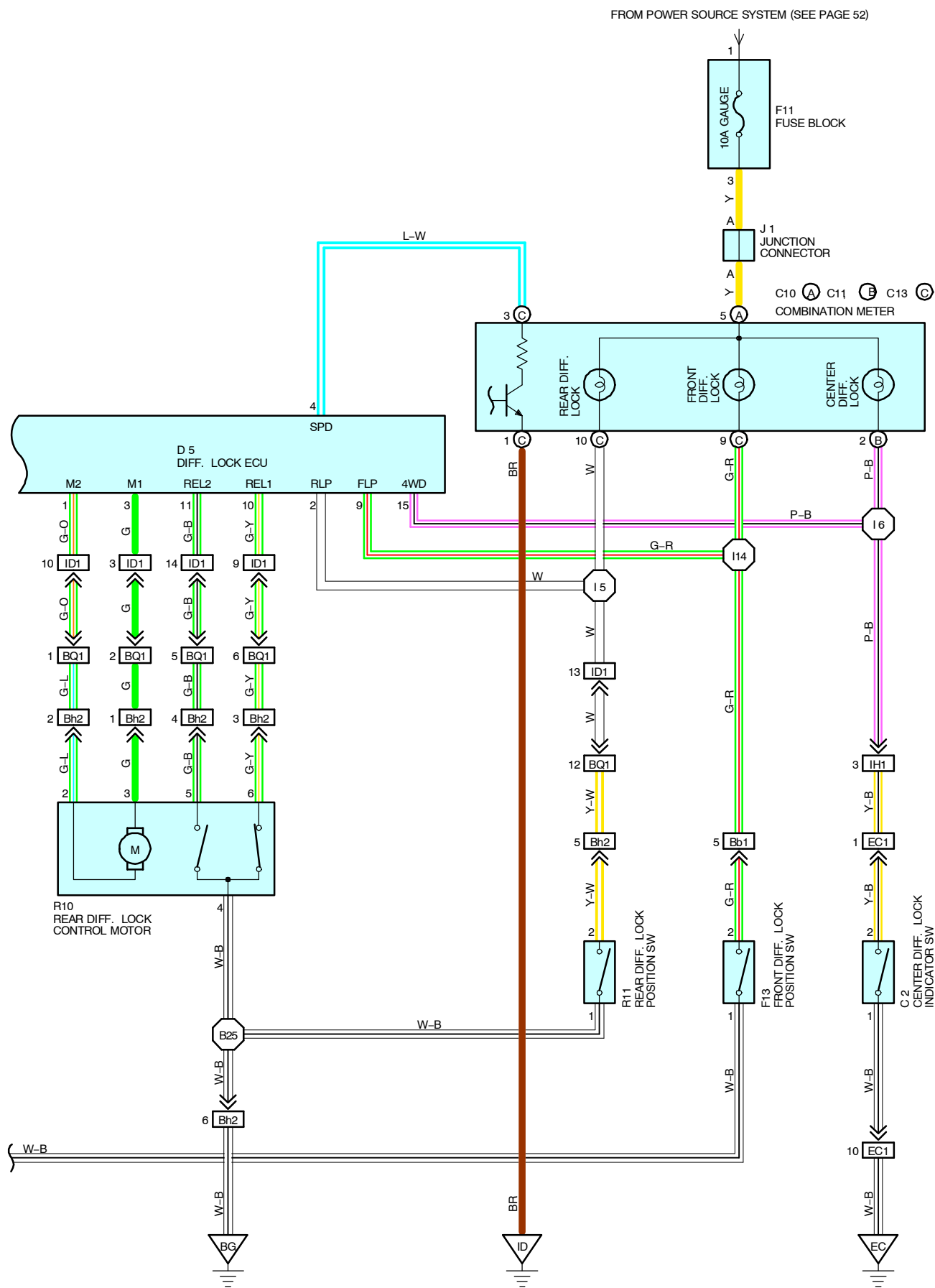




Wiring diagram for the front differential lock control system. The diagram shows the power flow from a 30A fuse block (F11) through a differential lock control switch (D4) to a differential lock ECU (D5). The ECU controls a front differential lock control motor (F12) and two relays (REL3, REL4). The motor is connected to a junction connector (J8) which is grounded. The diagram also shows the ground connection for the motor and the junction connector.

Key components and connections:

- F11 30A DIFF. FUSE BLOCK:** Connected to the main power line (1, 2, 8, IG).
- D4 DIFF. LOCK CONTROL SW:** Controls the front differential lock control motor (F12) and the front differential lock control relay (REL3).
- D5 DIFF. LOCK ECU:** Receives signals from the switch and controls the front differential lock control motor (F12) and the front differential lock control relay (REL3).
- F12 FRONT DIFF. LOCK CONTROL MOTOR:** Controls the front differential lock.
- J8 JUNCTION CONNECTOR:** Connects the motor to the ground.
- Grounding:** The motor and the junction connector are grounded through a common ground point (IE).





FRONT/REAR DIFFERENTIAL LOCK

SYSTEM OUTLINE

THIS SYSTEM FREES OR LOCKS THE FRONT AND REAR DIFFERENTIALS ACCORDING TO THE POSITION OF THE DIFF. LOCK CONTROL SW. THE DIFFERENTIAL WILL LOCK ONLY WHEN THE CENTER DIFF. LOCK INDICATOR SW IS ON AND THE VEHICLE SPEED IS AT 8 KM/H (5 MPH) OR LESS.

WHEN THE CENTER DIFF. LOCK INDICATOR SW IS OFF, DIFFERENTIAL LOCK DOES NOT OCCUR EVEN IF THE DIFF. LOCK CONTROL SW IS IN **RR** POSITION OR **FR-RR** POSITION.

WHEN THE DIFF. LOCK CONTROL SW IS SWITCHED FROM **OFF** POSITION TO **RR** POSITION, THE CURRENT FLOW TO **TERMINAL 12** OF THE DIFF. LOCK ECU. IF THE LIMIT SW ON THE LOCK SIDE INSIDE THE REAR DIFF. LOCK CONTROL MOTOR IS ON AT THIS TIME, UNTIL THE LIMIT SW IS TURNED OFF, THE CURRENT FLOWS FROM THE **DIFF** FUSE TO **TERMINAL 8** OF THE DIFF. LOCK ECU → **TERMINAL 3** → **TERMINAL 3** OF THE REAR DIFF. LOCK CONTROL MOTOR → **TERMINAL 2** → **TERMINAL 1** OF THE DIFF. LOCK ECU → **TERMINAL 13** → **GROUND**. THIS DRIVES THE REAR DIFF. LOCK CONTROL MOTOR AND LOCKS THE REAR DIFFERENTIAL. WHEN THE REAR DIFFERENTIAL LOCKS, THE REAR DIFF. LOCK POSITION SW TURNS ON, LIGHTING UP THE REAR DIFF. LOCK INDICATOR LIGHT IN THE COMBINATION METER.

WHEN THE DIFF. LOCK CONTROL SW IS SWITCHED FROM **RR** POSITION TO **FR-RR** POSITION, THE CURRENT FLOWS TO **TERMINAL 6** OF THE DIFF. LOCK ECU. IF THE LIMIT SW ON THE LOCK SIDE INSIDE THE FRONT DIFF. LOCK CONTROL MOTOR IS ON AT THIS TIME, UNTIL THE LIMIT SW IS TURNED OFF, THE CURRENT FLOWS FROM THE **DIFF** FUSE TO **TERMINAL 8** OF THE DIFF. LOCK ECU → **TERMINAL 7** → **TERMINAL 3** OF THE FRONT DIFF. LOCK CONTROL MOTOR → **TERMINAL 2** → **TERMINAL 5** OF THE DIFF. LOCK ECU → **TERMINAL 13** → **GROUND**. THIS DRIVES THE FRONT DIFF. LOCK CONTROL MOTOR AND LOCKS THE FRONT DIFFERENTIAL. WHEN THE FRONT DIFFERENTIAL LOCKS, THE FRONT DIFF. LOCK POSITION SW TURNS ON, LIGHTING UP THE FRONT DIFF. LOCK INDICATOR LIGHT IN THE COMBINATION METER.

WHEN THE DIFF. LOCK CONTROL SW IS SWITCHED FROM **FR-RR** POSITION TO **RR** POSITION, THE CURRENT TO **TERMINAL 6** OF THE DIFF. LOCK ECU IS CUT OFF. IF THE LIMIT SW ON THE FREE SIDE INSIDE THE FRONT DIFF. LOCK CONTROL MOTOR IS ON AT THIS TIME, UNTIL THE LIMIT SW IS TURNED OFF, THE CURRENT FLOWS FROM THE **DIFF** FUSE TO **TERMINAL 8** OF THE DIFF. LOCK ECU → **TERMINAL 5** → **TERMINAL 2** OF THE FRONT DIFF. LOCK CONTROL MOTOR → **TERMINAL 3** → **TERMINAL 7** OF THE DIFF. LOCK ECU → **TERMINAL 13** → **GROUND**. THIS DRIVES THE FRONT DIFF. LOCK CONTROL MOTOR AND FREES THE FRONT DIFFERENTIAL. THIS CAUSES THE FRONT DIFF. LOCK POSITION SW AND THE FRONT DIFF. LOCK INDICATOR LIGHT INSIDE THE COMBINATION METER TO TURN OFF.

WHEN THE DIFF. LOCK CONTROL SW IS SWITCHED FROM **RR** POSITION TO **OFF** POSITION, CURRENT TO **TERMINAL 12** OF THE DIFF. LOCK ECU IS CUT OFF. IF THE LIMIT SW ON THE FREE SIDE INSIDE THE REAR DIFF. LOCK CONTROL MOTOR IS ON, UNTIL THE LIMIT SW IS TURNED OFF, THE CURRENT FLOW FROM THE **DIFF** FUSE TO **TERMINAL 8** OF THE DIFF. LOCK ECU → **TERMINAL 1** → **TERMINAL 2** OF THE REAR DIFF. LOCK CONTROL MOTOR → **TERMINAL 3** → **TERMINAL 3** OF THE DIFF. LOCK ECU → **TERMINAL 13** → **GROUND**. THIS DRIVES THE REAR DIFF. LOCK CONTROL MOTOR AND FREES THE REAR DIFFERENTIAL. WHEN THE REAR DIFFERENTIAL IS FREE, THE REAR DIFF. LOCK POSITION SW AND THE REAR DIFF. LOCK INDICATOR LIGHT IN THE COMBINATION METER ARE TURNED OFF.

THE DIFF. LOCK INDICATOR LIGHT FLASHES WHEN:

- THE DIFF. LOCK CONTROL SW IS SWITCHED TO **RR** POSITION OR **FR-RR** POSITION DURING DIFFERENTIAL LOCK PROHIBITION CONDITIONS (VEHICLE SPEED ABOVE 8 KM/H (5 MPH) OR CENTER DIFF. LOCK INDICATOR SW OFF).
- THE DIFF. **LOCK** POSITION SW IS TURNED OFF DURING OPERATION OF THE DIFF. LOCK CONTROL MOTOR.

SERVICE HINTS

D4 DIFF. LOCK CONTROL SW

- 4-1 : CLOSED WITH THE DIFF. LOCK CONTROL SW AT “**RR**” POSITION OR “**FR-RR**” POSITION
- 4-2 : CLOSED WITH THE DIFF. LOCK SW AT “**FR-RR**” POSITION

D5 DIFF. LOCK ECU

(DISCONNECTED WIRING CONNECTOR FROM ECU)

- 13-GROUND : ALWAYS CONTINUITY
- 4-GROUND : PULSE GENERATION WITH VEHICLE MOVING
- 8-GROUND : 9-14 VOLTS WITH THE IGNITION SW ON
- 2-GROUND : ABOUT 0 VOLTS WITH THE REAR DIFF. LOCK INDICATOR LIGHT ON
: 9-14 VOLTS WITH THE REAR DIFF. LOCK INDICATOR LIGHT OFF
- 9-GROUND : ABOUT 0 VOLTS WITH THE FRONT DIFF. LOCK INDICATOR LIGHT ON
: 9-14 VOLTS WITH THE FRONT DIFF. LOCK INDICATOR LIGHT OFF
- 15-GROUND : ABOUT 0 VOLTS WITH THE CENTER DIFF. LOCK INDICATOR LIGHT ON
: 9-14 VOLTS WITH THE CENTER DIFF. LOCK INDICATOR LIGHT OFF

F12, R10 FRONT, REAR DIFF. LOCK CONTROL MOTOR

- 2-3 : 0.3-100Ω

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C2	22	D5	24	J8	25
C10 A	24	F11	25	R10	27
C11 B	24	F12	26	R11	27
C13 C	24	F13	26		
D4	24	J1	25		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EC1	30	ENGINE WIRE AND TRANSMISSION WIRE (NEAR THE STARTER)
ID1	32	COWL WIRE AND FLOOR NO. 1 WIRE (LEFT KICK PANEL)
IH1	32	ENGINE WIRE AND COWL WIRE (BEHIND GLOVE BOX)
BQ1	34	FLOOR NO. 3 WIRE AND FLOOR NO. 1 WIRE (LEFT QUARTER PANEL INNER)
Bb1	36	COWL WIRE AND FRAME WIRE (RIGHT FENDER)
Bh2	36	FLOOR NO. 3 WIRE AND FRAME NO. 2 WIRE (LEFT QUARTER PANEL INNER)

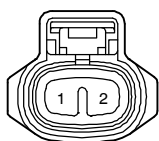
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EC	30	AIR INTAKE CHAMBER
ID	32	LEFT KICK PANEL
IE	32	RIGHT KICK PANEL
BG	34	LOWER BACK PANEL CENTER

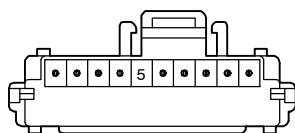
○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I2	32	COWL WIRE	I14	32	COWL WIRE
I5			B1	36	FRAME WIRE
I6			B25	36	FLAME NO. 2 WIRE

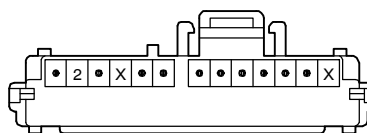
C 2, F13, R11 GRAY



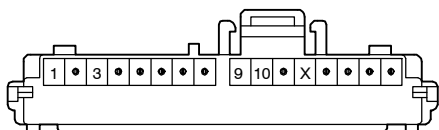
C10 (A) GRAY



C11 (B) BLUE



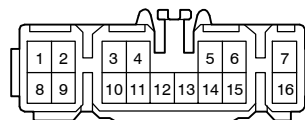
C13 (C)



D 4



D 5 GRAY



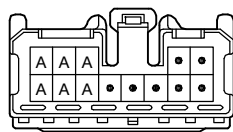
F11

(SEE PAGE 20)

F12, R10

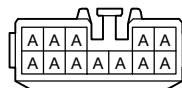


J 1



(HINT : SEE PAGE 7)

J 8 BLUE



(HINT : SEE PAGE 7)