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PRECAUTIONS

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:
• To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
• Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
• Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:
• When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
• When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

Precautions For Harness Repair

ITS communication uses a twisted pair line. Be careful when repairing it.
• Solder the repaired area and wrap tape around the soldered area.
  NOTE:
  A fray of twisted lines must be within 110 mm (4.33 in).

• Bypass connection is never allowed at the repaired area.
  NOTE:
  Bypass connection may cause ITS communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.
CAUTION:

• Turn the MAIN switch OFF in conditions similar to driving, such as free rollers or a chassis dyna- 
mometer.
• Never use the ICC sensor removed from vehicle. Never disassemble or remodel.
• Erase DTC when replacing parts of ICC system, then check the operation of ICC system after adjust-
ing radar alignment if necessary.
Special Service Tools

The actual shape of the tools may differ from those illustrated here.

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Component Parts Location

A. Engine room LH
B. Brake pedal area
C. Luggage compartment LH
## COMPONENT PARTS

### [ICC]

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| 1.  | ABS actuator and electric unit (control unit) | • ABS actuator and electric unit (control unit) transmits the vehicle speed signal (wheel speed), stop lamp signal and VDC/TCS/ABS system operation condition to ADAS control unit via CAN communication.  
• ABS actuator and electric unit (control unit) controls the brake based on a brake fluid pressure control signal received from the ADAS control unit via CAN communication. Refer to BRC-178, "Component Parts Location" for detailed installation location. |
| 2.  | ICC sensor                                     | • Refer to CCS-8, "ICC Sensor".                                                                                                                                                                                                                                         |
| 3.  | TCM                                           | • TCM transmits the signal related to CVT control to ADAS control unit via CAN communication.  
• Refer to TM-12, "CVT CONTROL SYSTEM : Component Parts Location" for detailed installation location.                                                                                                                                                       |
| 4.  | ECM                                           | • ECM transmits the accelerator pedal position signal, brake pedal position switch signal, stop lamp switch signal, ICC steering switch signal, etc., to ADAS control unit via CAN communication.  
• ECM controls the electric throttle control actuator based on the engine torque demand received from the ADAS control unit via CAN communication. Refer to EC-15, "ENGINE CONTROL SYSTEM : Component Parts Location" for detailed installation location. |
| 5.  | Combination meter (Information display, FEB indicator lamp, buzzer) | • Description: Refer to CCS-10, "Combination Meter".  
• System display and warning: Refer to CCS-18, "INTELLIGENT CRUISE CONTROL : Menu Displayed by Pressing Each Switch".                                                                                                                                                     |
| 6.  | ICC brake hold relay                           | Refer to CCS-10, "ICC Brake Hold Relay".                                                                                                                                                                                                                                 |
| 7.  | Brake pedal position switch                    | Refer to CCS-9, "Brake Pedal Position Switch/Stop Lamp Switch".                                                                                                                                                                                                           |
| 8.  | Stop lamp switch                               | Refer to CCS-9, "Brake Pedal Position Switch/Stop Lamp Switch".                                                                                                                                                                                                           |
| 9.  | ADAS control unit                              | • Refer to CCS-9, "ADAS Control Unit".  
• Refer to DAS-9, "Component Parts Location" for detailed installation location.                                                                                                                                                                                             |

### ICC Sensor

- ICC sensor is installed on the front of the bumper and detects a vehicle ahead using millimeter waves.
- ICC sensor detects radar reflected from a vehicle ahead by irradiating radar forward and calculates a distance from the vehicle ahead and relative speed, based on the detected signal.
- ICC sensor transmits information for ICC from the vehicle to ADAS control unit via ITS communication.
ADAS Control Unit

• ADAS control unit is installed.
• ADAS control unit calculates and transmits an engine torque command value to ECM and a brake fluid pressure control signal to ABS actuator and electric unit (control unit) via CAN communication.
• ADAS control unit transmits buzzer output signal and meter display signal to combination meter via CAN communication.

Brake Pedal Position Switch/Stop Lamp Switch

BRAKE PEDAL POSITION SWITCH

• Brake pedal position switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.
• Brake pedal position switch is turned OFF when depressing the brake pedal.
• Brake pedal position switch signal is input to ECM. Brake pedal position switch signal is transmitted from ECM to ADAS control unit via CAN communication.

STOP LAMP SWITCH

• Stop lamp switch is installed at the upper part of the brake pedal and detects a brake operation performed by the driver.
• Stop lamp switch is turned ON when depressing the brake pedal.
• Stop lamp switch signal is inputted to ECM and ABS actuator and electric unit (control unit). Stop lamp switch signals are transmitted from ECM and ABS actuator and electric unit (control unit) to ADAS control unit via CAN communication.

ICC Steering Switch

• ICC steering switch is installed to the steering wheel and allows the driver to operate the ICC system by using this switch.

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COMPONENT PARTS

ICC steering switch controls the ON/OFF operation of the Intelligent Cruise Control and the settings of vehicle speed and distance between vehicles.

ICC steering switch signal is transmitted to ECM. ECM transmits the signal to the ICC sensor unit via CAN communication.

ICC Brake Hold Relay

- ICC brake hold relay is installed in the engine room (LH).
- When the brake is activated by the ICC system, the ICC brake hold relay turns ON the stop lamp by bypassing the circuit of the stop lamp according to a signal transmitted from the ADAS control unit.

Combination Meter

- Performs the following operations using the signals received from the ADAS control unit via the CAN communication:
  - Displays the ICC system operation status using the meter display signal.
  - Illuminates the ICC system warning lamp using the ICC warning lamp signal.
  - Illuminates the FEB indicator lamp using the FEB indicator lamp signal.
  - Operates the buzzer (ICC warning chime) using the buzzer output signal.
- Combination meter turns ON/OFF the FEB system and transmits a system selection signal to the ICC sensor.
System Description

ICC SENSOR UNIT INPUT/OUTPUT SIGNAL ITEM

Input Signal Item
## SYSTEM DESCRIPTION

### Transmit unit

<table>
<thead>
<tr>
<th>ECM CAN communication</th>
<th>Signal name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECM CAN communication</td>
<td>Closed throttle position signal</td>
<td>Receives idle position state (ON/OFF)</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Accelerator pedal position signal</td>
<td>Receives accelerator pedal position (angle)</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>ICC prohibition signal</td>
<td>Receives an operable/inoperable state of the ICC system</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Engine speed signal</td>
<td>Receives engine speed</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Stop lamp switch signal</td>
<td>Receives an operational state of the brake pedal</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Brake pedal position switch signal</td>
<td>Receives an operational state of the brake pedal</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Input speed signal</td>
<td>Receives the number of revolutions of input shaft</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Current gear position signal</td>
<td>Receives a current gear position</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Shift position signal</td>
<td>Receives a selector lever position</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Output shaft revolution signal</td>
<td>Receives the number of revolutions of output shaft</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>ABS malfunction signal</td>
<td>Receives a malfunction state of ABS</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>ABS operation signal</td>
<td>Receives an operational state of ABS</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>ABS warning lamp signal</td>
<td>Receives an ON/OFF state of ABS warning lamp</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>TCS malfunction signal</td>
<td>Receives a malfunction state of TCS</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>TCS operation signal</td>
<td>Receives an operational state of TCS</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>VDC OFF switch signal</td>
<td>Receives an ON/OFF state of VDC</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>VDC malfunction signal</td>
<td>Receives a malfunction state of VDC</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>VDC operation signal</td>
<td>Receives an operational state of VDC</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Vehicle speed signal (ABS)</td>
<td>Receives wheel speeds of four wheels</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Stop lamp switch signal</td>
<td>Receives an operational state of the brake pedal</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Yaw rate signal</td>
<td>Receives yaw rate acting on the vehicle</td>
</tr>
</tbody>
</table>

### Reception unit

<table>
<thead>
<tr>
<th>ECM CAN communication</th>
<th>Signal name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECM CAN communication</td>
<td>Parking brake switch signal</td>
<td>Receives an operational state of the parking brake</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>System selection signal</td>
<td>Receives a selection state of FEB system</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Steering angle sensor malfunction signal</td>
<td>Receives a malfunction state of steering angle sensor</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Steering angle sensor signal</td>
<td>Receives the number of revolutions and turning direction of the steering wheel</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>Steering angle speed signal</td>
<td>Receives the turning angle speed of the steering wheel</td>
</tr>
<tr>
<td>ECM CAN communication</td>
<td>ADAS sensor signal</td>
<td>State of ADAS</td>
</tr>
</tbody>
</table>

Output Signal Item

<table>
<thead>
<tr>
<th>Reception unit</th>
<th>Signal name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADAS control unit</td>
<td>ITS communication</td>
<td>ICC sensor signal</td>
</tr>
</tbody>
</table>

---

ADAS CONTROL UNIT INPUT/OUTPUT SIGNAL ITEM

Revision: October 2015

2016 Maxima NAM
### Intelligent Cruise Control

The Intelligent Cruise Control (ICC) system maintains a selected distance from the vehicle in front of own vehicle within the speed range of 0 to 144 km/h (0 to 90 MPH) up to the set speed. The set speed can be selected by the driver between 32 to 144 km/h (20 to 90 MPH). The vehicle travels at a set speed when the road ahead is clear.

**CAUTION:**

Never set the cruise speed to exceed the posted speed limit.

**WARNING:**

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Always drive carefully and attentively when using either cruise control mode. To avoid serious injury or death, do not rely on the system to prevent accidents or to control the vehicle's speed in emergency situations. Do not use cruise control except in appropriate road and traffic conditions.

Forward Collision Warning (FCW) System
FCW shares the systems and components with ICC system. Refer to CCS-11, "System Description".

Forward Emergency Braking (FEB) System
FEB system shares the systems and components with ICC system. Refer to BRC-184, "System Description".

Fail-safe (ADAS Control Unit)
If a malfunction occurs in each system, ADAS control unit cancels each control, sounds a beep, and turns ON the warning lamp or indicator lamp.

<table>
<thead>
<tr>
<th>System</th>
<th>Buzzer</th>
<th>Warning lamp/Indicator lamp</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Cruise Control System</td>
<td>High-pitched tone</td>
<td>ICC system warning lamp</td>
<td>Cancel</td>
</tr>
</tbody>
</table>

Fail-safe (ICC Sensor)
If a malfunction occurs in the ICC sensor, ADAS control unit cancels control, sounds a beep, and turns ON the ICC system warning lamp in the combination meter.

INTELLIGENT CRUISE CONTROL
FUNCTION DESCRIPTION

The Intelligent Cruise Control (ICC) system automatically maintains a selected distance from the vehicle traveling in front of own vehicle according to that vehicle’s speed (up to the set speed) or at the set speed when the road ahead is clear.
With ICC system, the driver can maintain the same speed as other vehicles without the constant need to adjust the set speed as the driver would with a normal cruise control system.

The following items are controlled in the ICC system:

- When there are no vehicles traveling ahead, the ICC system maintains the speed set by the driver. The set speed range is between approximately 32 and 144 km/h (20 and 90 MPH).
- When there is a vehicle traveling ahead, the ICC system adjusts the speed to maintain the distance, selected by driver, from a vehicle ahead. The adjusting speed range is up to the set speed.
- When the vehicle traveling ahead has moved from its lane of travel, the ICC system accelerates and maintains vehicle speed up to the set speed.

**CAUTION:**

If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system. The system will cancel once it judges that the vehicle has come to a standstill and sound a warning chime.

To prevent the vehicle from moving, the driver must depress the brake pedal.

**NOTE:**

When the accelerator pedal is depressed, the brake operation and the warning are not performed by the ICC system.

**OPERATION DESCRIPTION**

Push and release the MAIN switch ON.

The MAIN switch indicator, set distance indicator and set vehicle speed indicator come on and ICC system is set to a standby state.

ADAS control unit performs the control as per the following:

<table>
<thead>
<tr>
<th>Constant speed</th>
<th>Comparing the set vehicle speed with the current vehicle speed, it transmits the command to ECM via CAN communication to reach the set vehicle speed and controls the electric throttle control actuator.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deceleration</td>
<td>When a vehicle ahead (slower than driver set vehicle speed) appears or when a vehicle ahead slows down, the system controls the electric throttle control actuator into the close direction and decelerates the vehicle. If greater deceleration is necessary, the system transmits the brake fluid pressure control signal to the ABS actuator and electric unit (control unit) via CAN communication and operates the brake.</td>
</tr>
<tr>
<td>Following</td>
<td>The system controls the electric throttle control actuator and the brake fluid pressure to keep the proper distance between the vehicles according to the vehicle speed change of the vehicle ahead.</td>
</tr>
<tr>
<td>Acceleration</td>
<td>When a vehicle ahead is not detected because it changes lanes or own vehicle changes lanes during the following driving, the system controls the electric throttle control actuator to the open direction and accelerates the vehicle to the set vehicle speed slowly.</td>
</tr>
</tbody>
</table>

**Set Condition**

Under a standby state, pushing down the SET/COAST switch will start system control.

- When vehicle speed is between approximately 32 km/h and 144 km/h (20 MPH and 90 MPH).
- When vehicle speed is below approximately 32 km/h (20 MPH) if a vehicle ahead is detected. The set vehicle speed becomes 32 km/h (20 MPH).

If the system is canceled by conditions 1-6 below, the system will resume control at the last set cruising speed by pushing up the RESUME/ACCELERATE switch.

**NOTE:**

- When the SET/COAST switch is pushed under the following conditions, the system cannot be set and the set vehicle speed indicator will blink for approximately 2 seconds:
  - When traveling below 32 km/h (20 MPH) and the vehicle ahead is not detected.
  - When the selector lever is not in the “D” position or manual mode.
  - When the parking brake is applied.
  - When the brakes are operated by the driver.
- When the SET/COAST switch is pushed under the following conditions, the system cannot be set and a warning chime will sound and display causes in combination meter (information display):
  - When the VDC is OFF. (To use the ICC system, turn ON the VDC system, push the MAIN switch to turn OFF the ICC system and reset the ICC system by pushing the MAIN switch again.)
  - When ABS or VDC (including the TCS) operates.
  - When the wheel is slipping. (To use the ICC system, make sure the wheels are no longer spinning, push the MAIN switch to turn OFF the ICC system and reset the ICC system by pushing the MAIN switch again.)

**Cancel Conditions**

1. When CANCEL switch is pressed.
2. When brake pedal is depressed.
3. When the vehicle ahead is not detected below the speed of 24 km/h (15 MPH).

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4. When the selector lever is not in the “D” position or manual mode.
5. When the parking brake is applied.
6. When the system judges the vehicle is at a standstill.
7. When ABS or VDC (including the TCS) operates.
8. When the MAIN switch is turned OFF.
9. When a wheel slips.
10. When the VDC is turned OFF.
11. When a system malfunction occurs.
INTELLIGENT CRUISE CONTROL: Switch Name and Function

<table>
<thead>
<tr>
<th>No.</th>
<th>Switch name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>DISTANCE switch</td>
<td>Changes the following distance from: Long, Middle, Short</td>
</tr>
<tr>
<td>2.</td>
<td>CANCEL switch</td>
<td>Deactivates the system without erasing the set speed</td>
</tr>
<tr>
<td>3.</td>
<td>RES/+ SET/- switch</td>
<td>Sets desired cruise speed or reduces speed incrementally</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Push and hold the switch to decrease the set speed by 8 km/h (5 MPH).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Push then quickly release the switch to decrease the set speed by 1.6 km/h (1 MPH).</td>
</tr>
<tr>
<td></td>
<td>NOTE:</td>
<td>The minimum set speed is 32 km/h (20 MPH).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resumes set speed or increases speed incrementally</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Push and hold the switch to increase the set speed by 8 km/h (5 MPH).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Push then quickly release the switch to increase the set speed by 1.6 km/h (1 MPH).</td>
</tr>
<tr>
<td>4.</td>
<td>MAIN switch</td>
<td>Master switch to activate the system (Press for less than 1.5 seconds.)</td>
</tr>
</tbody>
</table>

INTELLIGENT CRUISE CONTROL: Menu Displayed by Pressing Each Switch

<table>
<thead>
<tr>
<th>No.</th>
<th>Display item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vehicle ahead detection indicator</td>
<td>Indicates whether it detects a vehicle ahead</td>
</tr>
<tr>
<td>2.</td>
<td>Set distance indicator</td>
<td>Indicates the selected distance between vehicles set with the DISTANCE switch</td>
</tr>
<tr>
<td>3.</td>
<td>Main switch indicator (white)</td>
<td>White: Indicates the main switch is ON (ICC system ON)</td>
</tr>
<tr>
<td></td>
<td>ICC system warning lamp (orange)</td>
<td>Orange: Indicates that a malfunction occurred in the ICC system</td>
</tr>
<tr>
<td>4.</td>
<td>Set vehicle speed indicator</td>
<td>• Indicates the set vehicle speed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Indicates 32 km/h (20 MPH) when setting is less than 32 km/h (20 MPH)</td>
</tr>
</tbody>
</table>
**SYSTEM CONTROL CONDITION DISPLAY**

Push and hold the ICC MAIN switch for longer than approximately 1.5 seconds. This mode will be in a standby state for setting.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Display on ICC system display</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standby mode</strong></td>
<td></td>
</tr>
<tr>
<td>Set vehicle distance (Long)</td>
<td><img src="ALOA0268ZZ" alt="Image" /></td>
</tr>
<tr>
<td>Set vehicle distance (Middle)</td>
<td><img src="AWOA0131ZZ" alt="Image" /></td>
</tr>
<tr>
<td>Set vehicle distance (Short)</td>
<td><img src="AWOA0132ZZ" alt="Image" /></td>
</tr>
<tr>
<td>When the vehicle speed exceeds the set speed</td>
<td><img src="ALOA0273ZZ" alt="Image" /></td>
</tr>
<tr>
<td><strong>Control mode</strong></td>
<td></td>
</tr>
<tr>
<td>Without a vehicle ahead</td>
<td></td>
</tr>
</tbody>
</table>
### APPROACH WARNING DISPLAY

If own vehicle comes closer to a vehicle ahead due to rapid deceleration of that vehicle or if another vehicle cuts in, the system warns the driver with the chime and ICC system display. Decelerate by depressing the brake pedal to maintain a safe vehicle distance if:

- The chime sounds.
- The vehicle ahead detection indicator blinks in orange.

The warning chime may not sound in some cases when there is a short distance between vehicles. Some examples are:

- When the vehicles are traveling at the same speed and the distance between vehicles is not changing.
- When the vehicle ahead is traveling faster and the distance between vehicles is increasing.
- When a vehicle cuts in near own vehicle.

The warning chime will not sound when own vehicle approaches vehicles that are parked or moving slowly. The warning chime will not sound when the accelerator pedal is depressed, overriding the system.

The approach warning chime may sound and the system display may blink when the ICC sensor detects some reflectors which are fitted on vehicles in other lanes or on the side of the road.

This may cause the ICC system to decelerate or accelerate the vehicle.

The ICC sensor may detect these objects when the vehicle is driven on winding roads, hilly roads or when entering or exiting a curve.

The ICC sensor may also detect reflectors on narrow roads or in road construction zones.

In these cases, driver will have to manually control the proper distance ahead of own vehicle.

Also, the sensor sensitivity can be affected by vehicle operation (steering maneuver or driving position in the lane) or traffic or vehicle conditions (for example, if a vehicle is being driven with some damage).

#### Control mode

<table>
<thead>
<tr>
<th>Condition</th>
<th>Display on ICC system display</th>
</tr>
</thead>
<tbody>
<tr>
<td>With a vehicle ahead</td>
<td></td>
</tr>
<tr>
<td>Set vehicle distance (Long)</td>
<td><img src="AL0IA02744Z" alt="60 MPH" /></td>
</tr>
<tr>
<td>Set vehicle distance (Middle)</td>
<td><img src="AW0IA01334Z" alt="60 MPH" /></td>
</tr>
<tr>
<td>Set vehicle distance (Short)</td>
<td><img src="AW0IA01344Z" alt="60 MPH" /></td>
</tr>
<tr>
<td>When the vehicle speed exceeds the set speed</td>
<td><img src="AL0IA02724Z" alt="60 MPH" /></td>
</tr>
</tbody>
</table>
### WARNING LAMP AND AUTOMATIC CANCELLATION DISPLAY

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
<th>Display on ICC system display</th>
</tr>
</thead>
</table>
| **Automatic cancellation display** | When brake pedal is depressed | A chime sounds and the control is automatically canceled. **NOTE:**  
- The system will be in a standby state after the control is automatically canceled.  
- A chime sounds when the control is automatically canceled except when brake pedal is depressed or when CANCEL switch is pressed. | ![A chime sounds and the control is automatically canceled.](ALOA0277Z) |
|  | When CANCEL switch is pressed |  | ![A chime sounds and the control is automatically canceled.](ALOA0278Z) |
|  | When a vehicle ahead is not detected below the speed of 24 km/h (15 MPH) |  | ![A chime sounds and the control is automatically canceled.](ALOA0279Z) |
|  | When the system judges the vehicle is at a standstill |  |  |
|  | When the selector lever is not in "D" position or manual mode |  |  |
|  | When the parking brake is applied |  |  |
| **Warning display** | When the VDC is turned OFF | A chime sounds and the control is automatically canceled. **NOTE:**  
- When the conditions listed are no longer present, turn the system OFF using the MAIN switch.  
- Turn the ICC system back on to use the system. | ![A chime sounds and the control is automatically canceled.](ALOA0269Z) |
|  | When the VDC or ABS (including the TCS) operates |  | ![A chime sounds and the control is automatically canceled.](ALOA0268Z) |
|  | When a wheel slips |  |  |
|  | When the driver mode selector (DMS) switch is in SNOW mode |  |  |
|  | When the front bumper near the ICC sensor is blocked or dirty, making it impossible to detect a vehicle ahead | A chime sounds and the control is automatically canceled. **NOTE:**  
- Park the vehicle in a safe place and turn the engine OFF.  
- Clean the front bumper near the ICC sensor and then perform the settings again. | ![A chime sounds and the control is automatically canceled.](ALOA0270Z) |
|  | When the ICC system is malfunctioning | A chime sounds and the control is automatically canceled. **NOTE:**  
- Turn the engine OFF and restart engine. If there is no malfunction, it is possible to set the system. | ![A chime sounds and the control is automatically canceled.](ALOA0271Z) |

**NOTE:**
When the ICC system is automatically canceled, the cancellation condition can be displayed in "Work support" of CONSULT (ICC/ADAS).
HANDLING PRECAUTION

Precautions for Intelligent Cruise Control

• ICC system is only an aid to assist the driver and is not a collision warning or avoidance system. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
• The system is primarily intended for use on straight, dry, open roads with light traffic. It is not advisable to use the system in city traffic or congested areas.
• This system will not adapt automatically to road conditions. This system should be used in evenly flowing traffic. Never use the system on roads with sharp curves or on icy roads, in heavy rain or in fog.
• The ICC sensor will not detect the following objects:
  - Stationary and slow-moving vehicles.
  - Pedestrians or objects in the roadway.
  - Oncoming vehicles in the same lane.
  - Motorcycles traveling offset in the travel lane.
• As there is a performance limit to the distance control function, never rely solely on the ICC system. This system does not correct careless, inattentive or absent-minded driving or overcome poor visibility in rain, fog, or other bad weather. Decelerate the vehicle speed by depressing the brake pedal, depending on the distance to the vehicle ahead and the surrounding circumstances in order to maintain a safe distance between vehicles.
• If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system. The system will cancel once it judges that the vehicle has come to a standstill and sound a warning chime. To prevent the vehicle from moving, the driver must depress the brake pedal.
• The system may not detect the vehicle ahead of the driver in certain road or weather conditions. To avoid accidents, never use the ICC system under the following conditions:
  - On roads where the traffic is heavy or there are sharp curves.
  - On slippery road surfaces such as on ice or snow, etc.
  - During bad weather (rain, fog, snow, etc.).
  - When rain, snow or dirt adheres to the ICC sensor.
  - On steep downhill roads (the vehicle may go beyond the set vehicle speed and frequent braking may result in overheating the brakes).
  - On repeated uphill and downhill roads.
  - When traffic conditions make it difficult to keep a proper distance between vehicles because of frequent acceleration or deceleration.
  - Never use the ICC system if own vehicle is towing a trailer. The system may not detect a vehicle ahead.
  - Interference by other radar sources.
• In some road or traffic conditions, a vehicle or object can unexpectedly come into the sensor detection zone and cause automatic braking. The driver may need to control the distance from other vehicles using the accelerator pedal. Always stay alert and avoid using the ICC system when it is not recommended in this section.
• The Intelligent Cruise Control uses a sensor located on the front of the vehicle to detect vehicles traveling ahead. The sensor generally detects the signals returned from the vehicle ahead. Therefore, if the sensor cannot detect the reflection from the vehicle ahead, the ICC system may not maintain the selected distance.
• The following are some conditions in which the sensor cannot detect the signals:
  - When snow or road spray from traveling vehicles reduces the sensor's visibility.
  - When excessively heavy baggage is loaded in the rear seat or the luggage room of own vehicle.
• The ICC system is designed to automatically check the sensor's operation within the limitations of the system. When the sensor area around the ICC sensor is covered with dirt or is obstructed, the system will automatically cancel. If the sensor area around the ICC sensor is covered with ice, a transparent or translucent vinyl bag, etc., the ICC system may not detect it. In these instances, the Intelligent Cruise Control may not cancel and may not be able to maintain the selected following distance from the vehicle ahead. Be sure to check and clean the sensor area around the ICC sensor regularly.
• The ICC system does not control vehicle speed or warn the driver when own vehicle approaches stationary or slow-moving vehicles. The driver must pay attention to vehicle operation to maintain proper distance from vehicles ahead when approaching toll gates or traffic congestion.
• The detection zone of the ICC sensor is limited. A vehicle ahead must be in the detection zone for the Intelligent Cruise Control to maintain the selected distance from the vehicle ahead. A vehicle ahead may move outside of the detection zone due to its position within the same lane of travel. Motorcycles may not be detected in the same lane ahead if they are traveling offset from the center line of the lane. A vehicle that is entering the lane ahead may not be detected until the vehicle has completely moved into the lane. If this occurs, the ICC system may warn the driver by blinking the system indicator and sounding the chime. The driver may have to manually control the proper distance from vehicle traveling ahead.

• When driving on some roads, such as winding, hilly, curved, narrow roads or roads which are under construction, the ICC sensor may detect vehicles in a different lane or may temporarily not detect a vehicle traveling ahead. This may cause the ICC system to decelerate or accelerate the vehicle. The detection of vehicles may also be affected by vehicle operation (steering maneuver or traveling position in the lane, etc.) or vehicle condition. If this occurs, the ICC system may warn the driver by blinking the system indicator and sounding the chime unexpectedly. The driver will have to manually control the proper distance away from the vehicle traveling ahead.

• When driving on the freeway at a set speed and approaching a slower traveling vehicle ahead, the ICC will adjust the speed to maintain the distance, selected by the driver, from the vehicle ahead. If the vehicle ahead changes lanes or exits the freeway, the ICC system will accelerate and maintain the speed up to the set speed. Pay attention to the driving operation to maintain control of the vehicle as it accelerates to the set speed. The vehicle may not maintain the set speed on winding or hilly roads. If this occurs, the driver will have to manually control the vehicle speed.
HANDLING PRECAUTION

• Normally when controlling the distance to a vehicle ahead, this system automatically accelerates or decelerates own vehicle according to the speed of the vehicle ahead. Depress the accelerator to properly accelerate own vehicle when acceleration is required for a lane change. Depress the brake pedal when deceleration is required to maintain a safe distance to the vehicle ahead due to its sudden braking or if a vehicle cuts in. Always stay alert when using the ICC system.

• The sensor sensitivity can be affected by vehicle operation (steering maneuver or driving position in the lane) or traffic or vehicle conditions (for example, if a vehicle is being driven with some damage).
CONSULT Function (ICC/ADAS)

APPLICATION ITEMS
CONSULT performs the following functions via CAN communication using ADAS control unit:

<table>
<thead>
<tr>
<th>Diagnosis mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
<td>• The vehicle specification that is written in ADAS control unit can be displayed or stored.</td>
</tr>
<tr>
<td></td>
<td>• The vehicle specification can be written when ADAS control unit is replaced.</td>
</tr>
<tr>
<td>Work support</td>
<td>Displays causes of automatic system cancellation that occurred during system control.</td>
</tr>
<tr>
<td>Self Diagnostic Result</td>
<td>Displays the name of a malfunctioning system stored in the ADAS control unit.</td>
</tr>
<tr>
<td>Data Monitor</td>
<td>Displays ADAS control unit input/output data in real time.</td>
</tr>
<tr>
<td>Active Test</td>
<td>Enables an operational check of a load by transmitting a driving signal from the ADAS control unit to the load.</td>
</tr>
<tr>
<td>ECU Identification</td>
<td>Displays ADAS control unit part number.</td>
</tr>
<tr>
<td>CAN Diag Support Monitor</td>
<td>Displays a reception/transmission state of CAN communication and ITS communication.</td>
</tr>
</tbody>
</table>

CONFIGURATION
Configuration includes functions as follows:

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read/Write Configuration</td>
<td>Allows the reading of vehicle specification written in ADAS control unit to store the specification in CONSULT.</td>
</tr>
<tr>
<td>Before Replace ECU</td>
<td>Allows the writing of the vehicle information stored in CONSULT into the ADAS control unit.</td>
</tr>
<tr>
<td>After Replace ECU</td>
<td>Allows the writing of the vehicle specification into the ADAS control unit by hand.</td>
</tr>
<tr>
<td>Manual Configuration</td>
<td></td>
</tr>
</tbody>
</table>

WORK SUPPORT

<table>
<thead>
<tr>
<th>Work support items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUSE OF AUTO-CANCEL 5</td>
<td>Displays causes of automatic system cancellation that occurred during control of the Intelligent Cruise Control (ICC).</td>
</tr>
</tbody>
</table>

NOTE:
• Causes of the maximum five cancellations (system cancel) are displayed.
• The displayed cancellation causes display the number of the ignition switch ON/OFF up to 254. It is fixed to 254 if it is over 254. It returns to 0 when the same cancellation cause is detected again.

Display Items for the Cause of Automatic Cancellation 1

<table>
<thead>
<tr>
<th>Cause of cancellation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAN COMM ERROR</td>
<td>ADAS control unit received an abnormal signal with CAN communication.</td>
</tr>
<tr>
<td>NO RECORD</td>
<td></td>
</tr>
</tbody>
</table>

SELF DIAGNOSTIC RESULT
Refer to DAS-25, "DTC Index".

Revision: October 2015

2016 Maxima NAM
NOTE:
- The details of time display are as per the following:
  - CRNT: A malfunction is detected now.
  - PAST: A malfunction was detected in the past.
- ODO/TRIP METER (Mileage) and VOLTAGE (IGN voltage) are displayed on FFD (Freeze Frame Data).

DATA MONITOR
NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

<table>
<thead>
<tr>
<th>Monitored item [Unit]</th>
<th>ALL SIG (ICC)</th>
<th>MAIN SIG (ICC)</th>
<th>MAIN SIG (BSW)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN SW [On/Off]</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>SET/COAST SW [On/Off]</td>
<td>×</td>
<td>×</td>
<td></td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>CANCEL SW [On/Off]</td>
<td>×</td>
<td>×</td>
<td></td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>RESUME/ACC SW [On/Off]</td>
<td>×</td>
<td>×</td>
<td></td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>DISTANCE SW [On/Off]</td>
<td>×</td>
<td></td>
<td></td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>CRUISE OPE [On/Off]</td>
<td>×</td>
<td>×</td>
<td></td>
<td>Indicates whether controlling or not (ON means &quot;controlling&quot;).</td>
</tr>
<tr>
<td>BRAKE SW [On/Off]</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>Indicates [ON/OFF] status as judged from ICC brake switch signal (ECM transmits ICC brake switch signal through CAN communication).</td>
</tr>
<tr>
<td>STOP LAMP SW [On/Off]</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>Indicates [ON/OFF] status as judged from stop lamp switch signal (ECM transmits stop lamp switch signal through CAN communication).</td>
</tr>
<tr>
<td>IDLE SW [On/Off]</td>
<td>×</td>
<td></td>
<td></td>
<td>Indicates [ON/OFF] status of idle switch read from ADAS control unit through CAN communication (ECM transmits ON/OFF status through CAN communication).</td>
</tr>
<tr>
<td>SET DISTANCE [Short/Mid/Long]</td>
<td>×</td>
<td>×</td>
<td></td>
<td>Indicates set distance memorized in ADAS control unit.</td>
</tr>
<tr>
<td>OWN VHCL [On/Off]</td>
<td>×</td>
<td></td>
<td></td>
<td>NOTE: The item is displayed, but it is not monitored.</td>
</tr>
<tr>
<td>VHCL SPEED SE [km/h] or [mph]</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>Indicates vehicle speed calculated from ADAS control unit through CAN communication [ABS actuator and electric unit (control unit) transmits vehicle speed signal (wheel speed) through CAN communication].</td>
</tr>
<tr>
<td>SET VHCL SPD [km/h] or [mph]</td>
<td>×</td>
<td>×</td>
<td></td>
<td>Indicates set vehicle speed memorized in ADAS control unit.</td>
</tr>
<tr>
<td>THRTL SENSOR [deg]</td>
<td>×</td>
<td>×</td>
<td></td>
<td>NOTE: The item is displayed, but it is not monitored.</td>
</tr>
<tr>
<td>ENGINE RPM [rpm]</td>
<td>×</td>
<td></td>
<td></td>
<td>Indicates engine speed read from ADAS control unit through CAN communication (ECM transmits engine speed signal through CAN communication).</td>
</tr>
<tr>
<td>WIPER SW [OFF/LOW/HIGH]</td>
<td>×</td>
<td></td>
<td></td>
<td>Indicates wiper [OFF/LOW/HIGH] status (BCM transmits front wiper request signal through CAN communication).</td>
</tr>
</tbody>
</table>
## Diagnosis System (ADAS Control Unit)

### System Description

<table>
<thead>
<tr>
<th>Monitored Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yaw Rate [deg/s]</td>
<td>The item is displayed, but it is not monitored.</td>
</tr>
<tr>
<td>D Position SW [On/Off]</td>
<td>Indicates [ON/OFF] status of “D” or “M” positions read from ADAS control unit through CAN communication: ON when position “D” or “M” (TCM transmits shift selector position signal through CAN communication).</td>
</tr>
<tr>
<td>NP Range SW [On/Off]</td>
<td>Indicates shift selector position signal read from ADAS control unit through CAN communication (TCM transmits shift selector position signal through CAN communication).</td>
</tr>
<tr>
<td>PKB SW [On/Off]</td>
<td>Parking brake switch status [ON/OFF] judged from the parking brake switch signal that ADAS control unit receives via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication).</td>
</tr>
<tr>
<td>PWR Sup Moni [V]</td>
<td>Indicates ignition voltage input monitored by ADAS control unit.</td>
</tr>
<tr>
<td>Vhcl Spd At [km/h] or [mph]</td>
<td>Indicates vehicle speed calculated from CVT vehicle speed sensor read from ADAS control unit through CAN communication (TCM transmits CVT vehicle speed sensor signal through CAN communication).</td>
</tr>
<tr>
<td>Thrtl Opening [%]</td>
<td>Indicates throttle position read from ADAS control unit through CAN communication (ECM transmits accelerator pedal position signal through CAN communication).</td>
</tr>
<tr>
<td>Gear [1, 2, 3, 4, 5, 6, 7]</td>
<td>Indicates CVT gear position read from ADAS control unit through CAN communication (TCM transmits current gear position signal through CAN communication).</td>
</tr>
<tr>
<td>Clutch SW Sig [On/Off]</td>
<td>Indicates [ON/OFF] status as judged from clutch pedal position signal (ECM transmits ICC clutch switch signal through CAN communication).</td>
</tr>
<tr>
<td>NP Sw Sig [On/Off]</td>
<td>Indicates [ON/OFF] status as judged from park/neutral position switch signal (ECM transmits park/neutral position switch signal through CAN communication).</td>
</tr>
<tr>
<td>Mode Sig [OFF, ICC, ASCD]</td>
<td>Indicates the active mode from ICC or ASCD [conventional (fixed speed) cruise control mode].</td>
</tr>
<tr>
<td>Distance [m]</td>
<td>Indicates the distance from the vehicle ahead.</td>
</tr>
<tr>
<td>Relative Spd [m/s]</td>
<td>Indicates the relative speed of the vehicle ahead.</td>
</tr>
<tr>
<td>On Root Guidance [On/Off]</td>
<td>The item is displayed, but it is not monitored.</td>
</tr>
<tr>
<td>Dyna Assist SW [On/Off]</td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch signal (ECM transmits ICC steering switch signal through CAN communication).</td>
</tr>
<tr>
<td>Iba SW [On/Off]</td>
<td>The item is displayed, but it is not monitored.</td>
</tr>
<tr>
<td>Navi ICC Disp [On/Off]</td>
<td>The item is displayed, but it is not monitored.</td>
</tr>
<tr>
<td>Shift position [Off, P, R, N, D, M/T1 - 7]</td>
<td>Indicates shift selector position read from ADAS control unit through CAN communication (TCM transmits shift selector position signal through CAN communication).</td>
</tr>
</tbody>
</table>
## System Description

### Turn Signal
- **OFF/LH/RH/LH&RH**
  - Indicates turn signal operation status read from ADAS control unit through CAN communication (BCM transmits turn indicator signal through CAN communication).

### SIDE G
- **G**
  - Indicates lateral G acting on the vehicle. This lateral G is judged from a side G sensor signal read by ADAS control unit via CAN communication. (The ABS actuator and electric unit (control unit) transmits a side G sensor signal via CAN communication).

### FUNC ITEM (FCW)
- **On/Off**
  - Indicates system which can be set to ON/OFF by selecting “Driver Assistance”⇒“Emergency Brake” of the integral switch:
    - Forward Emergency Braking.

### FUNC ITEM (BSW)
- **On/Off**
  - Indicates system which can be set to ON/OFF by selecting “Driver Assistance”⇒“Blind Spot” of the integral switch:
    - Blind Spot Warning.

### FUNC ITEM (NV-ICC)
- **Off**
  - Indicates system which is displayed but not monitored.

### FCW SELECT
- **On/Off**
  - Indicates an ON/OFF state of the PFCW system. The PFCW system can be set to ON/OFF by selecting “Driver Assistance”⇒“Emergency Brake” of the integral switch.

### BSW SELECT
- **On/Off**
  - Indicates an ON/OFF state of the BSW system. The BSW system can be set to ON/OFF by selecting “Driver Assistance”⇒“Blind Spot” of the integral switch.

### NAVI ICC SELECT
- **Off**
  - Indicates system which is displayed but not monitored.

### SYS SELECTABILITY
- **On/Off**
  - Indicates the availability of ON/OFF switching for “Driving Aids” items received from the integral switch via CAN communication.

### BSW/BSI WARN LMP
- **On/Off**
  - Indicates [ON/OFF] status of Blind Spot Warning malfunction.

### BSW SYSTEM ON
- **On/Off**
  - Indicates [ON/OFF] status of BSW system.

### FCW SYSTEM ON
- **On/Off**
  - Indicates [ON/OFF] status of PFCW system.

### BATTERY CIRCUIT OFF
- **On/Off**
  - Indicates [ON/OFF] status as judged from steering switch.

### SYSTEM CANCEL MESSAGE
- **[NOREQ/SLIP/VDC OFF]**
  - Indicates [ON/OFF] status of system cancel display output.

### BSW ON INDICATOR
- **On/Off**
  - Indicates [ON/OFF] status of BSW system ON display output.

### SIDE RADAR BLOCK COND
- **On/Off**
  - Indicates [ON/OFF] status of side radar with dirt or foreign materials.

### BSW IND BRIGHTNESS
- **[Nothing/Bright/Normal/Dark]**
  - Indicates status of brightness of Blind Spot Warning indicator.

### SL MAIN SW
- **On/Off**
  - Indicates [ON/OFF] status as judged from steering switch.

### FUNC ITEM(FEB)
- **On/Off**
  - Indicates system which can be set to ON/OFF by selecting “Driver Assistance”⇒“Emergency Brake” of the integral switch:
    - Forward Emergency Braking.
ACTIVE TEST

CAUTION:
• Never perform “Active Test” while driving the vehicle.
• The “Active Test” cannot be performed when the following systems malfunction is displayed.
  - ICC system
  - Blind Spot Warning/RCTA
  - PFCW/FEB
• The “Active Test” cannot be performed when the FEB warning lamp is illuminated.
• The “Active Test” cannot be performed when the ICC System is ON.

<table>
<thead>
<tr>
<th>METER LAMP</th>
<th>The FEB warning lamp can be illuminated by ON/OFF operation as necessary.</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP LAMP</td>
<td>The ICC brake hold relay can be operated by ON/OFF operation as necessary, and the stop lamp can be illuminated.</td>
</tr>
<tr>
<td>METER BUZZER</td>
<td>Sounds a buzzer used for BSW, RCTA, ICC, PFCW and FEB by arbitrarily operating ON/OFF.</td>
</tr>
<tr>
<td>BRAKE ACTUATOR 1</td>
<td>Activates the brake by an arbitrary operation.</td>
</tr>
<tr>
<td>BRAKE ACTUATOR 2</td>
<td>Activates the brake by an arbitrary operation.</td>
</tr>
</tbody>
</table>

METER LAMP

NOTE:
The test can be performed only when the engine is running.

<table>
<thead>
<tr>
<th>Test item</th>
<th>Operation</th>
<th>Description</th>
<th>FEB warning lamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>METER LAMP</td>
<td>Off</td>
<td>Stops sending the FEB warning lamp signal to exit from the test.</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Transmits the FEB warning lamp signal to the combination meter via CAN communication.</td>
<td>ON</td>
</tr>
</tbody>
</table>

STOP LAMP
## SYSTEM DESCRIPTION

### [ICC]

#### DIAGNOSIS SYSTEM (ADAS CONTROL UNIT)

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Operation</th>
<th>Description</th>
<th>Stop lamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP LAMP</td>
<td>Off</td>
<td>Stops transmitting the ICC brake hold relay drive signal to end the test.</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Transmits the ICC brake hold relay drive signal.</td>
<td>ON</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Operation</th>
<th>Description</th>
<th>Operation sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>METER BUZZER</td>
<td>Off</td>
<td>Stops buzzer output to the combination meter via CAN communication.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Starts buzzer output to the combination meter via CAN communication.</td>
<td>—</td>
</tr>
</tbody>
</table>

#### BRAKE ACTUATOR

**NOTE:**
The test can be performed only when the engine is running.

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Operation</th>
<th>Description</th>
<th>&quot;PRESS ORDER&quot; value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRAKE ACTUATOR 1</td>
<td>Off</td>
<td>Stops transmitting the brake fluid pressure control signal to end the test.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Starts transmitting the brake fluid pressure control signal to start the test.</td>
<td>10 bar</td>
</tr>
<tr>
<td>BRAKE ACTUATOR 2</td>
<td>Off</td>
<td>Stops transmitting the brake fluid pressure control signal to end the test.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Starts transmitting the brake fluid pressure control signal to start the test.</td>
<td>20 bar</td>
</tr>
<tr>
<td>BRAKE ACTUATOR 3</td>
<td>Off</td>
<td>Stops transmitting the brake fluid pressure control signal to end the test.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Starts transmitting the brake fluid pressure control signal to start the test.</td>
<td>30 bar</td>
</tr>
</tbody>
</table>

**NOTE:**
The test is finished 10 seconds after starting.

---

#### ECU IDENTIFICATION
Displays ADAS control unit part number.
CONSULT Function (LASER/RADAR)

APPLICATION ITEMS
CONSULT performs the following functions via CAN communication with ADAS control unit and the communication with ICC sensor.

<table>
<thead>
<tr>
<th>Diagnosis mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Diagnostic Result</td>
<td>Displays malfunctioning system memorized in ICC sensor</td>
</tr>
<tr>
<td>Data Monitor</td>
<td>Displays real-time input/output data of ICC sensor</td>
</tr>
<tr>
<td>Work support</td>
<td>It can monitor the adjustment direction indication in order to perform the radar adjustment operation smoothly</td>
</tr>
<tr>
<td>ECU Identification</td>
<td>Displays ICC sensor part number</td>
</tr>
<tr>
<td>CAN Diag Support Monitor</td>
<td>The results of transmit/receive diagnosis of ITS communication can be read.</td>
</tr>
</tbody>
</table>

SELF DIAGNOSTIC RESULT
Refer to CCS-46, "DTC Index".

DATA MONITOR

<table>
<thead>
<tr>
<th>Monitored item [Unit]</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHCL SPEED SE [km/h] or [mph]</td>
<td>Vehicle speed judged from a vehicle speed signal read by the ICC sensor via ITS communication is displayed [ADAS control unit receives a vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication and transmits the calculated vehicle speed to ICC sensor via ITS communication].</td>
</tr>
<tr>
<td>YAW RATE [deg/s]</td>
<td>Indicates yaw rate read from ADAS control unit through ITS communication [ADAS control unit receives yaw rate signal from ABS actuator and electric unit (control unit) via CAN communication and transmits yaw rate calculated by the ADAS control unit] Yaw rate judged from a yaw rate signal read by ICC sensor via ITS communication is displayed [ADAS control unit receives a yaw rate signal from ABS actuator and electric unit (control unit) via CAN communication and transmits the calculated yaw rate to ICC sensor via ITS communication].</td>
</tr>
<tr>
<td>PWR SUP MONI [V]</td>
<td>Indicates IGN voltage input by ICC sensor</td>
</tr>
<tr>
<td>DISTANCE [m]</td>
<td>Indicates the distance from the vehicle ahead</td>
</tr>
<tr>
<td>RELATIVE SPD [m/s]</td>
<td>Indicates the relative speed of the vehicle ahead</td>
</tr>
<tr>
<td>LASER OFFSET [m]</td>
<td>NOTE: The item is indicated but not used.</td>
</tr>
<tr>
<td>LASER HEIGHT [m]</td>
<td>NOTE: The item is indicated but not used.</td>
</tr>
<tr>
<td>STEERING ANGLE [deg]</td>
<td>The steering angle is displayed.</td>
</tr>
<tr>
<td>STRG ANGLE SPEED [deg/s]</td>
<td>The steering angle speed is displayed.</td>
</tr>
<tr>
<td>L/R ADJUST [deg]</td>
<td>Indicates a horizontal correction value of the radar</td>
</tr>
<tr>
<td>U/D ADJUST [deg]</td>
<td>Indicates a vertical correction value of the radar</td>
</tr>
<tr>
<td>FCW SYSTEM ON</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>FCW SELECT</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
</tbody>
</table>
## Diagnosis System (ICC Sensor)

### Monitored Item

<table>
<thead>
<tr>
<th>Monitored Item [Unit]</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFCW SELECT</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>PFCW SYSTEM ON</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>FEB SW</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>FEB SELECT</td>
<td>Indicates [ON/OFF] state of the PFCW system.</td>
</tr>
<tr>
<td>MAIN SW</td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>ICC/ASCD MODE</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>SET/COAST SW</td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>CANCEL SW</td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>RESUME/ACC SW</td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>DISTANCE SW</td>
<td>Indicates [ON/OFF] status as judged from ICC steering switch.</td>
</tr>
<tr>
<td>BRAKE SW</td>
<td>Indicates [ON/OFF] status as judged from brake pedal position switch signal [ECM transmits brake pedal position switch signal through CAN communication].</td>
</tr>
<tr>
<td>STOP LAMP SW</td>
<td>Indicates [ON/OFF] status as judged from stop lamp switch signal [ABS actuator and electric unit (control unit) transmits stop lamp switch signal through CAN communication].</td>
</tr>
<tr>
<td>IDLE SW</td>
<td>Indicates [ON/OFF] status of idle switch read from ICC sensor through CAN communication (ECM transmits ON/OFF status through CAN communication).</td>
</tr>
<tr>
<td>CRUISE LAMP</td>
<td>Indicates [ON/OFF] status of MAIN switch indicator output.</td>
</tr>
<tr>
<td>OWN VHCL</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>VHCL AHEAD</td>
<td>Indicates [ON/OFF] status of vehicle ahead detection indicator output.</td>
</tr>
<tr>
<td>SET DISTANCE</td>
<td>Indicates set distance memorized in ADAS control unit.</td>
</tr>
<tr>
<td>SET VHCL SPD [km/h] or [mph]</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>THRRTL SENSOR [%]</td>
<td>Indicates throttle position read from ISS sensor through CAN communication (ECM transmits accelerator pedal position signal through CAN communication).</td>
</tr>
<tr>
<td>VEHICLE AHEAD DETECT</td>
<td>Indicates [ON/OFF] status of vehicle ahead detection indicator output.</td>
</tr>
<tr>
<td>STATIC OBSTACLE DETECT</td>
<td>Indicates [ON/OFF] status of static obstacle detection.</td>
</tr>
<tr>
<td>BUZER O/P</td>
<td>[ON/OFF] Indicates [On/Off] status of warning chime output.</td>
</tr>
<tr>
<td>FUNC ITEM (FCW)</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>FUNC ITEM (PFCW)</td>
<td>Indicates systems status</td>
</tr>
<tr>
<td>FUNC ITEM (FEB)</td>
<td>Indicates systems status</td>
</tr>
<tr>
<td>FUNC ITEM (ICC)</td>
<td>Indicates systems status</td>
</tr>
<tr>
<td>PRESS_ORDER [bar]</td>
<td>Indicates status as judged from brake fluid pressure signal [ABS actuator and electric unit (control unit) transmits brake fluid pressure signal through CAN communication].</td>
</tr>
<tr>
<td>D RANGE SW</td>
<td>Indicates [ON/OFF] status as judged from D position switch signal (TCM transmits shift position signal through CAN communication).</td>
</tr>
<tr>
<td>NP RANGE SW</td>
<td>Indicates [ON/OFF] status as judged from N/P position switch signal (TCM transmits shift position signal through CAN communication).</td>
</tr>
<tr>
<td>PKB SW</td>
<td>Parking brake switch status [ON/OFF] judges from the parking brake switch signal that ADAS control unit readout via CAN communication is displayed (combination meter transmits the parking brake switch signal via CAN communication)</td>
</tr>
<tr>
<td>VHCL SPD AT</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
</tbody>
</table>
### System Description

<table>
<thead>
<tr>
<th>Monitored Item [Unit]</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift position</td>
<td>Indicates shift position read from ADAS control unit though CAN communication (TCM transmits shift position signal through CAN communication).</td>
</tr>
<tr>
<td>Turn signal</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>SYSTEM CANCEL MESSAGE</td>
<td>Indicates [ON/OFF] status of system cancel display output.</td>
</tr>
<tr>
<td>DISP VHCL SPD [km/h] or [mph]</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>VHCL SPD UNIT</td>
<td>Indicates vehicle speed unit read from ICC sensor through CAN communication (combination meter transmits vehicle speed unit through CAN communications).</td>
</tr>
<tr>
<td>ADAS AVAILABLE COND</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>ICC SET STATUS</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>ICC MALF</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>ADAS MALF</td>
<td>Indicates [ON/OFF] status of ADAS malfunction.</td>
</tr>
<tr>
<td>STOP LAMP RELAY ON</td>
<td>Indicates [ON/OFF] status of stop lamp relay fixed on.</td>
</tr>
<tr>
<td>STOP LAMP RELAY OFF</td>
<td>Indicates [ON/OFF] status of stop lamp relay fixed off.</td>
</tr>
<tr>
<td>ACCEL COM VALUE 1 [m/s²]</td>
<td>Indicates accel command calculated from set speed and information of ahead vehicle.</td>
</tr>
<tr>
<td>ICC STATUS</td>
<td>Indicates ICC status.</td>
</tr>
<tr>
<td>ACCEL COM VALUE 2</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
<tr>
<td>MILEAGE</td>
<td>NOTE: The item is indicated, but not used.</td>
</tr>
</tbody>
</table>

### Work Support

<table>
<thead>
<tr>
<th>Work support items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILLIWAVE RADAR ADJUST</td>
<td>Outputs millimeter waves, calculates the displacement in radar direction, and indicates an adjustment direction</td>
</tr>
<tr>
<td>CAUSE OF AUTO-CANCEL</td>
<td>Displays causes of automatic cancellation occurred during Intelligent Cruise Control system.</td>
</tr>
</tbody>
</table>

### ICC sensor Adjust

Refer to **CCS-59, "Description"**.

### ECU IDENTIFICATION

ICC sensor part number is displayed.

### CAUSE OF AUTO CANCEL

<table>
<thead>
<tr>
<th>Work support items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING ABS</td>
<td>ABS function was operated.</td>
</tr>
<tr>
<td>OPERATING TCS</td>
<td>TCS function was operated.</td>
</tr>
<tr>
<td>OPERATING VDC</td>
<td>VDC function was operated.</td>
</tr>
<tr>
<td>ECM CIRCUIT</td>
<td>ECM did not permit ICC operation.</td>
</tr>
<tr>
<td>OP SW VOLT CIRC</td>
<td>The ICC steering switch input voltage is not within standard range.</td>
</tr>
<tr>
<td>OP SW DOUBLE TOUCH</td>
<td>The ICC steering switches were pressed at the same time.</td>
</tr>
<tr>
<td>VHCL SPD DOWN</td>
<td>Vehicle speed is lower than 24 km/h (15 mph).</td>
</tr>
<tr>
<td>WHL SPD ELEC NOISE</td>
<td>Wheel speed sensor signal caught electromagnetic noise.</td>
</tr>
<tr>
<td>VDC/TCS OFF SW</td>
<td>VDC OFF switch was pressed.</td>
</tr>
<tr>
<td>Work support items</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>VHCL SPD UNMATCH</td>
<td>Wheel speed became different from A/T vehicle speed.</td>
</tr>
<tr>
<td>TIRE SLIP</td>
<td>Wheel slipped.</td>
</tr>
<tr>
<td>IGN LOW VOLT</td>
<td>Decrease in ICC sensor ignition voltage.</td>
</tr>
<tr>
<td>PARKING BRAKE ON</td>
<td>The parking brake is operating.</td>
</tr>
<tr>
<td>WHEEL SPD UNMATCH</td>
<td>The wheel speed of all four wheels are out of the specified values.</td>
</tr>
<tr>
<td>INCHING LOST</td>
<td>A vehicle ahead is not detected during the following driving when the vehicle speed is approximately 24 km/h (15 mph) or less.</td>
</tr>
<tr>
<td>CAN COMM ERROR</td>
<td>ICC sensor received an abnormal signal with CAN communication.</td>
</tr>
<tr>
<td>ABS/TCS/VDC CIRC</td>
<td>An abnormal condition occurs in VDC/TCS/ABS system.</td>
</tr>
<tr>
<td>ECD CIRCUIT</td>
<td>An abnormal condition occurs in ECD system.</td>
</tr>
<tr>
<td>ASCD VHCL SPD DTAC</td>
<td>Vehicle speed is detached from the set vehicle speed.</td>
</tr>
<tr>
<td>ASCD DOUBLE COMD</td>
<td>Cancel switch and operation switch are detected simultaneously.</td>
</tr>
<tr>
<td>FEB OPERATED</td>
<td>FEB activated.</td>
</tr>
<tr>
<td>VHL AHAD LOST (CLSE RANGE)</td>
<td>A vehicle ahead lost close range.</td>
</tr>
<tr>
<td>NO RECORD</td>
<td>—</td>
</tr>
</tbody>
</table>
VALUES ON THE DIAGNOSIS TOOL

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

<table>
<thead>
<tr>
<th>Monitor item</th>
<th>Condition</th>
<th>Value/Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN SW</td>
<td>Ignition switch ON</td>
<td>When MAIN (ON/OFF) switch is pressed. On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When MAIN (ON/OFF) switch is not pressed. Off</td>
</tr>
<tr>
<td>SET/COAST SW</td>
<td>Ignition switch ON</td>
<td>When SET/COAST switch is pressed. On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When SET/COAST switch is not pressed. Off</td>
</tr>
<tr>
<td>CANCEL SW</td>
<td>Ignition switch ON</td>
<td>When CANCEL switch is pressed. On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When CANCEL switch is not pressed. Off</td>
</tr>
<tr>
<td>RESUME/ACC SW</td>
<td>Ignition switch ON</td>
<td>When RESUME/ACCELERATE switch is pressed. On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When RESUME/ACCELERATE switch is not pressed. Off</td>
</tr>
<tr>
<td>DISTANCE SW</td>
<td>Ignition switch ON</td>
<td>When DISTANCE switch is pressed. On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When DISTANCE switch is not pressed. Off</td>
</tr>
<tr>
<td>CRUISE OPE</td>
<td>Drive the vehicle and activate the ICC system</td>
<td>When ICC system is controlling. On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When ICC system is not controlling. Off</td>
</tr>
<tr>
<td>BRAKE SW</td>
<td>Ignition switch ON</td>
<td>When brake or clutch pedal is depressed. Off</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When brake or clutch pedal is not depressed. On</td>
</tr>
<tr>
<td>STOP LAMP SW</td>
<td>Ignition switch ON</td>
<td>When brake pedal is depressed. On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When brake pedal is not depressed. Off</td>
</tr>
<tr>
<td>IDLE SW</td>
<td>Engine running</td>
<td>Idling On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Except idling (depress accelerator pedal) Off</td>
</tr>
<tr>
<td>SET DISTANCE</td>
<td>• Start the engine and turn the ICC system ON</td>
<td>When set to “long” Long</td>
</tr>
<tr>
<td></td>
<td>• Press the DISTANCE switch to change the ICC system</td>
<td>When set to “middle” Mid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When set to “short” Short</td>
</tr>
<tr>
<td>CRUISE LAMP</td>
<td>Start the engine and press MAIN switch</td>
<td>ICC system ON (MAIN switch indicator ON). On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICC system OFF (MAIN switch indicator OFF). Off</td>
</tr>
<tr>
<td>OWN VHCL</td>
<td>NOTE:</td>
<td>The item is indicated, but not monitored Off</td>
</tr>
<tr>
<td>VHCL AHEAD</td>
<td>Drive the vehicle and activate the ICC system</td>
<td>When a vehicle ahead is detected (vehicle ahead detection indicator ON). On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When a vehicle ahead is not detected (vehicle ahead detection indicator OFF). Off</td>
</tr>
<tr>
<td>ICC WARNING</td>
<td>Start the engine and press MAIN switch</td>
<td>When ICC system is malfunctioning (ICC system malfunction ON). On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When ICC system is normal (ICC system malfunction OFF). Off</td>
</tr>
<tr>
<td>Monitor item</td>
<td>Condition</td>
<td>Value/Status</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>VHCL SPEED SE</td>
<td>While driving</td>
<td>Displays the vehicle speed calculated by ADAS control unit</td>
</tr>
<tr>
<td>SET VHCL SPD</td>
<td>While driving</td>
<td>Displays the set vehicle speed</td>
</tr>
<tr>
<td>BUZZER O/P</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the buzzer of the following system operates:</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>• ICC system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PFCW system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• FEB system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the buzzer of the following system does not operate:</td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>• ICC system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PFCW system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• FEB system</td>
<td></td>
</tr>
<tr>
<td>THRTL SENSOR</td>
<td>NOTE:</td>
<td>The item is indicated, but not monitored. 0.0</td>
</tr>
<tr>
<td>ENGINE RPM</td>
<td>Engine running</td>
<td>Equivalent to tachometer reading</td>
</tr>
<tr>
<td>WIPER SW</td>
<td>Ignition switch ON</td>
<td>Wiper not operating.                                                          Off</td>
</tr>
<tr>
<td></td>
<td>Wiper LO operation.</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Wiper HI operation.</td>
<td>High</td>
</tr>
<tr>
<td>YAW RATE</td>
<td>NOTE:</td>
<td>The item is indicated, but not monitored. 0.0</td>
</tr>
<tr>
<td>BA WARNING</td>
<td>Engine running</td>
<td>FEB OFF indicator lamp ON.                                                     On</td>
</tr>
<tr>
<td></td>
<td>• When FEB system is malfunctioning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• When FEB system is turned to OFF.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FEB OFF indicator lamp OFF.</td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>• When FEB system is normal.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• When FEB system is turned to ON.</td>
<td></td>
</tr>
<tr>
<td>STP LMP DRIVE</td>
<td>Drive the vehicle and activate the ICC system</td>
<td>When ICC brake hold relay is activated. On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When ICC brake hold relay is not activated. Off</td>
</tr>
<tr>
<td>D POSITION SW</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the shift selector is in “D” position or manual mode.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When the shift selector is in any position other than “D” or manual mode.</td>
<td>Off</td>
</tr>
<tr>
<td>NP RANGE SW</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the shift selector is in “N” or “P” position.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When the shift selector is in any position other than “N” or “P”.</td>
<td>Off</td>
</tr>
<tr>
<td>PKB SW</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the parking brake is applied.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When the parking brake is released.</td>
<td>Off</td>
</tr>
<tr>
<td>PWR SUP MONI</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Power supply voltage value of ADAS control unit</td>
<td></td>
</tr>
<tr>
<td>VHCL SPD AT</td>
<td>While driving</td>
<td>Value of CVT vehicle speed sensor signal</td>
</tr>
<tr>
<td>THRTL OPENING</td>
<td>Engine running</td>
<td>Displays the throttle position</td>
</tr>
<tr>
<td>GEAR</td>
<td>While driving</td>
<td>Displays the gear position</td>
</tr>
</tbody>
</table>
## ECU DIAGNOSIS INFORMATION

<table>
<thead>
<tr>
<th>Monitor item</th>
<th>Condition</th>
<th>Value/Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLUTCH SW SIG</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When clutch or brake pedal is depressed.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When clutch or brake pedal is not depressed.</td>
<td>Off</td>
</tr>
<tr>
<td>NP SW SIG</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the shift selector is in neutral position.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When the shift selector is in any position other than neutral.</td>
<td>Off</td>
</tr>
<tr>
<td>MODE SIG</td>
<td>Start the engine and press MAIN switch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When ICC system is deactivated.</td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>When ICC system is activated.</td>
<td>ICC</td>
</tr>
<tr>
<td>SET DISP IND</td>
<td>Press SET/COAST switch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SET switch indicator ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>SET switch indicator OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>DISTANCE</td>
<td>Drive the vehicle and activate the ICC system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When a vehicle ahead is detected.</td>
<td>Displays the distance from the preceding vehicle</td>
</tr>
<tr>
<td></td>
<td>When a vehicle ahead is not detected.</td>
<td>0.0</td>
</tr>
<tr>
<td>RELATIVE SPD</td>
<td>Drive the vehicle and activate the ICC system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When a vehicle ahead is detected.</td>
<td>Displays the relative speed.</td>
</tr>
<tr>
<td></td>
<td>When a vehicle ahead is not detected.</td>
<td>0.0</td>
</tr>
<tr>
<td>ON ROOT GUIDE</td>
<td>NOTE:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The item is indicated, but not monitored.</td>
<td>Off</td>
</tr>
<tr>
<td>FCW SYSTEM ON</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the PFCW system is ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When the PFCW system is OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>Shift position</td>
<td>• Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• While driving</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Displays the shift selector position</td>
<td></td>
</tr>
<tr>
<td>Turn signal</td>
<td>Turn signal lamps OFF.</td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>Turn signal lamp LH blinking.</td>
<td>LH</td>
</tr>
<tr>
<td></td>
<td>Turn signal lamp RH blinking.</td>
<td>RH</td>
</tr>
<tr>
<td></td>
<td>Turn signal lamp LH and RH blinking.</td>
<td>LH&amp;RH</td>
</tr>
<tr>
<td>SIDE G</td>
<td>While driving</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vehicle turning right.</td>
<td>Negative value</td>
</tr>
<tr>
<td></td>
<td>Vehicle turning left.</td>
<td>Positive value</td>
</tr>
<tr>
<td>FUNC ITEM</td>
<td>Ignition switch ON</td>
<td>FUNC3</td>
</tr>
<tr>
<td>FUNC ITEM (FCW)</td>
<td>Engine running</td>
<td>On</td>
</tr>
<tr>
<td>FUNC ITEM (BSW)</td>
<td>Engine running</td>
<td>On</td>
</tr>
<tr>
<td>FUNC ITEM (NV-ICC)</td>
<td>NOTE:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The item is indicated, but not monitored.</td>
<td>Off</td>
</tr>
<tr>
<td>FCW SELECT</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Forward Emergency Braking” set when the integral switch is ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>“Forward Emergency Braking” set when the integral switch is OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>BSW SELECT</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Blind Spot Warning” set when the integral switch is ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>“Blind Spot Warning” set when the integral switch is OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>NAVI ICC SELECT</td>
<td>NOTE:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The item is indicated, but not monitored.</td>
<td>Off</td>
</tr>
<tr>
<td>SYS SELECTABILITY</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Items set with the integral switch can be switched normally.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>Items set with the integral switch cannot be switched normally.</td>
<td>Off</td>
</tr>
<tr>
<td>Monitor item</td>
<td>Condition</td>
<td>Value/Status</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>BSW WARN LMP</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the BSW system is malfunctioning.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When the BSW system is normal.</td>
<td>Off</td>
</tr>
<tr>
<td>BSW SYSTEM ON</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the BSW system is ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When the BSW system is OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>FCW SYSTEM ON</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the FEB/PFCW system is ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When the FEB/PFCW system is OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>BATTERY CIRCUIT OFF</td>
<td>NOTE:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The item is indicated, but not used.</td>
<td>Off</td>
</tr>
<tr>
<td>SYSTEM CANCEL MESSAGE</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>System cancel display ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>System cancel display OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>BSW ON INDICATOR</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BSW system display ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>BSW system display OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>SIDE RADAR BLOCK COND</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Front bumper or side radar is dirty.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>Front bumper and side radar are clean.</td>
<td>Off</td>
</tr>
<tr>
<td>BSW IND BRIGHTNESS</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BSW system OFF.</td>
<td>Nothing</td>
</tr>
<tr>
<td></td>
<td>Blind Spot Warning indicator brightness bright.</td>
<td>Bright</td>
</tr>
<tr>
<td></td>
<td>Blind Spot Warning indicator brightness normal.</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td>Blind Spot Warning indicator brightness dark.</td>
<td>Dark</td>
</tr>
<tr>
<td>SL MAIN SW</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When speed limiter MAIN switch is pressed.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When speed limiter MAIN switch is not pressed.</td>
<td>Off</td>
</tr>
<tr>
<td>FUNC ITEM (FEB)</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Forward Emergency Braking” set when the integral switch is ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>“Forward Emergency Braking” set when the integral switch is OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>FEB SELECT</td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FEB system ON.</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>FEB system OFF.</td>
<td>Off</td>
</tr>
<tr>
<td>FEB SW</td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td>SL TARGET VEHICLE SPEED</td>
<td>While driving</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When vehicle speed is set.</td>
<td>Displays the set vehicle speed</td>
</tr>
<tr>
<td>SL SET LAMP</td>
<td>• Drive the vehicle and activate the speed limiter</td>
<td>Speed limiter SET indicator ON.</td>
</tr>
<tr>
<td></td>
<td>• Press speed limiter MAIN switch</td>
<td>Speed limiter SET indicator OFF.</td>
</tr>
<tr>
<td>SL LIMIT LAMP</td>
<td>• Drive the vehicle and activate the speed limiter</td>
<td>Speed limiter system ON.</td>
</tr>
<tr>
<td></td>
<td>• Press speed limiter MAIN switch</td>
<td>Speed limiter system OFF.</td>
</tr>
<tr>
<td>ASCD CANCEL (LOW SPEED)</td>
<td>Drive the vehicle and activate the ASCD</td>
<td>ASCD canceled by low vehicle speed.</td>
</tr>
<tr>
<td></td>
<td>Other than above.</td>
<td>Off</td>
</tr>
<tr>
<td>ASCD CANCEL (SPEED DIFF)</td>
<td>Drive the vehicle and activate the ASCD</td>
<td>ASCD canceled by difference between set speed and vehicle speed.</td>
</tr>
<tr>
<td></td>
<td>Other than above.</td>
<td>Off</td>
</tr>
<tr>
<td>KICK DOWN</td>
<td>Drive the vehicle and activate the speed limiter</td>
<td>When accelerator pedal is fully depressed.</td>
</tr>
<tr>
<td></td>
<td>Other than above.</td>
<td>Off</td>
</tr>
</tbody>
</table>
ADAS CONTROL UNIT

<TERMVALNT LAYOUT>

PHYSICAL VALUES

<table>
<thead>
<tr>
<th>Terminal No. (Wire color)</th>
<th>Description</th>
<th>Input/Output</th>
<th>Condition</th>
<th>Value (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ (B) Ground</td>
<td>Ground</td>
<td>Input</td>
<td>—</td>
<td>0 V</td>
</tr>
<tr>
<td>2 (L) ITS communication high</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>3 (BG) Ignition power supply</td>
<td>Input</td>
<td>Ignition switch ON</td>
<td>Battery voltage</td>
<td></td>
</tr>
<tr>
<td>5 (Y) ITS communication low</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>9 (L) CAN high</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>10 (P) CAN low</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>14 (W) ICC brake hold relay drive signal</td>
<td>Output</td>
<td>Ignition switch ON</td>
<td>—</td>
<td>Battery voltage</td>
</tr>
</tbody>
</table>

Fail-safe (ADAS Control Unit)

If a malfunction occurs in each system, ADAS control unit cancels each control, sounds a beep, and turns ON the warning or indicator lamp.

<table>
<thead>
<tr>
<th>System</th>
<th>Buzzer</th>
<th>Warning lamp/Warning display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Cruise Control (ICC)</td>
<td>High-pitched tone</td>
<td>ICC system warning</td>
<td>Cancel</td>
</tr>
<tr>
<td>Forward Emergency Braking (FEB)</td>
<td>High-pitched tone</td>
<td>FEB warning lamp (Yellow)</td>
<td>Cancel</td>
</tr>
<tr>
<td>Predictive Forward Collision Warning (PFCW)</td>
<td>High-pitched tone</td>
<td>FEB warning lamp (Yellow)</td>
<td>Cancel</td>
</tr>
<tr>
<td>Blind Spot Warming (BSW)</td>
<td>Low-pitched tone</td>
<td>BSW system warning</td>
<td>Cancel</td>
</tr>
<tr>
<td>Rear Cross Traffic Alert (RCTA)</td>
<td>—</td>
<td>BSW system warning</td>
<td>Cancel</td>
</tr>
</tbody>
</table>

DTC Inspection Priority Chart

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.
## ADAS CONTROL UNIT

### Systems for fail-safe
- A: Intelligent Cruise Control (ICC)
- B: Forward Emergency Braking (FEB)
- C: Predictive Forward Collision Warning (PFCW)
- D: Blind Spot Warning (BSW)
- E: Rear Cross Traffic Alert (RCTA)

### DTC Index

<table>
<thead>
<tr>
<th>Priority</th>
<th>Detected items (DTC)</th>
</tr>
</thead>
</table>
| 1        | U1507: LOST COMM (SIDE RDR R)  
U1508: LOST COMM (SIDE RDR L) |
| 2        | U1000: CAN COMM CIRCUIT  
U1321: CONFIGURATION |
| 3        | C1A17: ICC SENSOR MALF  
C1B53: SIDE RDR R MALF  
C1B54: SIDE RDR L MALF |
| 4        | C1A01: POWER SUPPLY CIR  
C1A02: POWER SUPPLY CIR 2  
C1A13: STOP LAMP RLY FIX  
C1A14: ECM CIRCUIT  
C1A34: COMMAND ERROR  
U0121: VDC CAN CIR 2  
U0235: ICC SENSOR CAN CIRC 1  
U0401: ECM CAN CIR 1  
U0402: TCM CAN CIR 1  
U0415: VDC CAN CIR 1  
U0433: ICC SENSOR CAN CIRC 2  
U1503: SIDE RDR L CAN CIR 2  
U1504: SIDE RDR L CAN CIR 1  
U1505: SIDE RDR R CAN CIR 2  
U1506: SIDE RDR R CAN CIR 1 |
| 5        | C1A03: VHCL SPEED SE CIRC |
| 6        | C1A00: CONTROL UNIT |

### CONSULT display
- NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED
  - **U1507** LOST COMM (SIDE RDR R)  
  - **U1508** LOST COMM (SIDE RDR L)  
  - **U1000** CAN COMM CIRCUIT  
  - **U1321** CONFIGURATION  
  - **C1A17** ICC SENSOR MALF  
  - **C1B53** SIDE RDR R MALF  
  - **C1B54** SIDE RDR L MALF  
  - **C1A01** POWER SUPPLY CIR  
  - **C1A02** POWER SUPPLY CIR 2  
  - **C1A13** STOP LAMP RLY FIX  
  - **C1A14** ECM CIRCUIT  
  - **C1A34** COMMAND ERROR  
  - **U0121** VDC CAN CIR 2

### Fail-safe Reference
- 

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Revision: October 2015  
CCS-40  
2016 Maxima NAM
Systems for fail-safe
• A: Intelligent Cruise Control (ICC)
• B: Forward Emergency Braking (FEB)
• C: Predictive Forward Collision Warning (PFCW)
• D: Blind Spot Warning (BSW)
• E: Rear Cross Traffic Alert (RCTA)

<table>
<thead>
<tr>
<th>DTC</th>
<th>CONSULT display</th>
<th>Fail-safe System</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>U0235</td>
<td>ICC SENSOR CAN CIRC 1</td>
<td>A, C, D, E</td>
<td>DAS-57</td>
</tr>
<tr>
<td>U0401</td>
<td>ECM CAN CIR 1</td>
<td>A, B, C, D, E</td>
<td>DAS-58</td>
</tr>
<tr>
<td>U0402</td>
<td>TCM CAN CIR 1</td>
<td>A, B, C, D, E</td>
<td>DAS-60</td>
</tr>
<tr>
<td>U0415</td>
<td>VDC CAN CIR 1</td>
<td>A, B, C, D, E</td>
<td>DAS-62</td>
</tr>
<tr>
<td>U0433</td>
<td>ICC SENSOR CAN CIRC 2</td>
<td>A, B, C</td>
<td>DAS-64</td>
</tr>
<tr>
<td>U1503</td>
<td>SIDE RDR L CAN CIR 2</td>
<td>D, E</td>
<td>DAS-68</td>
</tr>
<tr>
<td>U1504</td>
<td>SIDE RDR L CAN CIR 1</td>
<td>D, E</td>
<td>DAS-70</td>
</tr>
<tr>
<td>U1505</td>
<td>SIDE RDR R CAN CIR 2</td>
<td>D, E</td>
<td>DAS-72</td>
</tr>
<tr>
<td>U1506</td>
<td>SIDE RDR R CAN CIR 1</td>
<td>D, E</td>
<td>DAS-74</td>
</tr>
<tr>
<td>C1A03</td>
<td>VHCL SPEED SE CIRC</td>
<td>D, E</td>
<td>DAS-41</td>
</tr>
<tr>
<td>C1A00</td>
<td>CONTROL UNIT</td>
<td>A, B, C, D, E</td>
<td>DAS-39</td>
</tr>
</tbody>
</table>

**NOTE:**
With the detection of “U1000” some systems do not perform the fail-safe operation.
A system controlling based on a signal received from the control unit performs fail-safe operation when the communication with the ADAS control unit becomes inoperable.
# ICC SENSOR

## Reference Value

### VALUES ON THE DIAGNOSIS TOOL

<table>
<thead>
<tr>
<th>Monitor item</th>
<th>Condition</th>
<th>Value/Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHCL SPEED SE</td>
<td>While driving</td>
<td>Value of vehicle speed signal (wheel speed)</td>
</tr>
<tr>
<td>YAW RATE</td>
<td>While driving</td>
<td>Vehicle stopped</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vehicle turning right</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vehicle turning left</td>
</tr>
<tr>
<td>PWR SUP MONI</td>
<td>Ignition switch ON</td>
<td>Power supply voltage value of ICC sensor</td>
</tr>
<tr>
<td>DISTANCE</td>
<td>Drive the vehicle and activate the ICC system.</td>
<td>When a vehicle ahead is detected</td>
</tr>
<tr>
<td>RELATIVE SPD</td>
<td>Drive the vehicle and activate the ICC system.</td>
<td>When a vehicle ahead is detected</td>
</tr>
<tr>
<td>LASER OFFSET</td>
<td>NOTE:</td>
<td>The item is indicated but not used.</td>
</tr>
<tr>
<td>LASER HEIGHT</td>
<td>NOTE:</td>
<td>The item is indicated but not used.</td>
</tr>
<tr>
<td>STEERING ANGLE</td>
<td>Ignition switch ON</td>
<td>When setting the steering wheel in straight-ahead position</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When turning the steering wheel 90° rightward</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When turning the steering wheel 90° leftward</td>
</tr>
<tr>
<td>STRG ANGLE SPEED</td>
<td>Ignition switch ON</td>
<td>At the time of turning the steering wheel</td>
</tr>
<tr>
<td>L/R ADJUST</td>
<td>Ignition switch ON</td>
<td>At the completion of radar alignment adjustment</td>
</tr>
<tr>
<td>U/D ADJUST</td>
<td>Ignition switch ON</td>
<td>At the completion of radar alignment adjustment</td>
</tr>
<tr>
<td>FCW SYSTEM ON</td>
<td>NOTE:</td>
<td>The item is indicated, but not used</td>
</tr>
<tr>
<td>FCW SELECT</td>
<td>NOTE:</td>
<td>The item is indicated, but not used</td>
</tr>
<tr>
<td>PFCW SYSTEM ON</td>
<td>NOTE:</td>
<td>The item is indicated, but not used</td>
</tr>
<tr>
<td>PFCW SELECT</td>
<td>Engine running</td>
<td>PFCW system set with the information display is OFF</td>
</tr>
<tr>
<td>FEB SW</td>
<td>NOTE:</td>
<td>The item is indicated, but not used</td>
</tr>
<tr>
<td>FEB SELECT</td>
<td>Engine running</td>
<td>PFCW system set with the information display is ON</td>
</tr>
</tbody>
</table>

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# ICC Sensor

<table>
<thead>
<tr>
<th>Monitor Item</th>
<th>Condition</th>
<th>Value/Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAIN SW</strong></td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When MAIN switch is pressed</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When MAIN switch is not pressed</td>
<td>Off</td>
</tr>
<tr>
<td><strong>ICC/ASCD MODE</strong></td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intelligent Cruise Control System MAIN switch status</td>
<td>On</td>
</tr>
<tr>
<td><strong>SET/COAST SW</strong></td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When SET/COAST switch is pressed</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When SET/COAST switch is not pressed</td>
<td>Off</td>
</tr>
<tr>
<td><strong>CANCEL SW</strong></td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When CANCEL switch is pressed</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When CANCEL switch is not pressed</td>
<td>Off</td>
</tr>
<tr>
<td><strong>RESUME/ACC SW</strong></td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When RESUME/ACC SW switch is pressed</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When RESUME/ACC SW switch is not pressed</td>
<td>Off</td>
</tr>
<tr>
<td><strong>DISTANCE SW</strong></td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When DISTANCE switch is pressed</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When DISTANCE switch is not pressed</td>
<td>Off</td>
</tr>
<tr>
<td><strong>BRAKE SW</strong></td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When brake pedal is depressed</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When brake pedal is not depressed</td>
<td>Off</td>
</tr>
<tr>
<td><strong>STOP LAMP SW</strong></td>
<td>Ignition switch ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When brake pedal is depressed</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When brake pedal is not depressed</td>
<td>Off</td>
</tr>
<tr>
<td><strong>IDLE SW</strong></td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Idling</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>Except idling (depress accelerator pedal)</td>
<td>Off</td>
</tr>
<tr>
<td><strong>CRUISE LAMP</strong></td>
<td>Start the engine and press MAIN switch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ICC system ON</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>ICC system OFF</td>
<td>Off</td>
</tr>
<tr>
<td><strong>OWN VHCL</strong></td>
<td>NOTE: The item is indicated, but not used.</td>
<td>Off</td>
</tr>
<tr>
<td><strong>VHCL AHEAD</strong></td>
<td>Drive the vehicle and activate the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intelligent Cruise Control System</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When a vehicle ahead is detected (vehicle ahead detection indicator ON)</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>When a vehicle ahead is detected (vehicle ahead detection indicator OFF)</td>
<td>Off</td>
</tr>
<tr>
<td><strong>SET DISTANCE</strong></td>
<td>• Start the engine and turn the ICC system ON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Press the DISTANCE switch to change the distance setting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When set to &quot;long&quot;</td>
<td>LONG</td>
</tr>
<tr>
<td></td>
<td>When set to &quot;middle&quot;</td>
<td>MID</td>
</tr>
<tr>
<td></td>
<td>When set to &quot;short&quot;</td>
<td>SHORT</td>
</tr>
<tr>
<td><strong>SET VHCL SPD</strong></td>
<td>NOTE: The item is indicated, but not used.</td>
<td></td>
</tr>
<tr>
<td><strong>THRT SENSOR [%]</strong></td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depress accelerator pedal</td>
<td>Displays the throttle position</td>
</tr>
<tr>
<td><strong>VEHICLE AHEAD DETECT</strong></td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td><strong>STATIC OBSTACLE DETECT</strong></td>
<td>Indicates [ON/Off] status of static obstacle detection</td>
<td></td>
</tr>
<tr>
<td><strong>BUZZER O/P</strong></td>
<td>Engine running</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the buzzer of the following system operates:</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>• Intelligent Cruise Control System</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PFCW system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• FEB system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the buzzer of the following system does not operate:</td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>• Intelligent Cruise Control System</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PFCW system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• FEB system</td>
<td></td>
</tr>
</tbody>
</table>
### ICC Sensor

<table>
<thead>
<tr>
<th>Monitor Item</th>
<th>Condition</th>
<th>Value/Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNC ITEM (FCW)</td>
<td>Ignition switch ON</td>
<td>—</td>
</tr>
<tr>
<td>FUNC ITEM (PFCW)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>FUNC ITEM (FEB)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>FUNC ITEM (ICC)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>PRESS_ORDER</td>
<td>Engine running</td>
<td>—</td>
</tr>
<tr>
<td>D RANGE SW</td>
<td>Engine running</td>
<td>When the selector lever is in “D” position or manual mode</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When the selector lever is in any other than “D” or manual mode</td>
</tr>
<tr>
<td>NP RANGE SW</td>
<td>Engine running</td>
<td>When the selector lever is in “N” “P”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When the selector lever is in any other than “N” “P”</td>
</tr>
<tr>
<td>PKB SW</td>
<td>Ignition switch ON</td>
<td>When the parking brake is applied</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When the parking brake is released</td>
</tr>
<tr>
<td>VHCL SPD AT</td>
<td>While driving</td>
<td>—</td>
</tr>
<tr>
<td>Shift position</td>
<td>• Engine running</td>
<td>Displays the shift position</td>
</tr>
<tr>
<td></td>
<td>• While driving</td>
<td></td>
</tr>
<tr>
<td>Turn signal</td>
<td>NOTE: The item is indicated, but not used</td>
<td>—</td>
</tr>
<tr>
<td>SYSTEM CANCEL MESSAGE</td>
<td>Engine running</td>
<td>System cancel display OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>System cancel reason is slippery road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>System cancel reason is VDC OFF</td>
</tr>
<tr>
<td>DISP VHCL SPD UNIT</td>
<td>Engine running</td>
<td>Meter indicates km/h</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meter indicates mph</td>
</tr>
<tr>
<td>ADAS AVAILABLE COND</td>
<td>Engine running</td>
<td>ADAS is malfunction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ADAS is not malfunction</td>
</tr>
<tr>
<td>ICC SET STATUS</td>
<td>Engine running</td>
<td>Stop lamp relay is fixed on</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stop lamp relay is not fixed on</td>
</tr>
<tr>
<td>ICC MALF</td>
<td>Engine running</td>
<td>Stop lamp relay is fixed off</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stop lamp relay is not fixed off</td>
</tr>
<tr>
<td>ICC CANCEL</td>
<td>Engine running</td>
<td>—</td>
</tr>
<tr>
<td>ACCEL COM VALUE 1 [m/s²]</td>
<td>Engine running</td>
<td>—</td>
</tr>
<tr>
<td>ICC STATUS</td>
<td>Engine running</td>
<td>Intelligent Cruise Control System Off</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intelligent Cruise Control System On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intelligent Cruise Control System On and vehicle is stopped</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intelligent Cruise Control System On and Driver depressed accelerator pedal</td>
</tr>
</tbody>
</table>

Revision: October 2015

CCS-44

2016 Maxima NAM
If a malfunction occurs in the ICC sensor, ADAS control unit cancels control, sounds a beep, and turns ON the ICC system warning lamp in the combination meter.

**DTC Inspection Priority Chart**

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Detected items (DTC)</th>
</tr>
</thead>
</table>
| 1        | - U1000: CAN COMM CIRCUIT  
           | - U1010: CONTROL UNIT (CAN) |
| 2        | - C1A50: ADAS MALFUNCTION  
           | - C1A0C: ADAS MSG COUNTER  
           | - C1A0C: ADAS CRC ERROR     |
### DTC Index

<table>
<thead>
<tr>
<th>Priority</th>
<th>Detected items (DTC)</th>
</tr>
</thead>
</table>
| 3        | • C1A01: POWER SUPPLY CIR  
• C1A02: POWER SUPPLY CIR 2  
• C1A04: ABS/TCS/VDC CIRC  
• C1A05: BRAKE SW/STOP L SW  
• C1A06: OPERATION SW CIRC  
• C1A07: CVT CIRCUIT  
• C1A12: LASER BEAM OFFCNTR  
• C1A13: STOP_LAMP_RLY_FIX  
• C1A14: ECM_CIRCUIT  
• C1A16: RADAR STAIN  
• C1A18: LASER AIMING INCMP  
• C1A21: UNIT HIGH TEMP  
• C1A24: NP RANGE  
• C1A26: ECD MODE MALF  
• C1A27: ECD POWER SUPPLY CIRC  
• C1A39: STRG SEN CIR  
• C1B5D: FEB OPE COUNT LIMIT  
• C10B7: YAW RATE SENSOR  
• U0121: VDC CAN CIR2  
• U153A: TCM CAN CIR 1  
• U153B: TCM CAN CIR 2  
• U153D: ECM CAN CIR 2  
• U0126: STRG SEN CAN CIR1  
• U0401: ECM CAN CIR 1  
• U0415: VDC CIR CIR1  
• U0428: STRG SEN CAN CIR2 |
| 4        | • C1A03: VEH SPEED SE CIRC |
| 5        | • C1A15: GEAR POSITION |
| 6        | • C1A00: CONTROL UNIT  
• C1A17: ICC SENSOR MALF  
• C1A0D: RADAR CAN CIR |

### NOTE:
- The details of time display are as per the following.
- 0: The malfunctions that are detected now
  - CAN communication system (U1000, U1010)
  - Other than CAN communication system (Other than U1000, U1010)
- 1 - 39: It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever the ignition is switched OFF → ON. It returns to 0 when a malfunction is detected again in the process.
  - If it is over 39, it is fixed to 39 until the self-diagnosis results are erased.
- 1 - 49: It increases like 0 → 1 → 2 ··· 48 → 49 after returning to the normal condition whenever the ignition is switched OFF → ON. It returns to 0 when a malfunction is detected again in the process.
  - If it is over 49, it is fixed to 49 until the self-diagnosis results are erased.
### ICC Sensor

**CONSULT display**

<table>
<thead>
<tr>
<th>DTC</th>
<th>Reference</th>
<th>Fail-safe function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CCS-70, &quot;DTC Description&quot;</td>
<td></td>
</tr>
<tr>
<td>CCS-71, &quot;DTC Description&quot;</td>
<td>CCS-72, &quot;DTC Description&quot;</td>
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<tr>
<td>CCS-74, &quot;DTC Description&quot;</td>
<td>CCS-75, &quot;DTC Description&quot;</td>
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</tr>
<tr>
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<td>CCS-82, &quot;DTC Description&quot;</td>
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</tr>
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<td>CCS-85, &quot;DTC Description&quot;</td>
<td></td>
</tr>
<tr>
<td>CCS-87, &quot;DTC Logic&quot;</td>
<td>CCS-89, &quot;DTC Description&quot;</td>
<td></td>
</tr>
<tr>
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<td>CCS-92, &quot;DTC Description&quot;</td>
<td></td>
</tr>
<tr>
<td>CCS-93, &quot;DTC Description&quot;</td>
<td>CCS-94, &quot;DTC Description&quot;</td>
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</tr>
<tr>
<td>DTC</td>
<td>CONSULT</td>
<td>CONSULT display</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>C1A26</td>
<td>ECD MODE MALF</td>
<td>ON</td>
</tr>
<tr>
<td>C1A27</td>
<td>ECD POWER SUPPLY CIRCUIT</td>
<td>ON</td>
</tr>
<tr>
<td>C1A39</td>
<td>STRG SENS CIR</td>
<td>ON</td>
</tr>
<tr>
<td>C1A50</td>
<td>ADAS MALFUNCTION</td>
<td>ON</td>
</tr>
<tr>
<td>C1B5D</td>
<td>FEB OPE COUNT LIMIT</td>
<td>ON</td>
</tr>
<tr>
<td>C1B7</td>
<td>YAW RATE SENSOR</td>
<td>ON</td>
</tr>
<tr>
<td>U153A</td>
<td>TCM CAN CIR 1</td>
<td>ON</td>
</tr>
<tr>
<td>U153B</td>
<td>TCM CAN CIR 2</td>
<td>ON</td>
</tr>
<tr>
<td>U153D</td>
<td>ECM CAN CIR 2</td>
<td>ON</td>
</tr>
<tr>
<td>U0121</td>
<td>VDC CAN CIR2</td>
<td>ON</td>
</tr>
<tr>
<td>U0126</td>
<td>STRG SEN CAN CIR1</td>
<td>ON</td>
</tr>
<tr>
<td>U0401</td>
<td>ECM CAN CIR1</td>
<td>ON</td>
</tr>
<tr>
<td>U0415</td>
<td>VDC CAN CIR1</td>
<td>ON</td>
</tr>
<tr>
<td>U0428</td>
<td>STRG SEN CAN CIR2</td>
<td>ON</td>
</tr>
<tr>
<td>U1000</td>
<td>CAN COMM CIRCUIT</td>
<td>ON</td>
</tr>
<tr>
<td>U1010</td>
<td>CONTROL UNIT (CAN)</td>
<td>ON</td>
</tr>
</tbody>
</table>
OVERALL SEQUENCE

**INSPECTION START**

1. **INTERVIEW FOR MALFUNCTION**
   Interview the customer to obtain information for symptoms.

2. **SELF DIAGNOSTIC WITH CONSULT**
   Perform "Self Diagnostic Result" with CONSULT.
   Check if any DTC is detected.
   DTC is detected.
   DTC is not detected.

3. **ACTION TEST**
   Check the operation of the system.
   Check that any symptom occurs other than the identified symptoms.

4. **SYMPTOM DIAGNOSIS**
   Perform the symptom diagnosis.
   Specify the malfunctioning part.

   **SPECIFY MALFUNCTIONING PART**

5. **TROUBLE DIAGNOSIS BY DTC**
   Perform the trouble diagnosis for the detected DTC.
   Specify the malfunctioning part.

6. **MALFUNCTIONING PART REPAIR**
   Repair or replace the identified malfunctioning part.

   **7. REPAIR CHECK (SELF DIAGNOSTIC WITH CONSULT)**
   Perform "Self Diagnostic Result" with CONSULT.
   Check that any DTC is not detected.
   Erase DTC if DTC is detected before the repair.
   Check that DTC is not detected again.
   DTC is detected.
   DTC is not detected.

   **8. REPAIR CHECK (ACTION TEST)**
   Check operation condition of each part.
   Check that the system operates normally.
   Normal Operation

   **INSPECTION END**

**DETAILED FLOW**

1. **INTERVIEW FOR MALFUNCTION**
   It is important to clarify the customer’s concerns before starting the inspection. Interview the customer about the concerns carefully and understand the symptoms fully.
NOTE:
The customers are not professionals. Never assume that “maybe the customer means...” or “maybe the customer mentioned this symptom”.

>> GO TO 2.

2. SELF DIAGNOSTIC RESULT WITH CONSULT

CONSULT
1. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
2. Check if the DTC is detected in the “Self Diagnostic Result” mode of “LASER/RADAR”.

Is any DTC detected?
YES >> GO TO 5.
NO >> GO TO 3.

3. ACTION TEST

Perform the FEB system action test to check the system operation. Check if any other malfunctions occur.

>> GO TO 4.

4. SYMPTOM DIAGNOSIS

Perform the applicable diagnosis according to the diagnosis chart by symptom. Refer to CCS-119, "Symptom Table".

>> GO TO 6.

5. TROUBLE DIAGNOSIS BY DTC

1. Check the DTC in the “Self Diagnostic Result”.
2. Perform trouble diagnosis for the detected DTC. Refer to CCS-46, "DTC Index".

>> GO TO 6.

6. MALFUNCTIONING PART REPAIR

Repair or replace the identified malfunctioning parts.

>> GO TO 7.

7. REPAIR CHECK (SELF DIAGNOSTIC RESULT WITH CONSULT)

CONSULT
1. Erase “Self Diagnostic Result”.
2. Select “Self Diagnostic Result” again after repairing or replacing the specific items.
3. Check if any DTC is detected in "Self Diagnostic Result" mode of “LASER/RADAR”.

Is any DTC detected?
YES >> GO TO 5.
NO >> GO TO 8.

8. REPAIR CHECK (ACTION TEST)

Perform the FEB system action test. Check that the malfunction symptom is solved or no other symptoms occur.

Is there a malfunction symptom?
YES >> GO TO 4.
NO >> Inspection End.
ADDITIONAL SERVICE WHEN REPLACING ICC SENSOR

**Description**

- Always perform the radar alignment aiming adjustment after removing and installing or replacing the ICC sensor.

  **CAUTION:**

  The system does not operate normally unless the ICC sensor is aligned properly.

- Perform the ICC system action test to check that the ICC system operates normally.

**Work Procedure**

1. **RADAR ALIGNMENT ADJUSTMENT**

   Adjust the radar alignment. Refer to CCS-59, "Description".

   >> GO TO 2.

2. **ICC SYSTEM ACTION TEST**

   1. Perform the ICC system action test. Refer to CCS-66, "Description".
   2. Check that the ICC system operates normally.

   >> Inspection End.
Description

INFOID:0000000011952948

WARNING:
Radio waves could adversely affect electric medical equipment. Those who use a pacemaker should contact the electric medical equipment manufacturer for the possible influences before use.

OUTLINE OF ICC SENSOR INITIAL ALIGNMENT PROCEDURE
• Always perform the ICC sensor initial vertical alignment after removing and installing or replacing the ICC sensor.

CAUTION:
The system does not operate normally unless the ICC sensor is aligned properly.
1. For required tools, refer to CCS-57, "Required Tools".
2. For preparation, refer to CCS-57, "Preparation".
3. For ICC sensor initial vertical alignment, refer to CCS-58, "ICC Sensor Initial Vertical Alignment".

CAUTIONARY POINT FOR DISTANCE SENSOR ALIGNMENT PROCEDURE
• For Distance sensor alignment procedure, choose a level location with a few feet of working space in front and surrounding the vehicle.
• Vehicle must be stationary and unoccupied during the whole alignment procedure.
• Never enter the vehicle during ICC sensor alignment.
• For proper system operation and adjustment, all vehicle wheels must be the original factory size.

The ICC sensor requires alignment whenever the ICC sensor is removed and reinstalled and whenever front end structural repairs are performed. ICC sensor alignment consists of performing the mechanical vertical alignment (ICC sensor initial vertical alignment) described in the following procedure, followed by the electronic horizontal alignment (ICC sensor alignment) that is performed using CONSULT and the appropriate special service tools.

Required Tools

INFOID:0000000011952949

The following tool is necessary to perform the ICC sensor initial vertical alignment:
• Small level or angle meter.

Preparation

INFOID:0000000011952950

1. PREPARATION FOR ICC SENSOR INITIAL VERTICAL ALIGNMENT PROCEDURE
1. Verify correct vehicle suspension height. Refer to FSU-24, "Wheelarch Height (Unladen*1)".
2. Repair or replace any damaged body components.
3. Verify proper tire inflation pressures. Refer to WT-73, "Tire".
4. Remove any accumulations of mud, snow or ice from the vehicle underbody.
5. Verify that there is no load in the vehicle (cargo or passenger).
6. Place the vehicle on a known level horizontal surface such as a wheel or frame alignment rack to achieve satisfactory sensor vertical alignment results.
NOTE: The ICC sensor initial vertical alignment procedure must be performed anytime the distance sensor is removed and reinstalled.

1. The ICC sensor (1) is located near the right front headlamp behind the front bumper fascia.

2. Place the small level or angle meter (2) against the face of the ICC sensor (1).

3. Turn the ICC sensor adjustment screw (1) to level the sensor.

4. Ensure the ICC sensor electrical connector located on the bottom of the sensor is connected.

5. Perform the ICC sensor alignment procedure. Refer to CCS-59, "Description".
WARNING:
Radio waves could adversely affect electric medical equipment. Those who use a pacemaker should contact the electric medical equipment manufacturer for the possible influences before use.

OUTLINE OF ICC SENSOR ALIGNMENT PROCEDURE
• A 4-wheel vehicle alignment must be performed before proceeding with ICC sensor alignment procedure.
• Always perform the ICC sensor alignment after removing and installing or replacing the ICC sensor.
• If the ICC sensor was removed and installed or replaced, first perform ICC Sensor Initial Vertical Alignment, refer to CCS-59, "Description".

CAUTION:
The system does not operate normally unless the ICC sensor is aligned properly.
1. For required tools, refer to CCS-59, "Required Tools".
2. For preparation, refer to CCS-60, "Preparation".
3. For vehicle set up, refer to CCS-61, "Vehicle Set Up".
4. For setting the ICC target board, refer to CCS-63, "Setting The ICC Target Board".
5. For ICC sensor adjustment, refer to CCS-64, "ICC Sensor Adjustment".

CAUTIONARY POINT FOR ICC SENSOR ALIGNMENT PROCEDURE
CAUTION:
• For ICC sensor alignment procedure, choose a level location with a few feet of working space in front and surrounding the vehicle.
• Vehicle must be stationary and unoccupied during the whole alignment procedure.
• Any slight vibration during the alignment procedure can cause the test to fail. If this happens, you will have to restart the alignment process.
• The ignition switch must be in the ON position.
• The battery voltage must not fall below 12 volts during the whole alignment procedure. Failure to maintain adequate battery voltage will cause the test to fail. If this happens, you will have to restart the alignment process.
• The ICC target board must be set in front of the vehicle facing the sensor.
• Adjust the ICC sensor alignment with CONSULT. (The ICC sensor alignment procedure cannot be adjusted without CONSULT.)
• Never enter the vehicle during ICC sensor alignment.
• Never block the area between the ICC sensor and the ICC target board at any time during the alignment process.
• Never break the laser beam between the laser assembly and front ICC target board or rear reflector at any time during alignment.
• Accurate steering wheel setting is crucial. Once set, do not disturb the steering wheel for the remainder of the alignment procedure.
• To avoid physical damage, the ICC sensor adjustment screw must not be forced to either clockwise or counter-clockwise limit. For proper adjustment procedure, follow the directions of the CONSULT exactly as instructed.
• For proper system operation and adjustment, all vehicle wheels must be of the same size.

Required Tools
• ICC alignment kit 1-20-2721-1-IF in addition to one of the following:
  a) Hunter self-centering wheel adapter (Hunter wheel alignment tool)
  b) Special Service Tool kit 1-20-2722-1-IF (kit SCA W/Tire Clamp-ICC Aiming)

The following ICC alignment kit 1-20-2721-1-IF is necessary to perform the ICC sensor alignment:
ICC SENSOR ALIGNMENT

< BASIC INSPECTION >

- ICC target board.
  - Position 1, with top tilted 2° toward vehicle (1).
  - Position 2, vertical (2).
  - Position 3, with top tilted 2° away from vehicle (3).

- Hunter self-centering wheel adapter (1) [shown with laser assembly (2) installed]. (Hunter alignment rack head may be substituted.)
  
  NOTE:
  When the power switch is turned ON, the front laser signal (A) will be emitted toward the front ICC target board, and the rear laser signal (B) will be emitted toward the rear of the vehicle.
  
  NOTE:
  Retailers that are not equipped with a Hunter self-centering wheel adapter will require the following kit:
  Part No. 1-20-2722-1-IF (kit SCA W/Tire Clamp-ICC Aiming)

- Laser assembly (with bi-directional laser beam) as shown in the illustration.
  - Tightening knob (1)
  - Power ON/OFF button (2)
  - Front laser beam opening (3)
  - Rear laser beam opening (4)
  - Attaching shaft (5)

- Stationary target as shown in the illustration.
  - Stationary target (1)
  - Laser signal reception plate (2)

- Distance chain (not shown).

Preparation

1. ADVANCE PREPARATION FOR ICC SENSOR ALIGNMENT PROCEDURE

1. Adjust all tire pressures to the specified value.
2. Empty the vehicle. (Remove any luggage from the passenger compartment, luggage room, etc.)
3. Shift the selector lever to “P” position, and release the parking brake.
4. Fully fill the fuel tank, and then check that the coolant and oils are filled to correct level.
5. Clean off the front of the ICC sensor.
NOTE:
The ICC sensor (1) is located behind the fascia and it is not exposed to the elements. Therefore, it should not require any cleaning.

1  : ICC sensor

>> Refer to CCS-61, "Vehicle Set Up".

Vehicle Set Up

DESCRIPTION
Accurate adjustment of the ICC sensor alignment requires that the ICC target board, wheel adapter, laser assembly, and stationary target be properly positioned.

CAUTION:
If the ICC sensor alignment is adjusted with the ICC target board, wheel adapter, laser assembly, or stationary target in the incorrect position, the ICC system will not function properly or the alignment procedure may not be completed successfully.

1. PREPOSITION TARGET BOARD

NOTE:

• The center of the sensor wave axis (A) is located at the center of the front lens.

• Initial ICC target board setting must be in the center position.

1. Position the ICC target board in front facing the right front side of the vehicle:
   - Using the full length of the supplied chain for distance, place the marked center of the ICC target board (1) 1200 mm (47.2 in.) ± 625 mm (24.6 in) facing the ICC sensor.
   - Adjust the height of the ICC target board using the adjustable nut (2) to achieve the proper height. The up/down tolerance is ± 80 mm (3.15 in).
   - Adjust the ICC target board lateral position aligning the marked center of the board horizontally with the center of the ICC sensor front lens. The right/left tolerance is ± 80 mm (3.15 in).
2. Extend the machined arm of the ICC target board exposing the reflective surface (3) to the right front side of the vehicle.
3. Place one side of the laser assembly (2) flush against the center of the ICC target board (1) to assist in the positioning.

4. Turn the laser assembly ON (3) allowing the laser beam to emit through the opening of the laser assembly toward the center of the ICC sensor.

5. Move the ICC target board (1) as necessary so that center of ICC target board aligns with center of ICC sensor.

6. Turn the laser assembly OFF when done.

Are you using Hunter alignment equipment?

YES >> Refer to Hunter’s equipment instructions for complete vehicle set up and ICC target board setting. Then, refer to CCS-64, "ICC Sensor Adjustment".

NO >> GO TO 2.

2. INSTALLING LASER ASSEMBLY

NOTE:
• Ensure the steering wheel is positioned in the center straight-forward position.
• Ensure all four vehicle wheels do not have any physical damage.

1. Install the wheel adapter (1) on the right front wheel.

2. Mount the laser assembly (2) to the wheel adapter (1) as shown in the figure.

   NOTE:
   When the power switch is turned ON, the front laser signal (A) will be emitted toward the front ICC target board, and the rear laser signal (B) will be emitted toward the rear of the vehicle.

   >> GO TO 3.

3. SETTING UP STATIONARY TARGET

1. Place the stationary target next to the right rear tire as shown in the figure.

2. Turn the laser assembly ON allowing the laser beam to be emitted through the front and rear laser assembly openings.

3. Measure and record the distance (Dr) between the edge of the right rear wheel and the laser beam (1) on the stationary target (horizontal line).

4. Measure and record the height (Hr) between the laser beam (1) on the stationary target and ground level (vertical line).
5. Measure and record the distance (Df) between the edge of the right front wheel and the laser beam signal/opening (1) on the laser assembly (horizontal line).

6. Measure and record the height (Hf) between the laser beam signal/opening (1) on the laser assembly and ground level (vertical line).

**NOTE:**
- Horizontal adjustment [front distance (Df) and rear distance (Dr)] is accomplished by slowly turning the steering wheel until the 2 distances are the same.
- Vertical adjustment [front height (Hf) and rear height (Hr)] is accomplished by rotating the laser assembly around its axis until the two heights are the same.
- Directional arrows (A) and (B) are shown to illustrate the direction of the laser assembly beams.

7. Adjust laser beam as necessary until the two distances match and the two heights match.

**NOTE:**
You will have to verify both horizontal and vertical adjustments anytime one adjustment is made.

---

**>> Refer to CCS-63, "Setting The ICC Target Board".**

Setting The ICC Target Board

**DESCRIPTION**
Accurate adjustment of the ICC sensor alignment requires that the ICC target board be accurately positioned.

**CAUTION:**
If the ICC sensor alignment is adjusted with the ICC target board in the incorrect position, the ICC system will not function properly or the alignment procedure may not be completed successfully.

1. ICC TARGET BOARD FINAL SETTING

1. With the ICC target board arm extended, the laser beam (1) emitted by the laser assembly (A) will be reflected back (B) toward the laser assembly.

**NOTE:**
When adjusted properly, reflected laser beam (B) must align with emitted laser beam (A) and the two laser beams will be seen as one.

2. Rotate the ICC target board to achieve the necessary horizontal adjustment.

3. Adjust the ICC target board leveling screws to achieve the necessary vertical adjustment.

4. The figure shown illustrates the laser beam (A) emitted by the laser assembly (1) and its reflection (B) off the ICC target board arm.

---

**>> GO TO 2.**

2. CHECK THE POSITION OF THE ICC TARGET BOARD
Do not place anything other than the ICC target board in the space shown in front of the vehicle (view from top).

1. ICC target board arm
2. ICC target board
3. ICC sensor
4. Vehicle

- A. Distance between front wheel and laser beam (Dr)
- B. Distance between rear wheel and laser beam (Dr)
- C. Height between front laser beam and ground (Hf)
- D. Height between rear laser beam and ground (Hr)
- E. ICC target board center position (Position 2)
- L. 1 - 1.5 m (39.3 - 59 in.)

>> Refer to CCS-64, "ICC Sensor Adjustment".

**ICC Sensor Adjustment**

**DESCRIPTION**
- Adjust the ICC sensor alignment in a vertical direction with CONSULT as per the following.
- The ICC sensor alignment in the horizontal direction is performed automatically and cannot be adjusted manually.

**CAUTION:**
- Never look directly into or block the ICC sensor source (between the front fascia and ICC target board) during the ICC sensor alignment procedure.
- Perform all necessary work for ICC sensor alignment procedure until the adjustment completes as shown in the procedure. If the procedure is started but not completed, the ICC system is rendered inoperable.

1. SET CONSULT TO THE ICC SENSOR ALIGNMENT MODE

**CONSULT**
1. Place ignition switch in the ON position.
2. Connect CONSULT and select "LASER/RADAR" then "Work support".
3. Select "RADAR Alignment".
4. Select "Start" after the "RADAR Alignment" screen is displayed.

**NOTE:**
- If the adjustment screen does not appear or an error appears within approximately 10 seconds after "RADAR Alignment" is selected, the following causes are possible:
  - The ICC target board is not installed in the correct position.
  - Adequate space is not secured around the ICC target board.
  - The ICC sensor alignment procedure exceeds its proper installation range.
  - Deformation of vehicle body.
  - Deformation of unit.
  - Deformation of bracket.
  - The area is not suitable for the adjustment work.
  - Right front side of fascia (ICC sensor view) is not clean.
  - The ICC system warning lamp illuminates.
  - Battery voltage is low.
  - The extended arm and mirror are not stationary.

>> GO TO 2.

2. ICC SENSOR ALIGNMENT

Revision: October 2015
1. Once the ICC sensor alignment procedure is started, you will be prompted by CONSULT for the next instruction.

2. Follow all the instructions exactly as requested by CONSULT which will include the following:
   - Adjust ICC target board to position 1 (top tilted toward vehicle).
   - Adjust ICC target board to position 2 (vertical position).
   - Adjust ICC target board to position 3 (top tilted away from vehicle).

3. You will be prompted with specific instructions to perform physical adjustment to the sensor which may include turning the adjustment screw (1) by a certain number of turns in increments of 0.25 in either direction.

**NOTE:**
CONSULT is not live and will not automatically update while turning the tool.

**CAUTION:**
Be careful not to cover the right front side of the fascia (ICC sensor view) with a hand or any other body part during adjustment.

>> GO TO 3.

3. ICC SENSOR ALIGNMENT CONFIRMATION

**CONSULT**
1. When the "U/D CORRECT" value is executed and the "ADJ VALUE" has been performed, touch "End".
2. When "COMPLETED THE VERTICAL AIMING OF LASER BEAM" display appears, touch "End".
   **CAUTION:**
   Always check that the value of "U/D CORRECT" remains accurate (within specification) when the ICC sensor is left alone for at least 2 seconds.
3. Check that "ADJUSTING AUTOMATIC HORIZONTAL LASER BEAM AIMING" is displayed and wait for a short period of time. (The maximum: Approx. 10 seconds).
4. Check that "Normally Completed" is displayed, and select "End" to end "RADAR Alignment".
   **CAUTION:**
   Once "RADAR Alignment" is started with CONSULT, always continue the work until the ICC sensor alignment is completed successfully. If the job is stopped midway, the ICC sensor alignment is not completed and the ICC system is rendered inoperative.
5. Confirm proper ICC sensor alignment by following CONSULT steps until it shows "ADJ VALUE" to be 0.00 turn.

>> Alignment End.
ACTION TEST

Description

Always perform the ICC system action test to check that the ICC system operates normally after replacing the ICC sensor or repairing any ICC system malfunction.

**CAUTION:**
- Always drive safely when performing the action test.

Work Procedure

**NOTE:**
- When there is no vehicle ahead, drive at the set speed steadily.
- When there is a vehicle ahead, control to maintain distance from the vehicle ahead, watching its speed.
- The running speed can be set between 32 km/h (20 MPH) and 144 km/h (90 MPH).

**CAUTION:**
Never set the cruise speed exceed the posted speed limit.

1. CHECK FOR MAIN SWITCH
   1. Start the engine.
   2. Press the MAIN switch (1) (for less than 1.5 seconds).

   Information display status
   - Set vehicle speed indicator (2): "——" "km/h" ("MPH")
   - Set distance indicator (3): Long mode
   - MAIN switch indicator (4): ON

   3. Check the ICC system display on the information display to check that the Intelligent Cruise Control is ready for activation.
   4. Press the MAIN switch, and check that the ICC system display on the information display turns OFF when the ICC system is deactivated.
   5. Check that the ICC system display on the information display turns OFF after starting the engine again.

   >> GO TO 2.

2. CHECK FOR DISTANCE SWITCH
   1. Start the engine.
   2. Press the MAIN switch (for less than 1.5 seconds).
   3. Press the DISTANCE switch.
4. Check that the set distance indicator changes display in order of: (Long)→(Middle)→(Short).

<table>
<thead>
<tr>
<th>Distance</th>
<th>Display</th>
<th>Approximate distance at 100 km/h (60 MPH) [m (ft)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long</td>
<td>![Image]</td>
<td>100 km/h</td>
</tr>
<tr>
<td>Middle</td>
<td>![Image]</td>
<td>100 km/h</td>
</tr>
<tr>
<td>Short</td>
<td>![Image]</td>
<td>100 km/h</td>
</tr>
</tbody>
</table>

**NOTE:**
When the MAIN switch is turned ON, initial setting is set to (Long).

>> GO TO 3.

3. CHECK FOR RES/+, SET/-, AND CANCEL SWITCHES

1. Check that RES/+, SET/-, and CANCEL switches are operated smoothly.
2. Check that switches come up as hand is released from the switches.

>> GO TO 4.

4. SET CHECKING (1)

1. Start the engine.
2. Press the MAIN switch (for less than 1.5 seconds) and turn the Intelligent Cruise Control ON.
3. Drive the vehicle at 32 km/h (20 MPH) or more.
4. Push down the SET/- switch.
5. Check that the desired speed is set and Intelligent Cruise Control starts when releasing SET/- switch.

**NOTE:**
The set vehicle speed is indicated on the set vehicle speed indicator in the Intelligent Cruise Control display on the information display.

>> GO TO 5.

5. CHECK FOR INCREASE OF CRUISING SPEED (1)

1. Set the Intelligent Cruise Control at desired speed.
2. Check that the set speed increases by 1 km/h (1 MPH) as RES/+ switch is pushed up.

**NOTE:**
The maximum set speed of the Intelligent Cruise Control is 144 km/h (90 MPH).

**CAUTION:**
Never set the cruise speed exceed the posted speed limit.

>> GO TO 6.

6. CHECK FOR DECREASE OF CRUISING SPEED (1)

1. Set the Intelligent Cruise Control at desired speed.
2. Check that the set speed decreases by 1 km/h (1 MPH) as SET/- switch is pushed down.

**NOTE:**
• The minimum set speed is approximately 32 km/h (20 MPH).
ACTION TEST

< BASIC INSPECTION >

• Cancels the control automatically when the vehicle speed is less than approximately 24 km/h (15 MPH) and
when the system does not detect any vehicle ahead.

>> GO TO 7.

7. SET CHECKING (2)

1. Stop the vehicle.
2. Drive the vehicle at less than approximately 32 km/h (20 MPH).
3. Push down the SET/- switch when the system detects a vehicle ahead.
4. Check that the Intelligent Cruise Control is performed so that the vehicle maintains a proper distance
    according to the vehicle speed [Maximum: approximately 32 km/h (20 MPH)] when releasing SET/-
    switch.

NOTE:
• The Intelligent Cruise Control cannot be set when the vehicle speed is less than 32 km/h (20 MPH) and
when a vehicle ahead is not detected.
• Cancels the control automatically when the vehicle speed is 24 km/h (15 MPH) or less during the control and
when the system does not detect any vehicle ahead.
• The set vehicle speed indicator in the ICC system display on the information display is set to 32 km/h (20
MPH).

>> GO TO 8.

8. CHECK FOR INCREASE OF CRUISING SPEED (2)

1. Set the Intelligent Cruise control when the vehicle speed is less than approximately 32 km/h (20 MPH)
and when a vehicle ahead is detected.
2. Check that the set speed increases by 1 km/h (1 MPH) as RES/+ switch is pushed up.

NOTE:
The maximum set speed of the Intelligent Cruise Control is 144 km/h (90 MPH).

CAUTION:
Never set the cruise speed to exceed the posted speed limit.

>> GO TO 9.

9. CHECK FOR DECREASE OF CRUISING SPEED (2)

1. Set the Intelligent Cruise Control when the vehicle speed is less than approximately 32 km/h (20 MPH)
and when a vehicle ahead is detected.
2. Set vehicle speed to the desired vehicle speed “check for increase of cruising speed”.
3. Check that the set speed decreases by 1 km/h (1 MPH) as SET/- switch is pushed down.

NOTE:
• The minimum set speed is approximately 32 km/h (20 MPH).
• If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the sys-
  tem. The system will cancel once it judges a standstill with a warning chime.

>> GO TO 10.

10. CHECK FOR CANCELLATION OF INTELLIGENT CRUISE CONTROL

Check that the Intelligent Cruise Control is canceled when performing the following operations:
• When the brake pedal is depressed after Intelligent Cruise Control is set and the vehicle is driven.
• When the selector lever is in the “N” position after Intelligent Cruise control is set and the vehicle is driven.
• When the MAIN switch is turned OFF after Intelligent Cruise Control is set and the vehicle is driven.
• When the CANCEL switch is pressed after Intelligent Cruise Control is set and the vehicle is driven.

>> GO TO 11.

11. CHECK FOR RESTORING SPEED THAT IS SET BY INTELLIGENT CRUISE CONTROL BEFORE CAN-
    CELATION

Check that the vehicle restores the previous speed kept before the system deactivation when performing the
following operations:
ACTION TEST

< BASIC INSPECTION > [ICC]

• Drive the vehicle when the Intelligent Cruise Control is set and depress the brake pedal to cancel the control. Check that the vehicle restores the previous vehicle speed kept before the system deactivation when pushing up the RES/+ switch.
• Drive the vehicle when the Intelligent Cruise Control is set and shift the selector lever to the “N” position to cancel the control. Check that the vehicle restores the previous vehicle speed kept before the system deactivation when shifting the selector lever to the “D” position and pushing up the RESUME/+ switch.
• Drive the vehicle when the Intelligent Cruise Control is set and press the CANCEL switch to cancel the control. Check that the vehicle restores the previous vehicle speed kept before the system deactivation when pushing up the RESUME/+ switch.

>> Inspection End.
DTC/CIRCUIT DIAGNOSIS
C1A00 CONTROL UNIT

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A00</td>
<td>CONTROL UNIT (Control unit malfunction)</td>
<td>Diagnosis condition: When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal): —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold: ICC sensor CAN failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time: —</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
ICC sensor

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE
1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “C1A00” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A00” detected as the current malfunction?

YES >> Refer to CCS-70, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure
1. CHECK SELF DIAGNOSTIC RESULT

Check if any DTC other than “C1A00” is detected in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-46, "DTC Index".
NO >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A01</td>
<td>POWER SUPPLY CIR 1</td>
<td>Diagnosis condition</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td>(Power supply circuit)</td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>The battery voltage sent to ICC sensor remains less than 8.6 V.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
<tr>
<td>C1A02</td>
<td>POWER SUPPLY CIR 2</td>
<td>Diagnosis condition</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td>(Power supply circuit 2)</td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>The battery voltage sent to ICC sensor remains more than 19.3 V.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
- Connector, harness or fuse
- ICC sensor

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Perform “All DTC Reading” with CONSULT.
4. Check if the “C1A01” or “C1A02” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A01” or “C1A02” detected as the current malfunction?

YES >> Refer to CCS-71, “Diagnosis Procedure”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, “Intermittent Incident”.
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK ICC SENSOR POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit of ICC sensor. Refer to CCS-113, “ICC SENSOR : Diagnosis Procedure”.

Is the inspection result normal?

YES >> Replace the ICC sensor. Refer to CCS-136, “Removal and Installation”.
NO >> Repair or replace the malfunctioning parts.
C1A03 VEHICLE SPEED SENSOR

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A03</td>
<td>VHCL SPEED SE CIRC</td>
<td>Diagnosis condition</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td>(Vehicle speed sensor circuit)</td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Threshold</td>
<td>• If the vehicle speed signal (wheel speed) from ABS actuator and electric unit (control unit) and the CVT vehicle speed sensor signal (output shaft revolution signal) from TCM, received by the ICC sensor unit via CAN communication, are inconsistent</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If tire size is not correct</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

• Wheel speed sensor
• ABS actuator and electric unit (control unit)
• Vehicle speed sensor CVT (output speed sensor)
• TCM
• ICC sensor
• Tire

FAIL-SAFE

The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)
• Blind Spot Warning (BSW)
• Back-up Collision Intervention (BCI)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “C1A03” is displayed with DTC “U1000” or “C1A04”, first diagnose the DTC “U1000” or “C1A04”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC.
• U1000: Refer to CCS-111, "DTC Logic".
• C1A04: Refer to CCS-74, "DTC Description".

NO-1 >> Check the tire size.
NO-2 >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Drive the vehicle at 30 km/h (19 MPH) or more.
   CAUTION: Always drive safely.
4. Stop the vehicle.
5. Perform “All DTC Reading” with CONSULT.
6. Check if the “C1A03” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A03” detected as the current malfunction?

YES >> Refer to CCS-73, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

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C1A03 VEHICLE SPEED SENSOR

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “C1A03” is displayed with DTC “U1000” or “C1A04”, first diagnose the DTC “U1000” or “C1A04”. Is applicable DTC detected?

YES  >>  Perform diagnosis of applicable DTC.
    • U1000: Refer to CCS-111, "DTC Logic".
    • C1A04: Refer to CCS-74, "DTC Description".

NO   >>  GO TO 2.

2. CHECK DATA MONITOR

1. Start the engine.
2. Drive the vehicle.
3. Check that the value of “VHCL SPD AT” is almost the same as the value of “VHCL SPEED SE” in “Data Monitor” mode of “LASER/RADAR”.

CAUTION: Be careful of the vehicle speed.

Is the inspection result normal?

YES >>  Replace the ADAS control unit. Refer to DAS-80, "Removal and Installation".
NO  >>  GO TO 3.

3. CHECK TCM SELF-DIAGNOSIS RESULTS

1. Perform “All DTC Reading”.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES  >>  Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-58, "DTC Index".
NO   >>  GO TO 4.

4. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES  >>  Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-227, "DTC Index".
NO   >>  Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
C1A04 ABS/TCS/VDC SYSTEM

DTC DESCRIPTION

INFOID:0000000011952967

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A04</td>
<td>ABS/TCS/VDC CIRC (ABS/TCS/VDC circuit)</td>
<td>Diagnosis condition: When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Threshold</td>
<td>If a malfunction occurs in the VDC/TCS/ABS system</td>
</tr>
<tr>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE_CAUSE

ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

   If DTC “C1A04” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

   Is applicable DTC detected?
   
   YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "Diagnosis Procedure".
   NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

   1. Start the engine.
   2. Turn the MAIN switch of ICC system ON.
   3. Perform “All DTC Reading” with CONSULT.
   4. Check if the “C1A04” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

   Is “C1A04” detected as the current malfunction?
   
   YES >> Refer to CCS-74, "Diagnosis Procedure".
   NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
   NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

   If DTC “C1A04” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

   Is applicable DTC detected?
   
   YES >> Perform diagnosis of applicable. Refer to CCS-111, "DTC Logic".
   NO >> GO TO 2.

2. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAGNOSIS RESULTS

   Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

   Is any DTC detected?
   
   YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-227, "DTC Index".
   NO >> Replace the ADAS control unit. Refer to DAS-80, "Removal and Installation".

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C1A05 BRAKE SW/STOP LAMP SW

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A05</td>
<td>BRAKE SW/STOP L SW</td>
<td>Diagnosis condition</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td>(Brake switch/Stop lamp switch)</td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Threshold</td>
<td>A mismatch between a stop lamp switch signal and a brake pedal position switch signal received from ECM and a stop lamp signal received from the ABS actuator and electric unit (control unit) continues for 60 seconds or more when vehicle speed is approximately 40 km/h (65 MPH) or more.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

- Stop lamp switch circuit
- Brake pedal position switch circuit
- Stop lamp switch
- Brake pedal position switch
- Incorrect stop lamp switch installation
- Incorrect brake pedal position switch installation
- ECM
- ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:

- Intelligent Cruise Control
- Forward Emergency Braking (FEB)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “C1A05” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Logic”.

NO  >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1A05” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A05” detected as the current malfunction?

YES  >> Refer to CCS-75, "Diagnosis Procedure”.

NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident”.
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram Information, refer to CCS-49, "Wiring Diagram”.

1. CHECK DTC PRIORITY

If DTC “C1A05” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?
< DTC/CIRCUIT DIAGNOSIS >

YES >> Perform diagnosis of applicable DTC. Refer to CCS-75, "DTC Description".
NO >> GO TO 2.

2. CHECK STOP LAMP SWITCH AND BRAKE PEDAL POSITION SWITCH

Check that “STOP LAMP SW” and “BRAKE SW” operate normally in “Data Monitor” mode of “LASER/RADAR”.

Is the inspection result normal?
YES >> GO TO 3.
NO-1 >> When “BRAKE SW” operation is malfunctioning: GO TO 4.
NO-2 >> When “STOP LAMP SW” operation is malfunctioning: GO TO 9.

3. CHECK STOP LAMP SWITCH

Check that “STOP LAMP SW” operates normally in “Data Monitor” mode of “ABS”.

Is the inspection result normal?
YES >> GO TO 14.
NO >> GO TO 9.

4. CHECK BRAKE PEDAL POSITION SWITCH INSTALLATION

1. Turn ignition switch OFF.
2. Check brake pedal position switch for correct installation. Refer to BR-12, "Adjustment".

Is the inspection result normal?
YES >> GO TO 5.
NO >> Adjust brake pedal position switch installation. Refer to BR-12, "Adjustment".

5. BRAKE PEDAL POSITION SWITCH INSPECTION

1. Disconnect brake pedal position switch connector.
2. Check brake pedal position switch. Refer to CCS-78, "Component Inspection (Brake Pedal Position Switch)".

Is the inspection result normal?
YES >> GO TO 6.
NO >> Replace brake pedal position switch.

6. CHECK BRAKE PEDAL POSITION SWITCH POWER SUPPLY CIRCUIT

1. Turn the ignition switch ON.
2. Check voltage between brake pedal position switch harness connector and ground.

<table>
<thead>
<tr>
<th>(+)</th>
<th>(-)</th>
<th>Voltage (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brake pedal position switch</td>
<td>Ground</td>
<td>Battery voltage</td>
</tr>
<tr>
<td>Connector</td>
<td>Terminal</td>
<td></td>
</tr>
<tr>
<td>E37</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Is the inspection result normal?
YES >> GO TO 7.
NO >> Repair the harnesses or connectors.

7. CHECK HARNESS BETWEEN BRAKE PEDAL POSITION SWITCH AND ECM

1. Turn ignition switch OFF
2. Disconnect ECM connector.
3. Check for continuity between brake pedal position switch harness connector and ECM harness connector.

<table>
<thead>
<tr>
<th>Brake pedal position switch</th>
<th>ECM</th>
<th>Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector</td>
<td>Terminal</td>
<td>Connector</td>
</tr>
<tr>
<td>E37</td>
<td>2</td>
<td>E10</td>
</tr>
</tbody>
</table>

4. Check for continuity between brake pedal position switch harness connector and ground.
Is the inspection result normal?
YES >> GO TO 8.
NO >> Repair the harnesses or connectors.

8. PERFORM SELF DIAGNOSTIC RESULTS OF ECM

CONSULT
1. Connect all connectors if the connectors were disconnected.
2. Turn ignition switch ON.
3. Select “Self Diagnostic Result” mode of “ENGINE”.
4. Check if any DTC is detected in “Self Diagnostic Result” mode of “ENGINE”. Refer to EC-107, “DTC Index”.

Is any DTC detected?
YES >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.
NO >> Replace the ADAS control unit. Refer to DAS-80, “Removal and Installation”.

9. CHECK STOP LAMP SWITCH INSTALLATION

1. Turn ignition switch OFF.
2. Check stop lamp switch for correct installation. Refer to BR-12, “Adjustment”.

Is the inspection result normal?
YES >> GO TO 10.
NO >> Adjust stop lamp switch installation. Refer to BR-12, “Adjustment”.

10. STOP LAMP SWITCH INSPECTION

1. Disconnect stop lamp switch connector.
2. Check stop lamp switch. Refer to CCS-78, “Component Inspection (Stop Lamp Switch)”.

Is the inspection result normal?
YES >> GO TO 11.
NO >> Replace stop lamp switch.

11. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

1. Check voltage between stop lamp switch harness connector and ground.

<table>
<thead>
<tr>
<th>(+)</th>
<th>(-)</th>
<th>Voltage (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop lamp switch</td>
<td>Ground</td>
<td>Battery voltage</td>
</tr>
<tr>
<td>Connector</td>
<td>Terminal</td>
<td>E38</td>
</tr>
</tbody>
</table>

Is the inspection result normal?
YES >> GO TO 12.
NO >> Repair the harnesses or connectors.

12. CHECK HARNESS BETWEEN STOP LAMP SWITCH AND ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

1. Disconnect ABS actuator and electric unit (control unit) connector and resistor.
2. Check for continuity between stop lamp switch harness connector and ABS actuator and electric unit (control unit) harness connector.

<table>
<thead>
<tr>
<th>Stop lamp switch</th>
<th>ABS actuator and electric unit (control unit)</th>
<th>Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector</td>
<td>Terminal</td>
<td>Connector</td>
</tr>
</tbody>
</table>
3. Check for continuity between stop lamp switch harness connector and ground.

<table>
<thead>
<tr>
<th>Connector</th>
<th>Terminal</th>
<th>Ground</th>
<th>Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>E38</td>
<td>3</td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

**Is the inspection result normal?**
- **YES** >> GO TO 13.
- **NO** >> Repair the harnesses or connectors.

**13. PERFORM SELF DIAGNOSTIC RESULT OF ECM**

1. Connect all connectors if the connectors are disconnected.
2. Turn ignition switch ON.
3. Perform “All DTC Reading”.
4. Check if any DTC is detected in “Self Diagnostic Result” mode of “ENGINE”. Refer to **EC-107, “DTC Index”**.

**Is any DTC detected?**
- **YES** >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.
- **NO** >> GO TO 14.

**14. PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)**

Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”. Refer to **BRC-227, “DTC Index”**.

**Is any DTC detected?**
- **YES** >> Repair or replace the malfunctioning parts identified by the self-diagnosis result.
- **NO** >> Repair the ICC sensor. Refer to **DAS-80, "Removal and Installation"**.

**Component Inspection (Brake Pedal Position Switch)**

**1.CHECK BRAKE PEDAL POSITION SWITCH**

Check for continuity between brake pedal position switch terminals.

<table>
<thead>
<tr>
<th>Terminals</th>
<th>Condition</th>
<th>Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2</td>
<td>When brake pedal is depressed</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>When brake pedal is released</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Is the inspection result normal?**
- **YES** >> Inspection End.
- **NO** >> Replace brake pedal position switch.

**Component Inspection (Stop Lamp Switch)**

**1.CHECK STOP LAMP SWITCH**

Check for continuity between stop lamp switch terminals.

<table>
<thead>
<tr>
<th>Terminals</th>
<th>Condition</th>
<th>Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2</td>
<td>When brake pedal is depressed</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>When brake pedal is released</td>
<td>No</td>
</tr>
<tr>
<td>3 4</td>
<td>When brake pedal is depressed</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>When brake pedal is released</td>
<td>No</td>
</tr>
</tbody>
</table>

**Is the inspection result normal?**
- **YES** >> Inspection End.
- **NO** >> Replace stop lamp switch.
C1A06 OPERATION SW

DTC DESCRIPTION

INFOID:0000000011952973

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A06</td>
<td>OPERATION SW CIRC</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td>(Operation switch circuit)</td>
<td></td>
</tr>
</tbody>
</table>

Signal (terminal) —

Threshold —
• Any switch of the ICC steering switch is detected as “ON” continuously for 60 seconds.
• An ON/OFF state judgment of the ICC differs between ECM and ICC sensor, and the state continues for 2 seconds or more.

Diagnosis delay time —

POSSIBLE CAUSE
• ICC steering switch circuit
• ICC steering switch
• ECM

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control system is canceled

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “C1A06” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Logic".

NO   >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Wait for approximately 5 minutes after turning the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1A06” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A06” detected as the current malfunction?

YES  >> Refer to CCS-79, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “C1A06” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Logic".

NO   >> GO TO 2.

2. CHECK ICC STEERING SWITCH

1. Turn the ignition switch OFF.
2. Disconnect the ICC steering switch connector.
3. Check the ICC steering switch. Refer to CCS-80, "Component Inspection".

Is the inspection result normal?
YES >> GO TO 3.
NO >> Replace the ICC steering switch.

3. CHECK HARNESS BETWEEN SPIRAL CABLE AND ECM

1. Disconnect the ECM connector.
2. Check for continuity between the spiral cable harness connector and ECM harness connector.

<table>
<thead>
<tr>
<th>Spiral cable</th>
<th>ECM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector</td>
<td>Terminal</td>
</tr>
<tr>
<td>M30</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

3. Check for continuity between spiral cable harness connector and ground.

<table>
<thead>
<tr>
<th>Spiral cable</th>
<th>Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector</td>
<td>Terminal</td>
</tr>
<tr>
<td>M30</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

Is the inspection result normal?
YES >> GO TO 4.
NO >> Repair the harnesses or connectors.

4. CHECK SPIRAL CABLE

Check for continuity between spiral cable terminals.

<table>
<thead>
<tr>
<th>Spiral cable</th>
<th>Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminals</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>18</td>
</tr>
</tbody>
</table>

Is the inspection result normal?
YES >> GO TO 5.
NO >> Replace the spiral cable.

5. PERFORM SELF DIAGNOSTIC RESULT OF ECM

CONSULT
1. Connect the connectors of ICC steering switch and ECM connector.
2. Turn the ignition switch ON.
3. Select “Self Diagnostic Result” mode of “ENGINE”.
4. Check if any DTC is detected in “Self Diagnostic Result” mode of “ENGINE”.

Is any DTC detected?
YES >> Select “Self Diagnostic Result” on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-107, “DTC Index”.
NO >> Replace the ICC sensor. Refer to DAS-80, “Removal and Installation”

Component Inspection

1. CHECK ICC STEERING SWITCH

Check resistance between ICC steering switch terminals.
<table>
<thead>
<tr>
<th>Terminals</th>
<th>Switch operation</th>
<th>Approx. Resistance [Ω]</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 18</td>
<td>When pressing MAIN switch</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>When pressing CANCEL switch</td>
<td>309</td>
</tr>
<tr>
<td></td>
<td>When pressing DISTANCE switch</td>
<td>741</td>
</tr>
<tr>
<td></td>
<td>When pressing SET/COAST switch</td>
<td>1406</td>
</tr>
<tr>
<td></td>
<td>When pressing RESUME/ACCELERATE switch</td>
<td>2586</td>
</tr>
<tr>
<td></td>
<td>When all switches are not pressed</td>
<td>5456</td>
</tr>
</tbody>
</table>

Is the inspection result normal?

YES  >> Inspection End.
NO   >> Replace the ICC steering switch.
C1A12 LASER BEAM OFF CENTER

DTC Description

< DTC/CIRCUIT DIAGNOSIS >

[ICC]

INFOID:0000000011952976

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A12</td>
<td>LASER BEAM OFFCNTR</td>
<td>Diagnosis condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

• ICC sensor

FAIL-SAFE

• Intelligent Cruise Control is canceled

Diagnosis Procedure

1. PERFORM ICC SENSOR SELF DIAGNOSTIC RESULT

CONSULT
1. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
2. Check if the “C1A12” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A12” detected?

YES >> Refer to CCS-82, "DTC Description".

NO >> GO TO 2.

2. VISUAL INSPECTION

1. Check ICC sensor and ICC sensor bracket for damage or looseness.

Does damage or looseness exist?

YES >> 1. Repair or replace affected components. Refer to CCS-136, "Removal and Installation".
2. Perform ICC sensor alignment. Refer to CCS-59, "Description".
3. Perform action test. Refer to CCS-66, "Description".

NO >> GO TO 3.

3. PERFORM ADAS CONTROL SELF DIAGNOSTIC RESULT

CONSULT
Check if the “C1A12” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A12” detected?

YES >> Replace ICC sensor. Refer to CCS-136, "Removal and Installation".

NO >> Inspection End.

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CCS-82

2016 Maxima NAM
C1A13 STOP LAMP RELAY

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A13</td>
<td>STOP LAMP RLY FIX (Stop lamp relay fix)</td>
<td>Diagnosis condition</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>• Stop lamp inactive state continues for 0.3 seconds or more despite the outputting of ICC brake hold relay drive signal.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• The stop lamp remains ON for 60 seconds or more under the following conditions:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Driving at 40 km/h (25 MPH) or more</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- No stop lamp drive signal outputted from ADAS control unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- No brake operation</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
• Stop lamp switch circuit
• Brake pedal position switch circuit
• ICC brake hold relay circuit
• Stop lamp switch
• Brake pedal position switch
• ICC brake hold relay
• Incorrect stop lamp switch installation
• Incorrect brake pedal position switch installation
• ECM
• ABS actuator and electric unit (control unit)

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “C1A13” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, “DTC Logic”.

NO   >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE (1)

CONSULT

1. Start the engine.
2. Select the “Active Test” mode “STOP LAMP”.
3. Perform “All DTC Reading”.
4. Check if the “C1A13” is detected as the current malfunction in the “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A13” detected as the current malfunction?

YES  >> Refer to DAS-44, “Diagnosis Procedure”.

NO   >> GO TO 3.

3. PERFORM DTC CONFIRMATION PROCEDURE (2)

CONSULT

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< DTC/CIRCUIT DIAGNOSIS >

1. Drive the vehicle at a speed of 40 km/h (25 MPH) or more for approximately 20 seconds or more without the brake pedal depressed.
   **CAUTION:**
   Always drive safely.
   **NOTE:**
   If it is outside the above condition, repeat step 1.

2. Select “Self Diagnostic Result” mode of “ICC/ADAS”.

3. Check if the “C1A13” is detected as the current malfunction in the “Self Diagnostic Result” mode of “ICC/ADAS”.

Is "C1A13" detected as the current malfunction?

YES  >> Refer to DAS-44, ”Diagnosis Procedure”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.
C1A14 ECM

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A14</td>
<td>ECM CIRCUIT (ECM circuit)</td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>If ECM is malfunctioning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

- Accelerator pedal position sensor
- ECM
- ICC sensor

FAIL-SAFE

The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

   If DTC “C1A14” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

   Is applicable DTC detected?
   YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Logic".
   NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

   1. Start the engine.
   2. Operate the ICC system and drive.
      **CAUTION:**
      Always drive safely.
   3. Stop the vehicle.
   4. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
   5. Check if the “C1A14” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

   Is “C1A14” detected as the current malfunction?
   YES >> Refer to CCS-85, "Diagnosis Procedure".
   NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
   NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

   If DTC “C1A14” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

   Is applicable DTC detected?
   YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Logic".
   NO >> GO TO 2.

2. CHECK SELF DIAGNOSTIC RESULT

   Check if “U1000” is detected other than “C1A14” in “Self Diagnostic Result” mode of “LASER/RADAR”.

   Is “U1000” detected?
< DTC/CIRCUIT DIAGNOSIS >

| YES | >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to CCS-111, "DTC Logic". |
| NO  | >> GO TO 3. |

**3. PERFORM SELF DIAGNOSTIC RESULT OF ECM**

**CONSULT**
Select “Self Diagnostic Result” mode of “ENGINE”.

Is any DTC detected?

| YES | >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-107, "DTC Index". |
| NO  | >> Replace the ICC sensor. Refer to CCS-136, "Exploded View". |
C1A15 GEAR POSITION

DTC Description

ADAS control unit judges the gear position based on the following signals:
• Current gear position signal transmitted from TCM via CAN communication.
• Value of gear ratio calculated from input speed signal transmitted from TCM via CAN communication.
• Value of gear ratio calculated from the vehicle speed signal transmitted from ABS actuator and electric unit (control unit) via CAN communication.

DTC Logic

DTC DETECTION LOGIC

POSSIBLE CAUSE
• Input speed sensor
• Vehicle speed sensor CVT (output speed sensor)
• TCM

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “C1A15” is displayed with DTC “U1000”, “C1A03”, or “C1A04”, first diagnose the DTC “U1000”, “C1A03”, or “C1A04”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC.
• U1000: Refer to CCS-111, "DTC Logic".
• C1A03: Refer to CCS-72, "DTC Description".
• C1A04: Refer to CCS-74, "DTC Description".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Drive the vehicle at 10 km/h (6 MPH) or more for approximately 15 minutes or more.
CAUTION:
Always drive safely.
4. Stop the vehicle.
5. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
6. Check if “C1A15” is detected as the current malfunction in the “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A15” detected as the current malfunction?

YES >> Refer to CCS-88, "Diagnosis Procedure".
C1A15 GEAR POSITION

< DTC/CIRCUIT DIAGNOSIS >

NO-1  >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2  >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC "C1A15" is displayed with DTC "U1000" or "C1A03", or "C1A04", first diagnose the DTC "U1000", "C1A03", or "C1A04".

Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC.
  • U1000: Refer to CCS-111, "DTC Logic".
  • C1A03: Refer to CCS-72, "DTC Description".
  • C1A04: Refer to CCS-74, "DTC Description".

NO  >> GO TO 2.

2. CHECK VEHICLE SPEED SIGNAL

CONSULT
Check that "VHCL SPEED SE" operates normally in “Data Monitor” mode of “LASER/RADAR”.

CAUTION:
Be careful of the vehicle speed.

Is the inspection result normal?

YES  >> GO TO 3.

NO  >> GO TO 6.

3. CHECK GEAR POSITION SIGNAL

CONSULT
Check that "GEAR" operates normally in “Data Monitor” mode of “TRANSMISSION”.

Is the inspection result normal?

YES  >> GO TO 4.

NO  >> GO TO 5.

4. CHECK INPUT SPEED SENSOR SIGNAL

CONSULT
Check that "INPUT SPEED" operates normally in “Data Monitor” mode of “TRANSMISSION”.

Is the inspection result normal?

YES  >> Replace the ADAS control unit. Refer to DAS-80, "Removal and Installation".

NO  >> GO TO 5.

5. CHECK TCM SELF DIAGNOSTIC RESULT

CONSULT
1. Select “Self Diagnostic Result” mode of “TRANSMISSION”.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES  >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-58, "DTC Index".

NO  >> Replace the ADAS control unit. Refer to DAS-80, "Removal and Installation".

6. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

CONSULT
1. Select “Self Diagnostic Result” mode of “ABS”.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES  >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-227, "DTC Index".

NO  >> Replace the ICC sensor. Refer to DAS-80, "Removal and Installation"
C1A16 RADAR BLOCKED OR STAINED

< DTC/CIRCUIT DIAGNOSIS >

C1A16 RADAR BLOCKED OR STAINED

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No</th>
<th>CONSULT screen term</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A16</td>
<td>RADAR BLOCKED</td>
<td></td>
</tr>
</tbody>
</table>

NOTE:
DTC “C1A16” may be detected under the following conditions. (Explain to the customer about the difference between the contamination detection function and the indication when the malfunction is detected and tell them, “This is not a malfunction”)
• When contamination or foreign materials adhere to the ICC sensor area.
• When driving while it is snowing or when frost forms on the ICC sensor area.
• When ICC sensor area is temporarily fogged.

POSSIBLE CAUSE
• Stain or foreign material deposited on ICC sensor
• Cracked or scratched ICC sensor

FAIL-SAFE
• Intelligent Cruise Control system is canceled

Diagnosis Procedure

NOTE:
After ICC sensor alignment is performed, the vehicle must be driven at a speed of 4.5 MPH (7.2 km/h) or more for a minimum of 2 minutes before DTC C1A16 can be cleared.

1. VISUAL CHECK 1

Check for contamination and foreign matter on the ICC sensor area of the front bumper.

Does contamination or foreign material exist?
YES >> Clean the contamination and foreign material on the ICC sensor area of the front bumper.
NO >> GO TO 2.

2. VISUAL CHECK 2

Check ICC sensor for contamination and foreign materials.

Does contamination or foreign material exist?
YES >> Clean the contamination and foreign material from the ICC sensor.
NO >> GO TO 3.

3. VISUAL CHECK 3

Check ICC sensor and ICC sensor bracket for damage or looseness.

Does damage or looseness exist?
YES >> 1. Repair or replace effected components. Refer to CCS-136, "Removal and Installation".
2. Perform ICC sensor alignment. Refer to CCS-59, "Description".
3. Perform action test. Refer to CCS-59, "Description".

NO >> GO TO 4.

4. INTERVIEW

1. Ask if there is any trace of contamination or foreign materials adhering to the ICC sensor area.
2. Ask if the ICC sensor area was frosted during driving or if vehicle was driven in snow.
3. Ask if ICC sensor area was temporarily fogged. (Windshield glass may also tend to fog, etc.)

Are any of the above conditions seen?
C1A16 RADAR BLOCKED OR STAINED

< DTC/CIRCUIT DIAGNOSIS >

[ICC]

YES  >> Explain to the customer about the difference between the contamination detection function and an actual malfunction. Inform them “this is not a malfunction”.

NO  >> 1. Perform ICC sensor alignment. Refer to CCS-59, "Description".
       2. Perform action test. Refer to CCS-66, "Description".
       3. GO TO 5.

5. CHECK ICC SENSOR SELF DIAGNOSTIC RESULTS

CONSULT
Check if “C1A16” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A16” detected?

YES  >> Replace ICC sensor. Refer to CCS-136, "Removal and Installation".

NO  >> Inspection End.
C1A17 ICC SENSOR

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A17</td>
<td>ICC SENSOR MALF</td>
<td>Diagnosis condition: When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal): —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold: If ICC sensor is malfunctioning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time: —</td>
</tr>
</tbody>
</table>

**NOTE:**
If DTC “C1A17” is detected along with DTC “U1000”, first diagnose the DTC “U1000”. Refer to **CCS-111, "DTC Logic"**.

**POSSIBLE CAUSE**
ICC

**FAIL-SAFE**
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

**Diagnosis Procedure**

1. **CHECK ADAS CONTROL UNIT SELF DIAGNOSTIC RESULTS**

**CONSULT**
1. Select “Self Diagnostic Result” mode of “ICC/ADAS”.
2. Check if “U1000” is detected along with “C1A17” in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “U1000” detected?

**YES**  >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to **CCS-111, "DTC Logic"**.

**NO**   >> Replace ICC sensor. Refer to **CCS-136, "Removal and Installation"**.
**C1A18 RADAR AIMING INCMP**

**DTC Description**

**DTC DETECTION LOGIC**

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A18</td>
<td>RADAR AIMING INCMP</td>
<td>Diagnosis condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
</tr>
</tbody>
</table>

**POSSIBLE CAUSE**

- The adjustment of the radar is not yet performed.
- Interruption in radar adjustment

**FAIL-SAFE**

The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

**DTC CONFIRMATION PROCEDURE**

1. **PERFORM DTC CONFIRMATION PROCEDURE**

   **CONSULT**
   1. Start the engine.
   2. Turn the MAIN switch of ICC system ON.
   3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
   4. Check if the “C1A18” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

   Is “C1A18” detected as the current malfunction?
   - YES >> Refer to CCS-92, "Diagnosis Procedure".
   - NO >> Inspection End.

**Diagnosis Procedure**

1. **ADJUST RADAR ALIGNMENT**

   **CONSULT**
   1. Adjust the radar alignment. Refer to CCS-59, "Description".
   2. Erase all “Self Diagnostic Result”.
   3. Perform “All DTC Reading”.
   4. Check if the “C1A18” is detected in “Self Diagnostic Result” mode of “LASER/RADAR”.

   Is “C1A18” detected?
   - YES >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
   - NO >> Inspection End.
C1A21 UNIT HIGH TEMP

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A21</td>
<td>UNIT HIGH TEMP (Unit high temperature)</td>
<td>Diagnosis condition When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal) —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold Temperature around ICC sensor is high.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time —</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
Temperature around the ICC sensor becomes extremely low or high.

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE
1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Turn the ignition switch OFF.
2. Wait for 10 minutes or more.
3. Start the engine.
4. Turn the MAIN switch of ICC system ON.
5. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
6. Check if the “C1A21” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A21” detected as the current malfunction?

YES  >> Refer to CCS-93, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK ENGINE COOLING SYSTEM

Check for any malfunctions in engine cooling system.

Is engine cooling system normal?

YES  >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
NO  >> Repair engine cooling system.
C1A24 NP RANGE

DTC DESCRIPTION

INFOID:0000000011952992

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A24</td>
<td>NP RANGE (NP range)</td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>A mismatch between a shift position signal transmitted from TCM via CAN communication and a current gear position signal continues for 60 seconds or more.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

• TCM
• Transmission range switch

FAIL-SAFE

The following systems are canceled:

• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “C1A24” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, “DTC Logic”.
NO >> GO TO 2.

2. CHECK DTC(1)

CONSULT

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Wait for approximately 5 minutes or more after shifting the selector lever to “P” position.
4. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
5. Check if the “C1A24” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A24” detected as the current malfunction?

YES >> Refer to CCS-94, “Diagnosis Procedure”.
NO >> GO TO 3.

3. CHECK DTC (2)

CONSULT

1. Wait for approximately 5 minutes or more after shifting the selector lever to “N” position.
2. “Self Diagnostic Result” mode of “ICC/ADAS”.
3. Check if the “C1A24” is detected as the current malfunction in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is “C1A24” detected as the current malfunction?

YES >> Refer to CCS-94, “Diagnosis Procedure”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, “Intermittent Incident”.
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY
If DTC “C1A24” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Logic".

NO >> GO TO 2.

2. CHECK TCM DATA MONITOR

CONSULT
Check that “SLCT LVR POSI” operates normally in “Data Monitor” mode of “TRANSMISSION”.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform diagnosis for transmission range switch circuit and repair or replace the malfunctioning parts. Refer to TM-101, "Component Inspection".

3. PERFORM TCM SELF DIAGNOSTIC RESULT

CONSULT
1. “Self Diagnostic Result” mode of “TRANSMISSION”.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-58, "DTC Index".

NO >> Replace the ADAS control unit. Refer to DAS-80, "Removal and Installation".
## C1A26 ECD MODE MALFUNCTION

### DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A26</td>
<td>ECD MODE MALF</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td>(ECD mode malfunction)</td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If an abnormal condition occurs with ECD system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—</td>
</tr>
</tbody>
</table>

#### POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- ADAS control unit

#### FAIL-SAFE

The following systems are canceled:

- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning

### DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “C1A26” is displayed with DTC “U1000”, “U0415” or “U0121”, first diagnose the DTC “U1000”, “U0415” or “U0121”.

Is applicable DTC detected?

<table>
<thead>
<tr>
<th>YES</th>
<th>Perform diagnosis of applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• U1000: Refer to CCS-111, &quot;DTC Logic&quot;.</td>
</tr>
<tr>
<td></td>
<td>• U0415: Refer to CCS-104, &quot;DTC Description&quot;.</td>
</tr>
<tr>
<td></td>
<td>• U0121: Refer to CCS-104, &quot;DTC Description&quot;.</td>
</tr>
<tr>
<td></td>
<td>• C1A0C: Refer to CCS-117, &quot;DTC Description&quot;.</td>
</tr>
<tr>
<td></td>
<td>• C1A50: Refer to CCS-102, &quot;DTC Description&quot;.</td>
</tr>
</tbody>
</table>

| NO | Go to 2. |

2. PERFORM DTC CONFIRMATION PROCEDURE

### CONSULT

1. Start the engine.
2. Wait for approximately 1 minute after turning the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1A26” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR.”

Is “C1A26” detected as the current malfunction?

| YES | Refer to CCS-96, "Diagnosis Procedure". |
| NO-1| To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident". |
| NO-2| Confirmation after repair: Inspection End. |

#### Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “C1A26” is displayed with DTC “U1000”, “U0415” or “U0121”, first diagnose the DTC “U1000”, “U0415” or “U0121”.

Is applicable DTC detected?

<table>
<thead>
<tr>
<th>YES</th>
<th>Perform diagnosis of applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• U1000: Refer to CCS-111, &quot;DTC Logic&quot;.</td>
</tr>
<tr>
<td></td>
<td>• U0415: Refer to CCS-108, &quot;DTC Description&quot;.</td>
</tr>
<tr>
<td></td>
<td>• U0121: Refer to CCS-104, &quot;DTC Description&quot;.</td>
</tr>
</tbody>
</table>

Revision: October 2015
• C1A0C: Refer to CCS-117, "DTC Description".
• C1A50: Refer to CCS-102, "DTC Description".

NO >> GO TO 2.

2. PERFORM SELF DIAGNOSTIC RESULT OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-227, "DTC Index".

NO >> Replace ICC sensor. Refer to DAS-80, "Removal and Installation".
C1A27 ECD POWER SUPPLY CIRCUIT

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A27</td>
<td>ECD PWR SUPLY CIR (ECD power supply circuit)</td>
<td>When ignition switch is ON.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>ECD system power supply voltage is excessively low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit) power supply circuit
- ABS actuator and electric unit (control unit)

FAIL-SAFE

The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

CONSULT

If DTC “C1A27” is displayed with DTC “U1000”, “U0415” or “U0121”, first diagnose the DTC “U1000”, “U0415” or “U0121”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
   • U1000: Refer to CCS-111, “DTC Logic”.
   • U0415: Refer to CCS-108, “DTC Description”.
   • U0121: Refer to CCS-104, “DTC Description”.

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Wait for approximately 1 minute after turning the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1A27” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A27” detected as the current malfunction?

YES >> Refer to CCS-98, “Diagnosis Procedure”.

NO-1 >> To check malfunction symptom before repair: Refer to GI-41, “Intermittent Incident”.

NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “C1A27” is displayed with DTC “U1000”, “U0415” or “U0121”, first diagnose the DTC “U1000”, “U0415” or “U0121”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable.
   • U1000: Refer to CCS-111, “DTC Logic”.
   • U0415: Refer to CCS-108, “DTC Description”.
   • U0121: Refer to CCS-104, “DTC Description”.

Revision: October 2015

CCS-98 2016 Maxima NAM
2. CHECK POWER SUPPLY CIRCUIT OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

Check power supply circuit of ABS actuator and electric unit (control unit). Refer to BRC-276, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Perform “Self Diagnostic Result” mode of ABS actuator and electric unit (control unit). Refer to BRC-227, "DTC Index”.

NO >> Repair the harnesses or connectors.
C1A39 STEERING ANGLE SENSOR

DTC DESCRIPTION

INFOID:0000000011952998

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detecting condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A39</td>
<td>STRG SEN CIR (Steering angle sensor circuit)</td>
<td>Diagnosis condition: When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal): —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold: If the steering angle sensor is malfunctioning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time: —</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “C1A39” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Logic".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1A39” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A39” detected as the current malfunction?

YES >> Refer to CCS-100, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “C1A39” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to CCS-111, "DTC Logic".

NO >> GO TO 2.

2. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-227, "DTC Index".

NO >> Replace the ICC sensor. Refer to DAS-80, "Removal and Installation".
C1B5D FEB OPE COUNT LIMIT

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1B5D</td>
<td>FEB OPE COUNT LIMIT (Forward Emergency Braking operation count limit)</td>
<td>Diagnosis condition: When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal): —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold: FEB system operated 3 times within ignition switch ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time: —</td>
</tr>
</tbody>
</table>

NOTE:
If “C1B5D” is detected, perform the ICC system action test and check that ICC system operates normally.

POSSIBLE CAUSE
• FEB system operated 3 times within ignition switch ON.

FAIL-SAFE

DTC CONFIRMATION PROCEDURE
1. PERFORM ICC SYSTEM ACTION TEST

CONSULT
Perform the ICC system action test.

Is there any malfunction symptom?

YES >> Refer to CCS-101, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure
1. CHECK SELF DIAGNOSTIC RESULT

CONSULT
1. Turn ignition switch OFF.
2. Turn ignition switch ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1B5D” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1B5D” detected as a current malfunction?

YES >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
NO >> Perform ICC system action test. Refer to CCS-66, "Description".
C1A50 ADAS CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

C1A50 ADAS CONTROL UNIT

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A50</td>
<td>ADAS MALFUNCTION</td>
<td>Diagnosis condition: When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal): —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold: If ADAS control unit is malfunctioning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time: —</td>
</tr>
</tbody>
</table>

NOTE:
If DTC “C1A50” is detected along with DTC “U1000” or “C1A0C” first diagnose the DTC “U1000” or “C1A0C”. Refer to CCS-111, “DTC Logic”.

POSSIBLE CAUSE
• ADAS control unit

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1A50” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A50” detected as the current malfunction?

YES  >> Refer to CCS-102, "Diagnosis Procedure”.
NO   >> Refer to GI-41, "Intermittent Incident”.

Diagnosis Procedure

1. CHECK ICC SENSOR SELF-DIAGNOSIS RESULTS

If DTC “C1A50” is displayed with “U1000” diagnose the DTC “U1000” first.

Is "U1000" detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Logic" or CCS-117, "DTC Description”.
NO   >> GO TO 2.

2. CHECK ADAS CONTROL UNIT SELF-DIAGNOSIS RESULTS

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is any DTC detected?

YES  >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-46, "DTC Index”.
NO   >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation”.

Revision: October 2015

CCS-102 2016 Maxima NAM
C10B7 YAW RATE SENSOR

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C10B7</td>
<td>YAW RATE SENSOR</td>
<td>Diagnosis condition</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>The yaw rate/side/decel G sensor calibration is incorrect.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

- The calibration of yaw rate/side/decel G sensor is not yet performed.
- Interruption in yaw rate/side/decel G sensor calibration

FAIL-SAFE

The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C10B7” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C10B7” detected as the current malfunction?

YES >> Refer to CCS-103, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1. PERFORM CALIBRATION OF THE YAW RATE/SIDE/DECEL G SENSOR

CONSULT

1. Perform calibration of the yaw rate/side/decel G sensor. Refer to BRC-250, "Work Procedure".
2. Erase “Self Diagnostic Result” with CONSULT.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C10B7” is detected in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C10B7” detected?

YES >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".

NO >> Inspection End.
U0121 VDC CAN 2

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>U0121</td>
<td>VDC CAN CIR2</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td>(VDC CAN circuit 2)</td>
<td>Signal (terminal) —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time —</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
ABS actuator and electric unit (control unit)

FAIL-SAFE
The following systems are canceled.
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY
If DTC “U0121” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.
Is applicable DTC detected?
YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, “DTC Logic”.
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “U0121” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/ RADAR”.
Is “U0121” detected as the current malfunction?
YES >> Refer to CCS-104, “Diagnosis Procedure”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, “Intermittent Incident”.
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY
If DTC “U0121” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.
Is applicable DTC detected?
YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".
NO >> GO TO 2.

2. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.
Is any DTC detected?
YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-234, "DTC Index".

Revision: October 2015  
CCS-104 2016 Maxima NAM
NO  >> Replace the ICC sensor. Refer to DAS-80, "Removal and Installation".
U0126 STRG SEN CAN 1

DTC DESCRIPTION

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>U0126</td>
<td>STRG SEN CAN CIR1 (Steering sensor CAN circuit 1)</td>
<td>Diagnosis condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “U0126” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “U0126” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U0126” detected as the current malfunction?

YES >> Refer to CCS-106, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “U0126” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".
NO >> GO TO 2.

2. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-227, "DTC Index".
NO >> Replace the ADAS control unit. Refer to DAS-80, "Removal and Installation".

Revision: October 2015

CCS-106 2016 Maxima NAM
DTC DESCRIPTION

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>U0401</td>
<td>ECM CAN CIR1 (ECM CAN circuit 1)</td>
<td>When ignition switch is ON.</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>If ADAS control unit detects an error signal that is received from ECM via CAN communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

ECM

FAIL-SAFE

The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “U0401” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “U0401” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U0401” detected as the current malfunction?

YES >> Refer to CCS-107, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “U0401” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".

NO >> GO TO 2.

2. CHECK ECM SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ENGINE”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to EC-107, "DTC Index".

NO >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".

Revision: October 2015

CCS-107

2016 Maxima NAM
U0415 VDC CAN 1

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>U0415</td>
<td>VDC CAN CIR1 (VDC CAN circuit1)</td>
<td>Diagnosis condition</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>If ICC sensor detects an error signal that is received from ABS actuator and electric unit (control unit) via CAN communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
ABS actuator and electric unit (control unit)

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “U0415” is displayed with DTC “U1000”, first diagnose the DTC “U1000”. Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".

NO   >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “U0415” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U0415” detected as the current malfunction?

YES  >> Refer to CCS-108, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “U0415” is displayed with DTC “U1000”, first diagnose the DTC “U1000”. Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".

NO   >> GO TO 2.

2. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES  >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-227, "DTC Index".

Revision: October 2015

CCS-108  2016 Maxima NAM
NO >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
U0428 STRG SEN CAN 2

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>U0428</td>
<td>STRG SEN CAN CIR2</td>
<td>When ignition switch is ON.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Steering sensor CAN circuit2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signal (terminal)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Threshold</td>
<td>If ICC sensor detects an error signal that is received from steering angle sensor via CAN communication</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
Steering angle sensor

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. CHECK DTC PRIORITY

If DTC “U0428” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".
NO   >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “U0428” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U0428” detected as the current malfunction?

YES  >> Refer to CCS-110, “Diagnosis Procedure”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. CHECK DTC PRIORITY

If DTC “U0428” is displayed with DTC “U1000”, first diagnose the DTC “U1000”.

Is applicable DTC detected?

YES  >> Perform diagnosis of applicable DTC. Refer to CCS-111, "DTC Description".
NO   >> GO TO 2.

2. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ABS”.

Is any DTC detected?

YES  >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to BRC-227, "DTC Index".
NO   >> Replace the ADAS control unit. Refer to DAS-80, "Removal and Installation".

Revision: October 2015

CCS-110 2016 Maxima NAM
ITS COMMUNICATION

- ITS communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speeds by connecting control units with two communication lines.
- ITS communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

DTC Logic

POSSIBLE CAUSE
ITS communication system

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select "Self Diagnostic Result" mode of "LASER/RADAR".
4. Check if the "U1000" is detected as the current malfunction in "Self Diagnostic Result" mode of "LASER/RADAR".

Is "U1000" detected as the current malfunction?

YES >> Refer to CCS-111, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. PERFORM THE SELF DIAGNOSTIC RESULT

CONSULT
1. Turn the ignition switch ON.
2. Turn the MAIN switch of ICC system ON, and then wait for 2 seconds or more.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “U1000” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is "U1000" detected as the current malfunction?

YES >> Refer to LAN-17, "Trouble Diagnosis Flow Chart".
NO >> Inspection End.
U1010 CONTROL UNIT (CAN) [ICC]

U1010 CONTROL UNIT (CAN)

DTC Description

CAN controller controls the communication of ITS communication signal and the error detection.

DTC Logic

DTC DETECTION LOGIC

POSSIBLE CAUSE

ICC sensor

FAIL-SAFE

The following systems are canceled:
  • Intelligent Cruise Control
  • Forward Emergency Braking (FEB)
  • Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

   CONSULT
   1. Start the engine.
   2. Turn the MAIN switch of ICC system ON.
   3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
   4. Check if the “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1010” detected as the current malfunction?

YES >> Refer to CCS-112, “Diagnosis Procedure”.
NO-1 >> To check malfunction symptom before repair: Refer to GI-41, “Intermittent Incident”.
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

1. PERFORM DTC CONFIRMATION PROCEDURE

   CONSULT
   1. Turn the MAIN switch of ICC system ON.
   2. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
   3. Check if the “U1010” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1010” detected as the current malfunction?

YES >> Replace the ICC sensor. Refer to CCS-136, “Removal and Installation”.
NO >> Inspection End.
POWER SUPPLY AND GROUND CIRCUIT

ICC SENSOR

ICC SENSOR : Diagnosis Procedure

Regarding Wiring Diagram information, refer to CCS-49, "Wiring Diagram".

1. CHECK ICC SENSOR POWER SUPPLY CIRCUIT

Check voltage between ICC sensor harness connector and ground.

<table>
<thead>
<tr>
<th>(+)</th>
<th>(-)</th>
<th>Condition</th>
<th>Standard voltage</th>
<th>Voltage (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC sensor</td>
<td>ignition switch</td>
<td>OFF</td>
<td>0 - 0.1 V</td>
<td>0 V</td>
</tr>
<tr>
<td>E245</td>
<td>8</td>
<td>ON</td>
<td>9.5 - 16 V</td>
<td>Battery voltage</td>
</tr>
</tbody>
</table>

Is the inspection result normal?

YES  >> GO TO 2.
NO  >> Repair the ICC sensor power supply circuit.

2. CHECK ICC SENSOR GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the ICC sensor connector.
3. Check for continuity between ICC sensor harness connector and ground.

<table>
<thead>
<tr>
<th>ICC sensor</th>
<th>Ground</th>
<th>Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>E245</td>
<td>1</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Is the inspection result normal?

YES  >> Inspection End.
NO  >> Repair the ICC sensor ground circuit.
CCS-114 CVT

DTC/CIRCUIT DIAGNOSIS

(C1A07 CVT)

DTC Description

INFOID:0000000011953023

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A07</td>
<td>CVT MSG CIRCUIT</td>
<td>Diagnosis condition: When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal): —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold: If ICC sensor detects an error signal that is received from TCM via CAN communication.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time: —</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1A07” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1A07” detected as the current malfunction?

YES >> Refer to CCS-114, “Diagnosis Procedure”.
NO >> Refer to GI-41, “Intermittent Incident”.

Diagnosis Procedure

INFOID:0000000011953024

1. CHECK ICC SENSOR SELF-DIAGNOSIS RESULT

Check if “U1000” is also detected with “C1A07” in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to CCS-111, "DTC Description".
NO >> GO TO 2.

2. CHECK TCM SELF DIAGNOSTIC RESULTS

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-58, "DTC Index".
NO >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".

Revision: October 2015

CCS-114 2016 Maxima NAM
U153A CVT MESSAGE COUNTER FAILURE

DTC DESCRIPTION

INFOID:0000000011953025

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>Trouble diagnosis name</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>U153A</td>
<td>CVT MSG COUNTER</td>
<td>Diagnosis condition When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal) —</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold If ICC sensor detects an error signal that is received from TCM via CAN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time —</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “U153A” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U153A” detected as the current malfunction?

YES >> Refer to CCS-115, "Diagnosis Procedure".

NO >> Refer to GI-41, "Intermittent Incident".

Diagnosis Procedure

1. CHECK ICC SENSOR SELF DIAGNOSTIC RESULTS

Check if “U1000” is also detected with “U153A” in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to CCS-111, "DTC Logic".

NO >> GO TO 2.

2. CHECK TCM SELF DIAGNOSTIC RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to TM-58, "DTC Index".

NO >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".

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CCS-115 2016 Maxima NAM
U153B CVT CHECK SUM FAILURE

DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT screen terms</th>
<th>Diagnosis condition</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>U153B</td>
<td>CVT MSG COUNTER</td>
<td>Diagnosis condition</td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
<td>If ICC sensor detects an error signal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>that is received from TCM via CAN</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

TCM

FAIL-SAFE

The following systems are canceled:

- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “U153B” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U153B” detected as the current malfunction?

YES >> Refer to CCS-116, “Diagnosis Procedure”.
NO >> Refer to GI-41, “Intermittent Incident”.

Diagnosis Procedure

1. CHECK ICC SENSOR SELF DIAGNOSTIC RESULT

Check if “U1000” is detected other than “U153B” in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to CCS-111, “DTC Logic”.
NO >> GO TO 2.

2. CHECK TCM SELF DIAGNOSTIC RESULT

CONSULT

Check if any DTC is detected in “Self Diagnostic Result” mode of “TRANSMISSION”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to CCS-111, “DTC Logic”.
NO >> Replace the ICC sensor. Refer to CCS-136, “Removal and Installation”.

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DTC Description

DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>CONSULT terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A0C</td>
<td>ADAS MSG COUNTER</td>
<td>Diagnosis condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICC sensor internal malfunction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE
ICC Sensor

FAIL-SAFE
The following systems are canceled:
• Intelligent Cruise Control
• Forward Emergency Braking (FEB)
• Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE
1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Select "Self Diagnostic Result" mode of "LASER/RADAR".
3. Check if the “C1A0C” is detected as the current malfunction in "Self Diagnostic Result" mode of "LASER/RADAR".

Is "C1A0C" detected as the current malfunction?

YES >> Refer to CCS-117, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

1. CHECK ICC SENSOR SELF DIAGNOSTIC RESULT

Check if "U1000" is also detected with “C1A0C” in "Self Diagnostic Result" mode of "LASER/RADAR".

Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to CCS-111, "DTC Logic".

NO >> GO TO 2.

2. CHECK ADAS CONTROL UNIT SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in "Self Diagnostic Result" mode of "ICC/ADAS".

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-25, "DTC Index".
NO >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
DTC DETECTION LOGIC

<table>
<thead>
<tr>
<th>DTC No.</th>
<th>Consult screen terms</th>
<th>DTC detection condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1A0D</td>
<td>MRR CAN FAIL</td>
<td>Diagnosis condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When ignition switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal (terminal)</td>
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<td>—</td>
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<tr>
<td></td>
<td></td>
<td>Threshold</td>
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<tr>
<td></td>
<td></td>
<td>ICC sensor internal malfunction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosis delay time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—</td>
</tr>
</tbody>
</table>

POSSIBLE CAUSE

ICC Sensor

FAIL-SAFE
The following systems are canceled:
- Intelligent Cruise Control
- Forward Emergency Braking (FEB)
- Predictive Forward Collision Warning (PFCW)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Start the engine.
2. Turn the MAIN switch of ICC system ON.
3. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
4. Check if the “C1A0D” is detected as the current malfunction in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “C1A0D” detected as the current malfunction?

YES >> Refer to CCS-118, "Diagnosis Procedure".
NO >> Refer to GI-41, "Intermittent Incident".

Diagnosis Procedure

1. CHECK ICC SENSOR SELF DIAGNOSTIC RESULT

Check if “U1000” is also detected with “C1A0D” in “Self Diagnostic Result” mode of “LASER/RADAR”.

Is “U1000” detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to CCS-111, "DTC Logic".
NO >> GO TO 2.

2. CHECK ADAS CONTROL UNIT SELF DIAGNOSTIC RESULT

CONSULT
Check if any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS”.

Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DAS-25, "DTC Index".
NO >> Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".

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# INTELLIGENT CRUISE CONTROL SYSTEM SYMPTOMS

## SYMPTOM DIAGNOSIS

### INTELLIGENT CRUISE CONTROL SYSTEM SYMPTOMS

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<th>Reference page</th>
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<td>MAIN switch does not turn OFF</td>
<td>CCS-120, &quot;Description&quot;</td>
</tr>
<tr>
<td>ICC system cannot be set (MAIN switch turns ON/OFF)</td>
<td>ICC system cannot be set (MAIN switch turns ON/OFF)</td>
<td>CCS-122, &quot;Description&quot;</td>
</tr>
<tr>
<td>CANCEL switch does not function</td>
<td>CANCEL switch does not function</td>
<td>CCS-124, &quot;Description&quot;</td>
</tr>
<tr>
<td>Resume does not function</td>
<td>Resume does not function</td>
<td>CCS-124, &quot;Description&quot;</td>
</tr>
<tr>
<td>Set speed does not increase</td>
<td>Set speed does not increase</td>
<td>CCS-124, &quot;Description&quot;</td>
</tr>
<tr>
<td>Set distance to a vehicle ahead cannot be changed</td>
<td>Set distance to a vehicle ahead cannot be changed</td>
<td>CCS-125, &quot;Description&quot;</td>
</tr>
<tr>
<td>ICC is not canceled when the CVT selector lever is in “N” position</td>
<td>ICC is not canceled when the CVT selector lever is in “N” position</td>
<td>CCS-125, &quot;Description&quot;</td>
</tr>
<tr>
<td>Display/Chime</td>
<td>ICC system display does not appear</td>
<td>CCS-15, &quot;INTELLIGENT CRUISE CONTROL : System Description&quot;</td>
</tr>
<tr>
<td>Chime does not sound</td>
<td>Chime does not sound</td>
<td>CCS-126, &quot;Description&quot;</td>
</tr>
<tr>
<td>Control</td>
<td>Driving force is hunting</td>
<td>CCS-128, &quot;Description&quot;</td>
</tr>
<tr>
<td>System frequently cannot detect a vehicle ahead</td>
<td>System frequently cannot detect a vehicle ahead</td>
<td>CCS-129, &quot;Description&quot;</td>
</tr>
<tr>
<td>Distance to detect a vehicle ahead is short</td>
<td>Distance to detect a vehicle ahead is short</td>
<td>CCS-129, &quot;Description&quot;</td>
</tr>
<tr>
<td>System misidentifies a vehicle even though there is no vehicle ahead</td>
<td>System misidentifies a vehicle even though there is no vehicle ahead</td>
<td>• Adjust radar alignment. Refer to CCS-59, &quot;Description&quot;.</td>
</tr>
<tr>
<td>System misidentifies a vehicle in the next lane</td>
<td>System misidentifies a vehicle in the next lane</td>
<td>• Perform ICC system action test. Refer to CCS-66, &quot;Description&quot;.</td>
</tr>
<tr>
<td>System does not detect a vehicle at all</td>
<td>System does not detect a vehicle at all</td>
<td>CCS-131, &quot;Description&quot;</td>
</tr>
</tbody>
</table>
MAIN SWITCH DOES NOT TURN ON, MAIN SWITCH DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

MAIN SWITCH DOES NOT TURN ON, MAIN SWITCH DOES NOT TURN OFF

Description

MAIN switch does not turn ON
• ICC system display does not appear even when MAIN switch is pressed.

MAIN switch does not turn OFF
• When ICC system display is ON, display does not turn OFF even if MAIN switch is pressed.

NOTE:
When ICC system warning lamp illuminates, perform the self-diagnosis of ICC system, and then repair or replace the malfunctioning parts.

Diagnosis Procedure

1. MAIN SWITCH INSPECTION

CONSULT
1. Start the engine.
2. Check that “MAIN SW” and “CRUISE LAMP” operate normally in “Data Monitor” mode of “ICC/ADAS”.

Is the inspection result normal?

YES  >> GO TO 2.
NO    >> GO TO 4.

2. CHECK COMBINATION METER

CONSULT
Check that “CRUISE IND” operates normally in “Data Monitor” mode of “METER/M&A”.

Is the inspection result normal?

YES  >> GO TO 3.
NO    >> GO TO 4.

3. PERFORM SELF DIAGNOSTIC RESULT OF COMBINATION METER

CONSULT
1. Select “Self Diagnostic Result” mode of “METER/M&A”.
2. Check if DTC is detected. Refer to MWI-29, "DTC Index".

Is any DTC detected?

YES  >> Repair or replace malfunctioning parts.
NO    >> GO TO 4.

4. PERFORM SELF DIAGNOSTIC RESULT OF ICC SYSTEM

CONSULT
1. Select “Self Diagnostic Result” mode of “ICC/ADAS”.
2. Check if DTC “U1000” is detected in .

Is “U1000” detected?

YES  >> GO TO 5.
NO    >> GO TO 6.

5. CAN COMMUNICATION INSPECTION

Check the CAN communication and repair or replace malfunctioning parts. Refer to LAN-8, "System Description".

>> Inspection End.

6. CHECK ICC STEERING SWITCH

Check the ICC steering switch. Refer to CCS-138, "Exploded View".

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MAIN SWITCH DOES NOT TURN ON, MAIN SWITCH DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

[ICC]

>> Inspection End.
Description

The MAIN switch can be turned ON/OFF, but the ICC system cannot be set even if the SET/COAST switch is pressed.

NOTE:
The system cannot be set in the following cases:
- When the vehicle ahead is not detected below the speed of 32 km/h (20 MPH).
- When the selector lever is not in the "D" position or manual mode.
- When the brake pedal is depressed.
- When the VDC is turned OFF.
- When ABS or VDC (including the TCS) operates.
- When a wheel slips.
- When ABS warning lamp is ON.

Diagnosis Procedure

1. CHECK CAUSE OF AUTOMATIC CANCELLATION

CONSULT
Check if the cancellation cause in the “CAUSE OF AUTO-CANCEL” in “Work support” mode of “LASER/RADAR”. Is it displayed?

Not displayed>>GO TO 2.
“OPE SW VOLT CIRC”>> Refer to CCS-79, "DTC Description".
“OVHLD SPD UNMATCH”>> Refer to CCS-72, "DTC Description".
“IGN LOW VOLT”>> Refer to CCS-98, "DTC Description".
“ECM CIRCUIT”>> Refer to CCS-85, "DTC Description".
“CAN COMM ERROR”>> Refer to CCS-111, "DTC Logic".
“ICC SENSOR CAN COMM ERR”>> Refer to CCS-113, "ICC SENSOR : Diagnosis Procedure".
“ABS/TCS/VDC CIRC”>> Refer to CCS-96, "DTC Description".
“ECD CIRCUIT”>> Refer to CCS-96, "DTC Description".

2. PERFORM THE SELF DIAGNOSTIC RESULT

CONSULT
1. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
2. Check if any DTC is detected in “Self Diagnostic Result” mode of “ICC/ADAS” or “LASER/RADAR”. Refer to CCS-46, "DTC Index" (ICC/ADAS) or CCS-46, "DTC Index" (LASER/RADAR).

Is any DTC detected?
YES => GO TO 3.
NO => GO TO 4.

3. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts identified by the self-diagnosis result.

=> GO TO 6.

4. CHECK EACH SWITCH AND VEHICLE SPEED SIGNAL

CONSULT
1. Start the engine.
2. Check that the following items operate normally in “Data Monitor” mode of “LASER/RADAR”:
   - “VHCL SPEED SE”
   - “D RANGE SW”
   - “SET/COAST SW”
   - “BRAKE SW”
   - “PKB SW”

Is there a malfunctioning item?
All items are normal=>GO TO 5.
< SYMPTOM DIAGNOSIS >

ICC SYSTEM CANNOT BE SET (MAIN SWITCH TURNS ON/OFF)

“VHCL SPEED SE”>> Refer to CCS-72, "DTC Description".
“D RANGE SW”>> Refer to CCS-87, "DTC Logic".
“SET/COAST SW”>> Refer to CCS-79, "DTC Description".
“BRAKE SW”>> Refer to CCS-75, "DTC Description".
“PKB SW”>> Refer to CCS-74, "DTC Description".

5. REPLACE ICC SENSOR

Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".

>> GO TO 6.

6. CHECK ICC SYSTEM

CONSULT

1. Erase the “Self Diagnostic Result”, and then select “Self Diagnostic Result” mode again after performing the action test. (Refer to CCS-66, "Description" for action test.)
2. Check that the ICC system is normal.

>> Inspection End.
ICC STEERING SWITCH (OTHER THAN MAIN SWITCH) DOES NOT FUNCTION

Description

MAIN switch can be turned ON/OFF, but the operation of RESUME/+ switch, CANCEL switch, and DISTANCE switch cannot be performed during ICC system operation.

NOTE:
Resume is not accepted when the following condition is met:
• When the MAIN switch is turned OFF once.

Diagnosis Procedure

1. CHECK EACH SWITCH

   1. Start the engine.
   2. Check that each switch operates normally on “Data Monitor” mode of “LASER/RADAR”:
      - “RESUME/ACC SW”
      - “CANCEL SW”
      - “DISTANCE SW”

   Is the inspection result normal?
   YES >> GO TO 5.
   NO >> GO TO 2.

2. PERFORM THE SELF DIAGNOSTIC RESULT

   1. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
   2. Check if DTC “U1000” is detected.

   Is “U1000” detected?
   YES >> GO TO 3.
   NO >> GO TO 4.

3. CAN COMMUNICATION INSPECTION

   Check the CAN communication and repair or replace malfunctioning parts. Refer to CCS-111, "DTC Logic".

   >> Inspection End.

4. CHECK ICC STEERING SWITCH

   Check the ICC steering switch. Refer to CCS-138, "Exploded View".

   >> GO TO 6.

5. REPLACE ICC SENSOR

   Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".

   >> GO TO 6.

6. CHECK ICC SYSTEM

   1. Erase the “Self Diagnostic Result”, and then select “Self Diagnostic Result” mode again after performing the action test. (Refer to CCS-66, "Description" for action test.)
   2. Check that the ICC system is normal.

   >> Inspection End.
ICC SYSTEM DOES NOT CANCEL WHEN CVT SELECTOR LEVER SETS ON "N"

Description

The ICC system is not canceled even when the CVT selector lever is shifted to the “N” position while the ICC system is active.

Diagnosis Procedure

1. CHECK D RANGE SWITCH

   CONSULT
   Check if “D RANGE SW” operates normally in “Data Monitor” mode of “LASER/RADAR”.
   Is the inspection result normal?
   YES  >> GO TO 6.
   NO   >> GO TO 2.

2. PERFORM DIAGNOSTIC RESULT

   CONSULT
   1. Select “Self Diagnostic Result” mode of “LASER/RADAR”.
   2. Check if DTC “U1000” is detected in .
   Is “U1000” detected?
   YES  >> GO TO 3.
   NO   >> GO TO 4.

3. CAN COMMUNICATION INSPECTION

   Check the CAN communication and repair or replace malfunctioning parts. Refer to CCS-111, "DTC Logic".
   >> Inspection End.

4. CHECK POSITION SWITCH

   CONSULT
   Check if “RANGE” operates normally in “Data Monitor” mode of “TRANSMISSION”.
   Is the inspection result normal?
   YES  >> GO TO 6.
   NO   >> GO TO 5.

5. PERFORM TCM SELF DIAGNOSTIC RESULT

   CONSULT
   1. Select “Self Diagnostic Result” mode of “TRANSMISSION”.
   2. Repair or replace malfunctioning parts. Refer to TM-58, "DTC Index".
   >> GO TO 7.

6. REPLACE ICC SENSOR

   Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
   >> GO TO 7.

7. CHECK ICC SYSTEM

   CONSULT
   1. Erase the “Self Diagnostic Result”, and then select “Self Diagnostic Result” again after performing the action test. (Refer to CCS-66, "Description" for action test.)
   2. Check that the ICC system is normal.
   >> Inspection End.
CHIME DOES NOT SOUND

Description

Symptom check: In the following conditions, the warning chime may not sound even if the vehicle distance is short:
• When the vehicles are traveling at the same speed and the distance between vehicles is not changing.
• When the vehicle ahead is traveling faster and the distance between vehicles is increasing.
• When the accelerator pedal is depressed, overriding the system.
• When own vehicle approaches vehicles that are parked or moving slowly.
• The warning chime does not sound when the system does not detect any vehicle ahead. (Diagnose the conditions under which the system is detecting the vehicle ahead and when the system is malfunctioning. If there is any malfunction in detecting the vehicle ahead, check the system. Refer to CCS-129, "Description".)

Diagnosis Procedure

1. PERFORM ACTIVE TEST

CONSULT
Check if the warning chime sounds on the active test item “ICC BUZZER” of “LASER/RADAR”.

Does the warning chime sound?
YES >> GO TO 2.
NO >> GO TO 3.

2. CHECK THE MALFUNCTION SYMPTOM DURING WARNING CHIME OPERATION

Understand the vehicle ahead detecting condition when the malfunction occurred. If the warning chime should have sounded, replace the ICC sensor. Refer to DAS-80, "Removal and Installation".

>> GO TO 8.

3. PERFORM ACTIVE TEST

CONSULT
Check if the warning chime sounds on the active test item “METER BUZZER” of “ICC/ADAS”.

Does the warning chime sound?
YES >> GO TO 9.
NO >> GO TO 5.

4. CHECK ICC WARNING CHIME CIRCUIT

Check the meter buzzer circuit. Refer to WCS-27, "Component Function Check".
Is the inspection result normal?
YES >> GO TO 8.
NO >> GO TO 7.

5. PERFORM THE SELF DIAGNOSTIC RESULT

CONSULT
1. Select “Self Diagnostic Result” mode of “ICC/ADAS”.
2. Check if DTC “U1000” is detected in “Self Diagnostic Result” mode of “ICC/ADAS”.
Is “U1000” detected?
YES >> GO TO 6.
NO >> GO TO 4.

6. CAN COMMUNICATION SYSTEM INSPECTION

Check the CAN communication system and repair or replace malfunctioning parts. Refer to CCS-111, "DTC Logic".

>> Inspection End.

7. REPAIR OR REPLACE MALFUNCTIONING PARTS

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< SYMPTOM DIAGNOSIS >

Repair or replace malfunctioning parts.

>> GO TO 10.

8. REPLACE ADAS CONTROL UNIT

Replace the ADAS control unit. Refer to DAS-80, "Removal and Installation".

>> GO TO 8.

9. PERFORM ICC SENSOR ALIGNMENT

CONSULT
1. Perform ICC sensor alignment. Refer to CCS-59, "Description".
2. Perform action test. Refer to CCS-66, "Description".
3. Check that the vehicle ahead detection performance improves.

>> GO TO 10.

10. CHECK ICC SYSTEM

CONSULT
1. Erase the "Self Diagnostic Result", and then select "Self Diagnostic Result" mode again after performing the action test. (Refer to CCS-66, "Description" for action test.)
2. Check that the ICC system is normal.

>> Inspection End.
< SYMPTOM DIAGNOSIS >

DRIVING FORCE IS HUNTING

Description

The vehicle causes hunting when the ICC system is active.

Diagnosis Procedure

1. PERFORM SELF DIAGNOSTIC RESULT OF ECM

CONSULT
1. Select “Self Diagnostic Result”.
2. Check if DTC is detected in “Self Diagnostic Result” mode of “ENGINE”. Refer to EC-107, “DTC Index”.

Is any DTC detected?

YES  >> GO TO 3.

NO   >> GO TO 2.

2. CHECK ICC SENSOR

1. Check the vehicle driving conditions. Refer to CCS-129, “Description”.
2. Check the ICC sensor for contamination, foreign materials, or cracks. Refer to CCS-129, “Diagnosis Procedure”.

>> Inspection End.

3. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts identified by the self-diagnosis result.

>> GO TO 4.

4. CHECK ICC SYSTEM

CONSULT
1. Erase the “Self Diagnostic Result”, and then perform “Self Diagnostic Result” mode again after performing the action test. (Refer to CCS-66, “Description” for action test.)
2. Check that the ICC system is normal.

>> Inspection End.
FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

< SYMPTOM DIAGNOSIS > [ICC]

FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

Description

The detection function may become unstable in the following cases.
• When radar reflections from the vehicle ahead are interrupted.
• When driving on a road with extremely sharp corners.
• When the sensor cannot detect a vehicle ahead while the vehicle ahead passes a hill or valley.

Diagnosis Procedure

1. VISUAL CHECK (1)
   Check the contamination and foreign matter on the ICC sensor area.
   Is foreign matter adhered?
   YES >> GO TO 3.
   NO >> GO TO 2.

2. VISUAL CHECK (2)
   Check ICC sensor for contamination and foreign matter.
   Is foreign matter adhered?
   YES >> GO TO 3.
   NO >> GO TO 4.

3. WIPE OUT DIRT AND FOREIGN MATERIALS
   Wipe out the contamination and foreign matter in the area around the ICC sensor.
   >> GO TO 8.

4. VISUAL CHECK (3)
   Check ICC sensor for cracks and scratches.
   Are there any cracks or scratches?
   YES >> GO TO 6.
   NO >> GO TO 5.

5. ADJUST RADAR ALIGNMENT
   1. Adjust the radar alignment. Refer to CCS-59, "Description".
   2. Perform ICC system action test. Refer to CCS-66, "Description".
   3. Check that the vehicle ahead detection performance improves.
   Does it improve?
   YES >> Inspection End.
   NO >> GO TO 6.

6. REPLACE ICC SENSOR
   1. Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
   2. Adjust the radar alignment. Refer to CCS-59, "Description".
   3. Perform ICC system action test. Refer to CCS-66, "Description".
   4. Check that the vehicle ahead detection performance improves.
   Does it improve?
   YES >> Inspection End.
   NO >> GO TO 7.

7. CHECK ICC SYSTEM

CONSULT
1. Erase the “Self Diagnostic Result”, and then select “Self Diagnostic Result” mode again after performing the action test. (Refer to CCS-66, "Description" for action test.)
2. Check that the ICC system is normal.
FREQUENTLY CANNOT DETECT THE VEHICLE AHEAD / DETECTION ZONE IS SHORT

>> Inspection End.
THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

< SYMPTOM DIAGNOSIS >

THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

Description

When ICC system is active, the ICC system does not perform any control even though there is a vehicle ahead.

Diagnosis Procedure

1. CHECK ICC SYSTEM DISPLAY ON INFORMATION DISPLAY

   1. Start the self-diagnosis mode of combination meter. Refer to MWI-18, "On Board Diagnosis Function".
   2. Check that the information display turns ON normally.

   Is the inspection result normal?

   YES  >> GO TO 2.
   NO    >> Replace the combination meter.

2. VISUAL CHECK (1)

   Check the contamination and foreign matter on the ICC sensor area of the front bumper.

   Is foreign matter adhered?

   YES  >> GO TO 4.
   NO    >> GO TO 3.

3. VISUAL CHECK (2)

   Check ICC sensor for contamination and foreign matter.

   Is foreign matter adhered?

   YES  >> GO TO 4.
   NO    >> GO TO 5.

4. WIPE OUT DIRT AND FOREIGN MATTER

   Wipe out the contamination and foreign matter in the area around the ICC sensor.

   >> GO TO 10.

5. VISUAL CHECK (3)

   Check ICC sensor for cracks and/or scratches.

   Are there cracks or scratches?

   YES  >> GO TO 7.
   NO    >> GO TO 6.

6. RADAR ALIGNMENT ADJUSTMENT

   CONSULT
   1. Adjust the radar alignment. Refer to CCS-59, "Description".
   2. Perform ICC system action test. Refer to CCS-66, "Description".
   3. Check that the vehicle ahead detection performance improves.

   Does it improve?

   YES  >> Inspection End.
   NO    >> GO TO 7.

7. CHECK INFORMATION DISPLAY

   CONSULT
   1. Select “Self Diagnostic Result” mode of “ICC SENSOR”. Refer to CCS-31, "CONSULT Function (LASER/RADAR)".
   2. Check that the segment of information is displayed normally.

   Is the inspection result normal?

   YES  >> GO TO 8.
   NO    >> Refer to CCS-46, "DTC Index"

Revision: October 2015
THE SYSTEM DOES NOT DETECT THE VEHICLE AHEAD AT ALL

8. REPLACE ICC SENSOR

1. Replace the ICC sensor. Refer to CCS-136, "Removal and Installation".
2. Adjust the radar alignment. Refer to CCS-59, "Description".
3. Perform ICC system action test. Refer to CCS-66, "Description".
4. Check that the vehicle ahead detection performance improves.

Does it improve?
YES >> Inspection End.
NO >> GO TO 9.

9. REPLACE ADAS CONTROL UNIT

Replace ADAS control unit. Refer to DAS-80, "Removal and Installation".

>> GO TO 10.

10. CHECK ICC SYSTEM

CONSULT
1. Erase the “Self Diagnostic Result”, and then select “Self Diagnostic Result” mode again after performing the action test. (Refer to CCS-66, "Description" for action test.)
2. Check that the ICC system is normal.

>> Inspection End.
PRECAUTIONS FOR INTELLIGENT CRUISE CONTROL SYSTEM

- ICC system is only an aid to assist the driver and is not a collision warning or avoidance system. It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.
- The system is primarily intended for use on straight, dry, open roads with light traffic. It is not advisable to use the system in city traffic or congested areas.
- This system will not adapt automatically to road conditions. This system should be used in evenly flowing traffic. Never use the system on roads with sharp curves or on icy roads, in heavy rain or in fog.
- The ICC sensor will not detect the following objects:
  - Stationary and slow-moving vehicles.
  - Pedestrians or objects in the roadway.
  - Oncoming vehicles in the same lane.
  - Motorcycles traveling offset in the travel lane.
- As there is a performance limit to the distance control function, never rely solely on the ICC system. This system does not correct careless, inattentive or absent-minded driving or overcome poor visibility in rain, fog, or other bad weather. Decelerate the vehicle speed by depressing the brake pedal, depending on the distance to the vehicle ahead and the surrounding circumstances in order to maintain a safe distance between vehicles.
- If the vehicle ahead comes to a stop, the vehicle decelerates to a standstill within the limitations of the system. The system will cancel once it judges that the vehicle has come to a standstill and sound a warning chime. To prevent the vehicle from moving, the driver must depress the brake pedal.
- The system may not detect the vehicle in front of the driver in certain road or weather conditions. To avoid accidents, never use the ICC system under the following conditions:
  - On roads where the traffic is heavy or there are sharp curves.
  - On slippery road surfaces such as on ice or snow, etc.
  - During bad weather (rain, fog, snow, etc.).
  - When rain, snow or dirt adheres to the ICC sensor.
  - On steep downhill roads (the vehicle may go beyond the set vehicle speed and frequent braking may result in overheating the brakes).
  - On repeated uphill and downhill roads.
  - When traffic conditions make it difficult to keep a proper distance between vehicles because of frequent acceleration or deceleration.
  - Never use the ICC system if own vehicle is towing a trailer. The system may not detect a vehicle ahead.
- In some road or traffic conditions, a vehicle or object can unexpectedly come into the sensor detection zone and cause automatic braking. The driver may need to control the distance from other vehicles using the accelerator pedal. Always stay alert and avoid using the ICC system when it is not recommended in this section.
- The ICC system uses a sensor located behind the front bumper of the vehicle to detect vehicles traveling ahead. The sensor generally detects the signals returned from the vehicle ahead. Therefore, if the sensor cannot detect the reflection from the vehicle ahead, the ICC system may not maintain the selected distance.
- The following are some conditions in which the sensor cannot detect the signals:
  - When the snow or road spray from traveling vehicles reduces the sensor's visibility.
  - When excessively heavy baggage is loaded in the rear seat or the luggage room of own vehicle.
- The ICC system is designed to automatically check the sensor's operation within the limitation of the system. When the front bumper area of the ICC sensor is covered with dirt or is obstructed, the system will automatically cancel. If the front bumper area of the ICC sensor is covered with ice, a transparent or translucent vinyl bag, etc., the ICC system may not detect it. In these instances, the ICC system may not cancel and may not be able to maintain the selected following distance from the vehicle ahead. Be sure to check and clean the front bumper area of the ICC sensor regularly.
- The ICC system does not control vehicle speed or warn the driver when own vehicle approaches stationary and slow moving vehicles. The driver must pay attention to vehicle operation to maintain proper distance from vehicles ahead when approaching toll gates or traffic congestion.
NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[ICC]

• The detection zone of the ICC sensor is limited. A vehicle ahead must be in the detection zone for the vehicle-to-vehicle distance detection mode to maintain the selected distance from the vehicle ahead. A vehicle ahead may move outside of the detection zone due to its position within the same lane of travel. Motorcycles may not be detected in the same lane ahead if they are traveling offset from the center line of the lane. A vehicle that is entering the lane ahead may not be detected until the vehicle has completely moved into the lane. If this occurs, the ICC system may warn the driver by blinking the system indicator and sounding the chime. The driver may have to manually control the proper distance from vehicle traveling ahead.

• When driving on some roads, such as winding, hilly, curved narrow roads or roads which are under construction, the ICC sensor may detect vehicles in a different lane or may temporarily not detect a vehicle traveling ahead. This may cause the ICC system to decelerate or accelerate the vehicle. The detection of vehicles may also be affected by vehicle operation (steering maneuver or traveling position in the lane, etc.) or vehicle condition. If this occurs, the ICC system may warn the driver by blinking the system indicator and sounding the chime unexpectedly. The driver will have to manually control the proper distance away from the vehicle traveling ahead.

• When driving on the freeway at a set speed and approaching a slower traveling vehicle ahead, the ICC will adjust the speed to maintain the distance, selected by the driver, from the vehicle ahead. If the vehicle ahead changes lanes or exits the freeway, the ICC system will accelerate and maintain the speed up to the set speed. Pay attention to the driving operation to maintain control of the vehicle as it accelerates to the set speed. The vehicle may not maintain the set speed on winding or hilly roads. If this occurs, the driver will have to manually control the vehicle speed.
Normally when controlling the distance to a vehicle ahead, this system automatically accelerates or decelerates own vehicle according to the speed of the vehicle ahead. Depress the accelerator to properly accelerate own vehicle when acceleration is required for a lane change. Depress the brake pedal when deceleration is required to maintain a safe distance to the vehicle ahead due to its sudden braking or if a vehicle cuts in. Always stay alert when using the ICC system.

The sensor sensitivity can be affected by vehicle operation (steering maneuver or driving position in the lane) or traffic or vehicle condition (for example, if a vehicle is being driven with some damage).
Removal and Installation

REMOVAL
1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Disconnect harness connector from ICC sensor.
3. Remove ICC sensor bracket bolts.
4. Remove bolts and detach ICC sensor from ICC sensor bracket.

INSTALLATION
Install ICC sensor to ICC sensor bracket.
• Install ICC sensor bolts loosely and then tighten in sequence as shown.

**ICC sensor bolts : 3.8 N·m (0.39 kg-m, 34 in-lb)**

Install ICC sensor bracket to front bumper reinforcement.
• Install ICC sensor bracket bolts loosely and then tighten in sequence as shown.

**ICC sensor bracket bolts : 10.0 N·m (1.0 kg-m, 7 ft-lb)**

Installation of remaining components is in the reverse order of removal.

**CAUTION:**
• Always perform ICC sensor alignment and check the operation after removal, installation or replacement of ICC sensor. Refer to CCS-56, "Work Procedure".
• Do not touch ICC sensor face.
• Do not drop or shock ICC sensor.
• Make sure ICC sensor harness is installed without any twists.
Removal and Installation

REMOVAL

NOTE:
The ICC steering and audio switches are serviced as an assembly.

1. Remove steering wheel. Refer to ST-30, "Removal and Installation".
2. Remove screws (A) and pawls then remove steering wheel rear finisher (1) from steering wheel (2).

Pawls
3. Remove screws (A) and pawls then remove steering wheel front finisher (2) from steering wheel (1).

4. Remove screws (A) and remove steering switches from steering wheel (1).

INSTALLATION
Installation is in the reverse order of removal.

CAUTION:
Always perform ICC system action test to check that the ICC system operates normally after replacing the ICC sensor or repairing any ICC system malfunction. Refer to CCS-66, "Work Procedure".
PRECAUTIONS

PRECAUTION

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:
• To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.
• Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
• Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:
• When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
• When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, and wait at least three minutes before performing any service.
SYSTEM DESCRIPTION

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Information

Automatic Speed Control Device (ASCD) system is controlled by ECM. Regarding the information for ASCD system, refer to the following:

• VQ35DE: EC-21, "ASCD Steering Switch"