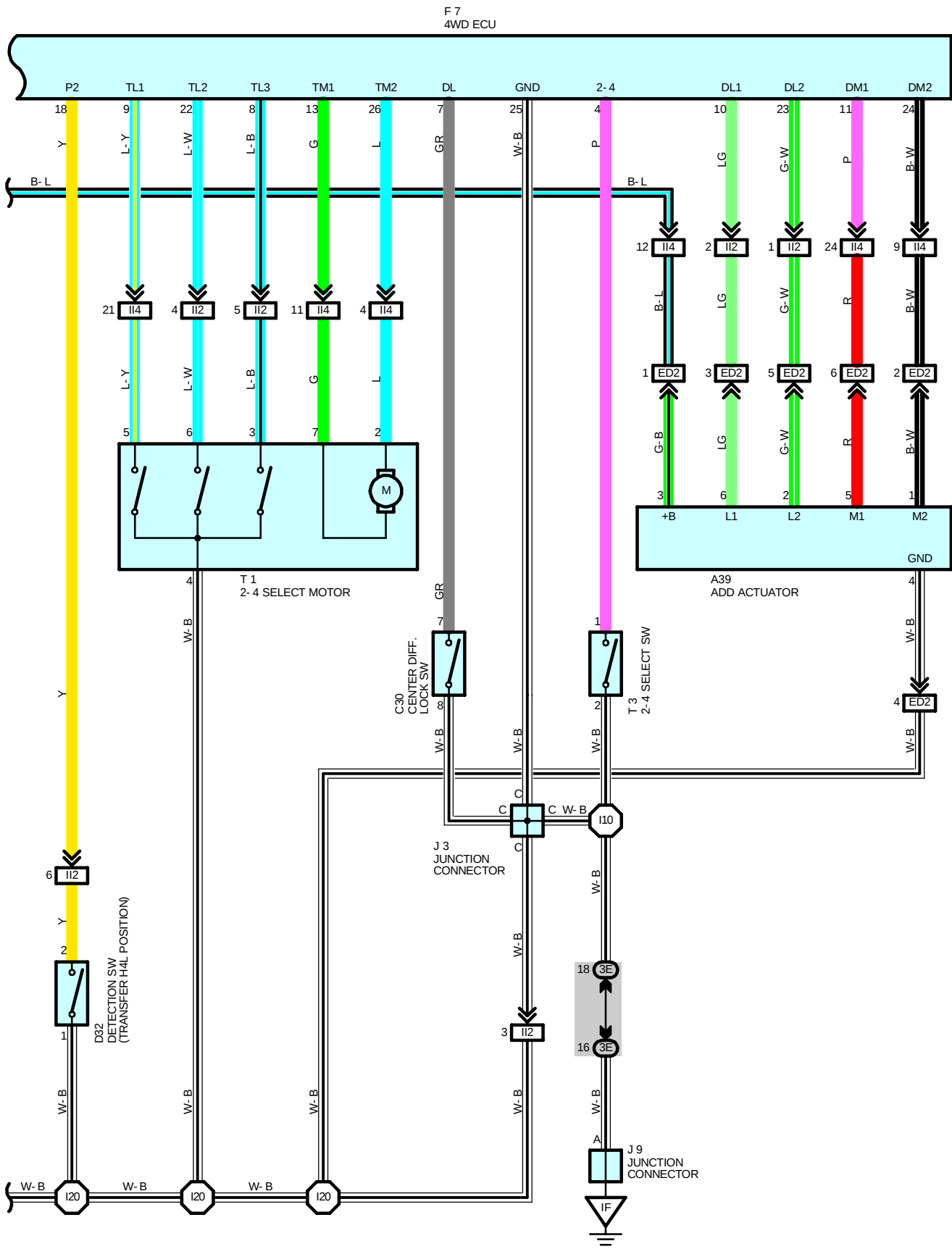




* 1 : CENTER DIFF. LOCK



SYSTEM OUTLINE

The 4WD ECU detects the condition of the detection SW ((Transfer 4WD position), (Transfer H4L Position)), 2-4 select SW and the vehicle speed, and controls the 2-4 select motor and center diff. lock SW.

4WD CONTROL

(1) Shift position

The target shift position determined through the condition of the 2-4 select SW and center diff. lock SW, and operates the 2-4 select motor.

- * When the 2-4 select SW and the center diff. lock SW are both off, put in to H2 position. At this time, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 26 to TERMINAL 2 of the 2-4 select motor to TERMINAL 7 to TERMINAL 13 of the 4WD ECU to TERMINAL 25 to GROUND, so the 2-4 select motor rotates at H2 position.
- * When the 2-4 select SW is on and the center diff. lock SW is off, put in to H4 position. At this time, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 13 to TERMINAL 7 of the 2-4 select motor to TERMINAL 2 to TERMINAL 26 of the 4WD ECU to TERMINAL 25 to GROUND, so the 2-4 select motor rotates at H4 position.
- * When the 2-4 select SW and the center diff. lock SW are both on, or the 2-4 select SW is off, and the center diff. lock SW is on, put in to H4L position. When switched from H4F to H4L, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 26 to TERMINAL 2 of the 2-4 select motor to TERMINAL 7 to TERMINAL 13 of the 4WD ECU to TERMINAL 25 to GROUND, so the 2-4 select motor rotates at H4L position. When switched from H2 to H4L, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 13 to TERMINAL 7 of the 2-4 select motor to TERMINAL 2 to TERMINAL 26 of the 4WD ECU to TERMINAL 25 to GROUND, so the 2-4 select motor rotates at H4L position.

(2) Shift limit control

When the vehicle speed is over 100 km/h, shift change to H4 or H4L mode can not be made. The vehicle speed signal is input to TERMINAL 3 of the 4WD ECU. At this time, the 4WD indicator light and the center diff. lock indicator light flashes, and the buzzer installed in the 4WD ECU goes on. This condition can be canceled by decelerating the vehicle speed to below 100 km/h, or by selecting H2 mode.

(3) Shift control

When the 2-4 select motor will not switch after approximately 3 seconds from shifting (When there are no changes to the signals to TERMINAL 8, TERMINAL 9 and TERMINAL 22 of the 4WD ECU), the 4WD indicator light and the center diff. lock indicator light flashes. The cruise control is canceled if in use. When the 2-4 select motor switch is completed, the indicator lights go off and the cruise control can be set again.

(4) ADD valve control

When switching between 2WD to 4WD, the ADD actuator is controlled to free or lock the ADD. At this time, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 23 to TERMINAL 2 of the ADD actuator to GROUND, or flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 10 to TERMINAL 6 of the ADD actuator to GROUND, so the ADD actuator is controlled.

SERVICE HINTS

F7 4WD ECU

- 12-GROUND : Approx. **12** volts with ignition SW on
- 25-GROUND : Always continuity
- 3-GROUND : Pulse generation with vehicle moving

T3 2-4 SELECT SW

- 1-2 : Closed with 2-4 select SW on

P1 A/T INDICATOR LIGHT SW [PARK/NEUTRAL POSITION SW]

- 3-1 : Closed with A/T shift lever at **P** position
- 3-7 : Closed with A/T shift lever at **D** position

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A39	28	D31	28	J8 B	31
C25 A	30	D32	28	J9	31
C26 C	30	E12	31	P1	29
C29 B	30	F7	31	T1	29
C30	30	J3	31	T3	31
D4	28	J5	31	V18	31
D5	28	J7 A	31		