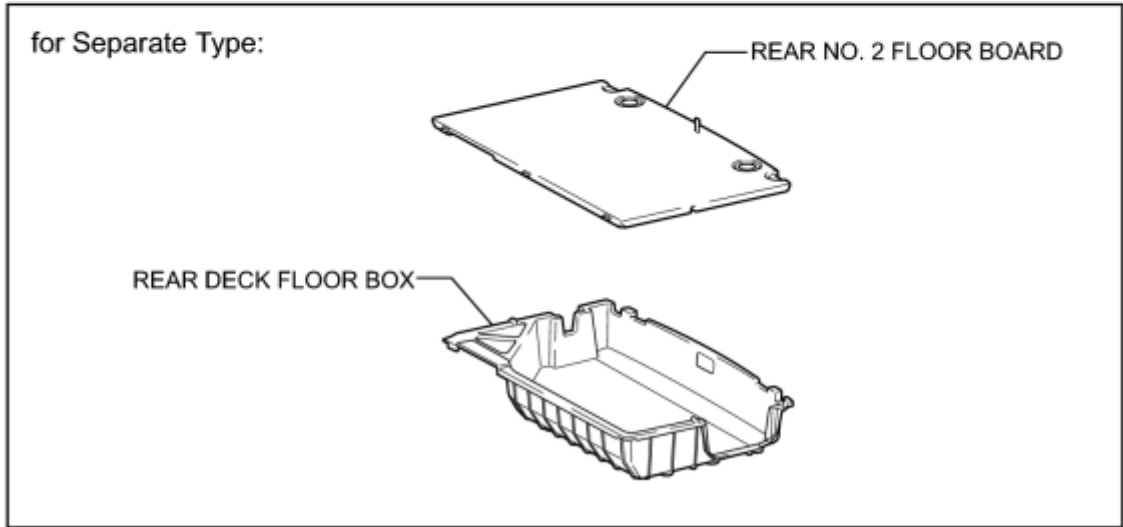
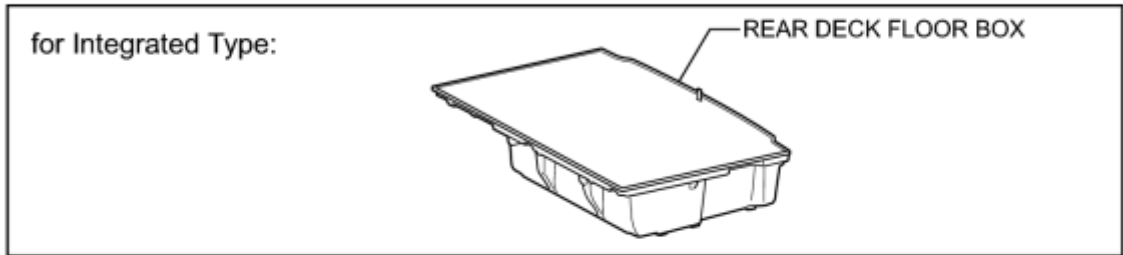
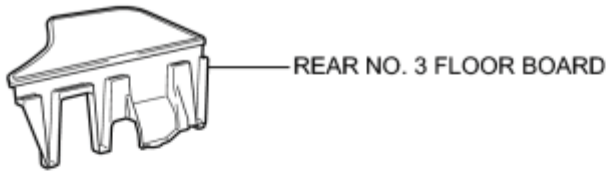


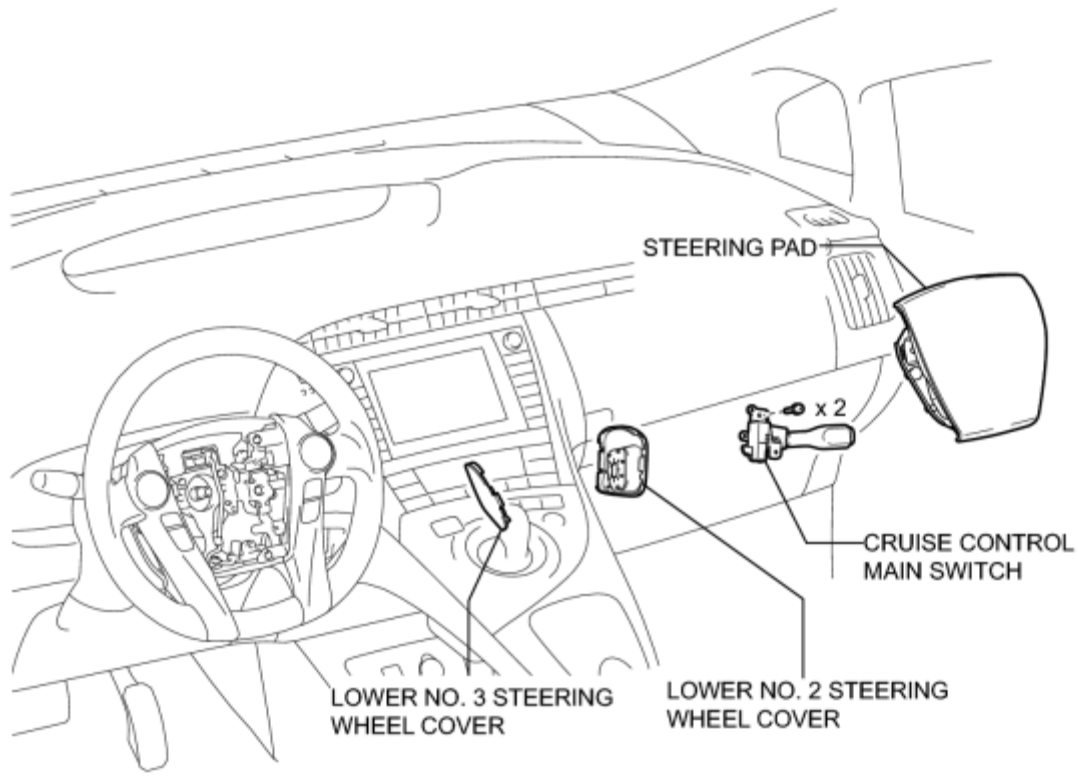
COMPONENTS

ILLUSTRATION



P

ILLUSTRATION



REMOVAL

1. REMOVE REAR NO. 2 FLOOR BOARD (for Separate Type) INFO

2. REMOVE REAR DECK FLOOR BOX INFO

3. REMOVE REAR NO. 3 FLOOR BOARD INFO

4. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

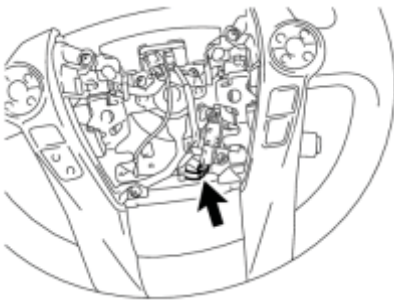
When disconnecting the cable, some systems need to be initialized after the cable is reconnected INFO.

5. REMOVE LOWER NO. 3 STEERING WHEEL COVER INFO

6. REMOVE LOWER NO. 2 STEERING WHEEL COVER INFO

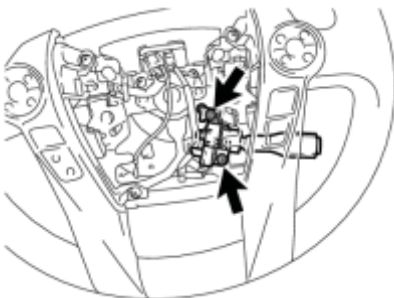
7. REMOVE STEERING PAD INFO

8. REMOVE CRUISE CONTROL MAIN SWITCH



(a) Disconnect the connector.

P



(b) Remove the 2 screws and cruise control main switch.

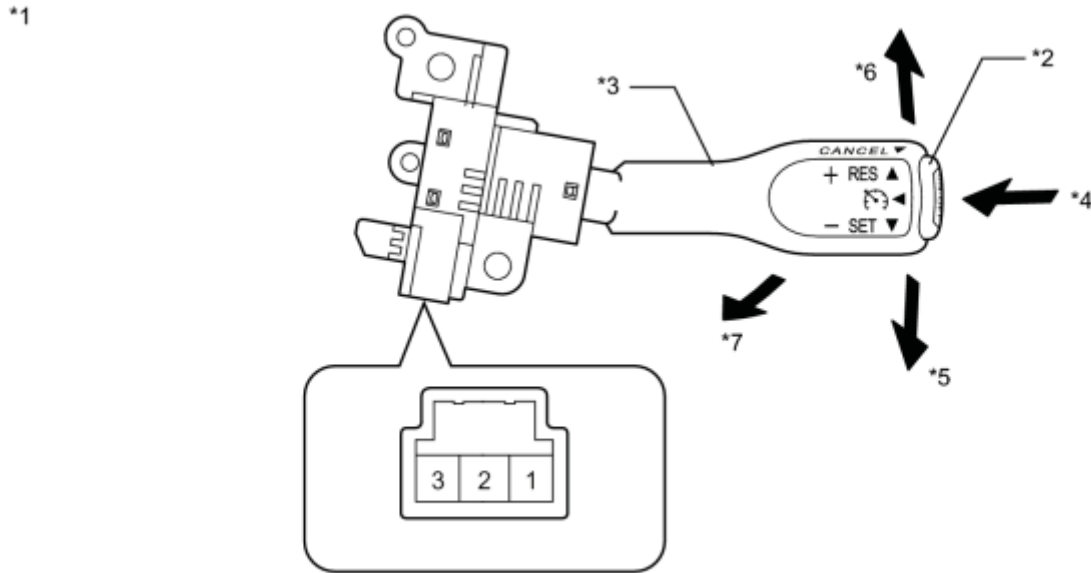
P

INSPECTION

1. INSPECT CRUISE CONTROL MAIN SWITCH

(a) for cruise control system:

(1) Measure the resistance according to the value(s) in the table below.



Text in Illustration

*1	Component without harness connected (Cruise Control Main Switch)	*2	Main Switch
*3	Lever	*4	ON/OFF
*5	- SET	*6	+ RES
*7	CANCEL	-	-

Standard Resistance:

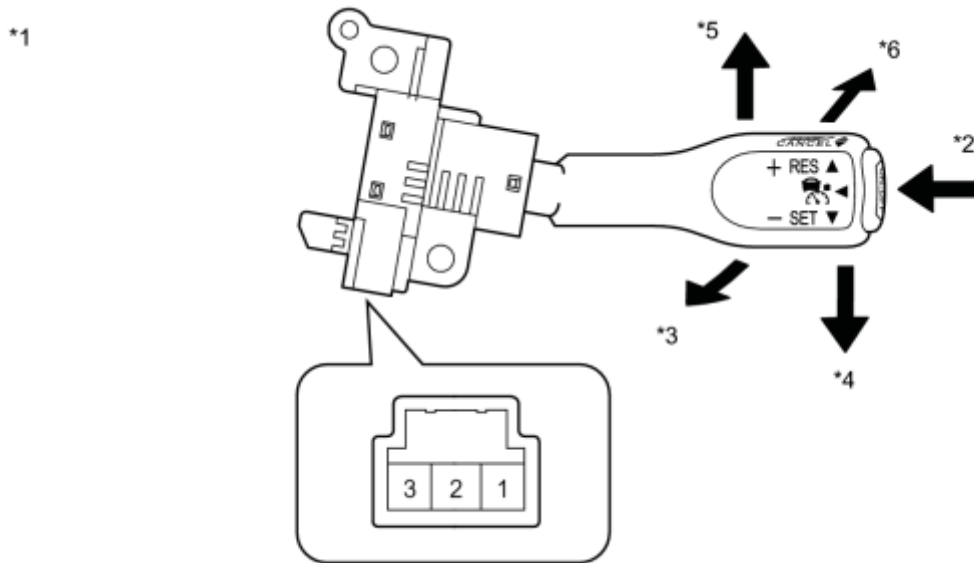
Tester Connection	Switch Condition	Specified Condition
1 - 3	Main Switch off*1	1 M Ω or higher
	Main Switch on	Below 2.5 Ω
	+ RES	235 to 245 Ω
	- SET	617 to 643 Ω
	CANCEL	1509 to 1571 Ω

*1: Lever is in the neutral position

If the result is not as specified, replace the cruise control main switch.

(b) for dynamic radar cruise control system:

(1) Measure the resistance according to the value(s) in the table below.



H

Text in Illustration

*1	Component without harness connected (Cruise Control Main Switch)	*2	ON/OFF
*3	CANCEL	*4	- SET
*5	+ RES	*6	MODE

Standard Resistance:

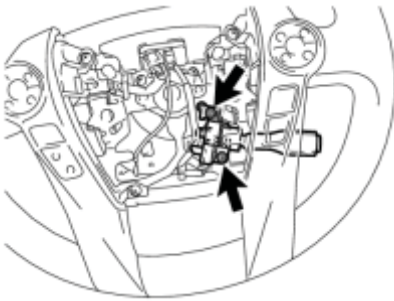
Tester Connection	Switch Condition	Specified Condition
1 - 2	Main Switch off*1	1 MΩ or higher
1 - 3		
1 - 3	Main switch on	Below 2.5 Ω
1 - 2	MODE	Below 2.5 Ω
1 - 3	+ RES	235 to 245 Ω
1 - 3	- SET	617 to 643 Ω
1 - 3	CANCEL	1509 to 1571 Ω

*1: Lever is in the neutral position

If the result is not as specified, replace the cruise control main switch.

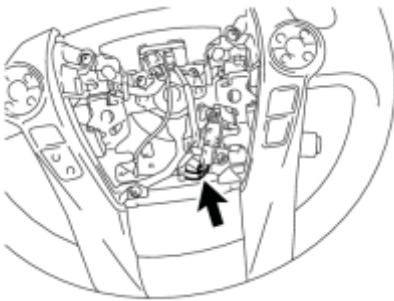
INSTALLATION

1. INSTALL CRUISE CONTROL MAIN SWITCH



(a) Install the cruise control main switch with the 2 screws.

P



(b) Connect the connector.

P

2. INSTALL STEERING PAD INFO

3. INSTALL LOWER NO. 3 STEERING WHEEL COVER INFO

4. INSTALL LOWER NO. 2 STEERING WHEEL COVER INFO

5. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected INFO.

6. INSTALL REAR NO. 3 FLOOR BOARD INFO

7. INSTALL REAR DECK FLOOR BOX INFO

8. INSTALL REAR NO. 2 FLOOR BOARD (for Separate Type) INFO

9. INSPECT STEERING PAD INFO

10. INSPECT SRS WARNING LIGHT

(a) Inspect SRS warning light INFO.

PRECAUTION

1. NOTICE FOR INITIALIZATION

NOTICE:

When disconnecting the cable from the negative (-) battery terminal, initialize the following systems after the cable is reconnected.

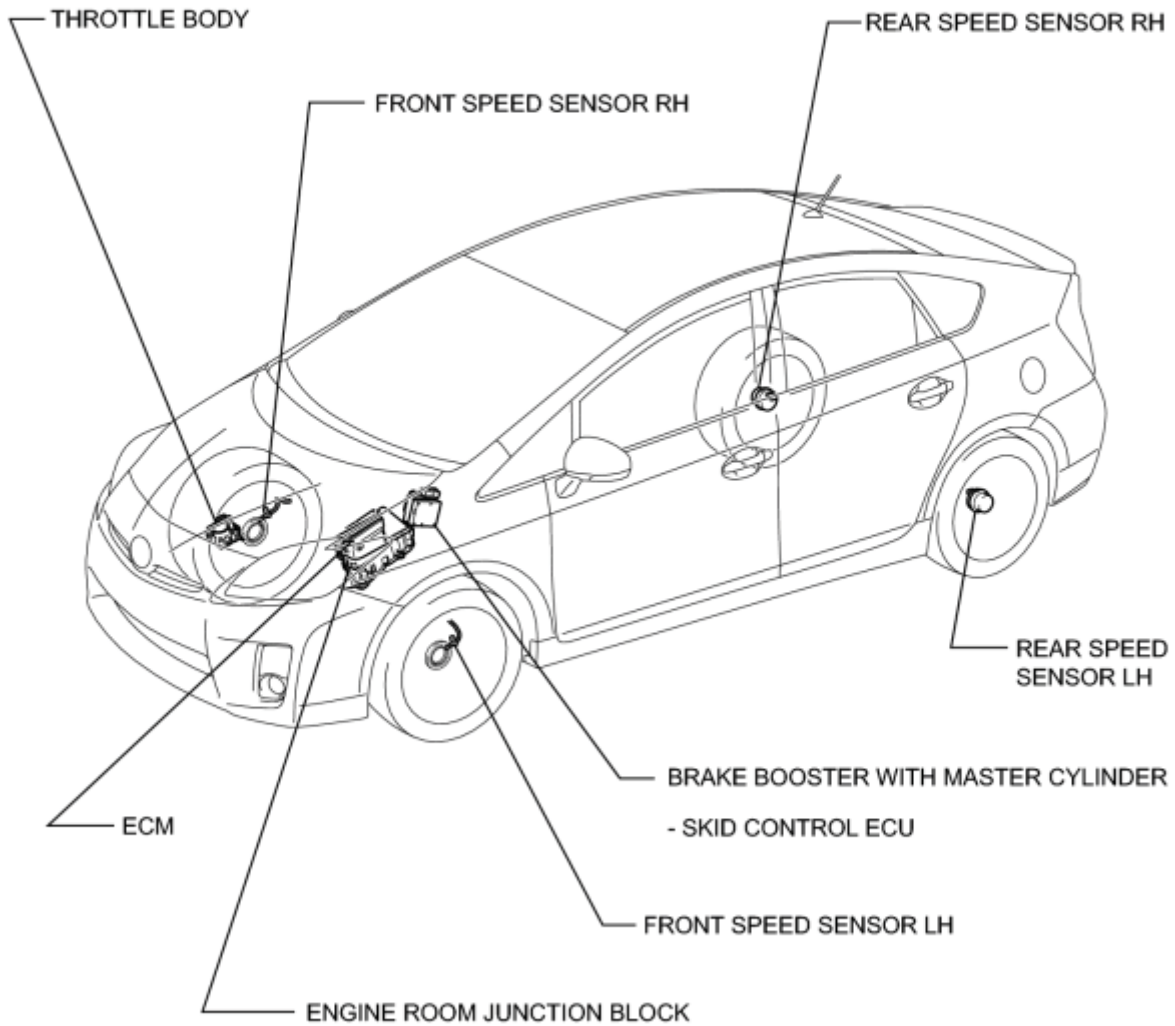
System Name	See Procedure
Advanced Parking Guidance System	

2. HANDLING PRECAUTION FOR CRUISE CONTROL SYSTEM

- (a) Turn the cruise control main switch (ON-OFF button) off when not using the cruise control system.
- (b) Be careful as the vehicle speed increases when driving downhill with the cruise control system on.
- (c) The +RES operation changes according to the cruise control system status. When the cruise control system is operating, the + function operates. When the cruise control system is not operating, the RES function operates.
- (d) If the cruise main indicator light blinks while the cruise control system is operating, turn the cruise control main switch (ON-OFF button) off to reset the cruise control system. After the reset, if the cruise control main switch (ON-OFF button) cannot be turned on, or the cruise control system is canceled immediately after turning the cruise control main switch (ON-OFF button) on, the system may have a malfunction.
- (e) Do not use the cruise control system where the road conditions are as follows:
 - Heavy traffic
 - Steep decline
 - Roads with sharp turns
 - Icy or snowy roads
 - Slippery roads
- (f) Do not use the cruise control system while towing.

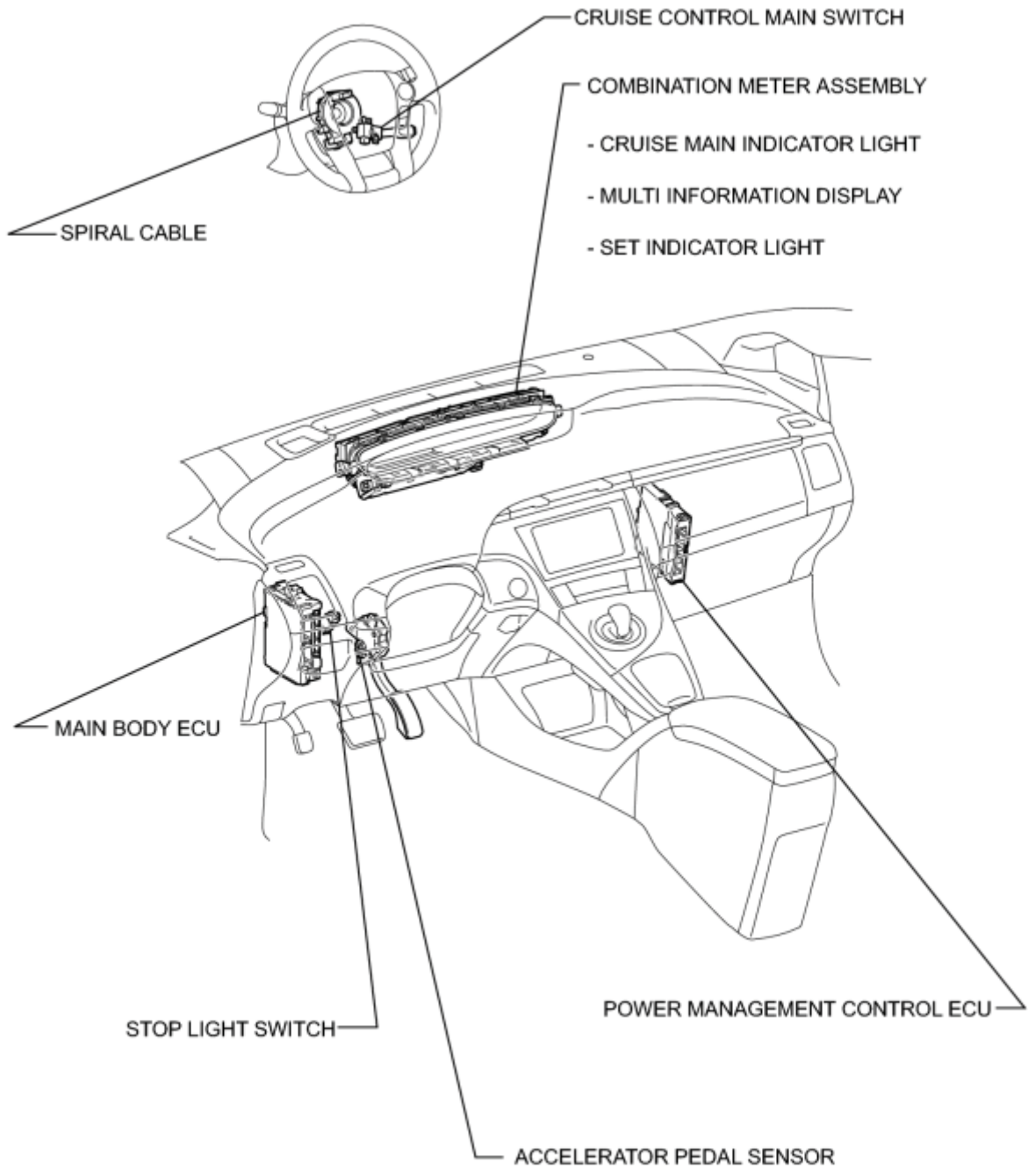
PARTS LOCATION

ILLUSTRATION

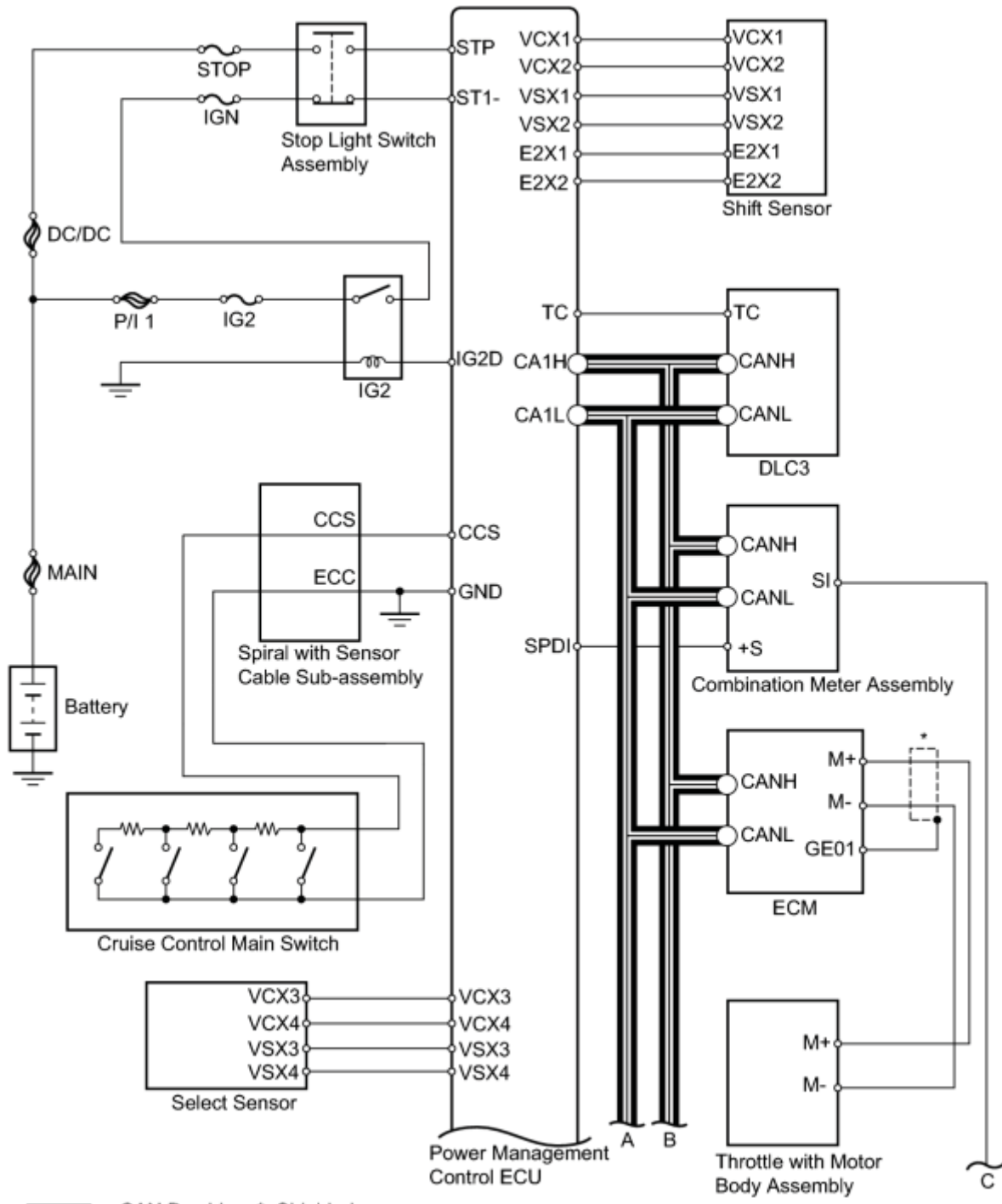


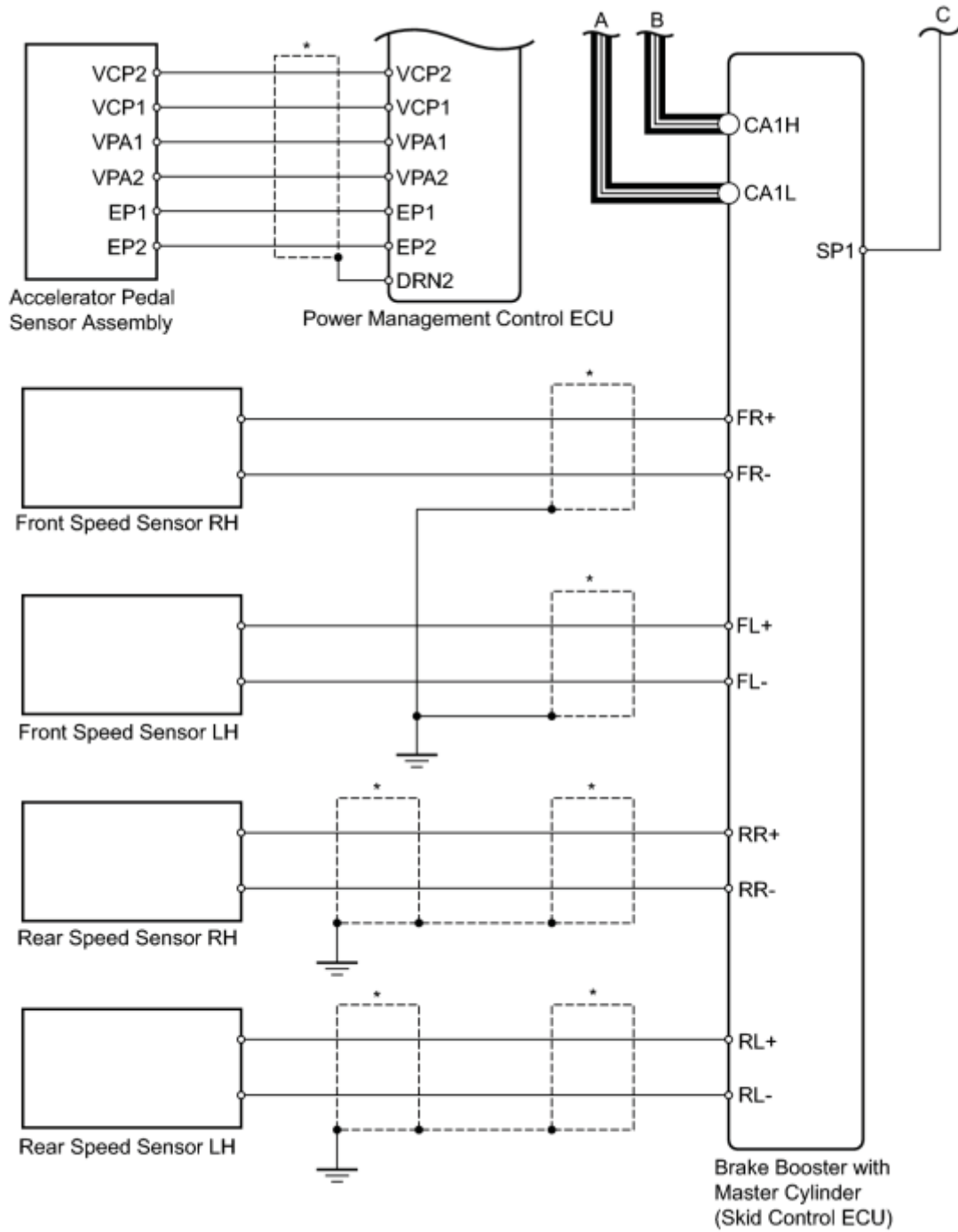
H

ILLUSTRATION



SYSTEM DIAGRAM





≡ : CAN Bus Line * : Shielded

c

Communication Table

Sender	Receiver	Signal	Line
Power management control ECU	Combination meter assembly (Cruise Main Indicator	<ul style="list-style-type: none"> Cruise main indicator and SET indicator operation signal Cruise control diagnosis signal 	CAN

Sender	Receiver	Signal	Line
	Light) ("SET" Indicator)		
Brake booster with master cylinder (skid control ECU)	Power management control ECU	Electronically controlled brake system malfunction signal	CAN
Power management control ECU	ECM	Throttle actuator operation signal	CAN
ECM	Power management control ECU	Throttle position signal	CAN

SYSTEM DESCRIPTION

1. CRUISE CONTROL SYSTEM

The cruise control system maintains constant vehicle speed. It enables the driver to adjust the vehicle speed by operating the cruise control main switch without using the accelerator pedal.

The power management control ECU receives signals from each switch and sensor, and maintains constant vehicle speed by optimizing the use of the engine and motor driving force.

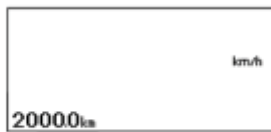
- The power management control ECU receives signals such as ON-OFF, - SET, + RES, and CANCEL from the cruise control main switch and executes the command.
- The power management control ECU illuminates the combination meter's cruise main indicator light when it receives a cruise control main switch (ON-OFF button) ON signal.

Text in Illustration

*1	Cruise Main Indicator Light
*2	"SET" Indicator



SET *2



- The power management control ECU displays "SET" on the multi-information display when constant speed control is started by pushing the cruise control main switch to "- SET".
- The power management control ECU cancels cruise control operation when the brake pedal is depressed and the power management control ECU receives a stop light switch signal.
- The power management control ECU cancels cruise control operation when the shift lever is moved from D to N or B position, and the power management control ECU receives a shift position sensor signal.

2. LIMIT CONTROL

(a) Low speed limit

The lowest possible limit of the speed setting range is set at approximately 40 km/h (25 mph). The cruise control system cannot be set when the vehicle speed is below the low speed limit. Cruise control operation will

be automatically canceled but the stored vehicle speed will be retained when the vehicle speed drops below the low speed limit of 40 km/h (25 mph) while the cruise control is in operation.

(b) High speed limit

The highest possible limit of the speed setting range is set at approximately 200 km/h (125 mph). The cruise control system cannot be set when the driving vehicle speed is over the high speed limit. Also, + RES cannot be used to increase speed over the high speed limit.

3. CRUISE CONTROL OPERATION

The cruise control main switch operates 7 functions: SET, -, TAP-DOWN, RES, +, TAP-UP, and CANCEL. The SET, TAP-DOWN, and - functions, and the RES, TAP-UP, and + functions are operated with the same switch. The cruise control main switch is an automatic return type switch which turns on only while it is being operated in the direction of each arrow and turns off after being released.

(a) SET CONTROL

Vehicle speed is stored and constant speed control is maintained when pushing the cruise control main switch to - SET while driving with the main switch on (the cruise main indicator light and "SET" indicator come on), and the vehicle speed is within the set speed range (between the low and high speed limits).

(b) - CONTROL

The power management control ECU decreases the cruise control demand speed and controls the engine and motor driving force to decelerate the vehicle when - SET on the cruise control main switch is pressed and held while the cruise control system is in operation. When the cruise control main switch is released from - SET, vehicle speed is stored and constant speed control is maintained.

(c) TAP-DOWN CONTROL

When tapping down the cruise control main switch to - SET (for approximately 0.6 seconds) while the cruise control system is in operation, the stored vehicle speed decreases each time by approximately 1.6 km/h (1 mph). When the cruise control main switch is released from - SET and the difference between the driving and stored vehicle speeds is more than 5 km/h (3 mph), the vehicle speed is stored and constant speed control is maintained.

(d) + CONTROL

The power management control ECU increases the cruise control demand speed and controls the engine and motor driving force to accelerate the vehicle when pushing and holding the cruise control main switch to + RES while the cruise control system is in operation.

When the cruise control main switch is released from + RES, vehicle speed is stored and constant speed control is maintained.

(e) TAP-UP CONTROL

When tapping up the cruise control main switch to + RES (for approximately 0.6 seconds) while the cruise control system is in operation, the stored vehicle speed increases each time by approximately 1.6 km/h (1 mph).

However, when the difference between the driving and the stored vehicle speeds is more than 5 km/h (3 mph), the stored vehicle speed will not be changed.

(f) RES CONTROL

If cruise control operation was canceled with the stop light switch assembly or the CANCEL switch, and if driving speed is within the limit range, pushing the cruise control main switch to + RES restores vehicle speed memorized at the time of cancellation, and maintains constant speed control.

(g) MANUAL CANCEL CONTROL

Performing any of the following cancels the cruise control system while it is operating (the stored vehicle speed in the ECM is maintained).

- Depressing the brake pedal
- Moving the shift lever from D to N or B position
- Pushing the cruise control main switch to CANCEL
- Turning the cruise control main switch (ON-OFF button) off (the stored vehicle speed in the ECM is not maintained)

4. AUTO CANCEL (FAIL-SAFE)

This system has an automatic cancellation function (fail-safe)  .

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use the following procedure to troubleshoot the cruise control system.
- *: Use the Techstream.

1. VEHICLE BROUGHT TO WORKSHOP

NEXT



2. INSPECT BATTERY VOLTAGE

Standard Voltage:

11 to 14 V

If the voltage is below 11 V, replace or recharge the battery before proceeding to the next step.

NEXT



3. CHECK COMMUNICATION FUNCTION OF CONTROLLER AREA NETWORK (CAN)*

(a) Use the Techstream to check if the CAN communication system is functioning normally.

Result:

Result	Proceed to
CAN DTC is not output	A
CAN DTC is output	B

B  GO TO CAN COMMUNICATION SYSTEM

A



4. CHECK FOR DTC*

Refer to DTC Check / Clear .

(a) Check for DTCs and note any codes that are output.

(b) Clear the DTCs.

(c) Recheck for DTCs. Try to reproduce the DTCs by duplicating the conditions indicated by the DTCs.

Result:

Result	Proceed to
DTC does not reoccur	A

Result	Proceed to
DTC reoccurs	B

B   GO TO DTC CHART

A


5.	PROBLEM SYMPTOMS TABLE
----	------------------------

Refer to Problem Symptoms Table .

Result:

Result	Proceed to
Fault is not listed in Problem Symptoms Table	A
Fault is listed in Problem Symptoms Table	B

B  Go to step 7

A


6.	OVERALL ANALYSIS AND TROUBLESHOOTING*
----	---------------------------------------

(a) Terminals of ECU 

(b) Data List / Active Test 

NEXT



7.	ADJUST, REPAIR OR REPLACE
----	---------------------------

NEXT



8.	CONFIRMATION TEST
----	-------------------

NEXT  END

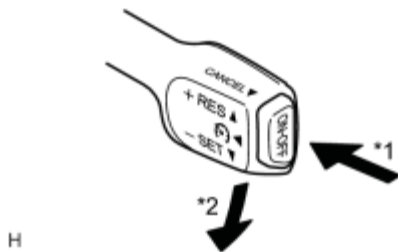
ROAD TEST

1. PROBLEM SYMPTOM CONFIRMATION

(a) Inspect the SET function.

Text in Illustration

*1	ON/OFF
*2	- SET



(1) Turn the cruise control main switch (ON-OFF button) on.

(2) Check that the cruise main indicator light illuminates on the combination meter assembly.

(3) Drive at a speed of between 40 km/h (25 mph) and 200 km/h (125 mph).



SET *2

(4) Push the cruise control main switch to - SET.

Text in Illustration

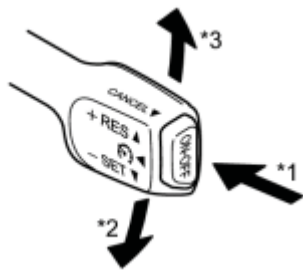


*1	Cruise Main Indicator Light
*2	"SET" Indicator

(5) Check that "SET" is indicated on the multi-information display.

(6) After releasing the switch, check that the vehicle cruises at the set speed.

(b) Inspect the + function.



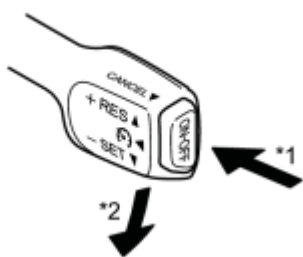
Text in Illustration

*1	ON/OFF
*2	- SET
*3	+ RES

- (1) Turn the cruise control main switch (ON-OFF button) on.
 - (2) Drive at the required speed (40 km/h (25 mph) or higher).
 - (3) Push the cruise control main switch to - SET.
 - (4) Check that vehicle speed increases while the cruise control main switch is pushed to + RES, and that the vehicle cruises at the newly set speed when the switch is released.
 - (5) Push the cruise control main switch to + RES and then release it immediately. Check that vehicle speed increases by approximately 1.6 km/h (1 mph) (tap-up control).
- (c) Inspect the - function.

Text in Illustration

*1	ON/OFF
*2	- SET

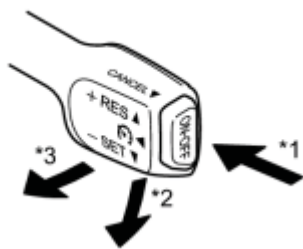


H

- (1) Turn the cruise control main switch (ON-OFF button) on.
 - (2) Drive at a speed of between 40 km/h (25 mph) and 200 km/h (125 mph).
 - (3) Push the cruise control main switch to - SET.
 - (4) Check that vehicle speed decreases while the cruise control main switch is pushed to - SET, and the vehicle cruises at the newly set speed when the switch is released.
 - (5) Push the cruise control main switch to - SET, and then release it immediately. Check that vehicle speed decreases by approximately 1.6 km/h (1 mph) (tap-down control).
- (d) Inspect the CANCEL function.

Text in Illustration

*1	ON/OFF
*2	- SET

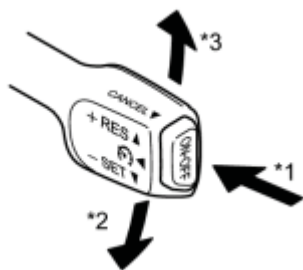


*3	CANCEL
----	--------

- (1) Turn the cruise control main switch (ON-OFF button) on.
- (2) Drive at a speed of between 40 km/h (25 mph) and 200 km/h (125 mph).
- (3) Push the cruise control main switch to - SET.
- (4) When performing any one of the following, check that the operation of the cruise control system is cancelled, normal driving resumes and "SET" on the multi-information display goes off.
 - Depressing the brake pedal
 - Moving the shift lever from D to N or selecting 3rd, 2nd, or 1st gear with the shift lever in S
 - Turning the cruise control main switch off
 - Pulling the cruise control main switch to CANCEL
- (e) Inspect the RES function.

Text in Illustration

*1	ON/OFF
*2	- SET
*3	+ RES



- (1) Turn the cruise control main switch (ON-OFF button) on.
- (2) Drive at a speed of between 40 km/h (25 mph) and 200 km/h (125 mph).
- (3) Push the cruise control main switch to - SET.
- (4) Cancel cruise control operation by performing any of the above operations (other than turning the main switch off).
- (5) After pushing the cruise control main switch to "+ RES" at a speed of more than 40 km/h (25 mph), check that the vehicle resumes the speed set prior to the cancellation and that "SET" is also displayed on the multi-information display.

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

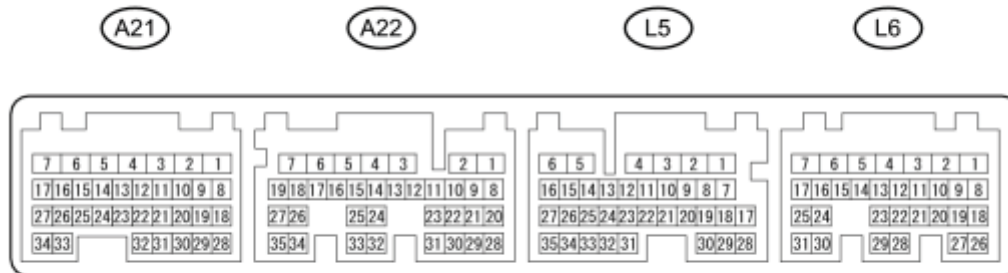
Cruise Control System

Symptom	Suspected Area	See page
The cruise control main switch cannot be turned on.	Cruise control switch circuit	INFO
	CRUISE main indicator light circuit	INFO
	Power management control ECU	INFO
Vehicle speed setting cannot be performed (the cruise main indicator light on the combination meter illuminates when the main switch is turned on, but turns off when SET function is operating).	Cruise control switch circuit	INFO
	Power management control ECU	INFO
Vehicle speed setting cannot be performed (the cruise main indicator light on the combination meter illuminates when the main switch is turned on, and remains illuminated when SET function is operating).	Stop light switch circuit	INFO
	Vehicle speed sensor circuit	INFO
	Cruise control switch circuit	INFO
	Hybrid control system	INFO
	Power management control ECU	INFO
The cruise control is canceled while it is operating.	Stop light switch circuit	INFO
	Hybrid control system	INFO
	Electronically controlled brake system	INFO
	Cruise control switch circuit	INFO
	Vehicle speed sensor circuit	INFO
	Power management control ECU	INFO

Symptom	Suspected Area	See page
Pulling back on the control main switch does not cancel the cruise control. (The cruise main indicator light remains on.)	Cruise control switch circuit	INFO
	Power management control ECU	INFO
Pulling back on the control main switch does not cancel the cruise control. (The cruise main indicator light goes off.)	Power management control ECU	INFO
The cruise control is not canceled when vehicle speed drops below the low speed limit. (The cruise main indicator light remains on.)	Vehicle speed sensor circuit	INFO
	Power management control ECU	INFO
The cruise control is not canceled when vehicle speed drops below the low speed limit. (The cruise main indicator light goes off.)	Power management control ECU	INFO
Depressing the brake pedal does not cancel the cruise control. (The cruise main indicator light remains on.)	Stop light switch circuit	INFO
	Power management control ECU	INFO
Depressing the brake pedal does not cancel the cruise control. (The cruise indicator main light goes off.)	Power management control ECU	INFO
Moving the shift lever does not cancel the cruise control. (The cruise main indicator light remains on.)	Hybrid control system	INFO
	Power management control ECU	INFO
Moving the shift lever does not cancel the cruise control. (The cruise indicator main light goes off.)	Power management control ECU	INFO
Hunting (Speed is not constant.)	Vehicle speed sensor circuit	INFO
	SFI system	INFO
	Power management control ECU	INFO
The cruise main indicator light remains blinking.	TC and CG terminal circuit	INFO
	Power management control ECU	INFO
The "SET" indicator does not comes on (SET function operate normally)	Cruise SET indicator light circuit	INFO
	Power management control ECU	INFO

TERMINALS OF ECU

1. CHECK POWER MANAGEMENT CONTROL ECU

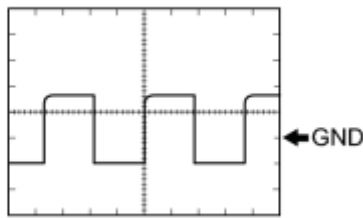


Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
A22-7 (ST1-) - L5-6 (E1)	R - BR	Stop light switch signal	Power switch on (IG), Brake pedal released	7.5 to 14 V
A22-7 (ST1-) - L5-6 (E1)	R - BR	Stop light switch signal	Power switch on (IG), Brake pedal depressed	Below 1 V
A22-23 (STP) - L5-6 (E1)	L - BR	Stop light switch signal	Brake pedal released	Below 1 V
A22-23 (STP) - L5-6 (E1)	L - BR	Stop light switch signal	Brake pedal depressed	7.5 to 14 V
L5-6 (E1) - Body ground	BR - Body ground	Earth (ground) circuit of power management control ECU	Always	Below 1 Ω
L5-11(TC) - L5-6 (E1)	P - BR	Terminal TC of DLC3	Power switch on (IG)	11 to 14 V
L5-11(TC) - L5-6 (E1)	P - BR	Terminal TC of DLC3	Terminals TC and CG of DLC3 connected	Below 1 V
L5-14 (SPDI) - L5-6 (E1)	V - BR	Vehicle speed signal	Driving at 20 km/h (12 mph)	Pulse generation (see waveform 1)
L6-22 (CCS) - L5-6 (E1)	R - BR	Cruise control main switch circuit	Power switch on (IG)	10 to 14 V
L6-22 (CCS) - L5-6 (E1)	R - BR	Cruise control main switch circuit	Power switch on (IG), MAIN switch on	Below 1 V
L6-22 (CCS) - L5-6 (E1)	R - BR	Cruise control main switch circuit	Power switch on (IG), + RES switch on	2.3 to 4.0 V
L6-22 (CCS) - L5-6 (E1)	R - BR	Cruise control main switch circuit	Power switch on (IG), - SET switch on	4.5 to 7.1 V

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
L6-22 (CCS) - L5-6 (E1)	R - BR	Cruise control main switch circuit	Power switch on (IG), CANCEL switch on	6.6 to 10.1 V
L6-24 (CA1L) - L5-6 (E1)	W - BR	CAN communication line	Power switch on (IG)	Pulse generation (see waveform 2)
L6-25 (CA1H) - L5-6 (E1)	B - BR	CAN communication line	Power switch on (IG)	Pulse generation (see waveform 3)

(a) WAVEFORM 1

(1) Vehicle speed signal

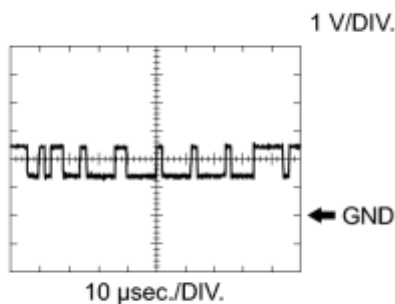


Power Management Control ECU Terminal Name	Between SPDI and E1
Tester Range	5 V/DIV., 20 ms./DIV.
Condition	Driving at 20 km/h (12 mph)

- The wavelength becomes shorter as the vehicle speed increases.
- Depending on the vehicle, the output waveform voltage may rise to 12 V if influenced by optionally installed systems.

(b) WAVEFORM 2

(1) CAN communication signal



Power Management Control ECU Terminal Name	Between CA1L and E1
Tester Range	1 V/DIV., 10 μsec./DIV.
Condition	Power switch on (IG)

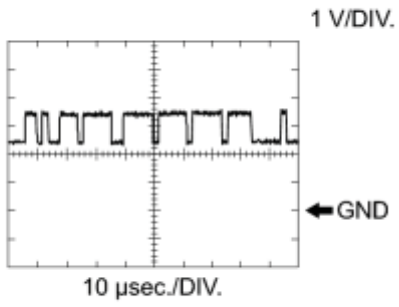
HINT:

The waveform varies depending on the CAN communication signal.

(c) WAVEFORM 3

(1) CAN communication signal

Power Management Control ECU Terminal	Between CA1H and E1
---------------------------------------	---------------------



Name	
Tester Range	1 V/DIV., 10 μsec./DIV.
Condition	Power switch on (IG)

HINT:

The waveform varies depending on the CAN communication signal.

DIAGNOSIS SYSTEM

1. DESCRIPTION

The power management control ECU controls the cruise control system of the vehicle. The data and DTCs relating to the cruise control system can be read from the DLC3 of the vehicle. If either DTC or CRUISE OK is not displayed on the multi-information display on the combination meter when checking for DTCs, there may be a problem with either the combination meter or the CAN communication system. Use the Techstream to check and solve the problem.

HINT:

If a vehicle speed sensor, stop light switch or any other related part malfunctions, the power management control ECU cancels cruise control operation automatically.

2. CHECK DLC3

(a) Check the DLC3 INFO.

3. CHECK INDICATOR

(a) Turn the power switch on (IG).

*1



Text in Illustration

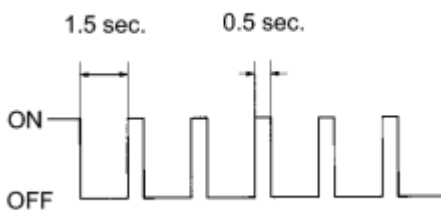
*1	Cruise Main Indicator Light
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(b) Check that the CRUISE main indicator light turns on when the cruise control switch (ON-OFF button) is turned on, and that the indicator light turns off when the control switch (ON-OFF button) is turned off.

HINT:

- If the indicator check result is not normal, proceed to troubleshooting for the cruise main indicator light circuit INFO.

CRUISE Main Indicator Light



If a malfunction occurs in the speed sensor or stop light switch, etc., during cruise control driving, the power management control ECU activates the AUTO CANCEL of the cruise control and turns on and

off the CRUISE main indicator light to inform the driver of a malfunction. At the same time, the malfunction is stored in memory as a diagnostic trouble code.

DTC CHECK / CLEAR

1. CHECK DTC

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Tune the Techstream on.
- (d) Enter the following menus: Powertrain / Cruise Control / Trouble Codes.
- (e) Read the DTCs.

2. CLEAR DTC

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Powertrain / Cruise Control / Trouble Codes.
- (e) Clear the DTCs.

FAIL-SAFE CHART

HINT:

If the following conditions are detected while cruise control is in operation, the system clears the stored vehicle speed in the hybrid vehicle control ECU and cancels the cruise control operation.

Vehicle Condition	Auto Cancel Condition	Re-operation Condition
Cruise main indicator light blinks	<ul style="list-style-type: none"> • There is problem with input circuit of stop light switch circuit • There is problem with cancel circuit • There is problem with electronically controlled brake system • There is open or short in stop light switch circuit • Communication stop between brake booster with master cylinder (skid control ECU) and power management control ECU • There is problem with hybrid vehicle control system 	<ul style="list-style-type: none"> • Turn cruise control main switch on again • Turn power switch off then on (IG) again
Cruise main indicator light remains on (Cruise control is canceled)	<ul style="list-style-type: none"> • Vehicle speed is lower than low speed limit (approximately. 40 km/h (25 mph)) while running with cruise control on • Electronically controlled brake system operates 	Push cruise control main switch to + RES
	<ul style="list-style-type: none"> • Vehicle speed is lower than stored speed by approximately 16 km/h (10 mph) or more 	Push cruise control main switch to - SET

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the Techstream to read the Data List allows values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Powertrain / Cruise Control / Data List.
- (e) According to the display on the Techstream, read the Data List.

Cruise Control (Power Management Control ECU)

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
CCS Vehicle Spd	Vehicle speed/min.: 0 km/h (0 mph), max.: 255 km/h (159 mph)	Actual vehicle speed is displayed	-
CCS Mem Vehicle Spd	Vehicle speed/min.: 0 km/h (0 mph), max.: 255 km/h (159 mph)	Actual vehicle speed stored in memory	-
Cruise Control	Cruise control/ON or OFF	ON: Cruise control activated OFF: Cruise control deactivated	-
Main SW M-CPU	Cruise control switch (M-CPU)/ON or OFF	ON: Cruise main switch on OFF: Cruise main switch off	-
CCS Ready M-CPU	Cruise control system standby condition (M-CPU)/ON or OFF	Each time main switch is pushed, ON/OFF changes	-
CCS Indicator M-CPU	Cruise main indicator (M-CPU)/ON or OFF	ON: Cruise main indicator light on OFF: Cruise main indicator light off	-

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Cancel Switch	CANCEL switch/ON or OFF	ON: CANCEL switch on OFF: CANCEL switch off	-
SET/COAST Switch	- SET switch/ON or OFF	ON: - SET switch on OFF: - SET switch off	-
RES/ACC Switch	+ RES switch/ON or OFF	ON: + RES switch on OFF: + RES switch off	-
Stop Light SW M-CPU	Stop light switch signal (Main CPU)/ON or OFF	ON: Brake pedal depressed OFF: Brake pedal released	-
Cruise Operation Status	Shift position signal (D position)/ON or OFF	ON: Shift lever in D OFF: Shift lever not in D	-
Cruise Request Driving Force	Cruise control driving force signal/min.: -51.2 kN, max.: 51.2 kN	Actual driving force	-
# Codes	Number of present trouble codes/min.: 0, max.: 255	Number of DTCs displayed	-

2. ACTIVE TEST

HINT:

Using the Techstream to perform Active Tests allows relays, VSVs, actuators and other items to be operated without removing any parts. This non-intrusive functional inspection can be very useful because intermittent operation may be discovered before parts or wiring is disturbed. Performing Active Tests early in troubleshooting is one way to save diagnostic time. Data List information can be displayed while performing Active Tests.

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Combination Meter / Active Test.
- (e) According to the display on the Techstream, perform the "Active Test".

Combination Meter

Tester Display	Test Part	Control Range	Diagnostic Note
Indicat. Lamp Cruise	Cruise main indicator light	ON / OFF	-