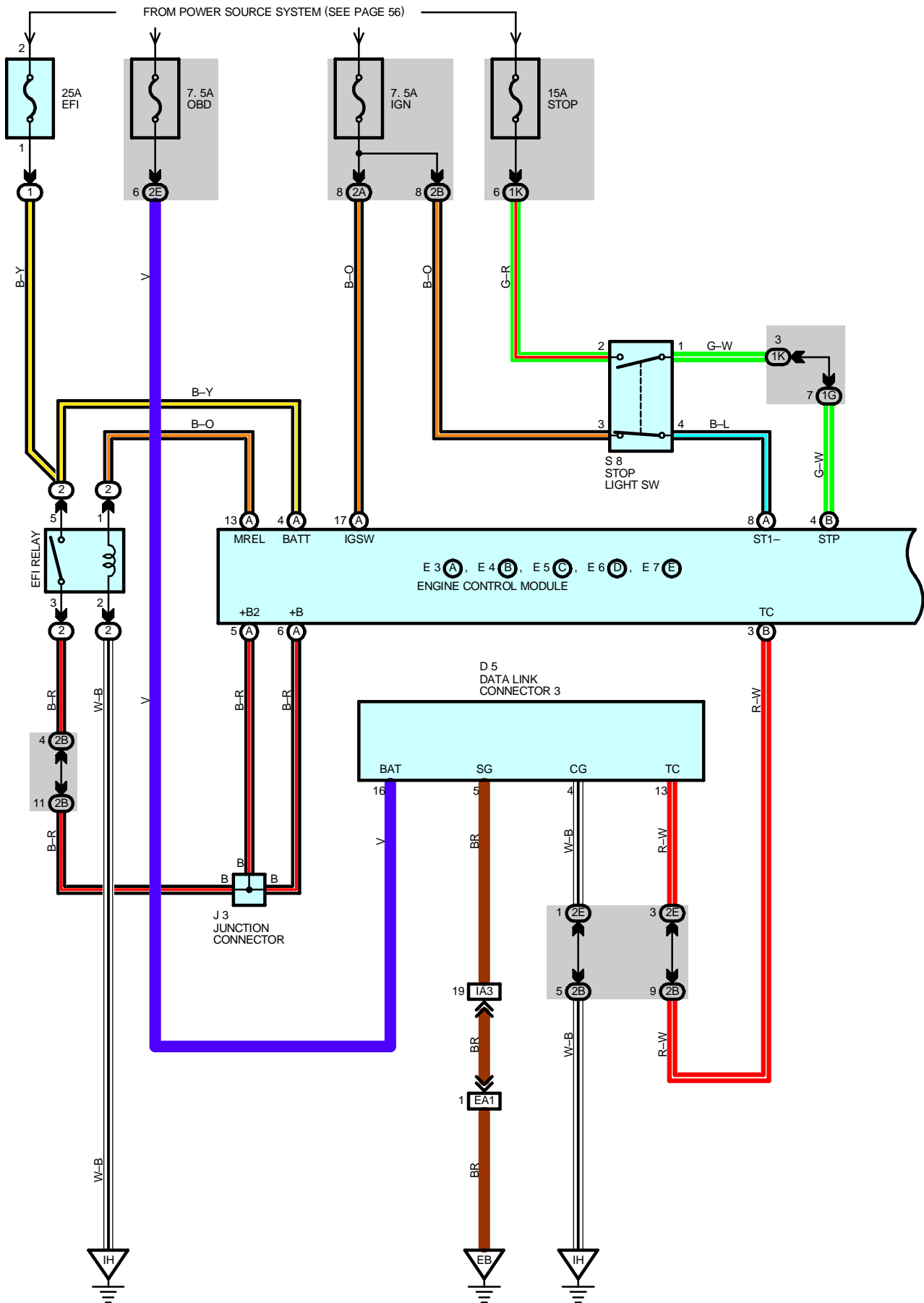
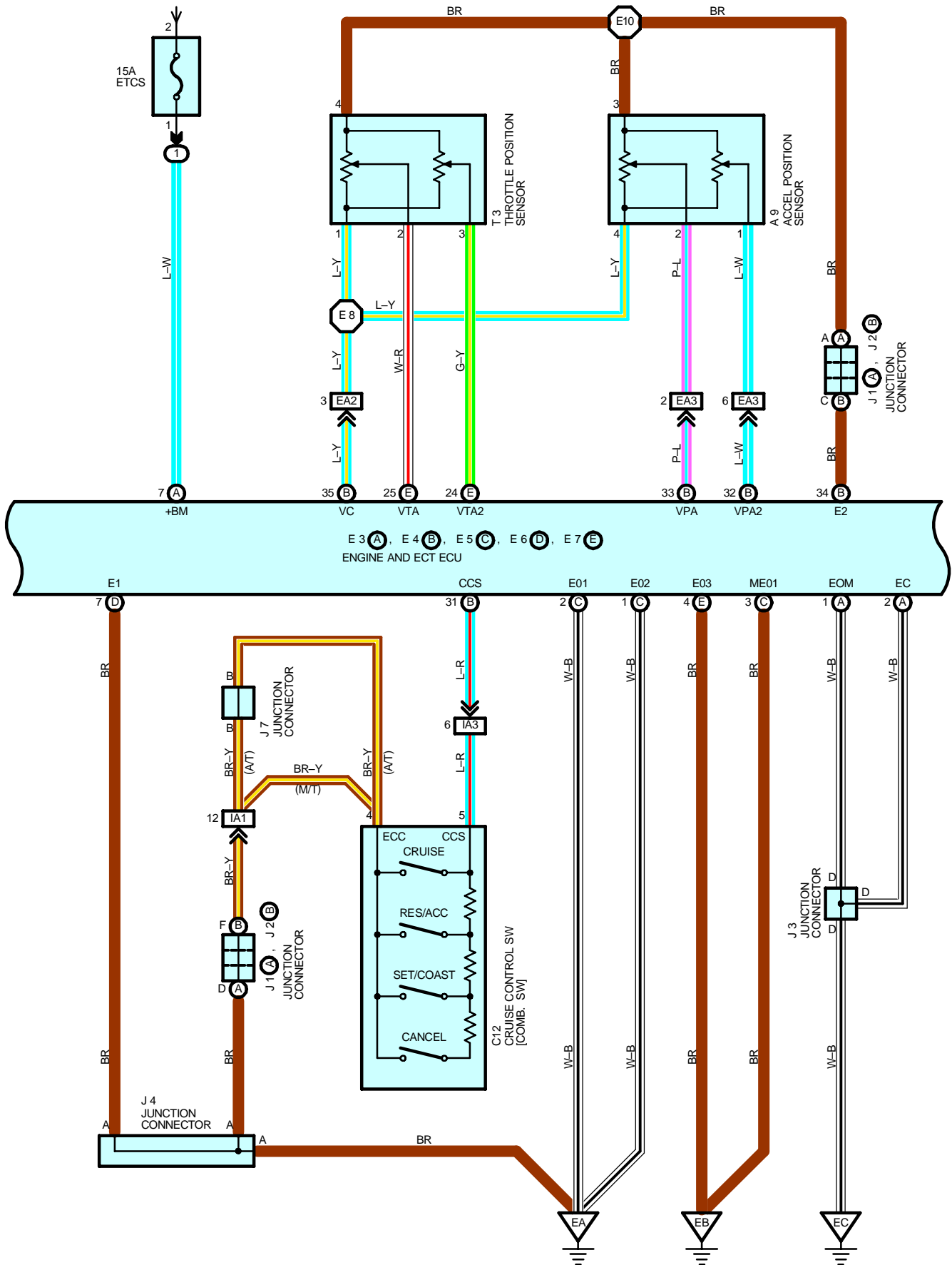


CRUISE CONTROL

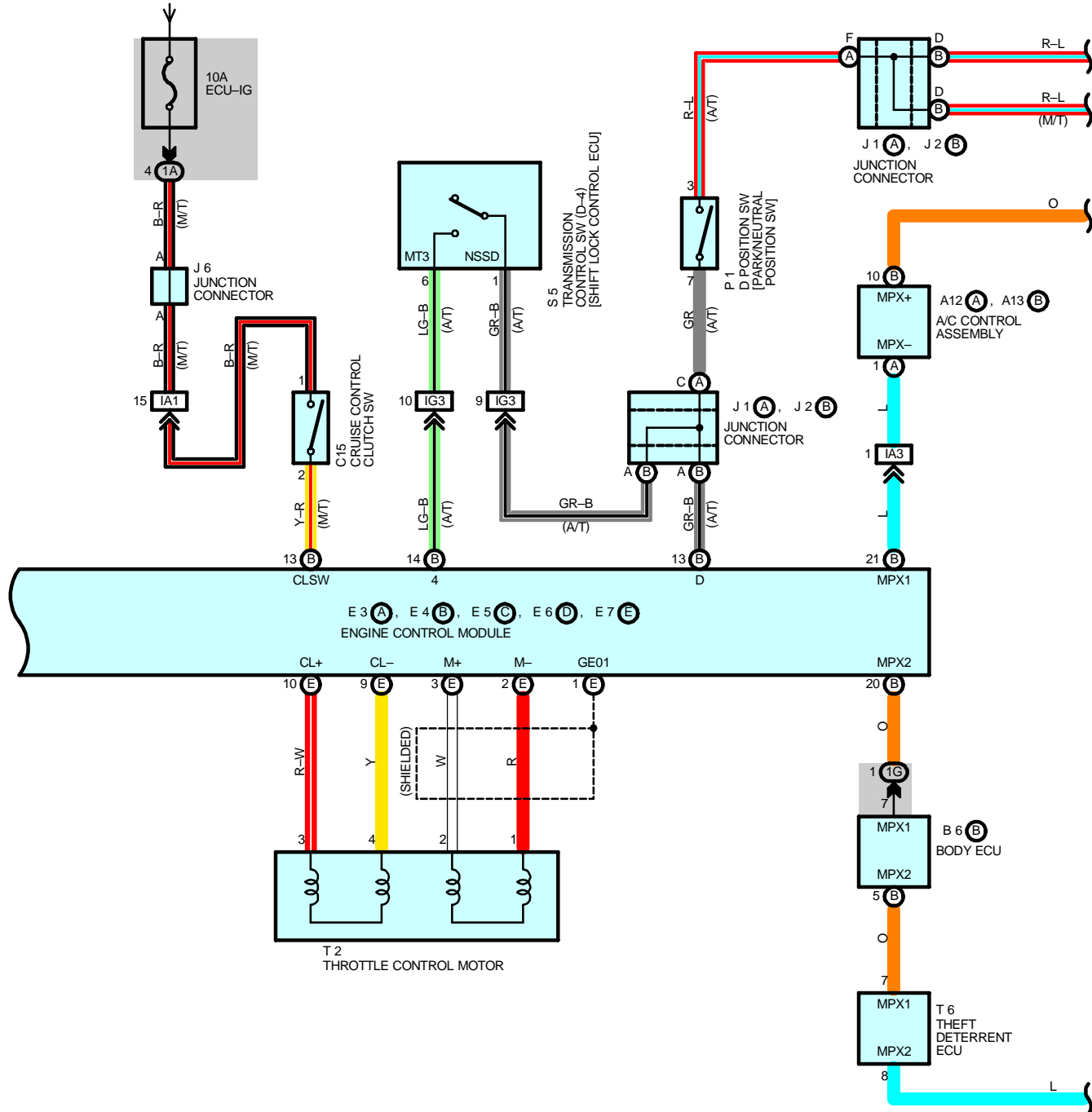


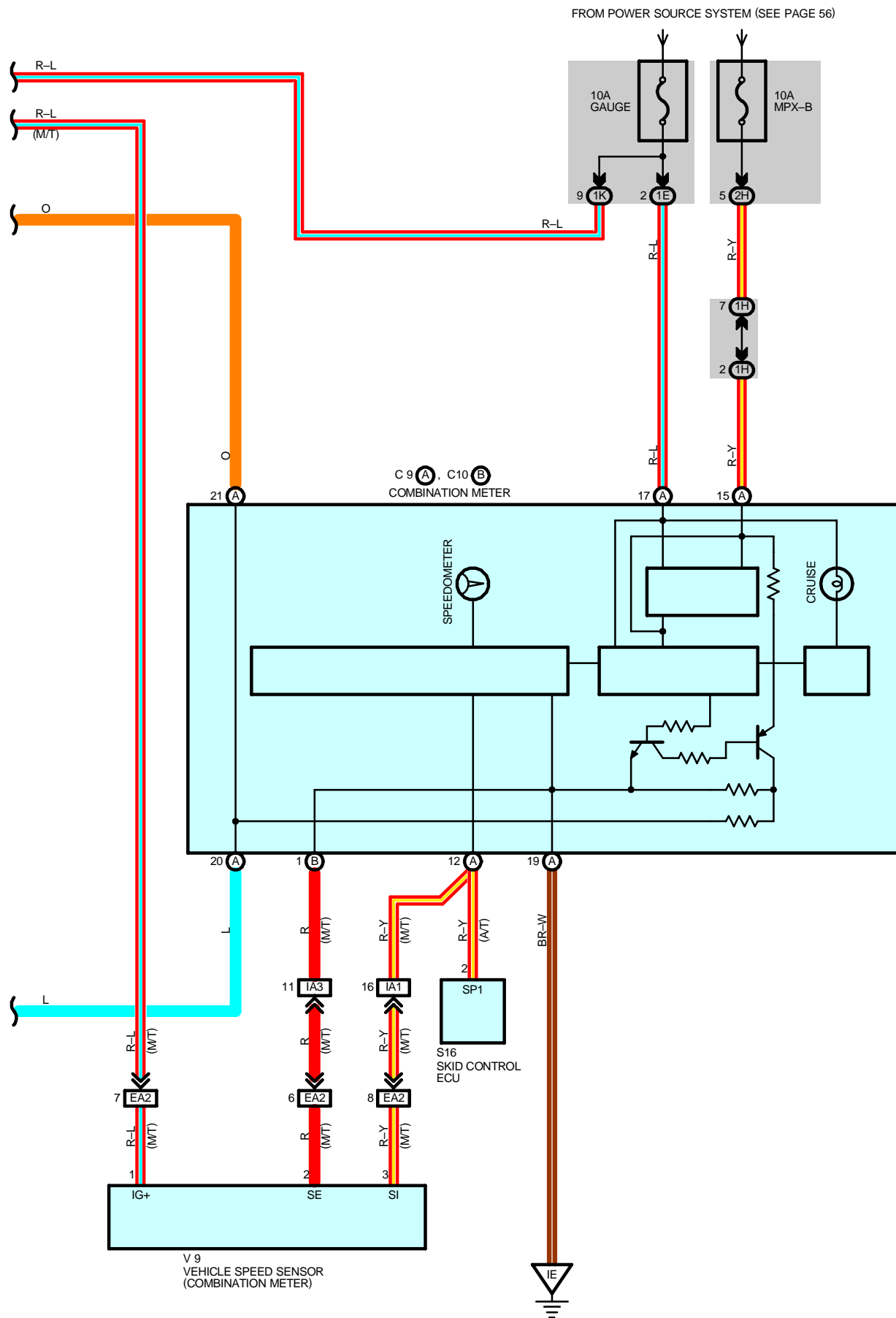
FROM POWER SOURCE SYSTEM (SEE PAGE 56)



CRUISE CONTROL

FROM POWER SOURCE SYSTEM (SEE PAGE 56)





CRUISE CONTROL

SYSTEM OUTLINE

The cruise control system allows the driver to control the vehicle speed at a constant speed, such as on a high way, without depressing the accelerator pedal. By operating the SW, the engine throttle valve is automatically adjusted to control the vehicle speed at a constant speed.

1. SET OPERATION

The actual vehicle speed is compared with the memorized vehicle speed, and when the actual vehicle speed is faster than the memorized speed, a signal is output to rotate the electronic throttle motor to close the throttle valve. When the actual vehicle speed is slower than the memorized speed, a signal is output to rotate the electronic throttle motor to open the throttle valve.

2. SET SPEED CONTROL

While traveling (Within the set speed limit) with the CRUISE SW on (Power indicator on), the speed when the SET/COAST SW is operated to off is memorized and the vehicle is controlled at that speed.

3. COAST CONTROL

When the SET/COAST SW is operated to on during cruise control driving, the cruise control opening angle requirement is controlled to 0 to decrease the vehicle speed (However the throttle valve itself is not fully closed due to ISC etc.), and the speed when the SW is operated to off is memorized, and the vehicle is controlled at that speed. Furthermore, every time the SET/COAST SW is operated to on momentarily (Approximately 0.5 seconds), the memorized vehicle speed is decreased by approximately 1.5km/h. In case of tap down operation where the difference between the memorized vehicle speed and the actual vehicle speed is more than 5km/h, the speed when the SW is operated to off is memorized, and the vehicle is controlled at that speed.

4. ACCEL CONTROL

When the RES/ACC SW is operated to on during cruise control driving, the electronic throttle motor is rotated so that the throttle valve opens to increase the vehicle speed, and the speed when the SW is operated to off is memorized, and the vehicle is controlled at that speed.

Furthermore, every time the RES/ACC SW is operated to on momentarily (Approximately 0.5 seconds), the memorized vehicle speed is increased by approximately 1.5km/h.

In case of tap up operation where the difference between the memorized vehicle speed and the actual vehicle speed is more than 5km/h, the memorized speed will not be changed.

5. MANUAL CANCEL MECHANISM

If any of the following signals are input during cruise control driving, the current to the motor flows in the direction to close the throttle valve, and the cruise control is canceled. (Vehicle speed memory will not be erased)

- * Stop light SW is on (Brake pedal is depressed)
- * D position circuit in the Park/Neutral position SW is turned from on to off (Shift position is changed from D to N, 2, or 1) (A/T)
- * The cruise control clutch SW is on (Clutch pedal depressed) (M/T)
- * The CANCEL SW of the control SW is on
- * The CRUISE SW is off (Vehicle speed memory will be erased)
- * Shift lever in M position and shift range other than D or 3 position (A/T)

6. RESUME CONTROL

After canceling the cruise control (Except when the CRUISE SW is off) if the vehicle speed is above the minimum speed limit (Approximately 40km/h, 25mph) operating the RES/ACC SW from off to on will cause the system to accelerate to resume the vehicle speed before manual cancellation.

7. OVERDRIVE CONTROL FUNCTION

During cruise control driving, the overdrive may be cut on an uphill grade.

After the overdrive is cut, if the vehicle speed reaches the overdrive resume speed (Set speed minus 2km/h), and if the system determines that the uphill grade has finished, the overdrive will resume after overdrive resume timer operation. However, if the actual vehicle speed becomes slower than the overdrive resume speed before the timer operation has finished, the timer will be reset, and will start again when the vehicle speed reaches the overdrive resume speed.

8. AUTO CANCEL OPERATION

(1) If any of the following conditions are detected, the set speed is erased and the control is canceled.

At this time, the power indicator will blink, and control of the system will be prohibited until the CRUISE SW is turned on again.

- * Disconnection and/or short in the stop light SW
- * Failure in the vehicle speed signal
- * Failure in the electronic throttle parts

(2) If any of the following conditions are detected, the set speed is erased and the control is canceled.

At this time, the power indicator will blink, and control of the system will be prohibited until the ignition SW is turned off.

- * Failure in the stop light SW input circuit
- * Failure in the cancel circuit

(3) If any of the following conditions are detected, the set speed is erased and the control is canceled. (Reset is possible)

- * The actual speed becomes slower than the minimum speed limit.
- * The actual speed becomes –16km/h slower than the set speed.

SERVICE HINTS

E3 (A), E4 (B), E5 (C), E6 (D), E7 (E) ENGINE CONTROL MODULE

IGSW–GROUND : Approx. **12** volts with the ignition SW at **ON** position

BATT, +BM–GROUND : Always approx. **12** volts

E01, E02, E03, ME01, EOM, EC, E1–GROUND : Always continuity

STP–GROUND : Approx. **12** volts with the stop light SW at on

CCS–GROUND : Continuity with the CRUISE SW at on

Approx. **1540** Ω with the CANCEL SW on in cruise control SW

Approx. **240** Ω with the RES/ACC SW on in cruise control SW

Approx. **630** Ω with the SET/COAST SW on in cruise control SW

C12 CRUISE CONTROL SW [COMB. SW]

5–4 : Approx. **1540** Ω with the CANCEL SW on

Approx. **240** Ω with the RES/ACC SW on

Approx. **630** Ω with the SET/COAST SW on

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A9	32	E4	32	P1	33
A12	34	E5	32	S5	35
A13	34	E6	32	S8	35
B6	34	E7	32	S16	35
C9	34	J1	33	T2	33
C10	34	J2	33	T3	33
C12	34	J3	33	T6	35
C15	34	J4	33	V9	33
D5	34	J6	35		
E3	32	J7	35		

○ : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room No.1 R/B (Engine Compartment Right)
2	22	Engine Room No.2 R/B (Engine Compartment Right)

CRUISE CONTROL

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Instrument Panel Wire and Driver Side J/B (Left Kick Panel)
1E		
1G		
1H		
1K	24	Engine Room Main Wire and Driver Side J/B (Left Kick Panel)
2A	26	Engine Room Main Wire and Passenger Side J/B (Right Kick Panel)
2B		
2E	26	Instrument Panel Wire and Passenger Side J/B (Right Kick Panel)
2H		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42	Engine Wire and Engine Room Main Wire (Inside of the ECU Box)
EA2		
EA3		
IA1	44	Instrument Panel Wire and Engine Room Main Wire (Near the Driver Side J/B)
IA3		
IG3	46	Instrument Panel Wire and Engine Room Main Wire (Near the Passenger Side J/B)

: GROUND POINTS

Code	See Page	Ground Points Location
EA	42	Front Side of the Intake Manifold
EB	42	Center Side of the Intake Manifold
EC	42	Left Fender Apron
IE	44	Front Floor Panel Center LH
IH	44	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E8	42	Engine Wire	E10	42	Engine Wire

