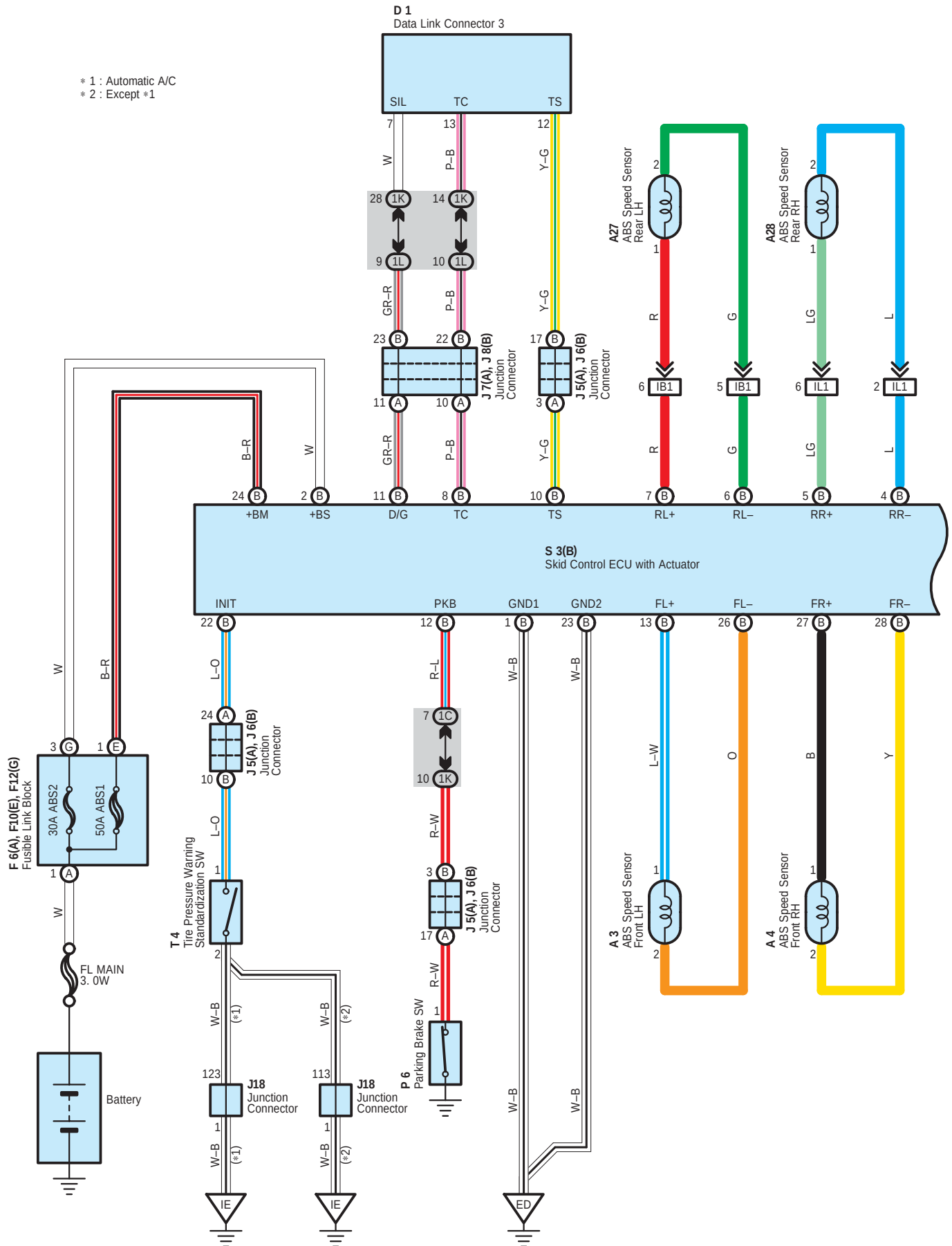
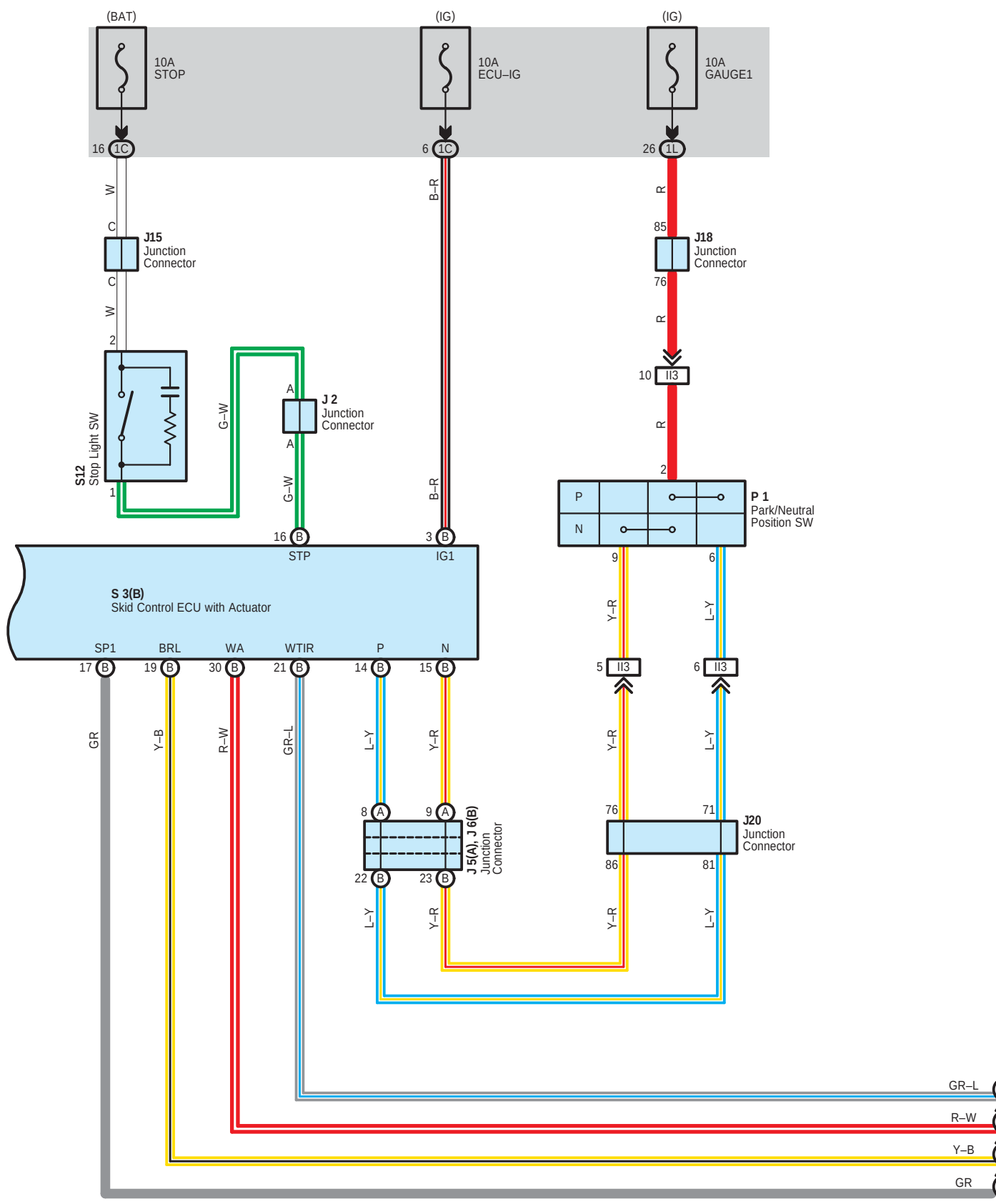
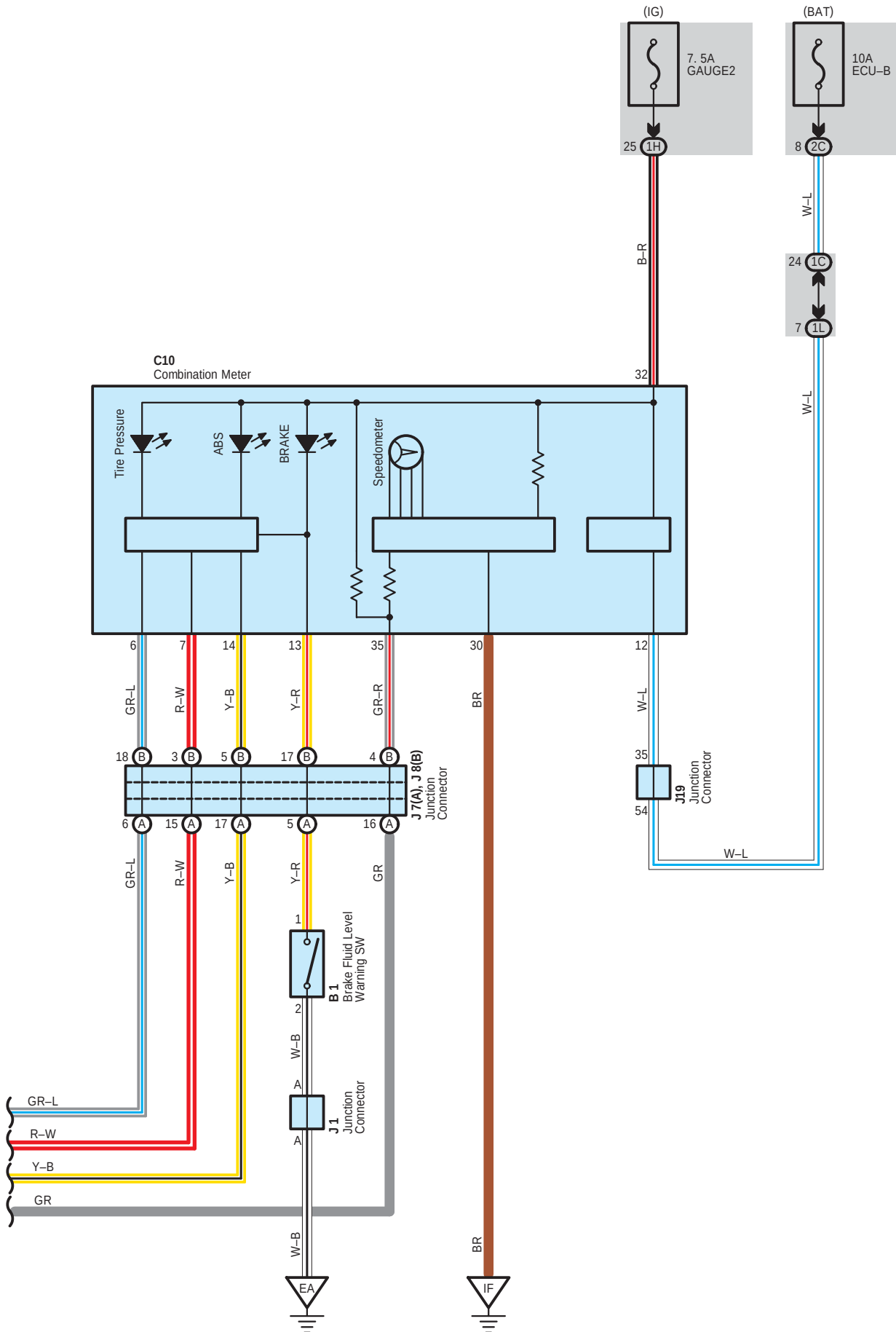


ABS and Tire Pressure Warning System





ABS and Tire Pressure Warning System



System Outline

ABS system controls the respective brake fluid pressures acting on the disc brake cylinders of the four 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.

Tire pressure warning system turns on the tire pressure warning light and warns the driver of low tire pressure, when driving with a low tire pressure, which may cause trouble driving.

However, this system can detect the low tire pressure condition only if one of the tires has such a condition in particular compared to other tires, and it cannot detect. Therefore, it can not detect natural (Gradual) air loss occurring to the tires.

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 skid control ECU with actuator.

(2) Stop light SW signal

A signal is input to TERMINAL STP of the skid control ECU with actuator when the brake pedal is operated.

(3) Standardization SW Signal

A signal is input to TERMINAL INIT of the skid control ECU with actuator when the tire pressure warning standardization SW is operated.

(4) Parking position signal

A signal is input to TERMINAL P of the skid control ECU with actuator when the Shift lever at "P" position.

(5) Neutral position signal

A signal is input to TERMINAL N of the skid control ECU with actuator when the Shift lever at "N" position.

2. ABS System Operation

During sudden braking the skid control ECU with actuator has signals input from each sensor, which controls the current 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 skid control ECU with actuator judges that the hydraulic pressure acting on the wheel cylinder is insufficient, the current on the solenoid is controlled and the hydraulic pressure is increased. Holding of the hydraulic pressure is also controlled by the skid control ECU with actuator, by the same method as above. Pressure reduction, holding and increase are repeated to maintain vehicle stability and to improve steerability during sudden braking.

3. Operation of Tire Pressure Warning System

In accordance with the reduction of tire pressure, tire diameter becomes small and the tire rotation speed becomes greater.

In the relation between the difference of the vehicle speed of normal wheels and the low pressure wheel and the tire pressure, based on the speed signal detected during driving, it detects the change of the tire pressure.

As a result, if the system judges that the tire pressure has reduced, it turns on the tire pressure warning light and warn the driver using the signal from the skid control ECU with actuator.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A3	36	F12 G	36	J19	40
A4	36	J1	37	J20	40
A27	42	J2	37	P1	37
A28	42	J5 A	40	P6	41
B1	36	J6 B	40	S3 B	37
C10	39	J7 A	40	S12	41
D1	39	J8 B	40	T4	41
F6 A	36	J15	40		
F10 E	36	J18	40		

ABS and Tire Pressure Warning System



: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	31	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1H	30	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1K	31	
1L		
2C	24	



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB1	52	Engine Room Main Wire and Floor No.1 Wire (Left Cowl Side Panel)
II3	53	Engine Wire and Instrument Panel Wire (Right Kick Panel)
IL1	53	Engine Room Main Wire and Floor No.2 Wire (Right Kick Panel)



: Ground Points

Code	See Page	Ground Points Location
EA	50	Front Side of the Right Fender Apron
ED	50	Front Side of the Left Fender Apron
IE	52	Left Kick Panel
IF	52	Instrument Panel Brace LH