Diagnosis

If a malfunction occurs in the dynamic radar cruise control system, during cruise control, the engine ECU cancels the cruise control and flashes the cruise MAIN indicator light to inform the driver of the malfunction. At the same time, the malfunction is stored in memory as a DTC (Diagnostic Trouble Codes).

- When an intelligent tester II connects to DLC3 or the SST (09843-18040) connects between the Tc and CG terminals of the DLC3, DTC can be read.
- An intelligent tester II can be used to read 5-digit codes. With the SST, 2-digit codes can be read from the number of blinks of the cruise MAIN indicator light.

For details, see the LEXUS LS430 Repair Manual Supplement (Pub. No. RM1133E).

7. Precaution for Dynamic Radar Cruise Control System Operation

1) Dynamic radar cruise control is not a collision-avoidance system and will not prevent accidents.
2) Dynamic radar cruise control is a vehicle speed control device that is intended for use only on freeways or roads where the traffic is light or moderate.
3) To avoid serious injury or death, you must use caution and be attentive to road and traffic conditions while using dynamic radar cruise control.
4) To avoid accidents, always keep the millimeter wave radar sensor front part clean and never allow it to be covered with ice or any substance, so it can detect the vehicle in front.
5) Do not rely excessively on dynamic radar cruise control. Observe the following precautions in order to avoid serious injury or death:

- Under certain conditions where the vehicle in front slows drastically, or is stopped, the dynamic radar cruise control will neither warn you nor decelerate. You must depress the brake pedal to slow down, ensuring collision avoidance or that sufficient vehicle-to-vehicle distance is maintained.
- Do not use dynamic radar cruise control in the following conditions:

– In bad weather (such as rain, fog, snow, sandstorms, when raindrops, snowflakes get on the millimeter wave radar sensor glass or the grille cover), the vehicle-to-vehicle distance will not be measured accurately.
– When using the windshield wipers at high speed the dynamic radar cruise control turns off.
– On roads with heavy traffic or sharp bends, an appropriate speed cannot be maintained and an accident may occur.
– On slippery road surfaces (icy or snow-covered road surfaces), the tires will race and you will be unable to control the vehicle.
– When there is no vehicle detected ahead on steep downhill slopes, the preset speed will be easily exceeded because of inefficient engine braking. (In this case, automatic braking will not work.) If there is a vehicle detected ahead, the delay in deceleration timing could cause serious injury or death.
– When the alarm sounds frequently (because acceleration or deceleration was repeated or sufficient vehicle-to-vehicle distance was not maintained), an appropriate vehicle speed cannot be attained and an accident may occur.
– On roads with steep and short inclines and declines, failure to detect the vehicle ahead will shorten the distance between your vehicle and the vehicle ahead and an accident may occur.

- Deceleration cruising function and approach warning do not operate when the vehicle ahead is at a stop or driving very slowly.
- If the vehicle ahead of you decelerates abruptly or if another vehicle cuts in ahead of you, your vehicle may collide with the vehicle ahead unless you manually depress the brake pedal to slow down your vehicle.
- Depending on the road configuration (curved, left and right continuous curved, the start or end of a curve, or narrow driving lanes due to road construction) or your vehicle condition (steering wheel maneuvering, position in the lane, or unstable driving because of an accident or breakdown), vehicles in other lanes or surrounding objects may be detected, resulting in a control failure or the approach warning activation. This may also result in a very close distance between vehicles due to a failure to detect the vehicle ahead.

- Do not use dynamic radar cruise control when exiting from or when entering or merging onto a freeway. When you are following a slower moving vehicle and exiting, the sensor does not detect the vehicle and will accelerate to the preset speed.
- If other vehicles are driving outside of the radar detection range, a delay in the detection of the vehicle cutting in at short range or failure to detect a motorcycle running on the side of the same lane will occur. In this case, the dynamic radar cruise control system will not function properly.
- When a slower vehicle in front of you leaves the lane, the dynamic radar cruise control will no longer detect a vehicle ahead and will attempt to accelerate the vehicle to the faster preset speed.

6) To avoid accidentally engaging the cruise control, keep the "ON-OFF " button off when not using the dynamic radar cruise control.

7) When the vehicle-to-vehicle distance control is on, your cruising speed is regulated in proportion to the speed of the vehicle ahead, so increasing the preset speed using the control lever does not accelerate the vehicle. However, if the vehicle ahead leaves the lane, your cruising speed will increase to the preset speed because the preset speed has been set higher using the control lever. Confirm the setting on the display.

8) Braking control will not ensure that your vehicle will reduce speed appropriately. You must depress the brake pedal to slow down, ensuring collision avoidance or that sufficient vehicle-to-vehicle distance is maintained.

- If the display flashes and beeps, you must depress the brake pedal to slow down to avoid a collision or maintain sufficient vehicle-to-vehicle distance.
- In the following conditions, the approach warning may not turn on even if the vehicle drives closer to the vehicle ahead, and an accident may occur:

– Your vehicle and the vehicle ahead are cruising at almost the same speed.

– The vehicle ahead is cruising at a faster speed than yours. (The distance between the vehicles will become longer.)

– The vehicle ahead is at a stop or driving very slowly. Pay special attention to a very slow vehicle at the end of the line in heavy traffic or at a tollgate.

– The speed has just been set.

– The accelerator pedal is depressed or has just been released.

9) To ensure that dynamic radar cruise control will function properly while driving, observe the following:

- Always keep the millimeter wave radar sensor front part clean. When cleaning, use a soft cloth and be careful not to damage the sensor.
- Avoid strong impacts around the millimeter wave radar sensor. An incorrect millimeter wave radar sensor alignment will result in system malfunction. A special device is required to adjust the millimeter wave radar sensor alignment. Be sure to have the sensor adjusted by your LEXUS dealer.
- Do not affix a sticker (including a transparent sticker) or attach an accessory around the millimeter wave radar sensor and radiator grille.
- Do not alter the radiator grille.

10) Always keep the front of the millimeter wave radar sensor and never allow it to be covered with icicle or any substance, so it can detect the vehicle in front.

11) The millimeter wave radar sensor effects control in accordance with the waves reflected by the vehicle driven ahead. Therefore, if the vehicle ahead is an empty trailer or a vehicle with an extremely small rear surface area, the sensor will not be able to perform an accurate detection. As a result, the system may not be able to maintain an accurate vehicle-to-vehicle distance.