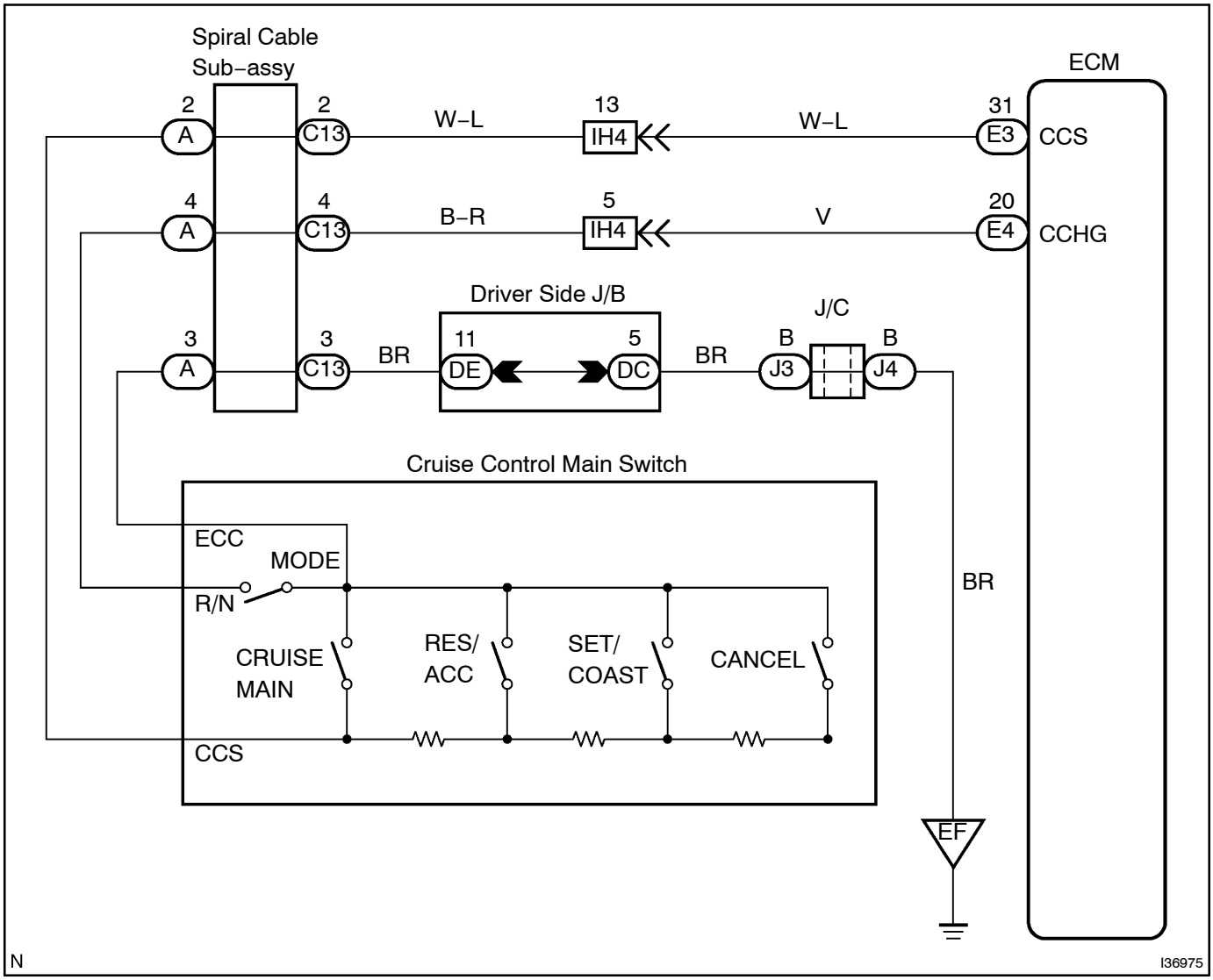
CRUISE CONTROL SWITCH CIRCUIT

CIRCUIT DESCRIPTION

The cruise control main switch operates eight functions: SET, COAST, TAP–DOWN, RESUME, ACCEL, TAP–UP, CANCEL and MODE. The SET, TAP–DOWN and COAST functions, and the 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 arrow direction and turns off after releasing it. The internal contact point of the cruise control main switch is turned on with the switch operation. The ECM then reads the resistance value that has been changed by the switch operation to control MODE, SET, COAST, RESUME, ACCEL and CANCEL.
The dynamic laser cruise control system has two cruise control modes: the constant speed control mode and vehicle–to–vehicle distance control mode.

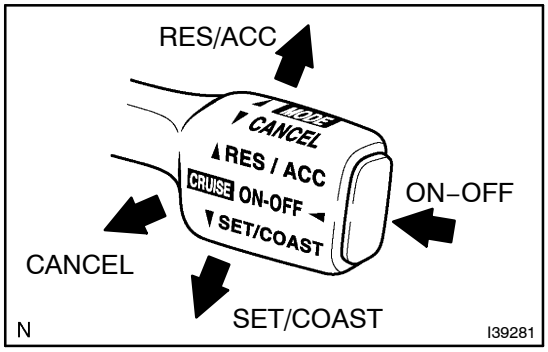
- The vehicle–to–vehicle distance control mode is always selected when starting up the dynamic laser cruise control system.
- The operation of the constant speed control mode is the same as that for the conventional type cruise control system.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE ON INTELLIGENT TESTER II



(a) Connect the intelligent tester II to the DLC3.
(b) Turn the ignition switch to the ON position.
(c) According to the display on the tester, read the "DATA LIST".

ECM:

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
Main SW M–CPU	Main SW signal (Main CPU) / ON or OFF	ON : Main SW ON (Pushed on) OFF: Main SW OFF (Pushed off)	–
Main SW S–CPU	Main SW signal (Sub CPU) / ON or OFF	ON : Main SW ON (Pushed on) OFF: Main SW OFF (Pushed off)	–
CANCEL Switch	CANCEL SW signal / ON or OFF	ON : CANCEL SW ON OFF : CANCEL SW OFF	–
SET/COAST Switch	SET/COAST SW signal / ON or OFF	ON : SET/COAST SW ON OFF : SET/COAST SW OFF	–
RES/ACC Switch	RES/ACC SW signal / ON or OFF	ON : RES/ACC SW ON OFF : RES/ACC OFF	–

OK: When cruise control main switch operation is performed the standard values will be above.
Result:

OK	A
NG (All items are defective.)	B
NG (One to Four items are defective.)	C

B → **Go to step 2**

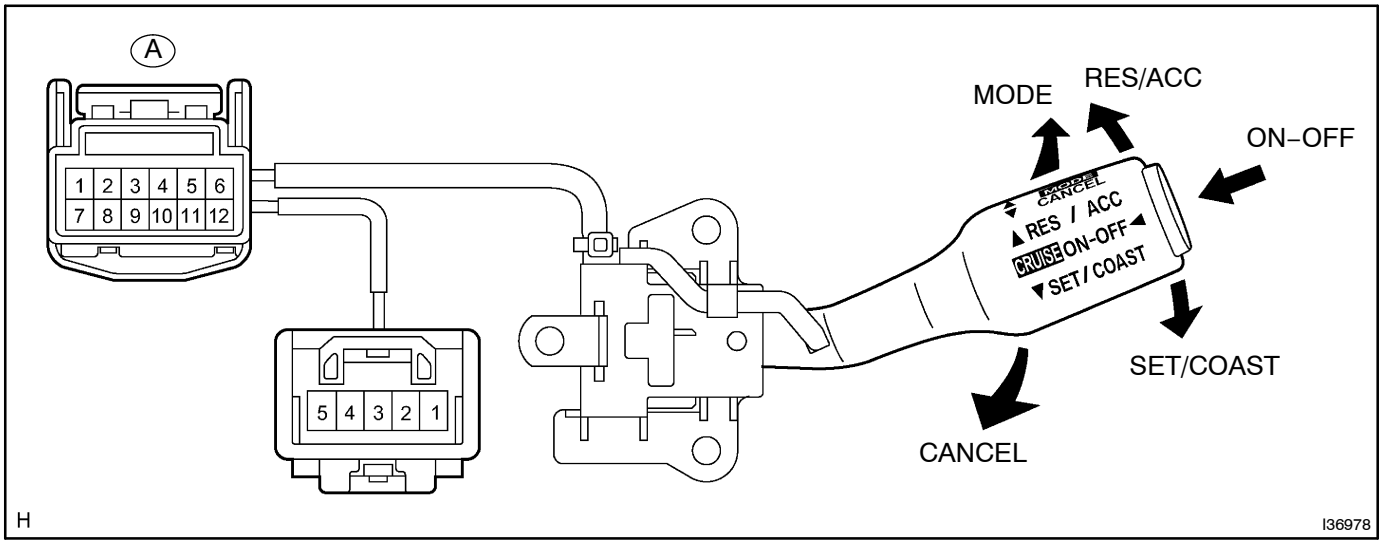
C → **REPLACE CRUISE CONTROL MAIN SWITCH ASSY (SEE PAGE 82–11)**

A

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–3638)

2	INSPECT CRUISE CONTROL MAIN SWITCH ASSY

(a) Disconnect the cruise control main switch connector.



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

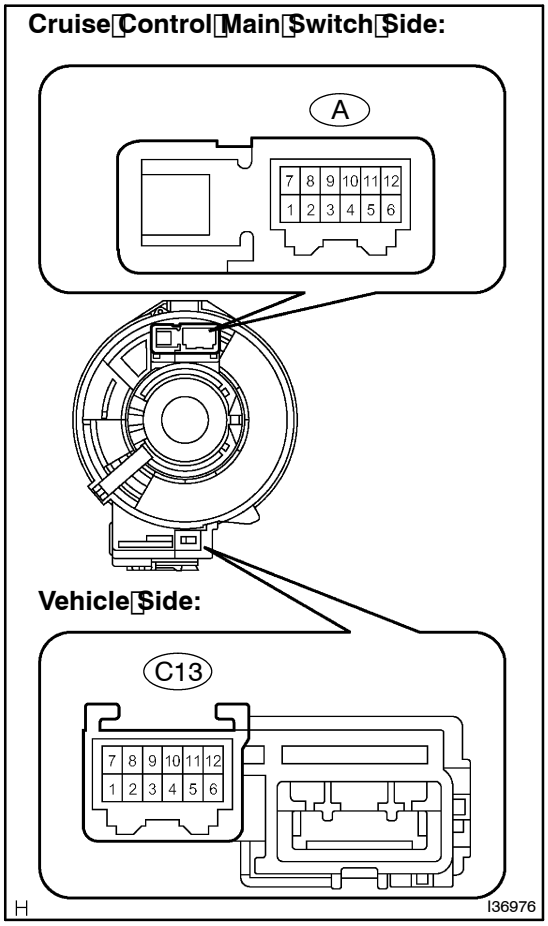
Standard:

Switch condition	Tester connection	Resistance(Ω)
Neutral	A–2 – A–3, A–3 – A–4	10 kΩ or higher
RES/ACC	A–2 – A–3	210 to 270
SET/COAST	A–2 – A–3	560 to 700
CANCEL	A–2 – A–3	1,380 to 1,700
Main Switch OFF	A–2 – A–3	10 kΩ or higher
Main Switch ON	A–2 – A–3	Below 1 Ω
MODE	A–3 – A–4	Below 1 Ω

NG → **REPLACE CRUISE CONTROL MAIN SWITCH ASSY** (SEE PAGE 32–11)

OK

3 INSPECT SPIRAL CABLE SUB–ASSY



(a) Disconnect the spiral cable sub–assy connector.

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

Standard:

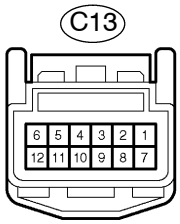
Terminal No.	Specified value
A–2 – C13–2	Below 1 Ω
A–3 – C13–3	Below 1 Ω
A–4 – C13–4	Below 1 Ω

NG → **REPLACE SPIRAL CABLE SUB–ASSY (SEE PAGE 60–31)**

OK

4 CHECK HARNESS AND CONNECTOR (SPIRAL CABLE SUB–ASSY – ECM)

Vehicle Side Connector Front View:



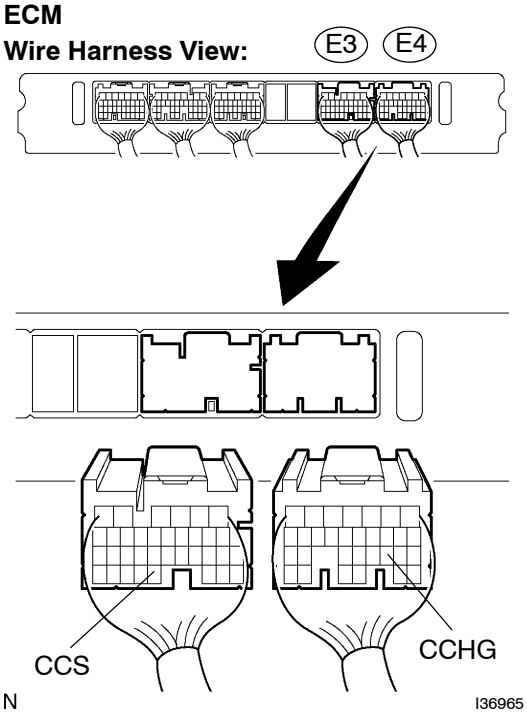
N I31380

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

Standard:

Tester connection	Condition	Specified value
C13–2 – E3–31 (CCS)	Always	Below 1 Ω
C13–4 – E4–20 (CCHG)	Always	Below 1 Ω
C13–2 – Body ground	Always	10 kΩ or higher
C13–4 – Body ground	Always	10 kΩ or higher

ECM
Wire Harness View:



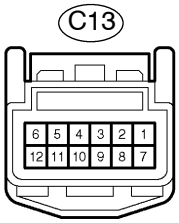
N I36965

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5	CHECK HARNESS AND CONNECTOR (SPIRAL CABLE SUB–ASSY – BODY GROUND)

Vehicle Side Connector Front View:



N I31380

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

Standard:

Tester connection	Condition	Specified value
C13–3 – Body ground	Always	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE ECM (SEE PAGE 10–21)