SEBM017803

SHOP MANUAL

KOMATSU®

avance

WA50-3

MACHINE MODEL

WA50-3

SERIAL NUMBER

21450 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.

- WA50-3 mount the S3D84E-3B and S3D84E-5X engine.
  For details of the engine, see the 68E-88E Series Engine Shop Manual.

MidWestTech | Komatsu Avance WA50-3 Wheel Loader Service Manual | Publication SEBM017803

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

CONTENTS

No. of page

01 GENERAL 01-1

10 STRUCTURE AND FUNCTION 10-1

20 TESTING AND ADJUSTING 20-1

30 DISASSEMBLY AND ASSEMBLY 30-1

40 MAINTENANCE STANDARD 40-1

90 OTHERS 90-1

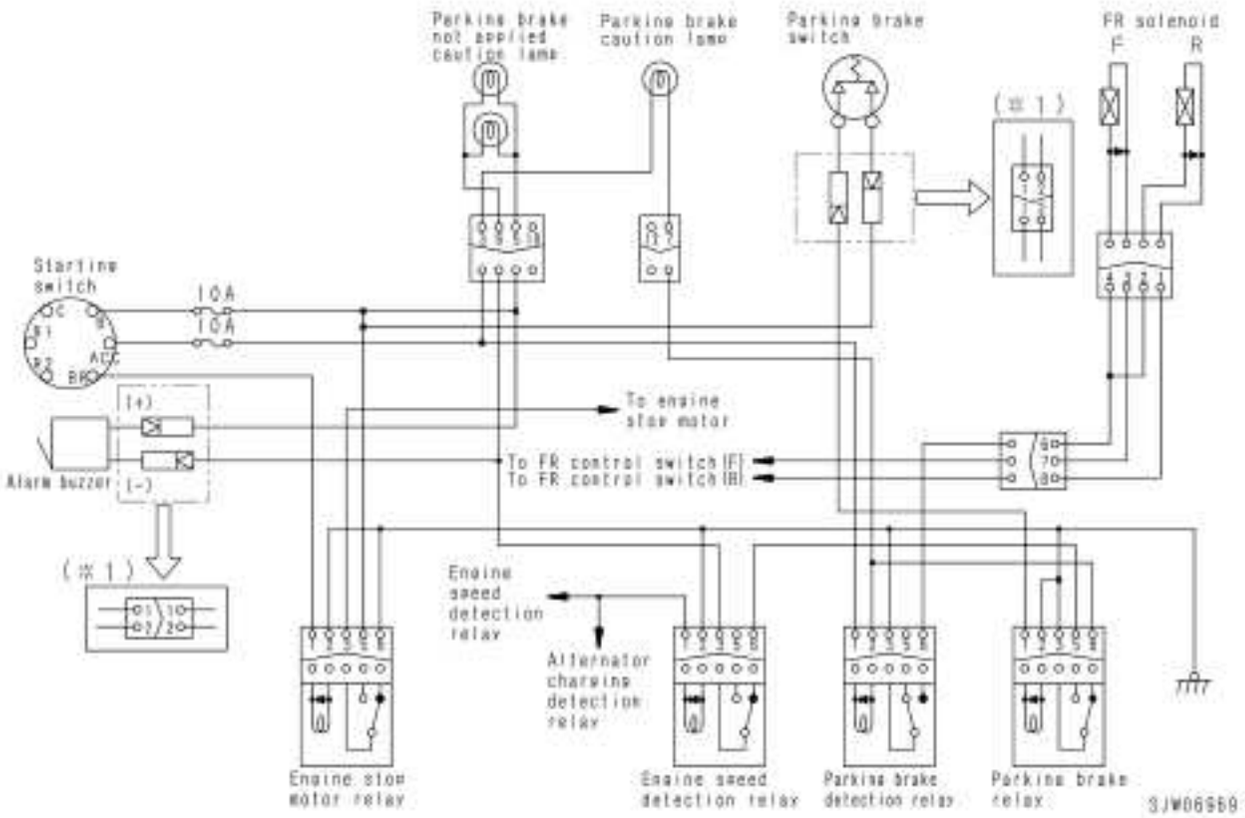
MidWestTech | Komatsu Avance WA50-3 Wheel Loader Service Manual | Publication... Order the manual at mid-west-tech.com >

Machine model			WA50-3	
Serial No.			21450 – 23000	23001 and up
Engine	Model		S3D84E-3B	S3D84E-5X
	Type		4-cycle, water-cooled, in-line, with turbocharger 3-cylinder, direct injection	4-cycle, water-cooled, in-line, with turbocharger 3-cylinder, direct injection
	No. of cylinders – bore x stroke	No. – mm x mm	3 – 84 x 90	3 – 84 x 90
	Piston displacement	ℓ {cc}	1,496 {1,496}	1,496 {1,496}
	Flywheel horsepower	kW{HP}/rpm	27.2 {36.5}/2,500	26.8 {35.9}/2,500
	Max. torque	Nm{kgm}/rpm	123 {12.5}/1,600	123 {12.5}/1,600
	Min. Fuel consumption ratio	g/kWh {g/HPh}	231 {172}	258 {192}
	High idling speed (with load)	rpm	2,575	2,575
	Low idling speed (with load)	rpm	900	900
	Alternator		12V 40A	12V 40A
	Starting motor		24V 2.0kW	24V 2.0kW
	Battery		12V 80Ah x 1	12V 80Ah x 1
Power train	Main piston pump		DA control, swash plate type	
	Piston motor		DA control, bent axis type piston motor	
	Reduction gear		Spiral bevel gear	
	Differential		Straight bevel gear	
	Final drive		Planetary gear, single reduction	
Axle, wheel	Drive type		Front/rear-wheel drive	
	Front axle		Fixed-frame, semi-floating	
	Rear axle		Center pin support type	
	Tire		15.5/60-18-8PR(L-2)	
	Wheel rim		W13 – 18	
	Inflation pressure	MPa {kg/cm^2}	0.18 {1.8}	
Brakes	Foot brake (also parking brake)		Transmission shaft braking, wet type multiple disc brake	
Steering device	Type		Articulated type	
	Structure		Fully hydraulically power steering (orbit roll)	

MidWestTech | Komatsu Avance WA50-3 Wheel Loader Service Manual | Publication... Order the manual at mid-west-tech.com >

PARKING BRAKE CIRCUIT

*1. Serial No. 23001 and up



Parking brake drag prevention device

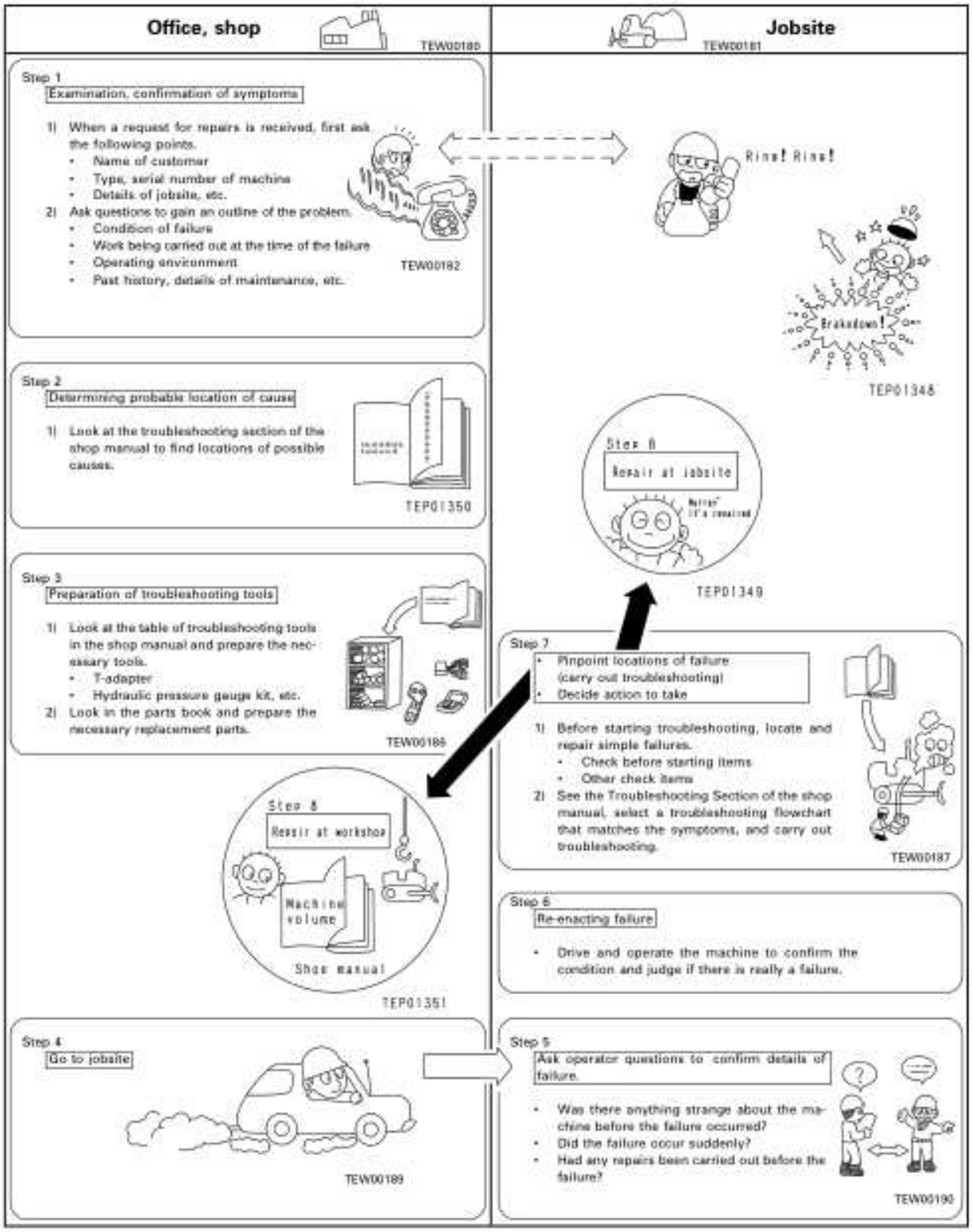
- When parking brake is applied, the parking brake switch is OFF and electric current does not flow into terminal (1) of parking brake relay, so terminal (3) and terminal (6) are connected.
- Therefore, the electricity flows in a circuit from starting switch ACC terminal – parking brake action detection relay (1) to terminal (2) – parking brake action detection relay (6) to terminal (3) – to ground, so terminal (3) – (6) of parking brake action detection relay open and current from terminal (6) is cut off and does not flow to FR solenoid.
- In this way, when parking brake is applied, if directional lever to put into F or R, electricity current does not flow to solenoid, so machine does not start.

Parking brake not applied prevention device

- when the parking brake is released, the parking brake switch is ON and electricity flows from starting switch terminal B – parking brake switch – parking brake relay (1) to terminal (2) – ground, and terminal (3) and terminal (6) are connected.
- When the engine is stopped, terminal (3) and terminal (6) of engine speed sensor relay are connected, and current flows from starting switch terminal B – alarm buzzer engine speed sensor relay (3) to terminal (6) – parking brake relay (5) to terminal (3) – ground, so the alarm buzzer sounds. In addition, electricity flows in the circuit from starting switch terminal B to parking brake not applied caution lamp, and the lamp lights up.

MidWestTech | Komatsu Avance WA50-3 Wheel Loader Service Manual | Publication... Order the manual at mid-west-tech.com >

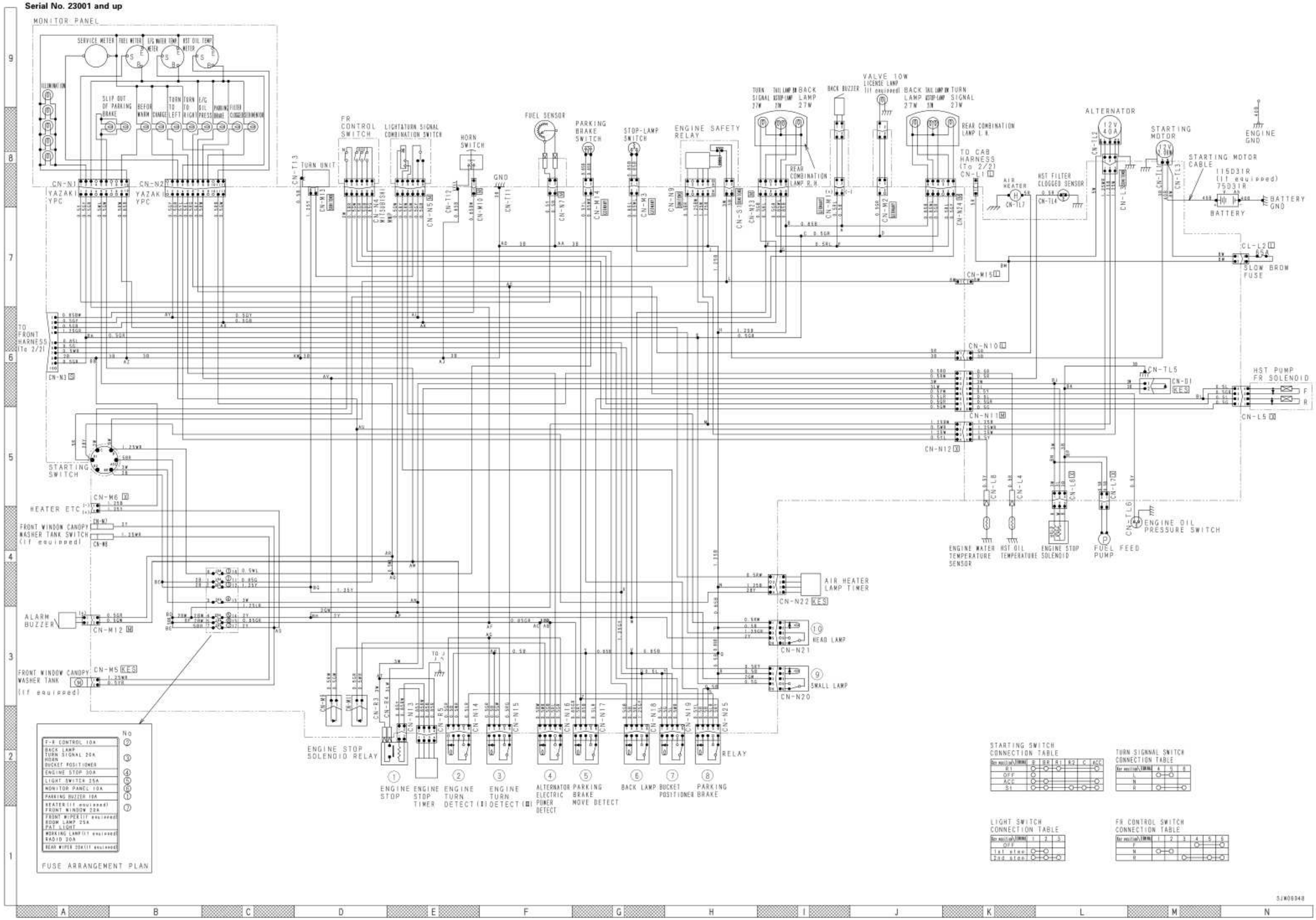
SEQUENCE OF EVENTS IN TROUBLESHOOTING



MidWestTech | Komatsu Avance WA50-3 Wheel Loader Service Manual | Publication... Order the manual at mid-west-tech.com >

ELECTRIC CIRCUIT DIAGRAM (1/2)

Serial No. 23001 and up



SJW06048

MidWestTech | Komatsu Avance WA50-3 Wheel Loader Service Manual | Publication SEBM017803

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