TPMS Sensors on Ford Branded Vehicles

In the 2002 model year Ford introduced direct tire pressure monitoring systems (TPMS) and continued the rollout in the 2003 model year. Ford vehicles with the initial TPMS system were the Explorer, Expedition, Aviator, Navigator, and Mountaineer.

The initial system used TPMS sensors that can be triggered with a low frequency (LF) 125 kHz radio frequency (RF) signal or a magnet. The sensors have aluminum stems and are secured to the wheel using a valve stem nut torqued to a specific value, which varies depending on the vehicle. The TIPS or PST TPMS tools can trigger these sensors magnetically (magnet is built into the base of the tool) or using an LF signal. If triggering the sensors magnetically, confirmation of the sensor operation (i.e. radio frequency transmission) can be verified by placing the TPM tool in “Listen Mode”. This is also known as “RF Reception Mode”. In this mode the tool’s onboard RF receivers are activated and listen for an RF transmission from the sensors.

In the 2006 model year Ford introduced a banded style sensor. This sensor is banded or strapped to the center of the wheel 180° away from the valve stem. The banded style (a.k.a. rim mount) sensor is triggered using an LF 125 kHz RF signal. A magnet will not trigger these sensors. Ford completed the rollout of the banded sensor to their entire product line by the 2007 model year and the stem mounted, aluminum stemmed sensor was phased out during this period. Banded style sensors are shipped in OFF mode. To turn ON, mount the sensor and inflate the tire. Wait at least two minutes before triggering the sensor.
Beginning in 2009 Ford began using a rubber stemmed, two-piece stem mounted sensor design in some vehicles (see Table 1). These sensors snap into the valve stem opening, no nut is used to secure it. They are triggered using the same LF signal as the band mounted sensors. Snap-in sensors use a longer valve cap and can be recognized by the exposed brass shoulder just below the valve cap threads.

FORD RUBBER STEMMED, SNAP-IN SENSOR

To trigger the Ford banded style sensors we recommend a 3 step procedure:

1. Position the tire pressure monitor (TPM) tool at the proper position on the tire, that is, 180° away from the valve stem. Usage has shown that the most effective position is placing the round tip of the tool on the tread side of the tire.

POSITION TPMS TOOL

HERE               or               HERE (recommended)
2. Trigger the sensors using the tool in “Manual Selection Mode” by pressing and releasing the “Selection” button until the 1st and 3rd yellow LEDs are illuminated, then immediately pressing and releasing the “Activation” button. The Activation button must be pressed within 3 seconds or the tool will shut off in which case simply reselect and activate.

3. The bands can sometimes slip so the sensors may not always be precisely at 180° away from the valve stem. For this reason, if you are unable to trigger the sensor on the first attempt, don’t remove the TPM tool but slightly reposition it by changing the angle at which it is pointed at the tire and then attempt to trigger again in Manual Selection mode.

Banded sensors may be triggered in Hunt Mode by simply pressing the Activation button – the Selection button is not used. Hunt Mode will determine the correct triggering signal on behalf of the user, but may take up to two minutes on the first tire on a vehicle.

To trigger the rubber stemmed, snap-in sensors position the tip of the TPM tool on the tire side wall beside the valve stem then proceed to activate the tool in either the Manual Selection Mode (use same signal selection as banded sensors) or Hunt Mode.
**TABLE 1 – TPMS SENSOR TYPE IN FORD BRANDED VEHICLES**

<table>
<thead>
<tr>
<th>Model</th>
<th>Aluminum Stem Mount</th>
<th>Banded Electronically Triggered</th>
<th>Rubber Stemmed Snap-in Electronically Triggered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ford Crown Victoria</td>
<td>n/a</td>
<td>2008+</td>
<td></td>
</tr>
<tr>
<td>Ford Econoline</td>
<td>n/a</td>
<td>2008 – 2010</td>
<td>2010+</td>
</tr>
<tr>
<td><strong>2010 Ford Econoline may have either the snap-in or banded TPMS sensors depending on the application</strong></td>
<td></td>
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<tr>
<td>Ford Edge</td>
<td>n/a</td>
<td>2007+</td>
<td></td>
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<tr>
<td>Ford Escape</td>
<td>n/a</td>
<td>2006 – 2008</td>
<td>2009+</td>
</tr>
<tr>
<td>Ford Expedition</td>
<td>2003 - 2006</td>
<td>2007+</td>
<td></td>
</tr>
<tr>
<td>Ford Explorer</td>
<td>2002 - 2005</td>
<td>2006+</td>
<td></td>
</tr>
<tr>
<td>Ford Explorer Sportrac</td>
<td>n/a</td>
<td>2007+</td>
<td></td>
</tr>
<tr>
<td>Ford F-Series</td>
<td>n/a</td>
<td>2007 - 2008</td>
<td>2009+</td>
</tr>
<tr>
<td>Ford F-Series Heavy Duty</td>
<td>n/a</td>
<td>2007 - 2008</td>
<td>2009+</td>
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<tr>
<td>Ford Fiesta</td>
<td>n/a</td>
<td>n/a</td>
<td>2010</td>
</tr>
<tr>
<td>Ford Five Hundred</td>
<td>n/a</td>
<td>2008 – 2009</td>
<td>n/a</td>
</tr>
<tr>
<td>Ford Flex</td>
<td>n/a</td>
<td>2009+</td>
<td></td>
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<tr>
<td>Ford Freestar</td>
<td>n/a</td>
<td>2006 - 2007</td>
<td></td>
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<tr>
<td>Ford Freestyle</td>
<td>n/a</td>
<td>2008 - 2009</td>
<td></td>
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<tr>
<td>Ford Focus</td>
<td>n/a</td>
<td>2008+</td>
<td></td>
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<tr>
<td>Ford Fusion</td>
<td>n/a</td>
<td>2008 - 2009</td>
<td>2010+</td>
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<tr>
<td>Ford Mustang</td>
<td>n/a</td>
<td>2007 – 2009</td>
<td>2010+</td>
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<tr>
<td>Ford Ranger</td>
<td>n/a</td>
<td>2007+</td>
<td></td>
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<tr>
<td>Ford Super Duty</td>
<td>n/a</td>
<td>2008 - 2009</td>
<td>2010+</td>
</tr>
<tr>
<td>Ford Transit Connect</td>
<td>n/a</td>
<td>n/a</td>
<td>2010</td>
</tr>
<tr>
<td>Ford Taurus</td>
<td>n/a</td>
<td>2008 – 2009</td>
<td>2010+</td>
</tr>
<tr>
<td>Model</td>
<td>Aluminum Stem Mount</td>
<td>Banded Stemmed Magnetically Triggered</td>
<td>Rubber Stemmed Snap-in Electronically Triggered</td>
</tr>
<tr>
<td>------------------------</td>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Lincoln Aviator</td>
<td>2003 - 2005</td>
<td>n/a</td>
<td></td>
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<tr>
<td>Lincoln Mark LT</td>
<td>n/a</td>
<td>2007+</td>
<td></td>
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<tr>
<td>Lincoln MKS</td>
<td>n/a</td>
<td>2009+</td>
<td></td>
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<tr>
<td>Lincoln MKT</td>
<td>n/a</td>
<td>n/a</td>
<td>2010+</td>
</tr>
<tr>
<td>Lincoln MKX</td>
<td>n/a</td>
<td>2007+</td>
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<tr>
<td>Lincoln MKZ</td>
<td>n/a</td>
<td>2008 - 2009</td>
<td>2010+</td>
</tr>
<tr>
<td>Lincoln Navigator</td>
<td>2003 - 2006</td>
<td>2007+</td>
<td></td>
</tr>
<tr>
<td>Lincoln Town Car</td>
<td>n/a</td>
<td>2008+</td>
<td></td>
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<tr>
<td>Mercury Grand Marquis</td>
<td>n/a</td>
<td>2008+</td>
<td></td>
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<tr>
<td>Mercury Mariner</td>
<td>n/a</td>
<td>2006 – 2008</td>
<td>2009+</td>
</tr>
<tr>
<td>Mercury Milan</td>
<td>n/a</td>
<td>2008 - 2009</td>
<td>2010+</td>
</tr>
<tr>
<td>Mercury Montego</td>
<td>n/a</td>
<td>2008 – 2009</td>
<td>n/a</td>
</tr>
<tr>
<td>Mercury Monterey</td>
<td>n/a</td>
<td>2006 - 2007</td>
<td></td>
</tr>
<tr>
<td>(Monterey MY2004-05 indirect TPM systems were standard; direct, magnetically triggered systems offered as an option)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury Mountaineer</td>
<td>2002-2005</td>
<td>2006+</td>
<td></td>
</tr>
<tr>
<td>Mercury Sable</td>
<td>n/a</td>
<td>2008 – 2009</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Other vehicles with Banded Sensors**

Chevrolet Corvette      1987 - 1996
(uses 355 MHz frequency sensor; does not trigger using same LF signal as Ford banded sensors)

Mazda B-Series truck (manufactured by Ford) n/a 2007+

Mazda Tribute (manufactured by Ford) n/a 2006 – 2008 2009+
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