FINAL REPORT NUMBER 202a-MGA-10-001

SAFETY COMPLIANCE TESTING FOR FMVSS 202a
"Head Restraints"

TOYOTA MOTOR MANUFACTURING
2010 Toyota Prius 4-Door Hatchback
NHTSA No. CA5104

MGA RESEARCH CORPORATION
446 Executive Drive
Troy, Michigan 48083

Test Dates: August 27, 2010 & September 22 -23, 2010
Report Date: December 23, 2010

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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16. Abstract A compliance test was conducted on the subject 2010 Toyota Prius 4-Door Hatchback, NHTSA No. CA5104, 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 August 27, 2010 and September 22-23, 2010. Test failures identified were as follows: NONE The data recorded indicates that the 2010 Toyota Prius 4-Door Hatchback tested appears to meet the requirements of FMVSS 202a.			
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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 Toyota Prius 4- Door Hatchback tested appears to meet the requirements of FMVSS 202a.

Table 1. Summary Data

MGA Test #	Test Type	Seat Description
E10772	Dimensional Measurements	Front LH 4-Way Manual (Cloth)
E10773	Dimensional Measurements	Front RH 2-Way Manual (Cloth)
E10860	Height Retention	Front RH 2-Way Manual (Cloth)
E10859	Backset Retention, Displacement and Strength	Front LH 4-Way Manual (Cloth)
D10281	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 Toyota Prius 4-Door Hatchback
VEH. NHTSA NO.	CA5104
VIN	JTDKN3DU0A0083164
COLOR	Black
VEH. BUILD DATE	November, 2009
TEST DATES	August 27, 2010 and September 22-23, 2010
TEST LABORATORY	MGA Research Corporation
OBSERVERS	Alisshia Woods, Helen Kaleto, Dave Maier

GENERAL INFORMATION:

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: Toyota Motor Manufacturing

Date of Manufacture: VIN: JTDKN3DU0A0083164

GVWR: 1,805 kg GAWR FRONT: 1,030 kg

GAWR REAR: 987 kg

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load:

FRONT: 240 kpa REAR: 230 kpa

Recommended Tire Size: P195/65R15

Recommended Cold Tire Pressure:

FRONT: 240 kpa REAR: 230 kpa

Size of Tire on Test Vehicle: P195/65R15

Size of Spare Tire: T135/80D16

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)	H1	H2	H3	H4	H1	H2	H3	H4		
E10772 (LH Manual)	-166	72	822	802	785	767	7	8	11	14	205	No
E10773 (RH Manual)	-168	59	835	814	797	780	15	15	16	18	201	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	
D10281 (RH Manual)	0.0	24.0	27.6	24.2	27.9	22.3	• 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
E10860 (RH Manual)	12.8	500	4.6	• 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)
E10859 (LH Manual)	2-Way	H2 (802)	24.0	13.3	-3.1	8.2	894	731

Note: H2 designates one notch below full up.

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DATA SHEET 1

SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY STYLE: 2010 Toyota Prius 4-DR Hatchback

VEH. NHTSA NO.: CA5104 ; VIN: JTDKN3DU0A0083164

VEH. BUILD DATE: 11/09 ; TEST DATE: 8/27/10, 9/22/10, 9/23/10

TEST LABORATORY: MGA

OBSERVERS: Alissha 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	X	___	
	Passenger's Side	X	___	
	Rear Designated Seating Positions	NA	NA	
C.	**OWNER'S MANUAL**	**(PASS)**	**FAIL**	
D.	**REMOVABILITY**	**(PASS)**	**FAIL**	**N/A**
	Driver's Side	X	___	
	Passenger's Side	X	___	
	Rear Designated Seating Positions	NA	NA	
E.	**NON-USE POSITION**	**PASS**	**FAIL**	**N/A**
	Rear Designated Seating Positions	NA	NA	
F.	**ENERGY ABSORPTION TEST**	**PASS**	**FAIL**	
	Driver's Side	NA	___	
	Passenger's Side	X	___	

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	Rear Designated Seating Positions	NA	NA
G.	**HEIGHT RETENTION TEST**	**PASS**	**FAIL**
	Driver's Side	NA	____
	Passenger's Side	X	____
	Rear Designated Seating Positions	NA	NA
H.	**BACKSET RETENTION TEST**	**PASS**	**FAIL**
	Driver's Side	X	____
	Passenger's Side	NA	____
	Rear Designated Seating Positions	NA	NA

RECORDED BY: Alissha Woods DATE: 12-23-10

APPROVED BY: [signature]

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DATA SHEET 2a

DIMENSIONAL REQUIREMENTS FOR ADJUSTABLE HEAD RESTRAINTS

VEH. NHTSA NO.: CA5104 TEST DATE: 8/27/10

Seat Location: Driver 4-way Manual (Cloth)

Height Measurement

SAE J826 three-dimensional manikin torso angle: 19

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): 822 X **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): 767 X **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): 757 mm

Width, W (mm): 205 X **PASS** **FAIL**

Width must be greater than of 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. 10°

HRMD torso angle: 19

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): 18 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 25mm cylinder did not pass through each gap X **PASS** **FAIL**

Gaps must be less than or equal to 60 mm.

REMARKS:

RECORDED BY: Alisha Woods DATE: 12-23-10

APPROVED BY: Heidi Kaleto

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DATA SHEET 2a

DIMENSIONAL REQUIREMENTS FOR ADJUSTABLE HEAD RESTRAINTS

VEH. NHTSA NO.: CA5104 TEST DATE: 8/27/10

Seat Location: Passenger 2-door manual

Height Measurement

SAE J826 three-dimensional manikin torso angle: 19

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): 835 x **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): >800 x **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): 770

Width, W (mm): 201 x **PASS** **FAIL**

Width must be greater than of 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: 19

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): 14 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 25mm Cylinder did not pass through each gap X **PASS** **FAIL**

Gaps must be less than or equal to 60 mm.

REMARKS:

RECORDED BY: Alisha Woods DATE: 12-23-10

APPROVED BY: Hale Kato

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DATA SHEET 3

OWNER'S MANUAL

VEH. NHTSA NO.: TEST DATE:

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.

X **PASS** **FAIL**

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

X **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.

X **PASS** **FAIL** **N/A**

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

X **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.

X **PASS** **FAIL**

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

REMARKS:

RECORDED BY: Alisha Wood DATE: 12-23-10

APPROVED BY: Heleo Kelsto

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DATA SHEET 4

REMOVABILITY

VEH. NHTSA NO.: CA5104 TEST DATE: 8/27/10

Are the head restraints removable? X **YES** **NO**

If removable, does removal REQUIRE an action distinct from actions to adjust the head restraint? X **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 pushing and holding the lock release button while pushing down on the head restraint

Description of distinct action for removal:

Pull up on the head restraint while pressing the lock release button

REMARKS:

RECORDED BY: Christie Woods DATE: 12-23-10

APPROVED BY: Hal Clark

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DATA SHEET 6

ENERGY ABSORPTION TEST

VEH. NHTSA NO.: CA 5104 TEST DATE: 9/23/10

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: 19

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

Description of equipment or method used to rigidly fix the seat back: N/A

Accelerometer identification: P57862 P58043 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)): 24.2 X **PASS** **FAIL**

REMARKS: HR test position was full down for testing

RECORDED BY: Alisha Wash DATE: 12-23-10

APPROVED BY: Helal Kelfo

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DATA SHEET 7

HEIGHT RETENTION TEST
(ADJUSTABLE HEAD RESTRAINTS ONLY)

VEH. NHTSA NO.: CA5104 TEST DATE: 9/22/10

Seat Location: Passenger 2-way Manual

Pre-test measurements

SAE J826 Manikin torso angle: 19 Top of Head Restraint Height (mm): 835

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 ± 1 N): 50 N Initial Displacement, D1 (mm): 12.8

Initial Displacement (D1) < 25 mm yes x **PASS** **FAIL**

Maximum load (495 N ± 5 N): 500 Maximum Displacement, D2 (mm):

Return load (50 N ± 1 N): 50 N Return Displacement, D3 (mm): 4.6

Total displacement (D3-D1) < 13 mm: yes x **PASS** **FAIL**

REMARKS: HR test position was full up

RECORDED BY: Alisha Wood DATE: 12-23-10

APPROVED BY: Helo Kleto

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DATA SHEET 8

BACKSET RETENTION TEST

VEH. NHTSA NO.: CA 5104 TEST DATE: 9/22/10

Seat Location: Driver 4-way Manual Type of head restraint: Adjustable

Pre-test measurements

SAE J826 Manikin torso angle: 19 Top of Head Restraint Height (mm): 802

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

Displacement torso reference line

Test device back pan angle: 24.0

Distance from the H-point to the initial location of the load (0.290 ± 0.013 m): 0.285

Initial load (N): 1081 Initial moment (373 ± 7.5 Nm): 373

Backset retention and strength

Distance from the H-point to the head form tangency point (m): ~~.73~~ 0.743

Initial load (N): 50.2 Initial moment (37 ± 0.7 Nm): 37

Initial head form displacement, D1 (< or = 25 mm): 13.3 X **PASS** **FAIL**

Load range to generate a 373 ± 7.5 Nm rearward moment (N): 510

Actual load applied (N): 510 Resultant moment (Nm): 373 Nm

Maximum Head form displacement, D2 (< or = 102 mm): -3.1 X **PASS** **FAIL**

Final head form displacement, D3 (mm): 21.5
measured at (37 ± 0.7 Nm)

Total displacement (D3-D1) < 13 mm : 8.2 X **PASS** **FAIL**

Maximum applied load (> or equal to 885 N): 894 X **PASS** **FAIL**

REMARKS:

RECORDED BY: [signature] DATE: 12-23-10

APPROVED BY: [signature]

PHOTOGRAPHS

1.1 Front right view

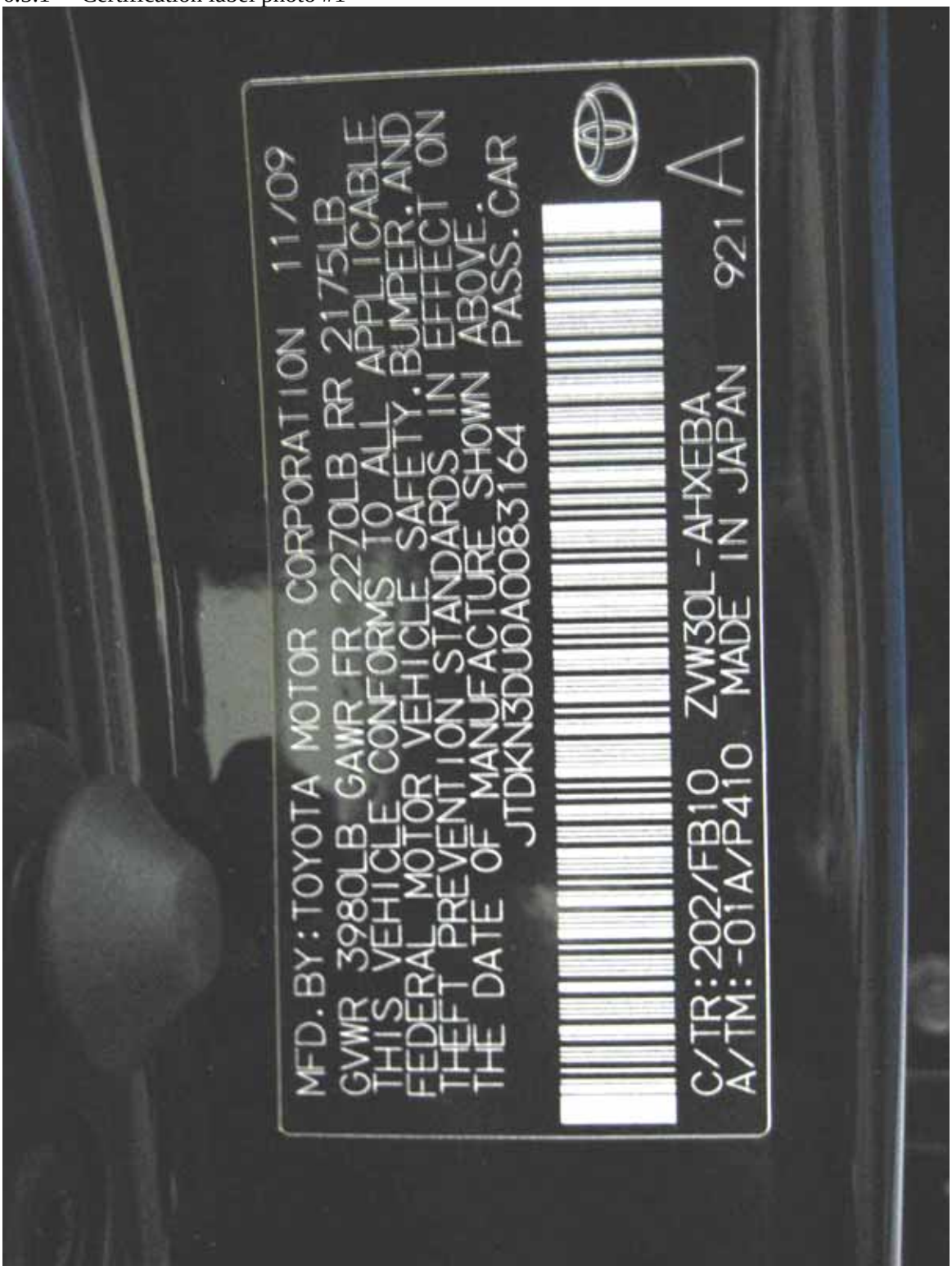
1.2 Front left view

1.3 Rear right view

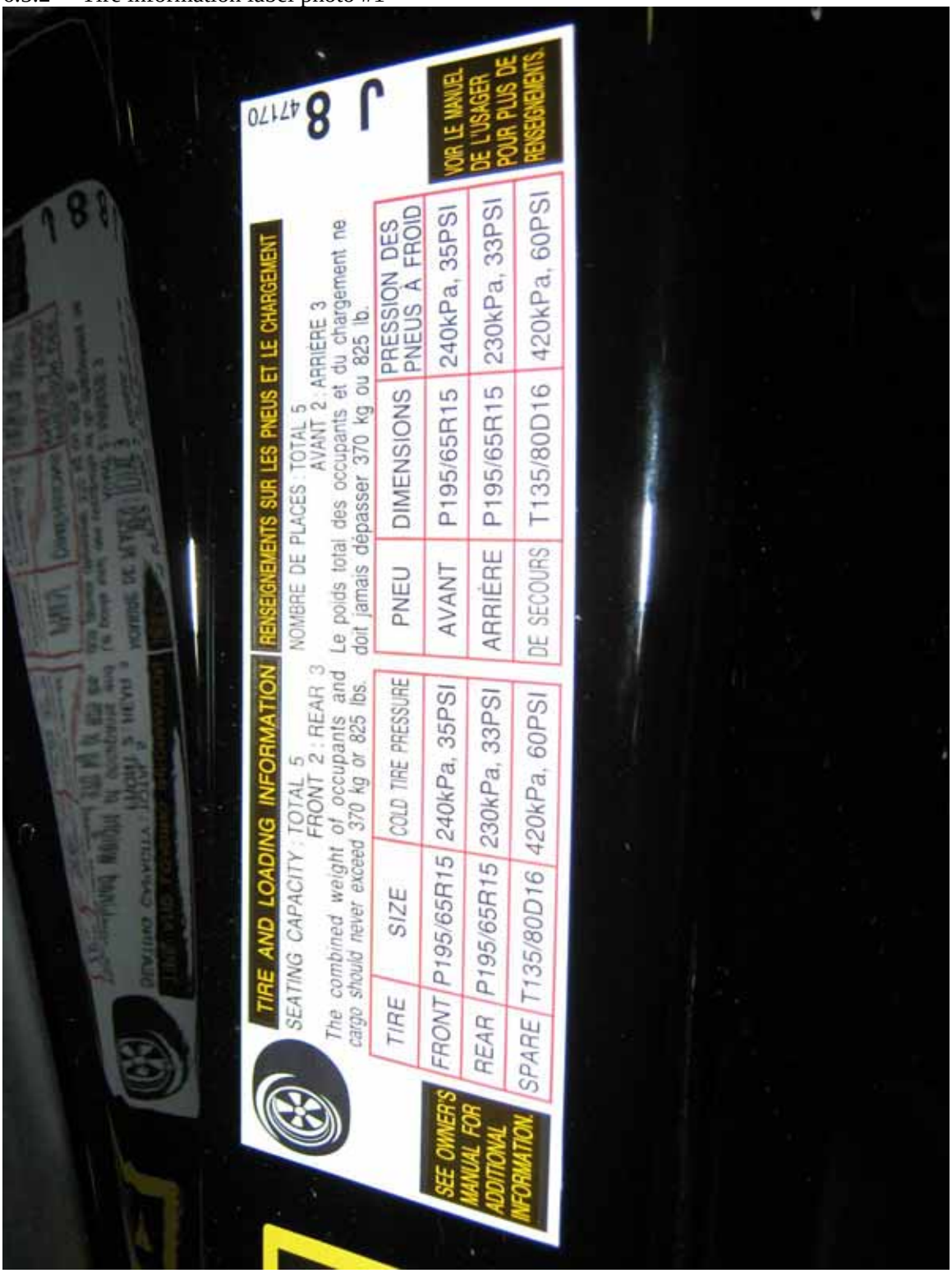
1.4 Rear left view

1.5 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

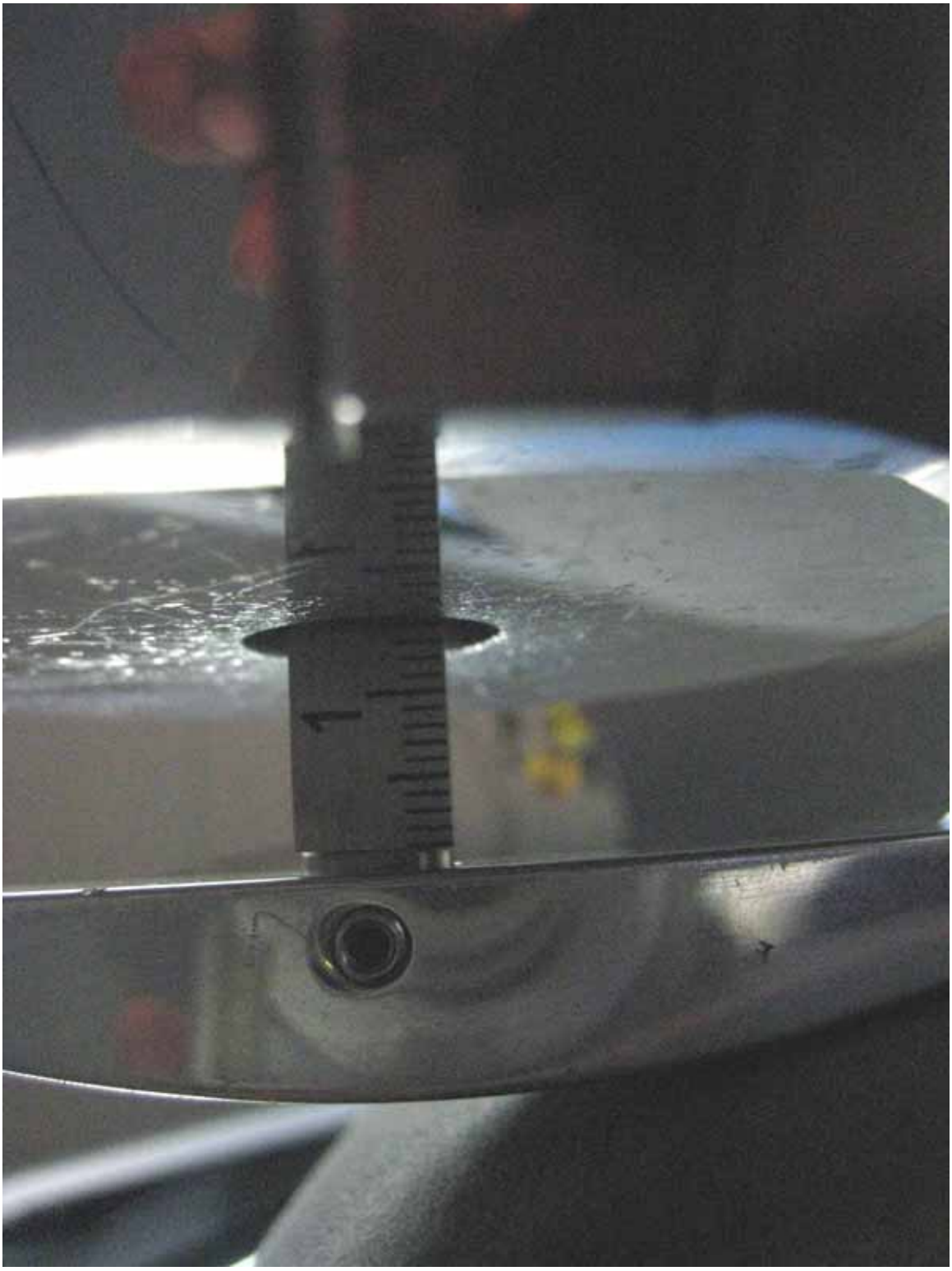
6.6.2 Driver Test Photo #2

6.6.3 Driver Test Photo #3

6.6.4 Driver Test Photo #4

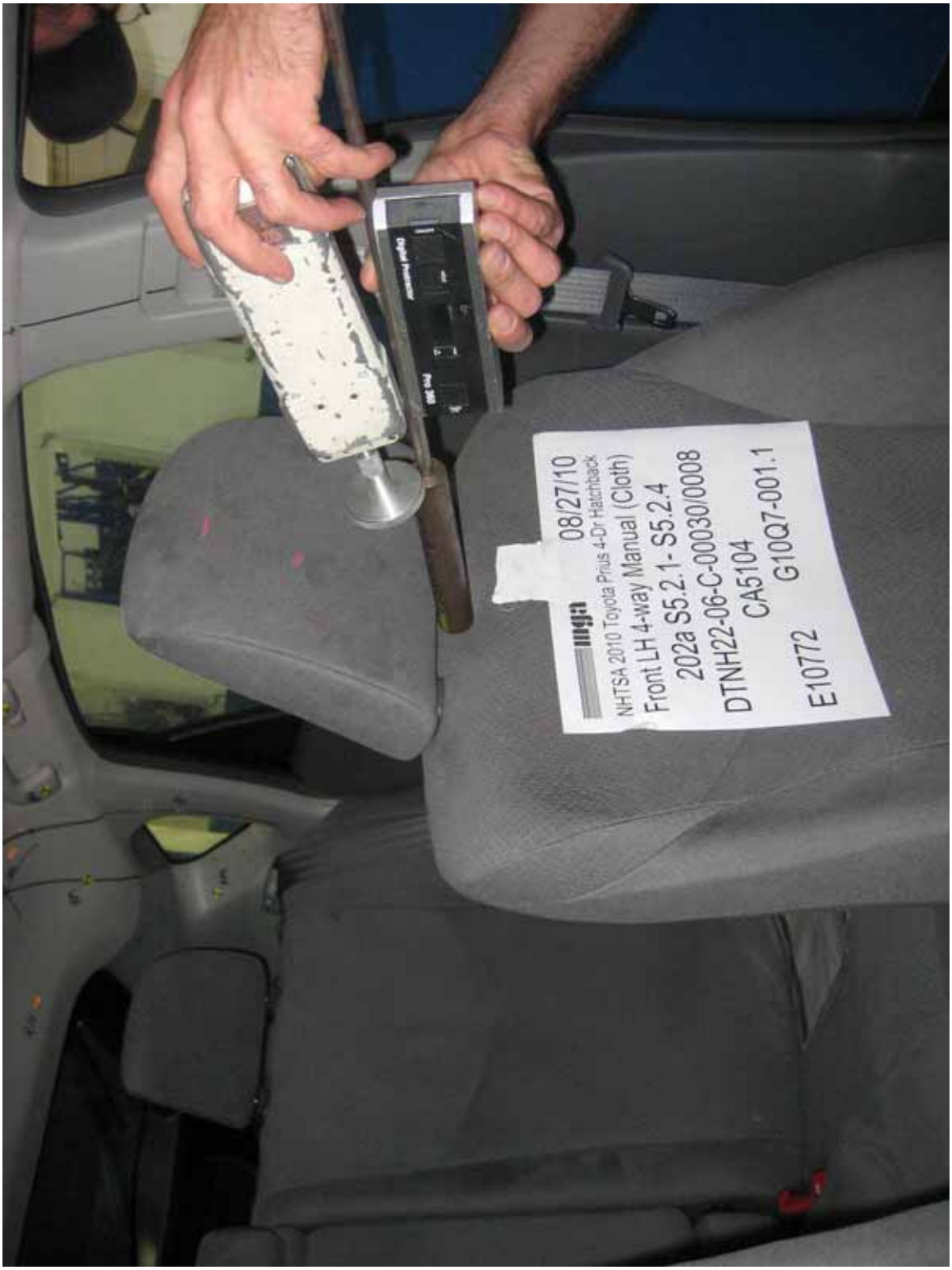
6.6.5 Driver Test Photo #5

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 Driver 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

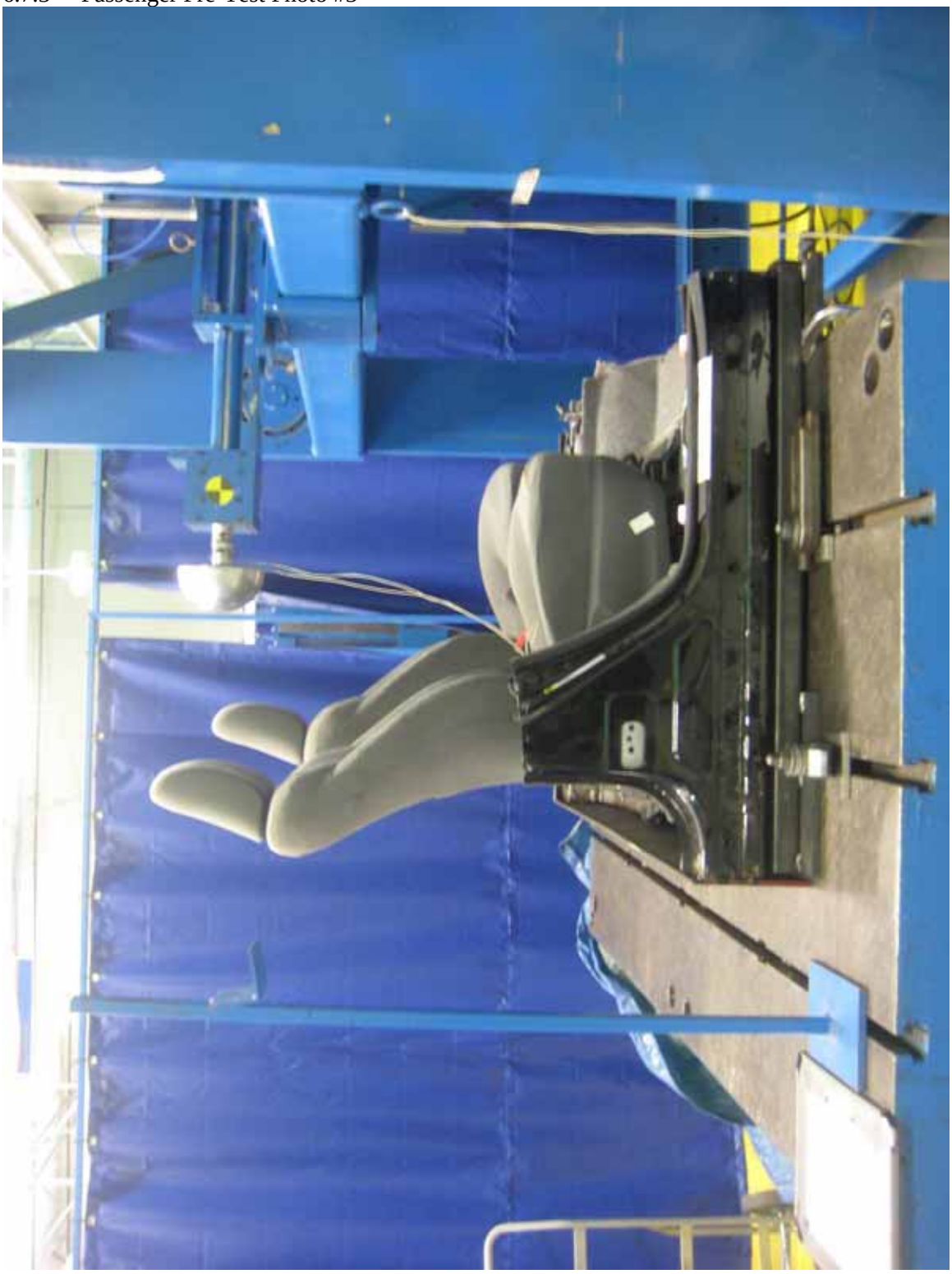
6.6.18 Passenger Test Photo #18

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 Pre-Test Photo #3



6.7.4 Passenger Post-Test Photo #1

6.7.5 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

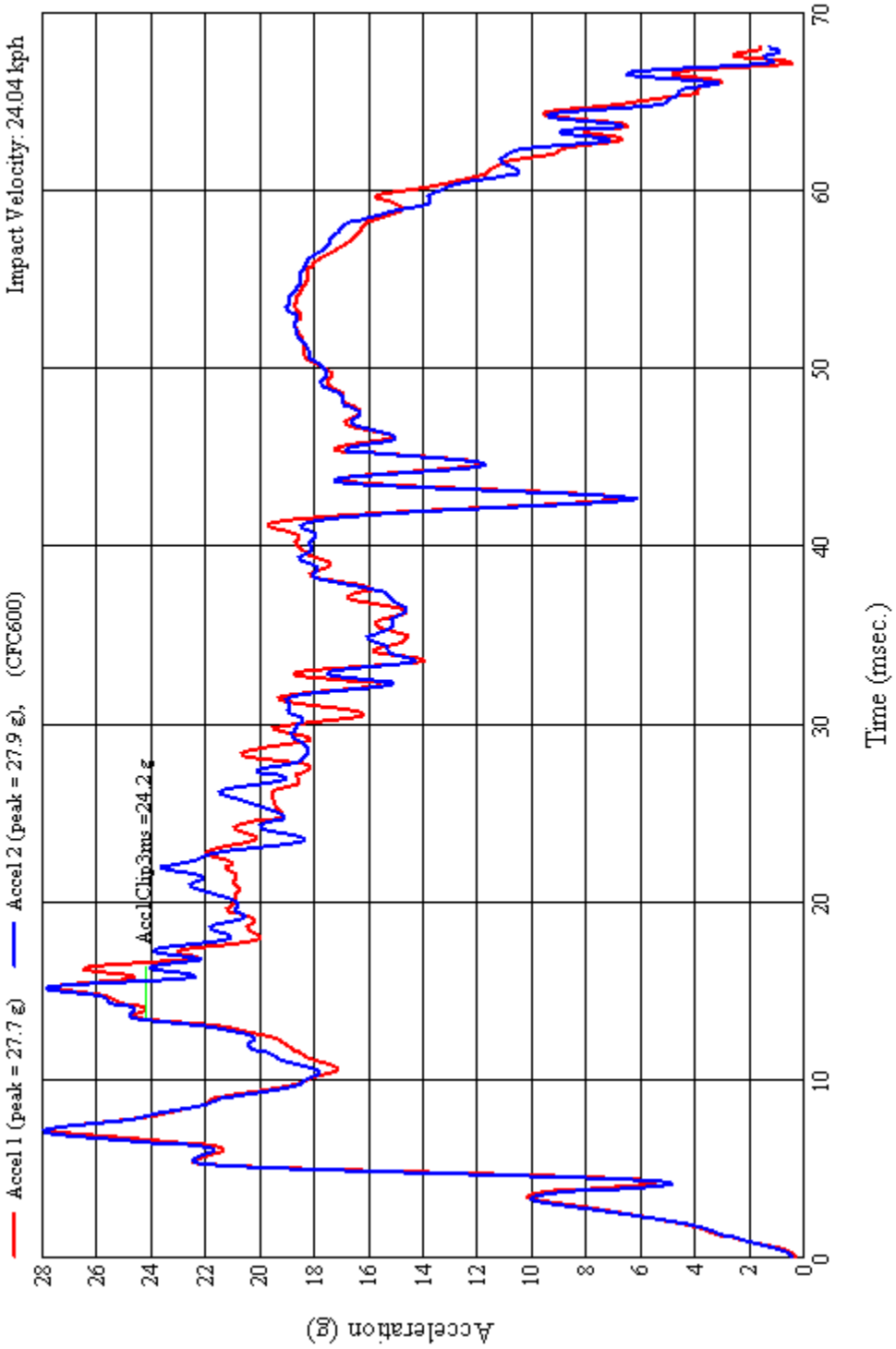
6.9.8 Driver Test Photo #8

6.9.9 Driver Test Photo #9

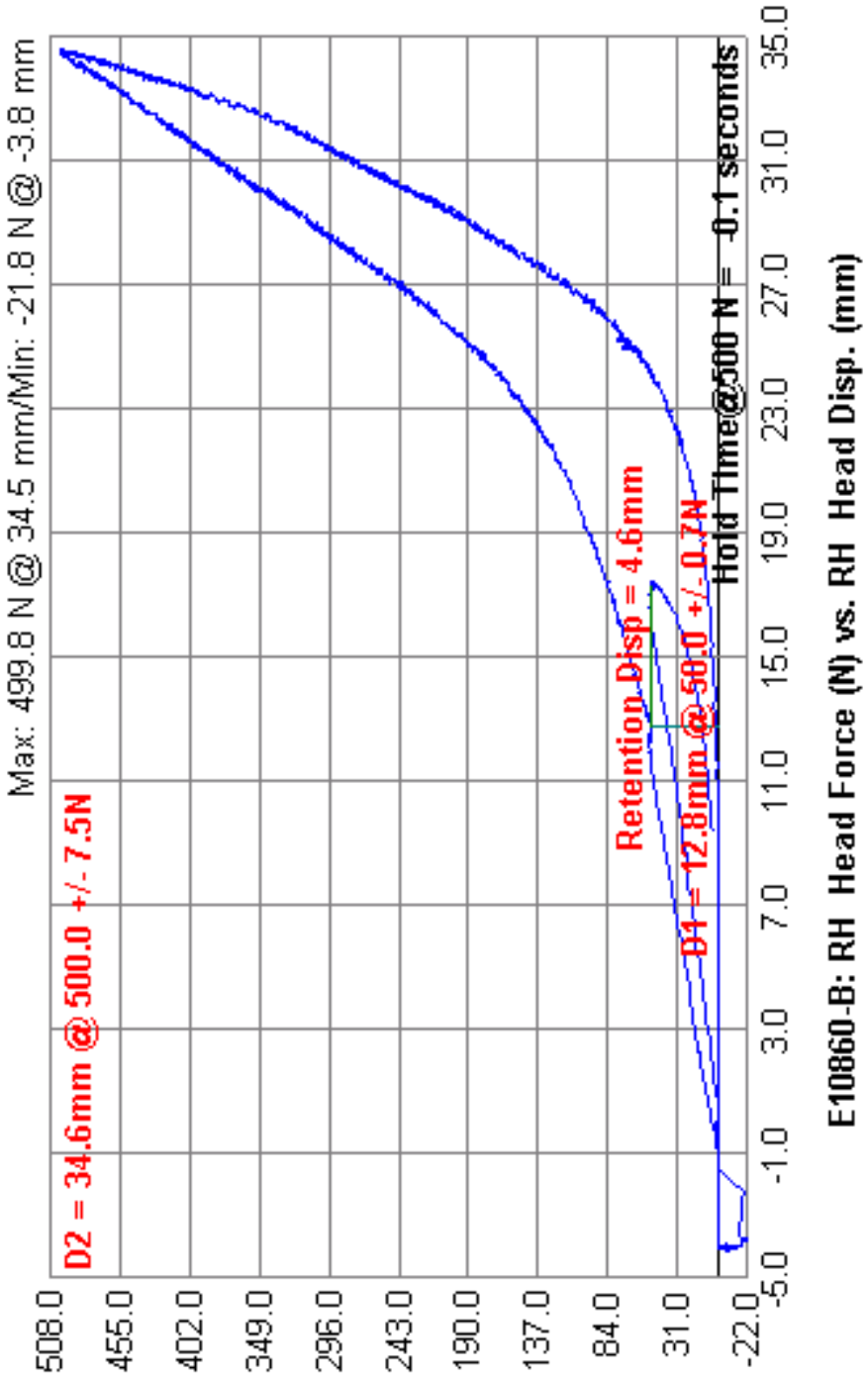
6.9.10 Driver Test Photo #10

7.0 PLOTS

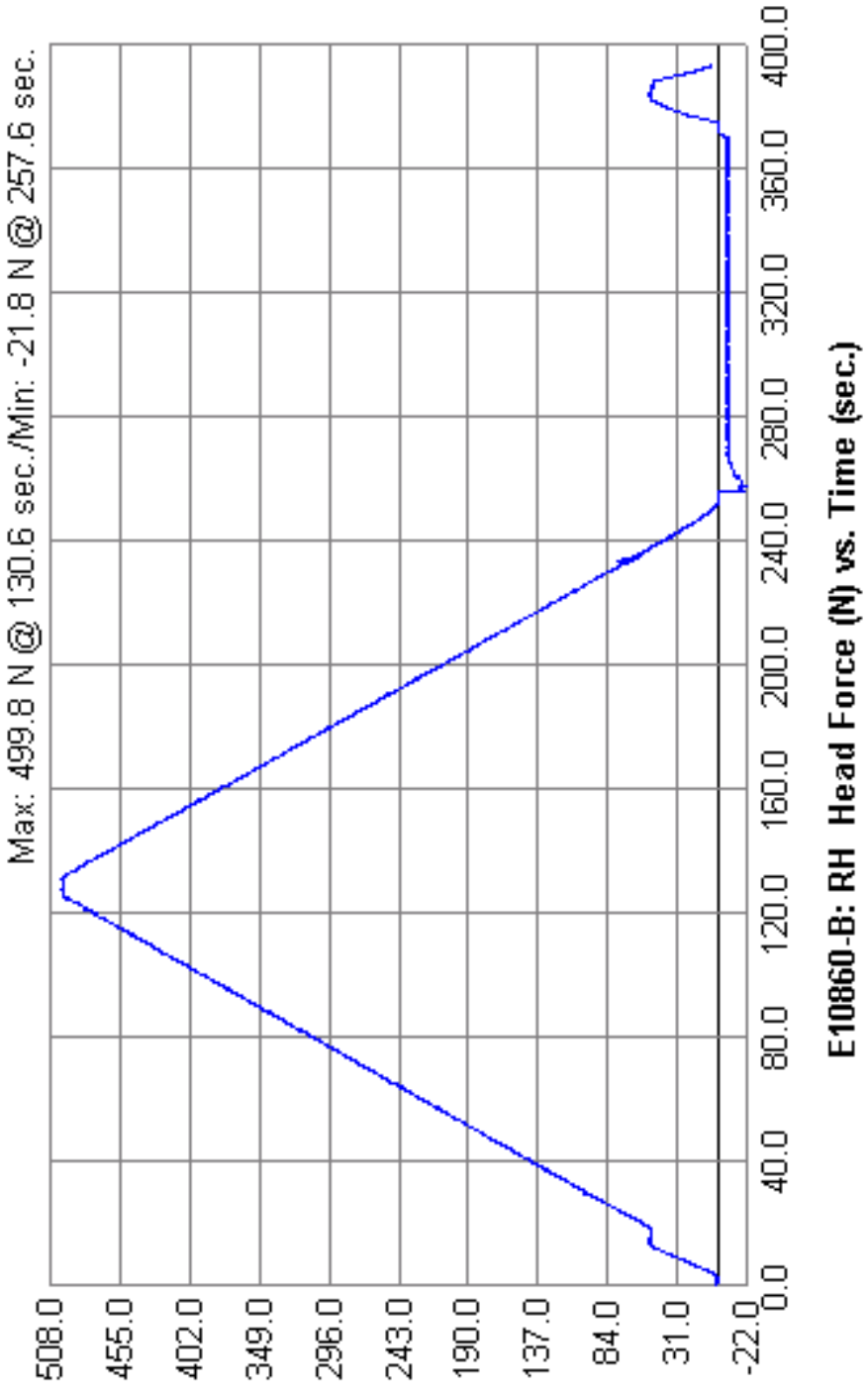
7.1.1 S5.2.5 Energy Absorption



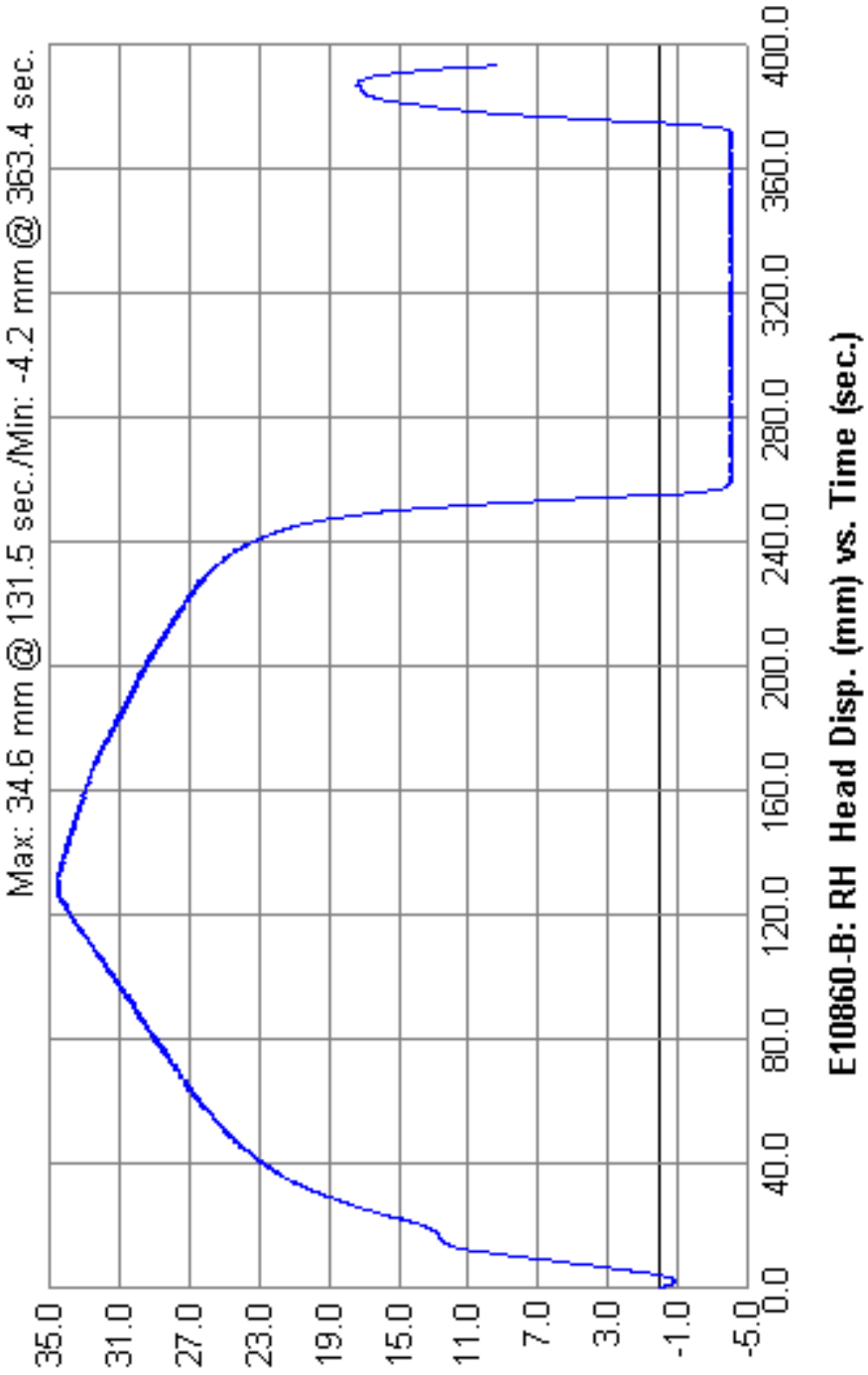
7.2.1 S5.2.6 Height Retention



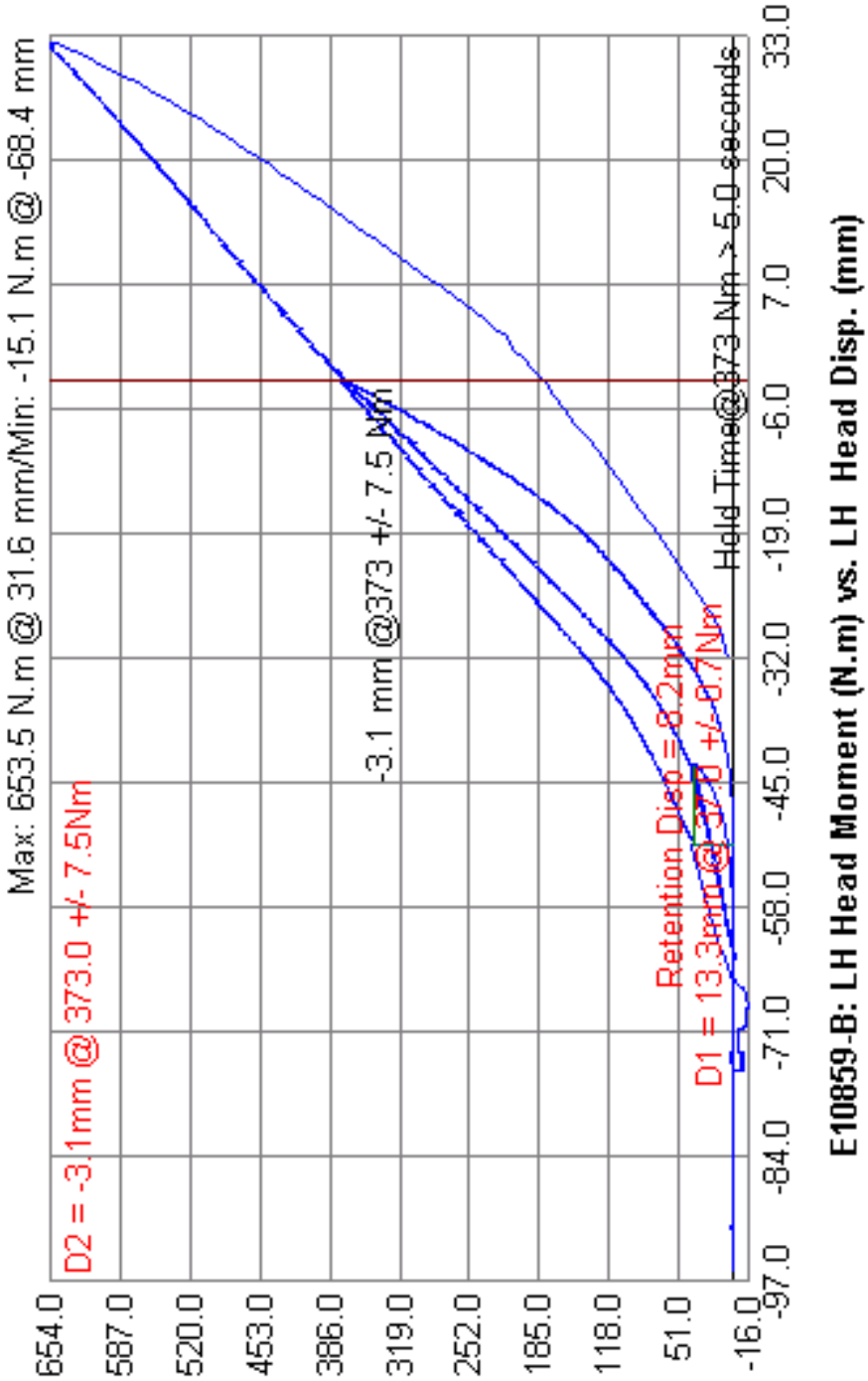
7.2.2 S5.2.6 Height Retention



7.2.3 S5.2.6 Height Retention



7.3.1 S5.2.7 Backset Retention, Displacement and Strength



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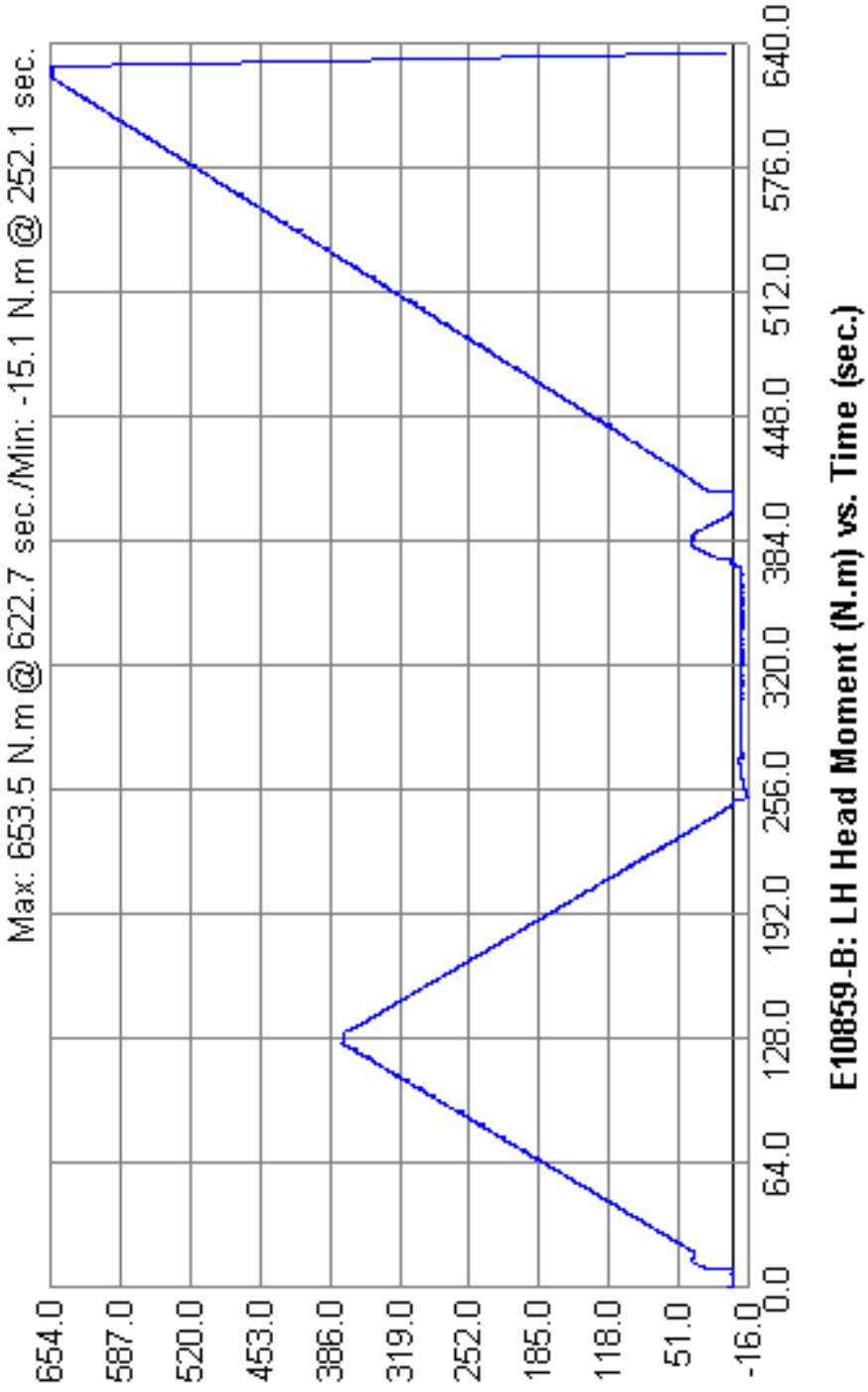
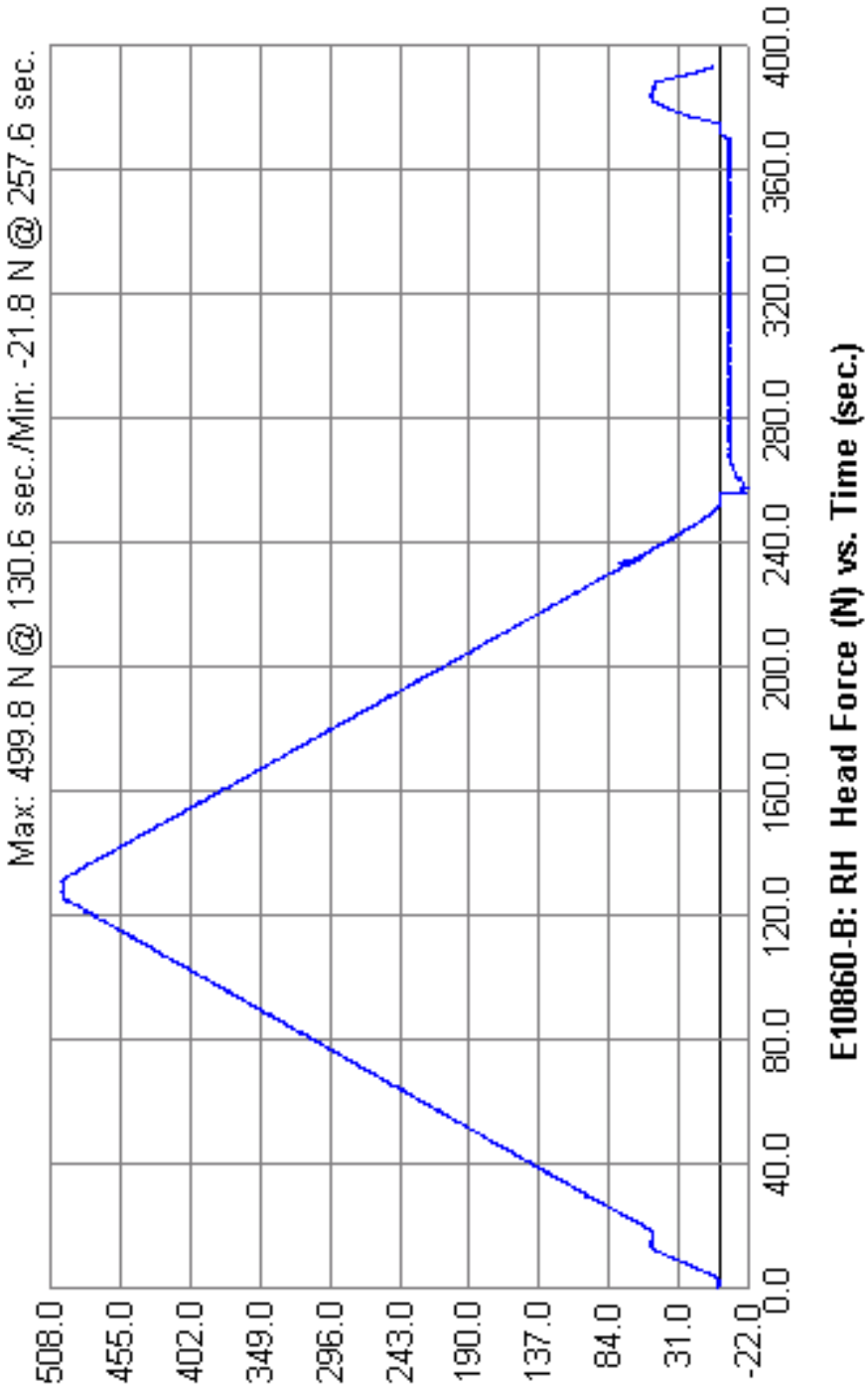
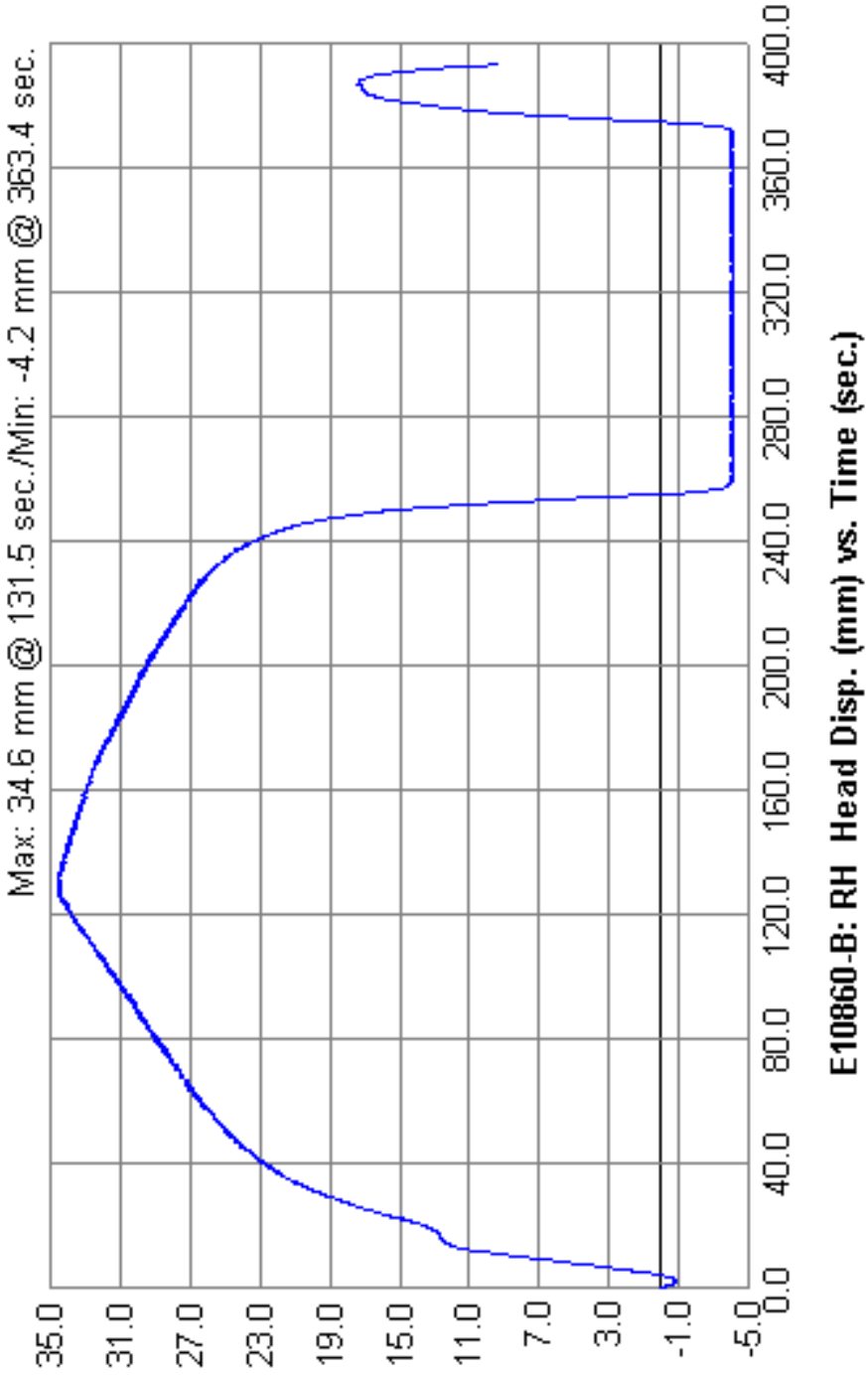


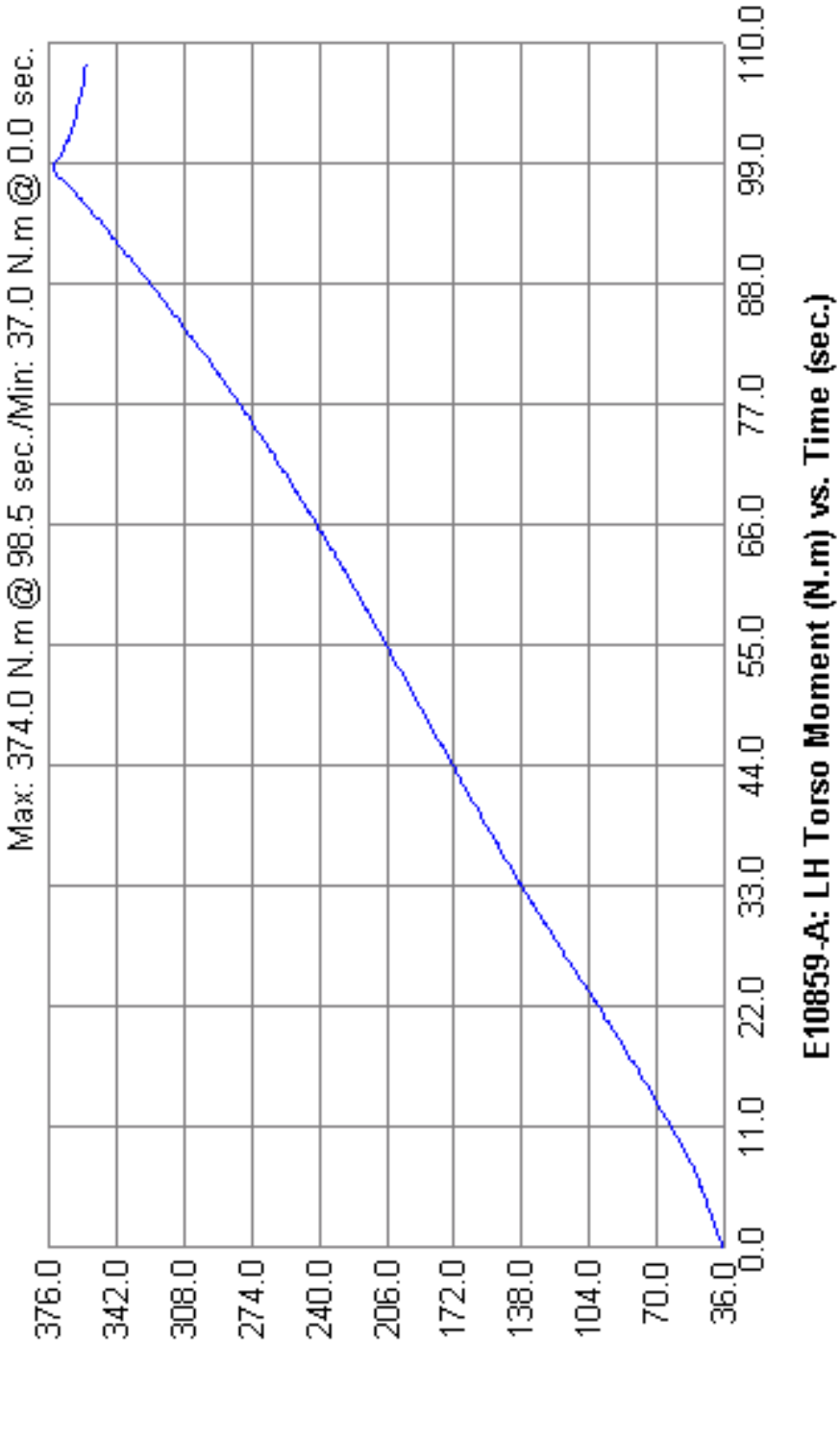
7.3.3 S5.2.7 Backset Retention, Displacement and Strength



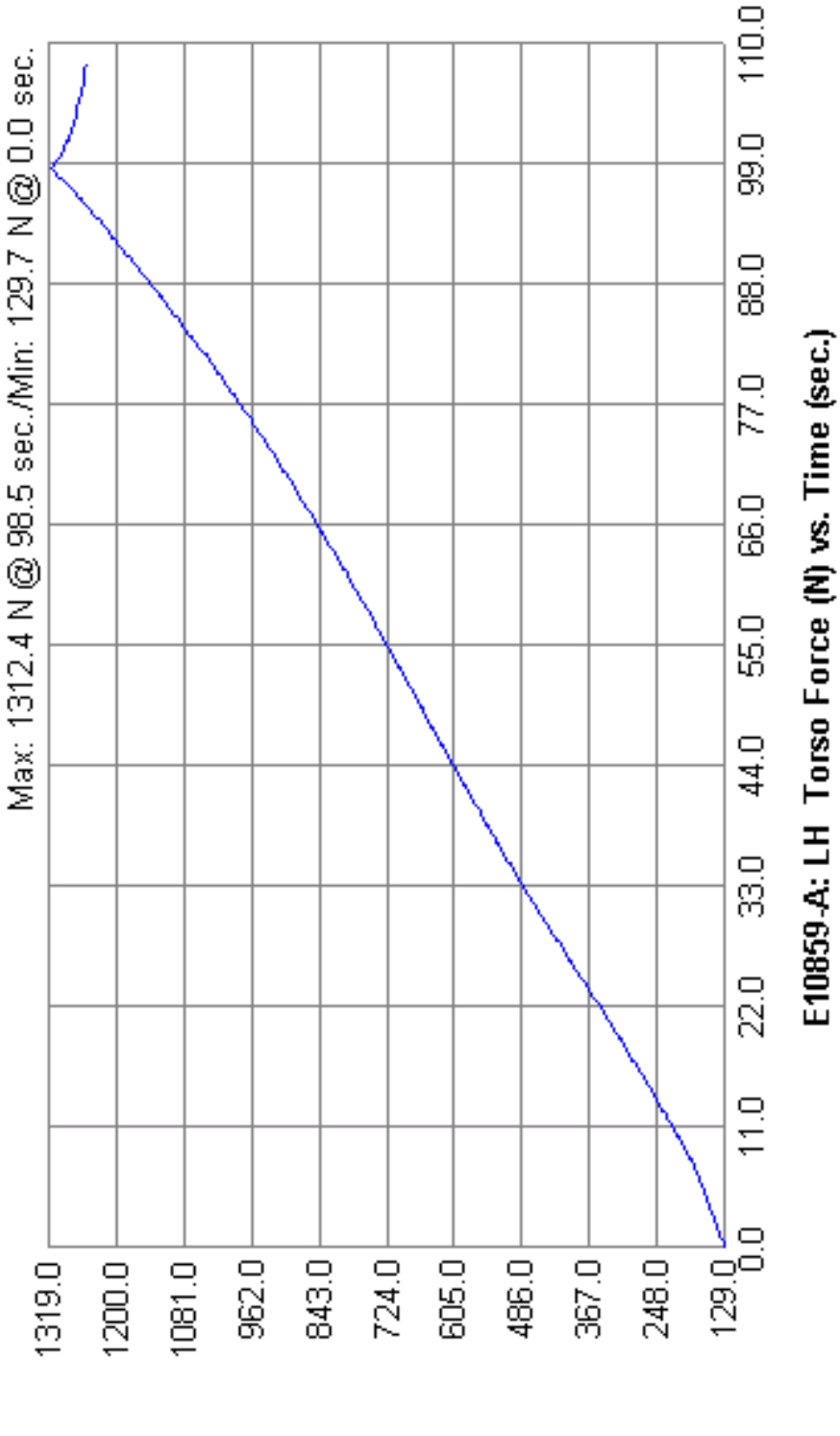
7.3.4 S5.2.7 Backset Retention, Displacement and Strength



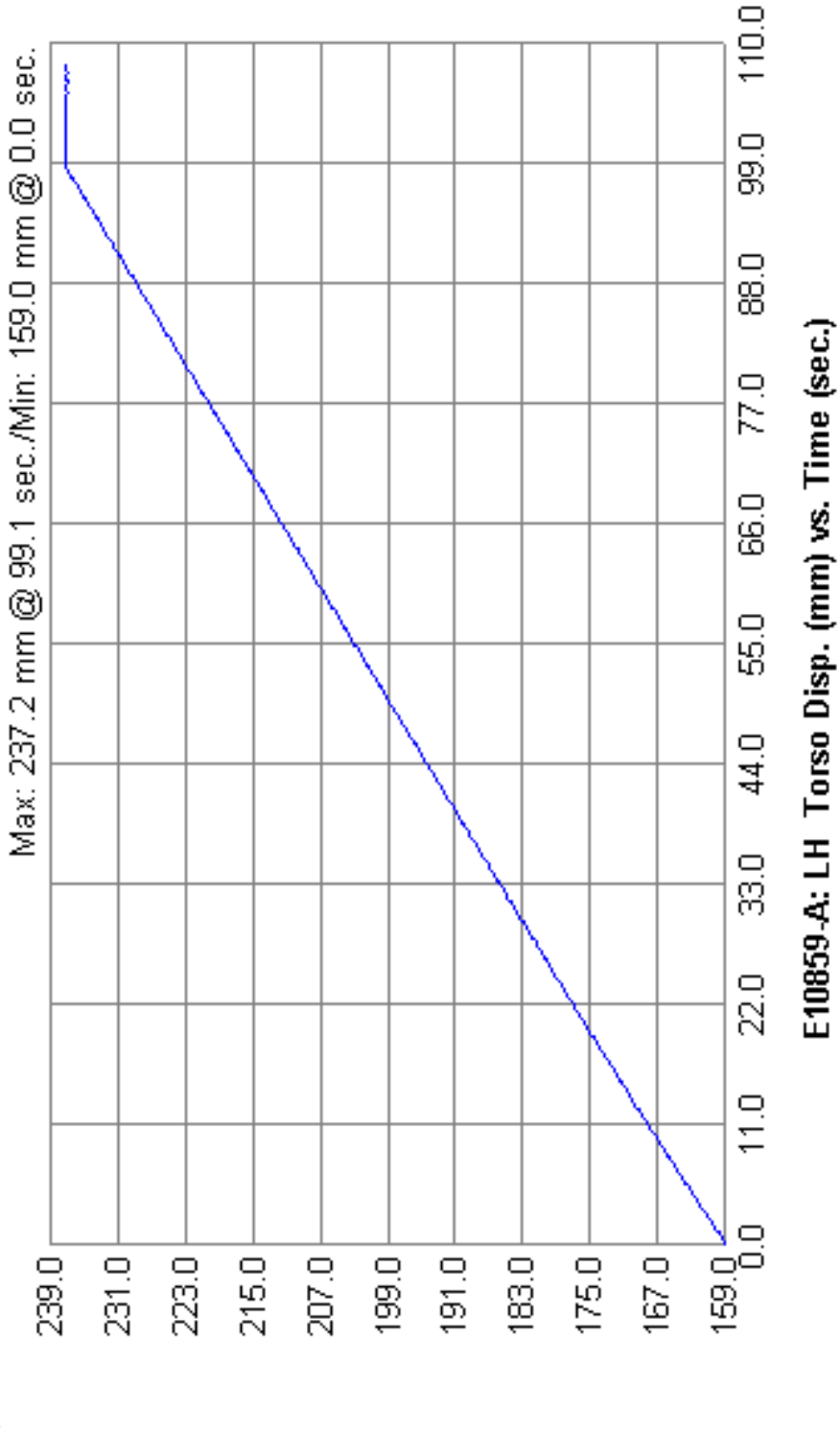
7.3.5 S5.2.7 Backset Retention, Displacement and Strength



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: August 27, 2010 and September 22-23, 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 Toyota Prius 4-Door Hatchback

VEH. NHTSA NO.: CA5104 VIN: JTDKN3DU0A0083164

COLOR: Black

ODOMETER READINGS: ARRIVAL 62 miles Date: February 22, 2010

COMPLETION 62 miles Date: September 30, 2010

ENGINE DATA: 4 Cylinders 1.8 Liters ___ Cubic Inches

TRANSMISSION DATA: X Automatic ___ Manual ___ No. of Speeds

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

CHECK APPROPRIATE BOXES FOR VEHICLE EQUIPMENT:

TEST LABORATORY: MGA Research Corporation

OBSERVERS: Helen Kaleto, Alisshia Woods and Dave Maier

X	Air Conditioning	X	Traction Control	X	Clock
No	Tinted Glass	N/A	All Wheel Drive	N/A	Roof Rack
X	Power Steering	X	Speed Control	X	Console
X	Power Windows	X	Rear Window Defroster	X	Driver Air Bag
X	Power Door Locks	N/A	Sun Roof or T-Top	X	Passenger Air Bag
No	Power Seat(s)	X	Tachometer	X	Front Disc Brakes
X	Power Brakes	X	Tilt Steering Wheel	X	Rear Disc Brakes
X	Antilock Brake System	X	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 23, 2010

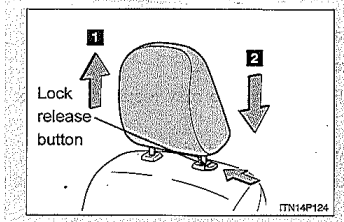
APPROVED BY: Helen Kaleto

APPENDIX A
OWNERS MANUAL HEAD RESTRAINTS

Head restraints

Head restraints are provided for all seats.

▶ Front seats



Vertical adjustment

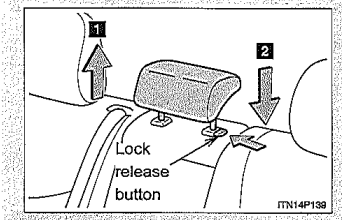
1 Up

Pull the head restraints up.

2 Down

Push and hold the lock release button when lowering the head restraint.

▶ Rear center seat



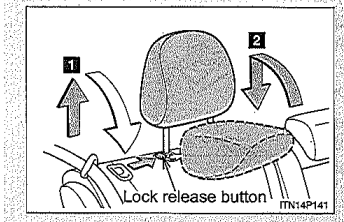
Vertical adjustment

1 Up

2 Down

Push the head restraint up or down while pressing the lock release button.

▶ Rear outboard seats (foldable type only)



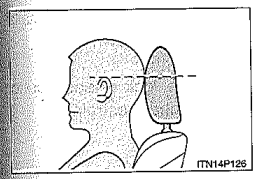
1 To fold

Push the head restraint up while pressing the lock release button.

2 To use

Lift up and push down the head restraint to the lowest lock position.

Adjusting the height of the head restraints



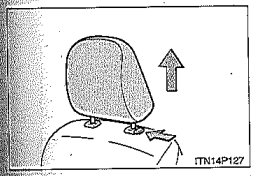
Make sure that the head restraints are adjusted so that the center of the head restraint is closest to the top of your ears.

Adjusting the rear center seat head restraint

Always raise the head restraint one level from the stowed position when using.

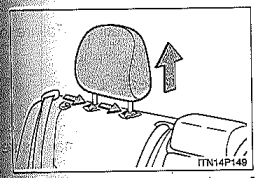
Removing the head restraints

▶ Front and rear center seats



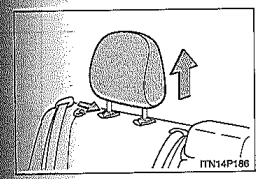
Pull the head restraint up while pressing the lock release button.

▶ Rear outboard seats (foldable type)



Pull the head restraint up while pressing the lock release buttons.

▶ Rear outboard seats (non-foldable type)



Pull the head restraint up while pressing the lock release button.

MGA File #: G10Q7-001.1

Safety Compliance Testing For FMVSS 202a
"Head Restraints"
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1-4. Adjustable components (seats, mirrors, steering wheel)

Seat belts

Installing the head restraints

▶ Front and rear center seats

Align the head restraint with the installation holes and push it down to the lock position.
Press and hold the lock release button when lowering the head restraint.

▶ Rear outboard seats

Align the head restraint with the installation holes and push it down to the lowest lock position.

⚠ CAUTION

■ Head restraint precautions

Observe the following precautions regarding the head restraints. Failure to do so may result in death or serious injury.

- Use the head restraints designed for each respective seat.
- Adjust the head restraints to the correct position at all times.
- After adjusting the head restraints, push down on them and make sure they are locked in position.
- Do not drive with the head restraints removed.

Make sure that all occupants are wearing their seat belts before driving the vehicle.

■ Correct use of the seat belts

1 Extend the shoulder belt so that it comes fully over the shoulder, but does not come into contact with the neck or slide off the shoulder.
2 Position the lap belt as low as possible over the hips.
3 Adjust the position of the seatback. Sit up straight and well back in the seat.
4 Do not twist the seat belt.

■ Fastening and releasing the seat belt

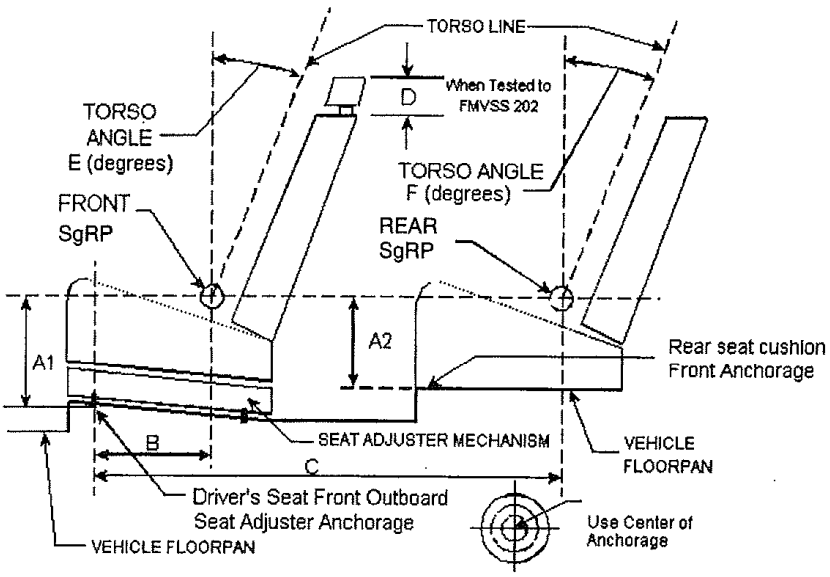
1 Fastening the belt
Push the tab into the buckle until a clicking sound is heard.
2 Releasing the belt
Press the release button.

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

Attachment 8
FORM 4
Page 1 of 2

SEAT REFERENCE POINT (SgRP) AND TORSO ANGLE DATA
FOR FMVSS (201) 202, 203, 207 & 210

Model Year: 2010 ; Make: Toyota ; Model: Prius; Body Style: 5Door H/B
Seat Style: Fr : Separate Rr : 60/40 Split Bench



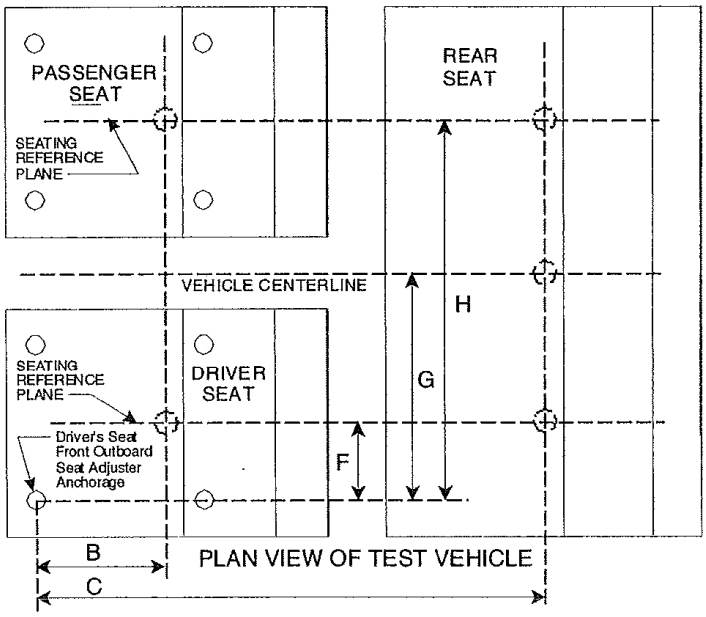
LEFT SIDE VIEW OF TEST VEHICLE

DIMENSION	FRONT, A1	REAR, A2
A	246.3mm	N/A
B	382.9mm	
C	Outboard: 1179.5mm Center: 1142.5mm	
D	N/A	
E	19 degrees	
F	Outboard: 23 degrees Center: 19.5 degrees	

Attachment 8
FORM 4
Page 2 of 2

SEATING REFERENCE POINT (SgRP) AND TORSO ANGLE DATA
FOR FMVSS (201) 202, 203, 207 & 210

Model Year: 2010 ; Make: Toyota ; Model: Prius ; Body Style: 5Door H/B
Seat Style: Fr : Separate Rr : 60/40 Split Bench



B	382.9mm
C	Outboard: 1179.5mm Center: 1142.5mm
F*	Fr: 207.0mm Rr: 222.5mm
G	559.5mm
H*	Fr: 912.0mm Rr: 896.5mm

* Provide all dimensions needed to locate SgRP.