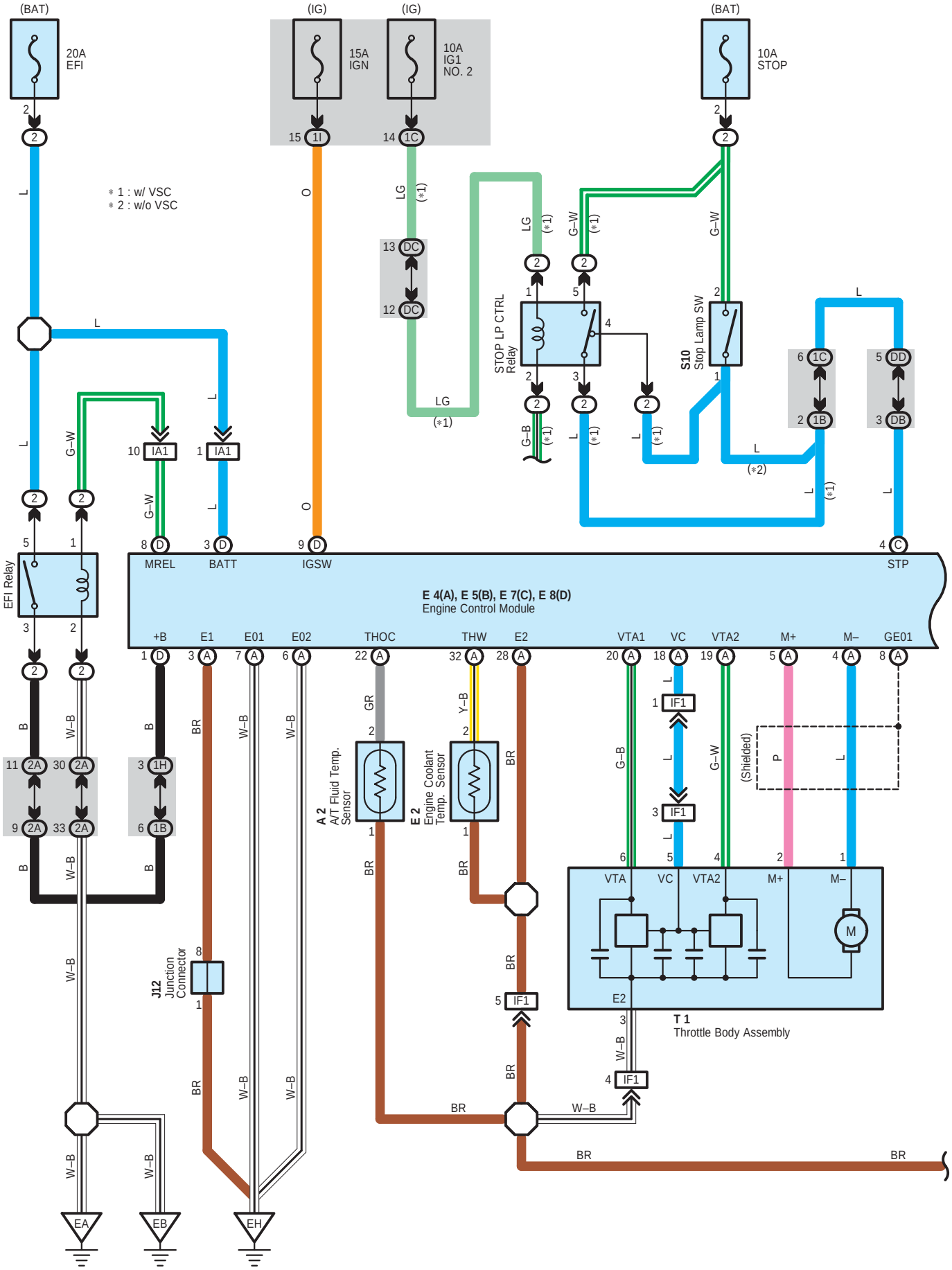
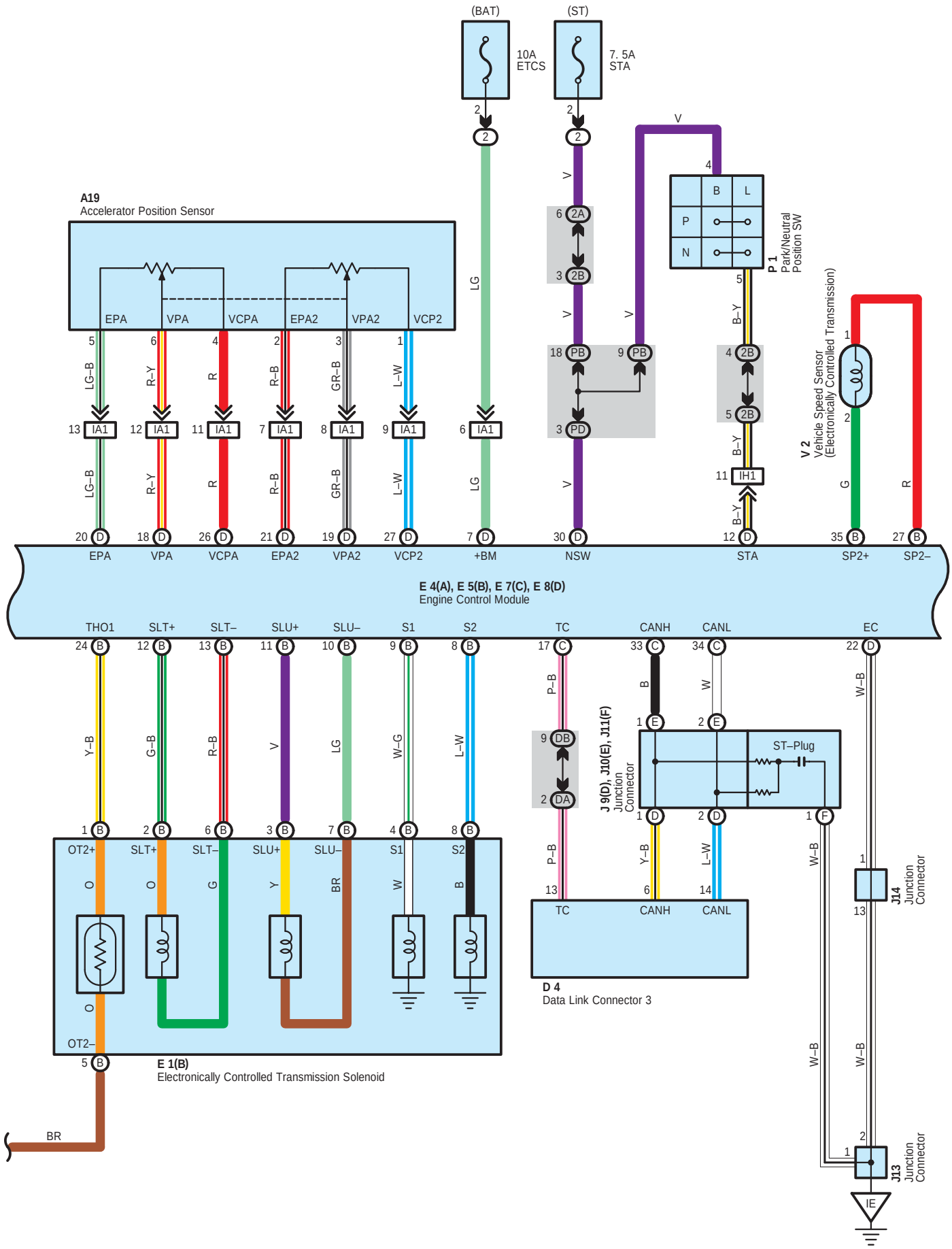
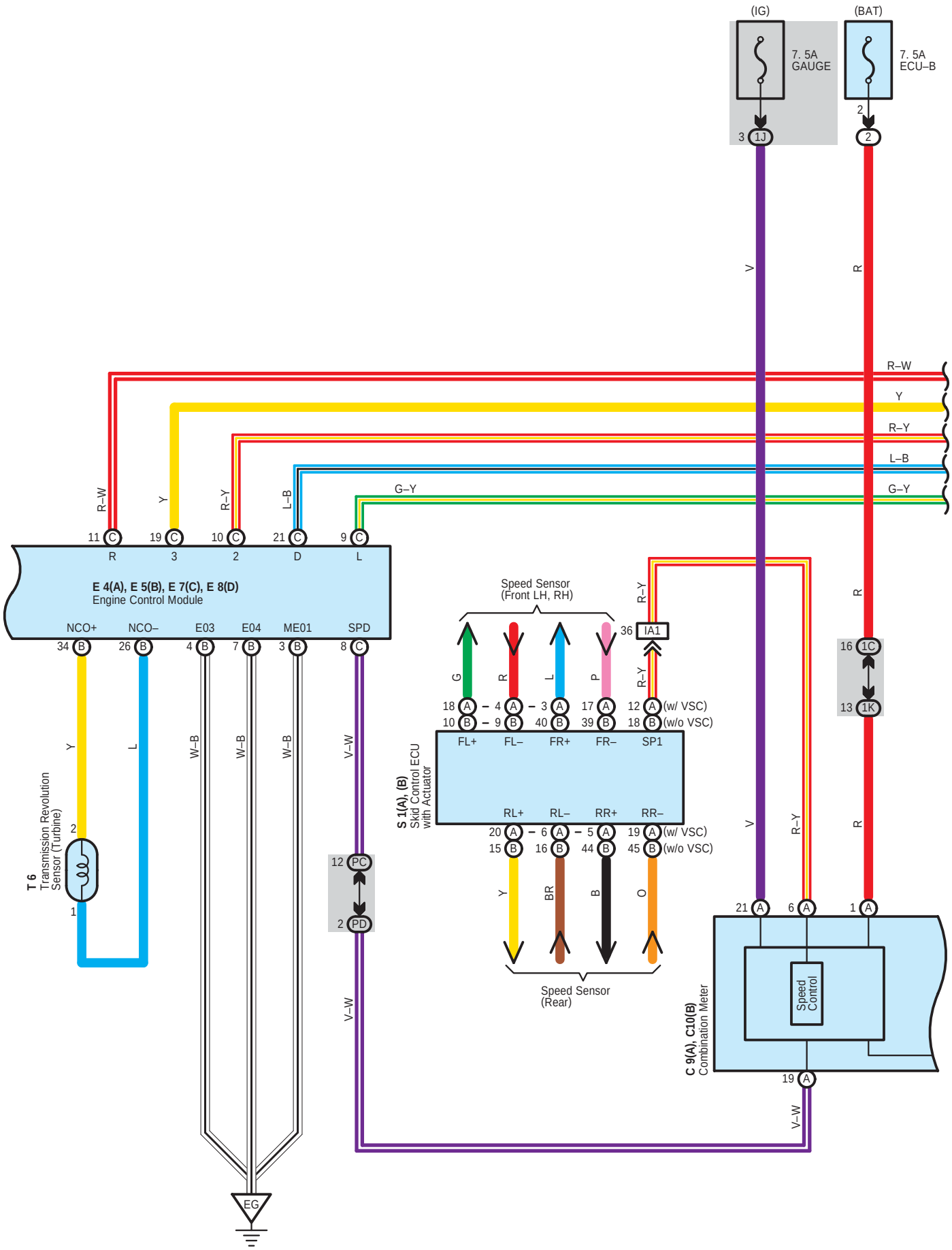
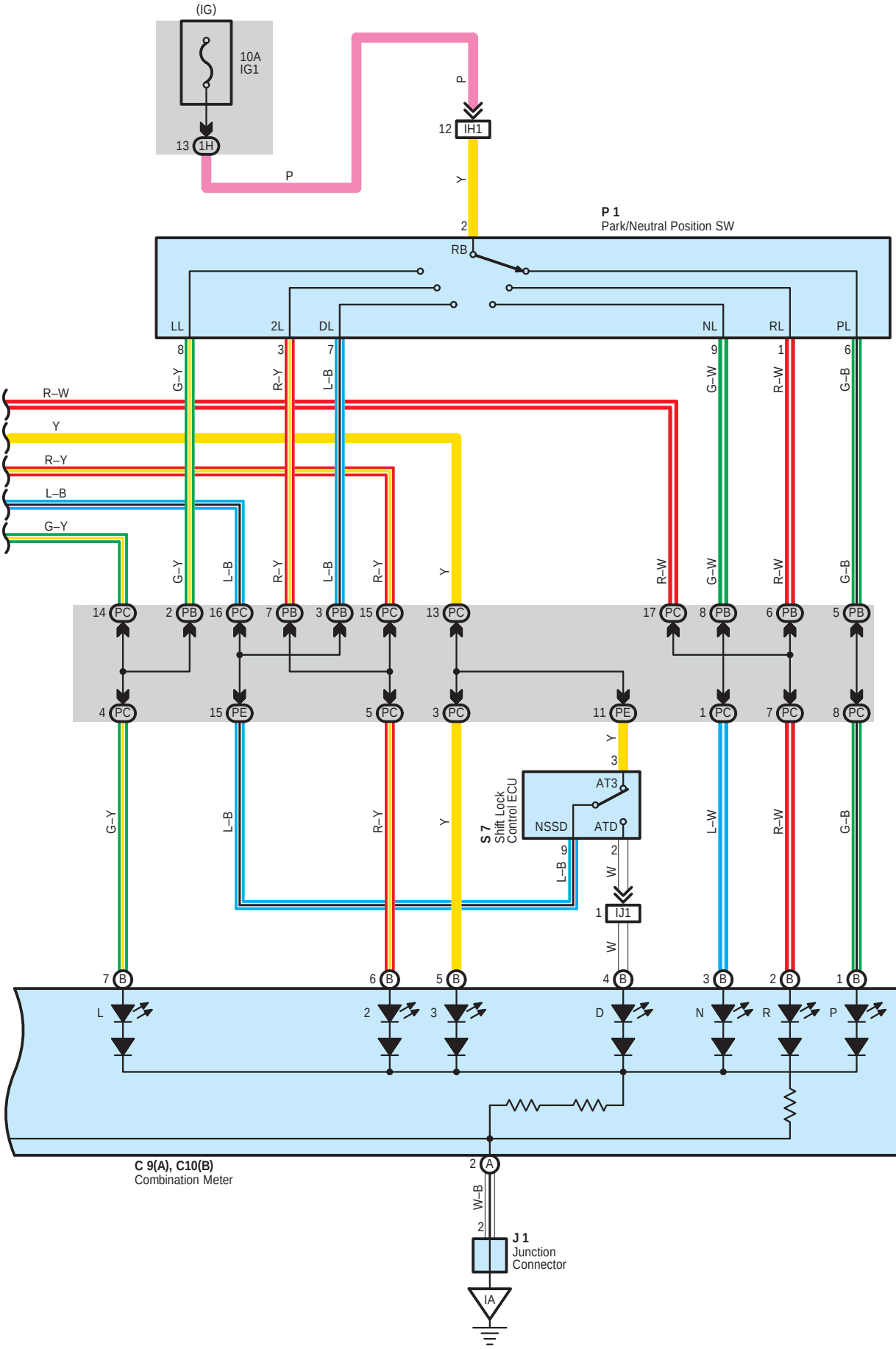

(BAT)
20A
EFI
(IG)
15A
IGN
(IG)
10A
IG1
NO. 2
(BAT)
10A
STOP
* 1 : w/ VSC
* 2 : w/o VSC
STOP LP CTRL
Relay
S10
Stop Lamp SW
EFI Relay
MREL
BATT
IGSW
STP
E 4(A), E 5(B), E 7(C), E 8(D)
Engine Control Module
+B
E1
E01
E02
THOC
THW
E2
VTA1
VC
VTA2
M+
M–
GE01
A 2
A/T Fluid Temp.
Sensor
E 2
Engine Coolant
Temp. Sensor
J12
Junction
Connector
T 1
Throttle Body Assembly
(Shielded)
VTA
VC
VTA2
M+
M–
E2
EA
EB
EH


(BAT)
(ST)
10A
ETCS
7. 5A
STA
A19
Accelerator Position Sensor
EPA
VPA
VCPA
EPA2
VPA2
VCP2
P 1
Park/Neutral
Position SW
V 2
Vehicle Speed Sensor
(Electronically Controlled Transmission)
E 4(A), E 5(B), E 7(C), E 8(D)
Engine Control Module
+BM
NSW
STA
SP2+
SP2–
THO1
SLT+
SLT–
SLU+
SLU–
S1
S2
TC
CANH
CANL
EC
J 9(D), J10(E), J11(F)
Junction
Connector
ST–Plug
J14
Junction
Connector
J13
Junction
Connector
D 4
Data Link Connector 3
E 1(B)
Electronically Controlled Transmission Solenoid
OT2+
OT2–
BR
IE


(IG)
(BAT)
7. 5A
GAUGE
7. 5A
ECU–B
3 1J
2
2
V
R
R–W
Y
R–Y
L–B
G–Y
G–Y
R–W
Y
R–Y
L–B
11 C
R
19 C
3
10 C
2
21 C
D
9 C
L
E 4(A), E 5(B), E 7(C), E 8(D)
Engine Control Module
NCO+
NCO–
E03
E04
ME01
SPD
34 B
26 B
4 B
7 B
3 B
8 C
Speed Sensor
(Front LH, RH)
36 IA1
R–Y
G
R
L
P
R–Y
18 A – 4 A – 3 A
10 B – 9 B – 40 B
17 A
39 B
12 A (w/ VSC)
18 B (w/o VSC)
FL+
FL–
FR+
FR–
SP1
S 1(A), (B)
Skid Control ECU
with Actuator
RL+
RL–
RR+
RR–
20 A – 6 A – 5 A
15 B
16 B
44 B
19 A (w/ VSC)
45 B (w/o VSC)
Y
BR
B
O
Speed Sensor
(Rear)
T 6
Transmission Revolution
Sensor (Turbine)
2
1
Y
L
W–B
W–B
W–B
V–W
12 PC
2 PD
V–W
16 1C
13 1K
R
R
V
R–Y
R
21 A
6 A
1 A
C 9(A), C10(B)
Combination Meter
Speed
Control
19 A
V–W
EG


(IG)
10A
IG1
13 1H
P
12 IH1
P
Y
2
P 1
Park/Neutral Position SW
RB
LL
2L
DL
NL
RL
PL
8
3
7
9
1
6
G–Y
R–Y
L–B
G–W
R–W
G–B
R–W
Y
R–Y
L–B
G–Y
14 PC
2 PB
16 PC
7 PB
3 PB
15 PC
13 PC
17 PC
8 PB
6 PB
5 PB
4 PC
15 PE
5 PC
3 PC
11 PE
1 PC
7 PC
8 PC
S 7
Shift Lock
Control ECU
AT3
NSSD
ATD
9
2
1 IJ1
7 B
6 B
5 B
4 B
3 B
2 B
1 B
L
2
3
D
N
R
P
C 9(A), C10(B)
Combination Meter
2 A
W–B
2
J 1
Junction
Connector
IA

ECT and A/T Indicator for 2TR–FE

System Outline

Previous automatic transaxle have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock–up hydraulic pressure. The electronically controlled transmission, however, controls the line pressure and lock–up pressure etc. electrically, through the solenoid valve. The engine control module controls each solenoid valve based on the input signals from each sensor, which makes smooth driving possible by shift selection for each gear that 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 from the engine coolant temp. sensor to TERMINAL THW of the engine control module, and also the input signals to TERMINAL SPD of the engine control module from the vehicle speed sensor devoted to the electronically controlled transmission. Current is then output to the electronically controlled transmission solenoid. When shifting to 1st speed, the current flows from TERMINAL S1 of the engine control module to TERMINAL (B) 4 of the solenoid to GROUND, and from TERMINAL S2 of the engine control module to TERMINAL 8 of the electronically controlled transmission solenoid to GROUND, and continuity to the No.1 and No.2 solenoid causes the shift.
For 2nd speed, the current flows from TERMINAL S1 of the engine control module to TERMINAL (B) 4 of the solenoid to GROUND, and from TERMINAL S2 of the engine control module to TERMINAL (B) 8 of the solenoid to GROUND, and continuity to solenoid No.1 and No.2 causes the shift.
For 3rd speed, there is no continuity No.1 solenoid, only to No.2, causing the shift.
Shifting into 4th speed (Overdrive) takes place when there is no continuity to both No.1 and No.2 solenoid.

2. Stop Lamp SW Circuit

If the brake pedal is depressed (Stop lamp 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 continuity to the lock–up solenoid is cut.

3. AI–Shift Control

The engine control module judges whether the road is downslope or upslope by detecting the throttle opening degree or the vehicle's speed. Moreover it can expect the winding roads by detecting the turning condition of the vehicle. The engine control module keeps unnecessary shifting up from the fourth gear from operating and carries out the automatic shifting down to the third gear in order to control the vehicle running according to the road conditions. The engine control module also reads the driver's intention during driving from his (her) accelerating operation and the running conditions of the vehicle. As a result of that, ideal shifting patters for each driver are automatically selected without any switching operations.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A2	42 (2TR–FE)	E7 C	44	P1	43 (2TR–FE)
A19	44	E8 D	44	S1 A	43 (2TR–FE)
C9 A	44	J1	45	S1 B	43 (2TR–FE)
C10 B	44	J9 D	45	S7	45
D4	44	J10 E	45	S10	45
E1 B	42 (2TR–FE)	J11 F	45	T1	43 (2TR–FE)
E2	42 (2TR–FE)	J12	45	T6	43 (2TR–FE)
E4 A	44	J13	45	V2	43 (2TR–FE)
E5 B	44	J14	45		

▭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	24	Engine Room R/B (Engine Compartment Left)

: **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1C		
1H	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1I		
1J		
1K		
2A	24	Engine Room J/B (Engine Compartment Left)
2B	24	Engine Wire and Engine Room J/B (Engine Compartment Left)
DA	34	Instrument Panel Wire and Instrument Panel J/B No.1 (Left Kick Panel)
DB		
DC	34	Engine Room Main Wire and Instrument Panel J/B No.1 (Left Kick Panel)
DD		
PB	36	Engine Wire and Instrument Panel J/B No.2 (Right Side of Glove Box)
PC	36	Instrument Panel Wire and Instrument Panel J/B No.2 (Right Side of Glove Box)
PD		
PE		

: **Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	54	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IF1	55	Engine Wire and Engine Wire (Behind the Glove Box)
IH1	55	Engine Wire and Instrument Panel Wire (Right Side of Glove Box)
IJ1	55	Instrument Panel Wire and Instrument Panel Wire (Right Kick Panel)

: **Ground Points**

Code	See Page	Ground Points Location
EA	53 (2TR–FE)	Front Right Fender
EB	53 (2TR–FE)	Front Left Fender
EG	53 (2TR–FE)	Rear Side of Cylinder Block
EH		
IA	54	Left Kick Panel
IE	54	Right Kick Panel