Shop Manual
Part I

VEBM920100

WA380-5H

WHEEL LOADER

MODEL	SERIAL NUMBER
WA380-5H	WA380H50051 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.

- WA380-5 mount the SAA6D114E-2 engine.
  For details of the engine, see the 114-2 Series Engine Shop Manual

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SPECIFICATIONS

Machine model				WA380-5	
Serial No.				WA380H50051 and up	
Weight	Operating weight		kg	16,150	
	Distribution (front) SAE travel posture		kg	7,785	
	Distribution (rear) SAE travel posture		kg	8,365	
Performance	Bucket capacity (piled)		m^3	3.3	
	Rated load		kg	5,280	
				N mode	P mode
	Travel speed	FORWARD 1st	km/h	4.8	6.3
		FORWARD 2nd	km/h	8.5	11.4
		FORWARD 3rd	km/h	15.3	20.2
		FORWARD 4th	km/h	24.7	31.5
		REVERSE 1st	km/h	5.2	6.7
		REVERSE 2nd	km/h	9.1	11.8
		REVERSE 3rd	km/h	16.2	21.0
		REVERSE 4th	km/h	25.5	32.5
	Max. rimpull	FORWARD	kN (kg)	130 (13,240)	168 (17,170)
		REVERSE	kN (kg)	122 (12,400)	158 (16,075)
	Gradeability		deg	25	
	Min. turning radius	(Center of outside wheel)	mm	5,620	
	SAE travel posture	(tip of BOC)	mm	6,540/6,580	
Dimensions	Overall length (with BOC)		mm	8,235	
	Overall width (chassis)		mm	2,695	
	Bucket width (with BOC)		mm	2,905	
	Overall height (top of cab)		mm	3, 315	
	Overall height (Bucket approx. raised to max.)		mm	5,565	
	Wheel base		mm	3,300	
	Tread		mm	2,160	
	Min. ground clearance		mm	390	
	Max. height of bucket hinge pin		mm	4,030	
	Dumping clearance (tip of BOC)		mm	2,885 / 2,800	
	Dumping reach (tip of BOC)		mm	1,165 / 1,210	
	Steering angle		deg	40	
	Bucket tilt angle (travel posture)		deg	50	
	Bucket tilt angle (max. height)		deg	65	
	Bucket dump angle (max. height)		deg	49	
	Digging depth (10° dump) (tip of BOC)		mm	310/360	

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ERROR CODE [D191KB]

Action Code	Error Code	Controller Code	Trouble	Neutral safety relay output system grounded
E01	D191KB	TM		
Description of Trouble	• No signal is output to the neutral safety relay due to grounding.			
Controller Reaction	• Turns output to the neutral safety relay OFF when it is grounded.			
Effect on Machine	• The engine cannot be started when the right FNR switch or joystick mode is on (Can be started in steering wheel mode).			
Related Information	—			

	Causes		Standard Values in Normal State and Remarks on Troubleshooting			
Possible Causes and Standard Values	1	Defective exchange relay (L115)	1) Turn starting switch OFF. 2) Replace relay. 3) Turn starting switch ON. 4) Turn right or joystick FN 5) Turn FNR selector switch ON.			
			This Error code (D191KB) issued		Relay L115 is not defective.	
			This Error code (D191KB) not issued		Relay L115 is defective.	
	2	Defective neutral safety relay (L116)	1) Turn starting switch OFF. 2) Replace relay. 3) Turn starting switch ON. 4) Turn right or joystick FNR switch 5) Turn FNR selector switch ON.			
			This Error code (D191KB) issued		Relay L116 is not defective.	
			This Error code (D191KB) not issued		Relay L116 is defective.	
	3	Wiring harness ground fault	1) Turn starting switch OFF. 2) Disconnect connectors L63, L101 and L102. 3) Connect T-adapter.			
			Between L63 (Female) J/L101 (Female) D – body		Resistance	1 MΩ and above
			Between L101 (Female) C/L102 (Female) A – body		Resistance	1 MΩ and below
	4	Defective transmission and fan pump motor controller	1) Turn starting switch OFF. 2) Disconnect connector L63. 3) Connect T-adapter. 4) Turn starting switch ON. 5) Turn forward-reverse lever to "N".			
			When right FNR switch mounted (Right FNR switch = ON)			
			Between L63 J – body	Right FNR switch = N	Voltage	17 – 30 V
				Other than above	Voltage	1 V and below
			When joystick mounted (Arm rest lock and joystick switch = ON)			
			Between L63 J – body	Joystick FNR switch = "N" and joystick lever = Neutral	Voltage	17 – 30 V
				Joystick FNR switch ≠ N	Voltage	1 V and below
				Joystick lever being operated	Voltage	1 V and below

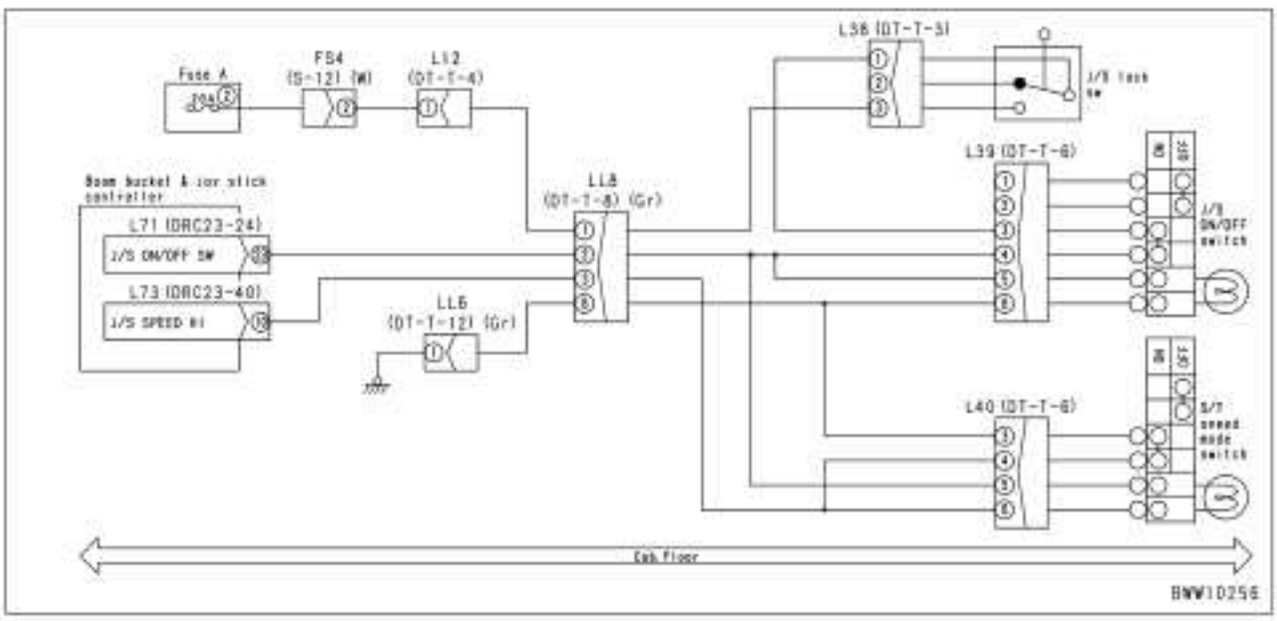
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ACTION CODE: [WRK-11]

Action Code	Error Code	Controller Code	Trouble	Defective joystick steering speed HI/LO switch system
WRK-11	—	(WRK)		
Description of Trouble	• The joystick steering speed slows or accelerates (Cannot be switched between HI/LO) due to defective joystick steering speed HI/LO switch system.			
Controller Reaction	• No reaction.			
Effect on Machine	• The joystick steering speed slows or accelerates (Cannot be switched between HI/LO).			
Related Information	• Can be checked with the monitoring function (Code: 40910_D-IN-8).			

	Causes		Standard Value in Normal State and Remarks on Troubleshooting			
Possible Causes and Standard Values	1	Defective joystick HI/LO switch	1) Turn starting switch OFF. 2) Disconnect connector L40. 3) Connect T-adapter.			
			Between L40 (Female) ④ – ③	Joystick ON/OFF switch = ON	Resistance	1 Ω and below
				Other than above = OFF	Resistance	1 MΩ and above
	2	Wiring harness discontinuity (Disconnection or defective contact)	1) Turn starting switch OFF. 2) Disconnect connectors L73 and L40. 3) Connect T-adapter.			
			Wiring harness between L73 ⑩ – L40 (Female) ④		Resistance	1 Ω and below
			Between L40 (Female) ③ – body		Resistance	1 Ω and below
	3	Hot-shorted wiring harness (Contacting 24 V harness)	1) Turn starting switch OFF. 2) Disconnect connectors L73, and L40. 3) Connect T-adapter. 4) Turn starting switch ON.			
			Between L73 ⑩, L40 (Female) ④ – body		Voltage	1 V and below
	4	Wiring harness ground fault ★ Fuse A-2 blows at switch operation in this case.	1) Turn starting switch OFF. 2) Disconnect connector L73, S04, L71, L40 and L40.			
			Between L73 ⑩, L40 (Female) ④ – body		Resistance	1 MΩ and above
	5	Defective work equipment controller	1) Turn starting switch OFF. 2) Disconnect connector L71. 3) Insert T-adapter. 4) Turn starting switch ON.			
			Between L73 ⑩ – body	Joystick ON/OFF switch = ON	Voltage	20 – 30 V
				Other than above	Voltage	1 V and below

Related circuit diagram



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Assembly

★ Assemble each component after having cleaned it thoroughly and having checked that there are no dirt and scratches.

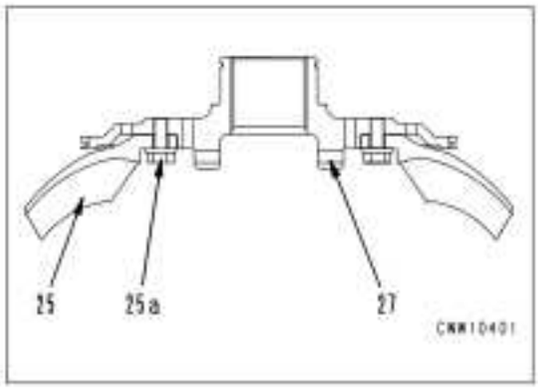
★ Check that the snap ring is inserted correctly in the groove.

1. Complete turbine

   Mount turbine (25) on boss (27) and tighten bolt (25a).

   Bolt: **Adhesive (LT-2)**

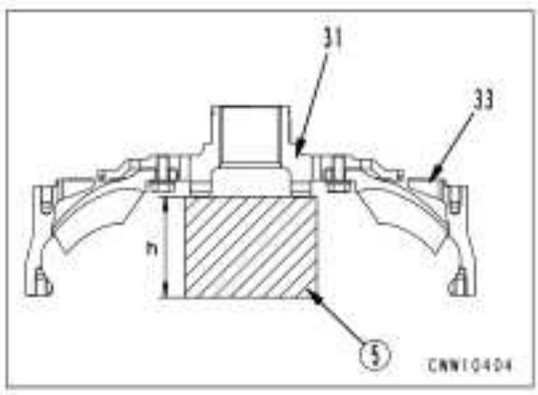
   Bolt: **58.8 ~ 73.5 Nm {6.0 ~ 7.5 kgm}**



2. Turbine and case

   Load complete turbine (31) on block ⑤ and set drive case (33).

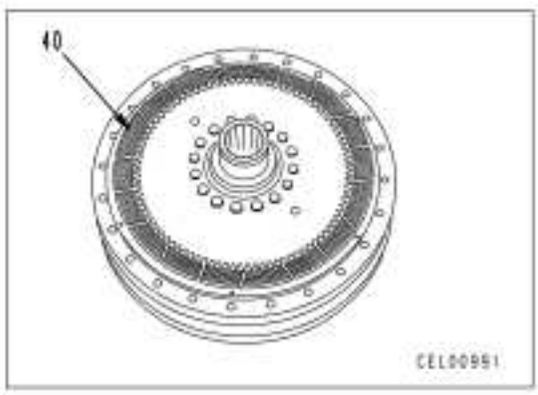
   ★ Height **h** of block ⑤: About 90 mm



3. Disc

   Mount disc (40).

   ★ Coat the sliding surface of the disc with engine oil and mount the disc.



4. Complete housing assembly

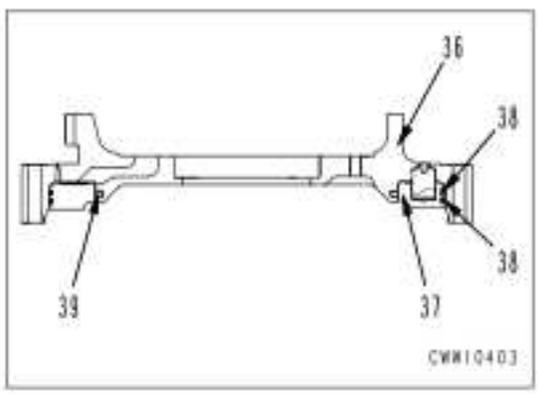
   1) Fine assembly of complete housing

      I. Mount seal ring (39) on complete housing (36).

      External surface of seal ring: **Grease (G2-LI)**

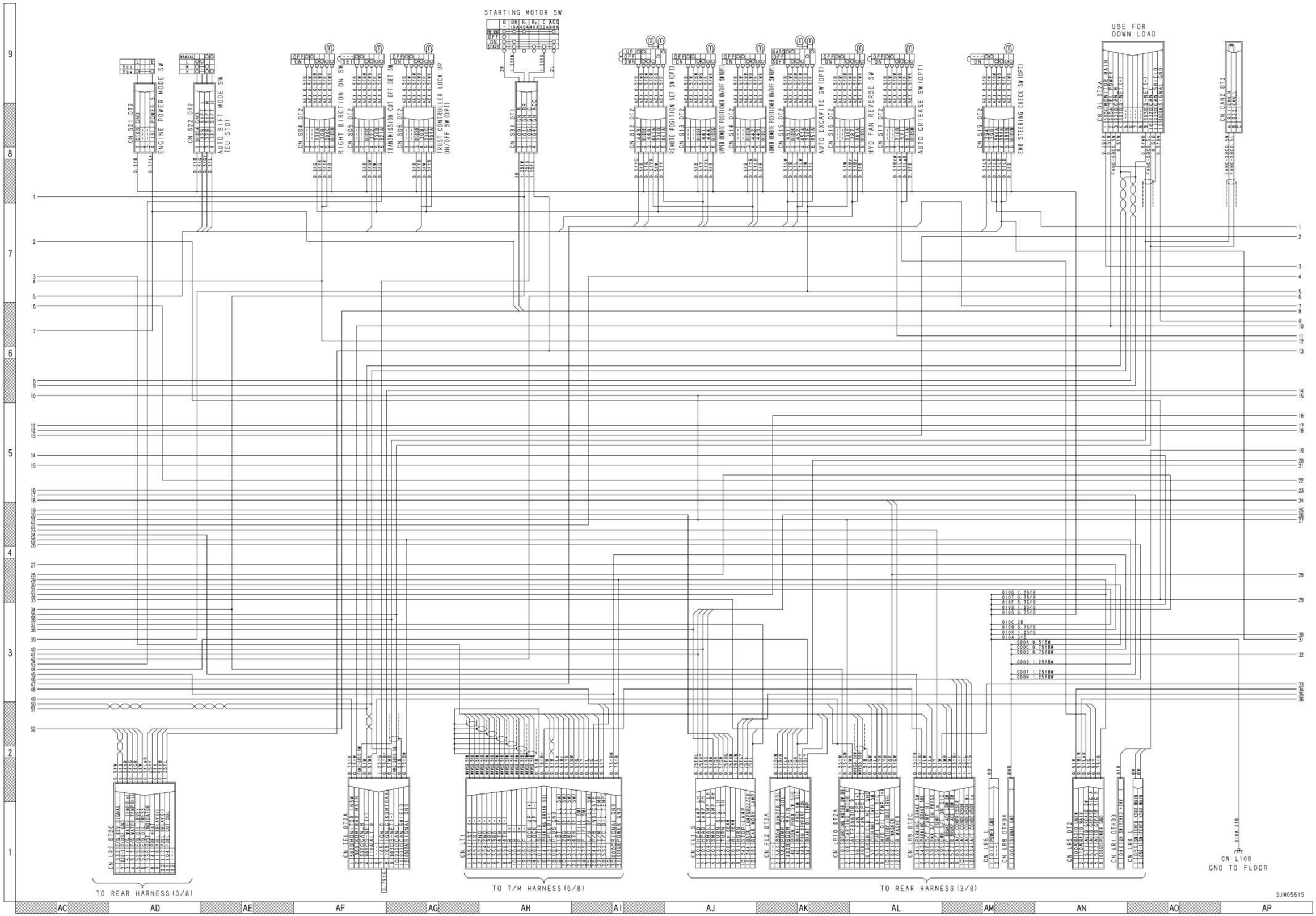
      II. Mount seal ring (38) on piston (37) and mount it on complete housing (36).

      ★ Because seal ring (38) has the assembly orientation, assemble it as shown in the following diagram.



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ELECTRIC CIRCUIT DIAGRAM (2/8)



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