CRUISE CONTROL SWITCH CIRCUIT

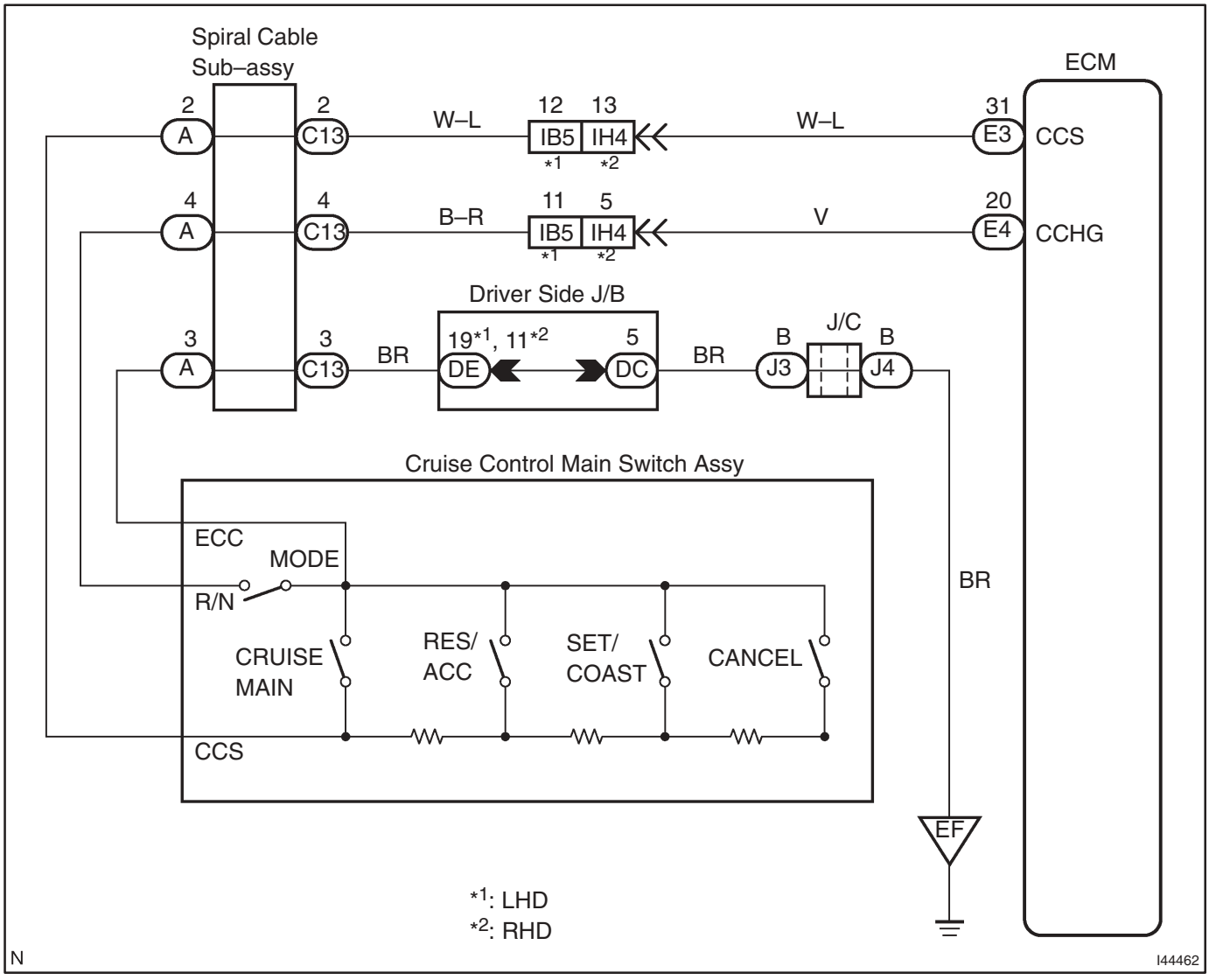
CIRCUIT DESCRIPTION

The cruise control main switch operates 8 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 radar cruise control system has 2 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 radar cruise control system.
- The operation of the constant speed control mode is the same as a conventional cruise control system.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ DATA LIST (CRUISE CONTROL MAIN SWITCH)

(a) Check the Data List for proper function of the cruise control main switch.
ECM (Cruise Control):

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

OK: When cruise control main switch operation is performed, ON will be display.
Result:

Result	Proceed to
OK	A
NG (all items are defective)	B
NG (one or more items are defective)	C

B → **Go to step 2**

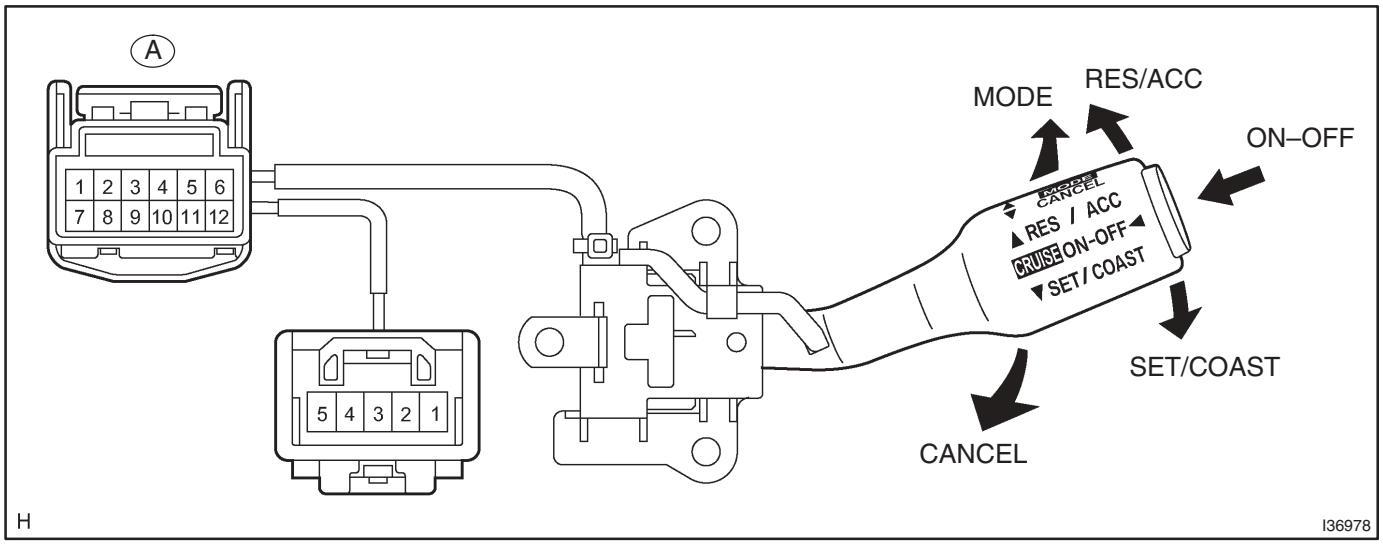
C → **REPLACE CRUISE CONTROL MAIN SWITCH ASSY (See Pub. No. RM1049E, page 82–11)**

A

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE
(See page 05–20)

2 INSPECT CRUISE CONTROL MAIN SWITCH ASSY

(a) Remove the cruise control main switch.



(b) Measure the resistance of the main switch.

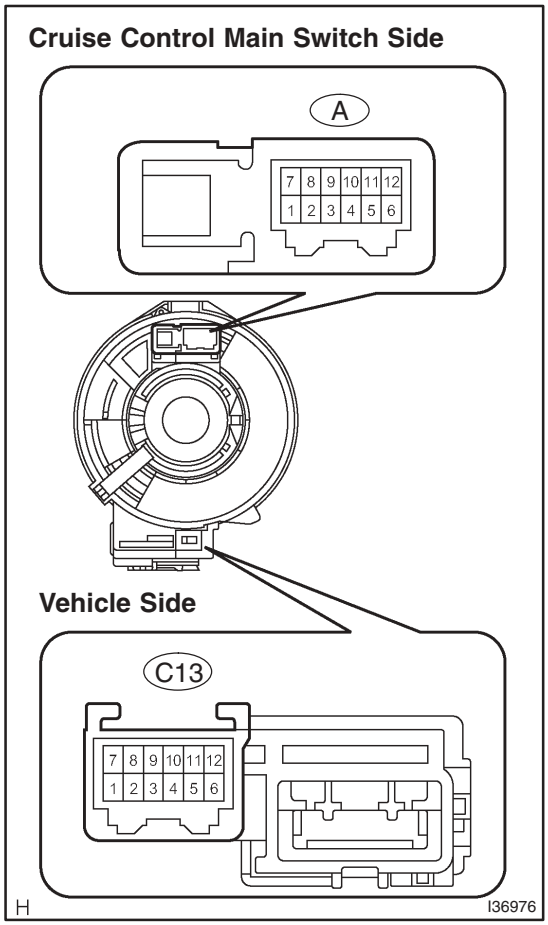
Standard:

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

NG → **REPLACE CRUISE CONTROL MAIN SWITCH ASSY (See Pub. No. RM1049E, page 82–11)**

OK

3 INSPECT SPIRAL CABLE SUB–ASSY



(a) Remove the spiral cable.

(b) Measure the resistance of the spiral cable.

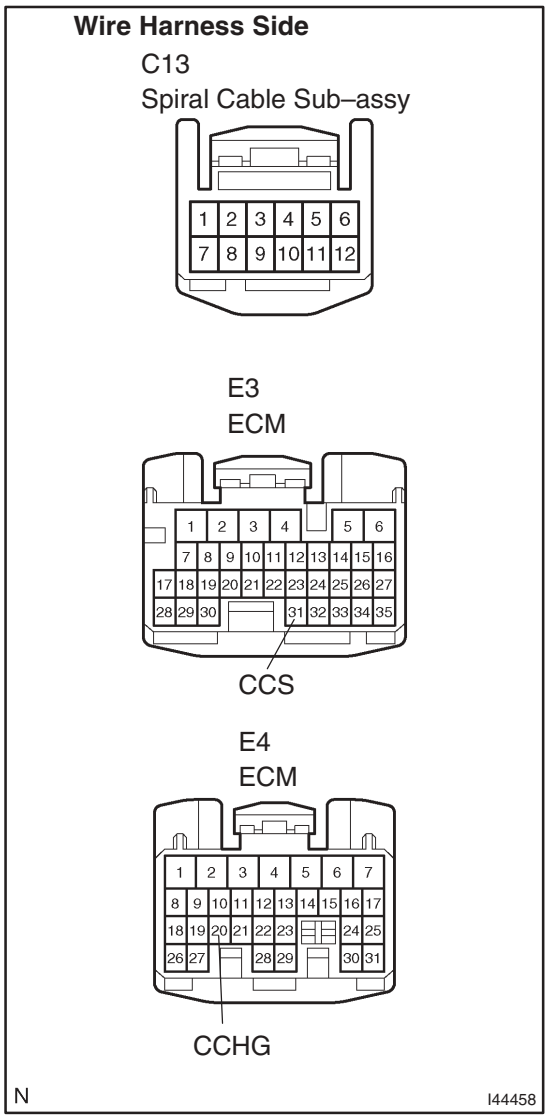
Standard:

Tester Connection	Specified Condition
A–2 – C13–2	Below 1 Ω
A–3 – C13–3	Below 1 Ω
A–4 – C13–4	Below 1 Ω

OK

NG → **REPLACE SPIRAL CABLE SUB–ASSY (See Pub. No. RM1049E, page 60–31)**

4	CHECK WIRE HARNESS (SPIRAL CABLE SUB–ASSY – ECM AND BODY GROUND)



(a) Disconnect the C13 spiral cable connector.
(b) Disconnect the E3 and E4 ECM connectors.
(c) Measure the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
C13–2 – E3–31 (CCS)	Below 1 Ω
C13–4 – E4–20 (CCHG)	Below 1 Ω
C13–2 – Body ground	10 kΩ or higher
C13–4 – Body ground	10 kΩ or higher
C13–3 – Body ground	Below 1 Ω

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

OK

REPLACE ECM (See Pub. No. RM1049E, page 10–21)