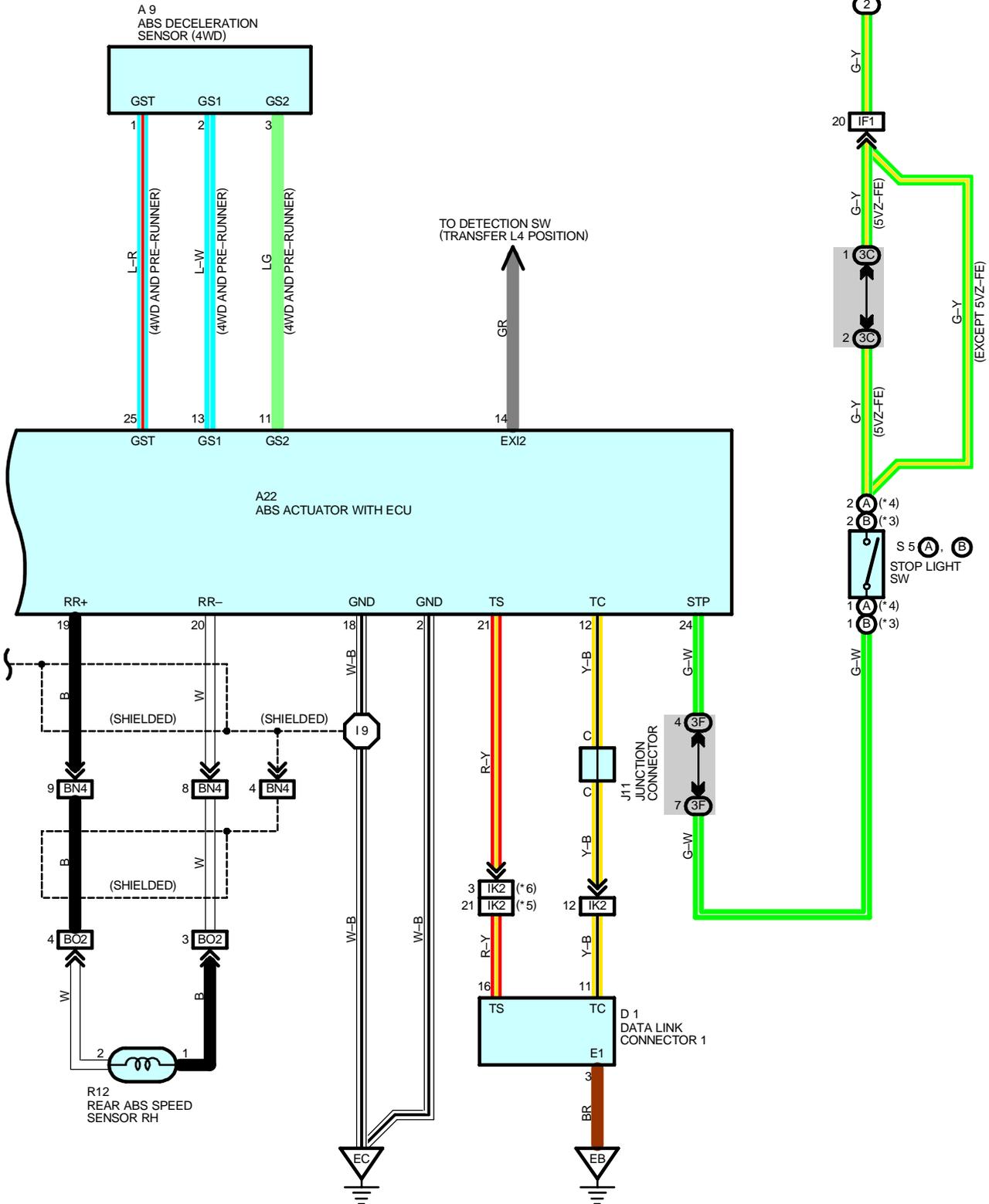


- * 1 : W/ REAR DIFF. LOCK
- * 2 : W/O REAR DIFF. LOCK
- * 3 : W/ CRUISE CONTROL
- * 4 : W/O CRUISE CONTROL
- * 5 : 3RZ-FE 2RZ-FE
- * 6 : 5VZ-FE

FROM POWER SOURCE SYSTEM (SEE PAGE 46)



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 SIGNAL

(1) Speed sensor signal

The speed of the wheels is detected and input to TERMINALS FL+, FR+, RL+ and RR+ of the ABS actuator with ECU.

(2) Stop light SW signal

A signal is input to TERMINAL STP of the ABS actuator with ECU when the brake pedal is depressed.

(3) Deceleration sensor signal (4WD)

Longitudinal acceleration is detected and a signal is input to the ABS actuator with ECU.

2. SYSTEM OPERATION

During sudden braking, the ABS actuator with ECU which has signals input from each sensor lets the hydraulic pressure acting on each wheel cylinder escape to the reservoir.

The pump inside the ABS actuator with ECU is also operating at this time and it returns the brake fluid from the reservoir to the master cylinder, thus preventing locking of vehicle wheels.

If the ABS actuator with 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 increased.

Holding of the hydraulic pressure is also controlled by the ECU, by the same method as above, by repeated pressure reduction. Holding and increase are repeated to maintain vehicle stability and to improve steerability during sudden braking.

SERVICE HINTS

F1, F2 FRONT ABS SPEED SENSOR LH, RH

1-2 : 0.92-1.22 kΩ (20°C, 68°F) (2WD)

1.40-1.80 kΩ (20°C, 68°F) (4WD)

R11, R12 REAR ABS SPEED SENSOR LH, RH

1-2 : 0.89-1.29 kΩ (20°C, 68°F)

A22 ABS ACTUATOR WITH ECU

6-GROUND : 10-14 volts with ignition SW on

24-GROUND : 10-14 volts with stop light SW on (Brake pedal depressed)

2, 18-GROUND : Always continuity

S5 (A), (B) STOP LIGHT SW

(A) 2-(A) 1, (B) 2-(B) 1 : Closed with brake pedal depressed

○ : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page | |
|------|---------------------|------|---------------------|------|----------|----|
| A9 | 32 | D1 | 30 (3RZ-FE, 2RZ-FE) | J11 | 33 | |
| A22 | 28 (5VZ-FE) | F1 | 28 (5VZ-FE) | R11 | 34 | |
| | 30 (3RZ-FE, 2RZ-FE) | | 30 (3RZ-FE, 2RZ-FE) | R12 | 34 | |
| C13 | 32 | F2 | 28 (5VZ-FE) | S5 | A | 33 |
| D1 | 28 (5VZ-FE) | | 30 (3RZ-FE, 2RZ-FE) | | B | 33 |

○ : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|------|----------|-------------------------------------|
| 2 | 21 | R/B No.2 (Engine Compartment Left) |

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|------|----------|---|
| 1B | 22 | Cowl Wire and J/B No.1 (Lower Finish Panel) |
| 3C | 24 | Cowl Wire and J/B No.3 (Behind the Instrument Panel Left) |
| 3D | | |
| 3F | | |
| 3H | 26 | Cowl Wire and J/B No.3 (Behind the Instrument Panel Center) |

 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|------|-------------------------------------|--|
| EF1 | 36 (5VZ-FE) | Cowl Wire and Engine Room Main Wire (Right Fender) |
| | 38 (3RZ-FE, 2RZ-FE) | |
| IF1 | 40 | Engine Room Main Wire and Cowl Wire (Left Kick Panel) |
| IF2 | | |
| IK2 | 40 | Engine Wire and Cowl Wire (Right Kick Panel) |
| BN4 | 42 | Frame Wire and Cowl Wire (Under the Driver's Seat) |
| BO2 | 42 | Frame Wire and Diff. Lock Wire (Rear Side Member LH) |

 : GROUND POINTS

| Code | See Page | Ground Points Location |
|------|-------------------------------------|---------------------------------|
| EB | 36 (5VZ-FE) | Under the Data Link Connector 1 |
| | 38 (3RZ-FE, 2RZ-FE) | Near the Throttle Body |
| EC | 36 (5VZ-FE) | Front Right Fender |
| | 38 (3RZ-FE, 2RZ-FE) | |

 : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|------|----------|---------------------------------|------|----------|---------------------------------|
| I9 | 40 | Cowl Wire | | | |