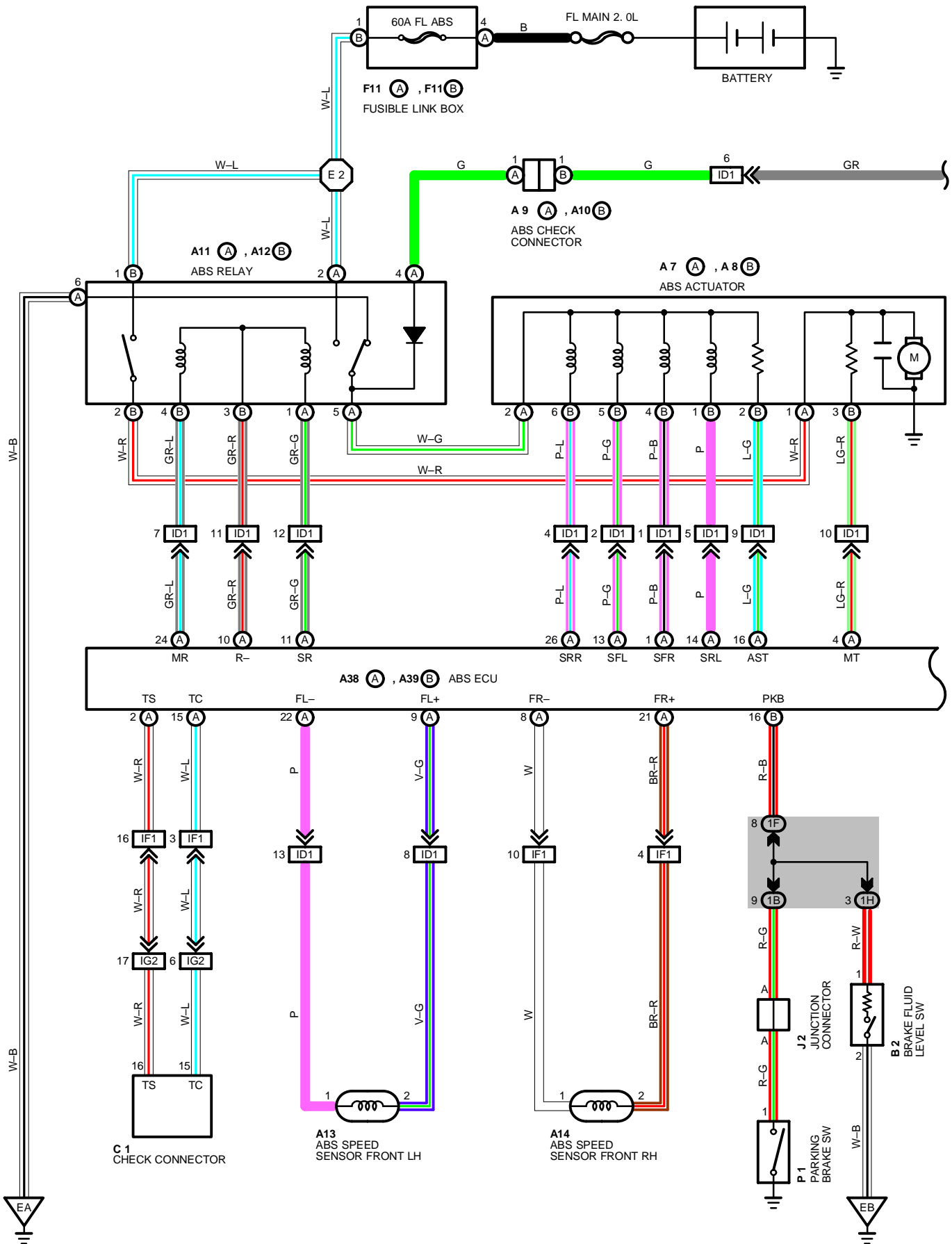
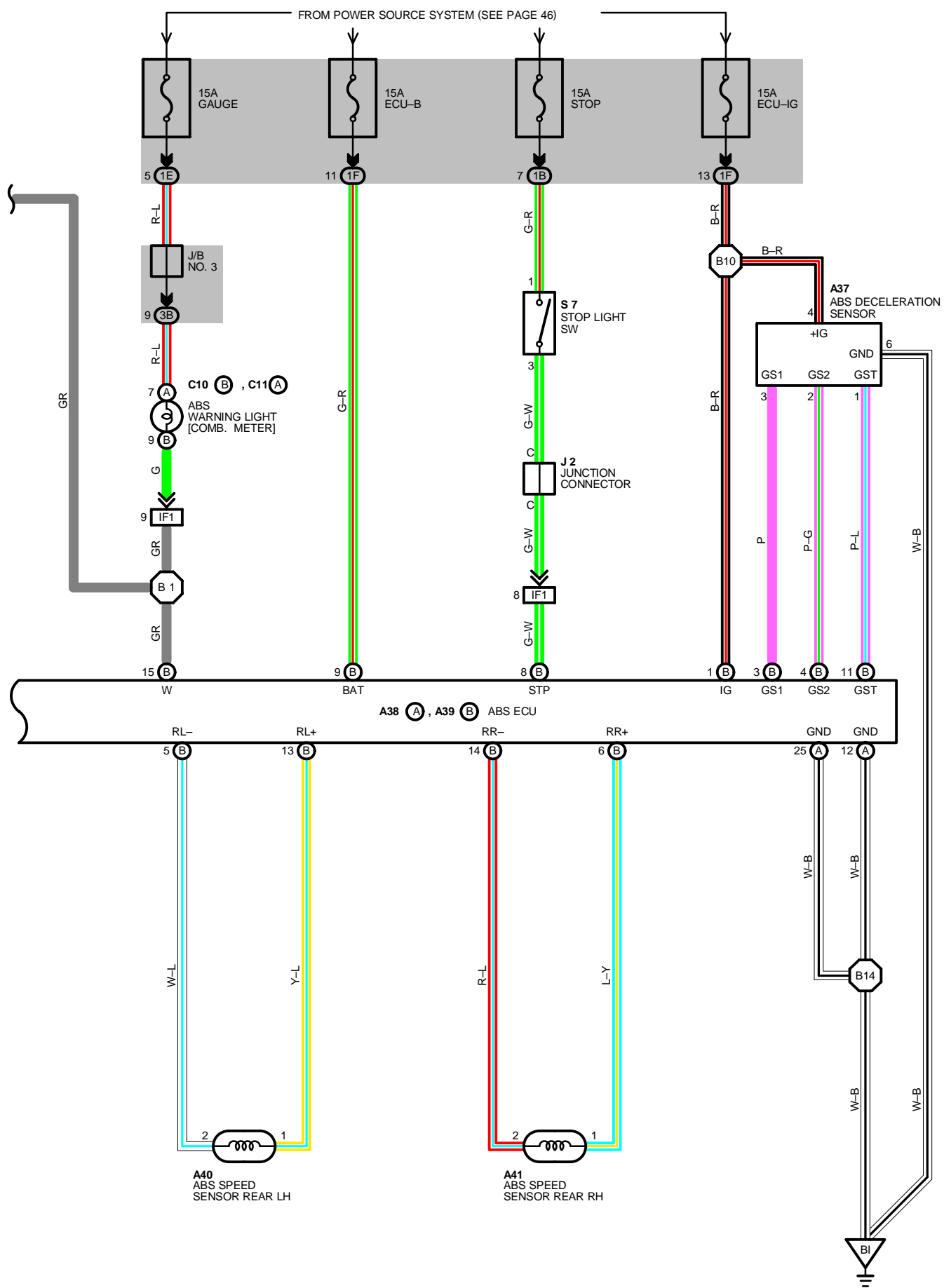


ABS (ANTI-LOCK BRAKE SYSTEM)





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SYSTEM OUTLINE

THIS SYSTEM CONTROLS THE RESPECTIVE BRAKE FLUID PRESSURES ACTING ON THE DISC BRAKE CYLINDERS OF THE RIGHT FRONT WHEEL, LEFT FRONT WHEEL AND REAR WHEELS WHEN THE BRAKES ARE APPLIED IN A PANIC STOP SO THAT THE WHEELS DO NOT LOCK. THIS RESULTS IN IMPROVED DIRECTIONAL STABILITY AND STEERABILITY DURING PANIC BRAKING.

1. INPUT SIGNALS

- (1) SPEED SENSOR SIGNAL
THE SPEED OF THE WHEELS IS DETECTED AND INPUT TO **TERMINALS FL+, FR+, RL+ AND RR+** OF THE ABS ECU.
- (2) STOP LIGHT SW SIGNAL
A SIGNAL IS INPUT TO **TERMINAL STP** OF THE ABS ECU WHEN BRAKE PEDAL IS OPERATED.
- (3) PARKING BRAKE SW SIGNAL
A SIGNAL IS INPUT TO **TERMINAL PKB** OF THE ABS ECU WHEN THE PARKING BRAKE IS OPERATED.
- (4) DECELERATION SENSOR SIGNAL
THE DEGREE OF VEHICLE DECELERATION IS DETECTED AND INPUT TO THE ABS ECU.

2. SYSTEM OPERATION

DURING SUDDEN BRAKING THE ABS ECU WHICH HAS SIGNALS INPUT FROM EACH SENSOR, CONTROLS THE CURRENT FLOWING TO THE SOLENOID INSIDE THE ACTUATOR AND LETS THE HYDRAULIC PRESSURE ACTING ON EACH WHEEL CYLINDER ESCAPE TO THE RESERVOIR. THE PUMP INSIDE THE ACTUATOR IS ALSO OPERATING AT THIS TIME AND IT RETURNS THE BRAKE FLUID FROM THE RESERVOIR TO THE MASTER CYLINDER. THUS PREVENTING LOCKING OF THE VEHICLE WHEELS.

IF THE ECU JUDGES THAT THE HYDRAULIC PRESSURE ACTING ON THE WHEEL CYLINDER IS INSUFFICIENT, THE CURRENT ACTING ON THE SOLENOID IS CONTROLLED AND THE HYDRAULIC PRESSURE IS REDUCTION, HOLDING AND INCREASE ARE REPLEATED TO MAINTAIN VEHICLE STABILITY AND TO IMPROVE STEERABILITY DURING SUDDEN BRAKING.

SERVICE HINTS

A38(A), A39(B) ABS ECU

(CONNECT THE ECU CONNECTOR)

- | | |
|-----------------------------|---|
| (A) 2-GROUND | : APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION AND CHECK CONNECTOR TS-E1 NOT CONNECTED |
| (A)15-GROUND | : APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION AND CHECK CONNECTOR TS-E1 NOT CONNECTED |
| (A)11-GROUND, (A) 13-GROUND | : APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION ABS WARNING LIGHT GOES OFF |
| (A)14-GROUND, (A) 16-GROUND | : APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION ABS WARNING LIGHT GOES OFF |
| (A)26-GROUND, (B) 15-GROUND | : APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION ABS WARNING LIGHT GOES OFF |
| (A)12-GROUND | : ALWAYS CONTINUITY |
| (A)25-GROUND | : ALWAYS CONTINUITY |
| (B) 1-GROUND | : APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION |
| (B) 8-GROUND | : APPROX. 12 VOLTS WITH BRAKE PEDAL DEPRESSED |
| (B) 9-GROUND | : ALWAYS APPROX. 12 VOLTS |
| (B)16-GROUND | : APPROX. 12 VOLTS WITH ENGINE RUNNING AND PARKING BRAKE LEVER RETURNED |

(DISCONNECT THE ECU CONNECTOR)

- | | |
|-------------|------------------------------|
| (A) 1-(A)16 | : APPROX. 6 Ω |
| (A)13-(A)16 | : APPROX. 6 Ω |
| (A)14-(A)16 | : APPROX. 6 Ω |
| (A)16-(A)26 | : APPROX. 6 Ω |
| (A) 8-(A)21 | : APPROX. 0.8-1.3 Ω |
| (A) 9-(A)22 | : APPROX. 0.8-1.3 Ω |
| (A)10-(A)11 | : APPROX. 60-100 Ω |
| (A)10-(A)24 | : APPROX. 50-80 Ω |
| (B) 5-(B)13 | : APPROX. 1.1-1.5 K Ω |
| (B) 6-(B)14 | : APPROX. 1.1-1.5 K Ω |

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 7	A 25	A37	27	C11	A 26
A 8	B 25	A38	A 27	F11	A 25
A 9	A 25	A39	B 27		B 25
A10	B 25	A40	27	J 2	26
A11	A 25	A41	27	P 1	26
A12	B 25	B 2	25	S 7	26
A13	25	C 1	25		
A14	25	C10	B 26		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
ID1	30	ENGINE ROOM MAIN WIRE AND FLOOR WIRE (LEFT KICK PANEL)
IF1	30	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG2	30	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)

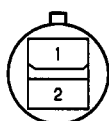
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	28	FRONT RIGHT FENDER
EB	28	FRONT LEFT FENDER
BI	34	UNDER THE LEFT CENTER PILLAR

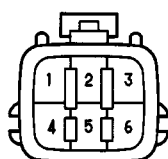
○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	28	ENGINE ROOM MAIN WIRE	B11	34	LUGGAGE ROOM WIRE
B 1	34	FLOOR WIRE	B14	34	FLOOR WIRE

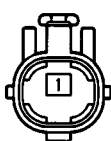
A 7 (A) GRAY



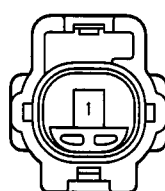
A 8 (B) GRAY



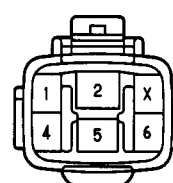
A 9 (A) DARK GRAY



A10 (B) DARK GRAY



A11 (A) GRAY



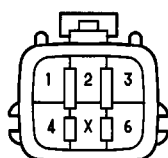
A12 (B) GRAY



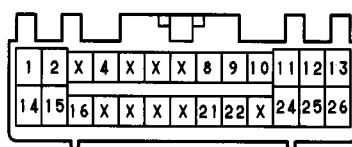
A13, A14 GRAY



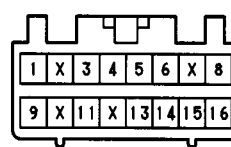
A37 GRAY



A38 (A)



A39 (B) DARK GRAY



A40, A41 GRAY



ABS (ANTI-LOCK BRAKE SYSTEM)

