TSB 05-6-4	FALSE PARKING AID WARNINGS

FORD:
2005 Five Hundred, Freestyle
2002-2003 Windstar
2002-2005 Excursion, Expedition, Explorer, F-Super Duty
2003-2005 Escape
2004-2005 F-150, Freestar

LINCOLN:
2002 Navigator
2002-2003 Blackwood
2003-2005 Aviator

MERCURY:
2005 Montego
2002-2005 Mountaineer
2004-2005 Monterey
2005 Mariner

This article supersedes TSB **05-4-19** to update the description for labor operation F.

ISSUE

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 PROCEDURE

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.

NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article.The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supercede this information with updates.The most recent information is available through Ford Motor Company's on-line technical resources.

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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:

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.

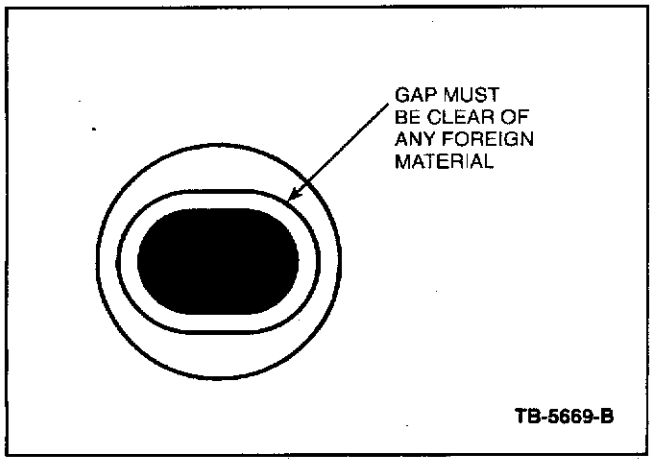

Figure 1 - Article 05-6-4

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 to ensure that the membrane gap is free of any dirt or contamination.
3. Using the New Generation Star (NGS) tester (up to 2004 MY), NGS+ (2005 MY) or WDS observe the following four parking aid module parameter identification displays (PIDs) for distance information:
   - LR_CNTD (NGS)/LRI_DIST (WDS): (Left Rear Center Sensor Distance To Obstacle)
   - RR_CNTD (NGS)/RRI_DIST (WDS): (Right Rear Center Sensor Distance To Obstacle)
   - LR_CNRD (NGS)/LRO_DIST (WDS): (Left Rear Corner Sensor Distance To Obstacle)
   - RR_CNRD (NGS)/RRO_DIST (WDS): (Right Rear Corner Sensor Distance To Obstacle)

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 cm (NGS) or 100 inches (NGS+ and WDS).

   b. If a PID reading other than 255 or 100 displays, replace only the sensor that is out of specification. Refer to Workshop Manual Section 413-00 as needed for removal and installation procedures.

ACCESSING PIDS WITH NGS, SELECT:

- Vehicle Line
- Diagnostic Data Link
- PAM
- PID/Data Monitor And Record

- Select The Appropriate PIDS
- Start

ACCESSING PIDS WITH WDS, SELECT:

- Toolbox Icon
- Datalogger, Then Tick (Check Mark)
- Modules, Then Tick
- PAM, Then Tick
- Select The Appropriate PIDS, Then Tick

NOTE

FOR SOME VEHICLES, 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.

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

OPERATION	DESCRIPTION	TIME
050604A	2004-2005 F150, 2002-2005 Excursion, 2002 Expedition/Navigator, 2002-2005 F Super Duty, 2002-2003 Blackwood, 2005 Freestyle: Replace One Or More REAR Parking Aid Sensor(S) DOES NOT INCLUDE Bumper Cover Removal (Do Not Use With 12651D, 12651D8, P101)	0.7 Hr.
050604B	2003-2005 Aviator, 2002-2005 Explorer/Mountaineer: Replace One Or More REAR Parking Aid Sensor(S) INCLUDES Time For Bumper Cover Removal (Do Not Use With 12651D, 12651D8, P101)	0.9 Hr.
050604B	2004-2005 Monterey, 2004-2005 Freestar, 2002-2003 Windstar: Replace One Or More REAR Parking Aid Sensor(S) INCLUDES Time For Bumper Cover Removal (Do Not Use With 12651D, 12651D8, P101)	0.8 Hr.
050604B	2003-2005 Expedition: Replace One Or More REAR Parking Aid Sensor(S) INCLUDES Time For Bumper Cover Removal (Do Not Use With 12651D, 12651D8, P101)	1.3 Hrs.
050604C	2004-2005 Monterey, 2004-2005 Freestar, 2005 Montego, 2005 Ford Five Hundred: Replace One Or More FRONT Parking Aid Sensor(S) INCLUDES Time For Bumper Cover Removal (Do Not Use With 12651D, 12651D8, P101)	1.2 Hrs.
050604D	2003-2005 Escape, 2005 Mariner: Replace One Or Both INNER Parking Aid Sensor(S) DOES NOT INCLUDE Time For Bumper Cover Removal (Do Not Use With 12651D, 12651D8, P101)	0.5 Hr.
050604E	2003-2005 Escape, 2005 Mariner: Replace One Or Both OUTER Parking Aid Sensor(S) INCLUDES Time For Bumper Cover Removal (Do Not Use With 12651D, 12651D8, P101)	0.9 Hr.

050604F	Additional Time To Paint Sensors To Match Bumper Cover On The Following Vehicles: Aviator, Monterey, Five Hundred, Freestyle, Montego	1.0 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
15K859	42