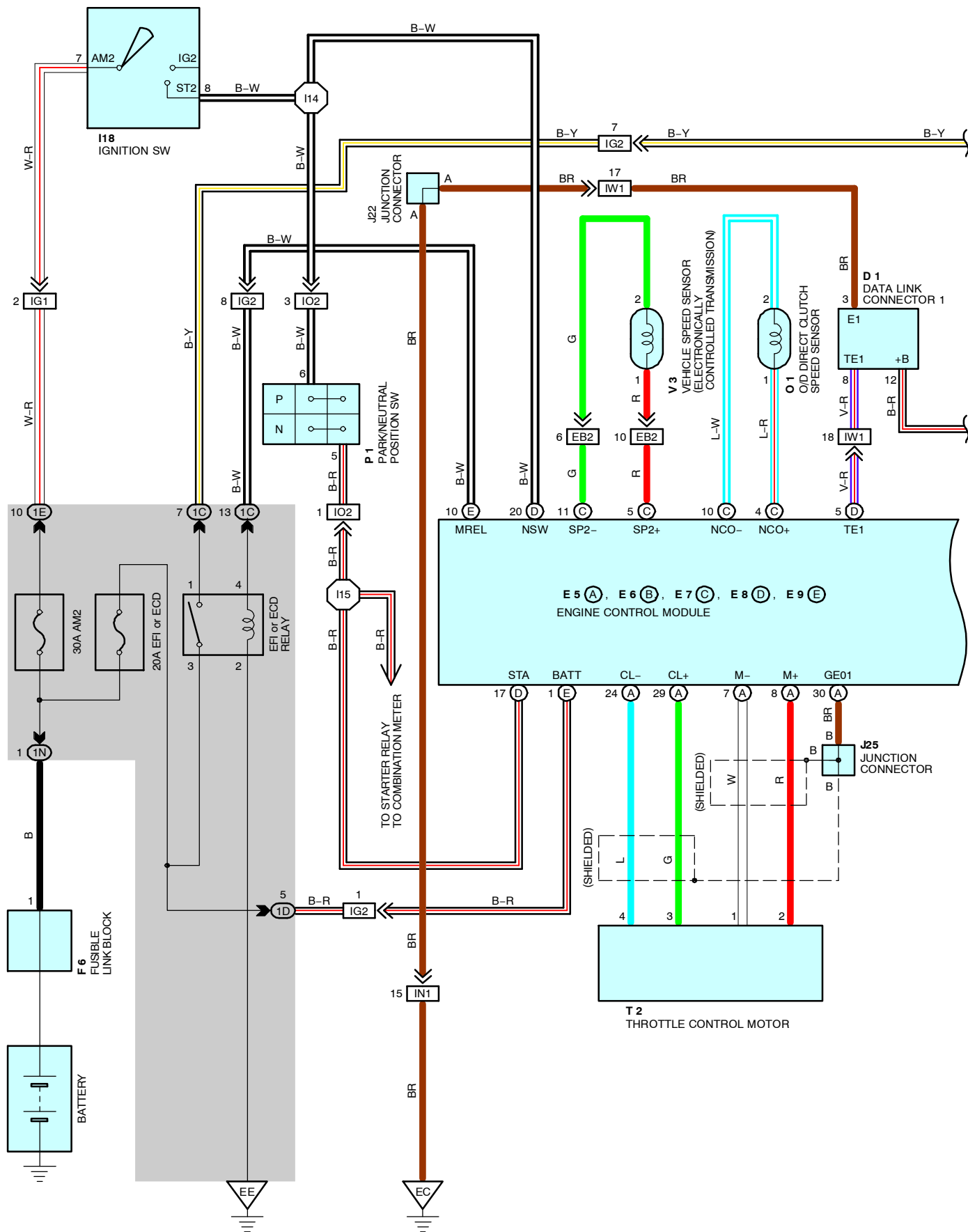
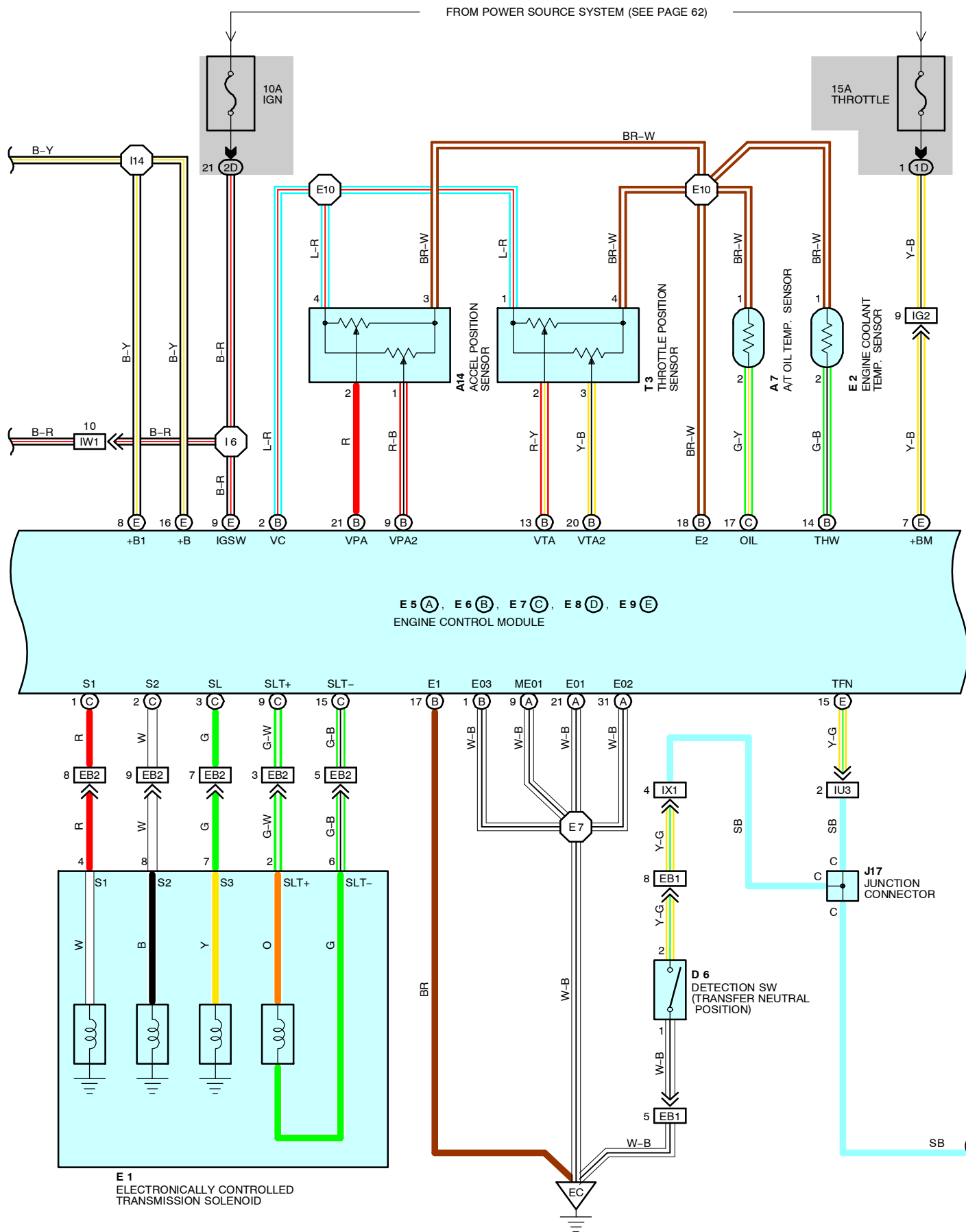
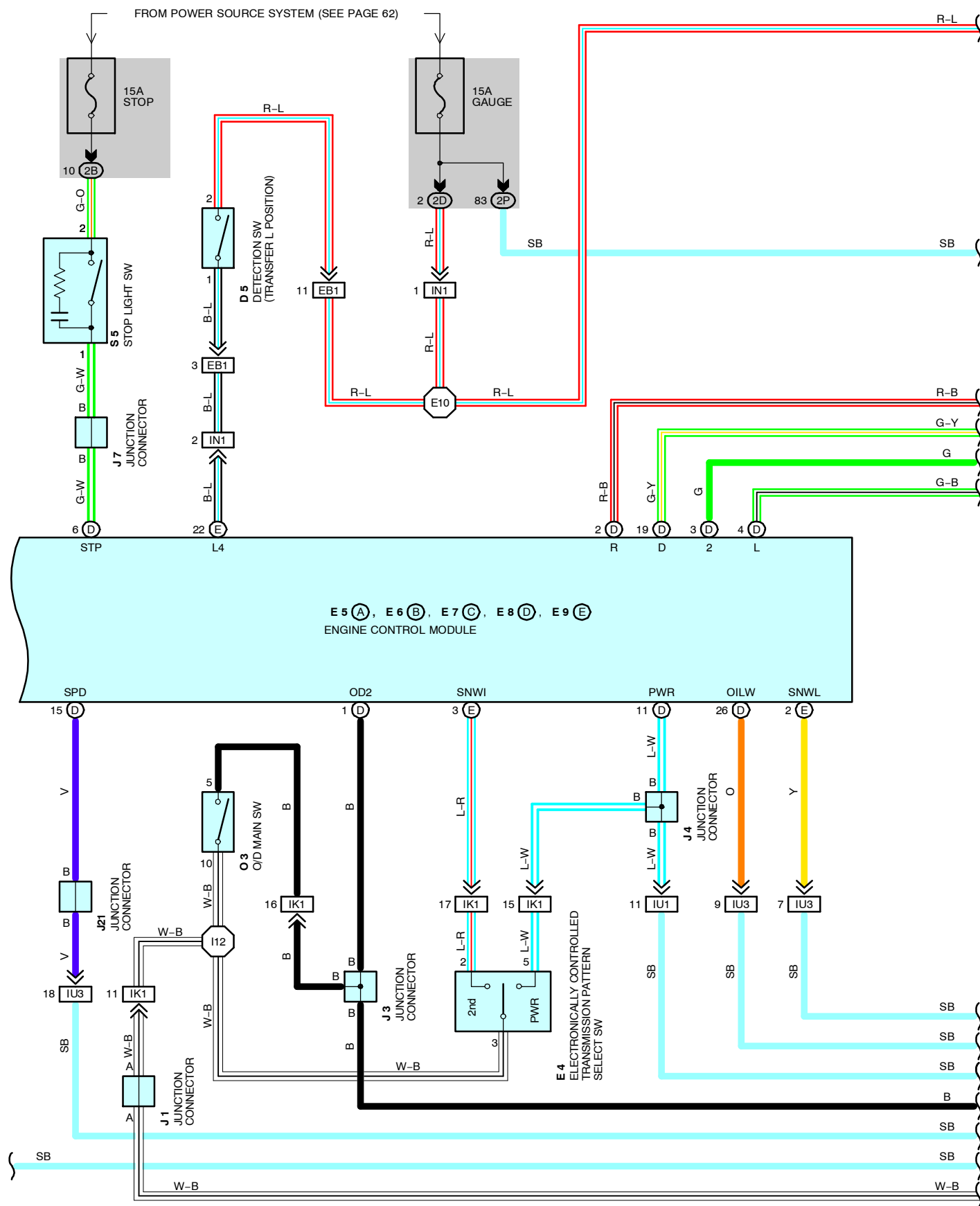


ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR





ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR





ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

SYSTEM OUTLINE

The electronically controlled transmission electrically controls, the throttle pressure, lock-up pressure, and accumulator pressure etc. through the solenoid valve.

The electronically controlled transmission is a system which precisely controls the 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 of the 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 control signal from the engine coolant temp. sensor to **TERMINAL THW** of the engine control module, and the vehicle speed is input to **TERMINAL SP2+** of the engine control module from the vehicle speed sensor. At the same time, the throttle valve opening signal from the throttle position sensor is input to **TERMINALS VTA, VTA2** of the engine control module as a 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 from the engine control module **TERMINAL SL** to **TERMINAL 7** of the electronically controlled transmission solenoid to **GROUND**.

3. STOP LIGHT SW CIRCUIT

If the brake pedal is depressed (Stop light SW on) when driving in lock-up position, a signal is input to **TERMINAL STP** of the engine control module. As a result, the engine control module cuts the current to the solenoid to release the 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 engine control module, and the engine control module controls to enable shift-up and shift-down at a higher speed range than usual. In that case, the ECT PWR indicator light in the combination meter is lit up. When the electronically controlled transmission pattern select SW is switched to 2nd position, a signal is input to the engine control module **TERMINAL SNWL**, and through control of the engine control module, the gear shift of the transmission is made from 2nd position. The 2nd STRT indicator light in the combination meter is lit up.

5. OVERDRIVE CIRCUIT

* O/D main SW on

When the O/D main SW is switched to **ON** position, a signal is input to **TERMINAL OD2** of the engine control module, and enables shift change to the overdrive range, through the control of the engine control module.

* O/D main SW off

When the O/D main SW is switched to OFF position, a signal is input to **TERMINAL OD2** of the engine control module, and prohibits shift change to the overdrive range through the control of the engine control module. When in the overdrive range already, shift down is made.

6. TRANSFER SHIFT OPERATION

When the transfer shift lever is moved to **L** position, a signal is input into **TERMINAL L4** of the engine control module.

In addition when the transfer shift lever is moved to **N** position a signal is input to engine control module **TERMINAL TFN**.

The engine control module detects the transfer condition through this.

SERVICE HINTS

E4 ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW

5-3 : Closed with select SW at **PWR** position

2-3 : Closed with select SW at **2nd** position

E6 (B), E8 (D), E9 (E) ENGINE CONTROL MODULE

BATT-E1 : Always **9.0-14.0** volts

+B-E1 : **9.0-14.0** volts with ignition SW at **ON** or **ST** position

+B1-E1 : **9.0-14.0** volts with ignition SW at **ON** or **ST** position

NSW-E1 : **9.0-14.0** volts with ignition SW at **ST** position

: **0-3.0** volts with ignition SW on and shift lever in **P** or **N** position

STA-E1 : **6.0** volts or more with ignition SW at **ST** position and shift lever in **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

4-2 : Closed with shift lever in **2** position

4-3 : Closed with shift lever in **L** position



: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A7	36	E7	C 38	J21	39
A14	36	E8	D 38	J22	39
C12	A 38	E9	E 38	J25	39
C13	B 38	F6	36	J26	39
C14	C 38	I18	38	O1	37
C15	D 38	J1	39	O3	39
D1	36	J3	39	P1	37
D5	36	J4	39	S5	39
D6	36	J7	39	T2	37
E1	36	J14	39	T3	37
E2	36	J17	39	V2	37
E4	38	J18	39	V3	37
E5	A 38	J19	39		
E6	B 38	J20	39		



: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	21	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
1E		
1N	21	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	24	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2P	26	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

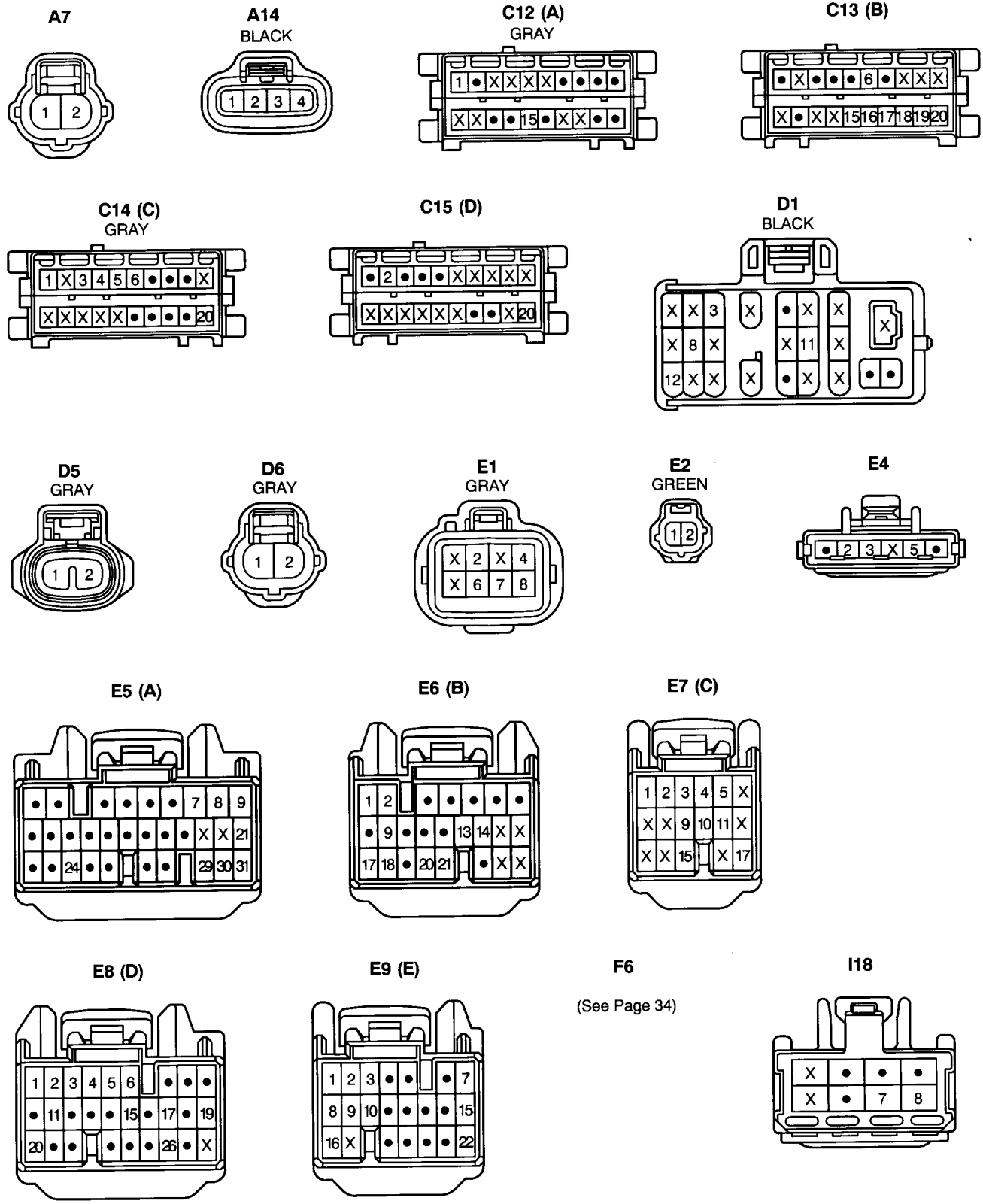
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	44	Engine Wire and Transmission Wire (On the Transmission)
EB2		
IG1	48	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IK1	48	Console Box Wire and Dash Wire (Left Side of Front Console)
IN1	50	Engine Wire and Dash Wire (Behind the Glove Box)
IO2		
IU1	50	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU3		
IW1	52	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	52	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)

: GROUND POINTS

Code	See Page	Ground Points Location
EC	44	Rear Bank of Right Cylinder Head
EE	44	Front Left Side of Fender Apron
IF	46	Set Bolt of Cowl Side J/B LH
IG		

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E7	44	Engine Wire	I12	48	Console Box Wire
E10			I14	48	Dash Wire
I6	48	Dash Wire	I15		



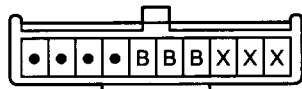
ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

J1



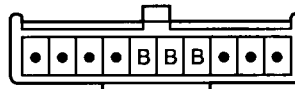
(Hint : See Page 7)

J3
BLUE



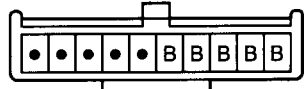
(Hint : See Page 7)

J4
BLUE



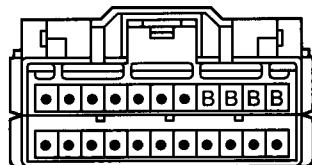
(Hint : See Page 7)

J7
GREEN



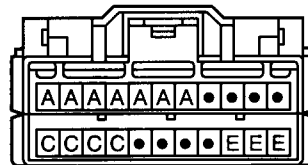
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J14



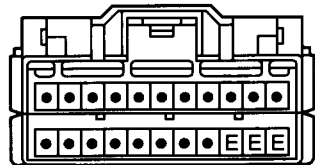
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J17



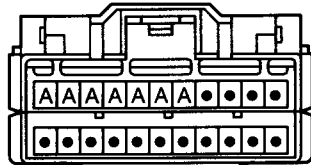
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J18
GRAY



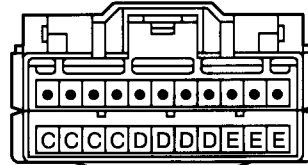
(Hint : See Page 7)

J19
GRAY



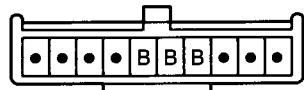
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J20



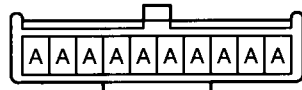
(Hint : See Page 7)

J21
BLUE



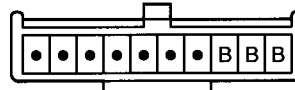
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J22



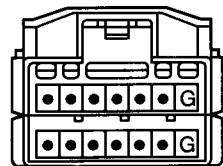
(Hint : See Page 7)

J25
RED



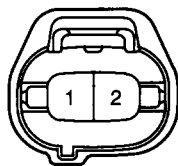
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J26
BLUE

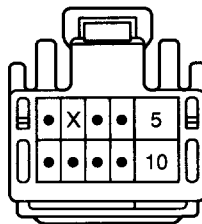


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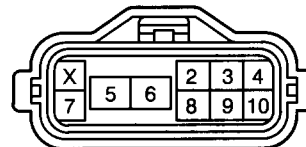
O1
BLACK



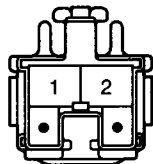
O3



P1
GRAY



S5
BLUE



T2
GRAY



T3
GRAY



V2
BLACK



V3
BLACK

