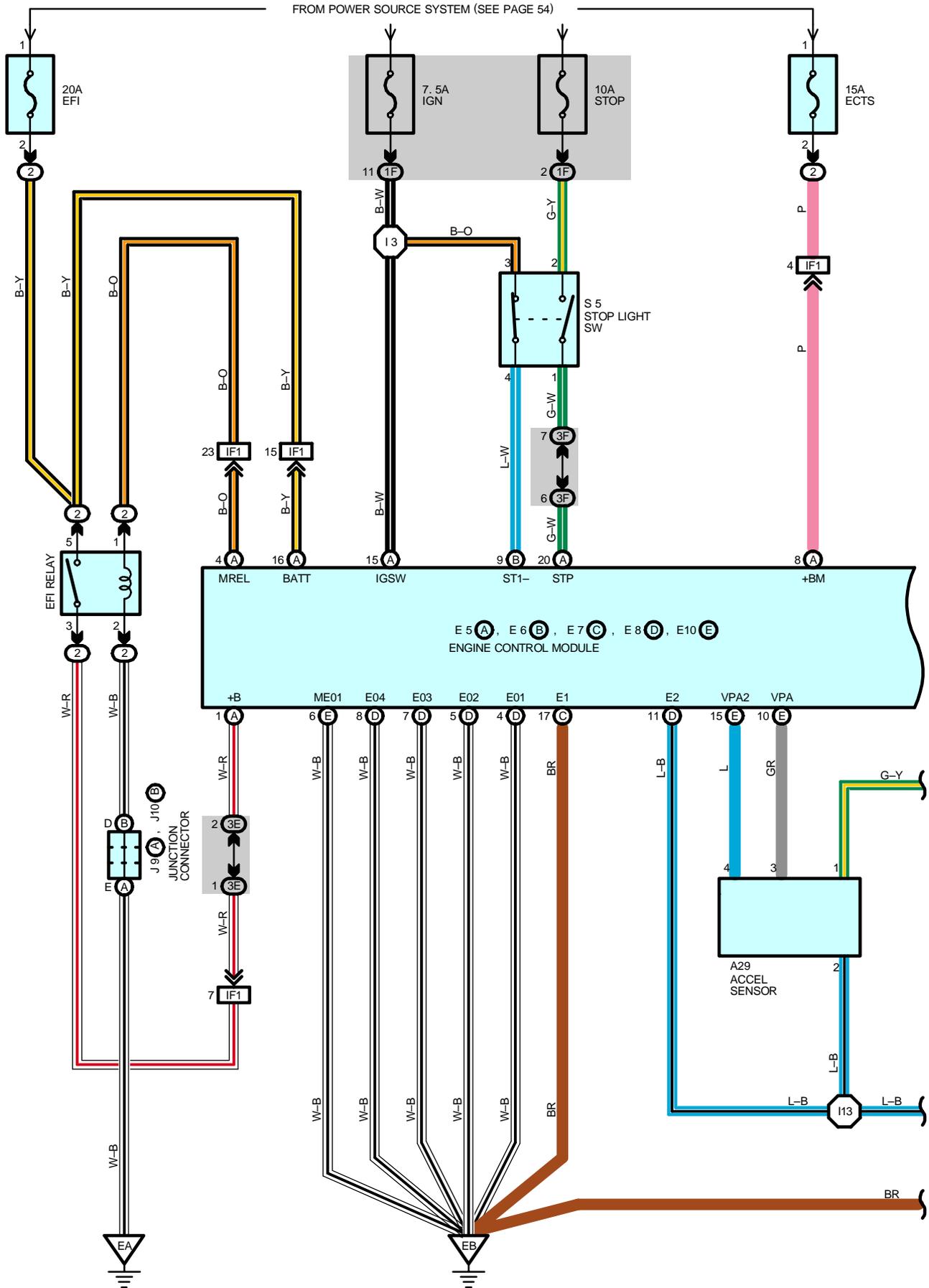


CRUISE CONTROL (EXCEPT 5VZ-FE 2WD M/T, 3RZ-FE AND 2RZ-FE)



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SYSTEM OUTLINE

The cruise control system is a constant vehicle speed controller which controls the opening angle of the engine throttle valve by the SW, and allows driving at a constant speed without depressing the accelerator pedal.

SET CONTROL

When the SET/COAST SW is operated while traveling with the main SW on, the speed when the SET/COAST SW is operated to off is memorized, and the vehicle speed is controlled at that speed.

COAST CONTROL

When the SET/COAST SW is operated to on, the cruise control opening angle requirement is turned to 0 to decrease the vehicle speed, and the speed when the SET/COAST SW is operated to off is memorized, and the vehicle speed is controlled at that speed.

Furthermore, every time the SET/COAST SW is operated momentarily (Approx. 0.5 sec.) to on, the memorized vehicle speed is decreased by approx. 1.6 km/h (1.0 mph).

ACCEL CONTROL

When the RES/ACC SW is operated to on, the throttle motor rotates the throttle valve to open direction to increase the vehicle speed, and the speed when the RES/ACC SW is operated to off is memorized, and the vehicle speed is controlled at that speed.

Furthermore, every time the RES/ACC SW is operated momentarily (Approx. 0.5 sec.) to on, the memorized vehicle speed is increased by approx. 1.6 km/h (1.0 mph).

MANUAL CANCEL MECHANISM

If any of the following signals are input during cruise control traveling, the current to the motor flows in the direction to close the throttle valve, and cancel the cruise control.

- (1) Stop lamp SW is on (Brake pedal is depressed)
- (2) The CANCEL SW of the control SW is on
- (3) CRUISE SW is off

RESUME CONTROL

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

OVERDRIVE FUNCTION

The overdrive may be cut on an uphill grade, while traveling with the cruise control.

After the overdrive is cut, if the vehicle speed reaches the overdrive resume speed (Set speed minus 2 km/h (1.2 mph)), and if the system determines that the uphill grade has finished, the overdrive will resume after the overdrive timer operation.

AUTO CANCEL OPERATION

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

- (1) Disconnection and/or short in the stop light SW
- (2) Malfunction in the vehicle speed signal
- (3) Malfunction in the electronic throttle parts
- (4) Malfunction in the stop light SW input circuit
- (5) Malfunction in the cancel circuit
- (6) The actual vehicle speed becomes slower than the minimum speed limit
- (7) The actual vehicle speed becomes -16 km/h (10 mph) slower than the set speed

SERVICE HINTS

E5 (A), E6 (B), E7 (C), E8 (D), E10 (E) ENGINE CONTROL MODULE

Voltage at engine control module wiring connectors

+B-E1 : 9-14 volts (Ignition SW on)

BATT-E1 : 9-14 volts (Always)

VC-E2 : 4.5-5.5 volts (Ignition SW on)

VTA-E2 : 0.3-0.8 volts (Ignition SW on and throttle valve fully closed)

3.2-4.9 volts (Ignition SW on and throttle valve fully open)

SP1-E1 : Pulse generation with vehicle moving

STP-E1 : 7.5-14 volts (Stop light SW on)

C19 CRUISE CONTROL SW [COMB. SW]

5-4 : Approx. 68 Ω with RESUME/ACCEL SW on

Approx. 198 Ω with SET/COAST SW on

Approx. 418 Ω with CANCEL SW on

S5 STOP LIGHT SW

2-1 : Closed with brake pedal depressed

3-4 : Opened with brake pedal depressed

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C10	A	34	E8	D	35
C13	D	34	J9	A	31 (5VZ-FE)
C19		34			
E5	A	35	J10	B	31 (5VZ-FE)
E6	B	35			
E7	C	35	P1		31 (5VZ-FE)
					P1
					S5
					T1
					V10

○ : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	R/B No.2 Engine Compartment Left

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	23	Cowl Wire and J/B No.1 Lower Finish Panel
3B	26	Cowl Wire and J/B No.3 Behind the Instrument Panel Left
3D		
3E		
3F		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	44	Engine Room Main Wire and Cowl Wire Left Kick Panel
IK2	44	Engine Wire and Cowl Wire Above the Glove Box
IK3	44	Engine Wire and Cowl Wire Above the Glove Box

▽ : GROUND POINTS

Code	See Page	Ground Points Location
EA	40 (5VZ-FE)	Front Left Fender
	42 (3RZ-FE, 2RZ-FE)	
EB	40 (5VZ-FE)	Near the Throttle Body
	42 (3RZ-FE, 2RZ-FE)	Under the Data Link Connector 1
ID	44	Left Kick Panel

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: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	44	Cowl Wire	I13	44	Engine Wire

