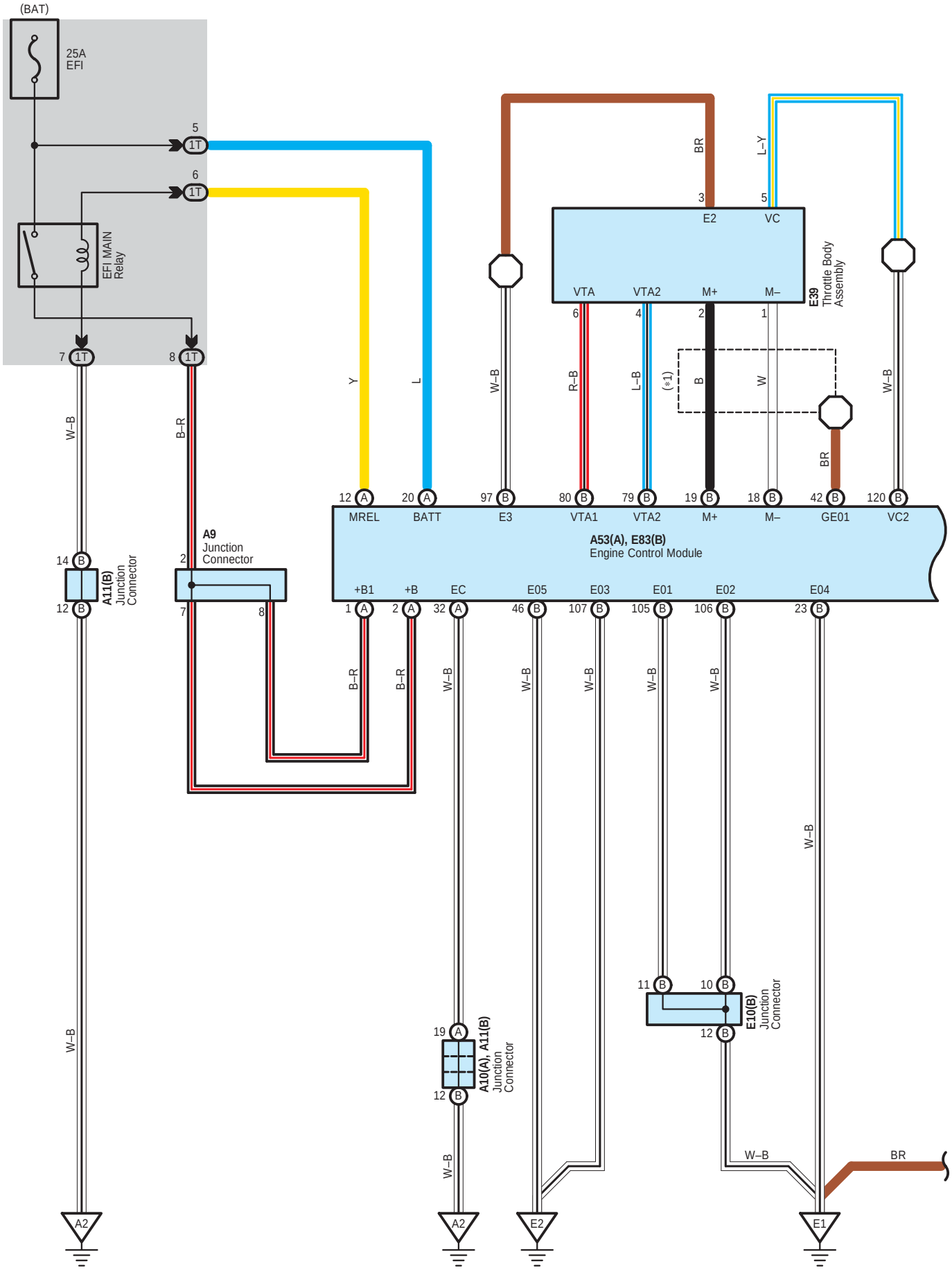
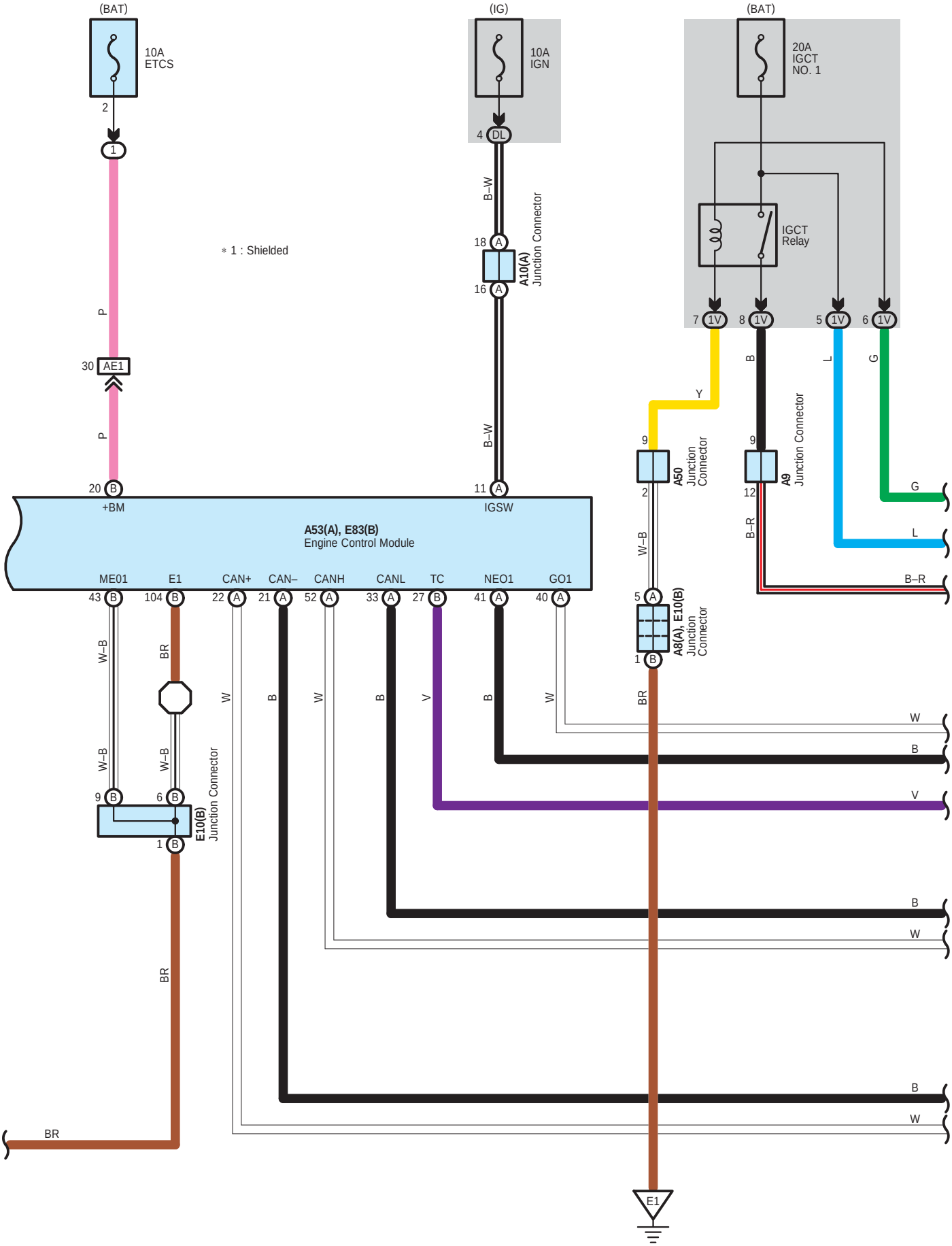
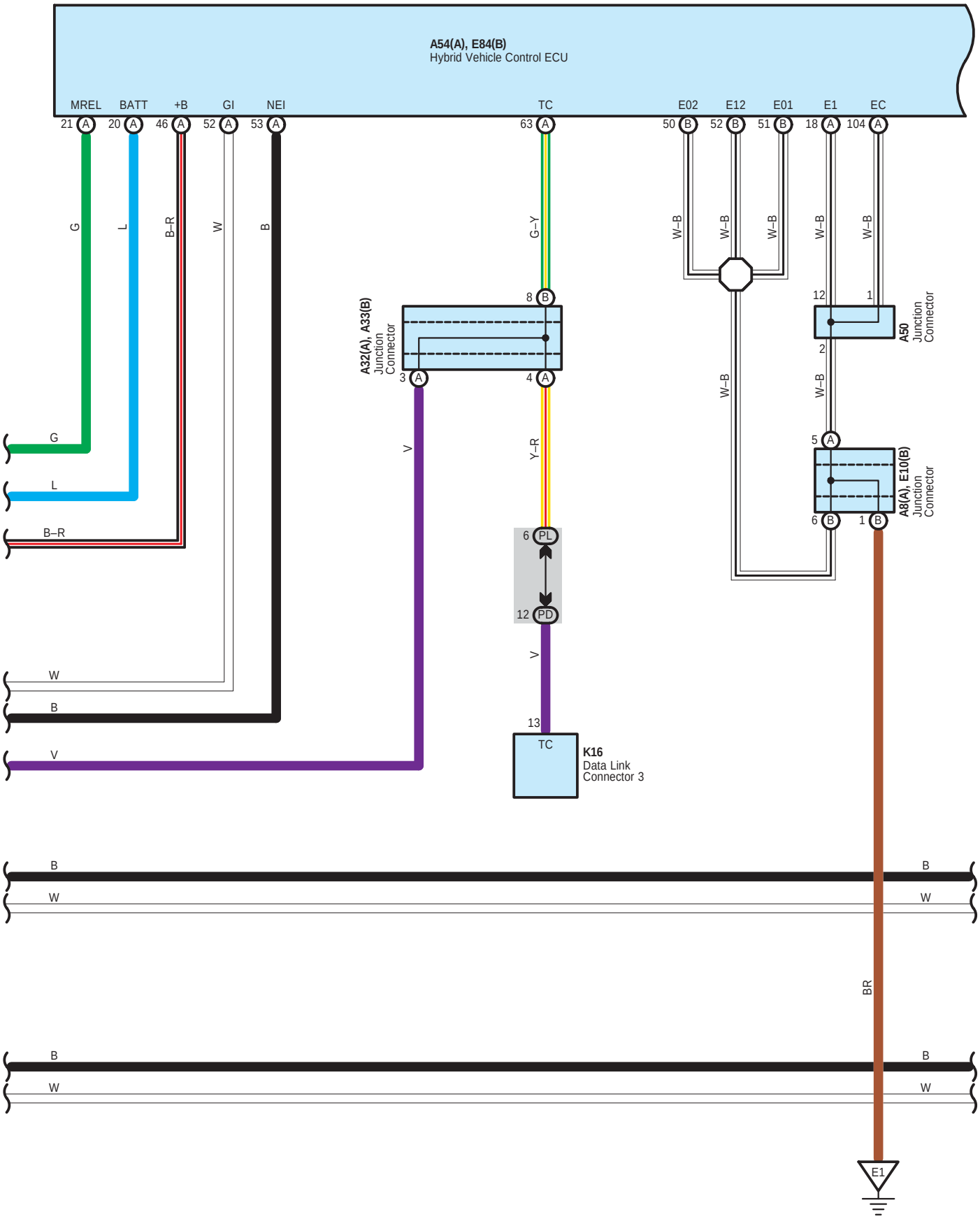
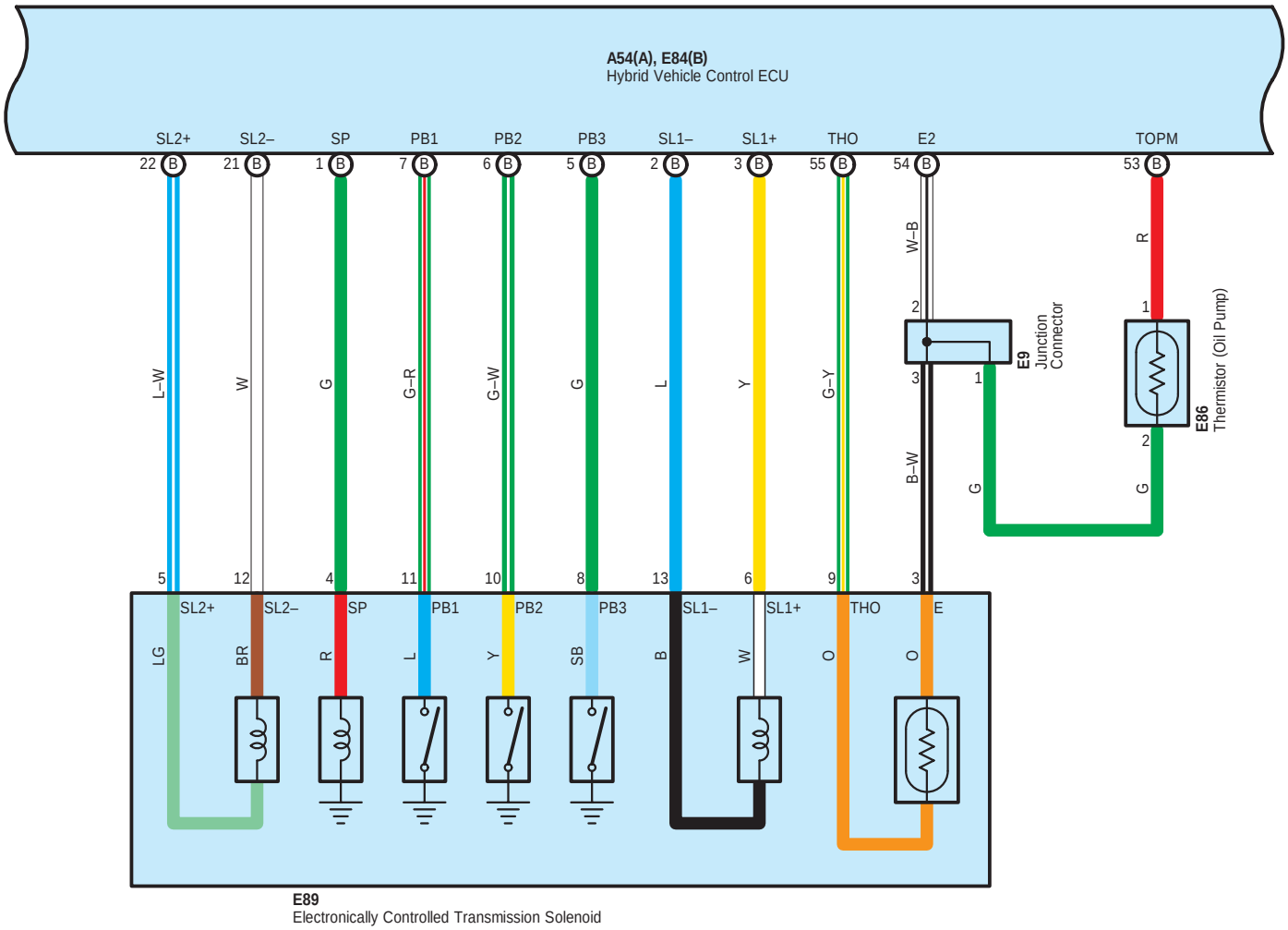

(BAT)
25A
EFI
5
1T
6
1T
EFI MAIN
Relay
7
1T
8
1T
W–B
B–R
Y
L
BR
L–Y
3
E2
5
VC
VTA
VTA2
M+
M–
6
4
2
1
E39
Throttle Body
Assembly
W–B
R–B
L–B
(*1)
B
W
BR
W–B
12
A
MREL
20
A
BATT
97
B
E3
80
B
VTA1
79
B
VTA2
19
B
M+
18
B
M–
42
B
GE01
120
B
VC2
A53(A), E83(B)
Engine Control Module
14
B
12
B
A11(B)
Junction
Connector
A9
Junction
Connector
2
7
8
+B1
+B
EC
E05
E03
E01
E02
E04
1
A
2
A
32
A
46
B
107
B
105
B
106
B
23
B
B–R
B–R
W–B
W–B
W–B
W–B
W–B
W–B
19
A
12
B
A10(A), A11(B)
Junction
Connector
11
B
10
B
12
B
E10(B)
Junction
Connector
W–B
BR
A2
A2
E2
E1

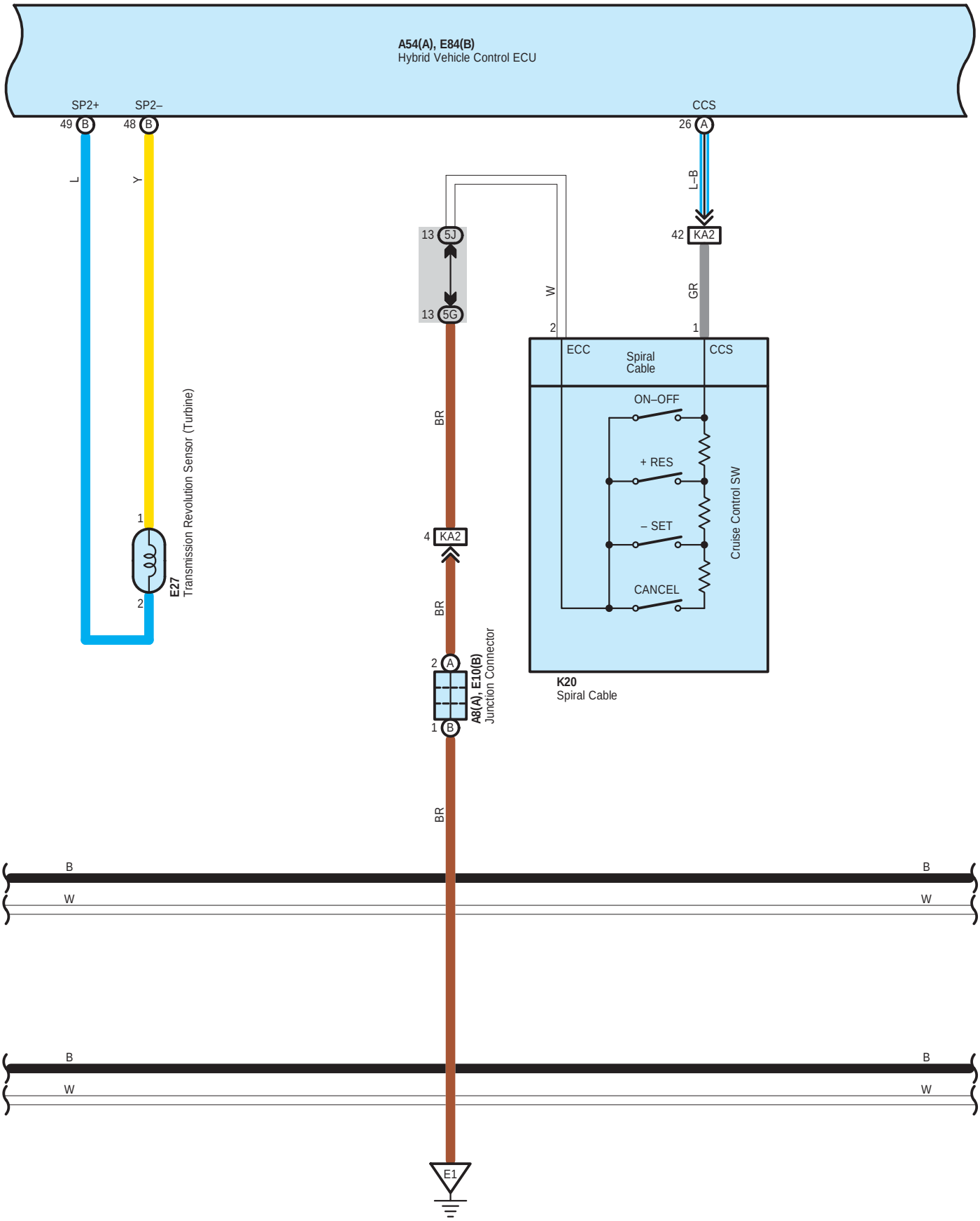

(BAT)
10A
ETCS
2
1
P
30
AE1
P
20
B
+BM
(IG)
10A
IGN
4
DL
B–W
18
A
16
A
A10(A)
Junction Connector
B–W
11
A
IGSW
* 1 : Shielded
(BAT)
20A
IGCT
NO. 1
IGCT
Relay
7
1V
8
1V
5
1V
6
1V
Y
B
L
G
9
A50
Junction
Connector
2
W–B
9
A9
Junction Connector
12
B–R
G
L
B–R
5
A
1
B
A8(A), E10(B)
Junction
Connector
BR
A53(A), E83(B)
Engine Control Module
ME01
E1
CAN+
CAN–
CANH
CANL
TC
NEO1
GO1
43
B
104
B
22
A
21
A
52
A
33
A
27
B
41
A
40
A
W–B
BR
W
B
W
B
V
B
W
W
B
V
W–B
W–B
9
B
6
B
E10(B)
Junction Connector
1
B
BR
B
W
BR
E1

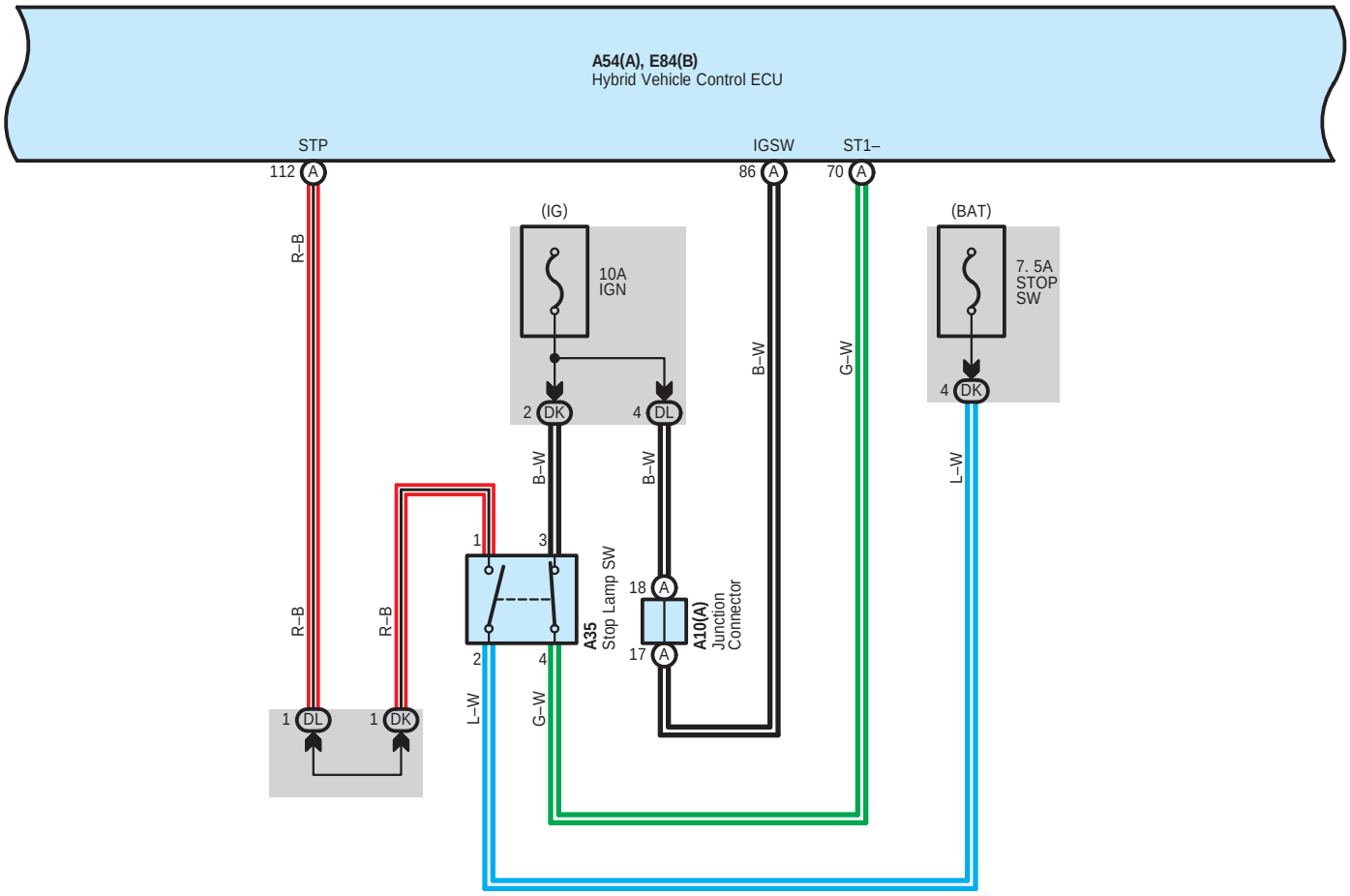

A54(A), E84(B)
Hybrid Vehicle Control ECU
MREL
BATT
+B
GI
NEI
TC
E02
E12
E01
E1
EC
21 A
20 A
46 A
52 A
53 A
63 A
50 B
52 B
51 B
18 A
104 A
G
L
B–R
W
B
G–Y
W–B
W–B
W–B
W–B
W–B
A32(A), A33(B)
Junction Connector
8 B
3 A
4 A
V
Y–R
6 PL
12 PD
V
13
TC
K16
Data Link Connector 3
A50
Junction Connector
12
1
2
W–B
W–B
5 A
A8(A), E10(B)
Junction Connector
6 B
1 B
G
L
B–R
W
B
V
B
W
B
W
BR
B
W
B
W
E1


A54(A), E84(B)
Hybrid Vehicle Control ECU
SL2+
SL2–
SP
PB1
PB2
PB3
SL1–
SL1+
THO
E2
TOPM
22 B
21 B
1 B
7 B
6 B
5 B
2 B
3 B
55 B
54 B
53 B
L–W
W
G
G–R
G–W
G
L
Y
G–Y
W–B
B–W
R
G
G
E9
Junction Connector
E86
Thermistor (Oil Pump)
5
12
4
11
10
8
13
6
9
3
LG
BR
R
L
Y
SB
B
W
O
O
E89
Electronically Controlled Transmission Solenoid


B
W
B
W


B
W
B
W

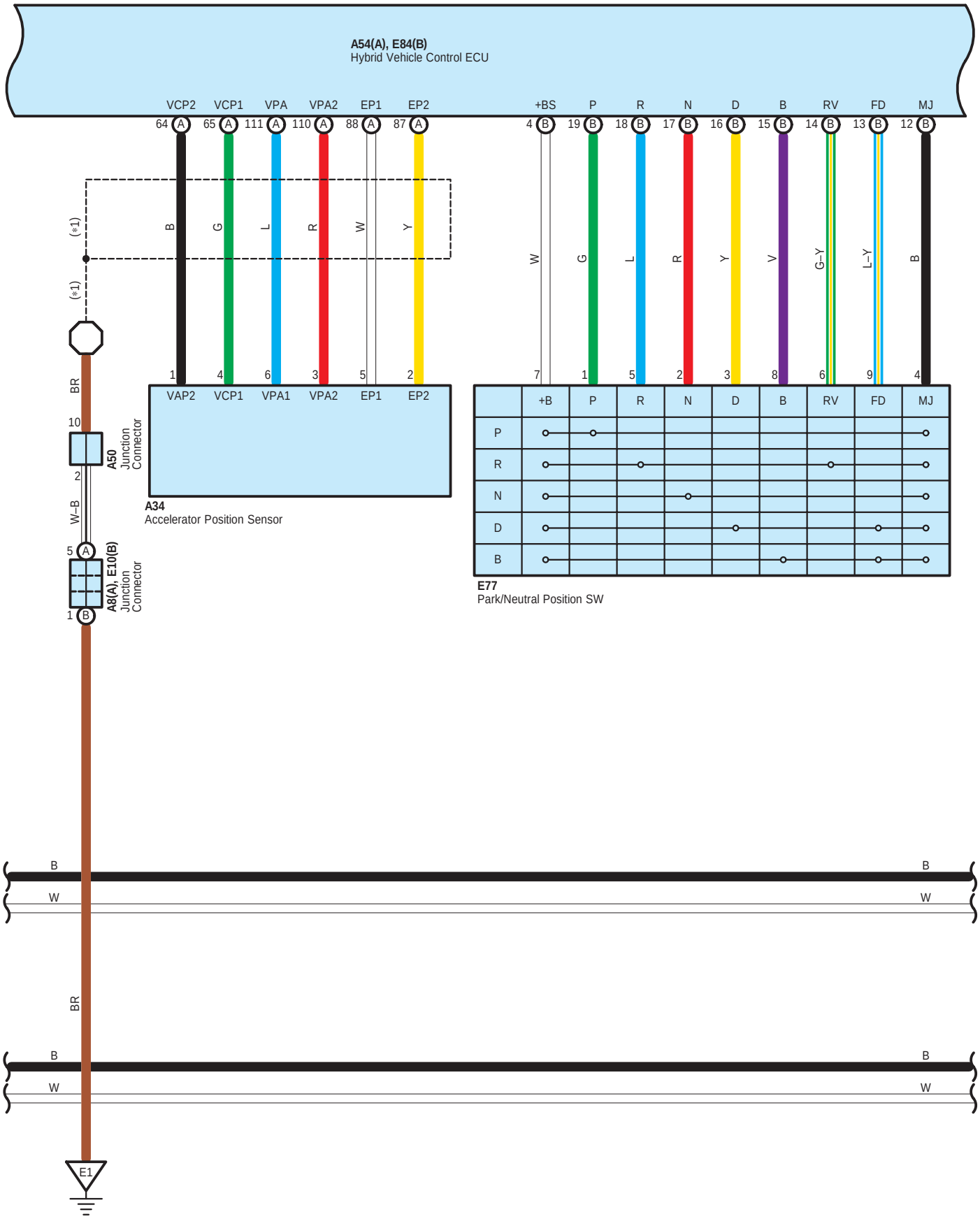

A54(A), E84(B)
Hybrid Vehicle Control ECU
SP2+
SP2–
CCS
49 B
48 B
26 A
L
Y
L–B
13 5J
13 5G
42 KA2
W
GR
2
1
ECC
Spiral Cable
CCS
ON–OFF
+ RES
– SET
CANCEL
Cruise Control SW
BR
4 KA2
BR
2 A
1 B
A8(A), E10(B)
Junction Connector
BR
K20
Spiral Cable
1
2
E27
Transmission Revolution Sensor (Turbine)
B
W
B
W
B
W
B
W
E1

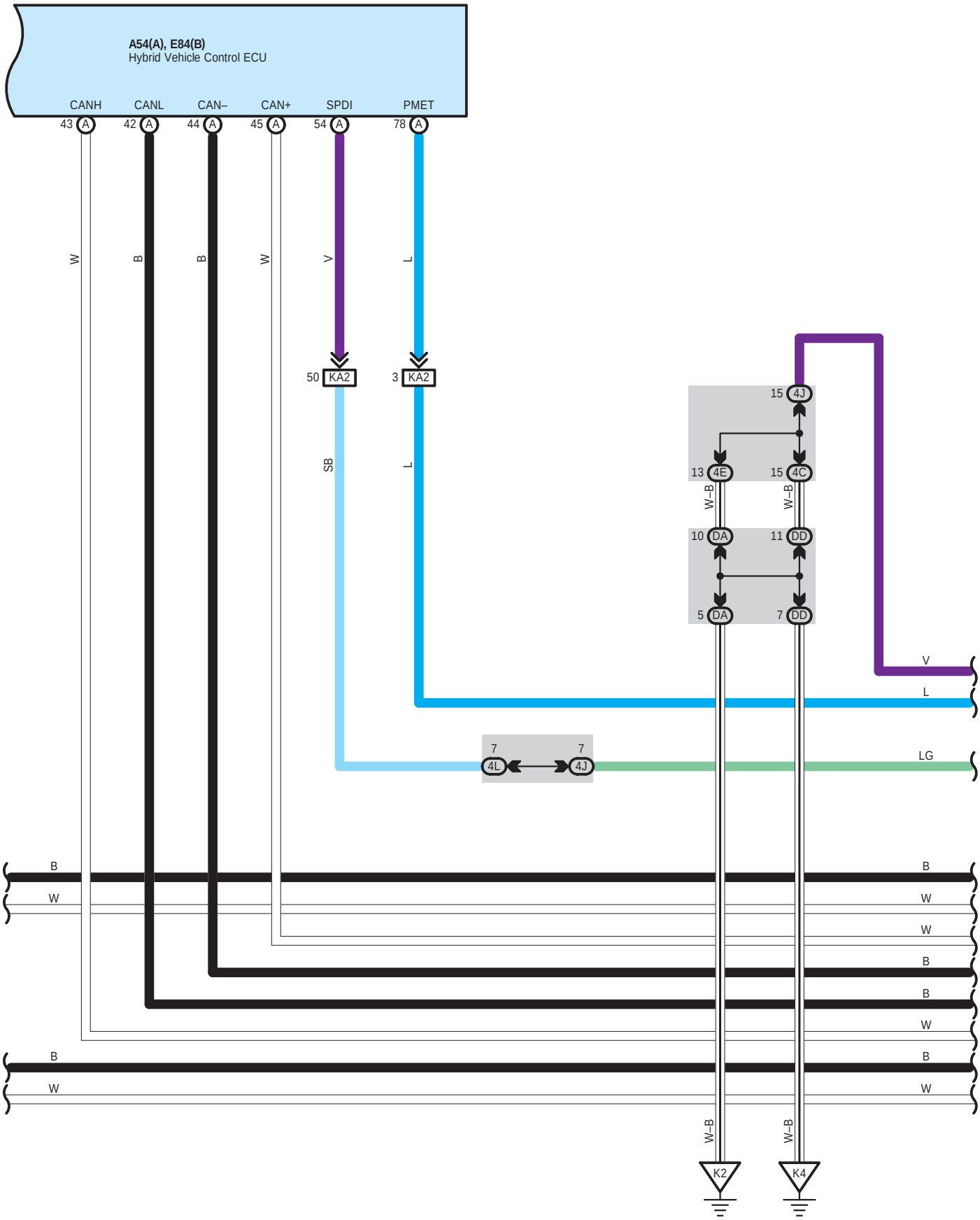

A54(A), E84(B)
Hybrid Vehicle Control ECU
STP
112 A
IGSW
86 A
ST1–
70 A
(IG)
10A
IGN
(BAT)
7. 5A
STOP
SW
2 DK
4 DL
4 DK
R–B
B–W
G–W
L–W
1
3
2
4
A35
Stop Lamp SW
18 A
17 A
A10(A)
Junction
Connector
1 DL
1 DK

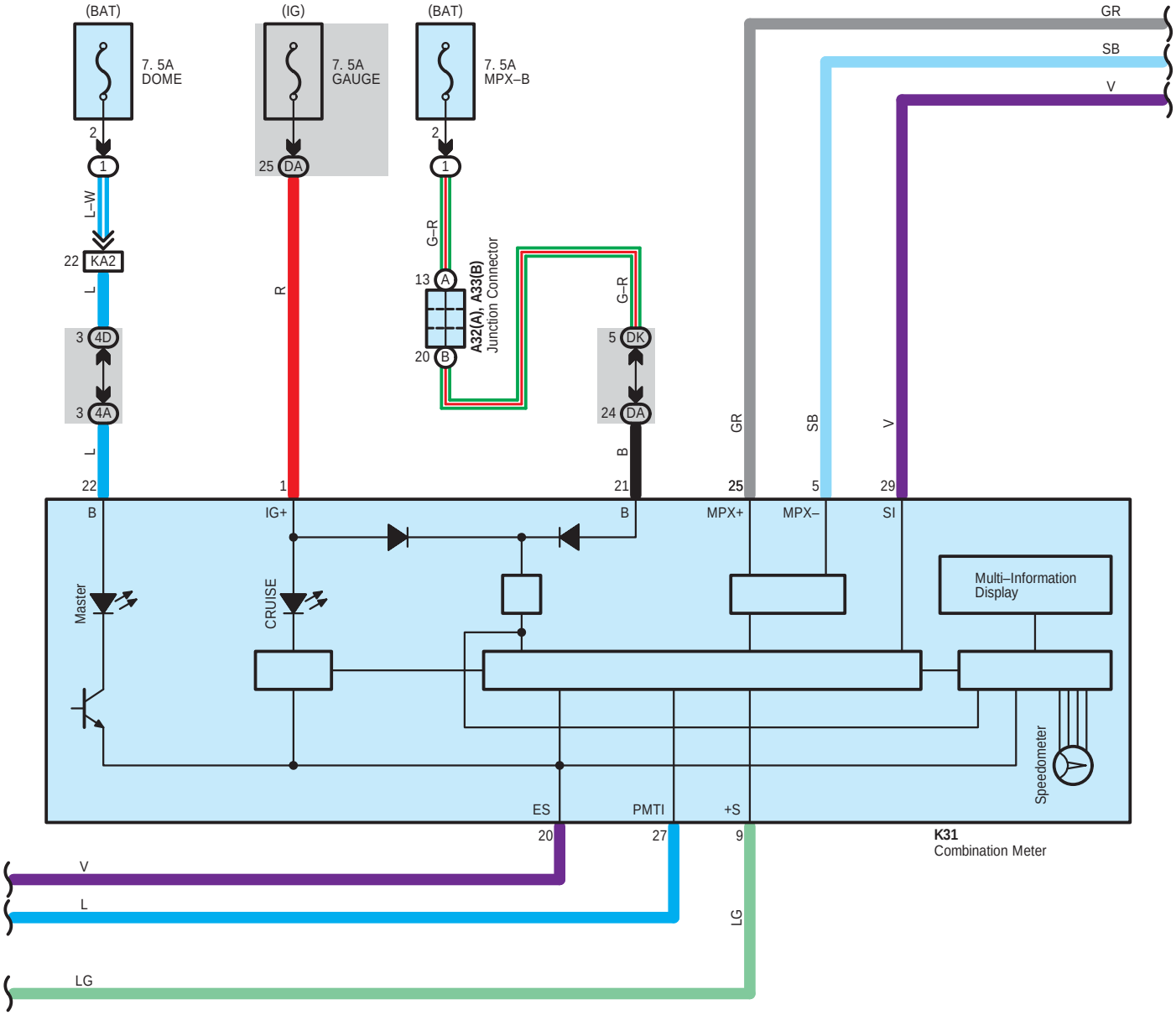

B
W
B
W


B
W
B
W

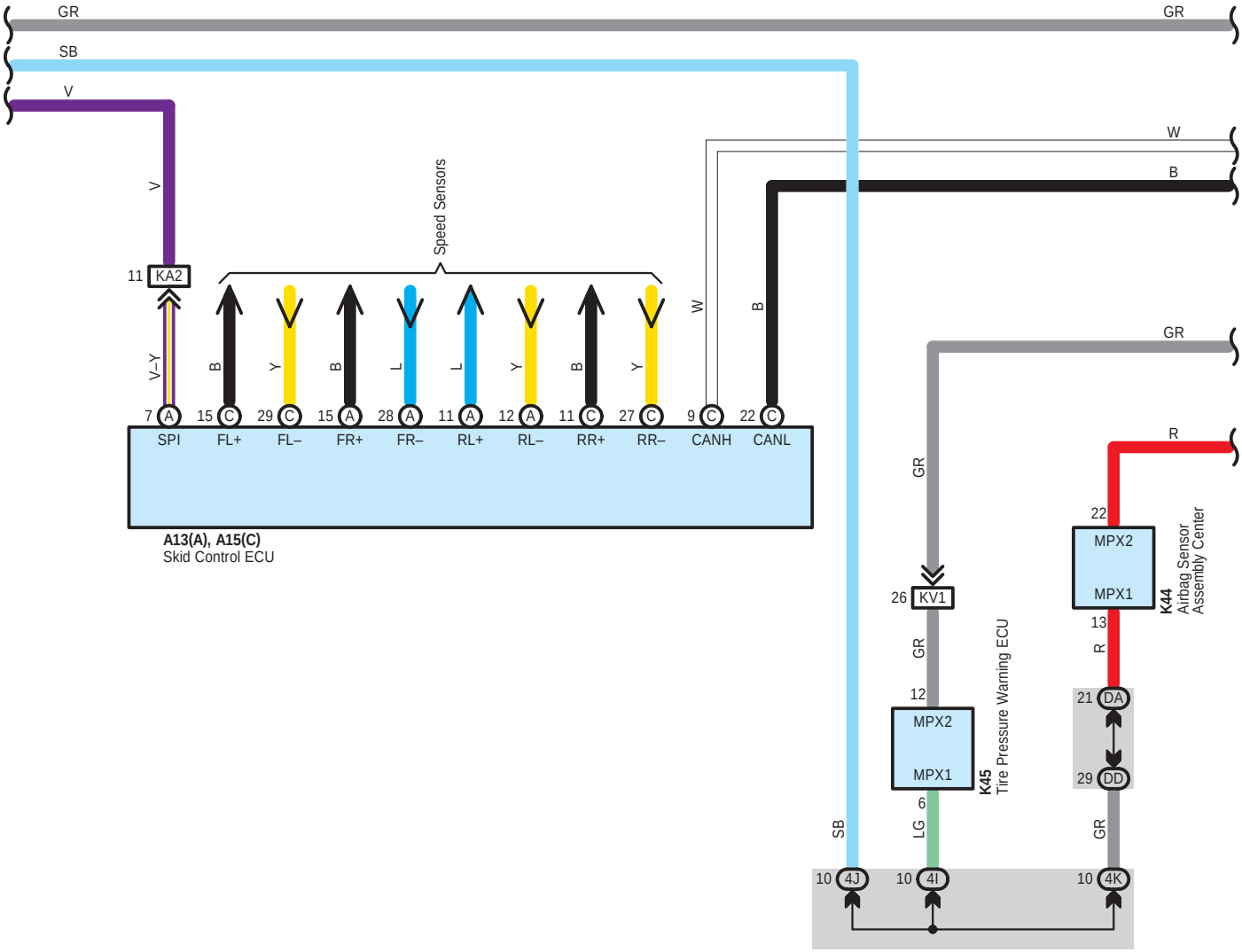
∗ 1 : Shielded


A54(A), E84(B)
Hybrid Vehicle Control ECU
VCP2 VCP1 VPA VPA2 EP1 EP2
64 65 111 110 88 87
+BS P R N D B RV FD MJ
4 19 18 17 16 15 14 13 12
(∗1)
(∗1)
B G L R W Y
W G L R Y V G–Y L–Y B
1 4 6 3 5 2
7 1 5 2 3 8 6 9 4
VAP2 VCP1 VPA1 VPA2 EP1 EP2
A34
Accelerator Position Sensor
BR
10
A50
Junction Connector
2
W–B
5 A
A8(A), E10(B)
Junction Connector
1 B
+B P R N D B RV FD MJ
P
R
N
D
B
E77
Park/Neutral Position SW
B
W
B
W
BR
B
W
B
W
E1

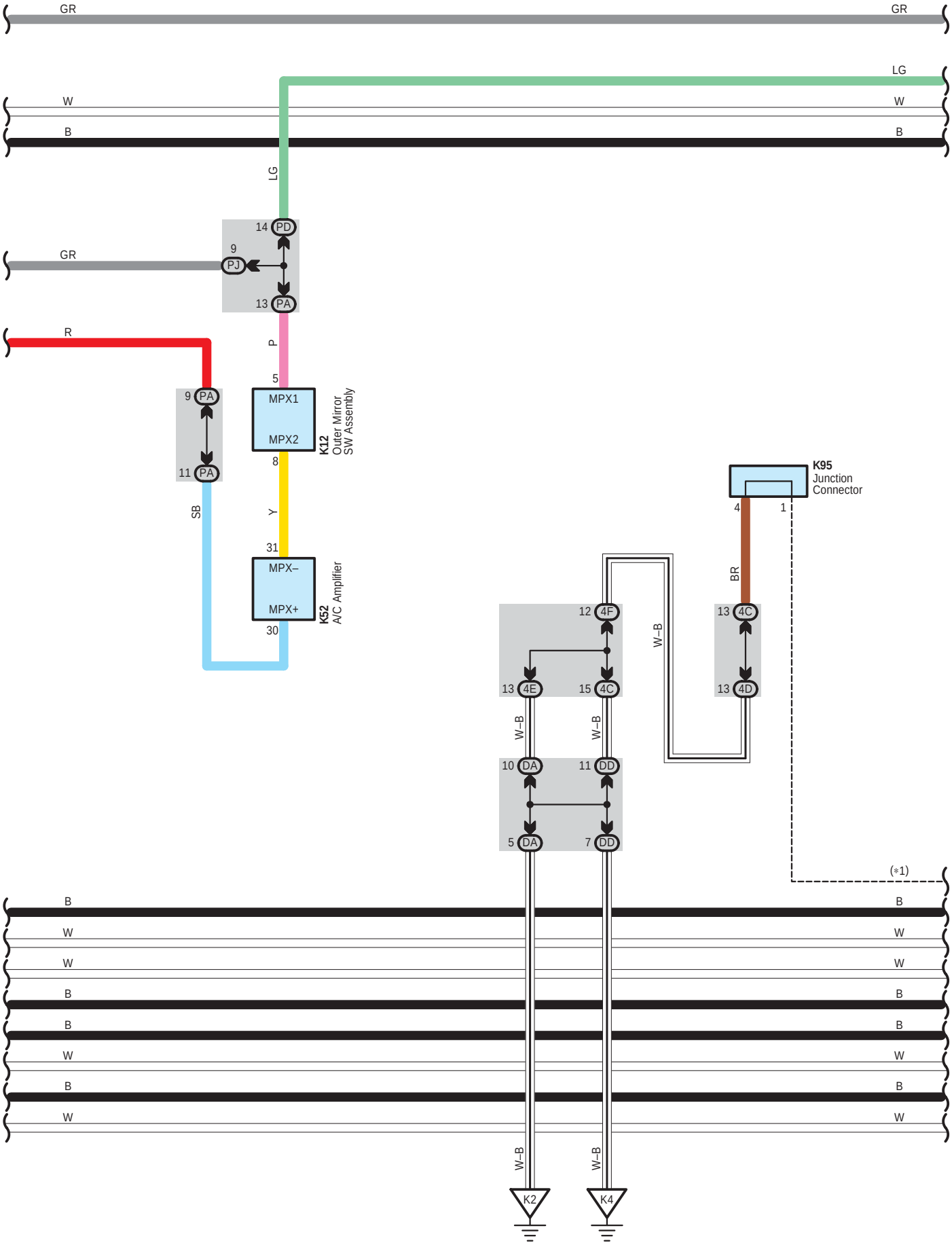

A54(A), E84(B)
Hybrid Vehicle Control ECU
CANH
CANL
CAN–
CAN+
SPDI
PMET
43 A
42 A
44 A
45 A
54 A
78 A
W
B
B
W
V
L
50 KA2
3 KA2
SB
L
15 4J
13 4E
15 4C
W–B
W–B
10 DA
11 DD
5 DA
7 DD
V
L
7 4L
7 4J
LG
B
W
W
B
B
W
B
W
W–B
W–B
K2
K4

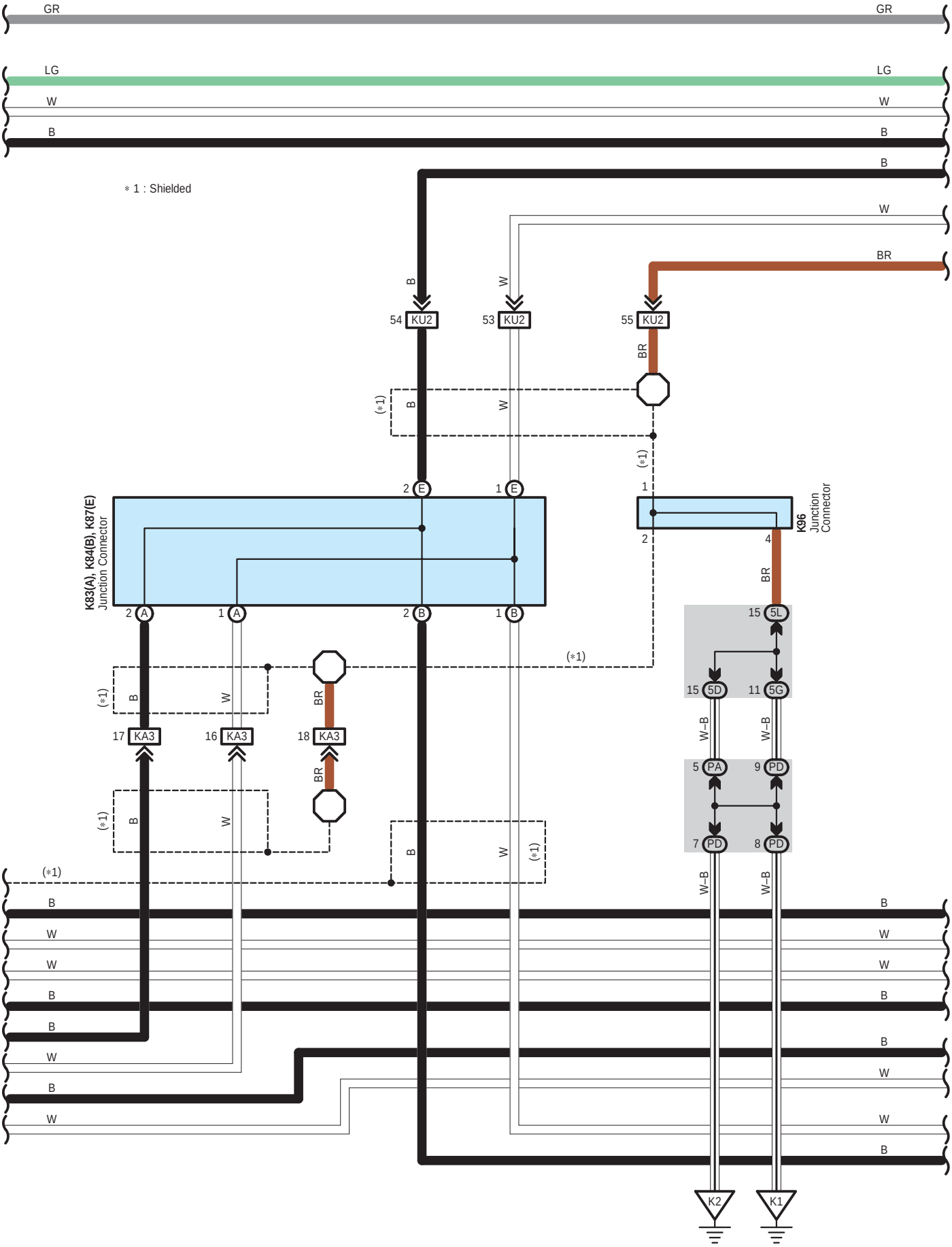

(BAT)
7. 5A
DOME
(IG)
7. 5A
GAUGE
(BAT)
7. 5A
MPX–B
GR
SB
V
L–W
G–R
G–R
L
R
L
B
A32(A), A33(B)
Junction Connector
KA2
4D
4A
DK
DA
DA
Master
CRUISE
Multi–Information
Display
Speedometer
MPX+
MPX–
SI
IG+
B
B
ES
PMTI
+S
K31
Combination Meter
V
L
LG
LG

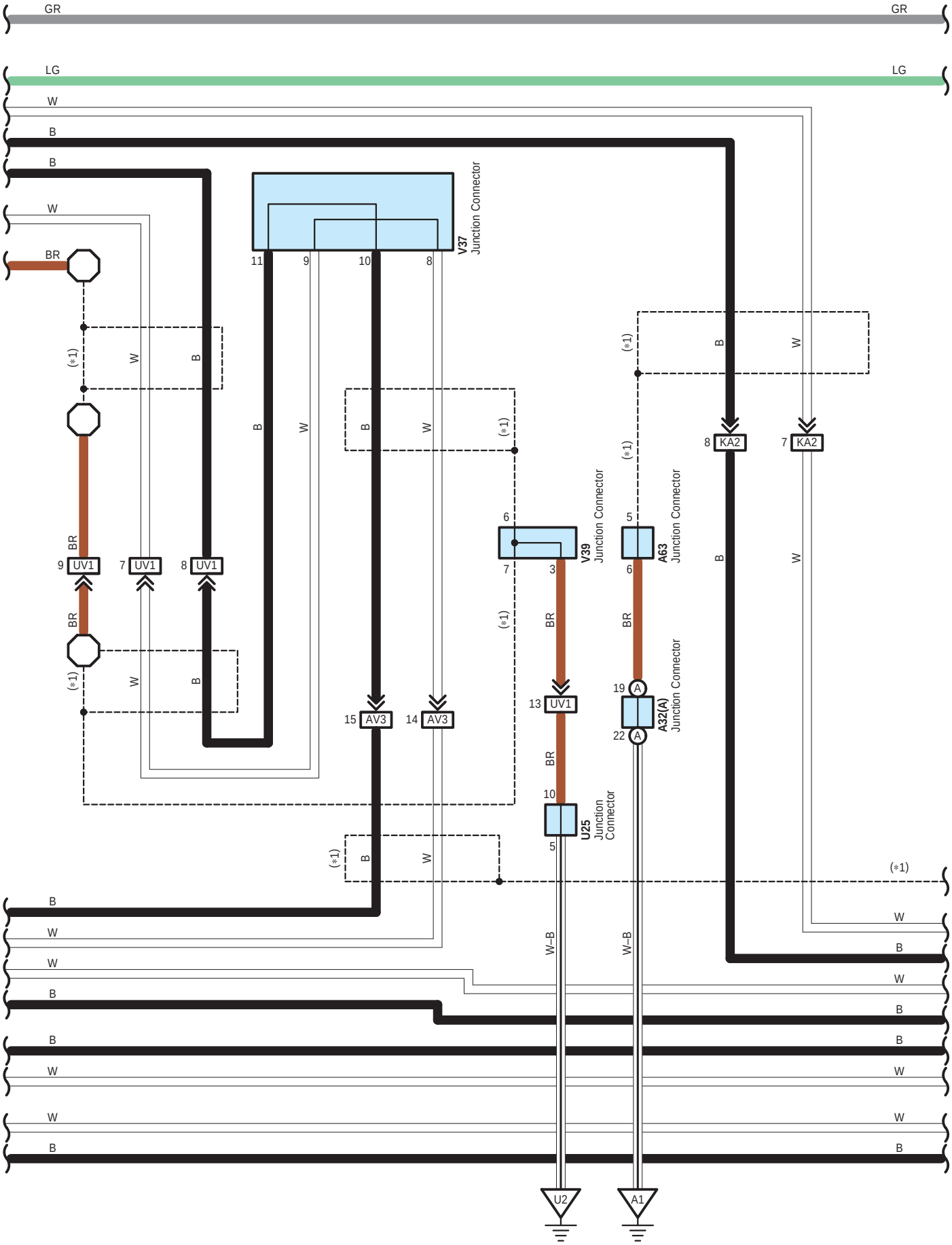

B
W
W
B
B
W
B
W
B
W
B
W
B
W

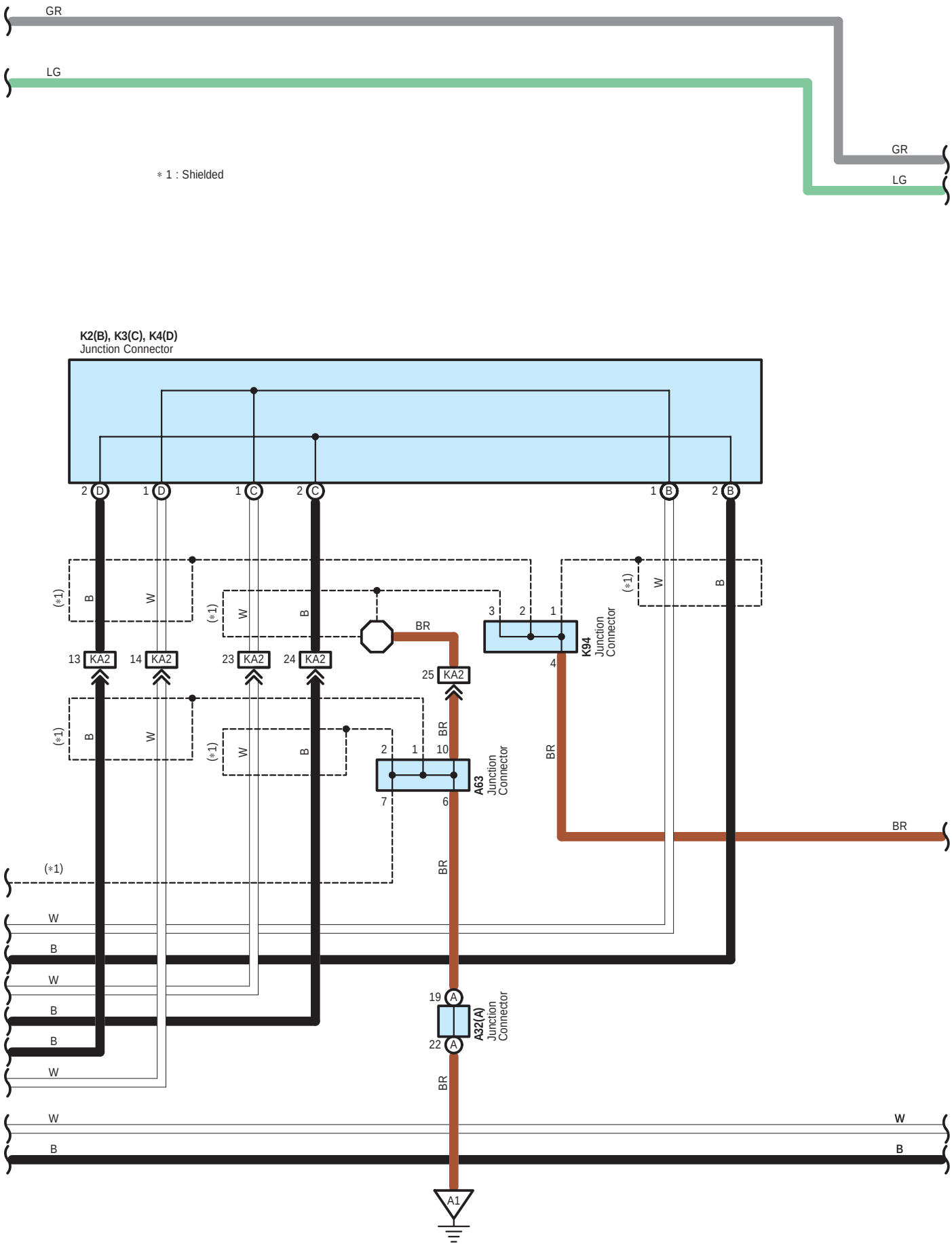

GR
SB
V
V
11 KA2
V–Y
Speed Sensors
B
Y
B
L
L
Y
B
Y
W
B
7 A SPI
15 C FL+
29 C FL–
15 A FR+
28 A FR–
11 A RL+
12 A RL–
11 C RR+
27 C RR–
9 C CANH
22 C CANL
A13(A), A15(C)
Skid Control ECU
GR
GR
R
22 MPX2
MPX1
K44
Airbag Sensor Assembly Center
26 KV1
GR
12 MPX2
MPX1
K45
Tire Pressure Warning ECU
13
R
21 DA
29 DD
SB
LG
GR
10 4J
10 4I
10 4K

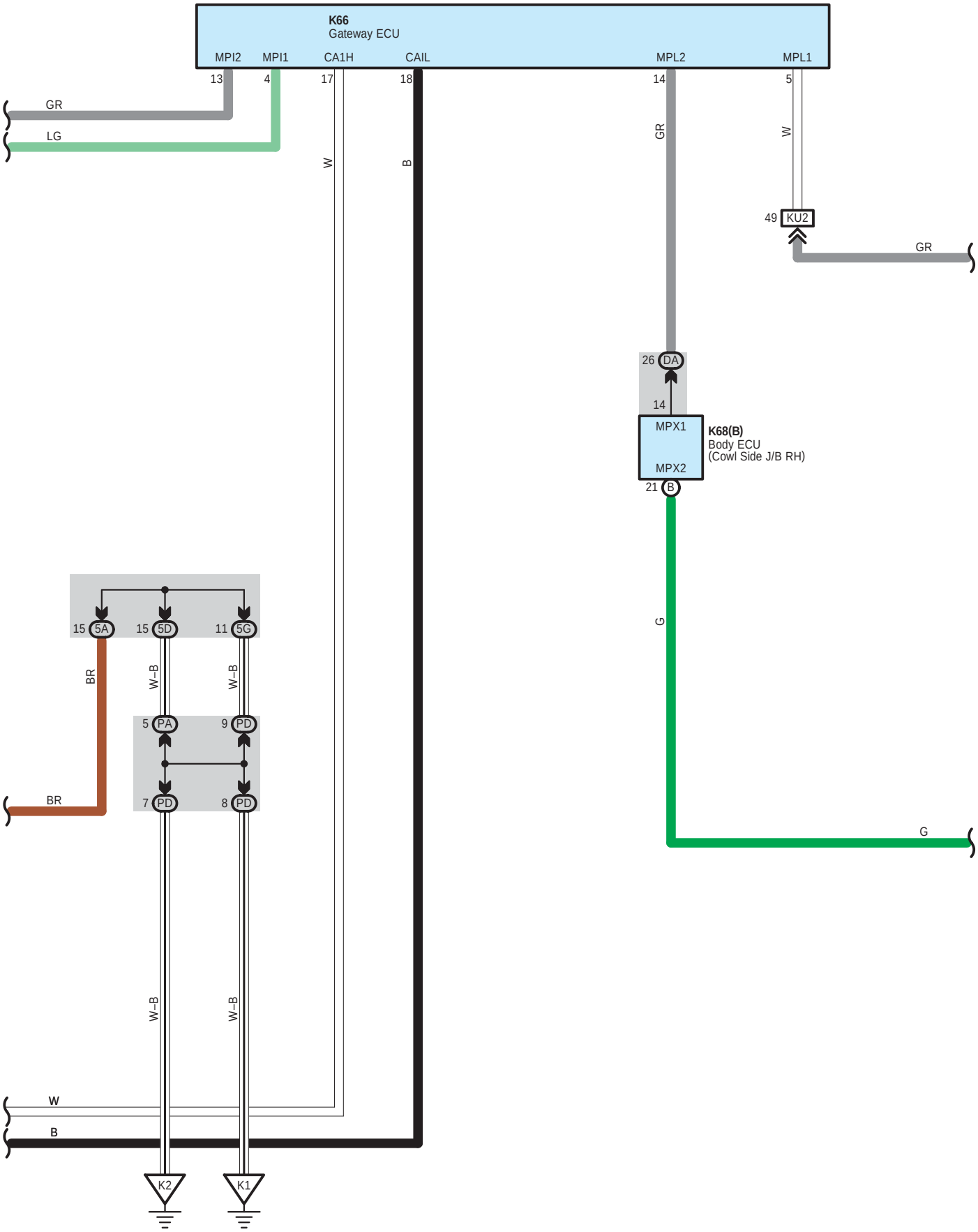

B
W
W
B
B
W
B
W
B
W
B
W

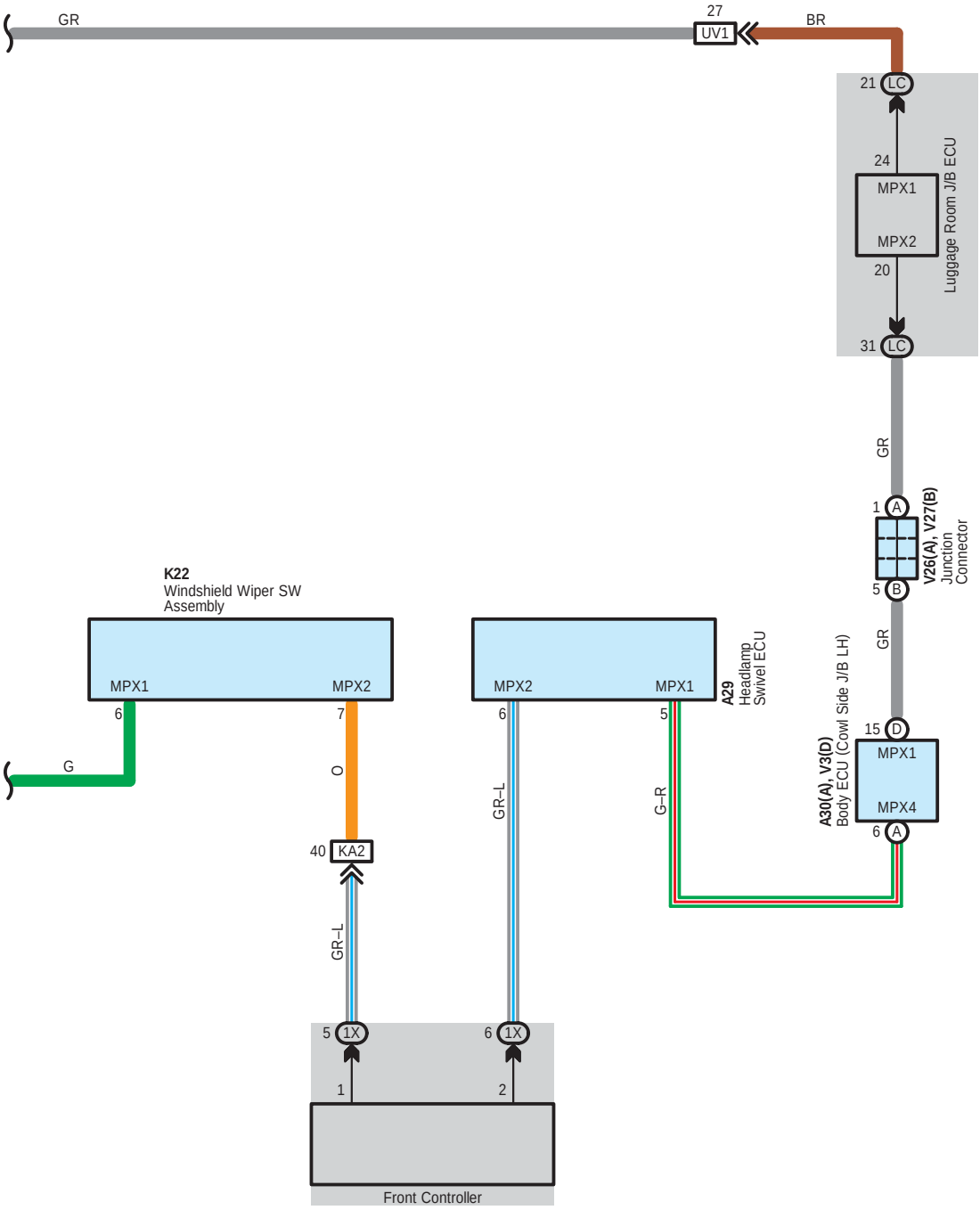

GR
GR
LG
W
W
B
B
LG
14 PD
9 PJ
13 PA
GR
R
P
5
9 PA
11 PA
MPX1
MPX2
K12 Outer Mirror SW Assembly
8
SB
Y
31
MPX–
MPX+
K52 A/C Amplifier
30
K95 Junction Connector
4
1
BR
12 4F
13 4C
13 4E
15 4C
13 4D
W–B
W–B
W–B
10 DA
11 DD
5 DA
7 DD
(*1)
B
W
W
B
B
W
B
W
B
W
W–B
W–B
K2
K4


GR
LG
W
B
∗1 : Shielded
54 KU2
53 KU2
55 KU2
K83(A), K84(B), K87(E) Junction Connector
K96 Junction Connector
17 KA3
16 KA3
18 KA3
15 5L
15 5D
11 5G
5 PA
9 PD
7 PD
8 PD
W–B
K2
K1


GR
LG
W
B
BR
(*1)
V37 Junction Connector
V39 Junction Connector
A63 Junction Connector
A32(A) Junction Connector
U25 Junction Connector
UV1
AV3
KA2
W-B
U2
A1


GR
LG
GR
LG
∗1 : Shielded
K2(B), K3(C), K4(D)
Junction Connector
2 D
1 D
1 C
2 C
1 B
2 B
(∗1)
B
W
13 KA2
14 KA2
23 KA2
24 KA2
25 KA2
BR
3 2 1
K94
Junction
Connector
4
2 1 10
A63
Junction
Connector
7 6
19 A
22 A
A32(A)
Junction
Connector
A1
W
B


K66
Gateway ECU
MPI2
MPI1
CA1H
CAIL
MPL2
MPL1
13
4
17
18
14
5
GR
LG
W
B
GR
W
49
KU2
GR
26
DA
14
MPX1
MPX2
K68(B)
Body ECU
(Cowl Side J/B RH)
21
B
G
G
15
5A
15
5D
11
5G
BR
W-B
W-B
5
PA
9
PD
7
PD
8
PD
BR
W-B
W-B
W
B
K2
K1


GR
27
UV1
BR
21
LC
24
MPX1
MPX2
20
Luggage Room J/B ECU
31
LC
GR
1
A
V26(A), V27(B)
Junction Connector
5
B
K22
Windshield Wiper SW Assembly
MPX1
MPX2
6
7
G
O
40
KA2
GR–L
5
1X
1
MPX2
MPX1
6
5
GR–L
G–R
A29
Headlamp Swivel ECU
6
1X
2
GR
15
D
MPX1
MPX4
6
A
A30(A), V3(D)
Body ECU (Cowl Side J/B LH)
Front Controller

System Outline

The cruise control system is a constant vehicle speed controller in which the engine output and motor drive torque are controlled automatically with control of the switch at hand without depressing the accelerator pedal when a driver wishes to drive at a constant speed on a highway.

1. Constant Speed Control

When actual vehicle speed is faster than the set vehicle speed, a signal is sent to the HV control motor to rotate in order to decrease the driving force. On the contrary, when the vehicle speed is slower than the set vehicle speed, a signal is sent to the HV control motor to rotate in order to increase the driving force.

2. Setting

When operating the – SET SW with the ON–OFF SW ON (Within the settable range of the vehicle speed: Above the low speed limit and below the high speed limit), the vehicle speed at which the switch is turned OFF is stored in the memory and the vehicle is controlled to drive constantly at that speed.

3. Coast, Tap Down

<Coast>

When the – SET SW is kept ON during driving under the cruise control, the coast control makes the cruise control request controlling 'Zero' to decelerate and stores the vehicle speed in the memory at which the switch is turned OFF and controls the vehicle to drive constantly at that speed.

<Tap down>

When the – SET SW is turned ON momentarily (Approx. 0.5 sec.), the set vehicle speed decelerates in approximately 1.6 km/h steps by each switch operation. In the tap down operation with more than 5 km/h difference between the set vehicle speed and actual vehicle speed, the vehicle speed at which the switch is turned OFF is stored in the memory and the vehicle is controlled to drive constantly at that speed.

4. Acceleration, Tap Up

<Acceleration>

When the + RES SW is kept ON during driving under the cruise control, the acceleration control rotates the HV control motor to increase the driving force to control the vehicle to accelerate with constant acceleration. The vehicle speed at which the switch is turned OFF is stored in the memory and the vehicle is controlled to drive constantly at that speed.

<Tap up>

When the – SET SW is turned ON momentarily (Approx. 0.5 sec.), the set vehicle speed accelerates in approximately 1.6 km/h steps by each switch operation. When difference between the set vehicle speed and actual vehicle speed is more than 5 km/h, the tap up operation does not change the set vehicle speed.

5. Low Speed Limit

It means the lower limit speed in the settable speed range and is set to be approximately 40 km/h. The cruise control cannot be set if the vehicle speed is slower than the low speed limit. When the vehicle speed drops below the low speed limit during driving under the cruise control, the cruise control is automatically cancelled.

6. High Speed Limit

It means the higher limit speed in the settable speed range and is set to be approximately 100 km/h for the domestic and 200 km/h for the other destinations. The cruise control cannot be set if the vehicle speed is faster than the high speed limit. The vehicle cannot be accelerated above the high speed limit with the + RES SW operation.

7. Cancel

When the following signals are input during driving under the cruise control, the cruise control is cancelled.

(1) Stop lamp switch ON

(2) D position circuit ON to OFF in the park/neutral position switch

(3) When selecting other gear positions than D or 3 range in the shift lever in M position

(4) CANCEL SW ON in the control switch

(5) ON–OFF SW OFF

8. Resume

When the vehicle speed stays above the low speed limit after the cruise control is canceled with above signals, the cruise control resumes operation to reach the vehicle speed that was set at the time the driver canceled the cruise control with constant acceleration by operating the + RES SW from OFF to ON.

9. Over Drive Control

Over–drive may be cut in climbing a hill during cruise control traveling. When climbing a hill is judged to finish from the throttle opening information under the over–drive ineffective condition, the over–drive function resumes automatically after the set time for over–drive resuming. However, when the vehicle speed drops below the over–drive resuming vehicle speed before the set time for over–drive resuming, the set time is reset and will work again from when the vehicle speed reaches the over–drive resuming vehicle speed.

10. Auto Cancel

(1) The set vehicle speed is erased in the memory and the cruise control is cancelled in the following conditions. Until the ON–OFF SW is turned ON again, the cruise operation indicator blinks and the control will not be effective.

A) When the stop lamp switch is disconnected and short–circuit.

B) When the vehicle speed signal is abnormal

C) When the electronic throttle parts are abnormal

(2) The set vehicle speed is erased in the memory and the cruise control is cancelled in the following conditions. Until the ON–OFF SW is turned ON again, the cruise operation indicator blinks and the control will not be effective unless the power switch is turned OFF.

A) When the stop lamp switch input circuit is abnormal

B) When the cancel circuit is abnormal

(3) The set vehicle speed is erased in the memory and the cruise control is cancelled in the following conditions.

A) When the vehicle speed reaches below the low speed limit (Approx. 40 km/h).

B) When the vehicle speed reaches the speed slower than (The set vehicle speed minus 16 km/h).

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A8 A	80	E10 B	81	K45	86
A9	80	E27	81	K52	86
A10 A	80	E39	81	K66	86
A11 B	80	E77	81	K68 B	86
A13 A	80	E83 B	81	K83 A	78, 86
A15 C	80	E84 B	81	K84 B	78, 86
A29	84	E86	81	K87 E	78, 86
A30 A	84	E89	81	K94	86
A32 A	84	K2 B	74, 85	K95	86
A33 B	84	K3 C	74, 85	K96	86
A34	84	K4 D	74, 85	U25	90
A37	84	K12	85	V3 D	87
A50	80	K16	85	V26 A	91
A53 A	80	K20	85	V27 B	91
A54 A	80	K22	85	V37	91
A63	84	K31	85	V39	91
E9	81	K44	86		

▭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	24	Engine Room R/B No.1 (Engine Compartment Left)

: **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1T	25	Engine Room Main Wire and Engine Room J/B No.1 (Engine Compartment left)
1V	28	
1X	29	
4A	70	Instrument Panel Wire and Center J/B RH (Right Side of the Instrument Panel Reinforcement)
4C		
4D		
4E		
4F		
4I		
4J		
4K		
4L		
5A	66	Instrument Panel Wire and Center J/B LH (Right Side of the Instrument Panel Reinforcement)
5D		
5G		
5J		
5L		
DA	55	Instrument Panel Wire and Cowl Side J/B RH (Behind the Glove Box)
DD		
DK	56	Engine Room Main Wire and Cowl Side J/B RH (Behind the Glove Box)
DL		
LC	63	Floor No.2 Wire and Luggage Room J/B (Left Side of the Quarter Panel)
PA	49	Instrument Panel Wire and Cowl Side J/B LH (Lower Finish Panel)
PD		
PJ	50	Floor No.2 Wire and Cowl Side J/B LH (Lower Finish Panel)
PL	50	Engine Room Main Wire and Cowl Side J/B LH (Lower Finish Panel)

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
AE1	96	Engine Room Main Wire and Engine Wire (Inside of the ECU Box)
AV3	97	Engine Room Main Wire and Floor No.2 Wire (Cowl Side Panel LH)
KA2	97	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
KA3	97	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
KU2	97	Instrument Panel Wire and Floor No.1 Wire (Right Kick Panel)
KV1	97	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
UV1	98	Floor No.1 Wire and Floor No.2 Wire (Center of the Rear Floor Partition Panel)

: **Ground Points**

Code	See Page	Ground Points Location
A1	96	Left Side of the Dash Panel
A2	96	Front Left Fender Apron
E1	96	Rear Side of the Left Cylinder Head
E2	96	Rear Side of the Right Cylinder Head
K1	97	Left Kick Panel
K2	97	Left Side of the Shift Lever
K4	97	Right Kick Panel
U2	98	Right Side of the Rear Floor Partition Panel