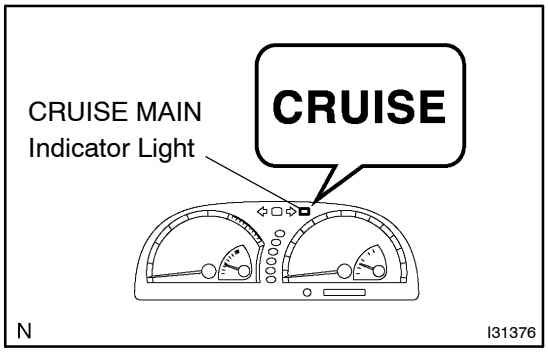
0563V–01

PRE–CHECK



1. DIAGNOSIS SYSTEM

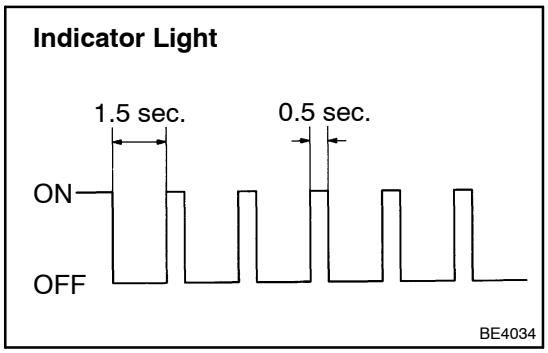
(a) Check the indicator.

(1) Turn the ignition switch ON.

(2) Check that the CRUISE MAIN indicator light comes on when the cruise control main switch is turned on, and that the indicator light goes off when the main switch is turned OFF.

HINT:

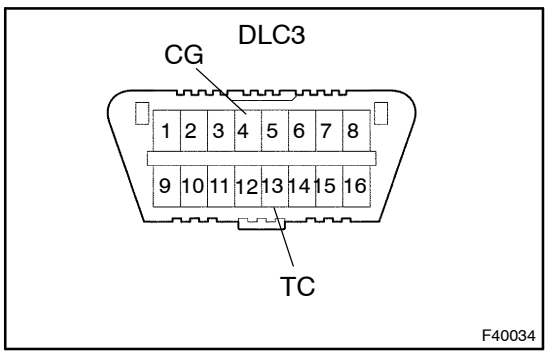
If the indicator check result is not normal, proceed to trouble-shooting (See page 05–1310).



(b) Check the DTC.

HINT:

If a malfunction occurs in the vehicle speed sensors or actuator, etc. during cruise control driving, the ECU actuates 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.



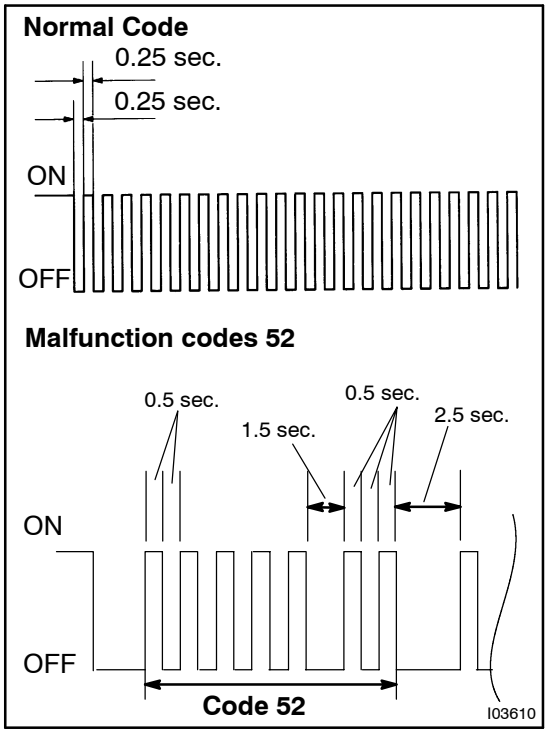
(c) Output of DTC using diagnosis check wire.

(1) Turn the ignition switch ON.

(2) Using SST, connect terminals Tc and CG of DLC3.

SST 09843–18020

(3) Read the DTC on the CRUISE MAIN indicator light.



HINT:
If the DTC is not output, inspect the cruise main indicator light circuit (See page 05–1310).
As an example, the blinking patterns for codes; normal, 52 are shown in the illustration.

2. USING HAND–HELD TESTER

(a) Hook up the hand–held tester to the DLC3.
(b) Monitor the ECU data by following the prompts on the tester screen.

HINT:
hand–held tester has a ”Snapshot” function which records the monitored data.
Please refer to the hand–held tester operator’s manual for further details.

3. DATA LIST

HINT:
According to the DATA LIST displayed by the OBD II scan tool or hand–held tester, you can read the value of the switch, sensor, actuator and so on without parts removal. Reading the DATA LIST as a first step of troubleshooting is one of the method to shorten the labor time.

(a) Connect the OBD II scan tool or Hand–held tester to the DLC3.
(b) Turn the ignition switch ON.
(c) According to the display on tester, read the ”DATA LIST”.

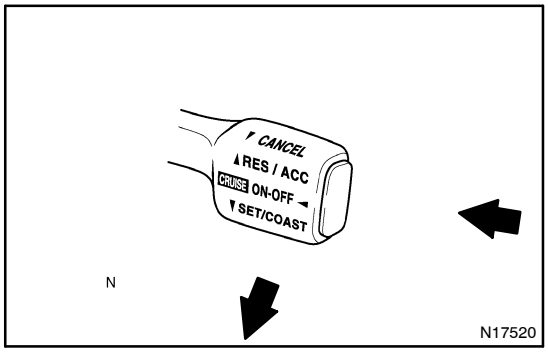
Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
VEHICLE SPD	Vehicle speed / min.: 0km/h (0mph), max.: 255km/h (158mph)	Actual vehicle speed	–
MEMORY SPD	Cruise control memorized speed / min.: 0km/h (0mph), max.: 255km/h (158mph)	Memorized speed : Cruise control activated	–
THROTTLE	Required throttle opening angle / min.: 0°, max.: 125°	Required throttle opening angle (0° – 84°) : Cruise control activated	–
CCS READY S	Cuise control system standby condition (Sub CPU) / ON or OFF	ON ⇔ OFF : Change ON/OFF each time Main SW is pressed in.	”1”
CCS READY M	Cuise control system standby condition (Main CPU) / ON or OFF	ON ⇔ OFF : Change ON/OFF each time Main SW is pressed in.	”1”
CANCEL SW	CANCEL SW signal / ON or OFF	ON : CANCEL SW ON OFF : CANCEL SW OFF	–
SET/COAST SW	SET/COAST SW signal / ON or OFF	ON : SET/COAST SW ON OFF : SET/COAST SW OFF	–

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
RES/ACC SW	RES/ACC SW signal / ON or OFF	ON : RES/ ACC SW ON OFF : RES/ACC SW OFF	–
STP LIGHT SW1 M	Stop light SW signal (Main CPU) / ON or OFF	ON : Brake pedal depressed OFF : Brake pedal released	–
STP LIGHT SW2 S	Stop light SW signal (Sub CPU) / ON or OFF	ON : Brake pedal depressed OFF : Brake pedal released	–
STP LIGHT SW1 S	Stop light SW signal (Sub CPU) / ON or OFF	ON : Brake pedal depressed OFF : Brake pedal released	–
SHIFT D POS	PNP SW signal (D postion) / ON or OFF	ON : Shift D position OFF : Except shift D postion	–
CRUISE CTRL	Cruise contro system active condition / ON or OFF	ON : Cruise control activated OFF : Cruise control inactivated	–
CCS INDICATOR M	Cruise indicator signal (Main CPU) / ON or OFF	ON : ”CCS READY” ON OFF : ”CCS READY” OFF	”2”
CCS INDICATOR S	Cruise indicator signal (Sub CPU) / ON or OFF	ON : ”CCS READY” ON OFF : ”CCS READY” OFF	”2”
MAIN SW (SUB)	Main SW signal (Sub CPU) / ON or OFF	ON : Main SW ON (Pressed in) OFF Main SW OFF (Pressed out)	”3”
MAIN SW (MAIN)	Main SW signal (Main CPU) / ON or OFF	ON : Main SW ON (Pressed in) OFF Main SW OFF (Pressed out)	”3”

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 not turn on → Indicator or W/H or ECM failure

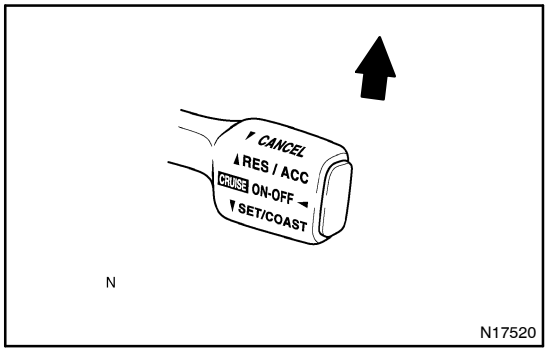
4. DTC CLEAR

(a) The following actions will erase the DTCs and freeze frame data.
  (1) Operating the OBD II scan tool (complying with SAEJ1978) or hand–held tester to erase the codes. (See the OBD II scan tool’s instruction book for operating instructions.)
  (2) Disconnecting the battery terminals or EFI fuse.
(b) After completing repairs, the DTC retained in memory can be cleared by removing the ECU–B fuse for 10 seconds or more with the ignition switch off.
(c) Check that the normal code is displayed after connecting the fuse.

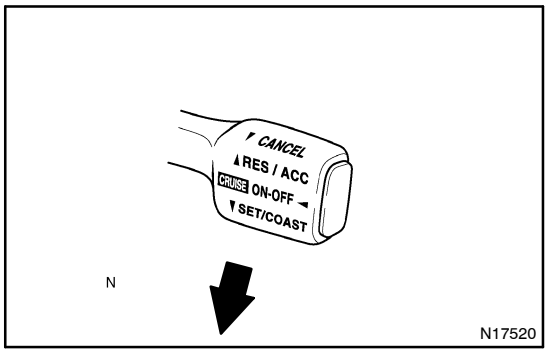


5. PROBLEM SYMPTOM CONFIRMATION (ROAD TEST)

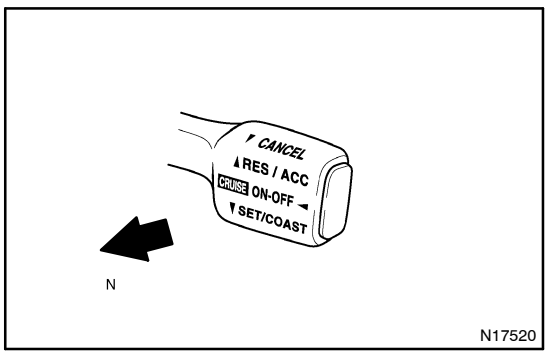
(a) Inspect the SET switch.
  (1) Push the main switch ON.
  (2) Drive at a desired speed (40 km/h (25 mph) or higher).
  (3) Press the control switch to the SET/COAST.
  (4) After releasing the switch, check that the vehicle cruises at the desired speed.



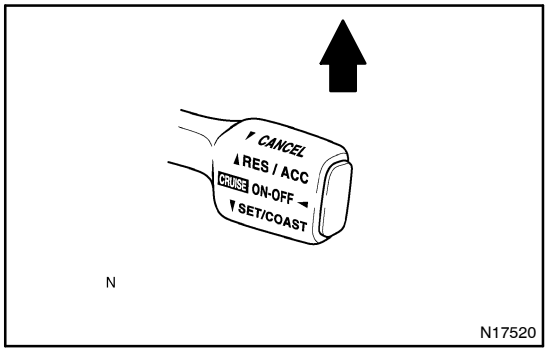
(b) Inspect the ACCEL switch.
(1) Push the main switch ON.
(2) Drive at a desired speed (40 km/h (25 mph) or higher).
(3) Check that the vehicle speed is increases while the control switch is turned to RES/ACC, and that the vehicle cruises at the set speed when the switch is released.
(4) Momentarily press the control switch upward in the RES/ACC and then immediately release it. Check that the vehicle speed increases by about 1.6 km/h (Tap–up function).



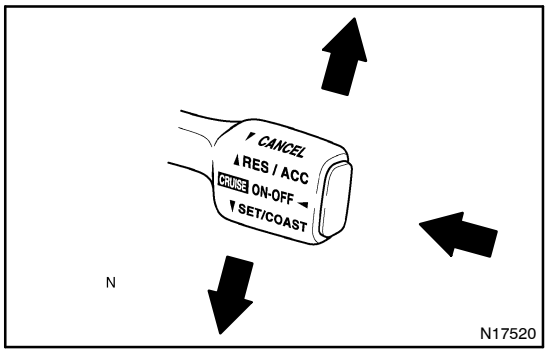
(c) Inspect the COAST switch.
(1) Push the main switch ON.
(2) Drive at a desired speed (40 km/h (25 mph) or higher).
(3) Check that the vehicle speed is decreases while the control switch is turned to SET/COAST, and the vehicle cruises at the set speed when the switch is released.
(4) Momentarily press the control switch is turned to SET/COAST, and then immediately release it. Check that the vehicle speed decreases by about 1.6 km/h (Tap–down function).



(d) Inspect the CANCEL switch.
(1) Push the main switch ON.
(2) Drive at a desired speed (40 km/h (25 mph) or higher).
(3) When operating one of the followings, check that the cruise control system is cancelled and that the normal driving mode is reset.
- Depress the brake pedal
- Shift to except D position (A/T)
- Push the main switch OFF
- Pull the cruise control switch to CANCEL



(e) Inspect the RESUME switch.
  (1) Push the main switch ON.
  (2) Drive at a desired speed (40 km/h (25 mph) or higher).
  (3) When operating one of the followings, check that the cruise control system is cancelled and that the normal driving mode is reset.
    • Depress the brake pedal
    • Shift to except D position (A/T)
    • Pull the cruise control switch to CANCEL
  (4) After the control switch is turned to RES/ACC at the driving speed of more than 40 km/h (25 mph), check that the vehicle restores the speed prior to the cancellation.



6. INPUT SIGNAL CHECK (Using hand–held tester)

(a) Connect the hand–held tester to DLC3.
(b) Check the control switch (MAIN, CANCEL, SET/COAST, RES/ACC).