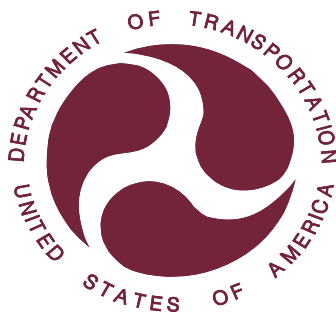


REPORT NUMBER 110-STF-11-006

# SAFETY COMPLIANCE TESTING FOR FMVSS NO. 110 TIRE SELECTION AND RIMS

FUJI HEAVY INDUSTRIES LTD  
2011 SUBARU FORESTER MPV  
NHTSA NO. CB5500

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



August 23, 2011

FINAL REPORT

PREPARED FOR

U. S. DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
ENFORCEMENT  
NVS-220  
OFFICE OF VEHICLE SAFETY COMPLIANCE  
1200 NEW JERSEY AVENUE, SE  
WASHINGTON, D.C. 20590

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Technical Report Documentation Page

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## SECTION 1

### INTRODUCTION

#### 1.1 PURPOSE OF COMPLIANCE TEST

A 2011 Subaru Forester MPV was tested to determine if the vehicle was in compliance with the requirements of FMVSS 110. All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure, TP-110T-02, dated August 31, 2007.

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. This standard also establishes location, content, and format requirements for the Vehicle Placard and optional Tire Inflation Pressure Label.

#### 1.2 TEST VEHICLE

The test vehicle was a 2011 Subaru Forester MPV. Nomenclatures applicable to the test vehicle are:

A. Vehicle Identification Number: JF2SHBBC7BG708309

B. NHTSA Number: CB5500

C. Manufacturer: Fuji Heavy Industries Ltd

D. Manufacture Date: 09/2010

#### 1.3 TEST DATE

The test vehicle was tested April 7, 2011.

## SECTION 2

### TEST PROCEDURE AND SUMMARY OF RESULTS

#### 2.1 TEST PROCEDURE

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. Pertinent information from the tire and rim was photographed.

Subsequent events included weighing the vehicle to establish delivered Unloaded Vehicle Weight and the distribution of weight on the front and rear axles and each wheel position. The vehicle was ballasted to its Normal Load, Full Occupant Load, and Maximum Vehicle Load weight. At each step of the ballasting procedure, data was recorded. Ballast was photographically documented for Normal, Full, and Maximum Vehicle Load weight. The vehicle maximum load on each wheel was measured. Data from each tire furnished with the vehicle were recorded. Tire size information was taken from vehicle certification label and vehicle placard. The right front wheel was removed from the vehicle and the tire was dismounted from the rim. The rim was measured from flange to flange, and rim markings were photographically documented. The owner's manual was checked for all required information on tire loading, and on general tire and loading parameters.

#### 2.2 SUMMARY OF RESULTS

The Subaru Forester MPV test vehicle appears to be in compliance with all FMVSS 110 requirements tested.

SECTION 3

TEST DATA

## DATA SUMMARY SHEET (1 of 2)

VEHICLE MAKE/MODEL/BODY STYLE: 2011 Subaru Forester MPV

VEHICLE NHTSA NUMBER: CB5500 VIN: JF2SHBBC7BG708309

VEHICLE TYPE: MPV DATE OF MANUFACTURE: 09/2010

LABORATORY: U.S. DOT San Angelo Test Facility

### LIGHT TRUCK TYPE REQUIREMENTS

**PASS/FAIL**

#### General (Data Sheet 2)

The vehicle must be equipped with tires that meet the requirements of S139. (S110, S4.1)

PASS

#### Tire Load Limits (Data Sheet 2)

The sum of the maximum load ratings of the tires fitted to an axle is not less than the gross axle weight rating (GAWR) of the axle system as specified on the certification label. When passenger car tires are installed, each tire's load rating is reduced by dividing it by 1.10 before determining the sum of the maximum load ratings of the tires fitted to an axle. (S110, S4.2.2.1, S4.2.2.2)

PASS

When passenger car tires are installed, the vehicle normal load on the tire is not greater than the value of 94 percent of the de-rated load rating at the vehicle manufacturer's recommended cold inflation pressure for that tire. When LT tires are installed, the vehicle normal load on the tire is not greater than the value of 94 percent of the load rating at the vehicle manufacturer's recommended cold inflation pressure for that tire. (S110, S4.2.2.3(a), (b))

PASS

#### Rim (Data Sheet 3)

Each rim is constructed to the dimensions of a rim referred to in FMVSS 139 that is listed by the manufacturer of the tires as suitable for use with those tires. (S110, S4.4.1(a))

PASS

Each rim is properly marked. (S110, S4.4.2)

PASS

Vehicle rims retain deflated tires during a controlled braking application. (S110, S4.4.1(b))

See  
Remarks



## DATA SUMMARY SHEET (2 of 2)

### **Certification, Placard, and Tire Inflation Pressure Labels** (Data Sheet 4)

The placard and tire inflation pressure label (if provided) are affixed and located correctly, and display the information and format required. (S110, S4.3)

PASS

The Part 567 certification label shows the size designation of the tires and rims appropriate for the vehicle including the tire size(s) listed on the vehicle placard and, if provided, tire inflation pressure label. (S110, S4.3.3)

PASS

No inflation pressure other than the maximum permissible inflation pressure is shown on the placard and, if any, tire inflation pressure label unless as required. (S110, S4.3.4)

PASS

### **Vehicle Weight Distribution** (Data Sheet 5)

The Gross Vehicle Weight Rating (GVWR) is not less than the sum of the unloaded vehicle weight, rated cargo load, and 68 kg times the vehicle's designated seating capacity. However, for school buses, the minimum occupant weight allowance is 54 kg. (49 CFR 567, *Certification*)

PASS

### **Owner's Manual** (Data Sheet 6)

Owner's manual or other document has discussion of Vehicle Placard, Loading and Tires. (575.6(a)(4))

PASS

Owner's manual includes exact statement relating to "Steps for Determining Correct Load Limits". (575.6(a)(5))

PASS

REMARKS: The rim retention test required by FMVSS No.110, paragraph S4.4.1(b) was not executed on the subject Subaru Forester.

RECORDED BY: Todd P. Groghan

DATE: April 7, 2011

APPROVED BY: Kenneth H. Yates

**DATA SHEET 1**  
**TEST VEHICLE INFORMATION / RECEIVING INSPECTION**

VEHICLE MAKE/MODEL/BODY STYLE: 2011 Subaru Forester MPV

VEHICLE NHTSA NUMBER: CB5500 TEST DATE: April 7, 2011

VIN: JF2SHBBC7BG708309 MANUFACTURE DATE: 09/2010

GVWR: 2,035 kg (4,480 lbs) GAWR (front): 1,050 kg (2,310 lbs)

GAWR (rear): 1,095 kg (2,410 lbs)

SEATING POSITIONS: FRONT 2 SECOND 3 THIRD N/A

ODOMETER READING AT START OF TEST: 216 km (134 mi)

ENGINE DATA: 4 Cylinders 2.5 Liters        Cubic Inches

TRANSMISSION DATA:        Automatic X Manual 5 No. of Speeds

FINAL DRIVE DATA:        Rear Drive        Front Drive X All Wheel Drive

**CHECK APPROPRIATE BOXES FOR INSTALLED VEHICLE EQUIPMENT:**

<input checked="" type="checkbox"/>	Air Conditioning	<input checked="" type="checkbox"/>	Traction Control	<input checked="" type="checkbox"/>	Clock
<input type="checkbox"/>	Tinted Glass	<input checked="" type="checkbox"/>	Tachometer	<input checked="" type="checkbox"/>	Roof Rack
<input checked="" type="checkbox"/>	Power Steering	<input checked="" type="checkbox"/>	Cruise Control	<input checked="" type="checkbox"/>	Console
<input checked="" type="checkbox"/>	Power Windows	<input checked="" type="checkbox"/>	Rear Window Defroster	<input checked="" type="checkbox"/>	Driver Air Bag
<input checked="" type="checkbox"/>	Power Door Locks	<input type="checkbox"/>	Sun Roof or T-Top	<input checked="" type="checkbox"/>	Passenger Air Bag
<input type="checkbox"/>	Power Seat(s)	<input checked="" type="checkbox"/>	Tilt Steering Wheel	<input checked="" type="checkbox"/>	Side Curtain Air Bag(s)
<input checked="" type="checkbox"/>	Power Brakes	<input checked="" type="checkbox"/>	Stereo	<input checked="" type="checkbox"/>	Front Disc Brakes
<input checked="" type="checkbox"/>	Antilock Brake System	<input type="checkbox"/>	Telephone	<input checked="" type="checkbox"/>	Rear Disc Brakes
<input type="checkbox"/>	Navigation System	<input type="checkbox"/>	Trailer Hitch	<input type="checkbox"/>	Other -

REMARKS: None

RECORDED BY: Todd P. Groghan DATE: April 7, 2011

APPROVED BY: Kenneth H. Yates

**DATA SHEET 2 (1 of 2)**  
**VEHICLE TIRE IDENTIFICATION AND LOAD LIMITS**

VEHICLE MAKE/MODEL/BODY STYLE: 2011 Subaru Forester MPV

VEHICLE NHTSA NUMBER: CB5500 VIN: JF2SHBBC7BG708309

LABORATORY: U.S. DOT San Angelo Test Facility TEST DATE: April 7, 2011

All tires on the vehicle (excluding the spare) are the same make and model: ( X ) YES ( ) NO

All tires on the vehicle (excluding the spare) are the same size: ( X ) YES ( ) NO

Spare tire is the same size as all other tires: ( ) YES ( X ) NO

<b>Tire Sidewall</b>	<b>Right Front</b>	<b>Left Rear</b> (If different)	<b>Spare Tire</b> (If different)
Manufacturer and Model	<u>Bridgestone Dueler H/T 687</u>	<u></u>	<u>Bridgestone Tracomp-2</u>
Tire Size Designation	<u>P215/65R16</u>	<u></u>	<u>T155/70D17</u>
Load Index/Speed Symbol	<u>96H</u>	<u></u>	<u>110M</u>
Maximum Inflation Pressure	<u>300 kPa (44 psi)</u>	<u></u>	<u>420 kPa/60 psi</u>
Maximum Load Rating	<u>710 kg (1,565 lbs)</u>	<u></u>	<u>1,060 kg (2,337 lbs)</u>
Tread/Traction/Temperature	<u>300/B/A</u>	<u></u>	<u></u>
Tires Have "DOT" Markings	<u>Yes</u>	<u></u>	<u>Yes</u>

Serial Number: Right Front EMHBDML3710 Left Front EMHBDML3710  
Right Rear EMHBDML3710 Left Rear EMHBDML3710  
Spare EHV0BEB3410

**DATA SHEET 2 (2 of 2)**  
**VEHICLE TIRE IDENTIFICATION AND LOAD LIMITS**

MOUNTED TIRE VS. AXLE RATING COMPARISON (at sidewall maximum inflation pressure)		
	FRONT AXLE	REAR AXLE
A. GAWR from certification label	1,050 kg (2,310 lbs)	1,095 kg (2,410 lbs)
B. Tire Maximum Load Rating from above	710 kg (1,565 lbs)	710 kg (1,565 lbs)
C. Reduced tire load rating if applicable*	645 kg (1,423 lbs)	645 kg (1,423 lbs)
D. (No. of tires) x (Tire load rating de-rated if appropriate )	1,290 kg (2,846 lbs)	1,290 kg (2,846 lbs)
Is "D" equal to or greater than "A"? (Yes/No)	Yes	Yes

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

DATA INDICATES COMPLIANCE:

PASS/FAIL: PASS

REMARKS: None

RECORDED BY: Todd P. Groghan

DATE: April 7, 2011

APPROVED BY: Kenneth H. Yates

**DATA SHEET 3  
VEHICLE RIM IDENTIFICATION**

VEHICLE MAKE/MODEL/BODY STYLE: 2011 Subaru Forester MPV

VEHICLE NHTSA NUMBER: CB5500 VIN: JF2SHBBC7BG708309

LABORATORY: U.S. DOT San Angelo Test Facility TEST DATE: April 7, 2011

<b>Rim Markings</b>	<b>RIGHT FRONT</b>	<b>LEFT REAR (if different)</b>
A. Source of published dimensions (letter designation)	J	
B. Rim Size Designation	16X6½J	
C. Does rim contain DOT symbol? (Yes/No)	Yes	
D. Manufacturer's name, symbol or trademark (copy format)	ENKEI	
E. Date of manufacture or symbol (copy format)	SEP. 23. 2010 08:47	
F. Letter height (not less than 3 mm)	5 mm	
G. Lettering (impressed or embossed)	Embossed	
H. Are all rim markings legible? (Yes/No)	Yes	
Do items A-C appear on weather side of rim (Yes/No)	Yes	
Do all markings comply with requirements (Yes/No)	Yes	

<b>Rim Measurements</b>	<b>RIGHT FRONT</b>	<b>LEFT REAR (If different)</b>
Rim width	16.5 cm (6.5 in)	
Rim diameter	40.6 cm (16 in)	
Rim measurements same as rim markings?	Yes	

Rims are suitable for tires on vehicle? ( X )YES ( ) NO

Reference source used for tire/rim match verification:  
2010 Tire and Rim Association Yearbook

DATA INDICATES COMPLIANCE:

PASS/FAIL: PASS

REMARKS: None

RECORDED BY: Todd P. Groghan

DATE: April 7, 2011

APPROVED BY: Kenneth H. Yates

**DATA SHEET 4 (1 of 3)**  
**VEHICLE PLACARD AND TIRE INFLATION PRESSURE LABEL**

VEHICLE MAKE/MODEL/BODY STYLE: 2011 Subaru Forester MPV

VEHICLE NHTSA NUMBER: CB5500 VIN: JF2SHBBC7BG708309

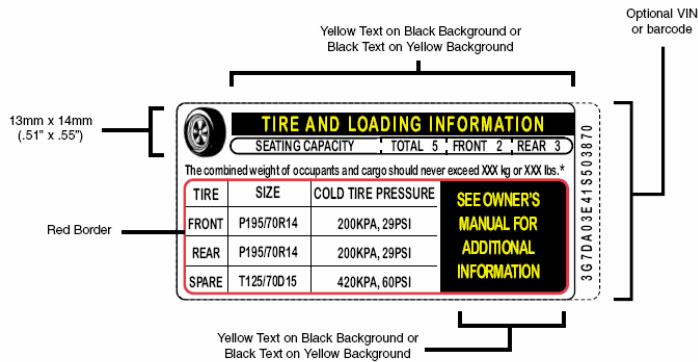
LABORATORY: U.S. DOT San Angelo Test Facility TEST DATE: April 7, 2011

**Identification of Vehicle Labeling**

	(Yes/No)	Location	PASS/FAIL
1. Certification Label*	<u>Yes</u>	<u>Driver's side door jamb</u>	<u>PASS</u>
2. Vehicle Placard*	<u>Yes</u>	<u>Driver's door B-pillar</u>	<u>PASS</u>
3. Tire Inflation Pressure Label*	<u>No</u>	<u></u>	<u></u>

\* Labels must be located as specified in section 12.4 of test procedure.

**Vehicle Placard**



**FIGURE 1**  
**(70 FR 14425)**

**Vehicle Placard** has the exact color and format as specified in the above Figure 1 and text is in English language. ( X ) YES ( ) NO

**Vehicle Placard** and, if provided, **Tire Inflation Pressure Label** are permanently affixed. ( X ) YES ( ) NO

**DATA SHEET 4 (2 of 3)**  
**VEHICLE PLACARD AND TIRE INFLATION PRESSURE LABEL**

**Vehicle Placard Information:**

Combined weight of occupants and cargo 408 kg (900 lbs)

Seating Capacity: Total 5 ; Front 2 ; Rear 3

Is the number of belted seating positions the same as the labeled seating capacity? ( X ) YES ( ) NO

Is the tire size and pressure provided? ( X ) YES ( ) NO

**Tire Information:**

Tire Size: Front P215/65R16 ; Rear P215/65R16

Tire Inflation Pressure: Front 210 kPa (30 psi) ; Rear 200 kPa (29 psi)

Are the sizes of the installed tires the same as the sizes of the labeled tires? ( X ) YES ( ) NO

Is the labeled cold tire inflation pressure equal to or less than the sidewall labeled maximum cold tire inflation pressure?

Front axle: ( X ) YES ( ) NO Rear axle: ( X ) YES ( ) NO

**Vehicle Certification Label information:**

	Tire Size	Rim Size Designation	Rim Suitable for Tire?*
Front Axle	<u>P215/65R16</u>	<u>16x6½J</u>	<u>Yes</u>
Rear Axle	<u>P215/65R16</u>	<u>16x6½J</u>	<u>Yes</u>

\*Referenced source used for tire/rim match verification:  
2010 Tire and Rim Association Yearbook

**DATA SHEET 4 (3 of 3)**  
**VEHICLE PLACARD AND TIRE INFLATION PRESSURE LABEL**

Is (Are) tire size(s) listed on the vehicle placard and/or tire inflation pressure label also listed on the certification label with suitable rim size? ( X ) YES ( ) NO

LABELED TIRE CAPACITY AT SPECIFIED PRESSURE		
GVWR <u>2,035 kg (4,480 lbs)</u>	FRONT AXLE	REAR AXLE
A. GAWR from certification label	1,050 kg (2,310 lbs)	1,095 kg (2,410 lbs)
B. Tire load rating of labeled tire size at labeled inflation pressure*	673 kg (1,483 lbs)	655 kg (1,444 lbs)
C. Reduced tire load rating if applicable**	612 kg (1,348 lbs)	595 kg (1,313 lbs)
D. (No. of tires) x (Tire load rating de-rated if appropriate )	1,224 kg (2,696 lbs)	1,190 kg (2,626 lbs)
Is "D" equal to or greater than "A"?	Yes	Yes

\*Reference source used for determining load rating:  
2010 Tire and Rim Association Yearbook

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

DATA INDICATES COMPLIANCE:

PASS/FAIL: PASS

REMARKS: None

RECORDED BY: Todd P. Groghan

DATE: April 7, 2011

APPROVED BY: Kenneth H. Yates



**DATA SHEET 5 (1 of 6)**  
**CURB WEIGHT, NORMAL AND FULL LOADS WEIGHT & MAXIMUM VEHICLE WEIGHT**

VEHICLE MAKE/MODEL/BODY STYLE: 2011 Subaru Forester MPV

VEHICLE NHTSA NUMBER: CB5500 VIN: JF2SHBBC7BG708309

LABORATORY: U.S. DOT San Angelo Test Facility TEST DATE: April 7, 2011

Full Fluid Levels: Fuel Full Coolant Full Other Fluids\* Full

\* Engine oil, transmission, windshield washer, brake, and clutch fluids

Tire Pressures: LF 210 kPa (30 psi) LR 200 kPa (29 psi)  
(cold, prior to loading vehicle) RF 210 kPa (30 psi) RR 200 kPa (29 psi)

**A. MEASURED CURB WEIGHT WITH INSTALLED OPTIONS AND ACCESSORIES**

Measured Unloaded Vehicle Weight

LF	<u>404 kg (890 lb)</u>	LR	<u>332 kg (731 lb)</u>
RF	<u>397 kg (876 lb)</u>	RR	<u>315 kg (695 lb)</u>
Front Axle	<u>801 kg (1,766 lb)</u>	Rear Axle	<u>647 kg (1,426 lb)</u>
Total Vehicle Weight		<u>1,448 kg (3,192 lb)</u>	

**DATA SHEET 5 (2 of 6)**  
**CURB WEIGHT, NORMAL AND FULL LOADS WEIGHT & MAXIMUM VEHICLE WEIGHT**

**B. MEASURED VEHICLE NORMAL LOAD WEIGHT**

- (1) Seating Capacity from Vehicle Placard =   5
- (2) Normal Load Number of Occupants   3    
Occupant Distribution:     Front Seat   2       Second Seat   1
- (3) Total Normal Occupant Load   204 kg (450 lb)    
[# of occupants x 68 KG per occupant]
- (4) Measured Normal Load on Axles
  - LF   445 kg (981 lb)                        LR   392 kg (865 lb)
  - RF   438 kg (966 lb)                        RR   377 kg (830 lb)
  - Front Axle   883 kg (1,947 lb)              Rear Axle   769 kg (1,695 lb)
  - Total Vehicle Weight   1,652 kg (3,642 lb)

**DATA SHEET 5 (3 of 6)**  
**CURB WEIGHT, NORMAL AND FULL LOADS WEIGHT & MAXIMUM VEHICLE WEIGHT**

(5) Calculated Vehicle Normal Load on the Tire

Front Tires [measured front axle normal load/2] = 442 kg (974 lbs)

Rear Tires [measured rear axle normal load/2] = 385 kg (848 lbs)

(6) Measured Normal Load on Tire vs. Value of 94% of Load Rating for that Tire at Specified Pressure

MEASURED NORMAL LOAD ON TIRE VS. VALUE OF 94% OF LOAD RATING FOR THAT TIRE AT SPECIFIED PRESSURE		
	FRONT AXLE	REAR AXLE
A. Calculated Vehicle Normal Load on the Tire from (5)	442 kg (974 lbs)	385 kg (848 lbs)
B. Tire load rating of installed tire size at recommended inflation pressure*	673 kg (1,483 lbs)	655 kg (1,444 lbs)
C. Adjusted Load Rating	612 kg (1,348 lbs)	595 kg (1,313 lbs)
D. 94% of tire load rating, (de-rated if appropriate)**	575 kg (1,267 lbs)	559 kg (1,234 lbs)
Is "D" equal to or greater than "A"?	Yes	Yes

\*Reference source used for tire/rim match verification:  
2010 Tire and Rim Association Yearbook

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

Vehicle Normal Load on the tire is not greater than 94% of the Recommended Cold Inflation Load Rating.

	PASS/FAIL
Front Tires	<u>PASS</u>
Rear Tires	<u>PASS</u>

**DATA SHEET 5 (4 of 6)**  
**CURB WEIGHT, NORMAL AND FULL LOADS WEIGHT & MAXIMUM VEHICLE WEIGHT**

**C. MEASURED VEHICLE WEIGHT WITH FULL OCCUPANT LOAD**

Seating Capacity: Total 5; Front 2; Second 3

Full Occupant Load 340 kg (750 lbs)

[# of occupants x 68 KG per adult occupant and 54 KG per student occupant]

LF	<u>456 kg (1,006 lb)</u>	LR	<u>449 kg (991 lb)</u>
RF	<u>448 kg (987 lb)</u>	RR	<u>435 kg (958 lb)</u>
Front Axle	<u>904 kg (1,993 lb)</u>	Rear Axle	<u>884 kg (1,949 lb)</u>
Total Vehicle Weight <u>1,788 kg (3,942 lb)</u>			

**D. MEASURED MAXIMUM VEHICLE LOAD WEIGHT**

(1) Vehicle Capacity Weight (from placard) 408 kg (900 lbs)

(2) Full Occupant Load (from above) 340 kg (750 lbs)

(3) Luggage/Cargo Load (subtract (2) from (1)) 68 kg (150 lbs)

(4) Measured Vehicle Maximum Load on Axles

LF	<u>454 kg (1,001 lb)</u>	LR	<u>486 kg (1,072 lb)</u>
RF	<u>442 kg (974 lb)</u>	RR	<u>474 kg (1,045 lb)</u>
Front Axle	<u>896 kg (1,975 lb)</u>	Rear Axle	<u>960 kg (2,117 lb)</u>
Total Vehicle Weight <u>1,856 kg (4,092 lb)</u>			

**DATA SHEET 5 (5 of 6)**  
**VEHICLE WEIGHT DISTRIBUTION**

ITEM	Tire or Vehicle Rating*	Unloaded Vehicle Weight		Vehicle Weight with Normal Occupant Load		Vehicle Weight with Full Occupant Load		Vehicle Maximum Weight with Occupants and Cargo	
		Measured	Over-load	Measured	Over-load	Measured	Over-load	Measured	Over-load
Left Front Tire	611 kg (1,348 lbs)	404 kg (890 lbs)	no	445 kg (981 lbs)	no	456 kg (1,006 lbs)	no	454 kg (1,001 lbs)	no
Right Front Tire	611 kg (1,348 lbs)	397 kg (876 lbs)	no	438 kg (966 lbs)	no	448 kg (987 lbs)	no	442 kg (974 lbs)	no
Front Axle (GAWR)	1,050 kg (2,310 lbs)	801 kg (1,766 lbs)	no	883 kg (1,947 lbs)	no	904 kg (1,993 lbs)	no	896 kg (1,975 lbs)	no
Left Rear Tire	596 kg (1,313 lbs)	332 kg (731 lbs)	no	392 kg (865 lbs)	no	449 kg (991 lbs)	no	486 kg (1,072 lbs)	no
Right Rear Tire	596 kg (1,313 lbs)	315 kg (695 lbs)	no	377 kg (830 lbs)	no	435 kg (958 lbs)	no	474 kg (1,045 lbs)	no
Rear Axle (GAWR)	1,095 kg (2,410 lbs)	647 kg (1,426 lbs)	no	769 kg (1,695 lbs)	no	884 kg (1,949 lbs)	no	960 kg (2,117 lbs)	no
Total Vehicle (GVWR)	2,035 kg (4,480 lbs)	1,448 kg (3,192 lbs)	no	1,652 kg (3,642 lbs)	no	1,788 kg (3,942 lbs)	no	1,856 kg (4,092 lbs)	no

\*Vehicle and axle weight ratings (GVWR & GAWR) are located on the vehicle certification label. Vehicle tire load ratings are based upon the inflation pressure specified on the Vehicle Placard or Tire Inflation Pressure Label for each respective axle, as determined from the appropriate Tire and Rim reference manual. If a passenger car tire is installed on a multipurpose passenger vehicle (TRUCK), truck, or bus, the tire's load rating is reduced by dividing by 1.10

DATA INDICATES COMPLIANCE:

PASS/FAIL: PASS

REMARKS: None

RECORDED BY: Todd P. Groghan

DATE: April 7, 2011

APPROVED BY: Kenneth H. Yates

**DATA SHEET 6 (1 of 2)**  
**OWNER'S MANUAL REQUIREMENTS**

VEHICLE MAKE/MODEL/BODY STYLE: 2011 Subaru Forester MPV

VEHICLE NHTSA NO. CB5500 VIN: JF2SHBBC7BG708309

LABORATORY: U.S. DOT San Angelo Test Facility TEST DATE: April 7, 2011

**Owner's Manual Discusses:**

<b>Part 575.6(a) Paragraph</b>	<b>Required Discussion Topic</b>	<b>Discussed in Manual? (YES/NO)</b>	<b>Page Numbers</b>
(4)(i)	Tire labeling, including a description and explanation of each marking on the tires provided with the vehicle, and information about the location of the Tire Identification Number (TIN).	YES	13-2, 13-3, 13-4
(4)(ii)	(A) Description and explanation of recommended cold tire inflation pressure.	YES	13-5
	(B) Description and explanation of FMVSS 110 Vehicle Placard and Tire Inflation Pressure Label and their location(s).	YES	13-4
	(C) Description and explanation of adverse safety consequences of under-inflation including tire failure.	YES	13-4, 13-5
	(D) Description and explanation for measuring and adjusting air pressure to achieve proper inflation.	YES	13-5
(4)(iii)	Glossary of tire terminology, including "cold tire pressure," maximum inflation pressure," and "recommended inflation pressure," and all non-technical terms defined in S3 of FMVSS 110 & 139.	YES	13-5, 13-6, 13-7, 13-8
(4)(iv)	Tire care, including maintenance and safety practices.	YES	13-9, 13-10
(4)(v)	(A) Description and explanation of locating and understanding load limit information, total load capacity, seating capacity, towing capacity, and cargo capacity.	YES	13-10
	(B) Description and explanation for calculating total and cargo load capacities with varying seating configurations including quantitative examples showing/illustrating how the vehicle's cargo and luggage capacity decreases as the combined number and size of occupants increases.	YES	13-10, 13-11, 13-12, 13-13
	(C) Description and explanation for determining compatibility of tire and vehicle load capabilities.	YES	13-13
	(D) Description and explanation of adverse safety consequences of overloading on handling and stopping and on tires.	YES	13-13

**DATA SHEET 6 (2 of 2)**  
**OWNER'S MANUAL REQUIREMENTS**

The following statement, in the English language, is provided verbatim in the Owner's Manual. Reference Part 575.6(a)(5)                      YES ( X )      NO ( )

**Steps for Determining Correct Load Limit**

- (1) Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
- (2) Determine the combined weight of the driver and passengers that will be riding in your vehicle.
- (3) Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
- (4) The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5x150) = 650 lbs.)
- (5) Determine the combined weight of the luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
- (6) If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

DATA INDICATES COMPLIANCE:

PASS/FAIL: PASS

REMARKS: None

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RECORDED BY: Todd P. Groghan

DATE: April 7, 2011

APPROVED BY: Kenneth H. Yates

## SECTION 4

## TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

<b>EQUIPMENT</b>	<b>DESCRIPTION</b>	<b>MODEL/ SERIAL NO</b>	<b>CAL. DATE</b>	<b>NEXT CAL. DATE</b>
AIR PRESSURE GAUGE	ASHCROFT GENERAL PURPOSE DIGITAL GAUGE	MODEL #D1005PS 02L 100 PSI SERIAL #20017398- 01	12/17/2010	12/17/2011
FLOOR SCALES (VEHICLE)	INTERCOMP SW DELUXE SCALES	PART #100156 SERIAL #27032382	7/21/2010	7/21/2011



SECTION 5  
PHOTOGRAPHS



2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.1  
¾ FRONT VIEW FROM LEFT SIDE OF VEHICLE



2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.2  
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE

MFD BY FUJI HEAVY INDUSTRIES LTD.

MFD IN 09/10

GVWR/PNBV: 4480LB (2035KG)

GAWR/PNBE:FRONT- 2310LB (1050KG) WITH P215/65R16 96H TIRES,  
16X6 1/2J RIMS AT 210 KPA (30 PSI) COLD

GAWR/PNBE:REAR - 2410LB (1095KG) WITH P215/65R16 96H TIRES,  
16X6 1/2J RIMS AT 200 KPA (29 PSI) COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR  
VEHICLE SAFETY AND THEFT PREVENTION STANDARDS IN EFFECT ON  
THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: JF2SHBBC7BG708309



TYPE:MPV/VTUM

ICES/NMB-002



## TIRE AND LOADING INFORMATION

SEATING CAPACITY: TOTAL 5 FRONT 2 REAR 3

The combined weight of occupants and cargo should never exceed 408kg or 900lbs.

TIRE	SIZE	COLD TIRE PRESSURE
FRONT	P215/65R16	210KPA, 30PSI
REAR	P215/65R16	200KPA, 29PSI
SPARE	T155/70D17	420KPA, 60PSI

SEE OWNER'S  
MANUAL FOR  
ADDITIONAL  
INFORMATION

XT



2011 SUBARU FORESTER  
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FIGURE 5.5  
TIRE SHOWING BRAND



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FIGURE 5.6  
TIRE SHOWING MODEL



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FIGURE 5.7  
TIRE SHOWING SIZE, LOAD INDEX, AND SPEED SYMBOL





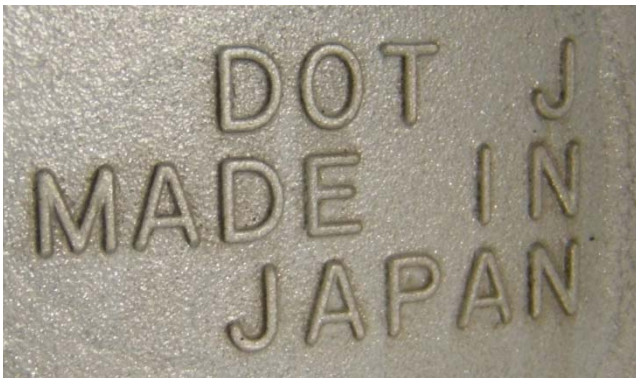
2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.8  
TIRE SHOWING MAX LOAD RATING AND MAX INFLATION PRESSURE



2011 SUBARU FORESTER  
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FIGURE 5.9  
TIRE SHOWING SERIAL NUMBER



2011 SUBARU FORESTER  
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FMVSS NO. 110

FIGURE 5.10  
RIM MARKINGS INCLUDING MANUFACTURE DATE, SIZE, MANUFACTURER'S SYMBOL, DOT SYMBOL,  
LETTER DESIGNATION FOR SOURCE OF PUBLISHED DIMENSIONS,, AND OTHER RIM MARKINGS



2011 SUBARU FORESTER  
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FIGURE 5.11  
OTHER RIM MARKINGS



2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.12  
RIM CONTOUR FOR FULL WIDTH OF CROSS SECTION



2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.13  
VEHICLE FRONT SEAT BALLASTED  
FOR NORMAL, FULL, AND MAXIMUM LOADS



2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.14  
VEHICLE REAR SEAT  
BALLASTED FOR NORMAL LOAD



2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.15  
VEHICLE REAR SEAT BALLASTED  
FOR FULL AND MAXIMUM LOADS





2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.16  
VEHICLE CARGO AREA BALLASTED FOR MAXIMUM LOAD



2011 SUBARU FORESTER  
NHTSA NO. CB5500  
FMVSS NO. 110

FIGURE 5.17  
VEHICLE ON WEIGHT SCALES