2458

# REPORT NO. MGA-96-N020

## NEW CAR ASSESSMENT PROGRAM (NCAP)

## FRONTAL BARRIER IMPACT TEST

CHRYSLER CORPORATION
1996 CHRYSLER SEBRING CONVERTIBLE
NHTSA NO. MT0306

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: September 11, 1996

Report Date: September 18, 1996

FINAL REPORT

Prepared For:

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF MARKET INCENTIVES
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15. Supplementary Notes

16. Abstract

A 56 kph (35 mph) frontal barrier impact using a 30 load cell barrier was conducted on a 1996 Chrysler Sebring Convertible at the MGA Proving Grounds and Crash Test Center in Burlington, WI. on September 11, 1996.

The barrier impact velocity was 56.6 kph (35.2 mph), and the ambient temperature at the time of impact was 21°C. The post-test maximum static crush was 574 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 FMVSS 208, "Occupant Crash Protection" injury criteria, the driver's HIC was 654 and the 3 msec. Clip (Chest g's) was 50 g's. The left and right femur loads for the driver were 4297 and 6839 Newtons, respectively. The passenger's HIC was 698 and the 3 msec Clip was 54 g's. The left and right femur maximum loads were 5832 and 3469 Newtons respectively.

| 17. Key Words | 18. Distribution Statement |
|---|---|
| 35 mph Frontal Barrier Impact Test<br>New Car Assessment Program (NCAP)<br>FMVSS 212 Indicant Testing<br>FMVSS 219 (partial) Indicant Testing<br>FMVSS 301 Indicant Testing | Copies of this report are available from: Technical Ref. Division, NHTSA, NASSIF Building, Room 5108 400 Seventh Street, S.W. Washington, D.C. 20590 |

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6 December 1996
Date of Report Acceptance

Contracting Officer's Tech. Rep. (COTR)

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SECTION 1

PURPOSE AND TEST PROCEDURE

This 35 mph frontal barrier impact test is part of the Composite FY'96 Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-90-D-12121. 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 January 1, 1990. 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.

SECTION 2

SUMMARY OF FRONTAL BARRIER IMPACT TEST

A load cell barrier consisting of 30 load cells was impacted by a 1996 Chrysler Sebring Convertible at a velocity of 56.6 kph (35.2 mph). The test was performed at the MGA Proving Grounds and Crash Test Center on September 11, 1996. 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 real-time camera and 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 fully instrumented with head and chest primary and redundant triaxial accelerometers, pelvis triaxial accelerometers, chest displacement transducer, neck load cell, right/left femur load cells, right/left lower leg sensors, and right/left feet 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. 037), and the right front passenger (Serial No. 036), were used for this test. Certification details, along with instrumentation calibration data, are found in Appendix C and D.

The 109 channels of data were recorded on 10 computers. Appendix B contains the vehicle, load cell barrier and dummy response data traces.

The driver's head struck the inflated airbag. The driver HIC was 654 and the maximum chest (CLIP) deceleration over 3 milliseconds was 50.4 g's. The maximum chest displacement was 26 mm. The left and right femur loads were 4297 and 6839 Newtons respectively.

The right front passenger's head struck the inflated airbag. The passenger HIC was 698 and maximum chest (CLIP) deceleration over 3 milliseconds was 54 g's. The maximum chest displacement was 29 mm. The left and right femur loads were 5832 and 3469 Newtons respectively.

GENERAL TEST AND VEHICLE PARAMETER DATA

Vehicle Yr/Make/Model/Body Style: 1996/Chrysler/Sebring/Convertible

NHTSA No.: MT0306 VIN.: 3C3EL45X6TT291593

Body color: White Date of Manufacture: 5/96

Engine: 4 Cylinders; __C.I.D.; 2.4 Liters;

X Gas; _Diesel; _Turbocharged

_Longitudinal; X Transverse

Transmission: 3 Speed; _Manual; X Automatic; X Overdrive

Final Drive: X Front Wheel; _Rear Wheel; _Four Wheel

Odometer Reading: 160 miles

X A/C; X P/S; XP/B; X P/wdo;

__P/seats; X Tilt Wheel; X Cruise Control;

Type of Occupant Restraint: Type II belt system with driver and passenger airbags

DATA RECORDED FROM VEHICLE'S TIRE PLACARD:

Tire Pressure (at capacity): Front 241 kPa (35 Psi) Rear 241 kPa (35 Psi)

Recommended Tire Size: P205/65R15 and P215/55R16

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

Tires on Vehicle: P215/55R16 ; Manufacturer: Michelin

Number of Occupants: 2 Front; 2 Rear; _ 3rd Seat; 4 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) = 324.3 kg. (A)

No. of Occupants x 68.0 kg. = 272.0 kg. (B)

Rated Cargo Weight (RCW) A-B = 52.3 kg.

GVWR 1900 kg. GAWR: Front 1066 kg.; Rear 867 kg.

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

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

Right Front = 459.5 kg Right Rear = 289.4 kg

Left Front = 467.2 kg Left Rear = 298.0 kg

TOTAL FRONT WEIGHT = 926.7 kg (61.0% of Total Vehicle Weight)

TOTAL REAR WEIGHT = 587.4 kg (39.0% of Total Vehicle Weight)

TOTAL UNLOADED DELIVERED WEIGHT (UDW) = 1514.1 kg

CALCULATION FOR TARGET TEST WEIGHT:

UDW = Unloaded Delivered Weight 1514.1 kg

VCW = Vehicle Capacity Weight 324.3 kg

DSC = Designated Seating Capacity 4 RCW = VCW - 68 (DSC) = 52.3 kg

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

Target Test Weight = 1718.0 kg

WEIGHT OF TEST VEHICLE WITH REQUIRED DUMMIES AND CARGO:

Right Front = 491.3 kg Right Rear = 366.1 kg

Left Front = 497.6 kg Left Rear = 360.6 kg

TOTAL FRONT WEIGHT = 988.9 kg (58.0% of Total Vehicle Weight)

TOTAL REAR WEIGHT = 726.7 kg (42.0% of Total Vehicle Weight)

TOTAL TEST WEIGHT = 1715.6 kg

Weight of ballast secured in vehicle trunk area = 11 kg

Vehicle components removed to meet target weight: Rear seat, soft top, spare tire and jack, rear and trunk trim

VEHICLE ATTITUDE (all dimensions in mm):

Delivered Attitude: RF 713 LF 714 RR 707 LR 707

Test Attitude: RF 706 LF 700 RR 687 LR 682

Wheel Base: 2688 mm; C.G. = 1138 mm rearward of front wheel C/L

Remarks: None Noted

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

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

POST-IMPACT DATA:

Type of Test: 35 mph Frontal Impact  Impact Angle: 90°

Date of Test: September 11, 1996  Time of Test: 2:18 p.m.

Ambient Temperature: 21 °C  (Spec. Range = 18.8 to 25.6°C)

Temperature in Occupant Compartment: 21.° C

Windshield Molding Temperature: 21.° C

Required Impact Velocity Range: 55.5 to 57.1 kph

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

Distance From Front Bumper to Barrier Face When

Entering Speed Trap: 1152 mm

Exiting Speed Trap: 152 mm

VEHICLE REBOUND AND CRUSH ( mm ):

| | | |
|---|---|---|
| Vehicle Length: | Pre-test | = R 4674 $C_L$ 4912 L 4675 |
| | Post-test | = R 4288 $C_L$ 4338 L 4256 |
| | Crush | = R 406 $C_L$ 574 L 419 |

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

R 414 mm  $C_L$ 409 mm  L 427 mm

VISIBLE DUMMY CONTACT POINTS:

| | Driver | Passenger |
|---|---|---|
| Head | Sunvisor and airbag | Sunvisor and airbag |
| Chest | Belts | Belts |
| Abdomen | Airbag | Airbag |
| Left Knee | Dash | Glovebox |
| Right Knee | Dash | Glovebox |

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

| | | Front |
|---|---|---|
| Post-Test Door Opening | Left | Right |
| (without use of tools) | Yes | Yes |

| | | Front |
|---|---|---|
| Seat Movement | Left | Right |
| Seat Back Movement | 0 | 0 |
| Seat Shift (mm) | 1 mm forward | 3 mm forward |

Glazing Damage

Backlight/Windshield Windshield cracked

Other Notable Impact Effects: Airbags deployed

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

POST TEST AIRBAG DATA

Vehicle Yr/Make/Model/Body Style: 1996/Chrysler/Sebring/Convertible

NHTSA No.: MT0306 VIN.: 3C3EL45X6TT291593

A. Number of Vent Holes: Driver 1 ; Passenger 0

B. Size of Vent Holes: Driver 25 mm ; Passenger N/A

C. Total Vent Area; Driver .4.9 $cm^2$ Passenger .0 $cm^2$

D. Deflated Airbag Length and Width Dimensions or, if Round, Diameter

Driver; Length 620 mm, Width 675 mm, Diameter 610 mm

Passenger; Length 680 mm, Width 580 mm, Diameter 610 mm

E. Is the Airbag Tethered?

Driver; X Yes; _ No; If yes, record length of tether 323 mm

Passenger; _ Yes; X No, If yes, record length of tether ____ mm

SECTION 3

SUMMARY OF RESULTS FOR-------

FMVSS 212, "Windshield Mounting"

FMVSS 219 (Partial), "Windshield Zone Intrusion"

FMVSS 301-75, "Fuel System Integrity"

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

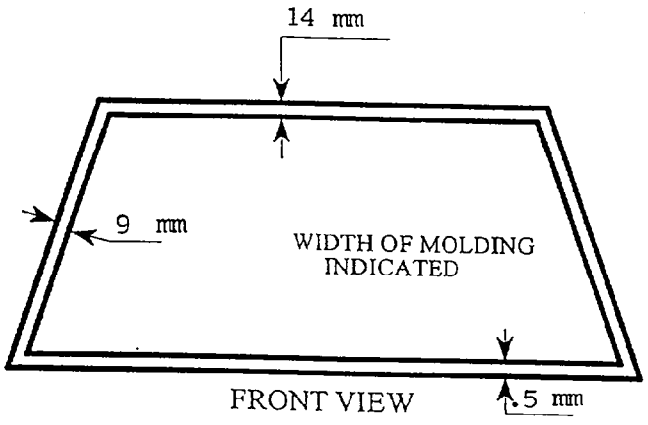
Details of windshield mounting such as retention method, trim type, etc.:
Windshield set in rubber molding with glue

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 | | |
|---|---|---|---|
| | PRE-TEST (mm) | POST-TEST (mm) | PERCENT RETENTION |
| RIGHT SIDE | 2198 | 2198 | 100% |
| LEFT SIDE | 2198 | 2198 | 100% |
| TOTAL | 4396 | 4396 | 100% |

AREA OF RETENTION FAILURE: None



FRONT VIEW

FAILURE DETAILS: None

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 ½" 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= 1227 mm

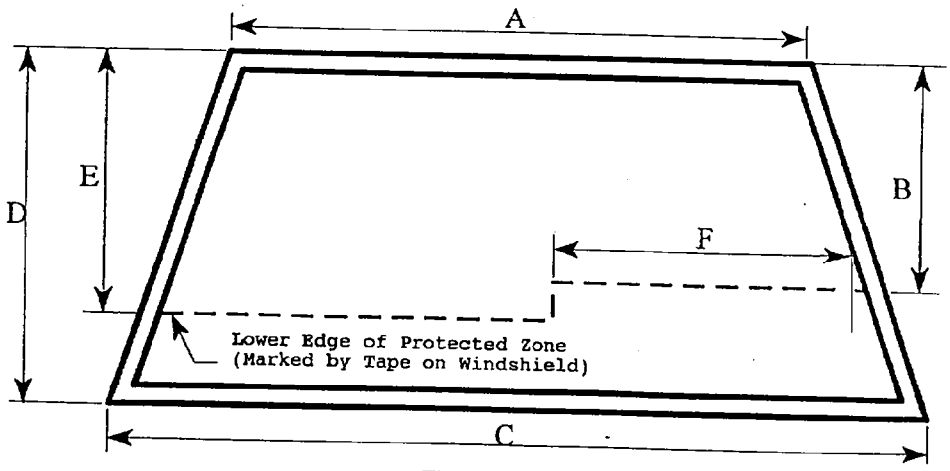
B= 479 mm

C= 1674 mm

D= 735 mm

E= 525 mm

F= 614 mm




FRONT VIEW

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 1/4":
(Show location of penetration)

NONE

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

FMVSS NO. 301

TEST VEHICLE NHTSA NO.: MT0306 Test Date: September 11, 1996

Vehicle Mfgr./Make/Model: 1996/Chrysler/Sebring/Convertible

Usable Capacity of Vehicle's Fuel Tank: 15.8 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:

14.7 Liters which is 93.0 % 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)

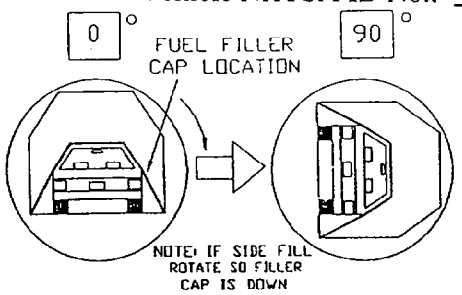
FUEL SPILLAGE MEASUREMENT:

| | ACTUAL | MAX ALLOWED |
|---|---|---|
| 1. From impact until vehicle motion ceases | 0 | 1 OZ |
| 2. For 5 minute period after vehicle motion ceases | 0 | 5 OZ |
| 3. For next 25 minutes | 0 | 1 oz./1 MIN |

SOLVENT SPILLAGE DETAILS: None

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE: 0° - 90°  Vehicle NHTSA ID No.: MT0306




I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time 2 minutes 46 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 46 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:

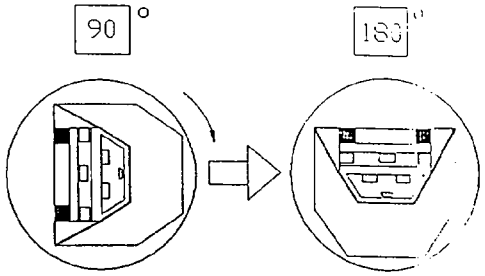
| 0 | 0 | 0 | 0 |
|---|---|---|---|

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

IV. SOLVENT SPILLAGE LOCATIONS(S): None

## FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE: 90° - 180° Vehicle NHTSA ID No.: MT0306




I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time 2 minutes 37 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 37 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:

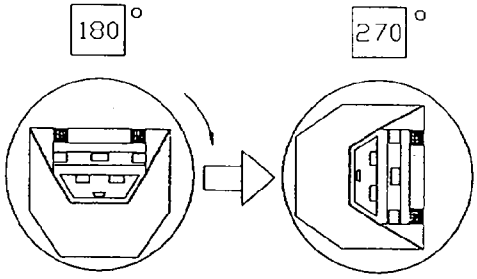
| | | | |
|---|---|---|---|
| 0 | 0 | 0 | 0 |

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

IV. SOLVENT SPILLAGE LOCATIONS(S): None

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE: 180° - 270°  Vehicle NHTSA ID No.: MT0306




I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time 2 minutes 27 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 27 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:

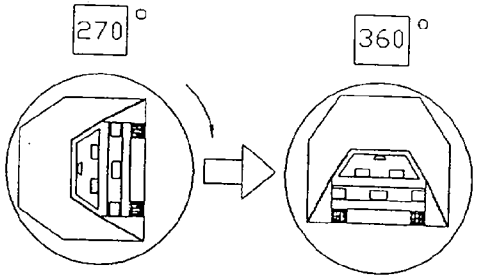
| 0 | 0 | 0 | 0 |
|---|---|---|---|

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

IV. SOLVENT SPILLAGE LOCATIONS(S): None

# FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE: 270° - 360° Vehicle NHTSA ID No.: MT0306




I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time 2 minutes 52 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 52 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

SECTION 4

OMI FINAL DATA

Occupant and Vehicle Information

I. OMI DATA

1. Dummy Injury Criteria Data Summary
2. Dummy Positioning Data
3. Seat Belt Positioning Data
4. Seat Belt Performance Assessment Data
5. Camera Locations
6. Vehicle Target Locations

II. OVR DATA

1. Load Cell Barrier Data
2. Vehicle Accelerometer Data
3. Test Vehicle Measurements

III. AID DATA

1. Accident Investigation Damage Data Summary

FMVSS NO. 208, "OCCUPANT CRASH PROTECTION", DATA SHEET

VEH. YR./MAKE/MODEL/BODY STYLE: 1996/Chrysler/Sebring/Convertible
VEH. NHTSA NO.: MT0306 TEST DATE: September 11, 1996

| MAX. ACCELERATION VALUES: (g's) | DRIVER #037 | PASSENGER #036 |
|---|---|---|
| Head Channel X | -64.2 @ 86 msec. | -95.9 @ 67 msec. |
| Head Channel Y | 19.9 @ 62 msec. | -14.0 @ 67 msec. |
| Head Channel Z | 24.4 @ 62 msec. | -25.8 @ 95 msec. |
| HEAD RESULTANT | 64.5 @ 86 msec. | 97.3 @ 67 msec. |
| Chest Channel X | -50.9 @ 64 msec. | -56.0 @ 74 msec. |
| Chest Channel Y | 6.1 @ 83 msec. | 12.0 @ 89 msec. |
| Chest Channel Z | 16.0 @ 97 msec. | 19.1 @ 67 msec. |
| CLIP | 50.4 | 53.9 |
| TIME INTERVAL (msec) [0.003 seconds minimum] | $t_1$ = 63.9<br>$t_2$ = 67.0 | $t_1$ = 72.8<br>$t_2$ = 75.9 |

HEAD INJURY CRITERIA (HIC) VALUES:

| | | |
|---|---|---|
| HIC | 654 | 698 |
| $t_1$ = (msec) | 61.1 | 58.0 |
| $t_2$ = (msec) | 97.1 | 80.6 |
| Avg. Accel. $t_1$ to $t_2$ (g's) | 36.0 | 22.6 |

[The maximum time interval from $t_1$ to $t_2$ is 36 milliseconds.]

MAX. COMPRESSIVE FEMUR FORCES:

| | | |
|---|---|---|
| Left Side (N) | 4297 | 5832 |
| Right Side (N) | 6838 | 3469 |

MAXIMUM SEAT BELT FORCES:

| | | |
|---|---|---|
| Lap Belt (N) | 3488 | 5081 |
| Shoulder Belt (N) | 4971 | 4534 |

HYBRID III NECK, CHEST AND PELVIS DATA SHEET

VEHICLE YR./MAKE/MODEL/BODY STYLE: 1996/Chrysler/Sebring/Convertible

VEHICLE NHTSA NO.: MT0306 TEST DATE: September 11, 1996

| MAXIMUM VALUES | DRIVER DUMMY #037 | PASSENGER DUMMY #036 |
|---|---|---|
| Neck Load X (N) | 1038 @ 78 msec. | 585 @ 49 msec. |
| Neck Load Y (N) | 236 @ 133 msec. | -402 @ 69 msec. |
| Neck Load Z (N) | 1580 @ 67 msec. | 2495 @ 73 msec. |
| Neck Moment X (NM) | 19.8 @ 73 msec. | -23.7 @ 72 msec. |
| Neck Moment Y (NM) | 65.6 @ 75 msec. | -61.8 @ 91 msec. |
| Neck Moment Z (NM) | 19.0 @ 118 msec. | 16.0 @ 94 msec. |
| Chest Deflection X (mm) | 27.5 | 30.0 |
| Time of Max. Occurrence | 88 msec. | 85 msec. |
| Pelvis X Acceleration (g's) | -69.0 @ 61 msec. | -61.0 @ 63 msec. |
| Pelvis Y Acceleration (g's) | -12.9 @ 117 msec. | 13.8 @ 72 msec. |
| Pelvis Z Acceleration (g's) | 16.8 @ 82 msec. | 23.3 @ 77 msec. |
| Pelvis Resultant (g's) | 70.0 @ 61 msec. | 62.0 @ 64 msec. |

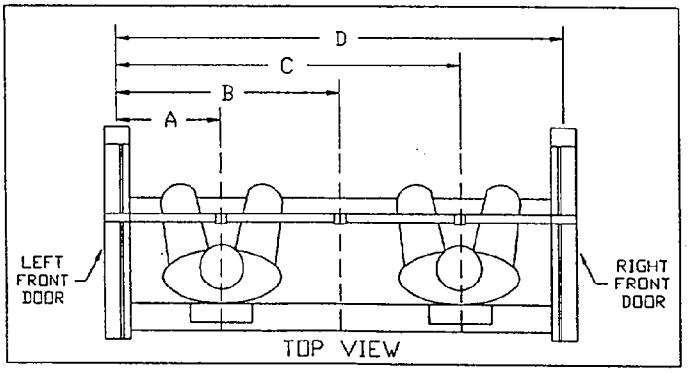
PART 572 DUMMY IN-VEHICLE POSITION

Vehicle NHTSA No.: MT0306 Vehicle: 1996 Chrysler Sebring Convertible

| SEAT TYPE: | ADJUSTER TYPE: | BUCKET SEAT BACK TYPE: |
|---|---|---|
| ____Bench | Driver: _X_Manual | ____Fixed |
| _X_Bucket | _____Power | _X_Adjustable Reclining |
| _____Split Bench | | |
| | Passenger: _X_Manual | |
| | _____Power | |

DRIVER SEAT POSITION
12th detent of 23 detents

PASSENGER SEAT POSITION
12th detent of 23 detents




037 DUMMY ID 036

| | | |
|---|---|---|
| A | = Left Door to Driver Centerline | 434 mm |
| B | = Left Door to Center Passenger Centerline | 780 mm |
| C | = Left Door to Right Passenger Centerline | 1148 mm |
| D | = Left Door to Right Door | 1560 mm |

FRONT SEAT MEASUREMENT TABLE

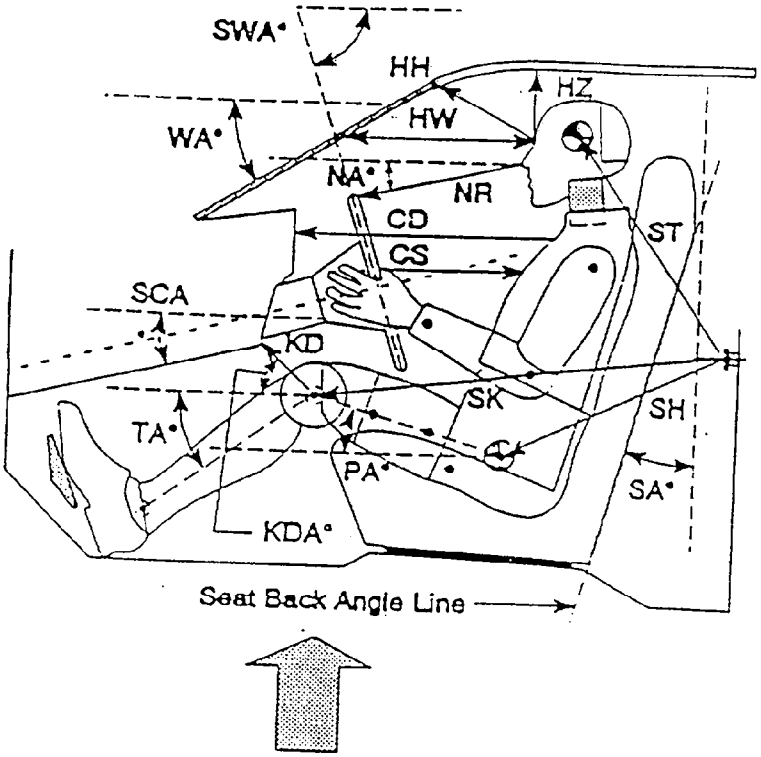
Units (mm)

| | DRIVER (Serial #037) | PASSENGER (Serial #036) |
|---|---|---|
| WA° | 23.6° | |
| SWA° | 21.3° | N/A |
| SCA° | 21.4° | N/A |
| SA° | 24.3° | 24.3° |
| HZ | N/A | N/A |
| HH | 431 | 386 |
| HW | 646 | 607 |
| HR | 240 | 223 |
| NR | 415 Angle (NA) 10.5° | N/A |
| CD | 536 | 521 |
| CS | 242 | N/A |
| RA | 211 | N/A |
| KDL | 168 Angle (KDA) 38.6° | 184 |
| KDR | 173 | 187 Angle 26.1° |
| PA° | 24.1° | 22.6° |
| TA° | 30.2° | 32.7° |
| KK | 273 | 240 |
| ST* | 616 Angle 30.5° | 640 Angle 34.0° |
| SK* | 847 Angle 90.3° | 852 Angle 92.0° |
| SH* | 465 Angle 101.5° | 481 Angle 106.5° |
| SHY | 266 | 283 |
| HS | 359 | 320 |
| HD | 123 | 115 |
| AD | 107 | 112 |

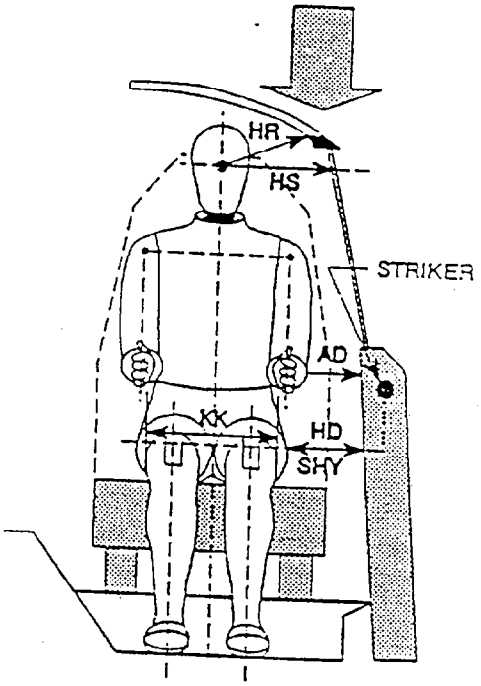
N/A = Not Applicable

* Angles measured from vertical

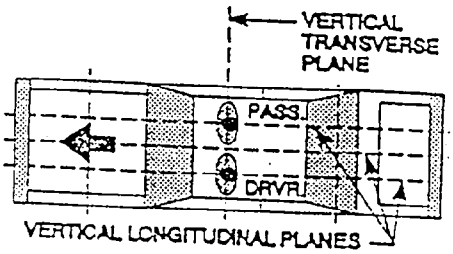
## FRONT SEAT MEASUREMENTS



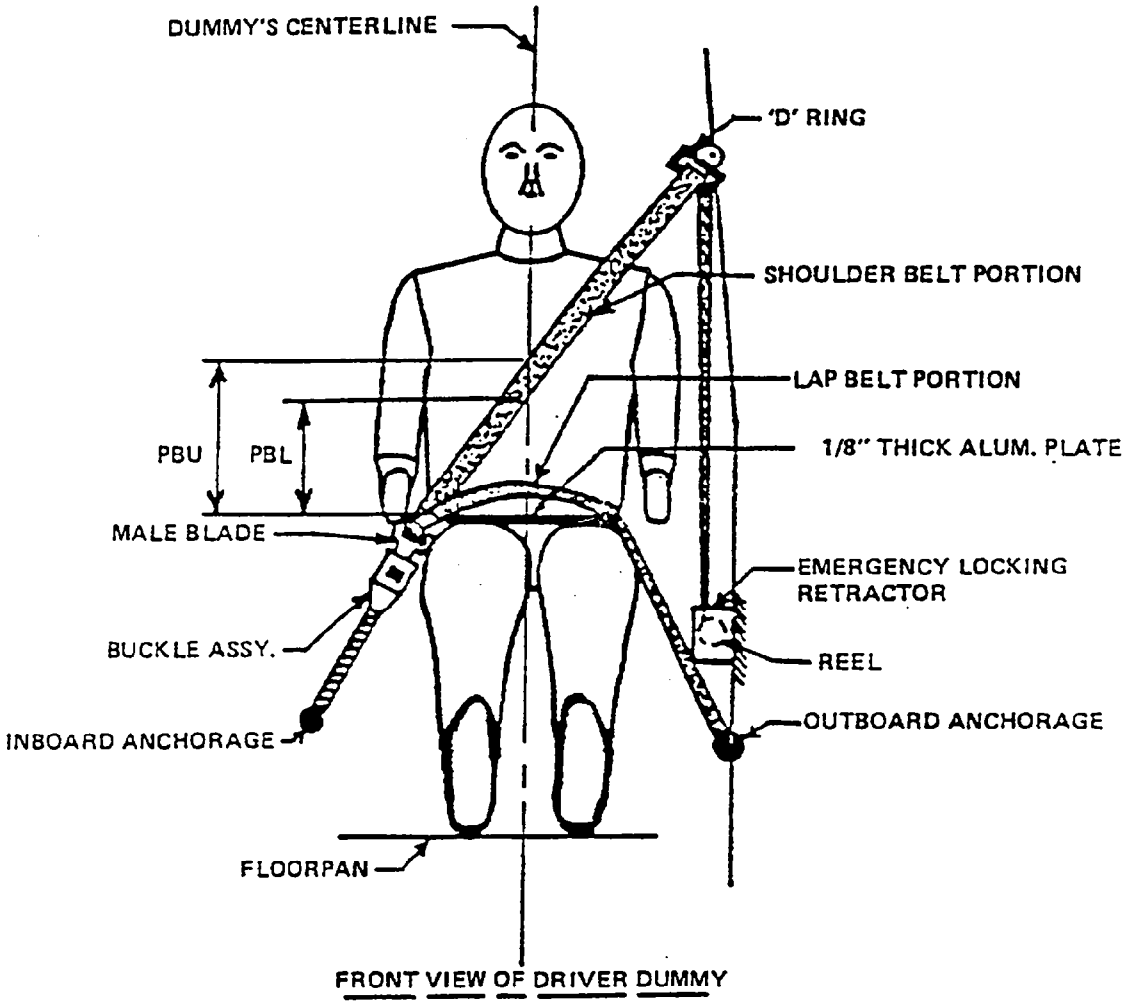

| | | |
|---|---|---|
| AD | - | Arm to Door |
| HD | - | H-Point to Door |
| HR | - | Head to Side Header |
| HS | - | Head to Side Window |
| KK | - | Knee to Knee |
| SHY | - | Striker to H-Point (Y-Direction) |




| | | |
|---|---|---|
| CD | - | Chest to Dash |
| CS | - | Steering Wheel to Chest |
| HH | - | Head to Header |
| HW | - | Head to Windshield |
| HZ | - | Head to Roof |
| KDA | - | Knee to Dash Angle |
| KDL | - | Left Knee to Dash |
| KDR | - | Right Knee to Dash |
| NA | - | Nose to Rim Angle |
| NR | - | Nose to Rim |
| PA | - | Pelvic Angle |
| RA | - | Rim to Abdomen |
| SA | - | Seat Back Angle |
| SCA | - | Steering Column Angle |
| SH | - | Striker to H-Point |
| SK | - | Striker to Knee |
| ST | - | Striker to Head |
| SWA | - | Steering Wheel Angle |
| TA | - | Tibial Angle |
| WA | - | Windshield Angle |



SEAT BELT POSITIONING DATA




(illustration)

Dimension = mm

| | DRIVER DUMMY | PASSENGER DUMMY |
|---|---|---|
| PBU -- Top surface of alum. plate to upper edge | 354 | 364 |
| PBL -- Top surface of alum. plate to belt lower edge | 280 | 290 |

SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

| BELT LENGTH DATA: | Driver | Passenger |
|---|---|---|
| Length from trim above retractor reel to "D" ring as measured on dummy. | N/A mm | N/A mm |
| Shoulder belt length as measured on Part 572 Dummy. | 784 mm | 814 mm |
| Lap belt length as measured on Part 572 Dummy. | 610 mm | 606 mm |

| SHOULDER BELT SPOOL-OFF DATA: | | |
|---|---|---|
| As determined by film analysis | 89 mm | 75 mm at shoulder |
| As determined mechanically | 87 mm | 72 mm at retractor |

| BELT STRETCH DATA: | | |
|---|---|---|
| Measured electronically between shoulder belt load cell and the "D" ring. | NR | NR |
| Measured mechanically | NR | NR |

| RETRACTOR LOCK-UP TIME: | | |
|---|---|---|
| As determined by shoulder belt spool-off observed in on-board cameras | 45 msec. | 46 msec. |

NR Not Recorded

## CAMERA LOCATIONS

VEH. NHTSA NO.: MT0306 ; TEST DATE: September 11, 1996 ; TIME: 2:18 p.m.

VEH. YEAR/MAKE/MODEL/BODY STYLE: 1996/Chrysler/Sebring/Convertible

| CAMERA POSITION NO. | VIEW | CAMERA POSITIONS (mm.)* | | | ANGLE (deg) | FILM PLANE TO HEAD TARGET (mm) | LENS (mm) | SPEED (fps) |
|---|---|---|---|---|---|---|---|---|
| | | X | Y | Z | | | | |
| 1 | Real-Time Left Side View | - | - | - | - | - | | |
| 2 | Left Front View | -970 | -7760 | 1400 | 90° | 7345 | 25 | 976 |
| 3 | Steering Column Top | -1670 | -8000 | 1555 | 90° | 7585 | 25 | NR |
| 4 | Steering Column Bottom | -1670 | -8000 | 1030 | 90° | 7585 | 25 | 935 |
| 5 | Left Driver Close-up | -1300 | -9250 | 1475 | 90° | 8835 | 75 | 1026 |
| 6 | Left Angle | -5000 | -5770 | 1970 | | | 50 | 862 |
| 7 | Driver Seat Belt | 1120 | -2420 | 1775 | | | 50 | 1020 |
| 8 | Passenger Seat Belt | 860 | 3110 | 2085 | | | 35 | 1010 |
| 9 | Right Overall | -2720 | 8130 | 1160 | 90° | 7675 | 13 | 576 |
| 10 | Right Front | -1170 | 8380 | 1190 | 90° | 7925 | 25 | 1026 |
| 11 | Right Passenger Close-up | -1940 | 7700 | 1230 | 90° | 7245 | 50 | 1010 |
| 12 | Right Angle | -4900 | 6310 | 2030 | | | 50 | 1042 |
| 13 | Top View Wide | 330 | 0 | 2750 | | | 13 | 1000 |
| 14 | Top Driver | -80 | -460 | 1615 | | | 13 | 926 |
| 15 | Top Passenger | -100 | 460 | 1620 | | | 13 | 943 |
| 16 | Pit Engine | -1280 | 0 | -3155 | | | 13 | 990 |
| 17 | Fuel Tank | -3050 | 0 | -3125 | | | 13 | 1010 |

* COORDINATES:

+X = film plane rearward of barrier

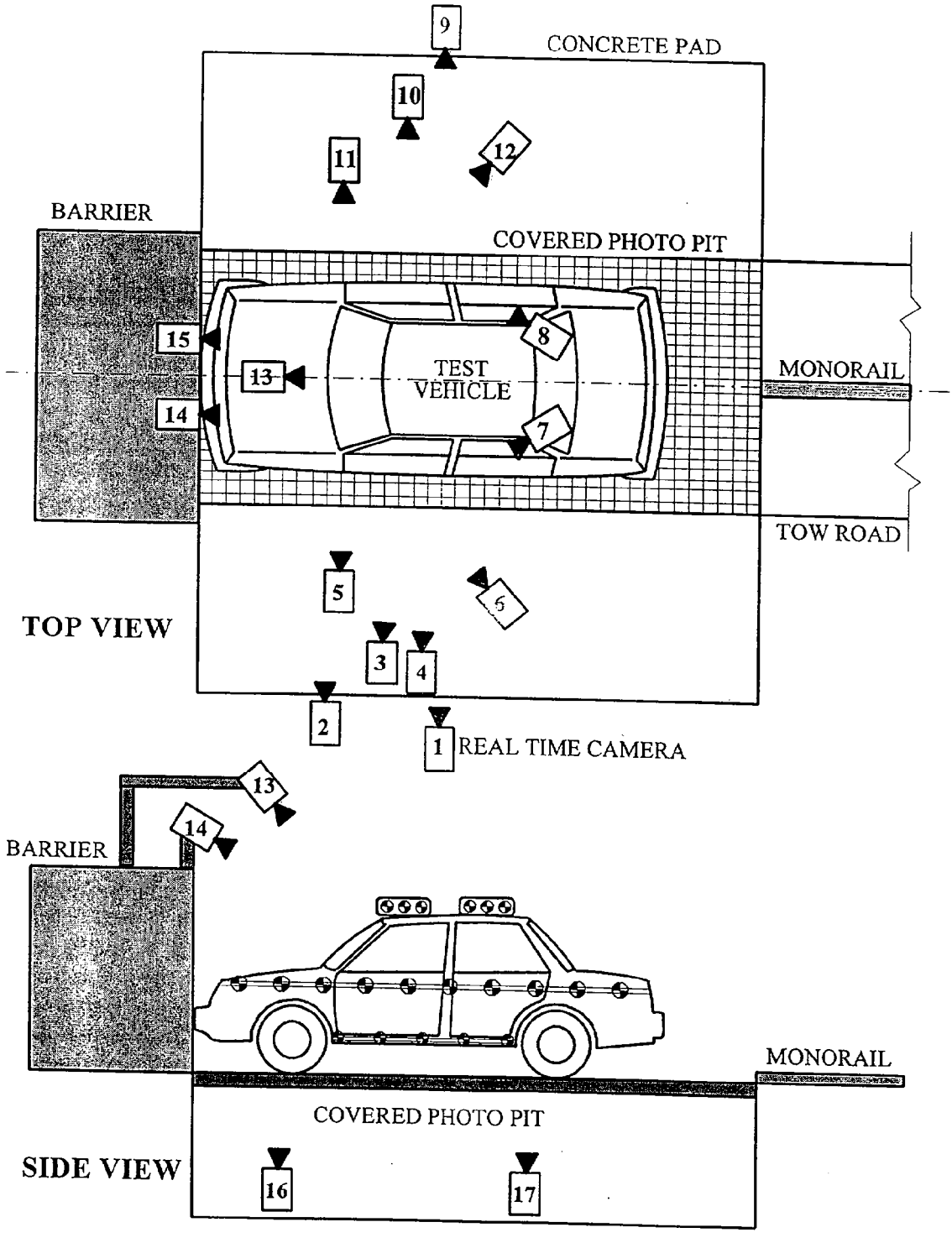
+Y = film plane to left of monorail centerline

+Z = film plane to above ground level

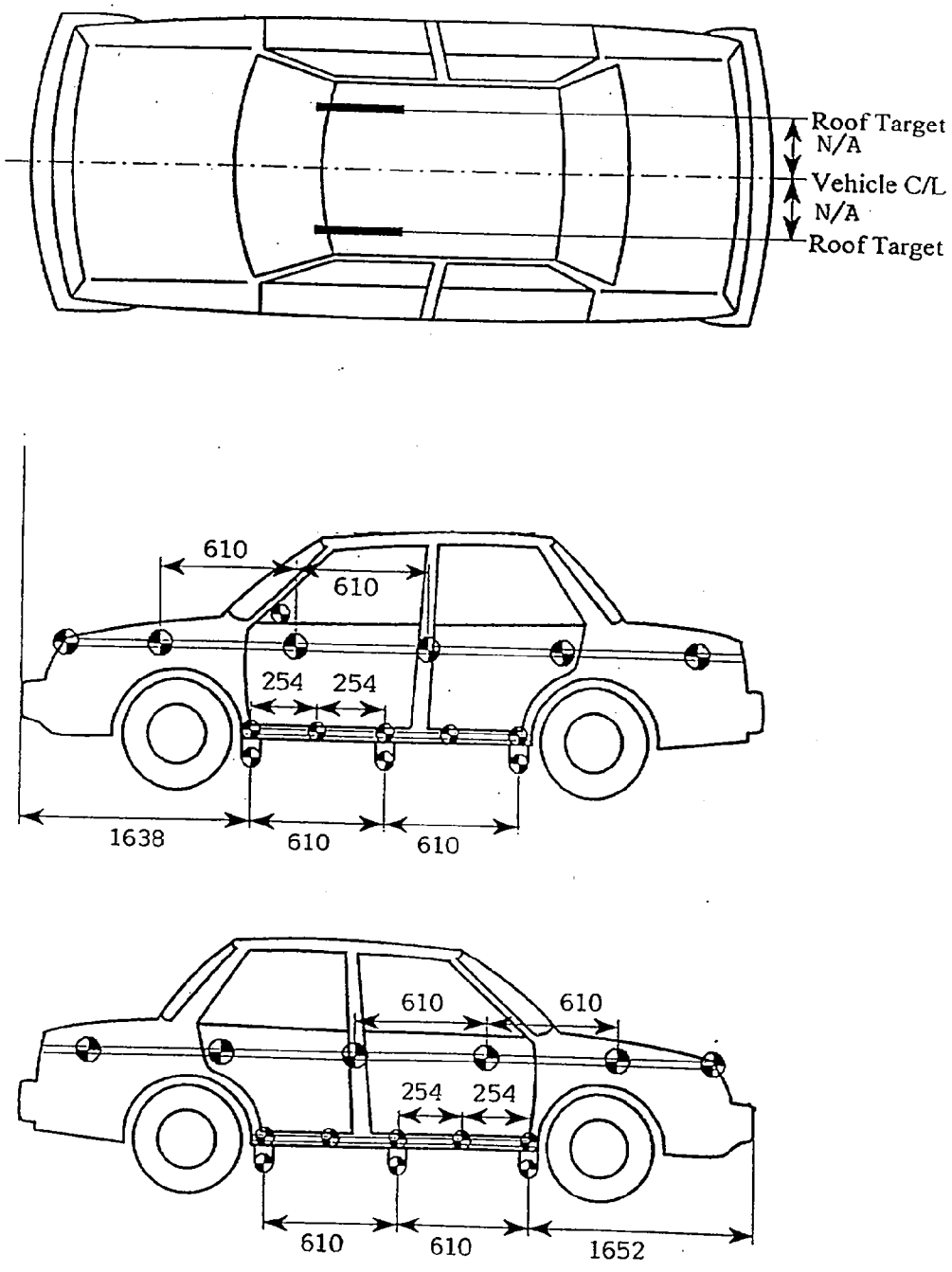
ORIGIN: For X and Y it is the Impact Point. For Z it is the Floor.

NR = Not Run

CAMERA LOCATIONS (Cont'd)



VEHICLE TARGET LOCATIONS




**(DIMENSIONS IN MM)**

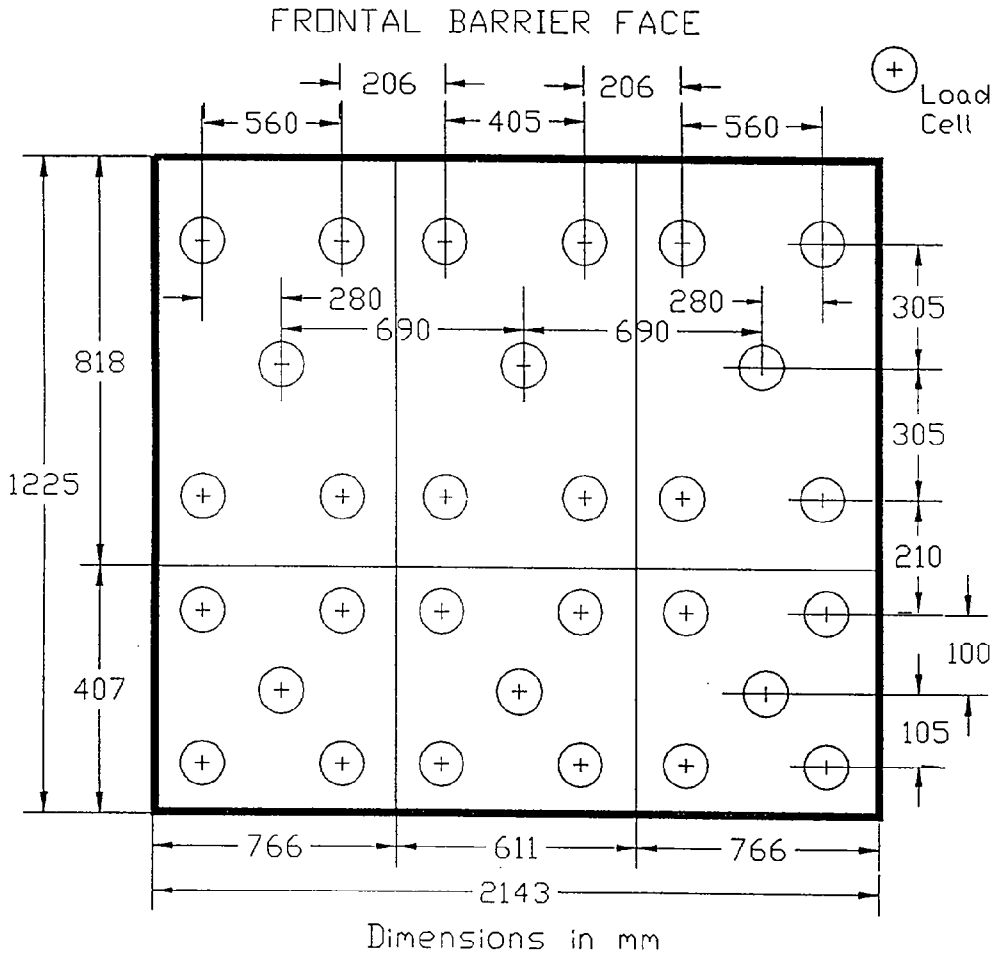
LOAD CELL LOCATIONS ON FIXED BARRIER

30 Load Cells

6 Rows

9 Columns

6 Groupings (5 cells/group)

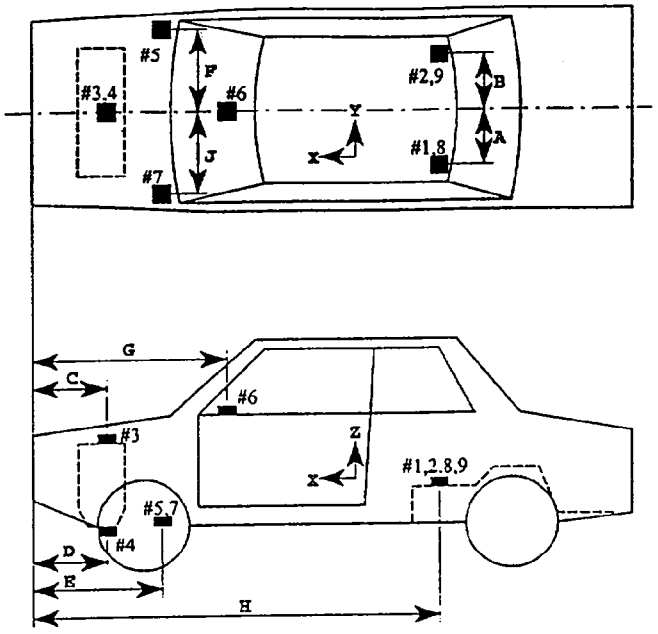



The following data is presented in Appendix B:

(1) Total or Sum of 30 individual load cells

(2) Data from 6 Groupings shown above (5 cells/group)

## VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY




Units: (mm)

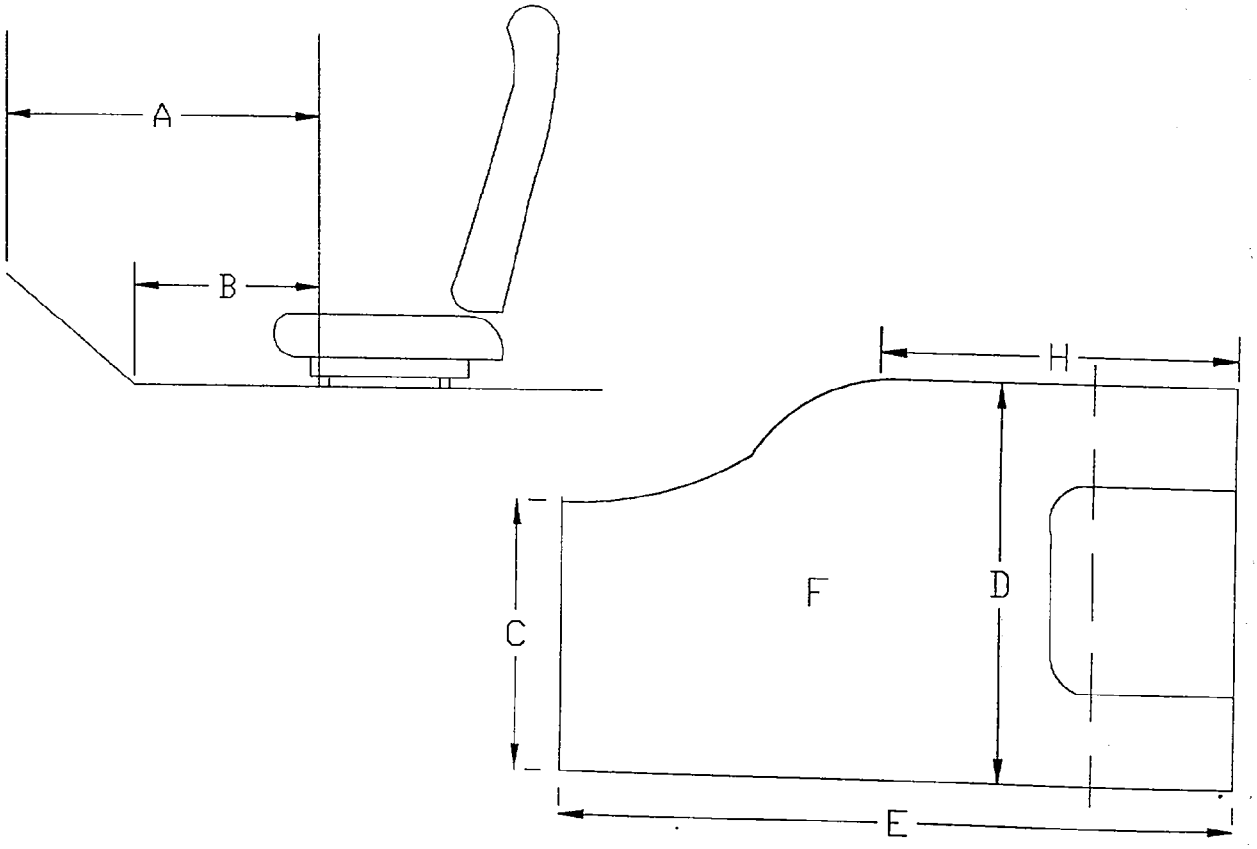
| Dimension | Length |
|---|---|
| A | 453 |
| B | 453 |
| C | 874 |
| D | 948 |
| E | 930 |
| F | 660 |
| G | 1583 |
| H | 2905 |
| J | 660 |

| ACCEL. NO. | ACCELEROMETER | DIRECTION |
|---|---|---|
| 1 and 8 | Left Rear Seat Crossmember | X |
| 2 and 9 | Right Rear Seat Crossmember | X |
| 3 | Top of Engine | X |
| 4 | Bottom of Engine | X |
| 5 | Right Side Brake Caliper | X |
| 6 | Instrument Panel | X |
| 7 | Left Disc Brake Caliper | X |

TEST VEHICLE MEASUREMENTS

STATIC FOOTWELL DEFORMATION

Driver's Side



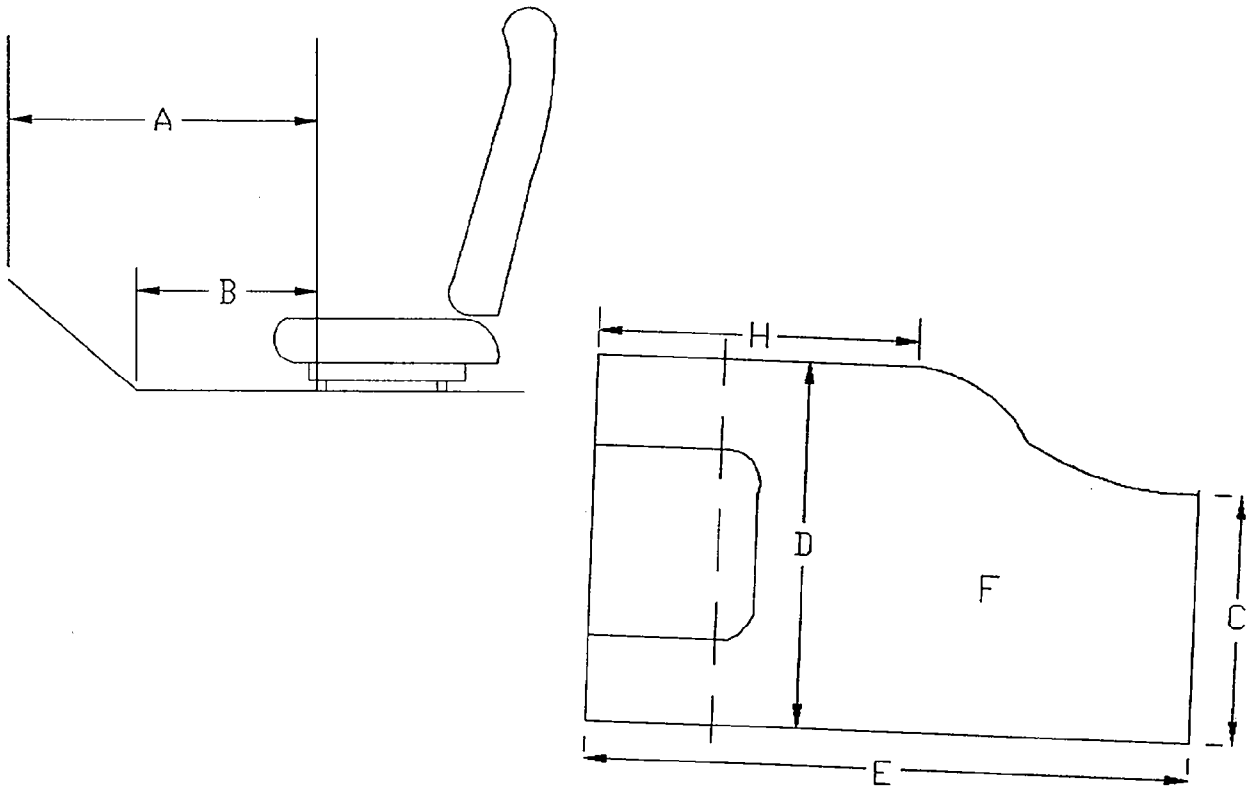

Units = mm

| MEASUREMENT | PRE TEST | POST TEST | DIFFERENCE |
|---|---|---|---|
| A | 832 | 674 | 158 |
| B | 527 | 417 | 110 |
| C | 460 | 438 | 22 |
| D | 549 | 559 | 10 |
| E | 1544 | 1387 | 157 |
| H | 1120 | 1111 | 9 |
| F ($cm^2$) | 8099.2 | 2031.9 | 6067 |

TEST VEHICLE MEASUREMENTS (Cont'd)

STATIC FOOTWELL DEFORMATION

Passenger's Side

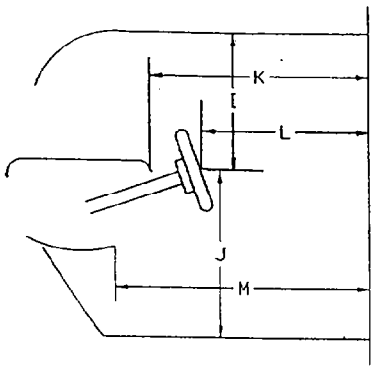


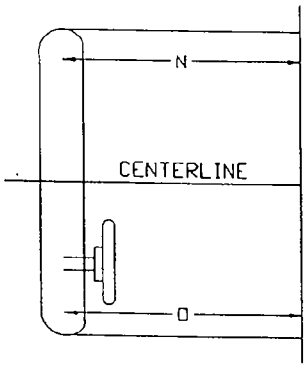

Units = mm

| MEASUREMENT | PRE TEST | POST TEST | DIFFERENCE |
|---|---|---|---|
| A | 756 | 634 | 122 |
| B | 554 | 481 | 73 |
| C | 345 | 306 | 39 |
| D | 548 | 537 | 11 |
| E | 1490 | 1410 | 80 |
| H | 1170 | 1136 | 34 |
| F ($cm^2$) | 7515.6 | 6939.8 | 576.8 |

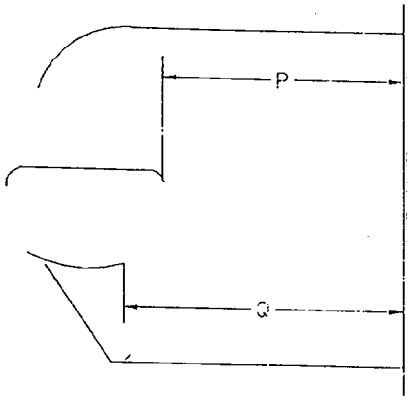
TEST VEHICLE MEASUREMENTS (Cont'd)

STATIC PASSENGER COMPARTMENT INTRUSION




MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE



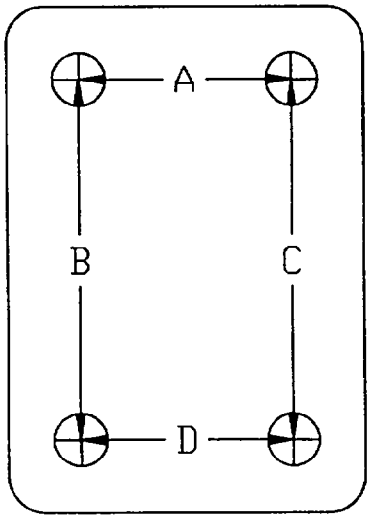

Units = mm

| MEASUREMENT | PRE TEST | POST TEST | DIFFERENCE |
|---|---|---|---|
| I | 390 | 294 | 96 |
| J | 602 | 703 | -101 |
| K | 1058 | 1010 | 48 |
| L | 864 | 833 | 31 |
| M | 1232 | 1184 | 48 |
| N | 1442 | 1390 | 52 |
| O | 1438 | 1365 | 73 |
| P | 1087 | 1049 | 38 |
| Q | 1241 | 1338 | 97 |

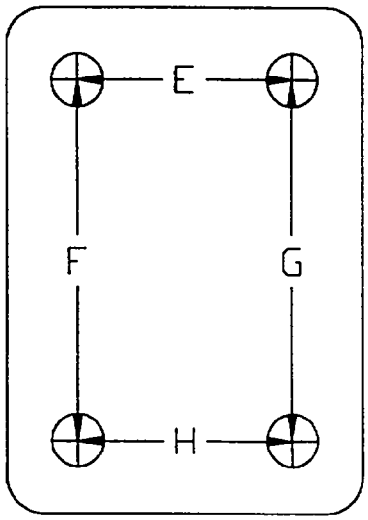
TEST VEHICLE MEASUREMENTS (Cont'd)

UNDERBODY FLOORBOARD DEFORMATION

DRIVER'S SIDE



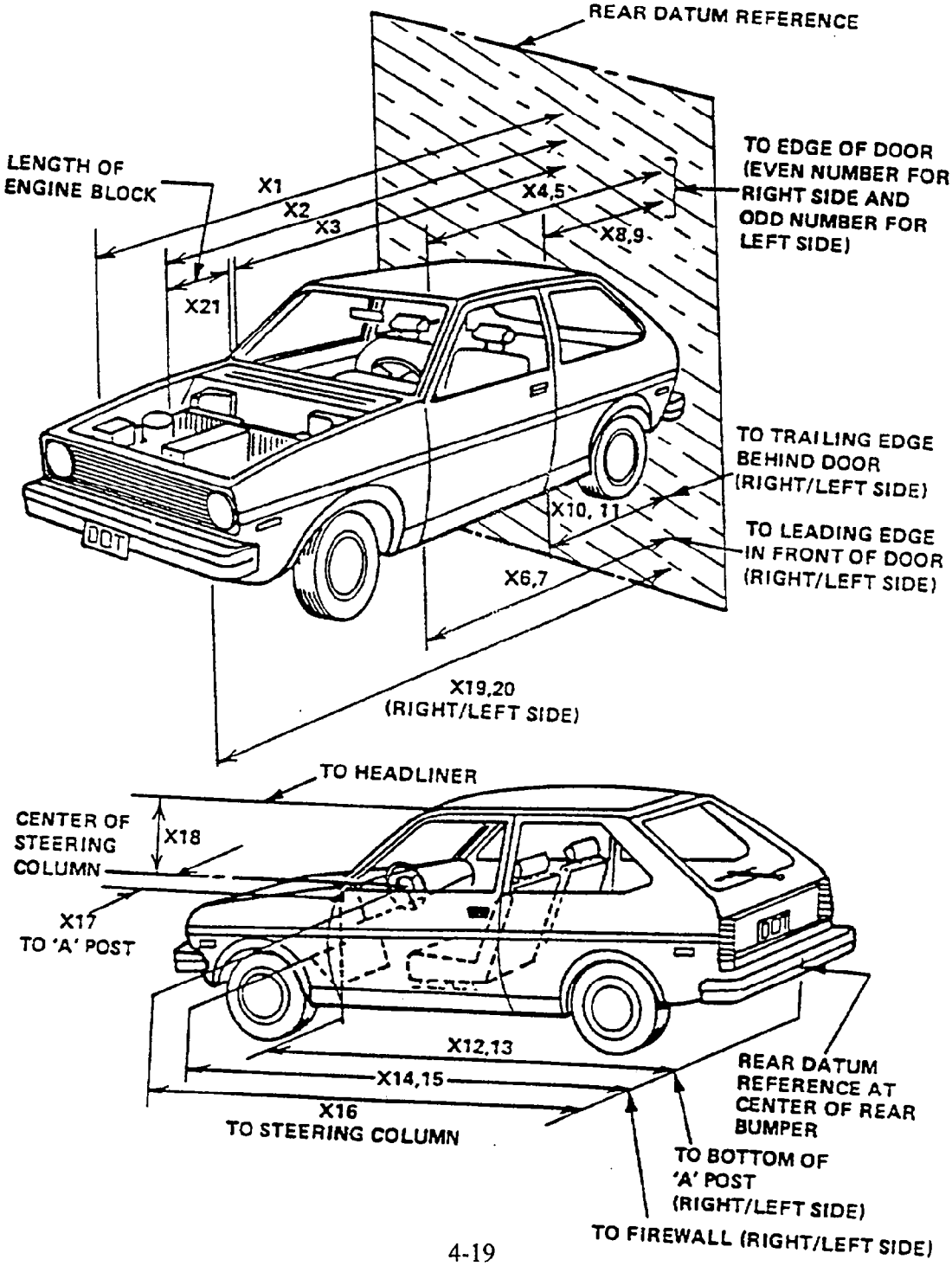

PASSENGER'S SIDE




| MEASUREMENT | PRE TEST | POST TEST | DIFFERENCE |
|---|---|---|---|
| A | 405 | 359 | 46 |
| B | 425 | 412 | 13 |
| C | 434 | 357 | 77 |
| D | 416 | 407 | 9 |
| E | 358 | 348 | 10 |
| F | 447 | 423 | 24 |
| G | 445 | 443 | 2 |
| H | 403 | 409 | -6 |

TEST VEHICLE MEASUREMENTS (Cont'd)

| No. | MEASUREMENT DESCRIPTION: | Pre-Test (mm) | Post-Test (mm) | Diff. (mm) |
|---|---|---|---|---|
| X1 | Total Length of Test Vehicle at Centerline | 4912 | 4338 | 574 |
| X2 | Rear Surface of Vehicle to Front of Engine | 4092 | 3864 | 228 |
| X3 | Rear Surface of Vehicle to Firewall | 3876 | 3719 | 157 |
| X4 | Rear Surface to Upr. Leading Edge of Rt. Door | 3387 | 3356 | 31 |
| X5 | Rear Surface to Upr. Leading Edge of Left Door | 3377 | 3372 | 5 |
| X6 | Rear Surface to Lwr. Leading Edge of Rt. Door | 3387 | 3363 | 24 |
| X7 | Rear Surface to Lwr. Leading Edge of Left Door | 3385 | 3373 | 12 |
| X8 | Rear Surface to Upr. Trailing Edge of Rt. Door | 2080 | 2066 | 14 |
| X9 | Rear Surface to Upr. Trailing Edge of Left Door | 2075 | 2075 | 0 |
| X10 | Rear Surface to Lwr. Trailing Edge of Rt. Door | 2145 | 2127 | 18 |
| X11 | Rear Surface to Lwr. Trailing Edge of Left Door | 2146 | 2147 | -1 |
| X12 | Rear Surface to Bottom of A-Post on Rt. Side | 3389 | 3361 | 28 |
| X13 | Rear Surface to Bottom of A-Post on Left Side | 3387 | 3383 | 4 |
| X14 | Rear Surface to Firewall on Right Side | 3796 | 3674 | 122 |
| X15 | Rear Surface to Firewall on Left Side | 3804 | 3694 | 110 |
| X16 | Rear Surface to Steering Column | 2875 | 2883 | 8 |
| X17 | Center of Steering Column to A-Post | 398 | 335 | 63 |
| X18 | Center of Steering Column to Headlining | 392 | 305 | 87 |
| X19 | Rear Surface to Right Side of Front Bumper | 4674 | 4288 | 386 |
| X20 | Rear Surface to Left Side of Front Bumper | 4675 | 4256 | 419 |
| X21 | Length of Engine Block | 475 | 475 | 0 |


REAR DATUM REFERENCE
LENGTH OF ENGINE BLOCK
X1
X2
X3
X4,5
X8,9
X21
TO EDGE OF DOOR (EVEN NUMBER FOR RIGHT SIDE AND ODD NUMBER FOR LEFT SIDE)
TO TRAILING EDGE BEHIND DOOR (RIGHT/LEFT SIDE)
X10, 11
TO LEADING EDGE IN FRONT OF DOOR (RIGHT/LEFT SIDE)
X6,7
X19,20 (RIGHT/LEFT SIDE)
TO HEADLINER
CENTER OF STEERING COLUMN
X18
X17 TO 'A' POST
X12,13
X14,15
X16 TO STEERING COLUMN
REAR DATUM REFERENCE AT CENTER OF REAR BUMPER
TO BOTTOM OF 'A' POST (RIGHT/LEFT SIDE)
TO FIREWALL (RIGHT/LEFT SIDE)

ACCIDENT INVESTIGATION DIVISION DATA

FOR 35 MPH FRONTAL BARRIER IMPACT

VEHICLE MAKE/MODEL/BODY STYLE: 1996/Chrysler/Sebring/Convertible

VEH. NHTSA NO.: MT0306 ; VIN: 3C3E645X6TT291593

MODEL YEAR: 1996 ; BUILD DATE: 5/96 ; TEST DATE: September 11, 1996

VEH. SIZE CATEGORY: Full Size ; TEST WEIGHT: 1716 kg

VEH. WHEELBASE: 2688 mm; FRONT OVERHANG: 1017 mm; OVERALL WIDTH: 1780 mm

ACCELEROMETER DATA:

LOCATION: As per measurements on pages 4-13

CALIBRATION PROCEDURE: As per MGA Calibration Procedure

LINEARITY: >99.9% ; INTEGRATION ALGORITHM: Trapezoidal

VEH: IMPACT SPEED: 56.6 kph ; TIME OF SEPARATION: 84 msec

VELOCITY CHANGE: 65.7 kph

COLLISION DEFORMATION CLASSIFICATION (CDC) CODE: F (Frontal)

CRUSH DEPTH DIMENSIONS:

C1 = 419 mm

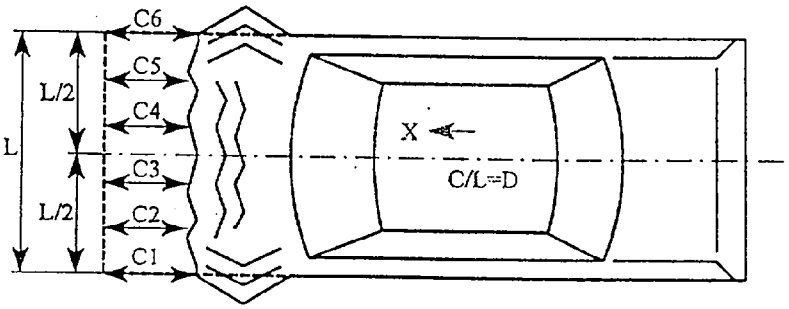
C2 = 521 mm

C3 = 584 mm

C4 = 551 mm

C5 = 473 mm

C6 = 386 mm




MIDPOINT OF DAMAGE: D = Vehicle Centerline (Longitude)

LENGTH OF DAMAGED REGION: L = 1340 mm

# APPENDIX A

# PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Note: Due to a NHTSA clerical error, the test number on the photographs is incorrect. The correct NHTSA No. MT0306.


| | Page No. |
|---|---|
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| 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 |

TABLE OF PHOTOGRAPHS (Cont'd)


| | Page No. |
|---|---|
| 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 |
| 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 - Pre-Test Passenger Dummy Position Right Side View | A-32 |
| Photo No. A-33 - Post-Test Passenger Dummy Position Right Side View | A-33 |
| Photo No. A-34 - Pre-Test Passenger Dummy Position Right Side View (Door Open) | A-34 |
| Photo No. A-35 - Post-Test Passenger Dummy Position Right Side View (Door Open) | A-35 |
| Photo No. A-36 - Pre-Test Passenger Seat Position View | A-36 |
| Photo No. A-37 - Post-Test Passenger Seat Position View | A-37 |
| Photo No. A-38 - Pre-Test Passenger Dummy Knee Position | A-38 |
| Photo No. A-39 - Post-Test Passenger Dummy Knee Position | A-39 |
| Photo No. A-40 - Post-Test Passenger Airbag Contact | A-40 |
| Photo No. A-41 - Post-Test Passenger Knee Contact View | A-41 |
| Photo No. A-42 - Vehicle Certification Label | A-42 |
| Photo No. A-43 - Tire Placard | A-43 |
| Photo No. A-44 - Vehicle Impact | A-44 |
| Photo No. A-45 - Rollover 90° | A-45 |
| Photo No. A-46 - Rollover 180° | A-46 |
| Photo No. A-47 - Rollover 270° | A-47 |
| Photo No. A-48 - Rollover 360° | A-48 |

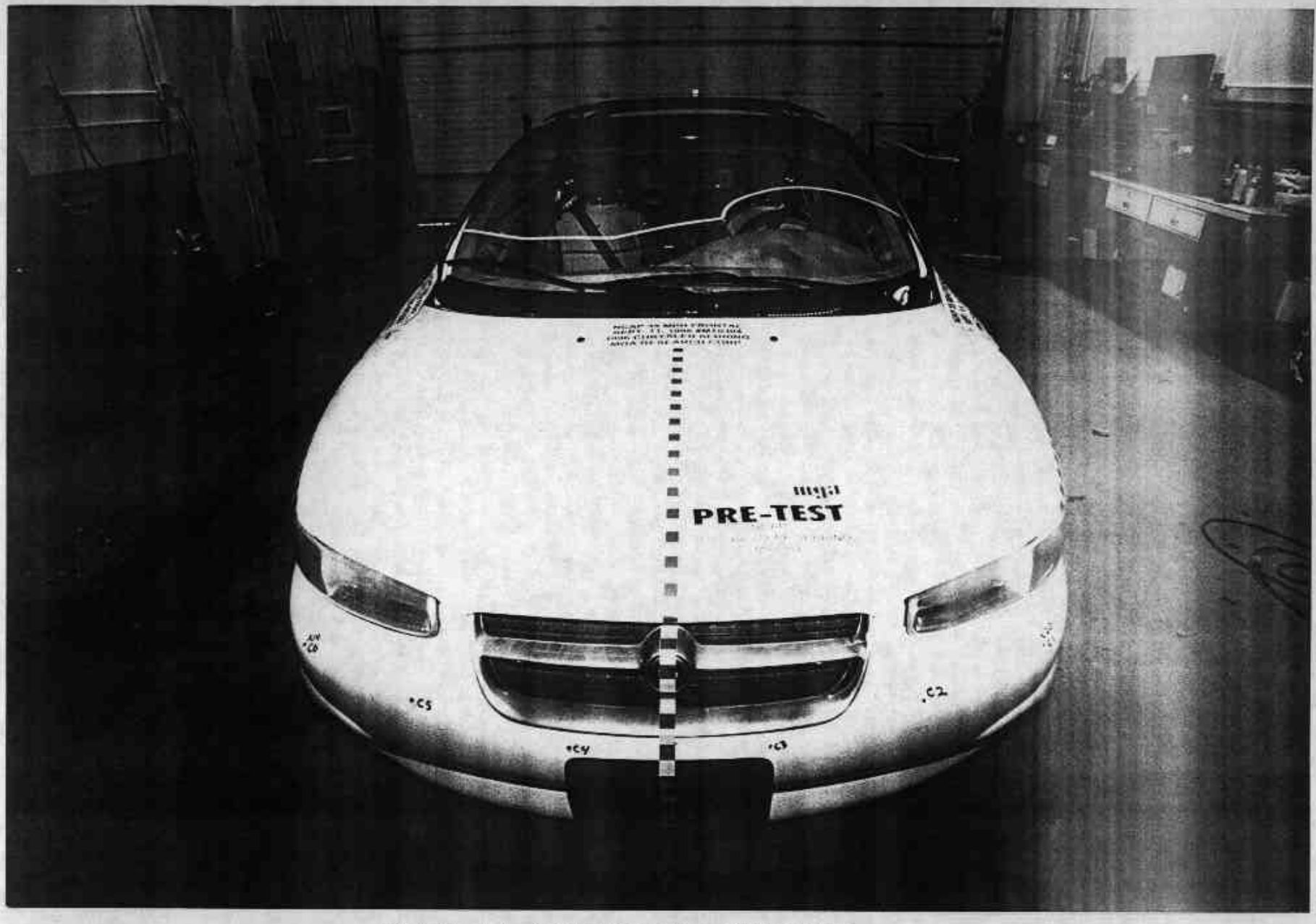



Photo No. A-1 - Pre-Test Front View of Test Vehicle

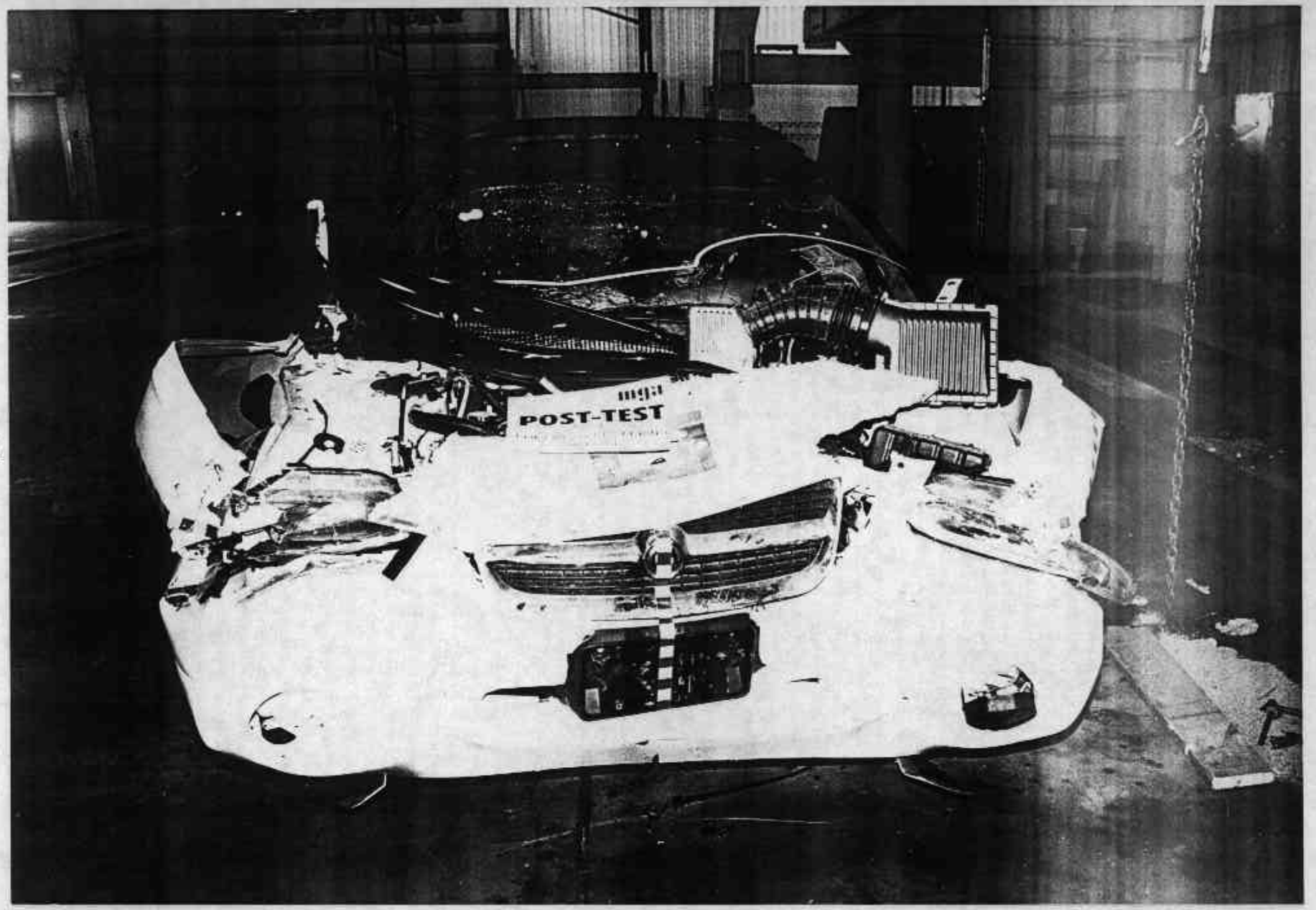



Photo No. A-2 - Post-Test Front View of Test Vehicle

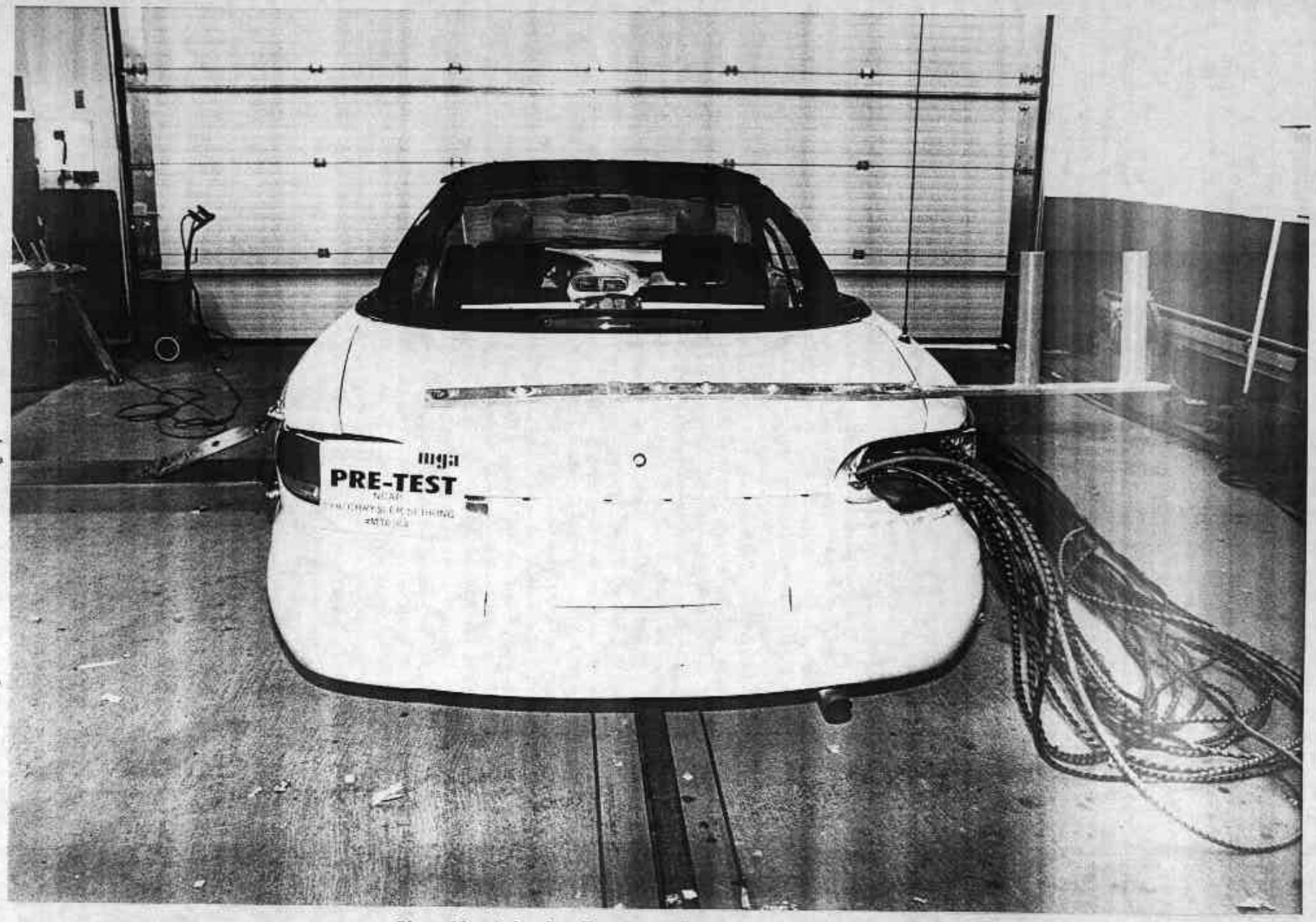
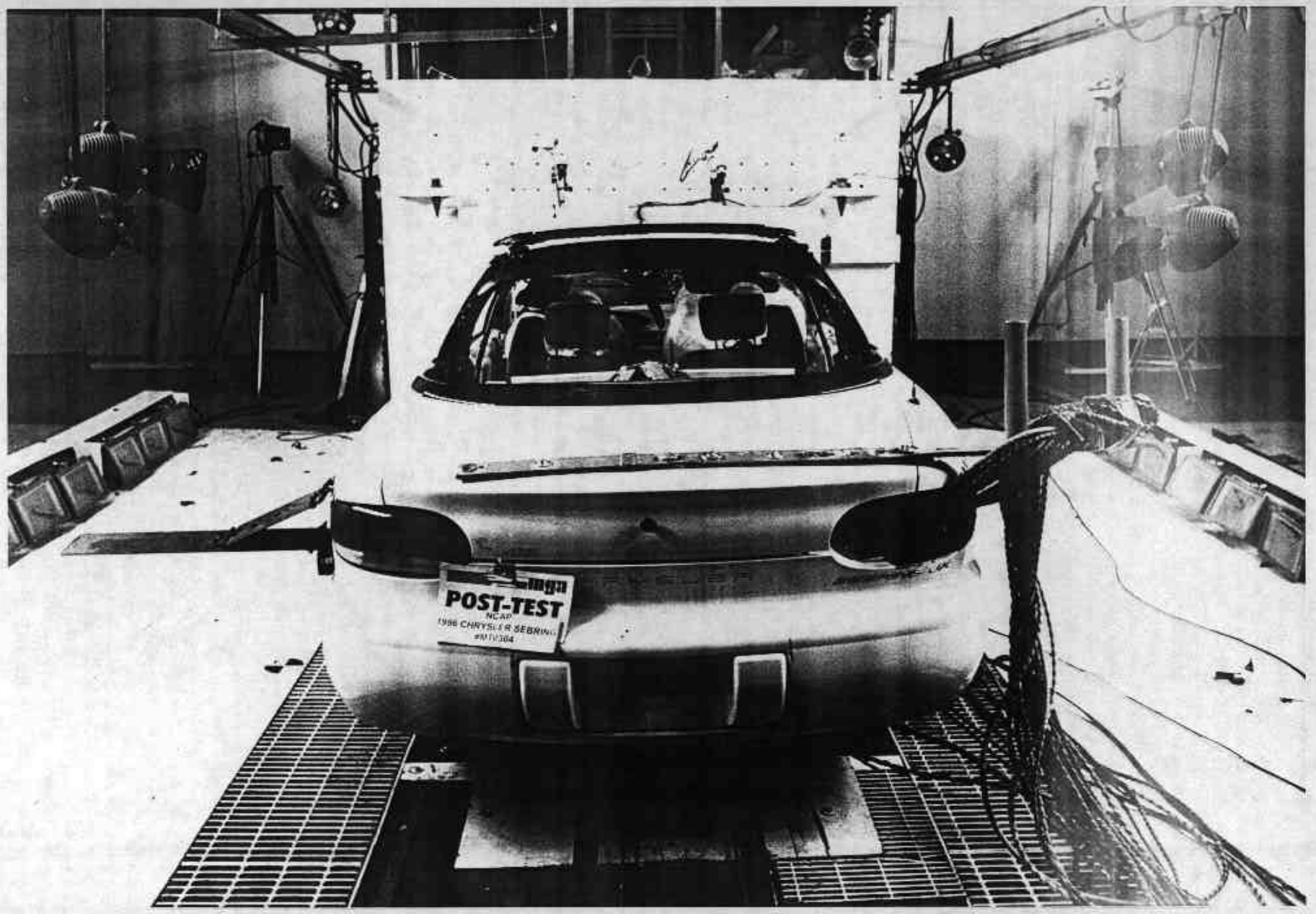



Photo No. A-3 - Pre-Test Rear View of Test Vehicle




A-4

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

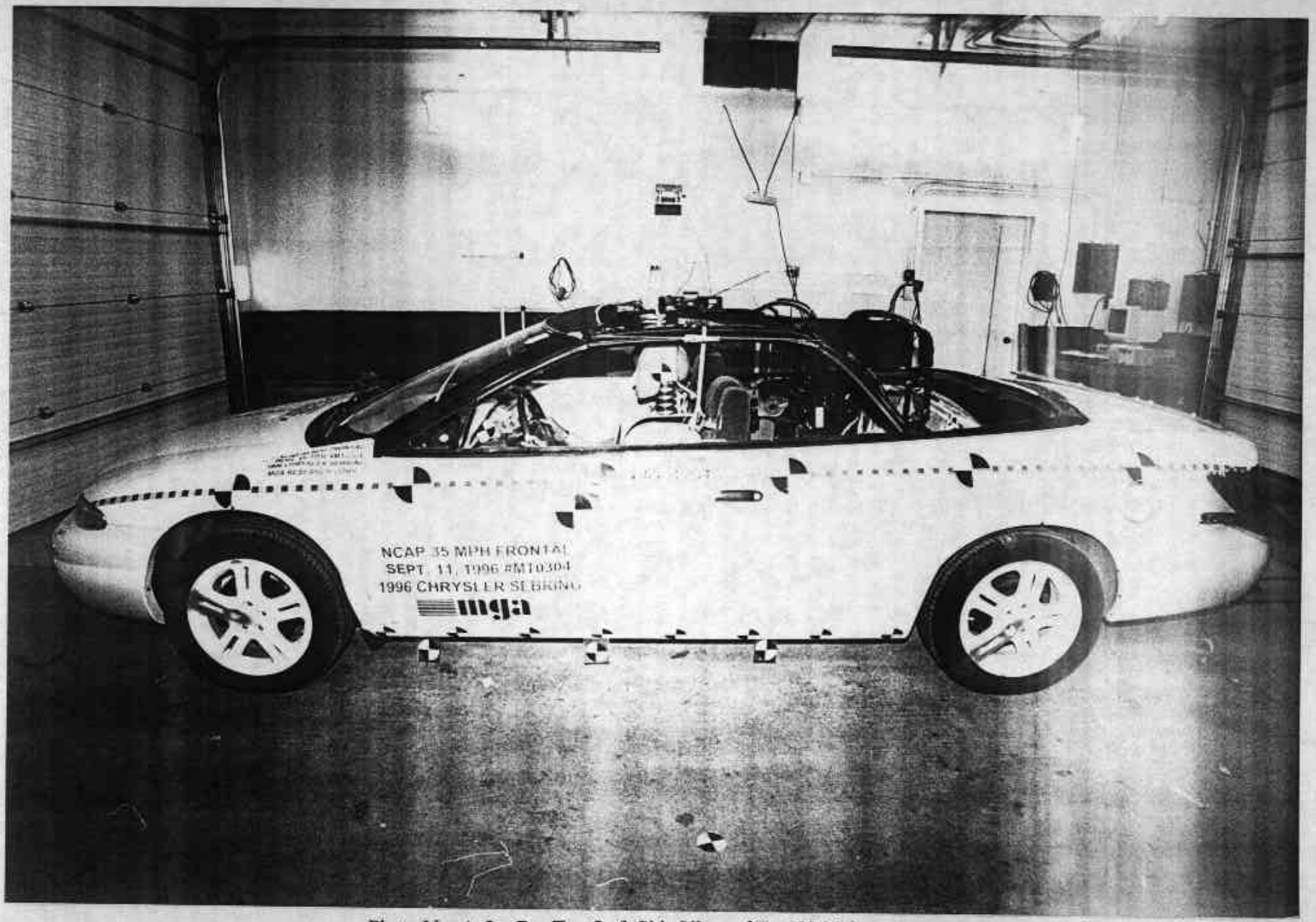
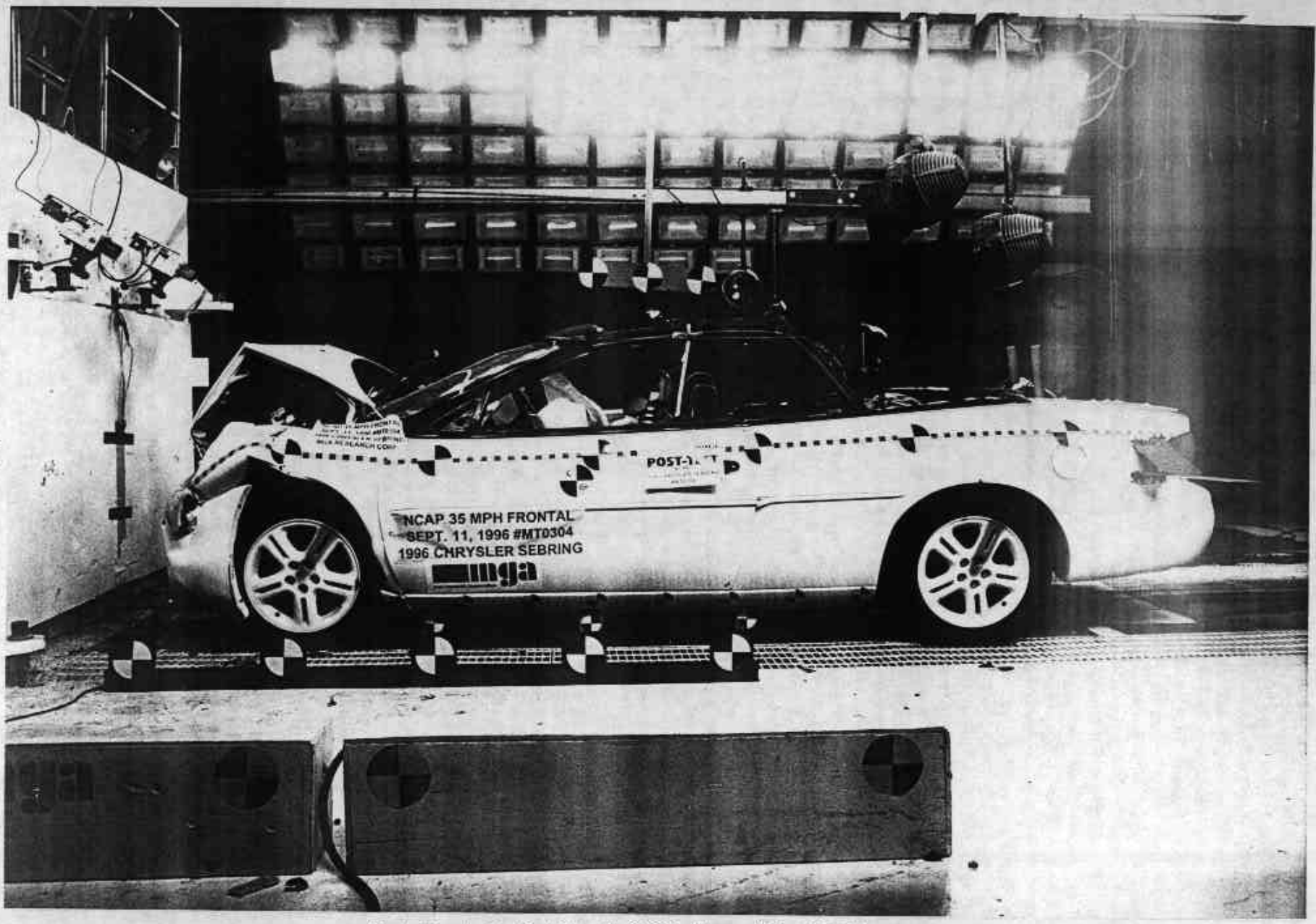
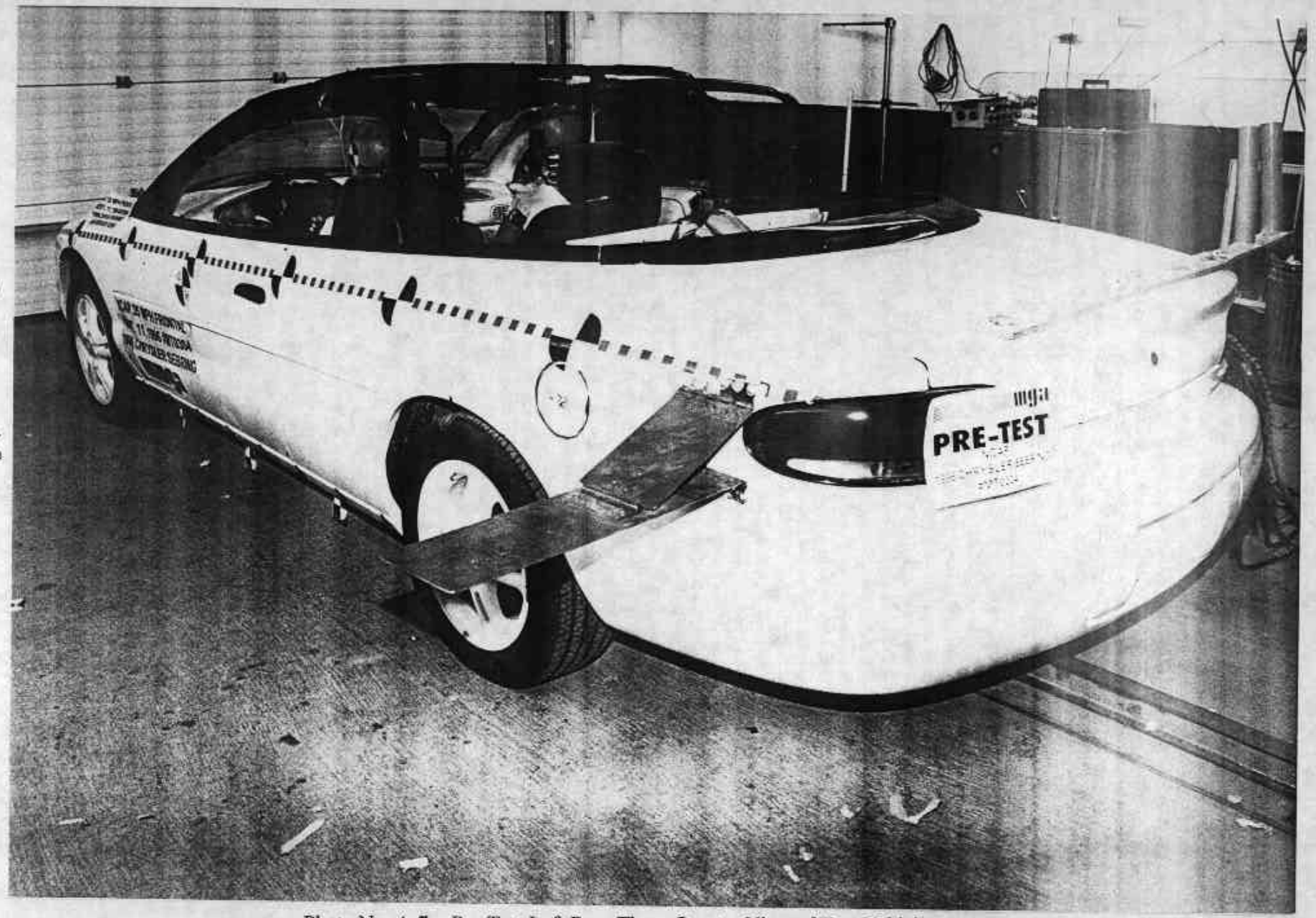



Photo No. A-5 - Pre-Test Left Side View of Test Vehicle




A-6

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




A-7

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

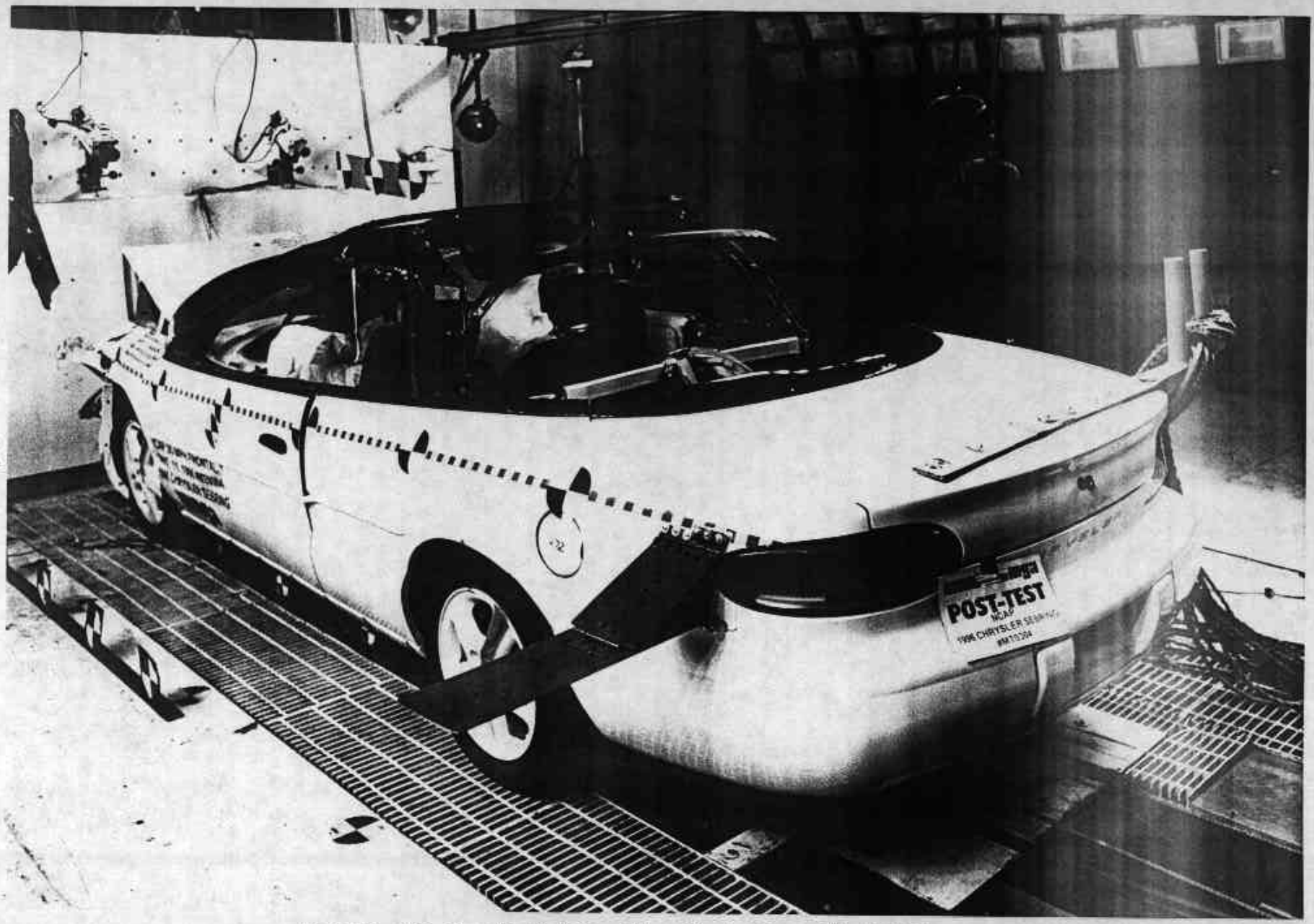



Photo No. A-8 - Post-Test Left Rear Three-Quarter View of Test Vehicle

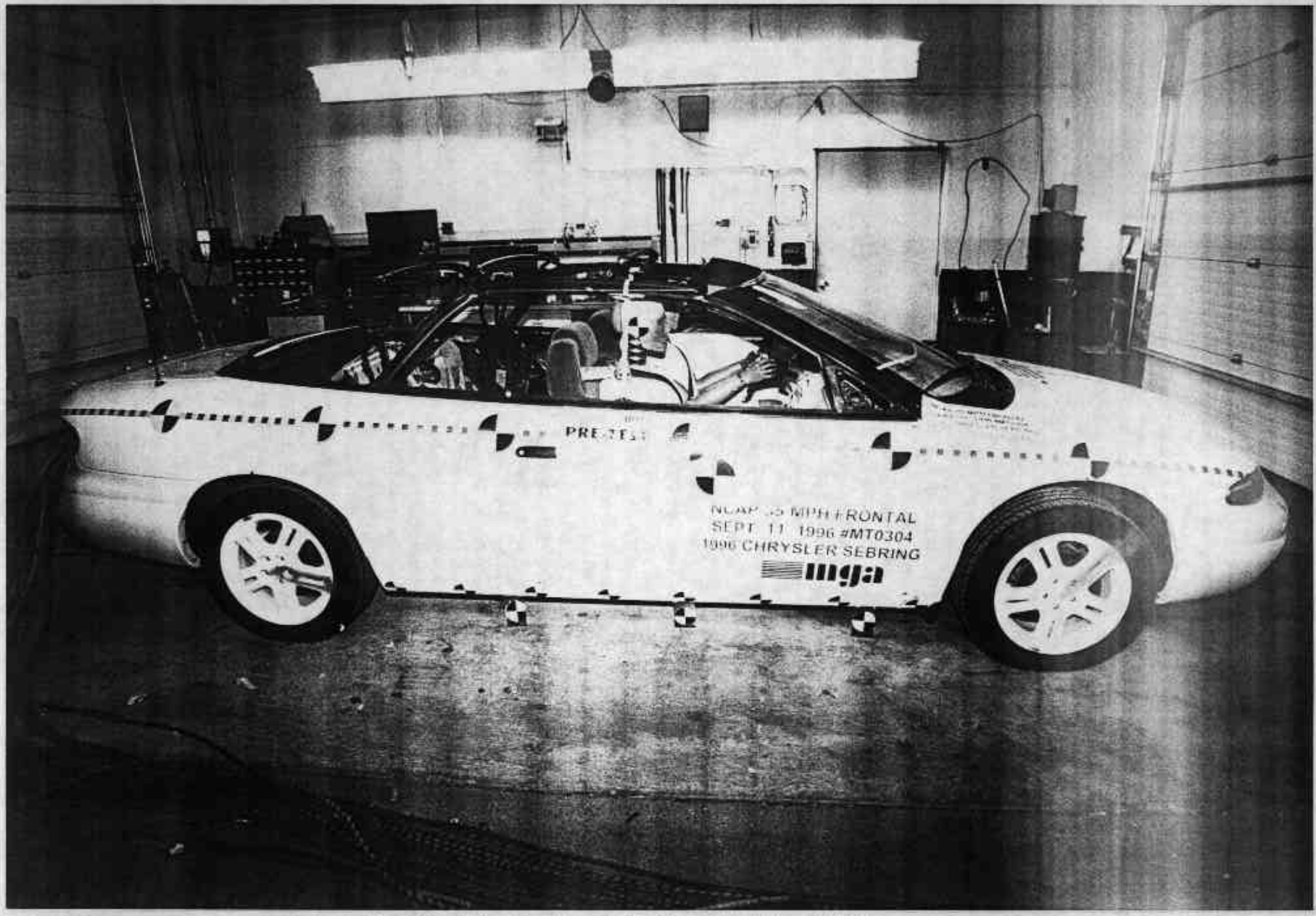



Photo No. A-9 - Pre-Test Right Side View of Test Vehicle

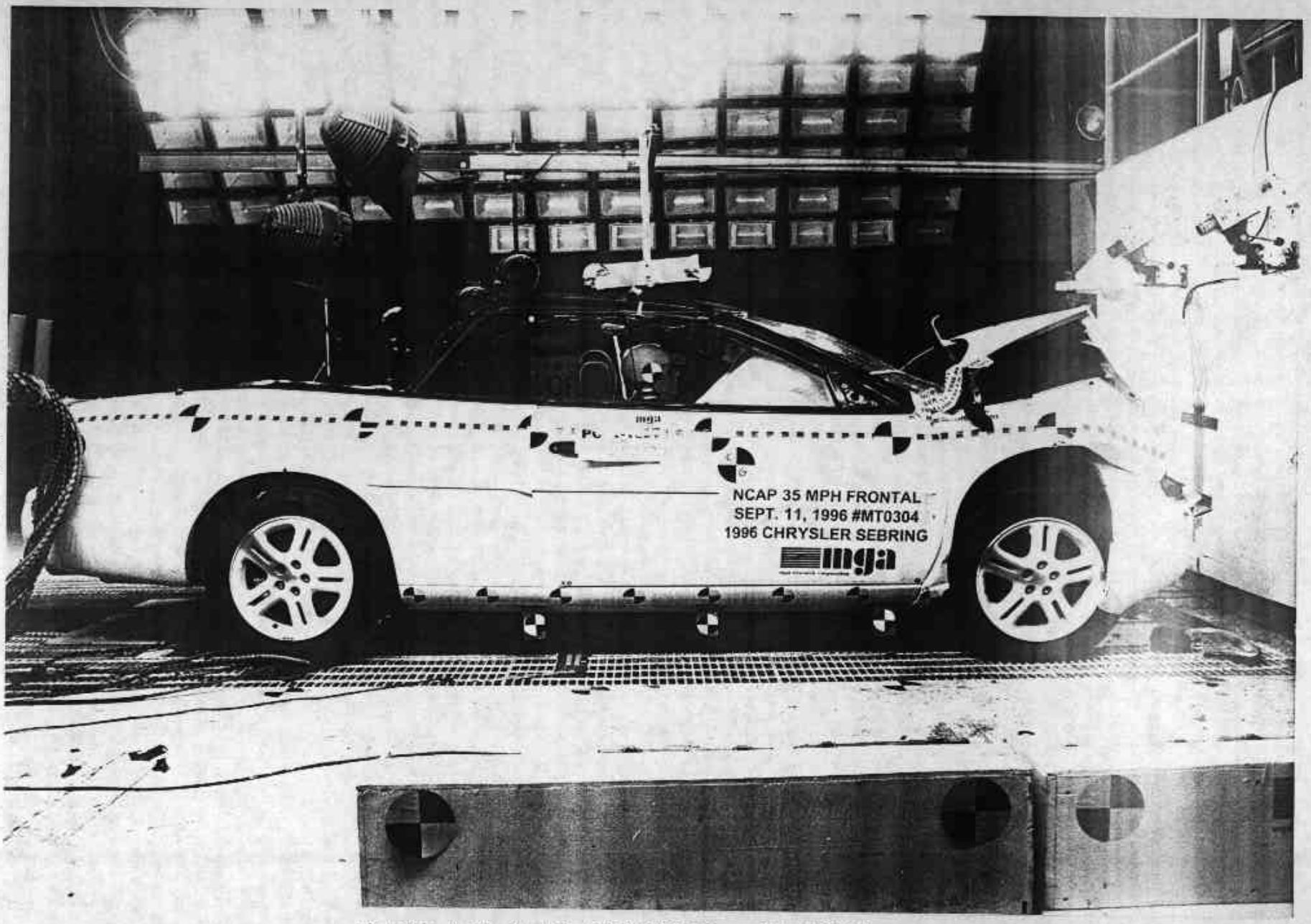



Photo No. A-10 - Post-Test Right Side View of Test Vehicle

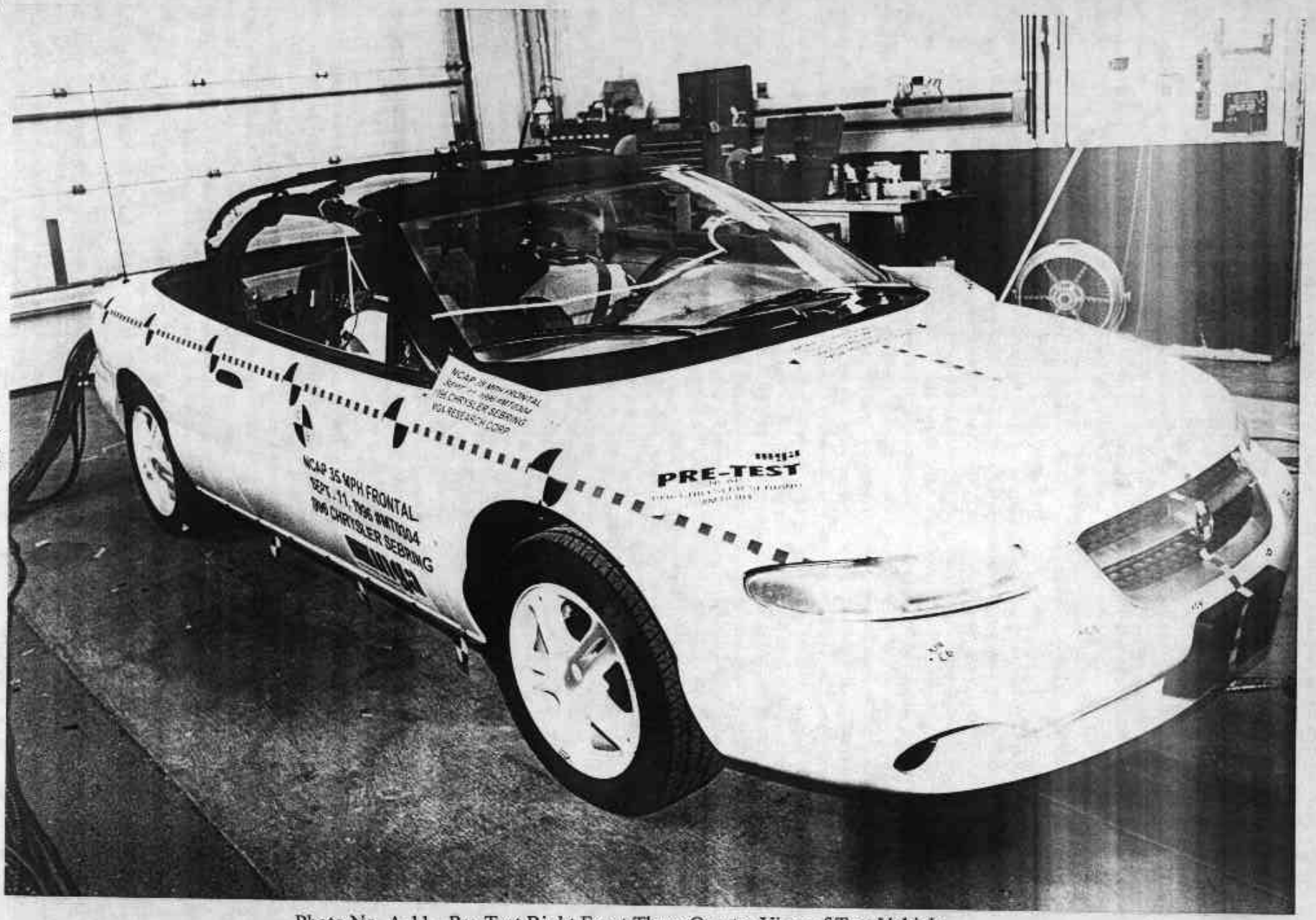



Photo No. A-11 - Pre-Test Right Front Three-Quarter View of Test Vehicle

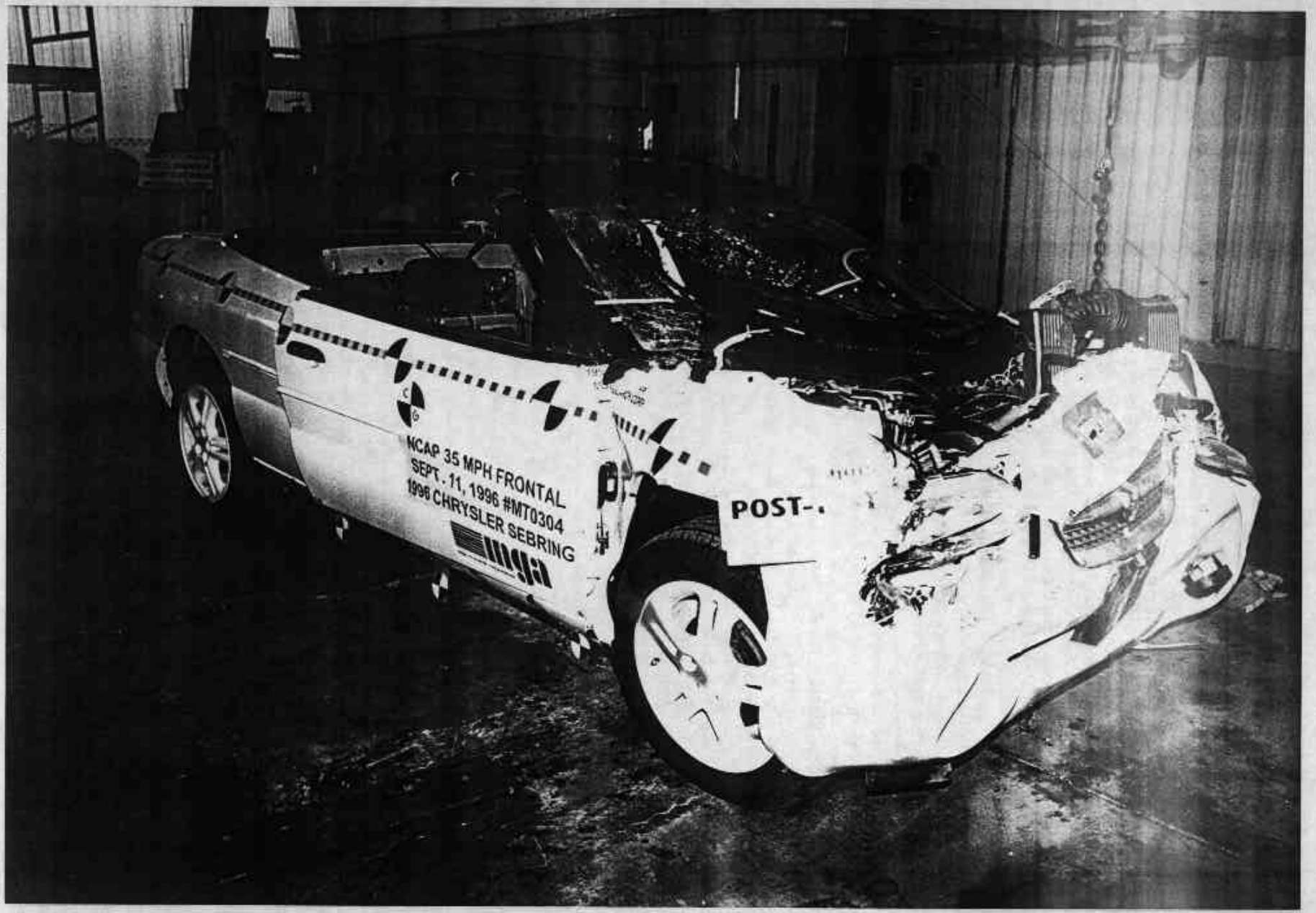



Photo No. A-12 - Post-Test Right Front Three-Quarter View of Test Vehicle


A-13

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

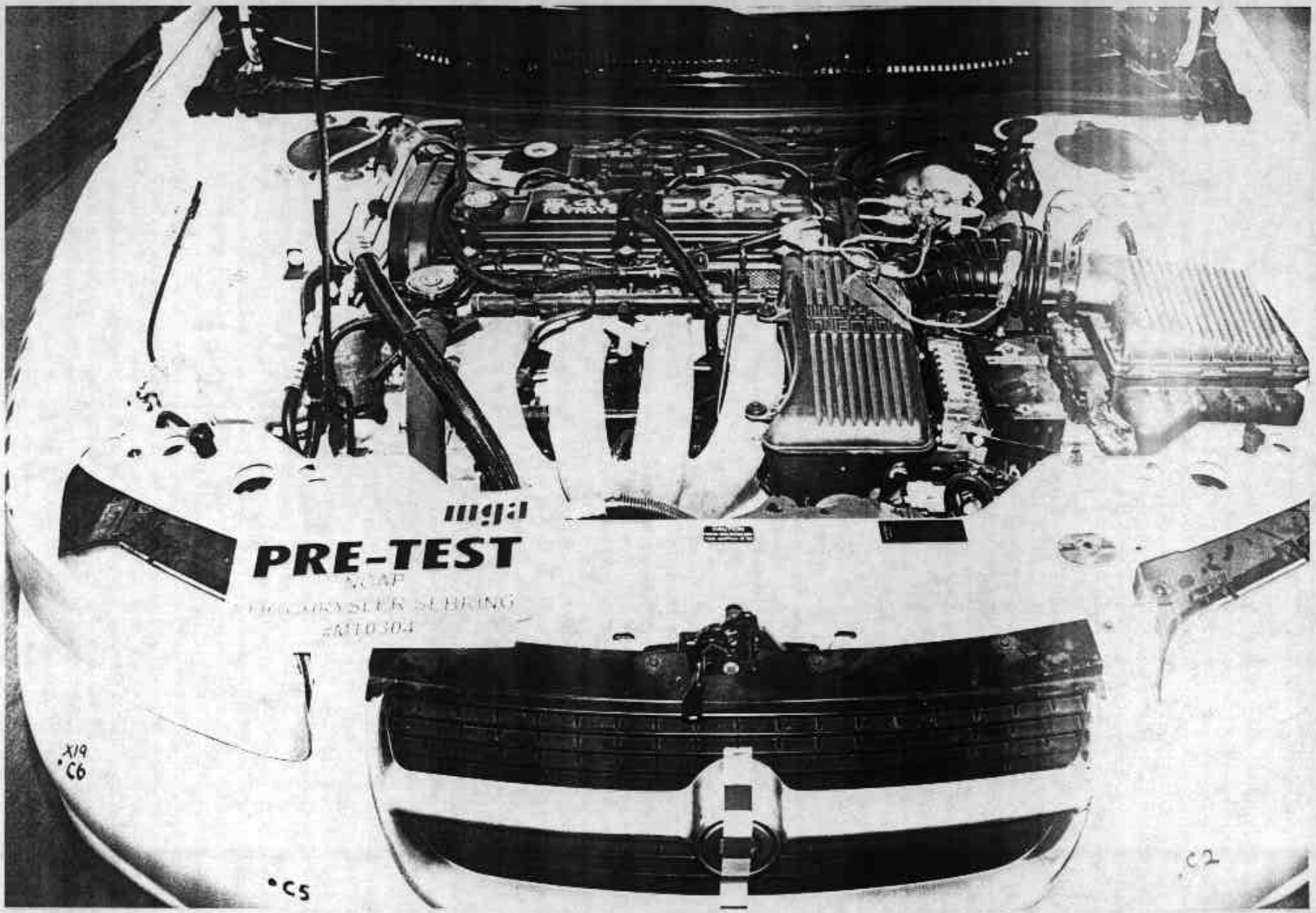
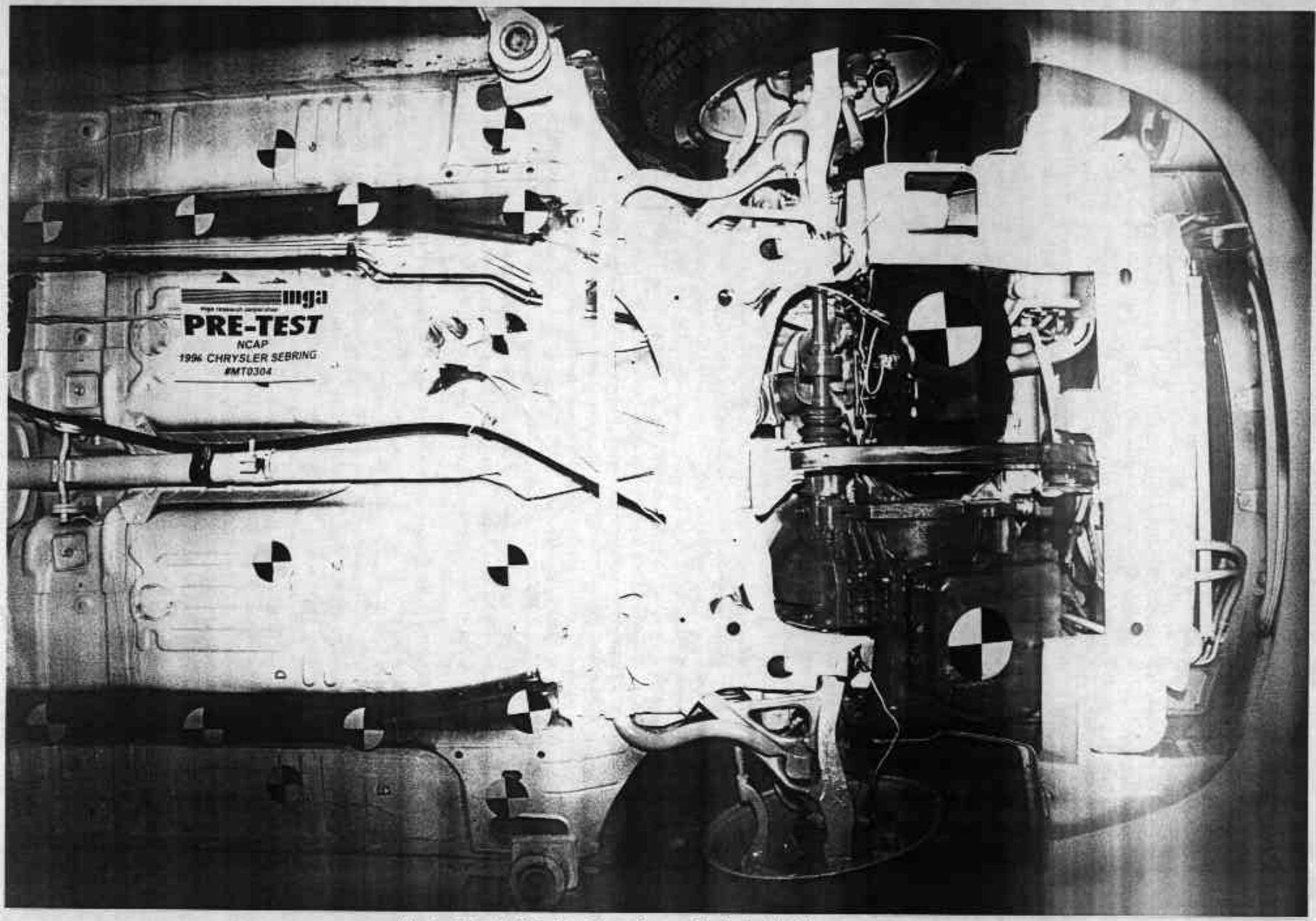



Photo No. A-14 - Pre-Test Engine Compartment View

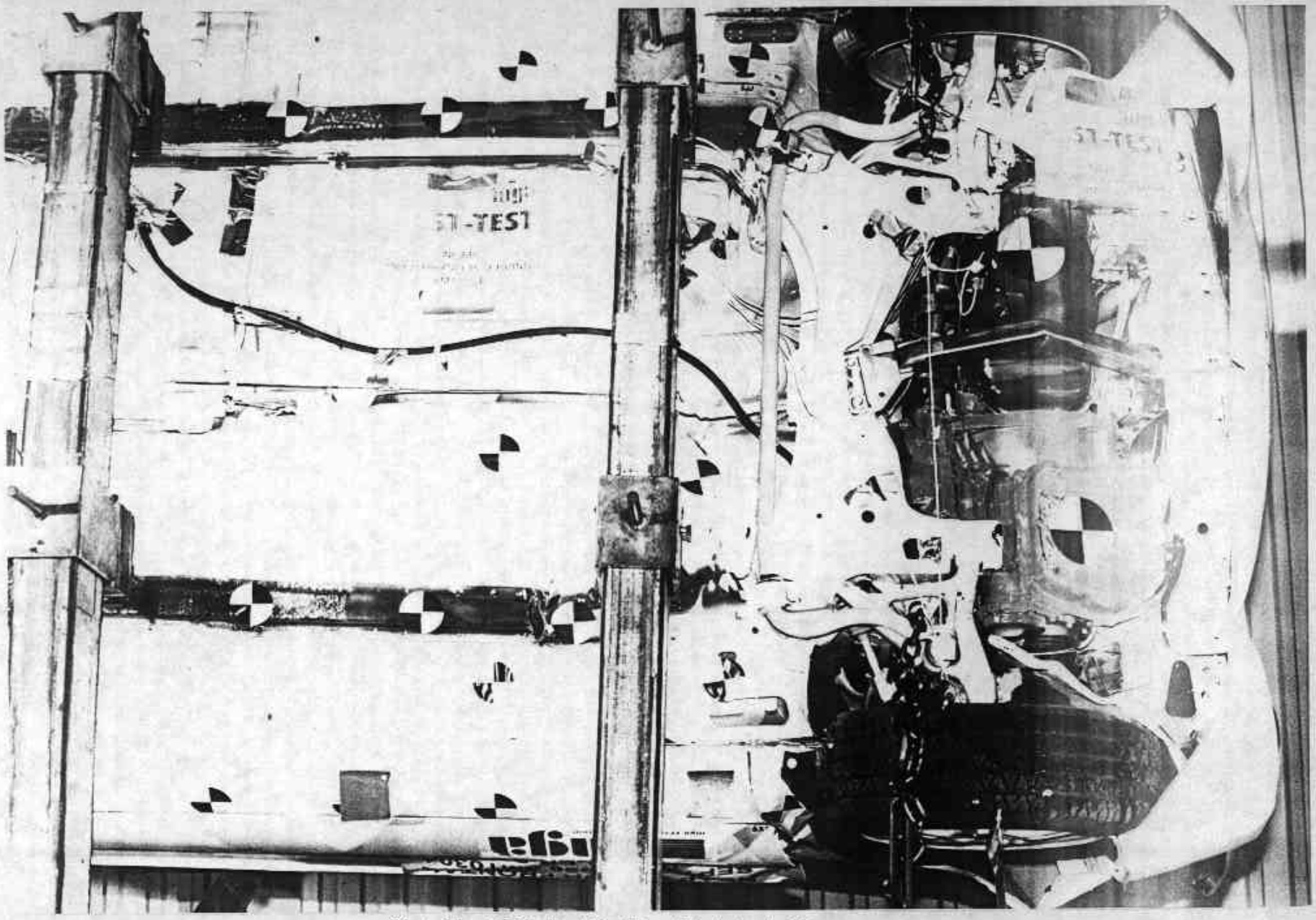

A-15

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




A-16

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



A-17

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

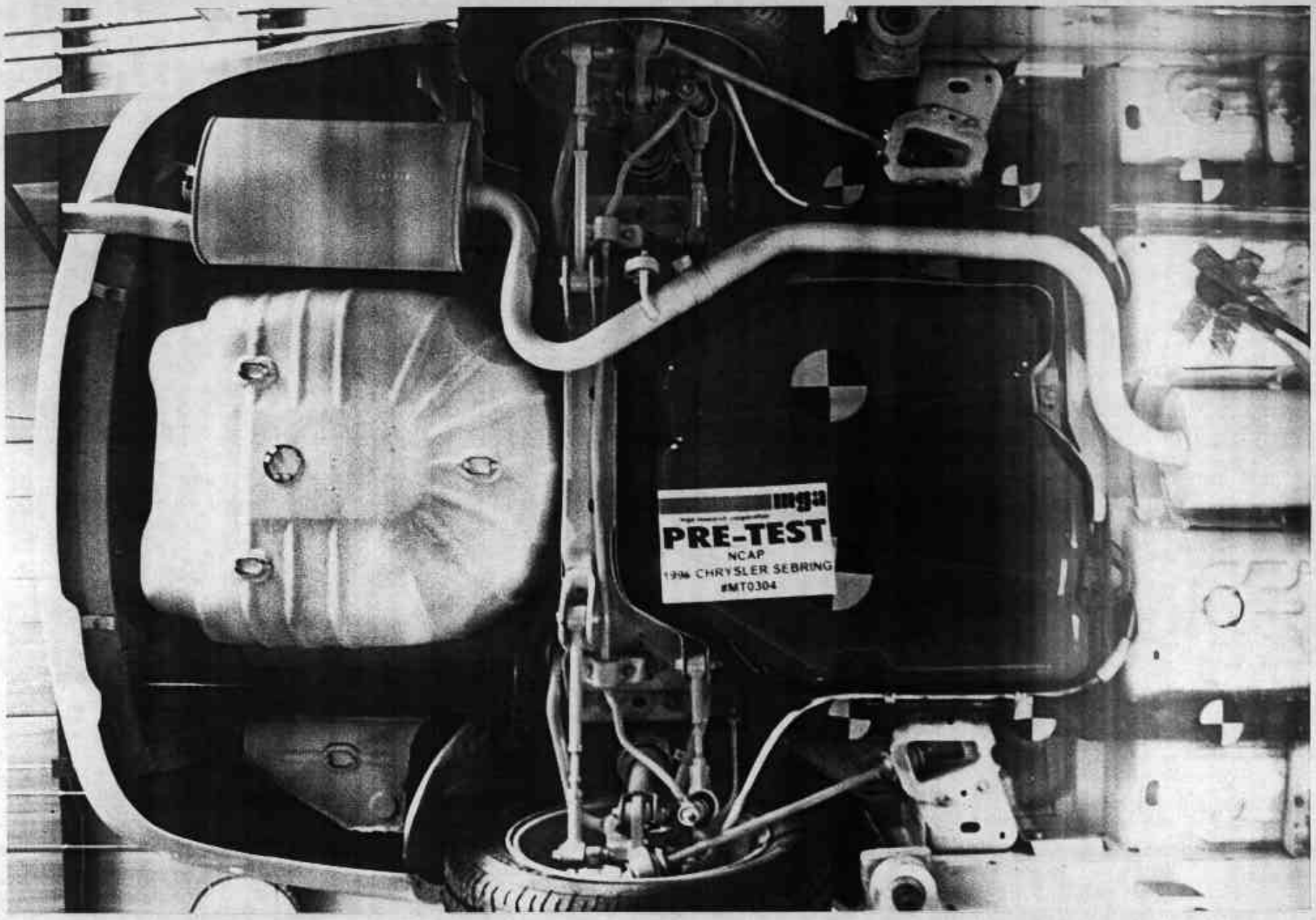



Photo No. A-18 - Pre-Test Rear Underbody View

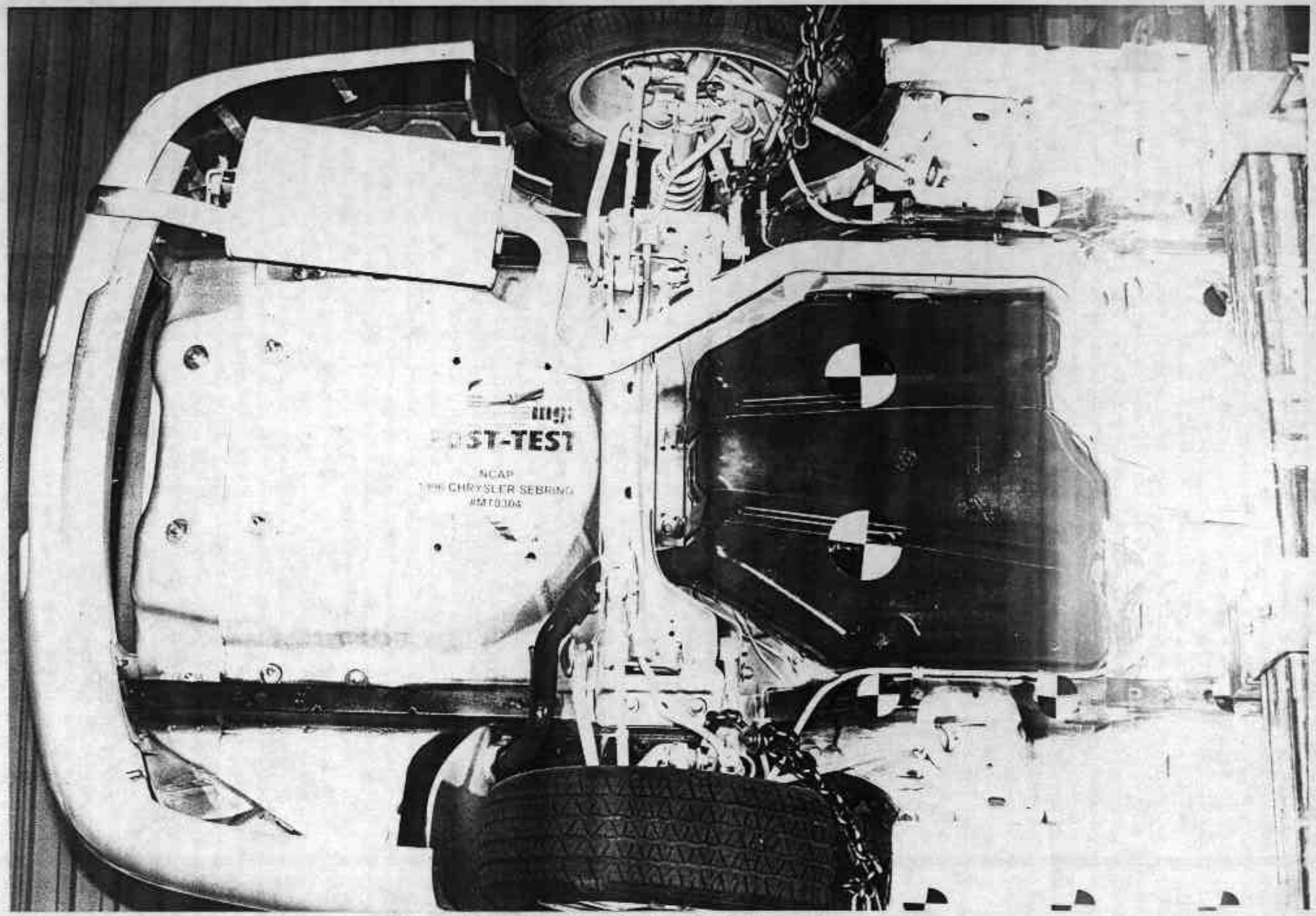



Photo No. A-19 - Post-Test Rear Underbody View

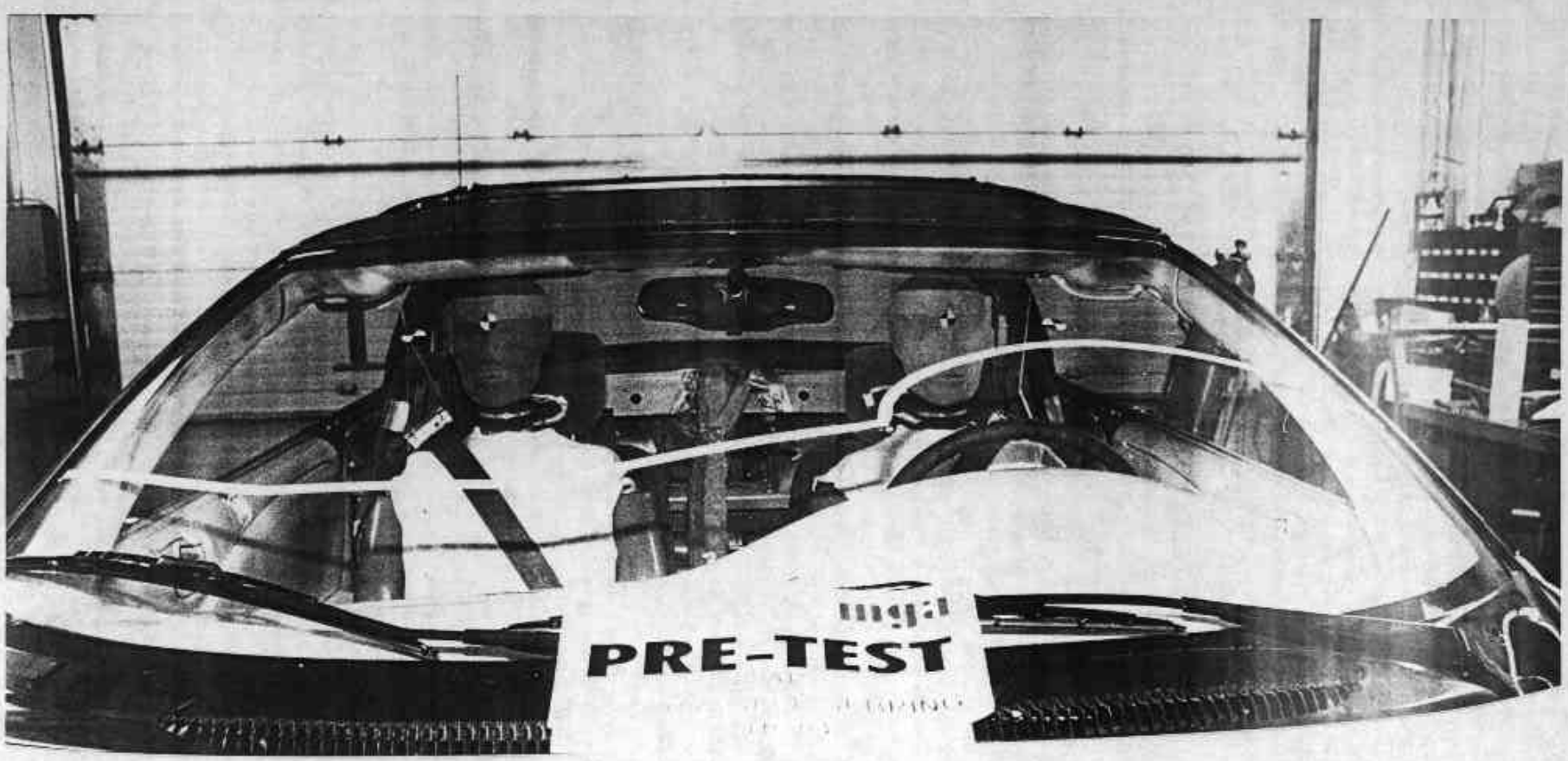
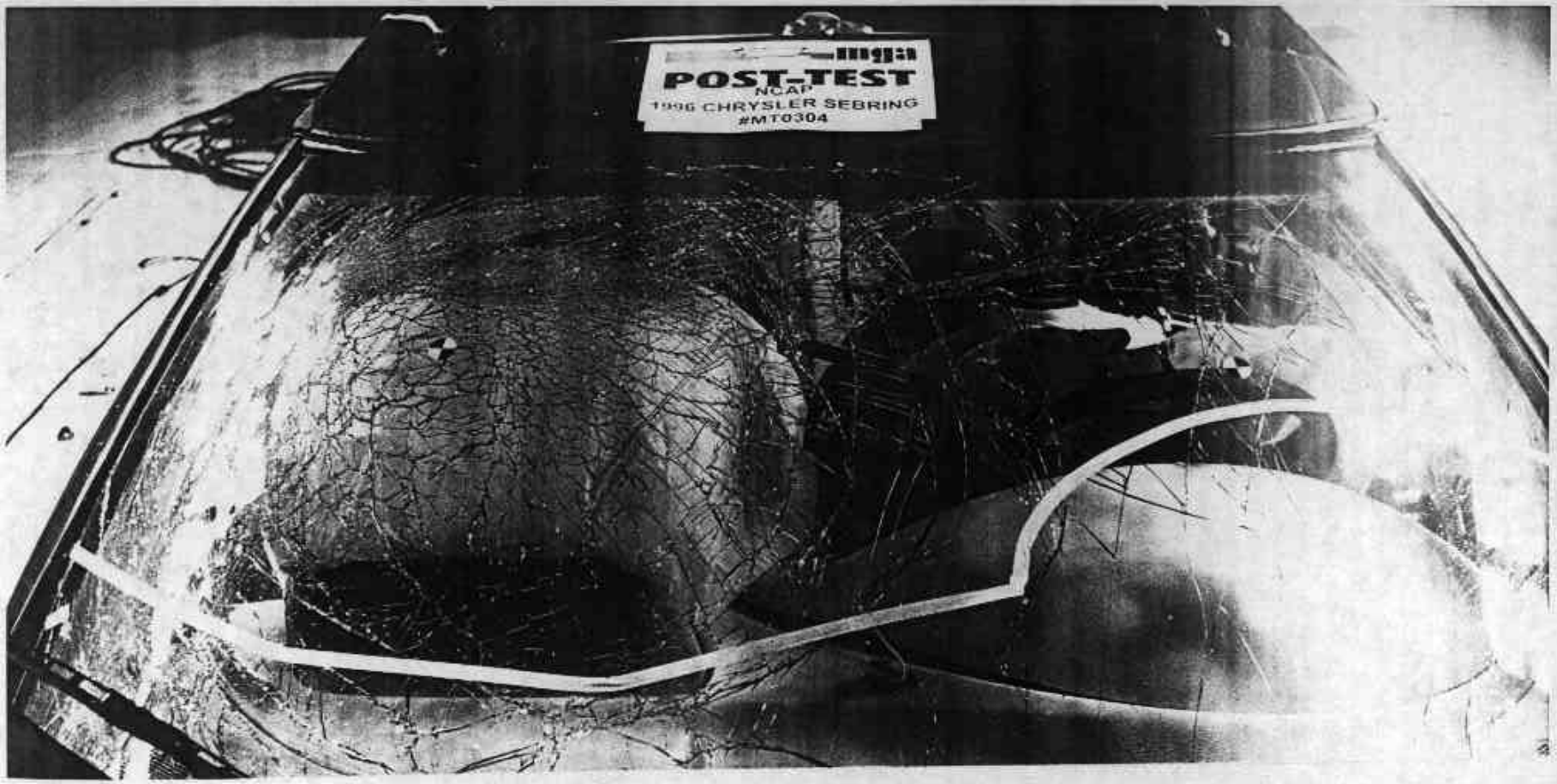



Photo No. A-20 - Pre-Test Windshield View

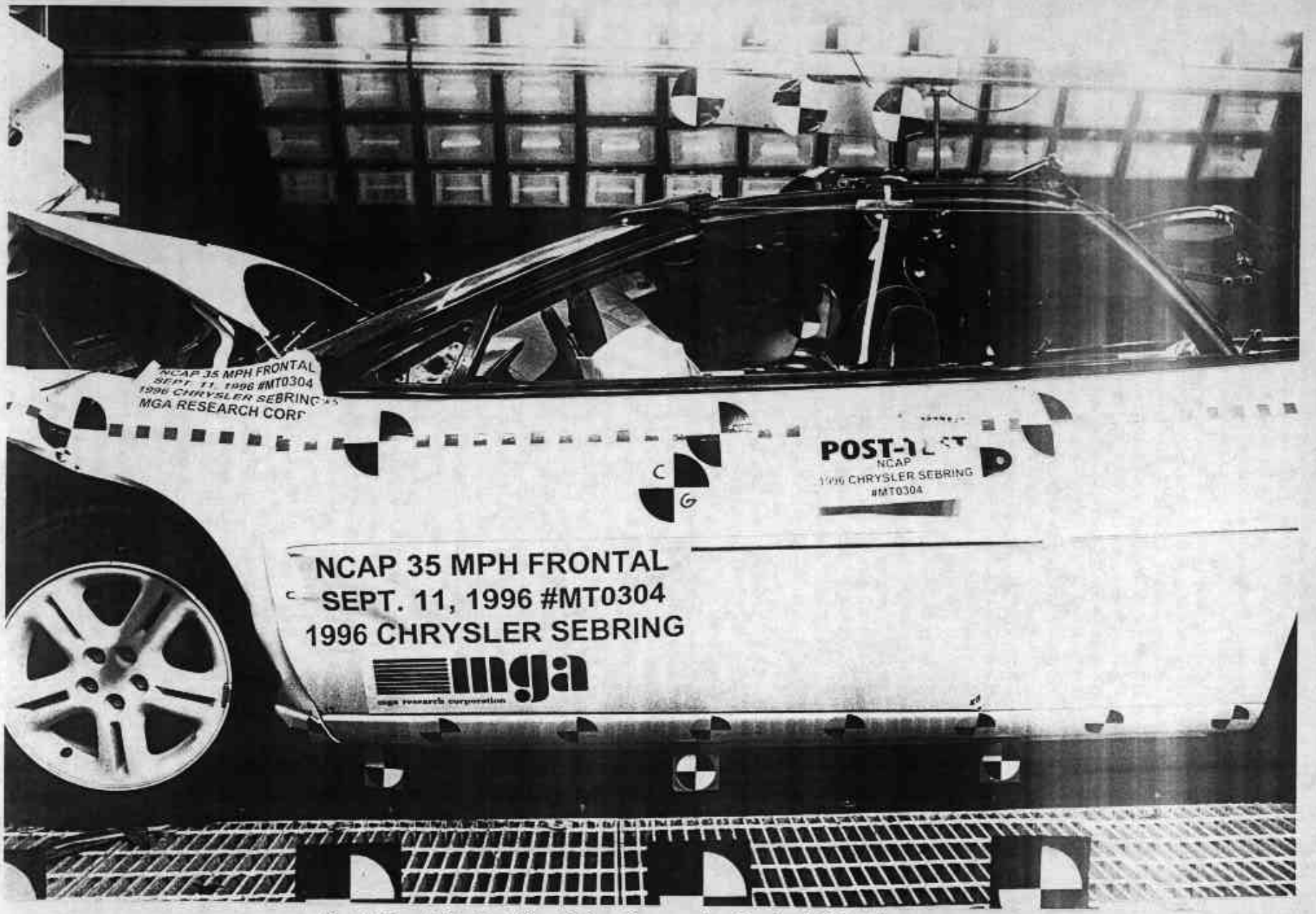



NCAP 35 MPH FRONTAL
SEPT. 11, 1996 #MT0304
1996 CHRYSLER SEBRING
MGA RESEARCH CORP

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

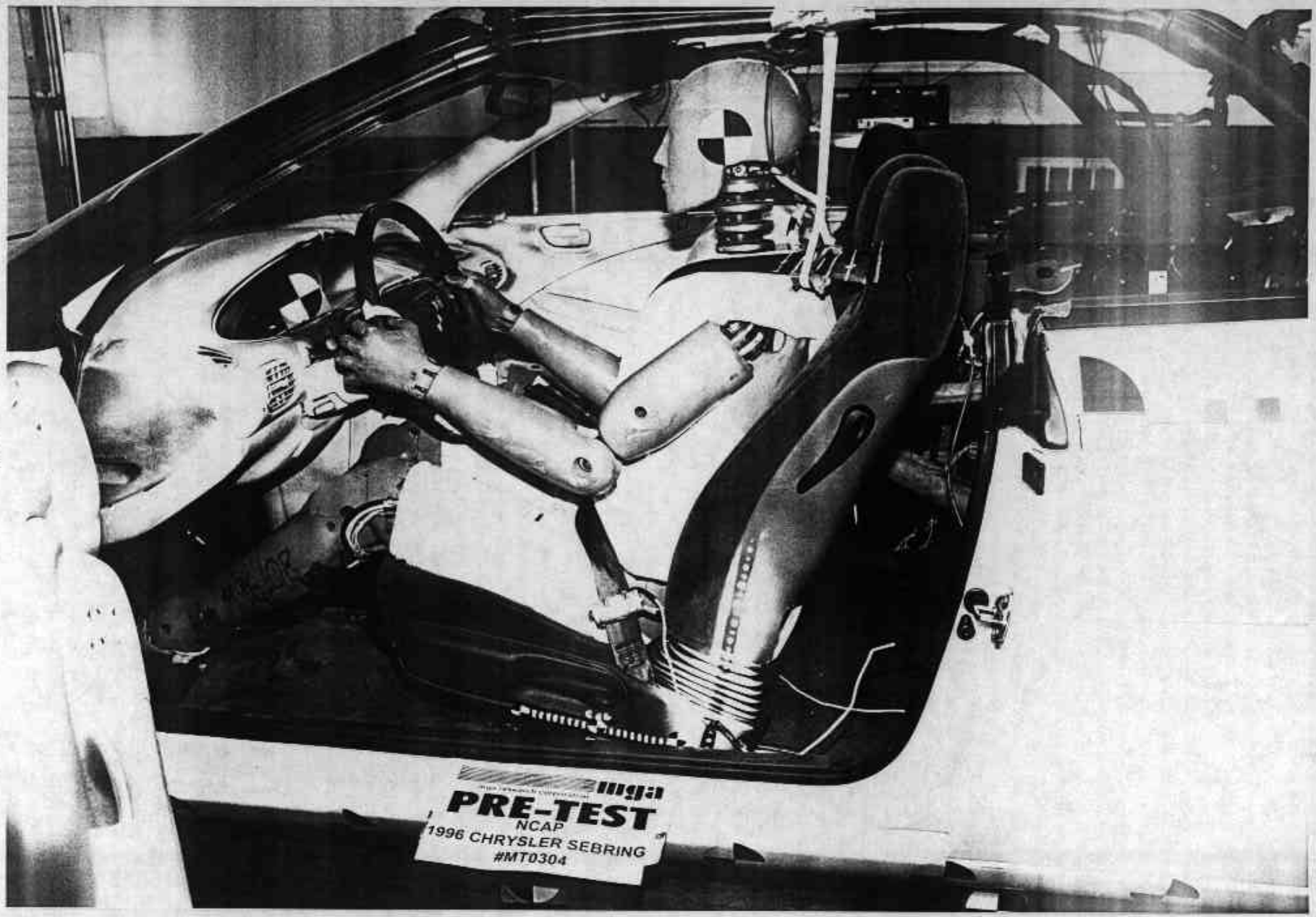

A-22

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




A-23

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




A-24

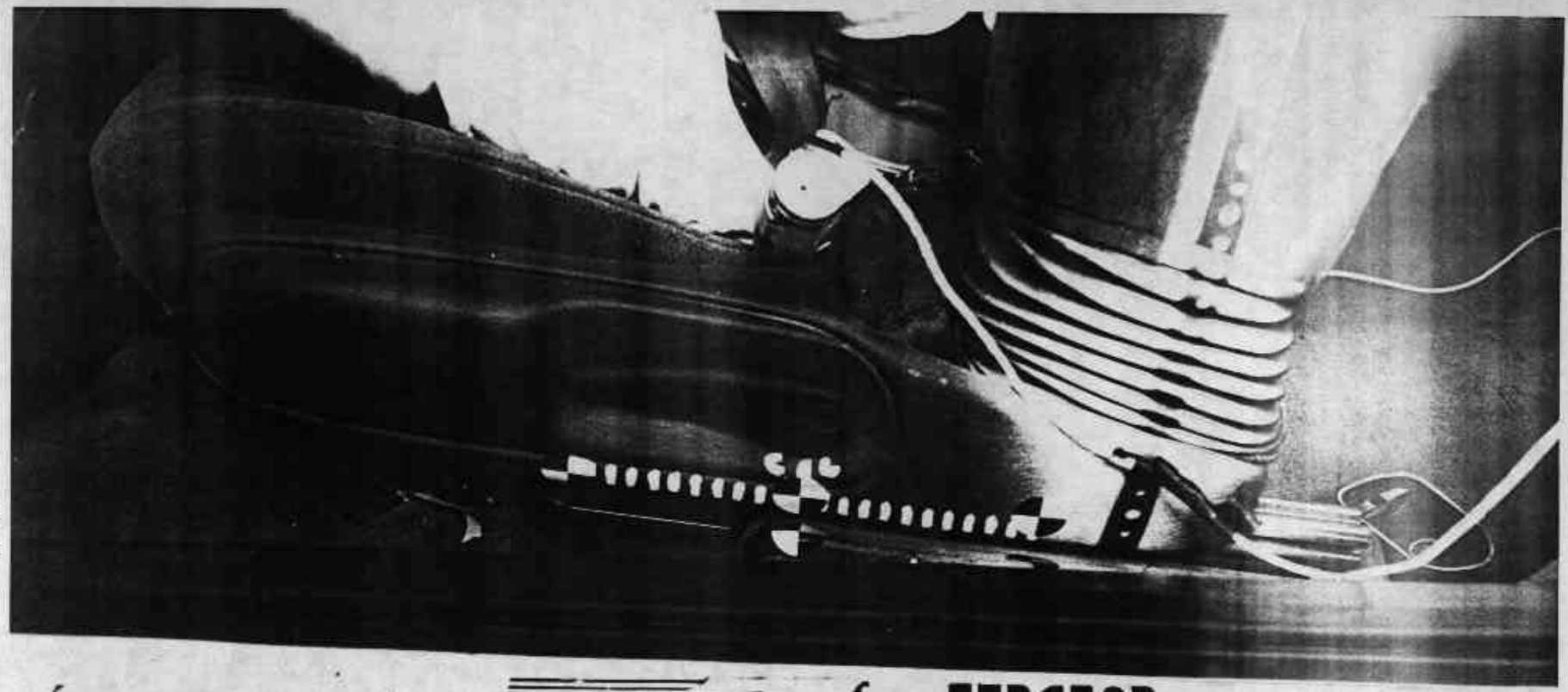
Photo No. A-24 - Pre-Test Driver Dummy Position Left Side View (Door Open)


A-25

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



mga

# POST-TEST

NCAP

1996 CHRYSLER SEBRING

#MT0304

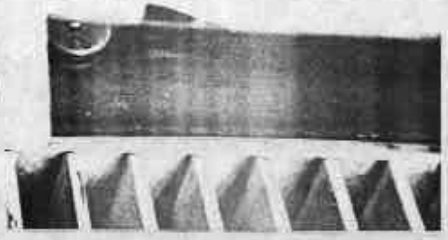


Photo No. A-27 - Post-Test Driver Seat Position View


A-28

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


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

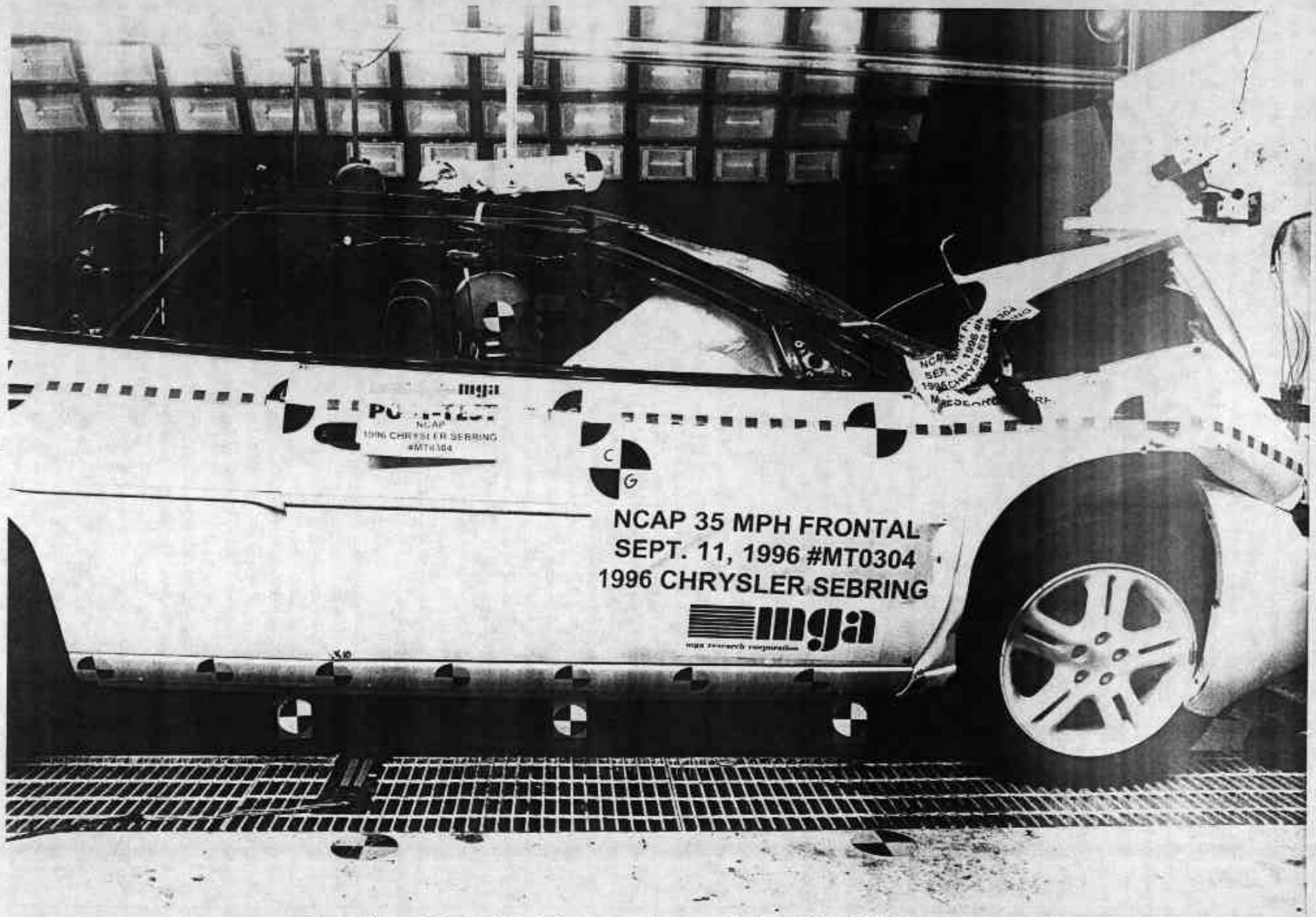

Photo No. A-30 - Post-Test Driver Airbag Contact


A-31

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

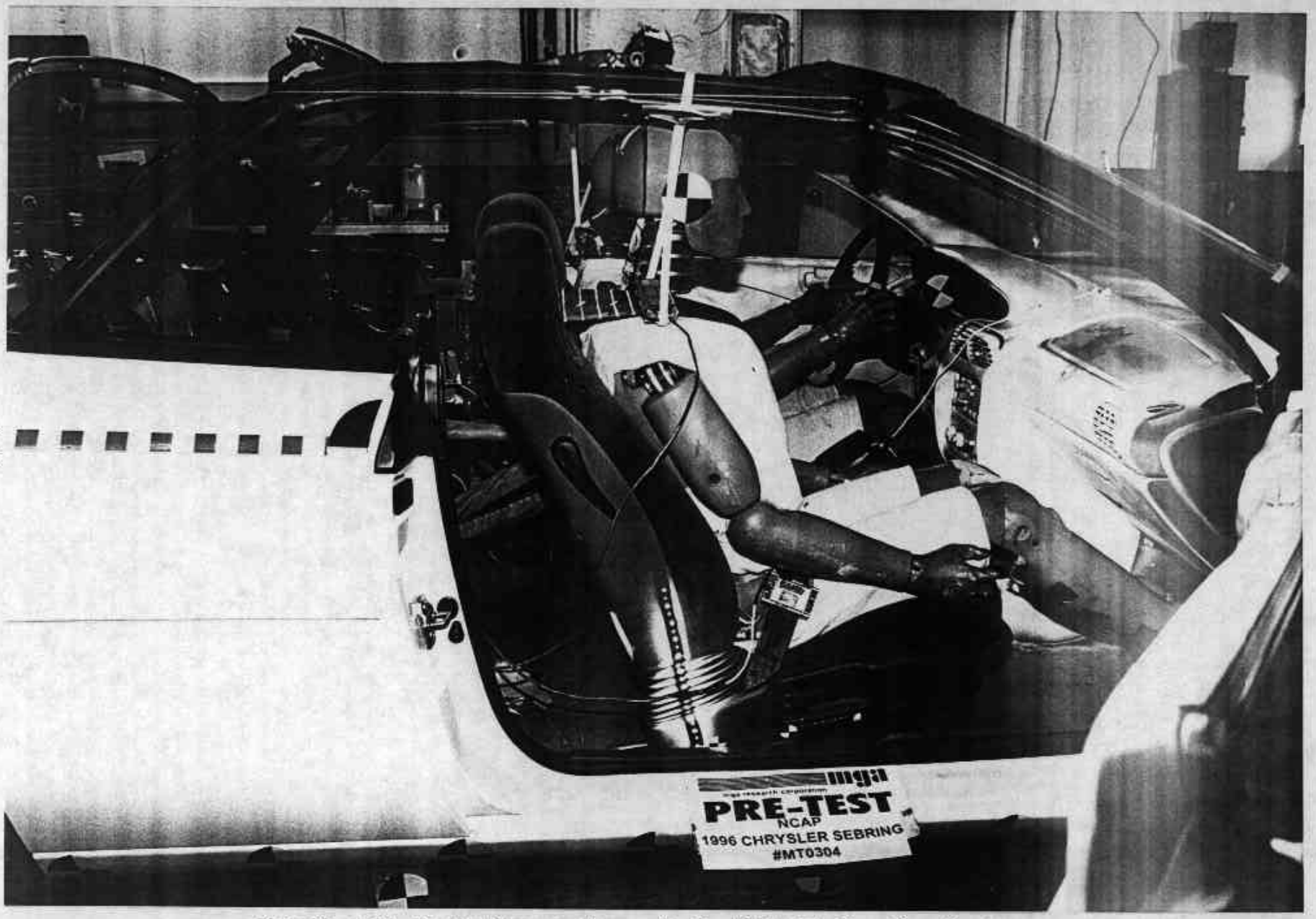

A-32

Photo No. A-32 - Pre-Test Passenger Dummy Position Right Side View




A-33

Photo No. A-33 - Post-Test Passenger Dummy Position Right Side View




A-34

Photo No. A-34 - Pre-Test Passenger Dummy Position Right Side View (Door Open)


A-35

Photo No. A-35 - Post-Test Passenger Dummy Position Right Side View (Door Open)

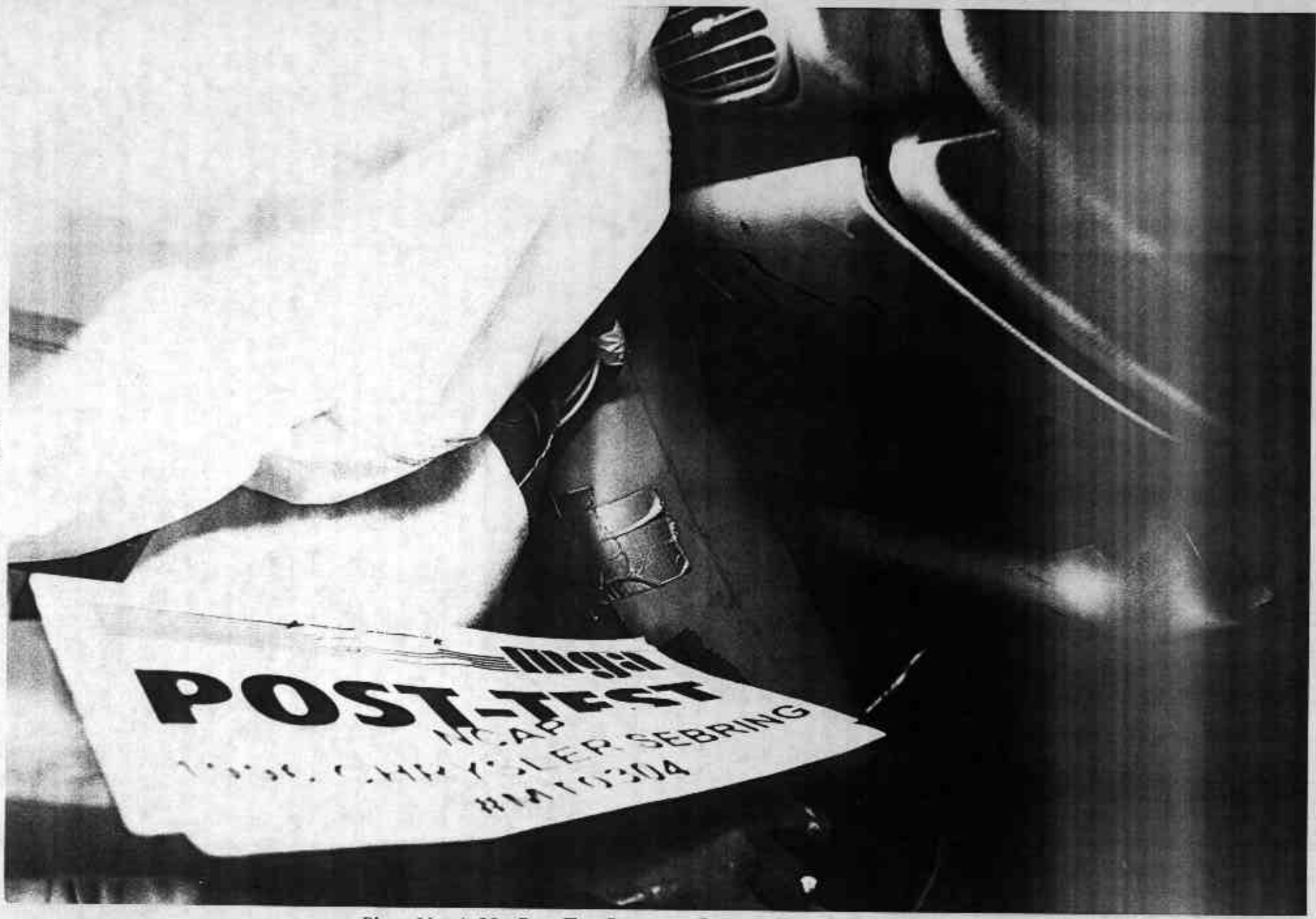

A-36

Photo No. A-36 - Pre-Test Passenger Seat Position View


A-37

Photo No. A-37 - Post-Test Passenger Seat Position View


Photo No. A-38 - Pre-Test Passenger Dummy Knee Position




A-39

Photo No. A-39 - Post-Test Passenger Dummy Knee Position


Photo No. A-40 - Post-Test Passenger Airbag Contact

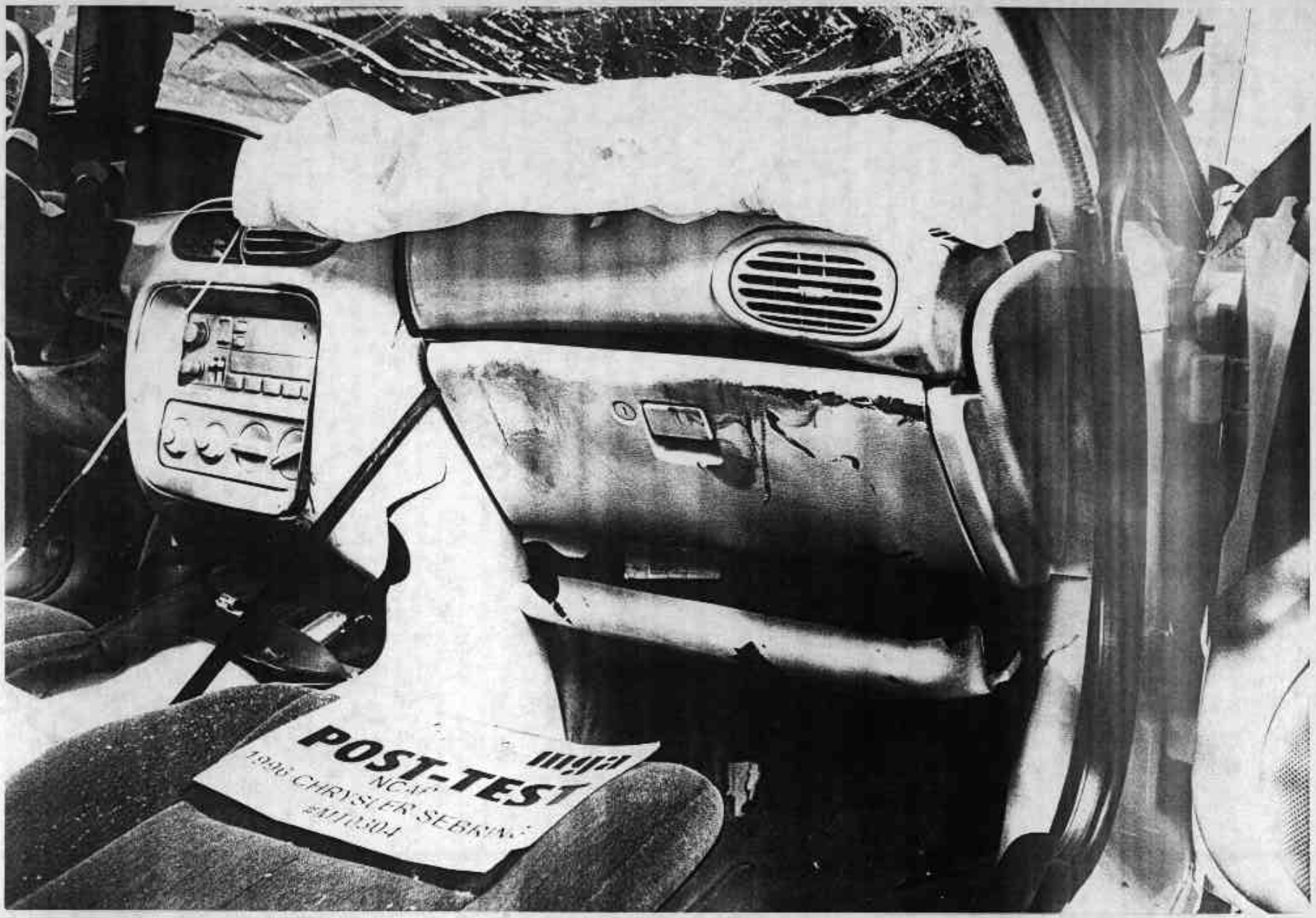
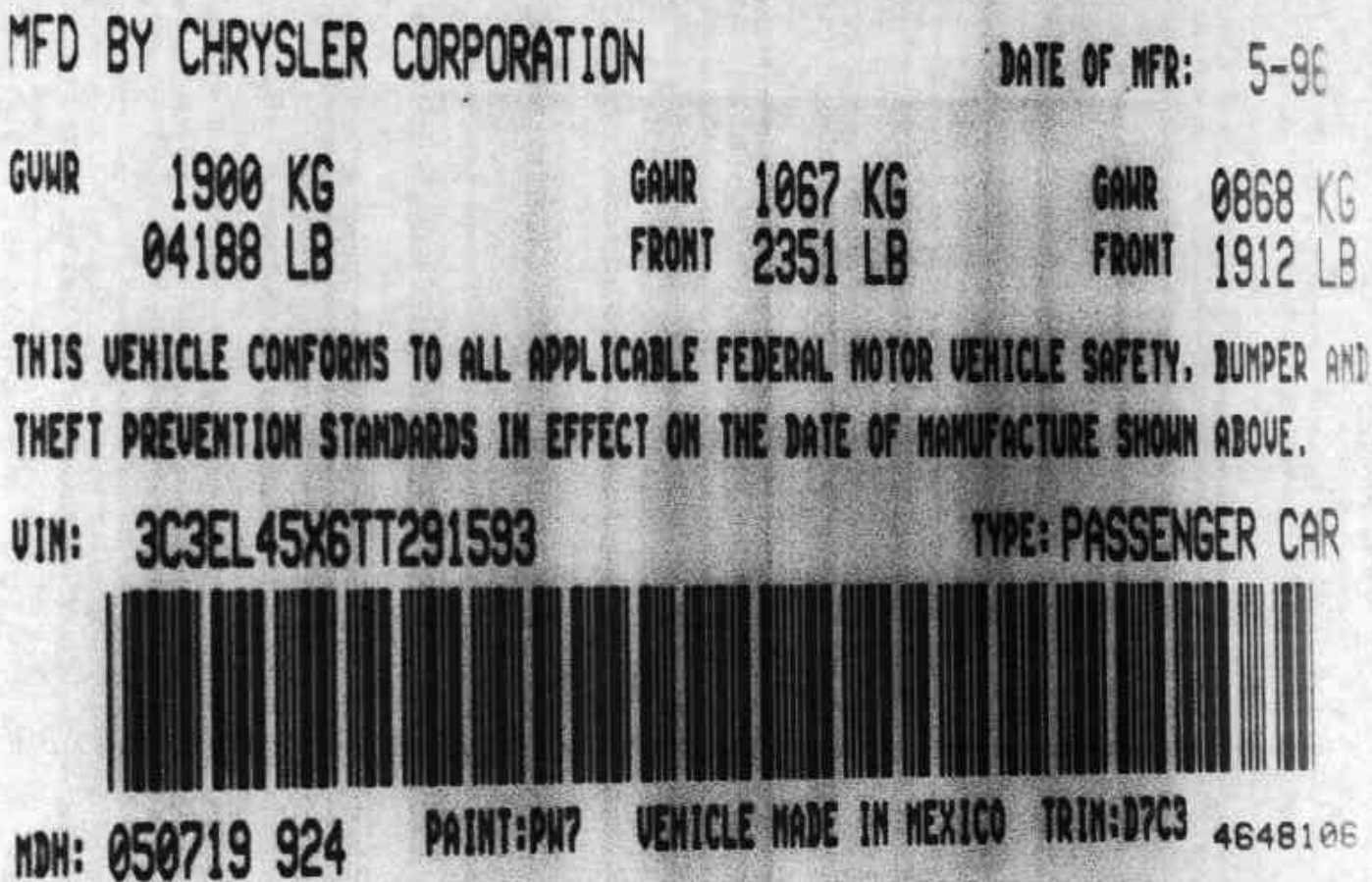
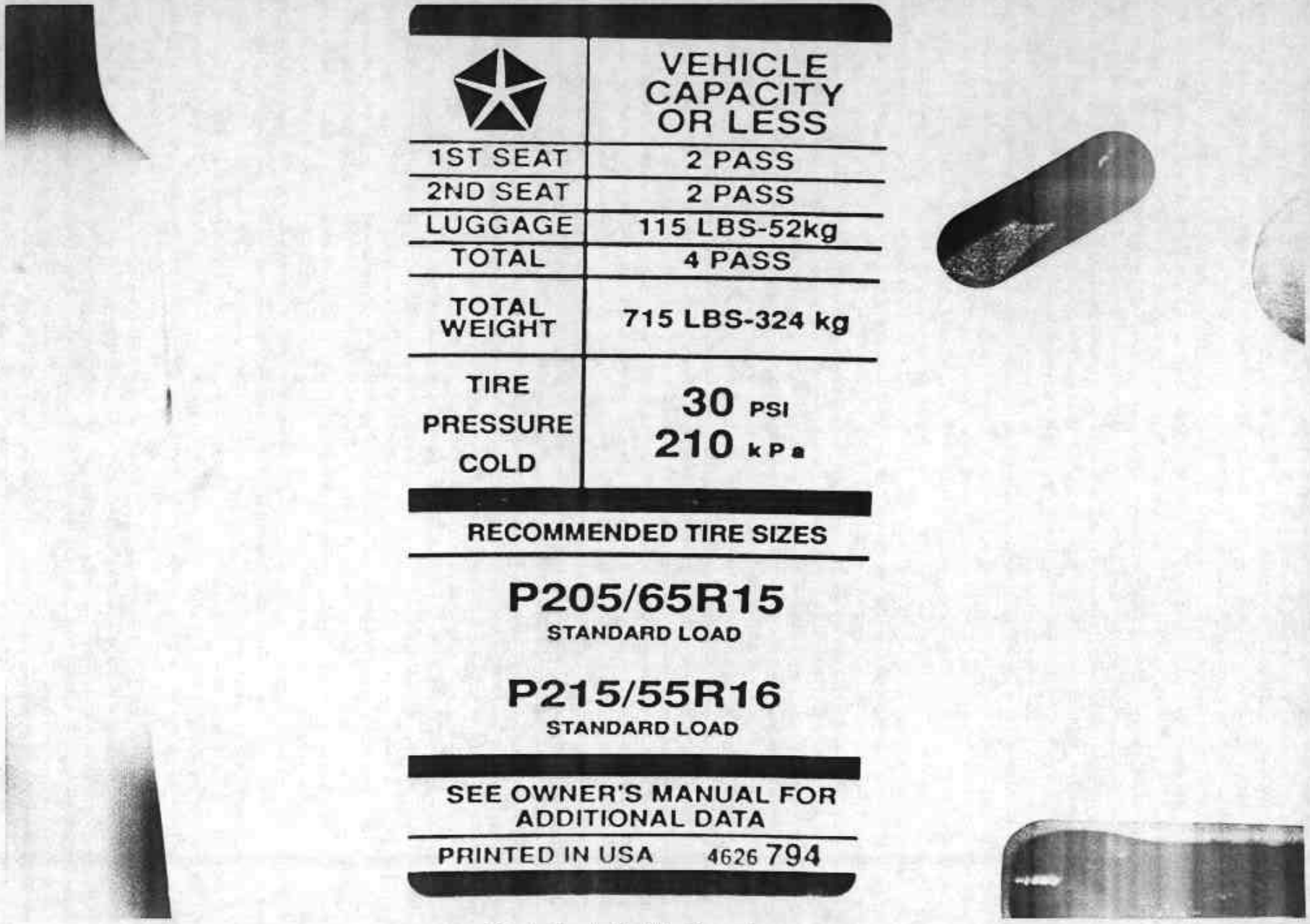



Photo No. A-41 - Post-Test Passenger Knee Contact View




A-42

Photo No. A-42 - Vehicle Certification Label



| | VEHICLE CAPACITY OR LESS |
|---|---|
| 1ST SEAT | 2 PASS |
| 2ND SEAT | 2 PASS |
| LUGGAGE | 115 LBS-52kg |
| TOTAL | 4 PASS |
| TOTAL WEIGHT | 715 LBS-324 kg |
| TIRE PRESSURE COLD | 30 PSI 210 kPa |

RECOMMENDED TIRE SIZES

**P205/65R15**
STANDARD LOAD

**P215/55R16**
STANDARD LOAD

SEE OWNER'S MANUAL FOR ADDITIONAL DATA

PRINTED IN USA 4626 794

A-43

Photo No. A-43 - Tire Placard

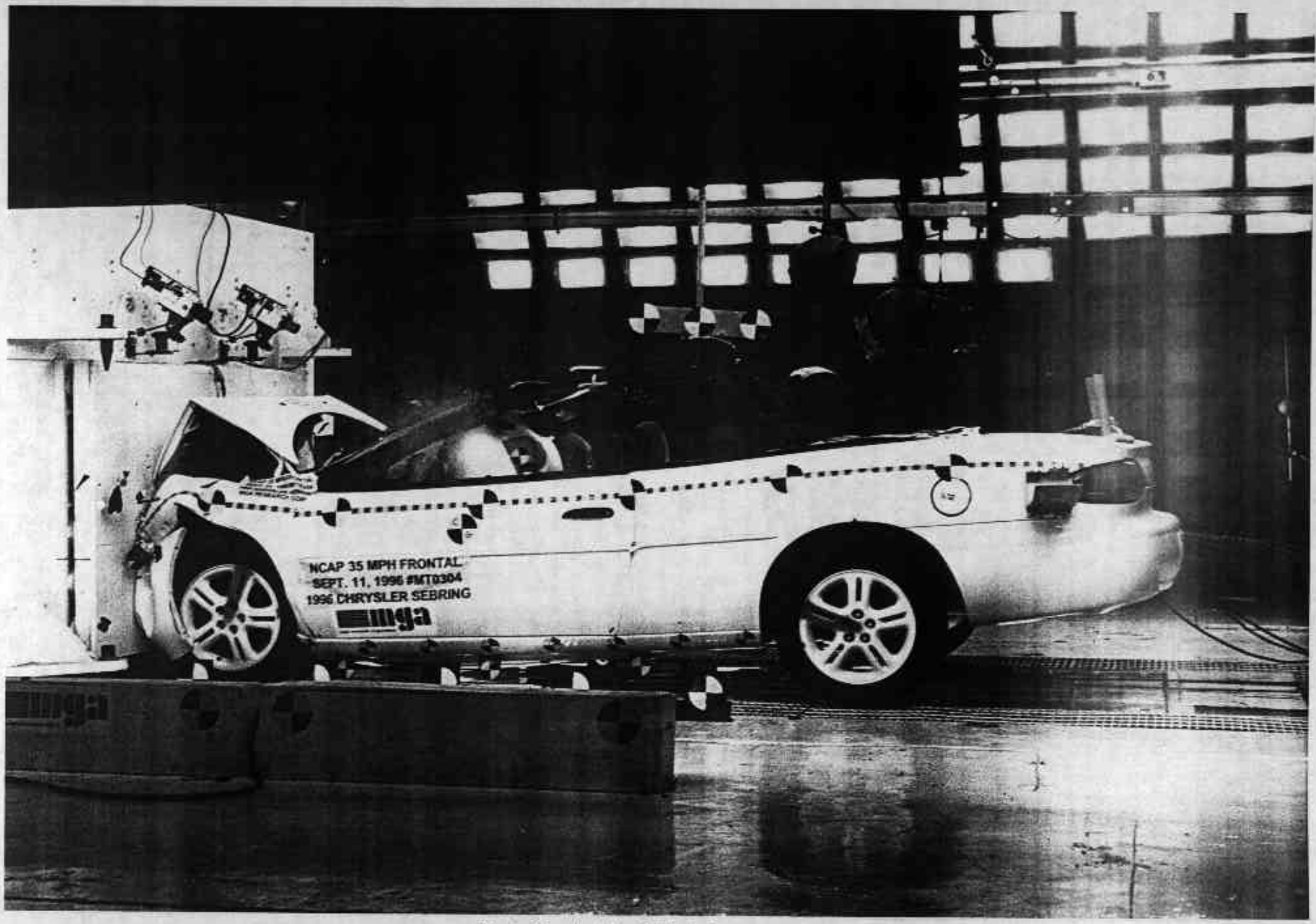



Photo No. A-44 - Vehicle Impact

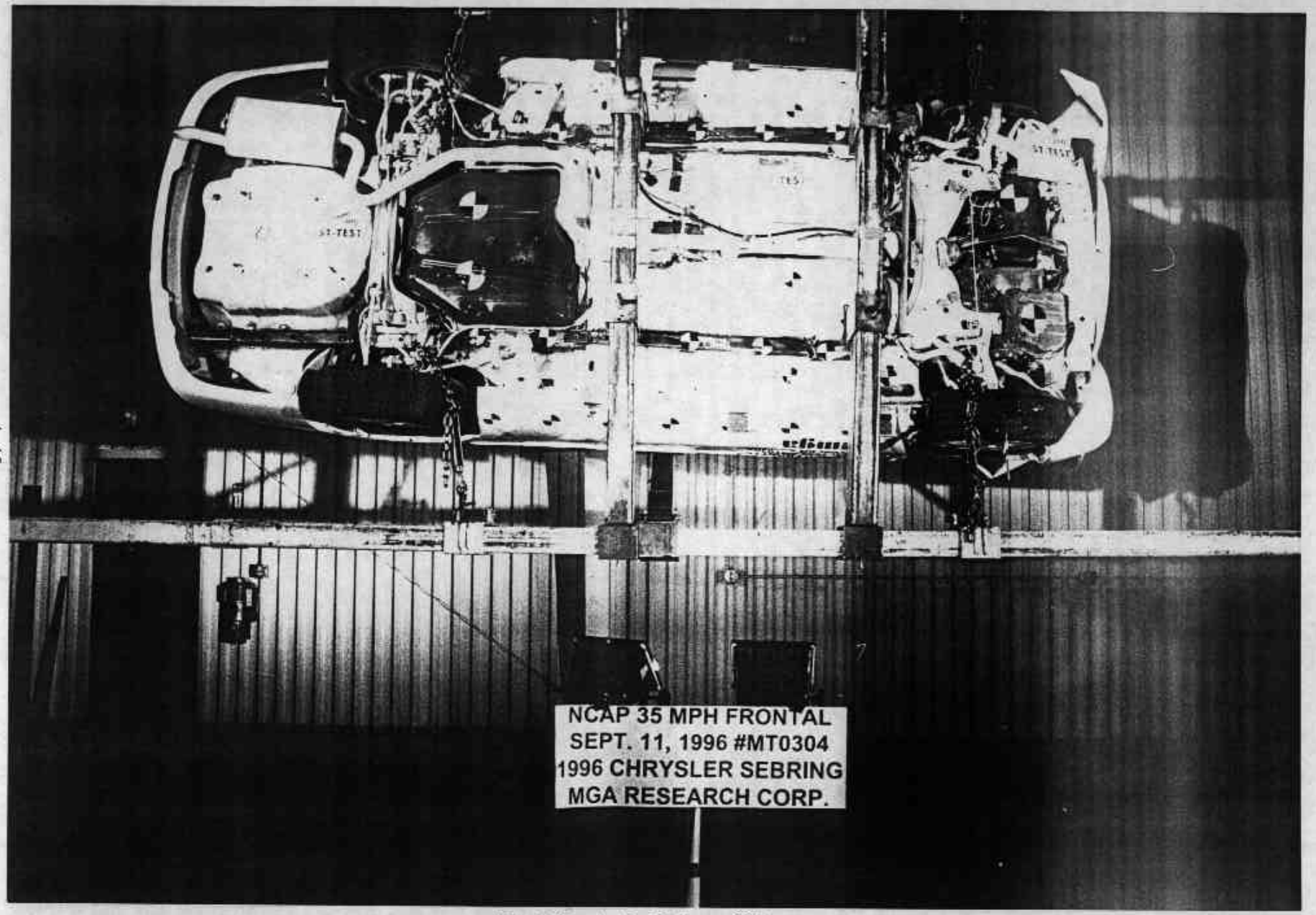



Photo No. A-45 - Rollover 90°


Photo No. A-46 - Rollover 180°

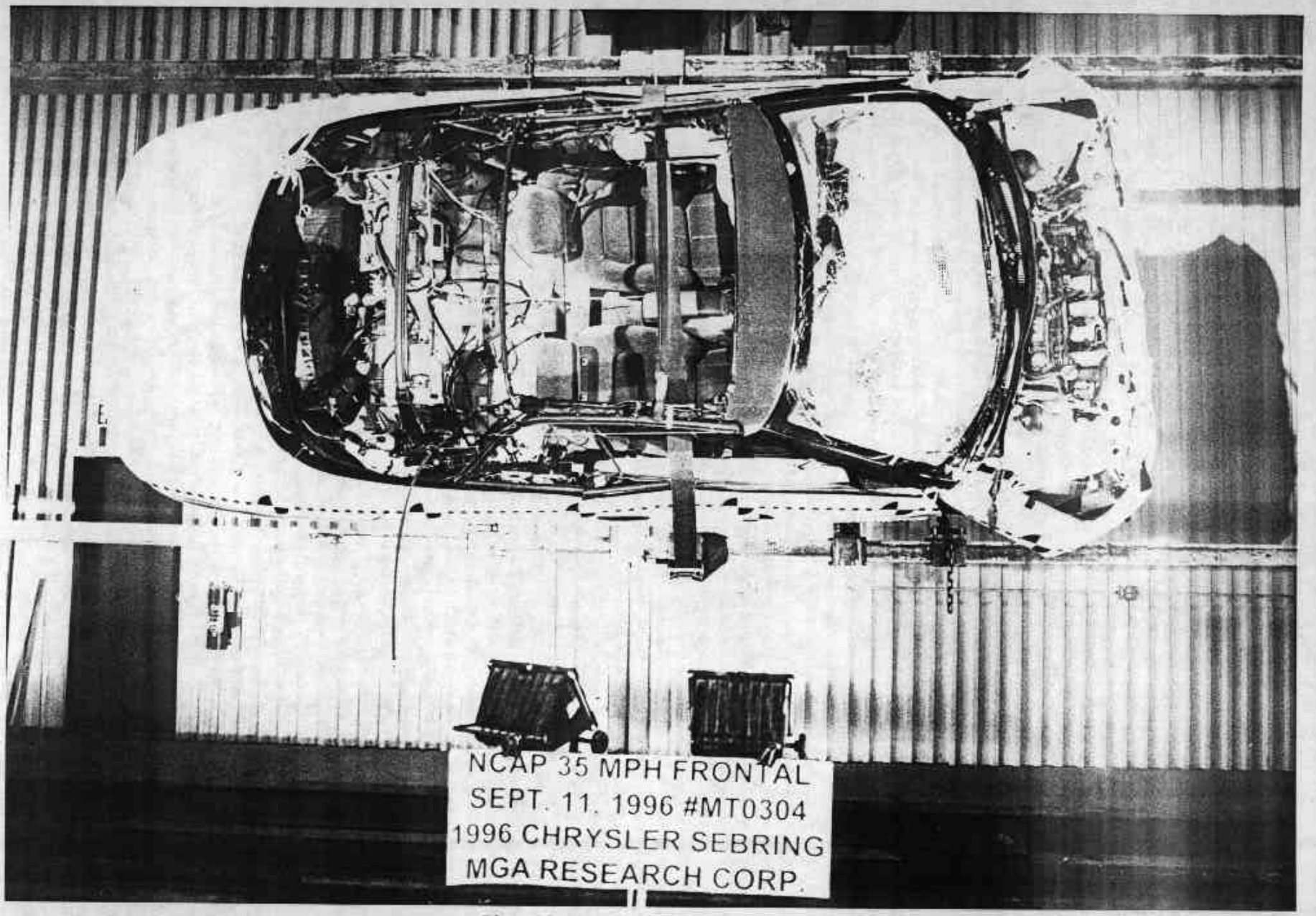



Photo No. A-47 - Rollover 270°


Photo No. A-48 - Rollover 360°

# APPENDIX B

Vehicle, Load Cell Barrier and Dummy Response Data

1996 Chrysler Sebring Convertible

NHTSA NO.: MT0306

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)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| Figure B-1 - Left Rear Seat Crossmember X Acceleration vs. Time | B-1 |
| Figure B-2 - Left Rear Seat Crossmember X Velocity vs. Time | B-2 |
| Figure B-3 - Left Rear Seat Crossmember X Displacement vs. Time | B-3 |
| Figure B-4 - Left Rear Seat Crossmember Redundant X Acceleration vs. Time | B-4 |
| Figure B-5 - Left Rear Seat Crossmember Redundant X Velocity vs. Time | B-5 |
| Figure B-6 - Left Rear Seat Crossmember Redundant X Displacement vs. Time | B-6 |
| Figure B-7 - Right Rear Seat Crossmember X Acceleration vs. Time | B-7 |
| Figure B-8 - Right Rear Seat Crossmember X Velocity vs. Time | B-8 |
| Figure B-9 - Right Rear Seat Crossmember X Displacement vs. Time | B-9 |
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| Figure B-40 - Driver Head Z Acceleration vs. Time | B-40 |
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|---|---|
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|---|---|
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* No valid data collected

| Data Plot | Page No. |
| --- | --- |
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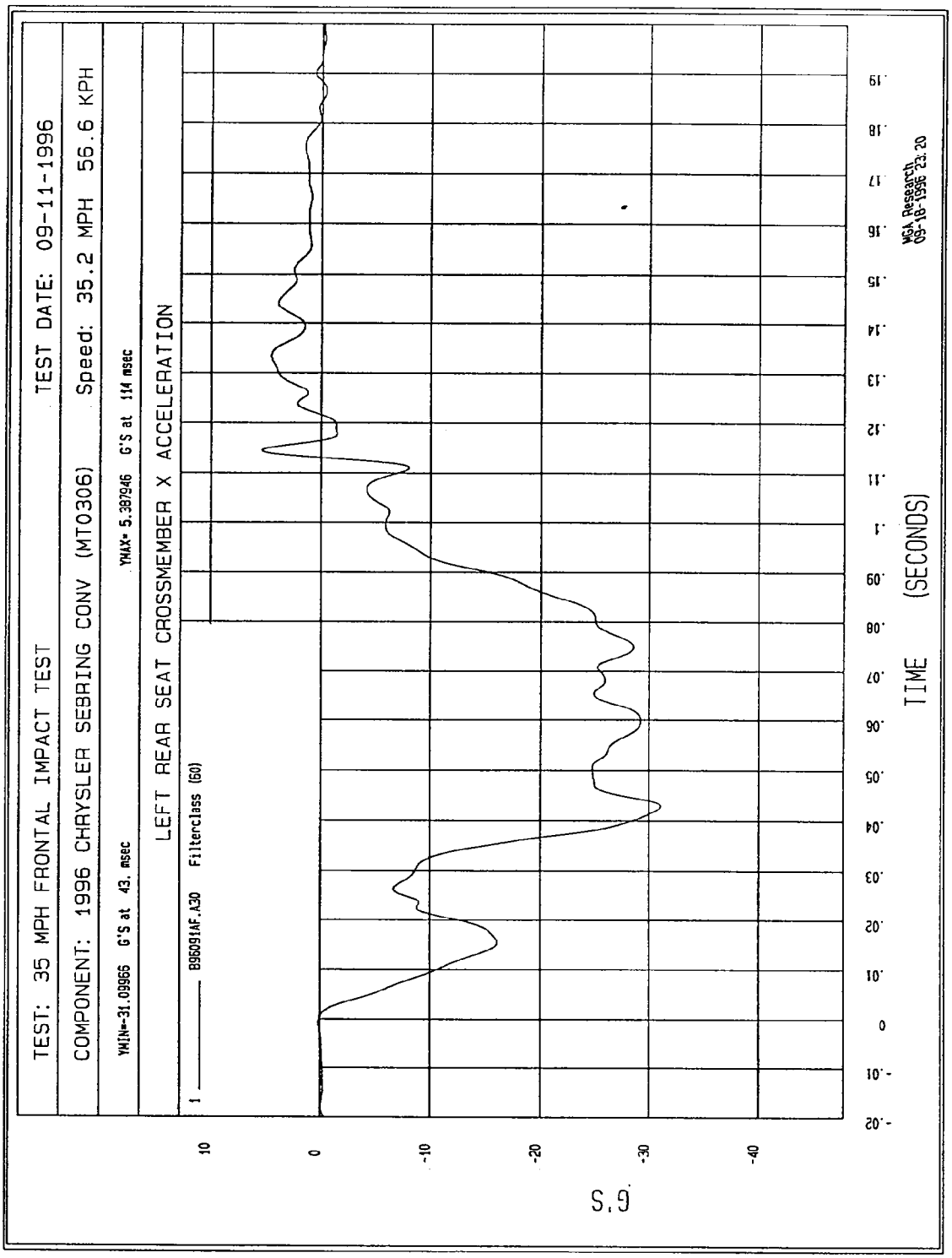
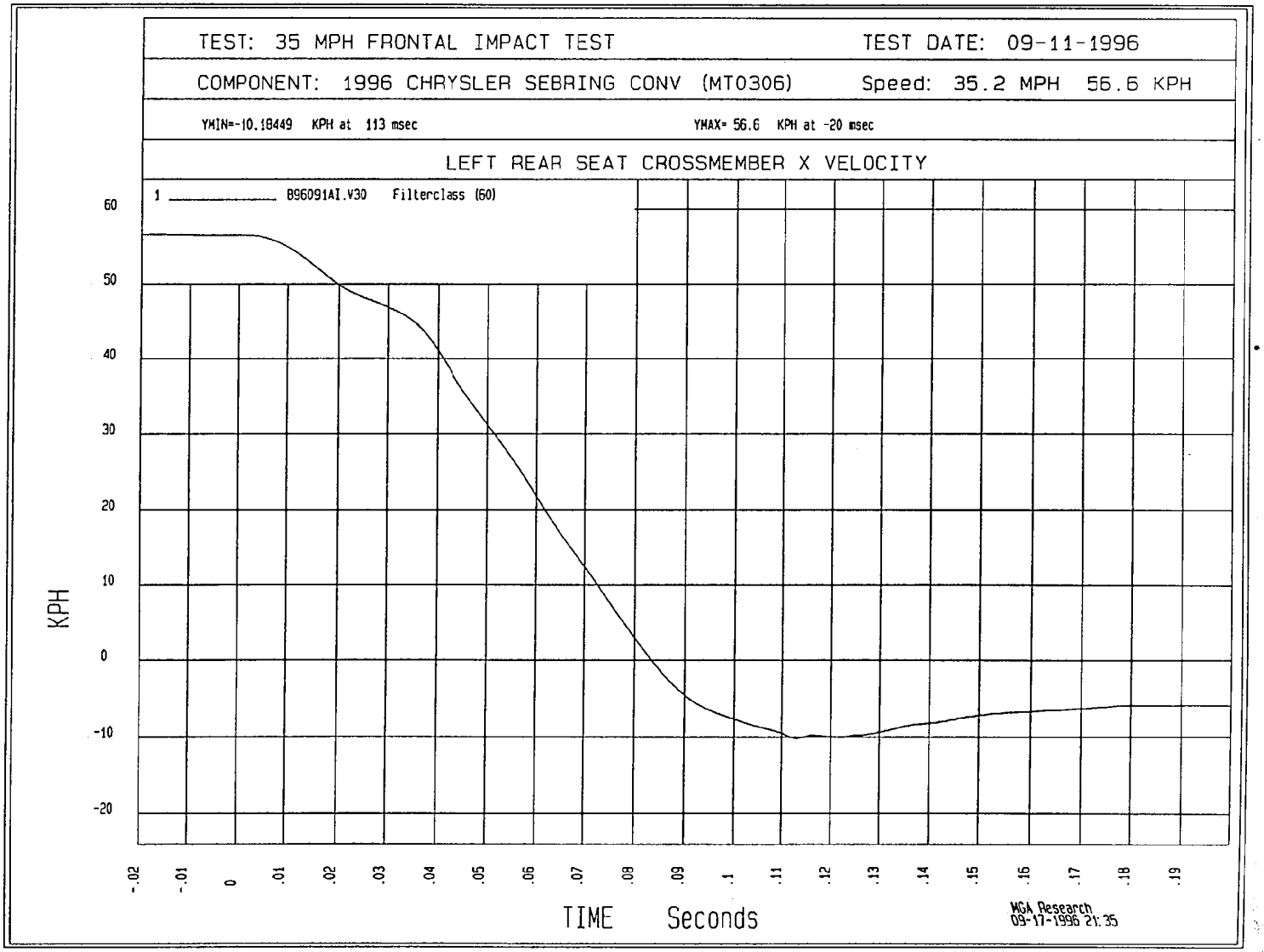
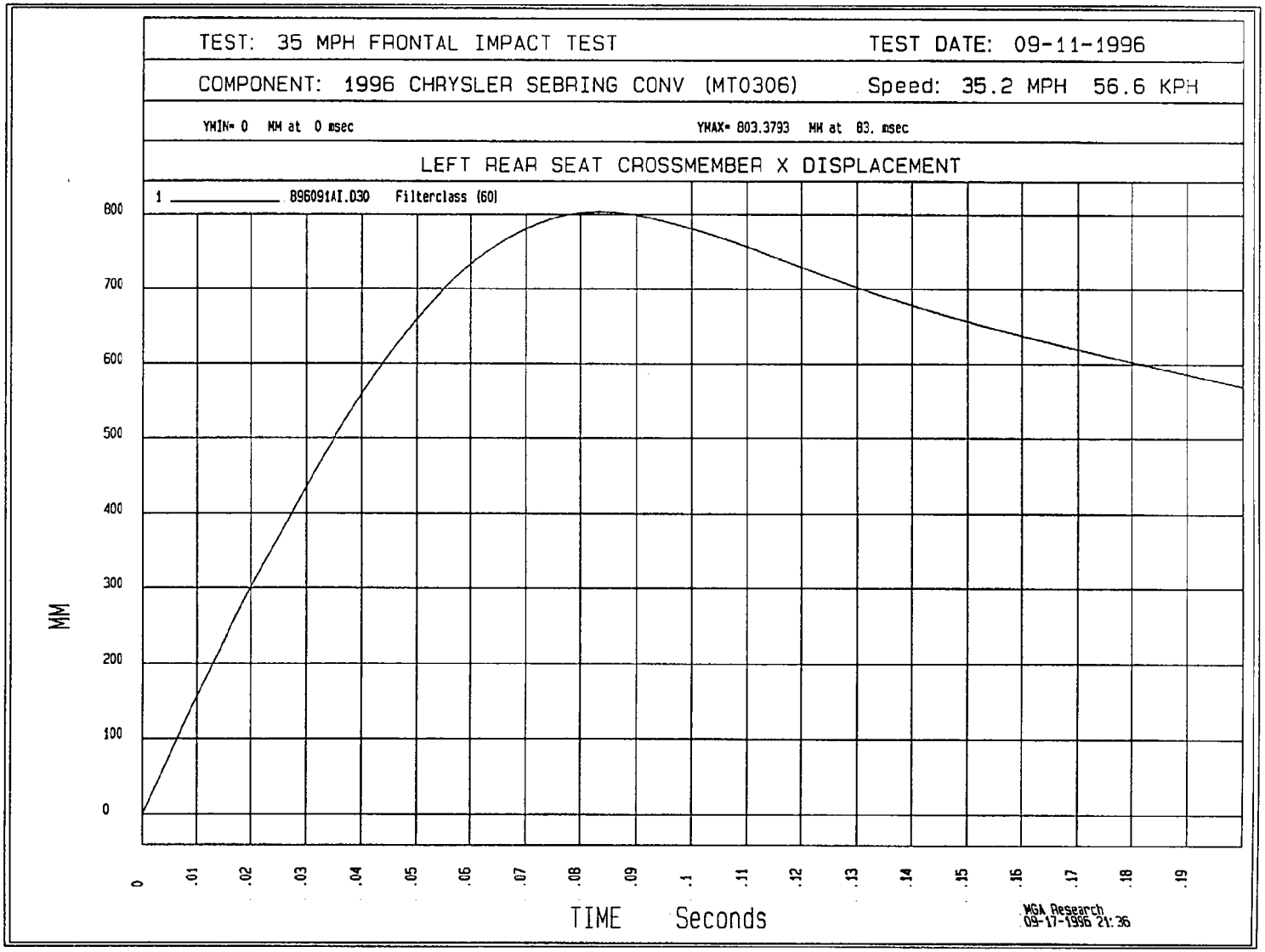
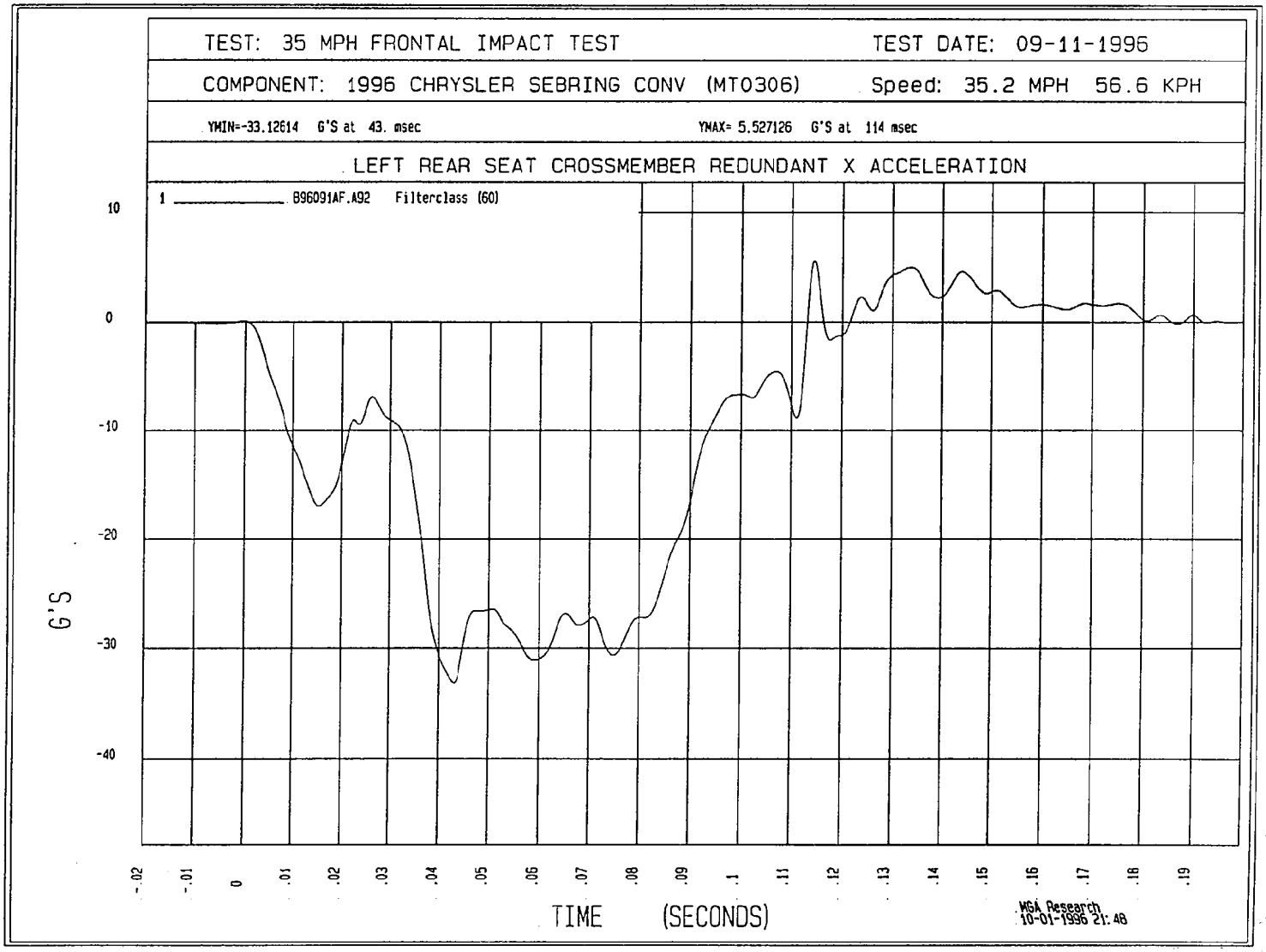
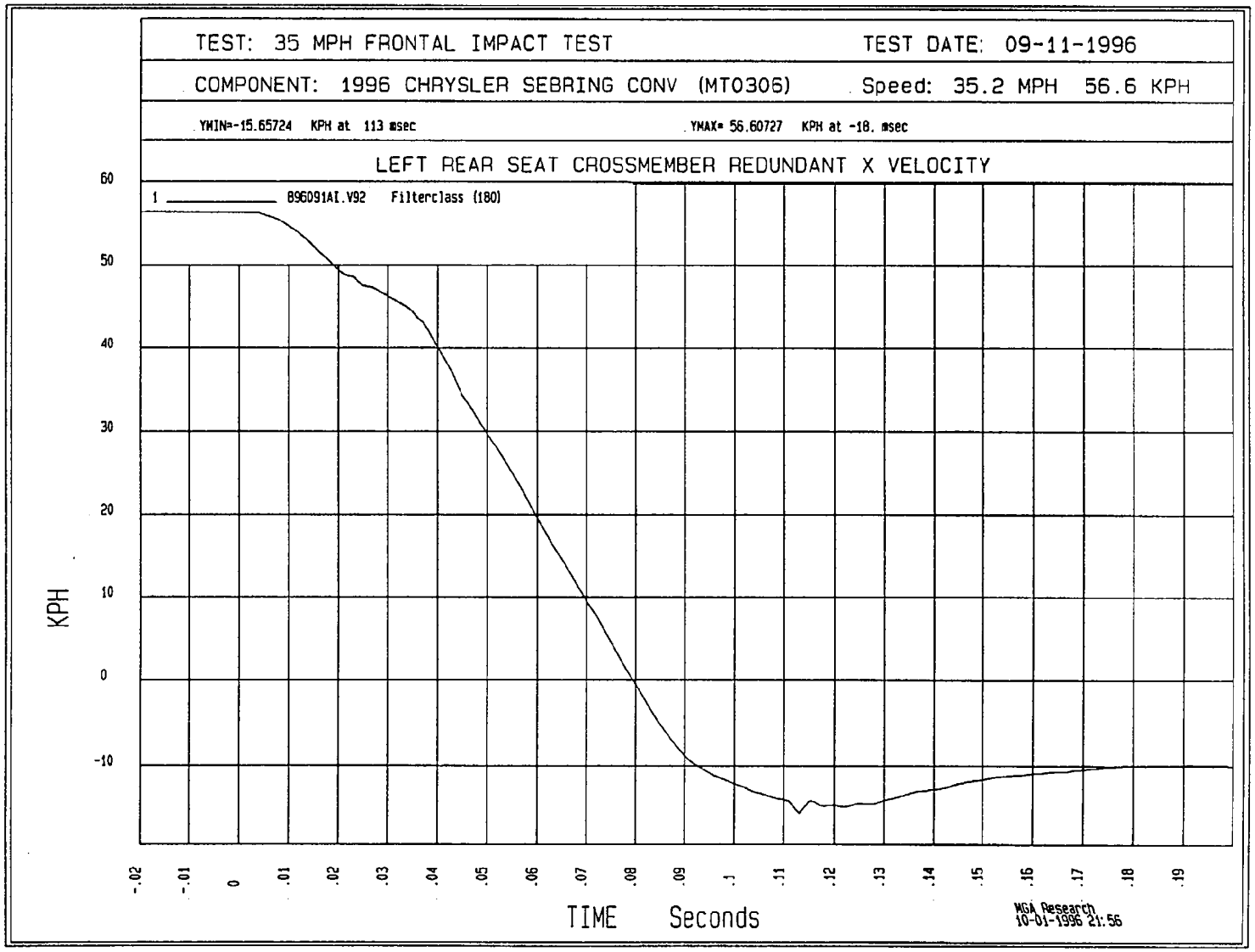
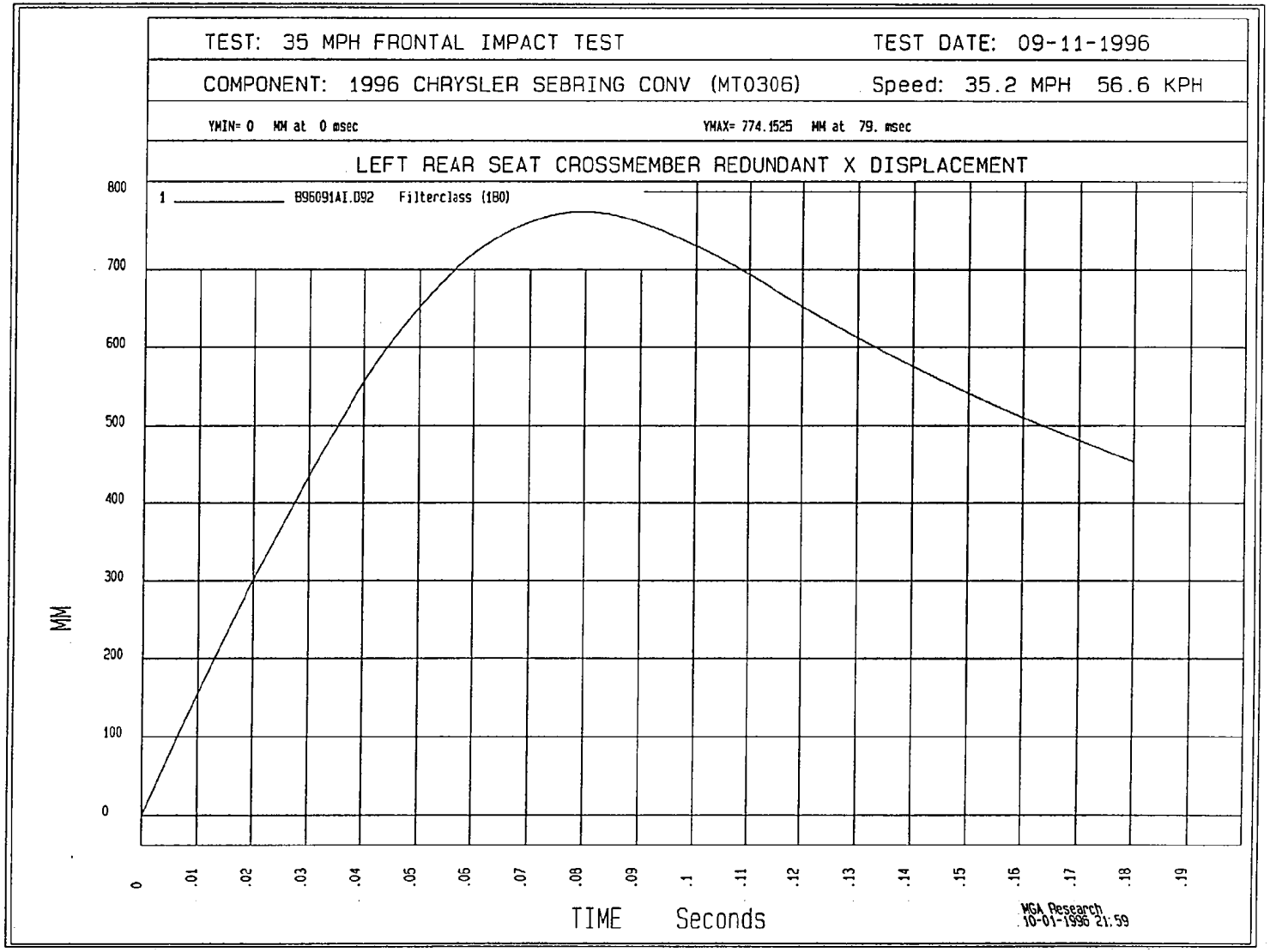

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-31.09966 G'S at 43. msec
YMAX= 5.387946 G'S at 114 msec
LEFT REAR SEAT CROSSMEMBER X ACCELERATION
1 B960914F.A30 Filterclass (60)
10
0
-10
-20
-30
-40
G'S
-02
-01
0
01
02
03
04
05
06
07
08
09
1
11
12
13
14
15
16
17
18
19
TIME (SECONDS)
MGA Research
09-18-1996 23:20

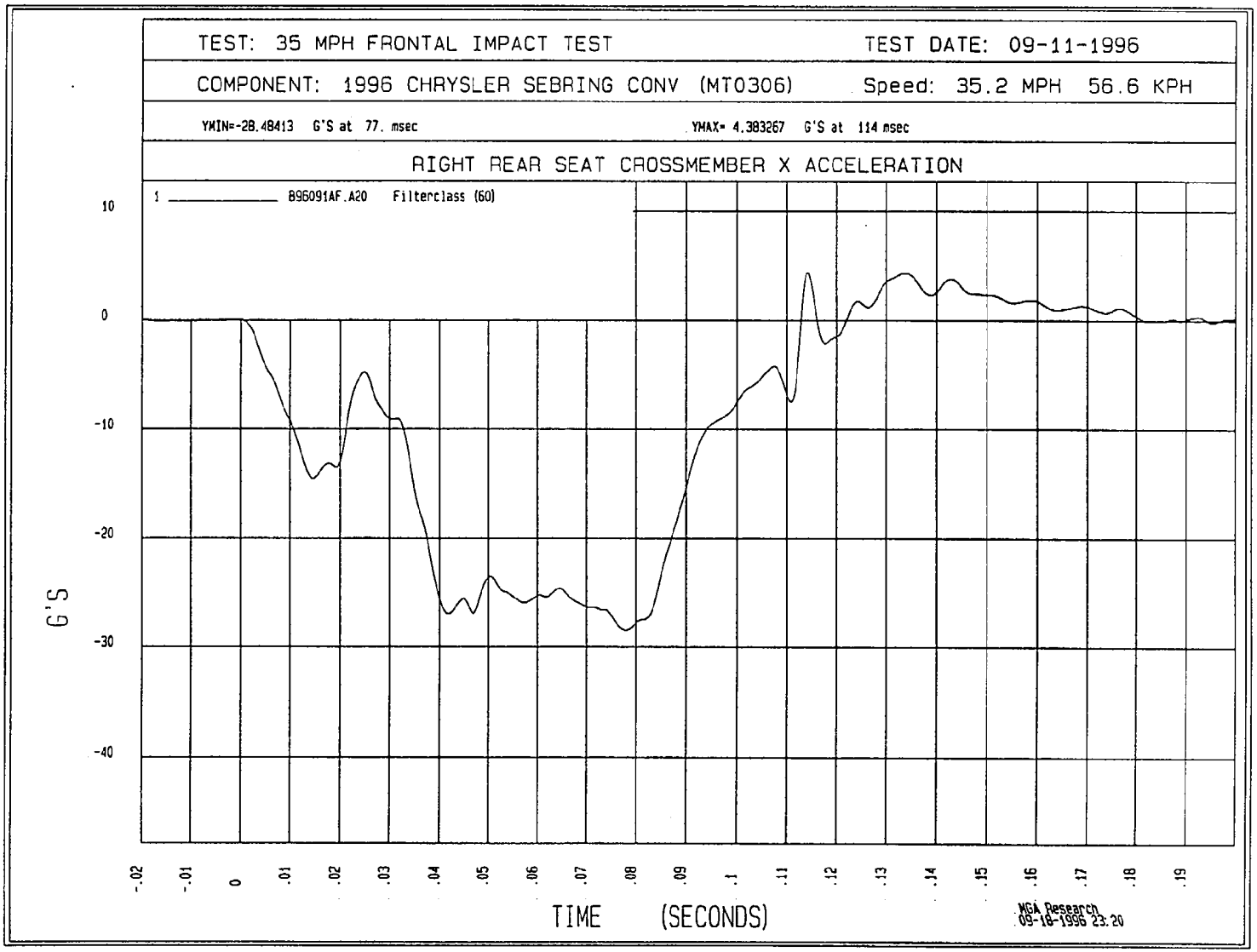

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-10.18449 KPH at 113 msec
YMAX= 56.6 KPH at -20 msec
LEFT REAR SEAT CROSSMEMBER X VELOCITY
1 B96091AI.V30 Filterclass (60)
KPH
60
50
40
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:35

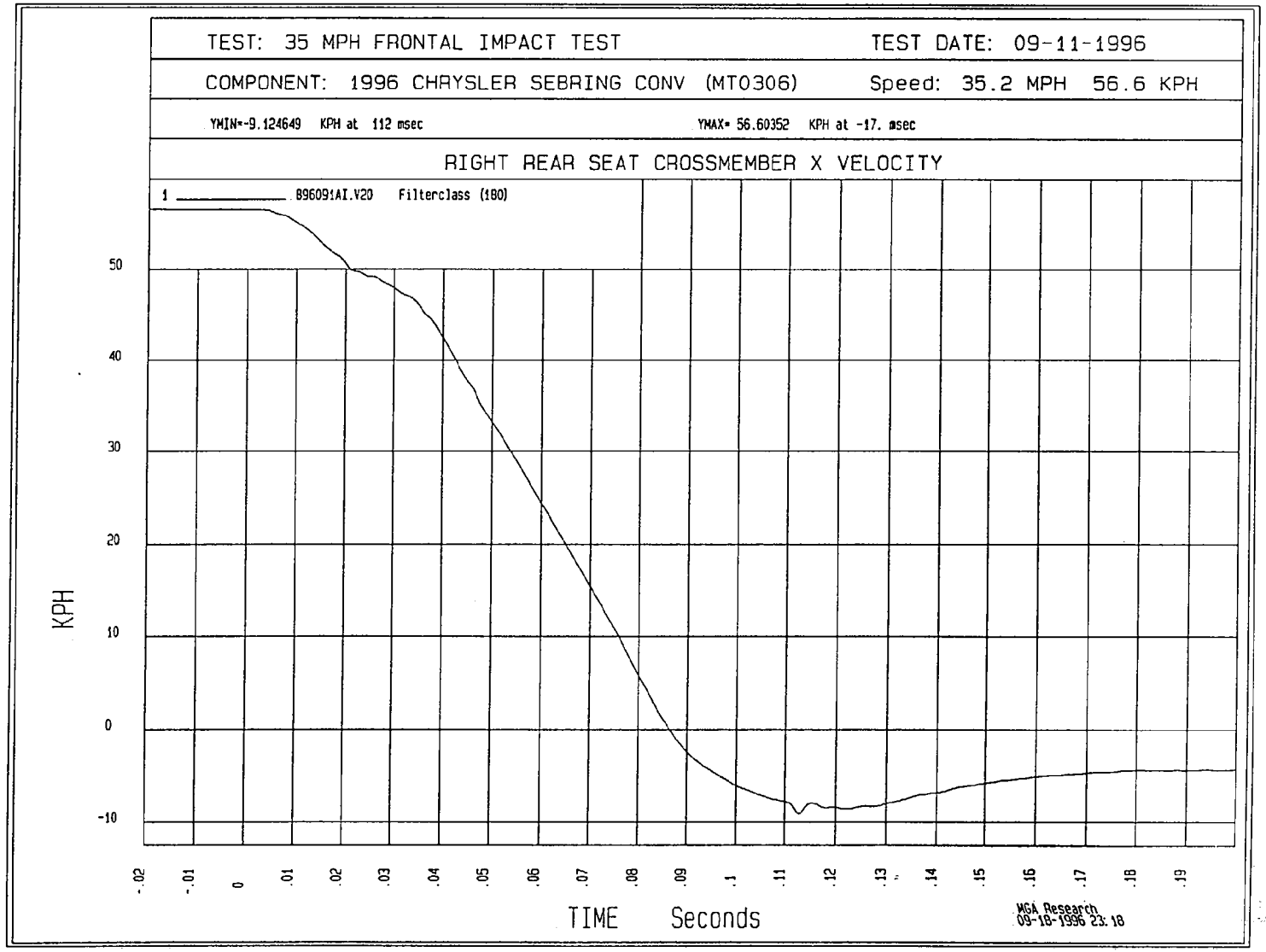

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 0 MM at 0 msec
YMAX= 803.3793 MM at 83. msec
LEFT REAR SEAT CROSSMEMBER X DISPLACEMENT
1 896091AI.D30 Filterclass (60)
MM
800
700
600
500
400
300
200
100
0
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:36

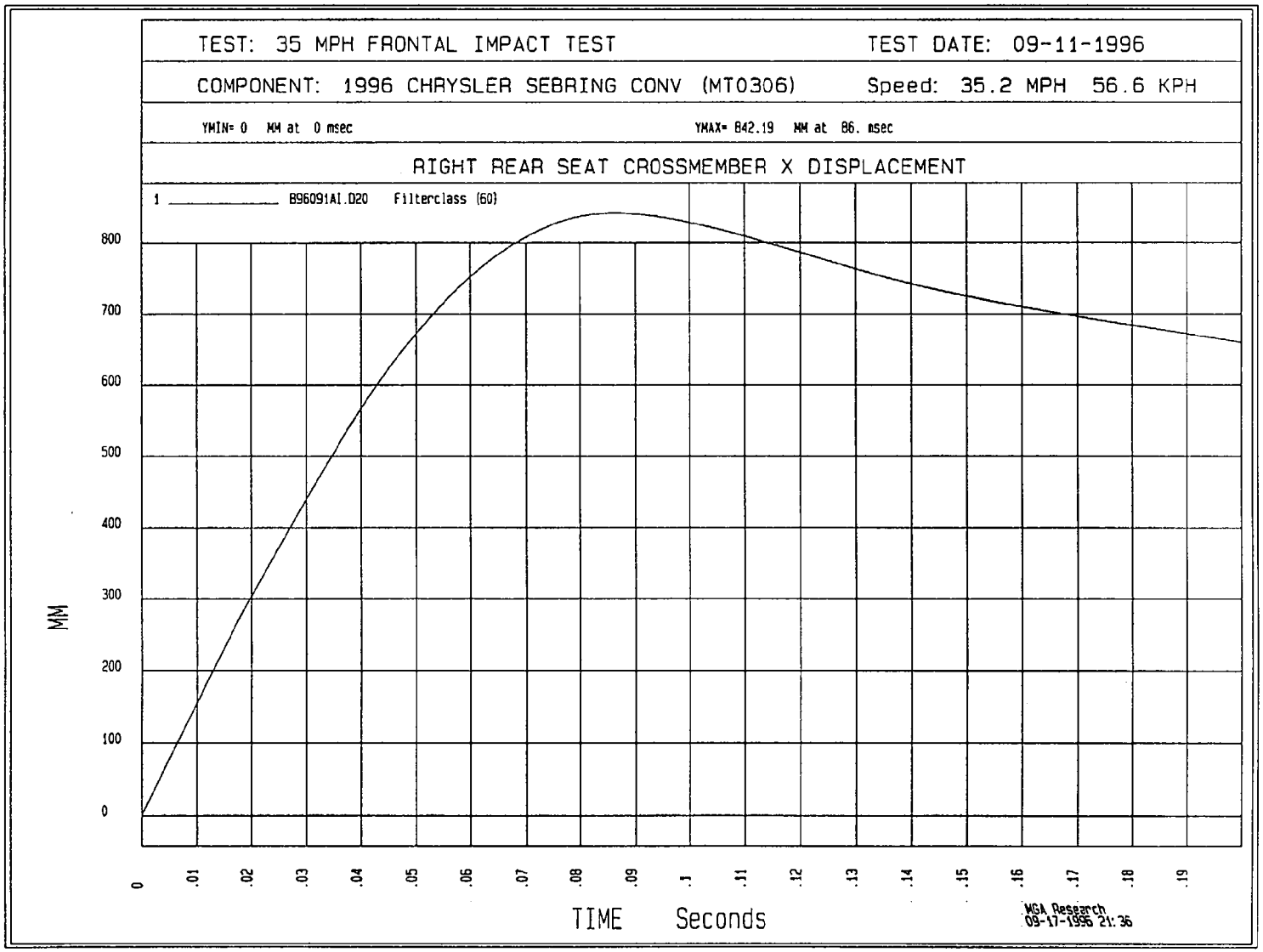

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-33.12614 G'S at 43. msec
YMAX= 5.527126 G'S at 114 msec
LEFT REAR SEAT CROSSMEMBER REDUNDANT X ACCELERATION
1 B96091AF.A92 Filterclass (60)
10
0
-10
-20
-30
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
10-01-1996 21:48

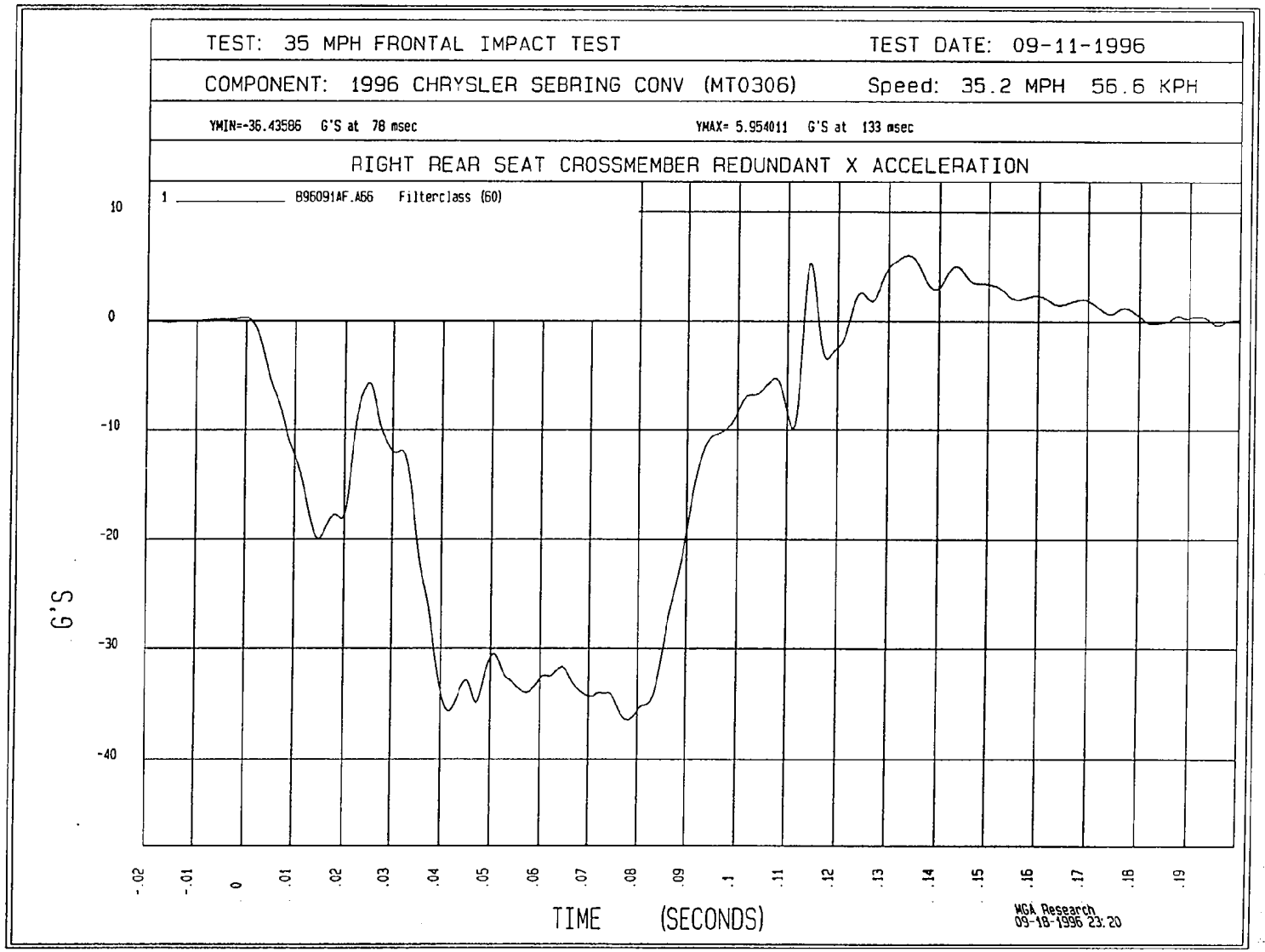

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-15.65724 KPH at 113 msec
YMAX= 56.60727 KPH at -18. msec
LEFT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY
1 896091AI.V92 Filterclass (180)
60
50
40
30
20
10
0
-10
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
10-01-1996 21:56

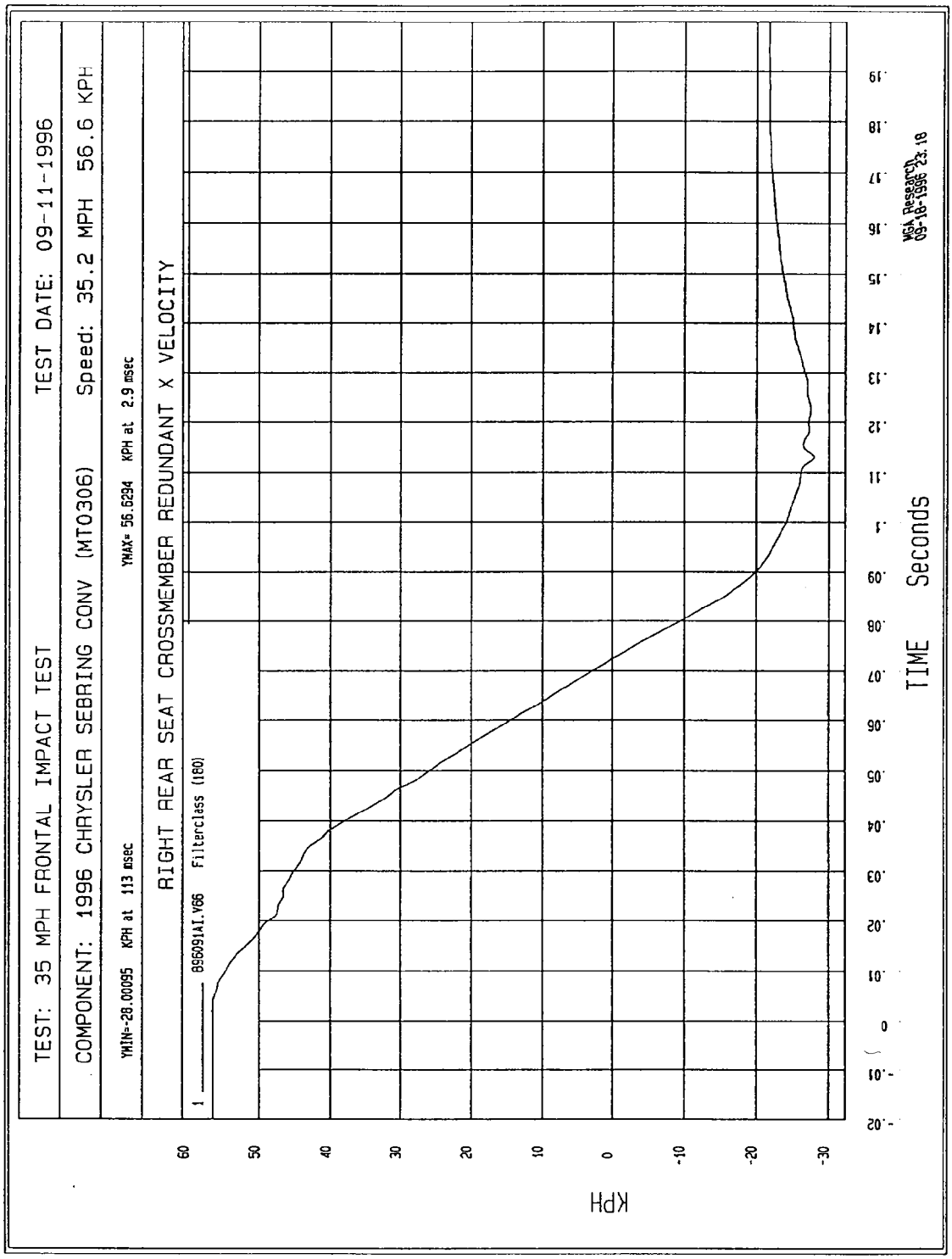

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 0 MM at 0 msec
YMAX= 774.1525 MM at 79. msec
LEFT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT
1 B96091AI.D92 Filterclass (180)
MM
800
700
600
500
400
300
200
100
0
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
10-01-1996 21:59

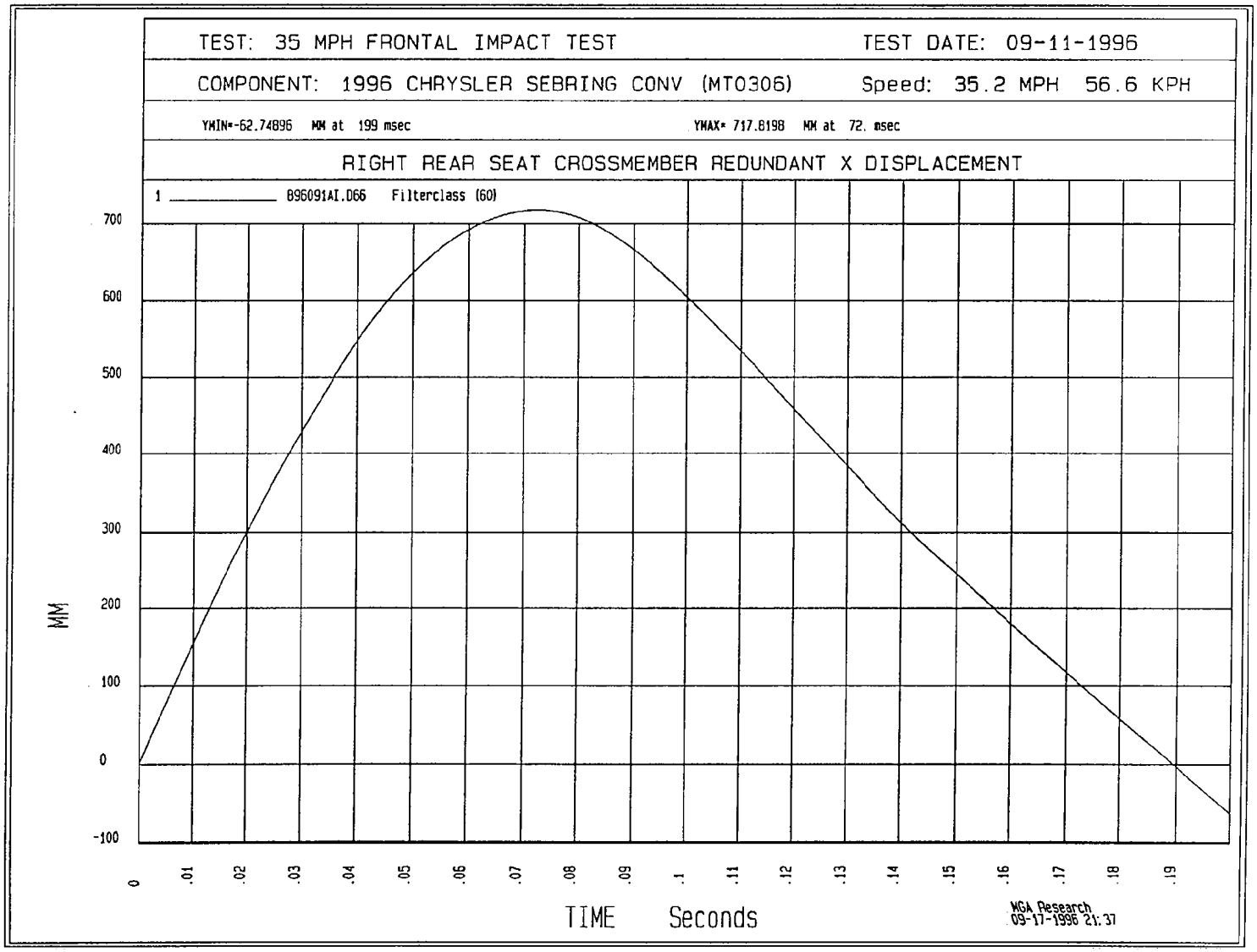

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-28.48413 G'S at 77. msec
YMAX= 4.383267 G'S at 114 msec
RIGHT REAR SEAT CROSSMEMBER X ACCELERATION
1 896091AF.A20 Filterclass (60)
10
0
-10
-20
-30
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-18-1996 23:20

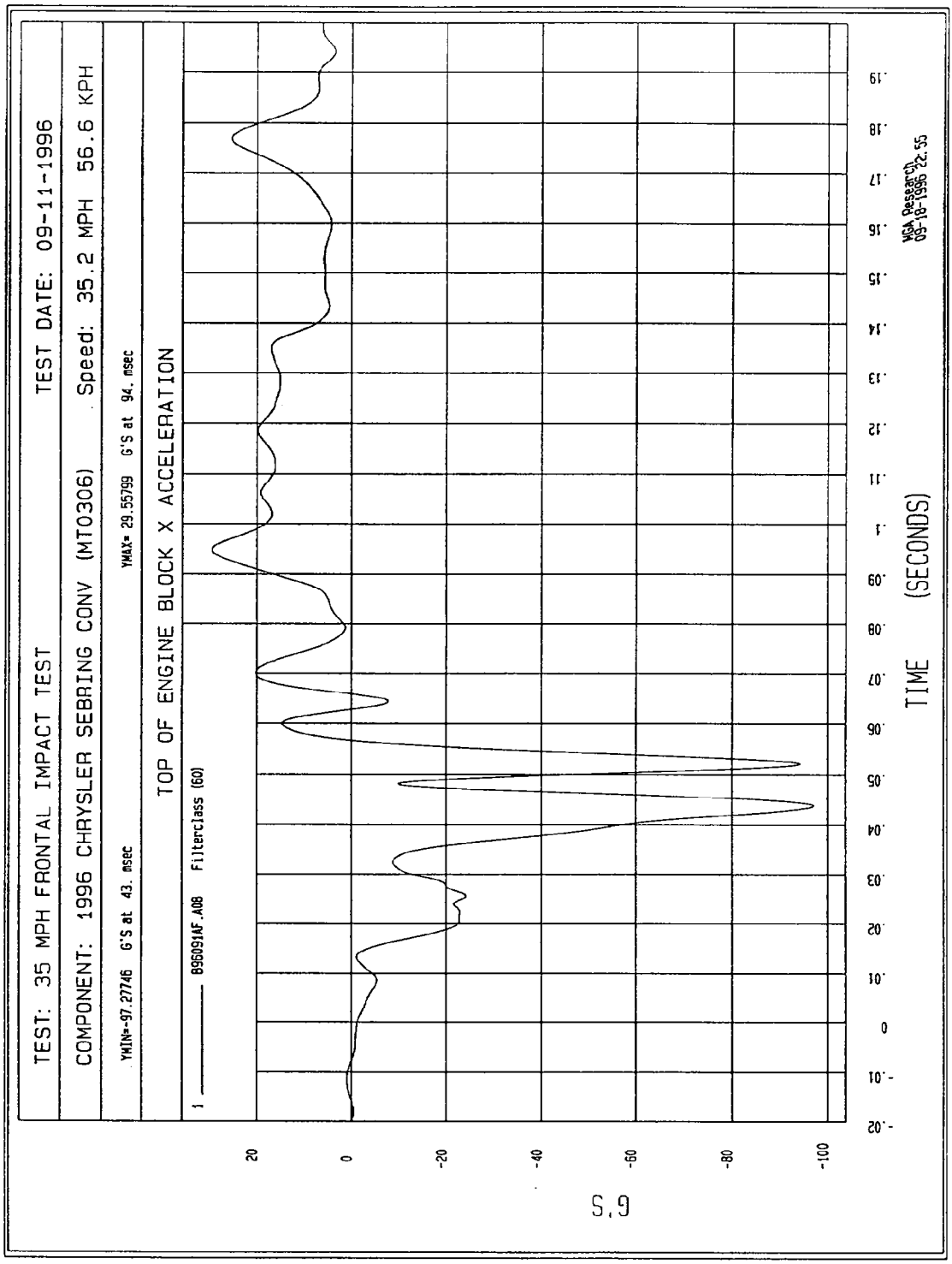

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-9.124649 KPH at 112 msec
YMAX= 56.60352 KPH at -17. msec
RIGHT REAR SEAT CROSSMEMBER X VELOCITY
1 896091AI.V20 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-18-1996 23:18

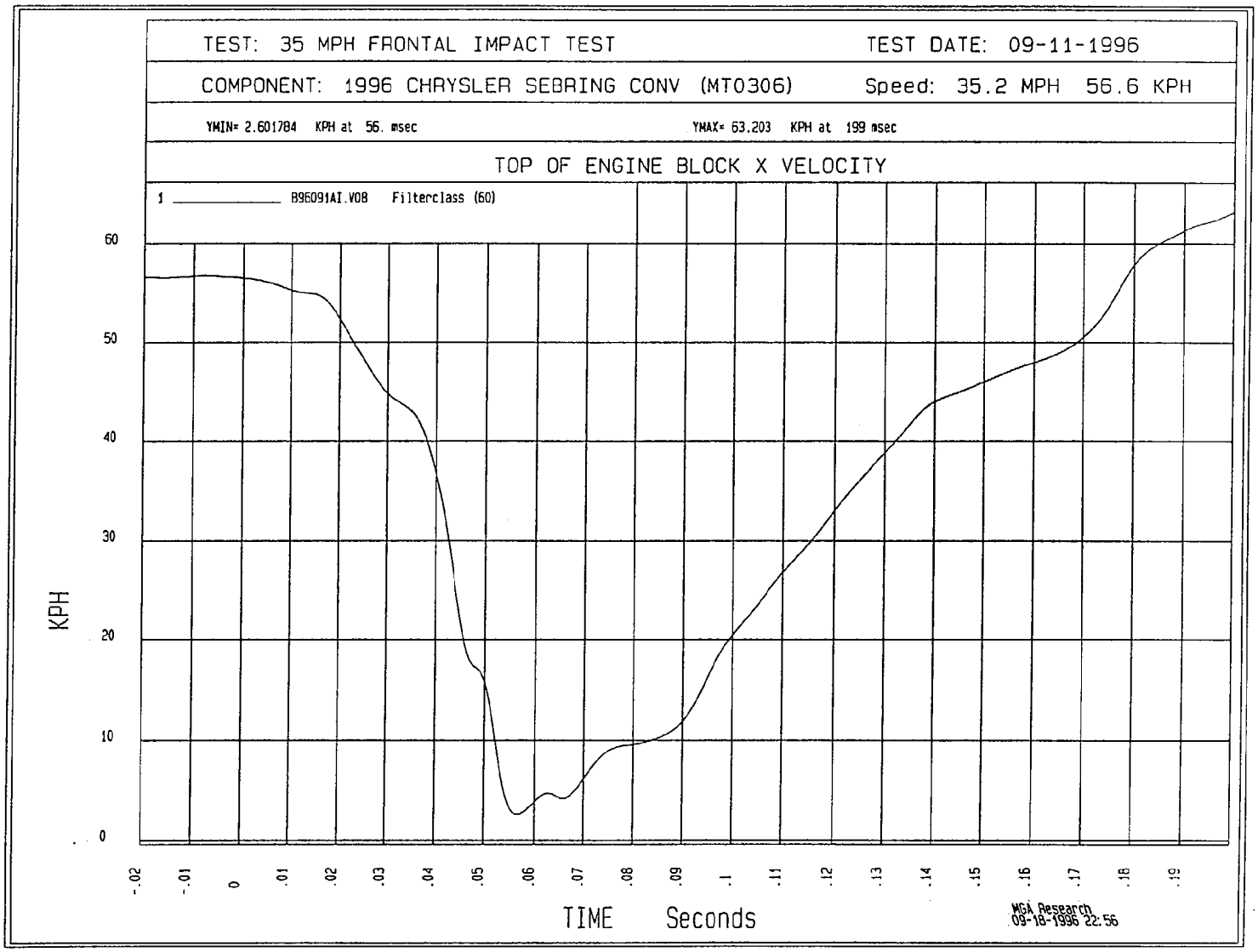

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 0 MM at 0 msec
YMAX= 842.19 MM at 86. msec
RIGHT REAR SEAT CROSSMEMBER X DISPLACEMENT
1 B96091AI.D20 Filterclass (60)
MM
800
700
600
500
400
300
200
100
0
0 .01 .02 .03 .04 .05 .06 .07 .08 .09 .1 .11 .12 .13 .14 .15 .16 .17 .18 .19
TIME Seconds
MGA Research
09-17-1996 21:36

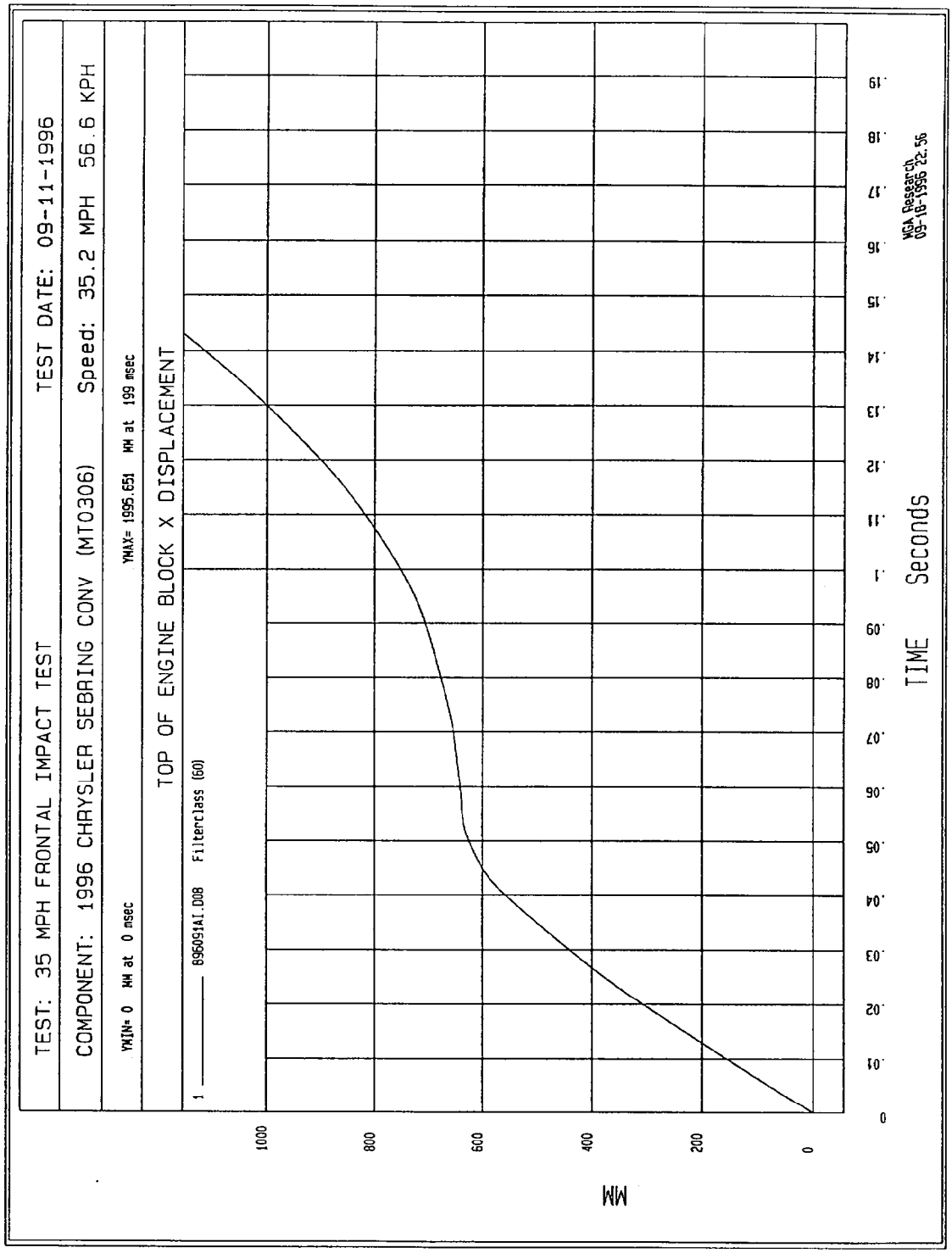

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-36.43586 G'S at 78 msec
YMAX= 5.954011 G'S at 133 msec
RIGHT REAR SEAT CROSSMEMBER REDUNDANT X ACCELERATION
1 B960911AF.A55 Filterclass (60)
10
0
-10
-20
-30
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-18-1996 23:20

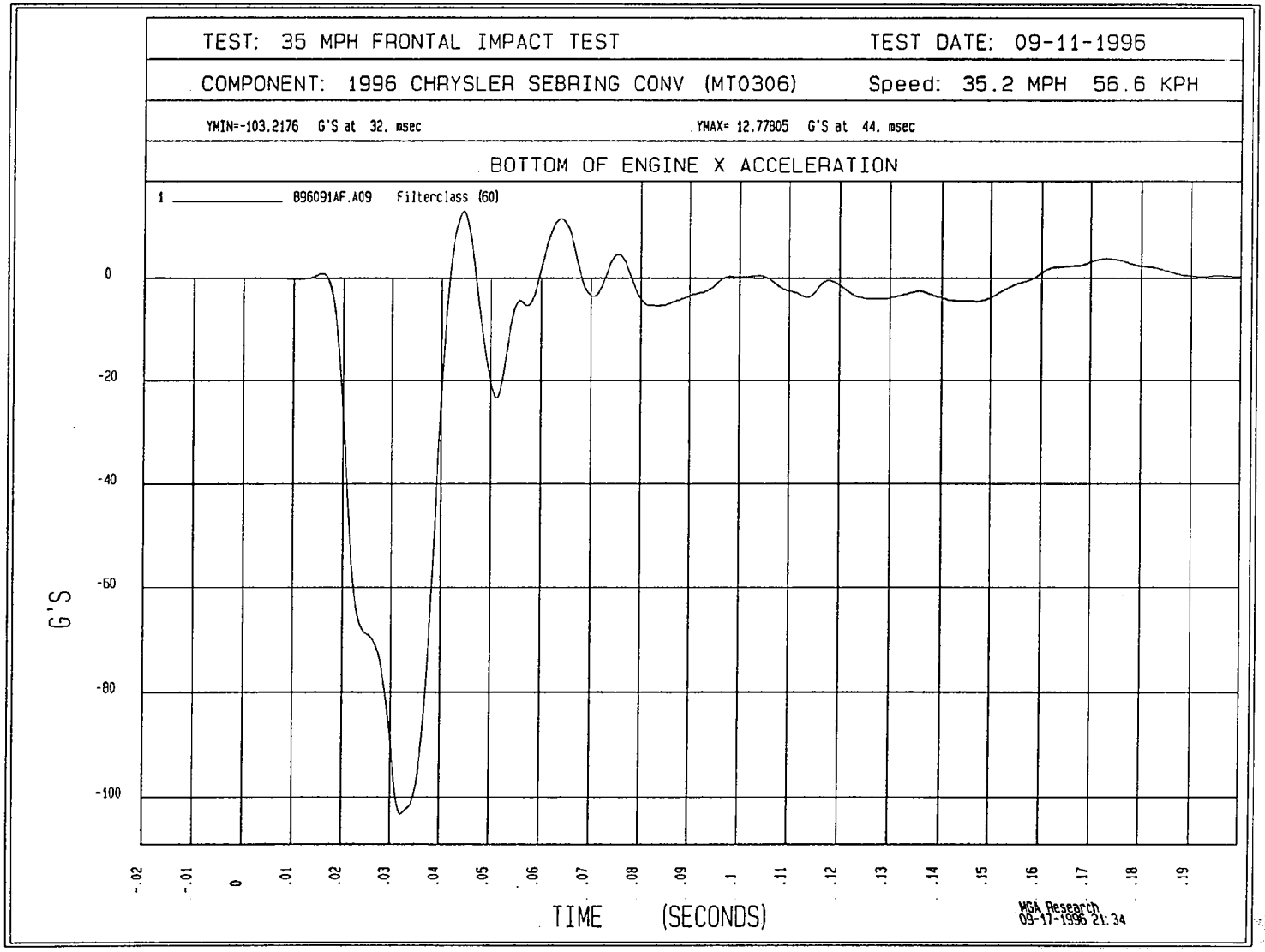

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-28.00095 KPH at 113 msec
YMAX= 56.6294 KPH at 2.9 msec
RIGHT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY
1 896091AI.V66 Filterclass (180)
KPH
TIME Seconds
MGA Research
09-16-1996 23:18

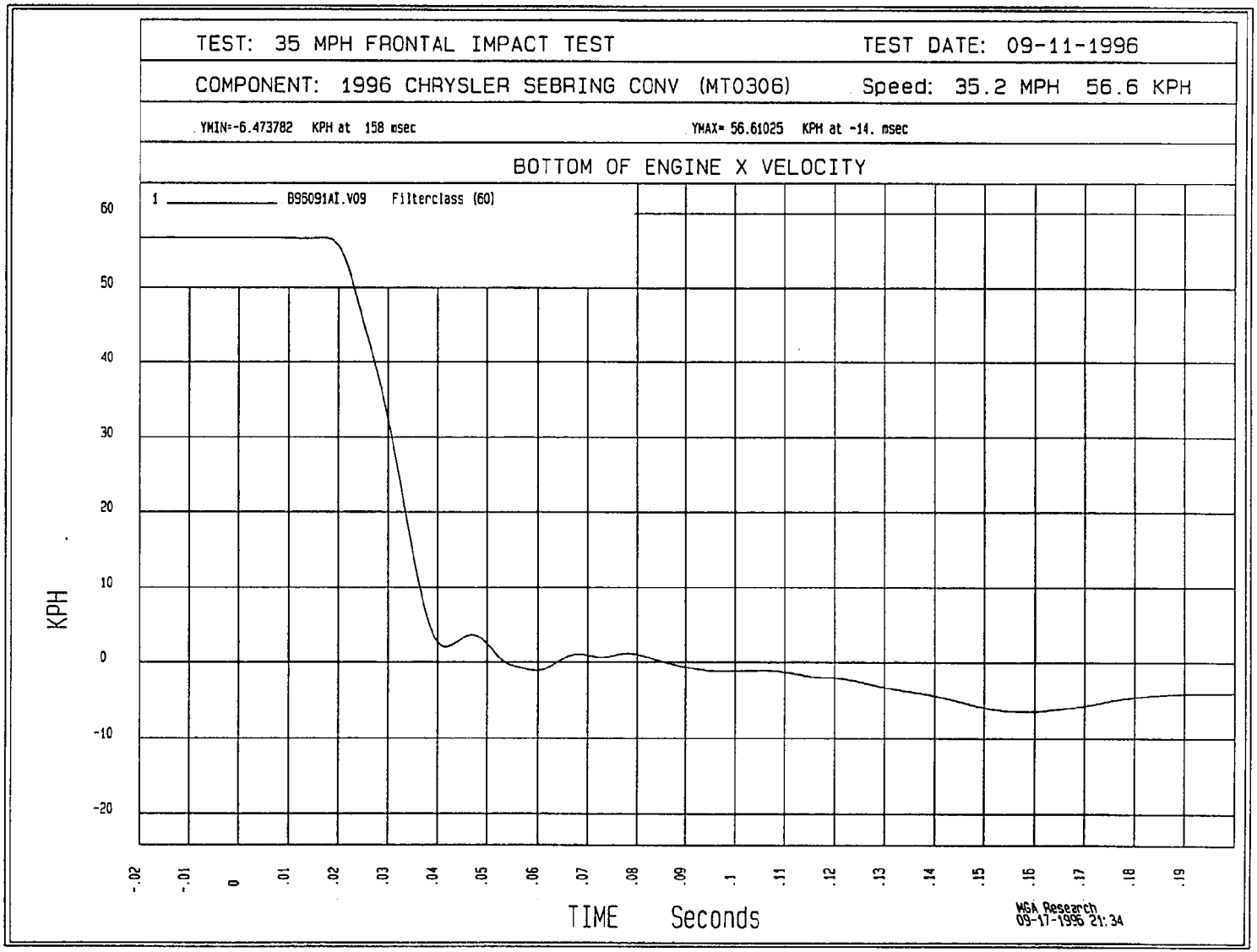

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-62.74896 MM at 199 msec
YMAX= 717.8198 MM at 72. msec
RIGHT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT
1 B96091AI.D66 Filterclass (60)
MM
700
600
500
400
300
200
100
0
-100
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:37

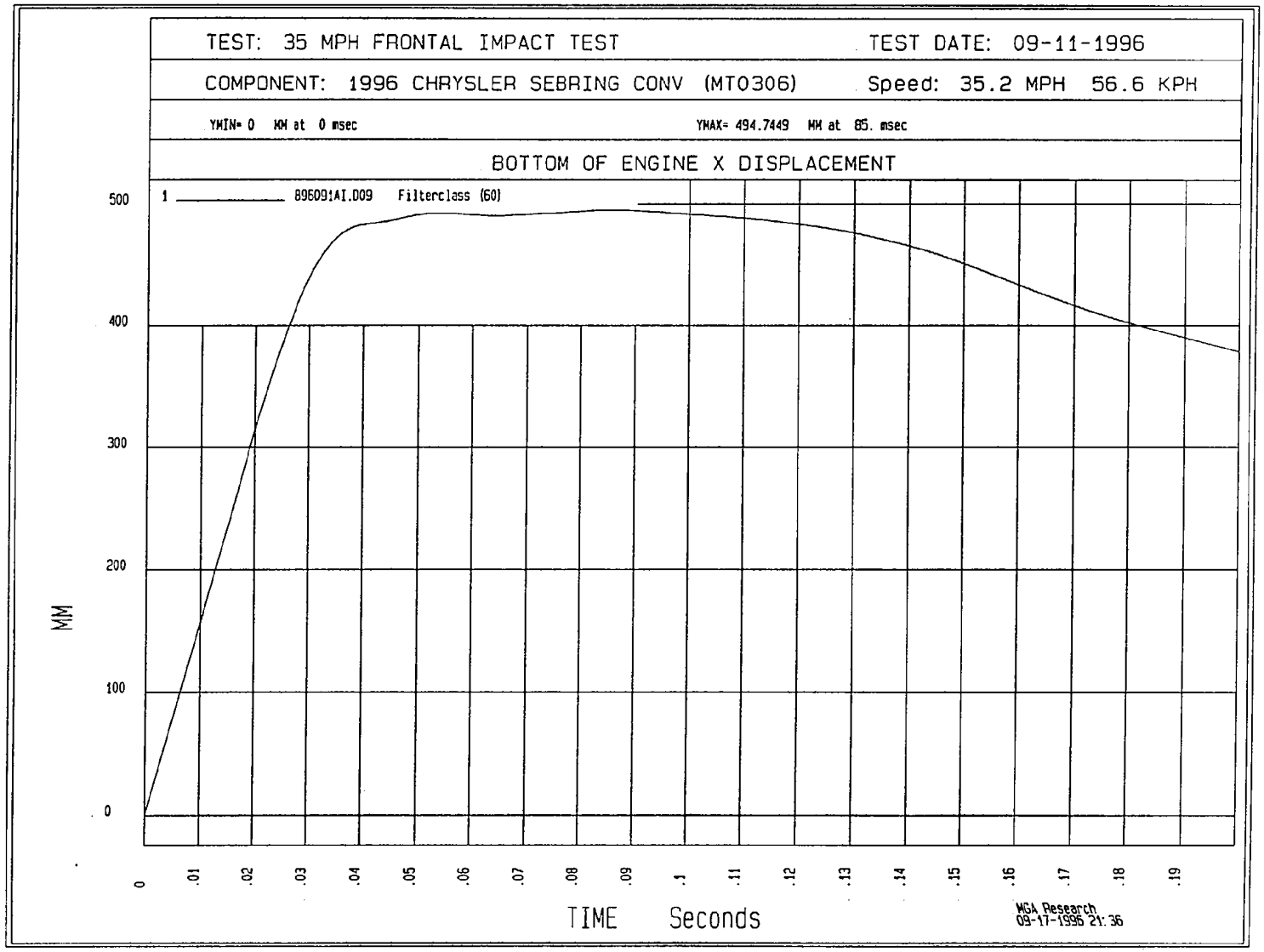

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-97.27746 G'S at 43. msec
YMAX= 29.55799 G'S at 94. msec
TOP OF ENGINE BLOCK X ACCELERATION
1 ——— 896091AF.A0B Filterclass (60)
20
0
-20
-40
-60
-80
-100
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
09-10-1996 22:55
6.5

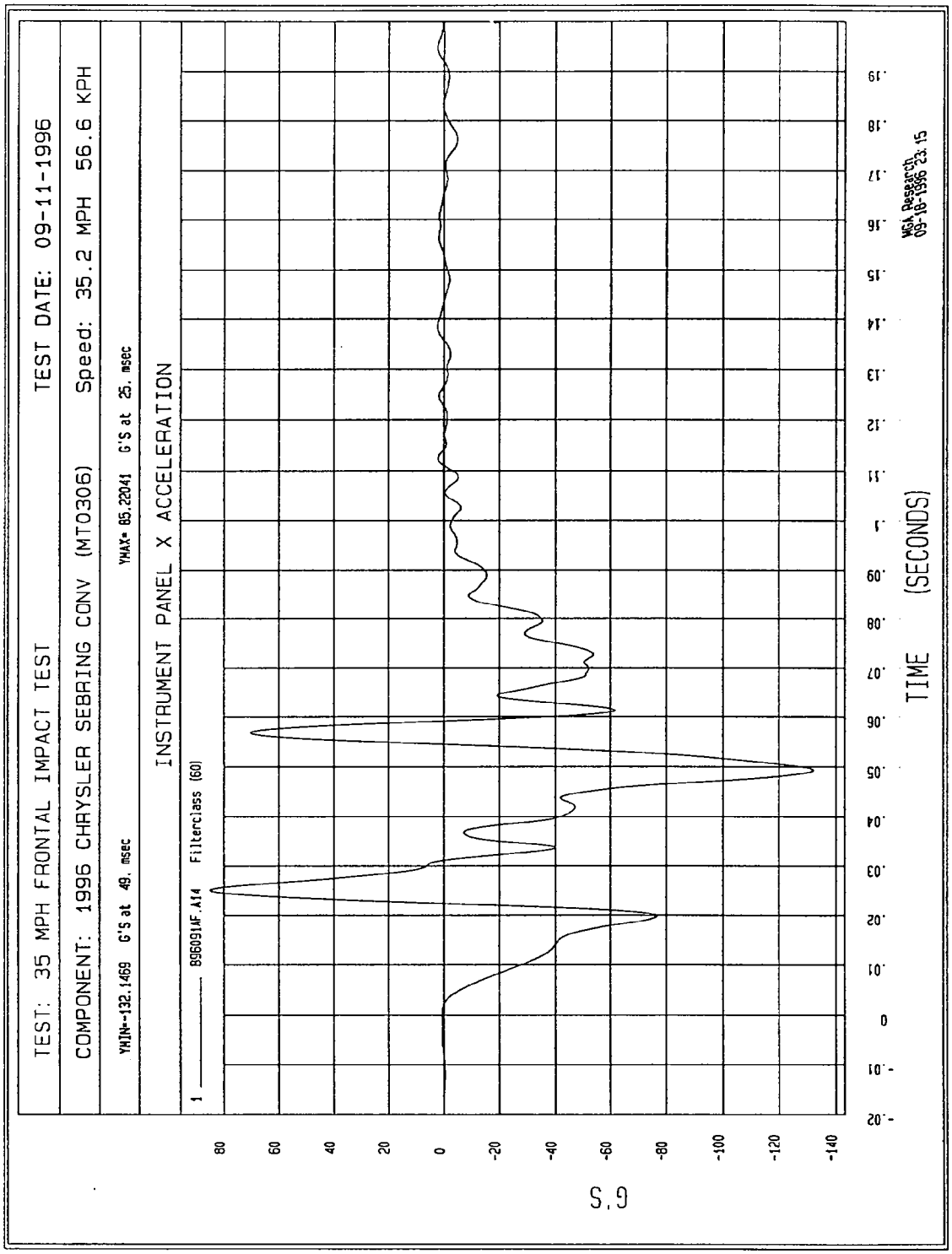

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 2.601784 KPH at 56. msec
YMAX= 63.203 KPH at 199 msec
TOP OF ENGINE BLOCK X VELOCITY
1 B96091AI.V08 Filterclass (60)
KPH
60
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-18-1996 22:56

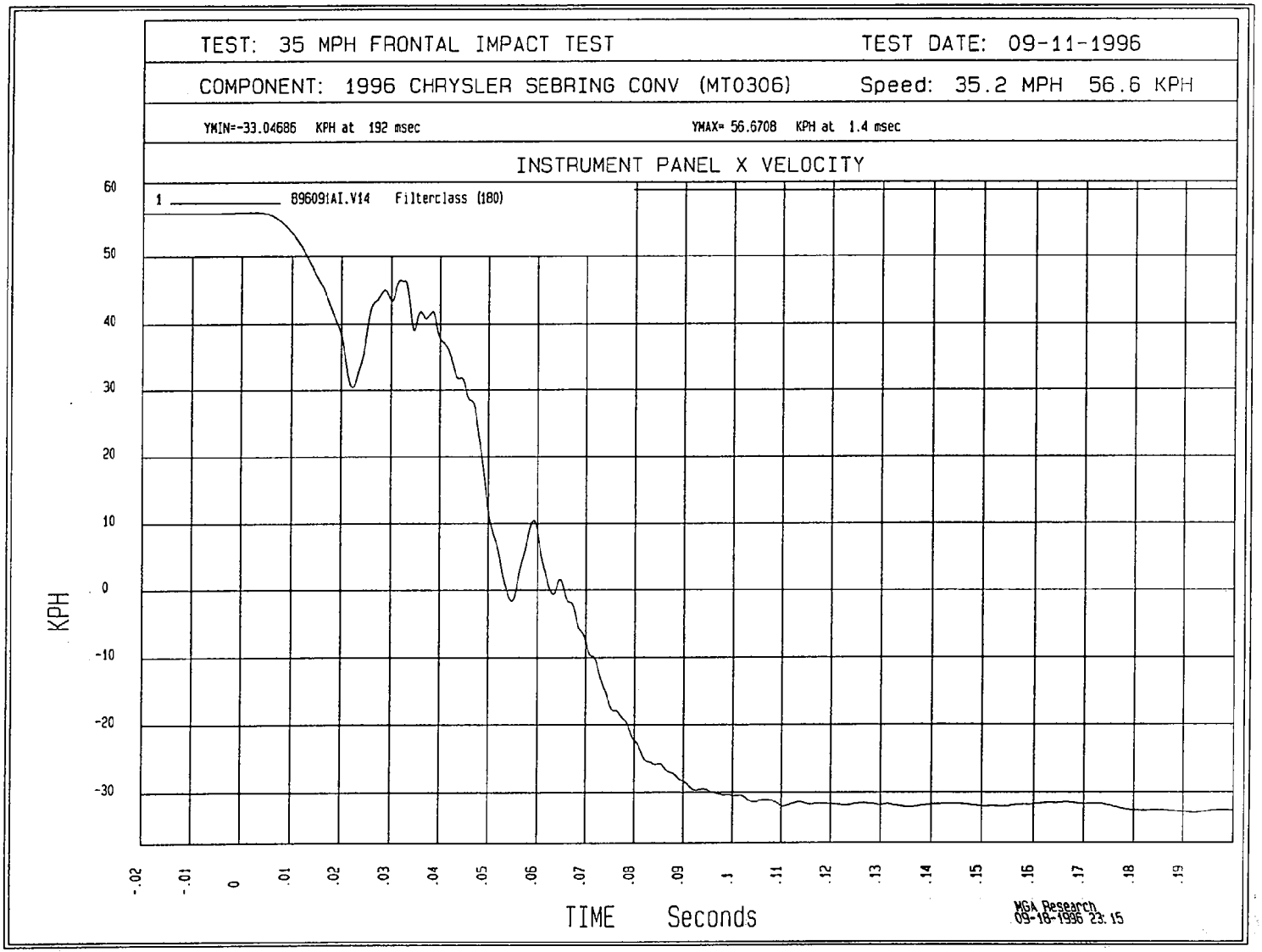

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 0 MM at 0 msec
YMAX= 1995.651 MM at 199 msec
TOP OF ENGINE BLOCK X DISPLACEMENT
1 _____ 896091AI.D08 Filterclass (60)
MM
1000
800
600
400
200
0
TIME Seconds
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
MGA Research
09-18-1996 22:56


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-103.2176 G'S at 32. msec
YMAX= 12.77305 G'S at 44. msec
BOTTOM OF ENGINE X ACCELERATION
1 896091AF.A09 Filterclass (60)
0
-20
-40
-60
-80
-100
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:34


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-6.473782 KPH at 158 msec
YMAX= 56.61025 KPH at -14. msec
BOTTOM OF ENGINE X VELOCITY
1 B95091AI.V09 Filterclass (60)
KPH
60
50
40
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:34


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 0 MM at 0 msec
YMAX= 494.7449 MM at 85. msec
BOTTOM OF ENGINE X DISPLACEMENT
1 896091AI.D09 Filterclass (60)
500
400
300
200
100
0
MM
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:36


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-132.1469 G'S at 49. msec
YMAX= 85.22041 G'S at 25. msec
INSTRUMENT PANEL X ACCELERATION
1 _____ B9609IAF.A14 Filterclass (60)
80
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
09-10-1996 23:15


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-33.04686 KPH at 192 msec
YMAX= 56.6708 KPH at 1.4 msec
INSTRUMENT PANEL X VELOCITY
1 89609!AI.V14 Filterclass (180)
60
50
40
30
20
10
0
-10
-20
-30
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
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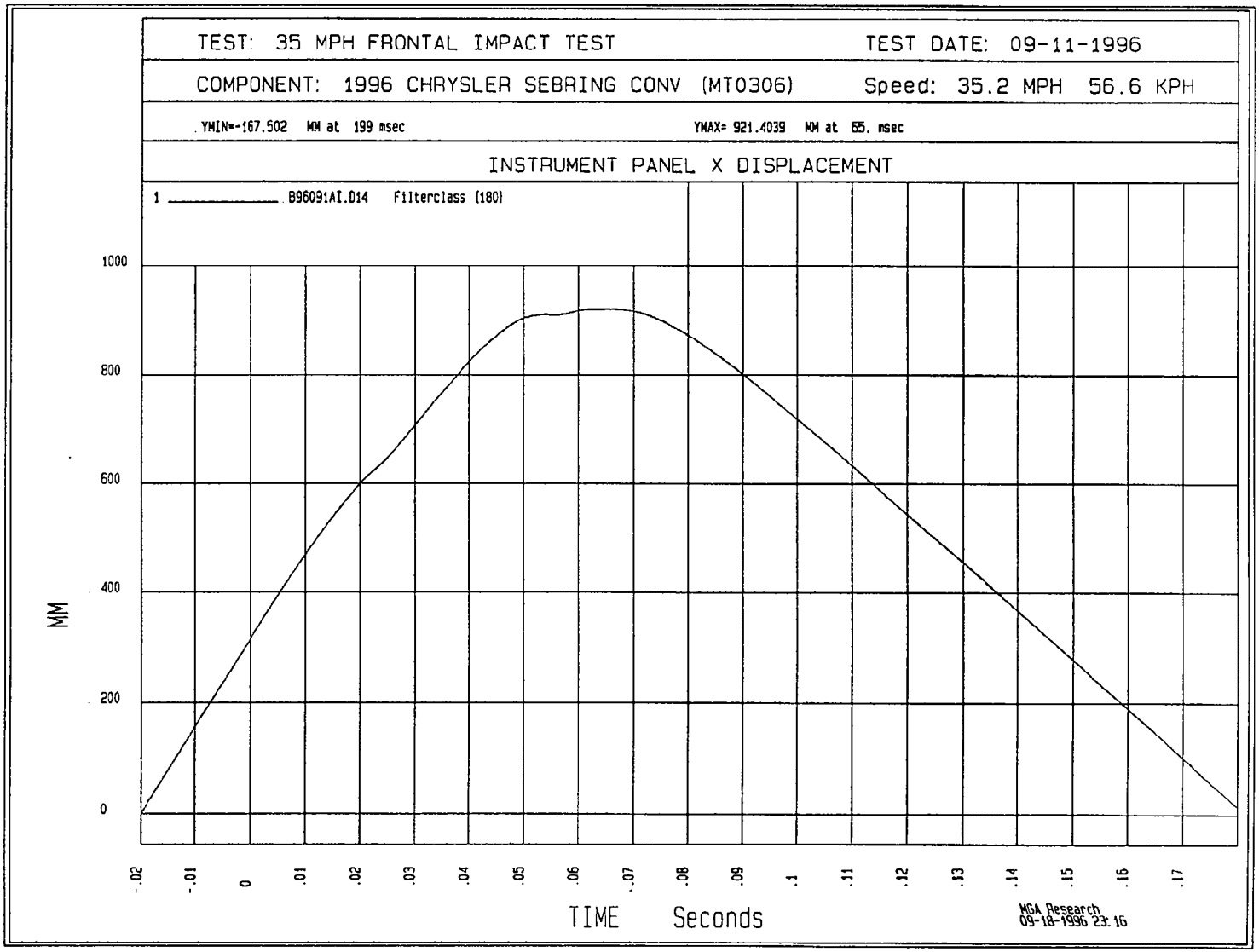
.19
TIME Seconds
MGA Research
09-18-1996 23:15


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-167.502 MM at 199 msec
YMAX= 921.4039 MM at 65. msec
INSTRUMENT PANEL X DISPLACEMENT
1 B96091AI.D14 Filterclass (180)
MM
1000
800
600
400
200
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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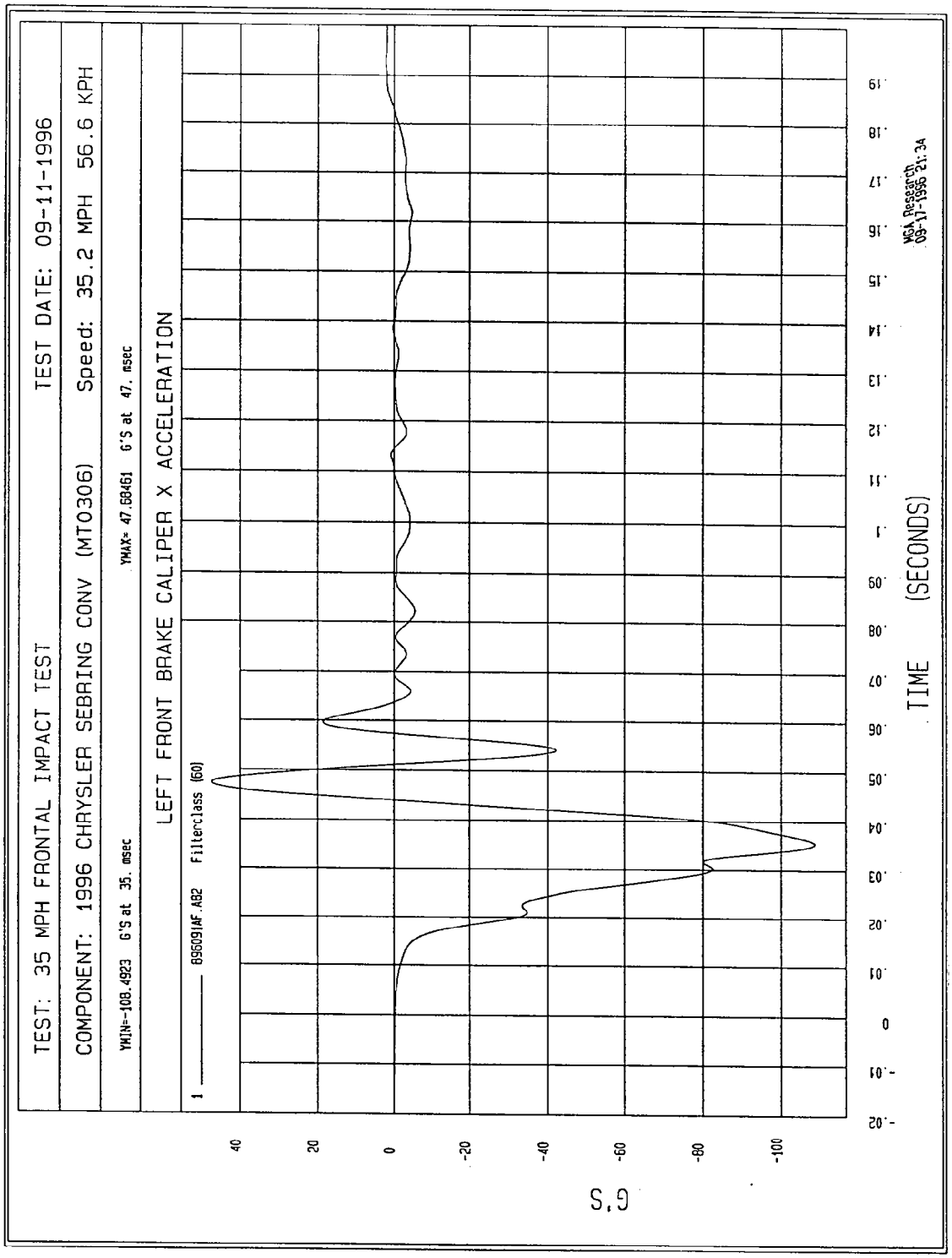
TIME Seconds
MGA Research
09-18-1996 23:16


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-108.4923 G'S at 35. msec
YMAX= 47.68461 G'S at 47. msec
LEFT FRONT BRAKE CALIPER X ACCELERATION
1 _____ 696091AF.A82 Filterclass (60)
40
20
0
-20
-40
-60
-80
-100
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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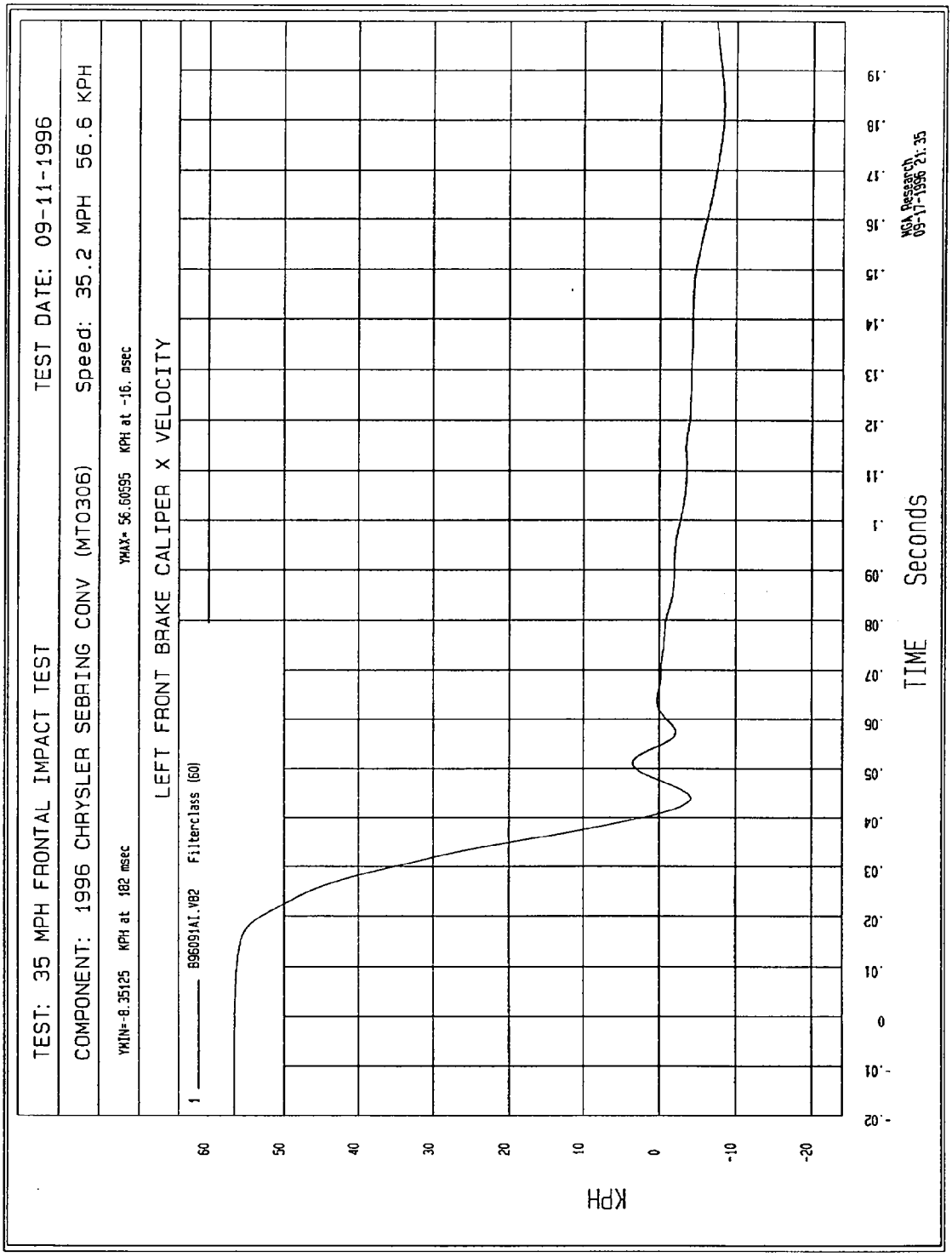
TIME (SECONDS)
MGA Research
09-17-1996 21:34


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-8.35125 KPH at 182 msec
YMAX= 56.60595 KPH at -16. msec
LEFT FRONT BRAKE CALIPER X VELOCITY
1 B96091AI.V82 Filterclass (60)
KPH
60
50
40
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
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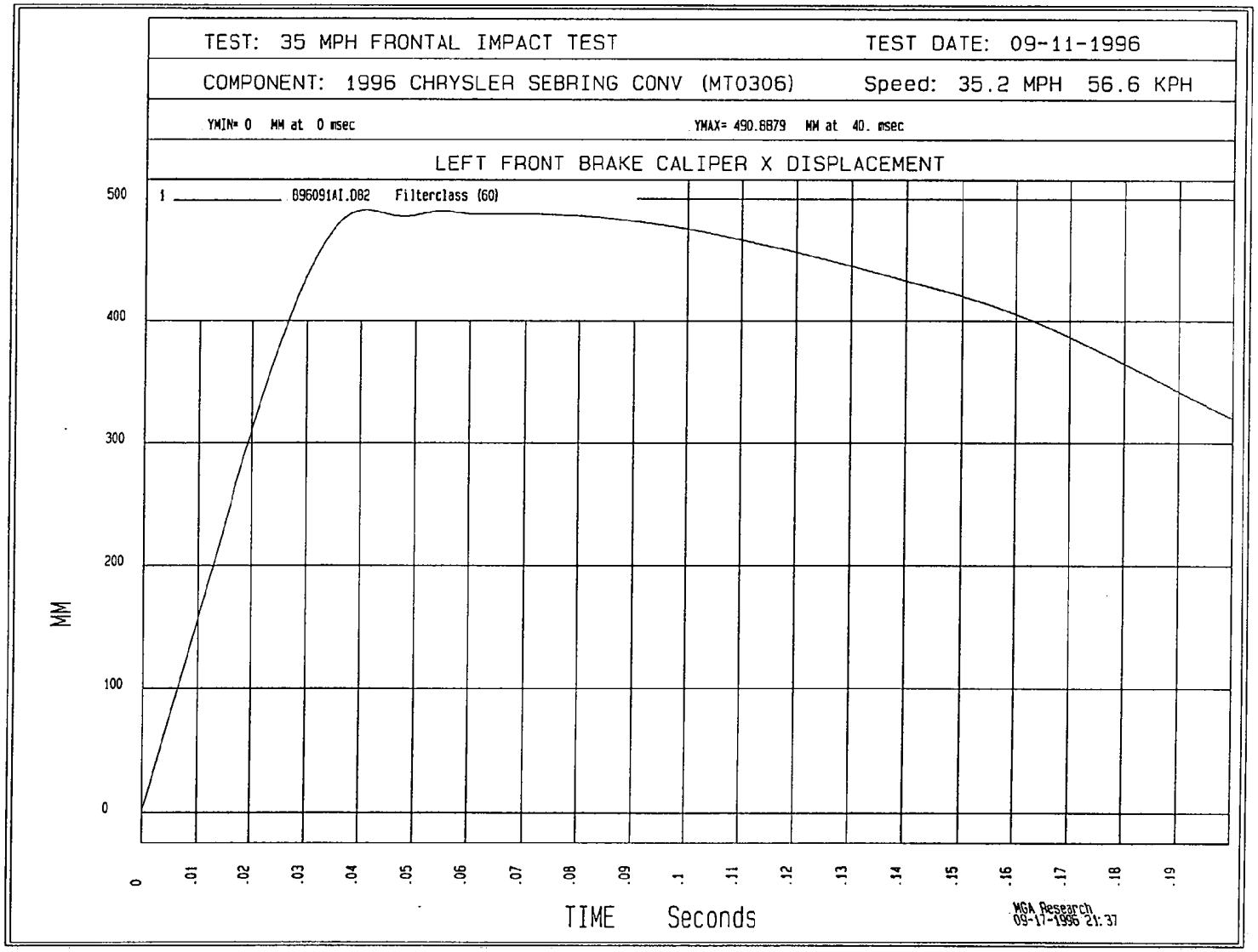
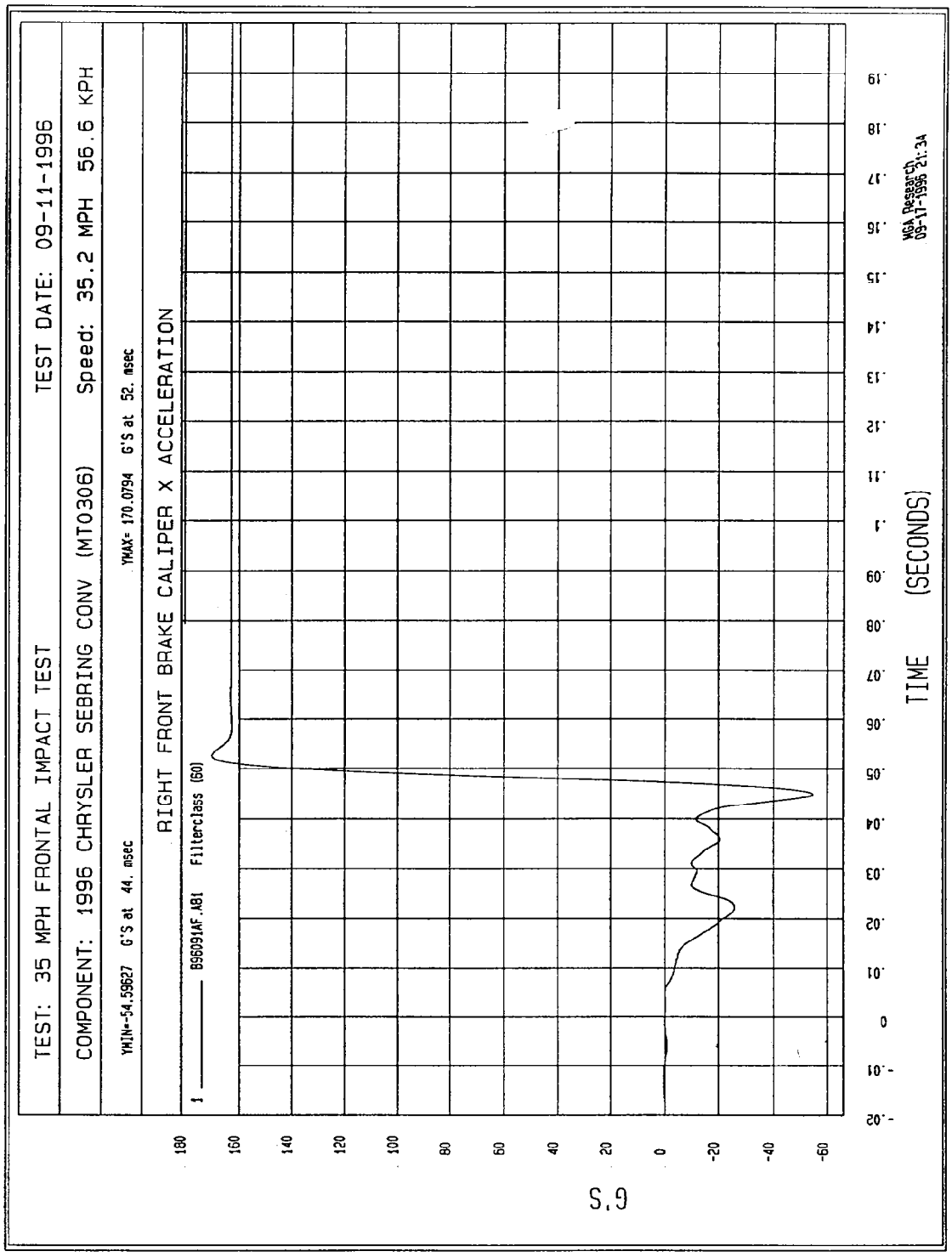
TIME Seconds
NGA Research
09-17-1996 21:35


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 0 MM at 0 msec
YMAX= 490.6879 MM at 40. msec
LEFT FRONT BRAKE CALIPER X DISPLACEMENT
1 896091AI.D62 Filterclass (60)
500
400
300
200
100
0
MM
0 .01 .02 .03 .04 .05 .06 .07 .08 .09 .1 .11 .12 .13 .14 .15 .16 .17 .18 .19
TIME Seconds
MGA Research
09-17-1996 21:37


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-54.59627 G'S at 44. msec
YMAX= 170.0794 G'S at 52. msec
RIGHT FRONT BRAKE CALIPER X ACCELERATION
1 B960914F.ABI Filterclass (60)
180
160
140
120
100
80
60
40
20
0
-20
-40
-60
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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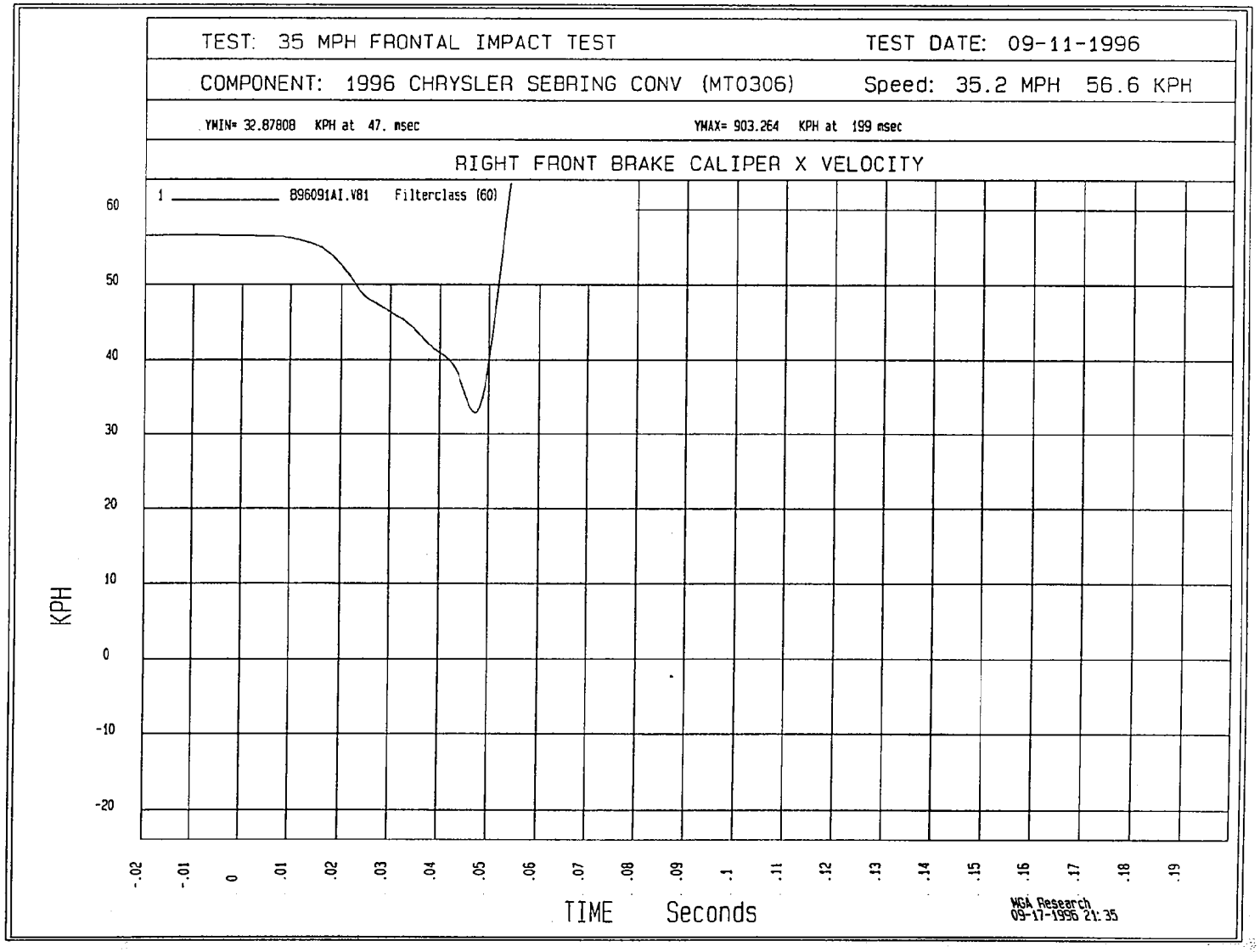
TIME (SECONDS)
NGA Research
09-17-1996 21:34

S.9


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 32.87808 KPH at 47. msec
YMAX= 903.264 KPH at 199 msec
RIGHT FRONT BRAKE CALIPER X VELOCITY
1 B96091AI.V81 Filterclass (60)
KPH
60
50
40
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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.13
.14
.15
.16
.17
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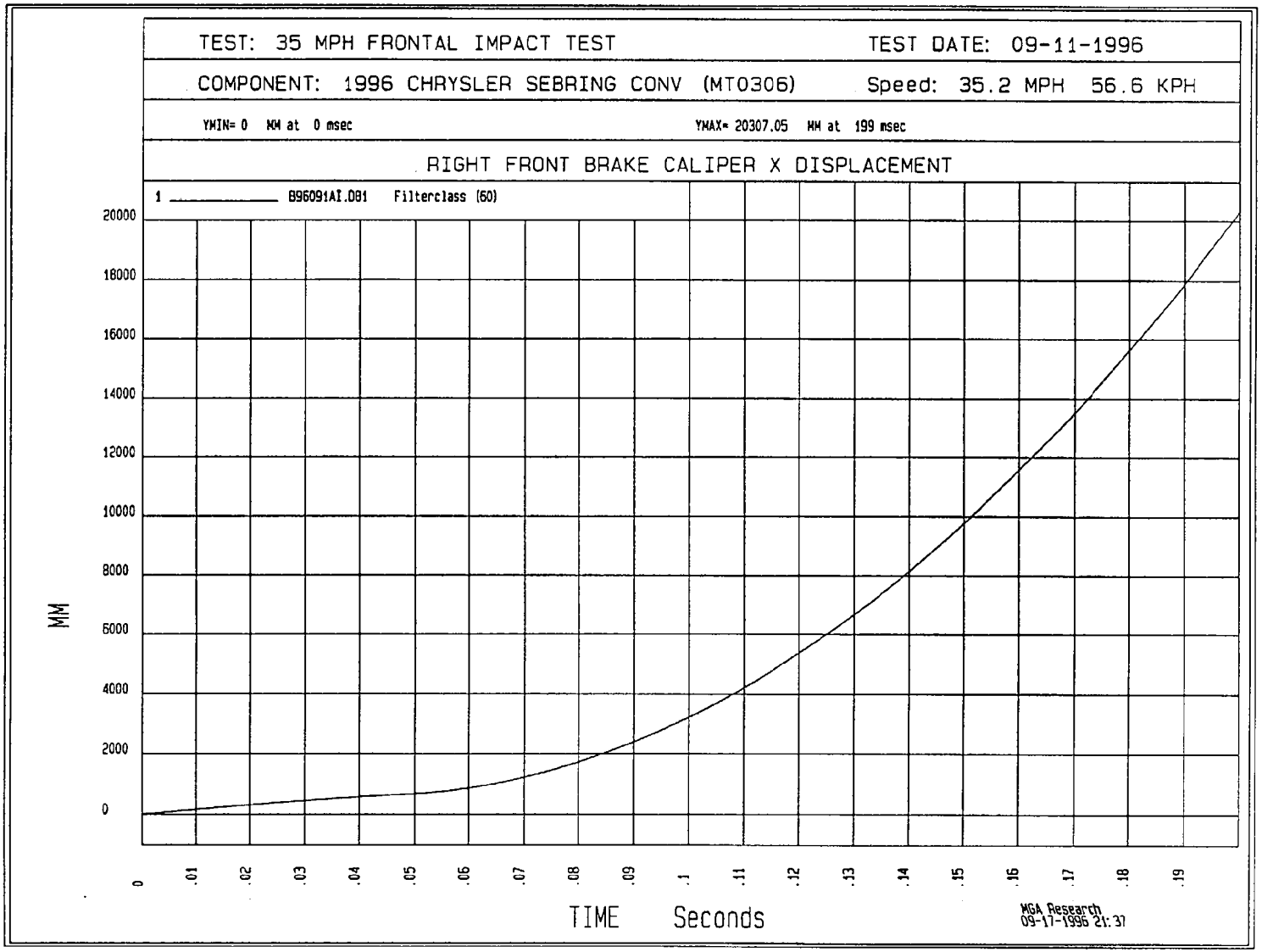
TIME Seconds
NGA Research
09-17-1996 21:35


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 0 MM at 0 msec
YMAX= 20307.05 MM at 199 msec
RIGHT FRONT BRAKE CALIPER X DISPLACEMENT
1 B96091AI.D81 Filterclass (60)
MM
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
.01
.02
.03
.04
.05
.06
.07
.08
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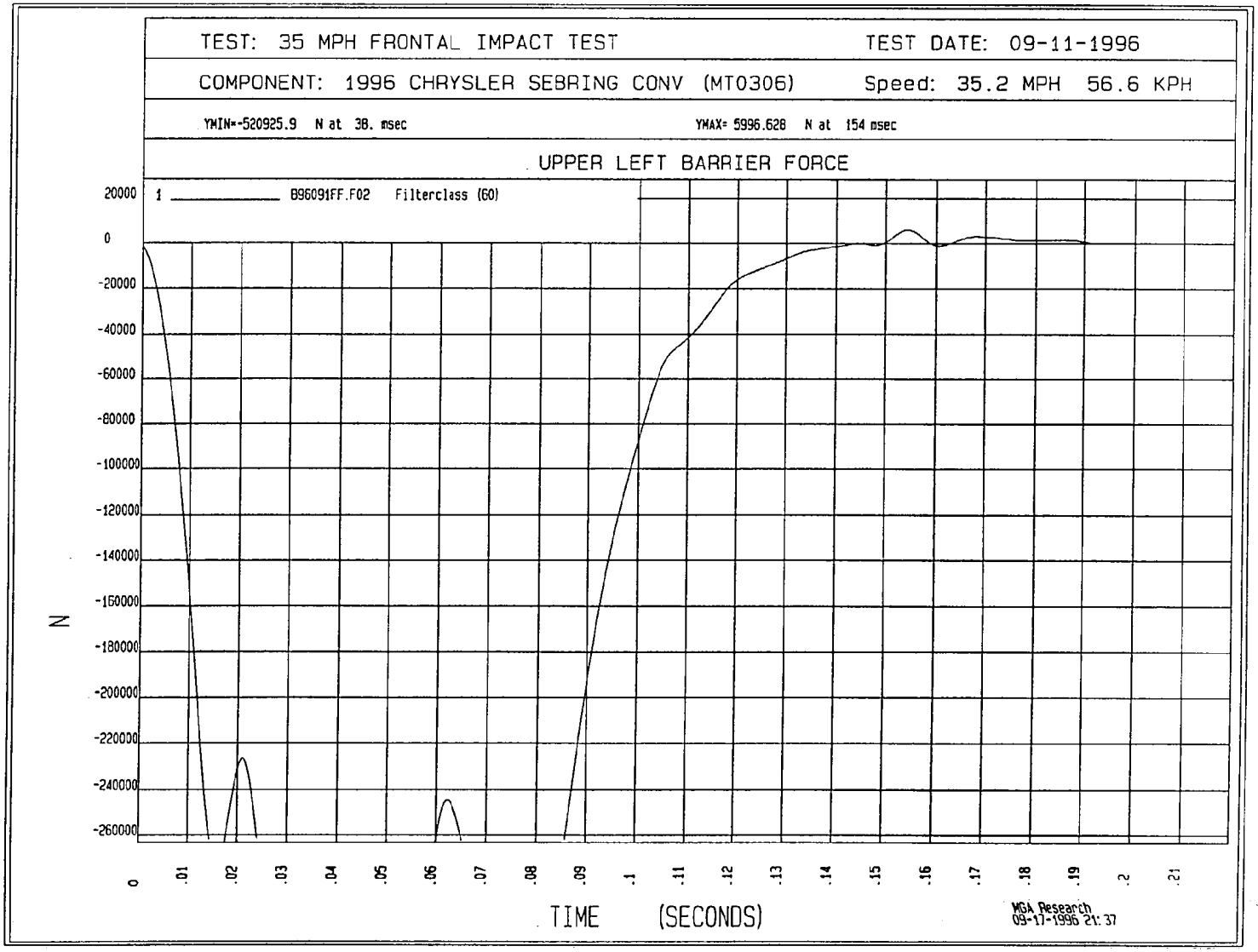
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:37


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-520925.9 N at 38. msec
YMAX= 5996.628 N at 154 msec
UPPER LEFT BARRIER FORCE
1 B96091FF.F02 Filterclass (60)
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
-140000
-160000
-180000
-200000
-220000
-240000
-260000
N
0
.01
.02
.03
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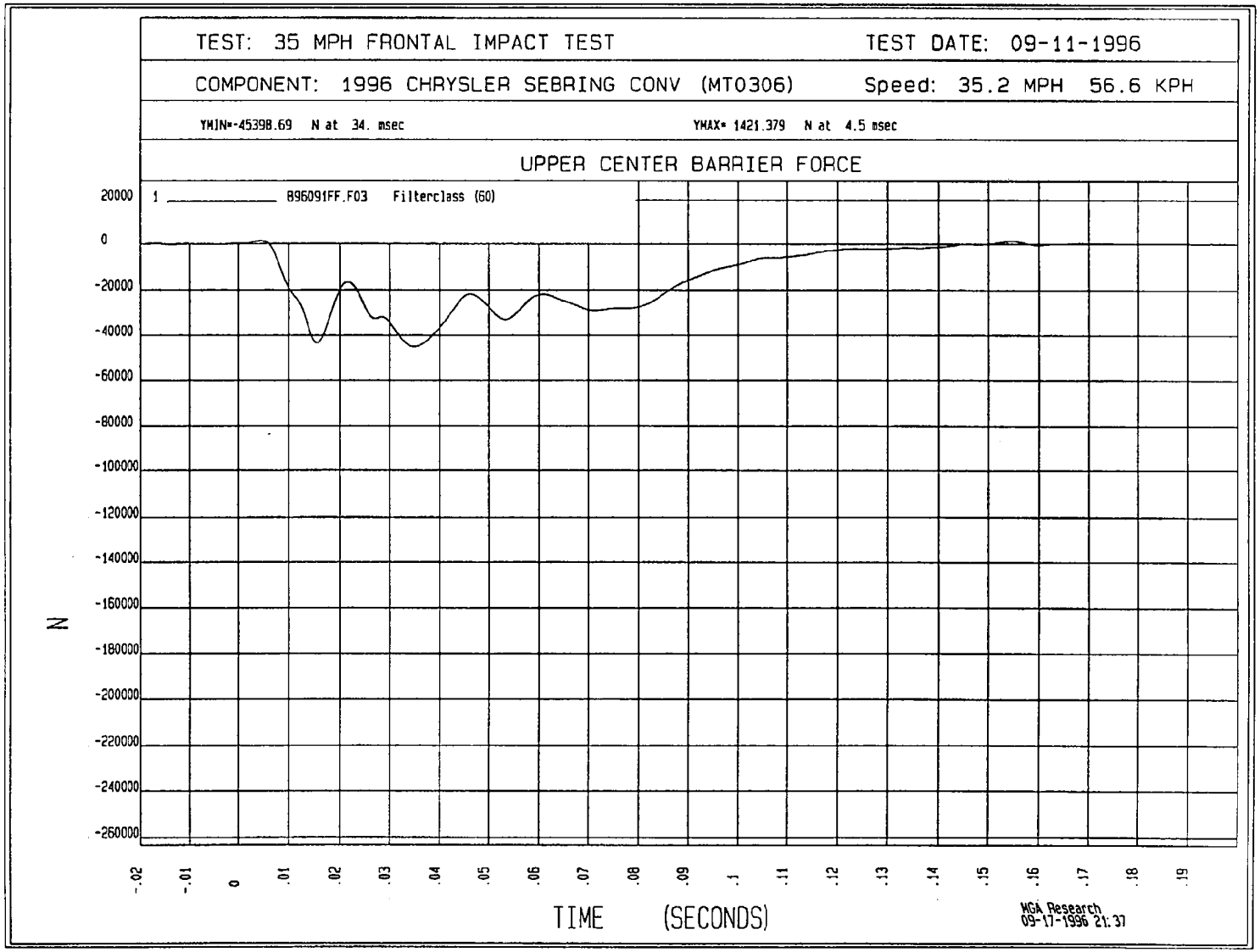
.2
.21
TIME (SECONDS)
MGA Research
09-17-1996 21:37


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-45398.69 N at 34. msec
YMAX= 1421.379 N at 4.5 msec
UPPER CENTER BARRIER FORCE
1 B96091FF.F03 Filterclass (60)
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
-140000
-160000
-180000
-200000
-220000
-240000
-260000
N
-.02
-.01
0
.01
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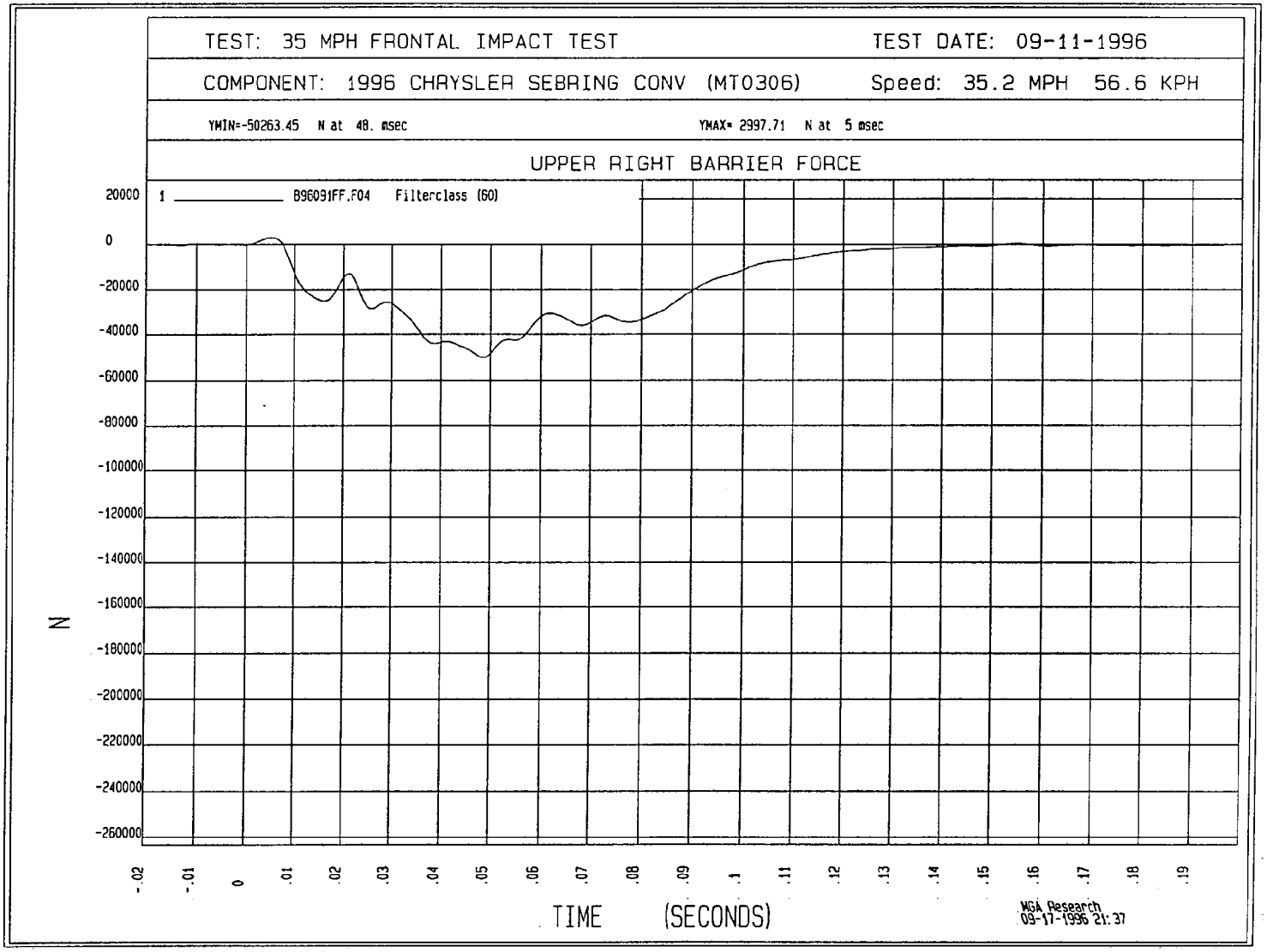
TIME (SECONDS)
MGA Research
09-17-1996 21:37


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-50263.45 N at 48. msec
YMAX= 2997.71 N at 5 msec
UPPER RIGHT BARRIER FORCE
1 B96091FF.F04 Filterclass (60)
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
-140000
-160000
-180000
-200000
-220000
-240000
-260000
N
-.02
-.01
0
.01
.02
.03
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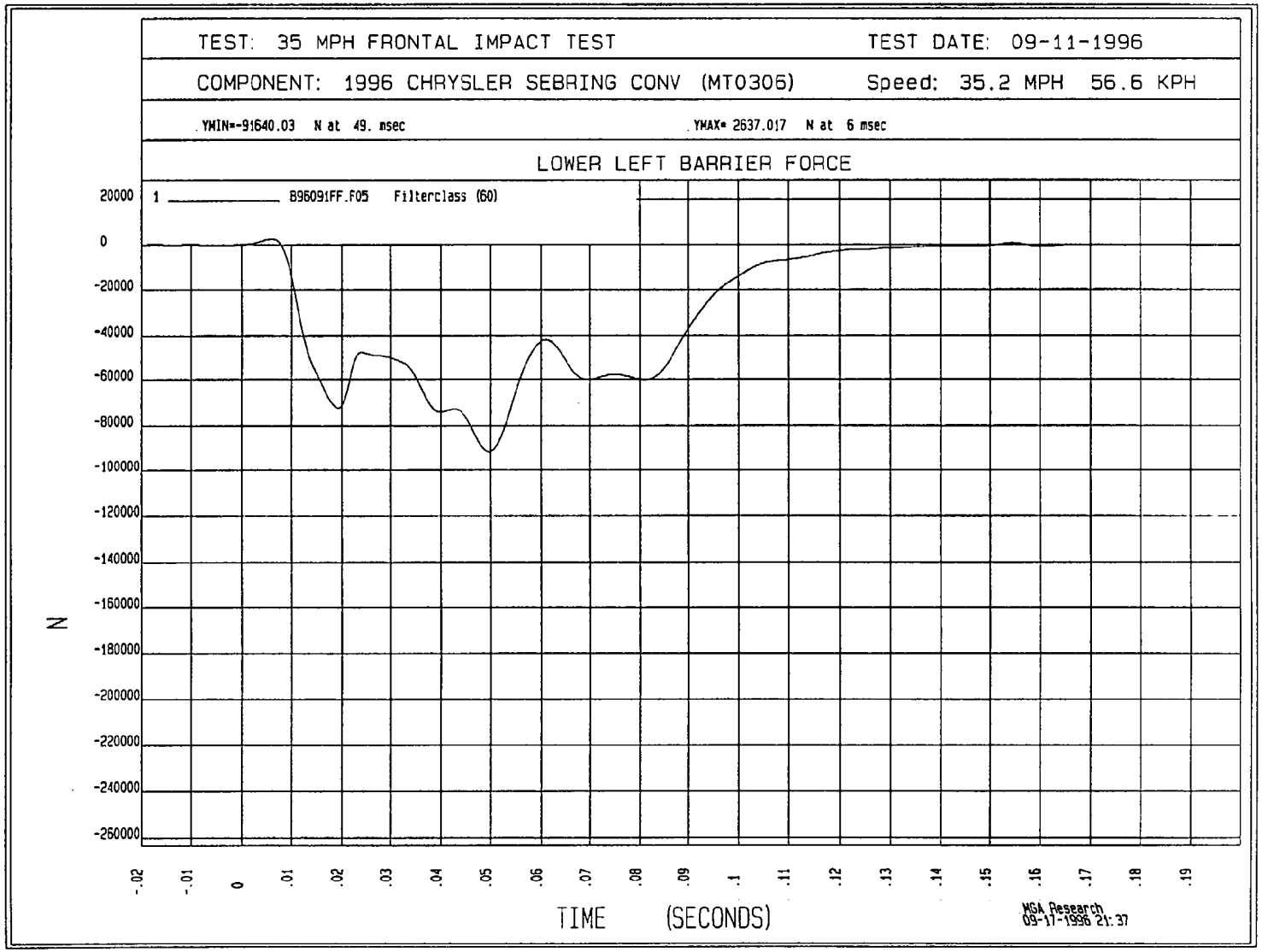
TIME (SECONDS)
MGA Research
09-17-1996 21:37


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0305)
Speed: 35.2 MPH 56.6 KPH
YMIN=-91640.03 N at 49. msec
YMAX= 2637.017 N at 6 msec
LOWER LEFT BARRIER FORCE
1 B96091FF.F05 Filterclass (60)
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
-140000
-160000
-180000
-200000
-220000
-240000
-260000
N
-.02
-.01
0
.01
.02
.03
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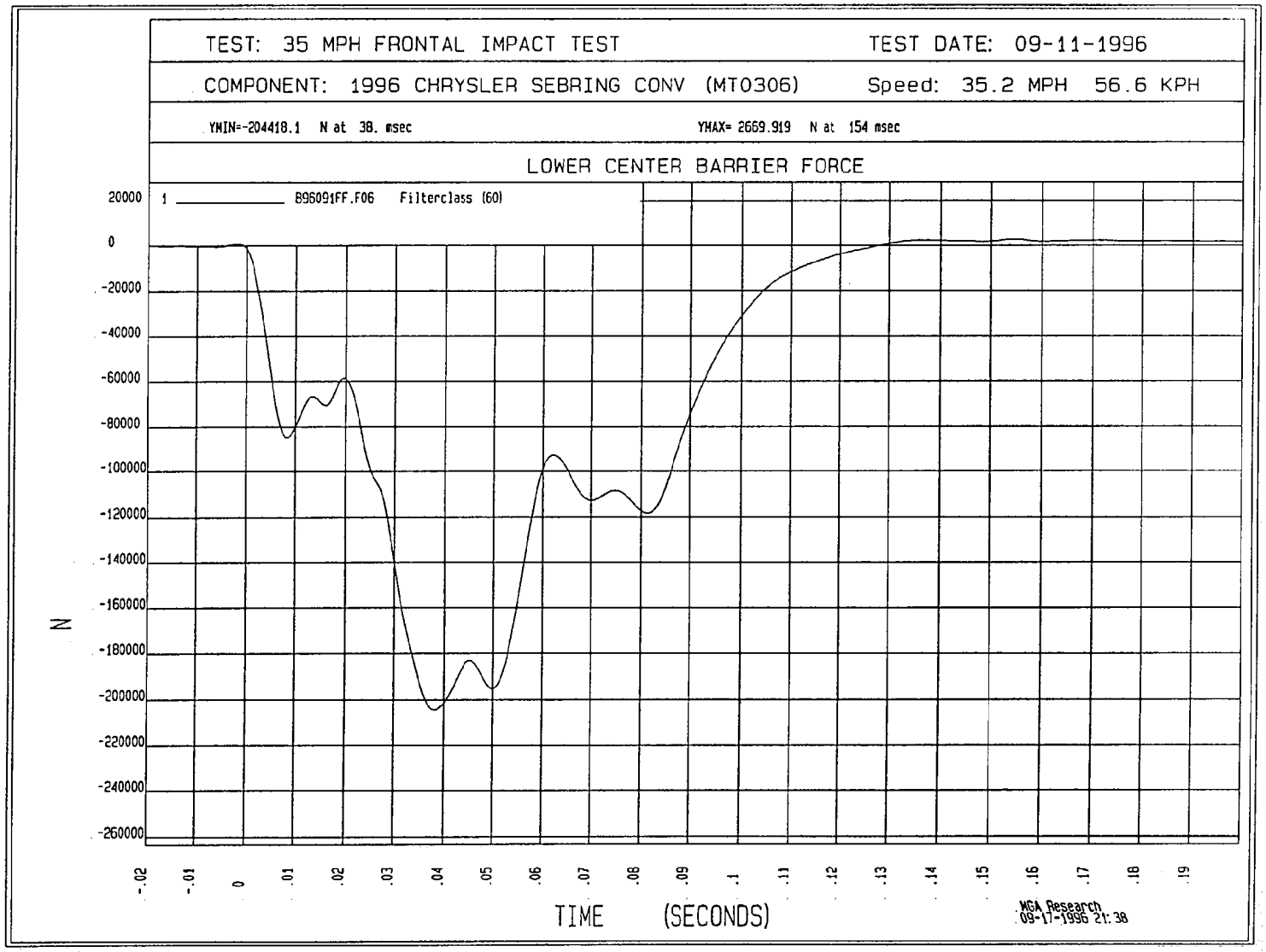
TIME (SECONDS)
MGA Research
09-11-1996 21:37


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-204418.1 N at 38. msec
YMAX= 2669.919 N at 154 msec
LOWER CENTER BARRIER FORCE
1 B96091FF.F06 Filterclass (60)
20000
0
-20000
-40000
-60000
-80000
-100000
-120000
-140000
-160000
-180000
-200000
-220000
-240000
-260000
N
-.02
-.01
0
.01
.02
.03
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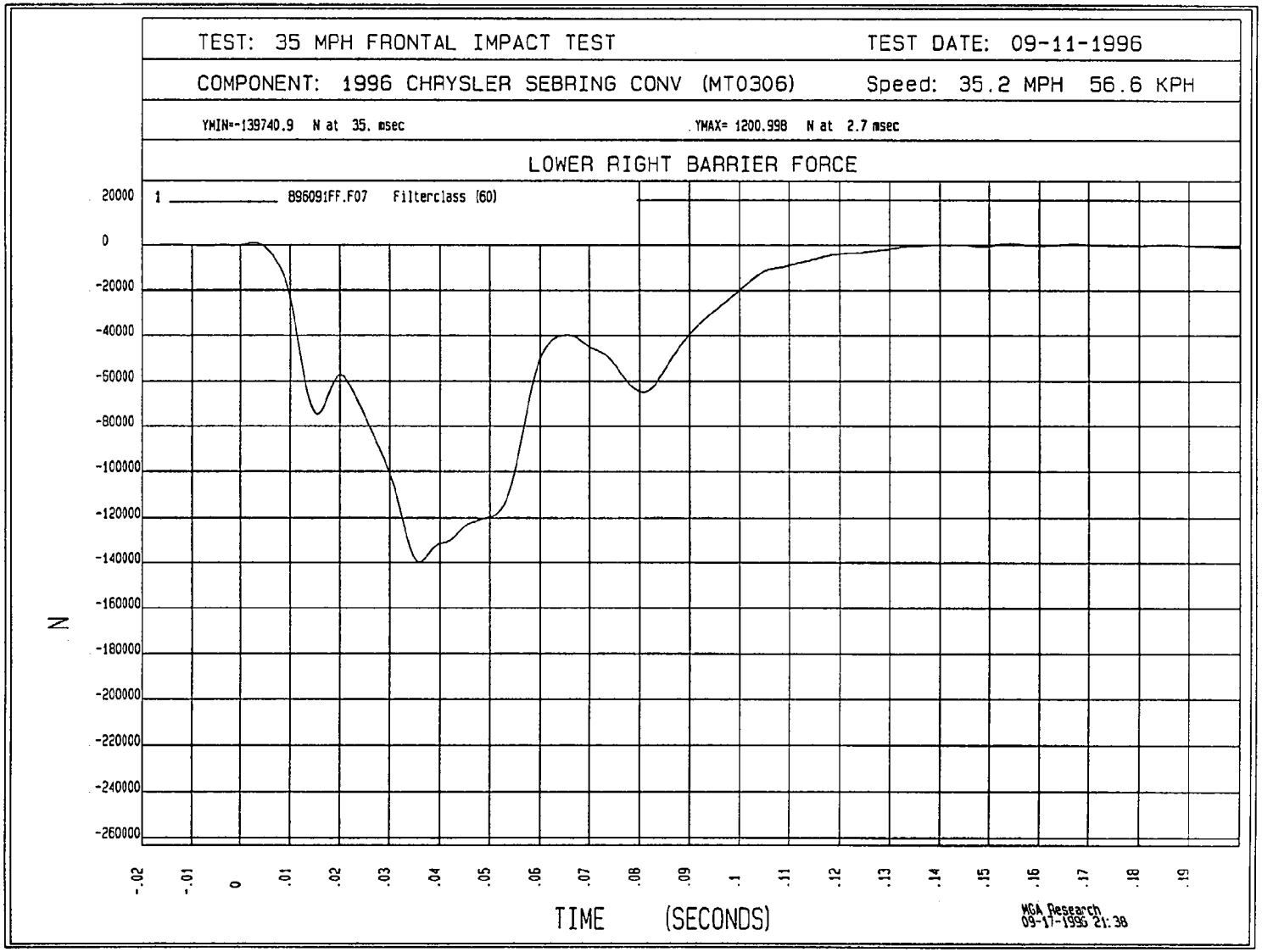
TIME (SECONDS)
MGA Research
09-17-1996 21:38


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-139740.9 N at 35. msec
YMAX= 1200.998 N at 2.7 msec
LOWER RIGHT BARRIER FORCE
1 896091FF.F07 Filterclass (60)
20000
0
-20000
-40000
-50000
-80000
-100000
-120000
-140000
-160000
-180000
-200000
-220000
-240000
-260000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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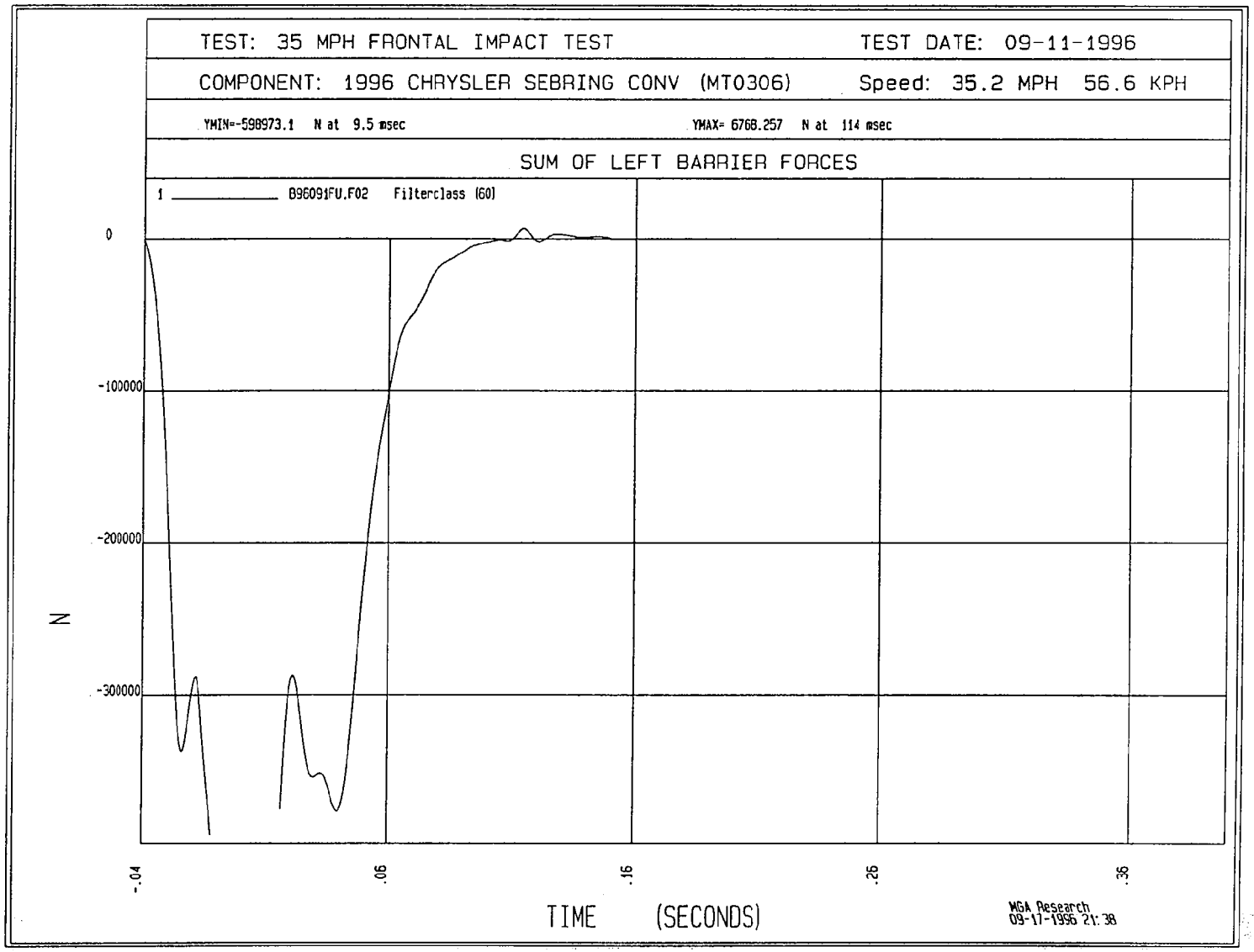
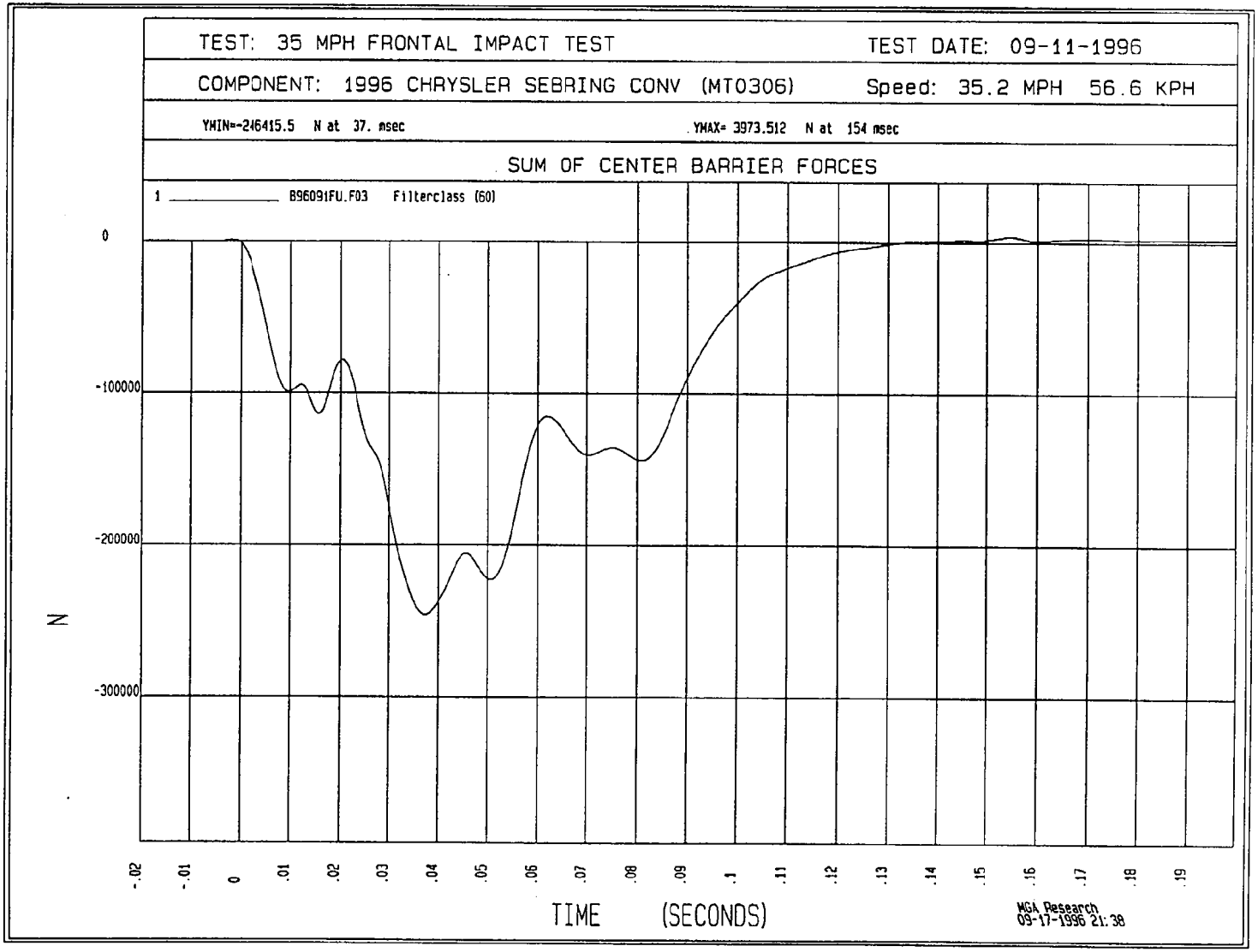
TIME (SECONDS)
MGA Research
09-17-1996 21:38


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-598973.1 N at 9.5 msec
YMAX= 6768.257 N at 114 msec
SUM OF LEFT BARRIER FORCES
1 B96091FU.F02 Filterclass (60)
0
-100000
-200000
-300000
N
-.04
.06
.16
.26
.36
TIME (SECONDS)
MGA Research
09-17-1996 21:38


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-246415.5 N at 37. msec
YMAX= 3973.512 N at 154 msec
SUM OF CENTER BARRIER FORCES
1 B96091FU.F03 Filterclass (60)
0
-100000
-200000
-300000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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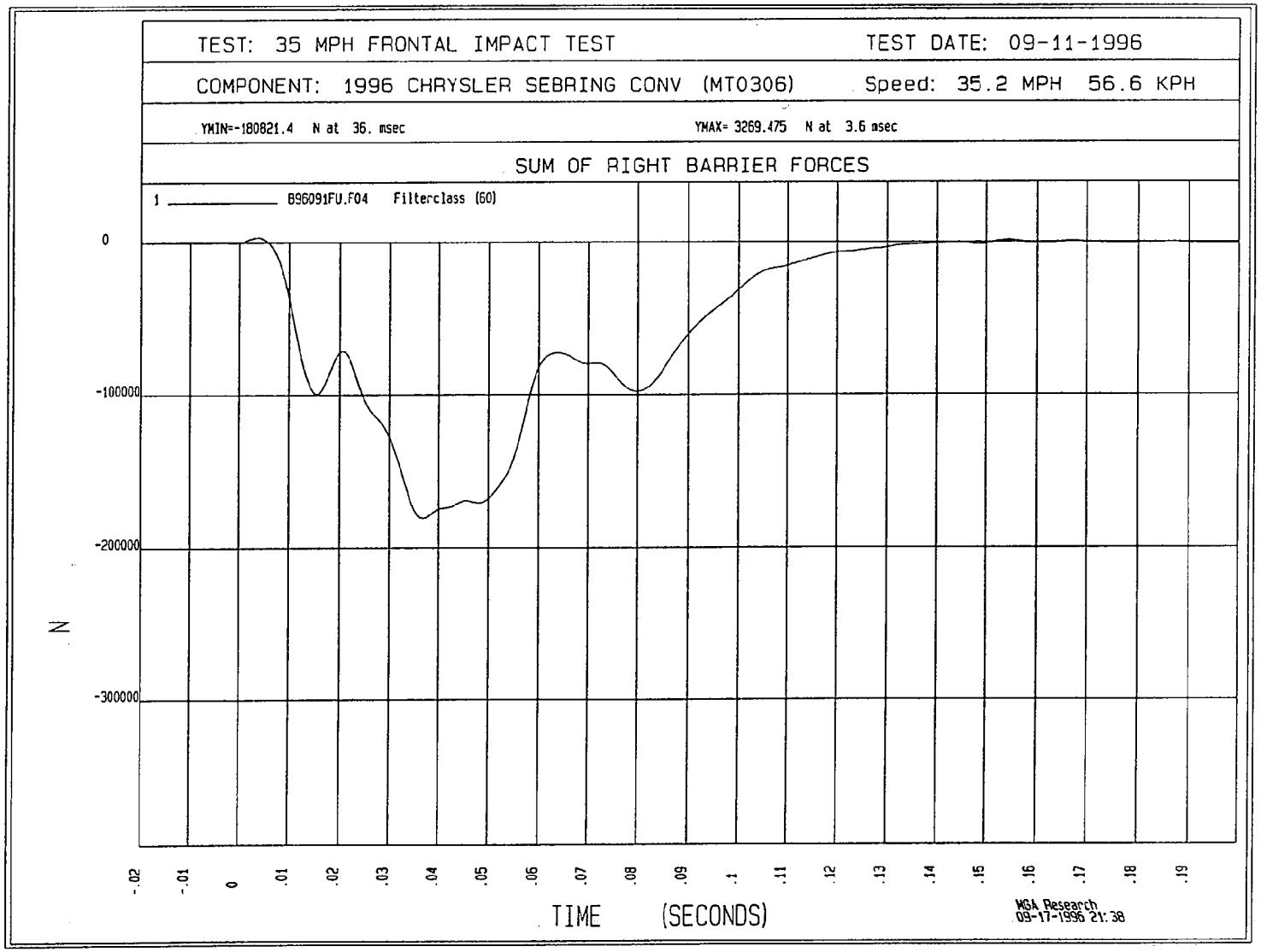
TIME (SECONDS)
MGA Research
09-17-1996 21:38


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-180821.4 N at 36. msec
YMAX= 3269.475 N at 3.6 msec
SUM OF RIGHT BARRIER FORCES
1 B96091FU.F04 Filterclass (60)
0
-100000
-200000
-300000
N
-.02
-.01
0
.01
.02
.03
.04
.05
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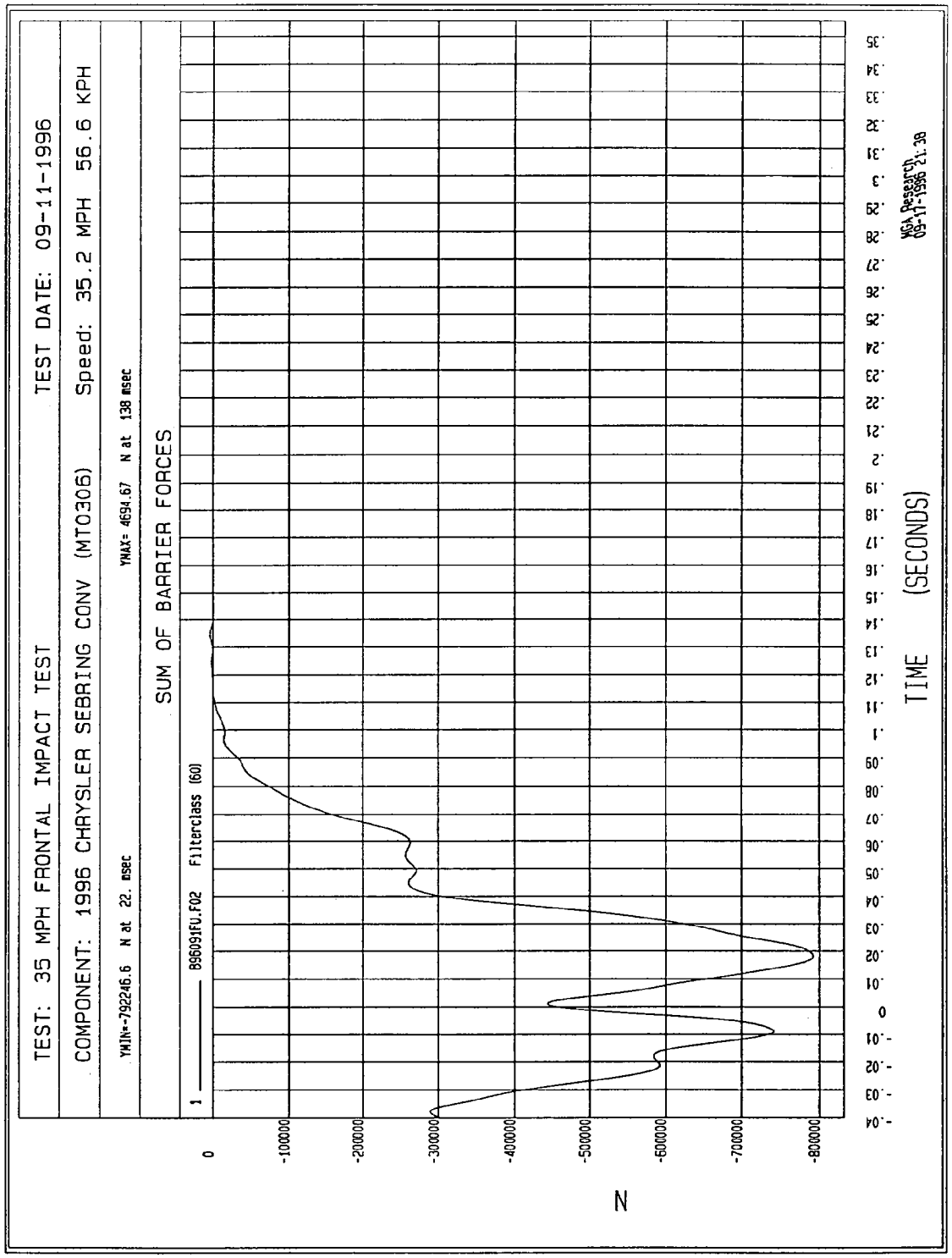
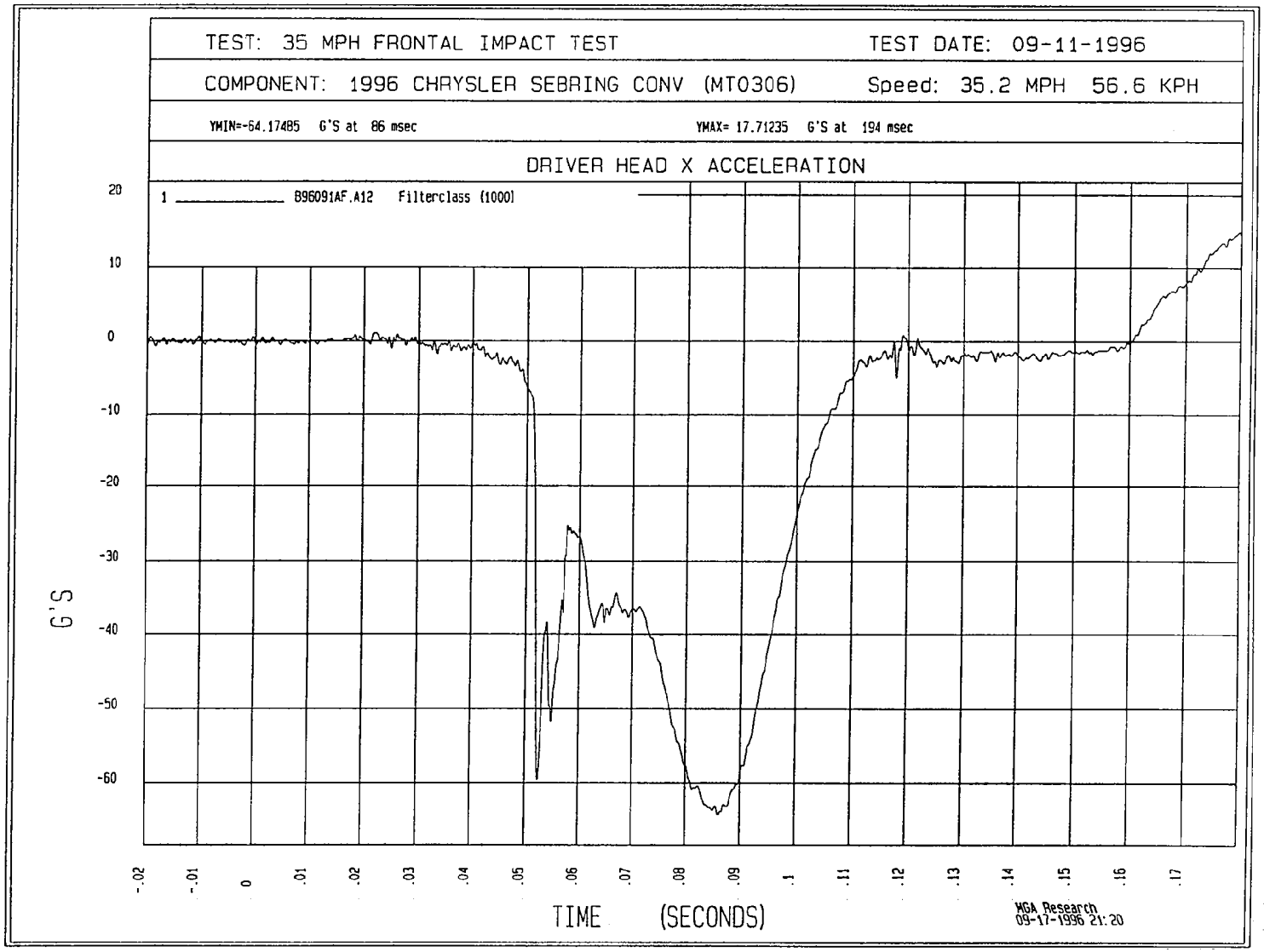
TIME (SECONDS)
MGA Research
09-17-1996 21:38


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-792246.6 N at 22. msec
YMAX= 4694.67 N at 138 msec
SUM OF BARRIER FORCES
1 B96091FU.F02 Filterclass (60)
N
TIME (SECONDS)
MGA Research
09-17-1996 21:38


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-64.17485 G'S at 86 msec
YMAX= 17.71235 G'S at 194 msec
DRIVER HEAD X ACCELERATION
1 B96091AF.A12 Filterclass (1000)
20
10
0
-10
-20
-30
-40
-50
-60
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
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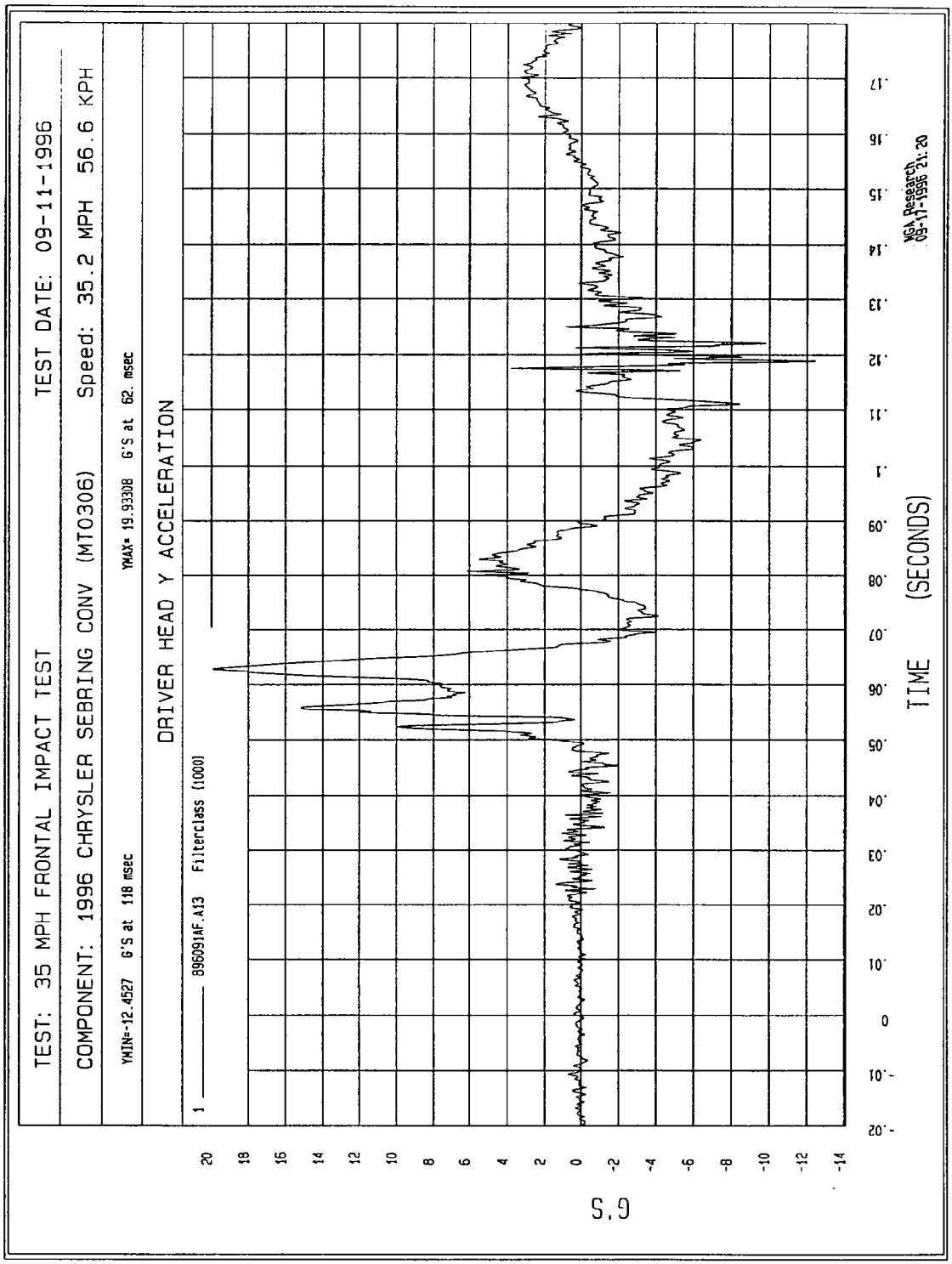
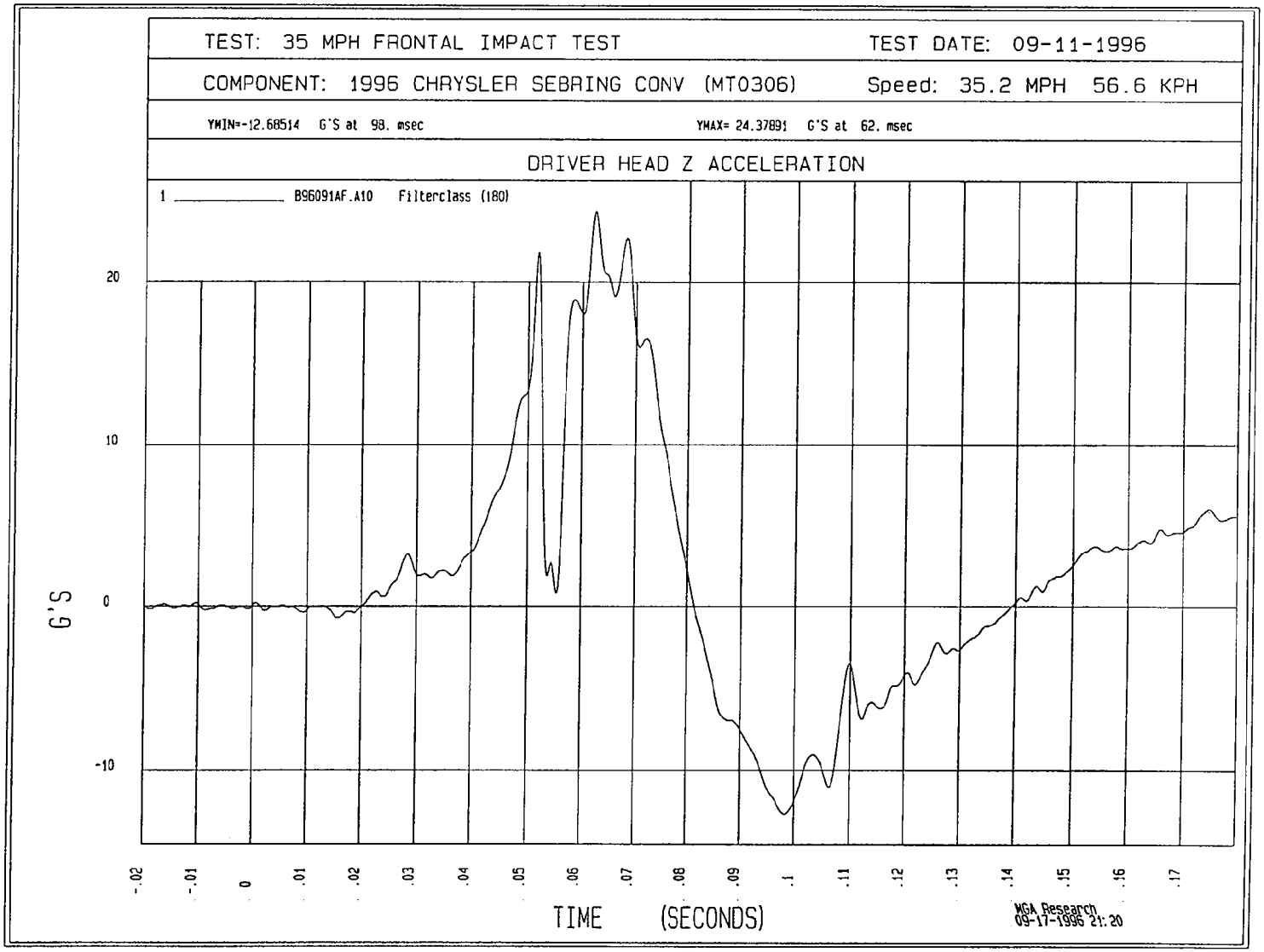
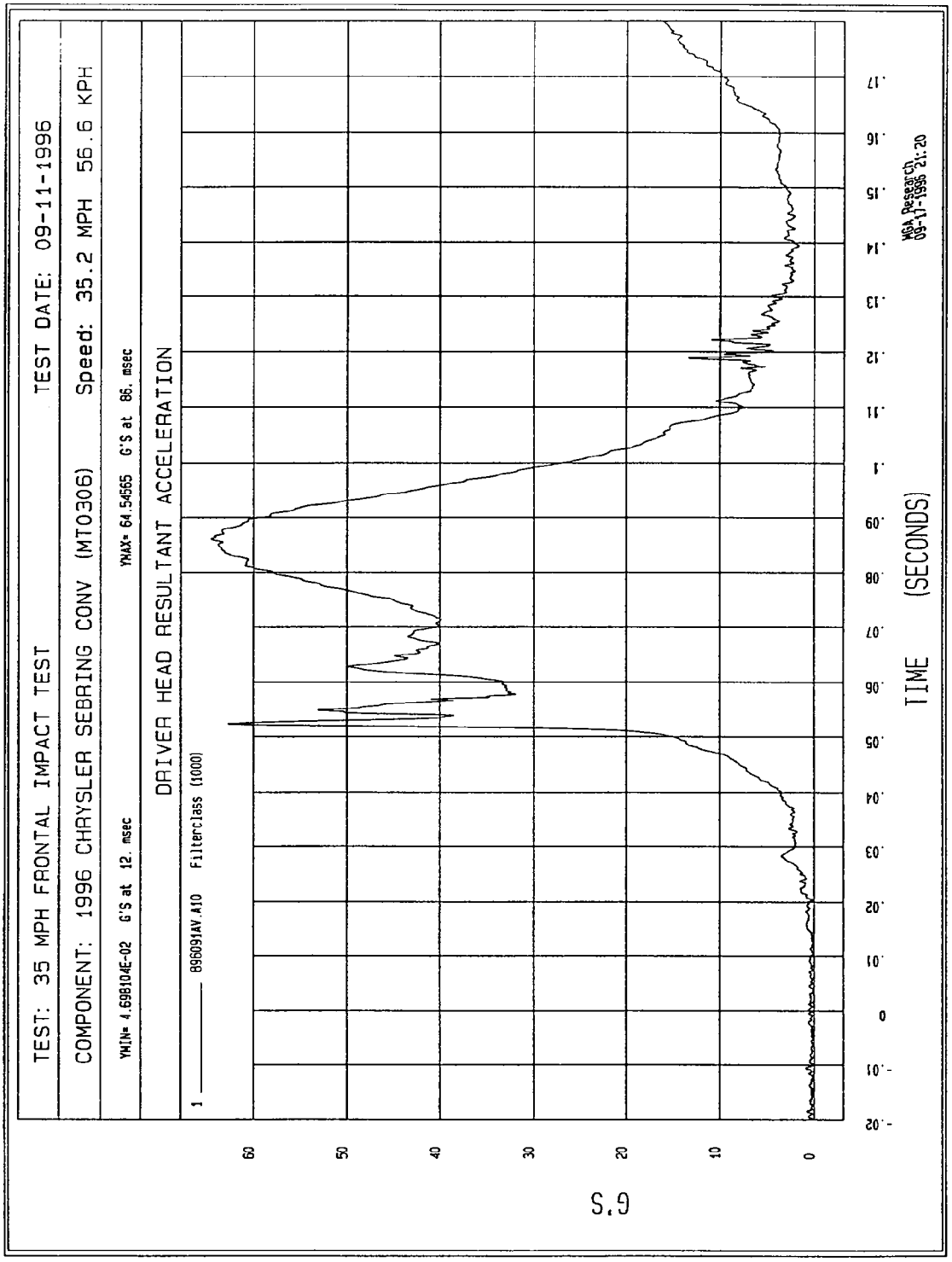
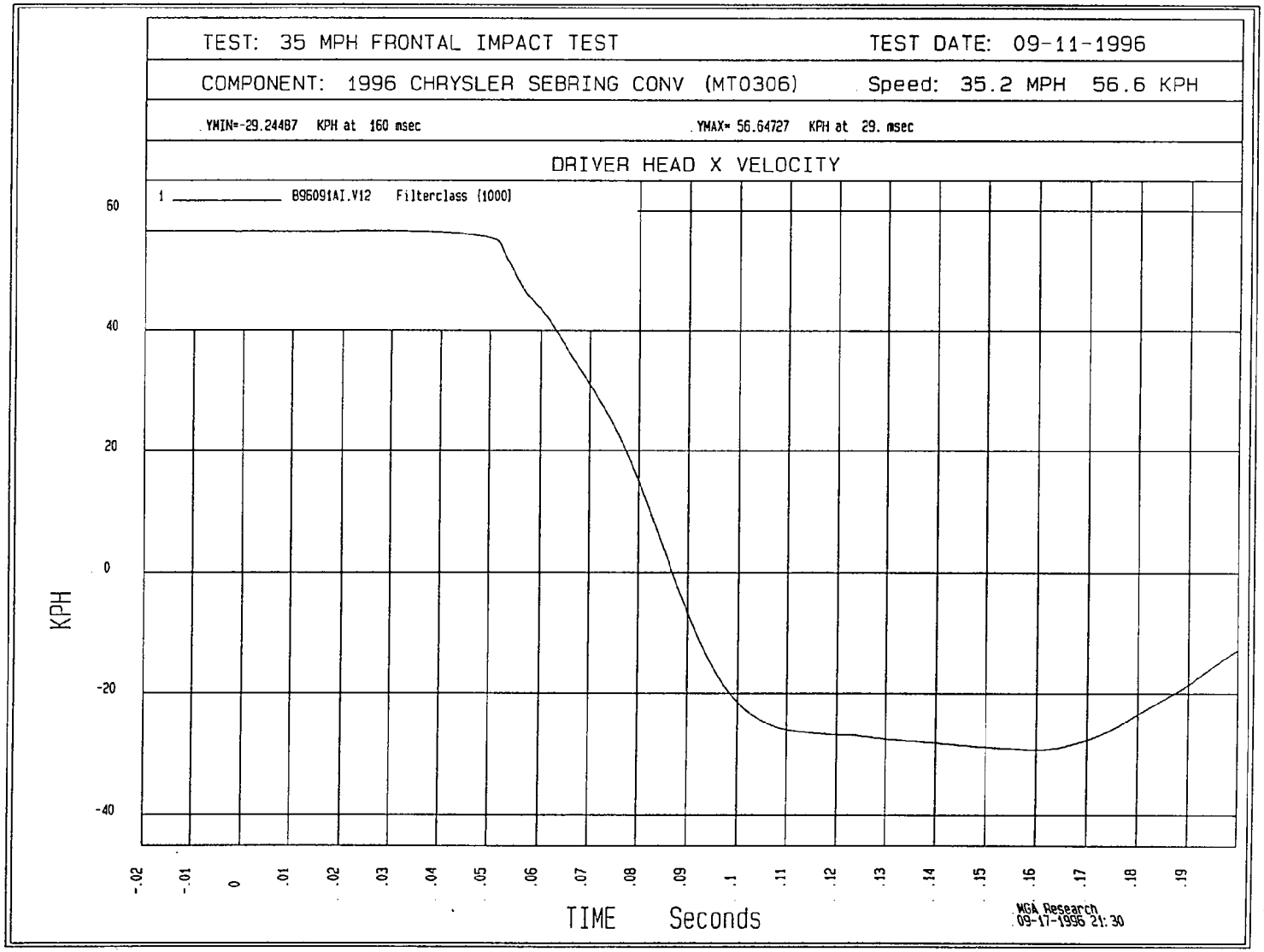
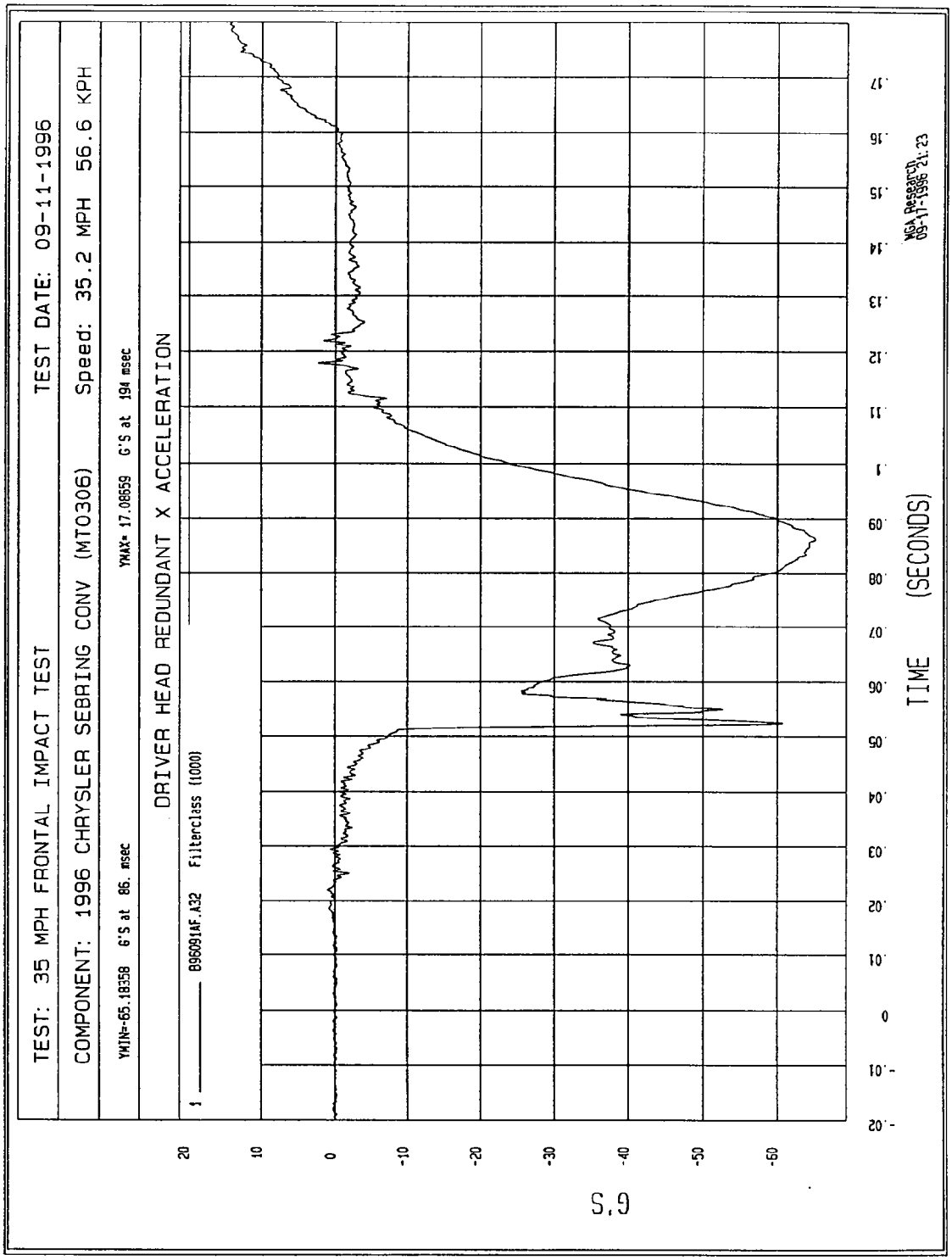
TIME (SECONDS)
MGA Research
09-17-1996 21:20

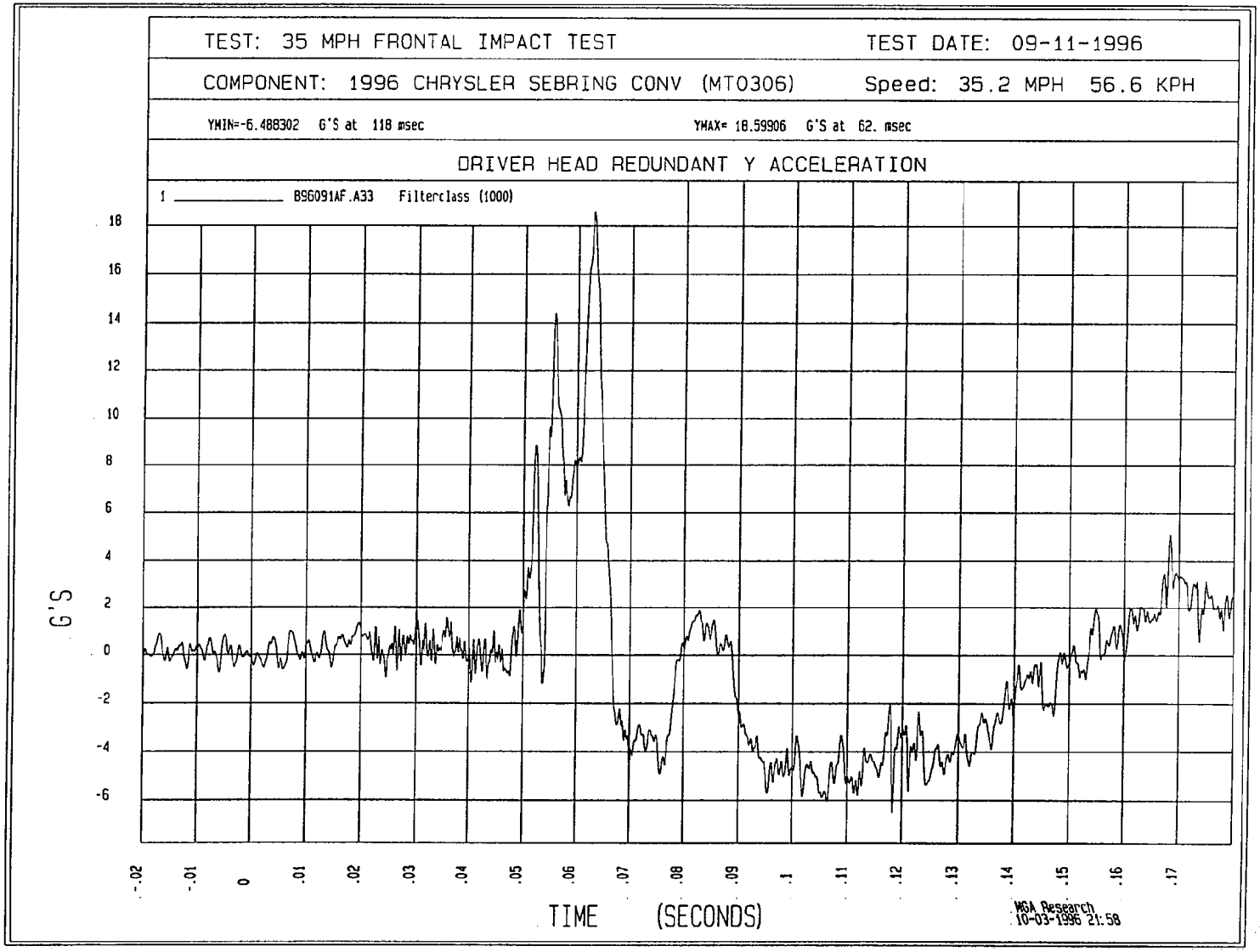

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-12.4527 G'S at 118 msec
YMAX= 19.93308 G'S at 62. msec
DRIVER HEAD Y ACCELERATION
1 B960914F.A13 Filterclass (1000)
G'S
TIME (SECONDS)
NGA Research
09-17-1996 21:20

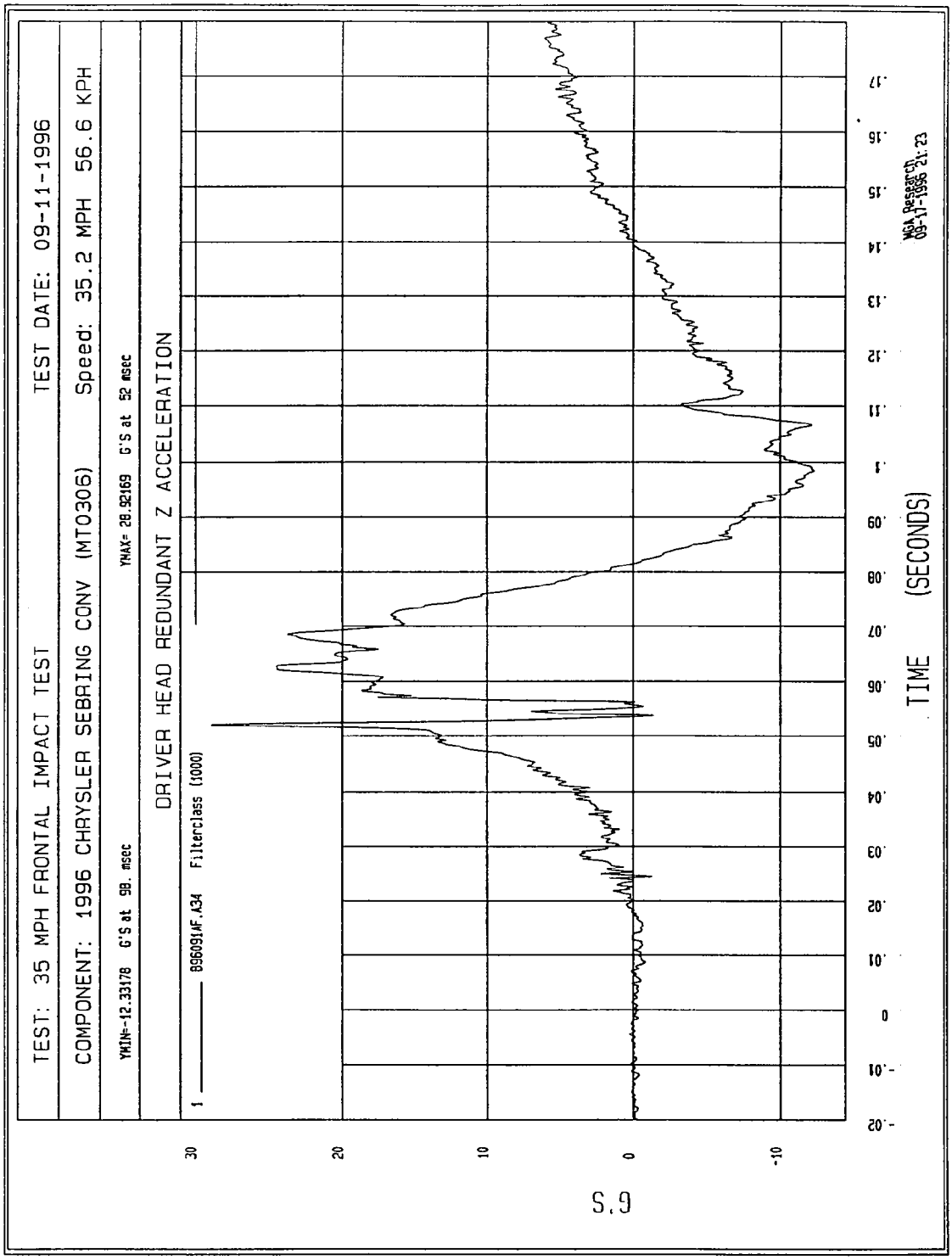

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-12.68514 G'S at 98. msec
YMAX= 24.37891 G'S at 62. msec
DRIVER HEAD Z ACCELERATION
1 B96091AF.A10 Filterclass (180)
20
10
0
-10
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:20

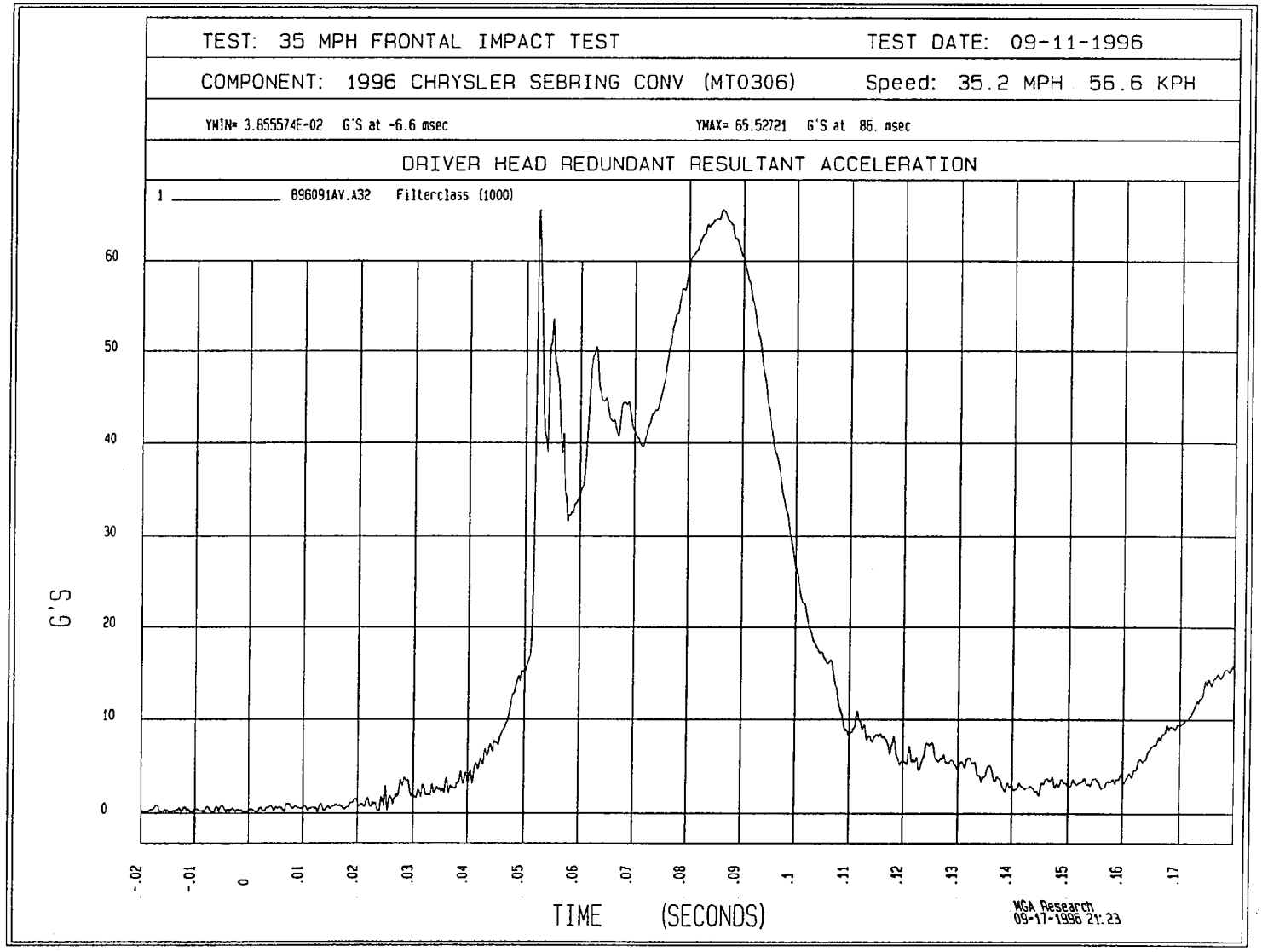

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 4.698104E-02 G'S at 12. msec
YMAX= 64.54565 G'S at 86. msec
DRIVER HEAD RESULTANT ACCELERATION
1 _____ 896091AV.A10 Filterclass (1000)
60
50
40
30
20
10
0
G's
TIME (SECONDS)
MGA Research
09-17-1996 21:20

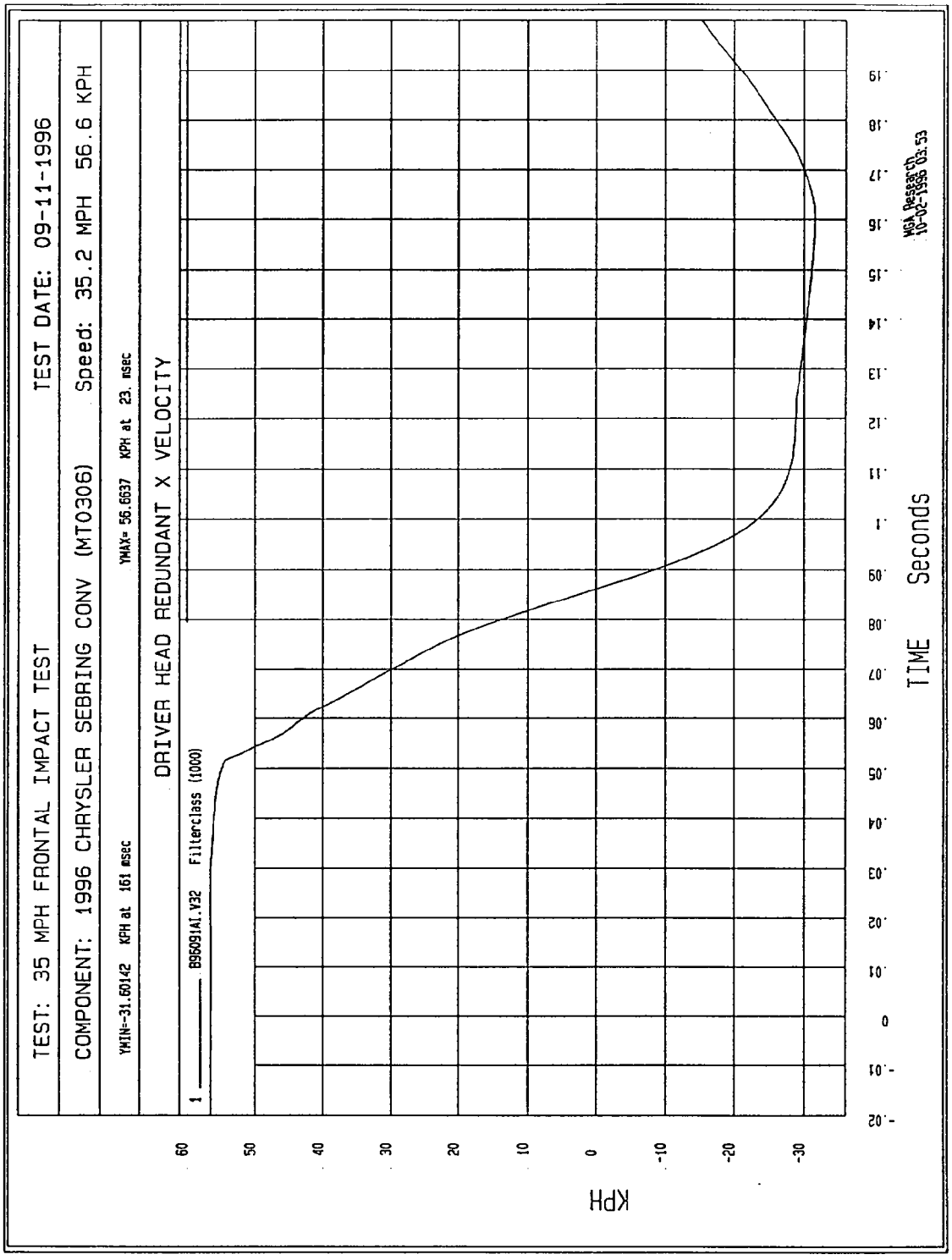

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-29.24487 KPH at 160 msec
YMAX= 56.64727 KPH at 29. msec
DRIVER HEAD X VELOCITY
1 B96091AI.V12 Filterclass (1000)
60
40
20
0
-20
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:30

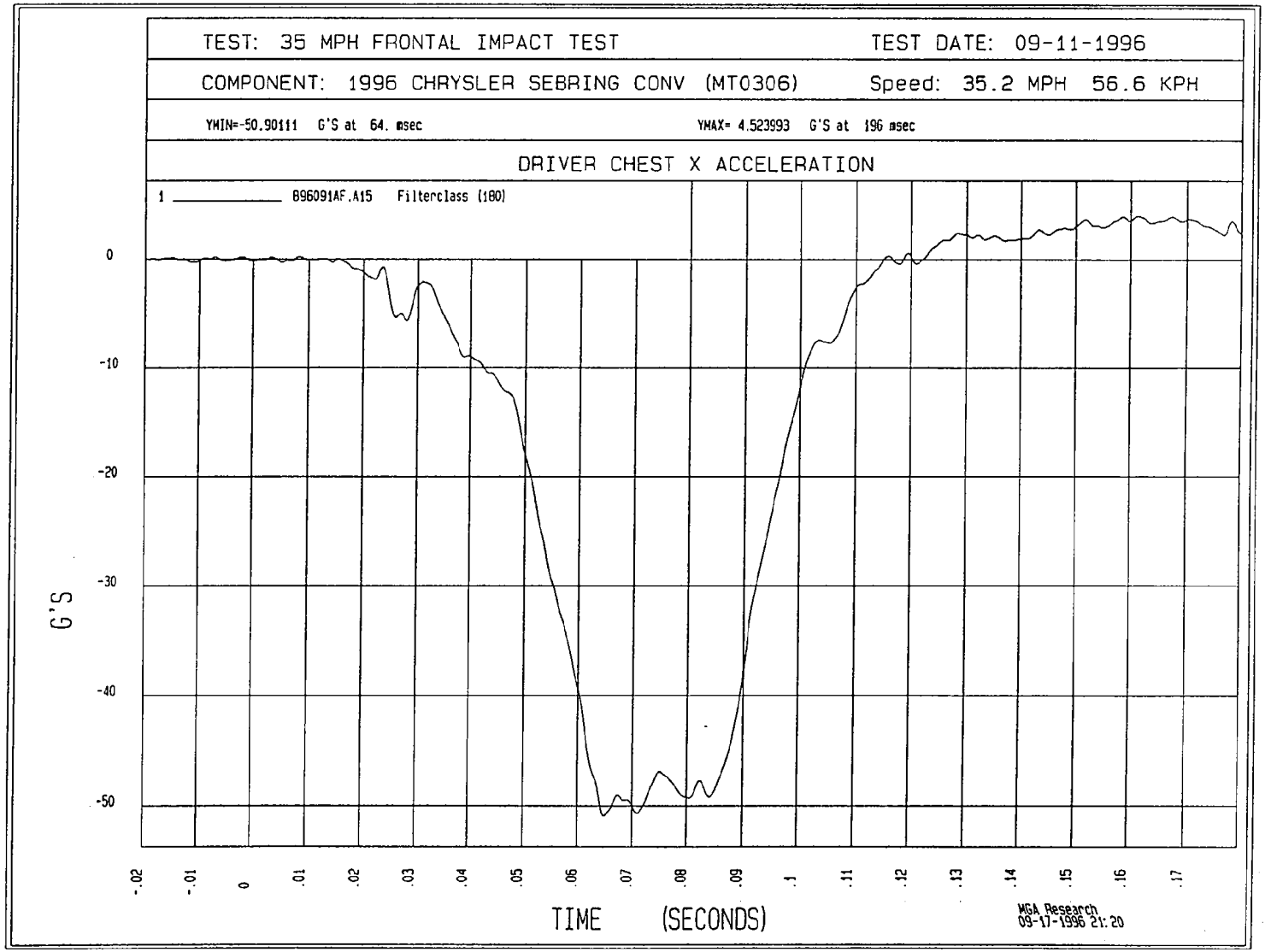

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-65.19358 G'S at 86. msec
YMAX= 17.08659 G'S at 194 msec
DRIVER HEAD REDUNDANT X ACCELERATION
1 B96091AF.A32 Filterclass (1000)
20
10
0
-10
-20
-30
-40
-50
-60
G's
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
MGA Research
09-17-1996 21:23

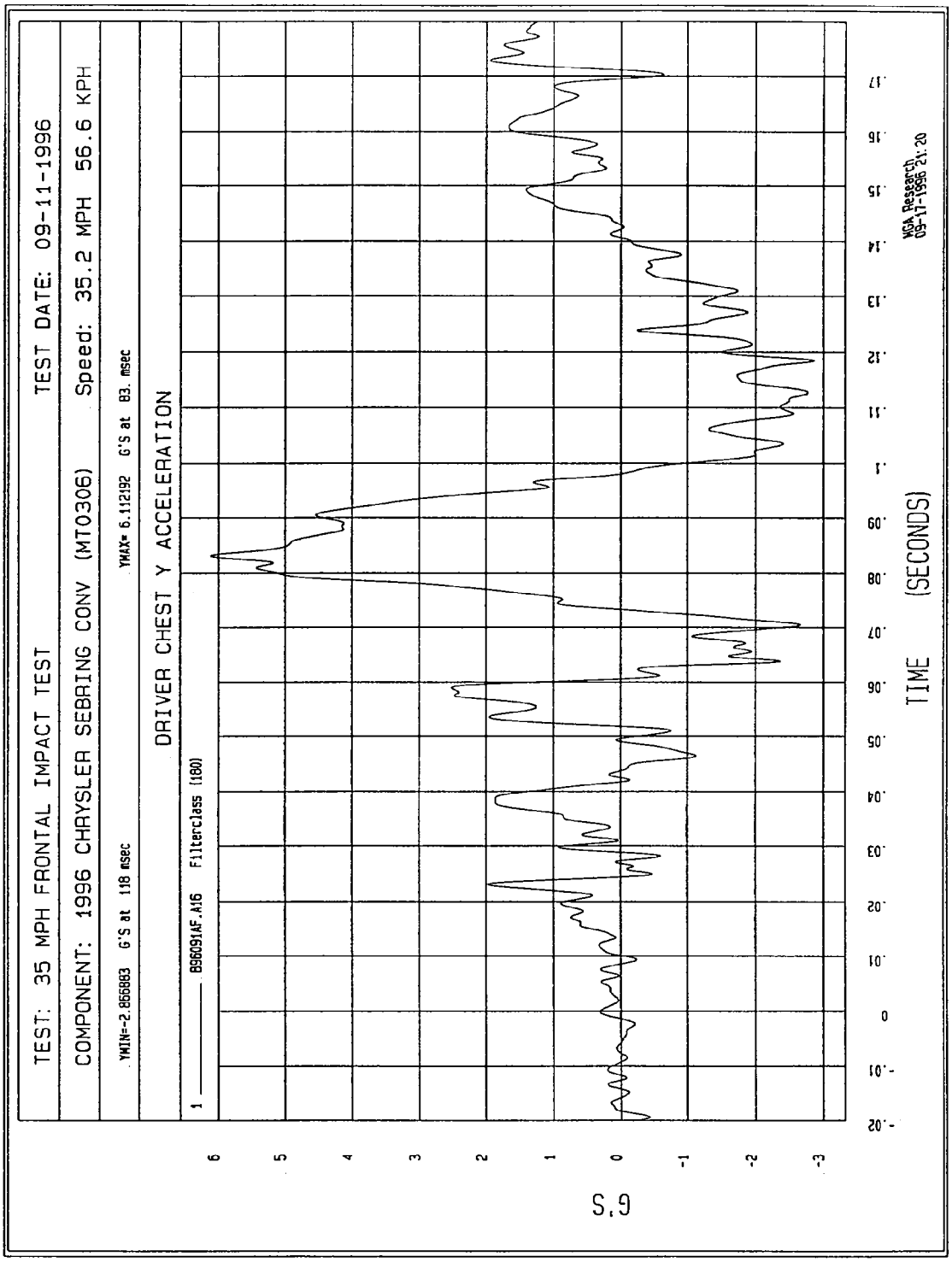

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-6.488302 G'S at 118 msec
YMAX= 18.59906 G'S at 62. msec
DRIVER HEAD REDUNDANT Y ACCELERATION
1 B96091AF.A33 Filterclass (1000)
G'S
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
10-03-1996 21:58

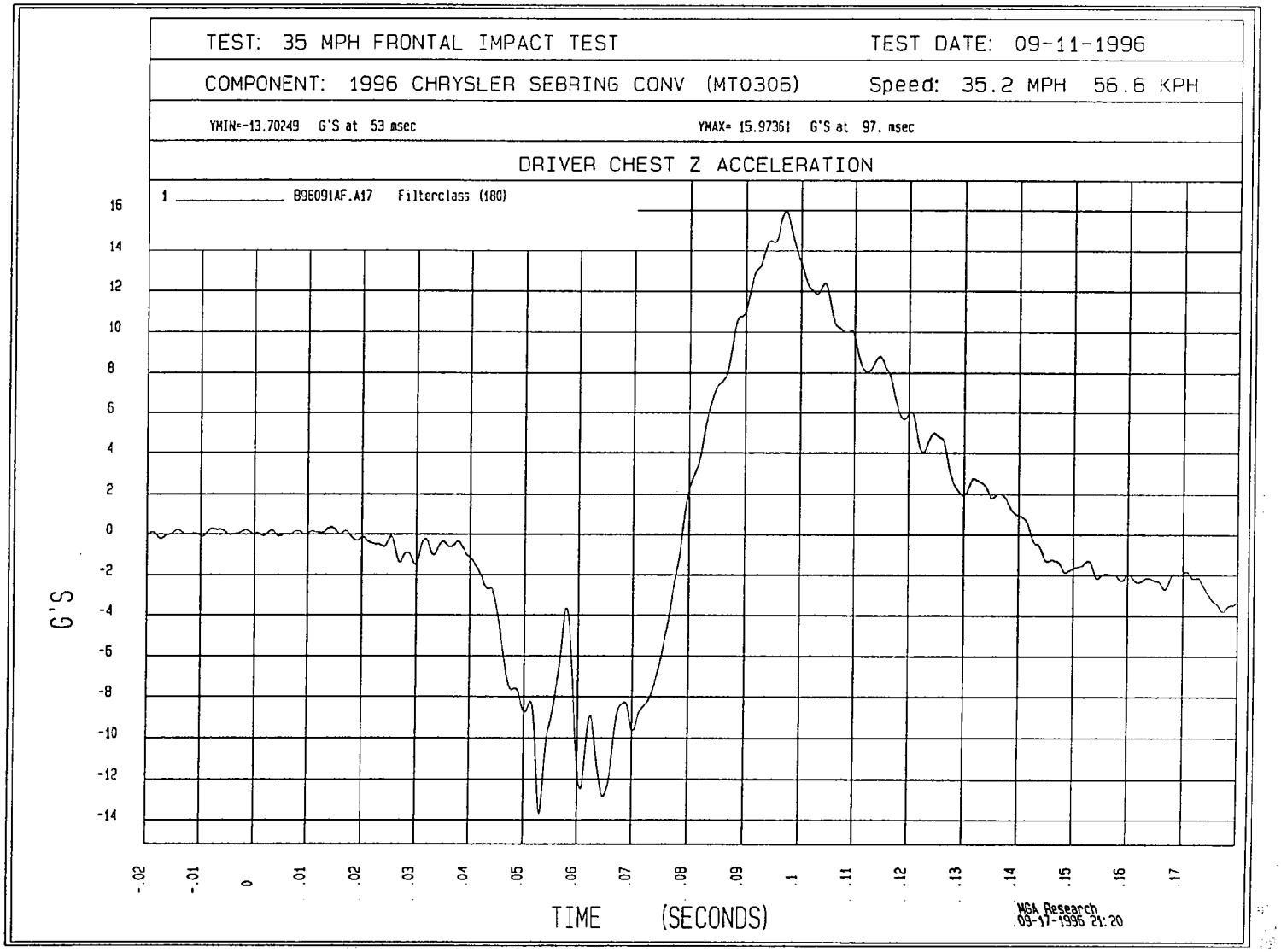

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-12.33178 G'S at 98. msec
YMAX= 28.92169 G'S at 52 msec
DRIVER HEAD REDUNDANT Z ACCELERATION
1 ——— 896091AF.A34 Filterclass (1000)
30
20
10
0
-10
G'S
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
MGA Research
09-17-1996 21:23

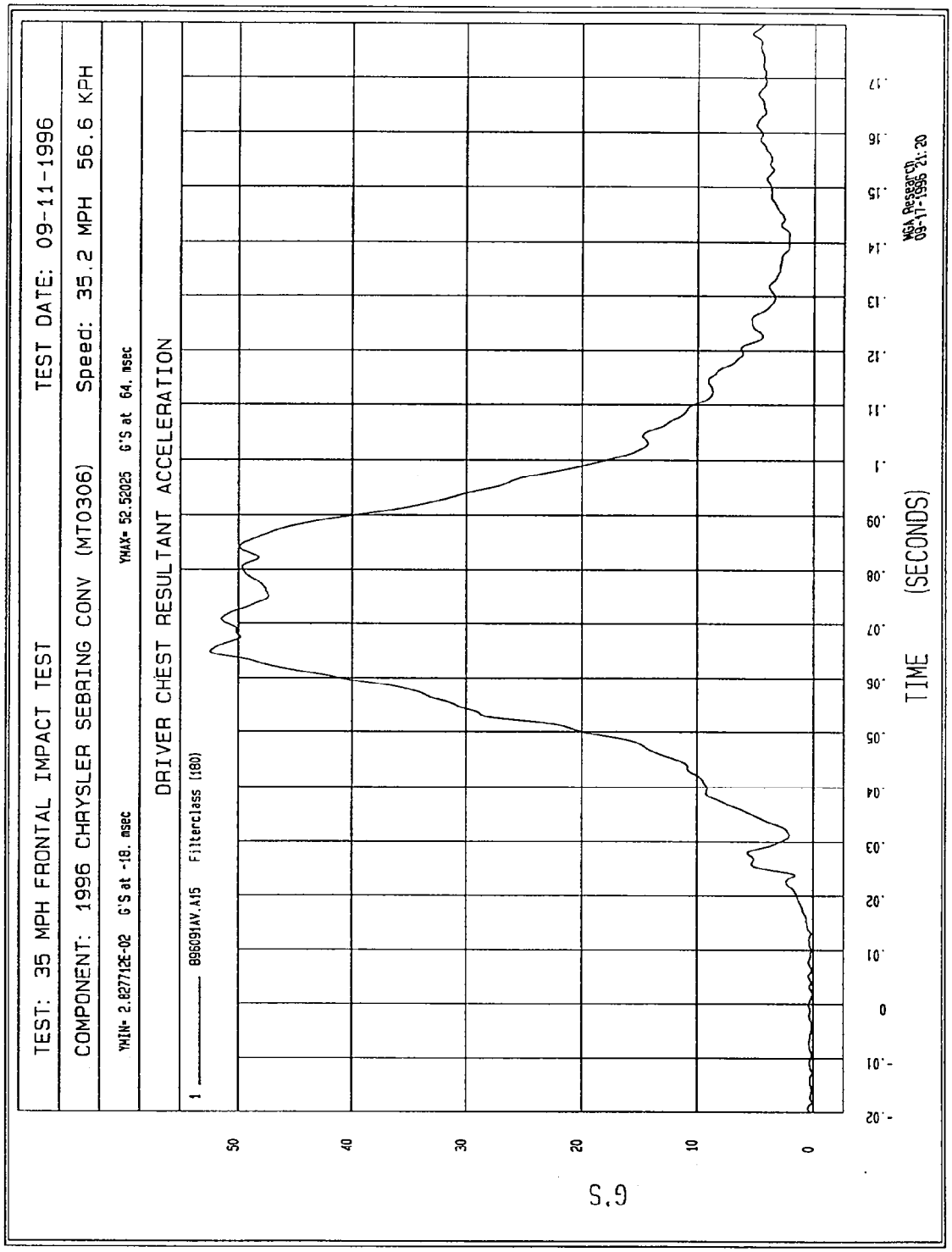

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 3.855574E-02 G'S at -6.6 msec
YMAX= 65.52721 G'S at 86. msec
DRIVER HEAD REDUNDANT RESULTANT ACCELERATION
1 896091AV.A32 Filterclass (1000)
G'S
60
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:23

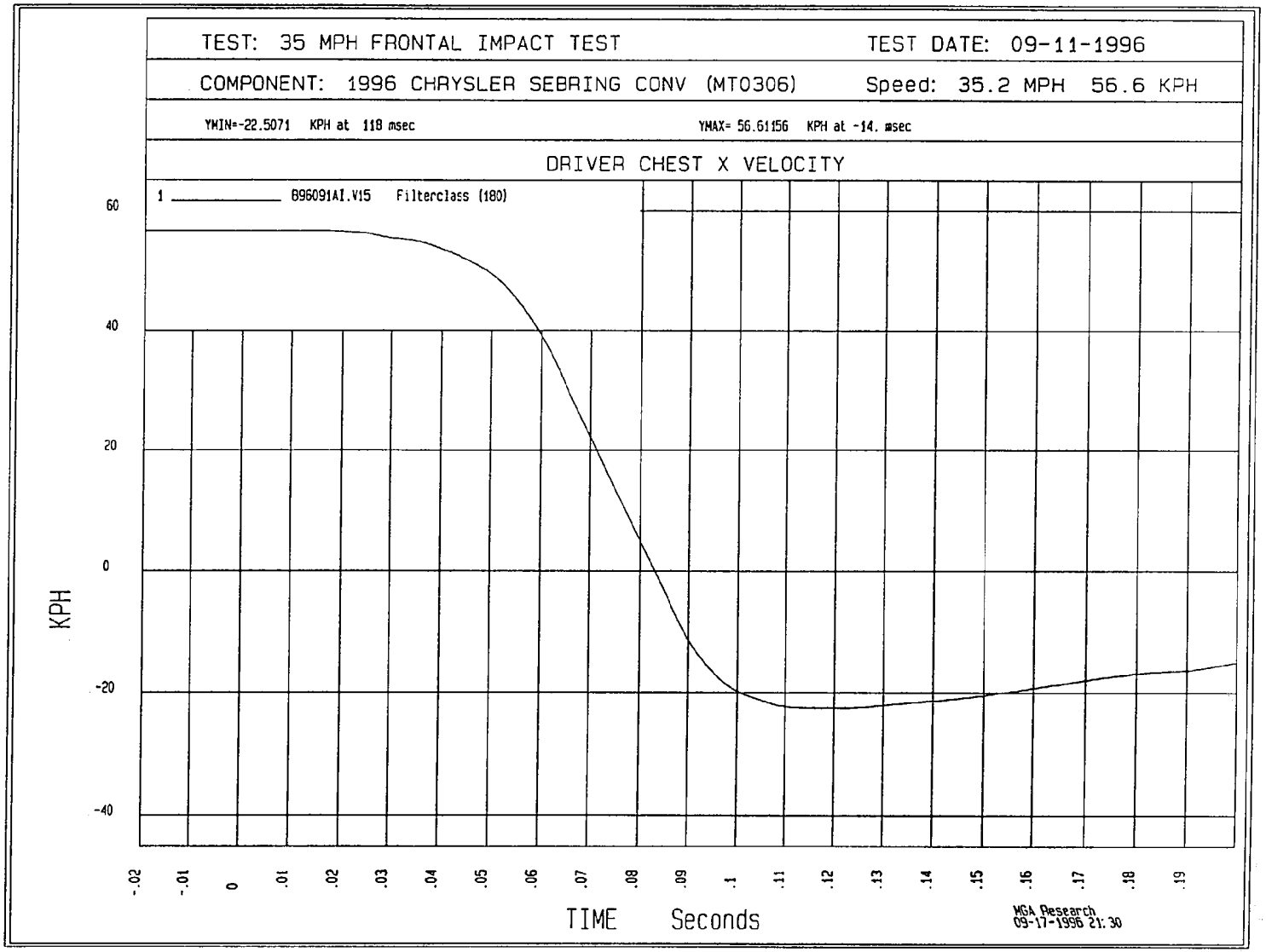

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-31.60142 KPH at 161 msec
YMAX= 56.6637 KPH at 23. msec
DRIVER HEAD REDUNDANT X VELOCITY
1 B95091A1.V32 Filterclass (1000)
KPH
TIME Seconds
MGA Research
10-02-1995 03:53

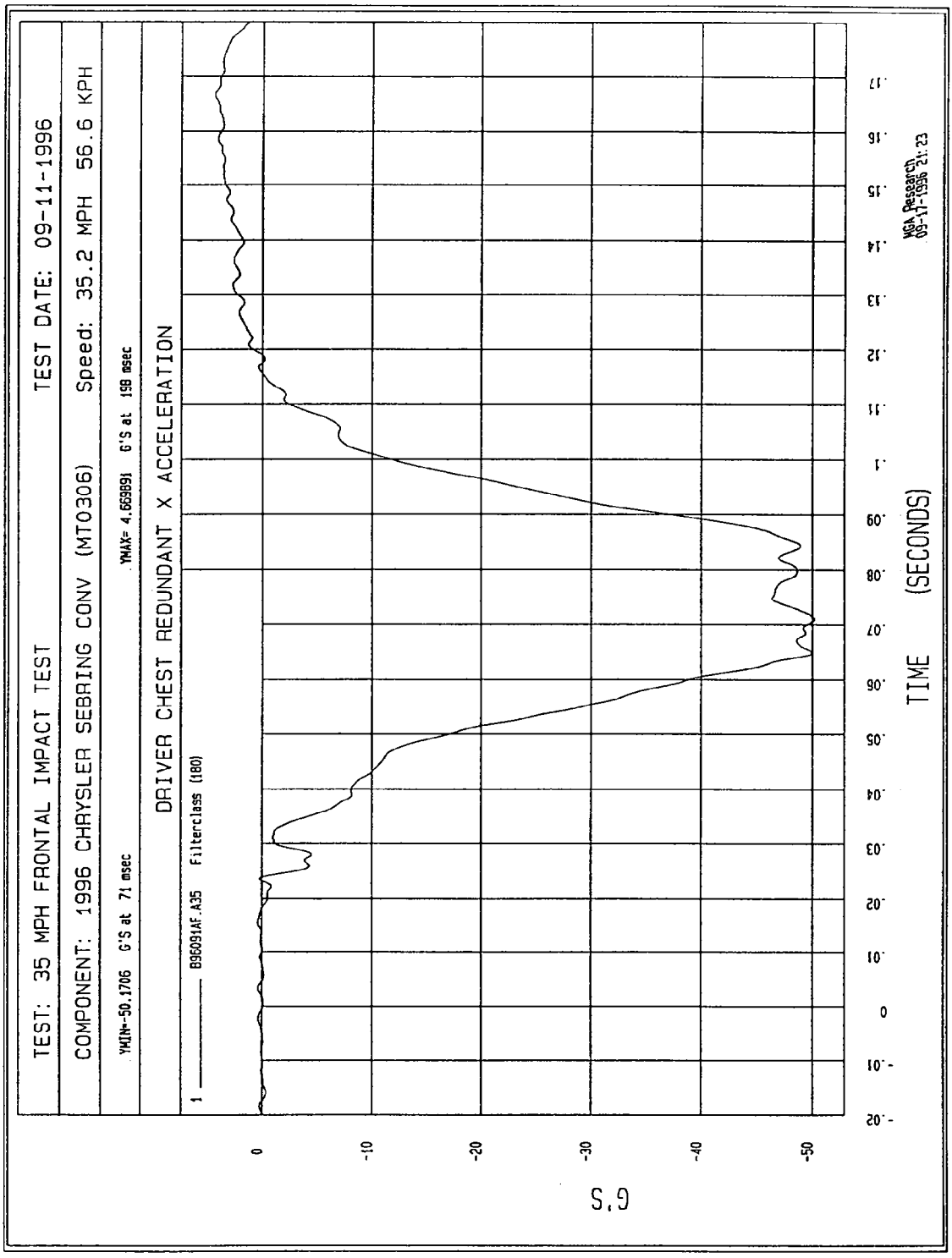

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-50.90111 G'S at 64. msec
YMAX= 4.523993 G'S at 196 msec
DRIVER CHEST X ACCELERATION
1 B96091AF.A15 Filterclass (180)
0
-10
-20
-30
-40
-50
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:20

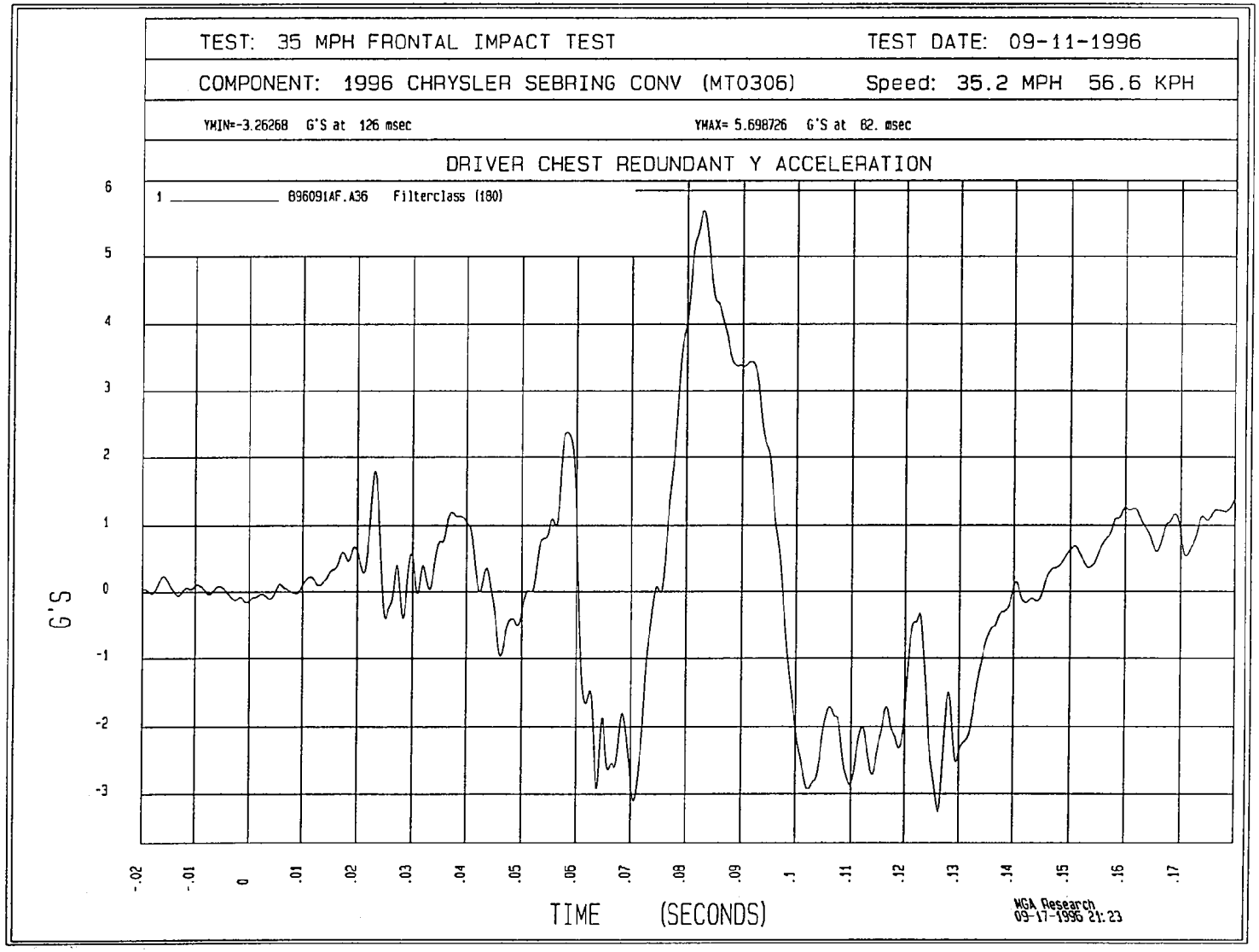

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-2.866863 G'S at 118 msec
YMAX= 6.112192 G'S at 83. msec
DRIVER CHEST Y ACCELERATION
1 B96091AF.A16 Filterclass (180)
6
5
4
3
2
1
0
-1
-2
-3
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:20

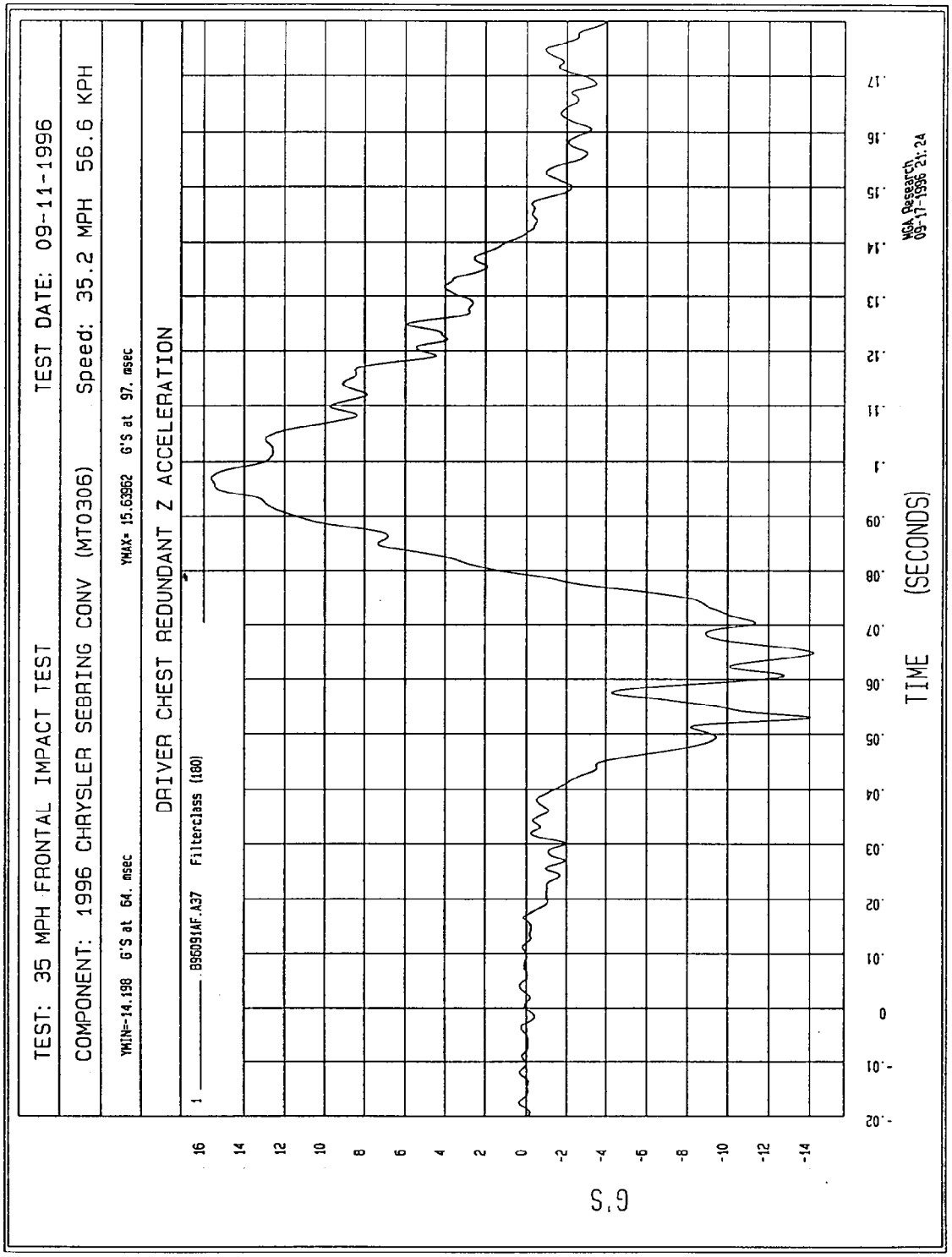

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-13.70249 G'S at 53 msec
YMAX= 15.97361 G'S at 97. msec
DRIVER CHEST Z ACCELERATION
1 B96091AF.A17 Filterclass (180)
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:20

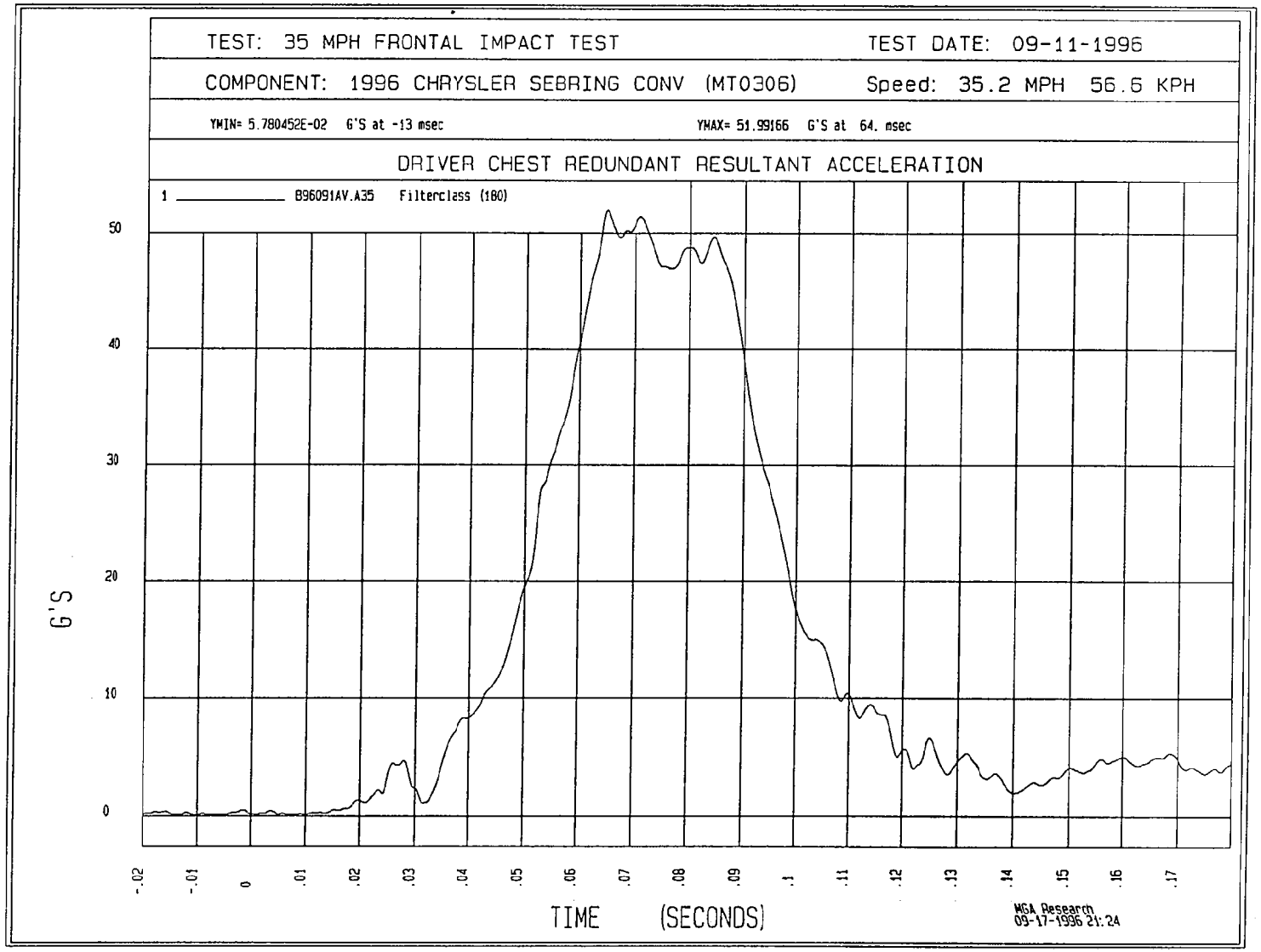

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 2.827712E-02 G'S at -18. msec
YMAX= 52.52025 G'S at 64. msec
DRIVER CHEST RESULTANT ACCELERATION
1 B96091AV.A15 Filterclass (180)
G'S
TIME (SECONDS)
MGA Research
09-11-1996 21:20

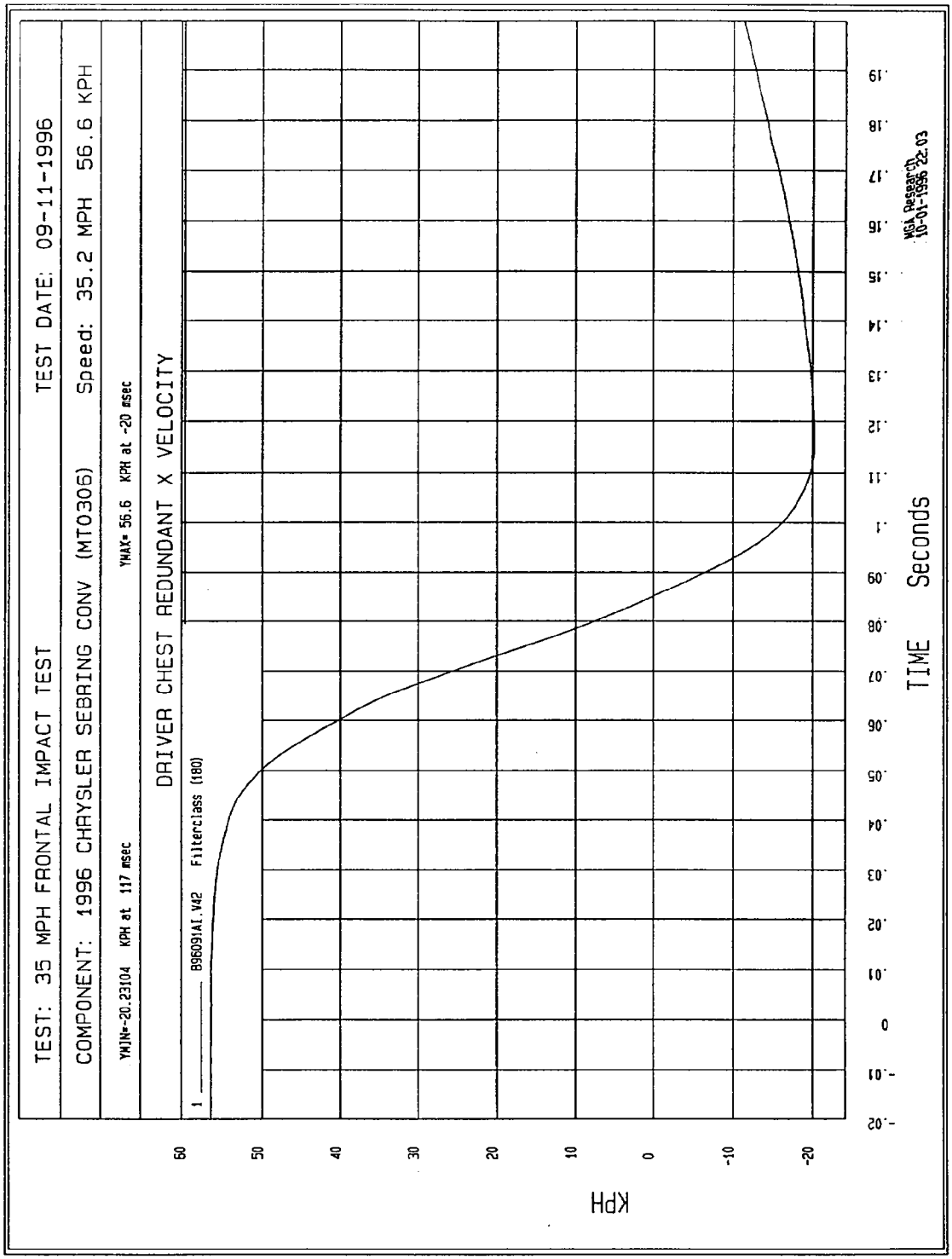

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-22.5071 KPH at 118 msec
YMAX= 56.61156 KPH at -14. msec
DRIVER CHEST X VELOCITY
1 B96091AI.V15 Filterclass (180)
60
40
20
0
-20
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:30

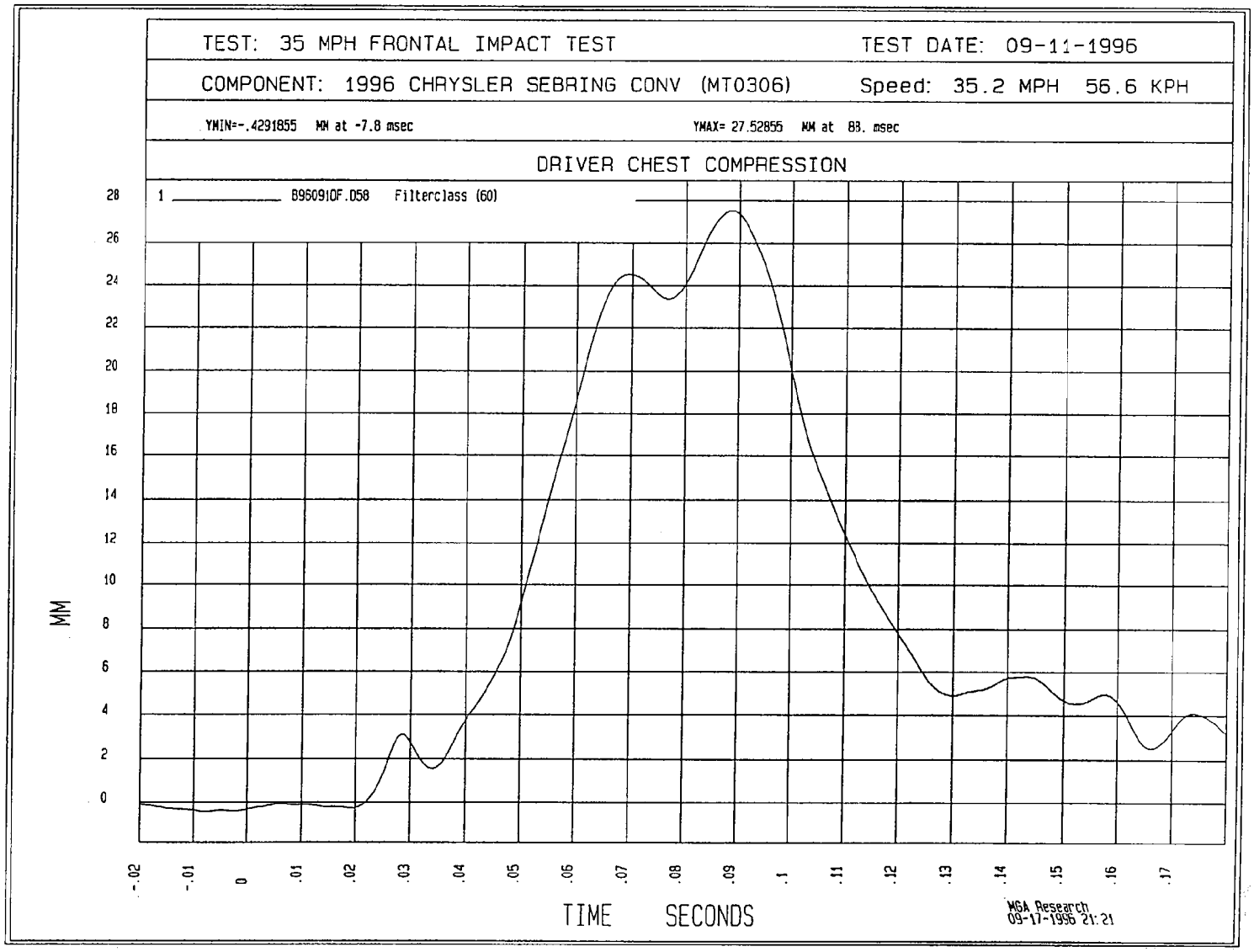

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-50.1706 G'S at 71 msec
YMAX= 4.669891 G'S at 198 msec
DRIVER CHEST REDUNDANT X ACCELERATION
1 B96091AF.A35 Filterclass (180)
0
-10
-20
-30
-40
-50
G'S
TIME (SECONDS)
MGA Research
09-17-1996 21:23

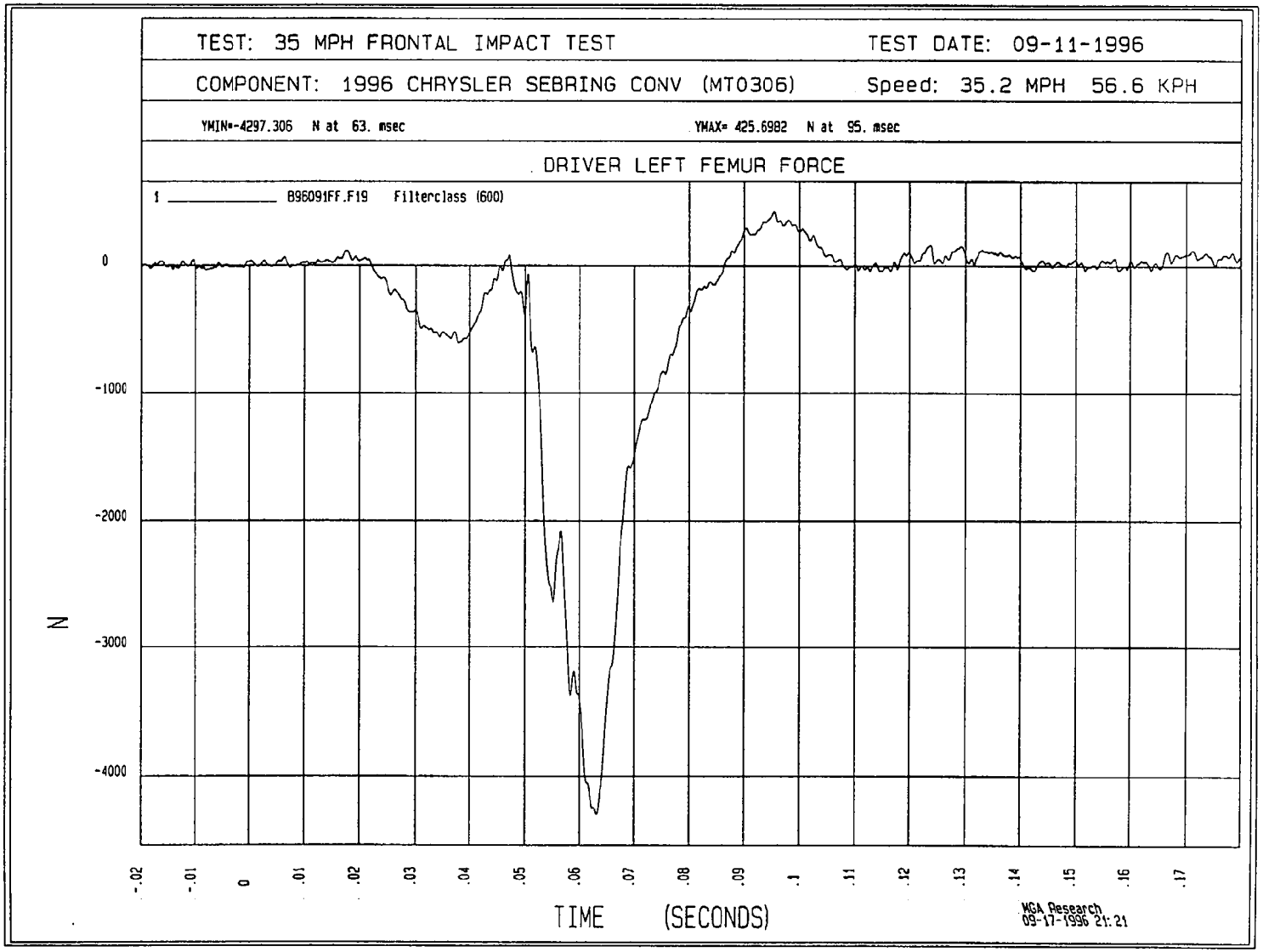

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-3.26268 G'S at 126 msec
YMAX= 5.698726 G'S at 82. msec
DRIVER CHEST REDUNDANT Y ACCELERATION
1 896091AF.A36 Filterclass (180)
G'S
6
5
4
3
2
1
0
-1
-2
-3
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:23


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-14.198 G'S at 64. msec
YMAX= 15.63962 G'S at 97. msec
DRIVER CHEST REDUNDANT Z ACCELERATION
1 B960914F.A37 Filterclass (180)
G'S
TIME (SECONDS)
MGA Research
09-17-1996 21:24


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 5.780452E-02 G'S at -13 msec
YMAX= 51.99166 G'S at 64. msec
DRIVER CHEST REDUNDANT RESULTANT ACCELERATION
1 B96091AV.A35 Filterclass (180)
G'S
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:24


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-20.23104 KPH at 117 msec
YMAX= 56.6 KPH at -20 msec
DRIVER CHEST REDUNDANT X VELOCITY
1 B9609IAI.V42 Filterclass (180)
KPH
TIME Seconds
NGA Research
10-01-1996 22:03


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-.4291855 MM at -7.8 msec
YMAX= 27.52855 MM at 88. msec
DRIVER CHEST COMPRESSION
1 B960910F.058 Filterclass (60)
MM
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME SECONDS
MGA Research
09-17-1996 21:21


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-4297.306 N at 63. msec
YMAX= 425.6982 N at 95. msec
DRIVER LEFT FEMUR FORCE
1 B96091FF.F19 Filterclass (600)
0
-1000
-2000
-3000
-4000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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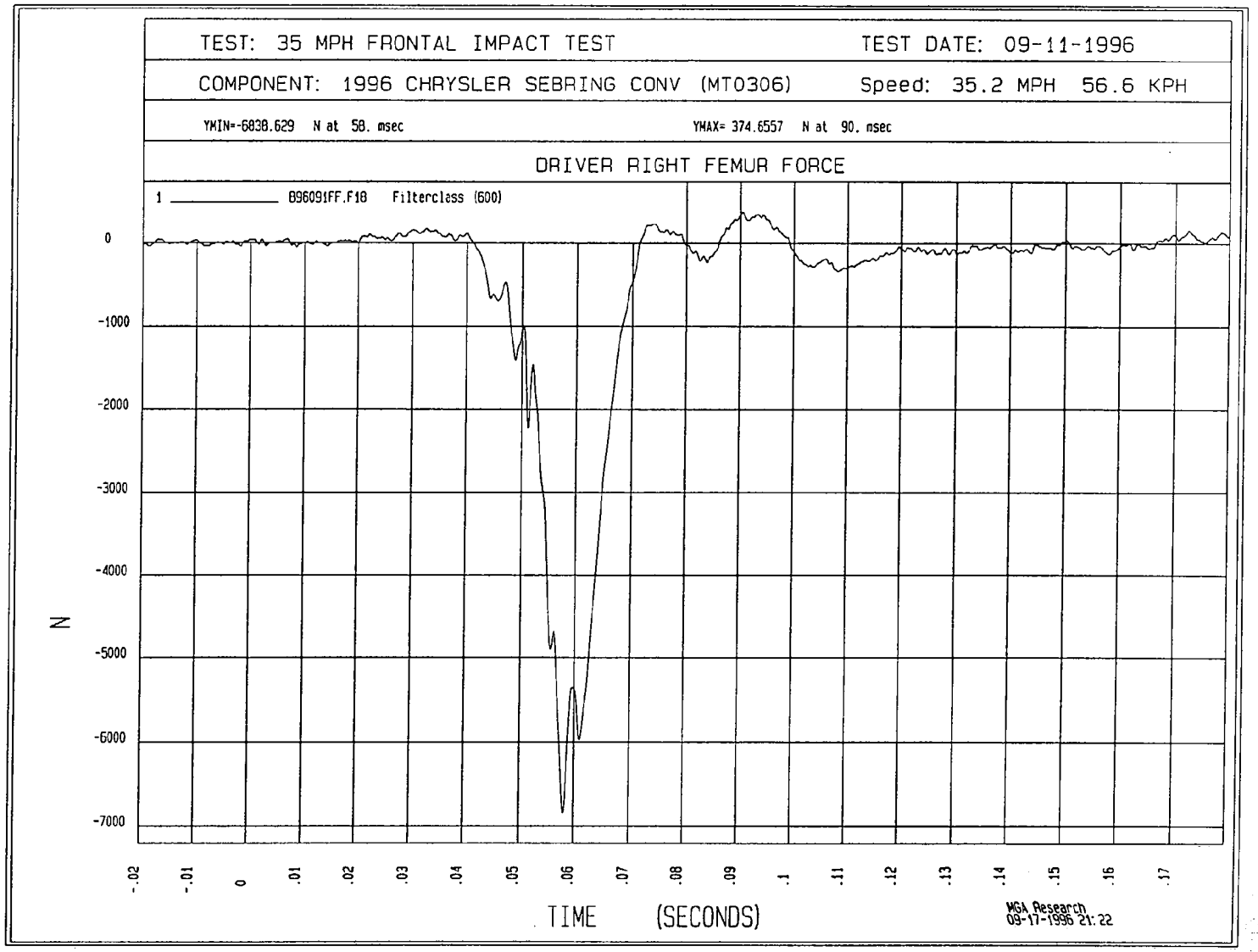
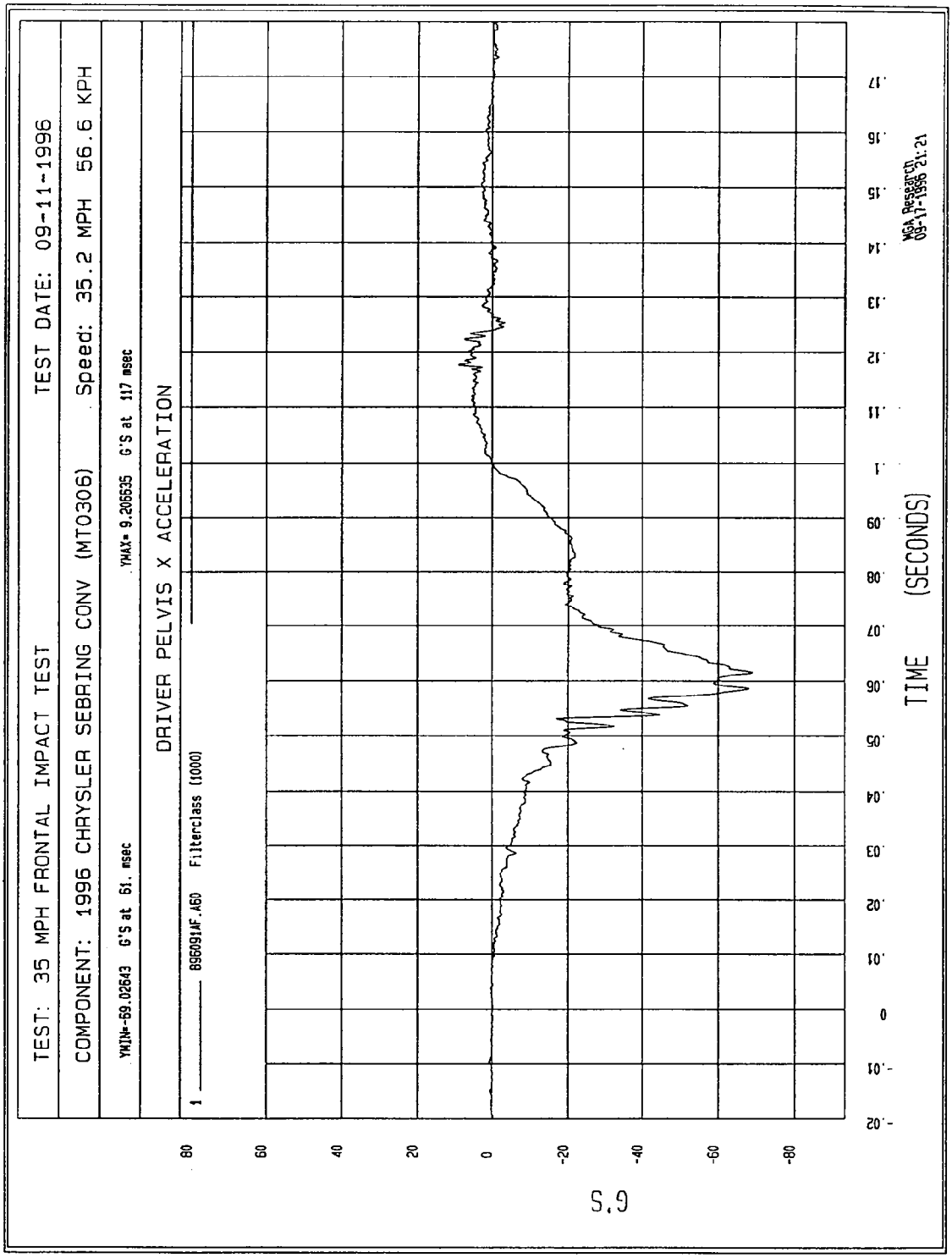
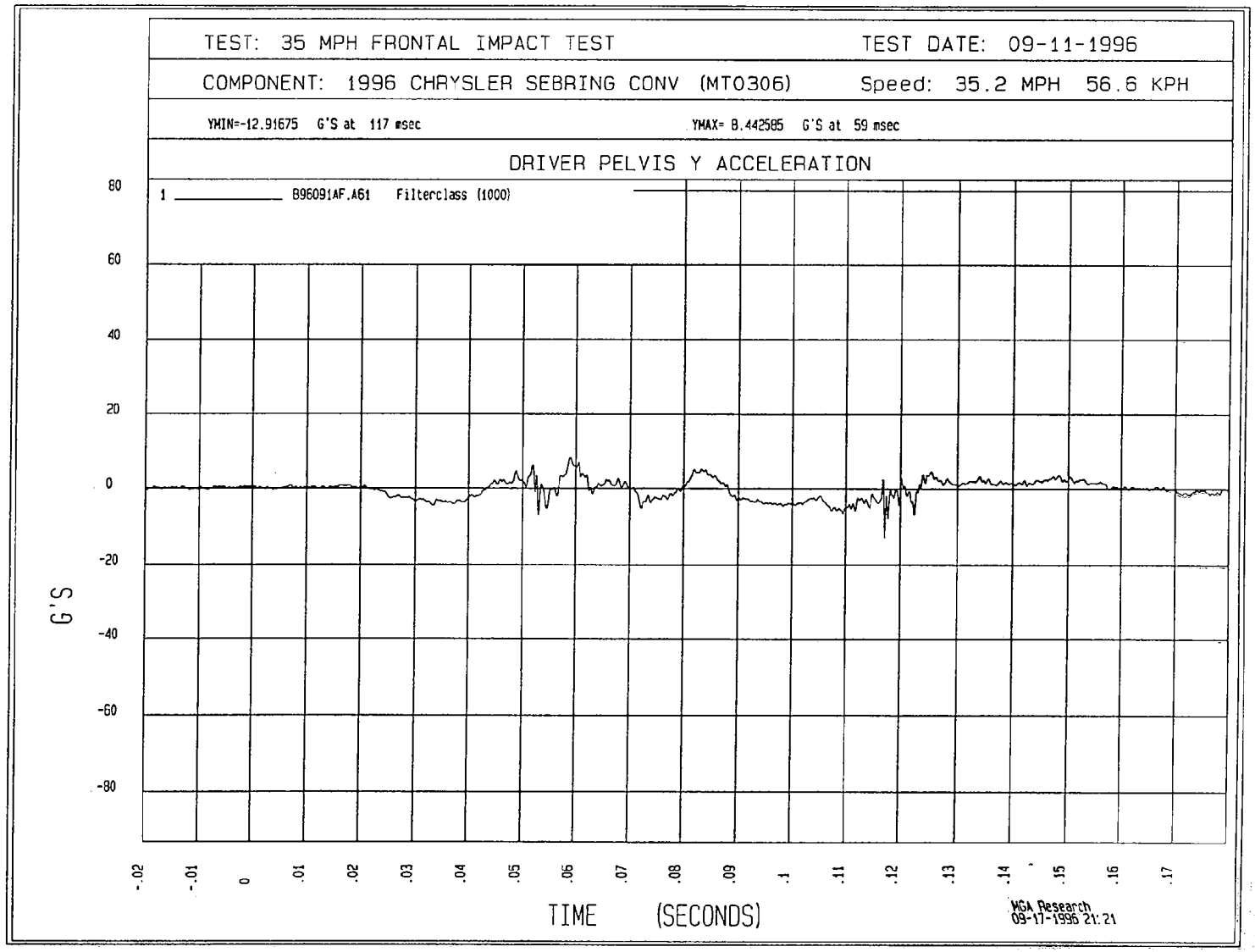
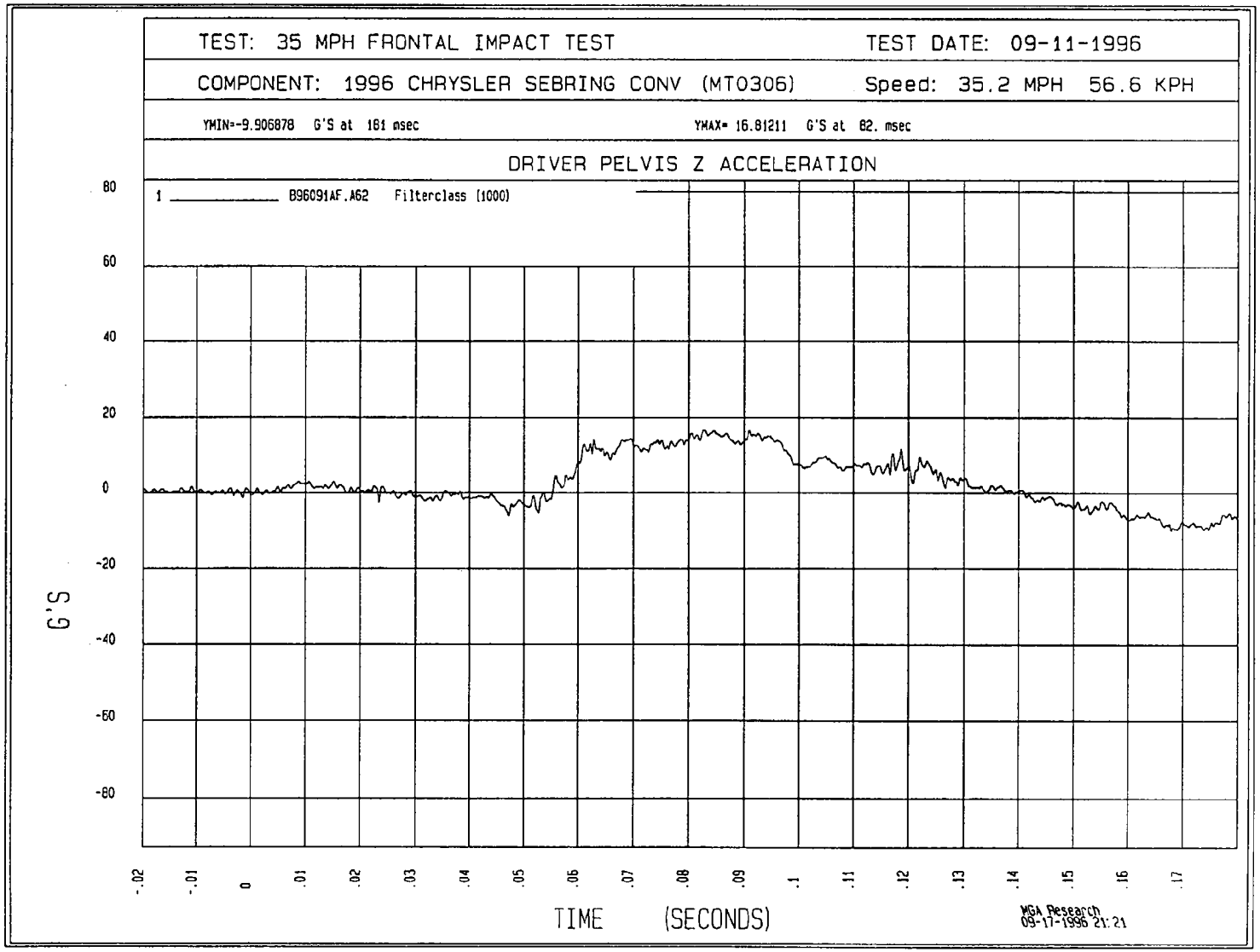
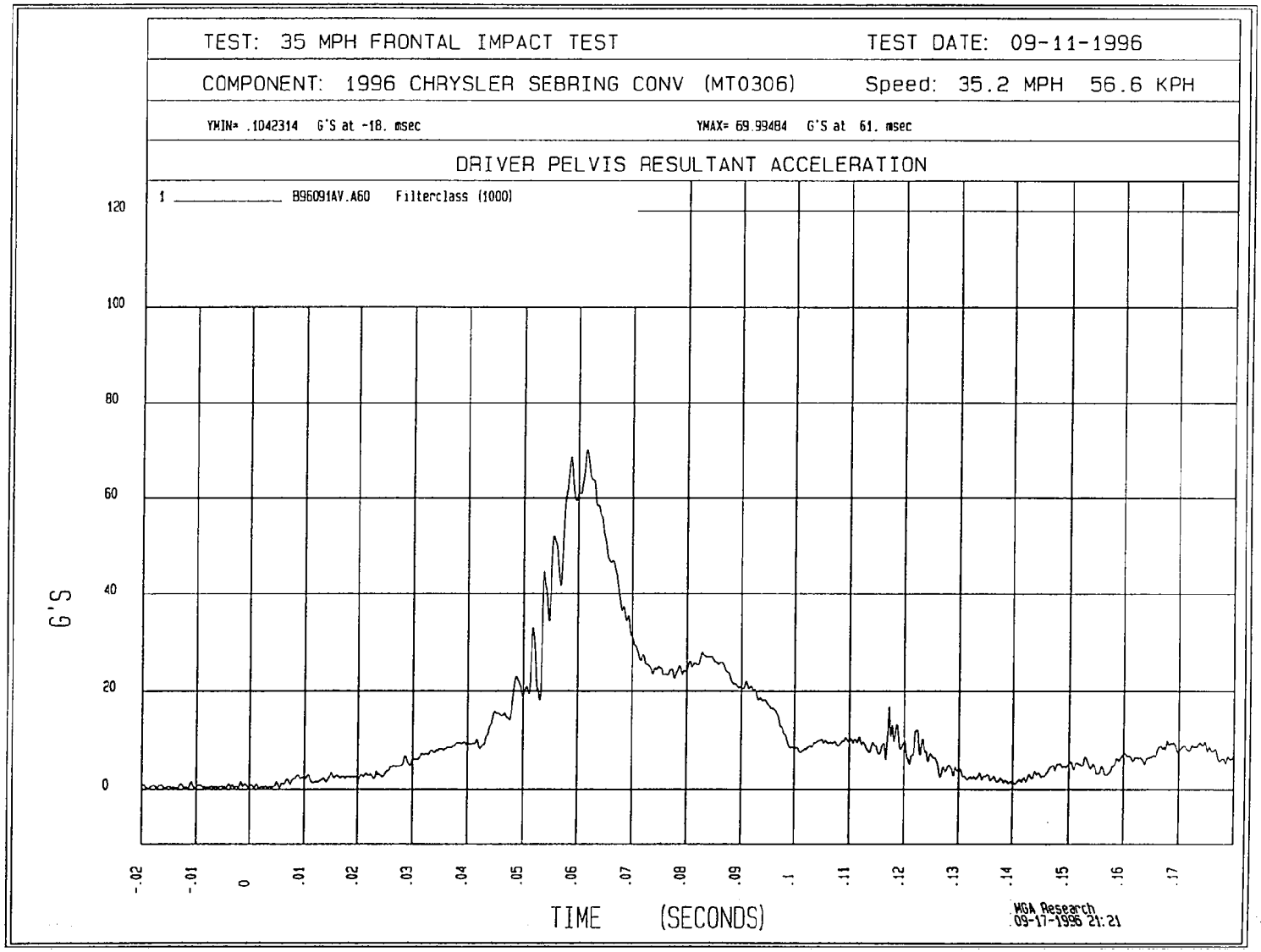
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:21

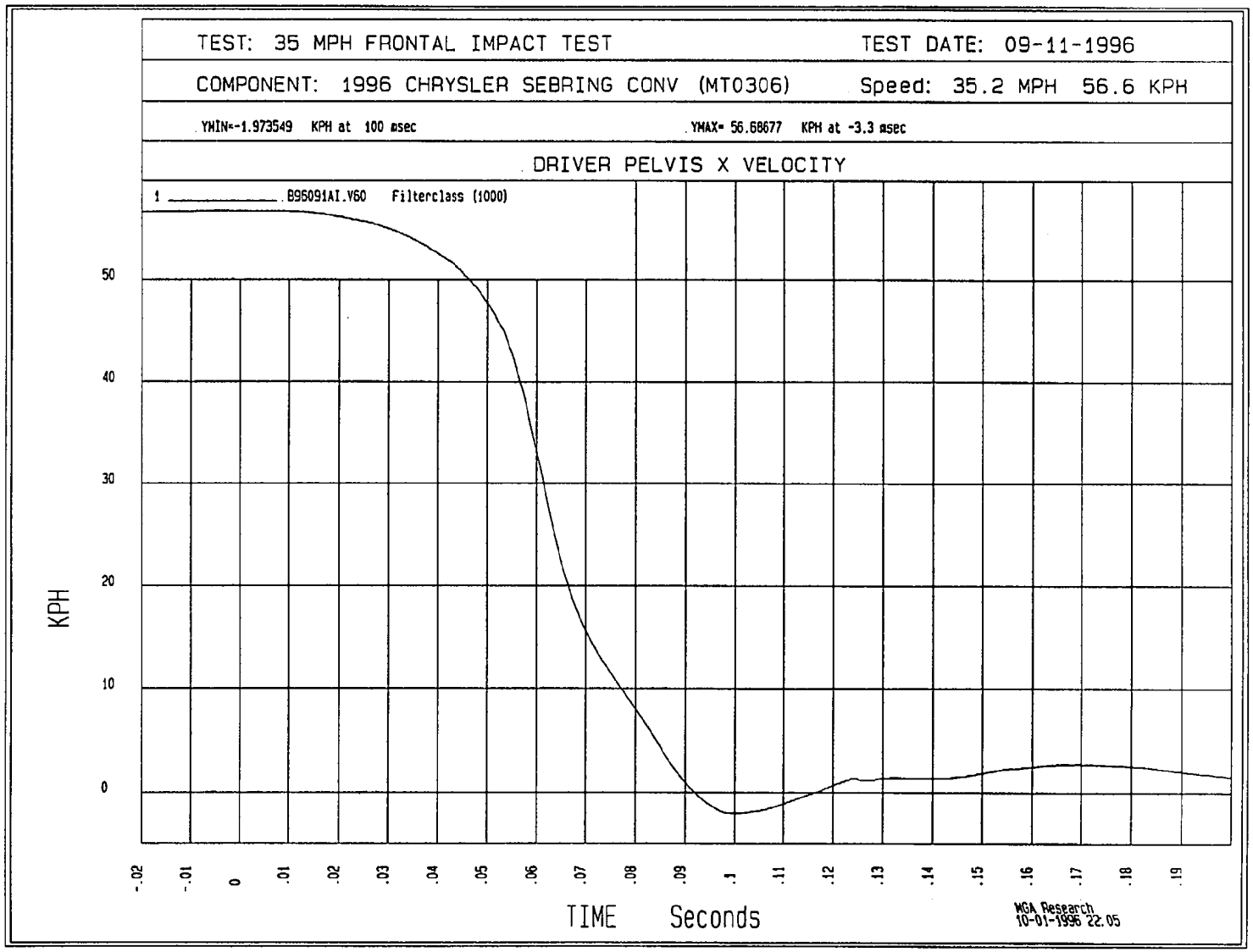

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-6838.629 N at 58. msec
YMAX= 374.6557 N at 90. msec
DRIVER RIGHT FEMUR FORCE
1 896091FF.F18 Filterclass (600)
0
-1000
-2000
-3000
-4000
-5000
-6000
-7000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:22


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-69.02643 G'S at 61. msec
YMAX= 9.206535 G'S at 117 msec
DRIVER PELVIS X ACCELERATION
1 B96091AF.A60 Filterclass (1000)
80
60
40
20
0
-20
-40
-60
-80
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
MGA Research
09-11-1996 21:21
S.9


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-12.91675 G'S at 117 msec
YMAX= 8.442585 G'S at 59 msec
DRIVER PELVIS Y ACCELERATION
1 B96091AF.A61 Filterclass (1000)
80
60
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:21


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-9.906878 G'S at 181 msec
YMAX= 16.81211 G'S at 82. msec
DRIVER PELVIS Z ACCELERATION
1 B96091AF.A62 Filterclass (1000)
80
60
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:21


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= .1042314 G'S at -18. msec
YMAX= 69.99484 G'S at 61. msec
DRIVER PELVIS RESULTANT ACCELERATION
1 B96091AV.A60 Filterclass (1000)
G'S
120
100
80
60
40
20
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:21


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-1.973549 KPH at 100 msec
YMAX= 56.68677 KPH at -3.3 msec
DRIVER PELVIS X VELOCITY
1 B95091AI.V60 Filterclass (1000)
KPH
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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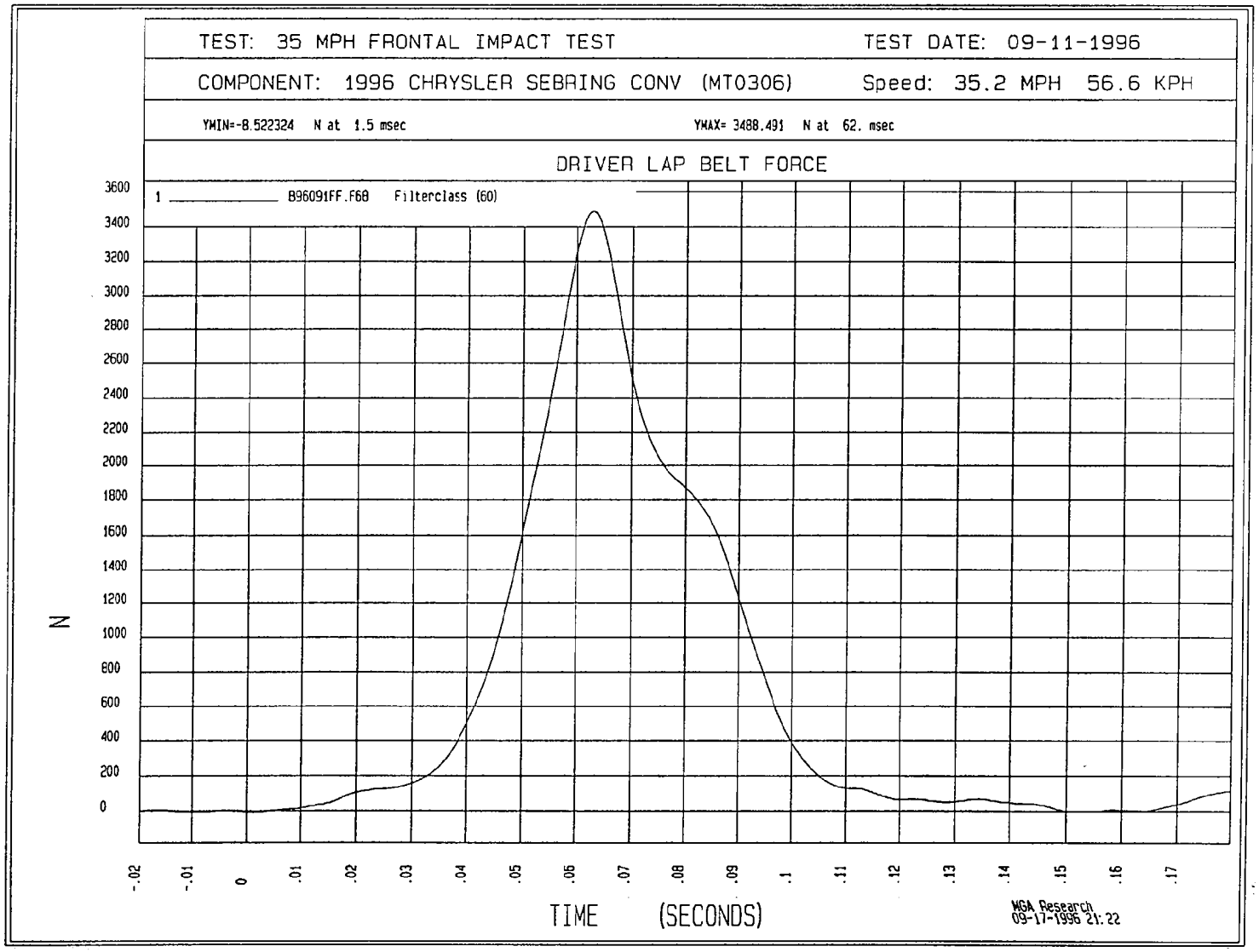
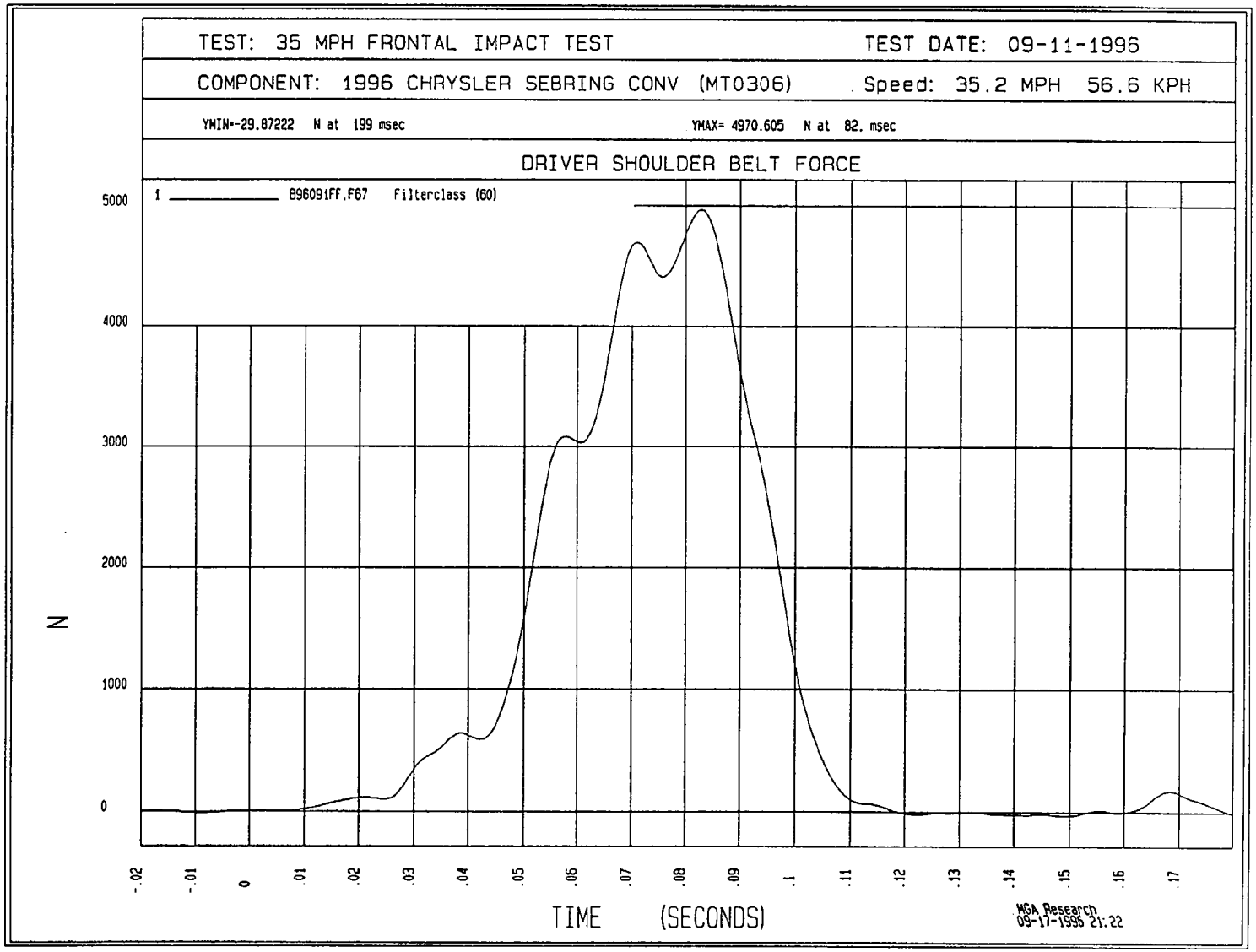
.16
.17
.18
.19
TIME Seconds
MGA Research
10-01-1996 22:05


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-8.522324 N at 1.5 msec
YMAX= 3488.491 N at 62. msec
DRIVER LAP BELT FORCE
1 B96091FF.F60 Filterclass (60)
N
TIME (SECONDS)
MGA Research
09-17-1996 21:22


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-29.87222 N at 199 msec
YMAX= 4970.605 N at 82. msec
DRIVER SHOULDER BELT FORCE
1 896091FF.F67 Filterclass (60)
5000
4000
3000
2000
1000
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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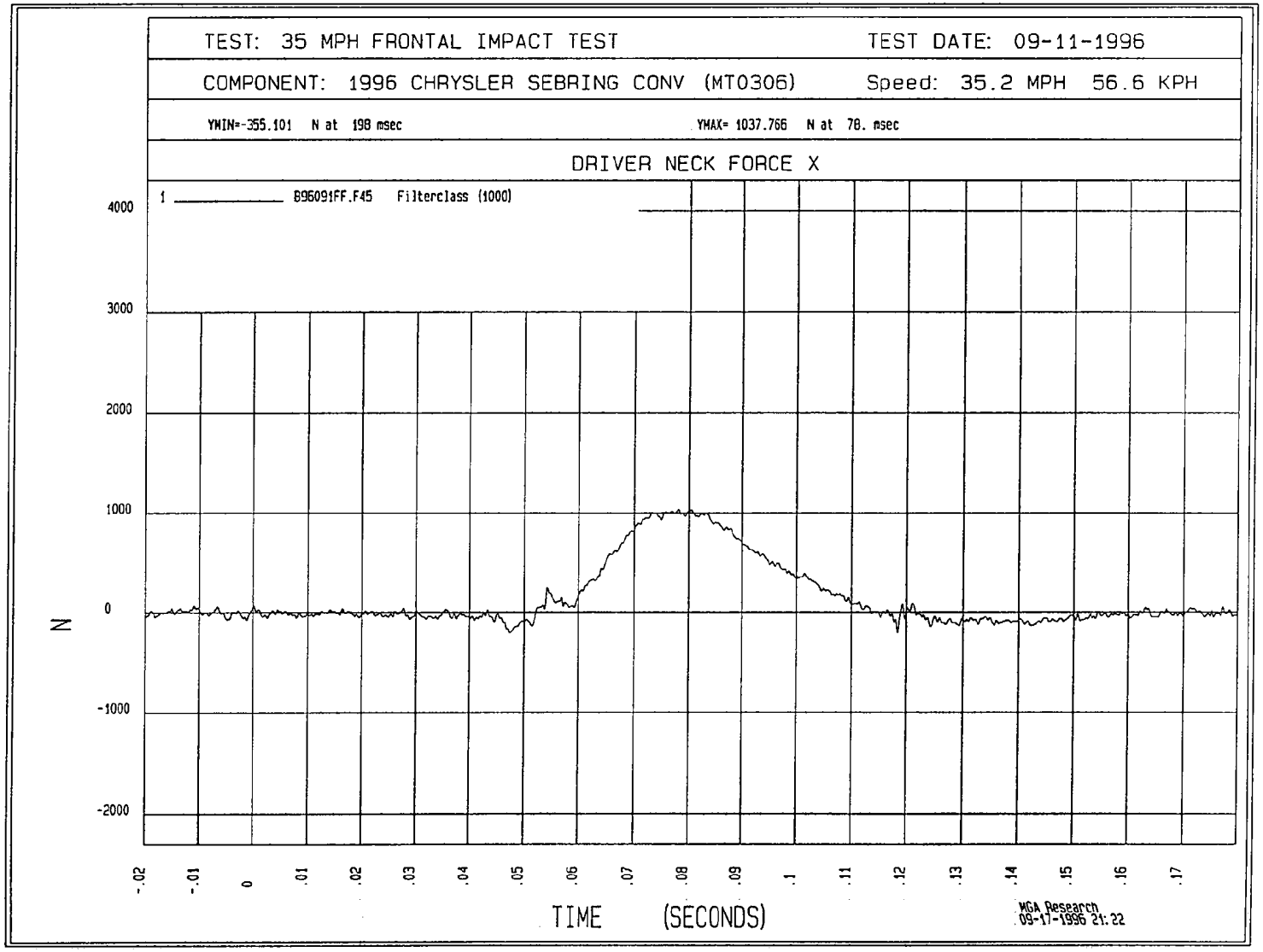
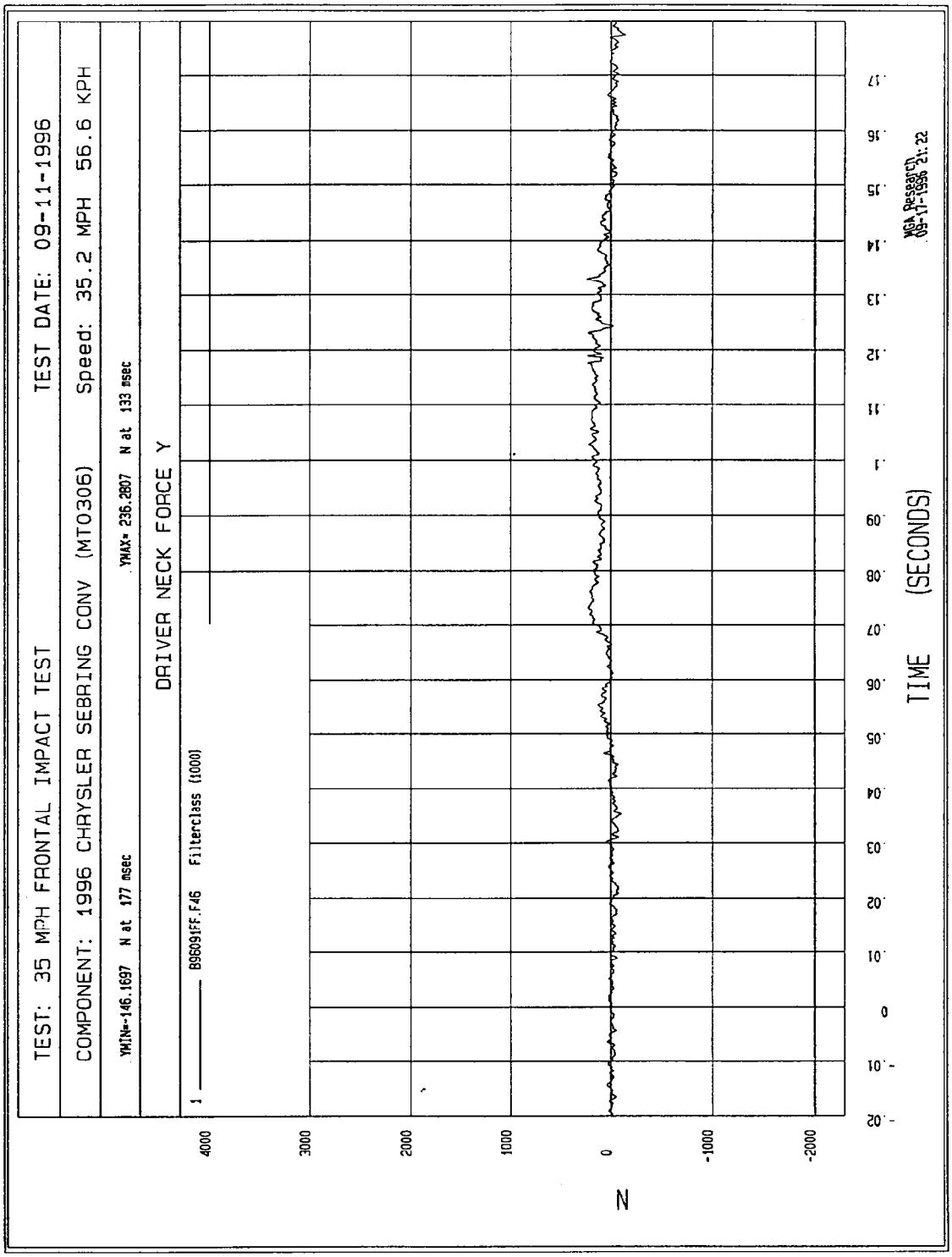
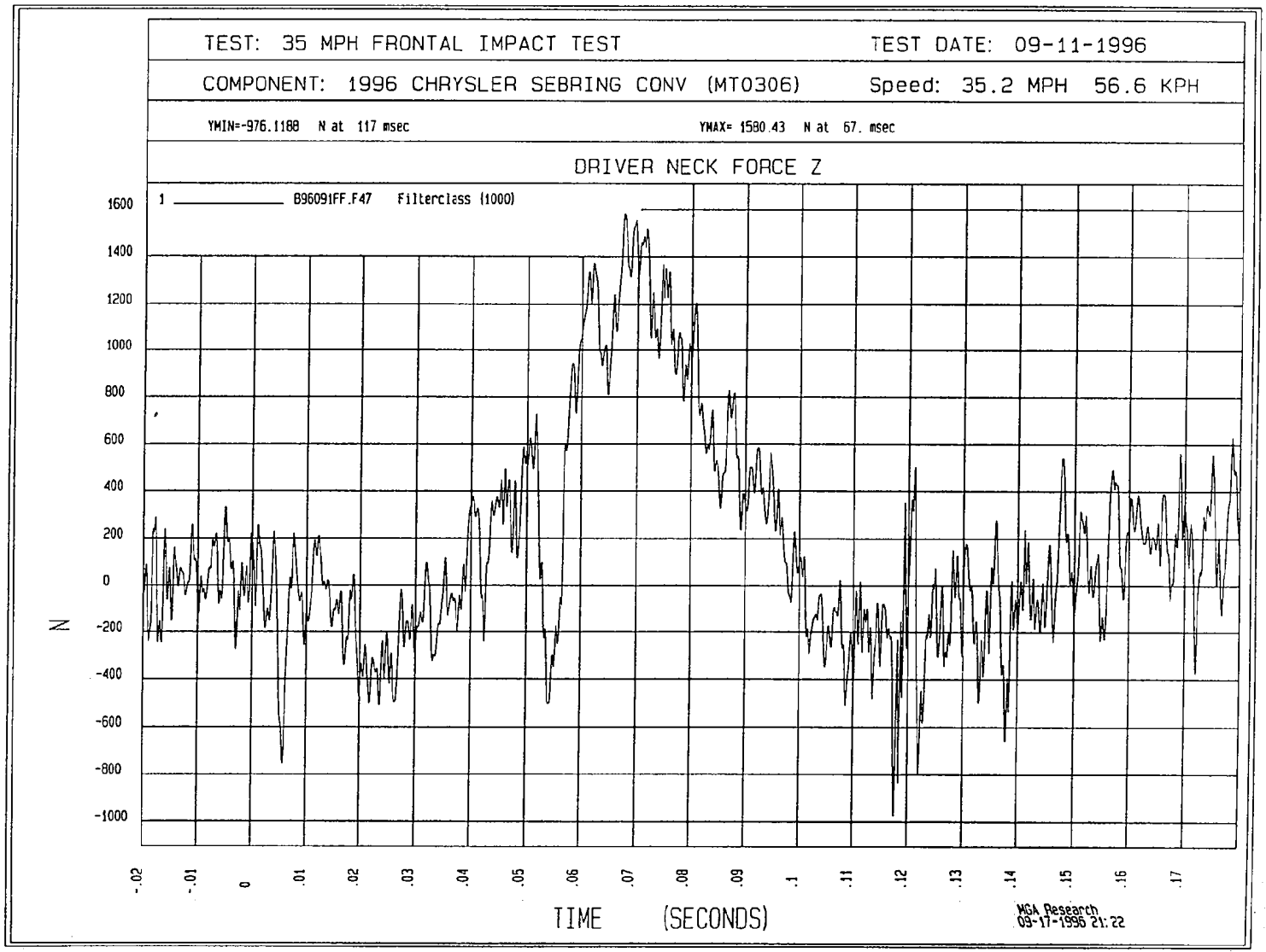
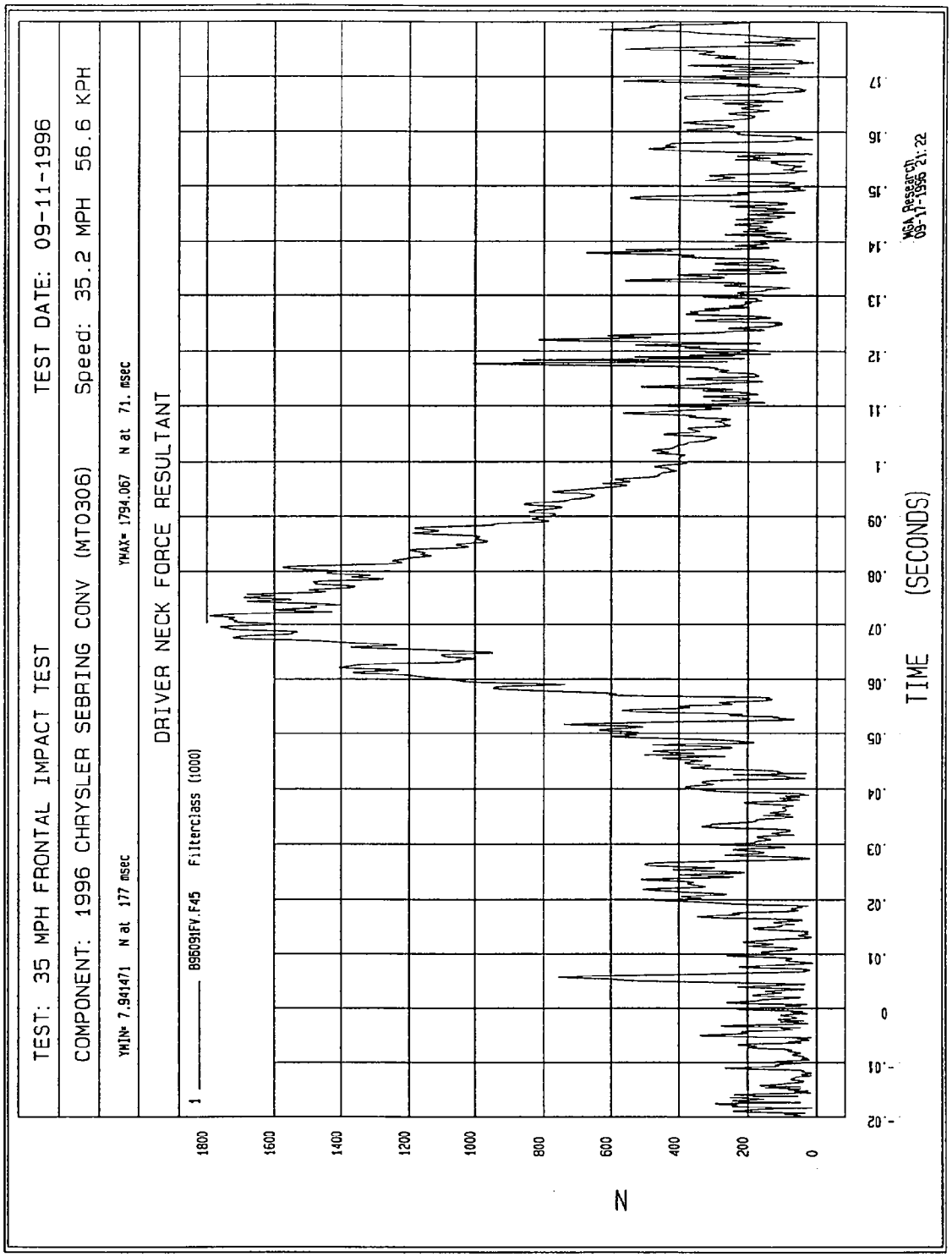
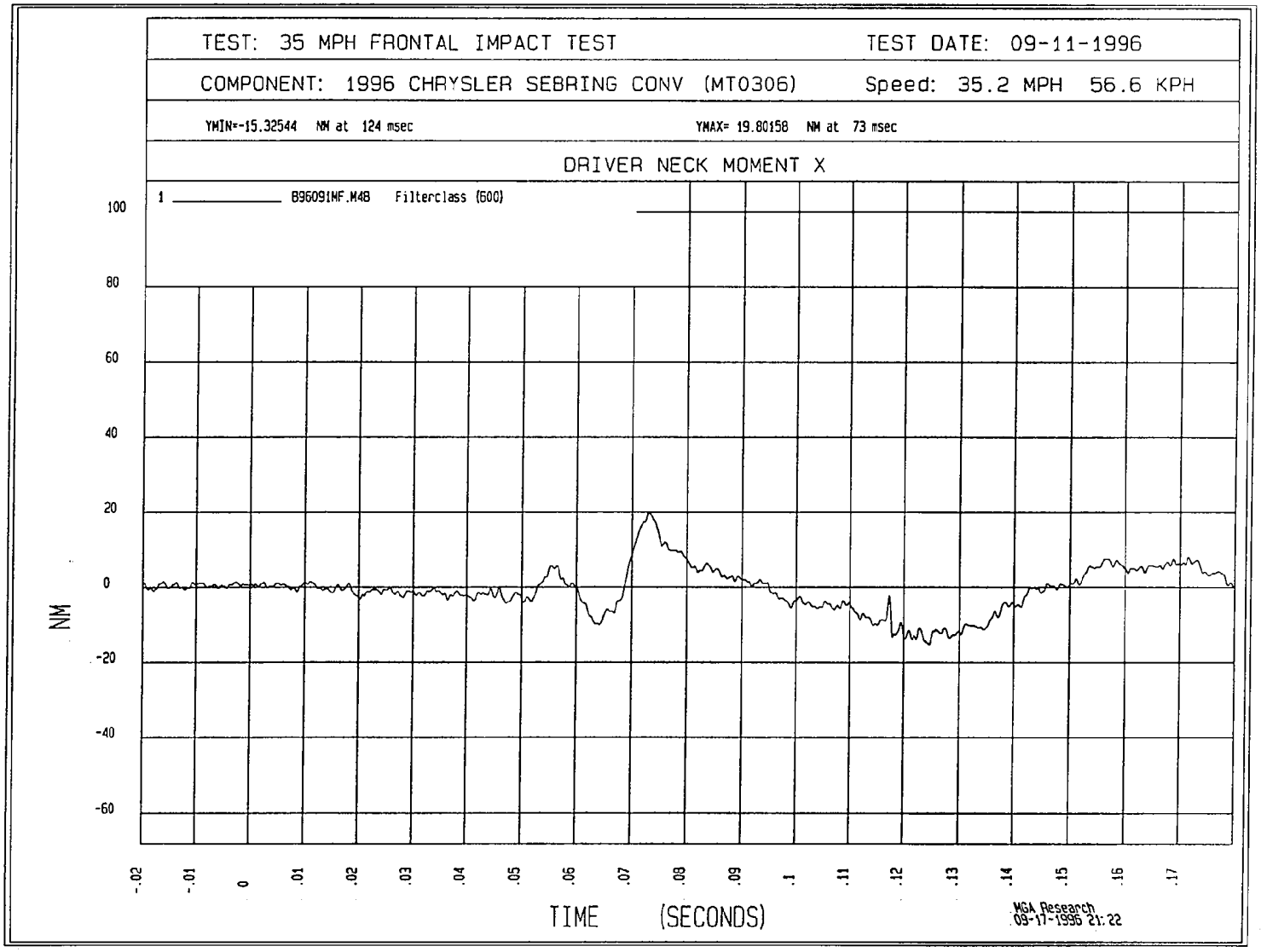
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:22


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-355.101 N at 198 msec
YMAX= 1037.766 N at 78. msec
DRIVER NECK FORCE X
1 B96091FF.F45 Filterclass (1000)
4000
3000
2000
1000
0
-1000
-2000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:22


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-146.1697 N at 177 msec
YMAX= 236.2807 N at 133 msec
DRIVER NECK FORCE Y
1 B96091FF.F46 Filterclass (1000)
4000
3000
2000
1000
0
-1000
-2000
N
-20
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
TIME (SECONDS)
MGA Research
09-17-1996 21:22


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-976.1188 N at 117 msec
YMAX= 1580.43 N at 67. msec
DRIVER NECK FORCE Z
1 B96091FF.F47 Filterclass (1000)
1600
1400
1200
1000
800
600
400
200
0
-200
-400
-600
-800
-1000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:22


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 7.941471 N at 177 msec
YMAX= 1794.067 N at 71. msec
DRIVER NECK FORCE RESULTANT
1 B96091FV.F45 Filterclass (1000)
N
TIME (SECONDS)
MGA Research
09-17-1996 21:22


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-15.32544 NM at 124 msec
YMAX= 19.80158 NM at 73 msec
DRIVER NECK MOMENT X
1 B9609IMF.M48 Filterclass (600)
100
80
60
40
20
0
-20
-40
-60
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.1
.11
.12
.13
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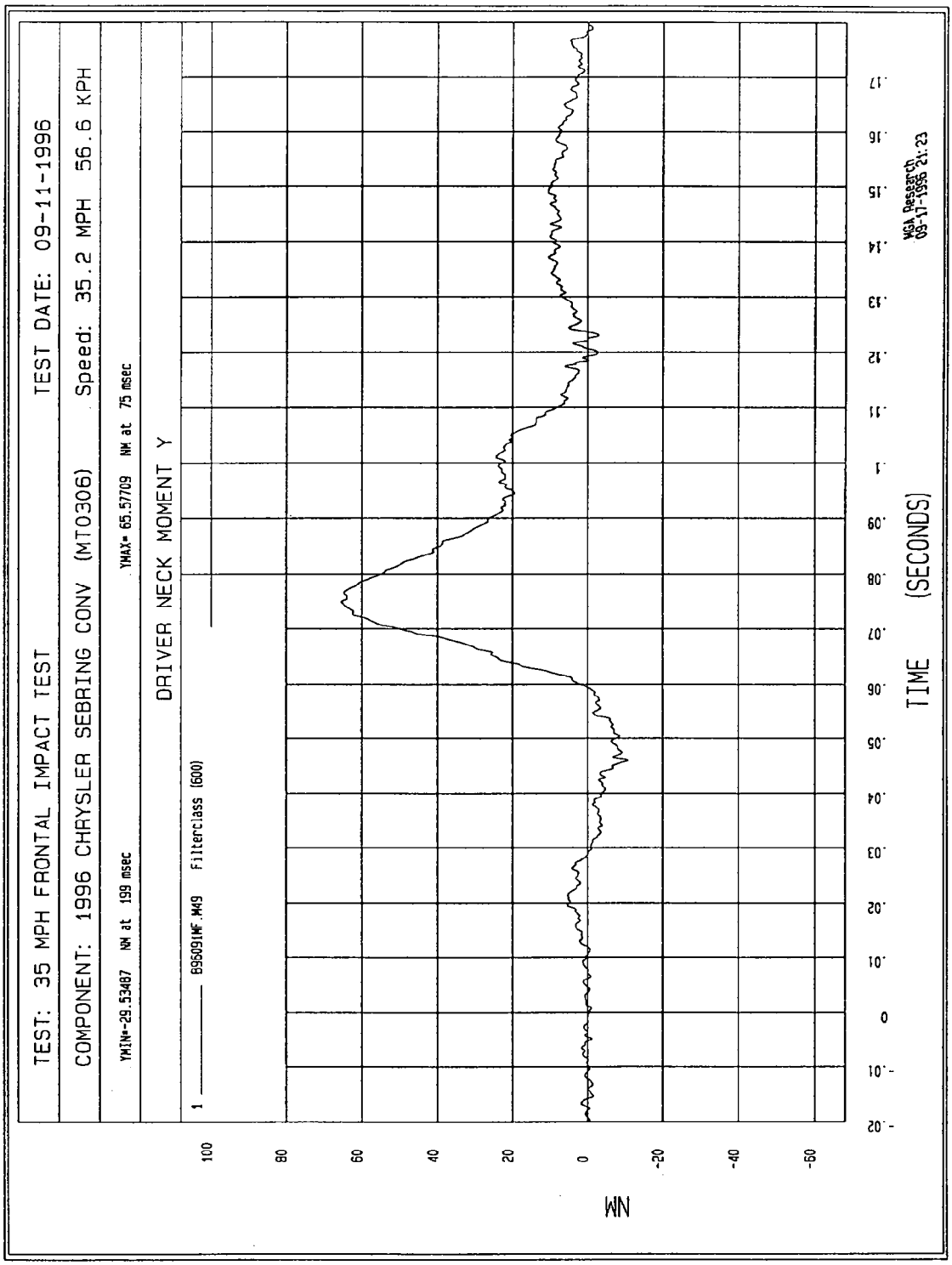
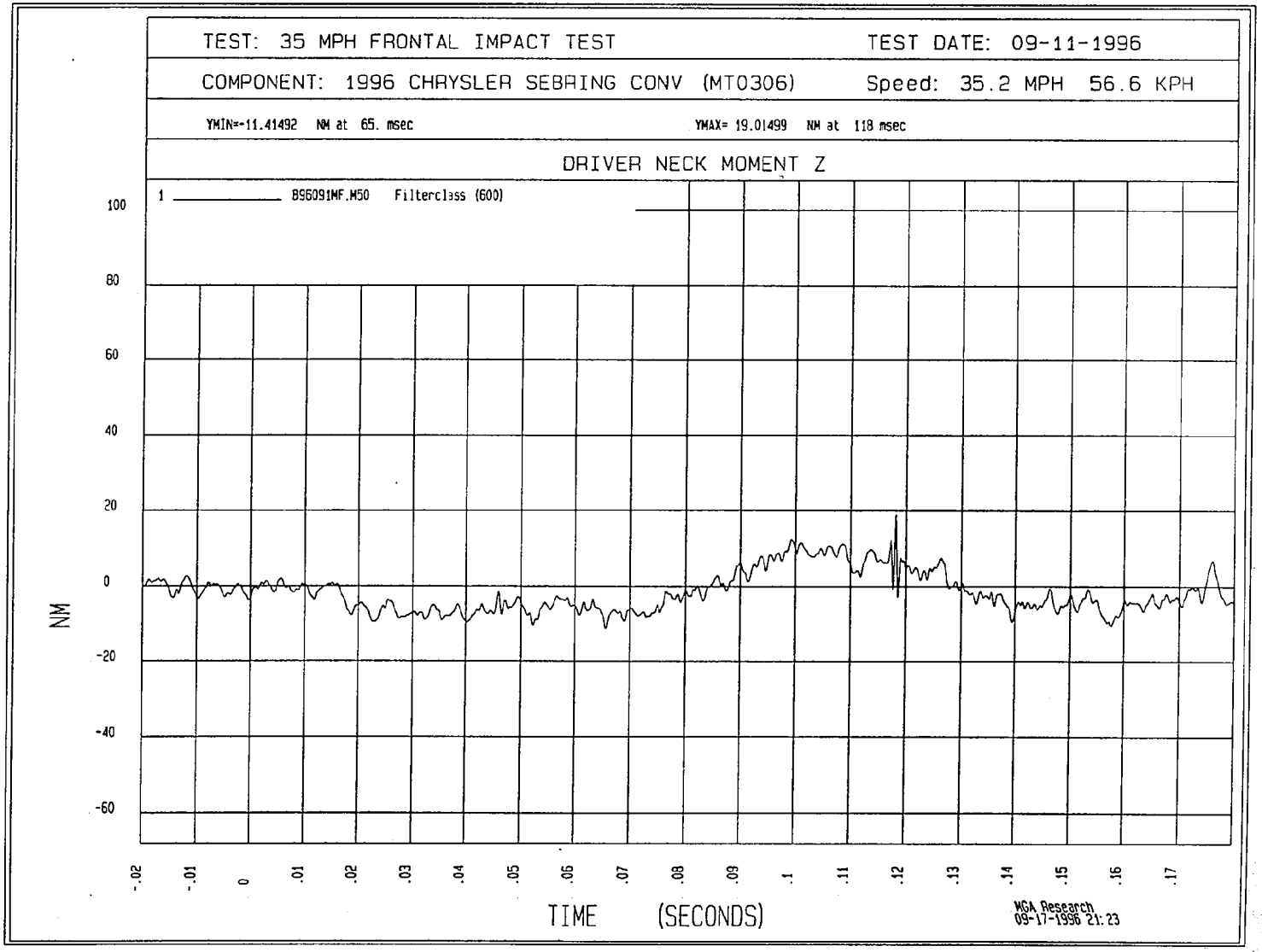
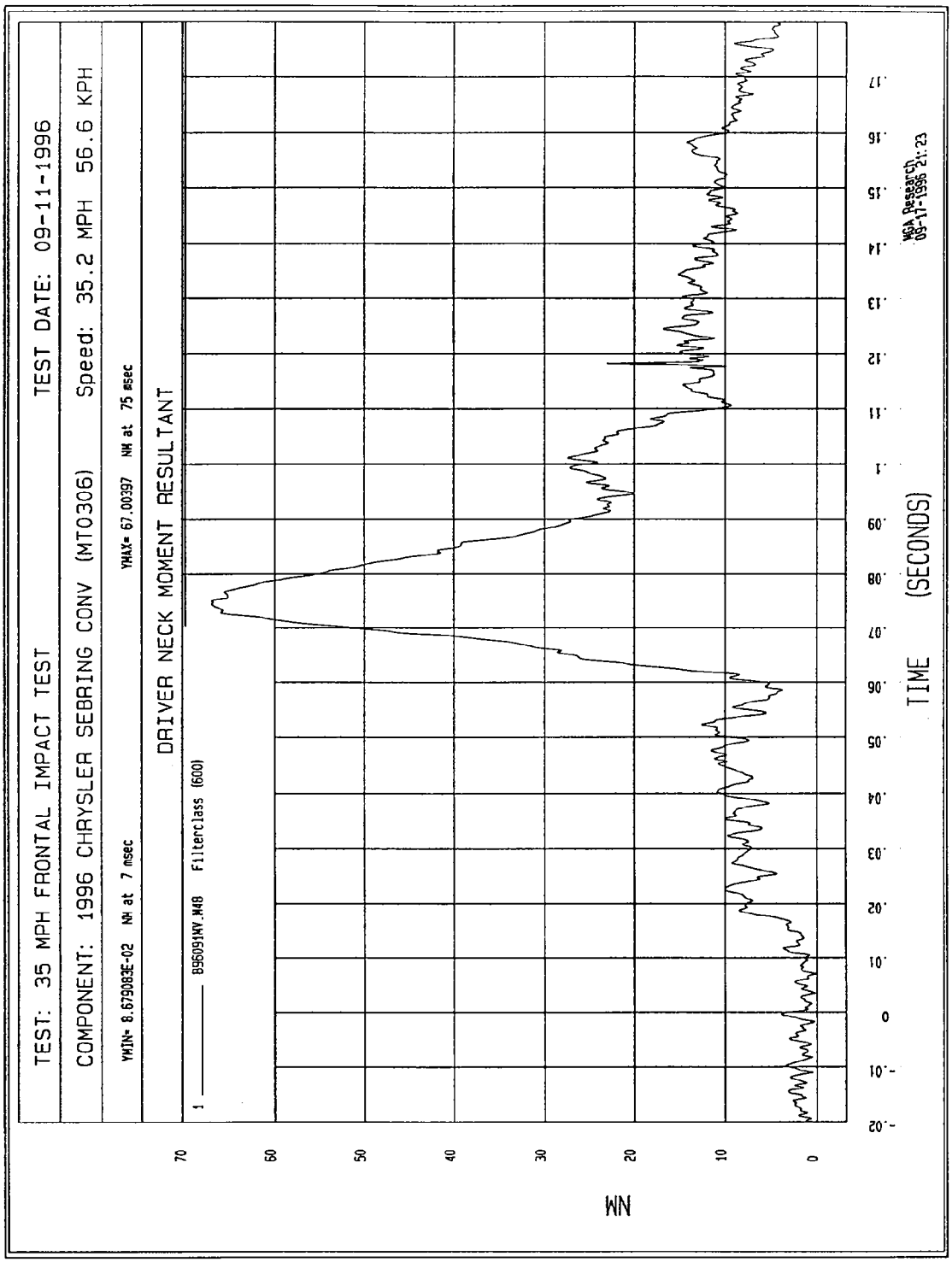
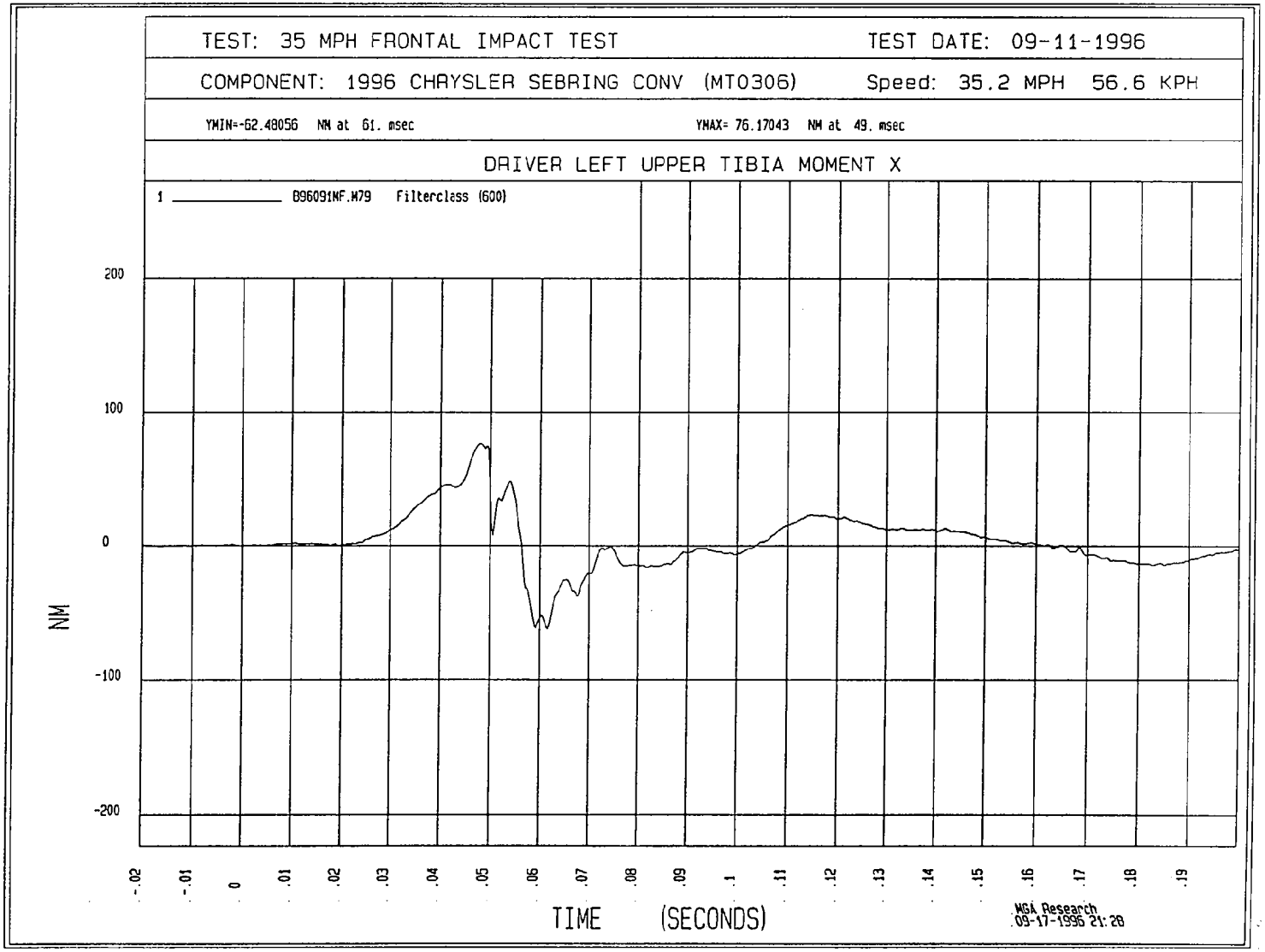
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:22


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-29.53487 NM at 199 msec
YMAX= 65.57709 NM at 75 msec
DRIVER NECK MOMENT Y
1 ——— 896091MF.M49 Filterclass (600)
NM
TIME (SECONDS)
MGA Research
09-17-1996 21:23


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-11.41492 NM at 65. msec
YMAX= 19.01499 NM at 118 msec
DRIVER NECK MOMENT Z
1 B96091MF.M50 Filterclass (600)
100
80
60
40
20
0
-20
-40
-60
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:23


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 8.679083E-02 NM at 7 msec
YMAX= 67.00397 NM at 75 msec
DRIVER NECK MOMENT RESULTANT
1 ——— B96091KY.M48 Filterclass (600)
NM
TIME (SECONDS)
MGA Research
09-17-1996 21:23


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-62.48056 NM at 61. msec
YMAX= 76.17043 NM at 49. msec
DRIVER LEFT UPPER TIBIA MOMENT X
1 B96091MF.M79 Filterclass (600)
200
100
0
-100
-200
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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.14
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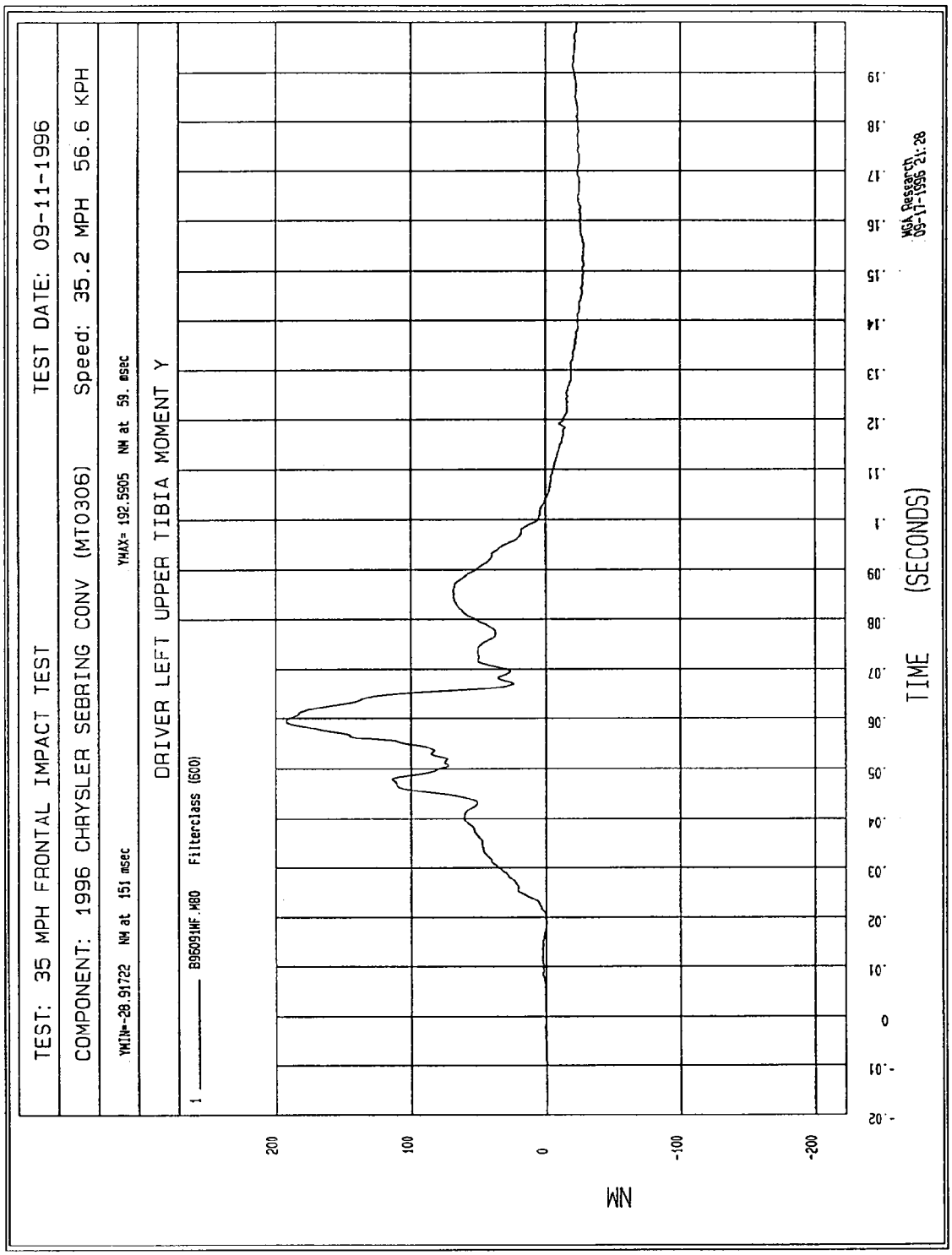
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:28


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-28.91722 NM at 151 msec
YMAX= 192.5905 NM at 59. msec
DRIVER LEFT UPPER TIBIA MOMENT Y
1 B96091MF.M80 Filterclass (600)
NM
200
100
0
-100
-200
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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.12
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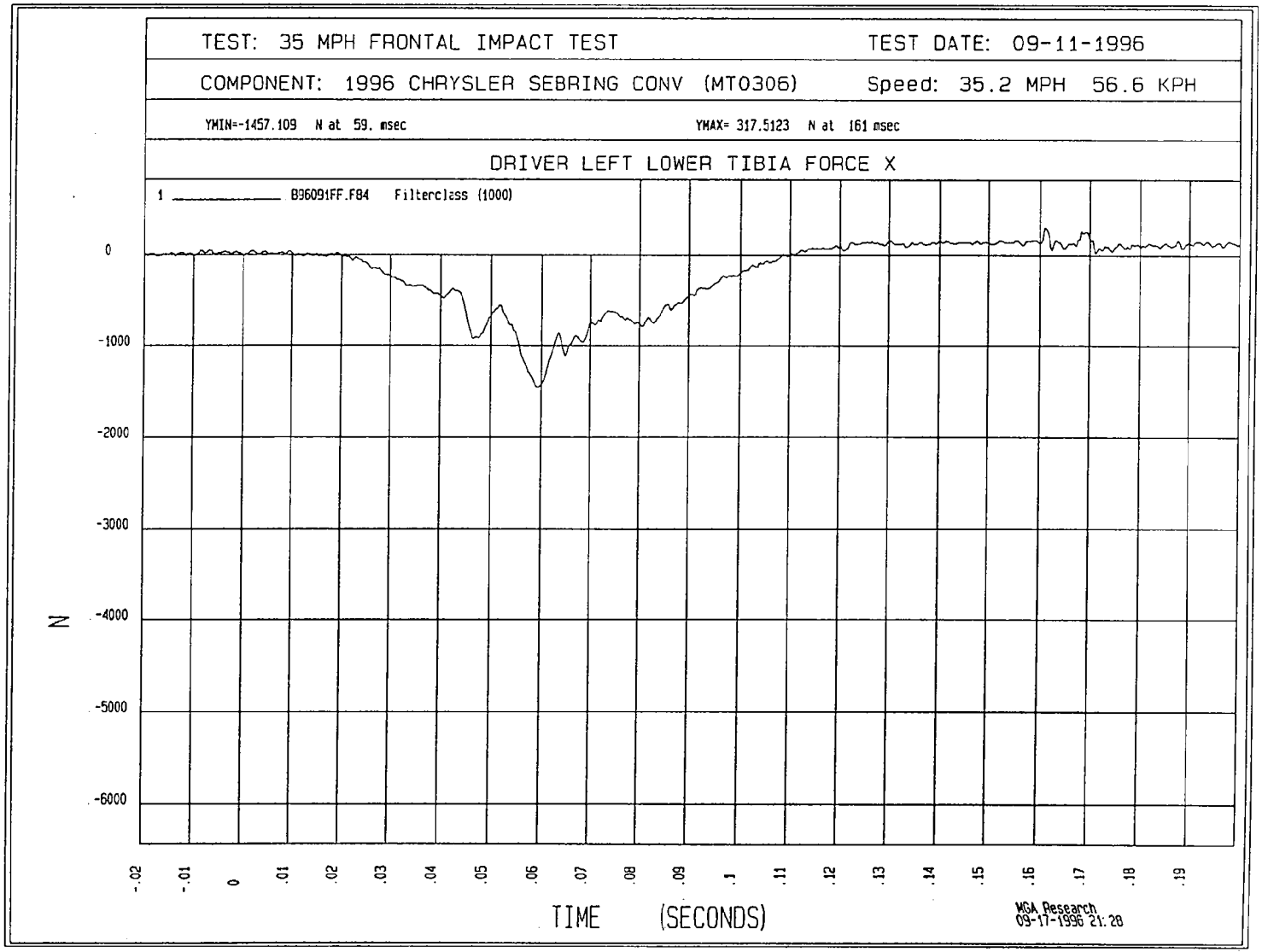
MGA Research
09-17-1996 21:28


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-1457.109 N at 59. msec
YMAX= 317.5123 N at 161 msec
DRIVER LEFT LOWER TIBIA FORCE X
1 B96091FF.F84 Filterclass (1000)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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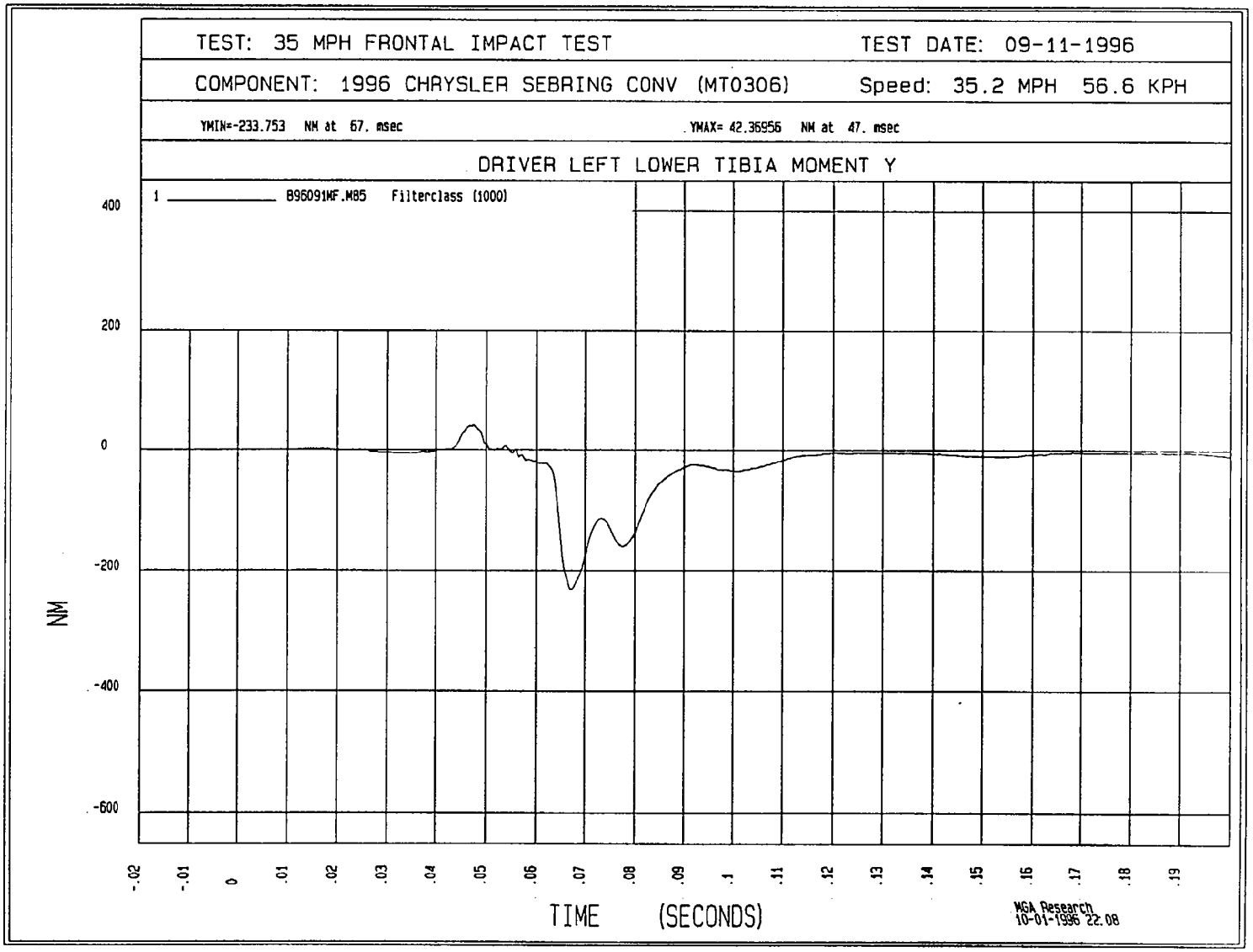
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:28


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-233.753 NM at 67. msec
YMAX= 42.36956 NM at 47. msec
DRIVER LEFT LOWER TIBIA MOMENT Y
1 B96091WF.M85 Filterclass (1000)
400
200
0
-200
-400
-600
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.14
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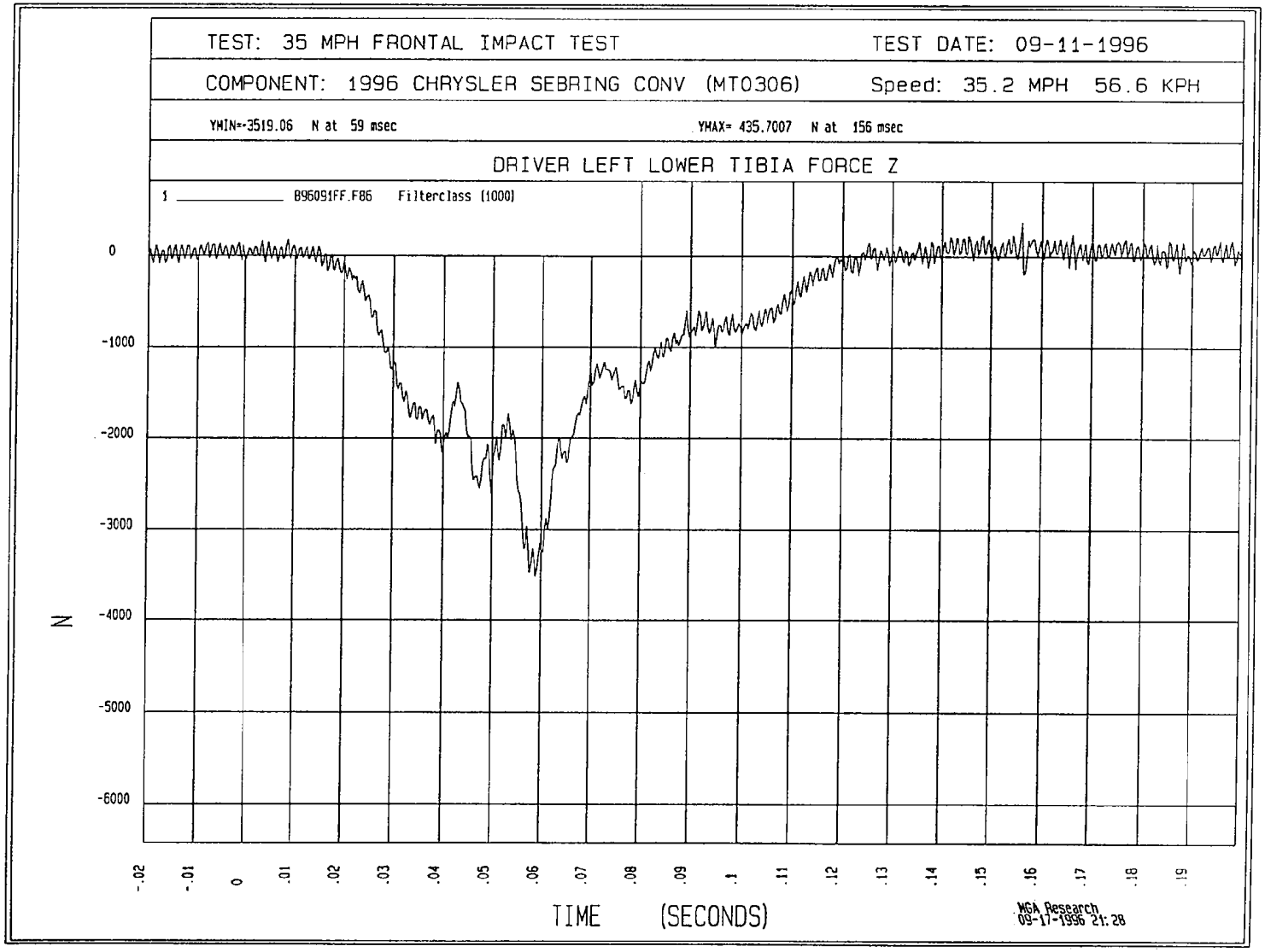
.18
.19
TIME (SECONDS)
MGA Research
10-01-1996 22:08


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-3519.06 N at 59 msec
YMAX= 435.7007 N at 156 msec
DRIVER LEFT LOWER TIBIA FORCE Z
1 B96091FF.F86 Filterclass (1000)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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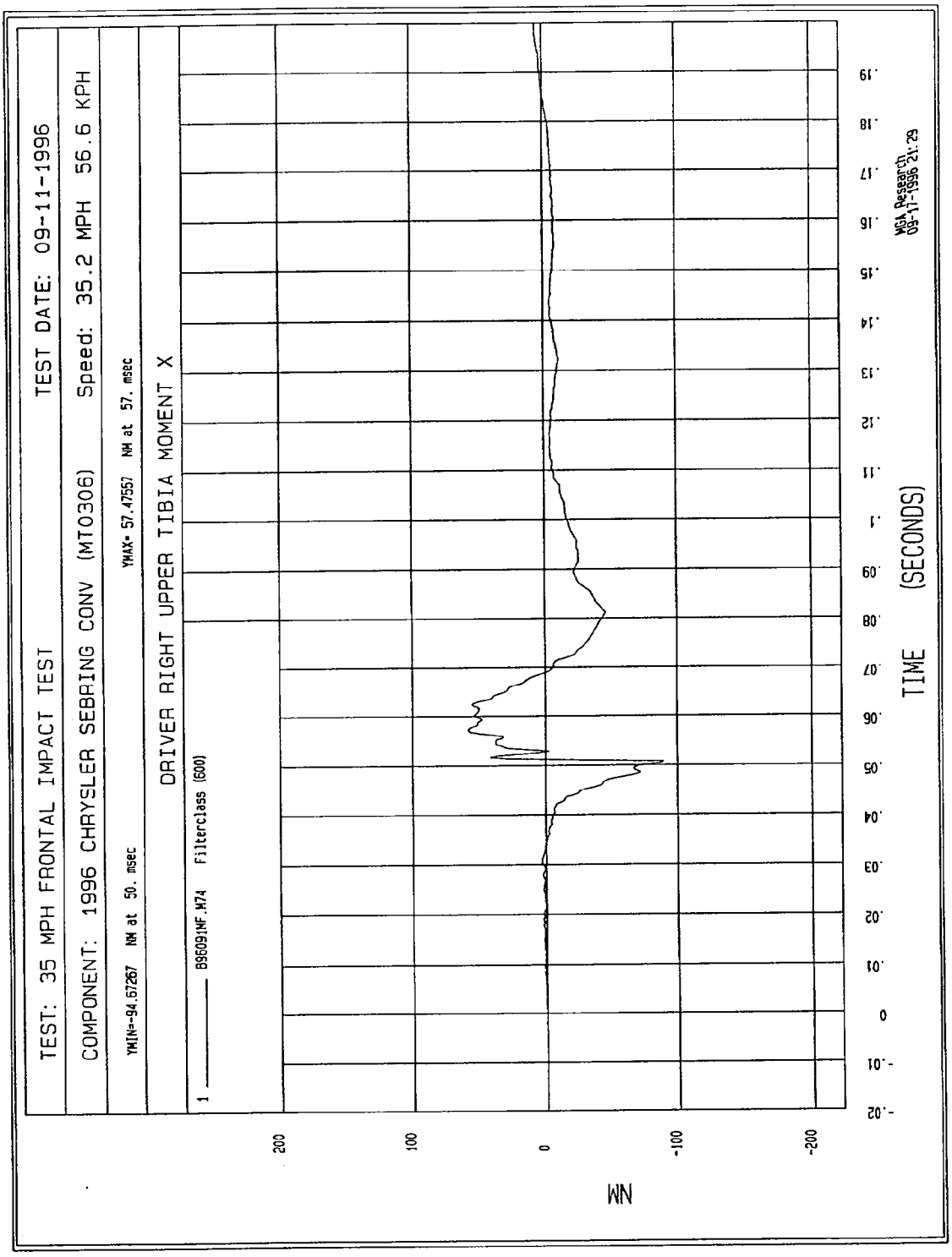
TIME (SECONDS)
MGA Research
09-17-1996 21:28


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-94.67267 NM at 50. msec
YMAX= 57.47557 NM at 57. msec
DRIVER RIGHT UPPER TIBIA MOMENT X
1 B96091NF.M74 Filterclass (600)
NM
200
100
0
-100
-200
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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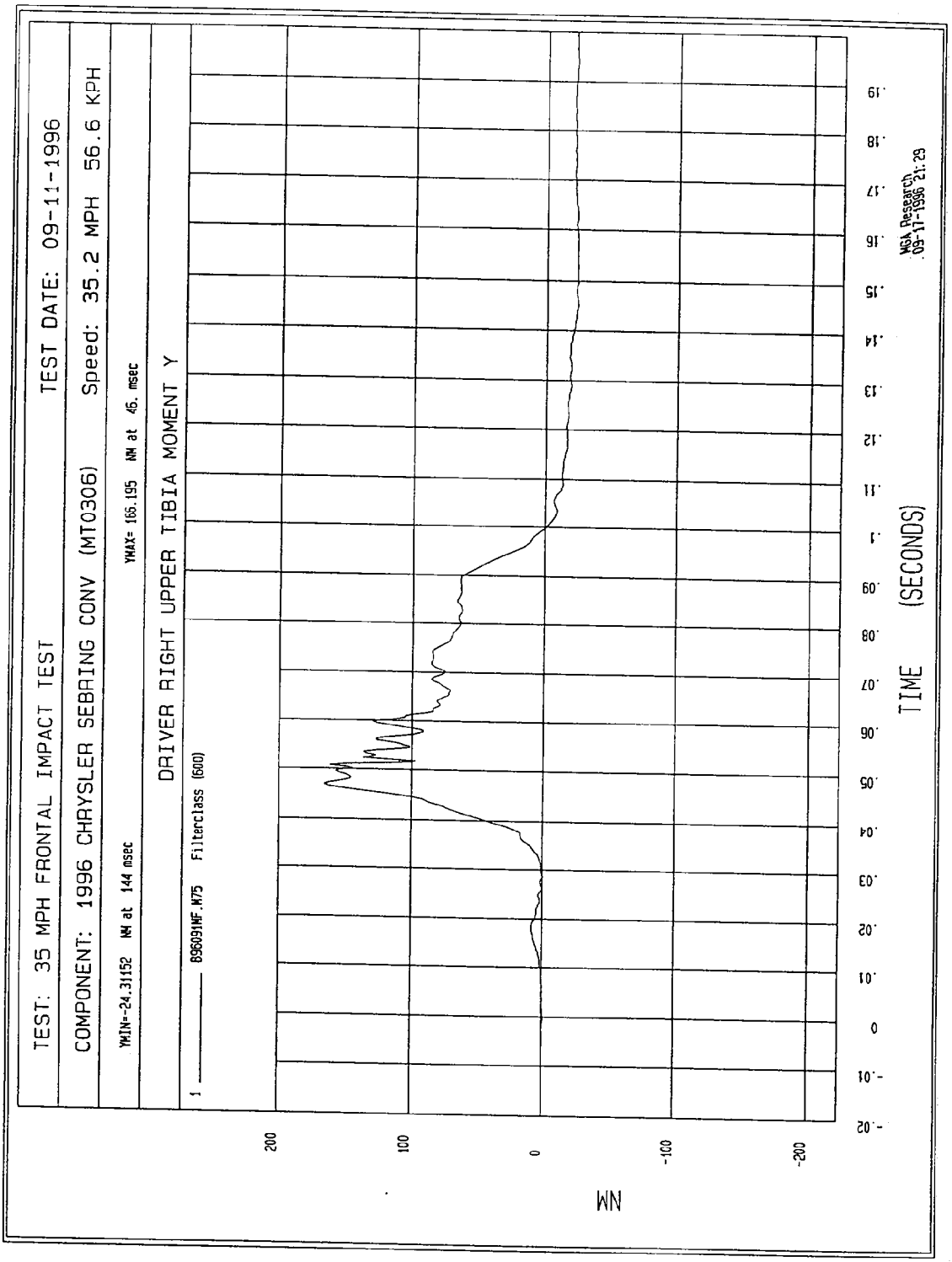
MGA Research
09-11-1996 21:29


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-24.31152 NM at 144 msec
YMAX= 165.195 NM at 45. msec
DRIVER RIGHT UPPER TIBIA MOMENT Y
1 896091NF.M75 Filterclass (600)
NM
200
100
0
-100
-200
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
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.07
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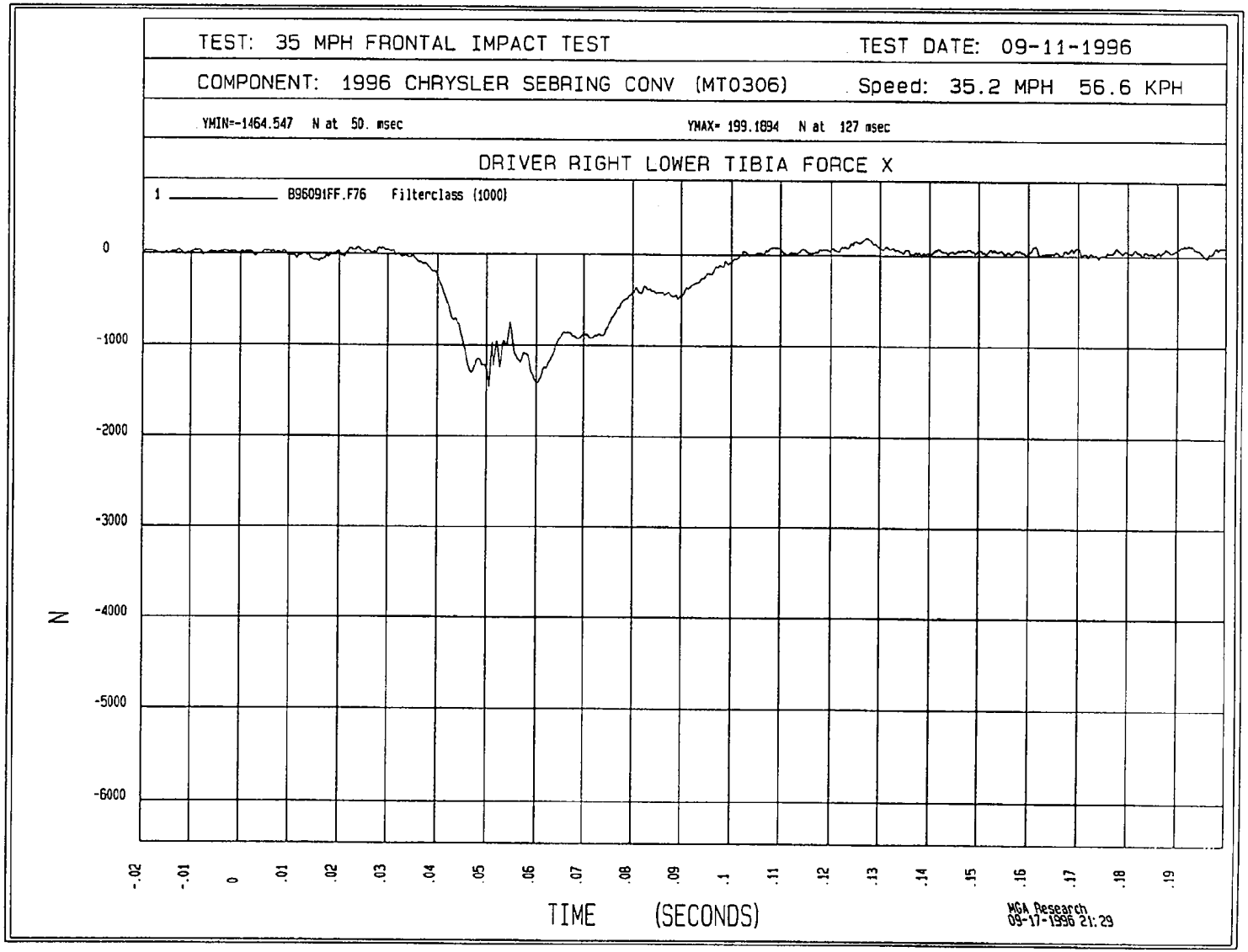
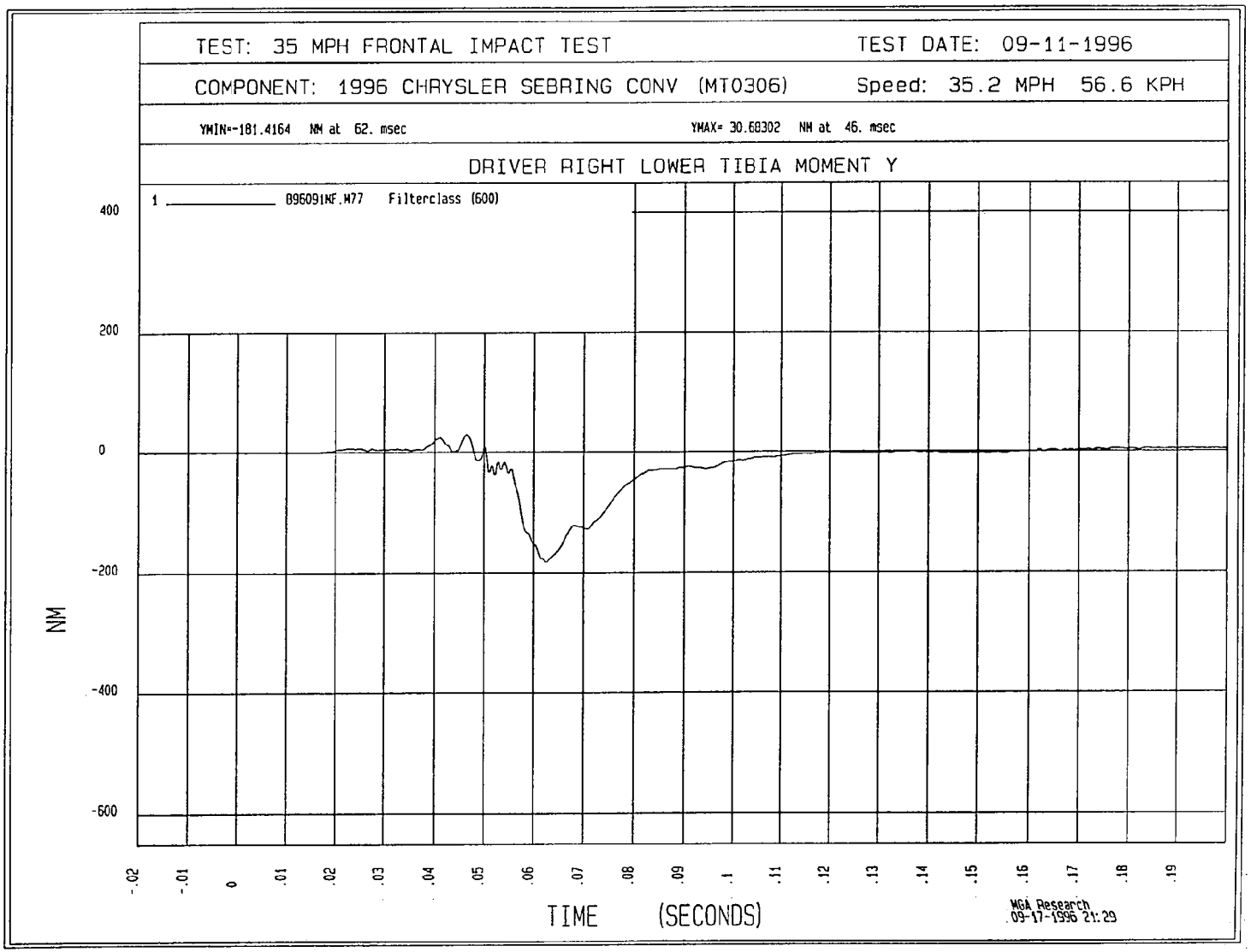
MGA Research
09-17-1996 21:29


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-1464.547 N at 50. msec
YMAX= 199.1894 N at 127 msec
DRIVER RIGHT LOWER TIBIA FORCE X
1 B96091FF.F76 Filterclass (1000)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:29


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-181.4164 NM at 62. msec
YMAX= 30.68302 NM at 46. msec
DRIVER RIGHT LOWER TIBIA MOMENT Y
1 B96091MF.M77 Filterclass (600)
400
200
0
-200
-400
-600
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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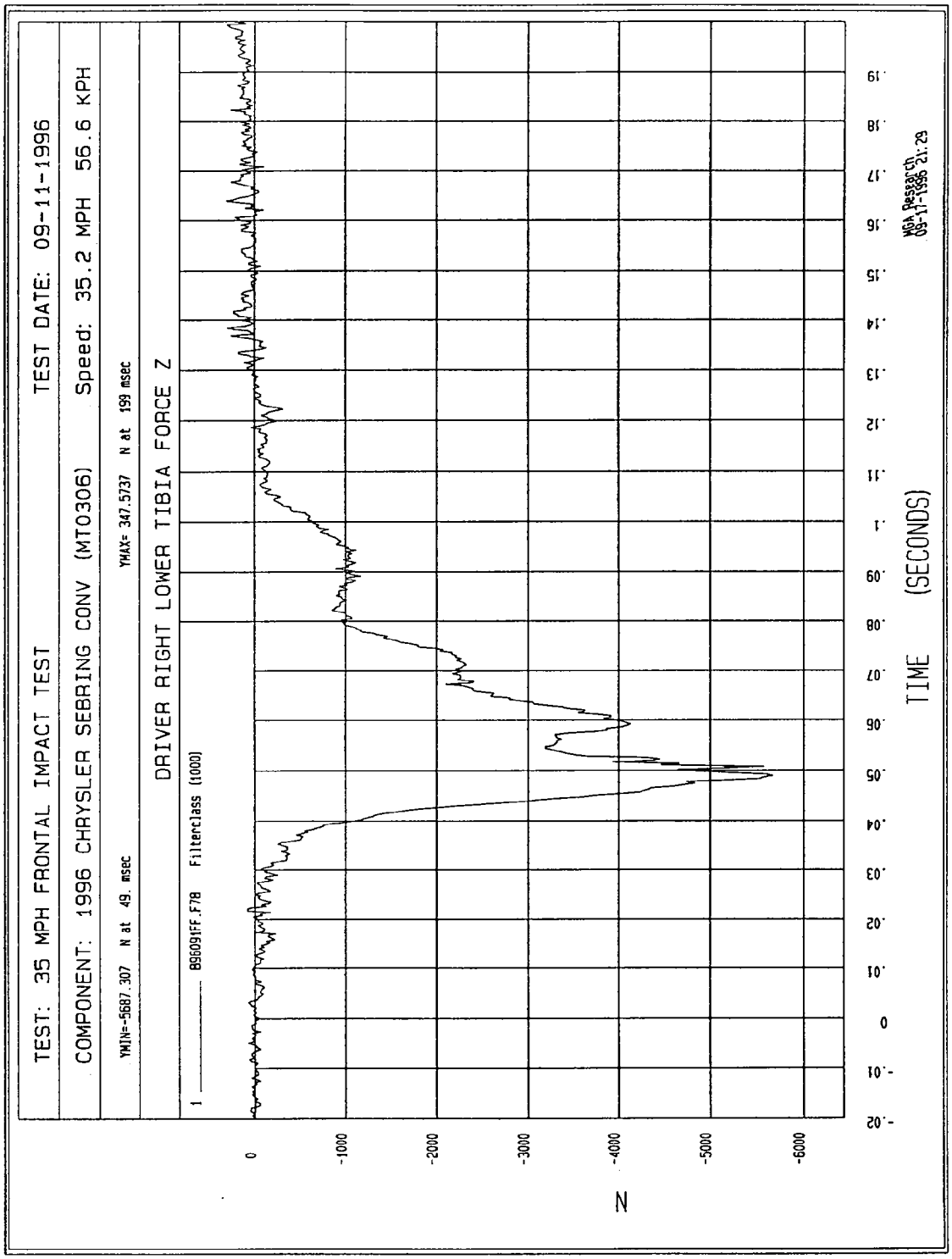
TIME (SECONDS)
MGA Research
09-17-1996 21:29


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-5687.307 N at 49. msec
YMAX= 347.5737 N at 199 msec
DRIVER RIGHT LOWER TIBIA FORCE Z
1 _____ B96091FF.F78 Filterclass (1000)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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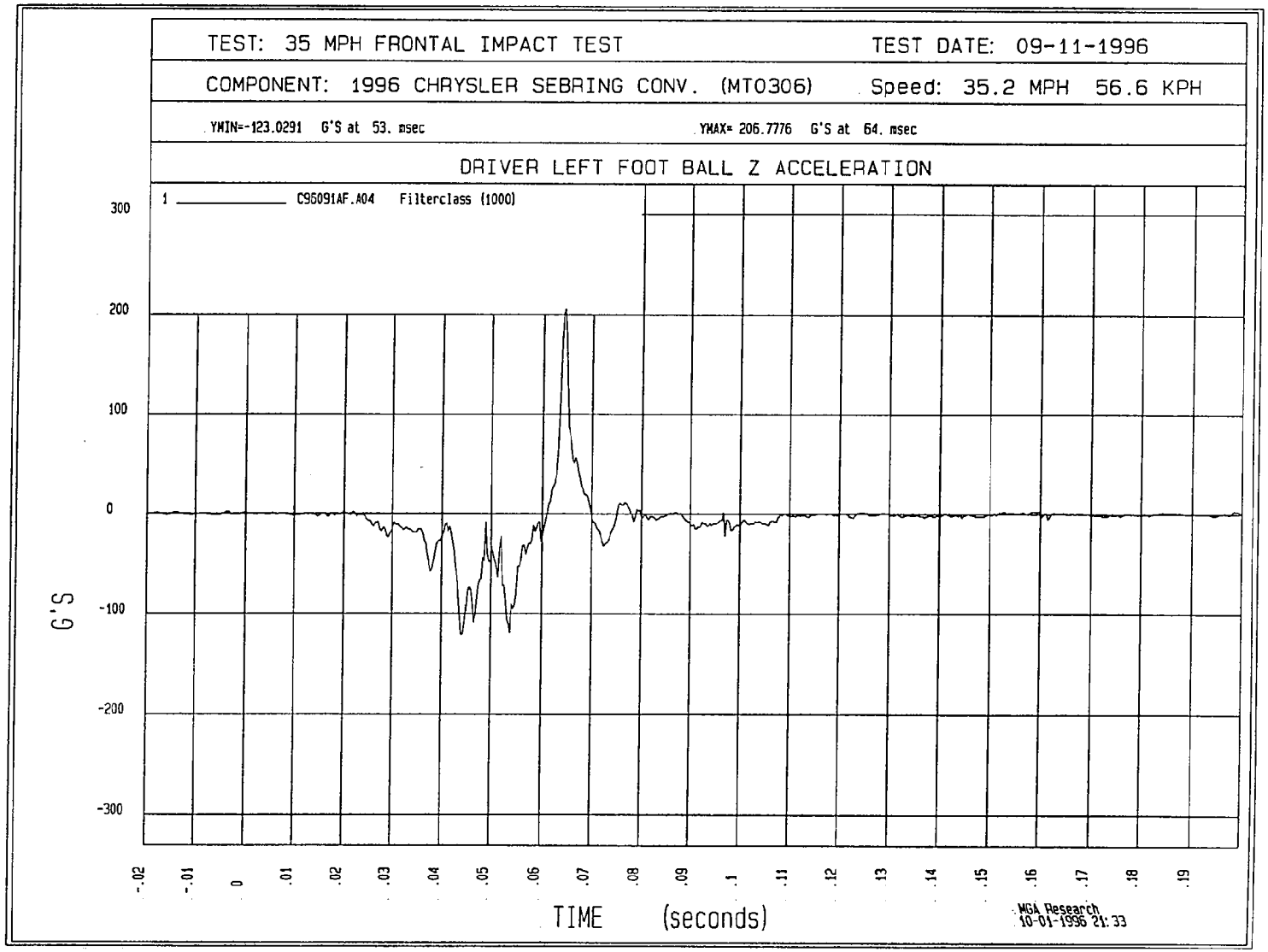
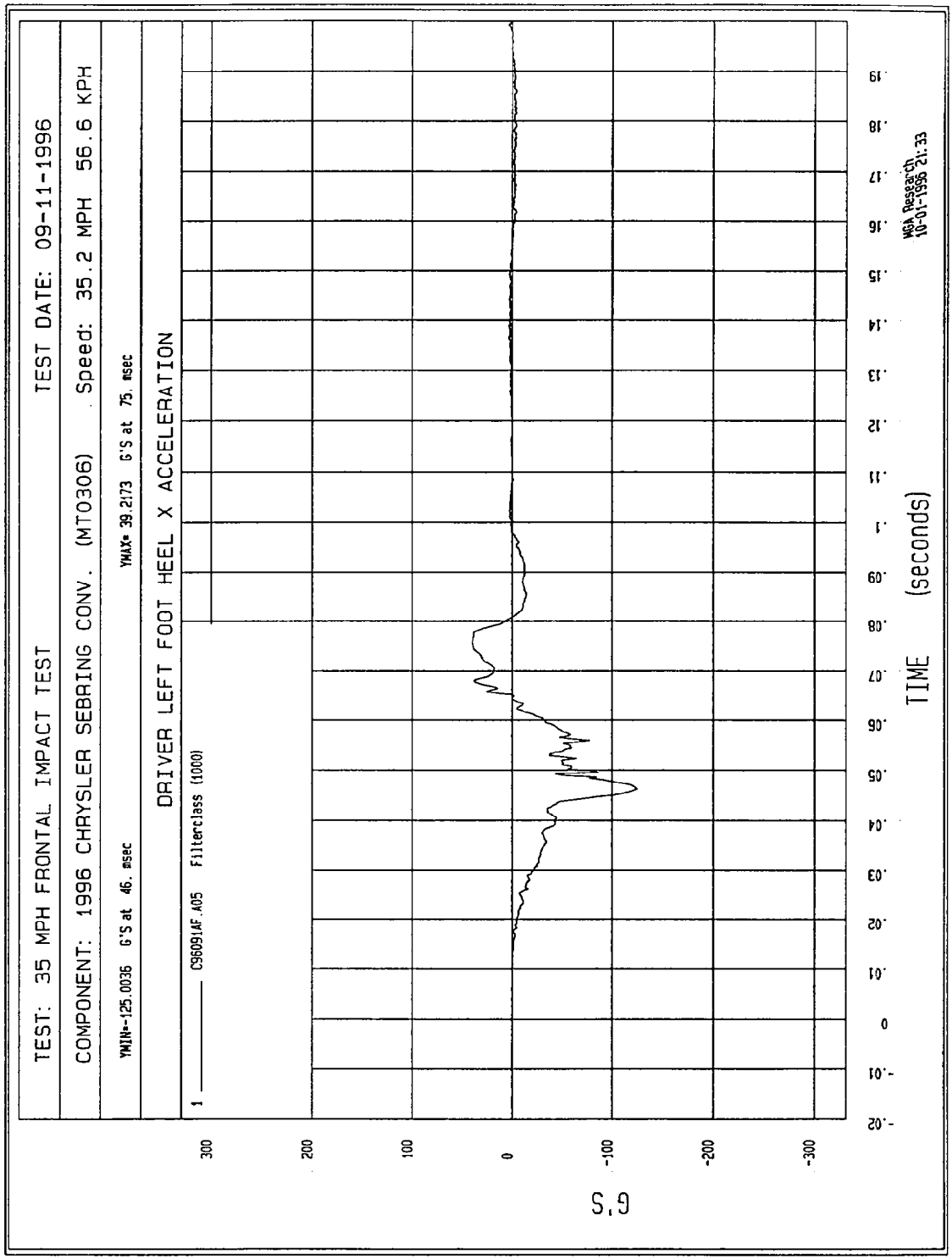
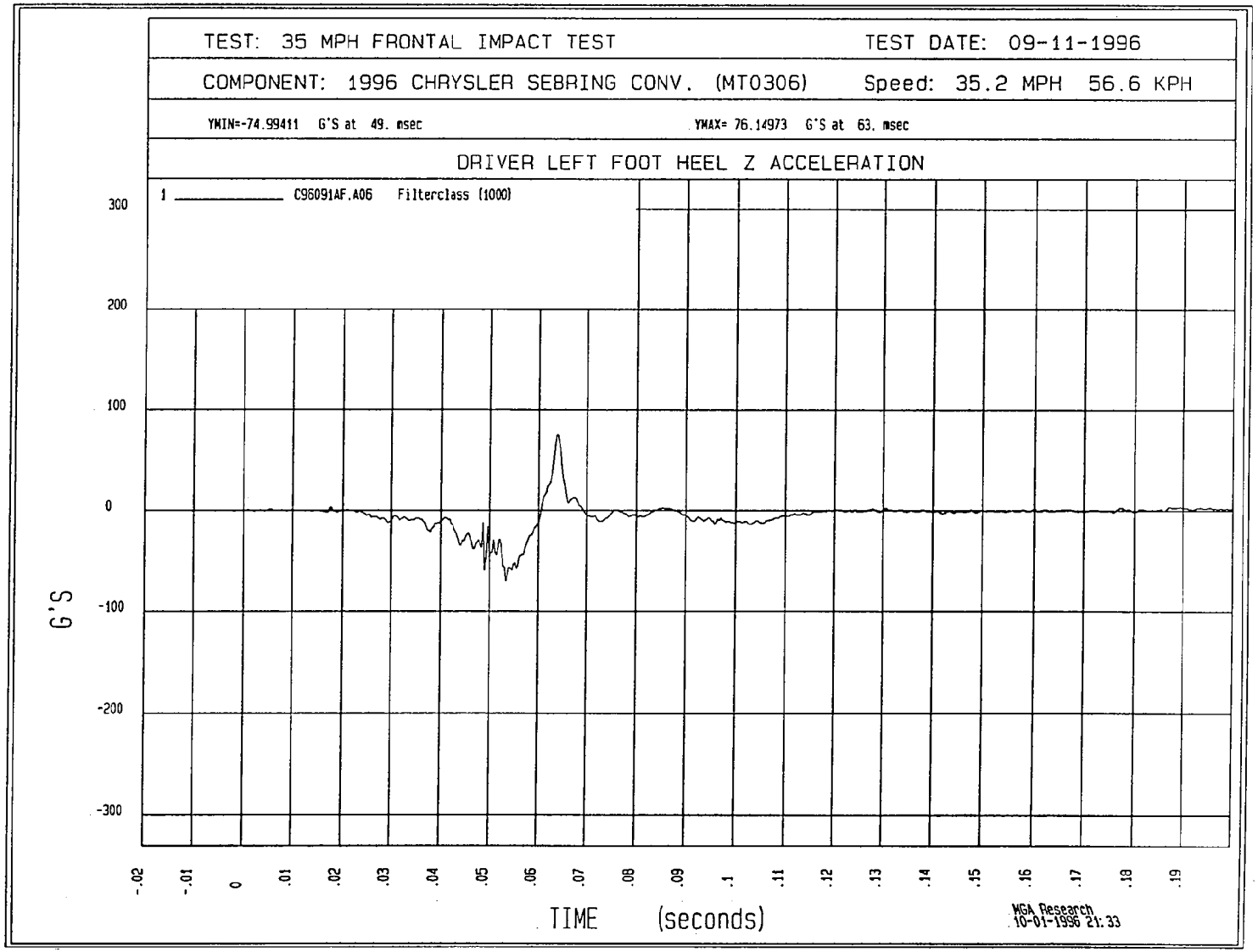
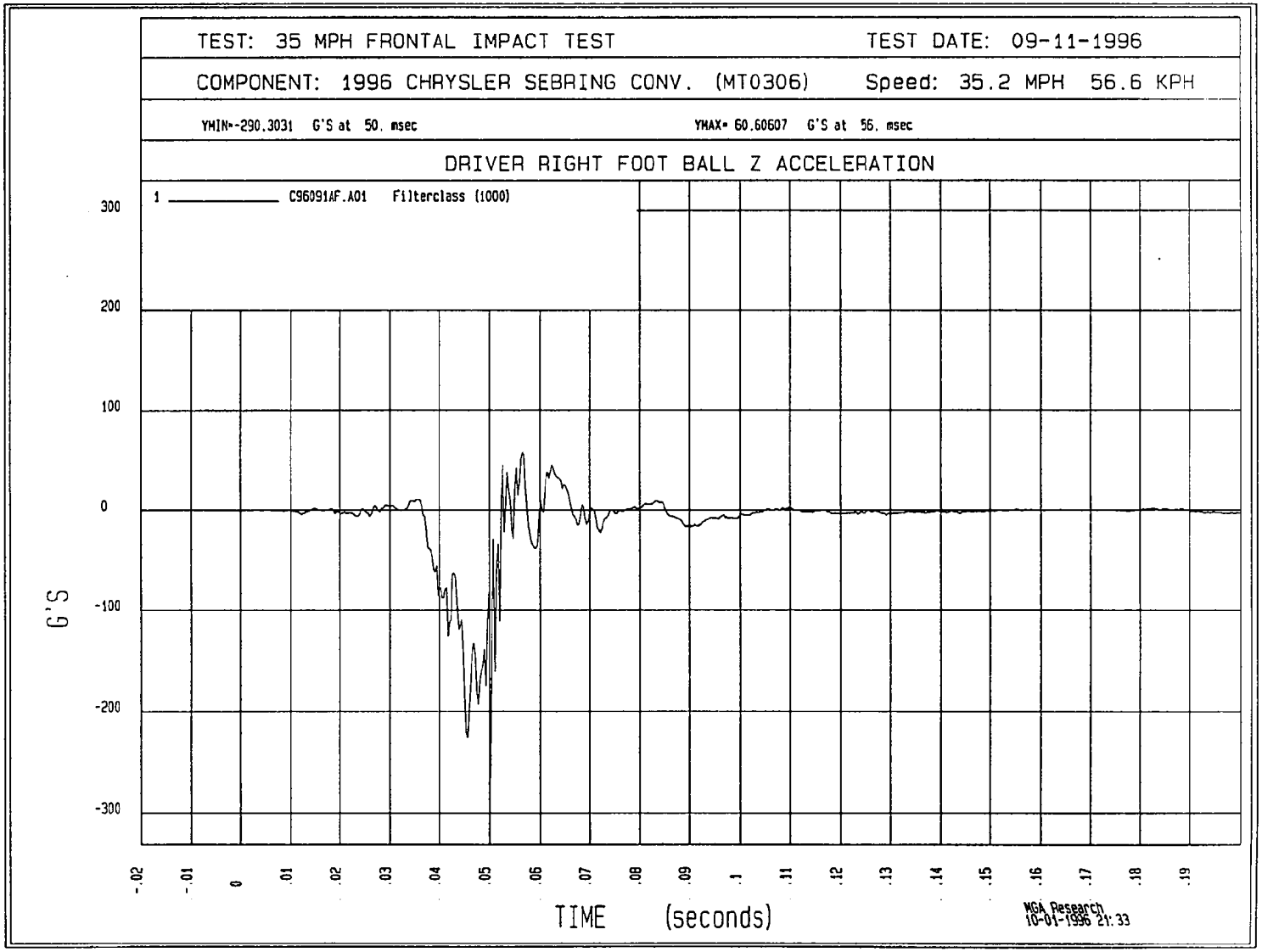
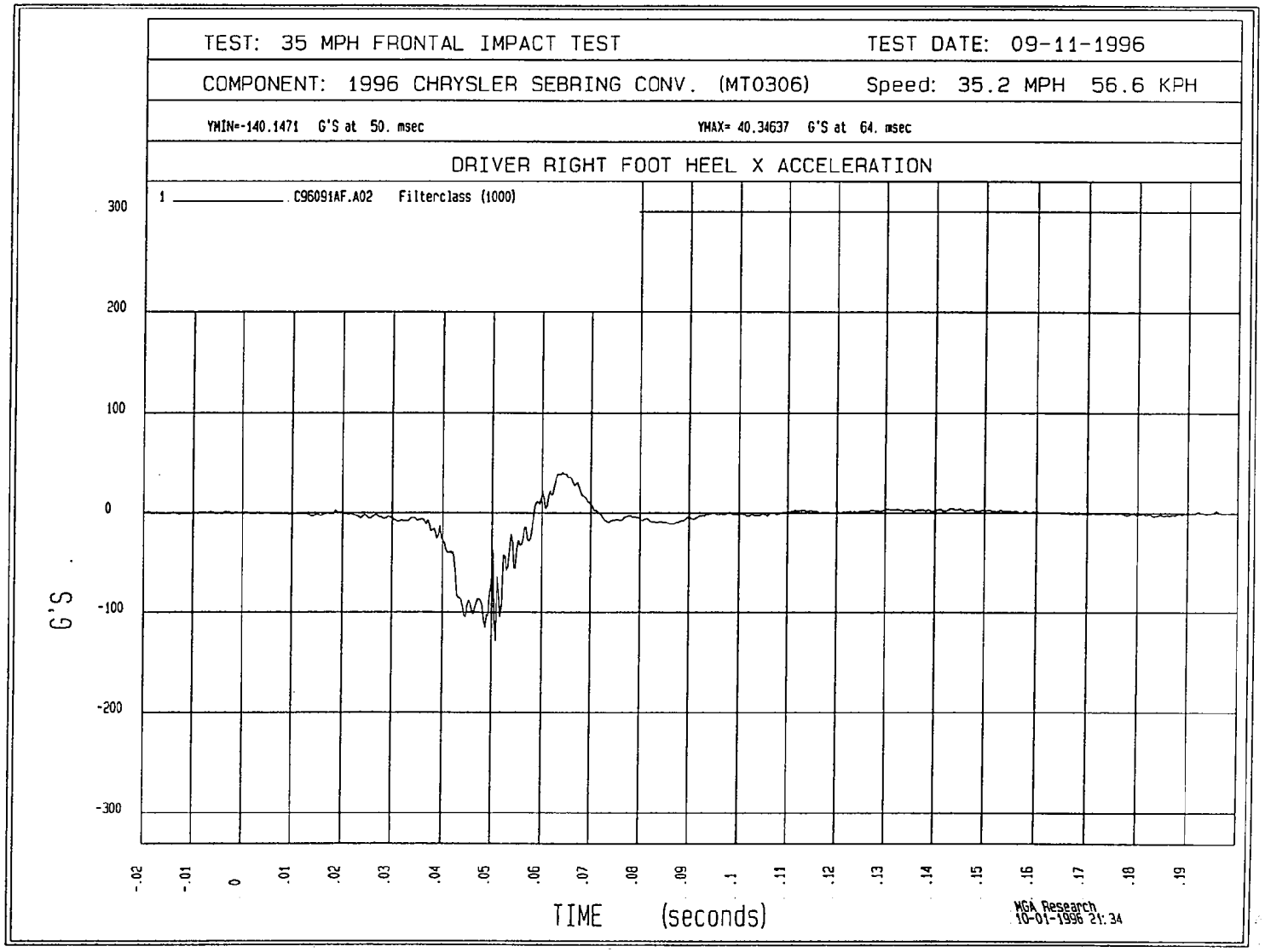
TIME (SECONDS)
MGA Research
09-11-1996 21:29

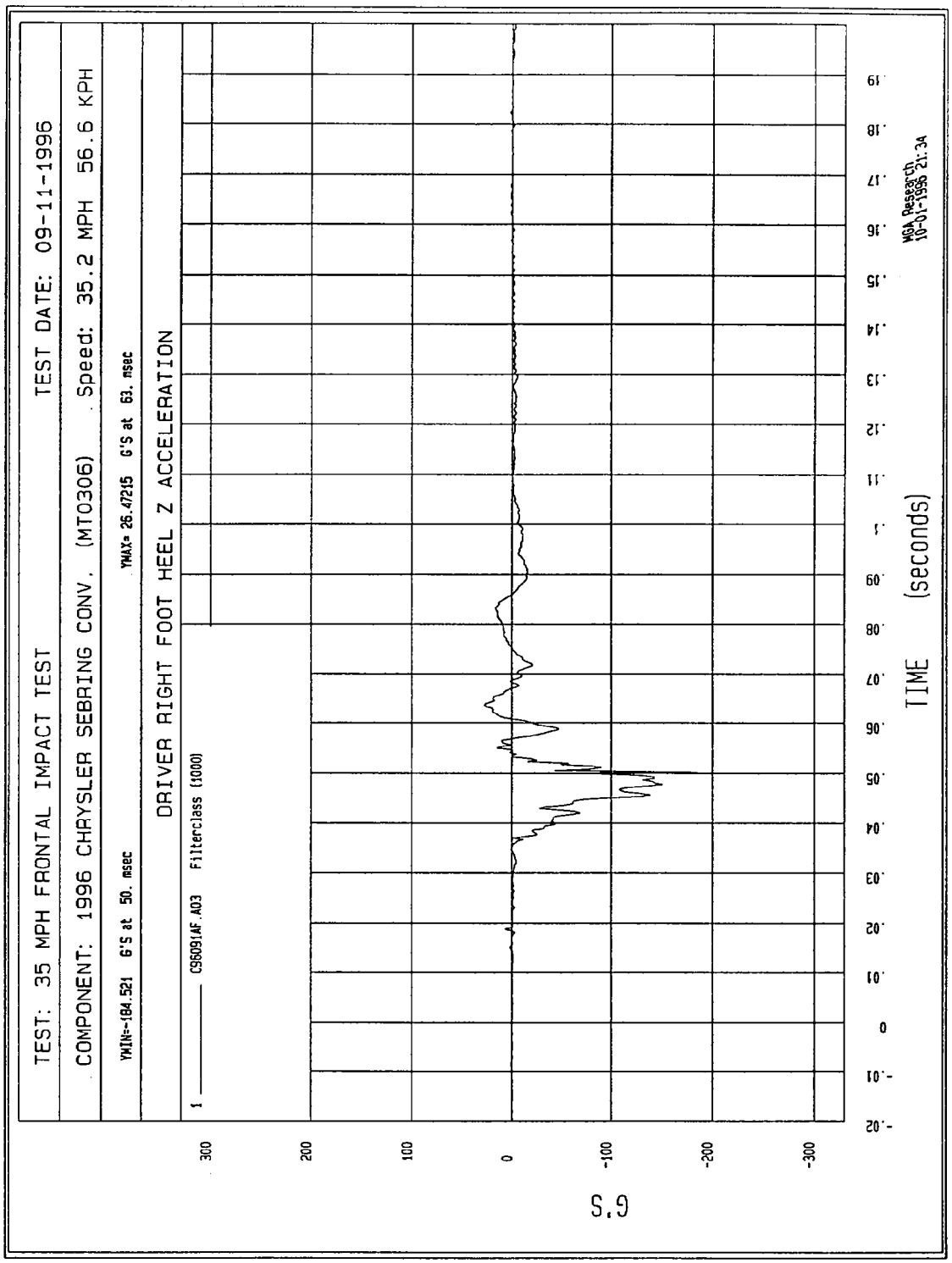

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-123.0291 G'S at 53. msec
YMAX= 206.7776 G'S at 64. msec
DRIVER LEFT FOOT BALL Z ACCELERATION
1 C9S091AF.A04 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
10-01-1996 21:33

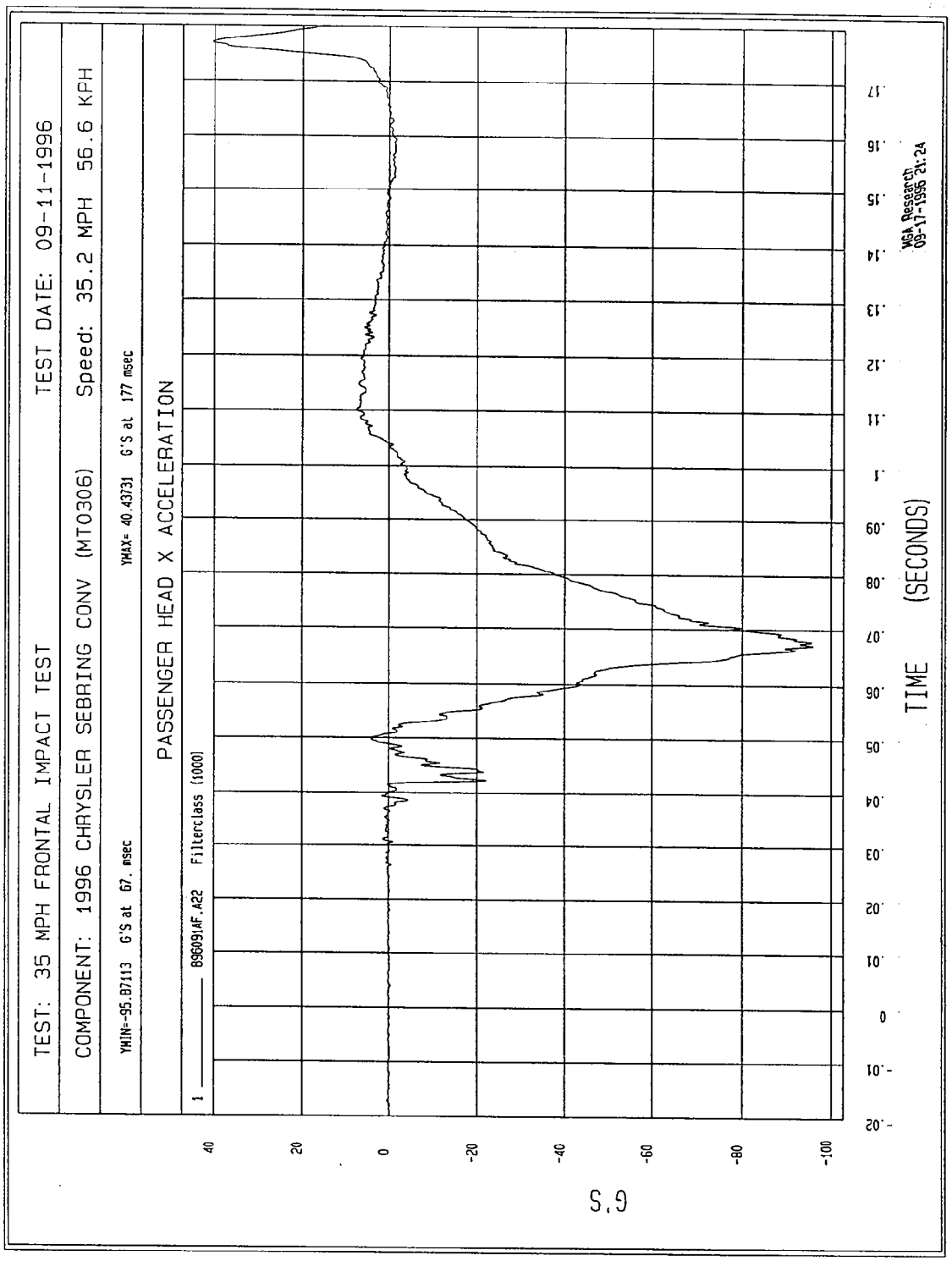

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-125.0036 G'S at 46. msec
YMAX= 39.2173 G'S at 75. msec
DRIVER LEFT FOOT HEEL X ACCELERATION
1 C9609LAF.A05 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (seconds)
MGA Research
10-01-1996 21:33

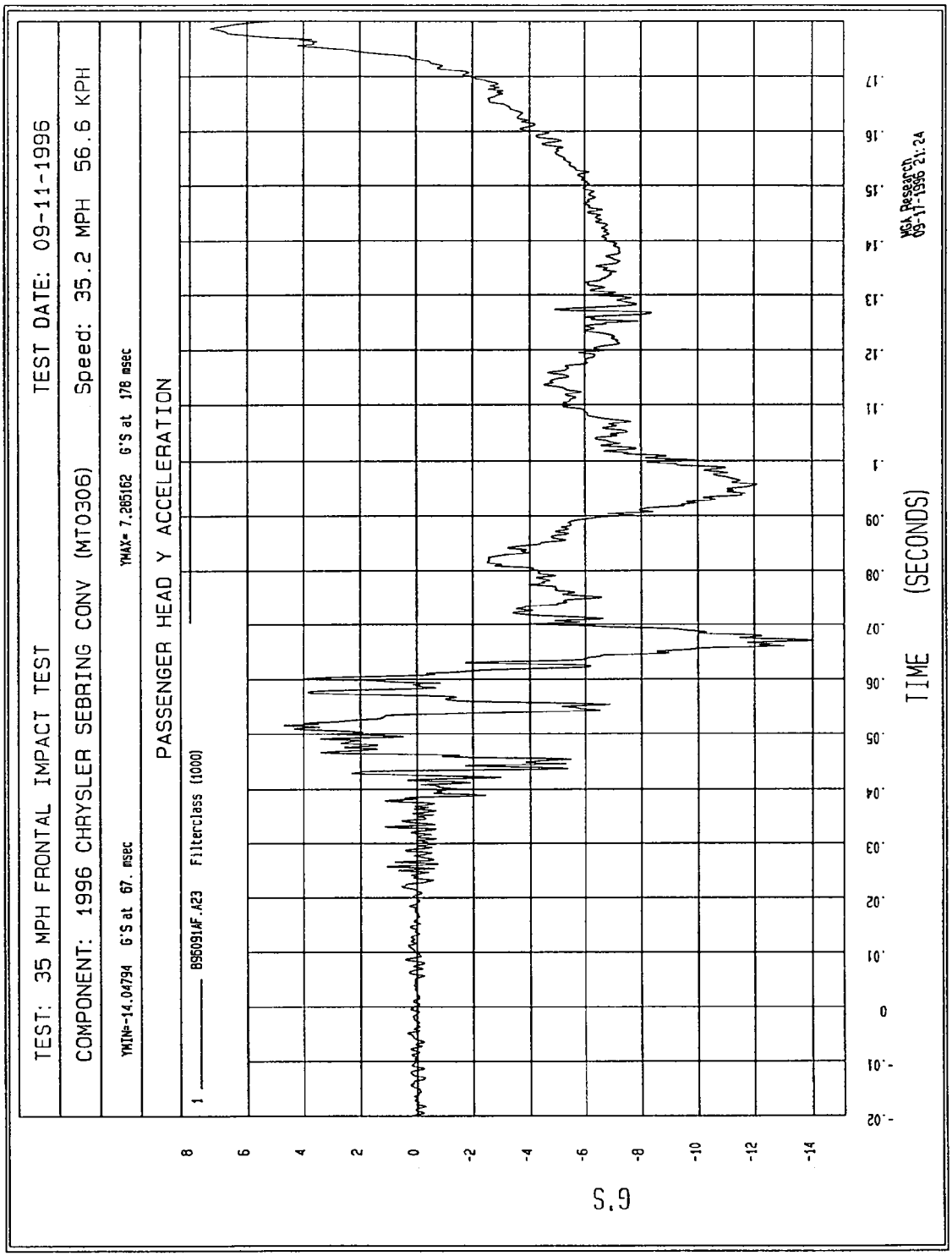

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-74.99411 G'S at 49. msec
YMAX= 76.14973 G'S at 63. msec
DRIVER LEFT FOOT HEEL Z ACCELERATION
1 C96091AF.A06 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
10-01-1996 21:33

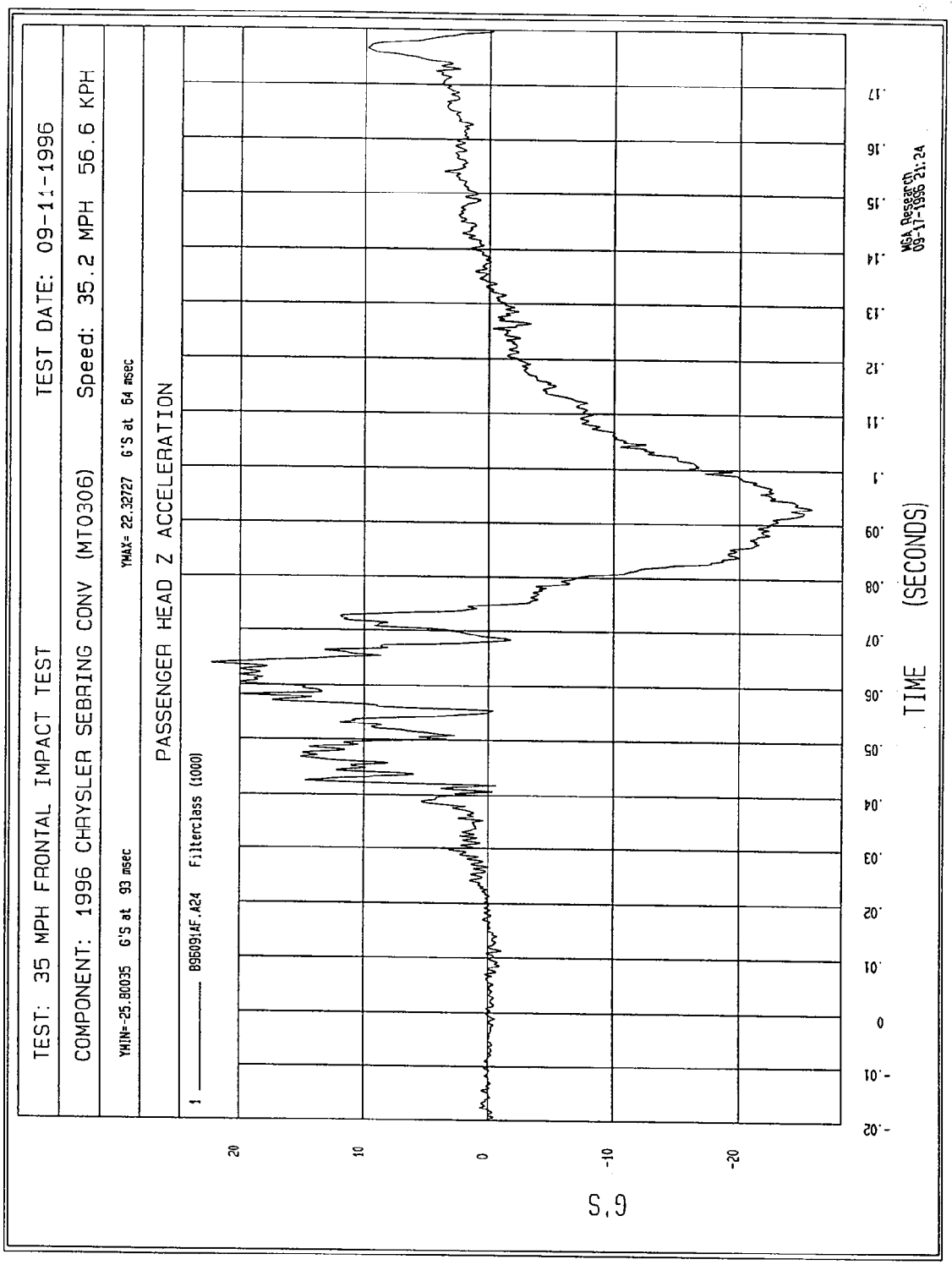

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-290.3031 G'S at 50. msec
YMAX= 60.60607 G'S at 56. msec
DRIVER RIGHT FOOT BALL Z ACCELERATION
1 C96091AF.A01 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
10-01-1996 21:33

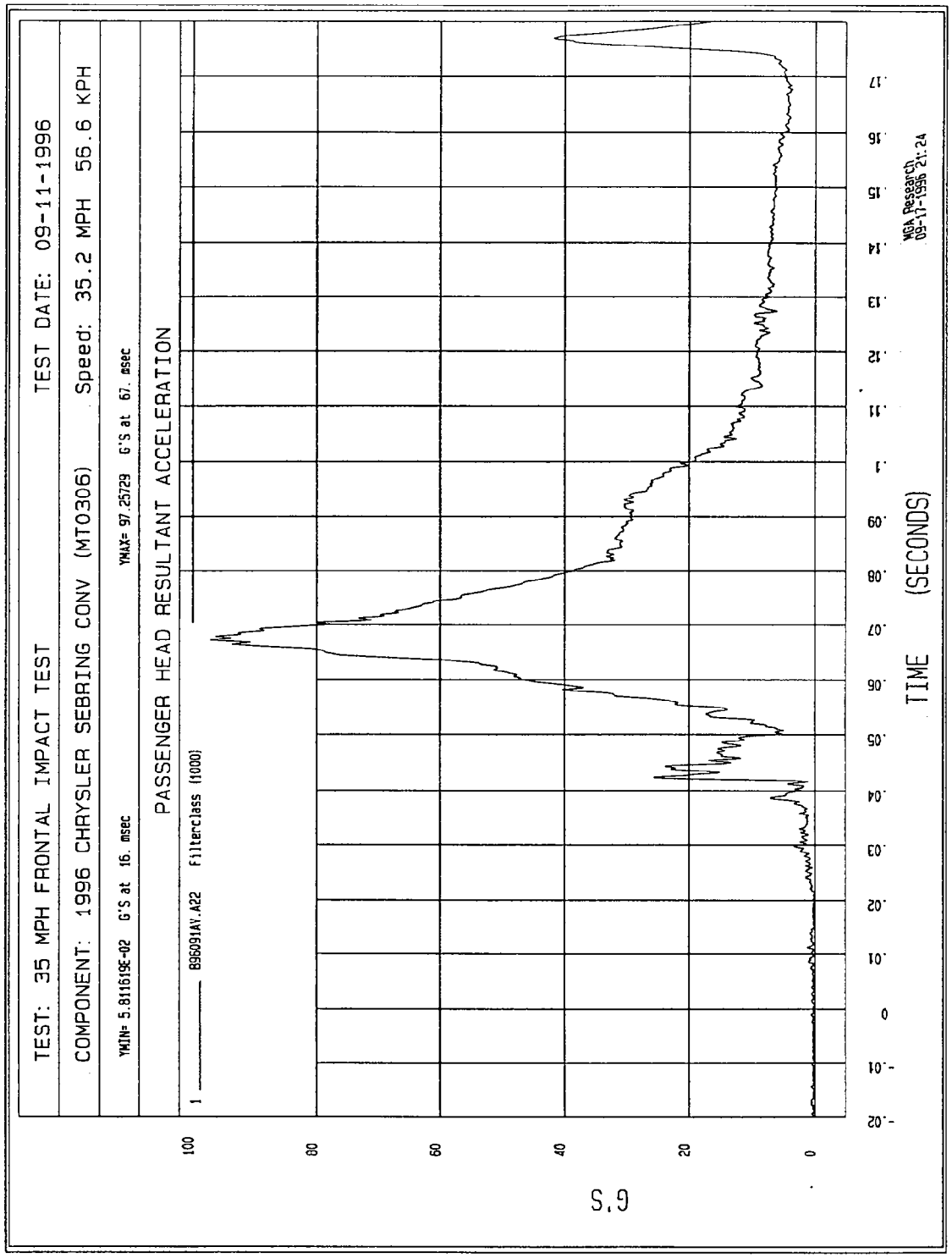

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-140.1471 G'S at 50. msec
YMAX= 40.34637 G'S at 64. msec
DRIVER RIGHT FOOT HEEL X ACCELERATION
1 C96091AF.A02 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
10-01-1996 21:34

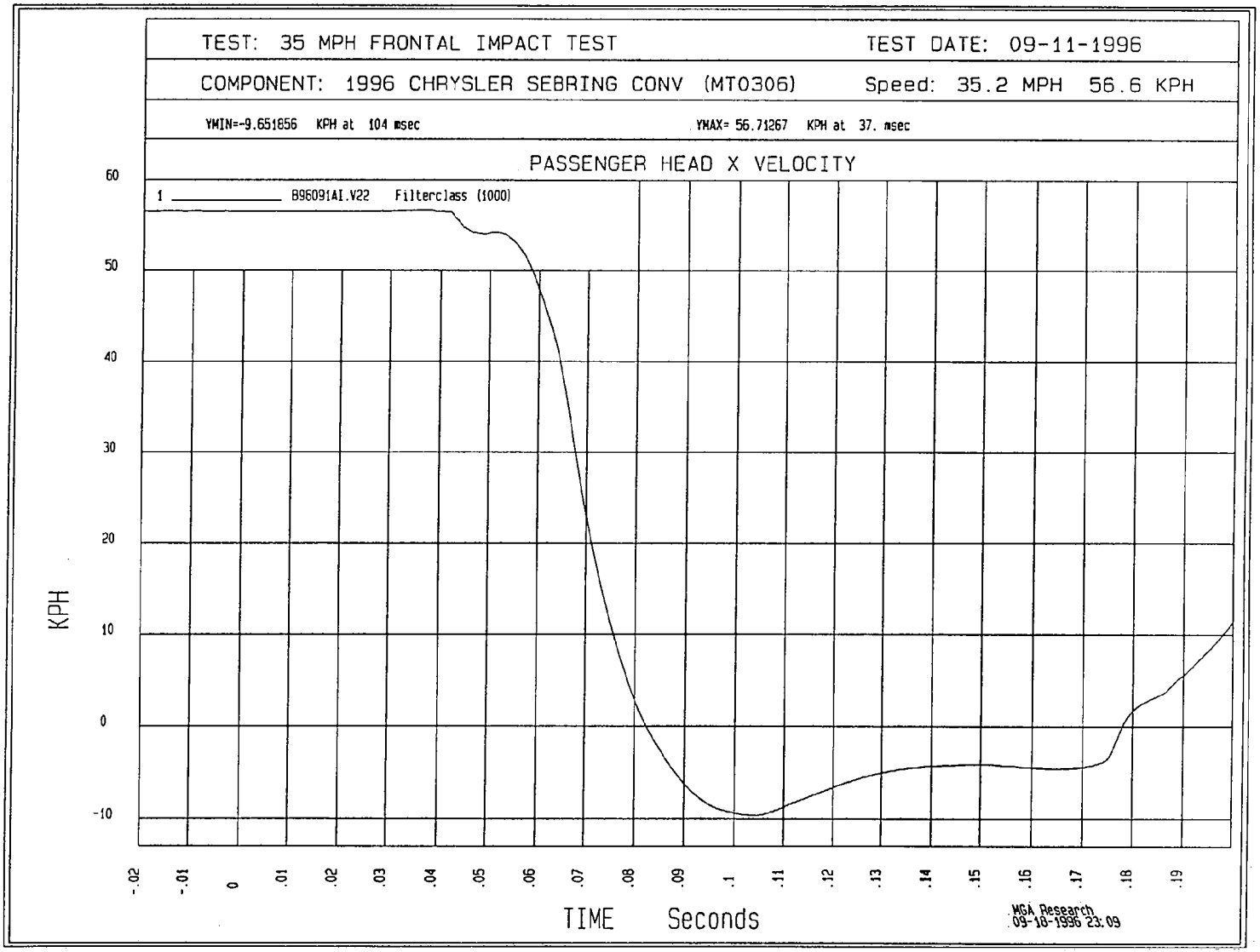

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-184.521 G'S at 50. msec
YMAX= 26.47215 G'S at 63. msec
DRIVER RIGHT FOOT HEEL Z ACCELERATION
1 C9609IAF.A03 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (seconds)
MGA Research
10-01-1996 21:34

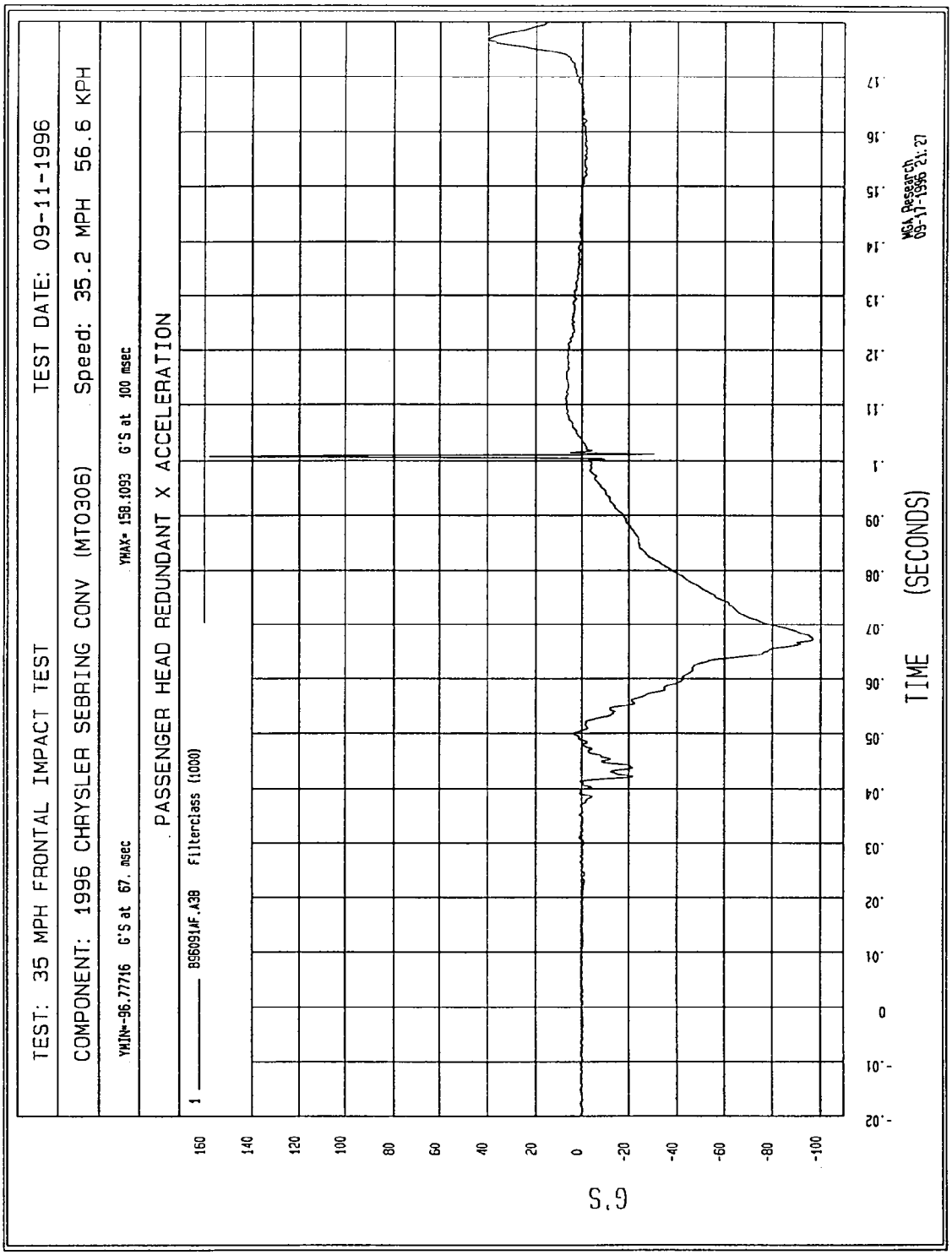

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-95.87113 G'S at 67. msec
YMAX= 40.43731 G'S at 177 msec
PASSENGER HEAD X ACCELERATION
1 _____ 89609JAF.A22 Filterclass (1000)
40
20
0
-20
-40
-60
-80
-100
G'S
-02
-01
0
01
02
03
04
05
06
07
08
09
1
11
12
13
14
15
16
17
TIME (SECONDS)
MGA Research
09-17-1996 21:24

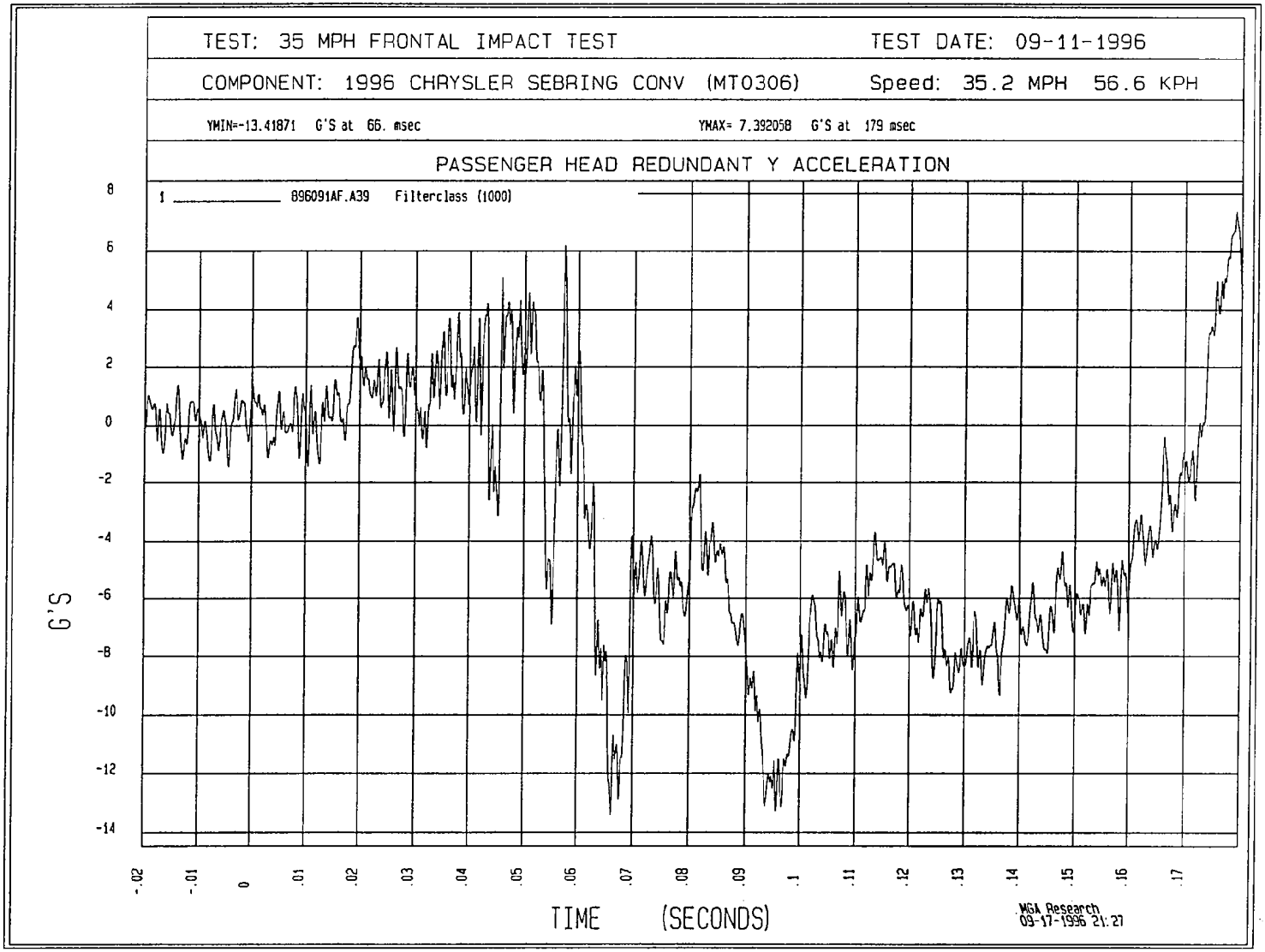

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-14.04794 G'S at 67. msec
YMAX= 7.265162 G'S at 178 msec
PASSENGER HEAD Y ACCELERATION
1 B96091AF.A23 Filterclass (1000)
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
.02
.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:24
G's

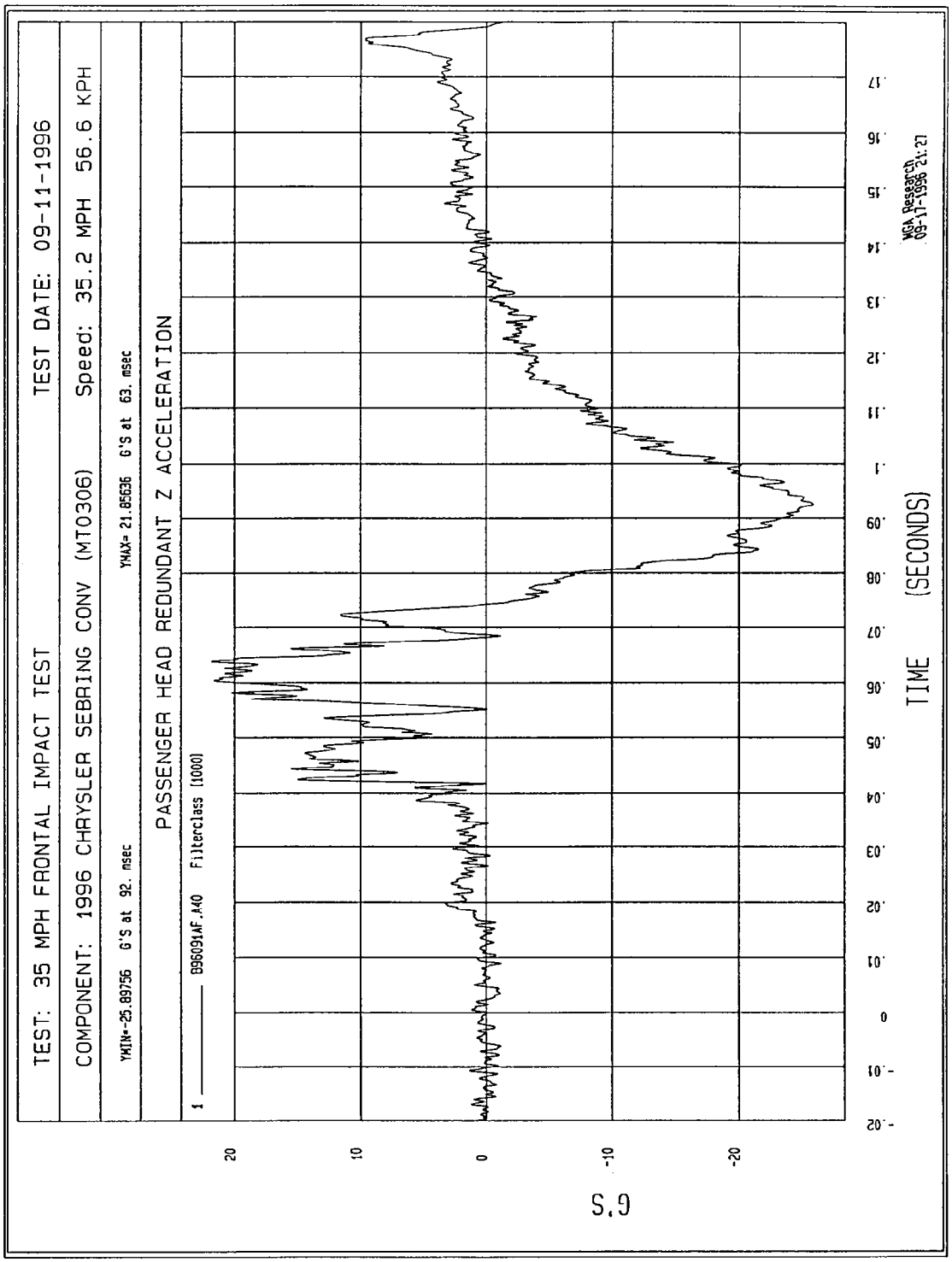

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-25.80035 G'S at 93 msec
YMAX= 22.32727 G'S at 64 msec
PASSENGER HEAD Z ACCELERATION
1 _____ B9509JAF.A24 Filterclass (1000)
20
10
0
-10
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:24

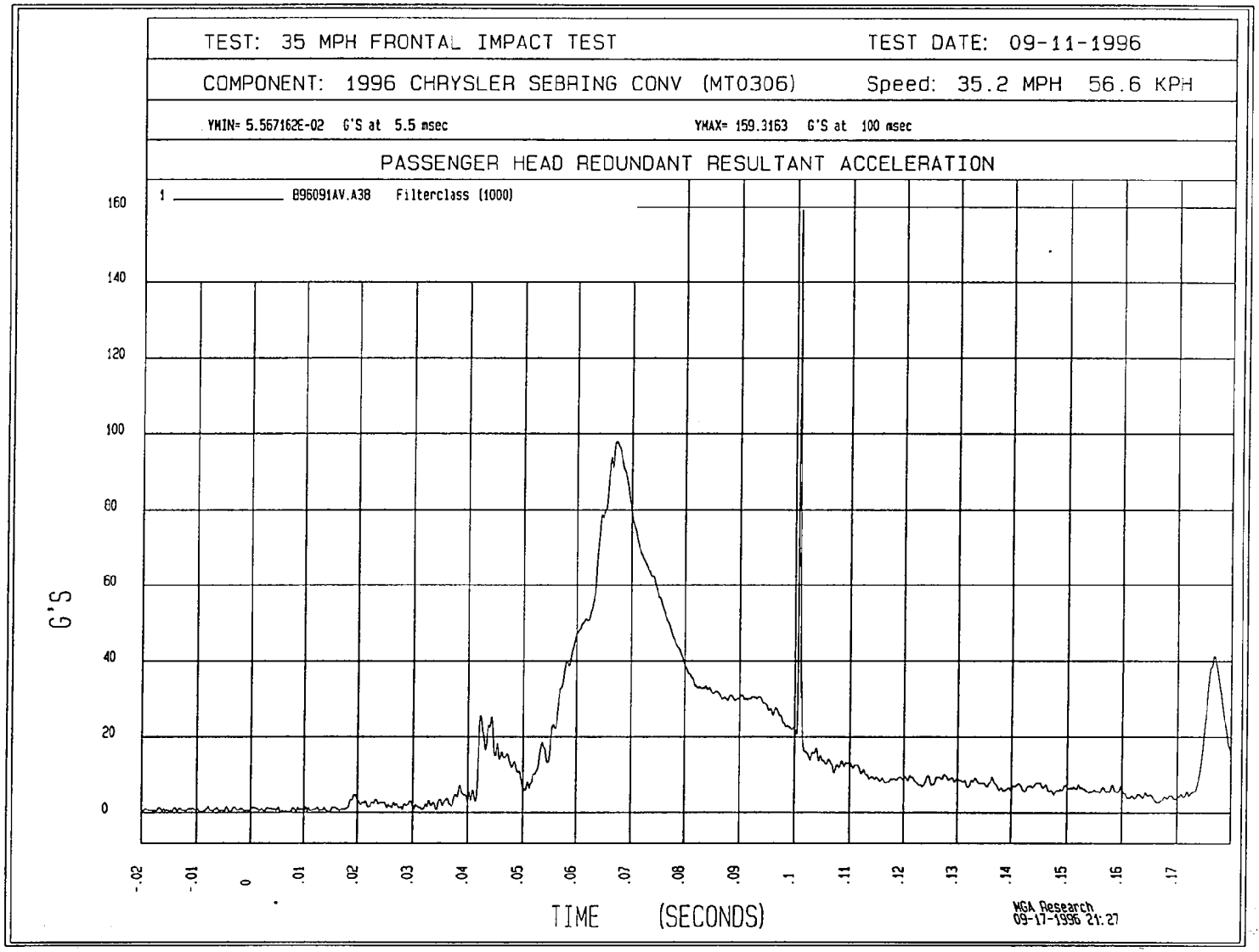

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 5.811619E-02 G'S at 16. msec
YMAX= 97.25729 G'S at 67. msec
PASSENGER HEAD RESULTANT ACCELERATION
1 B95091AY.A22 Filterclass (1000)
100
80
60
40
20
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
G's
MGA Research
09-17-1995 21:24

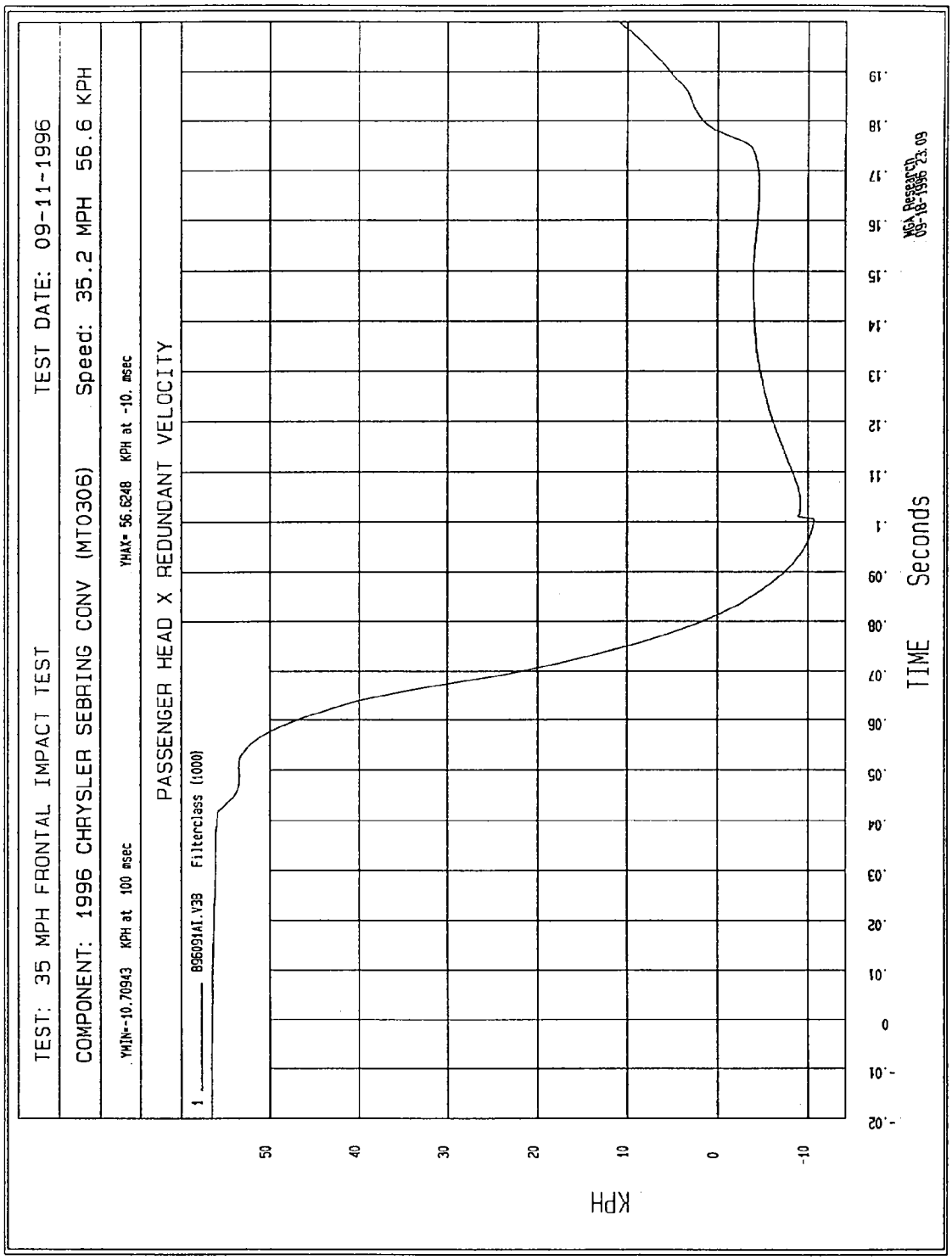

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-9.651856 KPH at 104 msec
YMAX= 56.71267 KPH at 37. msec
PASSENGER HEAD X VELOCITY
1 B96091AI.V22 Filterclass (1000)
KPH
60
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-10-1996 23:09

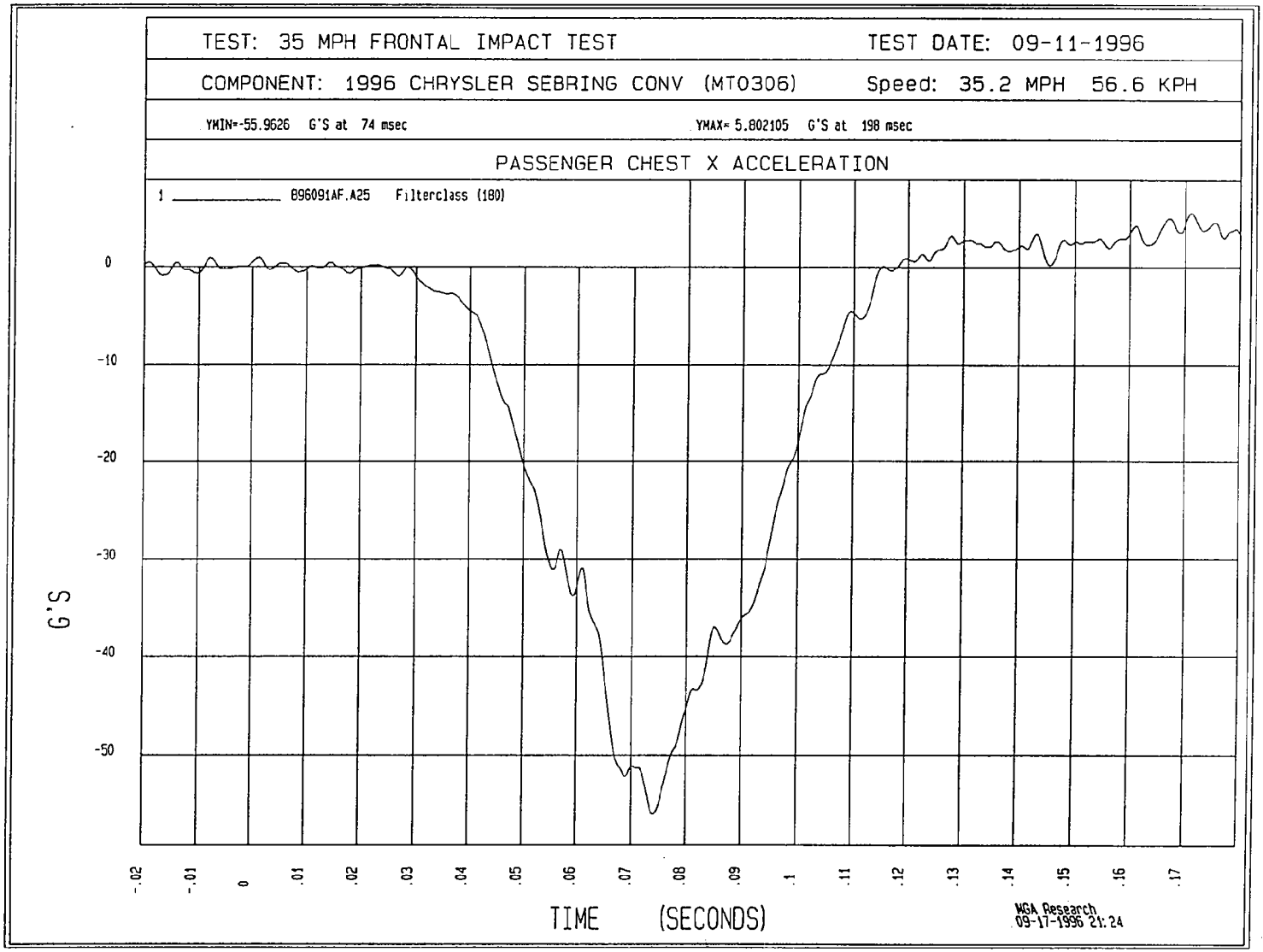

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-96.77716 G'S at 67. msec
YMAX= 158.1093 G'S at 100 msec
PASSENGER HEAD REDUNDANT X ACCELERATION
1 B96091AF.A3B Filterclass (1000)
160
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
.02
.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:27
6.5

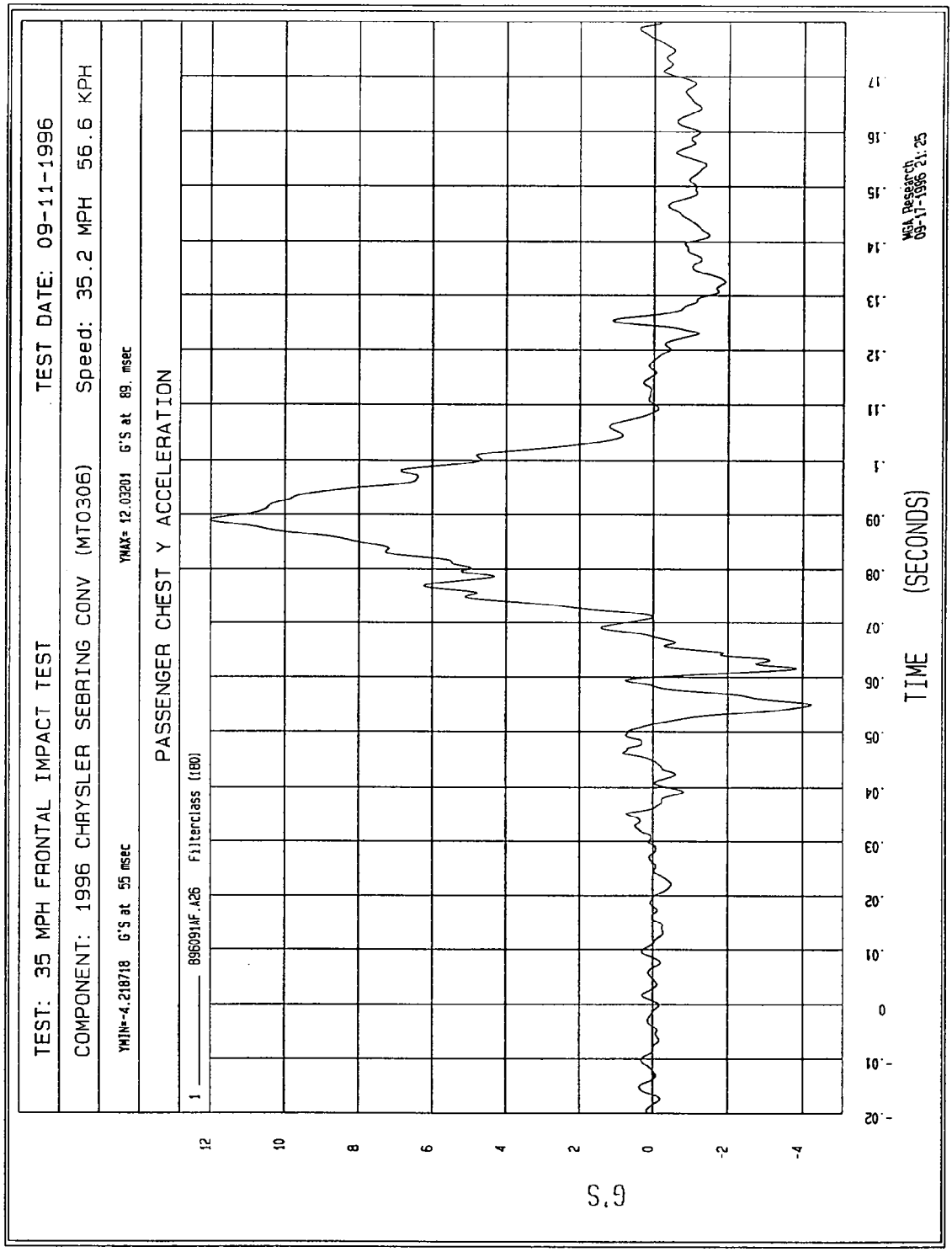

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-13.41871 G'S at 66. msec
YMAX= 7.392058 G'S at 179 msec
PASSENGER HEAD REDUNDANT Y ACCELERATION
1 896091AF.A39 Filterclass (1000)
G'S
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:27

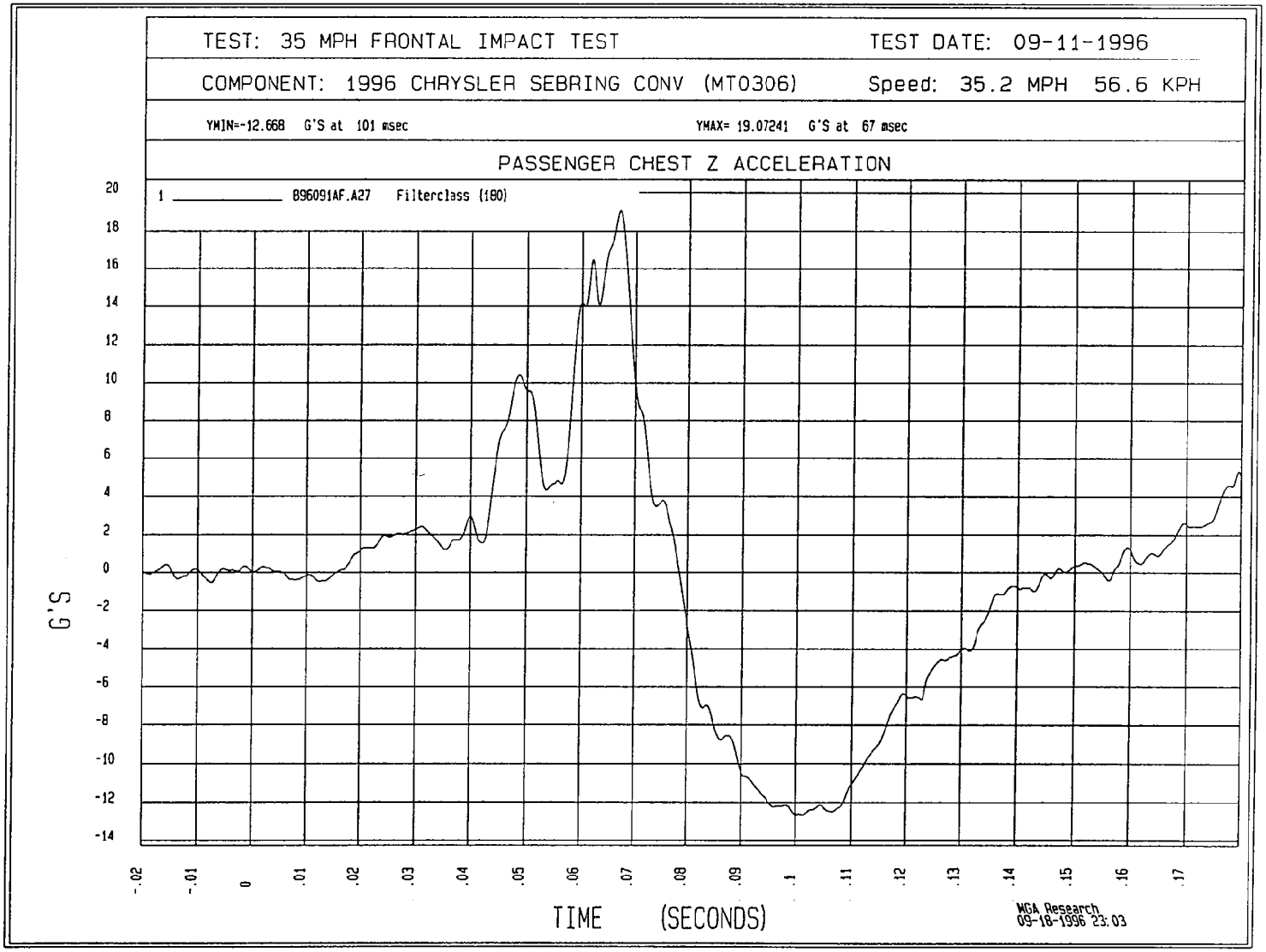

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-25.89756 G'S at 92. msec
YMAX= 21.85636 G'S at 63. msec
PASSENGER HEAD REDUNDANT Z ACCELERATION
1 _____ B96091AF.A40 Filterclass [1000]
20
10
0
-10
-20
G'S
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
MGA Research
09-17-1996 21:21

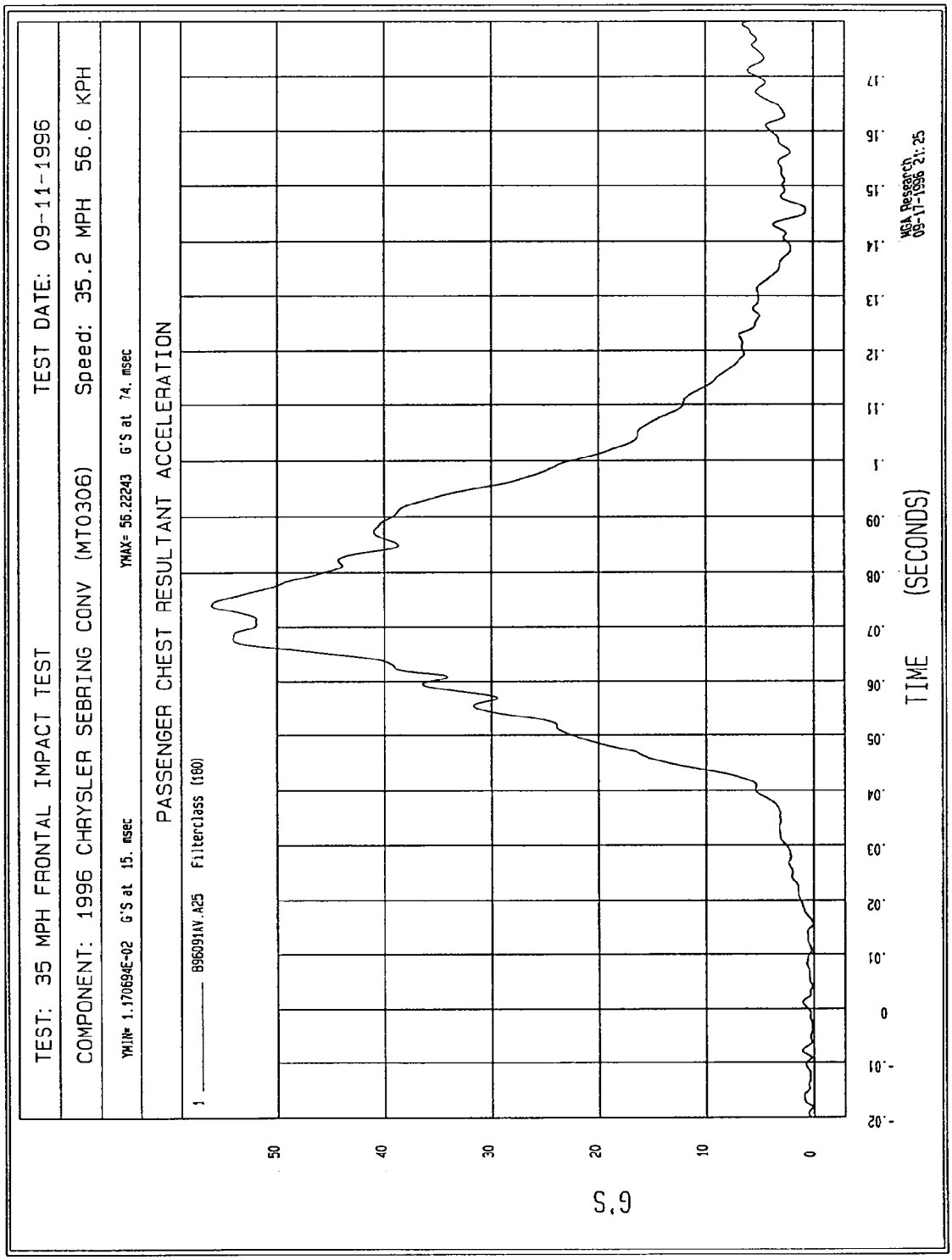

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 5.567162E-02 G'S at 5.5 msec
YMAX= 159.3163 G'S at 100 msec
PASSENGER HEAD REDUNDANT RESULTANT ACCELERATION
1 B96091AV.A38 Filterclass (1000)
160
140
120
100
80
60
40
20
0
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:27

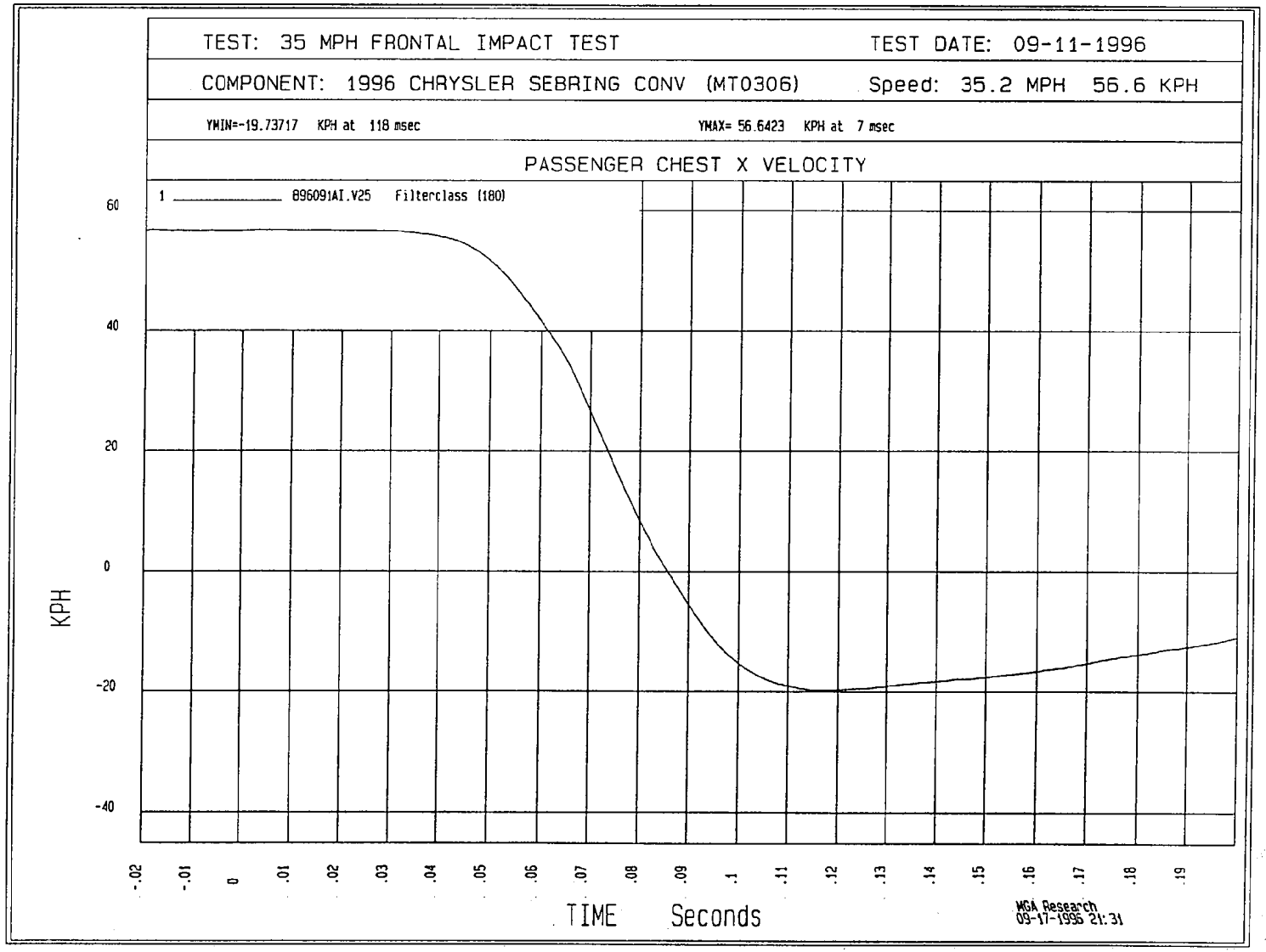

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-10.70943 KPH at 100 msec
YMAX= 56.6248 KPH at -10. msec
PASSENGER HEAD X REDUNDANT VELOCITY
1 B96091AI.V3B Filterclass (1000)
KPH
TIME Seconds
MGA Research
09-18-1996 23:09

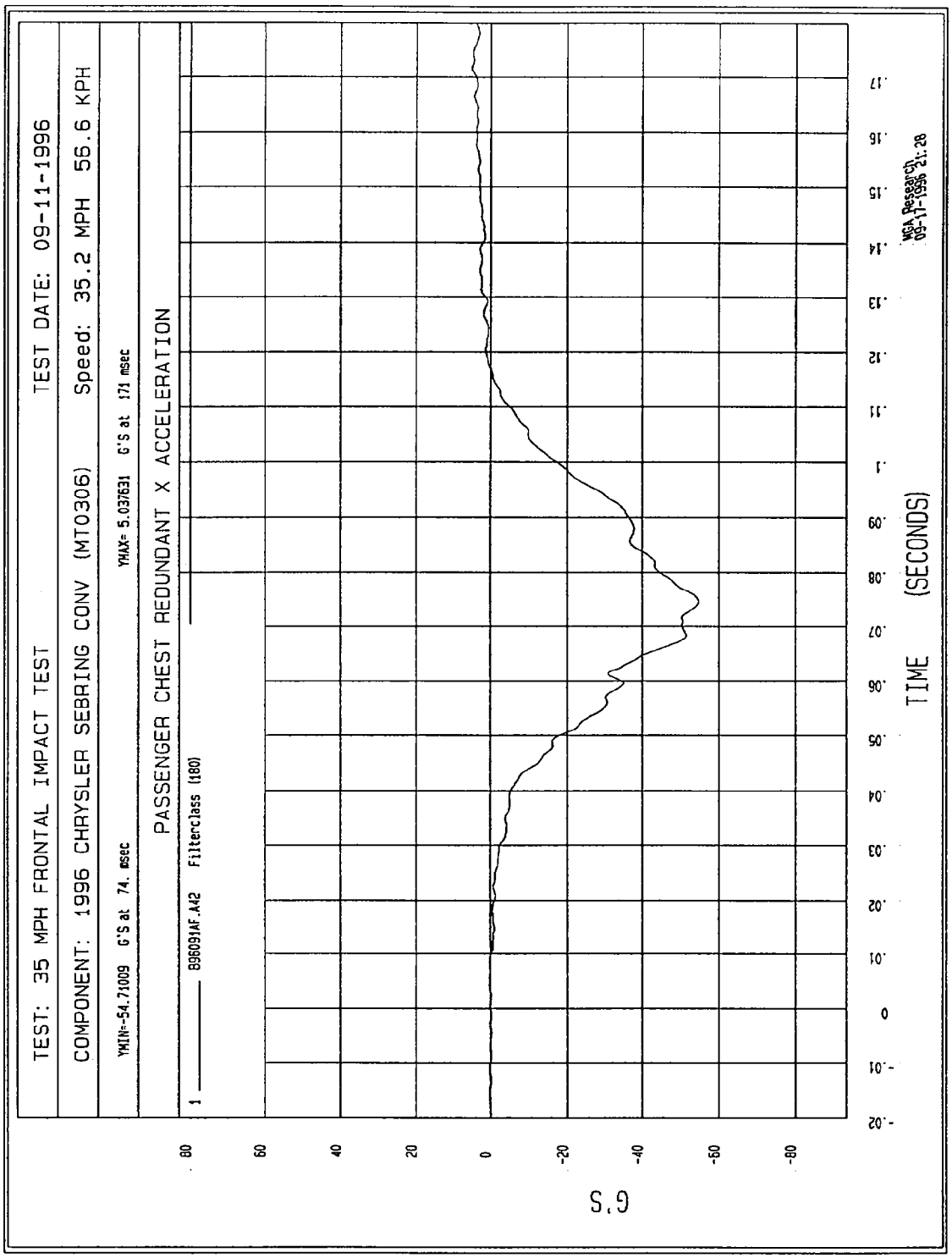

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-55.9626 G'S at 74 msec
YMAX= 5.802105 G'S at 198 msec
PASSENGER CHEST X ACCELERATION
1 896091AF.A25 Filterclass (180)
0
-10
-20
-30
-40
-50
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:24


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-4.218718 G'S at 55 msec
YMAX= 12.03201 G'S at 89. msec
PASSENGER CHEST Y ACCELERATION
1 B96091AF.A26 Filterclass (180)
12
10
8
6
4
2
0
-2
-4
G'S
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
09-17-1996 21:25


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-12.668 G'S at 101 msec
YMAX= 19.07241 G'S at 67 msec
PASSENGER CHEST Z ACCELERATION
1 B96091AF.A27 Filterclass (180)
G'S
TIME (SECONDS)
MGA Research
09-18-1996 23:03


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 1.170694E-02 G'S at 15. msec
YMAX= 56.22243 G'S at 74. msec
PASSENGER CHEST RESULTANT ACCELERATION
1 B96091AV.A25 Filterclass (180)
G's
TIME (SECONDS)
MGA Research
09-17-1996 21:25


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-19.73717 KPH at 118 msec
YMAX= 56.6423 KPH at 7 msec
PASSENGER CHEST X VELOCITY
1 896091AI.V25 Filterclass (180)
60
40
20
0
-20
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:31


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-54.71009 G'S at 74. msec
YMAX= 5.037631 G'S at 171 msec
PASSENGER CHEST REDUNDANT X ACCELERATION
1 _____ 896091AF.A42 Filterclass (180)
80
60
40
20
0
-20
-40
-60
G'S
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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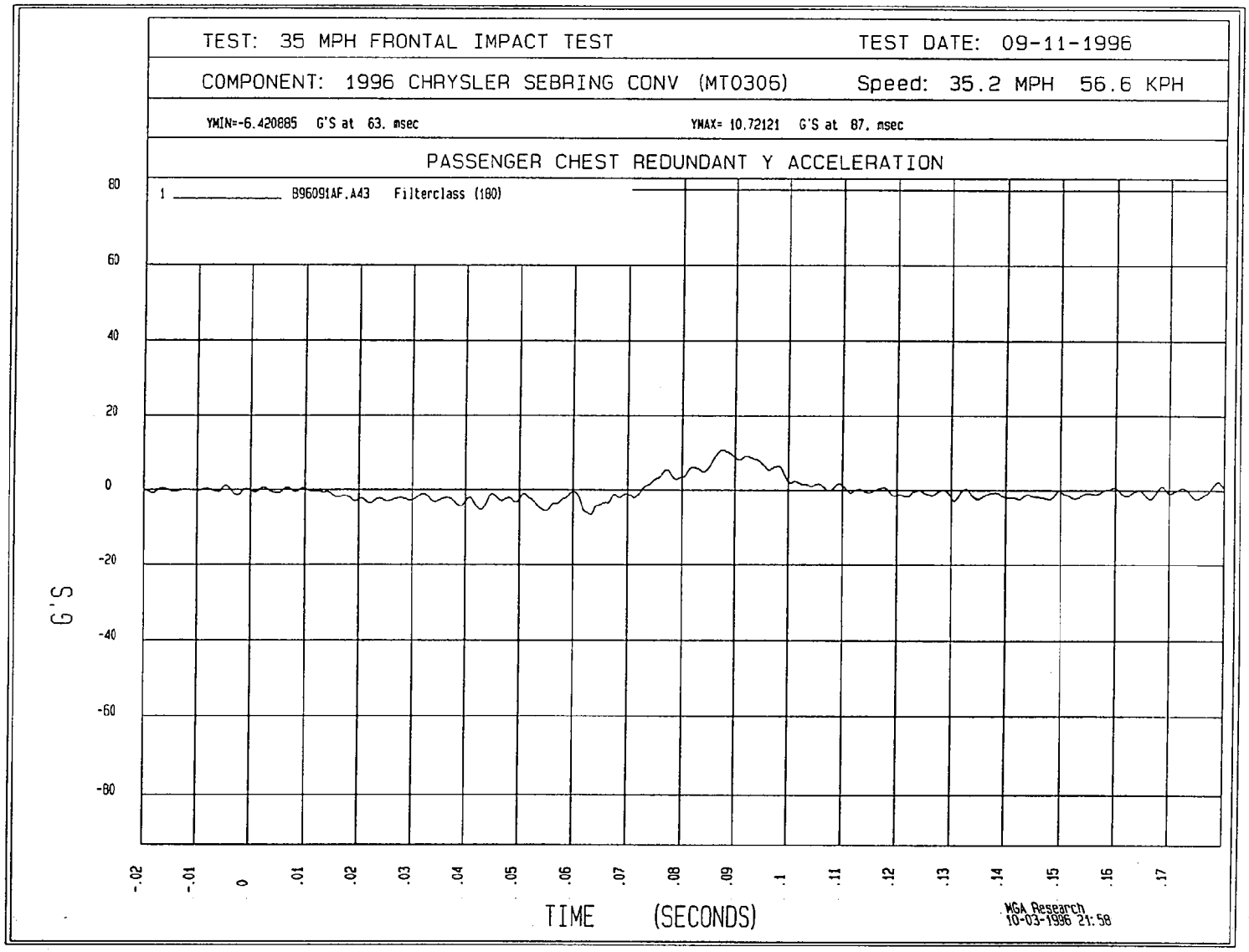
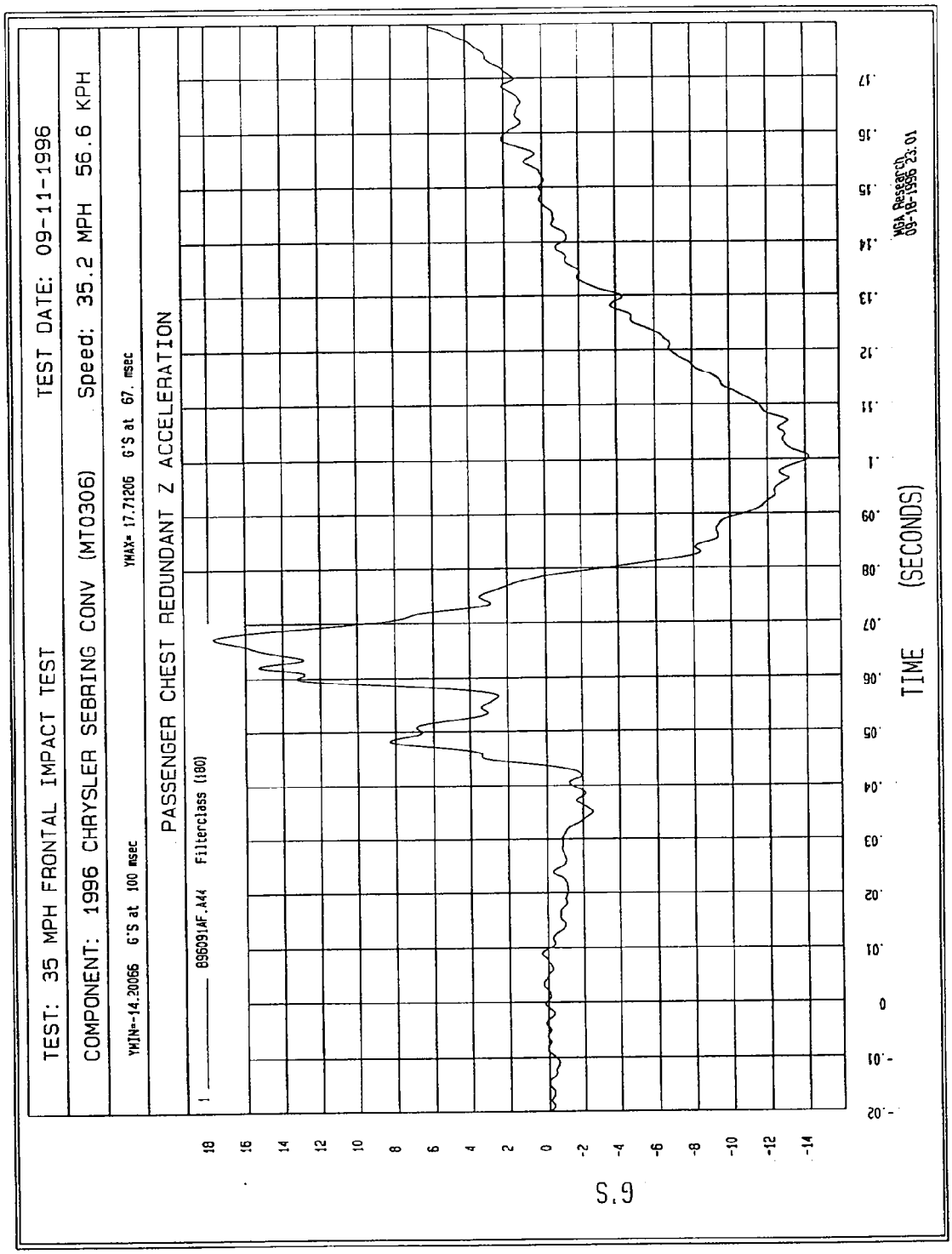
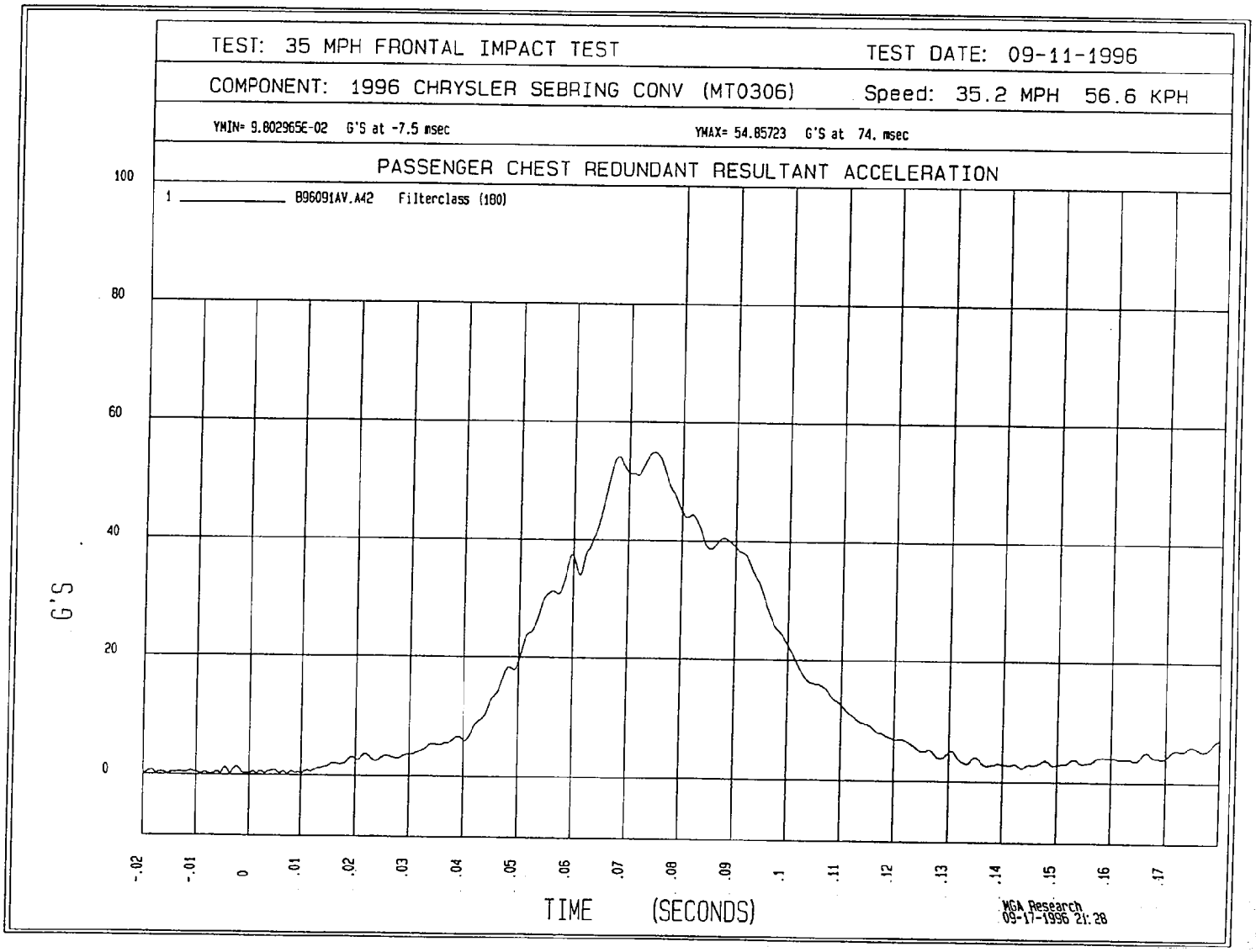
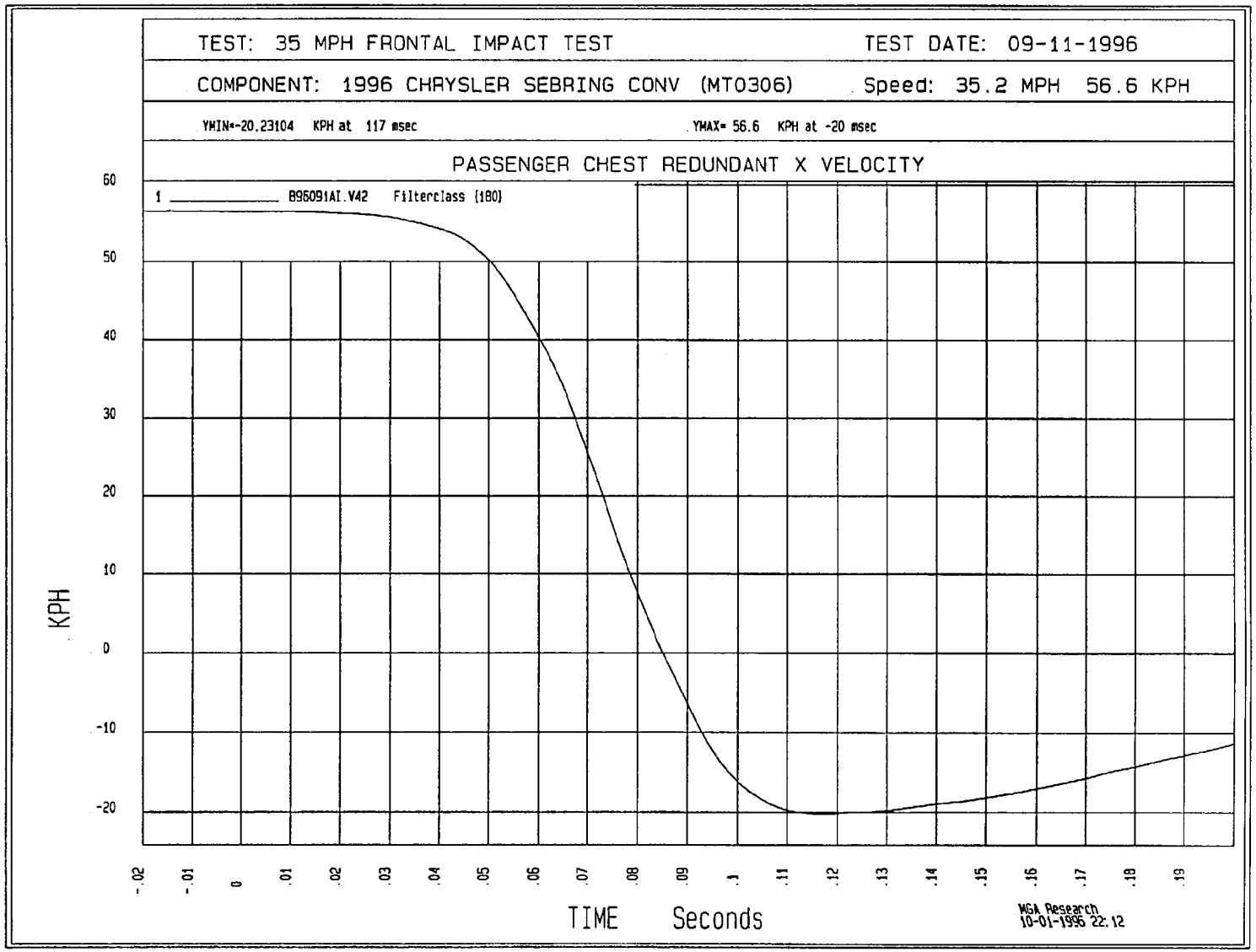
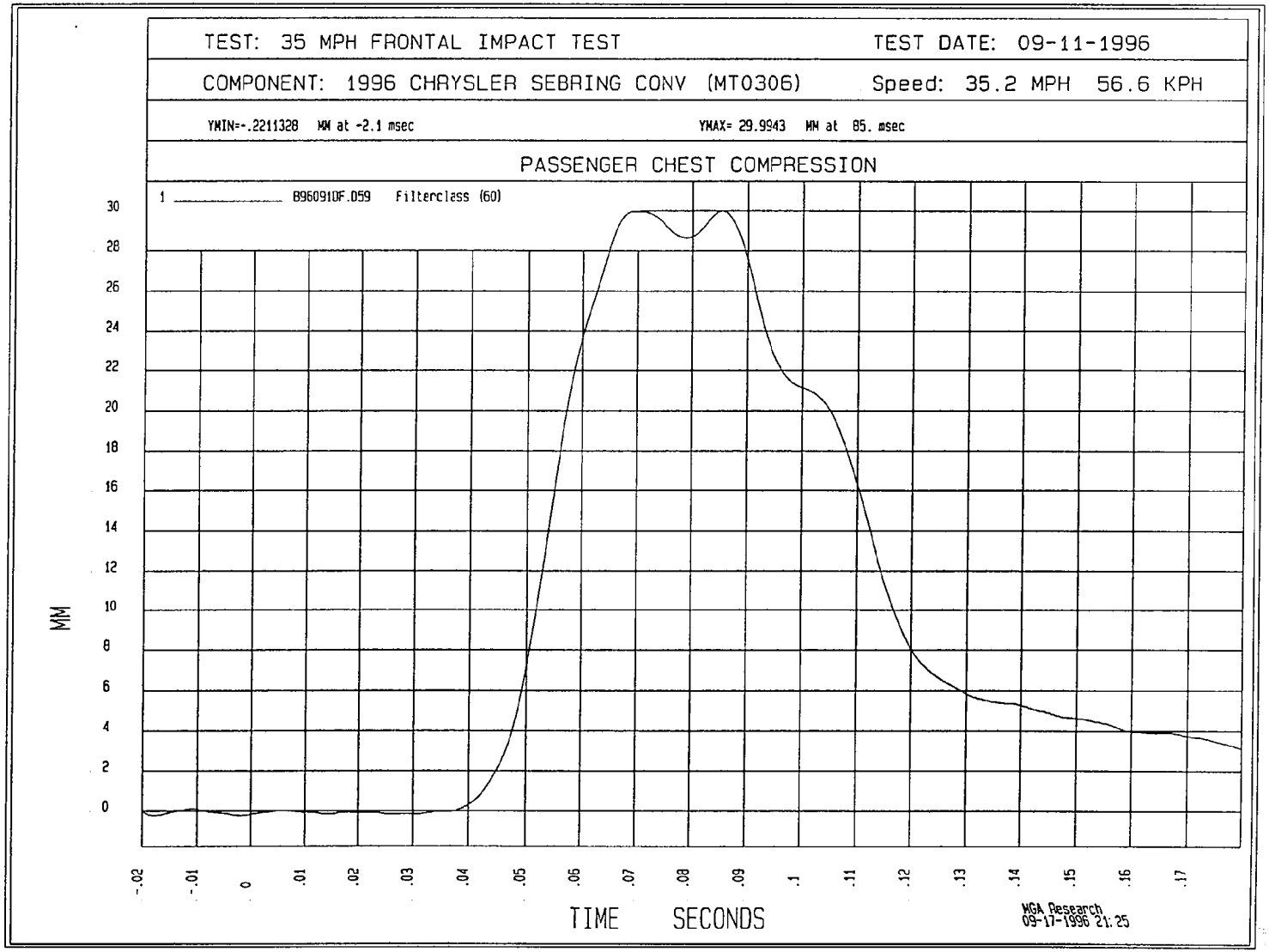
MGA Research
09-17-1996 21:28


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-6.420885 G'S at 63. msec
YMAX= 10.72121 G'S at 87. msec
PASSENGER CHEST REDUNDANT Y ACCELERATION
1 B96091AF.A43 Filterclass (180)
80
60
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
10-03-1996 21:58


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-14.20066 G'S at 100 msec
YMAX= 17.71206 G'S at 67. msec
PASSENGER CHEST REDUNDANT Z ACCELERATION
1 _____ 896091AF.A44 Filterclass (180)
TIME (SECONDS)
NGA Research
09-10-1996 23:01
G's


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 9.802965E-02 G'S at -7.5 msec
YMAX= 54.85723 G'S at 74. msec
PASSENGER CHEST REDUNDANT RESULTANT ACCELERATION
1 B96091AV.A42 Filterclass (180)
100
80
60
40
20
0
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:28


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-20.23104 KPH at 117 msec
YMAX= 56.6 KPH at -20 msec
PASSENGER CHEST REDUNDANT X VELOCITY
1 B96091AI.V42 Filterclass (180)
KPH
60
50
40
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
10-01-1996 22.12


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-.2211328 MM at -2.1 msec
YMAX= 29.9943 MM at 85. msec
PASSENGER CHEST COMPRESSION
1 B960910F.059 Filterclass (60)
MM
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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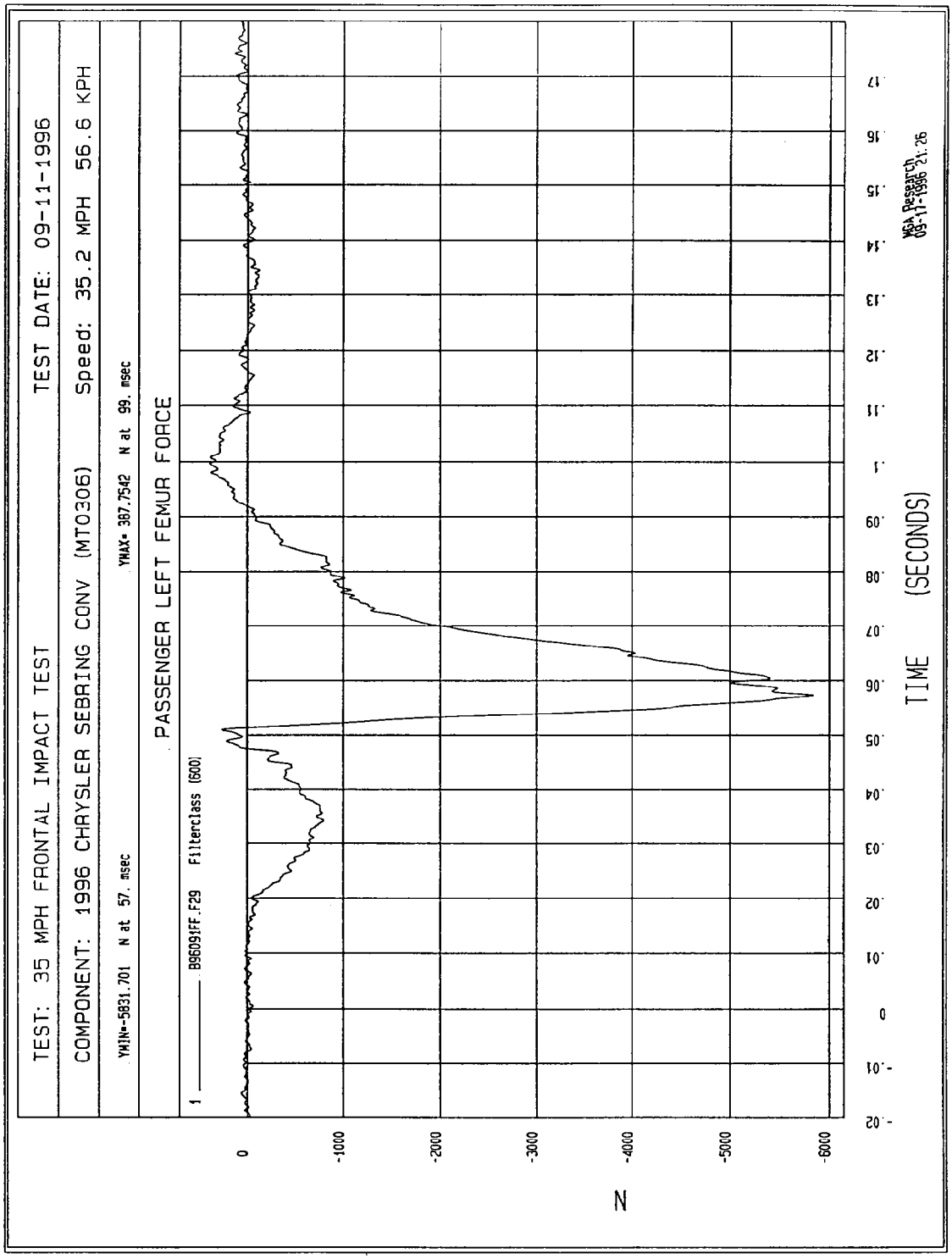
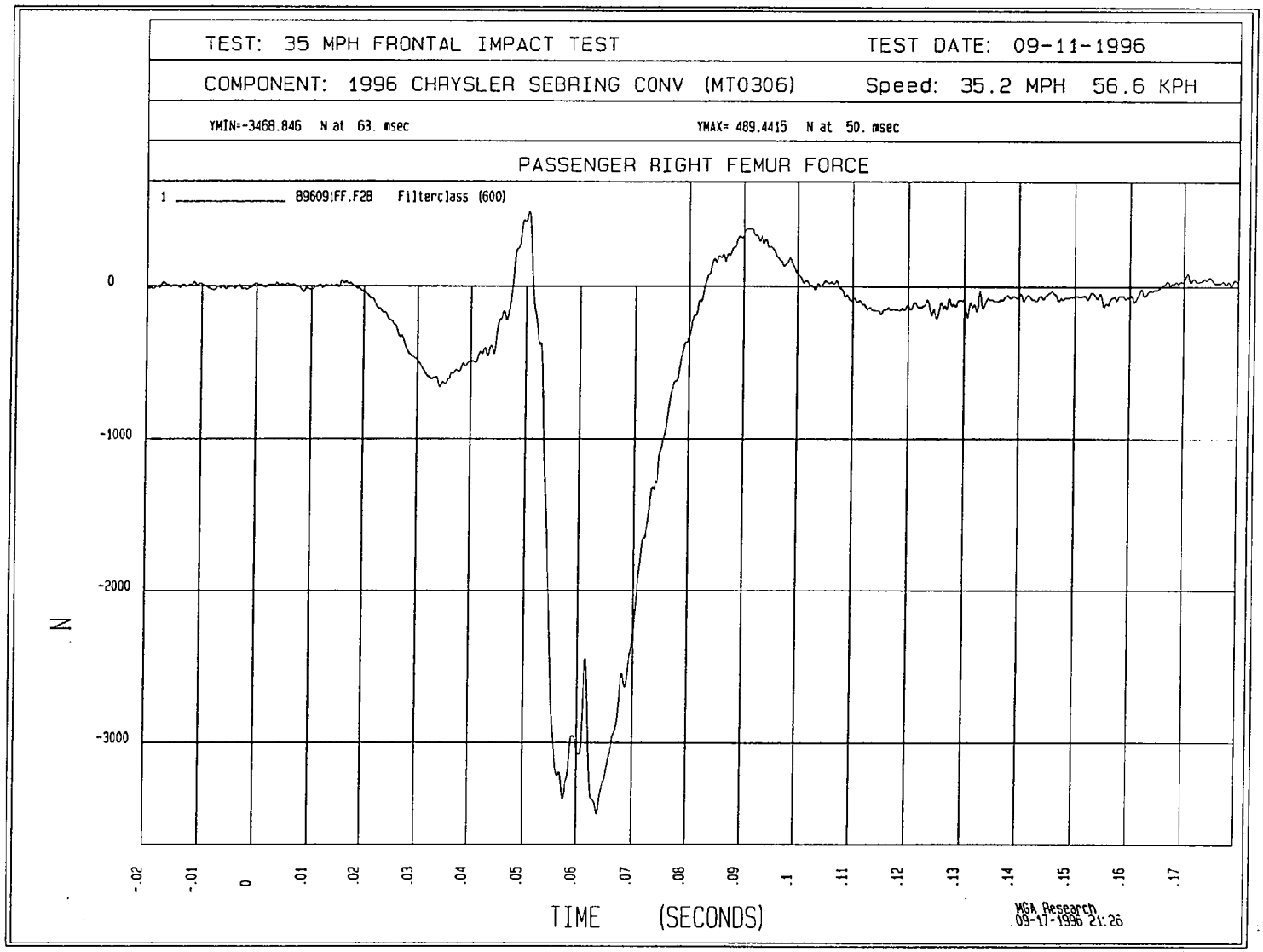
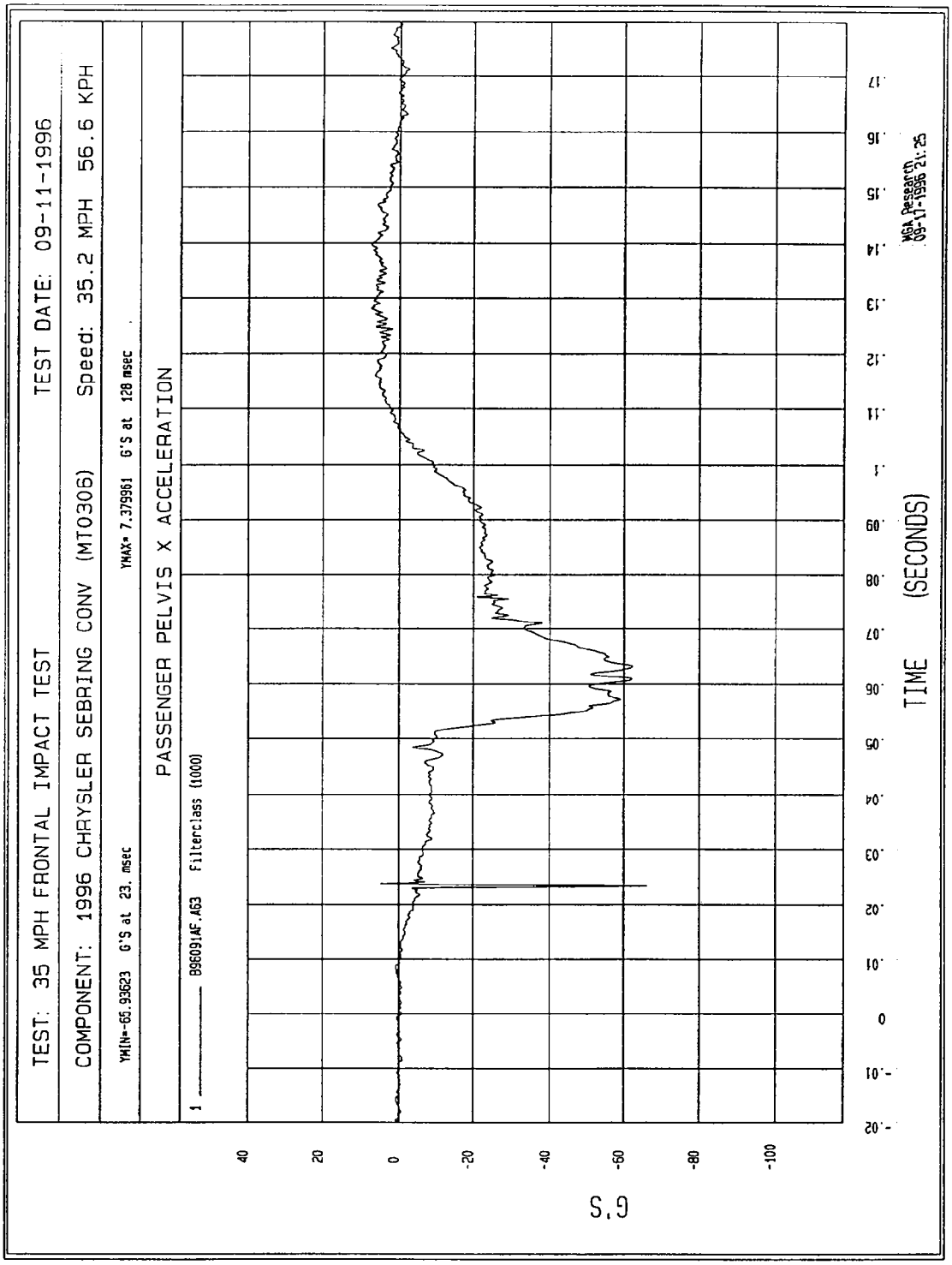
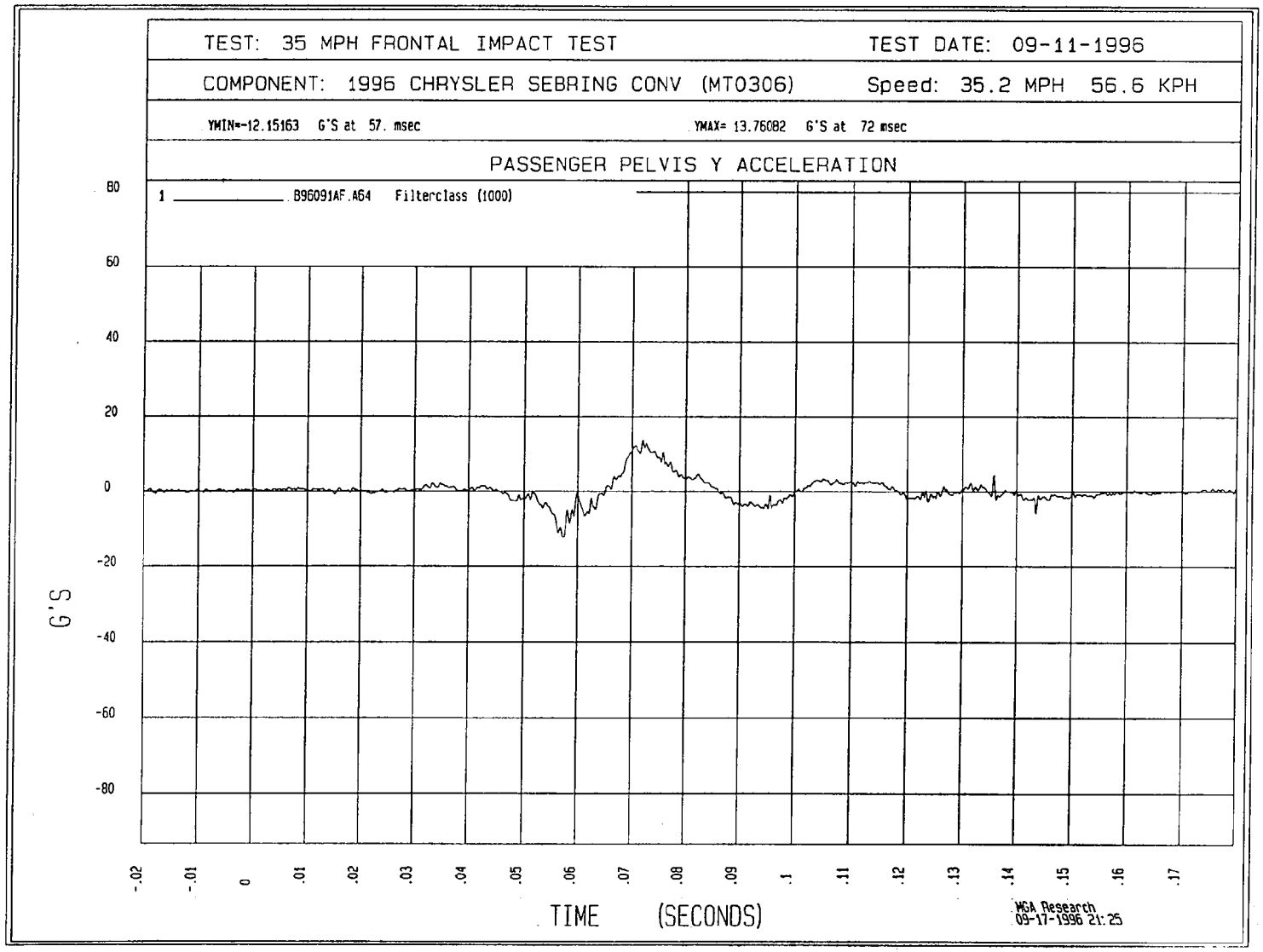
.1
.11
.12
.13
.14
.15
.16
.17
TIME SECONDS
MGA Research
09-17-1996 21:25


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-5831.701 N at 57. msec
YMAX= 387.7542 N at 99. msec
PASSENGER LEFT FEMUR FORCE
1 B96091FF.F29 Filterclass (600)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
TIME (SECONDS)
MGA Research
09-11-1996 21:26


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-3468.846 N at 63. msec
YMAX= 489.4415 N at 50. msec
PASSENGER RIGHT FEMUR FORCE
1 B96091FF.F28 Filterclass (600)
0
-1000
-2000
-3000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:26


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-65.93623 G'S at 23. msec
YMAX= 7.379961 G'S at 128 msec
PASSENGER PELVIS X ACCELERATION
1 B9609IAF.A63 Filterclass (1000)
40
20
0
-20
-40
-60
-80
-100
G's
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
NGA Research
09-17-1996 21:25


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-12.15163 G'S at 57. msec
YMAX= 13.76082 G'S at 72 msec
PASSENGER PELVIS Y ACCELERATION
1 B96091AF.A64 Filterclass (1000)
80
60
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.14
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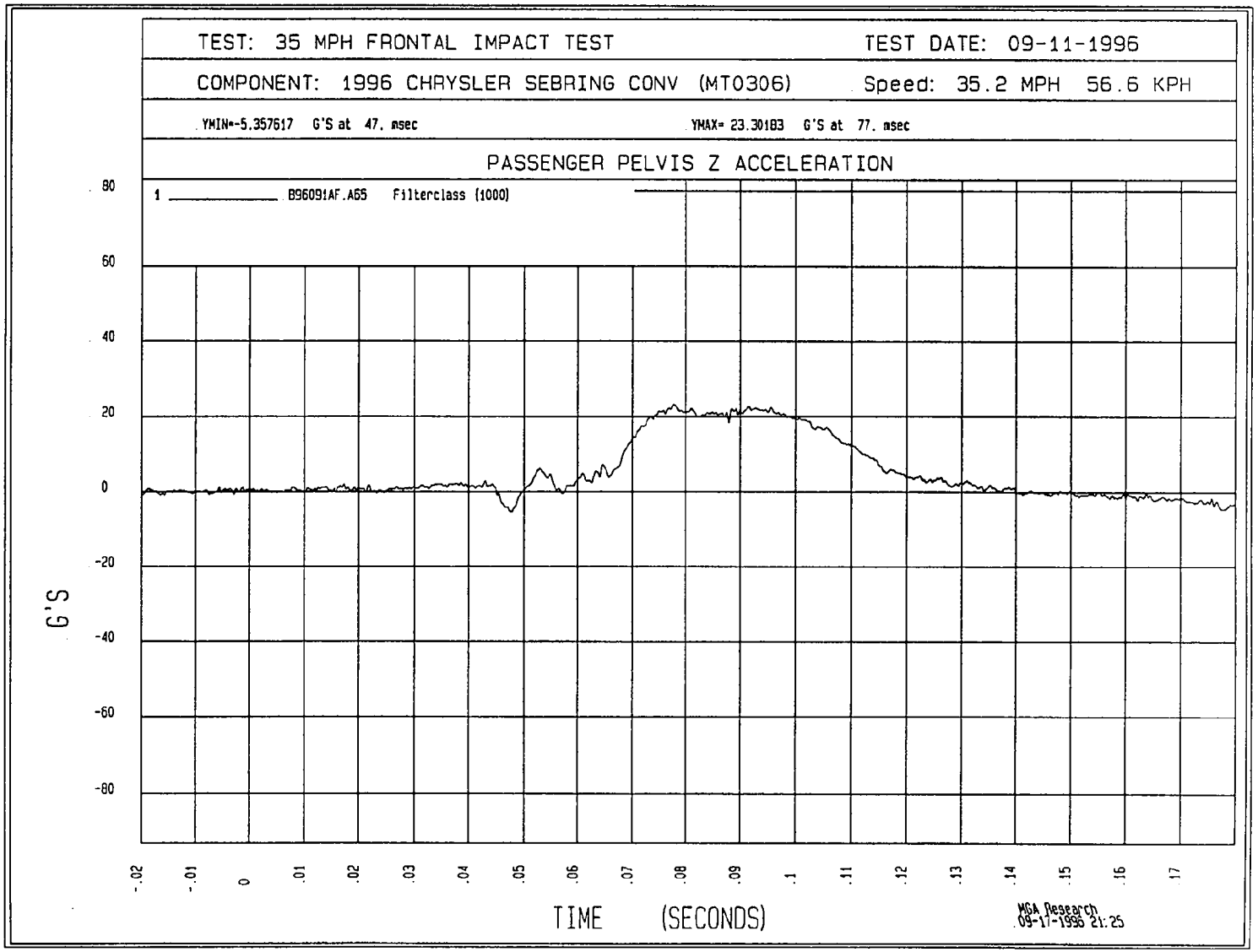
TIME (SECONDS)
MGA Research
09-17-1996 21:25


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-5.357617 G'S at 47. msec
YMAX= 23.30183 G'S at 77. msec
PASSENGER PELVIS Z ACCELERATION
1 B960911AF.A65 Filterclass (1000)
80
60
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.11
.12
.13
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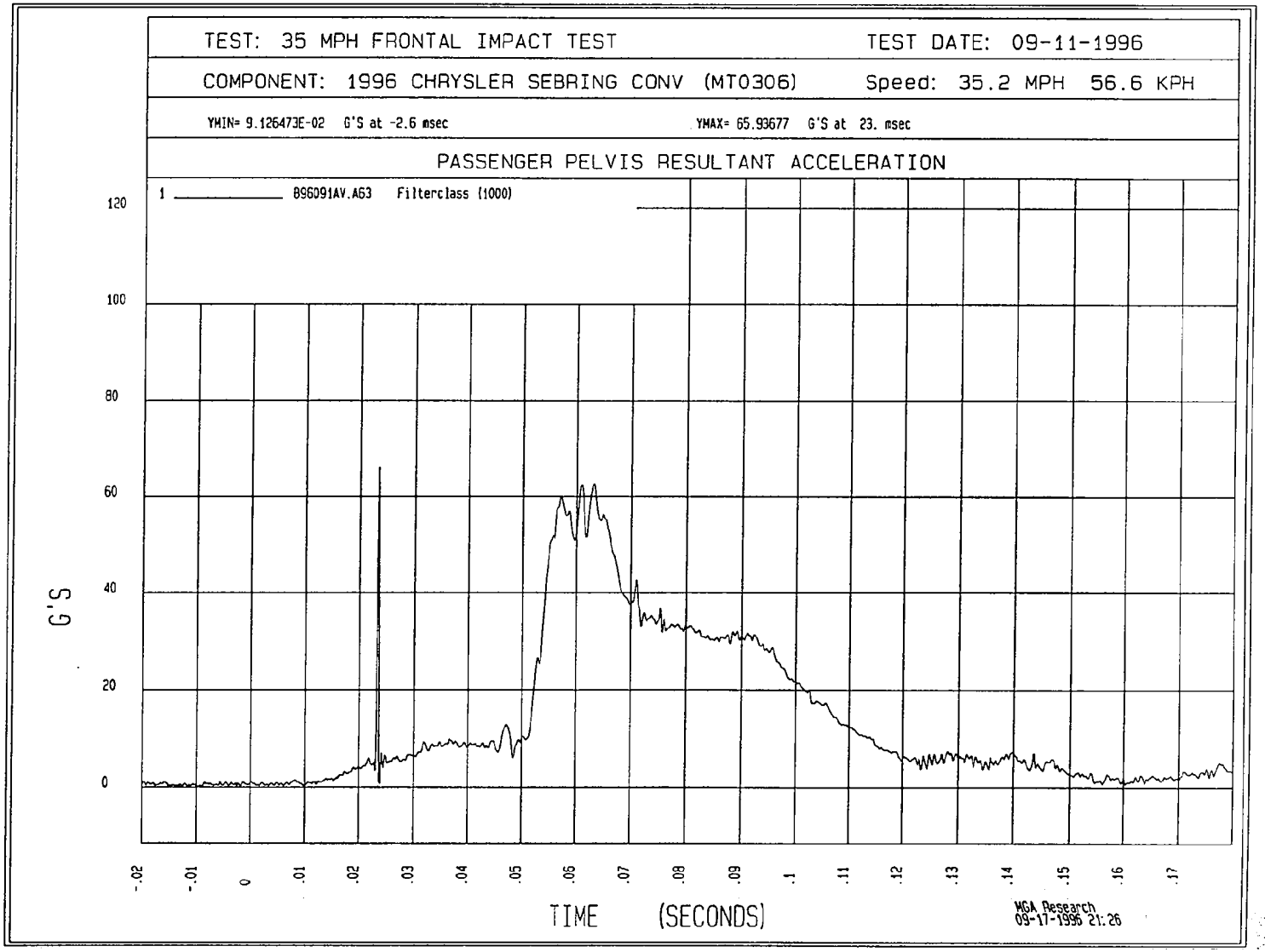
.15
.16
.17
TIME (SECONDS)
MGA Research
09-11-1996 21:25


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 9.126473E-02 G'S at -2.6 msec
YMAX= 65.93677 G'S at 23. msec
PASSENGER PELVIS RESULTANT ACCELERATION
1 B96091AV.A63 Filterclass (1000)
120
100
80
60
40
20
0
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
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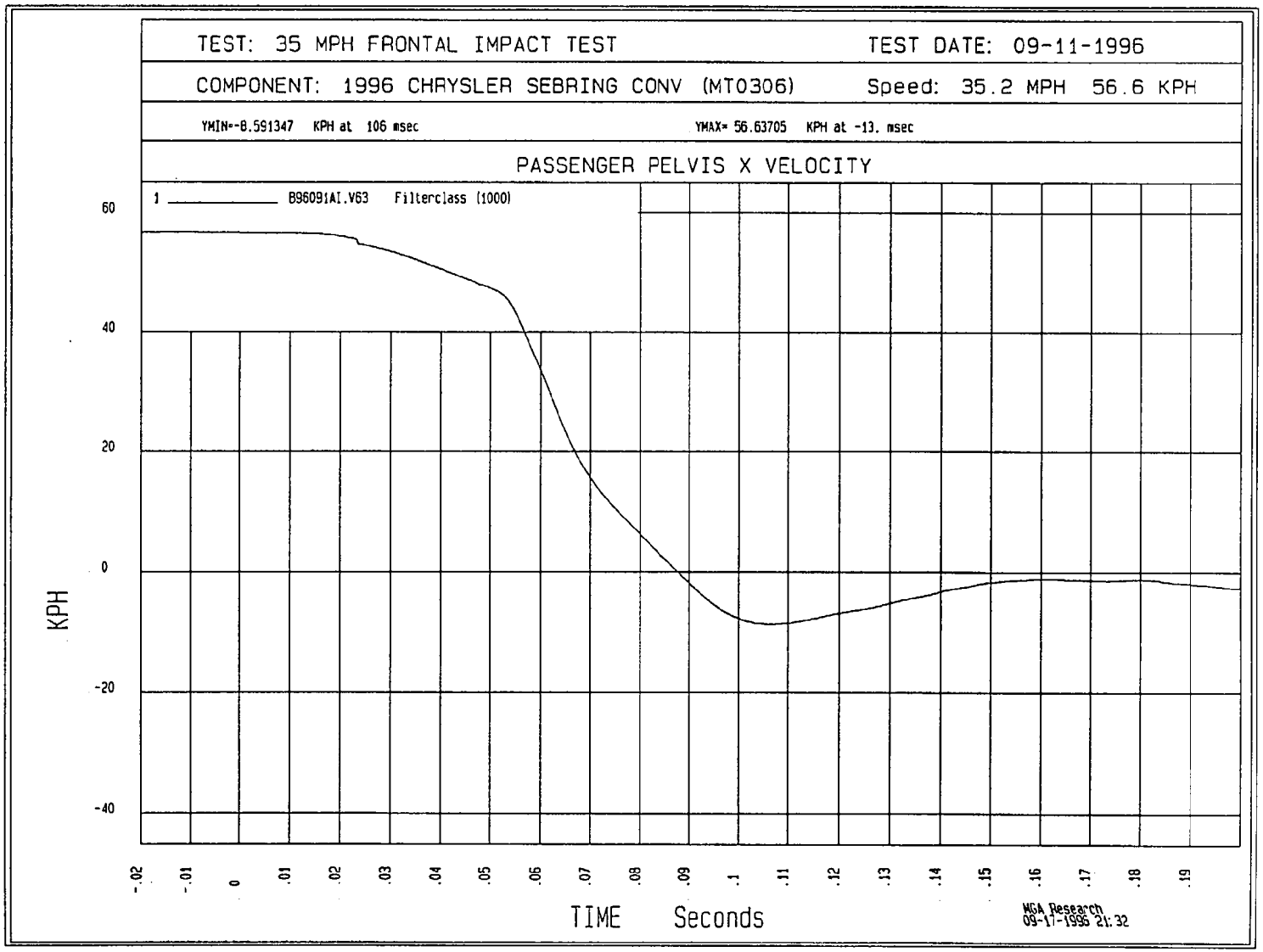
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:26


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-8.591347 KPH at 106 msec
YMAX= 56.63705 KPH at -13. msec
PASSENGER PELVIS X VELOCITY
1 B96091AI.V63 Filterclass (1000)
60
40
20
0
-20
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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.14
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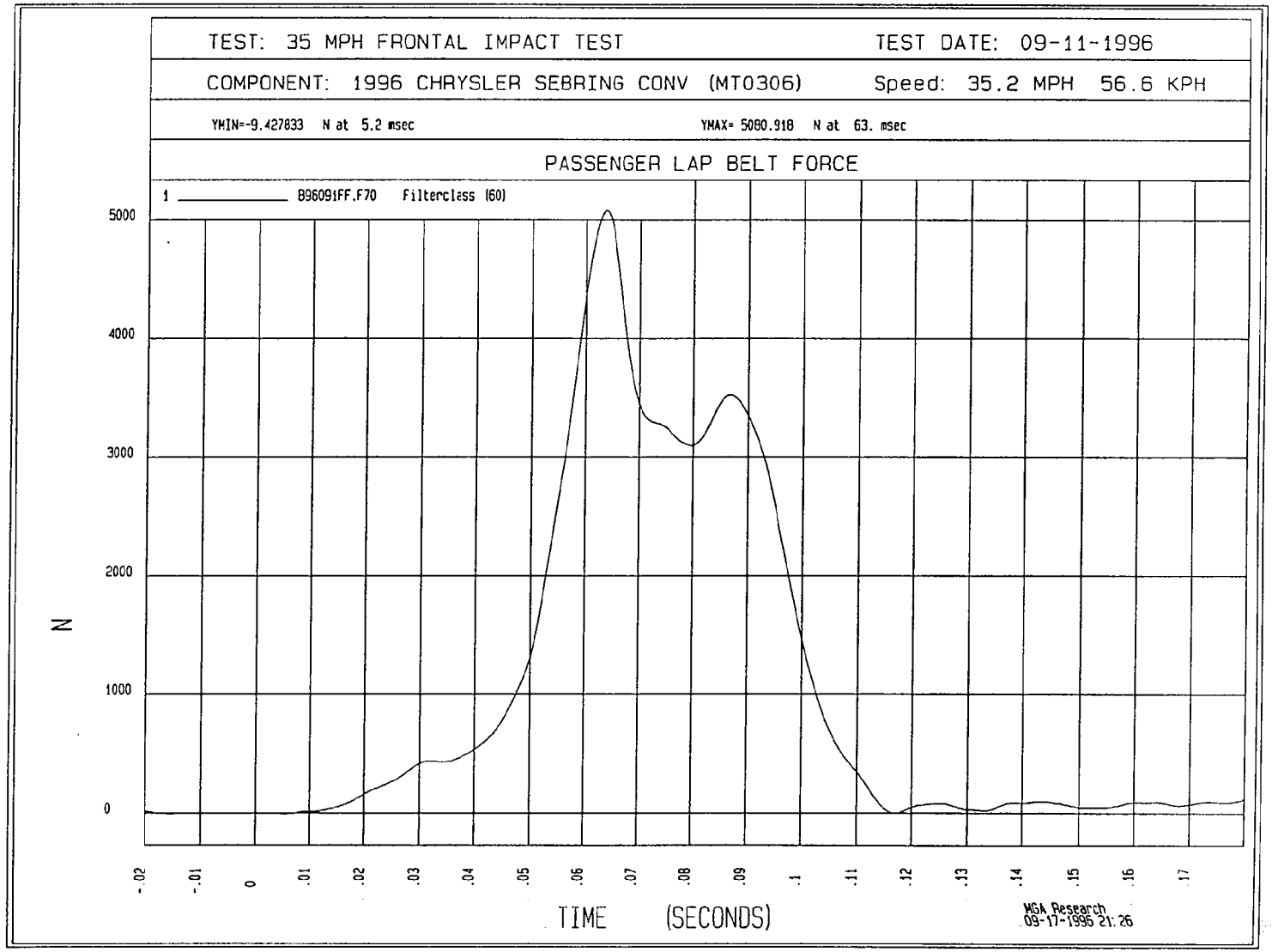
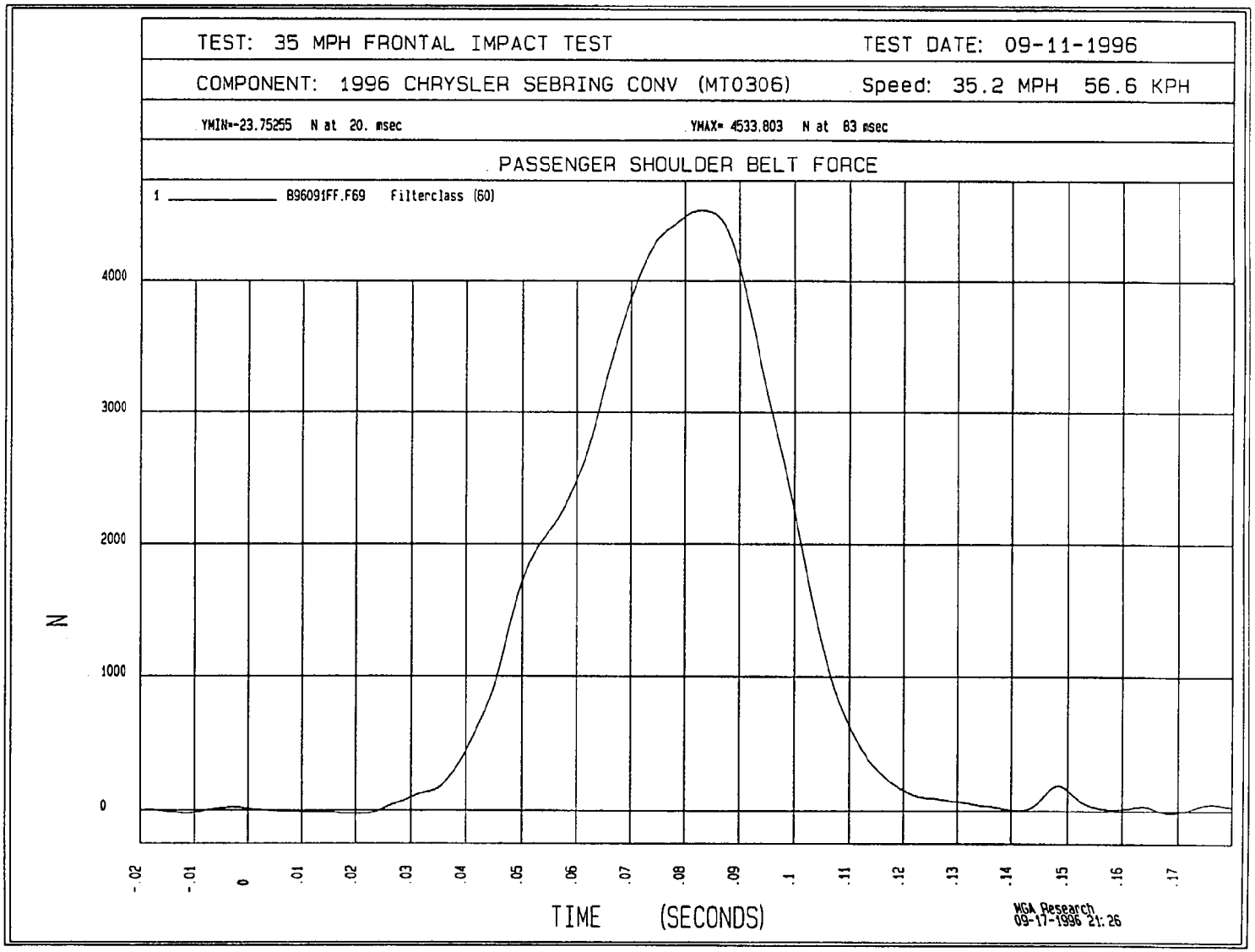
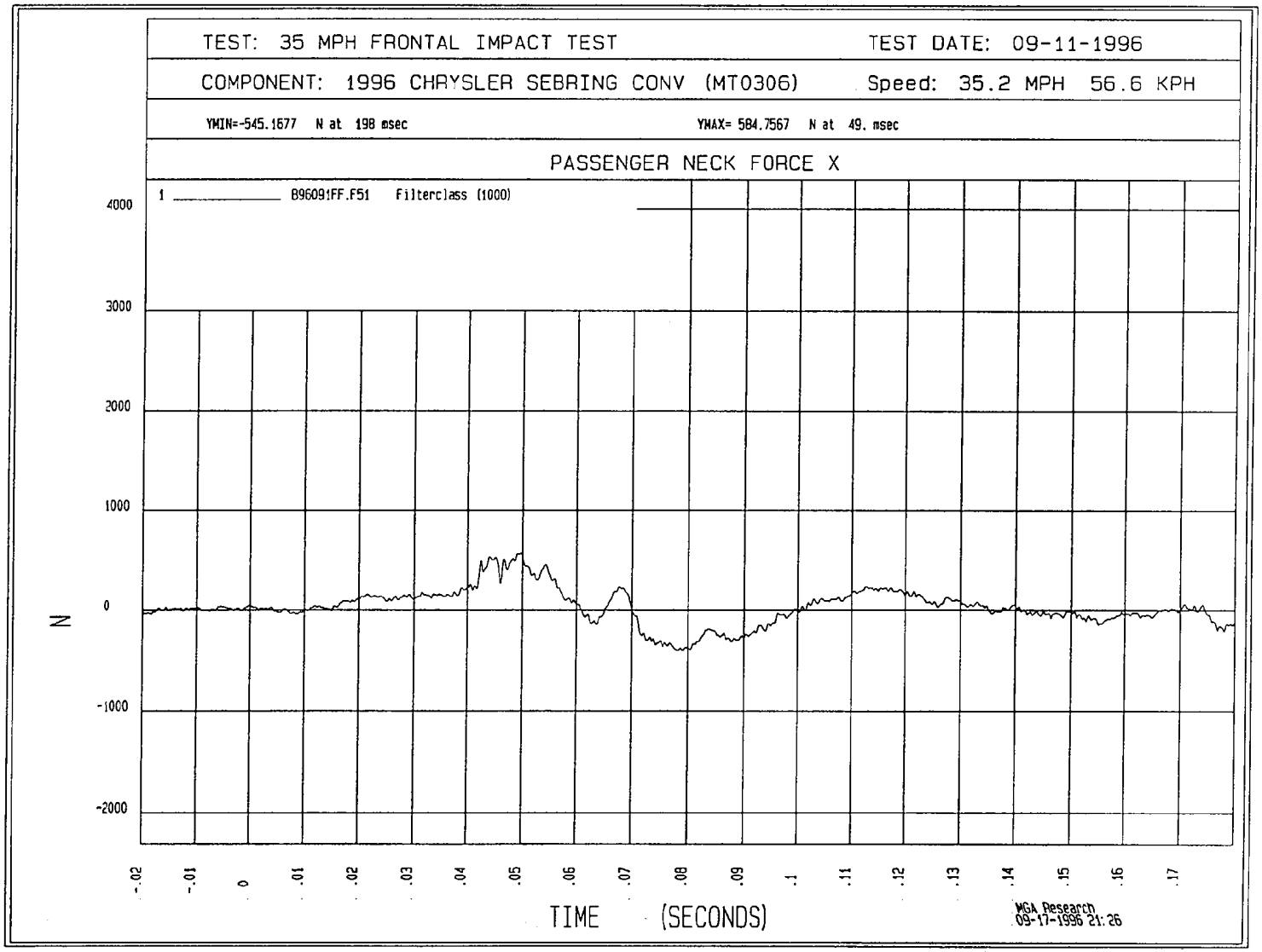
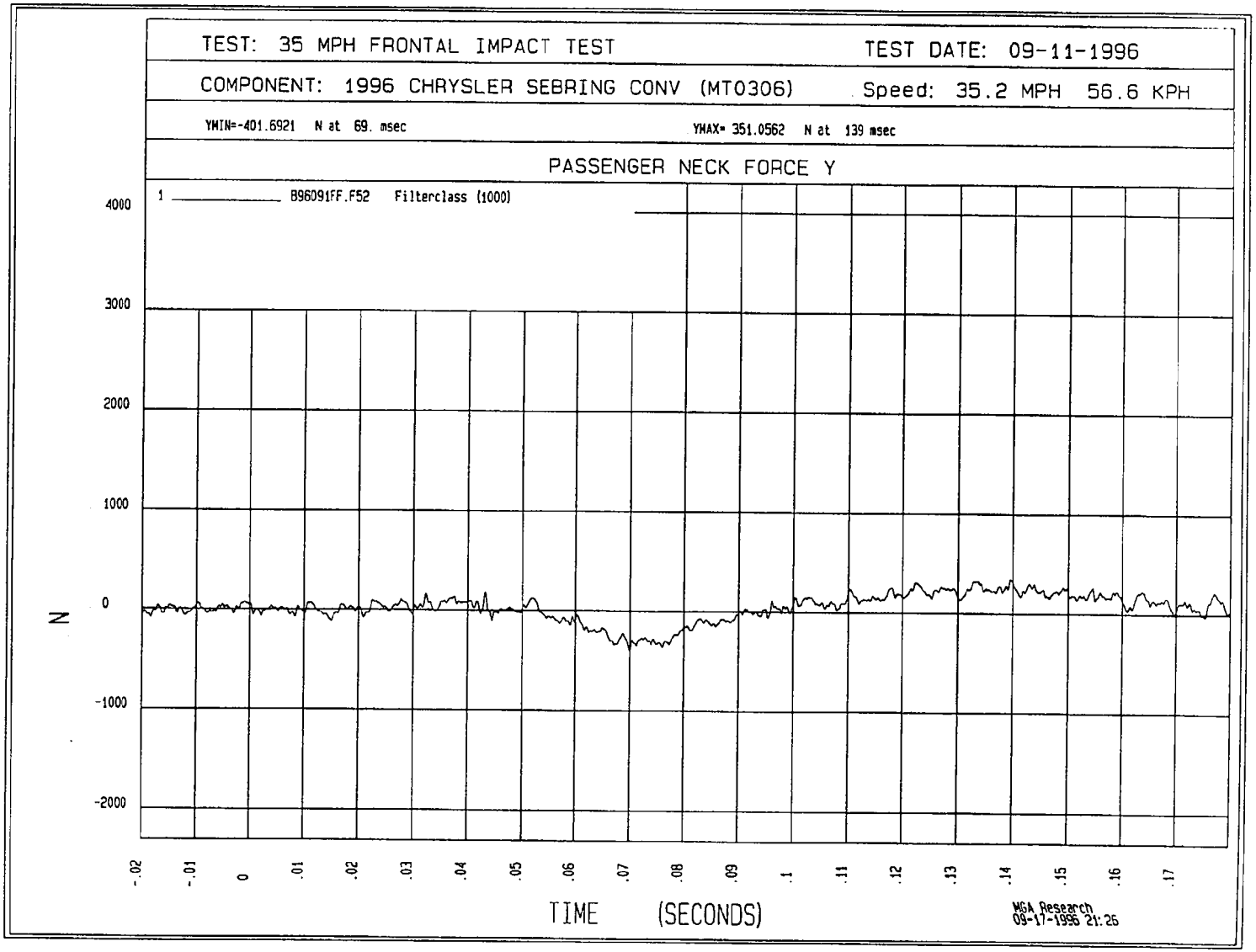
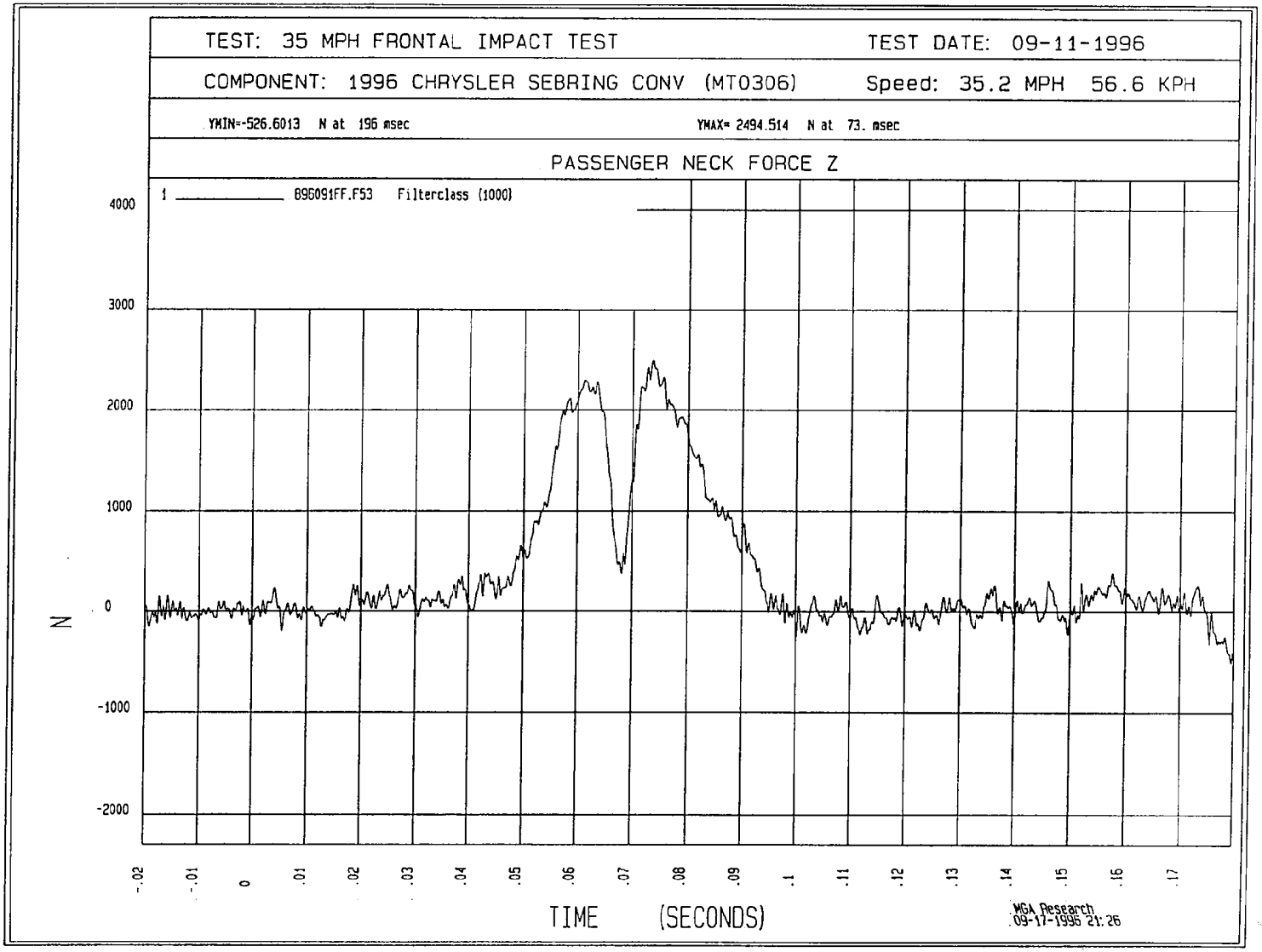
.16
.17
.18
.19
TIME Seconds
MGA Research
09-17-1996 21:32

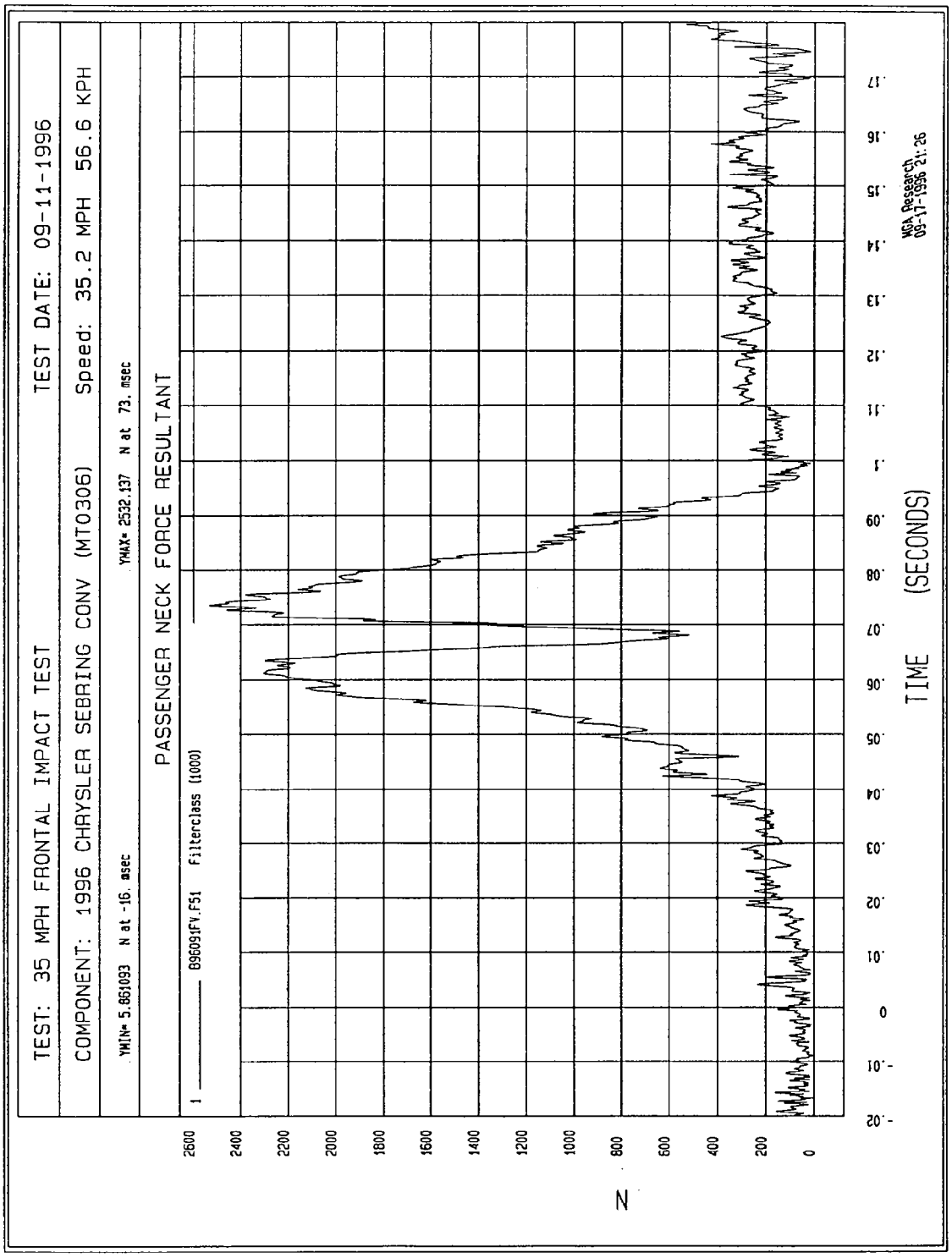

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-9.427833 N at 5.2 msec
YMAX= 5080.918 N at 63. msec
PASSENGER LAP BELT FORCE
1 B96091FF.F70 Filterclass (60)
5000
4000
3000
2000
1000
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:26

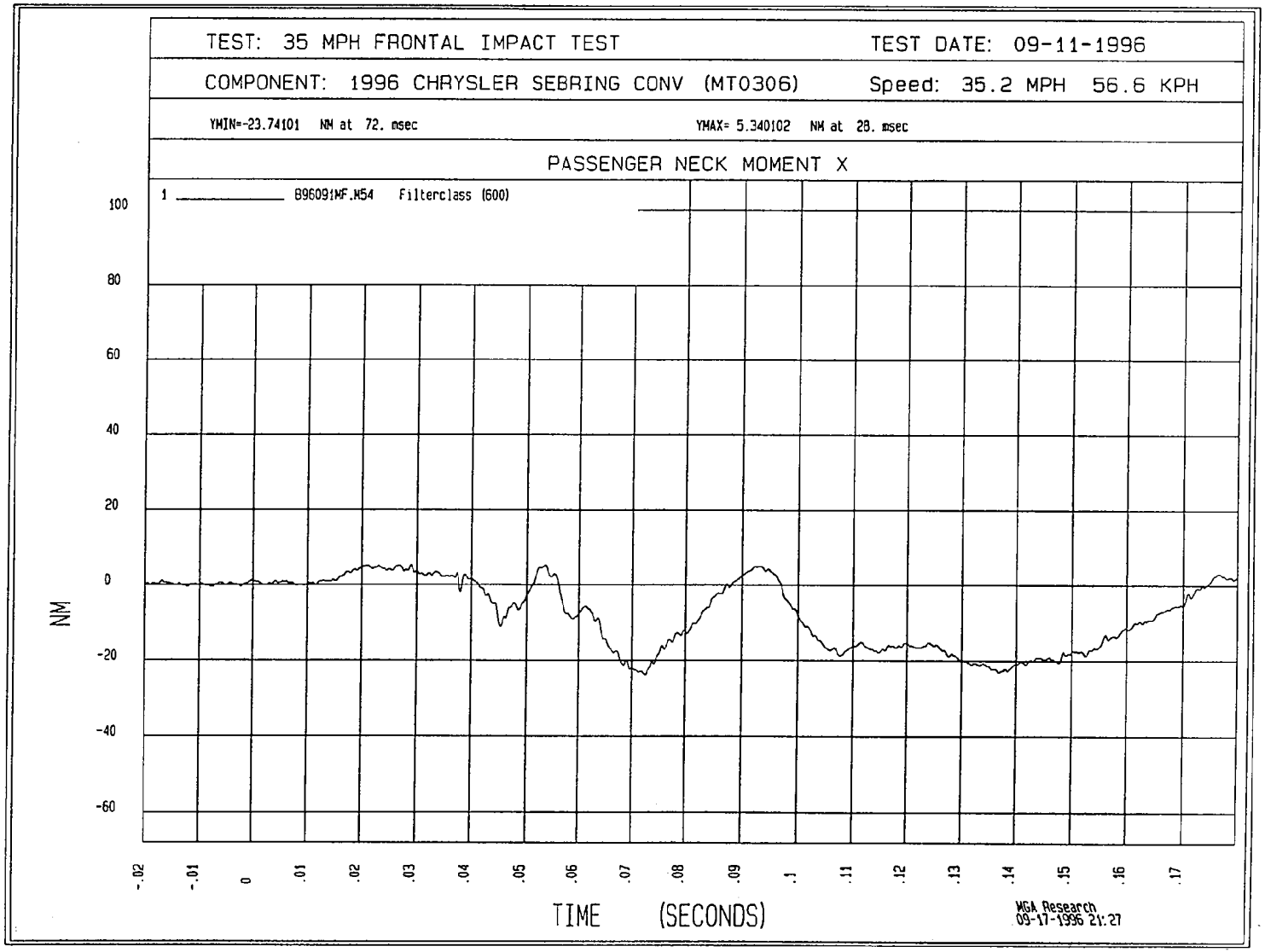

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-23.75255 N at 20. msec
YMAX= 4533.803 N at 83 msec
PASSENGER SHOULDER BELT FORCE
1 B96091FF.F69 Filterclass (60)
4000
3000
2000
1000
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:26

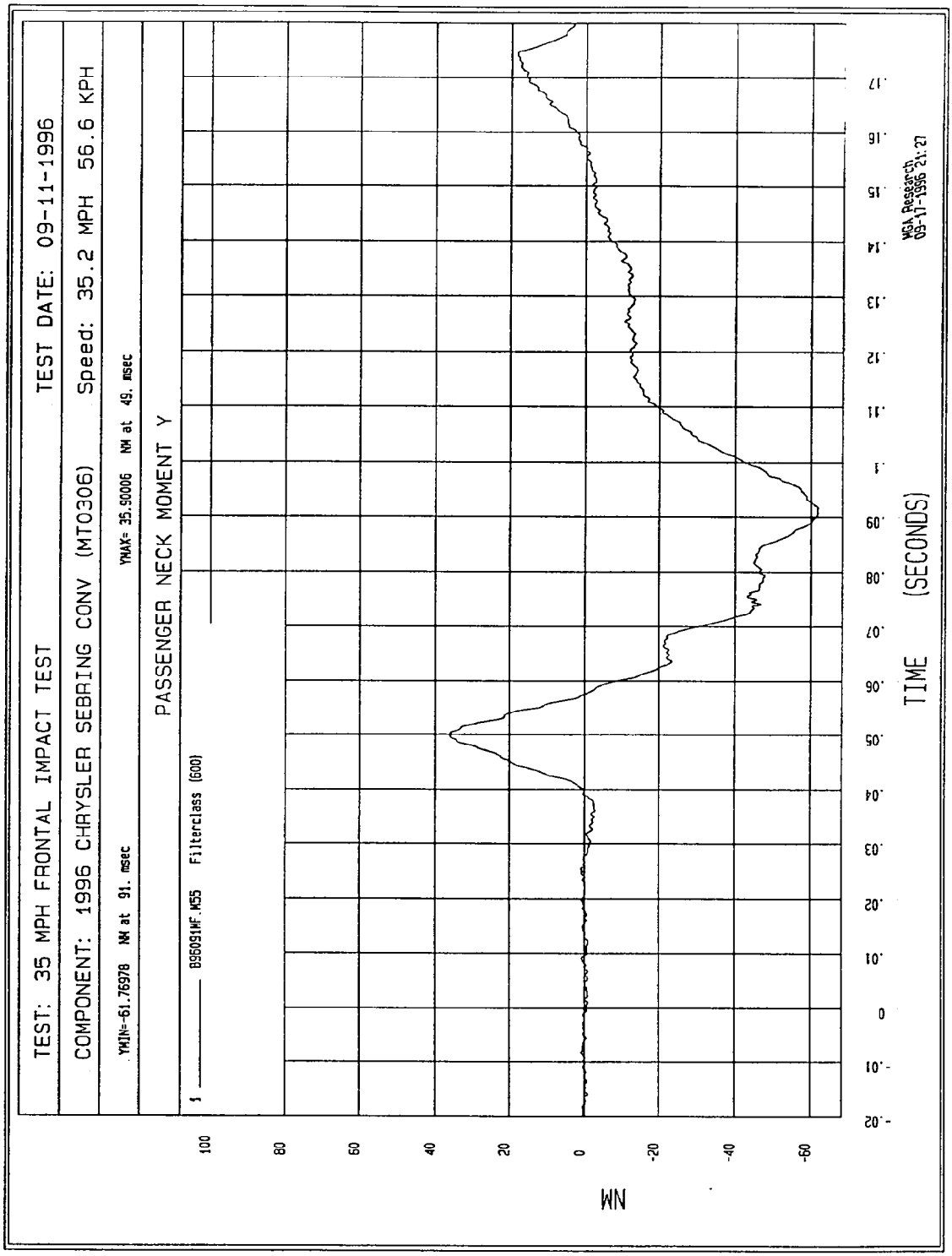

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-545.1677 N at 198 msec
YMAX= 584.7567 N at 49. msec
PASSENGER NECK FORCE X
1 B9609!FF.F51 Filterclass (1000)
4000
3000
2000
1000
0
-1000
-2000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:26

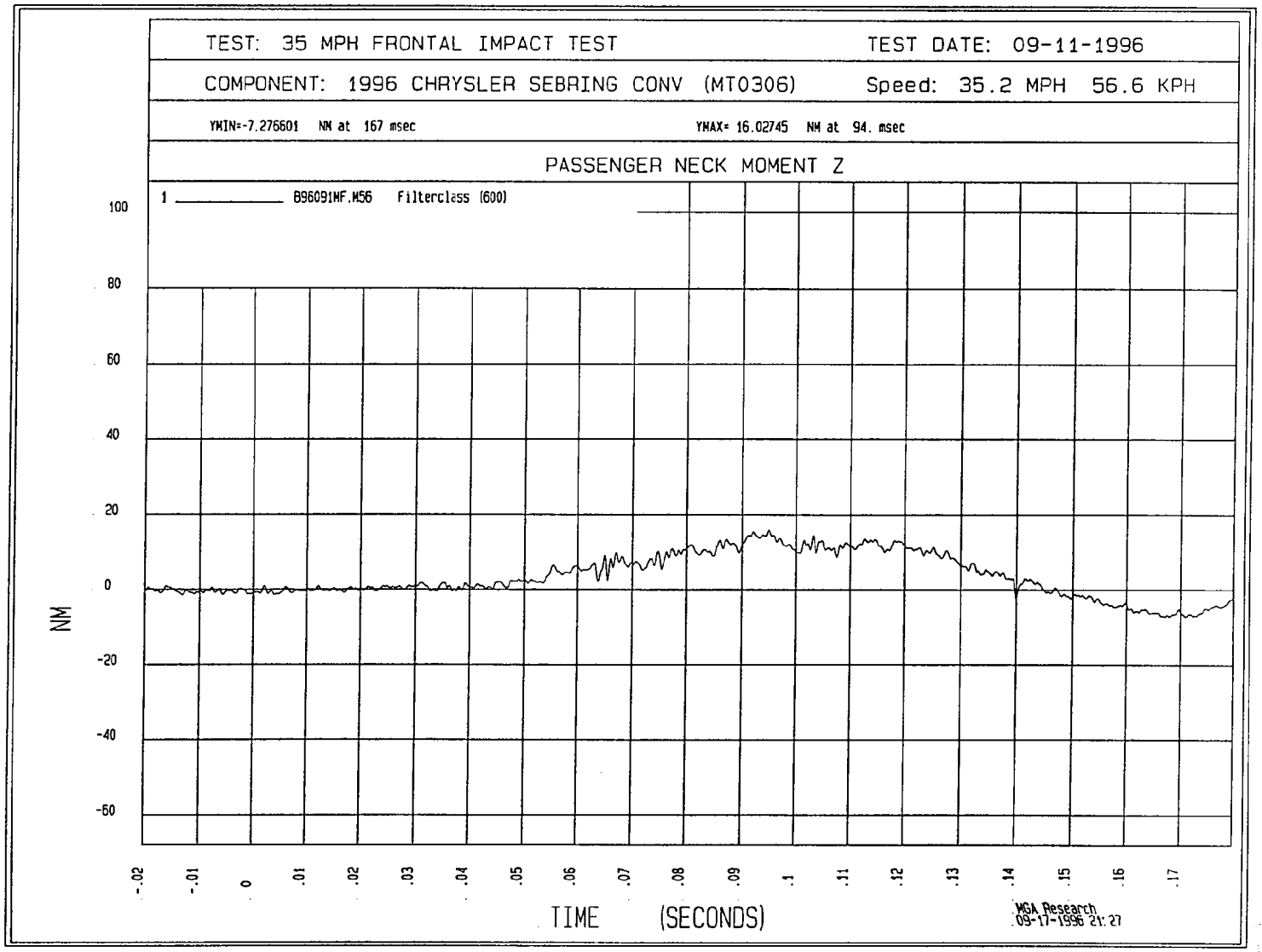

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-401.6921 N at 69. msec
YMAX= 351.0562 N at 139 msec
PASSENGER NECK FORCE Y
1 B96091FF.F52 Filterclass (1000)
4000
3000
2000
1000
0
-1000
-2000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:26

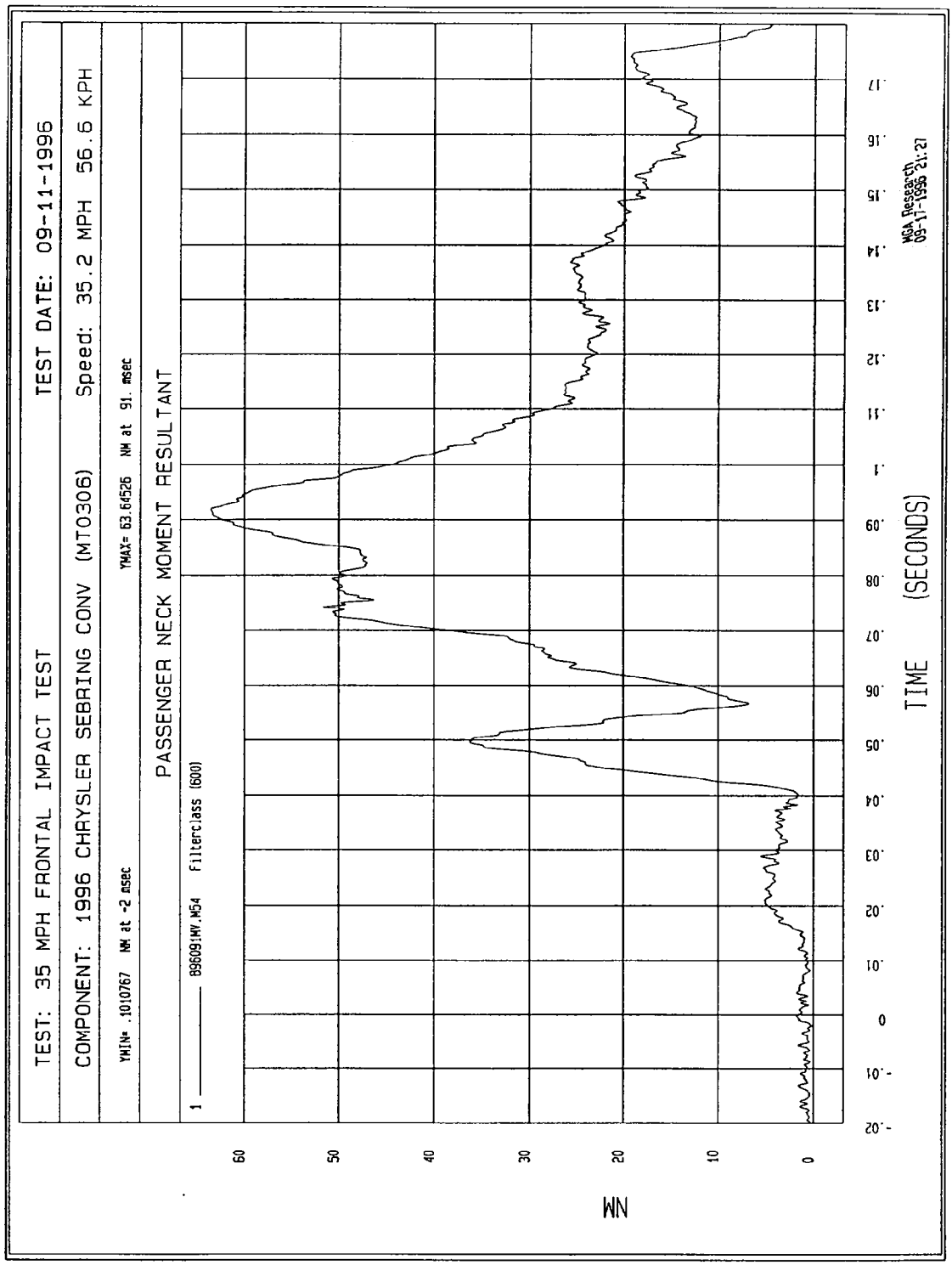

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-526.6013 N at 196 msec
YMAX= 2494.514 N at 73. msec
PASSENGER NECK FORCE Z
1 896091FF.F53 Filterclass (1000)
4000
3000
2000
1000
0
-1000
-2000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:26

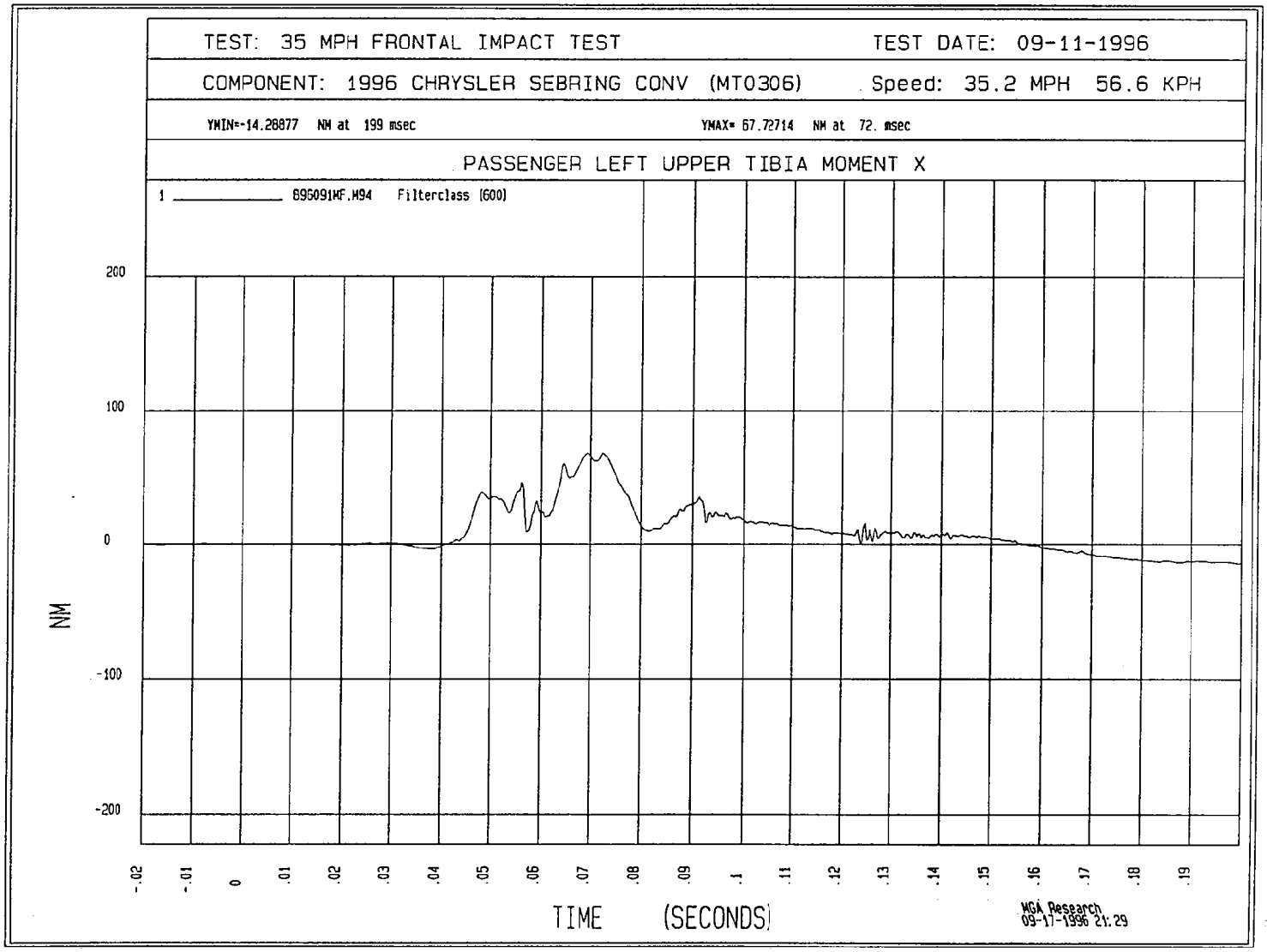

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= 5.861093 N at -16. msec
YMAX= 2532.137 N at 73. msec
PASSENGER NECK FORCE RESULTANT
1 _____ 896091FY.F51 filterclass (1000)
N
TIME (SECONDS)
MGA Research
09-17-1996 21:26

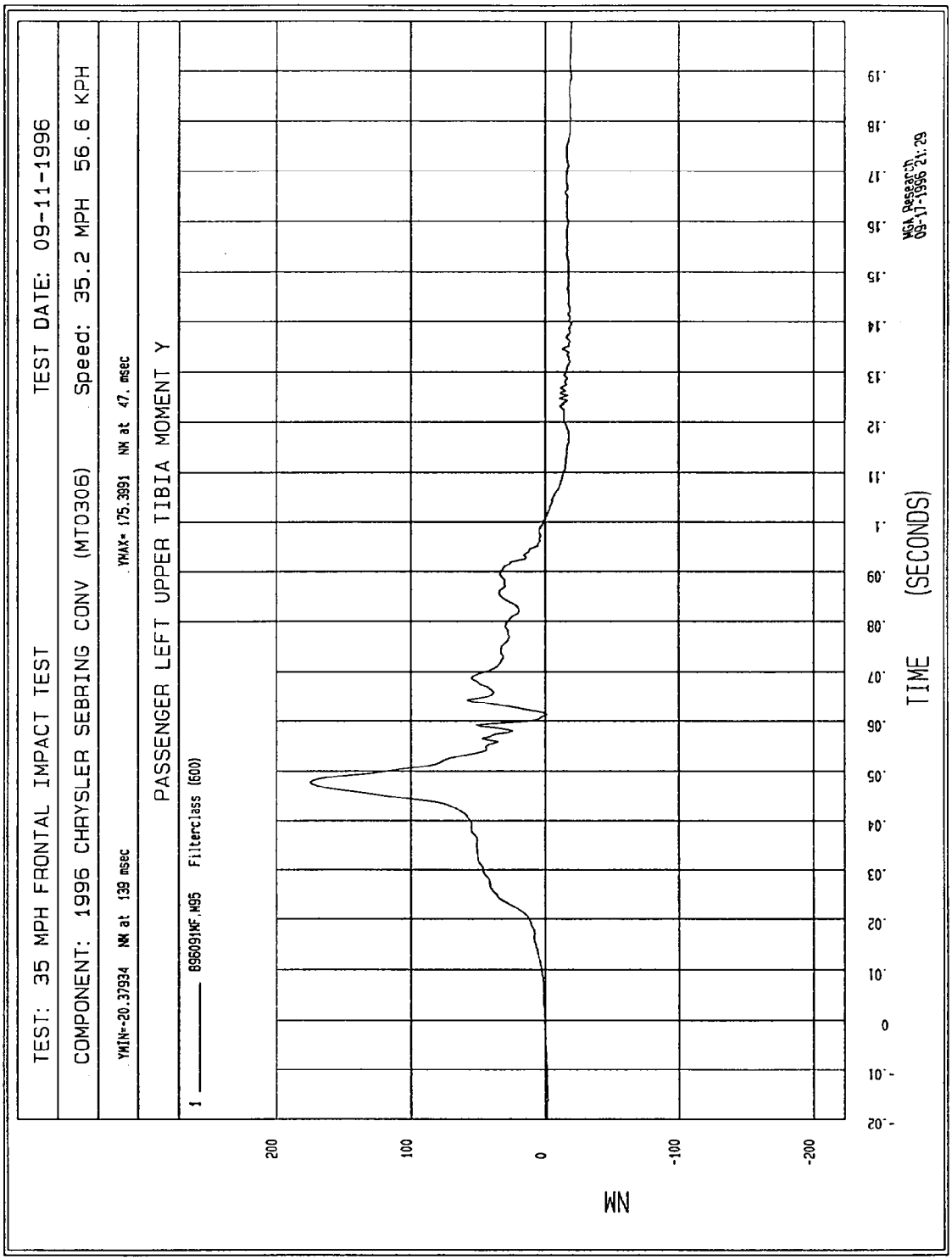

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-23.74101 NM at 72. msec
YMAX= 5.340102 NM at 28. msec
PASSENGER NECK MOMENT X
1 B96091MF.M54 Filterclass (600)
100
80
60
40
20
0
-20
-40
-60
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:27

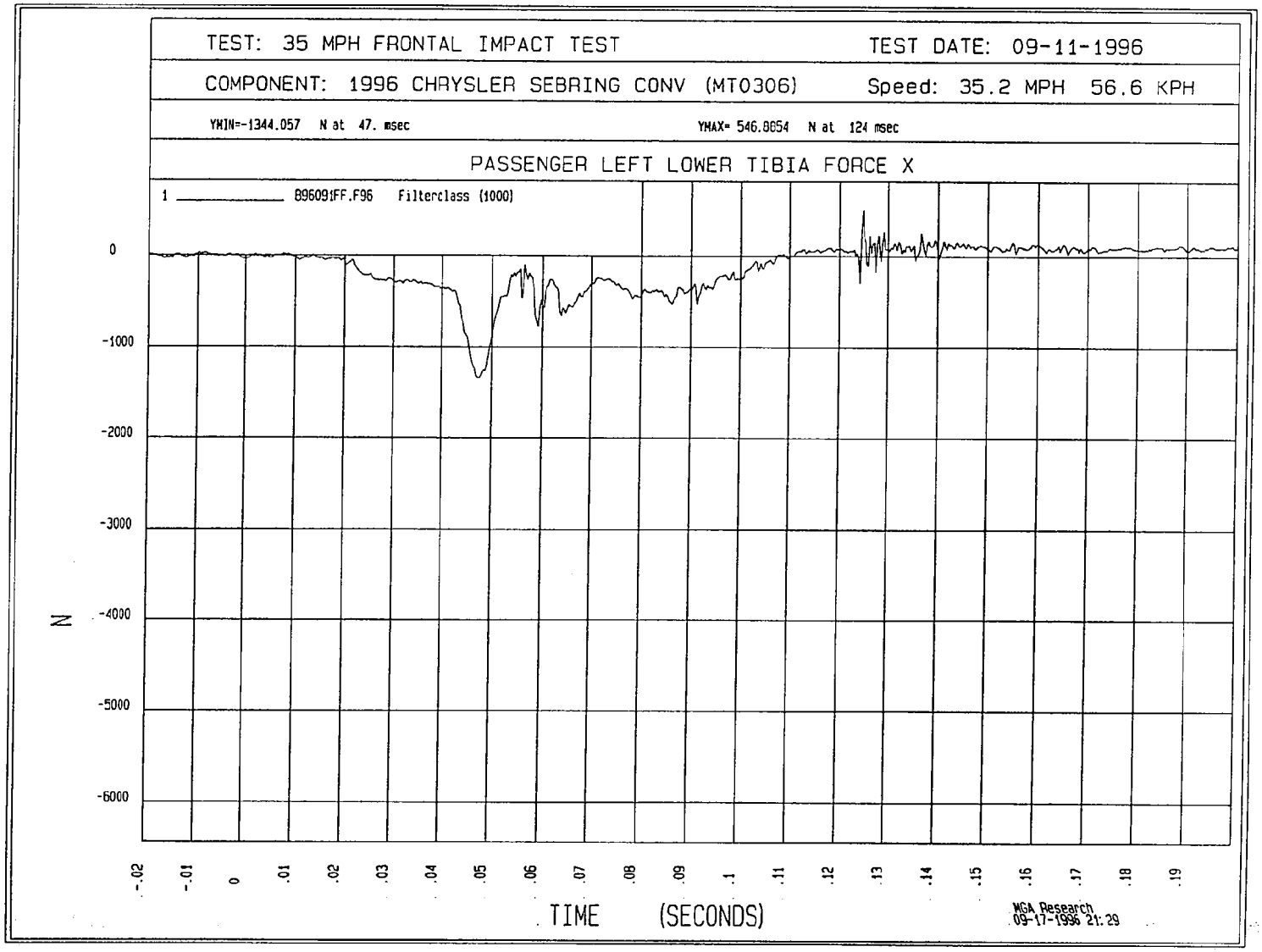

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-61.76978 NM at 91. msec
YMAX= 35.90006 NM at 49. msec
PASSENGER NECK MOMENT Y
1 B9609INF.MS5 Filterclass (600)
NM
TIME (SECONDS)
MGA Research
09-17-1996 21:27

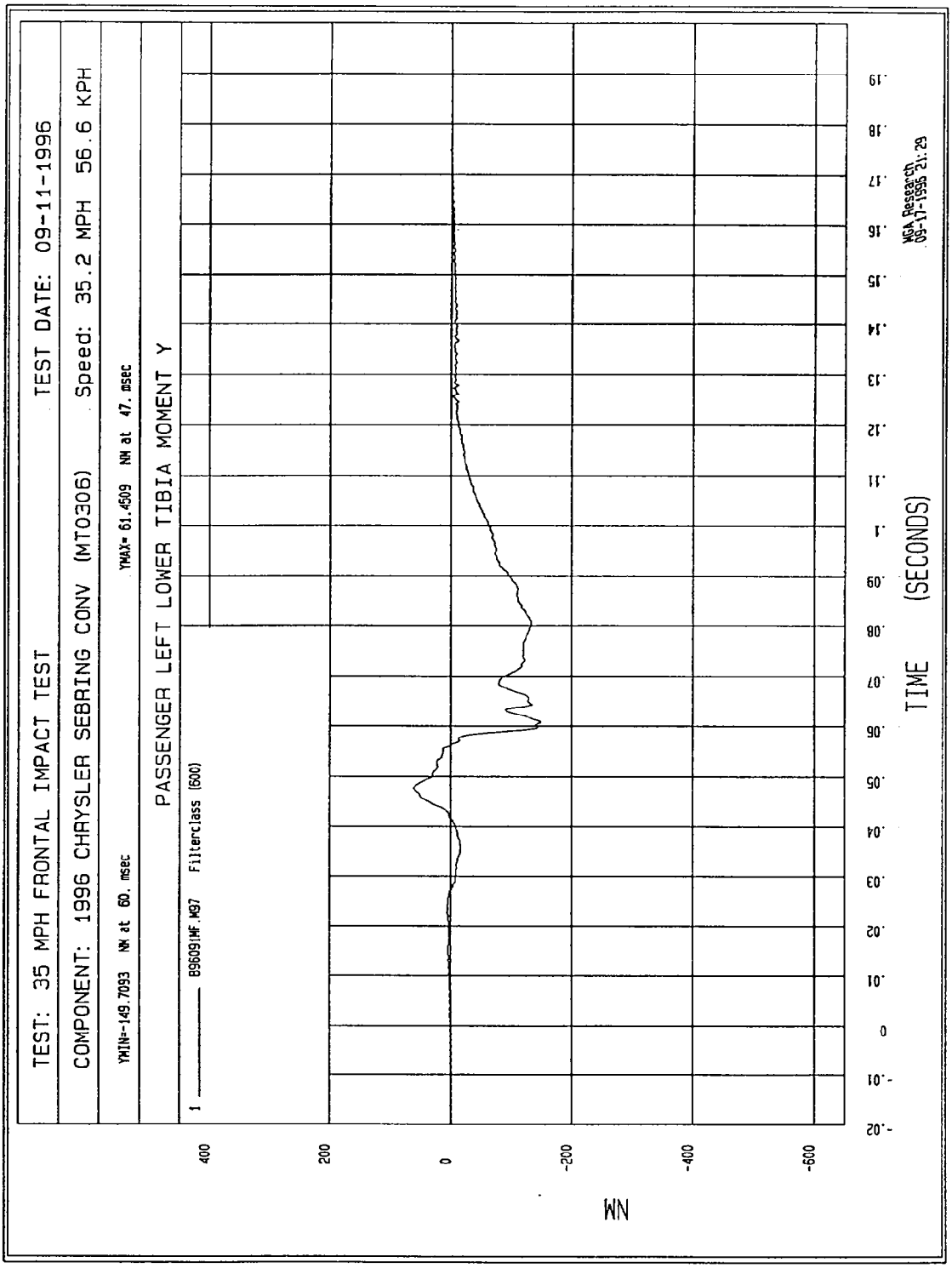

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-7.276601 NM at 167 msec
YMAX= 16.02745 NM at 94. msec
PASSENGER NECK MOMENT Z
1 B96091MF.M56 Filterclass (600)
100
80
60
40
20
0
-20
-40
-60
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME (SECONDS)
MGA Research
09-17-1996 21:27

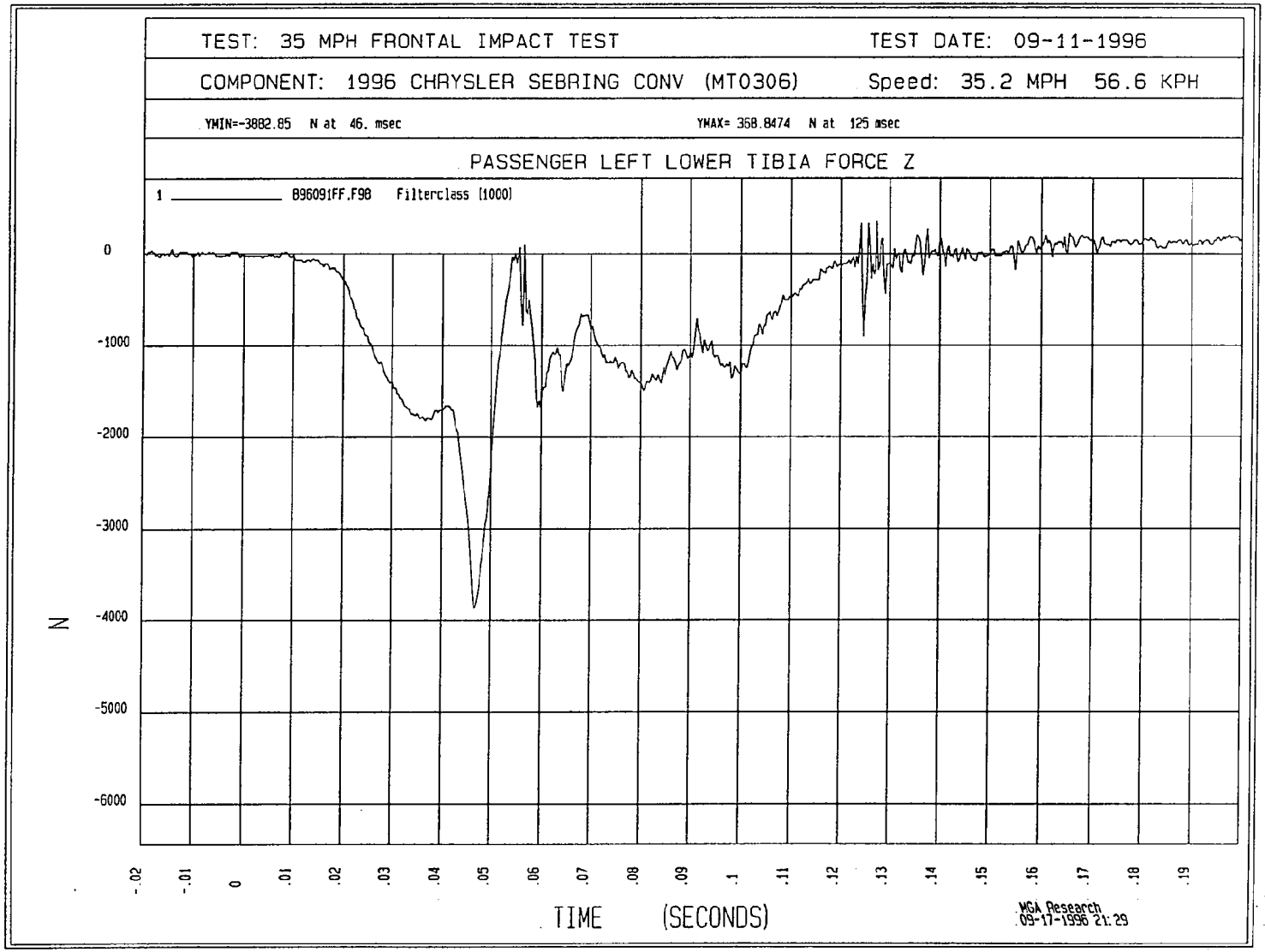

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN= .1010767 NM at -2 msec
YMAX= 63.64526 NM at 91. msec
PASSENGER NECK MOMENT RESULTANT
1 89609:HY.M54 Filterclass (600)
NM
TIME (SECONDS)
MGA Research
09-11-1996 21:27

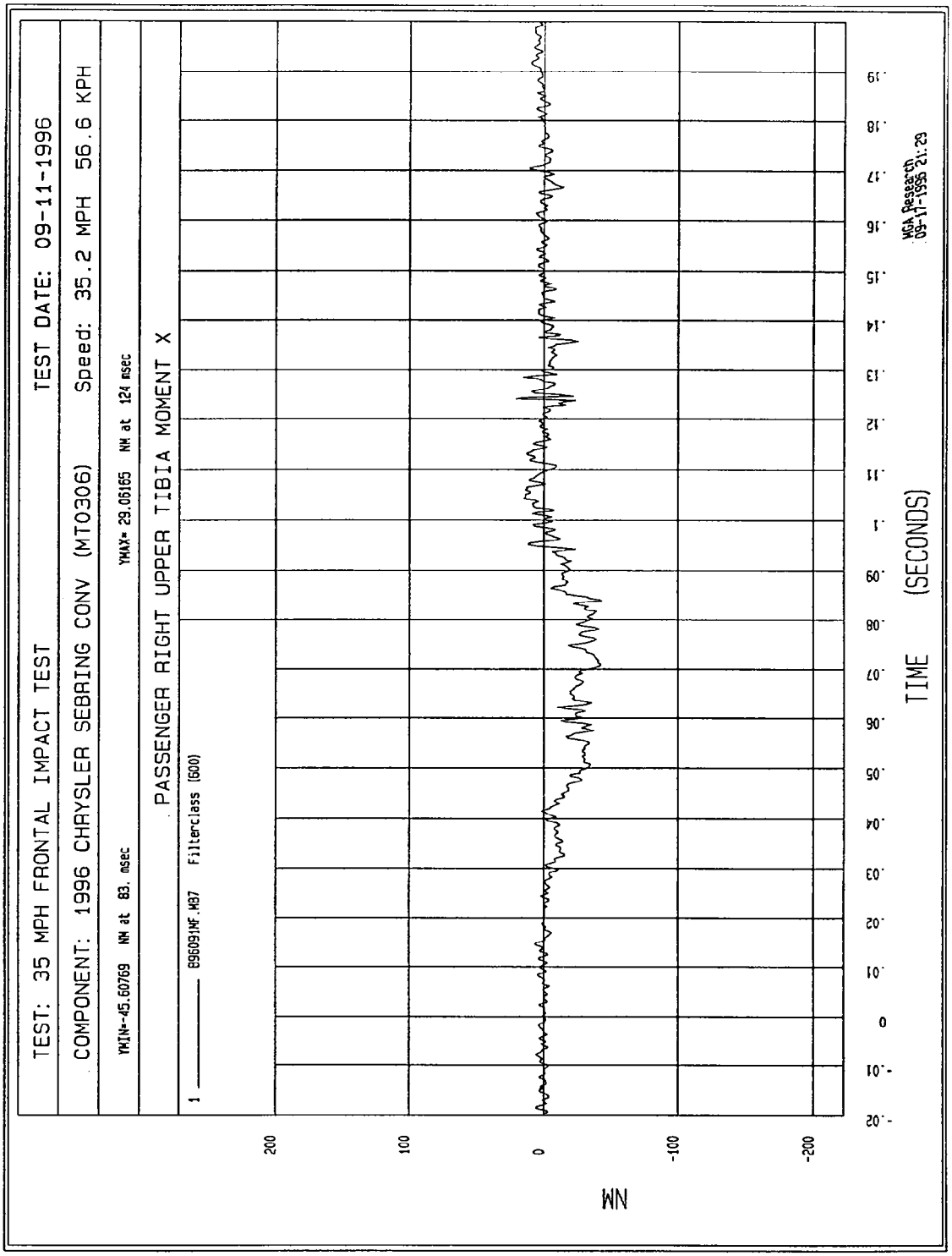

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-14.28877 NM at 199 msec
YMAX= 67.72714 NM at 72. msec
PASSENGER LEFT UPPER TIBIA MOMENT X
1 _____ 896091MF.H94 Filterclass (600)
200
100
0
-100
-200
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:29

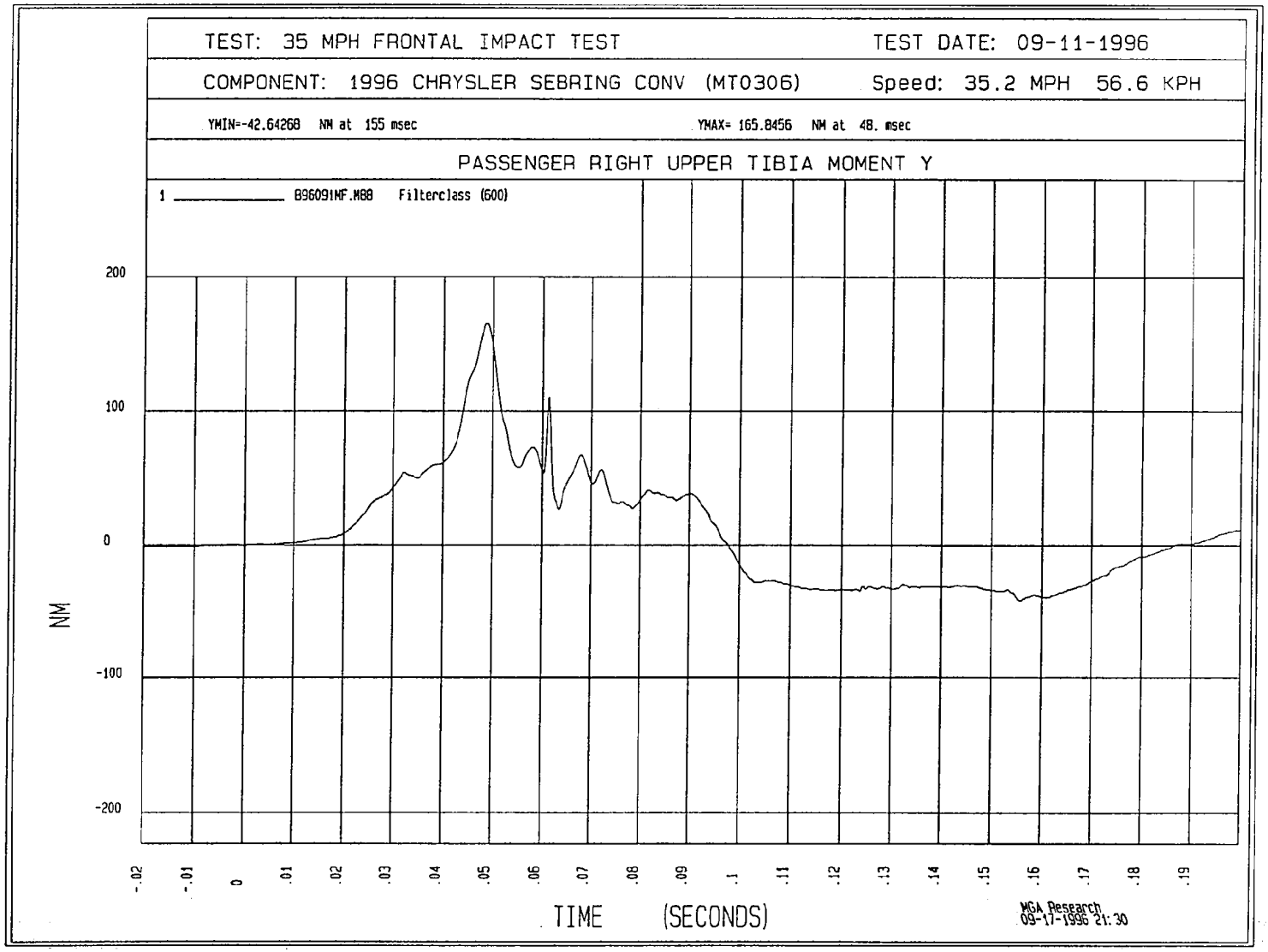

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-20.37934 NM at 139 msec
YMAX= 175.3991 NM at 47. msec
PASSENGER LEFT UPPER TIBIA MOMENT Y
1 B96091MF.M95 Filterclass (600)
NM
200
100
0
-100
-200
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
MGA Research
09-17-1996 21:29

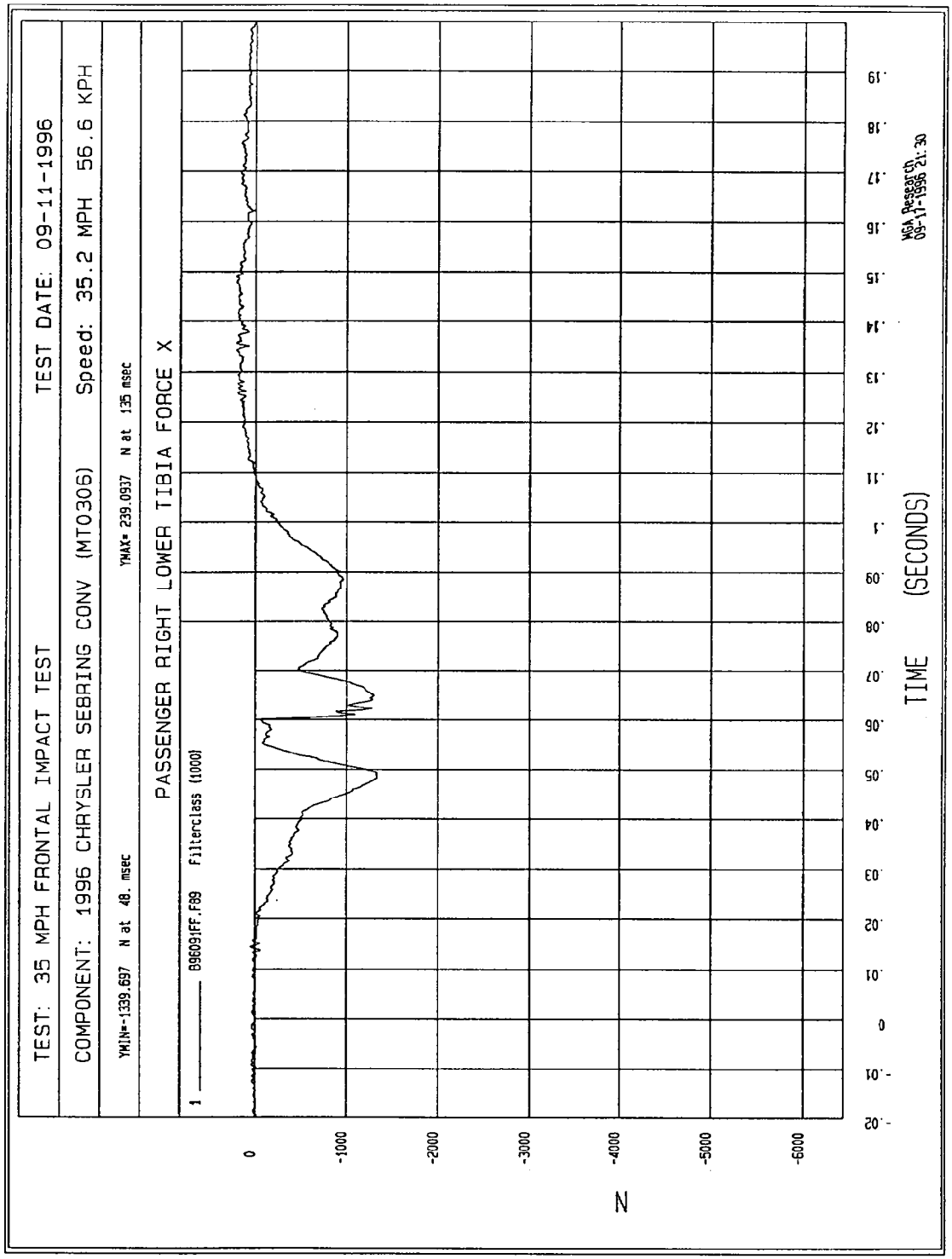

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-1344.057 N at 47. msec
YMAX= 546.8854 N at 124 msec
PASSENGER LEFT LOWER TIBIA FORCE X
1 896091FF.F96 Filterclass (1000)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:29

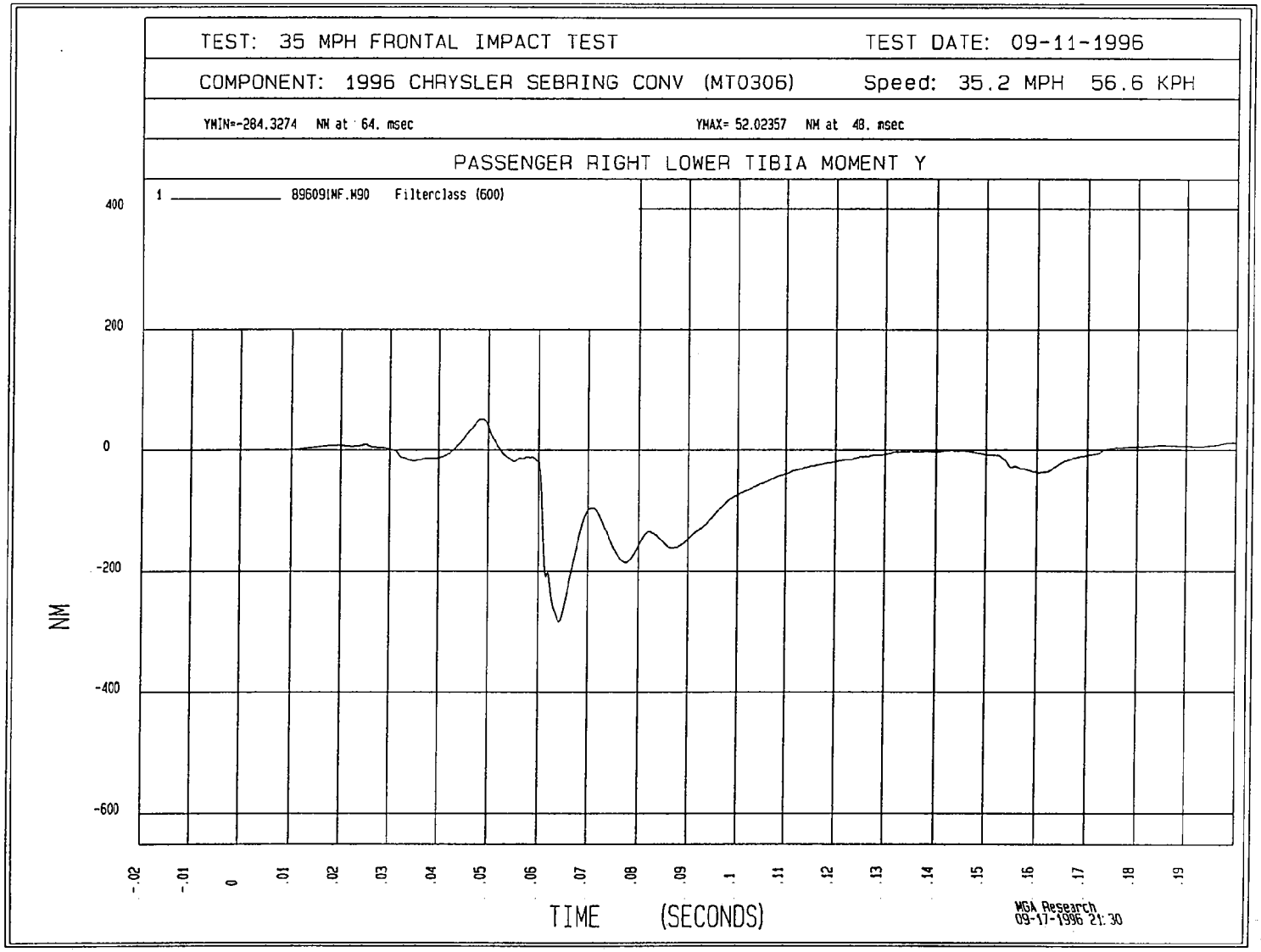

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-149.7093 NM at 60. msec
YMAX= 61.4509 NM at 47. msec
PASSENGER LEFT LOWER TIBIA MOMENT Y
1 ——— 89609IMF.M97 Filterclass (600)
400
200
0
-200
-400
-600
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:29

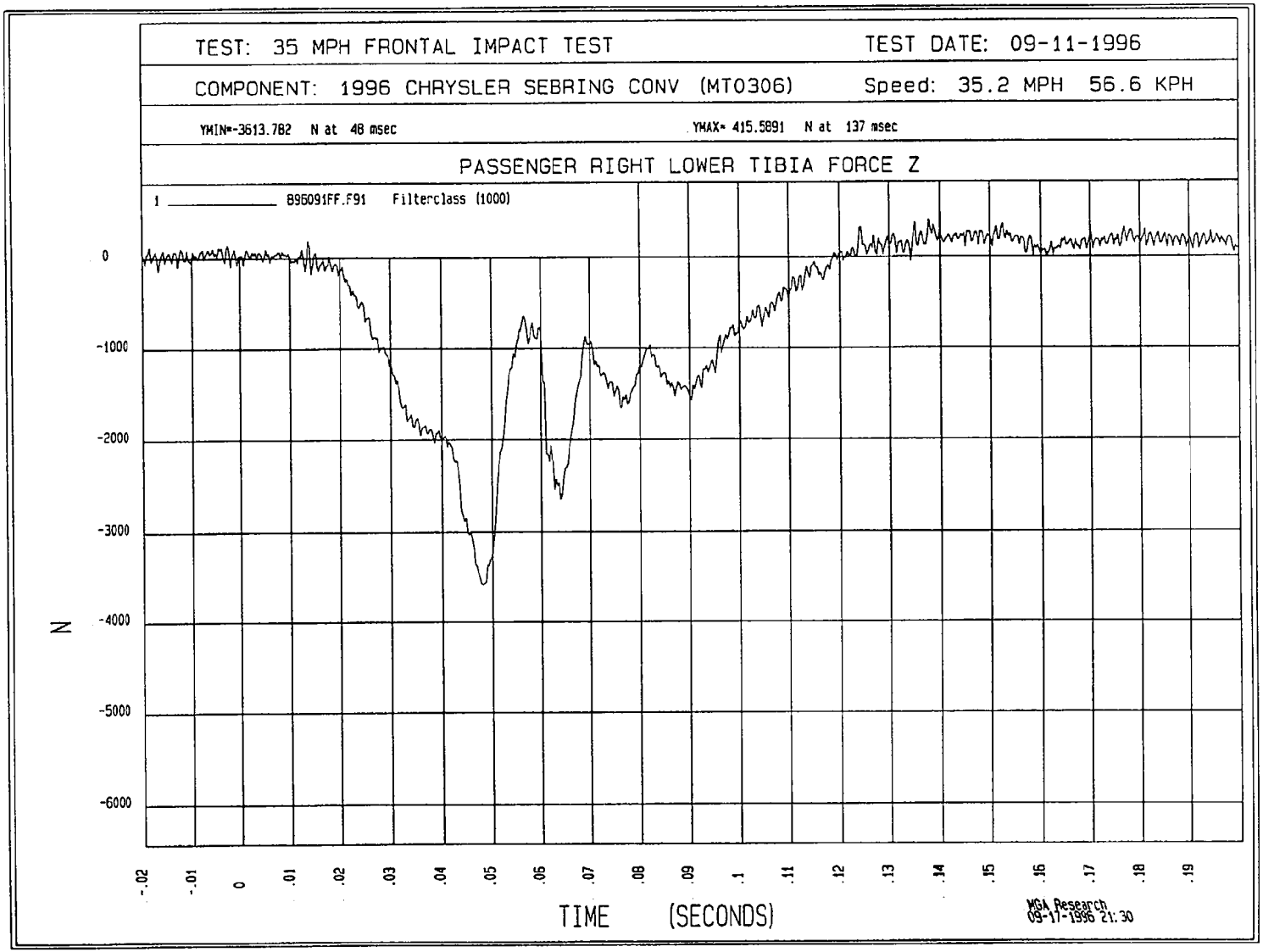

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-3882.85 N at 46. msec
YMAX= 368.8474 N at 125 msec
PASSENGER LEFT LOWER TIBIA FORCE Z
1 B9609IFF.F98 Filterclass (1000)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:29

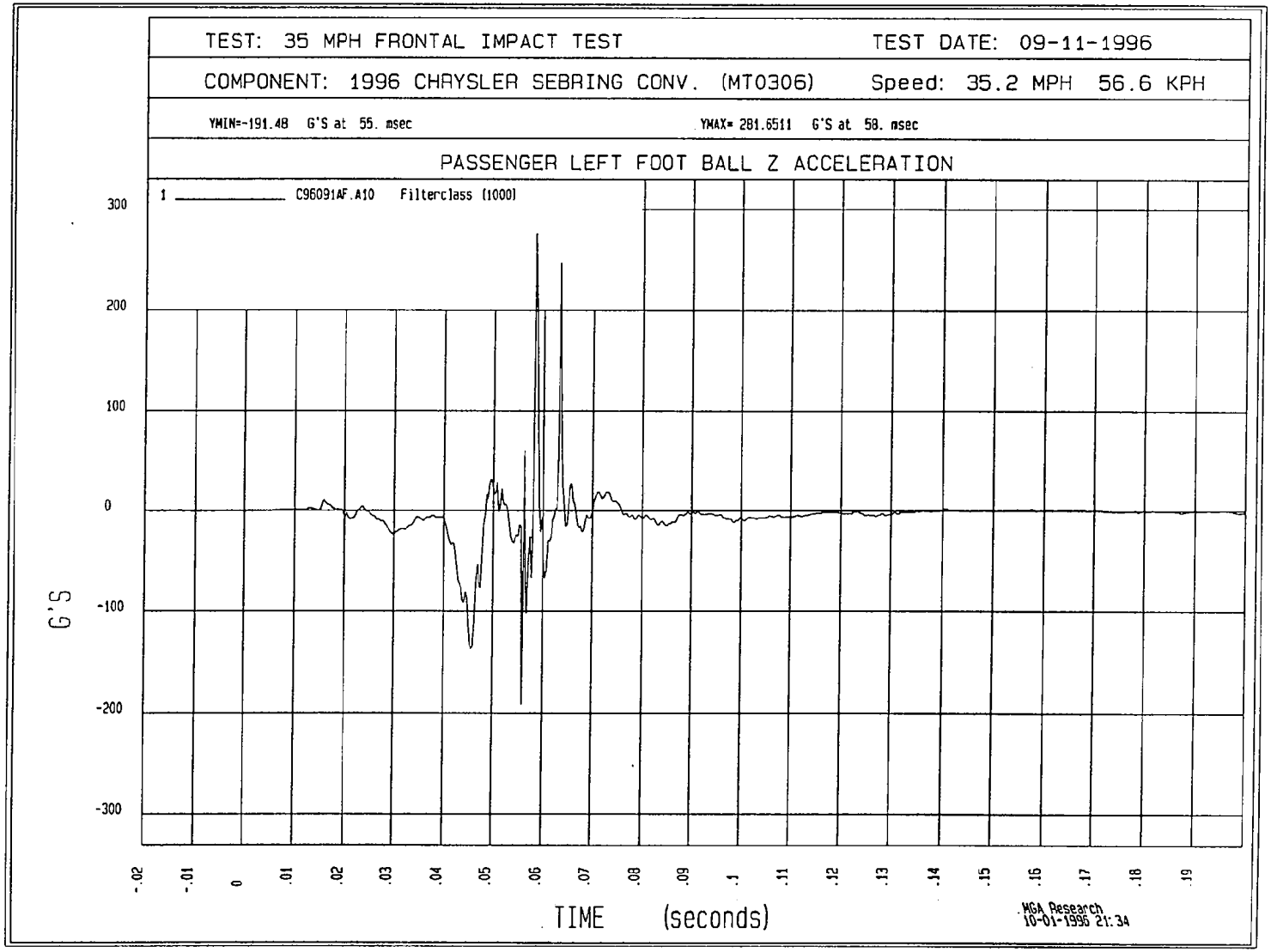

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-45.60769 NM at 83. msec
YMAX= 29.06165 NM at 124 msec
PASSENGER RIGHT UPPER TIBIA MOMENT X
1 _____ 89609JMF.M87 Filterclass (600)
NM
200
100
0
-100
-200
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
MGA Research
09-11-1996 21:29


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-42.64268 NM at 155 msec
YMAX= 165.8456 NM at 48. msec
PASSENGER RIGHT UPPER TIBIA MOMENT Y
1 B96091MF.M88 Filterclass (600)
200
100
0
-100
-200
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:30


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-1339.697 N at 48. msec
YMAX= 239.0937 N at 135 msec
PASSENGER RIGHT LOWER TIBIA FORCE X
1 B9609IFF.F09 Filterclass (1000)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
TIME (SECONDS)
MGA Research
09-11-1996 21:30

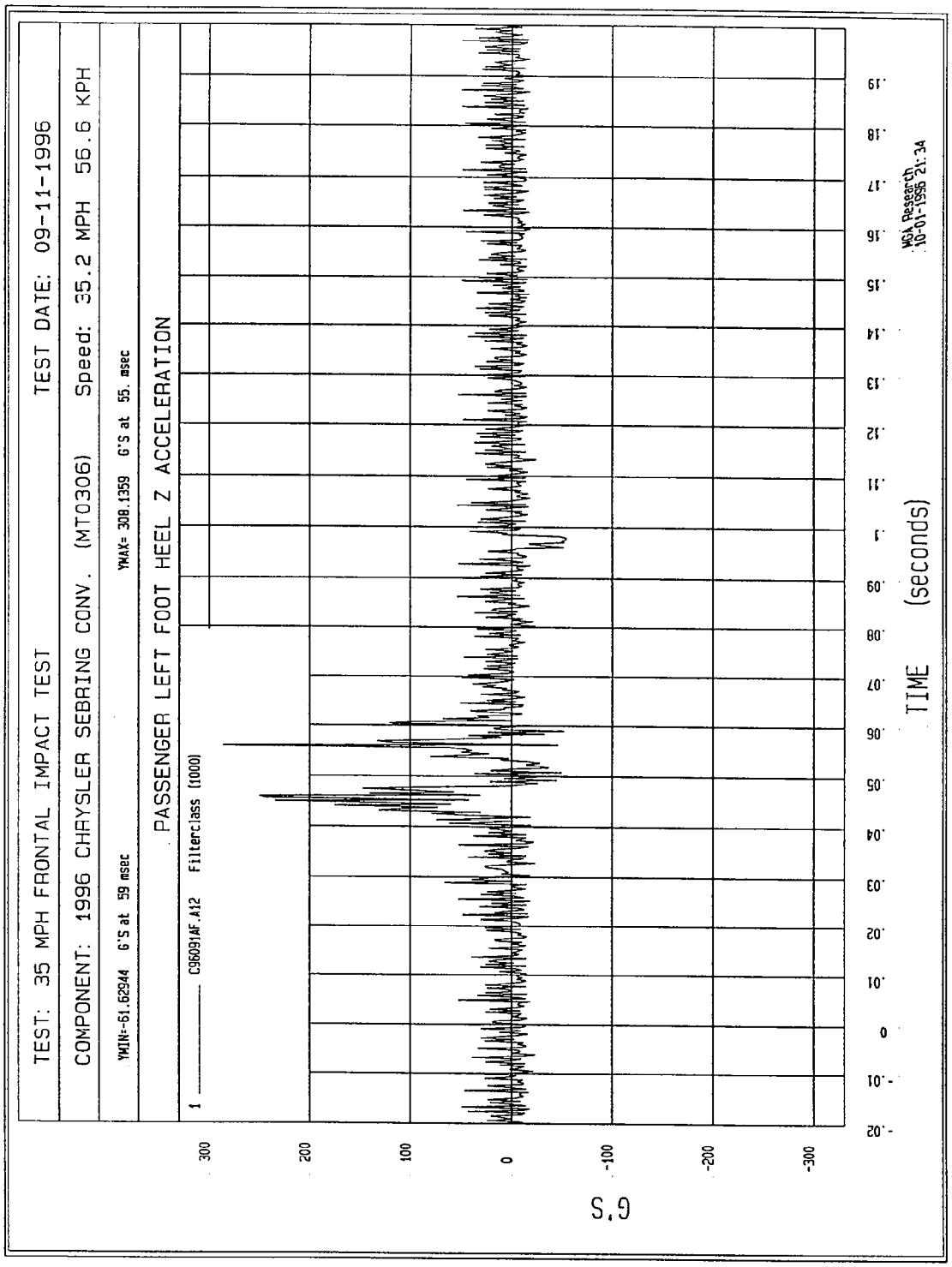

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-284.3274 NM at 64. msec
YMAX= 52.02357 NM at 48. msec
PASSENGER RIGHT LOWER TIBIA MOMENT Y
1 89609IMF.M90 Filterclass (600)
400
200
0
-200
-400
-600
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:30

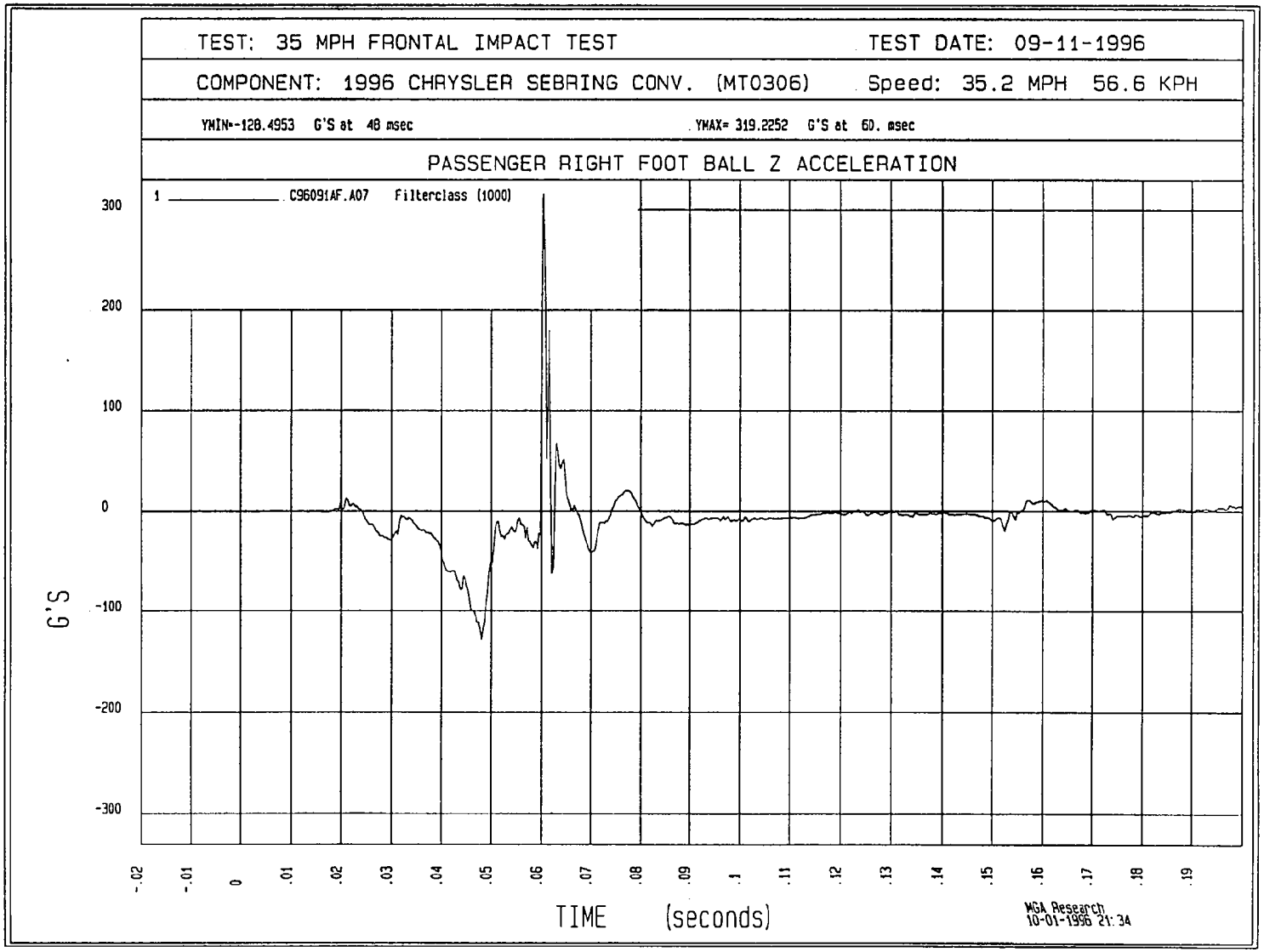

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-3613.782 N at 48 msec
YMAX= 415.5891 N at 137 msec
PASSENGER RIGHT LOWER TIBIA FORCE Z
1 B96091FF.F91 Filterclass (1000)
0
-1000
-2000
-3000
-4000
-5000
-6000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
09-17-1996 21:30

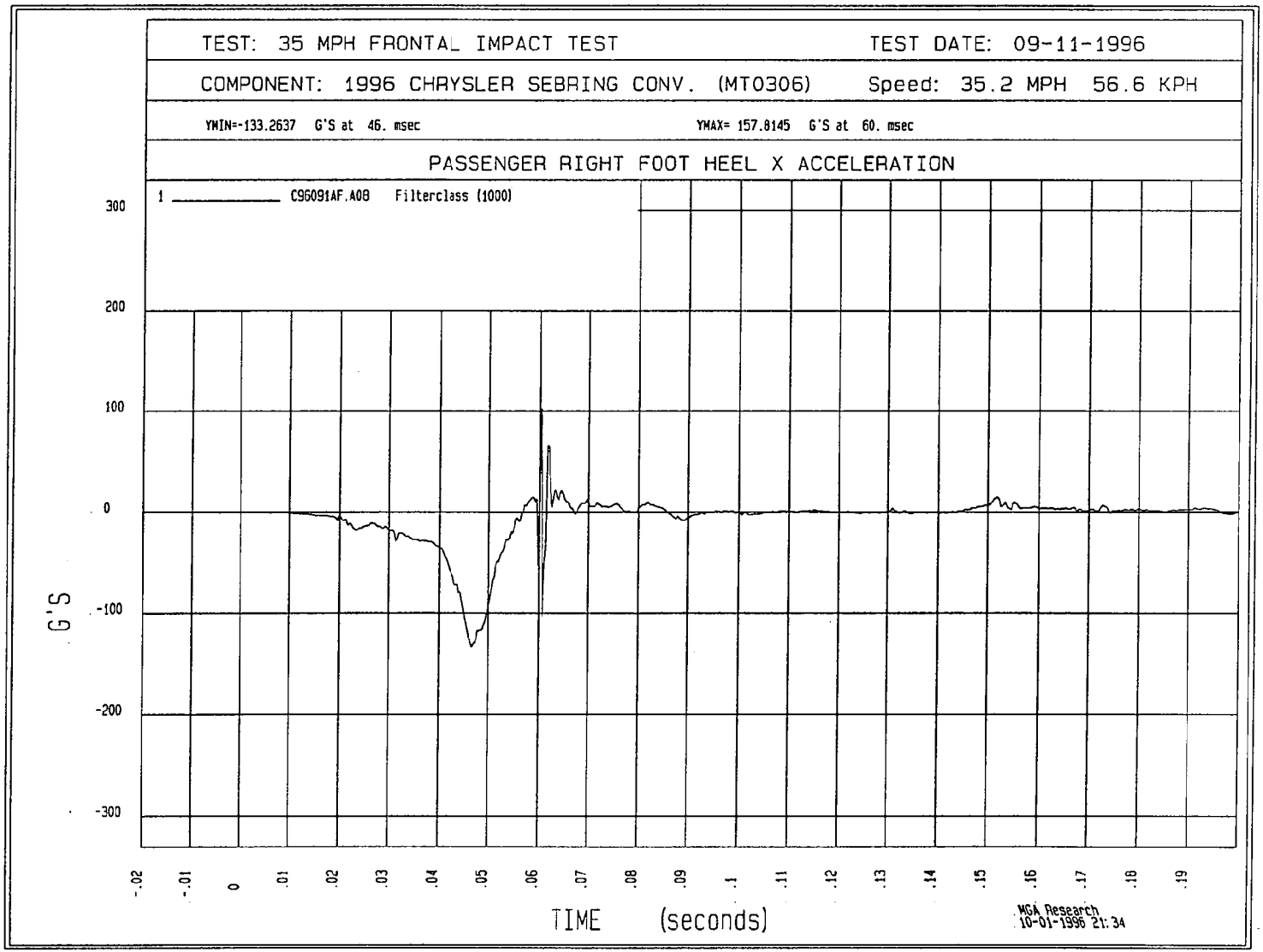

TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-191.48 G'S at 55. msec
YMAX= 281.6511 G'S at 58. msec
PASSENGER LEFT FOOT BALL Z ACCELERATION
1 C96091AF.A10 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
10-01-1996 21:34

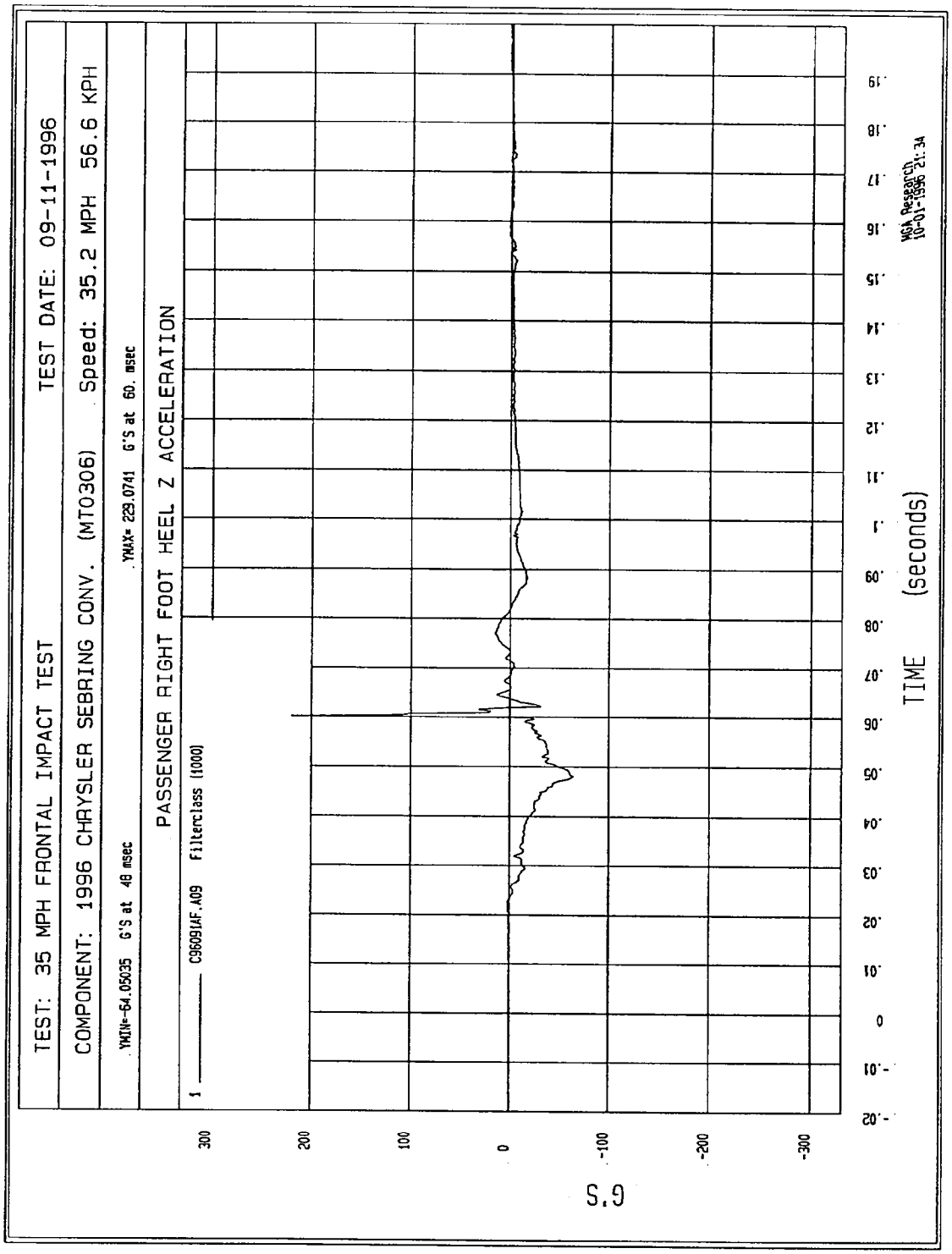
PASSENGER LEFT FOOT HEEL X ACCELERATION VS. TIME

NO VALID DATA COLLECTED


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-61.62944 G'S at 59 msec
YMAX= 308.1359 G'S at 55. msec
PASSENGER LEFT FOOT HEEL Z ACCELERATION
1 C9609IAF.A12 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
10-01-1998 21:34


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-128.4953 G'S at 48 msec
YMAX= 319.2252 G'S at 60. msec
PASSENGER RIGHT FOOT BALL Z ACCELERATION
1 C96091AF.A07 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
10-01-1996 21:34


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-133.2637 G'S at 46. msec
YMAX= 157.8145 G'S at 60. msec
PASSENGER RIGHT FOOT HEEL X ACCELERATION
1 C96091AF.A08 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
10-01-1996 21:34


TEST: 35 MPH FRONTAL IMPACT TEST
TEST DATE: 09-11-1996
COMPONENT: 1996 CHRYSLER SEBRING CONV. (MT0306)
Speed: 35.2 MPH 56.6 KPH
YMIN=-64.05035 G'S at 48 msec
YMAX= 229.0741 G'S at 60. msec
PASSENGER RIGHT FOOT HEEL Z ACCELERATION
1 C9609IAF.A09 Filterclass (1000)
300
200
100
0
-100
-200
-300
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (seconds)
MGA Research
10-01-1996 21:34

# APPENDIX C

## Dummy Configuration & Performance Verification Data

HYBRID III DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 037 DUMMY CALIBRATION BY: Al Chalmers

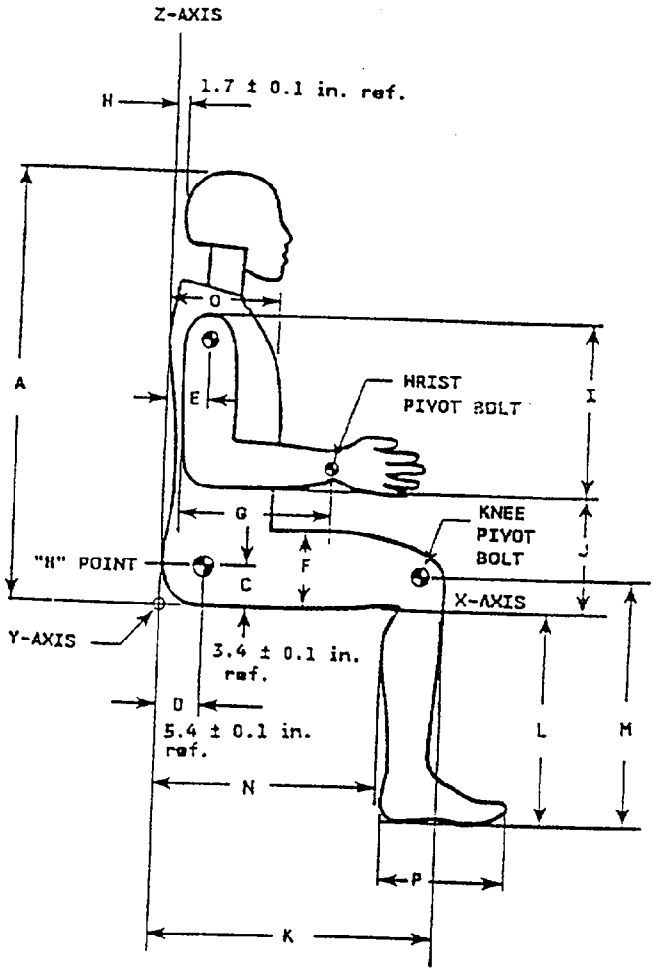
I. CONFIGURATION VERIFICATION DATA

DATE OF VERIFICATION: 5-8-96

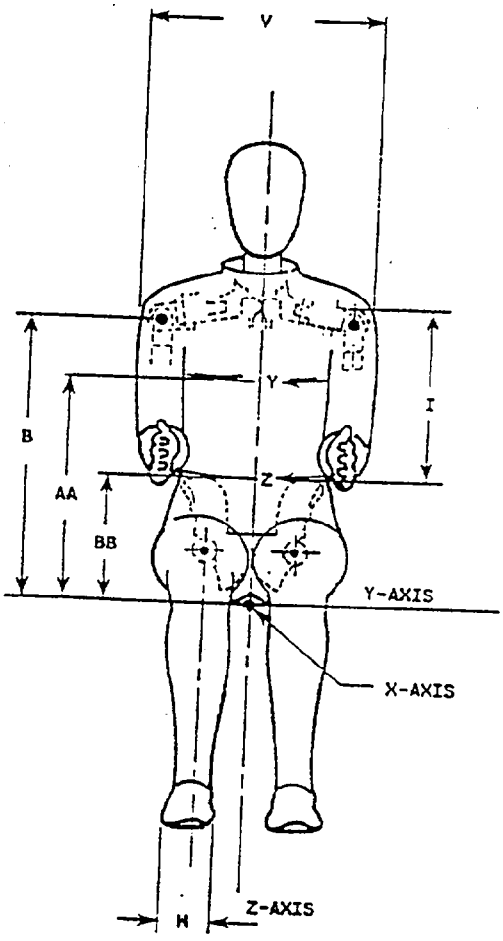
| DESCRIPTION | SPECIFICATION (inches) | ACTUAL MEASUREMENT (inches) |
|---|---|---|
| A - Total Sitting Height | 34.6 - 35.0 | 34.9 |
| B - Shoulder Pivot Height | 19.9 - 20.5 | 20.5 |
| C - "H" Point Height | 3.3 - 3.5 | 3.5 |
| D - "H" Point from Seat Back | 5.3 - 5.5 | 5.5 |
| E - Shoulder Pivot From Backline | 3.3 - 3.7 | 3.5 |
| F - Thigh Clearance | 5.5 - 6.1 | 6.1 |
| G - Back of Elbow to Wrist Pivot | 11.4 - 12.0 | 11.5 |
| H - Skull Cap Skin to Backline | 1.6 - 1.8 | 1.7 |
| I - Shoulder - Elbow Length | 13.0 - 13.6 | 13.0 |
| J - Elbow Rest Height | 7.5 - 8.3 | 8.0 |
| K - Buttock to Knee Length | 22.8 - 23.8 | 23.5 |
| L - Popliteal Height | 16.9 - 17.9 | 17.0 |
| M - Knee Pivot Height | 19.1 - 19.9 | 19.5 |
| N - Buttock Popliteal Length | 17.8 - 18.8 | 18.5 |
| O - Chest Depth at 3rd Rib | 8.4 - 9.0 | 8.8 |
| P - Foot Length | 9.9 - 10.5 | 10.3 |
| V - Shoulder Breadth | 16.6 - 17.2 | 16.8 |
| W - Foot Breadth | 3.6 - 4.2 | 4.0 |
| Y - Chest Circumference | 38.2 - 39.4 | 39.0 |
| Z - Waist Circumference | 32.9 - 34.1 | 33.5 |

Note: (See next page for external dimensions)

# HYBRID III EXTERNAL DIMENSIONS




SIDE VIEW




FRONT VIEW

Note: Figure is referenced to the erect seated position. The curved lumbar does not allow the hybrid III to be positioned in a perfect erect attitude.

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET

DUMMY NO.: 037 DUMMY CALIBRATION BY: Al Chalmers

VERIFICATION DATE: 5-8-96

VERIFICATION LABORATORY TEMPERATURE (66° - 78°): 70°

1.0 HEAD DROP TEST

| | SPECIFICATION | MEASUREMENT |
|---|---|---|
| Peak Resultant Acceleration | 225 - 275 G | 256 |
| Peak Lateral Acceleration | 15 G. MAX | 12 |
| Is Acceleration Curve Unimodel | within 10% of peak | Yes |

2.0 NECK FLEXION TEST

| | | SPECIFICATION | MEASUREMENT |
|---|---|---|---|
| Pendulum Speed | | 22.6 - 23.4 FT/SEC | 23.0 |
| Pendulum Deceleration | 10 MS | 22.50 - 27.50 G | 23.07 |
| | 20 MS | 17.60 - 22.60 G | 21.27 |
| | 30 MS | 12.50 - 18.50 G | 16.77 |
| Max. Pendulum G Above 30 MS | | 29.0 G MAX | 16.2 |
| Deceleration - Time Curve Decay Time to 5 G | | 34 - 42 MS | 38 |
| D Plane Rotation | MAX | 64 - 78 DEG. | 71 |
| | TIME | 57 - 64 MS | 59 |
| Rotation Angle - Time Curve Decay Time to Zero | | 113 - 128 MS | 114 |
| Moment About Occipital Condyle | MIN. | 65 - 80 FT.LBS | 66 |
| | TIME | 47 - 58 MS | 50 |
| Positive Moment - Time Curve Decay Time to Zero | | 97 - 107 MS | 103 |

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

3.0 NECK EXTENSION TEST

| | | SPECIFICATION | MEASUREMENT |
|---|---|---|---|
| Pendulum Speed | | 19.50 - 20.30 F/S | 20.00 |
| Pendulum Deceleration | 10 MS | 17.20 - 21.20 G | 17.76 |
| | 20 MS | 14.00 - 19.00 G | 16.22 |
| | 30 MS | 11.00 - 16.00 G | 13.12 |
| Max. Pendulum G Above 30 MS | | 22 G Max | 13 |
| Deceleration - Time Curve Decay Time to 5 G | | 38 - 46 MS | 41 |
| D Plane Rotation | MAX | 81 - 106 DEG. | 101 |
| | TIME | 72 - 82 MS | 78 |
| Rotation Angle - Time Curve Decay Time to Zero | | 147 - 174 MS | 158 |
| Moment About Occipital Condyle | MIN. | -59.0/-39.0 FT LBS | -45.0 |
| | TIME | 65 - 79 MS | 73 |
| Positive Moment - Time Curve Decay Time to Zero | | 120 - 148 MS | 142 |

4.0 CHEST IMPACT TESTS

| | SPECIFICATION | MEASUREMENT |
|---|---|---|
| Probe Speed | 21.6 to 22.4 F/S | 21.8 |
| Peak Deflection | 2.50 to 2.86 IN. | 2.50 |
| Peak Resistive Force | 1160 to 1325 LBS. | 1312 |
| Internal Hysteresis | 69 to 85% | 70 |

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

5.0 KNEE IMPACT TESTS

| LEFT KNEE | SPECIFICATION | MEASUREMENT |
|---|---|---|
| Probe Speed | 6.8 to 7.0 F/S | 7.0 |
| Maximum Force | 1060 - 1300 LBS. | 1175 |

| RIGHT KNEE | SPECIFICATION | MEASUREMENT |
|---|---|---|
| Probe Speed | 6.8 to 7.0 F/S | 7.0 |
| Maximum Force | 1060 - 1300 LBS. | 1083 |

HYBRID III DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 036 DUMMY CALIBRATION BY: Al Chalmers

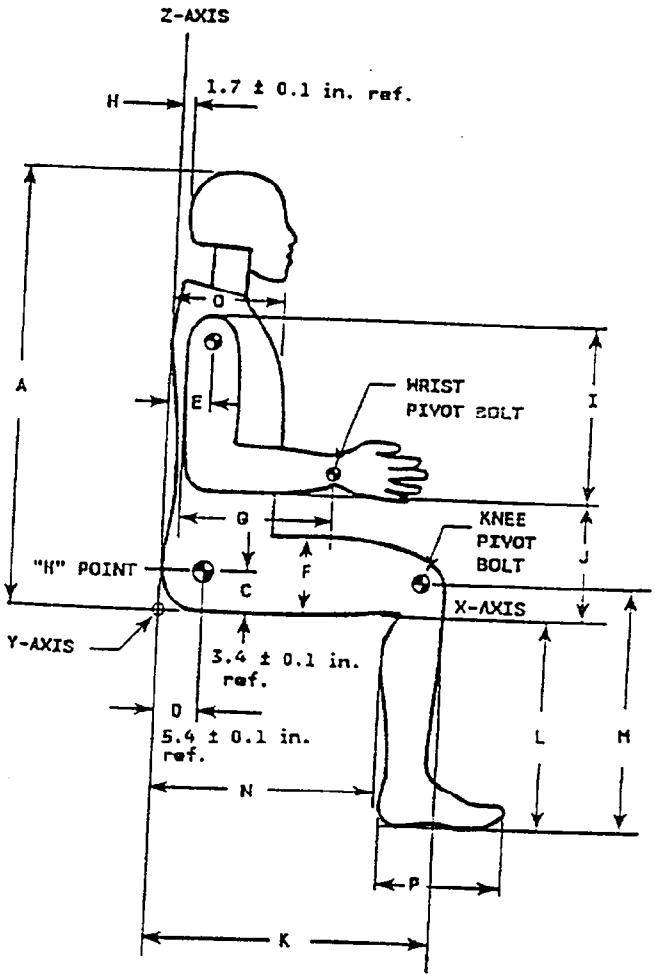
I. CONFIGURATION VERIFICATION DATA

DATE OF VERIFICATION: 5-30-96

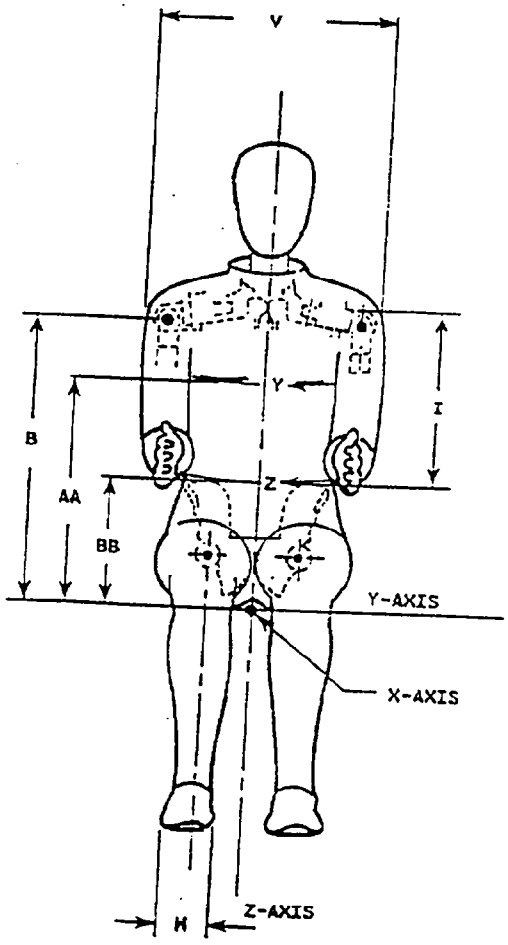
| DESCRIPTION | SPECIFICATION (Inches) | ACTUAL MEASUREMENT (inches) |
|---|---|---|
| A - Total Sitting Height | 34.6 - 35.0 | 34.8 |
| B - Shoulder Pivot Height | 19.9 - 20.5 | 20.5 |
| C - "H" Point Height | 3.3 - 3.5 | 3.5 |
| D - "H" Point from Seat Back | 5.3 - 5.5 | 5.5 |
| E - Shoulder Pivot From Backline | 3.3 - 3.7 | 3.5 |
| F - Thigh Clearance | 5.5 - 6.1 | 6.1 |
| G - Back of Elbow to Wrist Pivot | 11.4 - 12.0 | 11.5 |
| H - Skull Cap Skin to Backline | 1.6 - 1.8 | 1.7 |
| I - Shoulder Elbow Length | 13.0 - 13.6 | 13.0 |
| J - Elbow Rest Height | 7.5 - 8.3 | 8.0 |
| K - Buttock Knee Length | 22.8 - 23.8 | 23.5 |
| L - Popliteal Height | 16.9 - 17.9 | 17.0 |
| M - Knee Pivot Height | 19.1 - 19.9 | 19.5 |
| N - Buttock Popliteal Length | 17.8 - 18.8 | 18.5 |
| O - Chest Depth at 3rd Rib | 8.4 - 9.0 | 8.8 |
| P - Foot Length | 9.9 - 10.5 | 10.3 |
| V - Shoulder Breadth | 16.6 - 17.2 | 16.8 |
| W - Foot Breadth | 3.5 - 4.2 | 4.0 |
| Y - Chest Circumference | 38.2 - 39.4 | 39.0 |
| Z - Waist Circumference | 32.9 - 34.1 | 33.5 |

Note: (See next page for external dimensions)

HYBRID III EXTERNAL DIMENSIONS




SIDE VIEW




FRONT VIEW

Note: Figure is referenced to the erect seated position. The curved lumbar does not allow the hybrid III to be positioned in a perfect erect attitude.

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

DUMMY NO.: 036 DUMMY CALIBRATION BY: Al Chalmers

VERIFICATION DATE: 5-30-96

VERIFICATION LABORATORY TEMPERATURE (66° - 78°): 70°

1.0 HEAD DROP TEST

| | SPECIFICATION | MEASUREMENT |
|---|---|---|
| Peak Resultant Acceleration | 225 - 275 G | 260 |
| Peak Lateral Acceleration | 15 G. MAX | 7 |
| Is Acceleration Curve Unimodal | within 10% of peak | Yes |

2.0 NECK FLEXION TEST

| | | SPECIFICATION | MEASUREMENT |
|---|---|---|---|
| Pendulum Speed | | 22.6 - 23.4 FT/SEC | 23.0 |
| Pendulum Deceleration | 10 MS | 22.50 - 27.50 G | 24.20 |
| | 20 MS | 17.60 - 22.60 G | 21.54 |
| | 30 MS | 12.50 - 18.50 G | 16.74 |
| Max. Pendulum G Above 30 MS | | 29.0 G MAX | 16.7 |
| Deceleration - Time Curve Decay Time to 5 G | | 34 - 42 MS | 36 |
| D Plane Rotation | MAX | 64 - 78 DEG. | 77 |
| | TIME | 57 - 64 MS | 58 |
| Rotation Angle - Time Curve Decay Time to Zero | | 113 - 128 MS | 113 |
| Moment About Occipital Condyle | MIN. | 65 - 80 FT.LBS | 80 |
| | TIME | 47 - 58 MS | 48 |
| Positive Moment - Time Curve Decay Time to Zero | | 97 - 107 MS | 100 |

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

3.0 NECK EXTENSION TEST

| | | SPECIFICATION | MEASUREMENT |
|---|---|---|---|
| Pendulum Speed | | 19.50 - 20.30 F/S | 20.00 |
| Pendulum Deceleration | 10 MS | 17.20 - 21.20 G | 18.83 |
| | 20 MS | 14.00 - 19.00 G | 17.23 |
| | 30 MS | 11.00 - 16.00 G | 13.76 |
| 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 | 76 |
| Rotation Angle - Time Curve Decay Time to Zero | | 147 - 174 MS | 158 |
| Moment About Occipital Condyle | MIN. | -59.0/-39.0 FT LBS | -49.9 |
| | TIME | 65 - 79 MS | 72 |
| Positive Moment - Time Curve Decay Time to Zero | | 120 - 148 MS | 143 |

4.0 CHEST IMPACT TESTS

| | SPECIFICATION | MEASUREMENT |
|---|---|---|
| Probe Speed | 21.6 to 22.4 F/S | 21.8 |
| Peak Deflection | 2.50 to 2.86 IN. | 2.64 |
| Peak Resistive Force | 1160 to 1325 LBS. | 1280 |
| Internal Hysteresis | 69 to 85% | 69 |

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

5.0 KNEE IMPACT TESTS

| LEFT KNEE | SPECIFICATION | MEASUREMENT |
|---|---|---|
| Probe Speed | 6.8 to 7.0 F/S | 6.9 |
| Maximum Force | 1060 - 1300 LBS. | 1161 |

| RIGHT KNEE | SPECIFICATION | MEASUREMENT |
|---|---|---|
| Probe Speed | 6.8 to 7.0 F/S | 6.9 |
| Maximum Force | 1060 - 1300 LBS. | 1127 |

# APPENDIX D

Dummy, Vehicle and Laboratory Calibration Data

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 037

| | DRIVER | | |
|---|---|---|---|
| | SERIAL NO. | MANUFACTURER | CALIBRATION DATE |
| Head X | ACCY6 | Endevco | 6/07/96 |
| Head Y | ACCH1 | Endevco | 6/07/96 |
| Head Z | AAMW5 | Endevco | 6/07/96 |
| Head X Redundant | AJ902 | Endevco | 6/07/96 |
| Head Y Redundant | AH1E2 | Endevco | 6/07/96 |
| Head Z Redundant | AJ7K3 | Endevco | 6/07/96 |
| Chest X | ACCY1 | Endevco | 6/06/96 |
| Chest Y | ACCC8 | Endevco | 6/06/96 |
| Chest Z | ACCT7 | Endevco | 6/06/96 |
| Chest X Redundant | AJ904 | Endevco | 6/06/96 |
| Chest Y Redundant | AJ9f3 | Endevco | 6/06/96 |
| Chest Z Redundant | AJ909 | Endevco | 6/06/96 |
| Right Femur Load Cell | 261 | Denton | 8/28/96 |
| Left Femur Load Cell | 262 | Denton | 8/28/96 |
| Pelvis X | ALDY8 | Endevco | 6/06/96 |
| Pelvis Y | ALEK9 | Endevco | 6/06/96 |
| Pelvis Z | ALE80 | Endevco | 6/06/96 |

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 037

| | DRIVER | | |
|---|---|---|---|
| | SERIAL NO. | MANUFACTURER | CALIBRATION DATE |
| Neck Load Cell X | 443 | Denton | 6/18/96 |
| Neck Load Cell Y | 443 | Denton | 6/18/96 |
| Neck Load Cell Z | 443 | Denton | 6/18/96 |
| Neck Moment X | 443 | Denton | 6/18/96 |
| Neck Moment Y | 443 | Denton | 6/18/96 |
| Neck Moment Z | 443 | Denton | 6/18/96 |
| Chest Deflection Gauge | 037 | Servo | 7/10/96 |
| Lap Belt Load Cell | 212 | GSE | 6/18/96 |
| Torso Belt Load Cell | 211 | GSE | 6/18/96 |

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 037

| | DRIVER | | |
|---|---|---|---|
| | SERIAL NO. | MANUFACTURER | CALIBRATION DATE |
| Upper Right Tibia Moment X | 436 | Denton | 6/18/96 |
| Upper Right Tibia Moment Y | 436 | Denton | 6/18/96 |
| Lower Right Tibia Moment Y | 424 | Denton | 6/14/96 |
| Lower Right Tibia Force X | 424 | Denton | 6/14/96 |
| Lower Right Tibia Force Z | 424 | Denton | 6/14/96 |
| Upper Left Tibia Moment X | 438 | Denton | 6/18/96 |
| Upper Left Tibia Moment Y | 438 | Denton | 6/18/96 |
| Lower Left Tibia Moment Y | 426 | Denton | 6/14/96 |
| Lower Left Tibia Force X | 426 | Denton | 6/14/96 |
| Lower Left Tibia Force Z | 426 | Denton | 6/14/96 |
| Right Foot Ball Z | AP042 | Endevco | 6/06/96 |
| Right Foot Heel X | AP2C4 | Endevco | 6/06/96 |
| Right Foot Heel Z | AP120 | Endevco | 6/06/96 |
| Left Foot Ball Z | APOE1 | Endevco | 6/06/96 |
| Left Foot Heel X | AHY99 | Endevco | 6/06/96 |
| Left Foot Heel Z | AN8M6 | Endevco | 6/06/96 |

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 036

| | PASSENGER | | |
|---|---|---|---|
| | SERIAL NO. | MANUFACTURER | CALIBRATION DATE |
| Head X | AAMN8 | Endevco | 6/06/96 |
| Head Y | ACCG1 | Endevco | 6/06/96 |
| Head Z | ACCW9 | Endevco | 6/06/96 |
| Head X Redundant | AJ621 | Endevco | 6/06/96 |
| Head Y Redundant | AJ619 | Endevco | 6/06/96 |
| Head Z Redundant | AHY54 | Endevco | 6/06/96 |
| Chest X | ACC78 | Endevco | 6/06/96 |
| Chest Y | ACCE6 | Endevco | 6/06/96 |
| Chest Z | ACCY3 | Endevco | 6/06/96 |
| Chest X Redundant | AJ9J7 | Endevco | 6/06/96 |
| Chest Y Redundant | AJ7A2 | Endevco | 6/06/96 |
| Chest Z Redundant | AJ819 | Endevco | 6/06/96 |
| Right Femur Load Cell | 259 | Denton | 8/28/96 |
| Left Femur Load Cell | 260 | Denton | 8/28/96 |
| Pelvis X | ALB87 | Endevco | 6/06/96 |
| Pelvis Y | AGNB3 | Endevco | 6/06/96 |
| Pelvis Z | AJ834 | Endevco | 6/06/96 |

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 036

| | PASSENGER | | |
|---|---|---|---|
| | SERIAL NO. | MANUFACTURER | CALIBRATION DATE |
| Neck Load Cell X | 442 | Denton | 6/18/96 |
| Neck Load Cell Y | 442 | Denton | 6/18/96 |
| Neck Load Cell Z | 442 | Denton | 6/18/96 |
| Neck Moment X | 442 | Denton | 6/18/96 |
| Neck Moment Y | 442 | Denton | 6/18/96 |
| Neck Moment Z | 442 | Denton | 6/18/96 |
| Chest Deflection Gauge | 036 | Servo | 5/08/96 |
| Lap Belt Load Cell | 657 | Lebow | 6/18/96 |
| Torso Belt Load Cell | 624 | Lebow | 6/18/96 |

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 036

| | PASSENGER | | |
|---|---|---|---|
| | SERIAL NO. | MANUFACTURER | CALIBRATION DATE |
| Upper Right Tibia Moment X | 040 | Denton | 4/16/96 |
| Upper Right Tibia Moment Y | 040 | Denton | 4/16/96 |
| Lower Right Tibia Moment Y | 034 | Denton | 4/17/96 |
| Lower Right Tibia Force X | 034 | Denton | 4/17/96 |
| Lower Right Tibia Force Z | 034 | Denton | 4/17/96 |
| Upper Left Tibia Moment X | 023 | Denton | 4/16/96 |
| Upper Left Tibia Moment Y | 023 | Denton | 4/16/96 |
| Lower Left Tibia Moment Y | 019 | Denton | 4/17/96 |
| Lower Left Tibia Force X | 019 | Denton | 4/17/96 |
| Lower Left Tibia Force Z | 019 | Denton | 4/17/96 |
| Right Foot Ball Z | AP122 | Endevco | 6/6/96 |
| Right Foot Heel X | AP0T3 | Endevco | 6/06/96 |
| Right Foot Heel Z | AP0P6 | Endevco | 6/06/96 |
| Left Foot Ball Z | AMT88 | Endevco | 6/06/96 |
| Left Foot Heel X | AP1Y1 | Endevco | 6/06/96 |
| Left Foot Heel Z | ACC81 | Endevco | 6/06/96 |

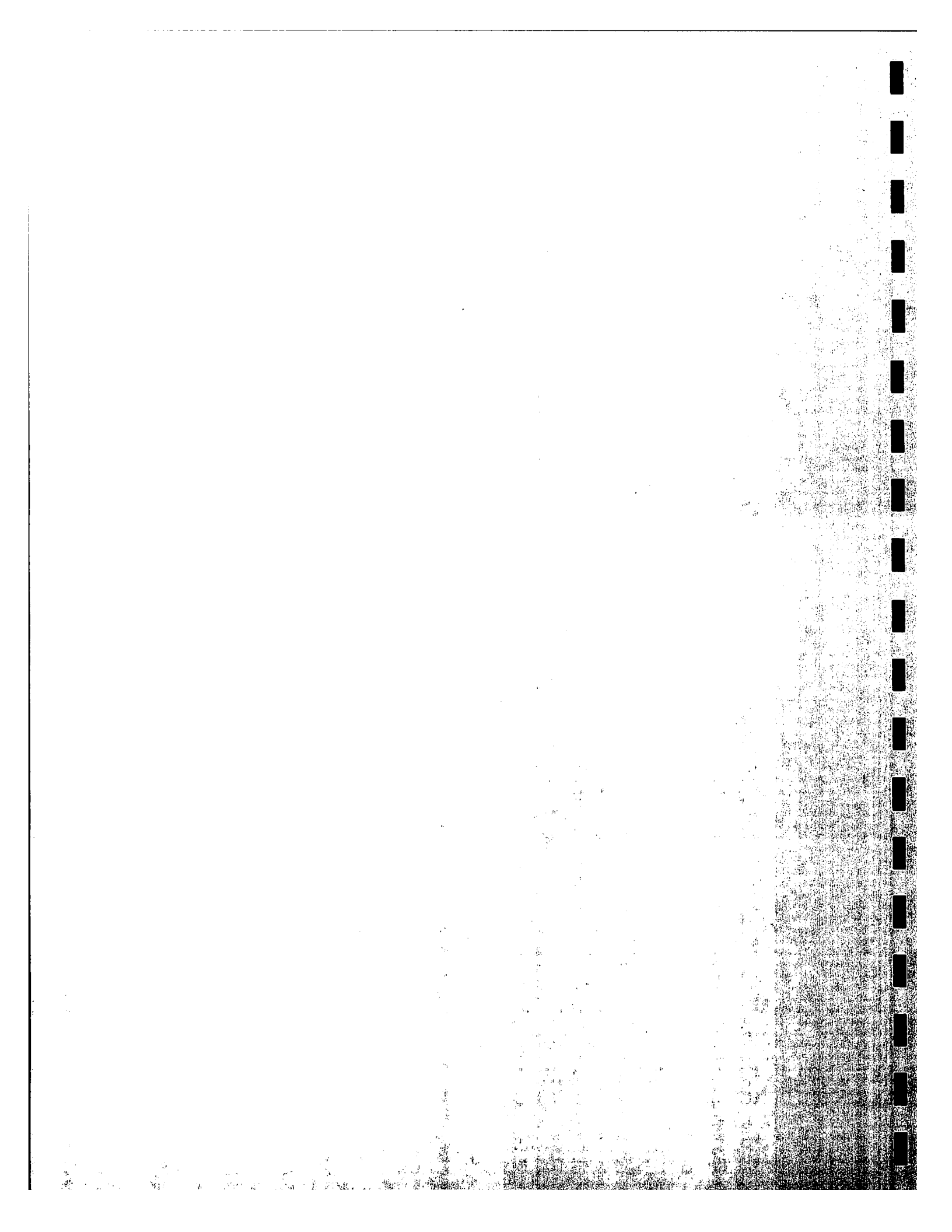
DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

| | VEHICLE ACCELEROMETERS | | |
|---|---|---|---|
| | SERIAL NO. | MANUFACTURER | CALIBRATION DATE |
| Left Rear Seat Crossmember X | J23-E02 | Entran | 1/22/96 |
| Right Rear Seat Crossmember X | J10-E16 | Entran | 1/22/96 |
| Top of Engine Block X | H07-A06 | Entran | 10/23/95 |
| Bottom of Engine X | J10-E04 | Entran | 1/22/96 |
| Left Brake Caliper X | H16-X15 | Entran | 1/31/96 |
| Right Brake Caliper X | L14-D14 | Entran | 10/24/95 |
| Instrument Panel X | L14-D10 | Entran | 10/28/95 |
| Redundant Left Rear Seat Crossmember X | J06-D20 | Entran | 1/22/96 |
| Redundant Right Rear Seat Crossmember X | L15-G03 | Entran | 2/02/96 |

| | LABORATORY INSTRUMENTS | | |
|---|---|---|---|
| | SERIAL NO. | MANUFACTURER | CALIBRATION DATE |
| Neck Bending Pendulum Accelerometer | AH5N9 | Endevco | 5/08/95 |
| Neck Bending Head Rotary Potentiometer | 018 | Spectrol | 3/13/95 |
| Neck Bending Pendulum Rotary Potentiometer | 019 | Spectrol | 3/13/95 |
| Chest Probe Accelerometer | AN8A4 | Endevco | 6/12/95 |
| Knee Impact Accelerometer | MGA001 | Entran | 4/21/95 |

# APPENDIX E

## Vehicle Owner's Occupant Restraint System Instructions



## OCCUPANT RESTRAINTS

One of the most important safety features in your vehicle is the restraint system. This system includes the front and rear seat belts, and airbags for the driver and right front passenger. Your seat belts also can be used to hold infant and child restraint systems if you will be carrying children too small for adult-size belts.

Please pay careful attention to the information in this section. It tells you how to use your restraint system properly to keep you and your passengers as safe as possible.

**WARNING:**

**In a collision, you and your passengers can suffer much greater injuries if you are not properly buckled up. You can strike the interior of your vehicle or other passengers, or you can be thrown out of the vehicle. Always be sure you and others in your vehicle are buckled up properly.**

Buckle up even though you are an excellent driver. Even on short trips. Someone on the road may be a poor driver and cause a collision which includes you. And this can happen far away from home or on your own street.

Research has shown that seat belts save lives. And they can reduce the seriousness of injuries in a collision. Some of the worst injuries happen when people are thrown from the vehicle. Seat belts provide protection from that, and they reduce the risk of injury caused by striking the inside of the vehicle.**Everyone** in a motor vehicle needs to be buckled up **all the time.**

**WARNING:**

**The convertible top does not provide the structural protection that a reinforced metal roof does, and the fabric top cannot be expected to prevent the ejection of the occupants of a vehicle in a collision. Therefore, it is important that all occupants wear their seat belts at all times when riding in a convertible. Studies have shown that it is generally safer to remain inside a vehicle during a collision, than to be ejected from the vehicle.**

### Unibelts

The seats in your vehicle are equipped with Unibelts.

Each unibelt is a combined lap/shoulder belt system. The belt webbing retractor will lock only during very sudden stops or impacts. This feature allows the shoulder part of the belt to move freely with you under normal conditions. But in a collision, the belt will lock and reduce the risk of your striking the inside of the vehicle or being thrown out.

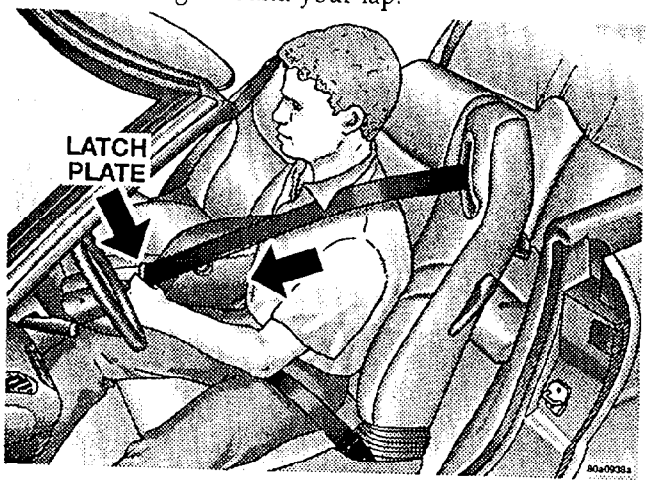
**WARNING:**

- **Wearing a seat belt incorrectly is dangerous. Seat belts are designed to go around the large bones of your body. These are the strongest parts of your body and can take the forces of a collision the best.**
- **Wearing your belt in the wrong place could make your injuries in a collision much worse. You might suffer internal injuries, or you could even slide out of part of the belt. Follow these instructions to wear your seat belt safely and to keep your passengers safe, too.**
- **Belting two people into one seat belt can lead to greater injury. People belted together can crash into one another in an accident, hurting one another badly. Never use a unibelt or a lap belt for more than one person, no matter what their size.**

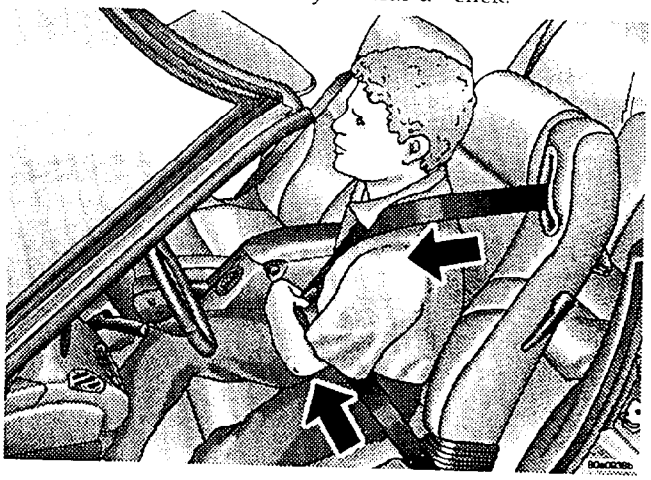
**Unibelt Operating Instructions**

1. Enter the vehicle and close the door. Sit back and adjust the seat.

2. The seat belt latch plate is on the seat over your left shoulder. Grasp the latch plate and pull out the belt. Slide the latch plate up the webbing as far as necessary to make the belt go around your lap.



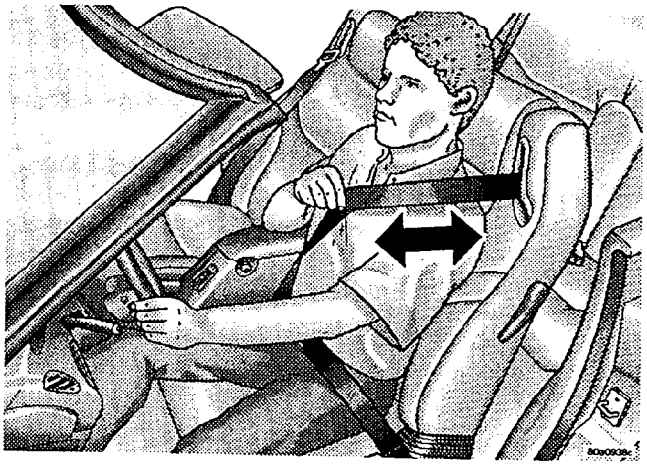

3. When the belt is long enough to fit, insert the latch plate into the buckle until you hear a "click."



**WARNING!**

- **A belt that is buckled into the wrong buckle will not protect you properly. The lap portion could ride too high on your body, possibly causing internal injuries. Always buckle your belt into the buckle nearest you.**
- **A belt that is too loose will not protect you as well. In a sudden stop you could move too far forward, increasing the possibility of injury. Wear your seat belt snugly.**
- **A belt that is worn under your arm is very dangerous. Your body could fall into the inside surfaces of the vehicle in a collision, increasing head and neck injury. And a belt worn under the arm can cause internal injuries. Ribs aren't as strong as shoulder bones. Wear the belt over your shoulder so that your strongest bones will take the force in a collision.**

4. Position the lap belt across your thighs, below your abdomen. To remove slack in the lap belt portion, pull up a bit on the shoulder belt, as shown. To loosen the lap belt if it is too tight, tilt the latch plate and pull on the lap belt. A snug belt reduces the risk of sliding under the belt in a collision.



**WARNING!**

- A lap belt worn too high can increase the risk of internal injury in a collision. The belt forces won't be at the strong hip and pelvic bones, but across your abdomen. Always wear the lap belt as low as possible and keep it snug.
- A twisted belt can't do its job as well. In a collision it could even cut into you. Be sure the belt is straight. If you can't straighten a belt in your vehicle, take it to your dealer and have it fixed.

5. Position the shoulder belt on your chest so that it is comfortable and not resting on your neck. The retractor will withdraw any slack in the belt.

6. To release the belt, push the red button marked PRESS on the buckle. The belt will automatically retract to its stowed position. If necessary, slide the latch plate down the webbing to allow it to retract fully.

**WARNING!**

A frayed or torn belt could rip apart in a collision and leave you with no protection. Inspect the belt system periodically, checking for cuts, frays, or loose parts. Damaged parts must be replaced immediately. Do not disassemble or modify the system. Seat belt assemblies must be replaced after an accident if they have been damaged (bent retractor, torn webbing, etc).

### Seat Belts and Pregnant Women

We recommend that pregnant women use the seat belts throughout their pregnancy. Keeping the mother safe is the best way to keep the baby safe.

Pregnant women should wear the lap part of the belt across the thighs and as snug across the hips as possible. Keep the belt low so that it does not come across the abdomen. That way the strong bones of the hips will take the force if there is a collision.

### Seat Belt Extender

Using a seat belt extender when not needed can increase the risk of injury in a collision. Only use the extender when a lap belt is not long enough when it is worn low and snug, and in the recommended seating positions. Remove and stow the seat belt extender when it is not needed.

### Child Restraint

Everyone in your vehicle needs to be buckled up all the time, babies and children, too.

**WARNING!**

In a collision, an unrestrained child, even a tiny baby, can become a missile inside the vehicle. The force required to hold even an infant on your lap could become so great that you could not hold the child, no matter how strong you are. The child and others could be badly injured. Any child riding in your vehicle should be in a proper restraint for the child's size. All states and Canadian provinces require small children to ride in proper restraint systems. This is the law, and you can be prosecuted for ignoring it.

### Infants and Small Children

There are different sizes and types of restraints for children from newborn size to the bigger child almost large enough for an adult safety belt. Use the restraint that is correct for your child.

Two different child restraint systems are generally available:

- The infant carrier for babies weighing up to 20 lbs. (9kg.)
- The child seat for small children over 20 lbs.

In addition, some manufacturers make systems that can be first used as an infant carrier, and then converted to a child seat as the child grows.

Here are some tips on getting the most out of your child restraint:

- Before buying any restraint system, make sure that it has a label certifying that it meets Motor Vehicle Safety Standard 213. Chrysler also recommends that before you buy a child restraint, you try it in the vehicle seats where you will use it.
- The restraint must be appropriate for your child's weight and height. Check the label on the restraint for this too.

**WARNING!**

- **A rearward facing infant restraint should only be used in a rear seat. A rearward facing infant restraint in the front seat may be struck by a deploying passenger airbag which may cause severe or fatal injury to the infant.**
- **Improper installation can lead to failure of an infant or child restraint. It could come loose in a collision. The child could be badly injured or killed. Follow the manufacturer's directions exactly when installing an infant or child restraint.**

- If possible, install the restraint in the rear seat. According to accident statistics, children are safer when properly restrained in the rear seats than in the front.
- Carefully follow the instructions that come with the restraint. If you install the restraint improperly, it may not work when you need it.
- Infant and child restraints are secured in the vehicle seats by the lap belt or the lap part of the lap/shoulder belt. In the rear seats, you may have trouble tightening the belt on the child restraint because the buckle or latch plate interferes with the belt path opening on the restraint. Disconnect the latch plate from the buckle and twist the short buckle-end belt several turns to shorten it. Reassemble the latch plate to the buckle with the release button facing out. In the front seat, move the seat forward to reposition the buckle against the side of the child restraint. In the center rear seat if the belt still can't be tightened, or if by pulling and pushing on the restraint loosens the belt, you may need to do something more. Disconnect the latch plate from the buckle, turn it over, and reconnect it to the buckle. If you still can't make the child restraint secure, try a different seating position.
- Some child seat manufacturers recommend the use of a top anchorage (tether) strap in addition to the lap belt. Your vehicle has tether strap anchorages behind the rear seating positions for use with these child seats. Your dealer can provide you with anchorage hardware and installation instructions.
- Buckle the child into the seat exactly as the seat manufacturer's directions tell you. The cinching latch plate will keep the belt tight.
- When your infant carrier or child seat is not in use, secure it with the seat belt or remove it from the vehicle. Don't leave it loose in the vehicle. In a sudden stop or collision, it could strike occupants and injure them.

### Children Too Large For Child Seats

Children who are too large for child seats and who can sit upright by themselves should use the available lap/shoulder belts for best protection.

Make sure that the child is seated upright in the seat.

The lap belt should be fastened low on the hips and as snug as possible.

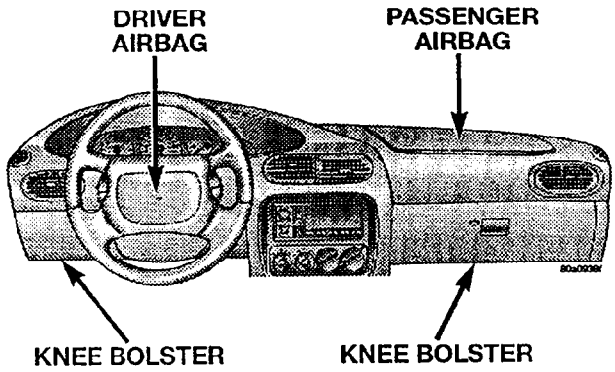
Check belt fit periodically. A child's squirming or slouching can move the belt out of position.

If the shoulder belt contacts the face or neck, move the child closer to the middle of the vehicle. If this doesn't solve the problem, move the child to the center rear seating position and use the lap belt.

Booster seats that may help overcome this problem are also available for use with lap/shoulder belts. Before buying a booster seat, make sure that it has a label certifying that it meets applicable Motor Vehicle Safety Standards. Make sure that it is satisfactory for use in this vehicle.

### Driver and Right Front Passenger Supplemental Restraint System (SRS) - Airbag

This vehicle has airbags for the driver and right front passenger as a supplement to the seat belt restraint systems. The driver's airbag is mounted in the steering wheel. The passenger side airbag is mounted in the instrument panel, above the glove compartment, under a cover marked SRS/AIRBAG. These airbags inflate in higher speed impacts. They work with the instrument panel knee bolsters and the seat belts to provide improved protection for the driver and right front passenger.




**WARNING!**

- **Relying on the airbags alone could lead to more severe injuries in a collision. The airbags work with your seat belt to restrain you properly. In some collisions the airbags won't deploy at all. Wear your seat belts even though you have airbags.**
- **Being too close to the steering wheel or instrument panel during airbag deployment could cause serious injury. Airbags need room to inflate. Sit back, comfortably extending your arms to reach the steering wheel or instrument panel.**

The seat belts are designed to protect you in many types of collisions. The airbags deploy only in frontal collisions and will not deploy in collisions at slow speed. But even in collisions where the airbags work, you need the seat belts to keep you in the right position for the airbags to protect you properly.

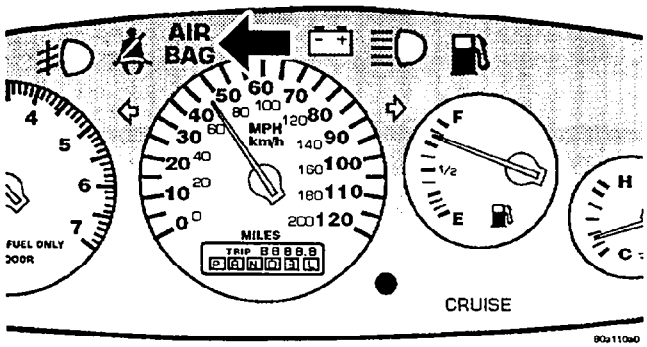
The airbag system consists of the following:

- Airbag Electronic Control Module (AECM)
- AIRBAG Readiness Light
- Driver and Passenger Airbag/Inflator Units
- Unique Steering Wheel and Column
- Unique Instrument Panel
- Interconnecting Wiring
- Knee Impact Bolster

How The Airbag System Works

- **The Airbag Electronic Control Module (AECM)** in the occupant compartment determines if a frontal impact is severe enough to require the airbag. The AECM will not detect side, roll over, or rear impacts. The AECM is connected to the Airbag/Inflator unit.

- The AECM monitors the readiness of the electronic parts of the system whenever the ignition switch is in the START or RUN positions. These include all of the items listed previously except the knee bolster, instrument panel, and steering column. The AECM also turns on the AIRBAG light in the instrument panel for 6 to 8 seconds when the ignition is first turned on, then turns the light off. If it detects a malfunction in any part of the system, it turns on the light either momentarily or continuously.




**WARNING!**

**Ignoring the AIRBAG light in your instrument panel could mean you won't have the airbags to protect you in a collision. If the light does not come on, stays on after you start the vehicle, or if it comes on as you drive, have the airbag system checked right away.**

- The **Airbag/Inflator Units** are in the center of the steering wheel and in the instrument panel. The words SRS/AIRBAG are embossed on the airbag covers.

**WARNING!**

**Do not put anything on or around the airbag covers or attempt to manually open them. You may damage the airbags and you could be injured because the airbags are not there to protect you. These protective covers for the airbag cushions are designed to open only when the airbags are inflating.**

- When the AECM detects an impact requiring the airbags, it signals the inflator units. A large quantity of non-toxic nitrogen gas is generated to inflate the airbags. The airbag covers separate and fold out of the way as the airbags inflate to their full size. The airbags fully inflate in about 50 milliseconds. This is only about half of the time it takes you to blink your eyes. The airbags then quickly deflate while helping to restrain the driver and right front passenger. The airbag gas is vented through the airbag material towards the instrument panel. In this way the airbags do not interfere with your control of the vehicle.

- **The Knee Impact Bolsters** help protect the knees and position you for the best interaction with the airbags.

**If A Deployment Occurs**

The airbag system is designed to deploy when the impact sensors detect a moderate-to-severe frontal collision, to help restrain the driver and right front passenger, and then to immediately deflate.

**NOTE:** A frontal collision that is not severe enough to need airbag protection will not activate the system. This does not mean something is wrong with the airbag system.

If you do have a collision which deploys the airbags, any or all of the following may occur:

- The nylon airbag material may sometimes cause abrasions and/or skin reddening to the driver and right front passenger as the airbags deploy and unfold. The abrasions are similar to friction rope burns or those you might get sliding along a carpet or gymnasium floor. They are not caused by contact with chemicals. They are not permanent and normally heal quickly. However, if you haven't healed significantly within a few days, or if you have any blistering, see your doctor immediately.

- As the airbags deflate you may see some smoke-like particles. The particles are a normal by-product of the process that generates the non-toxic nitrogen gas used for airbag inflation. These airborne particles may irritate the skin, eyes, nose, or throat. If you have skin or eye irritation, rinse the area with cool water. For nose or throat irritation, move to fresh air. If the irritation continues, see your doctor.

  If these particles settle on your clothing, follow the garment manufacturer's instructions for cleaning.

- Your vehicle may be safely driveable after the airbags deploy. If so, you can tuck the deployed airbags inside the opening in the steering wheel hub and instrument panel trim covers to make driving somewhat easier.

**WARNING!**

**Deployed airbags can't protect you in another collision. Have the airbags replaced by an authorized dealer as soon as possible.**

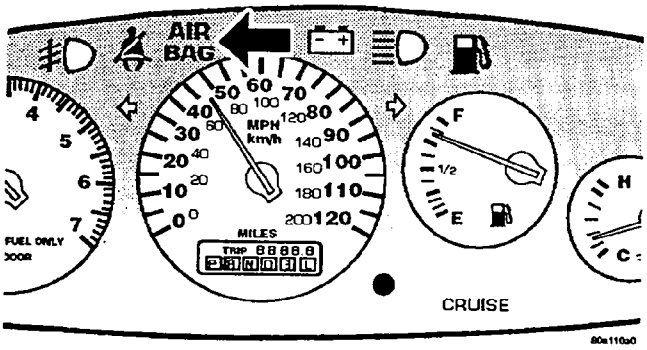
**Transporting Pets**

Airbags deploying in the front seat could harm your pet. An unrestrained pet will be thrown about and possibly injured, or injure a passenger during panic braking or in a collision.

Pets should be restrained in the rear seat in pet harnesses or pet carriers that are secured by seat belts.

If any of the following occurs, have an authorized dealer service the system immediately.

- The AIRBAG light does not come on or flickers during the 6 to 8 seconds when the ignition switch is first turned on.




- The light remains on or flickers after the 6 to 8 second interval.
- The light flickers or comes on and remains on while driving.

**Maintaining Your Airbag System**

**WARNING!**

- **Modifications to any part of the airbag system could cause it to fail when you need it. You could be injured because the airbag is not there to protect you. Do not modify the components or wiring, including adding any kind of badges or stickers to the airbag covers. Do not modify the front bumper or vehicle body structure.**
- **You need proper knee impact protection in a collision. Do not mount or locate any aftermarket equipment on or behind the knee bolsters**
- **It is dangerous to try to repair any part of the airbag system yourself. Don't try to repair the airbag system. Be sure to tell anyone who works on your vehicle that it has airbags.**

You will want to have the airbags ready for your protection in a collision. The airbag Supplemental Restraint System (SRS) is designed to be maintenance free.

## ENGINE BREAK-IN RECOMMENDATIONS

The engine in your new vehicle does not require a long break-in period.

Drive moderately during the first 300 miles (500 km). After the initial 60 miles (100 km), speeds up to 50 or 55 mph (80 or 90 km/h) are desirable.

While cruising, brief full-throttle acceleration, within the limits of local traffic laws, contributes to a good break-in.

Wide open throttle acceleration in low gear can be detrimental and should be avoided.

The crankcase oil installed in the engine at the factory is a high quality energy conserving type lubricant. Oil changes should be consistent with expected climate conditions under which vehicle operations will occur. The recommended viscosity and quality grades are in Section 7 of this manual.

Do not use non-detergent or straight mineral oils.

A new engine may consume some oil during its first few thousand miles of operation. This is a normal part of the break-in and not an indication of a problem.