CEBM003602

SHOP MANUAL

KOMATSU®

avance® plus

WA450-3

WHEEL LOADER

SERIAL NUMBERS **WA450-3MC - A31001** and up

SERIAL NUMBERS **WA450-3MC - A35001** and up

MATERIAL HANDLER

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

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 add 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, periodic revisions may be made to this publication. It is recommended that customers contact their distributor for information on the latest revision.

JULY 1999

Copyright 1999 Komatsu America International Company

MidWestTech | Komatsu Avance Plus WA450-3 Wheel Loader Service Manual | Publication CEBM003602

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

CONTENTS

01	GENERAL	01-1
10	STRUCTURE AND FUNCTION	10-1
20	TESTING, ADJUSTING AND TROUBLESHOOTING	20-1
30	DISASSEMBLY AND ASSEMBLY	30-1
40	MAINTENANCE STANDARD	40-1

MidWestTech | Komatsu Avance Plus WA450-3 Wheel Loader Service Manual | Publicatio... Order the manual at mid-west-tech.com >

ASSEMBLY 30-99
TRANSMISSION ACCUMULATOR VALVE 30-106
DISASSEMBLY 30-106
ASSEMBLY 30-107
DRIVE SHAFT ASSEMBLY 30-108
DISASSEMBLY 30-108
ASSEMBLY 30-110
FRONT AXLE 30-112
REMOVAL 30-112
INSTALLATION 30-114
REAR AXLE 30-116
REMOVAL 30-116
INSTALLATION 30-120
FRONT DIFFERENTIAL 30-124
REMOVAL 30-124
INSTALLATION 30-127
REAR DIFFERENTIAL 30-130
REMOVAL 30-130
INSTALLATION 30-133
DIFFERENTIAL 30-136
DISASSEMBLY 30-136
ASSEMBLY 30-140
FINAL DRIVE 30-150
DISASSEMBLY 30-150
ASSEMBLY 30-153
CENTER HINGE PIN 30-158
REMOVAL 30-158
INSTALLATION 30-169
Upper hinge 30-170
Connection of frame 30-171
Lower hinge 30-171
Upper hinge 30-173
STEERING VALVE (ORIBITROL) 30-176
REMOVAL 30-176
INSTALLATION 30-178
DISASSEMBLY 30-179
Rotor 30-179
Control Side 30-180
ASSEMBLY 30-182
Control Side 30-182
Rotor 30-184
STEERING DEMAND VALVE 30-188
REMOVAL 30-188
INSTALLATION 30-189
DISASSEMBLY 30-190
ASSEMBLY 30-195
STEERING AND SWITCH PUMP 30-200
REMOVAL 30-200
INSTALLATION 30-204
STEERING CYLINDER 30-206
REMOVAL 30-206
INSTALLATION 30-207
BRAKE VALVE 30-208
REMOVAL 30-208
INSTALLATION 30-210
RIGHT BRAKE VALVE (TANDEM) 30-212
DISASSEMBLY 30-212

MidWestTech | Komatsu Avance Plus WA450-3 Wheel Loader Service Manual | Publicatio... Order the manual at mid-west-tech.com >

ASSEMBLY 30-213
LEFT BRAKE VALVE (SINGLE) 30-216
DISASSEMBLY 30-216
ASSEMBLY 30-217
SLACK ADJUSTER 30-218
REMOVAL 30-218
INSTALLATION 30-219
DISASSEMBLY 30-220
ASSEMBLY 30-221
WHEEL BRAKE 30-222
DISASSEMBLY 30-222
ASSEMBLY 30-228
PARKING BRAKE DISC 30-238
REMOVAL 30-238
INSTALLATION 30-240
ACCUMULATOR CHARGE VALVE 30-241
REMOVAL 30-241
INSTALLATION 30-241
DISASSEMBLY 30-242
ASSEMBLY 30-244
HYDRAULIC TANK 30-246
REMOVAL 30-246
INSTALLATION 30-248
WORK EQUIPMENT, PPC PUMP ASSEMBLY 30-250
REMOVAL 30-250
INSTALLATION 30-254
PPC VALVE ASSEMBLY 30-256
REMOVAL 30-256
INSTALLATION 30-258
DISASSEMBLY 30-259
ASSEMBLY 30-260
MAIN CONTROL VALVE 30-262
REMOVAL 30-262
INSTALLATION 30-265
DISASSEMBLY (2-SPOOL VERSION) 30-266
Hydraulic Lines 30-267
Valves 30-267
Spools 30-267
ASSEMBLY (2-SPOOL VERSION) 30-268
Spools 30-269
Valves 30-269
ASSEMBLY (2-SPOOL VERSION) 30-270
Hydraulic Lines 30-271
DISASSEMBLY (3-SPOOL VERSION) 30-272
Hydraulic Lines 30-273
Valves 30-275
Spools 30-275
ASSEMBLY (3-SPOOL VERSION) 30-278
Spools 30-279
Valves 30-279
Hydraulic Lines 30-283
DUMP CYLINDER 30-284
REMOVAL 30-284
INSTALLATION 30-286
LIFT CYLINDER 30-288
REMOVAL 30-288
INSTALLATION 30-290

MidWestTech | Komatsu Avance Plus WA450-3 Wheel Loader Service Manual | Publicatio... Order the manual at mid-west-tech.com >

WEIGHT TABLE

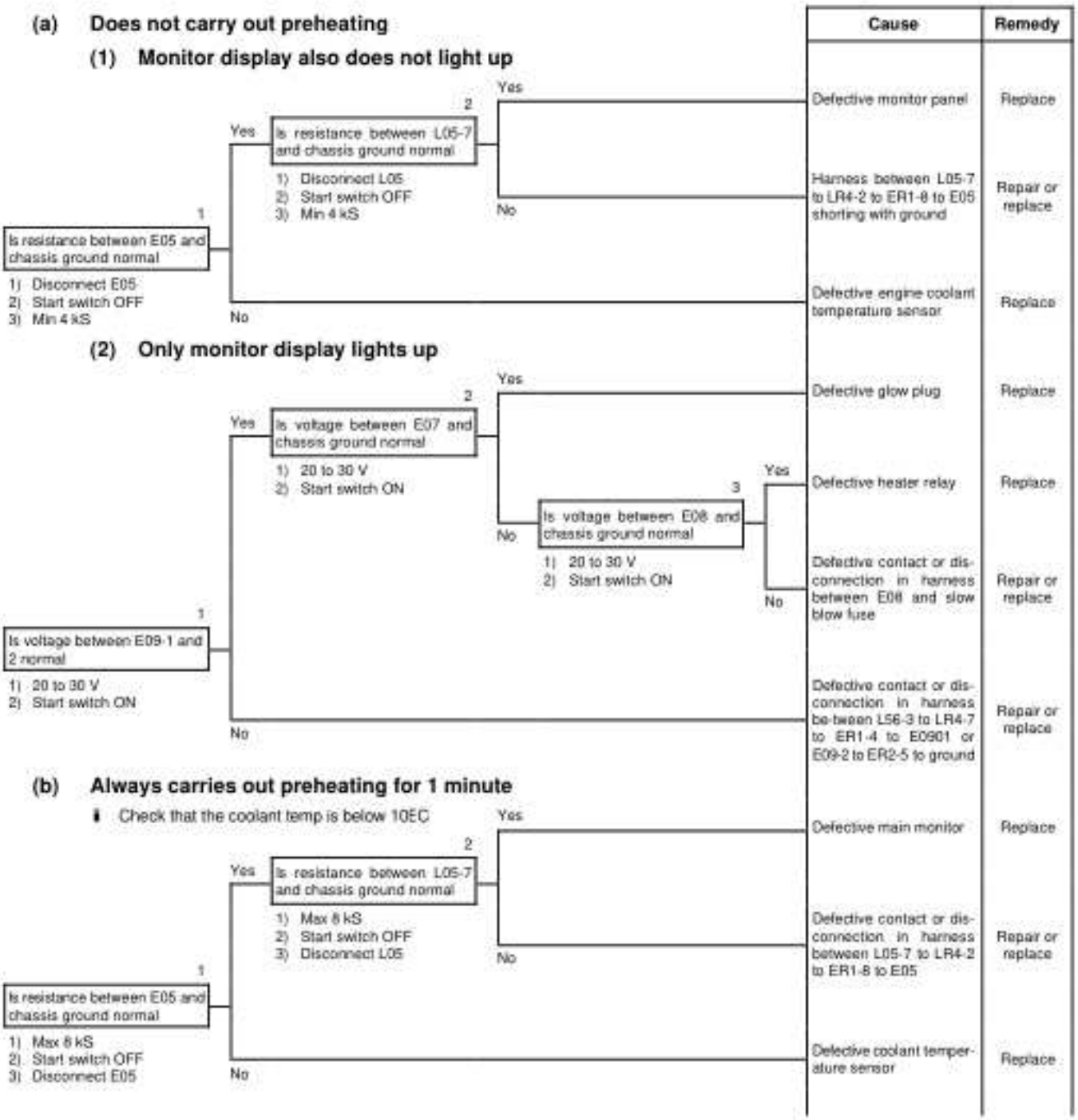
This weight table is a guide for use when for use when transporting or handling components.

WA450-3 - A31001 and up		WA450-3 Material Handler - A35001 and up	
Component	kg	Component	kg
Engine		Equipment and PPC pump	
Radiator		Boom cylinder	192
Torque converter	56	Bucket cylinder - std	228
Transmission with torque converter		Bucket cylinder - hi lift	256
Center drive shaft		Engine hood with side panel	
Front drive shaft		Front frame	
Rear drive shaft		Rear frame	
Front axle	1455	Bucket link	
Rear axle	1466	Bellcrank	
Axle pivot		Boom including bushing	
Wheel (each)		Bucket with bolt on cutting edge	
Tire (each)		Counterweight	
Orbit-roll valve		Fuel tank	
Steering cylinder (each)	38	Battery (each)	45
Brake valve (R.H.)		Floor frame	
Hydraulic tank		Cab (ROPS)	640
Main control valve		Air conditioner unit	
Steering and switch pump		Operator's seat	

MidWestTech | Komatsu Avance Plus WA450-3 Wheel Loader Service Manual | Publicatio... Order the manual at mid-west-tech.com >

M-8 Abnormality in preheating system

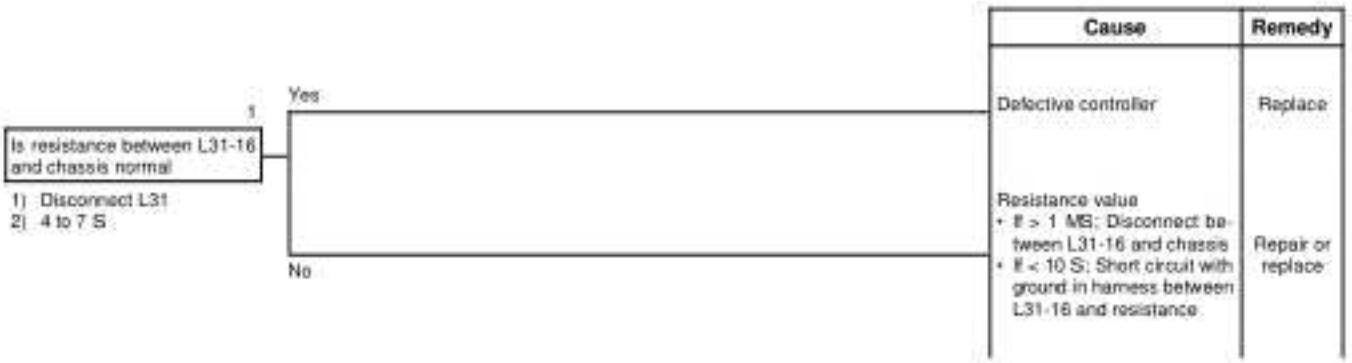
- Before carrying out troubleshooting, check that all the related connectors are properly inserted.
- Always connect any disconnected connectors before going on to the next step.
- Check that the water temperature is below 5EC.

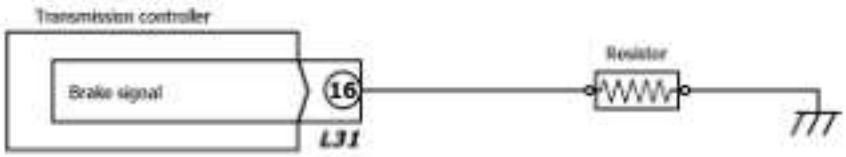


MidWestTech | Komatsu Avance Plus WA450-3 Wheel Loader Service Manual | Publicatio... Order the manual at mid-west-tech.com >

A-7 Failure code [17] Brake output signal system

- Before carrying out troubleshooting, check that all the related connectors are properly inserted.
- Always connect any disconnected connectors before going on to the next step.
- When disconnecting connectors to connect the T adapter [or socket adapter], always turn the start switch OFF.

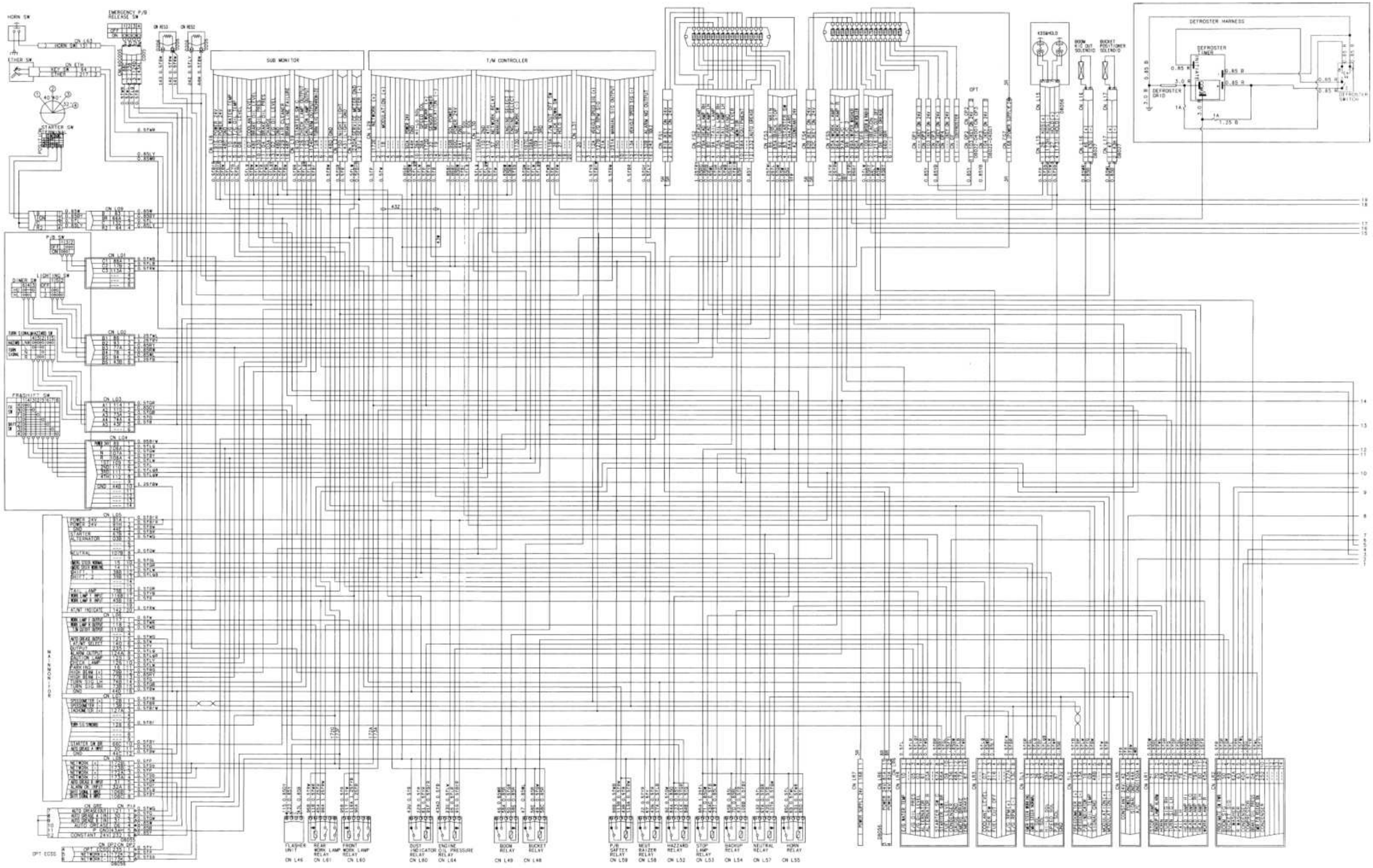




MidWestTech | Komatsu Avance Plus WA450-3 Wheel Loader Service Manual | Publicatio... Order the manual at mid-west-tech.com >

FOLDOUT 1

ELECTRICAL CIRCUIT DIAGRAM (1 OF 4)



MidWestTech | Komatsu Avance Plus WA450-3 Wheel Loader Service Manual | Publication CEBM003602

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