REPORT NO. 207-KAR-06-005A

INDICANT TESTING
FOR FMVSS 210

SEAT BELT ANCHORAGES FOR SIDE FACING SEATS

2006 FORD RANGER
2-DOOR EXTRA CAB TRUCK

NHTSA NO. C60207

PREPARED BY:
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October 23, 2006

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY ASSURANCE
OFFICE OF VEHICLE SAFETY COMPLIANCE
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This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract DTNH22-01-C-31025.

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Technical Report Documentation Page

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15. *Supplementary Notes*			
16. *Abstract* Indicant tests were conducted on the subject 2006 Ford Ranger 2-Door Extra Cab Truck in accordance with the specifications of the Office of Vehicle Safety Compliance. Test failures identified were as follows: None.			
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PURPOSE OF INDICANT TEST

1. PURPOSE OF INDICANT TEST

Tests were conducted on a 2006 Ford Ranger 2-Door Extra Cab Truck, manufactured by Ford Motor Corporation to determine FMVSS 210 indicant data.

All tests were conducted by pulling seat belt anchorages perpendicular to vehicle's centerline. The load was applied using the standard FMVSS 210 pelvic block. The tests were conducted at KARCO Engineering, LLC. Detailed procedures for receiving, inspecting, testing and reporting of test results are described in the test procedures and are not repeated in this report.

This report is organized in sections containing pertinent test information and data tables as follows:

Section 2	-	Indicant Test Procedure and Data Summary
Section 3	-	Indicant Test Data
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SECTION 2

INDICANT TEST PROCEDURE and DATA SUMMARY

2. INDICANT TEST PROCEDURE AND DATA SUMMARY

A 2006 Ford Ranger 2-Door Extra Cab Truck was subjected to FMVSS 210 indicant testing on October 20 thru October 23, 2006. All tests were conducted at KARCO Engineering, LLC in Adelanto, California. Summary data is shown on Data Sheet No. 2. The following tests were performed:

- Receiving inspection
- FMVSS 210 Loads on Rear side facing seats

The tests were conducted per the FMVSS 210 test procedure. The significant aspects of the test procedure are described in the following paragraphs.

2.1 Test Vehicle Inspection. The test vehicle was inspected to verify that all side facing seats, restraint systems and seat belt assembly anchorage systems are complete and working properly.

2.2 Test Vehicle Preparation and Pre-test Measurements. The test vehicle was securely mounted perpendicular to the test fixture and connected to the appropriate number of hydraulic actuators.

2.3 Static Load Tests-General Performance Requirements.

To meet FMVSS 210 requirements, a type 1 seat belt assembly must withstand a 5,000 pound forward load.

SECTION 3

INDIACANT TEST DATA

3. INDICANT TEST DATA

The results of FMVSS 210 indicant tests that were conducted on the 2006 Ford Ranger 2-Door Extra Cab Truck on October 20 thru October 23, 2006 are presented in this section. No performance failures were identified with the vehicle tested.

DATA SHEET NO. 1

TEST VEHICLE RECEIVING INSPECTION

VEHICLE			
YEAR	**2006**	MAKE	**Ford**
MODEL	**Ranger**	BODY STYLE	**2-Door Extra Cab Truck**
NHTSA NO.	**C60207**	VIN	**1FTYR14U56PA17744**
BUILD DATE	**09/05**	TEST DATE	**10/20/06 – 10/23/06**
TEST LABORATORY		**KARCO Engineering, LLC.**	

1. First compliance test by laboratory for this vehicle is S207 test.

   ____ Yes **X** No (Go to item 2)

*	1.1	Label test vehicle with NHTSA Number
*	1.2	Verify all options on the "window sticker" are present on the vehicle
*	1.3	Verify tires and wheel rims are new and the same as listed
*	1.4	Verify there are no dents or other interior or exterior flaws
*	1.5	Verify the glove box contains an owner's manual, warranty document, consumer information, and extra keys
*	1.6	Verify the vehicle is equipped with the proper fuel filler cap
*	1.7	If the vehicle has been delivered from the dealer, verify the vehicle has been properly prepared and is in running condition

2. Verify seat adjusters are working

   X Yes ____ No

3. Verify there is a seat belt at each seating position

   X Yes ____ No

4. Without disturbing the integrity of each seat belt and anchorage, verify that each seat belt is attached to the anchorage. For seat belts that are attached to the seat, also verify the seats are attached to the seat anchors and the seat anchors are attached to the vehicle.

   X Yes ____ No

RESULTS OR RECEIVING INSPECTION:

PASS - - **X**

FAIL - -

CONDITIONAL - -

REMARKS:

* Vehicle had previously been tested to FMVSS 124 and FMVSS 207/210 (Front Seats).

RECORDED BY: **RUPESH B. PATEL** DATE: **10/23/06**

APPROVED BY: **MATTHEW A. IVORY** DATE: **10/23/06**

DATA SHEET NO. 2

SEATING SYSTEM TEST RESULTS

VEHICLE			
YEAR	**2006**	MAKE	**Ford**
MODEL	**Ranger**	BODY STYLE	**2-Door Extra Cab Truck**
NHTSA NO.	**C60207**	VIN	**1FTYR14U56PA17744**
BUILD DATE	**09/05**	TEST DATE	**10/11/06 – 10/17/06**
TEST LABORATORY		**KARCO Engineering, LLC.**	

FOR REAR SIDE FACING SEATS:

	LOAD DIRECTION	REQUIRED LOAD (lbs)	ACTUAL LOAD (lbs)	ATTACHMENT (PASS/FAIL)
Right Rear Side Facing Seat	Forward	**5000**	**4997.0**	**PASS**
Left Rear Side Facing Seat	Forward	**5000**	**4908.0**	**PASS**

DATA SHEET NO. 3

REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING

The following vehicle has been subjected to compliance testing for FMVSS No. **210**

VEHICLE			
NHTSA NO.	**C60207**	TEST DATE	**10/20/06 – 10/23/06**
CONTRACT NO.	**DTNH22-01-C-31025**	VIN	**1FTYR14U56PA17744**
SEAT CONFIGURATION			
VEHICLE OR SEAT MANUFACTURER	**Ford Motor Corporation**		
TEST LABORATORY	**KARCO Engineering, LLC.**		

The vehicle was inspected upon arrival at the laboratory for the test and found to contain all of the equipment listed below. All variances have been reported within 2 working days of vehicle arrival, by letter, to the NHTSA Industrial Property Manager (NAD-30), with a copy to the OVSC COTR. The vehicle is again inspected, after the above test has been conducted, and all changes are noted below. The final condition of the vehicle is also noted in detail.

TEST VEHICLE INFORMATION			
Manufacturer	**Ford Motor Corporation**	VIN	**1FTYR14U56PA17744**
Manufacturing Date	**09/05**	Delivery Date	**09/25/06**
Dealer	**John Nolan Ford**	NHTSA No.	**C60207**
Odometer Reading (mi.)	**262**	Fuel Type	**Gas**
Engine Displacement	**3.6 Liter**	Cylinders	**V6**
Transmission	**3-Speed Automatic**	Final Drive	**Rear**
Engine Placement	**Longitudinal**	Color	**Yellow**
Tire Press./Max. Cap. Front	**44 PSI**	Cold Tire Press. Front	**30 PSI**
Tire Press./Max. Cap. Rear	**44 PSI**	Cold Tire Press. Rear	**30 PSI**
Recommend Tire Size	**P235/70R16**	Type of Spare	**P235/70R16**
Tire Size on Vehicle	**P235/70R16**	Manufacturer	**Continental**
GVWR	**2600 Kg.**	Cargo Capacity	**625**
GAWR Front	**1139 Kg.**	GAWR Rear	**1179 Kg.**
Air Conditioning	**Yes**	Power Steering	**Yes**
Power Brakes	**Yes**	AM/FM/Cassette	**Yes**
Disc Brakes (Front)	**Yes**	Disc Brakes (Rear)	**No**
Power Windows	**No**	Tilt Steering	**Yes**
Anti-lock Brakes (ABS)	**Yes**	Power Seats	**No**
Driver Airbag	**Yes**	Passenger Airbag	**Yes**

Test Vehicle Condition at the end of testing: **FRONT OF VEHICLE AND REAR SIDE WNDOWS WERE REMOVED. REAR SIDE FACING SEATS WERE TESTED.**

RECORDED BY: **RUPESH B. PATEL** DATE: **10/23/06**

APPROVED BY: **MATTHEW A. IVORY** DATE: **10/23/06**

APPENDIX A

PHOTOGRAPHS

FIGURE 1. Left Front ¾ View, As Received

FIGURE 2. Left Side, As Received

FIGURE 3. Right Rear ¾ View, As Received

FIGURE 4. Right Side, As Received

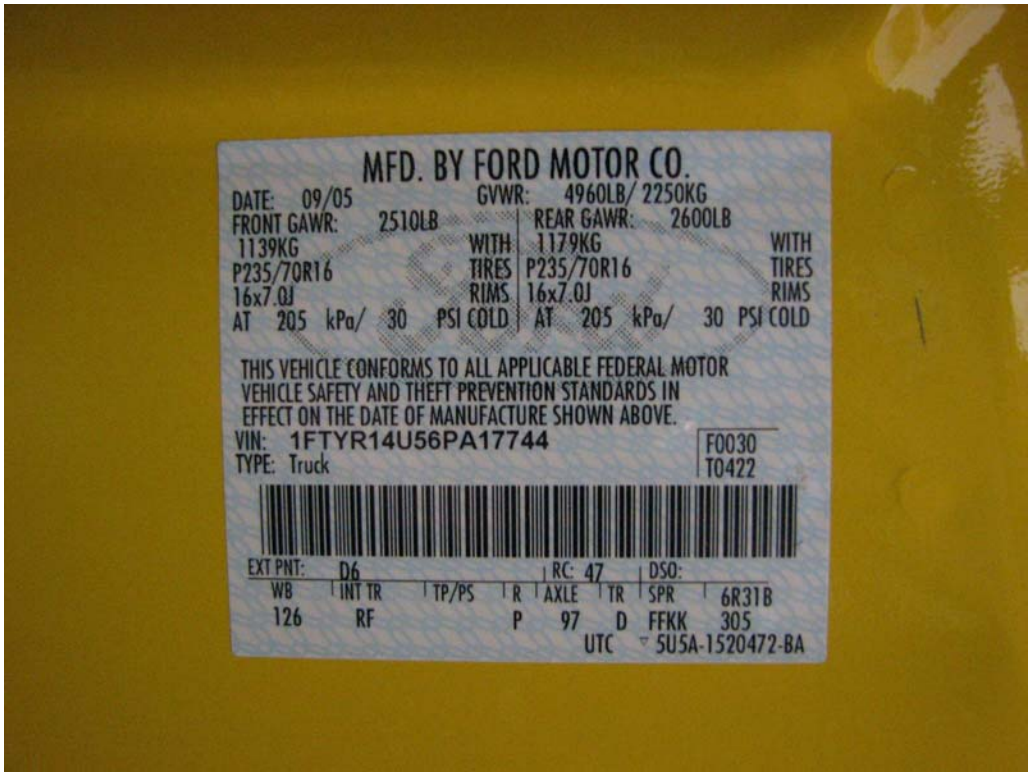


FIGURE 5. Manufacturer's Label

FIGURE 6. Vehicle Tire Placard

FIGURE 7. Vehicle Mounted in Test Fixture

FIGURE 8. Vehicle Mounted in Test Fixture

FIGURE 9. Vehicle Mounted in Test Fixture

FIGURE 10. Vehicle Mounted in Test Fixture

FIGURE 11. Load Applied Perpendicular, P3, Pre-Test

FIGURE 12. Load Applied Perpendicular, P3, Post-Test

FIGURE 13. Load Applied Perpendicular, P4, Pre-Test

FIGURE 14. Load Applied Perpendicular, P4, Post-Test

FIGURE 15. Floor Pan Anchors, P3 Overall, Pre-Test

FIGURE 16. Floor Pan Anchors, P3 Overall, Post-Test

FIGURE 17. Belt Anchor, P3, Pre-Test

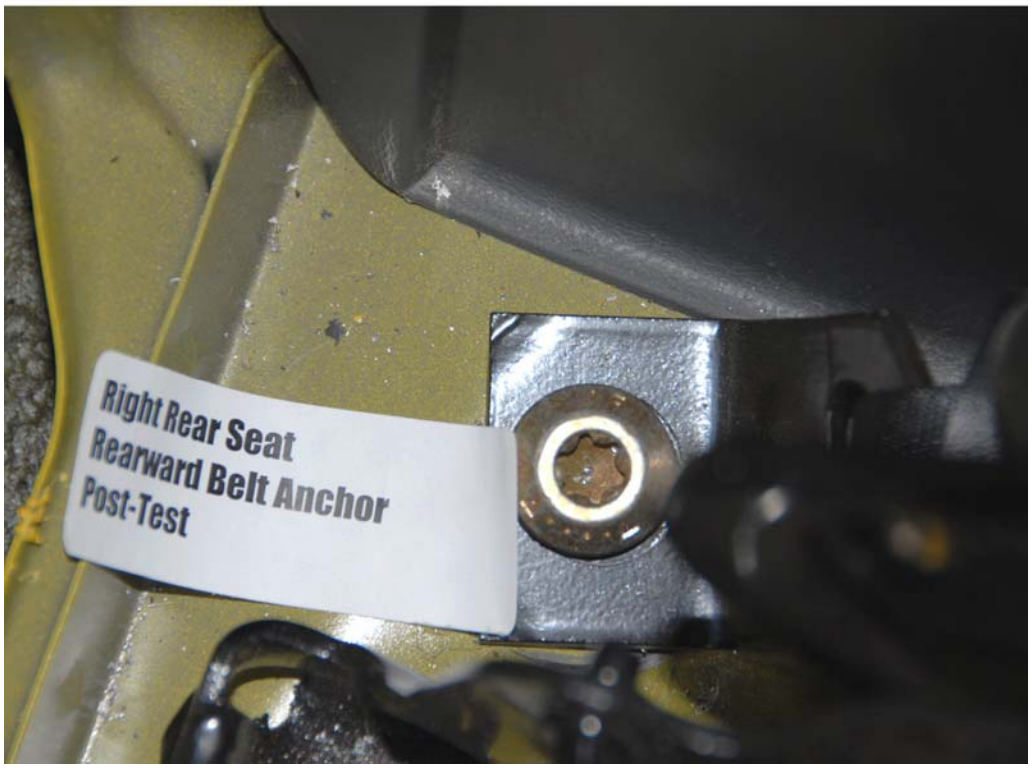


FIGURE 18. Belt Anchor, P3, Post-Test

FIGURE 19. Belt Anchor, P3, Pre-Test

FIGURE 20. Belt Anchor, P3, Post-Test

FIGURE 21. Floor Pan Anchors, P4 Overall,, Pre-Test

FIGURE 22. Floor Pan Anchors, P4 Overall,, Post-Test

FIGURE 23. Belt Anchor, P4, Pre-Test

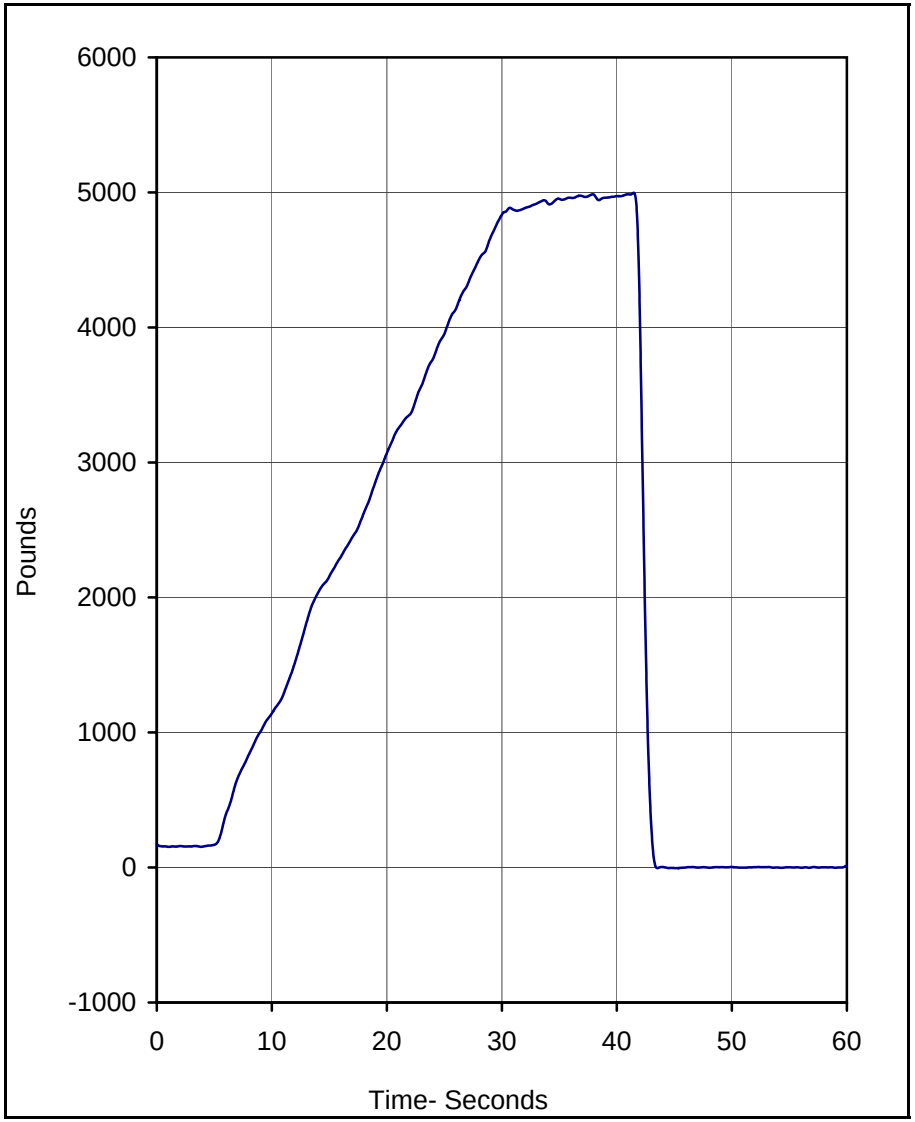
FIGURE 24. Belt Anchor, P4, Post-Test

FIGURE 25. Belt Anchor, P4, Pre-Test

FIGURE 26. Belt Anchor, P4, Post-Test

APPENDIX B

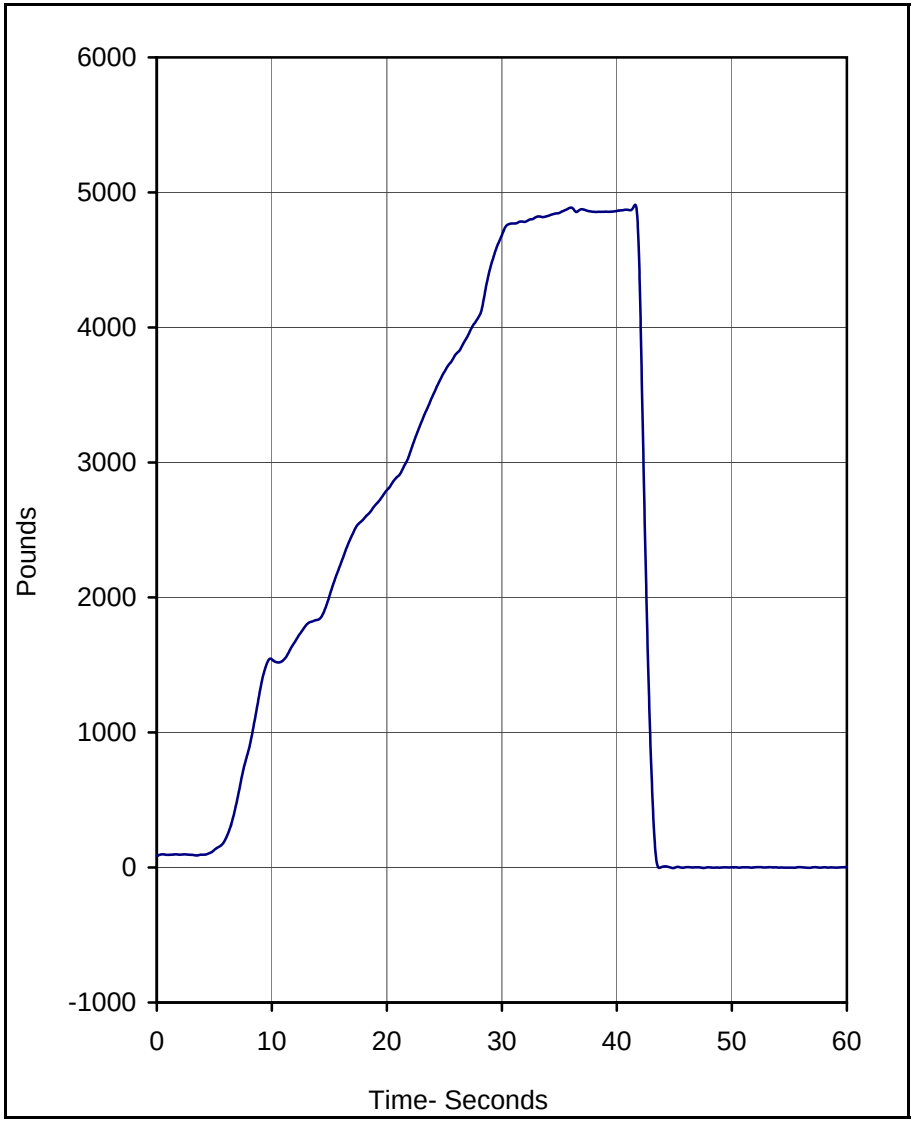
DATA PLOTS



Curve Description	CURNO	Type
Right Rear Side Facing Seat	001	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	4997.0	41.5	-5.2	45.3	1

Test Program:	FMVSS 210 Indicant Test (Rear)	Test Date:	10/20/06
Test Vehicle:	2006 Ford Ranger 2-Door Extra Cab Truck	Project No.:	C60207



Curve Description	CURNO	Type
Left Rear Side Facing Seat	002	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	4908.0	41.6	-4.3	44.9	1

Test Program:	FMVSS 210 Indicant Test (Rear)	Test Date:	10/23/06
Test Vehicle:	2006 Ford Ranger 2-Door Extra Cab Truck	Project No.:	C60207

APPENDIX C

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

FMVSS 210 Indicant Test (Rear)

Test Equipment List

10/20/06

2006 Ford Ranger 2-Door Extra Cab Truck

Description	Manufacturer	Model No.	Serial No.	Limit	Accuracy	Cal. Date	Due Cal.
Hydraulic Pump	Lincoln	T-3825-C	2460952	8 gpm @ 2700 psi			
Computer	Panasonic	CF-71	8IMAA01852	N/A	N/A	N/A	N/A
TDAS	DTS	TDAS	DM0103	N/A	SAE J211	11/28/01	11/28/02
Load Cell	BLH	U-1C	11139	12K	± 1.0%	6/2/03	12/1/03