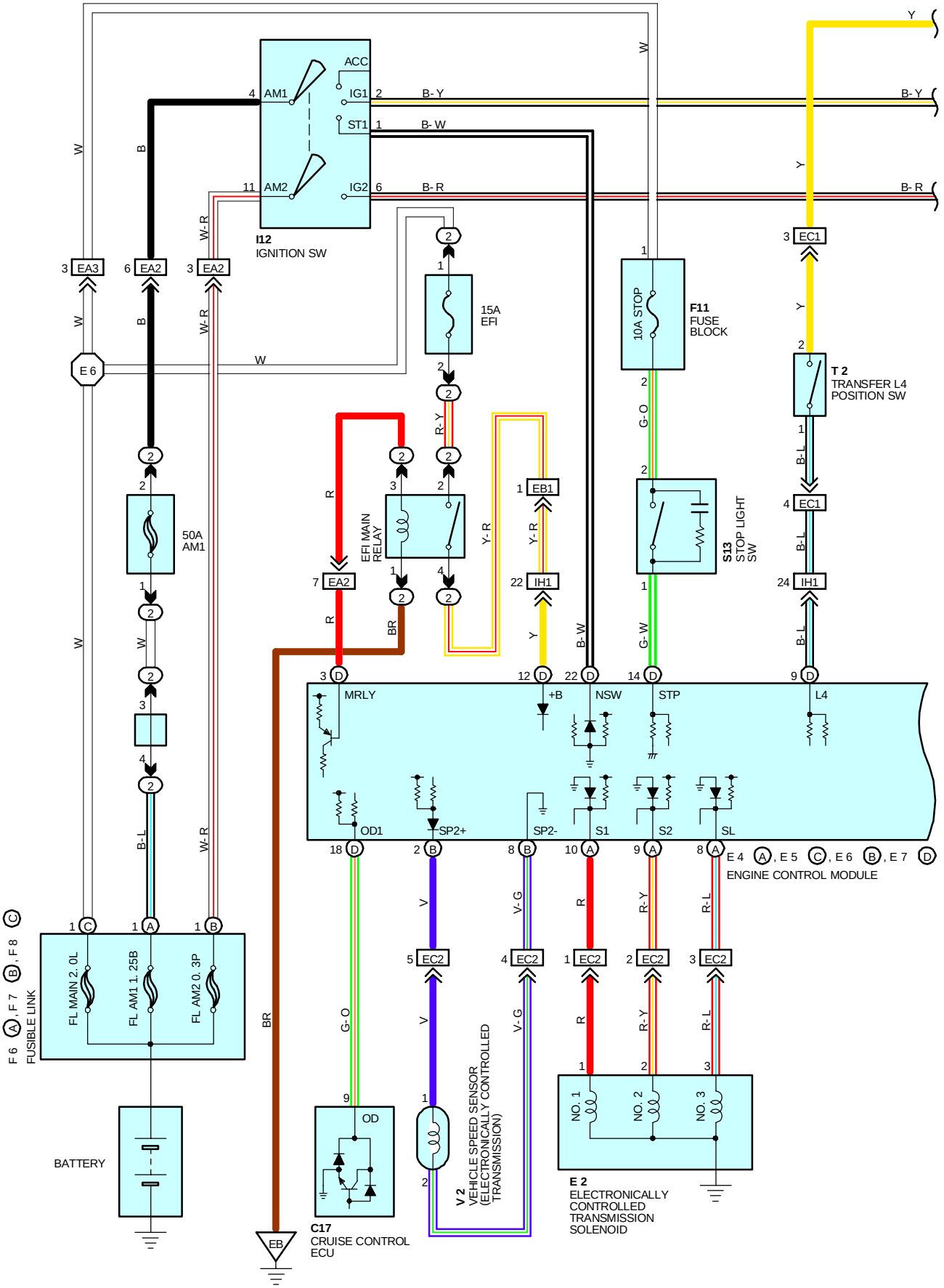
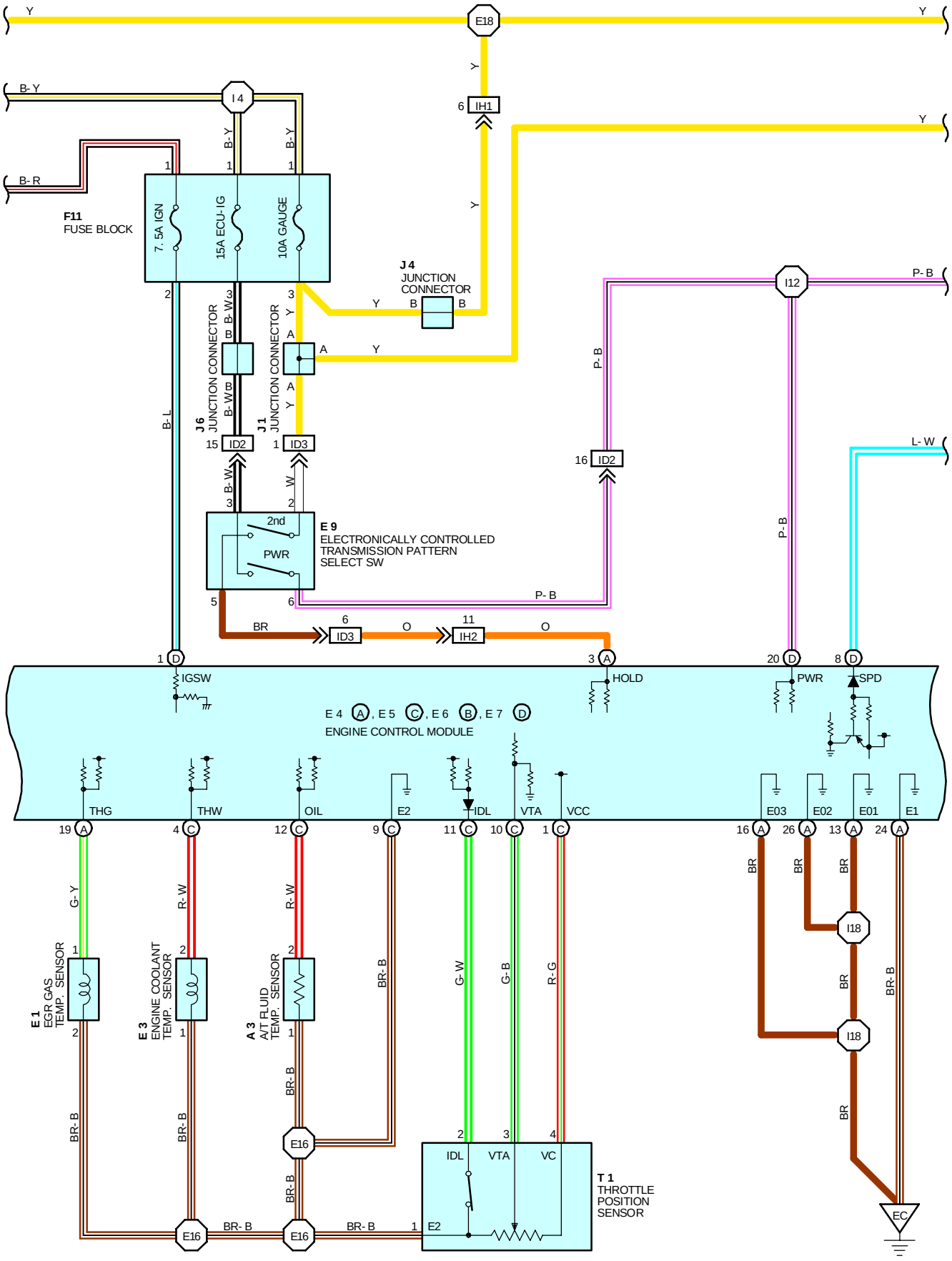
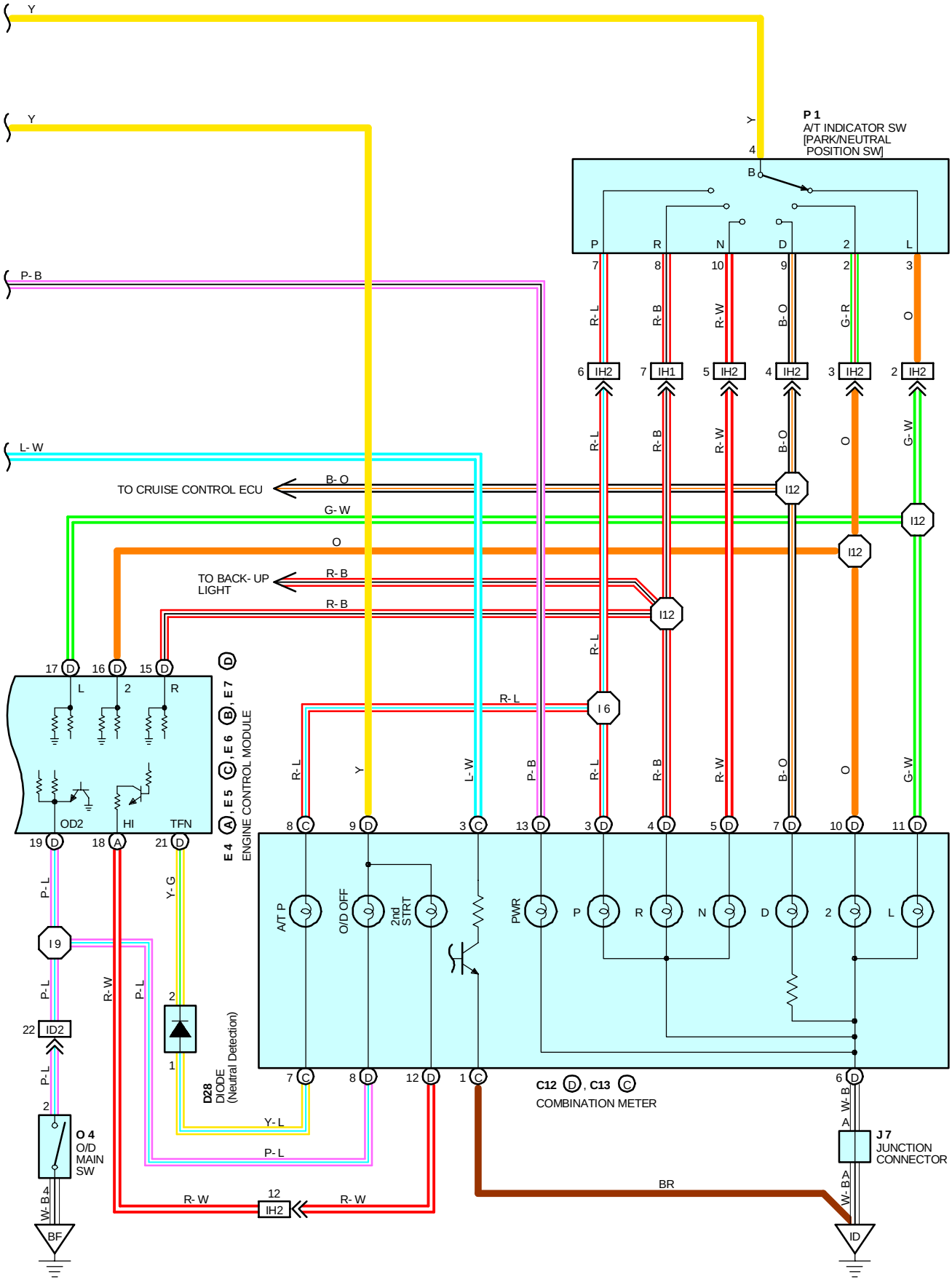

I12
IGNITION SW
ACC
AM1
AM2
IG1
IG2
ST1
B- Y
B- W
B- R
15A
EFI
50A
AM1
EFI MAIN
RELAY
F11
FUSE
BLOCK
10A STOP
S13
STOP LIGHT
SW
T 2
TRANSFER L4
POSITION SW
EA3
EA2
E 6
EB1
IH1
EC1
MRLY
+B
NSW
STP
L4
OD1
SP2+
SP2-
S1
S2
SL
ENGINE CONTROL MODULE
E 4 A, E 5 C, E 6 B, E 7 D
FUSIBLE LINK
FL MAIN 2. 0L
FL AM1 1. 25B
FL AM2 0. 3P
F 6 A, F 7 B, F 8 C
BATTERY
C17
CRUISE CONTROL
ECU
OD
V 2
VEHICLE SPEED SENSOR
(ELECTRONICALLY CONTROLLED
TRANSMISSION)
E 2
ELECTRONICALLY
CONTROLLED
TRANSMISSION
SOLENOID
NO. 1
NO. 2
NO. 3
EB
W
B
W-R
R
R- Y
Y
Y- R
B- W
G- O
G- W
B- L
BR
V
V- G
R- L


F11
FUSE BLOCK
7. 5A IGN
15A ECU-IG
10A GAUGE
J4
JUNCTION
CONNECTOR
J6
JUNCTION CONNECTOR
J1
JUNCTION CONNECTOR
E9
ELECTRONICALLY CONTROLLED
TRANSMISSION PATTERN
SELECT SW
2nd
PWR
E4 A, E5 C, E6 B, E7 D
ENGINE CONTROL MODULE
IGSW
HOLD
PWR
SPD
THG
THW
OIL
E2
IDL
VTA
VCC
E03
E02
E01
E1
E1
EGR GAS
TEMP. SENSOR
E3
ENGINE COOLANT
TEMP. SENSOR
A3
A/T FLUID
TEMP. SENSOR
T1
THROTTLE
POSITION
SENSOR
IDL
VTA
VC
E2
EC
E18
I4
I12
I18
IH1
IH2
ID2
ID3
E16
B-Y
B-R
B-L
B-W
Y
P-B
L-W
BR
O
G-Y
R-W
BR-B
G-W
G-B
R-G


Y
P-B
L-W
TO CRUISE CONTROL ECU
B-O
G-W
O
TO BACK-UP LIGHT
R-B
R-B
P 1
A/T INDICATOR SW
[PARK/NEUTRAL POSITION SW]
P R N D 2 L
IH2 IH1 IH2 IH2 IH2 IH2
R-L R-B R-W B-O G-R O
I12
I6
I9
ID2
O 4
O/D MAIN SW
W-B
BF
D28
DIODE
(Neutral Detection)
Y-L
P-L
R-W
12
IH2
ENGINE CONTROL MODULE
A, E5 C, E6 B, E7 D
E4
OD2 HI TFN
A/T P
O/D OFF
2nd STRT
PWR
C12 D, C13 C
COMBINATION METER
J7
JUNCTION CONNECTOR
BR
ID

AND A/T INDICATOR

SYSTEM OUTLINE

PREVIOUS AUTOMATIC TRANSMISSION 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 GOVERNOR PRESSURE AND LOCK-UP PRESSURE THROUGH THE SOLENOID VALVE. THE ENGINE CONTROL MODULE OF THE SOLENOID VALVE BASED ON THE INPUT SIGNALS FROM EACH SENSOR MAKES SMOOTH DRIVING POSSIBLE BY SHIFT SELECTION FOR EACH GEAR WHICH IS MOST APPROPRIATE TO THE DRIVING CONDITIONS AT THAT TIME.

1. GEAR SHIFT OPERATION

DURING DRIVING, THE ENGINE CONTROL MODULE SELECTS THE SHIFT FOR EACH GEAR WHICH IS MOST APPROPRIATE TO THE DRIVING CONDITIONS, BASED ON INPUT SIGNALS FORM THE ENGINE COOLANT TEMP. SENSOR TO **TERMINAL THW** OF THE ENGINE CONTROL MODULE, AND ALSO THE INPUT SIGNALS TO **TERMINAL SP2+** OF THE ENGINE CONTROL MODULE FROM THE VEHICLE SPEED SENSOR DEVOTED TO THE ELECTRONICALLY CONTROLLED TRANSMISSION. THE CURRENT IS THEN OUTPUT TO THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOIDS. WHEN SHIFTING INTO 1ST SPEED, THE CURRENT FLOWS FROM **TERMINAL S1** OF THE ENGINE CONTROL MODULE TO **TERMINAL 1** OF THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND**, AND CONTINUITY TO THE NO. 1 SOLENOID CAUSES THE SHIFT. FOR 2ND SPEED, THE CURRENT FLOWS FROM **TERMINAL S1** OF THE ENGINE CONTROL MODULE TO **TERMINAL 1** OF THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOIDS → **GROUND** AND FROM **TERMINAL S2** OF THE ENGINE CONTROL MODULE TO **TERMINAL 2** OF THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND**, AND CONTINUITY TO NO.1 AND NO.2, SOLENOIDS CAUSES THE SHIFT. FOR 3RD SPEED, THERE IS NO CONTINUITY TO NO.1 SOLENOID, ONLY TO NO.2, CAUSING THE SHIFT. SHIFTING INTO 4TH SPEED (OVERDRIVE) TAKES PLACE WHEN THERE IS NO CONTINUITY TO EITHER NO.1 OR NO.2 SOLENOID.

2. LOCK-UP OPERATION

WHEN THE ENGINE CONTROL MODULE JUDGES FROM EACH SIGNAL THAT LOCK-UP OPERATION CONDITIONS HAVE BEEN MET, THE CURRENT FLOWS FROM **TERMINAL SL** OF THE ENGINE CONTROL MODULE TO **TERMINAL 3** OF THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND**, CAUSING CONTINUITY TO THE LOCK-UP SOLENOID AND CAUSING LOCK-UP OPERATION.

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, AND THE ENGINE CONTROL MODULE OPERATES AND CONTINUITY TO THE LOCK-UP SOLENOID IS CUT.

4. OVERDRIVE CIRCUIT

* O/D MAIN SW ON
  WHEN THE O/D MAIN SW IS TURNED ON (SW POINT IS OPEN), A SIGNAL IS INPUT TO **TERMINAL OD2** 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 (SW POINT IS CLOSED), THE CURRENT FROM THE O/D OFF INDICATOR LIGHT THROUGH THE O/D MAIN SW TO **GROUND**, CAUSING THE INDICATOR LIGHT TO LIGHT UP. AT THE SAME TIME, A SIGNAL IS INPUT TO **TERMINAL OD2** OF THE ENGINE CONTROL MODULE, AND THE ENGINE CONTROL MODULE OPERATION PREVENTS SHIFT INTO OVERDRIVE.

5. ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW CIRCUIT

IF THE ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW IS CHANGED FROM NORMAL TO POWER, THE CURRENT THROUGH THE POWER INDICATOR FLOWS TO **GROUND**, AND FLOWS TO **TERMINAL PWR** OF THE ENGINE CONTROL MODULE, THE ENGINE CONTROL MODULE OPERATES, AND SHIFT UP AND SHIFT DOWN OCCUR AT HIGHER VEHICLE SPEEDS THAN WHEN THE SW IS IN NORMAL POSITION.

6. TRANSFER SHIFT OPERATION

WHEN THE TRANSFER SHIFT LEVER IS MOVED TO **L4** POSITION, A SIGNAL FROM TRANSFER **L4** POSITION SW IS INPUT TO THE **TERMINAL L4** OF THE ENGINE CONTROL, THEN SHIFT TO L4 OCCURS.

SERVICE HINTS

E4 (A), E5 (C), E6(B), E7 (D) ENGINE CONTROL MODULE

STP-GND:	**7.5**- **14.0** VOLTS WITH BRAKE PEDAL IS DEPRESSED
	0- **1.5** VOLTS WITH THE BRAKE PEDAL IS RELEASED
TFN-GRD:	**0**- **3.0** VOLTS WITH THE TRANSFER POSITION AT **N** POSITION
	9.0- **14.0** VOLTS WITH THE TRANSFER POSITION AT EXCEPT **N** POSITION
OD2-GRD:	**0**- **3.0** VOLTS WITH THE O/D MAIN SW TURNED ON
	9.0- **14.0** VOLTS WITH THE O/D MAIN SW TURNED OFF
OD1-GND:	**9.0**- **14.0** VOLTS WITH THE IGNITION SW ON
SP2+-SP2:	PULSE GENERATION WITH VEHICLE MOVING
SP2+-SP2-:	PULSE GENERATION WITH VEHICLE MOVING
SPD-GND:	PULSE GENERATION WITH VEHICLE MOVING
IDL-GND:	**0**- **3.0** VOLTS WITH THE THROTTLE VALVE FULLY CLOSED
	9.0- **14.0** VOLTS WITH THE THROTTLE VALVE FULLY OPEN
VTA-GND:	**3.5**- **4.5** VOLTS WITH THE THROTTLE VALVE FULLY CLOSED
	2.5- **3.5** VOLTS WITH THE THROTTLE VALVE FULLY OPEN
2-GND:	**7.5**- **14.0** VOLTS WITH THE SHIFT LEVER AT **2** POSITION
	0- **1.5** VOLTS WITH THE SHIFT LEVER AT EXCEPT **2** POSITION
L-GRD:	**7.5**- **14.0** VOLTS WITH THE SHIFT LEVER AT **L** POSITION
	0- **1.5** VOLTS WITH THE SHIFT LEVER AT EXCEPT **L** POSITION
R-GND:	**7.5**- **14.0** VOLTS WITH THE SHIFT LEVER AT **R** POSITION
	0- **1.5** VOLTS WITH THE SHIFT LEVER AT EXCEPT **R** POSITION
PWR-GND:	**7.5**- **14.0** VOLTS WITH THE PATTERN SELECT SW AT **PWR** POSITION
	0- **1.5** VOLTS WITH THE PATTERN SELECT SW AT **NORMAL** POSITION
L4-GND:	**7.5**- **14.0** VOLTS WITH THE TRANSFER POSITION AT **L4** POSITION
	0- **1.5** VOLTS WITH THE TRANSFER POSITION AT EXCEPT **L4** POSITION

E2 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID

1,2,3-GROUND: **11**- **15** Ω

E9 ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW

3-6: CLOSED WITH THE ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW AT **PWR** POSITION

O4 O/D MAIN SW

2-4:	OPEN WITH THE O/D MAIN SW AT **ON** POSITION
	CLOSE WITH THE O/D MAIN SW AT **OFF** POSITION

AND A/T INDICATOR

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A3	22	E6 B	24	J6	25
C12 D	24	E7 D	24	J7	25
C13 C	24	E9	26	O4	27
C17	24	F6 A	22	P1	23
D28	24	F7 B	22	S13	25
E1	22	F8 C	22	T1	23
E2	22	F11	25	T2	23
E3	22	I12	25	V2	23
E4 A	24	J1	25		
E5 C	24	J4	25		

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	18	R/B NO.2 (FRONT SIDE OF LEFT FENDER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA2 EA3	30	COWL WIRE AND ENGINE ROOM MAIN WIRE (LEFT FENDER)
EB1	30	ENGINE ROOM MAIN WIRE AND ENGINE WIRE (NEAR THE DISTRIBUTOR)
EC1 EC2	30	ENGINE WIRE AND TRANSMISSION WIRE (NEAR THE STARTER)
ID2 ID3	32	COWL WIRE AND FLOOR NO. 1 WIRE (LEFT KICK PANEL)
IH1 IH2	32	ENGINE WIRE AND COWL WIRE (BEHIND GLOVE BOX)

: GROUND POINTS

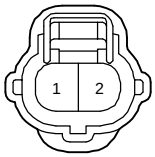
CODE	SEE PAGE	GROUND POINTS LOCATION
EB	30	FRONT SIDE OF LEFT FENDER
EC	30	AIR INTAKE CHAMBER
ID	32	KEFT KICK PANEL
BF	34	UNDER THE CENTER CONSOLE BOX

: SPLICE POINTS

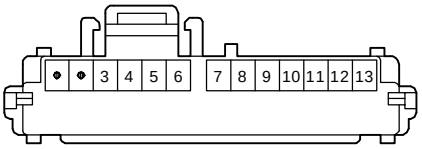
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E6	30	ENGINE ROOM MAIN WIRE	I6	32	COWL WIRE
E16 E18	30	ENGINE WIRE	I9 I12		
I4	32	COWL WIRE	I18	32	ENGINE WIRE

ELECTRONICALLY CONTROLLED TRANSMISSION

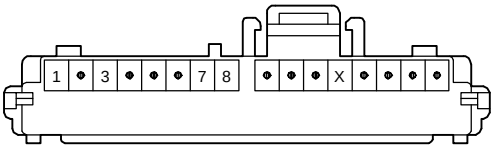
A 3



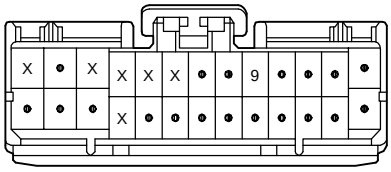
C12 (D) BROWN



C13 (C)



C17 GRAY



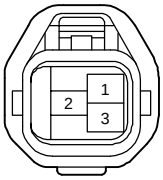
D28 BLACK



E 1 DARK GRAY



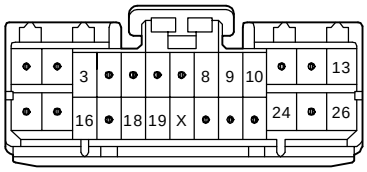
E 2 BLACK



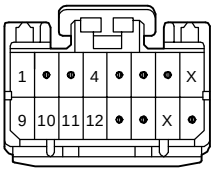
E 3 GREEN



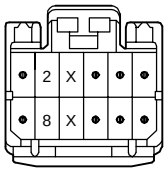
E 4 (A) DARK GRAY



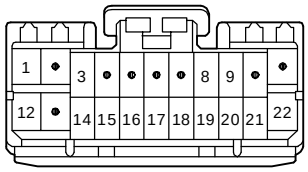
E 5 (C) DARK GRAY



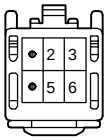
E 6 (B) DARK GRAY



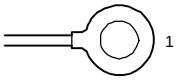
E 7 (D) DARK GRAY



E 9



F 6 (A), **F 8** (C)



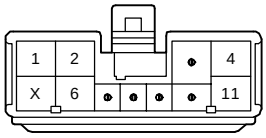
F 7 (B) GRAY



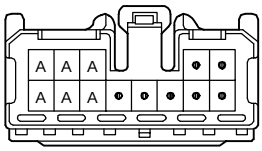
F11

(SEE PAGE 20)

I12 BLACK

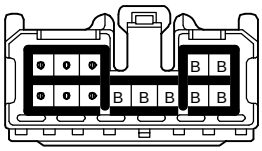


J 1



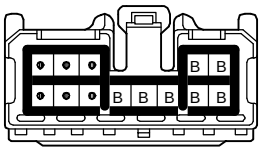
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J 4



(HINT : SEE PAGE 7)

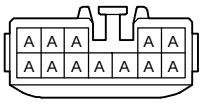
J 6



(HINT : SEE PAGE 7)

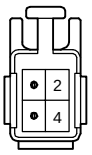
AND A/T INDICATOR

J 7 BLUE

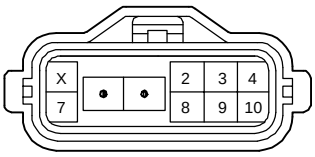


(HINT : SEE PAGE 7)

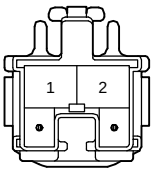
O 4 BLUE



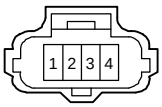
P 1 GRAY



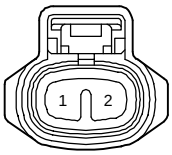
S13 BLACK



T 1 BLACK



T 2 GRAY



V 2 BLACK

