REPORT NUMBER 202a-GTL-08-003

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

HONDA DE MEXICO SA. DE CV.
2008 HONDA CR-V, MPV
NHTSA NO. C85307

GENERAL TESTING LABORATORIES, INC.
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February 25, 2009

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

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FINAL REPORT ACCEPTANCE BY OVSC:

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15. Supplementary Notes		
16. Abstract Compliance tests were conducted on the subject, 2008 Honda CR-V, MPV 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		
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PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2008 Honda CR-V MPV 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 2008 Honda CR-V MPV. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: 3ZCRE38368G703225

B. NHTSA No.: C85307

C. Manufacturer: HONDA DE MEXICO SA. DE CV.

D. Manufacture Date: 02/08

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 202a testing during the time period November 19-20, 2008.

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 2008 Honda CR-V MPV 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 2008 Honda CR-V MPV.

DATA SHEET 1 (1 of 2)
SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY STYLE: 2008 HONDA CR-V MPV

VEH. NHTSA NO.: C85307 ; VIN: 3ZCRE38368G703225

VEH. BUILD DATE: 02/08 ; TEST DATE: November 19-20, 2008

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

RECORDED BY: G. FARRAND DATE: 11/19/08

APPROVED BY: D. MESSICK

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

VEH. NHTSA NO.: C85307 TEST DATE: 11/19/08

Seat Location: DRIVER

Height Measurement

SAE J826 three-dimensional manikin torso angle: 22.9°

Striker to H-Point (mm): 115 mm (Ahead) Striker to H-Point angle: Down

Position the head restraint in the highest position of vertical adjustment.
Height, Hh (mm): 828 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): 765 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): 763 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: 23.1°

Striker to H-Point (mm): 114 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): 36 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: G. FARRAND DATE: 11/19/08

APPROVED BY: D. MESSICK

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

VEH. NHTSA NO.: C85307 TEST DATE: 11/19/08

Seat Location: PASSENGER

Height Measurement

SAE J826 three-dimensional manikin torso angle: 22°

Striker to H-Point (mm): 122 mm (Ahead) Striker to H-Point angle: Down

Position the head restraint in the highest position of vertical adjustment.
Height, Hh (mm): 820 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): 755 mm

Width, W (mm): 197 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 2b (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: 22.1°

Striker to H-Point (mm): 122 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): 23 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: G. FARRAND DATE: 11/19/08

APPROVED BY: D. MESSICK

DATA SHEET 3
OWNER'S MANUAL

VEH. NHTSA NO.: C85307 TEST DATE: 11/19/08

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: 11/19/08

APPROVED BY: D. MESSICK

DATA SHEET 4
REMOVABILITY

VEH. NHTSA NO.: C85307 TEST DATE: 11/19/08

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:
Lift upward on head restraint to raise; Push in and hold release button while pushing down on headrest to lower.

Description of distinct action for removal: Push in and hold release button while lifting up on head restraint.

REMARKS:

RECORDED BY: G. FARRAND DATE: 11/19/08

APPROVED BY: D. MESSICK

DATA SHEET 5
ENERGY ABSORPTION TEST

VEH. NHTSA NO.: C85307 TEST DATE: 11/20/08

Seat Location: PASSENGER Type of head restraint: ADJUSTABLE

Test Number: 6124

635 mm Height Measurement for lower boundary of the impact zone

SAE J826 three-dimensional manikin torso angle: 22°

Striker to H-Point (mm): 122 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: F209 Accelerometer type/brand: ENDEVCO

Last calibration date: 11/08

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

Distance between head form and target location (> or = 25 mm): 40 mm

Impact velocity (23.6 kph ± 0.5 kph): 23.7 KpH

Impact location: Transverse centerline of headrest and 120 mm down from top of headrest.

Maximum deceleration (< or = 785 m/s² (80 g)): 22.7 **PASS** X **FAIL**

REMARKS:

RECORDED BY: G. FARRAND DATE: 11/20/08

APPROVED BY: D. MESSICK

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

VEH. NHTSA NO.: C85307 TEST DATE: 11/19/08

Seat Location: DRIVER Test Number: 6118, 6119

Pre-test measurements

SAE J826 Manikin torso angle: 22.9° Top of Head Restraint Height (mm): 828 mm

Striker to H-Point (mm): 115 mm Striker to H-Point angle: Down

Description of height retention lock: Spring loaded push button detent on left side mounting post.

Test measurements

Initial load (50 N ± 1 N): 51 N Initial Displacement, D1 (mm): 5.7 mm

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

Maximum load (495 N ± 5 N): 500 N Maximum Displacement, D2 (mm): 24.2 mm

Return load (50 N ± 1 N): 51 N Return Displacement, D3 (mm): 6.1 mm

Total displacement (D3-D1) < 13 mm: 0.4 mm **PASS** X **FAIL**

REMARKS:

RECORDED BY: G. FARRAND DATE: 11/19/08

APPROVED BY: D. MESSICK

DATA SHEET 7
BACKSET RETENTION TEST

VEH. NHTSA NO.: C85307 TEST DATE: 11/19/08

Seat Location: DRIVER Type of head restraint: ADJUSTABLE

Test Number: 6120, 6121, 6122, 6123

Pre-test measurements

SAE J826 Manikin torso angle: 22.9° Top of Head Restraint Height (mm): 800 mm

Striker to H-Point (mm): 115 mm Striker to H-Point angle: Down

Displacement torso reference line

Test device back pan angle: 18°

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): .735 m

Initial load (N): 51 N @ -34.0 mm Initial moment (37 ± 0.7 Nm): 37 Nm

Initial head form displacement, D1 (< or = 25 mm): 13.5 mm **PASS** X **FAIL**

Load range to generate a 373 ± 7.5 Nm rearward moment (N): 507 N

Actual load applied (N): 507N Resultant moment (Nm): 373 Nm

Maximum Head form displacement, D2 (< or = 102 mm): 66.1 mm **PASS** X **FAIL**

Final head form displacement, D3 (mm): 32.9 mm
measured at (37 ± 0.7 Nm)

Total displacement (D3-D1) < 13 mm : 1.1 mm **PASS** X **FAIL**

Maximum applied load (> or equal to 885 N): 881 N **PASS** X **FAIL**

REMARKS:

RECORDED BY: G. FARRAND DATE: 11/19/08
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
DIGITAL PROTRACTOR	MITUTOYO	950-315 PRO 360	BEFORE USE	BEFORE USE
RULE/SCALE	STARRET	C331		
TORPEDO LEVEL	SANDS	500	BEFORE USE	BEFORE USE
FORCE GAUGE	CHATILLON	DPPN-50 870	BEFORE USE	BEFORE USE
CALIPER	STARRET	N/A	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	F209	11/08	11/09
LOAD CELL	SENSOTEC	257818	01/08	01/09
LOAD CELL	INTERFACE	27246	05/08	05/09
STRING POT	WALDALE	102	BEFORE USE	BEFORE USE
STRING POT	CELESCO	69	BEFORE USE	BEFORE USE

SECTION 5
PHOTOGRAPHS

2008 HONDA CRV
NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.1
LEFT SIDE VIEW OF VEHICLE

2008 HONDA CRV
NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE

2008 HONDA CRV
NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.3
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE

2008 HONDA CRV
NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE

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NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.5
VEHICLE CERTIFICATION LABEL

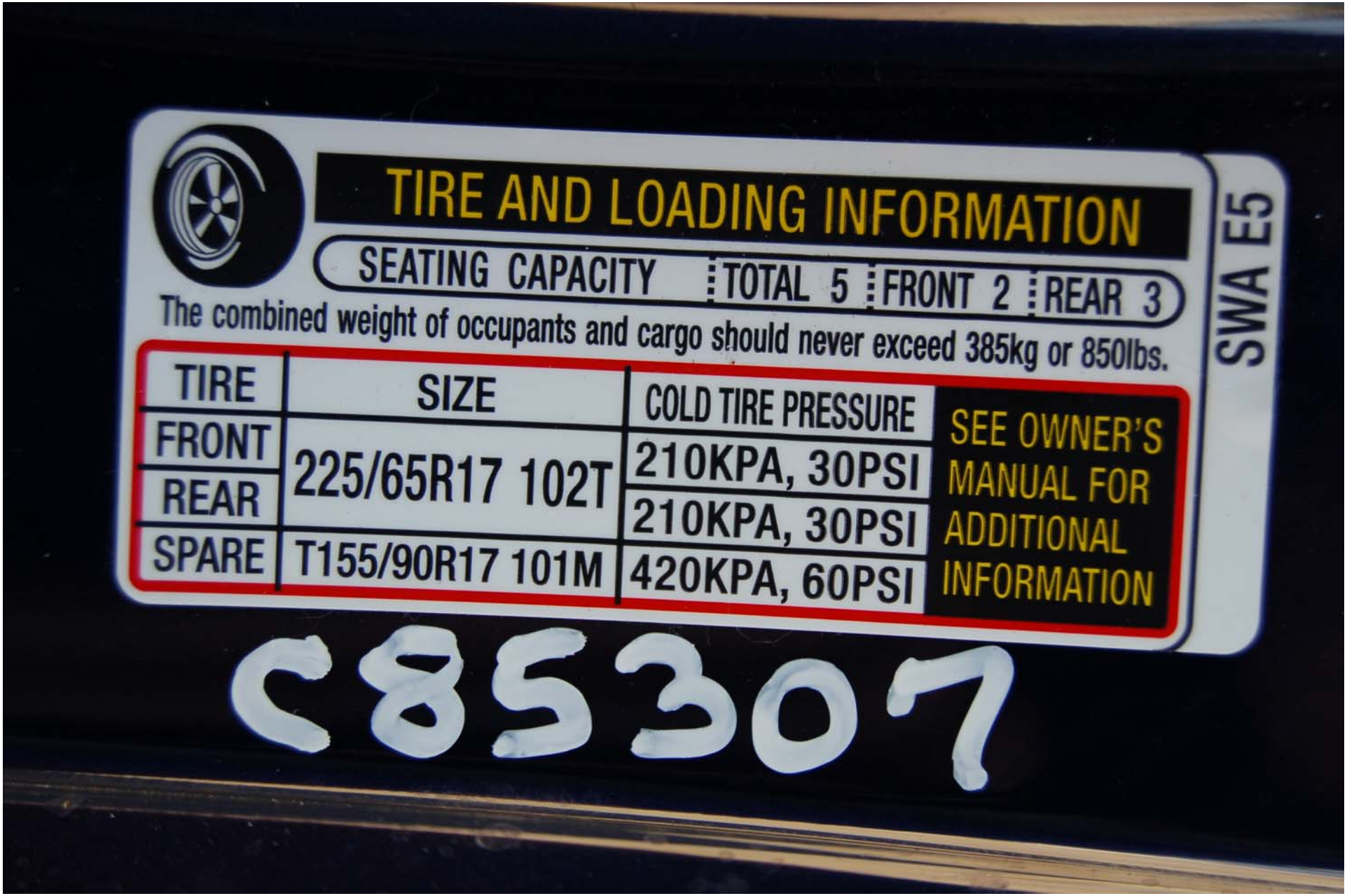

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FIGURE 5.6
VEHICLE TIRE INFORMATION LABEL

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FIGURE 5.7
DRIVER SEAT HEAD RESTRAINT

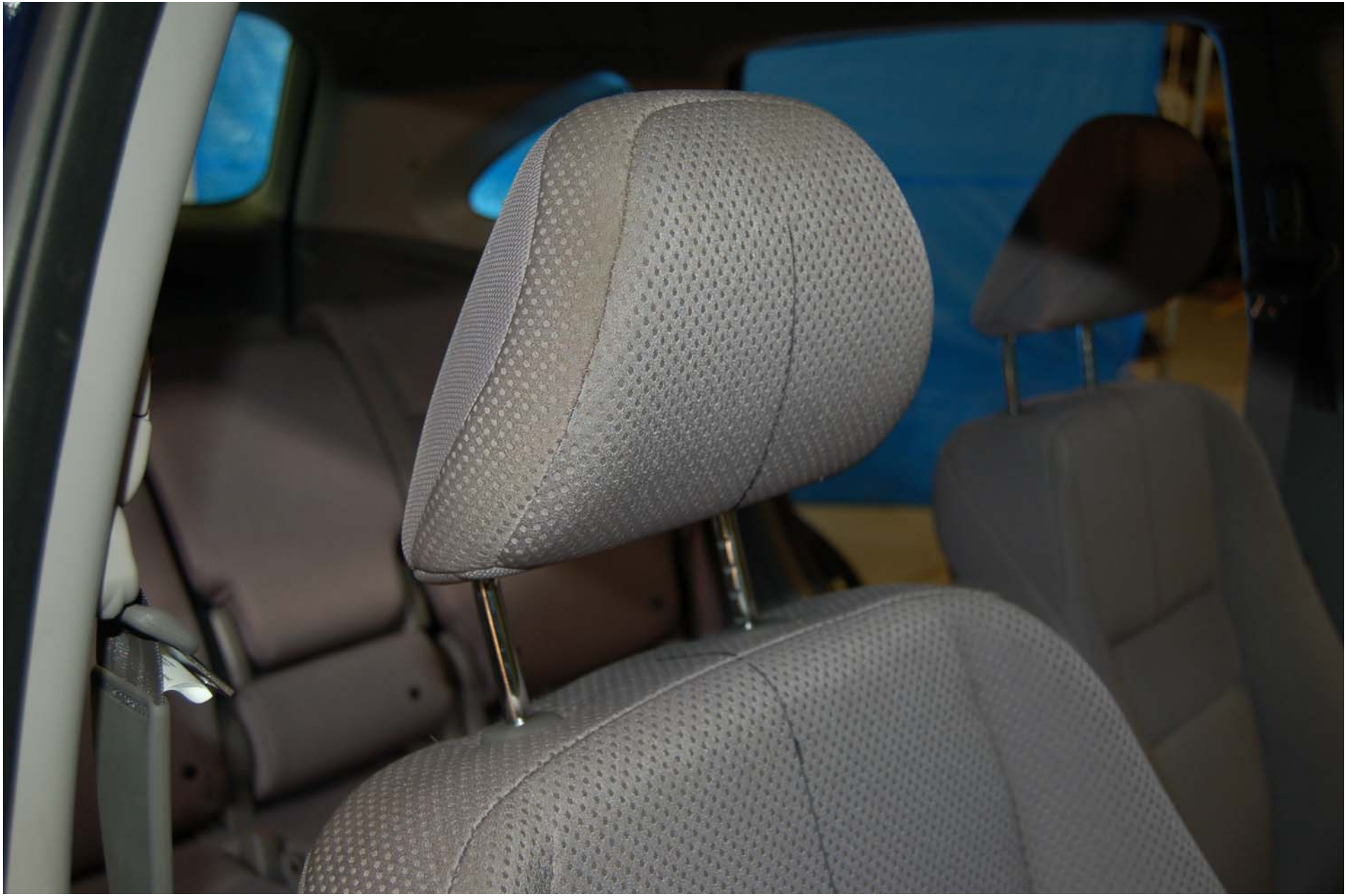

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FIGURE 5.8
PASSENGER SEAT HEAD RESTRAINT

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FIGURE 5.9
J826 MANIKIN POSITIONED IN DRIVER SEAT

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FMVSS NO. 202a

FIGURE 5.10
DRIVER HEAD RESTRAINT IN LOWEST POSITION

2008 HONDA CRV
NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.11
DRIVER HEAD RESTRAINT IN HIGHEST POSITION

2008 HONDA CRV
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FMVSS NO. 202a

FIGURE 5.12
DRIVER HEAD RESTRAINT WIDTH MEASUREMENT

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FIGURE 5.13
DRIVER HEAD RESTRAINT HRMD BACKSET MEASUREMENT

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FIGURE 5.14
DRIVER HEAD RESTRAINT IMPACT ZONE AND GAPS

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FMVSS NO. 202a

FIGURE 5.15
TYPICAL HEAD RESTRAINT ADJUSTMENT AND REMOVAL BUTTON

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FIGURE 5.16
J826 MANIKIN POSITIONED IN PASSENGER SEAT

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FMVSS NO. 202a

FIGURE 5.17
PASSENGER HEAD RESTRAINT IN LOWEST POSITION

2008 HONDA CRV
NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.18
PASSENGER HEAD RESTRAINT IN HIGHEST POSITION

2008 HONDA CRV
NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.19
PASSENGER HEAD RESTRAINT WIDTH MEASUREMENT

2008 HONDA CRV
NHTSA NO. C85307
FMVSS NO. 202a

FIGURE 5.20
PASSENGER HEAD RESTRAINT HRMD BACKSET MEASUREMENT

2008 HONDA CRV
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FIGURE 5.21
PASSENGER HEAD IMPACT ZONE AND GAPS

2008 HONDA CRV
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FIGURE 5.22
PRE-TEST SET-UP FOR HEIGHT RETENTION

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FIGURE 5.23
HEAD RESTRAINT WITH 50 N LOAD FOR HEIGHT RETENTION

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FMVSS NO. 202a

FIGURE 5.24
HEAD RESTRAINT WITH FULL LOAD FOR HEIGHT RETENTION

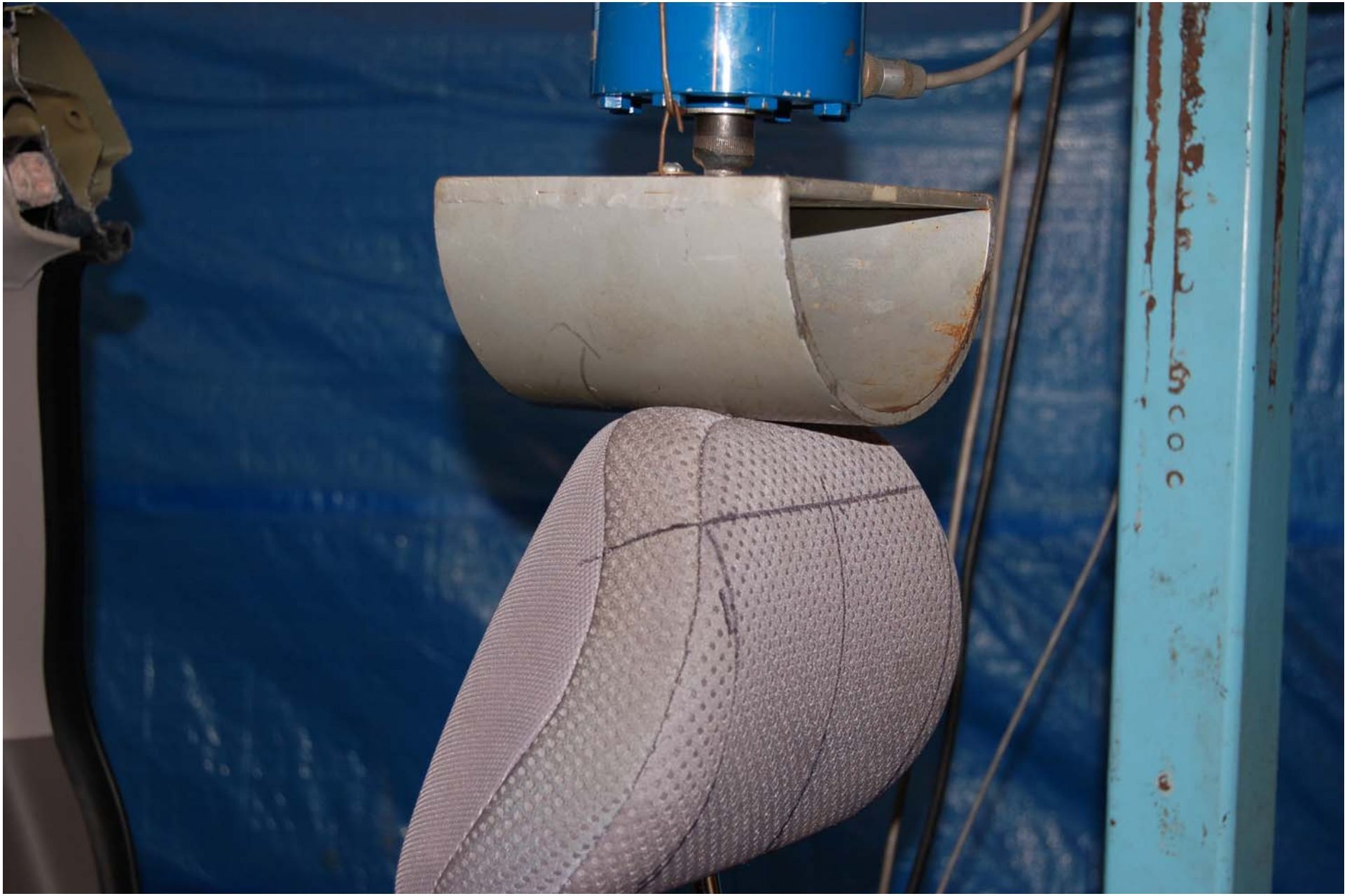

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FIGURE 5.25
REAPPLICATION OF 50 N LOAD FOR HEIGHT RETENTION

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FIGURE 5.26
HEAD RESTRAINT POST TEST HEIGHT RETENTION

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FIGURE 5.27
PRE-TEST SET-UP FOR BACKSET RETENTION

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FMVSS NO. 202a

FIGURE 5.28
BACK PAN LOADING WITH DISPLACED TORSO LINE

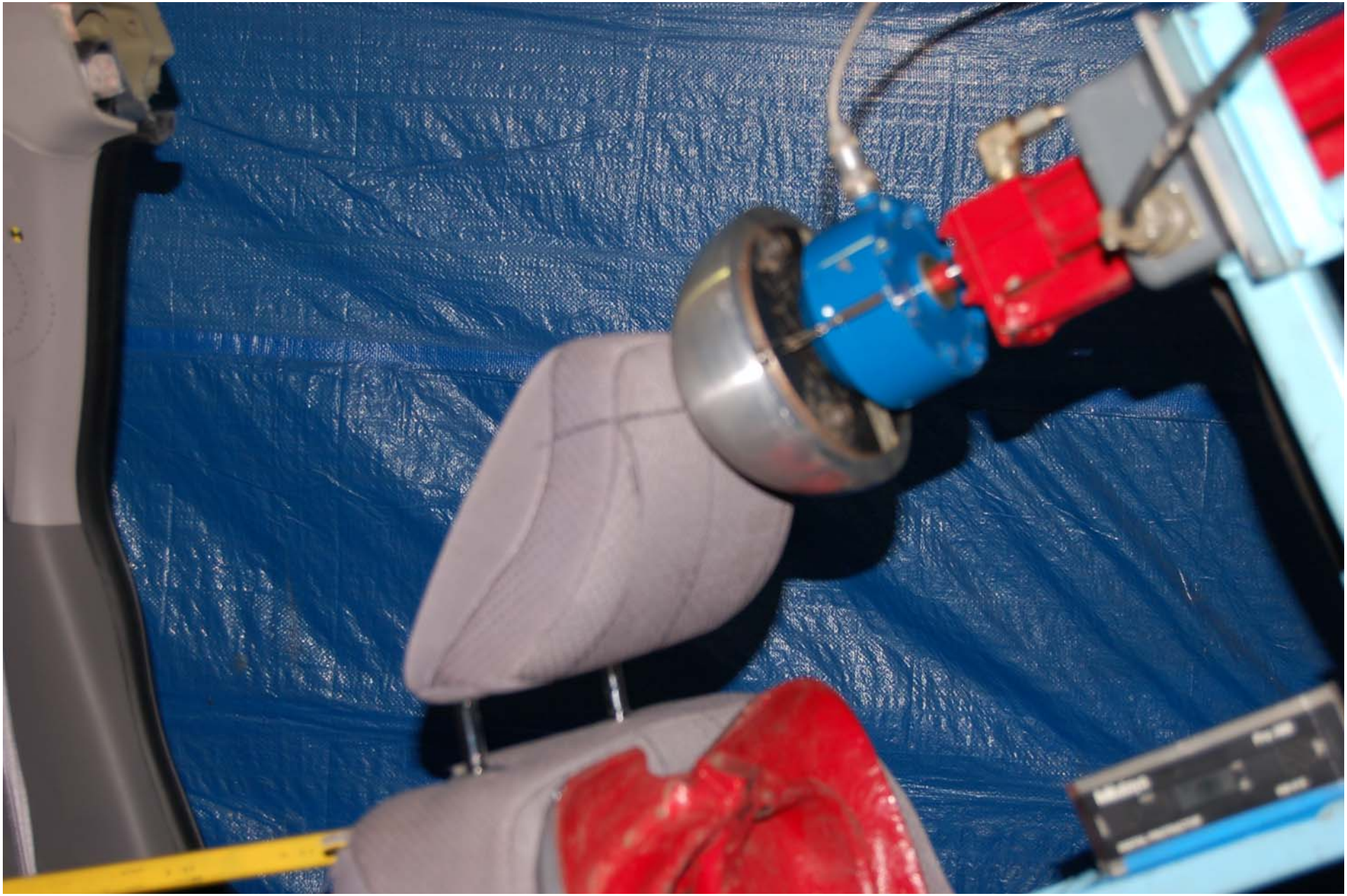

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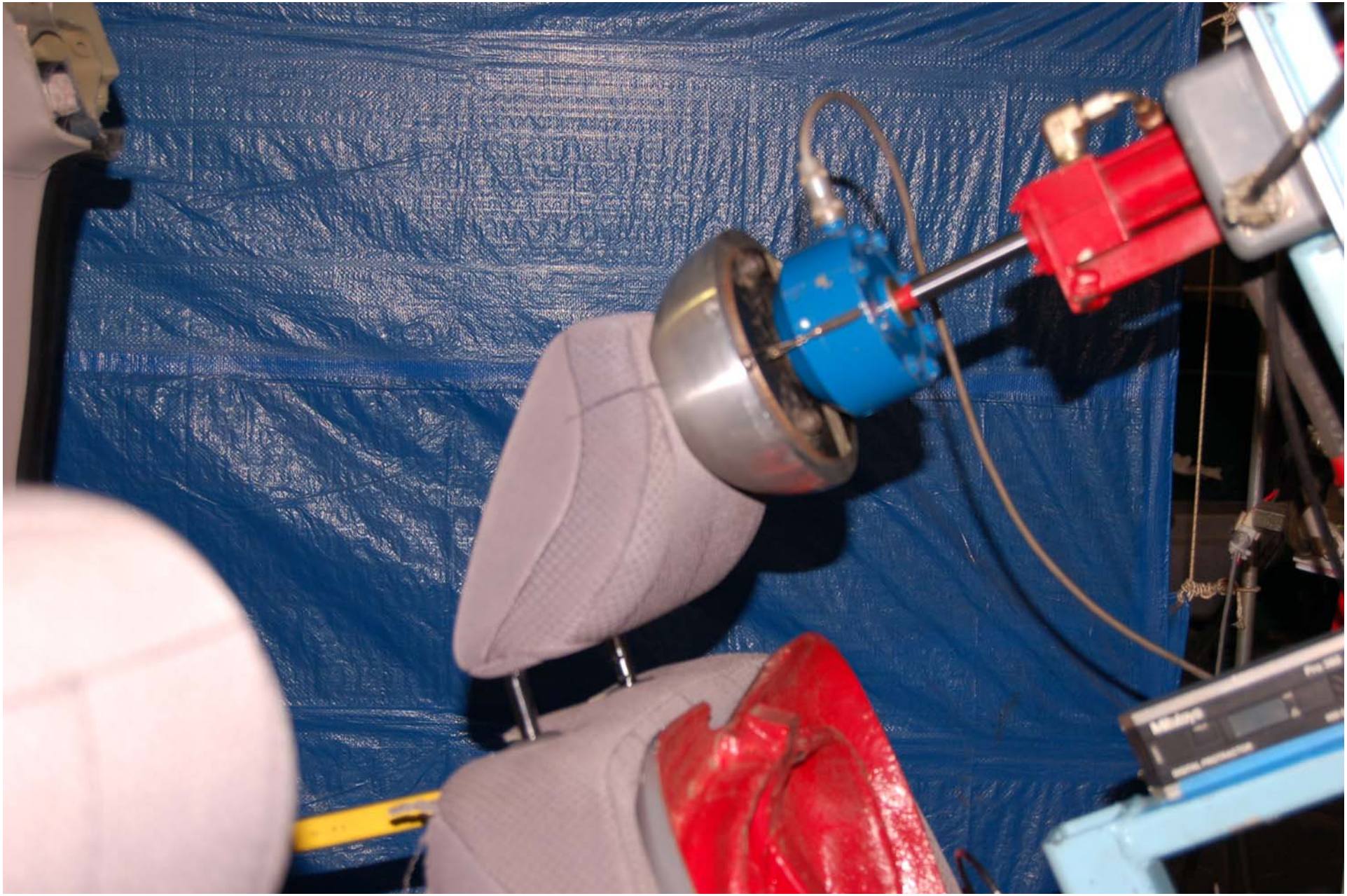
FIGURE 5.29
HEAD RESTRAINT WITH 37 Nm LOAD APPLIED



2008 HONDA CRV
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FIGURE 5.30
HEAD RESTRAINT WITH 373 Nm LOAD APPLIED

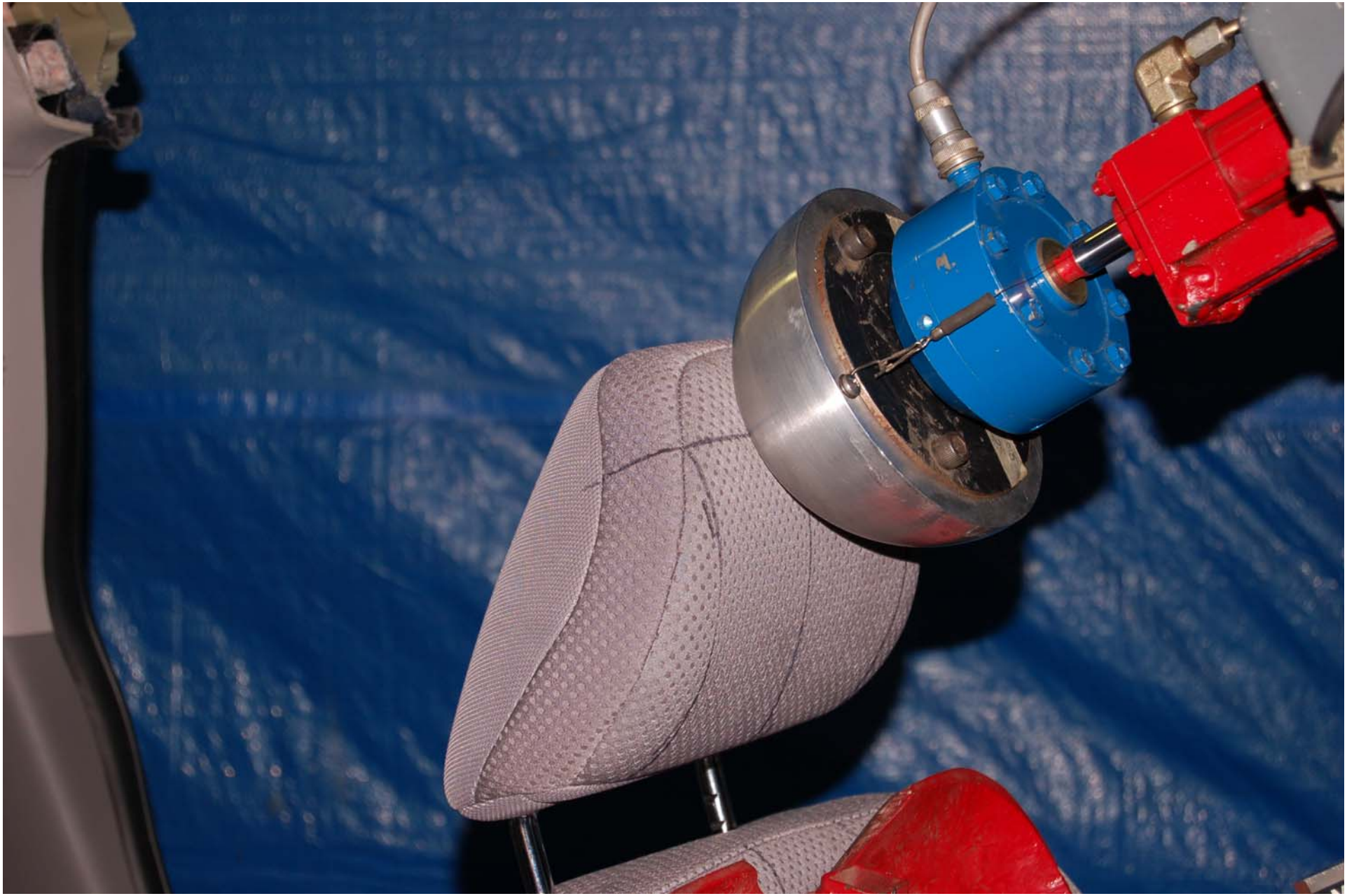

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FIGURE 5.31
HEAD RESTRAINT WITH 37 Nm LOAD REAPPLIED

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FIGURE 5.32
HEAD RESTRAINT POST TEST BACKSET TESTING

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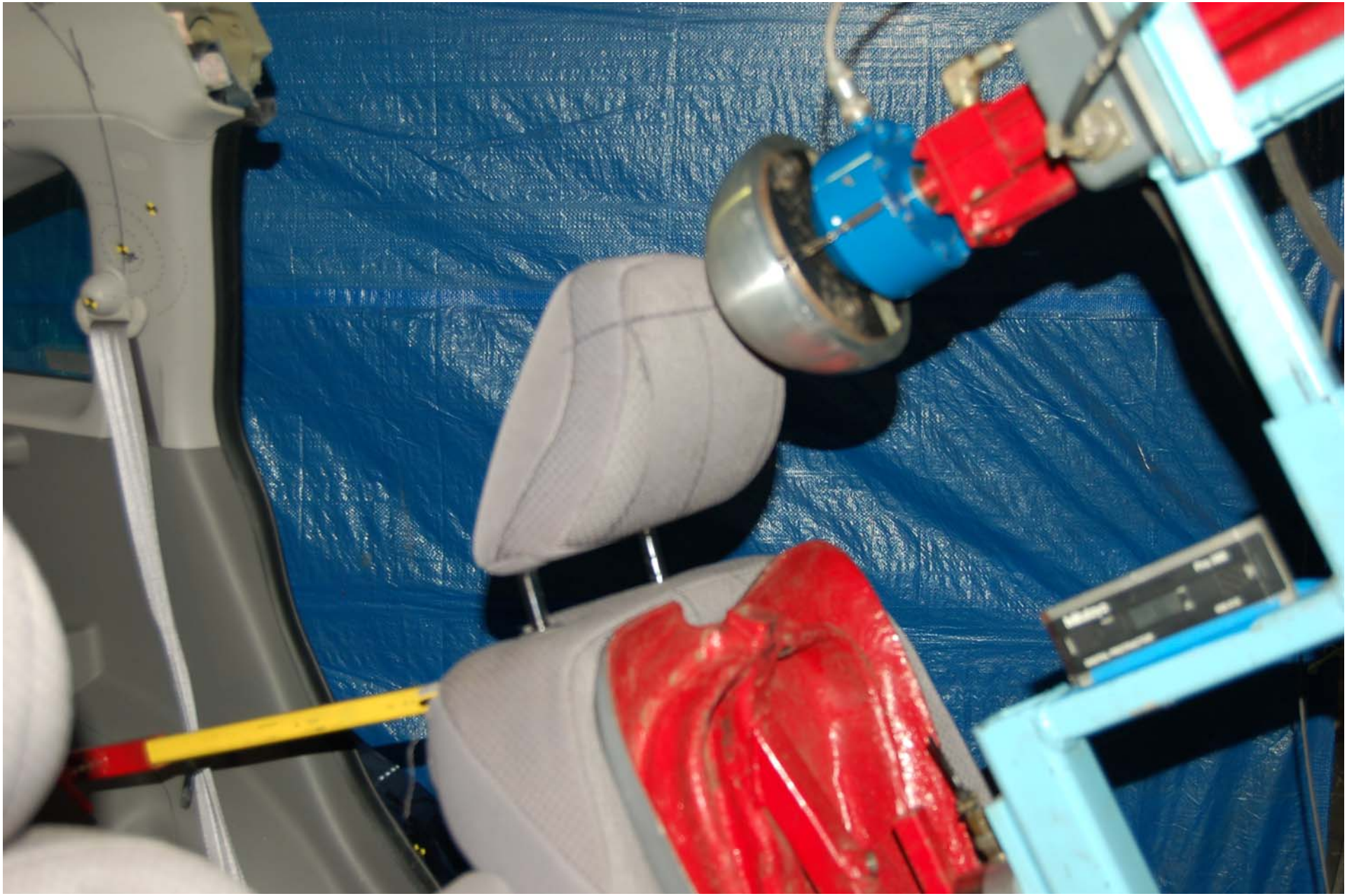
FIGURE 5.33
HEAD RESTRAINT WITH 285 Nm LOAD APPLIED



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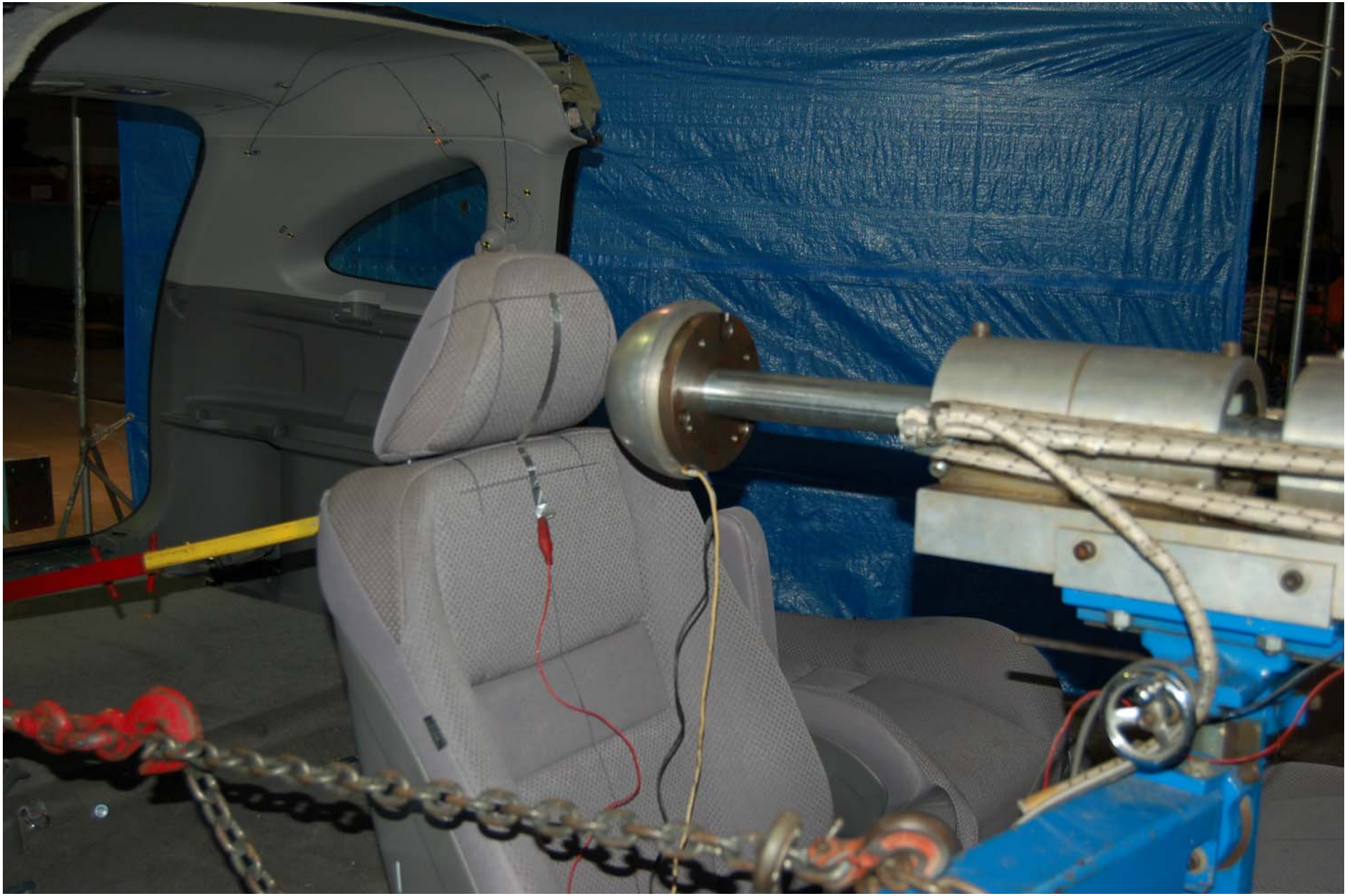
FMVSS NO. 202a

FIGURE 5.34
HEAD RESTRAINT POST TEST 285 Nm LOAD



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FMVSS NO. 202a

FIGURE 5.35
PRE-TEST SET-UP FOR ENERGY ABSORPTION TEST

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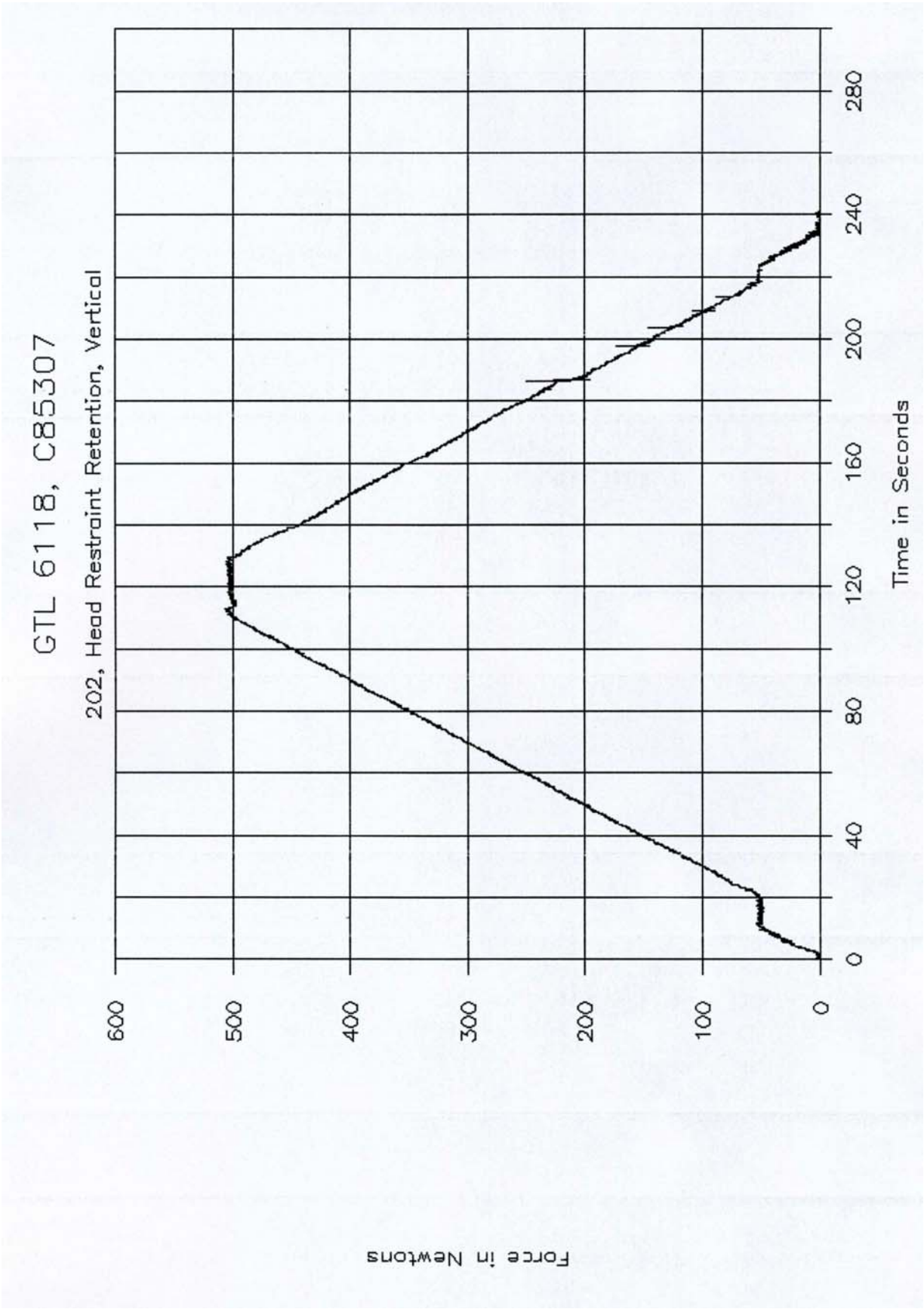
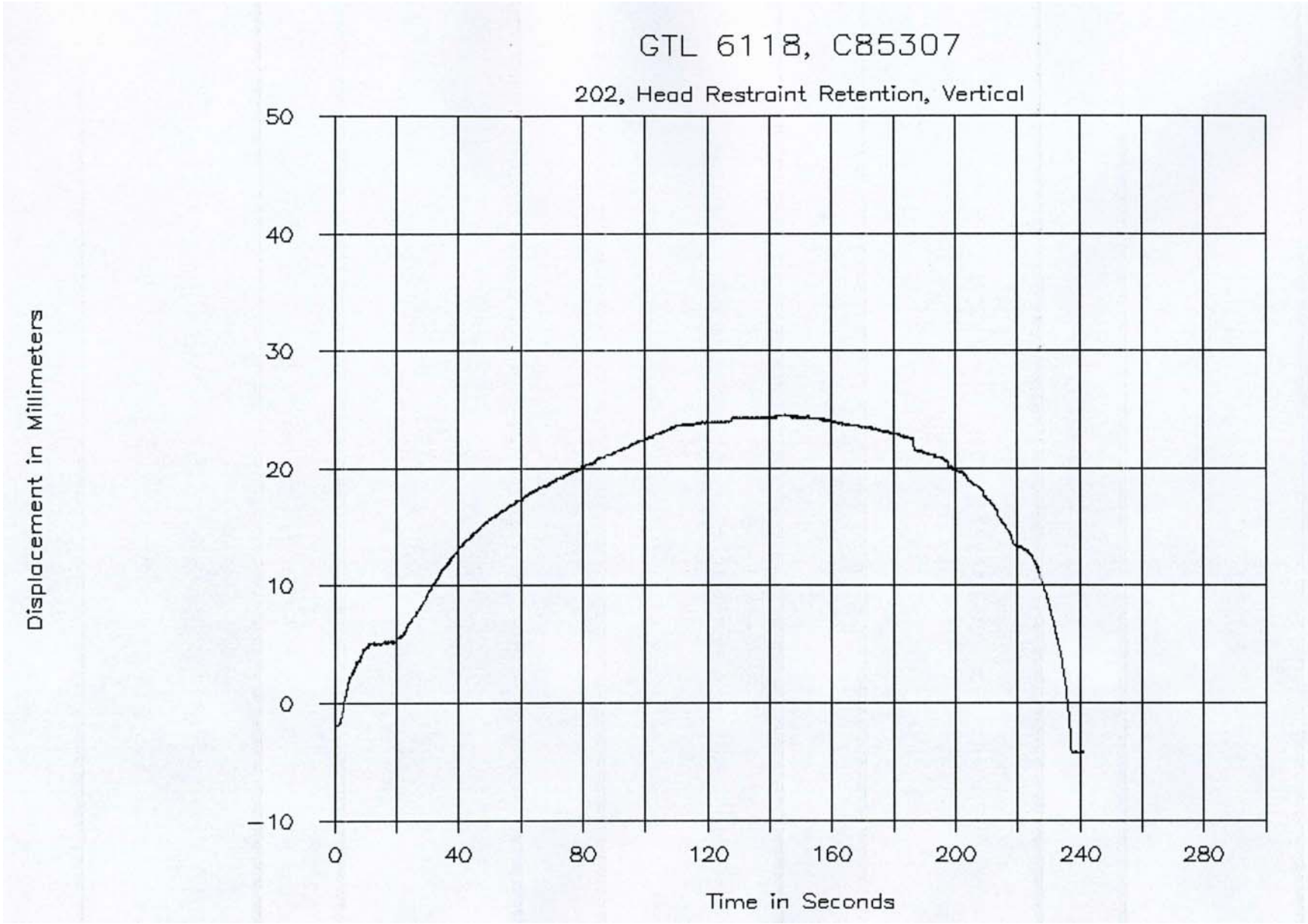
NHTSA NO. C85307
FMVSS NO. 202a

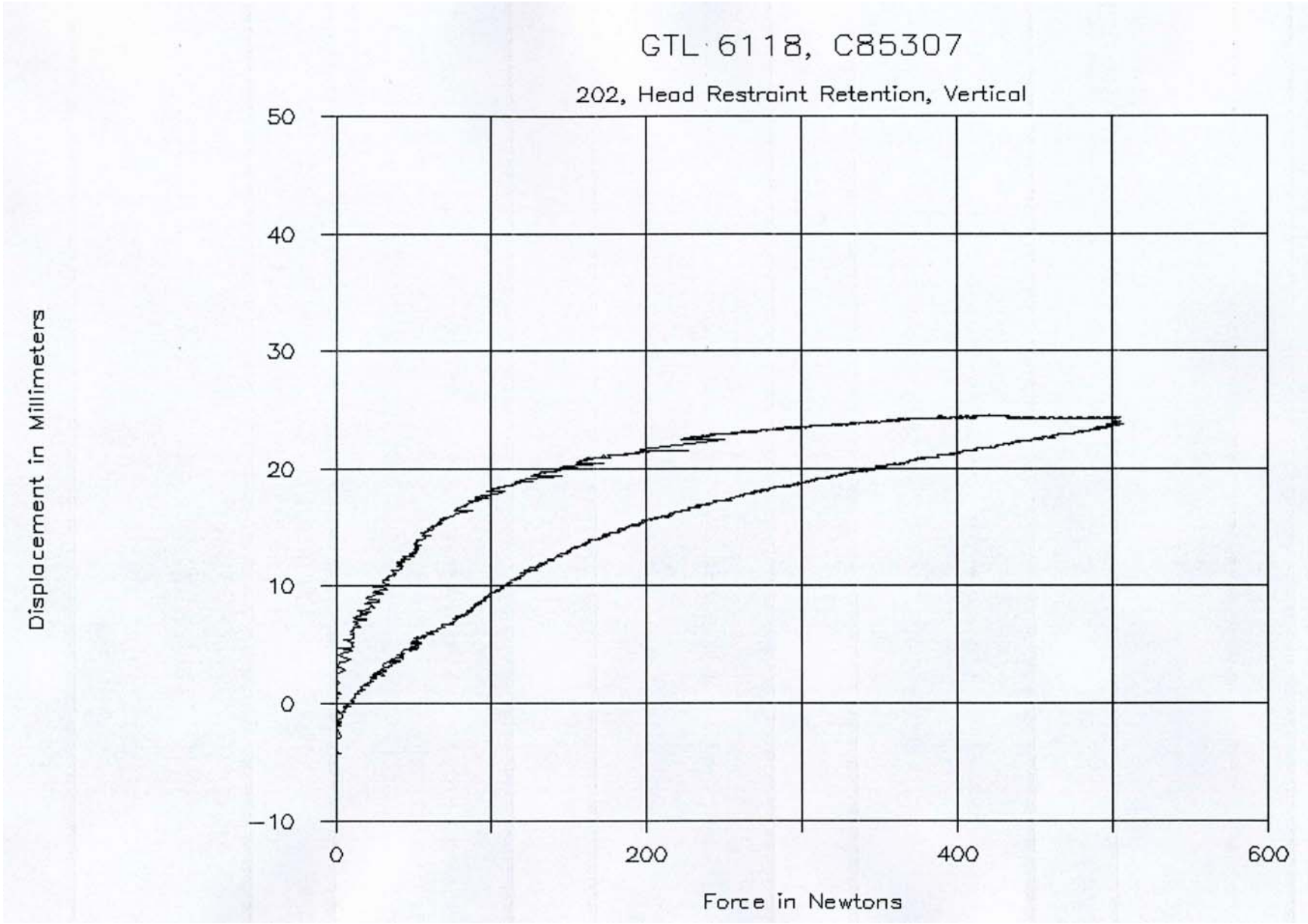
FIGURE 5.36
POST TEST ENERGY ABSORPTION TEST

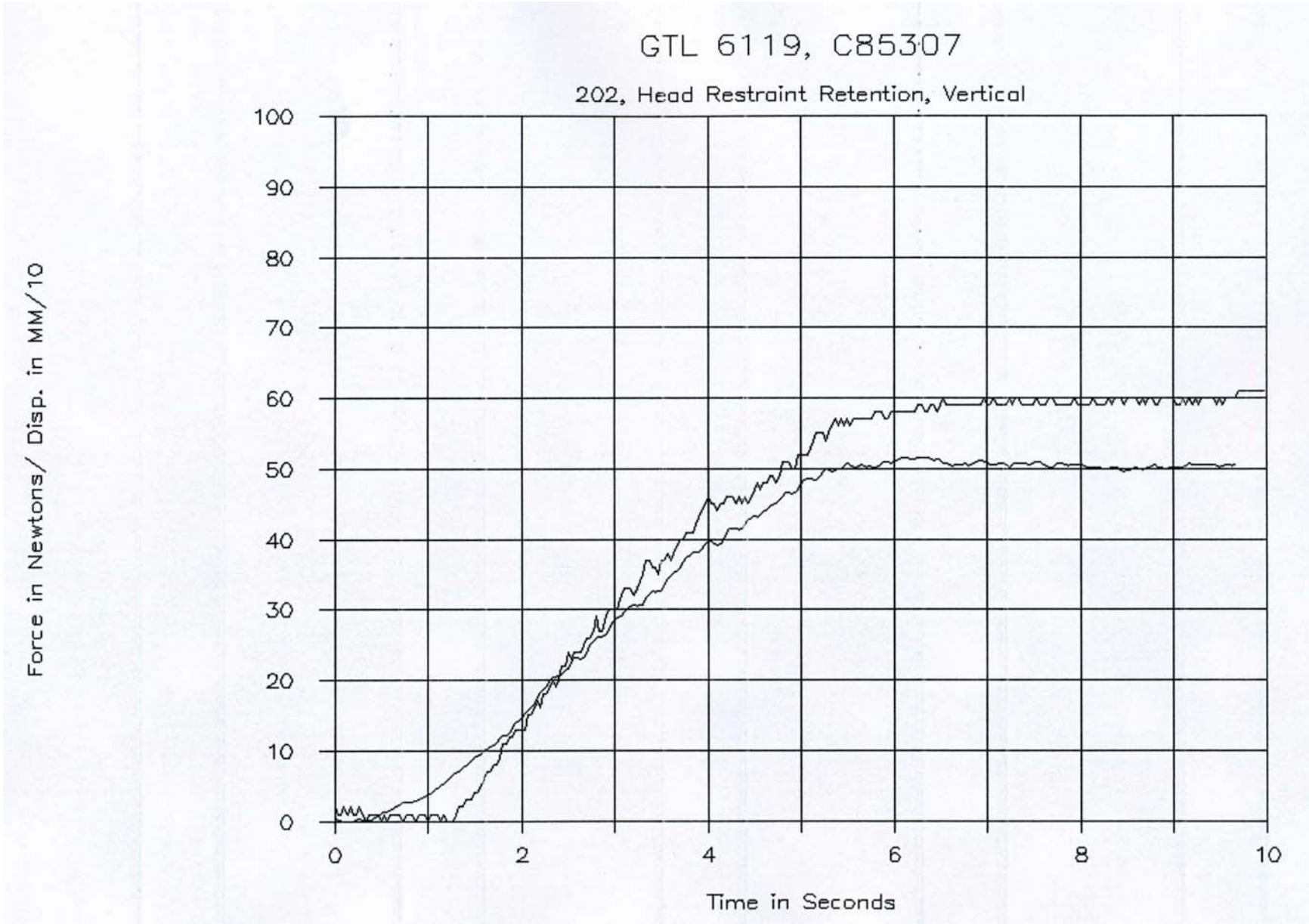
SECTION 6
TEST PLOTS

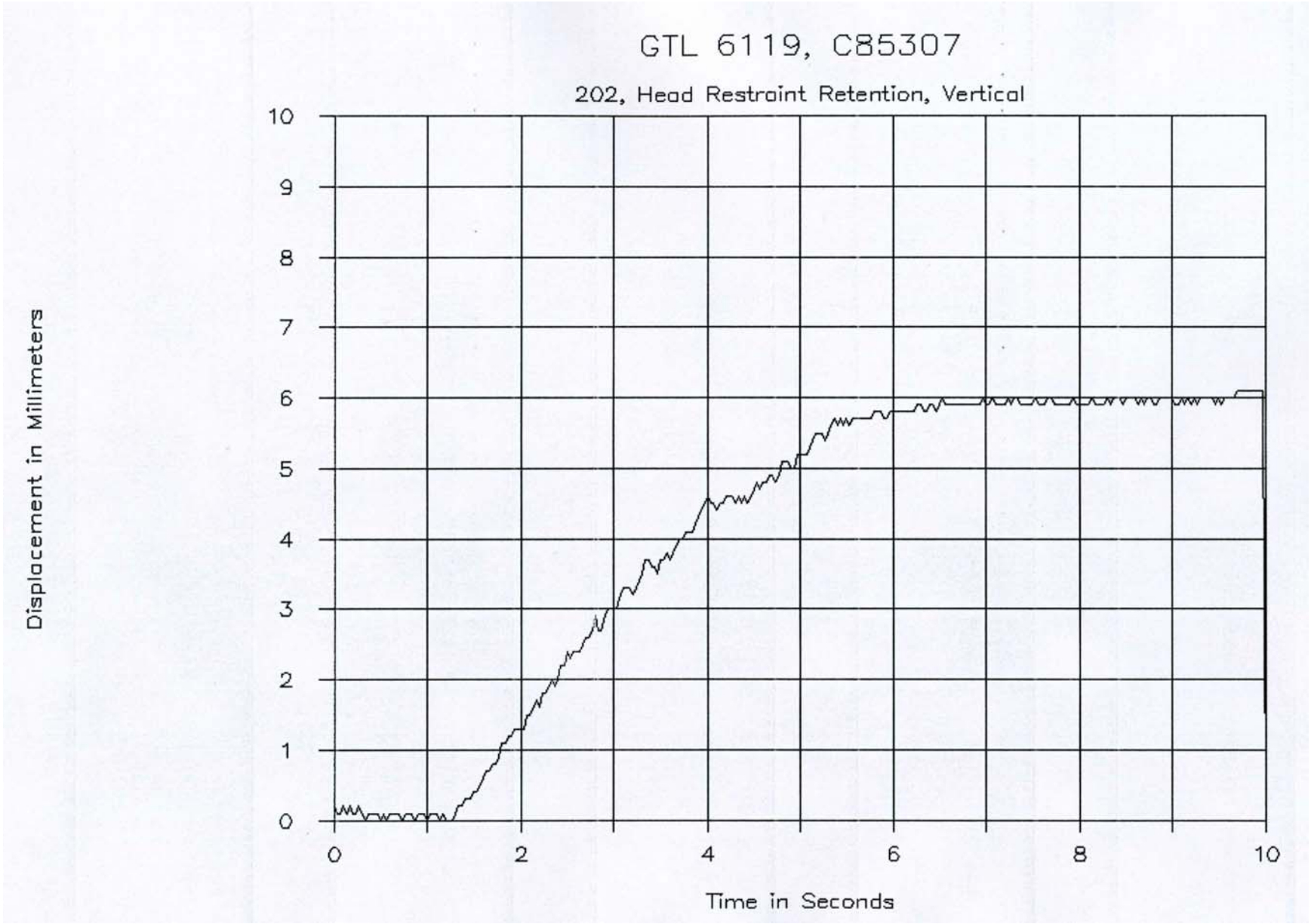

GTL 6118, C85307
202, Head Restraint Retention, Vertical
Force in Newtons/ Disp. in MM/10
600
500
400
300
200
100
0
−100
0
40
80
120
160
200
240
Time in Seconds


GTL 6118, C85307
202, Head Restraint Retention, Vertical
Force in Newtons
600
500
400
300
200
100
0
0
40
80
120
160
200
240
280
Time in Seconds


GTL 6118, C85307
202, Head Restraint Retention, Vertical
Displacement in Millimeters
50
40
30
20
10
0
−10
0
40
80
120
160
200
240
280
Time in Seconds

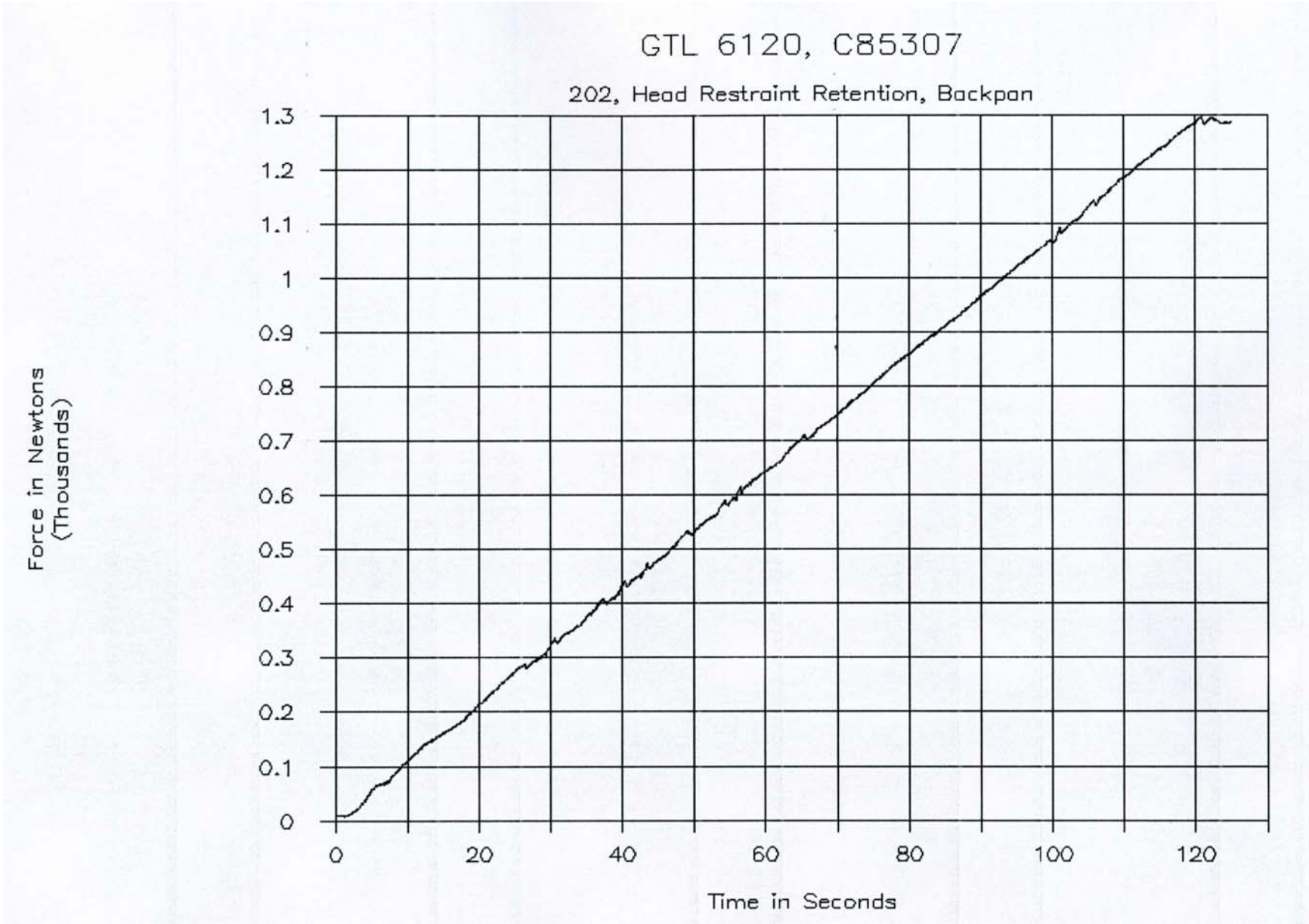

GTL 6118, C85307
202, Head Restraint Retention, Vertical
Displacement in Millimeters
50
40
30
20
10
0
−10
0
200
400
600
Force in Newtons


GTL 6119, C85307
202, Head Restraint Retention, Vertical
Force in Newtons/ Disp. in MM/10
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
Time in Seconds


GTL 6119, C85307
202, Head Restraint Retention, Vertical
Displacement in Millimeters
10
9
8
7
6
5
4
3
2
1
0
0
2
4
6
8
10
Time in Seconds


GTL 6119, C85307
202, Head Restraint Retention, Vertical
Displacement in Millimeters
10
9
8
7
6
5
4
3
2
1
0
0
20
40
60
80
Force in Newtons

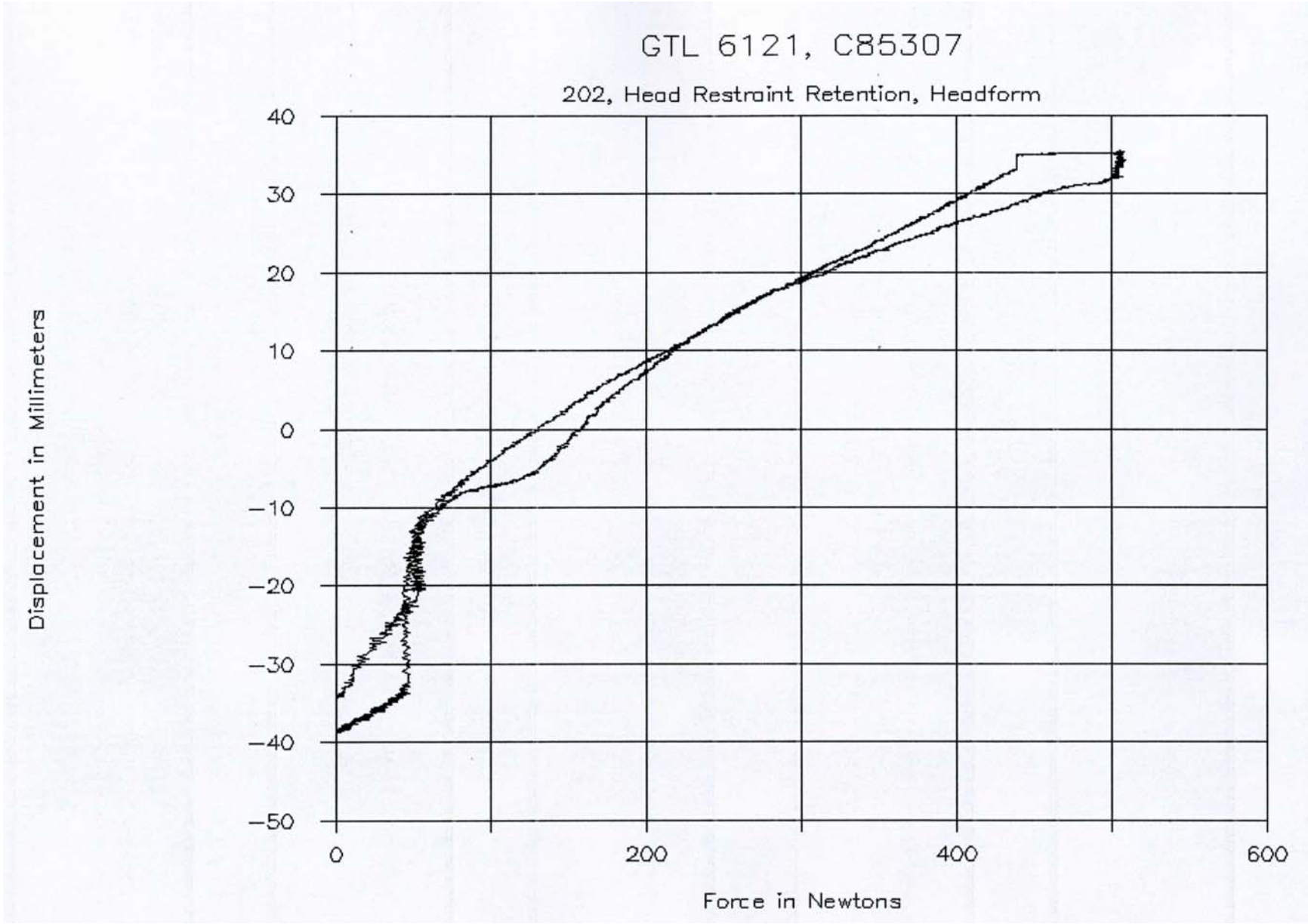

GTL 6120, C85307
202, Head Restraint Retention, Backpan
Force in Newtons/ Disp. in MM/10
(Thousands)
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100
120
Time in Seconds

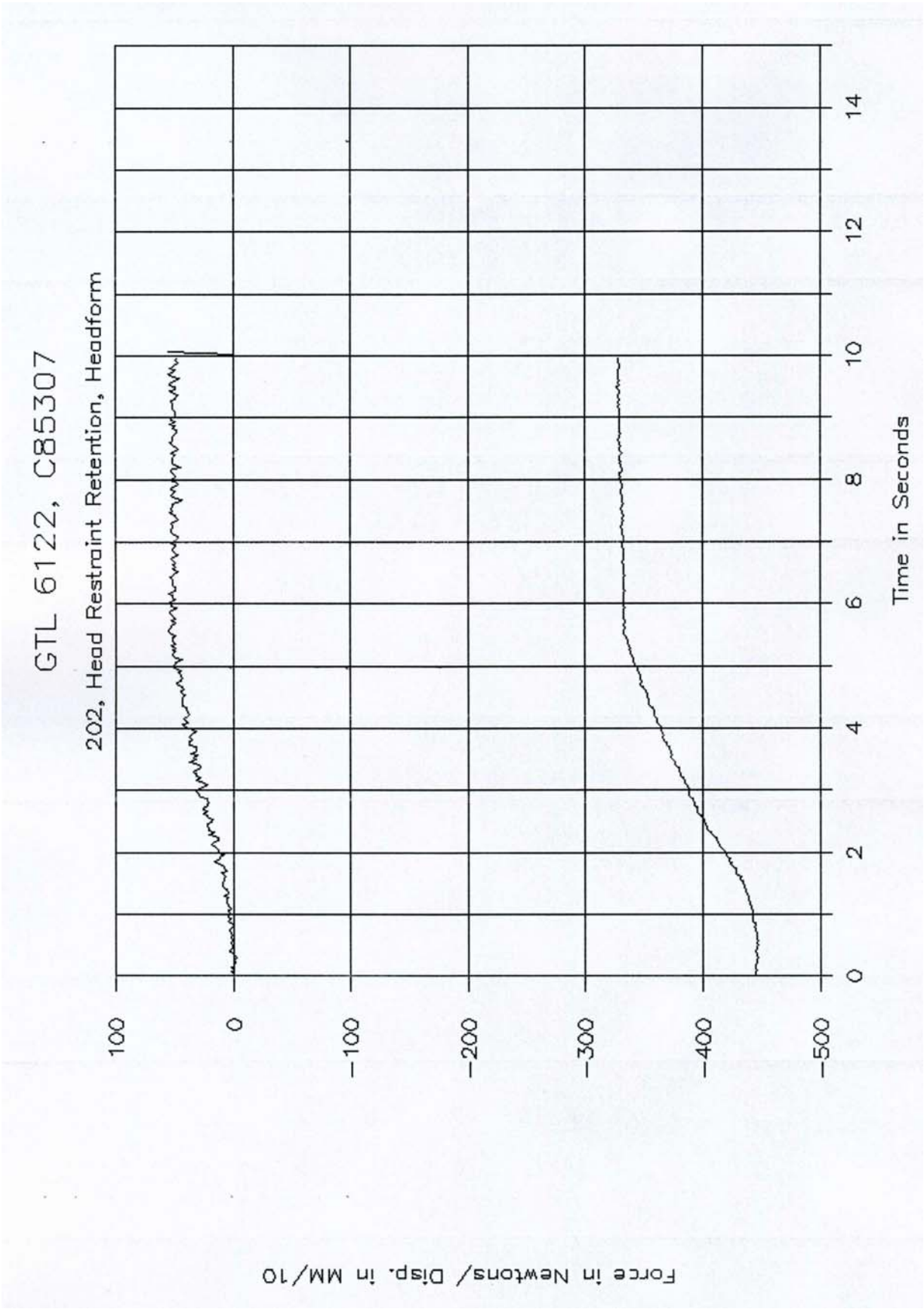

GTL 6120, C85307
202, Head Restraint Retention, Backpan
Force in Newtons
(Thousands)
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100
120
Time in Seconds


GTL 6120, C85307
202, Head Restraint Retention, Backpan
Displacement in Millimeters
80
70
60
50
40
30
20
10
0
0
20
40
60
80
100
120
Time in Seconds


GTL 6121, C85307
202, Head Restraint Retention, Headform
Force in Newtons/ Disp. in MM/10
600
500
400
300
200
100
0
−100
−200
−300
−400
0
40
80
120
160
200
240
Time in Seconds

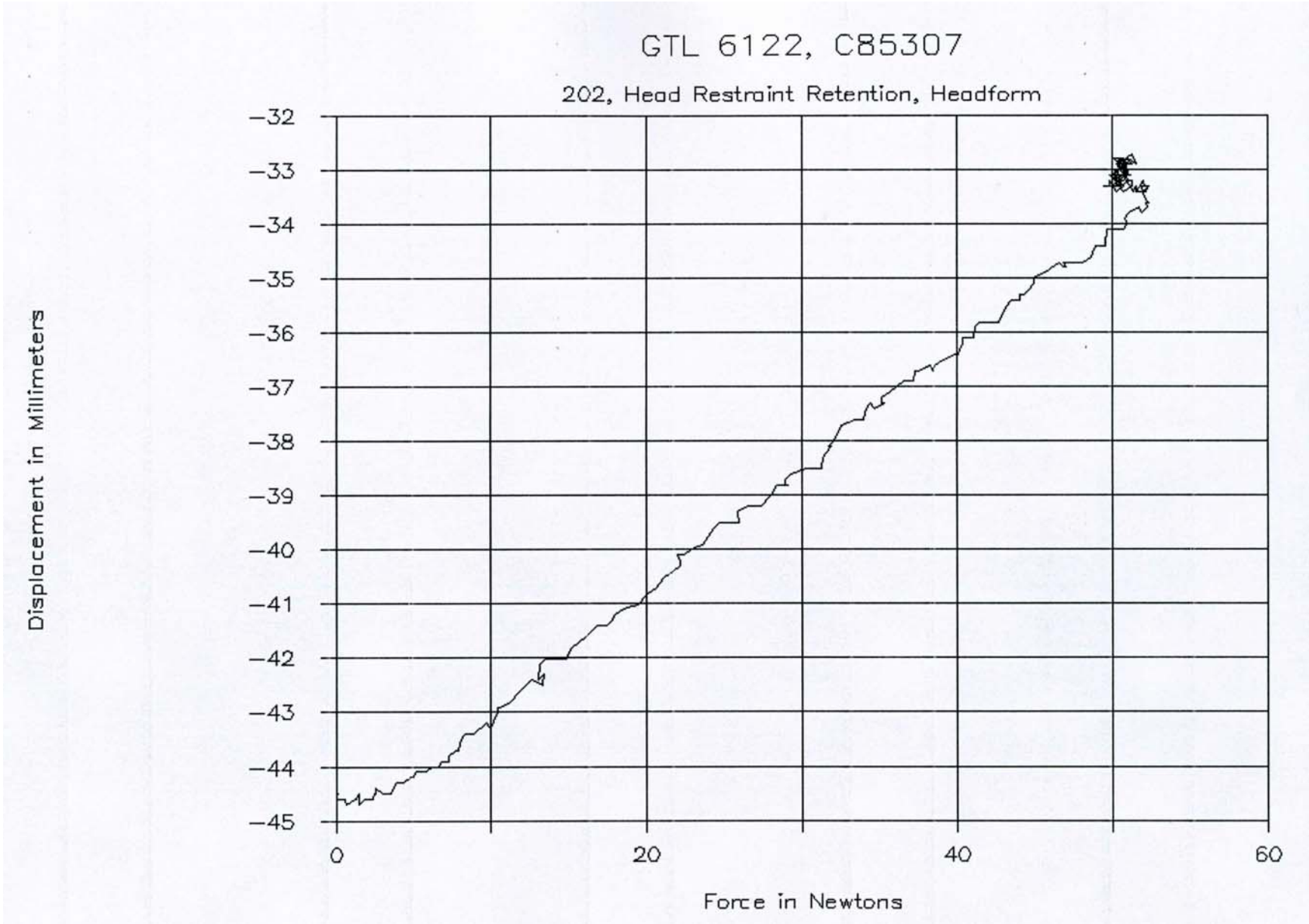

GTL 6121, C85307
202, Head Restraint Retention, Headform
Force in Newtons
600
500
400
300
200
100
0
0
40
80
120
160
200
240
Time in Seconds

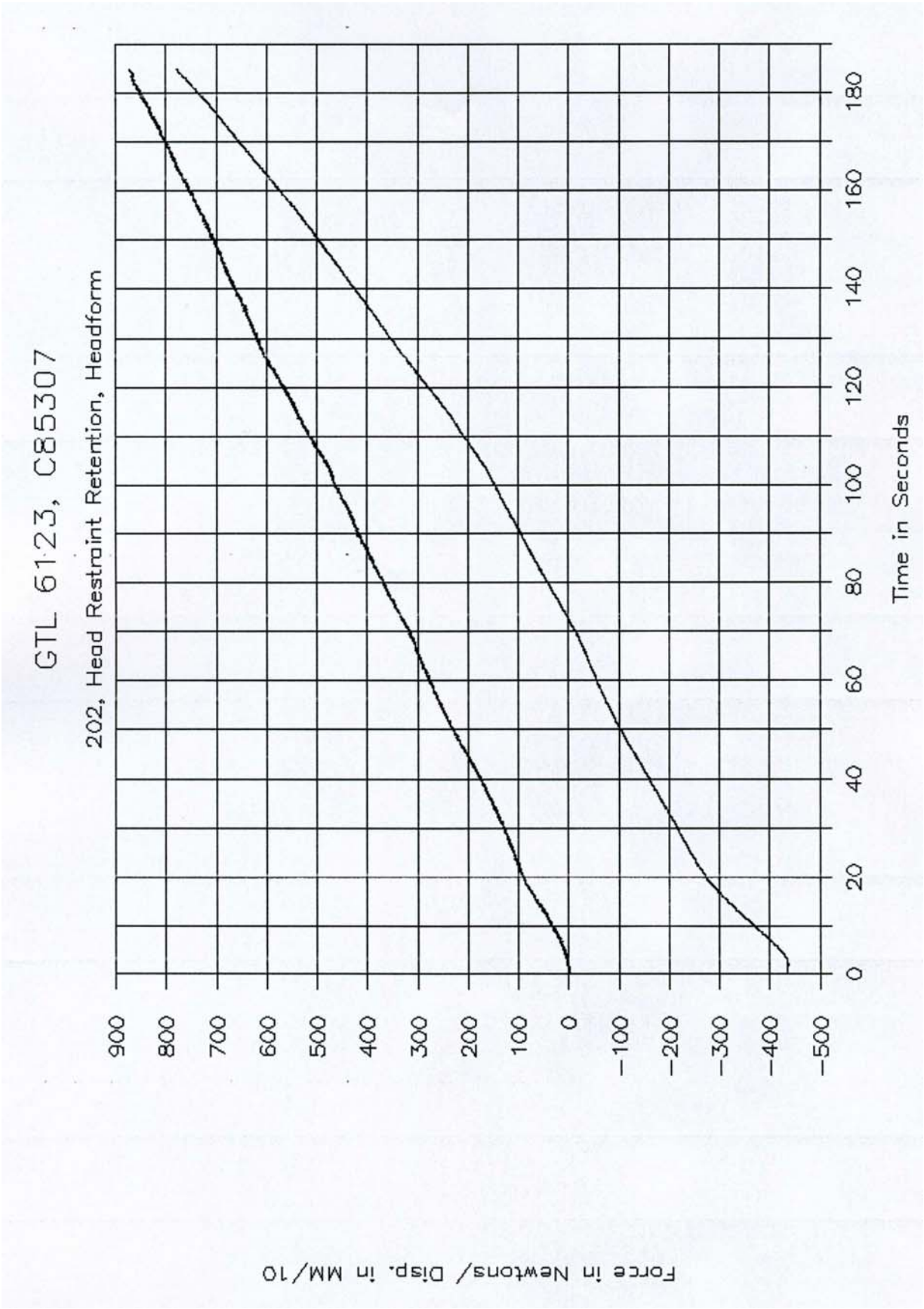

GTL 6121, C85307
202, Head Restraint Retention, Headform
Displacement in Millimeters
40
30
20
10
0
−10
−20
−30
−40
−50
0
200
400
600
Force in Newtons

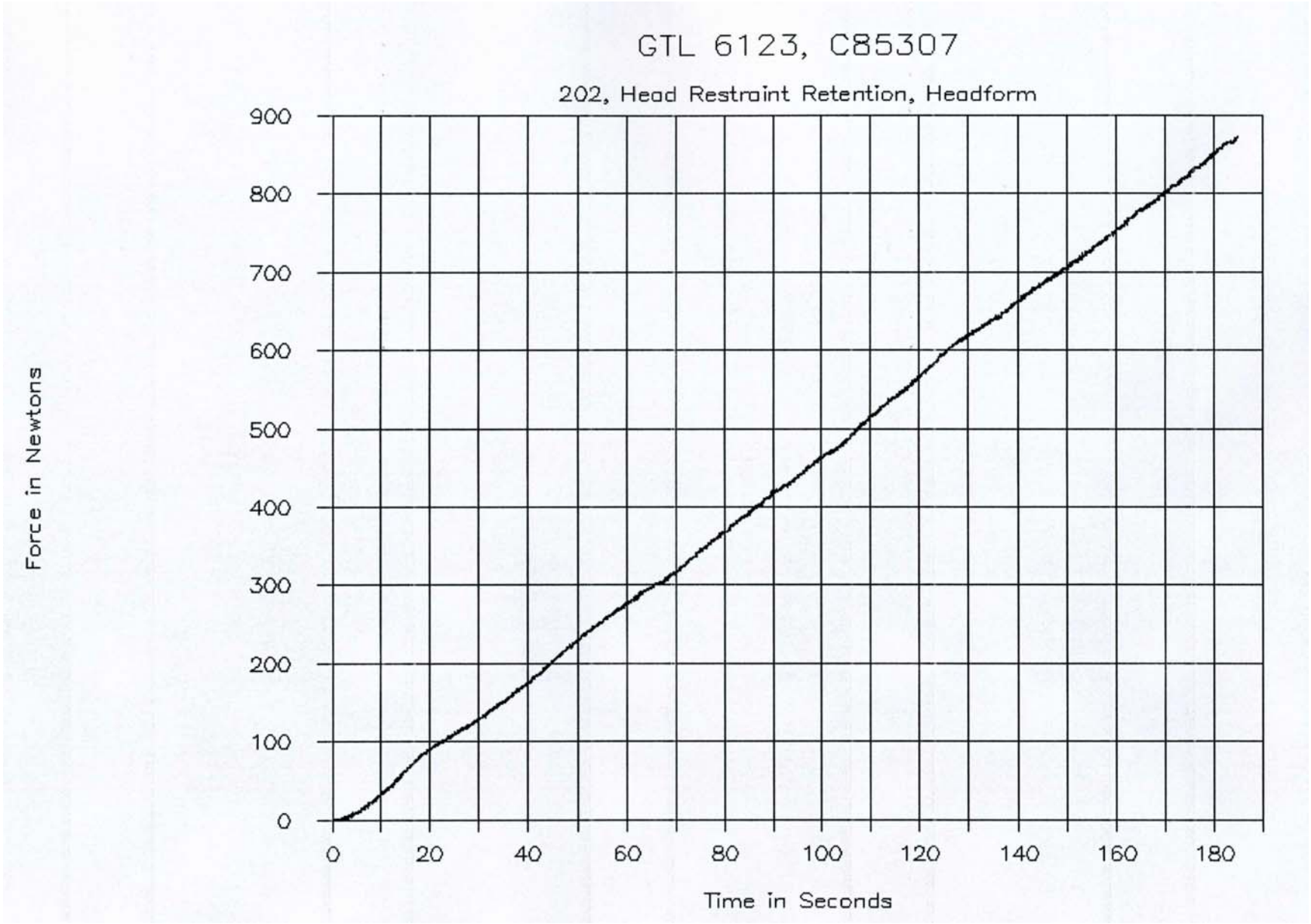

GTL 6122, C85307
202, Head Restraint Retention, Headform
Force in Newtons/ Disp. in MM/10
100
0
-100
-200
-300
-400
-500
0
2
4
6
8
10
12
14
Time in Seconds

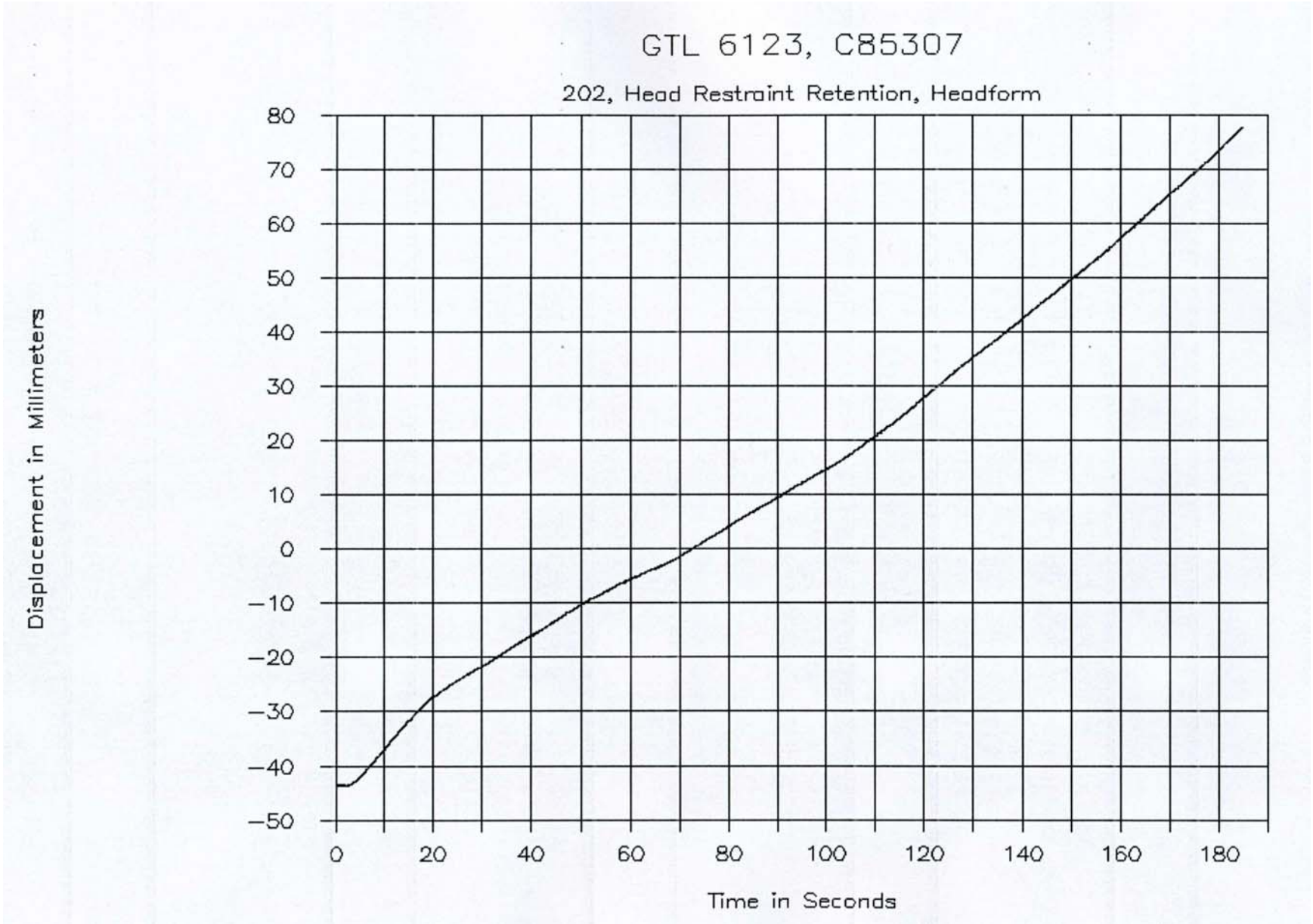

GTL 6122, C85307
202, Head Restraint Retention, Headform
Force in Newtons
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
Time in Seconds

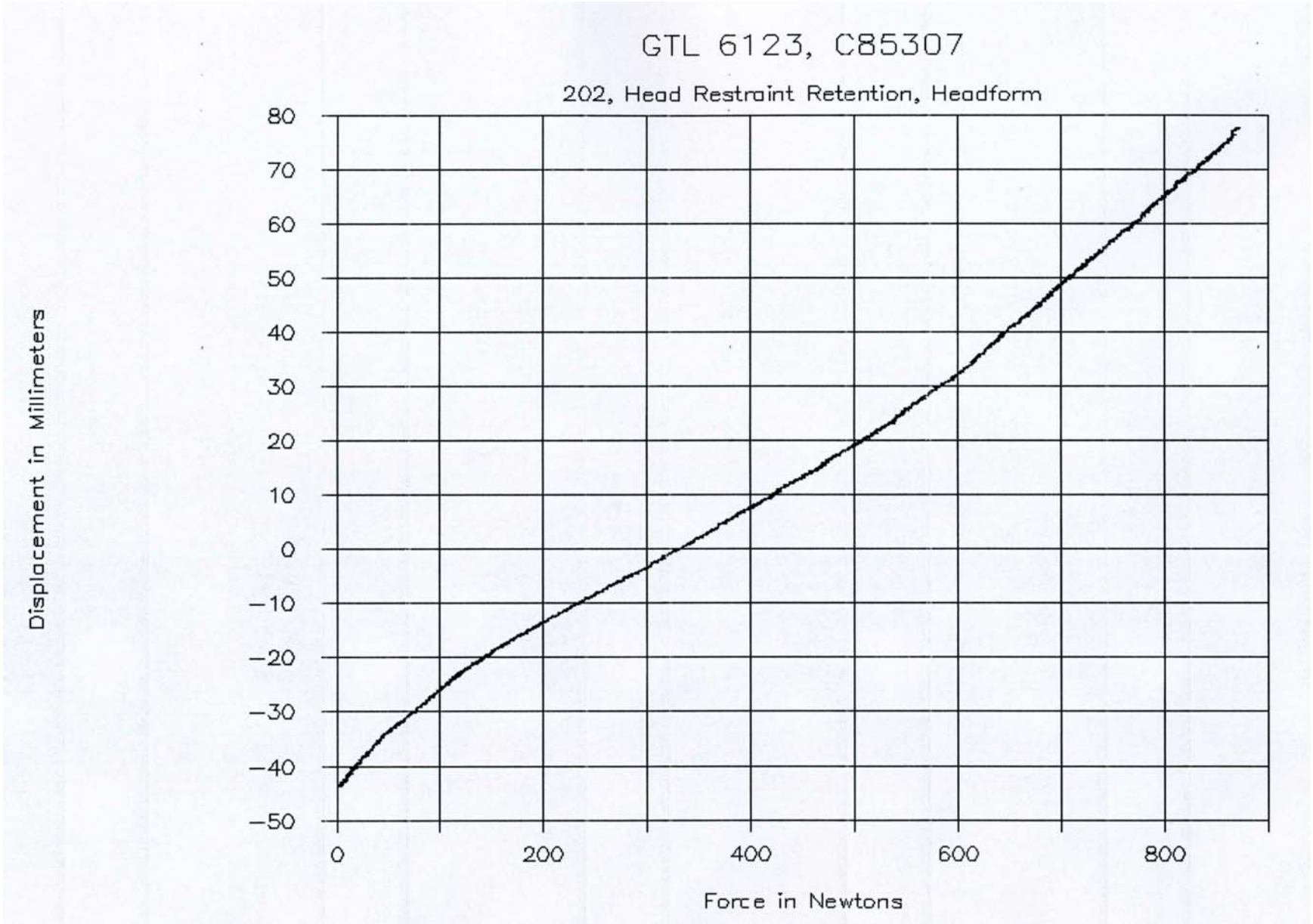

GTL 6122, C85307
202, Head Restraint Retention, Headform
Displacement in Millimeters
−32
−33
−34
−35
−36
−37
−38
−39
−40
−41
−42
−43
−44
−45
0
2
4
6
8
10
12
14
Time in Seconds

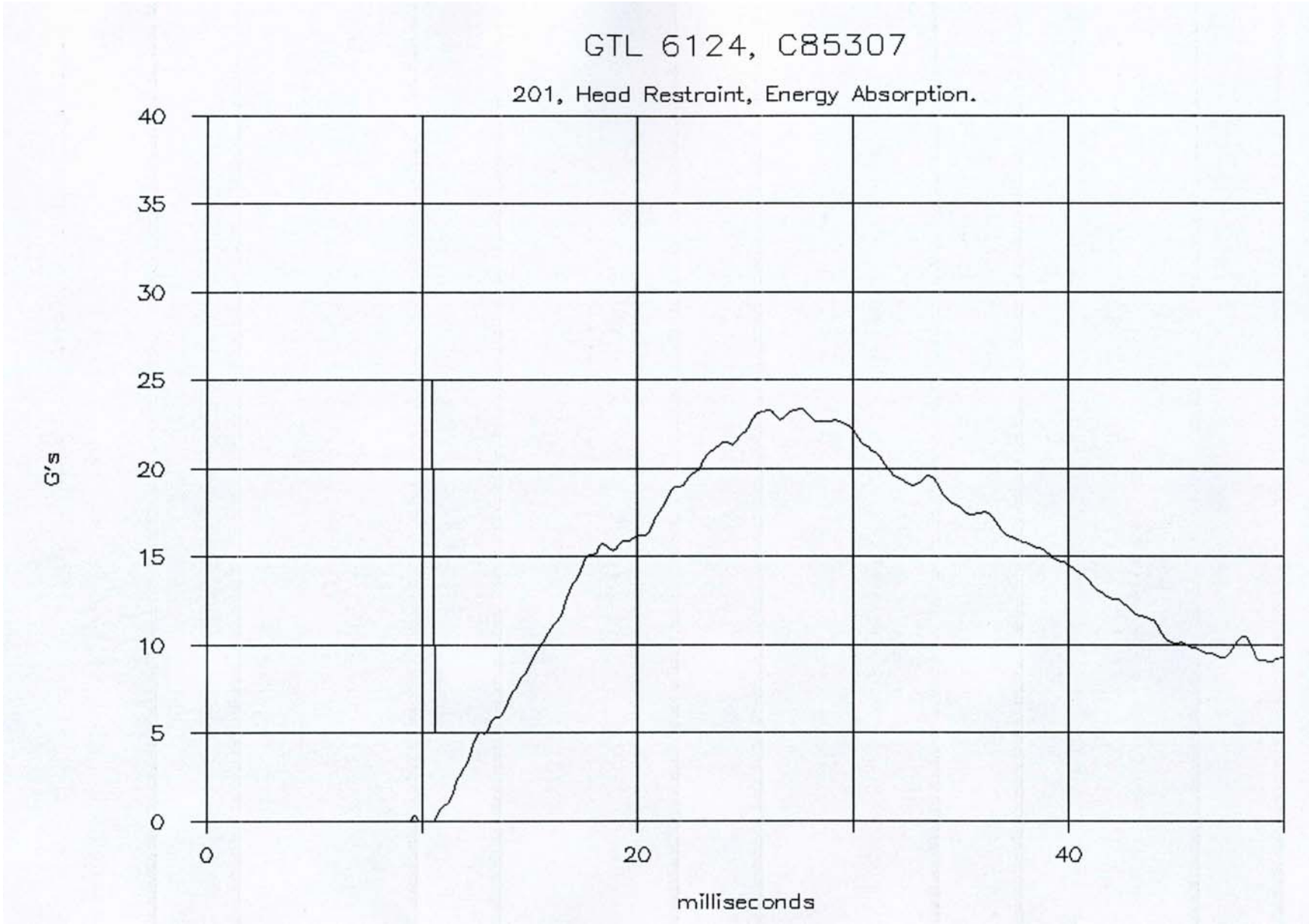

GTL 6122, C85307
202, Head Restraint Retention, Headform
Displacement in Millimeters
−32
−33
−34
−35
−36
−37
−38
−39
−40
−41
−42
−43
−44
−45
0
20
40
60
Force in Newtons


GTL 6123, C85307
202, Head Restraint Retention, Headform
Force in Newtons/ Disp. in MM/10
Time in Seconds
900
800
700
600
500
400
300
200
100
0
-100
-200
-300
-400
-500
0
20
40
60
80
100
120
140
160
180


GTL 6123, C85307
202, Head Restraint Retention, Headform
Force in Newtons
900
800
700
600
500
400
300
200
100
0
0
20
40
60
80
100
120
140
160
180
Time in Seconds


GTL 6123, C85307
202, Head Restraint Retention, Headform
Displacement in Millimeters
80
70
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
0
20
40
60
80
100
120
140
160
180
Time in Seconds


GTL 6123, C85307
202, Head Restraint Retention, Headform
Displacement in Millimeters
80
70
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
0
200
400
600
800
Force in Newtons

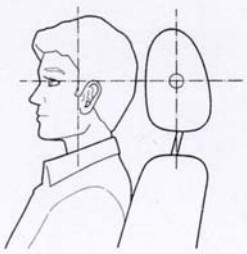

GTL 6124, C85307
201, Head Restraint, Energy Absorption.
G's
40
35
30
25
20
15
10
5
0
0
20
40
milliseconds

SECTION 7
OWNER'S MANUAL INFORMATION

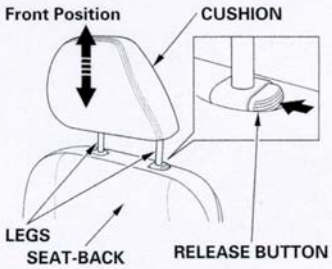
Head Restraints

See page 13 for important safety information and a warning about improperly positioning head restraints.

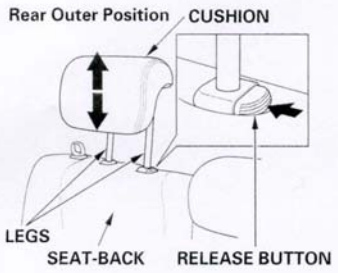
Your vehicle is equipped with head restraints in all seating positions to help protect you and your passengers from whiplash and other injuries.



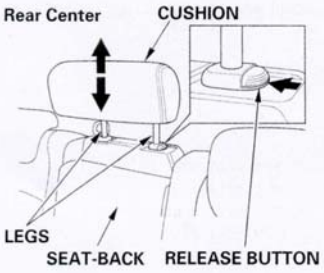
They are most effective when you adjust them so the center of the back of the occupant's head rests against the center of the restraint.



Adjusting the Head Restraint
The head restraints adjust for height. You need both hands to adjust a restraint. Do not attempt to adjust it while driving. To raise it, pull upward. To lower the restraint, push the release button sideways, and push the restraint down.



Removing the Head Restraint
To remove a head restraint, pull it up as far as it will go. Push the release button, then pull the restraint out of the seat-back.



When a passenger is seated in the rear center seating position, make sure the center head restraint is properly adjusted.

⚠WARNING

Failure to reinstall the head restraints can result in severe injury during a crash.

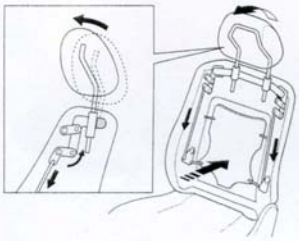
Always replace the head restraints before driving.

Make sure the removed head restraints are securely stored.

When reinstalling a head restraint, put the legs back in place. Then adjust it to the appropriate height while pressing the release button.

Make sure the head restraint locks in position when you reinstall it.

Active Head Restraints



The driver's and front passenger's seats have active head restraints. If the vehicle is struck severely from the rear, the occupant properly secured with the seat belt will be pushed against the seat-back and the head restraint will automatically move forward.

This reduces the distance between the restraint and the occupant's head. It also helps protect the occupants against whiplash and injuries to the neck and upper spine.

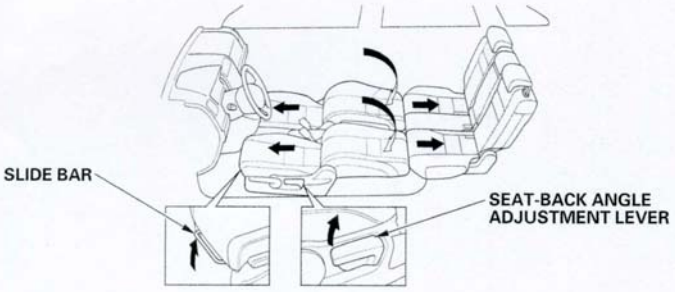
After a collision, the activated restraint should return to its normal position.

If the restraints do not return to their normal position, or in the event of a severe collision, have the vehicle inspected by a Honda dealer.

For a head restraint system to work properly:

- Do not hang any items on the head restraints, or from the restraint legs.
- Do not place any object between an occupant and the seat-back.
- Install each restraint in its proper location.
- Only use genuine Honda replacement head restraints.

Reclining the Front Seats



You can recline the seat-backs on the front seats so they are level with the rear seat cushions, making a large cushioned area. To do this:

EX-L model only
Only the passenger's side can be level as follows.

1. Adjust the rear seats as far back as possible.
2. Remove the front head restraints (see page 98), and store them securely.
3. Adjust the front seats forward as far as possible. Pull up the seat-back angle adjustment lever and pivot the seat-back backward until it is level with the rear seat cushion.

   EX-L model only
   The seat-back of the power adjustable driver's seat cannot be level. Do not push the seat-back down forcibly.
4. Adjust the rear seat-back to the desired position.

Reverse this procedure to return the front and rear seats to the upright position. Make sure you install the head restraints and securely lock the seats before driving.

When you return the seat-back to its upright position, hold the seat-back to keep it from going up too quickly.