

## PRE-CHECK

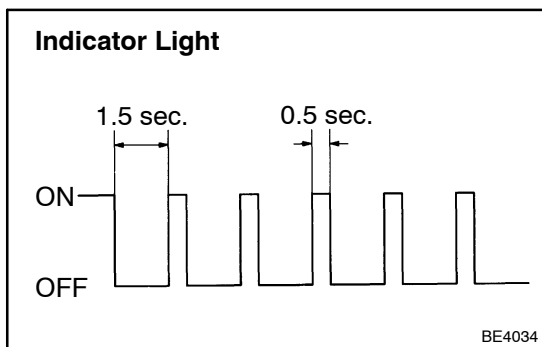
### 1. DIAGNOSIS SYSTEM

#### (a) INDICATOR CHECK

- (1) Turn the ignition switch to 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:

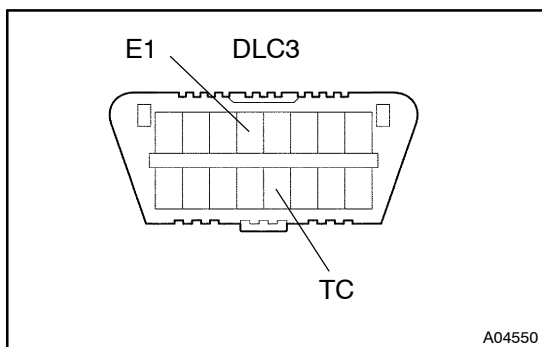
If the indicator check result is not normal, proceed to troubleshooting (See page BE-2) for the combination meter section.



#### (b) DTC CHECK

#### HINT:

If a malfunction occurs in the No. 1 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 E<sub>1</sub> of DLC3.  
SST 09843 -18020
- (3) Read the DTC on the CRUISE MAIN indicator light.

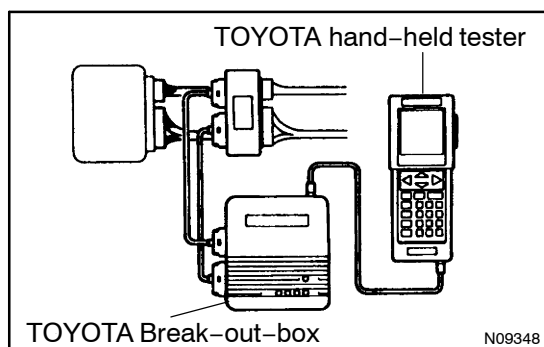
Timing diagram for the ON/OFF control signal. The signal is a square wave alternating between 'ON' and 'OFF' states. The 'ON' pulse width is 0.25 sec, and the 'OFF' pulse width is 0.25 sec.

BE4032  
BE4033

100021

If the DTC is not output, inspect the diagnosis circuit (See page DI-716).

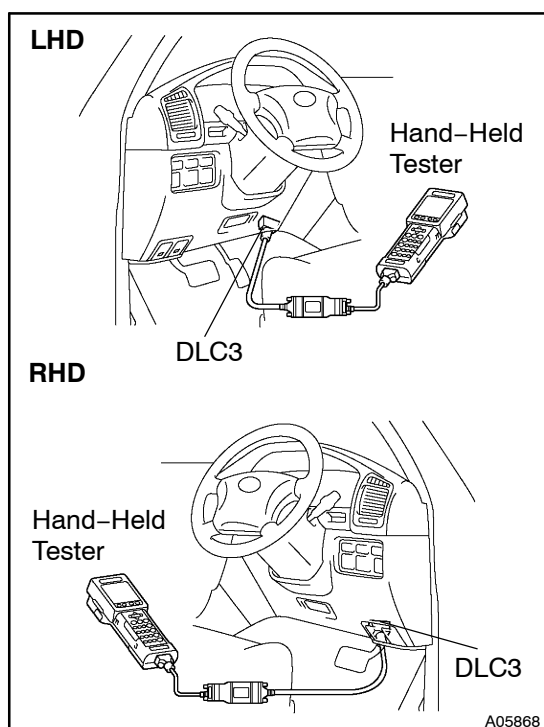
As an example, the blinking patterns for codes; normal, 11 and 21 are shown in the illustration.

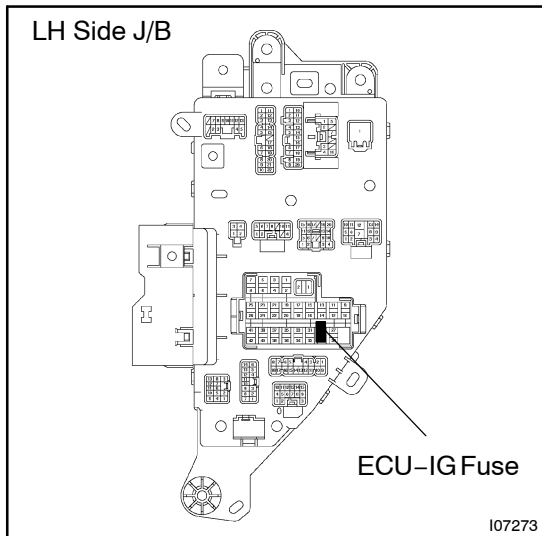


- (a) Hook up the break –out–box and TOYOTA hand –held tester to the vehicle.
- (b) Read the ECU input/output values by following the prompts on the tester screen.
- (c) Please refer to the TOYOTA hand –held tester has a "Snapshot" function. This records the measured data and is effective in the diagnosis of intermittent problems.

- Hook up the TOYOTA hand –held tester to the DLC3.
- Monitor the ECU data by following the prompts on the tester screen.

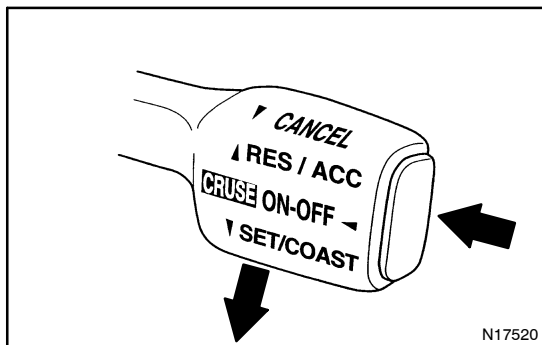
Please refer to the TOYOTA hand –held tester operator’s manual for further details.





#### 4. DTC CLEARANCE

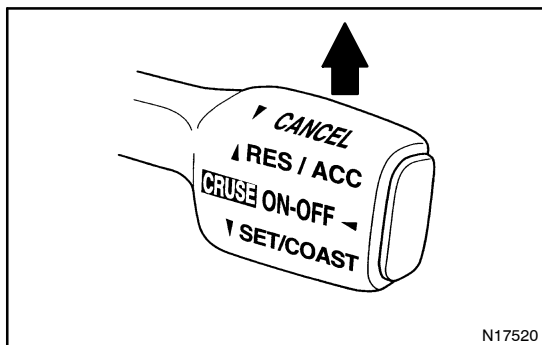
- (a) After completing repairs, the DTC retained in memory can be cleared by removing the ECU -IG fuse for 10 seconds or more, with the ignition switch OFF.
- (b) Check that the normal code is displayed after connecting the fuse.



#### 5. PROBLEM SYMPTOM CONFIRMATION (ROAD TEST)

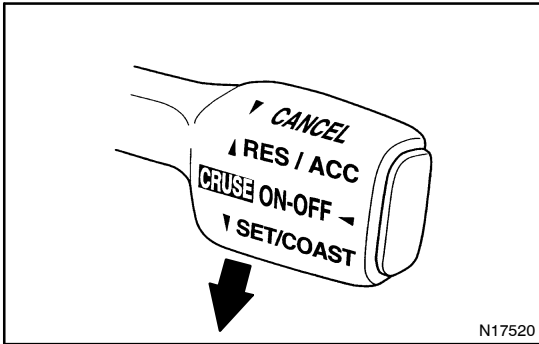
##### (a) SET INSPECTION

- (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.



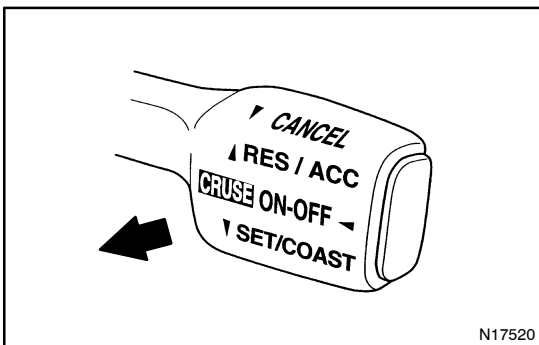
##### (b) ACCEL INSPECTION

- (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 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 1.5 km/h (Tap-up function).



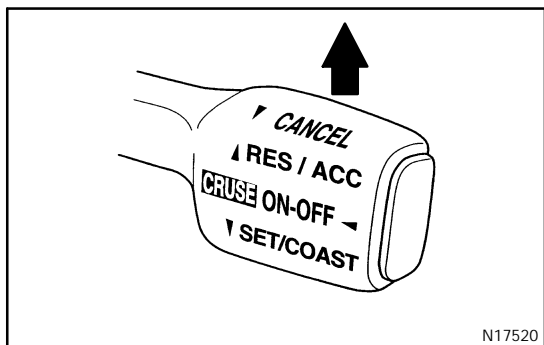
## (c) COAST INSPECTION

- (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 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 1.5 km/h (Tap -down function).



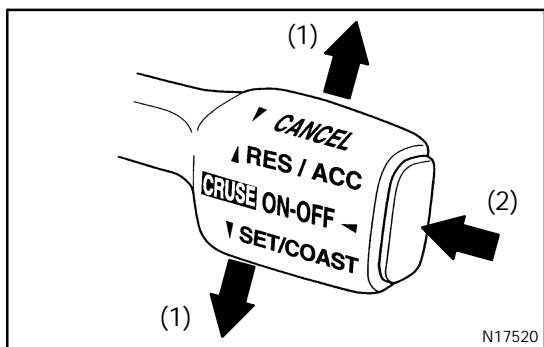
## (d) CANCEL INSPECTION

- (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
  - Push the main switch OFF
  - Pull the cruise control switch to CANCEL



## (e) RESUME INSPECTION

- (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
  - § Push the main switch OFF
  - § 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

## HINT:

- (1) For check No.1 ~ No.3
    - § Turn ignition switch ON.
  - (2) For check No.4
    - § Jack up the vehicle.
    - § Start the engine.
    - § Shift to D position.
- (a) Press the control switch to SET/COAST or RES/ACC position and hold it down or hold it up "1".
  - (b) Push the main switch ON "2".
  - (c) Check that the CRUISE MAIN indicator light blinks twice or 3 times repeatedly after 3 seconds.
  - (d) Turn the SET/COAST or RES/ACC switch OFF.
  - (e) Operate each switch as listed in the table below.
  - (f) Read the blinking pattern of the CRUISE MAIN indicator light.
  - (g) After performing the check, turn the main switch OFF.

## HINT:

When 2 or more signals are input to the ECU, the lowest numbered code will be displayed first.

No.	Operation Method	CRUISE MAIN Indicator Light Blinking Pattern	Diagnosis
1	Turn SET/COAST switch ON		SET/COAST switch circuit is normal
2	Turn RES/ACC switch ON		RES/ACC switch circuit is normal
3	Turn CANCEL switch ON		CANCEL switch circuit is normal
	Turn stop light switch ON Depress brake pedal		Stop light switch circuit is normal
	Turn PNP switch OFF (Shift to except D position)		PNP switch circuit is normal
4	Drive at about 40 km/h (25 mph) or higher		Vehicle Speed Sensor is normal
	Drive at about 40 km/h (25 mph) or below		