REPORT NUMBER 202a-GTL-10-002

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 202aS HEAD RESTRAINTS – STATIC REQUIREMENTS

CHRYSLER GROUP LLC
2010 DODGE CHARGER SE, PASSENGER CAR
NHTSA NO. CA0302

GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
COLONIAL BEACH, VIRGINIA 22443

August 5, 2010

FINAL REPORT

PREPARED FOR

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

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

Prepared By: Digitally signed by Debbie Messick
DN: cn=Debbie Messick, c=US, o=GTL, email=gtl@general-testing.com

Approved By: Digitally signed by Grant Farrand
DN: cn=Grant Farrand, c=US, o=GTL, email=gtl@general-testing.com

Approval Date: 08/05/10

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: Edward E. Chan Digitally signed by Edward E. Chan
DN: cn=Edward E. Chan, o=National Highway Traffic Safety Administration, ou=Office of Vehicle Safety Compliance, email=ed.chan@dot.gov, c=US
Date: 2010.08.04 11:01:24 -04'00'

Acceptance Date: _____

1. Report No. 202a-GTL-10-002	2. Government Accession No. N/A	3. Recipient's Catalog No. N/A
4. Title and Subtitle Final Report of FMVSS 202a Compliance Testing of a 2010 DODGE CHARGER SE, PASSENGER CAR NHTSA No. CA0302		5. Report Date August 5, 2010 6. Performing Organ. Code GTL
7. Author(s) Grant Farrand, Project Engineer Debbie Messick, Project Manager		8. Performing Organ. Rep# GTL-DOT-10-202a-002
9. Performing Organization Name and Address General Testing Laboratories, Inc. 1623 Leedstown Road Colonial Beach, Va 22443		10. Work Unit No. (TRAIS) N/A 11. Contract or Grant No. DTNH22-06-C-00032
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Admin. Enforcement Office of Vehicle Safety Compliance (NVS-220) 1200 New Jersey Ave., S.E., Washington, DC 20590		13. Type of Report and Period Covered Final Test Report June 24 – July 15, 2010 14. Sponsoring Agency Code NVS-221
15. Supplementary Notes		
16. Abstract Compliance tests were conducted on the subject, 2010 Dodge Charger SE 4-door Passenger Car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-202aS-00 for the determination of FMVSS 202a compliance. Test failures identified were as follows: NONE		
17. Key Words Compliance Testing Safety Engineering FMVSS 202aS	18. Distribution Statement Copies of this report are available from NHTSA Technical Information Services (TIS) Room W45-212 (NPO-411) 1200 New Jersey Ave., S.E. Washington, DC 20590 Telephone No. (202) 366-4947	
19. Security Classif. (of this report) UNCLASSIFIED	21. No. of Pages 75	22. Price
20. Security Classif. (of this page) UNCLASSIFIED		

Form DOT F 1700.7 (8-72)

TABLE OF CONTENTS

SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2010 Dodge Charger SE Passenger Car was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 202a testing to determine if the vehicle was in compliance with the requirements of the standard. The purpose of this standard is to establish requirements for head restraints to reduce the frequency and severity of neck injury in rear end and other collisions.

1.1 The test vehicle was a 2010 Dodge Charger SE Passenger Car. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: 2B3CA4CD2AH140890

B. NHTSA No.: CA0302

C. Manufacturer: CHRYSLER GROUP LLC

D. Manufacture Date: 10-09

E. Color: Brilliant Black

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 202a testing during the time period June 24 through July 15, 2010.

SECTION 2

COMPLIANCE TEST RESULTS

2.0 TEST RESULTS

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedures, TP-202aS-00 dated 22 December 2004.

Based on the test performed, the 2010 Dodge Charger SE Passenger Car appeared to meet the requirements of FMVSS 202a testing.

SECTION 3

COMPLIANCE TEST DATA

3.0 TEST DATA

The following data sheets document the results of testing on the 2010 Dodge Charger SE Passenger Car.

DATA SHEET 1 (1 of 2)
SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY STYLE: 2010 DODGE CHARGER SE PASSENGER CAR

VEH. NHTSA NO.: CA0302 ; VIN: 2B3CA4CD2AH140890

VEH. BUILD DATE: 10-09 ; TEST DATE: June 24-July 15, 2010

TEST LABORATORY: GENERAL TESTING LABORATORIES

OBSERVERS: G. FARRAND, J. LATANE

A. VISUAL INSPECTION OF TEST VEHICLE

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

RESULTS: OK for testing. Due to manufacture date of vehicle, rear DSP's are not required to meet 202a requirements.

B. DIMENSIONAL REQUIREMENTS	**PASS**	**FAIL**	**N/A**
Driver's Side	X		
Passenger's Side	X		
Rear Designated Seating Positions	X		

C. OWNER'S MANUAL	**PASS**	**FAIL**
	X	

D. REMOVABILITY	**PASS**	**FAIL**	**N/A**
Driver's Side	X		
Passenger's Side	X		
Rear Designated Seating Positions			X

E. NON-USE POSITION	**PASS**	**FAIL**	**N/A**
Rear Designated Seating Positions			X

DATA SHEET 1 (2 of 2)
SUMMARY OF RESULTS

F.	**ENERGY ABSORPTION TEST**	**PASS**	**FAIL**	**N/A**
	Driver's Side			
	Passenger's Side			
	Rear Designated Seating Positions	X		
G.	**HEIGHT RETENTION TEST**	**PASS**	**FAIL**	**N/A**
	Driver's Side	X		
	Passenger's Side			
	Rear Designated Seating Positions			
H.	**BACKSET RETENTION TEST**	**PASS**	**FAIL**	**N/A**
	Driver's Side			
	Passenger's Side	X		
	Rear Designated Seating Positions			

RECORDED BY: G. FARRAND DATE: 07/15/10

APPROVED BY: D. MESSICK

DATA SHEET 2 (1 of 2)
DIMENSIONAL REQUIREMENTS FOR FIXED HEAD RESTRAINTS

VEH. NHTSA NO.: CA0302 TEST DATE: June 24, 2010

Seat Location: REAR DRIVER

Height Measurement

SAE J826 three-dimensional manikin torso angle: 29°

Striker to H-Point (mm): 285 Striker to H-Point angle: Down
Height, H (mm): 758 X **PASS** **FAIL**

H > or = 800 mm for front seats.
H > or = 750 mm for 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.

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

Height, Hw (= H – 65): 693
Width, W (mm): 244 X **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.

Backset Measurement (Front Head Restraints Only)

Position the HRMD and record the following measurements.

HRMD torso angle: _____

Striker to H-Point (mm): _____ Striker to H-Point angle: _____
Backset, B (mm): _____ PASS FAIL

Backset must be less than or equal to 55 mm.

DATA SHEET 2 (2 of 2)
DIMENSIONAL REQUIREMENTS FOR FIXED HEAD RESTRAINTS

Gap Measurement

Number of gaps within the gap measurement zone: None

Least dimension of each gap (measured with a steel tape): 0

Size of each gap (measured with the spherical head form): 0

Gap Size None X PASS FAIL

Gaps must be less than or equal to 60 mm.

RECORDED BY: J. Latane DATE: 06/24/10

APPROVED BY: G. Farrand

DATA SHEET 2 (1 of 2)
DIMENSIONAL REQUIREMENTS FOR FIXED HEAD RESTRAINTS

VEH. NHTSA NO.: CA0302 TEST DATE: June 25, 2010

Seat Location: REAR PASSENGER

Height Measurement

SAE J826 three-dimensional manikin torso angle: 28.8°

Striker to H-Point (mm): 285 Striker to H-Point angle: Down
Height, H (mm): 752 X **PASS** **FAIL**

H > or = 800 mm for front seats.
H > or = 750 mm for 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.

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

Height, Hw (= H – 65): 687
Width, W (mm): 250 X **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.

Backset Measurement (Front Head Restraints Only)

Position the HRMD and record the following measurements.

HRMD torso angle: _____

Striker to H-Point (mm): _____ Striker to H-Point angle: _____
Backset, B (mm): _____ PASS FAIL

Backset must be less than or equal to 55 mm.

DATA SHEET 2 (2 of 2)
DIMENSIONAL REQUIREMENTS FOR FIXED HEAD RESTRAINTS

Gap Measurement

Number of gaps within the gap measurement zone: None

Least dimension of each gap (measured with a steel tape): 0

Size of each gap (measured with the spherical head form): 0

Gap Size None X PASS FAIL

Gaps must be less than or equal to 60 mm.

RECORDED BY: J. Latane DATE: 06/25/10

APPROVED BY: G. Farrand

DATA SHEET 2a (1 of 2)
DIMENSIONAL REQUIREMENTS FOR ADJUSTABLE HEAD RESTRAINTS

VEH. NHTSA NO.: CA0302 TEST DATE: 06/24/10

Seat Location: FRONT DRIVER

Height Measurement

SAE J826 three-dimensional manikin torso angle: 24°

Striker to H-Point (mm): 132 mm (Ahead) Striker to H-Point angle: Down

Position the head restraint in the highest position of vertical adjustment.
Height, Hh (mm): 815 mm 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. N/A

Position the head restraint in the lowest position of vertical adjustment.
Height, Hl (mm): 762 mm 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. N/A

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): 750 mm

Width, W (mm): 196 mm X **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. N/A

DATA SHEET 2a (2 of 2)
DIMENSIONAL REQUIREMENTS FOR ADJUSTABLE HEAD RESTRAINTS

Backset Measurement (Front Head Restraints Only)

Position the HRMD and record the following measurements.

HRMD torso angle: 24°

Striker to H-Point (mm): 132 mm Striker to H-Point angle: UP

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): 46 mm 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: None

Least dimension of each gap (measured with a steel tape): N/A

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

Gap Size N/A X PASS FAIL

Gaps must be less than or equal to 60 mm.

REMARKS:

RECORDED BY: J. LATANE DATE: 06/24/10

APPROVED BY: G. FARRAND

DATA SHEET 2a (1 of 2)
DIMENSIONAL REQUIREMENTS FOR ADJUSTABLE HEAD RESTRAINTS

VEH. NHTSA NO.: CA0302 TEST DATE: 06/25/10

Seat Location: FRONT PASSENGER

Height Measurement

SAE J826 three-dimensional manikin torso angle: 24°

Striker to H-Point (mm): 132 mm (Ahead) Striker to H-Point angle: Down

Position the head restraint in the highest position of vertical adjustment.
Height, Hh (mm): 810 mm 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. N/A

Position the head restraint in the lowest position of vertical adjustment.
Height, Hl (mm): 755 mm 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. N/A

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): 745 mm

Width, W (mm): 195 mm X **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. N/A

DATA SHEET 2a (2 of 2)
DIMENSIONAL REQUIREMENTS FOR ADJUSTABLE HEAD RESTRAINTS

Backset Measurement (Front Head Restraints Only)

Position the HRMD and record the following measurements.

HRMD torso angle: 23.7°

Striker to H-Point (mm): 128 mm Striker to H-Point angle: Down

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): 37 mm 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: None

Least dimension of each gap (measured with a steel tape): N/A

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

Gap Size N/A X PASS _____ FAIL

Gaps must be less than or equal to 60 mm.

REMARKS:

RECORDED BY: J. LATANE DATE: 06/25/10

APPROVED BY: G. FARRAND

DATA SHEET 3
OWNER'S MANUAL

VEH. NHTSA NO.: CA0302 TEST DATE: 06/24/10

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 X FAIL _____

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

PASS X 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 X FAIL _____ N/A _____

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

PASS X 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 X FAIL _____

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

REMARKS:

RECORDED BY: G. FARRAND DATE: 06/24/10

APPROVED BY: D. MESSICK

DATA SHEET 4
REMOVABILITY

VEH. NHTSA NO.: CA0302 TEST DATE: 06/24/10

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 pressing and holding in the large release button while pushing down on the head restraint.

Description of distinct action for removal:

Push in large button on base of head restraint while also depressing small button with key or screw driver and pull up on the head restraint.

REMARKS:

RECORDED BY: G. FARRAND DATE: 06/24/10

APPROVED BY: D. MESSICK

DATA SHEET 5
ENERGY ABSORPTION TEST

VEH. NHTSA NO.: CA0302 TEST DATE: 07/15/10

Seat Location: REAR DRIVER Type of head restraint: FIXED

Test Number: 6768

635 mm Height Measurement for lower boundary of the impact zone

SAE J826 three-dimensional manikin torso angle: 29°

Striker to H-Point (mm): 285 mm Striker to H-Point angle: Down

Description of equipment or method used to rigidly fix the seat back: Telescoping steel tube screwed into top of seat back and rear floor of vehicle.

Accelerometer identification: FZ03 Accelerometer type/brand: ENDEVCO

Last calibration date: 07/10

Head form vertical angle (-2° - +2°): 0.0

Distance between head form and target location (> or = 25 mm): 50 mm

Impact velocity (23.6 kph ± 0.5 kph): 23.66 KpH

Impact location: Centerline of Headrest, 693 mm up from “H” Point

Maximum deceleration (< or = 785 m/s² (80 g)): 36 g **PASS** X **FAIL**

REMARKS:

RECORDED BY: G. FARRAND DATE: 07/15/10

APPROVED BY: D. MESSICK

DATA SHEET 6
HEIGHT RETENTION TEST
(ADJUSTABLE HEAD RESTRAINTS ONLY)

VEH. NHTSA NO.: CA0302 TEST DATE: 07/14/10

Seat Location: DRIVER Test Number: 6766, 6767

Pre-test measurements

SAE J826 Manikin torso angle: 24° Top of Head Restraint Height (mm): 815 mm

Striker to H-Point (mm): 132 mm Striker to H-Point angle: Down

Description of height retention lock: Push button release on left post of head restraint.

Test measurements

Initial load (50 N ± 1 N): 51 N Initial Displacement, D1 (mm): 18.7 mm

Initial Displacement (D1) < 25 mm 18.7 mm **PASS** X **FAIL**

Maximum load (495 N ± 5 N): 495 N Maximum Displacement, D2 (mm): 74.5 mm

Post load (50 N ± 1 N): 50 N Return Displacement, D3 (mm): 26.1 mm

Total displacement (D3-D1) < 13 mm: 7.4 mm **PASS** X **FAIL**

REMARKS:

RECORDED BY: G. FARRAND DATE: 07/14/10

APPROVED BY: D. MESSICK

DATA SHEET 7
BACKSET RETENTION TEST

VEH. NHTSA NO.: CA0302 TEST DATE: 07/14/10

Seat Location: FRONT PASSENGER Type of head restraint: ADJUSTABLE

Test Number: 6762, 6763, 6764, 6765

Pre-test measurements

SAE J826 Manikin torso angle: 24° Top of Head Restraint Height (mm): 810 mm

Striker to H-Point (mm): 132 mm Striker to H-Point angle: Down

Displacement torso reference line

Test device back pan angle: 24°

Distance from the H-point to the initial location of the load (0.290 ± 0.013 m): .29 m

Initial load (N): 1286 N Initial moment (373 ± 7.5 Nm): 373 Nm

Backset retention and strength

Distance from the H-point to the head form tangency point (m): .745 m

Initial load (N): 50 N Initial moment (37 ± 0.7 Nm): 37 Nm

Initial head form displacement, D1 (< or = 25 mm): 19.2 mm **PASS** X **FAIL**

Load range to generate a 373 ± 7.5 Nm rearward moment (N): 501 N

Actual load applied (N): 501N Resultant moment (Nm): 373 Nm

Maximum Head form displacement, D2 (< or = 102 mm): 69 mm **PASS** X **FAIL**

Final head form displacement, D3 (mm): 29.5 mm
measured at (37 ± 0.7 Nm)

Total displacement (D3-D1) < 13 mm : 10.3 mm **PASS** X **FAIL**

Maximum applied load (> or equal to 885 N): 887 N **PASS** X **FAIL**

REMARKS:

RECORDED BY: G. FARRAND DATE: 07/14/10
APPROVED BY: D. MESSICK

SECTION 4
INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 – INSTRUMENTATION & EQUIPMENT LIST

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
HRMD	RONA KINETICS & ASSOCIATES LTD.	HRMD 0-62	N/A	N/A
J826 MANIKIN	ALDERSON RESEARCH LABS	3 DM/92	N/A	N/A
INCLINOMETER	MITUTOYO	PRO 360	BEFORE USE	BEFORE USE
STEEL TAPE	STANLEY	33-890	04/10	04/11
TORPEDO LEVEL	SANDS	500	BEFORE USE	BEFORE USE
FORCE GAUGE	CHATILLON	DPPN-50 870	BEFORE USE	BEFORE USE
LEVEL, LASER	BLACK & DECKER	360	BEFORE USE	BEFORE USE
LEVEL, LASER	SEAN & STEPHEN CORP	90º, 45º	BEFORE USE	BEFORE USE
LEVEL, LASER	GAERTNER	2789-A	BEFORE USE	BEFORE USE
ACCELEROMETER	ENDEVCO	FZ03	07/10	07/11
LOAD CELL	SENSOTEC	257818	07/10	07/11
LOAD CELL	INTERFACE	27246	02/10	02/11
LOAD CELL	INTERFACE	38068	02/10	02/11
STRING POT	WALDALE	102	BEFORE USE	BEFORE USE
STRING POT	CELESCO	69	BEFORE USE	BEFORE USE

SECTION 5
PHOTOGRAPHS

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.1
LEFT SIDE VIEW OF VEHICLE

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

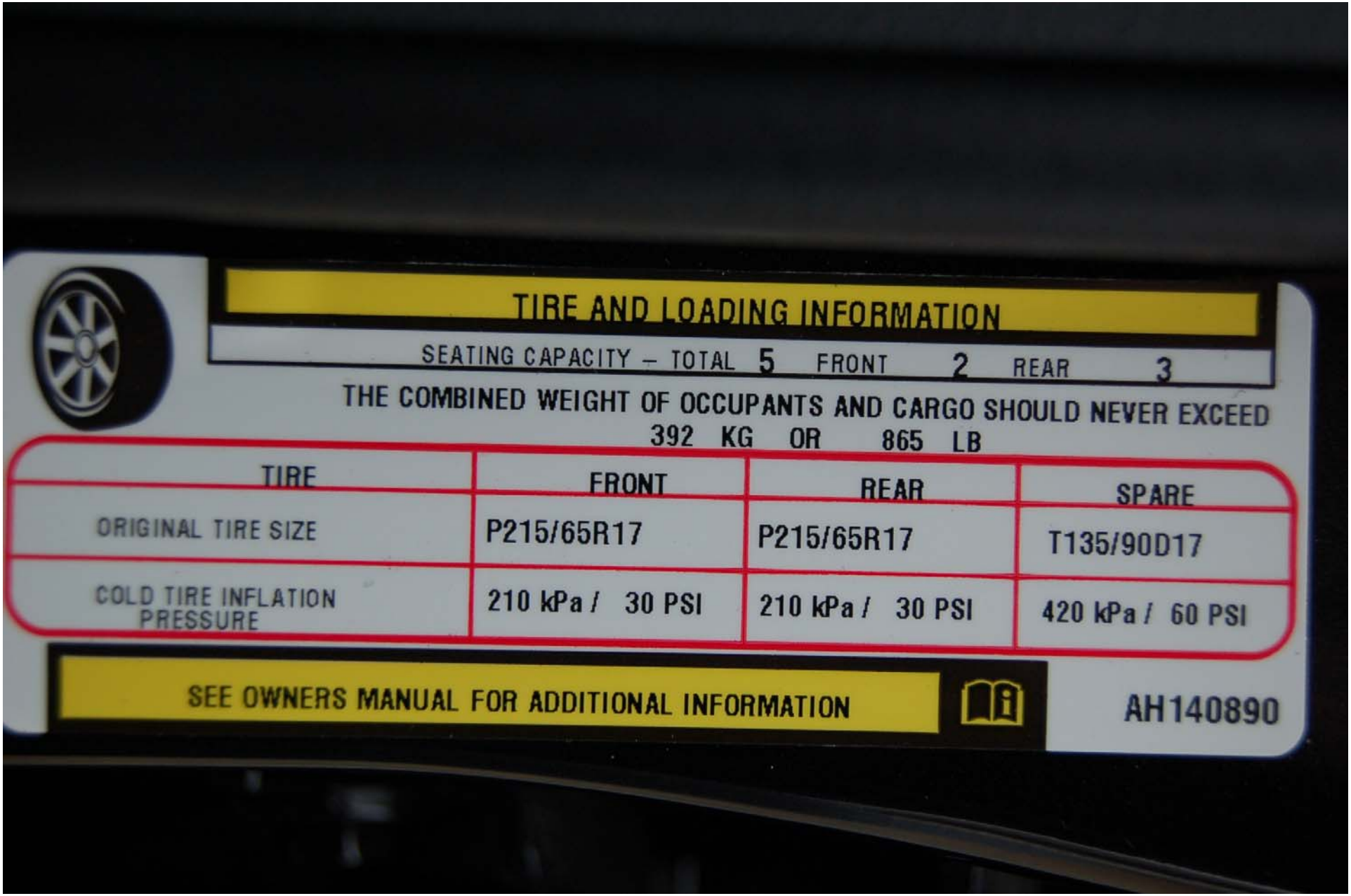
FIGURE 5.3
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.5
VEHICLE CERTIFICATION LABEL



2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.6
VEHICLE TIRE INFORMATION LABEL

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.7
PRE-TEST VIEW OF DRIVER SEAT HEAD RESTRAINT IN HIGHEST POSITION

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.8
PRE-TEST VIEW OF PASSENGER SEAT HEAD RESTRAINT IN HIGHEST POSITION

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.9
PRE-TEST VIEW OF REAR DRIVER SEAT HEAD RESTRAINT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.10
PRE-TEST VIEW OF PASSENGER SEAT HEAD RESTRAINT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.11
HEAD RESTRAINT ADJUSTMENT BUTTON

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.12
HEAD RESTRAINT REMOVE BUTTON

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.13
WIDTH MEASUREMENT OF FRONT DRIVER HEAD RESTRAINT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.14
WIDTH MEASUREMENT OF FRONT PASSENGER HEAD RESTRAINT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.15
WIDTH MEASUREMENT OF REAR DRIVER HEAD RESTRAINT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.16
WIDTH MEASUREMENT OF REAR PASSENGER HEAD RESTRAINT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.17
SAE J826 MANIKIN IN FRONT DRIVER SEAT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.18
HRMD IN FRONT DRIVER SEAT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.19
MEASUREMENT OF FRONT DRIVER BACKSET

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.20
SAE J826 MANIKIN IN FRONT PASSENGER SEAT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.21
HRMD IN FRONT PASSENGER SEAT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.22
MEASUREMENT OF FRONT PASSENGER BACKSET

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.23
SAE J826 MANIKIN IN REAR DRIVER SEAT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.24
SAE J826 MANIKIN IN REAR PASSENGER SEAT

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.25
PRE-TEST SET-UP FOR HEIGHT RETENTION

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

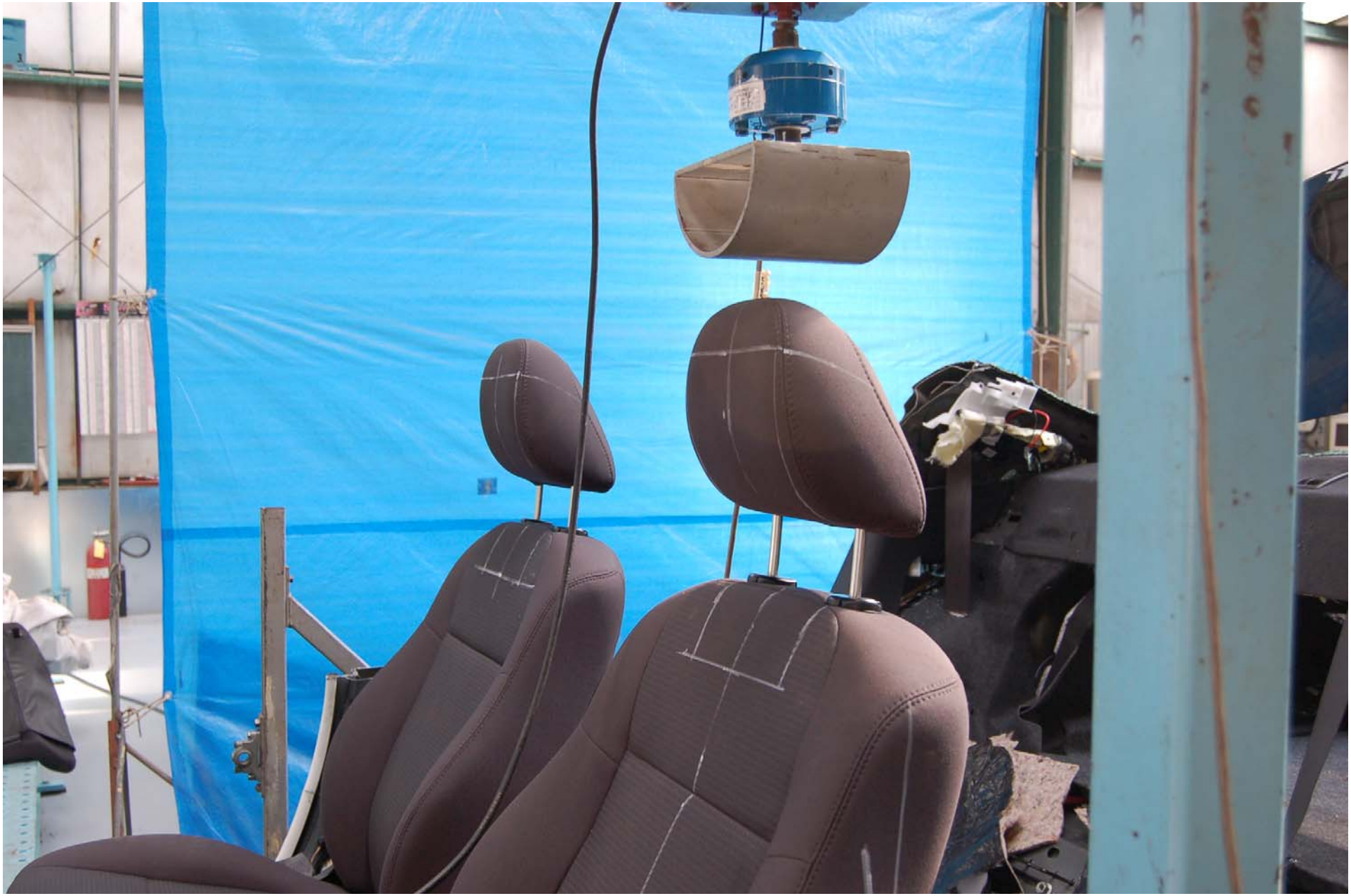
FIGURE 5.26
HEAD FORM AT 50 N PRE-LOAD

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.27
HEAD FORM AT 500 N LOAD

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.28
HEAD FORM AT 50 N POST LOAD



2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

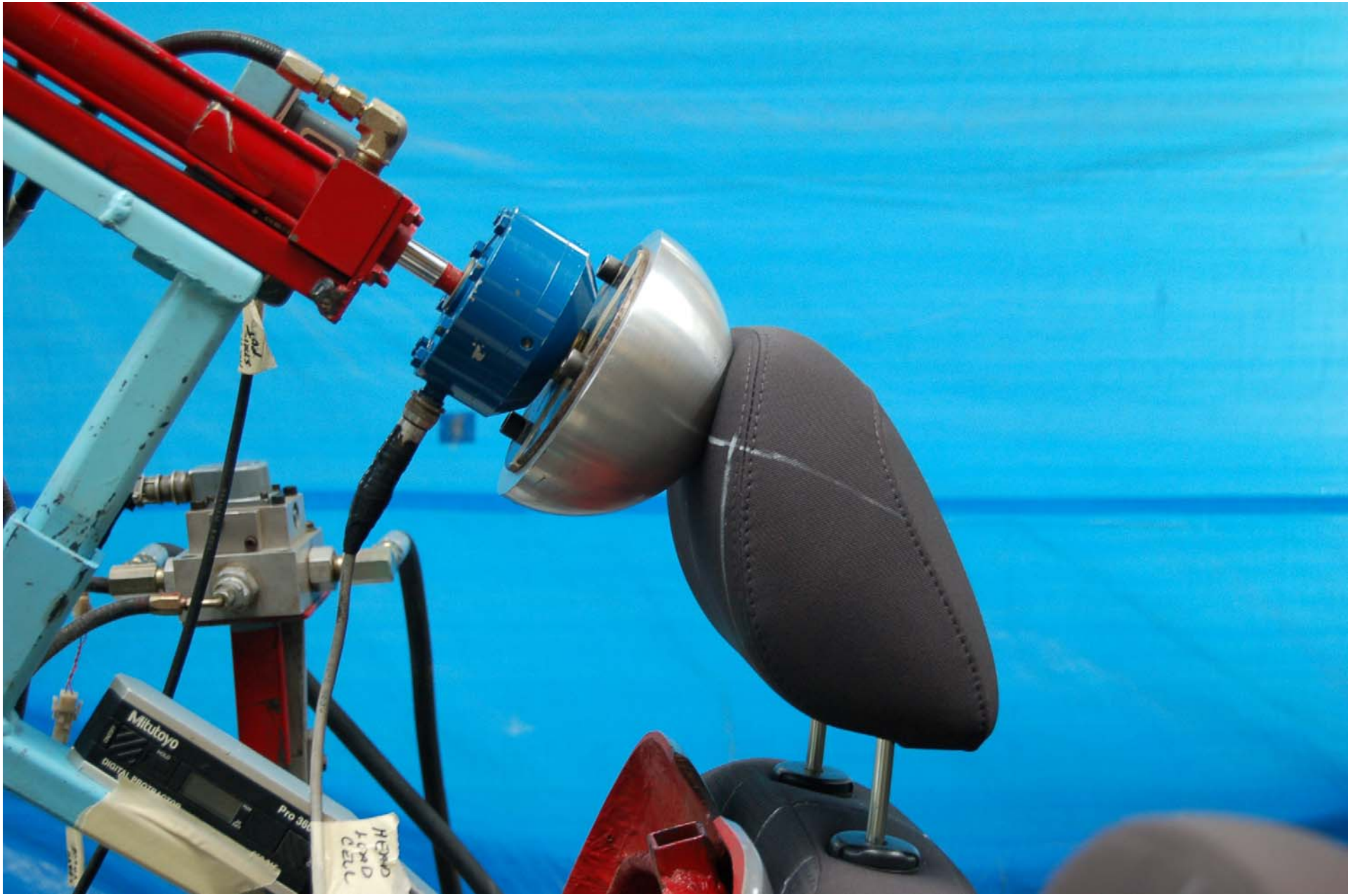
FIGURE 5.29
HEAD FORM POST TEST

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.30
PRE-TEST SET-UP FOR BACKSET RETENTION

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.31
BACK PAN LOADED FOR DISPLACED TORSO LINE



2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.32
HEAD RESTRAINT AT 37 Nm LOAD

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.33
HEAD RESTRAINT AT 373 Nm LOAD

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.34
HEAD RESTRAINT AT 37 Nm POST LOAD

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

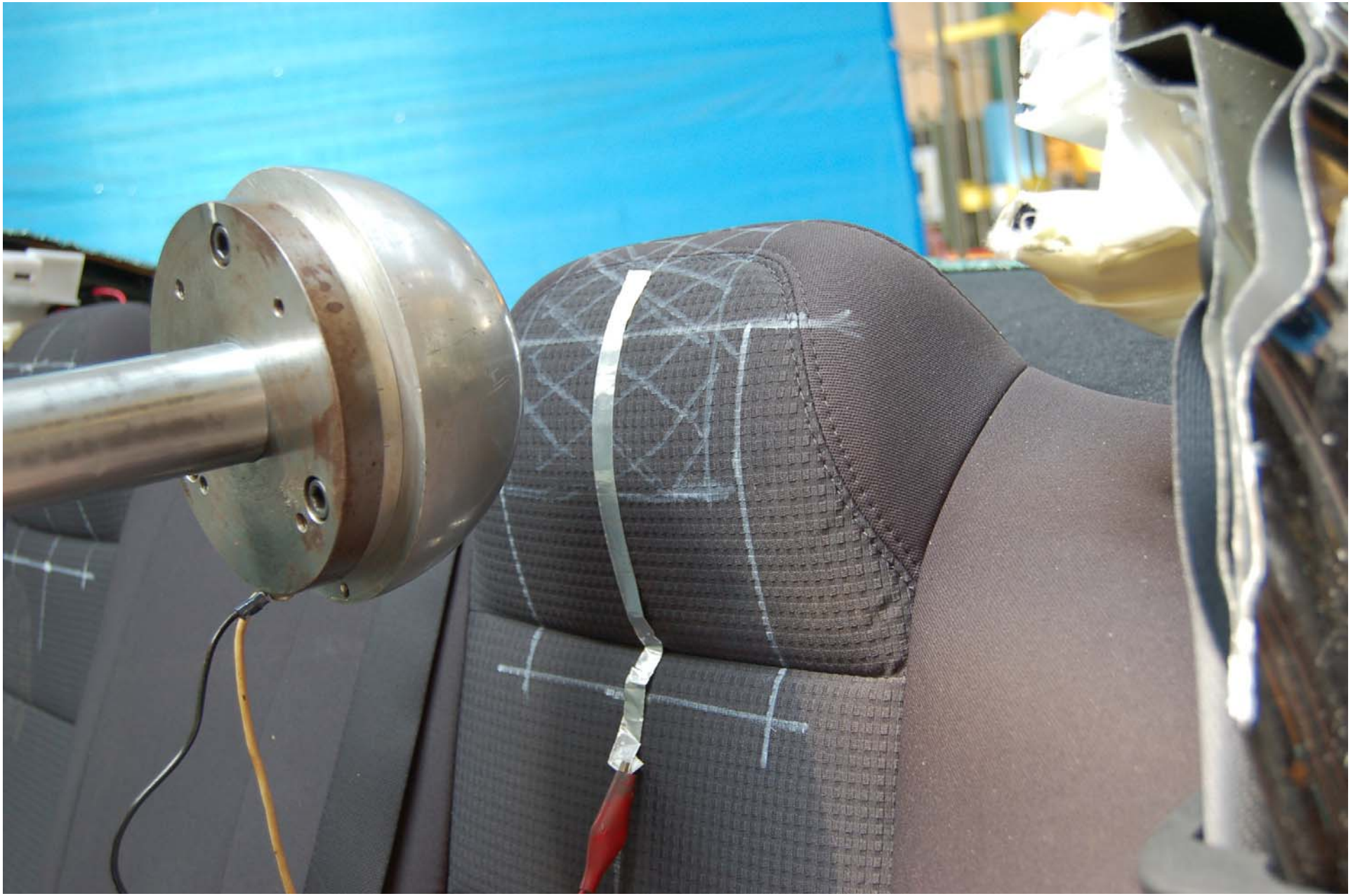
FIGURE 5.35
HEAD RESTRAINT AT 895 N LOAD

2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.36
HEAD RESTRAINT POST TEST

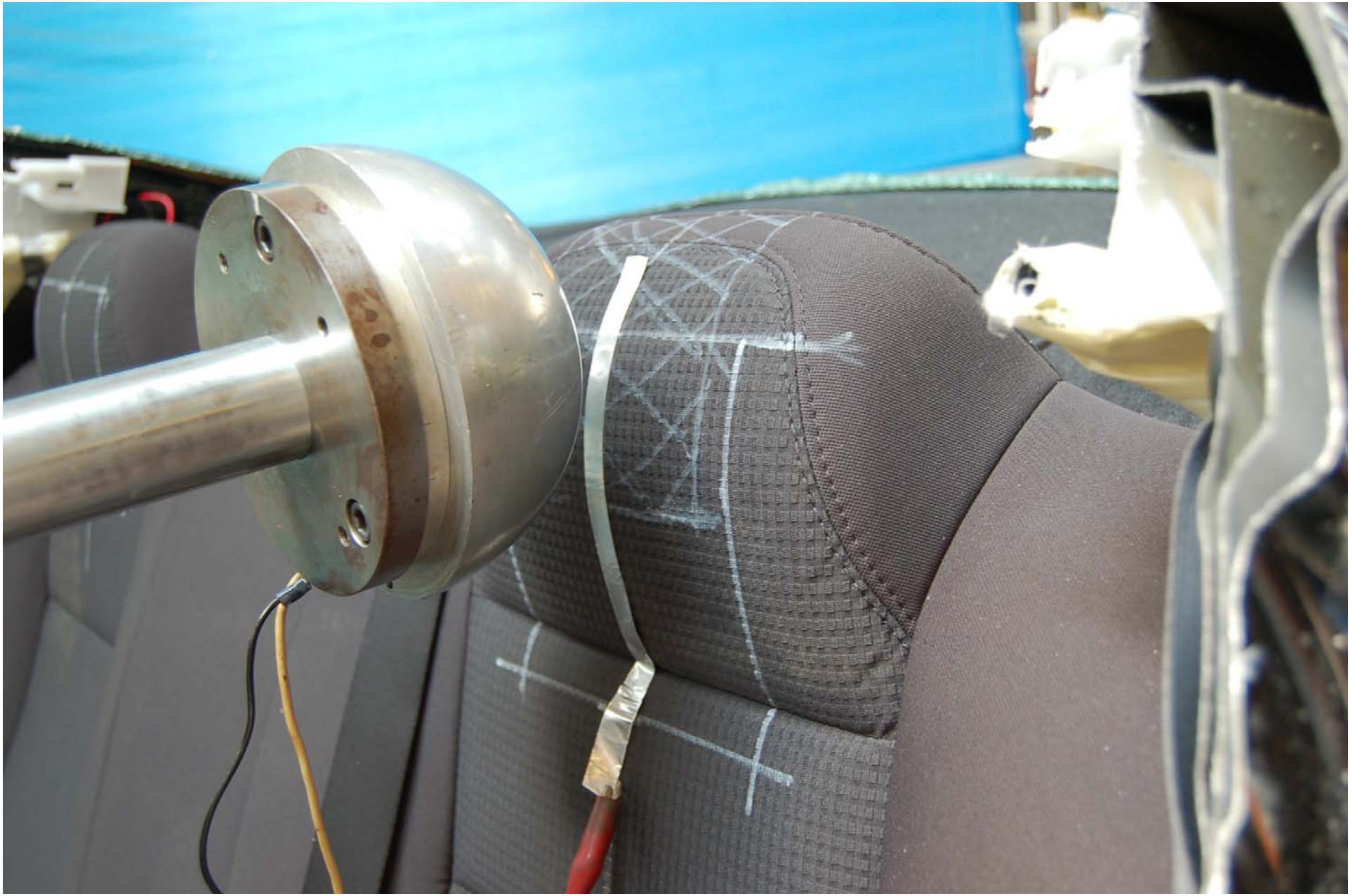
2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.37
ENERGY ABSORPTION TEST SET-UP



2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.38
HEAD RESTRAINT PRE-TEST



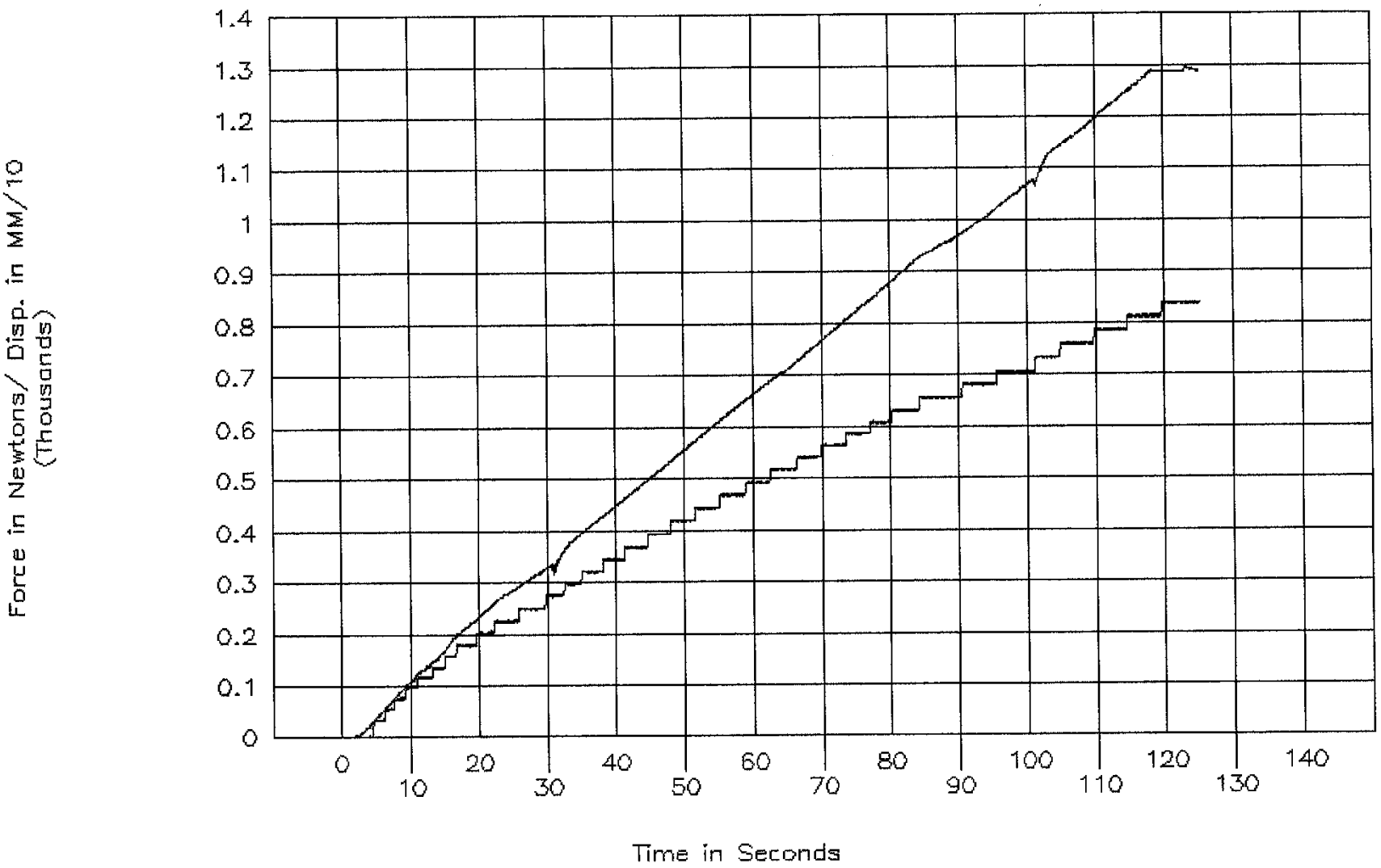
2010 DODGE CHARGER SE
NHTSA NO. CA0302
FMVSS NO. 202a

FIGURE 5.39
HEAD RESTRAINT POST TEST

SECTION 6
TEST PLOTS

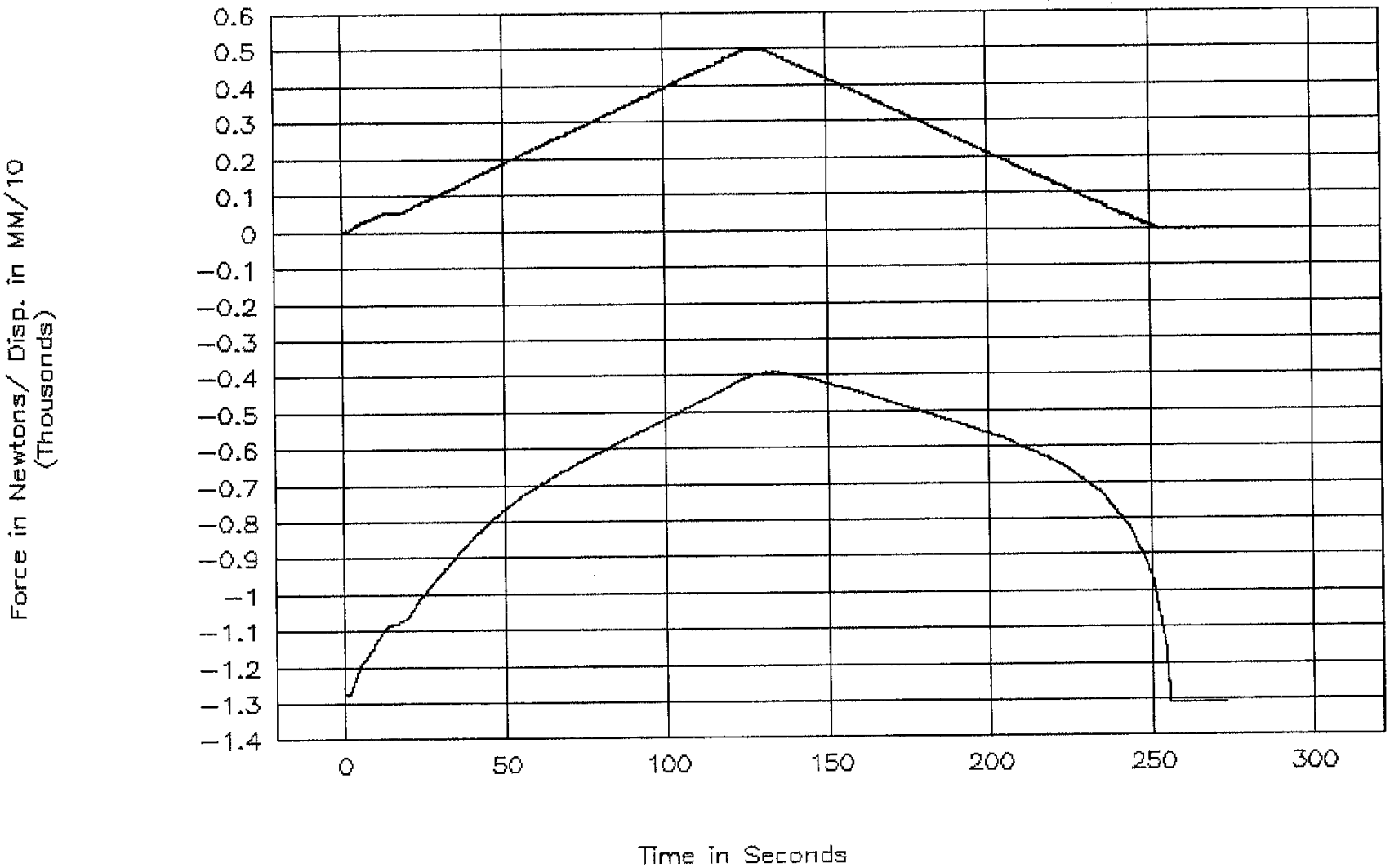
GTL 6762

202, Head Restraint Retention, Back pan



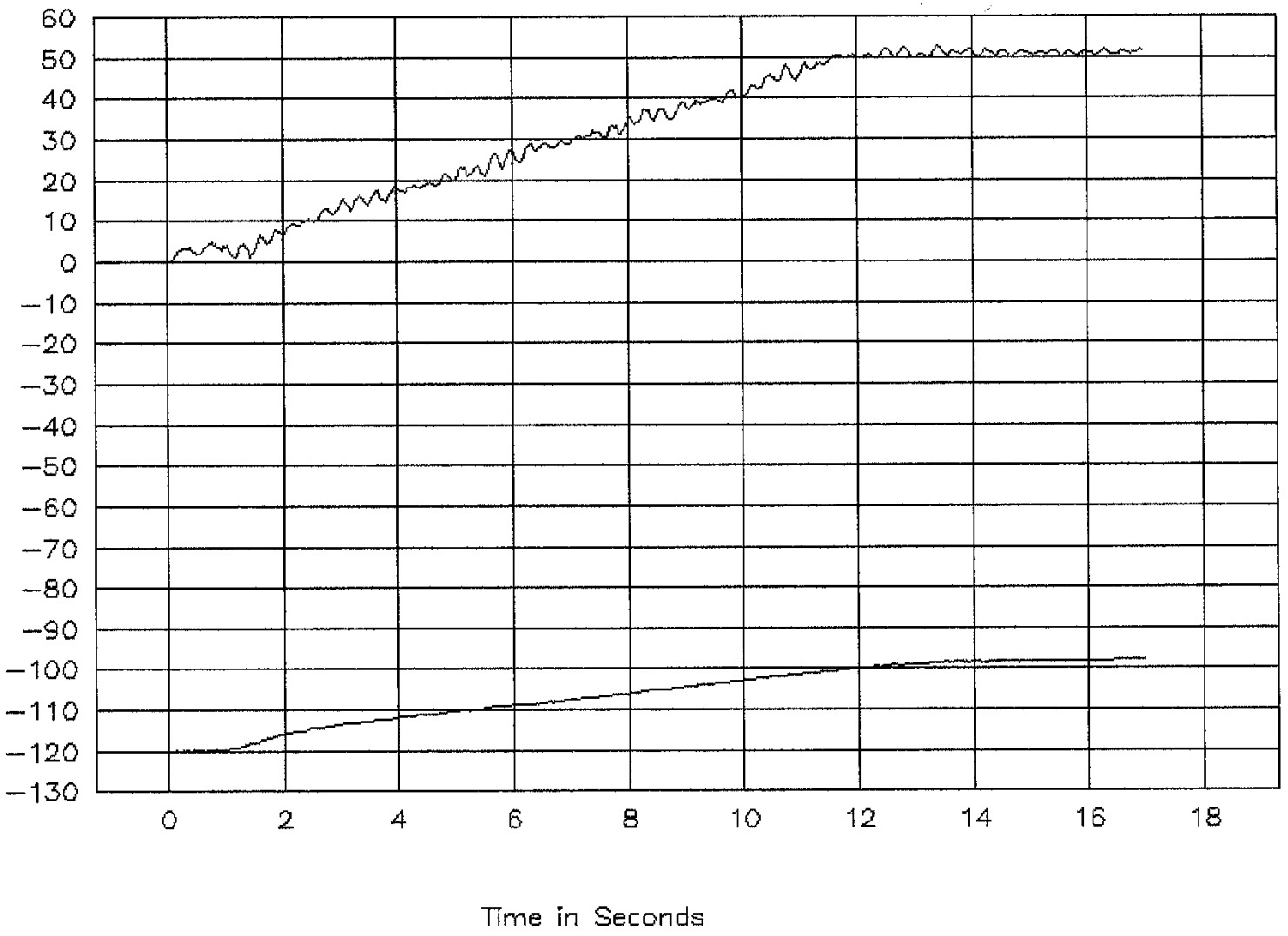
GTL 6763

202, Head Restraint Retention, Headform



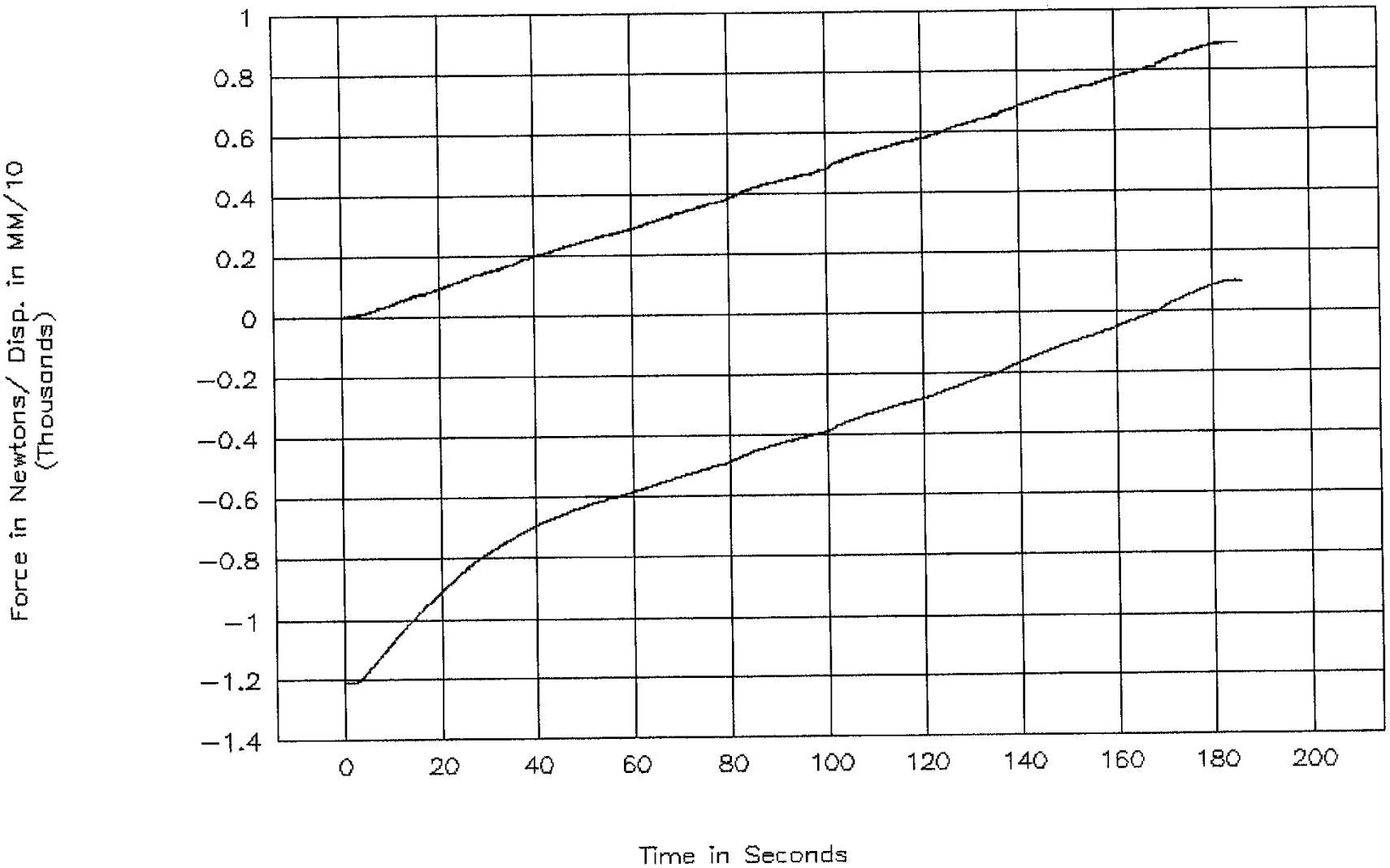
GTL 6764

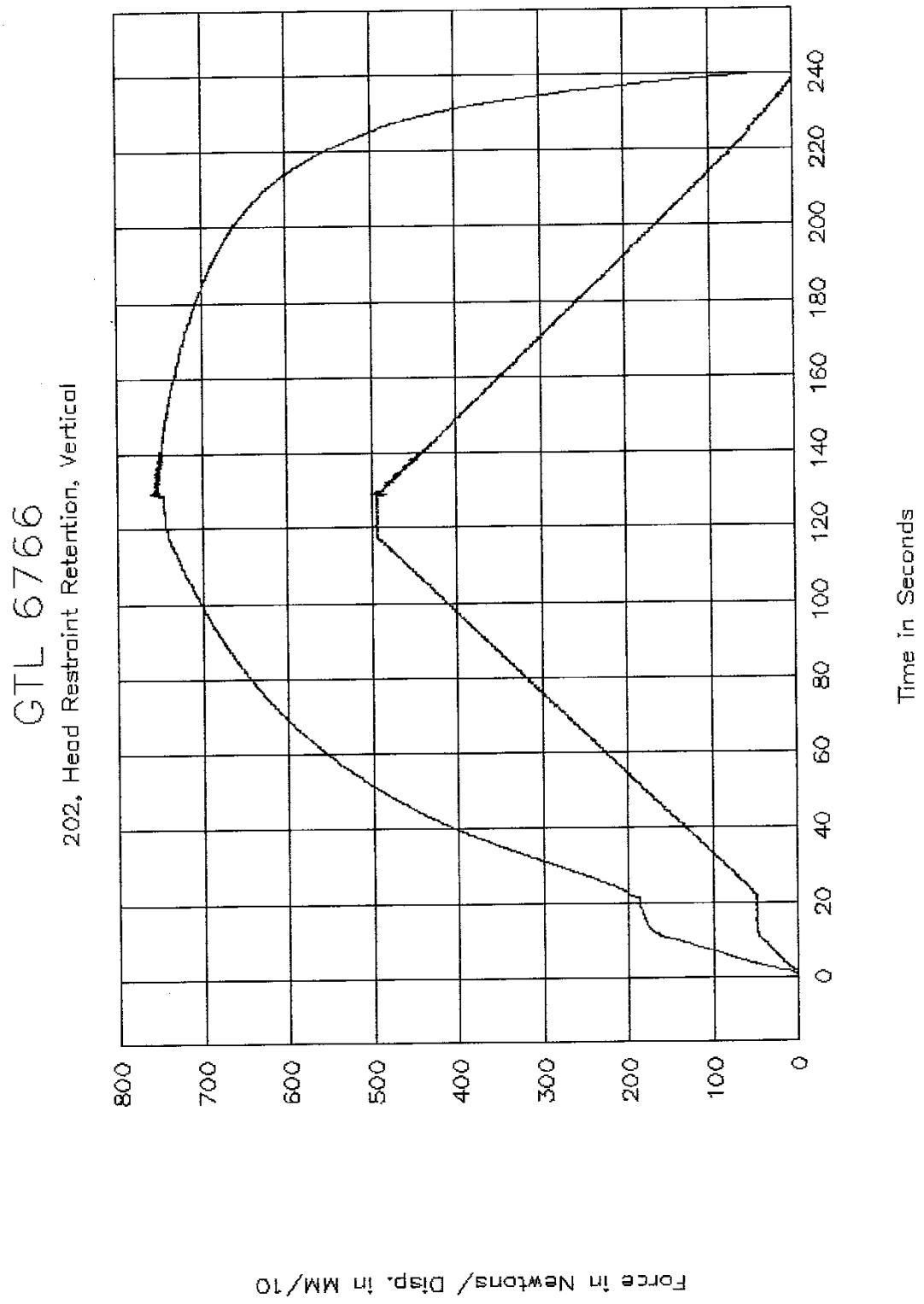
202, Head Restraint Retention, Headform



GTL 6765

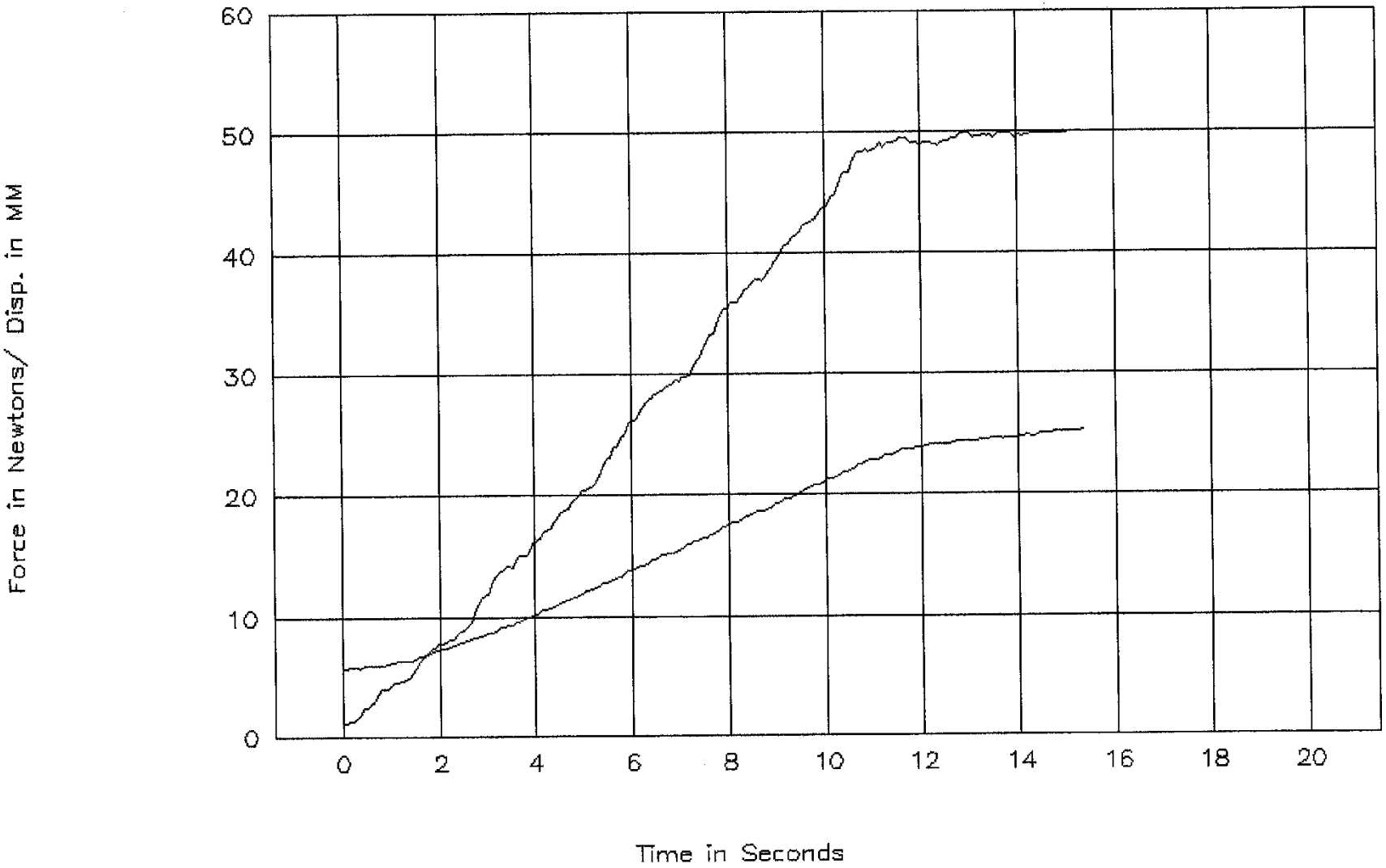
202, Head Restraint Retention, Headform

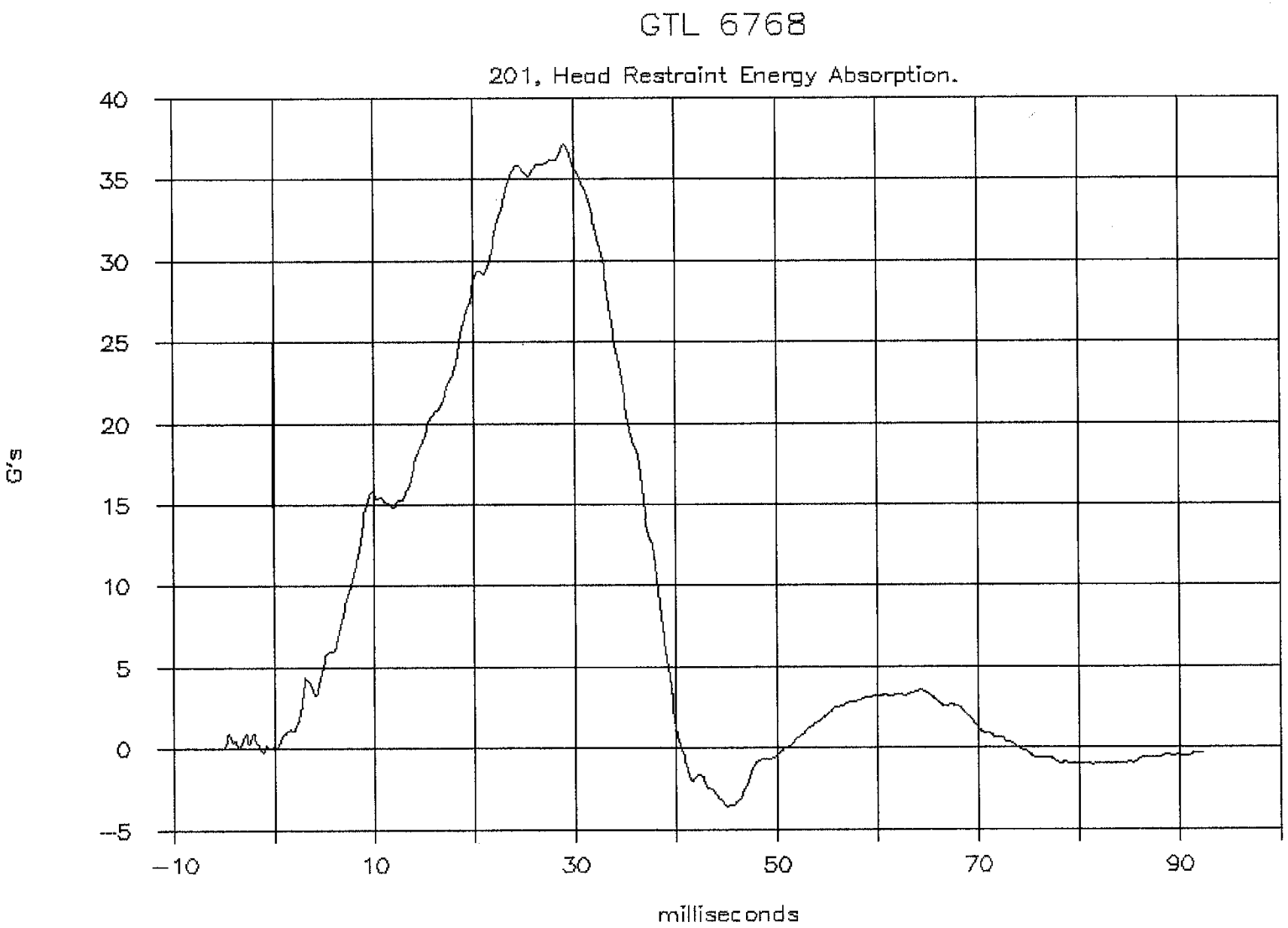



GTL 6766
202, Head Restraint Retention, Vertical
Force in Newtons/ Disp. in MM/10
Time in Seconds
800
700
600
500
400
300
200
100
0
0
20
40
60
80
100
120
140
160
180
200
220
240

GTL 6767

202, Head Restraint Retention, Vertical

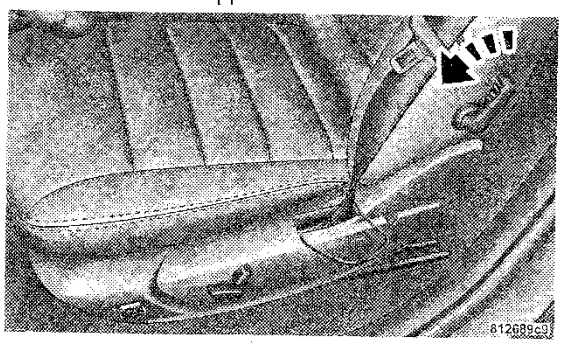



GTL 6768
201, Head Restraint Energy Absorption.
40
35
30
25
20
15
10
5
0
-5
G's
-10
10
30
50
70
90
milliseconds

SECTION 7
OWNER'S MANUAL INFORMATION

Lumbar Support — If Equipped

This feature allows you to increase or decrease the amount of lumbar support. Turn the control lever forward to increase and rearward to decrease the desired amount of lumbar support.

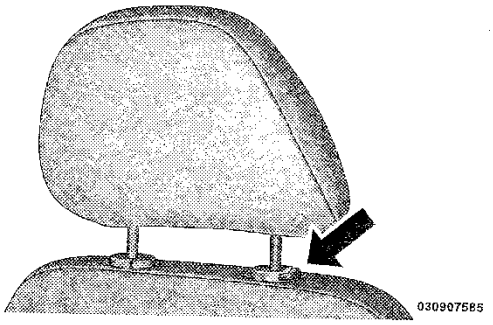


Lumbar Support Control Lever

Head Restraints

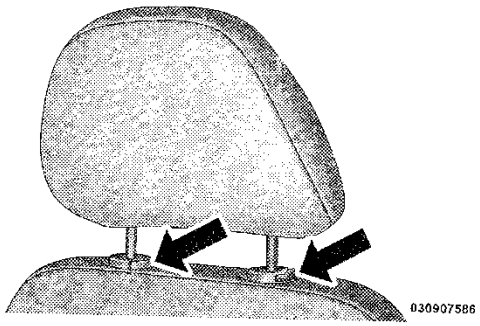
Head restraints can reduce the risk of injury in the event of a rear impact. The head restraint should be adjusted so the top of the head restraint is located above the top of your ear.

To raise the head restraint, pull upward on the head restraint. To lower the head restraint, press the large button, located on the base of the head restraint, and push downward on the head restraint.



Adjustable Head Restraint

To remove the head restraint, pull upward on the head restraint to its highest position, push in both buttons at the base of each head restraint rod, and simultaneously pull up on the head restraint.



Removing Head Restraint

To install the head restraint, insert the head restraint rods into each guide, apply pressure down on the headrest until the head restraint reaches the first lock position, push the large button in and push down and adjust head restraint to desired position.

NOTE: Ensure that the front of the head restraint is facing toward the front of the vehicle.

WARNING!

Driving a vehicle with the head restraints removed or improperly adjusted could cause serious injury or death in the event of a collision. The head restraints should always be checked prior to operating the vehicle and never adjusted while the vehicle is in motion. Always adjust the head restraints when the vehicle is in PARK.

Heated Seats — If Equipped

This feature heats the front driver and passenger seats. The controls for each front seat are located near the bottom center of the instrument panel.

After turning the ignition ON, you can choose from High, Low, or Off heat settings. Amber indicator lights in each switch indicate the level of heat in use. Two indicator lights will illuminate for High, one for Low and none for Off.

Press the switch once to select High-level heating. Press the switch a second time to select Low-level heating. Press the switch a third time to shut the heating elements Off.

If High-level heating is selected, the system will automatically switch to the Low-level after approximately 30 minutes of continuous operation. At that time, the number of indicators illuminated changes from two to one, indicating the change. Operation on the Low-level setting also turns off automatically after approximately 30 minutes.

NOTE: Once a heat setting is selected, heat will be felt within two to five minutes.