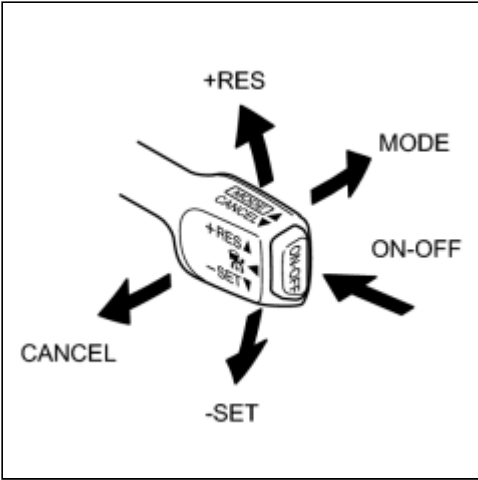


Cruise Control Switch Circuit



(a) Using the Techstream, read the Data List.

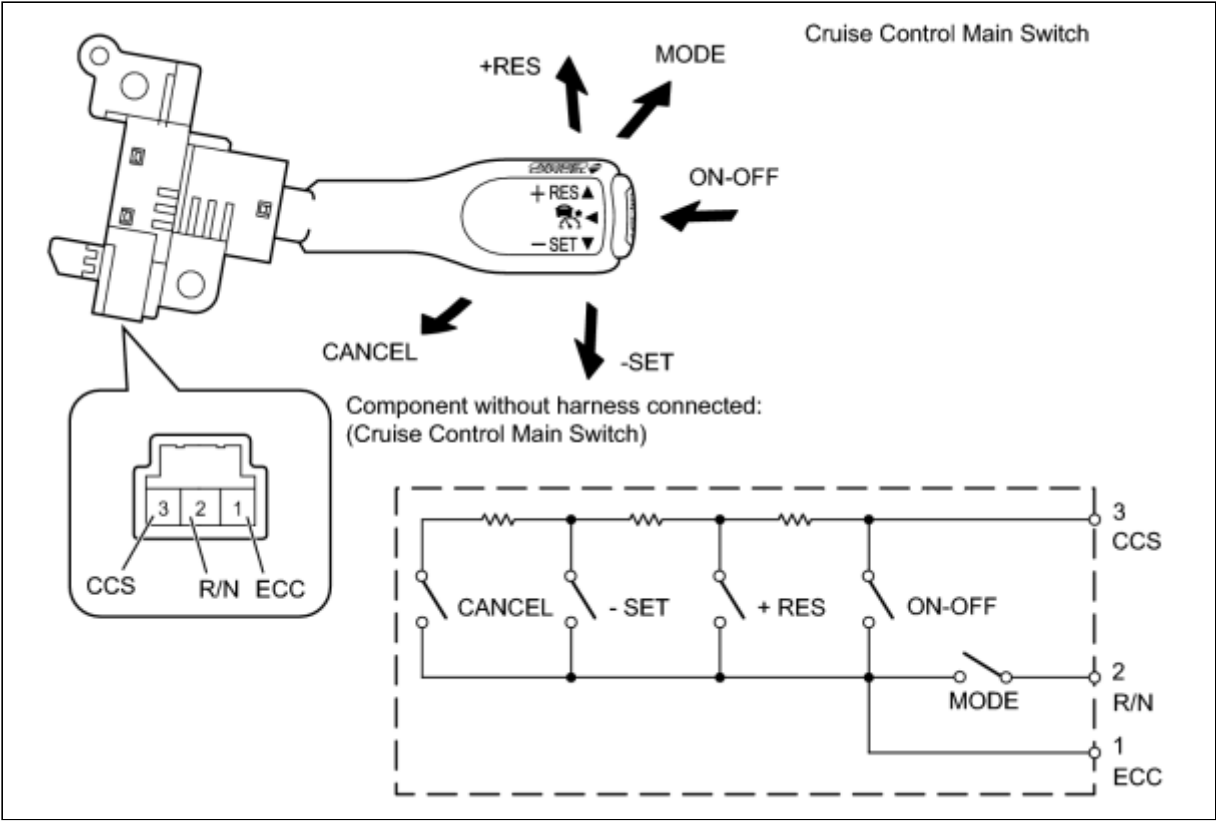
Radar Cruise

TESTER DISPLAY	MEASUREMENT ITEM/RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
CCS Main SW M- CPU	Cruise control main switch (Main CPU) / ON or OFF	ON: Cruise control main switch (Main CPU) on OFF: Cruise control main switch (Main CPU) off	-
Cancel Switch	CANCEL switch signal / ON or OFF	ON: CANCEL switch on OFF: CANCEL switch off	-
SET/COAST Switch	-SET switch signal / ON or OFF	ON: -SET switch on OFF: -SET switch off	-
RES/ACC Switch	+RES switch signal / ON or OFF	ON: +RES switch on OFF: +RES switch off	-
CCS Main SW S- CPU	Cruise control main switch (Sub CPU) / ON or OFF	ON: Cruise control main switch (Sub CPU) on OFF: Cruise control main switch (Sub CPU) off	-

OK:
The Techstream display changes according to operation of cruise control main switch.

OK
▼

2.	INSPECT CRUISE CONTROL MAIN SWITCH
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- (a) Remove the cruise control main switch INFO .
- (b) Measure the resistance according to the value(s) in the table below.
- Standard Resistance:

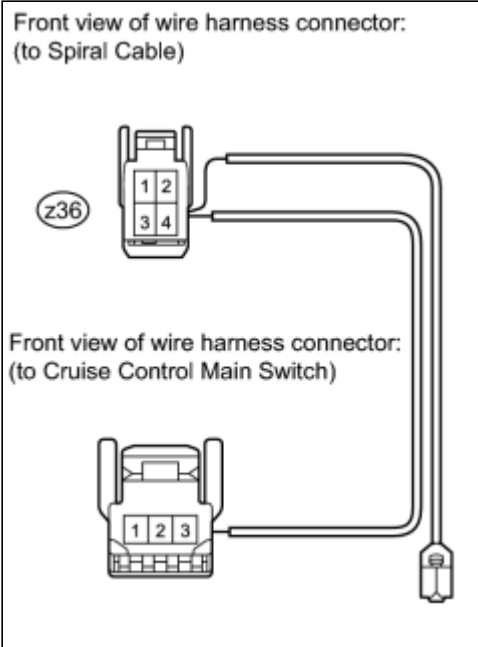
TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 (ECC) - 3 (CCS)	Neutral	1 MΩ or higher
	Pushed to +RES	235 to 245 Ω
	Pushed to -SET	620 to 640 Ω
	Pushed to CANCEL	1510 to 1570 Ω
	Main switch pushed off	1 MΩ or higher
	Main switch pushed on	Below 2.5 Ω
1 (ECC) - 2 (R/N)	MODE switch pushed on	Below 2.5 Ω
	MODE switch off	1 MΩ or higher

OK

▼

3.

INSPECT CRUISE CONTROL SWITCH WIRE



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

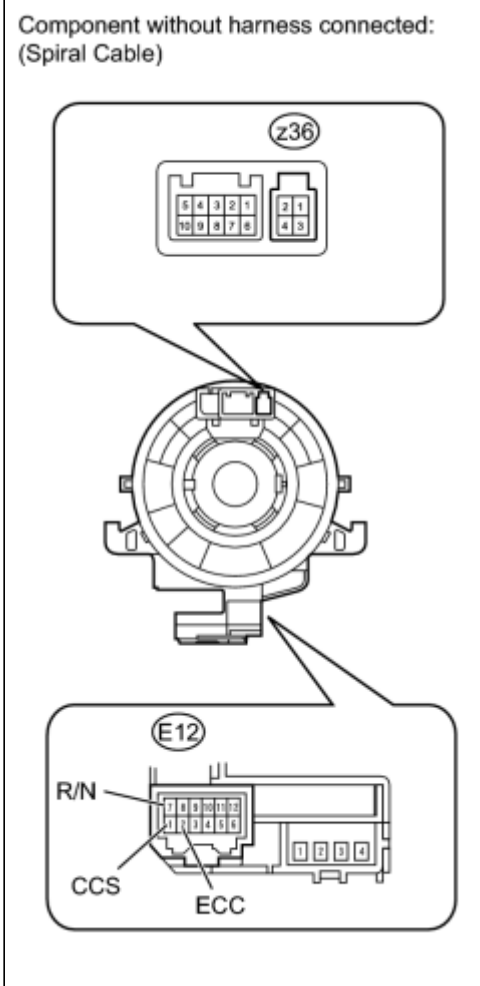
Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z36-3 - 3	Always	Below 1 Ω
z36-1 - 2		
z36-4 - 1		
z36-3 - Body ground	Always	10 kΩ or higher
z36-1 - Body ground		
z36-4 - Body ground		

OK

▼

4.	INSPECT SPIRAL CABLE
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- (a) Check the spiral cable and connector for scratches, cracks, dents and chips. If any defects are found, replace the spiral cable with a new one.
- (b) Check the spiral cable.
- (1) Set the spiral cable to the center position INFO.
- (2) After setting the spiral cable to the center position, rotate the spiral cable 2.5 times clockwise, and measure the resistance according to the value(s) in the table below. Then rotate the spiral cable 5 times counterclockwise, and measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z36-3 - E12-1 (CCS)	Always	Below 1 Ω
z36-1 - E12-7 (R/N)		
z36-4 - E12-2 (ECC)		

- (3) After setting the spiral cable to the center position, rotate the spiral cable 2.5 times clockwise. Then while rotating the spiral cable 5 times counterclockwise, measure the resistance according to the value(s) in the table below.

NOTICE:
As the spiral cable may break, do not rotate the spiral cable more than the specified amount.

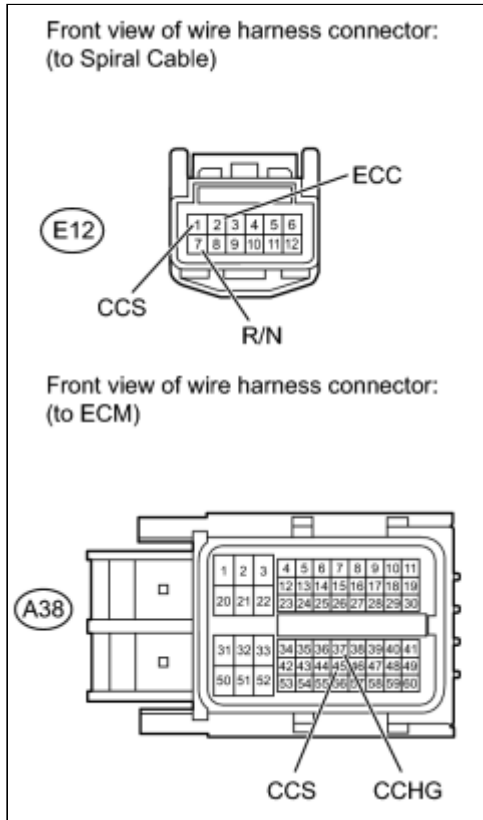
Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z36-3 - E12-1 (CCS)	Always	Below 1 Ω

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z36-1 - E12-7 (R/N)		
z36-4 - E12-2 (ECC)		

OK

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



- (a) Disconnect the E12 spiral cable connector.
- (b) Disconnect the A38 ECM connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E12-1 (CCS) - A38-45 (CCS)	Always	Below 1 Ω
E12-7 (R/N) - A38-37 (CCHG)		
E12-1 (CCS) - Body ground	Always	10 k Ω or higher
E12-7 (R/N) - Body ground		
E12-2 (ECC) - Body ground	Always	Below 1 Ω

OK

