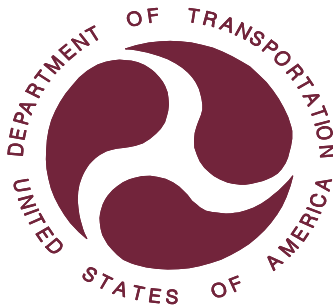


REPORT NUMBER 138-STF-06-002

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 138 TIRE PRESSURE MONITORING SYSTEMS

DAIMLERCHRYSLER CORPORATION
2006 CHRYSLER 300 TOURING
FOUR-DOOR PASSENGER CAR
NHTSA NO. C60306

U.S. DOT SAN ANGELO TEST FACILITY
131 COMANCHE TRAIL, BUILDING 3527
GOODFELLOW AFB, TEXAS 76908



January 30, 2007

FINAL REPORT

PREPARED FOR

**U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
400 SEVENTH STREET, SW
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WASHINGTON, D.C. 20590**

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SECTION 1
INTRODUCTION

1.1 PURPOSE OF COMPLIANCE TEST

A 2006 Chrysler 300 Touring four-door passenger car 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-138P-02, dated September 14, 2005.

1.2 TEST VEHICLE

The test vehicle was a 2006 Chrysler 300 Touring four-door passenger car. Nomenclatures applicable to the test vehicle are:

A. Vehicle Identification Number: 2C3KA53G06H382891

B. NHTSA No.: C60306

C. Manufacturer: DaimlerChrysler Corporation

D. Manufacture Date: 01/2006

1.3 TEST DATE

The test vehicle was tested on April 25 and 26, 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 DOT/NHTSA Test Procedure. Tire sidewall information was recorded. Owner's manual was reviewed.

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 then loaded to test weight and re-weighed. The test weight of 325 kg (718 lbs) included the weights of driver, three passengers, and equipment. The vehicle tire placard was photographed and checked for compliance to location, format, and information requirements.

The vehicle was instrumented with a Racelogic VBOX III 100 Hz GPS Data Logger to measure vehicle speed, time, and distance during the TPMS calibration and detection phases of the test. A stopwatch was also used to obtain approximate cumulative driving times during each test phase. Upon completion of each tire deflation test scenario, graph(s) were generated by VBOX software showing vehicle speed versus time for calibration and detection phase, as applicable. The cumulative driving time for each test phase 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 placard 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 of only deflated tire(s) was 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 placard 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 placard cold inflation pressure. The vehicle was driven (if necessary) until the telltale extinguished.

Malfunction detection tests were not attempted. The vehicle's voluntary malfunction indicator is not compliant with the April 2005 final rule.

2.2 SUMMARY OF RESULTS

Three tire deflation scenarios were run: 1. right rear tire deflated; 2. left front and right front tires deflated; 3. all four tires deflated. The data indicates compliance of the test vehicle's tire pressure monitoring system for those tire deflation scenarios tested.

SECTION 3
TEST DATA

FMVSS No. 138 – TEST DATA SUMMARY

TEST DATE: April 26, 2006 LAB: US DOT San Angelo Test Facility (SATF)

CONTRACT: N/A VEHICLE NHTSA NUMBER: C60306

VIN: 2C3KA53G06H382891 CERTIFICATION LABEL BUILD DATE: 01/2006

REQUIREMENTS	PASS/FAIL
LOW TIRE PRESSURE WARNING TELLTALE S138: S4.3.1 (a), (b); S4.3.3 (a), (b)	
Mounting	PASS
Symbol and color	PASS
Check of lamp function	PASS
MALFUNCTION TELLTALE S138: S4.4 (b) or (c)	
Mounting	N/A
Symbol and color	N/A
Check of lamp function	N/A
LOW TIRE PRESSURE WARNING - OPERATIONAL PERFORMANCE S138: S4.2, S4.3.1 (c), S4.3.2	
Telltale illumination	PASS
MALFUNCTION INDICATOR – OPERATIONAL PERFORMANCE S138: S4.4 (a)	
Telltale illumination	N/A
TPMS WRITTEN INSTRUCTIONS S138: S4.5	
Image of telltales	PASS
Verbatim Statements	N/A

REMARKS: Malfunction detection tests were not attempted. 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: April 26, 2006 LAB: US DOT San Angelo Test Facility

CONTRACT: N/A VEHICLE NHTSA NUMBER: C60306

VIN: 2C3KA53G06H382891 CERTIFICATION LABEL BUILD DATE: 01/2006

MY/MAKE/MODEL/BODY STYLE: 2006 Chrysler 300 Touring four-door passenger car

ENGINE: 3.5 L V-6

TIRE CONDITIONING:

(X) Tires used more than 100 km. Actual odometer reading : 7,475 km (4,645 mi)

VEHICLE ALIGNMENT AND WHEEL BALANCING:

Alignment checked: () Front () Rear (X) COTR waived

Wheels balanced: () Front () Rear (X) COTR waived

TPMS IDENTIFICATION:

TPMS MAKE/MODEL: Schrader Electronics

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 NO

Does TPMS have a manual reset control?

YES NO

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

Axle	Tire Size	Recommended Cold Inflation Pressure	Source
<u>Front</u>	<u>P215/65R17</u>	<u>210 kPa (30 psi)</u>	<u>Vehicle Placard</u>
<u>Rear</u>	<u>P215/65R17</u>	<u>210 kPa (30 psi)</u>	<u>Vehicle Placard</u>
<u>Spare</u>	<u>T135/90D17</u>	<u>420 kPa (60 psi)</u>	<u>Vehicle Placard</u>

DATA SHEET 1 (Sheet 2 of 3) TEST PREPARATION INFORMATION

INSTALLED TIRE DATA (Use diagrams as reference):

Diagram - Passenger Car Tire Labeling

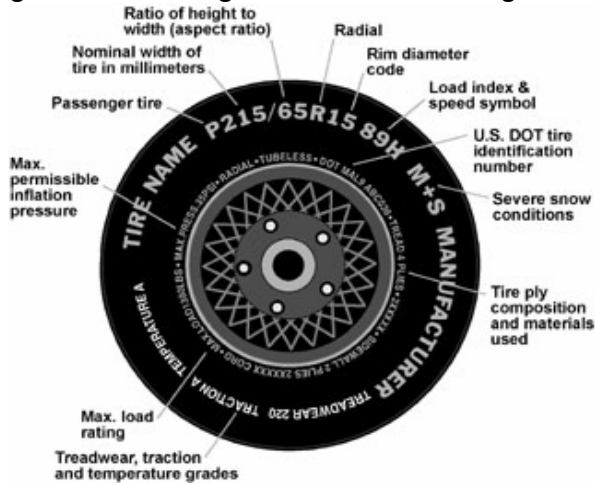
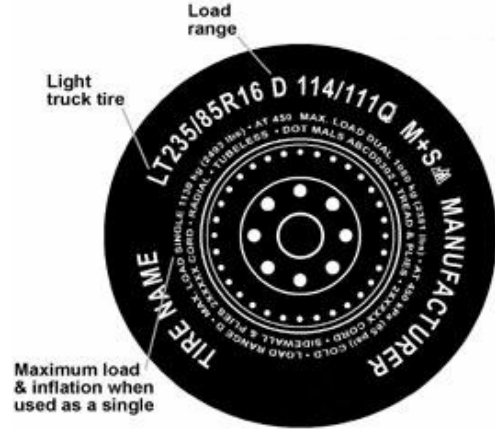


Diagram - Other Markings on Light Trucks



Front Axle

Tire Size (ex. P225/65R15 89H): P215/65R17 98T

Manufacturer/Tire Name: Goodyear Integrity

Sidewall Max. Load Rating: 750 kg (1653 lbs)

Max Inflation Pressure: 300 kPa (44 psi)

Sidewall Construction (number of plies and ply material): 1 ply polyester

Tread Construction (number of plies and ply material): 3 plies – 1 polyester, 2 steel

Rear Axle (if different than front axle)

Tire Size (ex. P225/65R15 89H): _____

Manufacturer/Tire Name: _____

Sidewall Max. Load Rating (kg): _____ Max. Inflation Press (kPa): _____

Sidewall Construction (number of plies and ply material): _____

Tread Construction (number of plies and ply material): _____

Do all installed tires have the same sidewall information?

YES NO

Are all installed tires the same as designated by the vehicle manufacturer on the Vehicle Placard?

YES NO

**DATA SHEET 1 (Sheet 3 of 3)
TEST PREPARATION**

Worksheet for Determining FMVSS No. 138 Telltale Warning Activation Pressure for Tires Installed on Vehicle		
Part	Front Axle	Rear Axle
(A) Recommended Inflation Pressure x .75	<u>210.0</u> kPa x .75 = <u>158.0</u> kPa	<u>210.0</u> kPa x .75 = <u>158.0</u> kPa
(B) Information from FMVSS 138 Table 1 below, Tire types are: Inflation pressure Minimum activation pressures from Table 1	(X) P-metric-Standard load () P-metric-Extra Load Load Range () C, () D, or () E (X) Maximum or () Rated <u>300</u> kPa (44 psi) <u>140</u> kPa (20 psi)	(X) P-metric-Standard load () P-metric-Extra Load Load Range () C, () D, or () E (X) Maximum or () Rated <u>300</u> kPa (44 psi) <u>140</u> kPa (20 psi)
(C) Telltale Warning Activation Pressure is the higher of Part (A) or (B)	<u>158.0</u> kPa (22.9 psi)	<u>158.0</u> kPa (22.9 psi)
(D) Pressure at which to deflate tire(s) = (C) – 7 kPa	<u>151.0</u> kPa (21.9 psi)	<u>151.0</u> kPa (21.9 psi)

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

Tire Type	Maximum or Rated Inflation Pressure		Minimum Activation Pressure	
	(kPa)	(psi)	(kPa)	(psi)
P-metric – Standard Load	240, 300, or 350	35, 44, or 51	140 140 140	20 20 20
P-metric – Extra Load	280 or 340	41 or 49	160 160	23 23
Load Range C	350	51	200	29
Load Range D	450	65	240	35
Load Range E	550	80	240	35

REMARKS: None

RECORDED BY: David K. Banks

DATE: April 26, 2006

APPROVED BY: Kenneth H. Yates

DATA SHEET 2 (Sheet 1 of 2)
LOW TIRE PRESSURE WARNING AND MALFUNCTION TELLTALE

TEST DATE: April 26, 2006 LAB: US DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C60306

TPMS Low Tire Pressure Warning Telltale:

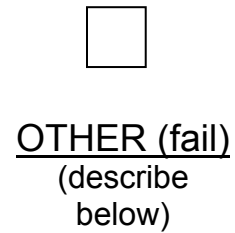
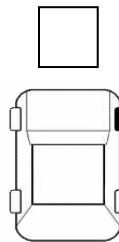
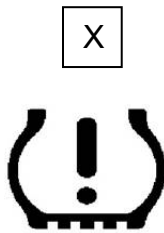
TPMS Low Tire Pressure Warning Telltale Location: Left side instrument cluster

Telltale is mounted inside the occupant compartment in front of and in clear view of the driver?

YES NO (fail)

Telltale is part of a reconfigurable display? YES NO

Identify Telltale Symbol Used (check box above figure).



Note any words or additional symbols used.

N/A

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: 2.67 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: April 26, 2006

APPROVED BY: Kenneth H. Yates

DATA SHEET 3 (Sheet 1 of 11)
TPMS OPERATIONAL PERFORMANCE
SCENARIO A – Right Rear Tire Deflation

TEST DATE: April 25, 2006 LAB: US DOT San Angelo Test Facility

VEHICLE NHTSA NUMBER: C60306

Time: Start: 9:30 am

Ambient: Start: 19.3°C (66.7°F)

Odometer Reading: Start: 7,475 km (4,645 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): Indoors, (in test facility shop overnight)

PRE-TEST TIRE INFLATION PRESSURES:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
Pre-test cold measurements after ambient soak: Inflation Pressure	210.0 kPa (30.5 psi)	210.0 kPa (30.5 psi)	210.0 kPa (30.5 psi)	210.0 kPa (30.5 psi)

DATA SHEET 3 (Sheet 2 of 11)
TPMS OPERATIONAL PERFORMANCE
SCENARIO A – Right Rear Tire Deflation

LLVW – Lightly Loaded Vehicle Weight
GVWR – Gross Vehicle Weight Rating
UVW – Unloaded Vehicle Weight
VCW – Vehicle Capacity Weight
DW – Driver Weight
PW – Passenger Weight
EQW – Equipment Weight

VEHICLE WEIGHT:

Vehicle Ratings from Certification Label:

GVWR: 2,246 kg (4,950 lbs)

GAWR(front): 1,275 kg (2,810 lbs)

GAWR(rear): 1,275 kg (2,810 lbs)

Vehicle Capacity Weight from Placard:

Vehicle Capacity Weight 392 kg (865 lbs)

Measured Unloaded Vehicle Weight:

LF	<u>450 kg (991 lbs)</u>	LR	<u>391 kg (862 lbs)</u>
RF	<u>469 kg (1,033 lbs)</u>	RR	<u>395 kg (871 lbs)</u>
Front		Rear	
Axle	<u>918 kg (2,024 lbs)</u>	Axle	<u>786 kg (1,733 lbs)</u>

Total Vehicle 1,704 kg (3,757 lbs)

Measured Vehicle Weight: () LLVW (+50, -0 kg) () GVWR (+0, -50 KG) (X) UVW+VCW

LF	<u>513 kg (1,131 lbs)</u>	LR	<u>498 kg (1,098 lbs)</u>
RF	<u>523 kg (1,154 lbs)</u>	RR	<u>495 kg (1,092 lbs)</u>
Front		Rear	
Axle	<u>1,036 kg (2,285 lbs) (≤ GAWR)</u>	Axle	<u>993 kg (2,190 lbs) (≤ GAWR)</u>

Total Vehicle 2,029 kg (4,475 lbs) (not greater than UVW + VCW)

Note: This Total Vehicle Weight measures the vehicle loaded to 325 kg (718 lbs), which is 67 kg (147 lbs) less than the Vehicle Capacity Weight listed on the vehicle placard.

DATA SHEET 3 (Sheet 3 of 11)
TPMS OPERATIONAL PERFORMANCE
SCENARIO A – Right Rear Tire Deflation

Time: Start: April 26 11:21 am
 Odometer Reading: Start: 7,475 km (4,645 mi)
 Fuel Level: Start: Full
 Outside Road Surface Temp: Start: 32.2°C (89.96°F)

TIRE INFLATION PRESSURES:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
After loading vehicle for performance test and positioning vehicle at selected test start point after vehicle cool down period.				
Ambient temperature: <u>18.0°C (64.4°F)</u> Vehicle cool down period: <u>overnight</u>				
Re-adjusted Inflation Pressure	210.0 kPa (30.5 psi)	210.0 kPa (30.5 psi)	210.0 kPa (30.5 psi)	210.0 kPa (30.5 psi)

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 (5 – 10minutes) at a vehicle speed of 75+ 25 km/h
 excluding time periods when brake pedal is applied.

9:44 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 – 10minutes) at a vehicle speed of 75+ 25 km/h
 excluding time periods when brake pedal is applied.

10:37 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Max speed: 89.0 km/hr (55.3 mph)

Total Driving Time: 20:20 minutes (V-Box time – see test plots)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
Immediately, after vehicle is stopped, engine off; Inflation Pressure	227.5 kPa (33.0 psi)	232.0 kPa (33.6 psi)	226.7 kPa (32.9 psi)	229.9 kPa (33.3 psi)
Tire Sidewall Temp	29.2°C (84.6°F)	30.0°C (86.0°F)	29.4°C (84.9°F)	29.0°C (84.2°F)
San Angelo Test Facility Shop Floor Temp	22.0°C (71.6°F)	22.0°C (71.6°F)	22.2°C (72.0°F)	22.2°C (72.0°F)

DATA SHEET 3 (Sheet 4 of 11)
TPMS OPERATIONAL PERFORMANCE
SCENARIO A – Right Rear Tire Deflation

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURE OF DEFLATED TIRE:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
Indicate Location of Tire(s) Deflated: ()LF ()LR ()RF (X)RR Inflation Pressure	227.5 kPa (33.0 psi)	232.0 kPa (33.6 psi)	226.7 kPa (32.9 psi)	151.4 kPa (22.0 psi)

TELLTALE ILLUMINATION:

Did the telltale illuminate? YES NO

 Illumination under 10 seconds. Driving was not required 0 distance

TELLTALE ILLUMINATES WITHIN 20 MINUTES: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (fail)

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

YES 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?

YES NO (fail)

DATA SHEET 3 (Sheet 5 of 11)
TPMS OPERATIONAL PERFORMANCE
SCENARIO A – Right Rear Tire Deflation

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? YES NO (fail)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELLTALE ILLUMINATION:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
After vehicle cool down period: Ambient Temperature: <u>21.6°C (70.9°F)</u> Vehicle cool down period: <u>74</u> minutes				
Inflation Pressure	218.8 kPa (31.7 psi)	219.7 kPa (31.9 psi)	218.3 kPa (31.7 psi)	144.6 kPa (21.0 psi)
Tire Sidewall Temp	22.8°C (73.0°F)	22.6°C (72.7°F)	23.4°C (74.1°F)	22.8°C (73.0°F)
San Angelo Test Facility Shop Floor Temp	22.6°C (72.7°F)	22.0°C (71.6°F)	22.6°C (72.7°F)	22.6°C (72.7°F)

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? YES NO (fail)

TELLTALE EXTINGUISHMENT:

RE-ADJUSTED TIRE INFLATION PRESSURES:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
After cool down period; Re-adjusted Inflation Pressure:	218.8 kPa (31.7 psi)	219.7 kPa (31.9 psi)	218.3 kPa (31.7 psi)	210.2 kPa (30.5 psi)

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

TEST RESULTS

TPMS Performance Test Results (PASS/FAIL)

PASS

The right rear tire was deflated.

REMARKS: None

RECORDED BY: David K. Banks

DATE: April 26, 2006

APPROVED BY: Kenneth H. Yates

DATA SHEET 3 (Sheet 6 of 11)
TPMS OPERATIONAL PERFORMANCE

SCENARIO B – Left Front, Right Front Tire Deflation

TEST DATE: April 26, 2006 LAB: U. S. DOT San Angelo Test Facility (SATF)

VEHICLE NHTSA NUMBER: C65804

Time: Start: 1:36 pm

Odometer Reading (km): Start: 7,504 km (4,663 mi)

Fuel Level: Start: Full

Outside Road Surface Temp: Start: 39.2°C (102.6°F)

Time vehicle has remained with engine off and tires shielded from direct sunlight (1 hour minimum): 1 hour, 46 minutes (in test facility shop, garage door open)

Note: See Data Sheet 3 (Sheet 2 of 11) for Test Weight. See Data Sheet 3 (Sheet 5 of 11) for Tire Inflation Pressures and Temperatures before Calibration Phase (Re-Adjusted Tire Inflation Pressures).

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.

9:57 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 – 10minutes) at a vehicle speed of 75± 25 km/h excluding time periods when brake pedal is applied.

10:11 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Max speed: 87.4 km/hr (54.3 mph)

Total Driving Time: 20:11 minutes (V-Box time – see test plots)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
Immediately, after vehicle is stopped, engine off; Inflation Pressure	231.2 kPa (33.5 psi)	236.8 kPa (34.3 psi)	230.6 kPa (33.4 psi)	224.1 kPa (32.5 psi)
Tire Sidewall Temp	32.4°C (90.3°F)	33.0°C (91.4°F)	32.2°C (90.0°F)	32.4°C (90.3°F)
San Angelo Test Facility Shop Floor Temp	22.2°C (72.0°F)	22.8°C (73.0°F)	22.4°C (72.3°F)	22.6°C (72.7°F)

DATA SHEET 3 (Sheet 7 of 11)
TPMS OPERATIONAL PERFORMANCE

SCENARIO B – Left Front, Right Front Tire Deflation

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURES OF DEFLATED TIRES:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
Indicate Location of Tire(s) Deflated: (X)LF ()LR (X)RF ()RR Inflation Pressure	151.0 kPa (21.9 psi)	236.8 kPa (34.3 psi)	151.0 kPa (21.9 psi)	224.1 kPa (32.5 psi)

TELLTALE ILLUMINATION:

Did the telltale illuminate? YES NO

 Illumination under 10 seconds. Driving was not required 0 distance

TELLTALE ILLUMINATES WITHIN 20 MINUTES: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (fail)

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

YES 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? YES NO (fail)

**DATA SHEET 3 (Sheet 8 of 11)
TPMS OPERATIONAL PERFORMANCE**

SCENARIO B – Left Front, Right Front Tire Deflation

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? YES NO (fail)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELLTALE ILLUMINATION:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
After vehicle cool down period: Ambient Temperature: <u>24.4°C (75.9°F)</u> Vehicle cool down period: <u>73</u> minutes				
Inflation Pressure	144.3 kPa (20.9 psi)	219.5 kPa (31.8 psi)	144.2 kPa (20.9 psi)	211.1 kPa (30.6 psi)
Tire Sidewall Temp	25.4°C (77.7°F)	25.6°C (78.1°F)	25.0°C (77.0°F)	26.0°C (78.8°F)
San Angelo Test Facility Shop Floor Temp	24.0°C (75.2°F)	24.5°C (76.1°F)	23.9°C (75.0°F)	24.5°C (76.1°F)

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? YES NO (fail)

TELLTALE EXTINGUISHMENT:

RE-ADJUSTED TIRE INFLATION PRESSURES:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
After cool down period; Re-adjusted Inflation Pressure:	210.0 kPa (30.5 psi)	210.1 kPa (30.5 psi)	210.1 kPa (30.5 psi)	210.2 kPa (30.5 psi)

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

TEST RESULTS

TPMS Performance Test Results (PASS/FAIL)

PASS

The left front and right front tires were deflated.

REMARKS: None

RECORDED BY: David K. Banks

DATE: April 26, 2006

APPROVED BY: Kenneth H. Yates

**DATA SHEET 3 (Sheet 9 of 11)
TPMS OPERATIONAL PERFORMANCE**

SCENARIO C – Left Front, Left Rear, Right Front, Right Rear Tire Deflation

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

VEHICLE NHTSA NUMBER: C65804

Time: Start: 3:42 pm

Odometer Reading (km): Start: 7,548 km (4,690 mi)

Fuel Level: Start: Full

Outside Road Surface Temp: Start: 42.8°C (109.0°F)

Time vehicle has remained with engine off and tires shielded from direct sunlight (1 hour minimum): 1 hour, 41 minutes (in test facility shop, garage door open)

Note: See Data Sheet 3 (Sheet 2 of 11) for Test Weight. See Data Sheet 3 (Sheet 8 of 11) for Tire Inflation Pressures and Temperatures before Calibration Phase (Re-Adjusted Tire Inflation Pressures).

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 (5 – 10minutes) at a vehicle speed of 75+ 25 km/h excluding time periods when brake pedal is applied.

9:49 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 – 10minutes) at a vehicle speed of 75+ 25 km/h excluding time periods when brake pedal is applied.

10:17 minutes (stopwatch time) 14.5 km (9.0 mi) distance

Max speed: 91.8 km/hr (57.0 mph)

Total Driving Time: 20:05 minutes (V-Box time – see test plots)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER CALIBRATION PHASE:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
Immediately, after vehicle is stopped, engine off; Inflation Pressure	221.9 kPa (32.2 psi)	226.2 kPa (32.8 psi)	221.8 kPa (32.2 psi)	224.8 kPa (32.6 psi)
Tire Sidewall Temp	34.6°C (94.3°F)	36.2°C (97.2°F)	34.4°C (93.9°F)	34.8°C (94.6°F)
San Angelo Test Facility Shop Floor Temp	23.8°C (74.8°F)	24.2°C (75.6°F)	23.6°C (74.5°F)	24.2°C (75.6°F)

**DATA SHEET 3 (Sheet 10 of 11)
TPMS OPERATIONAL PERFORMANCE**

SCENARIO C – Left Front, Left Rear, Right Front, Right Rear Tire Deflation

SYSTEM DETECTION PHASE:

LOCATION AND PRESSURES OF DEFLATED TIRES:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
Indicate Location of Tire(s) Deflated: (X)LF (X)LR (X)RF (X)RR Inflation Pressure	151.9 kPa (22.0 psi)	151.0 kPa (21.9 psi)	151.1 kPa (21.9 psi)	151.9 kPa (22.0 psi)

TELLTALE ILLUMINATION:

Did the telltale illuminate? YES NO

 Illumination under 10 seconds. Driving was not required 0 distance

TELLTALE ILLUMINATES WITHIN 20 MINUTES: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (fail)

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

YES 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? YES NO (fail)

**DATA SHEET 3 (Sheet 11 of 11)
TPMS OPERATIONAL PERFORMANCE**

SCENARIO C – Left Front, Left Rear, Right Front, Right Rear Tire Deflation

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? YES NO (fail)

TIRE INFLATION PRESSURES AND TEMPERATURES AFTER TELLTALE ILLUMINATION:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
After vehicle cool down period: Ambient Temperature: <u>25.7°C (78.3°F)</u> Vehicle cool down period: <u>63</u> minutes				
Inflation Pressure	142.7 kPa (20.7 psi)	142.5 kPa (20.7 psi)	145.0 kPa (21.0 psi)	142.7 kPa (20.7 psi)
Tire Sidewall Temp	25.8°C (78.4°F)	26.6°C (79.9°F)	26.6°C (79.9°F)	26.6°C (79.9°F)
San Angelo Test Facility Shop Floor Temp	23.8°C (74.8°F)	24.2°C (75.6°F)	24.2°C (75.6°F)	24.4°C (75.9°F)

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? YES NO (fail)

TELLTALE EXTINGUISHMENT:

RE-ADJUSTED TIRE INFLATION PRESSURES:

Execution Procedure	LF Tire	LR Tire	RF Tire	RR Tire
After cool down period; Re-adjusted Inflation Pressure:	210.0 kPa (30.5 psi)	209.9 kPa (30.4 psi)	210.0 kPa (30.5 psi)	210.2 kPa (30.5 psi)

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

TEST RESULTS

TPMS Performance Test Results (PASS/FAIL)

PASS

The left front, left rear, right front, and right rear tires were deflated.

REMARKS: None

RECORDED BY: David K. Banks

DATE: April 26, 2006

APPROVED BY: Kenneth H. Yates

DATA SHEET 4 (Sheet 1 of 1)
MALFUNCTION DETECTION TEST

NOTE: Malfunction detection tests were not attempted. The FMVSS 138 malfunction performance requirements do not become effective until September 1, 2007.

DATA SHEET 5 (Sheet 2 of 2)
TPMS WRITTEN INSTRUCTIONS

The following statement, in the English language, is provided verbatim in the Owner's Manual. YES NO

[The following paragraph 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. *[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.] *[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.] 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."

DATA INDICATES COMPLIANCE: PASS/FAIL

PASS/FAIL: N/A

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: Because the FMVSS 138 malfunction performance requirements do not become effective until September 1, 2007, the owner's manual statements were not required to exactly match those above.

RECORDED BY: R.N. Gregg

DATE: April 26, 2006

APPROVED BY: Kenneth H. Yates

SECTION 4

INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

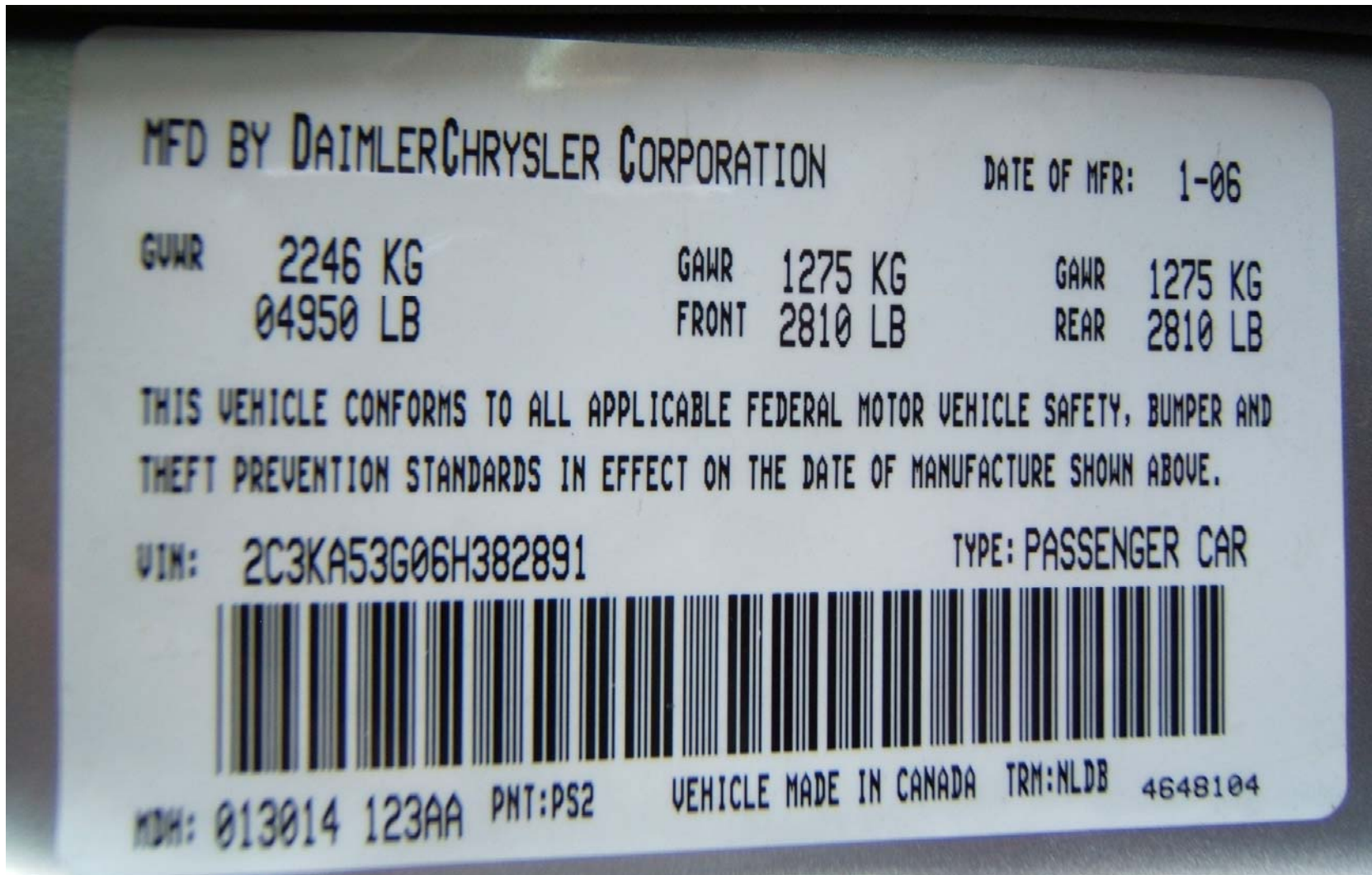
EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO	CAL. DATE	NEXT CAL. DATE
STOPWATCH	WESTCLOX QUARTZ STOPWATCH	NONE	N/A	
V-BOX RECORDING DEVICE	RACELOGIC V-BOX III	SERIAL #030209	2/23/2006	2/23/2007
TEMPERATURE GAUGE, AMBIENT	FLUKE 50D K/J THERMOMETER	SERIAL #80840101	7/7/2005	7/7/2006
TEMPERATURE GAUGE (LASER) - TIRES AND GROUND	RAYNGER ST20 PRO NON- CONTACT INFRARED THERMOMETER	SERIAL #2065640101-0014	9/14/2005	9/14/2006
AIR PRESSURE GAUGE	ASHCROFT GENERAL PURPOSE DIGITAL GAUGE	25C1005 PS02L100-B1 SERIAL #1003098	12/15/2005	12/15/2006
FLOOR SCALES (VEHICLE)	INTERCOMP SW DELUXE SCALES	SERIAL #27032382 PART #100156	9/13/2005	9/13/2006
ASHCROFT MASTER PRESSURE GAUGE	ASHCROFT (KILOPASCALS)	1082/40584	11/2/2005	11/2/2006

SECTION 5
PHOTOGRAPHS



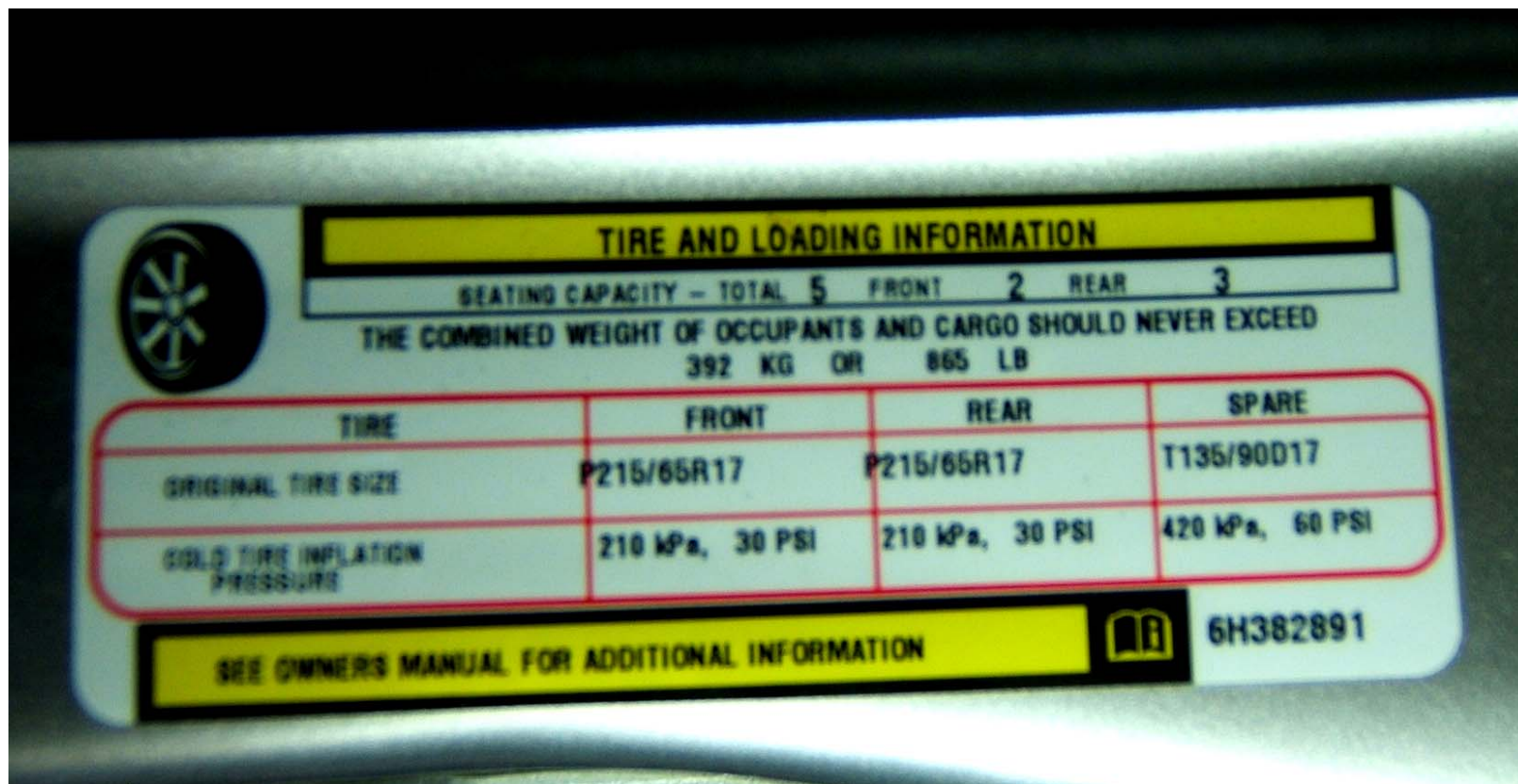
2006 CHRYSLER 300 TOURING
NHTSA NO. C60306
FMVSS NO. 138

FIGURE 5.1
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE



2006 CHRYSLER 300 TOURING
NHTSA NO. C60306
FMVSS NO. 138

FIGURE 5.2
VEHICLE CERTIFICATION LABEL



2006 CHRYSLER 300 TOURING
NHTSA NO. C60306
FMVSS NO. 138

FIGURE 5.3
VEHICLE PLACARD



2006 CHRYSLER 300 TOURING
NHTSA NO. C60306
FMVSS NO. 138

FIGURE 5.4
TIRE SHOWING BRAND



2006 CHRYSLER 300 TOURING
NHTSA NO. C60306
FMVSS NO. 138

FIGURE 5.5
TIRE SHOWING MODEL



2006 CHRYSLER 300 TOURING
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FMVSS NO. 138

FIGURE 5.6
TIRE SHOWING SIZE



2006 CHRYSLER 300 TOURING
NHTSA NO. C60306
FMVSS NO. 138

FIGURE 5.7
TIRE SHOWING SERIAL NUMBER



2006 CHRYSLER 300 TOURING
NHTSA NO. C60306
FMVSS NO. 138

FIGURE 5.8
TIRE SHOWING MAX LOAD RATING



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NHTSA NO. C60306
FMVSS NO. 138

FIGURE 5.9
TIRE SHOWING MAX COLD INFLATION PRESSURE



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FMVSS NO. 138

FIGURE 5.10
TIRE SHOWING SIDEWALL/TREAD CONSTRUCTION



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FIGURE 5.11
RIM SHOWING VALVE STEM



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FMVSS NO. 138

FIGURE 5.12
INSTRUMENT PANEL SHOWING
COMBINATION TIRE PRESSURE
WARNING AND MALFUNCTION TELLTALE



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FMVSS NO. 138

FIGURE 5.13
TEST INSTRUMENTATION MOUNTED ON VEHICLE



2006 CHRYSLER 300 TOURING
NHTSA NO. C60306
FMVSS NO. 138

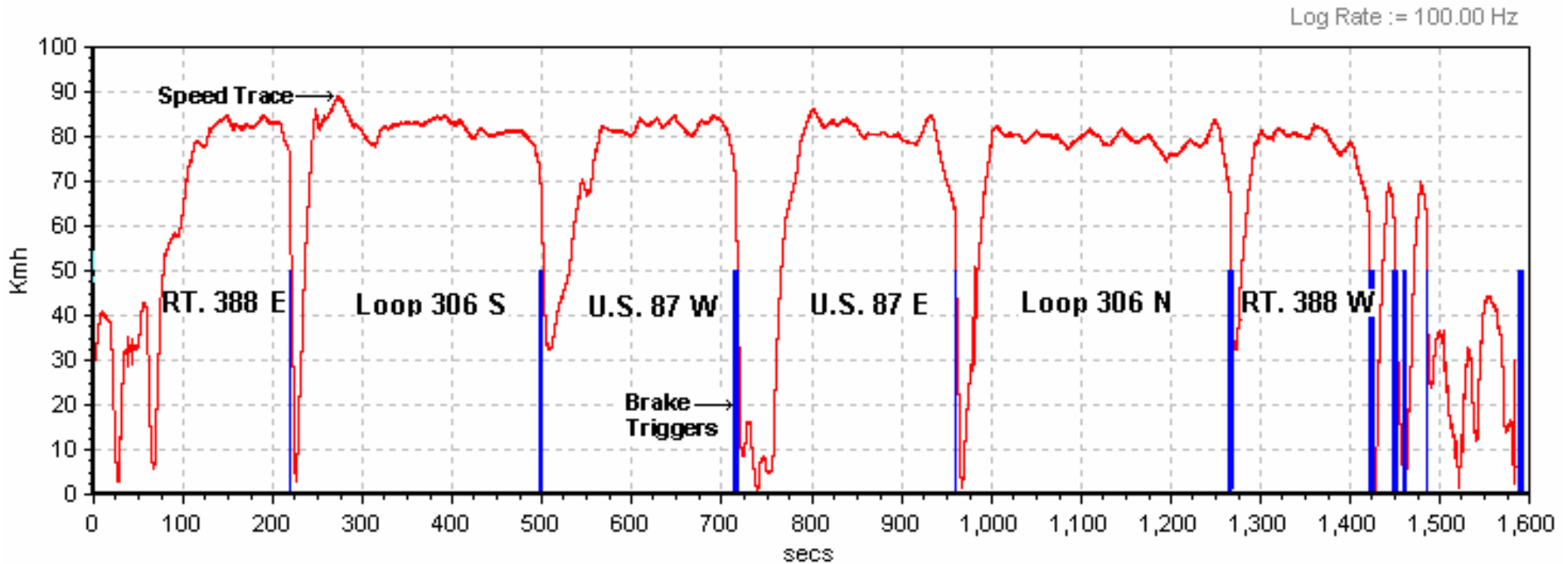
FIGURE 5.14
VEHICLE ON WEIGHT SCALES

SECTION 6
TEST PLOTS

Scenario A: Right Rear Tire
Test Date: 4/26/06
Data File Time: 26:31 minutes
Cumulative Driving Time: 20:20 minutes
Start Point: SATF Shop

Calibration Phase

2006 Chrysler 300 Touring (C60306) RR Calibration UWW, DW, 3 PW, EQW

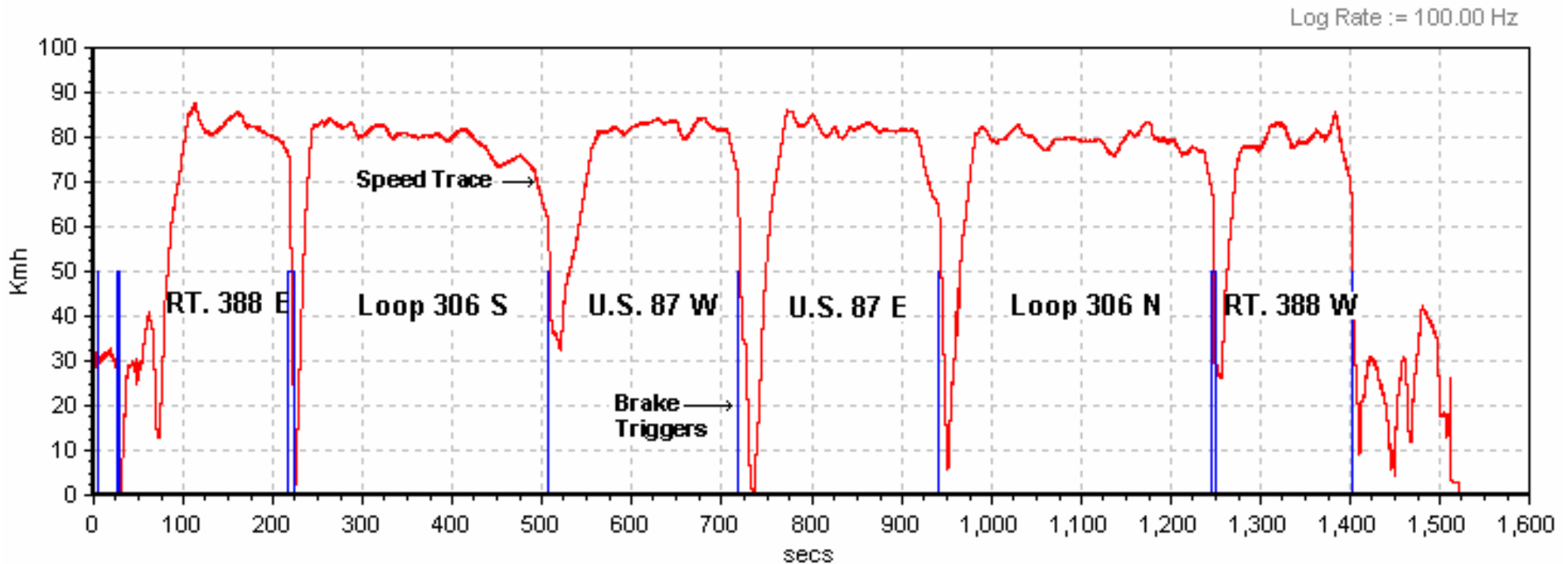


RR Detection Phase: Telltale illuminated upon start-up. Driving was not necessary.

Scenario B: Left Front, Right Front Tires
Test Date: 4/26/06
Data File Time: 25:22 minutes
Cumulative Driving Time: 20:11 minutes
Start Point: SATF Shop

Calibration Phase

2006 Chrysler 300 Touring (C60306) LF, RF Calibration UWW, DW, 3 PW, EQW

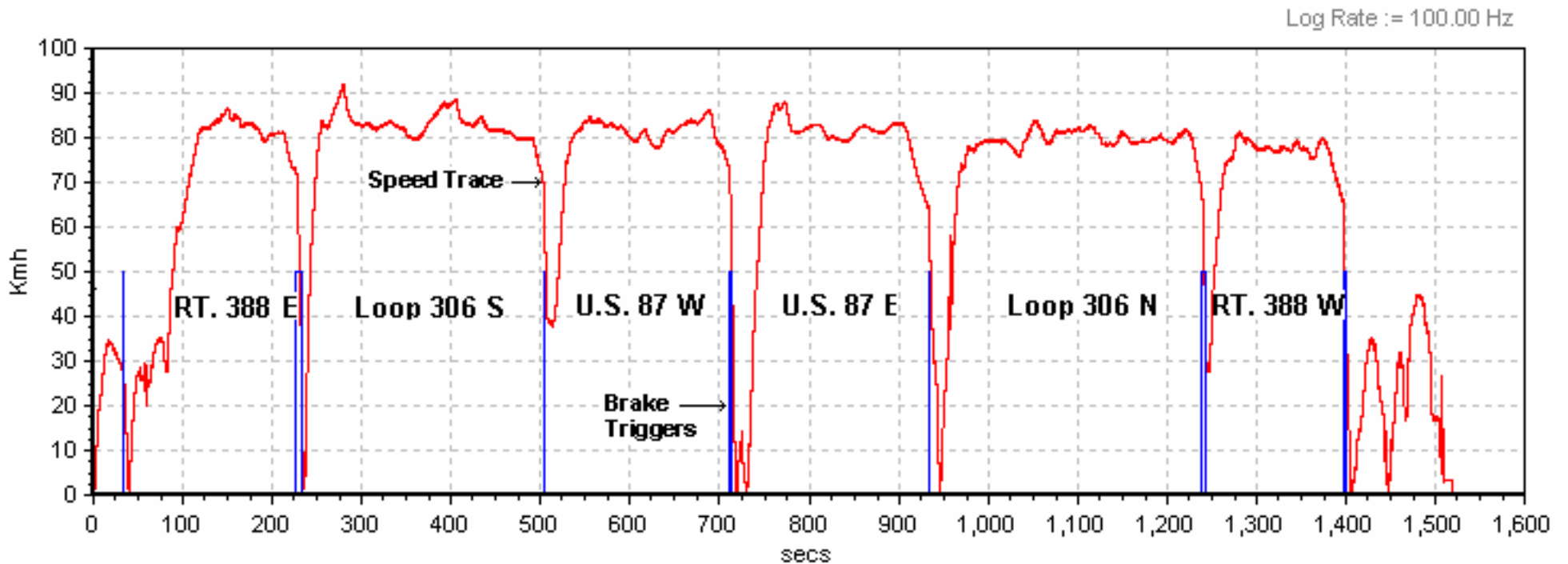


LF, RF Detection Phase: Telltale illuminated upon start-up. Driving was not necessary.

Scenario C: Left Front, Right Front, Left Rear, Right Rear Tires
Test Date: 4/26/06
Data File Time: 25:19 minutes
Cumulative Driving Time: 20:05 minutes
Start Point: SATF Shop

Calibration Phase

2006 Chrysler 300 Touring (C60306) LF, RF, LR, RR Calibration UWW, DW, 3 PW, EQW



LF, RF, LR, RR Detection Phase: Telltale illuminated upon start-up. Driving was not necessary.