

FINAL REPORT NUMBER 202a-MGA-10-002

SAFETY COMPLIANCE TESTING FOR FMVSS 202a
“Head Restraints”

FORD MOTOR COMPANY
2010 Ford Taurus 4-Door Sedan
NHTSA No. CA0212

MGA RESEARCH CORPORATION
446 Executive Drive
Troy, Michigan 48083



Test Dates: July 30, 2010 and September 27-29, 2010
Report Date: January 11, 2011

FINAL REPORT

Prepared For:

U.S DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Enforcement
Office of Vehicle Safety Compliance (Rm W45-304)
1200 New Jersey Avenue, SE
Washington, DC 20590

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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 (Rm W45-304) 1200 New Jersey Avenue, SE Washington, DC 20590		13. Type of Report and Period Covered Preliminary Test Report	
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15. Supplementary Notes			
16. Abstract <p>A compliance test was conducted on the subject 2010 Ford Taurus 4-Dr Sedan, NHTSA No. CA0212, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-202aS-00S-00 for the determination of FMVSS 202a compliance. The test was conducted at MGA Research Corporation in Troy, Michigan on July 30, 2010 and September 27-29, 2010. Test failures identified were as follows:</p> <p style="text-align: center;">NONE</p> <p>The data recorded indicates that the 2010 Ford Taurus 4-Dr Sedan tested appears to meet the requirements of FMVSS 202a.</p>			
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1.0 PURPOSE AND PROCEDURE

Purpose: The purpose of this testing was to determine whether head restraints equipped in vehicles supplied by the National Highway Traffic Safety Administration meet the requirements of Federal Motor Vehicle Safety Standard Number 202a, entitled “Head Restraints”.

Test Procedures: The “MGA Research Corporation Testing Procedures for FMVSS 202a,” submitted to and approved by the National Highway Traffic Safety Administration, contains the specific procedures used to conduct the testing.

This procedure shall not be interpreted to conflict with any portion of NHTSA TP-202aS-00, FMVSS 202a nor any amendment thereof within the applicable contract.

2.0 DATA SUMMARY

Summary data is provided below. Data for the configuration and the location of each seating position tested is provided in Section 5.0. Photographs can be found in Section 6.0 and test plots can be found in Section 7.0. The data recorded indicates that the 2010 Ford Taurus 4-Dr Sedan tested appears to meet the requirements of FMVSS 202a.

Table 1. Summary Data

MGA Test #	Test Type	Seat Description
E10671	Dimensional Measurements	Front LH 4-Way Power (Cloth)
E10672	Dimensional Measurements	Front RH 2-Way Manual (Cloth)
E10874	Height Retention	Front RH 2-Way Manual (Cloth)
E10880	Backset Retention, Displacement and Strength	Front LH 4-Way Power (Cloth)
D10290	Energy Absorption	Front RH 2-Way Manual (Cloth)

3.0 TEST VEHICLE INFORMATION

Table 2. General Test and Vehicle Parameter Data

VEH. MOD YR/MAKE/MODEL/BODY	2010 Ford Taurus 4-Dr Sedan
VEH. NHTSA NO.	CA0212
VIN	1FAHP2DW2AG139943
COLOR	Black
VEH. BUILD DATE	January 2010
TEST DATES	July 30, 2010 and September 27-29, 2010
TEST LABORATORY	MGA Research Corporation
OBSERVERS	Alisshia Woods, Helen Kaleto, Dave Maier

GENERAL INFORMATION:

DATA FROM VEHICLE’S CERTIFICATION LABEL:

Vehicle Manufactured By: Ford Motor Company

Date of Manufacture: 01/10 VIN: 1FAHP2DW2AG139943

GVWR: 2,386kg

GAWR FRONT: 1,279kg

GAWR REAR: 1,143kg

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load:

FRONT: 260 kpa REAR: 260 kpa

Recommended Tire Size: P235/60R17

Recommended Cold Tire Pressure:

FRONT: 260 kpa REAR: 260 kpa

Size of Tire on Test Vehicle: P235/60R17

Size of Spare Tire: T155/70D17

VEHICLE CAPACITY DATA:

Type of Front Seats: Bench ___; Bucket X; Split Bench ___

Number of Occupants: Front 2 ; Rear 3 TOTAL 5.

4.0 TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

MGA Research Corporation 446 Executive Drive Troy, Michigan 48083	
Test Equipment Used for Testing	Calibration Due Date
MGA Hydraulic Test Frame (202a)	N/A
Hydraulic Pump	N/A
MGA Data Acquisition System (202a)	1/25/2011
Inclinometer (Digital) - MGA0000823	1/27/2011
Accelerometer – P57862, P58043	11/17/2010
LVDT's - H1, H3, T1	12/15/2010
Load Cells - 500 lbs – 221488, 330317	12/22/2010, 12/23/2010

5.0 DATA

All data summarized below appears to meet the requirements of FMVSS 202a.

Table 3. S5.2.1-5.2.4 Dimensional Measurement

MGA Test #	Average H-Point (Reference Point: Seat Back Pivot)			S4.2.1 – Average Height (mm) (Req't>800 at 1 adj. / No adjustments below 750)			S4.2.3-Average Backset (mm) Req't<55			S4.2.2-Width (mm) Req't>170	S4.2.4- Gaps Did Cylinder Pass Through? (Yes/No) Req't = No
	X (mm)	Z (mm)	T/A (mm)	H1	H2	H3	H1	H2	H3		
E10671 (LH Power)	-176	68	24.0	846	826	798	19	12	5	204	No
E10672 (RH Manual)	-179	56	23.9	844	824	798	20	12	5	203	No

Table 4. S5.2.5 Energy Absorption

MGA Test #	Impact Angle (θ _h)	Impact Velocity (kph)	Accel 1 (g's)		Accel 2 (g's)		Post-Test Comments
			Peak	3msec Clip Req't<80	Peak	3msec Clip Req't<80	
D10290 (RH Manual)	0.0	24.0	30.4	29.9	30.9	29.8	• No Damage Evident.

Table 5. S5.2.6 Height Retention

MGA Test #	Initial Displacement at 50 N (mm) Req't < 25	Max. Load (N) Req't=500 N (Hold 5 Sec.)	Height Retention (mm) Req't < 13	Post-Test Comments
E10874 (RH Manual)	6.9	505	4.2	• The H/R successfully completed the load profile.

Table 6. S5.2.7 Backset Retention, Displacement and Strength

MGA Test #	H/R Type	H/R Test Position	Displaced Torso Angle (deg)	Initial Headform Disp. at 37 Nm (mm) Req't<25	Headform Disp. at 373 Nm (mm) Req't<102	Backset Retention (mm) Req't<13	Max Load Applied through Headform (N) Req't>890	Headform Loading Axis Distance (mm)
E10880 (LH Power)	2-Way	H2 (826)	33.9	17.2	-47.1	4.9	895	755

Note: H2 designates one notch below full up.

DATA SHEET 1

SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY STYLE: 2010 Ford Taurus 4-Door Sedan

VEH. NHTSA NO.: CA0212 ; VIN: 1FAHP2DW2AG139943

VEH. BUILD DATE: 1/2010 ; TEST DATE: 7/30/2010, 9/27-29/2010

TEST LABORATORY: MGA

OBSERVERS: Alisshia Woods, Helen Kaleto, David Maier

A. VISUAL INSPECTION OF TEST VEHICLE

Upon receipt for completeness, function, and discrepancies or damage which might influence the testing.

RESULTS: NONE

B. DIMENSIONAL REQUIREMENTS	PASS	FAIL	
Driver's Side	<u>X</u>	<u> </u>	
Passenger's Side	<u>X</u>	<u> </u>	
Rear Designated Seating Positions	<u>NA</u>	<u>NA</u>	
C. OWNER'S MANUAL	<u>PASS</u>	FAIL	
D. REMOVABILITY	<u>PASS</u>	FAIL	N/A
Driver's Side	<u>X</u>	<u> </u>	
Passenger's Side	<u>X</u>	<u> </u>	
Rear Designated Seating Positions	<u>NA</u>	<u>NA</u>	
E. NON-USE POSITION	PASS	FAIL	N/A
Rear Designated Seating Positions	<u>NA</u>	<u>NA</u>	
F. ENERGY ABSORPTION TEST	PASS	FAIL	
Driver's Side	<u>NA</u>	<u> </u>	
Passenger's Side	<u>X</u>	<u> </u>	

	Rear Designated Seating Positions	<u>NA</u>	<u>NA</u>
G.	HEIGHT RETENTION TEST	PASS	FAIL
	Driver's Side	<u>NA</u>	<u> </u>
	Passenger's Side	<u>X</u>	<u> </u>
	Rear Designated Seating Positions	<u>NA</u>	<u>NA</u>
H.	BACKSET RETENTION TEST	PASS	FAIL
	Driver's Side	<u>X</u>	<u> </u>
	Passenger's Side	<u>NA</u>	<u> </u>
	Rear Designated Seating Positions	<u>NA</u>	<u>NA</u>

RECORDED BY: Ashish Doshi

DATE: 7/30/10

APPROVED BY: Adeel Kalito

DATA SHEET 2a

DIMENSIONAL REQUIREMENTS FOR ADJUSTABLE HEAD RESTRAINTS

VEH. NHTSA NO.: CA0212 TEST DATE: 7/30/2010

Seat Location: Driver 4-way Power

Height Measurement

SAE J826 three-dimensional manikin torso angle: 24

Striker to H-Point (mm): NA Striker to H-Point angle: NA

Position the head restraint in the highest position of vertical adjustment.

Height, Hh (mm): 846 PASS FAIL

Hh > or = 800 mm for front seats.

If the head restraint is less than the required height, check for passage of the 25 mm diameter sphere.

Position the head restraint in the lowest position of vertical adjustment.

Height, HI (mm): 798 PASS FAIL

HI > or = 750 mm for front seats and rear seats with head restraints.

If the head restraint is less than the required height, check for passage of the 25 mm diameter sphere.

Width Measurement

If the manikin is moved between the Height measurement and the Width measurement, re-record the torso angle, striker to H-Point distance and angle.

Position the head restraint in the highest position of vertical adjustment.

Width is measured 65 mm below the measured Height, Hh.

Height, Hw (= Hh - 65): 781

Width, W (mm): 204 PASS FAIL

Width must be greater than or equal to 170 mm. If a vehicle has a front center designated seating position the front outboard head restraints must be greater than or equal to 254 mm.

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Backset Measurement (Front Head Restraints Only)

Position the HRMD and record the following measurements.

HRMD torso angle: 24

Striker to H-Point (mm): NA

Striker to H-Point angle: NA

Position the head restraint at a height greater than or equal to 750 mm and less than or equal to 800 mm for front head restraints. Exception: head restraint with lowest position higher than 800 mm, adjust to lowest position.

Backset, B (mm): 5

X PASS FAIL

Backset must be less than or equal to 55 mm.

Gap Measurement

Position the head restraint in the lowest position of vertical adjustment.

Number of gaps within the gap measurement zone: 3

Least dimension of each gap (measured with a steel tape): NA

Size of each gap (as measured with the spherical head form): NA

Gap Size 25 mm cylinder did not pass through each gap X PASS FAIL

FAIL

Gaps must be less than or equal to 60 mm.

REMARKS:

RECORDED BY: Alexis Wood DATE: 7/30/10

APPROVED BY: Heckert

DATA SHEET 2a

DIMENSIONAL REQUIREMENTS FOR ADJUSTABLE HEAD RESTRAINTS

VEH. NHTSA NO.: CA0212 TEST DATE: 7/30/10

Seat Location: Passenger 2-way Manual

Height Measurement

SAE J826 three-dimensional manikin torso angle: 24

Striker to H-Point (mm): NA Striker to H-Point angle: NA

Position the head restraint in the highest position of vertical adjustment.

Height, Hh (mm): 844 PASS FAIL

Hh > or = 800 mm for front seats.

If the head restraint is less than the required height, check for passage of the 25 mm diameter sphere.

Position the head restraint in the lowest position of vertical adjustment.

Height, Hl (mm): 798 PASS FAIL

Hl > or = 750 mm for front seats and rear seats with head restraints.

If the head restraint is less than the required height, check for passage of the 25 mm diameter sphere.

Width Measurement

If the manikin is moved between the Height measurement and the Width measurement, re-record the torso angle, striker to H-Point distance and angle.

Position the head restraint in the highest position of vertical adjustment.

Width is measured 65 mm below the measured Height, Hh.

Height, Hw (= Hh - 65): 779

Width, W (mm): 203 PASS FAIL

Width must be greater than or equal to 170 mm. If a vehicle has a front center designated seating position the front outboard head restraints must be greater than or equal to 254 mm.

51

Backset Measurement (Front Head Restraints Only)

Position the HRMD and record the following measurements.

HRMD torso angle: 24

Striker to H-Point (mm): NA

Striker to H-Point angle: NA

Position the head restraint at a height greater than or equal to 750 mm and less than or equal to 800 mm for front head restraints. Exception: head restraint with lowest position higher than 800 mm, adjust to lowest position.

Backset, B (mm): 5 PASS FAIL

Backset must be less than or equal to 55 mm.

Gap Measurement

Position the head restraint in the lowest position of vertical adjustment.

Number of gaps within the gap measurement zone: 3

Least dimension of each gap (measured with a steel tape): NA

Size of each gap (as measured with the spherical head form): NA

Gap Size ^{25 mm cylinder did not pass through each gap} PASS FAIL

Gaps must be less than or equal to 60 mm.

REMARKS:

RECORDED BY: Alexis Wood DATE: 7/30/10

APPROVED BY: [Signature]

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DATA SHEET 3

OWNER'S MANUAL

VEH. NHTSA NO.: CA0212 TEST DATE: 9/30/10

Emphasize that all occupants should place their head restraint in a proper position prior to operating the vehicle in order to prevent the risk of serious injury.

PASS FAIL

Description of the head restraint system and identification of which seats are equipped.

PASS FAIL

If the head restraint is removable, instructions on how to properly remove and reinstall using a deliberate action distinct from any act necessary for adjustment.

PASS FAIL N/A

Warning that all head restraints must be reinstalled properly to protect occupants.

PASS FAIL

Describe the adjustment of the head restraints and/or seat back to achieve proper head restraint position relative the head. The description must include the following:

- 1) a presentation and explanation of the main components of the vehicle's head restraints
- 2) the basic requirements for proper head restraint operation, including an explanation of the actions that may affect the proper functioning of the head restraints.
- 3) the basic requirements for proper positioning of a head restraint in relation to an occupant's head position, including information regarding the proper positioning of the center of gravity of an occupant's head in relation to the head restraint.

PASS FAIL

Include copies of relevant pages from the owner's manual in the final report.

REMARKS:

RECORDED BY: Alessio Wrosh DATE: 9/30/10

APPROVED BY: Alex O'Keefe

DATA SHEET 4

REMOVABILITY

VEH. NHTSA NO.: CA0212 TEST DATE: 7/30/2010

Are the head restraints removable? YES NO

If removable, does removal REQUIRE an action distinct from actions to adjust the head restraint? YES (PASS) NO (FAIL)

Description of action(s) for head restraint adjustment:

1. Raise the head restraint by pulling up on the head restraint
2. Lower the head restraint by pressing and holding the guide sleeve adjust/release button and pushing down on the head restraint

Description of distinct action for removal:

1. Pull up the head restraint until it reaches the highest adjustment position
2. Simultaneously press and hold both the adjust/release button, then pull up on the head restraint.

REMARKS:

RECORDED BY: Alisha Woods DATE: 7/30/10

APPROVED BY: [Signature]

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DATA SHEET 6

ENERGY ABSORPTION TEST

VEH. NHTSA NO.: CA0212 TEST DATE: 9/29/10
Seat Location: Passenger 2-way Manual Type of head restraint: Adjustable

635 mm Height Measurement for lower boundary of the impact zone

SAE J826 three-dimensional manikin torso angle: 24

Striker to H-Point (mm): NA Striker to H-Point angle: NA

Description of equipment or method used to rigidly fix the seat back: NA

Accelerometer identification: P57862 PS8043 Accelerometer type/brand: Endevco

Last calibration date: 5/17/2010

Head form vertical angle (-2° - +2°):

Distance between head form and target location (> or = 25 mm): 310 mm

Impact velocity (23.6 kph ± 0.5 kph): 24.0

Impact location: 635 mm above the H-point and within 70 mm of vertical centerline.

Maximum deceleration (< or = 785 m/s² (80 g)): 29.9 ~~X~~ PASS FAIL

REMARKS: HR test position was full down

RECORDED BY: Alisha Woods DATE: 9/29/10

APPROVED BY: Alex O'Keefe

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DATA SHEET 7

HEIGHT RETENTION TEST
(ADJUSTABLE HEAD RESTRAINTS ONLY)

VEH. NHTSA NO.: CA0212 TEST DATE: 9/27/2010

Seat Location: Passenger 2-way manual

Pre-test measurements

SAE J826 Manikin torso angle: 24 Top of Head Restraint Height (mm): 844

Striker to H-Point (mm): NA Striker to H-Point angle: NA

Description of height retention lock: spring loaded button catch

Test measurements

Initial load (50 N \pm 1 N): 50 N Initial Displacement, D1 (mm): 6.9

Initial Displacement (D1) < 25 mm PASS FAIL

Maximum load (495 N \pm 5 N): 505 Maximum Displacement, D2 (mm):

Return load (50 N \pm 1 N): 50 N Return Displacement, D3 (mm): 11.1

Total displacement (D3-D1) < 13 mm: 4.2 PASS FAIL

REMARKS: HR test position was full up.

RECORDED BY: Alexis Wood DATE: 9/27/10

APPROVED BY: Helene Kelso

DATA SHEET 8

BACKSET RETENTION TEST

VEH. NHTSA NO.: CA0212 TEST DATE: 9/28/2010
Seat Location: Driver 4-way Power Type of head restraint: Adjustable

Pre-test measurements

SAE J826 Manikin torso angle: 24 Top of Head Restraint Height (mm): 826
Striker to H-Point (mm): NA Striker to H-Point angle: NA

Displacement torso reference line

Test device back pan angle: 33.9
Distance from the H-point to the initial location of the load (0.290 ± 0.013 m): 0.285
Initial load (N): 1309 Initial moment (373 ± 7.5 Nm): 373

Backset retention and strength

Distance from the H-point to the head form tangency point (m): 0.755
Initial load (N): 495 Initial moment (37 ± 0.7 Nm): 37
Initial head form displacement, D1 (< or = 25 mm): 17.2 PASS FAIL
Load range to generate a 373 ± 7.5 Nm rearward moment (N): 495
Actual load applied (N): 495 Resultant moment (Nm): 373
Maximum Head form displacement, D2 (< or = 102 mm): 47.1 PASS FAIL
Final head form displacement, D3 (mm): 22.1
measured at (37 ± 0.7 Nm)
Total displacement (D3-D1) < 13 mm: 4.9 PASS FAIL
Maximum applied load (> or equal to 885 N): 895 PASS FAIL

REMARKS:

RECORDED BY: Alvinia Wood DATE: 9/28/10

APPROVED BY: Abel Kalito

PHOTOGRAPHS

6.1 Right view



6.2 Front left view



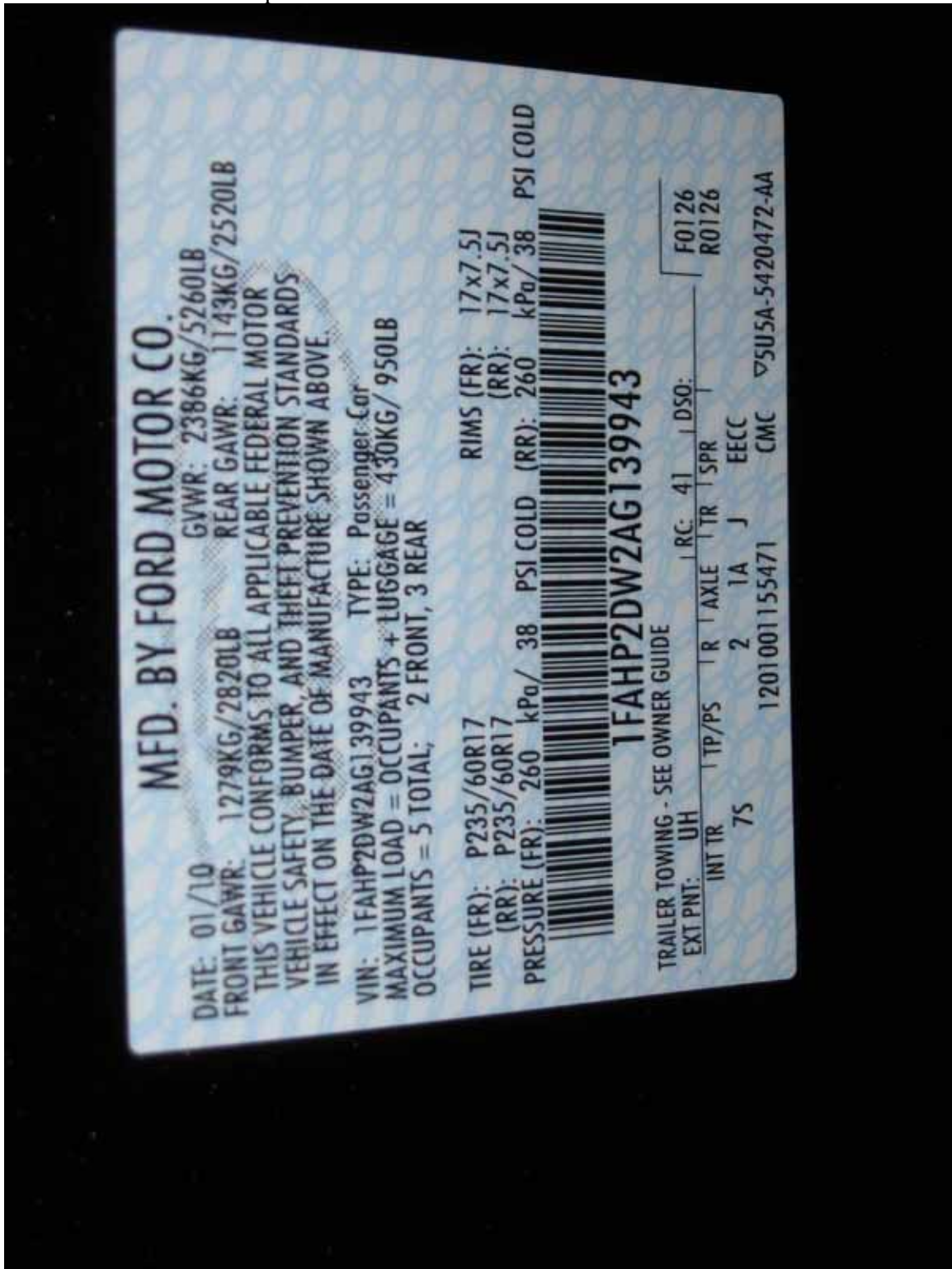
6.3 Rear right view



6.4 Left view



6.5 Test vehicle's certification label
6.5.1 Certification label photo #1



6.5.2 Tire information label photo #1



6.6 S5.2.1-5.2.4 Dimensional Measurements
6.6.1 Driver Test Photo #1



6.6.2 Driver Test Photo #2



6.6.3 Driver Test Photo #3



6.6.4 Driver Test Photo #4



6.6.5 Driver Test Photo #5



6.6.6 Driver Test Photo #6



6.6.7 Driver Test Photo #7



6.6.8 Driver Test Photo #8



6.6.9 Driver Test Photo #9



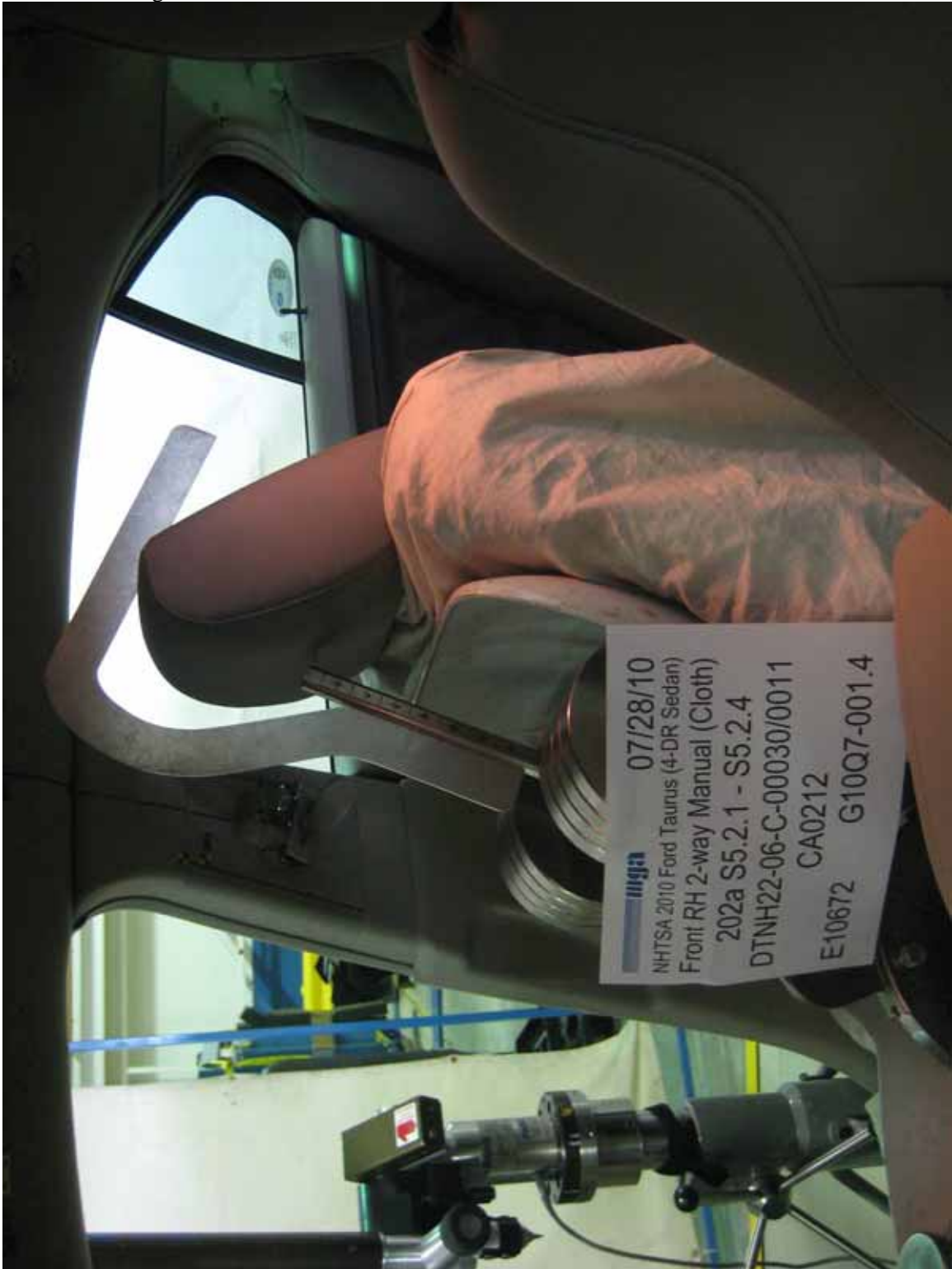
6.6.10 Passenger Test Photo #10



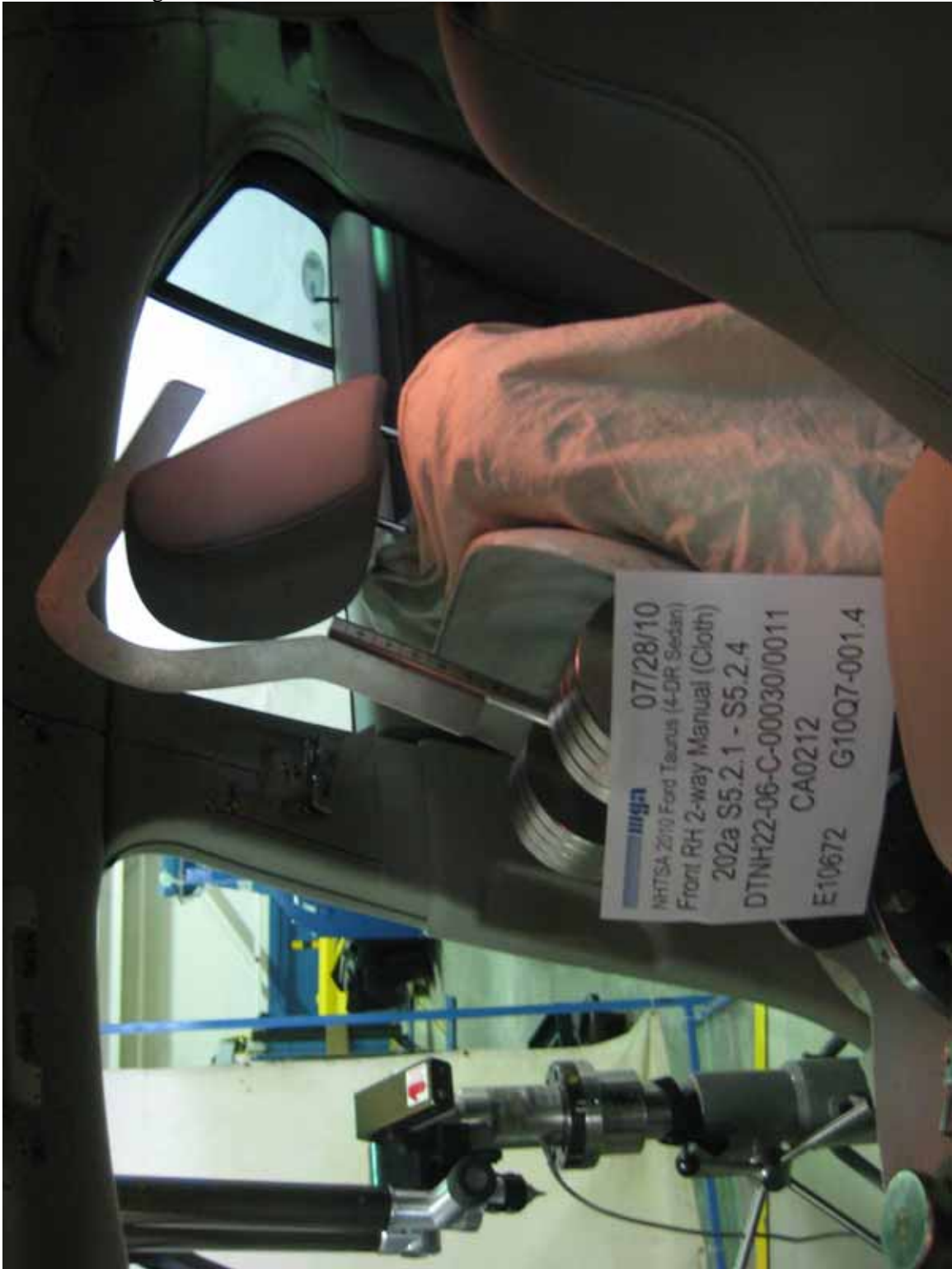
6.6.11 Passenger Test Photo #11



6.6.12 Passenger Test Photo #12



6.6.13 Passenger Test Photo #13



6.6.14 Passenger Test Photo #14



6.6.15 Passenger Test Photo #15



6.6.16 Passenger Test Photo #16



6.6.17 Passenger Test Photo #17



6.7 S5.2.5 Energy Absorption
6.7.1 Passenger Pre-Test Photo #1



6.7.2 Passenger Pre-Test Photo #2



6.7.3 Passenger Post-Test Photo #1



6.7.4 Passenger Post-Test Photo #2



6.8 S5.2.6 Height Retention
6.8.1 Passenger Test Photo #1



6.8.2 Passenger Test Photo #2



6.8.3 Passenger Test Photo #3



6.8.4 Passenger Test Photo #4



6.8.5 Passenger Test Photo #5



6.8.6 Passenger Test Photo #6



6.8.7 Passenger Test Photo #7



6.9 S5.2.7 Backset Retention, Displacement and Strength
6.9.1 Driver Test Photo #1



6.9.2 Driver Test Photo #2



6.9.3 Driver Test Photo #3



6.9.4 Driver Test Photo #4



6.9.5 Driver Test Photo #5



6.9.6 Driver Test Photo #6



6.9.7 Driver Test Photo #7



6.9.8 Driver Test Photo #8



6.9.9 Driver Test Photo #9

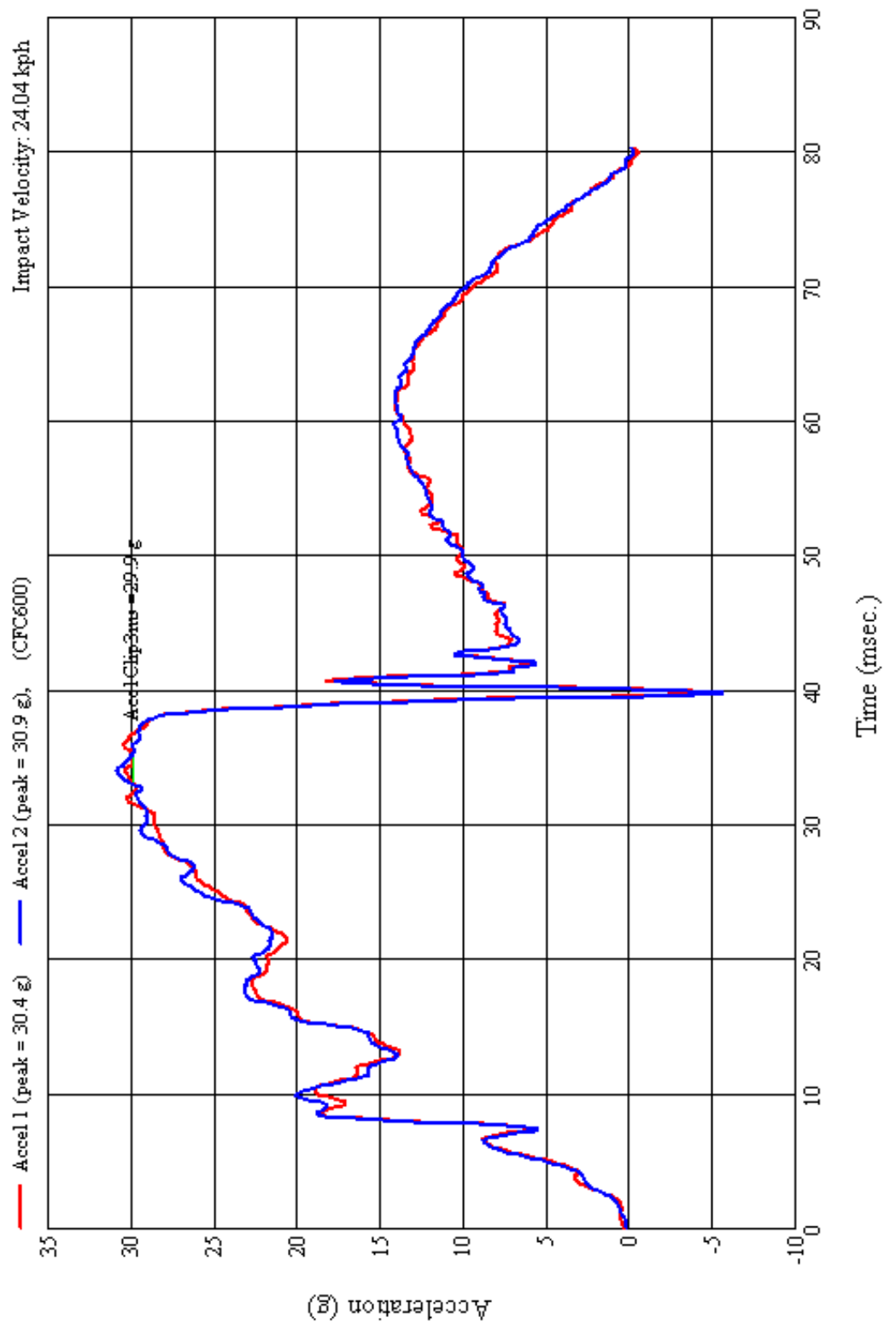


6.9.10 Driver Test Photo #10

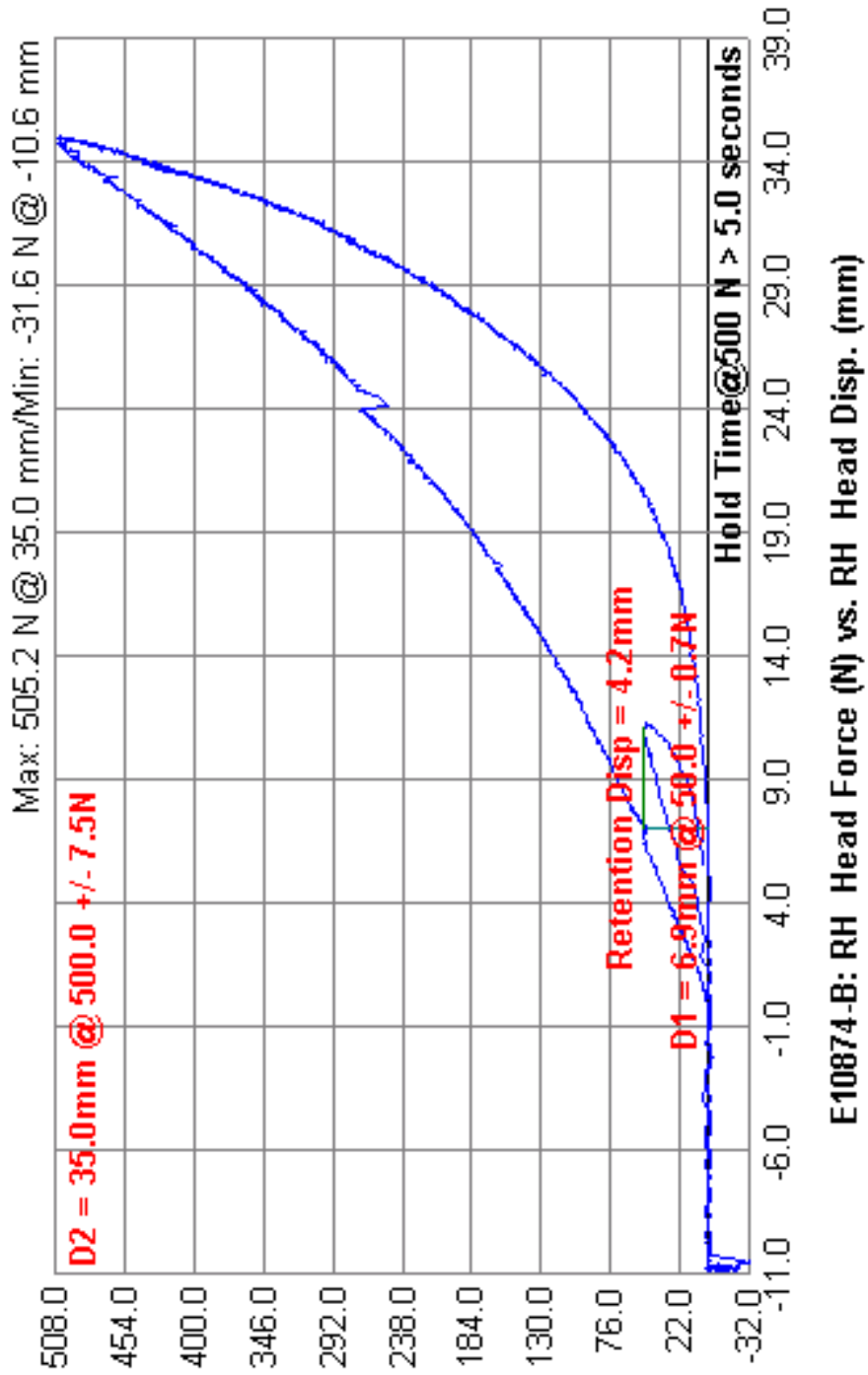


7.0 PLOTS

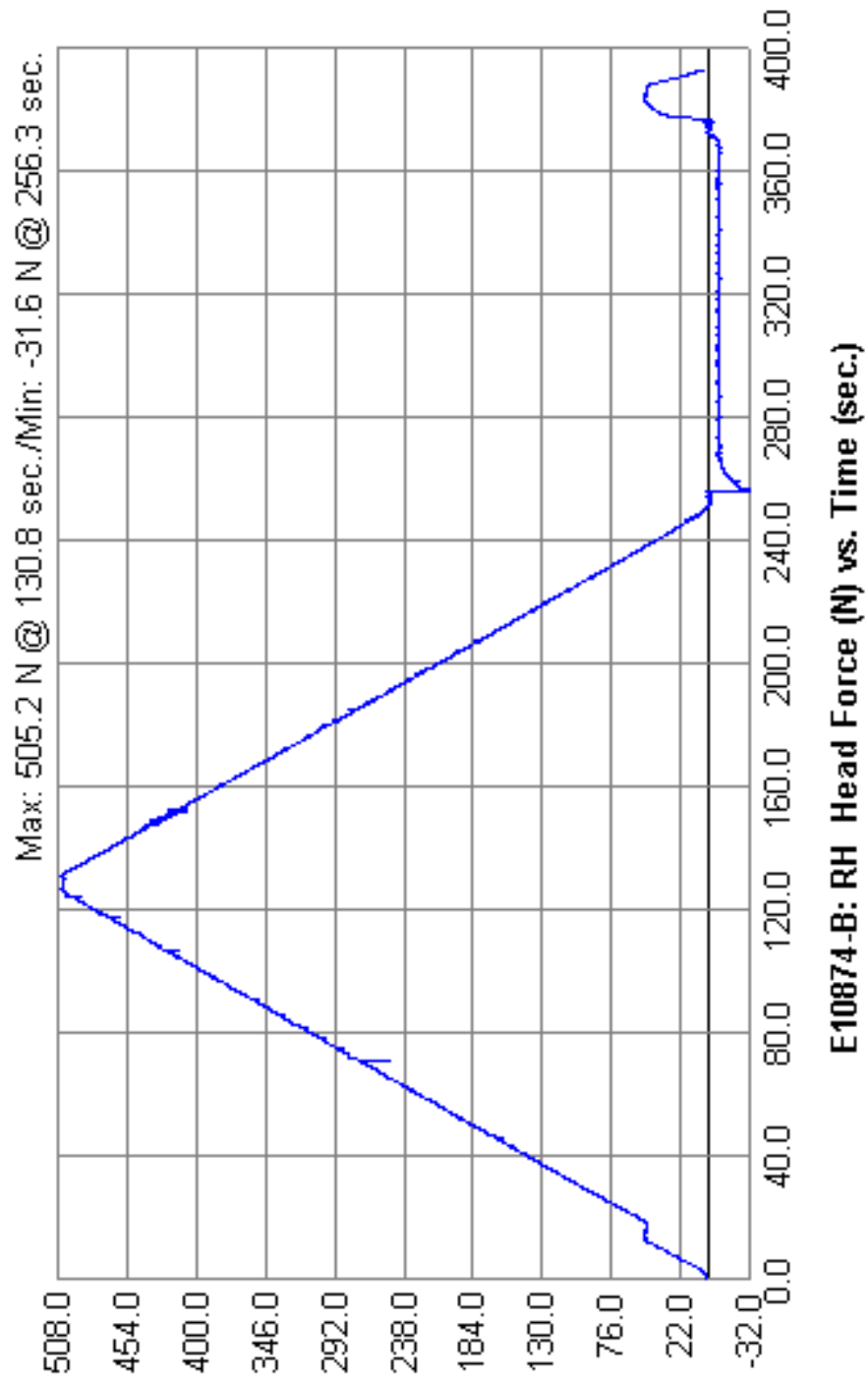
7.1.1 S5.2.5 Energy Absorption



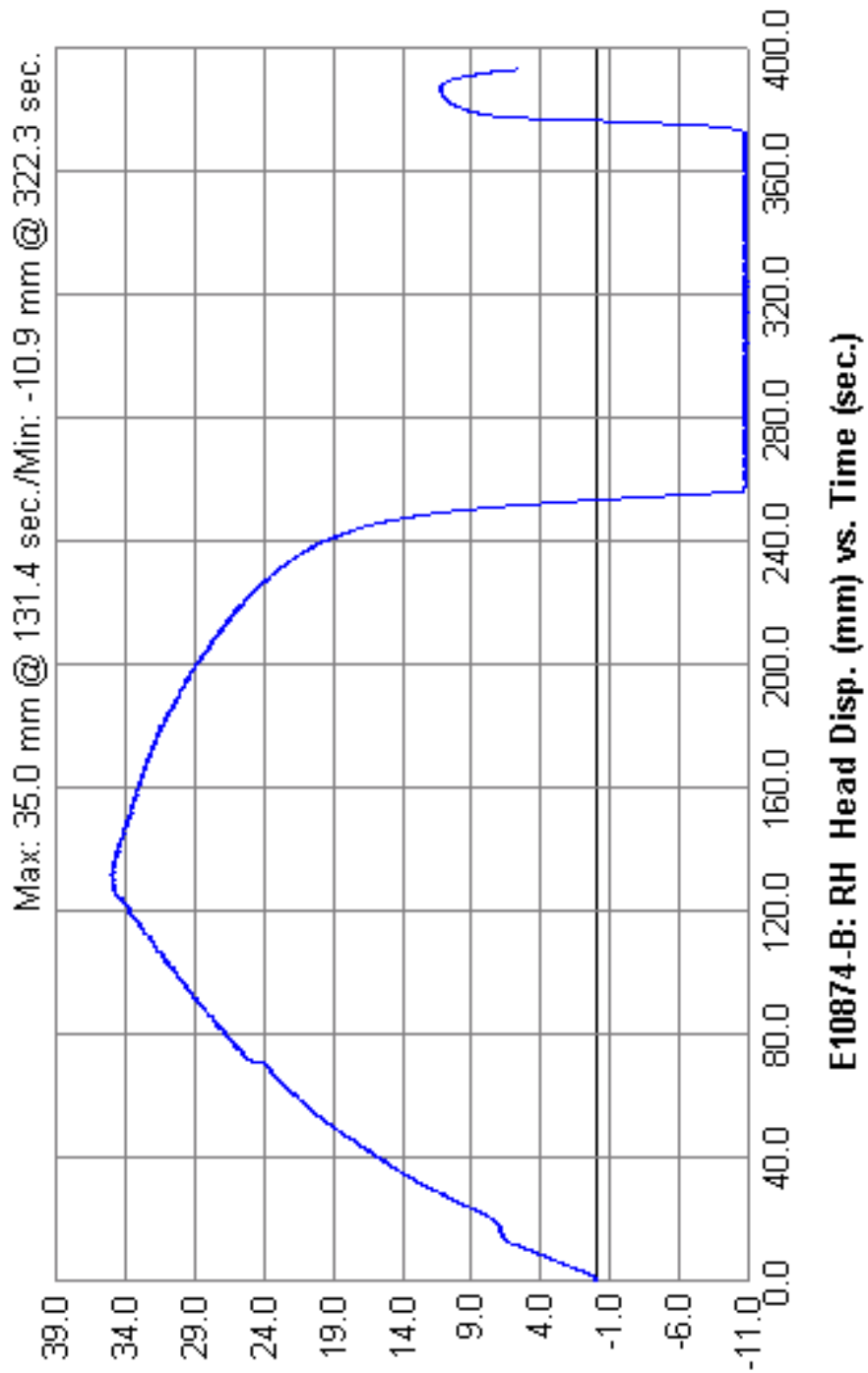
7.2.1 S5.2.6 Height Retention



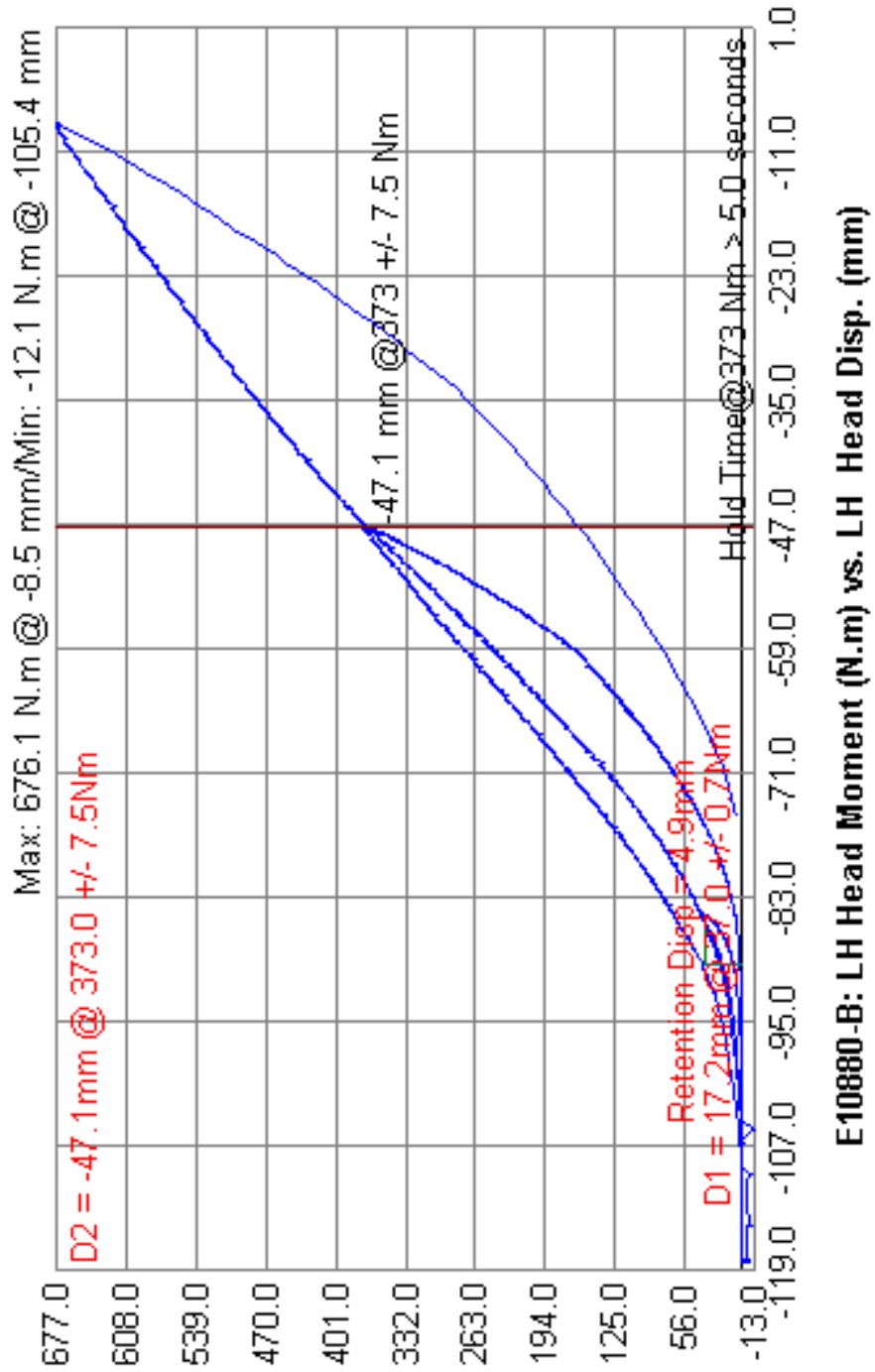
7.2.2 S5.2.6 Height Retention



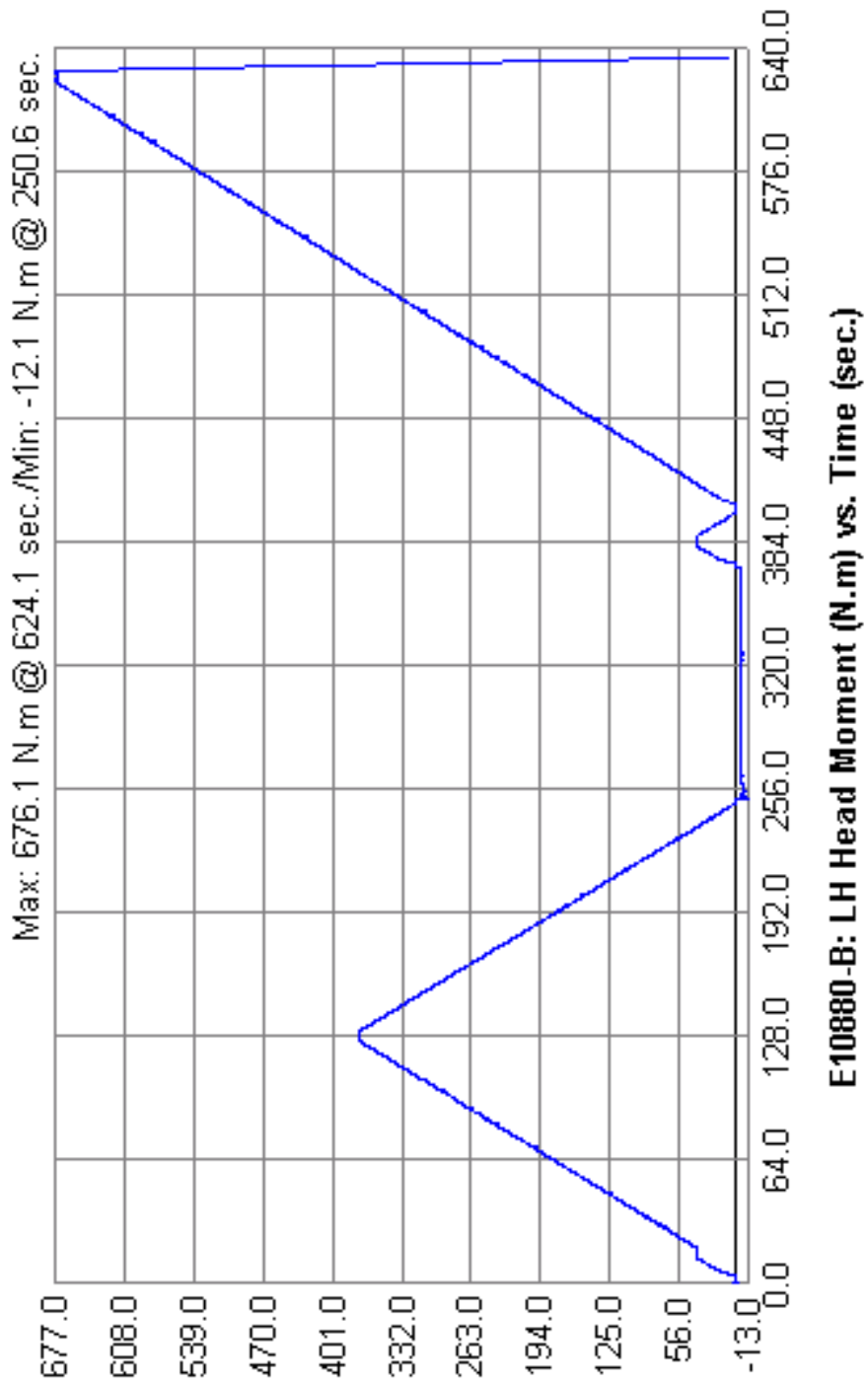
7.2.3 S5.2.6 Height Retention



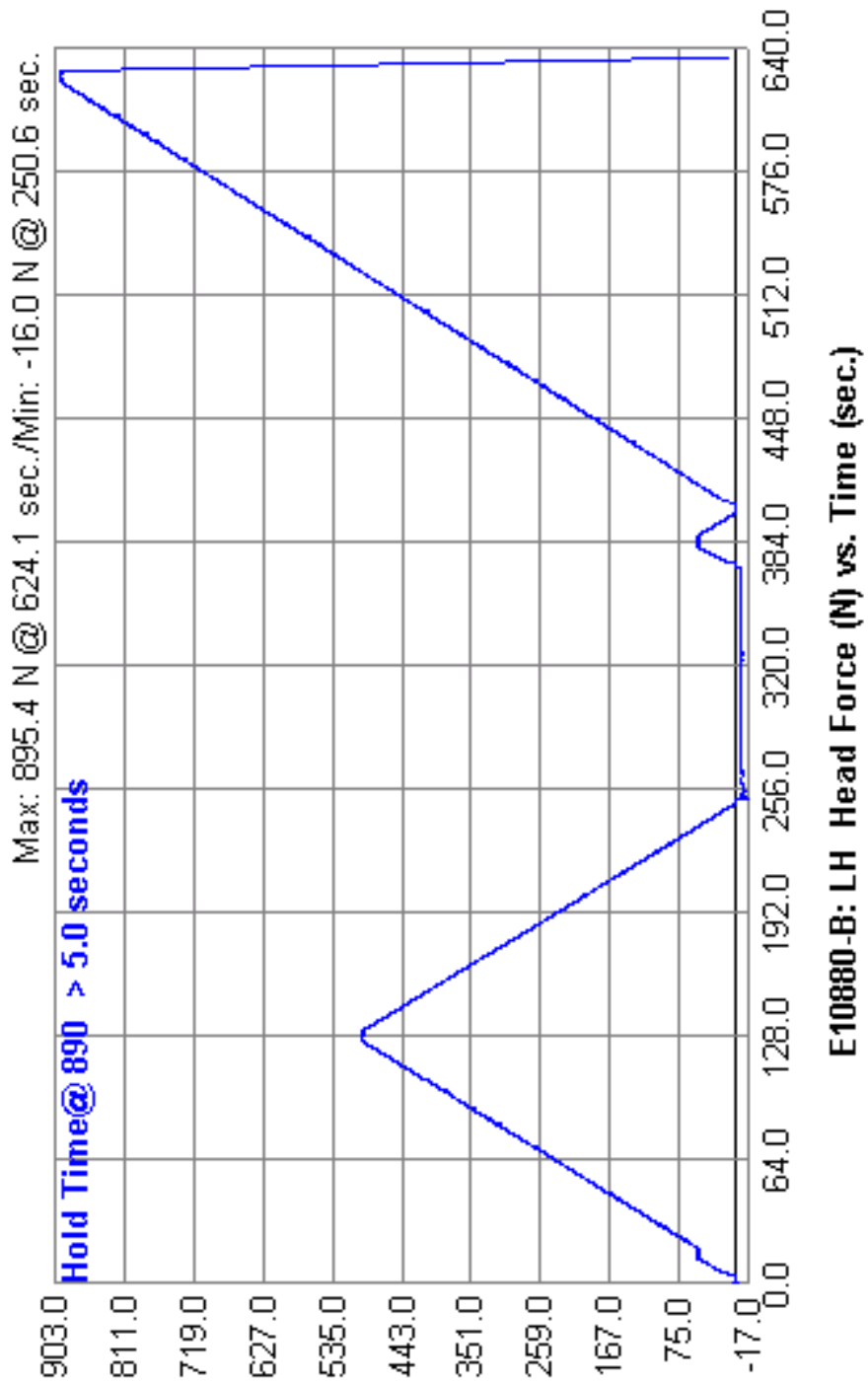
7.3.1 S5.2.7 Backset Retention, Displacement and Strength



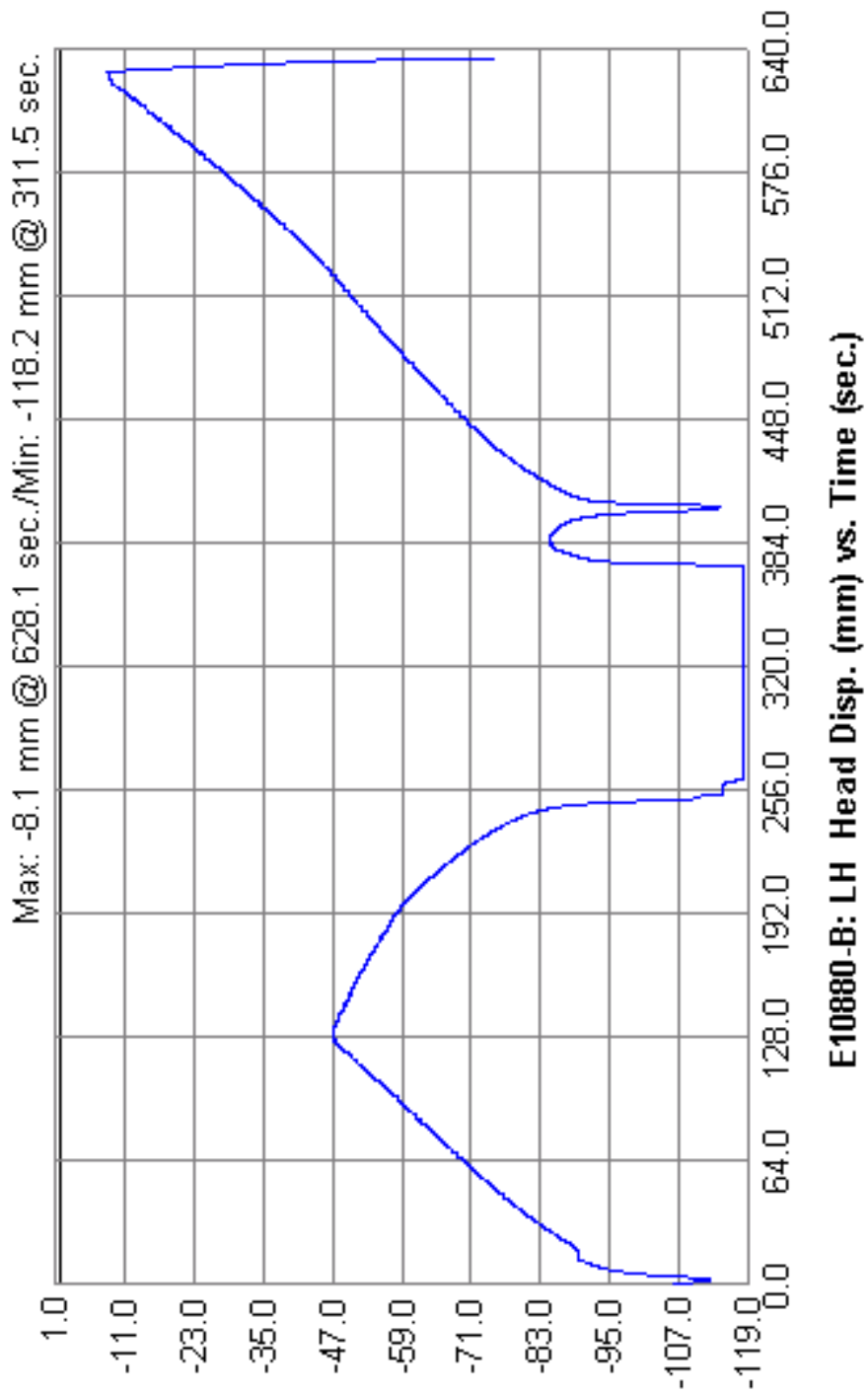
7.3.2 S5.2.7 Backset Retention, Displacement and Strength



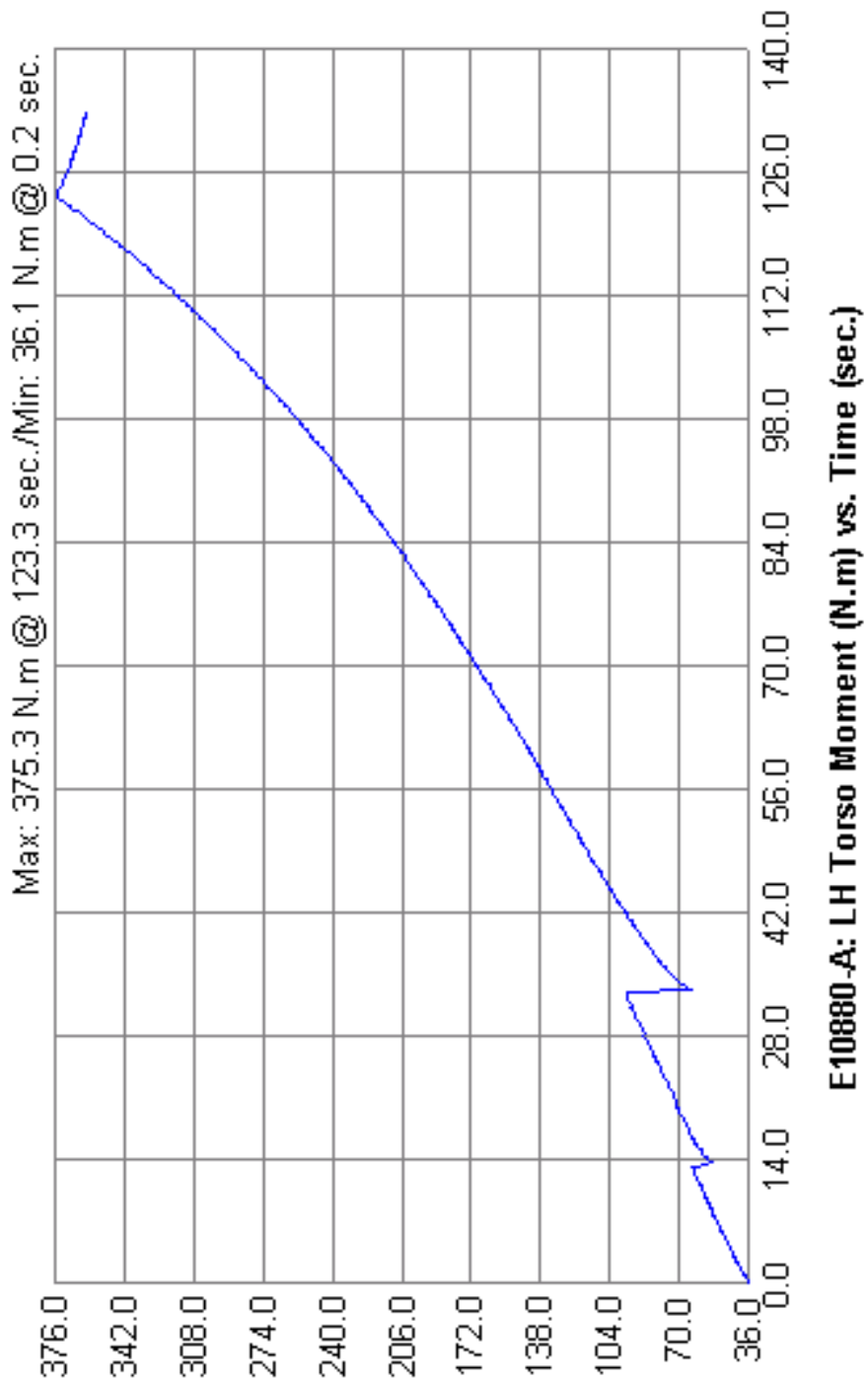
7.3.3 S5.2.7 Backset Retention, Displacement and Strength



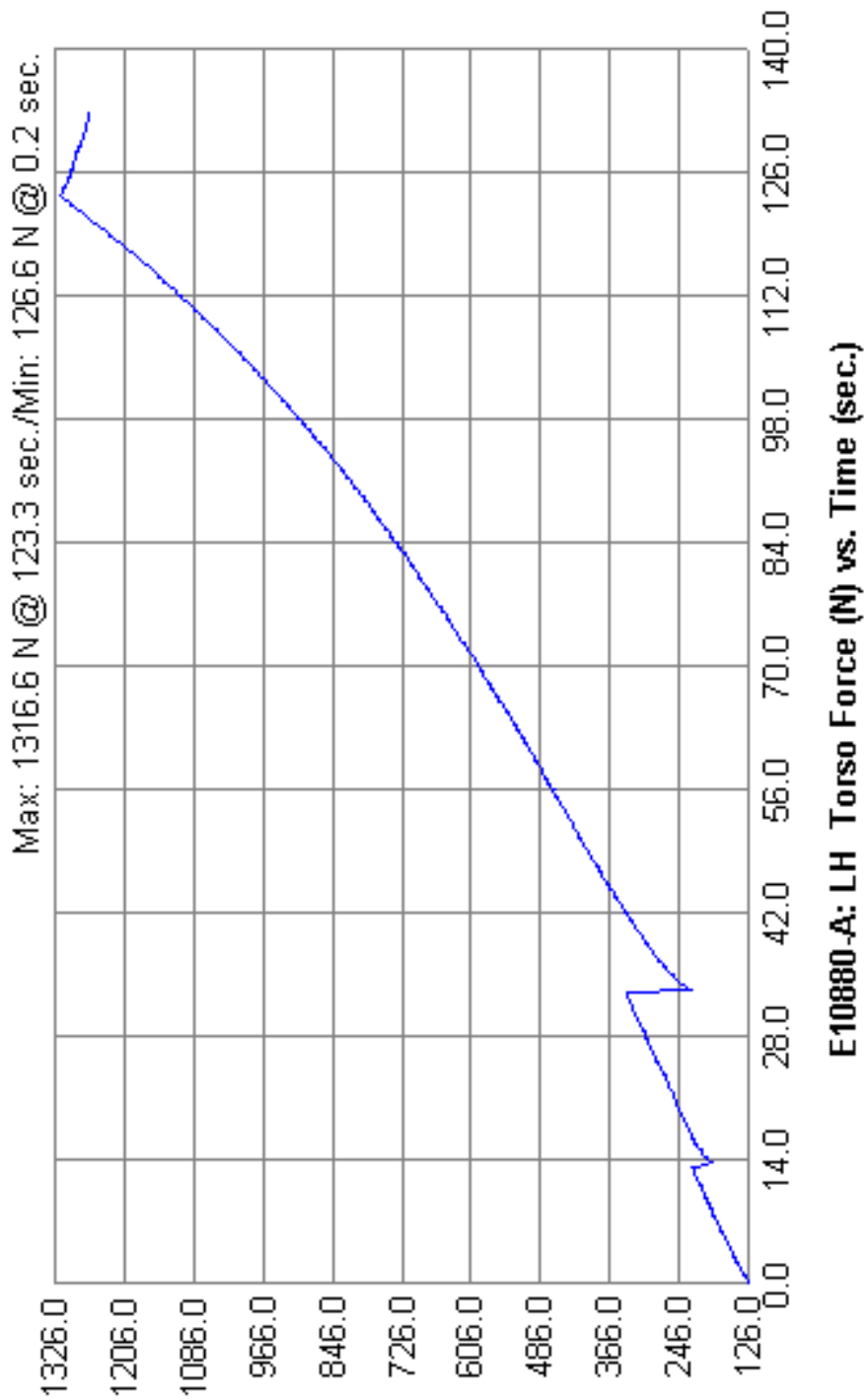
7.3.4 S5.2.7 Backset Retention, Displacement and Strength



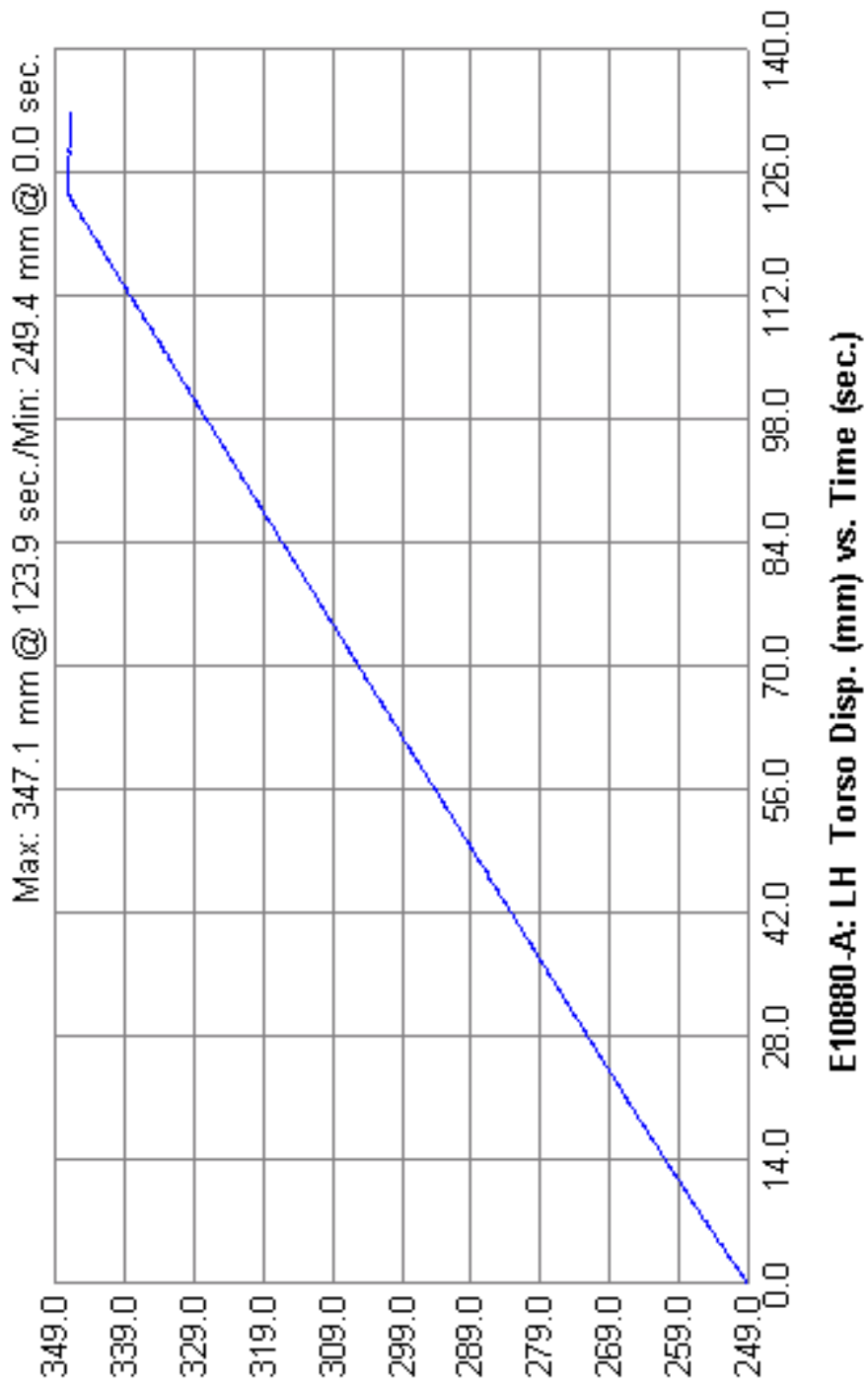
7.3.5 S5.2.7 Backset Retention, Displacement and Strength



7.3.6 S5.2.7 Backset Retention, Displacement and Strength



7.3.7 S5.2.7 Backset Retention, Displacement and Strength



8.0 REPORT OF VEHICLE CONDITION

REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING

CONTRACT No.: DTNH22-06-C-00030/0008 DATE: July 30, 2010 and September 27-29, 2010

From: MGA Research Corporation, 446 Executive Drive, Troy, MI 48083

To: NHTSA, OVSC, NVS-220

The following vehicle has been subjected to compliance testing for FMVSS No. 201U & 202a

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 (NAD0-30), 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.

VEH. MOD YR/MAKE/MODEL/BODY: 2010 Ford Taurus 4-Dr Sedan

VEH. NHTSA NO.: CA0212 VIN: 1FAHP2DW2AG139943

COLOR: Black

ODOMETER READINGS: ARRIVAL 3 miles Date: February 23, 2010

COMPLETION 3 miles Date: September 29, 2010

PURCHASE PRICE: \$24,040 DEALER'S NAME: Gordie Bouche

ENGINE DATA: 4 Cylinders 1.8 Liters Cubic Inches

TRANSMISSION DATA: X Automatic Manual No. of Speeds

FINAL DRIVE DATA: Rear Drive X Front Drive 4 Wheel Drive

CHECK APPROPRIATE BOXES FOR VEHICLE EQUIPMENT:

TEST LABORATORY: MGA Research Corporation

OBSERVERS: Helen Kaleto, Alisshia Woods and Dave Maier

<input checked="" type="checkbox"/>	Air Conditioning	<input checked="" type="checkbox"/>	Traction Control	<input checked="" type="checkbox"/>	Clock
<input checked="" type="checkbox"/>	Tinted Glass	N/A	All Wheel Drive	N/A	Roof Rack
<input checked="" type="checkbox"/>	Power Steering	<input checked="" type="checkbox"/>	Speed 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	N/A	Sun Roof or T-Top	<input checked="" type="checkbox"/>	Passenger Air Bag
<input checked="" type="checkbox"/>	Power Seat(s)	<input checked="" type="checkbox"/>	Tachometer	<input checked="" type="checkbox"/>	Front Disc Brakes
<input type="checkbox"/>	Power Brakes	<input checked="" type="checkbox"/>	Tilt Steering Wheel	<input checked="" type="checkbox"/>	Rear Disc Brakes
<input checked="" type="checkbox"/>	Antilock Brake System	<input checked="" type="checkbox"/>	AM/FM/Compact Disc		Other

REMARKS:

Salvage only.

Equipment that is no longer on the test vehicle as noted on previous pages:

All equipment inventoried and placed in vehicle.

Explanation for equipment removal:

Roof removed and vehicle cut to accommodate test equipment.

Test Vehicle Condition:

Salvage only. Vehicle cut in half to complete testing.

RECORDED BY: Alisshia Woods and David Maier

DATE: September 29, 2010

APPROVED BY: Helen Kaleto

APPENDIX A
OWNERS MANUAL HEAD RESTRAINTS

Seating and Safety Restraints

SEATING

⚠ WARNING: Reclining the seatback can cause an occupant to slide under the seat's safety belt, resulting in severe personal injuries in the event of a collision.

⚠ WARNING: Do not pile cargo higher than the seatbacks to reduce the risk of injury in a collision or sudden stop.

⚠ WARNING: Before returning the seatback to its original position, make sure that cargo or any objects are not trapped behind the seatback. After returning the seatback to its original position, pull on the seatback to ensure that it has fully latched. An unlatched seat may become dangerous in the event of a sudden stop or collision.

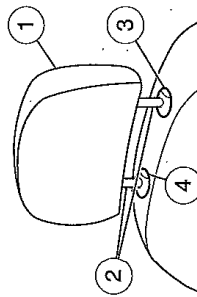
Adjustable head restraints

Your vehicle is equipped with front row outboard head restraints that are vertically adjustable.

⚠ WARNING: To minimize the risk of neck injury in the event of a crash, the driver and passenger occupants should not sit in and/or operate the vehicle, until the head restraint is placed in its proper position. The driver should never adjust the head restraint while the vehicle is in motion.

The adjustable head restraints consist of:

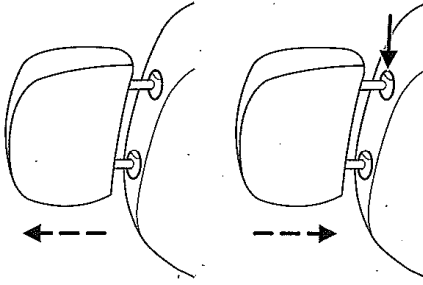
- a trimmed energy absorbing foam and structure (1),
- two steel stems (2),
- a guide sleeve adjust/release button (3),
- and a guide sleeve unlock/remove button (4).



Seating and Safety Restraints

To adjust the head restraint, do the following:

1. Adjust the seatback to an upright driving/riding position.
2. Raise the head restraint by pulling up on the head restraint.



3. Lower the head restraint by pressing and holding the guide sleeve adjust/release button and pushing down on the head restraint.

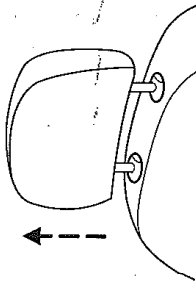
Properly adjust the head restraint so that the top of the head restraint is even with the top of your head and positioned as close as possible to the back of your head. For occupants of extremely tall stature, adjust the head restraint to its full up position.

⚠ WARNING: The adjustable head restraint is a safety device. Whenever possible, it should be installed and properly adjusted when the seat is occupied.

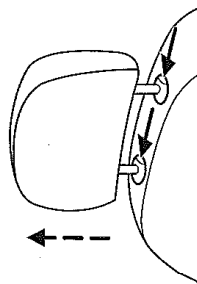
Seating and Safety Restraints

To remove the adjustable head restraint, do the following:

1. Pull up the head restraint until it reaches the highest adjustment position.



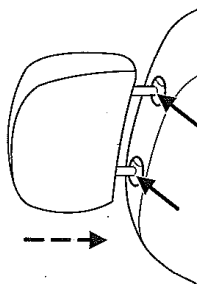
2. Simultaneously press and hold both the adjust/release button and the unlock/remove button, then pull up on the head restraint.



To reinstall the adjustable head restraint, do the following:

1. Insert the two stems into the guide sleeve collars.

2. Push the head restraint down until it locks.



Properly adjust the head restraint so that the top of the head restraint is even with the top of your head and positioned as close as possible to the back of your head. For occupants of extremely tall stature, adjust the head restraint to its full up position.

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Seating and Safety Restraints

WARNING: To minimize the risk of neck injury in the event of a crash, head restraints must be installed properly.

Using the manual lumbar support (if equipped)

The lumbar support control is located on the outboard side shield. Rotate the knob clockwise or counter clockwise to adjust lumbar support.

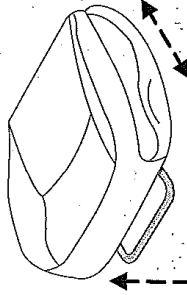


Adjusting the front manual seat (if equipped)

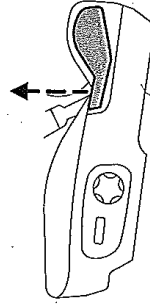
WARNING: Never adjust the driver's seat on seatback when the vehicle is moving.

WARNING: Always drive and ride with your seatback upright and the lap belt snug and low across the hips.

Lift handle to move seat forward or backward.



Pull lever up to adjust seatback.

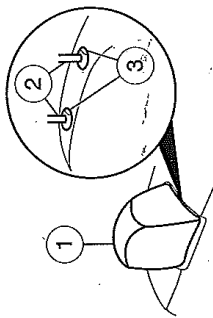


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Seating and Safety Restraints

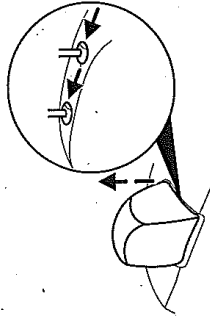
The non-adjustable head restraints consist of :

- a trimmed energy absorbing foam and structure (1),
- two steel stems (2),
- and two guide sleeve unlock/remove buttons (3).



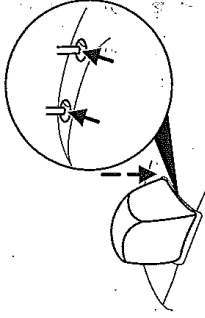
To remove the non-adjustable head restraint, do the following:

1. Simultaneously press and hold both unlock/remove buttons, then pull up on the head restraint.



To reinstall the non-adjustable head restraint, do the following:

1. Insert the two stems into the guide sleeve collars.
2. Push the head restraint down until it locks.



WARNING: The non-adjustable head restraint is a safety device. It should be installed whenever the seat is occupied.

Seating and Safety Restraints

WARNING: To minimize the risk of neck injury in the event of a crash, head restraints must be installed properly.

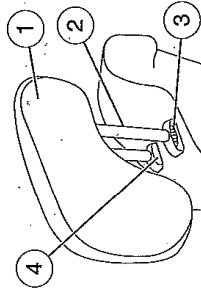
Adjustable second row center head restraint

Your vehicle is equipped with a head restraint in the second row center seating position that is vertically adjustable.

WARNING: To minimize the risk of neck injury in the event of a crash, the driver and passenger occupants should not sit in or operate the vehicle until the head restraint is placed in its proper position. The driver should never adjust the head restraint while the vehicle is in motion.

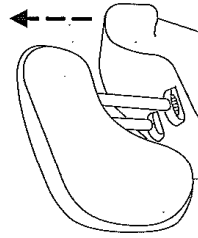
The adjustable head restraint consist of :

- a trimmed energy absorbing foam and structure (1),
- two steel stems (2),
- a guide sleeve adjust/release button (3),
- and a guide sleeve unlock/remove button (4).



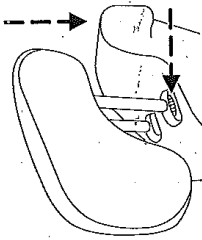
To adjust the head restraint, do the following:

1. Raise the head restraint by pulling up on the head restraint.



Seating and Safety Restraints

2. Lower the head restraint by pressing and holding the guide sleeve adjust/release button and pushing down on the head restraint.

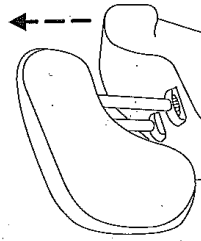


Properly adjust the head restraint so that the top of the head restraint is even with the top of your head and positioned as close as possible to the back of your head. For occupants of extremely tall stature, adjust the head restraint to its full up position.

⚠ WARNING: The adjustable head restraint is a safety device. Whenever possible, it should be installed and properly adjusted when the seat is occupied.

To remove the adjustable head restraint, do the following:

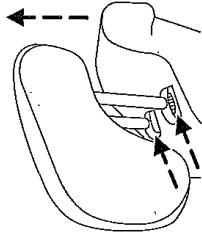
1. Pull up the head restraint until it reaches the highest adjustment position.



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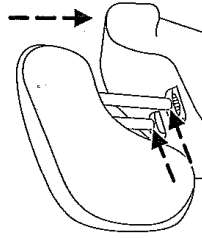
Seating and Safety Restraints

2. Simultaneously press and hold both the adjust/release button and the unlock/remove button, then pull up on the head restraint.



To reinstall the adjustable head restraint, do the following:

1. Insert the two stems into the guide sleeve collars.
2. Push the head restraint down until it locks.



Properly adjust the head restraint so that the top of the head restraint is even with the top of your head and positioned as close as possible to the back of your head. For occupants of extremely tall stature, adjust the head restraint to its full up position.

⚠ WARNING: To minimize the risk of neck injury in the event of a crash, head restraints must be installed properly.

Split-folding rear seat

One or both rear seatbacks can be folded down to provide additional cargo space.

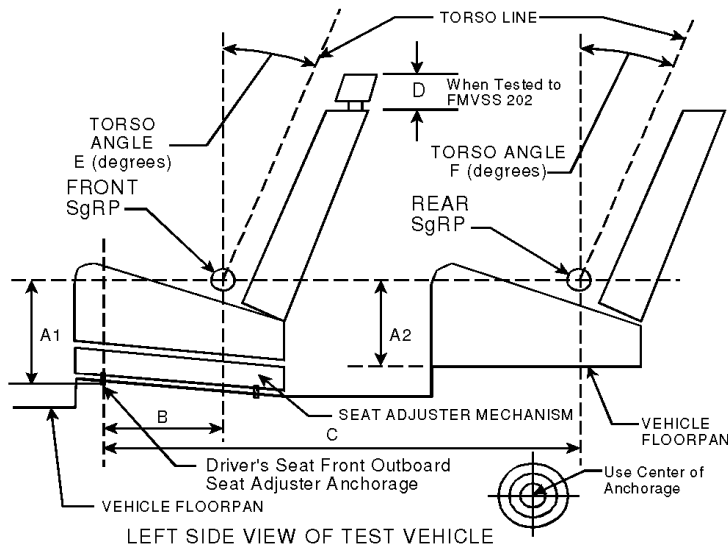
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APPENDIX B
MANUFACTURER’S DATA (OVSC FORM-SRP)

FORM 4
 Page 1 of 3

SEAT REFERENCE POINT (SRP) AND TORSO ANGLE DATA
 FOR FMVSS 201, 202, 203, 207 & 210
 (All dimensions in inches)

Model Year: 2010; Make: Ford; Model: Taurus
 Body Style: Sedan; Seat Style: Bucket (frt), Bench (rr) 60/40 split



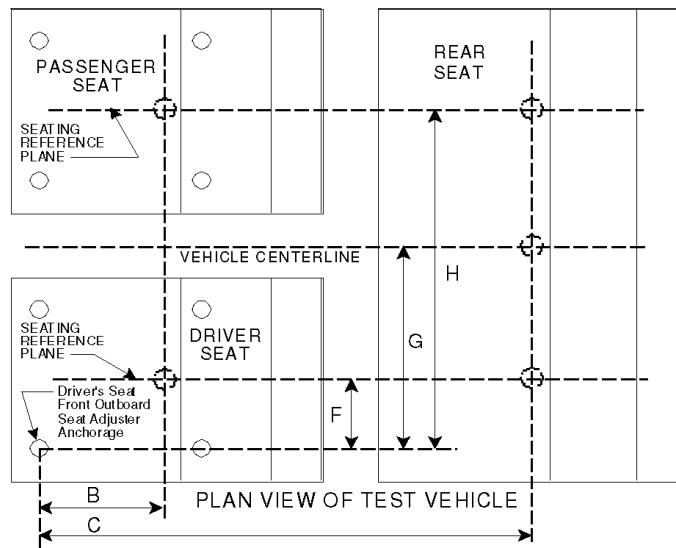
LEFT SIDE VIEW OF TEST VEHICLE

DIMENSION	FRONT, A1	REAR, A2
A	239.1mm	184.9mm
B	402.4mm	
C	1315.8mm	
D	N/A (testing to FMVSS 202a, not 202)	
E	24 deg	
F	25 deg	

FORM 4
 Page 2 of 3

**SEATING REFERENCE POINT (SRP) AND TORSO ANGLE DATA
 FOR FMVSS 201, 202, 203, 207 & 210
 (All dimensions in inches)**

Model Year: 2010 ; Make: Ford ; Model: Taurus
 Body Style: Sedan ; Seat Style: Bucket (frt), Bench (rr) 60/40 split



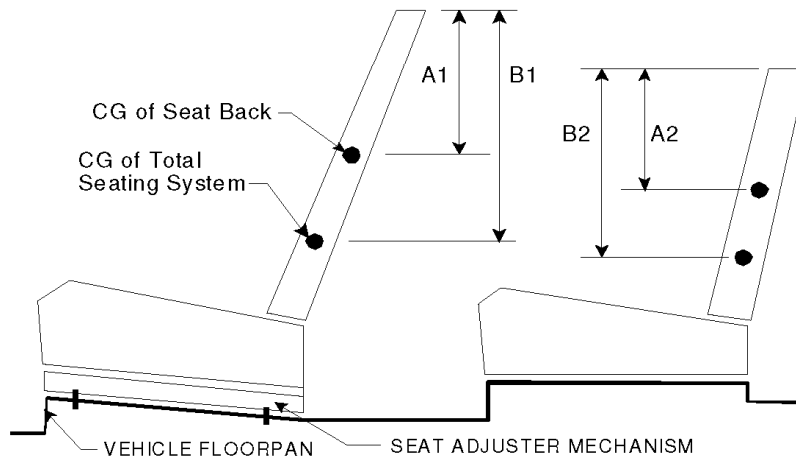
B	402.4mm
C	1315.8mm
F*	204.1mm
G	582mm
H*	960.2mm

* Provide all dimensions needed to locate SRP.

FORM 4
 Page 3 of 3

TEST VEHICLE SEAT INFORMATION
 (All dimensions in inches)

Model Year: 2010; Make: Ford; Model: Taurus
 Body Style: Sedan; Seat Style: Bucket (frt), Bench (rr) 60/40 split



A1			FRONT	BACK
B1		Weight of Hinged or Folding portion of seat	27.8 lbs	35.2 lbs (60%) 15.8 lbs (40%)
A2		Weight of Total Seat System	66.3 lbs	68.9 lbs
B2		Angle of Seat Back	23 deg	24 deg