VEBM390100

SHOP MANUAL

KOMATSU®

PW160-7H

MACHINE MODEL
PW160-7H

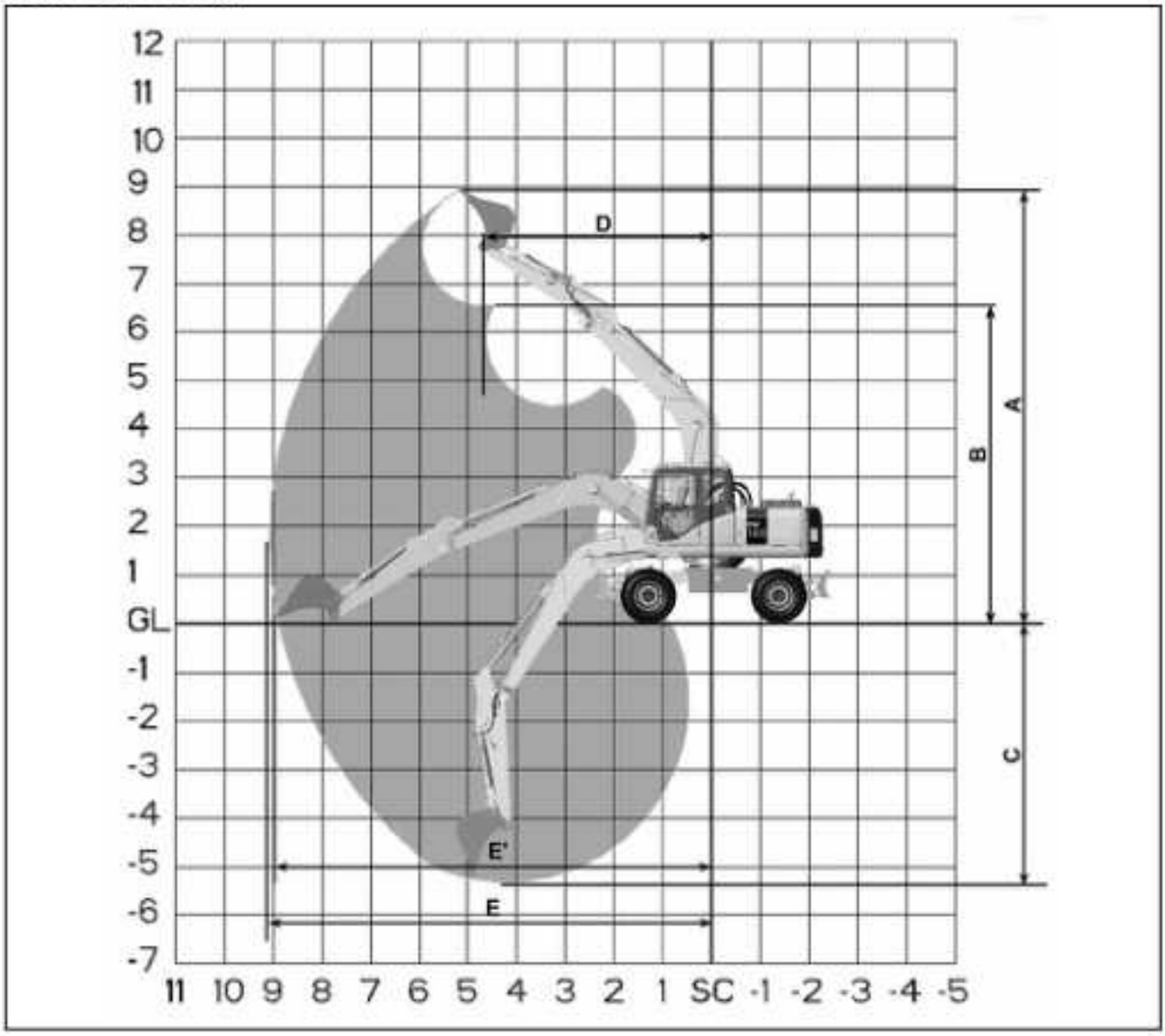
SERIAL NUMBER
H50051 AND UP

- This shop manual may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require.
  Materials and specifications are subject to change without notice.
- PW160-7H mount the SAA4D102E-2 engine.
  For details of the engine, see the 102 Series Engine Shop Manual.

MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication VEBM390100
Order the manual at mid-west-tech.com >

WORKING RANGES

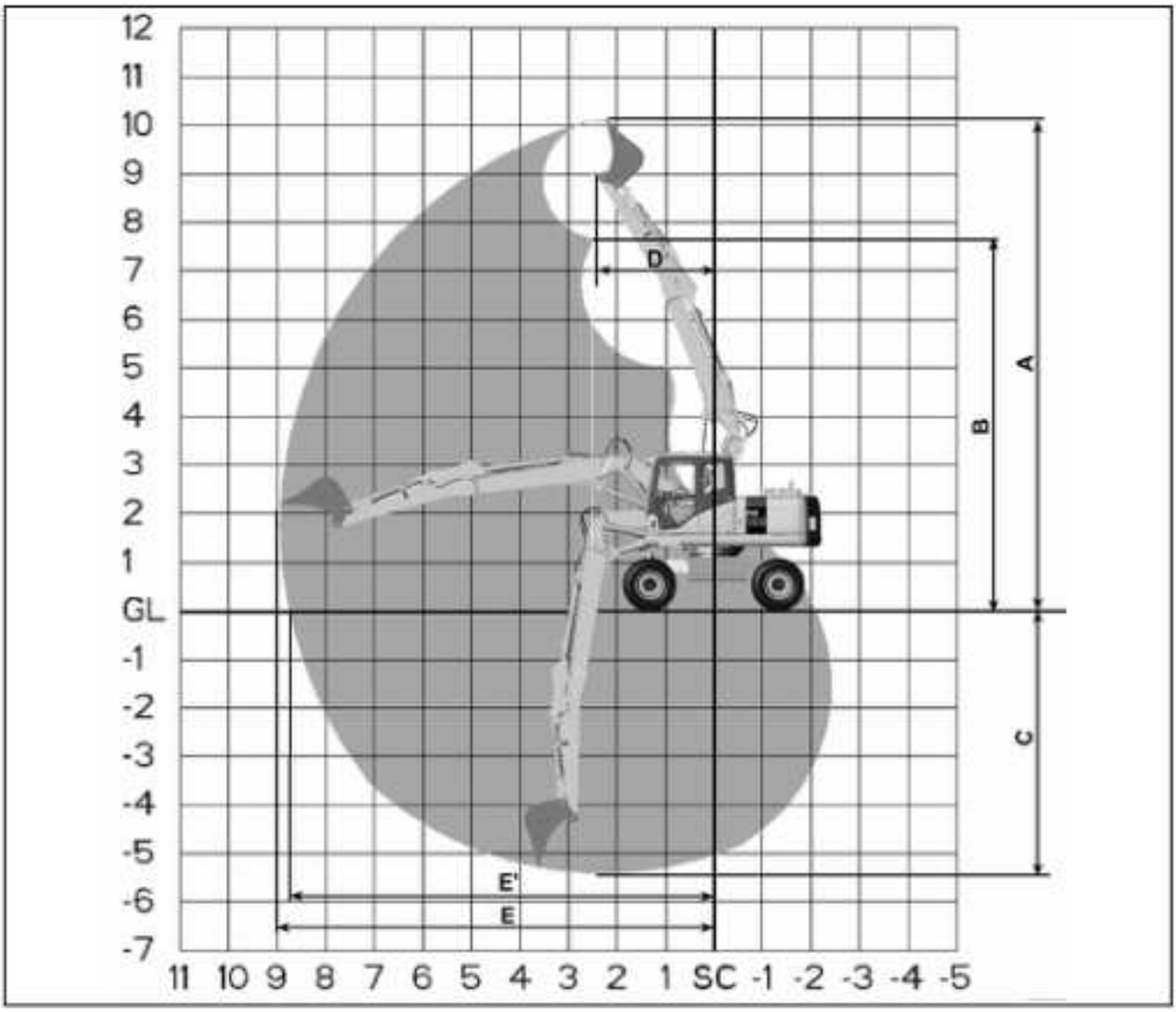
1 PIECE BOOM



Arm length mm (Tt/In)		2100	2500	3000
A	Max. digging height	8730	8930	9285
B	Max. dumping height	6335	6555	6911
C	Max. digging depth	4925	5320	5600
D	Min. swing radius	3205	3160	3180
E'	Max. digging reach ay GL	8620	8885	9315
E	Max. digging reach	8640	9070	9485

MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication V... Order the manual at mid-west-tech.com >

2 PIECE BOOM



Arm length mm (Tt/In)		2100	2500	3000
A	Max.digging height	9745	10118	10575
B	Max.dumping height	7285	7655	8117
C	Max digging depth	4960	5465	5770
D	Min. swing radius	2215	2385	2590
E'	Max. digging reach ay GL	8310	8745	9225
E	Max. digging reach	8505	8930	9410

MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication V... Order the manual at mid-west-tech.com >

SPECIFICATIONS

Machine model				PW160-7H
Serial Number				H50051 and up
Bucket capacity		Arm size (m)	m^3	0.55
Operating weight			kg	15,800
Performance	Max. digging force (using power max. function)	2.1	kN {kg}	102.0 {10,400}
		2.5		
		3.0		
	Swing speed		rpm	11.5
	Swing max. slope angle		deg.	21.5
	Travel speed		km/h	Cr : 0-2.5 Lo : 0-10 Hi : 10-35 (Germany :10-20)
	Gradeability		deg. kPa {kg cm^2}	35 36.3 {0.37}
	Standard Tyre Width		mm	10.00 - 20

MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication V... Order the manual at mid-west-tech.com >

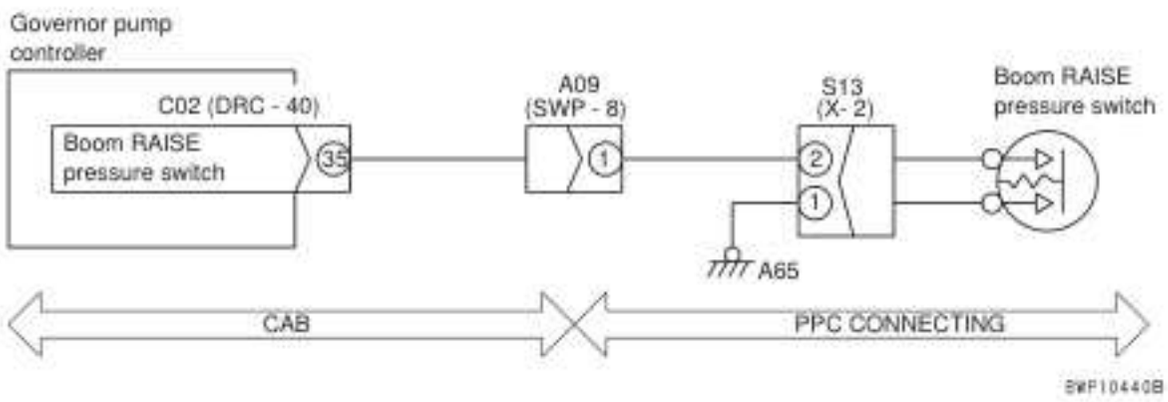
E-21 "Boom/Stabiliser RAISE" is not correctly displayed in monitor function

Failure information	• "Boom RAISE" is not correctly displayed in the monitor function on the monitor panel.
Relative information	—

Presumed cause and standard value in normal

	Cause	Standard value in normal and references for troubleshooting			
1	Boom RAISE PPC hydraulic switch fault (Internal disconnection or short-circuiting)	★Turn the engine starting switch OFF for the preparations, and keep the engine running during the troubleshooting.			
		S13 (male)	Boom control lever	Resistance value	
		Between ① and ②	NEUTRAL	Above 1 MΩ	
			RAISE	Below 1 Ω	
2	Disconnection of wiring harness (Disconnection or defective contact with connector)	★Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
		Wiring harness between C02 (female) ㊴ and S13 (female) ②		Resistance value	Below 1 Ω
		Wiring harness between S13 (female) ① and grounding		Resistance value	Below 1 Ω
3	Grounding fault of wiring harness (Contact with grounding (GND) circuit)	★Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.			
		Between wiring harness between C02 (female) ㊴ and S13 (female) ② and grounding		Resistance value	Above 1 MΩ
4	Short-circuiting of wiring harness (Contact with 24 V circuit)	★Turn the engine starting switch OFF for the preparations, and hold it in the ON position during the troubleshooting.			
		Between wiring harness between C02 (female) ㊴ and S13 (female) ② and grounding		Voltage	Below 1 V
5	Governor • pump controller defective	★Turn the engine starting switch OFF for the preparations, and hold it in the ON position during the troubleshooting.			
		C02	Boom control lever	Voltage	
		Between ㊴ and grounding	NEUTRAL	20 – 30 V	
			RAISE	Below 1 V	

Electrical Circuit Diagram for Boom RAISE PPC Hydraulic Switch



MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication V... Order the manual at mid-west-tech.com >

INFORMATION CONTAINED IN TROUBLESHOOTING TABLE

★ Troubleshooting Table and Related Circuit Diagram collectively carry the following information. Carry out troubleshooting work after fully grasping their contents.

Failure information	Phenomena occurring on machine
Relative information	Information on occurred failures and troubleshooting

Presumed cause and standard value in normal condition		Cause	Standard value in normal condition and references for troubleshooting
	1	Cause for presumed failure (The attached No. for filing and reference purpose only. It does not stand for any priority)	<Contents> • The standard values in normal condition by which to judge "good" or "no good" about presumed causes. • References for making judgement of "good" or "no good"
	2		
	3		
	4		
	5		

MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication V... Order the manual at mid-west-tech.com >

INSTALLATION

✕ Carry out installation in the reverse order to removal.

[*1]

N·m Hose clamp:
1st time: 10.8 ± 1 Nm {1.1 ± 0.1 kgm}
2nd time: 10.8 ± 1 Nm {1.1 ± 0.1 kgm}

[*2]

➤ Install the air conditioner compressor belt. For details, see TESTING AND ADJUSTING, Inspection and adjustment of air compressor belt tension.

[*3]

➤ Apply gasket sealant to the threads of the bolt (only 1 piece) on the head cover side among the 3 fuel filter bracket mounting bolts.

[*4]

➤ Apply gasket sealant to the threads of only the 2 of the air intake connector mounting bolts indicated by the arrows in the following figure



[*5]

➤ When connecting the exhaust pipe to under the muffler, apply thermosetting sealant (Firegum manufactured by Nihon Holts Co., Ltd. or equivalent) all round the pipe end.

N·m Clamp nut of muffler U-bolt:
9.8 – 14.7 Nm {1.0 – 1.5 kgm}

[*6]

N·m Clamp of hose (15):
10.0 – 11.0 Nm {1.02 – 1.12 kgm}

N·m Clamp of hose (16):
1st time: 10.8 ± 1 Nm {1.1 ± 0.1 kgm}
2nd time: 10.8 ± 1 Nm {1.1 ± 0.1 kgm}

N·m Tube (17):
Turbocharger side:
10.3 ± 1.2 Nm {1.1 ± 0.1 kgm}
Cylinder block side:
35 ± 5 Nm {3.6 ± 0.5 kgm}

N·m Tube (18):10 ± 2 Nm {1.0 ± 0.2 kgm}

N·m Mounting nut: 24 ± 4 Nm {2.4 ± 0.4 kgm}

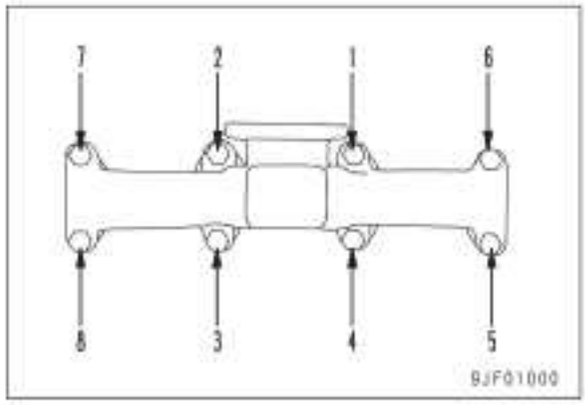
[*8]

N·m Mounting nut: 24 ± 4 Nm {2.4 ± 0.4 kgm}

[*9]

➤ Tighten the mounting bolts in the following numerical order.

N·m Mounting bolt:
1st time: Tighten all the bolts to:
43 ± 6 Nm {4.38 ± 0.61 kgm}.
2nd time: Tighten only bolts 1 – 4 to:
43 ± 6 Nm {4.38 ± 0.61 kgm}



[*10]

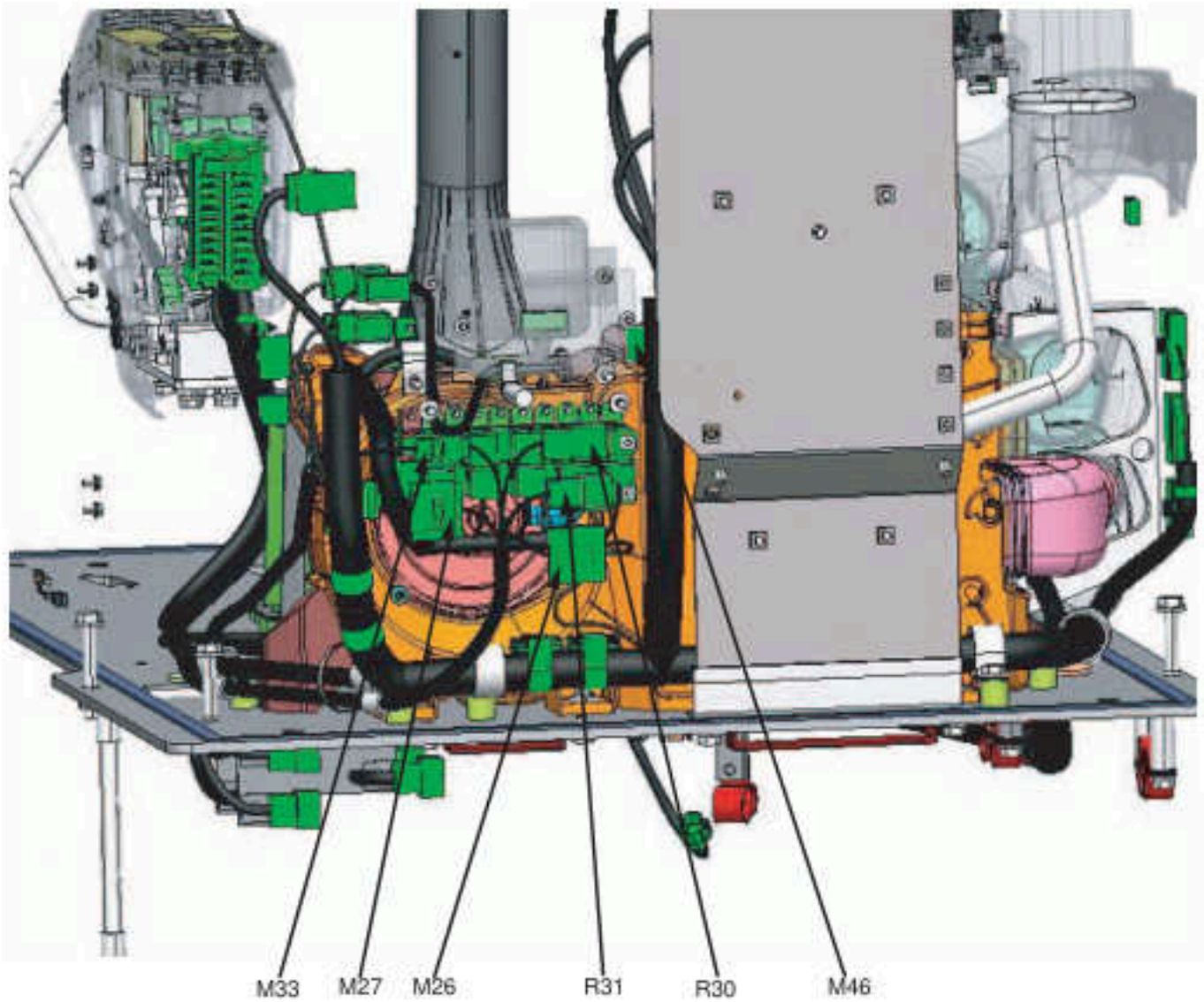
N·m Clamp of hose (22):
8.8 ± 0.5 Nm {0.9 ± 0.05 kgm}

[*11]

N·m Mounting bolt:
24 ± 4 Nm {2.45 ± 0.41 kgm}

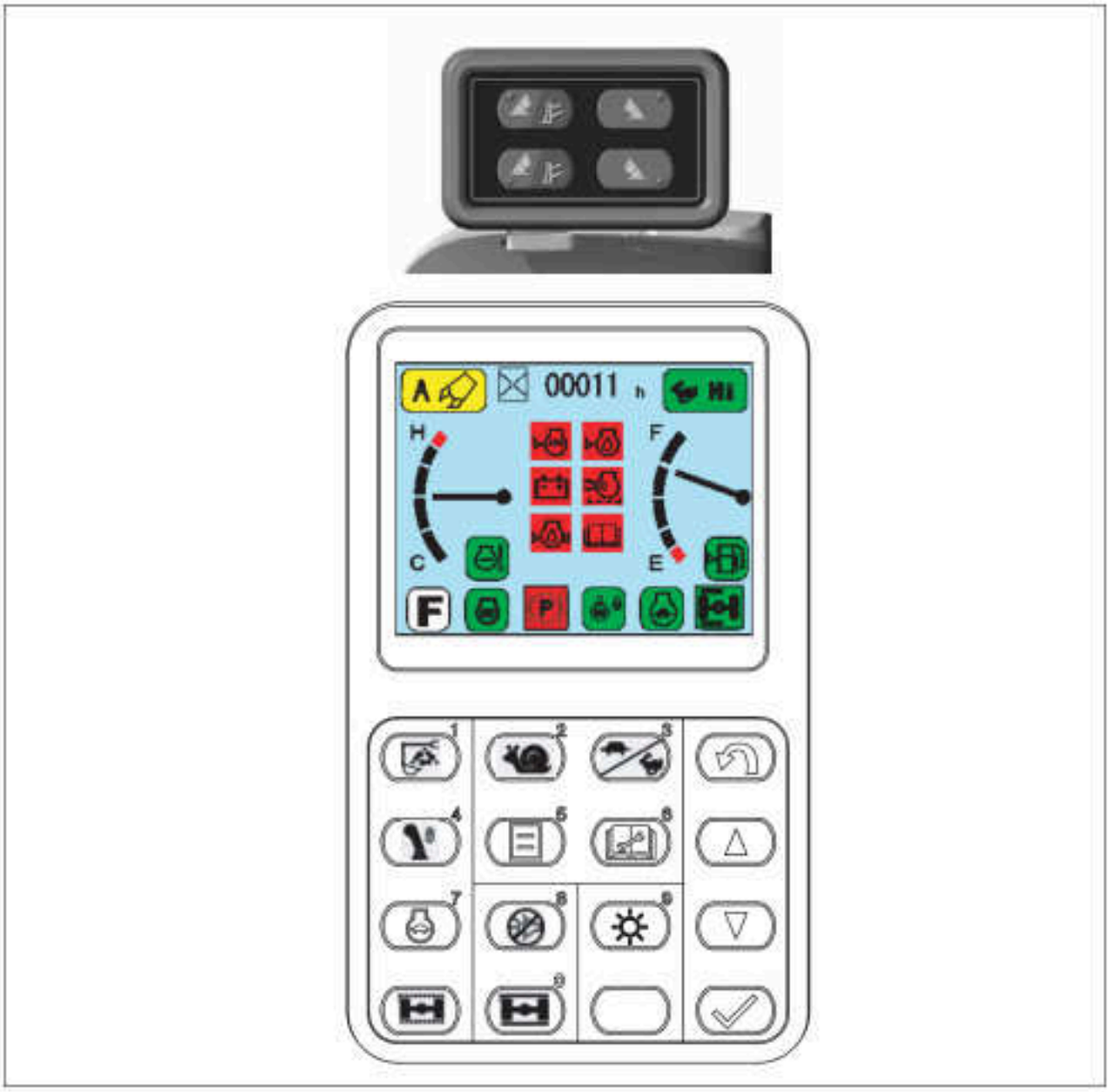
MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication V... Order the manual at mid-west-tech.com >

View L



MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication V...
Order the manual at mid-west-tech.com >

SPECIAL FUNCTION OF MONITOR PANEL

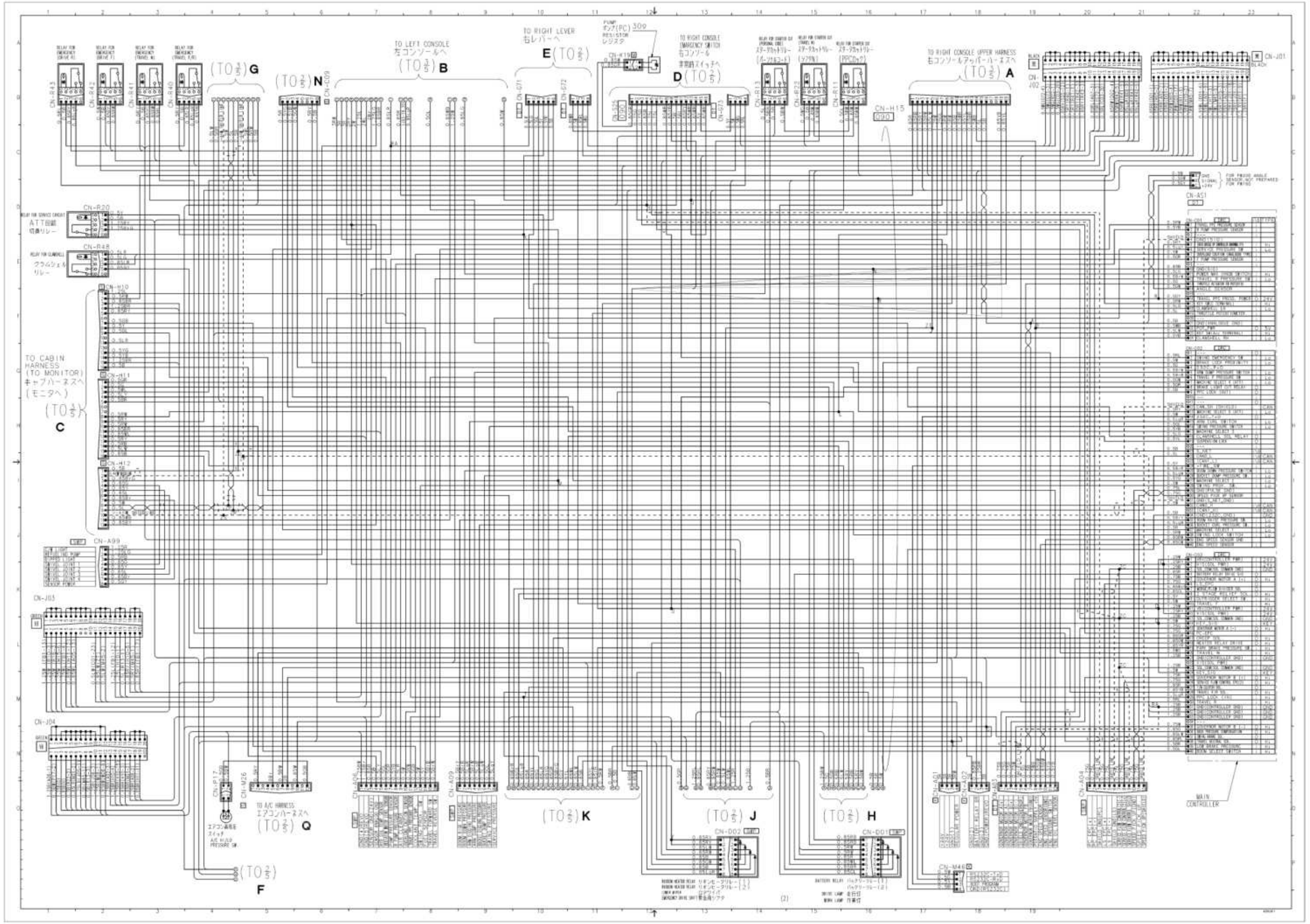


[1] Figure input switch 1
[2] Figure input switch 2
[3] Figure input switch 3
[4] Figure input switch 4
[5] Figure input switch 5
[6] Figure input switch 6
[7] Figure input switch 7
[8] Figure input switch 8
[9] Figure input switch 9
[0] Figure input switch 0

Undo switch
Scroll up switch
Scroll down switch
Input confirmation switch

MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication V... Order the manual at mid-west-tech.com >

ELECTRICAL CIRCUIT DIAGRAM 1/5



MidWestTech | Komatsu PW160-7H Mobile Excavator Service Manual | Publication VEBM390100

Order the manual at mid-west-tech.com >