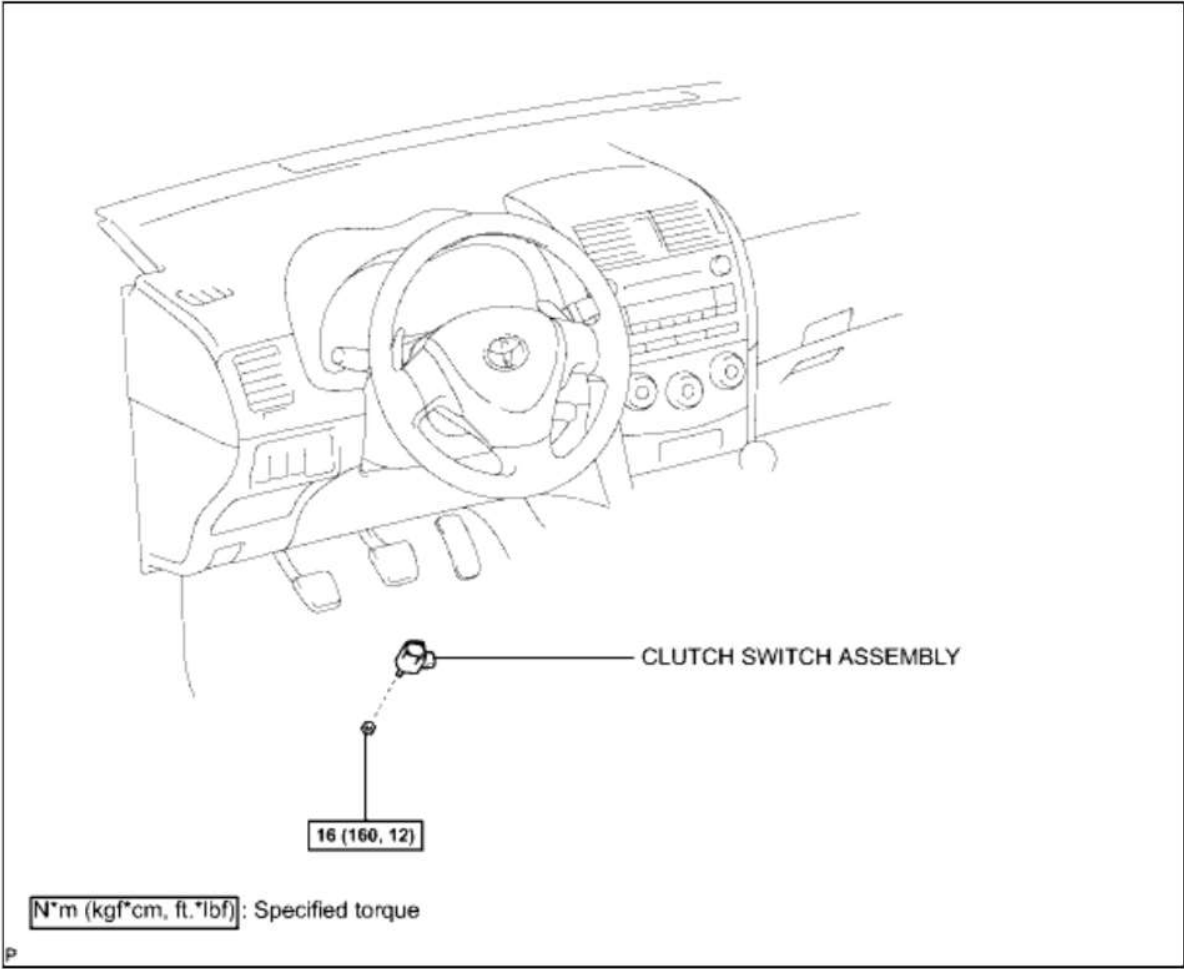


Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001OC100YX
Title: CRUISE CONTROL: CLUTCH SWITCH: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION



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Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001OC200ZX
Title: CRUISE CONTROL: CLUTCH SWITCH: REMOVAL (2010 Corolla)		

REMOVAL

1. REMOVE CLUTCH SWITCH ASSEMBLY

- (a) Disconnect the connector.
- (b) Loosen the nut and remove the clutch switch assembly.

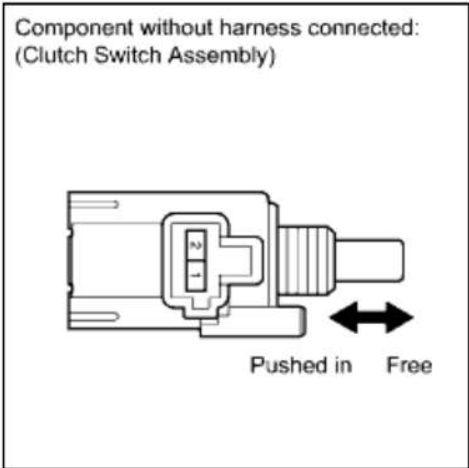


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Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001Z6F011X
Title: CRUISE CONTROL: CLUTCH SWITCH: INSPECTION (2010 Corolla)		

INSPECTION

1. INSPECT CLUTCH SWITCH ASSEMBLY



(a) Remove the clutch switch assembly [INFO](#) .

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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 - 2	Switch pin free	10 kΩ or higher
	Switch pin pushed in	Below 1 Ω

If the result is not as specified, replace the clutch switch.



Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001OC000ZX
Title: CRUISE CONTROL: CLUTCH SWITCH: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL CLUTCH SWITCH ASSEMBLY

- (a) Temporarily install the clutch switch assembly with the nut.
- (b) Engage the pin and tighten the nut.

Torque: 16 N·m (160 kgf·cm, 12ft·lbf)

- (c) Connect the connector.

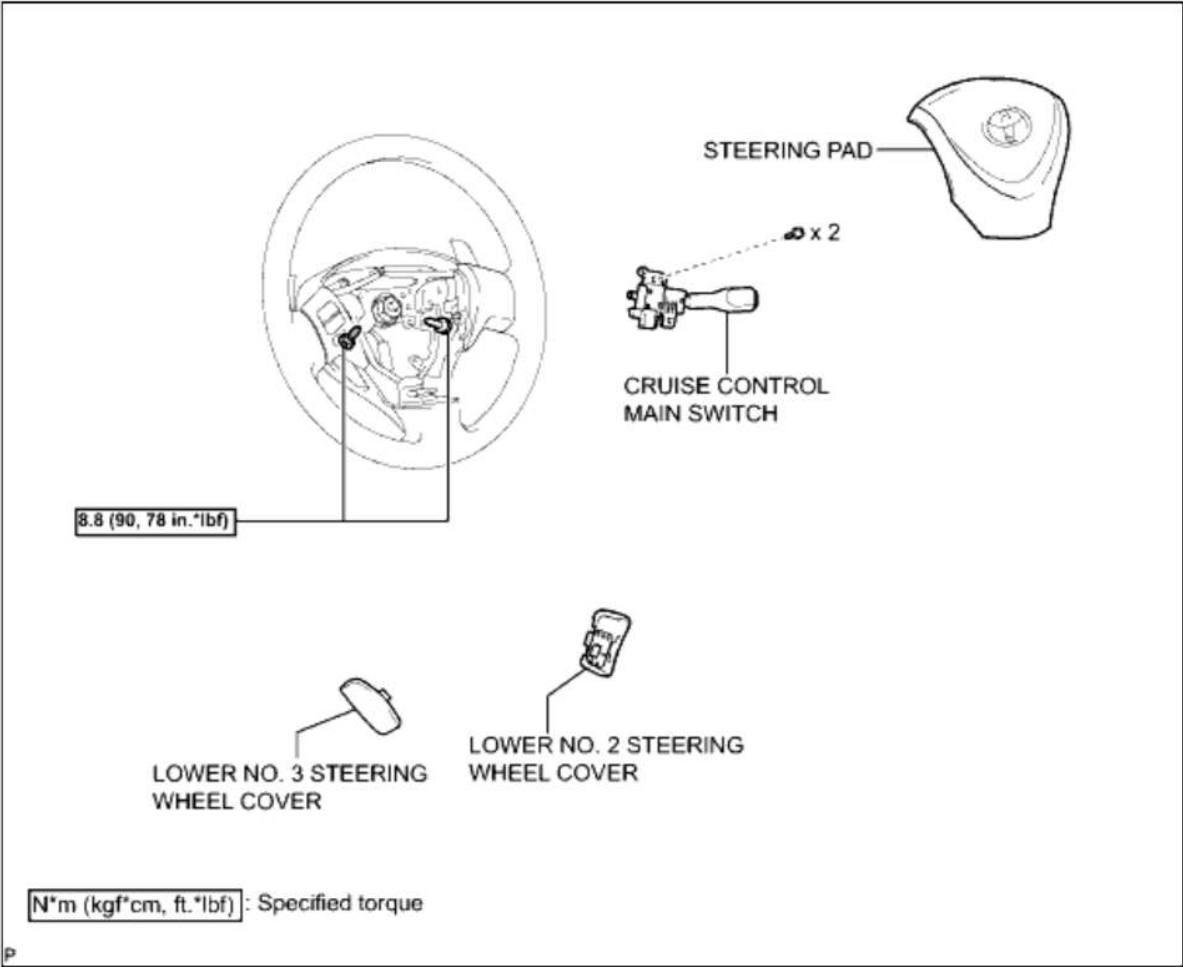


TOYOTA

Last Modified: 3-10-2010	6.4 K	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000VQ2020X
Title: CRUISE CONTROL: CRUISE CONTROL MAIN SWITCH: COMPONENTS (2010 Corolla)		

COMPONENTS

ILLUSTRATION



Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000VQ302LX
Title: CRUISE CONTROL: CRUISE CONTROL MAIN SWITCH: REMOVAL (2010 Corolla)		

REMOVAL

1. 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.

2. REMOVE LOWER NO. 3 STEERING WHEEL COVER

[INFO](#)

3. REMOVE LOWER NO. 2 STEERING WHEEL COVER

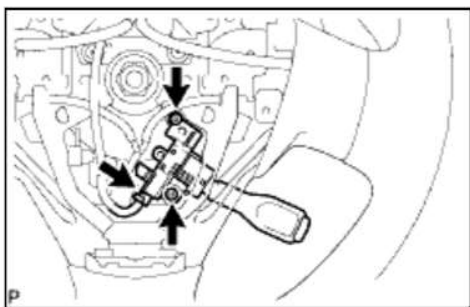
[INFO](#)

4. REMOVE STEERING PAD

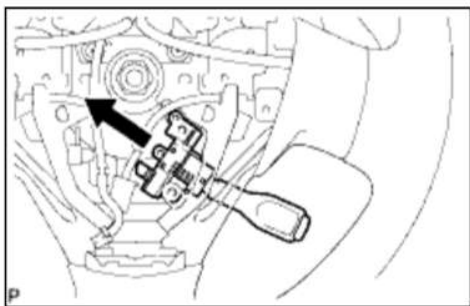
[INFO](#)

5. REMOVE CRUISE CONTROL MAIN SWITCH

(a) Disconnect the connector.



(b) Remove the 2 screws.



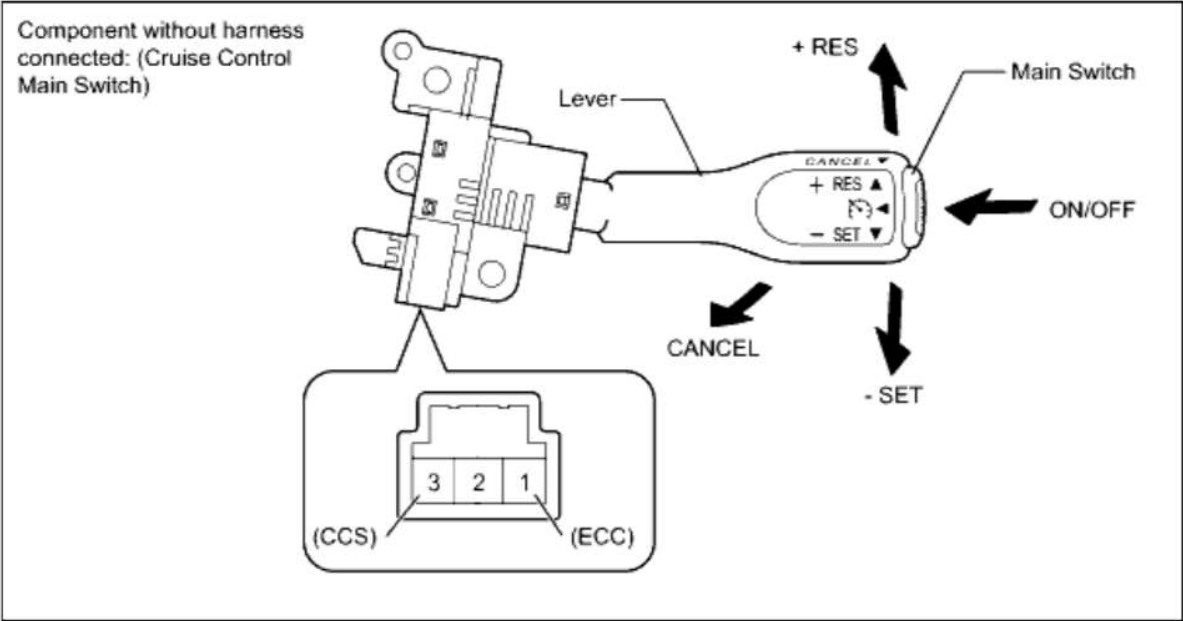
(c) Remove the switch as shown in the illustration.

Last Modified: 3-10-2010	6.4 G	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001Z6E01JX
Title: CRUISE CONTROL: CRUISE CONTROL MAIN SWITCH: INSPECTION (2010 Corolla)		

INSPECTION

1. INSPECT CRUISE CONTROL MAIN SWITCH

- (a) Remove the cruise control main switch  .
- (b) Measure the resistance according to the value(s) in the table below.



Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 (ECC) - 3 (CCS)	Main Switch off* 1	1 MΩ or higher
	Main Switch on	Below 2.5 Ω
	+ RES	235 to 245 Ω
	- SET	617 to 643 Ω
	CANCEL	1509 to 1571 Ω

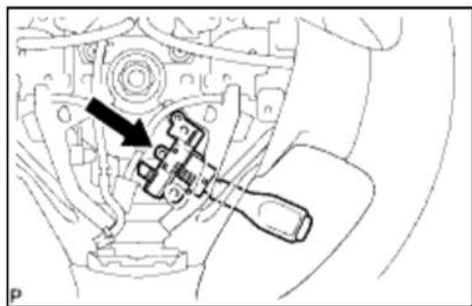
*1: Lever is in neutral position

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

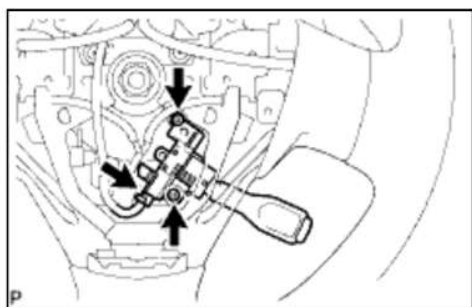
Last Modified: 3-10-2010	6.4 A	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000VQ102LX
Title: CRUISE CONTROL: CRUISE CONTROL MAIN SWITCH: INSTALLATION (2010 Corolla)		

INSTALLATION

1. INSTALL CRUISE CONTROL MAIN SWITCH



(a) Install the switch as shown in the illustration.



(b) Install the 2 screws.

(c) Connect the connector.

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

6. INSPECT STEERING PAD INFO

7. INSPECT SRS WARNING LIGHT



Last Modified: 3-10-2010	6.4 L	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000002VOG00KX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: PRECAUTION (2010 Corolla)		

PRECAUTION

1. EXPRESSIONS OF IGNITION SWITCH

- (a) The type of ignition switch used on this model differs according to the specifications of the vehicle.

The expressions listed in the table below are used in this section.

EXPRESSION	SWITCH TYPE	
	IGNITION SWITCH (POSITION)	ENGINE SWITCH (CONDITION)
Ignition Switch off	LOCK	Off
Ignition Switch ON	ON	On (IG)
Ignition Switch ACC	ACC	On (ACC)
Engine Start	START	Start

2. HANDLING PRECAUTIONS FOR CRUISE CONTROL SYSTEM

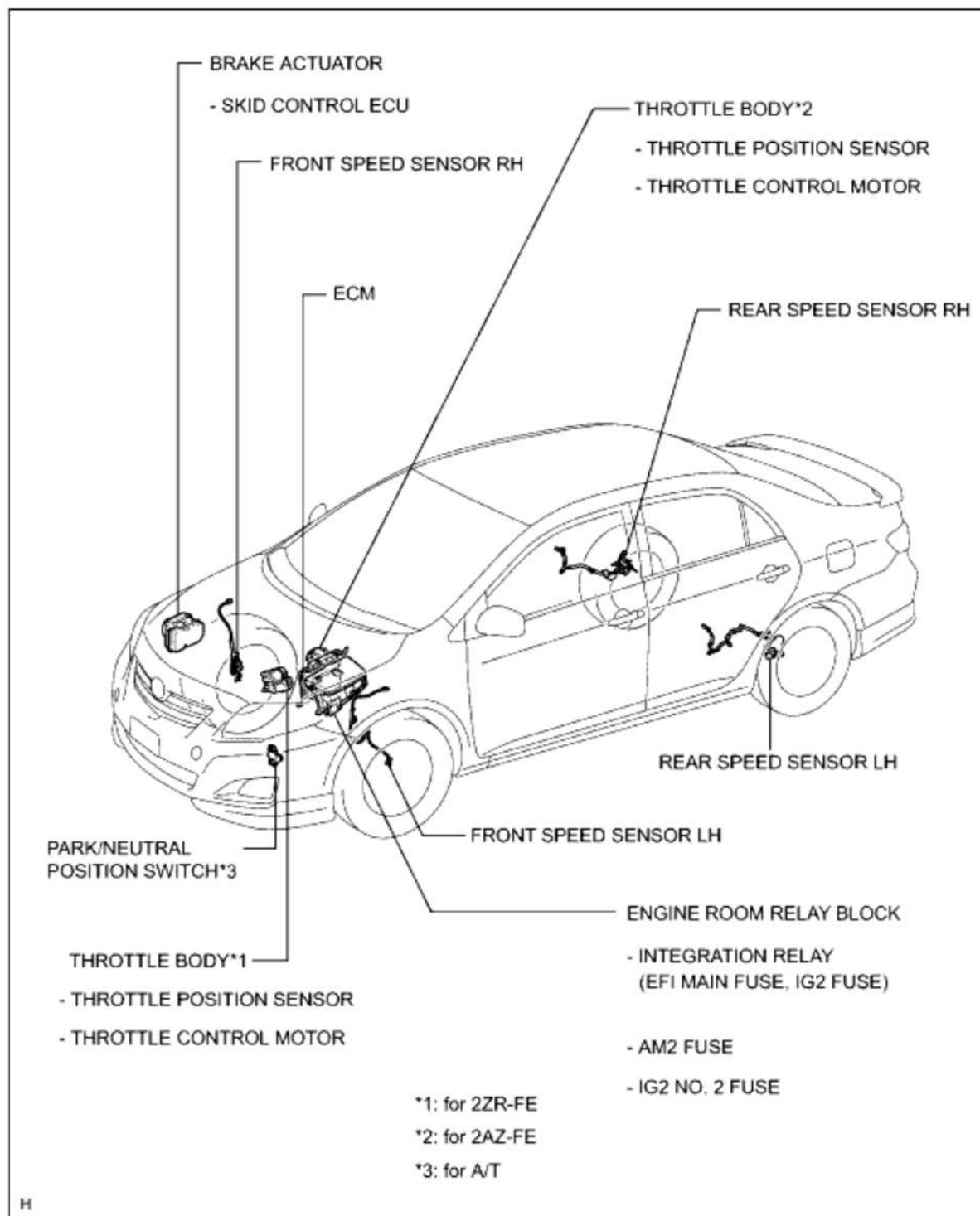
- (a) Turn the cruise control main switch off when not using the cruise control system.
- (b) Be careful as the vehicle speed increases when driving downhill with the cruise control system on.
- (c) The + (ACCEL)/RES (RESUME) operation changes according to the cruise control system status. When the cruise control system is operating, the + (ACCEL) function operates. When the cruise control system is not operating, the RES (RESUME) function operates.
- (d) If the CRUISE main indicator light blinks while the cruise control system is operating, turn the cruise control main switch off to reset the cruise control system. After the reset, if the cruise control main switch cannot be turned on, or the cruise control system is canceled immediately after turning the cruise control main switch 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.



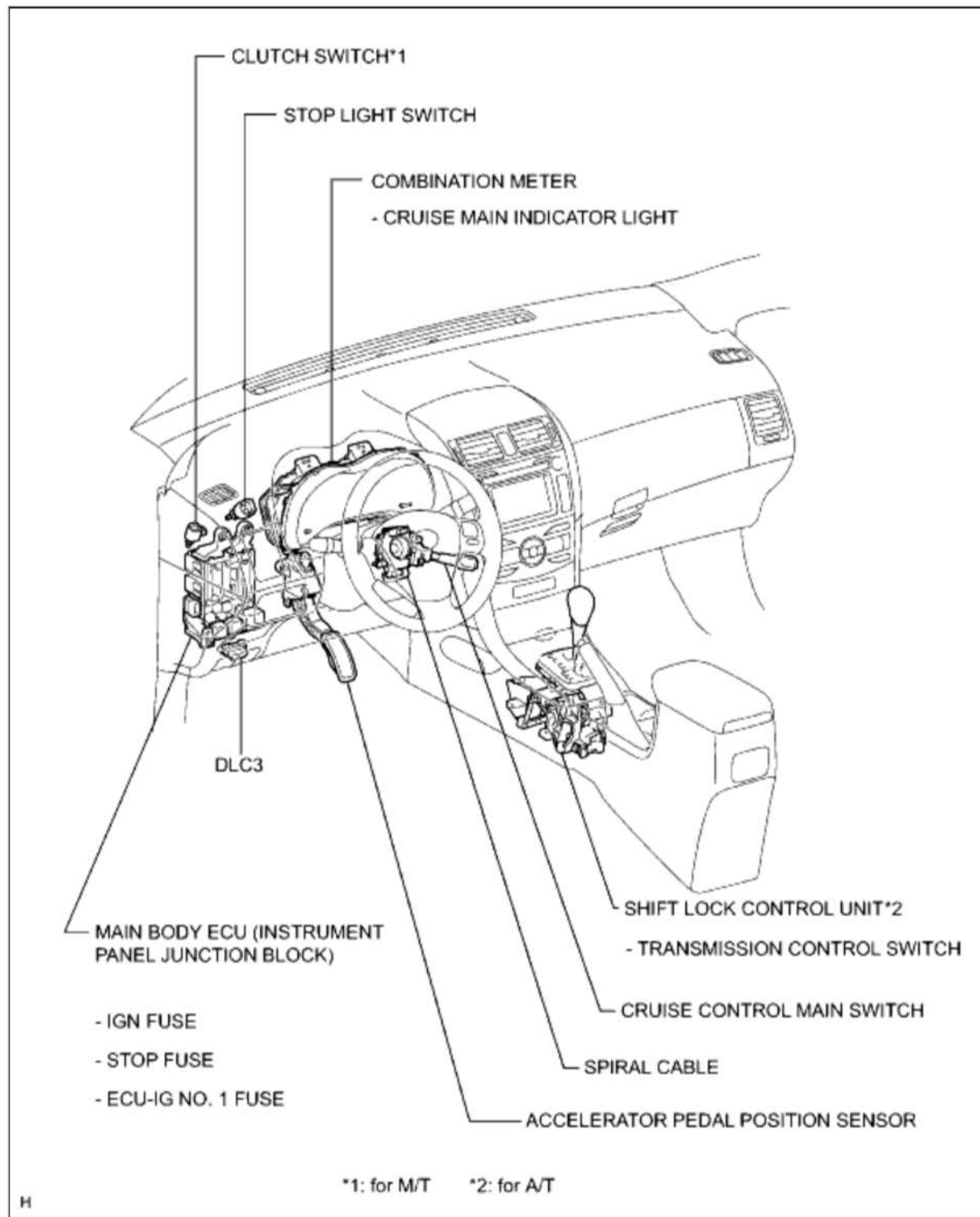
Last Modified: 3-10-2010	6.4 R	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000SSZ03SX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: PARTS LOCATION (2010 Corolla)		

PARTS LOCATION

ILLUSTRATION

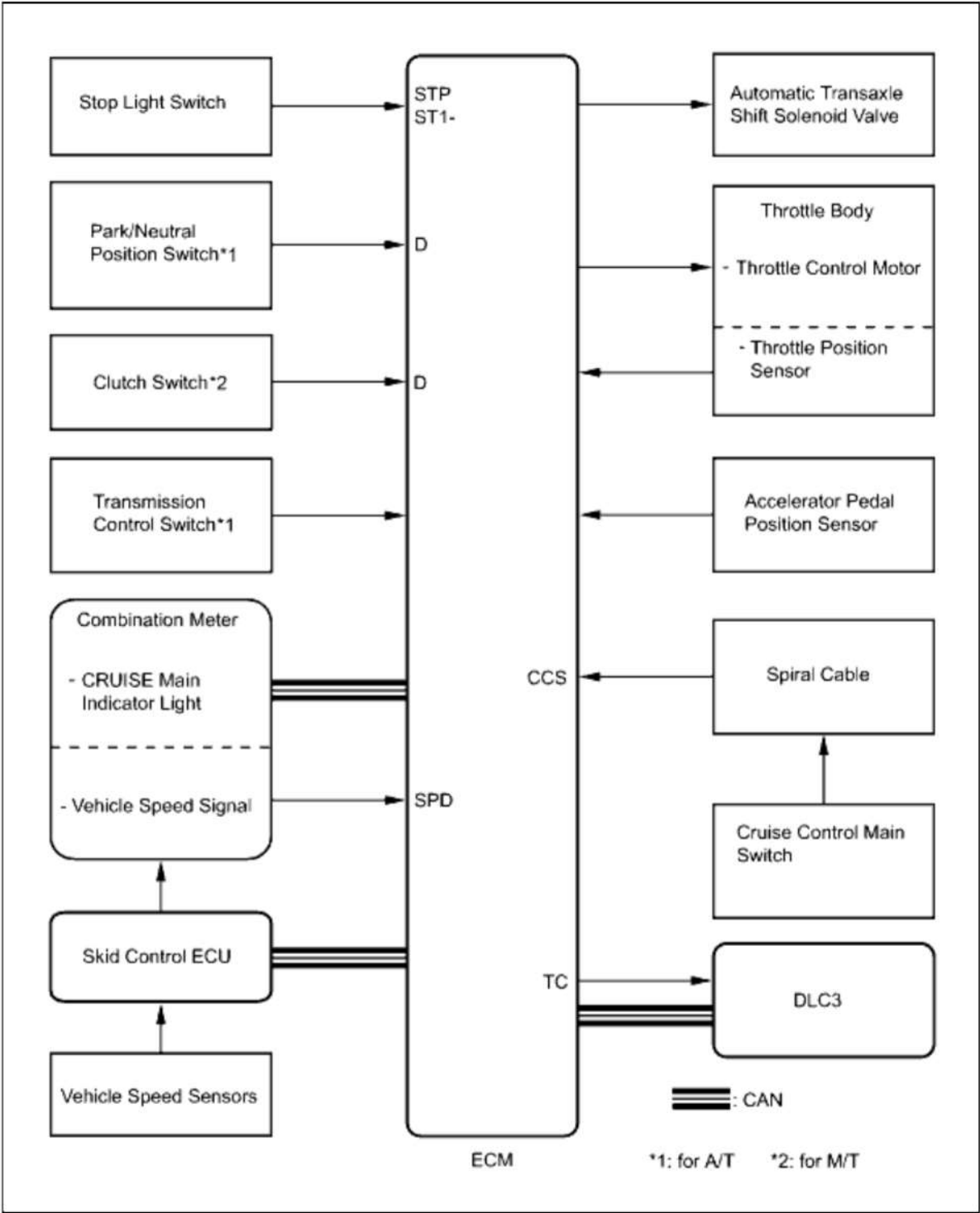


ILLUSTRATION



Last Modified: 3-10-2010	6.4 U	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000PM204KX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: SYSTEM DIAGRAM (2010 Corolla)		

SYSTEM DIAGRAM



Communication Table

SENDER	RECEIVER	SIGNAL	LINE
ECM	Combination Meter ECU	CRUISE main indicator operation signal	CAN



Last Modified: 3-10-2010	6.4 D	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000PLZ04ZX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: SYSTEM DESCRIPTION (2010 Corolla)		

SYSTEM DESCRIPTION

1. CRUISE CONTROL SYSTEM

This system is controlled by the ECM, and is activated by the throttle position sensor and motor. The ECM controls the following functions: ON-OFF, - (COAST)/SET, + (ACCEL)/RES (RESUME), CANCEL, vehicle speed operation, motor output control, and shift down control.

- The ECM compares the driving vehicle speed from the speed sensor with the stored vehicle speed set through the cruise control main switch. The ECM instructs the throttle valve motor of the throttle body assembly to close the valve when the driving speed is greater than the stored speed, and instructs it to open the valve when the driving speed is less than the stored speed.
- The ECM receives signals such as ON-OFF, - (COAST)/SET, + (ACCEL)/RES (RESUME), and CANCEL from the cruise control main switch and executes the command.
- The ECM illuminates the combination meter's CRUISE main indicator light when it receives a cruise control main switch ON signal.
- The ECM cancels the cruise control system when the brake pedal is depressed and the ECM receives a stop light switch signal.
- The ECM cancels the cruise control system when the shift lever is moved to except D or S (S5 and S4 range) (for U250E).
- The ECM cancels the cruise control system when the shift lever is moved to except D or 3 (for U341E).
- The ECM cancels the cruise control system when the clutch pedal is depressed and the ECM receives a clutch switch signal (for M/T).

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 driving 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, + (ACCEL)/RES (RESUME) cannot be used to increase speed beyond the high speed limit.

3. OPERATION OF CRUISE CONTROL

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

(a) SET CONTROL

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

(b) - (COAST) CONTROL

When the cruise control main switch is set to - (COAST)/SET and held in that position while the cruise control system is operating, the ECM sends a "throttle valve opening angle 0°" demand signal to the cruise control system. Then the vehicle speed, when the cruise control main switch is released, is stored and maintained.

HINT:

An actual throttle valve opening angle of 0° is not possible due to the idle speed control, etc.

(c) TAP-DOWN CONTROL

When tapping down the cruise control main switch to - (COAST)/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 (1.0 mph). When the cruise control main switch is released from - (COAST)/SET and the difference between the driving and stored vehicle speed is more than 5 km/h (3.1 mph), the driving vehicle speed is stored and constant speed control is maintained.

(d) ACCELERATION CONTROL

The throttle valve motor of the throttle body assembly is instructed by the ECM to open the throttle valve when + (ACCEL)/RES (RESUME) 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 + (ACCEL)/RES (RESUME), the vehicle speed is stored and the vehicle is controlled at a constant speed.

(e) TAP-UP CONTROL

When tapping up the cruise control main switch to + (ACCEL)/RES (RESUME) (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 (1.0 mph). However, when the difference between the driving speed and the stored vehicle speed is more than 5 km/h (3.1 mph), the stored vehicle speed will not be changed.

(f) RESUME CONTROL

If cruise control operation was canceled with the stop light switch, the CANCEL switch or the low speed limit control, and if driving speed is within the limit range, pushing the cruise control main switch to + (ACCEL)/RES (RESUME) 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 in operation (the stored vehicle speed in the ECM is maintained).

- Depressing the brake pedal
- Depressing the clutch pedal (for M/T)
- The shift lever is moved to except D or S (S5 and S4 range) (for U250E).
- The shift lever is moved to except D or 3 (for U341E).
- Pulling the cruise control main switch to CANCEL
- Turning the cruise control main switch off (the vehicle speed stored in the ECM is not maintained)

4. AUTO CANCEL (FAIL-SAFE)

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



Last Modified: 3-10-2010	6.4 D	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000PLO05KX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: HOW TO PROCEED WITH TROUBLESHOOTING (2010 Corolla)		

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, recharge or replace the battery before proceeding to the next step.

NEXT



3. CHECK CAN COMMUNICATION SYSTEM*

(a) Check for output DTCs.

Result:

RESULT	PROCEED TO
CAN DTC is not output	A
CAN DTC is output	B

HINT:

The ECM of this system is connected to the CAN communication system. Therefore, before starting troubleshooting, make sure to check that there is no trouble in the CAN communication system.

B   **GO TO CAN COMMUNICATION SYSTEM**

A


4.

CHECK INDICATOR LIGHT

NEXT


5.

CHECK FOR DTC*

- (a) Check for DTCs  .
- (b) Clear the DTCs  .
- (c) Recheck for DTCs  .

Result:

RESULT	PROCEED TO
DTC is not output	A
DTC is output	B

B   **GO TO DIAGNOSTIC TROUBLE CODE CHART**

A


6.

PROBLEM SYMPTOMS TABLE

(a) Refer to Problem Symptoms Table INFO .

Result:

RESULT	PROCEED TO
There is no applicable symptom in the table	A
There is an applicable symptom in the table	B

B ▶ Go to step 8

A
▼

7.

OVERALL ANALYSIS AND TROUBLESHOOTING*

(a) Terminals of ECM INFO

(b) Data List / Active Test INFO

NEXT
▼

8.

REPAIR OR REPLACE

NEXT
▼

9.

CONFIRMATION TEST

NEXT ► END



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Model Year: 2010	Model: Corolla	Doc ID: RM000000PLS04YX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: PROBLEM SYMPTOMS TABLE (2010 Corolla)		

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
Vehicle speed cannot be set. (The CRUISE main indicator light comes on.)	Cruise control switch circuit	INFO
	Vehicle speed sensor circuit	INFO
	Combination meter	INFO
	Stop light switch circuit	INFO
	Transmission range sensor circuit (for U341E)	INFO
	Transmission range sensor circuit (for U250E)	INFO
	Transmission control switch circuit (for U250E)	INFO
	Clutch switch circuit (for M/T)	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
The cruise control is canceled while it is operating.	Stop light switch circuit	INFO
	Clutch switch circuit (for M/T)	INFO
	Transmission range sensor circuit (for U341E)	INFO
	Transmission range sensor circuit (for U250E)	INFO

SYMPTOM	SUSPECTED AREA	SEE PAGE
	Transmission control switch circuit (for U250E)	INFO
	Cruise control switch circuit	INFO
	Vehicle speed sensor circuit	INFO
	Combination meter	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
Vehicle speed cannot be set. (The CRUISE main indicator light does not come on.)	Stop light switch circuit	INFO
	Clutch switch circuit (for M/T)	INFO
	Vehicle speed sensor circuit	INFO
	Combination meter	INFO
	Cruise control switch circuit	INFO
	Transmission range sensor circuit (for U341E)	INFO
	Transmission range sensor circuit (for U250E)	INFO
	Transmission control switch circuit (for U250E)	INFO
	Cruise main indicator light circuit	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
Vehicle speed can be set. (The CRUISE main indicator light does not come on.)	Cruise main indicator light circuit	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2AZ-FE)	INFO

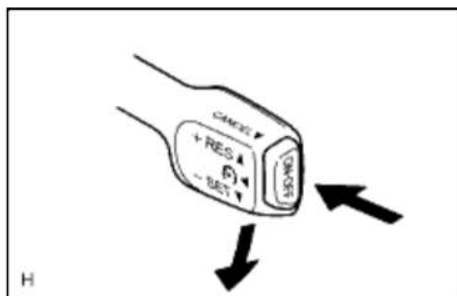
SYMPTOM	SUSPECTED AREA	SEE PAGE
Pulling back on the control main switch does not cancel the cruise control. (The CRUISE main indicator light remains on.)	Cruise control switch circuit	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
Pulling back on the control main switch does not cancel the cruise control. (The CRUISE main indicator light goes off.)	Replace ECM (for 2ZR-FE)	INFO
	Replace ECM (for 2AZ-FE)	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
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
The cruise control is not canceled when vehicle speed drops below the low speed limit. (The CRUISE main indicator light goes off.)	Replace ECM (for 2ZR-FE)	INFO
	Replace ECM (for 2AZ-FE)	INFO
Depressing the brake pedal does not cancel the cruise control. (The CRUISE main indicator light remains on.)	Stop light switch circuit	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
Depressing the brake pedal does not cancel the cruise control. (The CRUISE main indicator light goes off.)	Replace ECM (for 2ZR-FE)	INFO
	Replace ECM (for 2AZ-FE)	INFO
Depressing the clutch pedal does not cancel the cruise control. (The CRUISE main indicator light remains on.)	Clutch switch circuit (for M/T)	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
Depressing the clutch pedal does not cancel	Replace ECM (for 2ZR-FE)	INFO

SYMPTOM	SUSPECTED AREA	SEE PAGE
the cruise control. (The CRUISE main indicator light goes off.)	Replace ECM (for 2AZ-FE)	INFO
Moving the shift lever does not cancel the cruise control.	Transmission range sensor circuit (for U341E)	INFO
	Transmission range sensor circuit (for U250E)	INFO
	Transmission control switch circuit (for U250E)	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
Hunting (Speed is not constant.)	Vehicle speed sensor circuit	INFO
	Combination meter	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above areas have been inspected and have proven to be normal, replace the ECM. (for 2AZ-FE)	INFO
The CRUISE main indicator light remains blinking.	TC and CG terminal circuit	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2ZR-FE)	INFO
	If the symptoms still occur after the above area has been inspected and has proven to be normal, replace the ECM. (for 2AZ-FE)	INFO

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Model Year: 2010	Model: Corolla	Doc ID: RM000000ST0040X
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: ROAD TEST (2010 Corolla)		

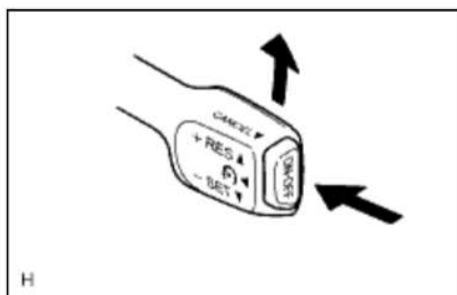
ROAD TEST

1. PROBLEM SYMPTOM CONFIRMATION



(a) Inspect the SET function.

- (1) Turn the cruise control main switch on.
- (2) Drive at the required speed between 40 km/h (25 mph) and 200 km/h (125 mph).
- (3) Push the cruise control main switch to - (COAST)/SET.
- (4) After releasing the switch, check that the vehicle cruises at the set speed.

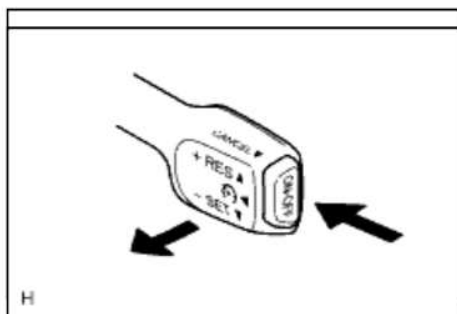


(b) Inspect the + (ACCELERATION) function.

- (1) Turn the cruise control main switch on.
- (2) Drive at the required speed between 40 km/h (25 mph) and 200 km/h (125 mph).
- (3) Push the cruise control main switch to - (COAST)/SET.
- (4) Check that vehicle speed increases while the cruise control main switch is pushed to + (ACCEL)/RES (RESUME), and that the vehicle cruises at the newly set speed when the switch is released.
- (5) Push the cruise control main switch to + (ACCEL)/RES (RESUME) and then release it immediately. Check that vehicle speed increases by approximately 1.6 km/h (1.0 mph) (tap-up control).

(c) Inspect the - (COAST) function.

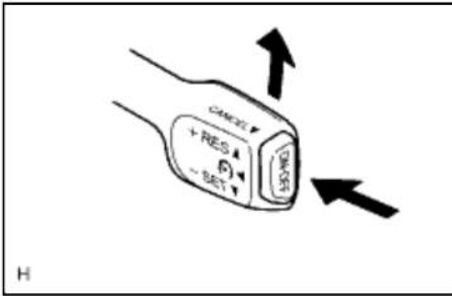
(d) Inspect the CANCEL function.



- (1) Turn the cruise control main switch on.
- (2) Drive at the required speed between 40 km/h (25 mph) and 200 km/h (125 mph).
- (3) Push the cruise control main switch to - (COAST)/SET.
- (4) Check that vehicle speed decreases while the cruise control main switch is pushed to - (COAST)/SET, and that the vehicle cruises at the newly set speed when the switch is released.
- (5) Push the cruise control main switch to - (COAST)/SET, and then release it immediately. Check that vehicle speed decreases by approximately 1.6 km/h (1.0 mph) (tap-down control).

- The shift lever is moved to except D or 3 (for U341E).
- Turning the cruise control main switch off
- Pulling the cruise control main switch to CANCEL

(e) Inspect the RES (RESUME) function.



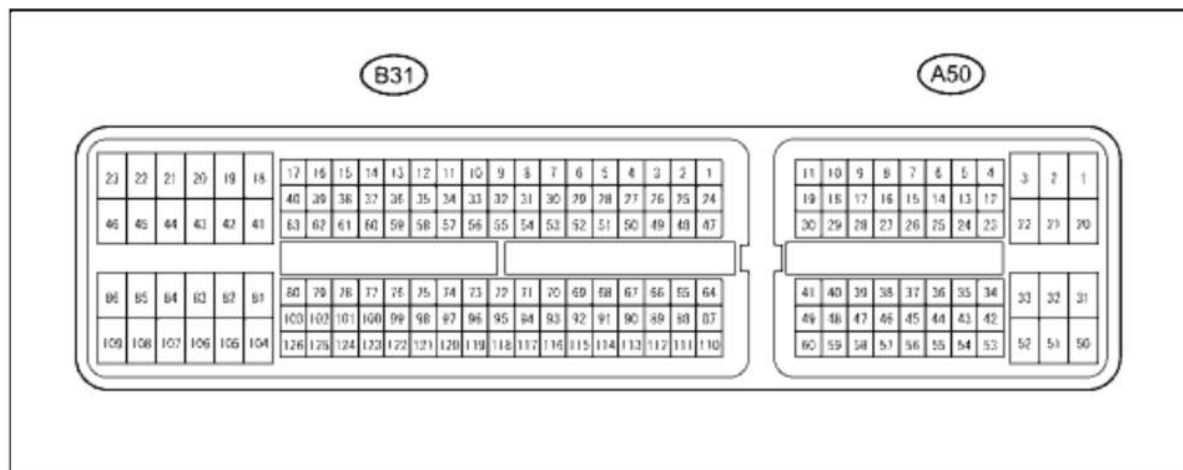
- (1) Turn the cruise control main switch on.
- (2) Drive at the required speed between 40 km/h (25 mph) and 200 km/h (125 mph).
- (3) Push the cruise control main switch to - (COAST)/SET.
- (4) Cancel the cruise control system by performing any of the above operations (other than turning the main switch off).
- (5) After pushing the cruise control main switch to + (ACCEL)/RES (RESUME) at a driving speed of more than 40 km/h (25 mph), check that the vehicle resumes at the speed set prior to the cancellation.



Last Modified: 3-10-2010	6.4 U	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001W1U02JX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: TERMINALS OF ECM (2010 Corolla)		

TERMINALS OF ECM

1. CHECK ECM



TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
A50-27 (TC) - B31-104 (E1)	P - BR	Body ground	Ignition switch ON	11 to 14 V
A50-27 (TC) - B31-104 (E1)	P - BR	Body ground	Terminals TC and CG of DLC3 connected	Below 1 V
A50-36 (STP) - B31-104 (E1)	L - BR	Stop light signal	Ignition switch ON, Brake pedal depressed	11 to 14 V
A50-36 (STP) - B31-104 (E1)	L - BR	Stop light signal	Ignition switch ON, Brake pedal released	Below 1 V
A50-40 (CCS) - B31-104 (E1)	L-B - BR	Cruise control main switch circuit	Ignition switch ON	11 to 14 V
A50-40 (CCS) - B31-104 (E1)	L-B - BR	Cruise control main switch circuit	CANCEL switch ON	6.6 to 10.1 V
A50-40 (CCS) - B31-104 (E1)	L-B - BR	Cruise control main switch circuit	- SET switch ON	4.5 to 7.1 V
A50-40 (CCS) - B31-104 (E1)	L-B - BR	Cruise control main switch circuit	+ RES switch ON	2.3 to 4.0 V
A50-40 (CCS) - B31-104 (E1)	L-B - BR	Cruise control main switch circuit	MAIN switch ON	Below 1 V

TERMINAL NO. (SYMBOL)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
A50-35 (ST1-) - B31-104 (E1)	R - BR	Stop light signal	Ignition switch ON, Brake pedal depressed	Below 1 V
A50-35 (ST1-) - B31-104 (E1)	R - BR	Stop light signal	Ignition switch ON, Brake pedal released	11 to 14 V
B31-56 (D)*1 - B31-104 (E1)	LG - BR	Clutch signal	Ignition switch ON, Clutch pedal depressed	Below 1 V
B31-56 (D)*1 - B31-104 (E1)	LG - BR	Clutch signal	Ignition switch ON, Clutch pedal released	11 to 14 V
B31-56 (D)*2 - B31-104 (E1)	P*3 - BR P-G*4 - BR	D shift position switch signal	Ignition switch ON, Shift lever in except D	Below 1 V
B31-56 (D)*2 - B31-104 (E1)	P*3 - BR P-G*4 - BR	D shift position switch signal	Ignition switch ON, Shift lever in D	11 to 14 V

- *1: for M/T
- *2: for A/T
- *3: for 2ZR-FE
- *4: for 2AZ-FE



Last Modified: 3-10-2010	6.4 D	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000PM005BX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: DIAGNOSIS SYSTEM (2010 Corolla)		

DIAGNOSIS SYSTEM

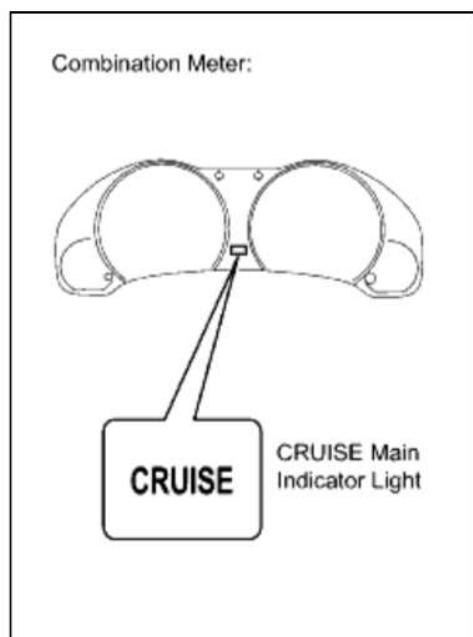
1. DESCRIPTION

The ECM 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 any DTC is not displayed 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.

2. CHECK DLC3

- (a) Check the DLC3 .

3. CHECK INDICATOR

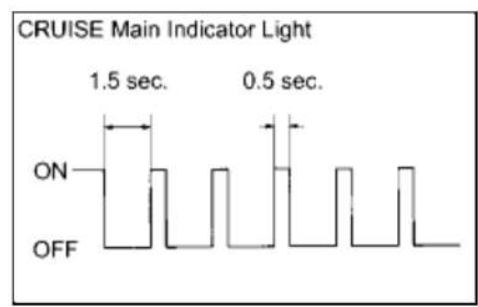


- (a) Turn the ignition switch to ON.

- (b) Check that the CRUISE main indicator light illuminates when the cruise control main switch is turned on, and that the indicator light turns off when the main switch is turned off. If the results are not as specified, inspect the CRUISE main indicator light circuit .

HINT:

While driving with cruise control, the ECM activates AUTO CANCEL of the cruise control system when a malfunction occurs in one of the following: vehicle speed sensors, stop light switch, or other related parts. When AUTO CANCEL is activated, the CRUISE main indicator light outputs the blinking pattern as shown in the illustration. At the same time, data of the malfunction is stored as a DTC.



Last Modified: 3-10-2010	6.4 D	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000PM1045X
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: DTC CHECK / CLEAR (2010 Corolla)		

DTC CHECK / CLEAR

1. CHECK DTC

- (a) Connect the Techstream to the DLC3.
- (b) Turn the ignition switch to ON.
- (c) Turn the Techstream on.
- (d) Enter the following menus: Powertrain / Cruise Control / Trouble Codes.
- (e) Check the details of the DTC(s)  .

2. CLEAR DTC

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



Last Modified: 3-10-2010	6.4 U	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000001XO200GX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: DATA LIST / ACTIVE TEST (2010 Corolla)		

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the Techstream to read the Data List allows the 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.

- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Powertrain / Cruise Control / Data List.
- Read the Data List according to the display on the Techstream.

Cruise Control (ECM)

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
CCS Vehicle Spd	Vehicle speed/min.: 0 km/h (0 mph), max.: 255 km/h (158 mph)	Actual vehicle speed	-
CCS Mem Vehicle Spd	Stored vehicle speed/min.: 0 km/h (0 mph), max.: 200 km/h (125 mph)	Actual stored vehicle speed	-
Throttle Opening Angle	Required throttle opening angle/min.: 0°, max.: 125°	Actual required throttle opening angle	-
Cruise Control	Cruise control system active condition/ON or OFF	ON: Cruise control activated OFF: Cruise control deactivated	-
Main SW M-CPU	Main SW signal (Main CPU)/ON or OFF	ON: Cruise control main switch pushed OFF: Cruise control main switch not pushed	3
CCS Ready M-CPU	Cruise control system standby condition (Main CPU)/ON or OFF	ON: Cruise control main switch (Main CPU) is SET OFF: Cruise control main switch (Main CPU) is	1

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
		UNSET	
CCS Indicator M-CPU	Cruise indicator signal (Main CPU)/ON or OFF	ON: "CRUISE" ON OFF: "CRUISE" OFF	2
Cancel Switch	CANCEL SW signal/ON or OFF	ON: CANCEL switch ON OFF: CANCEL switch OFF	-
SET/COAST Switch	- (COAST)/SET SW signal/ON or OFF	ON: - (COAST)/SET switch ON OFF: - (COAST)/SET switch OFF	-
RES/ACC Switch	+ (ACCEL)/RES (RESUME) SW signal/ON or OFF	ON: + (ACCEL)/RES (RESUME) switch ON OFF: + (ACCEL)/RES (RESUME) switch OFF	-
Stop Light SW M-CPU*1	Stop light SW signal (Main CPU)/ON or OFF	ON: Brake pedal depressed OFF: Brake pedal released	-
Cruise Operation Status	Transmission range sensor signal/ON or OFF	For 2ZR-FE: - ON: Shift lever in D or 3 position - OFF: Shift lever except in D or 3 position For 2AZ-FE: - ON: Shift lever in D or S (5th, 4th) position - OFF: Shift lever except in D or S (5th, 4th) position	-
Brake Cancel Switch*2	Brake Cancel Signal/ON or OFF	ON: Brake pedal depressed OFF: Brake pedal released	-

*1: for 2ZR-FE

*2: for 2AZ-FE

HINT:

3 is OK but 1 is NG → ECM failure

1 is OK but 2 is NG → DTC output or ECM failure

3 is OK but cruise indicator does not turn on → CRUISE main indicator light, wire harness, or ECM failure

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 trouble shooting 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 ignition switch to ON.
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Combination Meter / Active Test.
- (e) Perform the Active Test according to the display on the Techstream.

HINT:

The ignition switch must be turned to ON to proceed with the Active Test using the Techstream.

Combination Meter

TESTER DISPLAY	TEST PART	CONTROL RANGE	DIAGNOSTIC NOTE
Indicat. Lamp Cruise	CRUISE main indicator light	OFF or ON	Confirm that the vehicle is stopped, engine idling



Last Modified: 3-10-2010	6.4 U	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000ST104FX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: FAIL-SAFE CHART (2010 Corolla)		

FAIL-SAFE CHART

HINT:

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

VEHICLE CONDITION	AUTO CANCEL CONDITION	RE-OPERATION CONDITION
CRUISE main indicator light blinks	- There is an open or a short in the stop light switch circuit - There is a problem with the vehicle speed signal	Turn the cruise control main switch on again
CRUISE main indicator light goes off	There is a problem with the throttle position sensor and motor	Turn the cruise control main switch on again
CRUISE main indicator light blinks	- There is a problem with the input circuit of the stop light switch circuit - There is a problem with the cancel circuit	- Turn the cruise control main switch on again - Turn the ignition switch off then on again
CRUISE main indicator light remains on (Cruise control is canceled)	Under the following conditions, the stored vehicle speed is maintained: - The vehicle speed is lower than the low speed limit (approx. 40 km/h (25 mph)) while running with the cruise control on - The VSC system is operated	Push the cruise control main switch to + (ACCEL)/RES (RESUME)
	The vehicle speed is lower than the stored speed by approx. 16 km/h (10 mph) or more	Push the cruise control main switch to - (COAST)/SET



Last Modified: 3-10-2010	6.4 S	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000PLQ04PX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: DIAGNOSTIC TROUBLE CODE CHART (2010 Corolla)		

DIAGNOSTIC TROUBLE CODE CHART

If a trouble code is displayed during the DTC check, check the trouble areas listed for that code in the table below and proceed to the appropriate page.

Cruise Control System

DTC CODE	DETECTION ITEM	TROUBLE AREA	SEE PAGE
P0500	Vehicle Speed Sensor Malfunction	1. Open or short in speed signal circuit 2. Combination meter 3. Vehicle speed sensor 4. ECM	INFO
P0503	Vehicle Speed Sensor "A" Intermittent / Erratic / High	1. Open or short in speed signal circuit 2. Combination meter 3. Vehicle speed sensor 4. ECM	INFO
P0571	Brake Switch "A" Circuit	1. Stop light switch 2. Stop light switch circuit 3. ECM	INFO
P0575	Cruise Control Input Circuit	ECM	INFO



Last Modified: 3-10-2010	6.4 C	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000ZRE04IX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: P0571: Brake Switch "A" Circuit (2010 Corolla)		

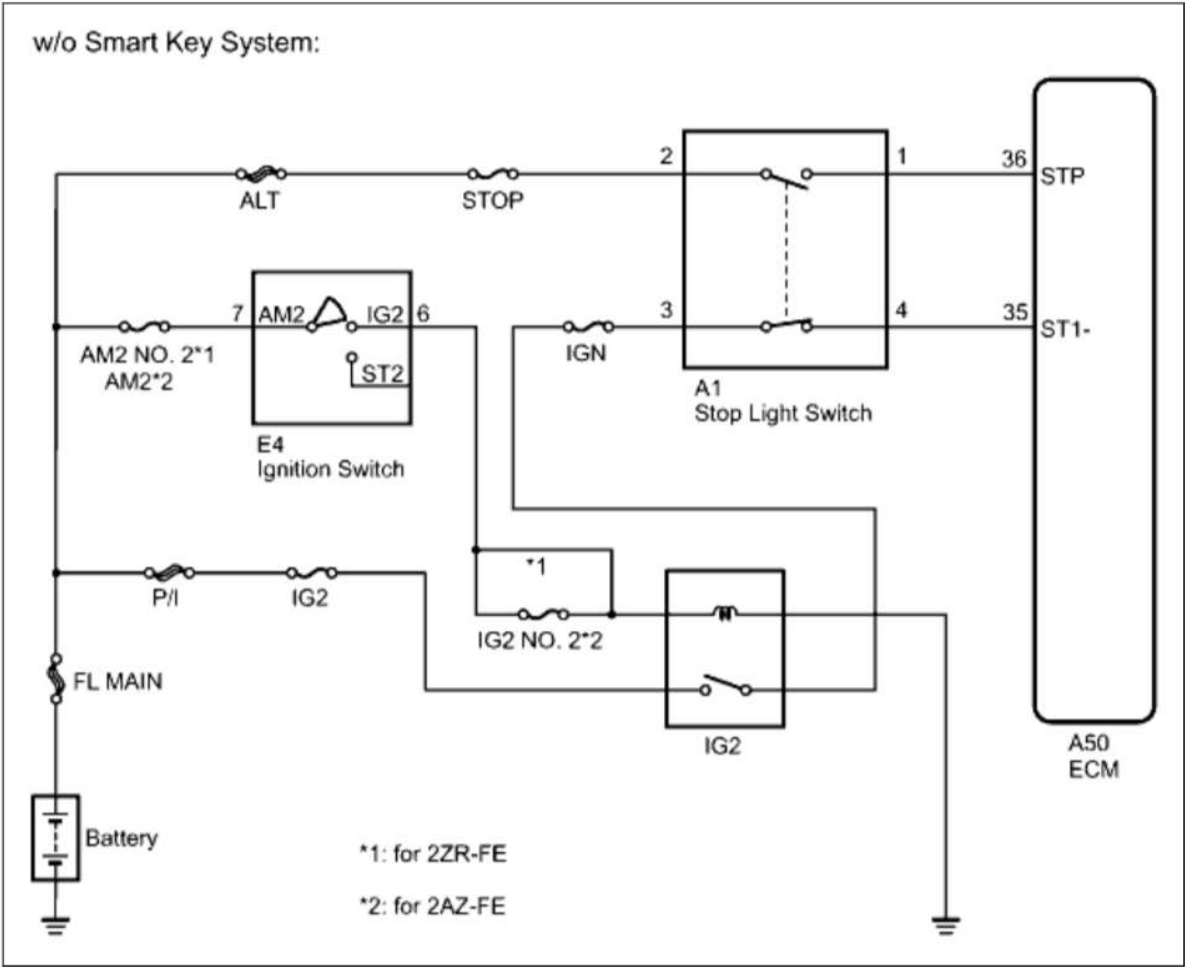
DTC	P0571	Brake Switch "A" Circuit
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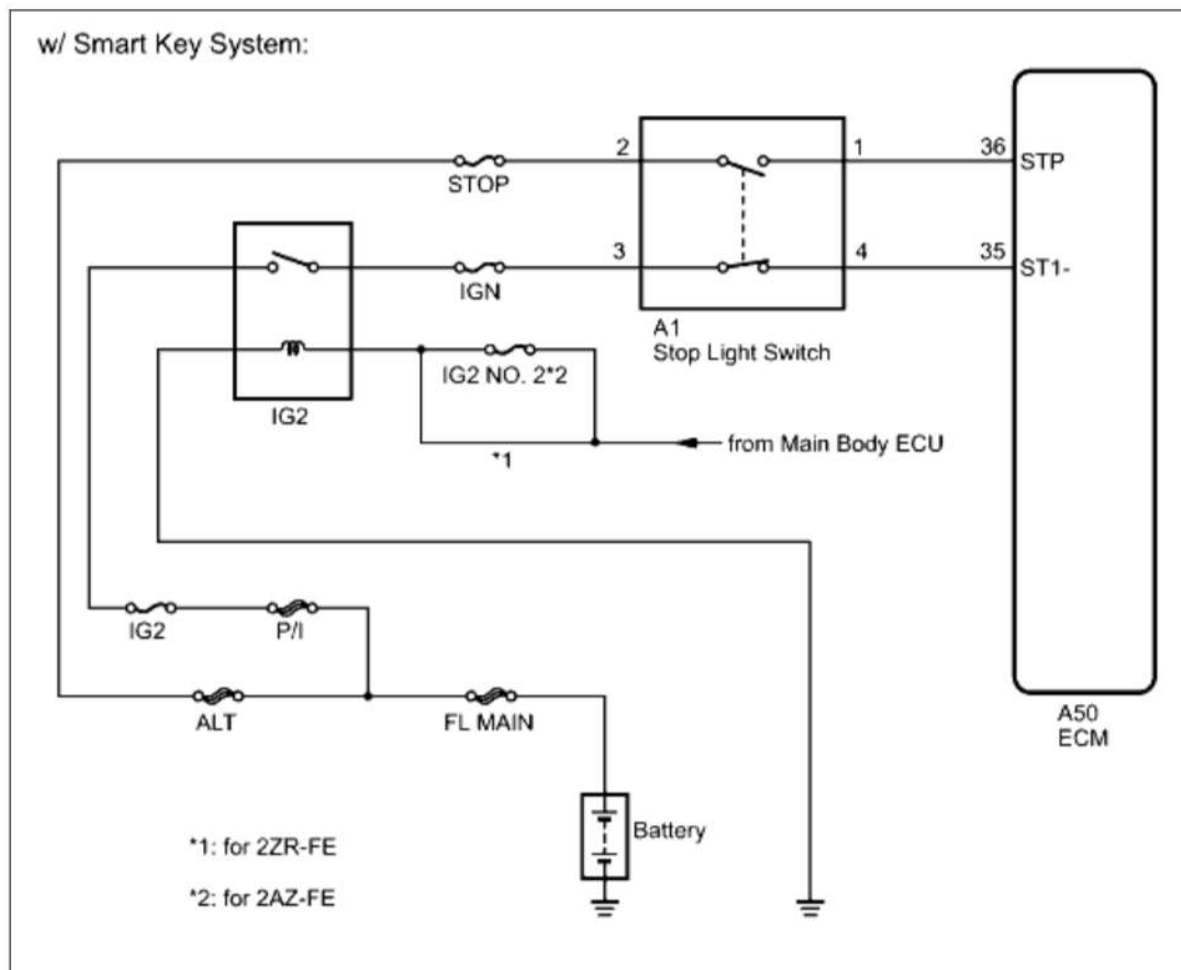
DESCRIPTION

When the brake pedal is depressed, the stop light switch sends a signal to the ECM. When the ECM receives this signal, it cancels the cruise control. The fail-safe function operates to enable normal driving even if there is a malfunction in the stop light signal circuit. The cancellation condition occurs when voltage is applied to terminal STP. When the brake is applied, voltage is normally applied to terminal STP of the ECM through the STOP fuse and the stop light switch, and the ECM turns the cruise control off.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
P0571	When voltage of STP terminal and that of ST1 - terminal of ECM are less than 1 V for 0.5 sec. or more	• Stop light switch • Stop light switch circuit • ECM

WIRING DIAGRAM



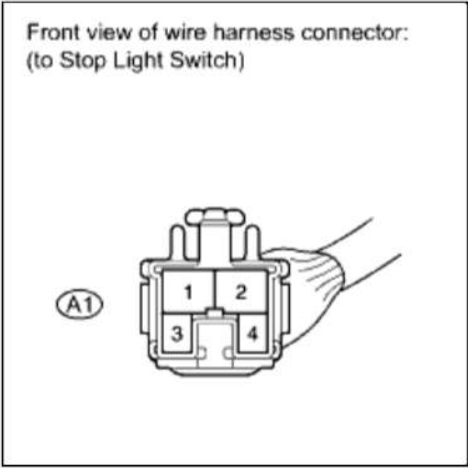


INSPECTION PROCEDURE

PROCEDURE

1. CHECK HARNESS AND CONNECTOR (STOP LIGHT SWITCH - BATTERY)

(a) Disconnect the stop light switch connector.



(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A1-2 - Body ground	Always	11 to 14 V
A1-3 - Body ground	Ignition switch ON	11 to 14 V

(c) Reconnect the stop light switch connector.

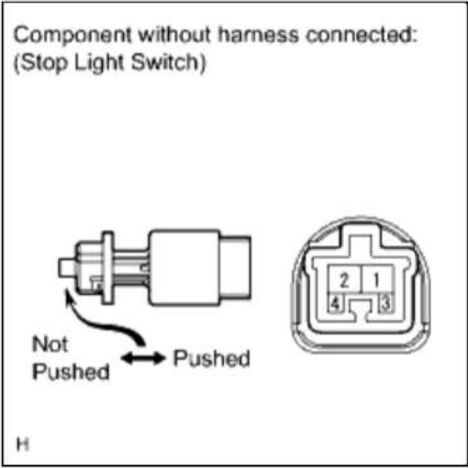
NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK
▼

2.

INSPECT STOP LIGHT SWITCH

(a) Remove the stop light switch  .



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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 - 2	Switch pin not pushed	Below 1 Ω
3 - 4	Switch pin not pushed	10 kΩ or higher
1 - 2	Switch pin pushed	10 kΩ or higher
3 - 4	Switch pin pushed	Below 1 Ω

(c) Install the stop light switch INFO.

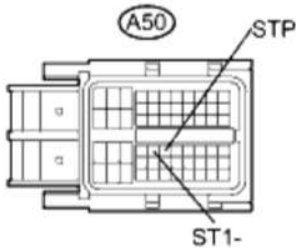
NG ► **REPLACE STOP LIGHT SWITCH**

OK
▼

3.	CHECK ECM
----	-----------

(a) Disconnect the ECM connector.

Front view of wire harness connector:
(to ECM)



- (b) Turn the ignition switch to ON.
- (c) Measure the voltage according to the value(s) in the table below.
- Standard V voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A 50-36 (STP) - Body ground	Brake pedal depressed	11 to 14 V
A 50-36 (STP) - Body ground	Brake pedal released	Below 1 V
A 50-35 (ST1-) - Body ground	Brake pedal depressed	Below 1 V
A 50-35 (ST1-) - Body ground	Brake pedal released	11 to 14 V

Result:

RESULT	PROCEED TO
NG	A
OK (for 2ZR-FE)	B
OK (for 2AZ-FE)	C

- (d) Reconnect the ECM connector.

- C ► REPLACE ECM (for 2AZ-FE)
- B ► REPLACE ECM (for 2ZR-FE)
- A ► REPAIR OR REPLACE HARNESS OR CONNECTOR
(STOP LIGHT SWITCH - ECM)

Last Modified: 3-10-2010	6.4 C	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000ZRD03IX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: P0500,P0503: Vehicle Speed Sensor Malfunction (2010 Corolla)		

DTC	P0500	Vehicle Speed Sensor Malfunction
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DTC	P0503	Vehicle Speed Sensor "A" Intermittent / Erratic / High
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DESCRIPTION

The cruise control system uses the same vehicle speed signal that is sent to the ECM for the SFI system. If DTC P0500 or P0503 is detected, perform the diagnosis using the inspection procedure for DTC P0500 in the SFI system [INFO](#) for 2ZR-FE, or [INFO](#) for 2AZ-FE). The speed signal is converted for use by the cruise control system inside the ECM. Both the SFI system and the cruise control system can set DTC P0500, however, the detection conditions of the two systems are different.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
P0500	The vehicle speed signal from the vehicle speed sensor is cut for 0.14 sec. or more while cruise control is in operation.	• Open or short in speed signal circuit • Combination meter • Vehicle speed sensor • ECM
P0503	Momentary interruption and noise are detected when a rapid change of vehicle speed occurs while cruise control is in operation.	• Open or short in speed signal circuit • Combination meter • Vehicle speed sensor • ECM

WIRING DIAGRAM

Refer to the SFI System (for 2ZR-FE) [INFO](#) .

Refer to the SFI System (for 2AZ-FE) [INFO](#) .

INSPECTION PROCEDURE

Refer to the SFI System (for 2ZR-FE) [INFO](#) .

Refer to the SFI System (for 2AZ-FE) [INFO](#) .



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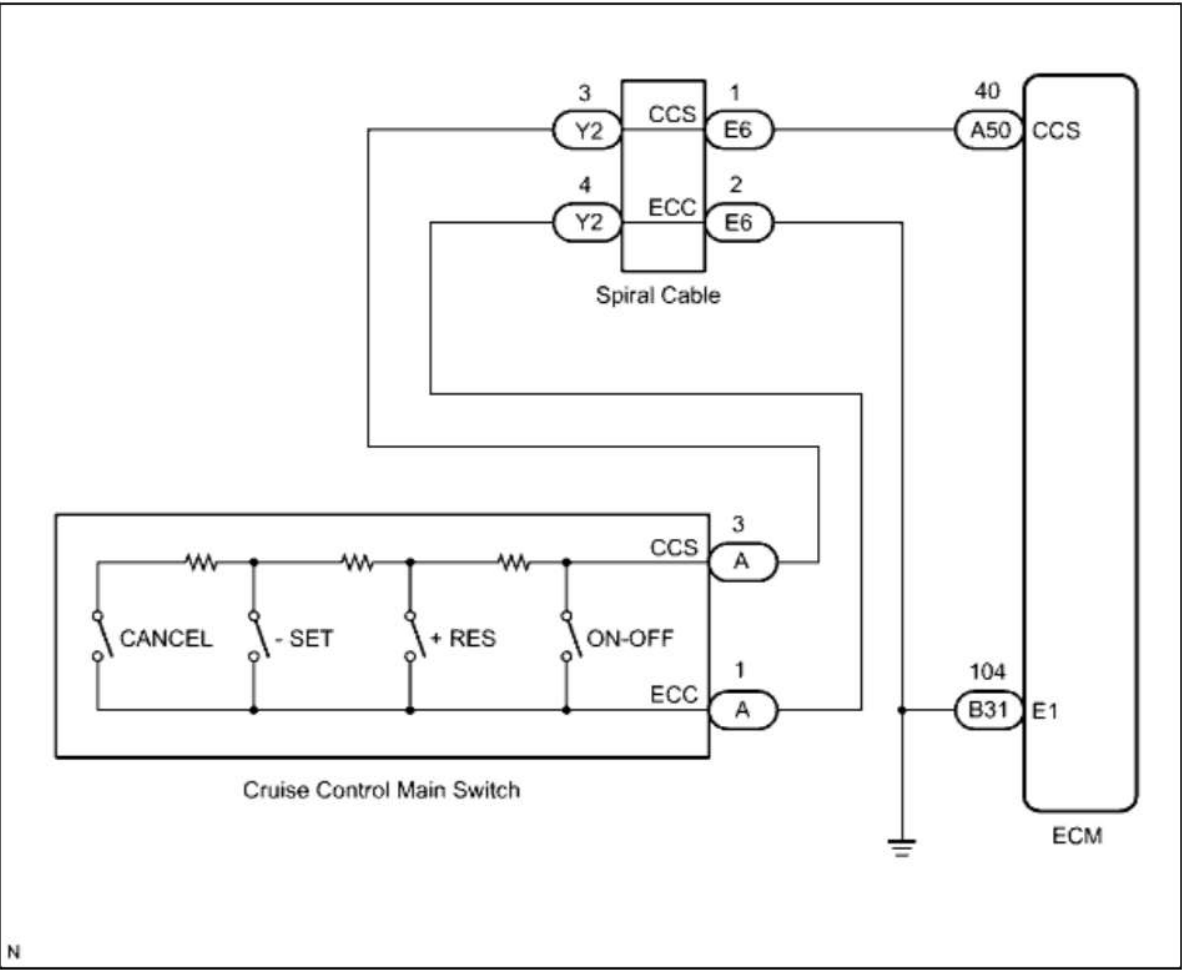
Last Modified: 3-10-2010	6.4 J	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000PLU05BX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: Cruise Control Switch Circuit (2010 Corolla)		

Cruise Control Switch Circuit

DESCRIPTION

The cruise control main switch operates 7 functions: SET, - (COAST), TAP-DOWN, RES (RESUME), + (ACCEL), TAP-UP, and CANCEL. The SET, TAP-DOWN, and - (COAST) functions, and the RES (RESUME), TAP-UP, and + (ACCEL) functions are operated with the same switch. The cruise control main switch is an automatic return type switch which turns on only while operating it in each direction and turns off after releasing it. The internal contact point of the cruise control main switch is turned on with the switch operation. Then the ECM reads the voltage value that has been changed by the switch operation to control SET, - (COAST), RES (RESUME), + (ACCEL), and CANCEL.

WIRING DIAGRAM



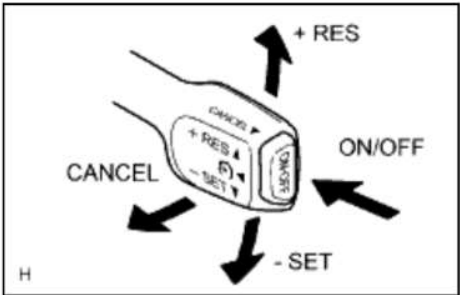
INSPECTION PROCEDURE

PROCEDURE

1. READ VALUE USING TECHSTREAM

- (a) Connect the Techstream to the DLC3.
- (b) Turn the ignition switch to ON.
- (c) Turn the Techstream on.
- (d) Enter the following menus: Powertrain / Cruise Control / Data List.
- (e) Check the Data List for proper functioning of the cruise control main switch.

Cruise Control (ECM)



TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Main SW M-CPU	Main switch signal (Main CPU)/ON or OFF	ON: Cruise control main switch pushed OFF: Cruise control main switch not pushed	-
Cancel SW	CANCEL switch signal/ON or OFF	ON: CANCEL switch on OFF: CANCEL switch off	-
SET/COAST SW	- (COAST)/SET switch signal/ON or OFF	ON: - SET switch on OFF: - SET switch off	-
RES/ACC SW	+ (ACCEL)/RES (RESUME) switch signal/ON or OFF	ON: + RES switch on OFF: + RES switch off	-

OK:

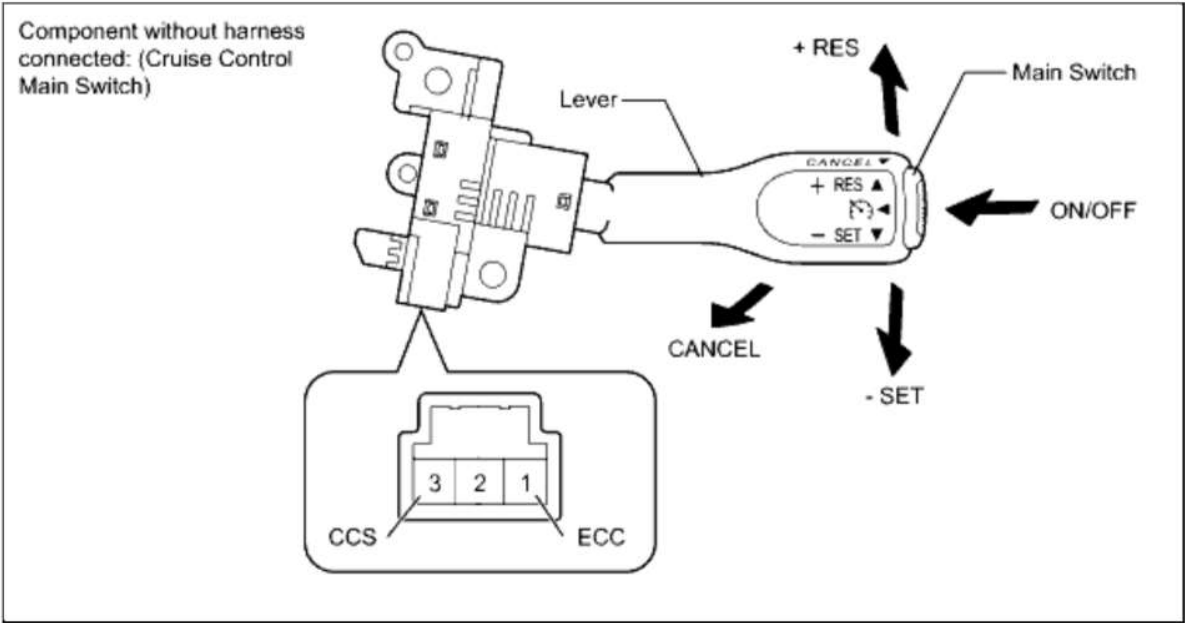
When the cruise control main switch is operated, the display changes as shown above.
Result:

RESULT	PROCEED TO
OK	A
NG (All items are defective)	B
NG (1 to 3 items are defective)	C

- C▶
REPLACE
CRUISE
CONTROL MAIN
SWITCH
- B▶
INSPECT
CRUISE
CONTROL MAIN
SWITCH
- A▶
PROCEED TO
NEXT
SUSPECTED
AREA SHOWN
IN PROBLEM
SYMPTOMS
TABLE

2. INSPECT CRUISE CONTROL MAIN SWITCH

(a) Remove the cruise control main switch  .



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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 (ECC) - 3 (CCS)	Main Switch off* 1	1 MΩ 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 neutral position

(c) Install the cruise control main switch .

NG ► **REPLACE CRUISE CONTROL MAIN SWITCH**

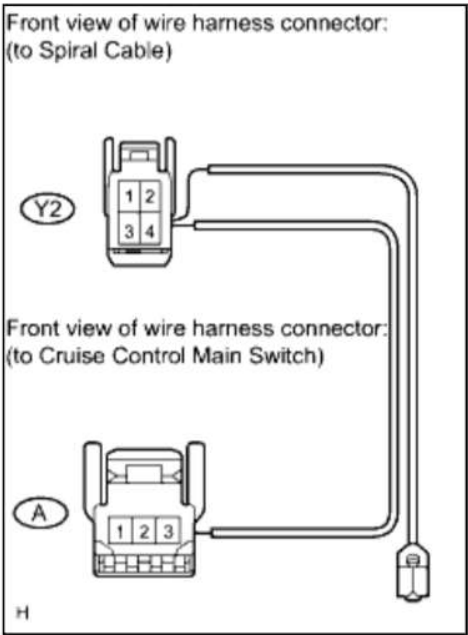
OK
▼

3.	CHECK HARNESS AND CONNECTOR (CRUISE CONTROL MAIN SWITCH - SPIRAL CABLE)
----	---

- (a) Disconnect the Y2 connector from the spiral cable.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A-1 - Y2-4	Always	Below 1 Ω
A-3 - Y2-3	Always	Below 1 Ω



- (c) Reconnect the Y2 connector from the spiral cable.

NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK ▼

4. CHECK SPIRAL CABLE

NOTICE:

The spiral cable is an important part of the SRS airbag system. Incorrect removal or installation of the spiral cable may cause airbag deployment. Be sure to read the page shown in the brackets.

HINT:

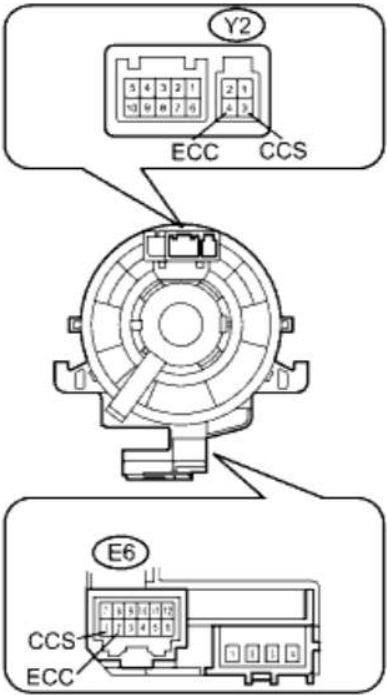
- Removal INFO
- Installation INFO

- (a) Remove the spiral cable INFO.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
-------------------	-----------	---------------------

Component without harness connected:
(Spiral Cable)



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
Y2-3 (CCS) - E6-1 (CCS)	The spiral cable position is center	Below 1 Ω
	The spiral cable position is 2.5 rotations to the left	
	The spiral cable position is 2.5 rotations to the right	
Y2-4 (ECC) - E6-2 (ECC)	The spiral cable position is center	Below 1 Ω
	The spiral cable position is 2.5 rotations to the left	
	The spiral cable position is 2.5 rotations to the right	

HINT:

The spiral cable makes a maximum of approximately 5 rotations.

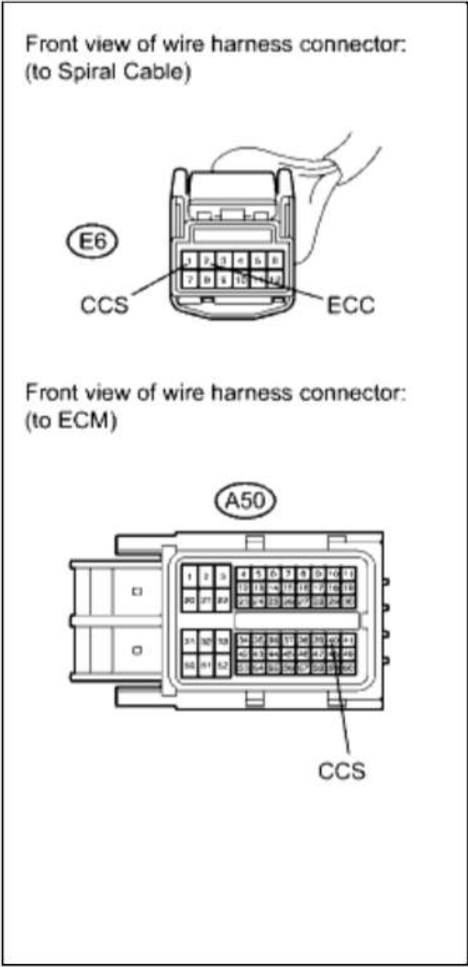
(c) Install the spiral cable.

NG ► **REPLACE SPIRAL CABLE**

OK
▼

5. CHECK HARNESS AND CONNECTOR (SPIRAL CABLE - ECM, BODY GROUND)

(a) Disconnect the spiral cable connector.



- (b) Disconnect the ECM connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E6-1 (CCS) - A50-40 (CCS)	Always	Below 1 Ω
A50-40 (CCS) - Body ground	Always	10 kΩ or higher
E6-2 (ECC) - Body ground	Always	Below 1 Ω

Result:

RESULT	PROCEED TO
NG	A
OK (for 2ZR-FE)	B
OK (for 2AZ-FE)	C

- (d) Reconnect the ECM connector.

(e) Reconnect the spiral cable connector.

C ► REPLACE ECM (for 2AZ-FE)

B ► REPLACE ECM (for 2ZR-FE)

A ► REPAIR OR REPLACE HARNESS OR CONNECTOR



Last Modified: 3-10-2010	6.4 J	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000ZAN01KX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: Clutch Switch Circuit (2010 Corolla)		

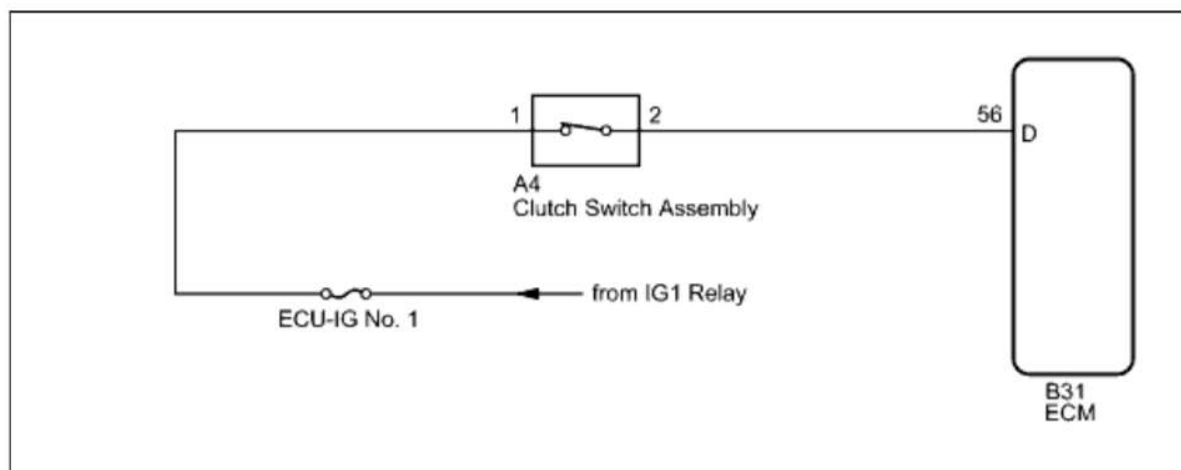
Clutch Switch Circuit

DESCRIPTION

Clutch switch circuit inspection is necessary for M/T vehicles.

When the clutch pedal is released, the ECM receives positive (+) battery voltage through the ECU-IG No. 1 fuse. While depressing the clutch pedal, the clutch switch sends a signal to terminal D of the ECM. The ECM cancels cruise control when terminal D receives the signal.

WIRING DIAGRAM

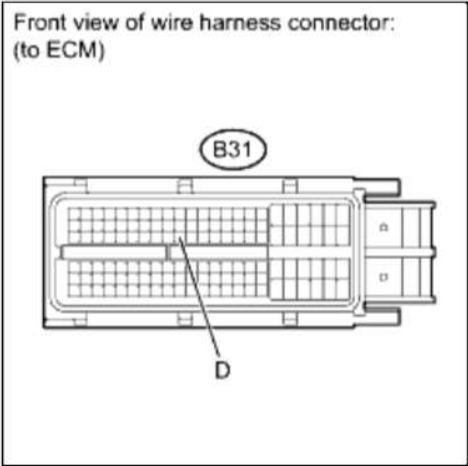


INSPECTION PROCEDURE

PROCEDURE

1.	INSPECT ECM
-----------	--------------------

(a) Disconnect the ECM connector.



- (b) Turn the ignition switch to ON.
- (c) Measure the voltage according to the value(s) in the table below.
- Standard V Voltage:

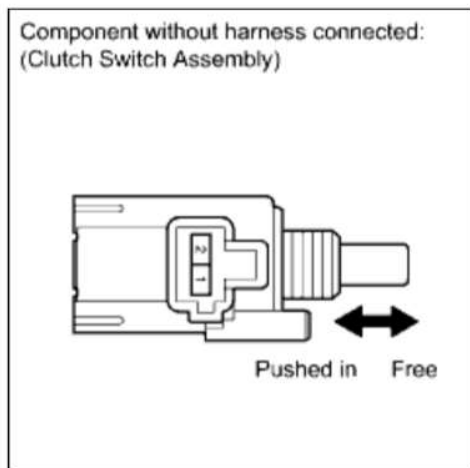
TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
B31-56 (D) - Body ground	Clutch pedal depressed	Below 1 V
	Clutch pedal released	11 to 14 V

- (d) Reconnect the ECM connector.

- NG** ► **INSPECT CLUTCH SWITCH ASSEMBLY**
- OK** ► **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE**

2.	INSPECT CLUTCH SWITCH ASSEMBLY
-----------	---------------------------------------

- (a) Turn the ignition switch off.
- (b) Remove the clutch switch assembly  .



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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 - 2	Switch pin free	10 k Ω or higher
	Switch pin pushed in	Below 1 Ω

(d) Install the clutch switch assembly .

NG ► **REPLACE CLUTCH SWITCH ASSEMBLY**

OK

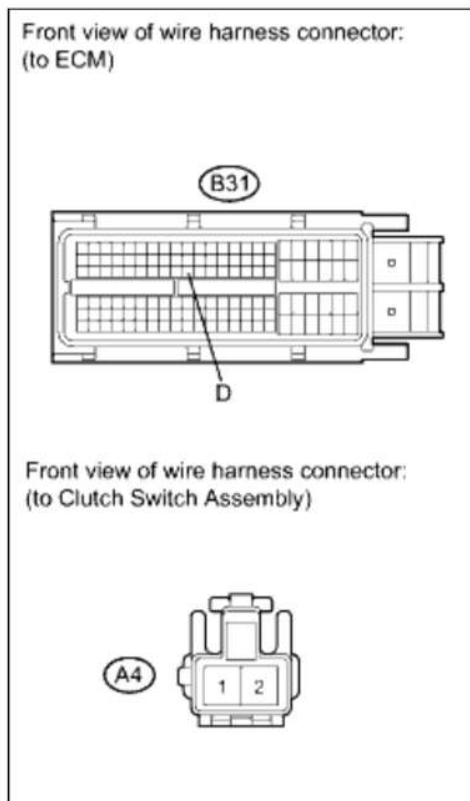


3. CHECK HARNESS AND CONNECTOR (ECM - CLUTCH SWITCH ASSEMBLY)

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
B31-56 (D) - A4-2	Always	Below 1 Ω
B31-56 (D) - Body ground	Always	10 k Ω or higher



NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR
(ECM - CLUTCH SWITCH ASSEMBLY)

OK ► REPAIR OR REPLACE HARNESS OR CONNECTOR
(BATTERY - CLUTCH SWITCH ASSEMBLY)



Last Modified: 3-10-2010	6.4 C	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000ZRF039X
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: P0575: Cruise Control Input Circuit (2010 Corolla)		

DTC	P0575	Cruise Control Input Circuit
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DESCRIPTION

This DTC indicates the internal abnormalities of the ECM.

DTC NO.	DTC DETECTION CONDITION	TROUBLE AREA
P0575	When either of the following conditions is met: • STP signals input to the ECM supervisory CPU and control ECU are different for 0.15 seconds or more • 0.4 seconds have passed after cruise cancel input signal (STP input) is input to the ECM	ECM

HINT:

The ECM receives signals from each sensor to control all functions of the cruise control system. When a trouble code is detected, the fail-safe function remains on until the ignition switch is turned off.

INSPECTION PROCEDURE

PROCEDURE

1.	REPLACE ECM
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(a) Replace the ECM  for 2ZR-FE,  for 2AZ-FE).

NEXT ► **END**



Last Modified: 3-10-2010	6.4 J	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000PLV053X
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: Cruise Main Indicator Light Circuit (2010 Corolla)		

Cruise Main Indicator Light Circuit

DESCRIPTION

- The ECM detects a cruise control switch signal and sends it to the combination meter through CAN. Then the CRUISE main indicator light comes on.
- The CRUISE main indicator light circuit uses CAN for communication. If there is a malfunction in this circuit, check for DTCs in the CAN Communication System before troubleshooting this circuit .

INSPECTION PROCEDURE

PROCEDURE

1. PERFORM ACTIVE TEST USING TECHSTREAM

- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Combination Meter / Active Test.
- Check the CRUISE main indicator light by performing the Active Test.

Combination Meter:

TESTER DISPLAY	TEST PART	CONTROL RANGE	DIAGNOSTIC NOTE
Indicat. Lamp Cruise	CRUISE main indicator light	OFF or ON	Confirm that the vehicle is stopped, engine idling

OK:

Indicator light blinks/goes off.

NG  **REPLACE COMBINATION METER**

OK

2. READ VALUE USING TECHSTREAM

- (a) Connect the Techstream to the DLC3.
- (b) Turn the ignition switch to ON.
- (c) Turn the Techstream on.
- (d) Enter the following menus: Powertrain / Cruise Control / Data List.
- (e) Check the Data List for proper functioning of the CRUISE main indicator light.

Cruise Control (ECM):

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
CCS Indicator M-CPU	Cruise indicator signal (Main CPU)/ON or OFF	ON: "CRUISE" on OFF: "CRUISE" off	-

OK:

When the cruise control main switch is operated, the display changes as shown above.

Result:

RESULT	PROCEED TO
OK	A
NG (for 2ZR-FE)	B
NG (for 2AZ-FE)	C

C ► REPLACE ECM (for 2AZ-FE)

B ► REPLACE ECM (for 2ZR-FE)

A ► PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE



Last Modified: 3-10-2010	6.4 J	From: 200901
Model Year: 2010	Model: Corolla	Doc ID: RM000000V6104IX
Title: CRUISE CONTROL: CRUISE CONTROL SYSTEM: TC and CG Terminal Circuit (2010 Corolla)		

TC and CG Terminal Circuit

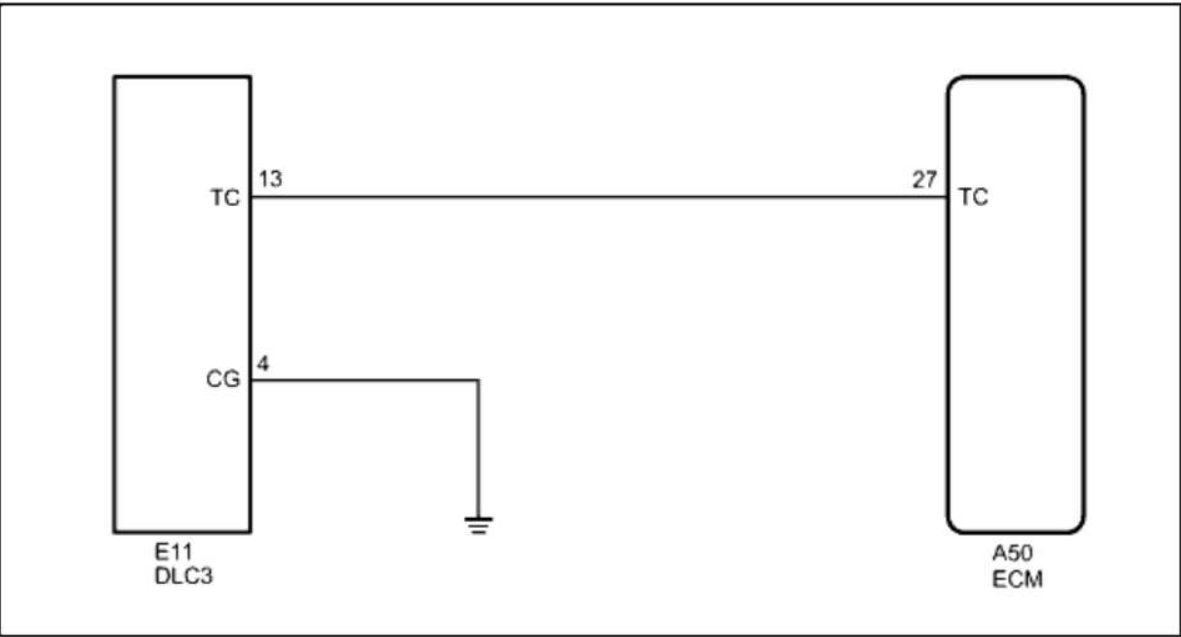
DESCRIPTION

Connecting terminals TC and CG of the DLC3 causes the system to enter self-diagnostic mode. If a malfunction is present, the MIL will blink.

HINT:

When a particular warning light remains blinking, a ground short in the wiring of terminal TC of the DLC3 or an internal ground short in the relevant ECU is suspected.

WIRING DIAGRAM

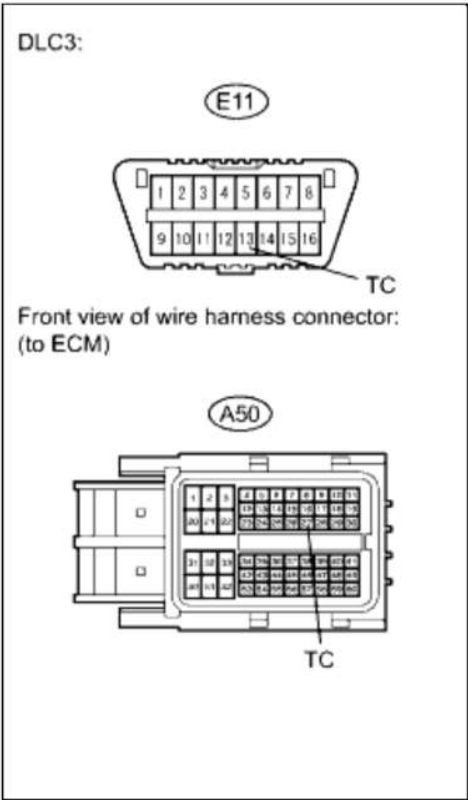


INSPECTION PROCEDURE

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (TERMINAL TC of DLC3 - ECM)
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(a) Disconnect the ECM connector.



- (b) Measure the resistance according to the value(s) in the table below.
- Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A 50-27 (TC) - E11-13 (TC)	Always	Below 1 Ω

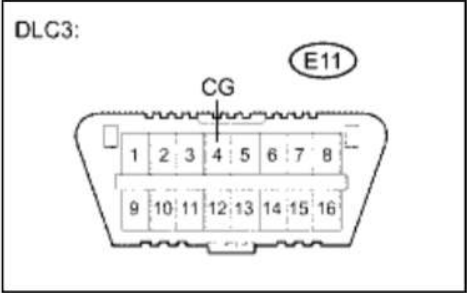
- (c) Reconnect the ECM connector.

NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR (DLC3 - ECM)**

OK
▼

2. CHECK HARNESS AND CONNECTOR (TERMINAL CG of DLC3 - BODY GROUND)

- (a) Measure the resistance according to the value(s) in the table below.
- Standard Resistance:



TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E11-4 (CG) - Body ground	Always	Below 1 Ω

NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR (DLC3 - BODY GROUND)**

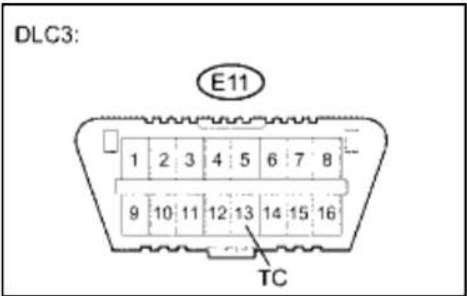
OK ▼

3. CHECK HARNESS AND CONNECTOR (TERMINAL TC of DLC3 - BODY GROUND)

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E11-13 (TC) - Body ground	Always	10 kΩ or higher



NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR OR EACH ECU**

OK ► **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS**

TABLE



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