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Approved By: 

Accepted By: 

Acceptance Date: 3/28/2007
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Final Report of FMVSS 138 Compliance Testing of 2006 Nissan Titan XE 4X2 King Cab Truck, NHTSA No. C65201

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Washington, DC 20590

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Final Test Report
June 22 through June 30, 2006

NVS-220

15. Supplementary Notes

16. Abstract
Compliance tests were conducted on the subject 2006 Nissan Titan XE 4X2 king cab truck in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-138-02 for the determination of FMVSS 138 compliance. Test failures identified were as follows: NONE.

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Safety Engineering
FMVSS 138

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<td>65</td>
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</tbody>
</table>
SECTION 1
INTRODUCTION

1.1 PURPOSE OF COMPLIANCE TEST

A 2006 Nissan Titan XE 4X2 king cab truck was tested to determine if the vehicle was in compliance with the requirements of the standard. All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure TP-138-02 dated September 14, 2005.

1.2 TEST VEHICLE

The test vehicle was a 2006 Nissan Titan XE 4X2 king cab truck. Nomenclatures applicable to the test vehicle are:

A. Vehicle Identification Number: 1N6BA06A86N502625

B. NHTSA No.: C65201

C. Manufacturer: Nissan Motor Company, Ltd.

D. Manufacture Date: 08/2005

1.3 TEST DATE

The test vehicle was tested during the time period June 22 through June 30, 2006.
SECTION 2
TEST PROCEDURE AND SUMMARY OF RESULTS

2.1 TEST PROCEDURE

Prior to test, the test vehicle was inspected for completeness, systems operability, and appropriate fuel and liquid levels, i.e. oil and coolant. The vehicle was then photographically documented as required by the NHTSA/OVSC Test Procedure. Tire sidewall information was recorded. The owner’s manual was reviewed, and pertinent tire and TPMS information were noted. Telltale’s symbol, color, location and lamp function were checked.

Subsequent events included weighing the vehicle to establish the Unloaded Vehicle Weight (UVW) and the distribution of weight on the front and rear axles and each wheel position. The vehicle was loaded to its lightly loaded vehicle weight (LLVW) for seven tire deflation scenarios. This LLVW included the weights of driver, one passenger, and test equipment. The vehicle was loaded to its gross vehicle weight rating (GVWR) for three tire deflation scenarios. The gross vehicle weight included the weights of driver, one passenger, equipment, ballast in the cab, and ballast in the truck bed. For determination of the telltale warning activation pressure, the recommended cold inflation pressure was identified from the certification label since the vehicle was built before the FMVSS No. 110 vehicle placard requirement was effective.

The vehicle was instrumented with a Racelogic VBOX III 100 Hz GPS Data Logger and brake pedal trigger. The VBOX uses GPS to measure vehicle speed, time, and distance. Test data were recorded to a compact flash card. During the test, a stopwatch was used to determine the approximate “cumulative driving time” during each test phase. Cumulative driving time does not include time during the brake application or when the vehicle speed was below 50 km/h or above 100 km/h. Upon completion of a tire deflation test, graph(s) were generated by VBOX software showing vehicle speed versus time during the test procedure calibration phase and detection phase. The graphs furnish a second-by-second analysis of each test phase. The cumulative driving time for each test was calculated by post processing the VBOX graph data and is reported in Section 3 (Test Data) as ‘Total Driving Time’.

The tire deflation test consisted of four parts:
1. Calibration phase: Tires were set at vehicle certification label cold inflation pressure and the vehicle was driven for at least twenty minutes of cumulative driving time between 50-100 km/h.
2. Detection phase: Immediately after calibration phase, the selected tire(s) were deflated to seven kPa (one psi) below the Telltale Warning Activation Pressure. After one minute, the inflation pressure(s) of only deflated tire(s) were rechecked and adjusted if necessary. Vehicle was started and driven (if necessary) between 50 -100 km/h until low tire pressure telltale illuminated.
3. Cool down phase: Vehicle was parked in test facility garage. Tires were allowed to cool down for one hour, or until all tires excluding deflated tire(s) were within seven kPa (one psi) of vehicle certification label cold inflation pressure. After cool down, the vehicle was started and the low tire pressure telltale was checked for re-illumination.

4. Extinguishment phase: Tires were adjusted to vehicle certification label cold inflation pressure. The vehicle was driven (if necessary) until the telltale extinguished.

An indicant malfunction detection test was performed with the vehicle loaded to its GVWR. A malfunction was simulated by placing the full size spare tire (with no TPMS sensor) on the left front wheel position. The vehicle was driven more than 20 minutes of cumulative driving time between 50-100 km/h.

2.2 SUMMARY OF RESULTS

Seven tire deflation scenarios were performed on the test vehicle at LLVW: A. left front; B. left rear; C. right front; D. right rear; E. left rear and right rear; F. left front, left rear, and right front; and G. all four tires. Three tire deflation scenarios were performed on the test vehicle at GVWR: H. left front; I. right rear; and J. left rear and right front.

The data indicate compliance of the test vehicle’s tire pressure monitoring system for the ten tire deflation scenarios tested.

One indicant malfunction detection test was performed on the test vehicle at GVWR. The vehicle’s combination low tire pressure warning and malfunction telltale did not indicate a malfunction. The telltale did not flash and illuminate per the standard's requirements effective September 1, 2007.
SECTION 3
TEST DATA
**FMVSS No. 138 – TEST DATA SUMMARY**

**TEST DATES:** June 22 - 30, 2006  **LAB:** U. S. DOT San Angelo Test Facility (SATF)

**CONTRACT:** N/A  **VEHICLE NHTSA NUMBER:** C65201

**VIN:** 1N6BA06A86N502625  **CERTIFICATION LABEL BUILD DATE:** 08/2005

<table>
<thead>
<tr>
<th>REQUIREMENTS</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOW TIRE PRESSURE WARNING TELLTALE</strong></td>
<td></td>
</tr>
<tr>
<td>S138: S4.3.1 (a), (b); S4.3.3 (a), (b)</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>PASS</td>
</tr>
<tr>
<td>Symbol and color</td>
<td>PASS</td>
</tr>
<tr>
<td>Check of lamp function</td>
<td>PASS</td>
</tr>
<tr>
<td><strong>MALFUNCTION TELLTALE</strong></td>
<td></td>
</tr>
<tr>
<td>S138: S4.4 (b) or (c)</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>N/A</td>
</tr>
<tr>
<td>Symbol and color</td>
<td>N/A</td>
</tr>
<tr>
<td>Check of lamp function</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>LOW TIRE PRESSURE WARNING - OPERATIONAL PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td>S138: S4.2, S4.3.1 (c), S4.3.2</td>
<td></td>
</tr>
<tr>
<td>Telltale illumination</td>
<td>PASS</td>
</tr>
<tr>
<td><strong>MALFUNCTION INDICATOR – OPERATIONAL PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td>S138: S4.4 (a)</td>
<td></td>
</tr>
<tr>
<td>Telltale illumination</td>
<td>INDICANT TEST ONLY</td>
</tr>
<tr>
<td>TPMS WRITTEN INSTRUCTIONS</td>
<td></td>
</tr>
<tr>
<td>S138: S4.5</td>
<td></td>
</tr>
<tr>
<td>Image of telltales</td>
<td>PASS</td>
</tr>
<tr>
<td>Verbatim statements</td>
<td>PASS</td>
</tr>
</tbody>
</table>

**REMARKS:** The FMVSS 138 malfunction performance requirements do not become effective until September 1, 2007. The test vehicle is equipped with a malfunction capability that would not correctly meet the future requirements.
DATA SHEET 1 (Sheet 1 of 3)
TEST PREPARATION INFORMATION

TEST DATE: June 22, 2006
LAB: U. S. DOT San Angelo Test Facility

CONTRACT: N/A
VEHICLE NHTSA NUMBER: C65201

VIN: 1N6BA06A86N502625
CERTIFICATION LABEL BUILD DATE: 08/2005

MY/MAKE/MODEL/BODY STYLE: 2006 Nissan Titan XE 4X2 king cab truck

ENGINE: 5.6 L V-8

TIRE CONDITIONING:
( X ) Tires used more than 100 km. Actual odometer reading: 204 km (127 mi)

VEHICLE ALIGNMENT AND WHEEL BALANCING:
Alignment checked: ( ) Front ( ) Rear ( X ) COTR waived
Wheels balanced: ( ) Front ( ) Rear ( X ) COTR waived

TPMS IDENTIFICATION:
TPMS SENSOR MAKE/MODEL: Schrader PN 70503161 [5]
TPMS TUNER MAKE/MODEL: Calsonic Kansei PN 7-C13000A04000

TPMS TYPE: ( X ) Direct ( ) Indirect ( ) Other

TPMS MALFUNCTION INDICATOR TYPE:
( ) None ( ) Dedicated Telltale ( X ) Combination low tire pressure/malfunction telltale

Does TPMS require execution of a learning/calibration driving phase? ( )YES ( X )NO
Does TPMS have a manual reset control? ( )YES ( X )NO
DATA SHEET 1 (Sheet 2 of 3)
TEST PREPARATION INFORMATION

DESIGNATED TIRE SIZE(S) FROM VEHICLE LABELING AND OWNER’S MANUAL:

<table>
<thead>
<tr>
<th>Axle</th>
<th>Tire Size</th>
<th>Recommended Cold Inflation Pressure</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>P245/75R17</td>
<td>240 kPa (35 psi)</td>
<td>Certification label</td>
</tr>
<tr>
<td>Rear</td>
<td>P245/75R17</td>
<td>240 kPa (35 psi)</td>
<td>Certification label</td>
</tr>
<tr>
<td>Spare</td>
<td>P245/75R17</td>
<td>240 kPa (35 psi)</td>
<td>Owner’s manual</td>
</tr>
</tbody>
</table>

INSTALLED TIRE DATA (Use diagrams as reference):

Front and Rear Axles

- Tire Size (ex. P225/65R15 89H): P245/75R17 110S
- Manufacturer/Tire Name: Bridgestone Dueler A/T
- Sidewall Max Load Rating: 1,060 kg (2,337 lbs)
- Max Inflation Pressure: 300 kPa (44 psi)
- Sidewall Construction (number of plies and ply material): 2 plies polyester
- Tread Construction (number of plies and ply material): 5 plies - 2 polyester, 2 steel, 1 nylon

Do all installed tires have the same sidewall information? ( X )YES (   )NO

Are all installed tires the same as designated by the vehicle manufacturer? ( X )YES (   )NO
## Worksheet for Determining FMVSS No. 138 Telltale Warning Activation Pressure for Tires Installed on Vehicle

<table>
<thead>
<tr>
<th>Part</th>
<th>Front Axle</th>
<th>Rear Axle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(A)</strong> Recommended Inflation Pressure ( x \times 0.75 )</td>
<td>240 kPa ( \times 0.75 = 180.0 ) kPa</td>
<td>240 kPa ( \times 0.75 = 180.0 ) kPa</td>
</tr>
<tr>
<td><strong>(B)</strong> Information from FMVSS 138 Table 1 below, Tire types are:</td>
<td>(X) P-metric-Standard load Load Range ( ) C, ( ) D, or ( ) E</td>
<td>(X) P-metric-Standard load Load Range ( ) C, ( ) D, or ( ) E</td>
</tr>
<tr>
<td>Inflation pressure</td>
<td>(X) Maximum or ( ) Rated 300 kPa (44 psi)</td>
<td>(X) Maximum or ( ) Rated 300 kPa (44 psi)</td>
</tr>
<tr>
<td>Minimum activation pressures from Table 1</td>
<td>140 kPa (20 psi)</td>
<td>140 kPa (20 psi)</td>
</tr>
<tr>
<td><strong>(C)</strong> Telltale Warning Activation Pressure is the higher of Part (A) or (B)</td>
<td>180.0 kPa (26.1 psi)</td>
<td>180.0 kPa (26.1 psi)</td>
</tr>
<tr>
<td><strong>(D)</strong> Pressure at which to deflate tire(s) = (C) – 7 kPa</td>
<td>173.0 kPa (25.1 psi)</td>
<td>173.0 kPa (25.1 psi)</td>
</tr>
</tbody>
</table>

### FMVSS 138 Table 1 - Low Tire Pressure Warning Telltale - Minimum Activation Pressure

<table>
<thead>
<tr>
<th>Tire Type</th>
<th>Maximum or Rated Inflation Pressure</th>
<th>Minimum Activation Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(kPa)</td>
<td>(psi)</td>
</tr>
<tr>
<td>P-metric -- Standard Load</td>
<td>240, 300, or 350</td>
<td>35, 44, or 51</td>
</tr>
<tr>
<td>P-metric - Extra Load</td>
<td>280 or 340</td>
<td>41 or 49</td>
</tr>
<tr>
<td>Load Range C</td>
<td>350</td>
<td>51</td>
</tr>
<tr>
<td>Load Range D</td>
<td>450</td>
<td>65</td>
</tr>
<tr>
<td>Load Range E</td>
<td>550</td>
<td>80</td>
</tr>
</tbody>
</table>

**REMARKS:** None

**RECORDED BY:** David K. Banks  
**DATE:** June 22, 2006

**APPROVED BY:** Kenneth H. Yates
DATA SHEET 2 (Sheet 1 of 2)
LOW TIRE PRESSURE WARNING AND MALFUNCTION TELLTALE

TEST DATE: June 22, 2006 LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

TPMS Low Tire Pressure Warning Telltale

TPMS Low Tire Pressure Warning Telltale Location: Lower left instrument panel below tachometer
Telltale is mounted inside the occupant compartment in front of and in clear view of the driver? (X) YES ( ) NO (fail)
Telltale is part of a reconfigurable display? ( ) YES (X) NO
Identify Telltale Symbol Used (check box above figure).

None

TPMS Malfunction Telltale

( ) None ( ) Dedicated stand-alone (X) Combined with low tire pressure telltale
Malfunction Telltale is part of a reconfigurable display? ( ) YES (X) NO
DATA SHEET 2 (Sheet 2 of 2)
LOW TIRE PRESSURE WARNING AND MALFUNCTION TELLTALE

Check Telltale Lamp Functions:
LOW TIRE PRESSURE TELLTALE AND MALFUNCTION INDICATION, IF COMBINED

Identify position of ignition locking system when telltale illuminates.

☐ OFF/LOCK ☐ Between OFF/LOCK and ON/RUN

☒ ON/RUN ☐ Between OFF/RUN and START

Is the telltale yellow in color? ( ☒ YES ( ☐ NO (fail)

Time telltale remains illuminated 1.32 seconds

Starter Interlocks:
Does vehicle have any starter, transmission or other interlocks that affect operation of the telltale lamp check function? ( ☐ YES ( ☒ NO

TEST RESULTS
Low Tire Pressure Warning Telltale (PASS/FAIL) ☒ PASS

REMARKS: None

RECORDED BY: David K. Banks DATE: June 22, 2006

APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 1 of 33)
TPMS OPERATIONAL PERFORMANCE

TEST DATE: June 22, 2006
LAB: U.S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 8:15 am

Ambient Temperature: Start: 26.6°C (79.9°F)

Odometer Reading: Start: 204.4 km (127.0 mi)

Fuel Level: Start: Full

Weather Conditions: Clear, light winds

Time vehicle has remained with engine off and tires shielded from direct sunlight:
(1 hour minimum): overnight (inside the SATF garage)

PRE-TEST TIRE INFLATION PRESSURES AND TIRE/SURFACE TEMPERATURES:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test cold measurements after ambient soak: Inflation Pressure</td>
<td>236.5 kPa (34.3 psi)</td>
<td>254.3 kPa (36.9 psi)</td>
<td>252.6 kPa (36.6 psi)</td>
<td>256.4 kPa (37.2 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>26.5°C (79.7°F)</td>
<td>26.8°C (80.2°F)</td>
<td>26.6°C (79.9°F)</td>
<td>26.6°C (79.9°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>28.2°C (82.8°F)</td>
<td>28.6°C (83.5°F)</td>
<td>28.2°C (82.8°F)</td>
<td>28.2°C (82.8°F)</td>
</tr>
<tr>
<td>Adjusted pre-test inflation pressure to recommended cold pressure</td>
<td>240.0 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
</tr>
</tbody>
</table>
VEHICLE WEIGHT:

Vehicle Ratings from Certification Label:

GVWR: 2,913 kg (6,422 lbs)
GAWR (front): 1,532 kg (3,377 lbs)
GAWR (rear): 1,724 kg (3,800 lbs)

Vehicle Capacity Weight:

Vehicle Capacity Weight* 679 kg (1,497 lbs)

Measured Unloaded Vehicle Weight:

<table>
<thead>
<tr>
<th>Location</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF</td>
<td>617 kg</td>
</tr>
<tr>
<td>RF</td>
<td>622 kg</td>
</tr>
<tr>
<td>Front</td>
<td>1,239 kg</td>
</tr>
<tr>
<td>Axle</td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>516 kg</td>
</tr>
<tr>
<td>RR</td>
<td>488 kg</td>
</tr>
<tr>
<td>Rear</td>
<td>1,004 kg</td>
</tr>
</tbody>
</table>

Total Vehicle 2,243 kg (4,945 lbs)

Measured Test Weights:

<table>
<thead>
<tr>
<th>Location</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF</td>
<td>668 kg</td>
</tr>
<tr>
<td>RF</td>
<td>676 kg</td>
</tr>
<tr>
<td>Front</td>
<td>1,344 kg</td>
</tr>
<tr>
<td>Axle</td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>554 kg</td>
</tr>
<tr>
<td>RR</td>
<td>524 kg</td>
</tr>
<tr>
<td>Rear</td>
<td>1,078 kg</td>
</tr>
</tbody>
</table>

Total Vehicle 2,422 kg (5,341 lbs) (not greater than GVWR)

Note: Scenarios A through G - this Total Vehicle Weight measures the vehicle loaded to LLVW including 180 kg (396 lbs) of passengers and equipment. The Unloaded Vehicle Weight includes the weight of the trailer hitch, which is not standard equipment.

* From placard affixed to similar vehicle built after September 1, 2005.
DATA SHEET 3 (Sheet 3 of 33)
TPMS OPERATIONAL PERFORMANCE

TEST DATE: June 28, 2006  LAB: U.S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 2:55 pm

Ambient Temperature: Start: 31.2°C (88.1°F)

Odometer Reading: Start: 425.7 km (264.5 mi)

Fuel Level: Start: Full

PRE-TEST TIRE INFLATION PRESSURES:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation Pressure</td>
<td>240.1 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
</tr>
</tbody>
</table>

VEHICLE WEIGHT:

Vehicle Ratings from Certification Label:

GVWR: 2,913 kg (6,422 lbs)

GAWR (front): 1,532 kg (3,377 lbs)

GAWR (rear): 1,724 kg (3,800 lbs)

Measured Unloaded Vehicle Weight:

<table>
<thead>
<tr>
<th></th>
<th>LF</th>
<th>617 kg (1,360 lbs)</th>
<th>LR</th>
<th>516 kg (1,138 lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>RF</td>
<td>622 kg (1,371 lbs)</td>
<td>RR</td>
<td>488 kg (1,076 lbs)</td>
</tr>
<tr>
<td>Axle</td>
<td></td>
<td>1,239 kg (2,731 lbs)</td>
<td>Rear</td>
<td>1,004 kg (2,214 lbs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Vehicle</td>
<td>2,243 kg (4,945 lbs)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Measured Test Weights: ( ) LLVW (+50, -0 kg)  (X) GVWR (+0, -50 kg)

<table>
<thead>
<tr>
<th></th>
<th>LF</th>
<th>706 kg (1,557 lbs)</th>
<th>LR</th>
<th>748 kg (1,648 lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>RF</td>
<td>731 kg (1,611 lbs)</td>
<td>RR</td>
<td>727 kg (1,602 lbs)</td>
</tr>
<tr>
<td>Axle</td>
<td></td>
<td>1,437 kg (3,168 lbs)</td>
<td>Rear</td>
<td>1,475 kg (3,250 lbs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(≤ GAWR)</td>
<td></td>
<td>(≤ GAWR)</td>
</tr>
<tr>
<td></td>
<td>Total Vehicle</td>
<td>2,912 kg (6,418 lbs)</td>
<td></td>
<td>(not greater than GVWR)</td>
</tr>
</tbody>
</table>

Note: Scenarios H through K - this Total Vehicle Weight measures the vehicle loaded to GVWR including 669 kg (1,473 lbs) of passengers, equipment, and ballast. The Unloaded Vehicle Weight includes the weight of the trailer hitch, which is not standard equipment.
DATA SHEET 3 (Sheet 4 of 33)
TPMS OPERATIONAL PERFORMANCE

SCENARIO A - Left Front Tire Deflation at LLVW

Date: Start: June 22, 2006
Time: Start: 8:43 am

Odometer Reading: Start: 204.4 km (127.0 mi)

Note: See Data Sheet 3 (Sheet 2 of 33) for Test Weight.

TIRE INFLATION PRESSURES AND TIRE/ROADWAY TEMPERATURES
BEFORE CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After loading vehicle to lightly loaded vehicle weight or GVWR, positioning vehicle at selected test start point, and vehicle cool down period.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature:</td>
<td>26.6°C (79.9°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle cool down period:</td>
<td>overnight</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inflation Pressure</th>
<th>240.0 kPa (34.8 psi)</th>
<th>240.0 kPa (34.8 psi)</th>
<th>240.0 kPa (34.8 psi)</th>
<th>240.0 kPa (34.8 psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire Sidewall Temp</td>
<td>26.5°C (79.7°F)</td>
<td>26.8°C (80.2°F)</td>
<td>26.6°C (79.9°F)</td>
<td>26.6°C (79.9°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>28.2°C (82.8°F)</td>
<td>28.6°C (83.5°F)</td>
<td>28.2°C (82.8°F)</td>
<td>28.2°C (82.8°F)</td>
</tr>
</tbody>
</table>

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:
Starting point: San Angelo Test Facility shop Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:05 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Driving in opposite direction:
Starting point: Brodnax Road / Highway 87 Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:17 minutes (stopwatch time) 14.8 km (9.2 mi) distance

Max speed: 92.4 km/hr (57.4 mph)

Total Driving Time: 20:28 minutes (V-Box time)
DATA SHEET 3 (Sheet 5 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO A - Left Front Tire Deflation at LLVW

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire (kPa/psi)</th>
<th>LR Tire (kPa/psi)</th>
<th>RR Tire (kPa/psi)</th>
<th>RF Tire (kPa/psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped, engine off; Inflation Pressure</td>
<td>256.6/37.2</td>
<td>253.6/36.8</td>
<td>255.5/37.1</td>
<td>256.8/37.2</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>38.0°C/100.4°F</td>
<td>36.2°C/97.2°F</td>
<td>36.2°C/97.2°F</td>
<td>36.0°C/96.8°F</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>29.8°C/85.6°F</td>
<td>30.4°C/86.7°F</td>
<td>30.8°C/87.4°F</td>
<td>29.8°C/85.6°F</td>
</tr>
</tbody>
</table>

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire (kPa/psi)</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td>173.2/25.1</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: San Angelo Test Facility shop  Direction: south

Did the telltale illuminate?  ( X )YES  ( )NO

Time and Distance to Illuminate:

Max speed: 60.1 km/hr (37.3 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES:  ( X )YES  ( )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated?  ( )YES  ( X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position?  ( X )YES  ( )NO (fail)
DATA SHEET 3 (Sheet 6 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO A - Left Front Tire Deflation at LLVW

Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position?  ( X )YES  (   )NO (fail)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELLTALE ILLUMINATION:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature:</td>
<td>28.8°C (83.8°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle cool down period:</td>
<td>65 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>157.4 kPa (22.8 psi)</td>
<td>243.3 kPa (35.3 psi)</td>
<td>243.9 kPa (35.4 psi)</td>
<td>245.6 kPa (35.6 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>29.8°C (85.6°F)</td>
<td>29.8°C (85.6°F)</td>
<td>30.2°C (86.4°F)</td>
<td>29.8°C (85.6°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>28.4°C (83.1°F)</td>
<td>29.2°C (84.6°F)</td>
<td>29.6°C (85.3°F)</td>
<td>28.8°C (83.8°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position?  ( X )YES  (   )NO (fail)

TELLTALE EXTINGUISHMENT:

RE-ADJUSTED TIRE INFLATION PRESSURES:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Re-adjusted Inflation Pressure:</td>
<td>240.1 kPa (34.8 psi)</td>
<td>243.3 kPa (35.3 psi)</td>
<td>243.9 kPa (35.4 psi)</td>
<td>245.6 kPa (35.6 psi)</td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale?  ( X )YES  (   )NO

Driving direction:
Starting point: San Angelo Test Facility shop  Direction: south

Time and Distance to Extinguish:
1:18 minutes (stopwatch time)  0.5 km (0.3 mi) distance

TEST RESULTS

TPMS Performance Test Results (PASS/FAIL)  PASS
Left front tire was deflated at LLVW.

REMARKS: None

RECORDED BY: David K. Banks  DATE: June 22, 2006
APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 7 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO B – Left Rear Tire Deflation at LLVW

TEST DATE: June 22, 2006 LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 10:49 am

Odometer Reading: Start: 236.9 km (147.2 mi)

Note: See Data Sheet 3 (Sheet 2 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:
Starting point: San Angelo Test Facility shop Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:08 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Driving in opposite direction:
Starting point: Brodnax Road / Highway 87 Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:28 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Max speed: 96.4 km/hr (59.9 mph)
Total Driving Time: 20:27 minutes (V-Box time)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped, engine off; Inflation Pressure</td>
<td>252.0 kPa (36.5 psi)</td>
<td>257.8 kPa (37.4 psi)</td>
<td>260.3 kPa (37.8 psi)</td>
<td>261.5 kPa (37.9 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>42.4°C (108.3°F)</td>
<td>39.6°C (103.3°F)</td>
<td>39.6°C (103.3°F)</td>
<td>41.2°C (106.2°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>30.4°C (86.7°F)</td>
<td>30.4°C (86.7°F)</td>
<td>31.4°C (88.5°F)</td>
<td>30.6°C (87.1°F)</td>
</tr>
</tbody>
</table>
SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFlated Tire(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td>N/A</td>
<td>173.0 kPa (25.1 psi)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: San Angelo Test Facility shop
Direction: south

Did the telltale illuminate? ( X )YES ( )NO

Time and Distance to Illuminate:

29 seconds (stopwatch time) 0.3 km (0.2 mi) distance

Max speed: 37.1 km/hr (23.1 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES: ( X )YES ( )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated? ( )YES ( X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES ( )NO (fail)
DATA SHEET 3 (Sheet 9 of 33)                     
TPMS OPERATIONAL PERFORMANCE                     
SCENARIO B – Left Rear Tire Deflation at LLVW

Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position?      ( X )YES    (   )NO (fail)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELTTALE ILLUMINATION:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature: 31.3°C (88.3°F)</td>
<td>Vehicle cool down period: 85 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>237.8 kPa (34.5 psi)</td>
<td>166.1 kPa (24.1 psi)</td>
<td>246.4 kPa (35.7 psi)</td>
<td>246.9 kPa (35.8 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>32.0°C (89.6°F)</td>
<td>33.6°C (92.5°F)</td>
<td>33.2°C (91.8°F)</td>
<td>32.8°C (91.0°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>29.9°C (85.8°F)</td>
<td>31.8°C (89.2°F)</td>
<td>31.2°C (88.2°F)</td>
<td>30.2°C (86.4°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position?      ( X )YES    (   )NO (fail)

TELLTALE EXTINGUISHMENT: 
RE-ADJUSTED TIRE INFLATION PRESSURES:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period; Re-adjusted Inflation Pressure:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Re-adjusted Inflation Pressure: 241.0 kPa (35.0 psi)</td>
<td>240.1 kPa (34.8 psi)</td>
<td>246.4 kPa (35.7 psi)</td>
<td>240.1 kPa (34.8 psi)</td>
<td></td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale?      ( X )YES    (   )NO

Driving direction:
Starting point: San Angelo Test Facility shop     Direction: south

Time and Distance to Extinguish:
24 seconds (stopwatch time) 0.3 km (0.2 mi) distance

TEST RESULTS

TPMS Performance Test Results (PASS/FAIL)          PASS
Left rear tire was deflated at LLVW.

REMARKS: None

RECORDED BY: David K. Banks       DATE: June 22, 2006

APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 10 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO C – Right Front Tire Deflation at LLVW

TEST DATE: June 22, 2006 LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 1:16 pm
Odometer Reading: Start: 267.8 km (166.4 mi)

Note: See Data Sheet 3 (Sheet 2 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:
Starting point: San Angelo Test Facility shop Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:06 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Driving in opposite direction:
Starting point: Brodnax Road / Highway 87 Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:14 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Max speed: 85.0 km/hr (52.8 mph)
Total Driving Time: 20:25 minutes (V-Box time)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped, engine off; Inflation Pressure</td>
<td>257.2 kPa</td>
<td>255.5 kPa</td>
<td>262.8 kPa</td>
<td>257.4 kPa</td>
</tr>
<tr>
<td></td>
<td>(37.3 psi)</td>
<td>(37.1 psi)</td>
<td>(38.1 psi)</td>
<td>(37.3 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>43.9°C</td>
<td>43.6°C</td>
<td>43.2°C</td>
<td>43.4°C</td>
</tr>
<tr>
<td></td>
<td>(111.0°F)</td>
<td>(110.5°F)</td>
<td>(109.8°F)</td>
<td>(110.1°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>31.6°C</td>
<td>33.4°C</td>
<td>33.4°C</td>
<td>31.4°C</td>
</tr>
<tr>
<td></td>
<td>(88.9°F)</td>
<td>(92.1°F)</td>
<td>(92.1°F)</td>
<td>(88.5°F)</td>
</tr>
</tbody>
</table>
SCENARIO C – Right Front Tire Deflation at LLVW

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(   )LF (   )LR (   )RR (X )RF</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>173.0 kPa</td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td></td>
<td></td>
<td></td>
<td>(25.1 psi)</td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: San Angelo Test Facility shop Direction: south

Did the telltale illuminate? (X )YES (   )NO

Time and Distance to Illuminate:

54 seconds (stopwatch time) 0.6 km (0.4 mi) distance

Max speed: 44.9 km/hr (27.9 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES: (X )YES (   )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated? (   )YES (X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? (X )YES (   )NO (fail)
Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? (X) YES ( ) NO (fail)

**TPMS OPERATIONAL PERFORMANCE**

**SCENARIO C – Right Front Tire Deflation at LLVW**

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELTTALE ILLUMINATION:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature:</td>
<td>33.9°C (93.0°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle cool down period:</td>
<td>84 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>242.9 kPa (35.2 psi)</td>
<td>242.6 kPa (35.2 psi)</td>
<td>249.0 kPa (36.1 psi)</td>
<td>165.3 kPa (24.0 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>35.0°C (95.0°F)</td>
<td>36.2°C (97.2°F)</td>
<td>36.6°C (97.9°F)</td>
<td>36.2°C (97.2°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>30.8°C (87.4°F)</td>
<td>32.2°C (90.0°F)</td>
<td>32.4°C (90.3°F)</td>
<td>31.4°C (88.5°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? (X) YES ( ) NO (fail)

**TELLTLE EXTINGUISHMENT:**

RE-ADJUSTED TIRE INFLATION PRESSURES:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period; Re-adjusted Inflation Pressure:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242.9 kPa (35.2 psi)</td>
<td>242.6 kPa (35.2 psi)</td>
<td>249.0 kPa (36.1 psi)</td>
<td>240.1 kPa (34.8 psi)</td>
<td></td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale? (X) YES ( ) NO

Driving direction:
Starting point: San Angelo Test Facility shop
Direction: south

Time and Distance to Extinguish:

1:32 minutes (stopwatch time) 0.6 km (0.4 mi) distance

**TEST RESULTS**

TPMS Performance Test Results (PASS/FAIL) PASS
Right front tire was deflated at LLVW.

**REMARKS:** None

RECORDED BY: David K. Banks DATE: June 22, 2006

APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 13 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO D – Right Rear Tire Deflation at LLVW

TEST DATE: June 26, 2006 LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 12:31 pm

Odometer Reading: Start: 299.7 km (186.2 mi)

Note: See Data Sheet 3 (Sheet 2 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:
Starting point: San Angelo Test Facility shop Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:00 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Driving in opposite direction:
Starting point: Brodnax Road / Highway 87 Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:10 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Max speed: 92.9 km/hr (57.7 mph)
Total Driving Time: 20:14 minutes (V-Box time)

TIRE INFLATION Pressures AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped, engine off: Inflation Pressure</td>
<td>254.9 kPa (37.0 psi)</td>
<td>252.4 kPa (36.6 psi)</td>
<td>252.6 kPa (36.6 psi)</td>
<td>254.1 kPa (36.9 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>39.2°C (102.6°F)</td>
<td>38.4°C (101.1°F)</td>
<td>36.2°C (97.2°F)</td>
<td>37.8°C (100.0°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>28.4°C (83.1°F)</td>
<td>29.4°C (84.9°F)</td>
<td>29.0°C (84.2°F)</td>
<td>28.2°C (82.8°F)</td>
</tr>
</tbody>
</table>
DATA SHEET 3 (Sheet 14 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO D – Right Rear Tire Deflation at LLVW

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td>( )LF  ( )LR  ( X )RR  ( )RF</td>
<td>N/A</td>
<td>N/A</td>
<td>173.0 kPa (25.1 psi)</td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: San Angelo Test Facility shop
Direction: south

Did the telltale illuminate? ( X )YES ( )NO

Time and Distance to Illuminate:

46 seconds (stopwatch time) 0.5 km (0.3 mi) distance
Max speed: 41.1 km/hr (25.5 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES: ( X )YES ( )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated? ( )YES ( X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES ( )NO (fail)
Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position?  

(X) YES ( ) NO (fail)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELTTLALE ILLUMINATION:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td>Inflation Pressure: 244.0 kPa (35.4 psi)</td>
<td>240.9 kPa (34.9 psi)</td>
<td>167.0 kPa (24.2 psi)</td>
<td>243.4 kPa (35.3 psi)</td>
</tr>
<tr>
<td></td>
<td>Tire Sidewall Temp: 30.8°C (87.4°F)</td>
<td>31.8°C (89.2°F)</td>
<td>31.1°C (88.2°F)</td>
<td>30.2°C (86.4°F)</td>
</tr>
<tr>
<td></td>
<td>San Angelo Test Facility Shop Floor Temp: 29.4°C (84.9°F)</td>
<td>30.0°C (86.0°F)</td>
<td>29.4°C (84.9°F)</td>
<td>29.4°C (84.9°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position?  

(X) YES ( ) NO (fail)

TELLTALE EXTINGUISHMENT:

RE-ADJUSTED TIRE INFLATION PRESSURES:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period;</td>
<td>Re-adjusted Inflation Pressure: 244.0 kPa (35.4 psi)</td>
<td>240.9 kPa (34.9 psi)</td>
<td>239.9 kPa (34.8 psi)</td>
<td>243.4 kPa (35.3 psi)</td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale?  

(X) YES ( ) NO

Driving direction:
Starting point: San Angelo Test Facility shop  Direction: south

Time and Distance to Extinguish:
30 seconds (stopwatch time)  0.2 km (0.1 mi) distance

TEST RESULTS

TPMS Performance Test Results (PASS/FAIL)  PASS
Right rear tire was deflated at LLVW.

REMARKS: None

RECORDED BY: David K. Banks  DATE: June 26, 2006
APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 16 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO E – Left Rear, Right Rear Tire Deflation at LLVW

TEST DATE: June 27, 2006
LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 8:28 am
Odometer Reading: Start: 331.0 km (205.7 mi)

Note: See Data Sheet 3 (Sheet 2 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:

Starting point: San Angelo Test Facility shop
Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:06 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Driving in opposite direction:

Starting point: Brodnax Road / Highway 87
Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:19 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Max speed: 87.6 km/hr (54.4 mph)
Total Driving Time: 20:29 minutes (V-Box time)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped,</td>
<td>257.6 kPa (37.4 psi)</td>
<td>256.9 kPa (37.3 psi)</td>
<td>258.3 kPa (37.5 psi)</td>
<td>256.0 kPa (37.1 psi)</td>
</tr>
<tr>
<td>engine off; Inflation Pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>32.8°C (91.0°F)</td>
<td>31.6°C (88.9°F)</td>
<td>30.6°C (87.1°F)</td>
<td>33.0°C (91.4°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>25.4°C (77.7°F)</td>
<td>25.9°C (78.6°F)</td>
<td>26.2°C (79.2°F)</td>
<td>25.2°C (77.4°F)</td>
</tr>
</tbody>
</table>
TPMS OPERATIONAL PERFORMANCE
SCENARIO E – Left Rear, Right Rear Tire Deflation at LLVW

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td>( )LF ( X )LR ( X )RR ( )RF</td>
<td>N/A</td>
<td>173.0 kPa (25.1 psi)</td>
<td>173.0 kPa (25.1 psi)</td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: San Angelo Test Facility shop
Direction: south

Did the telltale illuminate? ( X )YES ( )NO

Time and Distance to Illuminate:

17 seconds (stopwatch time) 0.2 km (0.1 mi) distance
Max speed: 42.7 km/hr (26.5 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES: ( X )YES ( )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated? ( )YES ( X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES ( )NO (fail)
Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? (X) YES ( ) NO (fail)

**TIRED INFLATION PRESSURES AND TEMPERATURES AFTER TELLTALE ILLUMINATION:**

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature:</td>
<td>25.6°C (78.1°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>245.5 kPa (35.6 psi)</td>
<td>163.5 kPa (23.7 psi)</td>
<td>166.7 kPa (24.2 psi)</td>
<td>245.4 kPa (35.6 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>27.2°C (81.0°F)</td>
<td>26.6°C (79.9°F)</td>
<td>26.4°C (79.5°F)</td>
<td>27.4°C (81.3°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>26.5°C (79.7°F)</td>
<td>26.5°C (79.7°F)</td>
<td>26.8°C (80.2°F)</td>
<td>26.7°C (80.1°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? (X) YES ( ) NO (fail)

**TELLTALE EXTINGUISHMENT:**

**RE-ADJUSTED TIRE INFLATION PRESSURES:**

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period; Re-adjusted Inflation Pressure:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>245.5 kPa (35.6 psi)</td>
<td>240.1 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td>245.4 kPa (35.6 psi)</td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale? (X) YES ( ) NO

Driving direction:
Starting point: San Angelo Test Facility shop  Direction: south

Time and Distance to Extinguish:
1:14 minutes (stopwatch time) 0.6 km (0.4 mi) distance

**TEST RESULTS**

TPMS Performance Test Results (PASS/FAIL)  PASS
Left rear and right rear tires were deflated at LLVW.

**REMARKS:** None

RECORDED BY: David K. Banks  DATE: June 27, 2006
APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 19 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO F – Left Front, Left Rear, Right Front Tire Deflation at LLVW

TEST DATE: June 27, 2006 LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 10:39 am

Odometer Reading: Start: 362.6 km (225.3 mi)

Note: See Data Sheet 3 (Sheet 2 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:

Starting point: San Angelo Test Facility shop Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:03 minutes (stopwatch time) 14.6 km (9.1 mi) distance

Driving in opposite direction:

Starting point: Brodnax Road / Highway 87 Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:12 minutes (stopwatch time) 14.8 km (9.2 mi) distance

Max speed: 87.0 km/hr (54.1 mph)

Total Driving Time: 20:16 minutes (V-Box time)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped,</td>
<td>257.2 kPa</td>
<td>255.1 kPa</td>
<td>253.6 kPa</td>
<td>257.1 kPa</td>
</tr>
<tr>
<td>engine off; Inflation Pressure</td>
<td>(37.3 psi)</td>
<td>(37.0 psi)</td>
<td>(36.8 psi)</td>
<td>(37.3 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>38.2°C</td>
<td>35.2°C</td>
<td>35.9°C</td>
<td>37.8°C</td>
</tr>
<tr>
<td></td>
<td>(100.8°F)</td>
<td>(95.4°F)</td>
<td>(96.6°F)</td>
<td>(100.0°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Temp</td>
<td>27.4°C</td>
<td>27.6°C</td>
<td>27.6°C</td>
<td>26.8°C</td>
</tr>
<tr>
<td></td>
<td>(81.3°F)</td>
<td>(81.7°F)</td>
<td>(81.7°F)</td>
<td>(80.2°F)</td>
</tr>
</tbody>
</table>
TPMS OPERATIONAL PERFORMANCE

SCENARIO F – Left Front, Left Rear, Right Front Tire Deflation at LLVW

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( X )LF ( X )LR ( )RR ( X )RF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>173.0 kPa</td>
<td>173.1 kPa</td>
<td>N/A</td>
<td>173.1 kPa</td>
</tr>
<tr>
<td>(25.1 psi)</td>
<td>(25.1 psi)</td>
<td>(25.1 psi)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: San Angelo Test Facility shop  Direction: south

Did the telltale illuminate? ( X )YES ( )NO

Time and Distance to Illuminate:

40 seconds (stopwatch time)  0.3 km (0.2 mi) distance

Max speed: 45.6 km/hr (28.3 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES: ( X )YES ( )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated? ( )YES ( X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES ( )NO (fail)
Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES (   )NO (fail)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELLETTA ILLUMINATION:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature:</td>
<td>28.3°C (82.9°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>166.0 kPa (24.1 psi)</td>
<td>163.8 kPa (23.8 psi)</td>
<td>229.1 kPa (33.2 psi)</td>
<td>162.4 kPa (23.6 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>29.8°C (85.6°F)</td>
<td>30.8°C (87.4°F)</td>
<td>30.4°C (86.7°F)</td>
<td>29.8°C (85.6°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>28.0°C (82.4°F)</td>
<td>28.8°C (83.8°F)</td>
<td>29.0°C (84.2°F)</td>
<td>28.4°C (83.1°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES (   )NO (fail)

TELLTALE EXTINGUISHMENT:

RE-ADJUSTED TIRE INFLATION PRESSURES:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Re-adjusted Inflation Pressure:</td>
<td>240.0 kPa (34.8 psi)</td>
<td>239.7 kPa (34.8 psi)</td>
<td>239.7 kPa (34.8 psi)</td>
<td>239.6 kPa (34.8 psi)</td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale? ( X )YES (   )NO

Driving direction:
Starting point: San Angelo Test Facility shop Direction: south

Time and Distance to Extinguish:
1:15 minutes (stopwatch time) 0.6 km (0.4 mi) distance

TEST RESULTS

TPMS Performance Test Results (PASS/FAIL) PASS
Left front, left rear, and right front tires were deflated at LLVW.

REMARKS: None

RECORDED BY: David K. Banks DATE: June 27, 2006
APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 22 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO G – Left Front, Left Rear, Right Rear, Right Front Tire Deflation at LLVW

TEST DATE: June 28, 2006 LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 8:04 am

Odometer Reading: Start: 394.6 km (245.2 mi)

Note: See Data Sheet 3 (Sheet 2 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:

Starting point: San Angelo Test Facility shop Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h
excluding time periods when brake pedal is applied.

10:05 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Driving in opposite direction:

Starting point: Brodnax Road / Highway 87 Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h
excluding time periods when brake pedal is applied.

10:22 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Max speed: 85.9 km/hr (53.4 mph)
Total Driving Time: 20:32 minutes (V-Box time)

<table>
<thead>
<tr>
<th>TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Execution Procedure</strong></td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Immediately, after vehicle is stopped, engine off; Inflation Pressure</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
</tr>
</tbody>
</table>
SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( X )LF ( X )LR ( X )RR ( X )RF</td>
<td>173.1 kPa (25.1 psi)</td>
<td>173.0 kPa (25.1 psi)</td>
<td>173.1 kPa (25.1 psi)</td>
<td>172.9 kPa (25.1 psi)</td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: San Angelo Test Facility shop Direction: south

Did the telltale illuminate? ( X )YES ( )NO

Time and Distance to Illuminate:

19 seconds (stopwatch time) 0.2 km (0.1 mi) distance

Max speed: 41.7 km/hr (25.9 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES: ( X )YES ( )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated? ( )YES ( X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES ( )NO
Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES ( )NO (fail)

**TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELTTALE ILLUMINATION:**

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>26.1°C (79.0°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle cool down period</td>
<td>80 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>169.2 kPa (24.5 psi)</td>
<td>169.8 kPa (24.6 psi)</td>
<td>168.4 kPa (24.4 psi)</td>
<td>168.1 kPa (24.4 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>27.4°C (81.3°F)</td>
<td>27.8°C (82.0°F)</td>
<td>27.9°C (82.2°F)</td>
<td>27.6°C (81.7°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>27.2°C (81.0°F)</td>
<td>27.6°C (81.7°F)</td>
<td>27.6°C (81.7°F)</td>
<td>27.2°C (81.0°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES ( )NO (fail)

**TELLTALE EXTINGUISHMENT:**

**RE-ADJUSTED TIRE INFLATION PRESSURES:**

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period; Re-adjusted Inflation Pressure:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>240.1 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td></td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale? ( X )YES ( )NO (fail)

Driving direction:
Starting point: San Angelo Test Facility shop  Direction: south

Time and Distance to Extinguish:
55 seconds (stopwatch time)  0.5 km (0.3 mi) distance

**TEST RESULTS**

TPMS Performance Test Results (PASS/FAIL)  PASS
Left front, left rear, right rear, and right front tires were deflated at LLVW.

**REMARKS:** None

**RECORDED BY:** David K. Banks  **DATE:** June 28, 2006

**APPROVED BY:** Kenneth H. Yates
DATA SHEET 3 (Sheet 25 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO H – Left Front Tire Deflation at GVWR

TEST DATE: June 29, 2006  LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 7:33 am

Odometer Reading: Start: 425.7 km (264.5 mi)

Note: See Data Sheet 3 (Sheet 3 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:
Starting point: San Angelo Test Facility shop  Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:00 minutes (stopwatch time)  14.6 km (9.1 mi) distance

Driving in opposite direction:
Starting point: Brodnax Road / Highway 87  Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:27 minutes (stopwatch time)  14.8 km (9.2 mi) distance

Max speed: 83.3 km/hr (51.8 mph)
Total Driving Time: 20:26 minutes (V-Box time)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped, engine off; Inflation Pressure</td>
<td>259.7 kPa (37.7 psi)</td>
<td>260.0 kPa (37.7 psi)</td>
<td>253.7 kPa (36.8 psi)</td>
<td>256.0 kPa (37.1 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>33.6°C (92.5°F)</td>
<td>33.4°C (92.1°F)</td>
<td>33.6°C (92.5°F)</td>
<td>35.2°C (95.4°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>26.8°C (80.2°F)</td>
<td>26.9°C (80.4°F)</td>
<td>27.4°C (81.3°F)</td>
<td>26.4°C (79.5°F)</td>
</tr>
</tbody>
</table>
DATA SHEET 3 (Sheet 26 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO H – Left Front Tire Deflation at GVWR

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td>( X )LF  (   )LR  (   )RR  (   )RF</td>
<td>173.0 kPa (25.1 psi)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Inflation Pressure

<table>
<thead>
<tr>
<th>Inflation Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>173.0 kPa (25.1 psi)</td>
</tr>
</tbody>
</table>

Telltales Illumination:

Starting point: San Angelo Test Facility shop
Direction: south

Did the telltale illuminate? ( X )YES  (   )NO

Time and Distance to Illuminate:

31 seconds (stopwatch time) 0.3 km (0.2 mi) distance

Max speed: 41.5 km/hr (25.8 mph)

Telltales Illuminates within 20 Minutes: ( X )YES  (   )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated? (   )YES  ( X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES  (   )NO (fail)
Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES (   )NO (fail)

**TIRED INFLATION PRESSURES AND TEMPERATURES AFTER TELLLTALE ILLUMINATION:**

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature:</td>
<td>26.1°C (79.0°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle cool down period:</td>
<td>55 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>166.3 kPa (24.1 psi)</td>
<td>246.4 kPa (35.7 psi)</td>
<td>243.4 kPa (35.3 psi)</td>
<td>246.4 kPa (35.7 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>27.6°C (81.7°F)</td>
<td>27.4°C (81.3°F)</td>
<td>27.8°C (82.0°F)</td>
<td>27.2°C (81.0°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>25.9°C (78.6°F)</td>
<td>26.5°C (79.7°F)</td>
<td>27.4°C (81.3°F)</td>
<td>26.6°C (79.9°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )Yes (   )No

**TELLTALE EXTINGUISHMENT:**

**RE-ADJUSTED TIRE INFLATION PRESSURES:**

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period; Re-adjusted Inflation Pressure:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>240.1 kPa (34.8 psi)</td>
<td>246.4 kPa (35.7 psi)</td>
<td>243.4 kPa (35.3 psi)</td>
<td>246.4 kPa (35.7 psi)</td>
<td></td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale? ( X )YES (   )NO

Driving direction:
Starting point: San Angelo Test Facility shop  Direction: south

Time and Distance to Extinguish:
55 seconds (stopwatch time) 0.5 km (0.3 mi) distance

**TEST RESULTS**

TPMS Performance Test Results (PASS/FAIL)  PASS
Left front tire was deflated at GVWR.

REMARKS: None

RECORDED BY: David K. Banks  DATE: June 29, 2006

APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 28 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO I – Right Rear Tire Deflation at GVWR

TEST DATE: June 29, 2006  LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 9:52 am

Odometer Reading: Start: 457.2 km (284.1 mi)

Note: See Data Sheet 3 (Sheet 3 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:

Starting point: San Angelo Test Facility shop  Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75+ 25 km/h excluding time periods when brake pedal is applied.

10:09 minutes (stopwatch time)  14.6 km (9.1 mi) distance

Driving in opposite direction:

Starting point: Brodnax Road / Highway 87  Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75+ 25 km/h excluding time periods when brake pedal is applied.

10:09 minutes (stopwatch time)  14.6 km (9.1 mi) distance

Max speed: 85.1 km/hr (52.9 mph)
Total Driving Time: 20:09 minutes (V-Box time)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped, engine off; Inflation Pressure</td>
<td>252.0 kPa (36.5 psi)</td>
<td>256.0 kPa (37.1 psi)</td>
<td>260.6 kPa (37.8 psi)</td>
<td>259.4 kPa (37.6 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>39.2°C (102.6°F)</td>
<td>39.2°C (102.6°F)</td>
<td>39.2°C (102.6°F)</td>
<td>38.9°C (102.0°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>27.8°C (82.0°F)</td>
<td>28.6°C (83.5°F)</td>
<td>28.6°C (83.5°F)</td>
<td>27.6°C (81.7°F)</td>
</tr>
</tbody>
</table>
TPMS OPERATIONAL PERFORMANCE
SCENARIO I – Right Rear Tire Deflation at GVWR

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td>N/A</td>
<td>N/A</td>
<td>173.1 kPa (25.1 psi)</td>
<td>N/A</td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: San Angelo Test Facility shop
Direction: south

Did the telltale illuminate? (X)YES ( )NO

Time and Distance to Illuminate:
1:07 minutes (stopwatch time) 0.5 km (0.3 mi) distance
Max speed: 42.4 km/hr (26.3 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES: (X)YES ( )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated? ( )YES (X)NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? (X)YES ( )NO (fail)
DATA SHEET 3 (Sheet 30 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO I – Right Rear Tire Deflation at GVWR

Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES (   )NO (fail)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELLETALE ILLUMINATION:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature:</td>
<td>28.7°C (83.7°F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle cool down period:</td>
<td>75 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>240.1 kPa (34.8 psi)</td>
<td>243.1 kPa (35.3 psi)</td>
<td>165.1 kPa (23.9 psi)</td>
<td>246.4 kPa (35.7 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>30.4°C (86.7°F)</td>
<td>32.2°C (90.0°F)</td>
<td>32.2°C (90.0°F)</td>
<td>29.6°C (85.3°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>28.0°C (82.4°F)</td>
<td>28.6°C (83.5°F)</td>
<td>29.2°C (84.6°F)</td>
<td>27.6°C (81.7°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? ( X )YES (   )NO (fail)

RE-ADJUSTED TIRE INFLATION PRESSURES:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Re-adjusted Inflation Pressure:</td>
<td>240.1 kPa (34.8 psi)</td>
<td>243.1 kPa (35.3 psi)</td>
<td>240.1 kPa (34.8 psi)</td>
<td>246.4 kPa (35.7 psi)</td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale? ( X )YES (   )NO

Driving direction:
Starting point: San Angelo Test Facility shop Direction: south

Time and Distance to Extinguish:

28 seconds (stopwatch time) 0.3 km (0.2 mi) distance

TEST RESULTS

TPMS Performance Test Results (PASS/FAIL) PASS
Right rear tire was deflated at GVWR.

REMARKS: There are two V-Box charts for the calibration phase of this scenario, due to a power failure to the V-Box occurring 12 minutes into the test.

RECORDED BY: David K. Banks DATE: June 29, 2006
APPROVED BY: Kenneth H. Yates
DATA SHEET 3 (Sheet 31 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO J – Left Rear, Right Front Tire Deflation at GVWR

TEST DATE: June 29, 2006  LAB: U. S. DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C65201

Time: Start: 12:40 pm
Odometer Reading: Start: 489 km (304.1 mi)

Note: See Data Sheet 3 (Sheet 3 of 33) for Test Weight. Tire pressures were re-adjusted to cold inflation pressure of 240 kPa before calibration phase.

SYSTEM CALIBRATION/LEARNING PHASE:
(V-box time – see Section 6 test plots)

Driving in first direction:
Starting point: San Angelo Test Facility shop  Direction: south
Cumulative vehicle driving time (10 – 15 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:03 minutes (stopwatch time)  14.5 km (9.0 mi) distance

Driving in opposite direction:
Starting point: Brodnax Road / Highway 87  Direction: north
Cumulative vehicle driving time (5 – 10 minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:16 minutes (stopwatch time)  14.8 km (9.2 mi) distance

Max speed: 88.3 km/hr (54.9 mph)
Total Driving Time: 20:21 minutes (V-Box time)

TIRED INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately, after vehicle is stopped, engine off;</td>
<td>254.2 kPa (36.9 psi)</td>
<td>258.0 kPa (37.4 psi)</td>
<td>256.4 kPa (37.2 psi)</td>
<td>259.9 kPa (37.7 psi)</td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>42.2°C (108.0°F)</td>
<td>42.8°C (109.0°F)</td>
<td>42.6°C (108.7°F)</td>
<td>42.2°C (108.0°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>29.6°C (85.3°F)</td>
<td>31.4°C (88.5°F)</td>
<td>31.8°C (89.2°F)</td>
<td>29.0°C (84.2°F)</td>
</tr>
</tbody>
</table>
DATA SHEET 3 (Sheet 32 of 33)
TPMS OPERATIONAL PERFORMANCE
SCENARIO J – Left Rear, Right Front Tire Deflation at GVWR

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE(S) OF DEFLATED TIRE(S):

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate Location of Tire(s) Deflated:</td>
<td>( )LF ( X )LR ( )RR ( X )RF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>N/A</td>
<td>173.0 kPa (25.1 psi)</td>
<td>N/A</td>
<td>172.9 kPa (25.1 psi)</td>
</tr>
</tbody>
</table>

TELLTALE ILLUMINATION:

Starting point: __San Angelo Test Facility shop__
Direction: __south__

Did the telltale illuminate?  ( X )YES  ( )NO

Time and Distance to Illuminate:

33 seconds (stopwatch time)  0.3 km (0.2 mi) distance

Max speed:  50.5 km/hr (31.4 mph)

TELLTALE ILLUMINATES WITHIN 20 MINUTES:  ( X )YES  ( )NO (fail)

Does the vehicle have a telltale that identifies which tire(s) is (are) under-inflated?

( )YES  ( X )NO

After 5 minutes with the ignition locking system in the “Off” or “Lock” position, does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position?

( X )YES  ( )NO (fail)
Deactivate the ignition locking system and then re-start the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? (X) Yes ( ) No

**TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELLETALE ILLUMINATION:**

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After vehicle cool down period:</td>
<td>29.9°C (85.8°F)</td>
<td>Vehicle cool down period: 75 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation Pressure</td>
<td>242.2 kPa (35.1 psi)</td>
<td>165.0 kPa (23.9 psi)</td>
<td>242.1 kPa (35.1 psi)</td>
<td>165.6 kPa (24.0 psi)</td>
</tr>
<tr>
<td>Tire Sidewall Temp</td>
<td>31.9°C (89.4°F)</td>
<td>33.6°C (92.5°F)</td>
<td>33.8°C (92.8°F)</td>
<td>32.4°C (90.3°F)</td>
</tr>
<tr>
<td>San Angelo Test Facility Shop Floor Temp</td>
<td>28.4°C (83.1°F)</td>
<td>30.8°C (87.4°F)</td>
<td>30.4°C (86.7°F)</td>
<td>28.6°C (83.5°F)</td>
</tr>
</tbody>
</table>

After the cool down period of approximately one hour, restart the vehicle engine. Does the telltale re-illuminate and stay illuminated when the ignition locking system is activated to the “On” or “Run” position? (X) YES ( ) NO (fail)

**TELLTALE EXTINGUISHMENT:**

**RE-ADJUSTED TIRE INFLATION PRESSURES:**

<table>
<thead>
<tr>
<th>Execution Procedure</th>
<th>LF Tire</th>
<th>LR Tire</th>
<th>RR Tire</th>
<th>RF Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>After cool down period; Re-adjusted Inflation Pressure:</td>
<td>242.2 kPa (35.1 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
<td>242.1 kPa (35.1 psi)</td>
<td>240.0 kPa (34.8 psi)</td>
</tr>
</tbody>
</table>

Is it necessary to drive the vehicle to extinguish the telltale? (X) YES ( ) NO

Driving direction:
Starting point: San Angelo Test Facility shop Direction: south

Time and Distance to Extinguish:
49 seconds (stopwatch time) 0.3 km (0.2 mi) distance

**TEST RESULTS**

TPMS Performance Test Results (PASS/FAIL) PASS
Left rear and right front tires were deflated at GVWR.

REMARKS: None

RECORDED BY: David K. Banks DATE: June 29, 2006
APPROVED BY: Kenneth H. Yates
DATA SHEET 4 (Sheet 1 of 2)
SCENARIO K – Malfunction Detection Test at GVWR

TEST DATE: June 30, 2006  LAB:  San Angelo Test Facility  VEHICLE NHTSA NO:  C65201

Ambient Temperature:  Start: 24.8°C (76.6°F) ;  End 28.8°C (83.8°F)
Odometer Reading:  Start: 520 km (323 mi) ;  End 566 km (352 mi)
Fuel Level:  Start: Full ;  End Near full

Note:  See Data Sheet 3 (Sheet 3 of 33) for Test Weight.

TPMS TYPE: ( X ) Direct  (   ) Indirect  (   ) Other  Describe__________________________

TPMS MALFUNCTION TELLTALE:
(   )Dedicated stand-alone  ( X ) Combination low tire pressure warning/malfunction telltale

METHOD OF MALFUNCTION SIMULATION:
Describe method of malfunction simulation:  Full size spare tire assembly without sensor
was installed on left front wheel position.

MALFUNCTION TELLTALE ILLUMINATION
(after ignition locking system is activated to “On” (“Run”) position):

Combination Low Tire Pressure Warning /Malfunction Telltale

Driving in first direction:
Starting point: San Angelo Test Facility shop  Direction: south
Cumulative vehicle driving time at a vehicle speed of 75±25 km/h excluding time periods when brake pedal was applied. Drive the vehicle for 15-17 minutes or until the telltale illuminates, whichever occurs first.

Did the telltale illuminate?  (   )YES  ( X )NO
15:16 minutes (stopwatch time)  22.9 km (14.2 mi) distance

Driving in opposite direction (if required):
Starting point: U.S. Highway 277  Direction: north
Cumulative vehicle driving time at a vehicle speed of 75±25 km/h excluding time periods when brake pedal was applied. Drive the vehicle for 5-10 minutes or until the telltale illuminates, whichever occurs first.

Did the telltale illuminate?  (   )YES  ( X )NO
16:07 minutes (stopwatch time)  22.4 km (13.9 mi) distance
11:23 minutes of additional driving time with no illumination

Max speed: 93.5 km/hr (58.1 mph)
Total Driving Time: 31:23 minutes (stopwatch time)

COMBINATION MALFUNCTION TELLTALE ILLUMINATES (FLASHING AND ILLUMINATION SEQUENCE) WITHIN 20 MINUTES:  (   )YES  ( X )NO
TPMS MALFUNCTION PERFORMANCE TEST RESULTS (PASS/FAIL)
Spare tire assembly was installed on left front wheel position at GVWR.

REMARKS: FMVSS 138 malfunction performance requirements do not become effective until September 1, 2007.

N/A (INDICANT TEST ONLY)

RECORDED BY: David K. Banks DATE: June 30, 2006

APPROVED BY: Kenneth H. Yates
DATA SHEET 5 (Sheet 1 of 3)
TPMS WRITTEN INSTRUCTIONS

TEST DATE: June 30, 2006  LAB: San Angelo Test Facility  VEHICLE NHTSA NO: C65201

Does the Owner's Manual provide an image of the Low Tire Pressure Warning Telltale symbol (and an image of the TPMS Malfunction Telltale warning (“TPMS”), if a dedicated telltale is utilized for this function)?

☑ YES  ☐ NO

The following statement, in the English language, is provided verbatim in the Owner's Manual.

☑ YES  ☐ NO

"Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

"As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle’s handling and stopping ability.

"Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver’s responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale."
As specified, the following sections, in the English language, are required verbatim in paragraph form in the Owner's Manual:

The following statement is required for all vehicles certified to the standard starting on September 1, 2007 and for vehicles voluntarily equipped with a compliant TPMS MIL before that time.

"Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly.

Statement is provided verbatim: (X)YES ( )NO

For vehicles with a dedicated MIL telltale, add the following statement:

The TPMS malfunction indicator is provided by a separate telltale, which displays the symbol "TPMS" when illuminated.

Statement is provided verbatim: ( )YES ( )NO (X)N/A

For vehicles with a combined low tire pressure/MIL telltale, add the following statement:

The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

Statement is provided verbatim: (X)YES ( )NO

The following statement is required for all vehicles certified to the standard starting on September 1, 2007 and for vehicles voluntarily equipped with a compliant TPMS MIL before that time.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly."

Statement is provided verbatim: (X)YES ( )NO

DATA INDICATES COMPLIANCE: PASS/FAIL

PASS/FAIL: PASS
Does the Owner’s Manual include the following (allowable) information?

☑ Significance of the low tire pressure warning telltale illuminating

☑ A description of corrective action to be undertaken

☑ Whether the tire pressure monitoring system functions with the vehicle's spare tire (if provided)

☐ How to use a reset button, if one is provided

☐ The time for the TPMS telltale(s) to extinguish once the low tire pressure condition or the malfunction is corrected

REMARKS: The malfunction statement is provided verbatim in the owner’s manual, but the vehicle has a malfunction indicator which does not meet the FMVSS 138 malfunction performance requirement that becomes effective September 1, 2007.

RECORDED BY: R.N. Gregg DATE: June 30, 2006

APPROVED BY: Kenneth H. Yates
### TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>DESCRIPTION</th>
<th>MODEL/ SERIAL NO</th>
<th>CAL. DATE</th>
<th>NEXT CAL. DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOPWATCH</td>
<td>WESTCLOX QUARTZ STOPWATCH</td>
<td>NONE</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>TEMPERATURE GAUGE, AMBIENT</td>
<td>FLUKE 50D K/J THERMOMETER</td>
<td>SERIAL #80840101</td>
<td>7/7/2005</td>
<td>7/7/2006</td>
</tr>
<tr>
<td>TEMPERATURE GAUGE (LASER) - TIRES AND GROUND</td>
<td>RAYNGER ST20 PRO NON-CONTACT INFRARED THERMOMETER</td>
<td>SERIAL #2065640101-0014</td>
<td>9/14/2005</td>
<td>9/14/2006</td>
</tr>
<tr>
<td>AIR PRESSURE GAUGE</td>
<td>ASHCROFT GENERAL PURPOSE DIGITAL GAUGE</td>
<td>MODEL #25C1005 PS02L100-B1 SERIAL #1003098</td>
<td>12/15/2005</td>
<td>12/15/2006</td>
</tr>
<tr>
<td>FLOOR SCALES (VEHICLE)</td>
<td>INTERCOMP SW DELUXE SCALES</td>
<td>PART #100156 SERIAL #27032382</td>
<td>9/13/2005</td>
<td>9/13/2006</td>
</tr>
<tr>
<td>ASHCROFT MASTER PRESSURE GAUGE</td>
<td>ASHCROFT (KILOPASCALS)</td>
<td>MODEL #1082 SERIAL #COO0618 STD. #40584</td>
<td>11/2/2005</td>
<td>11/2/2006</td>
</tr>
<tr>
<td>PLATFORM SCALE (BALLAST)</td>
<td>HOWE RICHARDSON</td>
<td>MODEL #6401 SERIAL #0181-5509-26</td>
<td>8/10/2005</td>
<td>8/10/2006</td>
</tr>
</tbody>
</table>
SECTION 5
PHOTOGRAPHS
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.1
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.2
VEHICLE CERTIFICATION LABEL
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.3
TIRE SHOWING BRAND
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.4
TIRE SHOWING MODEL
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.5
TIRE SHOWING SIZE
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.6
TIRE SHOWING DOT SERIAL NUMBER
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.7
TIRE SHOWING MAX LOAD RATING AND MAX COLD INFLATION PRESSURE
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.8
TIRE SHOWING SIDEWALL/TREAD CONSTRUCTION
FIGURE 5.10
INSTRUMENT PANEL SHOWING COMBINATION LOW TIRE PRESSURE WARNING AND MALFUNCTION TELLTALE
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO 138

FIGURE 5.11
TEST INSTRUMENTATION MOUNTED ON VEHICLE
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.12
VEHICLE CAB BALLAST FOR GVWR LOAD
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.13
VEHICLE BED BALLAST FOR GVWR LOAD
2006 NISSAN TITAN XE KING CAB TRUCK
NHTSA NO. C65201
FMVSS NO. 138

FIGURE 5.14
VEHICLE ON WEIGHT SCALES
SECTION 6
TEST PLOTS
Scenario A: Left Front Tire
Test Date: 6/22/06
Data File Time: 25:38 minutes
Cumulative Driving Time: 20:28 minutes
Start Point: SATF shop

Calibration Phase

2006 Nissan Titan King Cab (C65201) LF Calibration / LLWW

Log Rate := 100.00 Hz
Scenario A: Left Front Tire
Test Date: 6/22/06
Data File Time: 3:25 minutes
Illumination: 3:17 minutes
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (85201) LF Telltale Illumination / LLW

Log Rate := 100.00 Hz
Scenario B: Left Rear Tire
Test Date: 6/22/06
Data File Time: 25:05 minutes
Cumulative Driving Time: 20:27 minutes
Start Point: SATF shop

Calibration Phase
Scenario B: Left Rear Tire
Test Date: 6/22/06
Data File Time: 51.2 seconds
Illumination: 29 seconds
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (C65201) LR Telltale Illumination / LLVV
Log Rate: = 100.00 Hz
Scenario C: Right Front Tire
Test Date: 6/22/06
Data File Time: 25:35 minutes
Cumulative Driving Time: 20:25 minutes
Start Point: SATF shop

Calibration Phase
Scenario C: Right Front Tire
Test Date: 6/22/06
Data File Time: 3:02 minutes
Illumination: 54 seconds
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (65201) RF Telltale Illumination / LLW

Log Rate := 100.00 Hz

Speed Trace

Telltale Illumination

Kmh
0 5 10 15 20 25 30 35 40 45 50
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
secs
Scenario D: Right Rear Tire
Test Date: 6/26/06
Data File Time: 27:04 minutes
Cumulative Driving Time: 20:14 minutes
Start Point: SATF shop

Calibration Phase
Scenario D: Right Rear Tire
Test Date: 6/26/06
Data File Time: 1:53 minutes
Illumination: 46 seconds
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (65201) RR Telltale Illumination / LLW

Speed Trace

Telltale Illumination

Log Rate := 100.00 Hz
Scenario E: Left Rear, Right Rear Tires
Test Date: 6/27/06
Data File Time: 25:43 minutes
Cumulative Driving Time: 20:29 minutes
Start Point: SATF shop

Calibration Phase

2006 Nissan Titan King Cab (C65201) LR, RR Calibration / LLWV

Log Rate := 100.00 Hz

Speed Trace

RT. 388 E  Loop 306 S  U.S. 87 W  U.S. 87 E  Loop 306 N  RT. 388 W

Kmh

0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400 1,500 1,600

secs
Scenario E: Left Rear, Right Rear Tires
Test Date: 6/27/06
Data File Time: 81.2 seconds
Illumination: 17 seconds
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (65201) LR, RR Telltale Illumination / LLWW
Scenario F: Left Front, Left Rear, Right Front Tires
Test Date: 6/27/06
Data File Time: 25:40 minutes
Cumulative Driving Time: 20:16 minutes
Start Point: SATF shop

Calibration Phase
Scenario F: Left Front, Left Rear, Right Front Tires
Test Date: 6/27/06
Data File Time: 1:52 minutes
Illumination: 40 seconds
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (65201) LF, LR, RF Telltale Illumination / LLW
Scenario G: Left Front, Left Rear, Right Rear, Right Front Tires
Test Date: 6/28/06
Data File Time: 26:11 minutes
Cumulative Driving Time: 20:32 minutes
Start Point: SATF shop

Calibration Phase

2006 Nissan Titan King Cab (C65201) LF, LR, RF, RR Calibration / LLWV

Log Rate := 100.00 Hz
Scenario G: Left Front, Left Rear, Right Rear, Right Front Tires
Test Date: 6/28/06
Data File Time: 1:51 minutes
Illumination: 19 seconds
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (65201) LF, LR, RR, RF Telltale Illumination / LLWV

Log Rate := 100.00 Hz
Scenario H: Left Front Tire
Test Date: 6/29/06
Data File Time: 26:02 minutes
Cumulative Driving Time: 20:26 minutes
Start Point: SATF shop

Calibration Phase
Scenario H: Left Front Tire
Test Date: 6/29/06
Data File Time: 2:10 minutes
Illumination: 31 seconds
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (65201) LF Telltale Illumination / GWWR

Log Rate := 100.00 Hz
Scenario I: Right Rear Tire
Test Date: 6/29/06
Data File Time: 13:55 minutes
Cumulative Driving Time: 20:09 minutes
Start Point: SATF shop

Calibration Phase, Part 1
Scenario I: Right Rear Tire
Test Date: 6/29/06
Data File Time: 11:39 minutes
Cumulative Driving Time: 20:09 minutes
Start Point: SATF shop

Calibration Phase, Part 2
Scenario I: Right Rear Tire
Test Date: 6/29/06
Data File Time: 3:25 minutes
Illumination: 67 seconds
Start Point: SATF shop

Detection Phase

2006 Nissan Titan King Cab (65201) RR Telltale Illumination / GWR

Log Rate := 100.00 Hz

Telltale Illumination

Brake Triggers

Speed Trace

Kmh

0 5 10 15 20 25 30 35 40 45 50

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

secs
Scenario J: Left Rear, Right Front Tires
Test Date: 6/29/06
Data File Time: 25:13 minutes
Cumulative Driving Time: 20:21 minutes
Start Point: SATF shop

Calibration Phase
Scenario J: Left Rear, Right Front Tires
Test Date: 6/29/06
Data File Time: 1:29 minutes
Illumination: 33 seconds
Start Point: SATF shop

Detection Phase

![Graph of 2006 Nissan Titan King Cab (65201) LR, RF Telltale Illumination / GWWR](image)
Scenario K: Spare without Sensor Installed on Left Front
Test Date: 6/30/06
Data File Time: 39:24 minutes
Illumination: None
Start Point: SATF shop

Malfunction Detection Test

2006 Nissan Titan King Cab (65201) LF Combination Low Tire / Malfunction Telltale Illumination / GVWR

Log Rate := 100.00 Hz