

**33.5 MPH RIGHT SIDE IMPACT  
C/FMVSS 301**

**2010 FORD TRANSIT CONNECT XLT WAGON**

**MGA Reference Number: C09C3-030.3**

**Test Date: September 16, 2009**

**Report Date: September 28, 2009**

**PREPARED FOR:  
MOBILITY ALLIANCE**

**PREPARED BY:  
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**SIGNATURE APPROVAL PAGE**

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The results presented in this report relate only to the specified test items.

## TABLE OF CONTENTS

<u>Section</u>		<u>Page No</u>
1	Test Summary	1
2	Occupant and Vehicle Information / Data Sheets	2
<u>Data Sheet No.</u>		<u>Page No.</u>
1	Crash Test Summary	3
2	General Test and Vehicle Parameter Data	4
3	Summary of C/FMVSS 301 Data	5
4	Camera Locations	6
<u>Appendix</u>		
A	Photographs	A

## SECTION 1

### TEST SUMMARY

A 2010 Ford Transit Connect XLT Wagon was impacted by the FMVSS 214 moving deformable barrier at a velocity of 54.4 km/h. The test was performed at MGA Research Corporation on September 16, 2009. Pre-and post-test photographs of the vehicle can be found in Appendix A.

One real-time camera and three high-speed cameras were used to document the impact event. Camera locations and other pertinent camera information can be found in this report.

Two ballast dummies were placed in the driver and right-front passenger seating positions.

There was no Stoddard Solvent leakage after the event or during any phase of the static rollover.

**SECTION 2**  
**OCCUPANT AND VEHICLE INFORMATION / DATA SHEETS**

Test Vehicle: 2010 Ford Transit Connect XLT Wagon      Test Date: 9/16/2009  
 Test Program: 33.5 mph Right Side

**CONVERSION FACTORS USED IN THIS REPORT\***

Quantity	Typical Application	English Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4536
Linear Velocity	Impact Velocity	mile/h	km/h	1.609
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Pressure	Tire Pressure	lbf/in <sup>2</sup>	kPa	7.0
Temperature	General Use	°F	°C	=(tf -32)/1.8
Force	Dynamic Forces	lbf	N	4.448
Moment	Torque	lbf/ft	Nm	1.355

\*Based on the Recommended Practice in SAE J916, May 85

**DATA SHEET NO. 1**  
**CRASH TEST SUMMARY**

Test Vehicle: 2010 Ford Transit Connect XLT Wagon      Test Date: 9/16/2009  
Test Program: 33.5 mph Right Side

**TEST SPEED**

Measured Parameter	Units	Value
Trap No. 1 Velocity (Primary)	km/h	54.4
Trap No. 2 Velocity (Redundant)	km/h	54.4

**FUEL TANK CAPACITY DATA**

The "Usable Capacity" of the standard equipment fuel tank is: 56.8 liters  
Actual amount of Stoddard solvent added to vehicle for certification test: 52.6 liters

**TEST VEHICLE VERTICAL IMPACT LINE DATA**

Measurement Description	Units	Value
Test Vehicle Wheelbase	mm	2924
Test Vehicle Width	mm	1792
Target Impact Point Aft of Front Axle	mm	508
Actual Impact Point Aft of Front Axle	mm	517
Vertical Impact	mm	9 up

**DATA SHEET NO. 2**

**GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle: 2010 Ford Transit Connect XLT Wagon      Test Date: 9/16/2009  
 Test Program: 33.5 mph Right Side

**TEST VEHICLE INFORMATION**

Manufacturer	Ford Motor Company
Model	Transit Connect XLT Wagon
VIN	NM0KS9BN7AT000042
Transmission	Automatic
Final Drive	Front
Number of Cylinders	4
Engine (L)	2.0
Engine Placement	Lateral

**TEST VEHICLE OPTIONS**

Driver Airbag	Yes
Passenger Airbag	Yes
Power Windows	Yes
Power Steering	Yes
Power Door Locks	Yes
Tilt Wheel	Yes
Air Conditioning	Yes
Power Brakes	Yes

**TIRE DATA**

Measured Parameter	Front	Rear
Cold Pressure (kPa)	250	340
Tire Size on Vehicle	P205/65R15	P205/65R15
Tire Manufacturer	Continental	Continental

**TEST VEHICLE WEIGHTS**

	Units	As Delivered (UVW) (Axle)			As Tested (ATW) (Axle)		
		Front	Rear	Total	Front	Rear	Total
Left	kg	440.9	408.7		489.4	516.7	
Right	kg	416.4	403.3		455.0	500.3	
Ratio	%	52.2	47.8		48.1	51.9	
Totals	kg	857.3	812.0	1669.3	944.4	1017.0	1961.4

Vehicle Wheelbase (mm): 2924

Weight of Ballast secured in cargo area (kg): 147.4

**DATA SHEET NO. 3**  
**SUMMARY OF C/FMVSS 301 DATA**

Test Vehicle: 2010 Ford Transit Connect XLT Wagon      Test Date: 9/16/2009  
 Test Program: 33.5 mph Right Side

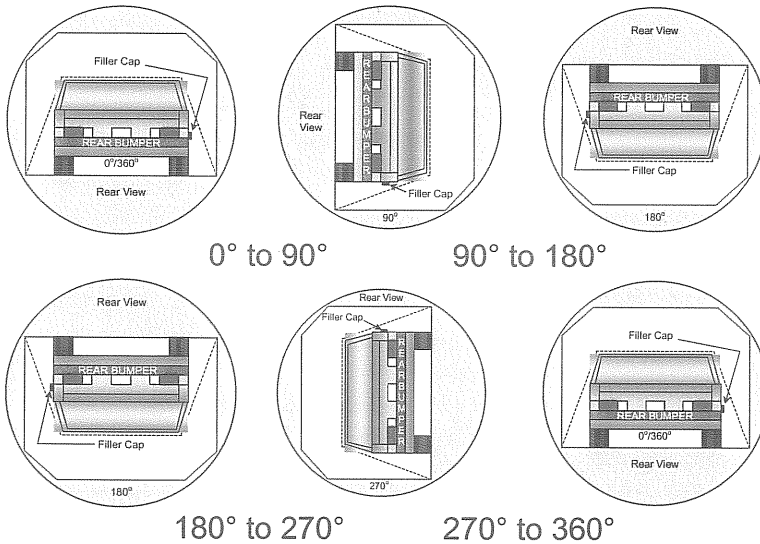
**C/FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA**

Temperature at Time of Impact: 21° C

Stoddard Solvent Spillage Measurements

- A. From impact until vehicle motion ceases: 0 oz.  
 (Maximum Allowable = 1 ounce)
- B. For the 5 minute period after motion ceases: 0 oz.  
 (Maximum Allowable = 5 ounces)
- C. For the following 25 minutes: 0 oz.  
 (Maximum Allowable = 1 oz. /minute)
- D. Spillage: None

**C/FMVSS 301 STATIC ROLLOVER DATA**



1. The specified fixture rollover rate for each 90° of rotation is 60 to 180 seconds.

2. The position hold time at each position is 300 seconds (minimum).

3. Details of Stoddard Solvent spillage locations:  
**None**

Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (oz.)
0° to 90°	117	300	0
90° to 180°	116	300	0
180° to 270°	109	300	0
270° to 360°	114	300	0

**DATA SHEET NO. 4**  
**CAMERA LOCATIONS**

Test Vehicle: 2010 Ford Transit Connect XLT Wagon      Test Date: 9/16/2009  
 Test Program: 33.5 mph Right Side

No.	Camera View	Location (mm) *			Lens (mm)	Speed (fps)
		X	Y	Z		
1	Front Angle	2460	-4130	1240	24	1000
2	Rear Overall	-2840	6520	1315	24	1000
3	Overhead Overall	-1010	990	1845	14	1000
4	Real Time				13	24

\*COORDINATES:

- +X = Rearward of barrier
- +Y = Right of monorail centerline
- +Z = Above ground level