SHOP MANUAL

KOMATSU®

D375A-5

Machine model	Serial number
D375A-5	**18001 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.

- D375A-5 mounts the SA6D170E-3 engine.
  For details of the engine, see the 170-3 Series Engine Shop Manual.

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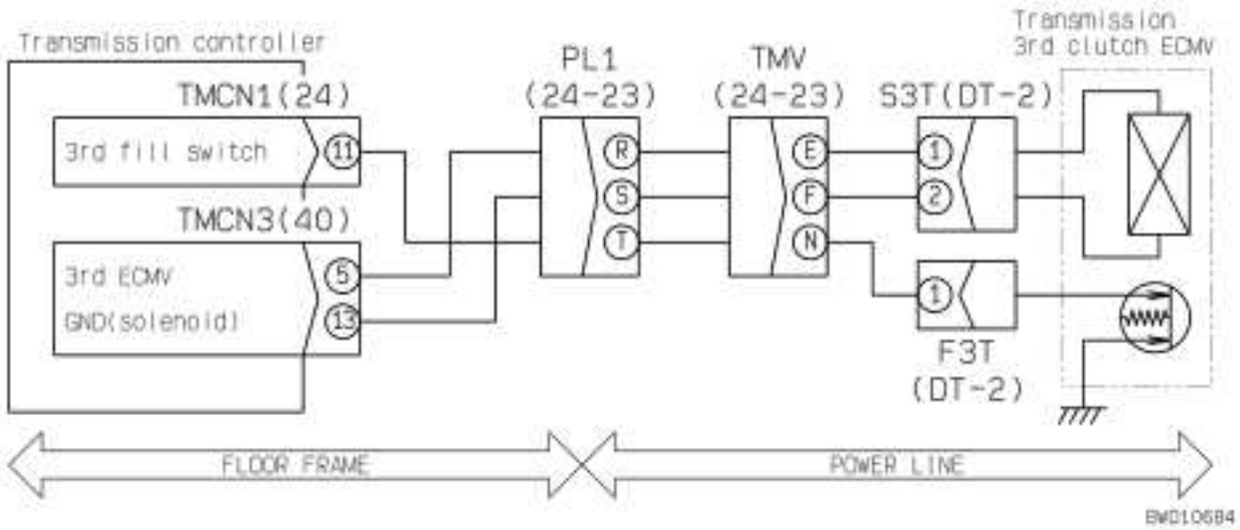
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SERVICE CODE E0268 (DEFECTIVE ENGAGEMENT OF TRANSMISSION 3RD CLUTCH)

User code	Service code	Trouble	Defective engagement of transmission 3rd clutch (Transmission controller system)
CALL03	E0268		
Contents of trouble	• When signal is output to transmission 3rd clutch solenoid circuit, fill switch signal is not turned ON.		
Action of controller	• Flashes caution lamp and turns on caution buzzer. • Limits operation of engine and transmission.		
Problem that appears on machine	• Once machine is stopped, engine speed is limited to medium (half). • Once machine is stopped, travel is limited to F1 and R1.		
Related information	• Inputting from 3rd clutch fill switch (ON·OFF) can be checked in monitoring mode. (Code 7H: Transmission fill switch input) • Method of reproducing service code: Start engine and drive in F3 or R3. ⚠ When troubleshooting by operating clutch, set system in adjustment mode (Code: Co) so that machine will not start.		

	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Defective 3rd clutch fill switch (Internal short circuit)	★Prepare with starting switch OFF, then start engine and carry out troubleshooting.			
			F3T (male)	PCCS lever	Resistance	
			Between ① – chassis ground	Other than F3·R3	Min. 1 MΩ	
				F3·R3	Max. 1 Ω	
	2	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between TMCN1 (female) ⑪ – F3T (female) ①		Resistance	Max. 1 Ω
	3	Defective transmission controller	★Prepare with starting switch OFF, then start engine and carry out troubleshooting.			
			TMCN1	PCCS lever	Voltage	
			Between ⑪ – chassis ground	Other than F3·R3	20 – 30 V	
				F3·R3	Max. 1 V	
	4	Defective hydraulic system	If electric system does not have abnormality, hydraulic system may have. Carry out related troubleshooting (H-mode).			

Circuit diagram related to transmission 3rd clutch ECMV



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SERVICE CODE E0781 (DISCONNECTION OR SHORT CIRCUIT IN PARKING BRAKE LEVER SWITCH SYSTEMS)

User code	Service code	Trouble	Disconnection or short circuit in parking brake lever switch systems (Steering controller system)
CALL03	E0781		
Contents of trouble	• Signals of both parking brake lever switch circuit systems are turned ON or OFF simultaneously.		
Action of controller	• Flashes caution lamp and turns on caution buzzer. • Assumes that parking brake lever is at FREE position. • Limits operation of engine and transmission.		
Problem that appears on machine	• Travel lock does not work (Mechanical parking brake and pedal work normally.) • Once machine is stopped, engine speed is limited to medium (half). • Once machine is stopped, travel is limited to F1 and R1.		
Related information	★ Since parking brake switch signal is used by both transmission controller and steering controller, related codes may be displayed simultaneously, depending on troubled part. (Related codes: E0238, E0239, E0782) • Inputting from parking brake switch (ON-OFF) can be checked in monitoring mode. (Code L9: Steering controller switch input 1) • Method of reproducing service code: Turn starting switch ON and operate parking brake lever.		

When only service code [E0781] is displayed

		Cause	Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between NGICN2 (female) ⑤ – circuit branching point	Resistance	Max. 1 Ω
			Wiring harness between NGICN2 (female) ⑮ – circuit branching point	Resistance	Max. 1 Ω
	2	Defective steering controller	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.		
			NGICN2	Parking brake lever: At FREE	Parking brake lever: At LOCK
			Between ⑤ – chassis ground	Max. 1 V	5 – 11 V
			Between ⑮ – chassis ground	5 – 11 V	Max. 1 V

When service codes [E0781] and [E0238] are displayed simultaneously

		Cause	Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	Defective parking brake lever switch (Internal disconnection or short circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			NSW	Parking brake lever: At FREE	Parking brake lever: At LOCK
			Between Ⓐ – Ⓑ	Max. 1 Ω	Min. 1 MΩ
			Between Ⓐ – Ⓒ	Min. 1 MΩ	Max. 1 Ω
	2	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between NSW (female) Ⓑ – circuit merging point	Resistance	Max. 1 Ω
			Wiring harness between NSW (female) Ⓒ – circuit merging point	Resistance	Max. 1 Ω
			Wiring harness between NSW (female) Ⓐ – chassis ground	Resistance	Max. 1 Ω
	3	Short circuit with chassis ground in wiring harness (Contact with ground circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Short circuit of wiring harness between NSW (female) Ⓑ – NGICN2 (female) ⑤ – TMCN1 (female) ⑱ with chassis ground	Resistance	Min. 1 MΩ
			Short circuit of wiring harness between NSW (female) Ⓒ – NGICN2 (female) ⑮ – TMCN1 (female) ⑫ with chassis ground	Resistance	Min. 1 MΩ
	4	Short circuit with power source in wiring harness (Contact with 24 V circuit)	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.		
			Short circuit of wiring harness between NSW (female) Ⓑ – NGICN2 (female) ⑤ – TMCN1 (female) ⑱ with chassis ground	Voltage	Max. 1 V
			Short circuit of wiring harness between NSW (female) Ⓒ – NGICN2 (female) ⑮ – TMCN1 (female) ⑫ with chassis ground	Voltage	Max. 1 V

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H-1 NO FORCE (NO DRAWBAR PULL)

Trouble	• No force (No drawbar pull)
Related information	• Before troubleshooting, check that the power train oil level is normal.

	Cause		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	Defective power train pump	The power train pump is supposed to be defective. Check it directly.		
	2	Internal defect of torque converter	★ Set the starting switch to OFF for preparation and idle the engine at a high speed for troubleshooting (after checking that the transmission main relief pressure is normal).		
			PCCS lever	Torque converter inlet pressure	Torque converter outlet pressure
			Full neutral	0.8 – 1.0 MPa (8.0 – 10.0 kg/cm²)	39.2 – 63.7 MPa (4.0 – 6.5 kg/cm²)
	3	Incorrect pressure set to transmission main relief valve	★ Set the starting switch to OFF for preparation and idle the engine at a high speed for troubleshooting.		
			PCCS lever	Transmission main relief pressure	
			Full neutral	2.45 – 2.94 MPa {25.0 – 30.0 kg/cm²}	
	4	Defective operation of transmission main relief valve	★ Set the starting switch to OFF for preparation and troubleshoot while keeping it to OFF.		
			Check it directly that the spring free length (120.3 mm) is normal and that the spool moves smoothly.		
	5	Defective operation of transmission valve (ECMV)	★ Set the starting switch to OFF for preparation and idle the engine at a low speed for troubleshooting (after checking that the transmission main relief pressure is normal).		
			Transmission clutch	Clutch pressure	
			FWD	2.35 – 2.94 MPa {24.0 – 30.0 kg/cm²}	
			REV	2.35 – 2.94 MPa {24.0 – 30.0 kg/cm²}	
			1ST	1.96 – 2.55 MPa {20.0 – 26.0 kg/cm²}	
			2ND	2.35 – 2.94 MPa {24.0 – 30.0 kg/cm²}	
			3RD	2.35 – 2.94 MPa {24.0 – 30.0 kg/cm²}	
	6	Internal defect of transmission	★ Set the starting switch to OFF for preparation and idle the engine at a high speed for troubleshooting.		
			Measuring conditions	Engine speed	
			F3 stall	1,430 rpm	
			F3 stall + Work equipment relief	1,160 rpm	
	7	Defective operation (dragging) of brake	★ Move the machine to a flat ground and start the engine for troubleshooting.		
			Idle the engine at a low speed and operate F2. Unless the machine moves, the brake is being dragged. (Execute the troubleshooting of "Brake does not work.")		
	8	Defective steering clutch	★ Set the starting switch to OFF for preparation and idle the engine at a high speed for troubleshooting (after checking that the transmission main relief pressure is normal).		
			PCCS lever	Left stroke end	Right stroke end
			Left clutch pressure	Min. 2.4 MPa {Min. 24 kg/cm²}	0 {0}
			Right clutch pressure	0 {0}	Min. 2.4 MPa {Min. 24 kg/cm²}
			Left brake pressure	0 {0}	Min. 2.4 MPa {Min. 24 kg/cm²}
			Right brake pressure	Min. 2.4 MPa {Min. 24 kg/cm²}	0 {0}
			When the oil pressure is abnormal, execute the troubleshooting of "Steering is not possible."		

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UNDERCARRIAGE TROUBLESHOOTING REPORT (IMPACT)

(Program form No.: SELA195001)

KUC

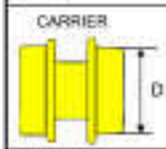
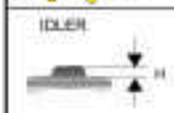
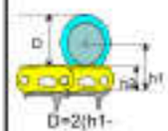
Komatsu
Undercarriage Inspection



Customer name:

Address:

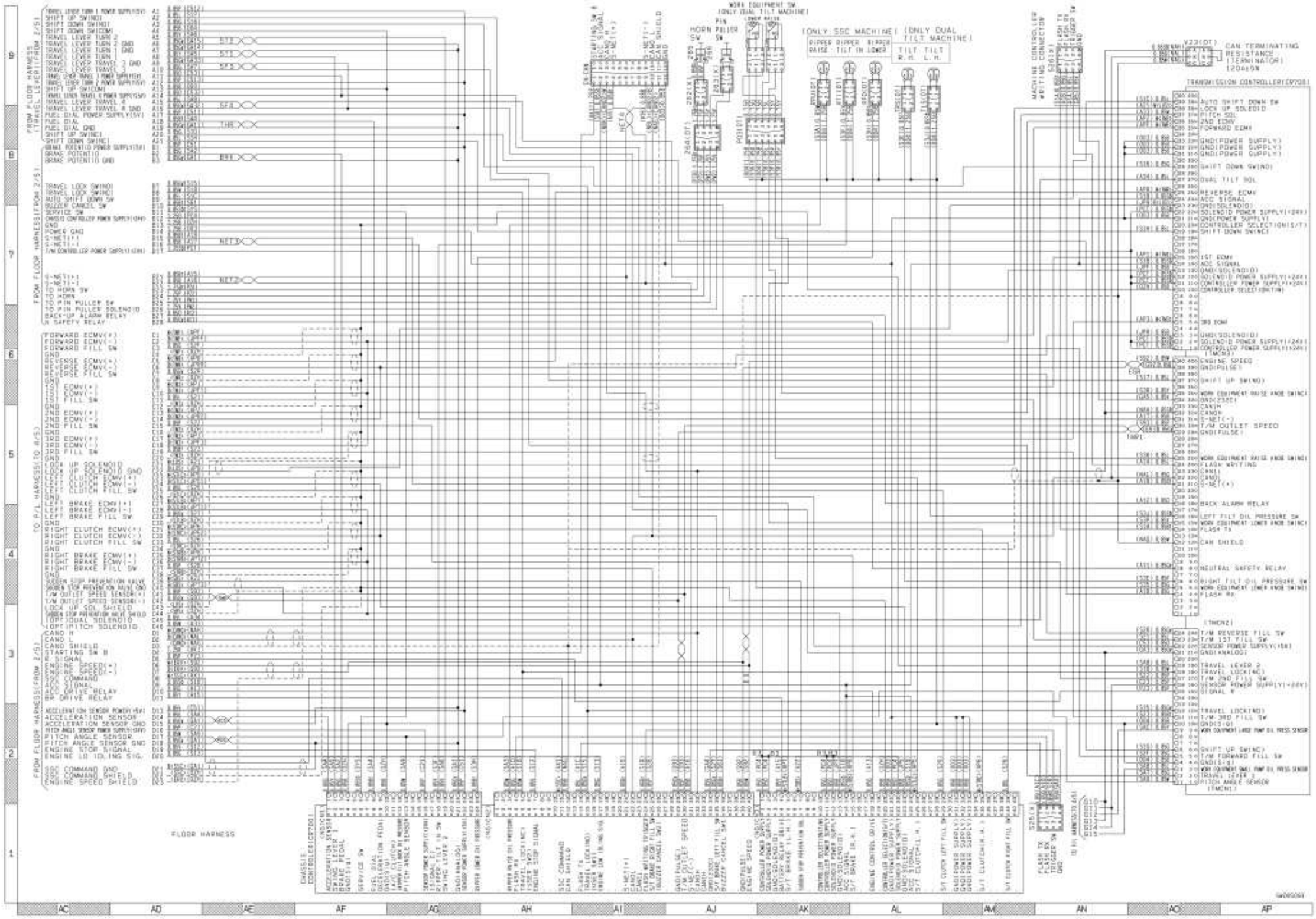
Model	D375A-5	Serial#		Equip#		Work Order No	
Location		SMR				Wet,AR,HD or Dry	Wet
Soil condition		Dealer				Shoe width (mm)	
Working condition		Inspector				Shoe type	SINGLE
		Insp.Date(yy/mm/dd)			(yy/mm/dd)	Wear type	IMPACT

			New	100% Wear	Measured mm	Wear %	SMR New	SMR Rebuilt	Hours on Parts:	Comments/Observation
LINK PITCH 	R	LH	1121.2	1133.2						
		RH	1121.2	1133.2						
	M	LH	280.30	283.30						
		RH	280.30	283.30						
 LINK HEIGHT		LH	161.0	163.0						
		RH	161.0	163.0						
BUSHIN G 		LH	98.5	92.5			New	Turned		
		RH	98.5	92.5			New	Turned		
GROUSER HEIGHT 		LH	93.0	30.0						
		RH	93.0	30.0						
CARRIER 	Front	LH	210.0	185.0						
		RH	210.0	185.0						
	Rear	LH	210.0	185.0						
		RH	210.0	185.0						
IDLER 	Front	LH	23.5	36.0						
		RH	23.5	36.0						
	Rear	LH	23.5	36.0						
		RH	23.5	36.0						
TRACK ROLLER  D=2(h1-	1	LH	270.0	200.0						
	2	LH	270.0	200.0						
	3	LH	270.0	200.0						
	4	LH	270.0	200.0						
	5	LH	270.0	200.0						
	6	LH	270.0	200.0						
	7	LH	270.0	200.0						
	8	LH	270.0	200.0						
	9	LH	270.0	200.0						
	10	LH	270.0	200.0						
	1	RH	270.0	200.0						
	2	RH	270.0	200.0						
	3	RH	270.0	200.0						
	4	RH	270.0	200.0						
	5	RH	270.0	200.0						
	6	RH	270.0	200.0						
	7	RH	270.0	200.0						
	8	RH	270.0	200.0						
	9	RH	270.0	200.0						
	10	RH	270.0	200.0						
SPROCKET 		LH	0.0	8.0						
		RH	0.0	8.0						

Remarks:

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ELECTRICAL CIRCUIT DIAGRAM 3/5



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