



GROUP
Trans/Driveline

MODEL
Sorento (BL)

NUMBER
019

DATE
November 2007

TECHNICAL SERVICE BULLETIN

SUBJECT:

SORENTO DRIVETRAIN CHATTER WITH TOD

There have been several reported conditions of drivetrain chatter due to incorrect tire size. The Torque On Demand (TOD) 4WD system utilizes two input speed sensors for the front and rear propeller shafts. When, due to uneven tire wear or incorrect tire size, the transfer case control module receives different inputs front versus rear, indicating tire slippage, the control module will increase the pulse width (duty cycle %) to the front differential axle through the transfer case. When this occurs without wheel slippage, chatter may occur and the front differential temperature increases. **Failure of the front differential due to incorrect tire size is not covered under warranty.**

To prevent premature failure and chatter of the front differential, ensure that tires are rotated regularly. To check allowable difference between tires, measure the tire circumference around the outside of the tire; **all four tires should be within 10mm (3/8 inch) of each other.** Refer to the tire size designation below for the correct replacement tire size. Always replace tires with the same size, load and speed ratings; never install tires with a smaller or larger size or lower speed rating. Tires of the same size designation are not always the same measured outside circumference.

Sorento Tire Replacement

Tire Size Designation:

A tire's sidewall is marked with a tire size designation. You will need this information when selecting replacement tires. The following explains what the letters and numbers in the tire size designation mean.

Correct tire size: Refer to placard located on driver's door jamb.

Example used in this TSB is **P245/70R16 106H**

P = Applicable vehicle type (tires marked with the 'P' are intended for use on passenger cars or light trucks.

245 = Tire width in millimeters

70 = Aspect ratio. (The tire's section height as a percentage of its width.)

R = Tire construction code (Radial).

16 = Rim diameter in inches.

106 = Load index, a numerical code associated with the maximum load the tire can carry.

H = Speed rating symbol. See the speed-rating chart in this TSB for additional information.

Do not install tires lower than this speed-rating.

File Under: Transmission/Driveline

Circulate To: **General Manager** **Service Manager** **Parts Manager**
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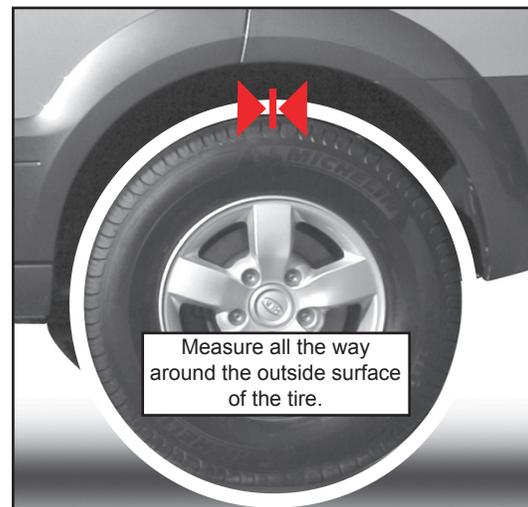
SUBJECT:**SORENTO DRIVETRAIN CHATTER WITH TOD****Tire Speed Ratings:**

The chart below shows some of the different speed ratings currently being used for passenger car and light truck tires. The speed-rating symbol is part of the tire size designation on the sidewall of the tire. This symbol corresponds to the tire's designed maximum safe operating speed.

Speed Rating Symbol	Maximum Speed
S	112 MPH (180 km/h)
T	118 MPH (190 km/h)
H	130 MPH (210 km/h)
V	149 MPH (240 km/h)
Z	Above 149 MPH (240 km/h)

Measuring Tire Circumference:

1. Using a lift, raise the vehicle until all four wheels are off the ground.
2. Using a piece of rope or a non-metallic measuring tape, measure all the way around the outside surface of the tire as shown in the image.
3. If the difference between measurements is more than 10mm (3/8 inch), tires will require replacement.

***NOTICE**

DO NOT use a metallic tape measure when measuring tire circumference.

