

120-TRC-04-004

**SAFETY COMPLIANCE TESTING FOR FMVSS 120
Tire Selection and Rims
for Motor Vehicles Other Than Passenger Cars**

Ford Motor Corporation
2004 Ford Freestar
NHTSA No. C40203

TRANSPORTATION RESEARCH CENTER INC.
10820 State Route 347
East Liberty, Ohio 43319



Final Report Completed: March 30, 2004

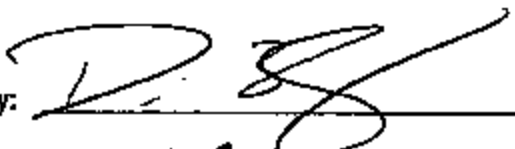
FINAL REPORT

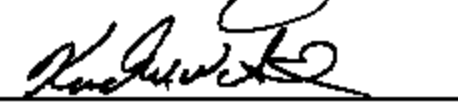
Prepared Under Contract No.: DTNH22-01-C-21025

**U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Enforcement
Office of Vehicle Safety Compliance
400 Seventh Street, SW
Room 6111 (NVS-220)
Washington, DC 20590**

Prepared for the Department of Transportation, National Highway Traffic Safety Administration,
under Contract No. DTNH22-01-C-21025.

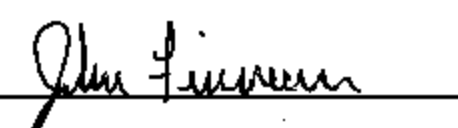
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Prepared By: 

Approved By: 

Approval Date: March 30, 2004

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: 

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TECHNICAL REPORT STANDARD TITLE PAGE

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7. Author(s) Jeff Sankey, Project Manager Dennis Grisez, Project Engineer		8. Performing Organization Report No. TRC-DOT-120-4-004	
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12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Enforcement Office of Vehicle Safety Compliance (NVS-220) 400 Seventh Street, SW, Room 6111 Washington, D.C. 20590		13. Type of Report and Period Covered Final test report March 3, 2004 to March 30, 2004	
		14. Sponsoring Agency Code NVS-220	
15. Supplementary Notes			
16. Abstract A test was conducted on a MY 2004 Ford Freestar, NHTSA No. C40203, in accordance with FMVSS 120, "Tire selection and rims for vehicles other than passenger cars," and TP-120-03. The vehicle was weighed in the unloaded and fully loaded conditions and its tires, rims, and related information were checked. Test failures identified were as follows: Vehicle certification and tire information label does not contain rim size information. No other label with that information can be found on the vehicle.			
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1.0 PURPOSE OF COMPLIANCE TEST

The purpose of this test report is to document the results of tests performed on an MY 2004 Ford Freestar in accordance with the requirements stated in Federal Motor Vehicle Safety Standard (FMVSS) 120, "Tire Selection and Rims for Motor Vehicles Other Than Passenger Cars."

This standard establishes requirements to ensure that applicable vehicles are equipped with tires of adequate size and load rating and rims of appropriate size and type designation.

2.0 TEST PROCEDURE AND DISCUSSION OF RESULTS

Testing of the MY 2004 Ford Freestar was conducted at Transportation Research Center Inc. (TRC Inc.) in accordance with NHTSA TP-120-03, dated April 10, 2000. The vehicle mounted tires and rims were surveyed to ensure that the rims were suitable for the tires and that the tires inflated to the maximum inflation pressure stated on the tire sidewall were appropriate for the vehicle's certified Gross Axle Weight Ratings (GAWR). The vehicle certification and tire information labeling was surveyed to ensure that the vehicle manufacturer's recommended rims were suitable for the recommended tires, and that the recommended tires inflated to the recommended inflation pressures stated on the labeling were appropriate for the vehicle's certified GAWRs. The vehicle was ballasted with weight to simulate first, the vehicle loaded with seven occupants, and second, the vehicle loaded to the vehicle's certified Gross Vehicle Weight Rating (GVWR), to determine if axle or tire overloading could occur.

The vehicle tires and rims appear to be suitable and appropriate to carry vehicle loads as required by FMVSS 120. The vehicle certification and tire information label does not specify an appropriate rim size designation as required.

3.0 COMPLIANCE TEST DATA

FMVSS No. 120 – TEST DATA SUMMARY

Test Laboratory: Transportation Research Center ; Contract No.: DTNH22-01-C-21025

Vehicle Make/Model: Ford Freestar ; Model Year: 2004

NHTSA No.: C40203 ; VIN: 2FMZA50624BA08509 ; Vehicle Type: MPV

Incomplete Veh. Make/Model: Not applicable

Designated Seating Capacity: 7 ; Engine Size: 3.9L

Dealer Installed Optional Accessories: N/A

REQUIREMENTS	PASS/FAIL
TIRE AND RIM SELECTION (S5.1)	
Installed tires and rims are suitable for vehicle	PASS
RIM MARKING (S5.2)	
Rims contain all required markings of proper dimensions	PASS
LABEL INFORMATION (5.3)	
Vehicle has proper certification/tire information label	FAIL
Label tires at recommended inflation pressure and rims are suitable for vehicle	FAIL
WEIGHT DISTRIBUTION (49 CFR 567 Certification)	
Vehicle loaded with occupants and cargo does not exceed GVWR	PASS
RESULTS:	
Test data indicates compliance with FMVSS 120	FAIL

REMARKS:

Rim Size is not listed on vehicle certification and tire information label. Supplemental tire label located inside fuel door lists tire size and inflation pressure only. No separate label containing rim size can be located..

3.0 COMPLIANCE TEST DATA

FMVSS 120 – DATA SHEET 1 (1 of 2)

Vehicle Make/Model: Ford Freestar

NHTSA No.: C40203; Test Date: March 3, 2004

Tire Type: Passenger Car- X; Other- _____

Are the tire and rim sizes the same for all axles, including the spare? No

Does the tire size fitted to the axles appear on the certification or tire label? Yes

Describe if "No": _____

Number of axles: 2; Dual tires on rear axle(s)? No

TIRE DATA FROM SIDEWALL		
	RIGHT FRONT	SPARE
Manufacturer	Michelin	Maxxis
Brand	Symmetry	Spare Tire
Tire size	P225/60R16	T145/90R16
Maximum Tire Load Rating (KG)	730	950
De-rated* Tire Load Rating (KG)	664	864
Maximum Inflation Pressure (KPA)	240	420
Tire has DOT symbol? (Yes/No)	Yes	Yes
DOT serial number	DOT APX0 089X 3503	DOT UY3L ABC 1503

* If a passenger car tire is installed on a multipurpose passenger vehicle (MPV), truck or bus, the tire's load rating shall be reduced by dividing by 1.10.

MOUNTED TIRE VS. AXLE RATING COMPARISON (at sidewall maximum inflation pressure)		
	FRONT AXLE	REAR AXLE
A. GAWR (KG) from certification label	1322	1251
B. (No. of tires) x (de-rated tire load rating (KG) from above table)	1328	1328
Is "B" equal to or greater than "A" ? (Yes/No)	Yes	Yes

3.0 COMPLIANCE TEST DATA

FMVSS 120 – DATA SHEET 1 (2 of 2)

RIM MARKINGS	RIGHT FRONT	SPARE
	T	T
A. Source of published dimensions (letter designation)	T	T
B. Rim size	16X6 1/2 J	16X4T
C. Does rim contain DOT symbol? (Yes/No)	Yes	Yes
D. Manufacturer's name, symbol or trademark (copy format)	Ford oval logo and ACCURIDE	Ford oval logo and ACCURIDE
E. Date of manufacture or symbol	06 23 03	09 11 03
Do items A-C appear on weather side of rim? (Yes/No)	Yes	Yes
Letter height (not less than 3mm)	Yes	Yes
Lettering (Impressed or embossed)	Impressed	Impressed
Are all rim markings legible? (Yes/No)	Yes	Yes
Do all markings comply with requirements? (Yes/No)	Yes	Yes
Rims are suitable for tires on vehicle? (Yes/No)	Yes	Yes

RIM MEASUREMENTS	RIGHT FRONT	SPARE
Rim width (mm)	165	102
Rim diameter (mm)	406	406
Rim measurements same as rim markings? (Yes/No)	Yes	Yes

TEST RESULTS (Pass/Fail): Pass

REMARKS:

Right rear tire DOT Serial Number: DOT APX0 089X 3503
Left front tire DOT Serial Number: DOT APX0 089X 3503
Left rear tire DOT Serial Number: DOT APX0 089X 3503

RECORDED BY: [Signature]; DATE: 3/3/04

APPROVED BY: [Signature]; DATE: 3/29/04

3.0 COMPLIANCE TEST DATA

FMVSS NO. 120 – DATA SHEET 2 (1 of 2)

Vehicle Make/Model: Ford Freestar

NHTSA No.: C40203; Test Date: March 3, 2004

Label Design: Combined Certification and Tire Label Yes

Separate Tire Information Label Yes

Label is in English (Yes/No) Yes

Block capital letters and numbers are not less than
2.4 mm in height (Yes/No) Yes

Location of Label(s) on the vehicle: Driver's side door jamb and inside fuel door.

TIRE AND RIM DATA FROM LABEL (for each GAWR/GVWR)		
GVWR: <u>2567</u> KG	FRONT AXLE	REAR AXLE
Tire size	P225/60R16	P225/60R16
Rim size	Not Shown (See Remarks)	Not Shown (See Remarks)
Recommended inflation pressure (KPA)	240	240
* Are labeled rims suitable for labeled tires? (Yes/No)	Not Available (See Remarks)	Not Available (See Remarks)
* Referenced load rating at label recommended inflation pressure (KG)	730	730
** De-rated tire load rating (KG)	664	664

* Referenced source for tire/rim match and load rating data: 2004 Yearbook – The Tire and Rim Association, Inc.

** If a passenger car tire is installed on a multipurpose passenger vehicle (MPV), truck or bus, the tire's load rating shall be reduced by dividing by 1.10.

3.0 COMPLIANCE TEST DATA

FMVSS No. 120 – DATA SHEET 2 (2 of 2)

CERTIFICATION/TIRE LABEL MAXIMUM CAPACITY COMPARISON		
GVWR: <u>2567</u> KG	FRONT AXLE	REAR AXLE
A. GAWR (KG) from certification label	C. <u>1322</u>	D. <u>1251</u>
B. (No. of tires) x (*Tire load rating (KG))	1328	1328
Is "B" equal to or greater than "A" ? (Yes/No)	Yes	Yes
Is "C" plus "D" equal to or greater than GVWR?	Yes	

*From tire load rating on previous page.

TEST RESULTS (Pass/Fail): Fail

REMARKS: Rim Size is not listed on vehicle certification and tire information label. Supplemental tire label located inside fuel door lists tire size and inflation pressure only. No separate label containing rim size can be located.

RECORDED BY: ; DATE: 3/3/04
APPROVED BY: ; DATE: 3/29/04

3.0 COMPLIANCE TEST DATA

FMVSS NO. 120 – DATA SHEET 3 (1 of 2)

Vehicle Make/Model: Ford Freestar

NHTSA No.: C40203; Test Date: March 4, 2004

Full Fluid levels:

Fuel Full; Coolant Full; Other Fluids Full

Tire pressures: LF 240 KPA (35 PSI) RF 240 KPA (35 PSI)
LR 240 KPA (35 PSI) RR 240 KPA (35 PSI)

Total Occupant Load: 476 KG (7 adult occupants)

[# of designated seating positions x 68 KG per adult]

Manufacturer's Rated Cargo Load: See REMARKS

Certified GVWR - Measured UVW - Total Occupant Load = Rated Cargo Load

2567 KG - 1930 KG - 476 KG = 161 KG

Describe placement of cargo: Distributed between rear cargo area (approximately 45 Kg) and the floor ahead of the first row of passenger seats (approximately 116 Kg).

ITEM	Tire or Vehicle Rating* (KG)	CONDITION 1 UVW (KG)		CONDITION 2 Cond. 1 + occupants (KG)		CONDITION 3 Cond. 2 + cargo (KG)	
		Measured	Overload	Measured	Overload	Measured	Overload
Left Front Tire	664	575	NO	637	NO	657	NO
Right Front Tire	664	572	NO	638	NO	659	NO
Front Axle**	1322	1147	NO	1275	NO	1316	NO
Left Rear Tire	664	394	NO	568	NO	628	NO
Right Rear Tire	664	389	NO	562	NO	623	NO
Rear Axle**	1251	783	NO	1130	NO	1251	NO
Total Veh.**	2567	1930	NO	2405	NO	2567	NO

NOTES:

* Vehicle and axle weight ratings (GVWR & GAWR) are located on the vehicle certification label plate. Vehicle tire load ratings are based upon the inflation pressure specified on the certification label plate for each respective axle, as determined from the appropriate tire manufacturer's specification table.

** Measured axle and vehicle loads are determined by summing the respective measured tire loads.

3.0 COMPLIANCE TEST DATA

FMVSS NO. 120 – DATA SHEET 3 (2 of 2)

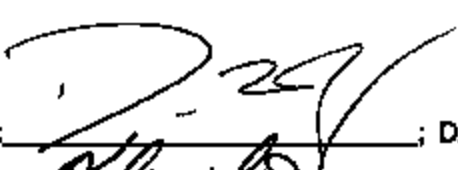
TEST RESULTS (Pass/Fail): Pass

REMARKS:

The vehicle owner's manual discusses vehicle loading in a section entitled "Vehicle Loading – With and Without a Trailer" (refer to Section 7 of this test report). This section contains definitions of GAWR and GVWR and states that these ratings can be found on the Safety Certification Label and that they should never be exceeded. The vehicle certification label does list "Maximum Load = Occupants + Luggage = 554KG/1200LBS."

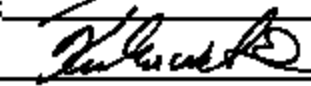
For the maximum load test conducted (condition 3) on the subject vehicle, an occupant and cargo load of 637 kg was used to obtain a total vehicle load equal to the vehicle's GVWR. With a full occupant load of 476 kg (7 occupants at 68 kg each), the cargo load was 161 kg. For this loading analysis the cargo load was first distributed evenly in the rear cargo area that resulted in a rear axle overload of 73 kg and a left rear tire overload of 1 kg. To eliminate the rear axle and left rear tire overload condition, 116 kg of the 161 kg cargo load was re-distributed to the floor around the second row of vehicle seats directly behind the driver and front passenger seating positions.

As mentioned above, for the maximum load test the vehicle was loaded with a total load (occupants and cargo) of 637 kg; however, the consumer, if following the loading information provided on the vehicle certification and tire information label, would not exceed a total load (occupants and cargo) of 554 kg.

RECORDED BY: 

DATE:

3/4/04

APPROVED BY: 

DATE:

3/29/04

4.0 TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

<u>Instrument</u>	<u>Manufacturer</u>	<u>Model/Serial#</u>	<u>Calibration</u>	<u>Next Calibration</u>
Scales	Toledo	5225831-5JC	1-29-04	4-2004
Steel Ruler	GEI	2020A/C8809	3-14-02	3-15-04
Digital InclInometer	Schaevitz	RXS5-70-B	8-21-03	8-23-04

FMVSS 120 - Scale Calibration Sheet



COMPREHENSIVE TEST REPORT

Customer Name	TRC	SERVICE TICKET/WORK ORDER #	163991
Unit location	Bldg 70	Customer ID#	F-R-44
Mfg/Model #	M.T. JAS EX 17 MC	Serial #	5225831-SJC
Capacity	2500 kg ☐ lb ☒	Number of divisions	5000
		Division Size	0.5

The weighing equipment noted on this report has been tested and/or calibrated in compliance with Mettler Toledo procedure VP00231R, and NIST Handbook 44 and/or Canada Standard where applicable.

SHIFT TEST Weights applied: 1000 Max. Permissible Error: ± 2

As Found			
2	1000.5	3	1000.5
1	1000.5	4	1000.5

As Left			
2	N/A	3	
1		4	

In tolerance without adjustment ☒

In tolerance after adjustment ☐

Out of tolerance ☐

Test Load	Weights applied	As found reading	Error: plus or minus (d)	Allowable error (d)	As left reading	Within Tolerance Y/N
Zero	0	0	0	± 1	N/A	Y ☒ N ☐
	250	250.0	0	± 1		Y ☒ N ☐
	500	500.5	+1	± 2		Y ☒ N ☐
	1000	1000.5	+1	± 2		Y ☒ N ☐
Max Load*	1500	1500.5	+1	± 3		Y ☒ N ☐
						Y ☒ N ☐
						Y ☒ N ☐
						Y ☒ N ☐
Zero	0	0	0	± 1		Y ☒ N ☐

* Maximum load used in test

In tolerance without adjustment ☐

REMARKS:			
WEIGHT IDENTIFICATION NUMBERS: <u>SIL500-506, 3 AND MI-MID</u>			
Weight Traceability Certificate #	<u>2002-348-576</u>	CUSTOMER CALIBRATION DATE	<u>1/29/04</u>
PERFORMED BY:	<u>Thomas R Knipp</u>	CUSTOMER CALIBRATION DUE: <u>4/2004</u>	
	Technician Name (Please Print)	Technician Signature <u>TSR/K</u>	
167mm Applicable:	Customer Name (Please Print)	Customer Signature	

FMVSS 120 - Scale Calibration Sheet



COMPREHENSIVE TEST REPORT

Customer Name	TRC	SERVICE TICKET/WORK ORDER #	163991
Unit location	BIDG 70	Customer ID#	R-RCAR
Mfg/Model #	M.T. JAGUAR	Serial #	5225831-5JC
Capacity	2500 kg ☐ 1000 ☒	Number of divisions	5000
		Division Size	0.5

The weighing equipment noted on this report has been tested and/or calibrated in compliance with Mettler Toledo procedure VP0023IR, and NIST Handbook 44 and/or Canada Standard where applicable.

SHIFT TEST

Weights applied: 1000

Max. Permissible Error: ± 2

As Found	
1000.0	1000.0
1000.0	999.5

As Left	
N/A	

In tolerance without adjustment ☒

In tolerance after adjustment ☐

Out of tolerance ☐

Test Load	Weights applied	As found reading	Error: plus or minus (d)	Allowable error (d)	As left reading	Within Tolerance Y/N
Zero	0	0	0	± 1	N/A	Y ☒ N ☐
	250	250.0	0	± 1		Y ☒ N ☐
	500	500.0	0	± 2		Y ☒ N ☐
	1000	1000.0	0	± 2		Y ☒ N ☐
Max Load*	1500	1500.0	0	± 3		Y ☒ N ☐
						Y ☒ N ☐
						Y ☒ N ☐
						Y ☒ N ☐
Zero	0	0	0	± 1		Y ☒ N ☐

* Maximum load used in test

In tolerance without adjustment ☒

REMARKS:			
WEIGHT IDENTIFICATION NUMBERS: 5WS00-506.3 AND M1-M10			
Weight Traceability Certificate #:	2602-348-576	CUSTOMER CALIBRATION DATE:	1/24/07
		CUSTOMER CALIBRATION DUE:	9/7/07
PERFORMED BY:	THOMAS R KNIPP	TS & K	
	Technician Name (Please Print)	Technician Signature	
Where Applicable:	Customer Name (Please Print)	Customer Signature	

FMVSS 120 - Scale Calibration Sheet

METTLER TOLEDO

COMPREHENSIVE TEST REPORT

Customer Name	TRC	SERVICE TICKET/ WORK ORDER #	163991
Unit location	BIDG 70	Customer ID#	112120
Mfg/Model #	M.T. J192AR	Serial #	5225831-556
Capacity	250 kg ☒ 100 ☒	Number of divisions	5000
		Division Size	0.5

The weighing equipment noted on this report has been tested and/or calibrated in compliance with Mettler Toledo procedure VP00231R, and NIST Handbook 44 and/or Canada Standard where applicable.

SHIFT TEST

Weights applied: 1000

Max. Permissible Error: ± 2

As Found	
1001.0	1001.0
1000.5	1000.5

As Left	
N/A	N/A

In tolerance without adjustment ☒

In tolerance after adjustment ☐

Out of tolerance ☐

Test Load	Weights applied	As found reading	Error: plus or minus (d)	Allowable error (d)	As left reading	Within Tolerance Y/N
Zero	0	0	0	± 1	N/A	Y ☒ N ☐
	250	250.0	0	± 1		Y ☒ N ☐
	500	500.5	+1	± 2		Y ☒ N ☐
	1000	1001.0	+2	± 2		Y ☒ N ☐
Max Load*	1500	1501.0	+2	± 3		Y ☒ N ☐
						Y ☒ N ☐
						Y ☒ N ☐
						Y ☒ N ☐
Zero	0	0	0	± 1		Y ☒ N ☐

* Maximum load used in test

In tolerance without adjustment ☒

REMARKS:			
WEIGHT IDENTIFICATION NUMBERS: SW500-506, 3 + M1-M10			
Weight Traceability Certificate #:	2002-3484576	CUSTOMER CALIBRATION DATE:	4/2/04
PERFORMED BY:	Thomas R. Knapp	Technician Signature	
		Customer Signature	

FMVSS 120 - Scale Calibration

METTLER TOLEDO

COMPREHENSIVE TEST REPORT

Customer Name	TRC		SERVICE TICKET/WORK ORDER #	163991	
Unit location	BIDG 70		Customer ID#	LEFT FRONT	
Mfg/Model #	MT-JA; EX41MC		Serial #	5225831-5JC	
Capacity	2500 kg ☐ lb ☒	Number of divisions	5000	Division Size	0.5

The weighing equipment noted on this report has been tested and/or calibrated in compliance with Mettler Toledo procedure VP0023IR, and NIST Handbook 44 and/or Canada Standard where applicable.

SHIFT TEST

Weights applied: 1000 Max. Permissible Error: ±2

As Found			
1000.0	1000.0	1000.5	1000.5
J	J	J	J

As Left			
N/A	N/A	N/A	N/A
J	J	J	J

In tolerance without adjustment ☒

In tolerance after adjustment ☐

Out of tolerance ☐

Test Load	Weights applied	As found reading	Error: plus or minus (d)	Allowable error (d)	As left reading	Within Tolerance Y/N
Zero	0	0	0	±1	N/A	Y ☒ N ☐
	250	250.0	0	±1		Y ☒ N ☐
	500	500.0	0	±2		Y ☒ N ☐
	1000	1000.0	0	±2		Y ☒ N ☐
Max Load*	1500	1500.0	0	±3		Y ☒ N ☐
						Y ☒ N ☐
						Y ☒ N ☐
						Y ☒ N ☐
Zero	0	0	0	±1		Y ☒ N ☐

* Maximum load used in test

In tolerance without adjustment ☒

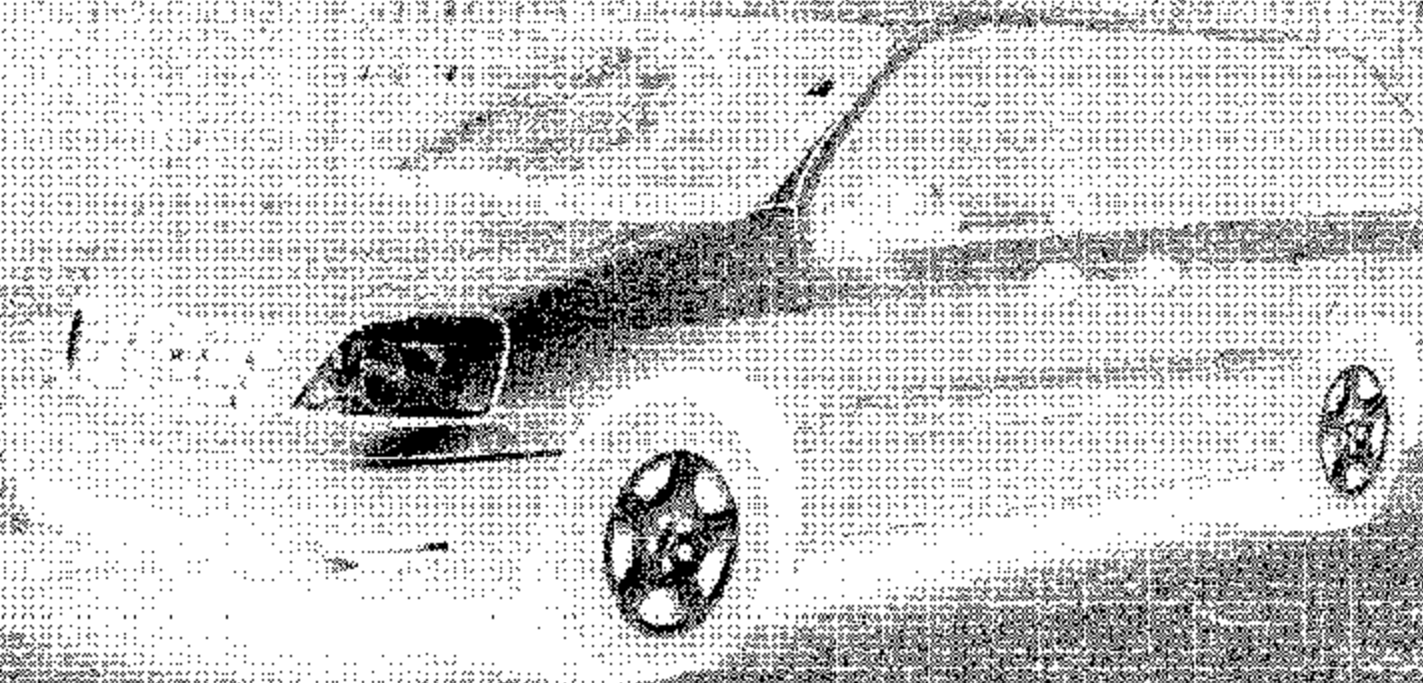
REMARKS:			
WEIGHT IDENTIFICATION NUMBERS: SW 500-506.3 + M1-M10			
Weight Traceability Certificate #:	2002-248+576	CUSTOMER CALIBRATION DATE:	11/24/04
PERFORMED BY:	THOMAS R KNIPP	TECHNICIAN SIGNATURE:	TSR
Customer Name (Please Print):		Customer Signature:	

5.0 PHOTOGRAPHS

- 1. 3/4 Frontal View From Left Side of Vehicle**
- 2. 3/4 Rear View From Right Side of Vehicle**
- 3. Vehicle Certification Label**
- 4. Supplemental Tire Information Label**
- 5. Right Front Tire Serial Number**
- 6. Right Front Tire Load Ratings**
- 7. Right Front Tire Size Designation**
- 8. Right Front Tire Markings**
- 9. Right Front Rim Markings**
- 10. Right Front Rim Markings**
- 11. TRC Weight Scales**
- 12. Simulated Occupant Loading**
- 13. Simulated Occupant Loading**
- 14. Simulated Cargo Loading**
- 15. Simulated Cargo Loading**

2004 FORD
FREESTAR
NHTSA NO. C40203
JANUARY 2004

15



¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE

2004 FORD
FREESTAR
NHTSA NO. C40203
JANUARY 2004

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¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE

MFD. BY FORD MOTOR CO.

DATE 09/03

GWR 2567KG/5650LB

FRONT GAWR 1322KG/2915LB

REAR GAWR 1245KG/2740LB

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR
VEHICLE SAFETY AND THEFT PREVENTION STANDARDS

IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VIN 2FMZA30624BA08509 TYPE MPV

MAXIMUM LOAD = OCCUPANTS + LUGGAGE = 544KG/1200LB

OCCUPANTS = 7 ADULTS

2 FRONT, 2 2ND, 3 REAR

TIRE P225/60R16

PRESSURE FR 240

PSI/35

PSI CORR

PRESSURE RE 240

PSI/35

PSI CORR



2FMZA30624BA08509

MAXIMUM LOAD = 544KG/1200LB

REAR 1000

2004 FORD FREESTAR VIN 2FMZA30624BA08509

2004 FORD
FREESTAR
NHTSA NO. C40203
JANUARY 2004



P225/60R16

A08509



240 kPa
35 PSI

240 kPa
35 PSI

SUPPLEMENTAL TIRE INFORMATION LABEL

2004 FORD
FREESTAR
NHTSA NO. C40203
JANUARY 2004

19

RIGHT FRONT TIRE SERIAL NUMBER

2004 FORD
FREESTAR
NHTSA NO. C40203
JANUARY 2004

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RIGHT FRONT TIRE LOAD RATINGS

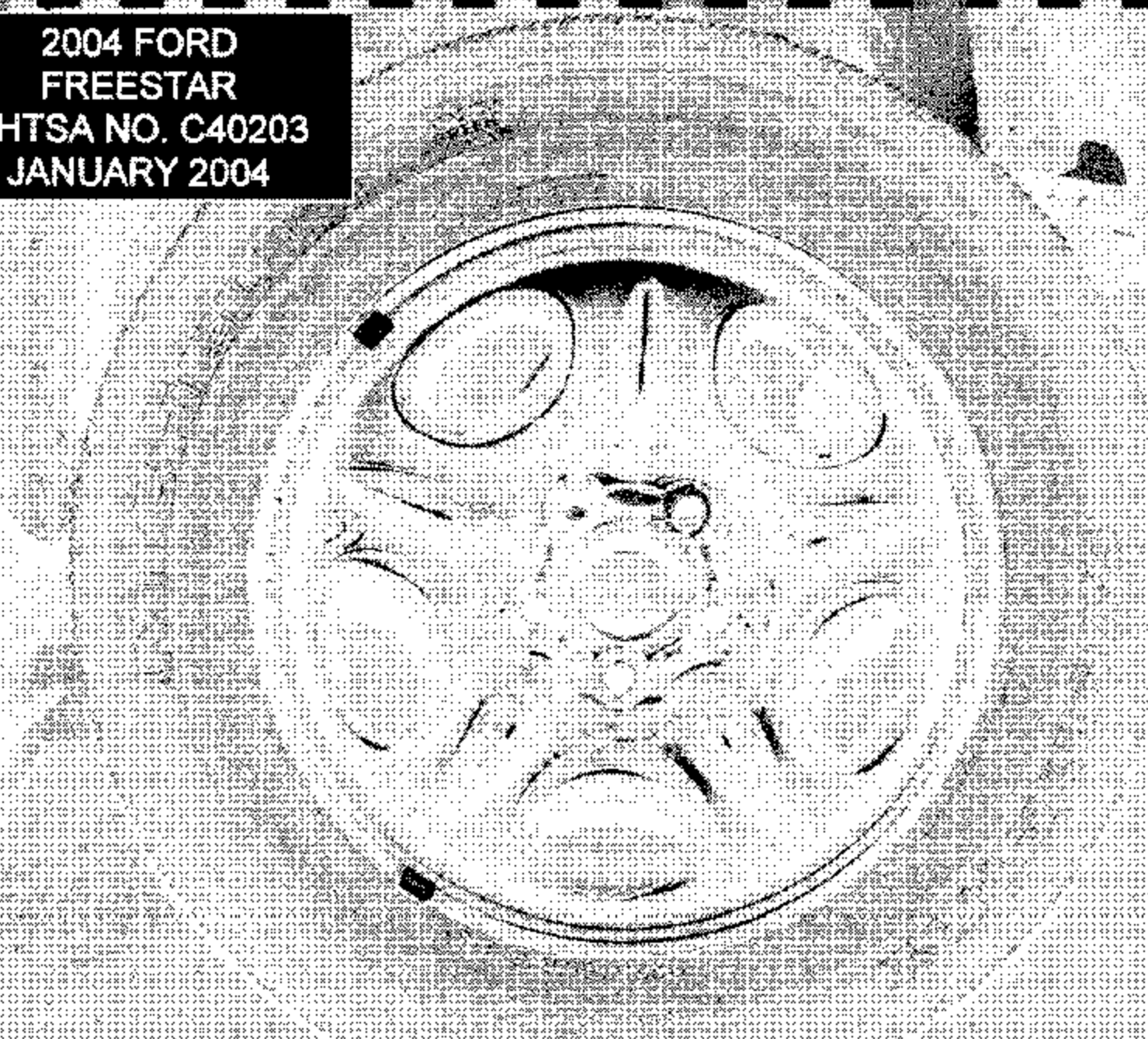
2004 FORD
FREESTAR
NHTSA NO. C40203
JANUARY 2004

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RIGHT FRONT TIRE SIZE DESIGNATION

2004 FORD
FREESTAR
NHTSA NO. C40203
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RIGHT FRONT TIRE MARKINGS

2004 FORD
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RIGHT FRONT RIM MARKINGS

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RIGHT FRONT RIM MARKINGS

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TRC WEIGHT SCALES

2004 FORD
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SIMULATED OCCUPANT LOADING

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SIMULATED OCCUPANT LOADING

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SIMULATED CARGO LOADING

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SIMULATED CARGO LOADING

6.0 NOTICE OF TEST FAILURE

LABORATORY NOTICE OF TEST FAILURE TO OVSC

FMVSS NO.: 120

TEST DATE: March 3, 2004

LABORATORY: Transportation Research Center Inc.

CONTRACT NO.: DTNH22-01-C-21025

DELV. ORDER NO.: 11

LABORATORY PROJECT ENGINEER'S NAME: Dennis Grisez

TEST VEHICLE MODEL YEAR/MAKE/MODEL/BODY STYLE: 2004 Ford Freestar MPV

VEHICLE NHTSA NO.: C40203

VIN: 2FMZA50624BA08509

MFR: Ford Motor Co.

BUILD DATE: 9/03

TEST FAILURE DESCRIPTION: Vehicle certification label does not contain rim size information. No other label with that information can be found on the vehicle, nor does the owner's manual contain rim size information.

FMVSS REQUIREMENT, PARAGRAPH S5.3.2

NOTIFICATION TO NHTSA (COTR):

DATE: March 8, 2004

BY: Dennis Grisez

REMARKS: Initial written notice given by email March 3, 2004.

7.0 APPLICABLE PAGES OF OWNERS MANUAL

Driving

OFF indicator remains illuminated when the system is disabled. If the indicator light illuminates when the RSS is not turned off, it may indicate a failure in the RSS.

The system defaults to **enabled** every time the ignition is turned on. Press the control to disable or enable the system.

Keep the RSS sensors (located on the rear bumper/fascia) free from snow, ice and large accumulations of dirt (do not clean the sensors with sharp objects). If the sensors are covered, it will affect the accuracy of the RSS.

If your vehicle sustains damage to the rear bumper/fascia, leaving it misaligned or bent, the sensing zone may be altered causing inaccurate measurement of obstacles or false alarms.

DRIVING THROUGH WATER

If driving through deep or standing water is unavoidable, proceed very slowly especially if the depth is not known. Never drive through water that is higher than the bottom of the hubs (for trucks) or the bottom of the wheel rims (for cars). Traction or brake capability may be limited and your vehicle may stall. Water may also enter your engine's air intake and severely damage your engine.

Once through the water, always dry the brakes by moving your vehicle slowly while applying light pressure on the brake pedal. Wet brakes do not stop the vehicle as quickly as dry brakes. **Driving through deep water where the transmission vent tube is submerged may allow water into the transmission and cause internal transmission damage.**

VEHICLE LOADING - WITH AND WITHOUT A TRAILER

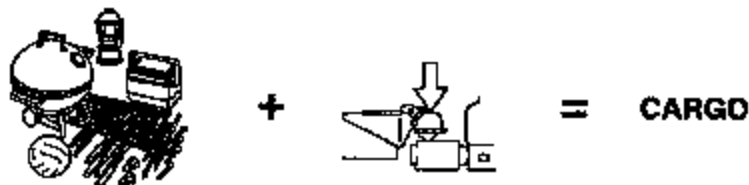
This section will guide you in the proper loading of your vehicle and/or trailer, to keep your loaded vehicle weight within its design rating capability, with or without a trailer. Properly loading your vehicle will provide maximum return of vehicle design performance. Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's Safety Certification Label and Tire and Load Information Label:

Base Curb Weight - is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.

Vehicle Curb Weight - is the weight of your new vehicle when you picked it up from your dealer plus any aftermarket equipment.

6.0 APPLICABLE PAGES OF OWNERS MANUAL

Driving



Cargo Weight – Includes all weight added to the Base Curb Weight, including cargo and optional equipment. When towing, trailer tongue load or king pin weight is also part of cargo weight.

GAW (Gross Axle Weight) – is the total weight placed on each axle (front and rear) – including vehicle curb weight and all payload.

GAWR (Gross Axle Weight Rating) – is the maximum allowable weight that can be carried by a single axle (front or rear). **These numbers are shown on the Safety Compliance Certification Label located on the driver's door or door pillar. The total load on each axle must never exceed its GAWR.**

 Exceeding the Safety Certification Label axle weight rating limits could result in substandard vehicle handling, performance, engine, transmission and/or structural damage, serious damage to the vehicle, loss of control and personal injury.

Note: For trailer towing information refer to *Trailer Towing* found in this chapter or the RV and Trailer Towing Guide provided by your dealership.



GVW (Gross Vehicle Weight) – is the Vehicle Curb Weight + cargo + passengers.

6.0 APPLICABLE PAGES OF OWNERS MANUAL

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GVWR (Gross Vehicle Weight Rating) – is the maximum allowable weight of the fully loaded vehicle (including all options, equipment, passengers and cargo). The GVWR is shown on the Safety Compliance Certification Label located on the driver's door or door pillar. The GVW must never exceed the GVWR.

[illegible]

▲ Ignoring the safety termination label(s) could result in such a vehicle handling, performance, engine, transmission and/or structural damage, serious damage to the vehicle, loss of control and personal injury.



GCW (Gross Combined Weight) – is the weight of the loaded vehicle (GVW) plus the weight of the fully loaded trailer.

GCWR (Gross Combined Weight Rating) – is the maximum allowable weight of the vehicle and the loaded trailer – including all cargo and passengers – that the vehicle can handle without risking damage. (Important: The towing vehicle's braking system is rated for operation at GVWR, not at GCWR. Separate functional brakes should be used for safe control of towed vehicles and for trailers weighing more than 680 kg [1,500 lbs]). **The GCW must never exceed the GCWR.**