

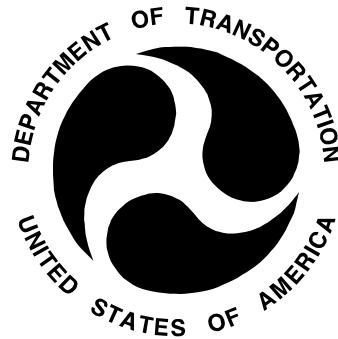
REPORT NO. NCAP-MGA-2001-004

NEW CAR ASSESSMENT PROGRAM (NCAP)

FRONTAL BARRIER IMPACT TEST

Honda Motor Company
2001 Honda Civic 4 door

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: October 26, 2000

Report Date: November 10, 2000

FINAL REPORT

Prepared For:

**U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY PERFORMANCE STANDARDS
OFFICE OF CRASHWORTHINESS STANDARDS
MAIL CODE NPS-10
400 SEVENTH STREET, SW, ROOM 5313
WASHINGTON, D.C. 20590**

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. NCAP-MGA-2000-004	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle NHTSA New Car Assessment Program (NCAP) Testing of a 2001 Honda Civic 4 door		5. Report Date November 10, 2000	
		6. Performing Organization Code MGA	
7. Author(s) Dave Kosloske		8. Performing Organization Report No. NCAP-MGA-2000-004	
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105		10. Work Unit No.	
		11. Contract or Grant No.	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards (Mail Code: NPS-10) 400 Seventh St., S.W., Room 5313 Washington, D.C. 20590		13. Type of Report and Period Covered Final Report	
		14. Sponsoring Agency Code	
15. Supplementary Notes			
16. Abstract A 56 kph (35 mph) frontal barrier impact using a rigid barrier was conducted on a 2001 Honda Civic 4 door in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure No. TP-NCAP120199 for the determination of vehicle crashworthiness on October 26, 2000. The barrier impact velocity was 56.8 kph (35.3 mph), and the ambient temperature at the time of impact was 21°C. The post-test maximum static crush was 474 mm. The test vehicle appeared to comply with the requirements of the following Federal Motor Vehicle Safety Standards: 1. FMVSS 212, "Windshield Mounting" 2. FMVSS 219 (partial), "Windshield Zone Intrusion" 3. FMVSS 301, "Fuel System Integrity" With regard to "Occupant Crash Protection" injury criteria, the driver's HIC was 303 and the 3 msec Clip (Chest g's) was 39.5 g's. The left and right femur loads for the driver were -1824 and -2551 Newtons, respectively. The passenger's HIC was 249 and the 3 msec Clip was 37.4 g's. The left and right femur maximum loads were -3737 and -2338 Newtons respectively.			
17. Key Words 35 mph Frontal Barrier Impact Test New Car Assessment Program (NCAP) FMVSS 212 Indicant Testing FMVSS 219 (partial) Indicant Testing FMVSS 301 Indicant Testing		18. Distribution Statement Copies of this report are available from: Technical Ref. Division, NHTSA, NASSIF Building, Room 5108 400 Seventh Street, S.W. Washington, D.C. 20590	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 315	22. Price

Form DOT F 1700.7 (8-69)

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.

This Final Test Report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration. This document is disseminated under the sponsorship of the U.S. Dept. of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

PREPARED BY: _____
Dave Kosloske, Project Engineer
MGA Research Corporation

APPROVED BY: _____
David Winkelbauer, Facility Director
MGA Research Corporation

APPROVAL DATE: _____

TEST TECHNICIANS: Eric Nelson
Wayne Dahlke
Chris Novak
Kurt Range
John Wistert

CALIBRATION/INSTRUMENTATION: Tim Michnay

PHOTOGRAPHIC: Chris Kulis
Tammy Brausch

SECRETARY: Danielle Rames

FINAL REPORT ACCEPTED BY:

Manager, New Car Assess. Program (NCAP)

Date of Report Acceptance

Contracting Officer's Tech. Rep. (COTR)

Date of Report Acceptance

TABLE OF CONTENTS

<u>SECTION</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
1	Purpose and Summary of NCAP Test	1-1
2	Occupant and Vehicle Information/Data Sheets	2-1
APPENDIX A	Photographs	
APPENDIX B	Vehicle and Dummy Response Data	
APPENDIX C	Dummy Configuration & Performance Verification Data	
APPENDIX D	Test Equipment and Instrumentation Calibration	
APPENDIX E	Vehicle Owner's Occupant Restraint System Instructions	

DATA SHEET LISTING

<u>DATA SHEET NO.</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
1	Crash Test Summary	2-1
2	General Test and Vehicle Parameter Data	2-2
3	Post Impact Data	2-5
4	Test Vehicle Information	2-6
5	Summary of FMVSS 212 Data	2-7
6	Windshield Zone Intrusion FMVSS 219 Data	2-8
7	FMVSS 301 Fuel System Integrity Data	2-9
8	FMVSS 301 Rollover Data	2-10
9	Dummy Injury Criteria Values	2-14
10	Dummy Positioning in Vehicle	2-17
11	Seat Belt Positioning Data	2-20
12	Seat Belt Performance Data	2-21
13	Camera Data	2-22
14	Vehicle Target Locations	2-24
15	Vehicle Accelerometer Location and Data Summary	2-25
16	Post Test Air Bag Data	2-26
17	Test Vehicle Measurements	2-27
18	Accident Investigation Division Data	2-34

SECTION 1

PURPOSE AND SUMMARY OF NCAP TEST

This 35 mph frontal barrier impact test is part of the Composite FY'01 Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA). The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 48 kph (30 mph) FMVSS 208/212/219/301-75 requirements.

The 56 kph (35 mph) frontal barrier impact test was conducted in accordance with the National Highway Traffic Safety Administration (NHTSA) Indicant Test Procedure for New Car Assessment Program (NCAP) dated December 1, 1999. Data for FMVSS No. 212, "Windshield Mounting", FMVSS No. 219 (Partial), "Windshield Zone Intrusion", FMVSS No. 301-75, "Fuel System Integrity," as well as occupant performance data are provided herein.

A flat concrete barrier covered with 3/4" plywood was impacted by a 2001 Honda Civic 4 door at a velocity of 56.8 kph (35.3 mph). The test was performed at the MGA Proving Grounds and Crash Test Center on October 26, 2000. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The frontal barrier impact event was documented by one (1) real-time camera and sixteen (16) high speed cameras. Camera locations and other pertinent camera information can be found in this report.

Two Part 572E, 50th percentile male anthropomorphic test devices (ATDs) were placed in the driver and right-front passenger seating positions according to dummy placement instructions specified in the Laboratory Indicant Test Procedure.

Both ATDs were instrumented with head and chest primary and redundant triaxial accelerometers, pelvis triaxial accelerometers, a chest displacement transducer, a six axis neck load cell, right/left femur load cells, right/left lower leg sensors, and right/left foot accelerometers. Seat belt load cells were also on the driver and passenger shoulder and lap

belts to measure dummy torso and pelvic section loading. Calibrated ATDs, driver (Serial No. 087), and the right front passenger (Serial No. 100), were used for this test. Certification details, along with instrumentation calibration data, are found in Appendices C and D.

The 103 channels of data were recorded on an EME onboard data acquisition system. Appendix B contains the vehicle and dummy response data traces.

The driver's head struck the inflated airbag. The driver HIC was 303 and the maximum chest (CLIP) deceleration over 3 milliseconds was 39.5 g's. The maximum chest compression was 33 mm. The left and right femur loads were -1824 and -2551 Newtons respectively.

The right front passenger's head struck the inflated airbag. The passenger HIC was 249 and maximum chest (CLIP) deceleration over 3 milliseconds was 37.4 g's. The maximum chest compression was 25 mm. The left and right femur loads were -3737 and -2338 Newtons respectively.

SECTION 2
OCCUPANT AND VEHICLE
INFORMATION/DATA SHEETS

DATA SHEET NO. 1
CRASH TEST SUMMARY

Vehicle Yr/Make/Model/Body Style: 2001/Honda/Civic/4 door

VIN.: 1HGES16521L010443

Vehicle Test Weight: 1340.9 kgs.

Impact Velocity: 56.8 kph

Maximum Static Crush: 474 mm

Vehicle Rebound: 922 mm

DUMMIES:	DRIVER	PASSENGER
Serial Number:	<u>087</u>	<u>100</u>
Restraint System:	<u>Type II belt system</u> <u>and airbag</u>	<u>Type II belt system</u> <u>and airbag</u>
No. Data Channels:	<u>42</u>	<u>42</u>

Number of Cameras: 1 Real Time
16 High Speed

Door Opening Data: LF yes RF yes LR yes RR yes
(without use of tools)

FRONT SEAT(S) DATA	DRIVER	PASSENGER
Seat Shift:	<u>4 mm</u> forward;	<u>0 mm</u>
Seat Back Movement:	<u>none</u>	<u>none</u>

VISIBLE DUMMY

CONTACT POINTS:	DRIVER	PASSENGER
Head	<u>Airbag, headrest</u>	<u>Airbag, headrest</u>
Chest	<u>Airbag</u>	<u>Airbag</u>
Left Knee	<u>Instrument panel,</u> <u>steering column</u>	<u>Glovebox</u>
Right Knee	<u>Instrument panel</u>	<u>Glovebox</u>

DATA SHEET NO. 2
GENERAL TEST AND VEHICLE PARAMETER DATA

Vehicle Yr/Make/Model/Body Style: 2001/Honda/Civic/4 door

VIN.: 1HGES16521L010443

Body color: Titanium

Date of Manufacture: 9/00

Engine: 4 Cylinders; ___ C.I.D.; 1.7 Liters;
 X Gas; ___ Diesel; ___ Turbocharged
 ___ Longitudinal; X Transverse

Transmission: 4 Speed; ___ Manual; X Automatic; ___ Overdrive

Final Drive: X Front Wheel; ___ Rear Wheel; ___ Four Wheel

Odometer Reading: 3 miles

Major Option:

X A/C; X P/S; X P/B; X P/wdo;
 X P/locks; X Tilt Wheel; X Cruise Control; X ABS
Other: _____

DATA RECORDED FROM VEHICLE'S TIRE PLACARD:

Tire Pressure (at capacity): Front 207 kPa (30 psi) Rear 207 kPa (30 psi)

Recommended Tire Size: P185/70R14

Recommended Cold Tire Pressure: Front 207 kPa (30 psi) Rear 207 kPa (30 psi)

Tires on Vehicle: P185/70R14 Manufacturer: Firestone

Number of Occupants: 2 Front; 3 Rear; ___ 3rd Seat; 5 TOTAL

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

Type of Front Seat Back: ___ Fixed; X Adj. With; ___ Power; X Lever

Vehicle Capacity Weight (VCW) = 385.6 kg. (A)

No. of Occupants x 68.0 kg. = 340.0 kg. (B)

Rated Cargo Weight (RCW) A-B = 45.6 kg.

GVWR 1539.9 kg. GAWR: Front 800.6 kg.; Rear 755.2 kg.

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER (WITH MAXIMUM FLUIDS) = UDW:

Right Front =	<u>338.8</u>	kg	Right Rear =	<u>227.7</u>	kg
Left Front =	<u>352.9</u>	kg	Left Rear =	<u>224.5</u>	kg
TOTAL FRONT =	<u>691.7</u>	kg	TOTAL REAR =	<u>452.2</u>	kg
% of Total Weight =	<u>60.5</u>	%	% of Total Weight =	<u>39.5</u>	%
TOTAL UNLOADED DELIVERED WEIGHT (UDW) =				<u>1143.9</u>	kg

CALCULATION FOR TARGET TEST WEIGHT:

UDW = Unloaded Delivered Weight 1143.9 kg

VCW = Vehicle Capacity Weight 385.6 kg

DSC = Designated Seating Capacity 5

RCW = VCW - 68 (DSC) = 45.6 kg*

Target Test Weight = UDW + RCW + (2 dummies x 78.0 kg/dummy)

Target Test Weight = 1345.5 kg

WEIGHT OF TEST VEHICLE WITH REQUIRED DUMMIES AND CARGO:

Right Front =	<u>389.2</u>	kg	Right Rear =	<u>278.5</u>	kg
Left Front =	<u>398.3</u>	kg	Left Rear =	<u>274.9</u>	kg
TOTAL FRONT =	<u>787.5</u>	kg	TOTAL REAR =	<u>553.4</u>	kg
% of Total Weight =	<u>58.7</u>	%	% of Total Weight =	<u>41.3</u>	%
TOTAL WEIGHT =				<u>1340.9</u>	kg
Weight of ballast secured in vehicle trunk area = <u>0</u> kg					
Vehicle components removed to meet target weight: <u>Rear bumper, trunk lid,</u>					
<u>taillights, muffler, rear seat, spare tire, jack, and cargo area interior</u>					

VEHICLE ATTITUDE (all dimensions in mm):

Delivered Attitude:	RF <u>666</u>	LF <u>664</u>	RR <u>683</u>	LR <u>684</u>
Test Attitude:	RF <u>643</u>	LF <u>644</u>	RR <u>660</u>	LR <u>664</u>
Post Test	RF <u>699</u>	LF <u>618</u>	RR <u>660</u>	LR <u>649</u>

Wheel Base: 2615 mm; C.G. = 1079 mm rearward of front wheel C/L

Remarks: _____

* light trucks and MPVs RCW is 136 kgs or manufacturer's value, whichever is less

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 50.0 liters

Usable Capacity Figure Furnished by COTR = 47.3 liters

Test Volume Range (92 to 94% of Usable Capacity) = 43.5 to 44.5 liters

ACTUAL TEST VOLUME = 43.5 liters

Test Fluid Type: Stoddard Solvent; Spec. Grav. = 0.77

Kinematic Viscosity = 1.788 centistrokes; Color = Purple

Type of Fuel Pump; Electric X; Mechanical ____

Does Electric Pump operate with ignition switch "ON" & engine "Off"?

Yes X No ____

DATA SHEET NO. 3
POST-IMPACT DATA

Vehicle Yr/Make/Model/Body Style: 2001/Honda/Civic/4 door

VIN.: 1HGES16521L010443

Type of Test: 35 mph Frontal Impact Impact Angle: 0E

Date of Test: October 26, 2000 Time of Test: 3:58 p.m.

Ambient Temperature: 20.6°C (69°F) (Spec. Range = 18.8 to 25.6°C)

Temperature in Occupant Compartment: 20.6° C (69°F)

Required Impact Velocity Range: 55.5 to 57.1 kph

Impact Velocity: primary = 56.8 kph; secondary = 56.6 kph

Distance From Front Bumper to Barrier Face When

Entering Speed Trap: 1300 mm

Exiting Speed Trap: 300 mm

VEHICLE REBOUND AND CRUSH (mm):

Vehicle Length: Pre-test = Right 4176 C/L 4410 Left 4188

Post-test = Right 3857 C/L 4015 Left 3920

Crush = Right 319 C/L 395 Left 268

Distance from front of test vehicle to point of impact (rebound):

Right 976 mm C/L 842 mm Left 948 mm

Average = 922 mm

DATA SHEET NO. 4
TEST VEHICLE INFORMATION

	<u>Front</u>		<u>Rear</u>	
<u>Post-Test Door Opening</u>	<u>Left</u>	<u>Right</u>	<u>Left</u>	<u>Right</u>
(without use of tools)	<u>yes</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>

	<u>Front</u>		<u>Rear</u>	
<u>Seat Movement</u>	<u>Left</u>	<u>Right</u>	<u>Left</u>	<u>Right</u>
Seat Back Movement	<u>none</u>	<u>none</u>	<u>N/A</u>	<u>N/A</u>
Seat Shift (mm)	<u>4 mm forward</u>	<u>0 mm</u>	<u>N/A</u>	<u>N/A</u>

Glazing Damage

Backlight/Windshield Windshield cracked

Other Notable Impact Effects: None noted

DATA SHEET 5
FMVSS NO. 212, "WINDSHIELD MOUNTING", DATA SHEET

Details of windshield mounting such as retention method, trim type, etc.:

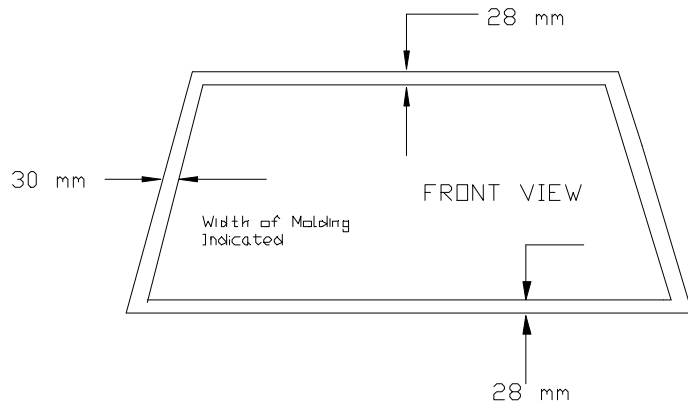
Windshield set in rubber molding with glue

FMVSS 212 Requirements: The Post-Test periphery retention amount must be at least 75% of the Pre-Test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

FMVSS 212 TEST DATA:

	WINDSHIELD PERIPHERY		PERCENT RETENTION
	PRE-TEST (mm)	POST-TEST (mm)	
RIGHT SIDE	2076	2076	100%
LEFT SIDE	2076	2076	100%
TOTAL	4152	4152	100%

AREA OF RETENTION FAILURE: None



FAILURE DETAILS: None

DATA SHEET 6

FMVSS NO. 219, "WINDSHIELD ZONE INTRUSION", DATA SHEET

PROTECTED ZONE LOWER EDGE REQUIREMENT:

The lower edge of the protected zone is determined by placing a 6.5" dia. rigid sphere weighing 15 pounds in a position such that it simultaneously contacts the inner surface of the windshield and the surface of the instrument panel, including padding, and drawing the locus of points on the inner surface of the windshield contactable by the sphere across the width of the instrument panel. From the outermost contact points, extend the locus line horizontally to the edges of the windshield, and then draw a line on the inner surface of the windshield below and $\frac{1}{2}$ " distant from the locus line. The LOWER EDGE OF THE PROTECTED ZONE is the longitudinal projection onto the outer surface of the windshield of this line.

FMVSS 219 TEST DATA:

A= 1110 mm

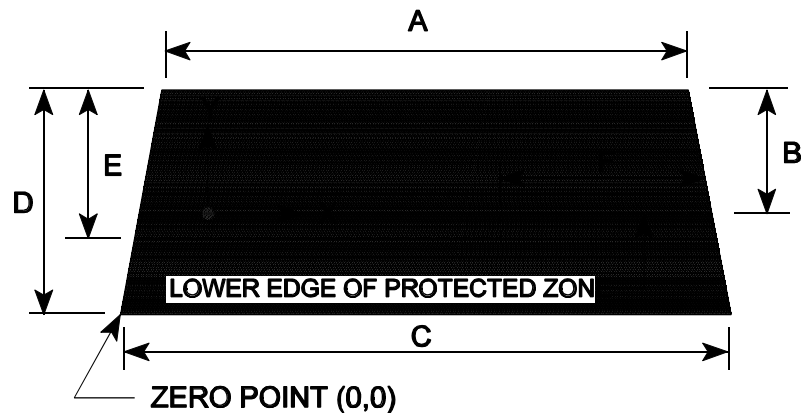
B= 540 mm

C= 1444 mm

D= 799 mm

E= 518 mm

F= 533 mm



DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 1/4": None

(Show location of penetration)

DATA SHEET 7

FMVSS NO. 301-75, FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

FMVSS NO. 301

Test Date: October 26, 2000

Vehicle Mfr./Make/Model: 2001/Honda/Civic/4 door

Usable Capacity of Vehicle's Fuel Tank: 47.3 Liters
(figure furnished by vehicle manufacturer)

TEST REQUIREMENTS:

Drain the test vehicle's fuel system and operate the engine until the fuel system is dry. Add Stoddard solvent, which has been dyed purple, until 92-94% of the stated usable capacity is reached. Operate the engine to assure the Stoddard solvent is present throughout the entire fuel system.

AMOUNT OF STODDARD SOLVENT ADDED TO VEHICLE'S FUEL TANK:

43.5 Liters which is 92 % of the stated USABLE CAPACITY.

TEST VEHICLE IMPACT TYPE: X Frontal (35 mph)

- ☐ Oblique (30 mph) with ☐° barrier face first
contacting (driver/passenger) side
- ☐ Rear Moving Barrier (30 mph)
- ☐ Side Impact MDB (33.2 mph)

FUEL SPILLAGE MEASUREMENT:

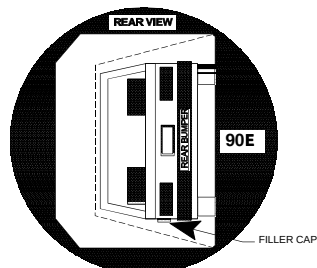
1. From impact until vehicle motion ceases
2. For 5 minute period after vehicle motion ceases
3. For next 25 minutes

ACTUAL	MAX ALLOWED
0 oz.	1 OZ
0 oz.	5 OZ
0 oz.	1 oz./1 MIN

SOLVENT SPILLAGE DETAILS: None

DATA SHEET 8
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE: 0° - 90°



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90^B Rotation Time 2 minutes 45 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 45 seconds

Next whole minute interval 8 minutes

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 min FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
------------------------------------	----------	----------	-------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

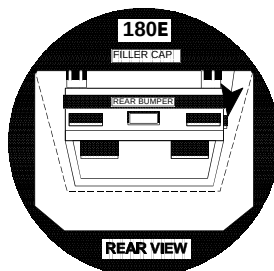
0	0	0	0
---	---	---	---

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATIONS(S): None

DATA SHEET 8
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (Cont'd)

TEST PHASE: 90°- 180°



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time 2 minutes 24 seconds
(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 24 seconds

Next whole minute interval 8 minutes

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 min FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
------------------------------------	----------	----------	-------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

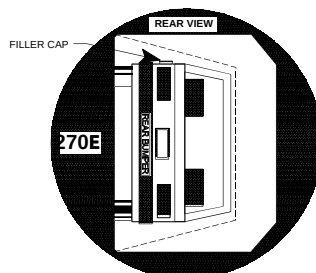
0	0	0	0
---	---	---	---

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATIONS(S): None

DATA SHEET 8
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (Cont'd)

TEST PHASE: 180° - 270°



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time 2 minutes 11 seconds
(Spec. Range = 1 to 3 minutes)
FMVSS 301 Position Hold Time + 5 minutes 0 seconds
TOTAL 7 minutes 11 seconds
Next whole minute interval 8 minutes

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 min FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
------------------------------------	----------	----------	-------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

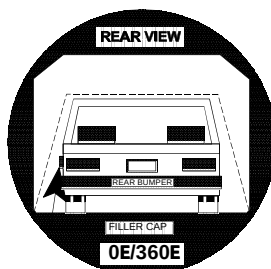
0	0	0	0
---	---	---	---

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATIONS(S): None

DATA SHEET 8
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (Cont'd)

TEST PHASE: 270E - 360E



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90^B Rotation Time 2 minutes 49 seconds
(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 49 seconds

Next whole minute interval 8 minutes

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 min FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
------------------------------------	----------	----------	-------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0	0	0	0
---	---	---	---

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATIONS(S): None

DATA SHEET 9

DUMMY INJURY CRITERIA VALUES DATA SHEET

Vehicle Year/Make/Model/Body Style: 2001/Honda/Civic/4 door

Test Date: October 26, 2000

DESCRIPTION	UNIT	MAXIMUM VALUE			
		pos.	msec.	neg.	msec.
Pos. 1 Head X	G	0.4	200	43.0	78
Pos. 1 Head Y	G	3.1	20	14.8	83
Pos. 1 Head Z	G	16.0	41	1.7	137
Pos. 1 Head Resultant	G	45.2	79	--	--
Pos. 2 Head X	G	0.4	16	40.6	74
Pos. 2 Head Y	G	5.4	37	5.3	81
Pos. 2 Head Z	G	16.7	82	0.8	144
Pos. 2 Head Resultant	G	42.2	74	--	--
Pos. 1 Chest X	G	3.3	154	39.7	60
Pos. 1 Chest Y	G	3.6	110	5.0	77
Pos. 1 Chest Z	G	7.1	18	11.0	72
Pos. 1 Chest Resultant	G	40.4	60	--	--
Pos. 1 Chest Displacement	mm	--	--	33	54
Pos. 2 Chest X	G	2.0	158	37.7	64
Pos. 2 Chest Y	G	5.4	44	4.7	91
Pos. 2 Chest Z	G	7.4	85	3.2	48
Pos. 2 Chest Resultant	G	37.8	65	--	--
Pos. 2 Chest Displacement	mm	--	--	25	79
Pos. 1 Left Femur	N	993.2	49	1823.6	64
Pos. 1 Right Femur	N	901.0	81	2550.9	60
Pos. 2 Left Femur	N	543.1	16	3737.5	48
Pos. 2 Right Femur	N	601.0	98	2337.6	55

DATA SHEET 9
DUMMY INJURY CRITERIA VALUES DATA SHEET (Cont'd)

DESCRIPTION	UNIT	MAXIMUM VALUE			
		pos.	msec.	neg.	msec.
Pos. 1 Lap Belt Load	N	7481.6	59	--	--
Pos. 1 Torso Belt Load	N	6196.8	58	--	--
Pos. 2 Lap Belt Load	N	5941.2	51	--	--
Pos. 2 Torso Belt Load	N	5023.4	45	--	--
Pos. 1 Upper Neck Fx	N	243.1	77	483.3	128
Pos. 1 Upper Neck Fy	N	132.6	76	119.6	112
Pos. 1 Upper Neck Fz	N	936.5	46	272.8	155
Pos. 1 Neck Force Resultant	N	959.7	46	--	--
Pos. 1 Upper Neck Mx	N•m	6.8	30	15.6	79
Pos. 1 Upper Neck My	N•m	44.2	138	31.2	93
Pos. 1 Upper Neck Mz	N•m	13.9	88	8.2	142
Pos. 1 Neck Moment Result	N•m	44.7	137	--	--
Pos. 2 Upper Neck Fx	N	217.4	61	578.7	131
Pos. 2 Upper Neck Fy	N	169.1	73	145.2	135
Pos. 2 Upper Neck Fz	N	960.8	65	38.6	140
Pos. 2 Neck Force Result	N	976.2	65	--	--
Pos. 2 Upper Neck Mx	N•m	16.5	80	6.5	122
Pos. 2 Upper Neck My	N•m	39.7	140	25.3	76
Pos. 2 Upper Neck Mz	N•m	9.2	92	5.6	148
Pos. 2 Neck Moment Result	N•m	40.2	140	--	--
Pos. 1 Pelvic (X)	G	6.7	88	57.2	59
Pos. 1 Pelvic (Y)	G	6.8	49	8.9	64
Pos. 1 Pelvic (Z)	G	4.4	158	36.1	62
Pos. 1 Pelvic Resultant	G	65.9	59	--	--

DATA SHEET 9

DUMMY INJURY CRITERIA VALUES DATA SHEET (Cont'd)

DESCRIPTION	UNIT	MAXIMUM VALUE			
		pos.	msec.	neg.	msec.
Pos. 2 Pelvic (X)	G	3.6	120	58.4	51
Pos. 2 Pelvic (Y)	G	12.3	43	5.0	88
Pos. 2 Pelvic (Z)	G	3.8	138	29.2	53
Pos. 2 Pelvic Resultant	G	64.7	51	--	--
Pos. 1 Left Upper Tibia Mx	N•m	26.4	77	37.0	48
Pos. 1 Left Upper Tibia My	N•m	14.8	112	101.6	47
Pos. 1 Left Upper Tibia Fz	N	1794.3	46	153.1	125
Pos. 1 Left Lower Tibia Mx	N•m	5.1	166	75.4	48
Pos. 1 Left Lower Tibia My	N•m	25.3	81	28.1	50
Pos. 1 Left Lower Tibia Fz	N	2132.5	46	167.7	122
Pos. 1 Right Upper Tibia Mx	N•m	42.0	45	36.4	107
Pos. 1 Right Upper Tibia My	N•m	24.2	107	228.3	53
Pos. 1 Right Upper Tibia Fz	N	3777.7	54	232.7	162
Pos. 1 Right Lower Tibia Mx	N•m	20.0	42	108.5	53
Pos. 1 Right Lower Tibia My	N•m	102.9	60	46.2	39
Pos. 1 Right Lower Tibia Fz	N	4203.4	53	204.1	151
Pos. 2 Left Upper Tibia Mx	N•m	32.5	58	36.1	47
Pos. 2 Left Upper Tibia My	N•m	103.3	48	149.2	40
Pos. 2 Left Lower Tibia Fz	N	4598.8	43	196.9	18
Pos. 2 Left Lower Tibia Mx	N•m	93.4	43	9.8	39
Pos. 2 Left Lower Tibia My	N•m	86.0	43	54.4	38
Pos. 2 Left Lower Tibia Fz	N	5415.3	42	335.7	154
Pos. 2 Right Upper Tibia Mx	N•m	51.0	42	8.4	64
Pos. 2 Right Upper Tibia My	N•m	20.6	85	132.5	42
Pos. 2 Right Upper Tibia Fz	N	2730.3	43	202.0	20
Pos. 2 Right Lower Tibia Mx	N•m	30.1	42	27.4	63
Pos. 2 Right Lower Tibia My	N•m	51.6	61	32.9	39
Pos. 2 Right Lower Tibia Fz	N	3381.5	42	128.4	18

DATA SHEET 10 DUMMY POSITIONING IN VEHICLE

Vehicle: 2001/Honda/Civic/4 door

SEAT TYPE:

☐ Bench
☒ Bucket
☐ Split Bench

ADJUSTER TYPE:

Driver: ☒ Manual
☐ Power

Passenger: ☒ Manual
☐ Power

BUCKET SEAT BACK TYPE:

☐ Fixed
☒ Adjustable Reclining

☐ Fixed
☒ Adjustable Reclining

DRIVER SEAT POSITION

13th detent of 25 detents

Seat back angle 10.4°

Set five positions back from
the first locking position

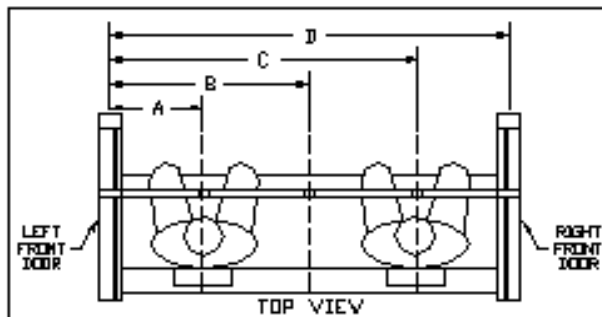
PASSENGER SEAT POSITION

13th detent of 25 detents

Seat back angle 9.6°

Set five positions back from
the first locking position

Steering column set to mid position. Steering column angle 25.2°



087 DUMMY ID 100

A = Left Door to Driver Centerline 408 mm

B = Left Door to Center Passenger Centerline 742 mm

C = Left Door to Right Passenger Centerline 1071 mm

D = Left Door to Right Door 1484 mm

DATA SHEET 10
DUMMY POSITIONING IN VEHICLE (Cont'd)

Units (mm)

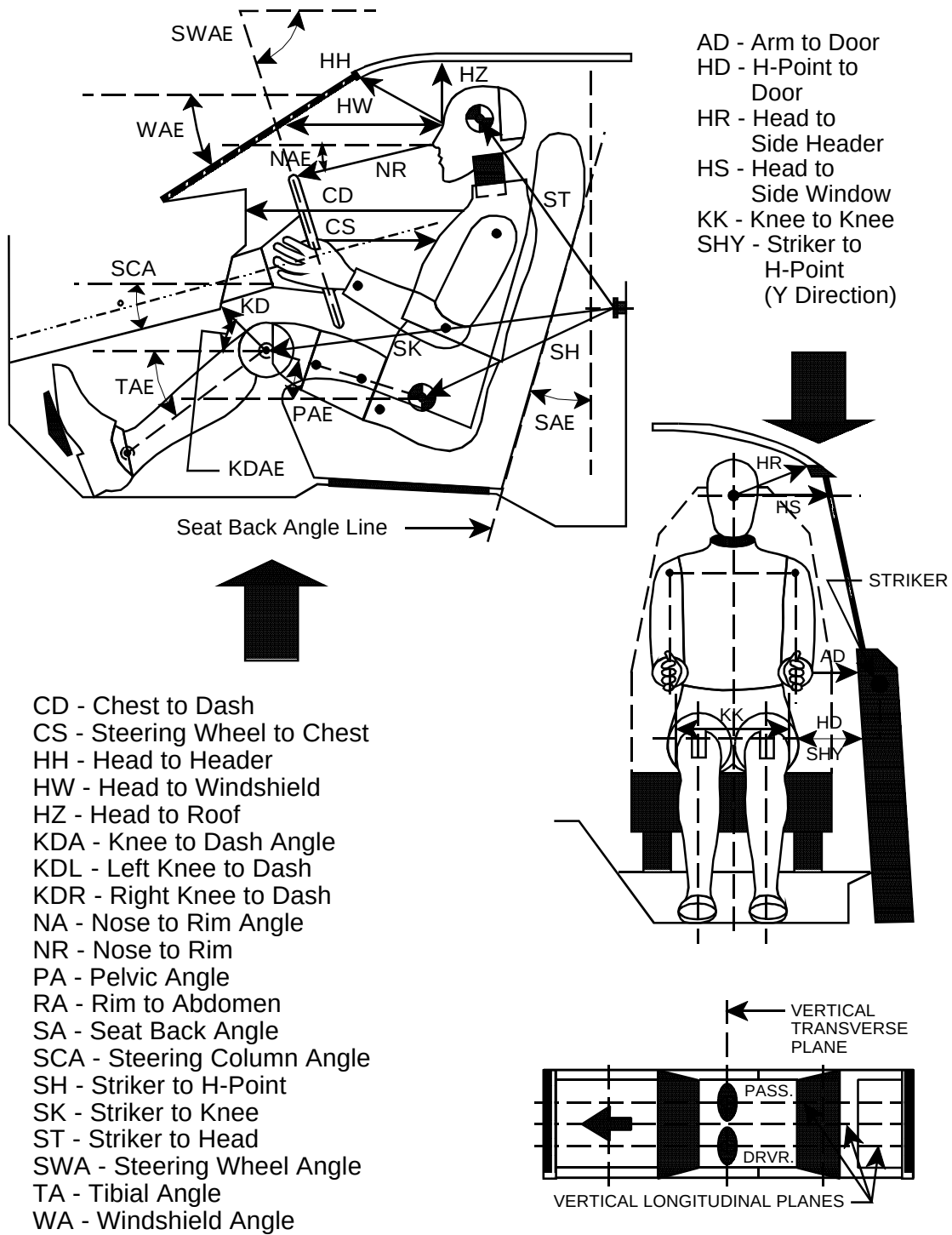
	DRIVER (Serial #087)	PASSENGER (Serial #100)
WA°	30.6°	
SWA°	64.2°	N/A
SCA°	25.2°	N/A
SA°**	10.4°	9.6°
HZ	195	221
HH	318	314
HW	564	561
HR	254	259
NR	405 Angle 15.8°	N/A
CD	536	503
CS	323	N/A
RA	178	N/A
KDL	204 Angle 2.2°	115
KDR	174	125 Angle 15.7°
PAE	23.1°	23.9°
TAE	41.5°	42.5°
KK	330	282
ST*	517 Angle 5.6°	539 Angle 10.2°
SK*	593 Angle 3.2°	629 Angle 91.9 °
SH*	225 Angle 32.2°	243 Angle 119.4°
SHY	238	239
HS	316	309
HD	126	130
AD	87	105

N/A = Not Applicable

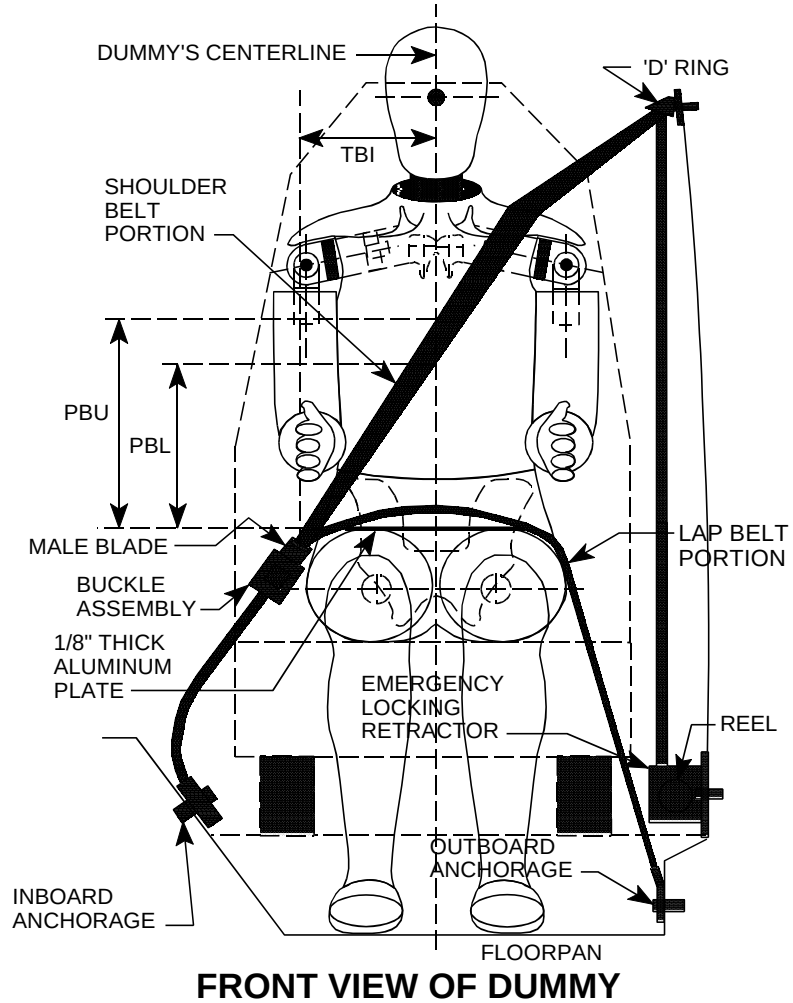
* angle measured with respect to vertical

** measured on headrest posts

FRONT SEAT MEASUREMENTS



DATA SHEET 11
SEAT BELT POSITIONING DATA



(illustration)

Dimension = mm		
	DRIVER DUMMY	PASSENGER DUMMY
PBU – Top surface of alum. plate to upper edge	320	335
PBL -- Top surface of alum. plate to belt lower edge	243	261

DATA SHEET 12
SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

<u>BELT LENGTH DATA:</u>	<u>Driver</u>	<u>Passenger</u>
Length from trim above retractor reel to "D" ring as measured on dummy.	<u>173 mm</u>	<u>173 mm</u>
Shoulder belt length as measured on Part 572 Dummy.	<u>874 mm</u>	<u>887 mm</u>
Lap belt length as measured on Part 572 Dummy.	<u>809 mm</u>	<u>835 mm</u>
<u>SHOULDER BELT SPOOL-OFF DATA:</u>		
As determined by film analysis	<u>114 mm</u>	<u>197 mm</u>
As determined mechanically at Retractor	<u>N/A mm</u>	<u>N/A mm</u>
As determined mechanically at D-Ring	<u>N/A mm</u>	<u>N/A mm</u>
<u>BELT STRETCH DATA:</u>		
Measured electronically between shoulder belt load cell and the "D" ring.	<u>Not Recorded</u>	<u>Not Recorded</u>
Measured mechanically	<u>Not Recorded</u>	<u>Not Recorded</u>
<u>RETRACTOR LOCK-UP TIME:</u>		
As determined by shoulder belt spool-off observed in on-board cameras	<u>82 msec.</u>	<u>85 msec.</u>

DATA SHEET 13
CAMERA LOCATIONS

Test Date: October 26, 2000

Vehicle Year/Make/Model/Body Style: 2001/Honda/Civic/4 door

CAMERA POSITION NO.	VIEW	CAMERA POSITIONS (mm.)*			LENS (mm)	SPEED (fps)
		X	Y	Z		
1	Real-Time Left Side View	-	-	-	18	32
2	Left Front View	1000	-8000	1410	25	1005
3	Steering Column Top	2000	-2000	1560	25	769
4	Steering Column Bottom	2000	-7000	1040	13	1000
5	Driver Close-up	1450	-10000	1540	75	901
6	Driver Angle	4700	-5210	2020	50	**
7	Onboard Driver	--	--	--	13	1005
8	Onboard Passenger	--	--	--	13	1015
9	Right Overall	2100	7130	1390	13	935
10	Right Passenger Half	1070	8100	1390	25	1015
11	Right Close-up	1580	9900	1250	75	1053
12	Right Angle	4900	5530	2020	50	939
13	Windshield	-450	0	2710	13	1015
14	Top Driver	70	-440	1780	13	1010
15	Top Passenger	80	400	1770	13	1005
16	Pit Front	1100	0	-3120	13	1005
17	Pit Rear	2700	0	-3120	13	1005

* COORDINATES:

+X = film plane rearward of barrier

+Y = film plane to right of monorail centerline

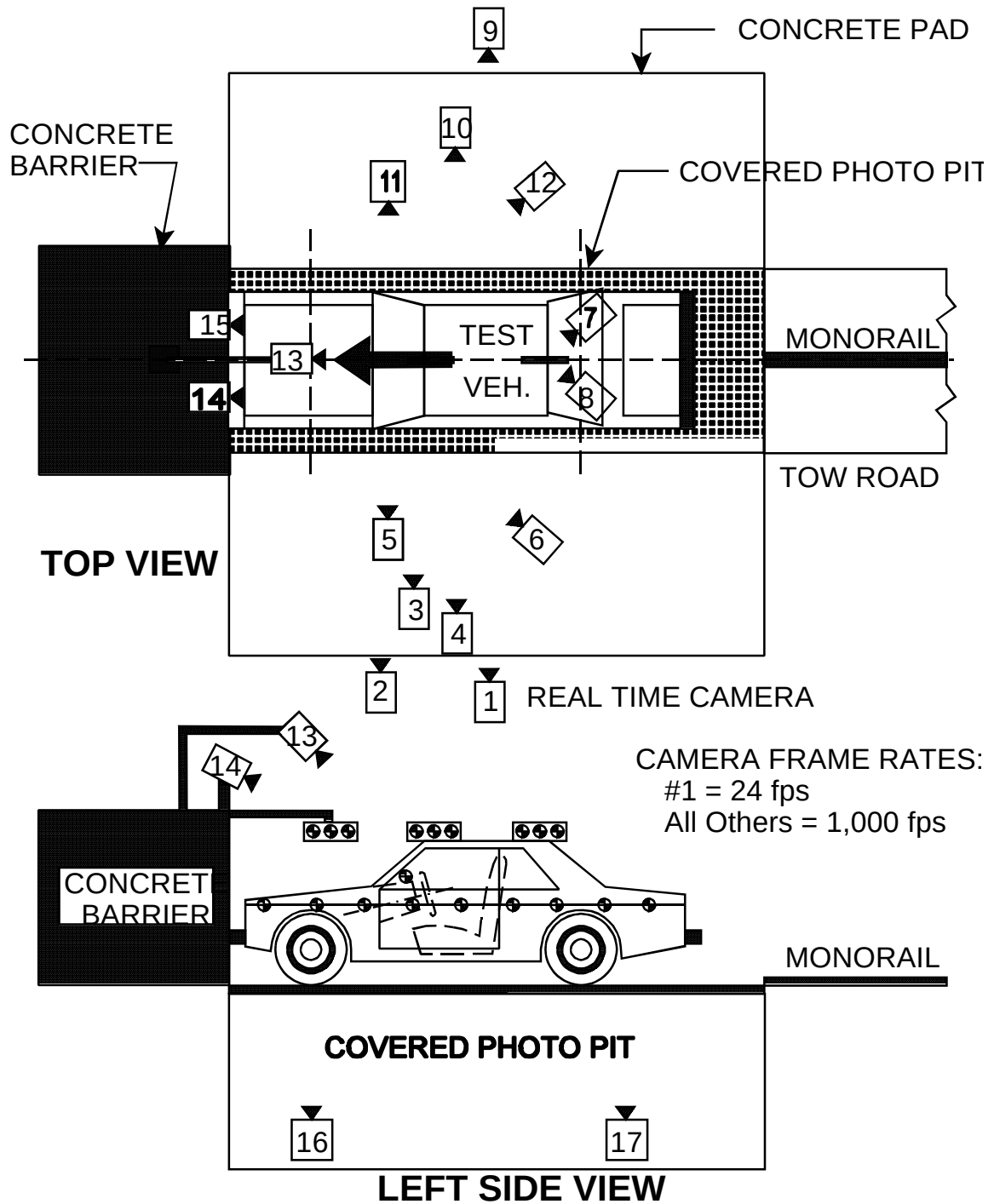
+Z = film plane to above ground level

ORIGIN: For X and Y it is the Impact Point. For Z it is the Floor.

** No timing marks

CAMERA LOCATIONS (Cont'd)

CAMERA POSITIONS FOR FRONTAL IMPACTS

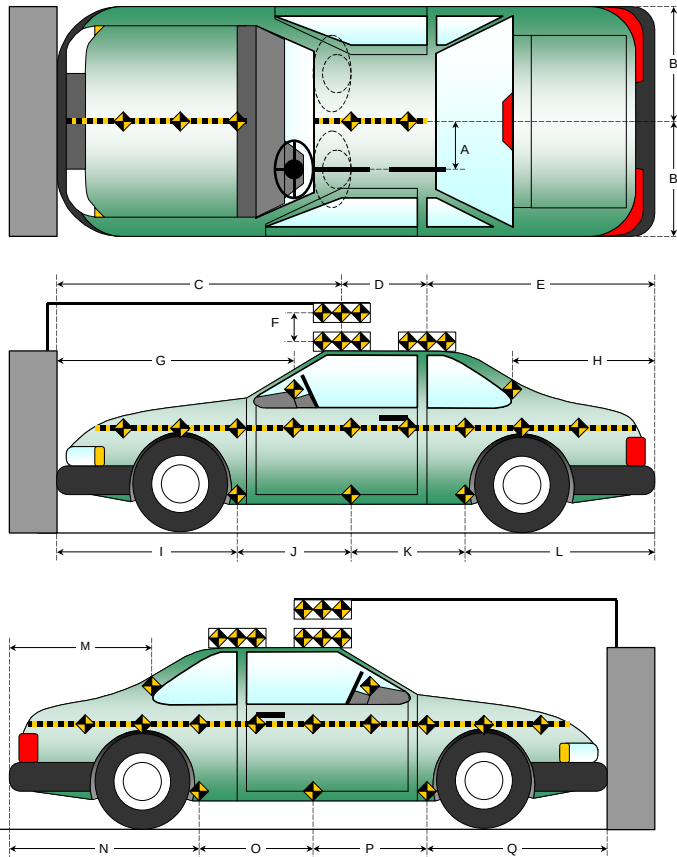


DATA SHEET 14 VEHICLE TARGET LOCATIONS

Test Date: October 26, 2000

VehicleYear/Make/Model/Body Style: 2001/Honda/Civic/4 door

All Dimensions
in mm

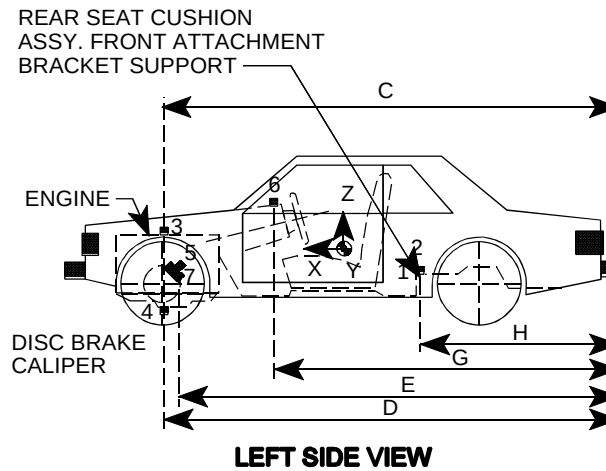
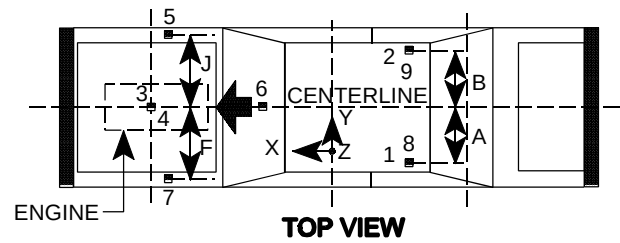


Item	Value
A	334
B	865
C	2215
D	610
E	1585
F	286
G	1595
H	1130
I	1308
J*	764
K**	783
L	1555
M	1133
N	1476
O	759
P*	758
Q**	1417

* 1st - 5th target

** 5th - 7th target

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



Units: (mm)

Dimension	Length	ACCEL. NO.	ACCELEROMETER	DIRECTION
A	300	1 and 8	Left Rear Seat Crossmember	X
B	300	2 and 9	Right Rear Seat Crossmember	X
C	3829	3	Top of Engine	X
D	3839	4	Bottom of Engine	X
E	3539	5	Right Side Brake Caliper	X
F	635	6	Instrument Panel	X
G	2913	7	Left Side Brake Caliper	X
H	1695			
J	635			

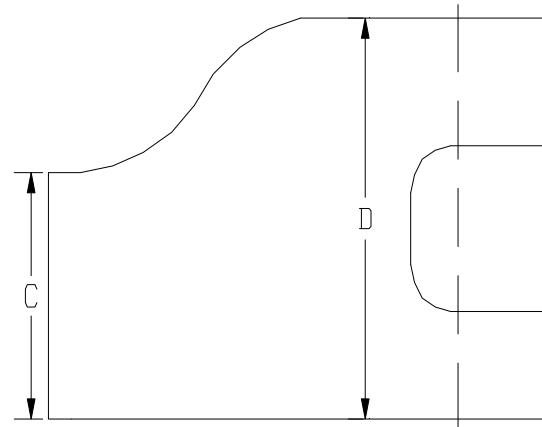
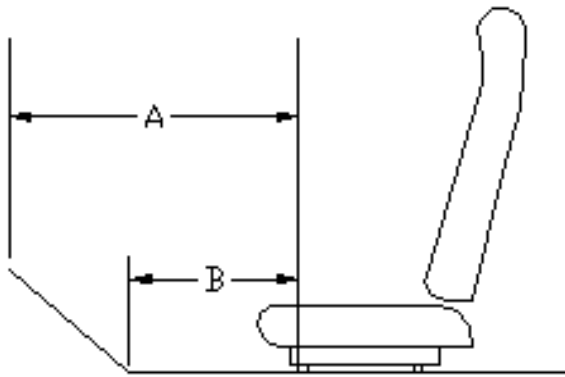
DATA SHEET 16
POST TEST AIRBAG DATA

- A. Number of Vent Holes: Driver 2; Passenger 2
- B. Size of Vent Holes: Driver 38 mm dia; Passenger 64 mm dia;
- C. Total Vent Area; Driver 23 cm² Passenger 64 cm²
- D. Deflated Airbag Length and Width Dimensions or, if Round, Diameter
Driver; Length____mm, Width____mm, Diameter 610 mm
Passenger; Length 711 mm, Width 559 mm, Diameter ____ mm
- E. Is the Airbag Tethered?
Driver; ____ Yes; X No; If yes, record length of tether____mm
Passenger; ____ Yes; X No, If yes, record length of tether____mm

DATA SHEET 17
TEST VEHICLE MEASUREMENTS

STATIC FOOTWELL DEFORMATION

Driver's Side



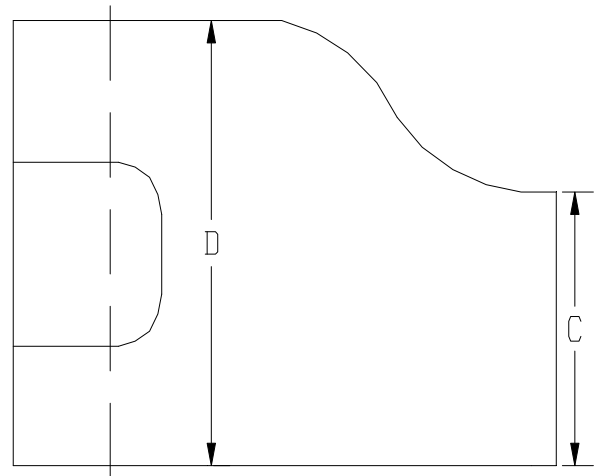
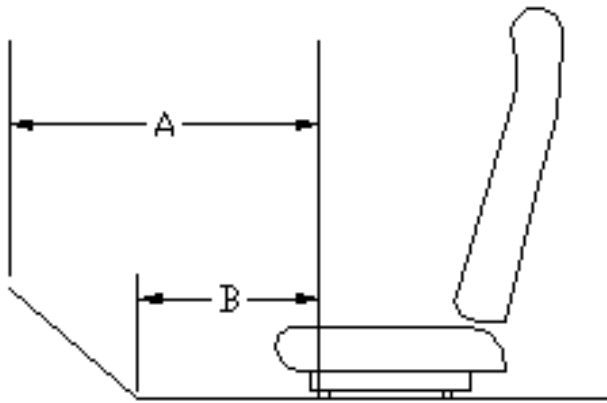
Units = mm

MEASUREMENT	PRE TEST	POST TEST	DIFFERENCE
A	737	677	60
B	578	539	39
C	324	313	11
D	336	330	6

DATA SHEET 17
TEST VEHICLE MEASUREMENTS (Cont'd)

STATIC FOOTWELL DEFORMATION

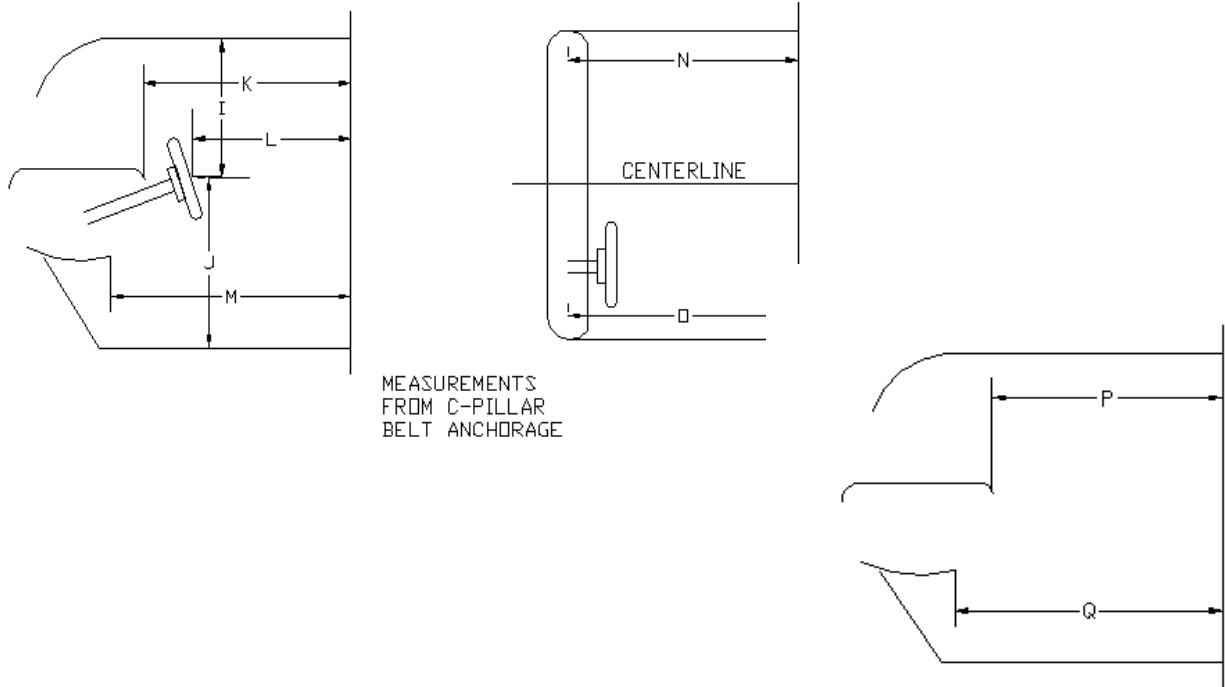
Passenger's Side



Units = mm

MEASUREMENT	PRE TEST	POST TEST	DIFFERENCE
A	759	664	95
B	560	502	58
C	243	251	8
D	433	415	18

DATA SHEET 17
TEST VEHICLE MEASUREMENTS (Cont'd)
STATIC PASSENGER COMPARTMENT INTRUSION



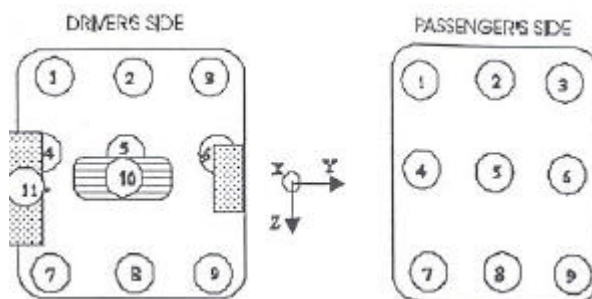
Units = mm

MEASUREMENT	PRE TEST	POST TEST	DIFFERENCE
I	426	398	28
J	661	728	67
K	1776	1718	58
L	1563	1584	21
M	1949	1976	27
N	2097	2079	18
O	2089	2084	5
P	1815	1796	19
Q	1980	1925	55

DATA SHEET 17

TEST VEHICLE MEASUREMENTS (Cont'd)

TOE PAN MEASUREMENTS

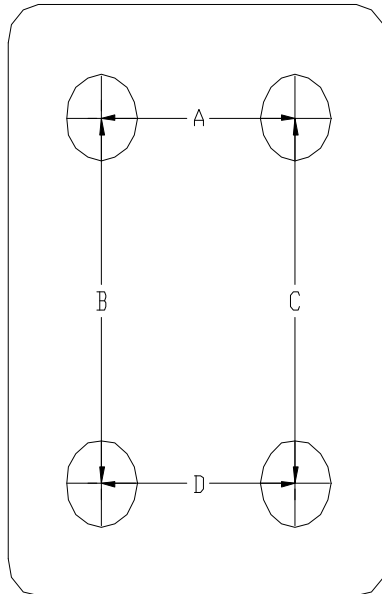


Driver						
Location	X			Z		
	Pre-Test	Post-Test	Def.	Pre-Test	Post-Test	Def.
1	748	688	60	41	19	-22
2	737	677	60	34	14	-20
3	739	653	86	33	24	-9
4	676	631	45	-4	43	47
5	674	620	54	-8	-41	-33
6	672	615	57	-16	-56	-40
7	585	557	28	-34	-86	-52
8	578	539	39	-35	-85	-30
9	575	546	29	-42	-107	-65
10	596	543	53	156	150	-6
11	626	587	39	78	49	-29
Passenger						
Location	X			Z		
	Pre-Test	Post-Test	Def.	Pre-Test	Post-Test	Def.
1	751	650	101	19	41	22
2	759	668	91	23	40	17
3	772	698	74	23	56	23
4	668	578	90	-44	-49	-5
5	688	611	77	-30	-17	13
6	708	648	60	-41	-5	36
7	556	478	78	-70	-87	-17
8	560	495	65	-70	-74	-4
9	564	519	45	-72	-80	-8

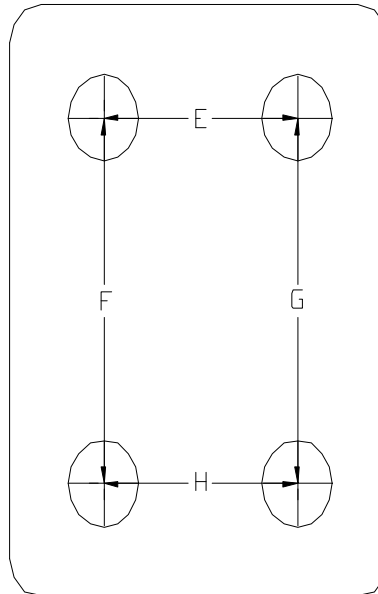
DATA SHEET 17
TEST VEHICLE MEASUREMENTS (Cont'd)

UNDERBODY FLOORBOARD DEFORMATION

DRIVER'S SIDE



PASSENGER'S SIDE

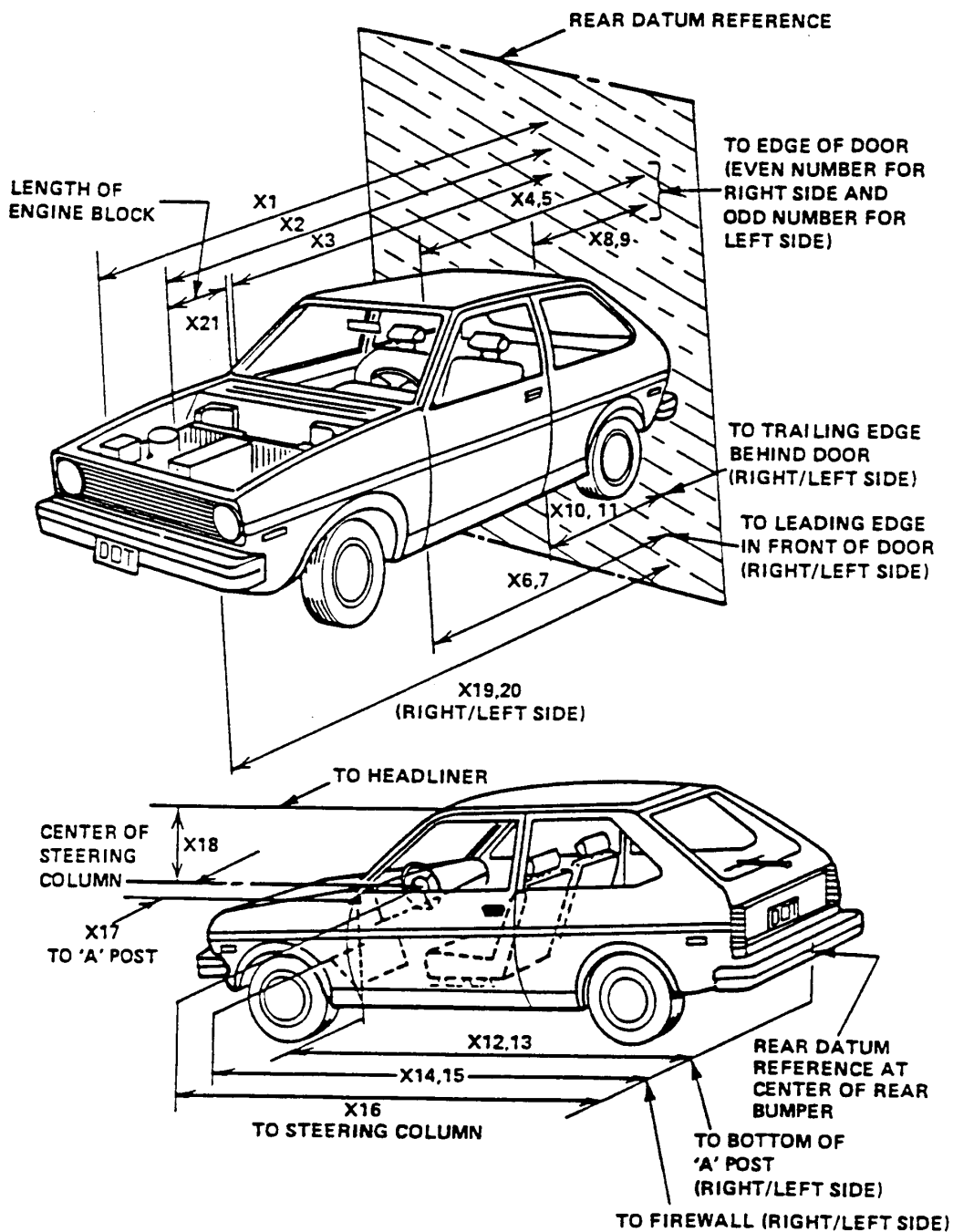


MEASUREMENT	PRE TEST	POST TEST	DIFFERENCE
A	280	291	11
B	296	299	3
C	296	290	6
D	285	308	23
E	281	275	6
F	288	240	48
G	288	271	17
H	284	285	1

DATA SHEET 17
TEST VEHICLE MEASUREMENTS (Cont'd)

No.	MEASUREMENT DESCRIPTION:	Pre-Test (mm)	Post-Test (mm)	Diff. (mm)
X1	Total Length of Test Vehicle at Centerline	4410	4015	395
X2	Rear Surface of Vehicle to Front of Engine	3812	3716	96
X3	Rear Surface of Vehicle to Firewall	3377	3376	1
X4	Rear Surface to Upr. Leading Edge of Rt. Door	3130	3125	5
X5	Rear Surface to Upr. Leading Edge of Left Door	3128	3119	9
X6	Rear Surface to Lwr. Leading Edge of Rt. Door	3088	3081	7
X7	Rear Surface to Lwr. Leading Edge of Left Door	3101	3088	13
X8	Rear Surface to Upr. Trailing Edge of Rt. Door	2022	2013	9
X9	Rear Surface to Upr. Trailing Edge of Left Door	2027	2020	7
X10	Rear Surface to Lwr. Trailing Edge of Rt. Door	2034	2027	7
X11	Rear Surface to Lwr. Trailing Edge of Left Door	2040	2029	11
X12	Rear Surface to Bottom of A-Post on Rt. Side	3060	3048	12
X13	Rear Surface to Bottom of A-Post on Left Side	3054	3037	17
X14	Rear Surface to Firewall on Right Side	3489	3441	48
X15	Rear Surface to Firewall on Left Side	3462	3434	28
X16	Rear Surface to Steering Column	2635	2647	-12
X17	Center of Steering Column to A-Post	356	328	28
X18	Center of Steering Column to Headlining	427	398	29
X19	Rear Surface to Right Side of Front Bumper	4176	3857	319
X20	Rear Surface to Left Side of Front Bumper	4188	3920	268
X21	Length of Engine Block	468	468	0

DATA SHEET 17
TEST VEHICLE MEASUREMENTS (Cont'd)



DATA SHEET 18
ACCIDENT INVESTIGATION DIVISION DATA
FOR 35 MPH FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: 2001/Honda/Civic/4 door

VIN: 1HGES16521L010443

Model Year: 2001; Build Date: 9/00; Test Date: October 26, 2000

Veh. Size Category: Small; TEST WEIGHT: 1340.9 kg

Veh. Wheelbase: 2615 mm; Front Overhang: 790 mm; Overall Width: 1618 mm

ACCELEROMETER DATA:

Location: As per measurements on pages 2-25

Calibration Procedure: As per MGA Calibration Procedure

Linearity: >99.9%; Integration Algorithm: Trapezoidal

Veh: Impact Speed: 56.8 kph; Time Of Separation: 163 msec

Velocity Change: 64.1 kph

Collision Deformation Classification (CDC) Code: F (Frontal)

Crush Depth C1 = 268 mm

Dimensions*: C2 = 376 mm

C3 = 366 mm

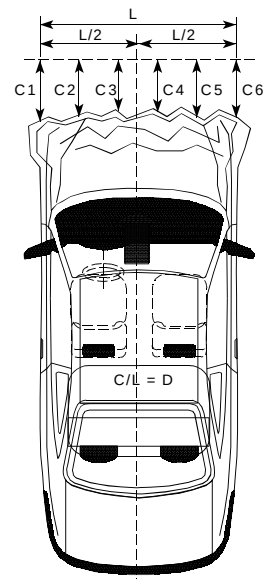
C4 = 422 mm

C5 = 474 mm

C6 = 319 mm

Midpoint Of Damage: D = Vehicle Centerline (Longitudinal)

Length Of Damaged Region: L = 1638 mm



APPENDIX A
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

<u>Description</u>	<u>Page No.</u>
Photo No. A-1 - Pre-Test Front View of Test Vehicle	A-1
Photo No. A-2 - Post-Test Front View of Test Vehicle	A-2
Photo No. A-3 - Pre-Test Rear View of Test Vehicle	A-3
Photo No. A-4 - Post-Test Rear View of Test Vehicle	A-4
Photo No. A-5 - Pre-Test Left Side View of Test Vehicle	A-5
Photo No. A-6 - Post-Test Left Side View of Test Vehicle	A-6
Photo No. A-7 - Pre-Test Left Rear Three-Quarter View of Test Vehicle	A-7
Photo No. A-8 - Post-Test Left Rear Three-Quarter View of Test Vehicle	A-8
Photo No. A-9 - Pre-Test Right Side View of Test Vehicle	A-9
Photo No. A-10 - Post-Test Right Side View of Test Vehicle	A-10
Photo No. A-11 - Pre-Test Right Front Three-Quarter View of Test Vehicle	A-11
Photo No. A-12 - Post-Test Right Front Three-Quarter View of Test Vehicle	A-12
Photo No. A-13 - Pre-Test Fuel Filler Cap View	A-13
Photo No. A-14 - Pre-Test Engine Compartment View	A-14
Photo No. A-15 - Post-Test Engine Compartment View	A-15
Photo No. A-16 - Pre-Test Front Underbody View	A-16
Photo No. A-17 - Post-Test Front Underbody View	A-17
Photo No. A-18 - Pre-Test Rear Underbody View	A-18
Photo No. A-19 - Post-Test Rear Underbody View	A-19
Photo No. A-20 - Pre-Test Windshield View	A-20
Photo No. A-21 - Post-Test Windshield View	A-21
Photo No. A-22 - Pre-Test Driver Dummy Position Left Side View	A-22
Photo No. A-23 - Post-Test Driver Dummy Position Left Side View	A-23
Photo No. A-24 - Pre-Test Driver Dummy Position Left Side View (Door Open)	A-24
Photo No. A-25 - Post-Test Driver Dummy Position Left Side View (Door Open)	A-25
Photo No. A-26 - Pre-Test Driver Seat Position View	A-26
Photo No. A-27 - Post-Test Driver Seat Position View	A-27
Photo No. A-28 - Pre-Test Driver Dummy Knee Position	A-28
Photo No. A-29 - Post-Test Driver Dummy Knee Position	A-29

TABLE OF PHOTOGRAPHS (Cont'd)

<u>Description</u>	<u>Page No.</u>
Photo No. A-30 - Post-Test Driver Airbag Contact	A-30
Photo No. A-31 - Post-Test Driver Knee Contact View	A-31
Photo No. A-32 - Post-Test Driver Knee Contact View	A-32
Photo No. A-33 - Pre-Test Driver Windshield View	A-33
Photo No. A-34 - Post-Test Driver Windshield View	A-34
Photo No. A-35 - Pre-Test Passenger Dummy Position Right Side View	A-35
Photo No. A-36 - Post-Test Passenger Dummy Position Right Side View	A-36
Photo No. A-37 - Pre-Test Pass. Dummy Position Right Side View (Door Open)	A-37
Photo No. A-38 - Post-Test Pass. Dummy Position Right Side View (Door Open)	A-38
Photo No. A-39 - Pre-Test Passenger Seat Position View	A-39
Photo No. A-40 - Post-Test Passenger Seat Position View	A-40
Photo No. A-41 - Pre-Test Passenger Dummy Knee Position	A-41
Photo No. A-42 - Post-Test Passenger Dummy Knee Position	A-42
Photo No. A-43 - Post-Test Passenger Airbag Contact	A-43
Photo No. A-44 - Post-Test Passenger Knee Contact View	A-44
Photo No. A-45 - Pre-Test Passenger Windshield View	A-45
Photo No. A-46 - Post-Test Passenger Windshield View	A-46
Photo No. A-47 - Vehicle Certification Label	A-47
Photo No. A-48 - Tire Placard	A-48
Photo No. A-49 - Vehicle Impact	A-49
Photo No. A-50 - Rollover 90E	A-50
Photo No. A-51 - Rollover 180E	A-51
Photo No. A-52 - Rollover 270E	A-52
Photo No. A-53 - Rollover 360E	A-53

A-1



Photo No. A-1 - Pre-Test Front View of Test Vehicle

A-2



Photo No. A-2 - Post-Test Front View of Test Vehicle



Photo No. A-3 - Pre-Test Rear View of Test Vehicle

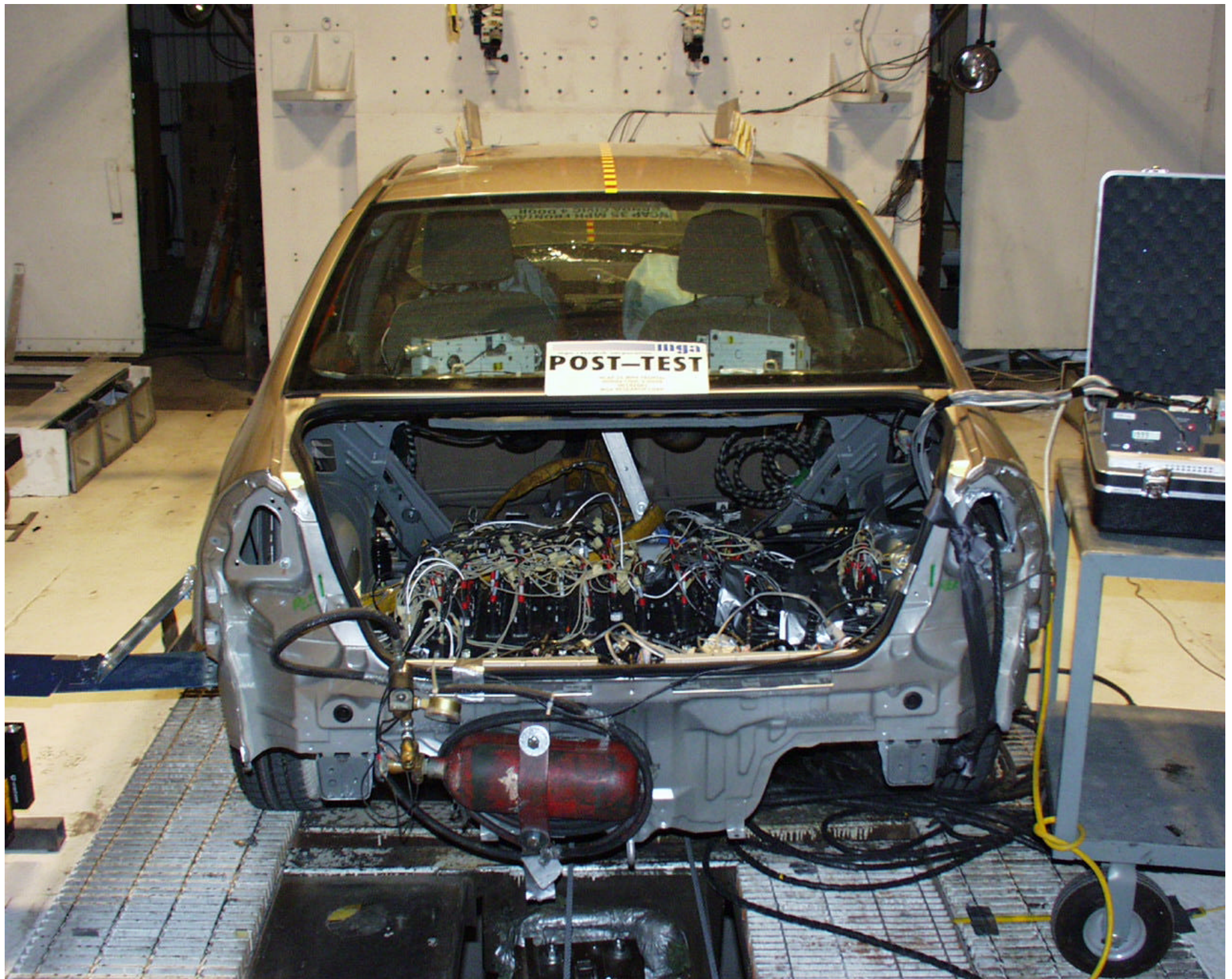


Photo No. A-4 - Post-Test Rear View of Test Vehicle



Photo No. A-5 - Pre-Test Left Side View of Test Vehicle



Photo No. A-6 - Post-Test Left Side View of Test Vehicle



Photo No. A-7 - Pre-Test Left Rear Three-Quarter View of Test Vehicle



Photo No. A-8 - Post-Test Left Rear Three-Quarter View of Test Vehicle



Photo No. A-9 - Pre-Test Right Side View of Test Vehicle

A-10



Photo No. A-10 - Post-Test Right Side View of Test Vehicle



Photo No. A-11 - Pre-Test Right Front Three-Quarter View of Test Vehicle

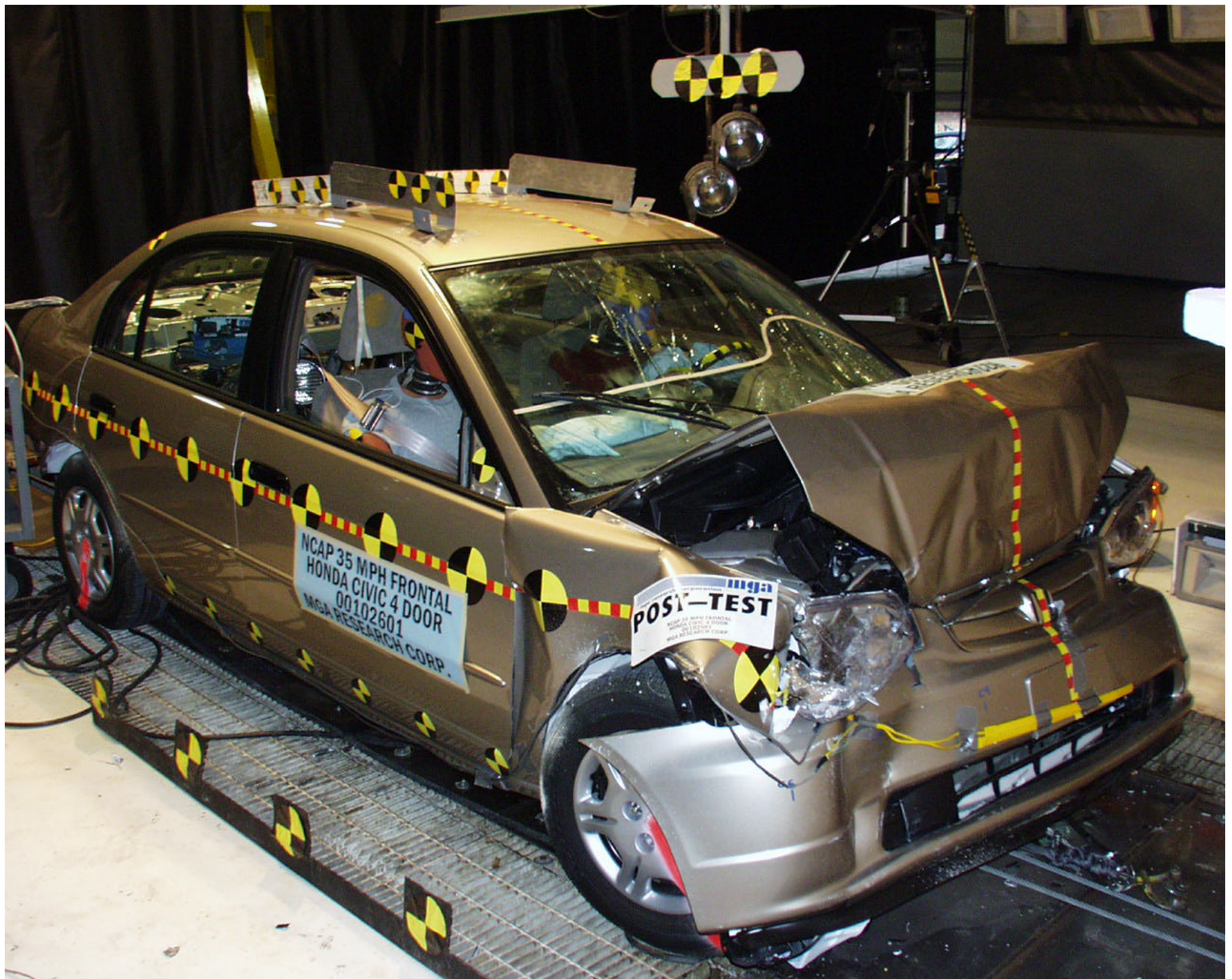


Photo No. A-12 - Post-Test Right Front Three-Quarter View of Test Vehicle

A-13



Photo No. A-13 - Pre-Test Fuel Filler Cap View

A-14



Photo No. A-14 - Pre-Test Engine Compartment View

A-15



Photo No. A-15 - Post-Test Engine Compartment View

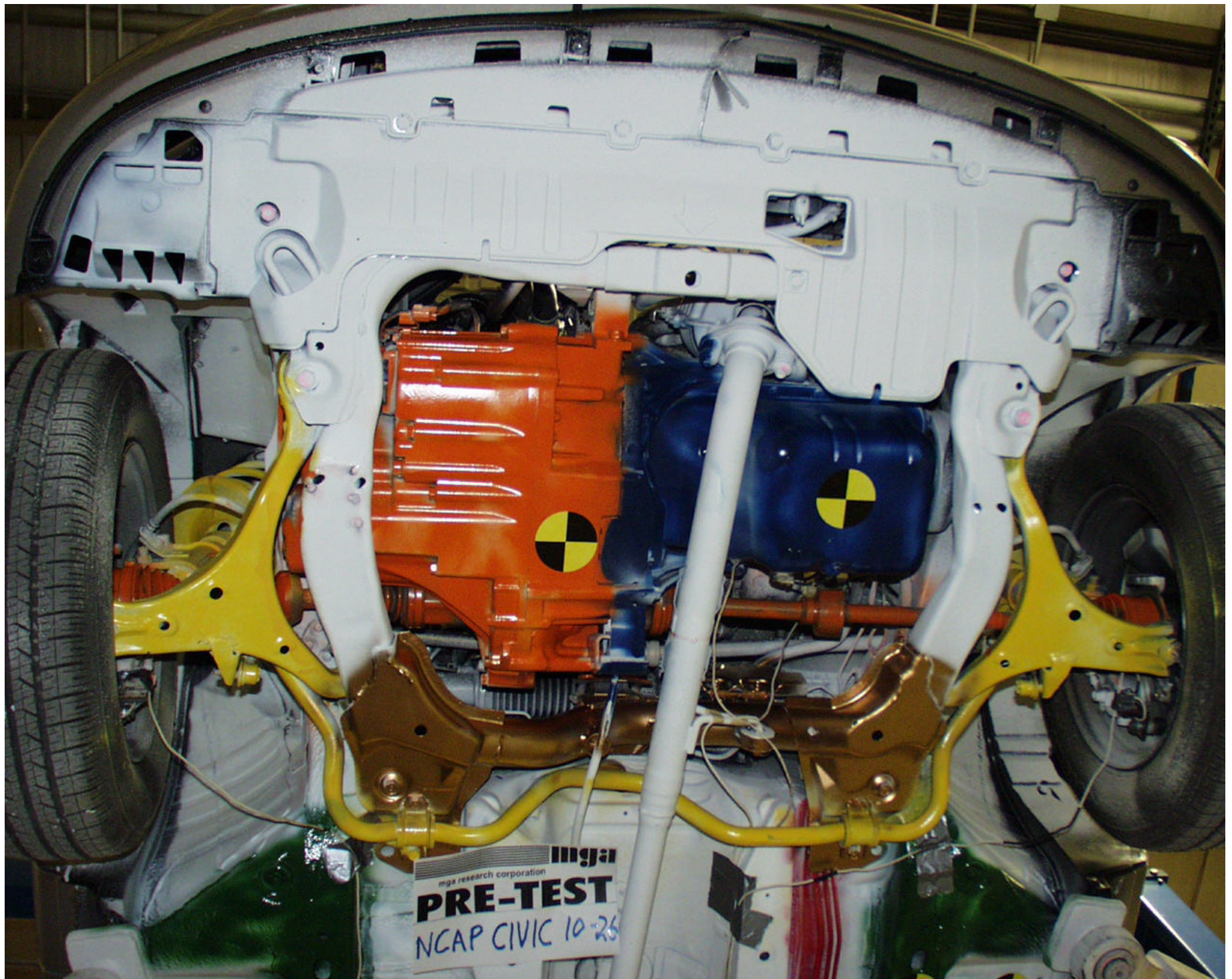


Photo No. A-16 - Pre-Test Front Underbody View

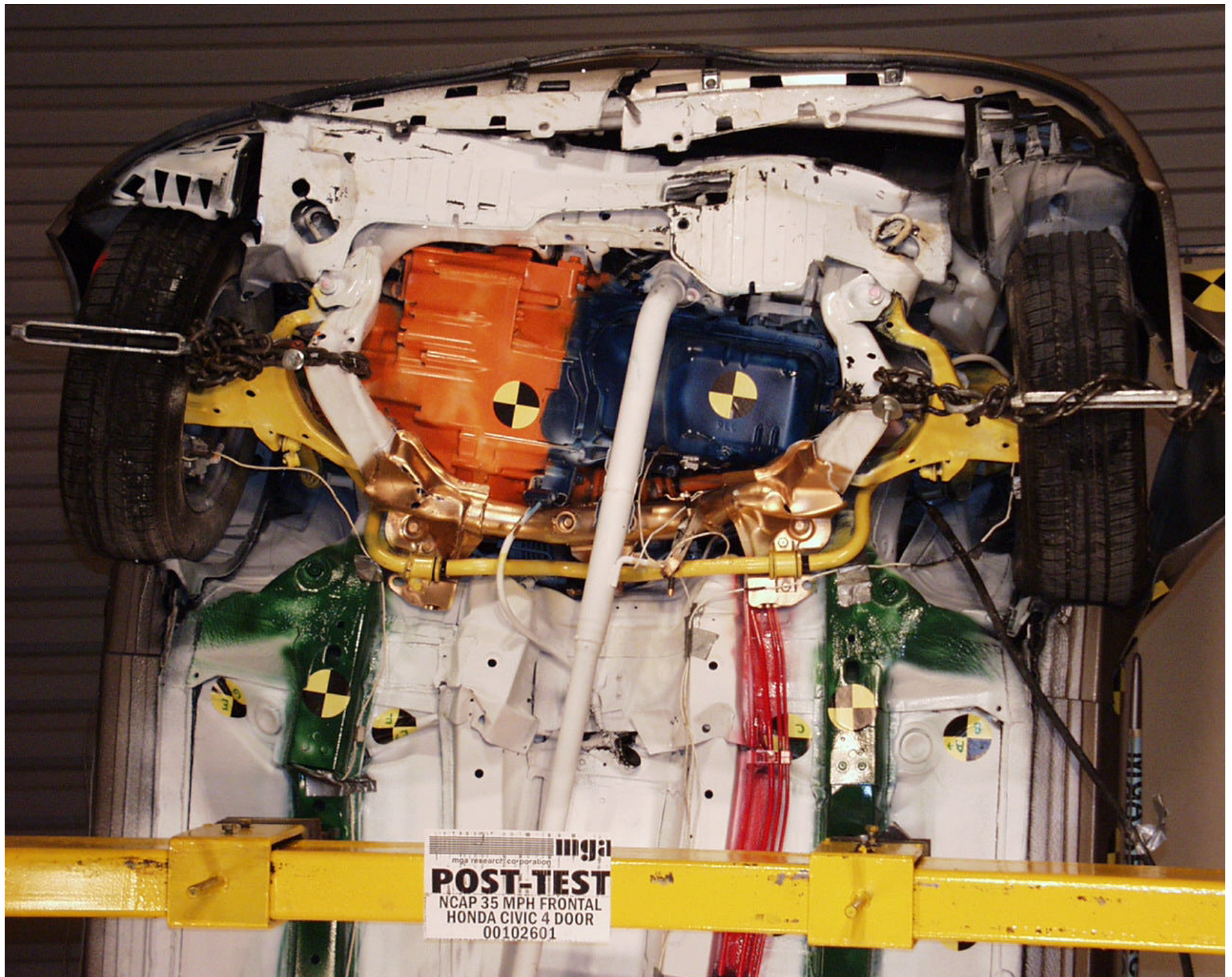


Photo No. A-17 - Post-Test Front Underbody View



Photo No. A-18 - Pre-Test Rear Underbody View

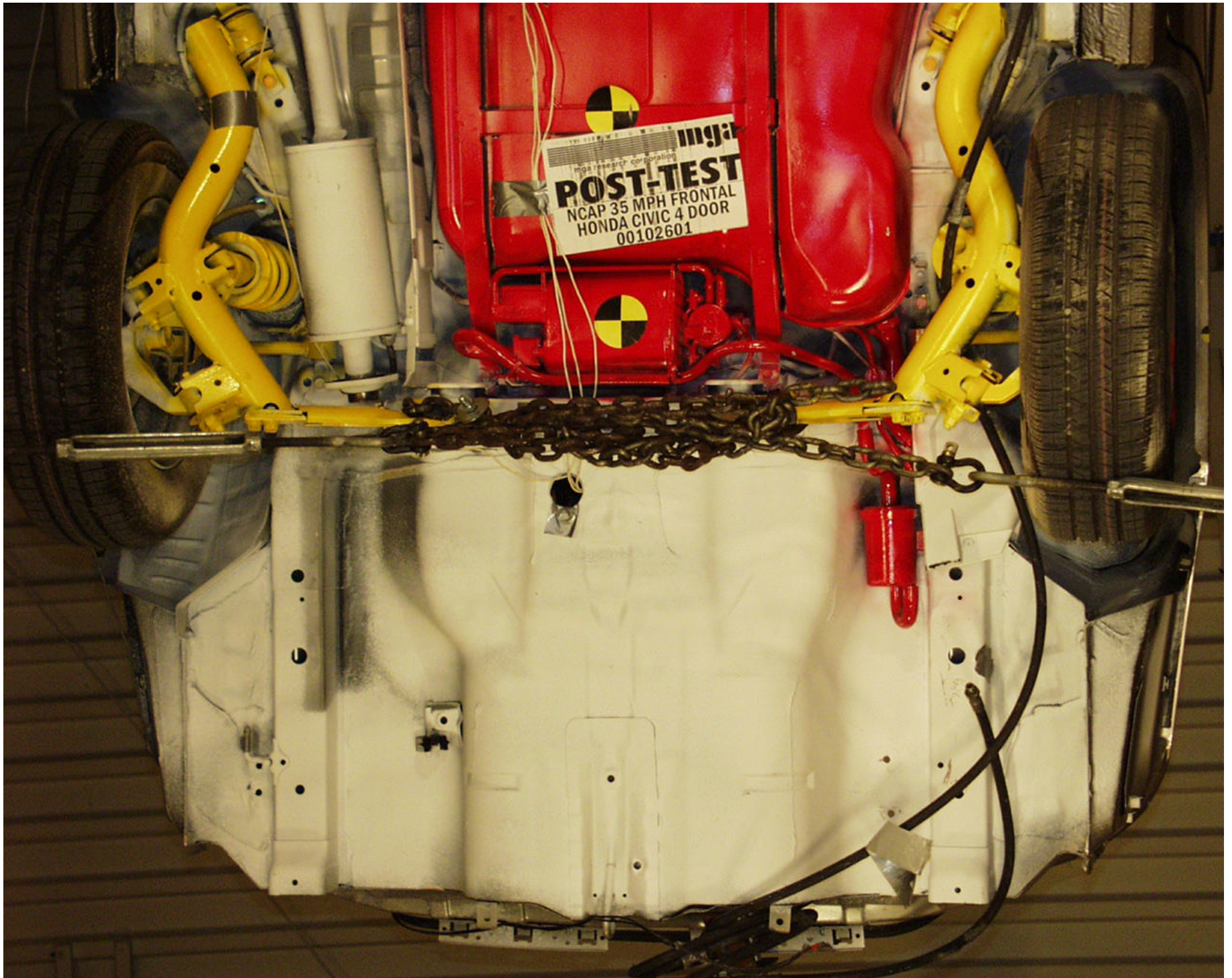


Photo No. A-19 - Post-Test Rear Underbody View

A-20



Photo No. A-20 - Pre-Test Windshield View



Photo No. A-21 - Post-Test Windshield View



Photo No. A-22 - Pre-Test Driver Dummy Position Left Side View



Photo No. A-23 - Post-Test Driver Dummy Position Left Side View



Photo No. A-24 - Pre-Test Driver Dummy Position Left Side View (Door Open)



Photo No. A-25 - Post-Test Driver Dummy Position Left Side View (Door Open)



Photo No. A-26 - Pre-Test Driver Seat Position View

A-27



Photo No. A-27 - Post-Test Driver Seat Position View



Photo No. A-28 - Pre-Test Driver Dummy Knee Position



Photo No. A-29 - Post-Test Driver Dummy Knee Position

A-30



Photo No. A-30 - Post-Test Driver Airbag Contact



Photo No. A-31 - Post-Test Driver Knee Contact View

A-32



Photo No. A-32 - Post-Test Driver Knee Contact View

A-33



Photo No. A-33 - Pre-Test Driver Windshield View

A-34



Photo No. A-34 - Post-Test Driver Windshield View

A-35



Photo No. A-35 - Pre-Test Passenger Dummy Position Right Side View

A-36



Photo No. A-36 - Post-Test Passenger Dummy Position Right Side View



Photo No. A-37 - Pre-Test Pass. Dummy Position Right Side View (Door Open)

Photo No. A-38 - Post-Test Pass. Dummy Position Right Side View (Door Open)

A-39



Photo No. A-39 - Pre-Test Passenger Seat Position View

A-40



Photo No. A-40 - Post-Test Passenger Seat Position View

A-41



Photo No. A-41 - Pre-Test Passenger Dummy Knee Position

A-42



Photo No. A-42 - Post-Test Passenger Dummy Knee Position

A-43



Photo No. A-43 - Post-Test Passenger Airbag Contact

A-44



Photo No. A-44 - Post-Test Passenger Knee Contact View

A-45



Photo No. A-45 - Pre-Test Passenger Windshield View

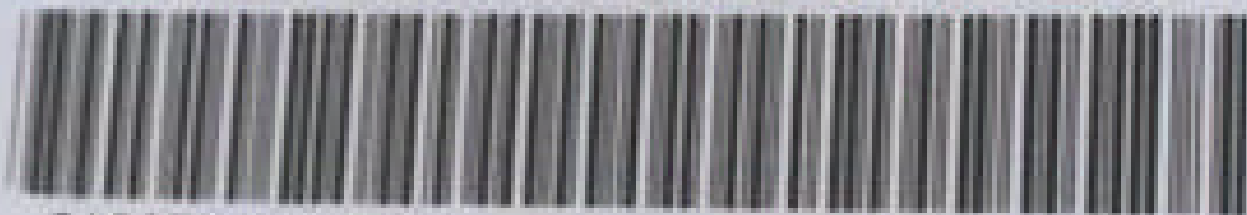
A-46



Photo No. A-46 - Post-Test Passenger Windshield View

MFD. BY HONDA OF AMERICA MFG., INC. 9/00
GVWR 3395LBS GAWR F 1765LBS R 1665LBS
THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY, BUMPER,
AND THEFT PREVENTION STANDARDS IN EFFECT
ON THE DATE OF MANUFACTURE SHOWN ABOVE:

V.I.N. 1HGES16521L010443



PASSENGER CAR

TIRE INFORMATION		VEHICLE CAPACITY WEIGHT		850lbs
SEATING CAPACITY		TOTAL 5 : FRONT 2 : REAR 3		
RECOMMENDED TIRE SIZE	COLD TIRE INFLATION PRESSURE		SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION	
P185/70R14 87S	FRONT	210kPa, 30psi		
	REAR	210kPa, 30psi		
COMPACT SPARE TIRE	UP TO VEHICLE CAPACITY WEIGHT			
T115/70D14 88M	420kPa, 60psi		80	

Photo No. A-48 - Tire Placard



Photo No. A-49 - Vehicle Impact

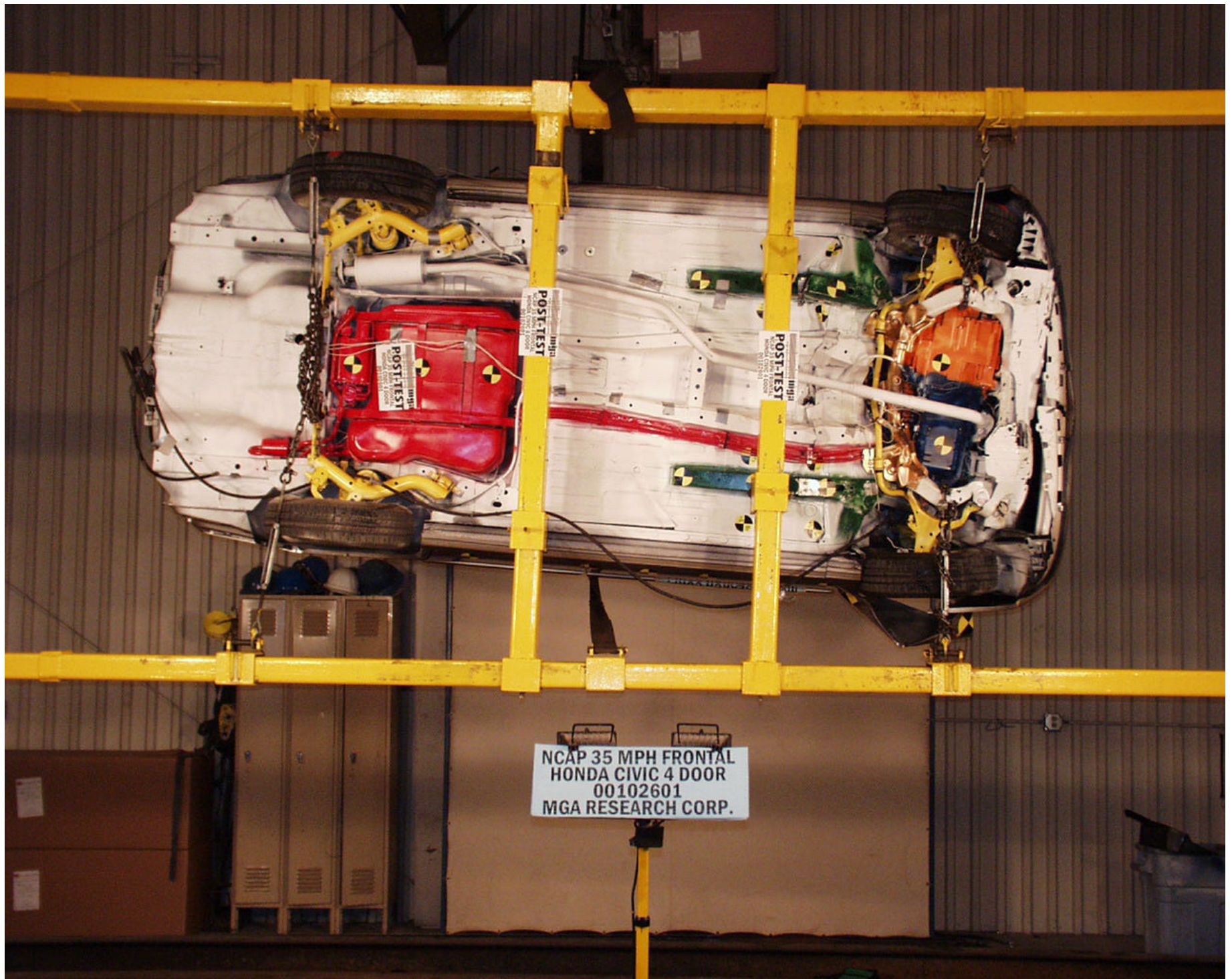


Photo No. A-50 - Rollover 90E



Photo No. A-51 - Rollover 180E



Photo No. A-52 - Rollover 270E



Photo No. A-53 - Rollover 360E

APPENDIX B
VEHICLE, LOAD CELL BARRIER AND DUMMY RESPONSE DATA

VEHICLE DATA FILTER CHANNEL CLASS

Head Accelerations 1000 (1650 Hz)

Chest Accelerations 180 (300 Hz)

Vehicle Accelerations 60 (100 Hz)

Barrier Load Cells 60 (100 Hz)

Femur Load Cells 600 (1000 Hz)

Lap and Torso Belts 60 (100 Hz)

Occupant Data

Page No.

Figure B-1 - Driver Head X Acceleration vs. Time	B-1
Figure B-2 - Driver Head Y Acceleration vs. Time	B-2
Figure B-3 - Driver Head Z Acceleration vs. Time	B-3
Figure B-4 - Driver Head Resultant Acceleration vs. Time	B-4
Figure B-5 - Driver Head X Velocity vs. Time	B-5
Figure B-6 - Driver Head Redundant X Acceleration vs. Time	B-6
Figure B-7 - Driver Head Redundant Y Acceleration vs. Time	B-7
Figure B-8 - Driver Head Redundant Z Acceleration vs. Time	B-8
Figure B-9 - Driver Head Redundant Resultant Acceleration vs. Time	B-9
Figure B-10 - Driver Head Redundant X Velocity vs. Time	B-10
Figure B-11 - Driver Neck Force X vs. Time	B-11
Figure B-12 - Driver Neck Force Y vs. Time	B-12
Figure B-13 - Driver Neck Force Z vs. Time	B-13
Figure B-14 - Driver Neck Force Resultant vs. Time	B-14
Figure B-15 - Driver Neck Moment X vs. Time	B-15
Figure B-16 - Driver Neck Moment Y vs. Time	B-16
Figure B-17 - Driver Neck Moment Z vs. Time	B-17
Figure B-18 - Driver Neck Moment Resultant vs. Time	B-18
Figure B-19 - Driver Chest X Acceleration vs. Time	B-19
Figure B-20 - Driver Chest Y Acceleration vs. Time	B-20
Figure B-21 - Driver Chest Z Acceleration vs. Time	B-21
Figure B-22 - Driver Chest Resultant Acceleration vs. Time	B-22
Figure B-23 - Driver Chest X Velocity vs. Time	B-23
Figure B-24 - Driver Chest Redundant X Acceleration vs. Time	B-24

<u>Occupant Data: (Cont'd)</u>	<u>Page No.</u>
Figure B-25 - Driver Chest Redundant Y Acceleration vs. Time	B-25
Figure B-26 - Driver Chest Redundant Z Acceleration vs. Time	B-26
Figure B-27 - Driver Chest Redundant Resultant Acceleration vs. Time	B-27
Figure B-28 - Driver Chest Redundant X Velocity vs. Time	B-28
Figure B-29 - Driver Chest Compression vs. Time	B-29
Figure B-30 - Driver Pelvis X Acceleration vs. Time	B-30
Figure B-31 - Driver Pelvis Y Acceleration vs. Time	B-31
Figure B-32 - Driver Pelvis Z Acceleration vs. Time	B-32
Figure B-33 - Driver Pelvis Resultant Acceleration vs. Time	B-33
Figure B-34 - Driver Pelvis X Velocity vs. Time	B-34
Figure B-35 - Driver Left Femur Force vs. Time	B-35
Figure B-36 - Driver Right Femur Force vs. Time	B-36
Figure B-37 - Driver Left Upper Tibia Moment X vs. Time	B-37
Figure B-38 - Driver Left Upper Tibia Moment Y vs. Time	B-38
Figure B-39 - Driver Left Upper Tibia Force Z vs. Time	B-39
Figure B-40 - Driver Left Lower Tibia Moment X vs. Time	B-40
Figure B-41 - Driver Left Lower Tibia Moment Y vs. Time	B-41
Figure B-42 - Driver Left Lower Tibia Force Z vs. Time	B-42
Figure B-43 - Driver Right Upper Tibia Moment X vs. Time	B-43
Figure B-44 - Driver Right Upper Tibia Moment Y vs. Time	B-44
Figure B-45 - Driver Right Upper Tibia Force Z vs. Time	B-45
Figure B-46 - Driver Right Lower Tibia Moment X vs. Time	B-46
Figure B-47 - Driver Right Lower Tibia Moment Y vs. Time	B-47
Figure B-48 - Driver Right Lower Tibia Force Z vs. Time	B-48
Figure B-49 - Driver Left Foot Ball Z Acceleration vs. Time	B-49
Figure B-50 - Driver Left Heel X Acceleration vs. Time	B-50
Figure B-51 - Driver Left Heel Z Acceleration vs. Time	B-51
Figure B-52 - Driver Right Foot Ball Z Acceleration vs. Time	B-52
Figure B-53 - Driver Right Heel X Acceleration vs. Time	B-53
Figure B-54 - Driver Right Heel Z Acceleration vs. Time	B-54
Figure B-55 - Driver Shoulder Belt Force vs. Time	B-55
Figure B-56 - Driver Lap Belt Force vs. Time	B-56

<u>Occupant Data: (Cont'd)</u>	<u>Page No.</u>
Figure B-57 - Passenger Head X Acceleration vs. Time	B-57
Figure B-58 - Passenger Head Y Acceleration vs. Time	B-58
Figure B-59 - Passenger Head Z Acceleration vs. Time	B-59
Figure B-60 - Passenger Head Resultant Acceleration vs. Time	B-60
Figure B-61 - Passenger Head X Velocity vs. Time	B-61
Figure B-62 - Passenger Head Redundant X Acceleration vs. Time	B-62
Figure B-63 - Passenger Head Redundant Y Acceleration vs. Time	B-63
Figure B-64 - Passenger Head Redundant Z Acceleration vs. Time	B-64
Figure B-65 - Passenger Head Redundant Resultant Acceleration vs. Time	B-65
Figure B-66 - Passenger Head Redundant X Velocity vs. Time	B-66
Figure B-67 - Passenger Neck Force X vs. Time	B-67
Figure B-68 - Passenger Neck Force Y vs. Time	B-68
Figure B-69 - Passenger Neck Force Z vs. Time	B-69
Figure B-70 - Passenger Neck Force Resultant vs. Time	B-70
Figure B-71 - Passenger Neck Moment X vs. Time	B-71
Figure B-72 - Passenger Neck Moment Y vs. Time	B-72
Figure B-73 - Passenger Neck Moment Z vs. Time	B-73
Figure B-74 - Passenger Neck Moment Resultant vs. Time	B-74
Figure B-75 - Passenger Chest X Acceleration vs. Time	B-75
Figure B-76 - Passenger Chest Y Acceleration vs. Time	B-76
Figure B-77 - Passenger Chest Z Acceleration vs. Time	B-77
Figure B-78 - Passenger Chest Resultant Acceleration vs. Time	B-78
Figure B-79 - Passenger Chest X Velocity vs. Time	B-79
Figure B-80 - Passenger Chest Redundant X Acceleration vs. Time	B-80
Figure B-81 - Passenger Chest Redundant Y Acceleration vs. Time	B-81
Figure B-82 - Passenger Chest Redundant Z Acceleration vs. Time	B-82
Figure B-83 - Passenger Chest Redundant Resultant Acceleration vs. Time	B-83
Figure B-84 - Passenger Chest Redundant X Velocity vs. Time	B-84
Figure B-85 - Passenger Chest Compression vs. Time	B-85
Figure B-86 - Passenger Pelvis X Acceleration vs. Time	B-86
Figure B-87 - Passenger Pelvis Y Acceleration vs. Time	B-87
Figure B-88 - Passenger Pelvis Z Acceleration vs. Time	B-88

Occupant Data: (Cont'd)Page No.

Figure B-89 - Passenger Pelvis Resultant Acceleration vs. Time	B-89
Figure B-90 - Passenger Pelvis X Velocity vs. Time	B-90
Figure B-91 - Passenger Left Femur Force vs. Time	B-91
Figure B-92 - Passenger Right Femur Force vs. Time	B-92
Figure B-93 - Passenger Left Upper Tibia Moment X vs. Time	B-93
Figure B-94 - Passenger Left Upper Tibia Moment Y vs. Time	B-94
Figure B-95 - Passenger Left Upper Tibia Force Z vs. Time	B-95
Figure B-96 - Passenger Left Lower Tibia Moment X vs. Time	B-96
Figure B-97 - Passenger Left Lower Tibia Moment Y vs. Time	B-97
Figure B-98 - Passenger Left Lower Tibia Force Z vs. Time	B-98
Figure B-99 - Passenger Right Upper Tibia Moment X vs. Time	B-99
Figure B-100 - Passenger Right Upper Tibia Moment Y vs. Time	B-100
Figure B-101 - Passenger Right Upper Tibia Force Z vs. Time	B-101
Figure B-102 - Passenger Right Lower Tibia Moment X vs. Time	B-102
Figure B-103 - Passenger Right Lower Tibia Moment Y vs. Time	B-103
Figure B-104 - Passenger Right Lower Tibia Force Z vs. Time	B-104
Figure B-105 - Passenger Left Foot Ball Z Acceleration vs. Time	B-105
Figure B-106 - Passenger Left Heel X Acceleration vs. Time	B-106
Figure B-107 - Passenger Left Heel Z Acceleration vs. Time	B-107
Figure B-108 - Passenger Right Foot Ball Z Acceleration vs. Time	B-108
Figure B-109 - Passenger Right Heel X Acceleration vs. Time	B-109
Figure B-110 - Passenger Right Heel Z Acceleration vs. Time	B-110
Figure B-111 - Passenger Shoulder Belt Force vs. Time	B-111
Figure B-112 - Passenger Lap Belt Force vs. Time	B-112

Vehicle and Barrier Data:

Figure B-113- Left Rear Seat Crossmember X Acceleration vs. Time	B-113
Figure B-114 - Left Rear Seat Crossmember X Velocity vs. Time	B-114
Figure B-115 - Left Rear Seat Crossmember X Displacement vs. Time	B-115
Figure B-116 - Right Rear Seat Crossmember X Acceleration vs. Time	B-116
Figure B-117- Right Rear Seat Crossmember X Velocity vs. Time	B-117
Figure B-118 - Right Rear Seat Crossmember X Displacement vs. Time	B-118

<u>Vehicle and Barrier Data:</u>	<u>Page No.</u>
Figure B-119 - Top of Engine Block X Acceleration vs. Time	B-119
Figure B-120 - Top of Engine Block X Velocity vs. Time	B-120
Figure B-121 - Top of Engine Block X Displacement vs. Time	B-121
Figure B-122 - Bottom of Engine X Acceleration vs. Time	B-122
Figure B-123 - Bottom of Engine X Velocity vs. Time	B-123
Figure B-124 - Bottom of Engine X Displacement vs. Time	B-124
Figure B-125 - Left Front Brake Caliper X Acceleration vs. Time	B-125
Figure B-126 - Left Front Brake Caliper X Velocity vs. Time	B-126
Figure B-127 - Left Front Brake Caliper X Displacement vs. Time	B-127
Figure B-128 - Right Front Brake Caliper X Acceleration vs. Time	B-128
Figure B-129 - Right Front Brake Caliper X Velocity vs. Time	B-129
Figure B-130 - Right Front Brake Caliper X Displacement vs. Time	B-130
Figure B-131 - Instrument Panel X Acceleration vs. Time	B-131
Figure B-132 - Instrument Panel X Velocity vs. Time	B-132
Figure B-133 - Instrument Panel X Displacement vs. Time	B-133
Figure B-134 - Left Rear Seat Crossmember Redundant X Accel. vs. Time	B-134
Figure B-135 - Left Rear Seat Crossmember Redundant X Velocity vs. Time	B-135
Figure B-136 - Left Rear Seat Crossmember Redundant X Displ. vs. Time	B-136
Figure B-137 - Right Rear Seat Crossmember Redundant X Accel. vs. Time	B-137
Figure B-138 - Right Rear Seat Crossmember Redundant X Velocity vs. Time	B-138
Figure B-139 - Right Rear Seat Crossmember Redundant X Displ. vs. Time	B-139
Figure B-140 - Upper Left Barrier Force vs. Time	B-140
Figure B-141 - Upper Center Barrier Force vs. Time	B-141
Figure B-142 - Upper Right Barrier Force vs. Time	B-142
Figure B-143 - Lower Left Barrier Force vs. Time	B-143
Figure B-144 - Lower Center Barrier Force vs. Time	B-144
Figure B-145 - Lower Right Barrier Force vs. Time	B-145
Figure B-146 - Sum of Left Barrier Forces vs. Time	B-146
Figure B-147 - Sum of Center Barrier Forces vs. Time	B-147
Figure B-148 - Sum of Right Barrier Forces vs. Time	B-148
Figure B-149 - Sum of Barrier Forces vs. Time	B-149



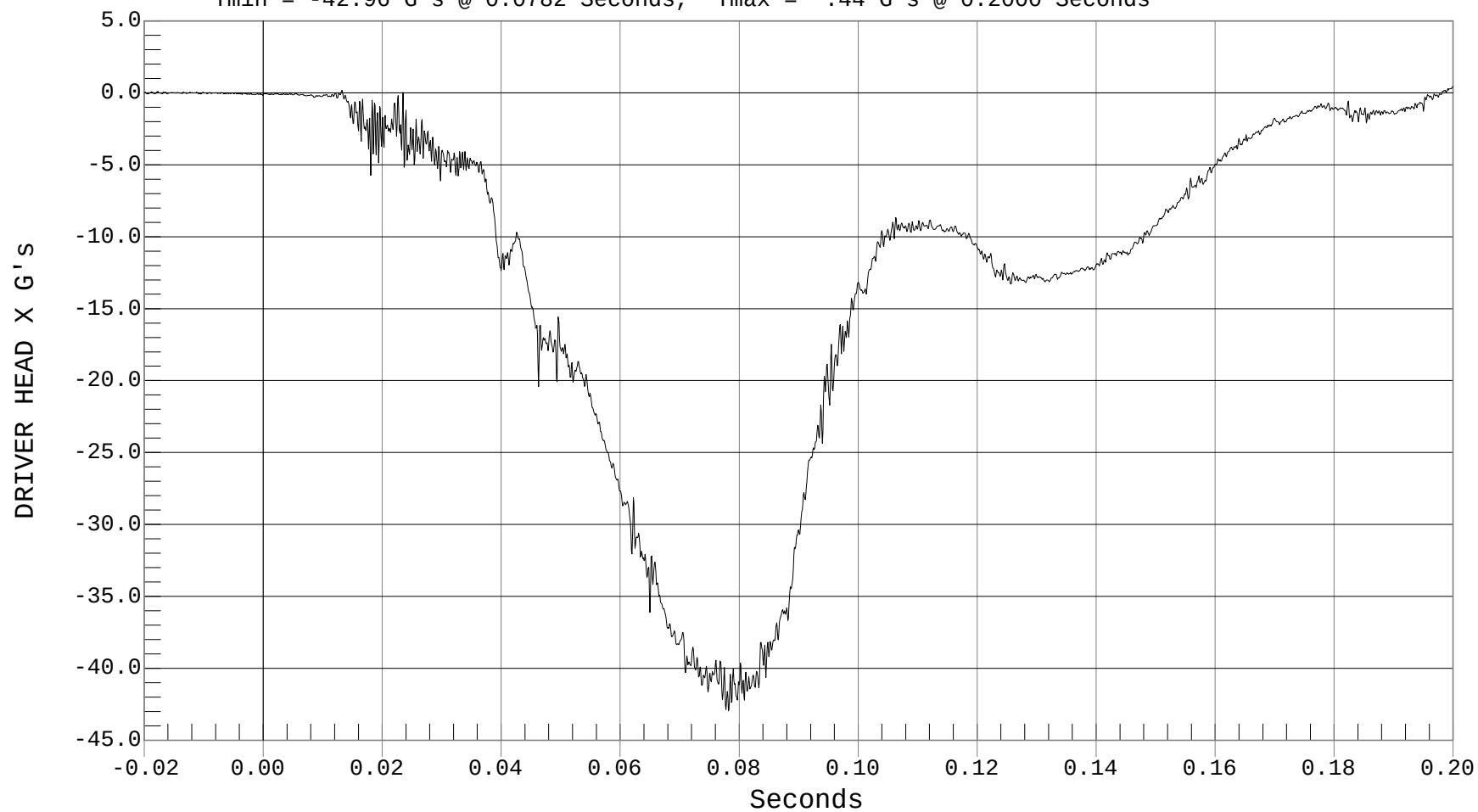
DRIVER HEAD X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER HEAD X, B00089AT.A01

Ymin = -42.96 G's @ 0.0782 Seconds, Ymax = .44 G's @ 0.2000 Seconds





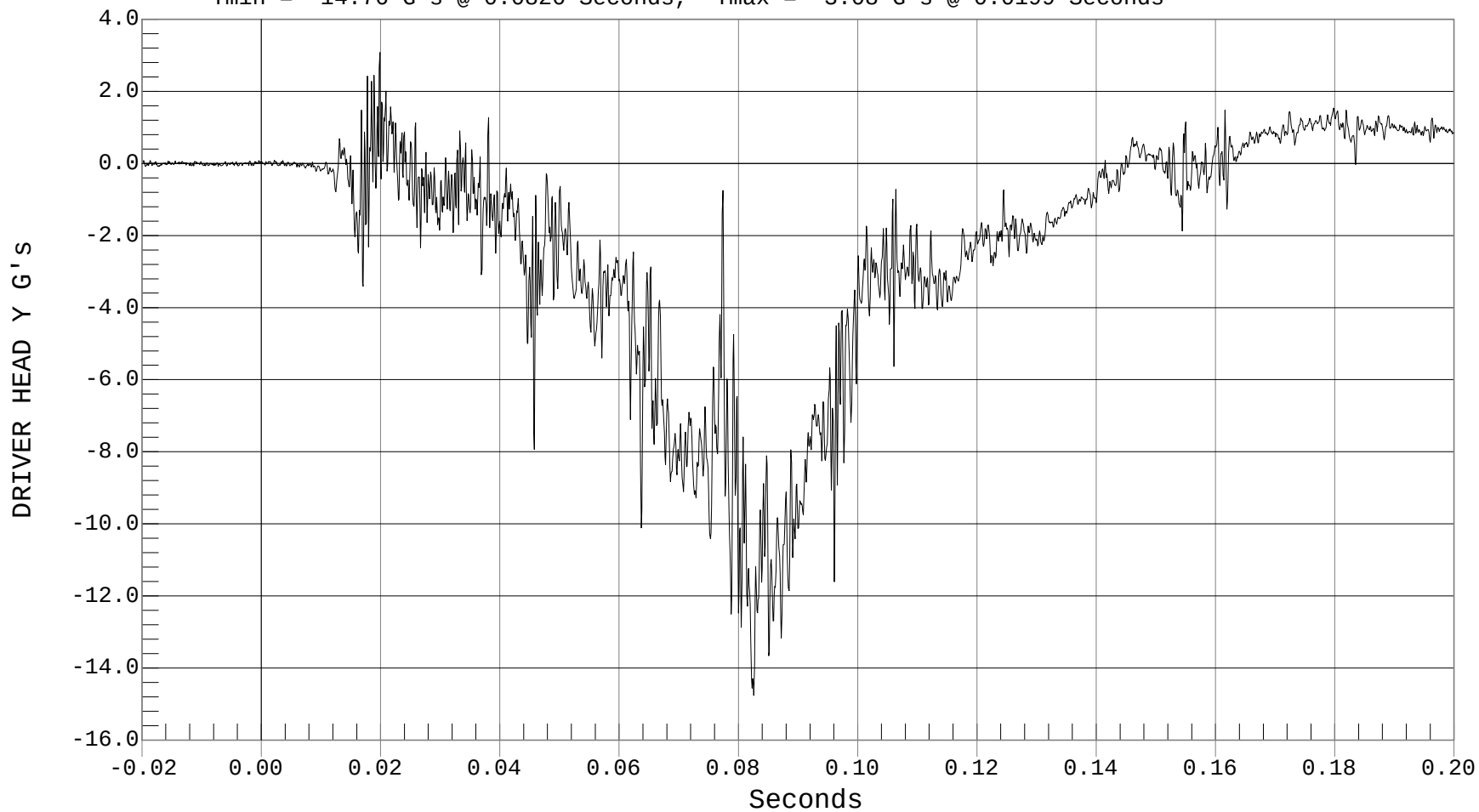
DRIVER HEAD Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER HEAD Y, B00089AT.A02

Ymin = -14.76 G's @ 0.0826 Seconds, Ymax = 3.08 G's @ 0.0199 Seconds





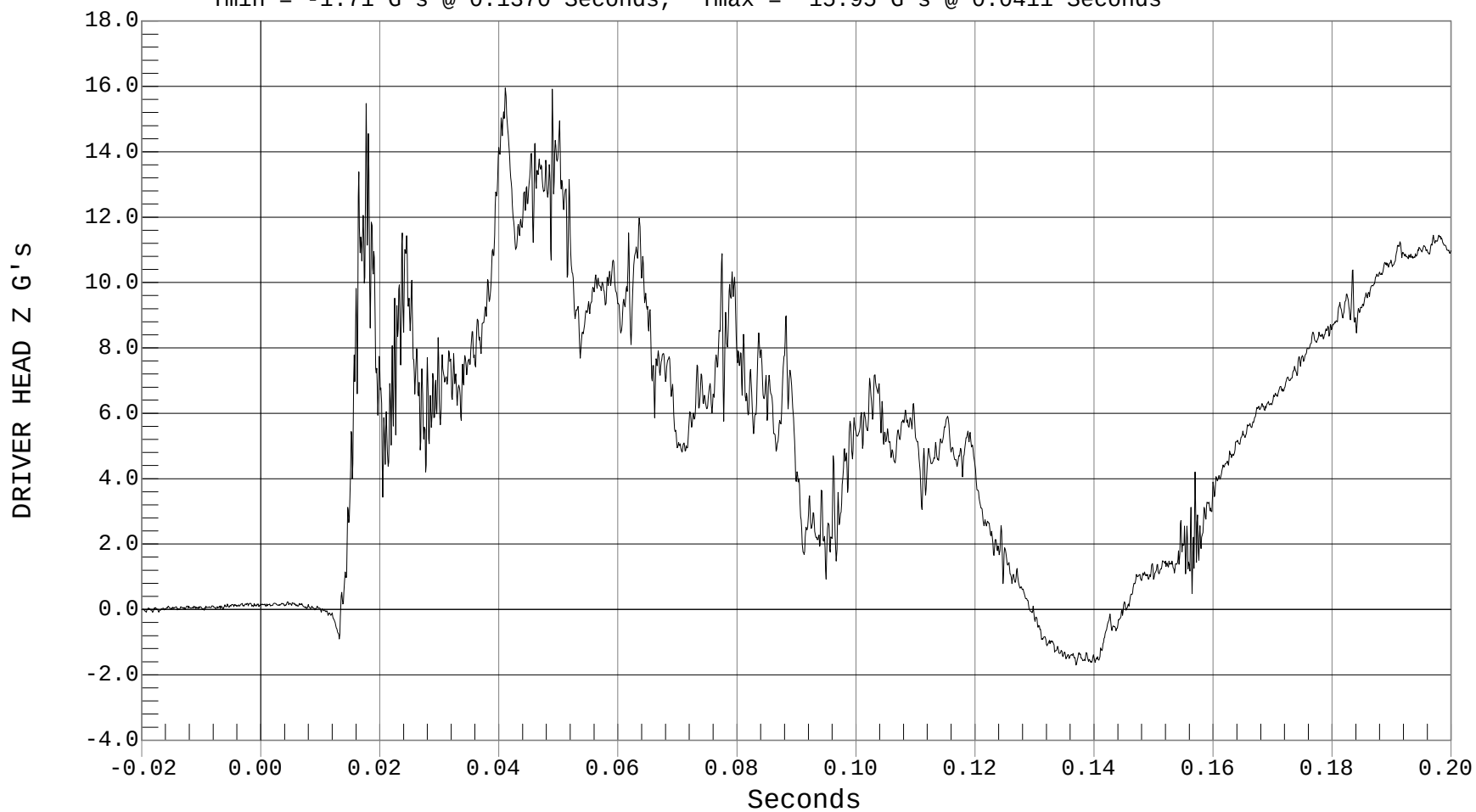
DRIVER HEAD Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER HEAD Z, B00089AT.A03

Ymin = -1.71 G's @ 0.1370 Seconds, Ymax = 15.95 G's @ 0.0411 Seconds





DRIVER HEAD RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

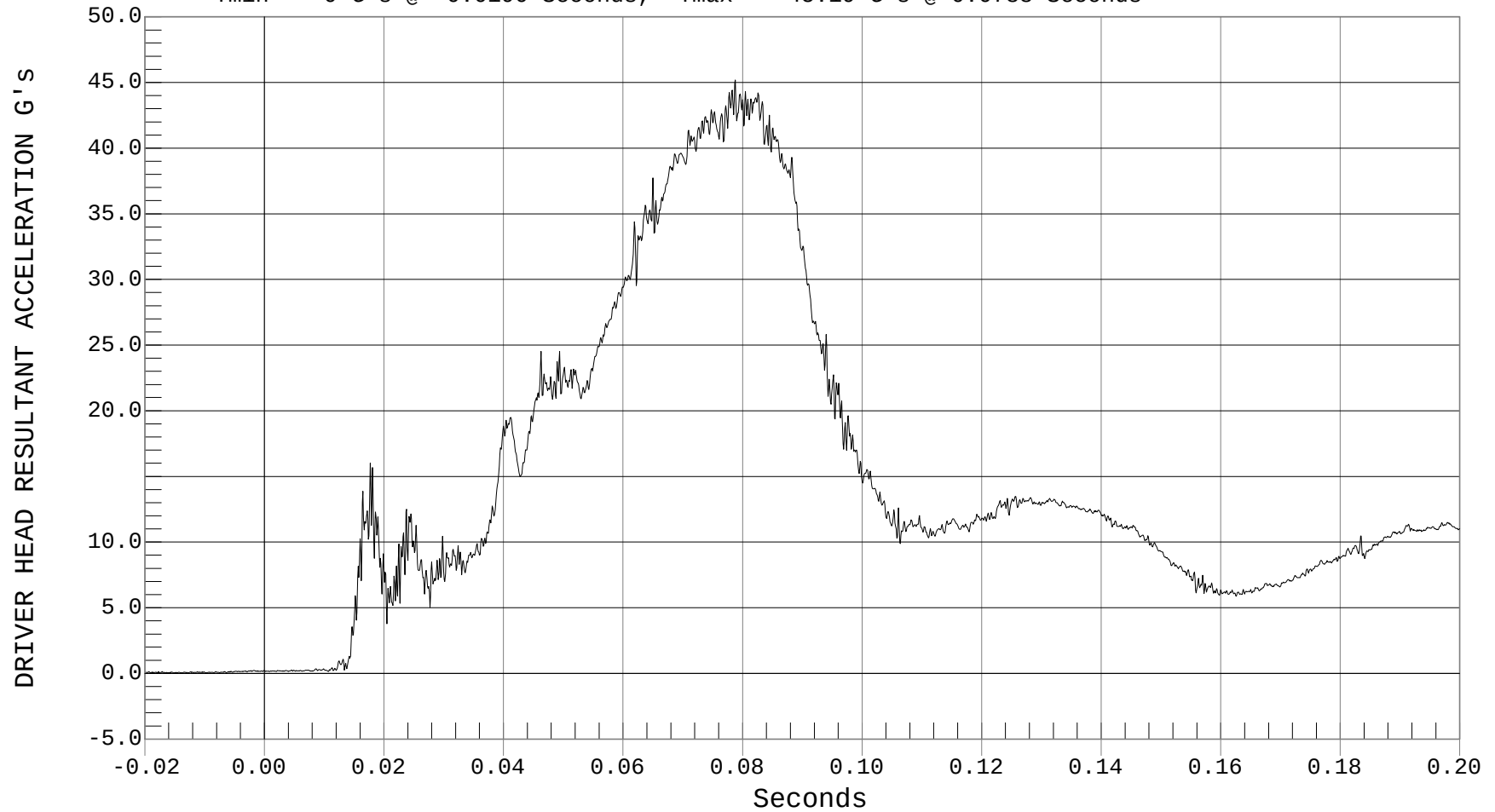
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 1000

— 1 DRIVER HEAD RESULTANT ACCELERATION, B00089AV.A01

Ymin = 0 G's @ -0.0190 Seconds, Ymax = 45.19 G's @ 0.0788 Seconds





DRIVER HEAD X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

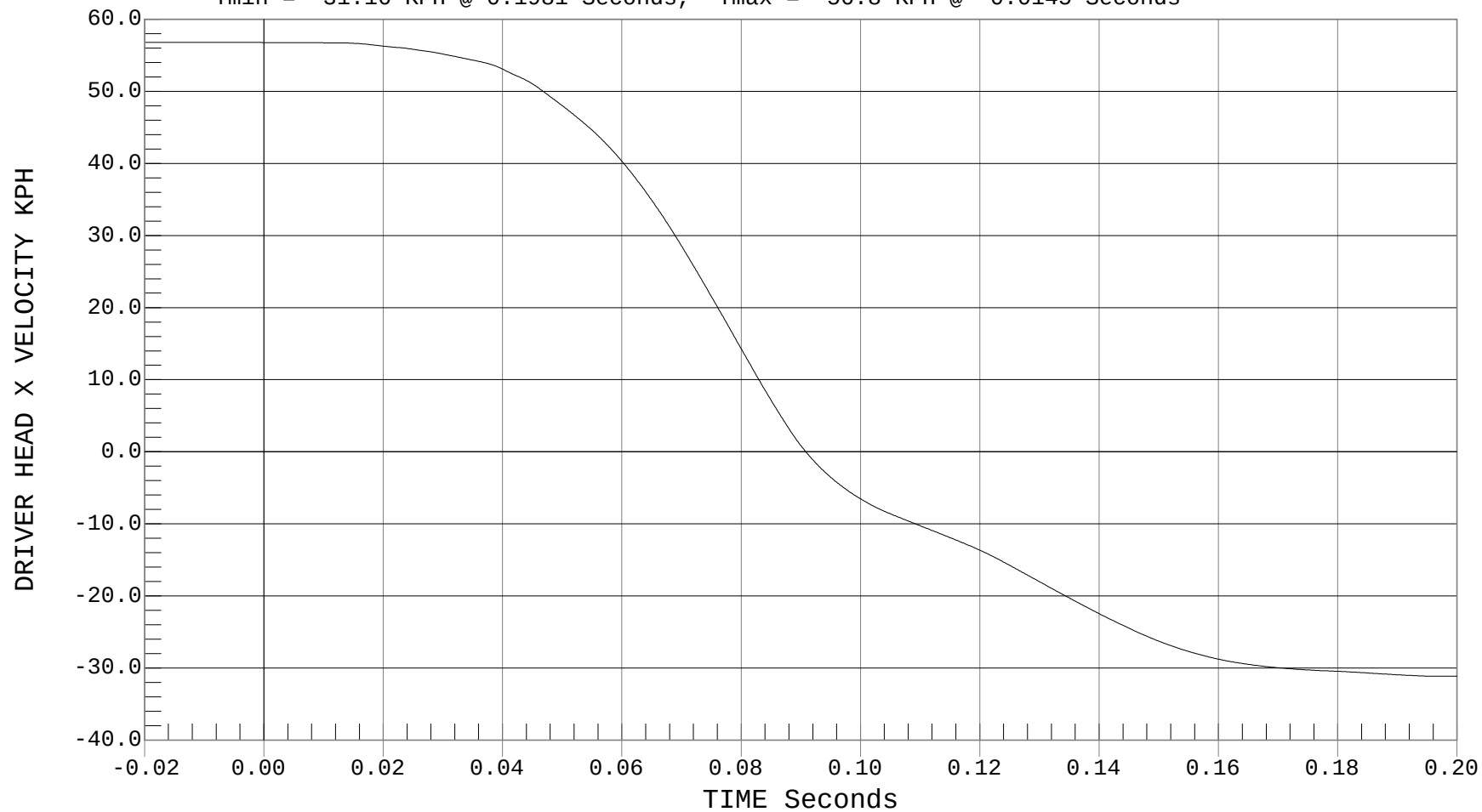
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 DRIVER HEAD X VELOCITY, B00089AI.V01

Ymin = -31.16 KPH @ 0.1981 Seconds, Ymax = 56.8 KPH @ -0.0145 Seconds





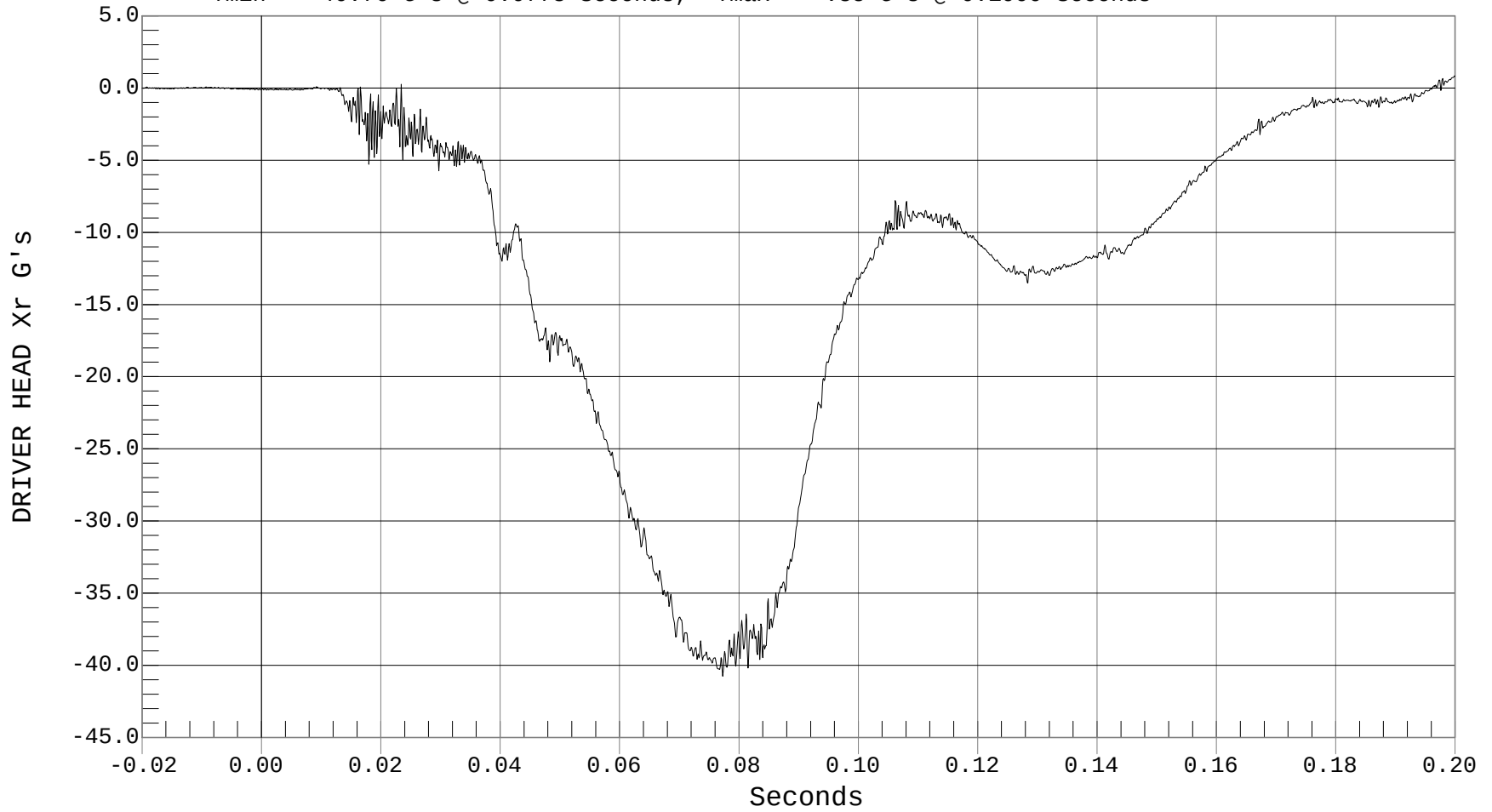
DRIVER HEAD REDUNDANT X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER HEAD Xr, B00089AT.A33

Ymin = -40.76 G's @ 0.0773 Seconds, Ymax = .85 G's @ 0.1999 Seconds





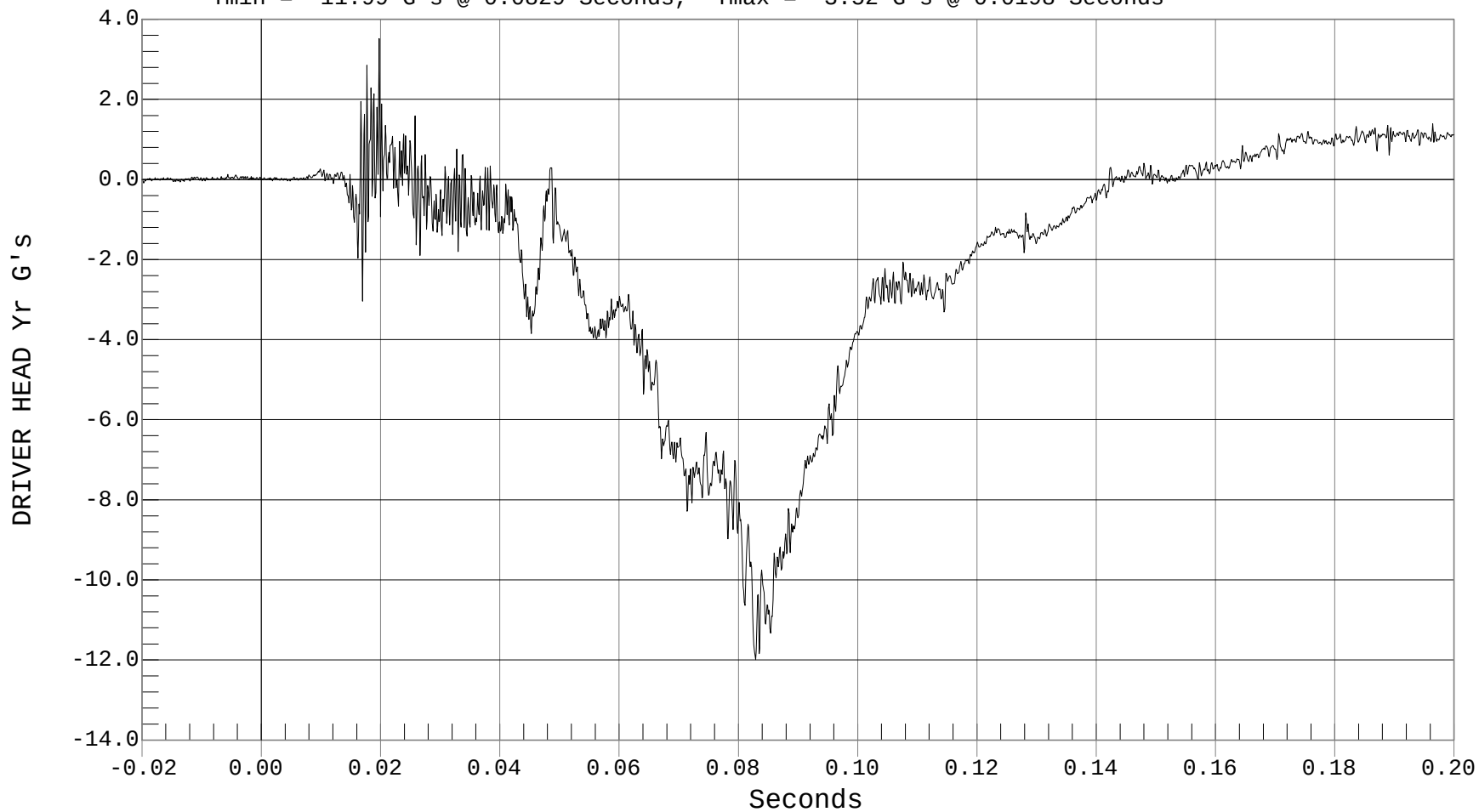
DRIVER HEAD REDUNDANT Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER HEAD Yr, B00089AT.A34

Ymin = -11.99 G's @ 0.0829 Seconds, Ymax = 3.52 G's @ 0.0198 Seconds





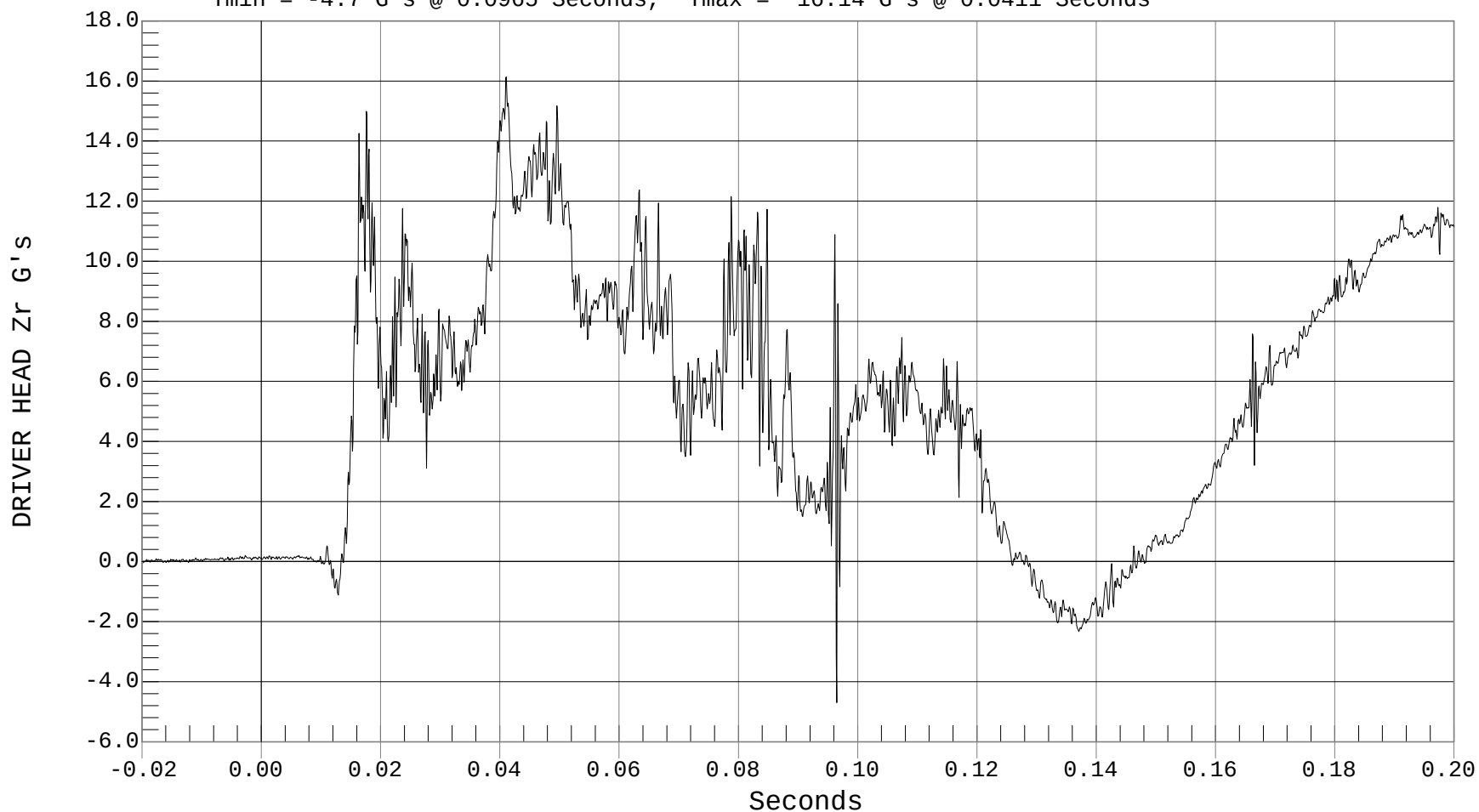
DRIVER HEAD REDUNDANT Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER HEAD Zr, B00089AT.A35

Ymin = -4.7 G's @ 0.0965 Seconds, Ymax = 16.14 G's @ 0.0411 Seconds





DRIVER HEAD REDUNDANT RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

Speed: 35.3 MPH, 56.8 KPH

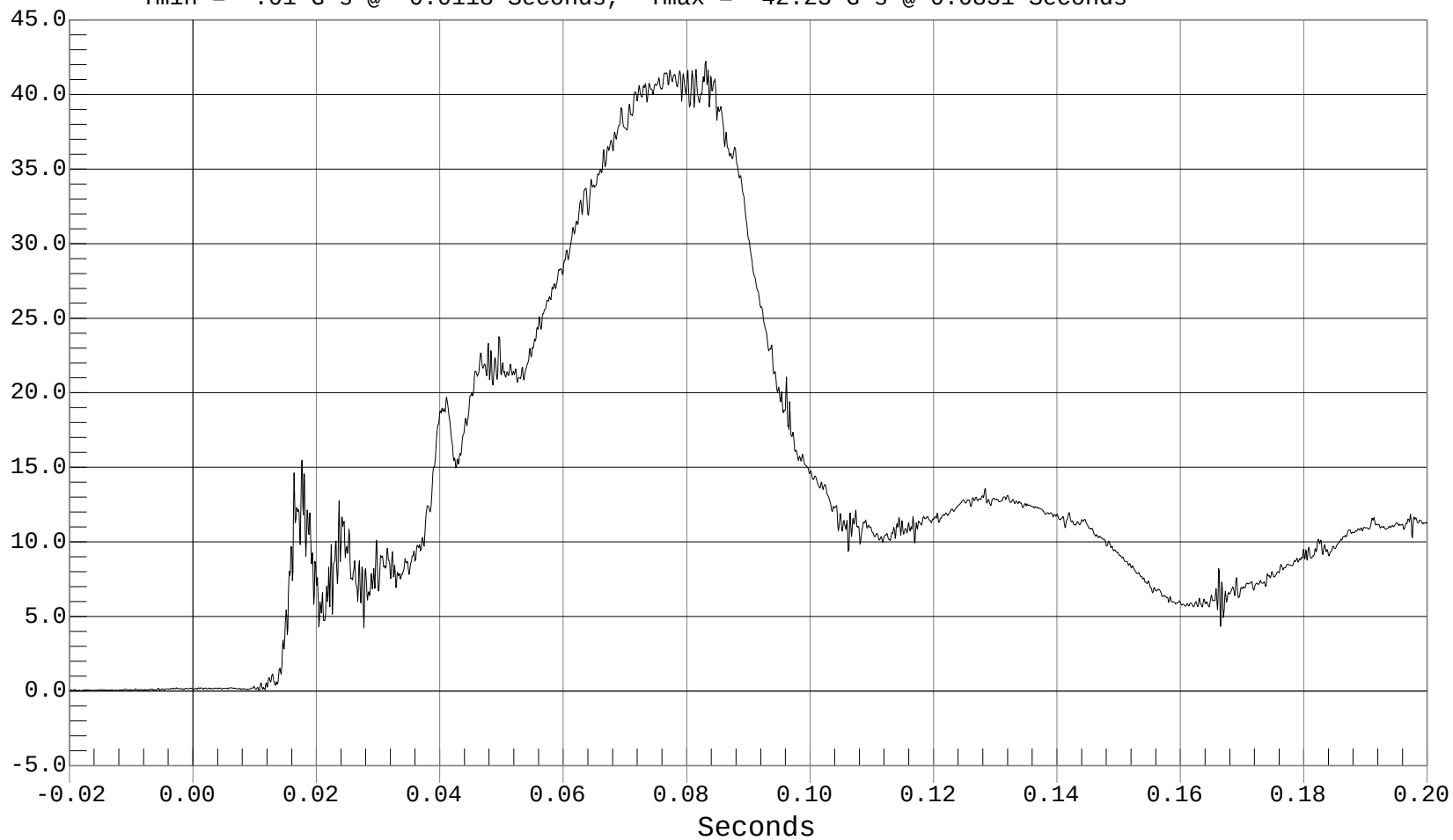
Other Info:

Filter Class: 1000

— 1 DRIVER HEAD REDUNDANT RESULTANT ACCELERATION, B00089AV.A33

DRIVER HEAD REDUNDANT RESULTANT ACCELERATION G'S

Ymin = .01 G's @ -0.0118 Seconds, Ymax = 42.23 G's @ 0.0831 Seconds





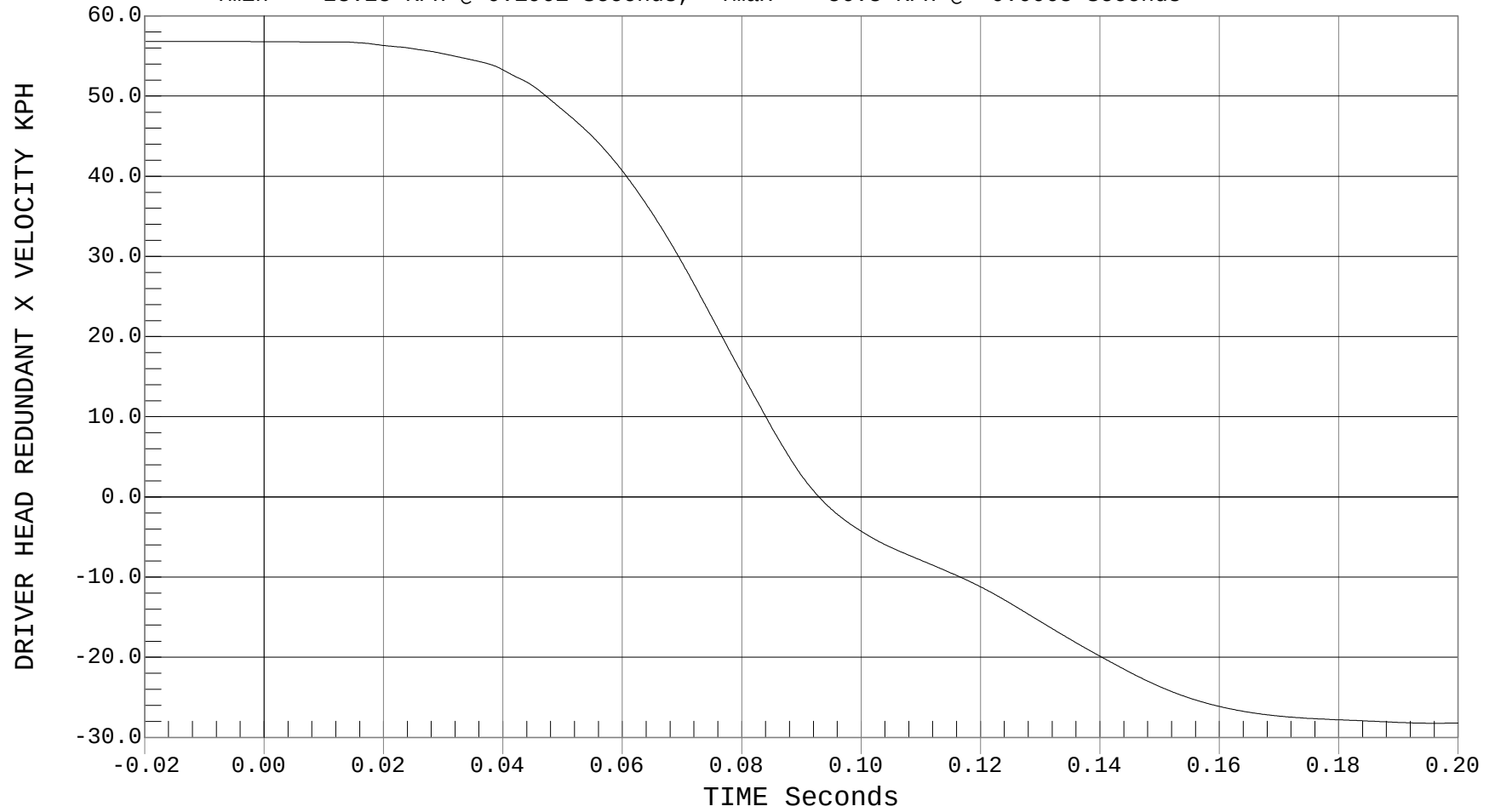
DRIVER HEAD REDUNDANT X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER HEAD REDUNDANT X VELOCITY, B00089AI.V33

Ymin = -28.25 KPH @ 0.1961 Seconds, Ymax = 56.8 KPH @ -0.0068 Seconds





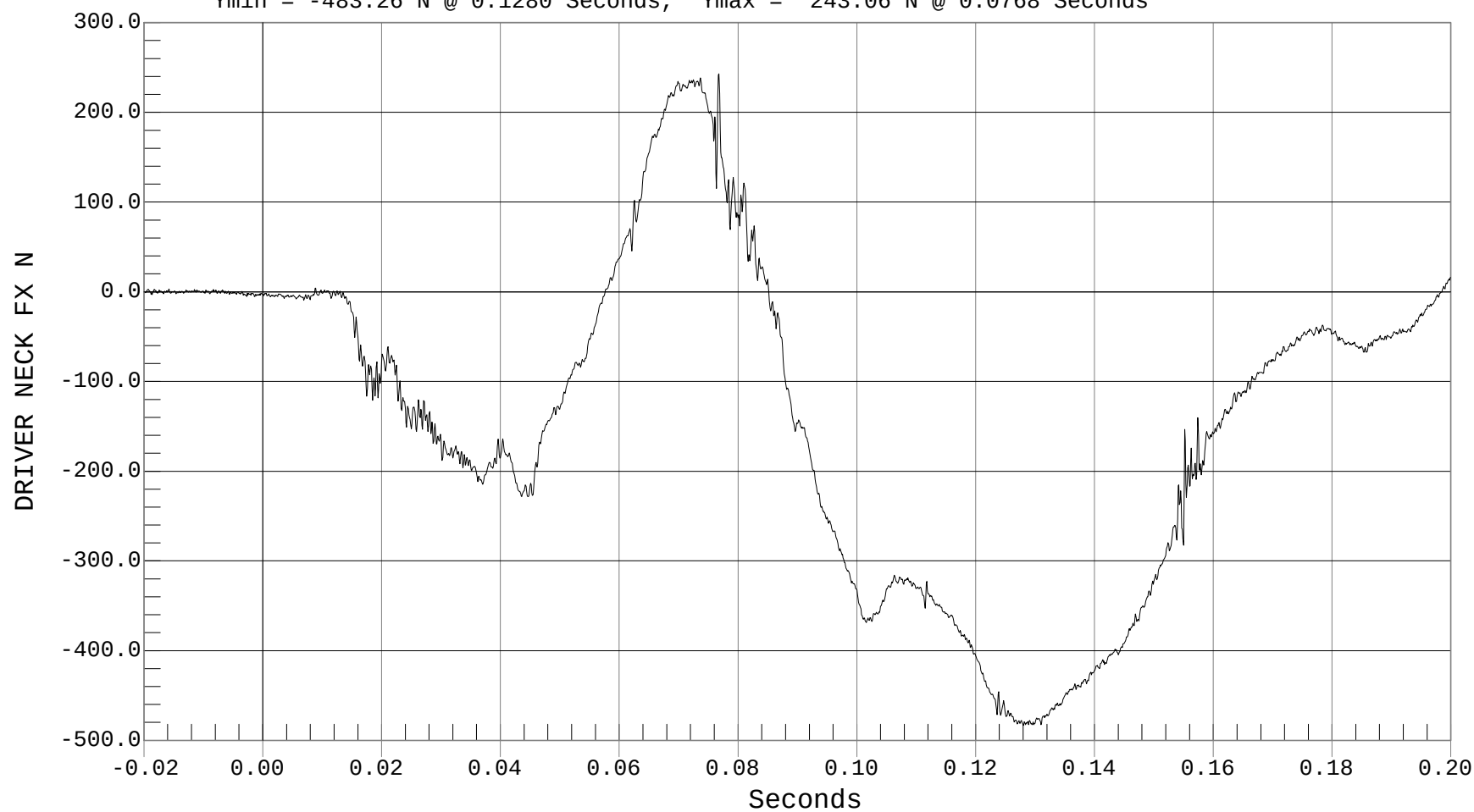
DRIVER NECK FORCE X

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER NECK FX, B00089FT.F04

Ymin = -483.26 N @ 0.1280 Seconds, Ymax = 243.06 N @ 0.0768 Seconds





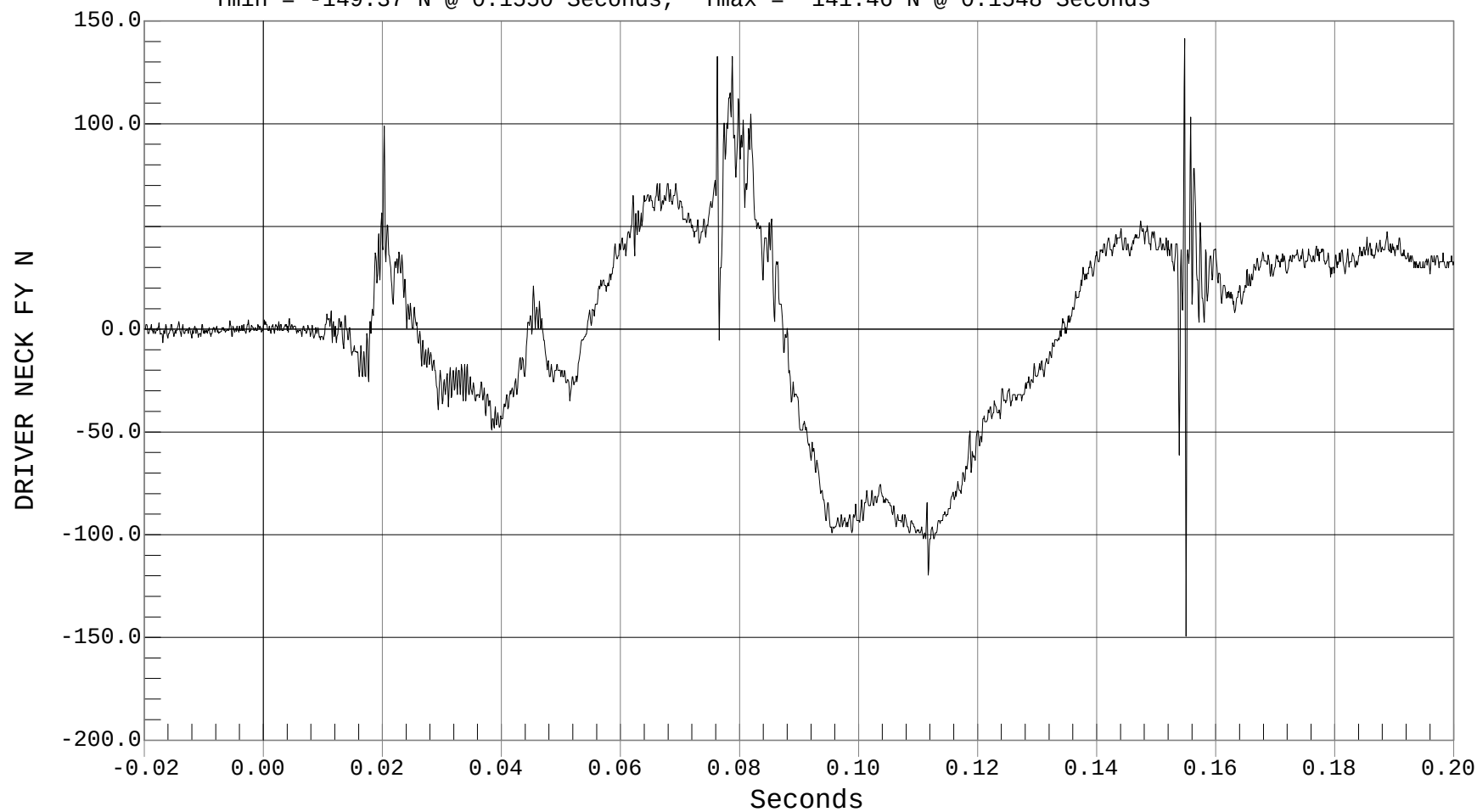
DRIVER NECK FORCE Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER NECK FY, B00089FT.F05

Ymin = -149.37 N @ 0.1550 Seconds, Ymax = 141.46 N @ 0.1548 Seconds





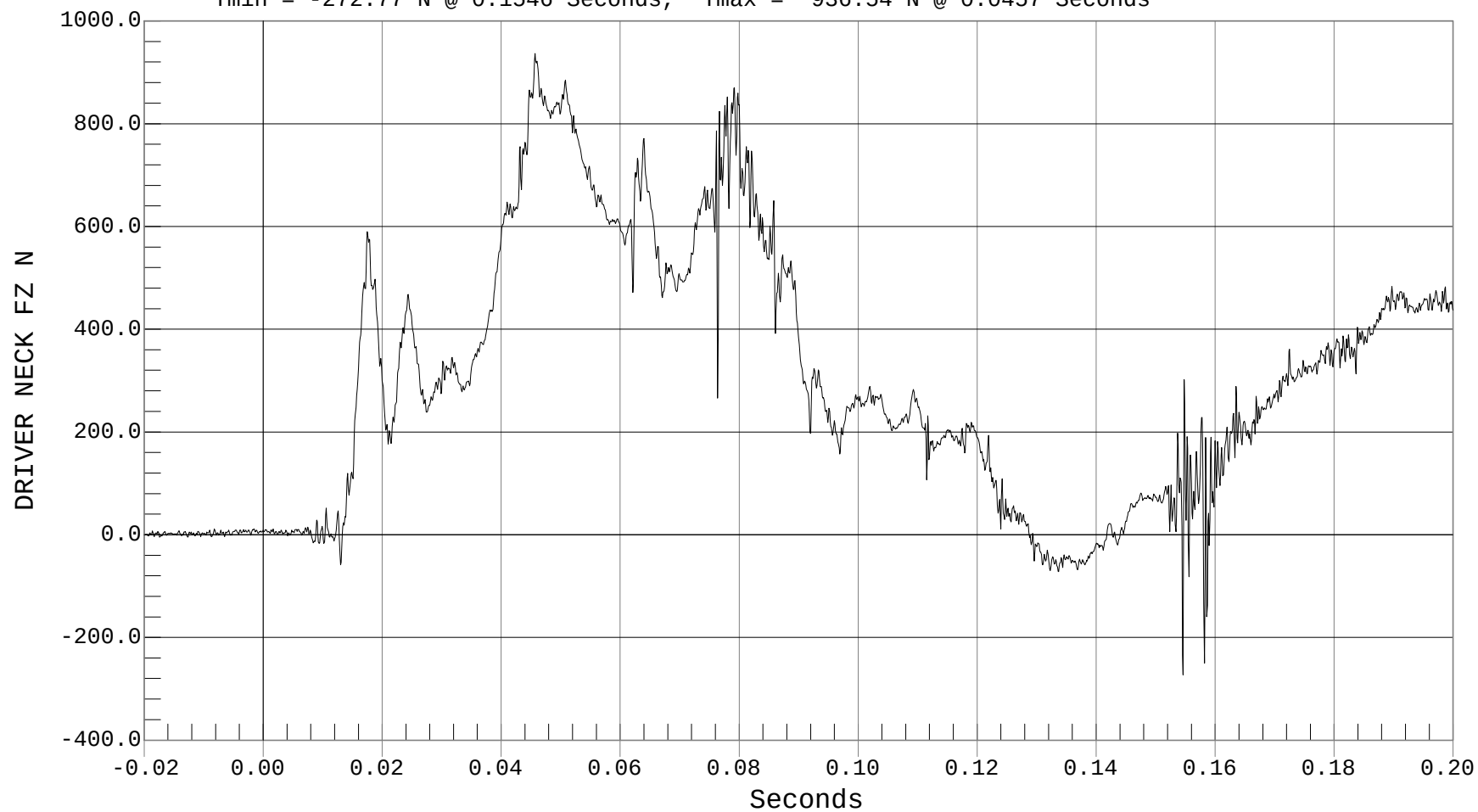
DRIVER NECK FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER NECK FZ, B00089FT.F06

Ymin = -272.77 N @ 0.1546 Seconds, Ymax = 936.54 N @ 0.0457 Seconds





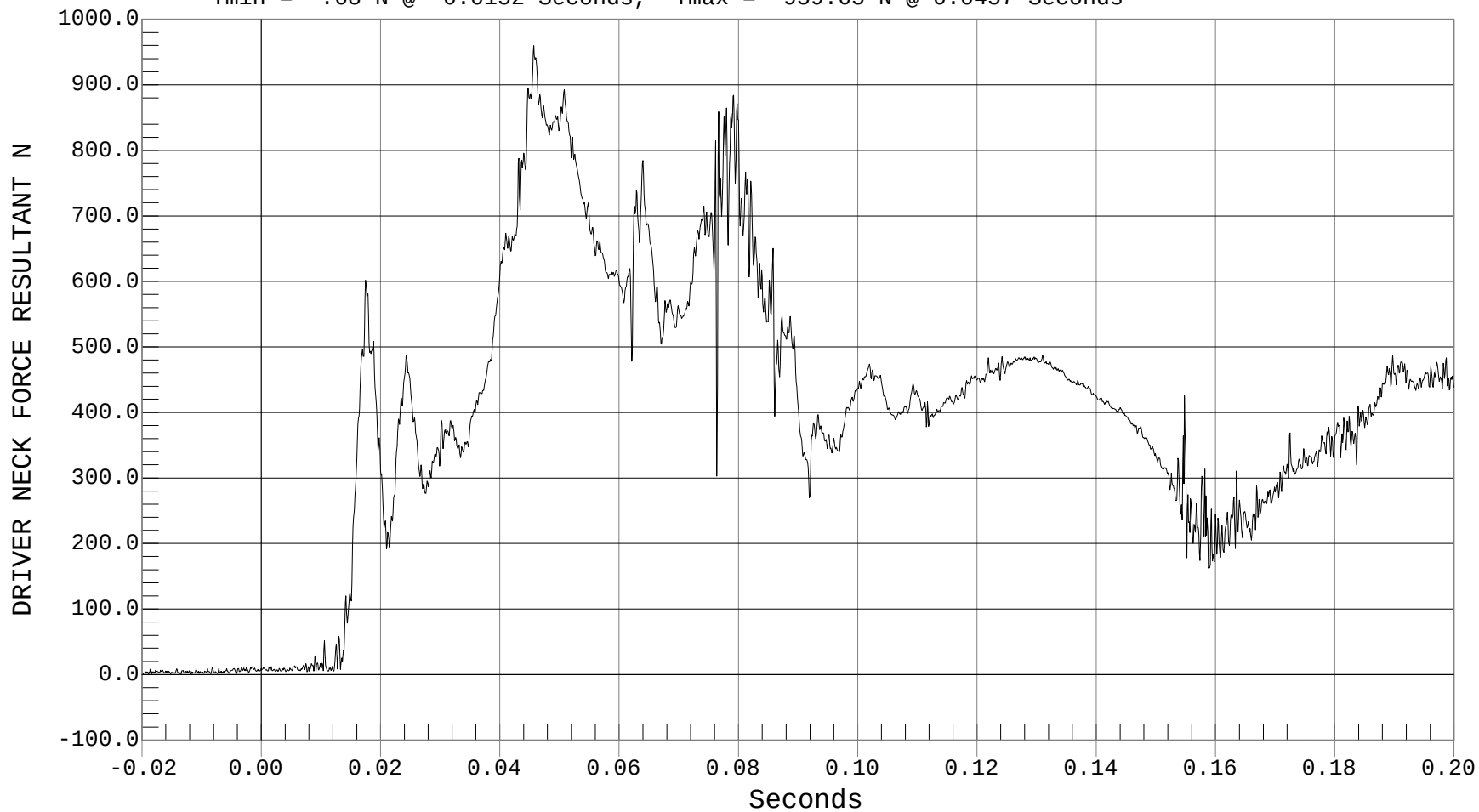
DRIVER NECK FORCE RESULTANT

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER NECK FORCE RESULTANT, B00089FV.F04

Ymin = .68 N @ -0.0152 Seconds, Ymax = 959.65 N @ 0.0457 Seconds





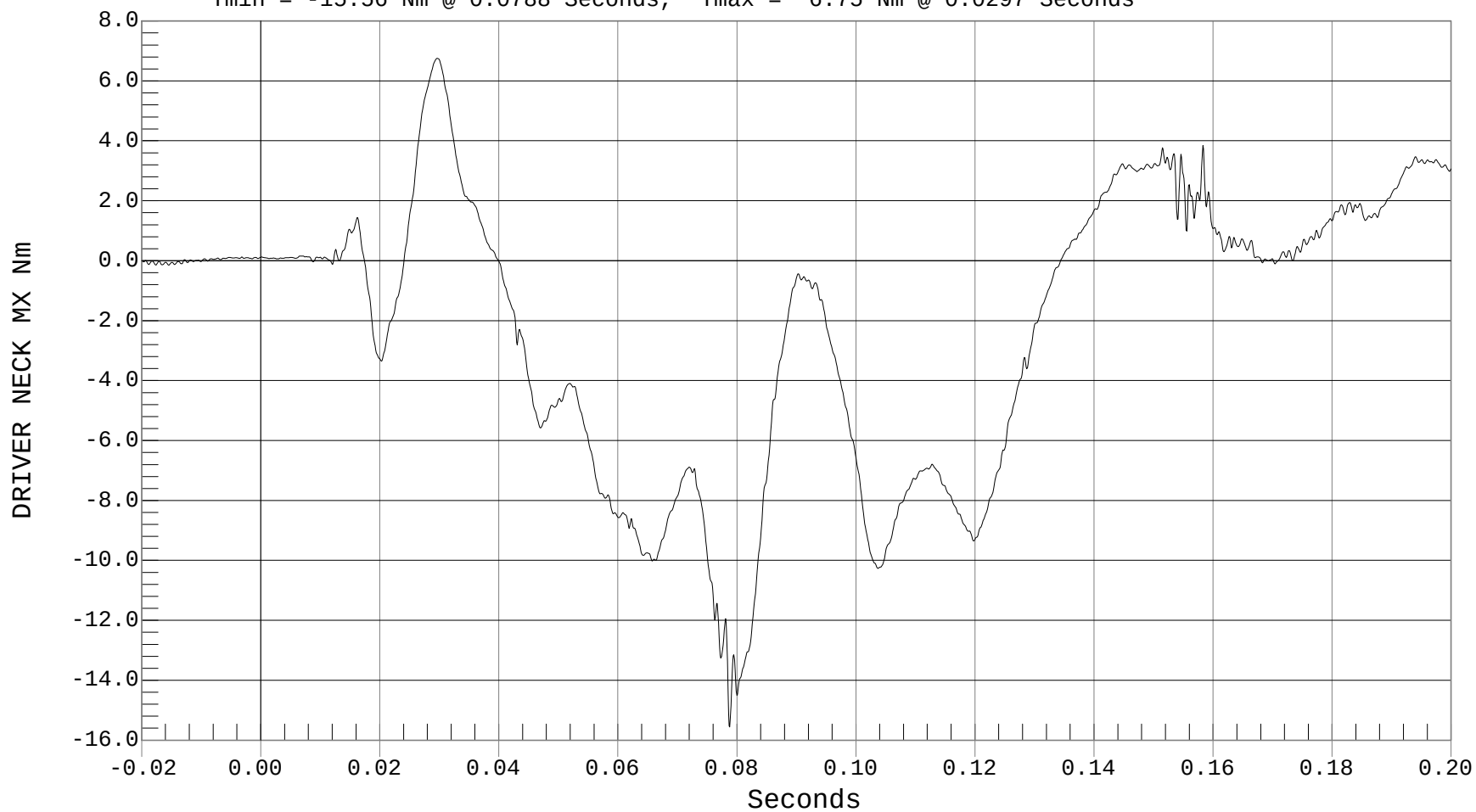
DRIVER NECK MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 DRIVER NECK MX, B00089MF.M07

Ymin = -15.56 Nm @ 0.0788 Seconds, Ymax = 6.75 Nm @ 0.0297 Seconds





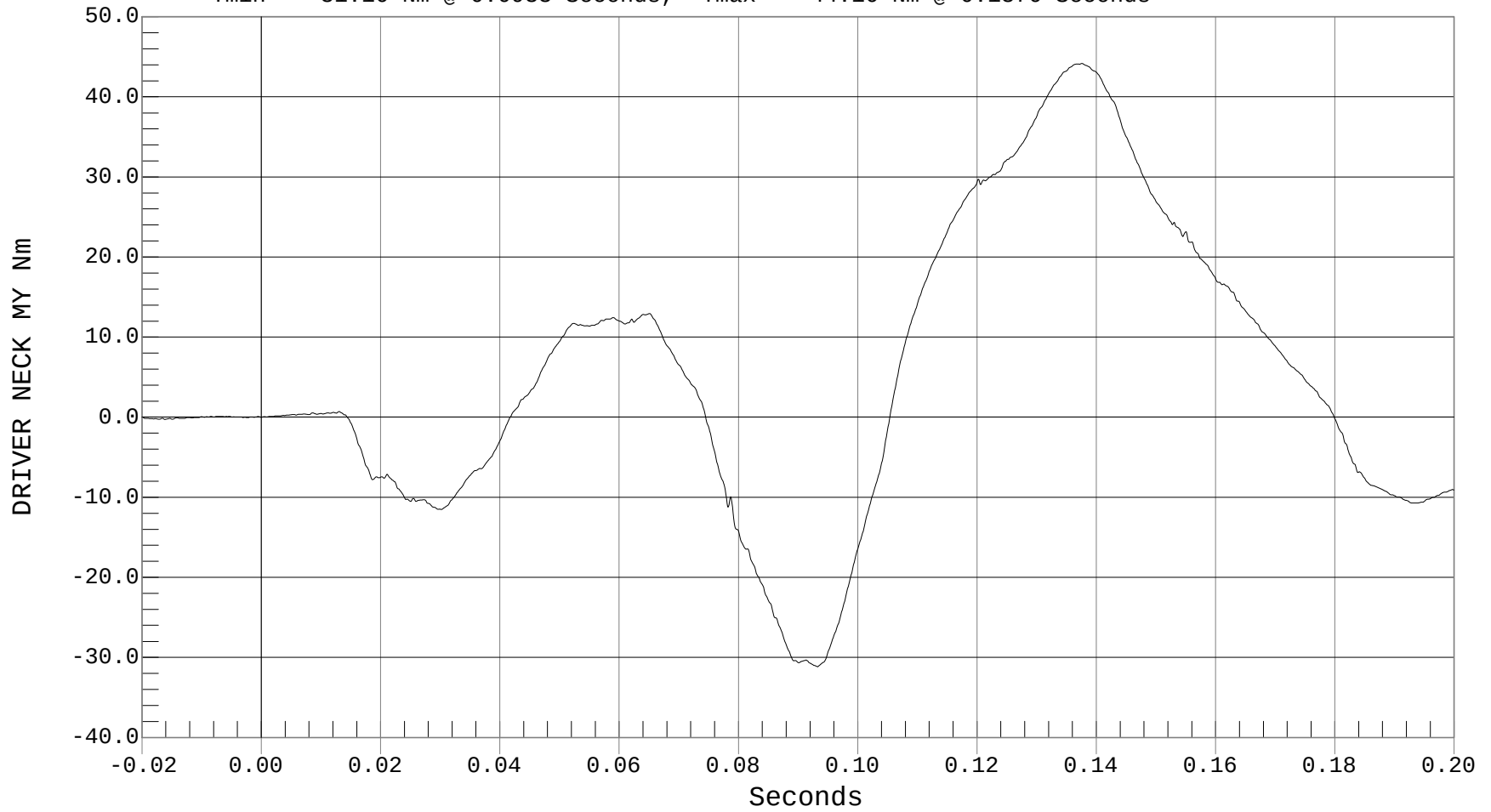
DRIVER NECK MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 DRIVER NECK MY, B00089MF.M08

Ymin = -31.16 Nm @ 0.0933 Seconds, Ymax = 44.16 Nm @ 0.1376 Seconds





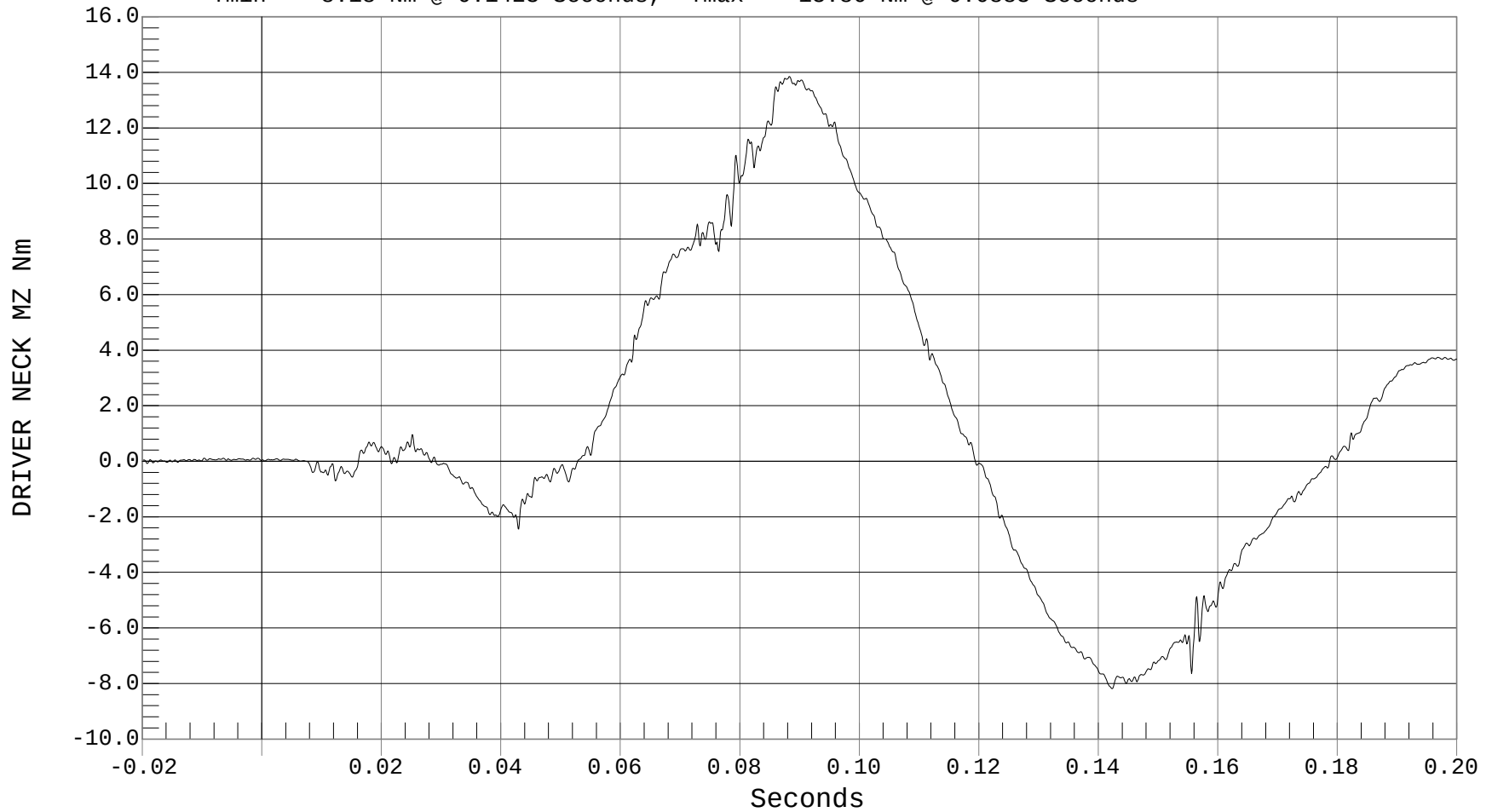
DRIVER NECK MOMENT Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 DRIVER NECK MZ, B00089MF.M09

Ymin = -8.18 Nm @ 0.1423 Seconds, Ymax = 13.86 Nm @ 0.0883 Seconds





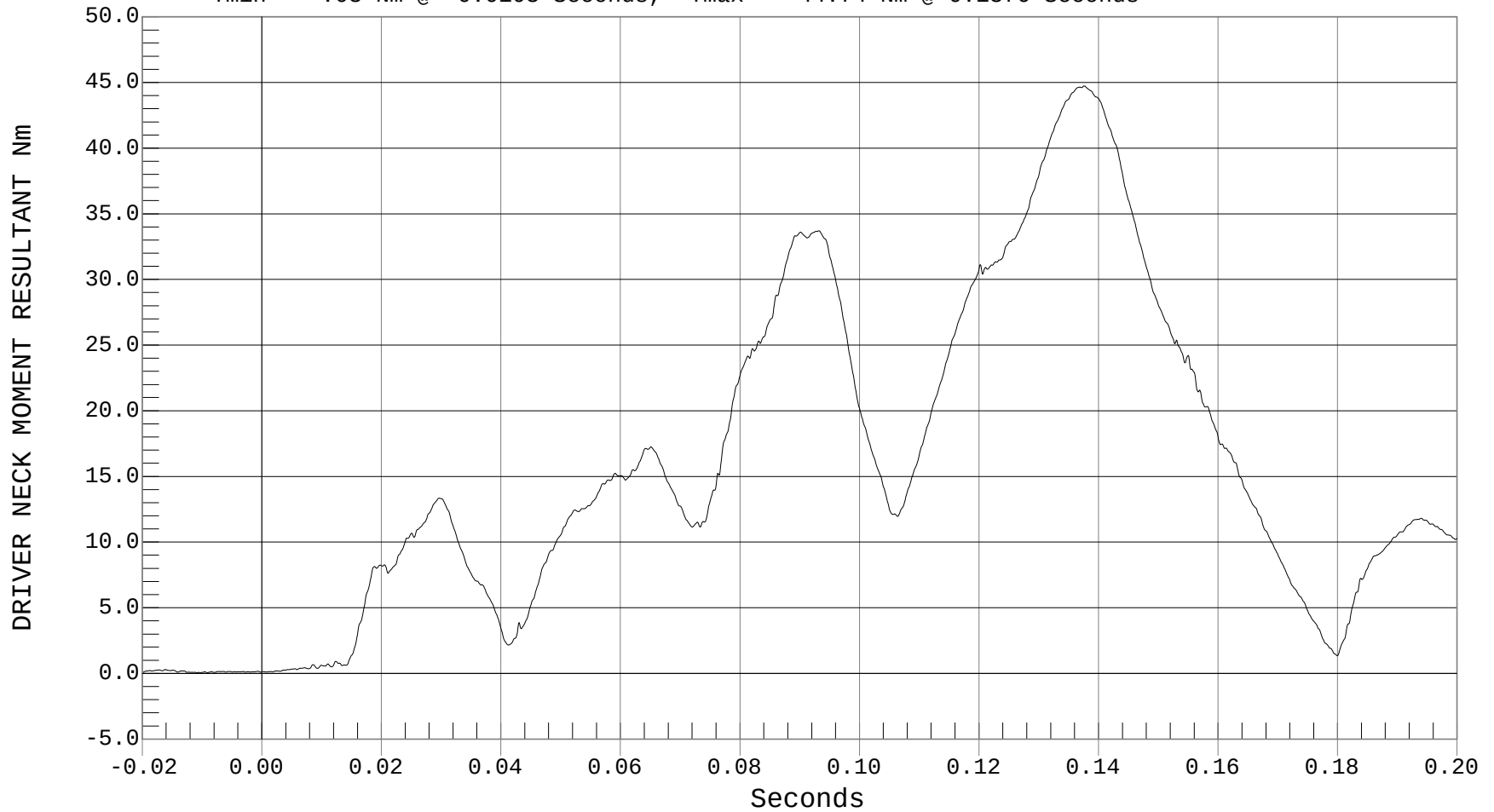
DRIVER NECK MOMENT RESULTANT

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 DRIVER NECK MOMENT RESULTANT, B00089MV.M07

Ymin = .03 Nm @ -0.0103 Seconds, Ymax = 44.74 Nm @ 0.1376 Seconds





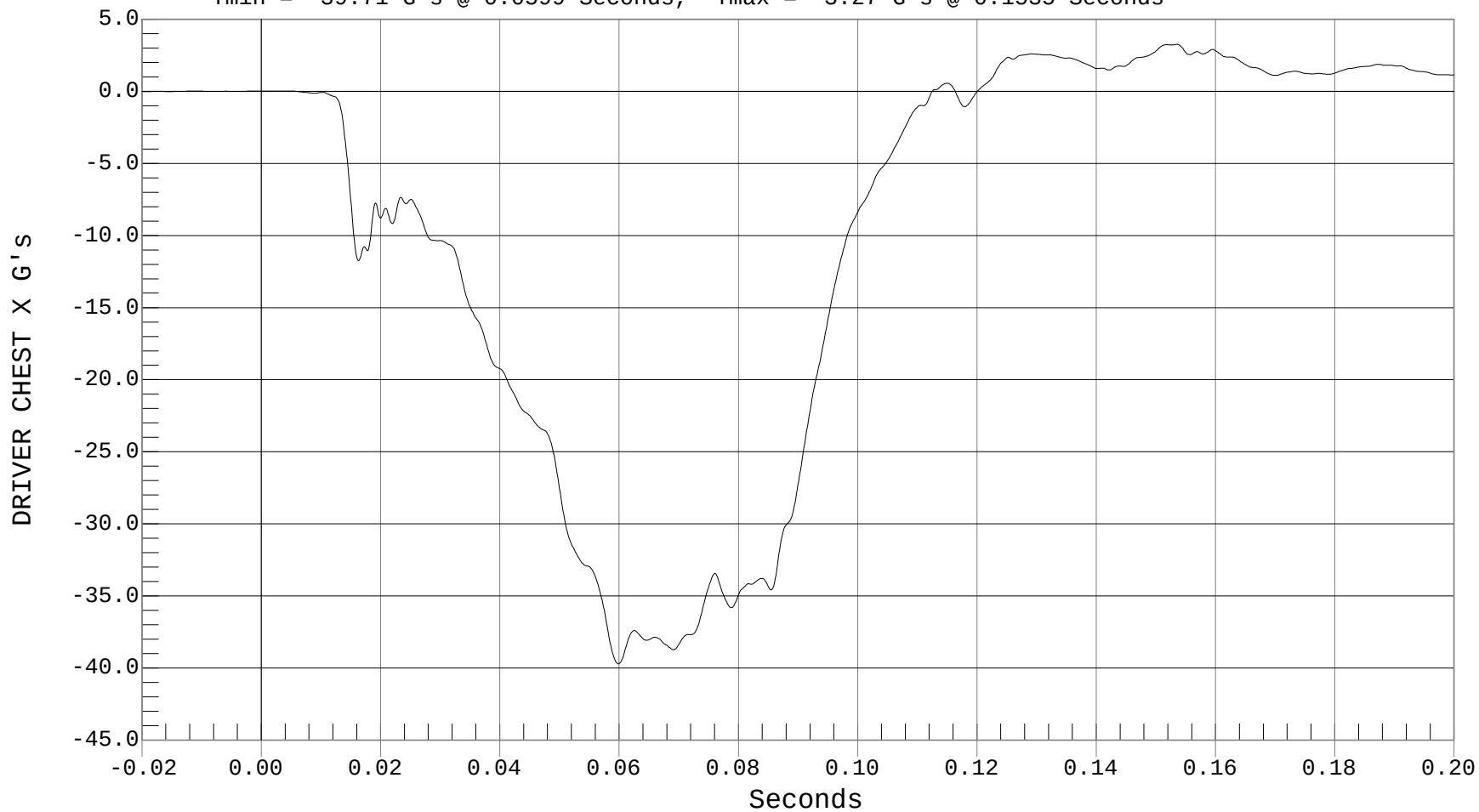
DRIVER CHEST X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER CHEST X, B00089AF.A10

Ymin = -39.71 G's @ 0.0599 Seconds, Ymax = 3.27 G's @ 0.1535 Seconds





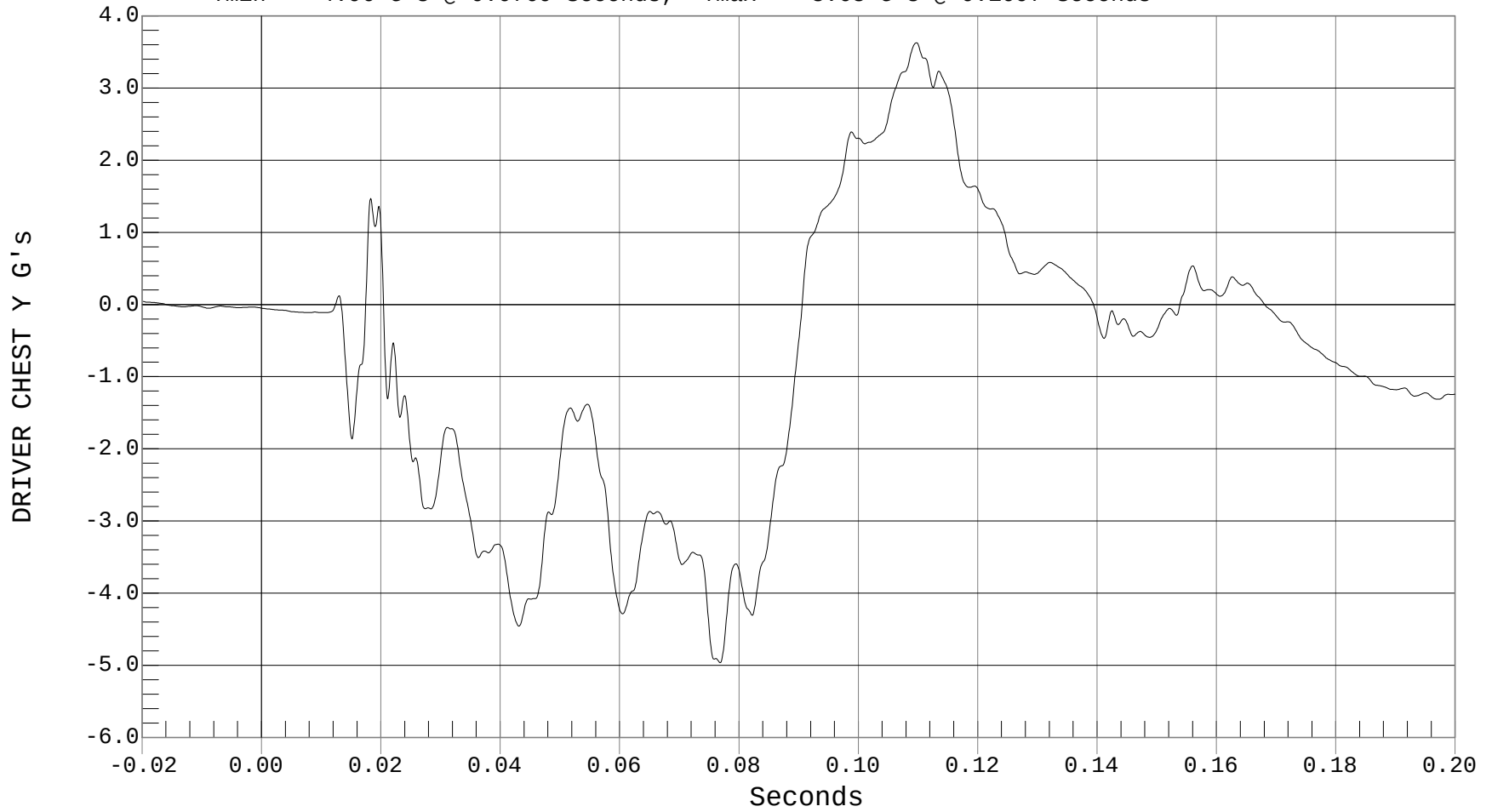
DRIVER CHEST Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER CHEST Y, B00089AF.A11

Ymin = -4.96 G's @ 0.0769 Seconds, Ymax = 3.63 G's @ 0.1097 Seconds





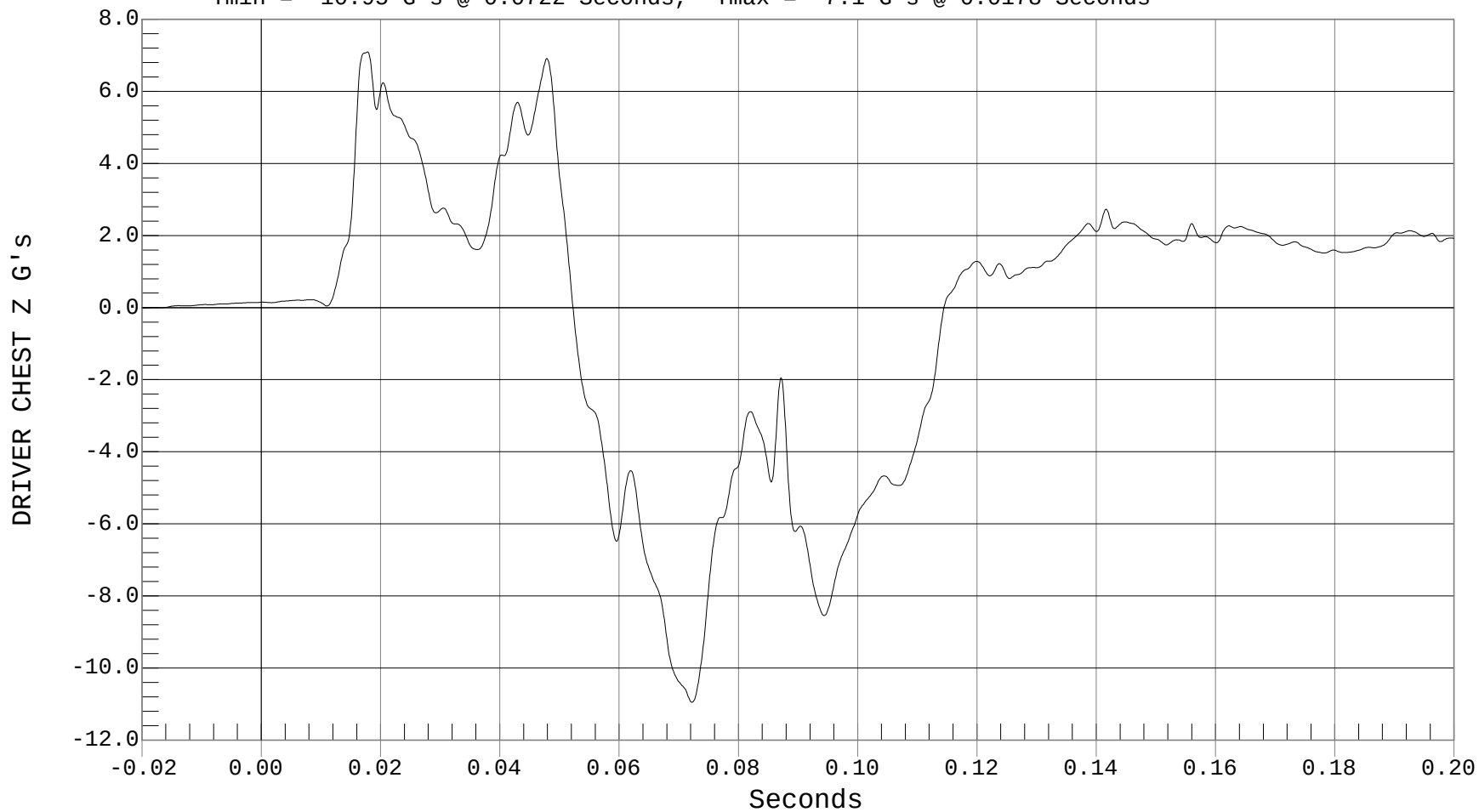
DRIVER CHEST Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER CHEST Z, B00089AF.A12

Ymin = -10.95 G's @ 0.0722 Seconds, Ymax = 7.1 G's @ 0.0178 Seconds





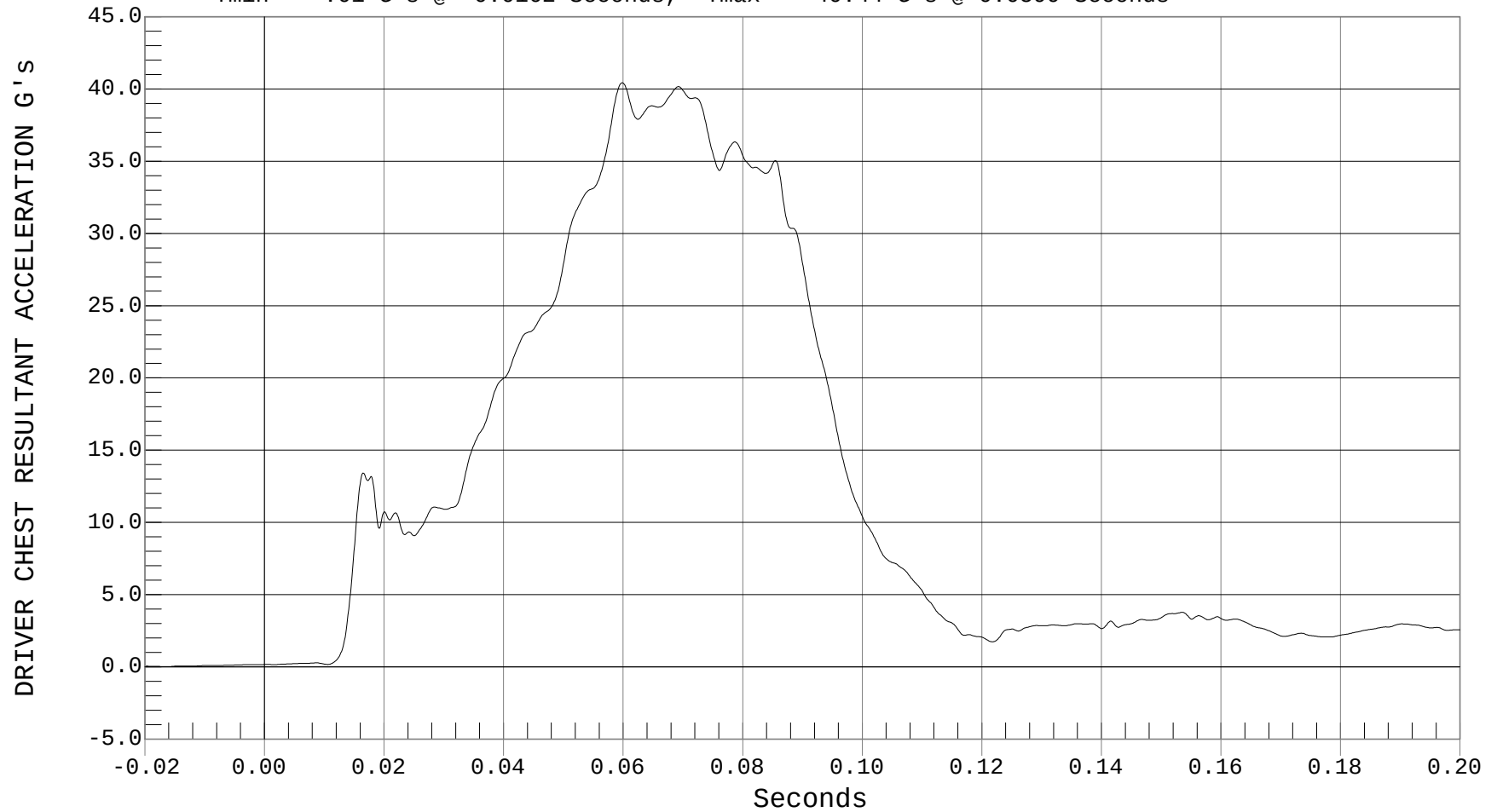
DRIVER CHEST RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER CHEST RESULTANT ACCELERATION, B00089AV.A10

Ymin = .01 G's @ -0.0162 Seconds, Ymax = 40.44 G's @ 0.0599 Seconds





DRIVER CHEST X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

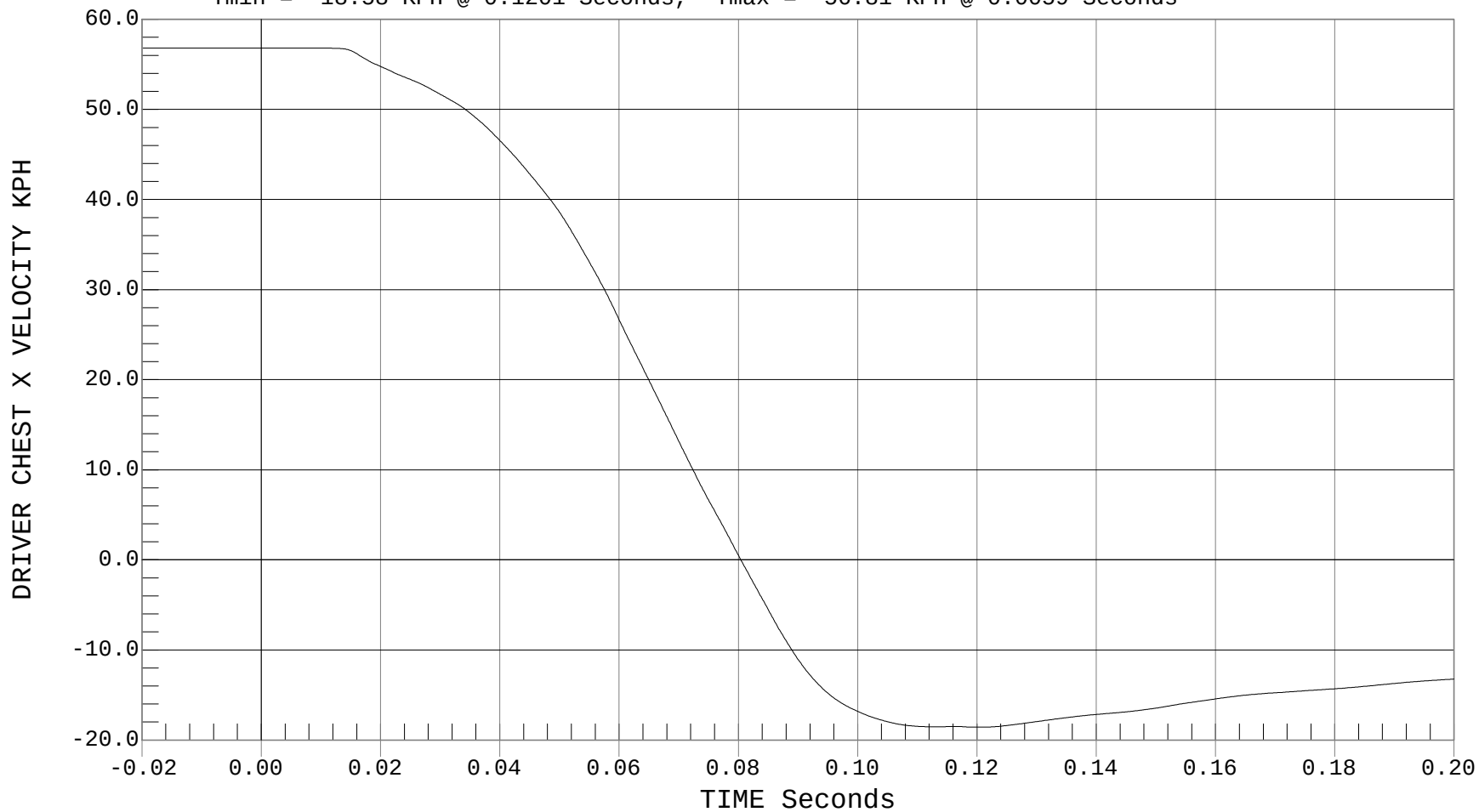
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 DRIVER CHEST X VELOCITY, B00089AI.V10

Ymin = -18.58 KPH @ 0.1201 Seconds, Ymax = 56.81 KPH @ 0.0059 Seconds





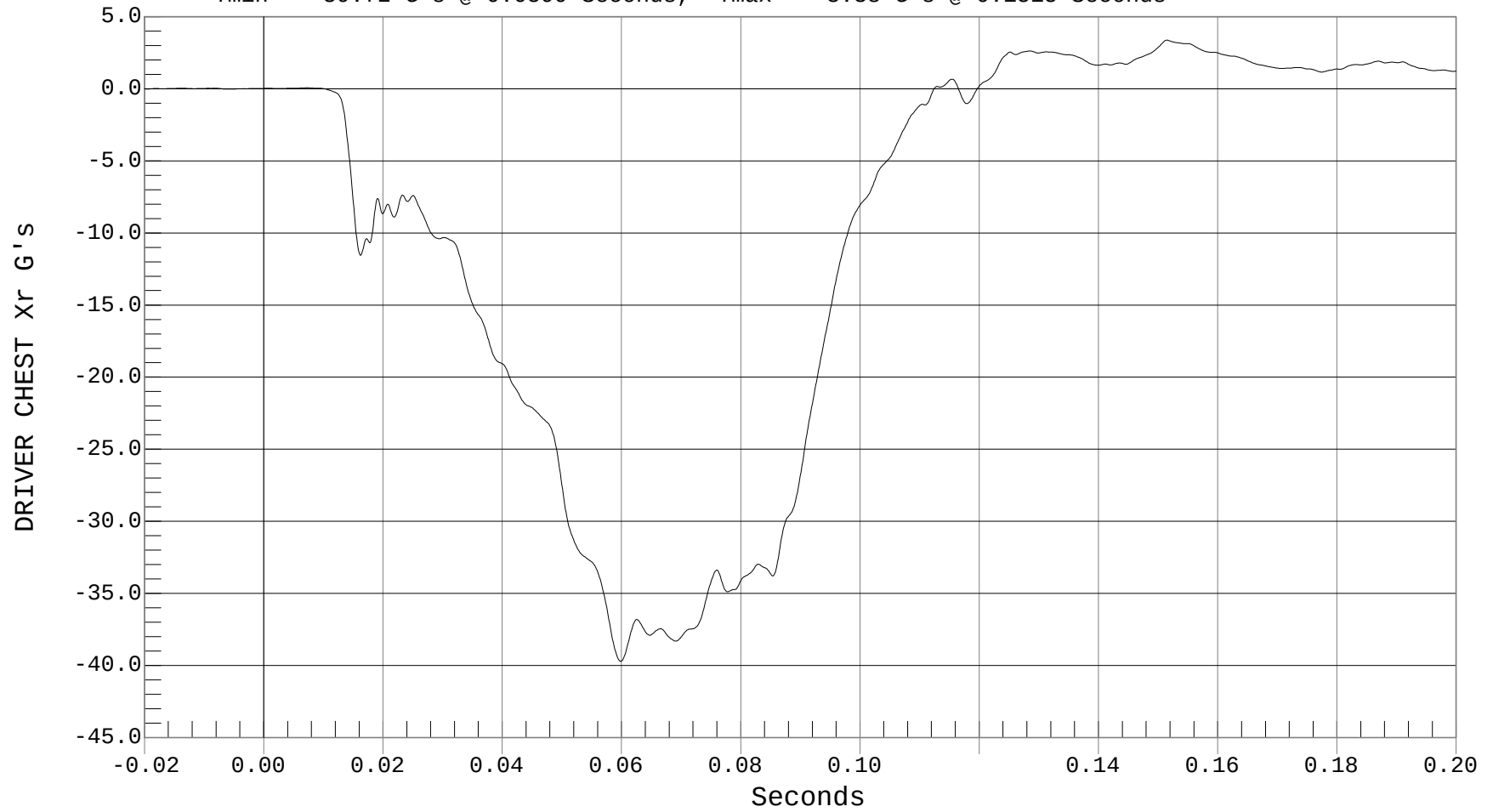
DRIVER CHEST REDUNDANT X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER CHEST Xr, B00089AF.A36

Ymin = -39.72 G's @ 0.0599 Seconds, Ymax = 3.38 G's @ 0.1515 Seconds



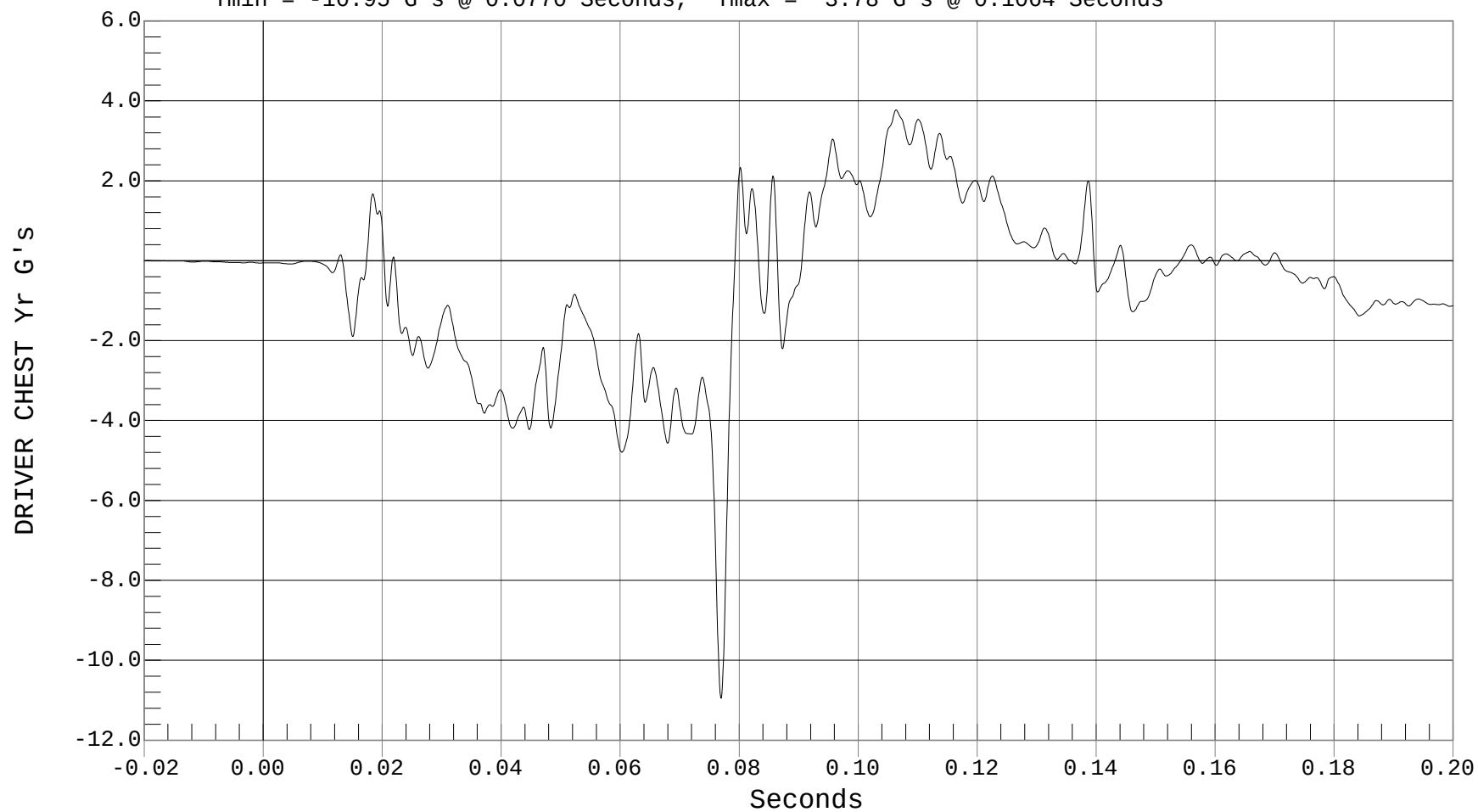


DRIVER CHEST REDUNDANT Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

Ymin = -10.95 G's @ 0.0770 Seconds, Ymax = 3.78 G's @ 0.1064 Seconds





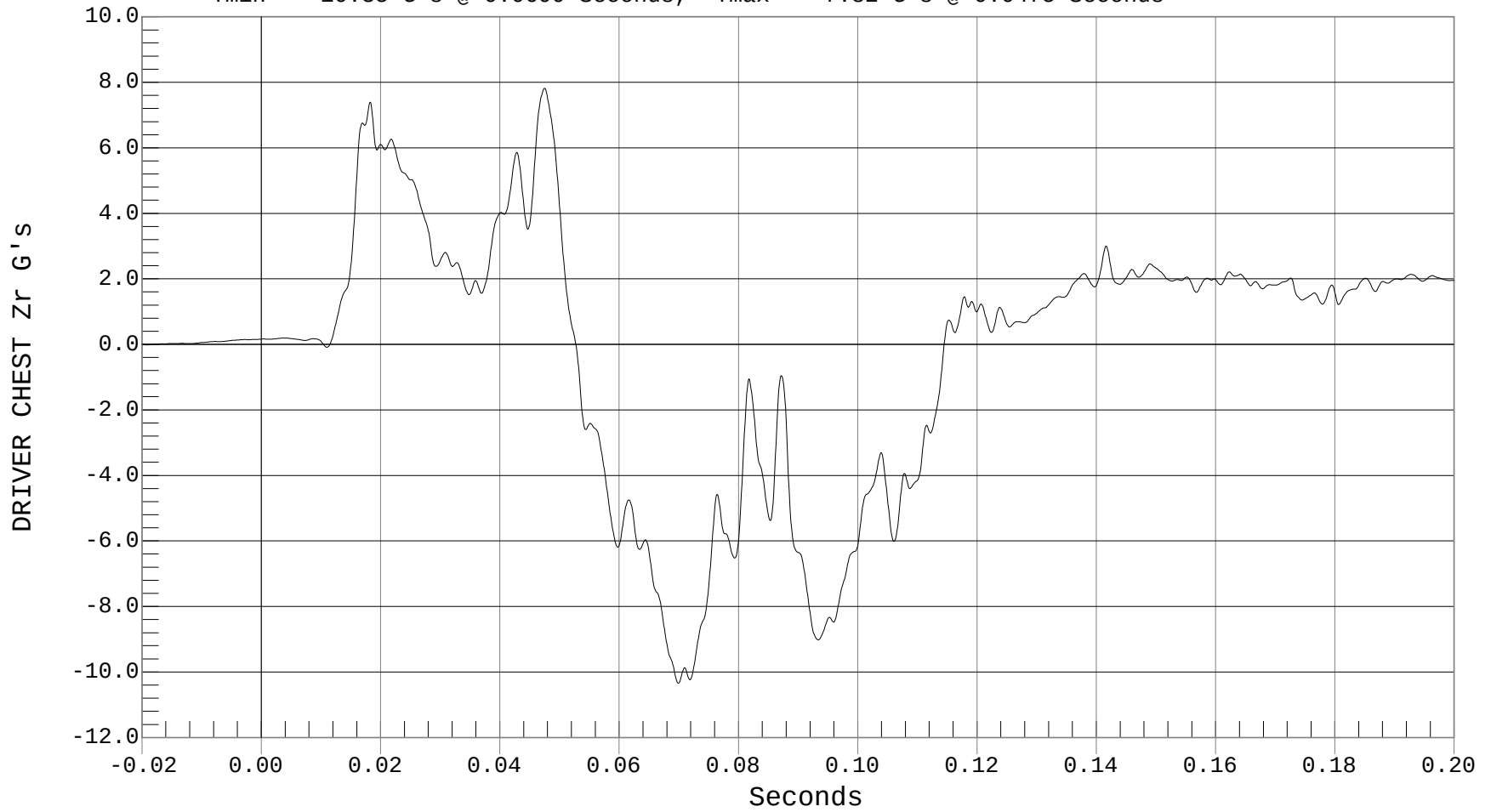
DRIVER CHEST REDUNDANT Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER CHEST Zr, B00089AF.A38

Ymin = -10.35 G's @ 0.0699 Seconds, Ymax = 7.82 G's @ 0.0475 Seconds





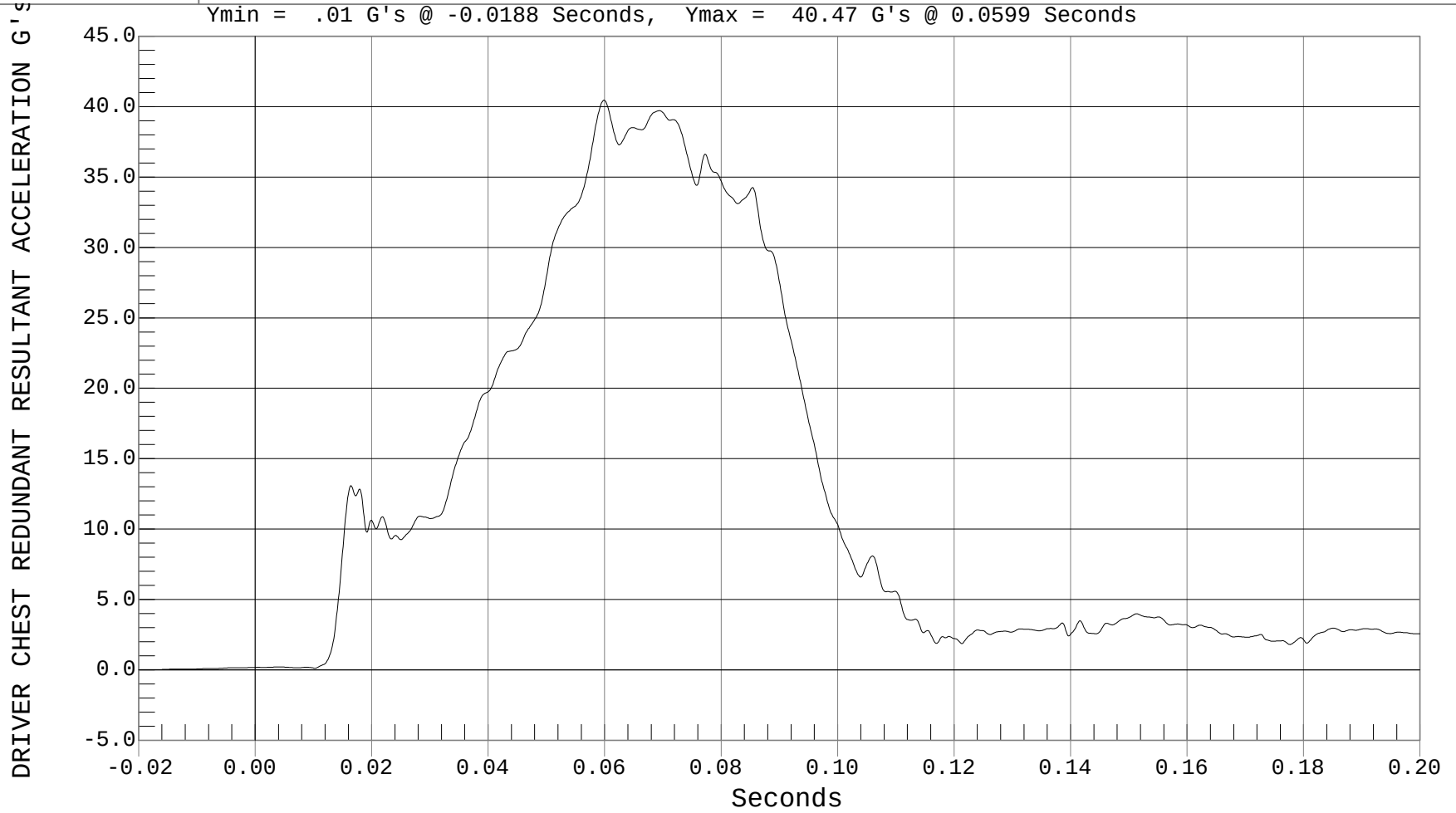
DRIVER CHEST REDUNDANT RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER CHEST REDUNDANT RESULTANT ACCELERATION, B00089AV.A36

Ymin = .01 G's @ -0.0188 Seconds, Ymax = 40.47 G's @ 0.0599 Seconds





DRIVER CHEST REDUNDANT X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

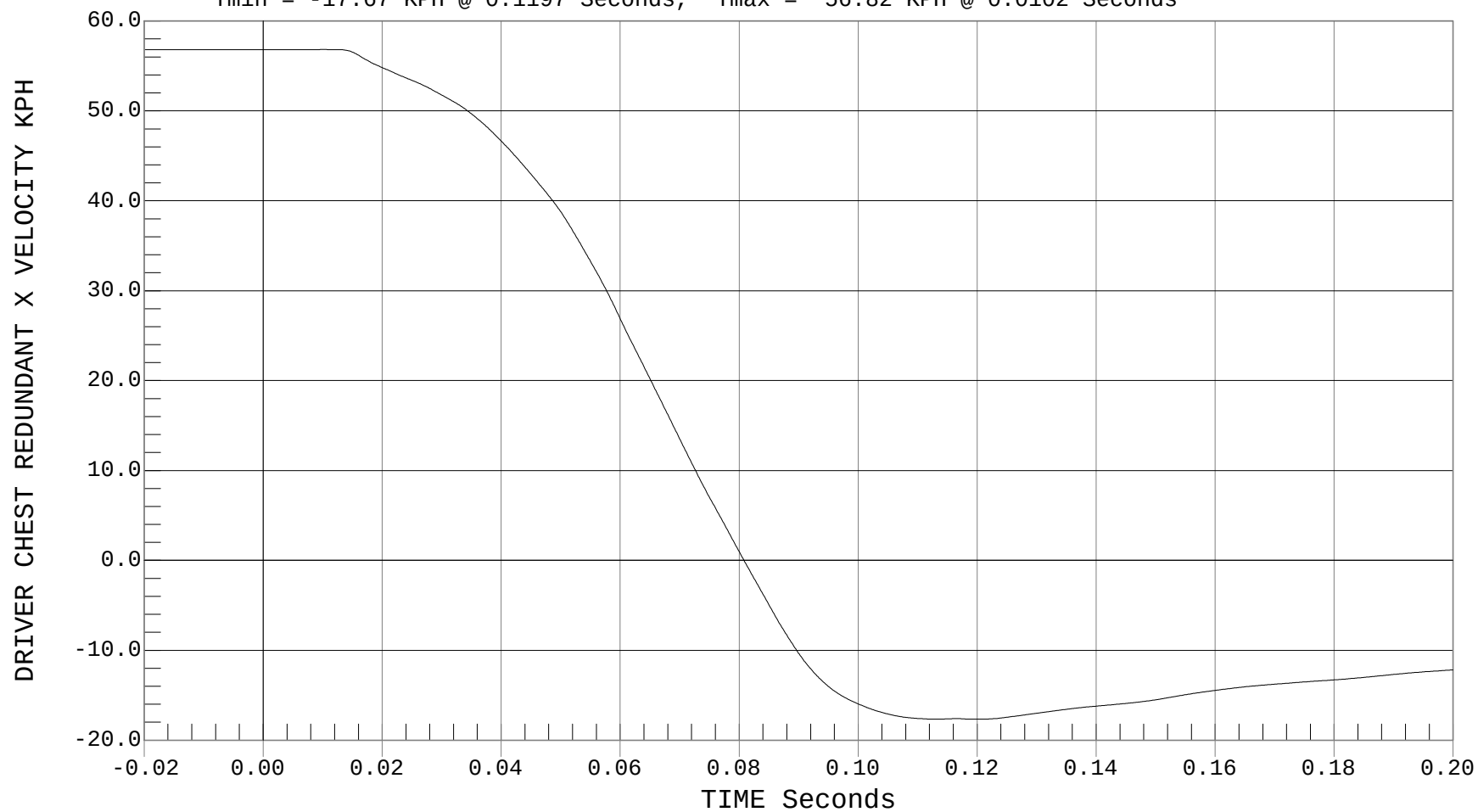
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 180

— 1 DRIVER CHEST REDUNDANT X VELOCITY, B00089AI.V36

Ymin = -17.67 KPH @ 0.1197 Seconds, Ymax = 56.82 KPH @ 0.0102 Seconds





DRIVER CHEST COMPRESSION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

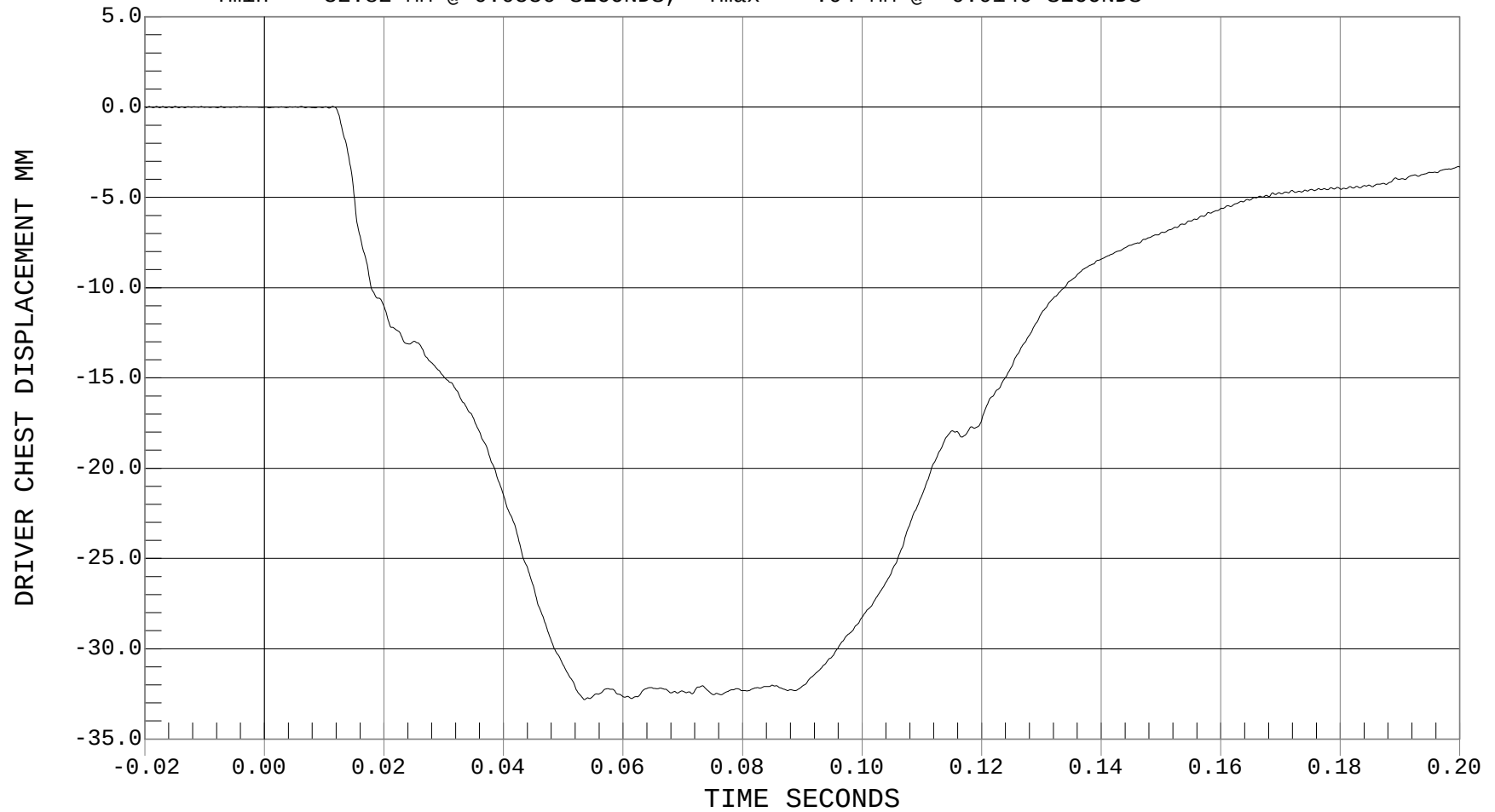
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER CHEST DISPLACEMENT, B00089DF.D13

Ymin = -32.82 MM @ 0.0536 SECONDS, Ymax = .04 MM @ -0.0149 SECONDS





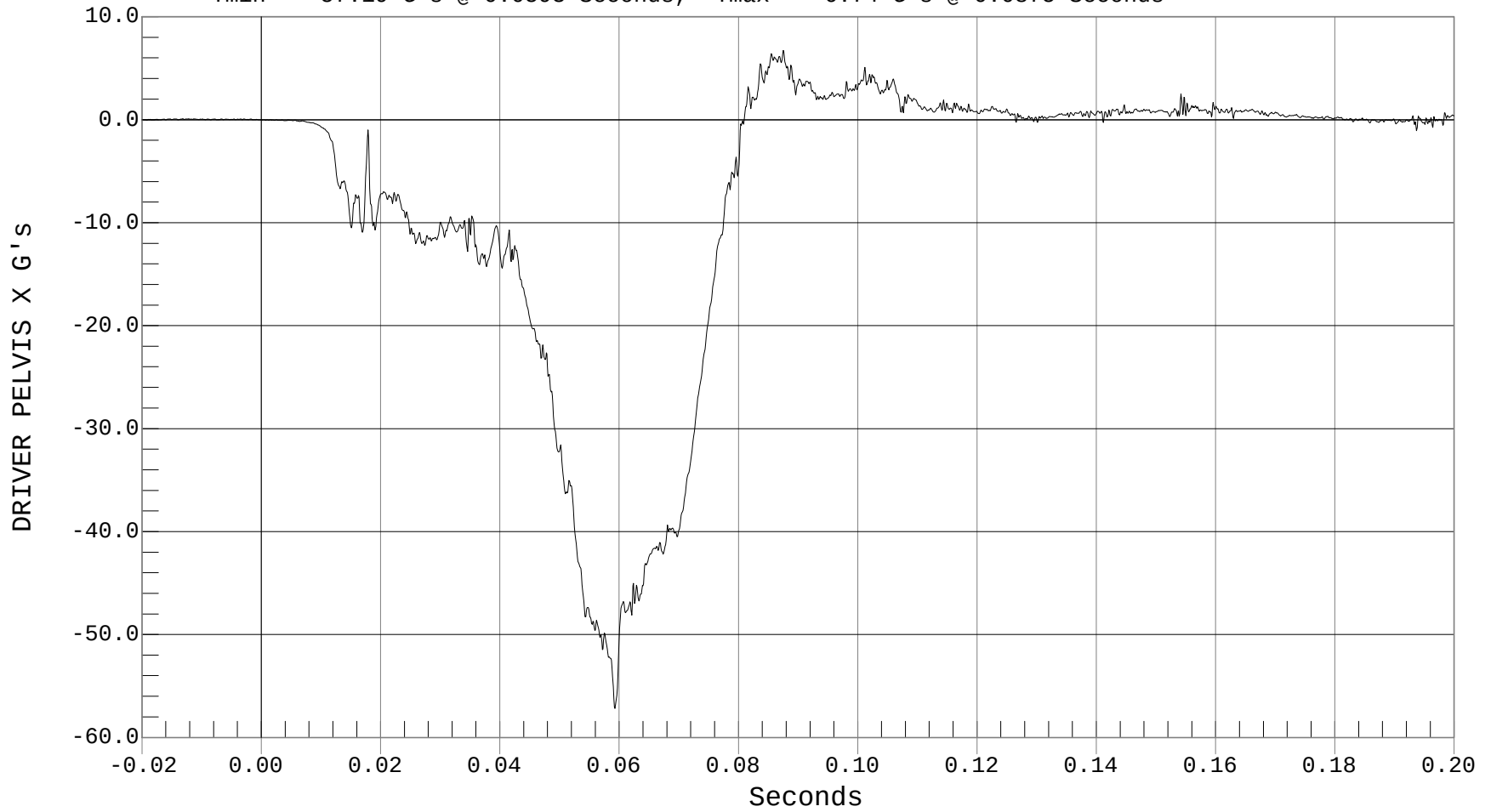
DRIVER PELVIS X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER PELVIS X, B00089AT.A14

Ymin = -57.19 G's @ 0.0593 Seconds, Ymax = 6.74 G's @ 0.0875 Seconds





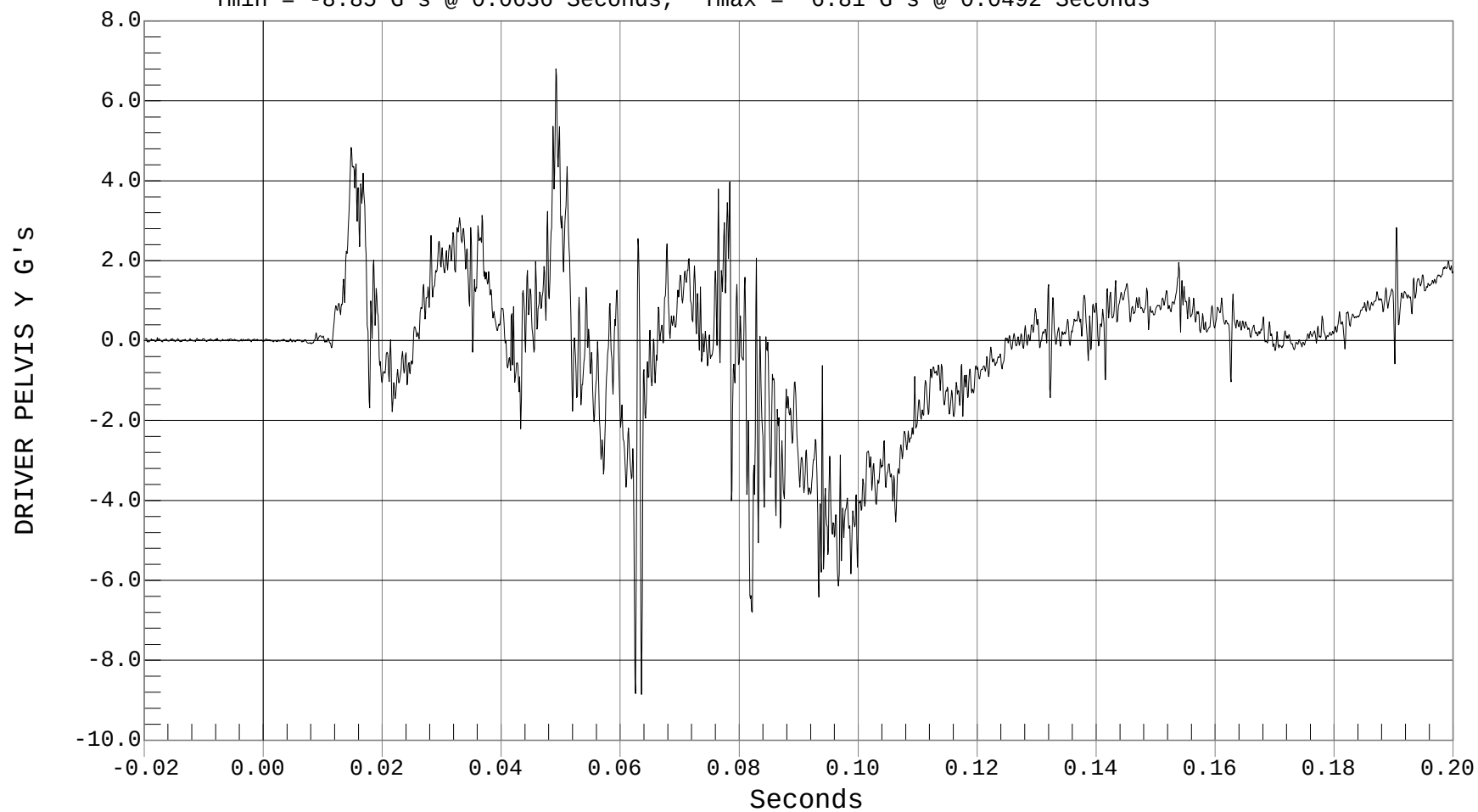
DRIVER PELVIS Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER PELVIS Y, B00089AT.A15

Ymin = -8.85 G's @ 0.0636 Seconds, Ymax = 6.81 G's @ 0.0492 Seconds





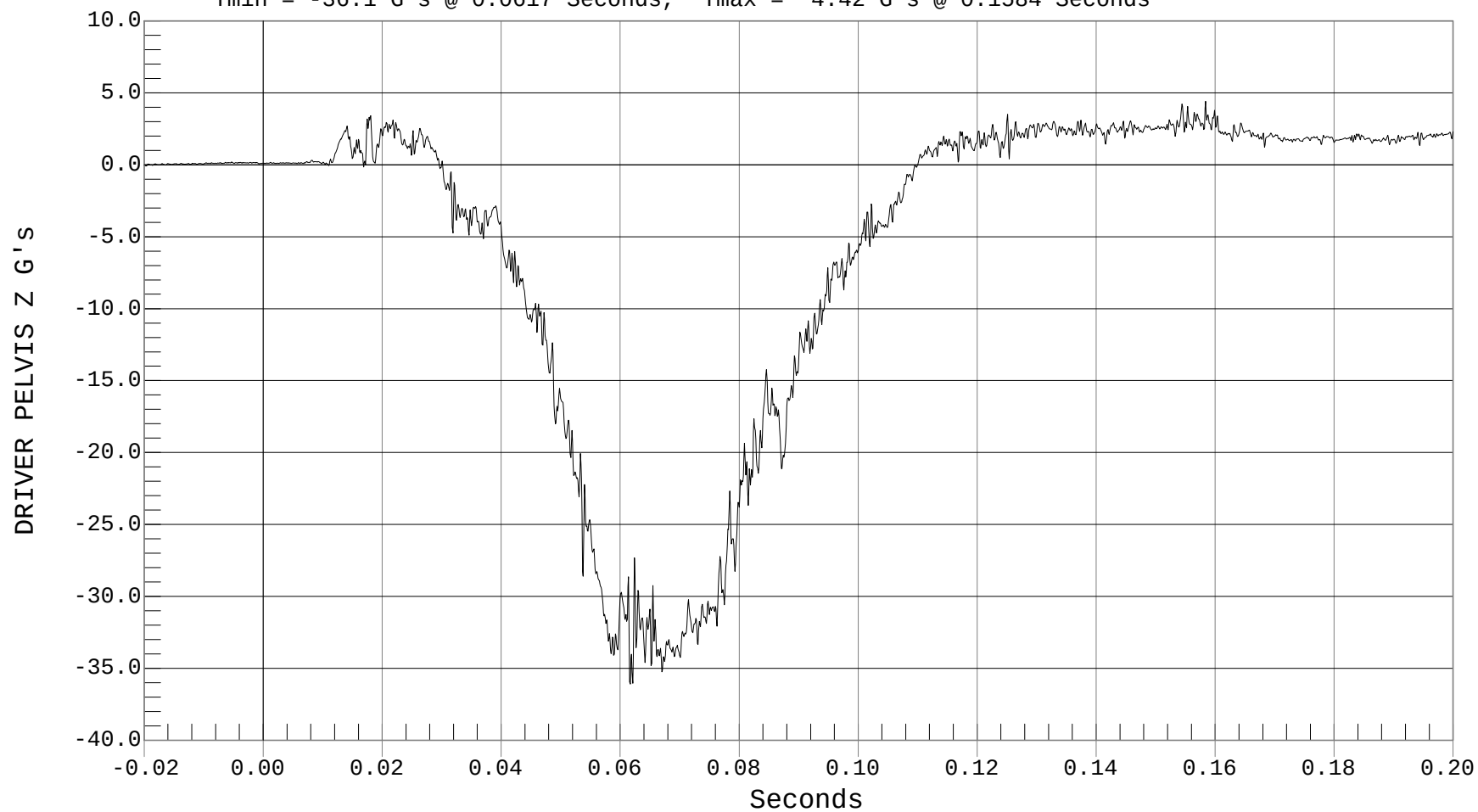
DRIVER PELVIS Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 DRIVER PELVIS Z, B00089AT.A16

Ymin = -36.1 G's @ 0.0617 Seconds, Ymax = 4.42 G's @ 0.1584 Seconds





DRIVER PELVIS RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

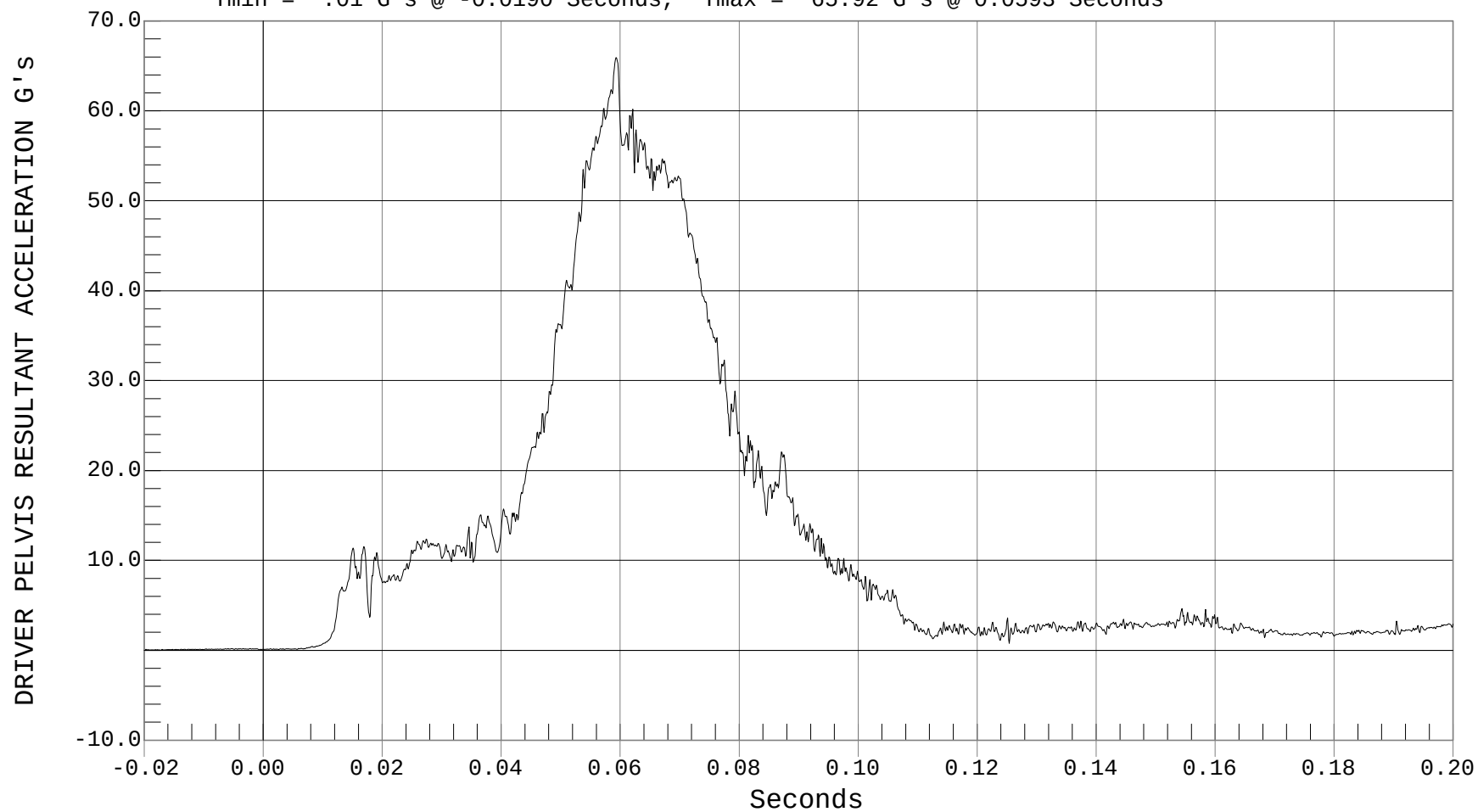
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 1000

— 1 DRIVER PELVIS RESULTANT ACCELERATION, B00089AV.A14

Ymin = .01 G's @ -0.0190 Seconds, Ymax = 65.92 G's @ 0.0593 Seconds





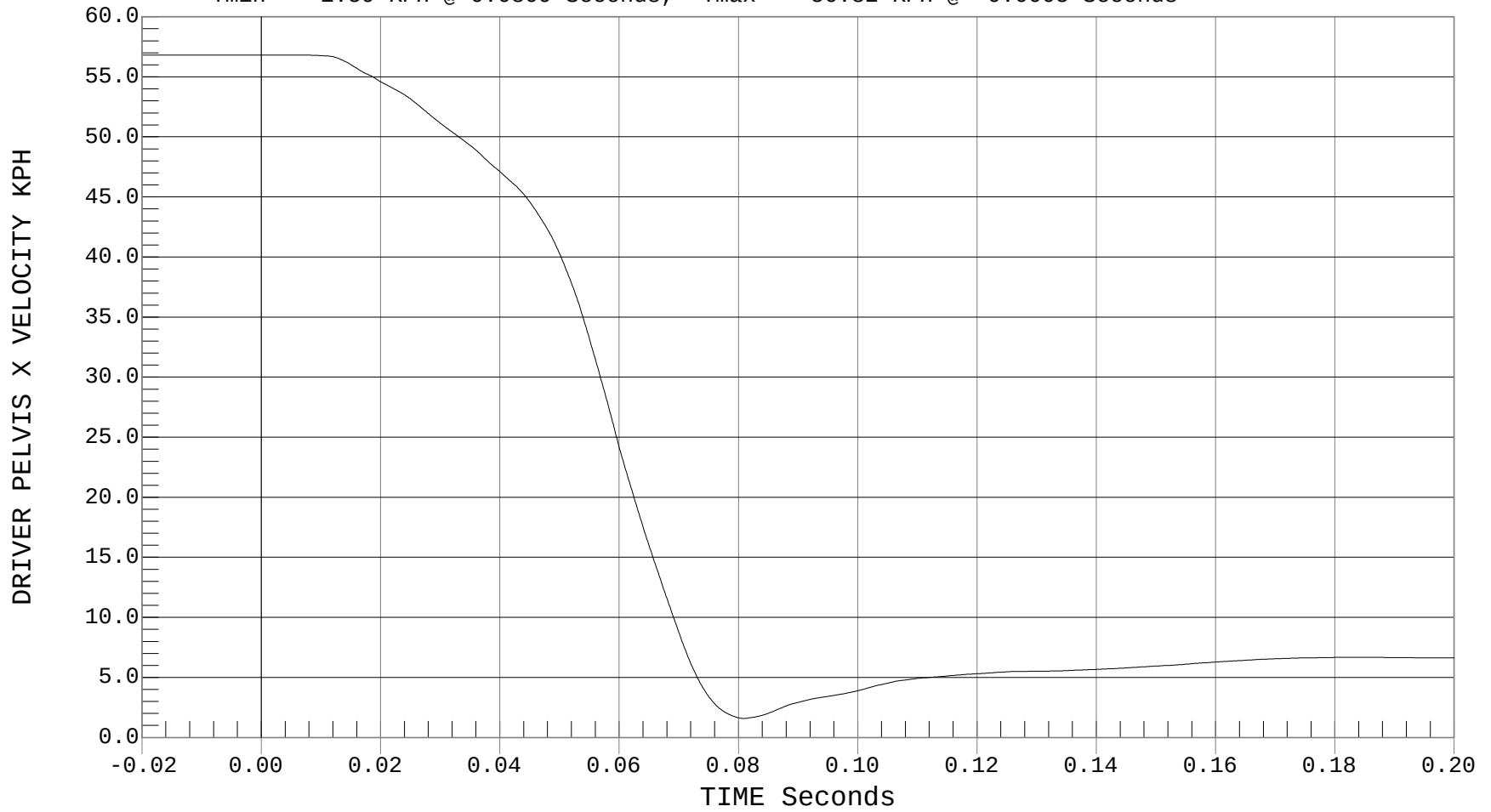
DRIVER PELVIS X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 DRIVER PELVIS X VELOCITY, B00089AI.V14

Ymin = 1.59 KPH @ 0.0809 Seconds, Ymax = 56.82 KPH @ -0.0005 Seconds





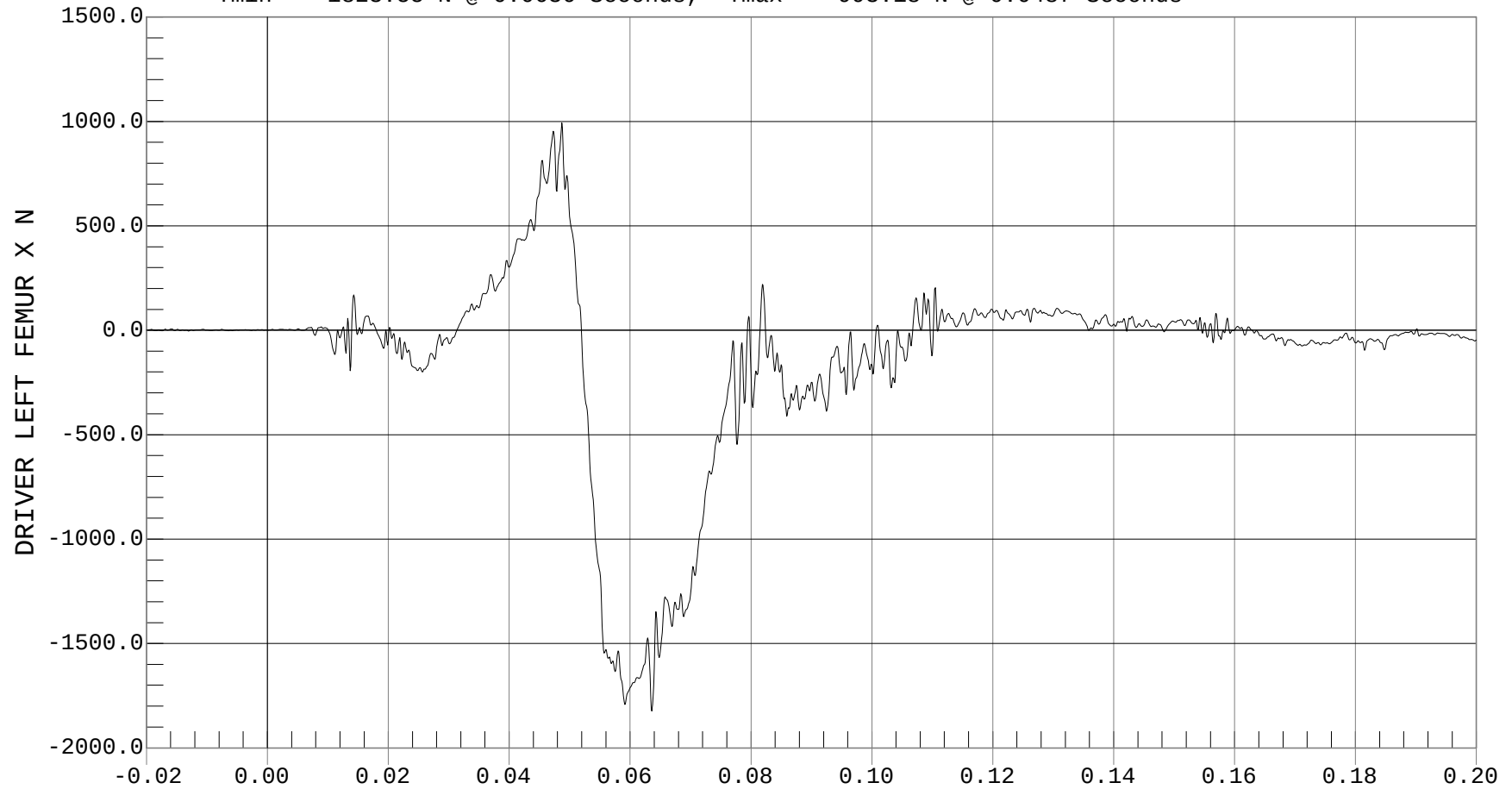
DRIVER LEFT FEMUR FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 DRIVER LEFT FEMUR X, B00089FF.F18

Ymin = -1823.55 N @ 0.0636 Seconds, Ymax = 993.18 N @ 0.0487 Seconds





DRIVER RIGHT FEMUR FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

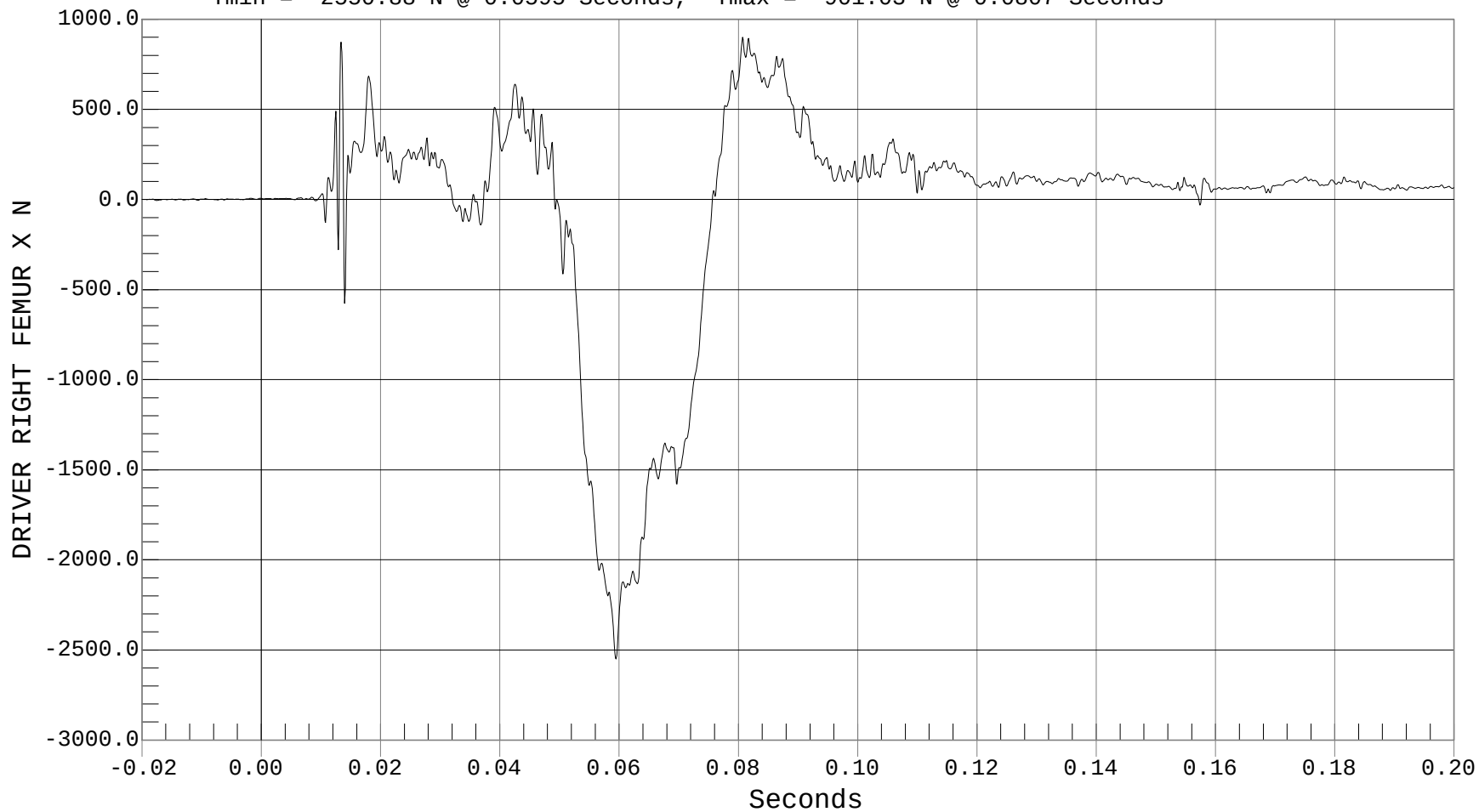
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER RIGHT FEMUR X, B00089FF.F17

Ymin = -2550.88 N @ 0.0595 Seconds, Ymax = 901.03 N @ 0.0807 Seconds





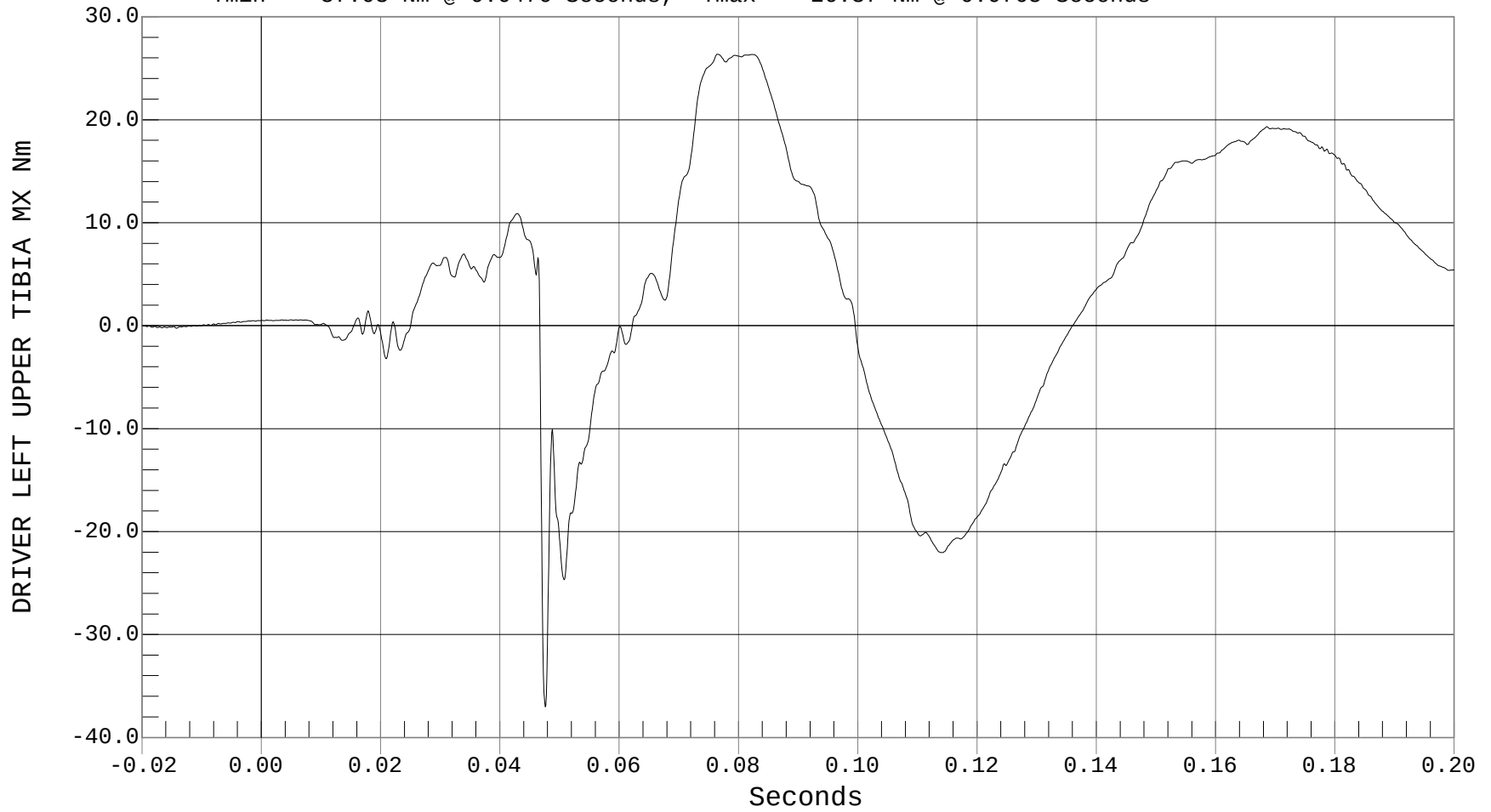
DRIVER LEFT UPPER TIBIA MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 DRIVER LEFT UPPER TIBIA MX, B00089MF.M75

Ymin = -37.03 Nm @ 0.0476 Seconds, Ymax = 26.37 Nm @ 0.0765 Seconds





DRIVER LEFT UPPER TIBIA MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

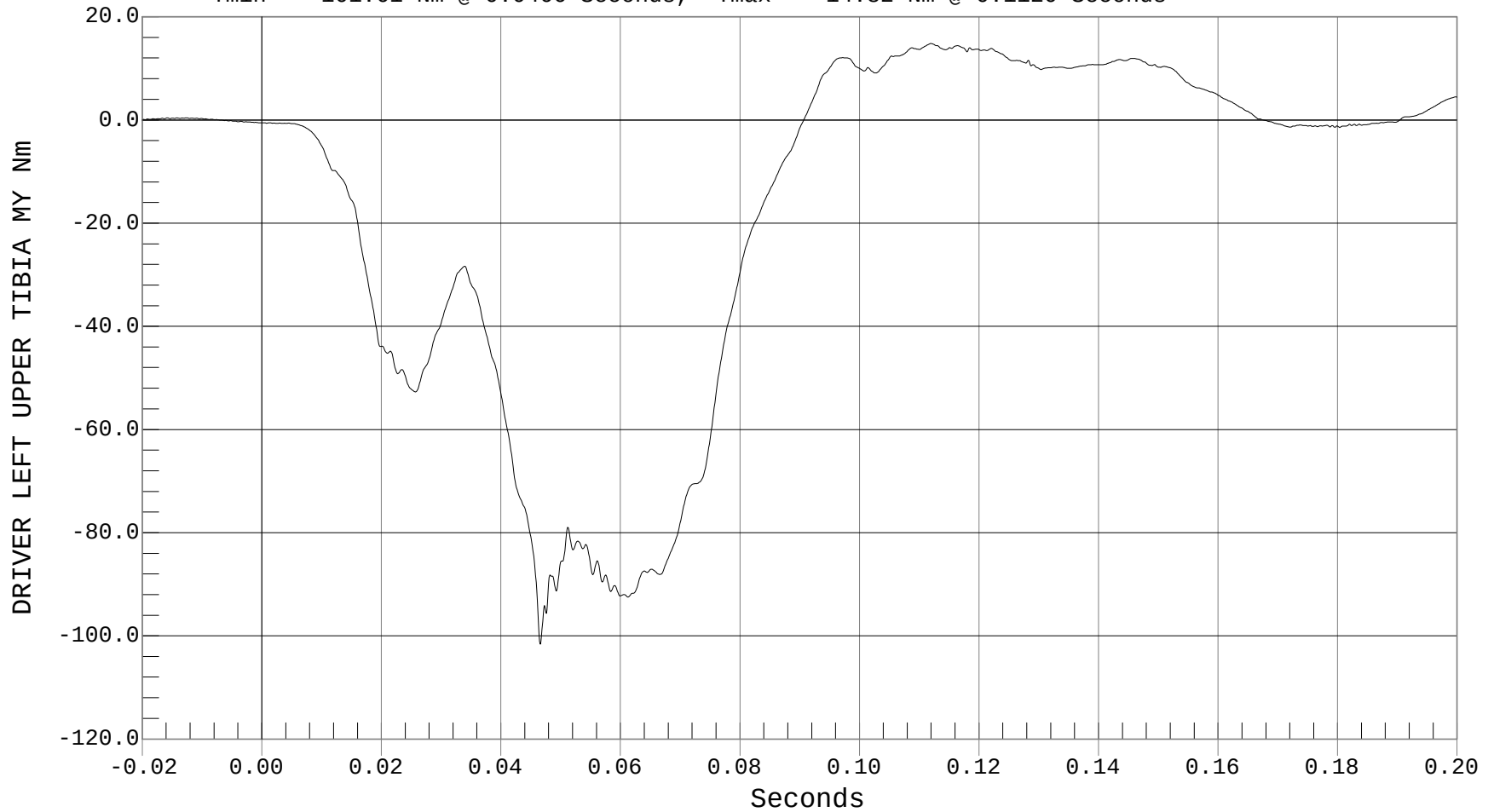
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER LEFT UPPER TIBIA MY, B00089MF.M76

Ymin = -101.61 Nm @ 0.0466 Seconds, Ymax = 14.82 Nm @ 0.1120 Seconds





DRIVER LEFT UPPER TIBIA FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

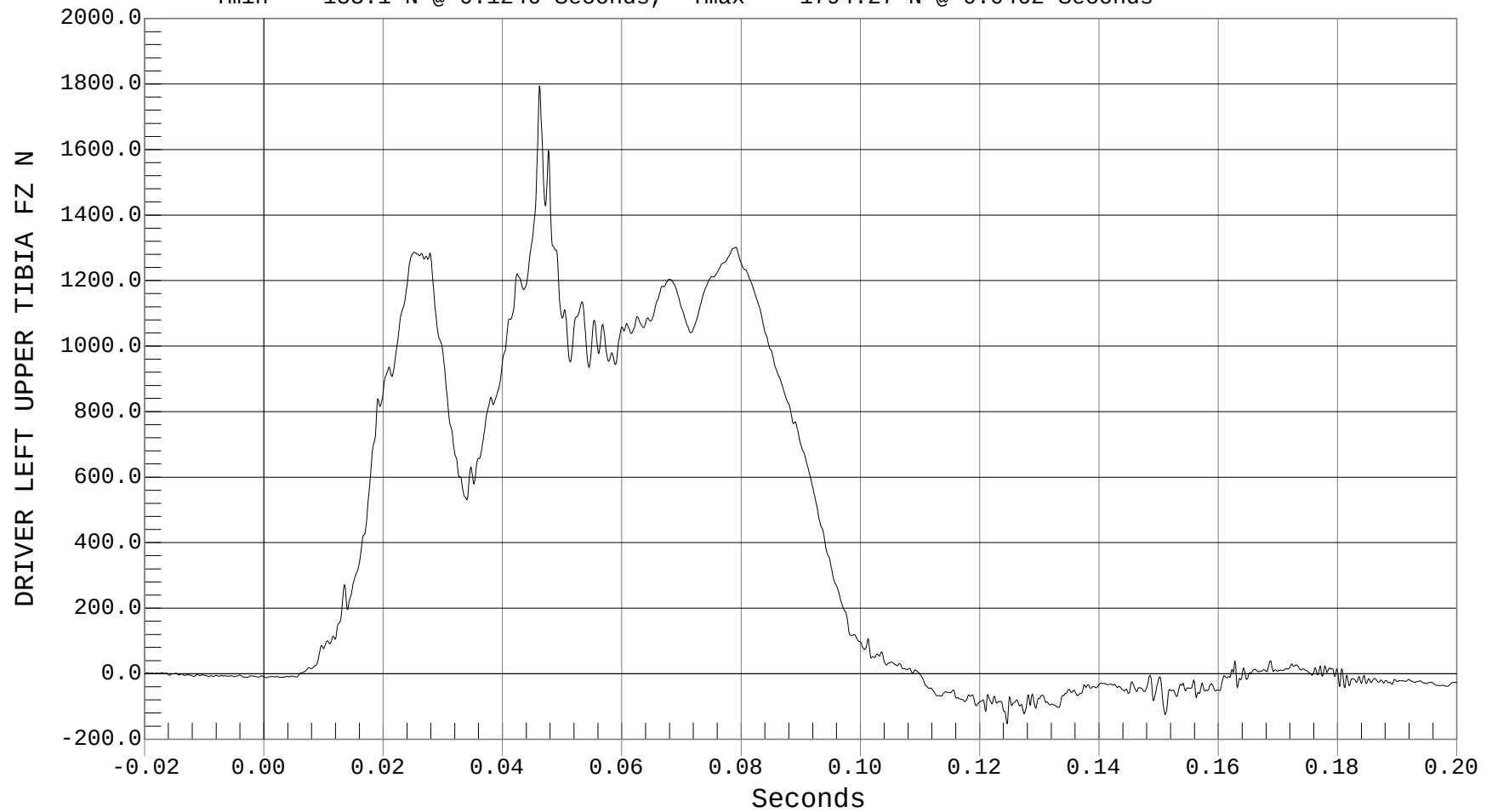
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER LEFT UPPER TIBIA FZ, B00089FF.F77

Ymin = -153.1 N @ 0.1246 Seconds, Ymax = 1794.27 N @ 0.0462 Seconds





DRIVER LEFT LOWER TIBIA MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

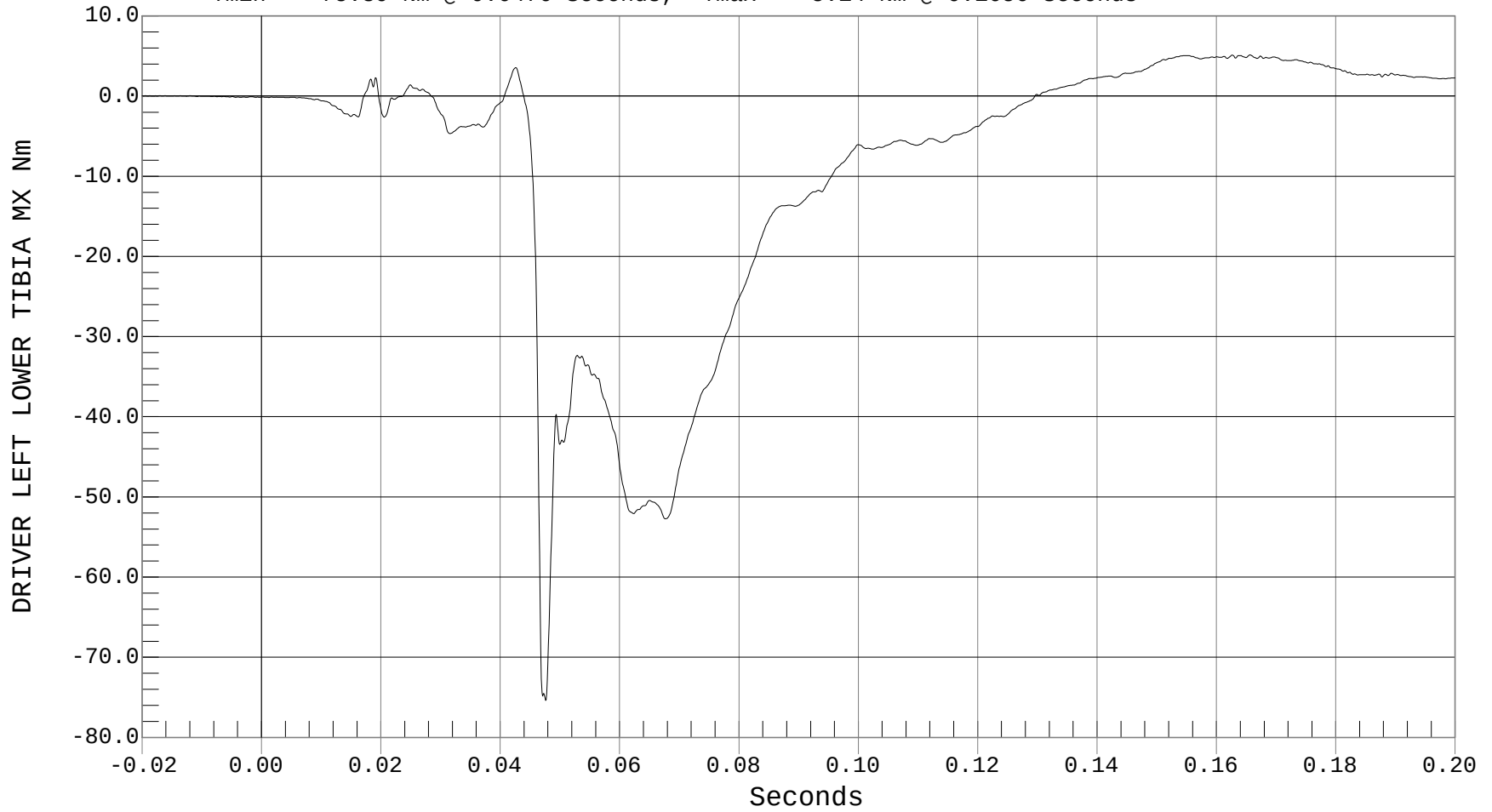
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER LEFT LOWER TIBIA MX, B00089MF.M78

Ymin = -75.39 Nm @ 0.0476 Seconds, Ymax = 5.14 Nm @ 0.1656 Seconds





DRIVER LEFT LOWER TIBIA MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

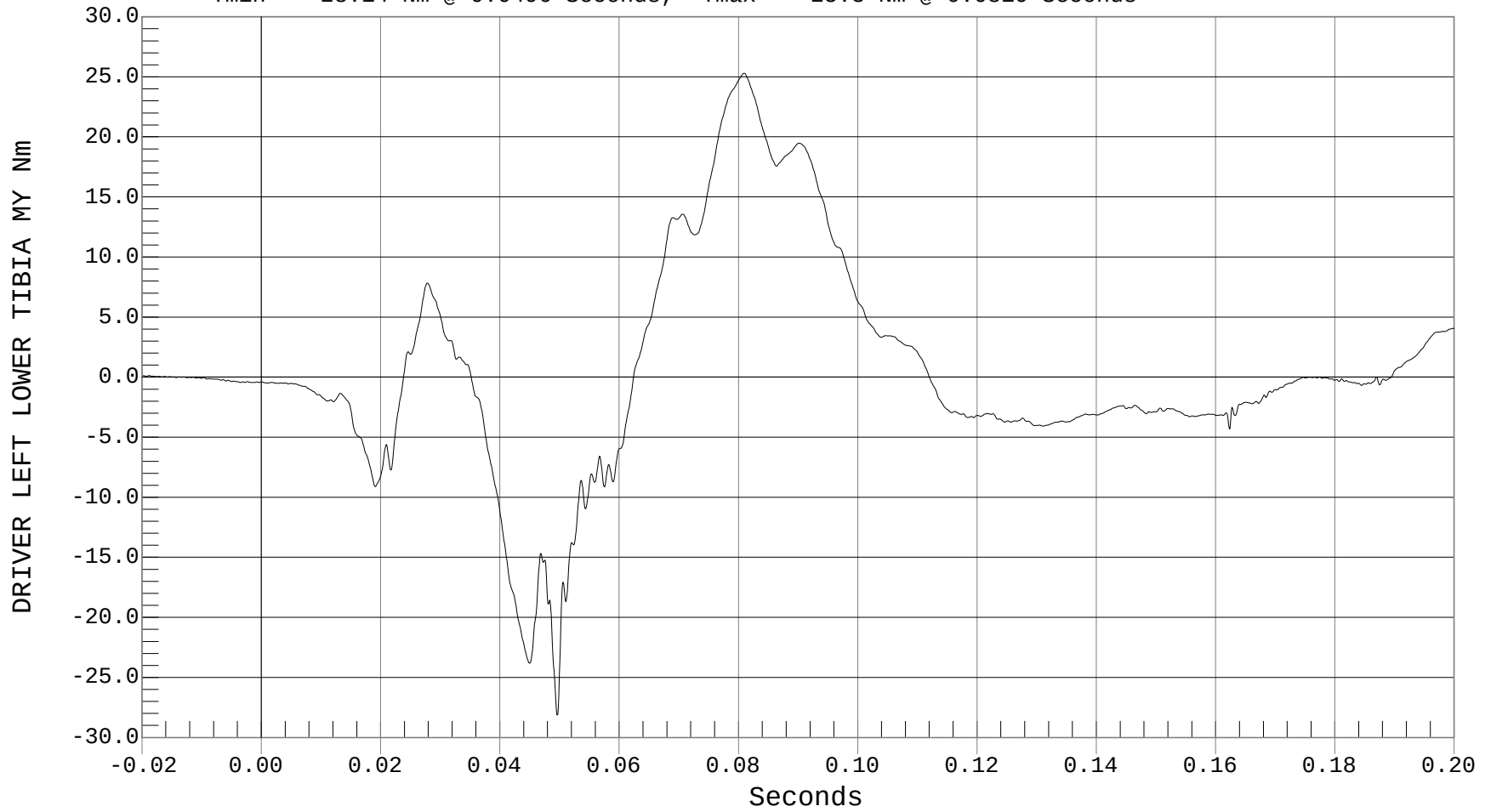
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER LEFT LOWER TIBIA MY, B00089MF.M79

Ymin = -28.14 Nm @ 0.0496 Seconds, Ymax = 25.3 Nm @ 0.0810 Seconds





DRIVER LEFT LOWER TIBIA FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

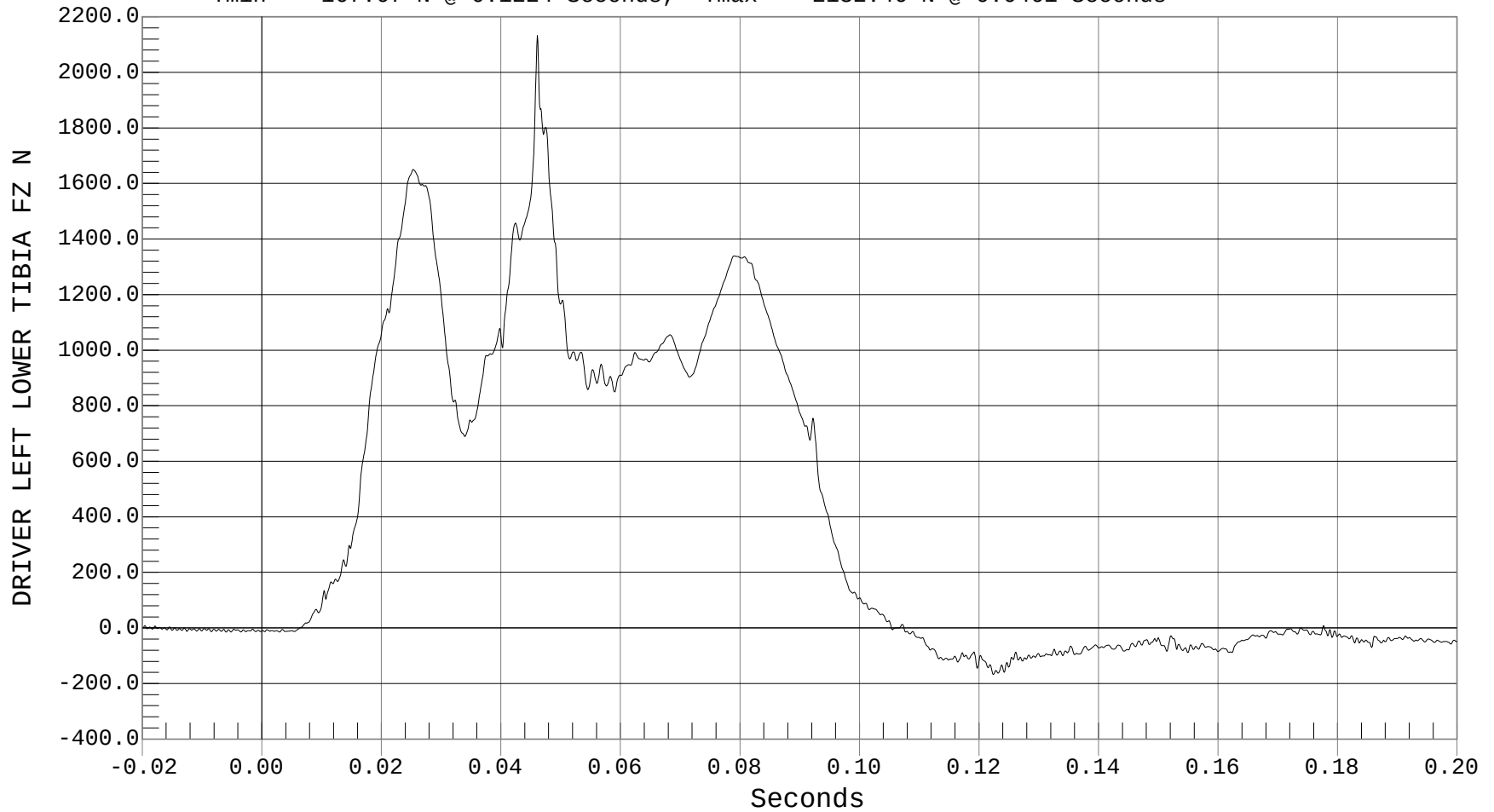
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER LEFT LOWER TIBIA FZ, B00089FF.F80

Ymin = -167.67 N @ 0.1224 Seconds, Ymax = 2132.46 N @ 0.0461 Seconds





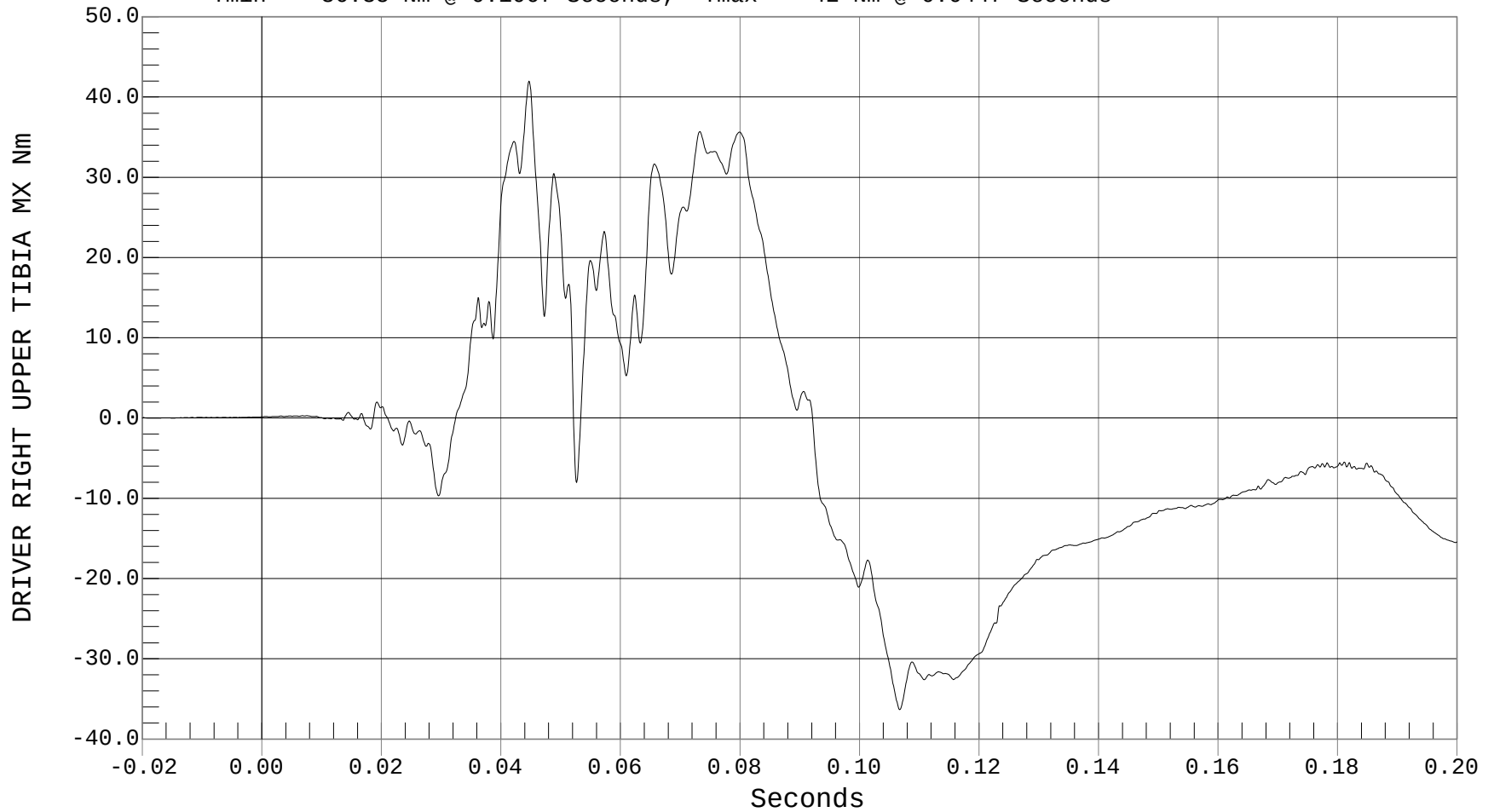
DRIVER RIGHT UPPER TIBIA MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 DRIVER RIGHT UPPER TIBIA MX, B00089MF.M69

Ymin = -36.35 Nm @ 0.1067 Seconds, Ymax = 42 Nm @ 0.0447 Seconds





DRIVER RIGHT UPPER TIBIA MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

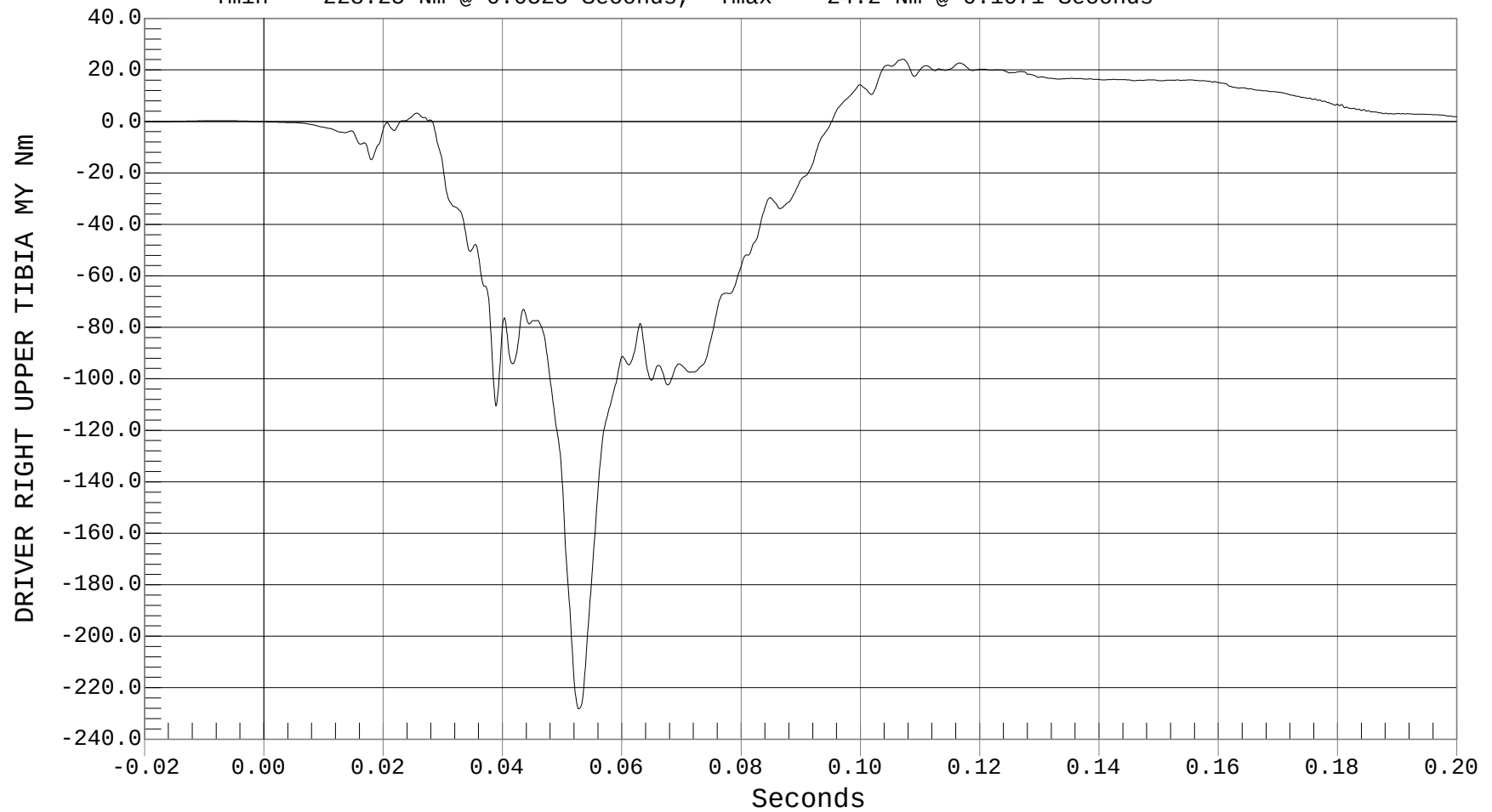
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER RIGHT UPPER TIBIA MY, B00089MF.M70

Ymin = -228.25 Nm @ 0.0528 Seconds, Ymax = 24.2 Nm @ 0.1071 Seconds





DRIVER RIGHT UPPER TIBIA FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 D00R

Other Info:

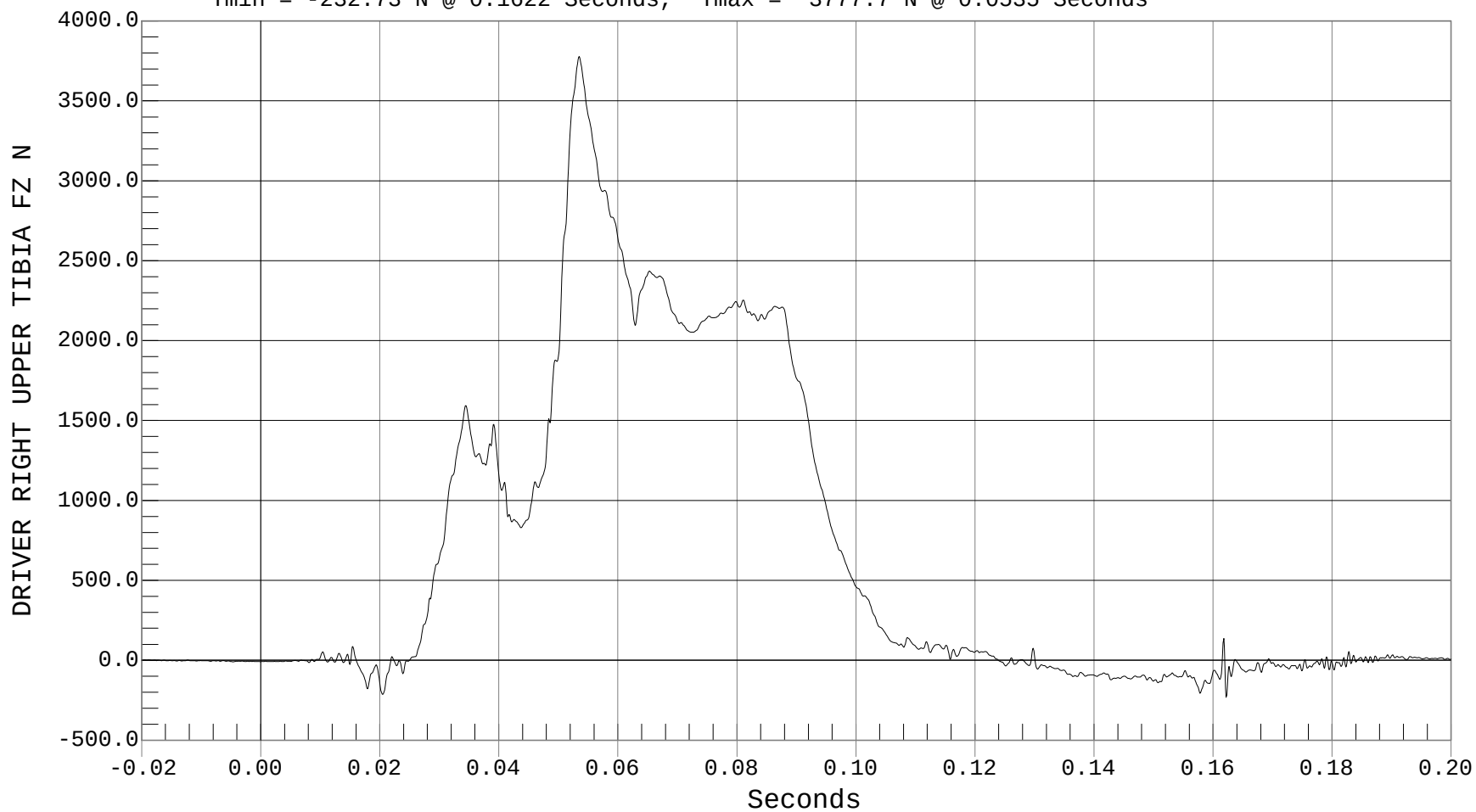
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER RIGHT UPPER TIBIA FZ, B00089FF.F71

Ymin = -232.73 N @ 0.1622 Seconds, Ymax = 3777.7 N @ 0.0535 Seconds





DRIVER RIGHT LOWER TIBIA MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

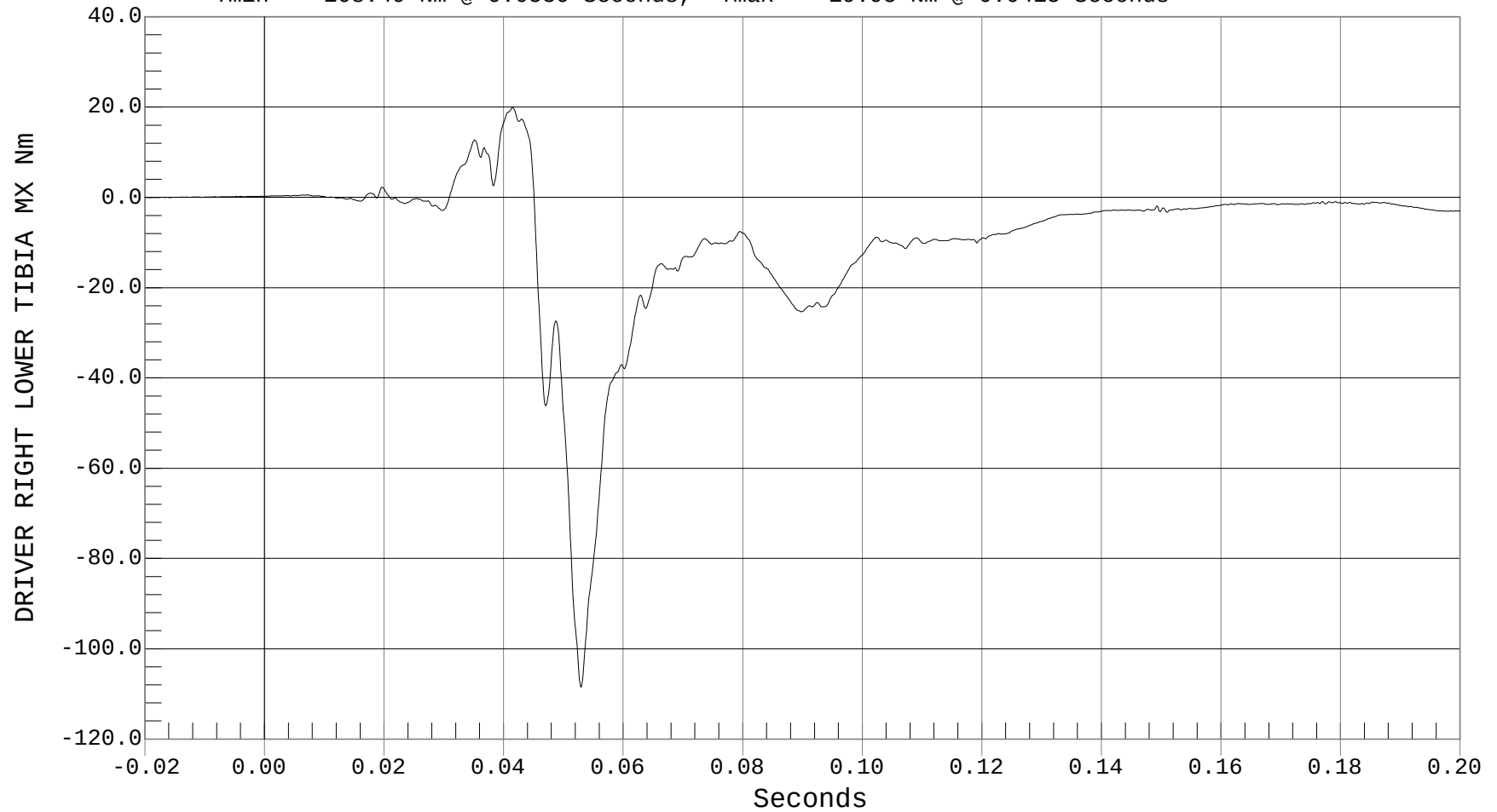
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER RIGHT LOWER TIBIA MX, B00089MF.M72

Ymin = -108.49 Nm @ 0.0530 Seconds, Ymax = 19.95 Nm @ 0.0415 Seconds





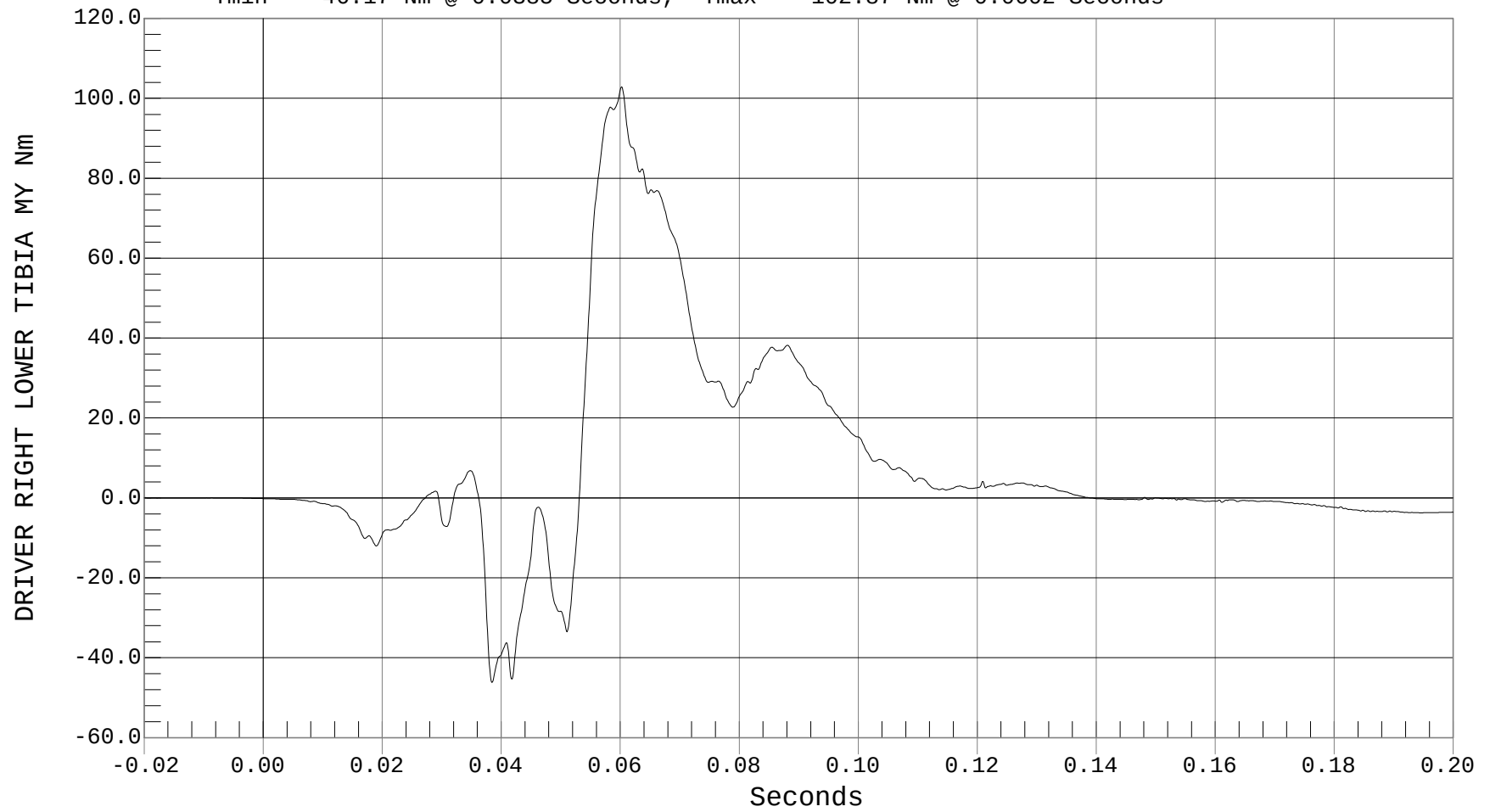
DRIVER RIGHT LOWER TIBIA MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 DRIVER RIGHT LOWER TIBIA MY, B00089MF.M73

Ymin = -46.17 Nm @ 0.0385 Seconds, Ymax = 102.87 Nm @ 0.0602 Seconds





DRIVER RIGHT LOWER TIBIA FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 D00R

Other Info:

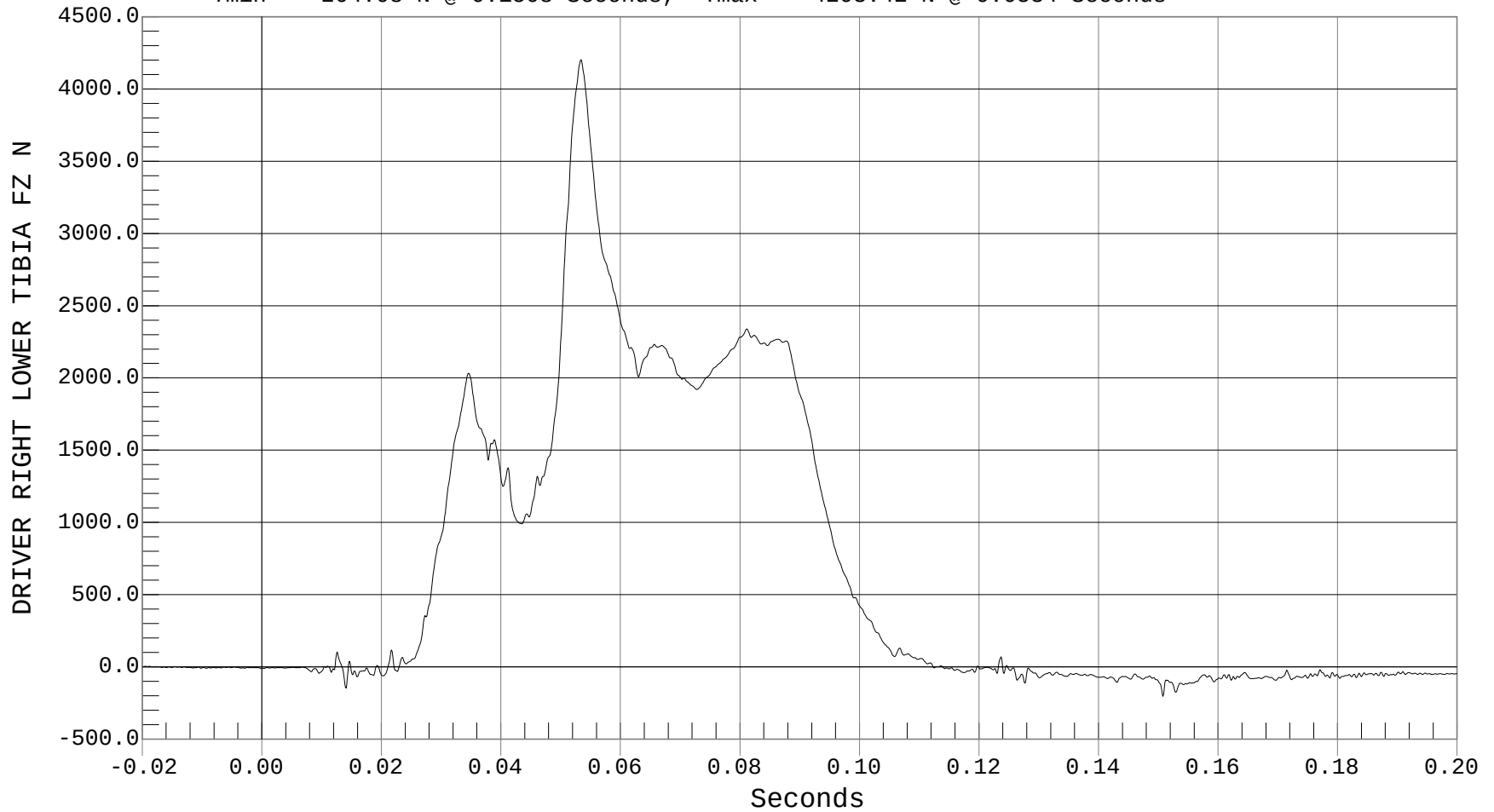
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 DRIVER RIGHT LOWER TIBIA FZ, B00089FF.F74

Ymin = -204.08 N @ 0.1508 Seconds, Ymax = 4203.42 N @ 0.0534 Seconds





DRIVER LEFT FOOT @ BALL Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

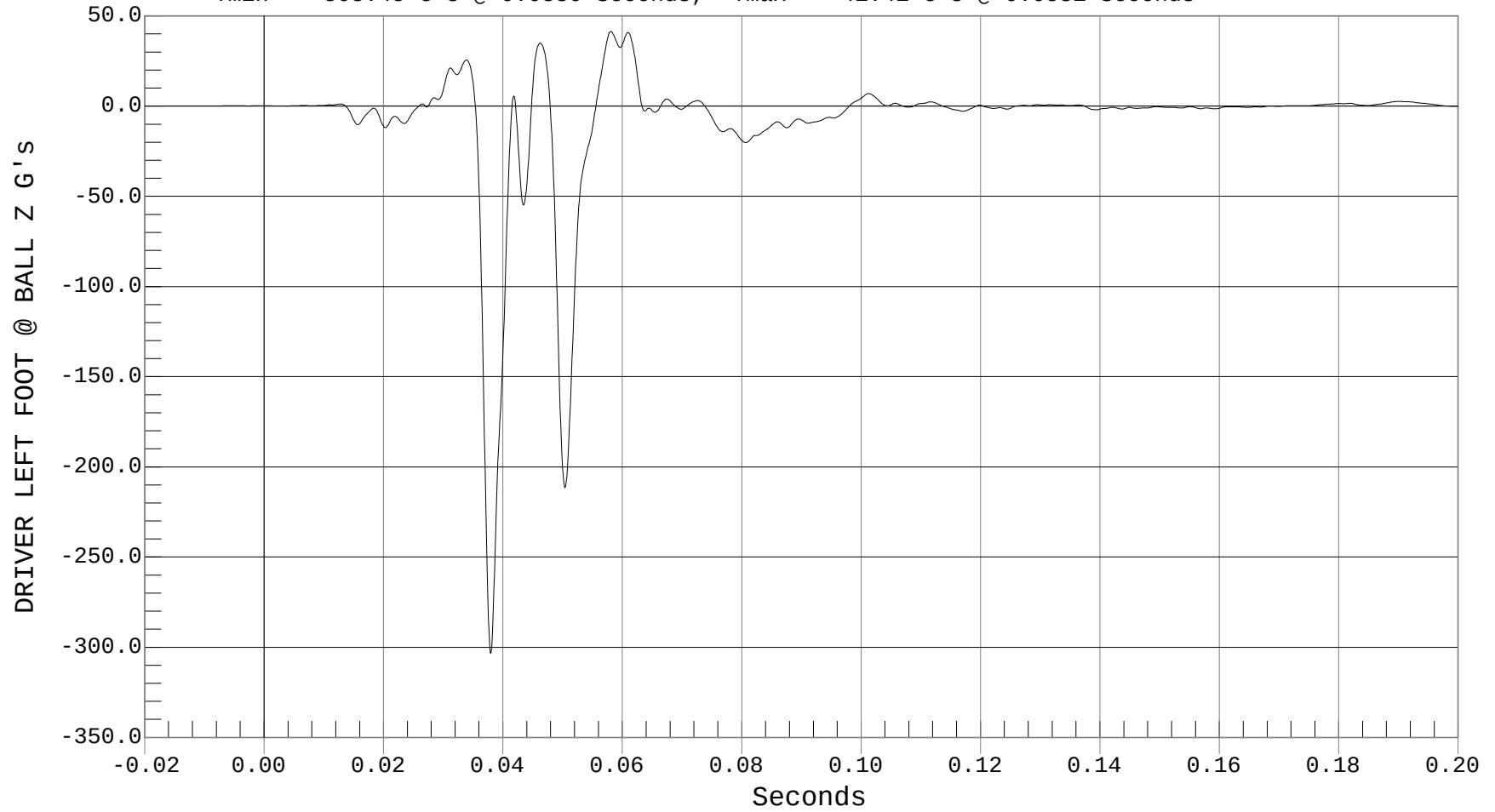
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 DRIVER LEFT FOOT @ BALL Z, C00089AF.A12

Ymin = -303.45 G's @ 0.0380 Seconds, Ymax = 41.41 G's @ 0.0581 Seconds





DRIVER LEFT FOOT @ HEEL X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 D00R

Other Info:

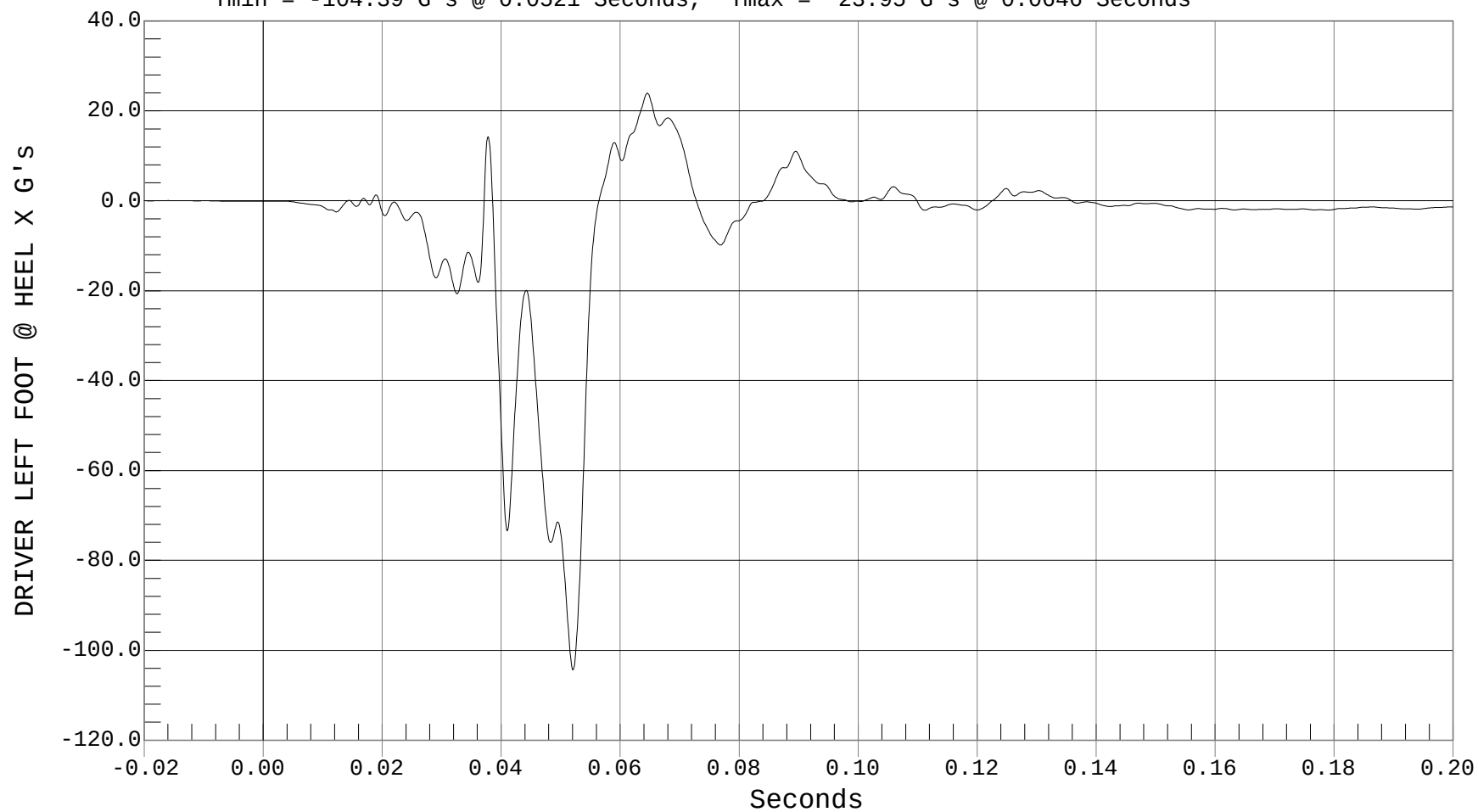
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 DRIVER LEFT FOOT @ HEEL X, C00089AF.A10

Ymin = -104.39 G's @ 0.0521 Seconds, Ymax = 23.95 G's @ 0.0646 Seconds





DRIVER LEFT FOOT @ HEEL Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 D00R

Other Info:

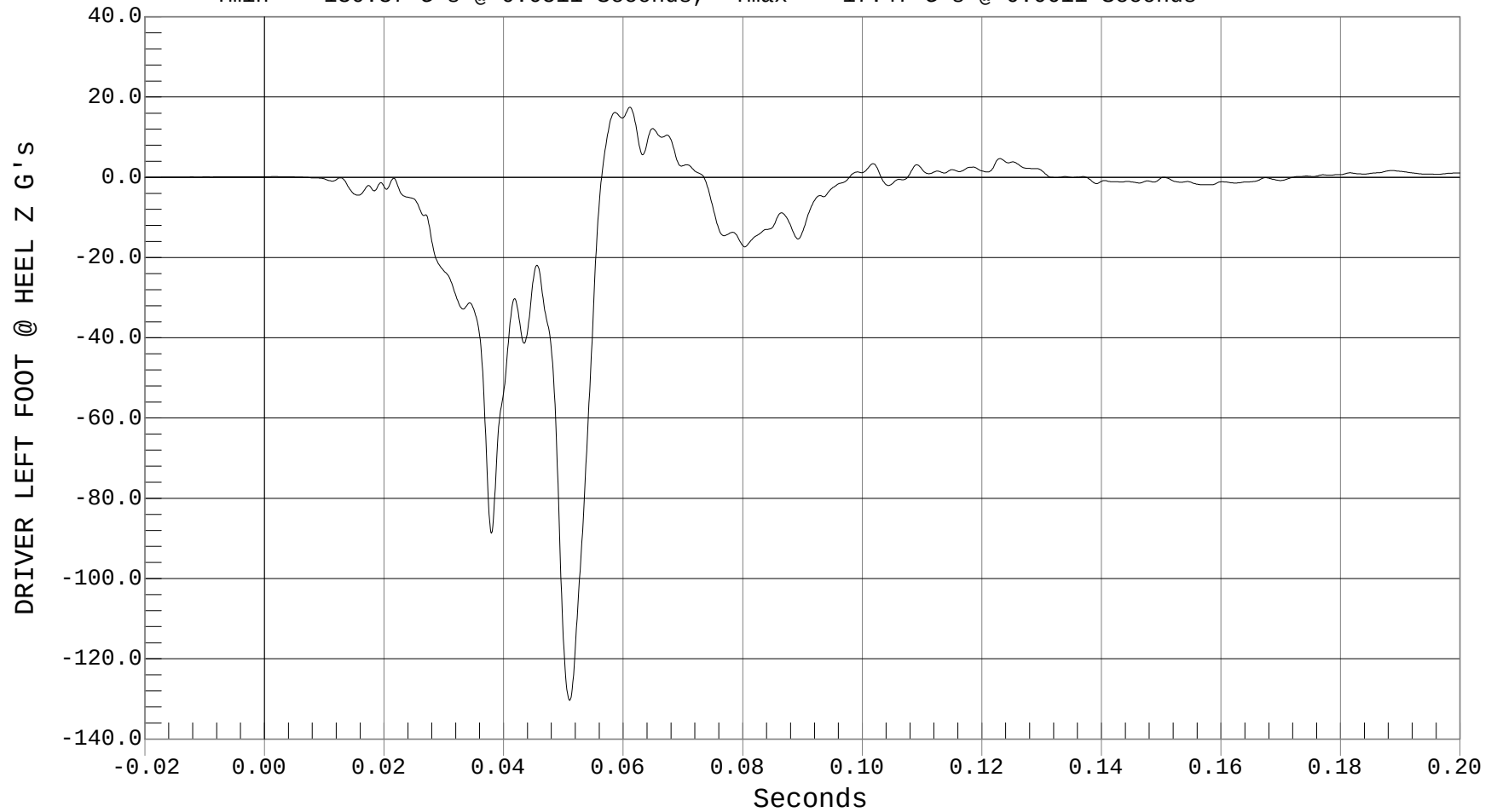
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 DRIVER LEFT FOOT @ HEEL Z, C00089AF.A11

Ymin = -130.37 G's @ 0.0511 Seconds, Ymax = 17.47 G's @ 0.0611 Seconds





DRIVER RIGHT FOOT @ BALL Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 D00R

Other Info:

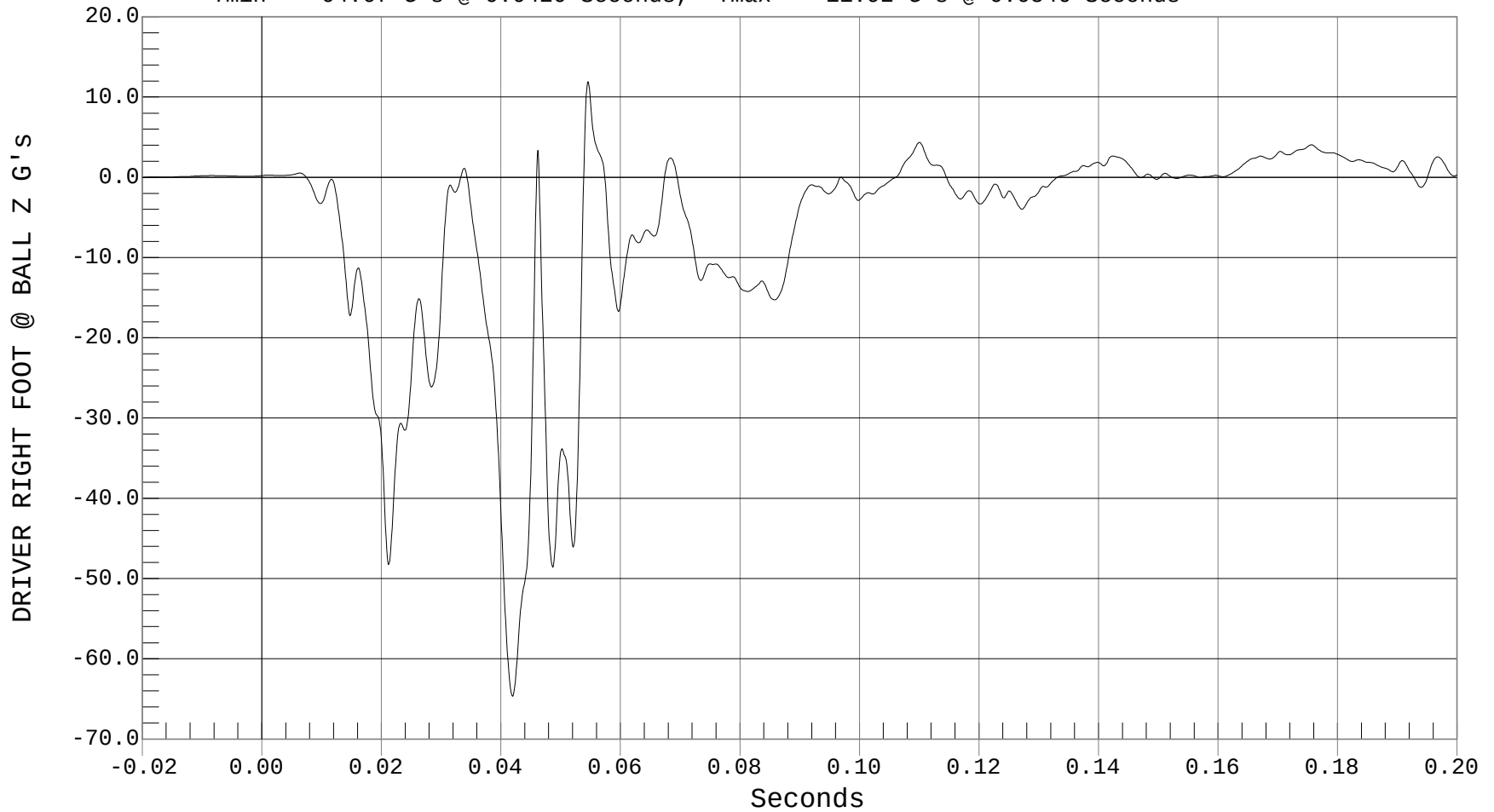
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 DRIVER RIGHT FOOT @ BALL Z, B00089AF.A95

Ymin = -64.67 G's @ 0.0420 Seconds, Ymax = 11.92 G's @ 0.0546 Seconds





DRIVER RIGHT FOOT @ HEEL X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

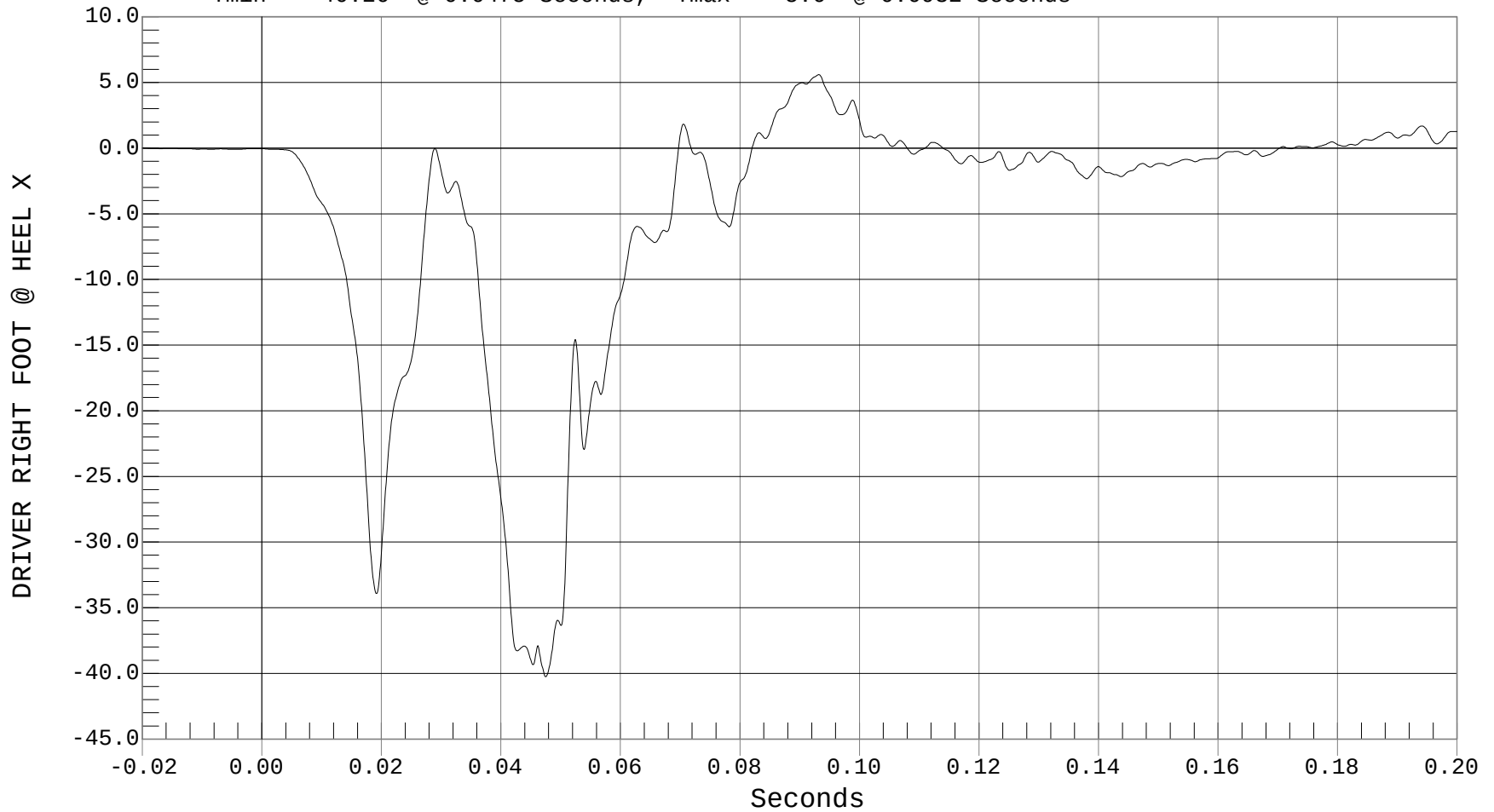
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 DRIVER RIGHT FOOT @ HEEL X, B00089AF.A93

Ymin = -40.26 @ 0.0475 Seconds, Ymax = 5.6 @ 0.0932 Seconds





DRIVER RIGHT FOOT @ HEEL Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 D00R

Other Info:

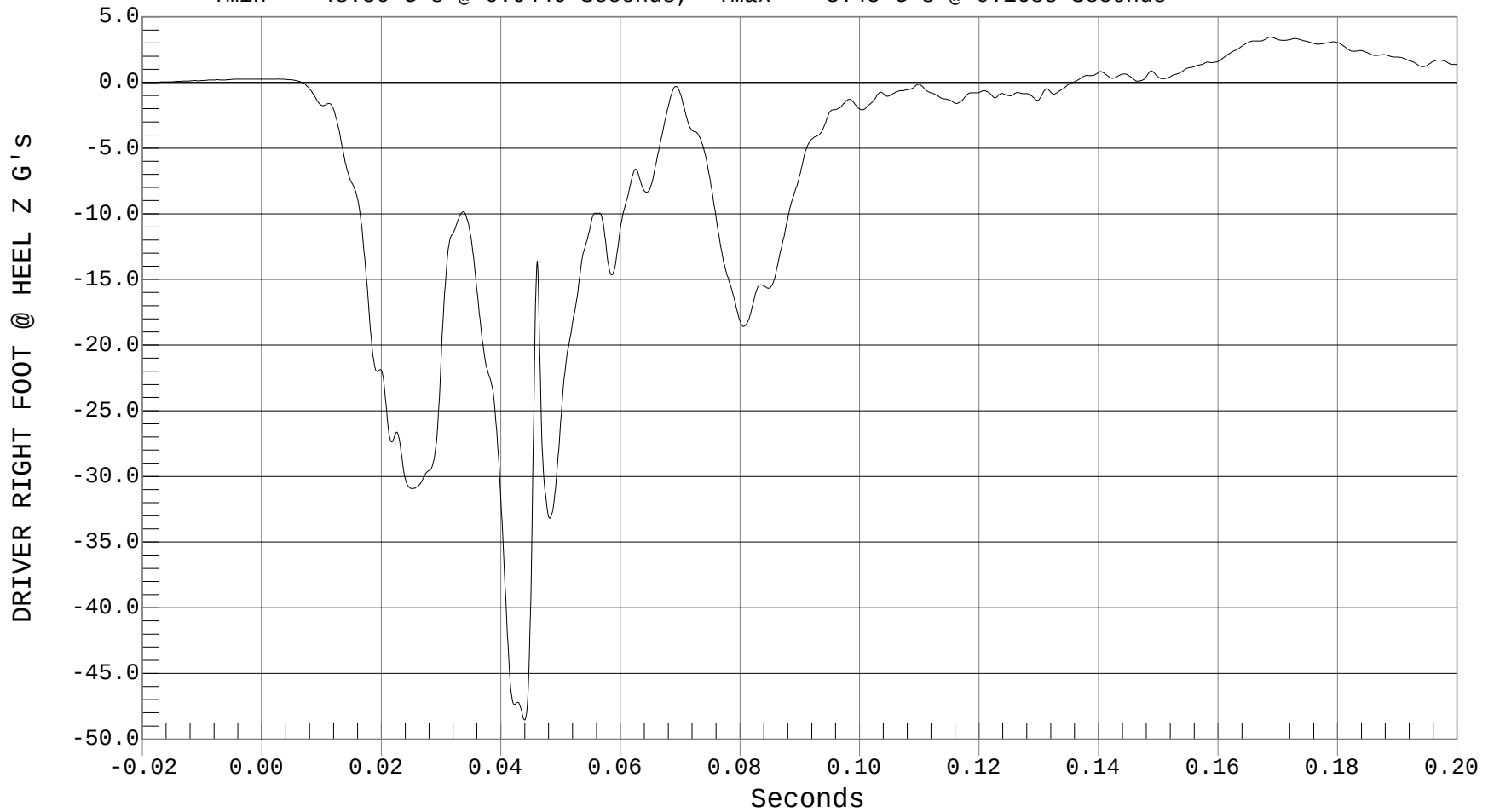
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 DRIVER RIGHT FOOT @ HEEL Z, B00089AF.A94

Ymin = -48.56 G's @ 0.0440 Seconds, Ymax = 3.45 G's @ 0.1688 Seconds





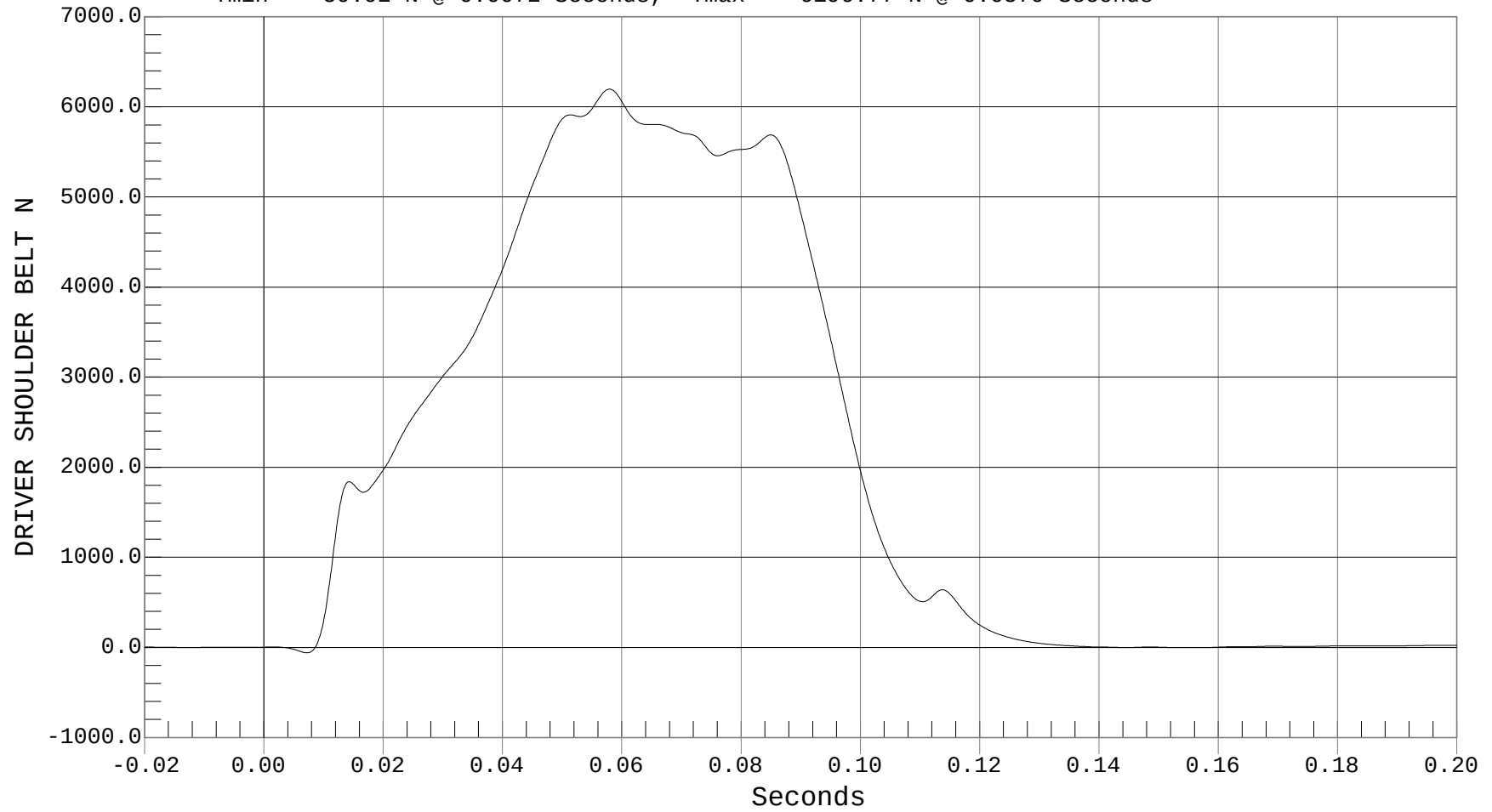
DRIVER SHOULDER BELT FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 DRIVER SHOULDER BELT, B00089FF.F65

Ymin = -59.92 N @ 0.0072 Seconds, Ymax = 6196.77 N @ 0.0579 Seconds





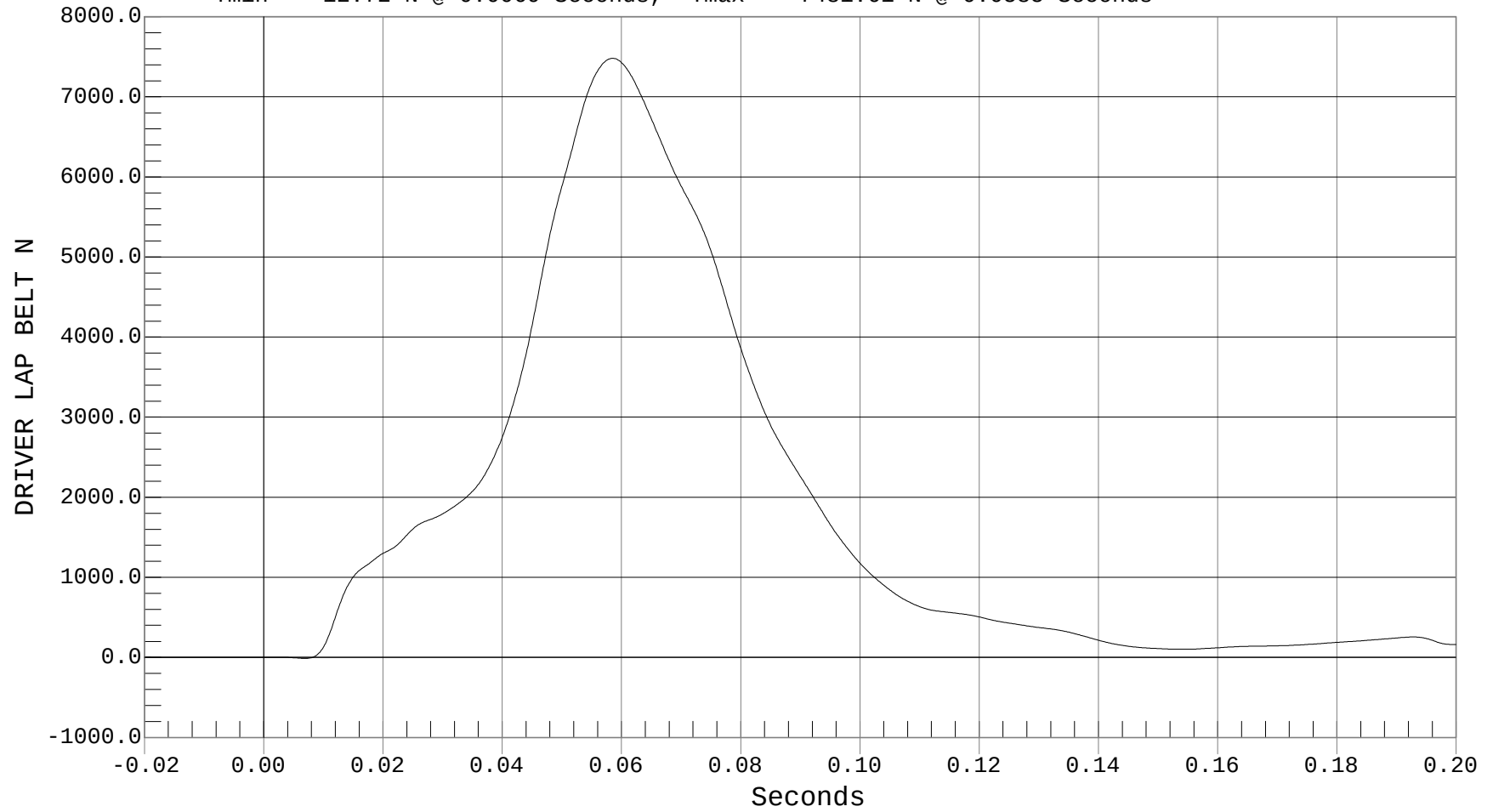
DRIVER LAP BELT FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 DRIVER LAP BELT, B00089FF.F66

Ymin = -12.72 N @ 0.0069 Seconds, Ymax = 7481.61 N @ 0.0585 Seconds





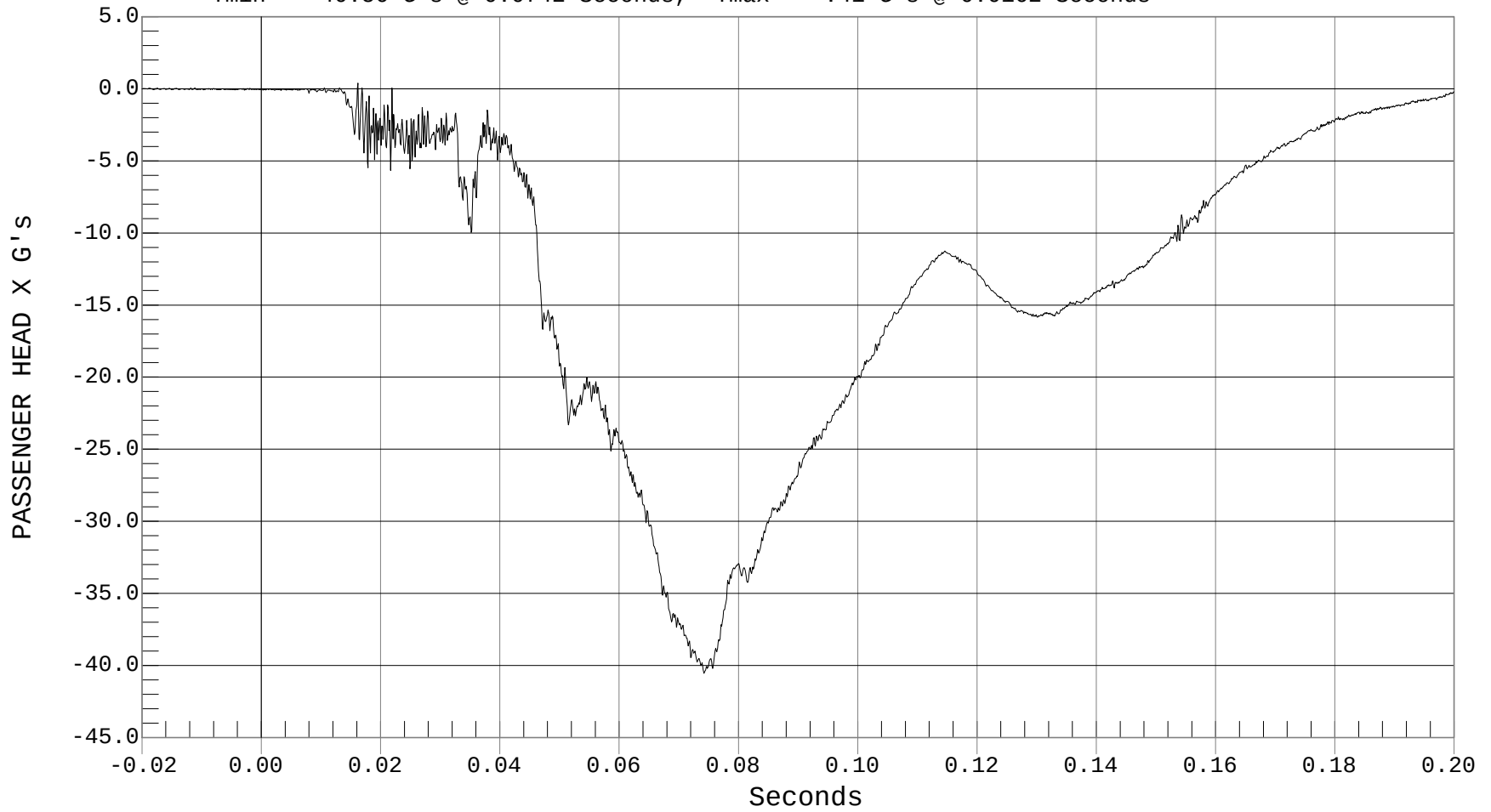
PASSENGER HEAD X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER HEAD X, B00089AT.A19

Ymin = -40.56 G's @ 0.0742 Seconds, Ymax = .41 G's @ 0.0162 Seconds





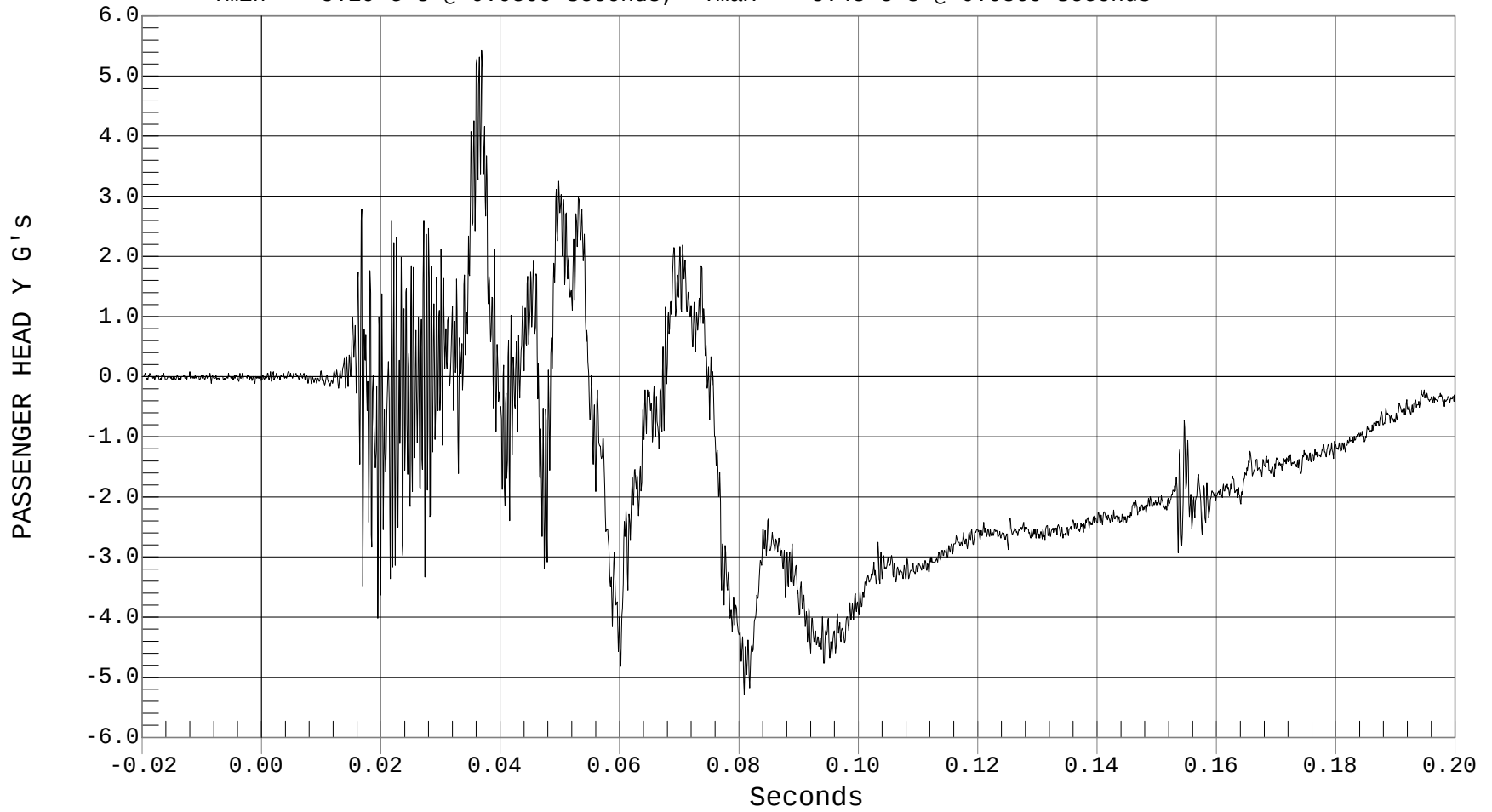
PASSENGER HEAD Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Y, B00089AT.A20

Ymin = -5.29 G's @ 0.0809 Seconds, Ymax = 5.43 G's @ 0.0369 Seconds





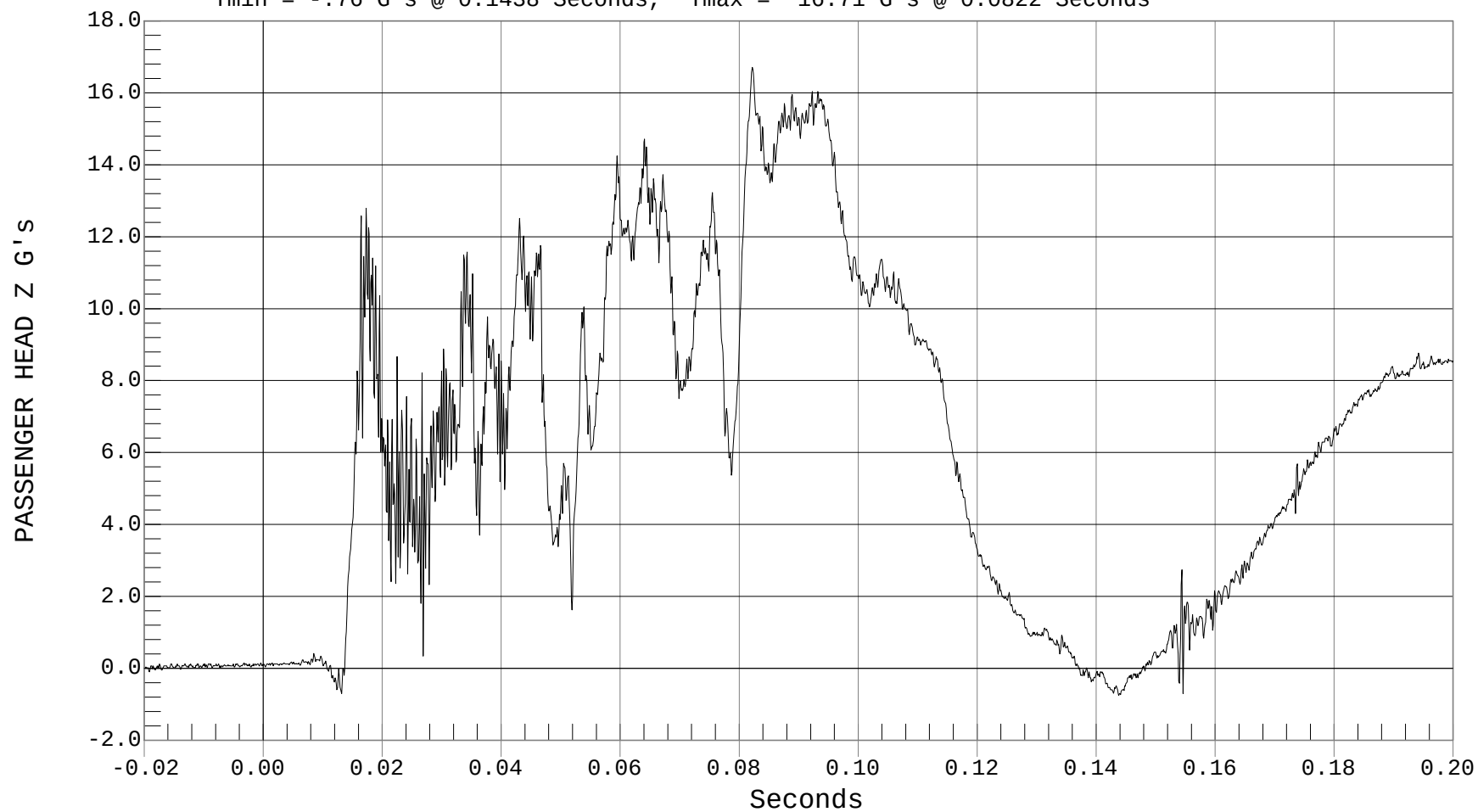
PASSENGER HEAD Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Z, B00089AT.A21

Ymin = -0.76 G's @ 0.1438 Seconds, Ymax = 16.71 G's @ 0.0822 Seconds





PASSENGER HEAD RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

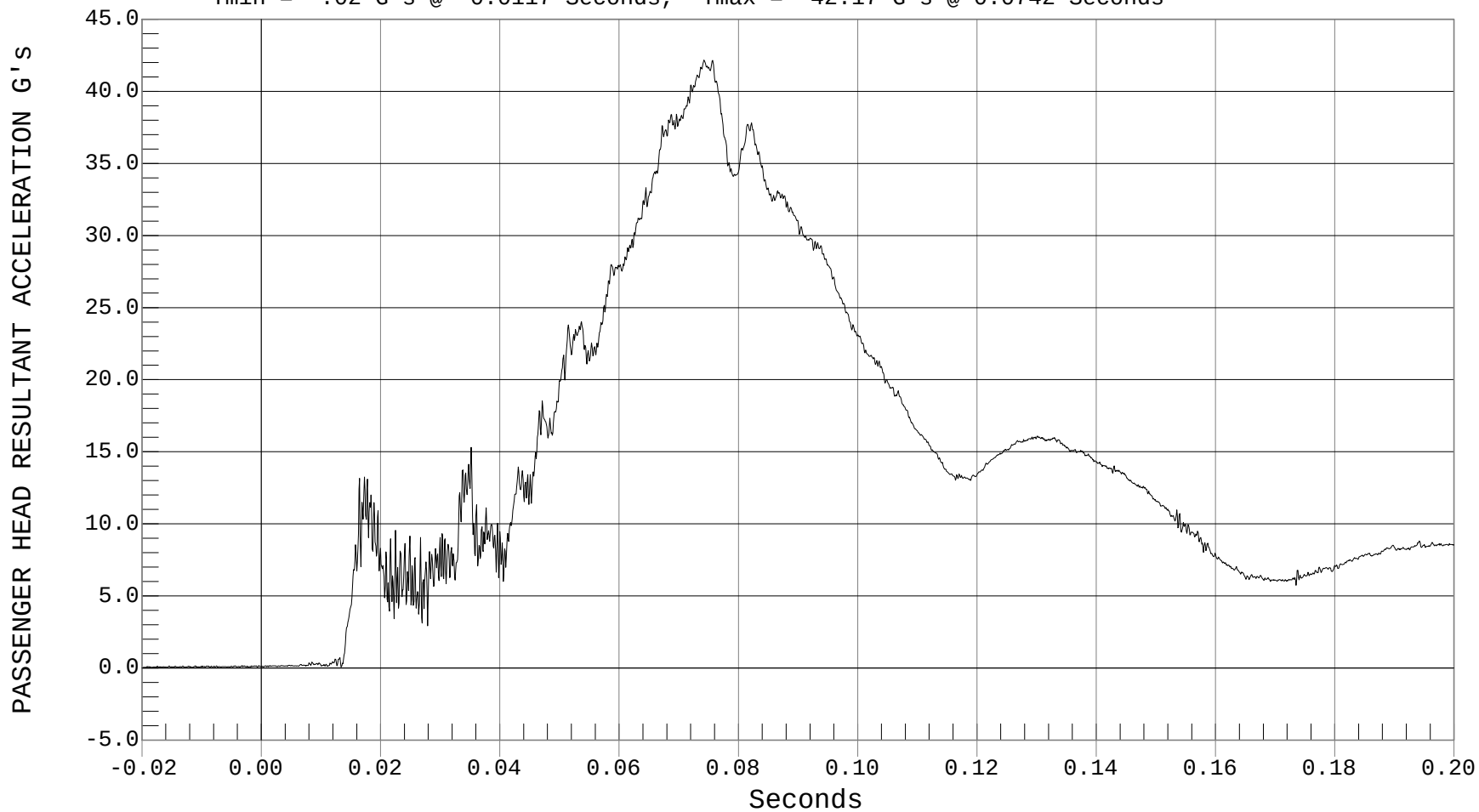
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 1000

— 1 PASSENGER HEAD RESULTANT ACCELERATION, B00089AV.A19

Ymin = .02 G's @ -0.0117 Seconds, Ymax = 42.17 G's @ 0.0742 Seconds





PASSENGER HEAD X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

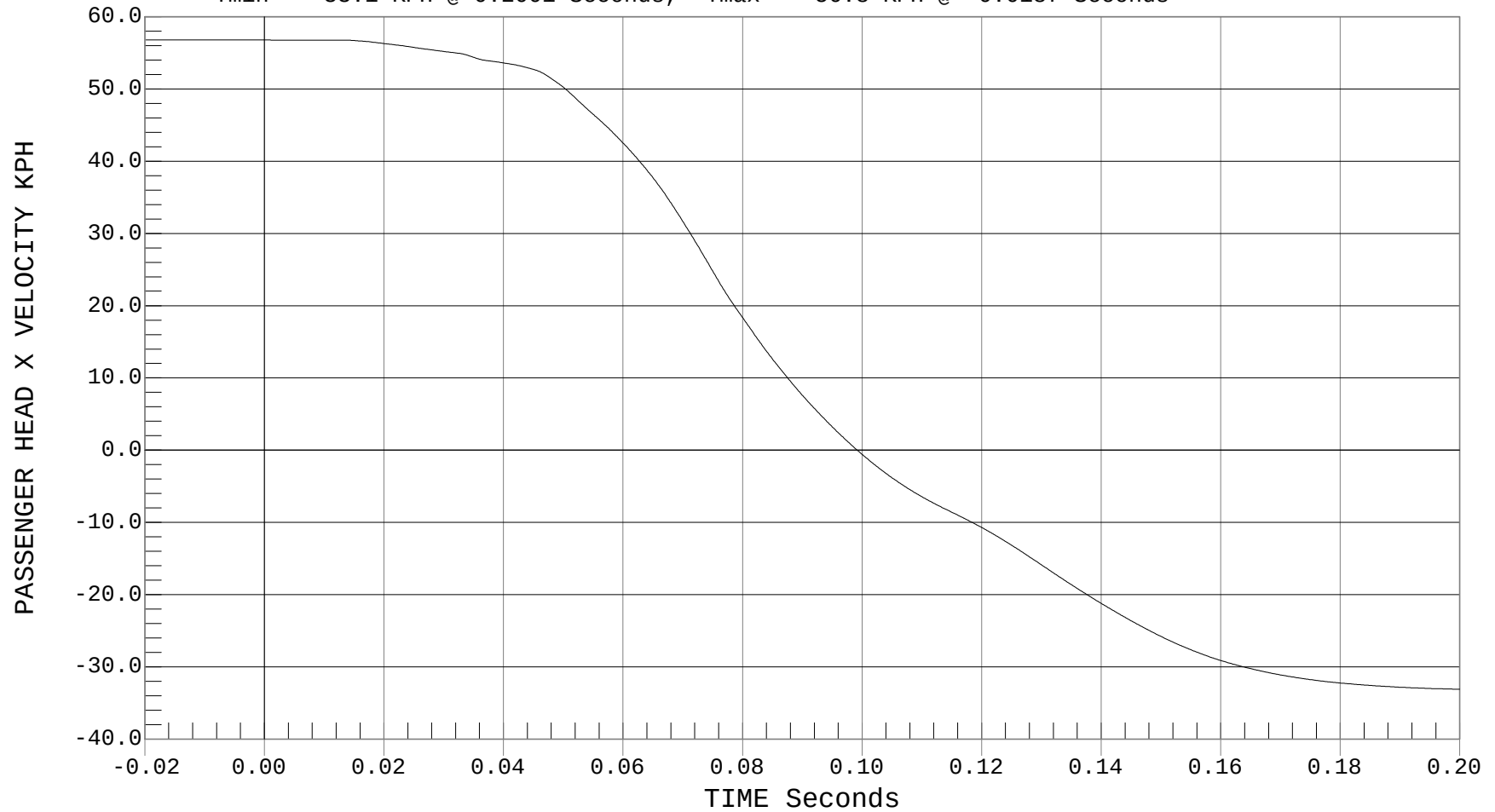
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 PASSENGER HEAD X VELOCITY, B00089AI.V19

Ymin = -33.1 KPH @ 0.2001 Seconds, Ymax = 56.8 KPH @ -0.0187 Seconds





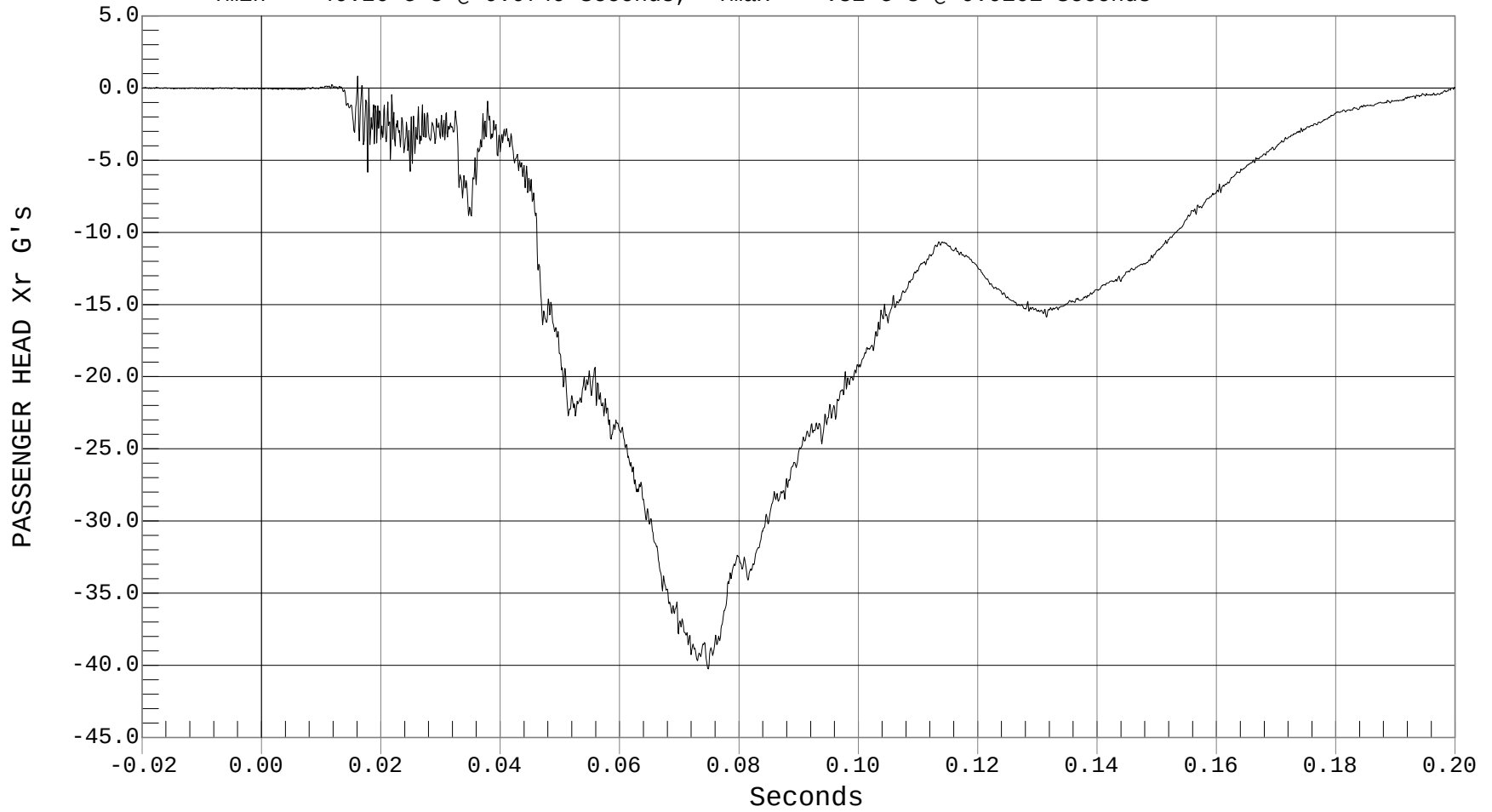
PASSENGER HEAD REDUNDANT X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Xr, B00089AT.A41

Ymin = -40.26 G's @ 0.0749 Seconds, Ymax = .82 G's @ 0.0161 Seconds





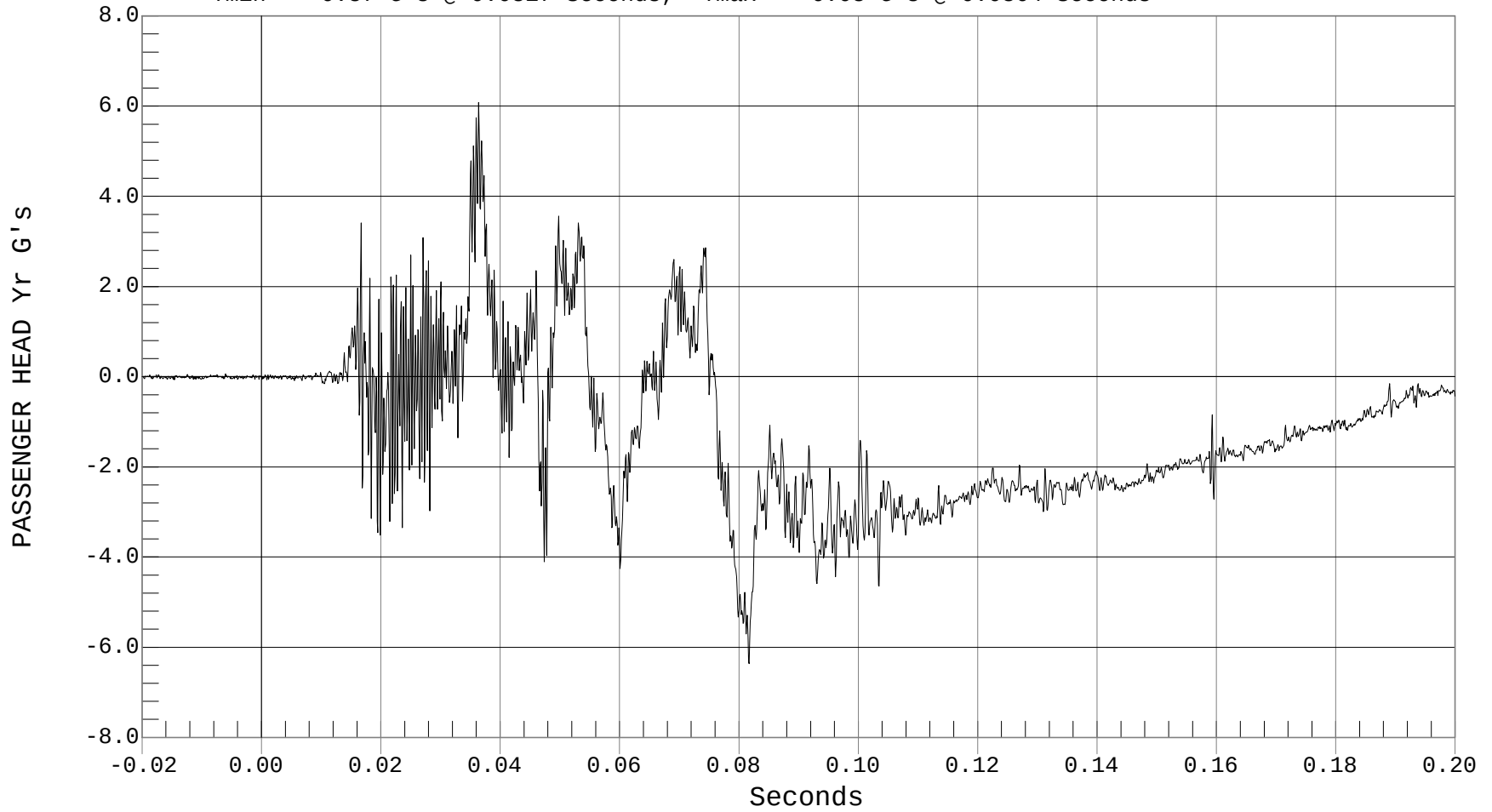
PASSENGER HEAD REDUNDANT Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Yr, B00089AT.A42

Ymin = -6.37 G's @ 0.0817 Seconds, Ymax = 6.08 G's @ 0.0364 Seconds





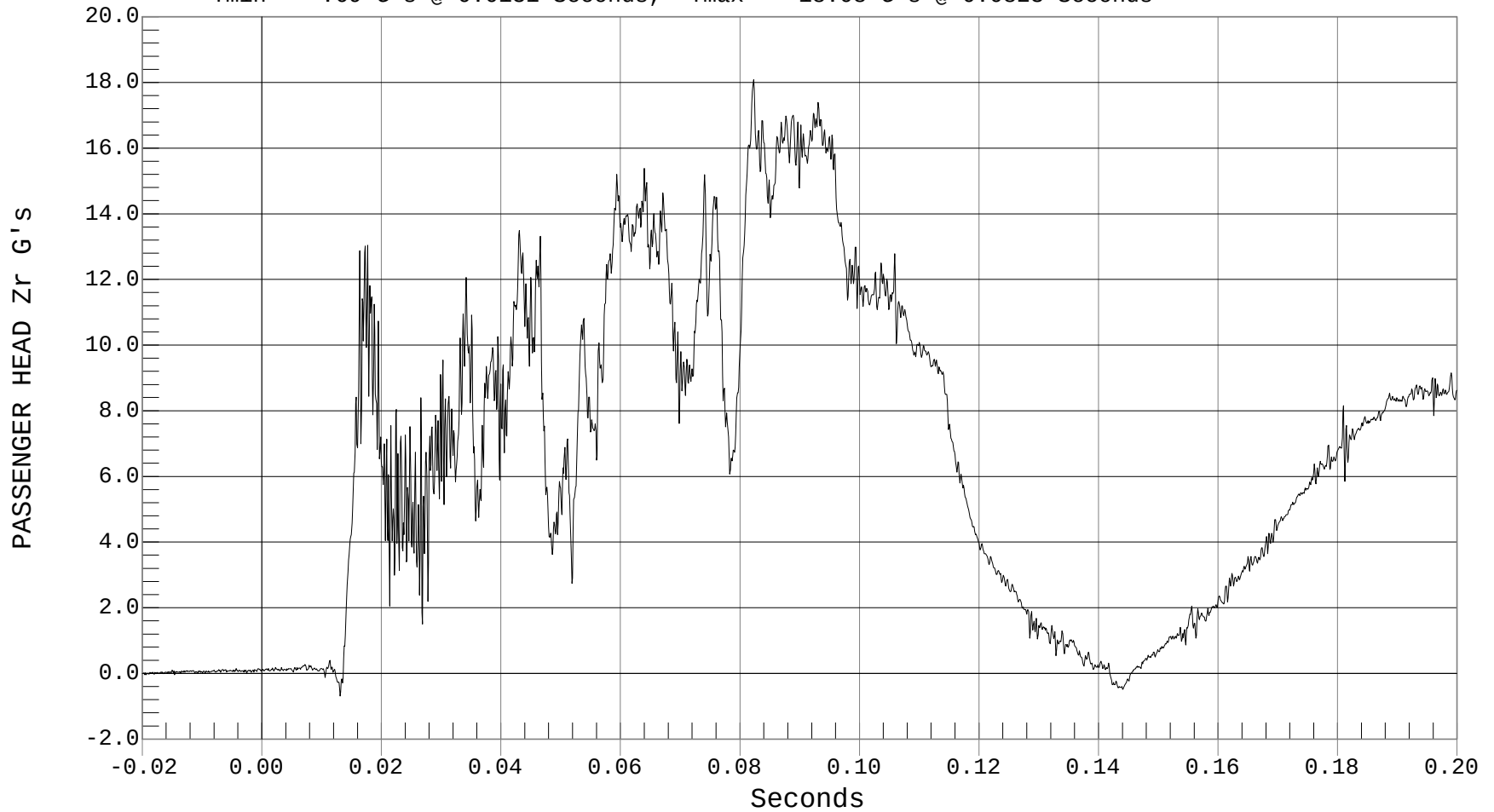
PASSENGER HEAD REDUNDANT Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Zr, B00089AT.A43

Ymin = -0.69 G's @ 0.0131 Seconds, Ymax = 18.08 G's @ 0.0823 Seconds





PASSENGER HEAD REDUNDANT RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

Speed: 35.3 MPH, 56.8 KPH

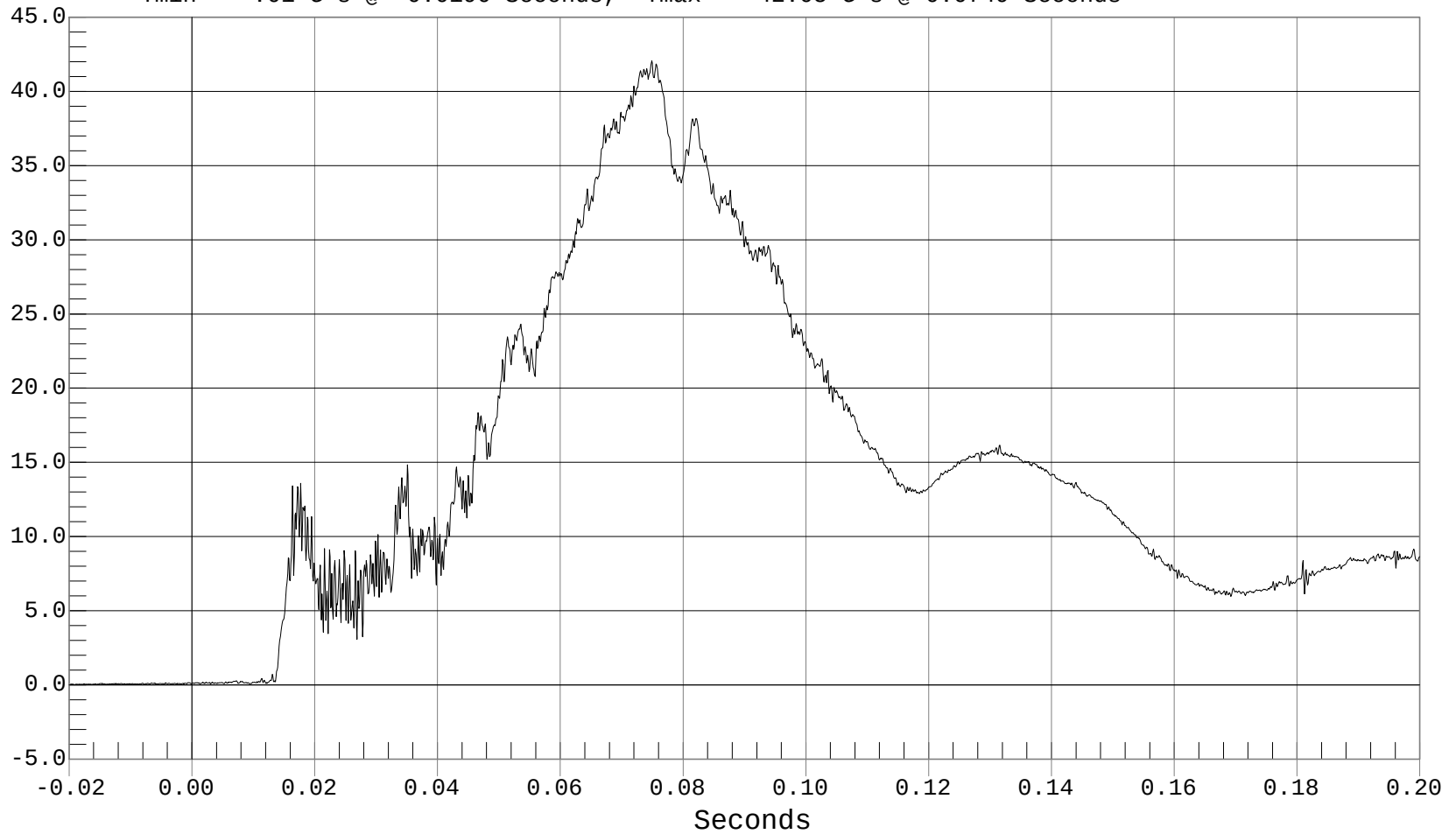
Other Info:

Filter Class: 1000

— 1 PASSENGER HEAD REDUNDANT RESULTANT ACCELERATION, B00089AV.A41

PASSENGER HEAD REDUNDANT RESULTANT ACCELERATION G's

Ymin = .01 G's @ -0.0190 Seconds, Ymax = 42.05 G's @ 0.0749 Seconds





PASSENGER HEAD REDUNDANT X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

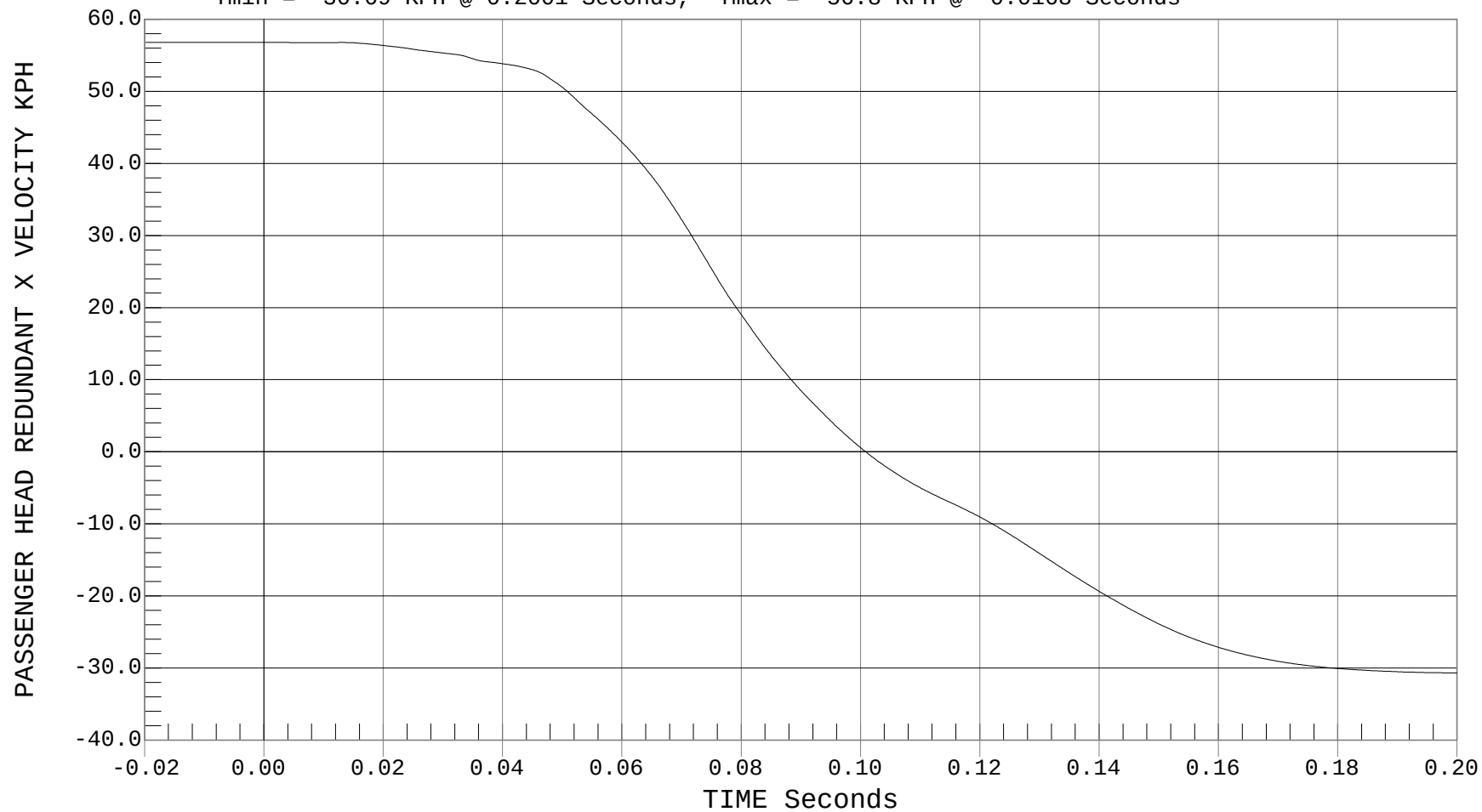
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 180

— 1 PASSENGER HEAD REDUNDANT X VELOCITY, B00089AI.V41

Ymin = -30.69 KPH @ 0.2001 Seconds, Ymax = 56.8 KPH @ -0.0168 Seconds





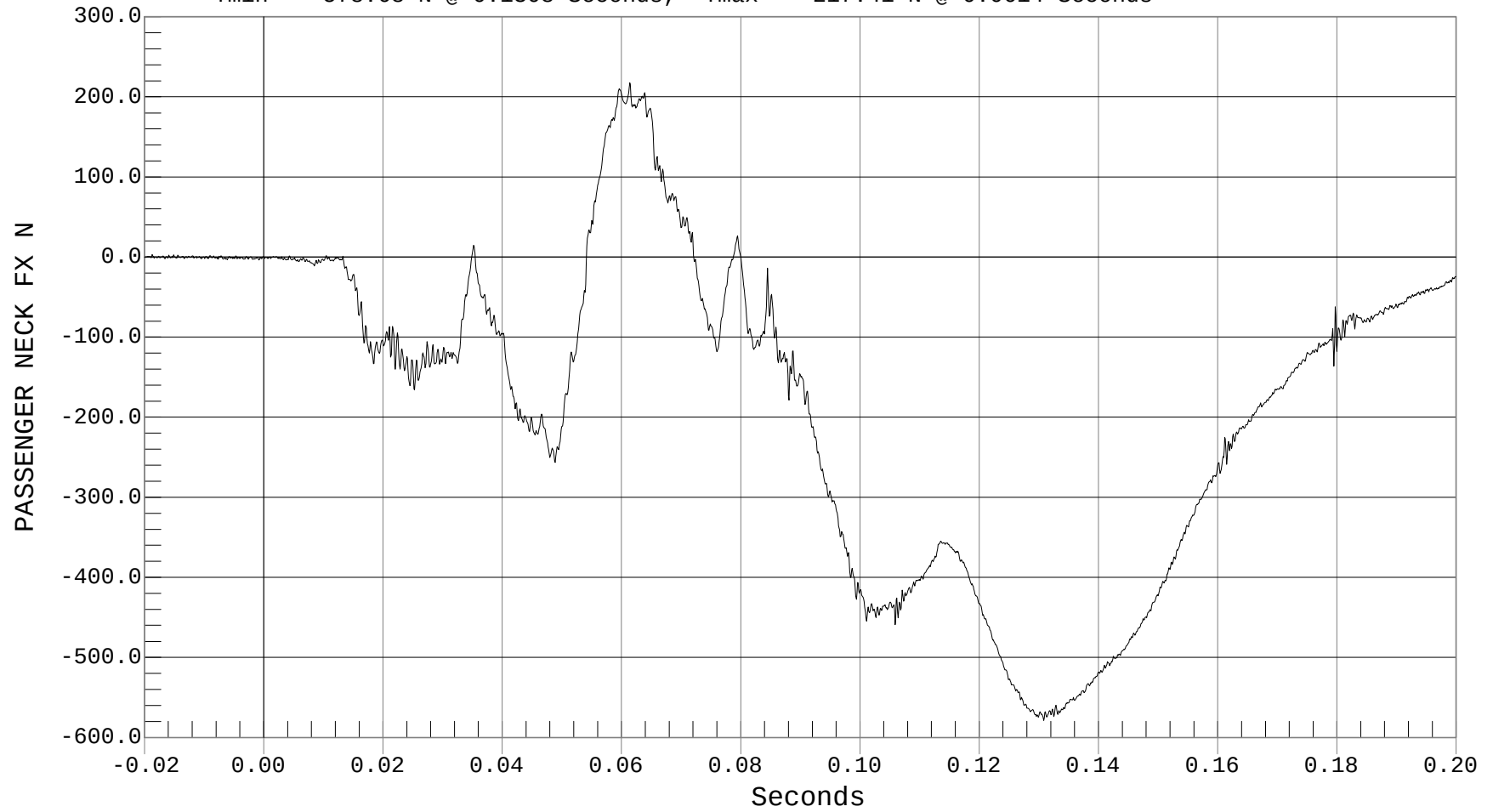
PASSENGER NECK FORCE X

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER NECK FX, B00089FT.F44

Ymin = -578.68 N @ 0.1308 Seconds, Ymax = 217.41 N @ 0.0614 Seconds





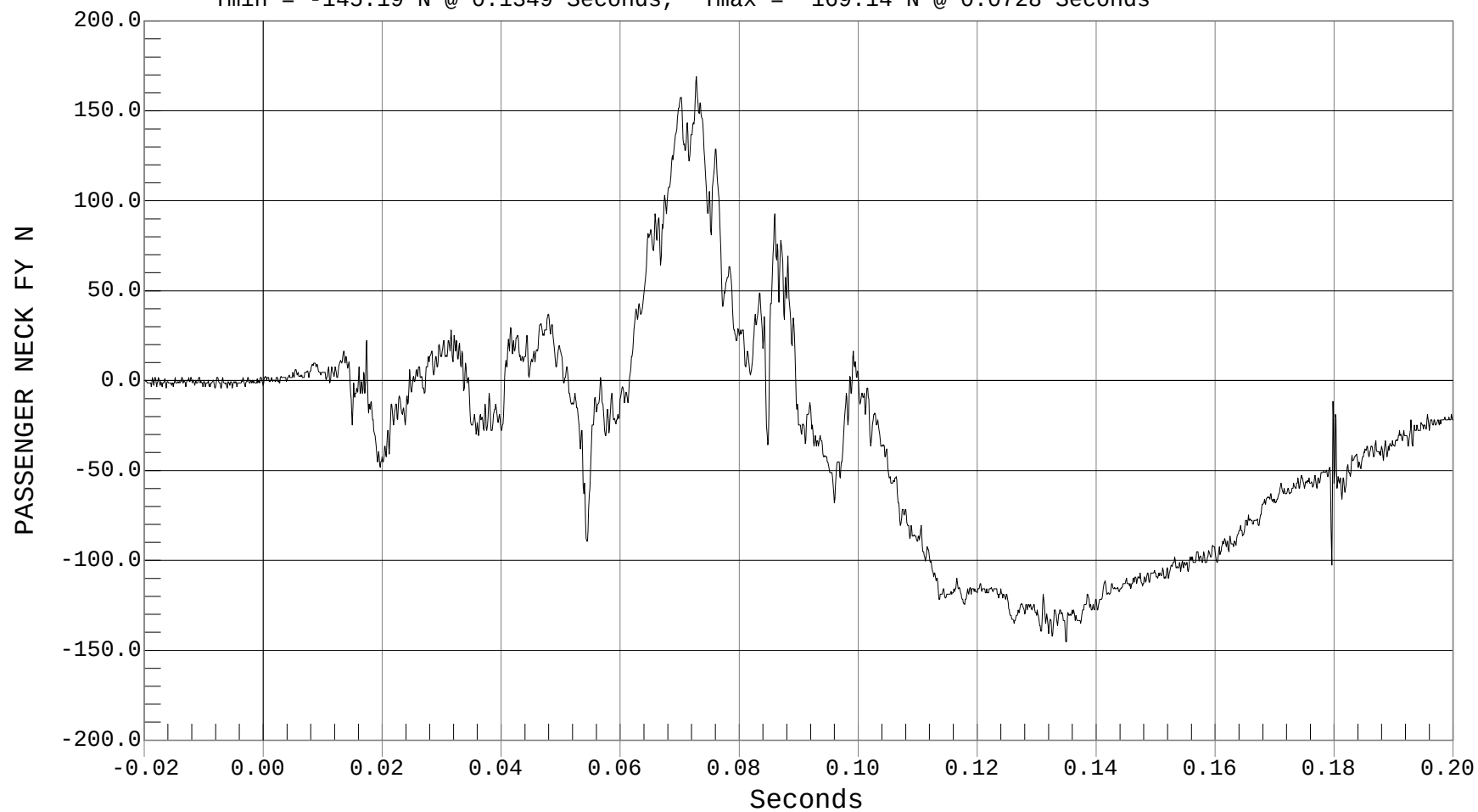
PASSENGER NECK FORCE Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER NECK FY, B00089FT.F45

Ymin = -145.19 N @ 0.1349 Seconds, Ymax = 169.14 N @ 0.0728 Seconds





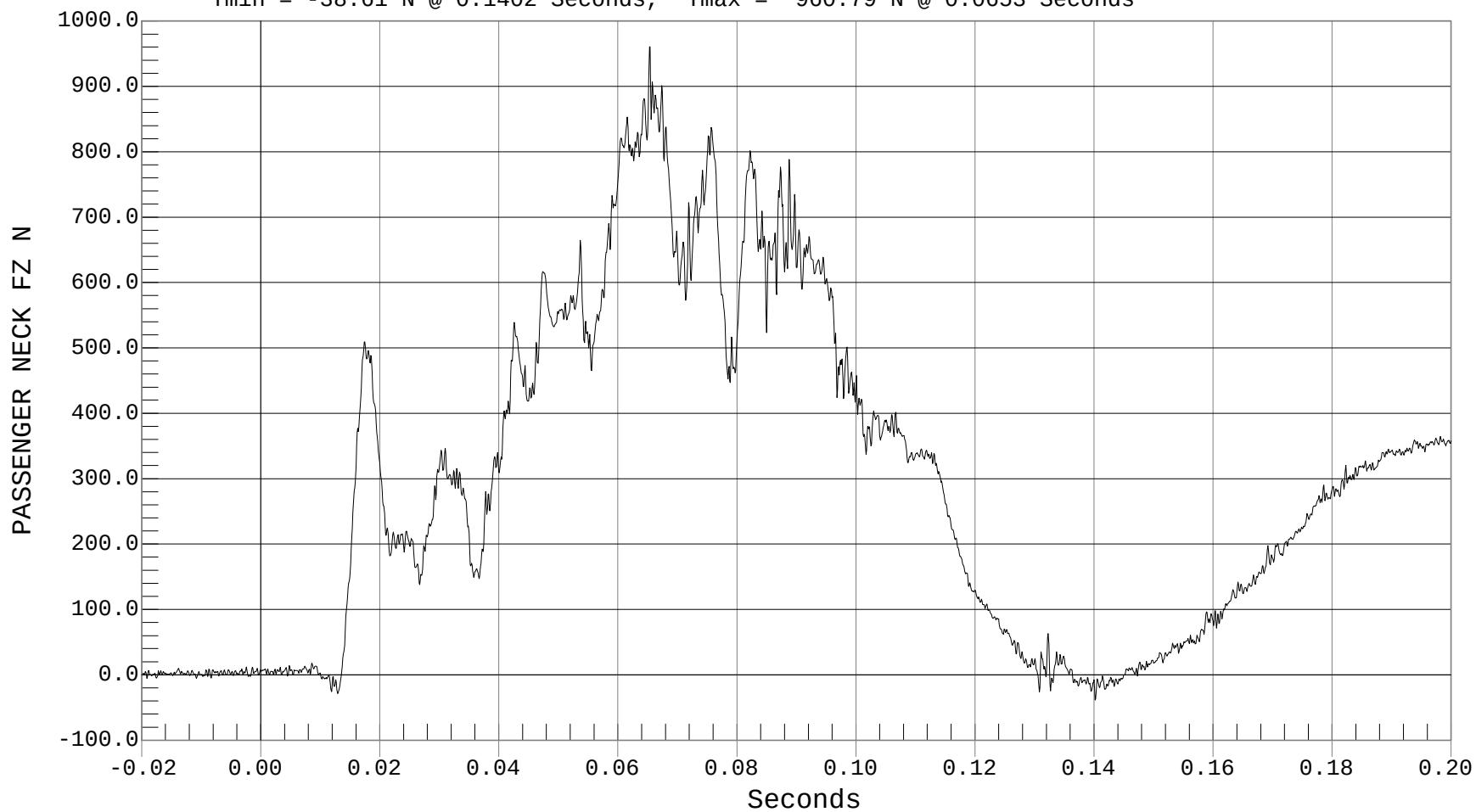
PASSENGER NECK FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER NECK FZ, B00089FT.F46

Ymin = -38.61 N @ 0.1402 Seconds, Ymax = 960.79 N @ 0.0653 Seconds





PASSENGER NECK FORCE RESULTANT

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

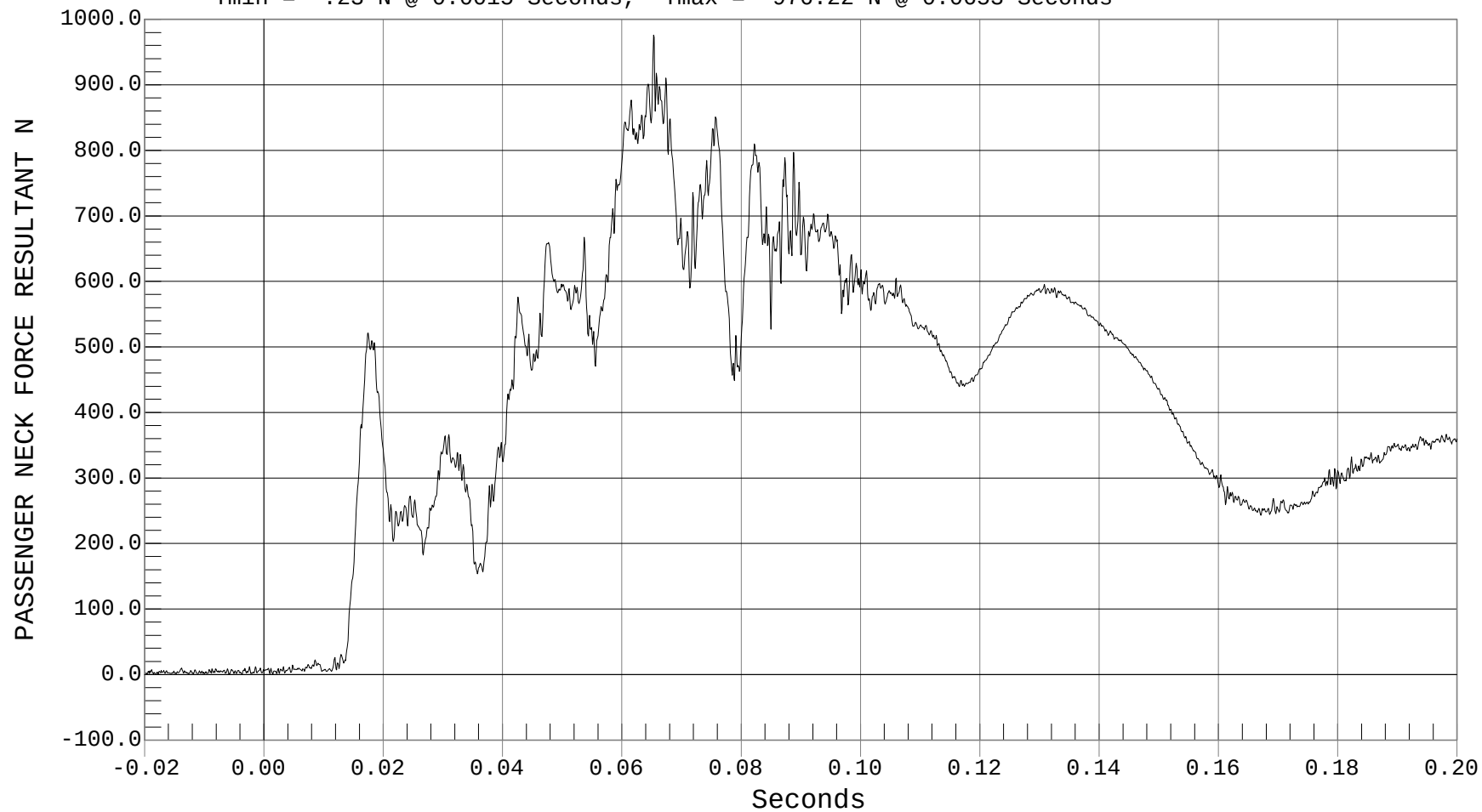
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 1000

— 1 PASSENGER NECK FORCE RESULTANT, B00089FV.F44

Ymin = .23 N @ 0.0015 Seconds, Ymax = 976.22 N @ 0.0653 Seconds





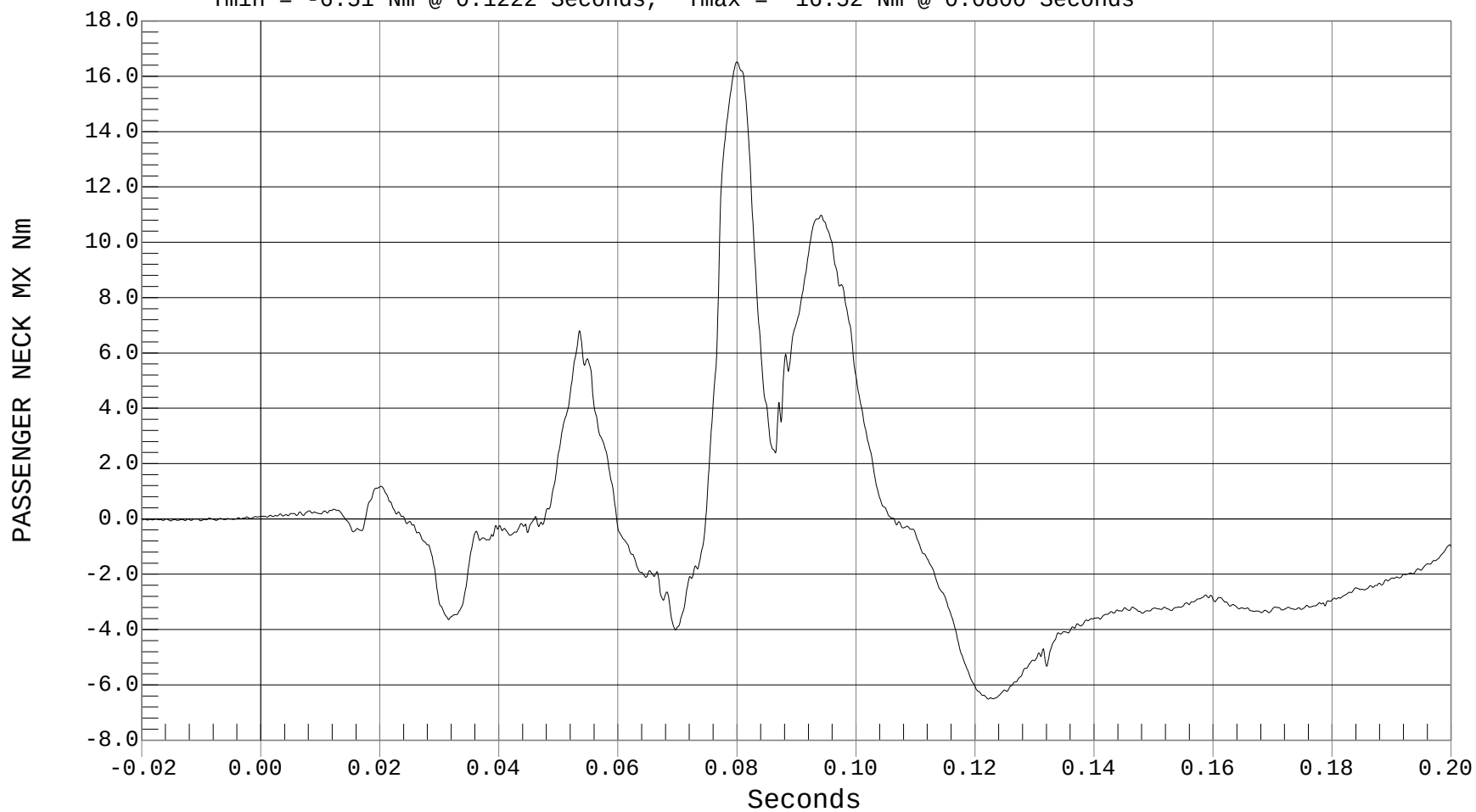
PASSENGER NECK MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER NECK MX, B00089MF.M47

Ymin = -6.51 Nm @ 0.1222 Seconds, Ymax = 16.52 Nm @ 0.0800 Seconds





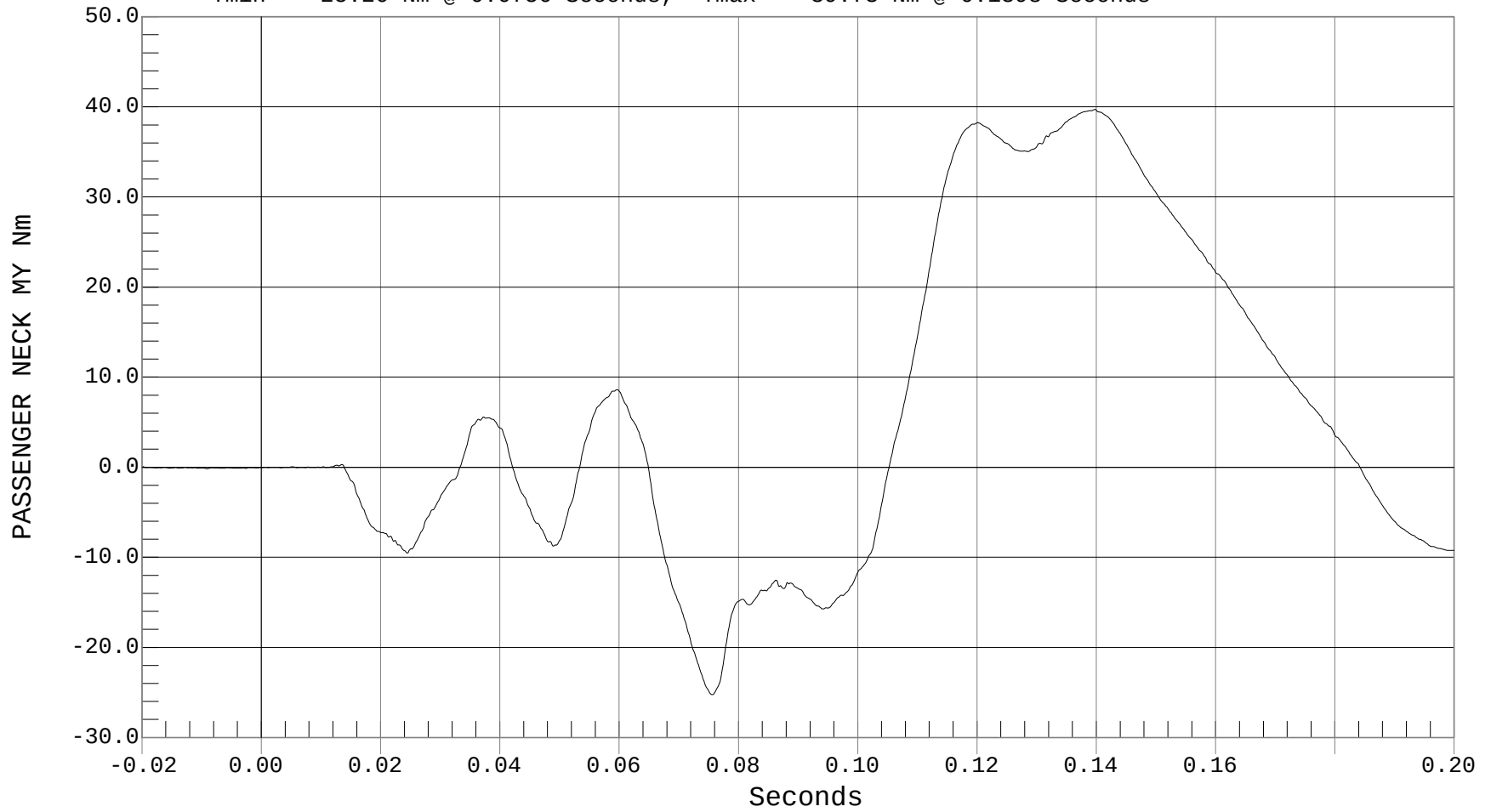
PASSENGER NECK MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER NECK MY, B00089MF.M48

Ymin = -25.26 Nm @ 0.0756 Seconds, Ymax = 39.73 Nm @ 0.1398 Seconds





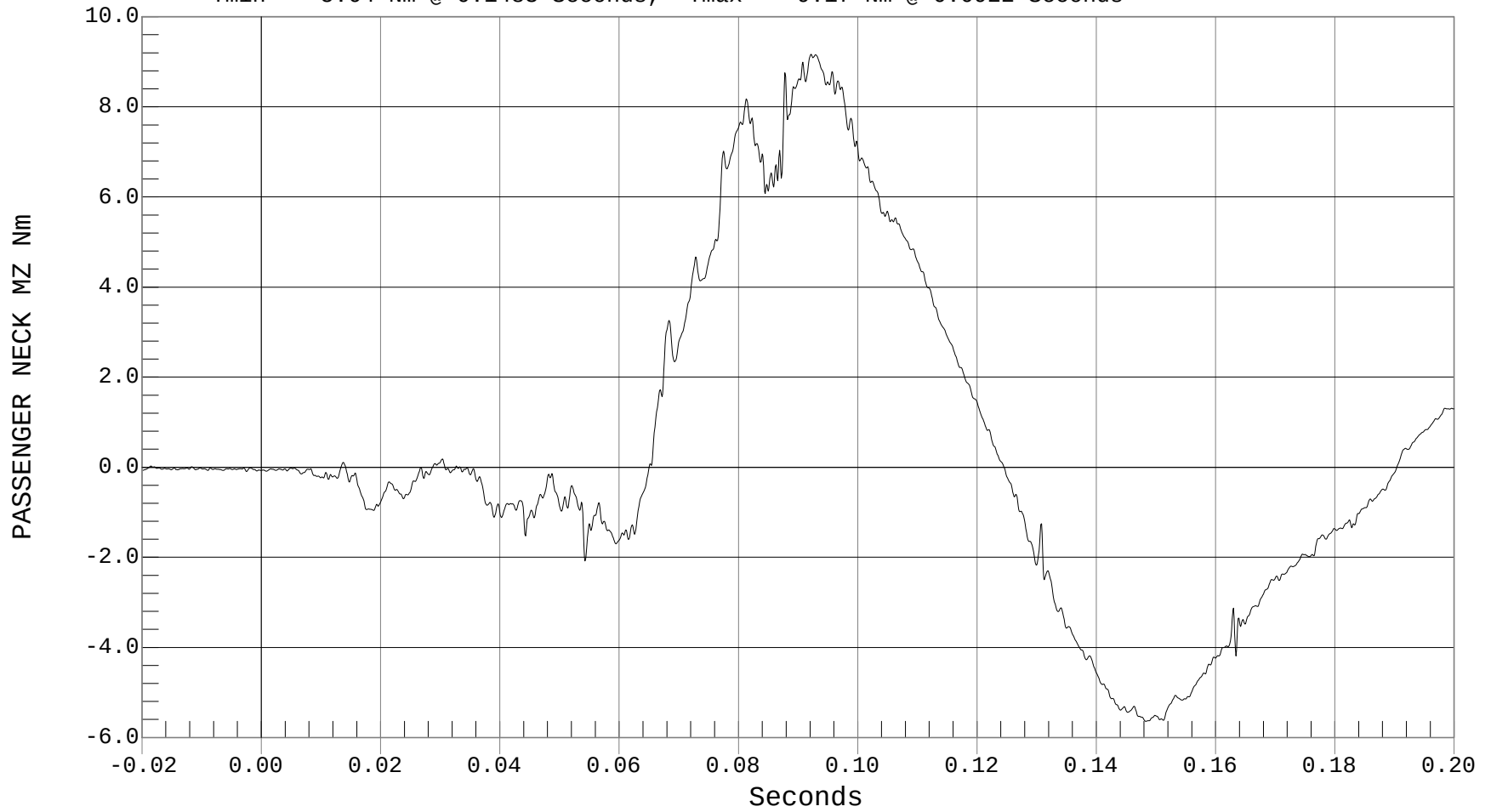
PASSENGER NECK MOMENT Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER NECK MZ, B00089MF.M49

Ymin = -5.64 Nm @ 0.1483 Seconds, Ymax = 9.17 Nm @ 0.0922 Seconds





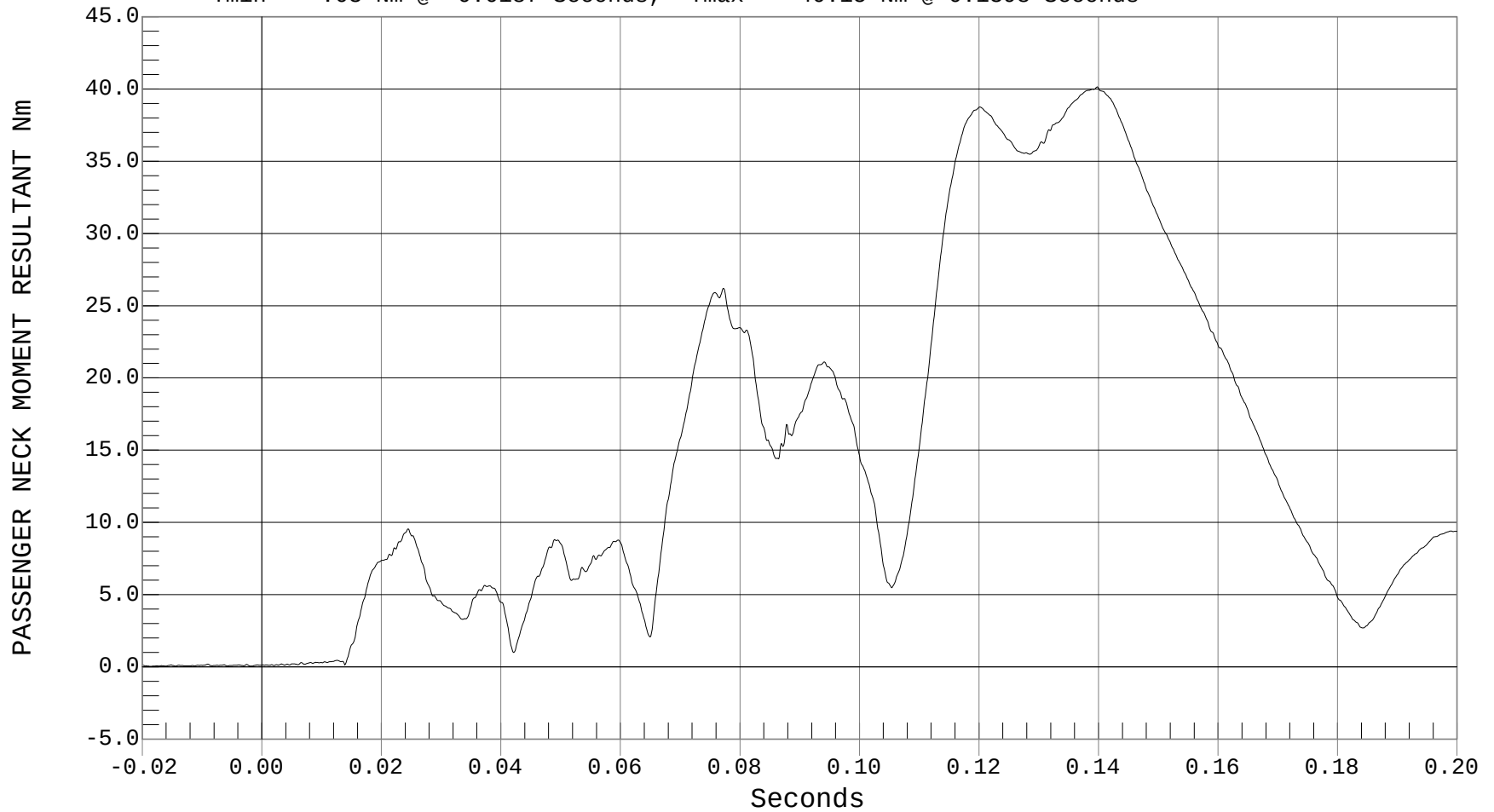
PASSENGER NECK MOMENT RESULTANT

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER NECK MOMENT RESULTANT, B00089MV.M47

Ymin = .03 Nm @ -0.0187 Seconds, Ymax = 40.15 Nm @ 0.1398 Seconds





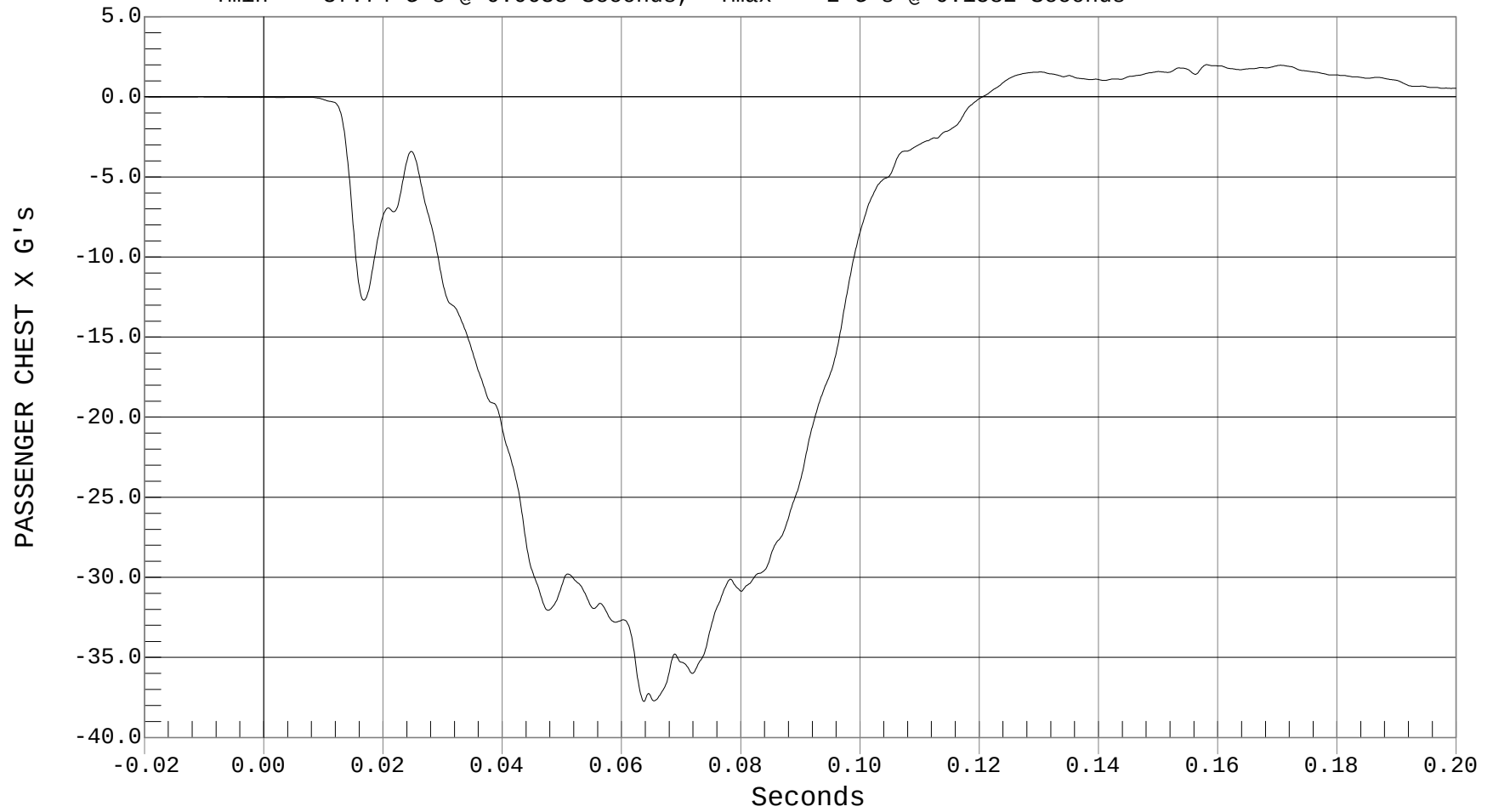
PASSENGER CHEST X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER CHEST X, B00089AF.A22

Ymin = -37.74 G's @ 0.0638 Seconds, Ymax = 2 G's @ 0.1582 Seconds





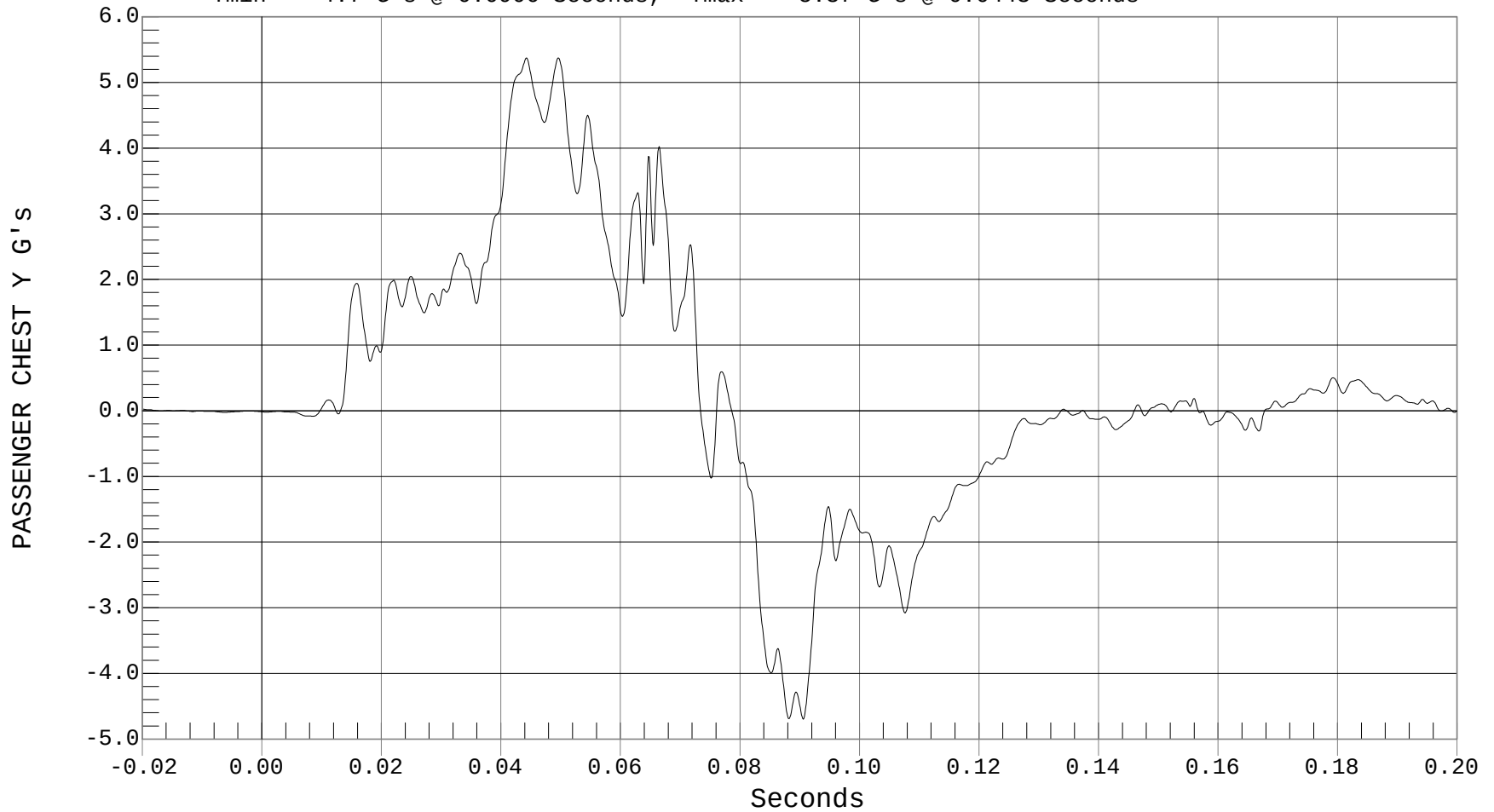
PASSENGER CHEST Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER CHEST Y, B00089AF.A23

Ymin = -4.7 G's @ 0.0906 Seconds, Ymax = 5.37 G's @ 0.0443 Seconds





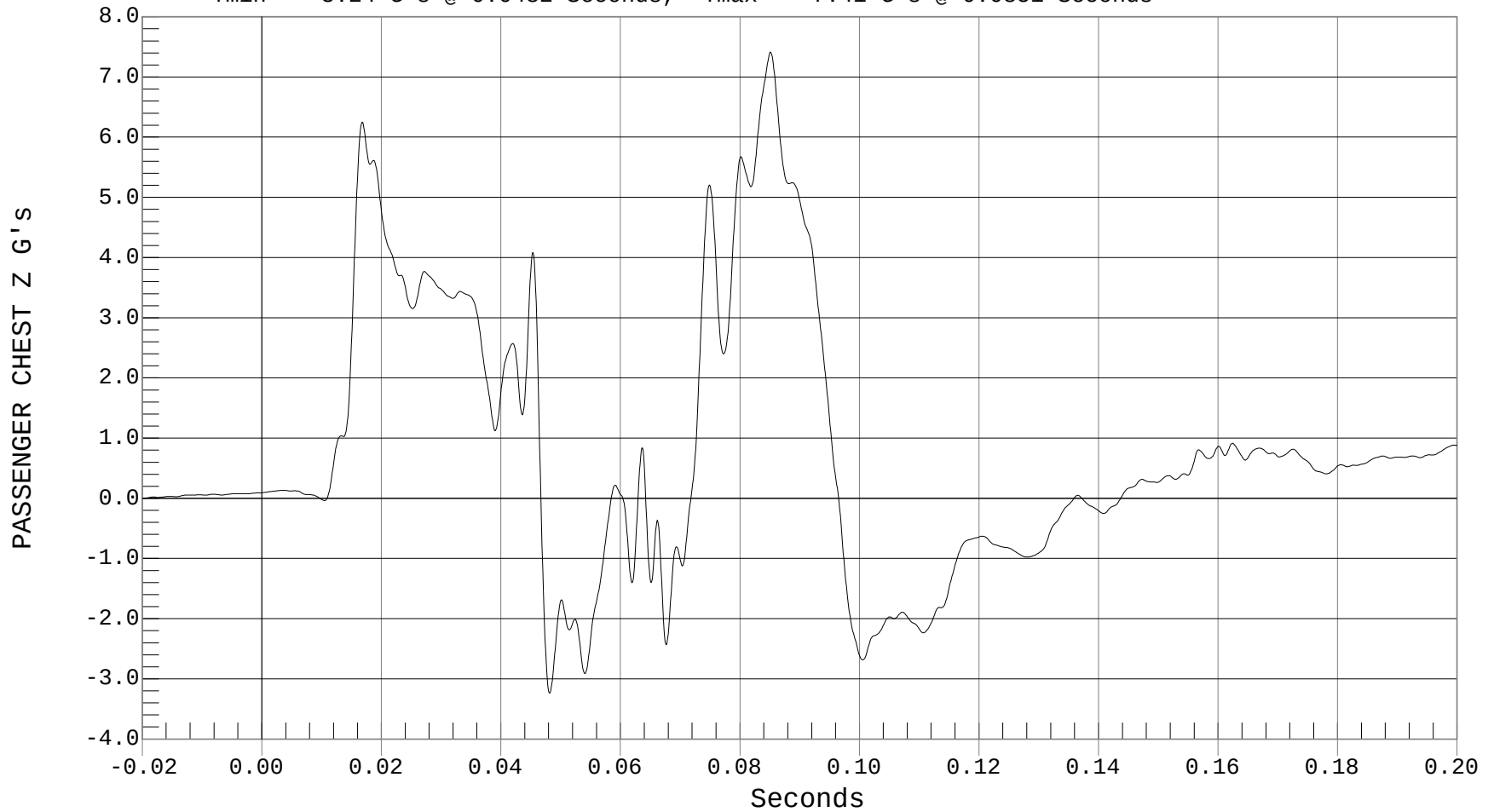
PASSENGER CHEST Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER CHEST Z, B00089AF.A24

Ymin = -3.24 G's @ 0.0482 Seconds, Ymax = 7.41 G's @ 0.0851 Seconds





PASSENGER CHEST RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

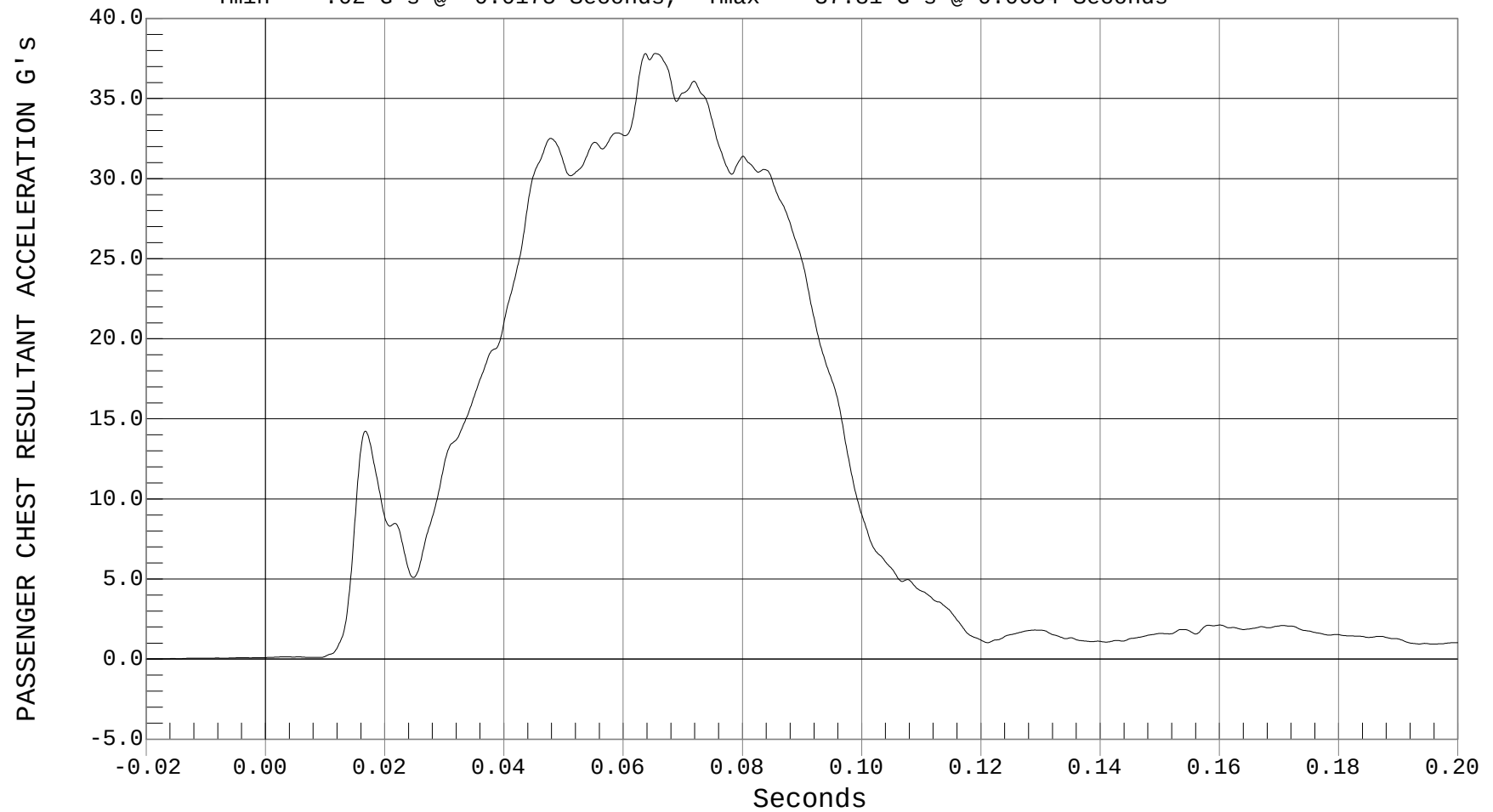
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 180

— 1 PASSENGER CHEST RESULTANT ACCELERATION, B00089AV.A22

Ymin = .02 G's @ -0.0175 Seconds, Ymax = 37.81 G's @ 0.0654 Seconds





PASSENGER CHEST X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 D00R

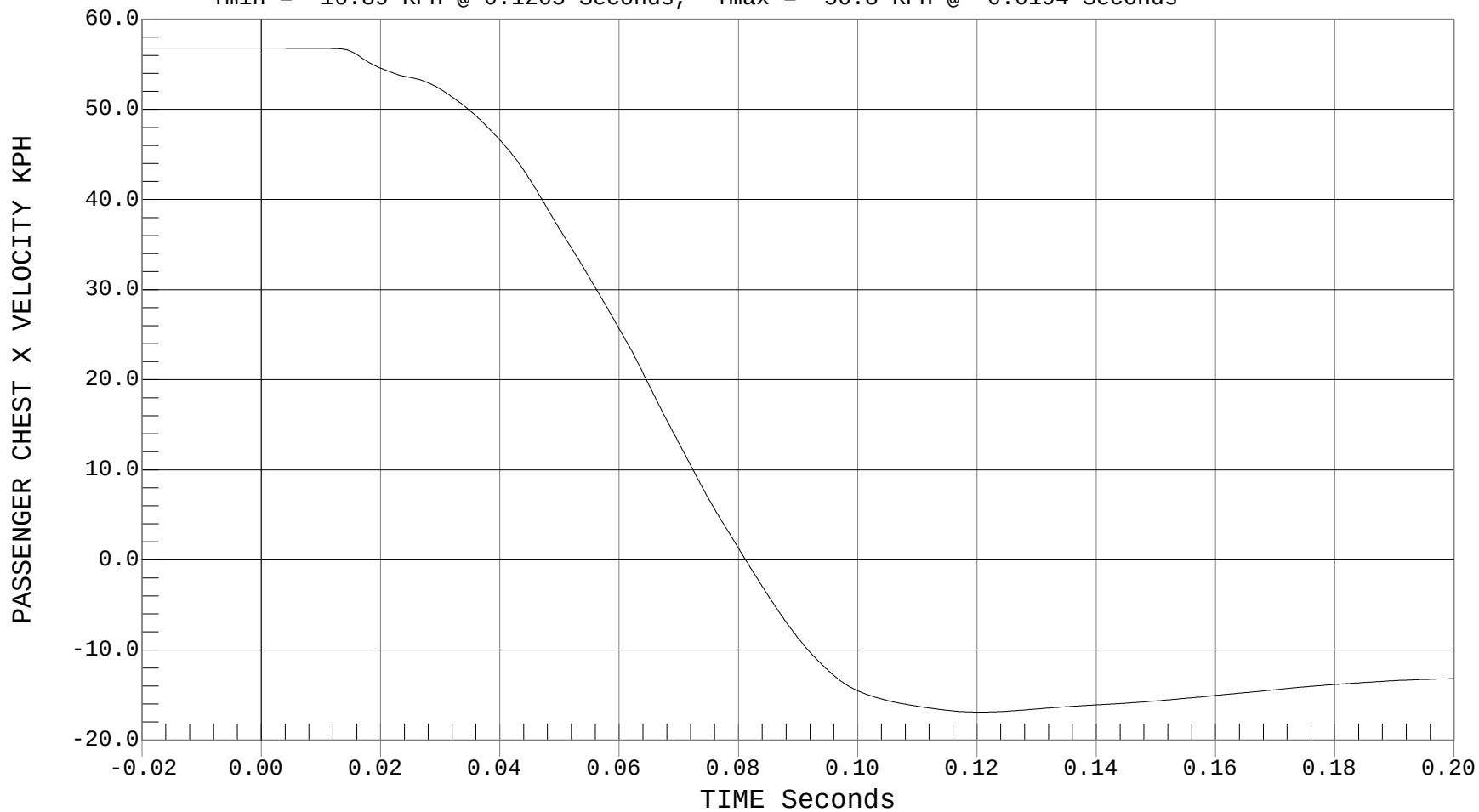
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 180

— 1 PASSENGER CHEST X VELOCITY, B00089AI.V22

Ymin = -16.89 KPH @ 0.1205 Seconds, Ymax = 56.8 KPH @ -0.0194 Seconds





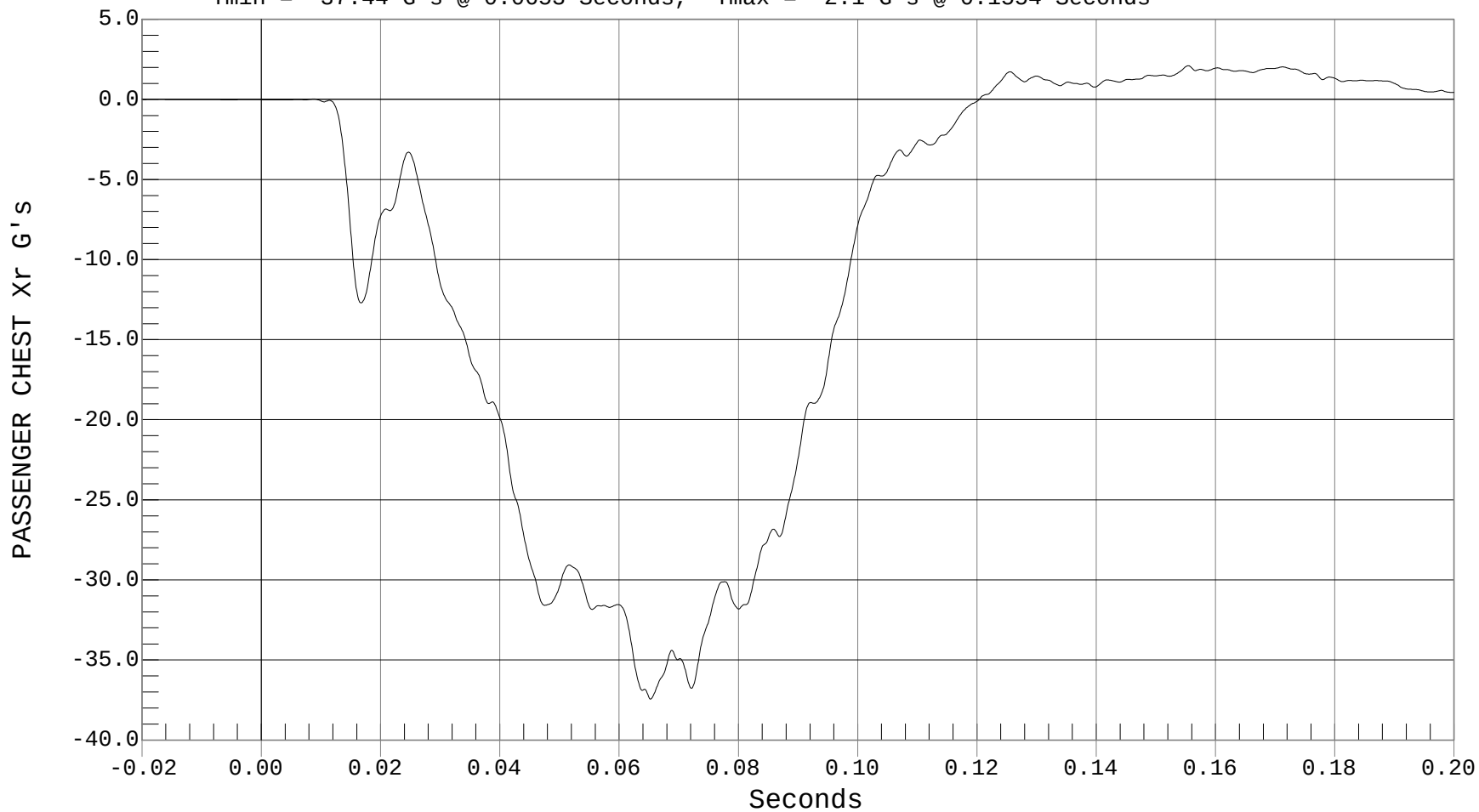
PASSENGER CHEST REDUNDANT X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER CHEST Xr, B00089AF.A50

Ymin = -37.44 G's @ 0.0653 Seconds, Ymax = 2.1 G's @ 0.1554 Seconds





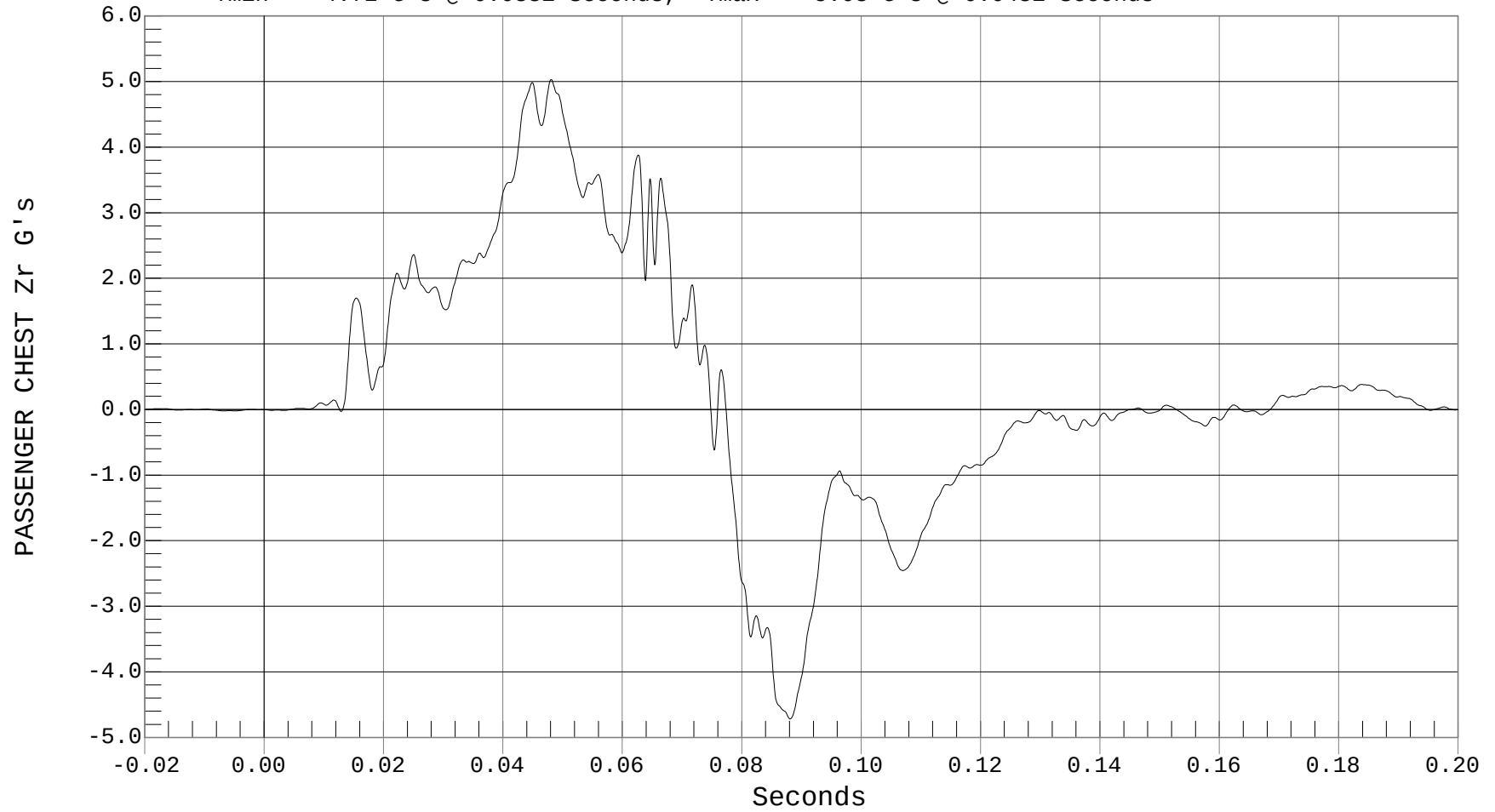
PASSENGER CHEST REDUNDANT Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER CHEST Zr, B00089AF.A52

Ymin = -4.72 G's @ 0.0881 Seconds, Ymax = 5.03 G's @ 0.0481 Seconds





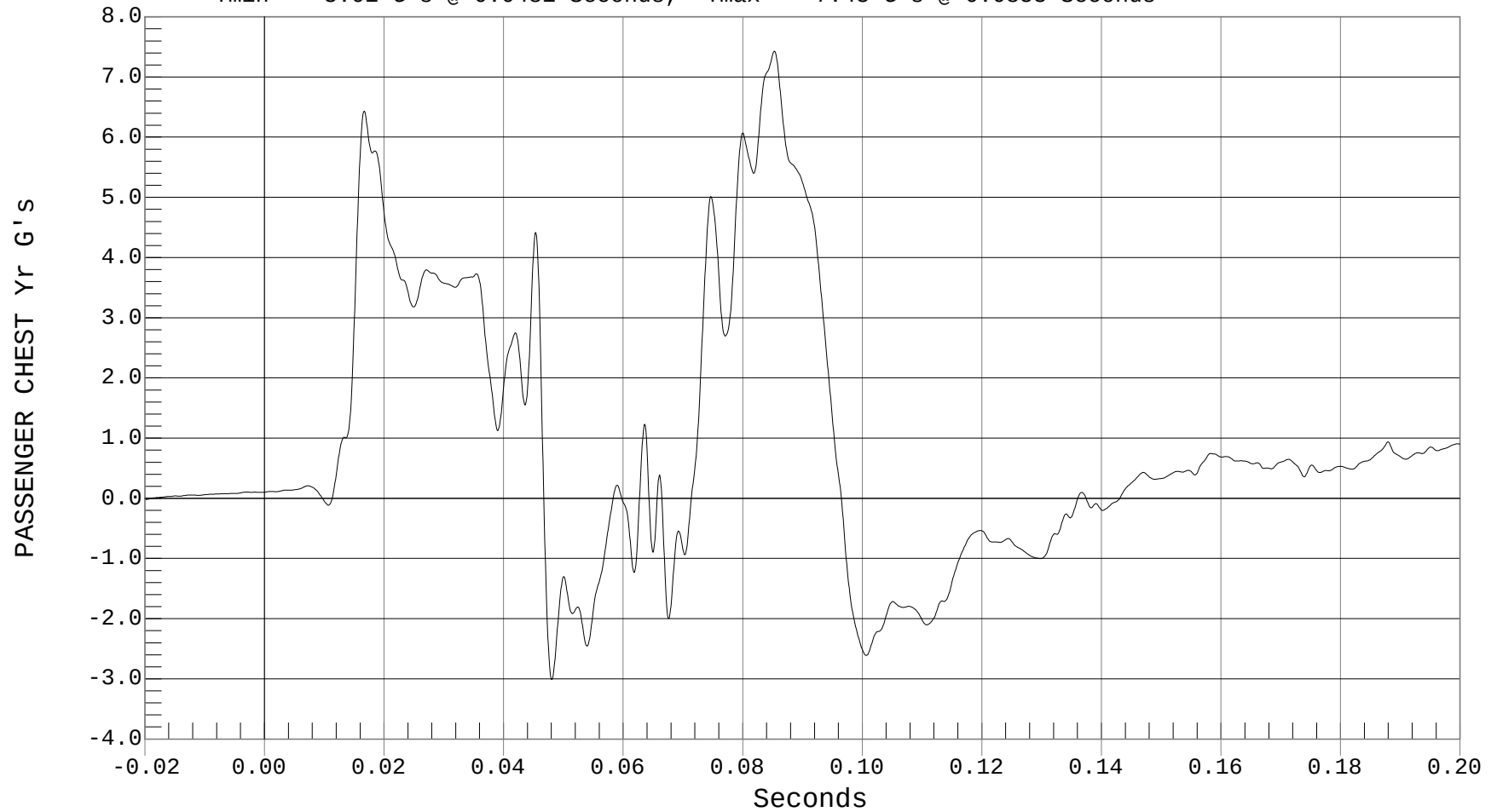
PASSENGER CHEST REDUNDANT Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER CHEST Yr, B00089AF.A51

Ymin = -3.01 G's @ 0.0481 Seconds, Ymax = 7.43 G's @ 0.0853 Seconds





PASSENGER CHEST REDUNDANT RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

Speed: 35.3 MPH, 56.8 KPH

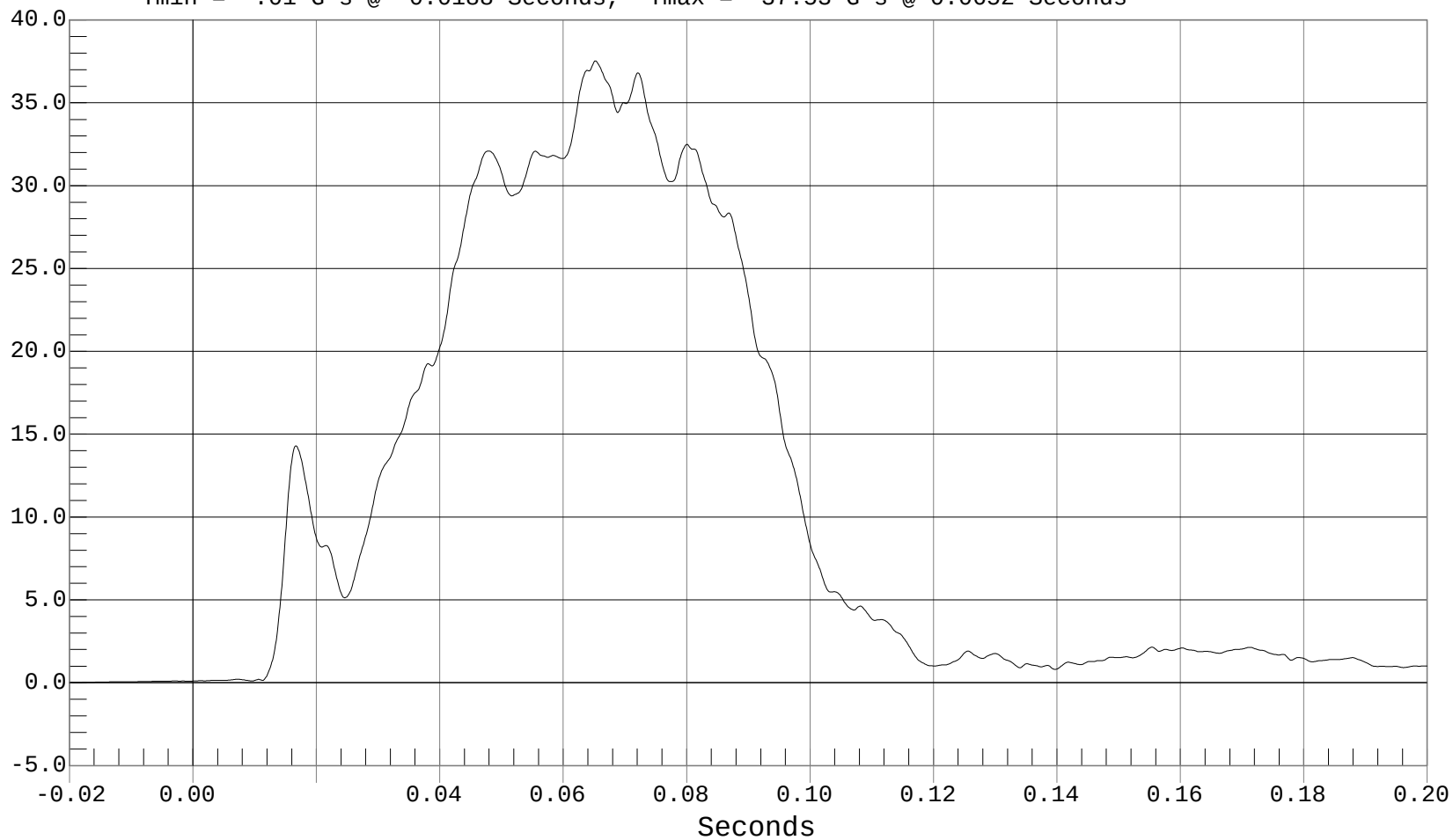
Other Info:

Filter Class: 180

— 1 PASSENGER CHEST REDUNDANT RESULTANT ACCELERATION, B00089AV.A50

PASSENGER CHEST REDUNDANT RESULTANT ACCELERATION G

Ymin = .01 G's @ -0.0188 Seconds, Ymax = 37.53 G's @ 0.0652 Seconds





PASSENGER CHEST REDUNDANT X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

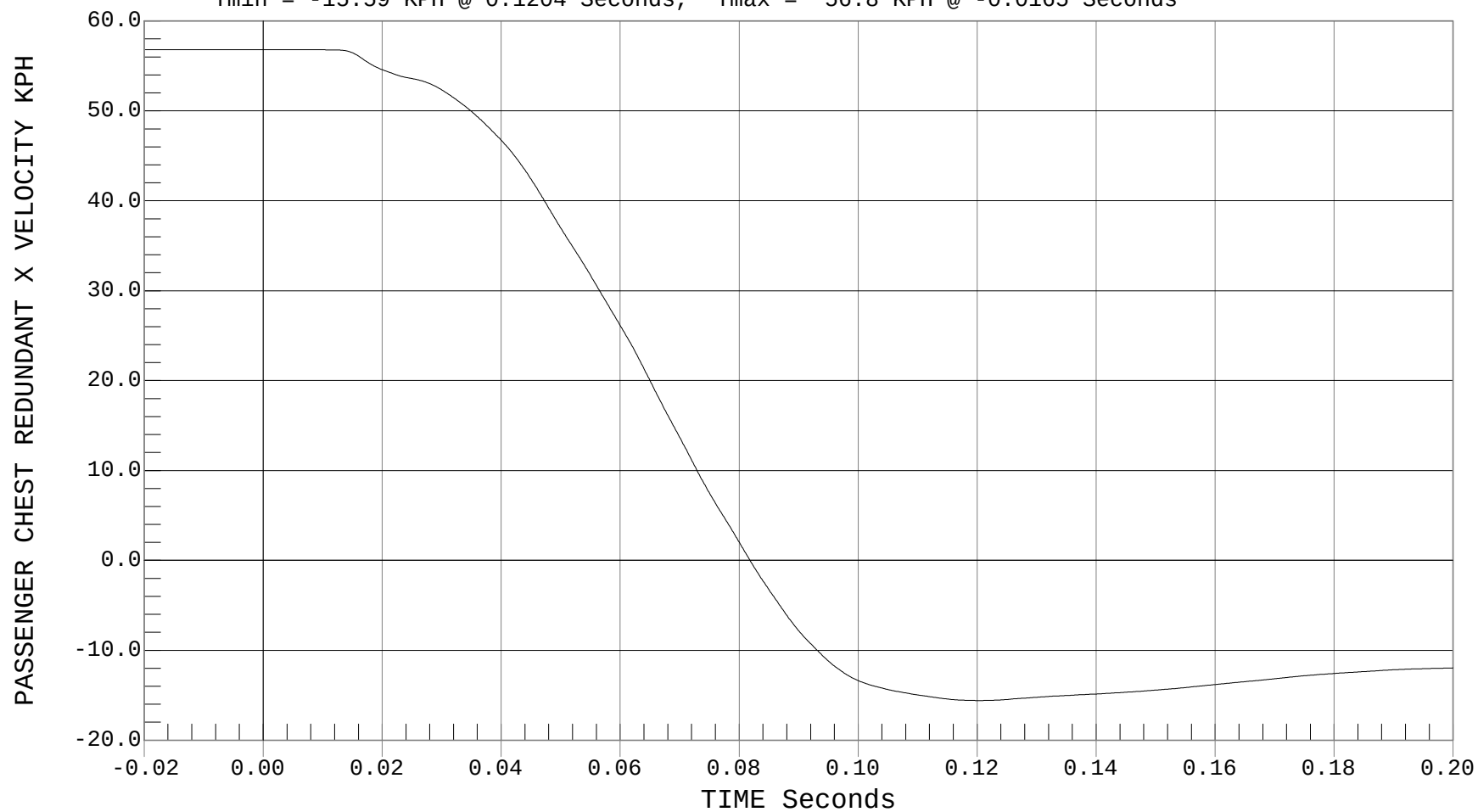
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 180

— 1 PASSENGER CHEST REDUNDANT X VELOCITY, B00089AI.V50

Ymin = -15.59 KPH @ 0.1204 Seconds, Ymax = 56.8 KPH @ -0.0165 Seconds





PASSENGER CHEST COMPRESSION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

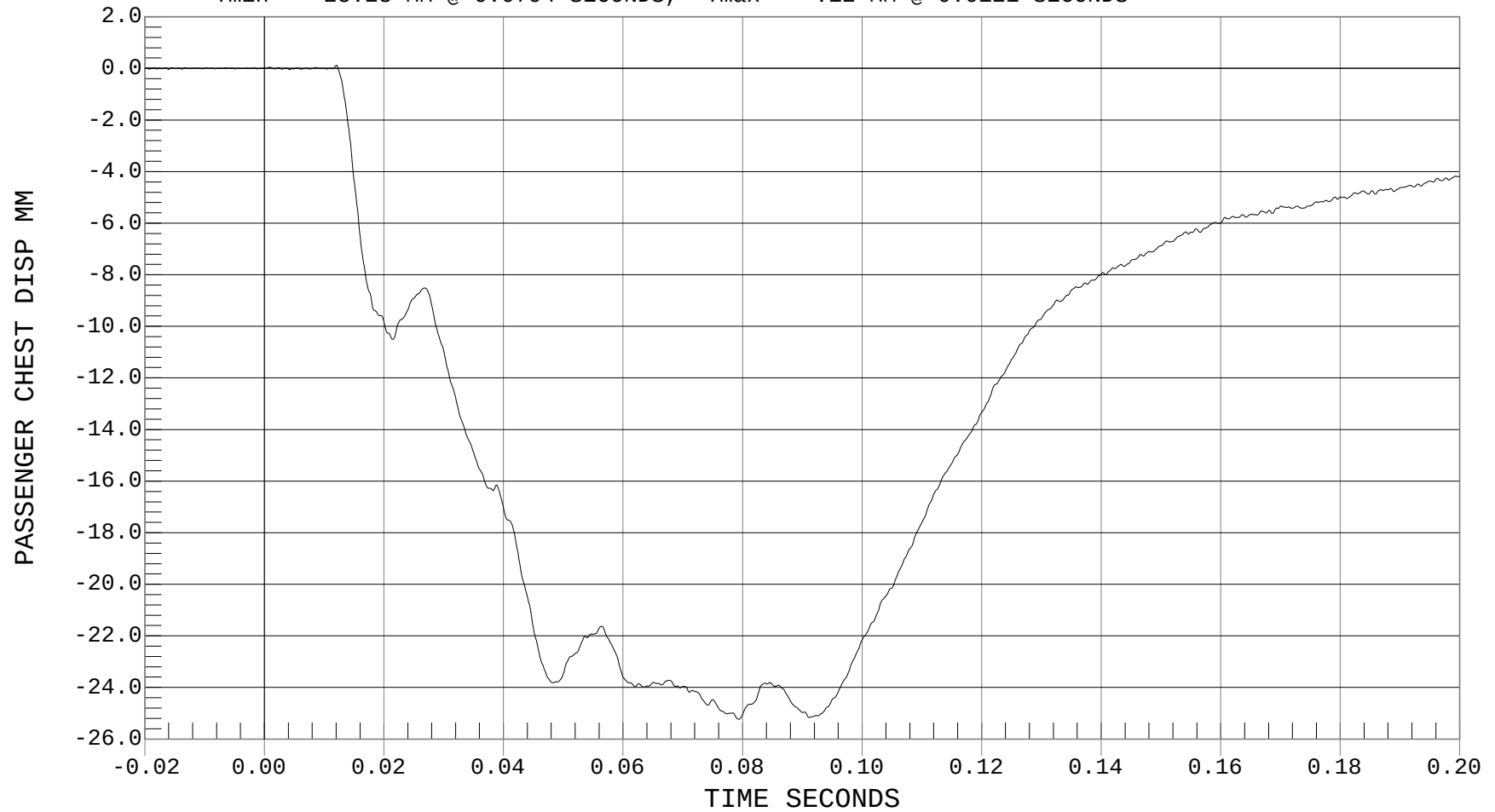
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 PASSENGER CHEST DISP, B00089DF.D25

Ymin = -25.23 MM @ 0.0794 SECONDS, Ymax = .12 MM @ 0.0121 SECONDS





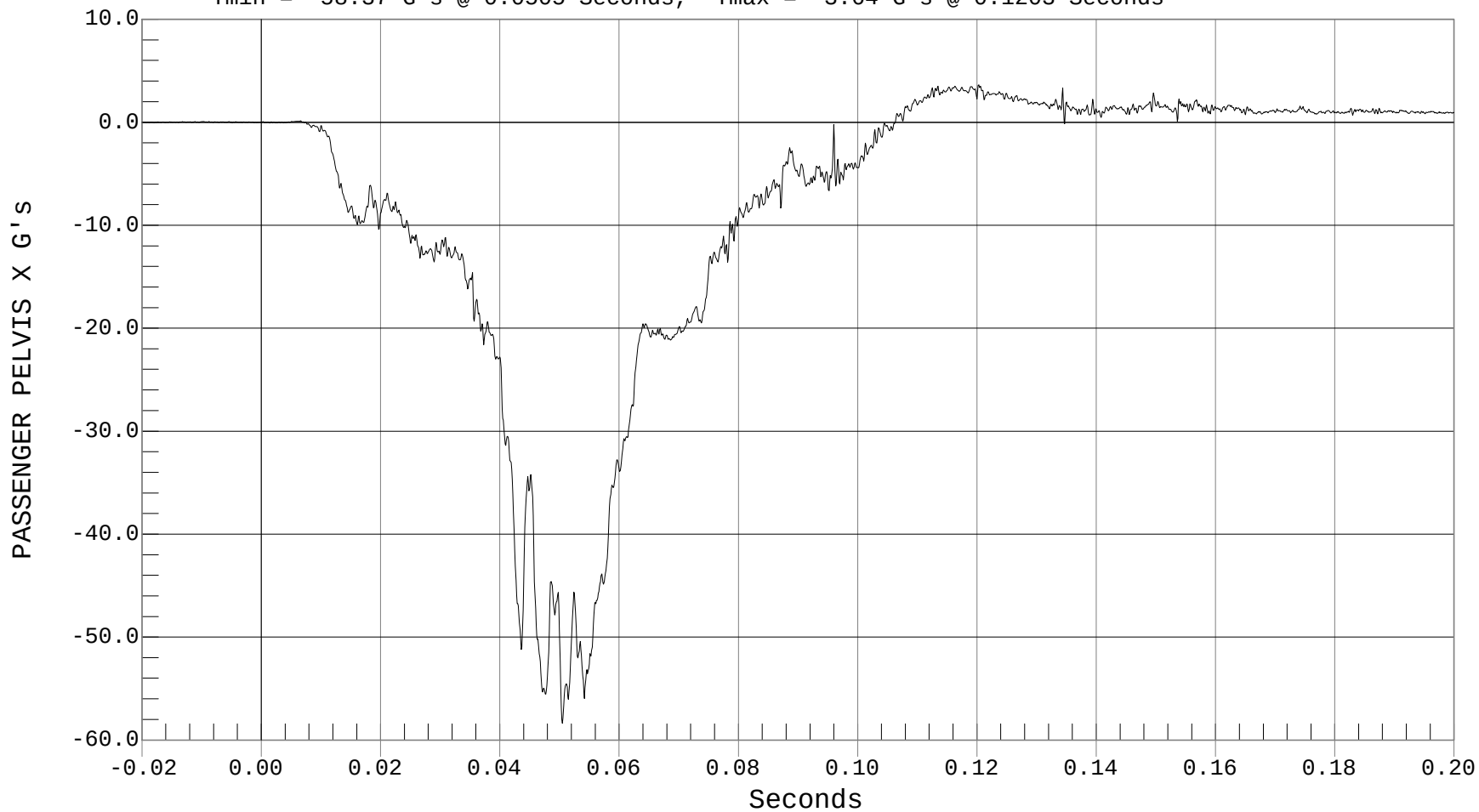
PASSENGER PELVIS X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER PELVIS X, B00089AT.A26

Ymin = -58.37 G's @ 0.0505 Seconds, Ymax = 3.64 G's @ 0.1203 Seconds





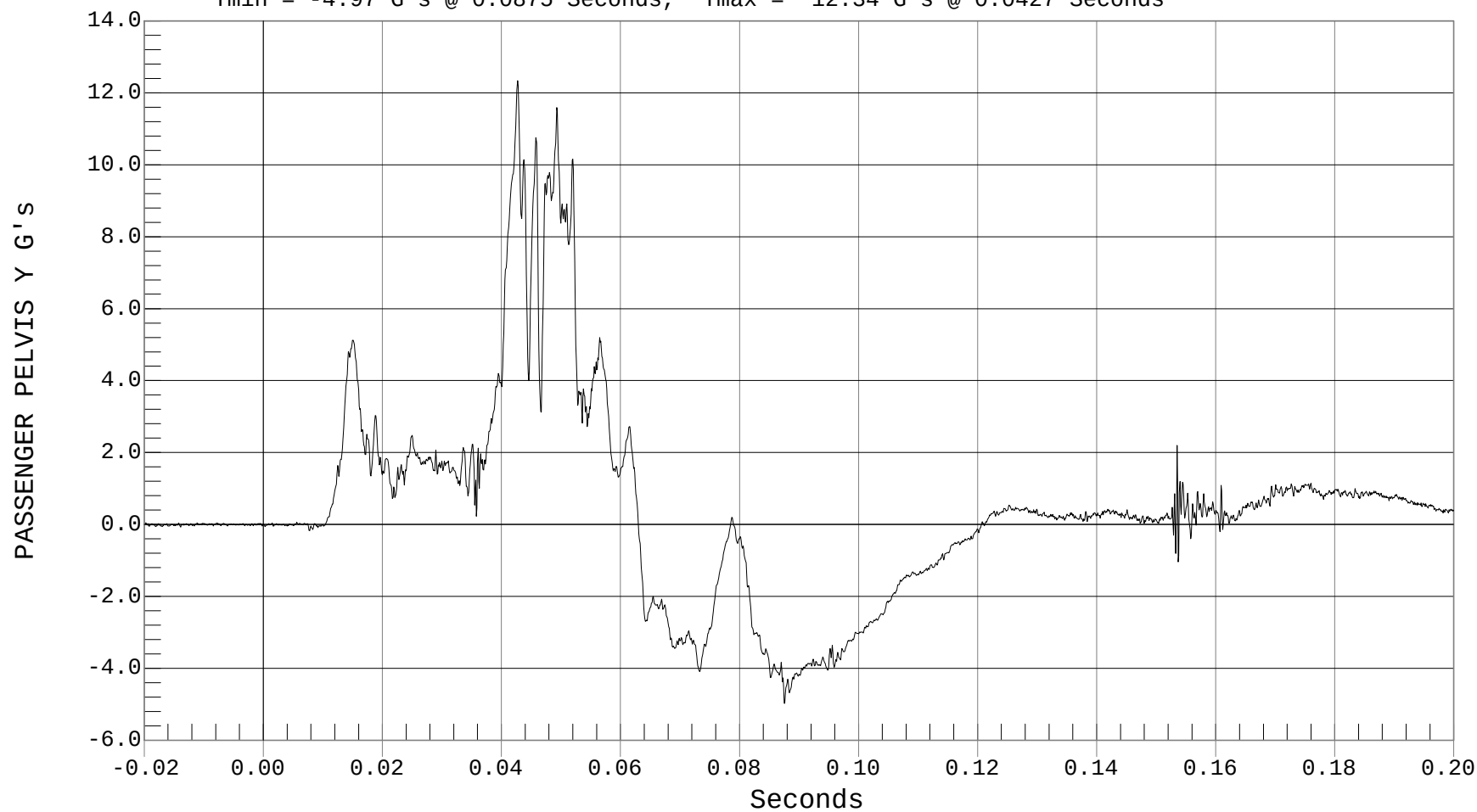
PASSENGER PELVIS Y ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER PELVIS Y, B00089AT.A27

Ymin = -4.97 G's @ 0.0875 Seconds, Ymax = 12.34 G's @ 0.0427 Seconds





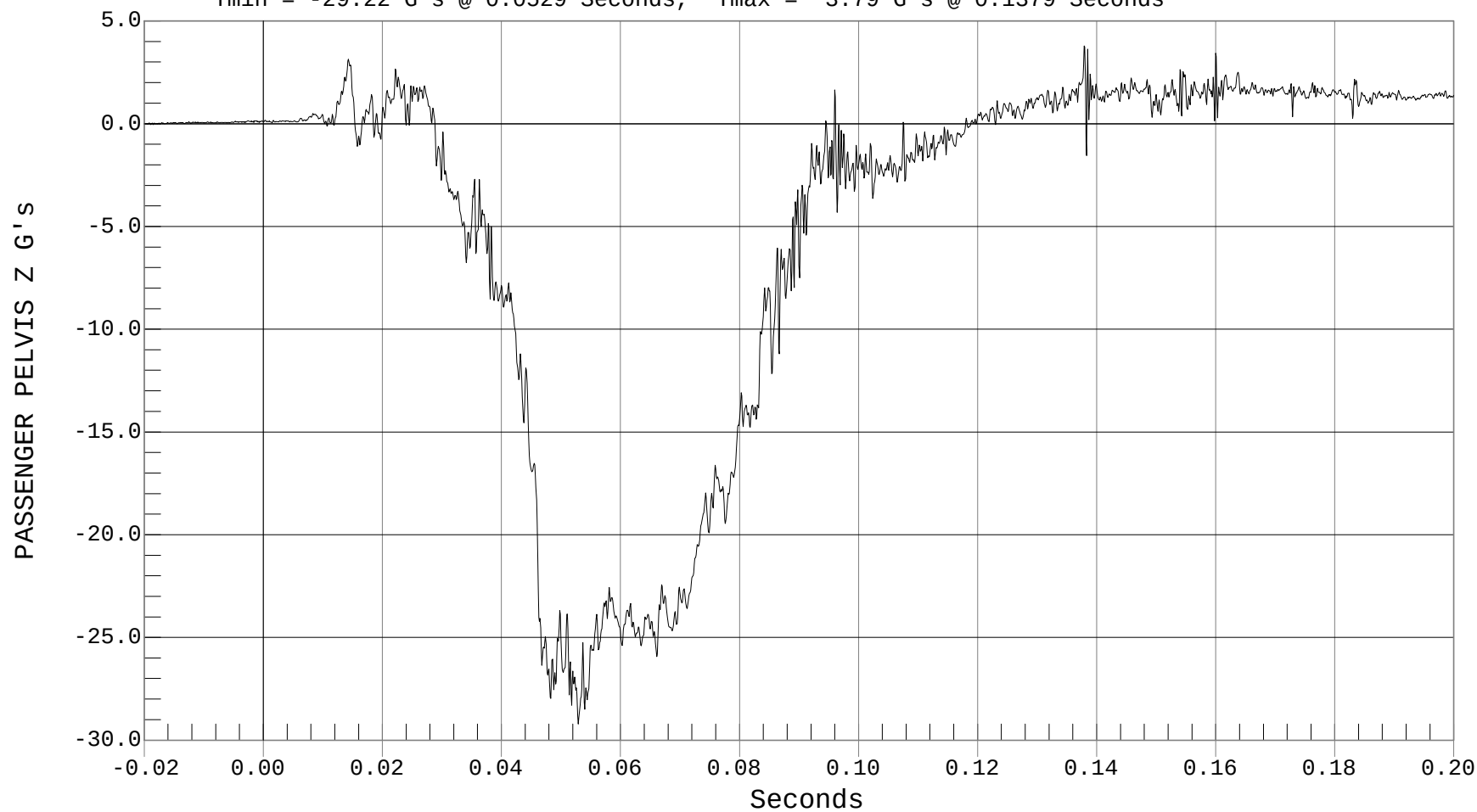
PASSENGER PELVIS Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 1000

— 1 PASSENGER PELVIS Z, B00089AT.A28

Ymin = -29.22 G's @ 0.0529 Seconds, Ymax = 3.79 G's @ 0.1379 Seconds





PASSENGER PELVIS RESULTANT ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

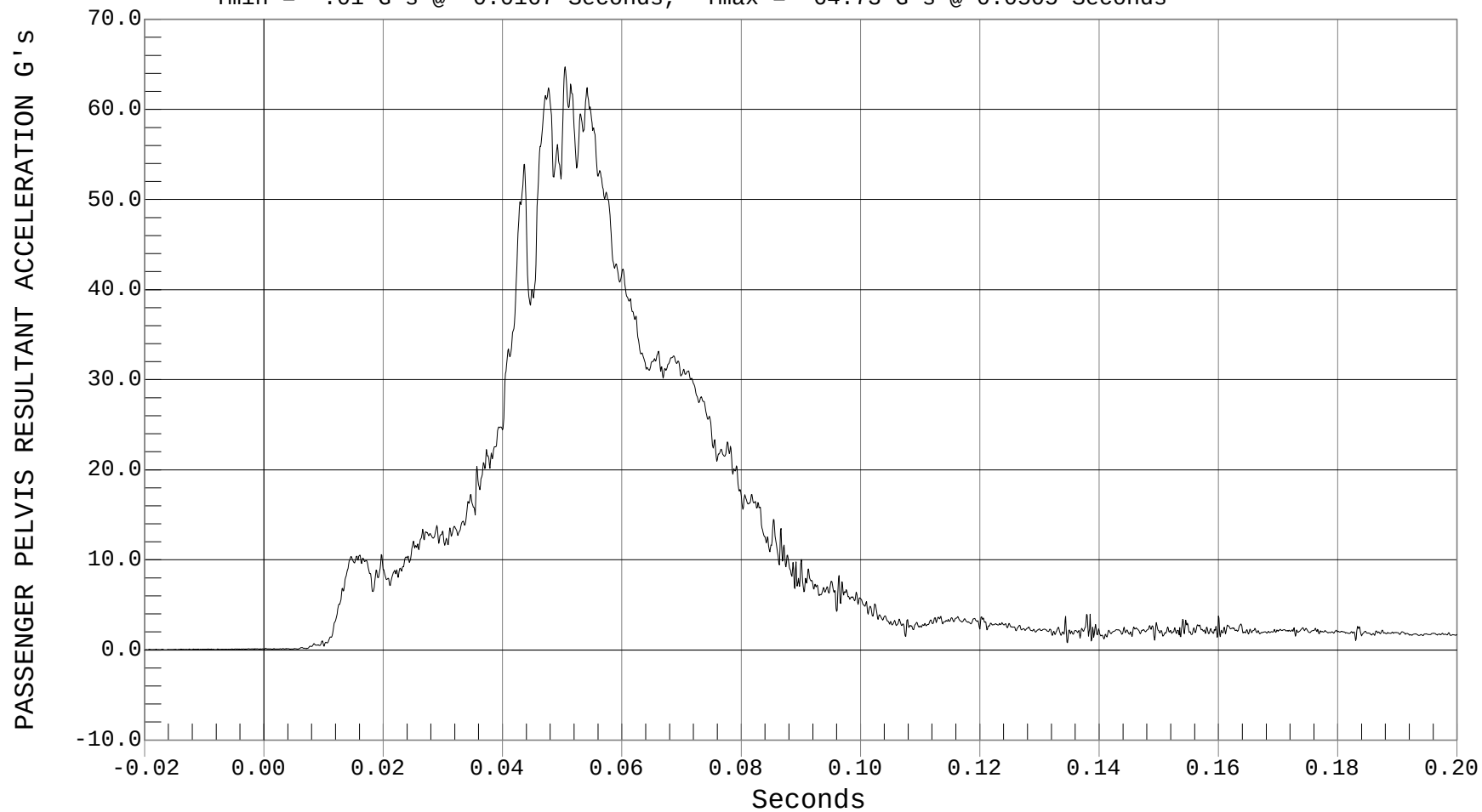
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 1000

— 1 PASSENGER PELVIS RESULTANT ACCELERATION, B00089AV.A26

Ymin = .01 G's @ -0.0167 Seconds, Ymax = 64.73 G's @ 0.0505 Seconds





PASSENGER PELVIS X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 D00R

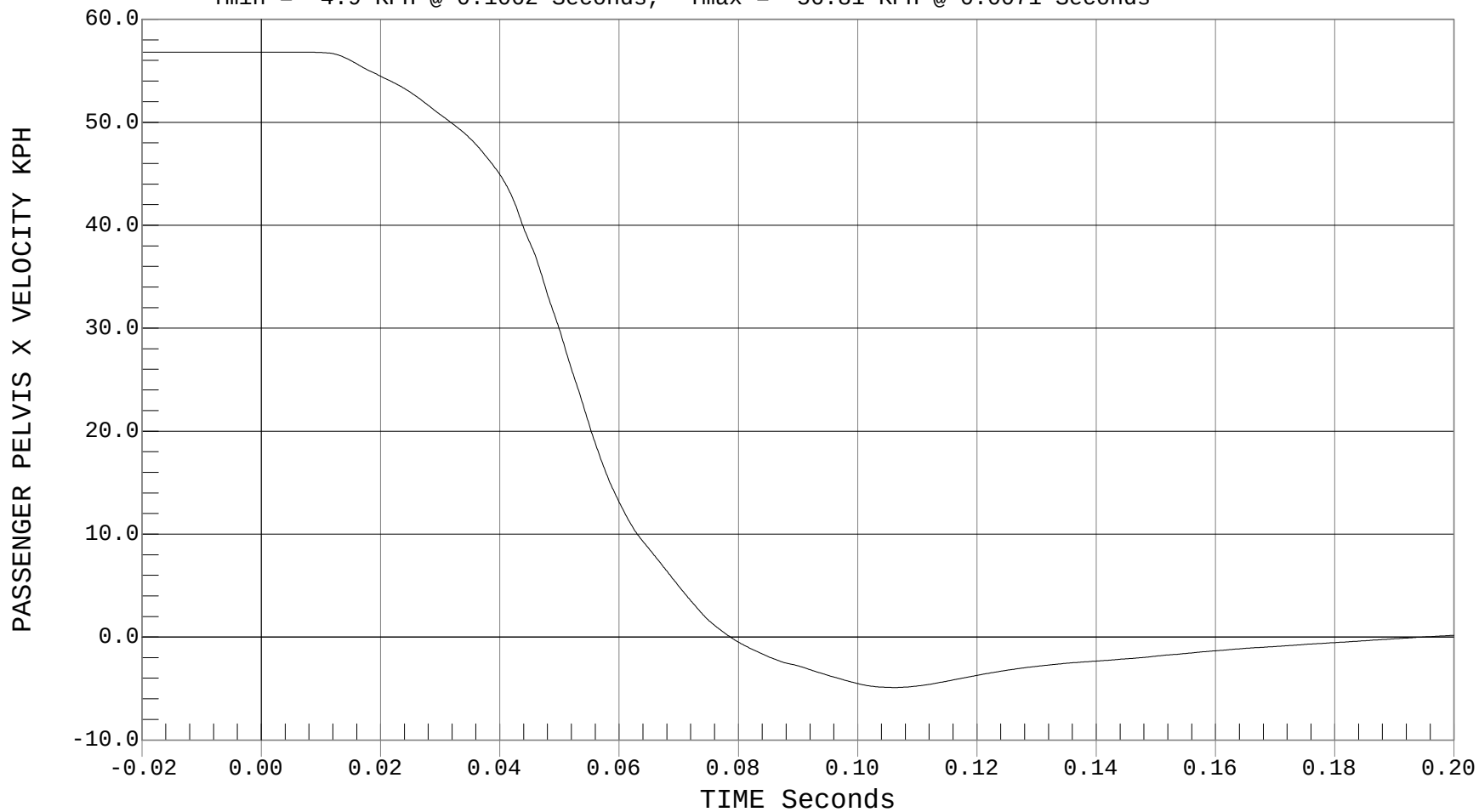
Speed: 35.3 MPH, 56.8 KPH

Other Info:

Filter Class: 180

— 1 PASSENGER PELVIS X VELOCITY, B00089AI.V26

Ymin = -4.9 KPH @ 0.1062 Seconds, Ymax = 56.81 KPH @ 0.0071 Seconds





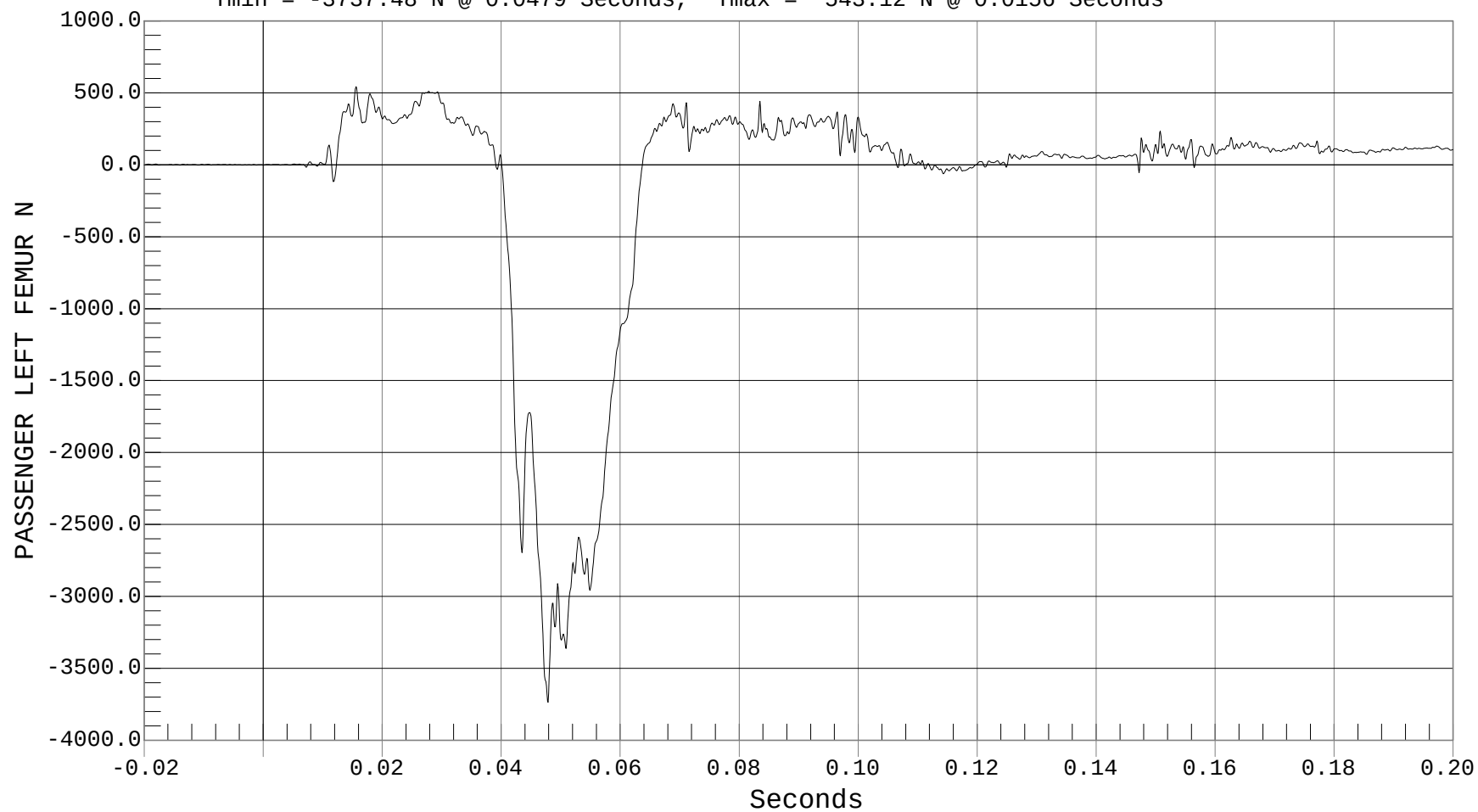
PASSENGER LEFT FEMUR FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER LEFT FEMUR, B00089FF.F30

Ymin = -3737.48 N @ 0.0479 Seconds, Ymax = 543.12 N @ 0.0156 Seconds





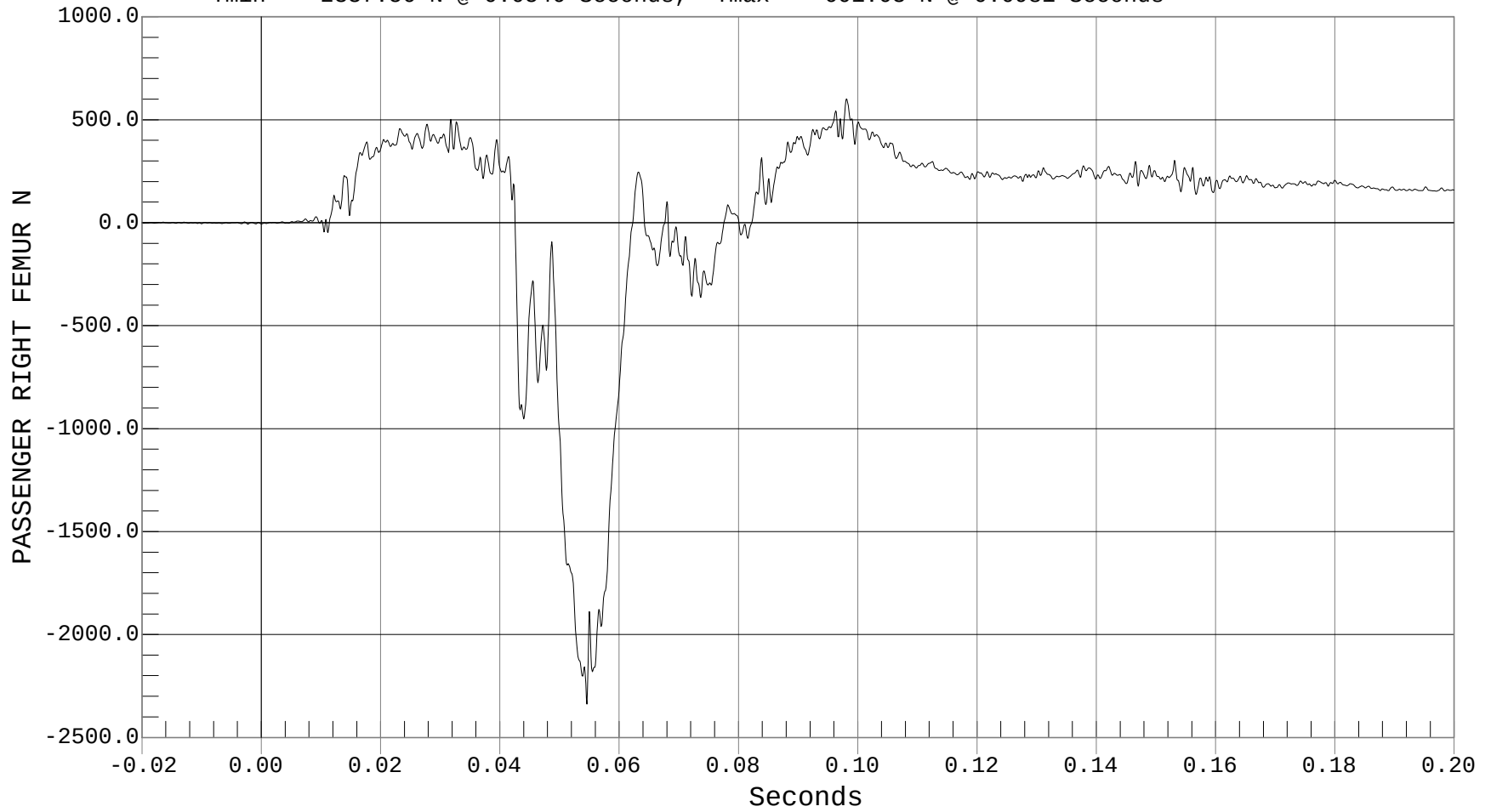
PASSENGER RIGHT FEMUR FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER RIGHT FEMUR, B00089FF.F29

Ymin = -2337.56 N @ 0.0546 Seconds, Ymax = 601.03 N @ 0.0981 Seconds





PASSENGER LEFT UPPER TIBIA MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

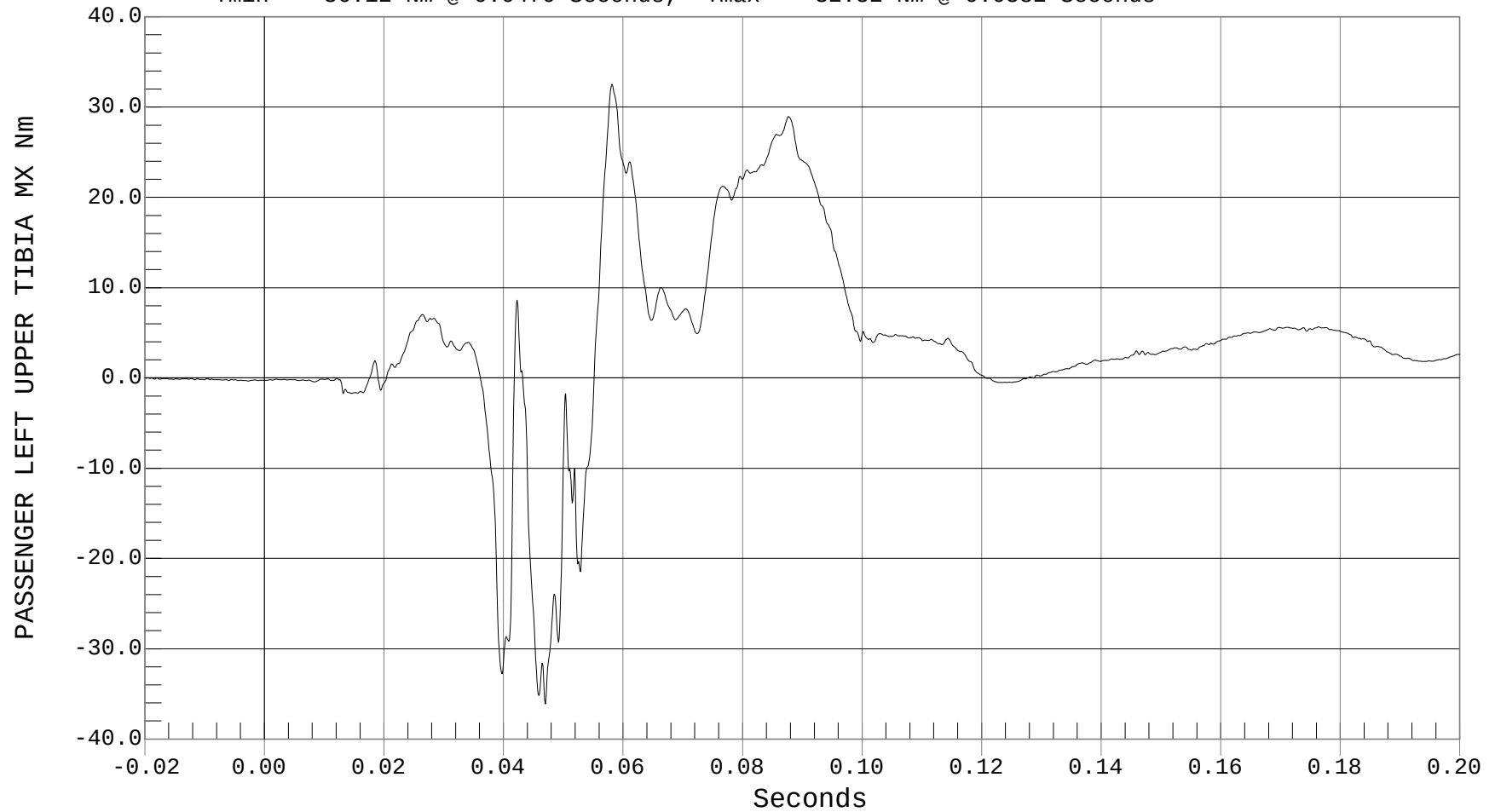
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 PASSENGER LEFT UPPER TIBIA MX, B00089MF.M87

Ymin = -36.12 Nm @ 0.0470 Seconds, Ymax = 32.52 Nm @ 0.0582 Seconds





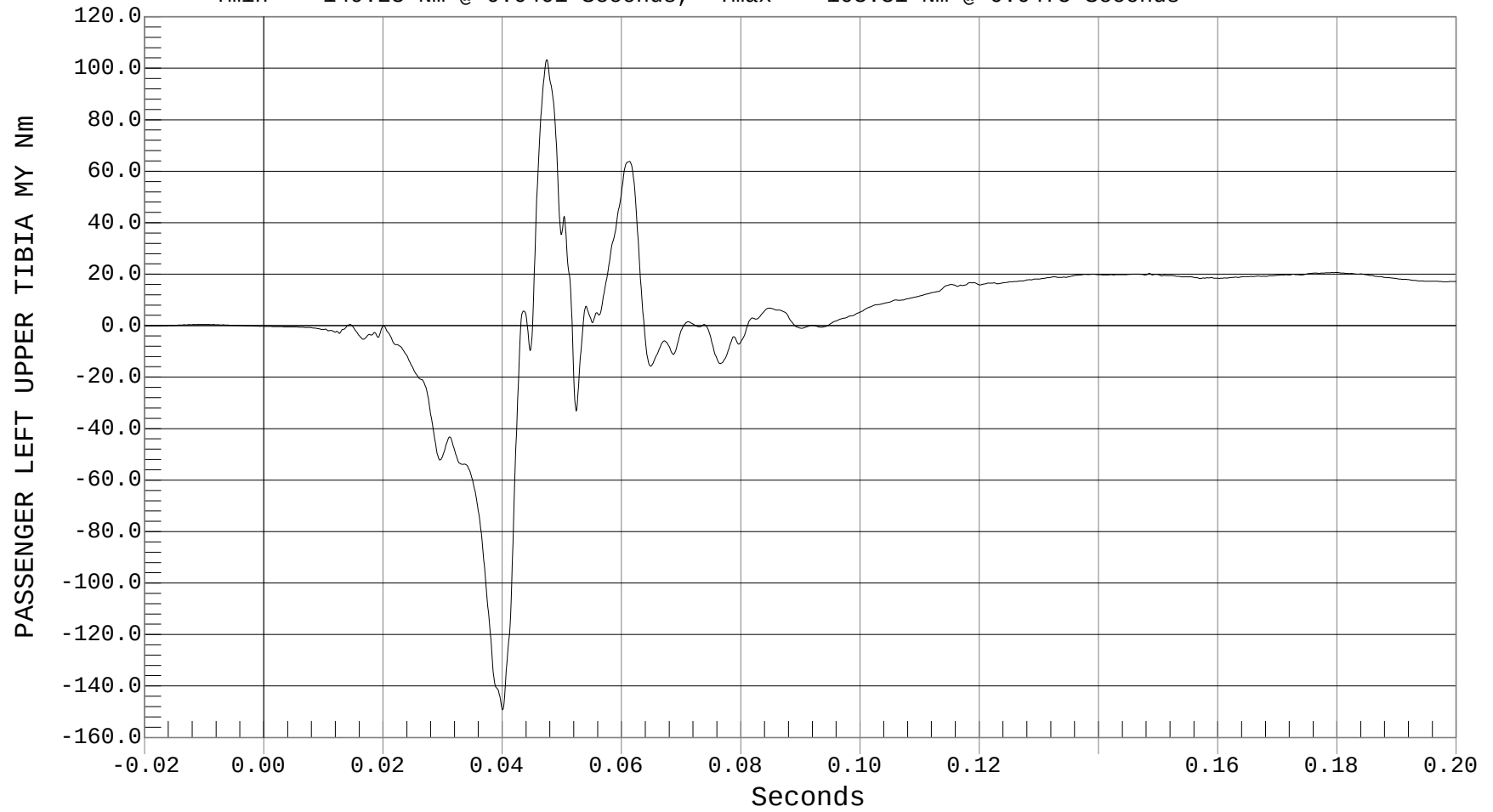
PASSENGER LEFT UPPER TIBIA MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER LEFT UPPER TIBIA MY, B00089MF.M88

Ymin = -149.23 Nm @ 0.0401 Seconds, Ymax = 103.31 Nm @ 0.0475 Seconds





PASSENGER LEFT UPPER TIBIA FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

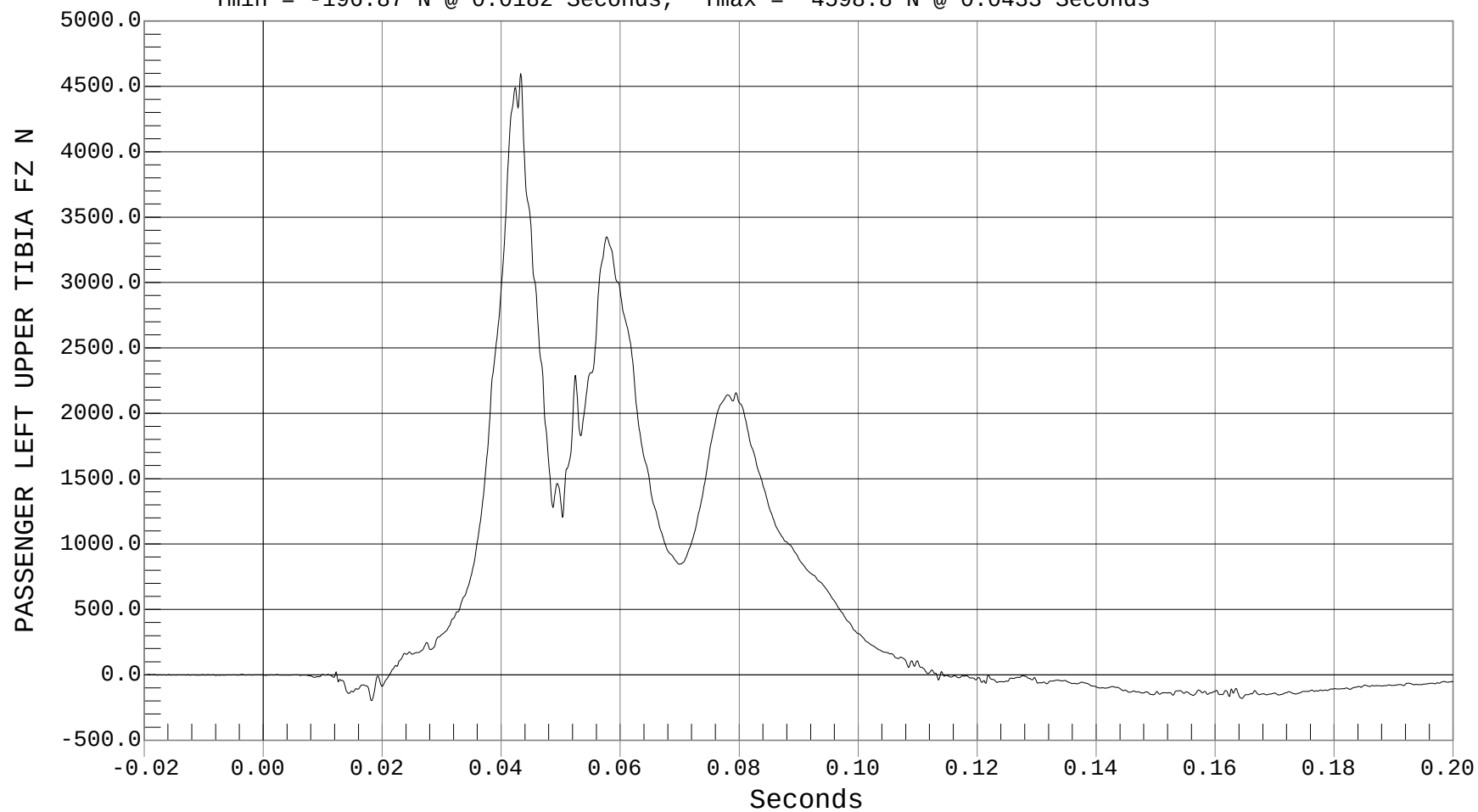
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 PASSENGER LEFT UPPER TIBIA FZ, B00089FF.F89

Ymin = -196.87 N @ 0.0182 Seconds, Ymax = 4598.8 N @ 0.0433 Seconds





PASSENGER LEFT LOWER TIBIA MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

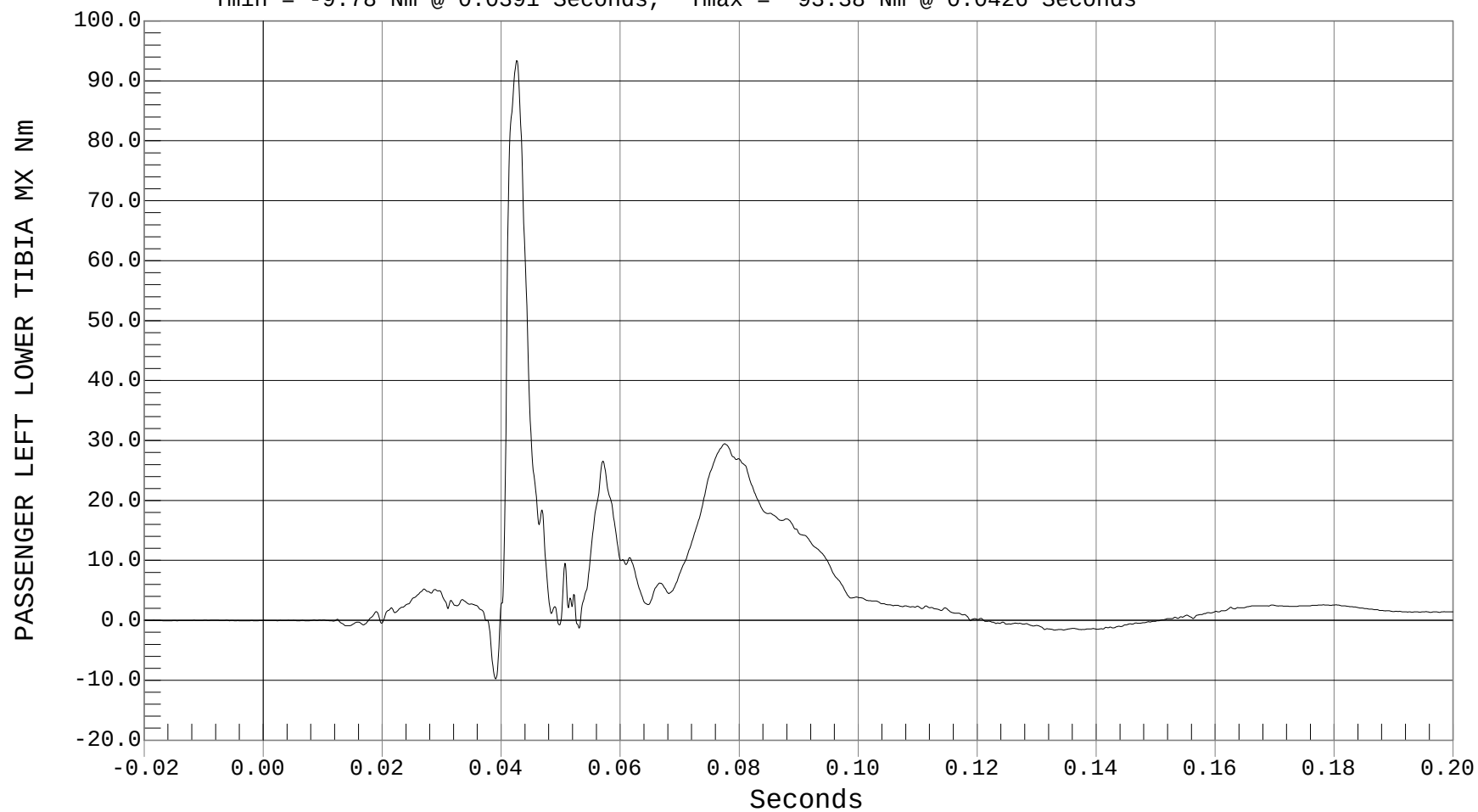
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 PASSENGER LEFT LOWER TIBIA MX, B00089MF.M90

Ymin = -9.78 Nm @ 0.0391 Seconds, Ymax = 93.38 Nm @ 0.0426 Seconds





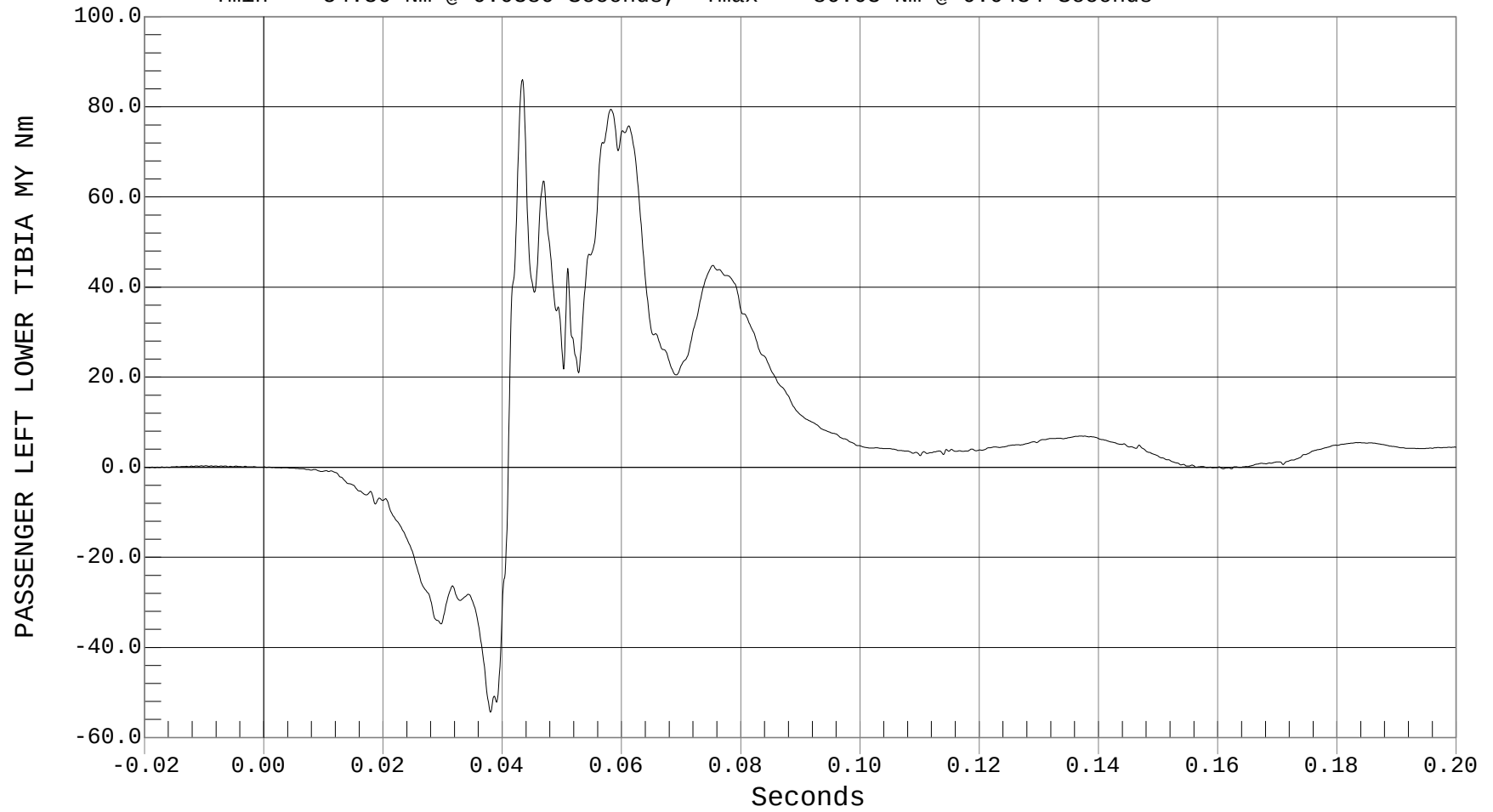
PASSENGER LEFT LOWER TIBIA MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER LEFT LOWER TIBIA MY, B00089MF.M91

Ymin = -54.36 Nm @ 0.0380 Seconds, Ymax = 86.03 Nm @ 0.0434 Seconds





PASSENGER LEFT LOWER TIBIA FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

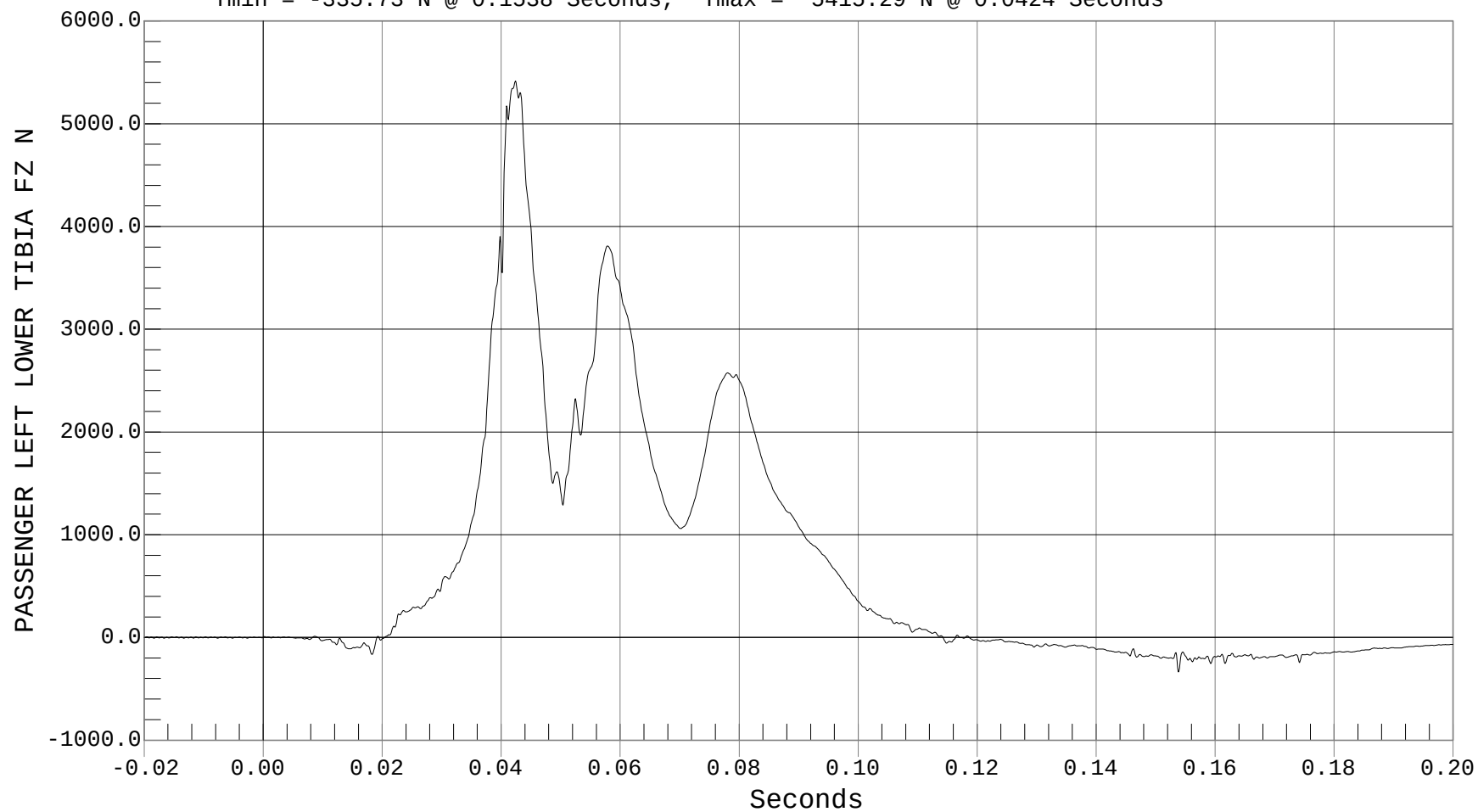
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 PASSENGER LEFT LOWER TIBIA FZ, B00089FF.F92

Ymin = -335.73 N @ 0.1538 Seconds, Ymax = 5415.29 N @ 0.0424 Seconds





PASSENGER RIGHT UPPER TIBIA MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

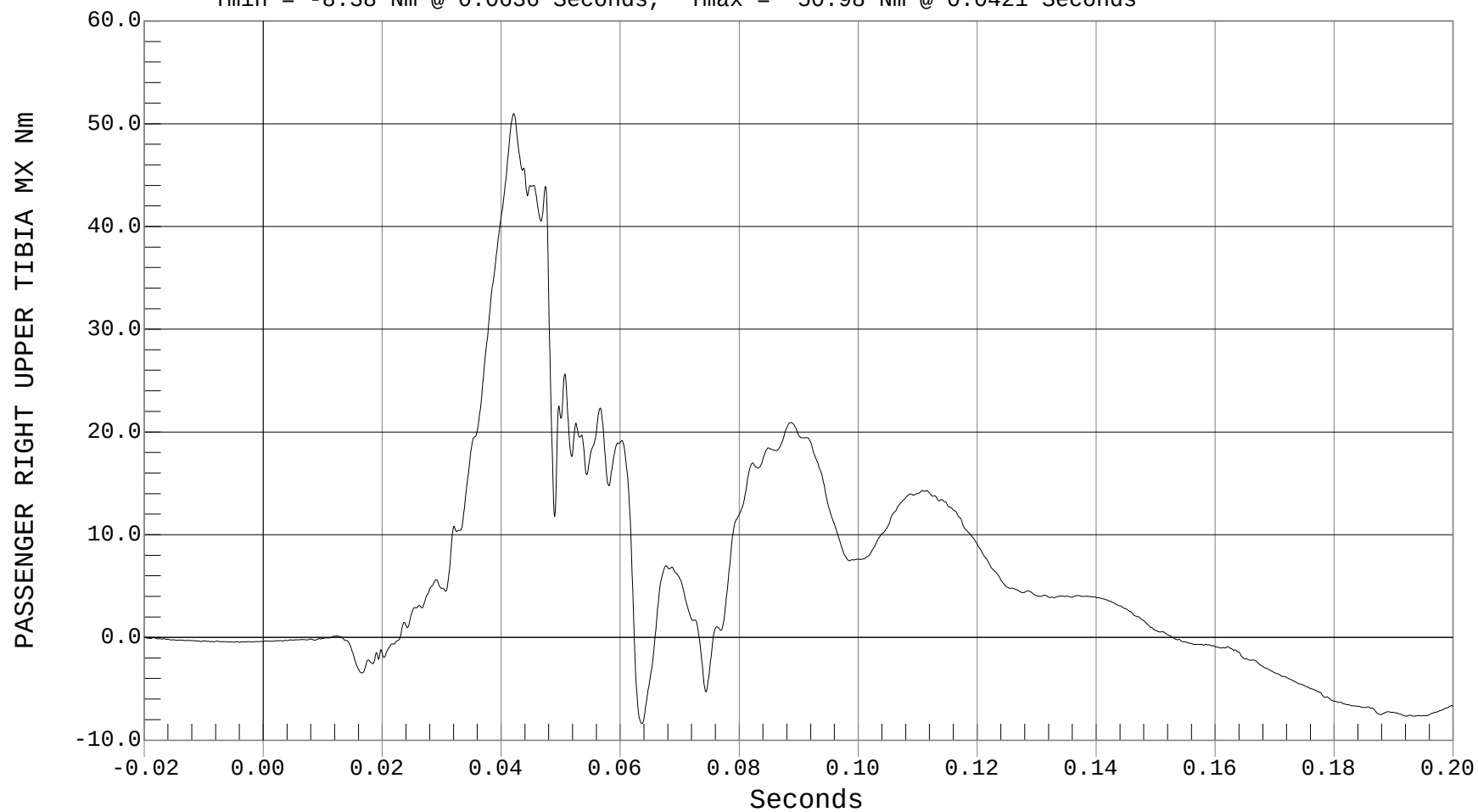
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 PASSENGER RIGHT UPPER TIBIA MX, B00089MF.M81

Ymin = -8.38 Nm @ 0.0636 Seconds, Ymax = 50.98 Nm @ 0.0421 Seconds





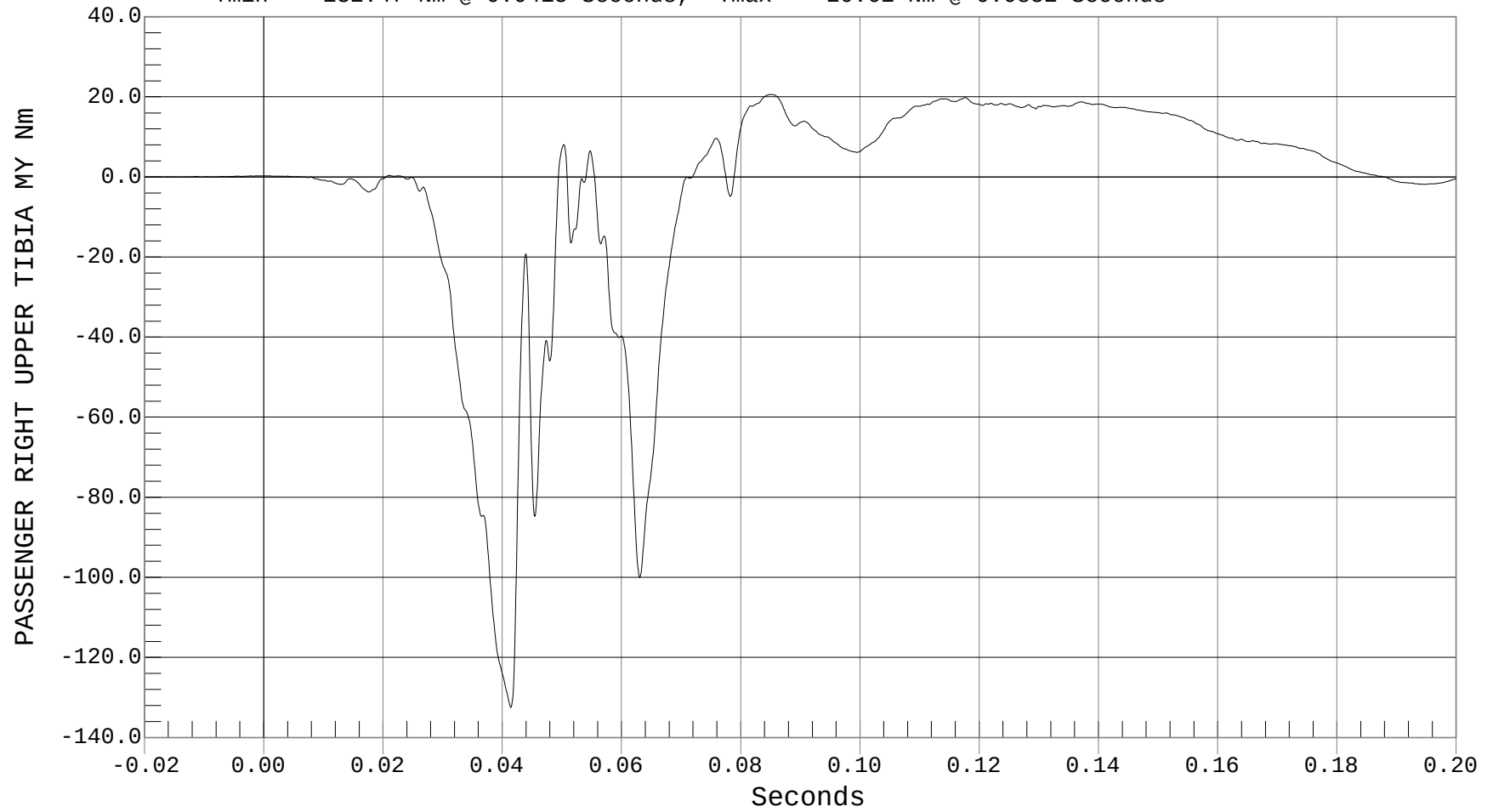
PASSENGER RIGHT UPPER TIBIA MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER RIGHT UPPER TIBIA MY, B00089MF.M82

Ymin = -132.47 Nm @ 0.0415 Seconds, Ymax = 20.61 Nm @ 0.0852 Seconds





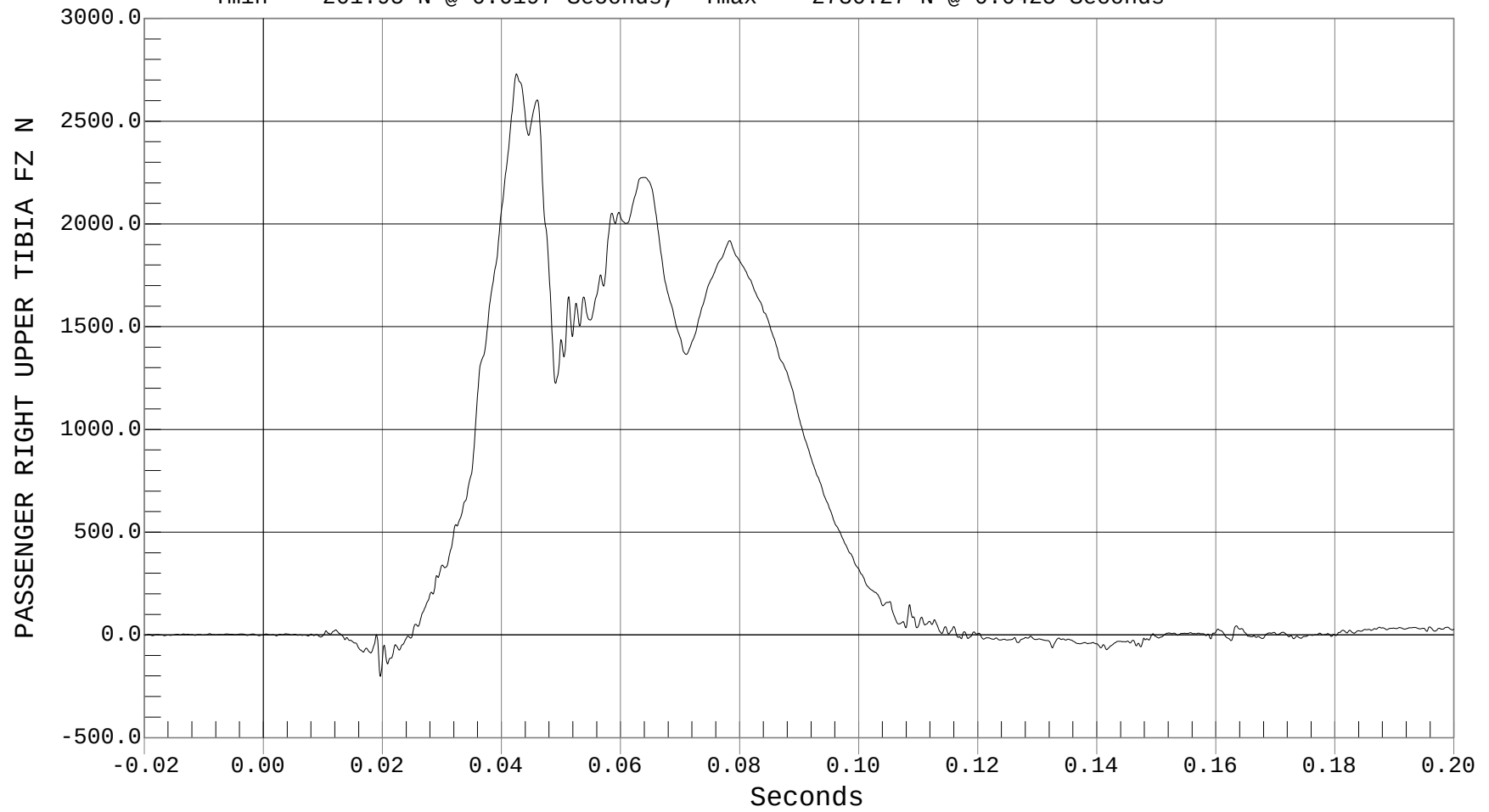
PASSENGER RIGHT UPPER TIBIA FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER RIGHT UPPER TIBIA FZ, B00089FF.F83

Ymin = -201.95 N @ 0.0197 Seconds, Ymax = 2730.27 N @ 0.0425 Seconds





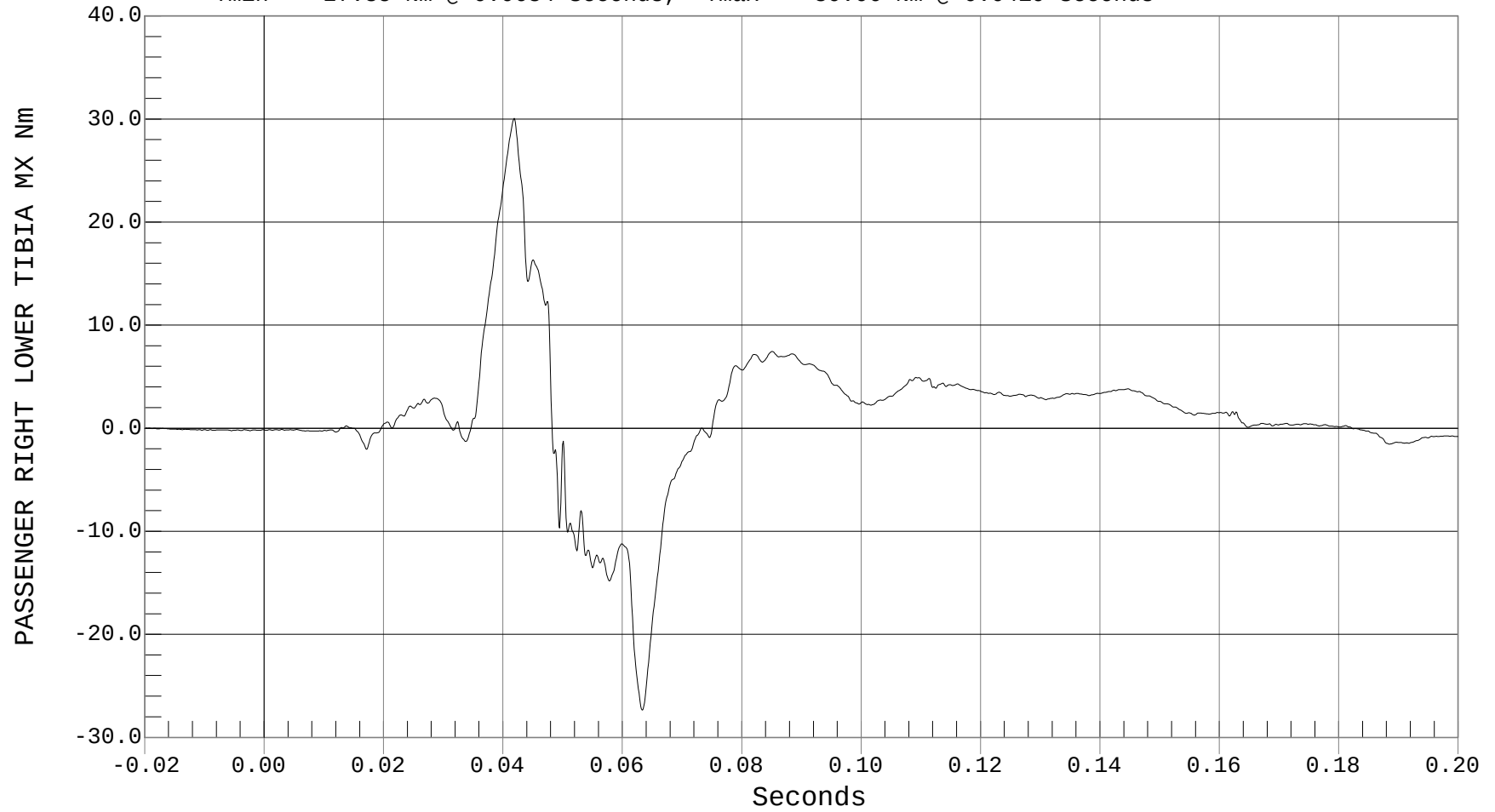
PASSENGER RIGHT LOWER TIBIA MOMENT X

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 600

— 1 PASSENGER RIGHT LOWER TIBIA MX, B00089MF.M84

Ymin = -27.35 Nm @ 0.0634 Seconds, Ymax = 30.06 Nm @ 0.0419 Seconds





PASSENGER RIGHT LOWER TIBIA MOMENT Y

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

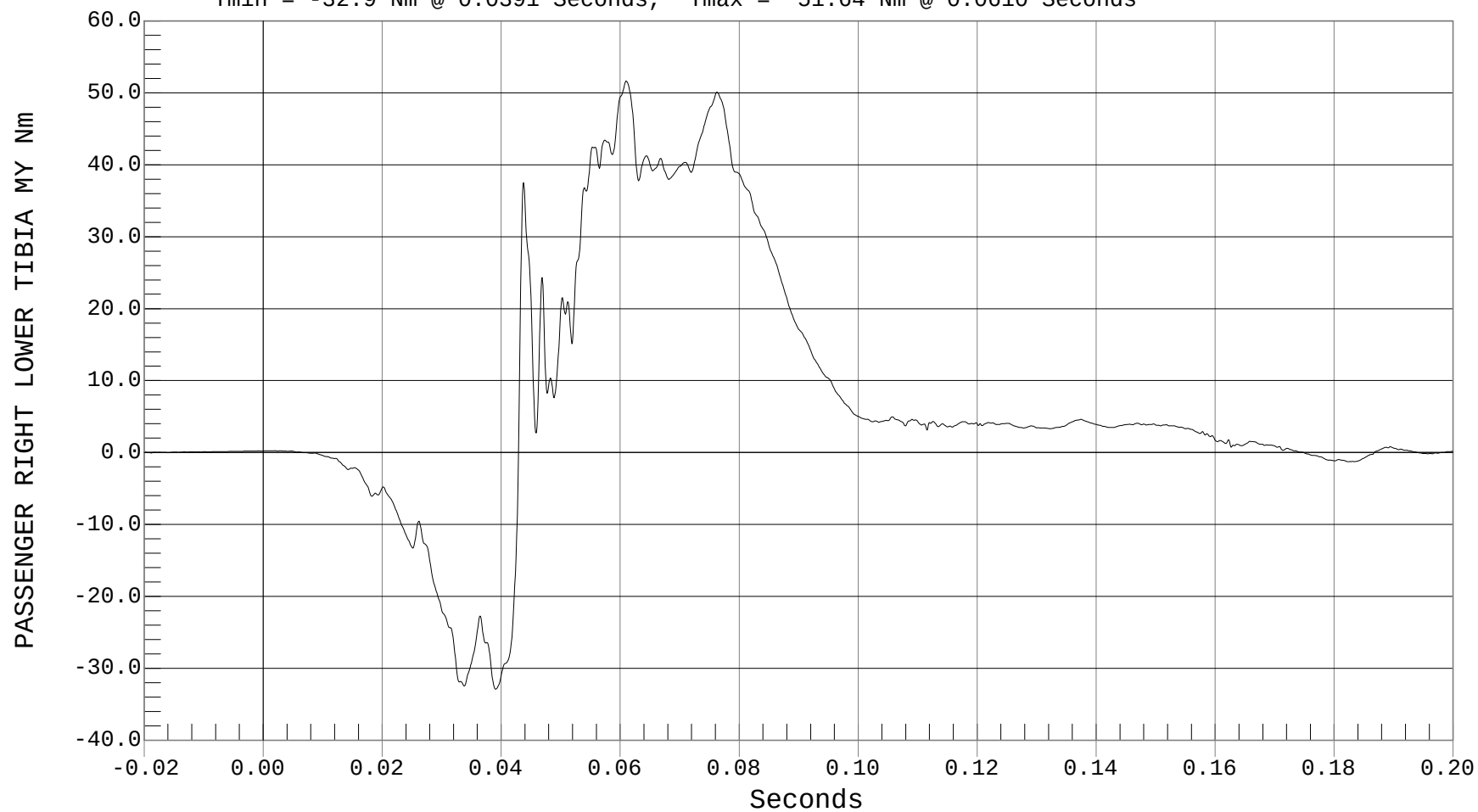
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 PASSENGER RIGHT LOWER TIBIA MY, B00089MF.M85

Ymin = -32.9 Nm @ 0.0391 Seconds, Ymax = 51.64 Nm @ 0.0610 Seconds





PASSENGER RIGHT LOWER TIBIA FORCE Z

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

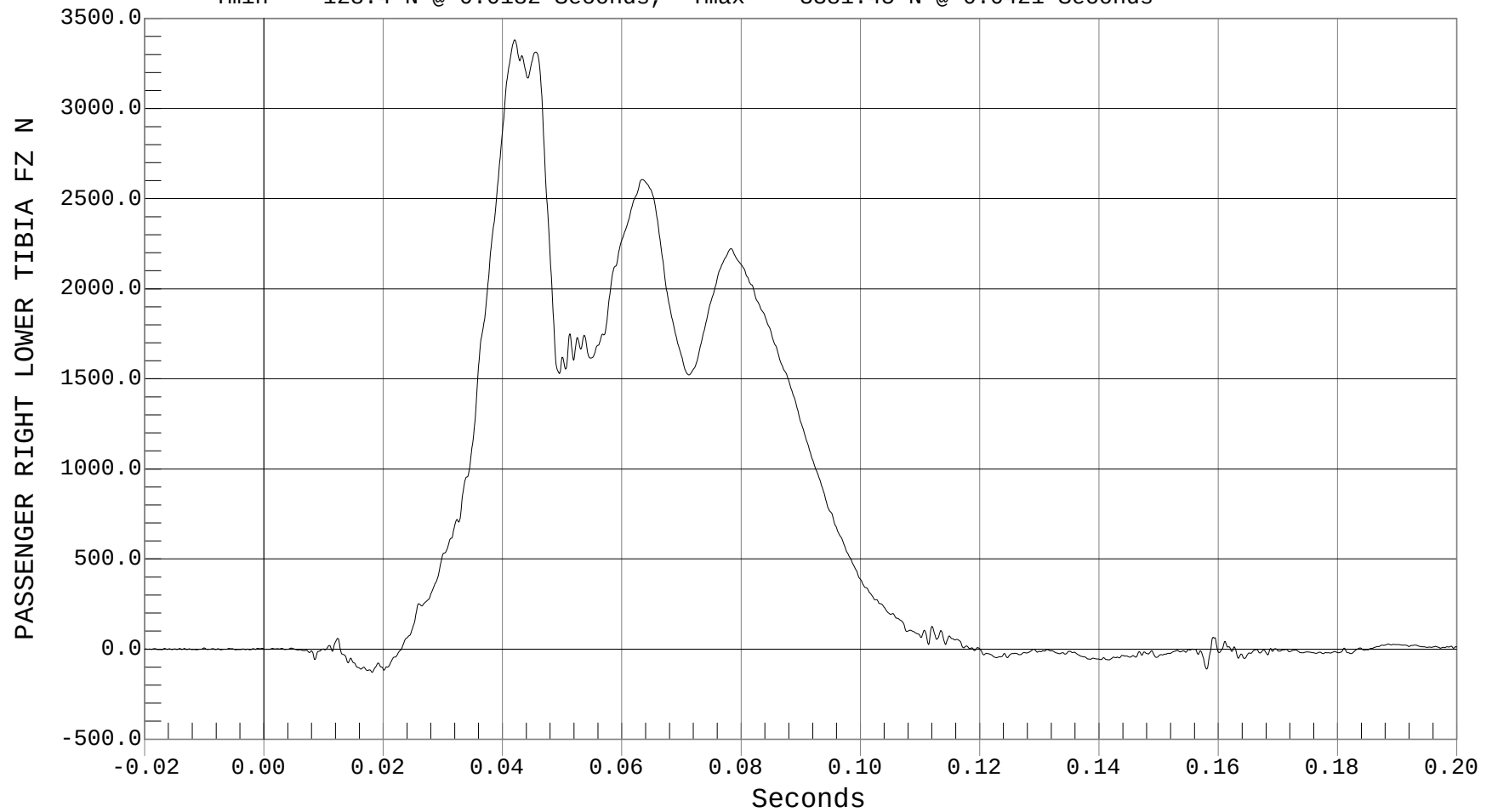
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 600

— 1 PASSENGER RIGHT LOWER TIBIA FZ, B00089FF.F86

Ymin = -128.4 N @ 0.0182 Seconds, Ymax = 3381.45 N @ 0.0421 Seconds



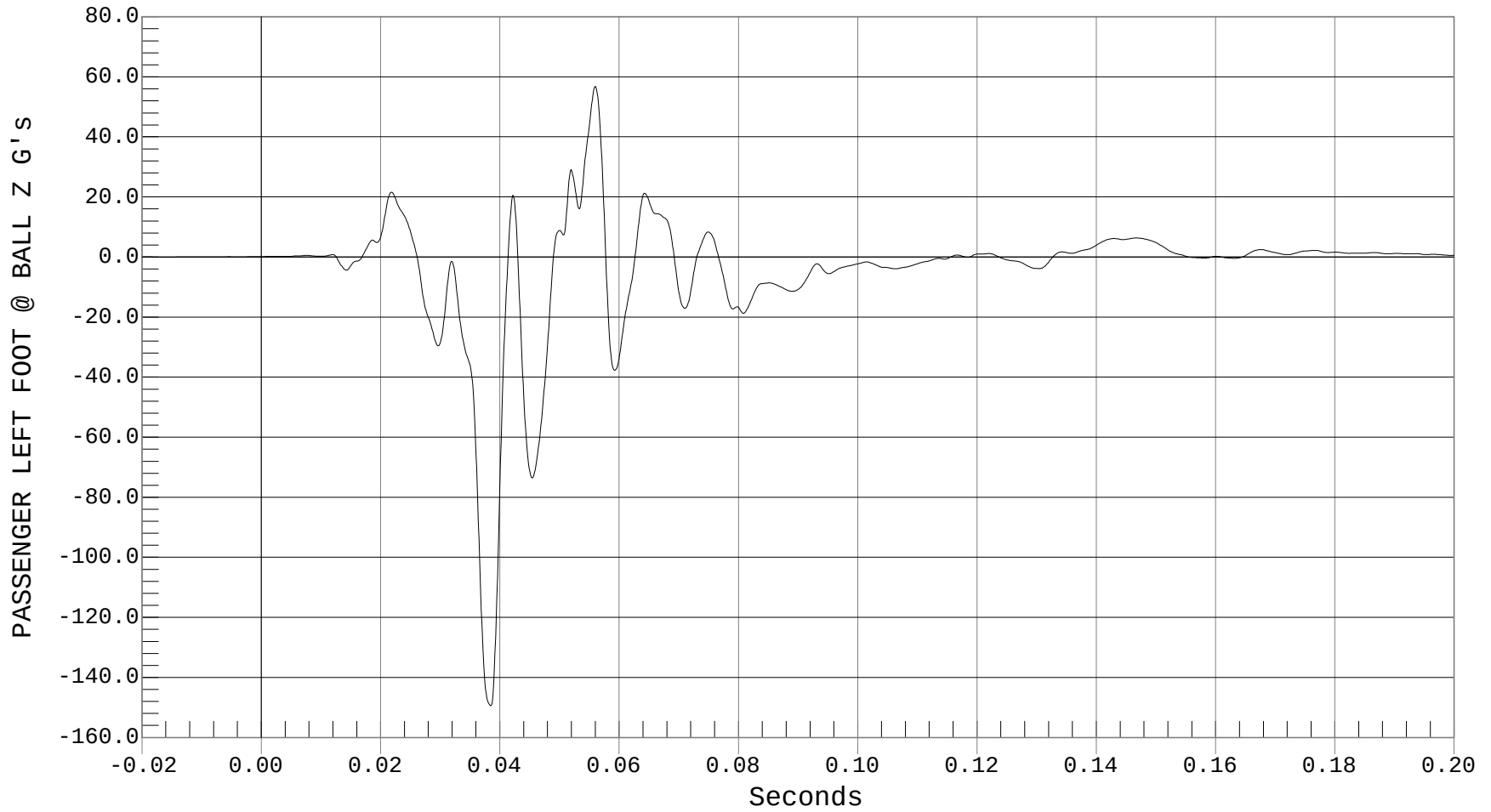


PASSENGER LEFT FOOT @ BALL Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER LEFT FOOT @ BALL Z, C00089AF.A09





PASSENGER LEFT FOOT @ HEEL X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

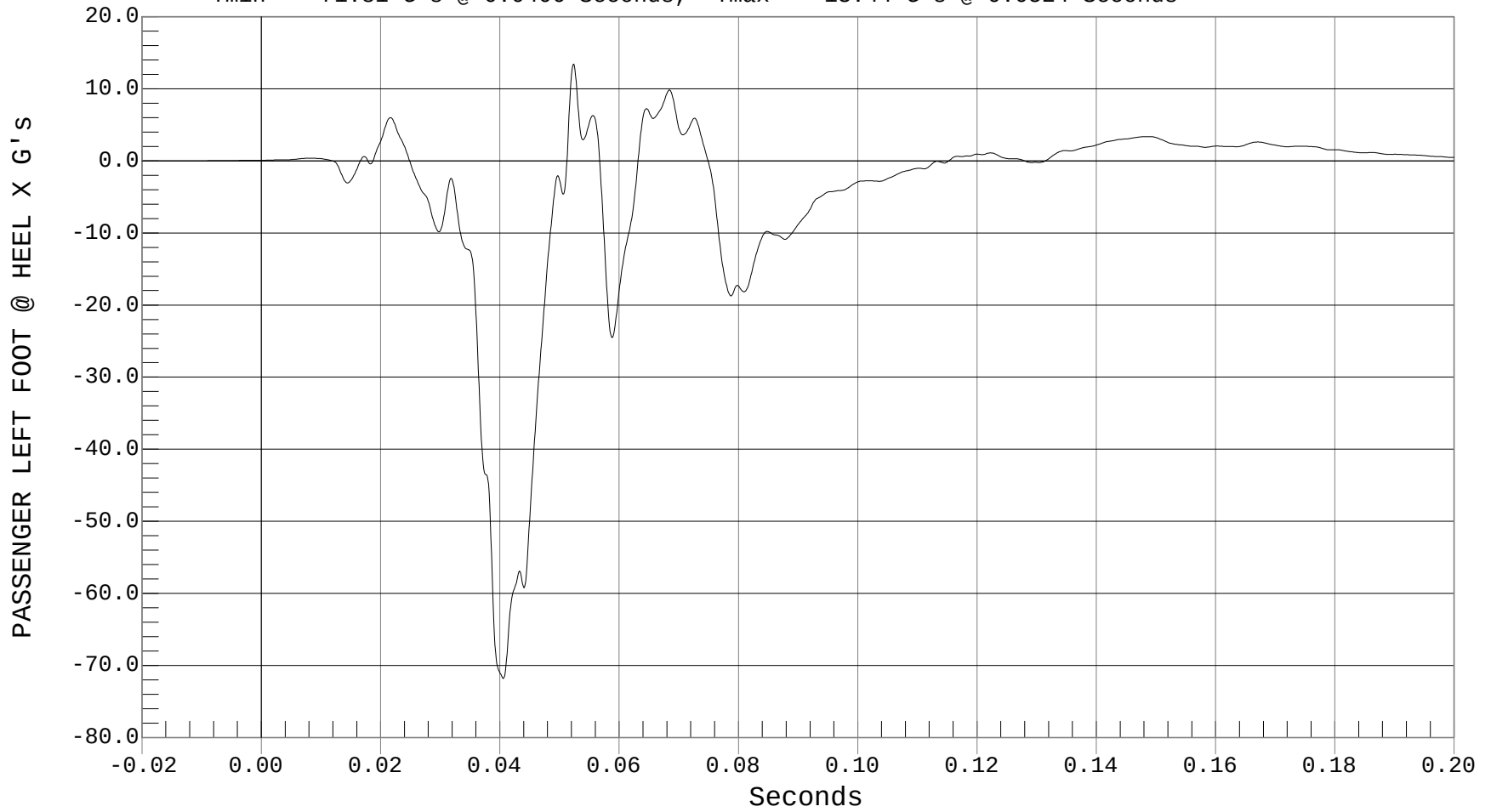
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 PASSENGER LEFT FOOT @ HEEL X, C00089AF.A07

Ymin = -71.81 G's @ 0.0406 Seconds, Ymax = 13.44 G's @ 0.0524 Seconds





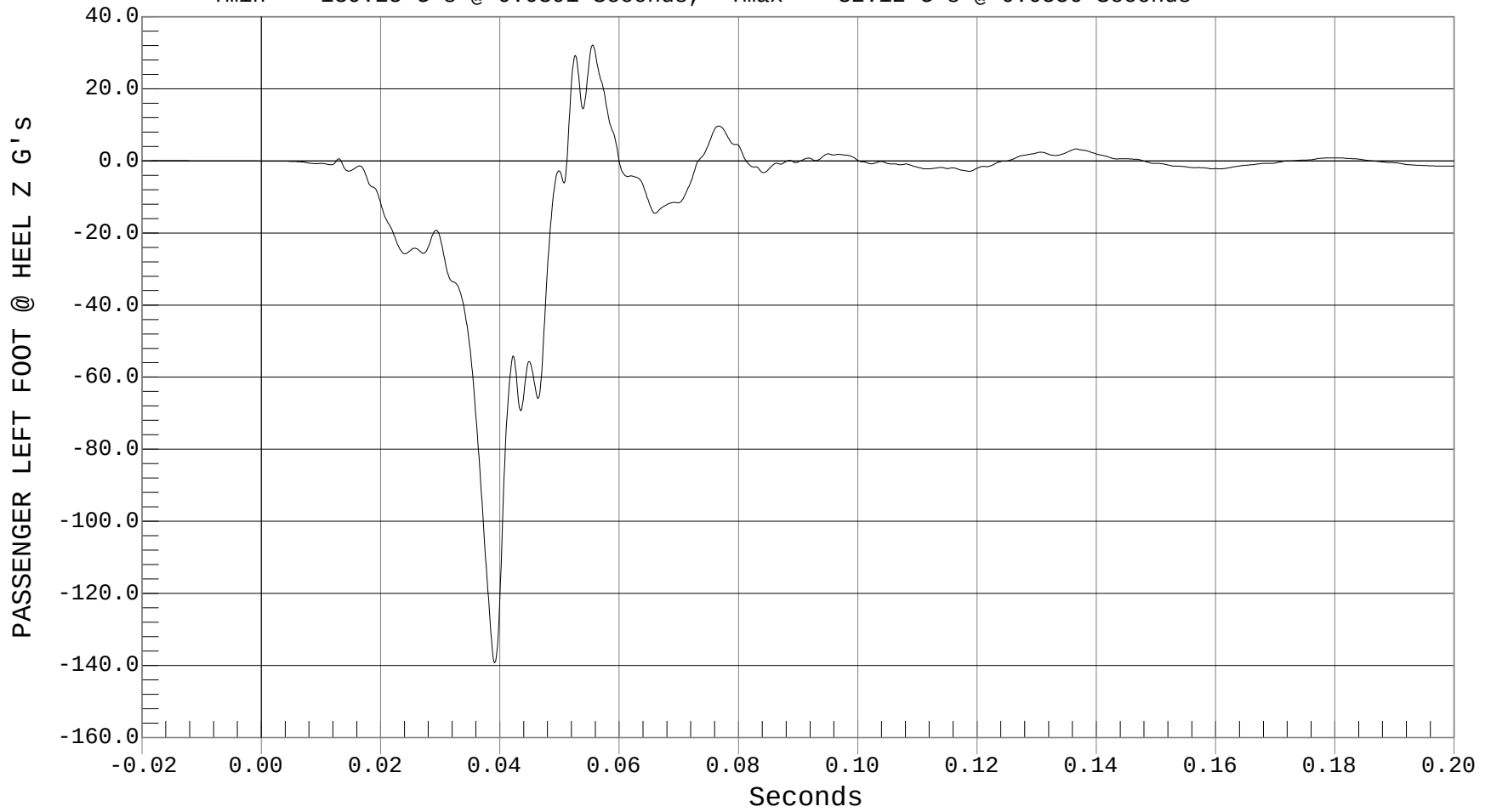
PASSENGER LEFT FOOT @ HEEL Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER LEFT FOOT @ HEEL Z, C00089AF.A08

Ymin = -139.25 G's @ 0.0391 Seconds, Ymax = 32.12 G's @ 0.0556 Seconds





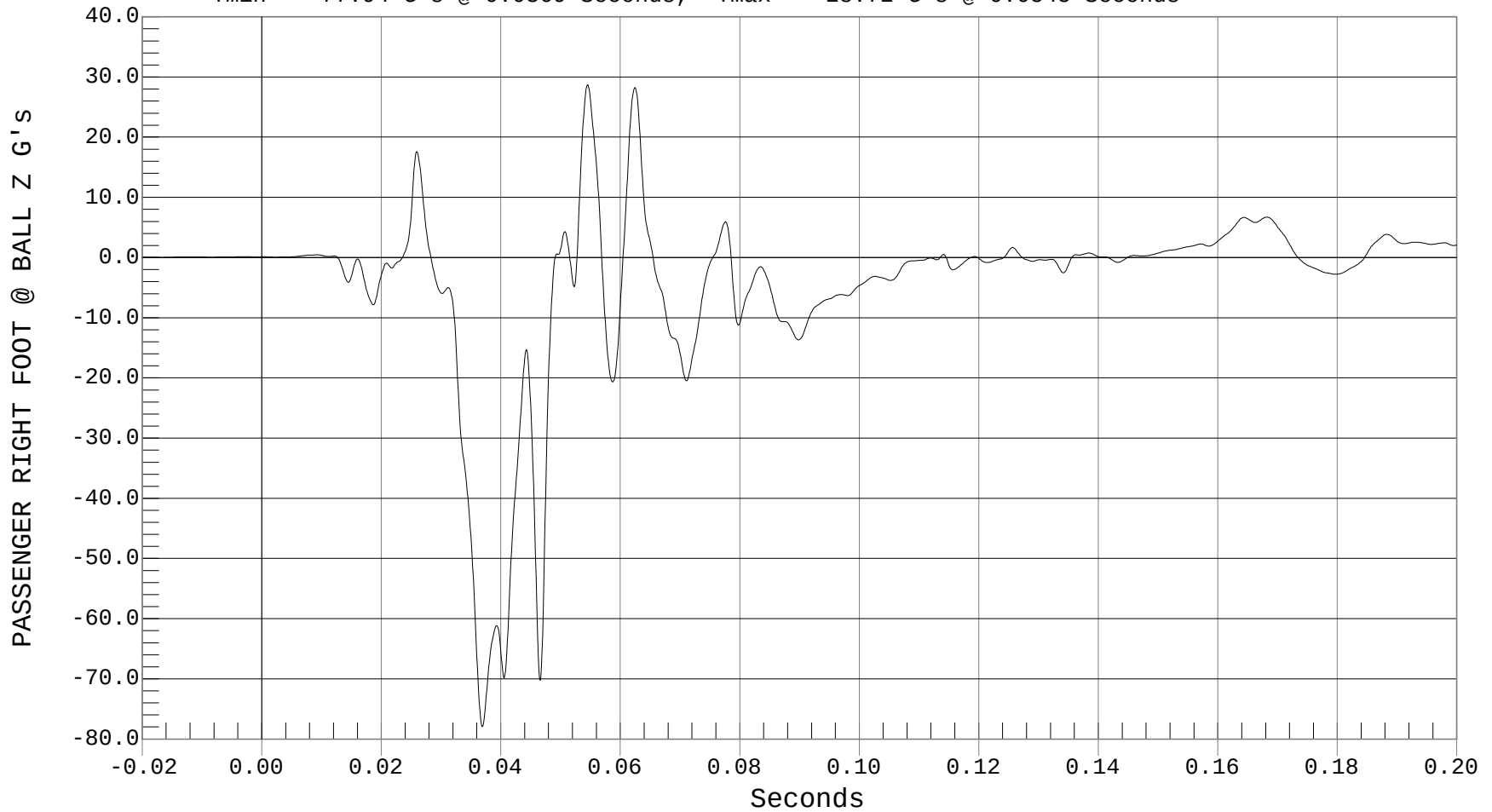
PASSENGER RIGHT FOOT @ BALL Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 PASSENGER RIGHT FOOT @ BALL Z, C00089AF.A06

Ymin = -77.94 G's @ 0.0369 Seconds, Ymax = 28.72 G's @ 0.0545 Seconds





PASSENGER RIGHT FOOT @ HEEL X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

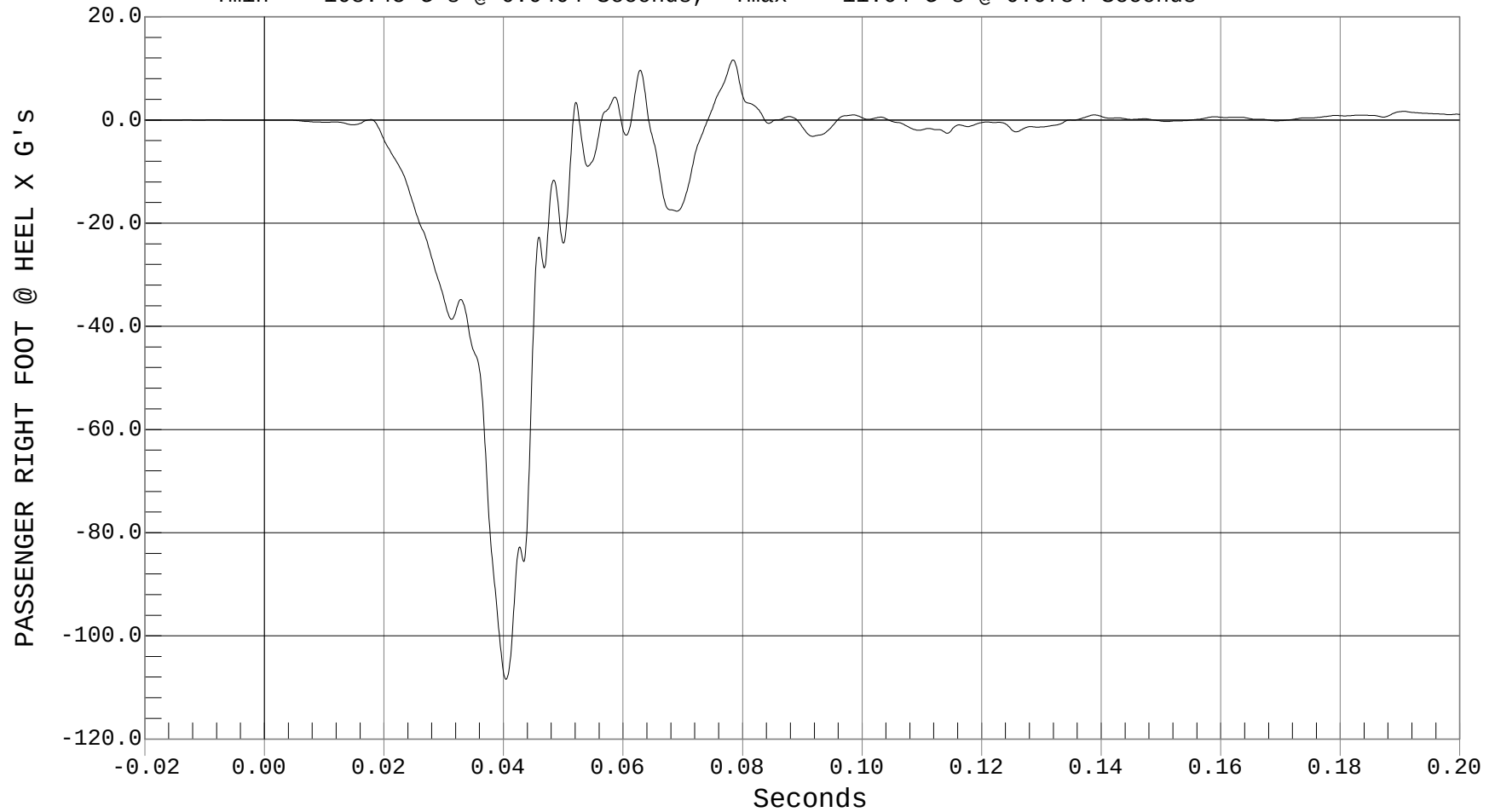
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 PASSENGER RIGHT FOOT @ HEEL X, C00089AF.A04

Ymin = -108.45 G's @ 0.0404 Seconds, Ymax = 11.64 G's @ 0.0784 Seconds





PASSENGER RIGHT FOOT @ HEEL Z ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

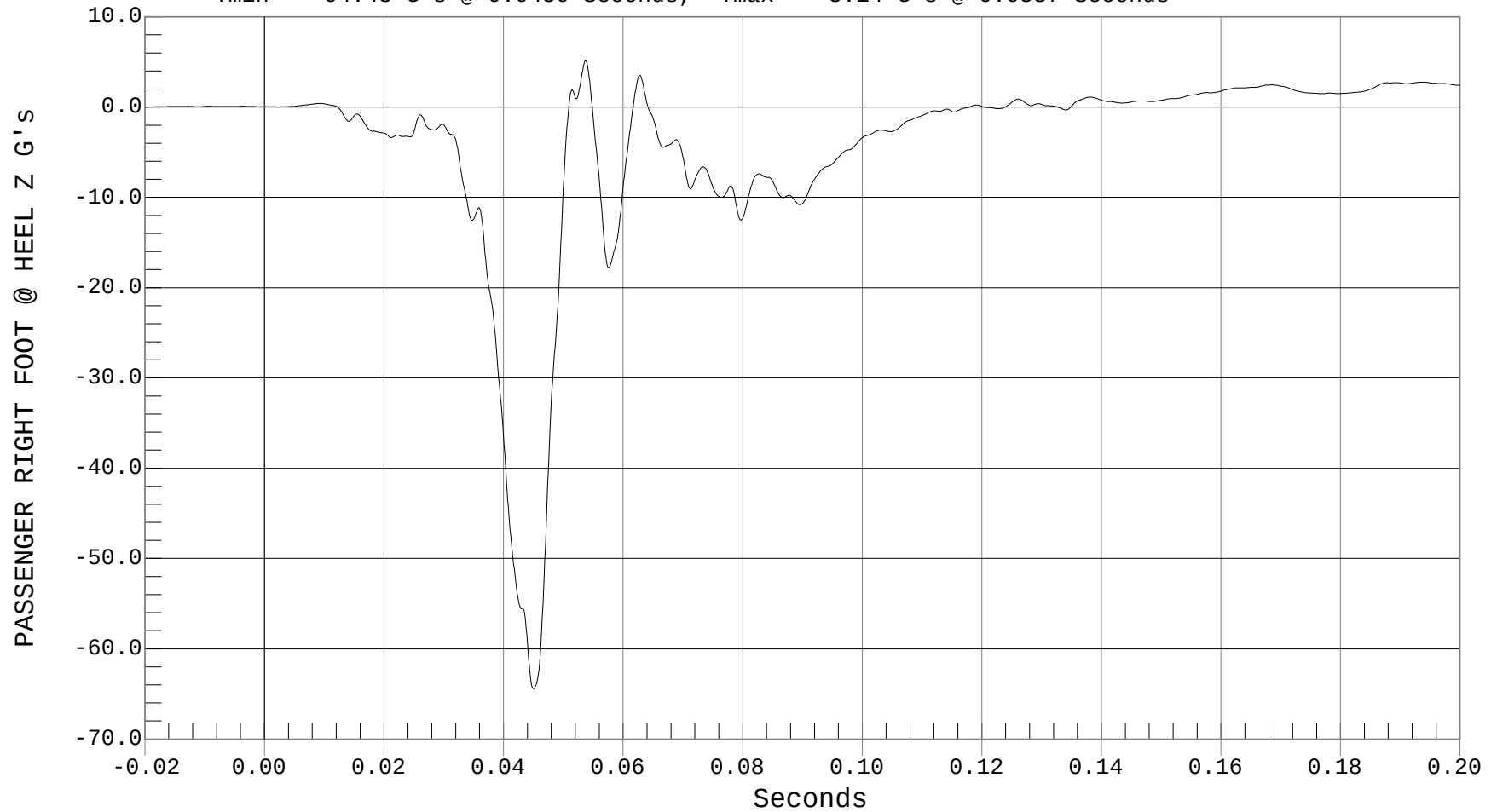
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 PASSENGER RIGHT FOOT @ HEEL Z, C00089AF.A05

Ymin = -64.43 G's @ 0.0450 Seconds, Ymax = 5.14 G's @ 0.0537 Seconds





PASSENGER SHOULDER BELT FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 D00R

Other Info:

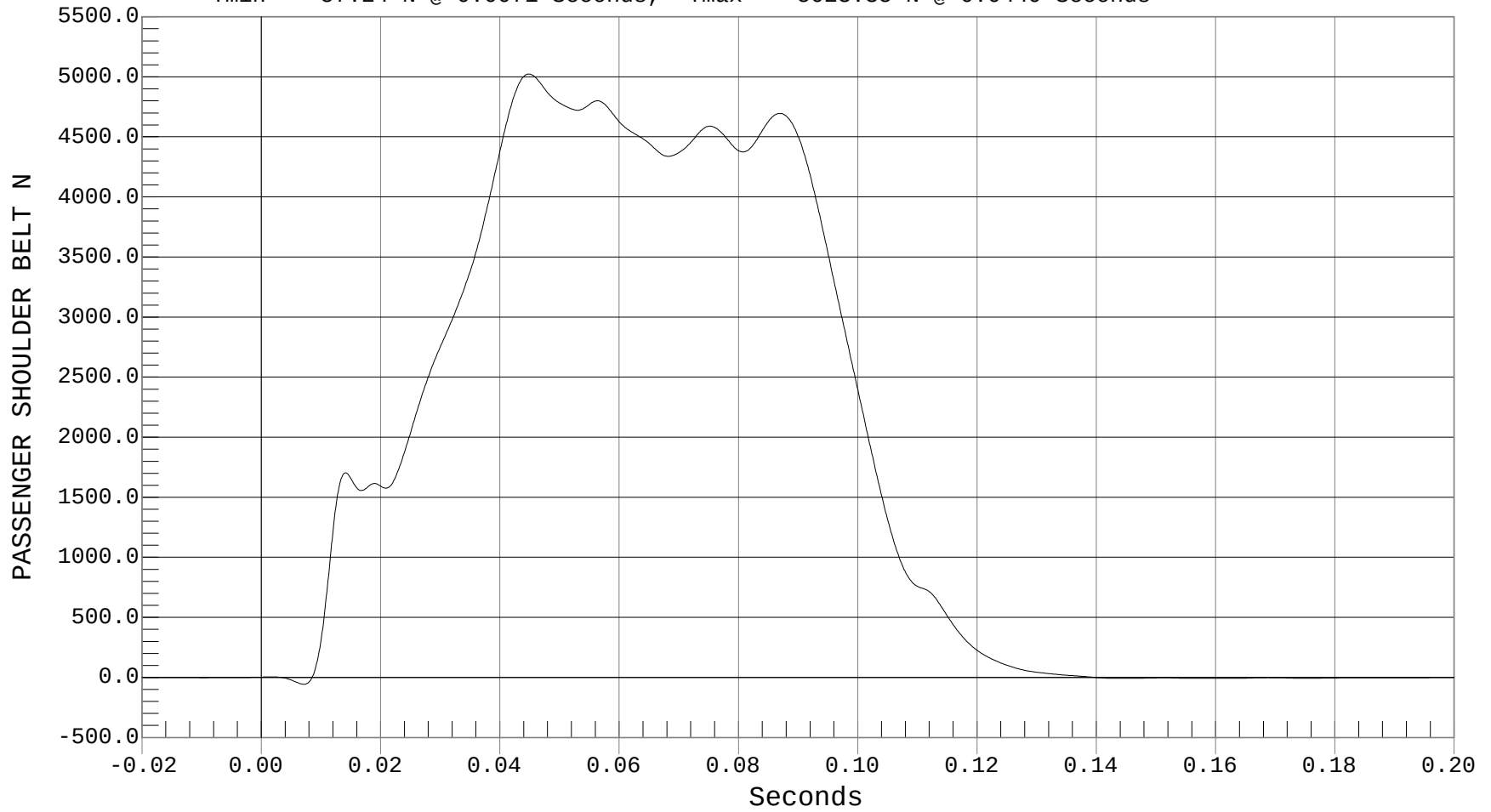
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 60

— 1 PASSENGER SHOULDER BELT, B00089FF.F67

Ymin = -57.24 N @ 0.0071 Seconds, Ymax = 5023.35 N @ 0.0449 Seconds





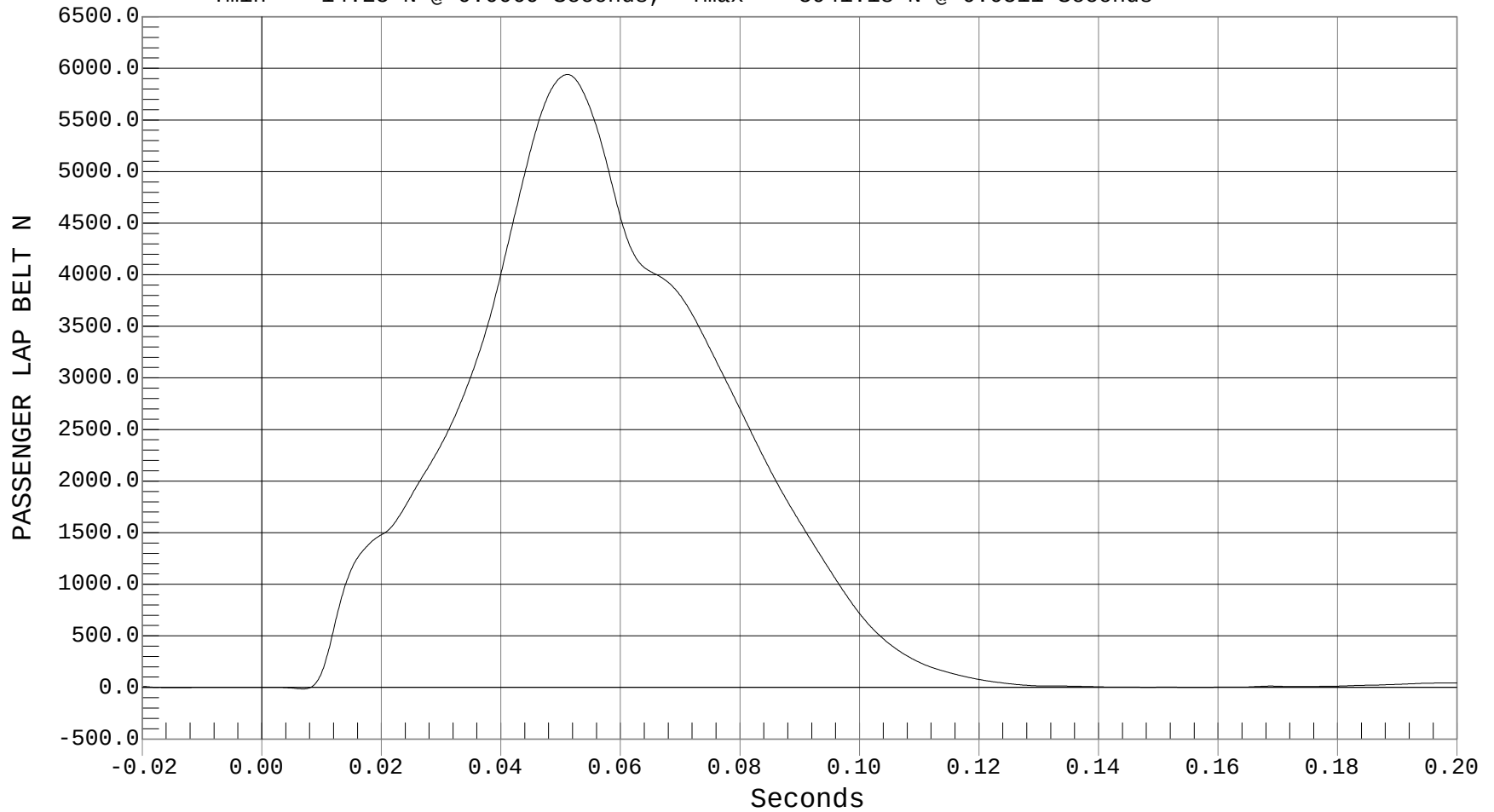
PASSENGER LAP BELT FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 PASSENGER LAP BELT, B00089FF.F68

Ymin = -14.25 N @ 0.0069 Seconds, Ymax = 5941.18 N @ 0.0511 Seconds





LEFT REAR SEAT CROSSMEMBER X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

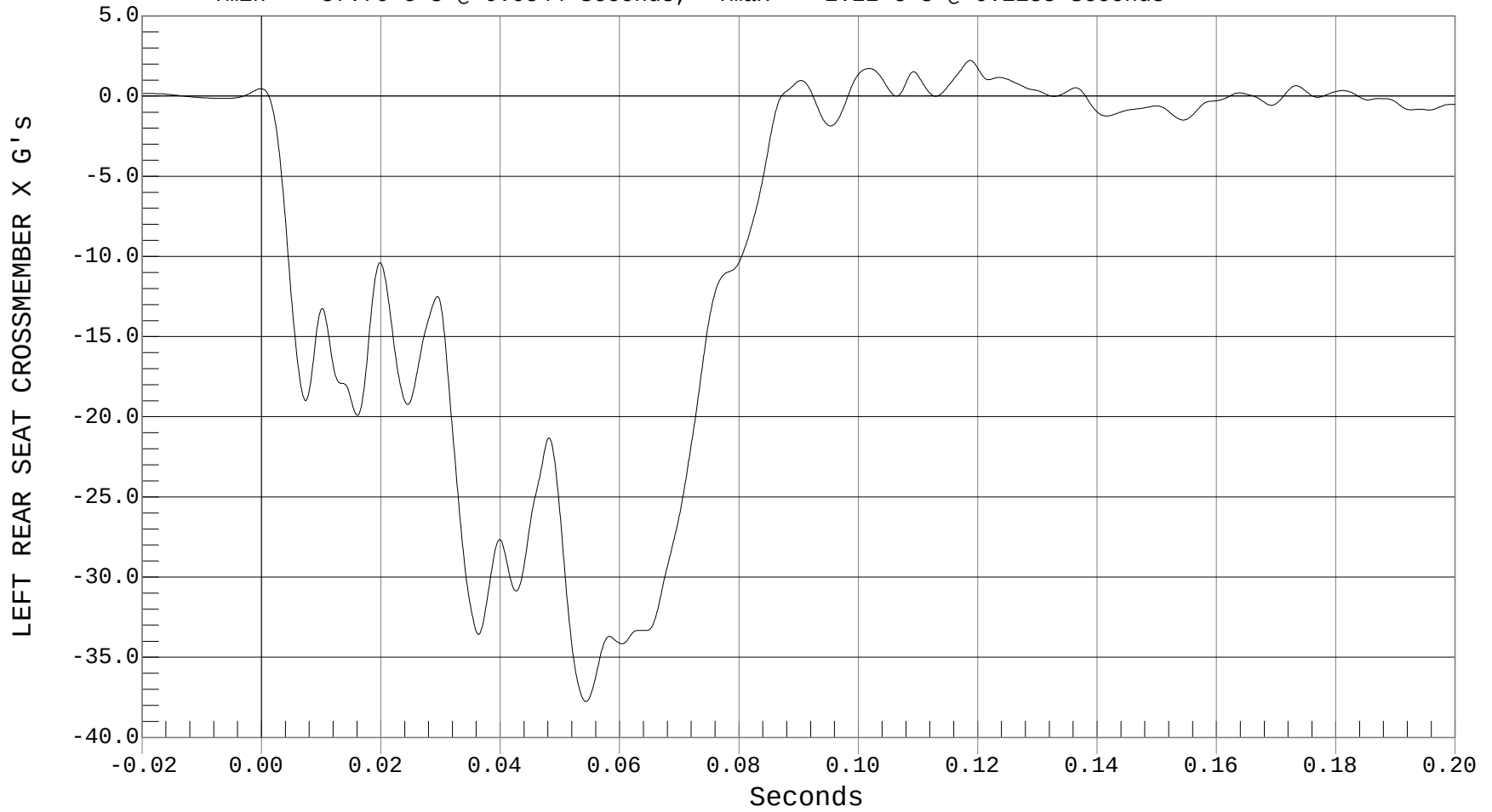
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 60

— 1 LEFT REAR SEAT CROSSMEMBER X, B00089AF.A59

Ymin = -37.76 G's @ 0.0544 Seconds, Ymax = 2.22 G's @ 0.1188 Seconds





LEFT REAR SEAT CROSSMEMBER X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

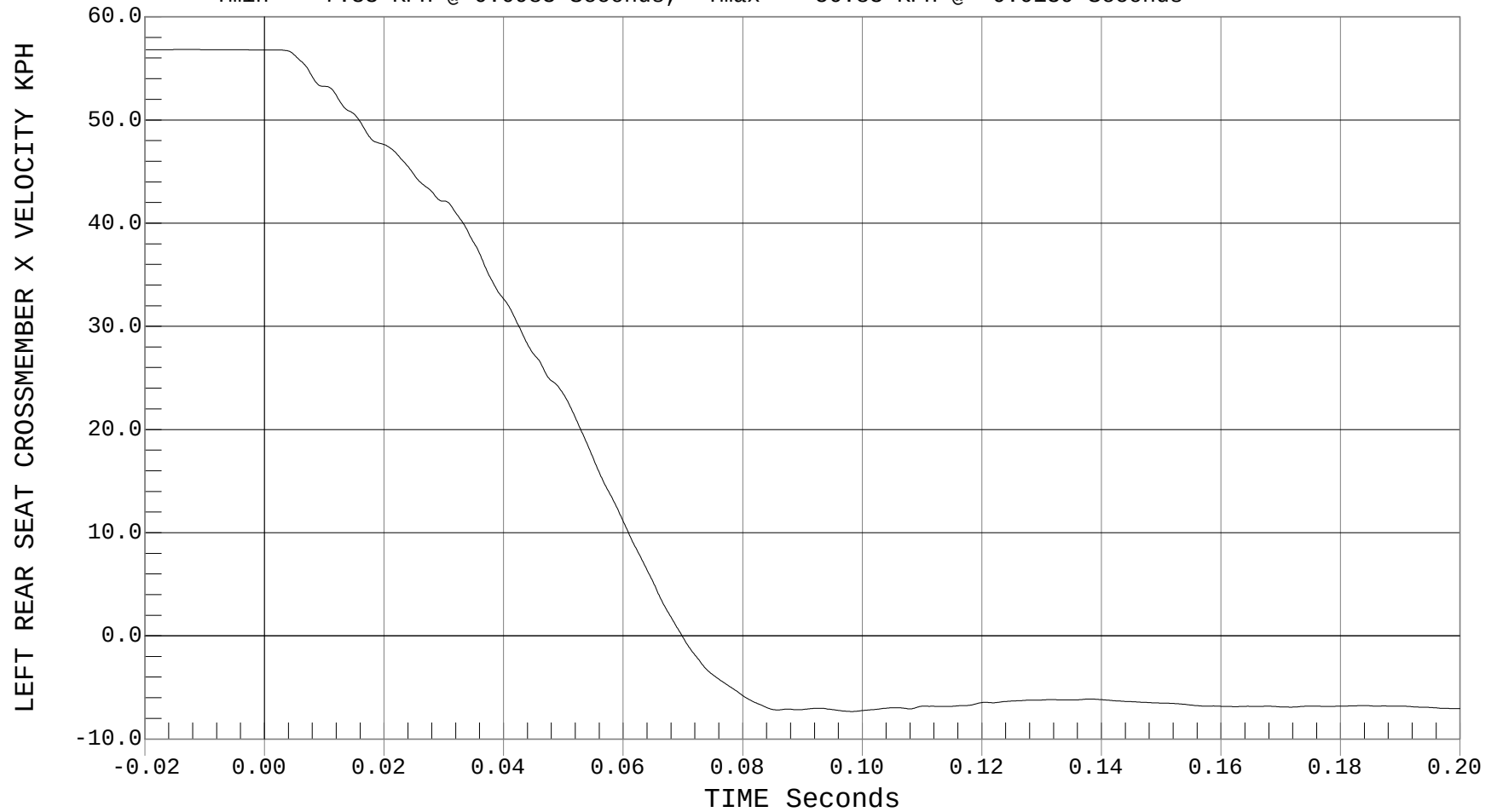
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 LEFT REAR SEAT CROSSMEMBER X VELOCITY, B00089AI.V59

Ymin = -7.33 KPH @ 0.0983 Seconds, Ymax = 56.83 KPH @ -0.0139 Seconds





LEFT REAR SEAT CROSSMEMBER X DISPLACEMENT

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

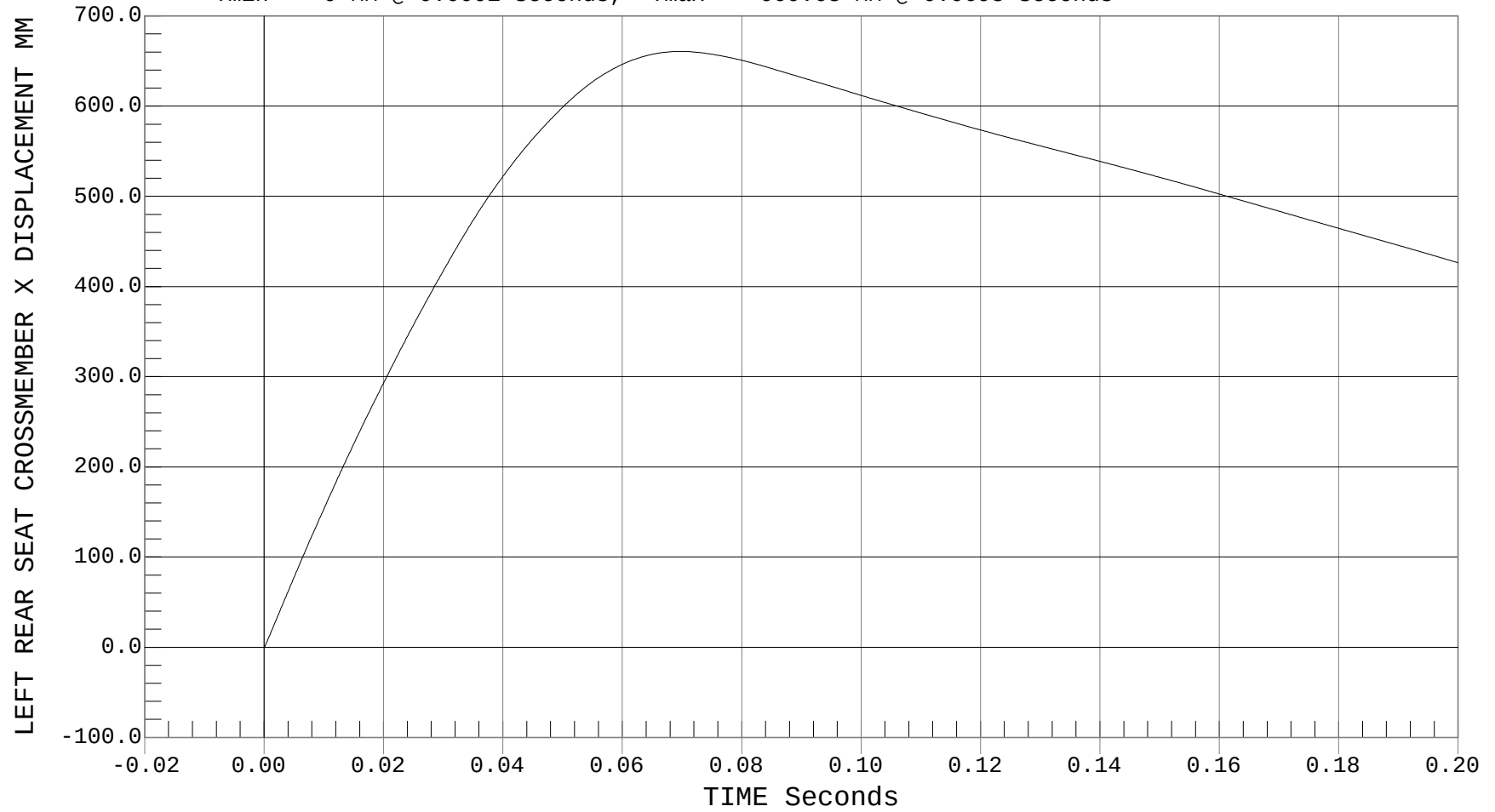
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 LEFT REAR SEAT CROSSMEMBER X DISPLACEMENT, B00089AI.D59

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 660.63 MM @ 0.0698 Seconds





RIGHT REAR SEAT CROSSMEMBER X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

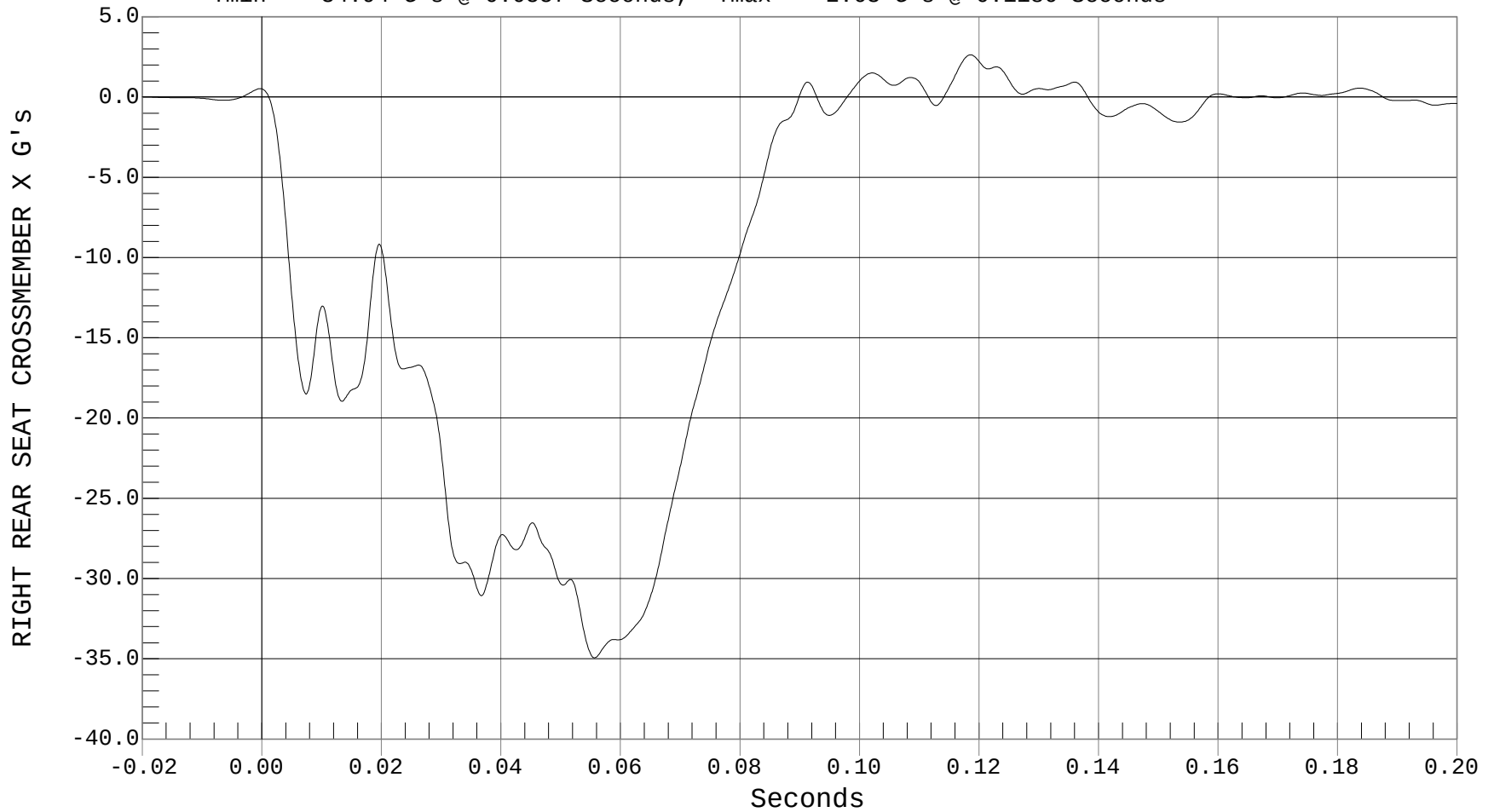
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 60

— 1 RIGHT REAR SEAT CROSSMEMBER X, B00089AF.A58

Ymin = -34.94 G's @ 0.0557 Seconds, Ymax = 2.63 G's @ 0.1186 Seconds





RIGHT REAR SEAT CROSSMEMBER X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

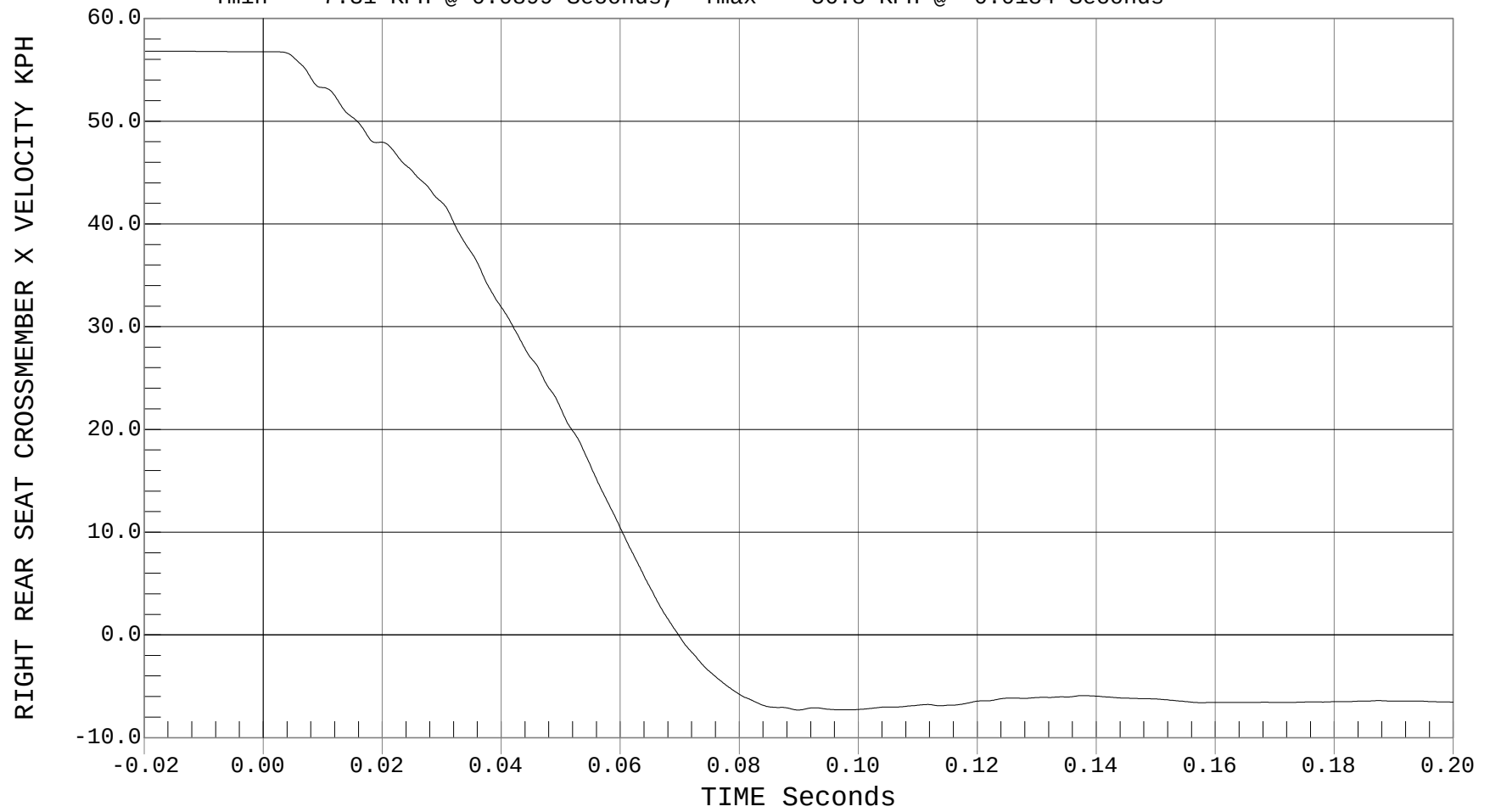
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 RIGHT REAR SEAT CROSSMEMBER X VELOCITY, B00089AI.V58

Ymin = -7.31 KPH @ 0.0899 Seconds, Ymax = 56.8 KPH @ -0.0184 Seconds





RIGHT REAR SEAT CROSSMEMBER X DISPLACEMENT

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

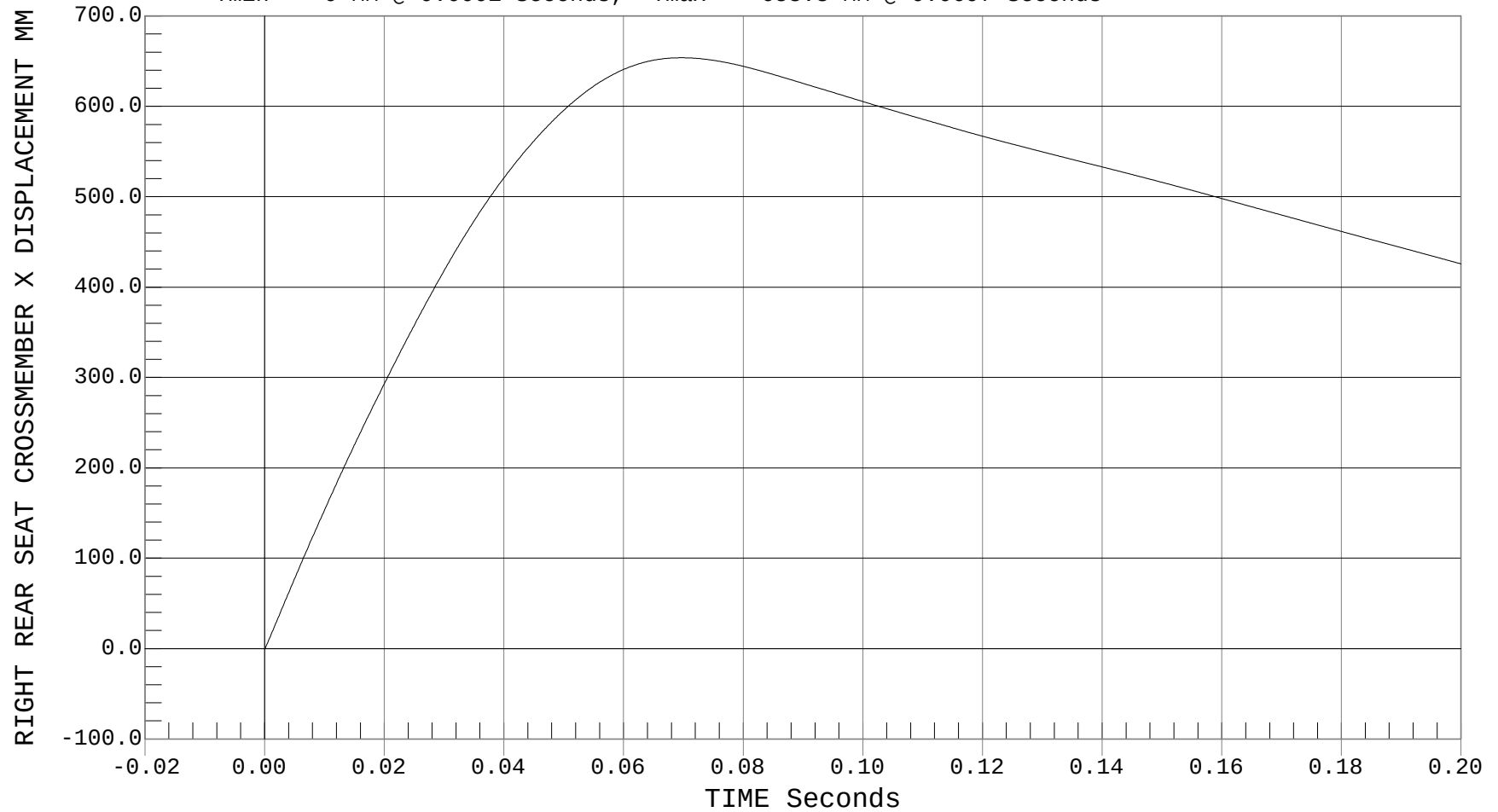
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 RIGHT REAR SEAT CROSSMEMBER X DISPLACEMENT, B00089AI.D58

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 653.8 MM @ 0.0697 Seconds





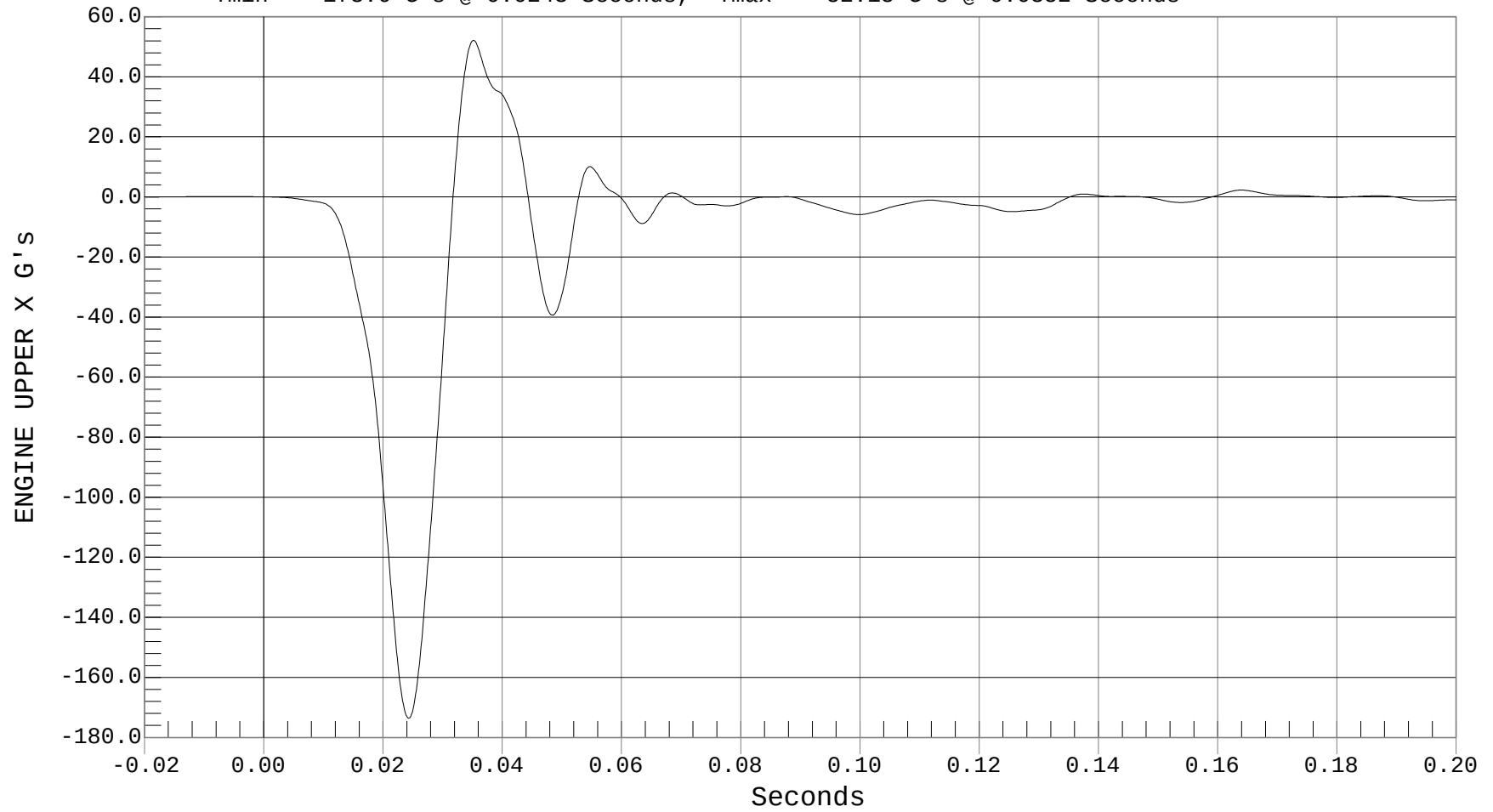
UPPER ENGINE X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 ENGINE UPPER X, B00089AF.A55

Ymin = -173.6 G's @ 0.0243 Seconds, Ymax = 52.15 G's @ 0.0352 Seconds





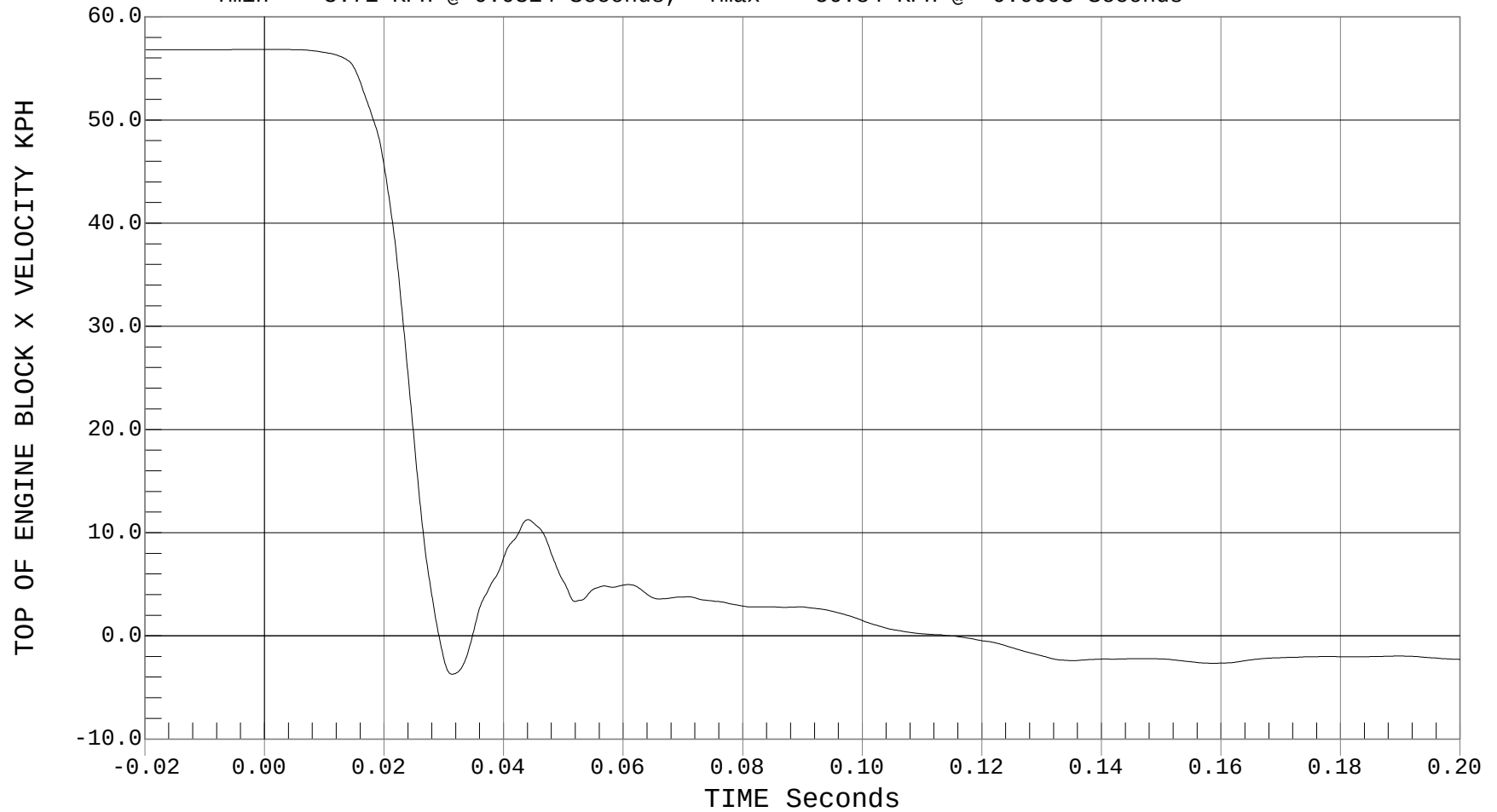
UPPER ENGINE X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 TOP OF ENGINE BLOCK X VELOCITY, B00089AI.V55

Ymin = -3.71 KPH @ 0.0314 Seconds, Ymax = 56.84 KPH @ -0.0003 Seconds





UPPER ENGINE X DISPLACEMENT

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

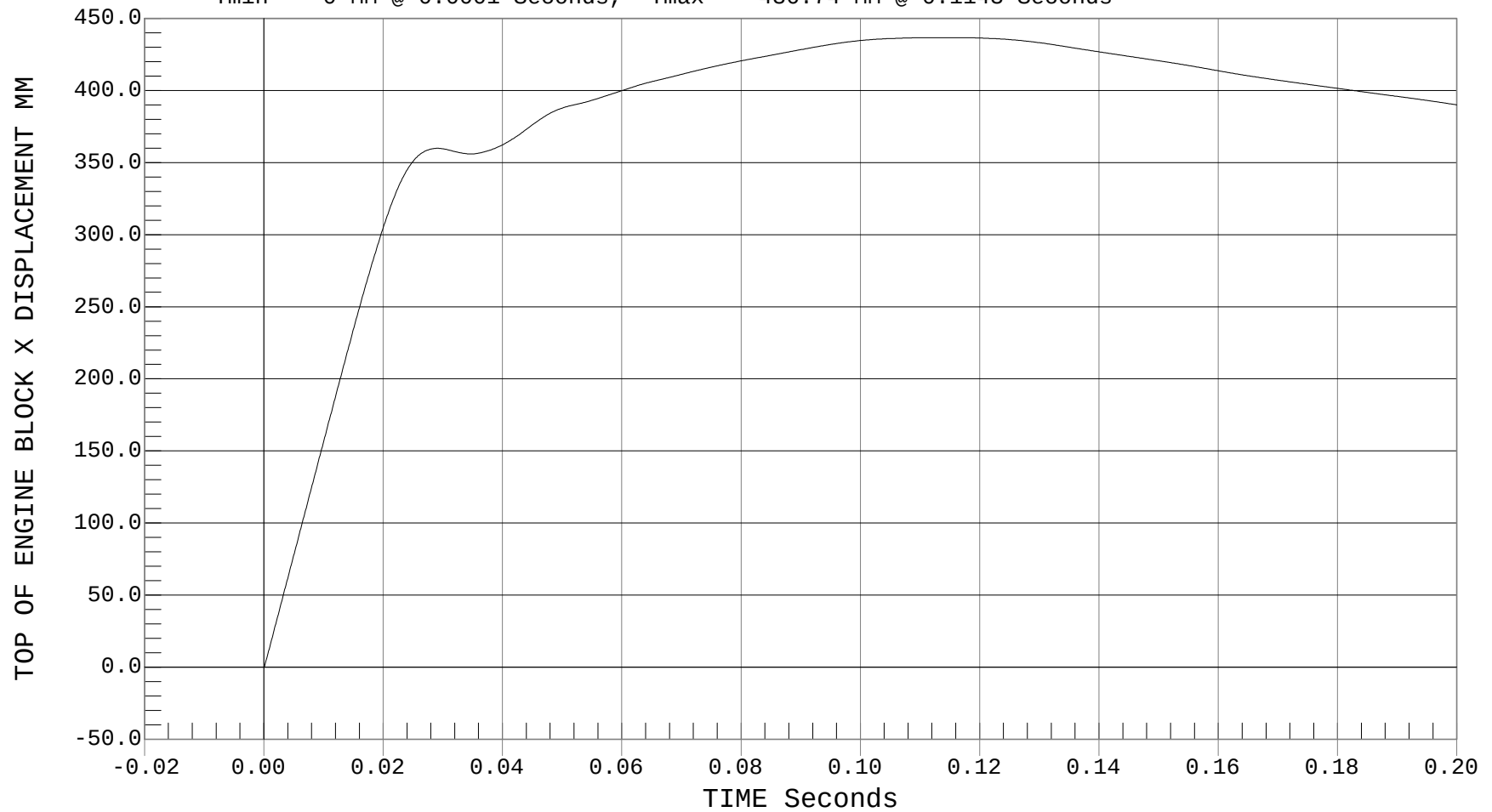
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 TOP OF ENGINE BLOCK X DISPLACEMENT, B00089AI.D55

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 436.74 MM @ 0.1143 Seconds





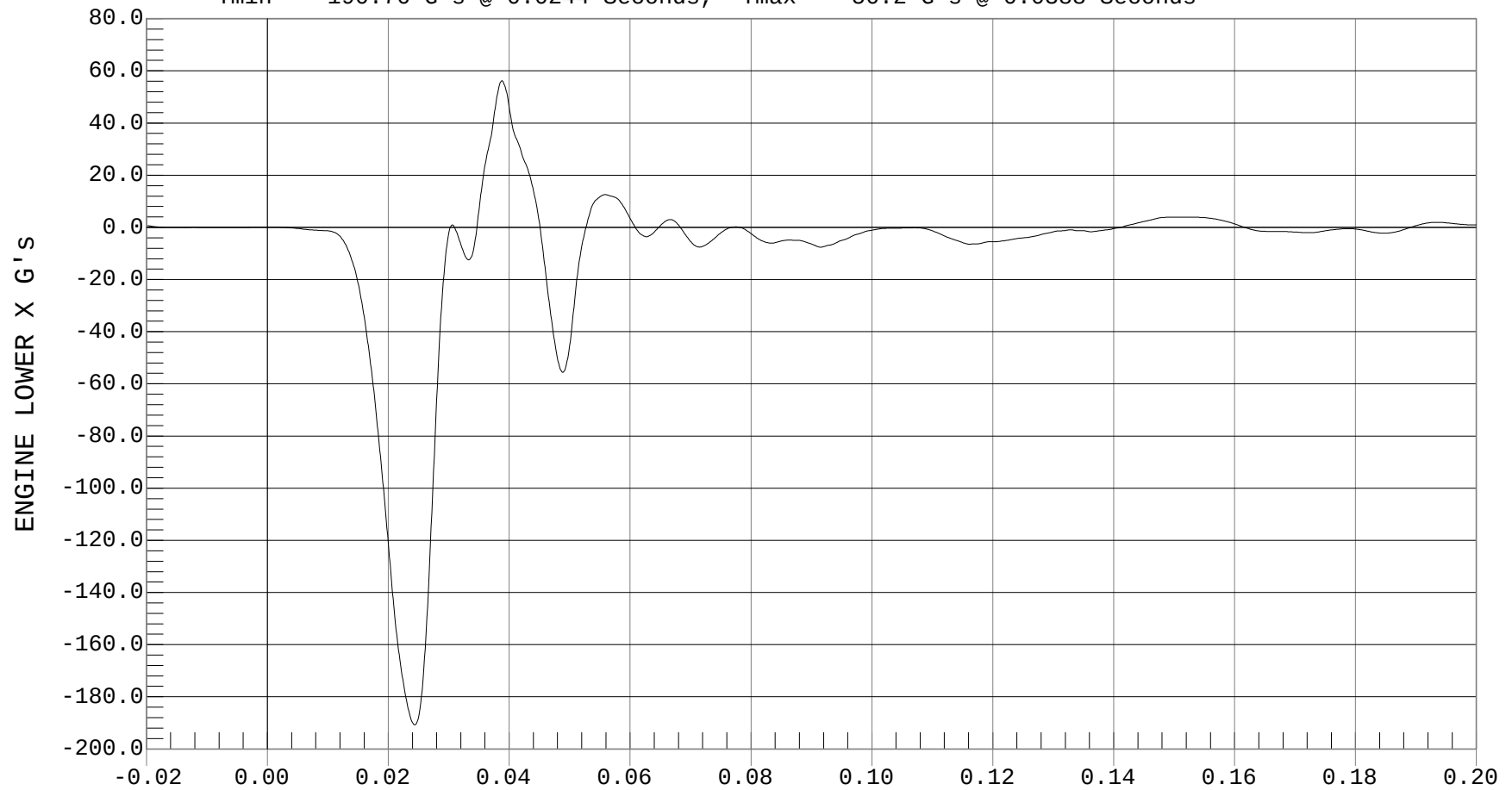
LOWER ENGINE X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 ENGINE LOWER X, B00089AF.A56

Ymin = -190.76 G's @ 0.0244 Seconds, Ymax = 56.2 G's @ 0.0388 Seconds





LOWER ENGINE X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

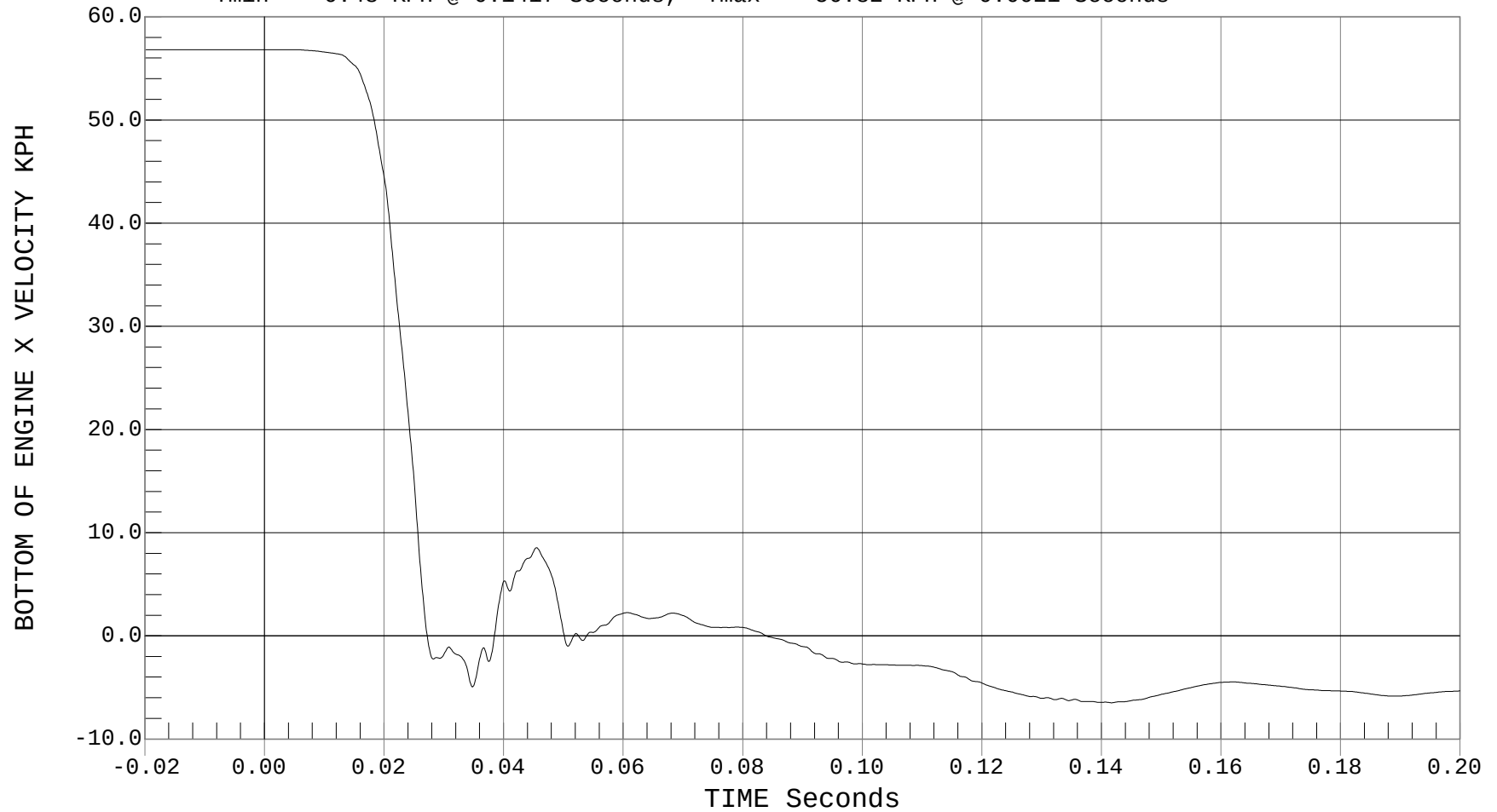
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 BOTTOM OF ENGINE X VELOCITY, B00089AI.V56

Ymin = -6.48 KPH @ 0.1417 Seconds, Ymax = 56.82 KPH @ 0.0021 Seconds





LOWER ENGINE X DISPLACEMENT

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

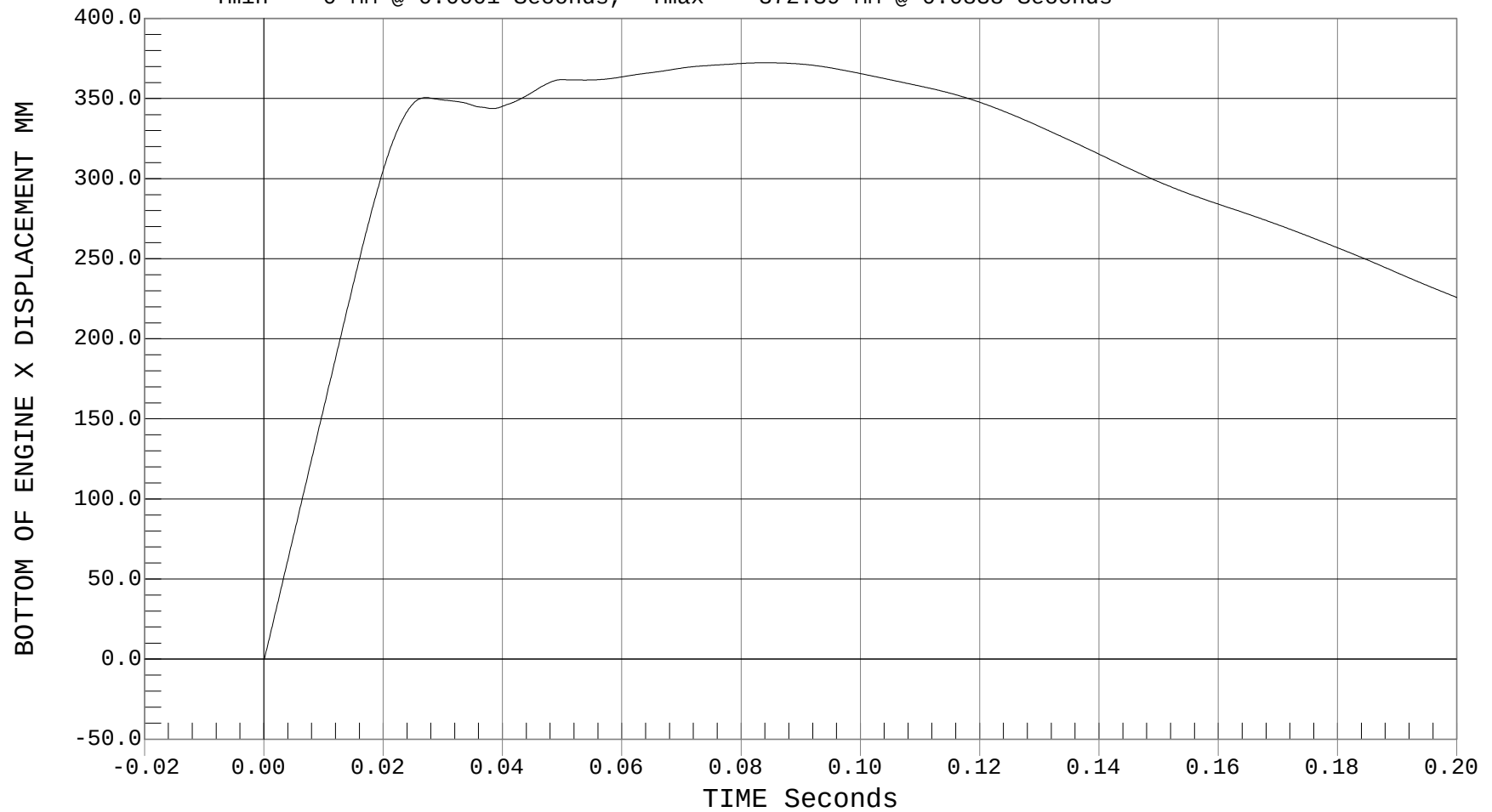
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 BOTTOM OF ENGINE X DISPLACEMENT, B00089AI.D56

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 372.39 MM @ 0.0838 Seconds





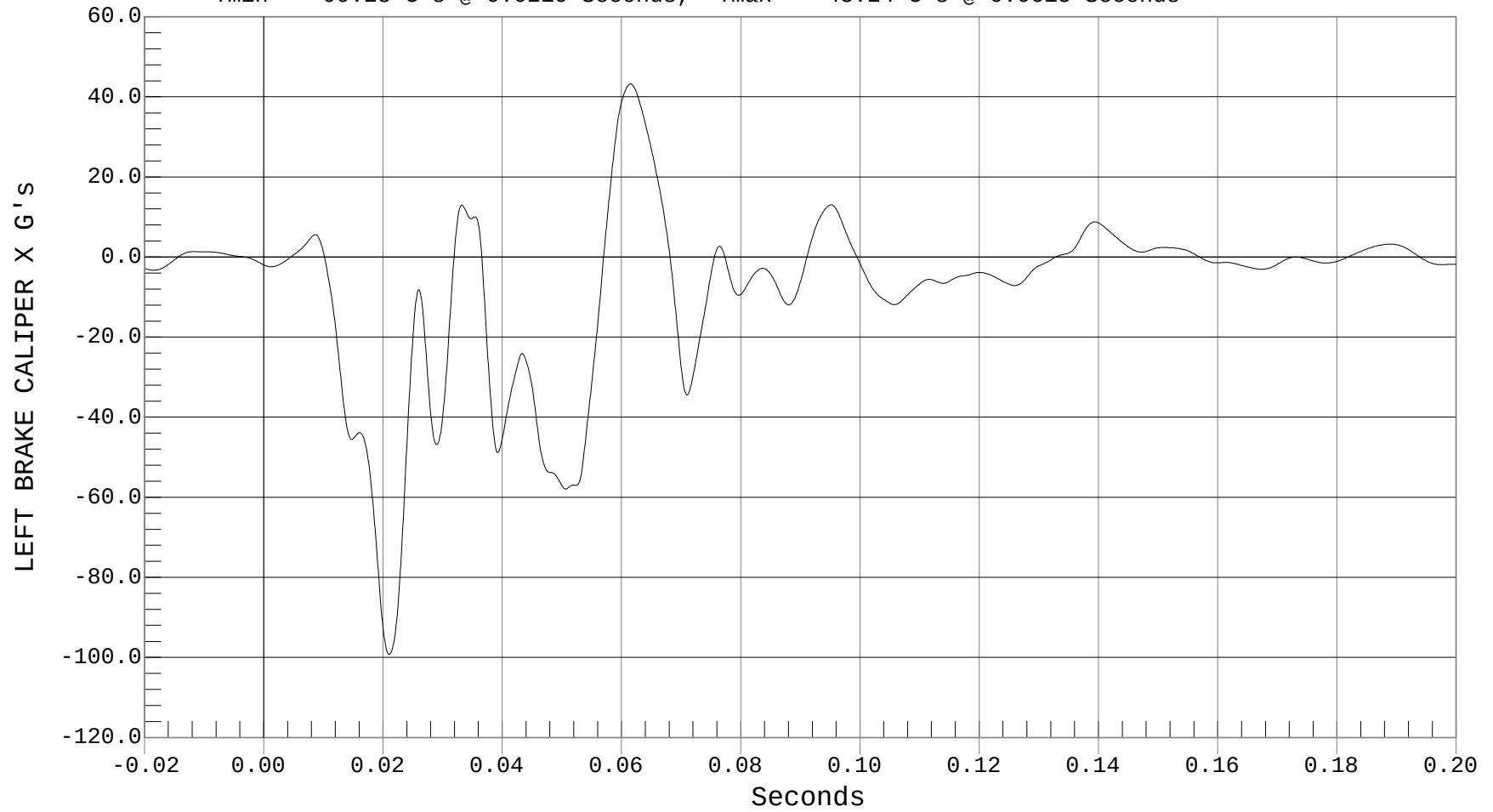
LEFT BRAKE CALIPER X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 LEFT BRAKE CALIPER X, B00089AF.A61

Ymin = -99.28 G's @ 0.0210 Seconds, Ymax = 43.24 G's @ 0.0615 Seconds





LEFT BRAKE CALIPER X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

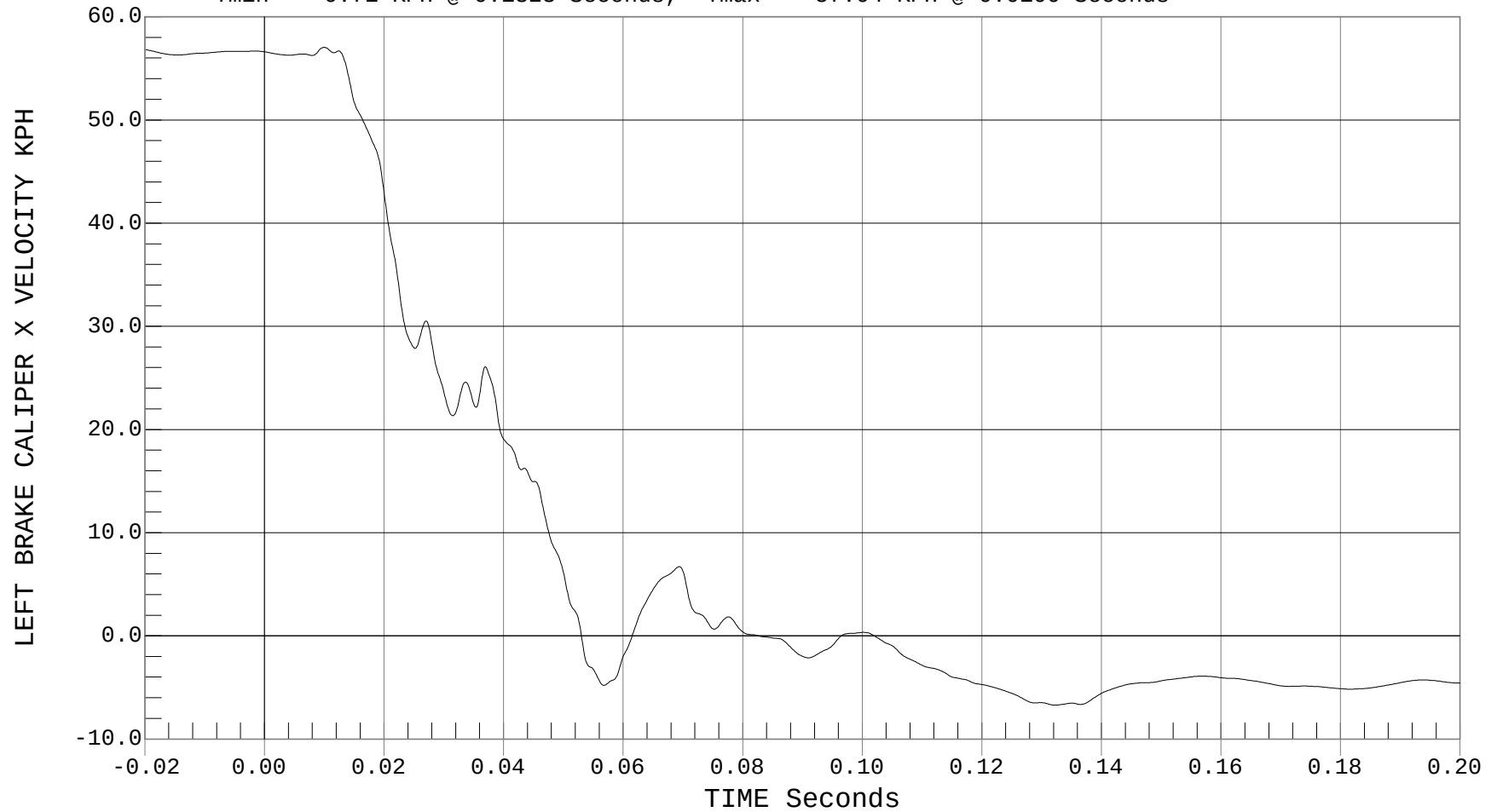
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 LEFT BRAKE CALIPER X VELOCITY, B00089AI.V61

Ymin = -6.71 KPH @ 0.1323 Seconds, Ymax = 57.04 KPH @ 0.0100 Seconds





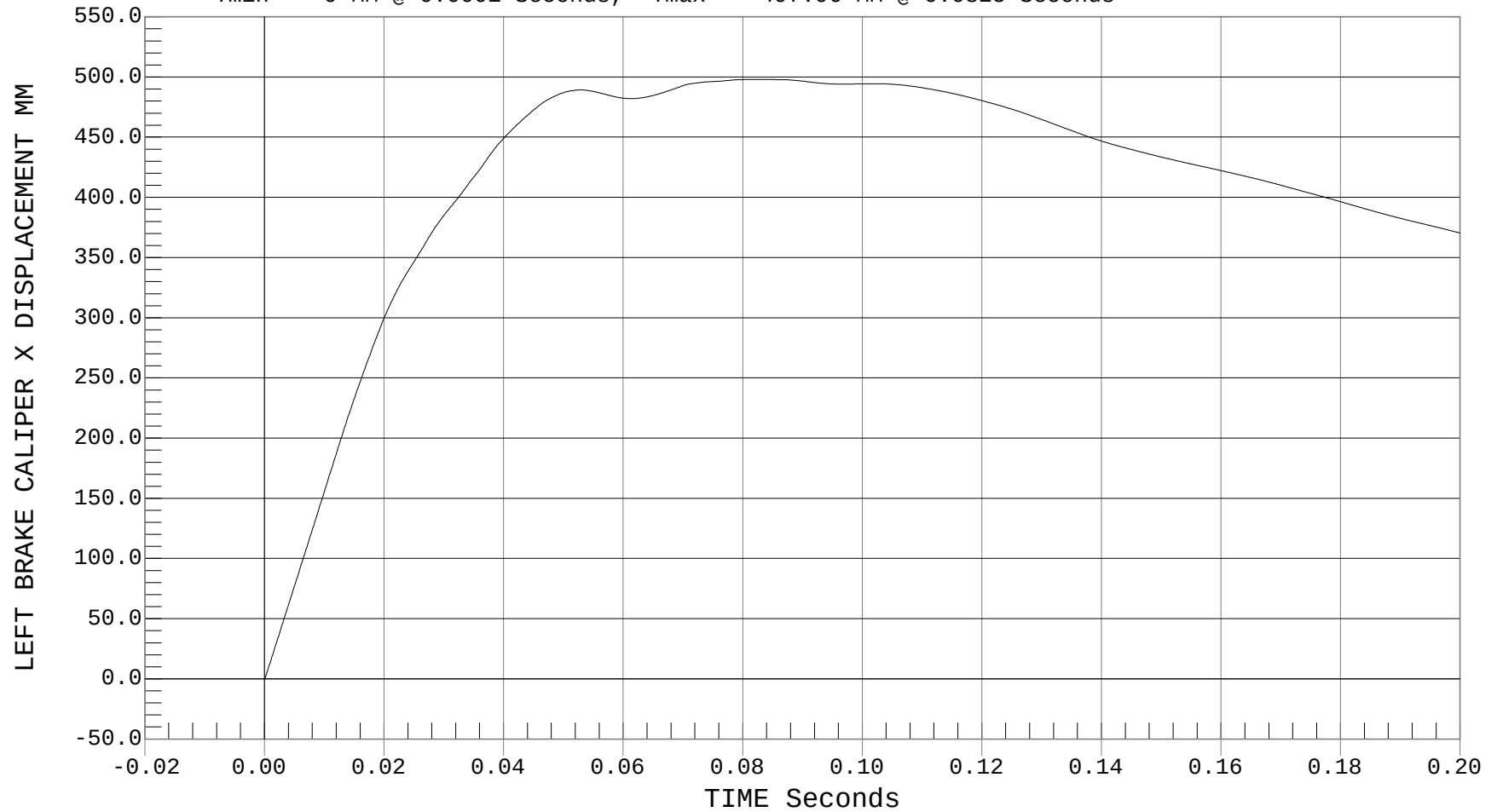
LEFT BRAKE CALIPER X DISPLACEMENT

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 LEFT BRAKE CALIPER X DISPLACEMENT, B00089AI.D61

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 497.96 MM @ 0.0825 Seconds





RIGHT BRAKE CALIPER X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

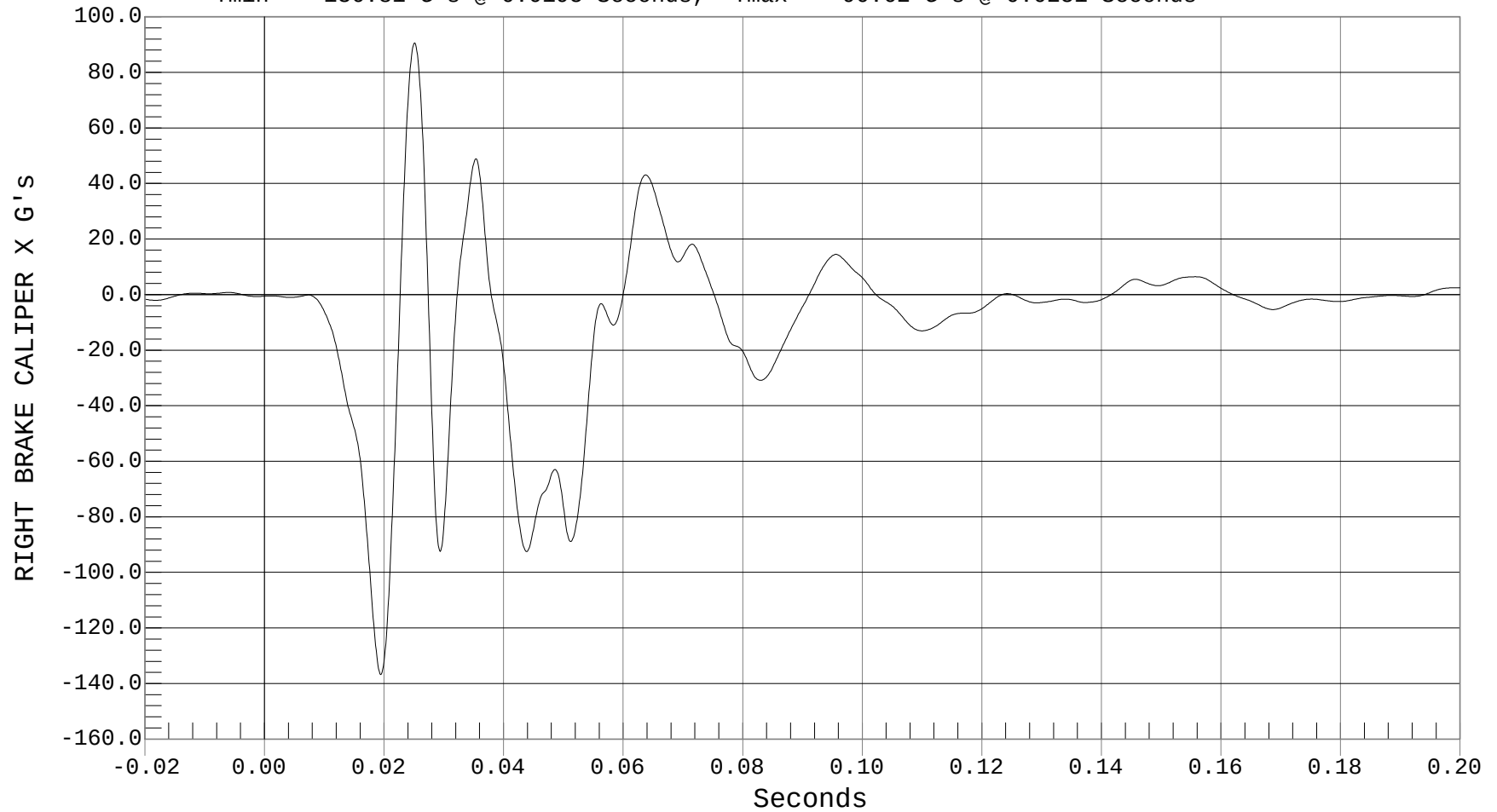
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 60

— 1 RIGHT BRAKE CALIPER X, B00089AF.A60

Ymin = -136.81 G's @ 0.0195 Seconds, Ymax = 90.62 G's @ 0.0251 Seconds





RIGHT BRAKE CALIPER X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

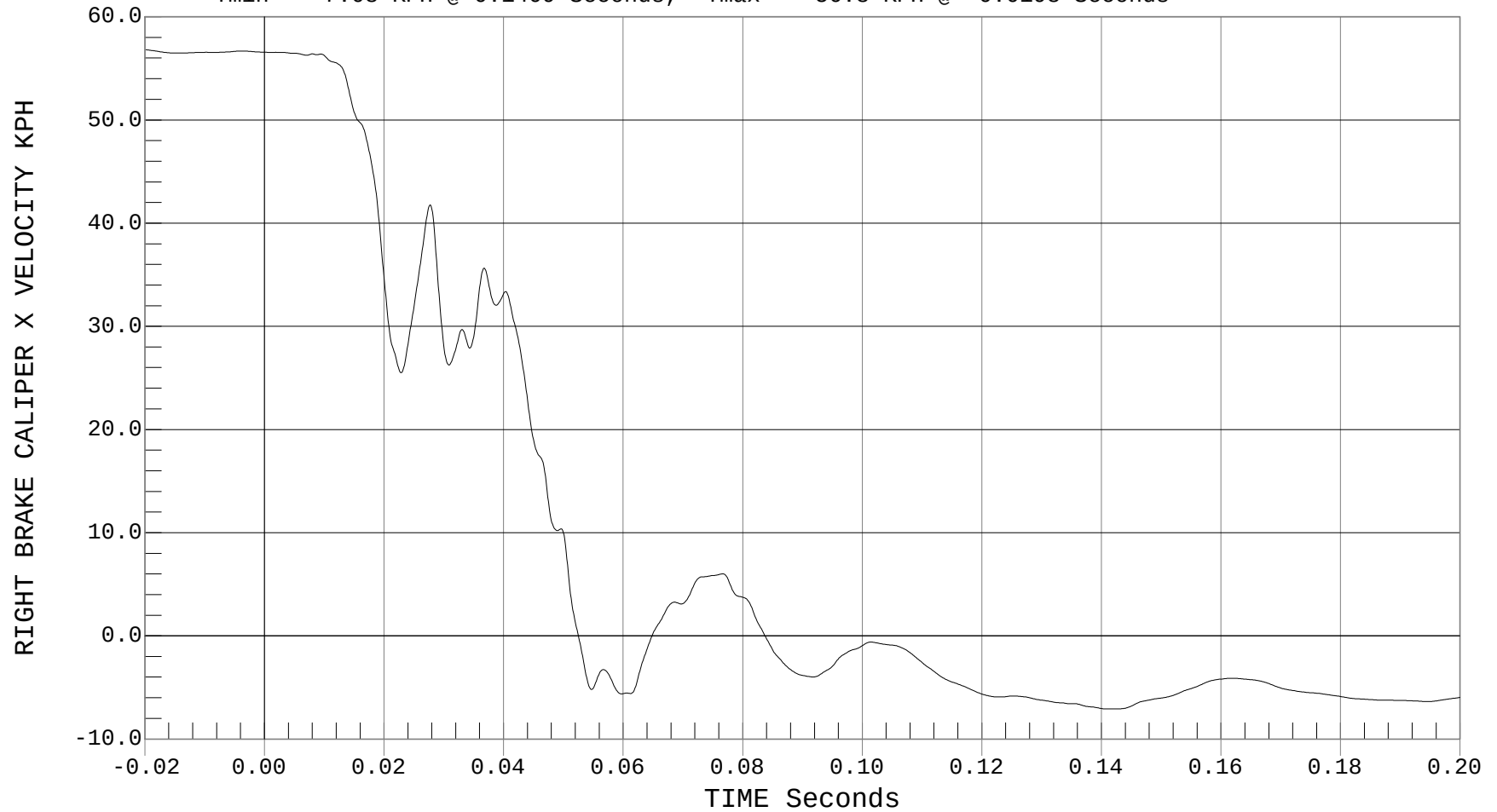
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 RIGHT BRAKE CALIPER X VELOCITY, B00089AI.V60

Ymin = -7.08 KPH @ 0.1409 Seconds, Ymax = 56.8 KPH @ -0.0198 Seconds





RIGHT BRAKE CALIPER X DISPLACEMENT

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

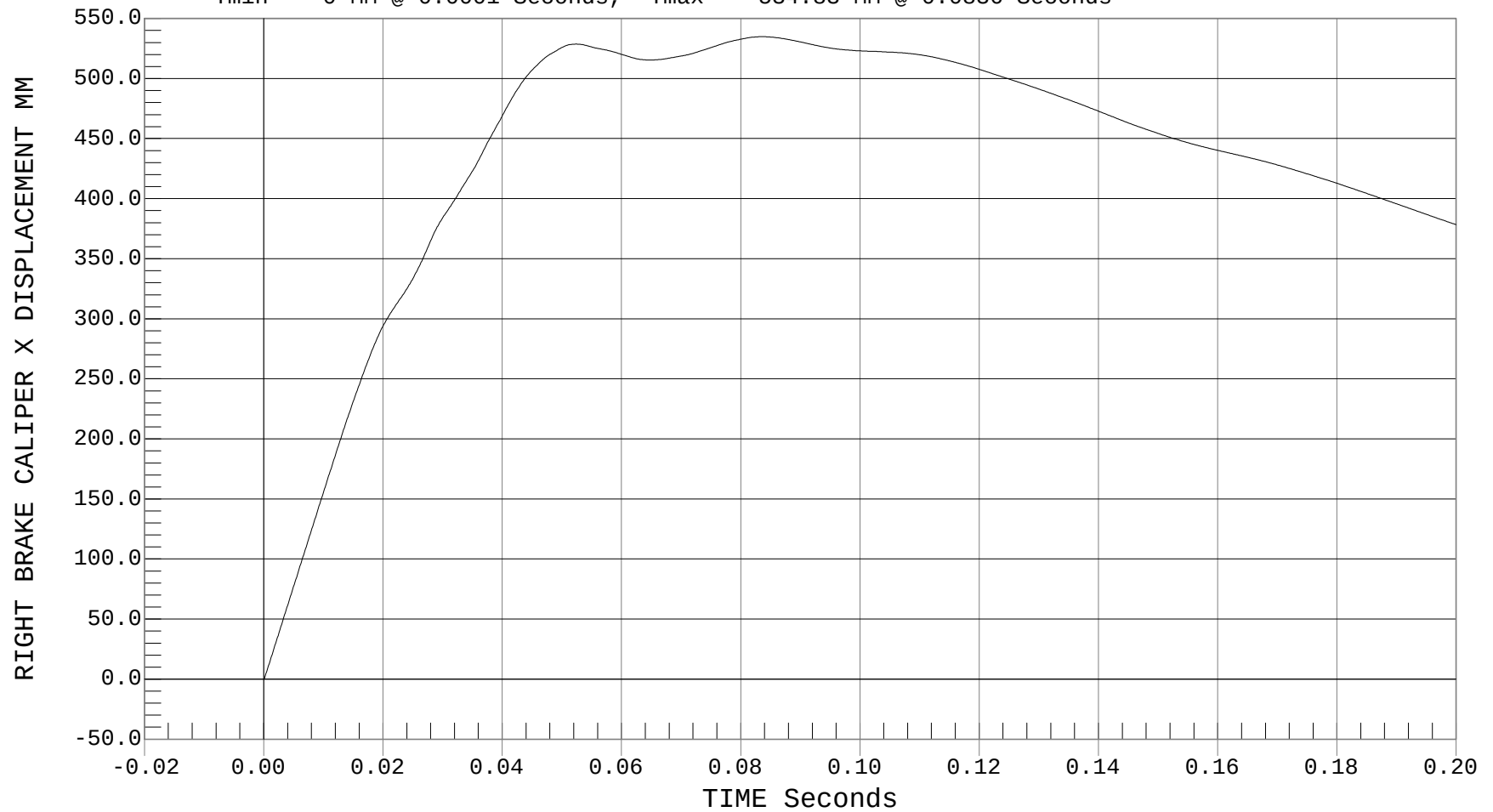
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 RIGHT BRAKE CALIPER X DISPLACEMENT, B00089AI.D60

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 534.83 MM @ 0.0836 Seconds





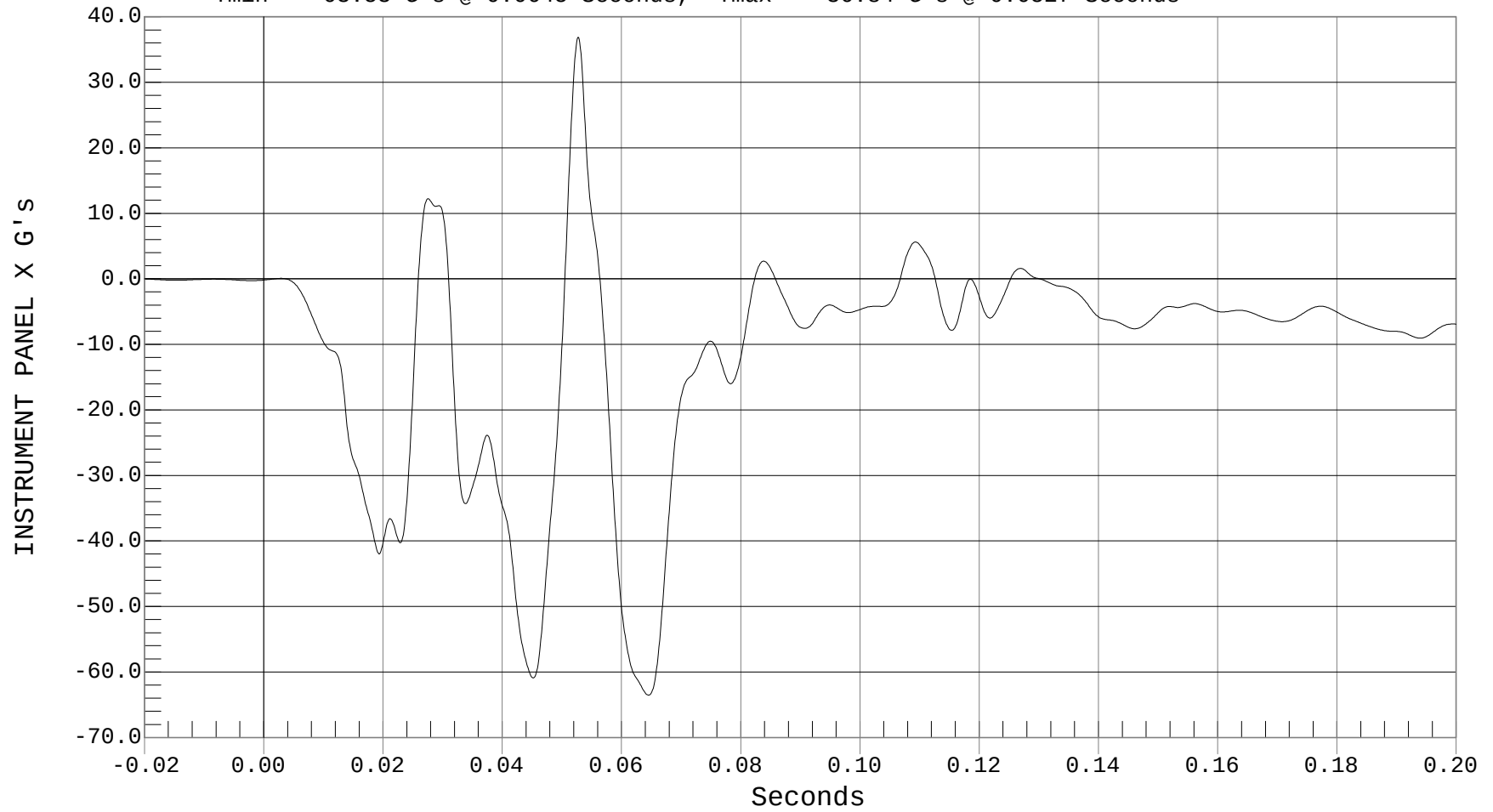
INSTRUMENT PANEL X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 INSTRUMENT PANEL X, B00089AF.A57

Ymin = -63.53 G's @ 0.0645 Seconds, Ymax = 36.84 G's @ 0.0527 Seconds





INSTRUMENT PANEL X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

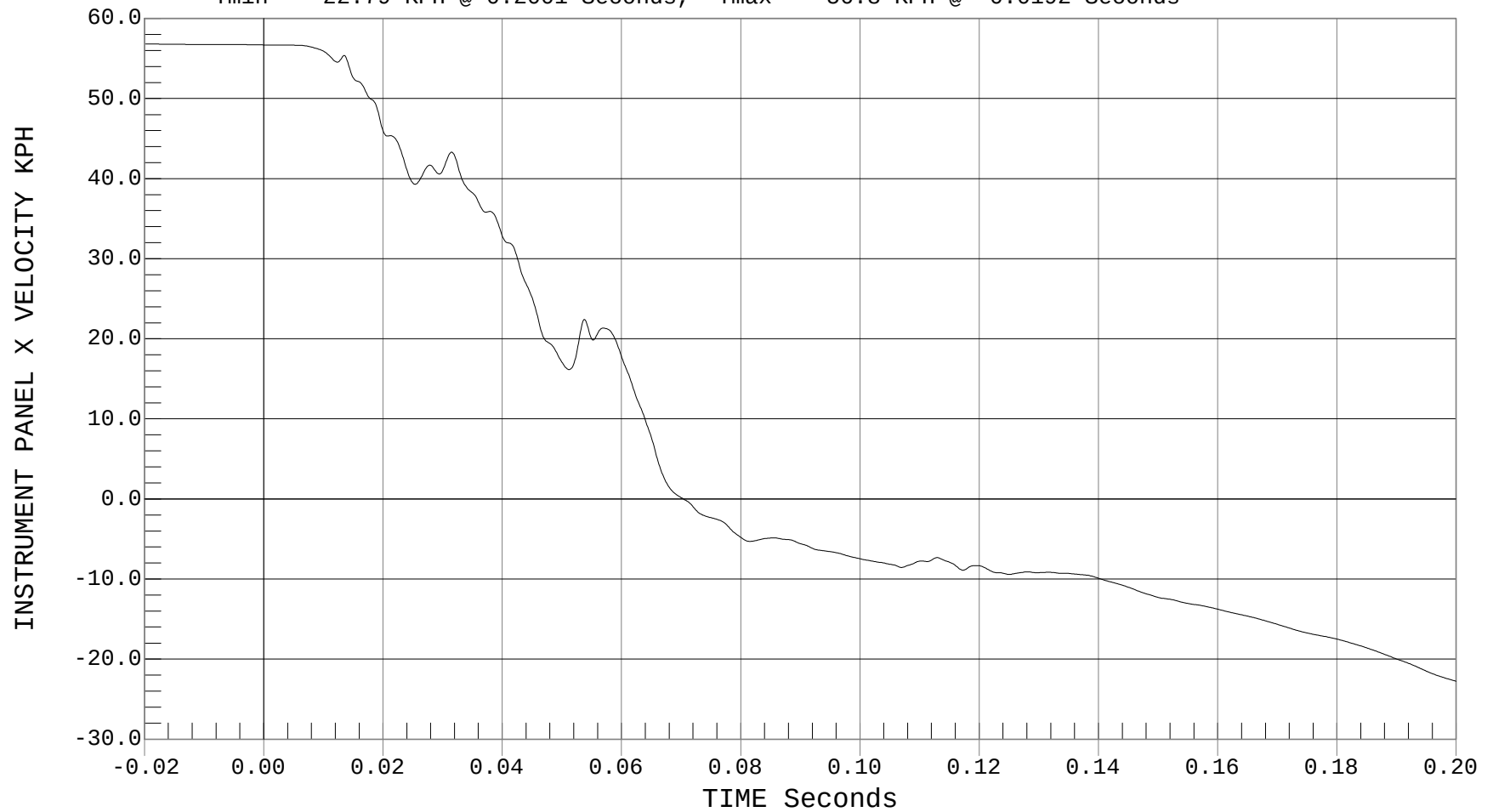
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 INSTRUMENT PANEL X VELOCITY, B00089AI.V57

Ymin = -22.79 KPH @ 0.2001 Seconds, Ymax = 56.8 KPH @ -0.0192 Seconds





INSTRUMENT PANEL X DISPLACEMENT

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

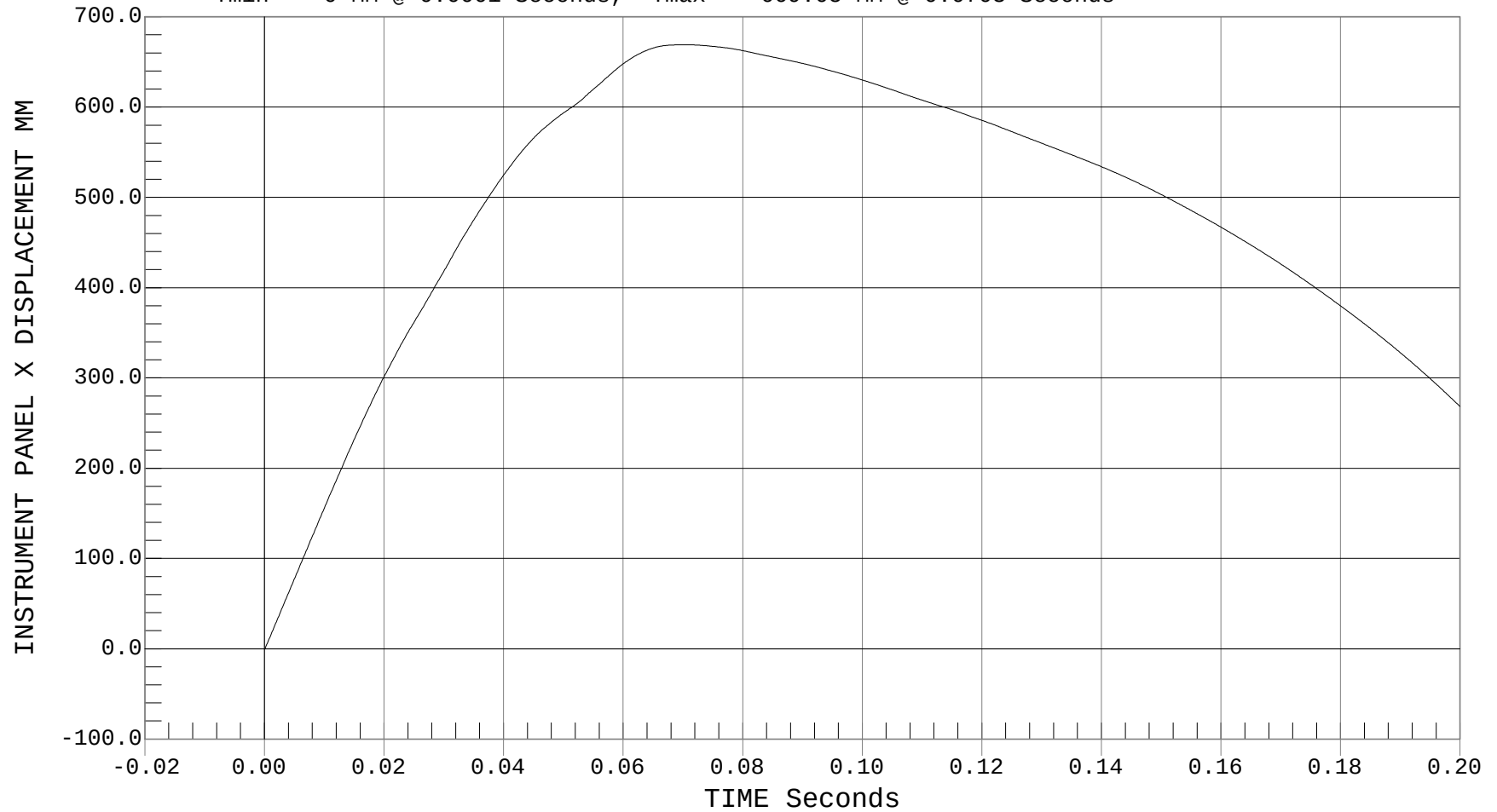
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 180

— 1 INSTRUMENT PANEL X DISPLACEMENT, B00089AI.D57

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 669.05 MM @ 0.0703 Seconds





LEFT REAR SEAT CROSSMEMBER REDUNDANT X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 D00R

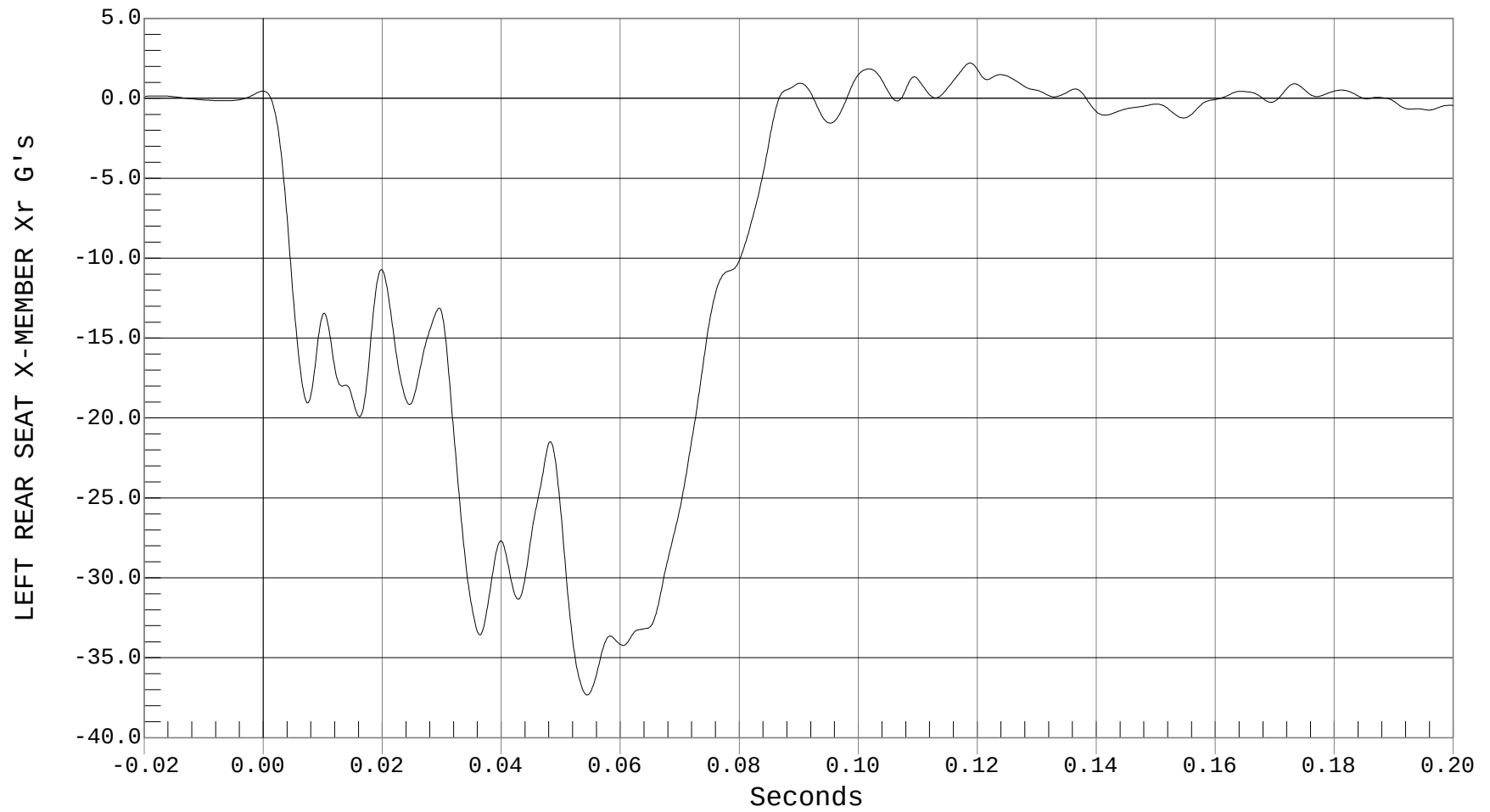
Other Info:

Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 60

— 1 LEFT REAR SEAT X-MEMBER Xr, C00089AF.A03





LEFT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

Speed: 35.3 MPH, 56.8 KPH

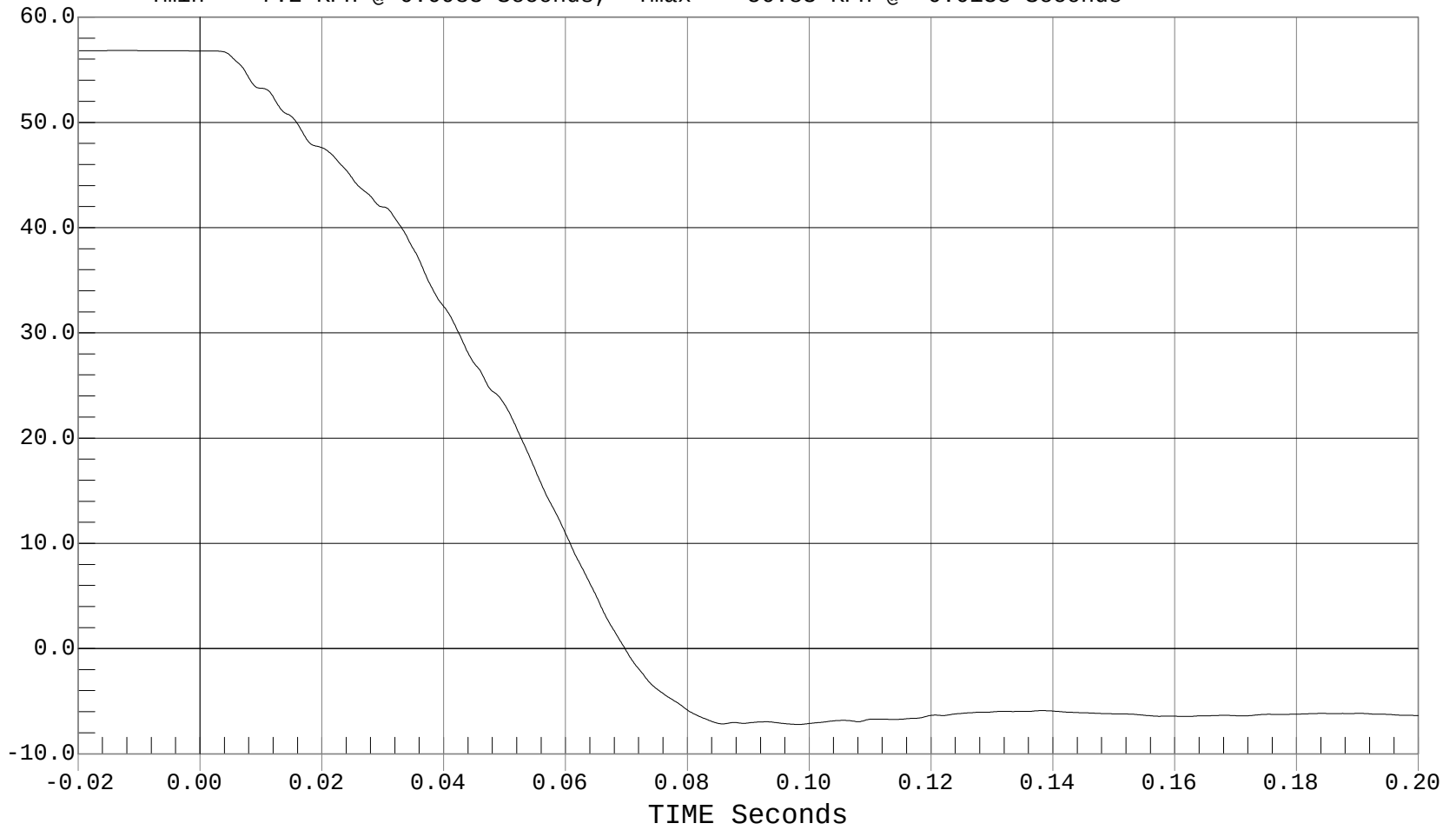
Other Info:

Filter Class: 180

— 1 LEFT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY, C00089AI.V03

LEFT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY KF

Ymin = -7.2 KPH @ 0.0983 Seconds, Ymax = 56.83 KPH @ -0.0138 Seconds





LEFT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Test Date: 10-26-00

Component: 2001 HONDA CIVIC 4 DOOR

Speed: 35.3 MPH, 56.8 KPH

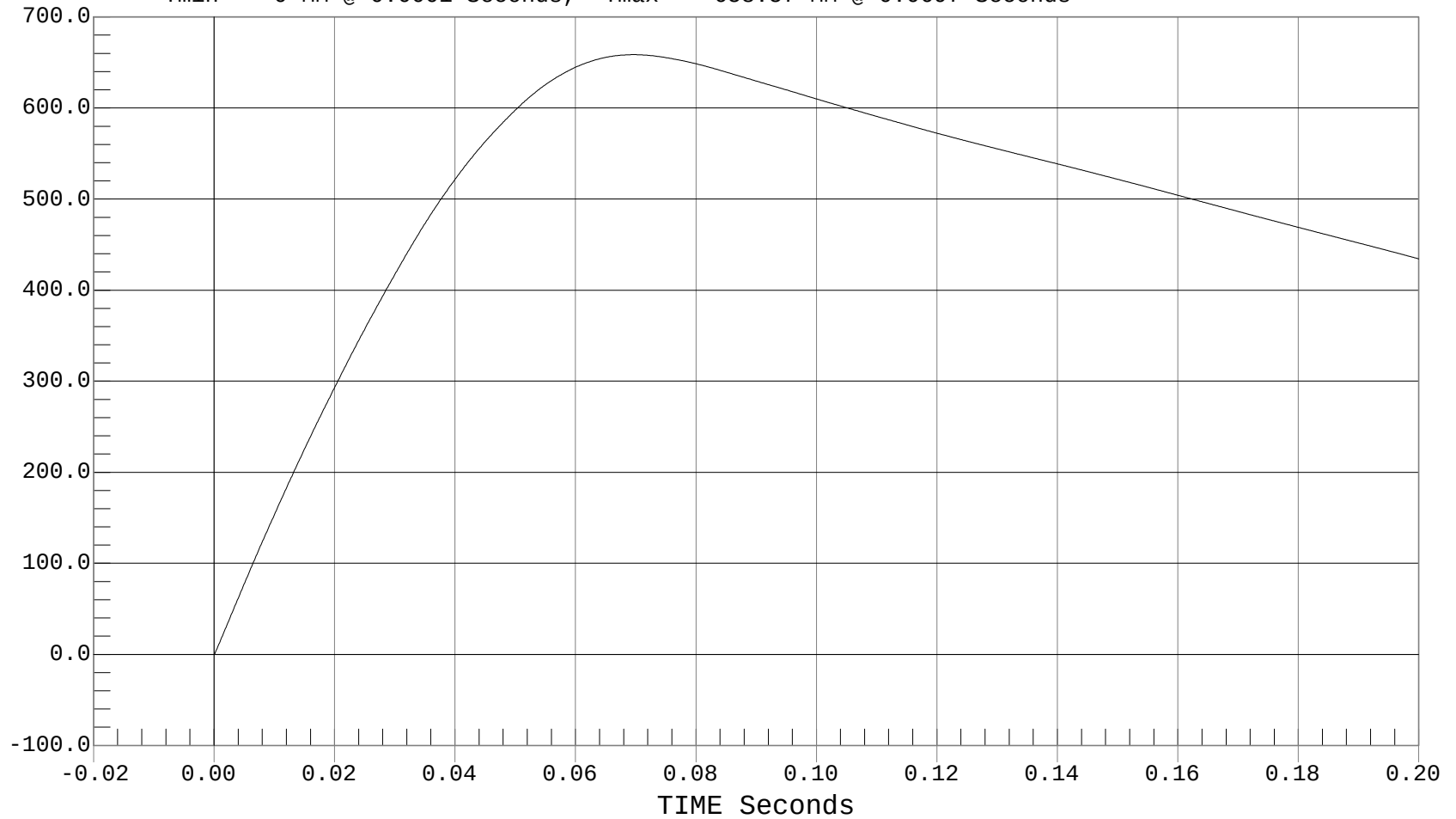
Other Info:

Filter Class: 180

— 1 LEFT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT, C00089AI.D03

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 658.57 MM @ 0.0697 Seconds

LEFT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT





RIGHT REAR SEAT CROSSMEMBER REDUNDANT X ACCELERATION

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

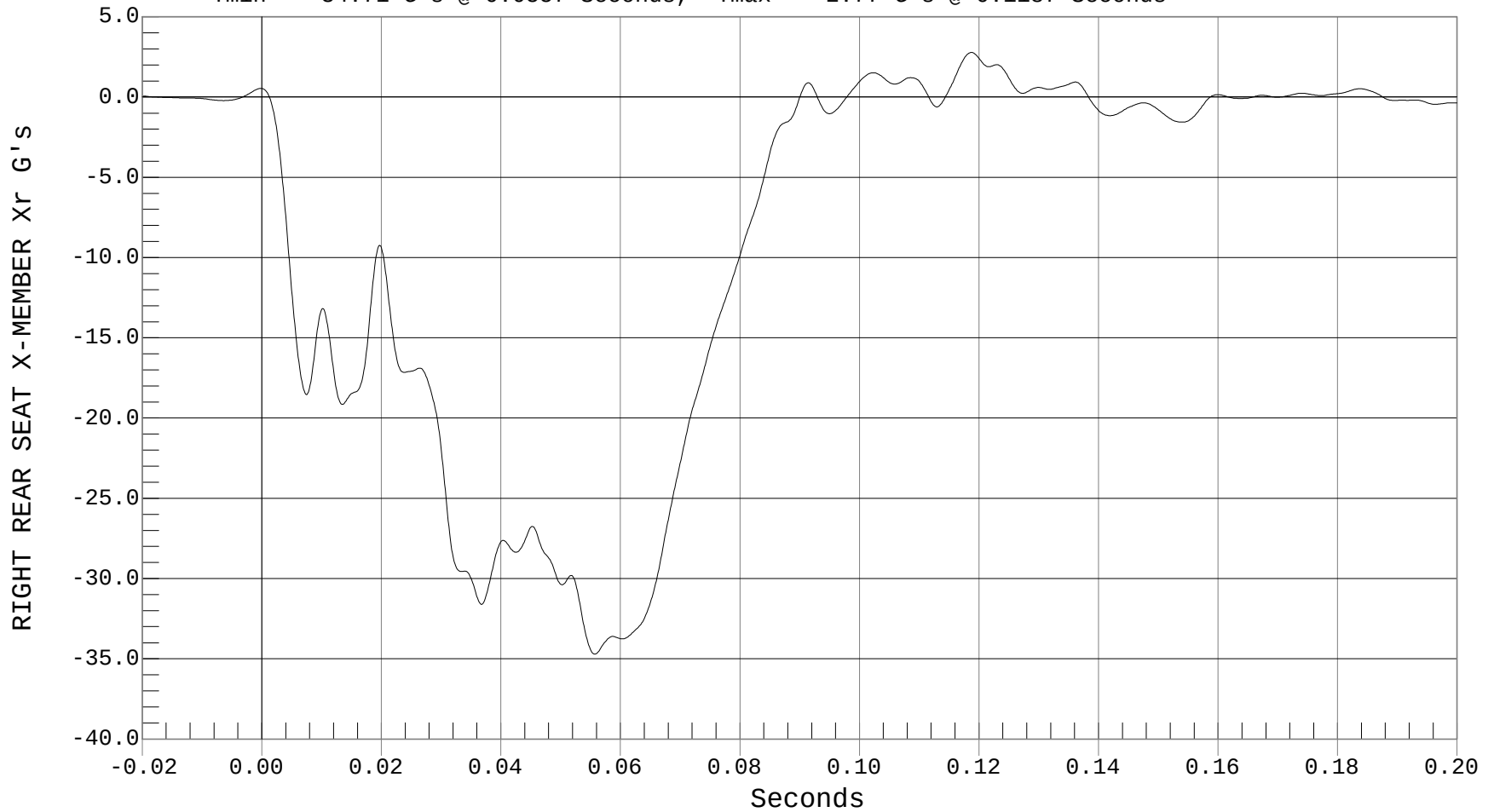
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 60

— 1 RIGHT REAR SEAT X-MEMBER Xr, C00089AF.A02

Ymin = -34.71 G's @ 0.0557 Seconds, Ymax = 2.77 G's @ 0.1187 Seconds





RIGHT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY

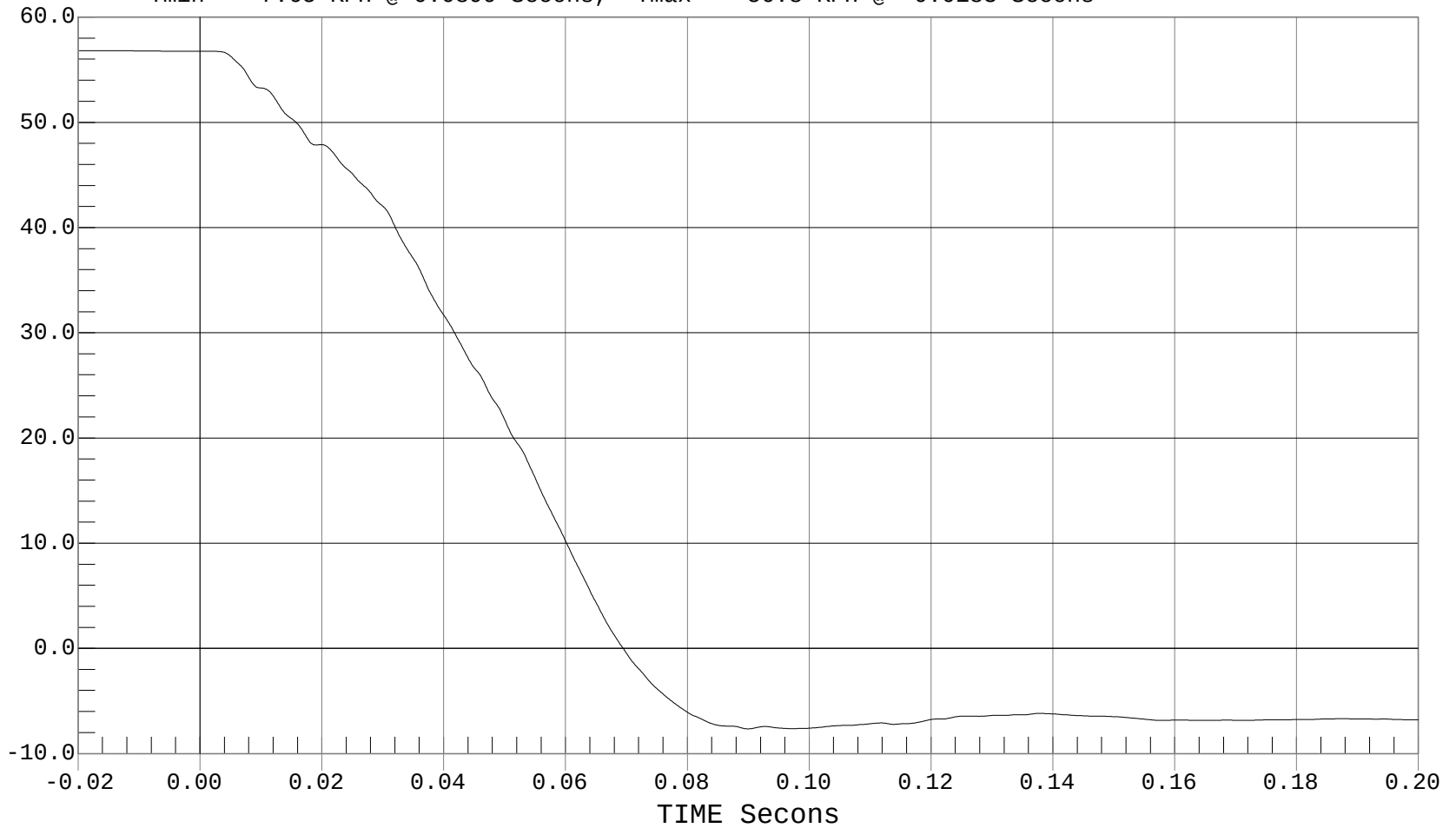
Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 RIGHT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY, C00089AI.V02

RIGHT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY K

Ymin = -7.65 KPH @ 0.0899 Secons, Ymax = 56.8 KPH @ -0.0183 Secons





RIGHT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT

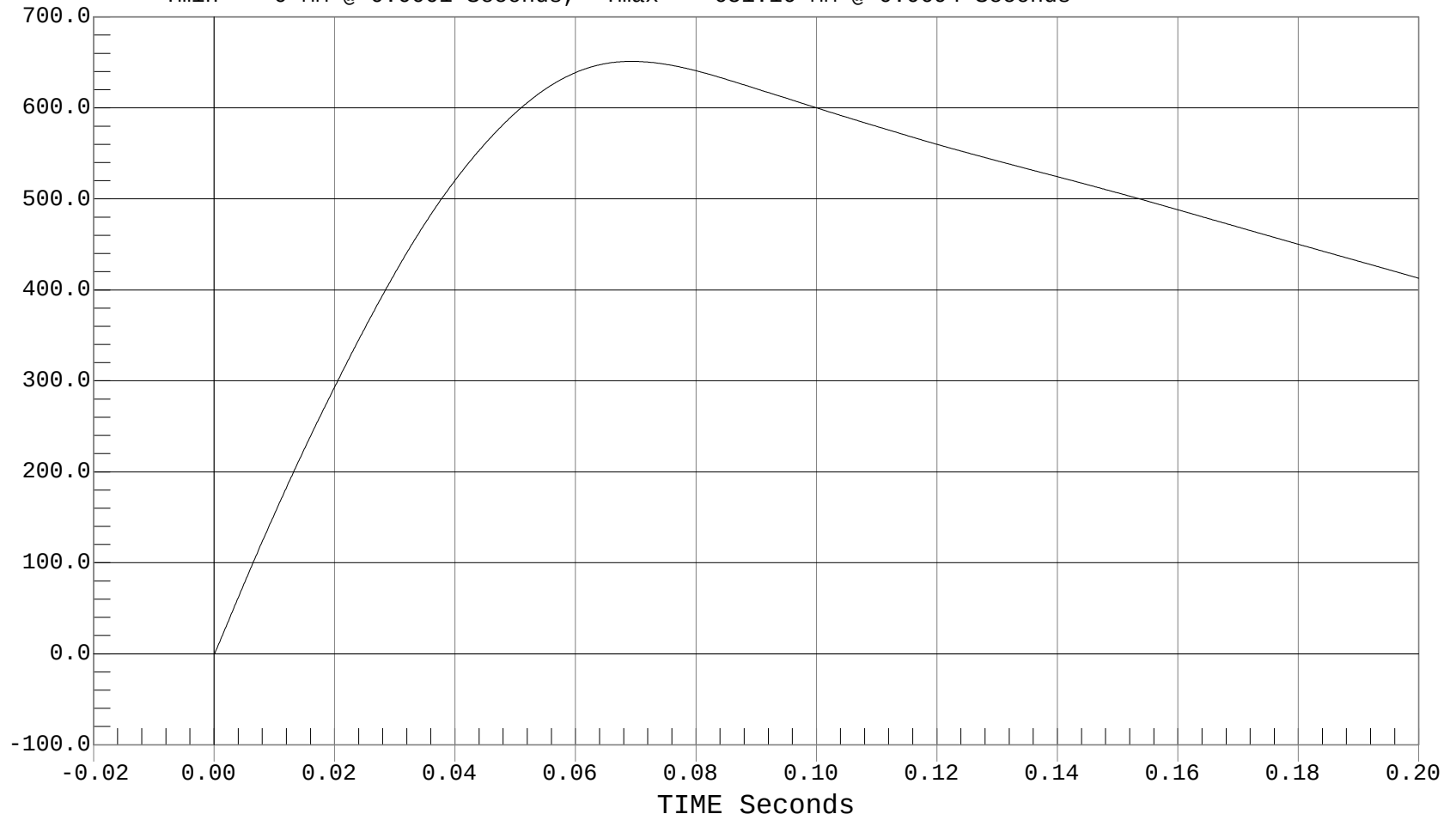
Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 180

— 1 RIGHT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT, C00089AI.D02

RIGHT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT

Ymin = 0 MM @ 0.0001 Seconds, Ymax = 651.16 MM @ 0.0694 Seconds





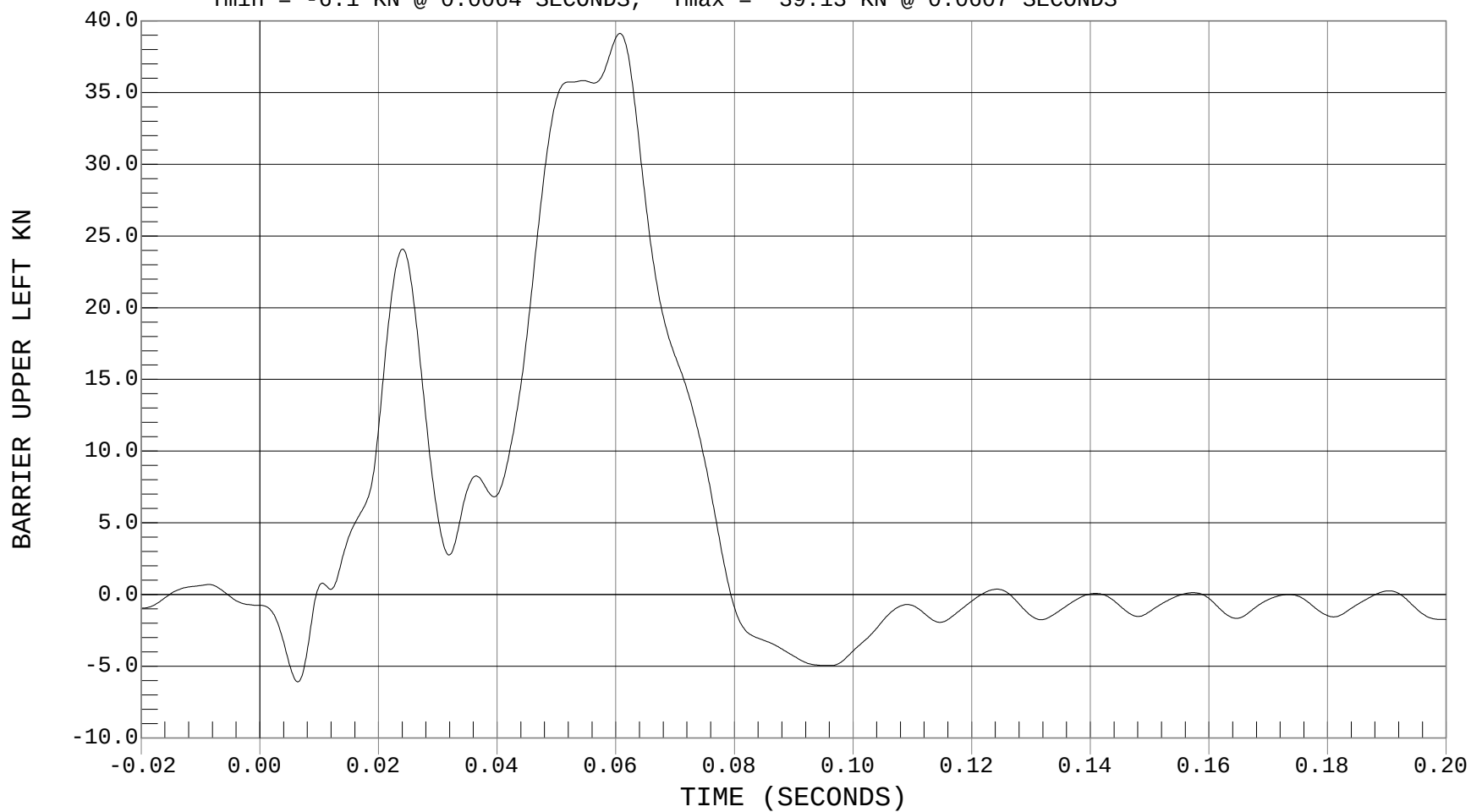
UPPER LEFT BARRIER FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 BARRIER UPPER LEFT, C00089FF.F02

Ymin = -6.1 KN @ 0.0064 SECONDS, Ymax = 39.13 KN @ 0.0607 SECONDS





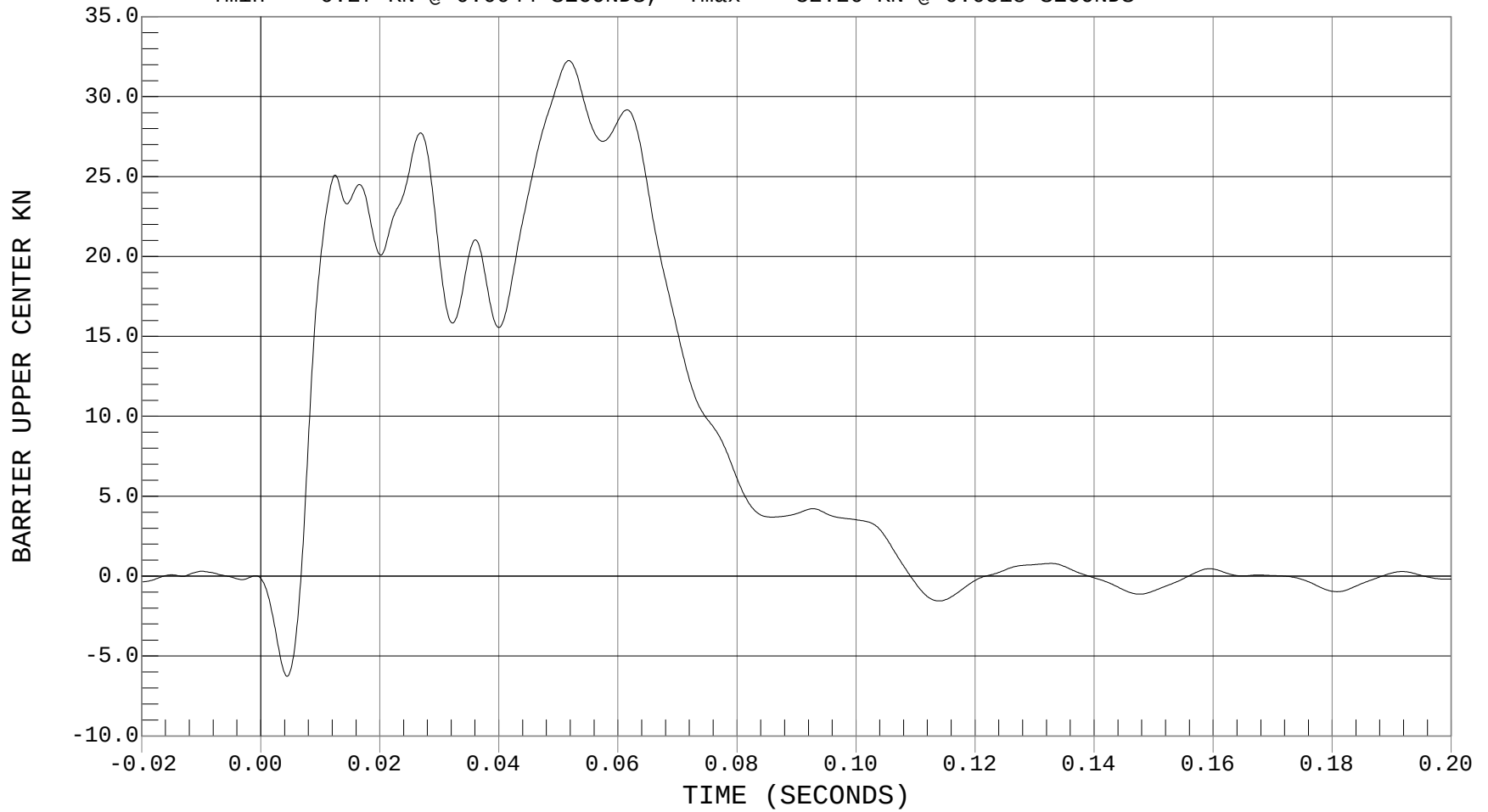
UPPER CENTER BARRIER FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 BARRIER UPPER CENTER, C00089FF.F03

Ymin = -6.27 KN @ 0.0044 SECONDS, Ymax = 32.26 KN @ 0.0518 SECONDS





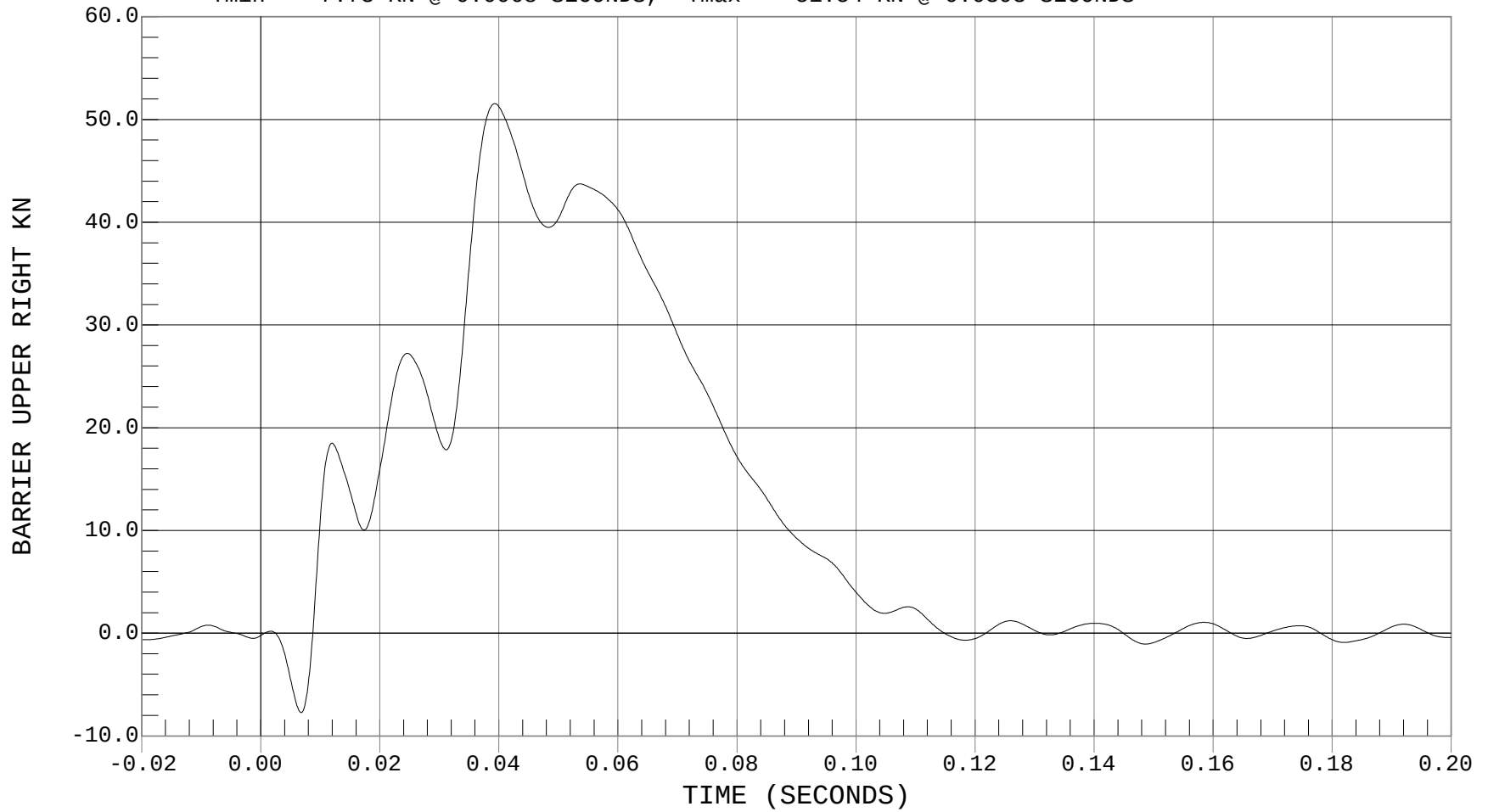
UPPER RIGHT BARRIER FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 BARRIER UPPER RIGHT, C00089FF.F04

Ymin = -7.73 KN @ 0.0068 SECONDS, Ymax = 51.54 KN @ 0.0393 SECONDS





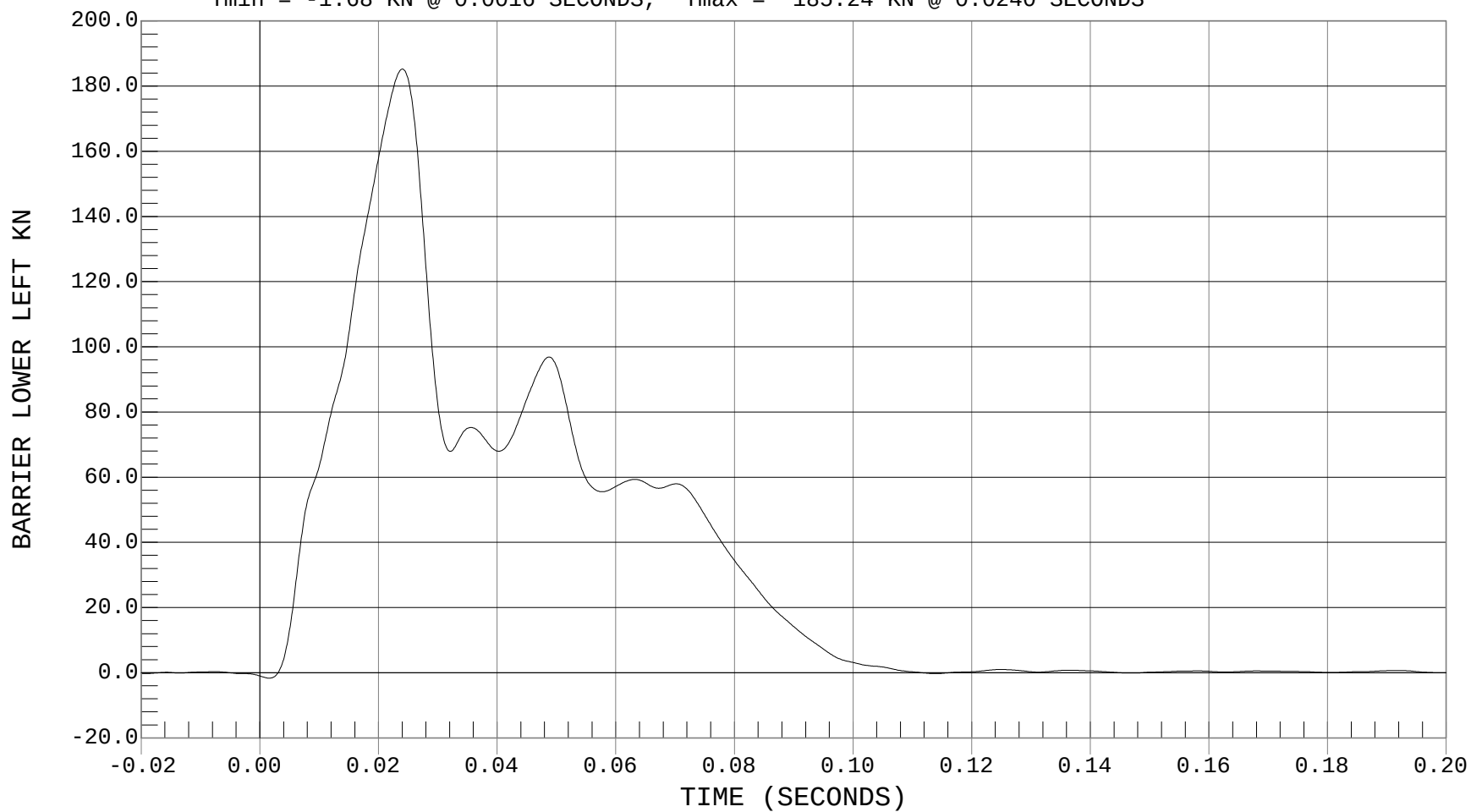
LOWER LEFT BARRIER FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 BARRIER LOWER LEFT, C00089FF.F05

Ymin = -1.68 KN @ 0.0016 SECONDS, Ymax = 185.24 KN @ 0.0240 SECONDS





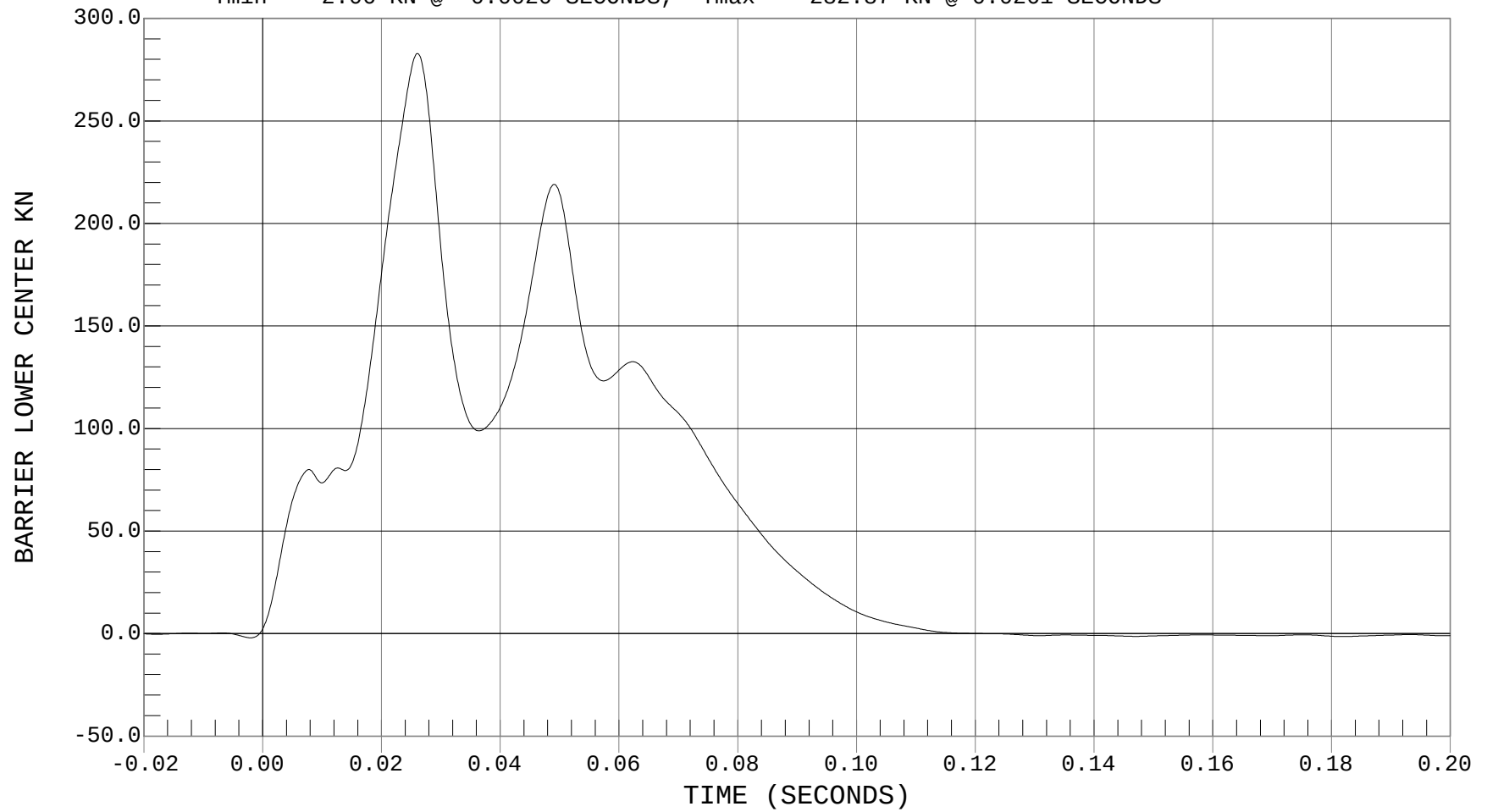
LOWER CENTER BARRIER FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 BARRIER LOWER CENTER, C00089FF.F06

Ymin = -2.06 KN @ -0.0020 SECONDS, Ymax = 282.87 KN @ 0.0261 SECONDS





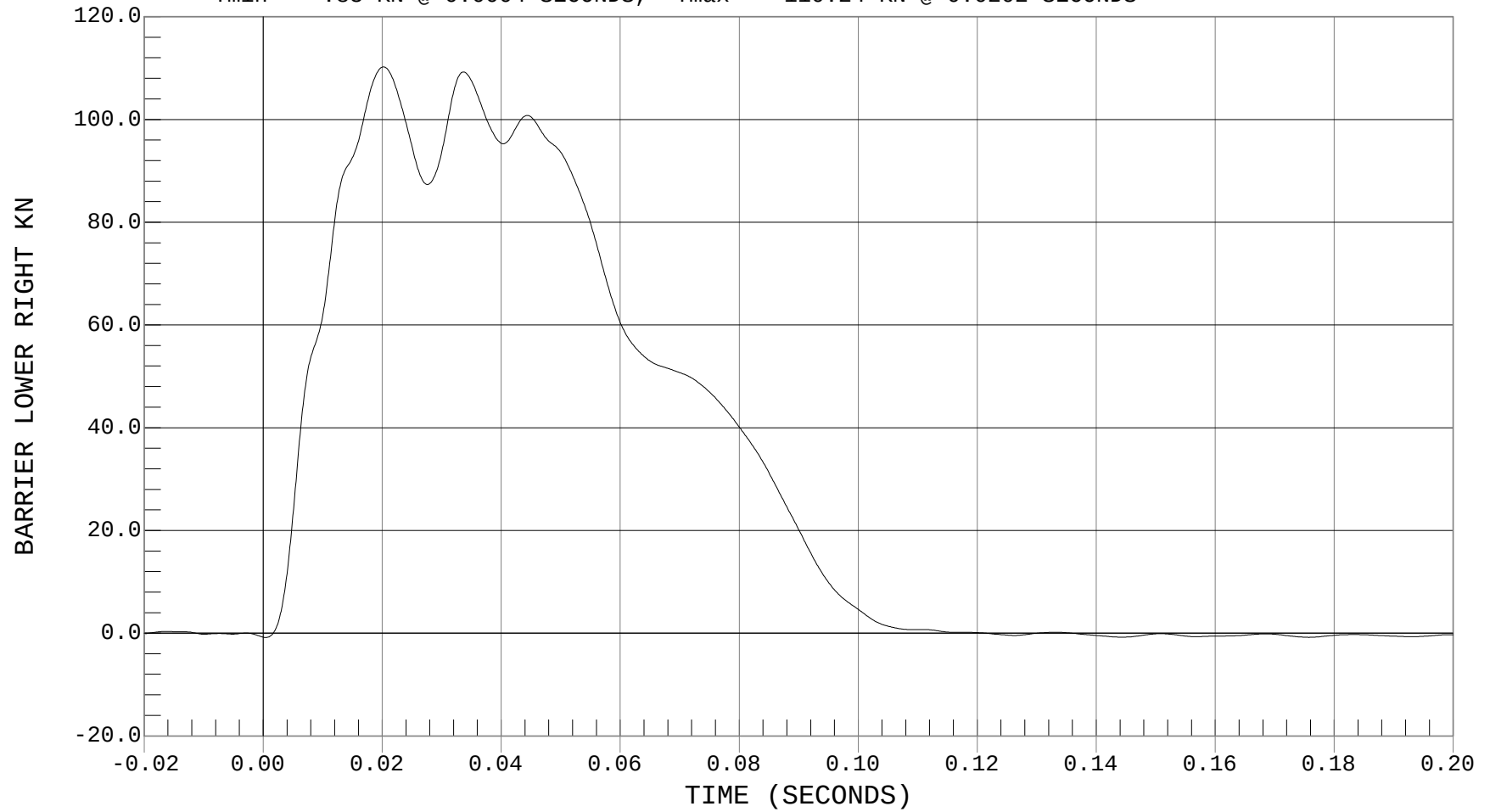
LOWER RIGHT BARRIER FORCE

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 BARRIER LOWER RIGHT, C00089FF.F07

Ymin = -.83 KN @ 0.0004 SECONDS, Ymax = 110.24 KN @ 0.0202 SECONDS





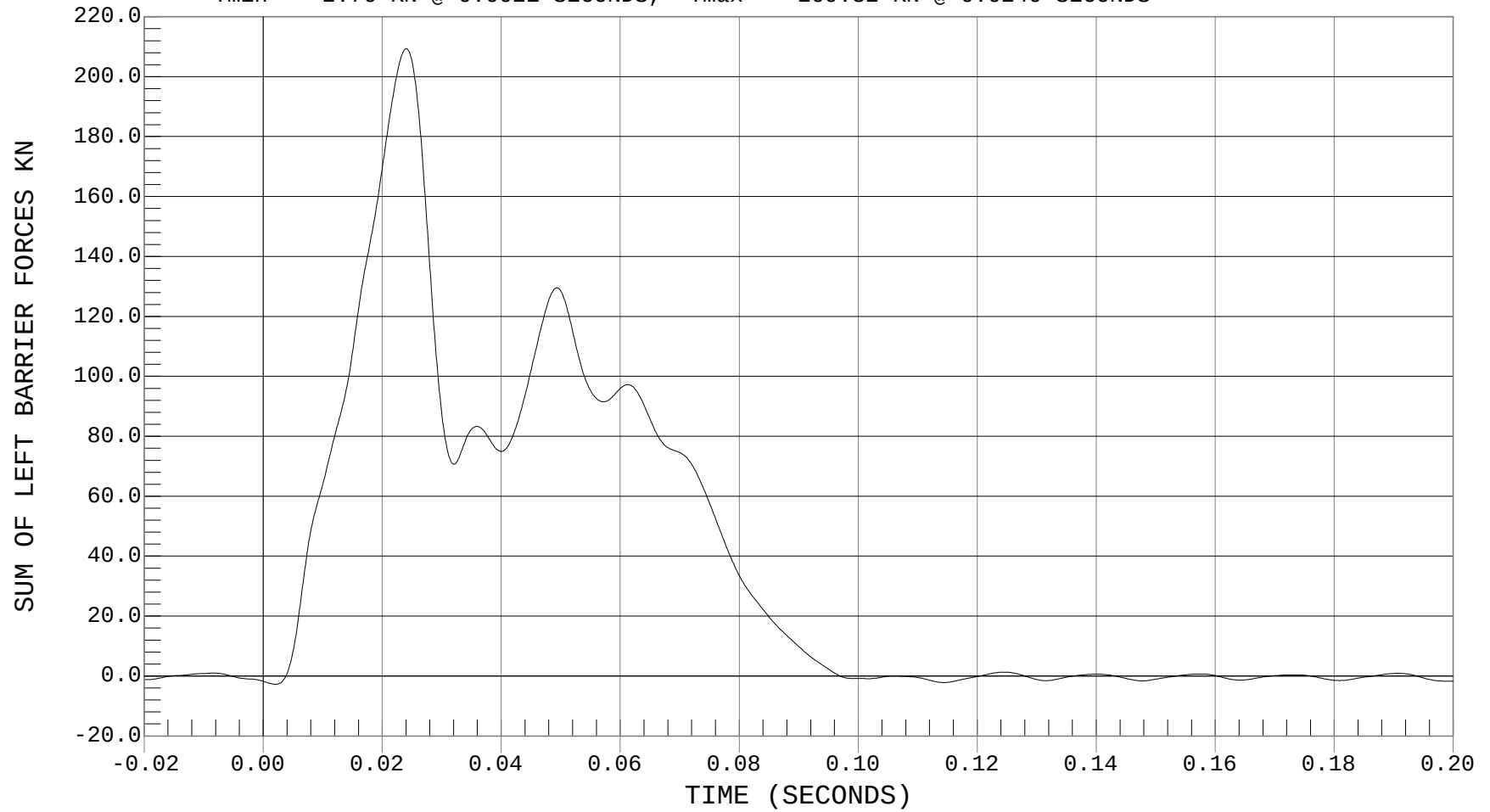
SUM OF LEFT BARRIER FORCES

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 DOOR
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 SUM OF LEFT BARRIER FORCES, C00089FU.F02

Ymin = -2.76 KN @ 0.0021 SECONDS, Ymax = 209.32 KN @ 0.0240 SECONDS





SUM OF CENTER BARRIER FORCES

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

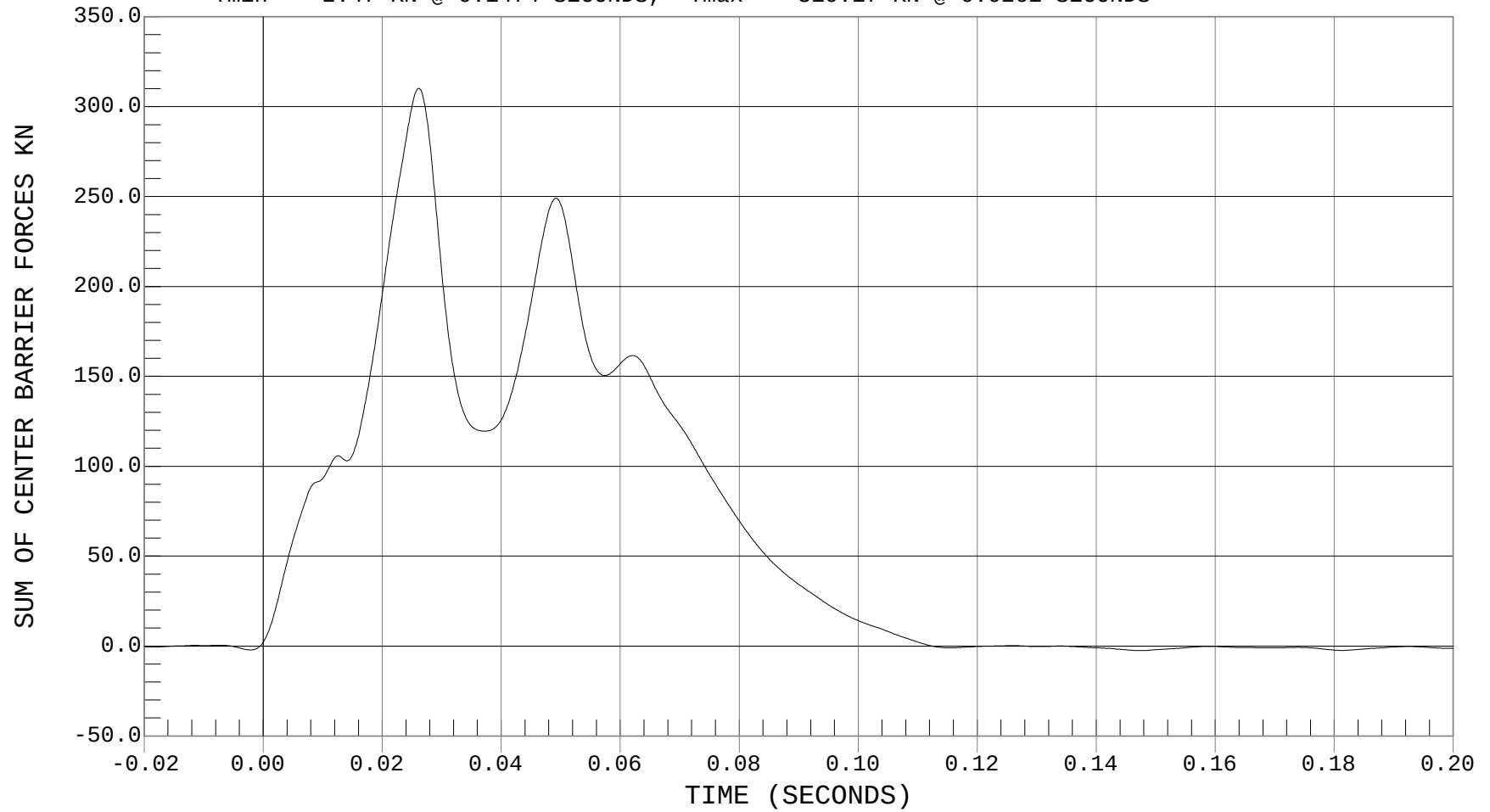
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 60

— 1 SUM OF CENTER BARRIER FORCES, C00089FU.F03

Ymin = -2.47 KN @ 0.1474 SECONDS, Ymax = 310.17 KN @ 0.0261 SECONDS





SUM OF RIGHT BARRIER FORCES

Test Desc.: NCAP FRONTAL BARRIER IMPACT

Component: 2001 HONDA CIVIC 4 DOOR

Other Info:

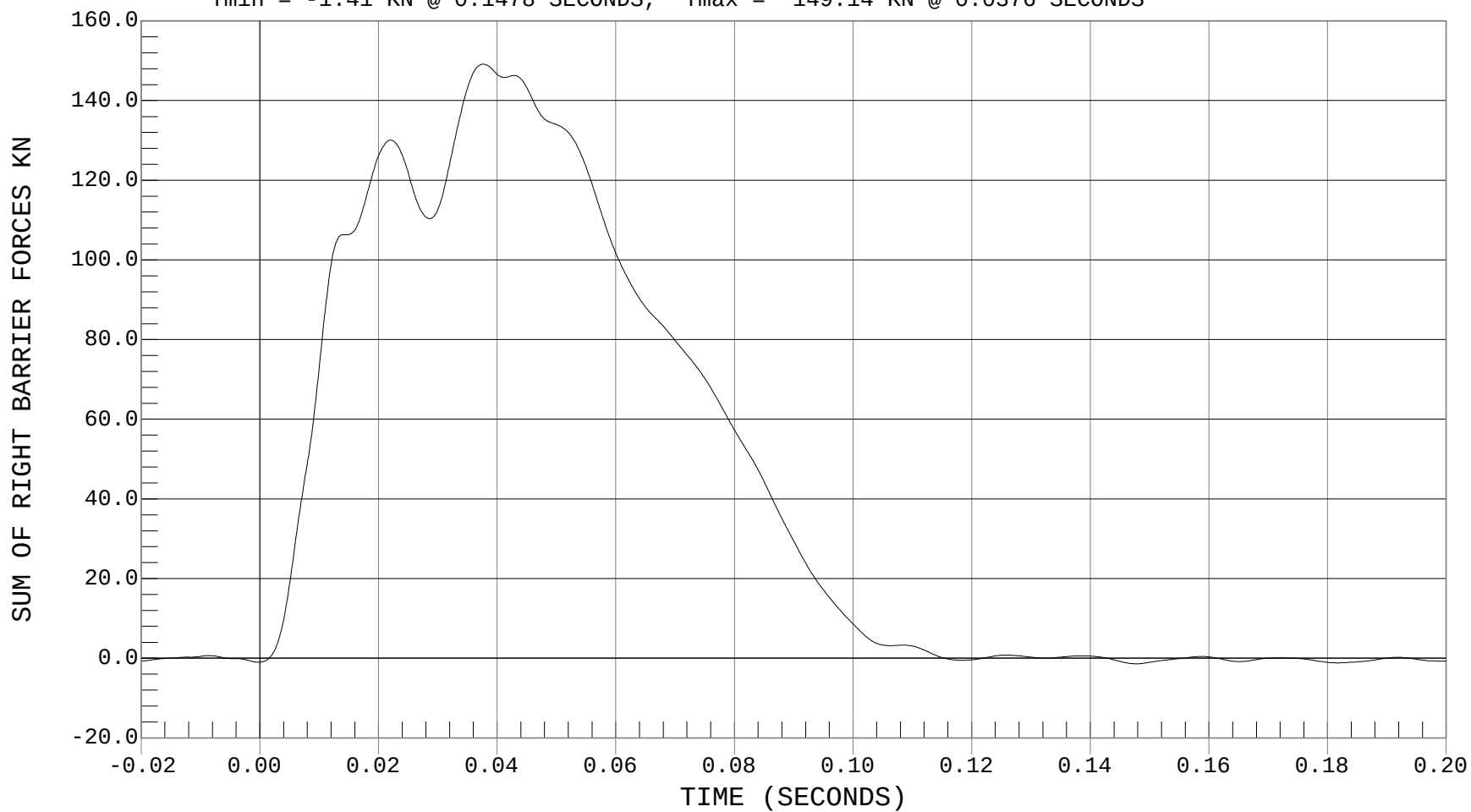
Test Date: 10-26-00

Speed: 35.3 MPH, 56.8 KPH

Filter Class: 60

— 1 SUM OF RIGHT BARRIER FORCES, C00089FU.F04

Ymin = -1.41 KN @ 0.1478 SECONDS, Ymax = 149.14 KN @ 0.0376 SECONDS





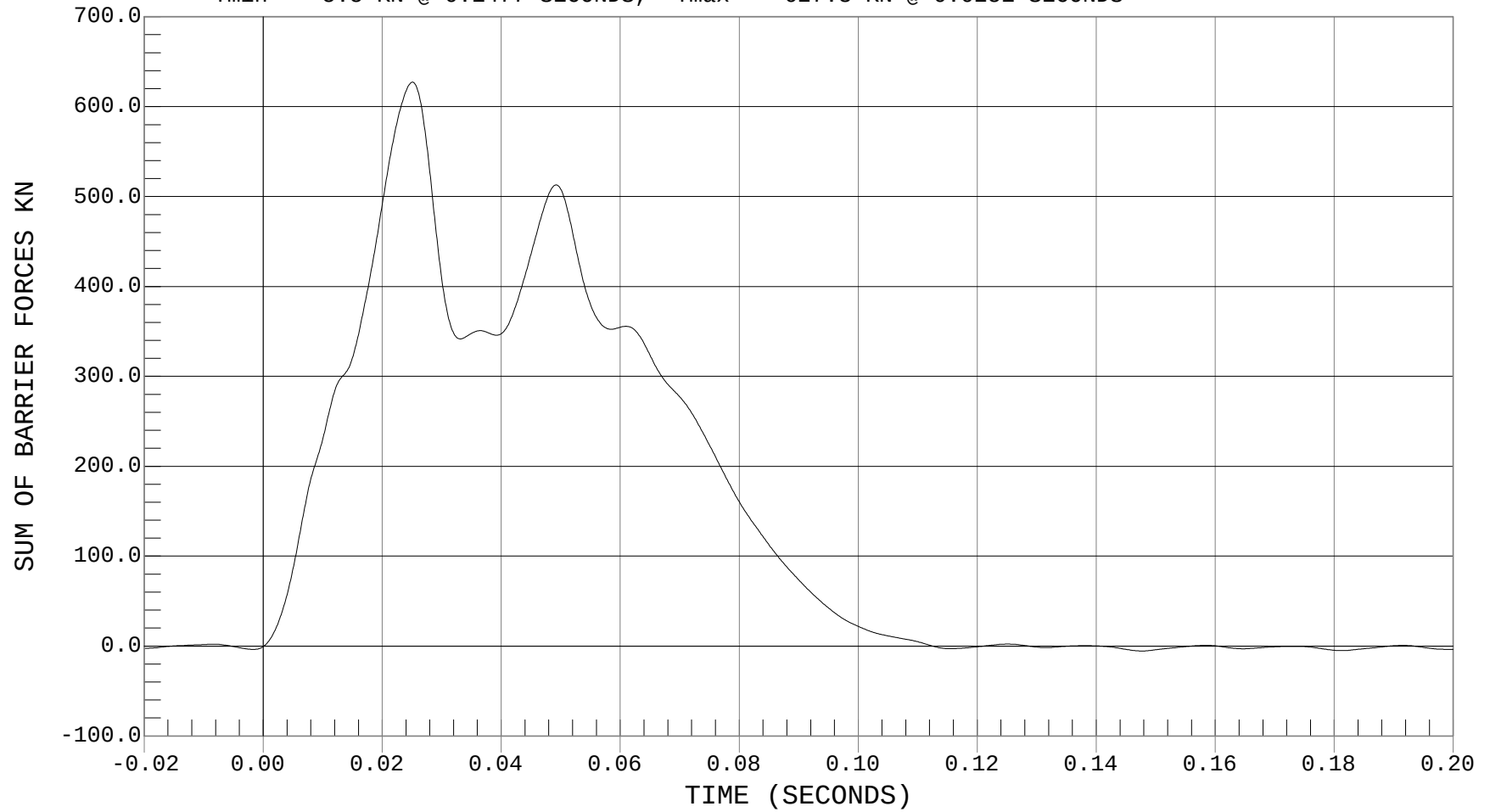
SUM OF BARRIER FORCES

Test Desc.: NCAP FRONTAL BARRIER IMPACT
Component: 2001 HONDA CIVIC 4 D00R
Other Info:

Test Date: 10-26-00
Speed: 35.3 MPH, 56.8 KPH
Filter Class: 60

— 1 SUM OF BARRIER FORCES, C00089FU.F05

Ymin = -5.5 KN @ 0.1477 SECONDS, Ymax = 627.3 KN @ 0.0251 SECONDS



APPENDIX C
DUMMY CONFIGURATION & PERFORMANCE VERIFICATION DATA

CERTIFICATION DATA

Dummy Serial Number: 087

Calibration Test Results Summary

Dummy Serial Number: 087

Pre-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Head Drop Test:	The head passed all drop test requirements.
Neck Flexion Test:	The neck passed all flexion test requirements.
Neck Extension Test:	The neck passed all extension test requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Knee Impact Tests:	Both knees passed all impact test requirements.
Hip-Femur Flexion Tests:	Both femurs passed all flexion test requirements.

HYBRID III DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Dummy Serial Number: 087

Date of Verification: 10/12/00

Test Number: D00124

DESCRIPTION	SPECIFICATION	TEST RESULTS
Temperature (°F)	69 – 72	70°
Relative Humidity	10 – 70	32%
AA - Location for Chest Circumference	16.9" – 17.1"	17.0
BB - Location for Waist Circumference	8.9" – 9.1"	9.0
A - Total Sitting Height	34.6" – 35.0"	34.7
B – Shoulder Pivot Height	19.9" – 20.5"	20.2
C – H Point Height	3.3" – 3.5"	3.4
D – H Point from Seat Back	5.3" – 5.5"	5.4
E – Shoulder Pivot From Backline	3.3" – 3.7"	3.6
F – Thigh Clearance	5.5" – 6.1"	5.8
G – Back of Elbow to Wrist Pivot	11.4" – 12.0"	11.8
H – Skull Cap Skin to Backline	1.6" – 1.8"	1.7
I – Shoulder Elbow Length	13.0" – 13.6"	13.4
J – Elbow Rest Height	7.5" – 8.3"	7.8
K – Buttock Knee Length	22.8" – 23.8"	23.1
L – Popliteal Height	16.9" – 17.9"	17.3
M – Knee Pivot Height	19.1 – 19.9"	19.6
N – Buttock Popliteal Length	17.8" – 18.8"	18.4
O – Chest Depth at 3 rd Rib	8.4" – 9.0"	8.6
P – Foot Length	9.9" – 10.5"	10.4
V – Shoulder Breadth	16.6" – 17.2"	17.0
W – Foot Breadth	3.5" – 4.2"	4.0
Y – Chest Circumference	38.2" – 39.4"	38.5
Z – Waist Circumference	32.9" – 34.1"	33.6

Technician: _____

Approved By: _____

MGA RESEARCH CORPORATION
HEAD DROP TEST
HYBRID III

Date: 10/11/00

Dummy Serial Number: 087

Test Number: D001241

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°F)	66 – 78	70°
Relative Humidity (%)	10 – 70	29%
Peak Resultant Acceleration	225 – 275 g's	226
Peak Lateral Acceleration	± 15 g's max.	-11
Is Acceleration Curve Unimodal	Within 10% of peak	Yes

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



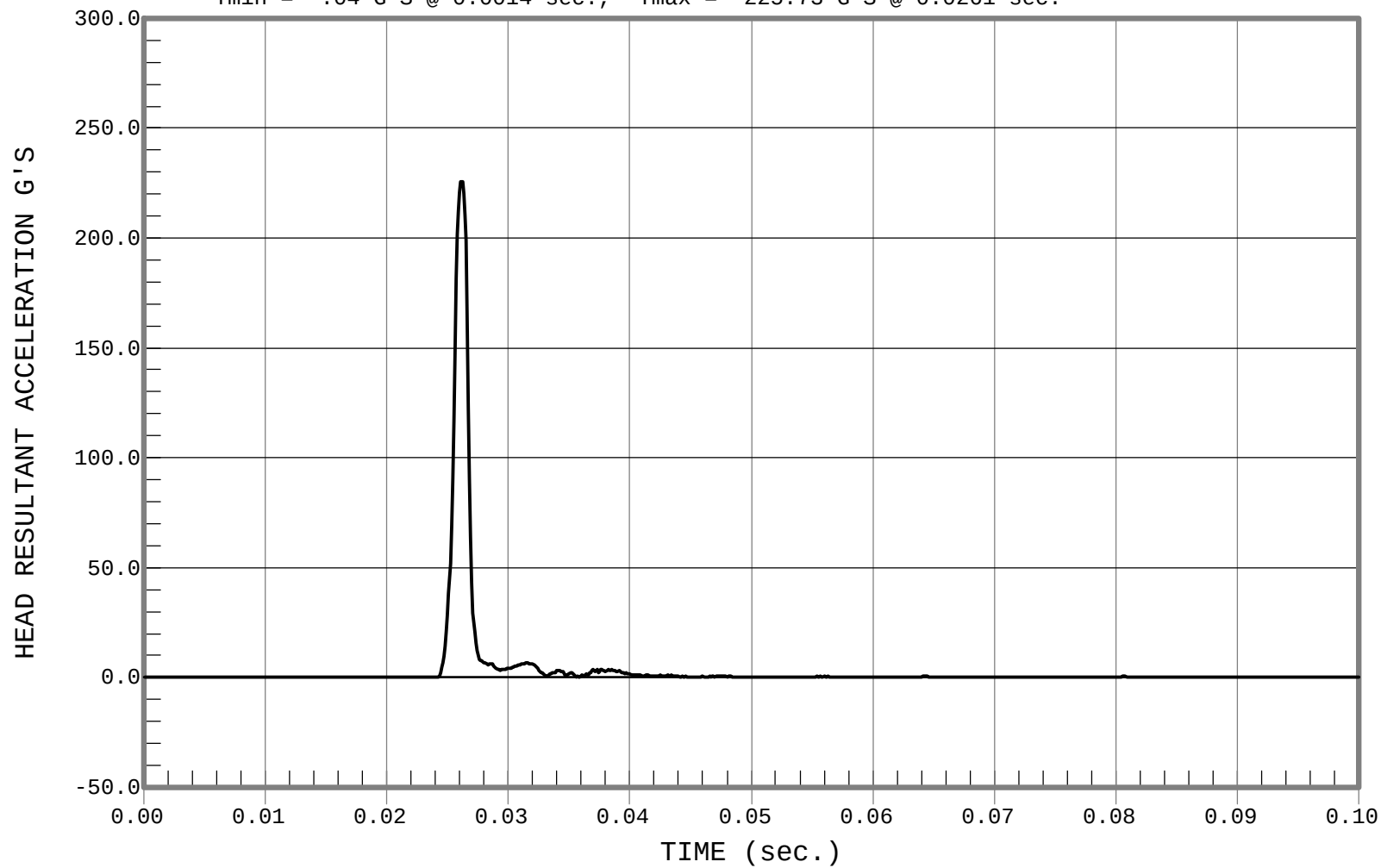
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #087

Test Date: 10-11-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 HEAD RESULTANT ACCELERATION, D00241av.a01

Ymin = .04 G'S @ 0.0014 sec., Ymax = 225.73 G'S @ 0.0261 sec.





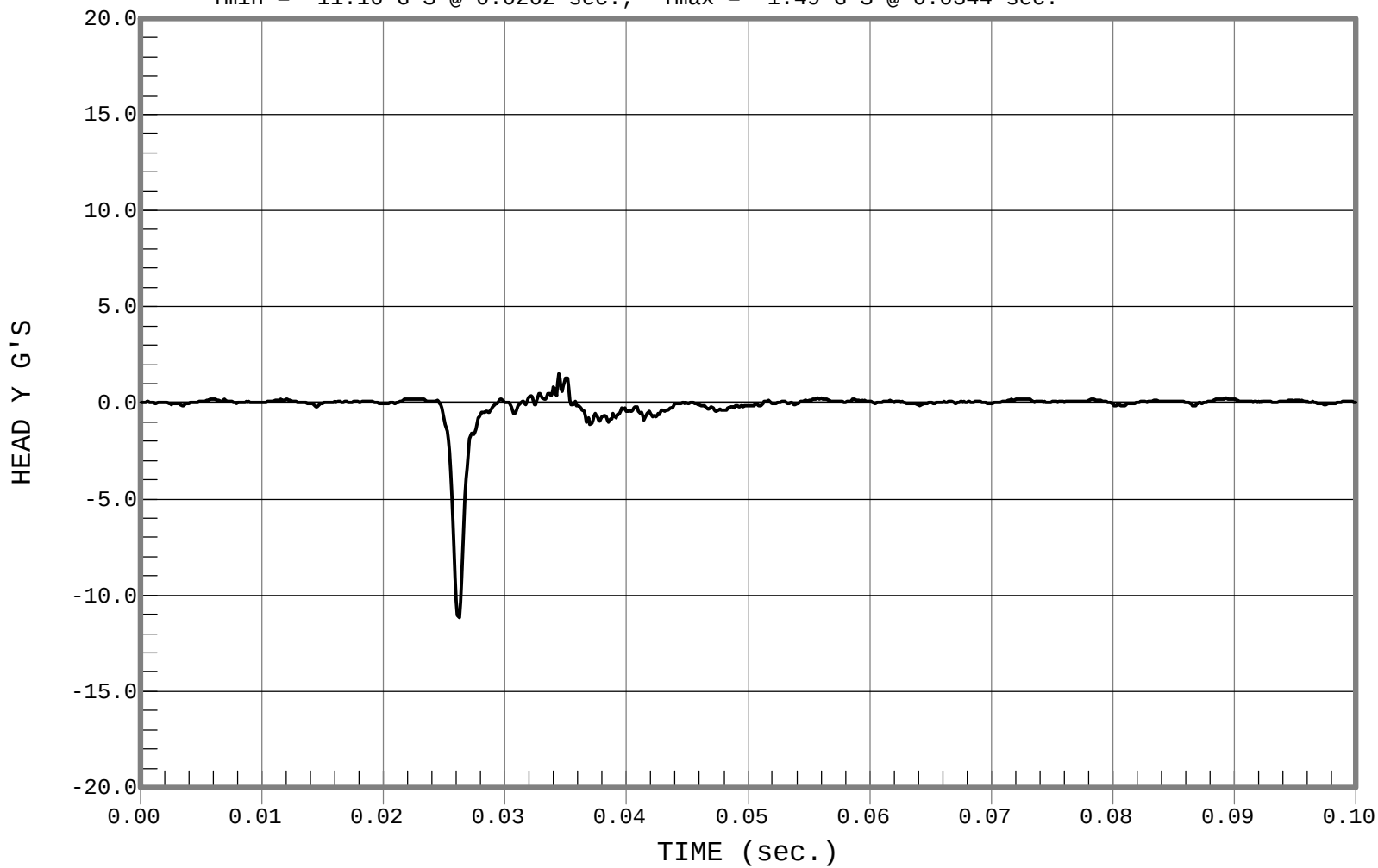
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #087

Test Date: 10-11-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 HEAD Y, D00241AR.A02

Ymin = -11.16 G'S @ 0.0262 sec., Ymax = 1.49 G'S @ 0.0344 sec.



MGA RESEARCH CORPORATION
NECK FLEXION TEST
HYBRID III

Date: 10/12/00

Dummy Serial Number: 087

Test Number: D001242

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature (°F)		69 - 72	70°
Relative Humidity (%)		10 – 70	30%
Pendulum Speed		22.6 – 23.4 ft/sec	23.0
Pendulum Deceleration	10 ms	22.50 – 27.50 g	24.28
	20 ms	17.60 – 22.60 g	21.18
	30 ms	12.50 – 18.50 g	14.37
Max. Pendulum G Above 30 ms		29.0 g max.	14.4
Deceleration – Time Curve Decay Time to 5 G		34 – 42 ms	36
D Plane Rotation	Max.	64 – 78 deg.	67
	Time	57 - 64 ms	61
Rotation Angle – Time Curve Decay Time to Zero		113 – 128 ms	119
Moment About Occipital Condyle	Max.	65 – 80 ft-lbf	67
	Time	47 – 58 ms	51
Positive Moment – Time Curve Decay Time to Zero		97 – 107 ms	100

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



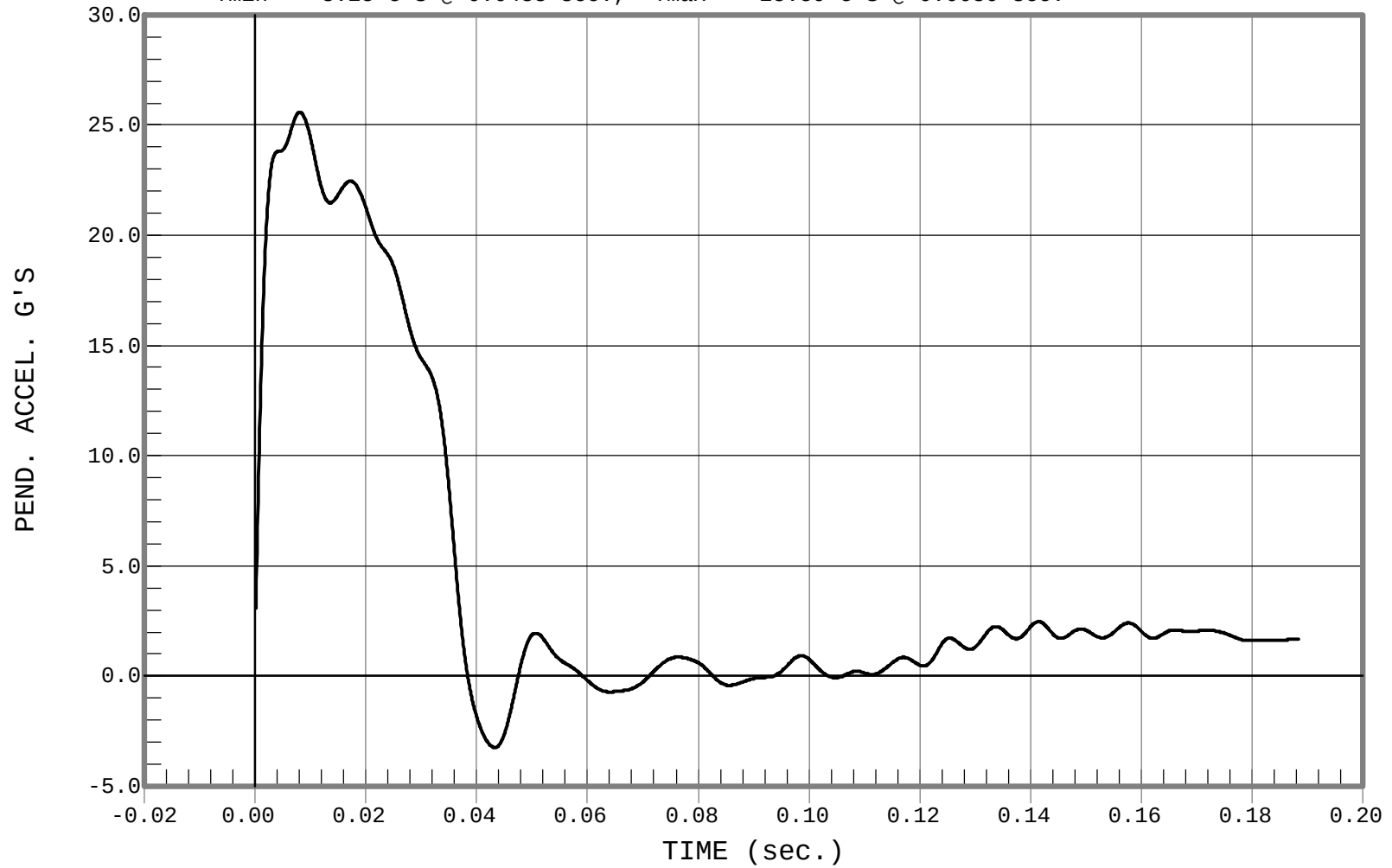
PENDULUM DECELERATION

Test Desc.: Dummy Calibration - Neck Flexion
Component: Dummy #087

Test Date: 10-12-00
Speed: 23.03 FT/SEC, 7.02 M/SEC

1 PEND. ACCEL., D00242AF.A04

Ymin = -3.25 G'S @ 0.0433 sec., Ymax = 25.59 G'S @ 0.0080 sec.





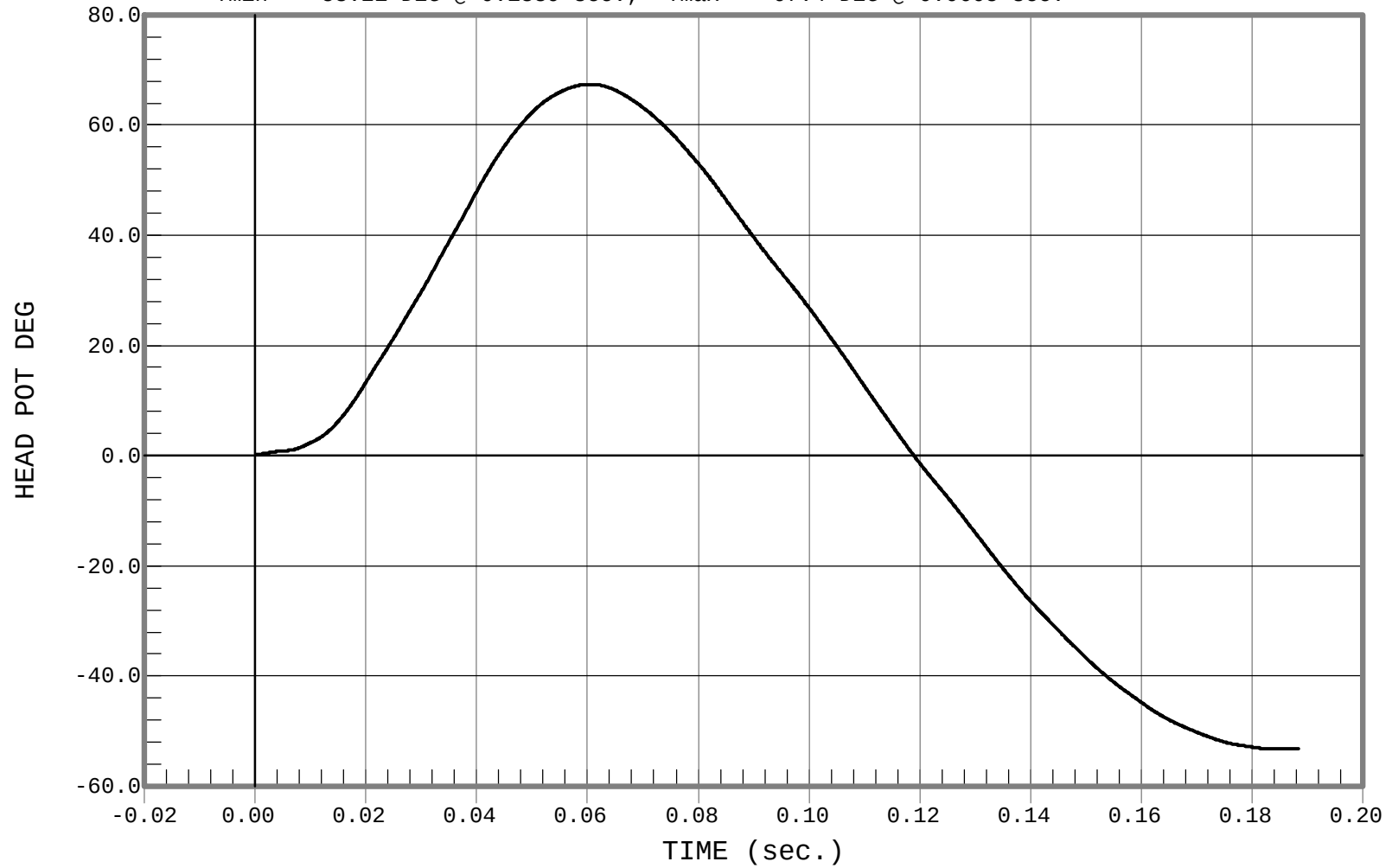
NECK ROTATION

Test Desc.: Dummy Calibration - Neck Flexion
Component: Dummy #087

Test Date: 10-12-00
Speed: 23.03 FT/SEC, 7.02 M/SEC

1 HEAD POT, D00242DU.D05

Ymin = -53.21 DEG @ 0.1839 sec., Ymax = 67.4 DEG @ 0.0605 sec.





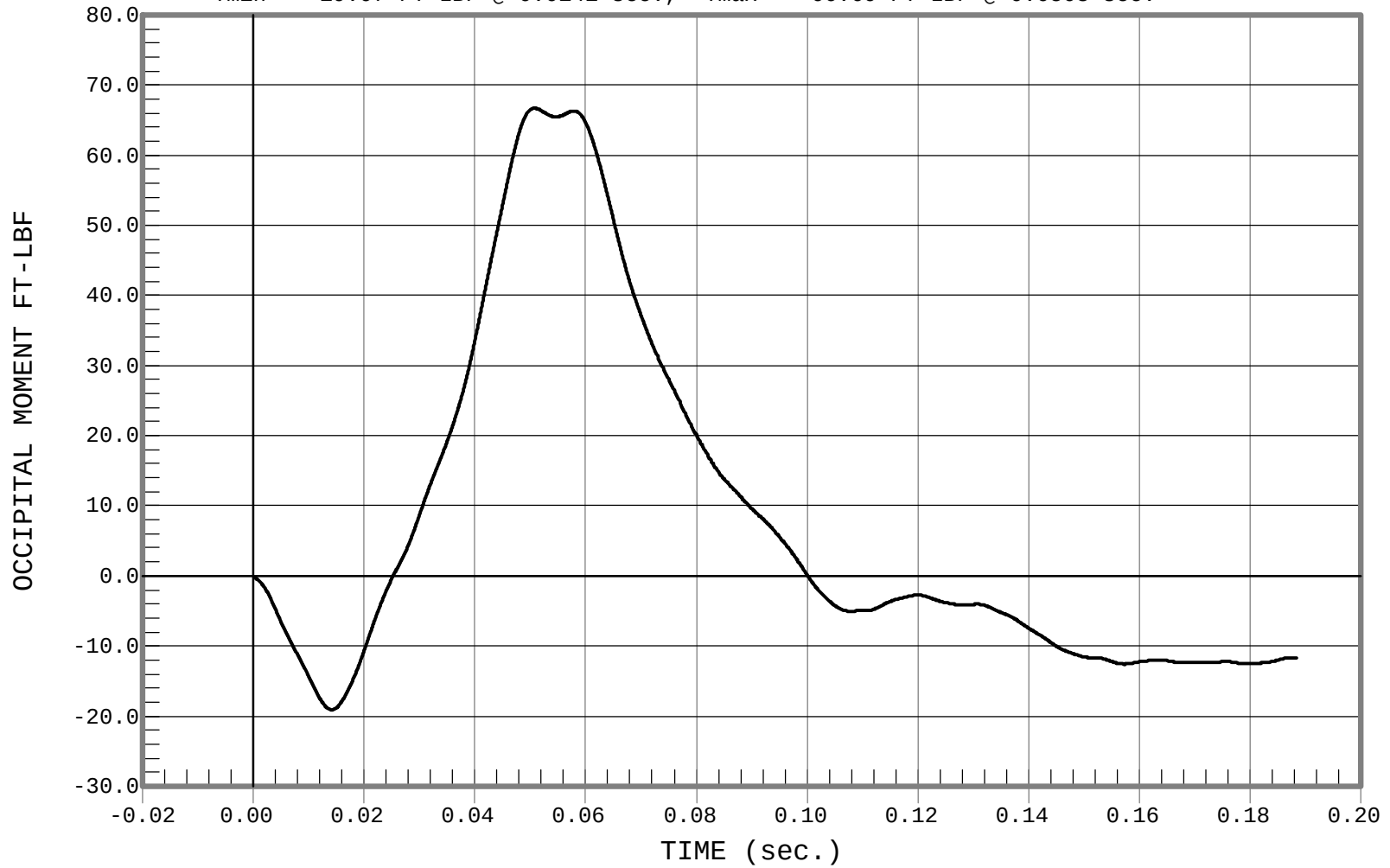
OCCIPITAL MOMENT

Test Desc.: Dummy Calibration - Neck Flexion
Component: Dummy #087

Test Date: 10-12-00
Speed: 23.03 FT/SEC, 7.02 M/SEC

1 OCCIPITAL MOMENT, D00242NK.MNT

Ymin = -19.07 FT-LBF @ 0.0141 sec., Ymax = 66.69 FT-LBF @ 0.0508 sec.



MGA RESEARCH CORPORATION
NECK EXTENSION TEST
HYBRID III

Date: 10/12/00

Dummy Serial Number: 087

Test Number: D001243

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature (°F)		69 – 72	70°
Relative Humidity (%)		10 – 70	30%
Pendulum Speed		19.50 – 20.30 ft/sec	19.53
Pendulum Deceleration	10 msec	17.20 – 21.20 g	20.88
	20 msec	14.00 – 19.00 g	18.08
	30 msec	11.00 – 16.00 g	13.77
Max. Pendulum G Above 30 ms		22 g max.	15
Deceleration – Time Curve Decay Time to 5 g		38 – 46 ms	38
D Plane Rotation	Max.	81 – 106 deg.	102
	Time	72 – 82 ms	78
Rotation Angle – Time Curve Decay Time to Zero		147 – 174 ms	163
Moment About Occipital Condyle	Min.	-59.0/-39.0 ft-lbf	-55.3
	Time	65 – 79 ms	74
Positive Moment – Time Curve Decay Time to Zero		120 – 148 ms	143

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



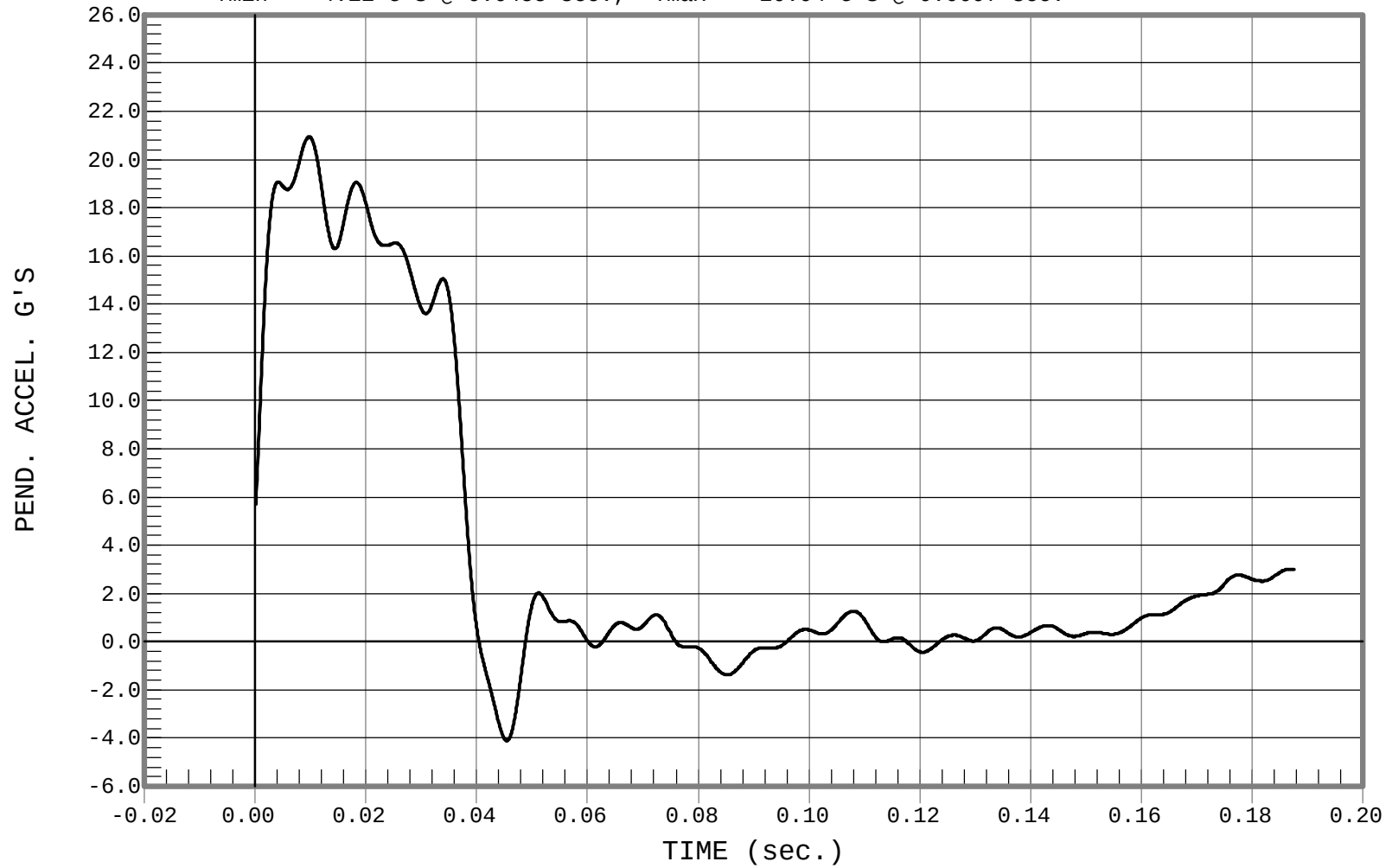
PENDULUM DECELERATION

Test Desc.: Dummy Calibration - Neck Extension
Component: Dummy #087

Test Date: 10-12-00
Speed: 19.53 FT/SEC, 5.95 M/SEC

1 PEND. ACCEL., D00243AF.A04

Ymin = -4.11 G'S @ 0.0455 sec., Ymax = 20.94 G'S @ 0.0097 sec.





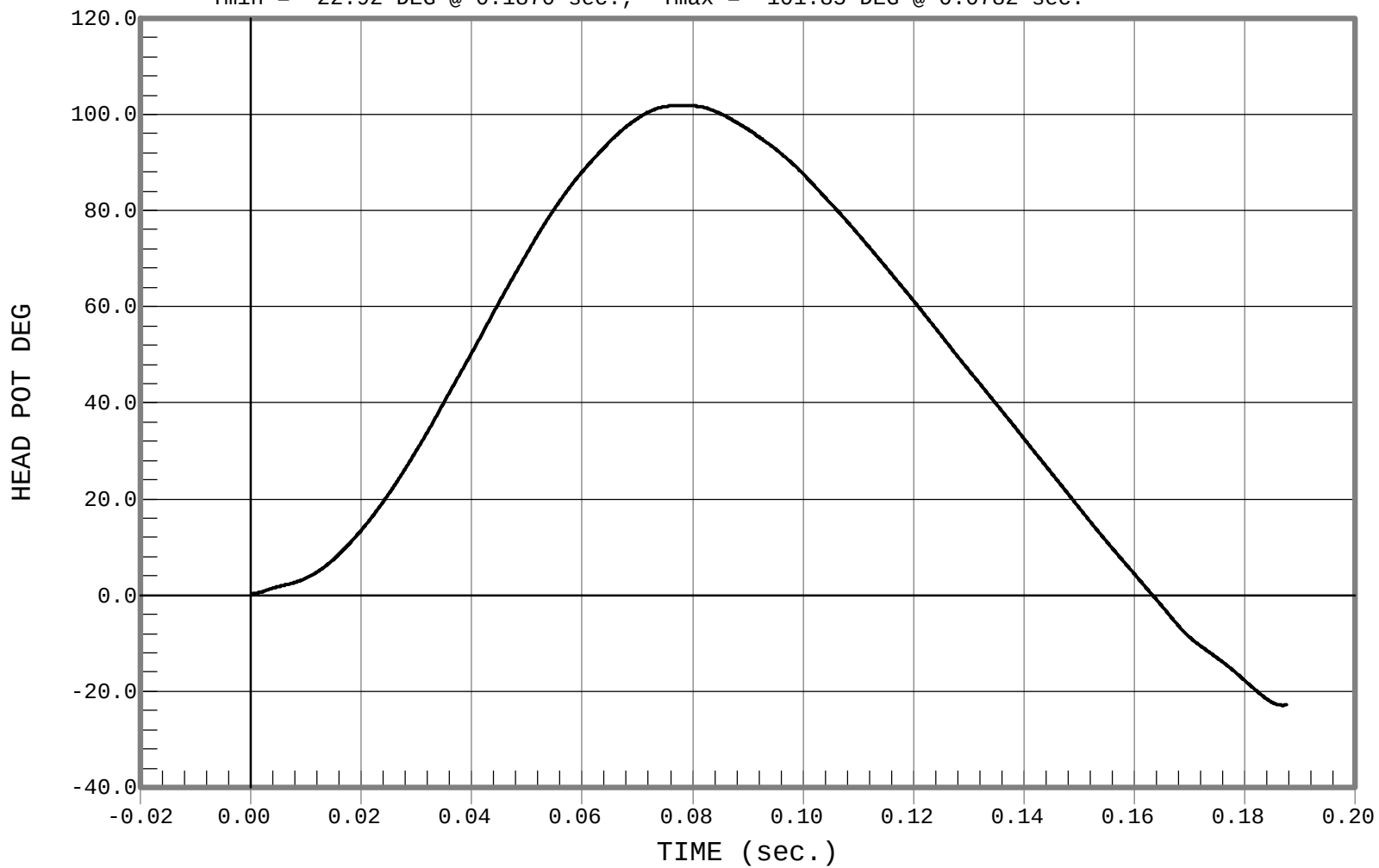
NECK ROTATION

Test Desc.: Dummy Calibration - Neck Extension
Component: Dummy #087

Test Date: 10-12-00
Speed: 19.53 FT/SEC, 5.95 M/SEC

1 HEAD POT, D00243DM.D05

Ymin = -22.92 DEG @ 0.1870 sec., Ymax = 101.85 DEG @ 0.0782 sec.





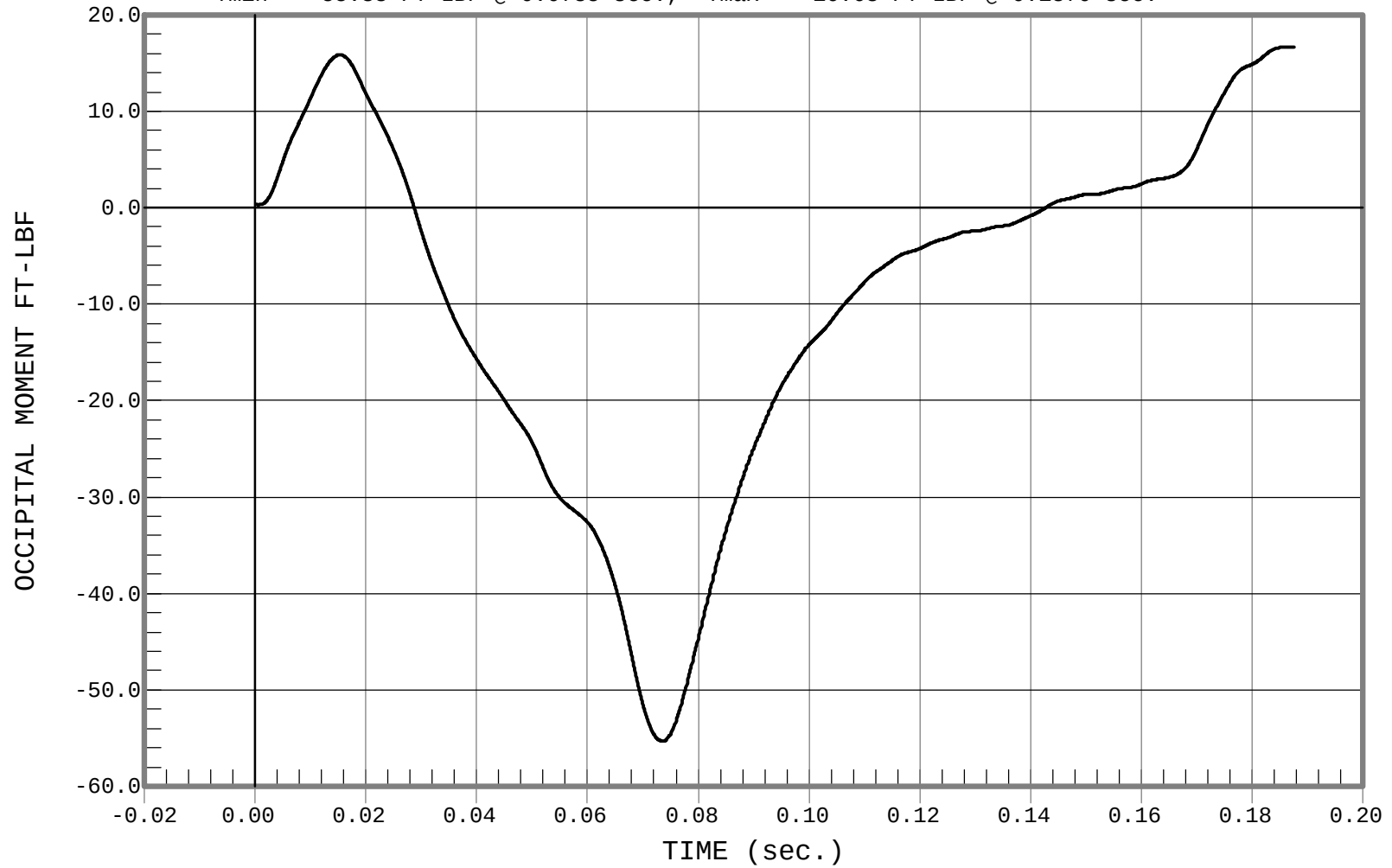
OCCIPITAL MOMENT

Test Desc.: Dummy Calibration - Neck Extension
Component: Dummy #087

Test Date: 10-12-00
Speed: 19.53 FT/SEC, 5.95 M/SEC

1 OCCIPITAL MOMENT, D00243NK.MNT

Ymin = -55.33 FT-LBF @ 0.0735 sec., Ymax = 16.68 FT-LBF @ 0.1870 sec.



MGA RESEARCH CORPORATION
THORAX IMPACT TEST
HYBRID III

Date: 10/11/00

Dummy Serial Number: 087

Test Number: D001244

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°F)	69 – 72	70°
Relative Humidity (%)	10 – 70%	29%
Probe Speed	21.6 – 22.4 ft/sec	21.7
Peak Deflection	2.50 – 2.86 in	2.73
Peak Resistive Force	1160 – 1325 lbs	1263
Internal Hysteresis	69 – 85%	72%

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



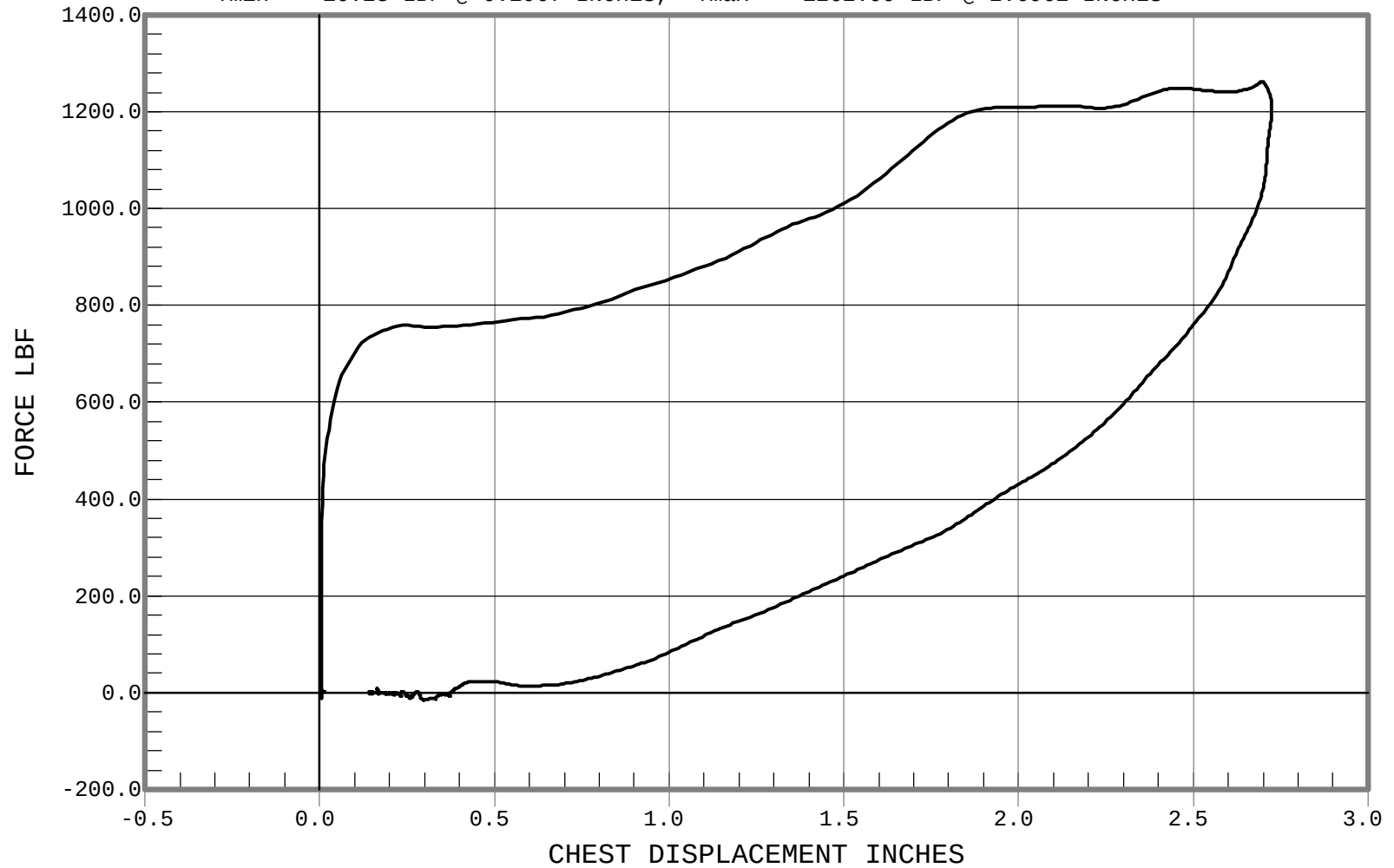
THORAX IMPACT

Test Desc.: Dummy Calibration - Chest Impact
Component: Dummy #87

Test Date: 10-11-00
Speed: 21.68 FT/SEC, 6.61 M/SEC

1 FORCE, D00244CH.FVD

Ymin = -16.23 LBF @ 0.2967 INCHES, Ymax = 1262.99 LBF @ 2.6962 INCHES



MGA RESEARCH CORPORATION
RIGHT KNEE IMPACT TEST
HYBRID III

Date: 10/11/00

Dummy Serial Number: 087

Test Number: D001245

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°F)	66 – 78	70°
Relative Humidity (%)	10 – 70	29%
Probe Speed	6.8 – 7.0 ft/sec	6.9
Maximum Force	1060 - 1300	1181

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



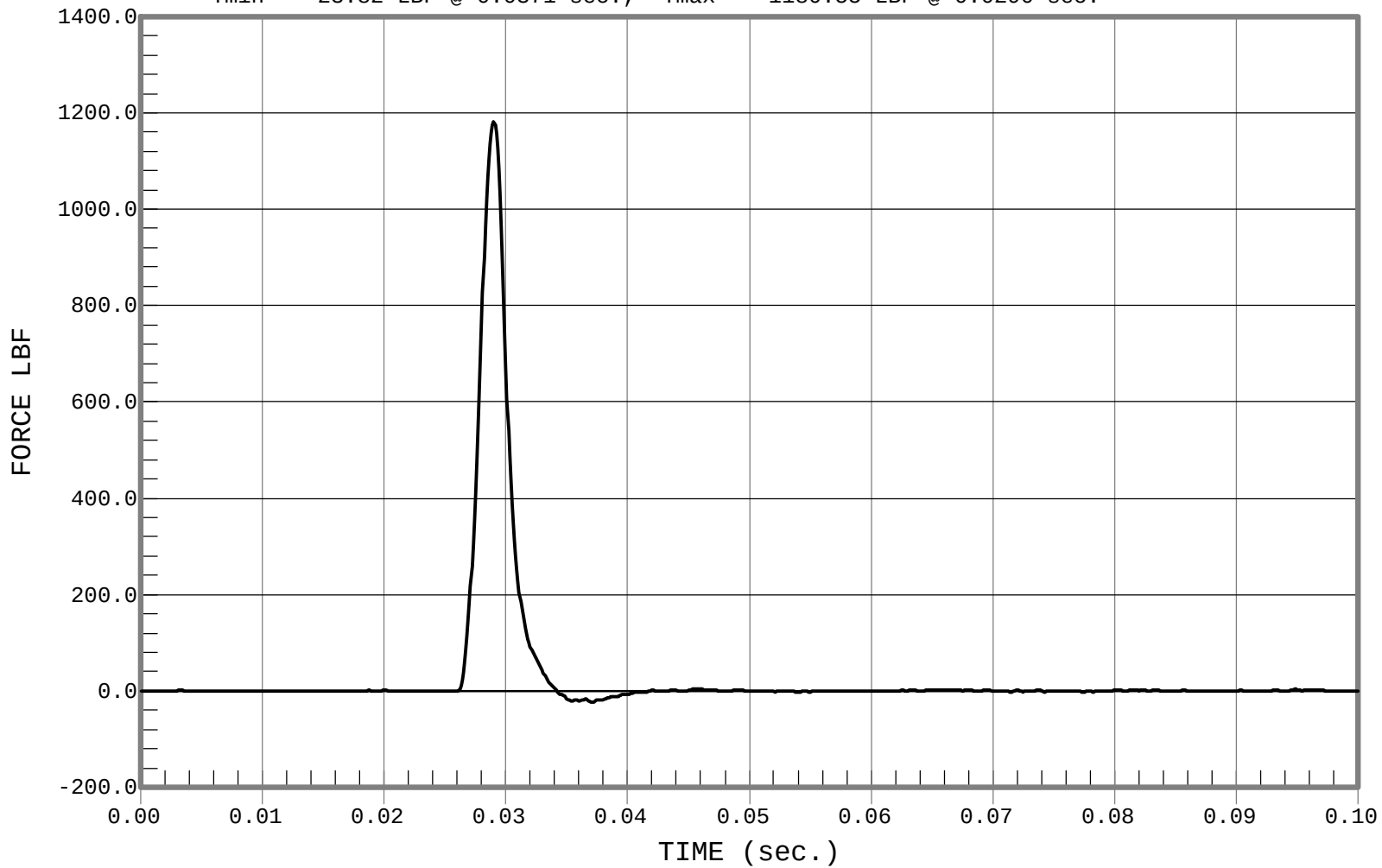
KNEE IMPACT

Test Desc.: Dummy Calibration - Right Knee Impact
Component: Dummy #87

Test Date: 10-11-00
Speed: 6.90 FT/SEC, 2.10 M/SEC

1 FORCE, D00245FF.F09

Ymin = -23.82 LBF @ 0.0371 sec., Ymax = 1180.55 LBF @ 0.0290 sec.



MGA RESEARCH CORPORATION
LEFT KNEE IMPACT TEST
HYBRID III

Date: 10/11/00

Dummy Serial Number: 087

Test Number: D001246

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°F)	66 – 78	70°
Relative Humidity (%)	10 – 70	29%
Probe Speed	6.8 – 7.0 ft/sec	6.9
Maximum Force	1060 - 1300	1148

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



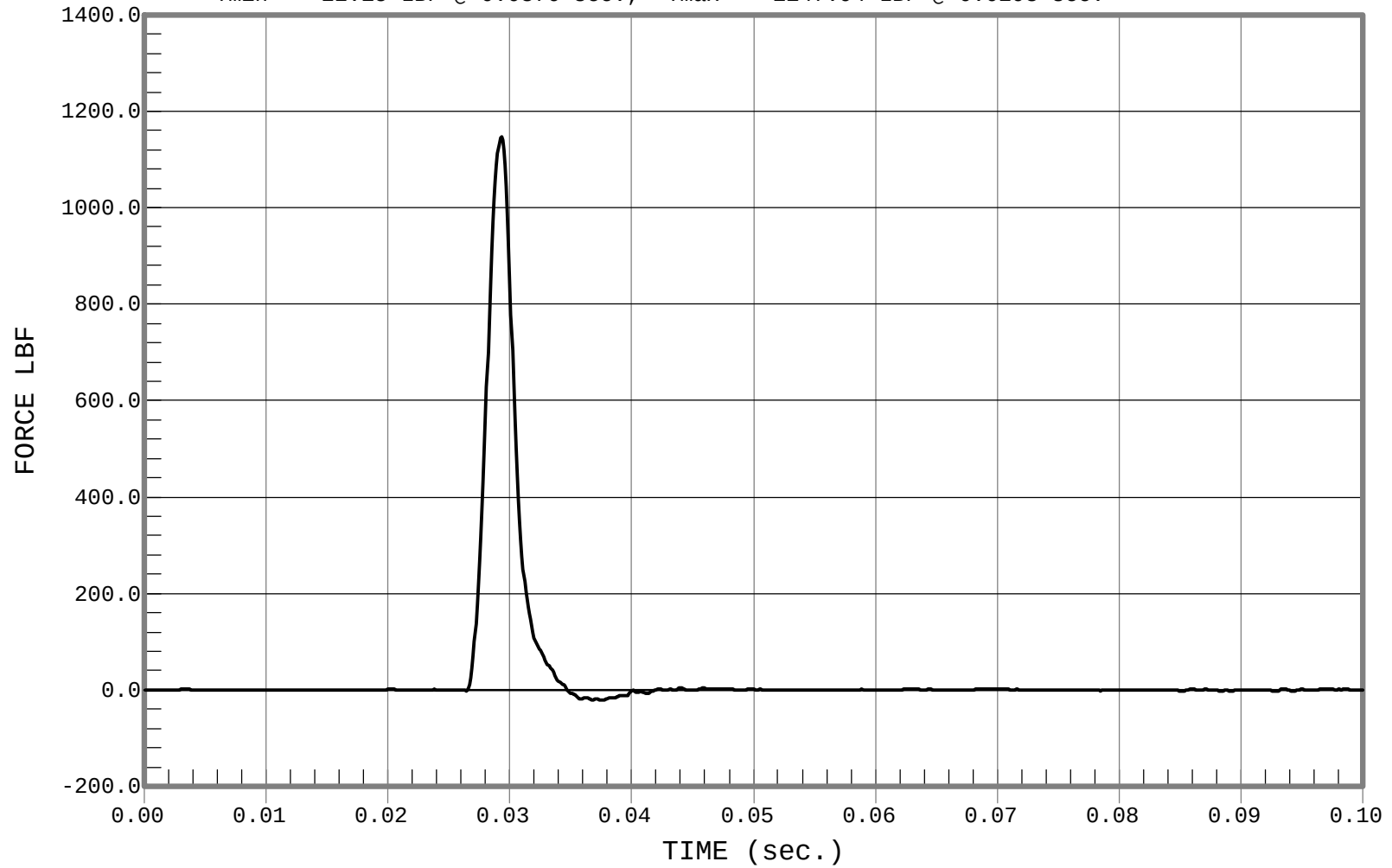
KNEE IMPACT

Test Desc.: Dummy Calibration - Left Knee Impact
Component: Dummy #87

Test Date: 10-11-00
Speed: 6.87 FT/SEC, 2.09 M/SEC

1 FORCE, D00246FF.F09

Ymin = -22.15 LBF @ 0.0376 sec., Ymax = 1147.94 LBF @ 0.0293 sec.



MGA RESEARCH CORPORATION
HIP-FEMUR FLEXION TEST
HYBRID III

Date: 10/11/00
Dummy Serial Number: 087
Test Number: D001249/0

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
		Right	Left
Temperature (°F)	66 – 78	70°	70°
Relative Humidity (%)	10 – 70	29%	29%
Rotation Rate	5-10 deg/sec	Yes	Yes
30 Degrees	70 ft-lb maximum	48	47
150 ft-lbf	40-50 degree maximum rotation	49°	48°

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



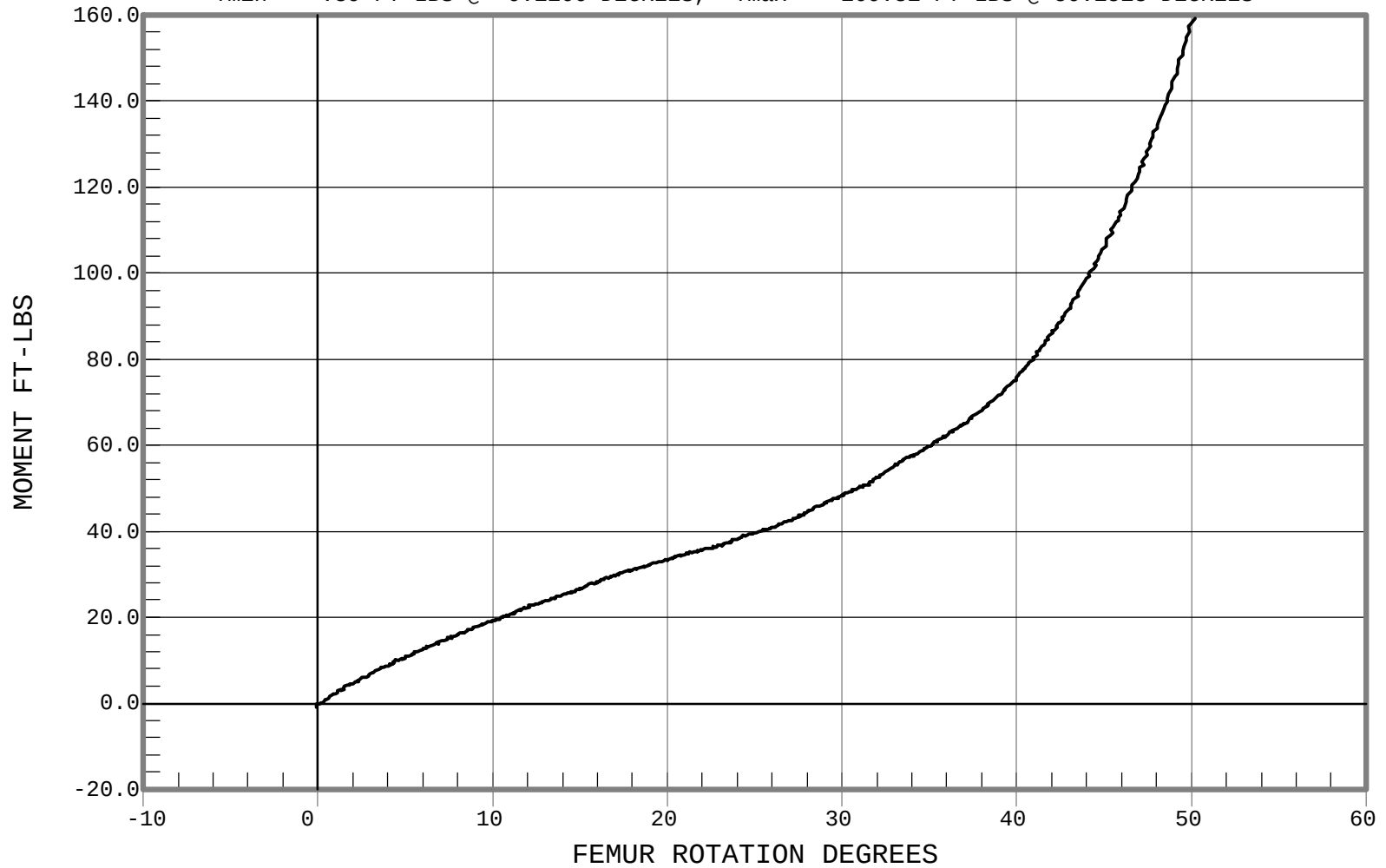
HIP-FEMUR FLEXION

Test Desc.: DUMMY CALIBRATION - HIP-FEMUR FLEXION
Component: DUMMY # 087 RIGHT FEMUR

Test Date: 10-11-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 MOMENT, D00249FC.F14

Ymin = -.89 FT-LBS @ -0.1166 DEGREES, Ymax = 160.31 FT-LBS @ 50.1513 DEGREES





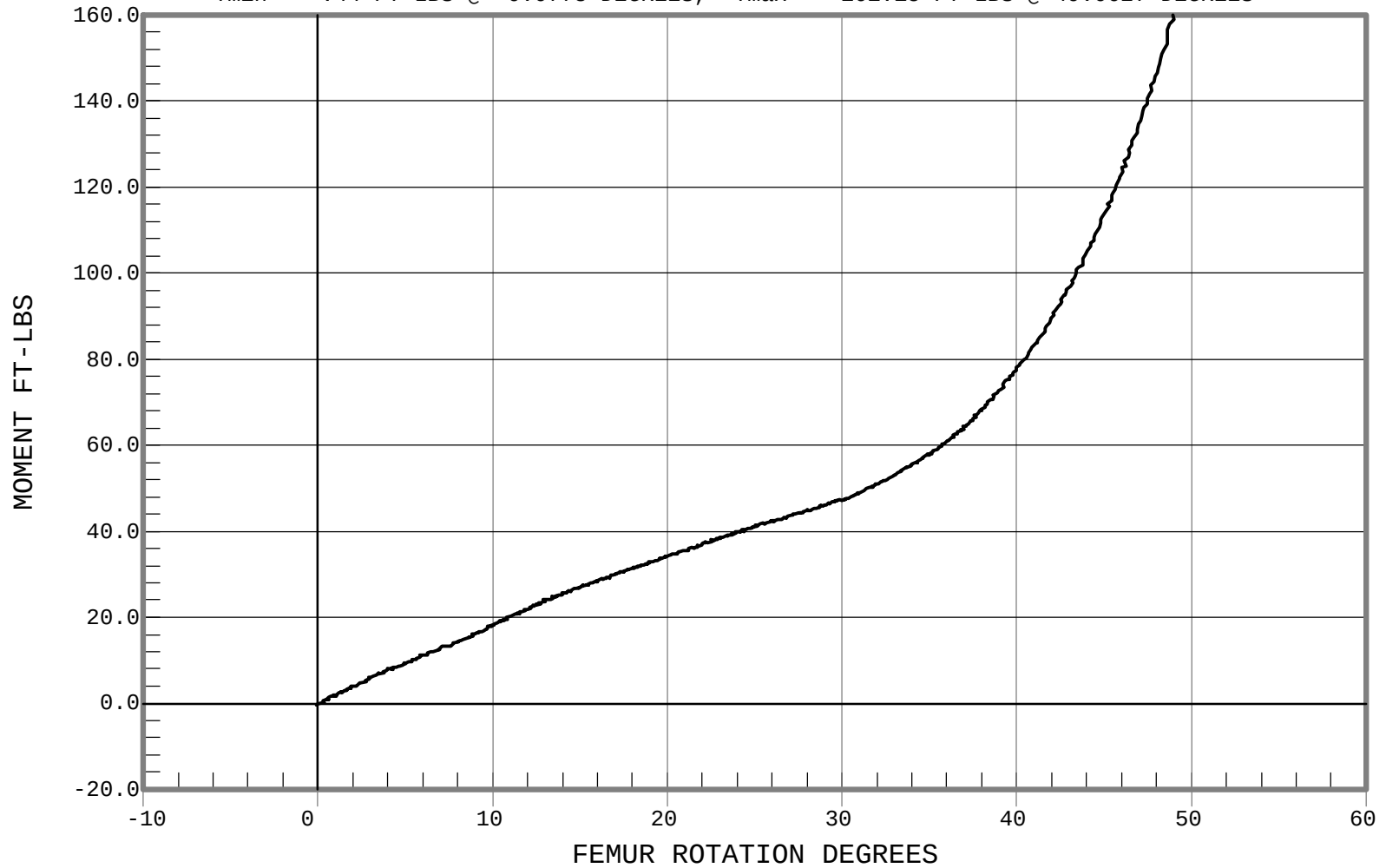
HIP-FEMUR FLEXION

Test Desc.: DUMMY CALIBRATION - HIP-FEMUR FLEXION
Component: DUMMY # 087 LEFT FEMUR

Test Date: 10-11-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 MOMENT, D00240FC.F14

Ymin = -.44 FT-LBS @ -0.0778 DEGREES, Ymax = 161.15 FT-LBS @ 49.0627 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Hybrid III

Dummy Serial Number: 087

Inspected By: Tim Michnay

Date: 10/12/00

<u>Part</u>	<u>Items Checked</u>	<u>Comments</u>
Skin	visual inspection	OK
Head	visual, ballast, accelerometer mount	OK
Neck	visual, cable torque, nodding blocks	OK
Clavicles	visual, bumpers, range of motion	OK
Arms/Hands	visual, bumpers, range of motion	OK
Spine box	visual, ballast, weldment, accelerometer mount	OK
Rib cage	visual, measure, stiffeners	OK
Sternum	visual, bumpers	OK
Lumbar spine	visual, cable torque	OK
Abdomen	visual	OK
Pelvis	visual, palpate, accelerometer mount	OK
Upper legs	visual, load cell bolts	OK
Knees	visual, stops, inserts, sliders	OK
Lower legs	visual, range of motion	OK
Ankles	visual, range of motion	OK
Feet	visual, range of motion	OK
Joints	1 to 2 g range	OK
Other		

Notes (include component/problem/action/reason):

CERTIFICATION DATA

Dummy Serial Number: 100

Calibration Test Results Summary

Dummy Serial Number: 100

Pre-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Head Drop Test:	The head passed all drop test requirements.
Neck Flexion Test:	The neck passed all flexion test requirements.
Neck Extension Test:	The neck passed all extension test requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Knee Impact Tests:	Both knees passed all impact test requirements.
Hip-Femur Flexion Tests:	Both femurs passed all flexion test requirements.

HYBRID III DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Dummy Serial Number: 100

Date of Verification: 10/12/00

Test Number: D00125

DESCRIPTION	SPECIFICATION	TEST RESULTS
Temperature (°F)	69 – 72	70°
Relative Humidity	10 – 70	32%
AA - Location for Chest Circumference	16.9" – 17.1"	17.0
BB - Location for Waist Circumference	8.9" – 9.1"	9.0
A - Total Sitting Height	34.6" – 35.0"	34.8
B – Shoulder Pivot Height	19.9" – 20.5"	20.3
C – H Point Height	3.3" – 3.5"	3.4
D – H Point from Seat Back	5.3" – 5.5"	5.4
E – Shoulder Pivot From Backline	3.3" – 3.7"	3.6
F – Thigh Clearance	5.5" – 6.1"	5.7
G – Back of Elbow to Wrist Pivot	11.4" – 12.0"	11.6
H – Skull Cap Skin to Backline	1.6" – 1.8"	1.7
I – Shoulder Elbow Length	13.0" – 13.6"	13.4
J – Elbow Rest Height	7.5" – 8.3"	8.0
K – Buttock Knee Length	22.8" – 23.8"	23.0
L – Popliteal Height	16.9" – 17.9"	17.2
M – Knee Pivot Height	19.1 – 19.9"	19.6
N – Buttock Popliteal Length	17.8" – 18.8"	18.5
O – Chest Depth at 3 rd Rib	8.4" – 9.0"	8.6
P – Foot Length	9.9" – 10.5"	10.4
V – Shoulder Breadth	16.6" – 17.2"	16.9
W – Foot Breadth	3.5" – 4.2"	4.0
Y – Chest Circumference	38.2" – 39.4"	38.7
Z – Waist Circumference	32.9" – 34.1"	33.6

Technician: _____

Approved By: _____

MGA RESEARCH CORPORATION
HEAD DROP TEST
HYBRID III

Date: 10/11/00

Dummy Serial Number: 100

Test Number: D001251

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°F)	66 – 78	70°
Relative Humidity (%)	10 – 70	29%
Peak Resultant Acceleration	225 – 275 g's	260
Peak Lateral Acceleration	± 15 g's max.	-3
Is Acceleration Curve Unimodal	Within 10% of peak	Yes

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



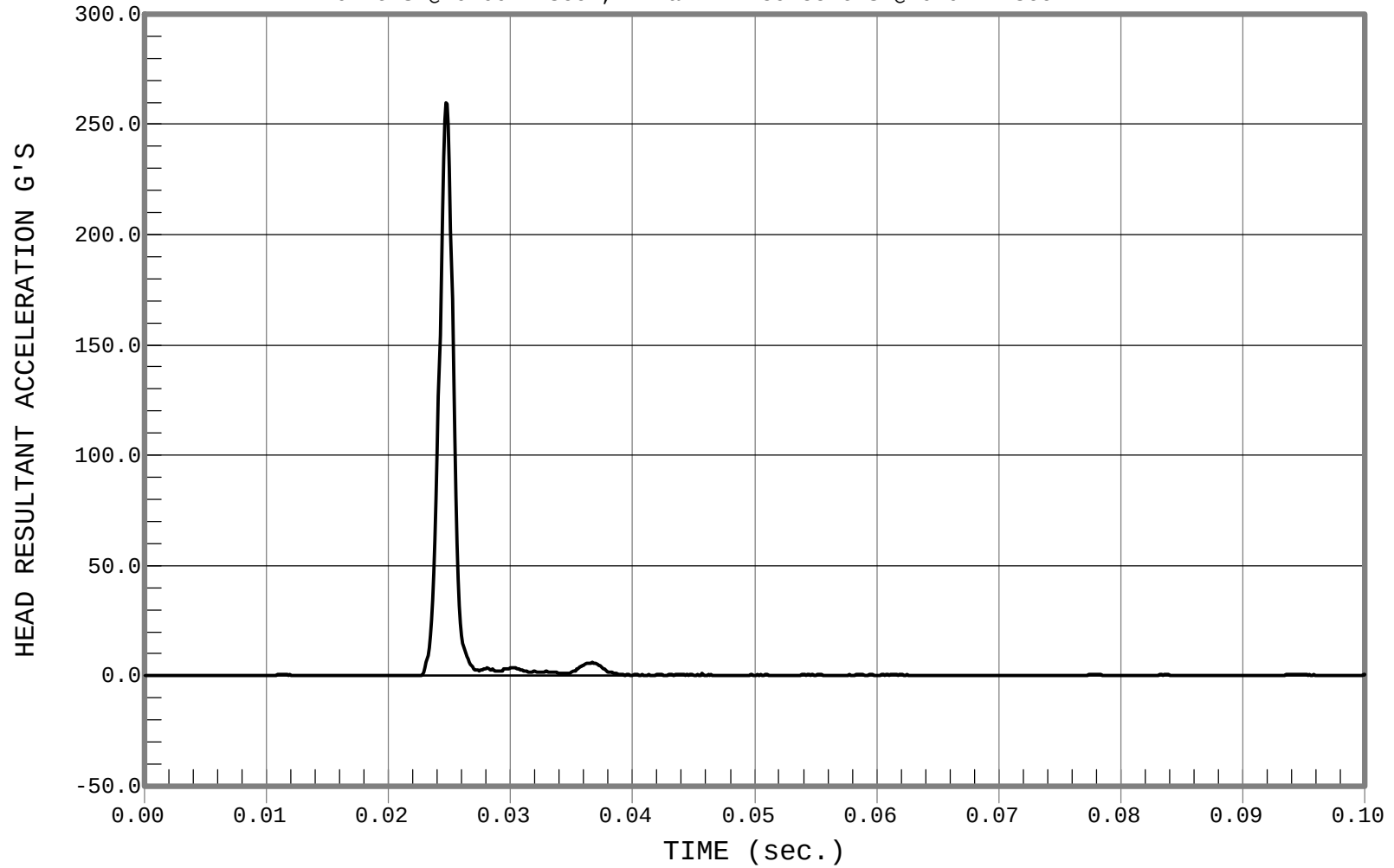
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #100

Test Date: 10-11-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 HEAD RESULTANT ACCELERATION, D00251av.a01

Ymin = .02 G'S @ 0.0017 sec., Ymax = 259.55 G'S @ 0.0247 sec.





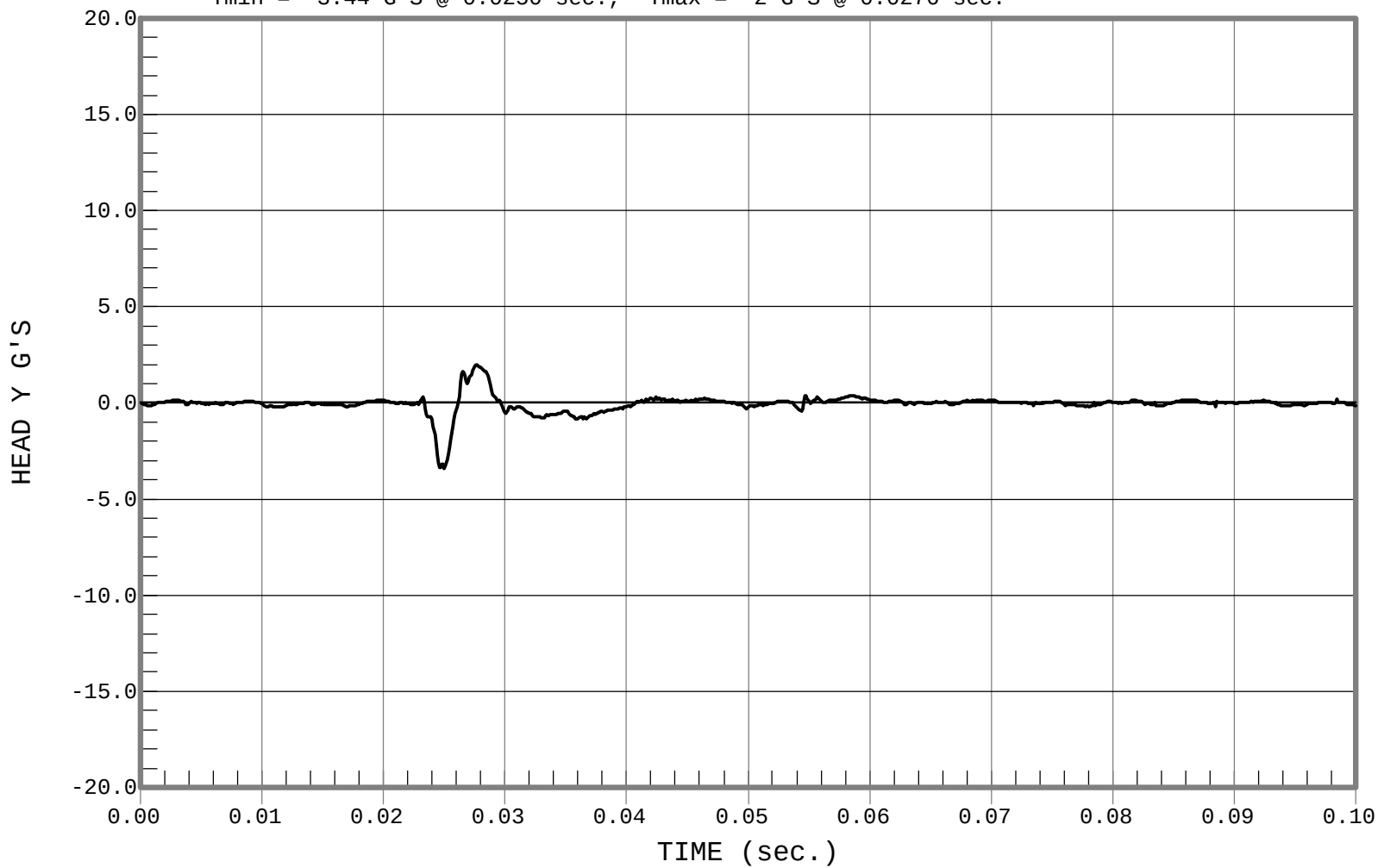
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #100

Test Date: 10-11-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 HEAD Y, D00251AR.A02

Ymin = -3.44 G'S @ 0.0250 sec., Ymax = 2 G'S @ 0.0276 sec.



MGA RESEARCH CORPORATION
NECK FLEXION TEST
HYBRID III

Date: 10/12/00

Dummy Serial Number: 100

Test Number: D001252

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature (°F)		69 - 72	70°
Relative Humidity (%)		10 – 70	32%
Pendulum Speed		22.6 – 23.4 ft/sec	23.0
Pendulum Deceleration	10 ms	22.50 – 27.50 g	23.81
	20 ms	17.60 – 22.60 g	20.66
	30 ms	12.50 – 18.50 g	16.71
Max. Pendulum G Above 30 ms		29.0 g max.	16.7
Deceleration – Time Curve Decay Time to 5 G		34 – 42 ms	35
D Plane Rotation	Max.	64 – 78 deg.	70
	Time	57 - 64 ms	61
Rotation Angle – Time Curve Decay Time to Zero		113 – 128 ms	117
Moment About Occipital Condyle	Max.	65 – 80 ft-lbf	65
	Time	47 – 58 ms	50
Positive Moment – Time Curve Decay Time to Zero		97 – 107 ms	102

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



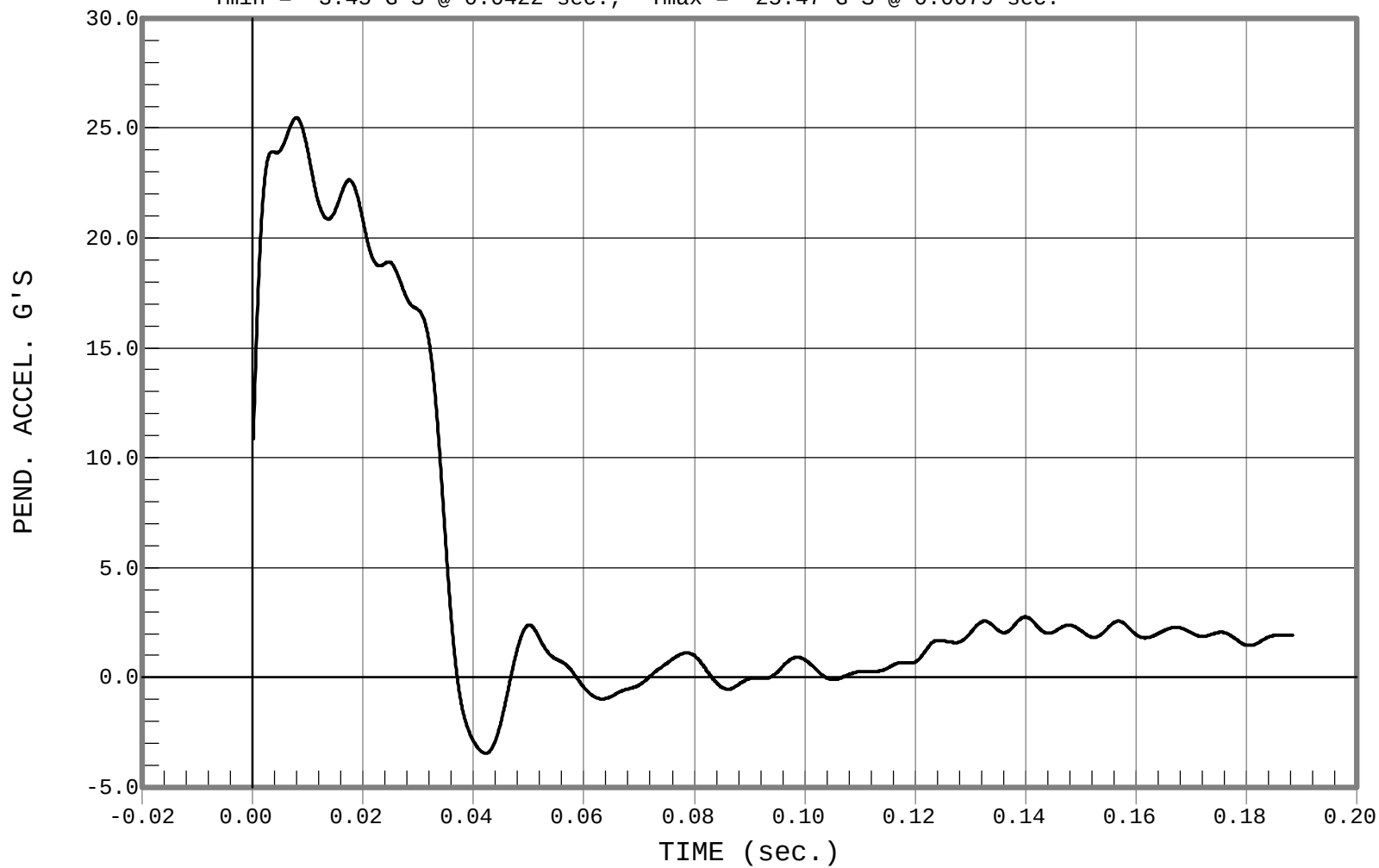
PENDULUM DECELERATION

Test Desc.: Dummy Calibration - Neck Flexion
Component: Dummy #100

Test Date: 10-12-00
Speed: 22.99 FT/SEC, 7.01 M/SEC

1 PEND. ACCEL., D00252AF.A04

Ymin = -3.45 G'S @ 0.0422 sec., Ymax = 25.47 G'S @ 0.0079 sec.





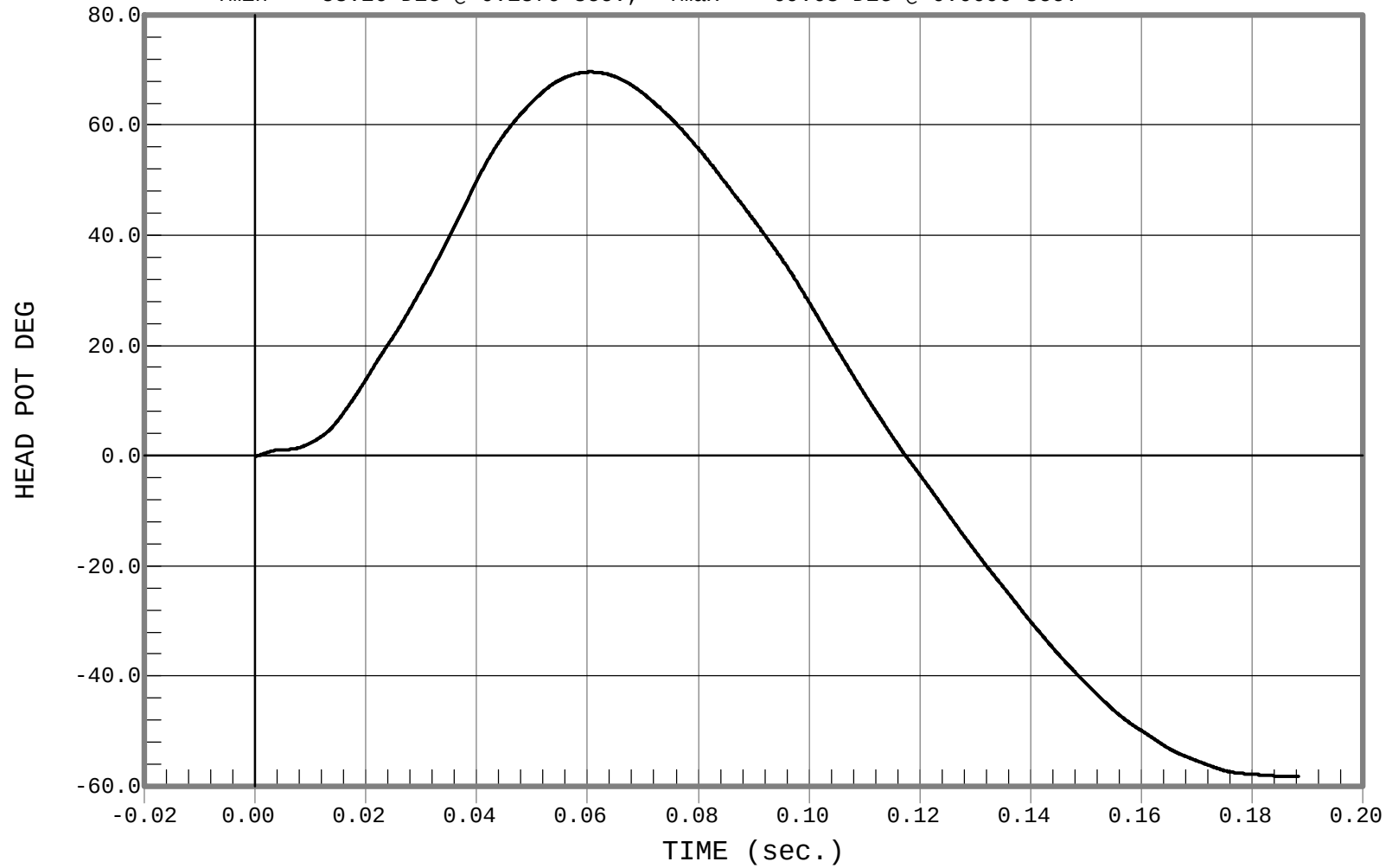
NECK ROTATION

Test Desc.: Dummy Calibration - Neck Flexion
Component: Dummy #100

Test Date: 10-12-00
Speed: 22.99 FT/SEC, 7.01 M/SEC

1 HEAD POT, D00252DU.D05

Ymin = -58.26 DEG @ 0.1876 sec., Ymax = 69.63 DEG @ 0.0606 sec.





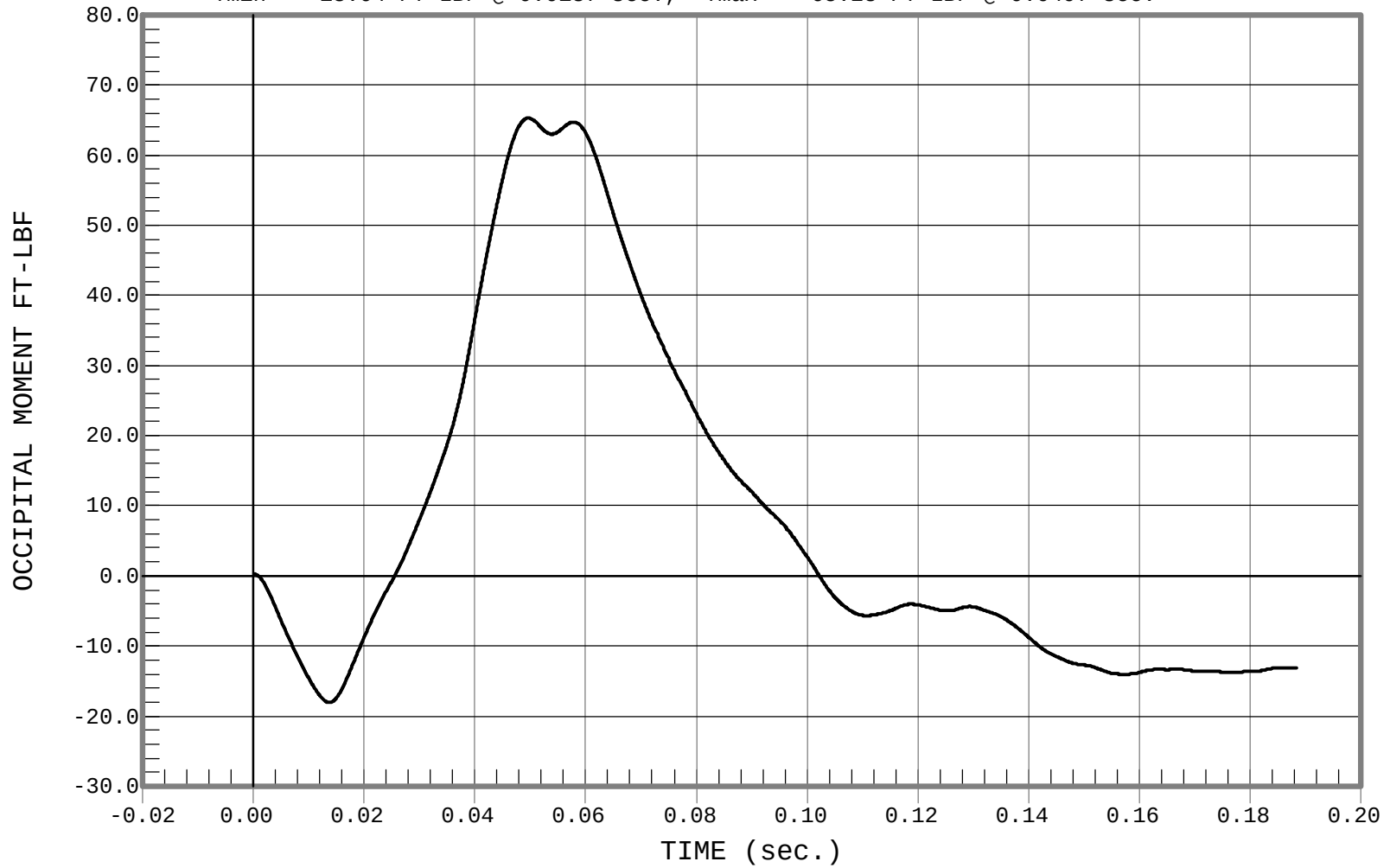
OCCIPITAL MOMENT

Test Desc.: Dummy Calibration - Neck Flexion
Component: Dummy #100

Test Date: 10-12-00
Speed: 22.99 FT/SEC, 7.01 M/SEC

1 OCCIPITAL MOMENT, D00252NK.MNT

Ymin = -18.04 FT-LBF @ 0.0137 sec., Ymax = 65.28 FT-LBF @ 0.0497 sec.



MGA RESEARCH CORPORATION
NECK EXTENSION TEST
HYBRID III

Date: 10/12/00

Dummy Serial Number: 100

Test Number: D001253

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature (°F)		69 – 72	70°
Relative Humidity (%)		10 – 70	32%
Pendulum Speed		19.50 – 20.30 ft/sec	19.64
Pendulum Deceleration	10 msec	17.20 – 21.20 g	19.62
	20 msec	14.00 – 19.00 g	17.32
	30 msec	11.00 – 16.00 g	12.99
Max. Pendulum G Above 30 ms		22 g max.	14
Deceleration – Time Curve Decay Time to 5 g		38 – 46 ms	39
D Plane Rotation	Max.	81 – 106 deg.	101
	Time	72 – 82 ms	77
Rotation Angle – Time Curve Decay Time to Zero		147 – 174 ms	158
Moment About Occipital Condyle	Min.	-59.0/-39.0 ft-lbf	-53.2
	Time	65 – 79 ms	73
Positive Moment – Time Curve Decay Time to Zero		120 – 148 ms	146

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



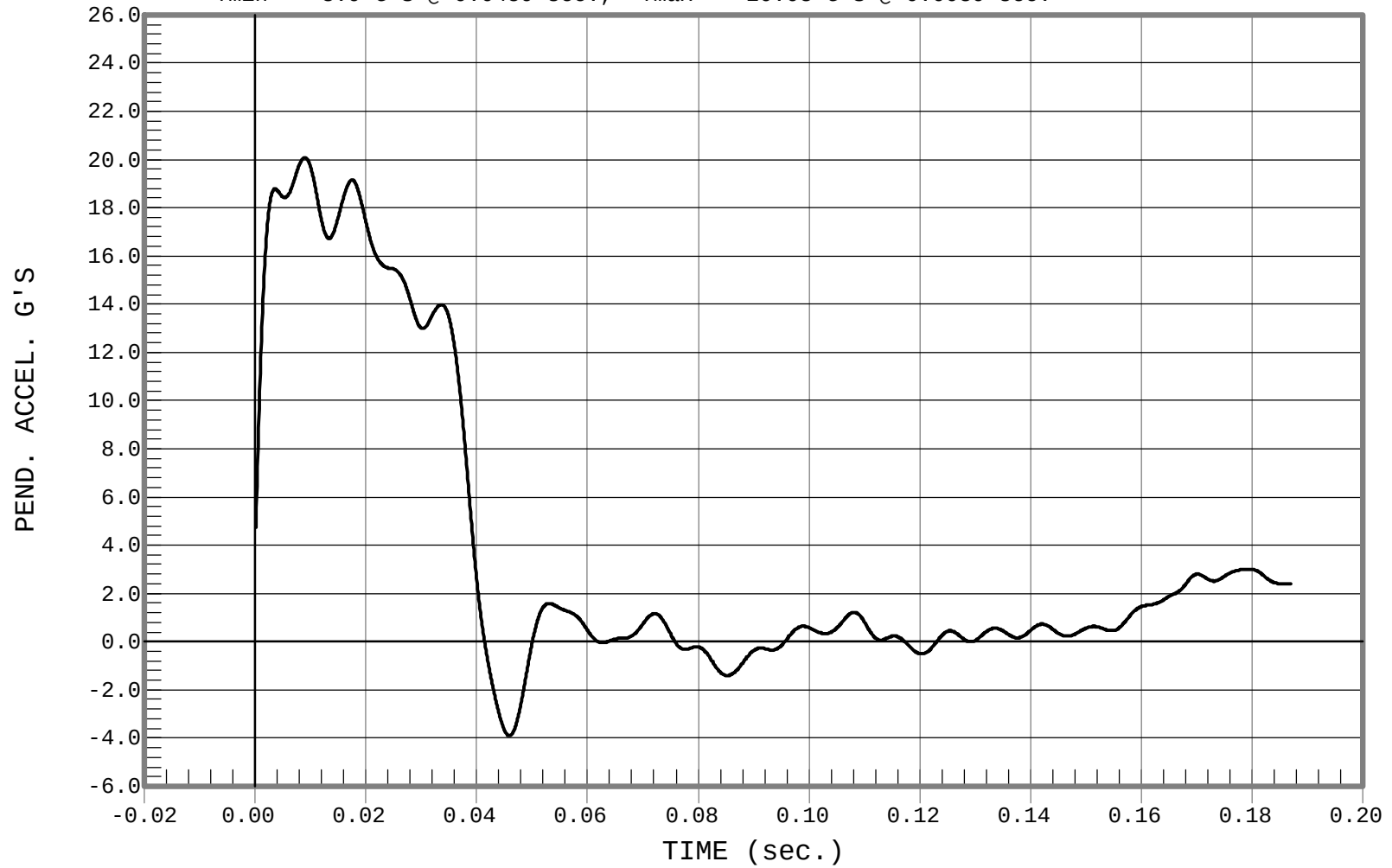
PENDULUM DECELERATION

Test Desc.: Dummy Calibration - Neck Extension
Component: Dummy #100

Test Date: 10-12-00
Speed: 19.64 FT/SEC, 5.99 M/SEC

1 PEND. ACCEL., D00253AF.A04

Ymin = -3.9 G'S @ 0.0459 sec., Ymax = 20.08 G'S @ 0.0089 sec.





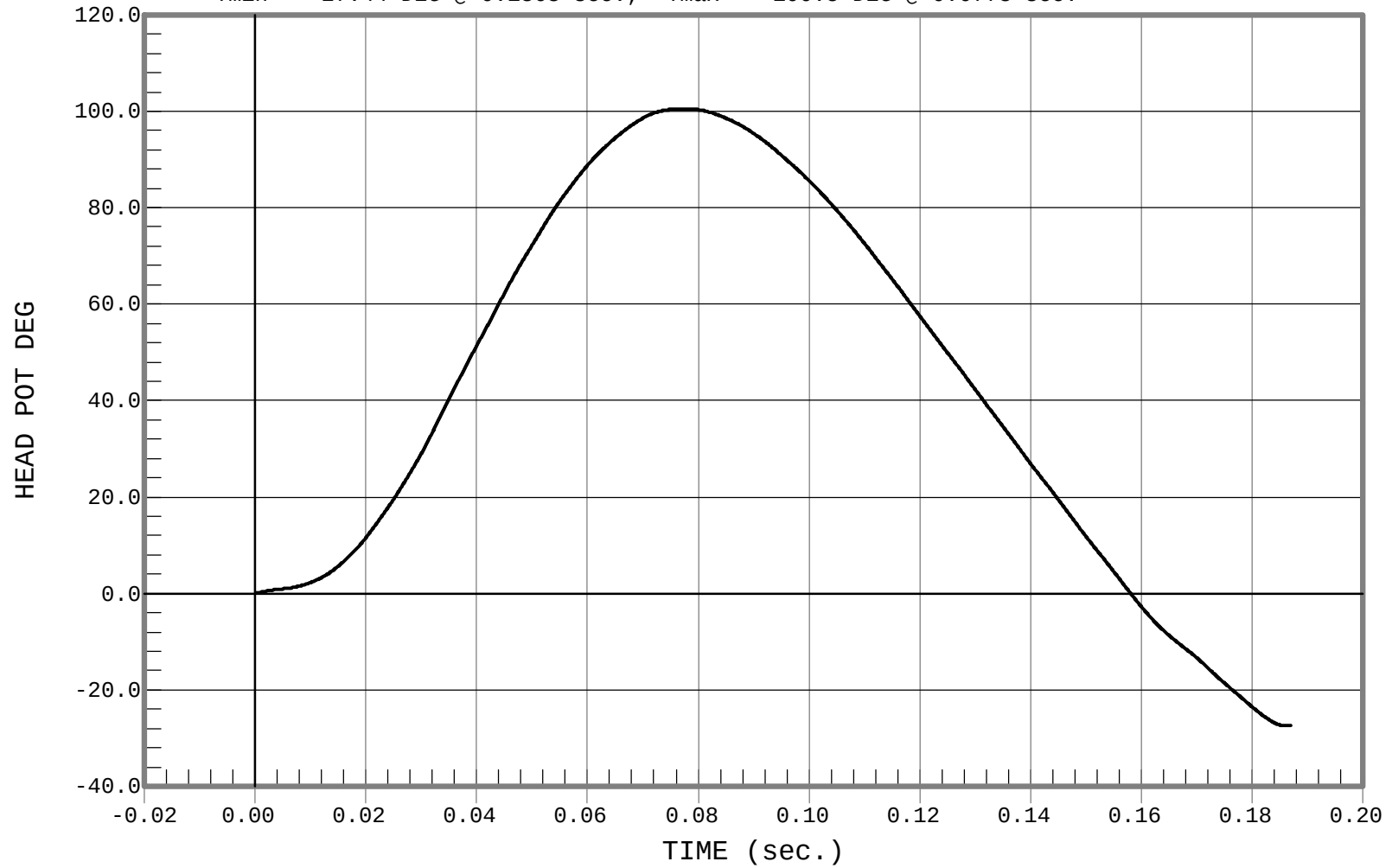
NECK ROTATION

Test Desc.: Dummy Calibration - Neck Extension
Component: Dummy #100

Test Date: 10-12-00
Speed: 19.64 FT/SEC, 5.99 M/SEC

1 HEAD POT, D00253DM.D05

Ymin = -27.44 DEG @ 0.1863 sec., Ymax = 100.5 DEG @ 0.0773 sec.





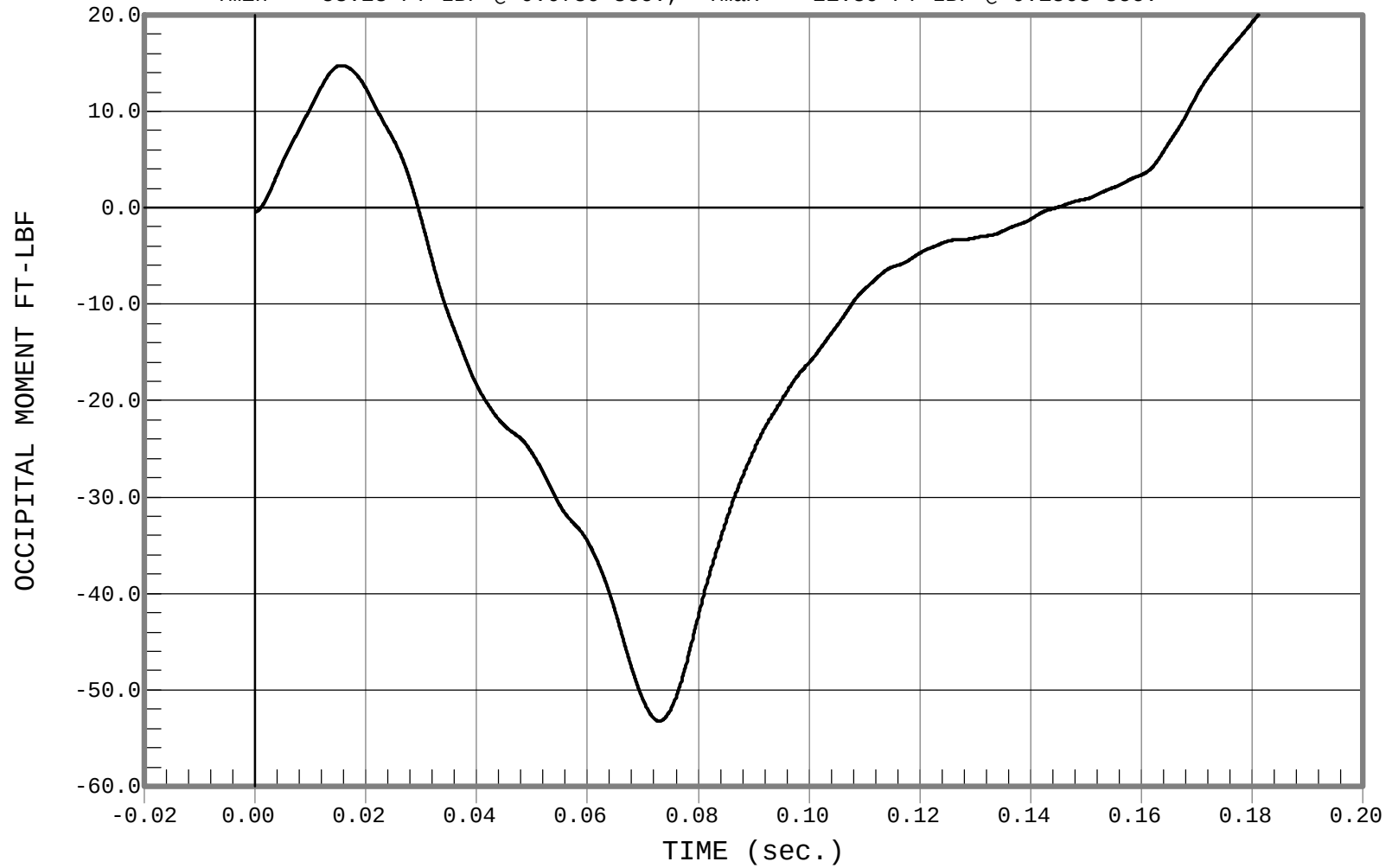
OCCIPITAL MOMENT

Test Desc.: Dummy Calibration - Neck Extension
Component: Dummy #100

Test Date: 10-12-00
Speed: 19.64 FT/SEC, 5.99 M/SEC

1 OCCIPITAL MOMENT, D00253NK.MNT

Ymin = -53.23 FT-LBF @ 0.0730 sec., Ymax = 21.89 FT-LBF @ 0.1863 sec.



MGA RESEARCH CORPORATION
THORAX IMPACT TEST
HYBRID III

Date: 10/11/00

Dummy Serial Number: 100

Test Number: D001254

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°F)	69 – 72	70°
Relative Humidity (%)	10 – 70%	29%
Probe Speed	21.6 – 22.4 ft/sec	22.2
Peak Deflection	2.50 – 2.86 in	2.84
Peak Resistive Force	1160 – 1325 lbs	1248
Internal Hysteresis	69 – 85%	72%

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



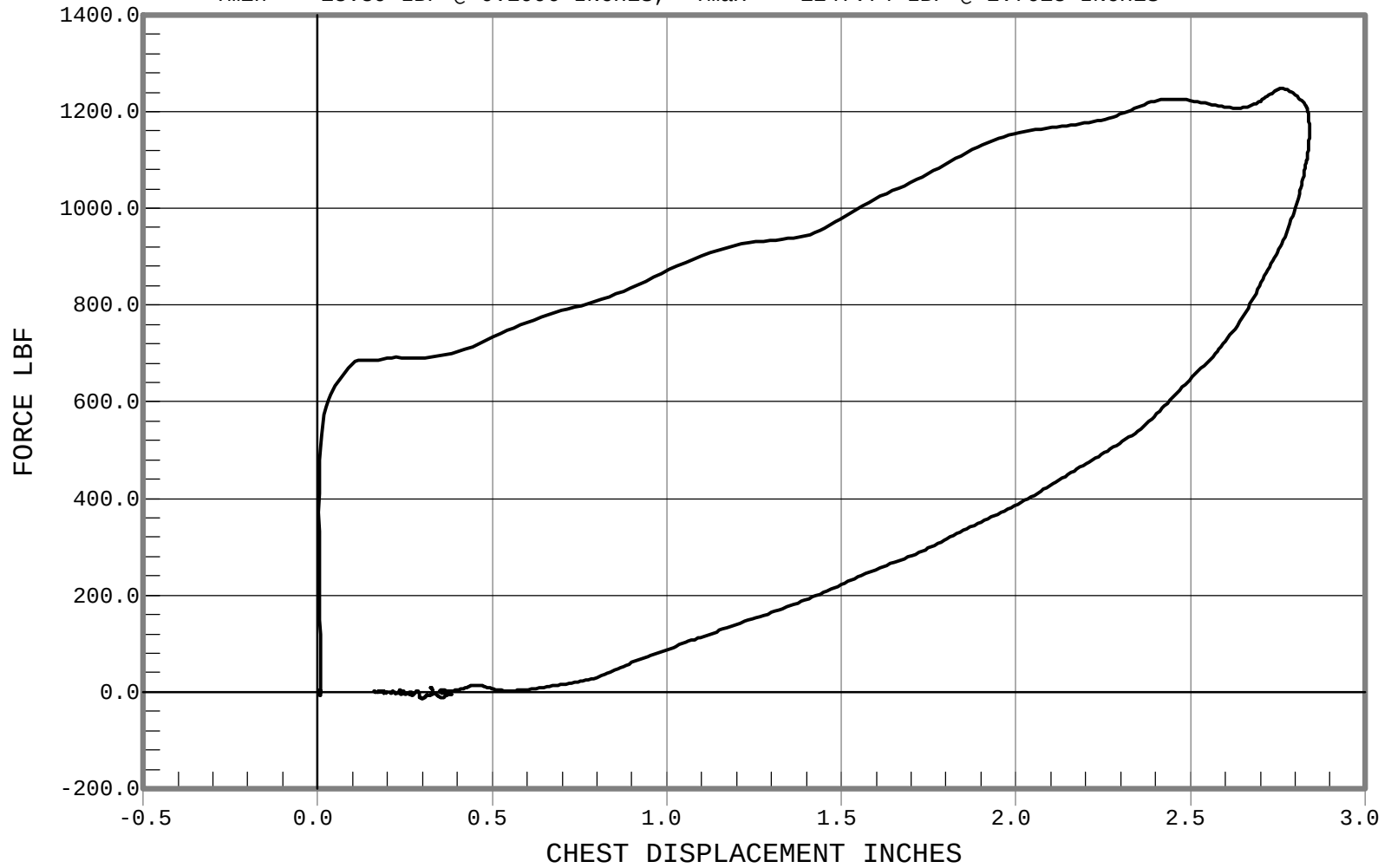
THORAX IMPACT

Test Desc.: Dummy Calibration - Chest Impact
Component: Dummy #100

Test Date: 10-11-00
Speed: 22.22 FT/SEC, 6.77 M/SEC

1 FORCE, D00254CH.FVD

Ymin = -13.39 LBF @ 0.2996 INCHES, Ymax = 1247.74 LBF @ 2.7613 INCHES



MGA RESEARCH CORPORATION
RIGHT KNEE IMPACT TEST
HYBRID III

Date: 10/11/00

Dummy Serial Number: 100

Test Number: D001255

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°F)	66 – 78	70°
Relative Humidity (%)	10 – 70	29%
Probe Speed	6.8 – 7.0 ft/sec	6.9
Maximum Force	1060 - 1300	1161

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



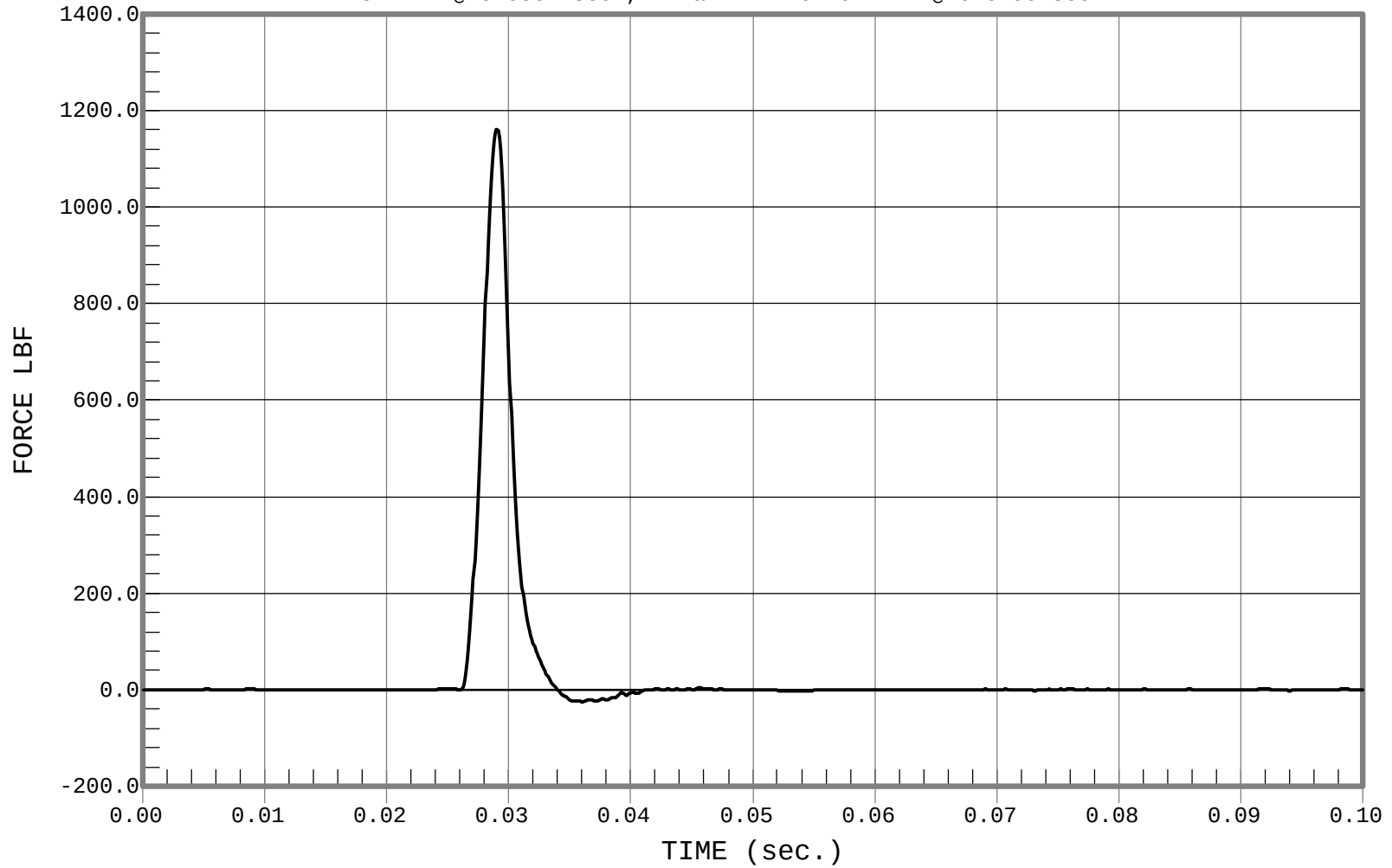
KNEE IMPACT

Test Desc.: Dummy Calibration - Right Knee Impact
Component: Dummy #100

Test Date: 10-11-00
Speed: 6.87 FT/SEC, 2.09 M/SEC

1 FORCE, D00255FF.F09

Ymin = -24.87 LBF @ 0.0361 sec., Ymax = 1161.07 LBF @ 0.0290 sec.



MGA RESEARCH CORPORATION
LEFT KNEE IMPACT TEST
HYBRID III

Date: 10/11/00

Dummy Serial Number: 100

Test Number: D001256

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°F)	66 – 78	70°
Relative Humidity (%)	10 – 70	29%
Probe Speed	6.8 – 7.0 ft/sec	6.9
Maximum Force	1060 - 1300	1167

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



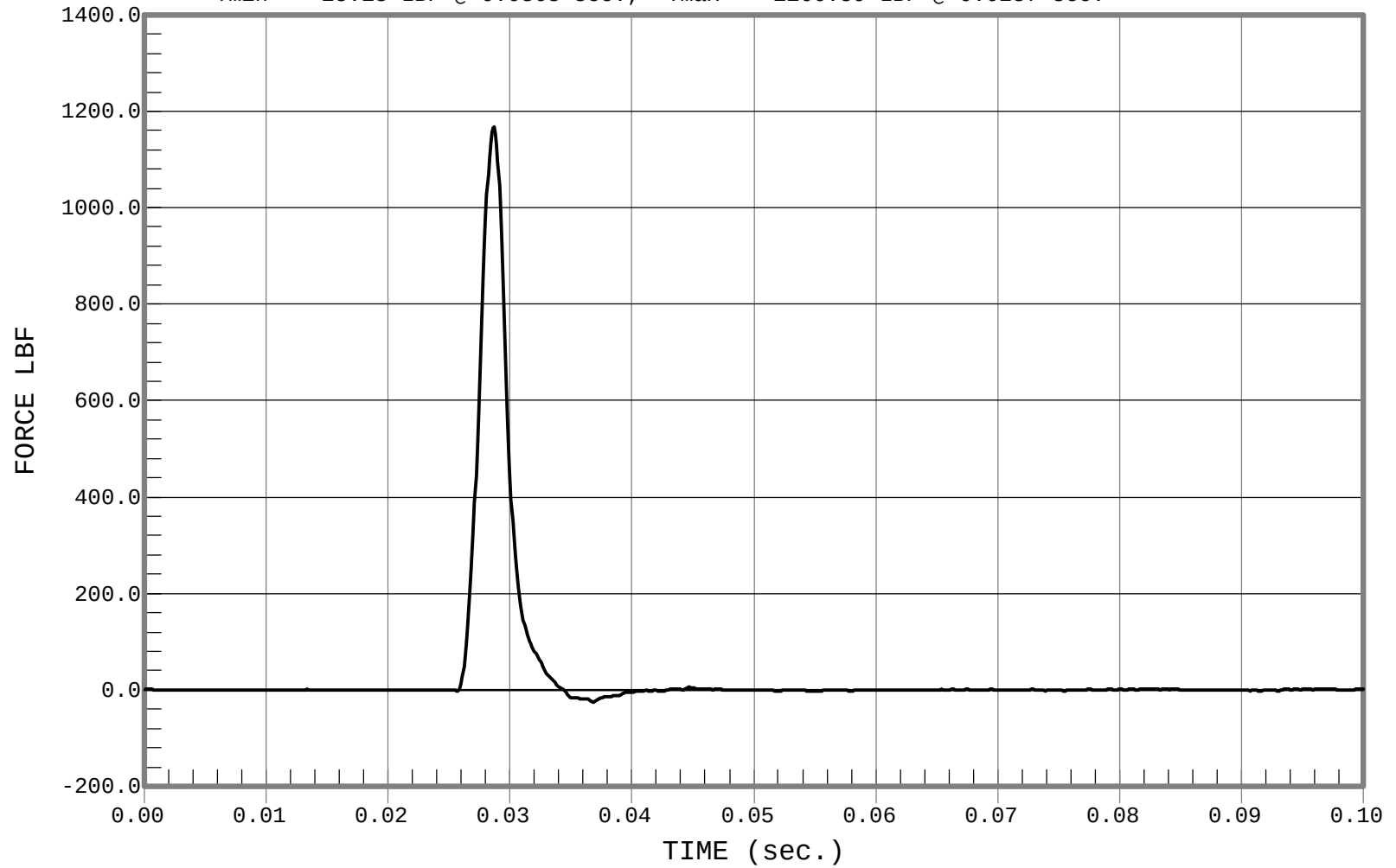
KNEE IMPACT

Test Desc.: Dummy Calibration - Left Knee Impact
Component: Dummy #100

Test Date: 10-11-00
Speed: 6.93 FT/SEC, 2.11 M/SEC

1 FORCE, D00256FF.F09

Ymin = -25.13 LBF @ 0.0368 sec., Ymax = 1166.59 LBF @ 0.0287 sec.



MGA RESEARCH CORPORATION
HIP-FEMUR FLEXION TEST
HYBRID III

Date: 10/11/00
Dummy Serial Number: 100
Test Number: D001259/0

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
		Right	Left
Temperature (°F)	66 – 78	70°	70°
Relative Humidity (%)	10 – 70	29%	29%
Rotation Rate	5-10 deg/sec	Yes	Yes
30 Degrees	70 ft-lb maximum	49	49
150 ft-lbf	40-50 degree maximum rotation	46°	46°

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



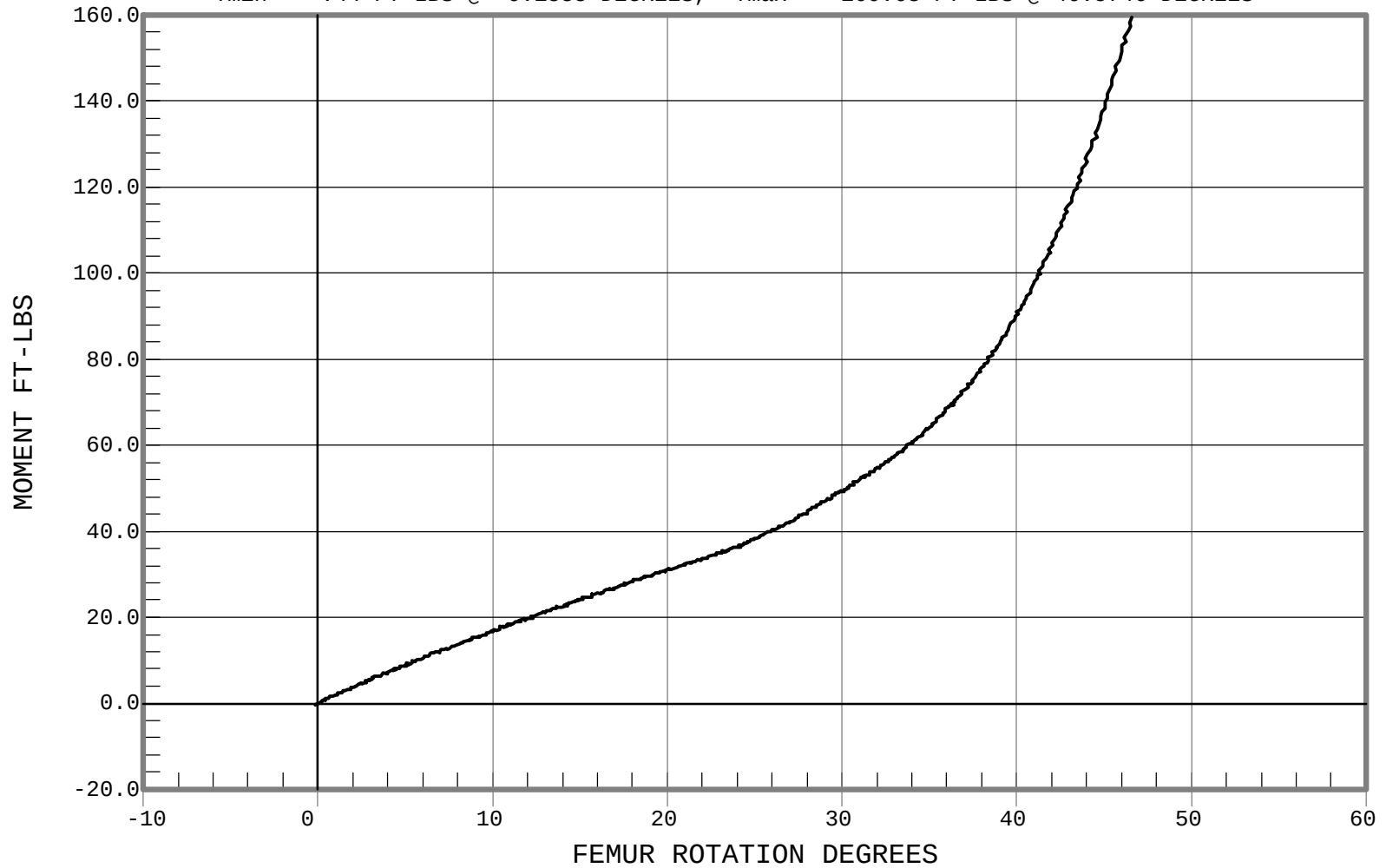
HIP-FEMUR FLEXION

Test Desc.: DUMMY CALIBRATION - HIP-FEMUR FLEXION
Component: DUMMY # 100 RIGHT FEMUR

Test Date: 10-11-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 MOMENT, D00259FC.F14

Ymin = -.44 FT-LBS @ -0.1555 DEGREES, Ymax = 160.63 FT-LBS @ 46.5746 DEGREES





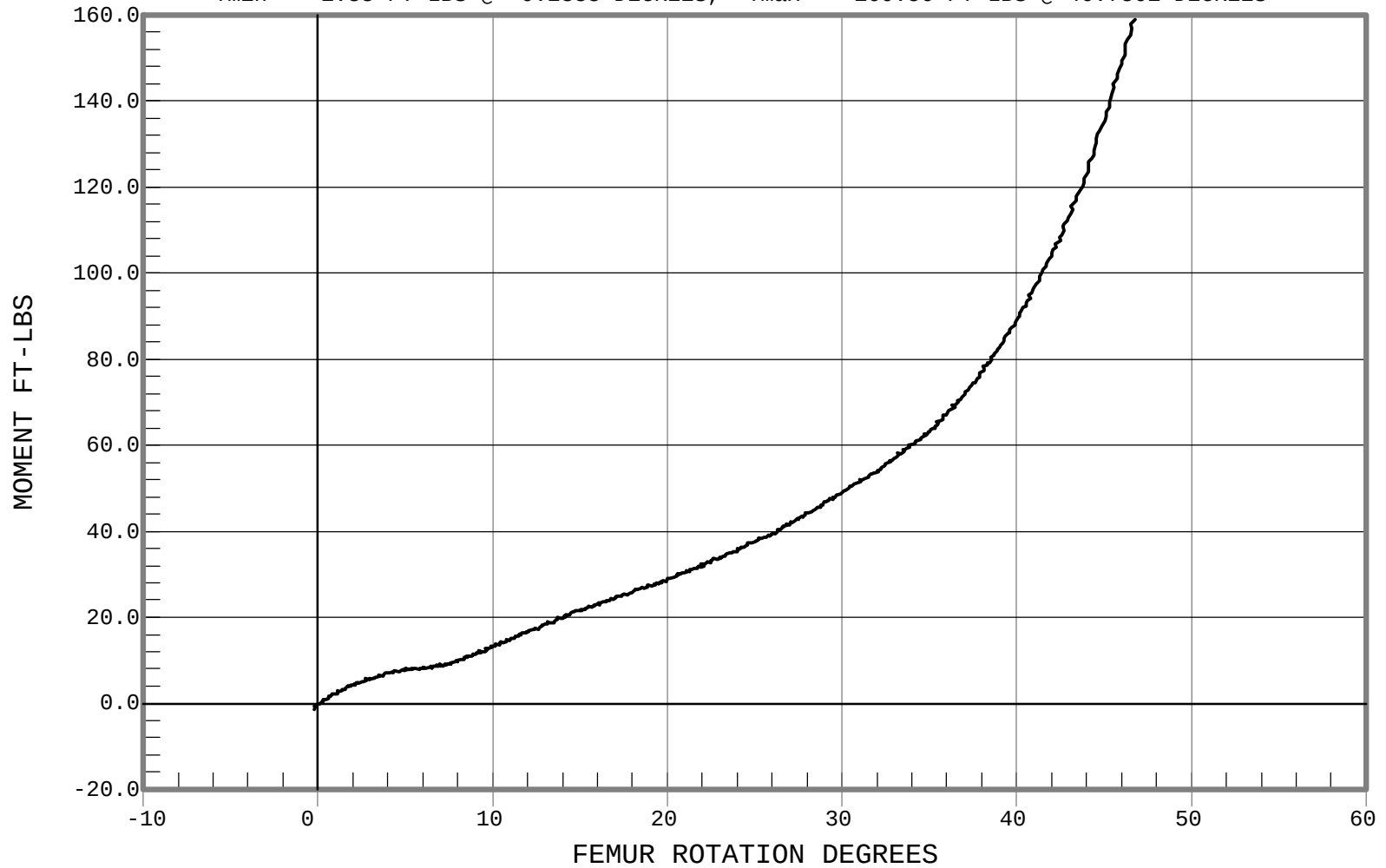
HIP-FEMUR FLEXION

Test Desc.: DUMMY CALIBRATION - HIP-FEMUR FLEXION
Component: DUMMY # 100 LEFT FEMUR

Test Date: 10-11-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 MOMENT, D00250FC.F14

Ymin = -1.33 FT-LBS @ -0.2333 DEGREES, Ymax = 160.56 FT-LBS @ 46.7301 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Hybrid III

Dummy Serial Number: 100

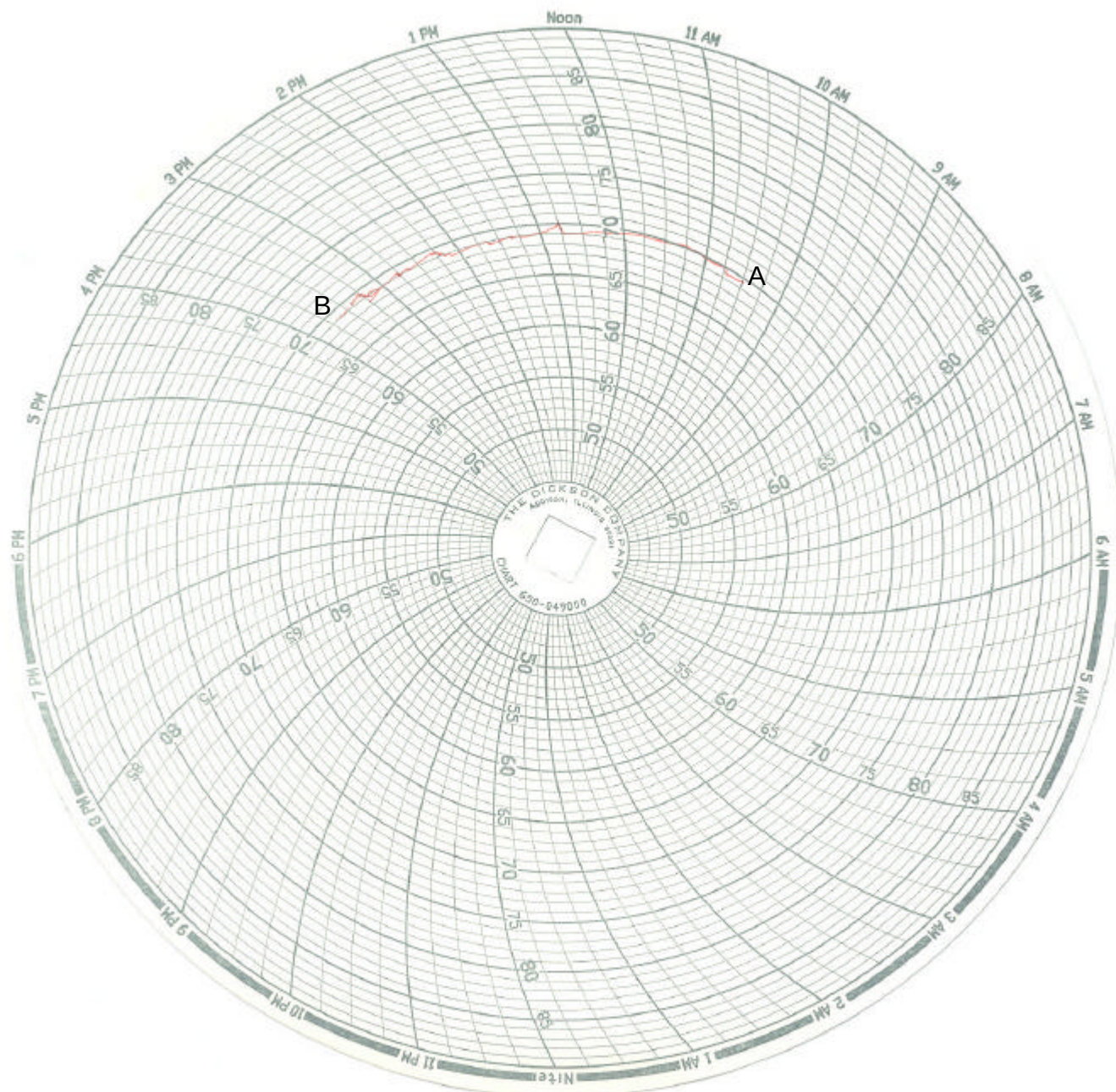
Inspected By: Tim Michnay

Date: 10/12/00

<u>Part</u>	<u>Items Checked</u>	<u>Comments</u>
Skin	visual inspection	OK
Head	visual, ballast, accelerometer mount	OK
Neck	visual, cable torque, nodding blocks	OK
Clavicles	visual, bumpers, range of motion	OK
Arms/Hands	visual, bumpers, range of motion	OK
Spine box	visual, ballast, weldment, accelerometer mount	OK
Rib cage	visual, measure, stiffeners	OK
Sternum	visual, bumpers	OK
Lumbar spine	visual, cable torque	OK
Abdomen	visual	OK
Pelvis	visual, palpate, accelerometer mount	OK
Upper legs	visual, load cell bolts	OK
Knees	visual, stops, inserts, sliders	OK
Lower legs	visual, range of motion	OK
Ankles	visual, range of motion	OK
Feet	visual, range of motion	OK
Joints	1 to 2 g range	OK
Other		

Notes (include component/problem/action/reason):

VEHICLE AND DUMMY TEMPERATURE



A = Dummies installed in vehicle at 10:30 a.m.
B = Test conducted at 3:45 p.m.

APPENDIX D
TEST EQUIPMENT & INSTRUMENTATION CALIBRATION

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION
INSTRUMENTS FOR DUMMY NO. 087

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	J22055	Endevco	10/3/00
Head Y	J20965	Endevco	10/3/00
Head Z	J22107	Endevco	10/3/00
Head X Redundant	J13709	Endevco	10/3/00
Head Y Redundant	AN8D5	Endevco	10/3/00
Head Z Redundant	AN8D2	Endevco	10/3/00
Chest X	J12449	Endevco	10/3/00
Chest Y	J12462	Endevco	10/3/00
Chest Z	J12425	Endevco	10/3/00
Chest X Redundant	AHRP5	Endevco	10/3/00
Chest Y Redundant	ALB87	Endevco	10/3/00
Chest Z Redundant	AJ9T6	Endevco	10/3/00
Right Femur Load Cell	950	Denton	5/18/00
Left Femur Load Cell	959	Denton	5/18/00
Pelvis X	J21970	Endevco	10/3/00
Pelvis Y	J21691	Endevco	10/3/00
Pelvis Z	J22033	Endevco	10/3/00

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION
INSTRUMENTS FOR DUMMY NO. 087

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Neck Load Cell X	376	Denton	8/31/00
Neck Load Cell Y	376	Denton	8/31/00
Neck Load Cell Z	376	Denton	8/31/00
Neck Moment X	376	Denton	8/31/00
Neck Moment Y	376	Denton	8/31/00
Neck Moment Z	376	Denton	8/31/00
Chest Deflection Gauge	087	Servo	8/31/00
Lap Belt Load Cell	192	Denton	10/6/00
Shoulder Belt Load Cell	191	Denton	10/6/00

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION
INSTRUMENTS FOR DUMMY NO. 087

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Right Tibia Moment X	103	Denton	10/11/00
Upper Right Tibia Moment Y	103	Denton	10/11/00
Upper Right Tibia Force Z	103	Denton	10/11/00
Lower Right Tibia Moment X	133	Denton	10/11/00
Lower Right Tibia Moment Y	133	Denton	10/11/00
Lower Right Tibia Force Z	133	Denton	10/11/00
Upper Left Tibia Moment X	105	Denton	10/11/00
Upper Left Tibia Moment Y	105	Denton	10/11/00
Upper Left Tibia Force Z	105	Denton	10/11/00
Lower Left Tibia Moment X	134	Denton	10/11/00
Lower Left Tibia Moment Y	134	Denton	10/11/00
Lower Left Tibia Force Z	134	Denton	10/11/00
Left Foot Ball Z Acceleration	AMTL6	Endevco	7/12/00
Left Heel X Acceleration	AMTG3	Endevco	7/12/00
Left Heel Z Acceleration	ALC37	Endevco	7/12/00
Right Foot Ball Z Acceleration	J33394	Endevco	7/12/00
Right Heel X Acceleration	AHYE2	Endevco	5/18/00
Right Heel Z Acceleration	J33415	Endevco	5/18/00

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION
INSTRUMENTS FOR DUMMY NO. 100

	PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	J13530	Endevco	8/17/00
Head Y	J13535	Endevco	8/17/00
Head Z	AP2E1	Endevco	8/17/00
Head X Redundant	J17689	Endevco	8/17/00
Head Y Redundant	J13541	Endevco	8/17/00
Head Z Redundant	APYY3	Endevco	8/17/00
Chest X	J14006	Endevco	8/17/00
Chest Y	J13652	Endevco	8/17/00
Chest Z	J13628	Endevco	8/17/00
Chest X Redundant	J14007	Endevco	8/17/00
Chest Y Redundant	J13424	Endevco	8/17/00
Chest Z Redundant	J13650	Endevco	8/17/00
Right Femur Load Cell	9425	Denton	5/18/00
Left Femur Load Cell	9426	Denton	5/18/00
Pelvis X	AJ9N4	Endevco	8/29/00
Pelvis Y	AJ808	Endevco	8/29/00
Pelvis Z	ALFL9	Endevco	8/29/00

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 100

	PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Neck Load Cell X	606	Denton	5/16/00
Neck Load Cell Y	606	Denton	5/16/00
Neck Load Cell Z	606	Denton	5/16/00
Neck Moment X	606	Denton	5/16/00
Neck Moment Y	606	Denton	5/16/00
Neck Moment Z	606	Denton	5/16/00
Chest Deflection Gauge	100	Servo	6/6/00
Lap Belt Load Cell	194	Denton	10/4/00
Shoulder Belt Load Cell	193	Denton	10/6/00

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION
INSTRUMENTS FOR DUMMY NO. 100

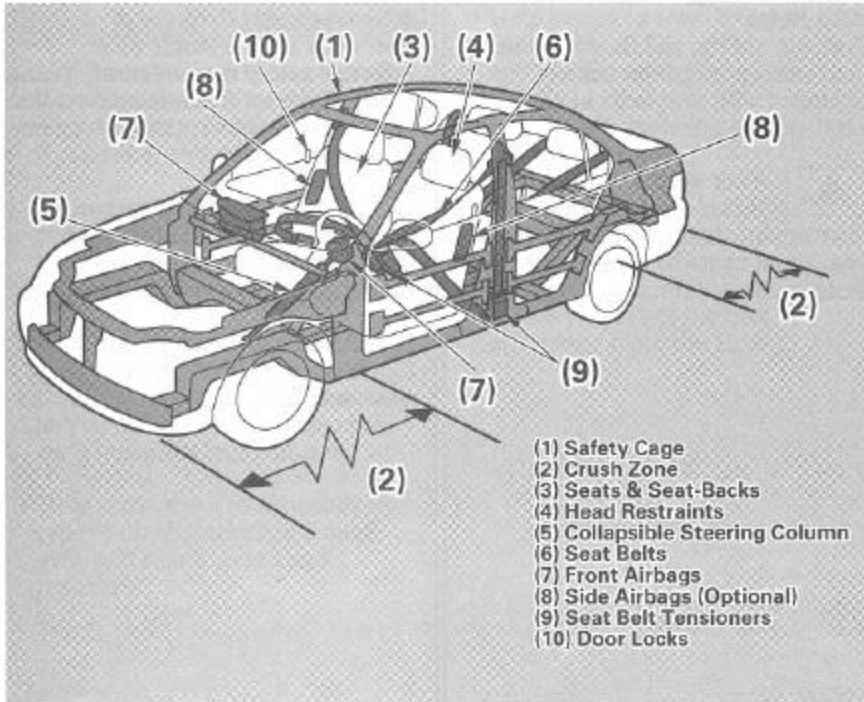
	PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Right Tibia Moment X	106	Denton	10/11/00
Upper Right Tibia Moment Y	106	Denton	10/11/00
Upper Right Tibia Force Z	106	Denton	10/11/00
Lower Right Tibia Moment X	135	Denton	10/11/00
Lower Right Tibia Moment Y	135	Denton	10/11/00
Lower Right Tibia Force Z	135	Denton	10/11/00
Upper Left Tibia Moment X	109	Denton	10/11/00
Upper Left Tibia Moment Y	109	Denton	10/11/00
Upper Left Tibia Force Z	109	Denton	10/11/00
Lower Left Tibia Moment X	138	Denton	10/11/00
Lower Left Tibia Moment Y	138	Denton	10/11/00
Lower Left Tibia Force Z	138	Denton	10/11/00
Left Foot Ball Z Acceleration	AHY71	Endevco	6/2/00
Left Heel X Acceleration	AGRW3	Endevco	6/2/00
Left Heel Z Acceleration	AMPY0	Endevco	6/2/00
Right Foot Ball Z Acceleration	J13649	Endevco	6/2/00
Right Heel X Acceleration	J13653	Endevco	6/2/00
Right Heel Z Acceleration	J13713	Endevco	6/2/00

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Left Rear Seat Crossmember X	G13-F09	Entran	8/14/00
Right Rear Seat Crossmember X	G13-B14	Entran	9/14/00
Top of Engine Block X	K16-X10	Entran	9/12/00
Bottom of Engine X	A09-G02	Entran	9/12/00
Left Brake Caliper X	K16-X08	Entran	7/11/00
Right Brake Caliper X	F18-G13	Entran	1/20/00
Instrument Panel X	C25-A06	Entran	5/18/00
Redundant Left Rear Seat Crossmember X	G13-F01	Entran	8/14/00
Redundant Right Rear Seat Crossmember X	I25-J02	Entran	9/14/00

	LABORATORY INSTRUMENTS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Neck Bending Pendulum Accelerometer	C12885	Endevco	7/12/00
Neck Bending Head Rotary Potentiometer	018	Spectrol	7/12/00
Neck Bending Pendulum Rotary Potentiometer	019	Spectrol	7/12/00
Chest Probe Accelerometer	J14396	Endevco	7/12/00
Knee Impact Accelerometer	J14398	Entran	7/12/00

APPENDIX E
VEHICLE OWNER'S OCCUPANT RESTRAINT
SYSTEM INSTRUCTIONS



Your car is equipped with many features that work together to protect you and your passengers during a crash.

Some safety features do not require any action on your part. These include a strong steel framework that forms a safety cage around the passenger compartment; front and rear crush zones that are designed to crumple and absorb energy during a crash; a collapsible steering column; and seat belt tensioners that automatically tighten the front seat belts in the event of a crash.

CONTINUED

Your Car's Safety Features

These safety features are designed to reduce the severity of injuries in a crash. However, you and your passengers can't take full advantage of these safety features unless you remain sitting in a proper position and **always wear your seat belts properly**. In fact, some safety features can contribute to injuries if they are not used properly.

Seat Belts

For your safety, and the safety of your passengers, your car is equipped with seat belts in all seating positions.



Your seat belt system also includes a light on the instrument panel to remind you and your passengers to fasten your seat belts.

Why Wear Seat Belts

Seat belts are the single most effective safety device for adults and larger children. (Infants and smaller children must be properly restrained in child seats.)

Not wearing a seat belt properly increases the chance of serious injury or death in a crash, even though your car has airbags.

In addition, most states and all Canadian provinces require you to wear seat belts.

⚠ WARNING

Not wearing a seat belt properly increases the chance of serious injury or death in a crash, even if you have airbags.

Be sure you and your passengers always wear seat belts and wear them properly.

When properly worn, seat belts:

- Keep you connected to the vehicle so you can take advantage of the car's built-in safety features.
- Help protect you in almost every type of crash, including frontal, side, and rear impacts and rollovers.

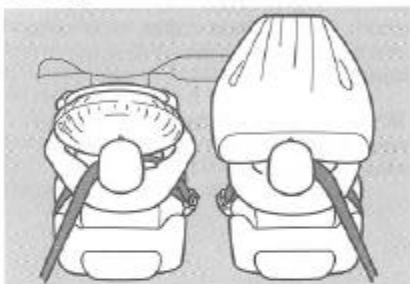
- Help keep you from being thrown against the inside of the vehicle and against other occupants.
- Keep you from being thrown out of the vehicle.
- Help keep you in a good position should the airbags ever deploy. A good position reduces the risk of injury from an inflating airbag, and allows you to get the best advantage from the airbag.

Of course, seat belts cannot completely protect you in every crash. But in most cases, seat belts can reduce your risk of serious injury.

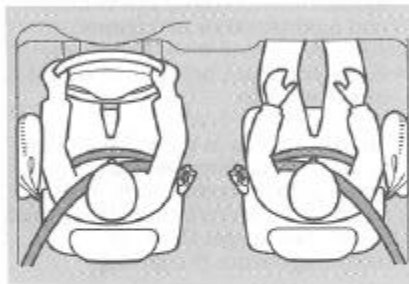
What you should do: Always wear your seat belt, and make sure you wear it properly.

Your Car's Safety Features

Airbags



Your car has a Supplemental Restraint System (SRS) with front airbags to help protect the heads and chests of the driver and a front seat passenger during a moderate to severe frontal collision.



Only on models equipped with side airbags. Your car also has side airbags to help protect the upper torso of the driver or a front seat passenger during a moderate to severe side impact.

The most important things you need to know about your airbags are:

- **Airbags do not replace seat belts.** They are designed to supplement

the seat belts.

- **Airbags offer no protection in rear impacts, rollovers, or minor frontal or side collisions.**
- **Airbags can pose serious hazards.** To do their job, airbags must inflate with tremendous force and speed. So while airbags help save lives, they can cause minor injuries, or more serious or even fatal injuries if occupants are not properly restrained or sitting properly.

What you should do: Always wear your seat belt properly, and sit upright and as far back as possible from the steering wheel or dashboard.

Seats & Seat-Backs

Your car's seats are designed to keep you in a comfortable, upright position so you can take full advantage of the protection offered by seat belts and the energy absorbing materials in the seats.

How you adjust your seats and seat-backs can also affect your safety. For example, sitting too close to the steering wheel or dashboard increases the risk of you or your passenger being injured by striking the inside of the car, or by an inflating airbag.

Reclining a seat-back too far reduces the seat belt's effectiveness and increases the chance that the seat's occupant will slide under the seat belt in a crash and be seriously injured.

What you should do: Move the front seats as far back as possible, and keep adjustable seat-backs in an upright position whenever the car is moving.

Head Restraints

Head restraints can help protect you from whiplash and other injuries. For maximum protection, the back of your head should rest against the center of the head restraint.

Door Locks

Keeping your doors locked reduces the chance of being thrown out of the car during a crash. It also helps prevent occupants from accidentally opening a door and falling out, and outsiders from unexpectedly opening your doors.

Your Car's Safety Features

Pre-Drive Safety Checklist

To make sure you and your passengers get the maximum protection from your car's safety features, check the following each time before you drive away:

- All adults, and children who have outgrown child safety seats, are wearing their seat belts and wearing them properly (see page 16).
- Any infant or small child is properly restrained in a child seat in the back seat (see page 21).

- Front seat occupants are sitting upright and as far back as possible from the steering wheel and dashboard (see page 13).
- Seat-backs are upright (see page 14).
- Head restraints are properly adjusted (see page 15).
- All doors are closed and locked (see page 13).
- All cargo is properly stored or secured (see page 169).

The rest of this section gives more detailed information about how you can maximize your safety.

Remember, however, that no safety system can prevent all injuries or deaths that can occur in severe crashes, even when seat belts are properly worn and the airbags deploy.