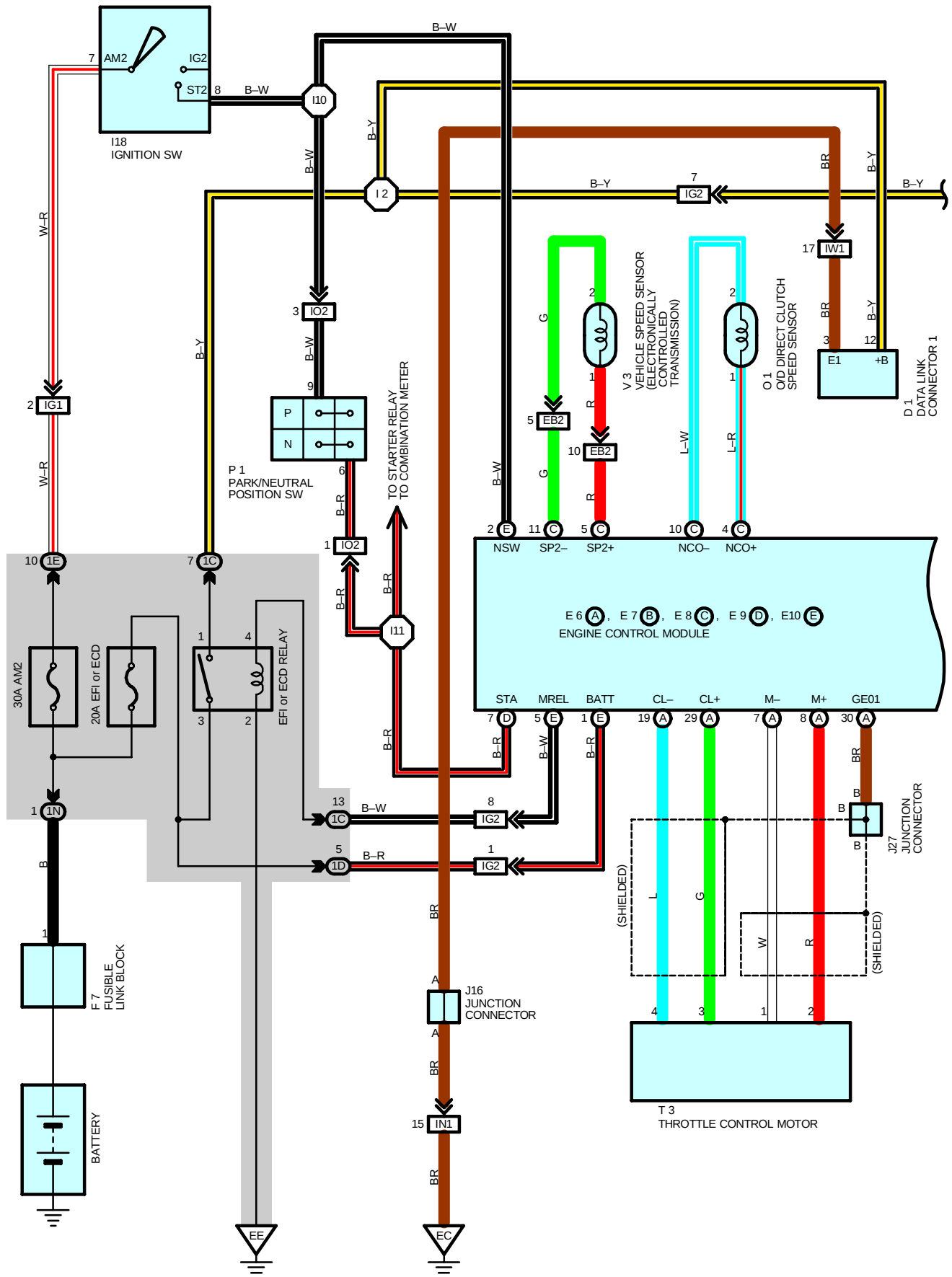
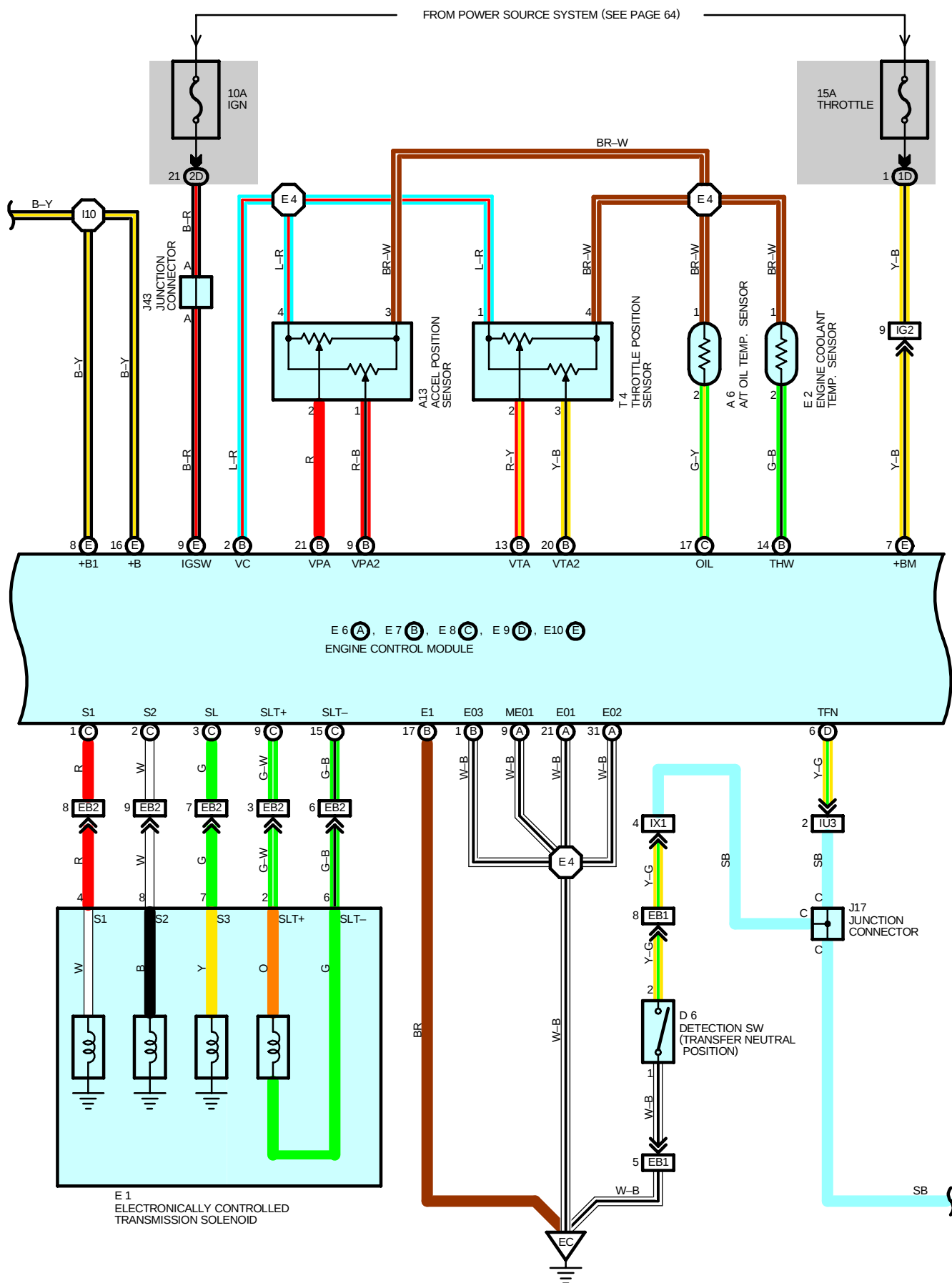
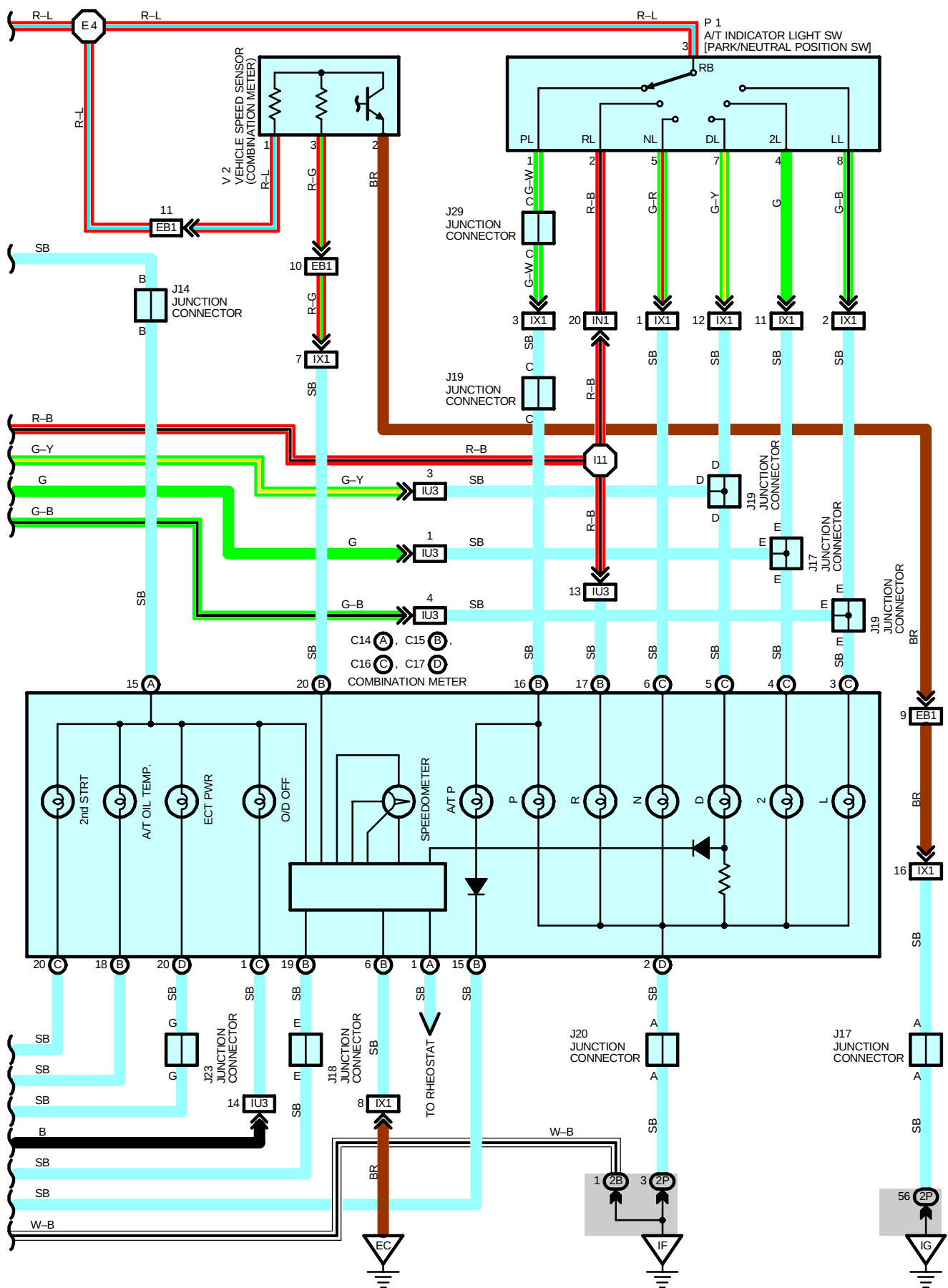


ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR







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 SNWI, 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 turned on, a signal is input to TERMINAL ODMS of the engine control module and engine control module operation causes gear shift when the conditions for overdrive are met.

* O/D main SW off

When the O/D main SW is turned off, a signal is input into TERMINAL ODMS of the engine control module, and turns on the O/D off indicator light. This activates the ECU, and the transmission system is controlled not to shift to overdrive.

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

E5 ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW

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

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

E7 (B), E9 (D), E10 (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 on and other shift lever in **P** and **N** 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]

3-1 : Closed with shift lever in **P** position

3-2 : Closed with shift lever in **R** position

3-5 : Closed with shift lever in **N** position

3-7 : Closed with shift lever in **D** position

3-4 : Closed with shift lever in **2** position

3-8 : Closed with shift lever in **L** position

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A6	38	E7	B 40	J23	41
A13	38	E8	C 40	J27	41
C14	A 40	E9	D 40	J29	41
C15	B 40	E10	E 40	J43	41
C16	C 40	F7	38	J45	41
C17	D 40	I18	40	O1	39
D1	38	J14	41	O3	41
D5	38	J16	41	P1	39
D6	38	J17	41	S5	41
E1	38	J18	41	T3	39
E2	38	J19	41	T4	39
E5	40	J20	41	V2	39
E6	A 40	J22	41	V3	39

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
1E		
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2P	28	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	46	Engine Wire and Transmission Wire (On the Transmission)
EB2		
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IK1	50	Console Box Wire and Dash Wire (Left Side of Front Console)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IO1		
IO2		
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU3		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)



: GROUND POINTS

Code	See Page	Ground Points Location
EC	46	Rear Bank of Right Cylinder Head
EE	46	Front Left Side of Fender Apron
IF	48	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
E4	46	Engine Wire	I10	50	Dash Wire
I2	50	Engine Room No.2 Wire	I11		
I9	50	Console Box Wire			