WSM

WORKSHOP MANUAL
TRACTOR

B2050,B2350,B2650,B3150

Kubota

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2. SERVICING SPECIFICATIONS

ENGINE BODY

Item		Factory Specification	Allowable Limit
Compression Pressure		3.73 to 4.11 MPa 38.0 to 42.0 kgf/cm^2 541 to 597 psi	2.26 MPa 23.0 kgf/cm^2 327 psi
• Variance Among Cylinders		–	10 % or less
Valve Clearance (Cold)		0.145 to 0.185 mm 0.0057 to 0.0073 in.	–
Top Clearance	D1105, V1505	0.55 to 0.75 mm 0.022 to 0.029 in.	–
	D1305	0.80 to 1.0 mm 0.032 to 0.039 in.	–
Cylinder Head Surface	Flatness	–	0.05 mm 0.002 in.
Valve Recessing	Intake and Exhaust	0.050 to 0.25 mm 0.0020 to 0.0098 in.	0.40 mm 0.016 in.
Valve Stem to Valve Guide	Clearance	0.035 to 0.065 mm 0.0014 to 0.0025 in.	0.10 mm 0.0039 in.
• Valve Stem	O.D.	6.960 to 6.975 mm 0.2741 to 0.2746 in.	–
• Valve Guide	I.D.	7.010 to 7.025 mm 0.2760 to 0.2765 in.	–
Valve Guide (Intake and Exhaust)		7.010 to 7.025 mm 0.2760 to 0.2765 in.	–
Valve Face	Angle (Intake)	1.047 rad 60 °	–
	Angle (Exhaust)	0.785 rad 45 °	–
Valve Seat	Angle (Intake)	1.047 rad 60 °	–
	Angle (Exhaust)	0.785 rad 45 °	–
	Width	2.12 mm 0.0835 in.	–
Valve Spring	Free Length	37.0 to 37.5 mm 1.46 to 1.47 in.	36.5 mm 1.44 in.
	Tilt	–	1.0 mm 0.039 in.
	Setting Load	117.4 N / 31.0 mm 11.97 kgf / 31.0 mm 26.39 lbf / 1.22 in.	100.0 N / 31.0 mm 10.20 kgf / 31.0 mm 22.48 lbf / 1.22 in.

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1. TROUBLESHOOTING

Symptom	Probable Cause and Checking Procedure	Solution	Reference Page
Implement Does Not Rise (No Noise)	1. Transmission fluid improper	Check transmission oil	G-8
	2. Hydraulic pump malfunctioning	Solution order 1. Check hydraulic flow test	8-S8
		2. Replace hydraulic pump	8-S11
	3. Relief valve malfunctioning	Solution order 1. Check relief valve	8-S10
		2. Check or adjust relief valve	8-S10
		3. Replace relief valve	8-S10
	4. Piston O-ring or cylinder damaged	Replace O-ring or cylinder	8-S21
	5. Control valve malfunctioning	Replace control valve	8-S16
	6. Control valve improperly adjusted	Check or adjust control valve	8-S19
	7. Control valve improperly assembled	Repair control valve	8-S19
Implement Does Not Rise (Noise)	1. Transmission fluid improper	Check transmission oil	G-8
	2. Oil filter cartridge clogged	Replace oil filter cartridge	G-30, G-35
	3. Suction pipe loosen or broken	Check or repair suction pipe	8-S11
	4. Suction pipe connecting hose loosen or broken	Check or repair suction hose	8-S11
	5. Suction pipe O-ring broken	Check or replace O-ring	8-S11
	6. Relief valve setting pressure too low	Solution order 1. Check relief valve	8-S10
		2. Check or adjust relief valve	8-S10
		3. Replace relief valve	8-S10
	7. Hydraulic pump broken	Solution order 1. Check hydraulic flow test	8-S8
		2. Replace hydraulic pump	8-S11
Implement Does Not Reach Maximum Height	1. Feedback rod improperly adjusted	Solution order 1. Check lift arm free play	8-S11
		2. Adjust feedback rod	8-S11
Implement Does Not Lower	1. Control valve malfunctioning	Replace control valve	8-S16

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CHARGING SYSTEM

Symptom	Probable Cause and Checking Procedure	Solution	Reference Page
Charging Lamp Does Not Light when Main Switch is Turned ON	1. Fuse blown (10 A)	Replace wire harness or other	G-40, 9-M1 to 9-M3
	2. Wiring harness disconnected or improperly connected (between main switch **AC** terminal and panel board, between panel board and dynamo)	Repair or replace connector and other	9-M1 to 9-M3
	3. Alternator damaged	Repair or replace alternator	9-S40
	4. Regulator damaged	Replace regulator	9-M18
Charging Lamp Does Not Go Off When Engine Operates	1. Wiring harness disconnected or improperly connected (between main switch terminal and alternator, between panel board and dynamo)	Repair or replace connector and wire harness	9-M1 to 9-M3
	2. Alternator damaged	Repair or replace alternator	9-S40
	3. Regulator damaged	Replace regulator	9-M18

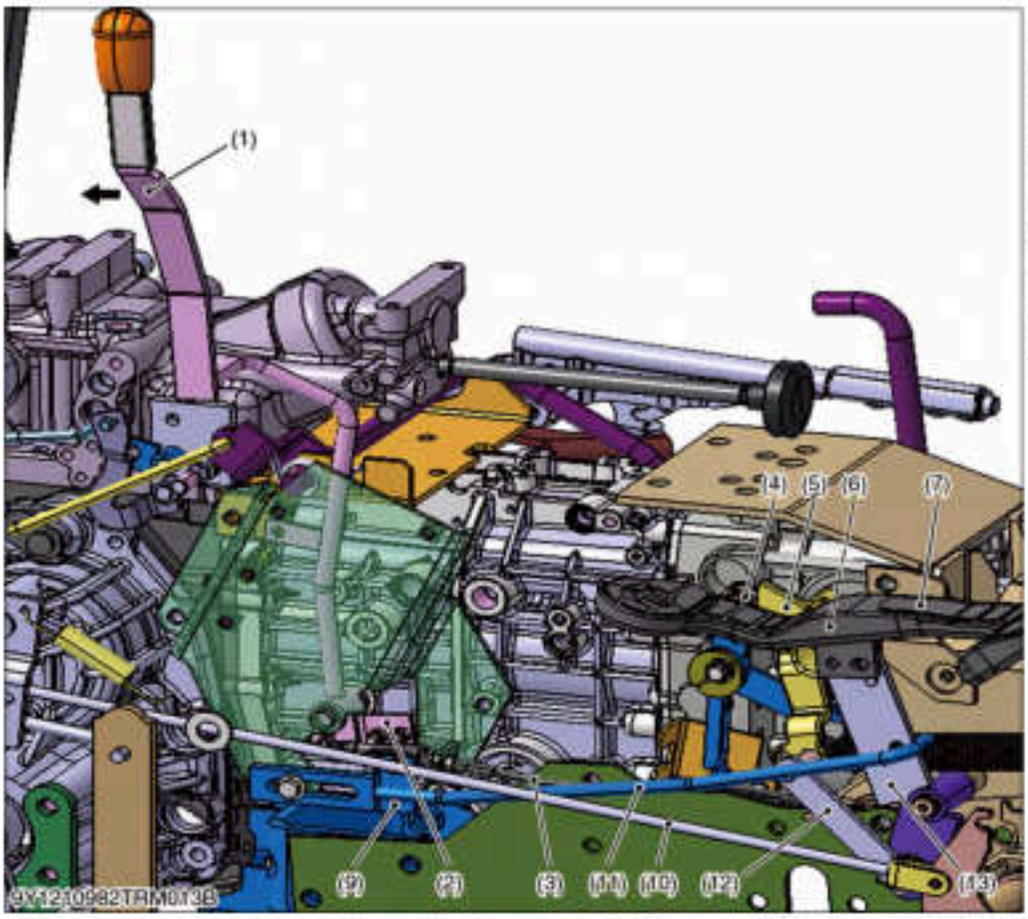
LIGHTING SYSTEM

Symptom	Probable Cause and Checking Procedure	Solution	Reference Page
Head Light Does Not Light	1. Fuse blown (15 A)	Replace wire harness or other	G-40, 9-M1 to 9-M3
	2. Bulb blown	Replace bulb	G-41
	3. Wiring harness disconnected or improperly connected (between main switch **AC** terminal and combination switch terminal, between combination switch **1** terminal and headlight	Repair or replace connector and wire harness	9-M1 to 9-M3
	4. Flasher unit damaged	Repair flasher unit	9-S28
	5. Combination switch damaged	Check or replace Combination switch	9-S22
Tail Light Does Not Light	1. Fuse blown (15 A)	Repair wire harness or other	9-M1 to 9-M3
	2. Bulb blown	Replace bulb	G-41
	3. Wiring harness disconnected or improperly connected (between main switch **AC** terminal and combination switch terminal, between combination switch **T** terminal and tail light)	Repair or replace connector and wire harness	9-M1 to 9-M3
	4. Flasher unit damaged	Repair flasher unit	9-S28
Illumination Light Does Not Light	1. Fuse blown (15 A)	Replace fuse	G-40
	2. Bulb blown	Replace bulb	G-41
	3. Wiring harness disconnected or improperly connected (between main switch **AC** terminal and combination switch terminal, between combination switch **T** terminal and panel board)	Repair or replace connector and wire harness	9-M1 to 9-M3

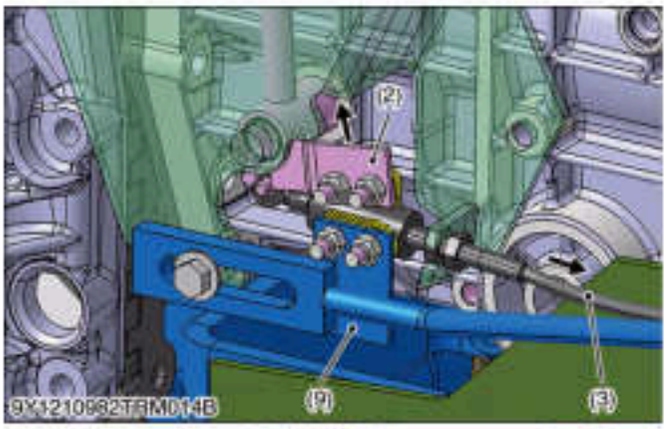
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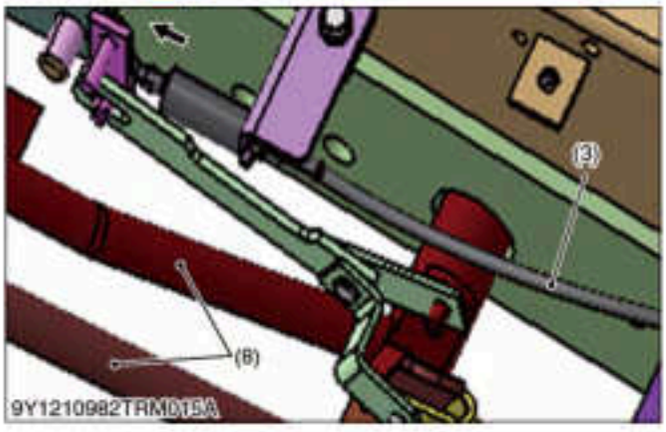
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(2) Cruise Control Release



(1) Cruise Control Lever
(2) Cruise Lock 1
(3) Release Wire
(4) Roller
(5) Neutral Holder
(6) Trunnion Shaft
(7) HST Pedal
(8) Brake Pedal
(9) Cruise Lock 2
(10) Brake Rod
(11) Cruise Rod
(12) HST Plate
(13) HST Lever





When depressing the brake pedals (8), the release wire (3), the cruise control lever (1) and the cruise lock 1 (2) moves like the arrow shown in the pictures.

And the cruise lock 1 (2) release from the cruise lock 2 (9).

Cruise lock is changed from **"ON"** to **"OFF"** position.

Since the cruise lock is kept **"OFF"**, the neutral holder turns counterclockwise, and the roller is returned to **"Neutral"** position. The HST pedal (7) also returns to **"Neutral"** position and the tractor stops.

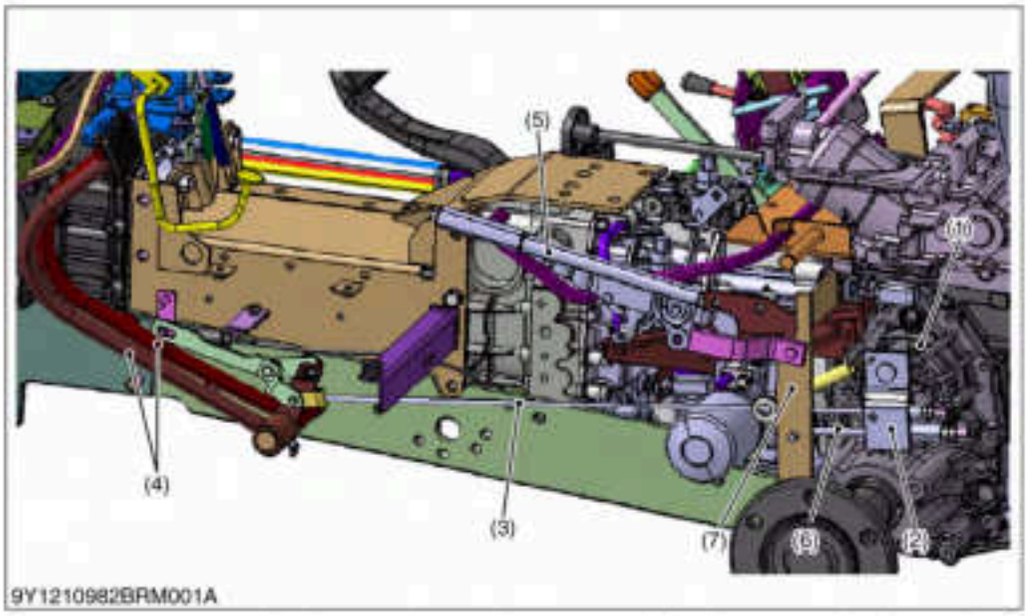
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1. LINKAGE

[1] ROPS

(1) HST Type



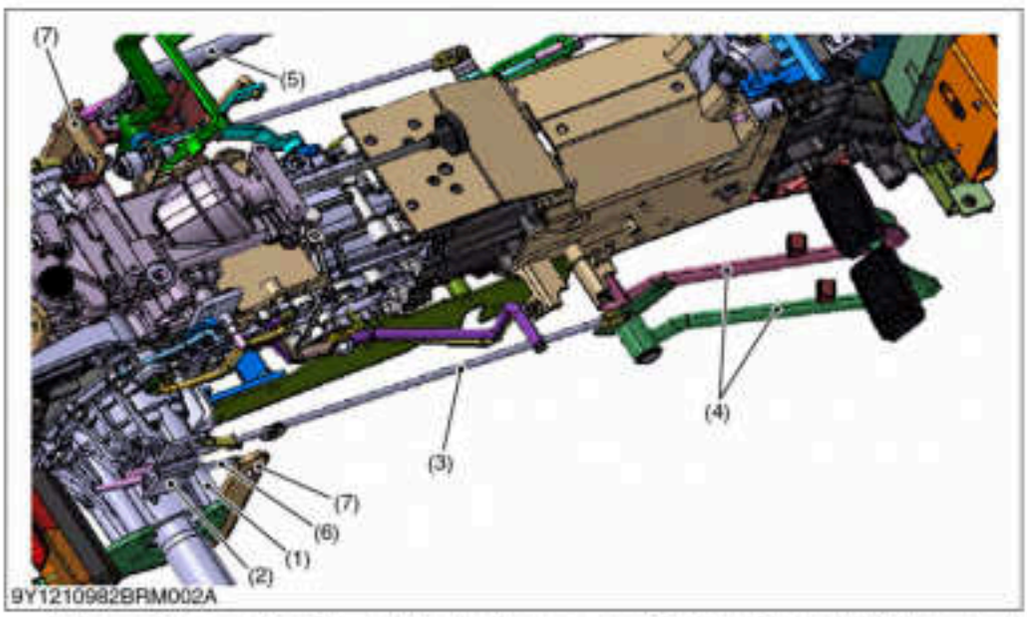
(1) Rear Axle Case
(2) Brake Cam Lever
(3) Brake Rod
(4) Brake Pedal
(5) Parking Brake Lever
(6) Parking Brake Lever Rod
(7) Parking Brake Lever Arm

Independent mechanical wet disc brakes are used for the right and left traveling brakes. They are operated by the brake pedals through the mechanical linkages and provide stable braking and require little adjustment.

The parking brake is a mechanical type which is designed to actuate the traveling brakes through the linkages. Pulling the parking brake lever (5) results in the same state as the obtained when the brake pedals are depressed. Linkage mechanism of brake is different from parking brake.

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(2) Manual Type



(1) Rear Axle Case
(2) Brake Cam Lever
(3) Brake Rod
(4) Brake Pedal
(5) Parking Brake Lever
(6) Parking Brake Lever Rod
(7) Parking Brake Lever Arm

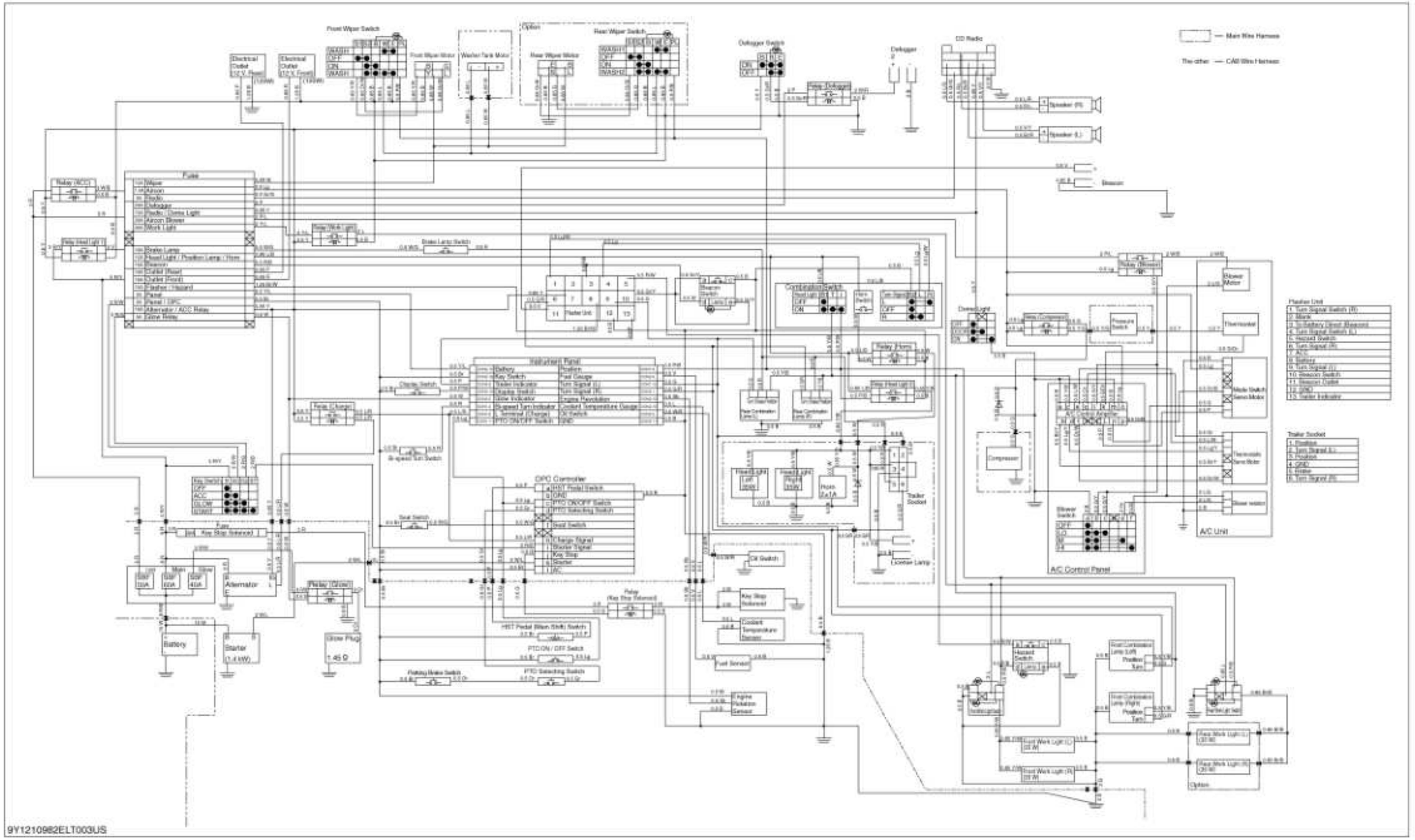
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[3] CABIN MODEL



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