

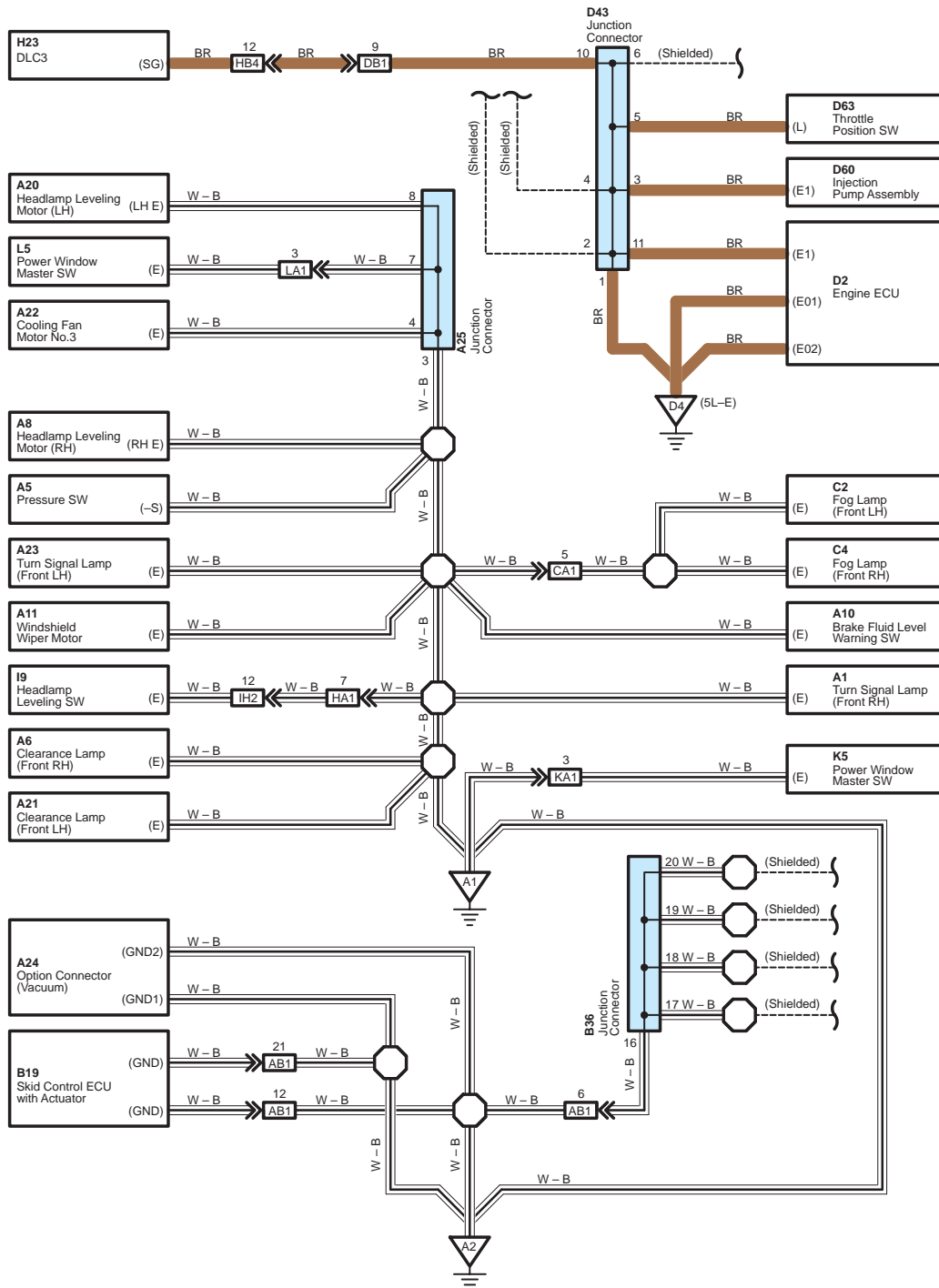
2006 AVALON ELECTRICAL WIRING DIAGRAM

	Section Code	Page
INTRODUCTION	A	2
HOW TO USE THIS MANUAL	B	3
TROUBLESHOOTING	C	12
ABBREVIATIONS	D	17
GLOSSARY OF TERMS AND SYMBOLS	E	18
RELAY LOCATIONS	F	20
ELECTRICAL WIRING ROUTING	G	48
SYSTEM CIRCUITS	H	64
GROUND POINT	I	410
POWER SOURCE (Current Flow Chart)	J	420
CONNECTOR LIST	K	430
PART NUMBER OF CONNECTORS	L	452
OVERALL ELECTRICAL WIRING DIAGRAM .	M	456

B HOW TO USE THIS MANUAL

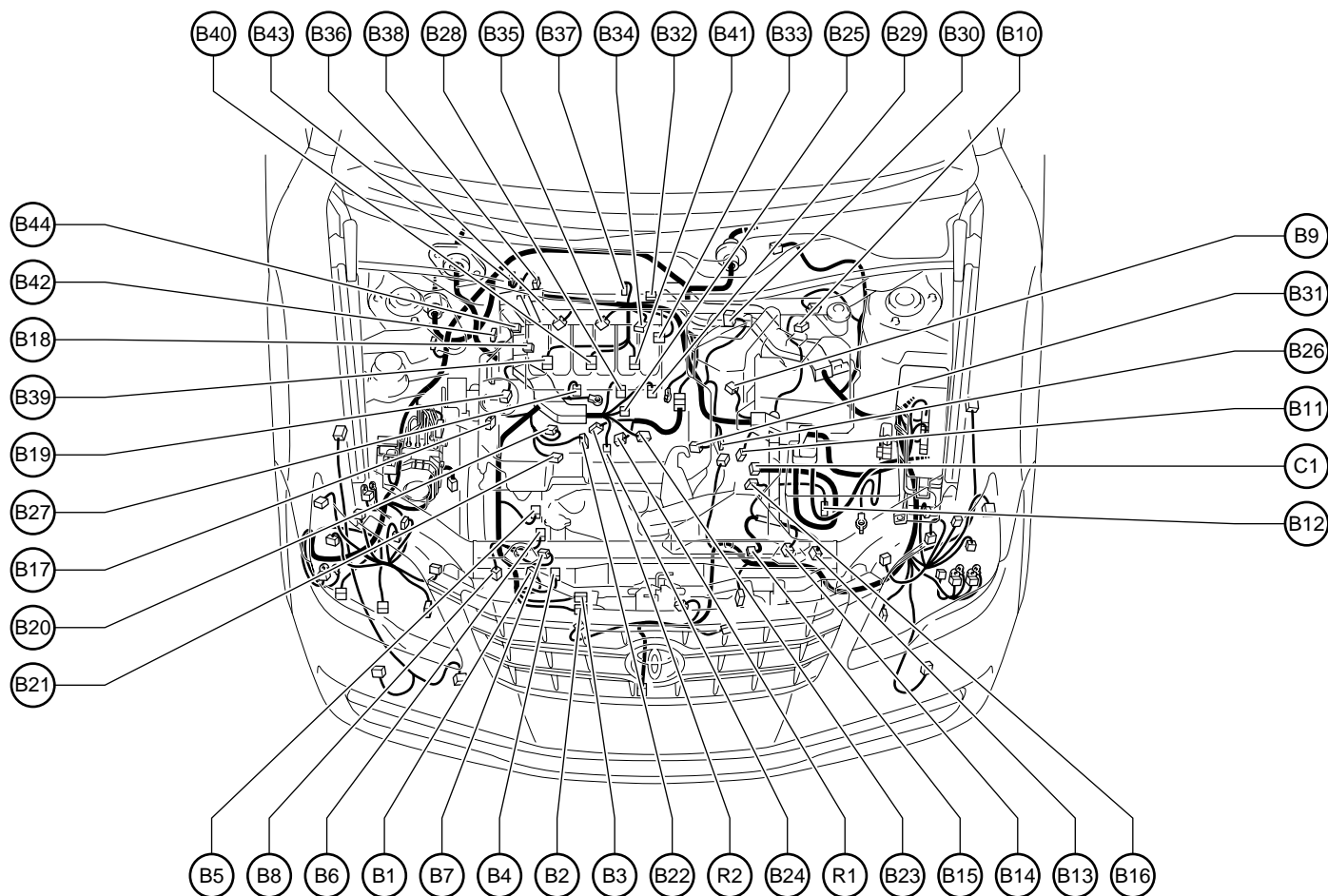
The ground points circuit diagram shows the connections from all major parts to the respective ground points. When troubleshooting a faulty ground point, checking the system circuits which use a common ground may help you identify the problem ground quickly. The relationship between ground points ($\nabla A1$, $\nabla A2$ and $\nabla D4$ shown below) can also be checked this way.

I GROUND POINT

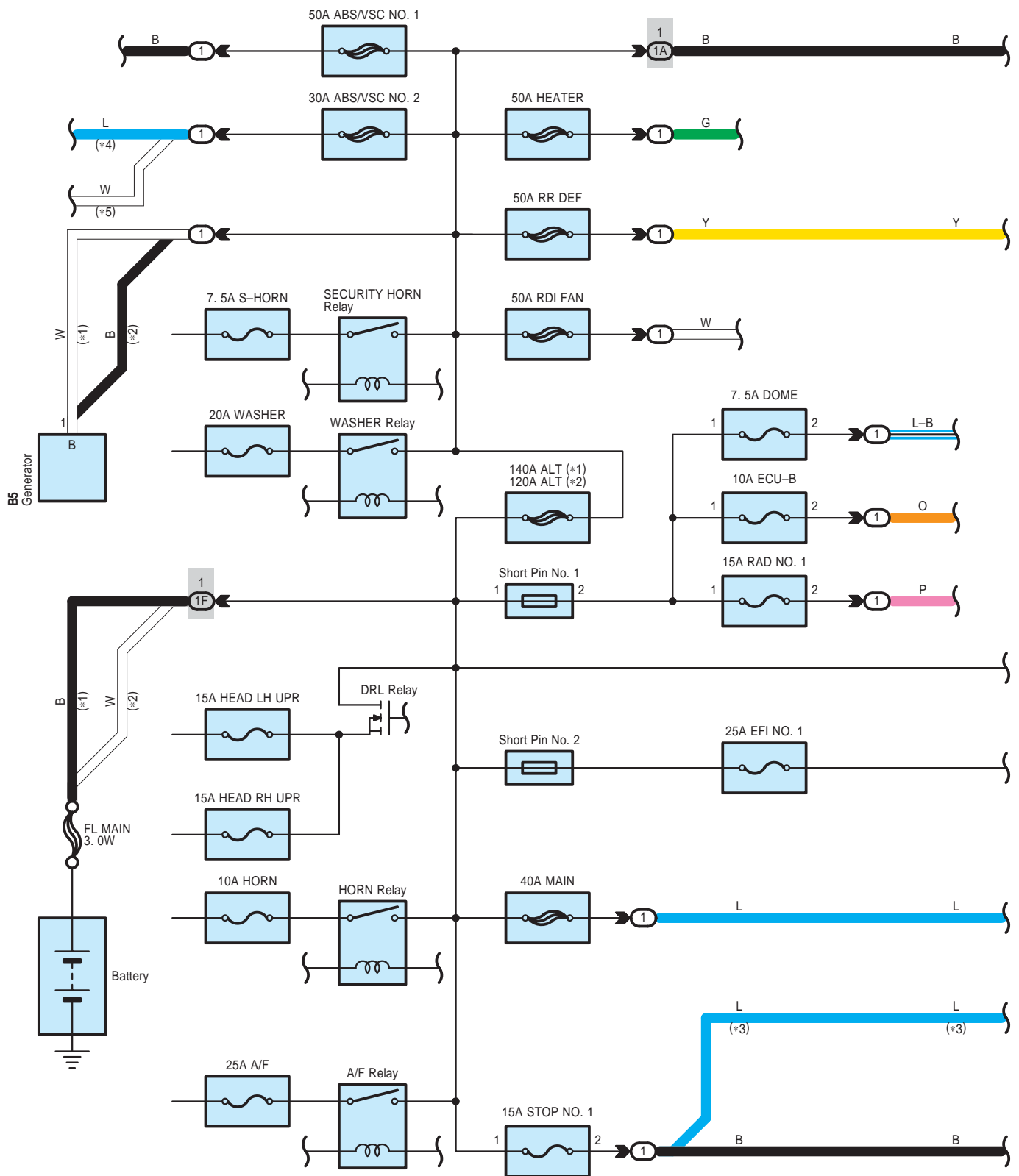


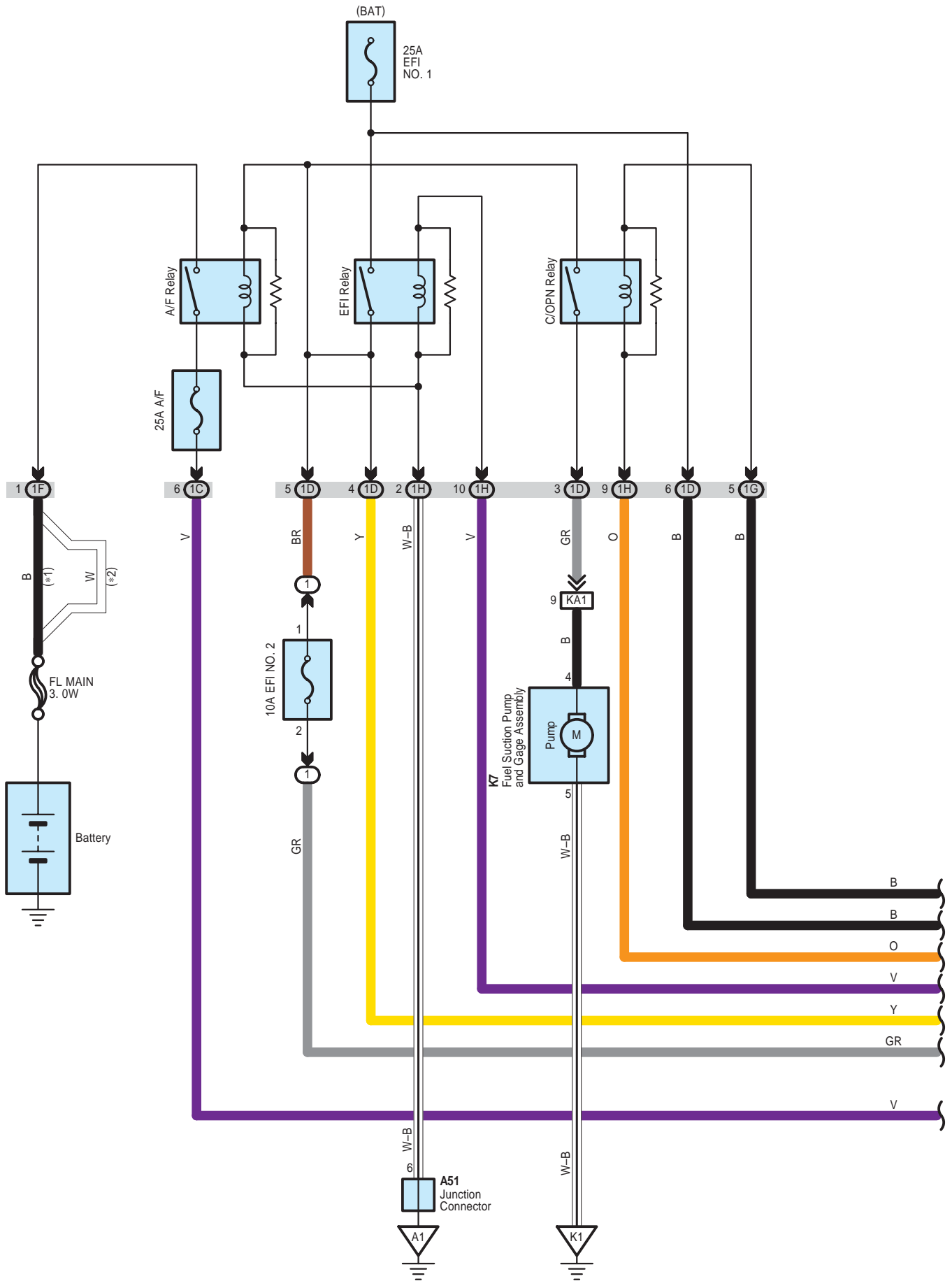
* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

Position of Parts in Engine Compartment



- | | |
|---|--|
| <p> B 1 Engine Oil Pressure SW
 B 2 Heated Oxygen Sensor (Bank 2 Sensor 2)
 B 3 Heated Oxygen Sensor (Bank 1 Sensor 2)
 B 4 A/C Compressor
 B 5 Generator
 B 6 Generator
 B 7 Crankshaft Position Sensor
 B 8 A/C Compressor
 B 9 Engine Coolant Temp. Sensor
 B10 Mass Air Flow Meter
 B11 Speed Sensor (Counter Gear)
 B12 Speed Sensor (Turbine)
 B13 Park/Neutral Position SW
 B14 Electronically Controlled Transmission Solenoid
 B15 VSV (ACM)
 B16 Starter
 B17 Crankshaft Position Sensor No.3 (LH Intake Side)
 B18 VSV (ACIS)
 B19 Camshaft Timing Oil Control Valve (LH Intake Side)
 B20 Camshaft Timing Oil Control Valve (LH Exhaust Side)
 B21 Ignition Coil (No.2)
 B22 Ignition Coil (No.4)
 B23 Ignition Coil (No.6)
 B24 Crankshaft Position Sensor No.2 (LH Exhaust Side)
 B25 Noise Filter (Ignition No.1) </p> | <p> B26 Air Fuel Ratio Sensor (Bank 2 Sensor 1)
 B27 Fuel Injector (No.2)
 B28 Fuel Injector (No.4)
 B29 Fuel Injector (No.6)
 B30 Throttle Body Assembly
 B31 VSV (Purge)
 B32 Air Fuel Ratio Sensor (Bank 1 Sensor 1)
 B33 Noise Filter (Ignition No.2)
 B34 Ignition Coil (No.5)
 B35 Ignition Coil (No.3)
 B36 Ignition Coil (No.1)
 B37 Crankshaft Position Sensor No.2 (RH Exhaust Side)
 B38 Power Steering Oil Pressure SW
 B39 Fuel Injector (No.1)
 B40 Fuel Injector (No.3)
 B41 Fuel Injector (No.5)
 B42 Crankshaft Position Sensor No.2 (RH Intake Side)
 B43 Camshaft Timing Oil Control Valve (RH Exhaust Side)
 B44 Camshaft Timing Oil Control Valve (RH Intake Side) </p> |
| <p> C 1 Starter </p> | <p> R 1 Knock Control Sensor (Bank 2)
 R 2 Knock Control Sensor (Bank 1) </p> |





Front Fog Light

: Parts Location

Code		See Page		Code		See Page		Code		See Page	
A1		48		D9	D	51		D53		52	
A25		48		D13	A	51		E2		52	
A41	A	50		D37		51		E23		53	
A51		48		D39		52		U1	B	53	
A53		48		D44		52					
D6	A	51		D46	B	52					

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

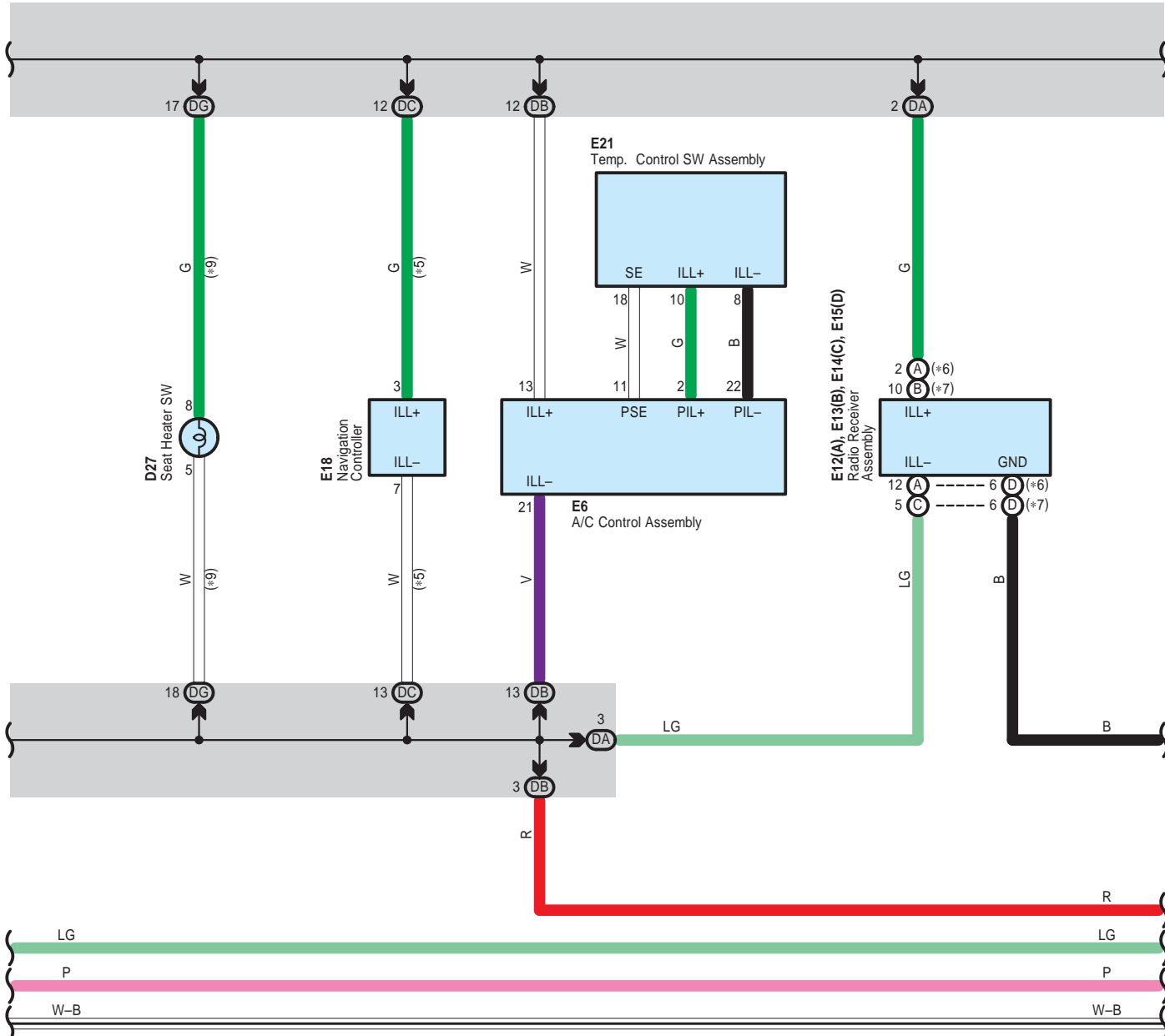
Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	22	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1G	24	
DE	36	Instrument Panel Wire and Driver Side J/B (Behind the Combination Meter)
DF		
DG		
DH		
DI	36	Instrument Panel No.2 Wire and Driver Side J/B (Behind the Combination Meter)
DK	36	Instrument Panel Wire and Driver Side J/B (Behind the Combination Meter)
IA	30	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IC		
ID		
IF	30	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
II	31	
IL	30	
IR		

: Connector Joining Wire Harness and Wire Harness

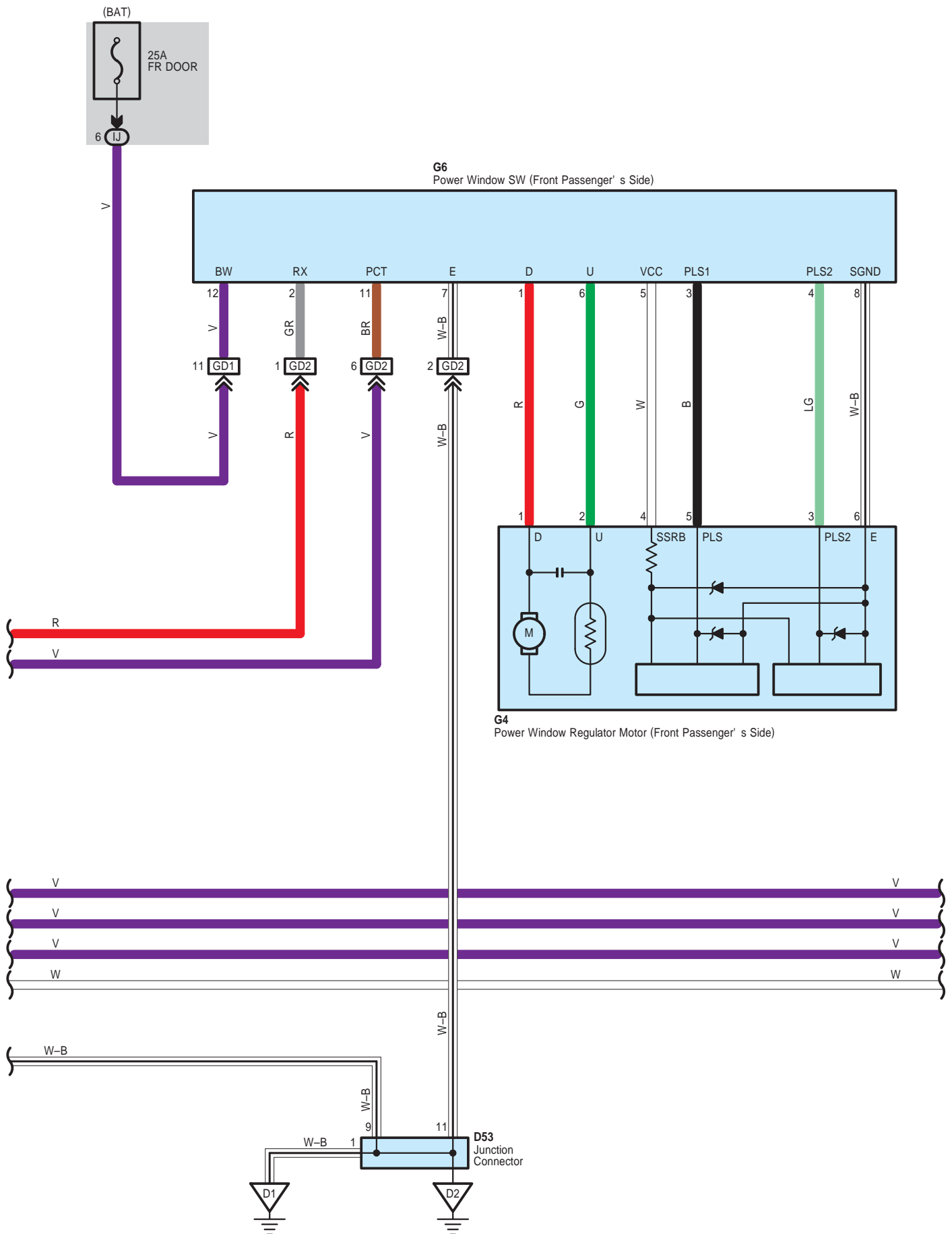
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
DA1	60	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
ED1	61	Instrument Panel No.2 Wire and Instrument Panel Wire (Left Side of the Instrument Panel)

: Ground Points

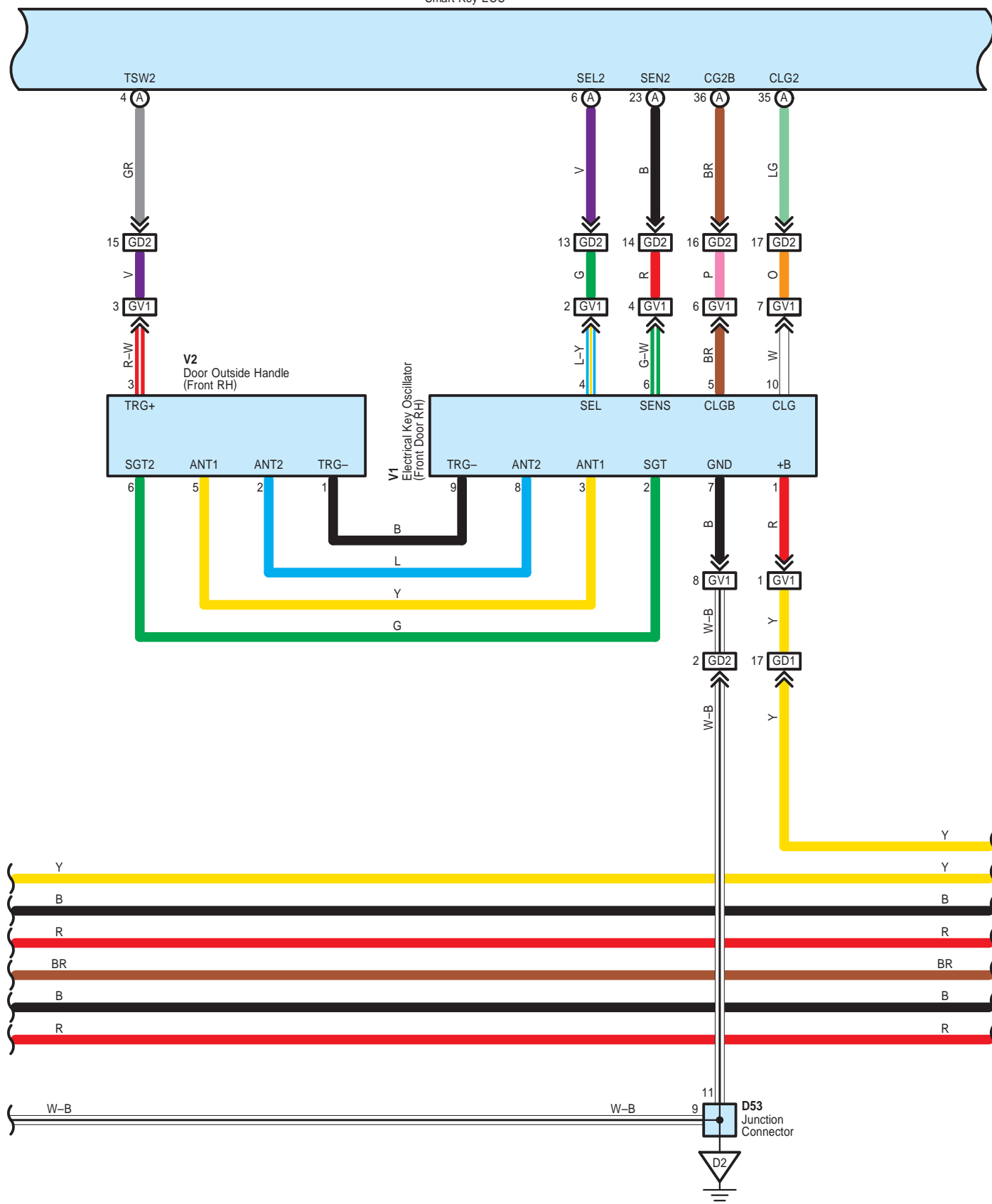
Code	See Page	Ground Points Location
A1	58	Front Left Fender
A4	58	Near the Skid Control ECU with Actuator
D1	60	Left Kick Panel
D2	60	Instrument Panel Brace LH

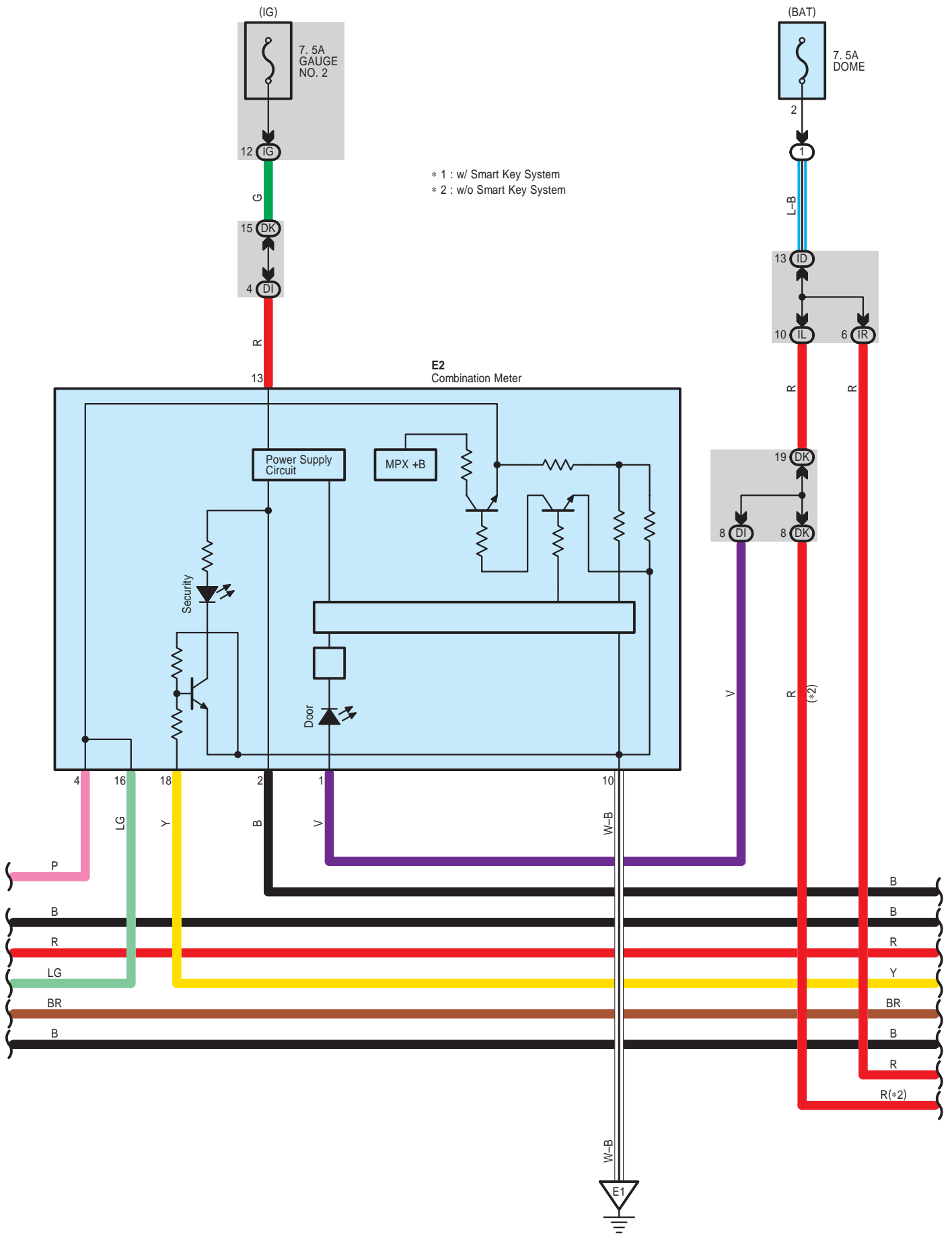


Power Window



D39(A), D40(B)
Smart Key ECU





System Outline

The radar cruise control system allows you to drive at a selected cruising speed, maintaining an appropriate vehicle-to-vehicle distance using the laser radar sensor, the steering sensor and the yaw rate sensor. The laser radar sensor detects the reflection of the vehicle ahead in your lane.

1. Setting Operation

<The vehicle-to-vehicle distance control mode>

While the ON-OFF SW is ON (The power indicator light is turned on), bring the vehicle to the desired speed, press the control lever downward in the "– SET" direction and release it. This sets the vehicle at that speed from the lower limit of the preset speed about 45 km/h (28 mph) to the upper limit of the preset speed about 135 km/h (85 mph). However, the vehicle speed is faster than 135 km/h (85 mph), the preset speed is the upper limit of the preset speed.

<The conventional cruise control mode>

While the ON-OFF SW is ON (The power indicator light is turned on), bring the vehicle to the desired speed, press the control lever downward in the "– SET" direction and release it. This sets the vehicle at that speed. It is possible to set at that speed between lower speed limit and higher speed limit.

2. Resetting to a Speed

<The vehicle-to-vehicle distance control mode>

(1) Resetting to a lower speed

The set speed can be decreased 5 mph (For USA) or 5 km/h (For Canada) each time by pressing the control lever downward in the "– SET" direction quickly within 0.5 seconds.

And while the cruise control is on and the control lever is held downward in the "– SET" direction, the preset speed will decrease every 5 mph (For USA) or 5 km/h (For Canada). But you cannot decrease lower than the lower limit of the preset speed about 27 mph (For USA) or 43 km/h (For Canada). If the preset speed is changed, the vehicle speed will be gradually decreased to the preset speed. (In the other case, perhaps the vehicle speed will be increase.)

(2) Resetting to a faster speed

* The set speed can be increased 5 mph (For USA) or 5 km/h (For Canada) each time by pressing the control lever upward in the "+ RES" direction quickly within 0.5 seconds.

And while the cruise control is on and the control lever is held upward in the "+ RES" direction, the preset speed will increase every 5 mph (For USA) or 5 km/h (For Canada). But you cannot increase faster than the upper limit of the preset speed. If the preset speed is changed, the vehicle speed will be constantly increased to the preset speed. (In the other case, perhaps the vehicle speed will be decrease.)

* When your vehicle follow up cruise function, if press the control lever upward in the "+ RES" direction, the vehicle speed will not be increased and the preset speed will be changed only.

<The conventional cruise control mode>

(1) Deceleration

* While the cruise control is on and the control lever is held downward in the "– SET" direction, the vehicle speed will gradually decrease. When you release it, this sets the vehicle speed at that speed. If the control lever is released when the vehicle speed exceeds the upper limit of the preset speed traveling downhill while you are pressing the control lever downward, the system will memorize the upper limit of the preset speed as a preset speed.

* When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be decreased 1.6 km/h (1 mph) each time by pressing the control lever downward in the "– SET" direction quickly within 0.5 seconds. But if the control lever is released when the difference between the actual vehicle speed and the set speed is more than 5 km/h (3 mph), this sets the vehicle speed at that speed.

(2) Acceleration

* While the cruise control is on and the control lever is held upward in the "+ RES" direction, the vehicle speed will constantly increase. When you release it, this sets the vehicle speed at that speed. If the vehicle speed exceeds the upper limit of the preset speed while you are pressing the control lever downward, the system will cruise at the upper limit of the preset speed. And if the control lever is released, this sets the vehicle speed at that speed.

* When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be increased 1.6 km/h (1 mph) each time by pressing the control lever upward in the "+ RES" direction quickly within 0.5 seconds. But if the control lever is released when the difference between the actual vehicle speed and the set speed is more than 5 km/h (3 mph), this sets the vehicle speed at that speed.

* If you are pressing the control lever downward and released when the vehicle speed is increased by pressing the acceleration pedal, the system will memorize the preset speed at that speed. But if you operate the control lever downward at the upper limit of the set speed, you cannot set the preset speed.

3. The Lower Limit of the Preset Speed

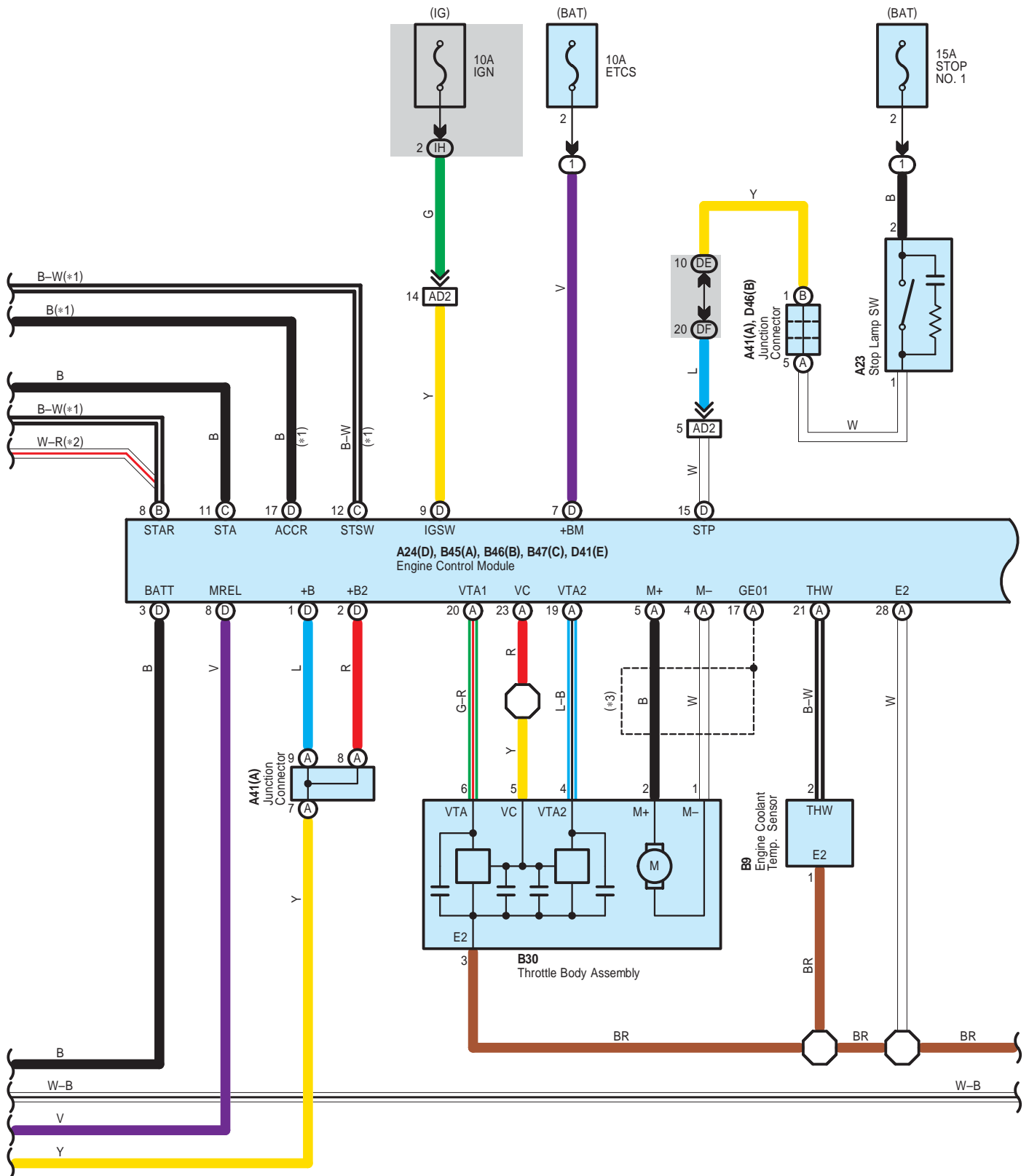
* This is the lower limit of the preset speed of the followings. This is a difference of the lower limit of the canceled speed.

* For USA : about 27 mph

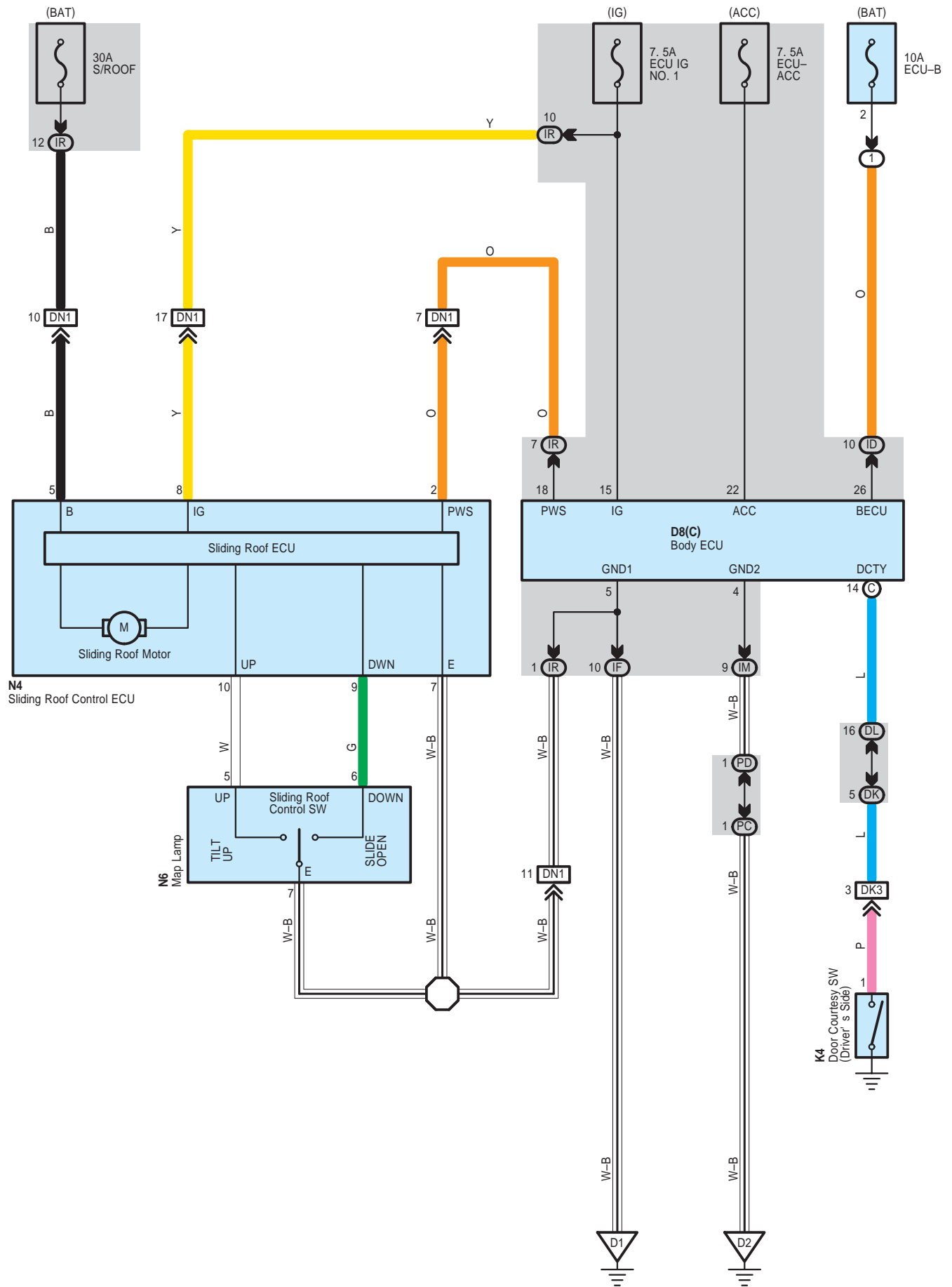
* For Canada : about 43 km/h

* When the vehicle speed is less than the lower limit of the preset speed, you cannot change the preset speed.

ECT and A/T Indicator



Sliding Roof



Multi Display without Navigation System

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A11	48	D39	52	E7	52
A41 A	50	D44	52	E11	52
A51	48	D46 B	52	E15	53
D6 A	51	D53	52	E23	53
D13	51	E1	52		
D37	51	E2	52		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1G	24	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
1I		
DB	36	Instrument Panel No.2 Wire and Driver Side J/B (Behind the Combination Meter)
DD	36	Instrument Panel Wire and Driver Side J/B (Behind the Combination Meter)
DE		
DG		
DH		
DI	36	Instrument Panel No.2 Wire and Driver Side J/B (Behind the Combination Meter)
DJ		
DK	36	Instrument Panel Wire and Driver Side J/B (Behind the Combination Meter)
ID	30	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	30	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG	31	
IR	30	

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
DA1	60	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
ED1	61	Instrument Panel No.2 Wire and Instrument Panel Wire (Left Side of the Instrument Panel)

: Ground Points

Code	See Page	Ground Points Location
A1	58	Front Left Fender
A3	60	Left Side of the Instrument Panel
D1	60	Left Kick Panel
D2	60	Instrument Panel Brace LH
E1	60	Under the Combination Meter

