SEBM021010

SHOP MANUAL

KOMATSU®

GD555-3A
GD655-3A
GD675-3A

MACHINE MODEL	SERIAL NUMBER
GD555-3A	**10001 and up**
GD655-3A	**10001 and up**
GD675-3A	**10001 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
- GD555-3A mounts the SA6D102E-1 or SAA6D102E-2 engine.
  GD655-3A, GD675-3A mounts the SA6D114E-1 or SAA6D114E-2 engine.
  For details of the engine, see the 102 Series Engine Shop Manual and the 114 Series Engine Shop Manual.

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SPECIFICATIONS

GD555-3A

Machine Model					GD555-3A	
					VHP Engine	
Serial Number					10001 – 11000	11001 and up
Machine weight (Without cab)				kg	13,050	13,100
On front axle				kg	3,780	3,740
On rear axle				kg	9,270	9,360
Dimensions	Overall length			mm	8,350	
	Overall width			mm	2,525	
	Overall height (top of muffler)			mm	2,980	
	Overall height (with ROPS cab)			mm	3,330	
	Wheel base			mm	5,850	
	Distance between centers of tandem wheels			mm	1,535	
	Tread (Front)			mm	2,130	
	Tread (Rear)			mm	2,130	
	Ground clearance			mm	350	
Performance	Travel speed	Forward	1st	km/h	3.3	
			2nd	km/h	4.8	
			3rd	km/h	6.8	
			4th	km/h	9.8	
			5th	km/h	14.9	
			6th	km/h	21.6	
			7th	km/h	29.6	
			8th	km/h	42.9	
		Reverse	1st	km/h	4.4	4.4
			2nd	km/h	8.9	9.0
			3rd	km/h	18.7	19.7
			4th	km/h	36.1	39.1
	Maximum drawbar pull			kN (kg)	72.7 (7,416)	73.5 (7,490)
	Gradeability			deg	24	
	Min. Turning radius			m	6.9	
	Static stability			deg	35	

- VHP engine: variable horsepower engine

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Machine Model				GD555-3A VHP Engine	
Serial Number				10001 – 11000	11001 and up
Engine		Engine model		SA6D102E-1	SAA6D102E-2
		Type		4-cycle, water cooled, overhead valve, direct-injection type with turbocharger and aftercooler	
		Cylinder number - bore x stroke	mm	6 - 102 x 120	
		Piston displacement	ℓ {cc}	5.88 {5,880}	
	Performance	Flywheel horsepower	kW/rpm {HP/rpm}	104.4 to 119.3/2,000 {140 to 160/2,000}	
		Maximum torque	Nm/rpm {kgm/rpm}	606 to 741/1,400 {61.8 to 75.6/1,400}	576 to 729/1,500 {58.7 to 74.3/1,500}
		Max. speed at no load	rpm	2,200	2,200
		Min. speed at no load	rpm	800	850
		Fuel consumptions ratio	g/kWh (g/HPh)	229.4 to 232.4 {171.1 to 173.3}	214.3 {159.7}
		Starting motor		24 V, 7.5 kW	24 V, 5.5 kW
		Alternator		24 V, 50 A	
		Battery		12 V, 112 Ah x 2	
		Radiator type		CF19-4	
Drive train		Torque converter		3-element, single-stage Wet disc for lock-up	
		Transmission		Multiple shaft Fully automatic electric, automatic shifting type, pump force feed type 8 forward speeds, 4 reverse speeds	
		Reduction gear		Spiral bevel gear, single-stage reduction	
		Rear axle		Fully floating tandem type	
		Tandem		Double-strand chain drive	
Steering	Front axle	Type		Reverse Elliott, angle type	
		Max. leaning angle	deg.	16	
	Steering system	Type		Fully hydraulic type	
		Steering angle	deg	49	
		Articulate angle	deg	23	

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Machine Model				GD555-3A				
				VHP Engine				
Serial Number				10001 – 11000	11001 and up			
Steering, operating system	Tires	Tires (front)		13.00-24-10PR				
		Tires (rear)		13.00-24-10PR				
		Inflation pressure (front)	kPa {kg/cm^2}	275 {2.75}				
		Inflation pressure (rear)	kPa {kg/cm^2}	275 {2.75}				
	Brakes	Main brake		Rear 4-wheel braking, multiple-disc wet type				
		Parking brake		Dry disc type				
Hydraulic system	Hydraulic pump	Type x no.		Komatsu LPV90 Variable swash plate type x 1				
		Discharge	ℓ/min.	205				
		Set pressure	MPa {kg/cm^2}	20.6 {210}				
	Control valve	Type x no.		4-spool type x 2 (CLSS)				
		Control method		Hydraulic type				
	Steering related cylinders	Type		Steering		Leaning	Articulating	
				Double-acting piston type				
		Cykinder bore	mm	50		70	90	
		Piston rod outside diameter	mm	35		35	50	
		Piston stroke	mm	330		160	325	
	Work equipment cylinders	Type		Blade lift	Blade side shift	Blade tilt	Drawbar side shift	Ripper
				Double-acting piston type				
		Cylinder bore	mm	80	80	80	80	100
		Piston rod outside diameter	mm	50	50	40	45	50
		Piston stroke	mm	1,160	1,250	300	585	600
		Type		Scarifier		—		
				Double-acting piston type				
		Cylinder bore	mm	80		—		
		Piston rod outside diameter	mm	50				
		Piston stroke	mm	345				

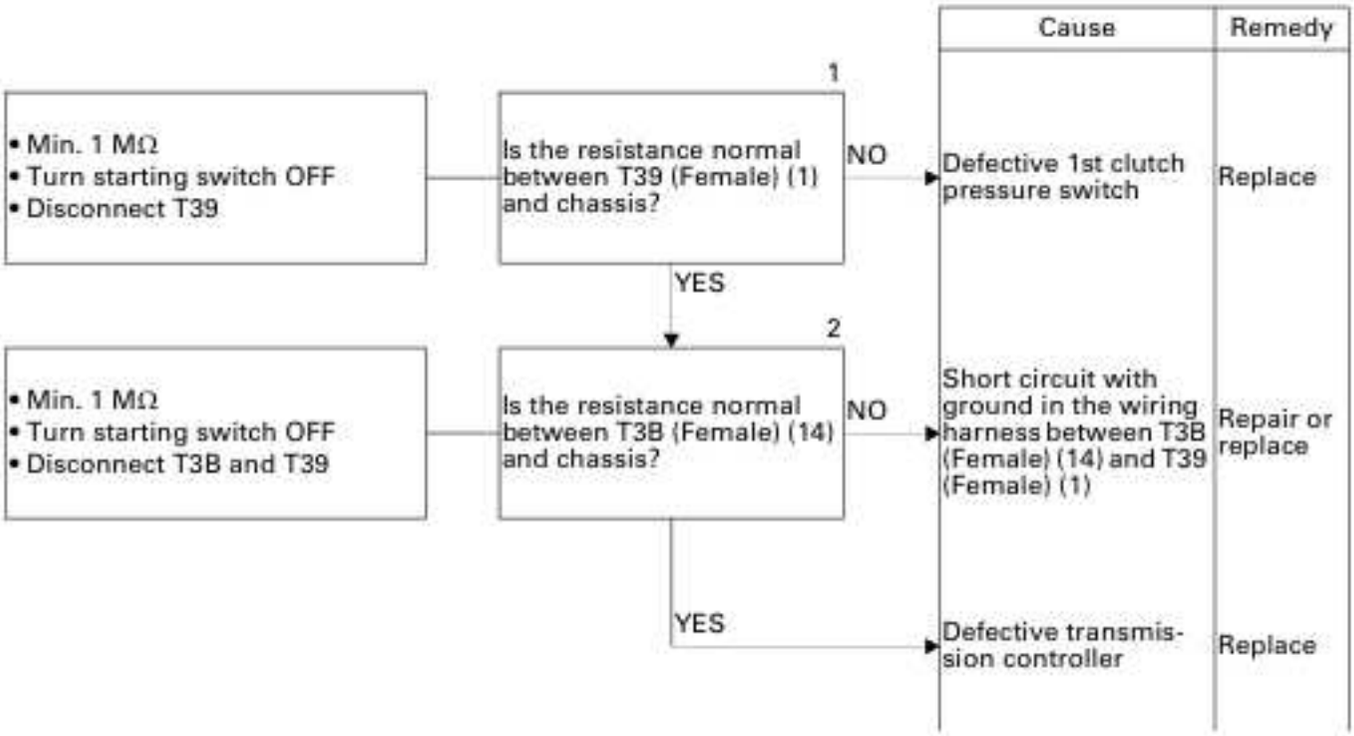
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Machine Model			GD675-3A	
Serial Number			10001 – 11000	11001 and up
Blade	Blade dimension (Length x Height x Thickness)	mm	3,660 x 660 x 25	
	Cutting edge dimension (Length x Width x Thickness - Number)		1,830 x 153 x 16 - 2	
	Max. lift above ground		480	
	Max. cutting depth		815	
	Blade base		2,600	
	Blade load	kN {kg}	73.6 {7,504}	72.6 {7,399}
	Turning angle (with scarifier)	deg	360 (130)	
	Max. side shift distance (left) (Moving distance by cylinder + Quantity of bolt adjustment)	mm	625 + 195	
	Max. side shift distance (right) (Moving distance by cylinder + Quantity of bolt adjustment)\		625 + 195	
	Cutting angle	deg		
	[Standard]		37	
	[Adjustable]		32 to 81	

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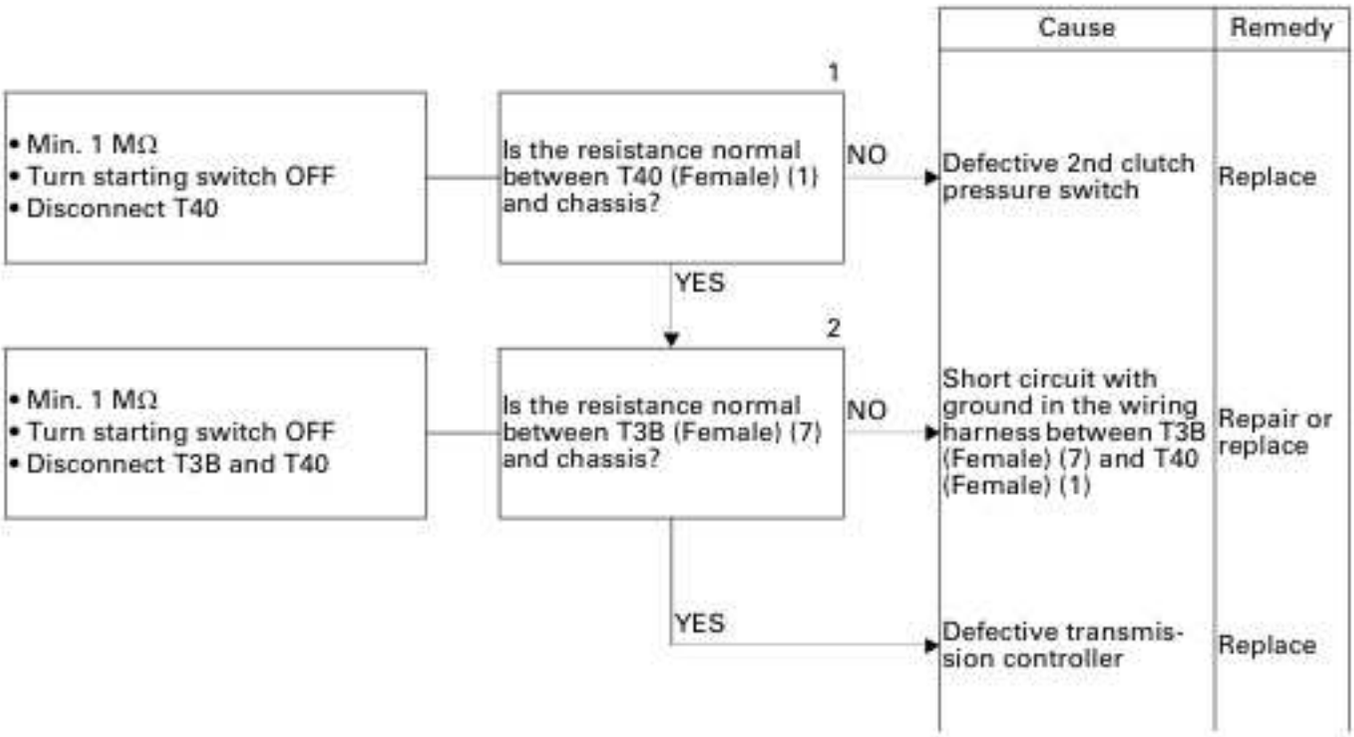
T-41 ERROR CODE [F4]

SHORT CIRCUIT WITH GROUND IN THE 1ST CLUTCH PRESSURE SWITCH CIRCUIT



T-42 ERROR CODE [F5]

SHORT CIRCUIT WITH GROUND IN THE 2ND CLUTCH PRESSURE SWITCH CIRCUIT

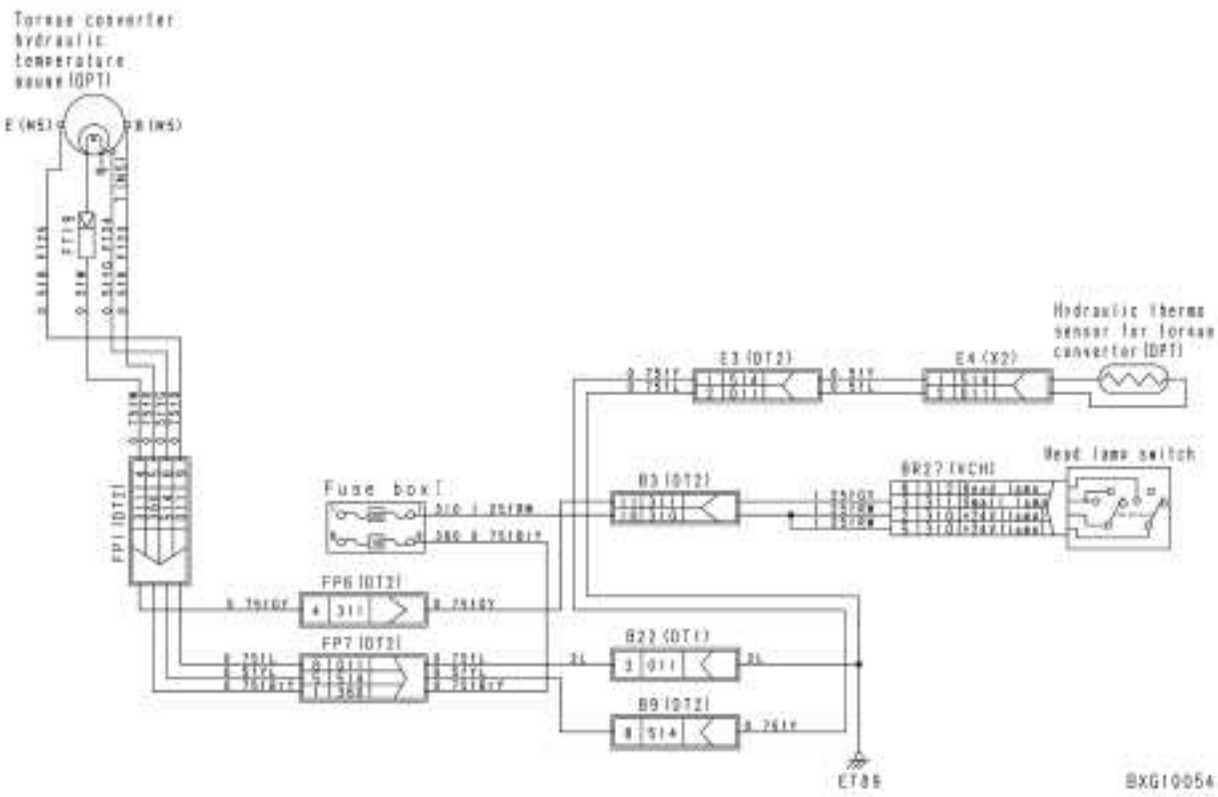


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M-19 TORQUE CONVERTER TEMPERATURE GAUGE DOES NOT WORK (OPT)

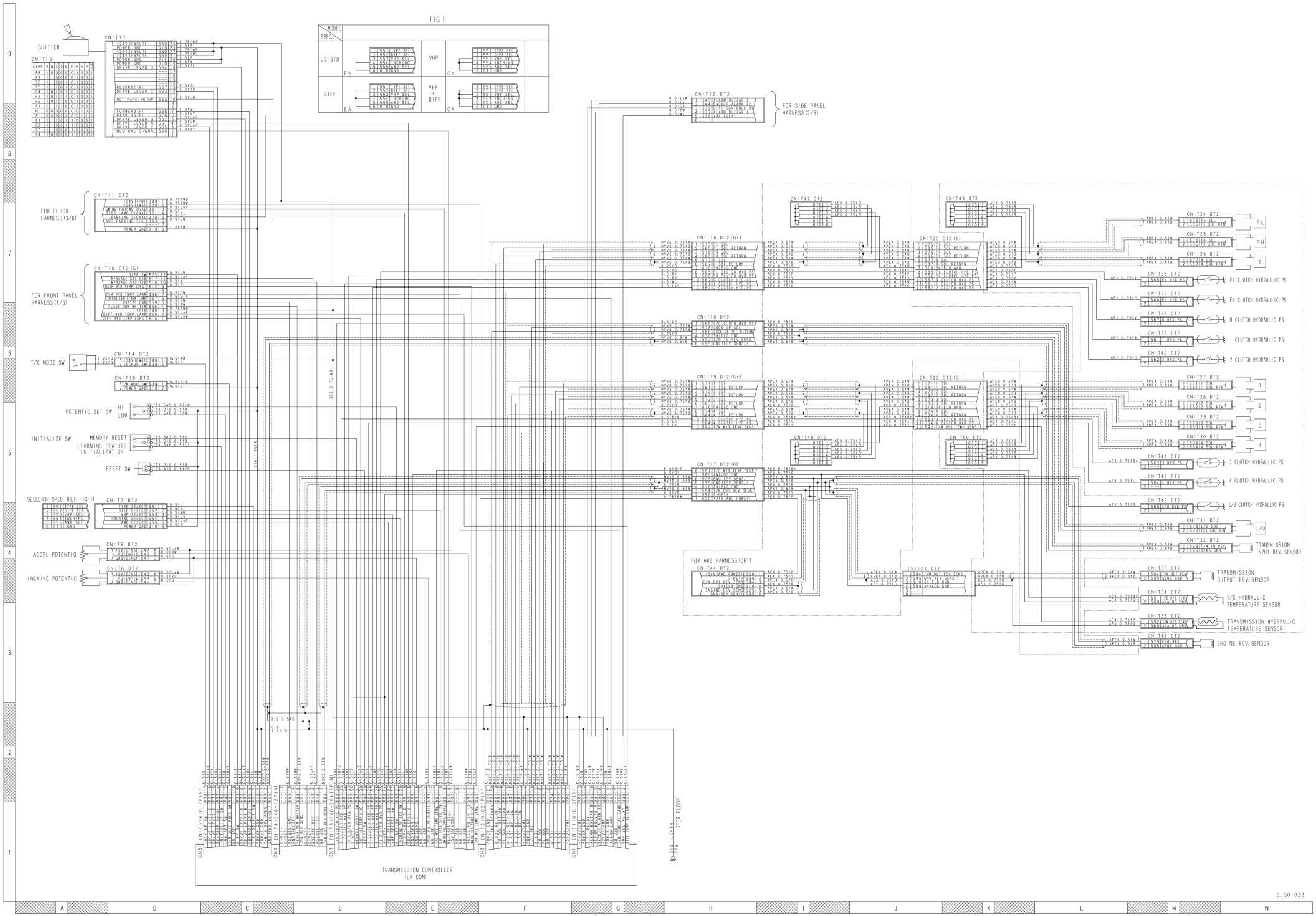
			Cause	Remedy
• 20 – 30 V • Turn starting switch ON	1 Is the voltage normal between FT23 and the chassis?	NO	Open circuit in the wiring harness between FT23 and FP1 (Male) (5)	Repair or replace
	YES			
• 10 – 100 Ω • Turn starting switch OFF • Disconnect E4	2 Is the resistance normal between E4 (Male) (1) and the chassis?	NO	Open circuit in the wiring harness between E4 (Female) (2) and GND, or a defective torque converter oil temperature sensor	Repair or replace
	YES			
• 10 – 100 Ω • Turn starting switch OFF • Disconnect FP1	3 Is the resistance normal between FP1 (Female) (6) and the chassis?	NO	Open circuit or short circuit to ground in the wiring harness between FP1 (Female) (6) and E4 (Female) (1)	Repair or replace
	YES		Defective torque converter oil temperature gauge	Replace

M-19 RELATED ELECTRICAL CIRCUIT DIAGRAM



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ELECTRICAL CIRCUIT DIAGRAM (6/6) (Serial No.: 10001 – 11000)



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