CEBM000704

Shop Manual

KOMATSU®

WA250-6

WHEEL LOADER

SERIAL NUMBERS WA250-6 A76001 and up

ENGINE 6D107E-1

This material is proprietary to Komatsu America Corp. and is not to be reproduced, used, or disclosed except in accordance with written authorization from Komatsu America Corp.

It is our policy to improve our products whenever it is possible and practical to do so. We reserve the right to make changes or improvements at any time without incurring any obligation to install such changes on products sold previously.

Due to this continuous program of research and development, revisions may be made to this publication. It is recommended that customers contact their distributor for information on the latest revision.

Copyright 2016 Komatsu
Printed in U.S.A.
Komatsu America Corp.

March 2016

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

The affected pages are indicated by using the following marks. It is requested that necessary actions be taken to these pages according to the table below.

Mark	Indication	Action
❍	New page to be added	Add
●	Page to be replaced	Replace
( )	Page to be deleted	Discard

Mark	Page	Rev
●	00-1	③
●	00-2	③
●	00-2-1	③
●	00-2-2	③
●	00-2-3	③
●	00-2-4	③
●	00-2-5	③
●	00-2-6	③
●	00-2-7	③
●	00-2-8	③
●	00-2-9	③
●	00-2-10	③
●	00-2-11	③
●	00-2-12	③
	00-3	②
	00-4	②
	00-5	②
	00-6	②
	00-7	②
	00-8	②
	00-9	②
	00-10	②
	00-11	②
	00-12	②
	00-13	②
	00-14	②
	00-15	②
	00-16	②
	00-17	②

Mark	Page	Rev
	00-18	②
	00-19	②
	00-20	②
	00-21	②
	00-22	②
	00-23	②
	00-24	②
	00-25	②
	00-26	②
	00-27	②
	00-28	②
	00-29	②
	00-30	②
	00-31	②
	00-32	②
	00-33	②
	00-34	②
	00-35	②
	00-36	②
	00-37	②
	00-38	②
	00-39	②
	00-40	②
	00-41	②
	00-42	②
	01-1	
	01-2	
	01-3	

Mark	Page	Rev
	01-4	②
	01-5	②
	01-6	
	01-7	
	01-8	
	01-9	
	01-10	
	01-11	②
	01-12	②
●	10-1	③
●	10-2	③
●	10-3	③
●	10-4	③
●	10-5	③
●	10-6	③
●	10-7	③
●	10-8	③
●	10-9	③
●	10-10	③
●	10-11	③
●	10-12	③
●	10-13	③
●	10-14	③
●	10-15	③
●	10-16	③
●	10-17	③
●	10-18	③
●	10-19	③

Mark	Page	Rev
●	10-20	③
●	10-21	③
●	10-22	③
●	10-23	③
●	10-24	③
●	10-25	③
●	10-26	③
●	10-27	③
●	10-28	③
●	10-29	③
●	10-30	③
●	10-31	③
●	10-32	③
●	10-33	③
●	10-34	③
●	10-35	③
●	10-36	③
●	10-37	③
●	10-38	③
●	10-39	③
●	10-40	③
●	10-41	③
●	10-42	③
●	10-43	③
●	10-44	③
●	10-45	③
●	10-46	③
●	10-47	③
●	10-48	③

MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704 Order the manual at mid-west-tech.com >

Mark	Page	Rev
●	10-49	③
●	10-50	③
●	10-51	③
●	10-52	③
●	10-53	③
●	10-54	③
●	10-55	③
●	10-56	③
●	10-57	③
●	10-58	③
●	10-59	③
●	10-60	③
●	10-61	③
●	10-62	③
●	10-63	③
●	10-64	③
●	10-65	③
●	10-66	③
●	10-67	③
●	10-68	③
●	10-69	③
●	10-70	③
●	10-71	③
●	10-72	③
●	10-73	③
●	10-74	③
●	10-75	③
●	10-76	③
●	10-77	③
●	10-78	③
●	10-79	③
●	10-80	③
●	10-81	③

Mark	Page	Rev
●	10-82	③
●	10-83	③
●	10-84	③
●	10-85	③
●	10-86	③
●	10-87	③
●	10-88	③
●	10-89	③
●	10-90	③
●	10-91	③
●	10-92	③
●	10-93	③
●	10-94	③
●	10-95	③
●	10-96	③
●	10-97	③
●	10-98	③
●	10-99	③
●	10-100	③
●	10-101	③
●	10-102	③
●	10-103	③
●	10-104	③
●	10-105	③
●	10-106	③
●	10-107	③
●	10-108	③
●	10-109	③
●	10-110	③
●	10-111	③
●	10-112	③
●	10-113	③
●	10-114	③

Mark	Page	Rev
●	10-115	③
●	10-116	③
●	10-117	③
●	10-118	③
●	10-119	③
●	10-120	③
●	10-121	③
●	10-122	③
●	10-123	③
●	10-124	③
●	10-125	③
●	10-126	③
●	10-127	③
●	10-128	③
●	10-129	③
●	10-130	③
●	10-131	③
●	10-132	③
●	10-133	③
●	10-134	③
●	10-135	③
●	10-136	③
●	10-137	③
●	10-138	③
●	10-139	③
●	10-140	③
●	10-141	③
●	10-142	③
●	10-143	③
●	10-144	③
●	10-145	③
●	10-146	③
●	10-147	③

Mark	Page	Rev
●	10-148	③
●	10-149	③
●	10-150	③
●	10-151	③
●	10-152	③
●	10-153	③
●	10-154	③
●	10-155	③
●	10-156	③
●	10-157	③
●	10-158	③
●	10-159	③
●	10-160	③
●	10-161	③
●	10-162	③
●	10-163	③
●	10-164	③
●	10-165	③
●	10-166	③
●	10-167	③
●	10-168	③
●	10-169	③
●	10-170	③
●	10-171	③
●	10-172	③
●	10-173	③
●	10-174	③
●	10-175	③
●	10-176	③
●	10-177	③
●	10-178	③
●	10-179	③
●	10-180	③

MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704 Order the manual at mid-west-tech.com >

Mark	Page	Rev
●	10-181	③
●	10-182	③
●	10-183	③
●	10-184	③
●	10-185	③
●	10-186	③
●	10-187	③
●	10-188	③
●	10-189	③
●	10-190	③
●	10-191	③
●	10-192	③
●	10-193	③
●	10-194	③
●	10-195	③
●	10-196	③
●	10-197	③
●	10-198	③
●	10-199	③
●	10-200	③
●	10-201	③
●	10-202	③
●	10-203	③
●	10-204	③
●	10-205	③
●	10-206	③
●	10-207	③
●	10-208	③
●	10-209	③
●	10-210	③
●	10-211	③
●	10-212	③
●	10-213	③

Mark	Page	Rev
●	10-214	③
●	10-215	③
●	10-216	③
●	10-217	③
●	10-218	③
●	10-219	③
●	10-220	③
●	10-221	③
●	10-222	③
●	10-223	③
●	10-224	③
●	10-225	③
●	10-226	③
●	10-227	③
●	10-228	③
●	10-229	③
●	10-230	③
●	10-231	③
●	10-232	③
●	10-233	③
●	10-234	③
●	10-235	③
●	10-236	③
●	10-237	③
●	10-238	③
●	10-239	③
●	10-240	③
●	10-241	③
●	10-242	③
●	10-243	③
●	10-244	③
●	10-245	③
●	10-246	③

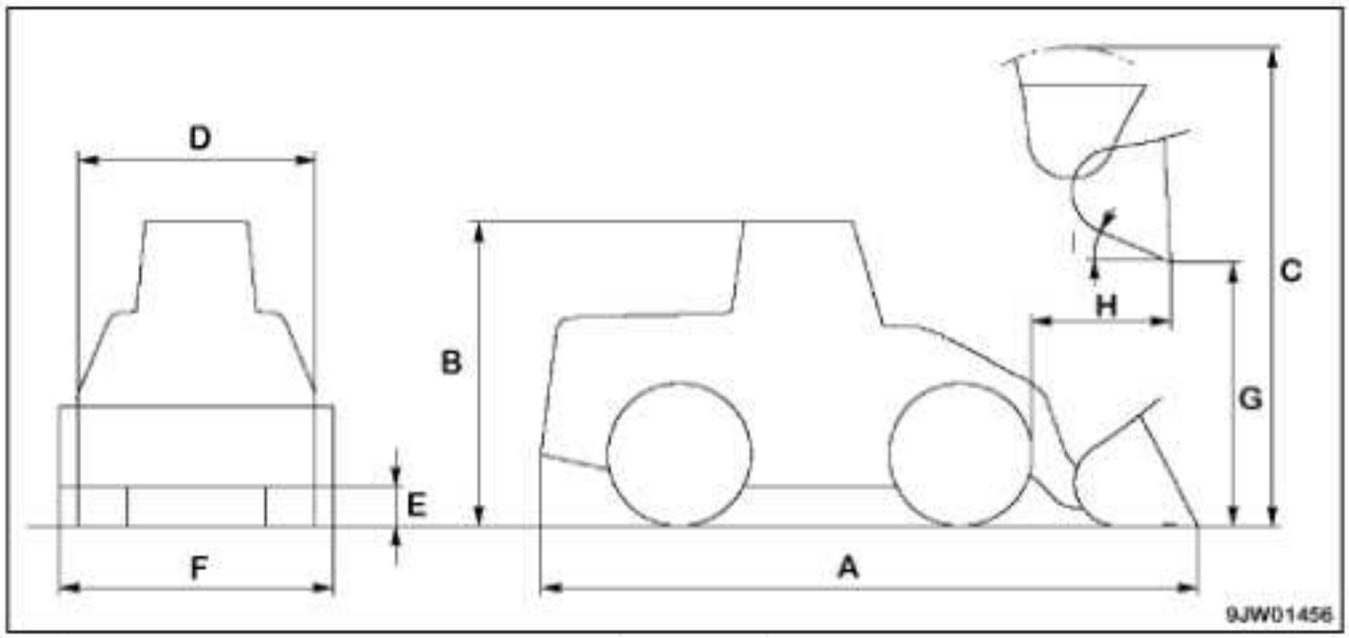
Mark	Page	Rev
●	10-247	③
●	10-248	③
●	10-249	③
●	10-250	③
●	10-251	③
●	10-252	③
●	10-253	③
●	10-254	③
●	10-255	③
●	10-256	③
●	10-257	③
●	10-258	③
●	10-259	③
●	10-260	③
●	10-261	③
●	10-262	③
●	10-263	③
●	10-264	③
●	10-265	③
●	10-266	③
●	10-267	③
●	10-268	③
●	10-269	③
●	10-270	③
●	10-271	③
●	10-272	③
●	10-273	③
●	10-274	③
●	10-275	③
●	10-276	③
●	10-277	③
●	10-278	③
●	10-279	③

Mark	Page	Rev
●	10-280	③
( )	10-281	②
( )	10-282	②
( )	10-283	②
( )	10-284	②
( )	10-285	②
( )	10-286	②
( )	10-287	②
( )	10-288	②
( )	10-289	②
( )	10-290	②
( )	10-291	②
( )	10-292	②
( )	10-293	②
( )	10-294	②
( )	10-295	②
( )	10-296	②
	20-1	②
	20-2	
	20-3	
	20-4	
	20-5	
	20-6	
	20-7	
	20-8	
	20-9	②
	20-10	②
●	30-1	③
●	30-2	③
●	30-3	③
●	30-4	③

MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704 Order the manual at mid-west-tech.com >

SPECIFICATIONS

Dimension Drawing



	Item		Unit	WA250-6
	Machine weight (with BOC)		kg (lbs)	10,890 (24,008)
	Normal load		kg (lbs)	3,680 (8,113)
	Bucket capacity (heaped, with BOC)		m^3 (yd^3)	2.3 (3.0)
	Engine model		—	Komatsu SAA6D107E-1 Diesel engine
	Engine rated output • Net [ISO 9249/SAE J1349] (*1) • Gross [SAE J1995] (*2)		kW(HP)/rpm	103 {138}/2,000 104.1 {140}/2,000
A	Overall length (with BOC)		mm (in)	7,055 (23 ft 2 in)
B	Overall height		mm (in)	3,130 (10 ft 3 in)
C	Overall height with bucket lifted up		mm (in)	4,995 (16 ft 4 in)
D	Overall width		mm (in)	2,375 (7 ft 8 in)
E	Minimum ground clearance		mm (in)	395 (1.30 in)
F	Bucket width		mm (in)	2,685 (8 ft 8 in)
G	Dumping clearance *3	Bucket tip/BOC tip	mm (in)	2,865/2,780 (9ft 4 in/9ft 1 in)
H	Dumping reach *3	Bucket tip/BOC tip	mm (in)	1,015/1,055 (3 ft 3 in/3 ft 5 in)
I	Buckeet dump angle (max. height)		deg.	45
	Min. turning radius	Bucket tip/BOC tip	mm (in)	6,005/6,030 (19 ft 7 in/19 ft 8 in)
		Center of outside tire	mm (in)	5,175 (16 ft 10 in)
	Permissible towing load		kN (lbf)	82.4 (18,524)
	Travel speed	1st (forward/reverse)	km/h (mph)	3.6 – 11.7/3.6 – 11.7 (2.2 – 7.3/2.2 – 7.3)
		2nd (forward/reverse)		11.7/11.7 (7.3/7.3)
		3rd (forward/reverse)		16.2/16.2 (10.1/10.1)
		4th (forward/reverse)		34.2/34.2 (21.3/21.3)

MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704 Order the manual at mid-west-tech.com >

TROUBLESHOOTING BY FAILURE CODE

Failure Code Table

Failure Code	Problem Part	Trouble	Controller	Action Code	Category of Record
2G40ZG	Brake	Oil pressure reduction	MON	E03	Mechanical system
6091NX	HST filter	Clogging	MON	E01	
989FN1	Travel speed	Overrun alarm	MON	E02	
AB00L6	Alternator R system	Short circuit	MON	E01	Electrical system
AB00MA	Alternator R system	Ground fault/Disconnection charge/Low charge voltage	MON	E03	
B@BAZG	Engine	Oil pressure reduction	ENG	E03	Mechanical system
B@BCNS	Engine	Overheat	ENG	E02	
B@BCZK	Engine	Low coolant level	MON	E01	
B@C6NS	Front brake	High oil temperature	MON	E02	
B@CRNS	HST	High oil temperature	MON	E02	
CA111	Engine controller	Internal abnormality	ENG	E03	Electrical system
CA115	Engine NE, Bkup speed sensor	Abnormality	ENG	E03	
CA122	Charge pressure sensor	Abnormally high level	ENG	E03	
CA123	Charge pressure sensor	Abnormally low level	ENG	E03	
CA131	Throttle sensor	Abnormally high level	ENG	E03	
CA132	Throttle sensor	Abnormally low level	ENG	E03	
CA144	Coolant temperature sensor	Abnormally high level	ENG	E01	
CA145	Coolant temperature sensor	Abnormally low level	ENG	E01	
CA153	Charge temperature sensor	Abnormally high level	ENG	E01	
CA154	Charge temperature sensor	Abnormally low level	ENG	E01	
CA155	Charge temperature	Abnormally high speed derate	ENG	E03	
CA187	Sensor power supply 2	Abnormally low level	ENG	E03	
CA221	Ambient pressure sensor	Abnormally high level	ENG	E01	
CA222	Ambient pressure sensor	Abnormally low level	ENG	E01	
CA227	Sensor power supply 2	Abnormally high level	ENG	E03	
CA234	Engine	Overspeed	ENG	E02	Mechanical system
CA238	Ne speed sensor power supply	Abnormality	ENG	E03	Electrical system
CA271	IMV (IMA)	Short circuit	ENG	E03	

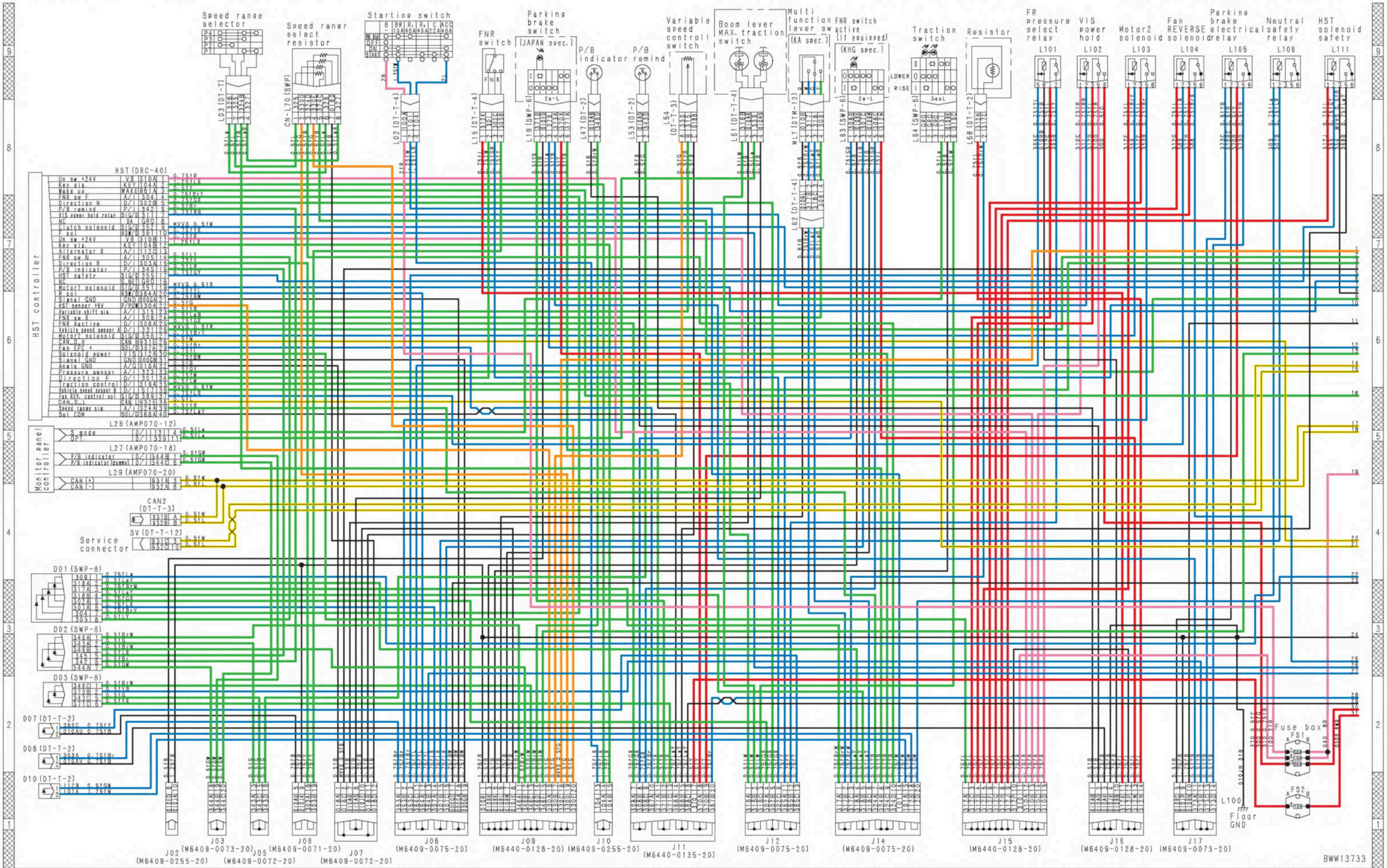
MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704 Order the manual at mid-west-tech.com >

	Causes		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	6	Wiring harness ground fault	★ Prepare with ignition switch OFF then carry out troubleshooting without turning ignition switch ON.		
			Wiring harness between F03 (female) (B) – L114 (female) (2) and ground	Resistance	Min. 1 MΩ
			★ In this case, the bucket positioner detent does not function (lever does not return to neutral).		
			Wiring harness between L114 (female) (5) – L37 (female) (1) and ground	Resistance	Min. 1 MΩ
			★ In this case, the bucket positioner does not function (lever returns to neutral).		
			Wiring harness between F03 (female) (A) – fuse FS1 (13) and ground	Resistance	Min. 1 MΩ
			Wiring harness between L114 (female) (1) (3) – L115 (female) (5) and ground	Resistance	Min. 1 MΩ
			Wiring harness between L115 (female) (3) – fuse FS1 (13) and ground	Resistance	Min. 1 MΩ
			Wiring harness between E02 (female) (1) – L115 (female) (1) and ground	Resistance	Min. 1 MΩ
			★ In this case, the fuse is blown and no detents function (lever returns to neutral).		
	7	Short circuit-circuiting between harnesses	★ Prepare with ignition switch OFF then turn ignition switch ON and carry out troubleshooting.		
			Wiring harness between L114 (female) (5) – L37 (female) (1) and ground	Voltage	Max. 1 V
			★ In this case, the bucket positioner does not function (lever does not return to neutral).		
			Wiring harness between L114 (female) (1), (3) – L115 (female) (5) and ground	Voltage	Max. 1 V
			Wiring harness between E02 (female) (1) – L115 (female) (1) and ground	Voltage	Max. 1 V
			★ In this case, bucket detent operates even if engine is stopped.		
			★ Prepare with ignition switch OFF then turn ignition switch ON; tilt bucket; and carry out troubleshooting.		
			Wiring harness between F03 (female) (B) – L114 (female) (2) and ground	Voltage	Max. 1 V
			★ In this case, bucket positioner detent does not function (lever returns to neutral).		

MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704 Order the manual at mid-west-tech.com >

★ This circuit diagram is made by excerpting the HST controller system.
★ Some devices in the drawing are not set for some districts.

(Red) : Accessory power supply system
(Pink) : Unswitched power supply system
(Orange) : Sensor power supply system
(Black) : Ground (GND) system
(Green) : Input signal system
(Blue) : Output signal system
(Brown) : Starting switch terminal C system
(Yellow) : Network communication system

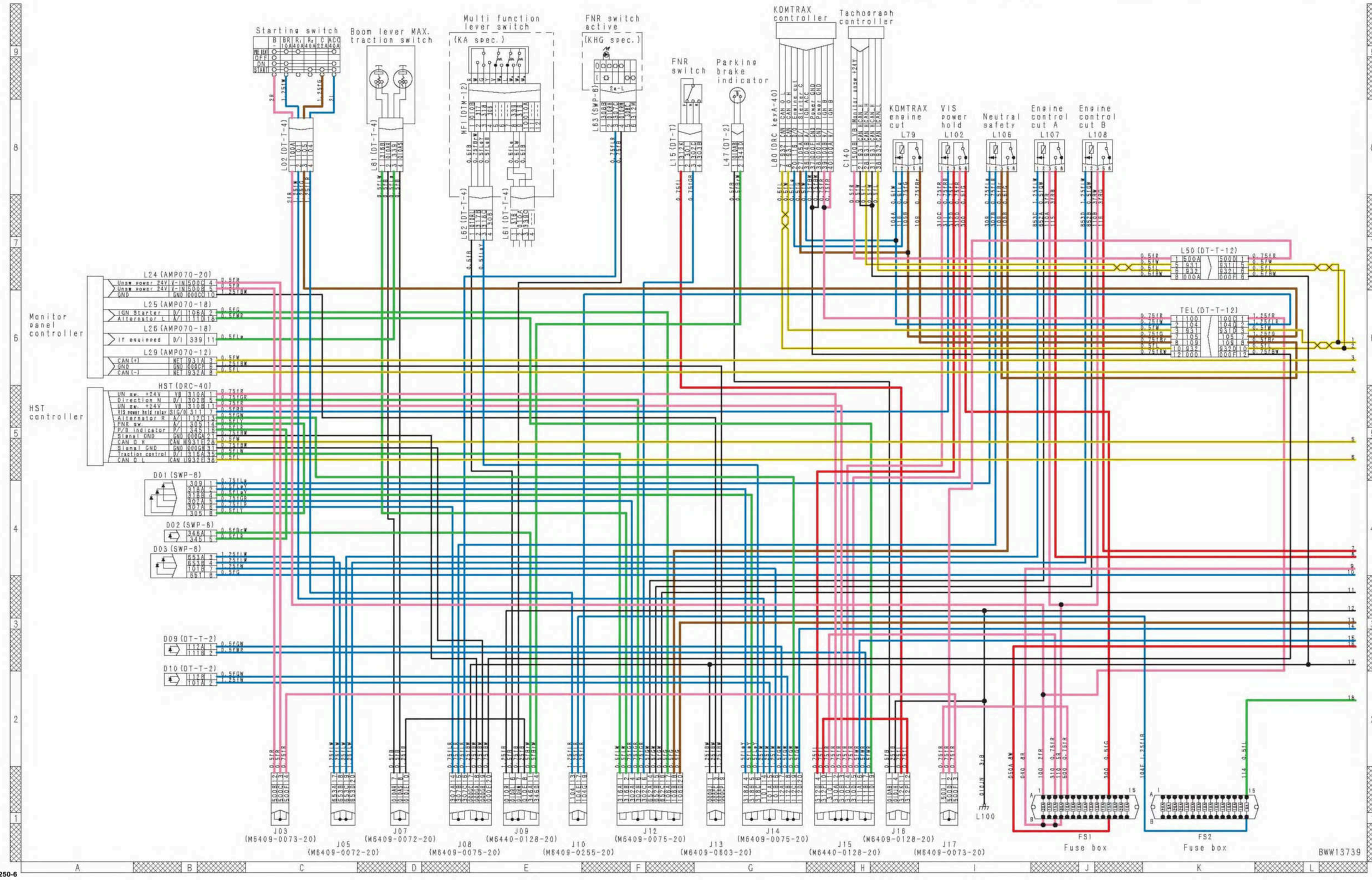


MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704
Order the manual at mid-west-tech.com >

Electrical Circuit Diagram of Each System
Engine Controller System (1/2)

★ This circuit diagram is made by excerpting the engine controller, starting, power supply, and charge system.
★ Some devices in the drawing are not set for some districts.

(Red) : Accessory power supply system
(Pink) : Unswitched power supply system
(Orange): Sensor power supply system
(Black) : Ground (GND) system
(Green) : Input signal system
(Blue) : Output signal system
(Brown) : Starting switch terminal C system
(Yellow): Network communication system

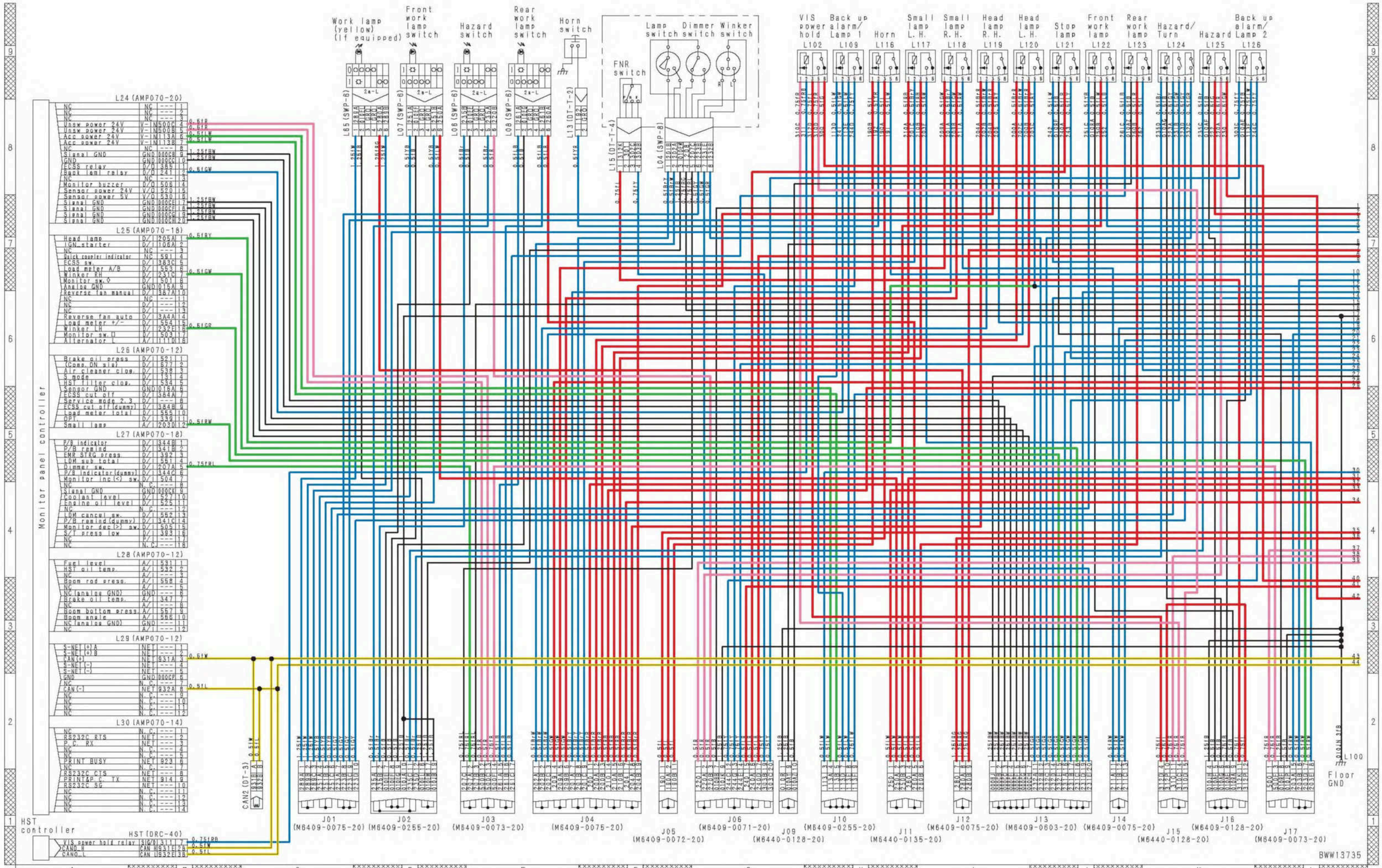


MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704
Order the manual at mid-west-tech.com >

Electrical Circuit Diagram of Each System
Machine Monitor System (Lamp Related Items) (1/2)

★ This circuit diagram is made by excerpting the machine monitor system (lamp-related items).
★ Some devices in the drawing are not set for some districts.

(Red) : Accessory power supply system
(Pink) : Unswitched power supply system
(Orange) : Sensor power supply system
(Black) : Ground (GND) system
(Green) : Input signal system
(Blue) : Output signal system
(Brown) : Starting switch terminal C system
(Yellow) : Network communication system



MidWestTech | Komatsu WA250-6 Wheel Loader Service Manual | Publication CEBM000704
Order the manual at mid-west-tech.com >