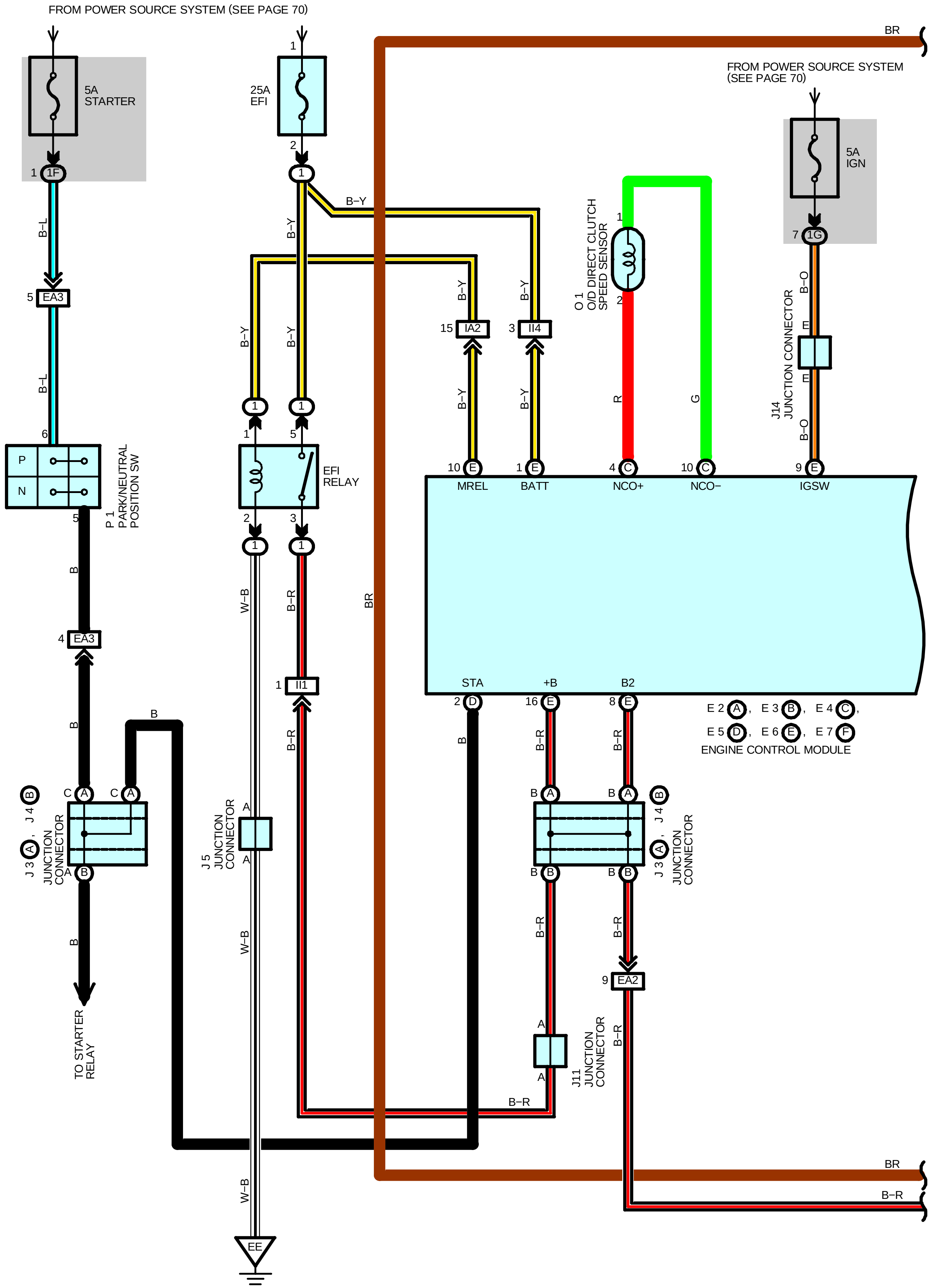
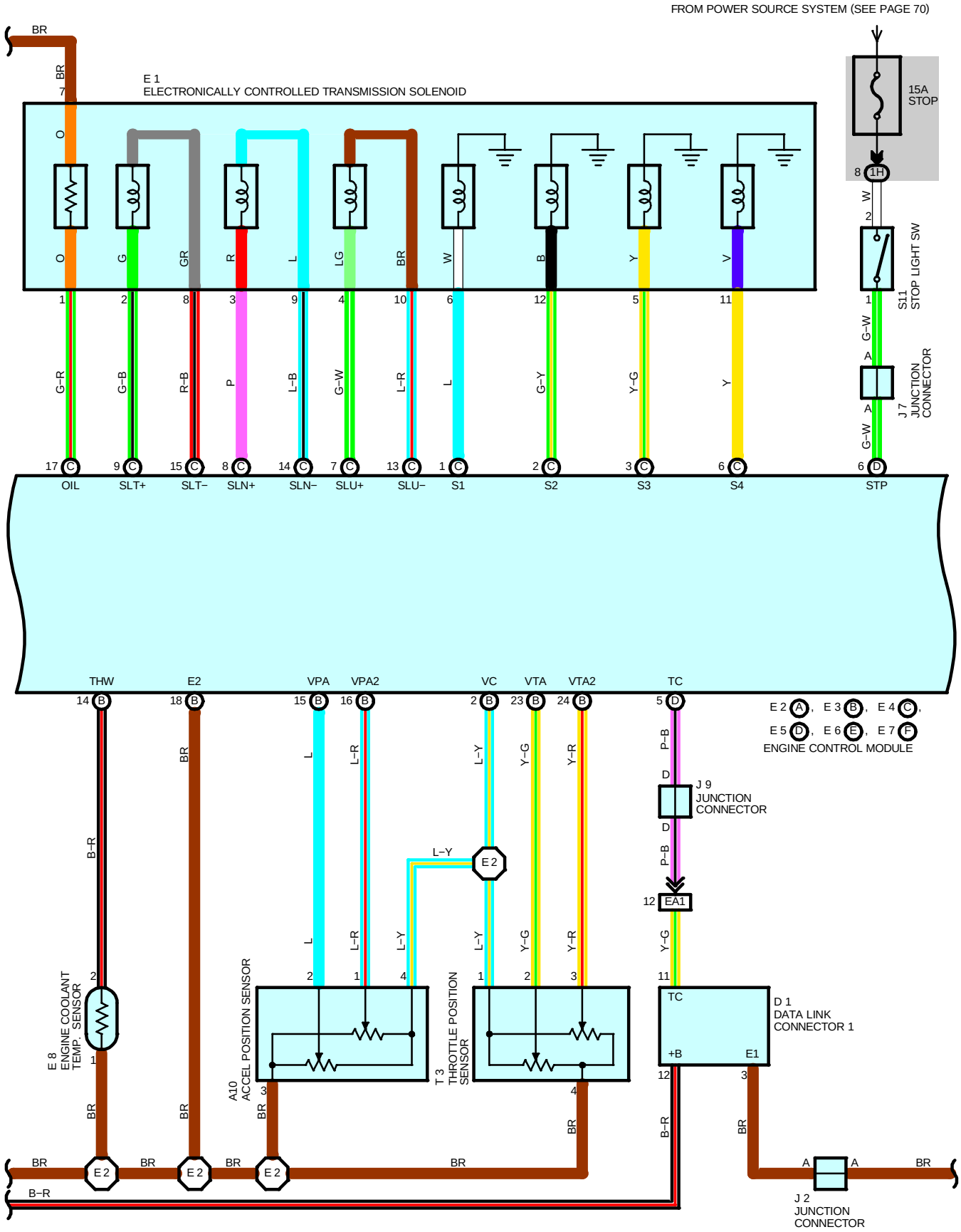
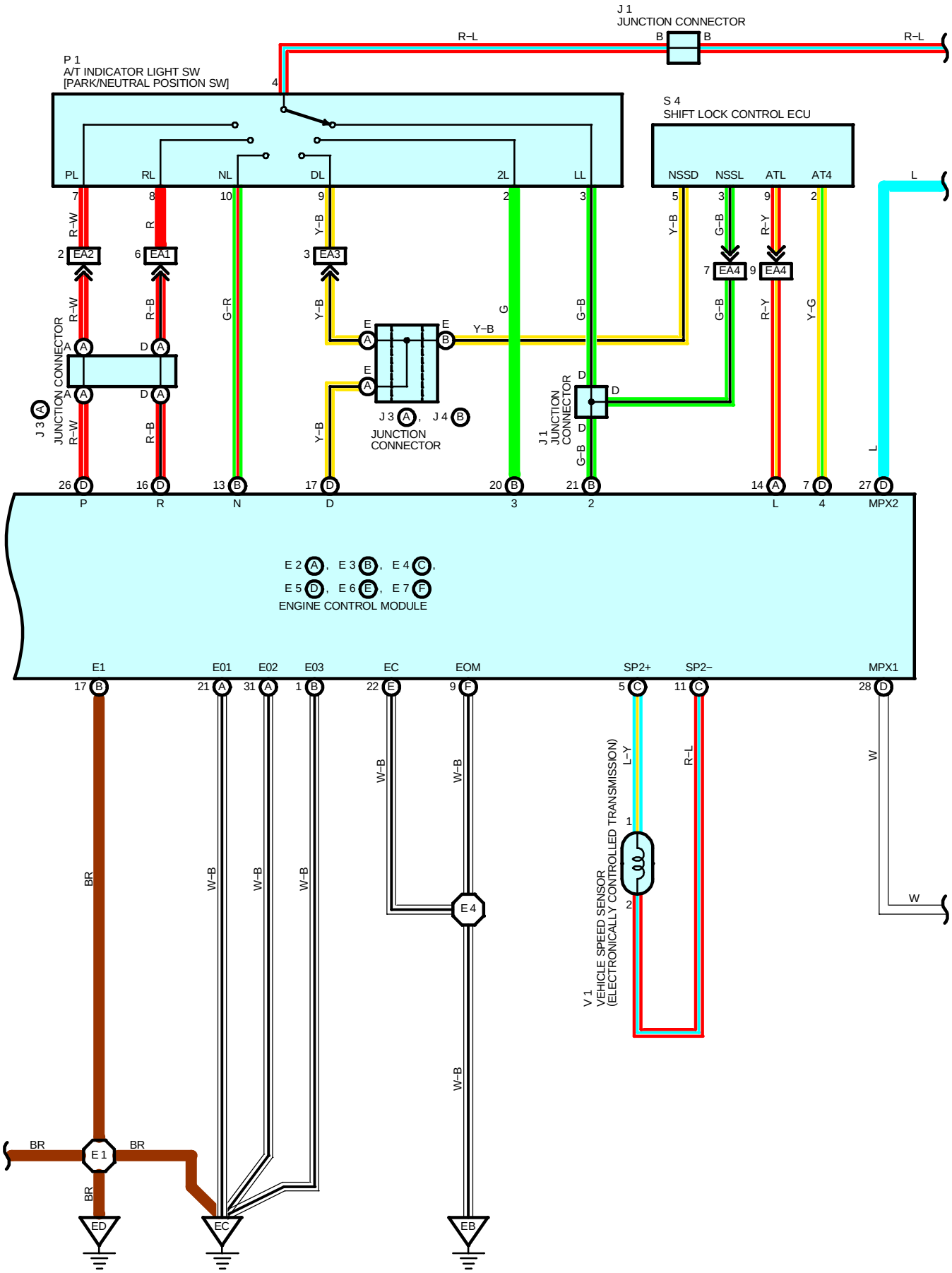
ELECTRONICALLY CONTROLLED TRANSMISSION



AND A/T INDICATOR (2JZ−GE)

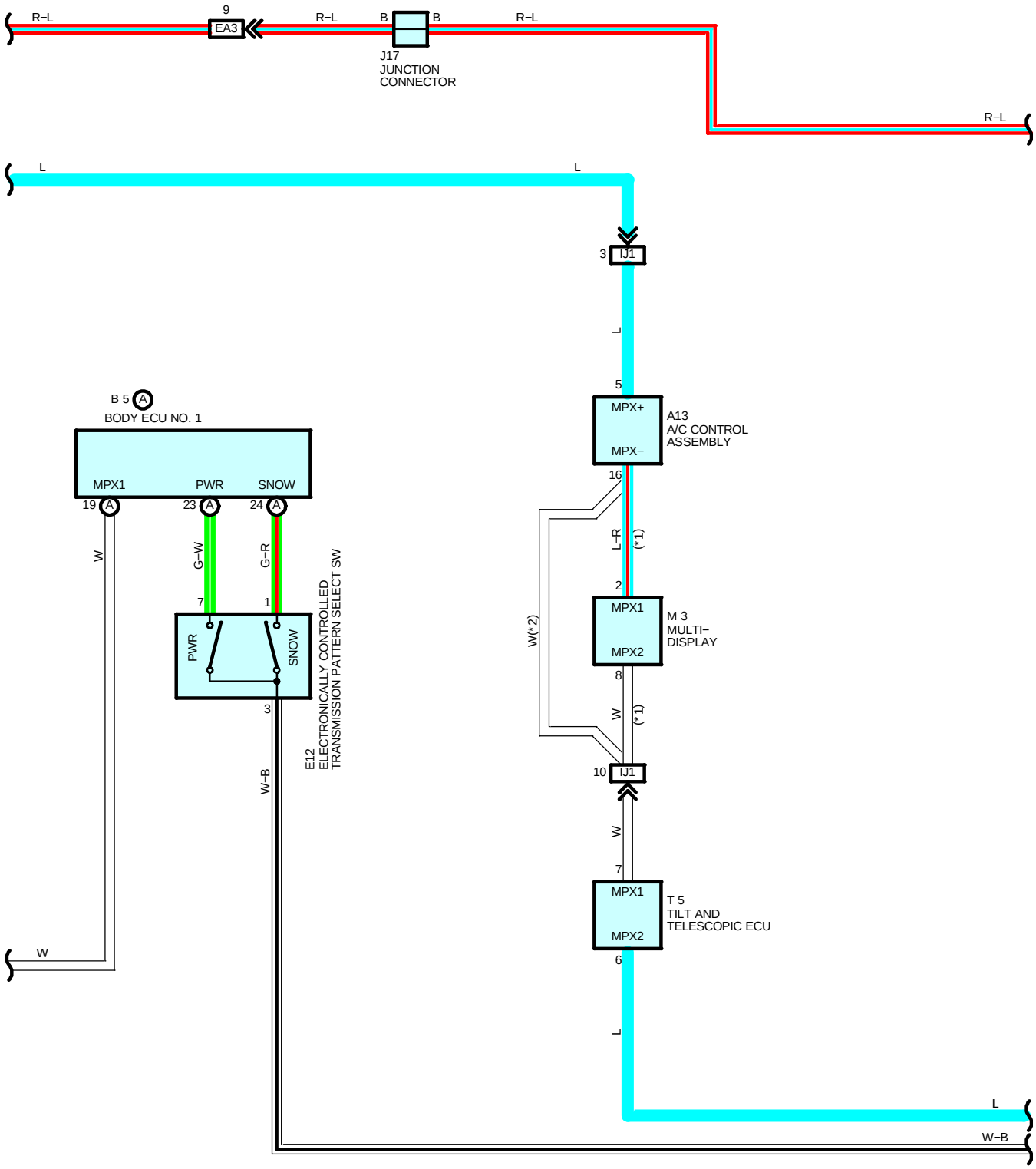


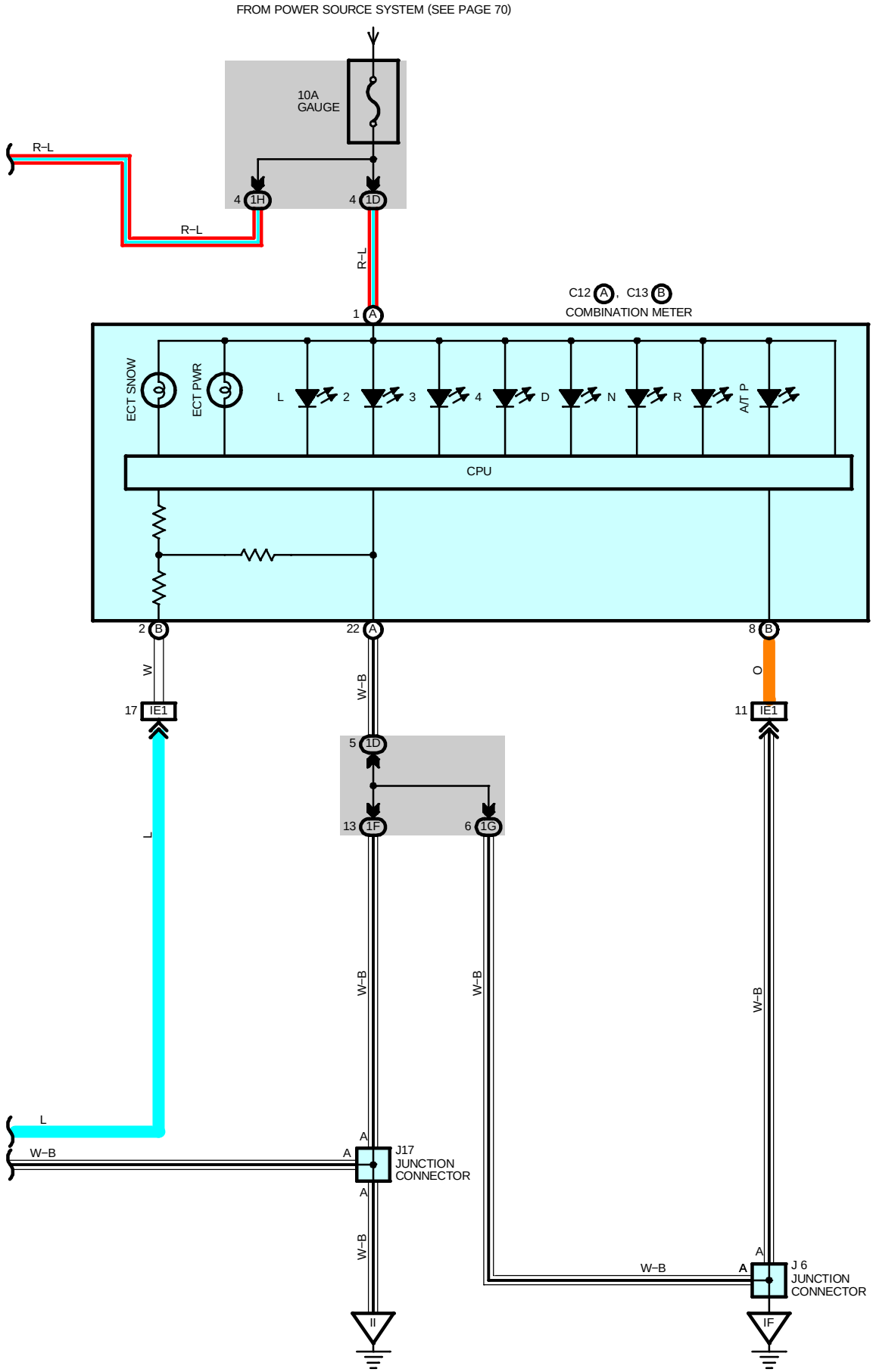
ELECTRONICALLY CONTROLLED TRANSMISSION



AND A/T INDICATOR (2JZ−GE)

* 1 : W/ LEXUS NAVIGATION SYSTEM
* 2 : W/O LEXUS NAVIGATION SYSTEM




FROM POWER SOURCE SYSTEM (SEE PAGE 70)
10A
GAUGE
R–L
4 1H
4 1D
R–L
R–L
C12 A, C13 B
COMBINATION METER
1 A
ECT SNOW
ECT PWR
L
2
3
4
D
N
R
A/T P
CPU
2 B
22 A
8 B
W
W–B
O
17 IE1
11 IE1
5 1D
13 1F
6 1G
L
W–B
W–B
W–B
L
W–B
A
A
J17
JUNCTION
CONNECTOR
A
W–B
A
J 6
JUNCTION
CONNECTOR
II
IF

AND A/T INDICATOR (2JZ−GE)

SYSTEM OUTLINE

Previous automatic transmissions have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock−up hydraulic pressure. The electronically controlled transmission, however, electrically controls the line pressure, throttle pressure, lock−up pressure and accumulator pressure etc. through the solenoid valve. The electronically controlled transmission is a system which precisely controls gear shift timing and lock−up timing in response to the vehicle's driving conditions and the engine condition detected by various sensors. It makes smooth driving possible by shift selection for each gear which is the most appropriate to the driving conditions at that time, and by preventing downing, squat and gear shift shock when starting off.

1. GEAR SHIFT OPERATION

When driving, the engine warm up condition is input as a signal to **TERMINAL THW** of the engine control module from the engine coolant temp. sensor and the vehicle speed signal from vehicle speed sensor is input to **TERMINAL SP2+** of the engine control module. At the same time, the throttle valve opening signal from the throttle position sensor is input to **TERMINALS VTA** and **VTA2** of the engine control module as throttle angle signal.
Based on these signals, the engine control module selects the best shift position for the driving conditions and sends current to the electronically controlled transmission solenoid.

2. LOCK−UP OPERATION

When the engine control module decides based on each signal that the lock−up condition has been met, the current flows through **TERMINAL SLU+** of the engine control module to **TERMINAL 4** of the electronically controlled transmission solenoid to **TERMINAL 10** to **TERMINAL SLU−** of the engine control module to **GROUND**.

3. STOP LIGHT SW CIRCUIT

If the brake pedal is depressed (Stop light SW on) when driving in lock−up condition, a signal is input to **TERMINAL STP** of the engine control module. The engine control module operates and cuts the current to the solenoid to release lock−up.

4. ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW CIRCUIT

When the electronically controlled transmission pattern select SW is switched to **PWR**, a signal is input to **TERMINAL PWR** of the body ECU No.2, and control signals are distributed to the engine control module through communication control of the body ECU. This enables shift−up and shift−down at a higher speed range.

SERVICE HINTS

E1 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID

2−8 : **5.1**−**5.5** Ω
3−9 : **3.5**−**3.9** Ω
4−10 : **5.1**−**5.5** Ω
5, 6, 11, 12−GROUND : **11**−**15** Ω

E12 ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW

7−3 : Closed with select SW at **PWR** position
1−3 : Only closed with select SW at **SNOW** position

V1 VEHICLE SPEED SENSOR (ELECTRONICALLY CONTROLLED TRANSMISSSION)

1−2 : **560**−**680** Ω

O1 O/D DIRECT CLUTCH SPEED SENSOR

1−2 : **560**−**680** Ω

E3 (B), E5 (D), E6 (E) ENGINE CONTROL MODULE

BATT−E1 : Always approx. **12** volts
+B−E1 : Approx. **12** volts with ignition SW **ON** or **ST** position
B2−E1 : Approx. **12** volts with ignition SW **ON** or **ST** position
MREL−E1 : Approx. **12** volts with ignition SW **ON** or **ST** position
STA−E1 : Approx. **12** volts with ignition SW **ST** position and shift lever other than **P** or **N** position

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

4−7 : Closed with shift lever in **P** position
4−8 : Closed with shift lever in **R** position
4−10 : Closed with shift lever in **N** position
4−9 : Closed with shift lever in **D** position or **4** position
4−2 : Closed with shift lever in **3** position
4−3 : Closed with shift lever in **2** position or **L** position

ELECTRONICALLY CONTROLLED TRANSMISSION

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A10	38 (2JZ−GE)	E7 F	38 (2JZ−GE)	J14	41
A13	40	E8	38 (2JZ−GE)	J17	41
B5 A	40	E12	40	M3	41
C12 A	40	J1	39 (2JZ−GE)	O1	39 (2JZ−GE)
C13 B	40	J2	39 (2JZ−GE)	P1	39 (2JZ−GE)
D1	38 (2JZ−GE)	J3 A	39 (2JZ−GE)	S4	41
E1	38 (2JZ−GE)	J4 B	39 (2JZ−GE)	S11	41
E2 A	38 (2JZ−GE)	J5	39 (2JZ−GE)	T3	39 (2JZ−GE)
E3 B	38 (2JZ−GE)	J6	41	T5	41
E4 C	38 (2JZ−GE)	J7	41	V1	39 (2JZ−GE)
E5 D	38 (2JZ−GE)	J9	41		
E6 E	38 (2JZ−GE)	J11	41		

: RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room No.1 R/B (Engine Compartment Right)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	26	Instrument Panel Wire and Driver Side J/B (Left Kick Panel)
1F	26	Cowl Wire and Driver Side J/B (Left Kick Panel)
1G	27	
1H		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	48 (2JZ−GE)	Engine Wire and Cowl Wire (Inside of the ECU Box)
EA2		
EA3		
EA4		
IA2	50	Engine Room Main Wire and Cowl Wire (Near the Driver Side J/B)
IE1	50	Instrument Panel Wire and Cowl Wire (Left Side of the Steering Column)
II1	52	Engine Room Main Wire and Cowl Wire (Near the Passenger Side R/B)
II4		
IJ1	52	Instrument Panel Wire and Cowl Wire (Left Side of the Blower Unit)

: GROUND POINTS

Code	See Page	Ground Points Location
EB	48 (2JZ−GE)	Left Fender
EC	48 (2JZ−GE)	Front Side of the Intake Manifold
ED	48 (2JZ−GE)	Rear Side of the Intake Manifold
EE	48 (2JZ−GE)	Under the ABS & TRAC & VSC Actuator
IF	50	Left Kick Panel
II	50	Right Side of the Cowl Panel

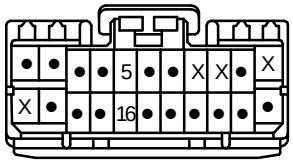
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	48 (2JZ−GE)	Engine Wire	E4	48 (2JZ−GE)	Cowl Wire
E2					

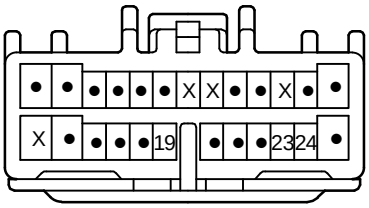
AND A/T INDICATOR (2JZ−GE)

A10 BLACK

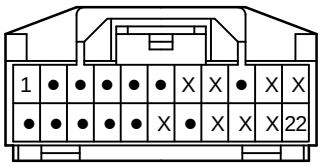
A13



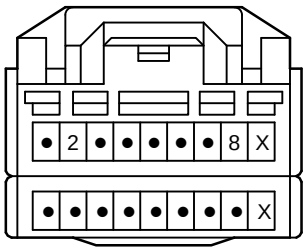
B5 (A)



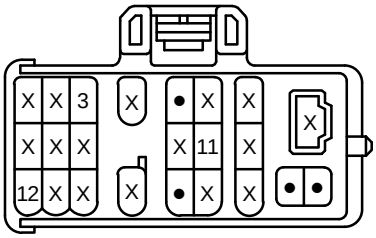
C12 (A)



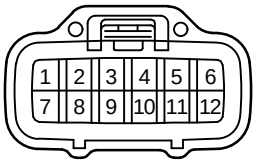
C13 (B)



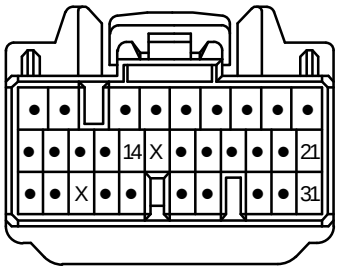
D1 BLACK



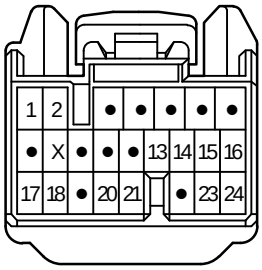
E1 GRAY



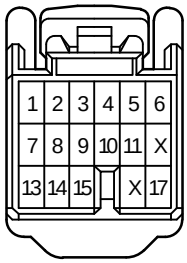
E2 (A)



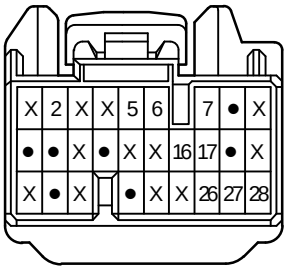
E3 (B)



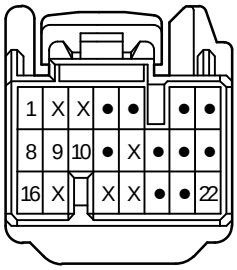
E4 (C)



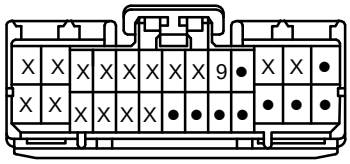
E5 (D)



E6 (E)

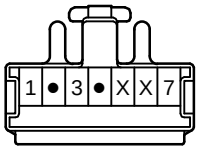


E7 (F)

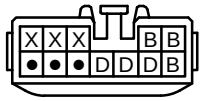


E8 BLACK

E12 BLACK

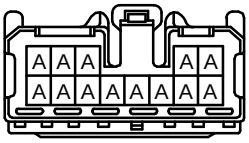


J1 BLACK



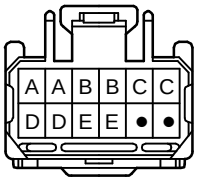
(Hint : See Page 7)

J2 ORANGE



(Hint : See Page 7)

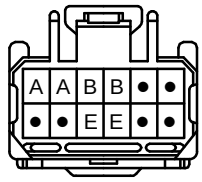
J3 (A)



(Hint : See Page 7)

ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (2JZ−GE)

J4 (B)

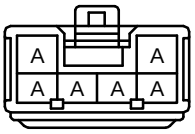


(Hint : See Page 7)

J5 BLUE

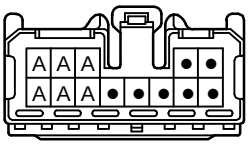
(Hint : See Page 7)

J6



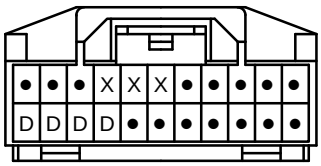
(Hint : See Page 7)

J7 GRAY



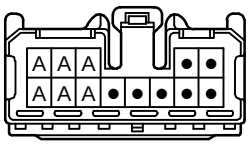
(Hint : See Page 7)

J9



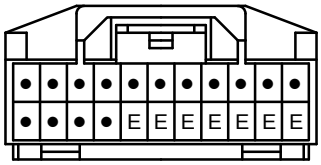
(Hint : See Page 7)

J11 GRAY



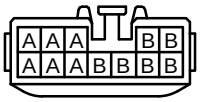
(Hint : See Page 7)

J14



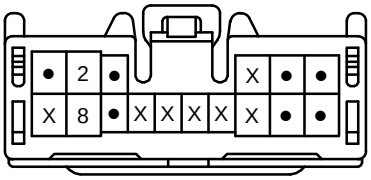
(Hint : See Page 7)

J17

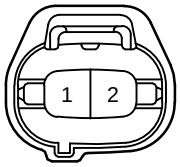


(Hint : See Page 7)

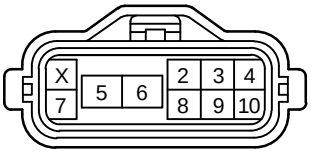
M3 BLUE



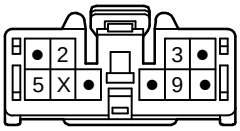
O1 BLACK



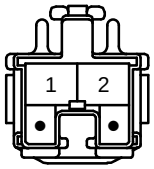
P1 GRAY



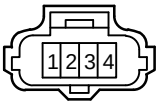
S4



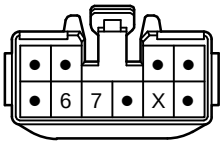
S11 BLUE



T3 BLACK



T5 GRAY



V1 BLACK