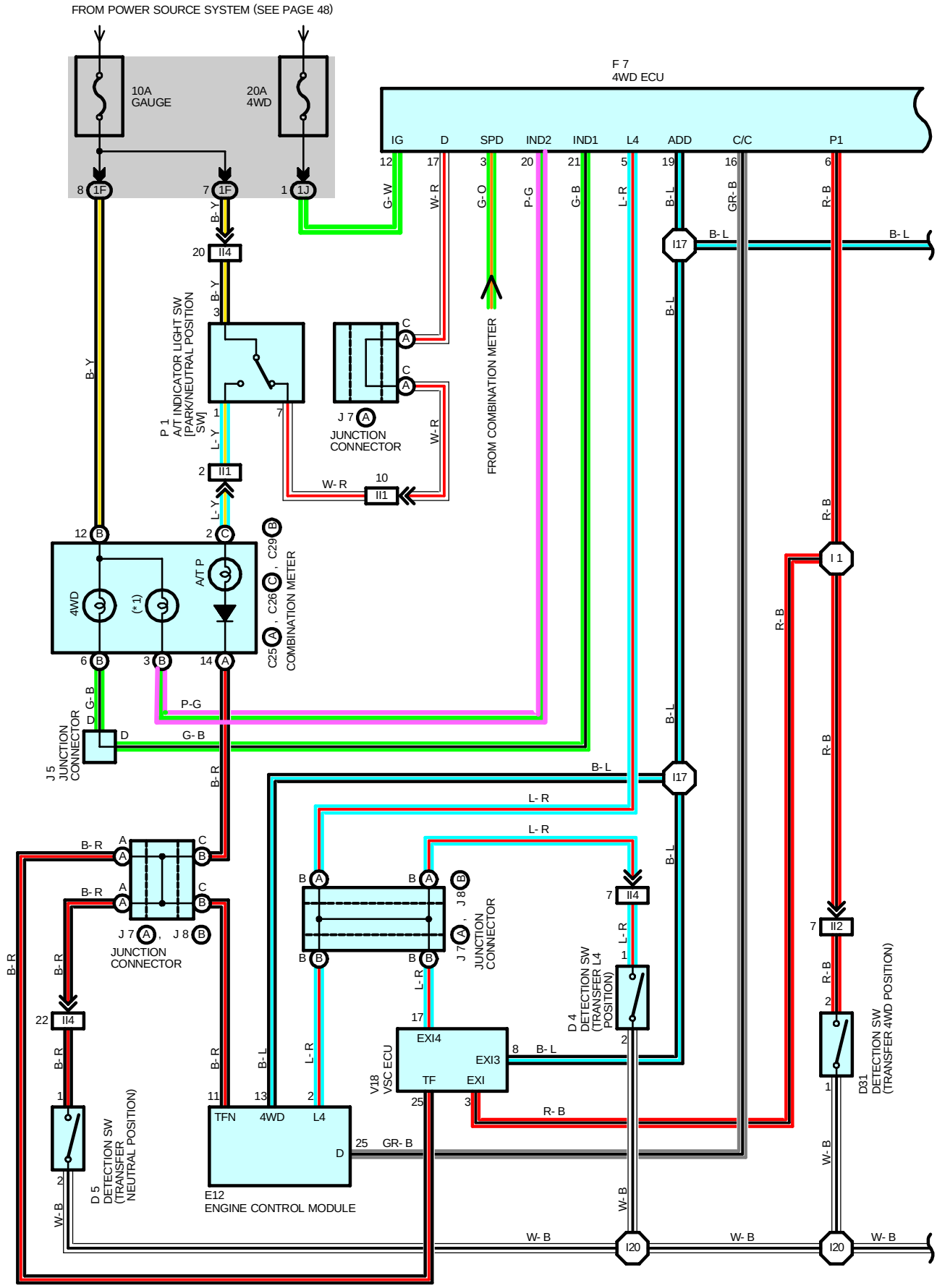
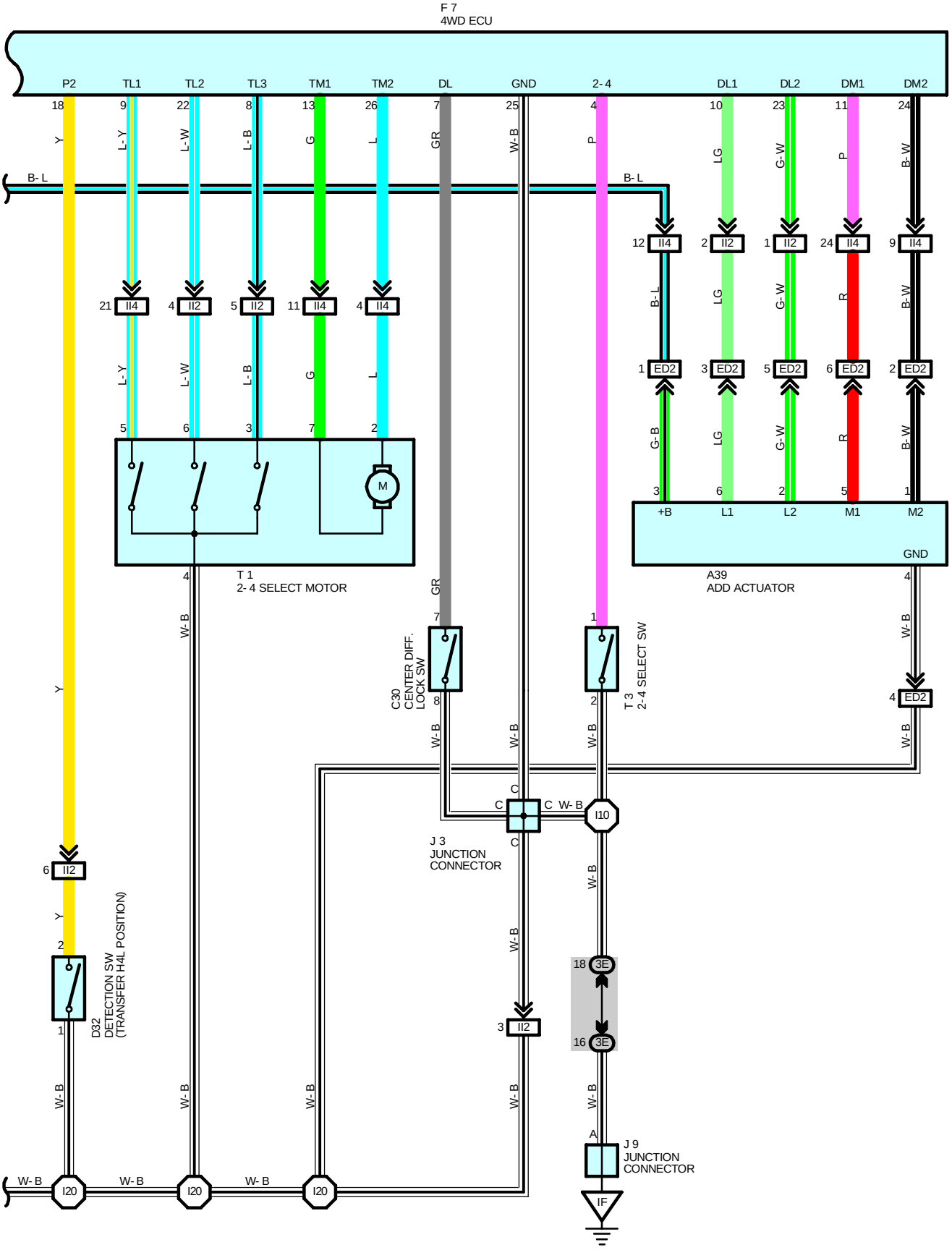

FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A GAUGE
20A 4WD
F 7 4WD ECU
IG
D
SPD
IND2
IND1
L4
ADD
C/C
P1
G-W
W-R
G-O
P-G
G-B
L-R
B-L
GR-B
R-B
FROM COMBINATION METER
P 1 A/T INDICATOR LIGHT SW [PARK/NEUTRAL POSITION SW]
J 7 JUNCTION CONNECTOR
A/T P
4WD
(*1)
C25, C26, C29 COMBINATION METER
J 5 JUNCTION CONNECTOR
J 7, J 8 JUNCTION CONNECTOR
V18 VSC ECU
EXI4
EXI3
TF
EXI
D 4 DETECTION SW (TRANSFER L4 POSITION)
D31 DETECTION SW (TRANSFER 4WD POSITION)
D 5 DETECTION SW (TRANSFER NEUTRAL POSITION)
TFN
4WD
L4
E12 ENGINE CONTROL MODULE
I17
I 1
I20
II1
II2
II4

* 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		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J		
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ED2	36	Engine Wire and Differential Wire (Near the Front Differential)
II1	40	Engine Wire and Cowl Wire (On the Glove Box)
II2		
II4		

: GROUND POINTS

Code	See Page	Ground Points Location
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	I17	40	Cowl Wire
I10			I20	40	Engine Wire