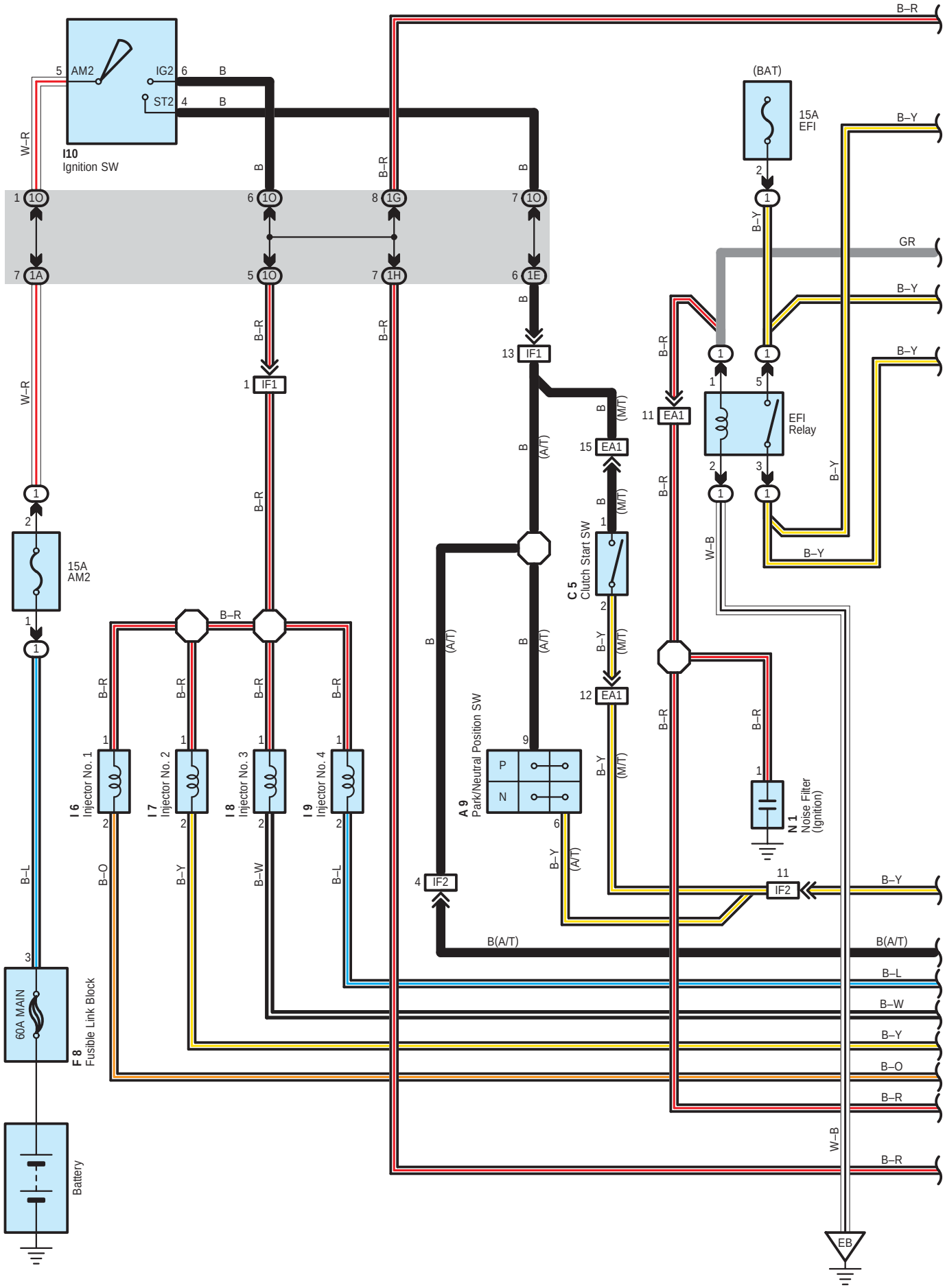
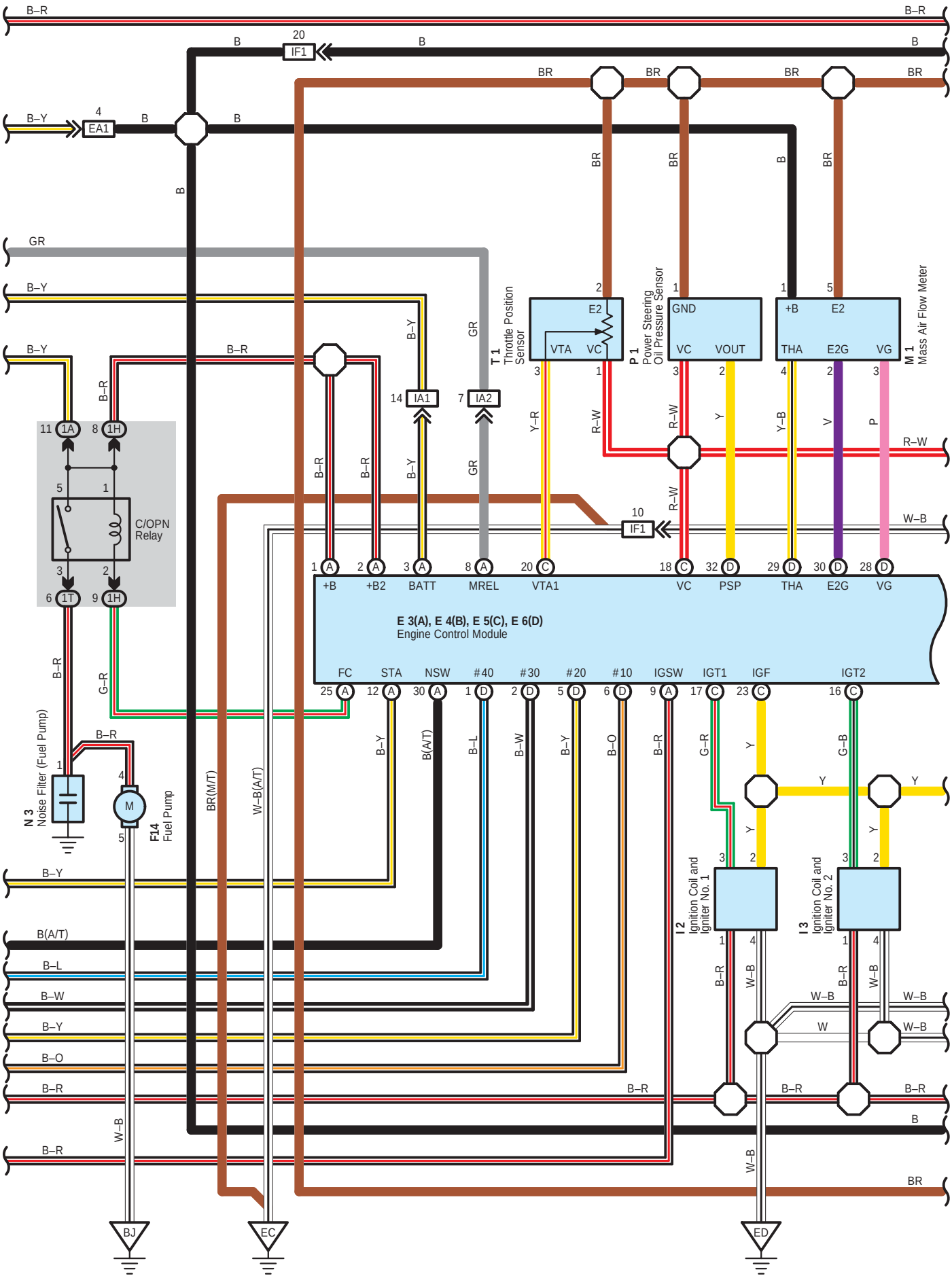
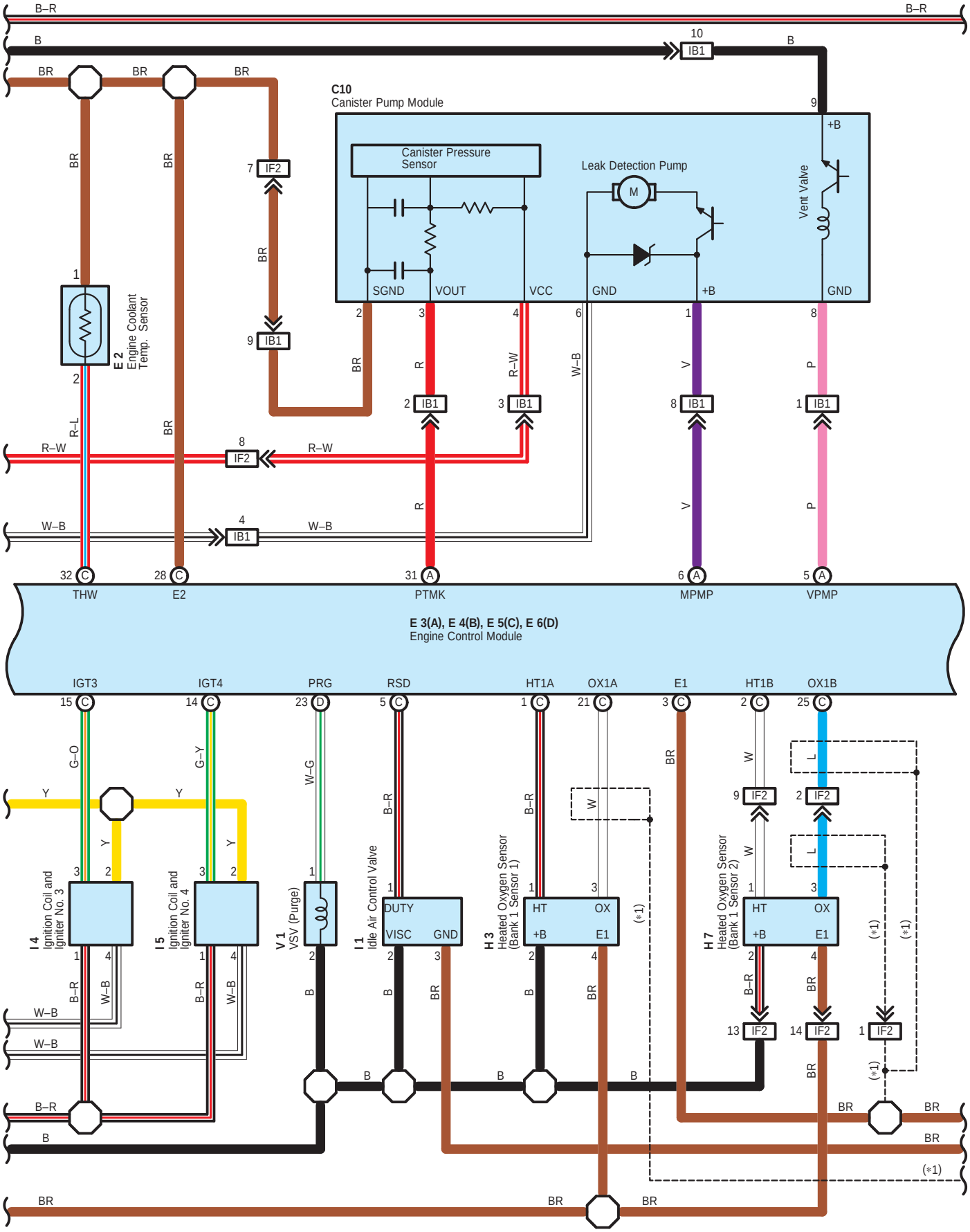
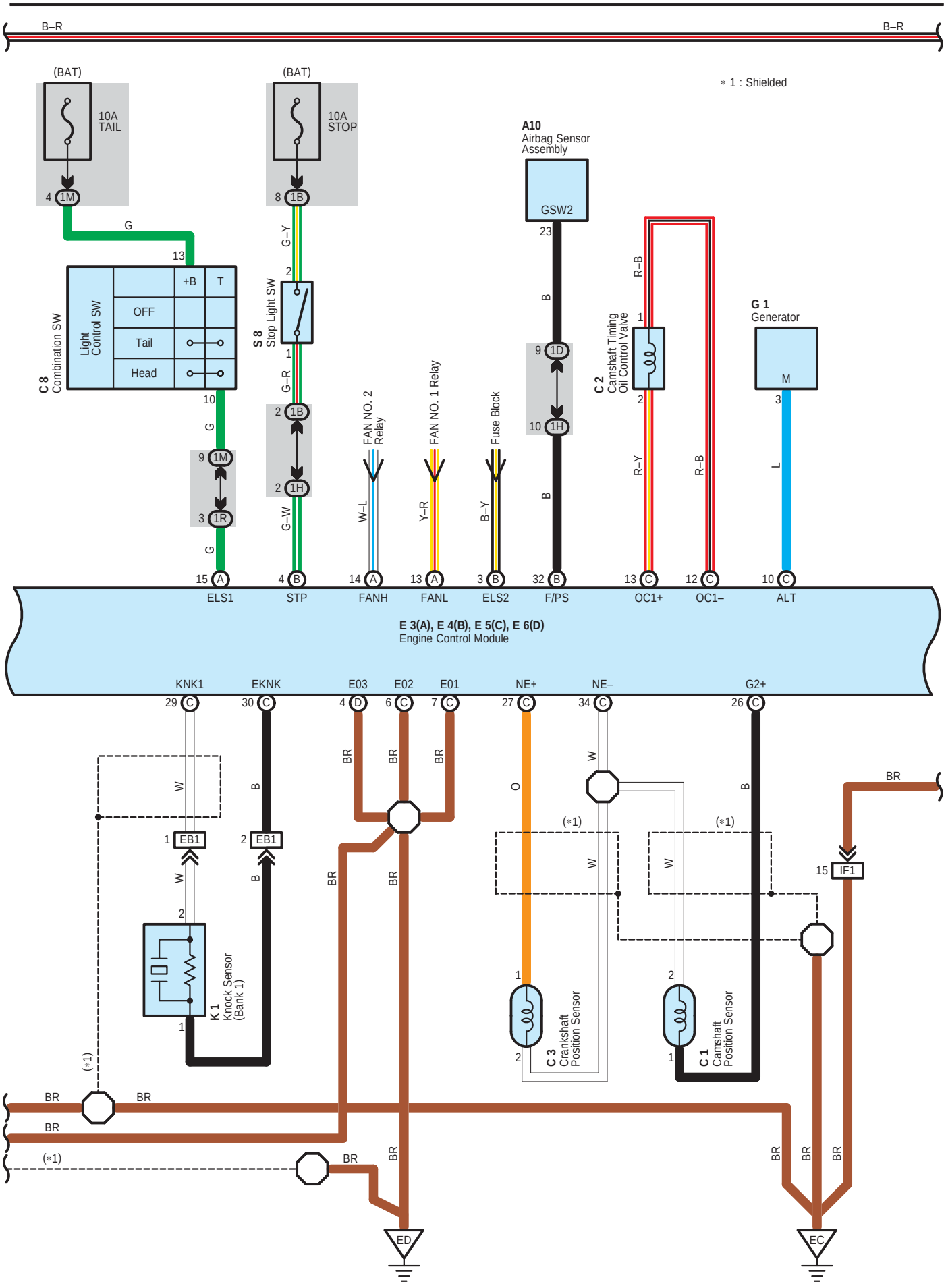
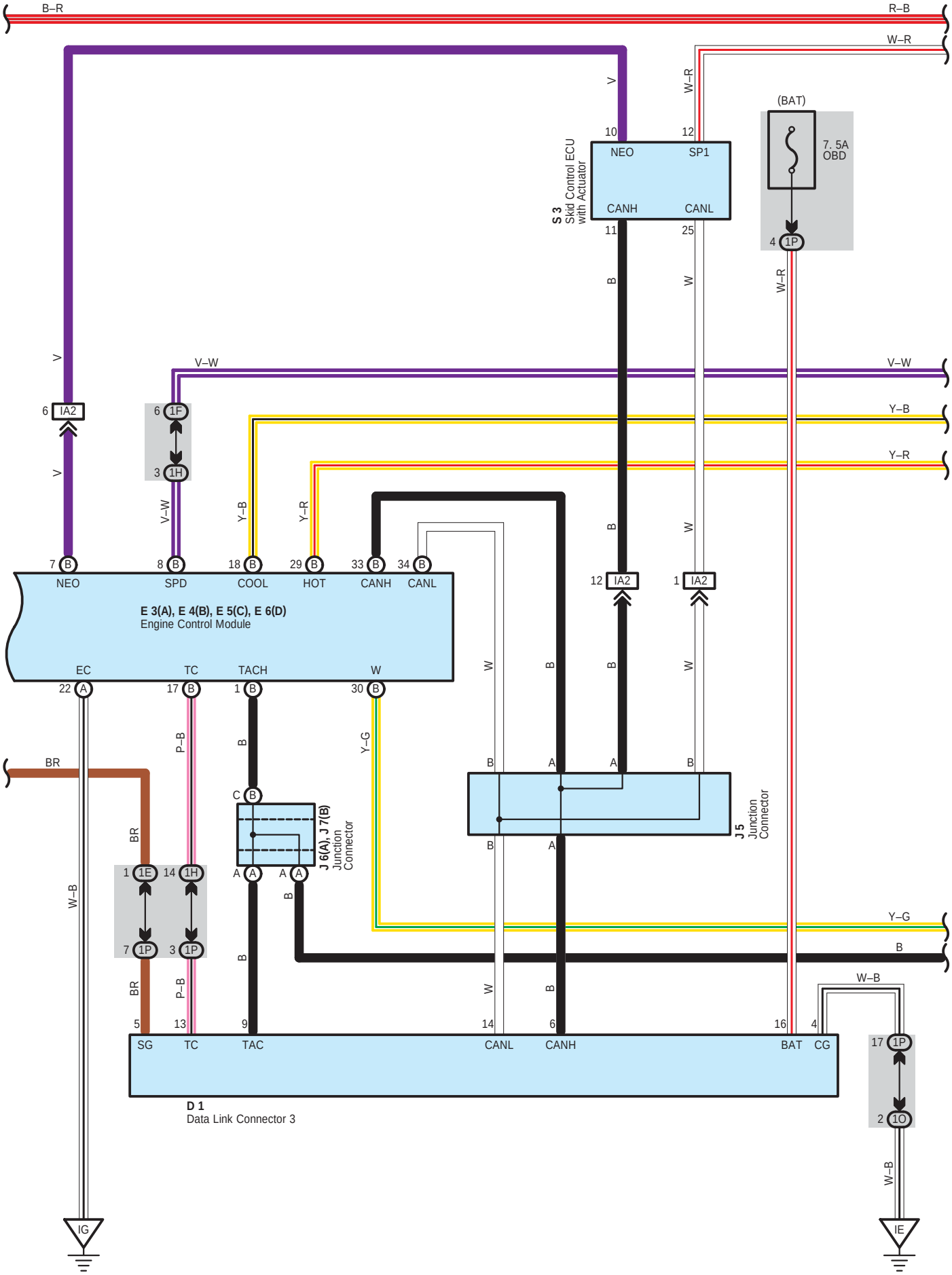
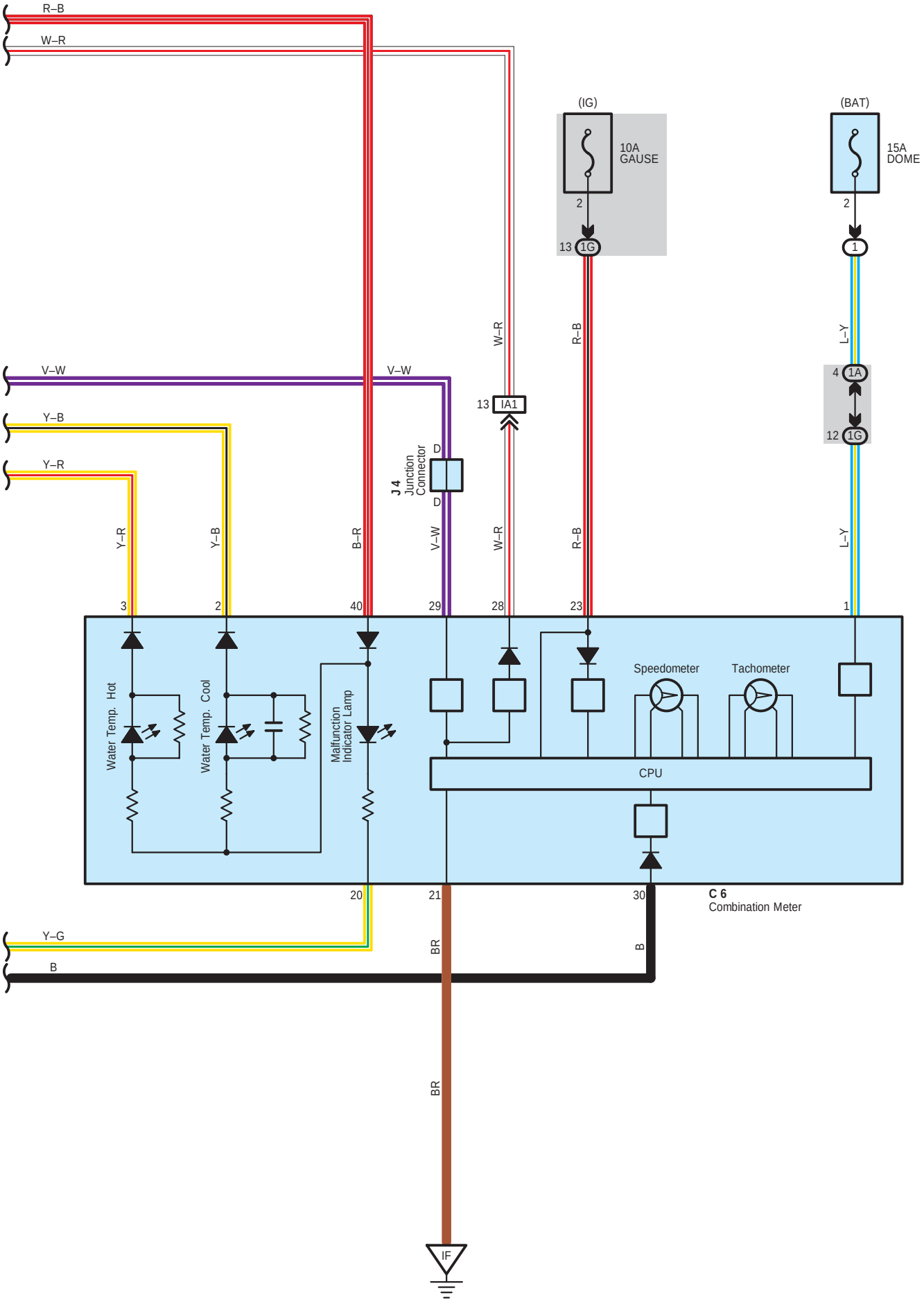

I10
Ignition SW
AM2
IG2
ST2
W–R
B
B–R
1O
1A
1G
1H
1E
IF1
IF2
EA1
(BAT)
15A
EFI
15A
AM2
EFI
Relay
GR
B–Y
W–B
C 5
Clutch Start SW
(M/T)
(A/T)
A 9
Park/Neutral Position SW
P
N
I 6
Injector No. 1
I 7
Injector No. 2
I 8
Injector No. 3
I 9
Injector No. 4
B–O
B–W
B–L
N 1
Noise Filter
(Ignition)
F 8
Fusible Link Block
60A MAIN
Battery
B(A/T)
W–B
EB


B–R
B
B–Y
GR
BR
W–B
B(A/T)
B–L
B–W
B–O
BR(M/T)
W–B(A/T)
G–R
Y
W
20
IF1
4
EA1
14
IA1
7
IA2
10
IF1
11 1A
8 1H
5
1
3
2
6 1T
9 1H
C/OPN Relay
T 1 Throttle Position Sensor
E2
VTA
VC
P 1 Power Steering Oil Pressure Sensor
GND
VC
VOUT
M 1 Mass Air Flow Meter
+B
E2
THA
E2G
VG
1 A +B
2 A +B2
3 A BATT
8 A MREL
20 C VTA1
18 C VC
32 D PSP
29 D THA
30 D E2G
28 D VG
E 3(A), E 4(B), E 5(C), E 6(D)
Engine Control Module
FC
STA
NSW
#40
#30
#20
#10
IGSW
IGT1
IGF
IGT2
25 A
12 A
30 A
1 D
2 D
5 D
6 D
9 A
17 C
23 C
16 C
N 3 Noise Filter (Fuel Pump)
M
F14 Fuel Pump
I 2 Ignition Coil and Igniter No. 1
I 3 Ignition Coil and Igniter No. 2
BJ
EC
ED


B–R
B
BR
10
IB1
C10
Canister Pump Module
Canister Pressure Sensor
Leak Detection Pump
Vent Valve
+B
M
SGND
VOUT
VCC
GND
+B
GND
E 2
Engine Coolant Temp. Sensor
IF2
R–L
R–W
W–B
R
V
P
R–W
W–B
32 C THW
28 C E2
31 A PTMK
6 A MPMP
5 A VPMP
E 3(A), E 4(B), E 5(C), E 6(D)
Engine Control Module
IGT3
IGT4
PRG
RSD
HT1A
OX1A
E1
HT1B
OX1B
G–O
G–Y
W–G
B–R
W
L
Y
B
I 4
Ignition Coil and Igniter No. 3
I 5
Ignition Coil and Igniter No. 4
V 1
VSV (Purge)
I 1
Idle Air Control Valve
DUTY
VISC
GND
H 3
Heated Oxygen Sensor (Bank 1 Sensor 1)
HT
OX
+B
E1
H 7
Heated Oxygen Sensor (Bank 1 Sensor 2)
(*1)


B–R
B–R
(BAT)
10A TAIL
4 1M
G
13
C 8 Combination SW
Light Control SW
+B
T
OFF
Tail
Head
10
G
9 1M
3 1R
G
15 A
ELS1
(BAT)
10A STOP
8 1B
G–Y
2
S 8 Stop Light SW
1
G–R
2 1B
2 1H
G–W
4 B
STP
FAN NO. 2 Relay
W–L
14 A
FANH
FAN NO. 1 Relay
Y–R
13 A
FANL
Fuse Block
B–Y
3 B
ELS2
∗ 1 : Shielded
A10 Airbag Sensor Assembly
GSW2
23
B
9 1D
10 1H
B
32 B
F/PS
C 2 Camshaft Timing Oil Control Valve
R–B
1
2
R–Y
13 C
OC1+
R–B
12 C
OC1–
G 1 Generator
M
3
L
10 C
ALT
E 3(A), E 4(B), E 5(C), E 6(D)
Engine Control Module
KNK1
29 C
W
1 EB1
W
2
K 1 Knock Sensor (Bank 1)
1
EKNK
30 C
B
2 EB1
B
(∗1)
BR
BR
(∗1)
E03
4 D
BR
E02
6 C
BR
E01
7 C
BR
BR
BR
BR
NE+
27 C
O
1
C 3 Crankshaft Position Sensor
2
NE–
34 C
W
(∗1)
W
W
2
C 1 Camshaft Position Sensor
1
G2+
26 C
B
(∗1)
BR
15 IF1
BR
BR
BR
BR
BR
BR
BR
BR
BR
ED
EC


B–R
R–B
W–R
V
W–R
(BAT)
7. 5A
OBD
10
12
NEO
SP1
CANH
CANL
S 3
Skid Control ECU
with Actuator
11
25
4
1P
B
W
W–R
V
V–W
V–W
6
IA2
6
1F
Y–B
Y–R
3
1H
V
V–W
Y–B
Y–R
B
W
7
8
18
29
33
34
NEO
SPD
COOL
HOT
CANH
CANL
12
IA2
1
IA2
E 3(A), E 4(B), E 5(C), E 6(D)
Engine Control Module
EC
TC
TACH
W
22
17
1
30
W
B
B
W
P–B
B
Y–G
BR
B
A
A
B
C
B
J 6(A), J 7(B)
Junction
Connector
J 5
Junction
Connector
BR
1
1E
14
1H
A
A
A
A
B
W–B
7
1P
3
1P
Y–G
B
BR
P–B
W–B
5
13
9
14
6
16
4
SG
TC
TAC
CANL
CANH
BAT
CG
17
1P
2
1O
D 1
Data Link Connector 3
W–B
IG
IE


R–B
W–R
(IG)
10A
GAUSE
2
13
1G
(BAT)
15A
DOME
2
1
W–R
R–B
L–Y
4
1A
12
1G
V–W
V–W
Y–B
Y–R
13
IA1
J 4
Junction
Connector
D
D
Y–R
Y–B
B–R
V–W
W–R
R–B
L–Y
3
2
40
29
28
23
1
Water Temp. Hot
Water Temp. Cool
Malfunction
Indicator Lamp
Speedometer
Tachometer
CPU
20
21
30
C 6
Combination Meter
Y–G
B
BR
B
BR
IF

System Outline

This system utilizes an engine control module and maintains overall control of the engine, transmission and so on. An outline of the engine control is explained here.

1. Input Signals

(1) Engine coolant temp. signal circuit

The engine coolant temp. sensor detects the engine coolant temp. and has a built–in thermistor with a resistance which varies according to the engine coolant temp. thus the engine coolant temp. is input in the form of a control signal into TERMINAL THW of the engine control module.

(2) Intake air temp. signal circuit

The intake air temp. sensor is installed in the mass air flow meter and detects the intake air temp., which is input as a control signal into TERMINAL THA of the engine control module.

(3) Oxygen sensor signal circuit

The oxygen density in the exhaust gases is detected and input as a control signal into TERMINALS OX1A and OX1B of the engine control module.

(4) RPM signal circuit

Camshaft position and crankshaft position are detected by the camshaft position sensor and crankshaft position sensor. Camshaft position is input as a control signal to TERMINAL G2+ of the engine control module, and engine RPM is input into TERMINAL NE+.

(5) Throttle signal circuit

The throttle position sensor detects the throttle valve opening angle, which is input as a control signal into TERMINAL VTA1 of the engine control module.

(6) Vehicle speed signal circuit

The vehicle speed sensor detects the vehicle speed, and the signal is input into TERMINAL SPD of the engine control module via the combination meter, from TERMINAL SP1 of the skid control ECU with actuator.

(7) NSW signal circuit (A/T)

The Park/Neutral position SW detects whether the shift position are in neutral, parking or not, and inputs a control signal into TERMINAL NSW of the engine control module.

(8) Battery signal circuit

Voltage is constantly applied to TERMINAL BATT of the engine control module. When the ignition SW is turned on, the voltage for engine control module start–up power supply is applied to TERMINALS +B and +B2 of the engine control module via EFI relay.

(9) Starter signal circuit

To confirm whether the engine is cranking, the voltage applied to the starter motor during cranking is detected and the signal is input into TERMINAL STA of the engine control module as a control signal.

(10) Engine knock signal circuit

Engine knocking is detected by knock sensor and the signal is input into TERMINAL KNK1 of the engine control module as a control signal.

2. Control System

* SFI system
  The SFI system monitors the engine condition through the signals, which are input from each sensor to the engine control module. The best fuel injection volume is decided based on this data and the program memorized by the engine control module, and the control signal is output to TERMINALS #10, #20, #30 and #40 of the engine control module to operate the injector. (Inject the fuel). The SFI system produces control of fuel injection operation by the engine control module in response to the driving conditions.
* ESA system
  The ESA system monitors the engine condition through the signals, which are input to the engine control module from each sensor. The best ignition timing is detected according to this data and the memorized data in the engine control module, and the control signal is output to TERMINALS IGT1, IGT2, IGT3 and IGT4. This signal controls the ignition coil and igniter to provide the best ignition timing for the driving conditions.
* IAC system
  The IAC system increases the RPM and provides idling stability for fast idle–up when the engine is cold and when the idle speed has dropped due to electrical load, etc. The engine control module evaluates the signals from each sensor, outputs current to TERMINAL RSD, and controls the idle air control valve.
* Fuel pump control system
  The engine control module operation outputs to TERMINAL FC and controls the C/OPN relay. Thus controls the fuel pump drive speed in response to conditions.

3. Diagnosis System

With the diagnosis system, when there is a malfunctioning in the engine control module signal system, the malfunction system is recorded in the memory. The malfunctioning system can then be found by reading the display (Code) of the malfunction indicator lamp.

4. Fail–Safe System

When a malfunction occurs in any system, if there is a possibility of engine trouble being caused by continued control based on the signals from that system, the fail–safe system either controls the system by using data (Standard values) recorded in the engine control module memory or else stops the engine.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A9	30	F8	28	J4	31
A10	30	F14	32	J5	31
C1	28	G1	28	J6 A	31
C2	28	H3	28	J7 B	31
C3	28	H7	30	K1	29
C5	30	I1	29	M1	29
C6	30	I2	29	N1	29
C8	30	I3	29	N3	33
C10	32	I4	29	P1	29
D1	30	I5	29	S3	29
E2	28	I6	29	S8	31
E3 A	30	I7	29	T1	29
E4 B	30	I8	29	V1	29
E5 C	30	I9	29		
E6 D	30	I10	30		

⬭ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
1B		
1D	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
1E		
1F		
1G		
1H		
1M		
1O		
1P		
1R		
1T	24	Floor Wire and Instrument Panel J/B (Lower Finish Panel)

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	34	Engine Wire and Engine Room Main Wire (Inside of Engine Room R/B)
EB1	34	Engine Wire and Sensor Wire (Near the Starter)
IA1	35	Engine Room Main Wire and Instrument Panel Wire (Behind the Reinforcement LH)
IA2		
IB1	35	Floor Wire and Instrument Panel Wire (Behind the Reinforcement LH)
IF1	35	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IF2		

: **Ground Points**

Code	See Page	Ground Points Location
EB	34	Front Left Fender Apron
EC	34	Engine Block
ED		
IE	35	Left Kick Panel
IF	35	Instrument Panel Brace LH
IG	35	Right Kick Panel
BJ	36	Rear Quarter Panel Inner LH