

2007 RAV4 ELECTRICAL WIRING DIAGRAM

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B HOW TO USE THIS MANUAL

[O] System Outline

Current is applied at all times through the STOP fuse to TERMINAL 2 of the stop lamp SW.
When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 8 of the light failure sensor, and also flows through the rear lights warning light to TERMINAL 4 of the light failure sensor.

Stop Light Disconnection Warning

When the ignition SW is turned on and the brake pedal is pressed (Stop lamp SW on), if the stop light circuit is open, the current flowing from TERMINAL 7 of the light failure sensor to TERMINALS 1, 2 changes, so the light failure sensor detects the disconnection and the warning circuit of the light failure sensor is activated.

As a result, the current flows from TERMINAL 4 of the light failure sensor to TERMINAL 11 to GROUND and turns the rear lights warning light on. By pressing the brake pedal, the current flowing to TERMINAL 8 of the light failure sensor keeps the warning circuit on and holds the warning light on until the ignition SW is turned off.

[P] : Parts Location

Code	See Page	Code	See Page	Code	See Page
H4	36	H7	36	H17	38
H6	36	H9	38	J7	38

[Q] : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	18	R/B No.1 (Instrument Panel Brace LH)

[R] : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
3C	22	Instrument Panel Wire and J/B No.3 (Instrument Panel Brace LH)
IB	20	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)

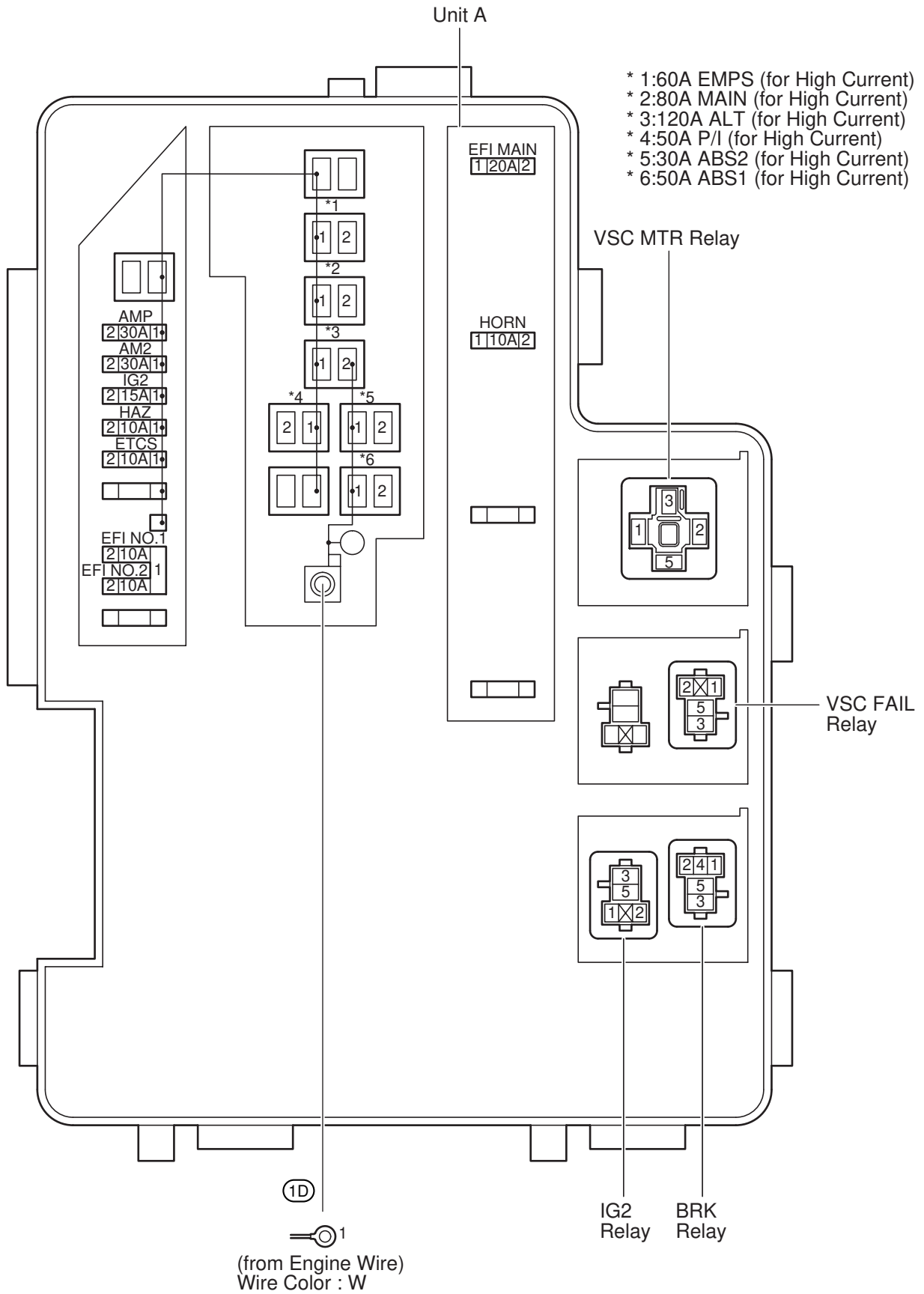
[S] : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
CH1	42	Engine Room Main Wire and Instrument Panel Wire (Left Kick Panel)
HJ1	50	Instrument Panel Wire and Floor Wire (Right Kick Panel)

[T] : Ground Points

Code	See Page	Ground Points Location
H1	50	Under the Left Center Pillar
H2	50	Back Panel Center

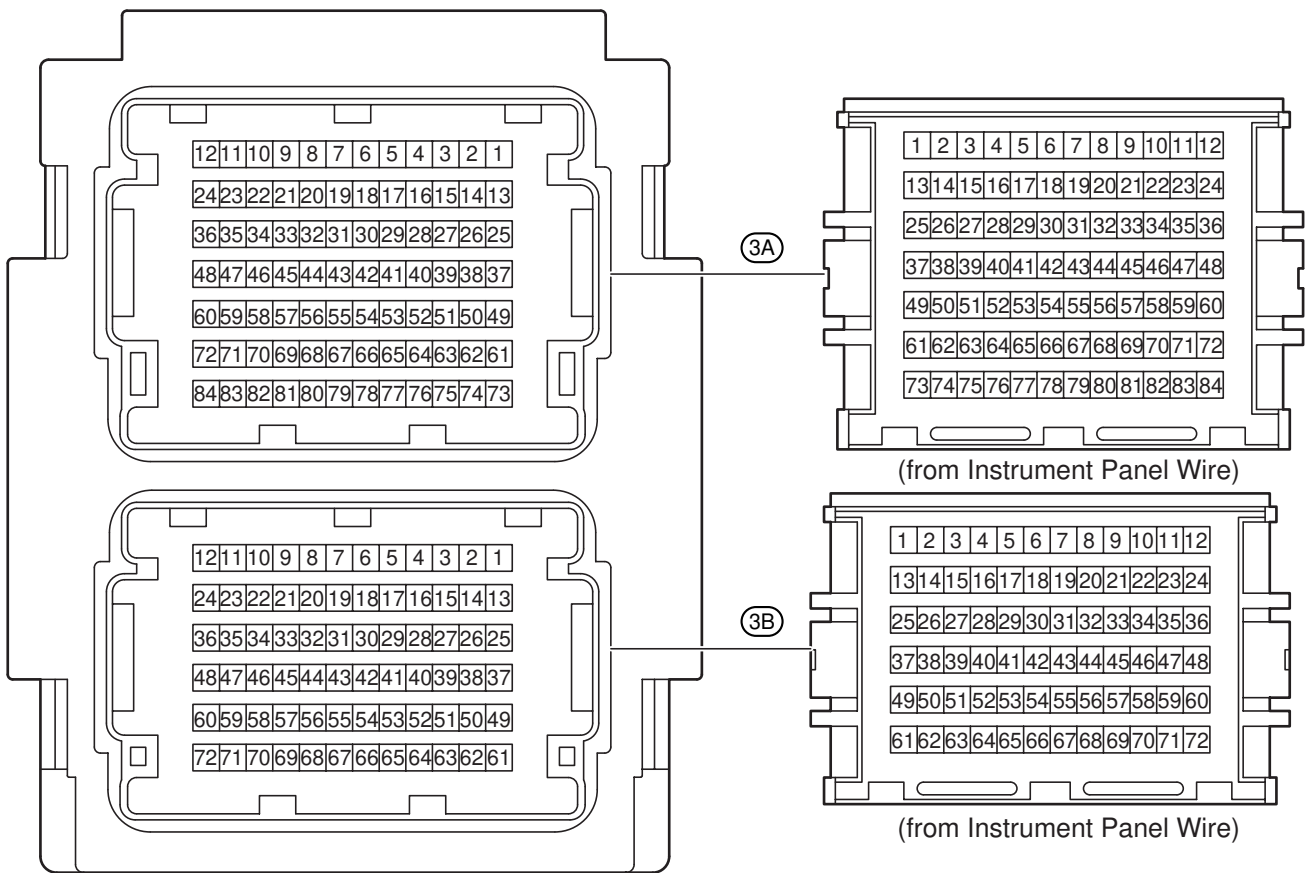
[2AZ-FE]



F RELAY LOCATIONS

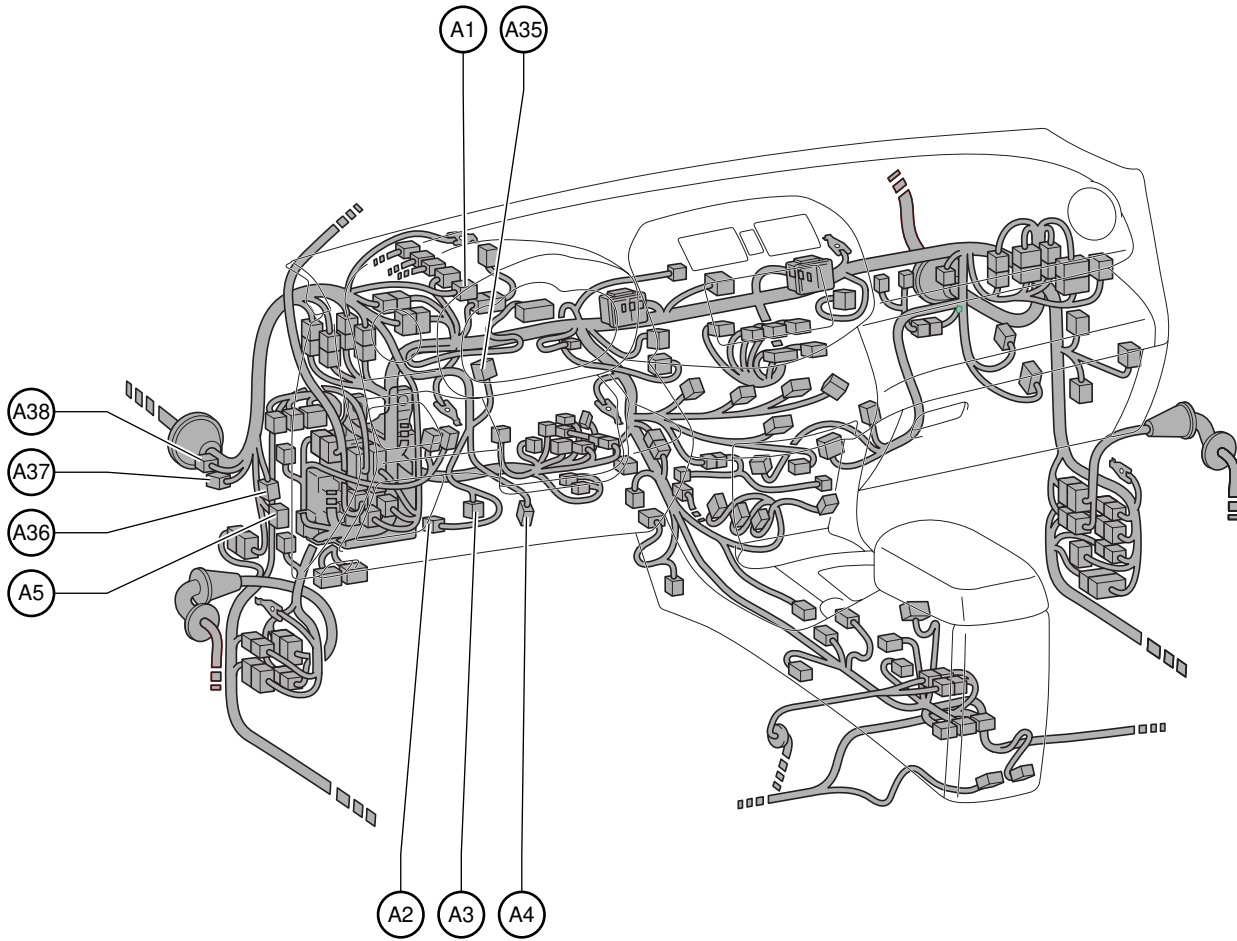
○ : J/B No.3

Instrument Panel Center (See Page 20)



G ELECTRICAL WIRING ROUTING

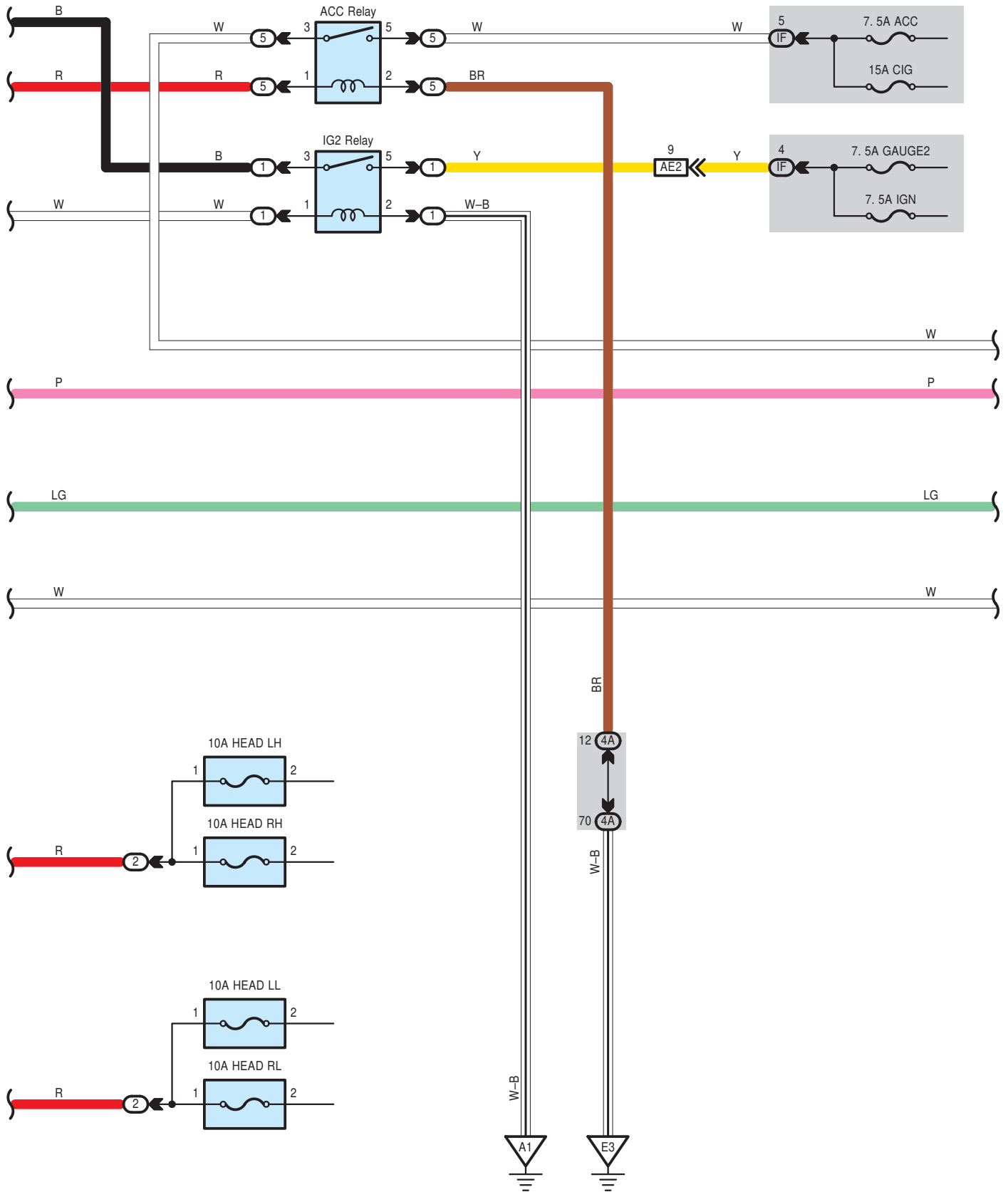
Position of Parts in Instrument Panel



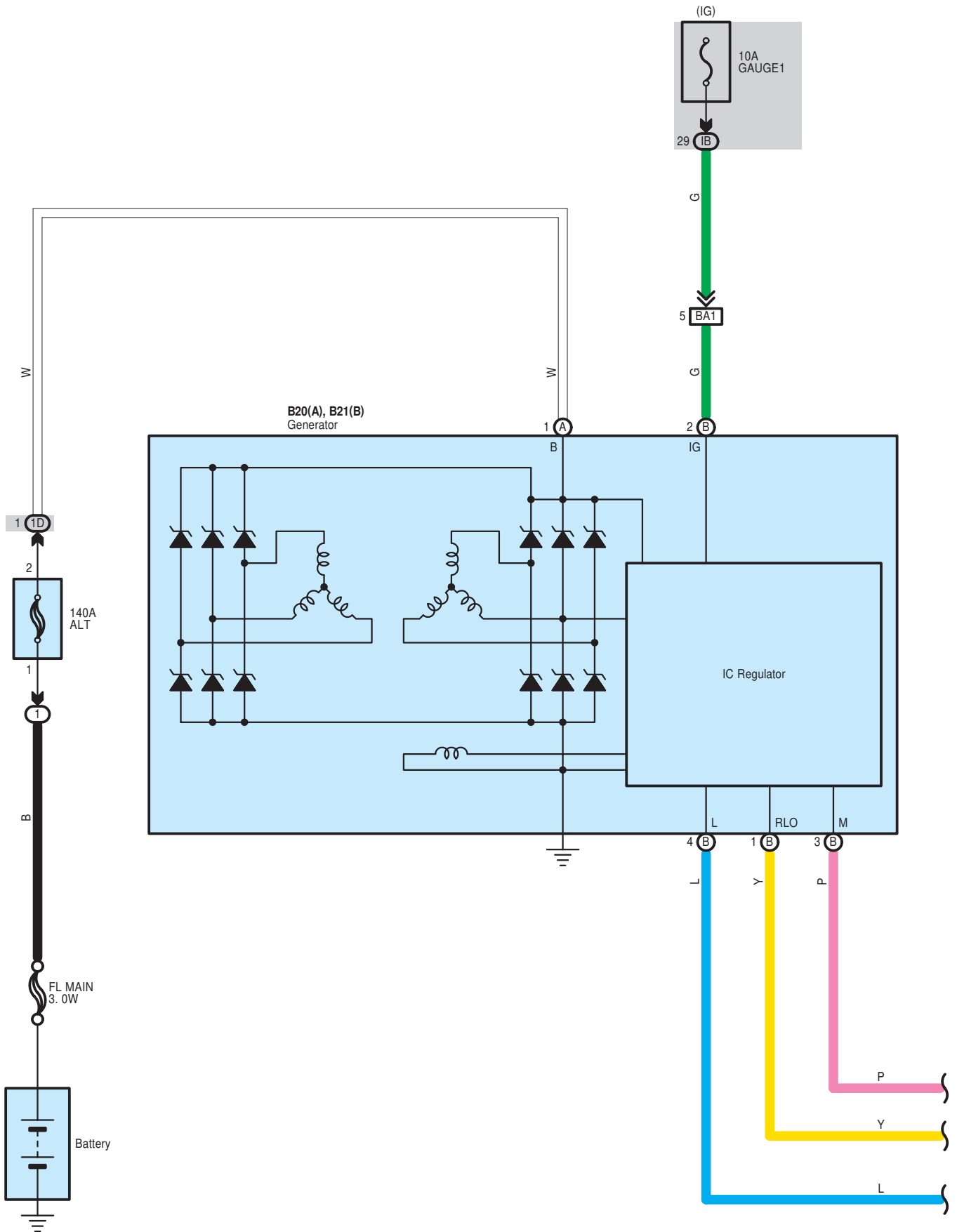
- A 1 Power Steering ECU
- A 2 Brake Pedal Load Sensing SW
- A 3 Stop Lamp SW
- A 4 Accelerator Position Sensor
- A 5 Trailer Socket

- A 35 Junction Connector
- A 36 Junction Connector
- A 37 Junction Connector
- A 38 Junction Connector

Power Source

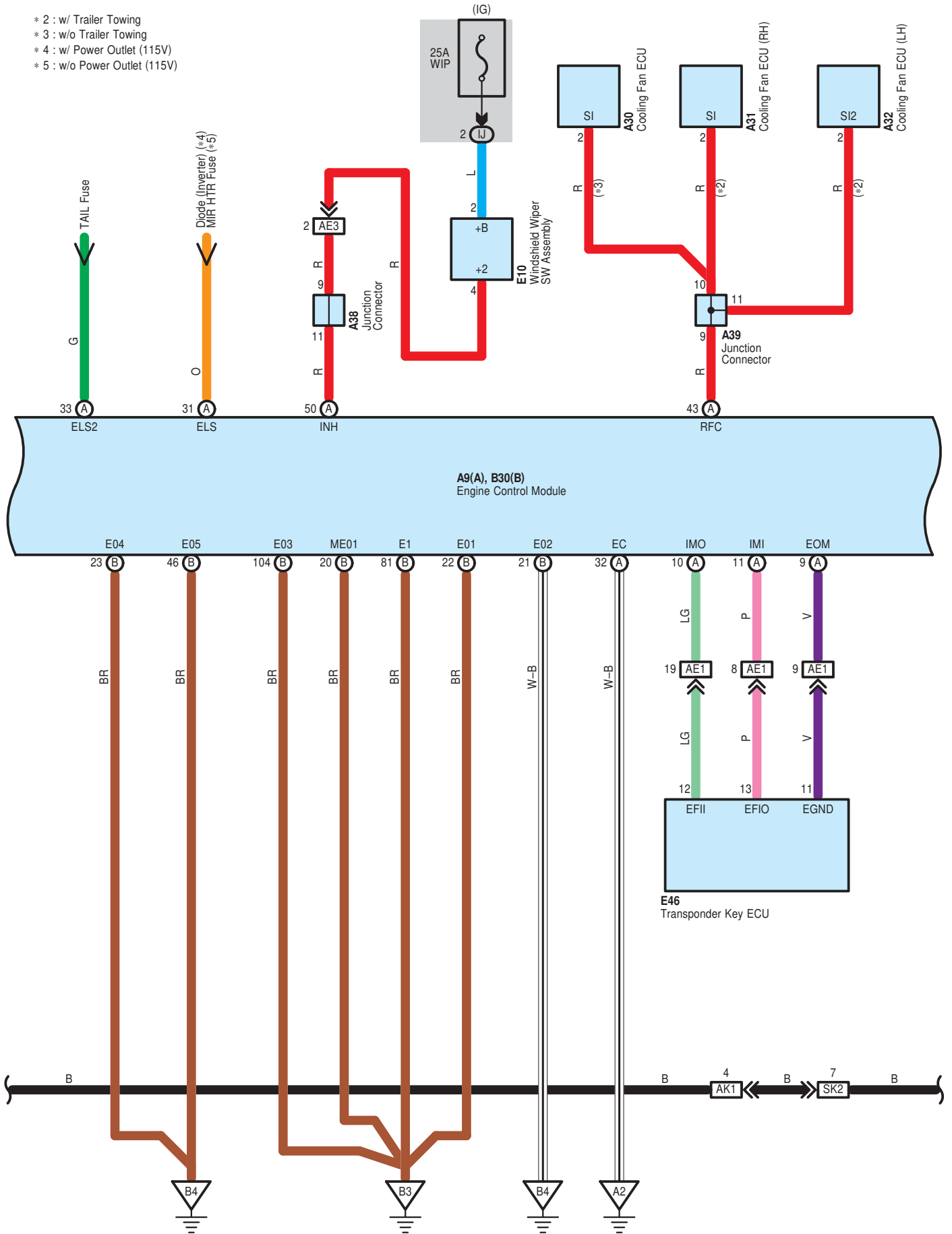


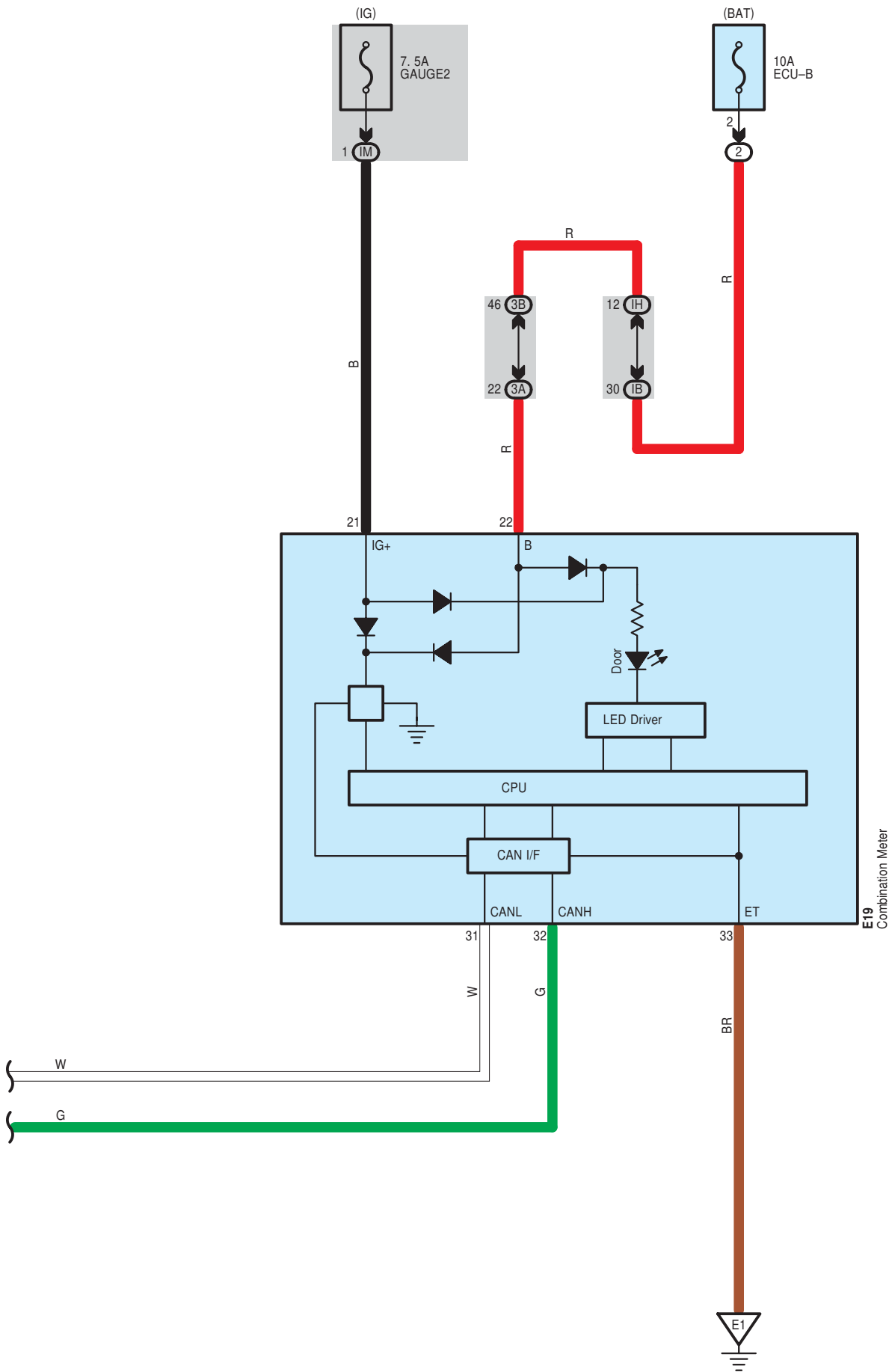
Charging with Trailer Towing



Engine Control for 2GR-FE

- * 2 : w/ Trailer Towing
- * 3 : w/o Trailer Towing
- * 4 : w/ Power Outlet (115V)
- * 5 : w/o Power Outlet (115V)





RAV4 (EM03T0U)

 : **Parts Location**

Code	See Page	Code	See Page	Code	See Page
A9	A	50 (2GR-FE)	E72	55	K19
		52 (2AZ-FE)	K3	57	
E1	54	K15	59		

 : **Relay Blocks**

Code	See Page	Relay Blocks (Relay Block Location)
2	26 (2GR-FE)	Engine Room R/B No.2 (Engine Compartment Right)
	27 (2AZ-FE)	
6	28	R/B No.6 (Cowl Side Left)

 : **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
3A	38	Instrument Panel Wire and J/B No.3 (Instrument Panel Center)
3B		
4A	44	Instrument Panel Wire and J/B No.4 (Instrument Panel Center)
IS	31	Instrument Panel Wire and Instrument Panel J/B (Cowl Side Left)

 : **Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
AE1	66	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel)
AE2		
EK2	66	Instrument Panel Wire and Floor Wire (Left Kick Panel)

 : **Ground Points**

Code	See Page	Ground Points Location
E3	66	Instrument Panel Reinforcement Center
K2	67	Left Quarter Panel

Wireless Door Lock Control

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A10	50 (2GR-FE)	H5	58	L11	60
	52 (2AZ-FE)	I4	58	L18	60
E4	54	J4	58	L22	60
E5	54	K7	59	P5	61
E6	54	K10	59	P7	61
E15	A 54	K16	59	Q3	61
E17	C 54	K18	59	Q7	61
E67	55	K20	59		
G5	58	L8	60		

: Relay Blocks

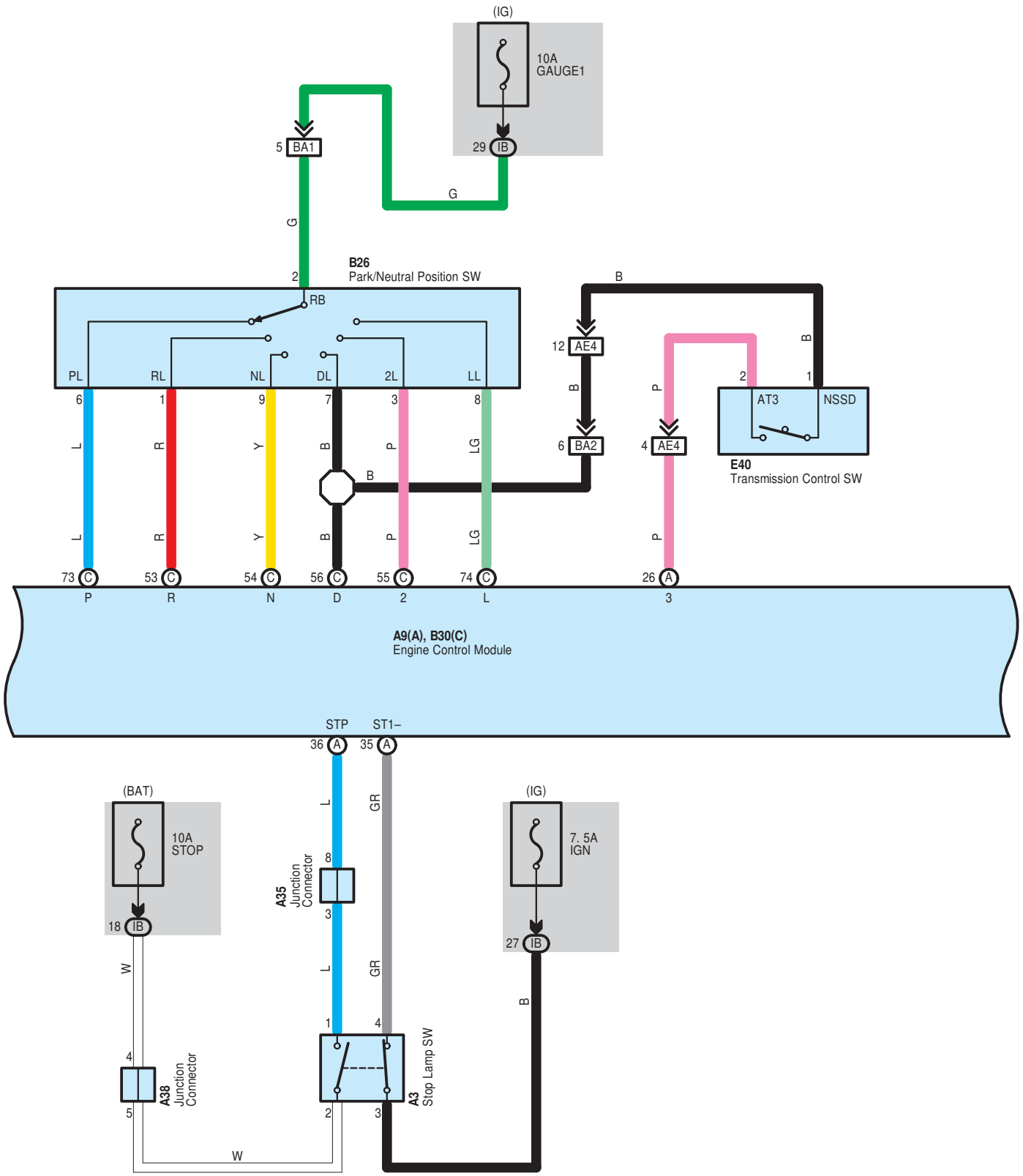
Code	See Page	Relay Blocks (Relay Block Location)
2	26 (2GR-FE)	Engine Room R/B No.2 (Engine Compartment Right)
	27 (2AZ-FE)	

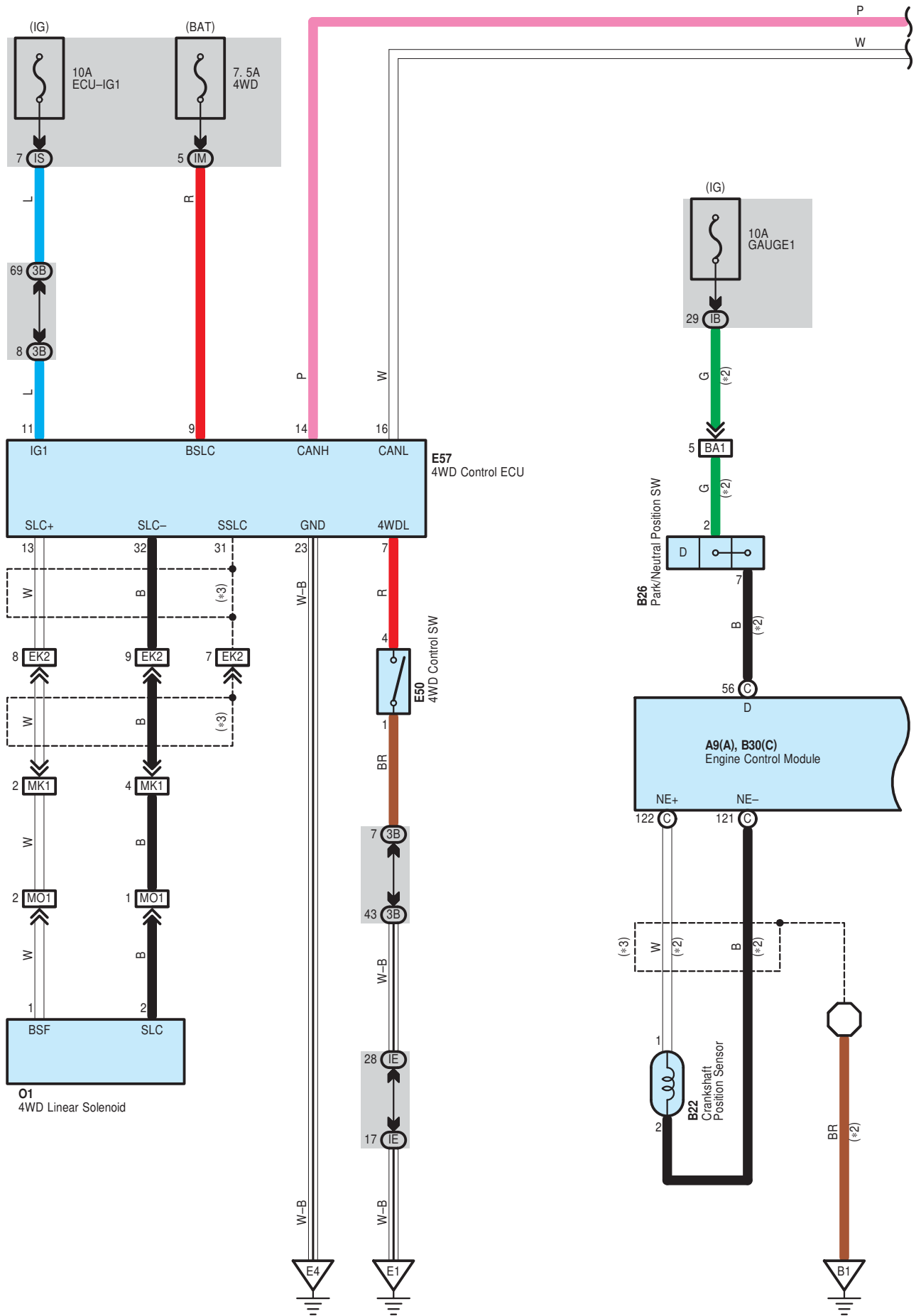
: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
3A	38	Instrument Panel Wire and J/B No.3 (Instrument Panel Center)
3B		
4A	44	Instrument Panel Wire and J/B No.4 (Instrument Panel Center)
4B		
IA	30	Floor Wire and Instrument Panel J/B (Cowl Side Left)
IB	30	Engine Room Main Wire and Instrument Panel J/B (Cowl Side Left)
IC	30	Instrument Panel Wire and Instrument Panel J/B (Cowl Side Left)
ID		
IE		
IH		
IK	30	Roof Wire and Instrument Panel J/B (Cowl Side Left)
IS	31	Instrument Panel Wire and Instrument Panel J/B (Cowl Side Left)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
AE1	66	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel)
EK2	66	Instrument Panel Wire and Floor Wire (Left Kick Panel)
EL1	66	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
EL2		
GE1	66	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
GE2		
HE1	66	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
HE2		
IL1	67	Rear Door No.1 RH Wire and Floor No.2 Wire (Right Center Pillar)
JK1	67	Rear Door No.1 LH Wire and Floor Wire (Left Center Pillar)
QK1	67	Back Door No.1 Wire and Floor Wire (Right Rear Quarter Panel)
QL1	67	Back Door No.2 Wire and Floor No.2 Wire (Right Rear Quarter Panel)





System Outline

Driving conditions are detected through indicators such as wheel speed, yaw rate sensor and steering angle signals, which are sent by ECUs, sensors and switches. The current delivered to the solenoid is controlled to provide the optimum torque to the rear wheels, in accordance with the driving conditions.

* Auto mode control

- * The torque distribution to the rear wheels is increased at vehicle start, to ensure a stable start.
- * The torque distribution to the rear wheels is reduced during slow speed driving to stabilize.
- * During stable driving, the torque distribution to the rear wheels is discontinued, making the vehicle front wheel drive and reducing fuel consumption.
- * During deceleration using the brakes, the 4 wheel drive is released to enhance the effect of the ABS/VSC control.

* Lock mode control

- * The torque distribution to the rear wheels is fixed at the maximum level.
- * At vehicle start, the torque distribution to the rear wheels is set at the maximum level to facilitate escape from the stuck condition.
- * The mode automatically reverts to auto mode at a vehicle speed of 40 km/h or over.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A3	56	B3	53 (2AZ-FE)	E19	54
A9	A	B22	53 (2AZ-FE)	E41	55
A19	50 (2GR-FE)	B26	53 (2AZ-FE)	E57	55
A35	56	B30	B	53 (2AZ-FE)	E69
A36	56				
A37	56	B46	51 (2GR-FE)	E70	55
A38	56	E11	54	K6	59
A38	56	E13	54	O1	61
B3	51 (2GR-FE)	E17	C	54	

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22 (2GR-FE)	Engine Room R/B No.1 (Engine Compartment Left)
	23 (2AZ-FE)	
2	26 (2GR-FE)	Engine Room R/B No.2 (Engine Compartment Right)
	27 (2AZ-FE)	

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
3A	38	Instrument Panel Wire and J/B No.3 (Instrument Panel Center)
3B		
IB	30	Engine Room Main Wire and Instrument Panel J/B (Cowl Side Left)
ID	30	Instrument Panel Wire and Instrument Panel J/B (Cowl Side Left)
IE		
IH		
IM		
IS	31	

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
AE4	66	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel)
BA1	64 (2GR-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B No.1 and Engine Room J/B No.1)
	65 (2AZ-FE)	
EK1	66	Instrument Panel Wire and Floor Wire (Left Kick Panel)
EK2		
MK1	67	Floor No.4 Wire and Floor Wire (Left Quarter Panel)
MO1	67	Floor No.4 Wire and Frame No.3 Wire (Near the Rear Differential)

Tire Pressure Warning System

System Outline

- * In the tire pressure warning system, the warning light illuminates to alert the driver about the low tire pressure when the vehicle continues driving with one of the five tires (Include spare tire) under such low pressure to cause possible driving disturbance.
- * The air pressure sensors installed in the wheels measure air pressure in the tires directly.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A19	50 (2GR-FE)	E13	54	E56	55
	52 (2AZ-FE)	E19	54	L20	60

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	26 (2GR-FE)	Engine Room R/B No.2 (Engine Compartment Right)
	27 (2AZ-FE)	

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
3A	38	Instrument Panel Wire and J/B No.3 (Instrument Panel Center)
3B		
4A	44	Instrument Panel Wire and J/B No.4 (Instrument Panel Center)
4B		
IB	30	Instrument Panel Wire and Instrument Panel J/B (Cowl Side Left)
ID		
IE		
IH		
IM	31	
IS		

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
AE6	66	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel)
EL4	66	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
E3	66	Instrument Panel Reinforcement Center