

# WARNING INDICATORS—PARKING AID—REVERSE SENSING SYSTEM (RSS) AND FORWARD SENSING SYSTEM (FSS)—FALSE ACTIVATION OF WARNING TONE—SERVICE TIPS

TSB 04-26-2

## FORD:

1999-2003 WINDSTAR  
1999-2004 EXPLORER  
2000-2004 EXCURSION, EXPEDITION  
2001-2004 F-SUPER DUTY  
2003-2005 ESCAPE  
2004 F-150, FREESTAR

## LINCOLN:

2000-2002 NAVIGATOR  
2002-2003 BLACKWOOD  
2003-2004 AVIATOR

## MERCURY:

1999-2004 MOUNTAINEER  
2004 MONTEREY

This article supersedes TSB **04-7-1** to update the model years affected for the Navigator.

## ISSUE

Various 1999-2005 vehicles equipped with the parking aid reverse sensing system (RSS) may sound a warning tone when the vehicle is in reverse, even though there are no objects behind the vehicle. This condition may also occur on vehicles equipped with the forward sensing system (FSS) when vehicle is in reverse or drive.

## ACTION

The condition MAY NOT be due to proximity sensor(s) malfunction but may be a normal operation characteristic, or due to sensor contamination (sensor being covered with dirt). Refer to the following description of OPERATION AND COMMON CAUSE OF WARNINGS, before replacing any sensor(s).

## SERVICE TIPS

### NOTE

THE FOLLOWING DESCRIPTIONS ARE TRUE FOR BOTH THE RSS AND FSS.

## **OPERATION AND COMMON CAUSE OF WARNINGS**

The RSS is only operational when the vehicle is in reverse. For vehicles also equipped with the FSS the system is operational when the vehicle is in reverse or drive.

The FSS and RSS give an audible warning to the driver when obstacles are within 6' (1.8 meters) from the vehicle, and when obstacles are within 18" (46 cm) on either side of the bumper.

### NOTE

CERTAIN OBSTACLES MAY BE DIFFICULT FOR THE RSS/FSS TO DETECT DEPENDING ON GEOMETRIC SHAPE OR PROFILE OF THE OBJECT AND THE MATERIAL THE OBJECT IS COMPOSED OF.

### NOTE

THE NEAREST OBSTACLE WILL ALWAYS BE THE OBSTACLE REPORTED, WITH THE EXCEPTION STATED IN THE NOTE ABOVE.

### NOTE

THE VEHICLE OPERATOR MUST BE AWARE THAT THE WARNING TONES ARE AT A MODERATE VOLUME LEVEL AND THAT THE TONES MAY BE DIFFICULT TO HEAR WITH BACKGROUND NOISE (RADIO, BLOWERS, PASSENGER CONVERSATION, ETC). THE RSS/FSS SPEAKER VOLUME IS ALREADY AT MAXIMUM VOLUME AND IS NOT ADJUSTABLE.

In cases where the RSS/FSS give warnings but nothing is within range of the vehicle sensors, or give warnings for 3 seconds then ceases, the occurrence may be due to any of the following reasons:

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## TSB 04-26-2 (Continued)

### BLOCKED/CONTAMINATED PROXIMITY SENSOR SURFACE:

Proximity sensor surfaces may be covered with snow, ice, dirt or mud. There is a gap between the sensor membrane and its plastic housing that must remain clear (Figure 1). If this space is contaminated with any foreign material the system may sound a continuous tone or intermittent tone. The sensor surface can be cleaned by a high pressure water spray.

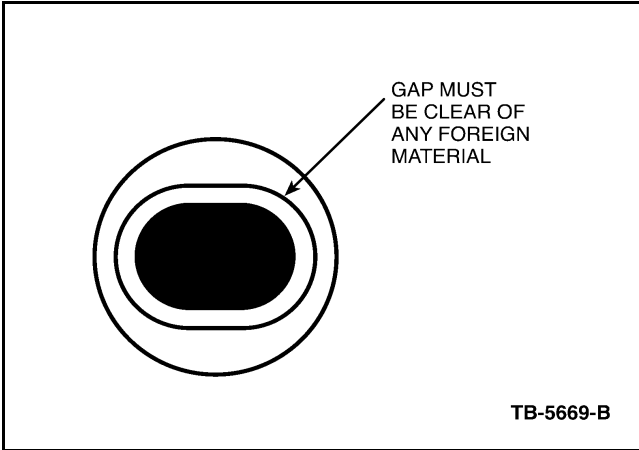


Figure 1 - Article 04-26-2

### SIDE COVERAGE SENSOR:

There is side/rear coverage that extends approximately 18" (46 cm) perpendicular from the side rear fascia. Side coverage is a desirable feature in a parking situation where the vehicle is involved in a very tight turn with little rearward movement, or where the vehicle is backing parallel to a large, extending obstacle such as a garage wall. If there is no encroachment between any of the outer sensors and an obstacle, then the warning will sound for 3 seconds and cease. If vehicle or the obstacle begin to move closer to each other, then the warning will begin again. Obstacles within 10" (25 cm) of the fascia will always be reported with a continuous tone. This is considered normal operation.

### ABNORMAL ROAD SURFACES:

The RSS/FSS may give warnings due to certain road surfaces with surface projections such as rocks, broken pavement, unplowed snow covered roads. This is considered normal operation.

### OTHER POSSIBLE CAUSES:

Very wet weather conditions, such as mist, frost or snow may provoke occasional warnings. The system may detect liftgate while open and certain trailer hitches and/or bicycle racks. External ultrasonic noise may be detected (high velocity air, machinery). This is considered normal operation.

### SENSOR DIAGNOSTICS

1. Ensure that nothing is in detectable sensor-range 6' (1.8 meters) behind vehicle for the RSS and within 6' (1.8 meters) of the front of the vehicle for the FSS.
2. Clean proximity sensors with a dry shop towel, and if required wash with water or a high pressure water wash if necessary to ensure that the membrane gap is free of any dirt or contamination.
3. Using the New Generation Star (NGS) tester, observe park aid module parameter identification displays (PIDs) for distance information by selecting the park aid module in the NGS menu. PIDs are identified as:
  - LR\_CNTD (Left Rear Center Sensor Distance To Obstacle Detected In Centimeters)
  - RR\_CNTD (Right Rear Center Sensor Distance To Obstacle Detected In Centimeters)
  - LR\_CNRD (Left Rear Corner Sensor Distance To Obstacle Detected In Centimeters)
  - RR\_CNRD (Right Rear Corner Sensor Distance To Obstacle Detected In Centimeters)

### NOTE

PID IDENTIFIERS ALSO EXIST FOR FRONT SENSORS IF EQUIPPED.

- a. If the sensor is functioning properly, with no objects in range of the vehicle, each sensor PID as described above should display a full scale numerical reading of 255.
- b. If a PID reading other than 255 displays, replace only the sensor that is out of specification.

## TSB 04-26-2 (Continued)

### **NOTE**

FOR THE AVIATOR AND MONTEREY, REPLACEMENT SENSORS WILL BE RECEIVED WITH A PRIMED-BLACK PAINTABLE SURFACE AND MUST BE PAINTED TO MATCH VEHICLE COLOR. REFER TO PAINTING INSTRUCTIONS BELOW.

### **PAINTING INSTRUCTIONS**

- Use a Ford-Approved paint gun, apply base/clear coat to match vehicle
- Surface can be cleaned with Isopropyl alcohol
- Maximum paint curing temperature is 194° F (90° C) for 1 hour
- Maximum coating thickness 125 micro meters (including the primer)
- Paint or veil of paint must not get into connector
- Immersion processes ARE NOT permitted

- Paint must be applied evenly to the surface
- Functional test must be done after painting
- Use NGS tester to confirm settling time of the sensor is within the specified limits: 850 micro sec. to 1500 micro sec.

### **NOTE**

REPLACEMENT SENSORS FOR ALL OTHER VEHICLES LINES COVERED BY THIS TSB, DO NOT REQUIRE PAINT BEFORE INSTALLATION.

**WARRANTY STATUS:** Eligible Under Provisions Of  
New Vehicle Limited  
Warranty Coverage

### **DEALER CODING**

BASIC PART NO.  
15K859

CONDITION  
CODE  
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