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| **Last Modified:** 03-12-2013 | 6.4 F | **Doc ID:** NM1000000004IE1 |
| **Model Year:** 2013 | **Model:** RAV4 | **Prod Date Range:** [12/2012 - ] |
| **Title:** PARK ASSIST / MONITORING: INTUITIVE PARKING ASSIST SYSTEM: GENERAL; 2013 MY RAV4 [12/2012 - ] | | |

# GENERAL

## 1. OUTLINE

(a) The intuitive parking assist system uses the No. 1 ultrasonic sensors to detect any obstacles at the rear corner or the rear of the vehicle.

(b) The intuitive parking assist system informs the driver of the approximate distance between the No. 1 ultrasonic sensors and the obstacles as well as their positions by displaying them on the telltale light assembly and by sounding the No. 1 clearance warning buzzer.

## 2. PRECAUTION

(a) Ignition Switch Expressions

(1) The type of ignition switch used on this model differs depending on the specifications of the vehicle. The expressions listed in the table below are used in this section.

| EXPRESSION | IGNITION SWITCH (POSITION) | ENGINE SWITCH (CONDITION) |
|---|---|---|
| Ignition Switch off | LOCK | Off (Lock) |
| Ignition Switch ACC | ACC | On (ACC) |
| Ignition Switch ON | ON | On (IG) |
| Engine Start | START | On (Start) |

(b) The detection function of the intitive parking assist system may not operate properly in the following conditions:

(1) When ice, snow or mud gets on the No. 1 ultrasonic sensors. If the material is removed, the system will work properly.

(2) When a No. 1 ultrasonic sensor is frozen. If the No. 1 ultrasonic sensor is no longer frozen, the system will work properly.

(3) When the No. 1 ultrasonic sensors are covered with something. If the material is removed, the system will work properly.

(c) Especially in cold weather, a malfunction warning may occur (the buzzer may sound) due to frozen No. 1 ultrasonic sensors. If the malfunction warning occurs, be sure to check the No. 1 ultrasonic sensors. If the malfunction warning occurs and there is no mud, ice or snow on the No. 1 ultrasonic sensors, a No. 1 ultrasonic sensor may be malfunctioning.

(d) In the following conditions, the detection range may be affected:

(1) When foreign matter such as snow or mud gets on the No. 1 ultrasonic sensors.

(2) When the vehicle is operated in direct sun light or in a freezing climate.

(e) The system may improperly detect obstacles in the following conditions:

(1) When the vehicle is being driven on bumpy road, gravel road or grass.

(2) When the sound of horns from other vehicles, the sound of a motorcycle engine, the sound of the air brakes of a large truck, or an object that generates ultrasonic waves is in the vicinity.

(3) When there is a downpour, or water is splashing on the vehicle.

(4) When the vehicle posture tilts significantly.

(5) When an antenna for a wireless transmitter is mounted on the vehicle.

(6) When the No. 1 ultrasonic sensors are covered with ice, snow or mud.

(7) When the vehicle travels alongside a tall curb or a square curb.

(8) When other vehicles with sonar are nearby.

(9) When a towing hitch is mounted on the vehicle.

(10) When the bumper is damaged.

(f) There are cases in which the objects listed below cannot be detected:

(1) Thin objects such as wire or rope.

(2) Objects with surfaces that are too small to reflect ultrasonic waves such as wire gauze or a fence.

(3) Objects that absorb sound waves such as cotton or snow.

(4) Objects that have sharp edges.

(5) Objects that are short.

(6) Objects that are tall and protrude at the top.

(g) Others

(1) Objects directly underneath the bumpers cannot be detected. Some objects located lower than the No. 1 ultrasonic sensors, or thin objects, may not be detected as the vehicle comes close to these objects.

(2) An object might not be detected if the vehicle is too close.

(3) The No. 1 ultrasonic sensors might not detect properly if they are exposed to strong shocks such as when being struck or having objects thrown at them.