V3004

REPORT NO. NCAP-MGA-99-02

NEW CAR ASSESSMENT PROGRAM (NCAP)

FRONTAL BARRIER IMPACT TEST

Mitsubishi Motors
1999 Mitsubishi Galant 4 Door
NHTSA No. MX5600

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: January 12, 1999

Report Date: February 13, 1999

FINAL REPORT

Prepared For:

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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16. Abstract

A 56 kph (35 mph) frontal barrier impact using a rigid barrier was conducted on a 1999 Mitsubishi Galant 4 Door in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure No. TP-NCAP090196 for the determination of vehicle crashworthiness on January 12, 1999.

The barrier impact velocity was 56.2 kph (34.9 mph), and the ambient temperature at the time of impact was 21 °C. The post-test maximum static crush was 611 mm.

The test vehicle appeared to comply with the requirements of the following Federal Motor Vehicle Safety Standards:

1. FMVSS 212, "Windshield Mounting"
2. FMVSS 219 (partial), "Windshield Zone Intrusion"
3. FMVSS 301, "Fuel System Integrity"

With regard to "Occupant Crash Protection" injury criteria, the driver's HIC was 439 and the 3 msec. Clip (Chest g's) was 50.1 g's. The left and right femur loads for the driver were 3220 and 4478 Newtons, respectively. The passenger's HIC was 550 and the 3 msec Clip was 46.6 g's. The left and right femur maximum loads were 3002 and 3737 Newtons respectively.

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SECTION 1
PURPOSE AND SUMMARY OF NCAP TEST

This 35 mph frontal barrier impact test is part of the Composite FY'99 Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-96-D-12010. 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.

A flat concrete barrier covered with 3/4" plywood was impacted by a 1999 Mitsubishi Galant 4 Door at a velocity of 56.2 kph (34.9 mph). The test was performed at the MGA Proving Grounds and Crash Test Center on January 12, 1999. 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 instrumented with head and chest primary and redundant triaxial accelerometers, pelvis triaxial accelerometers, a chest displacement transducer, a six axis neck load cell, right/left femur load cells, right/left lower leg sensors, and right/left foot accelerometers. Seat belt load cells were also on the driver and passenger lap and shoulder belts to measure dummy torso and pelvic section loading. Calibrated ATDs, driver (Serial No.

065), and the right front passenger (Serial No. 066), were used for this test. Certification details, along with instrumentation calibration data, are found in Appendices C and D.

The 113 channels of data were recorded on 10 computers. Appendix B contains the vehicle and dummy response data traces.

The driver's head struck the inflated airbag. The driver HIC was 439 and the maximum chest (CLIP) deceleration over 3 milliseconds was 50.1 g's. The maximum chest compression was 30 mm. The left and right femur loads were 3220 and 4478 Newtons respectively.

The right front passenger's head struck the inflated airbag. The passenger HIC was 550 and maximum chest (CLIP) deceleration over 3 milliseconds was 46.6 g's. The maximum chest compression was 26 mm. The left and right femur loads were 3002 and 3737 Newtons respectively.

SECTION 2

OCCUPANT AND VEHICLE

INFORMATION/DATA SHEETS

DATA SHEET NO. 1

CRASH TEST SUMMARY

Vehicle Yr/Make/Model/Body Style: 1999/Mitsubishi/Galant/4 Door

NHTSA No.: MX5600 VIN.: 4A3AA46G5XE061528

Vehicle Test Weight: 1608 kgs.

Impact Velocity: 56.2 kph Maximum Static Crush: 611 mm

Vehicle Rebound: 517 mm

DUMMIES:	DRIVER	PASSENGER
Serial Number:	065	066
Restraint System:	Airbag and type II belt	Airbag and type II belt
No. Data Channels:	42	42

Number of Cameras: 1 Real Time

16 High Speed

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

FRONT SEAT(S) DATA	DRIVER	FRONT PASSENGER
Seat Shift:	None	None
Seat Back Movement:	None	None

VISIBLE DUMMY

CONTACT POINTS:	DRIVER	PASSENGER
Head	to airbag	to airbag
Chest	none noted	none noted
Left Knee	to instrument panel	to center console and glovebox
Right Knee	to instrument panel	to glovebox

DATA SHEET NO. 2

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

Vehicle Yr/Make/Model/Body Style: 1999/Mitsubishi/Galant/4 Door

NHTSA No.: MX5600 VIN.: 4A3AA46G5XE061528

Body color: Beige Date of Manufacture: 10/98

Engine: 4 Cylinders; ___ C.I.D.; 2.4 Liters;

X Gas; ___ Diesel; ____Turbocharged

___ Longitudinal; X Transverse

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

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

Odometer Reading: 68 miles

Major Option:

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

X P/locks; X Tilt Wheel; X Cruise Control; X ABS

Other: _____

DATA RECORDED FROM VEHICLE'S TIRE PLACARD:

Tire Pressure (at capacity): Front 221 kPa (32 Psi) Rear 200 kPa (29 Psi)

Recommended Tire Size: P195/60R15

Recommended Cold Tire Pressure: Front 221 kPa (32 Psi) Rear 200 kPa (29 Psi)

Tires on Vehicle: P195/60R15 Manufacturer: Bridgestone

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

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

Type of Front Seat Back: __Fixed; X Adj. With; __ Power; X Lever

Vehicle Capacity Weight (VCW) = 375.1 kg. (A)

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

Rated Cargo Weight (RCW) A-B = 35.1 kg.

GVWR 1809.8 kg. GAWR: Front 970.7 kg.; Rear 839.1 kg.

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

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

Right Front = 425.0 kg Right Rear = 284.4 kg

Left Front = 431.8 kg Left Rear = 277.2 kg

TOTAL FRONT WEIGHT = 856.8 kg (60.4 % of Total Vehicle Weight)

TOTAL REAR WEIGHT = 561.6 kg (39.6 % of Total Vehicle Weight)

TOTAL UNLOADED DELIVERED WEIGHT (UDW) = 1418.4 kg

CALCULATION FOR TARGET TEST WEIGHT:

UDW = Unloaded Delivered Weight 1418.4 kg

VCW = Vehicle Capacity Weight 375.1 kg

DSC = Designated Seating Capacity 5

RCW = VCW - 68 (DSC) = 35.1 kg*

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

Target Test Weight = 1609.5 kg

WEIGHT OF TEST VEHICLE WITH REQUIRED DUMMIES AND CARGO:

Right Front = 464.0 kg Right Rear = 330.7 kg

Left Front = 482.6 kg Left Rear = 330.7 kg

TOTAL FRONT WEIGHT = 946.6 kg (58.9 % of Total Vehicle Weight)

TOTAL REAR WEIGHT = 661.4 kg (41.1 % of Total Vehicle Weight)

TOTAL TEST WEIGHT = 1608.0 kg

Weight of ballast secured in vehicle trunk area = 0 kg

Vehicle components removed to meet target weight: Spare tire, jack, rear seat, rear speakers, taillights, trunk interior, muffler, heat shield, and trunk lid

VEHICLE ATTITUDE (all dimensions in mm):

Delivered Attitude:	RF 702	LF 704	RR 679	LR 681
Test Attitude:	RF 685	LF 680	RR 660	LR 653
Post Test	RF 682	LF 785	RR 649	LR 682

Wheel Base: 2748 mm; C.G. = 1130 mm rearward of front wheel C/L

Remarks: _____

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

GENERAL TEST AND VEHICLE PARAMETER DATA (Cont'd)

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 62.1 liters

Usable Capacity Figure Furnished by COTR = 62.1 liters

Test Volume Range (92 to 94% of Usable Capacity) = 57.1 to 58.4 liters

ACTUAL TEST VOLUME = 58.4 liters

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

Kinematic Viscosity = 1.788 centistrokes; Color = Purple

Type of Fuel Pump; Electric X ; Mechanical ___

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

Yes X No ____

DATA SHEET NO. 3

POST-IMPACT DATA

Vehicle Yr/Make/Model/Body Style: 1999/Mitsubishi/Galant/4 Door

NHTSA No.: MX5600 VIN.: 4A3AA46G5XE061528

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

Date of Test: January 12, 1999 Time of Test: 4:58 p.m.

Ambient Temperature: 21.1°C (70° F) (Spec. Range = 18.8 to 25.6°C)

Temperature in Occupant Compartment: 21.1° C (70°F)

Windshield Molding Temperature: 21.1° C

Required Impact Velocity Range: 55.5 to 57.1 kph

Impact Velocity: primary = 56.2 kph; secondary = 56.4 kph

Distance From Front Bumper to Barrier Face When

Entering Speed Trap: 1305 mm

Exiting Speed Trap: 305 mm

VEHICLE REBOUND AND CRUSH (mm):

Vehicle Length:	Pre-test	= Right	4197	C/L	4597	Left 4203
	Post-test	= Right	3932	C/L	3986	Left 3897
	Crush	= Right	265	C/L	611	Left 306

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

Right 564 mm C/L 450 mm Left 538 mm

Average = 517 mm

DATA SHEET NO. 4

TEST VEHICLE INFORMATION

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

	Front		Rear	
Seat Movement	Left	Right	Left	Right
Seat Back Movement	none	none	none	none
Seat Shift (mm)	none	none	none	none

Glazing Damage

Backlight/Windshield windshield cracked

Other Notable Impact Effects: frontal airbags deployed

DATA SHEET 5

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

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

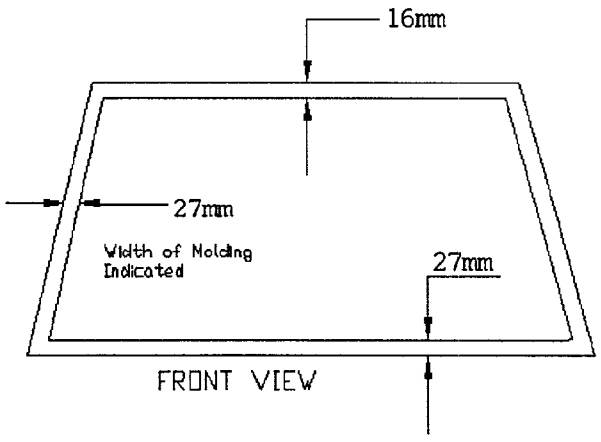
Windshield set in rubber molding with glue

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

FMVSS 212 TEST DATA:

	WINDSHIELD PERIPHERY		
	PRE-TEST (mm)	POST-TEST (mm)	PERCENT RETENTION
RIGHT SIDE	2074	2074	100%
LEFT SIDE	2077	2077	100%
TOTAL	4151	4151	100%

AREA OF RETENTION FAILURE: None



FAILURE DETAILS:

None

DATA SHEET 6

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

PROTECTED ZONE LOWER EDGE REQUIREMENT:

The lower edge of the protected zone is determined by placing a 6.5" dia. rigid sphere weighing 15 pounds in a position such that it simultaneously contacts the inner surface of the windshield and the surface of the instrument panel, including padding, and drawing the locus of points on the inner surface of the windshield contactable by the sphere across the width of the instrument panel. From the outermost contact points, extend the locus line horizontally to the edges of the windshield, and then draw a line on the inner surface of the windshield below and 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= 1094 mm

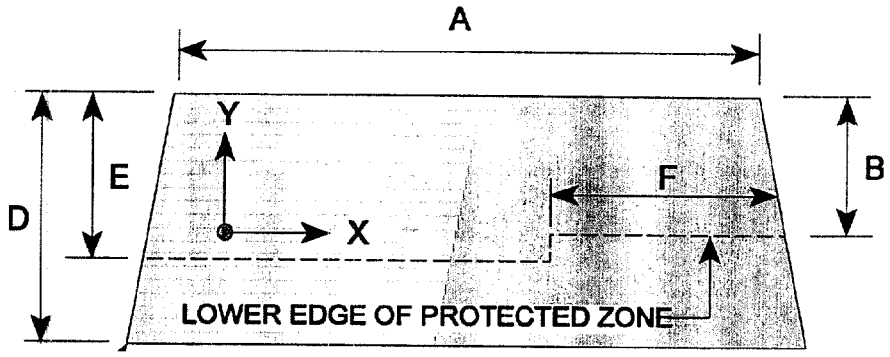
B= 561 mm

C= 1440 mm

D= 807 mm

E= 564 mm

F= 573 mm



DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 1/4":

(Show location of penetration)

DATA SHEET 7

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

FMVSS NO. 301

Test Vehicle NHTSA No.: MX5600 Test Date: January 12, 1999

Vehicle Mfgr./Make/Model: 1999/Mitsubishi/Galant/4 Door

Usable Capacity of Vehicle's Fuel Tank: 62.1 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:

58.4 Liters which is 94 % 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:

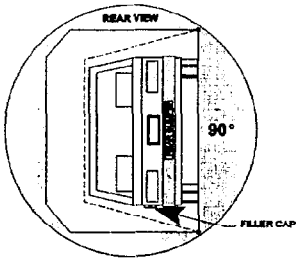
	ACTUAL	MAX ALLOWED
1. From impact until vehicle motion ceases	0 oz.	1 OZ
2. For 5 minute period after vehicle motion ceases	0 oz.	5 OZ
3. For next 25 minutes	0 oz.	1 oz./1 MIN

SOLVENT SPILLAGE DETAILS: None

DATA SHEET 8

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE: 0° - 90° Vehicle NHTSA No.: MX5600



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time	2 minutes	50 seconds
(Spec. Range = 1 to 3 minutes)		
FMVSS 301 Position Hold Time +	5 minutes	0 seconds
TOTAL	7 minutes	50 seconds
Next whole minute interval	8 minutes	

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0	0	0	0

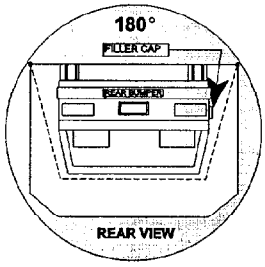
Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATIONS(S): None

DATA SHEET 8

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

TEST PHASE: 90°- 180° Vehicle NHTSA No.: MX5600



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time 2 minutes 30 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 30 seconds

Next whole minute interval 8 minutes

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0	0	0	0

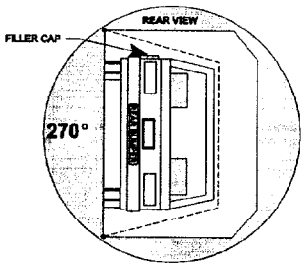
Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATIONS(S): None

DATA SHEET 8

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

TEST PHASE: 180° - 270° Vehicle NHTSA No.: MX5600



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time 2 minutes 09 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 7 minutes 09 seconds

Next whole minute interval 8 minutes

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0	0	0	0

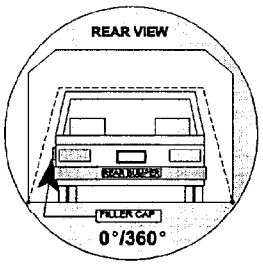
Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATIONS(S): None

DATA SHEET 8

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

TEST PHASE: 270° - 360° Vehicle NHTSA No.: MX5600



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

DATA SHEET 9

DUMMY INJURY CRITERIA VALUES DATA SHEET

Vehicle Year/Make/Model/Body Style: 1999/Mitsubishi/Galant/4 Door

Vehicle NHTSA No.: MX5600 Test Date: January 12, 1999

DESCRIPTION	UNIT	MAXIMUM VALUE			
		pos.	msec.	neg.	msec.
Pos. 1 Head X	G	8.6	51	-60.5	83
Pos. 1 Head Y	G	2.7	143	-21.9	85
Pos. 1 Head Z	G	23.8	62	-5.6	93
Pos. 1 Head Resultant	G	63.8	83	--	--
Pos. 2 Head X	G	2.4	49	-49.8	86
Pos. 2 Head Y	G	20.3	103	-2.4	33
Pos. 2 Head Z	G	25.0	74	-6.9	114
Pos. 2 Head Resultant	G	52.9	89	--	--
Pos. 1 Chest X	G	2.8	153	-51.7	79
Pos. 1 Chest Y	G	6.0	97	-8.2	60
Pos. 1 Chest Z	G	11.5	55	-5.4	101
Pos. 1 Chest Resultant	G	51.9	79	--	--
Pos. 1 Chest Displacement	mm	30	86	--	--
Pos. 2 Chest X	G	2.1	181	-47.8	81
Pos. 2 Chest Y	G	9.5	86	-4.3	114
Pos. 2 Chest Z	G	13.3	76	-7.2	117
Pos. 2 Chest Resultant	G	48.3	81	--	--
Pos. 2 Chest Displacement	mm	26	77	--	--
Pos. 1 Left Femur	N	412	52	-3220	58
Pos. 1 Right Femur	N	521	48	-4478	58
Pos. 2 Left Femur	N	537	55	-3002	62
Pos. 2 Right Femur	N	421	54	-3737	63

DATA SHEET 9

DUMMY INJURY CRITERIA VALUES DATA SHEET (Cont'd)

DESCRIPTION	UNIT	MAXIMUM VALUE			
		pos.	msec.	neg.	msec.
Pos. 1 Lap Belt Load	N	7060	68	--	--
Pos. 1 Torso Belt Load	N	4031	88	--	--
Pos. 2 Lap Belt Load	N	7173	67	--	--
Pos. 2 Torso Belt Load	N	4096	61	--	--
Pos. 1 Upper Neck Fx	N	244	76	-352	135
Pos. 1 Upper Neck Fy	N	182	71	-56	59
Pos. 1 Upper Neck Fz	N	1892	73	261	126
Pos. 1 Neck Force Resultant	N	1902	73	--	--
Pos. 1 Upper Neck Mx	N•m	10.9	138	-13.3	67
Pos. 1 Upper Neck My	N•m	27.7	124	-25.7	91
Pos. 1 Upper Neck Mz	N•m	14.8	93	-7.8	139
Pos. 1 Neck Moment Result	N•m	28.5	91	--	--
Pos. 2 Upper Neck Fx	N	136	100	-730	69
Pos. 2 Upper Neck Fy	N	131	112	-147	94
Pos. 2 Upper Neck Fz	N	2034	68	-153	141
Pos. 2 Neck Force Result	N	2156	68	--	--
Pos. 2 Upper Neck Mx	N•m	29.8	93	-7.5	175
Pos. 2 Upper Neck My	N•m	29.0	140	-54.6	74
Pos. 2 Upper Neck Mz	N•m	9.0	135	-16.3	99
Pos. 2 Neck Moment Result	N•m	56.4	71	--	--
Pos. 1 Pelvic (X)	G	3.8	133	-78.8	59
Pos. 1 Pelvic (Y)	G	7.1	91	-14.5	64
Pos. 1 Pelvic (Z)	G	25.9	72	-7.0	54
Pos. 1 Pelvic Resultant	G	79.7	58	--	--

DATA SHEET 9

DUMMY INJURY CRITERIA VALUES DATA SHEET (Cont'd)

DESCRIPTION	UNIT	MAXIMUM VALUE			
		pos.	msec.	neg.	msec.
Pos. 2 Pelvic (X)	G	5.0	139	-72.0	62
Pos. 2 Pelvic (Y)	G	5.9	60	-5.0	72
Pos. 2 Pelvic (Z)	G	22.8	75	-2.7	51
Pos. 2 Pelvic Resultant	G	72.9	62	–	--
Pos. 1 Left Upper Tibia Mx	N•m	82.7	45	-161.3	62
Pos. 1 Left Upper Tibia My	N•m	33.5	155	-383.6	62
Pos. 1 Left Upper Tibia Fz	N	1189	62	-35	166
Pos. 1 Left Lower Tibia Fz	N	1345	62	-31	165
Pos. 1 Left Lower Tibia Mx	N•m	33.6	43	-349.3	61
Pos. 1 Left Lower Tibia My	N•m	57.3	100	-142.2	60
Pos. 1 Right Upper Tibia Mx	N•m	71.8	53	-69.7	63
Pos. 1 Right Upper Tibia My	N•m	54.2	105	-412.7	54
Pos. 1 Right Upper Tibia Fz	N	2582	54	-53	155
Pos. 1 Right Lower Tibia Fz	N	3221	53	-24	155
Pos. 1 Right Lower Tibia Mx	N•m	22.9	87	-302.8	56
Pos. 1 Right Lower Tibia My	N•m	28.6	80	-115.7	107
Pos. 2 Left Upper Tibia Mx	N•m	22.3	74	-76.2	92
Pos. 2 Left Upper Tibia My	N•m	51.5	132	-228.3	53
Pos. 2 Left Upper Tibia Fz	N	1037	52	-68	170
Pos. 2 Left Lower Tibia Fz	N	1413	52	-71	70
Pos. 2 Left Lower Tibia Mx	N•m	7.0	58	-33.7	96
Pos. 2 Left Lower Tibia My	N•m	76.0	99	-49.1	50
Pos. 2 Right Upper Tibia Mx	N•m	49.7	64	-97.1	94
Pos. 2 Right Upper Tibia My	N•m	36.1	138	-149.9	51
Pos. 2 Right Upper Tibia Fz	N	616	46	-77	146
Pos. 2 Right Lower Tibia Fz	N	795	46	-26	160
Pos. 2 Right Lower Tibia Mx	N•m	31.0	96	-23.4	92
Pos. 2 Right Lower Tibia My	N•m	55.0	95	-51.0	54

DATA SHEET 10
DUMMY POSITIONING IN VEHICLE

Vehicle NHTSA No.: MX5600 Vehicle: 1999 Mitsubishi Galant 4 Door

SEAT TYPE:	ADJUSTER TYPE:		BUCKET SEAT BACK TYPE:
___Bench	Driver:	_X_ Manual	___Fixed
_X_Bucket		___ Power	_X_Adjustable Reclining
___Split Bench			
	Passenger:	_X_ Manual	___Fixed
		___ Power	_X_Adjustable Reclining

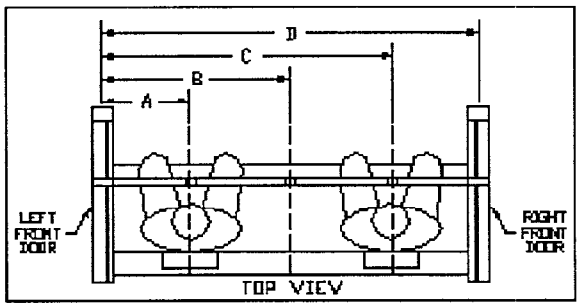
DRIVER SEAT POSITION
12th detent of 23 detents

Seat back angle 34.8° (ref. sill)
16th notch rearward of full up

PASSENGER SEAT POSITION
12th detent of 23 detents

Seat back angle 34.8° (ref. sill)*
16th notch rearward of full up

Steering column set to mid position. Steering column angle 21.2°



065 DUMMY ID 066

A	= Left Door to Driver Centerline	398 mm
B	= Left Door to Center Passenger Centerline	745 mm
C	= Left Door to Right Passenger Centerline	1091 mm
D	= Left Door to Right Door	1490 mm

DATA SHEET 10

DUMMY POSITIONING IN VEHICLE (Cont'd)

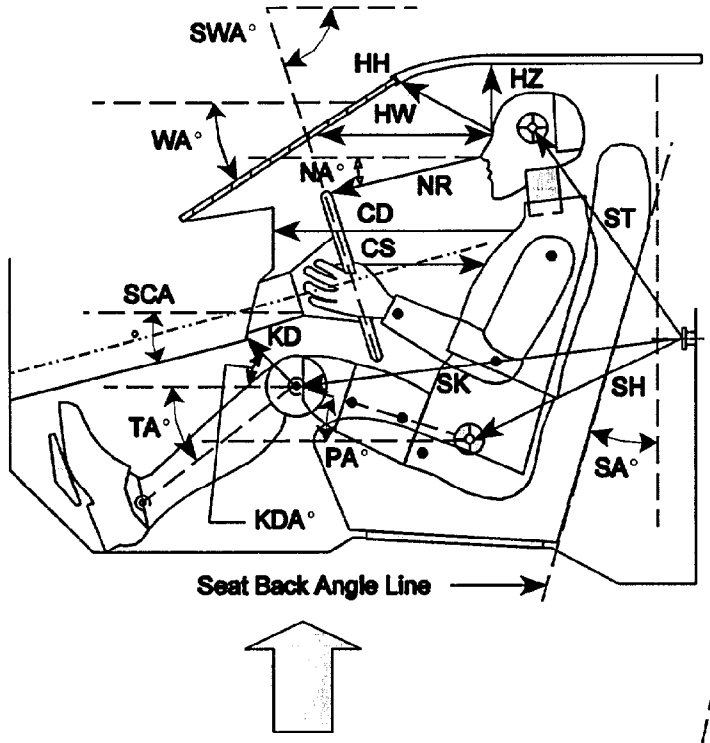
Units (mm)

	DRIVER (Serial #065)	PASSENGER (Serial #066)
WA°	27.2°	
SWA°	20.4°	N/A
SCA°	21.2°	N/A
SA°	34.8°	34.8°
HZ	157	150
HH	317	315
HW	586	571
HR	209	210
NR	400 Angle 13.2°	N/A
CD	561	544
CS	330	N/A
RA	189	N/A
KDL	161 Angle (KDA) 7.1°	159
KDR	155	161 Angle 20.0°
PA°	23.9°	23.8°
TA°	45.5°	38.7°
KK	310	250
ST*	516 Angle 5.8°	514 Angle 8.0°
SK*	600 Angle 87.7°	617 Angle 92.5°
SH*	257 Angle 118.8°	242 Angle 118.6°
SHY	237	243
HS	332	308
HD	144	136
AD	93	112

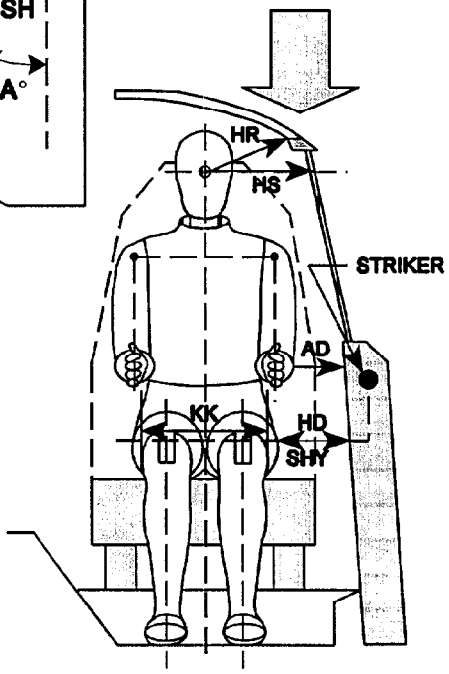
N/A = Not Applicable

* angle measured with respect to vertical

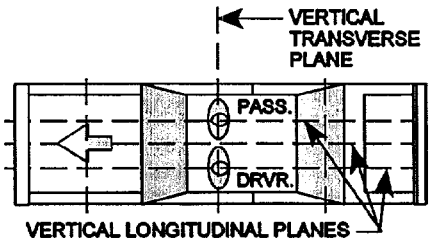
FRONT SEAT MEASUREMENTS



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)

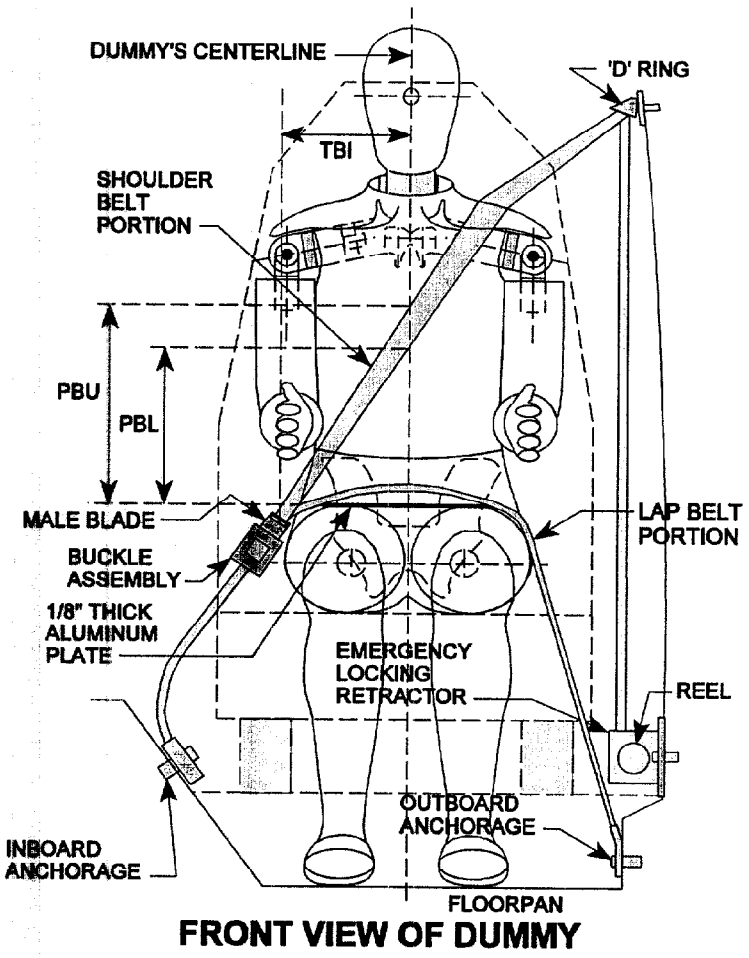


CD - Chest to Dash
CS - Steering Wheel to Chest
HH - Head to Header
HW - Head to Windshield
HZ - Head to Roof
KDA - Knee to Dash Angle
KDL- Left Knee to Dash
KDR - Right Knee to Dash
NA - Nose to Rim Angle
NR - Nose to Rim
PA - Pelvic Angle
RA - Rim to Abdomen
SA - Seat Back Angle
SCA - Steering Column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



DATA SHEET 11

SEAT BELT POSITIONING DATA



FRONT VIEW OF DUMMY

(illustration)

Dimension = mm

	DRIVER DUMMY	PASSENGER DUMMY
PBU -- Top surface of alum. plate to upper edge	354	345
PBL -- Top surface of alum. plate to belt lower edge	285	262

DATA SHEET 12

SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

BELT LENGTH DATA:	Driver	Passenger
Length from trim above retractor reel to "D" ring as measured on dummy.	128 mm	120 mm
Shoulder belt length as measured on Part 572 Dummy.	856 mm	854 mm
Lap belt length as measured on Part 572 Dummy.	848 mm	859 mm

SHOULDER BELT SPOOL-OFF DATA:		
As determined by film analysis	187 mm	230 mm
As determined mechanically at Retractor	192 mm	232 mm

BELT STRETCH DATA:		
Measured electronically between shoulder belt load cell and the "D" ring.	Not Applicable	Not Applicable
Measured mechanically	Not Applicable	Not Applicable

RETRACTOR LOCK-UP TIME:		
As determined by shoulder belt spool-off observed in on-board cameras	79 msec.	83 msec.

DATA SHEET 13

CAMERA LOCATIONS

Veh. NHTSA No.: MX5600 Test Date: January 12, 1999

VehicleYear/Make/Model/Body Style: 1999/Mitsubishi/Galant/4 Door

CAMERA POS. 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	-	-	-	-	-	18	32
2	Left Front View	1000	-7930	1510	90	7495	25	1000
3	Steering Column Top	2080	-7890	1550	90	7455	25	1015
4	Steering Column Bottom	2070	-7910	1030	90	7475	25	1064
5	Driver Close-up	1450	-10540	1410	90	10105	75	943
6	Driver Angle	4850	-5350	2050			50	952
7	Onboard Driver						35	1010
8	Onboard Passenger						35	1000
9	Right Overall	2250	7860	1370	90	7415	13	930
10	Right Passenger Half	1020	7930	1420	90	7485	25	1176
11	Right Close-up	1450	10160	1310	90	9715	75	1015
12	Right Angle	5000	5410	1980			50	1205
13	Windshield	-380	0	2750			13	893
14	Top Driver	100	-450	1625			13	862
15	Top Passenger	100	480	1625			13	913
16	Pit Front	980	0	-3195			13	1015
17	Pit Rear	2620	0	-3195			13	1010

* COORDINATES:

+X = film plane rearward of barrier

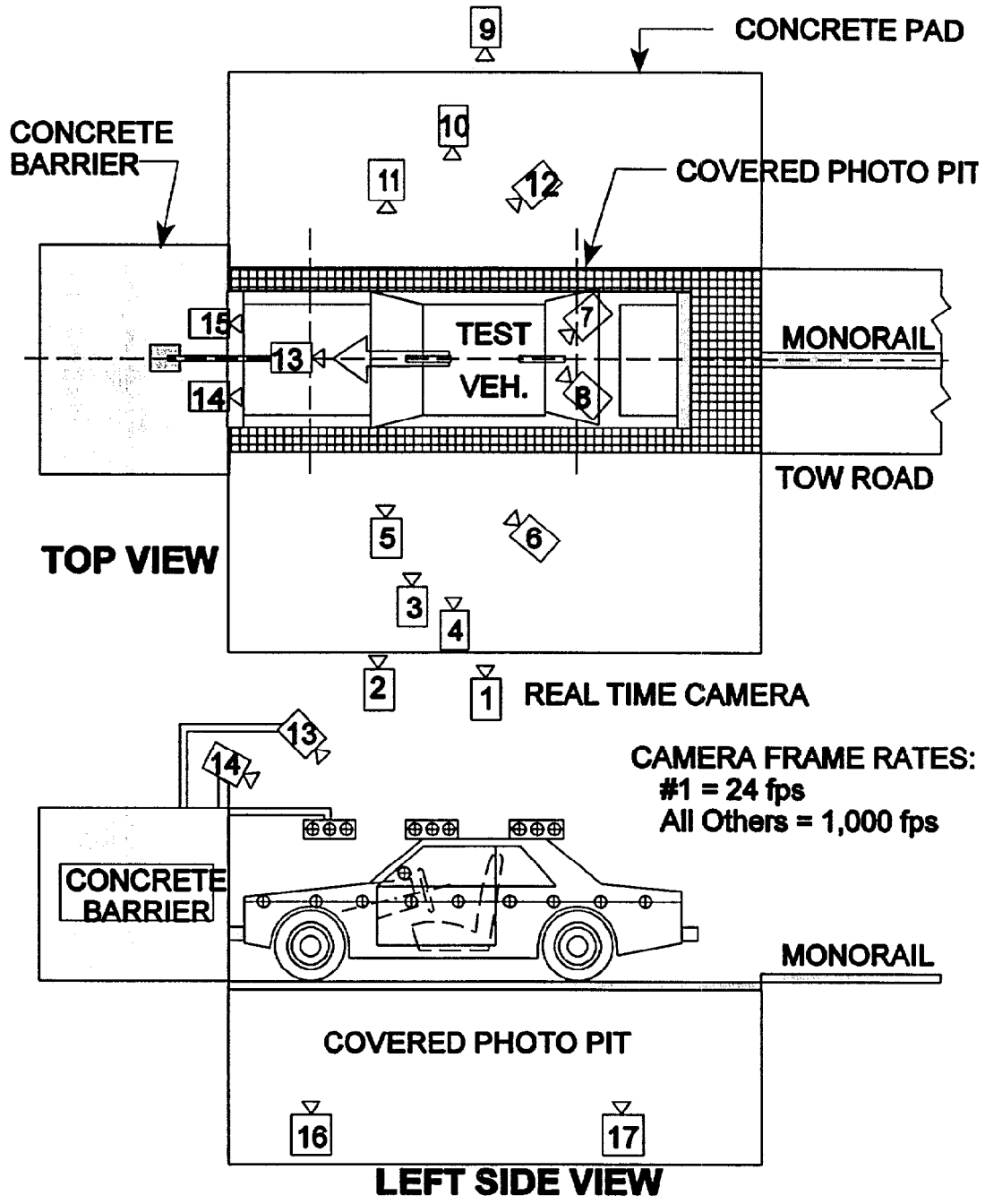
+Y = film plane to right of monorail centerline

+Z = film plane to above ground level

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

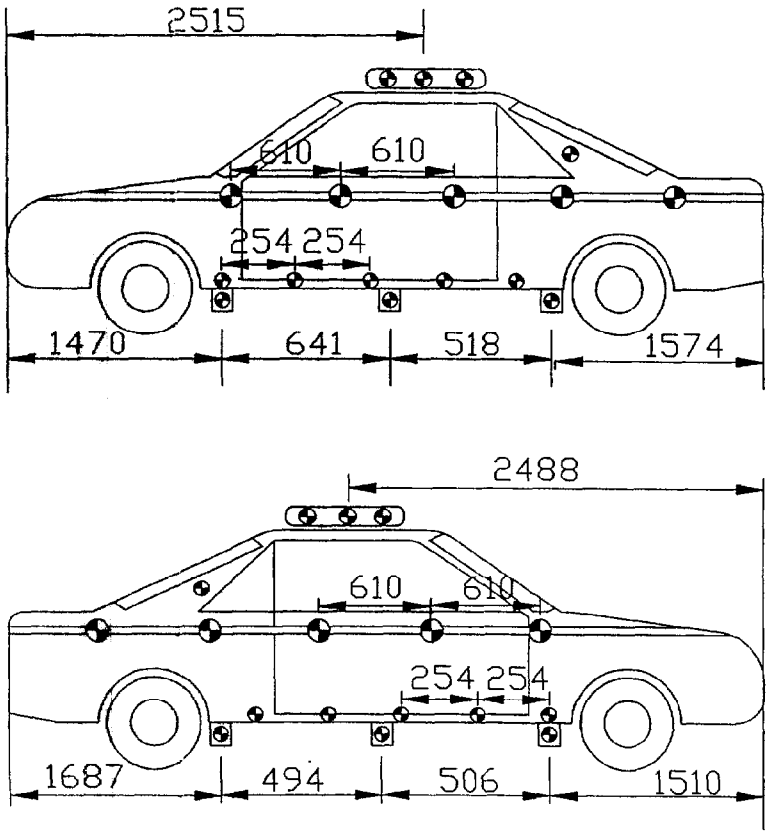
CAMERA LOCATIONS (Cont'd)

CAMERA POSITIONS FOR FRONTAL IMPACTS



DATA SHEET 14

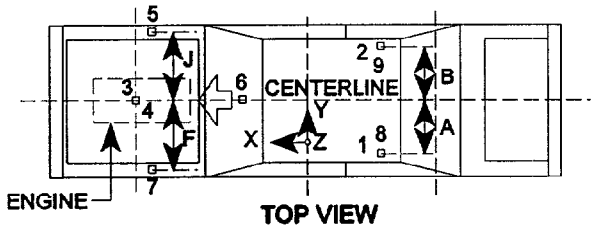
VEHICLE TARGET LOCATIONS



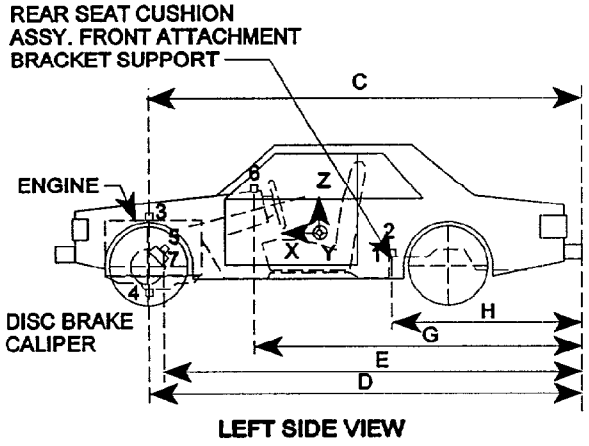
(DIMENSIONS IN MM)

DATA SHEET 15

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



TOP VIEW



LEFT SIDE VIEW

Units: (mm)

Dimension	Length
A	413
B	413
C	3755
D	3755
E	3652
F	675
G	2950
H	1683
J	675

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 Side Brake Caliper	X

DATA SHEET 16

POST TEST AIRBAG DATA

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

B. Size of Vent Holes: Driver _____; Passenger _____

C. Total Vent Area; Driver _____; Passenger _____

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

Driver; Length____mm, Width____mm, Diameter 610 mm

Passenger; Length 572 mm, Width 457 mm, Diameter ____ mm

E. Is the Airbag Tethered?

Driver; X Yes; __ No; If yes, record length of tether 381 mm

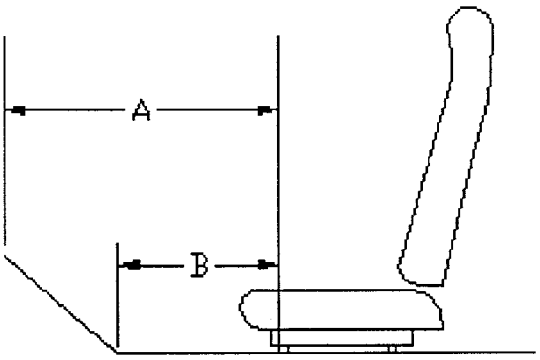
Passenger; X Yes; __ No, If yes, record length of tether 406 mm

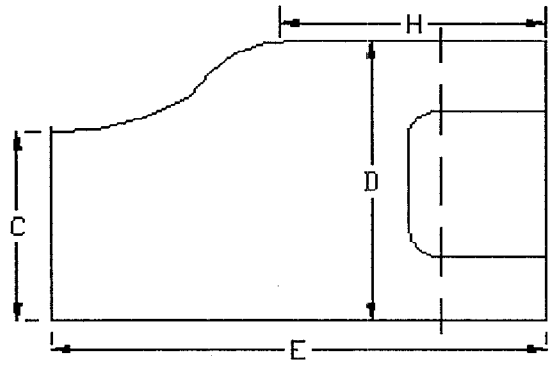
DATA SHEET 17

TEST VEHICLE MEASUREMENTS

STATIC FOOTWELL DEFORMATION

Driver's Side





Units = mm

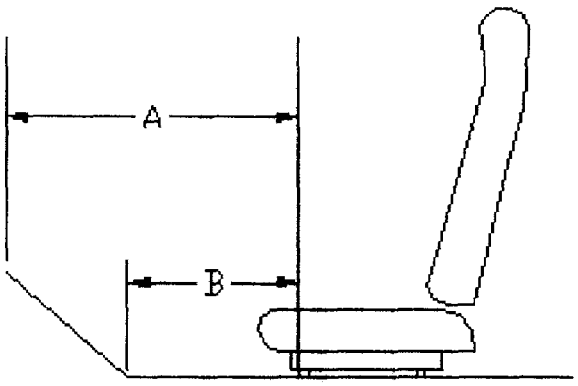
MEASUREMENT	PRE TEST	POST TEST	DIFFERENCE
A	725	630	-95
B	562	498	-64
C	308	307	-1
D	464	460	-4
E	1420	1390	-30
H	1575	1559	-16

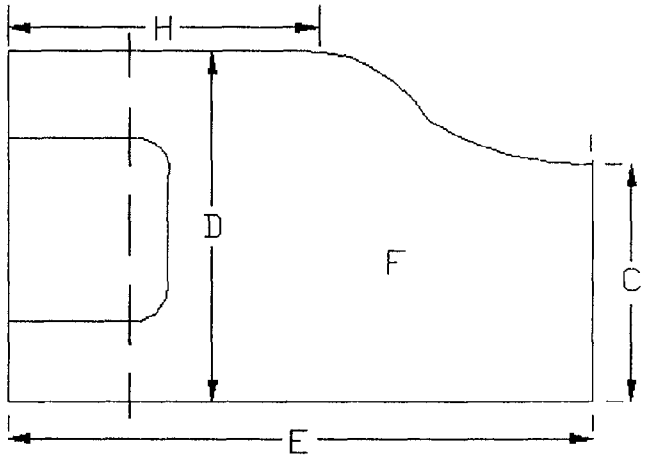
DATA SHEET 17

TEST VEHICLE MEASUREMENTS (Cont'd)

STATIC FOOTWELL DEFORMATION

Passenger's Side





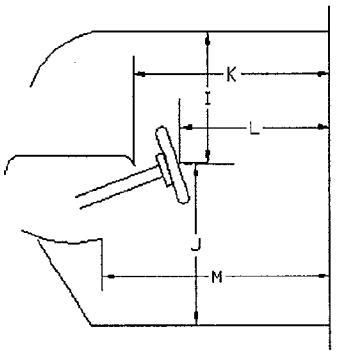
Units = mm

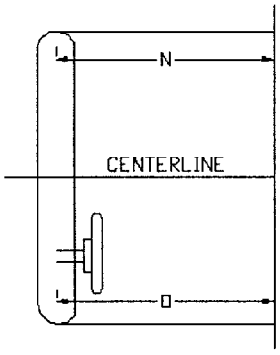
MEASUREMENT	PRE TEST	POST TEST	DIFFERENCE
A	735	602	-133
B	565	527	-38
C	328	283	-45
D	478	469	-9
E	1420	1392	-28
H	1568	1565	-3

DATA SHEET 17

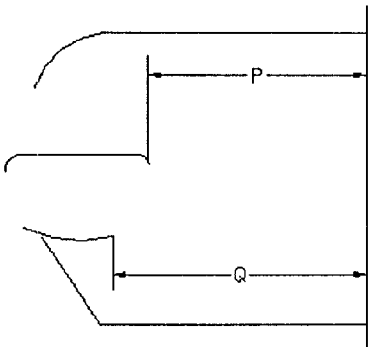
TEST VEHICLE MEASUREMENTS (Cont'd)

STATIC PASSENGER COMPARTMENT INTRUSION





MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE



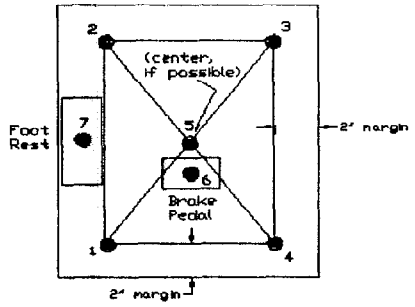
Units = mm

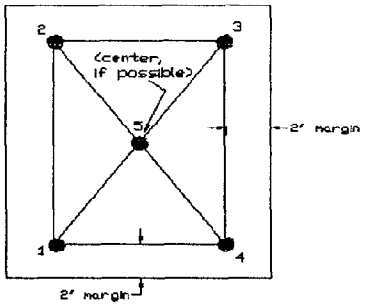
MEASUREMENT	PRE TEST	POST TEST	DIFFERENCE
I	431	476	45
J	662	625	-37
K	1375	1362	-13
L	1160	1225	65
M	1505	1499	-6
N	1655	1626	-29
O	1655	1649	-6
P	1443	1392	-51
Q	1580	1571	-9

DATA SHEET 17

TEST VEHICLE MEASUREMENTS (Cont'd)

TOE PAN MEASUREMENTS





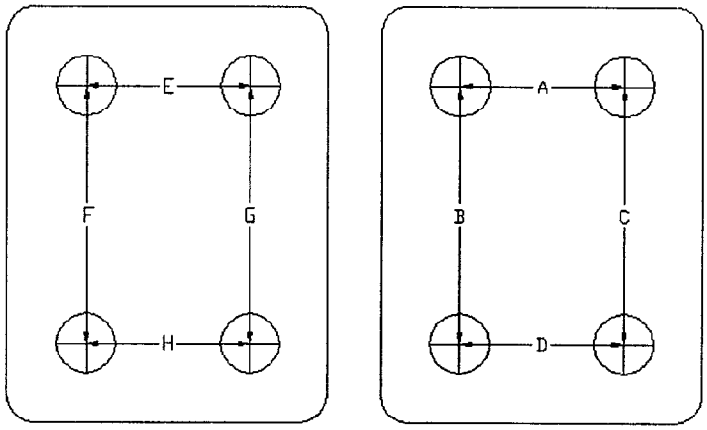
DRIVER **PASSENGER**

Driver						
Location	**X**			**Z**		
	Pre-Test	Post-Test	Def.	Pre-Test	Post-Test	Def.
1	584	510	74	-8	4	12
2	697	539	158	112	121	9
3	706	544	162	108	135	27
4	586	518	68	0	-5	-5
5	637	496	141	55	-57	-112
6	560	468	92	138	150	12
7	602	556	46	135	116	-19
Passenger						
Location	**X**			**Z**		
	Pre-Test	Post-Test	Def.	Pre-Test	Post-Test	Def.
1	585	513	72	-45	-18	27
2	690	620	70	68	114	46
3	705	610	95	80	118	38
4	585	530	55	-35	-24	11
5	640	533	107	30	58	28

DATA SHEET 17
TEST VEHICLE MEASUREMENTS (Cont'd)

UNDERBODY FLOORBOARD DEFORMATION

DRIVER'S SIDE PASSENGER'S SIDE



MEASUREMENT	PRE TEST	POST TEST	DIFFERENCE
A	270	248	22
B	298	290	8
C	312	302	10
D	274	264	10
E	315	305	10
F	306	305	1
G	306	304	2
H	335	328	7

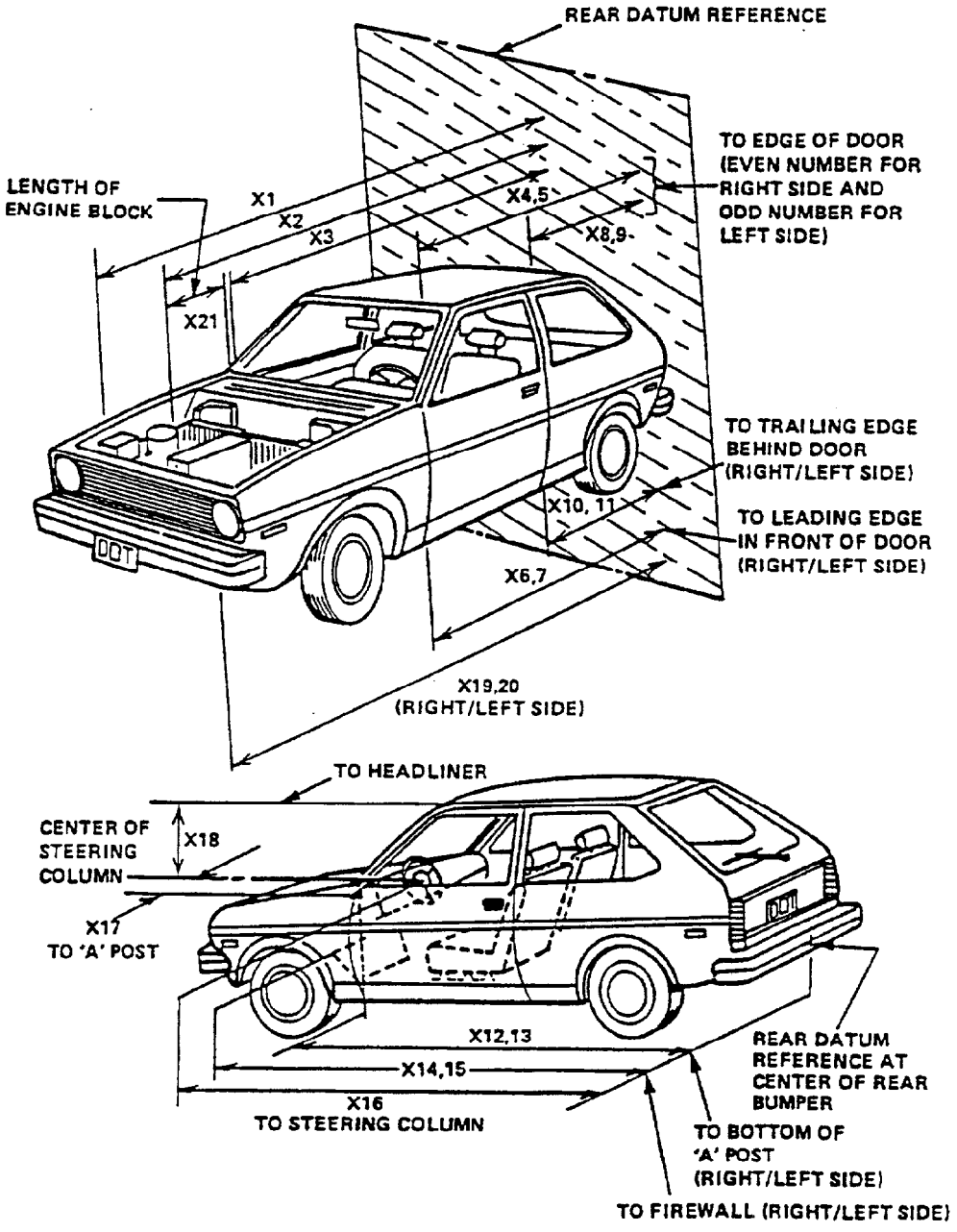
DATA SHEET 17

TEST VEHICLE MEASUREMENTS (Cont'd)

No.	MEASUREMENT DESCRIPTION:	Pre-Test (mm)	Post-Test (mm)	Diff. (mm)
X1	Total Length of Test Vehicle at Centerline	4597	3986	611
X2	Rear Surface of Vehicle to Front of Engine	3933	3645	288
X3	Rear Surface of Vehicle to Firewall	3311	3300	11
X4	Rear Surface to Upr. Leading Edge of Rt. Door	3008	3014	-6
X5	Rear Surface to Upr. Leading Edge of Left Door	3008	3020	-12
X6	Rear Surface to Lwr. Leading Edge of Rt. Door	3047	3037	10
X7	Rear Surface to Lwr. Leading Edge of Left Door	3043	3045	-2
X8	Rear Surface to Upr. Trailing Edge of Rt. Door	1953	1960	-7
X9	Rear Surface to Upr. Trailing Edge of Left Door	1951	1961	-10
X10	Rear Surface to Lwr. Trailing Edge of Rt. Door	1973	1966	7
X11	Rear Surface to Lwr. Trailing Edge of Left Door	1973	1978	-5
X12	Rear Surface to Bottom of A-Post on Rt. Side	3053	3043	10
X13	Rear Surface to Bottom of A-Post on Left Side	3053	3054	-1
X14	Rear Surface to Firewall on Right Side	3303	3258	45
X15	Rear Surface to Firewall on Left Side	3307	3297	10
X16	Rear Surface to Steering Column	2558	2600	-42
X17	Center of Steering Column to A-Post	382	397	-15
X18	Center of Steering Column to Headlining	431	476	-45
X19	Rear Surface to Right Side of Front Bumper	4197	3932	265
X20	Rear Surface to Left Side of Front Bumper	4203	3897	306
X21	Length of Engine Block	495	495	0

DATA SHEET 17

TEST VEHICLE MEASUREMENTS (Cont'd)



DATA SHEET 18

ACCIDENT INVESTIGATION DIVISION DATA

FOR 35 MPH FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: 1999/Mitsubishi/Galant/4 Door

VIN: 4A3AA46G5XE061528

Model Year: 1999 ; Build Date: 10/98 ; Test Date: January 12, 1999

Veh. Size Category: Small ; TEST WEIGHT: 1608 kg

Veh. Wheelbase: 2748 mm ; Front Overhang: 1010 mm; Overall Width: 1745 mm

ACCELEROMETER DATA:

Location: As per measurements on pages 2-25

Calibration Procedure: As per MGA Calibration Procedure

Linearity: >99.9% ; Integration Algorithm: Trapezoidal

Veh: Impact Speed: 56.2 kph ; Time Of Separation: 78 msec

Velocity Change: 63.9 kph

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

Crush Depth C1 = 265 mm

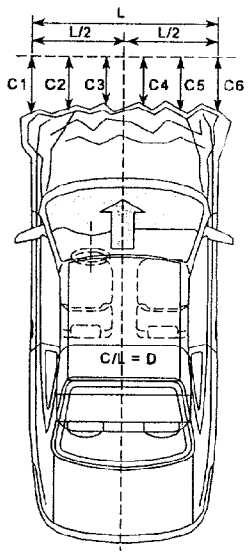
Dimensions: C2 = 501 mm

C3 = 574 mm

C4 = 582 mm

C5 = 499 mm

C6 = 306 mm



Midpoint Of Damage: D = Vehicle Centerline (Longitudinal)

Length Of Damaged Region: L = 1820 mm

APPENDIX A
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

TABLE OF PHOTOGRAPHS (Cont'd)

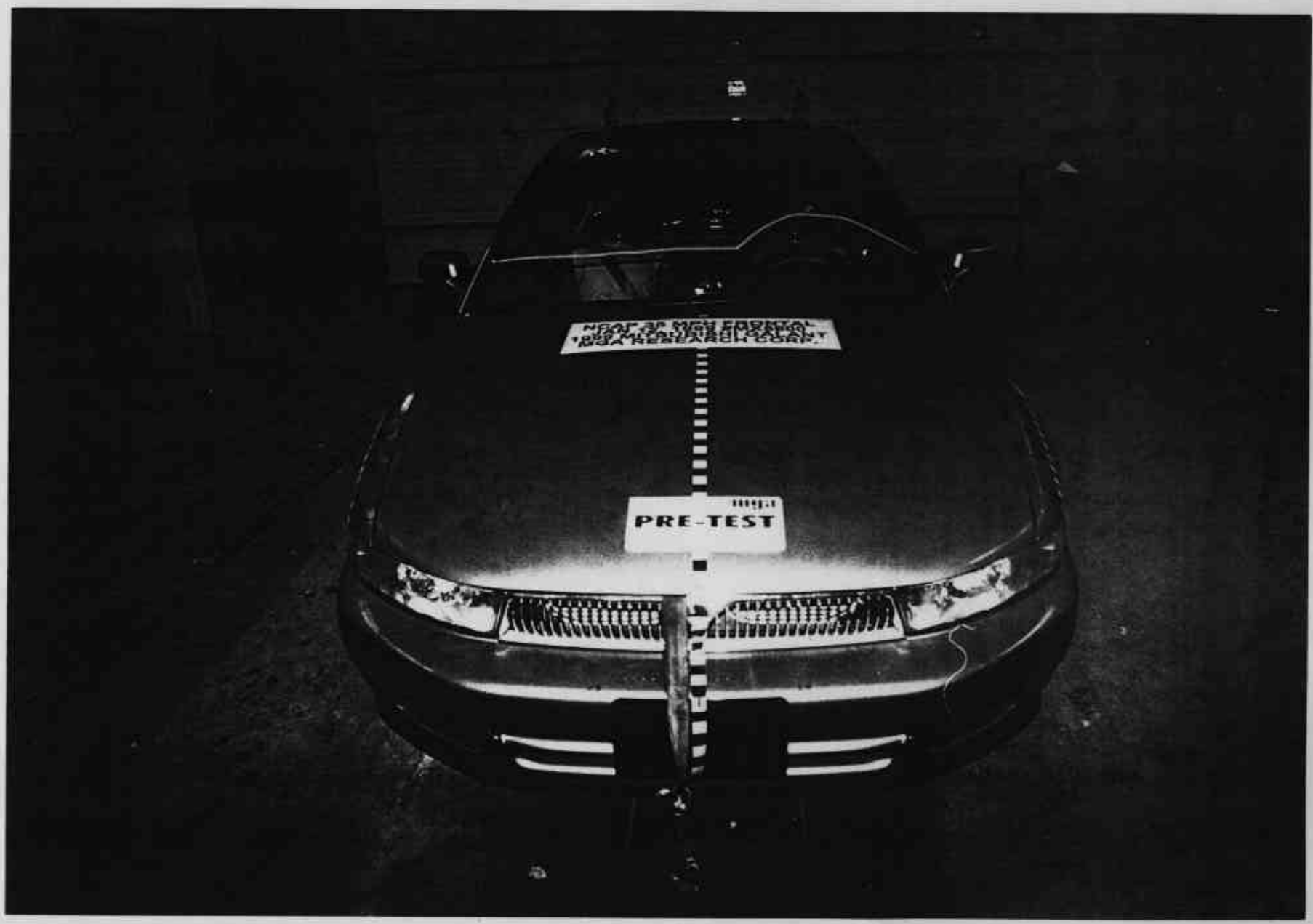


Photo No. A-1 - Pre-Test Front View of Test Vehicle

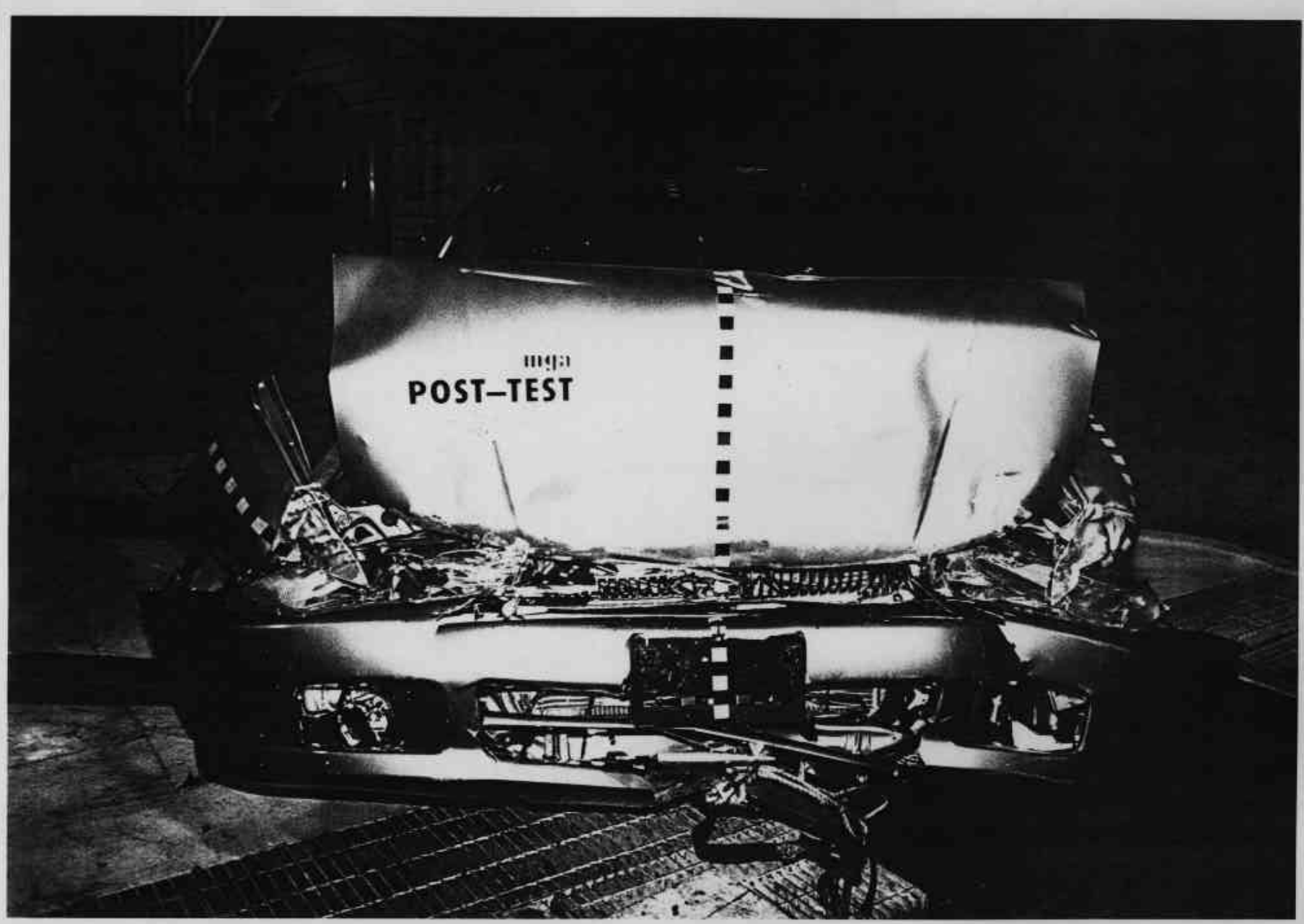


Photo No. A-2 - Post-Test Front View of Test Vehicle

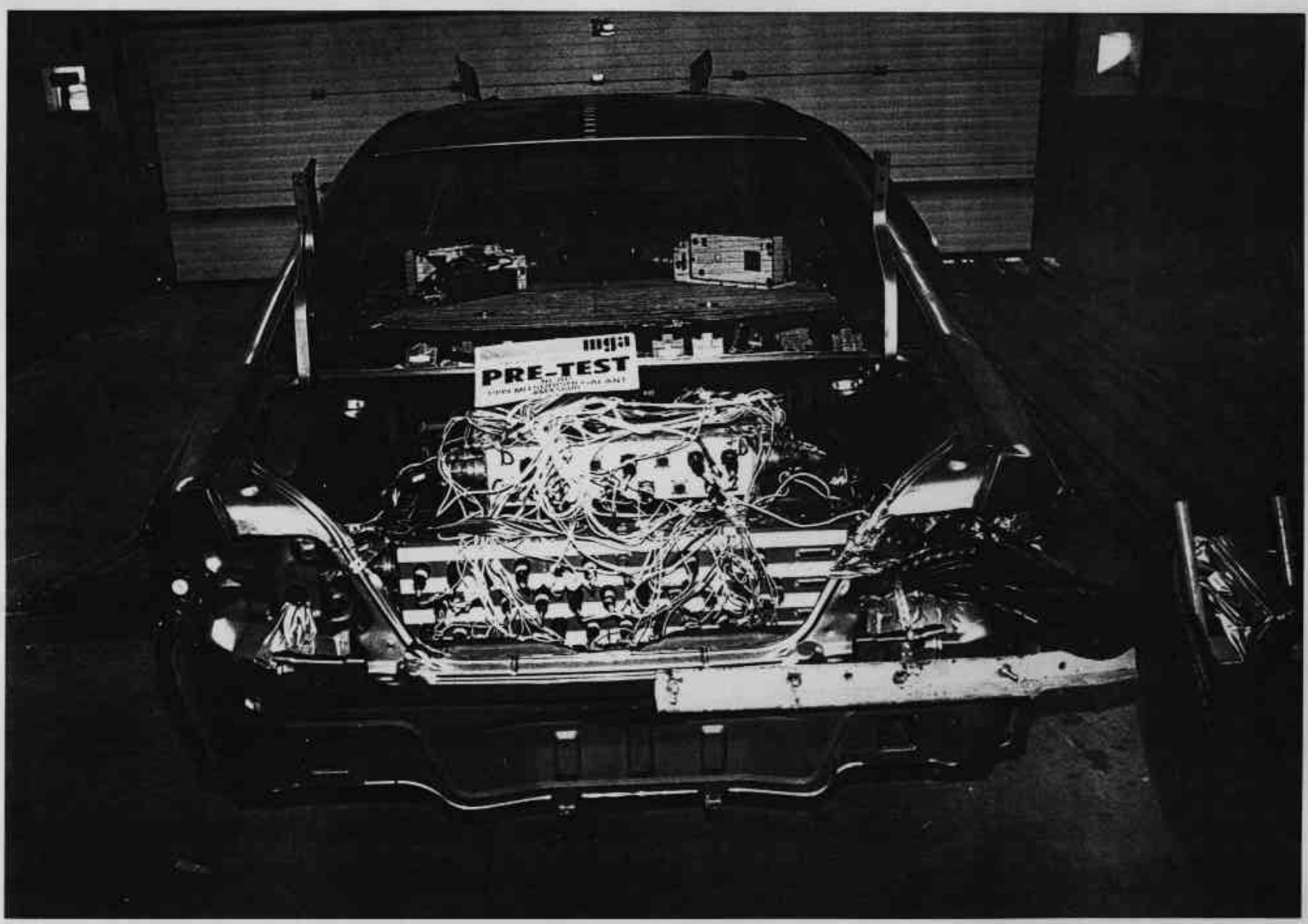


Photo No. A-3 - Pre-Test Rear View of Test Vehicle

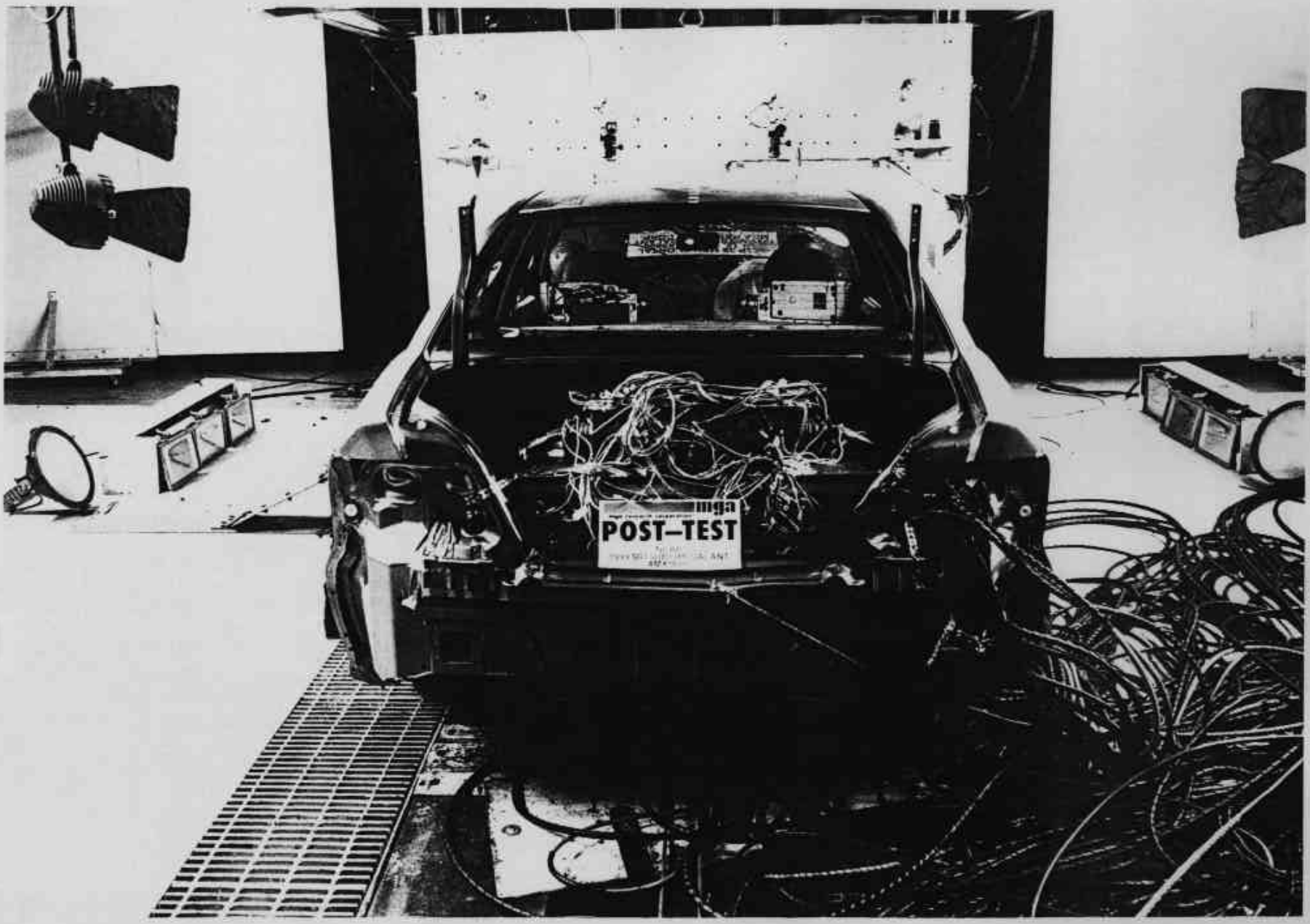


Photo No. A-4 - Post-Test Rear View of Test Vehicle

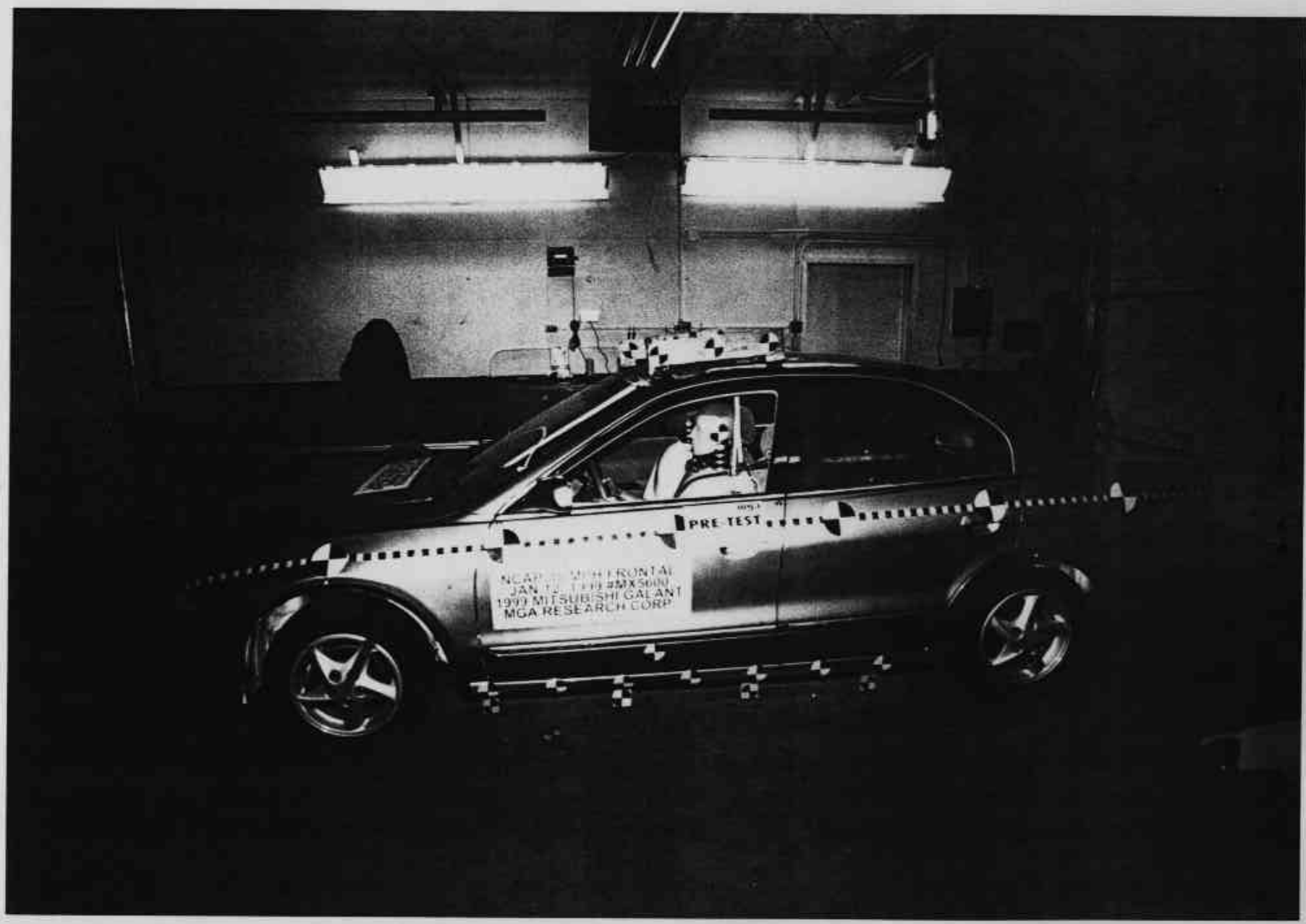


Photo No. A-5 - Pre-Test Left Side View of Test Vehicle

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

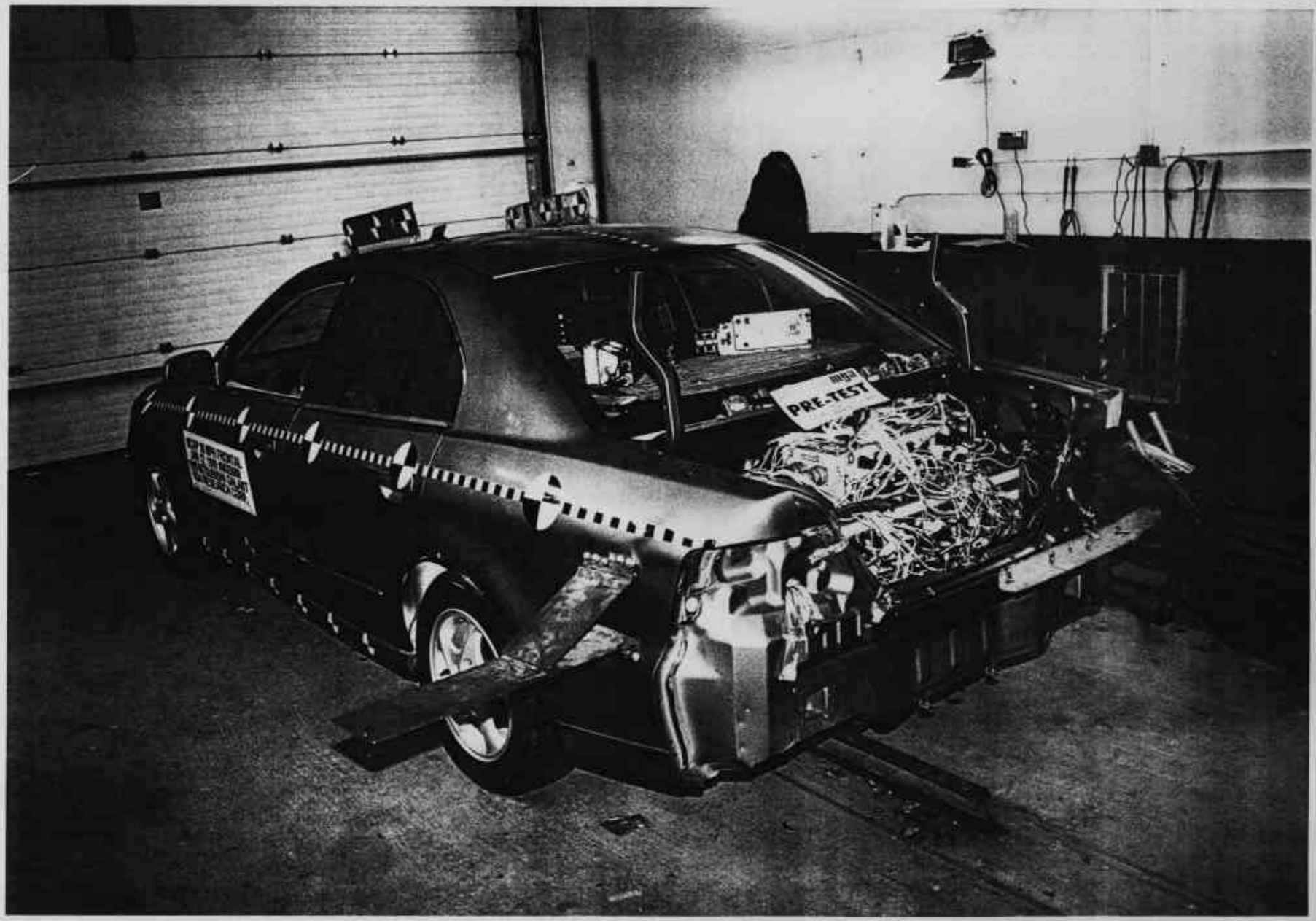


Photo No. A-7 - Pre-Test Left Rear Three-Quarter View of Test Vehicle

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

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

Photo No. A-10 - Pre-Test Right Front Three-Quarter View of Test Vehicle

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

Photo No. A-12 - Pre-Test Fuel Filler Cap View

A-12

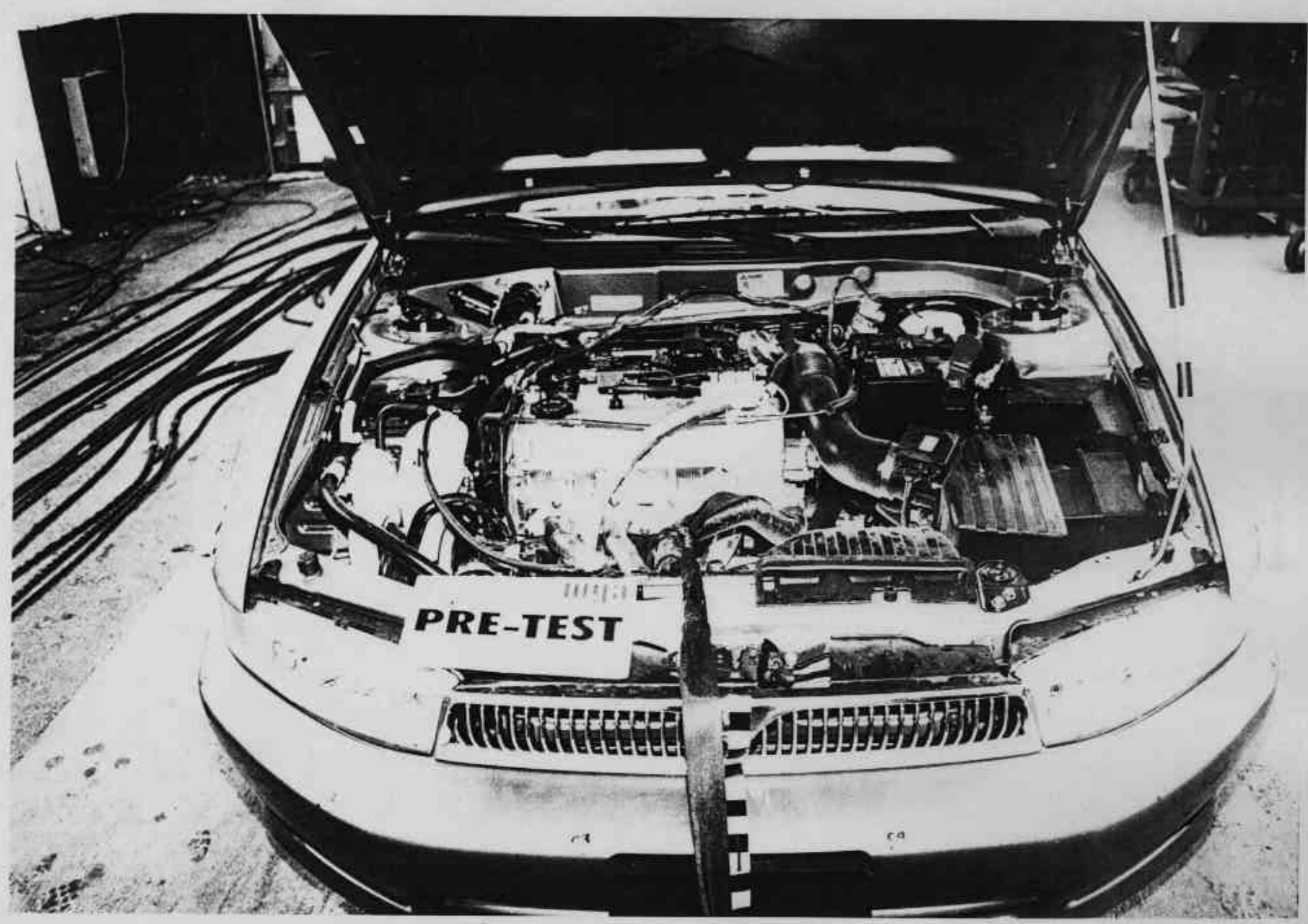


Photo No. A-13 - Pre-Test Engine Compartment View

A-13

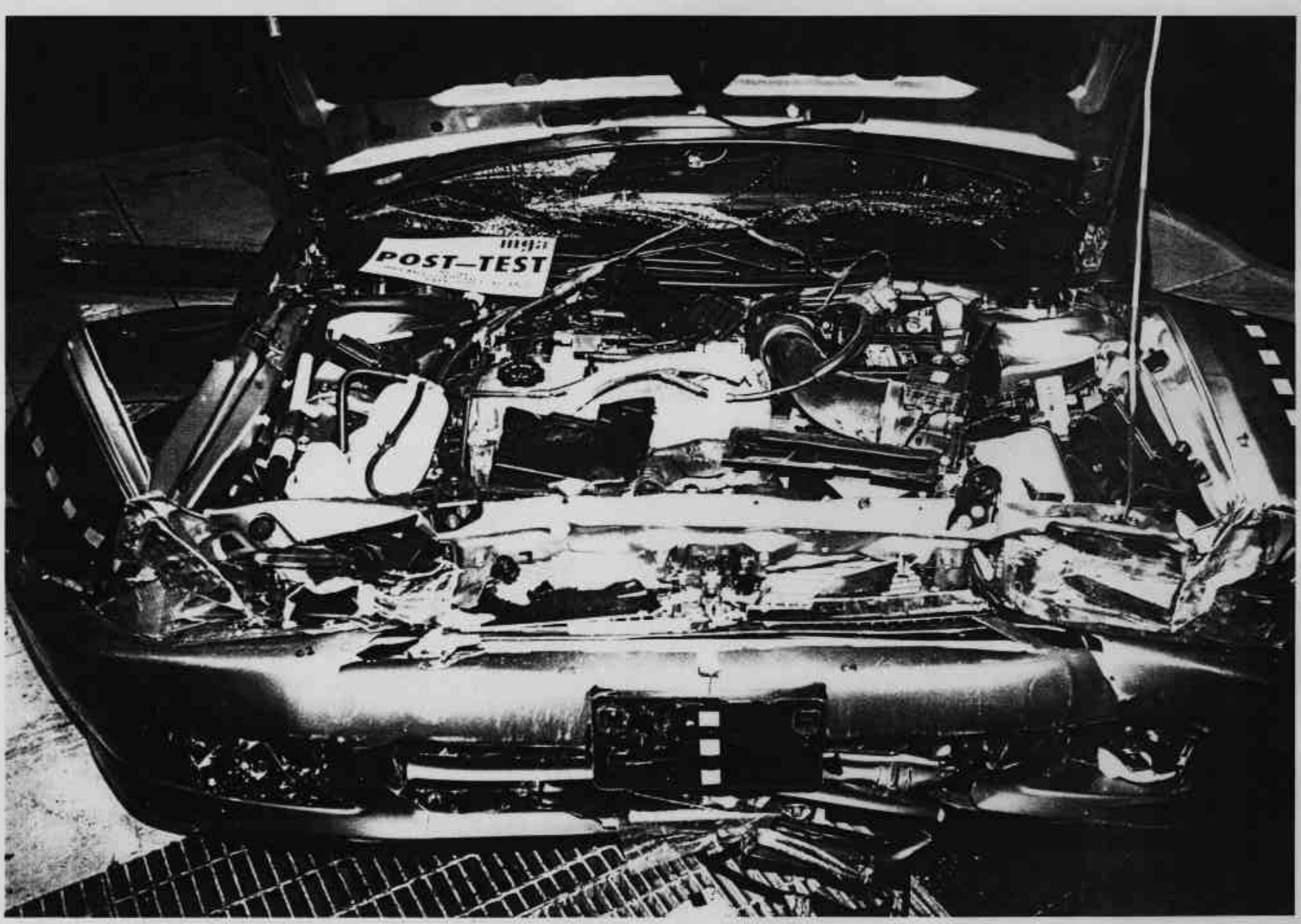


Photo No. A-14 - Post-Test Engine Compartment View

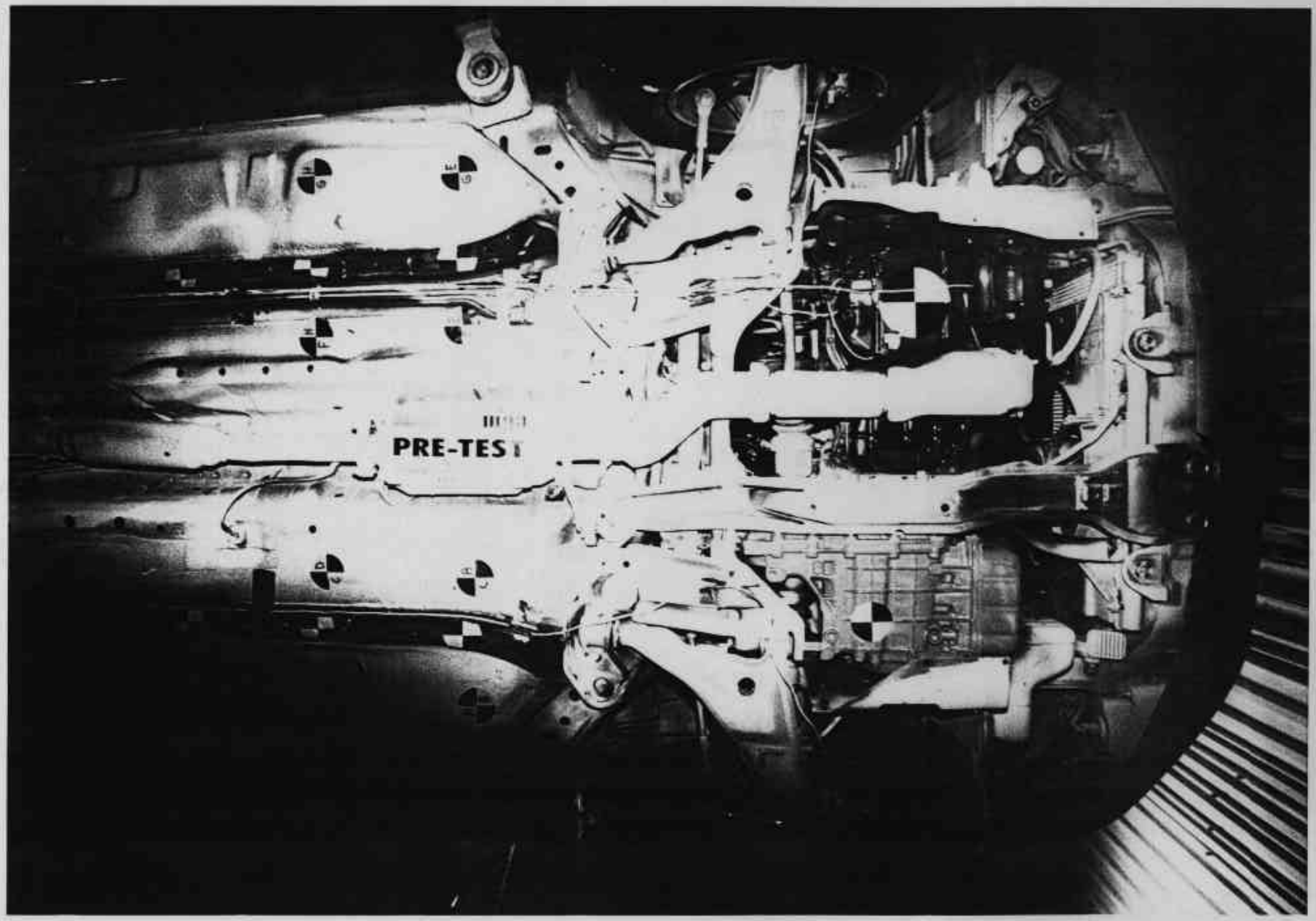


Photo No. A-15 - Pre-Test Front Underbody View

A-15

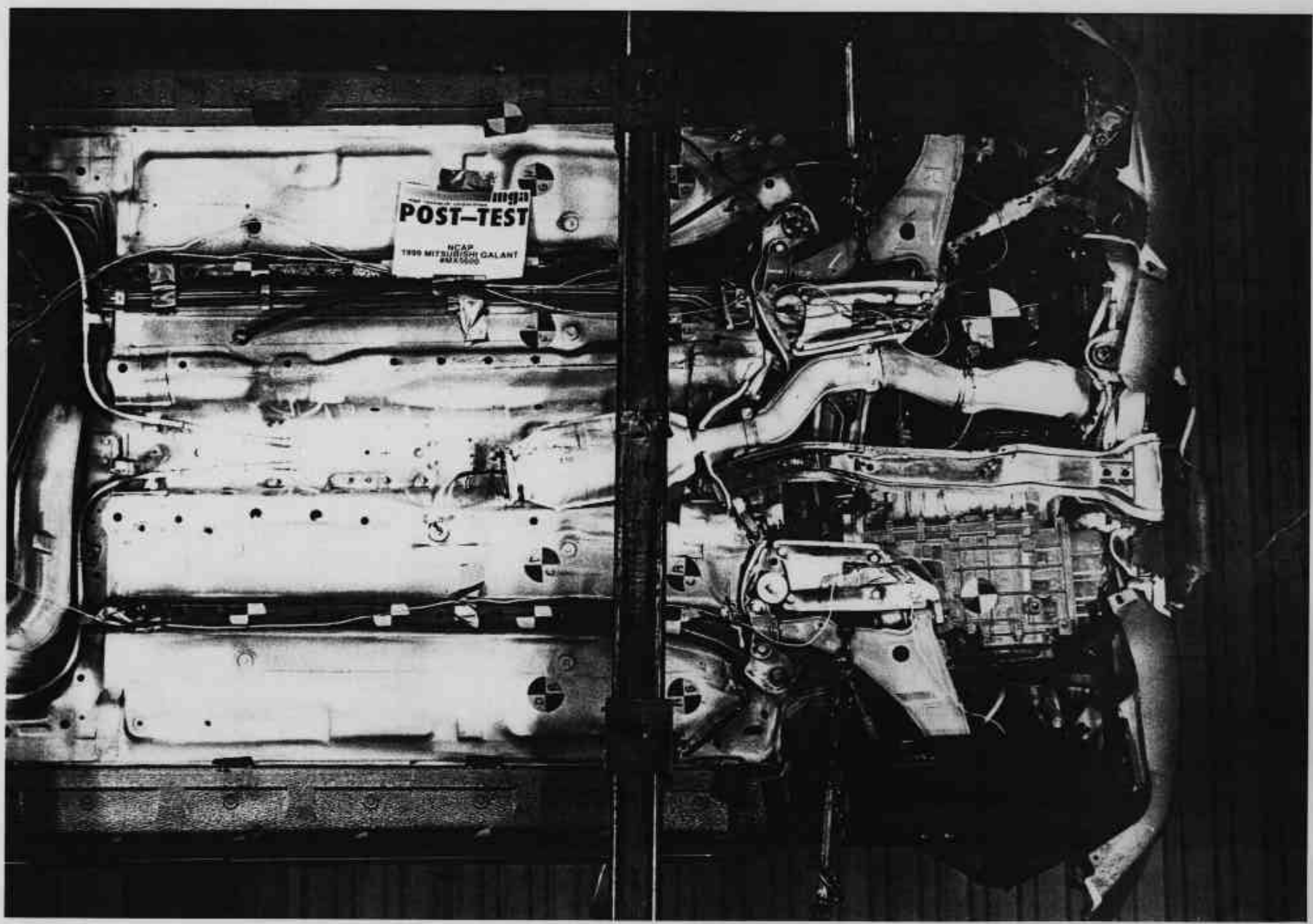


Photo No. A-16 - Post-Test Front Underbody View

A-16

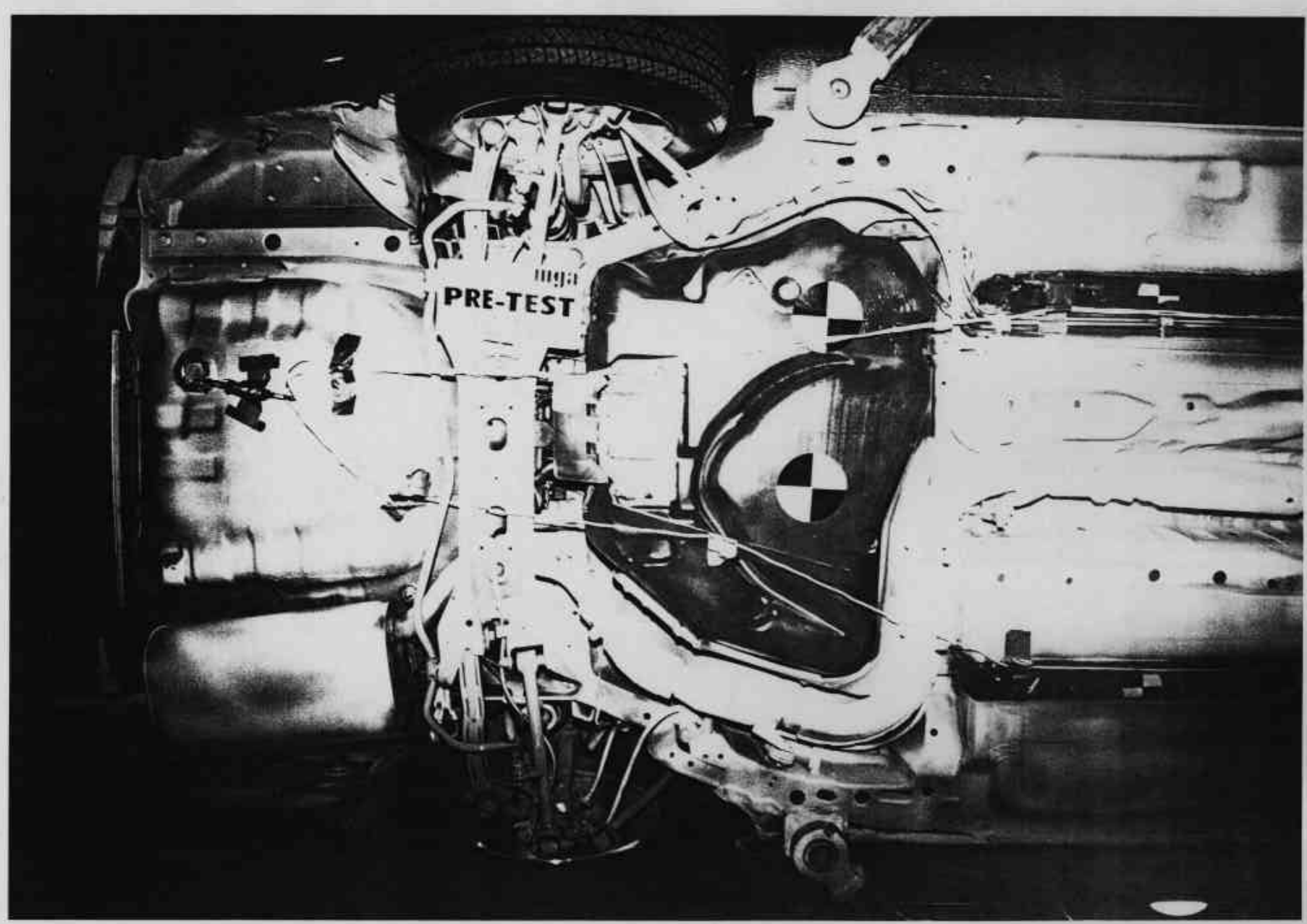


Photo No. A-17 - Pre-Test Rear Underbody View

A-17

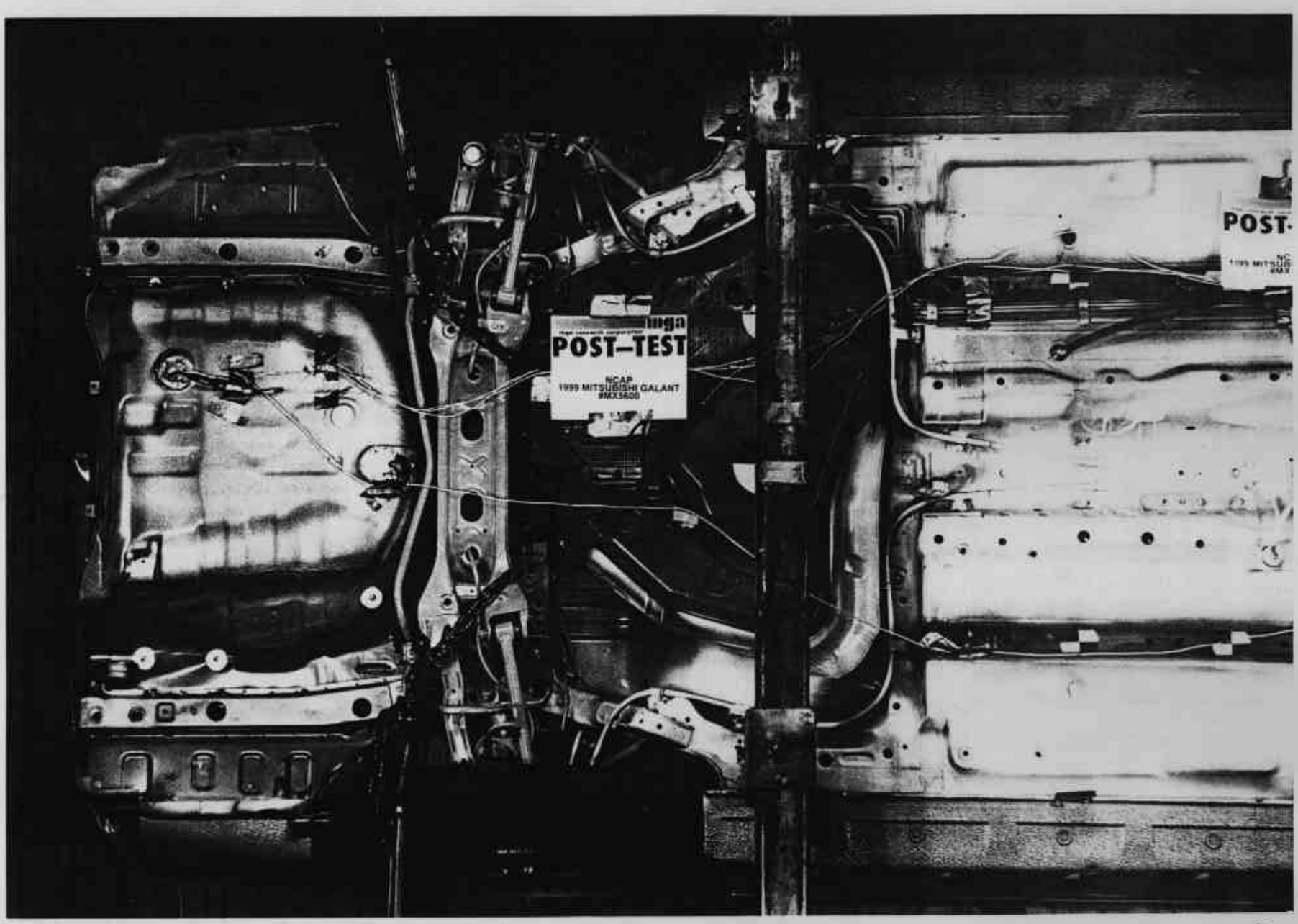


Photo No. A-18 - Post-Test Rear Underbody View

A-18

Photo No. A-19 - Pre-Test Windshield View

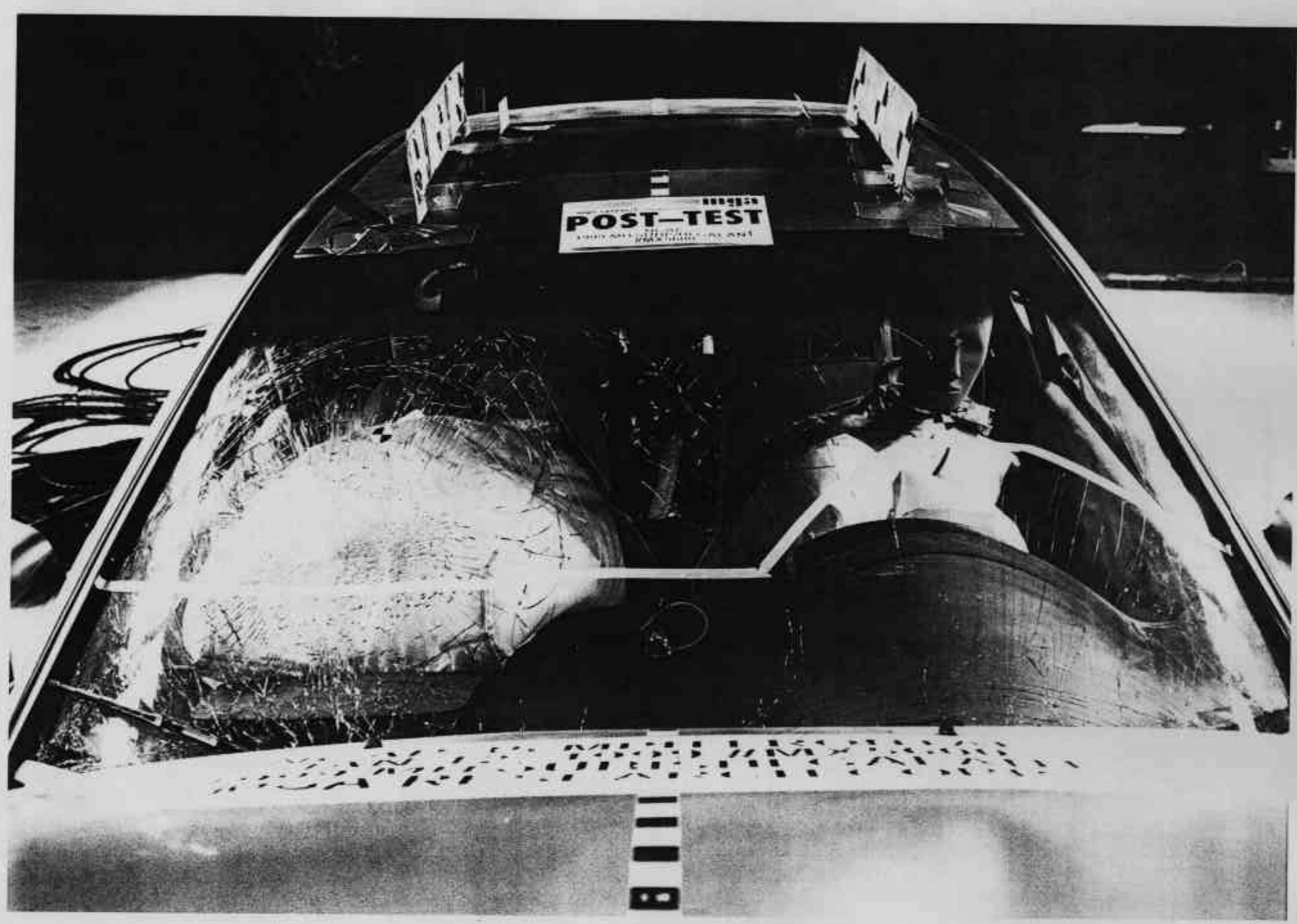


Photo No. A-20 - Post-Test Windshield View

A-20

Photo No. A-21 - Pre-Test Driver Dummy Position Left Side View

A-21

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

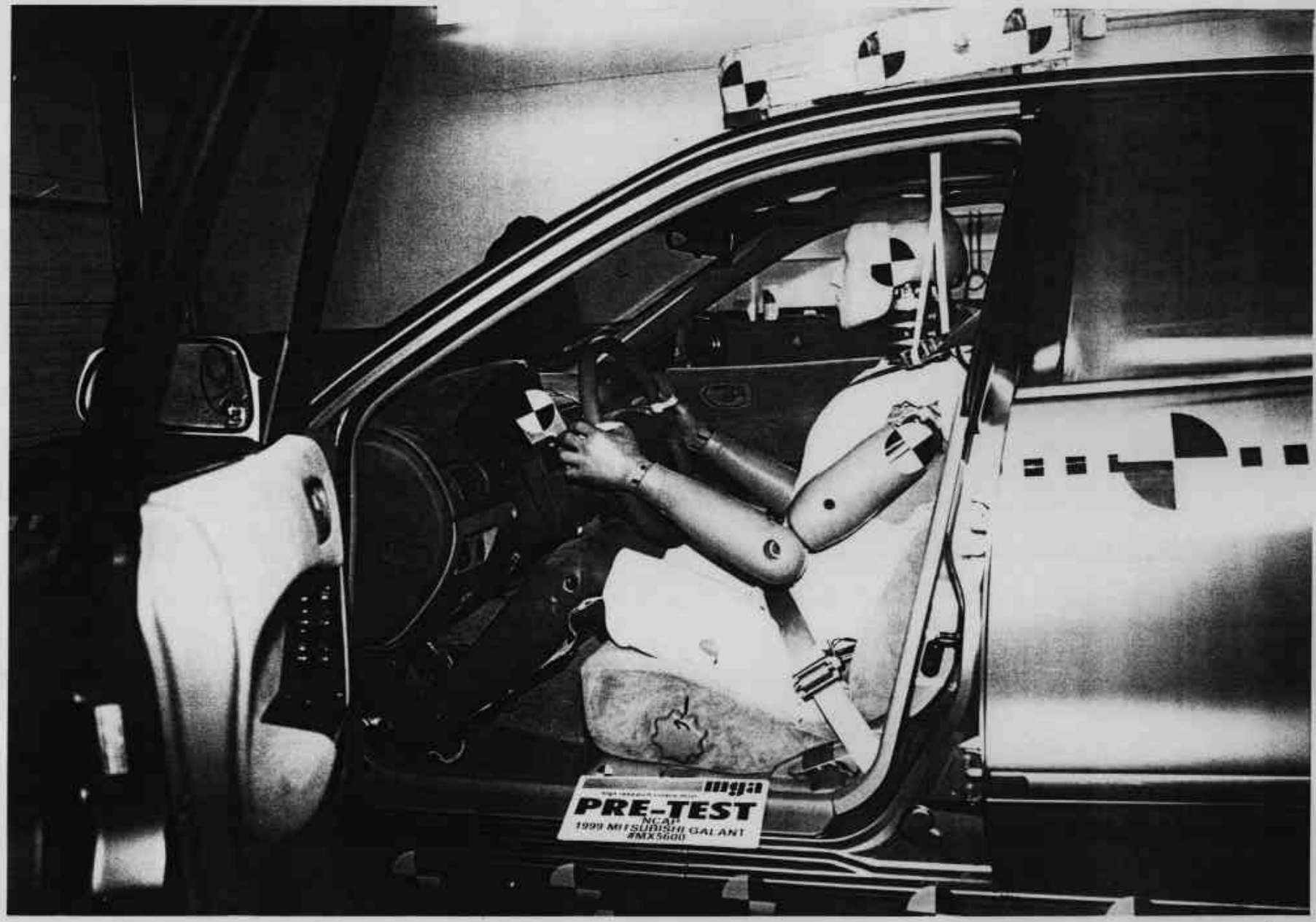


Photo No. A-23 - Pre-Test Driver Dummy Position Left Side View (Door Open)

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

Photo-No. A-25 - Pre-Test Driver Seat Position View

A-25

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

A-26

Photo No. A-27 - Pre-Test Driver Dummy Knee Position

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

Photo No. A-29 - Post-Test Driver Airbag Contact

A-29

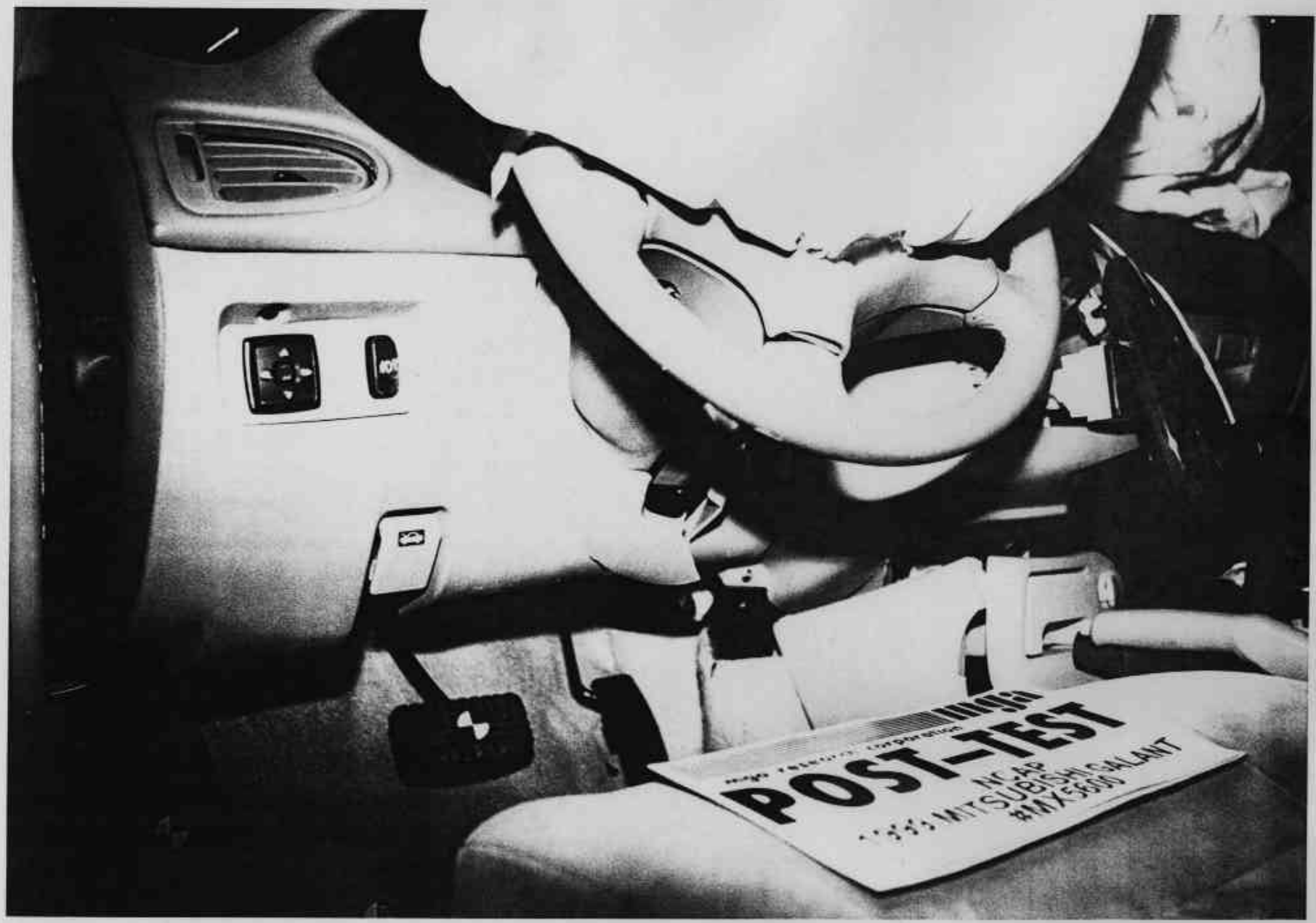


Photo No. A-30 - Post-Test Driver Knee Contact View

A-30

Photo No. A-31 - Pre-Test Passenger Dummy Position Right Side View

A-31

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

A-32

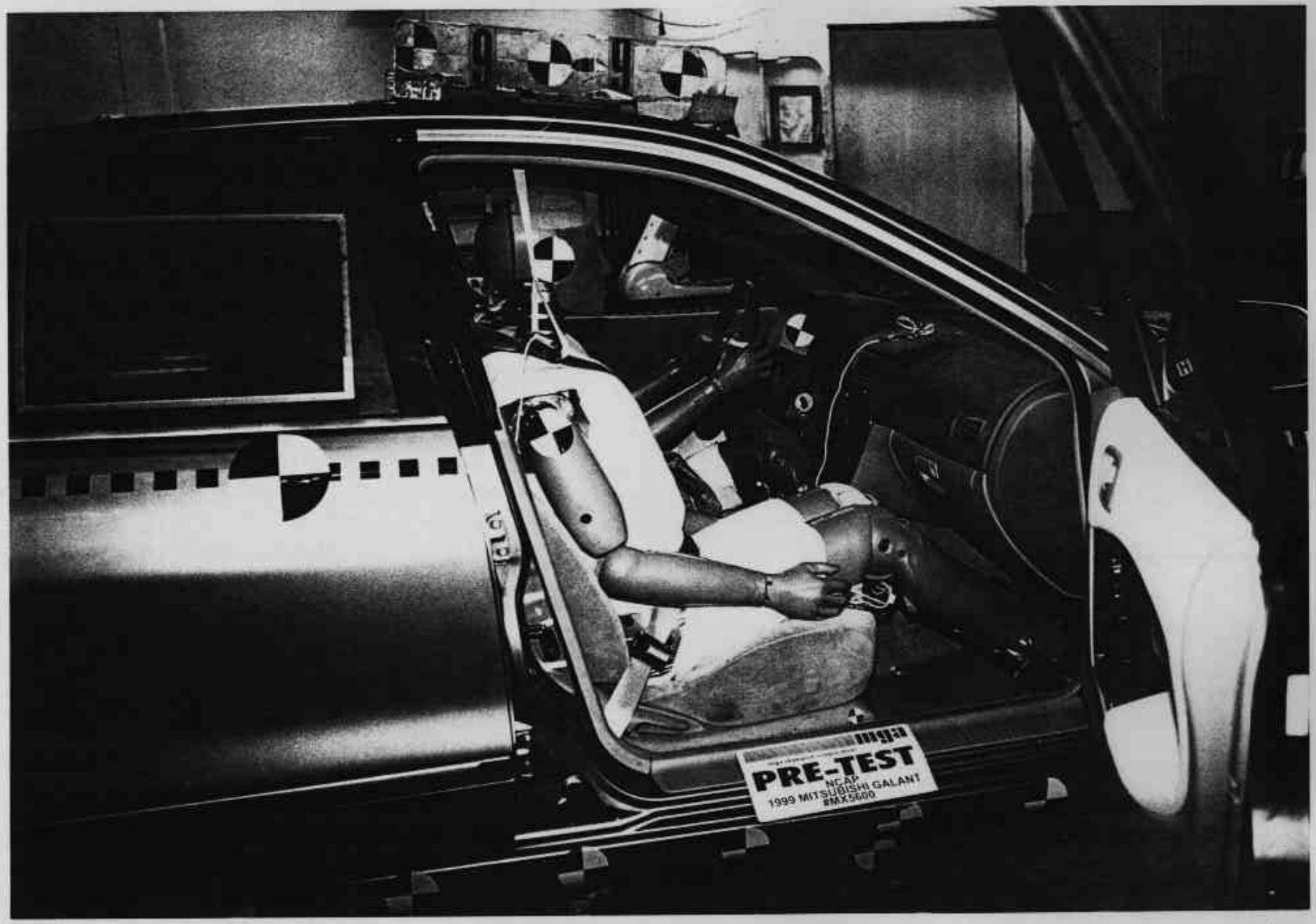


Photo No. A-33 - Pre-Test Pass. Dummy Position Right Side View (Door Open)

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

Photo No. A-35 - Pre-Test Passenger Seat Position View

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

Photo No. A-37 - Pre-Test Passenger Dummy Knee Position

A-37

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

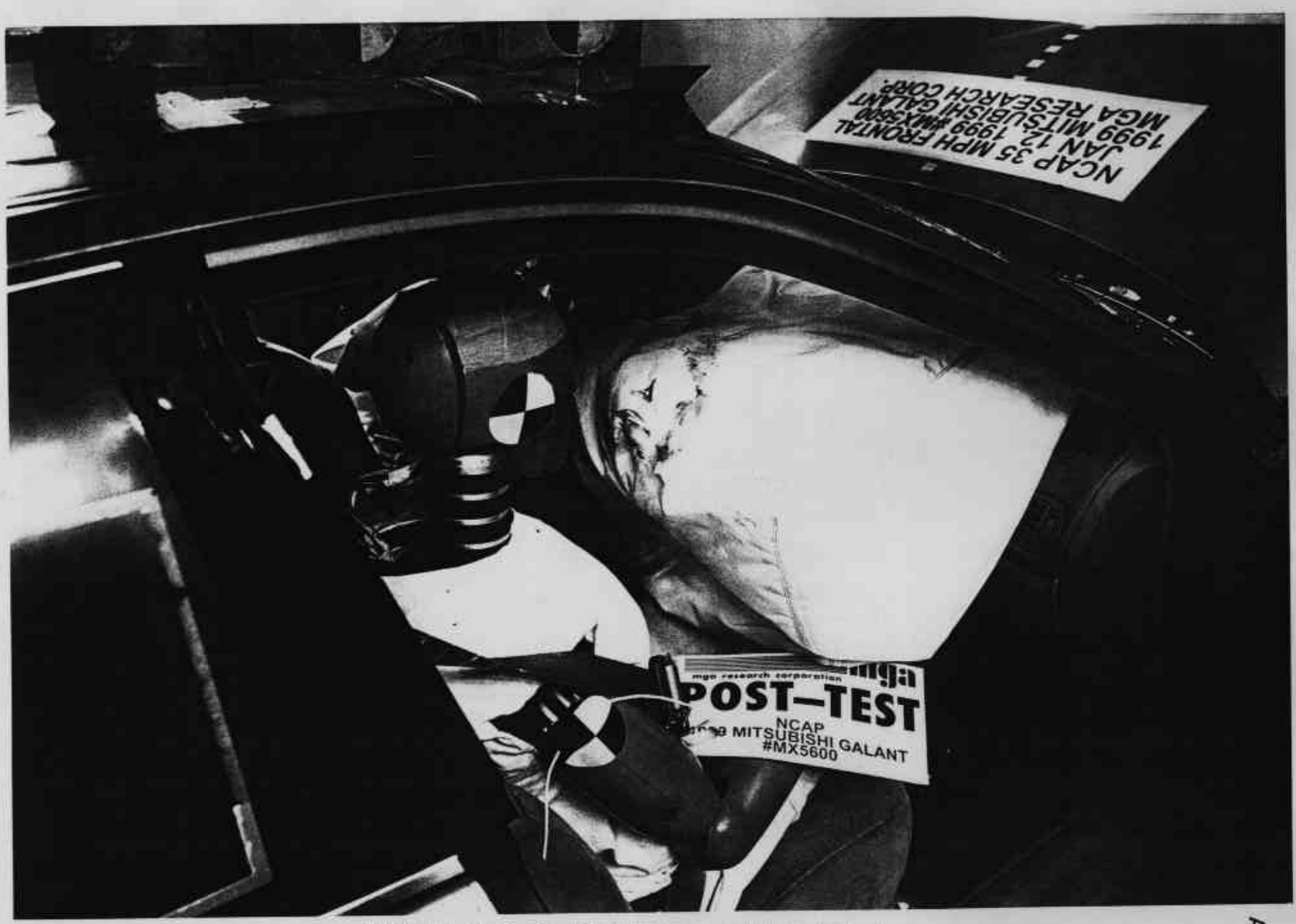


Photo No. A-39 - Post-Test Passenger Airbag Contact

Photo No. A-40 - Post-Test Passenger Knee Contact View

A-40

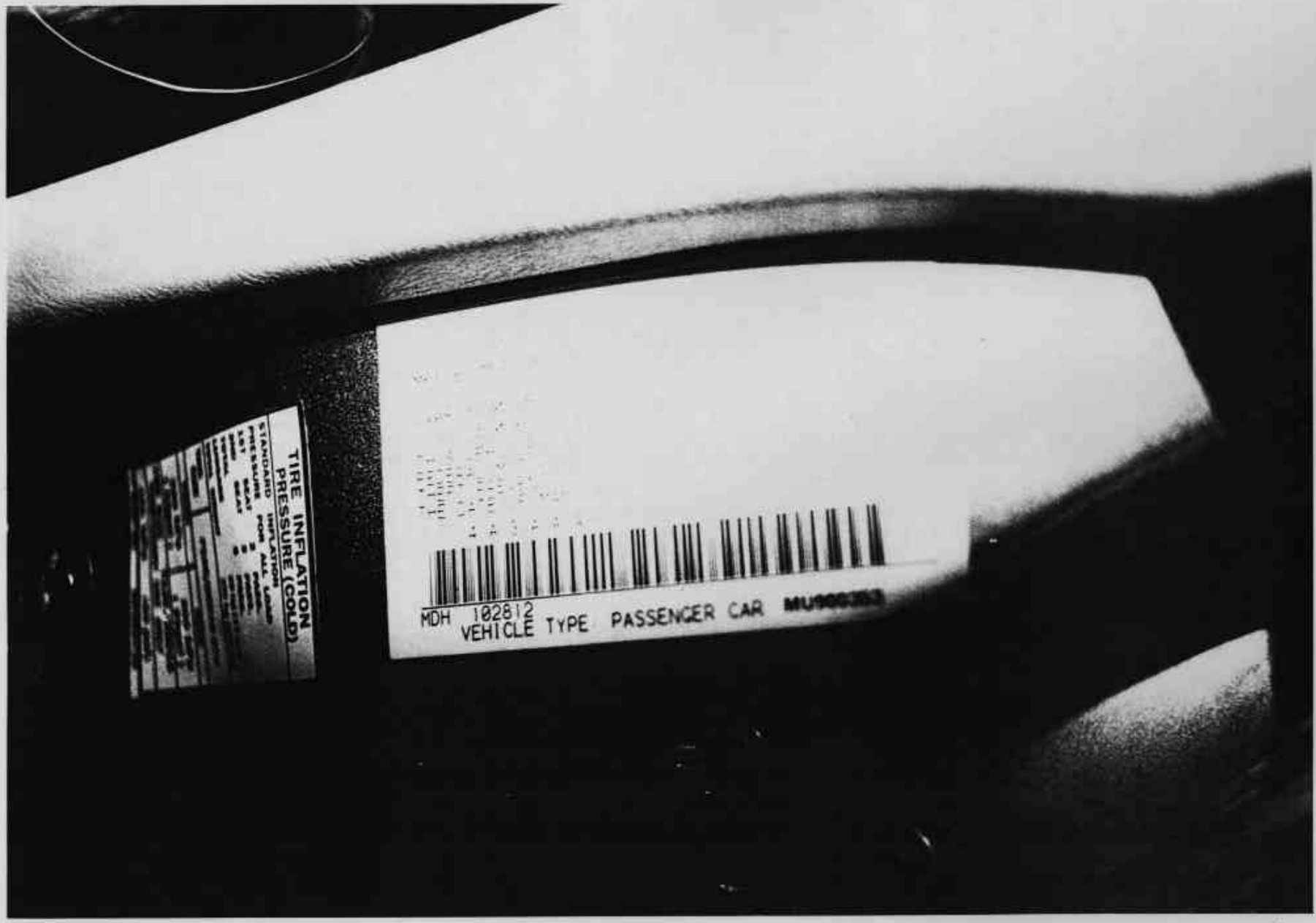


Photo No. A-41 - Vehicle Certification Label

A-41

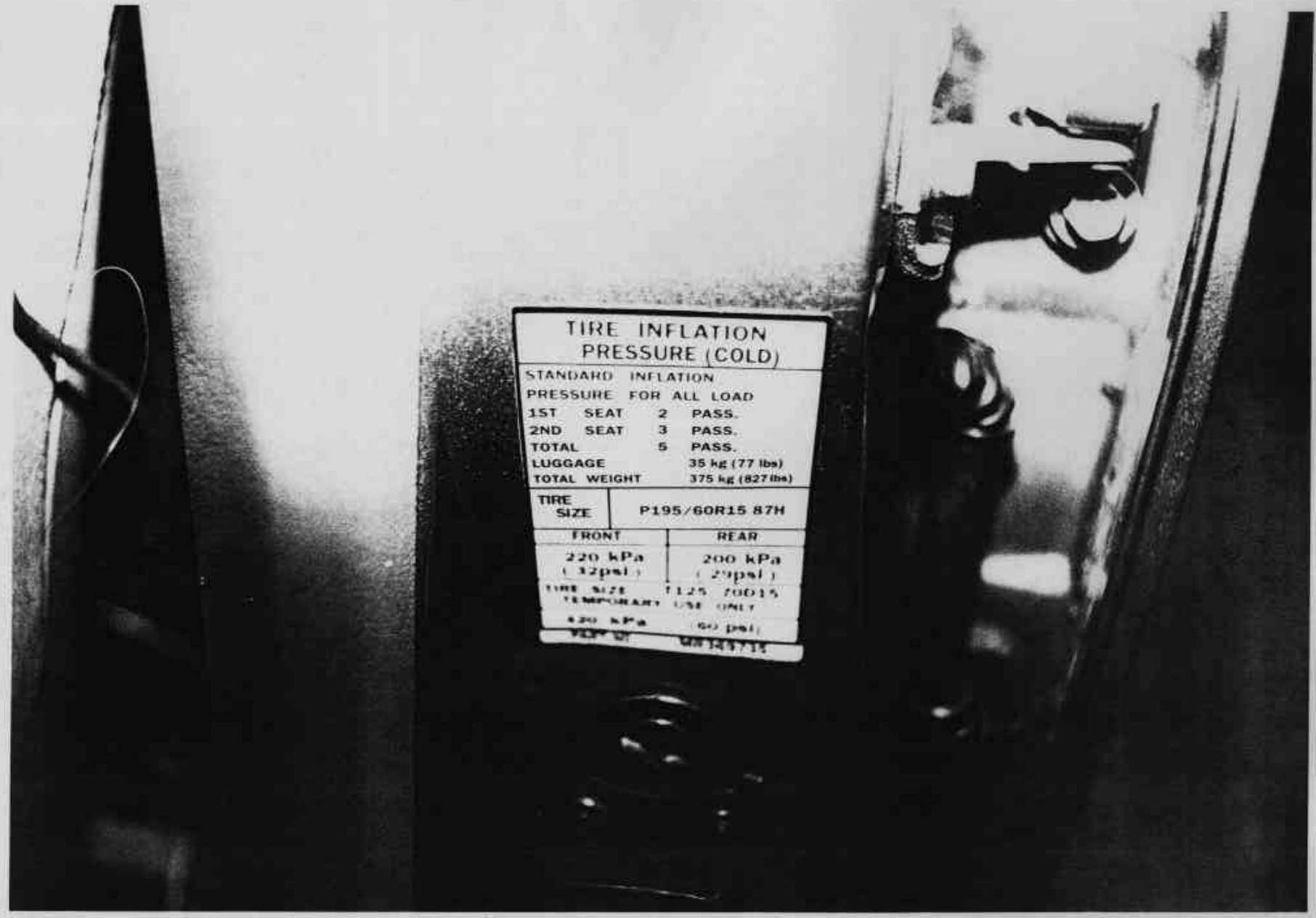


Photo No. A-42 - Tire Placard

A-42

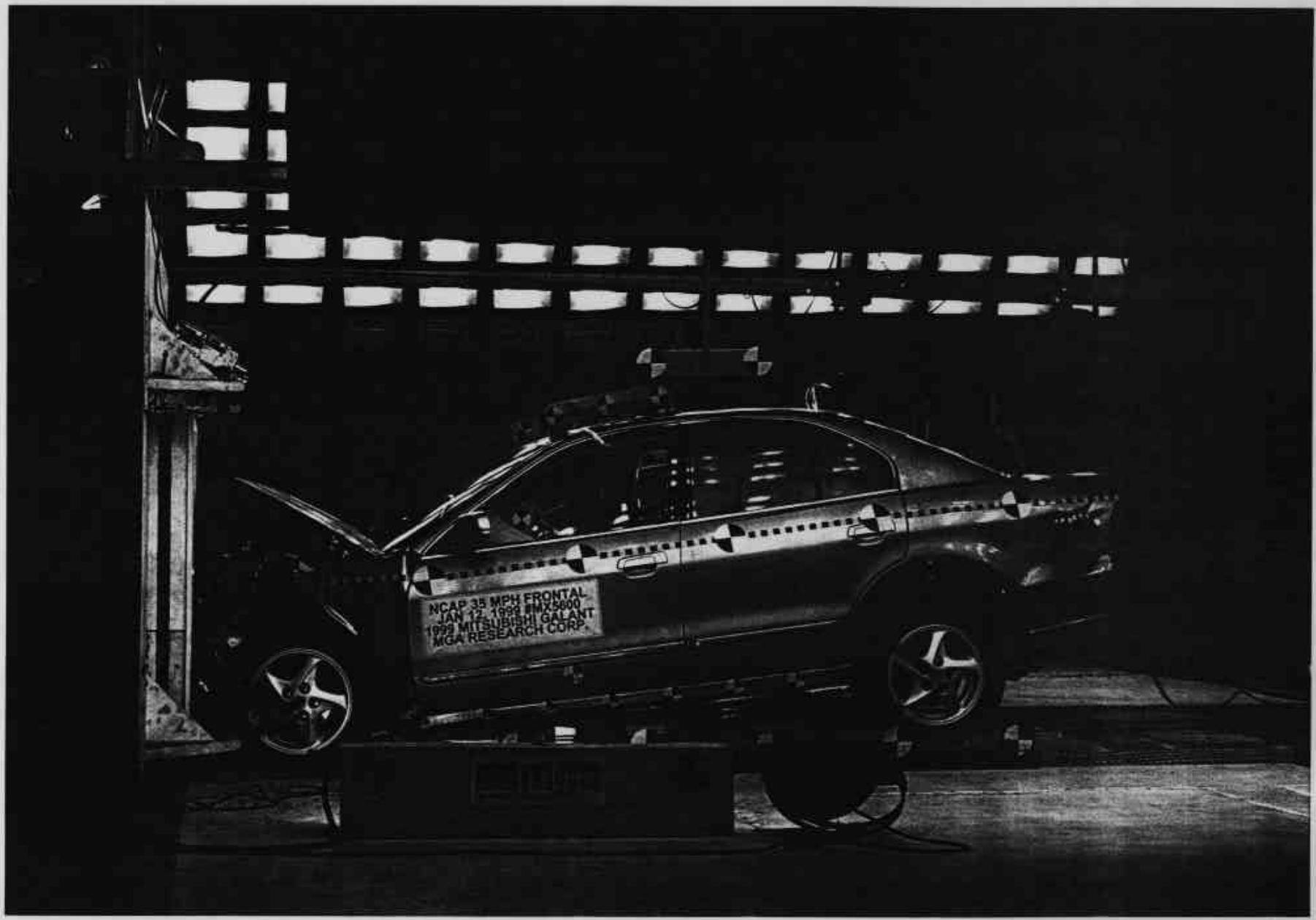


Photo No. A-43 - Vehicle Impact

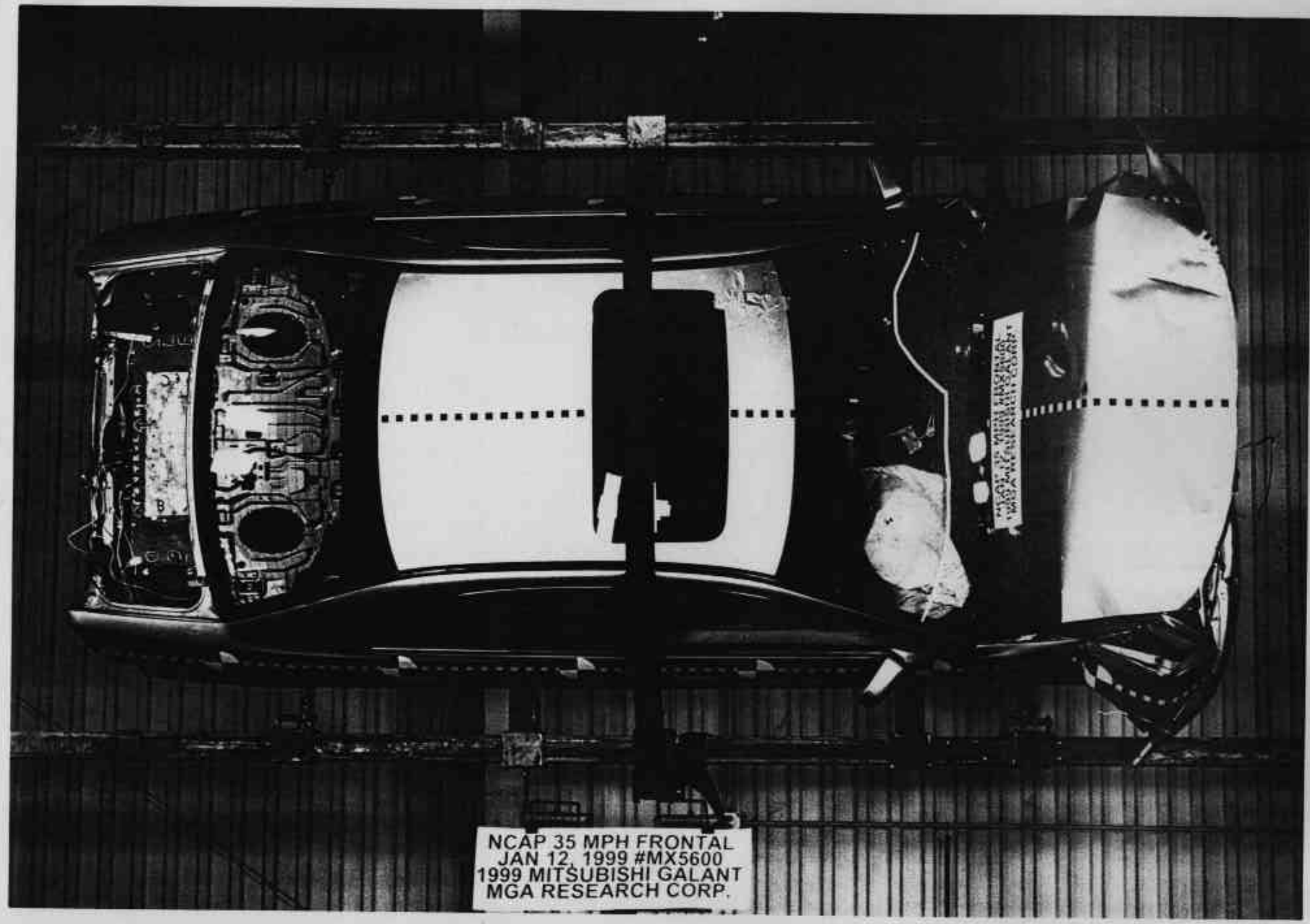


Photo No. A-44 - Rollover 90°

A-44

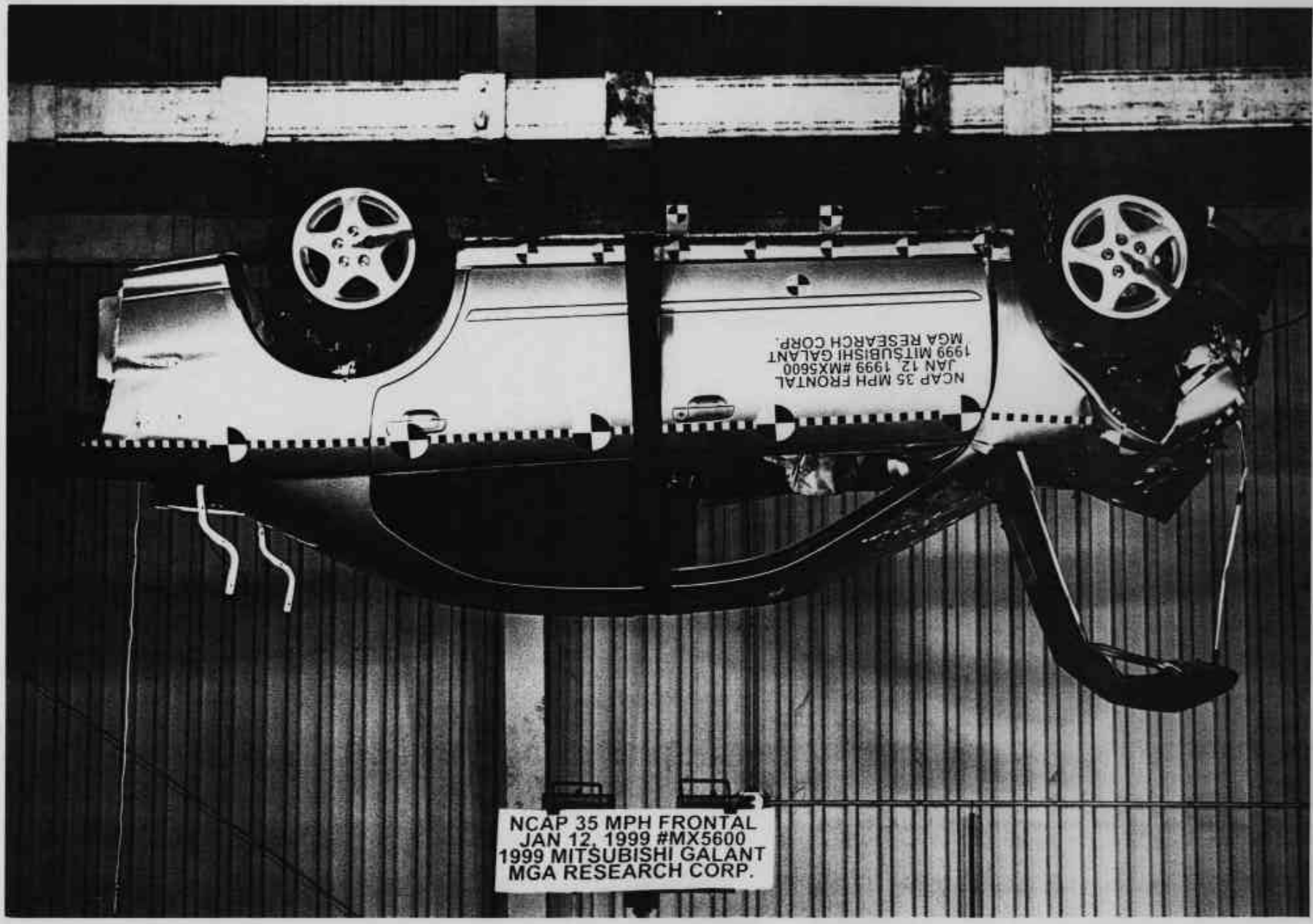


Photo No. A-45 - Rollover 180°

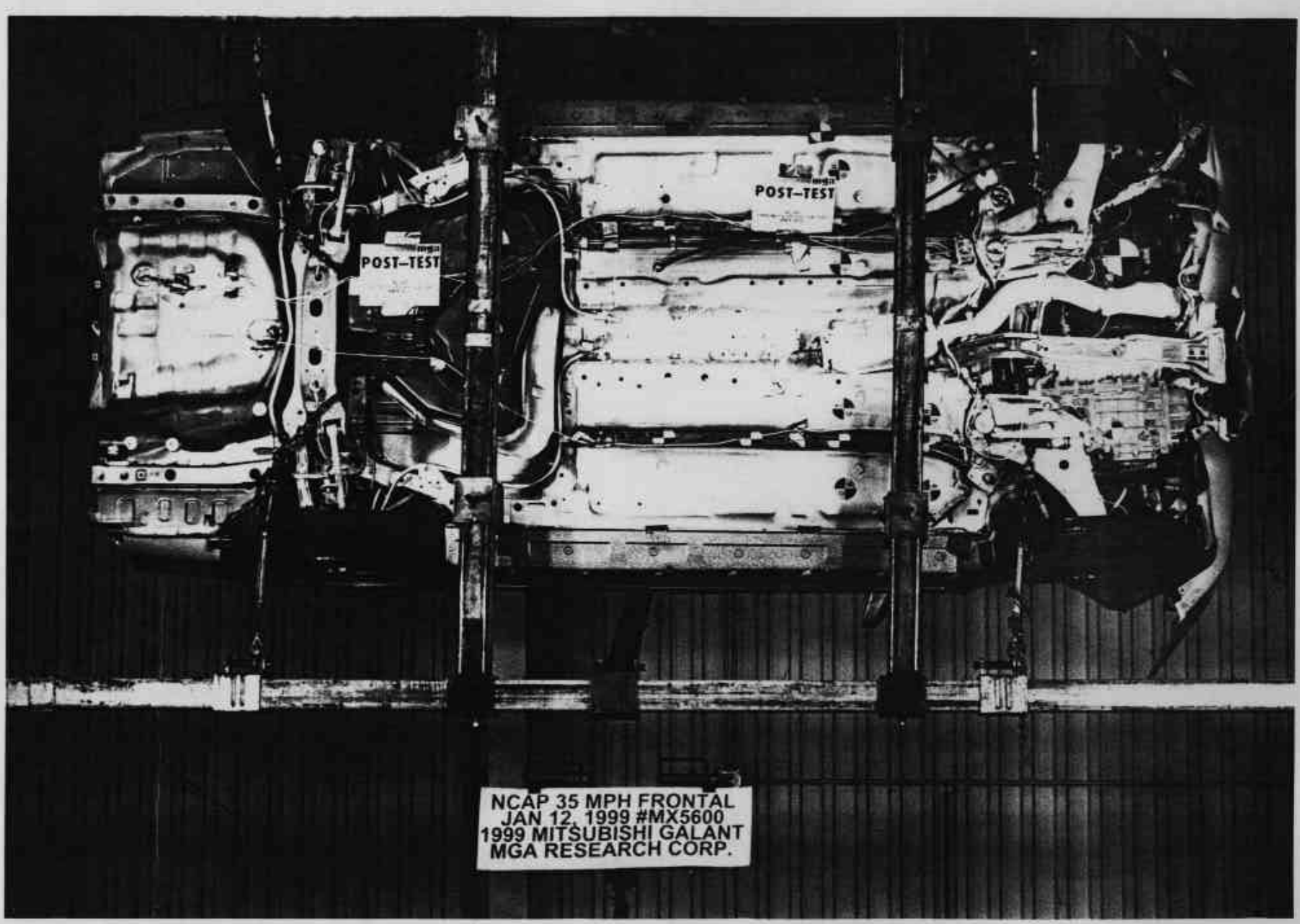


Photo No. A-46 - Rollover 270°

Photo No. A-47 - Rollover 360°

APPENDIX B

VEHICLE, LOAD CELL BARRIER AND DUMMY RESPONSE DATA

1999 Mitsubishi Galant 4 Door

VEHICLE DATA FILTER CHANNEL CLASS

Head Accelerations 1000 (1650 Hz)

Chest Accelerations 180 (300 Hz)

Vehicle Accelerations 60 (100 Hz)

Barrier Load Cells 60 (100 Hz)

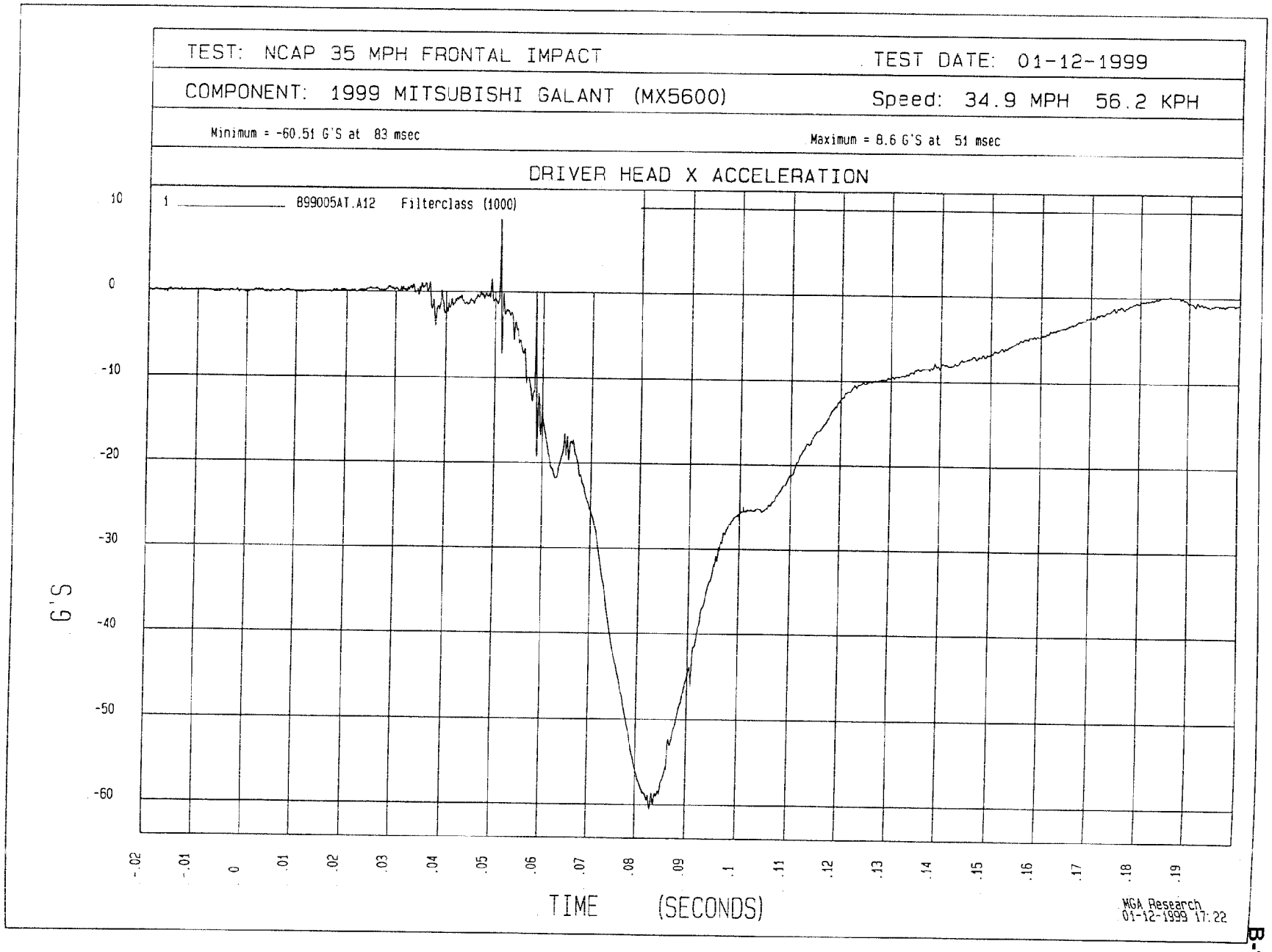
Femur Load Cells 600 (1000 Hz)

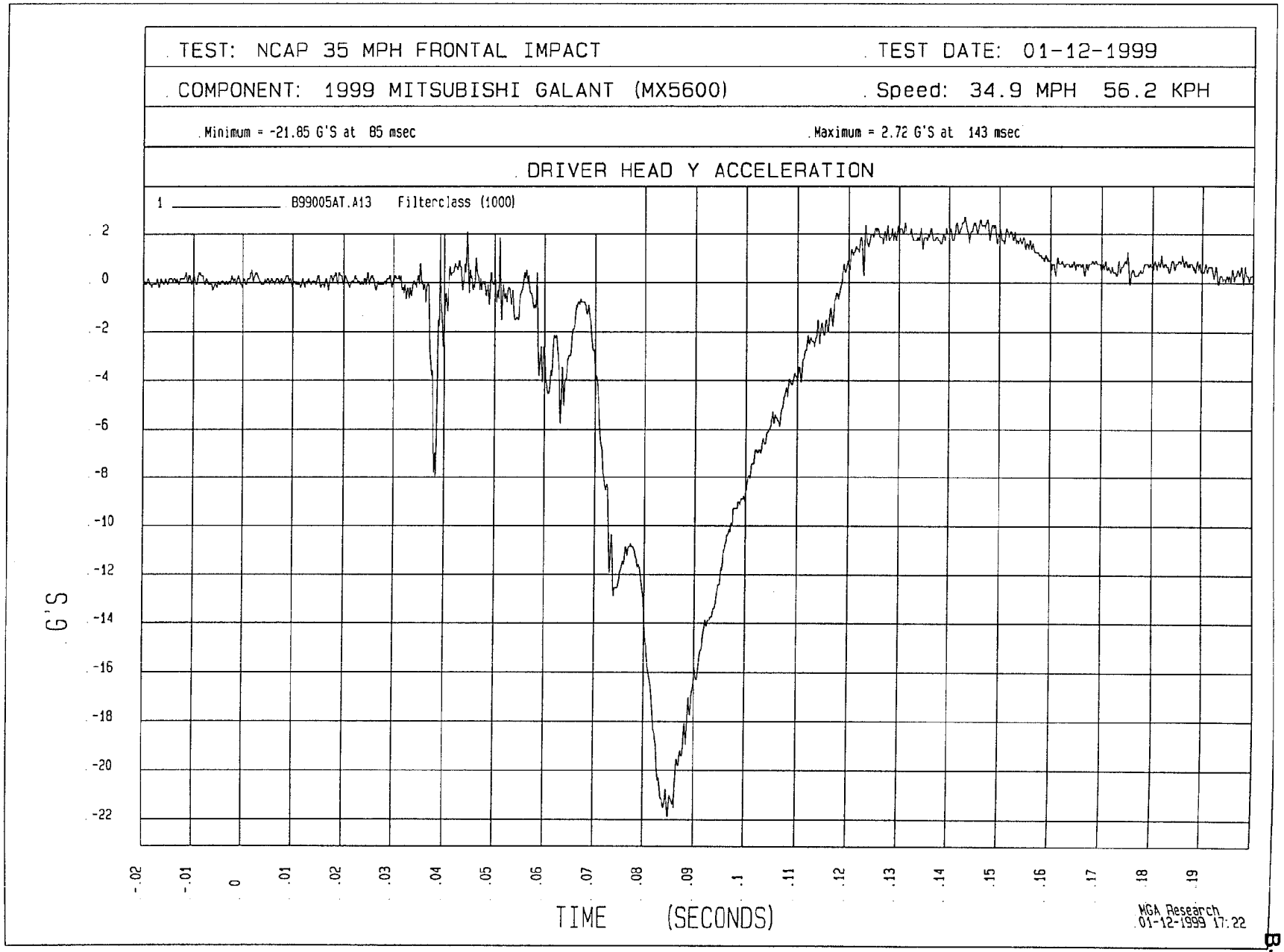
Lap and Torso Belts 60 (100 Hz)

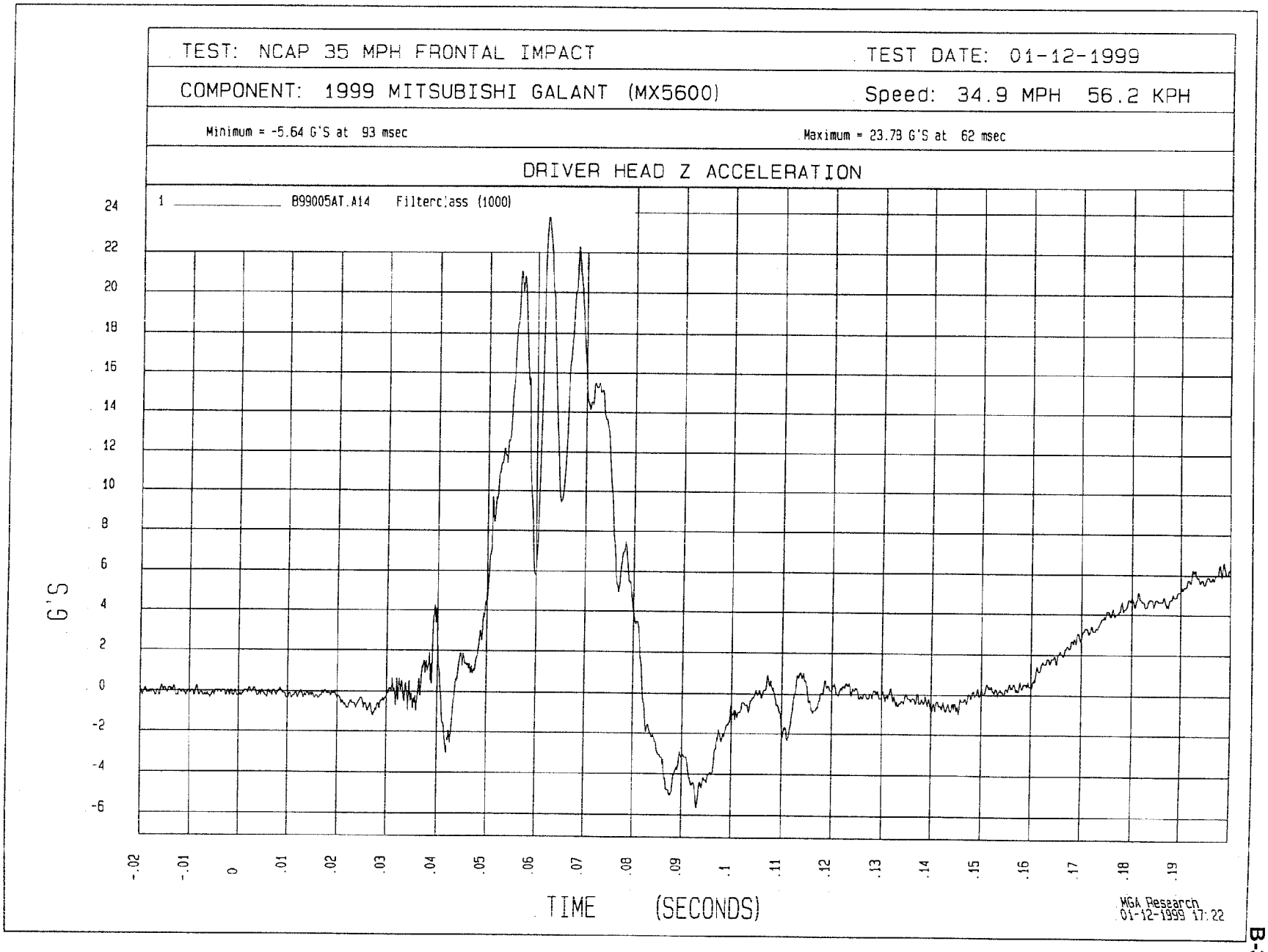
Occupant Data: (Cont'd) Page No.

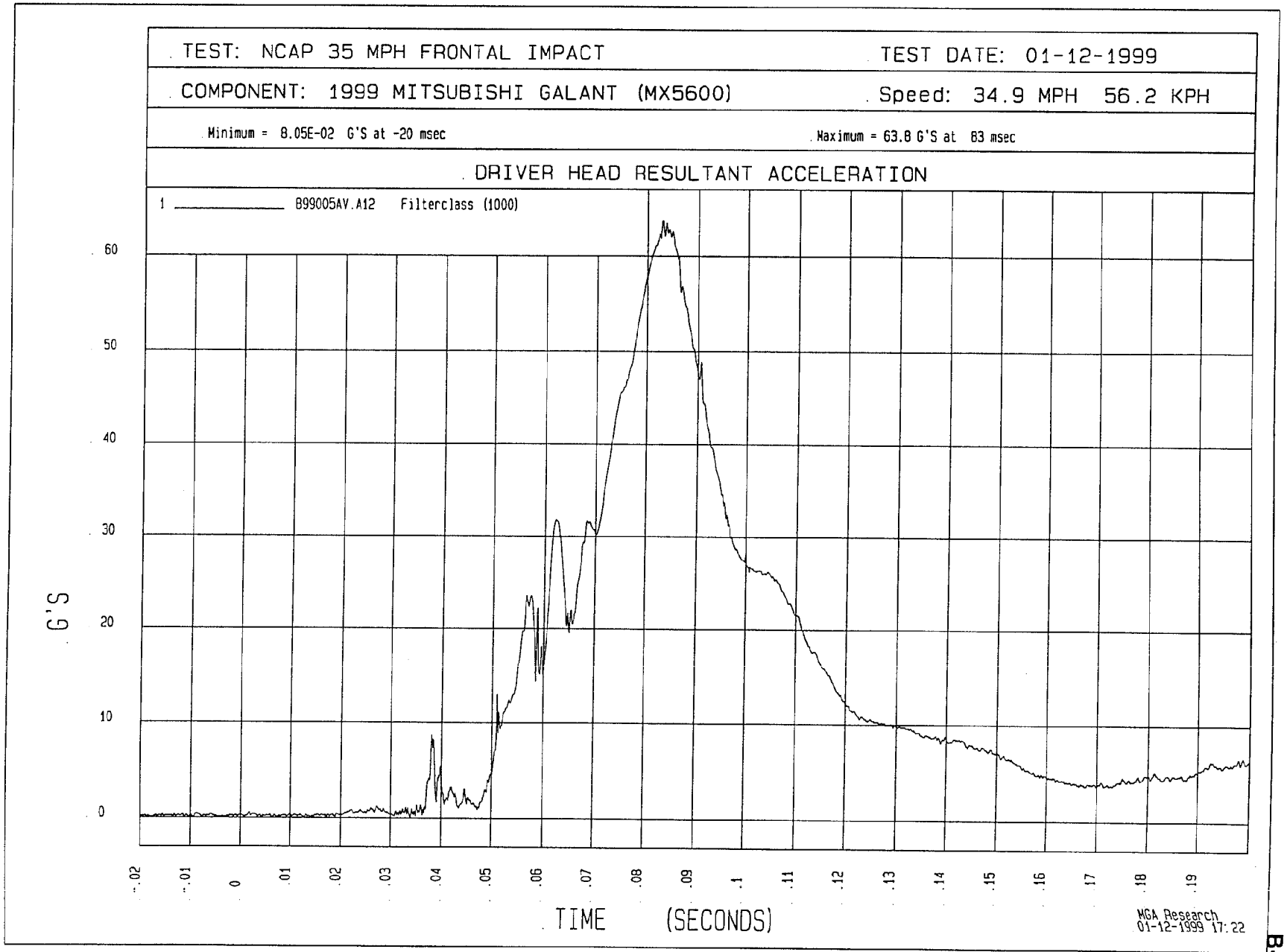
* Data not valid after approximately 50 msec.

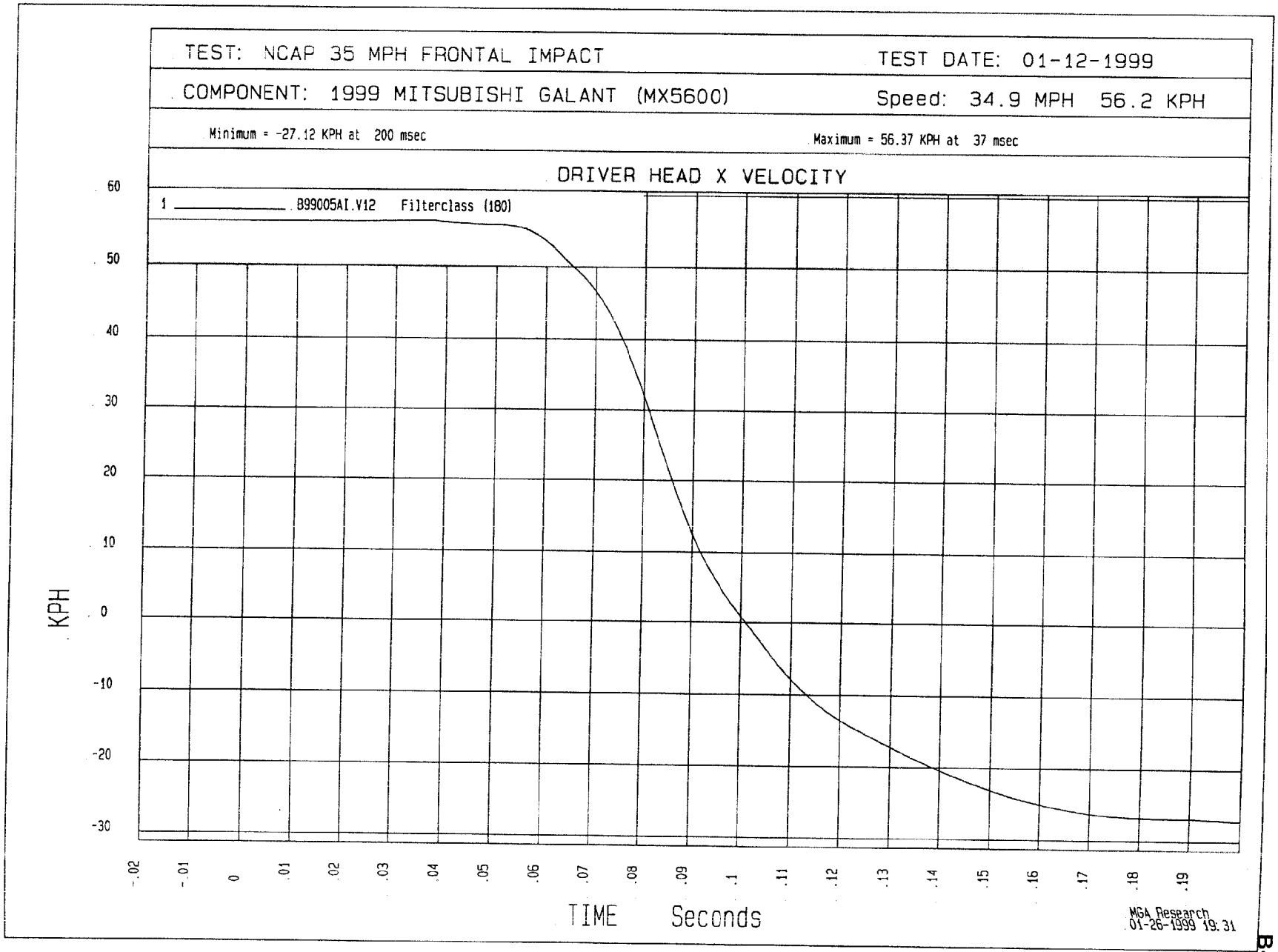
** Data not valid after approximately 17 msec.

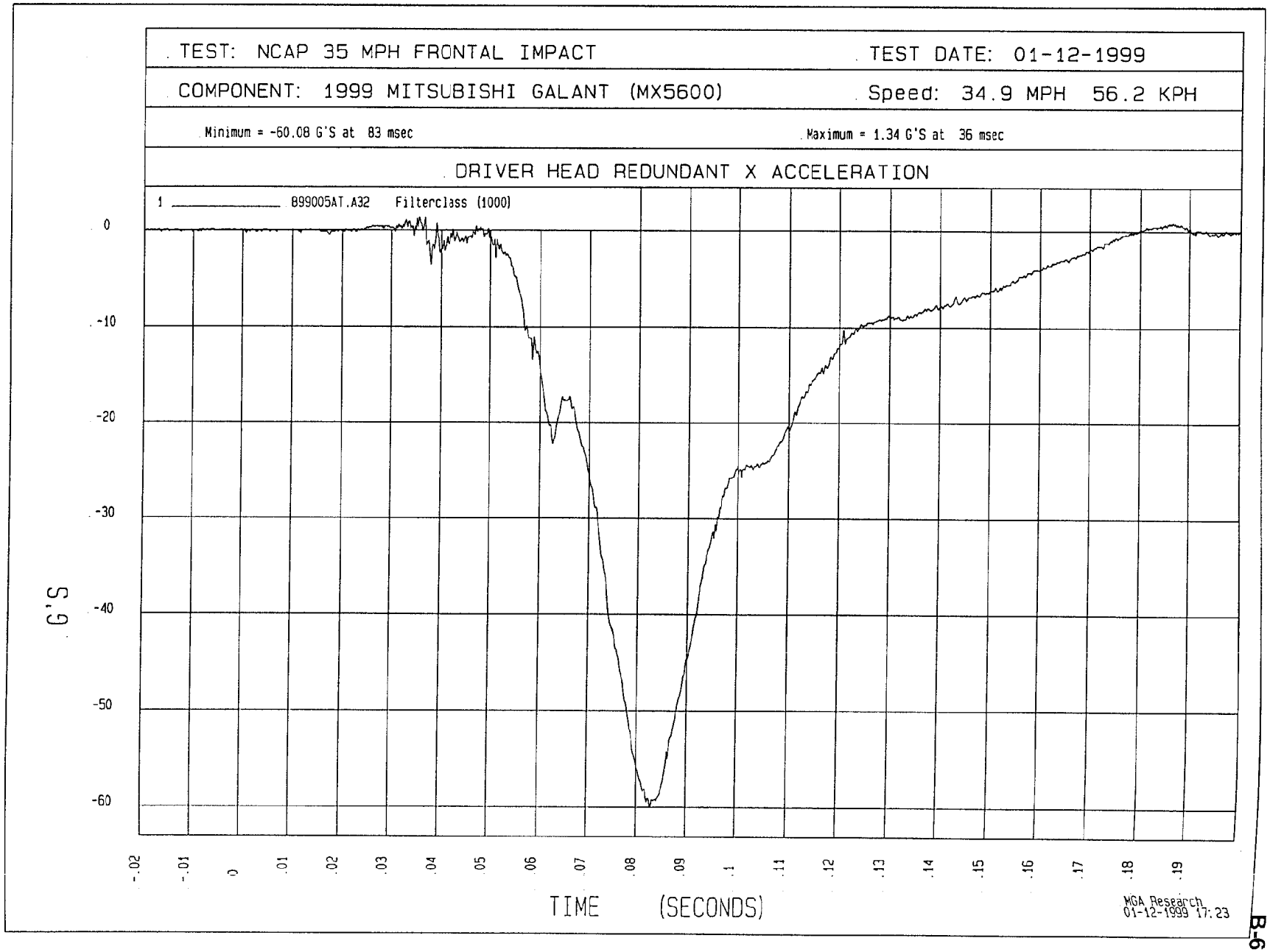

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -60.51 G'S at 83 msec
Maximum = 8.6 G'S at 51 msec
DRIVER HEAD X ACCELERATION
1 899005AT.A12 Filterclass (1000)
10
0
-10
-20
-30
-40
-50
-60
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:22

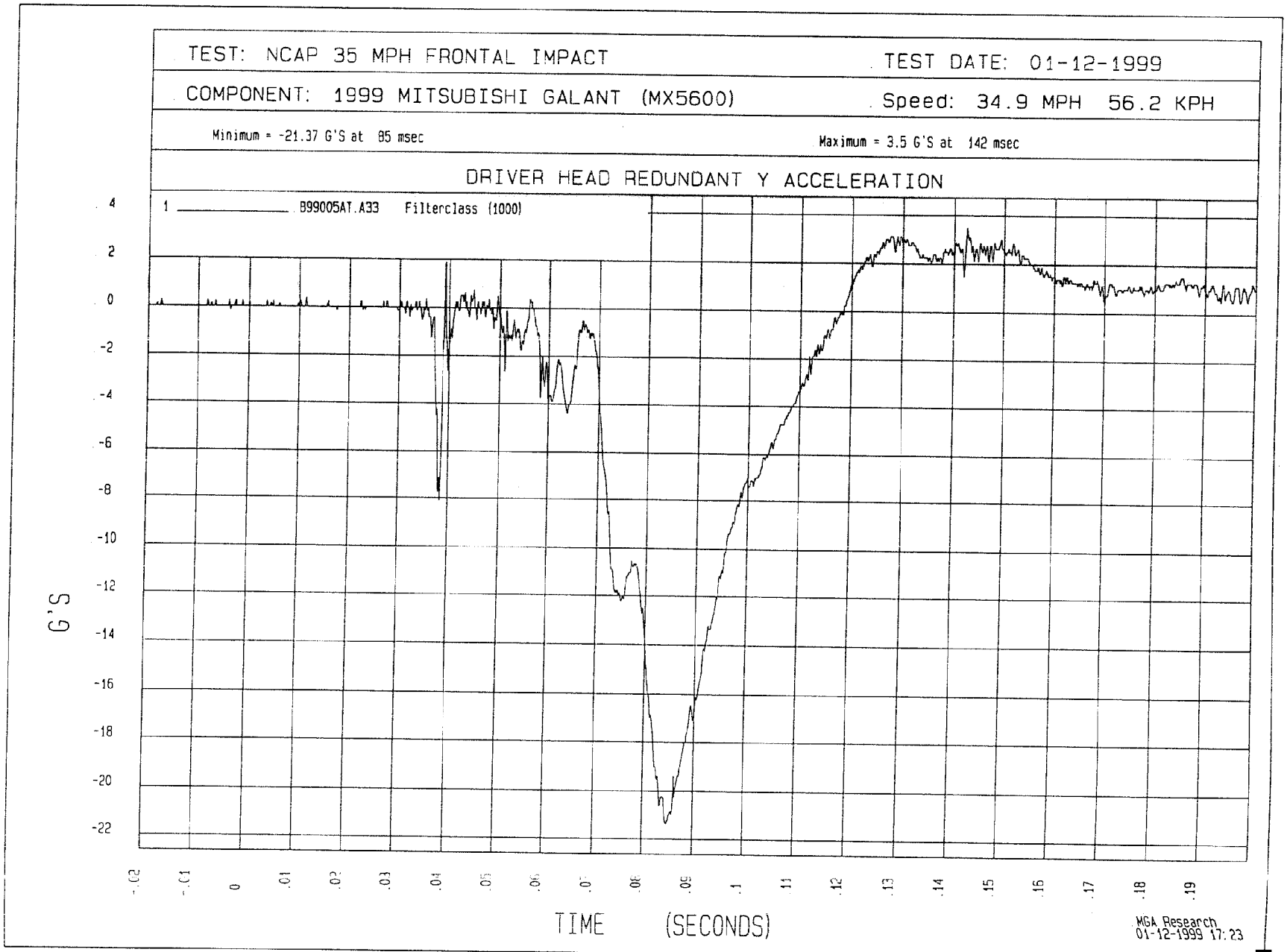

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -21.85 G'S at 85 msec
Maximum = 2.72 G'S at 143 msec
DRIVER HEAD Y ACCELERATION
1 B99005AT.A13 Filterclass (1000)
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:22

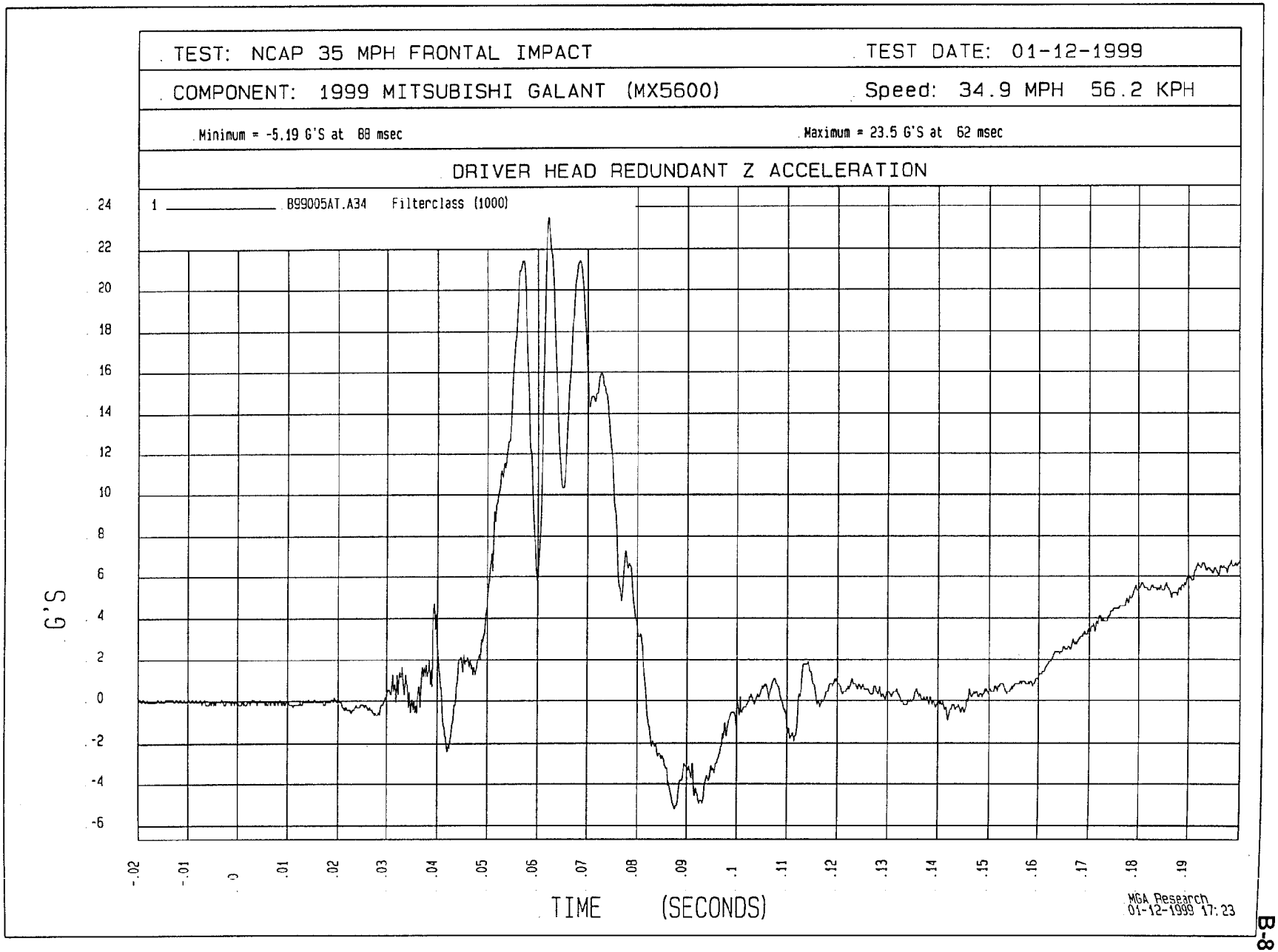

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -5.64 G'S at 93 msec
Maximum = 23.78 G'S at 62 msec
DRIVER HEAD Z ACCELERATION
1 B99005AT.A14 Filterclass (1000)
G'S
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:22

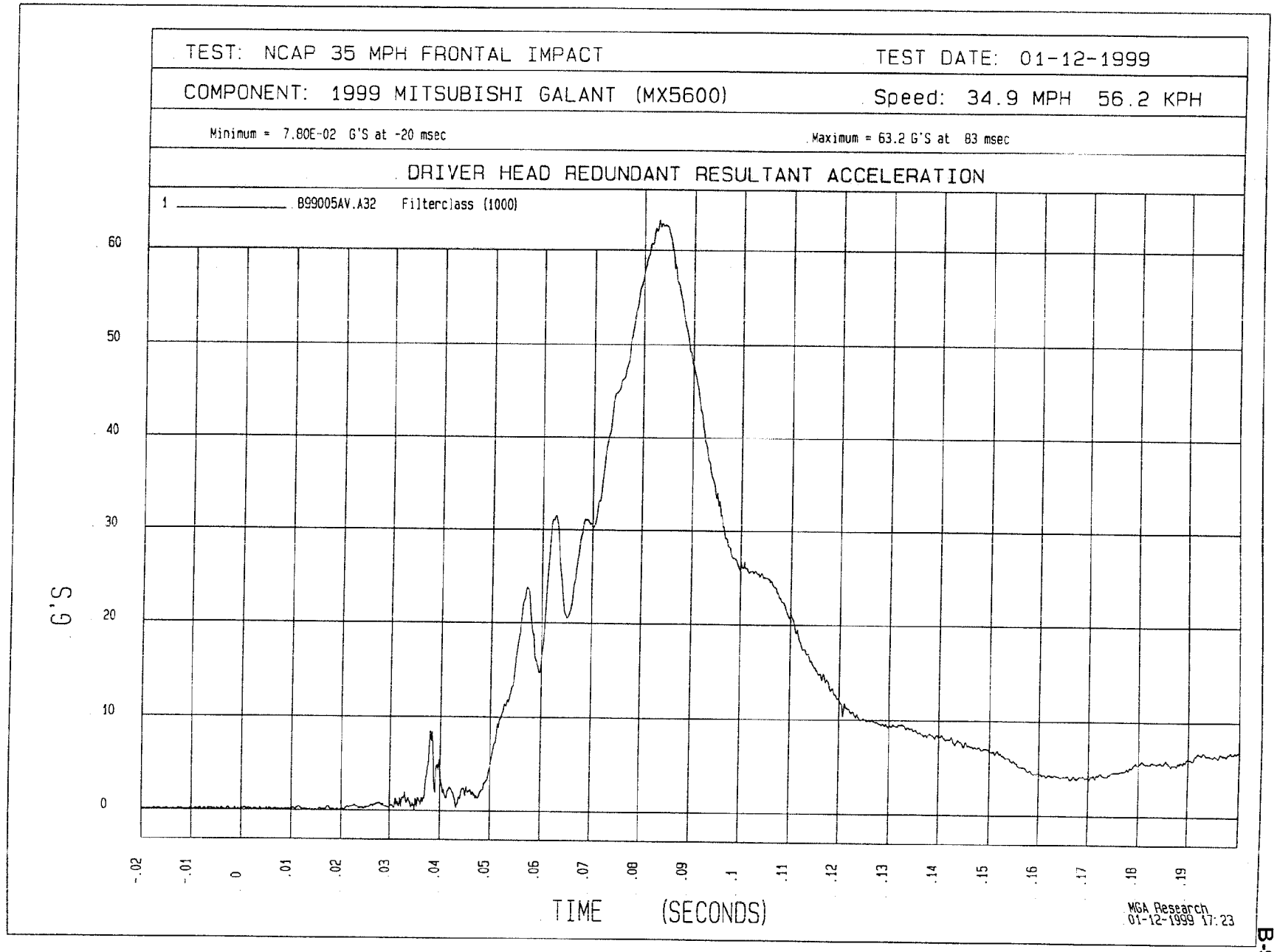

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 8.05E-02 G'S at -20 msec
Maximum = 63.8 G'S at 83 msec
DRIVER HEAD RESULTANT ACCELERATION
1 B99005AV.A12 Filterclass (1000)
G'S
60
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:22

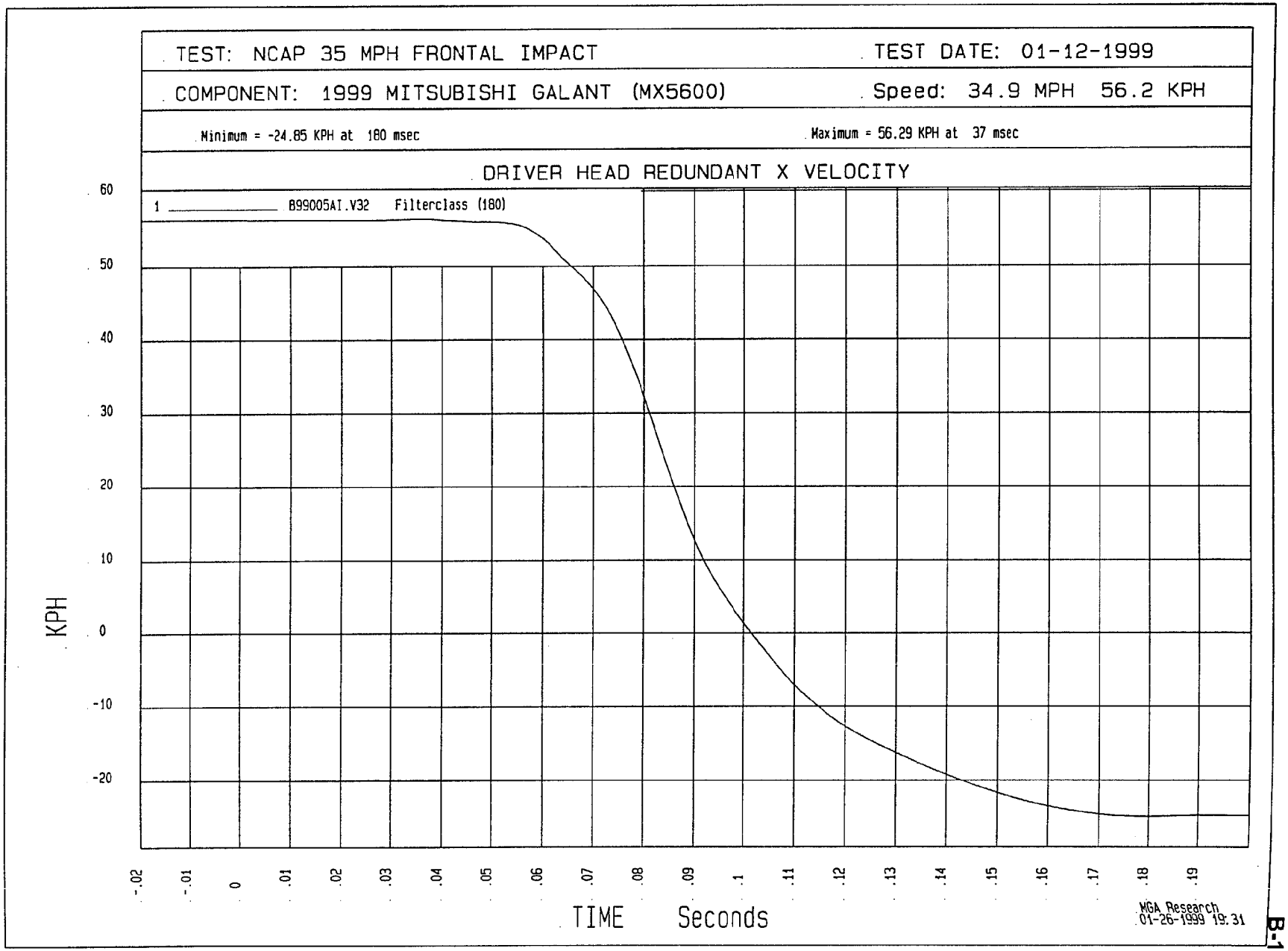

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -27.12 KPH at 200 msec
Maximum = 56.37 KPH at 37 msec
DRIVER HEAD X VELOCITY
1 B99005AI.V12 Filterclass (180)
KPH
60
50
40
30
20
10
0
-10
-20
-30
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 19:31

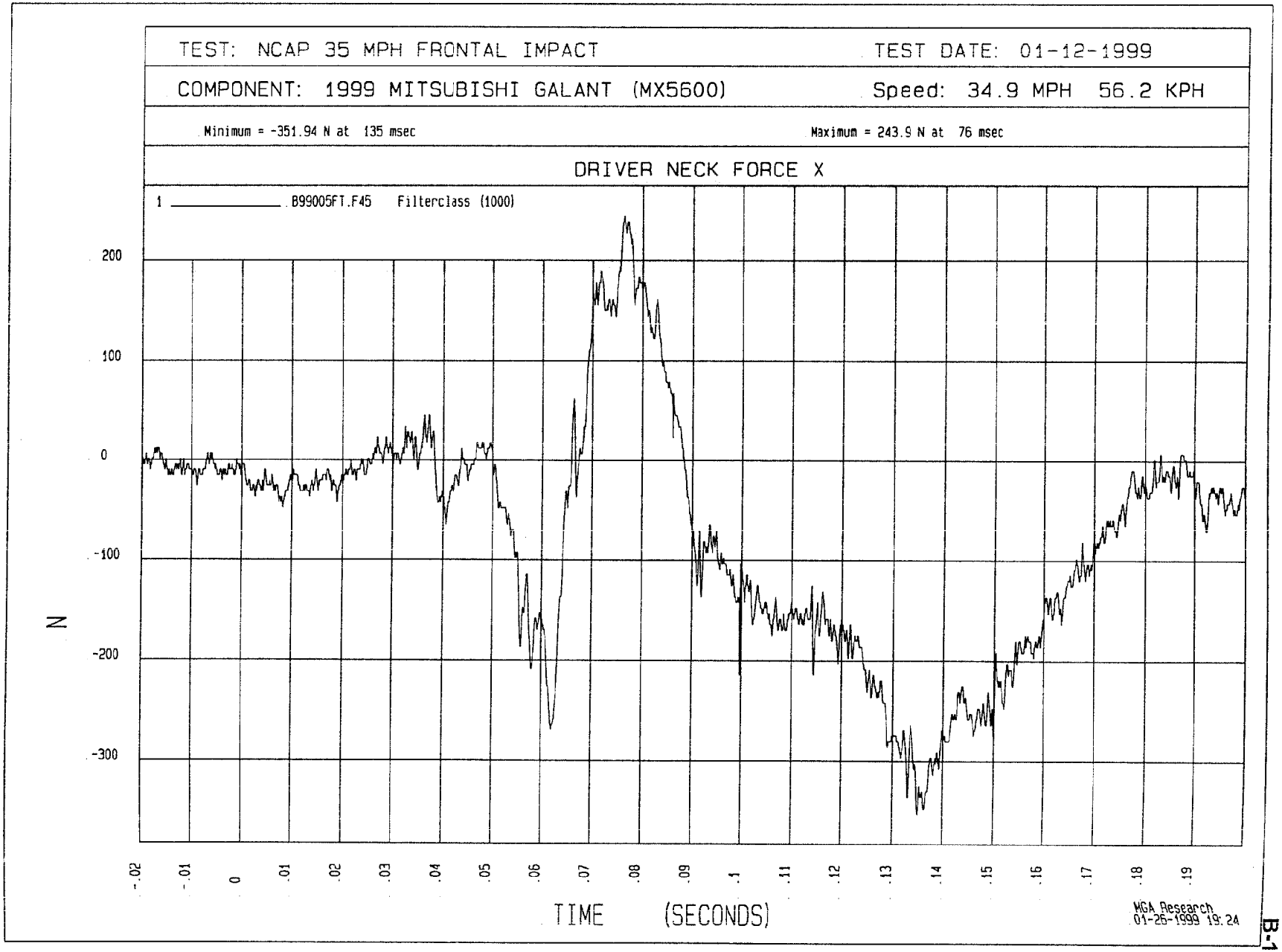

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -60.08 G'S at 83 msec
Maximum = 1.34 G'S at 36 msec
DRIVER HEAD REDUNDANT X ACCELERATION
1 B99005AT.A32 Filterclass (1000)
0
-10
-20
-30
-40
-50
-60
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:23

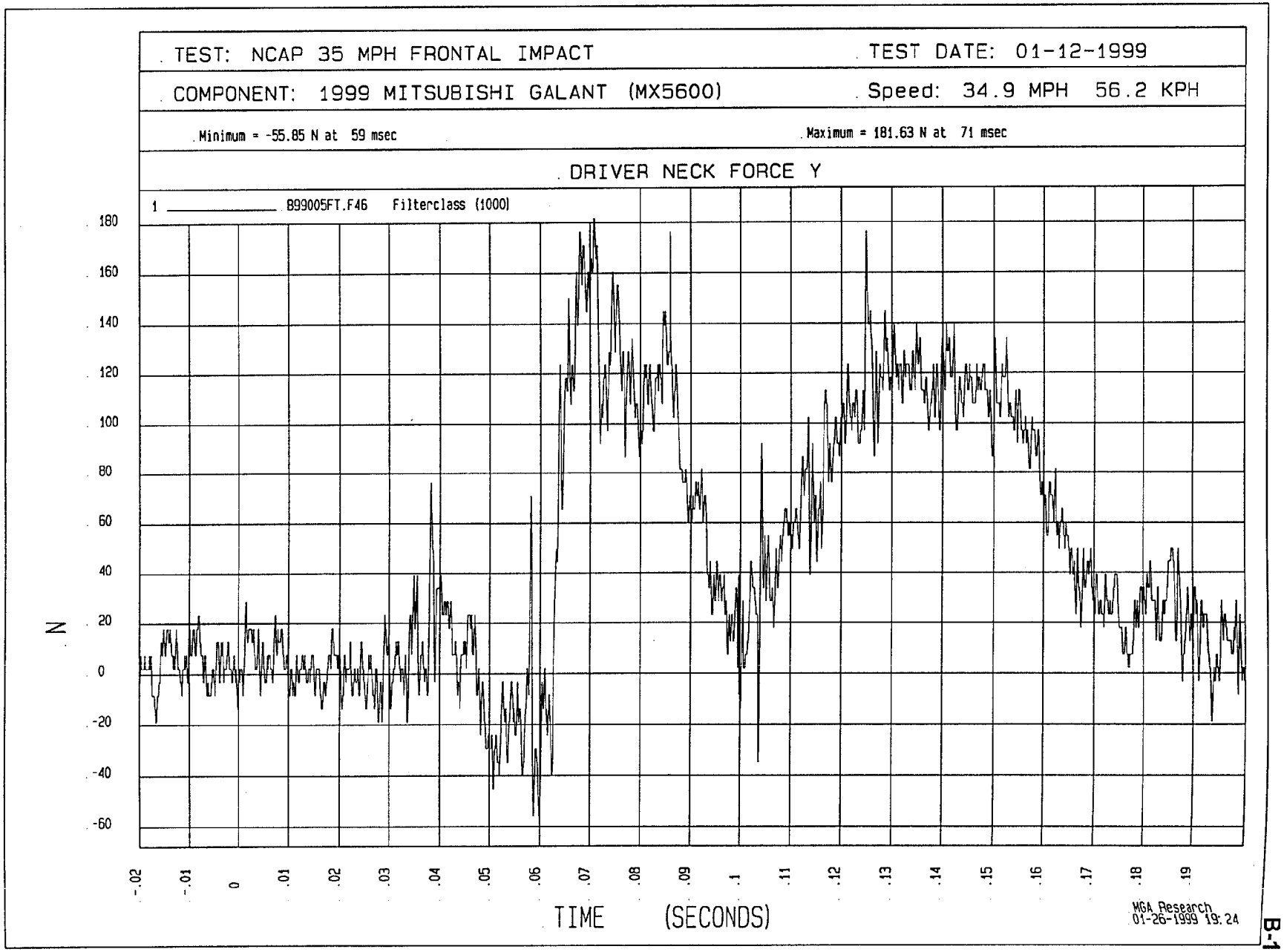

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -21.37 G'S at 85 msec
Maximum = 3.5 G'S at 142 msec
DRIVER HEAD REDUNDANT Y ACCELERATION
1 B99005AT.A33 Filterclass (1000)
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
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
01-12-1999 17:23

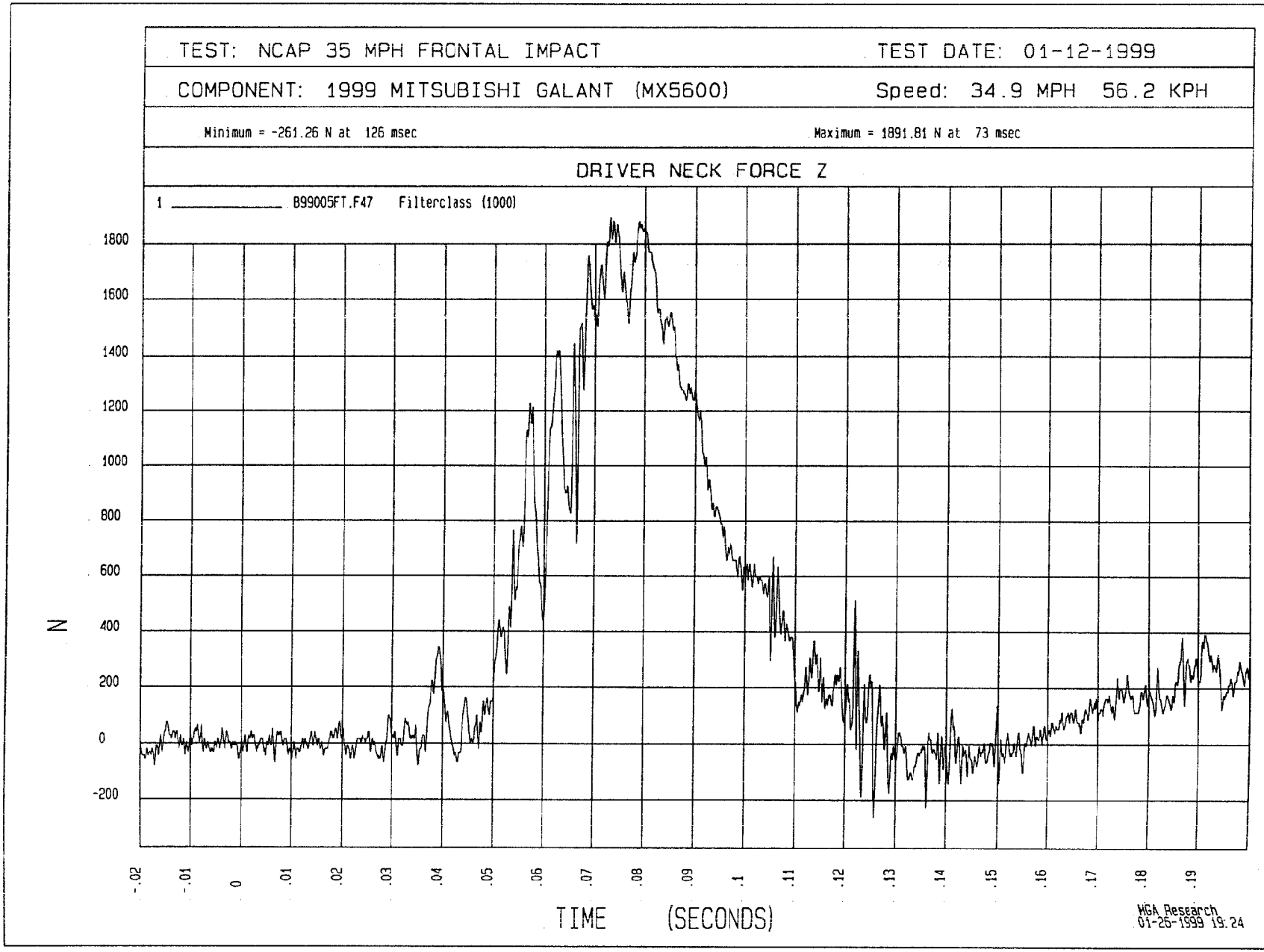

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -5.19 G'S at 88 msec
Maximum = 23.5 G'S at 62 msec
DRIVER HEAD REDUNDANT Z ACCELERATION
1 B99005AT.A34 Filterclass (1000)
G'S
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:23

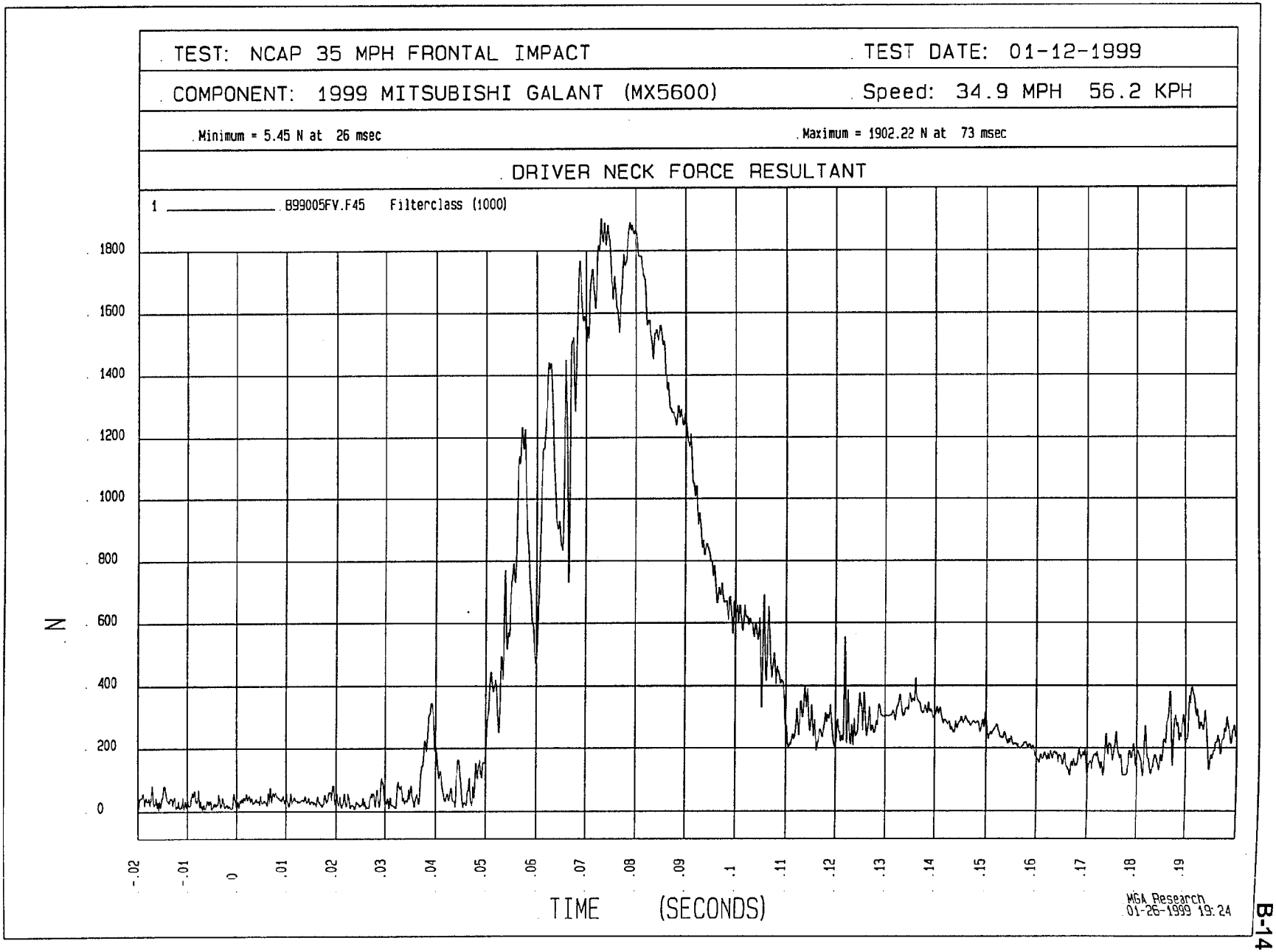

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 7.80E-02 G'S at -20 msec
Maximum = 63.2 G'S at 83 msec
DRIVER HEAD REDUNDANT RESULTANT ACCELERATION
1 B99005AV.A32 Filterclass (1000)
G'S
60
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -24.85 KPH at 180 msec
Maximum = 56.29 KPH at 37 msec
DRIVER HEAD REDUNDANT X VELOCITY
1 B99005AI.V32 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
01-26-1999 19:31


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -351.94 N at 135 msec
Maximum = 243.9 N at 76 msec
DRIVER NECK FORCE X
1 B99005FT.F45 Filterclass (1000)
200
100
0
-100
-200
-300
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
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -55.85 N at 59 msec
Maximum = 181.63 N at 71 msec
DRIVER NECK FORCE Y
1 B99005FT.F46 Filterclass (1000)
180
160
140
120
100
80
60
40
20
0
-20
-40
-60
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
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -261.26 N at 126 msec
Maximum = 1891.81 N at 73 msec
DRIVER NECK FORCE Z
1 B99005FT.F47 Filterclass (1000)
1800
1600
1400
1200
1000
800
600
400
200
0
-200
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
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 5.45 N at 26 msec
Maximum = 1902.22 N at 73 msec
DRIVER NECK FORCE RESULTANT
1 B99005FV.F45 Filterclass (1000)
N
1800
1600
1400
1200
1000
800
600
400
200
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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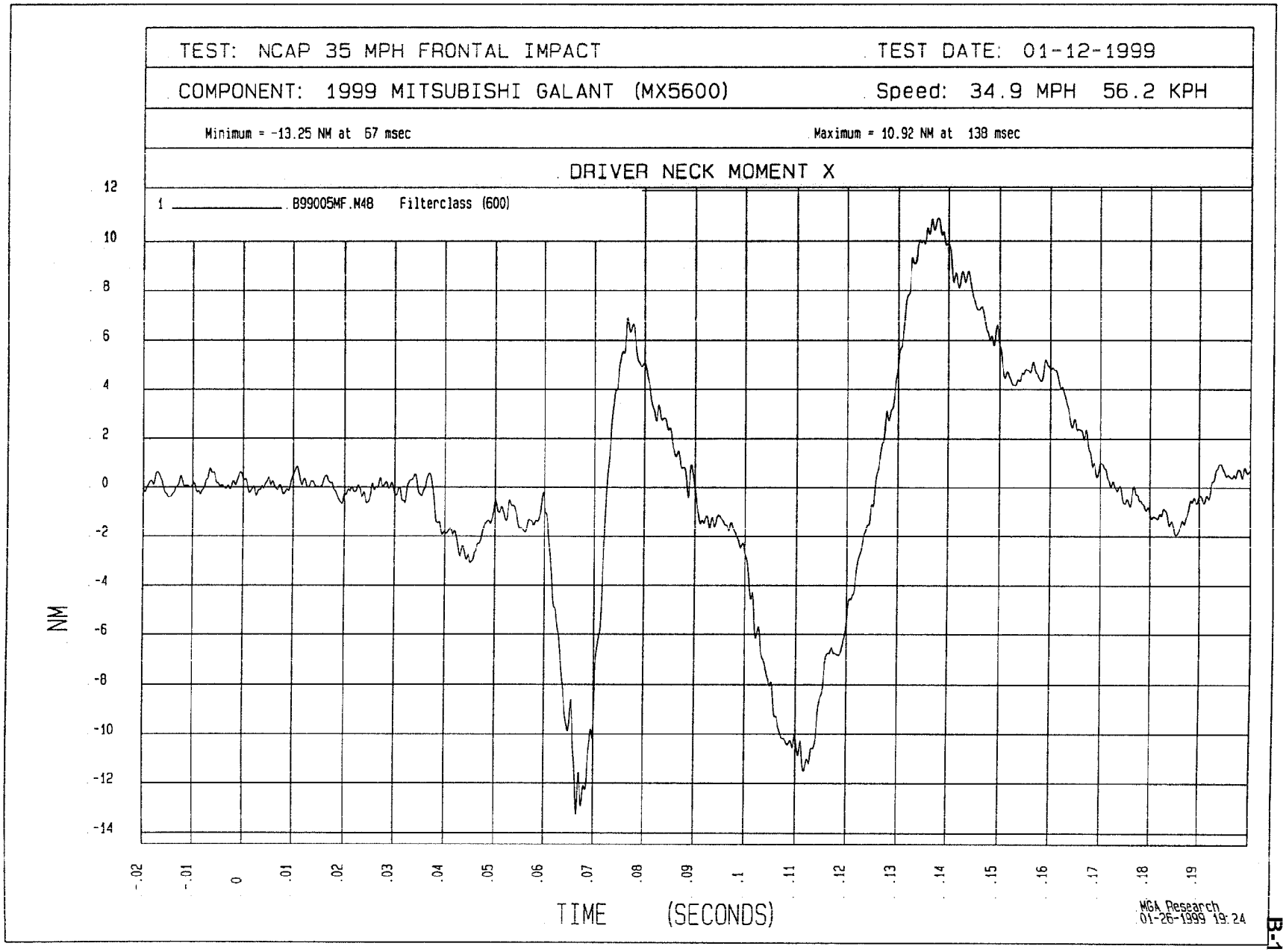
TIME (SECONDS)
MGA Research
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -13.25 NM at 67 msec
Maximum = 10.92 NM at 138 msec
DRIVER NECK MOMENT X
1 B99005MF.M48 Filterclass (600)
NM
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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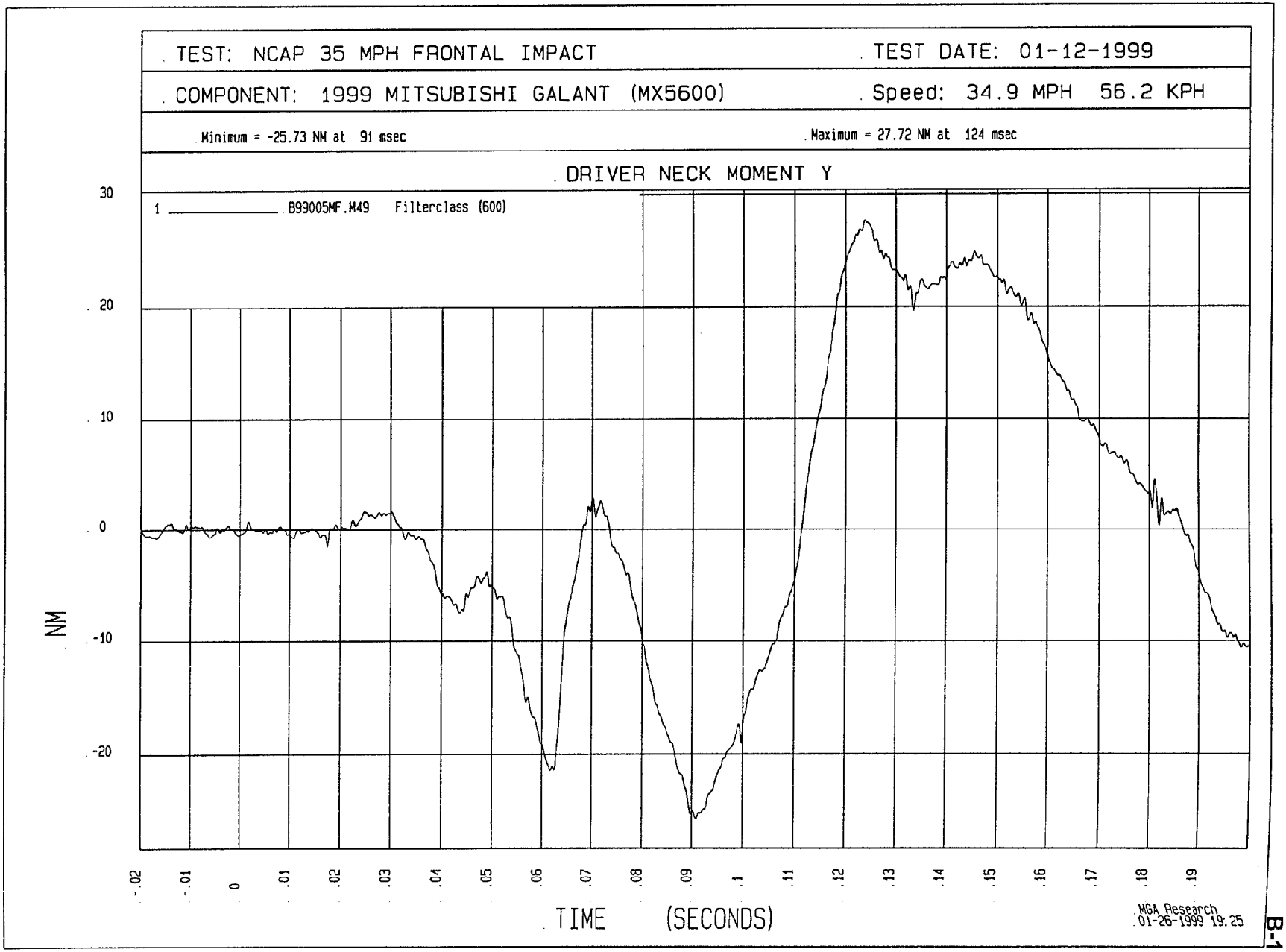
TIME (SECONDS)
MGA Research
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -25.73 NM at 91 msec
Maximum = 27.72 NM at 124 msec
DRIVER NECK MOMENT Y
1 B99005MF.M49 Filterclass (600)
30
20
10
0
-10
-20
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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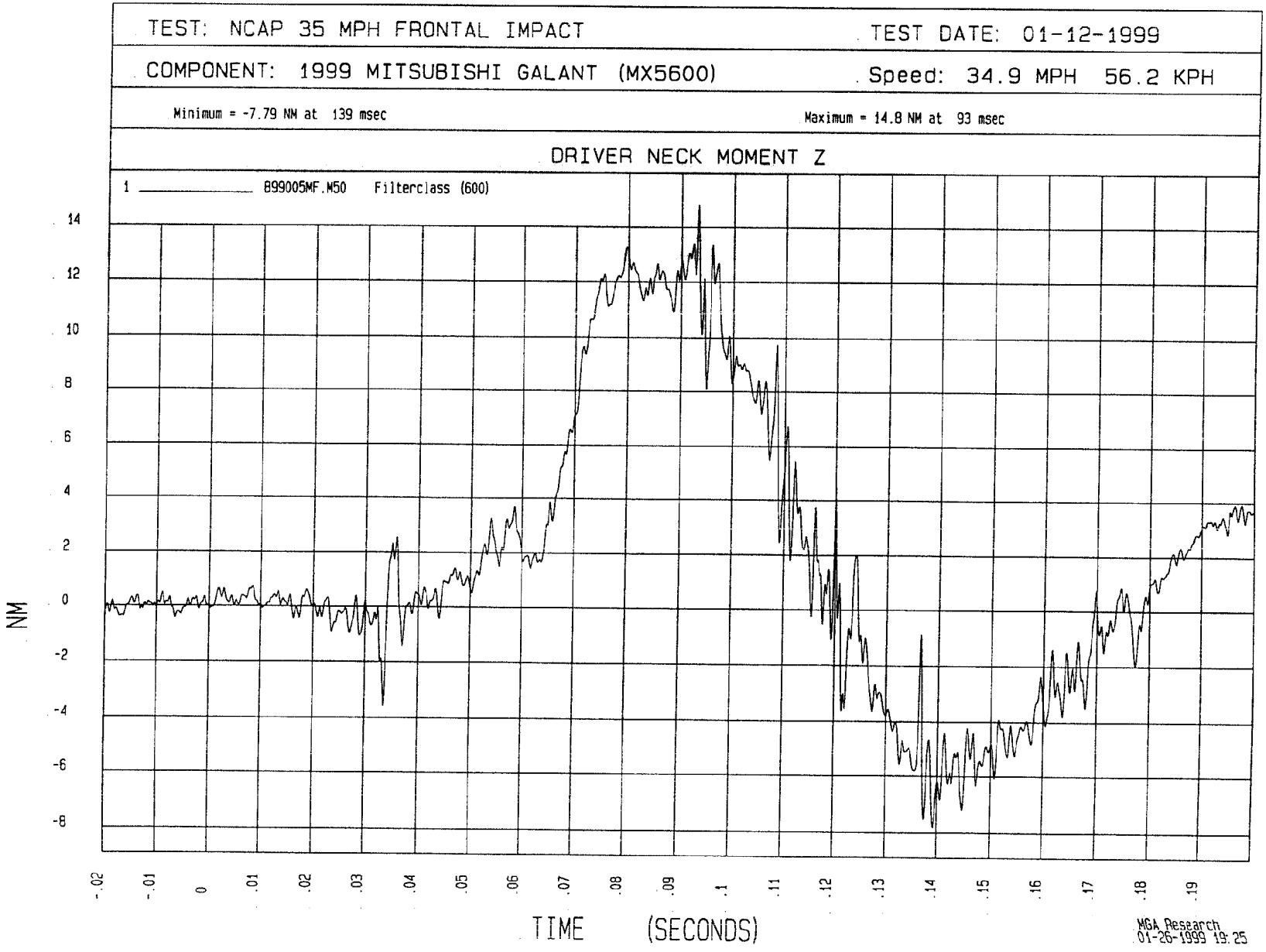
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -7.79 NM at 139 msec
Maximum = 14.8 NM at 93 msec
DRIVER NECK MOMENT Z
1 899005MF.M50 Filterclass (600)
NM
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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.09
.1
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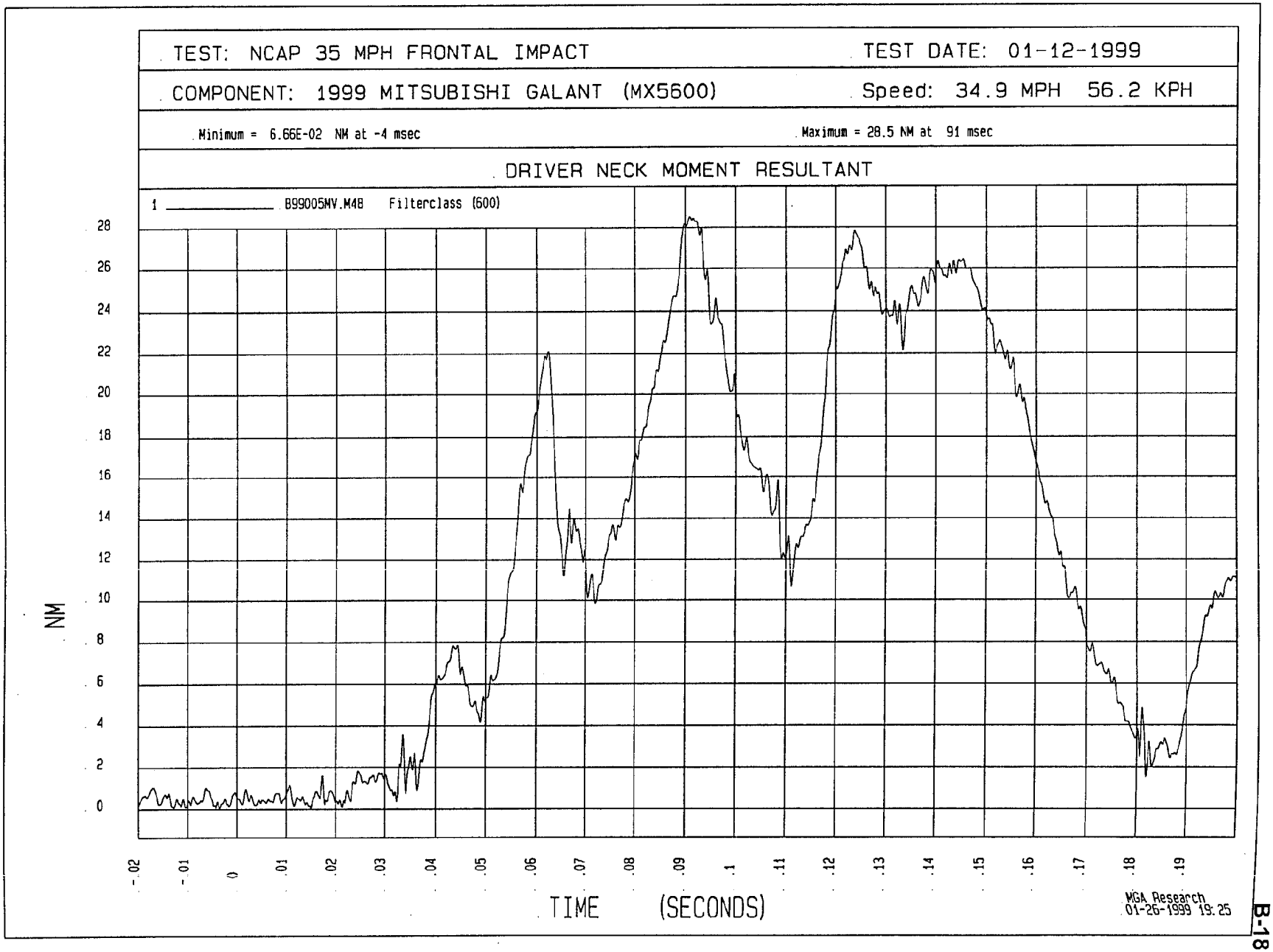
TIME (SECONDS)
MGA Research
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 6.66E-02 NM at -4 msec
Maximum = 28.5 NM at 91 msec
DRIVER NECK MOMENT RESULTANT
1 B99005MV.M4B Filterclass (600)
NM
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
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.13
.14
.15
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.17
.18
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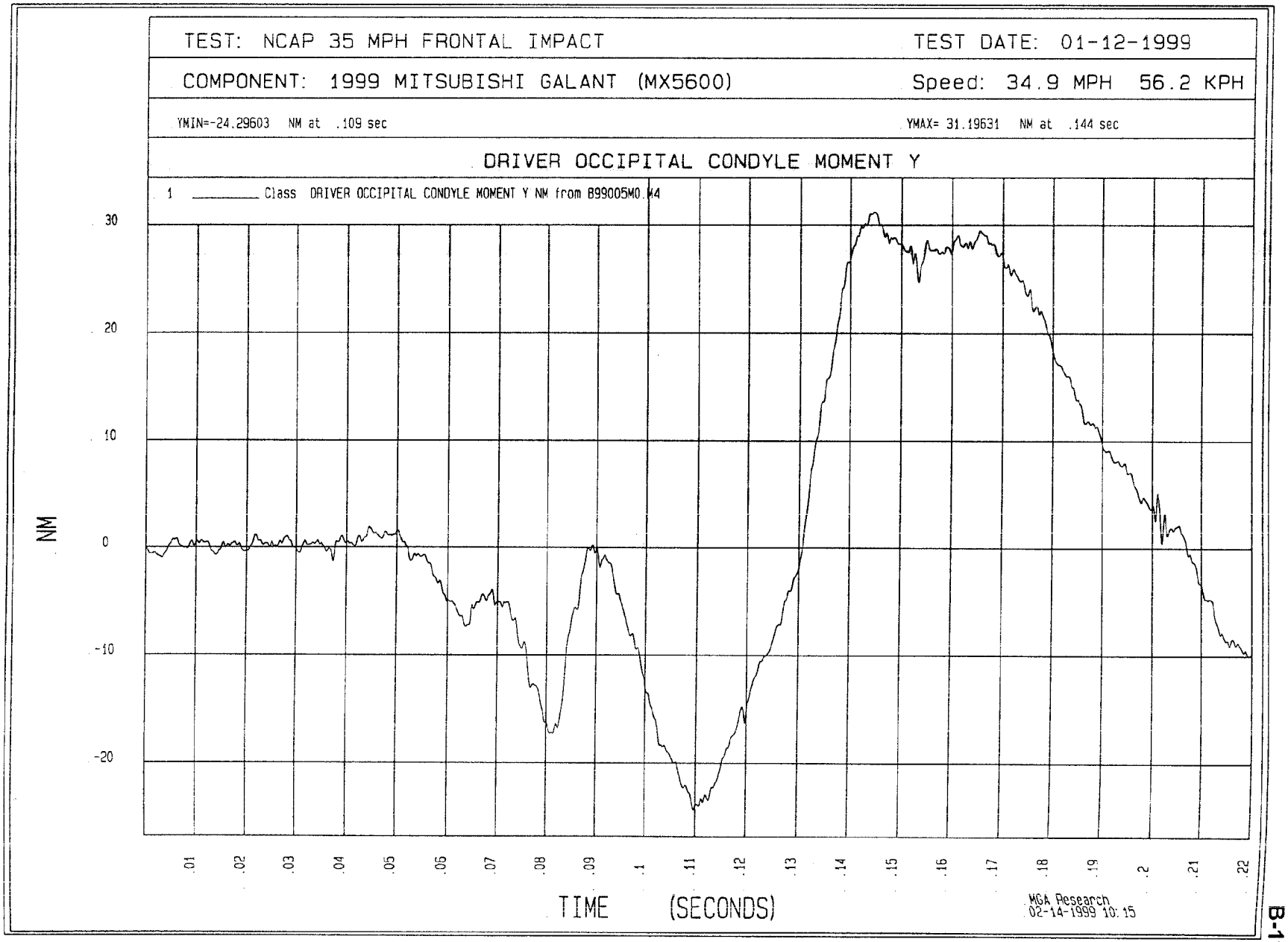
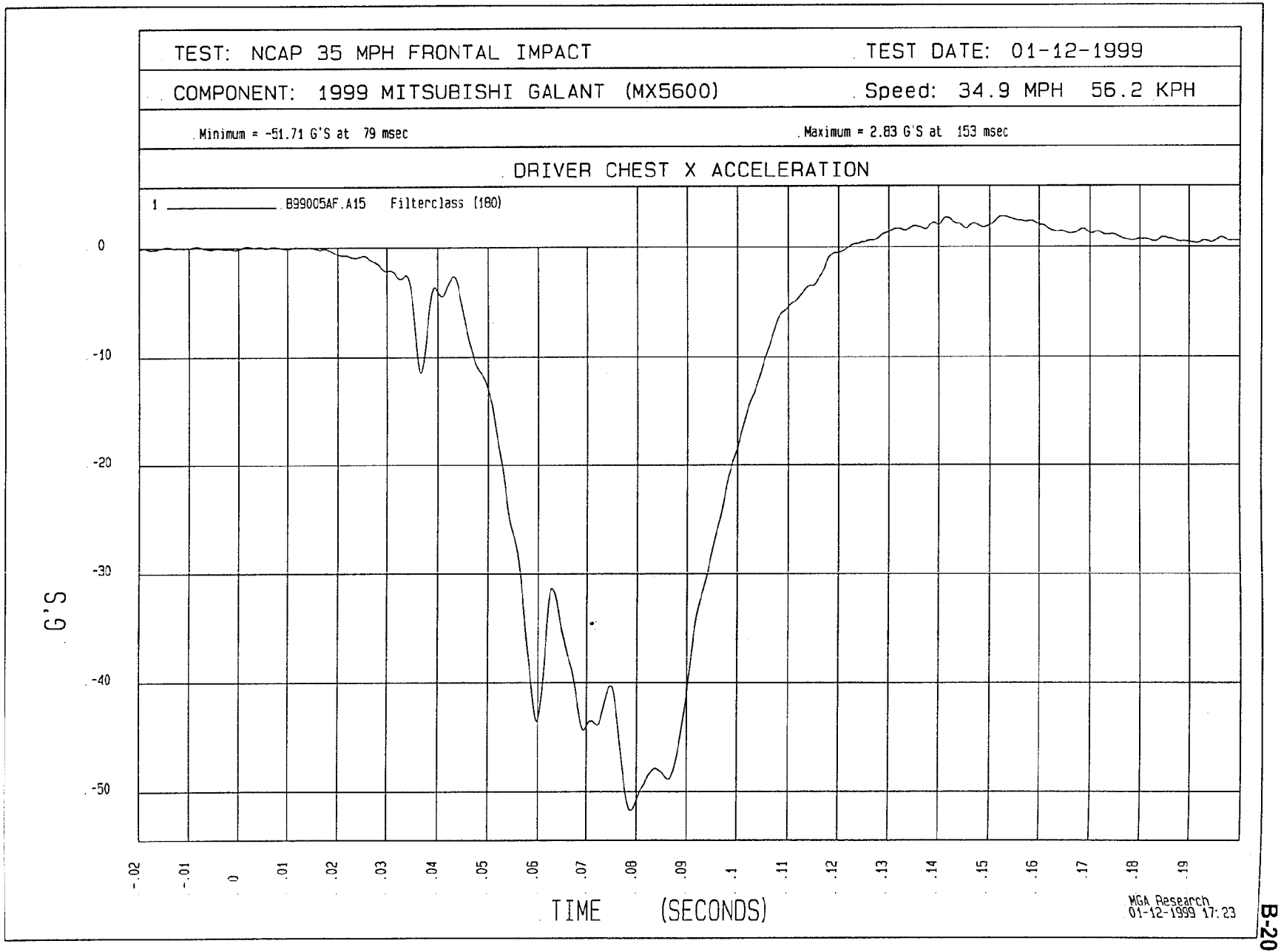
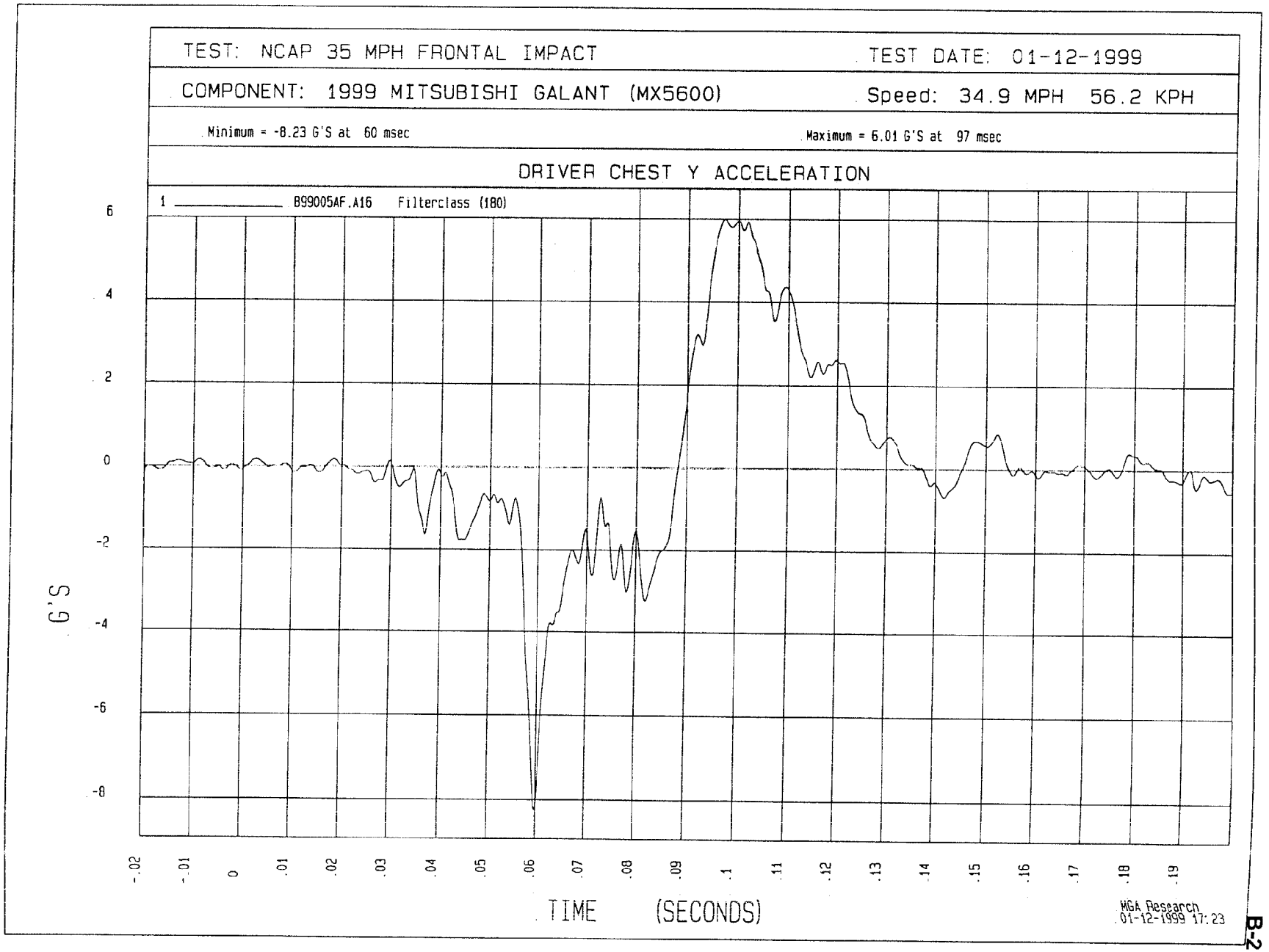
TIME (SECONDS)
MGA Research
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
YMIN=-24.29603 NM at .109 sec
YMAX= 31.19631 NM at .144 sec
DRIVER OCCIPITAL CONDYLE MOMENT Y
1 _____ Class DRIVER OCCIPITAL CONDYLE MOMENT Y NM from B99005M0.M4
NM
30
20
10
0
-10
-20
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
.2
.21
.22
TIME (SECONDS)
MGA Research
02-14-1999 10:15


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -51.71 G'S at 79 msec
Maximum = 2.83 G'S at 153 msec
DRIVER CHEST X ACCELERATION
1 B99005AF.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
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -8.23 G'S at 60 msec
Maximum = 6.01 G'S at 97 msec
DRIVER CHEST Y ACCELERATION
1 B99005AF.A16 Filterclass (180)
6
4
2
0
-2
-4
-6
-8
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
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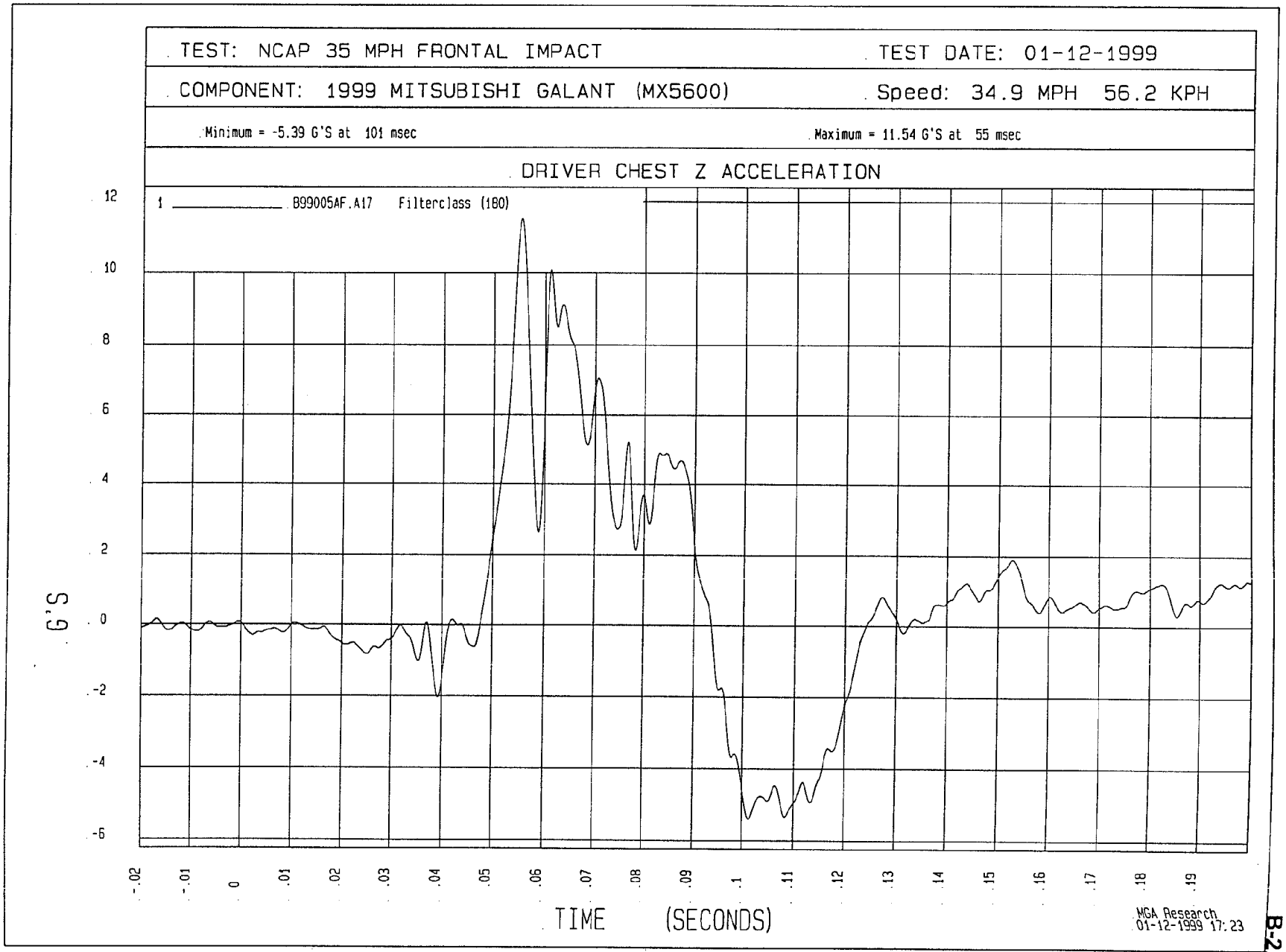
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -5.39 G'S at 101 msec
Maximum = 11.54 G'S at 55 msec
DRIVER CHEST Z ACCELERATION
1 B99005AF.A17 Filterclass (180)
12
10
8
6
4
2
0
-2
-4
-6
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.1
.11
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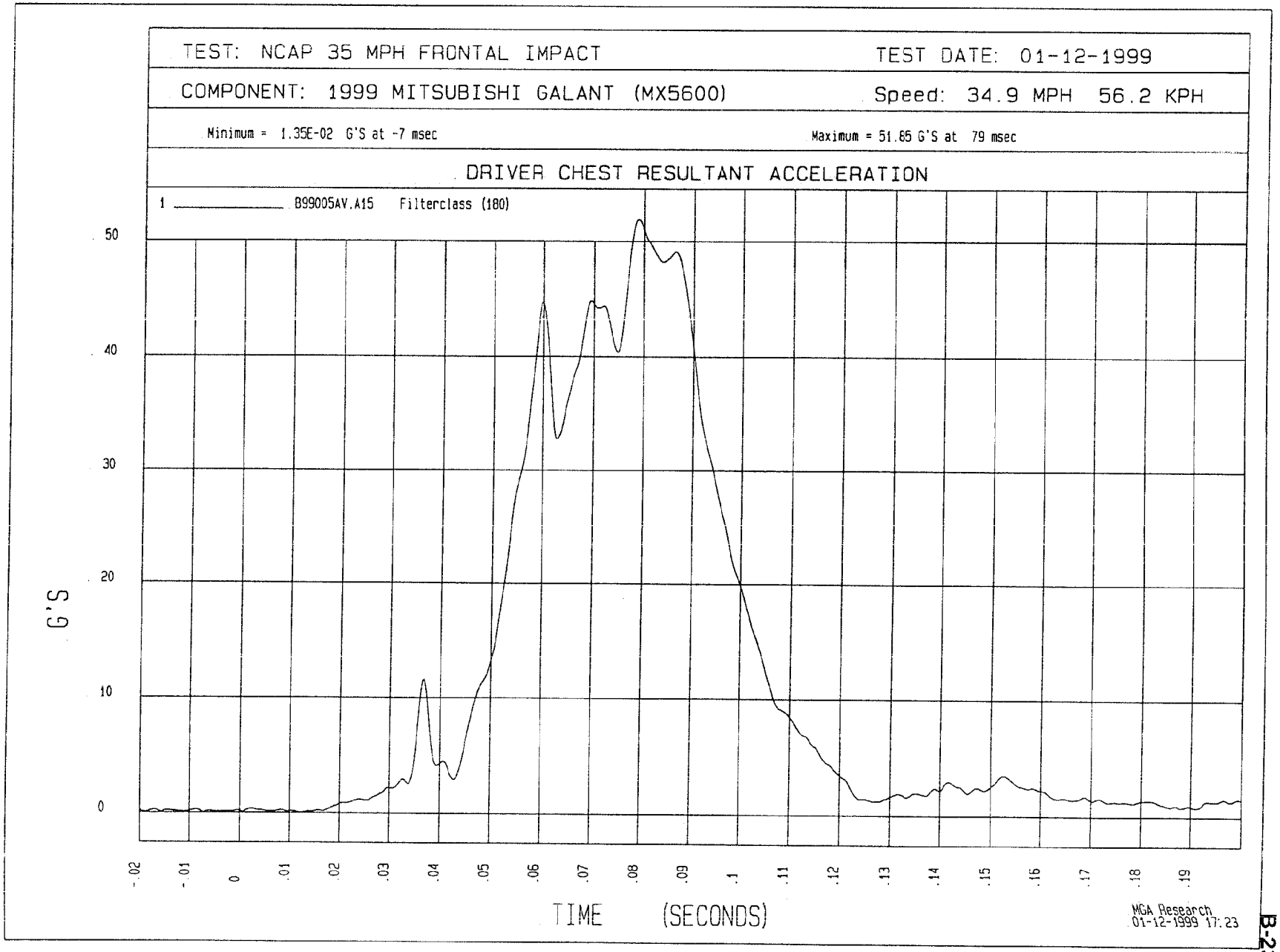
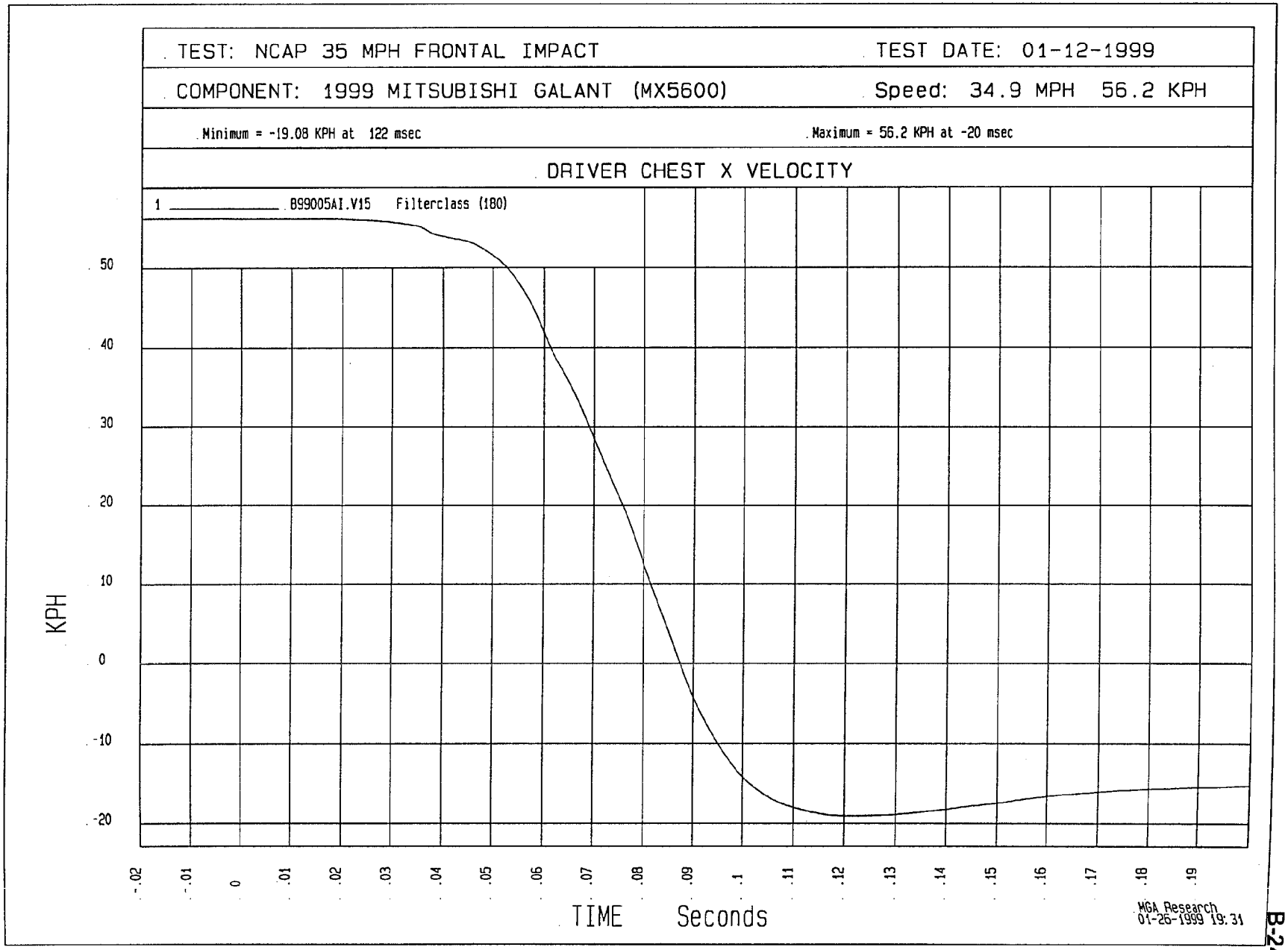
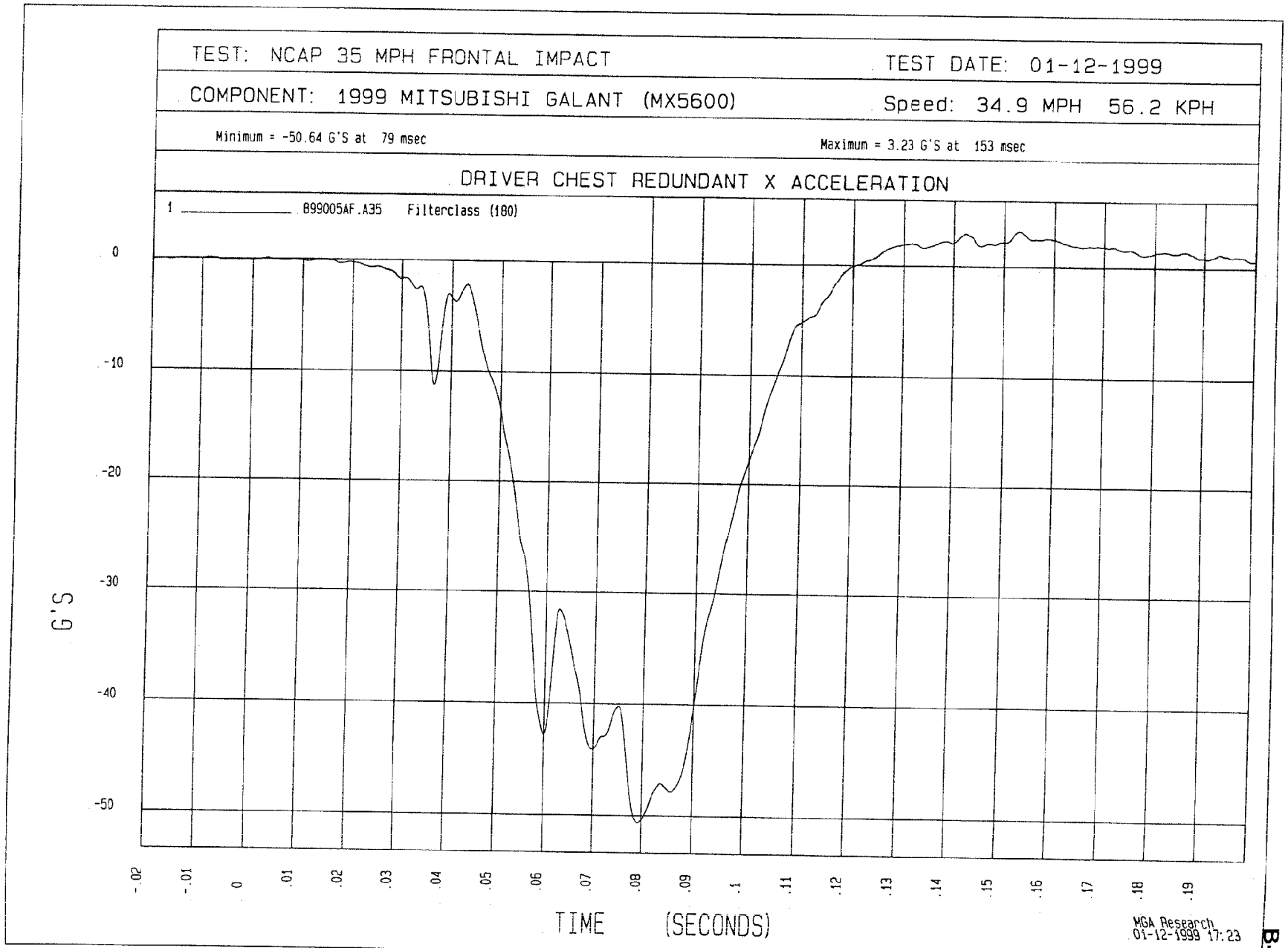
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 1.35E-02 G'S at -7 msec
Maximum = 51.65 G'S at 79 msec
DRIVER CHEST RESULTANT ACCELERATION
1 B99005AV.A15 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
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -19.08 KPH at 122 msec
Maximum = 56.2 KPH at -20 msec
DRIVER CHEST X VELOCITY
1 B99005AI.V15 Filterclass (180)
KPH
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
01-26-1999 19:31


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -50.64 G'S at 79 msec
Maximum = 3.23 G'S at 153 msec
DRIVER CHEST REDUNDANT X ACCELERATION
1 B99005AF.A35 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
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.15
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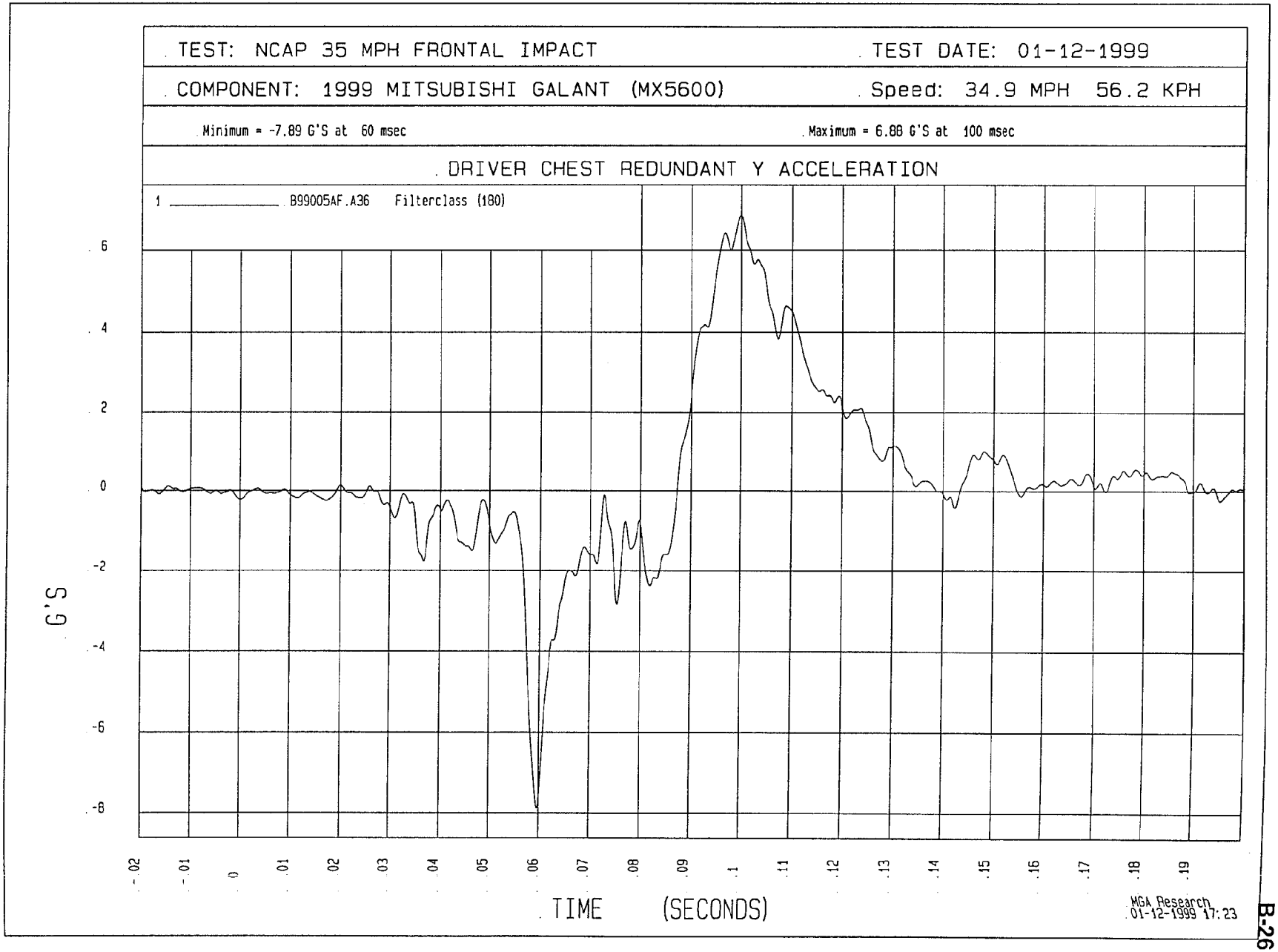
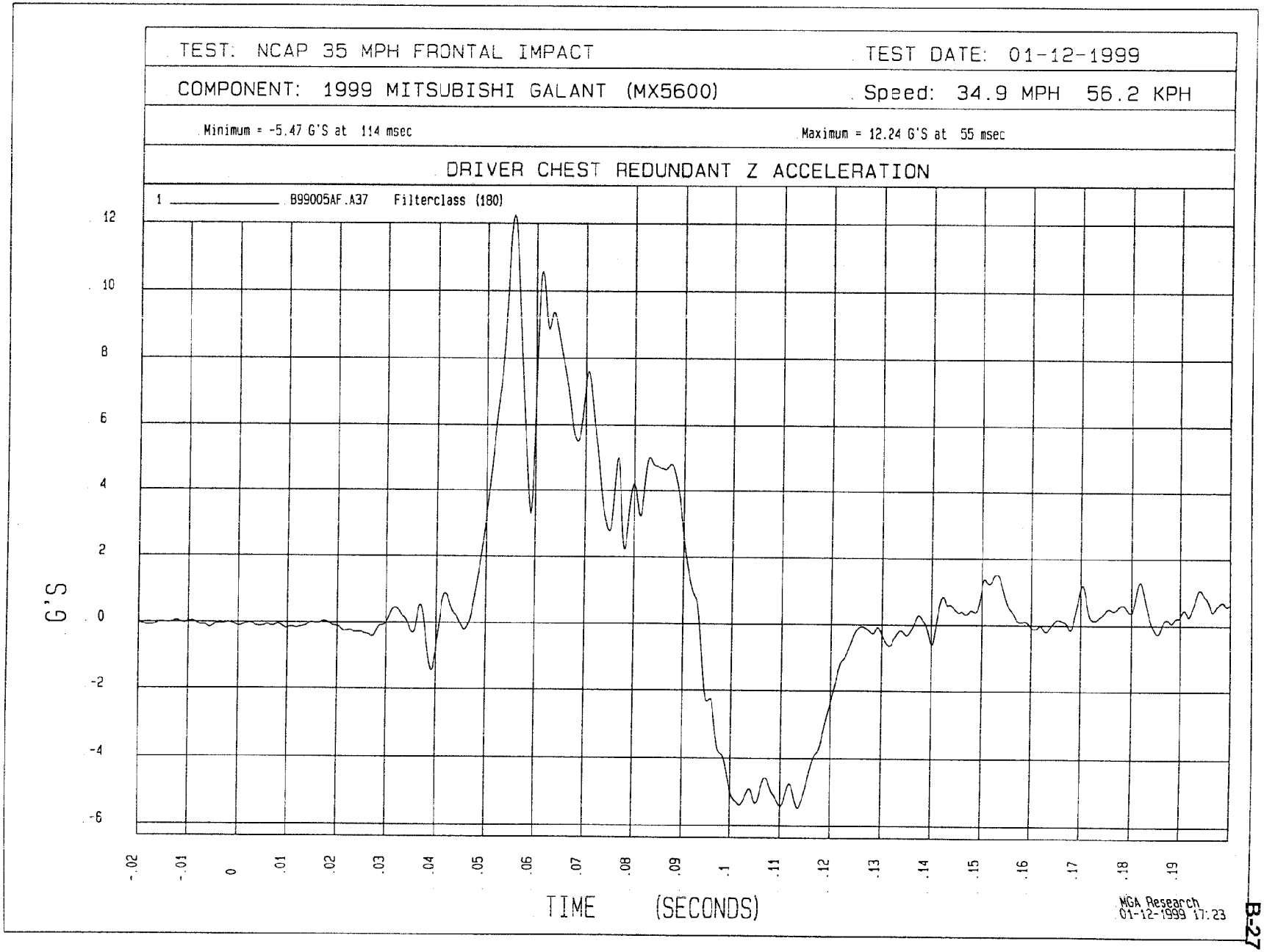
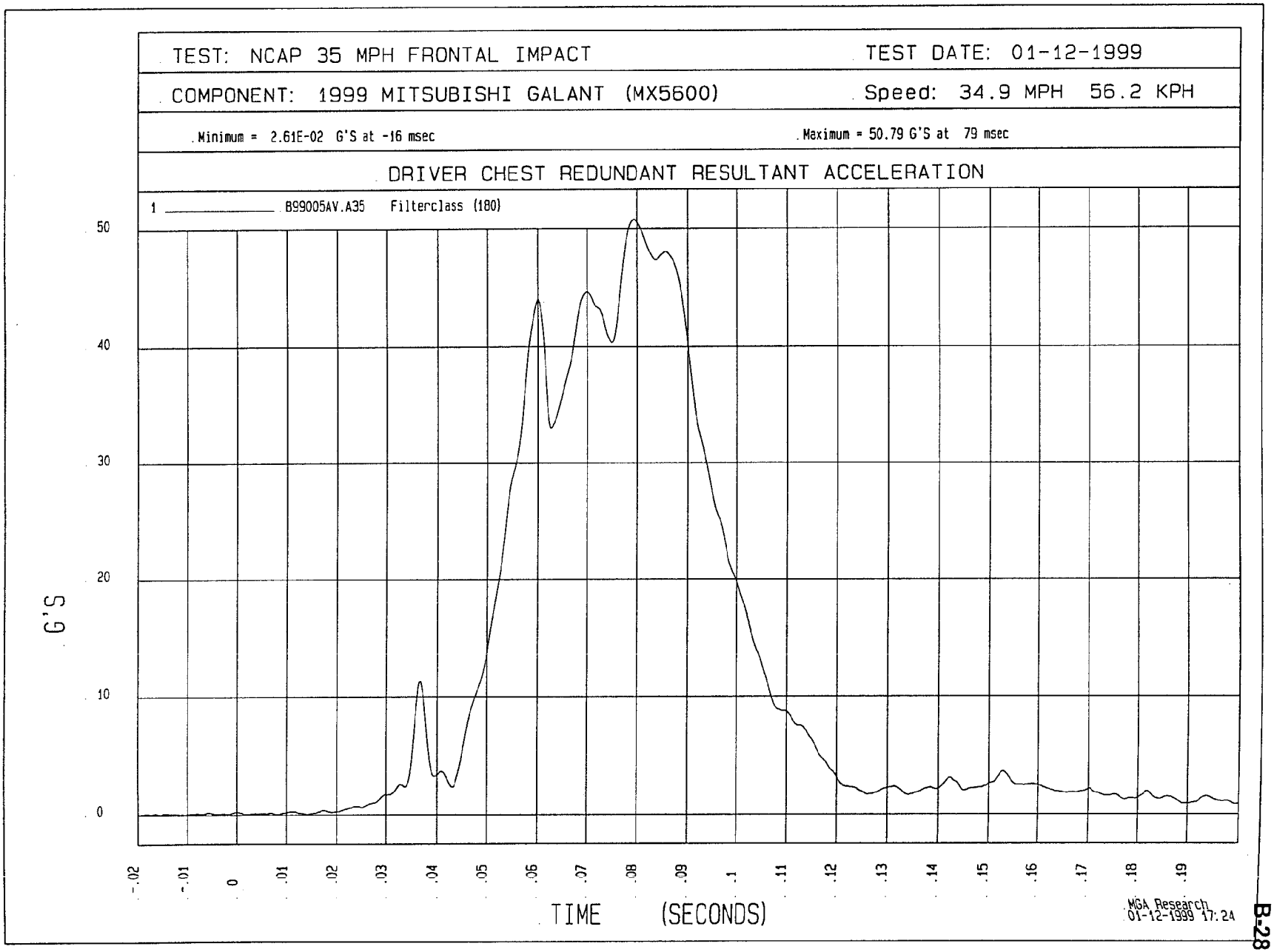
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -7.89 G'S at 60 msec
Maximum = 6.88 G'S at 100 msec
DRIVER CHEST REDUNDANT Y ACCELERATION
1 B99005AF.A36 Filterclass (180)
G'S
6
4
2
0
-2
-4
-6
-8
-.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
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -5.47 G'S at 114 msec
Maximum = 12.24 G'S at 55 msec
DRIVER CHEST REDUNDANT Z ACCELERATION
1 B99005AF.A37 Filterclass (180)
G'S
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
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 2.61E-02 G'S at -16 msec
Maximum = 50.79 G'S at 79 msec
DRIVER CHEST REDUNDANT RESULTANT ACCELERATION
1 B99005AV.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
.18
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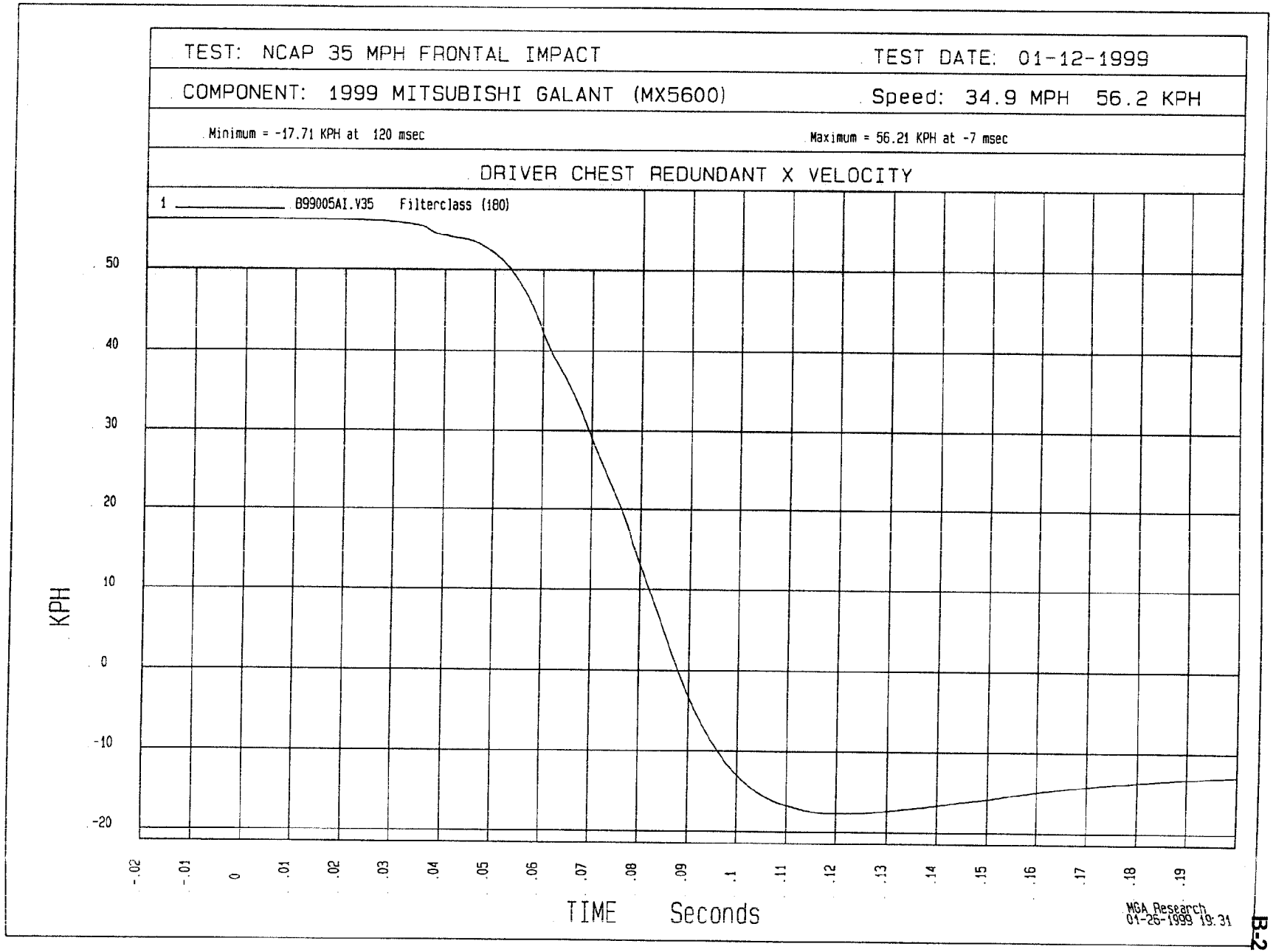
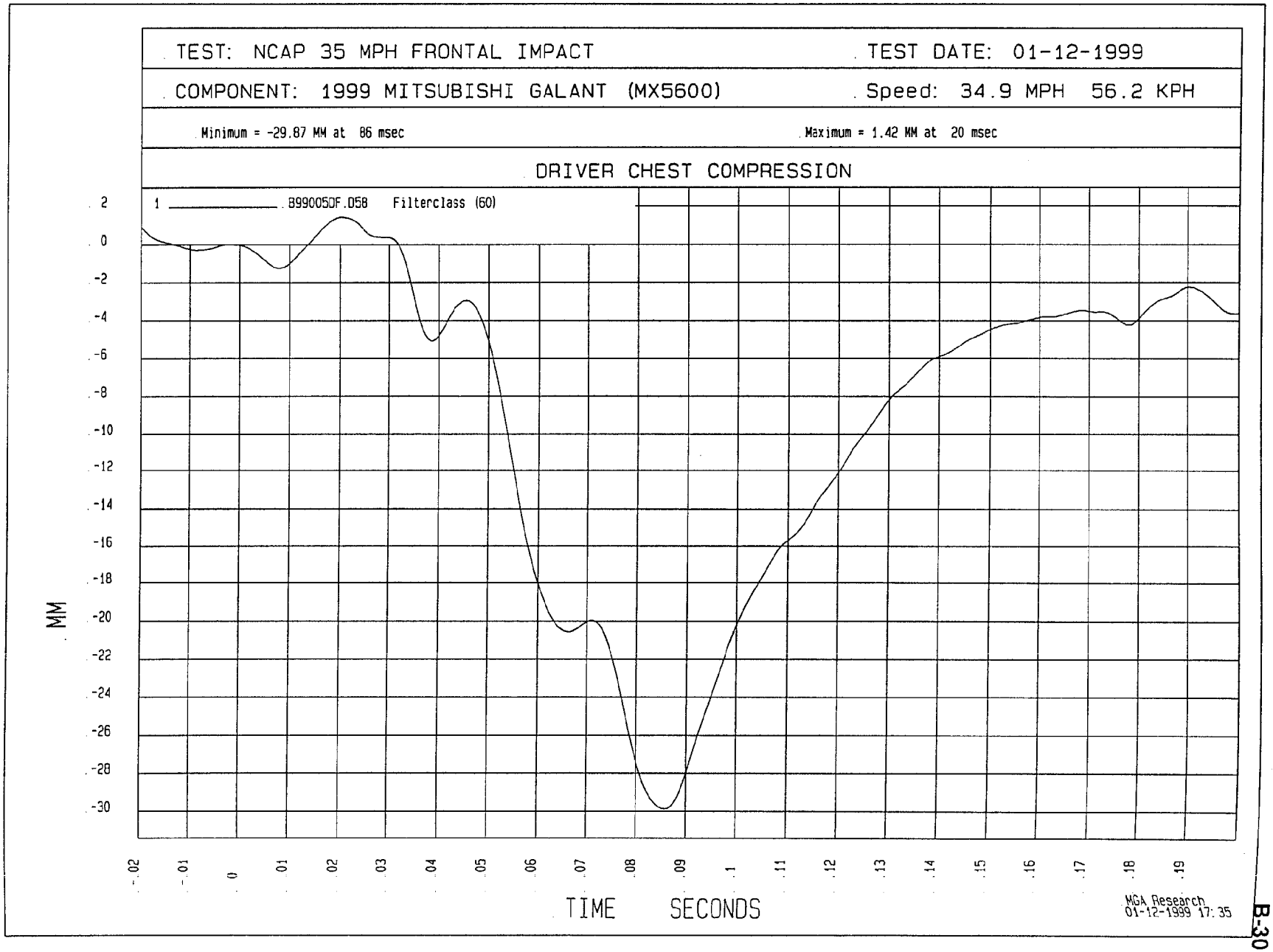
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -17.71 KPH at 120 msec
Maximum = 56.21 KPH at -7 msec
DRIVER CHEST REDUNDANT X VELOCITY
1 B99005AI.V35 Filterclass (180)
KPH
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
01-26-1999 19:31


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -29.87 MM at 86 msec
Maximum = 1.42 MM at 20 msec
DRIVER CHEST COMPRESSION
1 B99005DF.D58 Filterclass (60)
MM
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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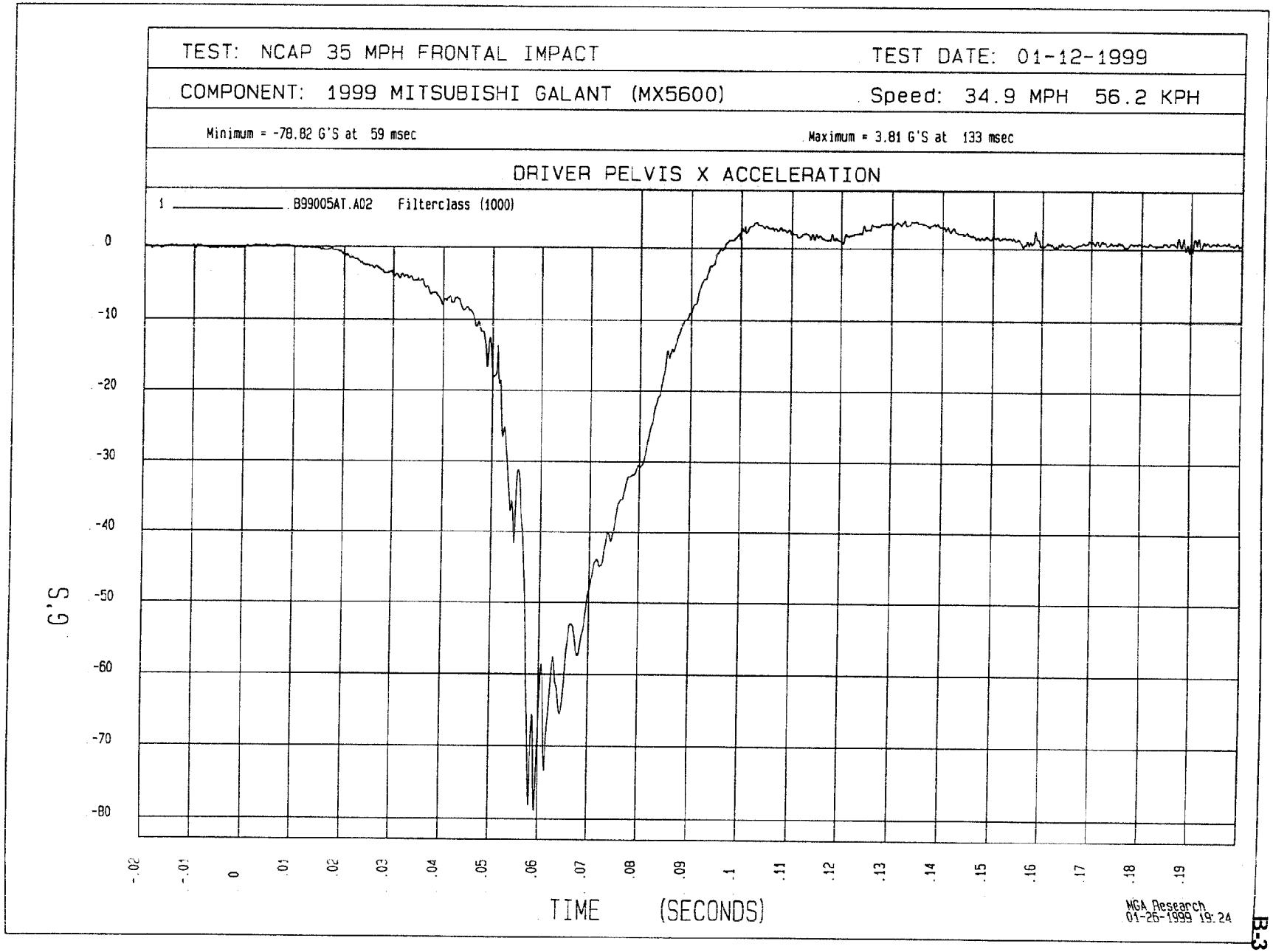
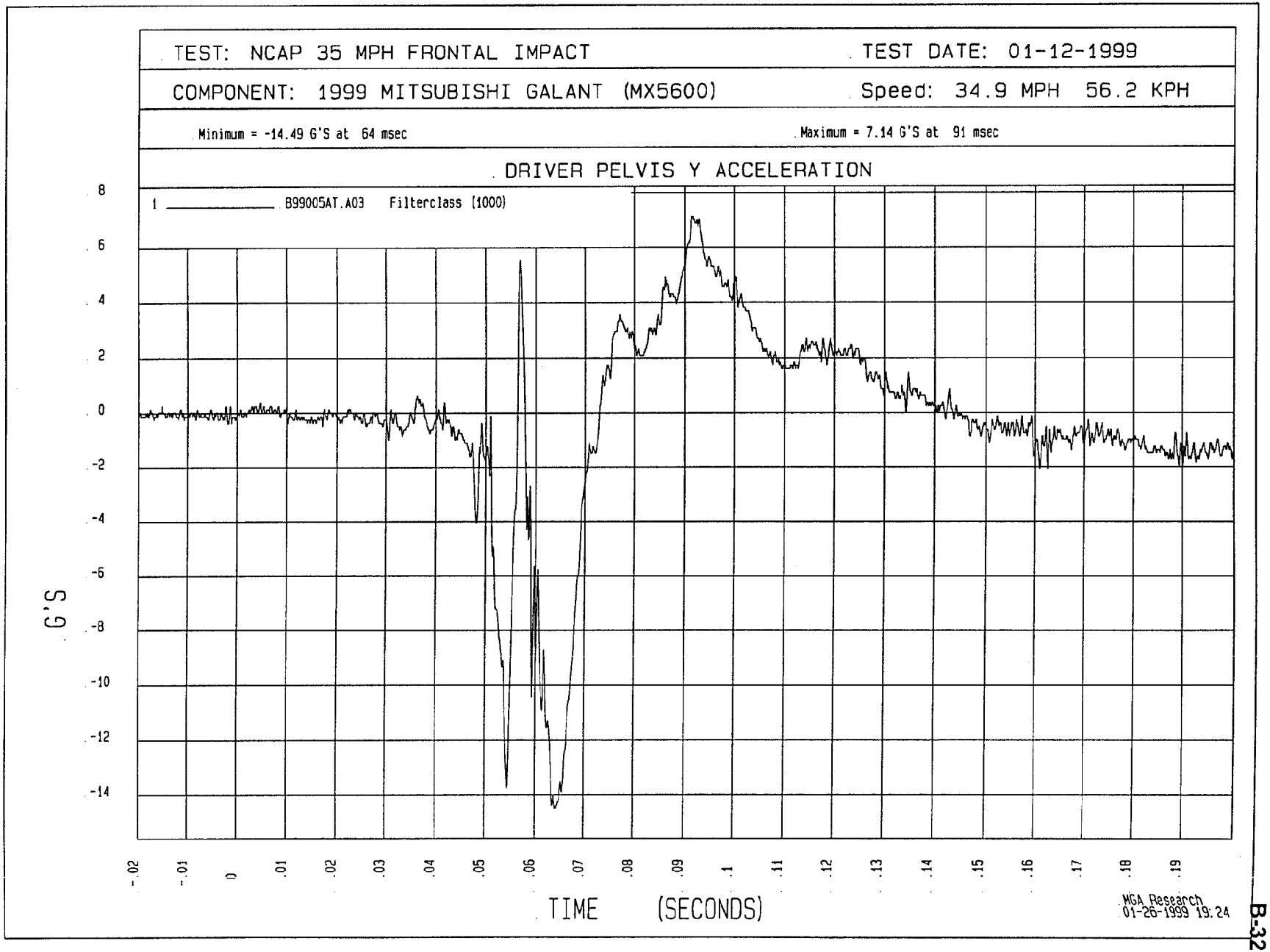
.16
.17
.18
.19
TIME SECONDS
MGA Research
01-12-1999 17:35


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -78.82 G'S at 59 msec
Maximum = 3.81 G'S at 133 msec
DRIVER PELVIS X ACCELERATION
1 B99005AT.A02 Filterclass (1000)
0
-10
-20
-30
-40
-50
-60
-70
-80
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
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -14.49 G'S at 64 msec
Maximum = 7.14 G'S at 91 msec
DRIVER PELVIS Y ACCELERATION
1 B99005AT.A03 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
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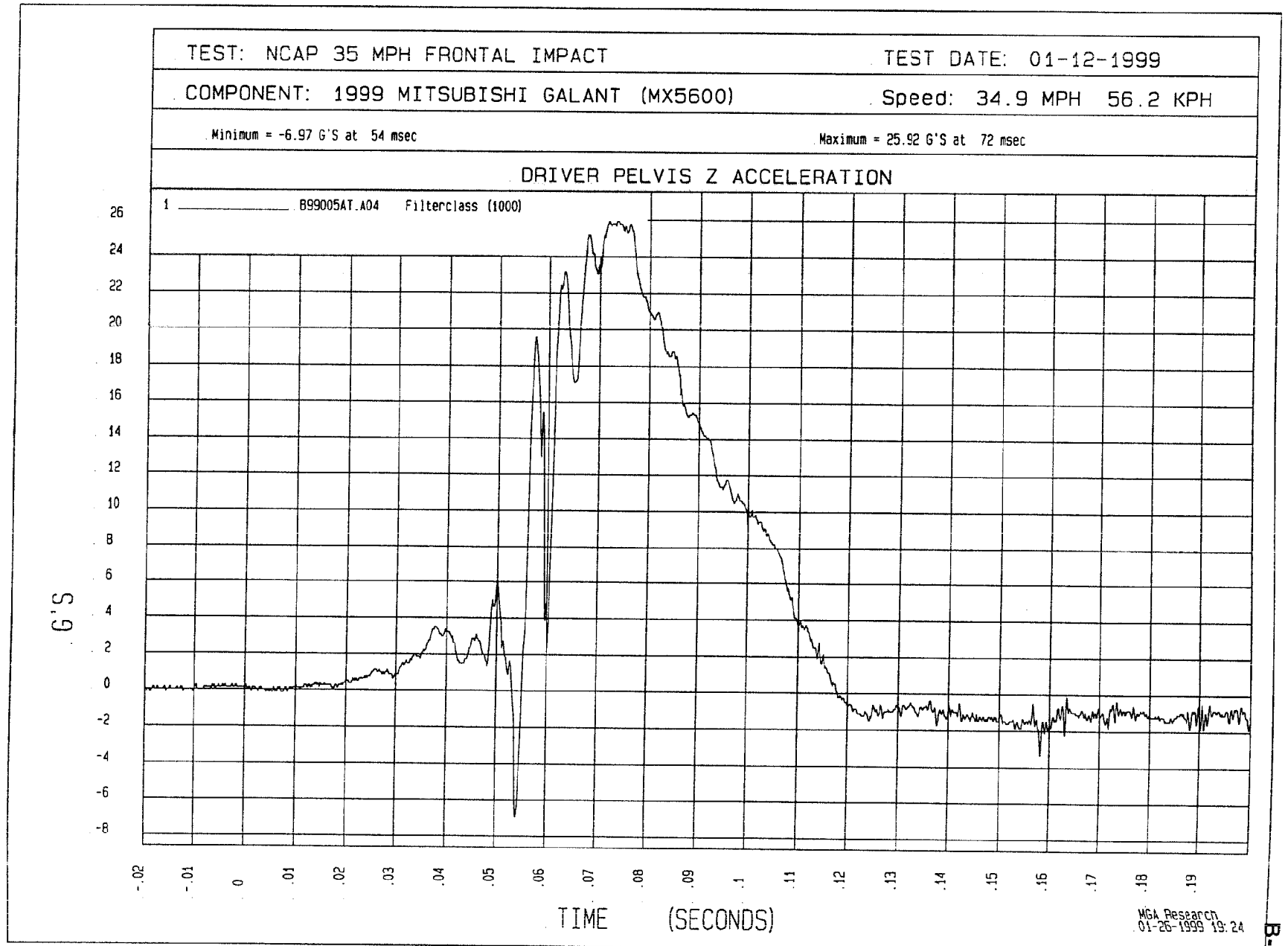
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -6.97 G'S at 54 msec
Maximum = 25.92 G'S at 72 msec
DRIVER PELVIS Z ACCELERATION
1 B99005AT.A04 Filterclass (1000)
G'S
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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.13
.14
.15
.16
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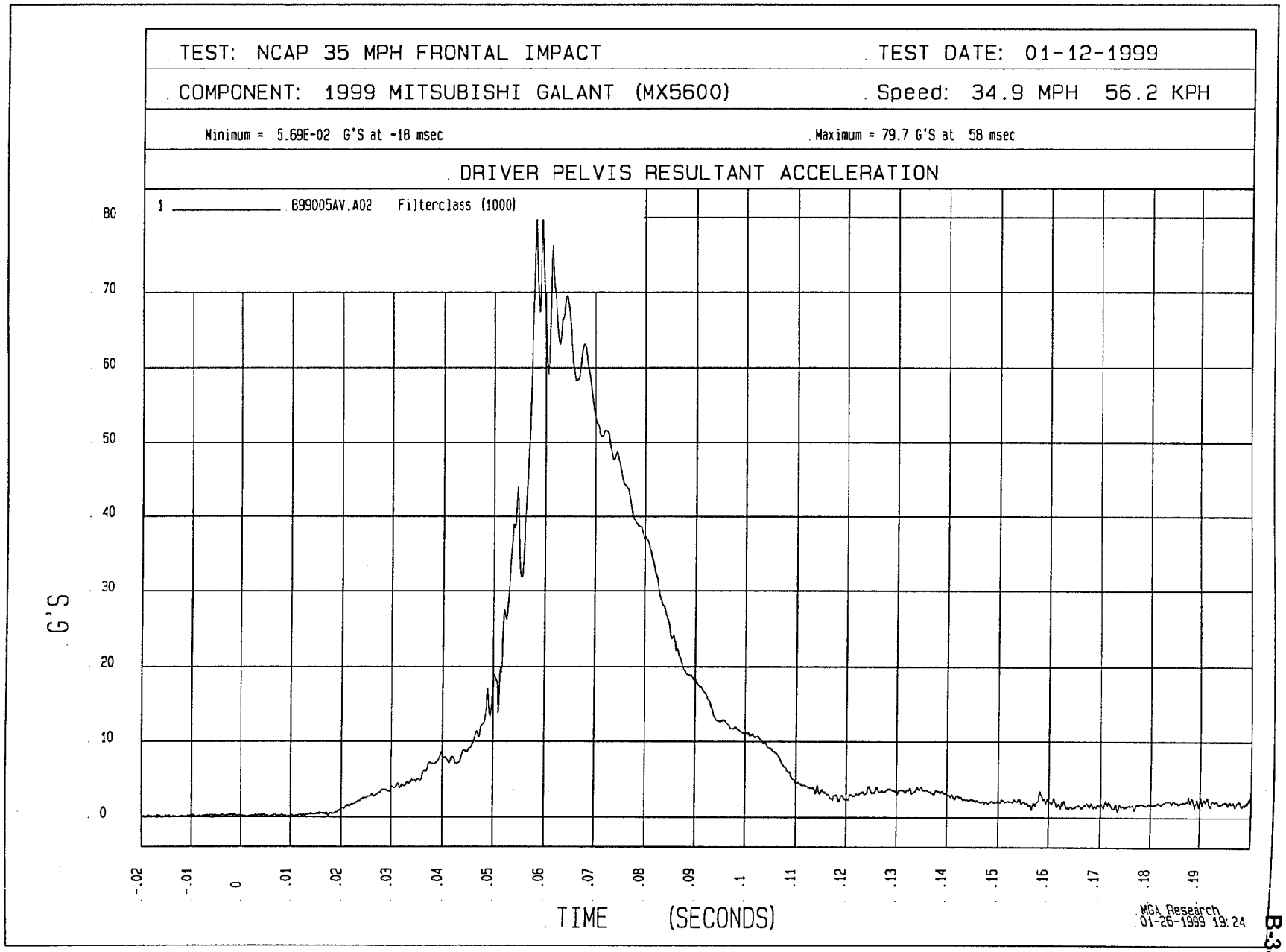
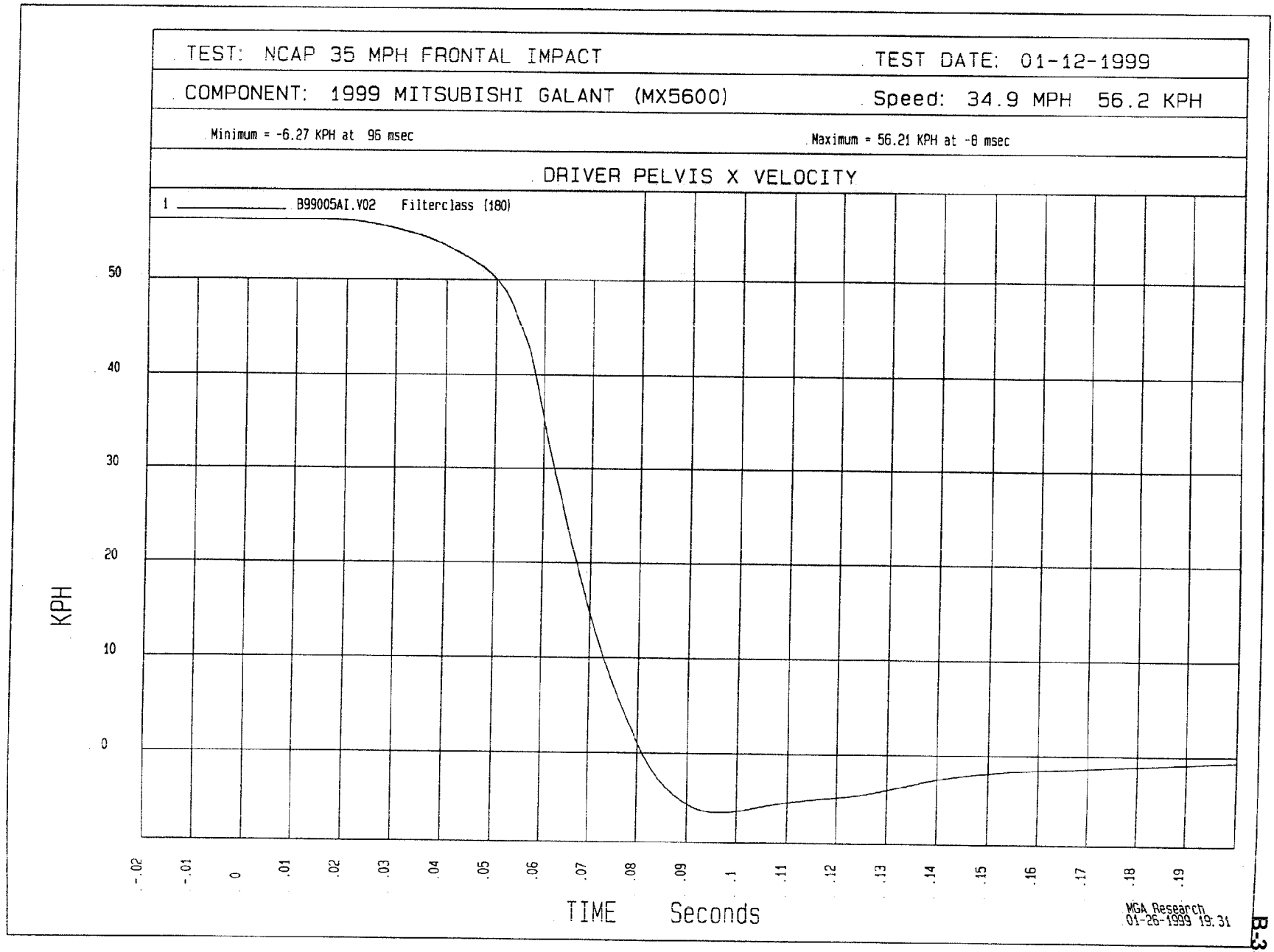
TIME (SECONDS)
MGA Research
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 5.69E-02 G'S at -18 msec
Maximum = 79.7 G'S at 58 msec
DRIVER PELVIS RESULTANT ACCELERATION
1 B99005AV.A02 Filterclass (1000)
G'S
80
70
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
01-26-1999 19:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -6.27 KPH at 95 msec
Maximum = 56.21 KPH at -8 msec
DRIVER PELVIS X VELOCITY
1 B99005AI.V02 Filterclass (180)
KPH
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
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.17
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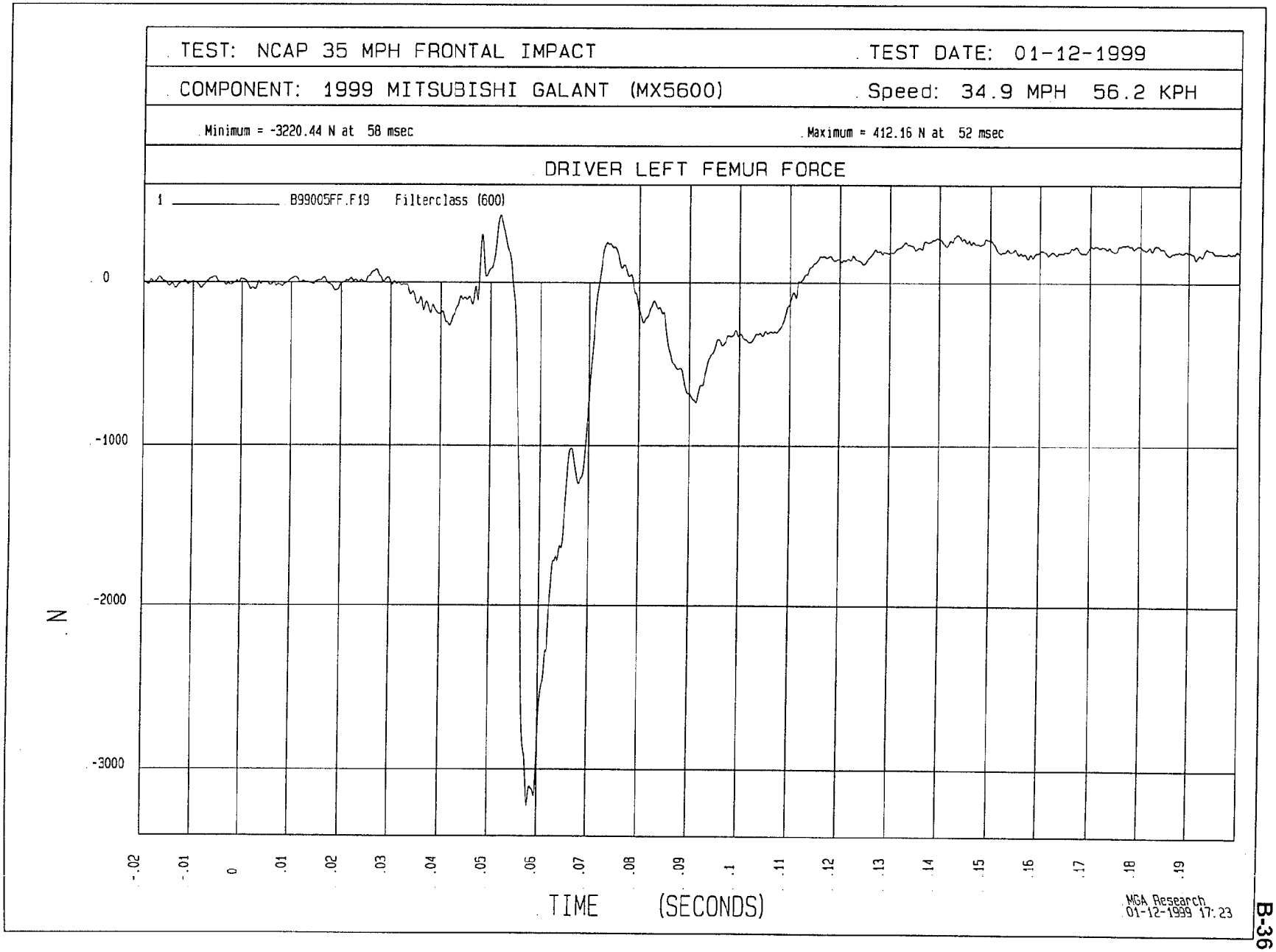
.19
TIME Seconds
MGA Research
01-26-1999 19:31


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -3220.44 N at 58 msec
Maximum = 412.16 N at 52 msec
DRIVER LEFT FEMUR FORCE
1 B99005FF.F19 Filterclass (600)
0
-1000
-2000
-3000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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.09
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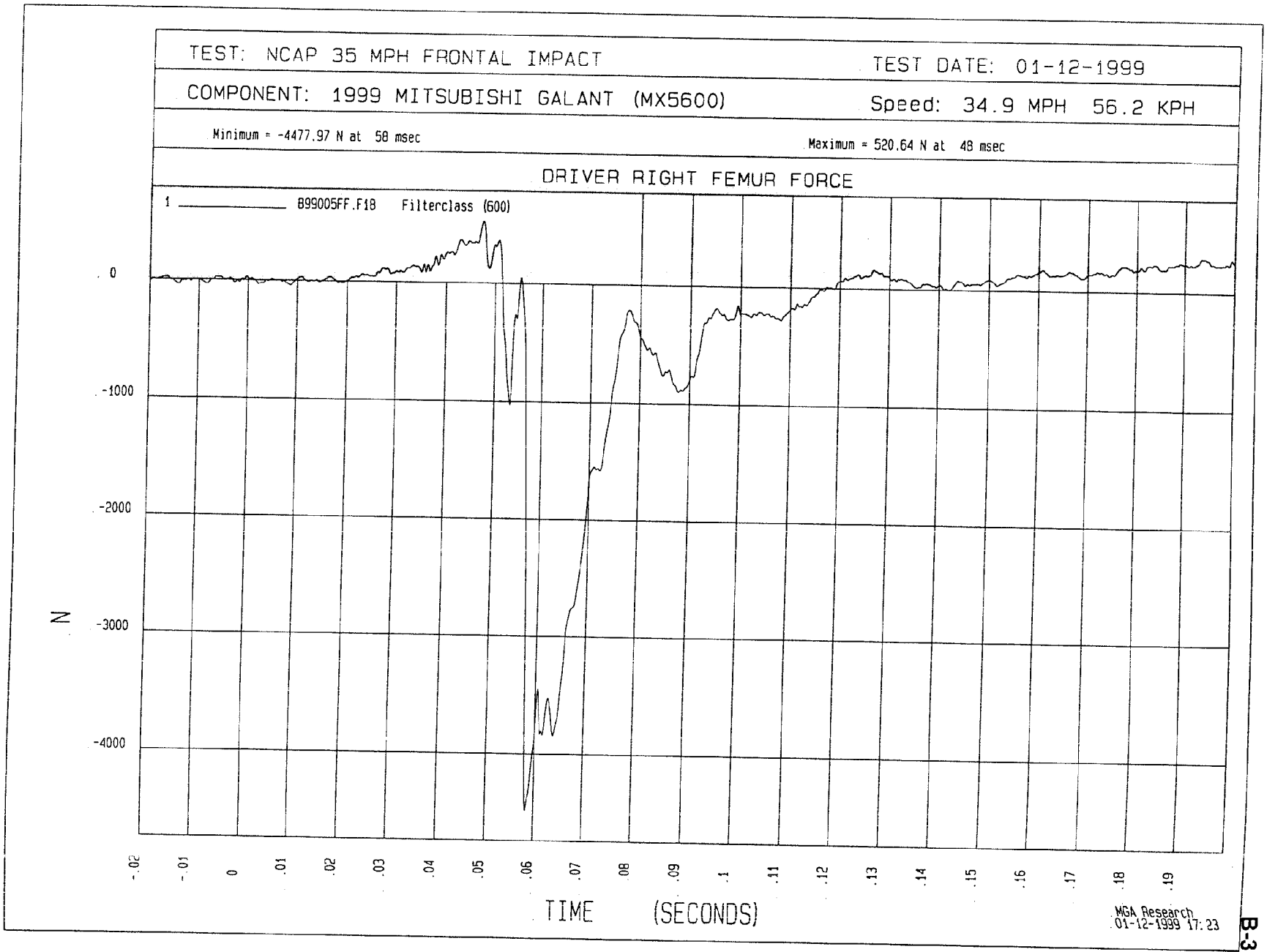
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -4477.97 N at 58 msec
Maximum = 520.64 N at 48 msec
DRIVER RIGHT FEMUR FORCE
1 B99005FF.F18 Filterclass (600)
0
-1000
-2000
-3000
-4000
N
-.02
-.01
0
.01
.02
.03
.04
.05
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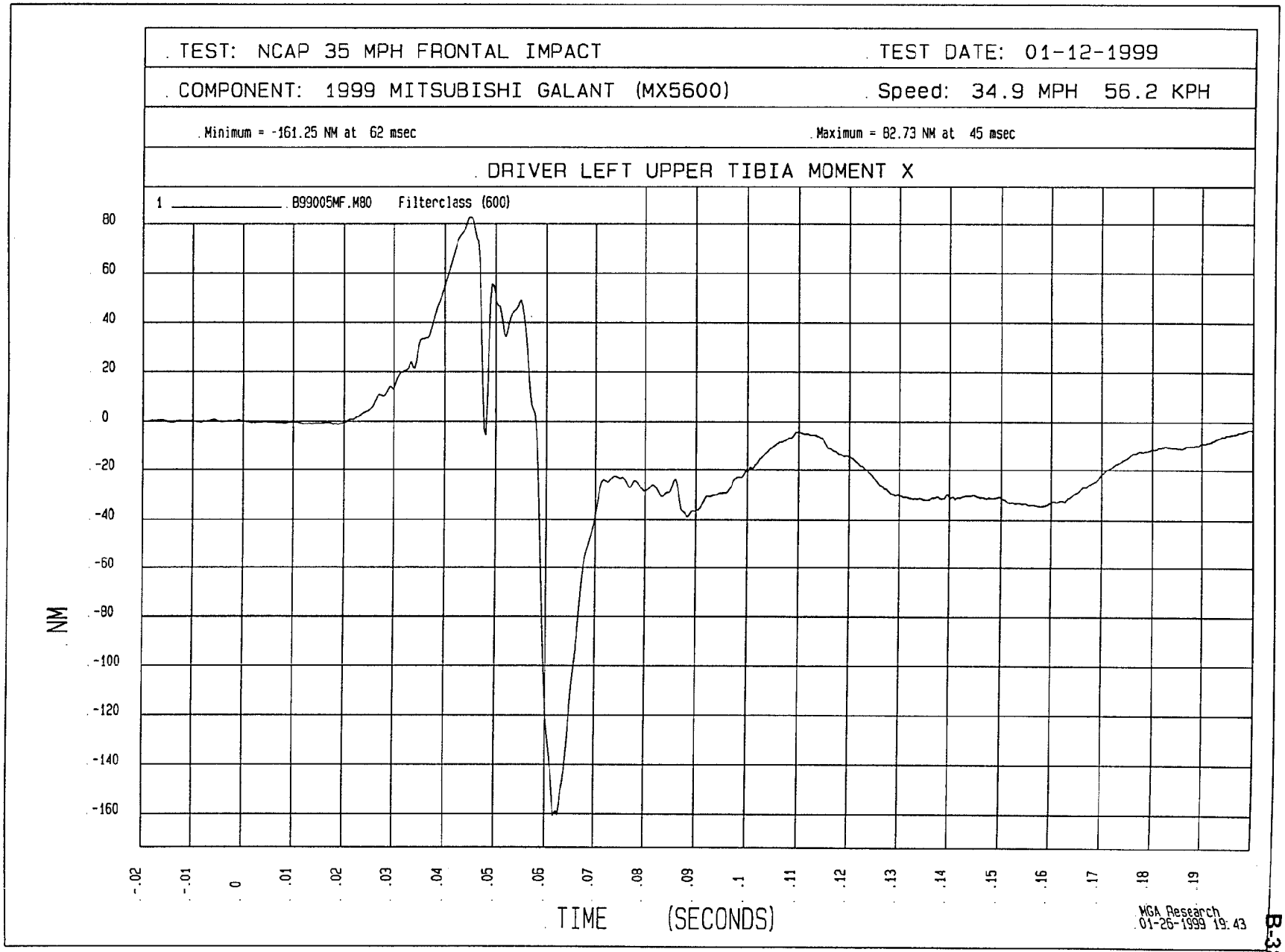
TIME (SECONDS)
MGA Research
01-12-1999 17:23


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -161.25 NM at 62 msec
Maximum = 82.73 NM at 45 msec
DRIVER LEFT UPPER TIBIA MOMENT X
1 B99005MF.M80 Filterclass (600)
NM
80
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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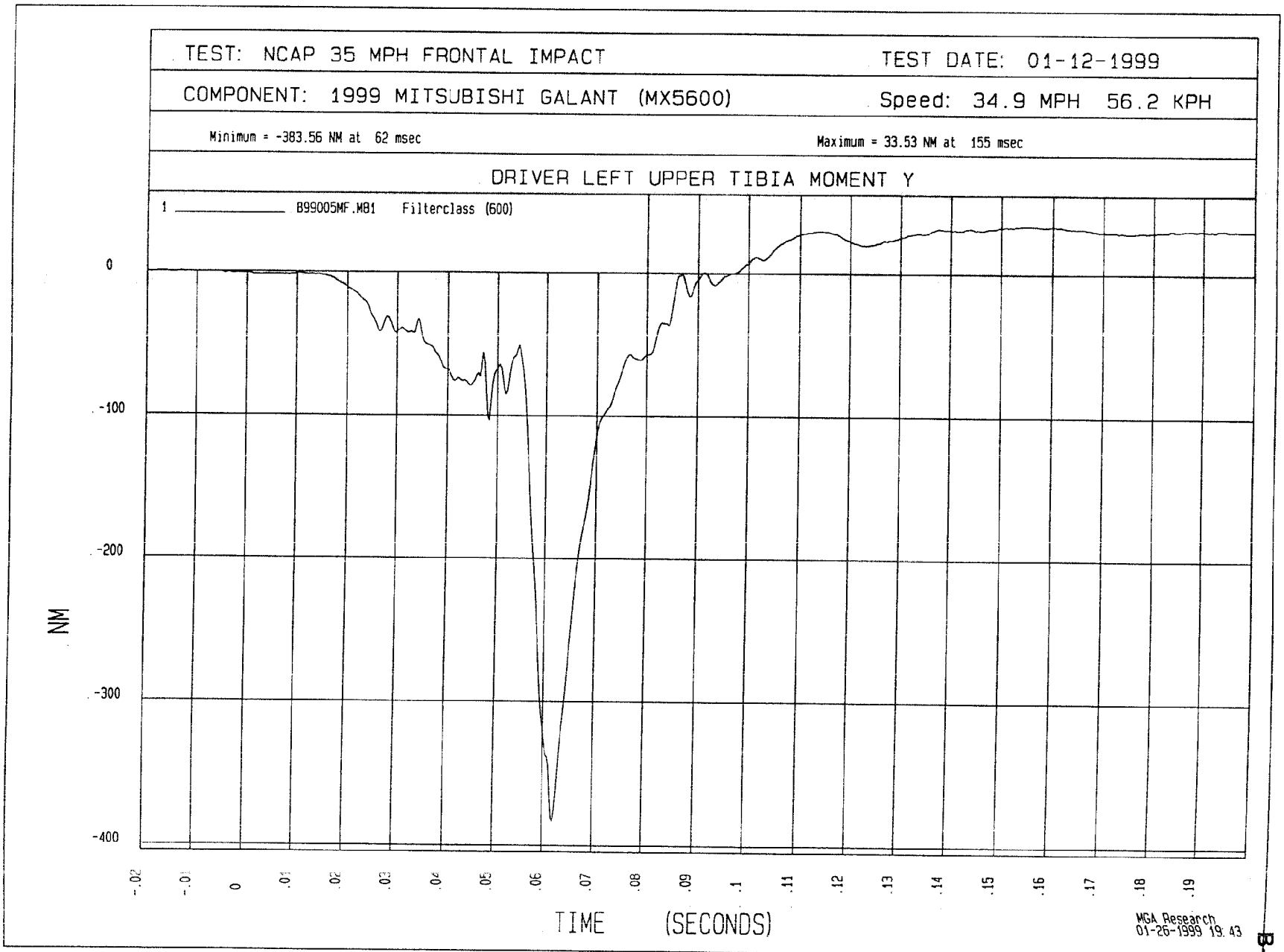
TIME (SECONDS)
MGA Research
01-26-1999 19:43


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -383.56 NM at 62 msec
Maximum = 33.53 NM at 155 msec
DRIVER LEFT UPPER TIBIA MOMENT Y
1 B99005MF.MB1 Filterclass (600)
0
-100
-200
-300
-400
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.1
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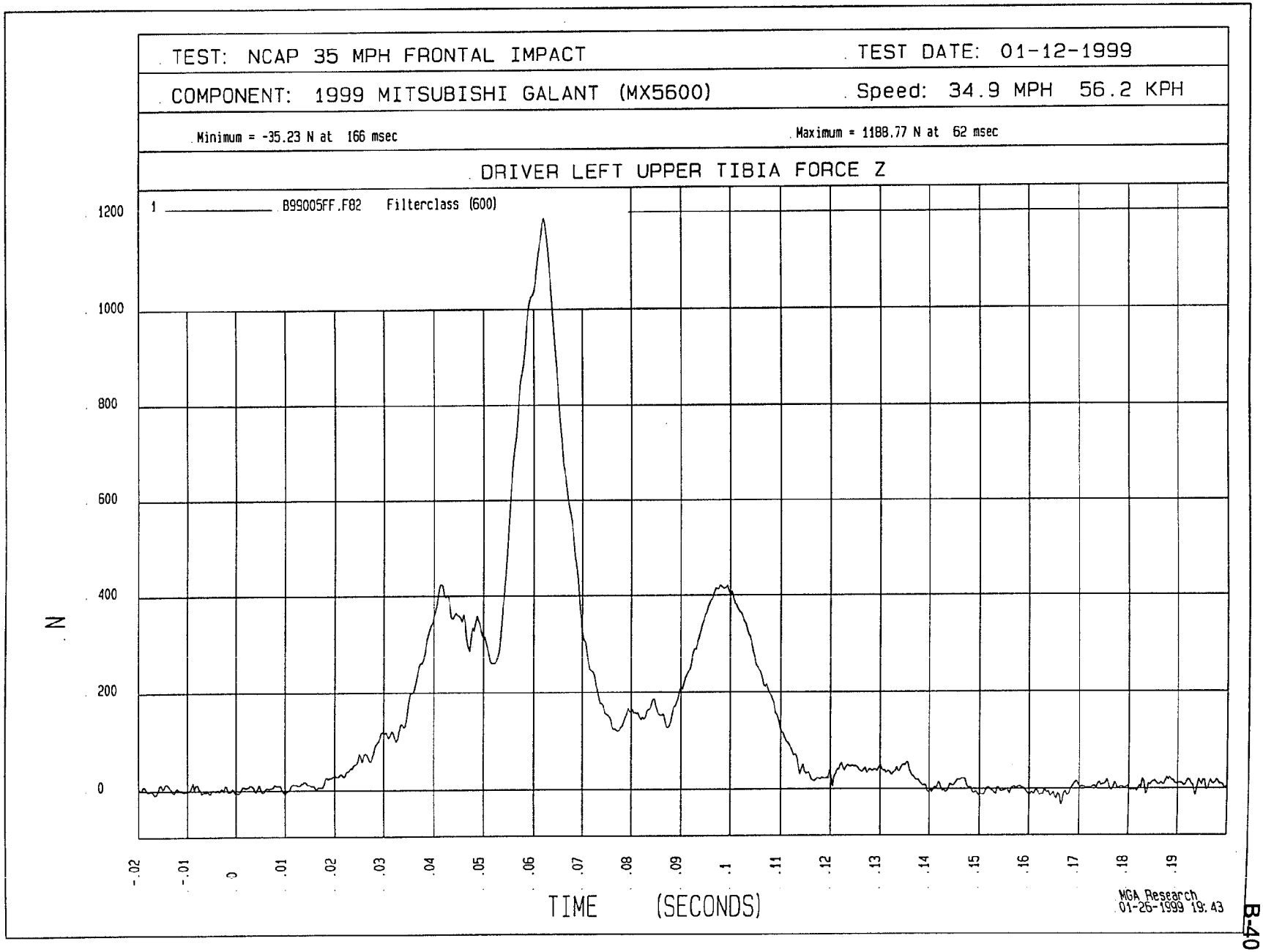
TIME (SECONDS)
MGA Research
01-26-1999 19:43


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -35.23 N at 166 msec
Maximum = 1188.77 N at 62 msec
DRIVER LEFT UPPER TIBIA FORCE Z
1 B99005FF.F82 Filterclass (600)
1200
1000
800
600
400
200
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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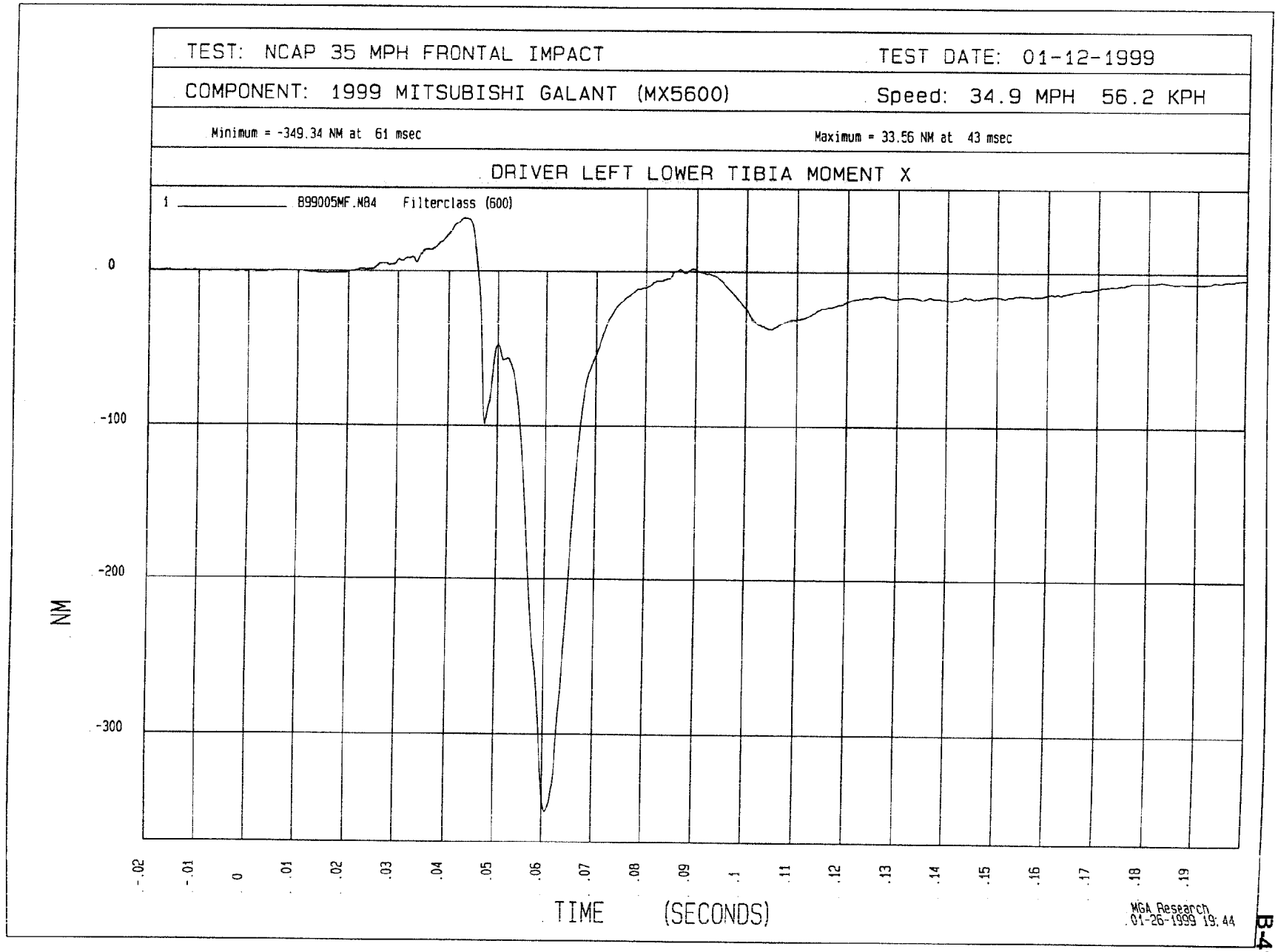
TIME (SECONDS)
MGA Research
01-26-1999 19:43


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -349.34 NM at 61 msec
Maximum = 33.56 NM at 43 msec
DRIVER LEFT LOWER TIBIA MOMENT X
1 B99005MF.N84 Filterclass (600)
0
-100
-200
-300
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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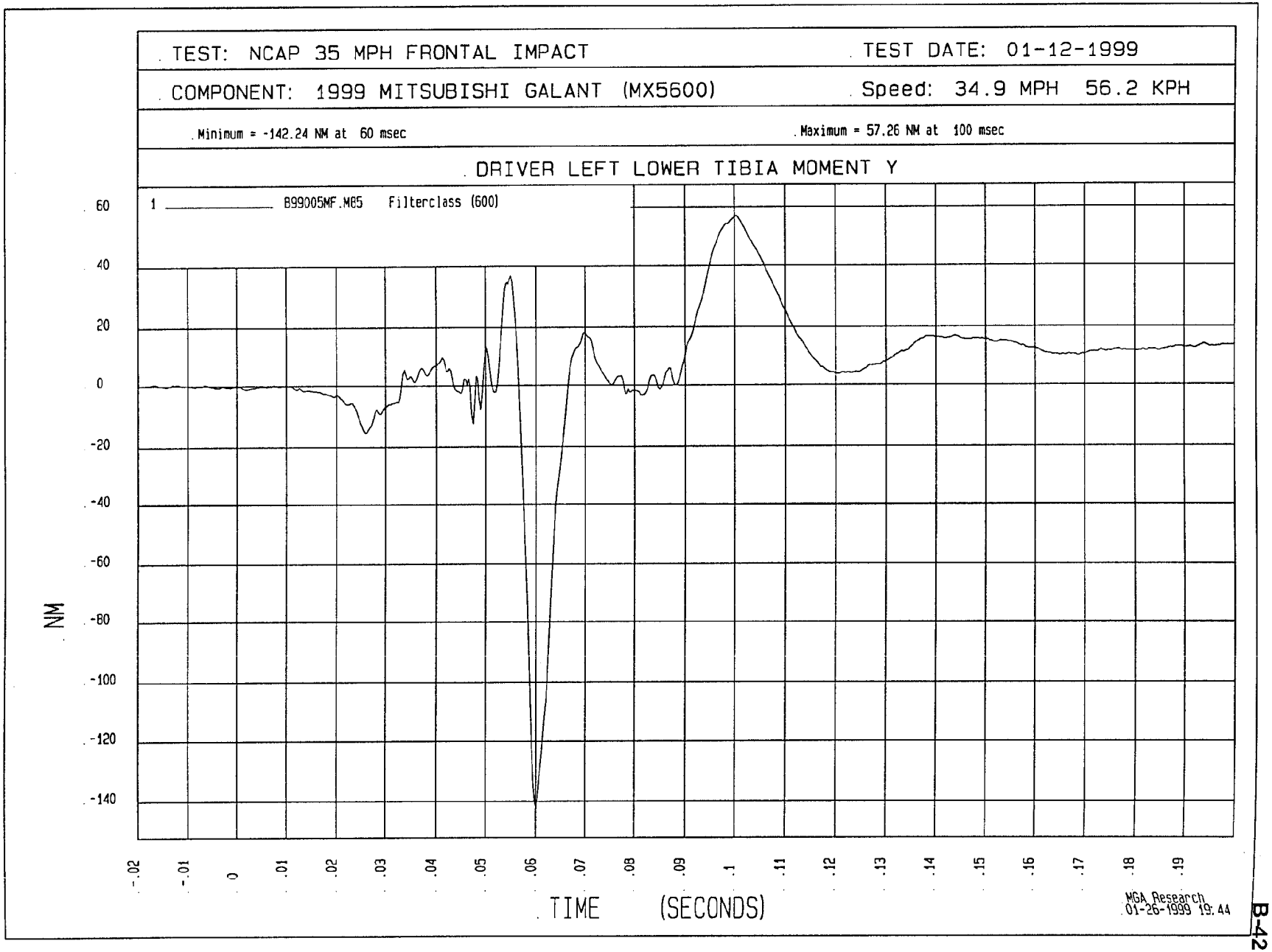
TIME (SECONDS)
MGA Research
01-26-1999 19:44


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -142.24 NM at 60 msec
Maximum = 57.26 NM at 100 msec
DRIVER LEFT LOWER TIBIA MOMENT Y
1 B99005MF.M85 Filterclass (600)
NM
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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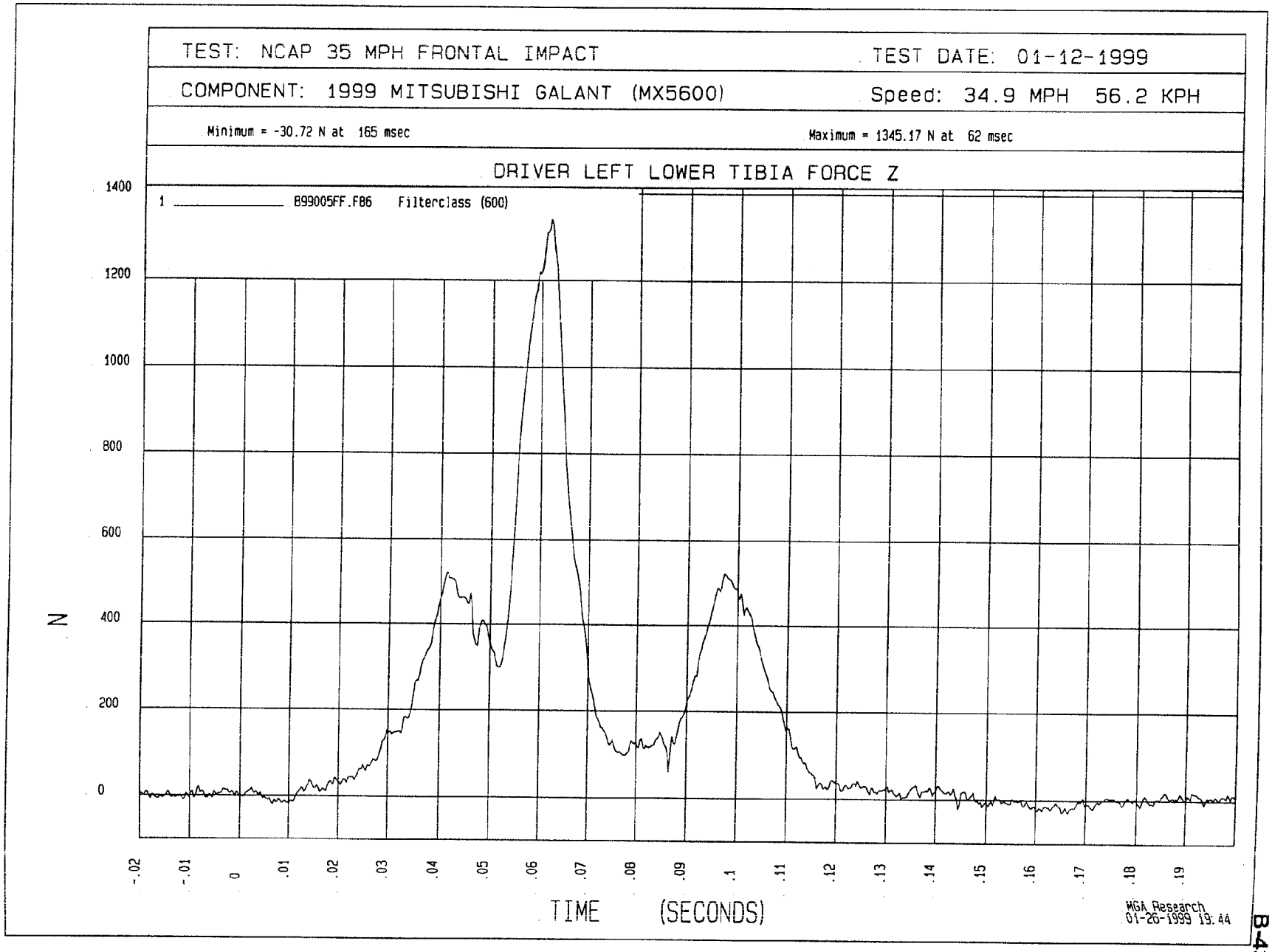
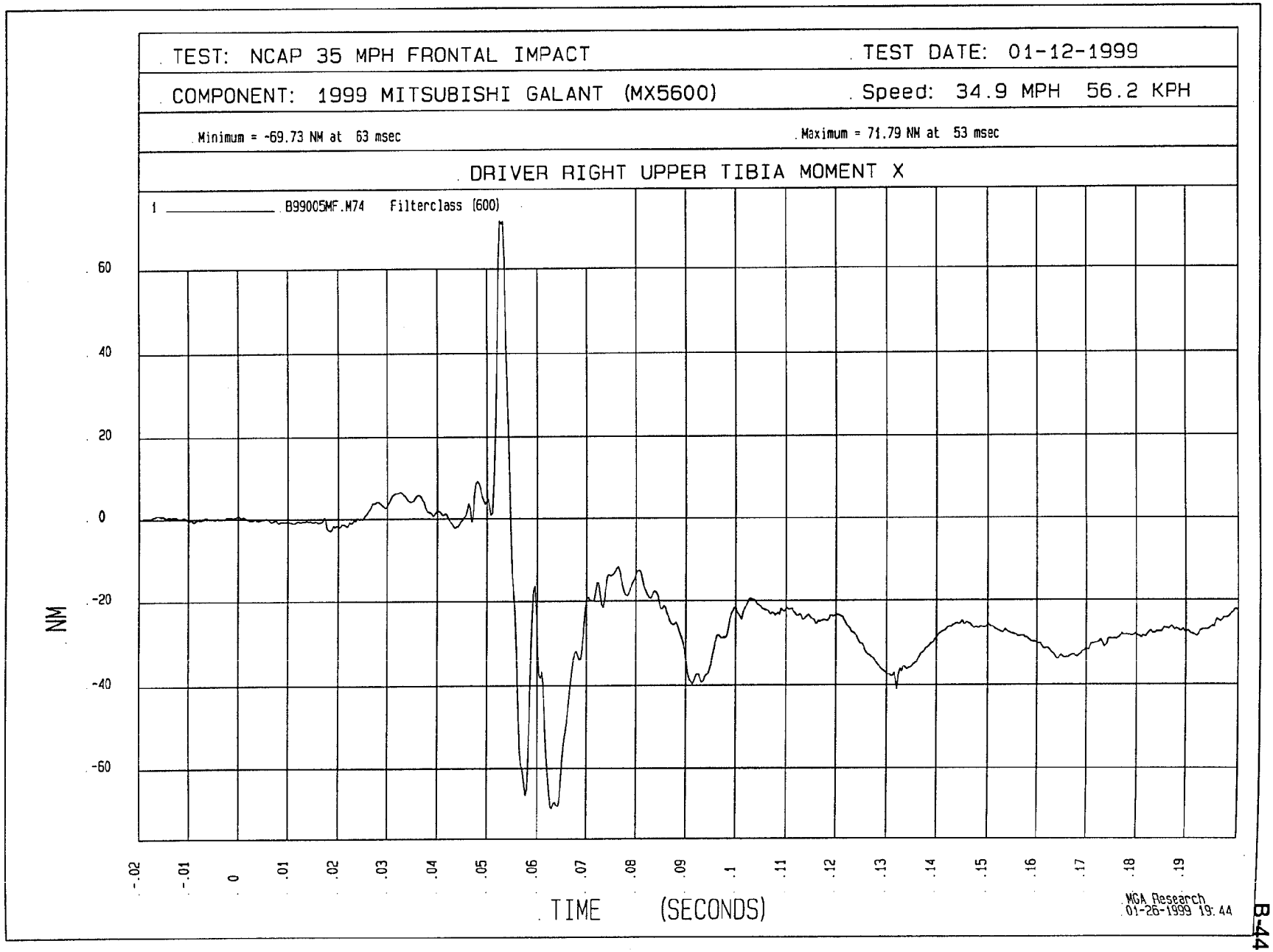
TIME (SECONDS)
MGA Research
01-26-1999 19:44


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -30.72 N at 165 msec
Maximum = 1345.17 N at 62 msec
DRIVER LEFT LOWER TIBIA FORCE Z
1 B99005FF.F86 Filterclass (600)
1400
1200
1000
800
600
400
200
0
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
01-26-1999 19:44


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -69.73 NM at 63 msec
Maximum = 71.79 NM at 53 msec
DRIVER RIGHT UPPER TIBIA MOMENT X
1 B99005MF.M74 Filterclass (600)
NM
60
40
20
0
-20
-40
-60
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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.09
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.14
.15
.16
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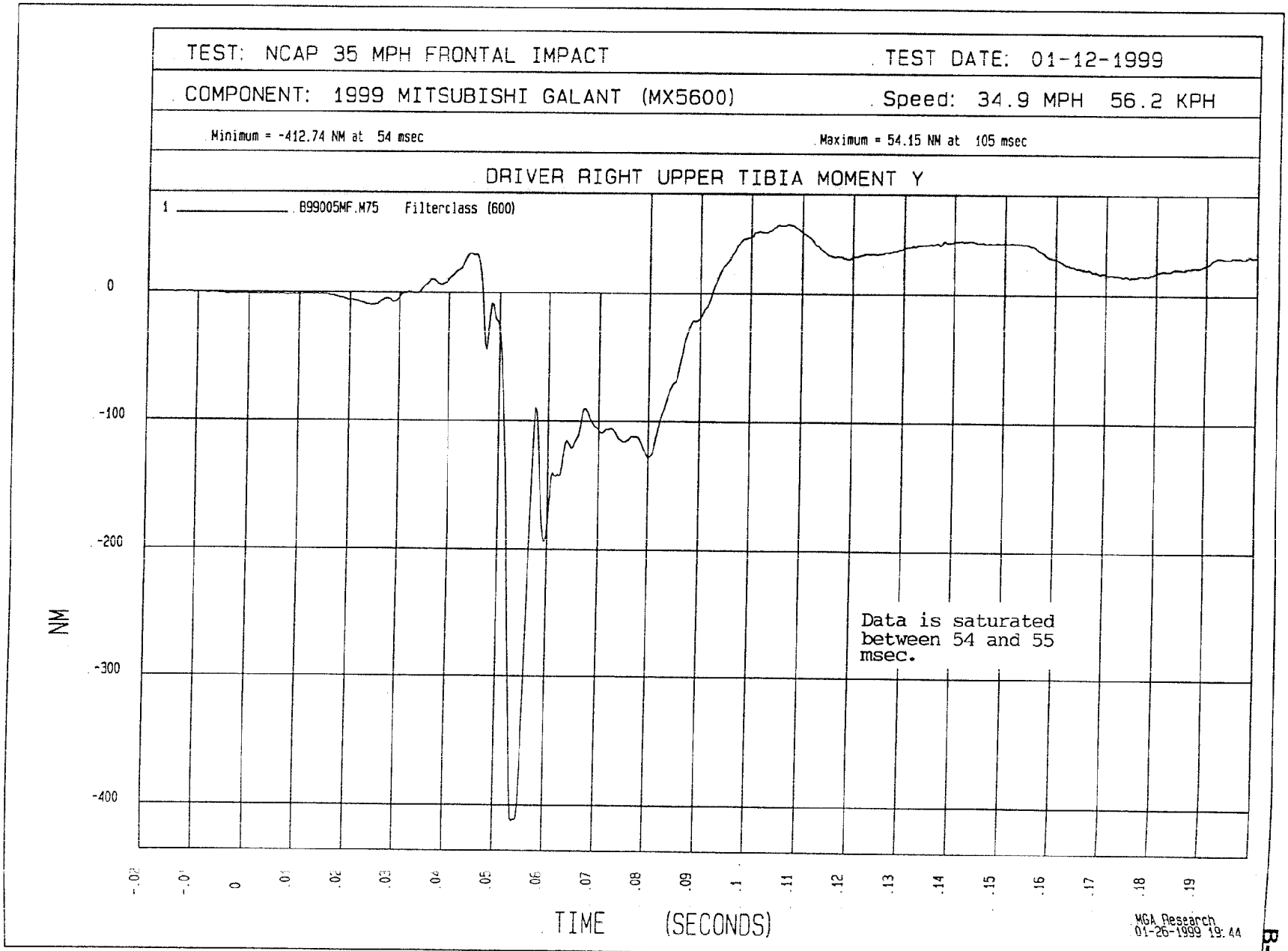
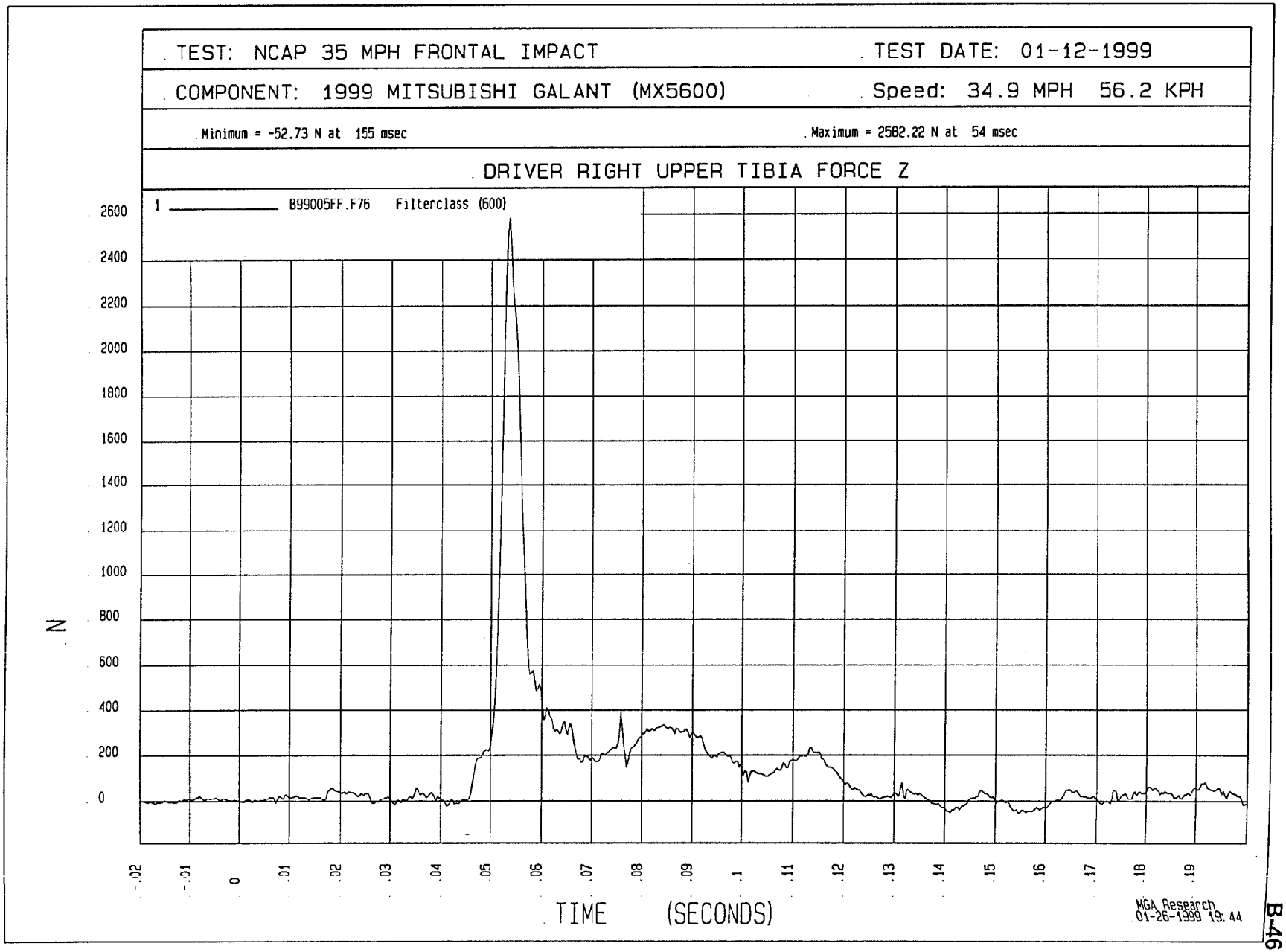
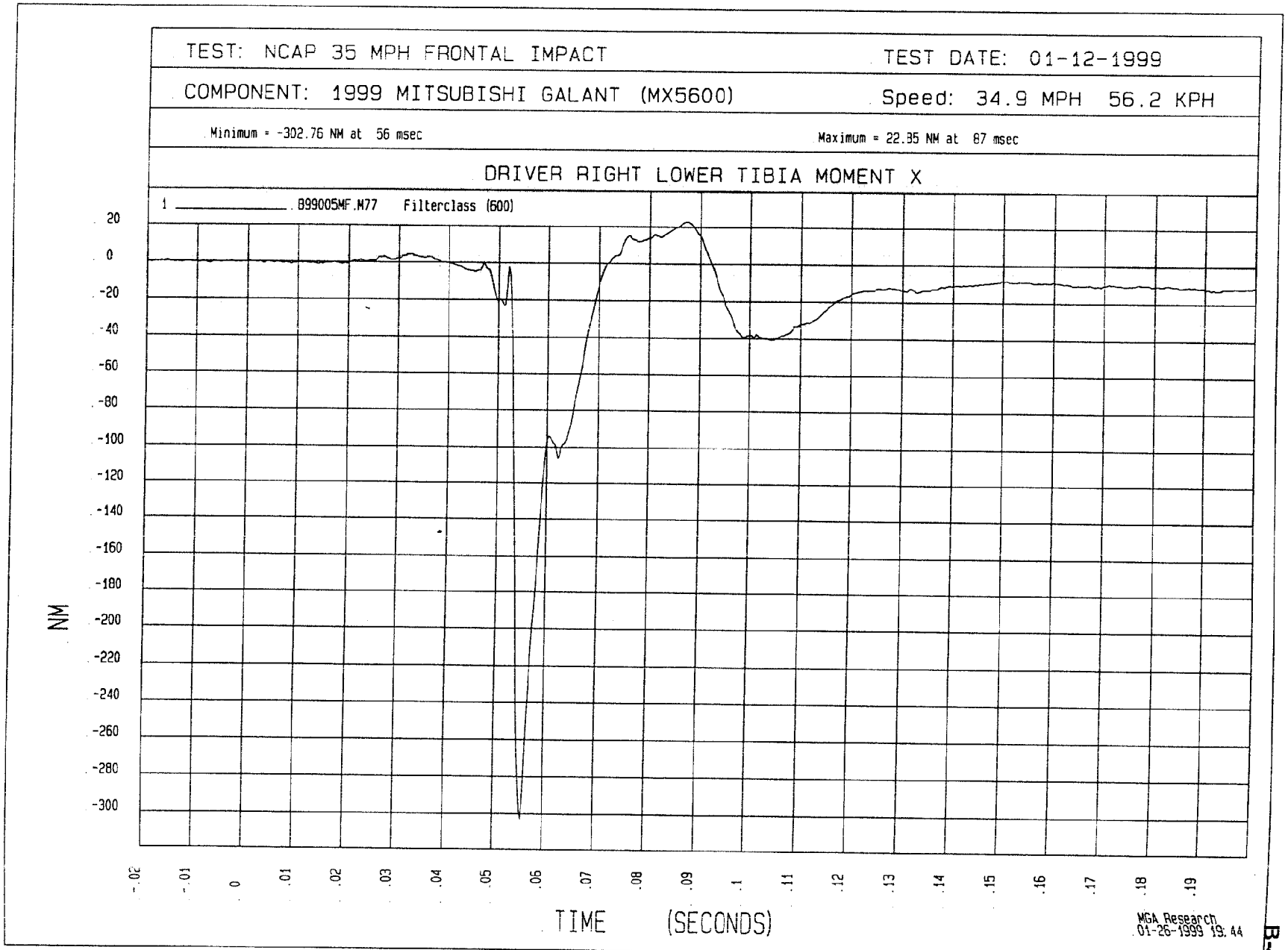
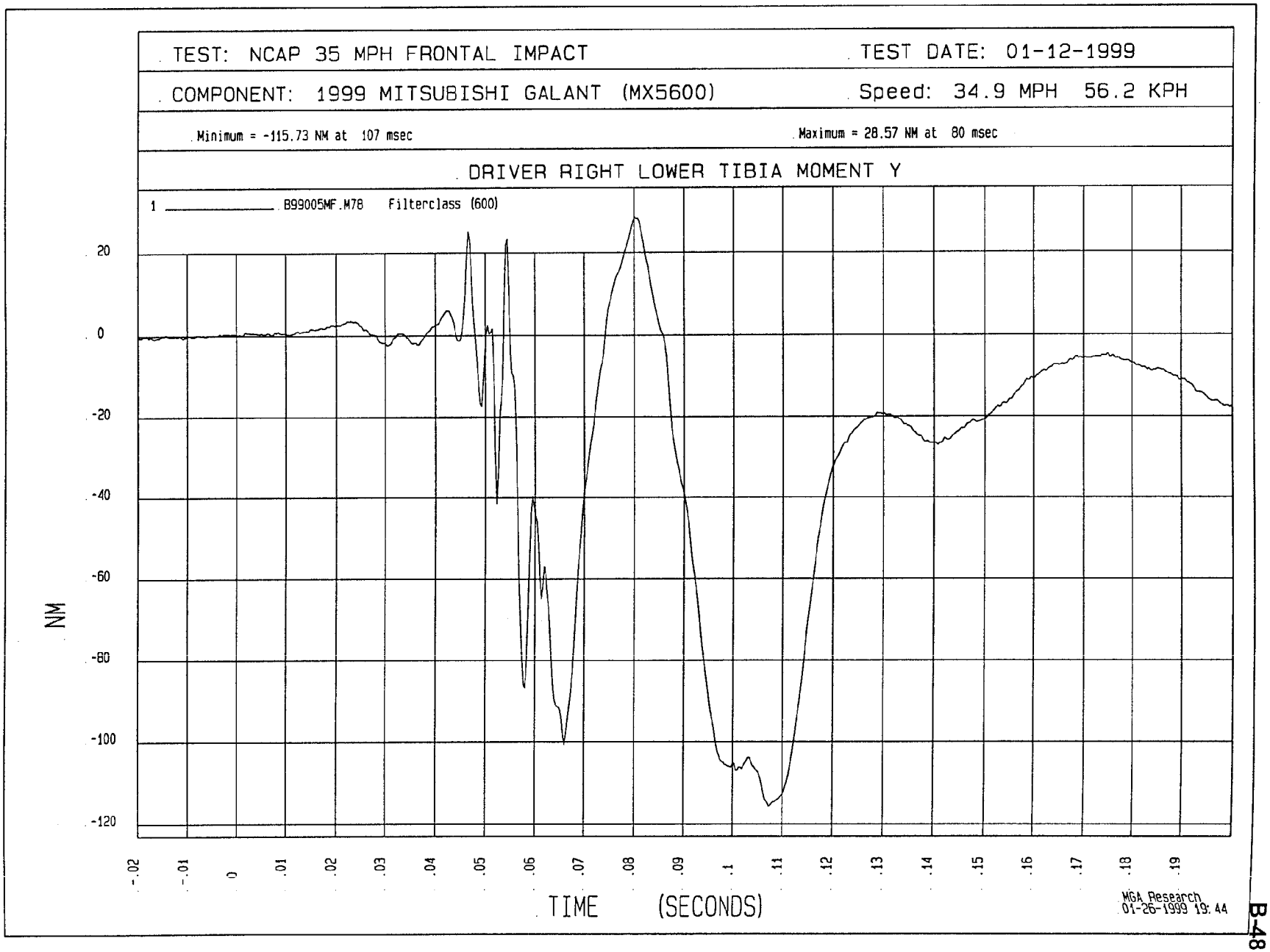
TIME (SECONDS)
MGA Research
01-26-1999 19:44


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -412.74 NM at 54 msec
Maximum = 54.15 NM at 105 msec
DRIVER RIGHT UPPER TIBIA MOMENT Y
1 B99005MF.M75 Filterclass (600)
0
-100
-200
-300
-400
NM
Data is saturated between 54 and 55 msec.
-.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
01-26-1999 19:44


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -52.73 N at 155 msec
Maximum = 2582.22 N at 54 msec
DRIVER RIGHT UPPER TIBIA FORCE Z
1 B99005FF.F76 Filterclass (600)
N
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
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
01-26-1999 19:44


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -302.76 NM at 56 msec
Maximum = 22.35 NM at 87 msec
DRIVER RIGHT LOWER TIBIA MOMENT X
1 B99005MF.M77 Filterclass (600)
NM
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
-220
-240
-260
-280
-300
-.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
01-26-1999 19:44

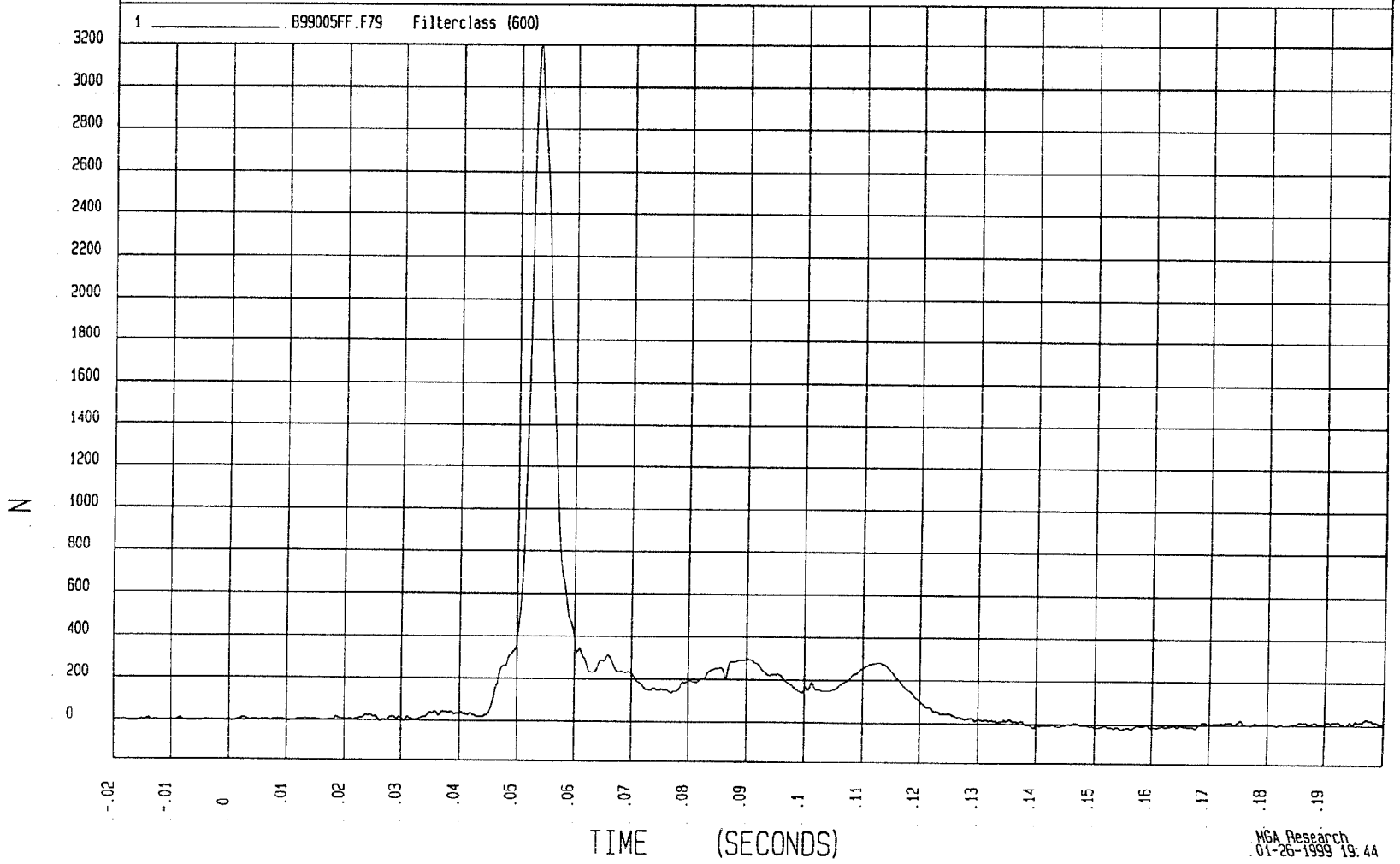

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -115.73 NM at 107 msec
Maximum = 28.57 NM at 80 msec
DRIVER RIGHT LOWER TIBIA MOMENT Y
1 B99005MF.M78 Filterclass (600)
NM
20
0
-20
-40
-60
-80
-100
-120
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 19:44

TEST: NCAP 35 MPH FRONTAL IMPACT TEST DATE: 01-12-1999

COMPONENT: 1999 MITSUBISHI GALANT (MX5600) Speed: 34.9 MPH 56.2 KPH

Minimum = -24.33 N at 155 msec Maximum = 3221.27 N at 53 msec

DRIVER RIGHT LOWER TIBIA FORCE Z



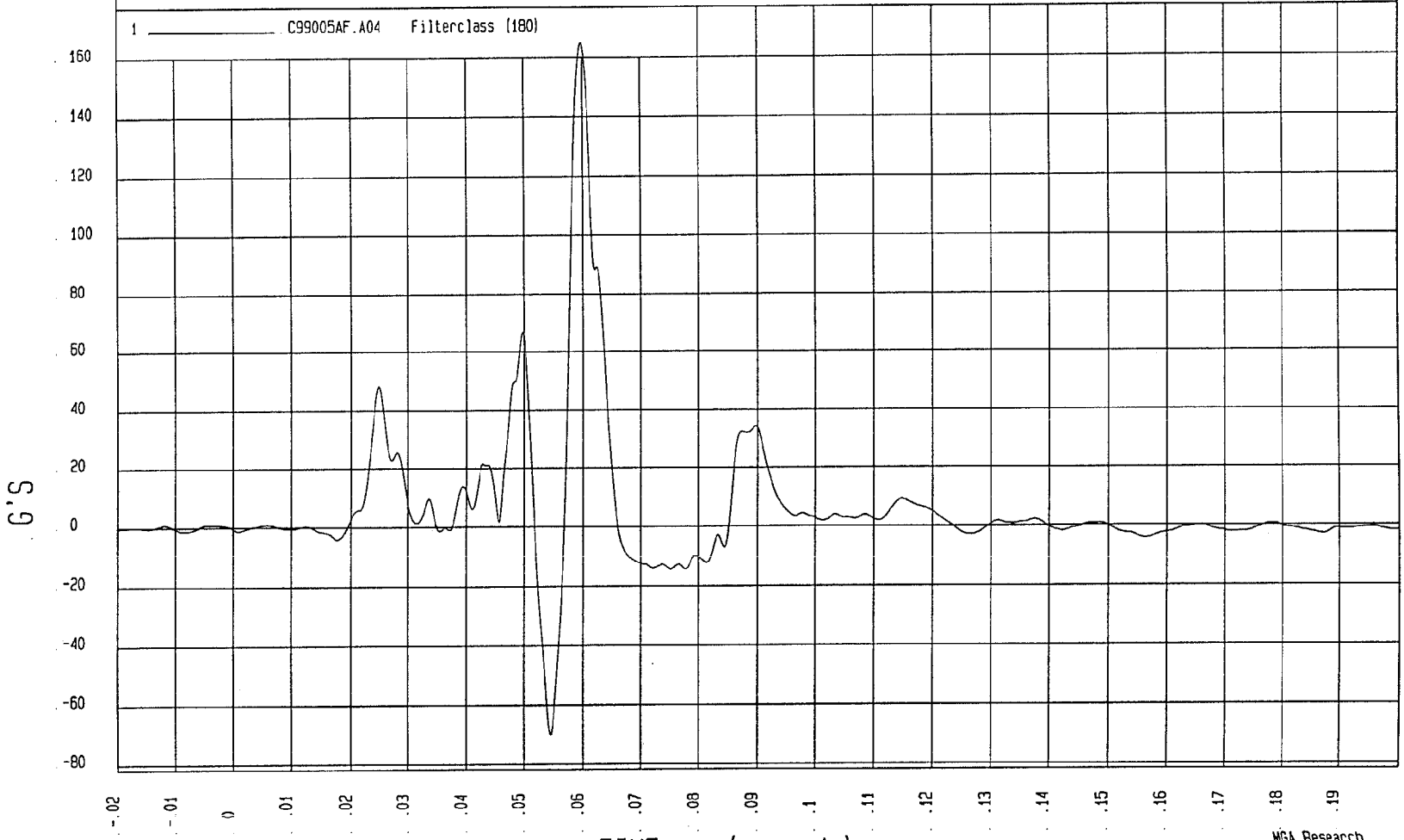
MGA Research
01-26-1999 19:44

TEST: NCAP 35 MPH FRONTAL IMPACT TEST DATE: 01-12-1999

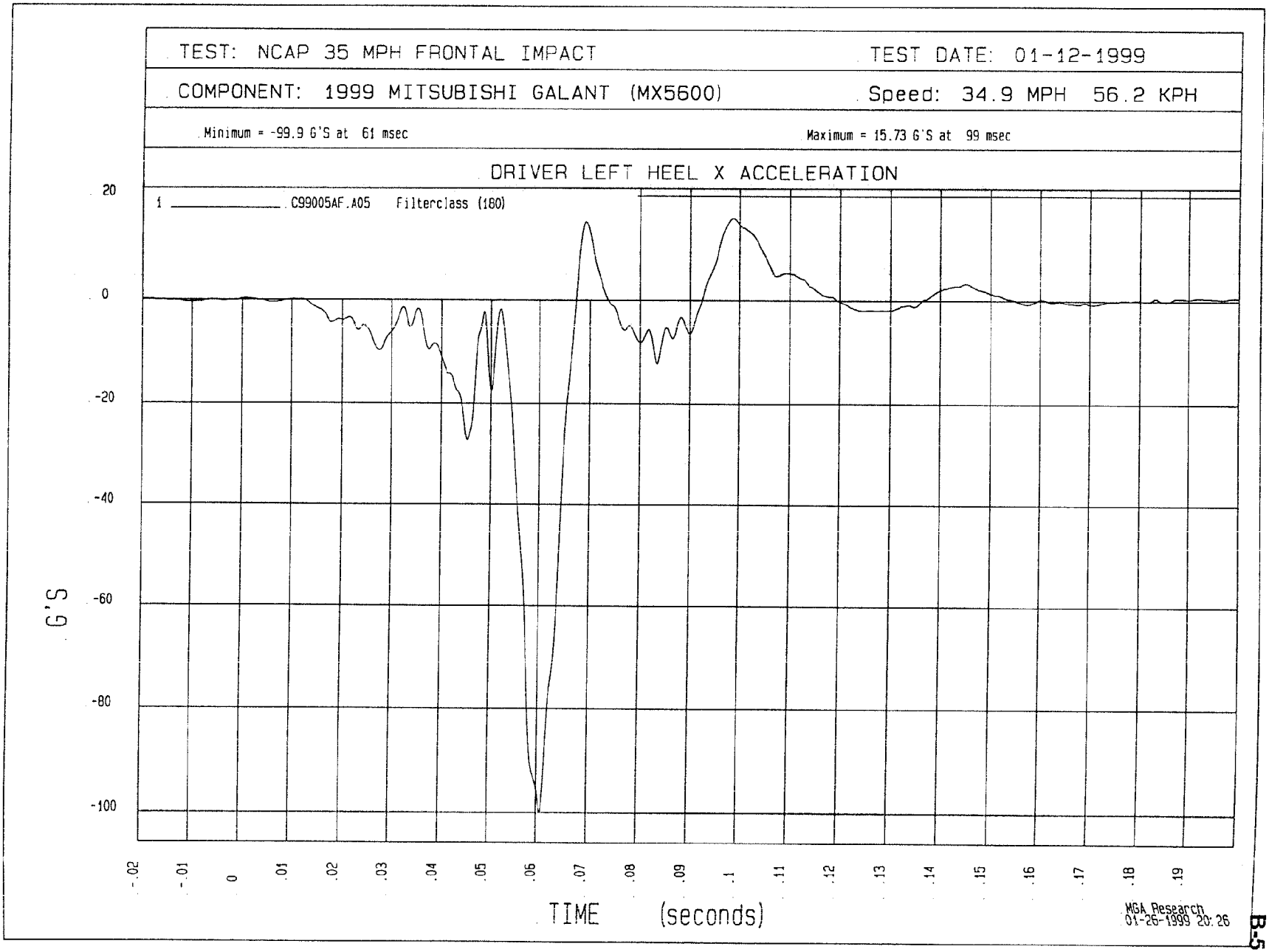
COMPONENT: 1999 MITSUBISHI GALANT (MX5600) Speed: 34.9 MPH 56.2 KPH

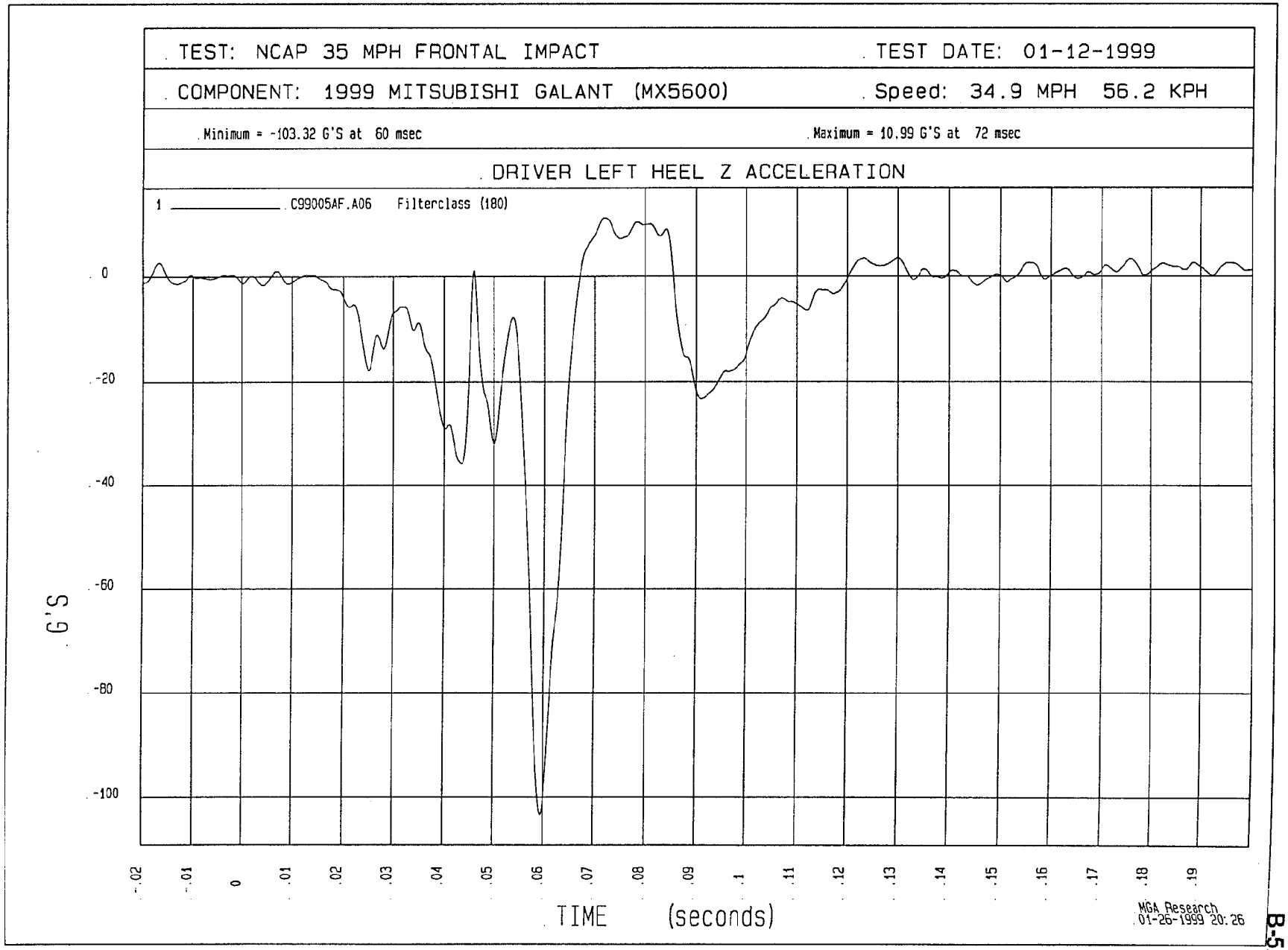
Minimum = -70.06 G'S at 54 msec Maximum = 165.16 G'S at 60 msec

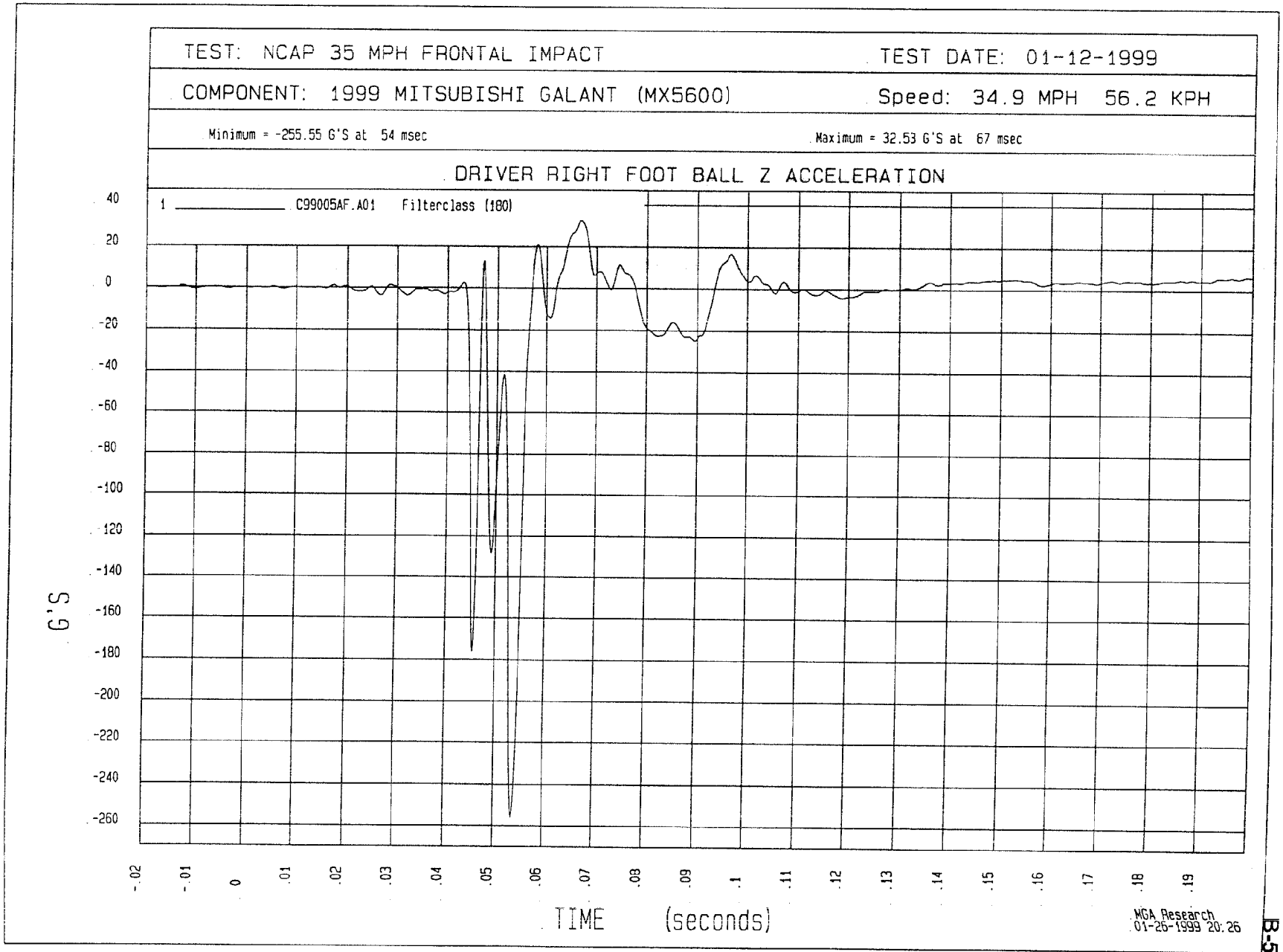
DRIVER LEFT FOOT BALL Z ACCELERATION

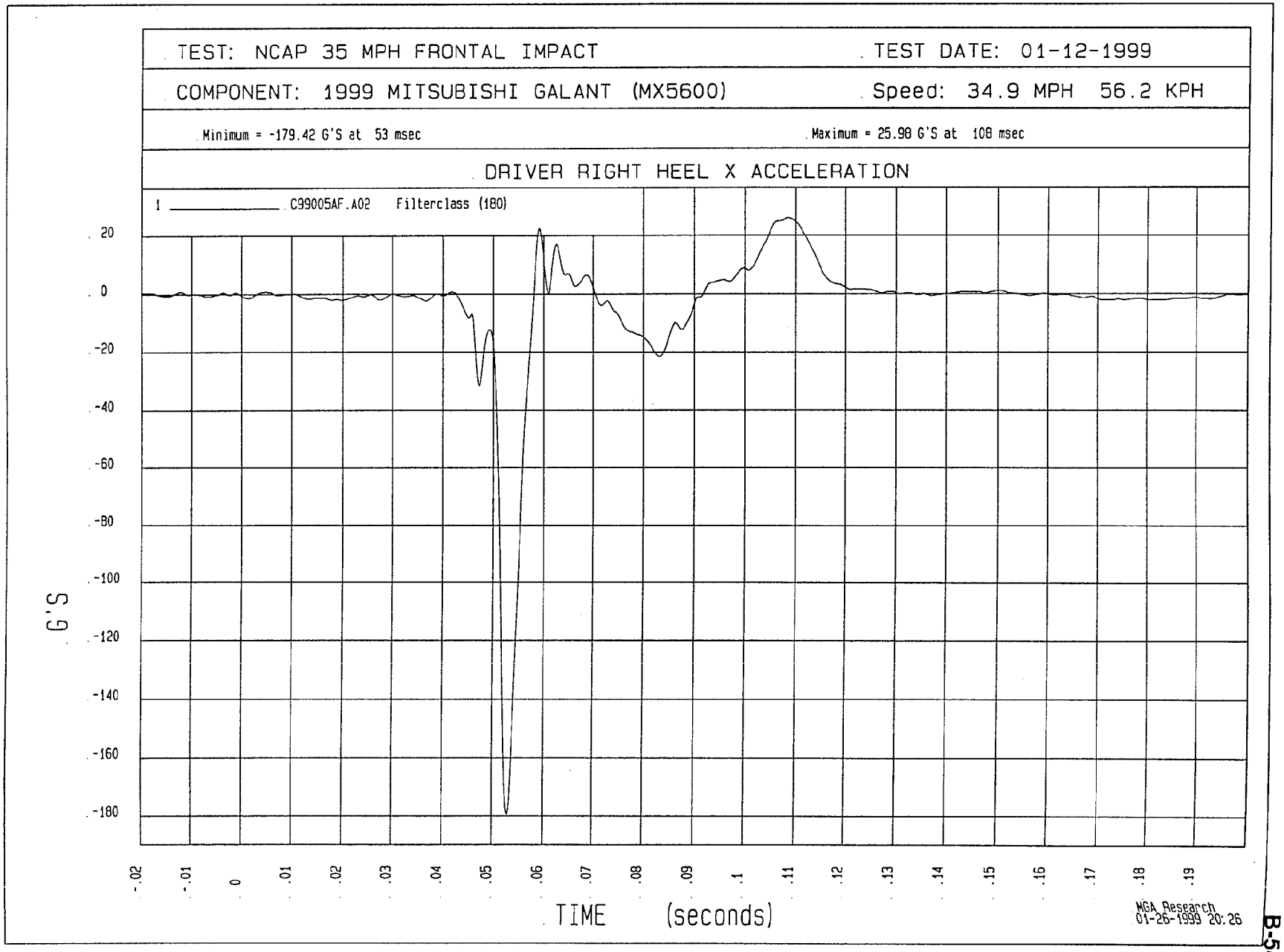


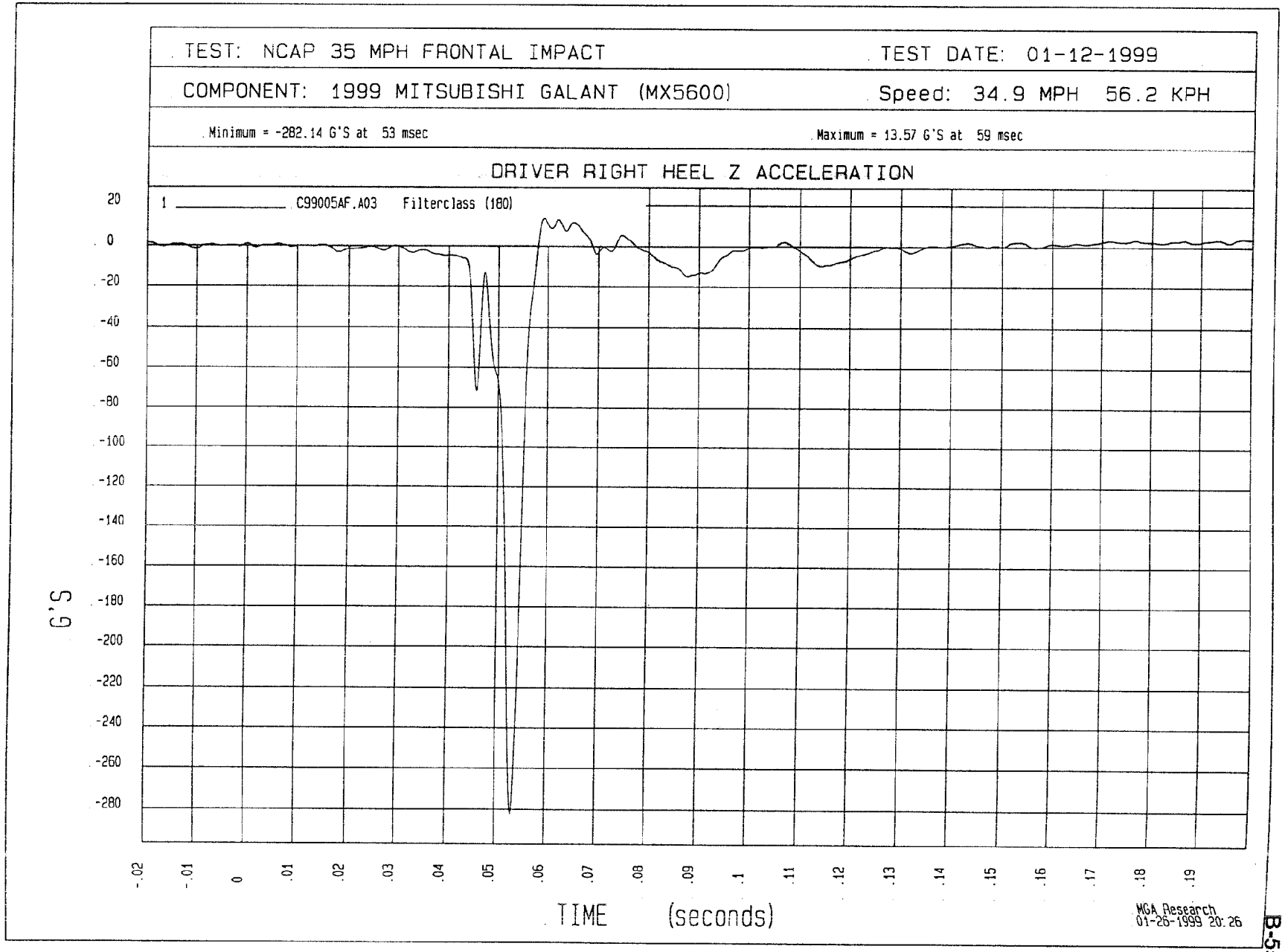
MGA Research
01-26-1999 20:26

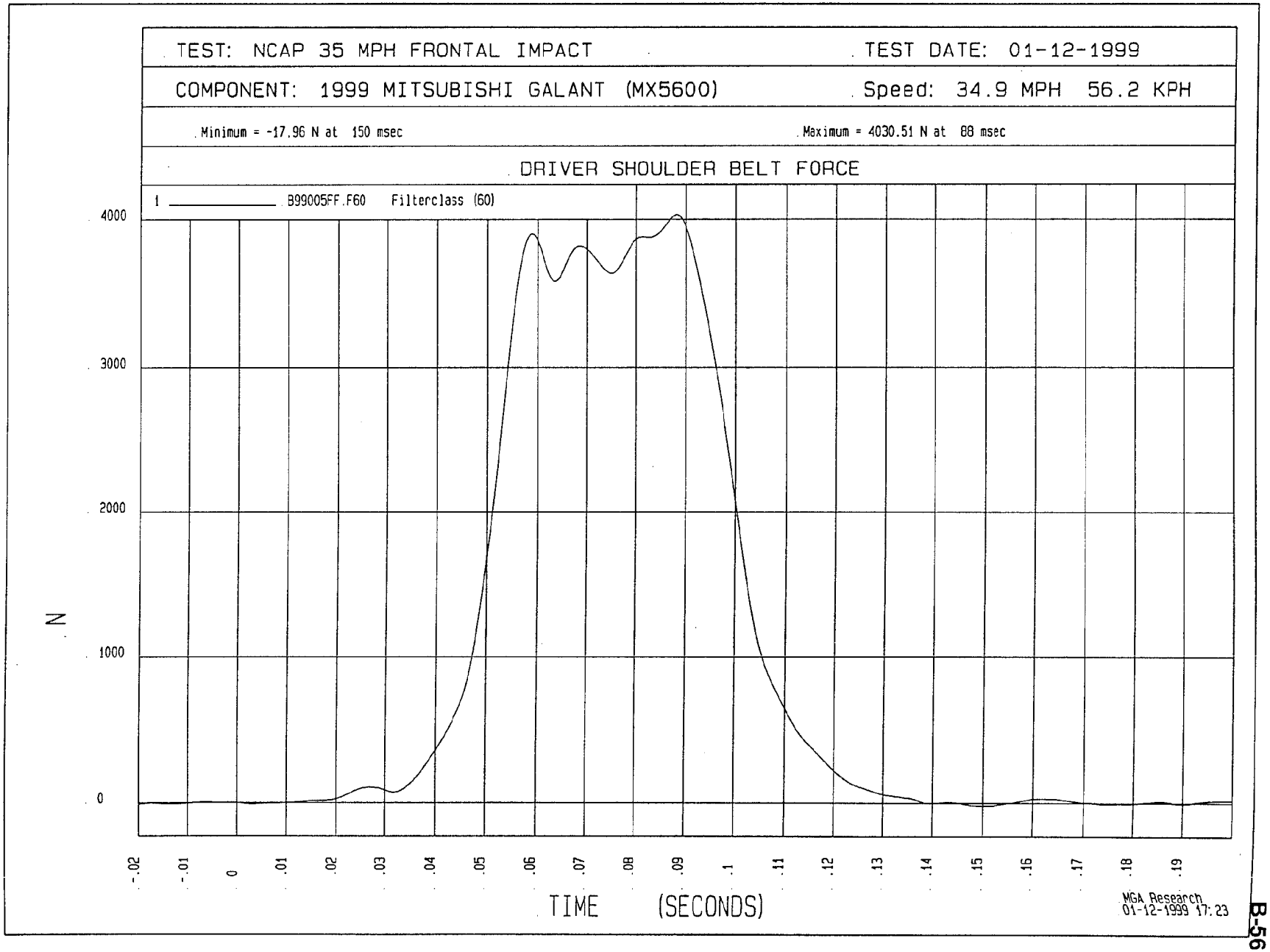

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -99.9 G'S at 61 msec
Maximum = 15.73 G'S at 99 msec
DRIVER LEFT HEEL X ACCELERATION
1 C99005AF.A05 Filterclass (180)
20
0
-20
-40
-60
-80
-100
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
01-26-1999 20:26

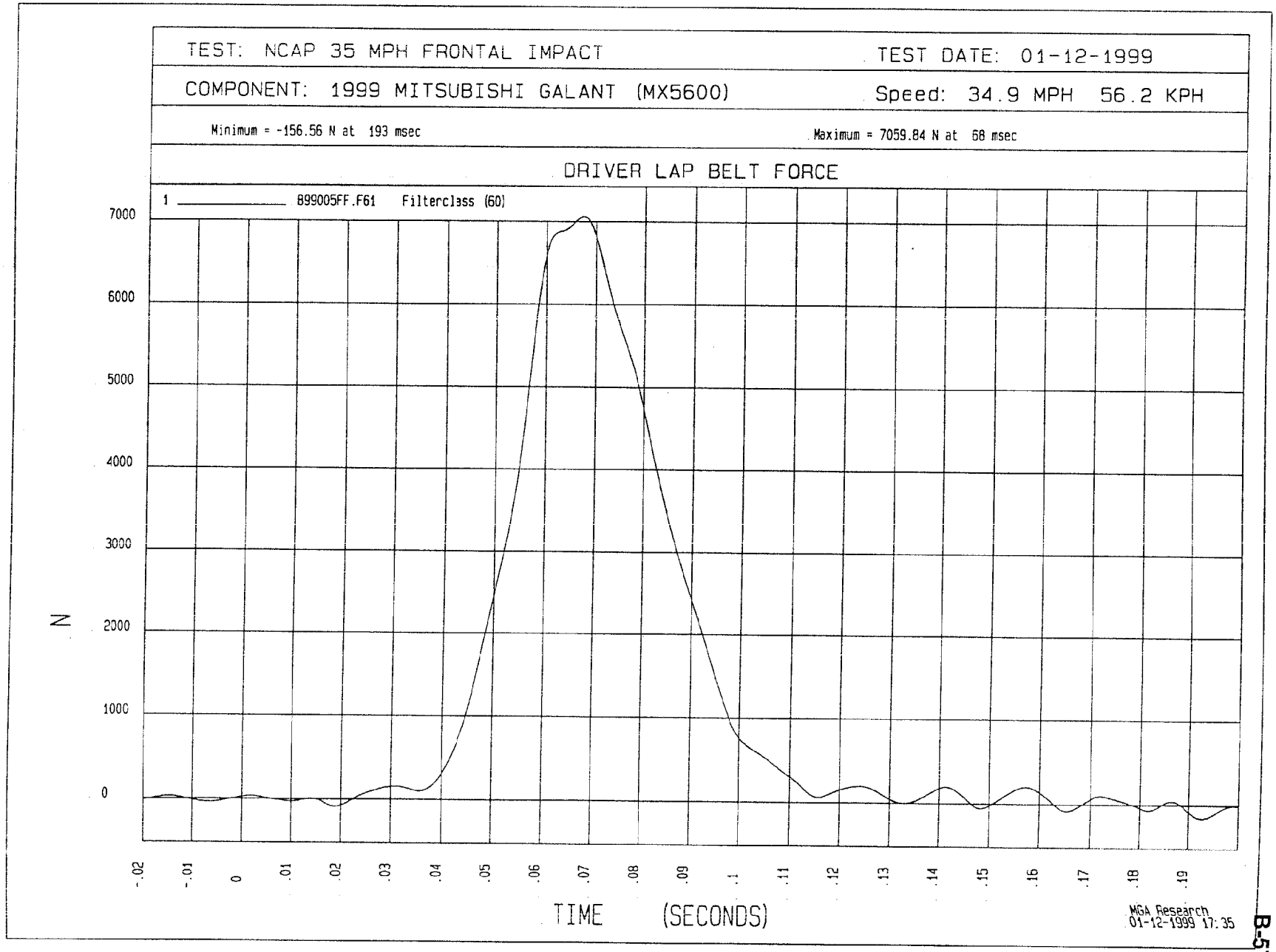

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -103.32 G'S at 60 msec
Maximum = 10.99 G'S at 72 msec
DRIVER LEFT HEEL Z ACCELERATION
1 C99005AF.A06 Filterclass (180)
0
-20
-40
-60
-80
-100
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
01-26-1999 20:26

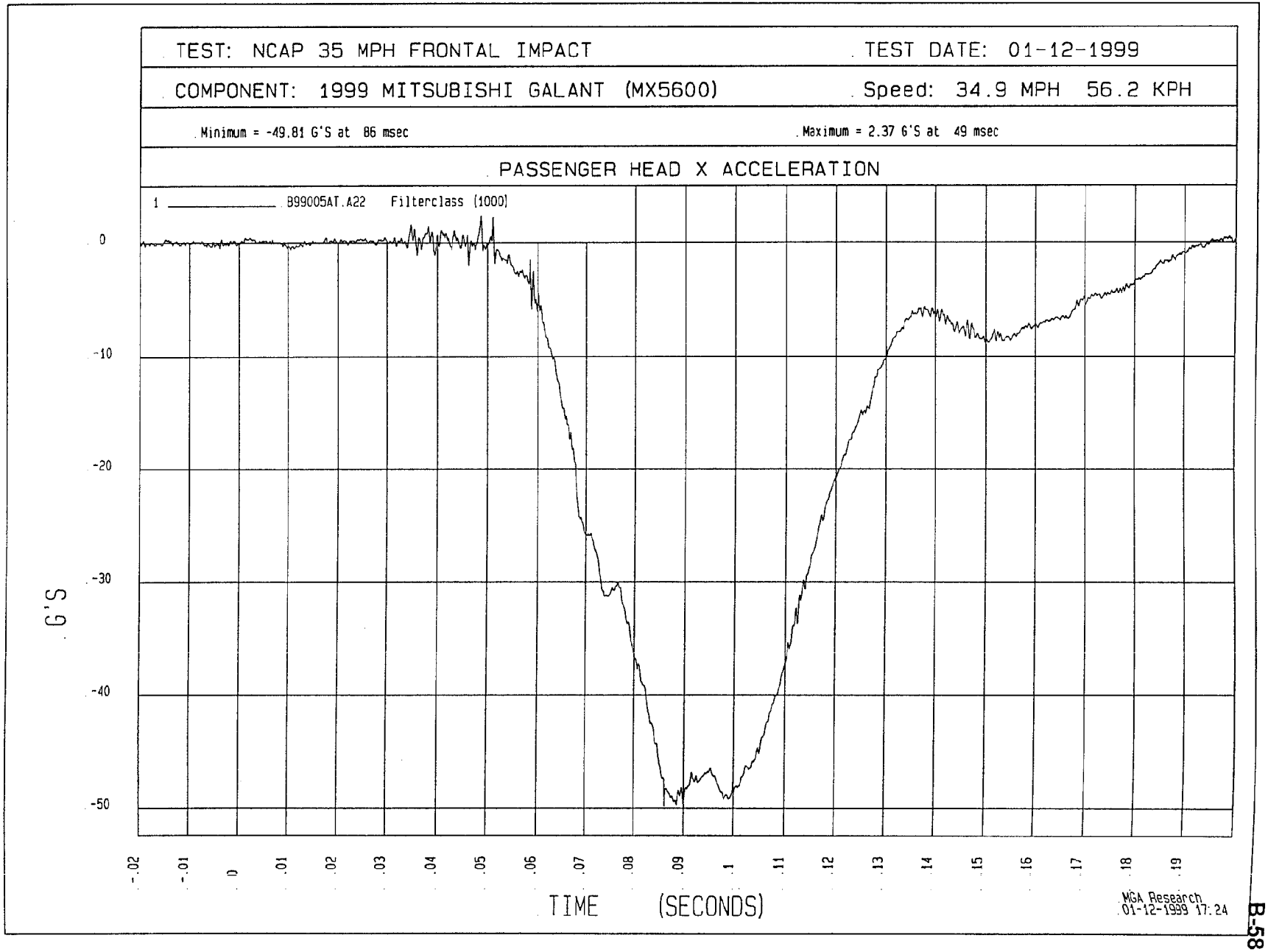

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -255.55 G'S at 54 msec
Maximum = 32.53 G'S at 67 msec
DRIVER RIGHT FOOT BALL Z ACCELERATION
1 C99005AF.A01 Filterclass (180)
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
-220
-240
-260
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
01-26-1999 20:26

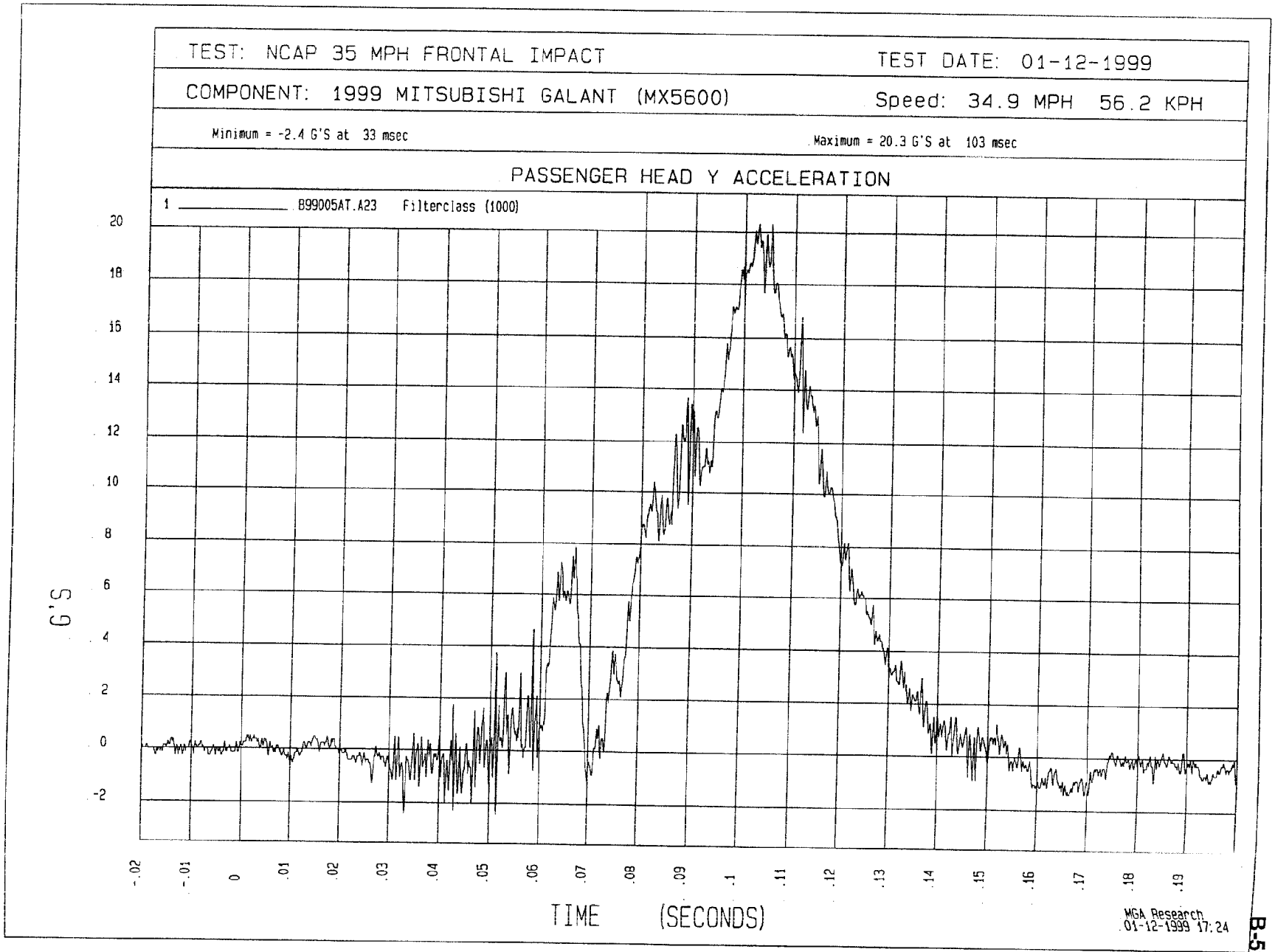

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -179.42 G'S at 53 msec
Maximum = 25.98 G'S at 108 msec
DRIVER RIGHT HEEL X ACCELERATION
1 C99005AF.A02 Filterclass (180)
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
G'S
-.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
01-26-1999 20:26

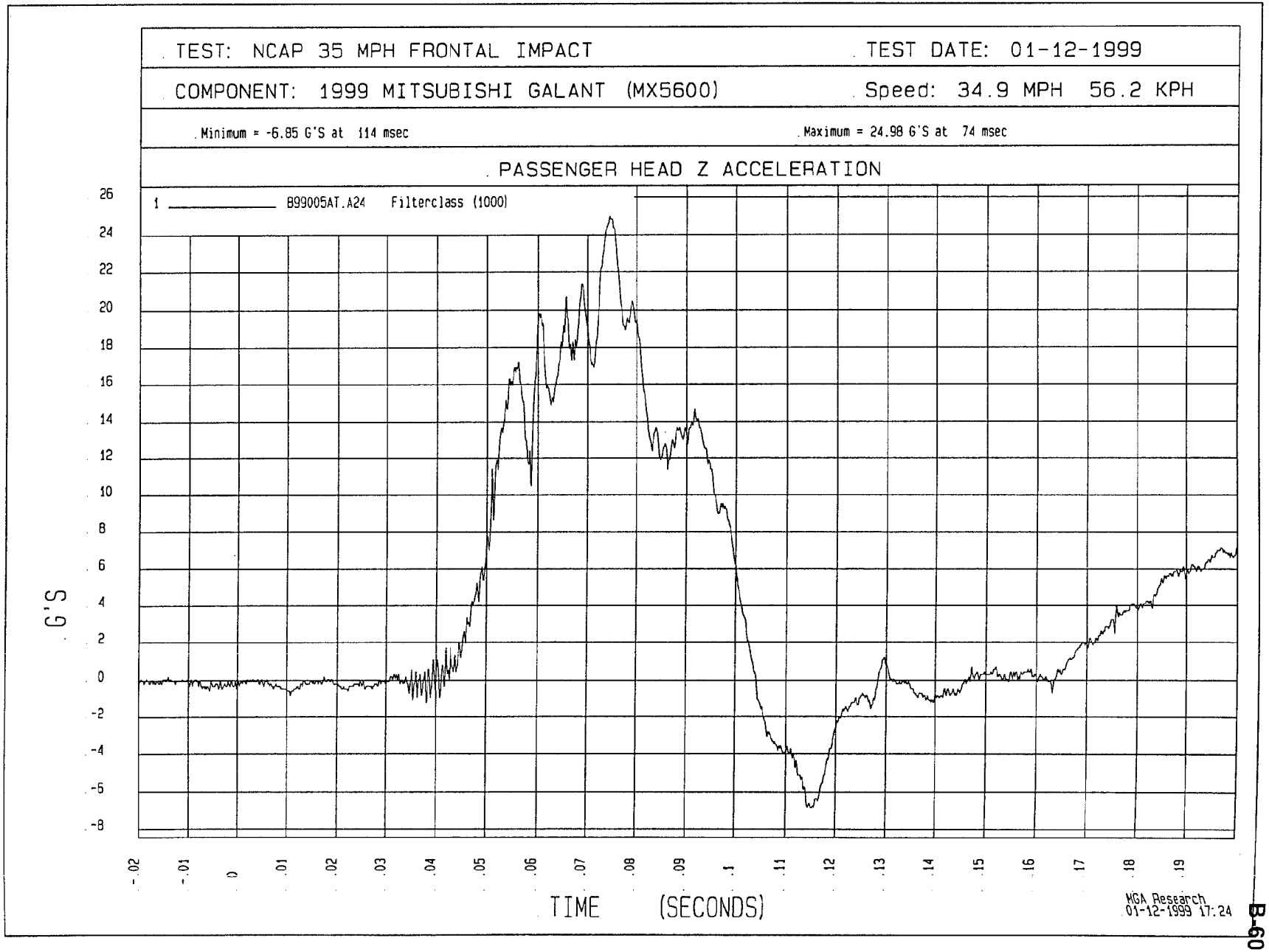

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -282.14 G'S at 53 msec
Maximum = 13.57 G'S at 59 msec
DRIVER RIGHT HEEL Z ACCELERATION
1 C99005AF.A03 Filterclass (180)
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
-220
-240
-260
-280
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
01-26-1999 20:26

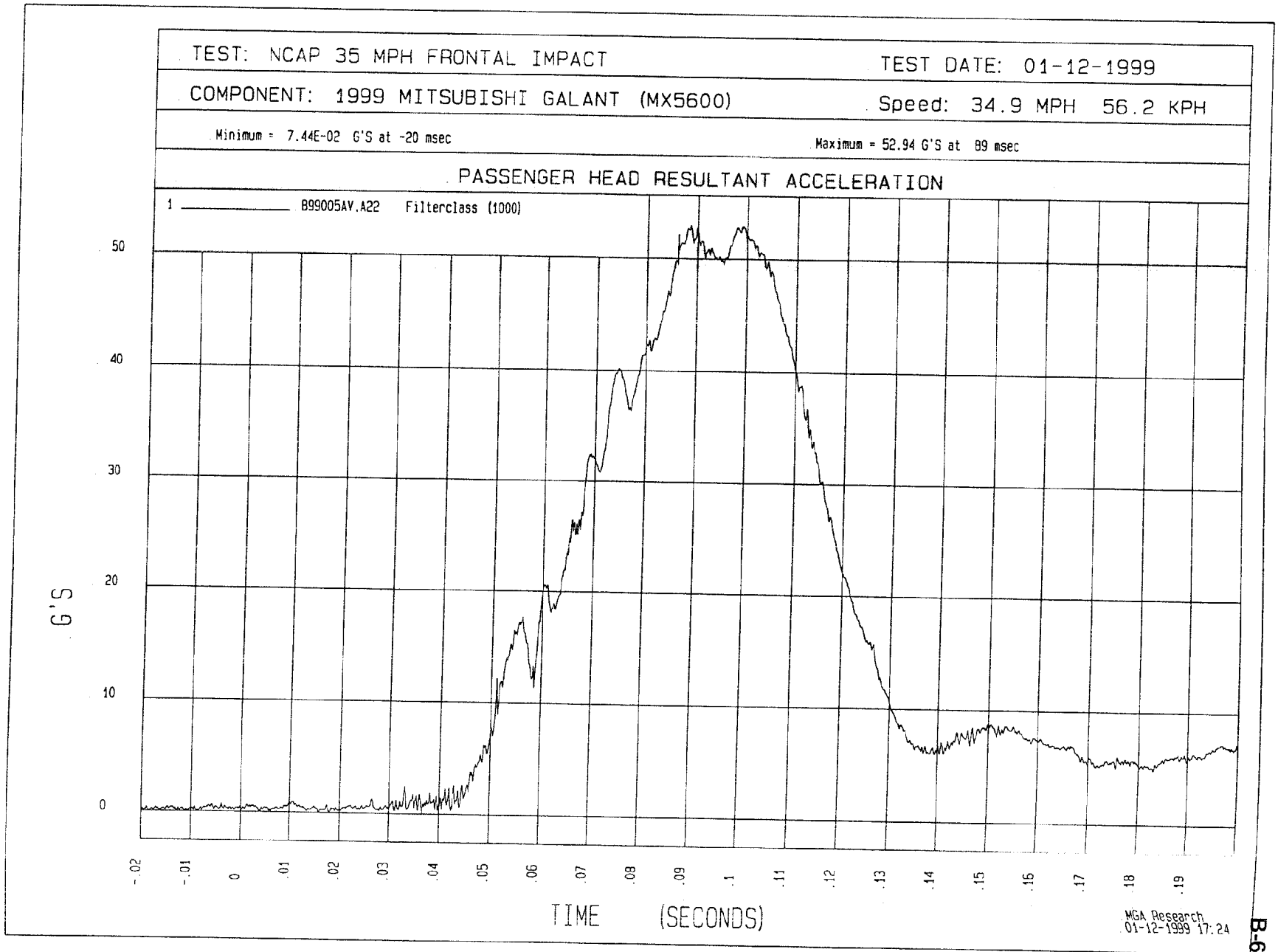

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -17.96 N at 150 msec
Maximum = 4030.51 N at 88 msec
DRIVER SHOULDER BELT FORCE
1 B99005FF.F60 Filterclass (60)
4000
3000
2000
1000
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:23

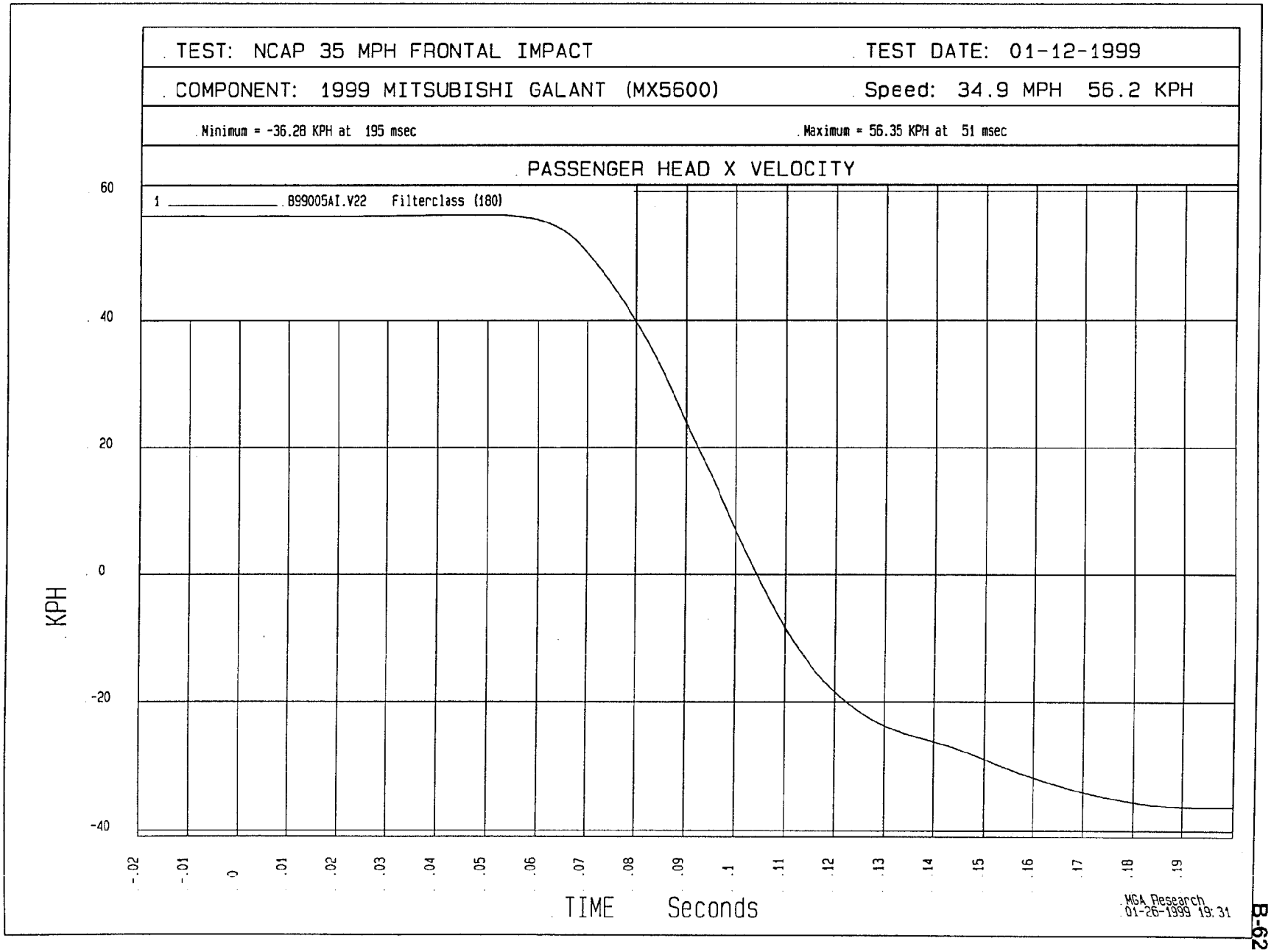

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -156.56 N at 193 msec
Maximum = 7059.84 N at 68 msec
DRIVER LAP BELT FORCE
1 B99005FF.F61 Filterclass (60)
7000
6000
5000
4000
3000
2000
1000
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:35

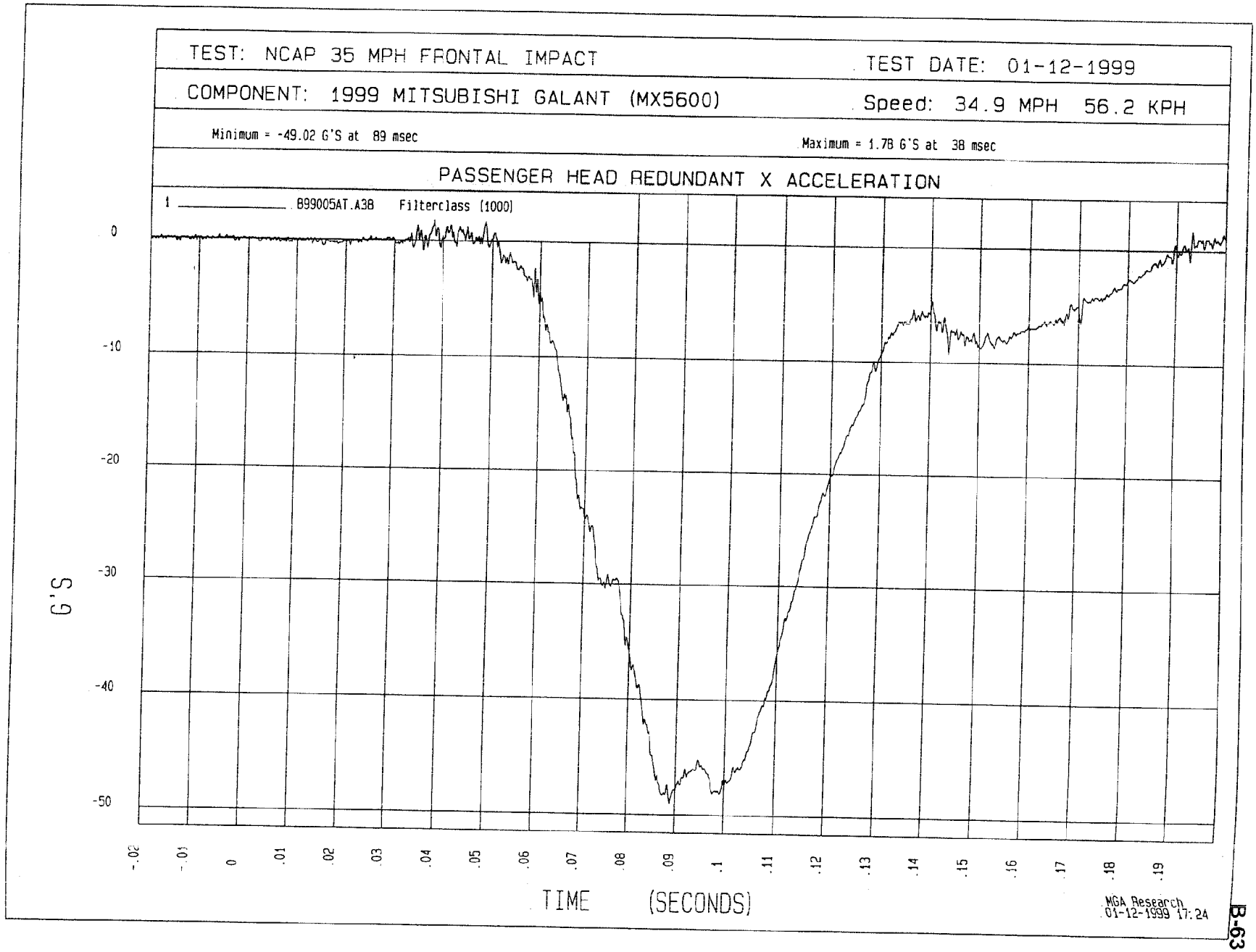

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -49.81 G'S at 86 msec
Maximum = 2.37 G'S at 49 msec
PASSENGER HEAD X ACCELERATION
1 B99005AT.A22 Filterclass (1000)
0
-10
-20
-30
-40
-50
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:24

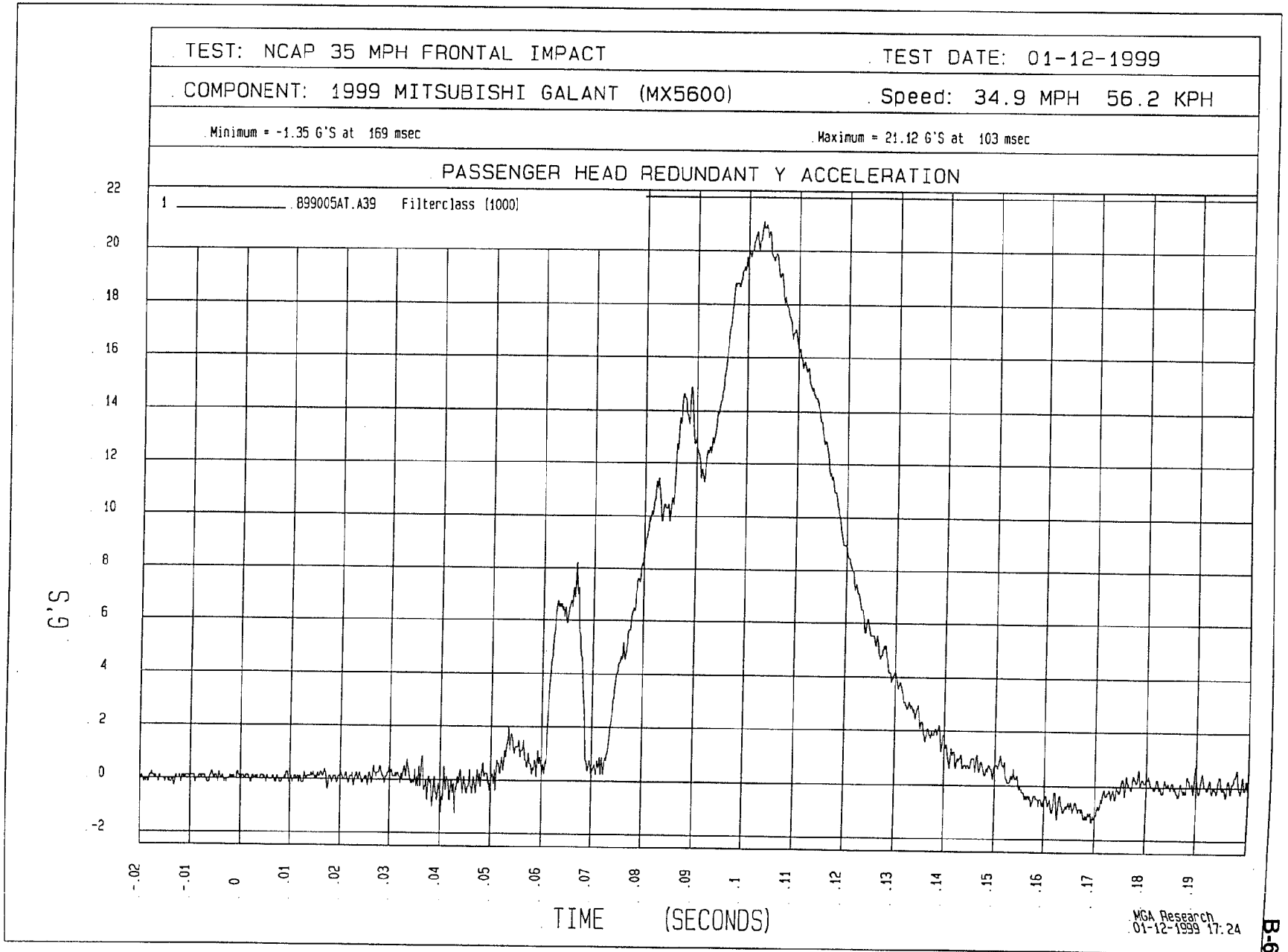

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -2.4 G'S at 33 msec
Maximum = 20.3 G'S at 103 msec
PASSENGER HEAD Y ACCELERATION
1 B99005AT.A23 Filterclass (1000)
G'S
20
18
16
14
12
10
8
6
4
2
0
-2
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:24

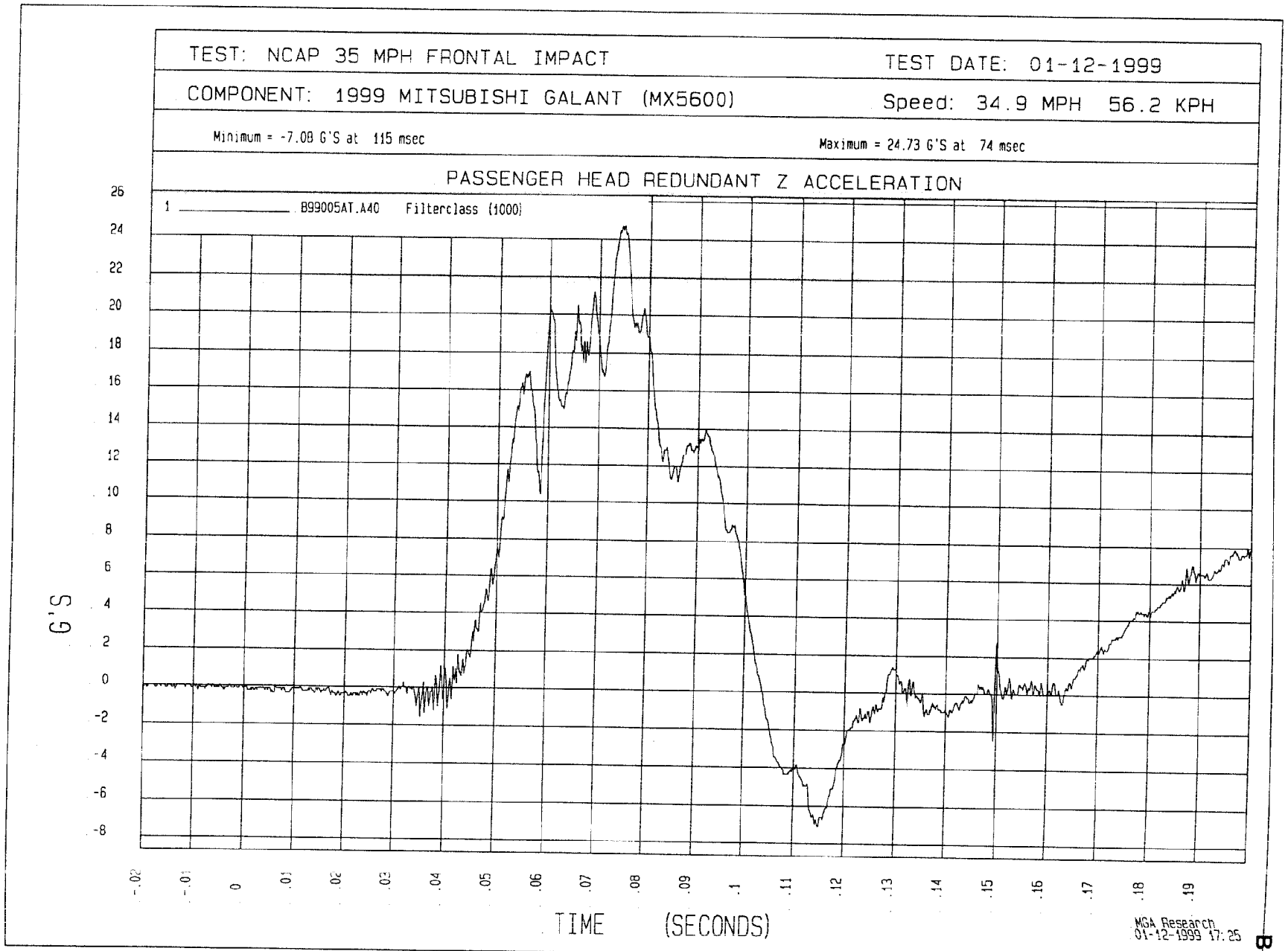

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -6.85 G'S at 114 msec
Maximum = 24.98 G'S at 74 msec
PASSENGER HEAD Z ACCELERATION
1 B99005AT.A24 Filterclass (1000)
G'S
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
NGA Research
01-12-1999 17:24

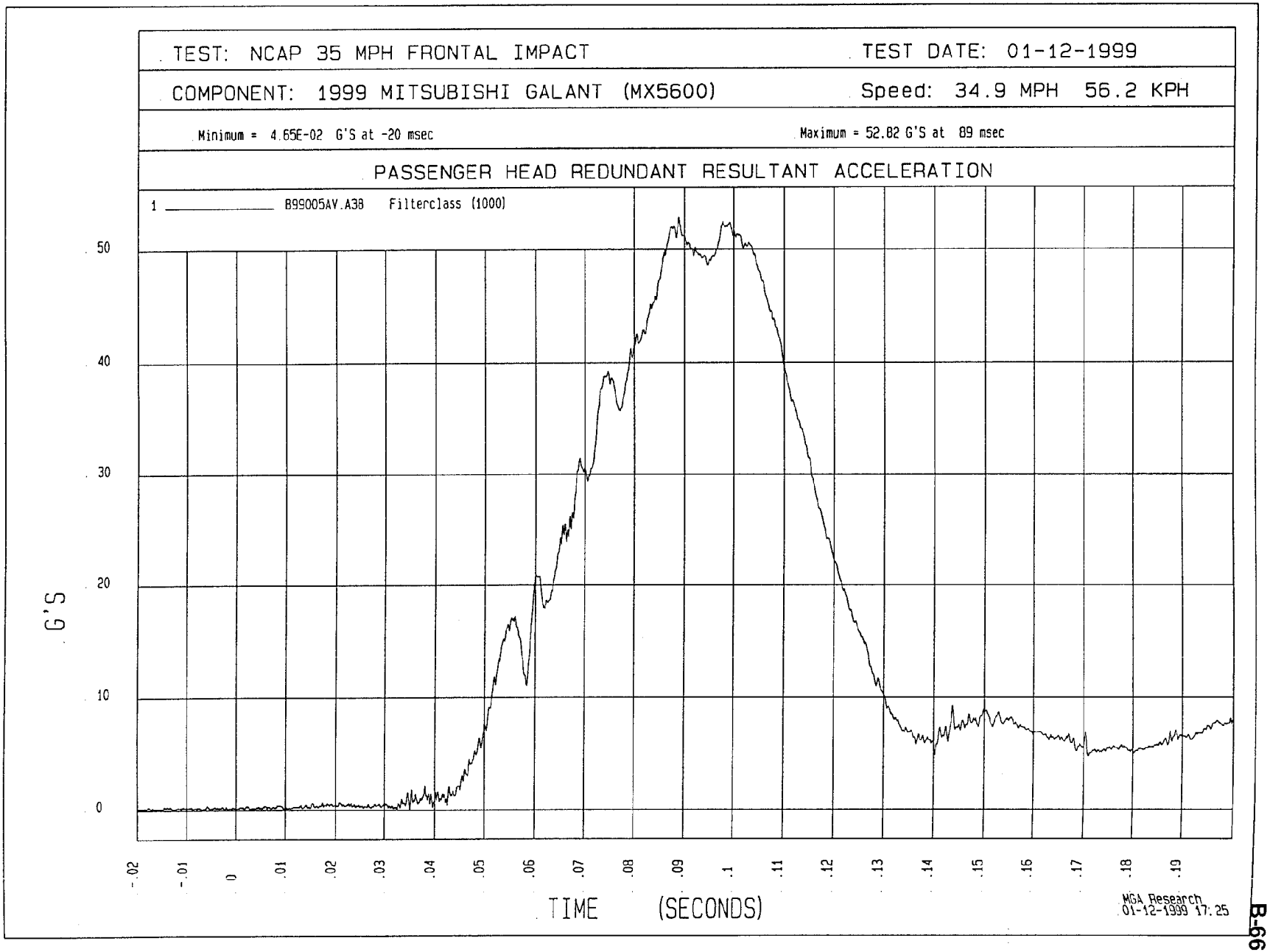

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 7.44E-02 G'S at -20 msec
Maximum = 52.94 G'S at 89 msec
PASSENGER HEAD RESULTANT ACCELERATION
1 B99005AV.A22 Filterclass (1000)
G'S
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:24

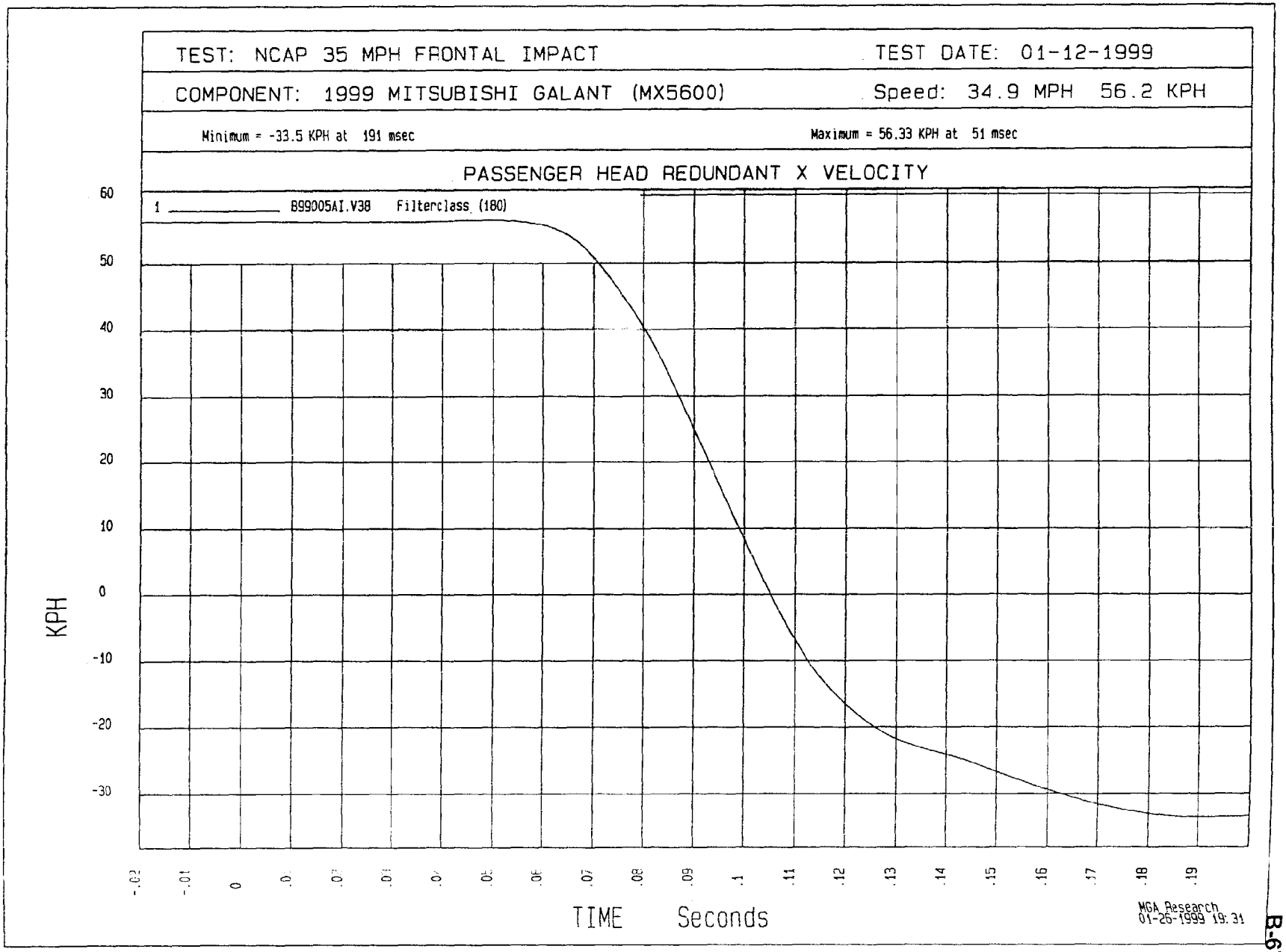

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -36.28 KPH at 195 msec
Maximum = 56.35 KPH at 51 msec
PASSENGER HEAD X VELOCITY
1 B99005AI.V22 Filterclass (180)
60
40
20
0
-20
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 19:31

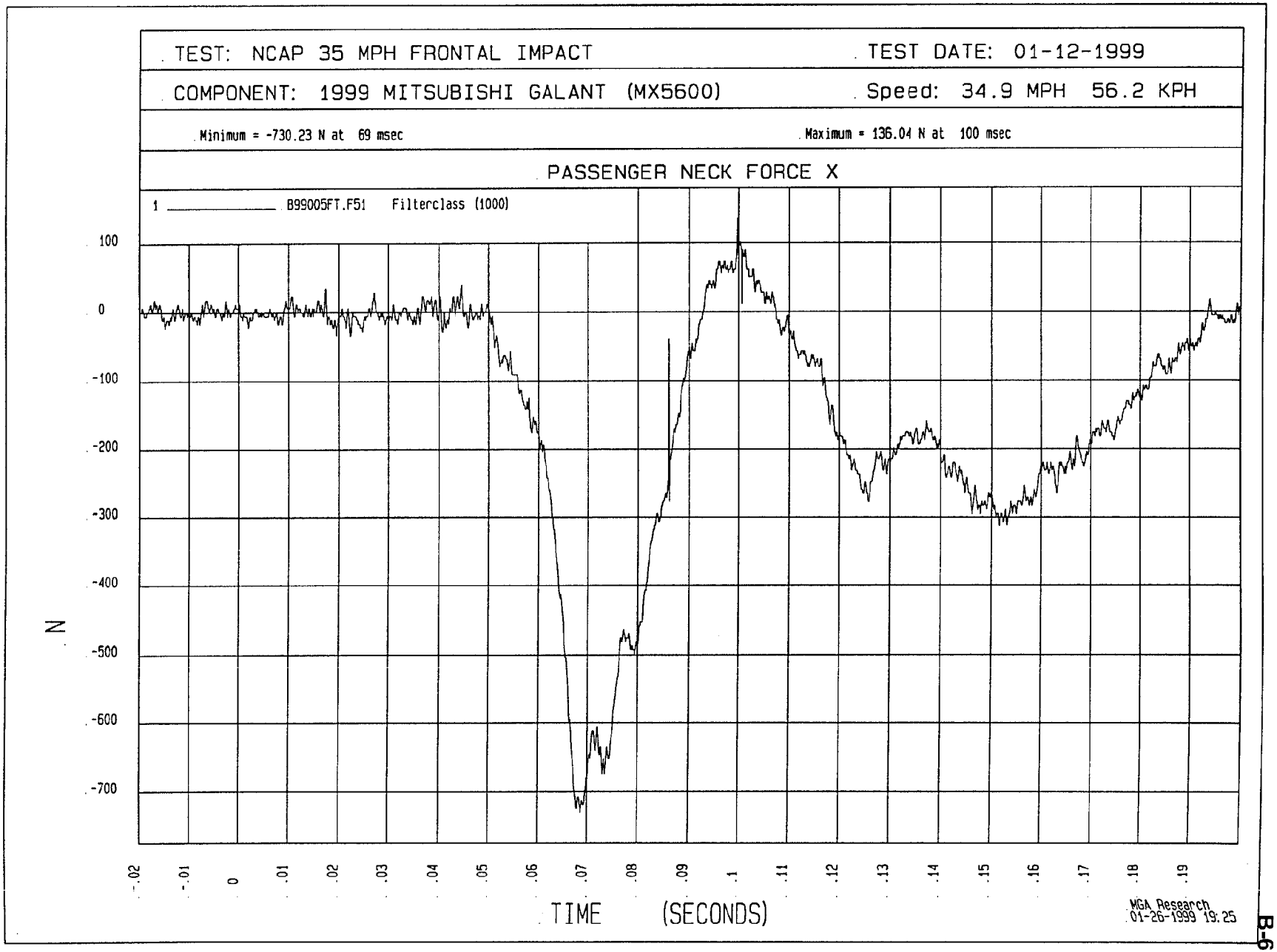

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -49.02 G'S at 89 msec
Maximum = 1.78 G'S at 38 msec
PASSENGER HEAD REDUNDANT X ACCELERATION
1 B99005AT.A3B Filterclass (1000)
0
-10
-20
-30
-40
-50
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:24

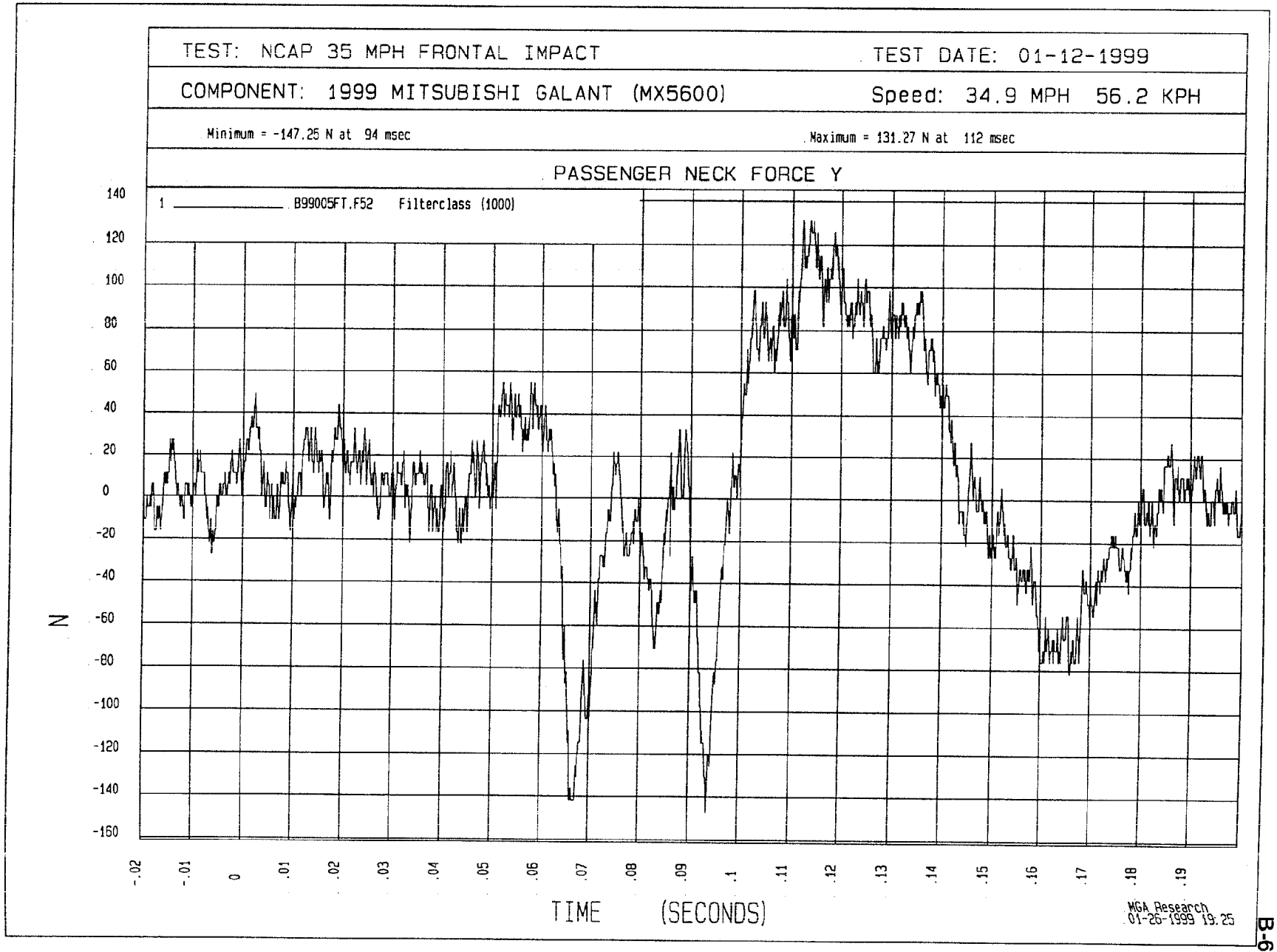

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -1.35 G'S at 169 msec
Maximum = 21.12 G'S at 103 msec
PASSENGER HEAD REDUNDANT Y ACCELERATION
1 B99005AT.A39 Filterclass (1000)
G'S
22
20
18
16
14
12
10
8
6
4
2
0
-2
-.02
-.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
01-12-1999 17:24

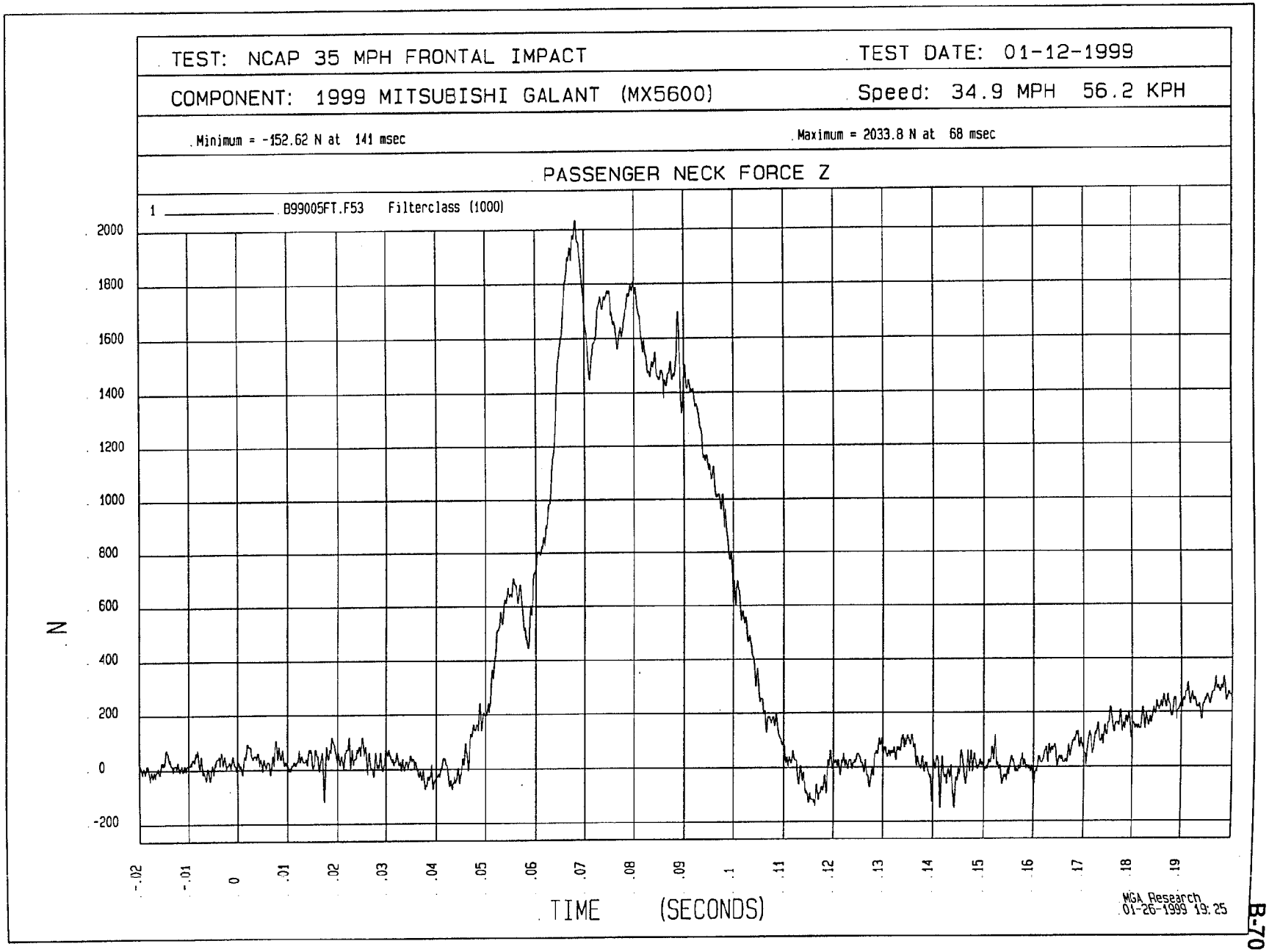

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -7.08 G'S at 115 msec
Maximum = 24.73 G'S at 74 msec
PASSENGER HEAD REDUNDANT Z ACCELERATION
1 B99005AT.A40 Filterclass (1000)
G'S
TIME (SECONDS)
MGA Research
01-12-1999 17:25

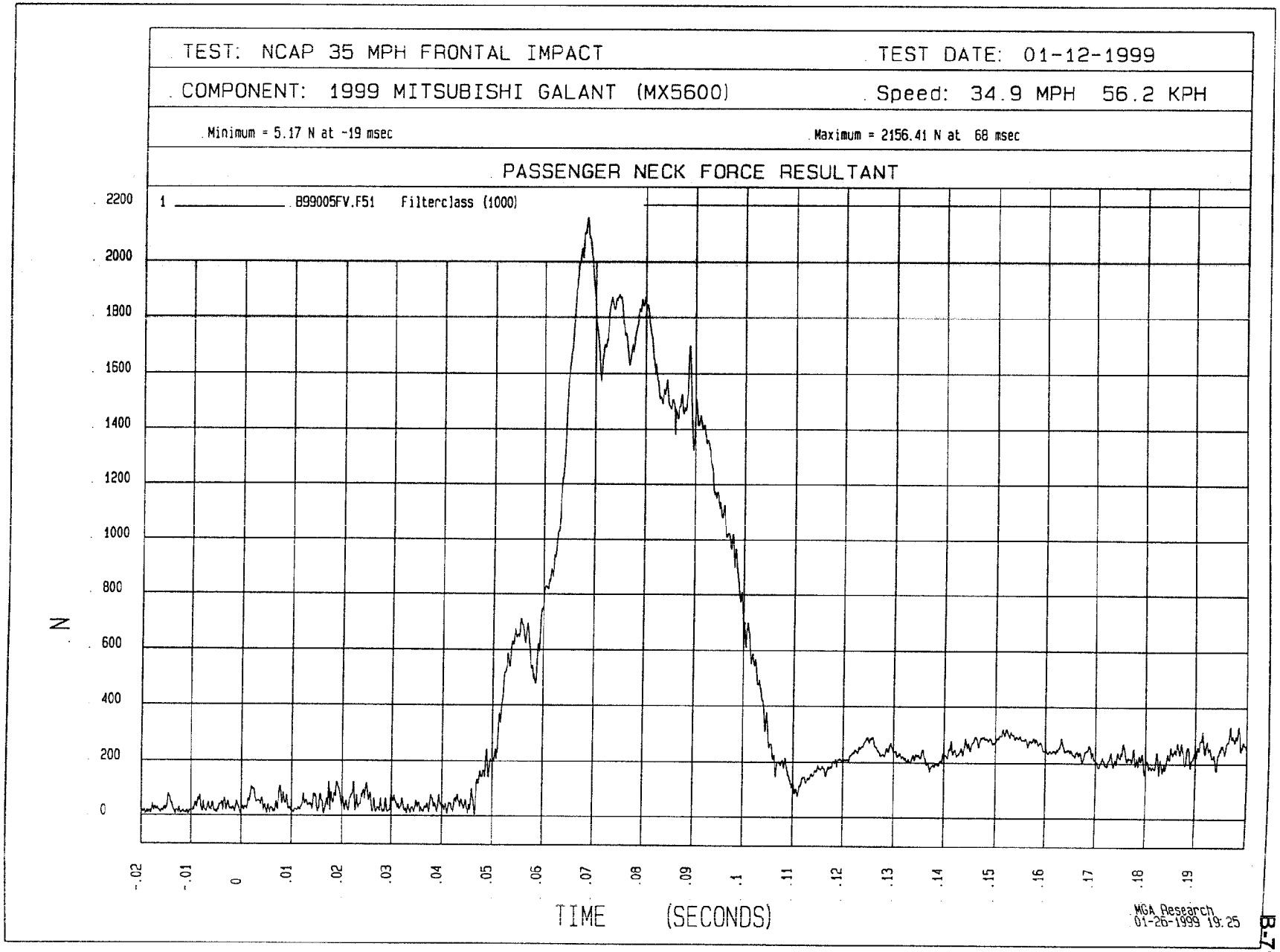

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 4.65E-02 G'S at -20 msec
Maximum = 52.82 G'S at 89 msec
PASSENGER HEAD REDUNDANT RESULTANT ACCELERATION
1 B99005AV.A38 Filterclass (1000)
G'S
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:25

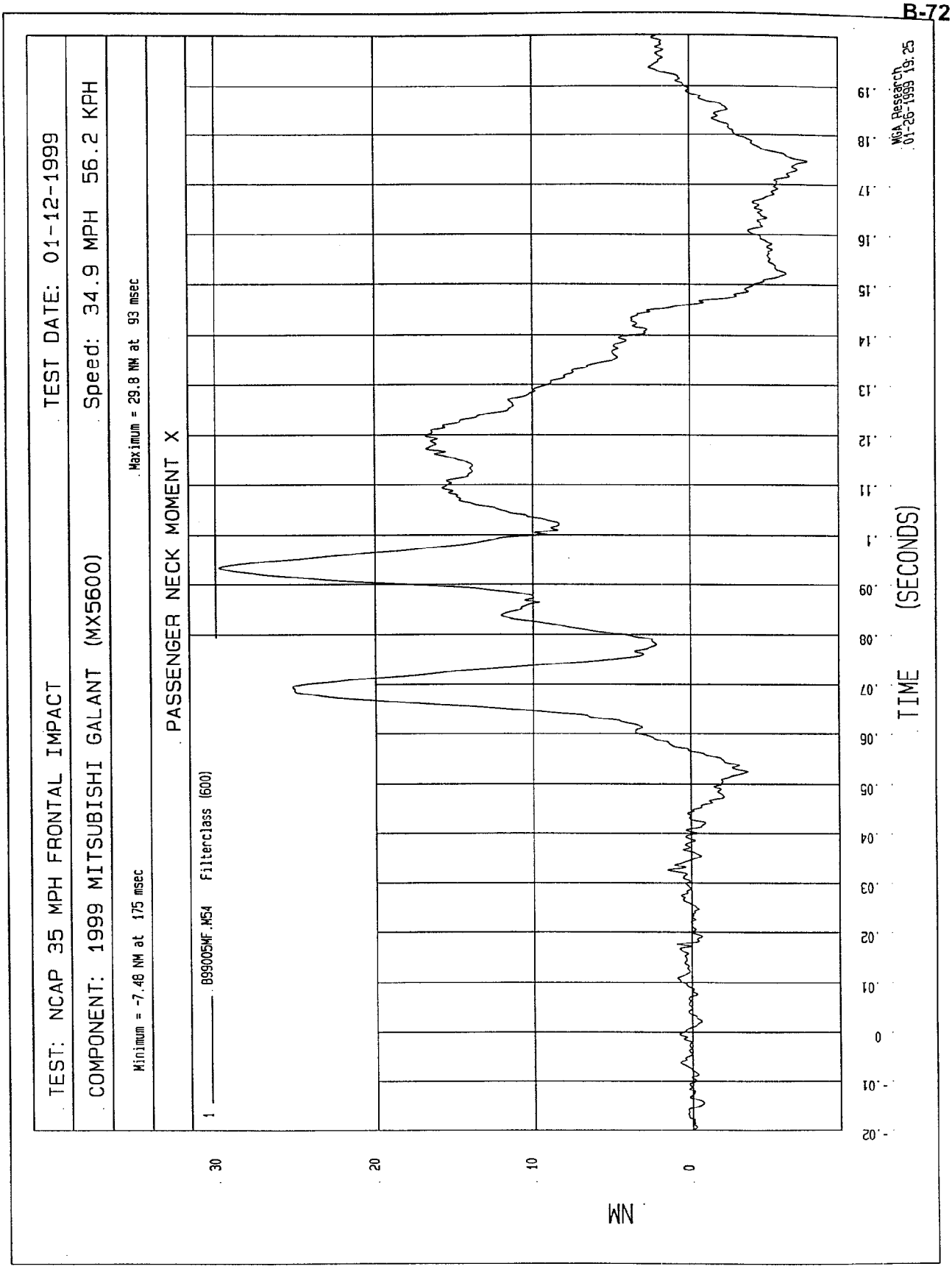

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -33.5 KPH at 191 msec
Maximum = 56.33 KPH at 51 msec
PASSENGER HEAD REDUNDANT X VELOCITY
1 B99005AI.V38 Filterclass (180)
KPH
60
50
40
30
20
10
0
-10
-20
-30
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 19:31

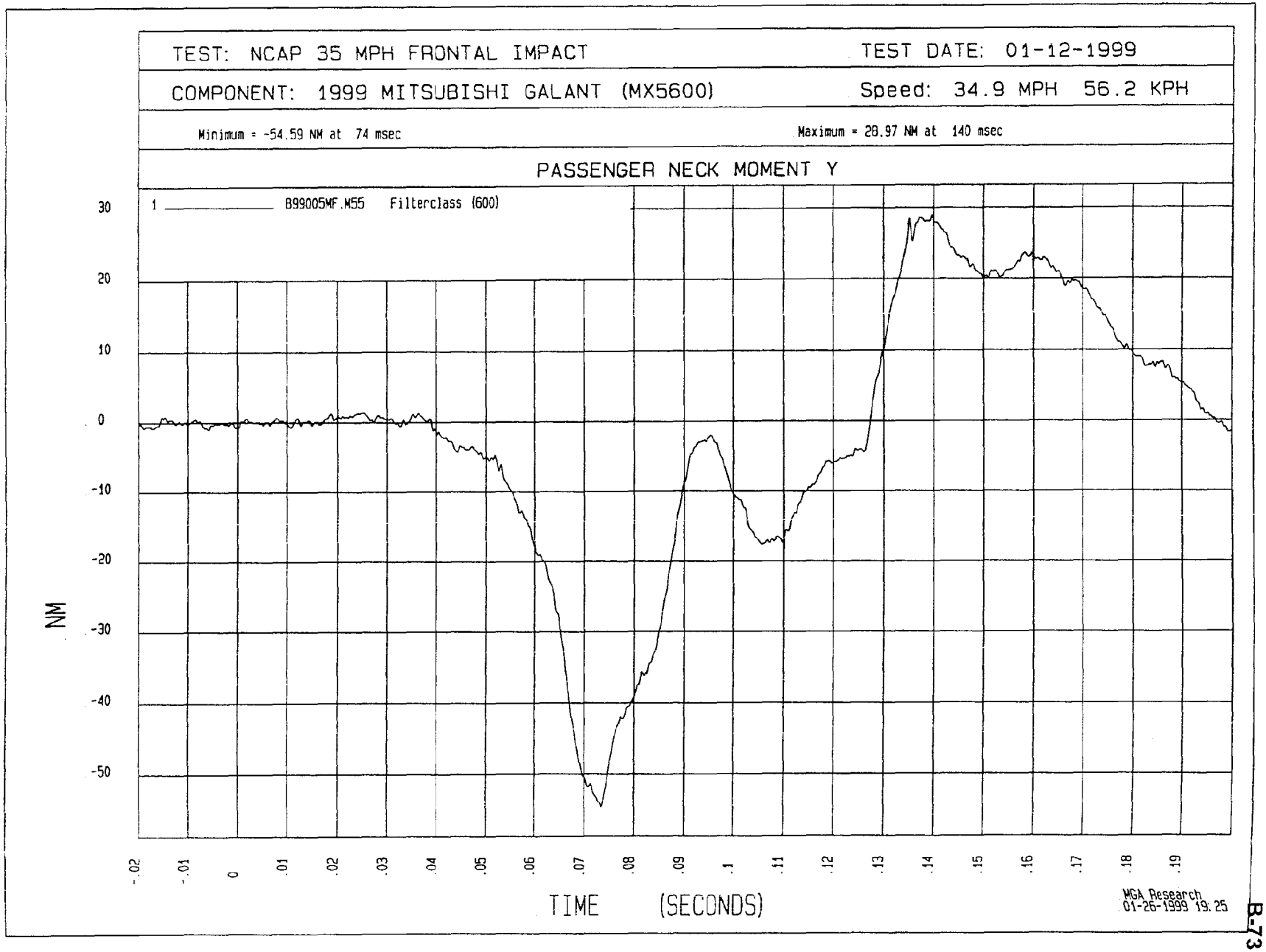

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -730.23 N at 69 msec
Maximum = 136.04 N at 100 msec
PASSENGER NECK FORCE X
1 B99005FT.F51 Filterclass (1000)
100
0
-100
-200
-300
-400
-500
-600
-700
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 19:25

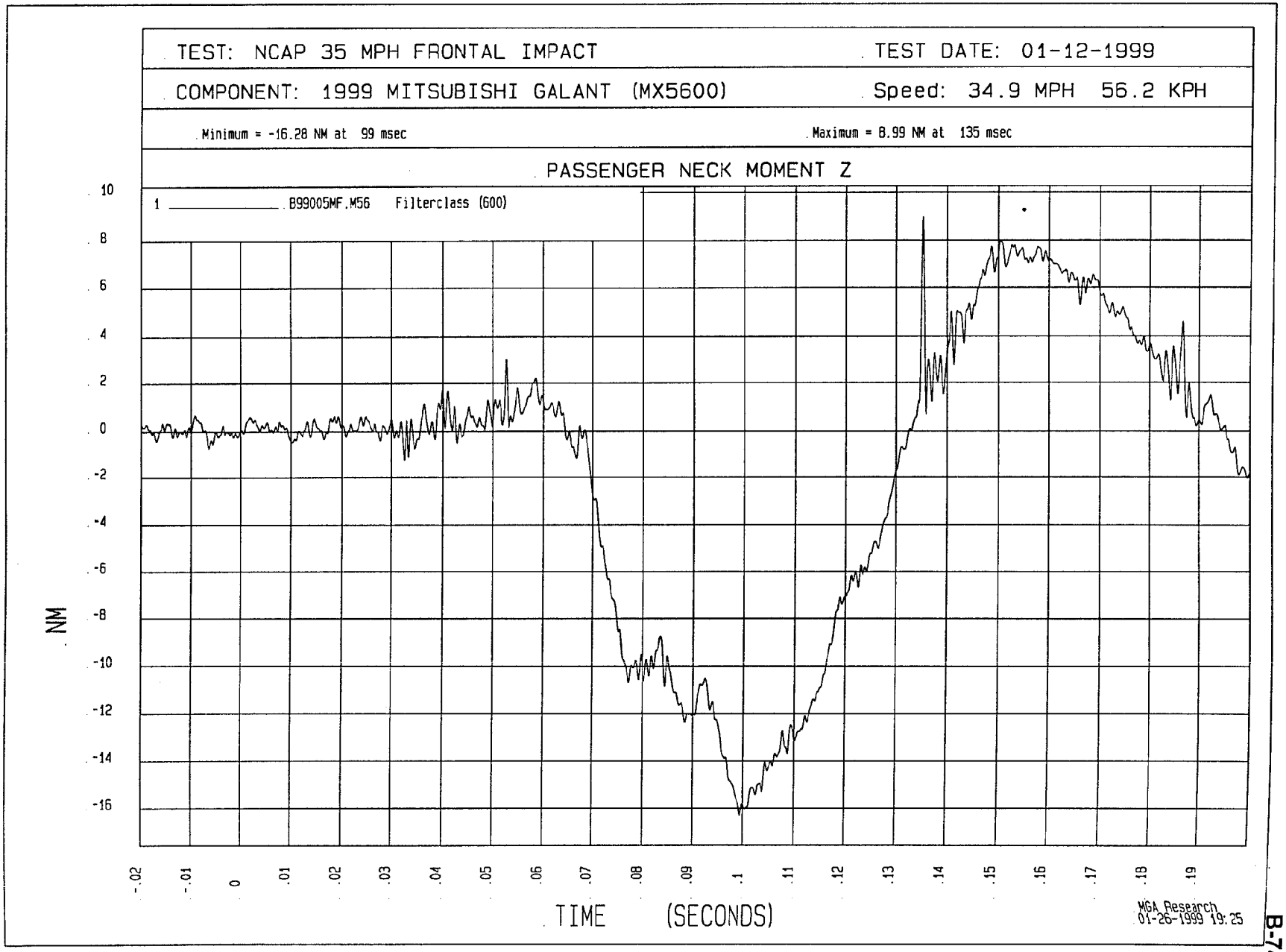

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -147.25 N at 94 msec
Maximum = 131.27 N at 112 msec
PASSENGER NECK FORCE Y
1 B99005FT.F52 Filterclass (1000)
N
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-.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
01-26-1999 19:25

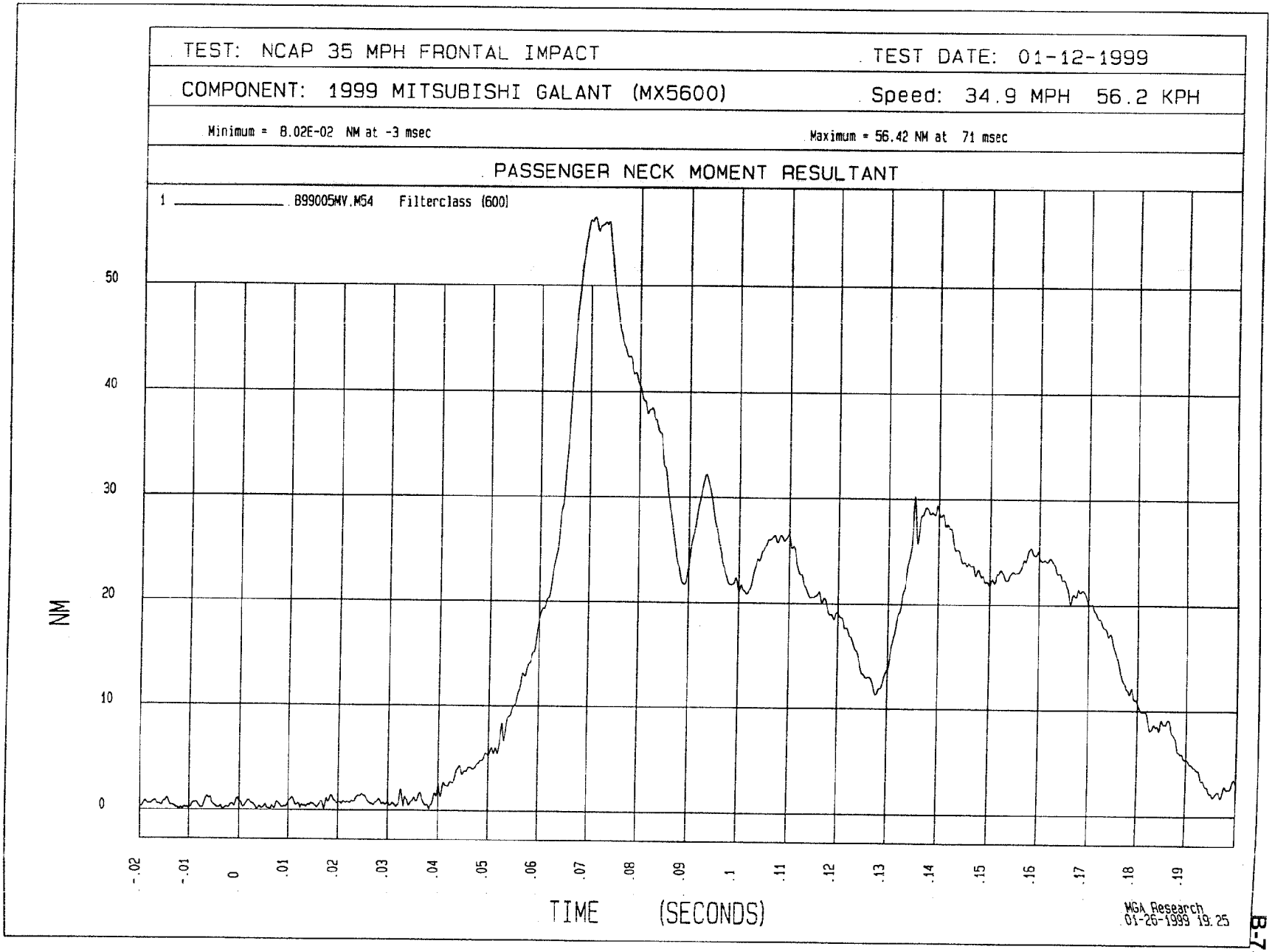

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -152.62 N at 141 msec
Maximum = 2033.8 N at 68 msec
PASSENGER NECK FORCE Z
1 B99005FT.F53 Filterclass (1000)
N
2000
1800
1600
1400
1200
1000
800
600
400
200
0
-200
-.02
-.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
01-26-1999 19:25

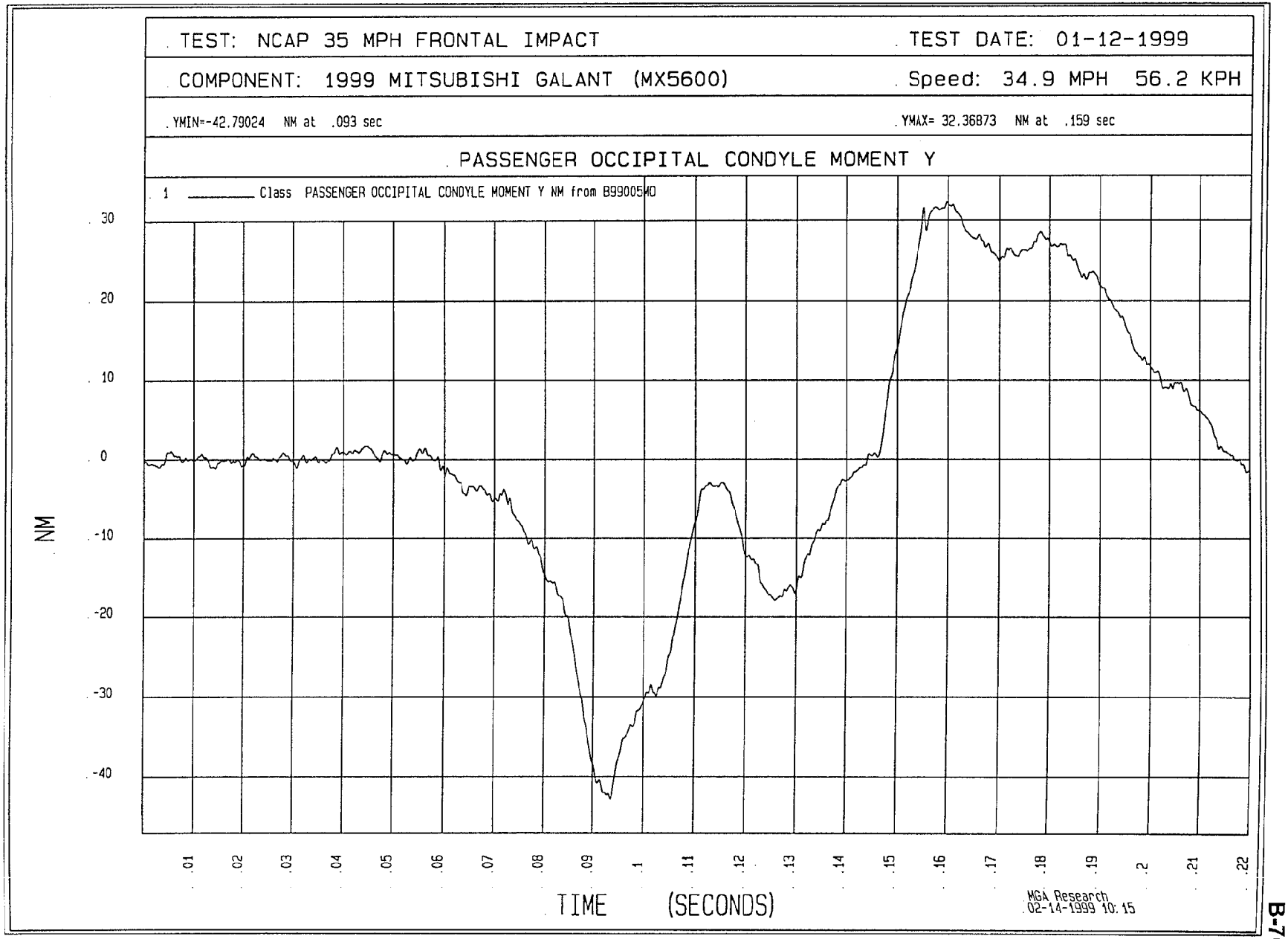

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 5.17 N at -19 msec
Maximum = 2156.41 N at 68 msec
PASSENGER NECK FORCE RESULTANT
1 B99005FV.F51 Filterclass (1000)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
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
01-26-1999 19:25

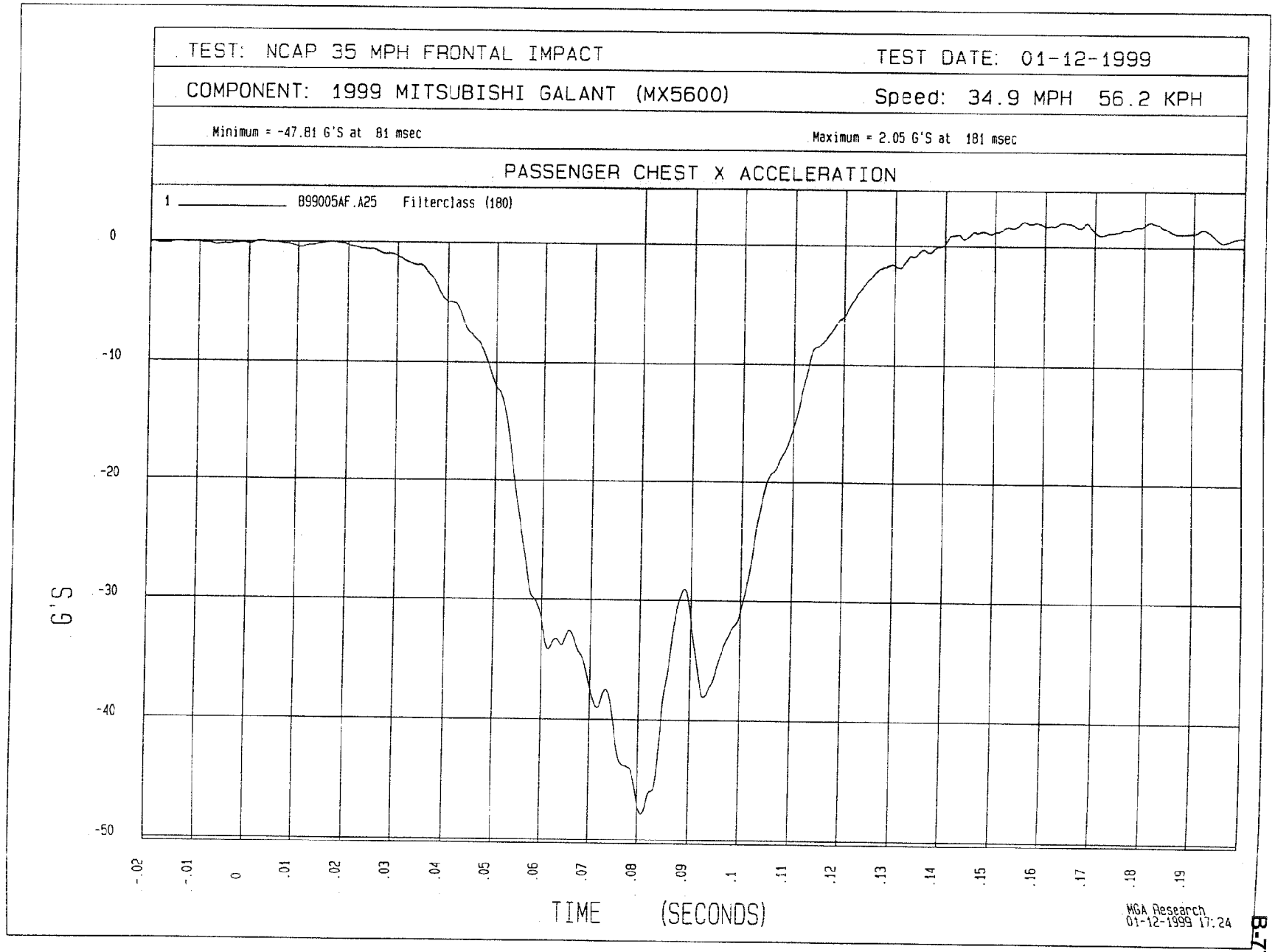

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -7.48 NM at 175 msec
Maximum = 29.8 NM at 93 msec
PASSENGER NECK MOMENT X
1 B99005MF.M54 Filterclass (600)
NM
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 13:25

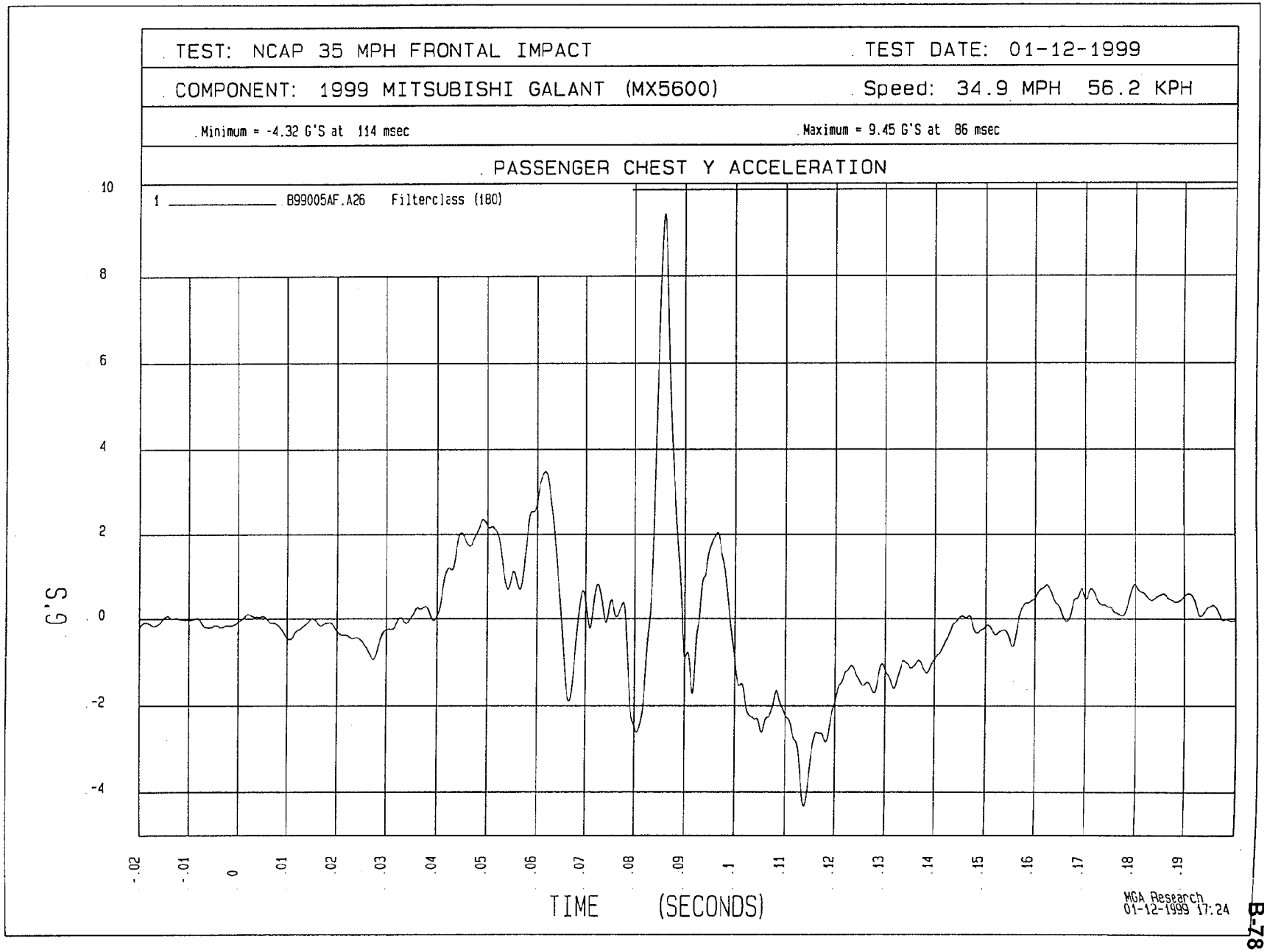

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -54.59 NM at 74 msec
Maximum = 28.97 NM at 140 msec
PASSENGER NECK MOMENT Y
1 B99005MF.M55 Filterclass (600)
30
20
10
0
-10
-20
-30
-40
-50
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -16.28 NM at 99 msec
Maximum = 8.99 NM at 135 msec
PASSENGER NECK MOMENT Z
1 B99005MF.M56 Filterclass (600)
NM
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-.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
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 8.02E-02 NM at -3 msec
Maximum = 56.42 NM at 71 msec
PASSENGER NECK MOMENT RESULTANT
1 B99005MV.M54 Filterclass (600)
NM
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
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
YMIN=-42.79024 NM at .093 sec
YMAX= 32.36873 NM at .159 sec
PASSENGER OCCIPITAL CONDYLE MOMENT Y
1 Class PASSENGER OCCIPITAL CONDYLE MOMENT Y NM from B99005MO
NM
30
20
10
0
-10
-20
-30
-40
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
.2
.21
.22
TIME (SECONDS)
MGA Research
02-14-1999 10:15


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -47.81 G'S at 81 msec
Maximum = 2.05 G'S at 181 msec
PASSENGER CHEST X ACCELERATION
1 B99005AF.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
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -4.32 G'S at 114 msec
Maximum = 9.45 G'S at 86 msec
PASSENGER CHEST Y ACCELERATION
1 B99005AF.A26 Filterclass (180)
10
8
6
4
2
0
-2
-4
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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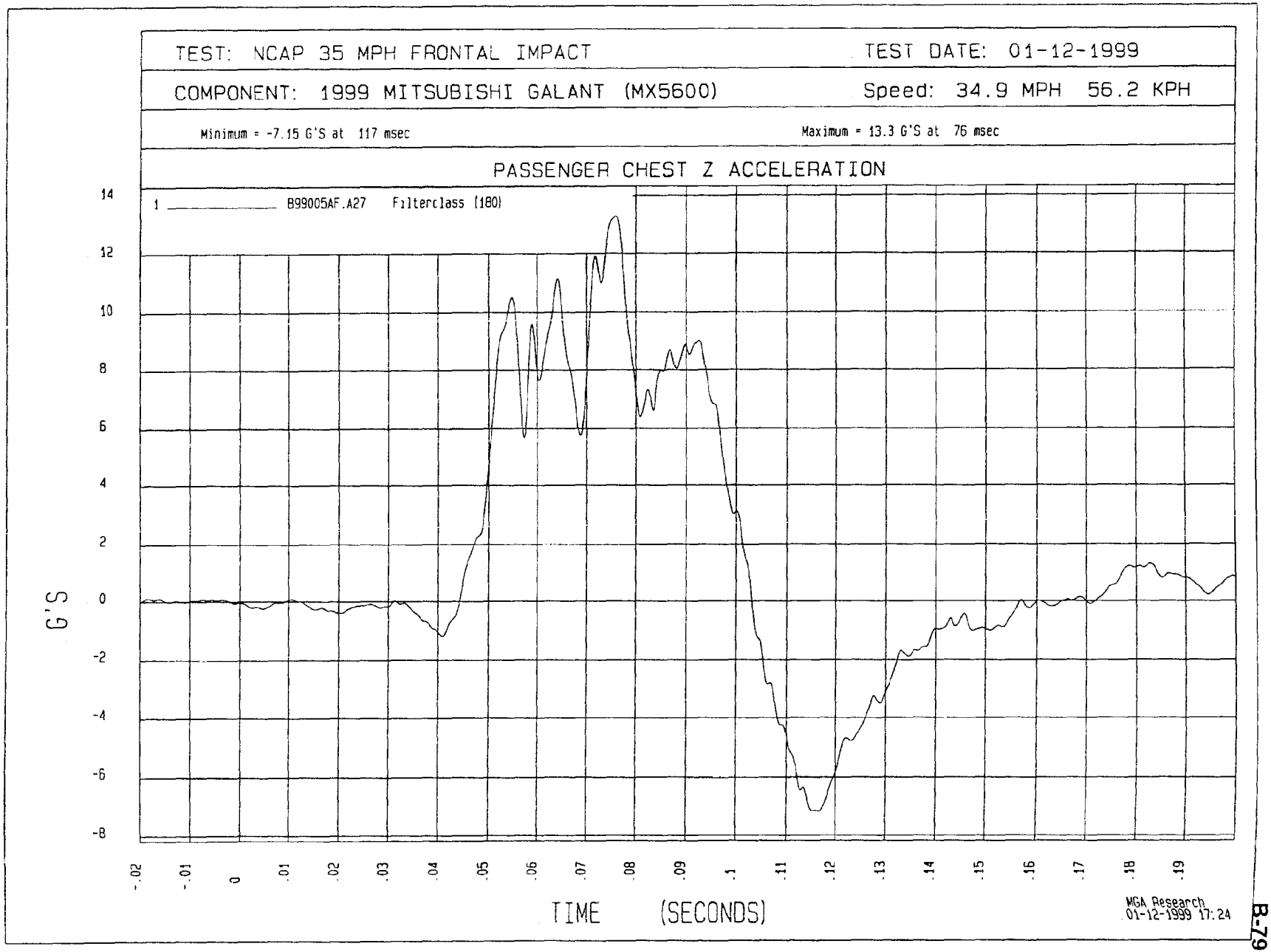
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -7.15 G'S at 117 msec
Maximum = 13.3 G'S at 76 msec
PASSENGER CHEST Z ACCELERATION
1 B99005AF.A27 Filterclass (180)
G'S
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-.02
-.01
0
.01
.02
.03
.04
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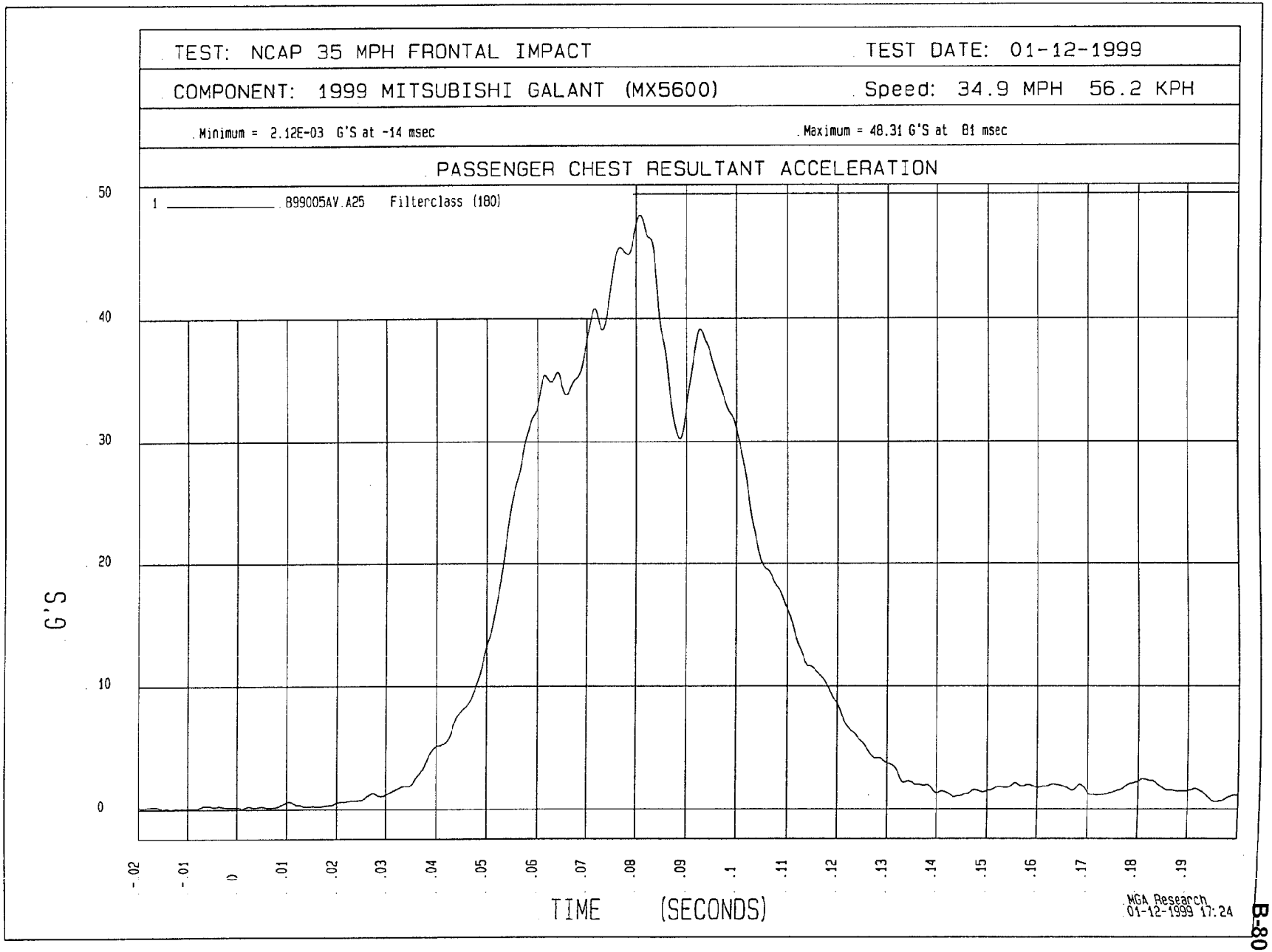
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 2.12E-03 G'S at -14 msec
Maximum = 48.31 G'S at 81 msec
PASSENGER CHEST RESULTANT ACCELERATION
1 B99005AV.A25 Filterclass (180)
G'S
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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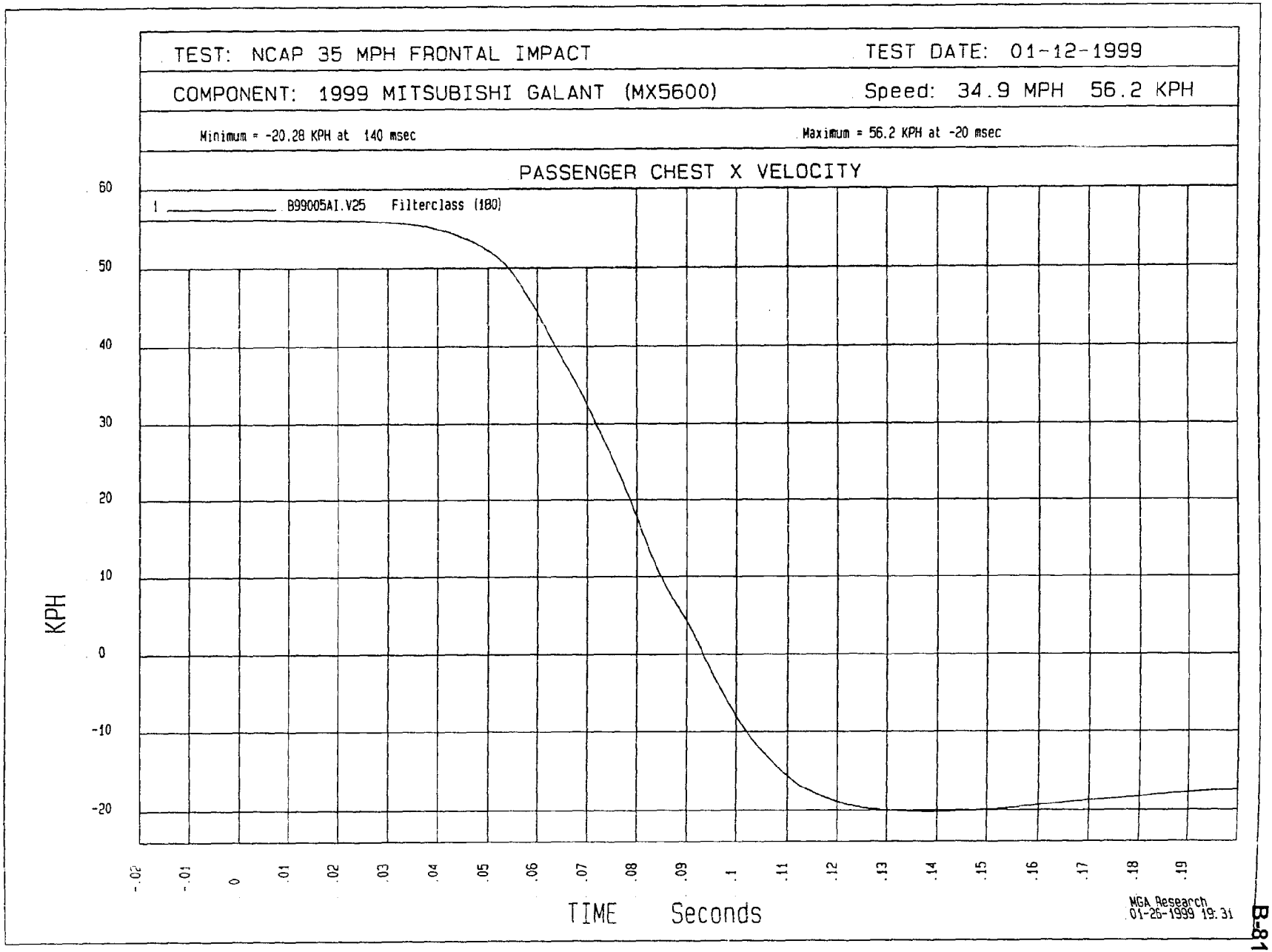
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -20.28 KPH at 140 msec
Maximum = 56.2 KPH at -20 msec
PASSENGER CHEST X VELOCITY
1 B99005AI.V25 Filterclass (180)
KPH
60
50
40
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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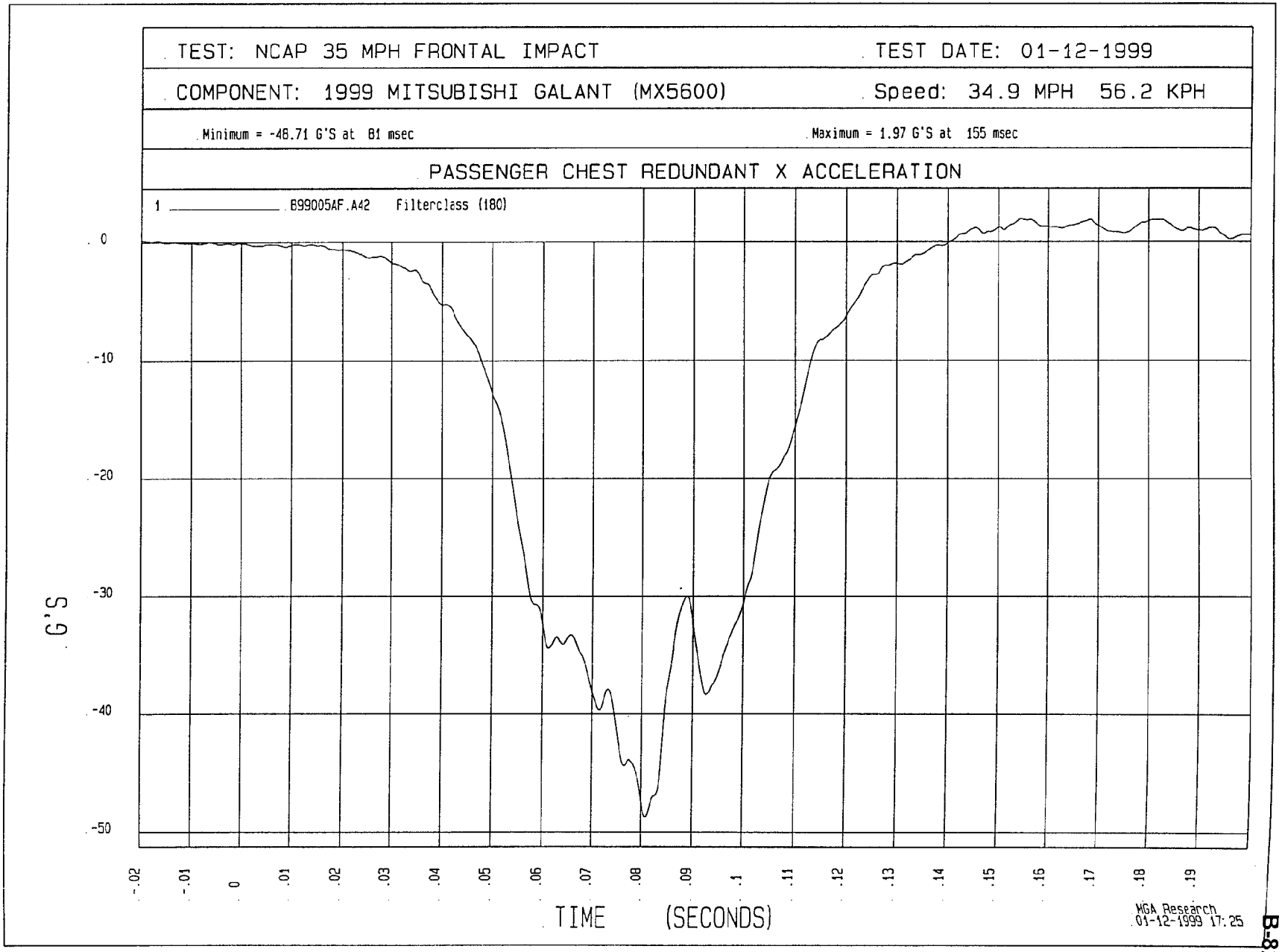
TIME Seconds
MGA Research
01-26-1999 19:31


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -48.71 G'S at 81 msec
Maximum = 1.97 G'S at 155 msec
PASSENGER CHEST REDUNDANT X ACCELERATION
1 B99005AF.A42 Filterclass (180)
0
-10
-20
-30
-40
-50
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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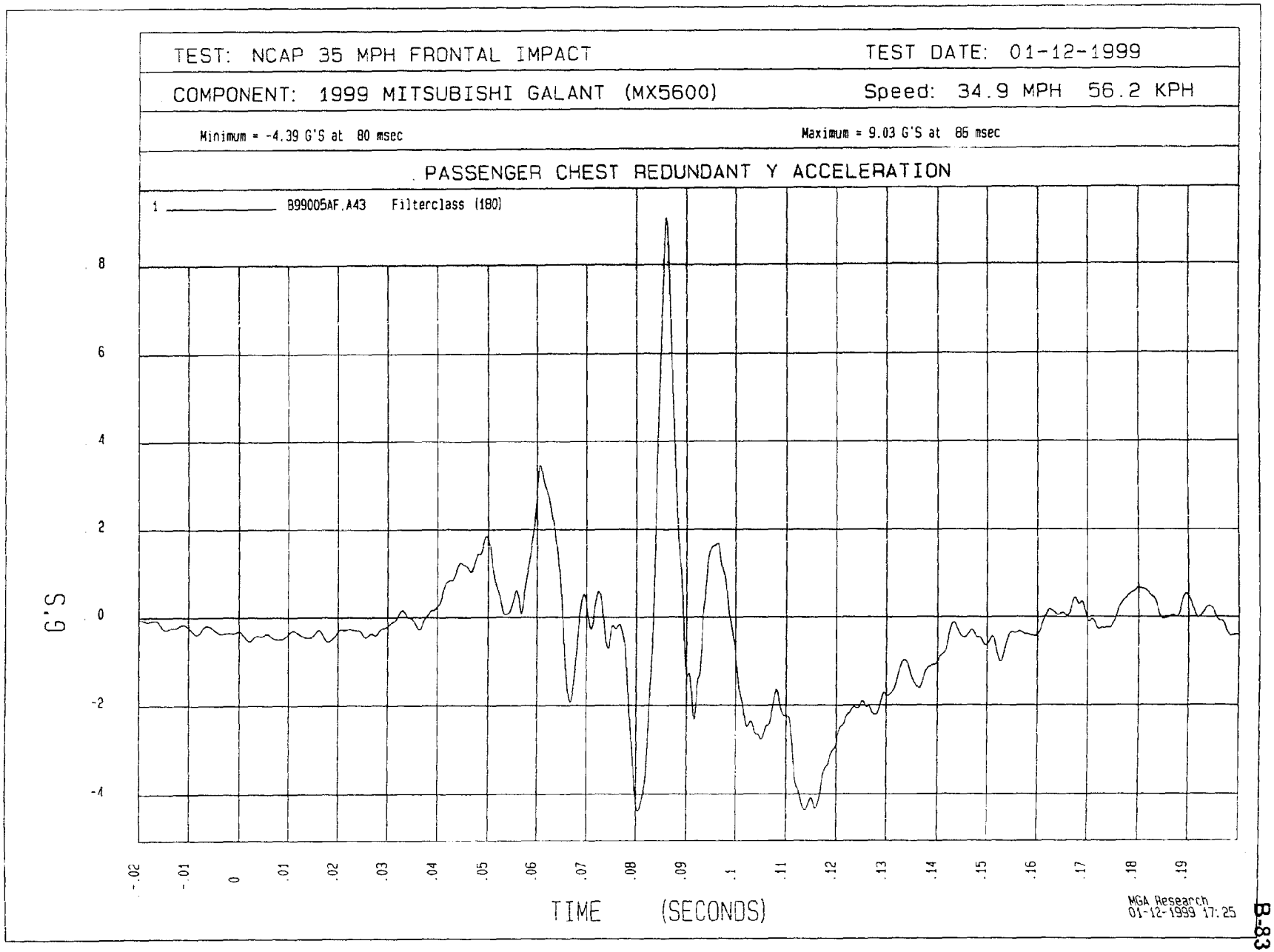
TIME (SECONDS)
MGA Research
01-12-1999 17:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -4.39 G'S at 80 msec
Maximum = 9.03 G'S at 86 msec
PASSENGER CHEST REDUNDANT Y ACCELERATION
1 B99005AF.A43 Filterclass (180)
G'S
8
6
4
2
0
-2
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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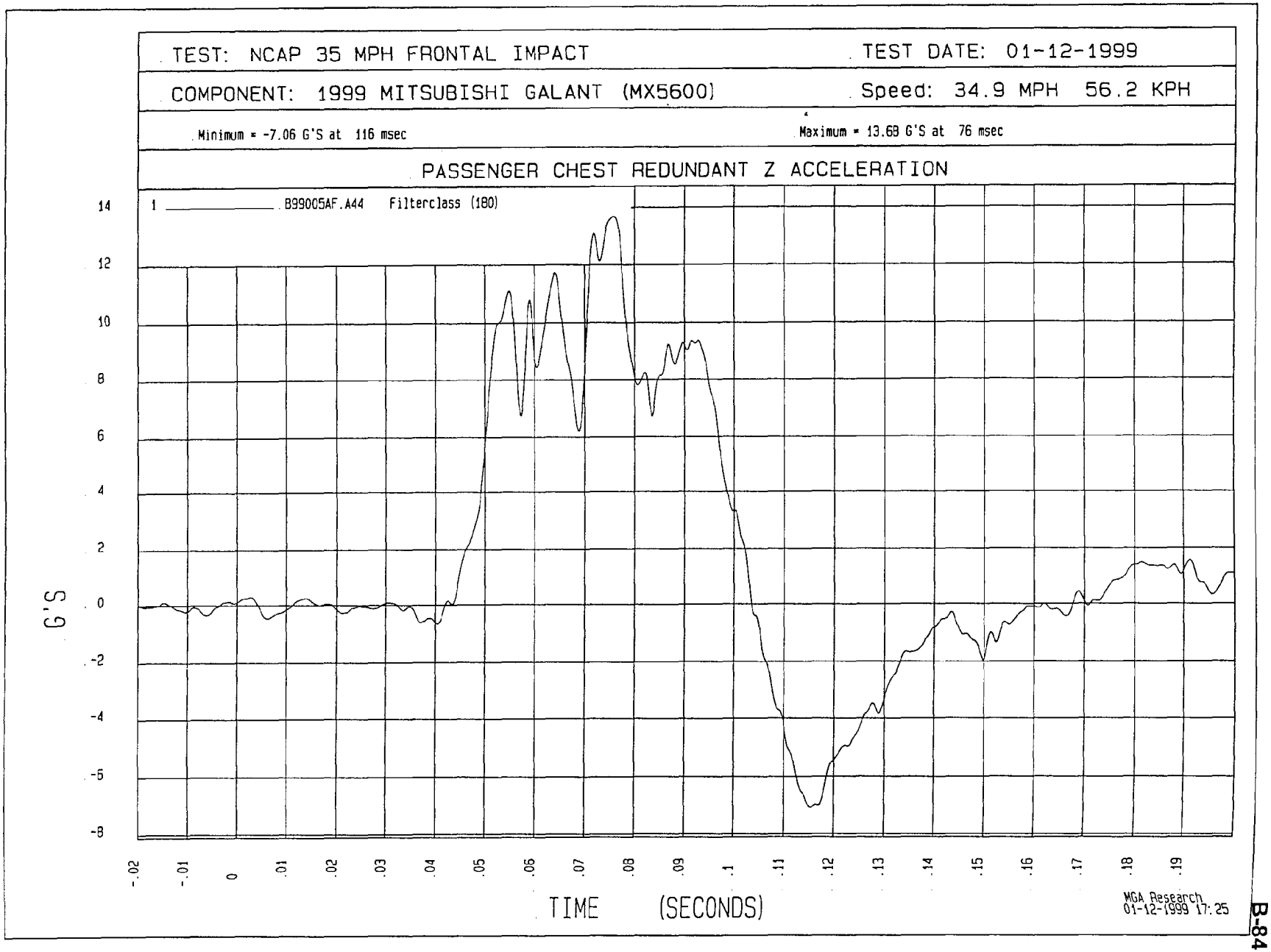
TIME (SECONDS)
MGA Research
01-12-1999 17:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -7.06 G'S at 116 msec
Maximum = 13.68 G'S at 76 msec
PASSENGER CHEST REDUNDANT Z ACCELERATION
1 B99005AF.A44 Filterclass (180)
G'S
14
12
10
8
6
4
2
0
-2
-4
-5
-8
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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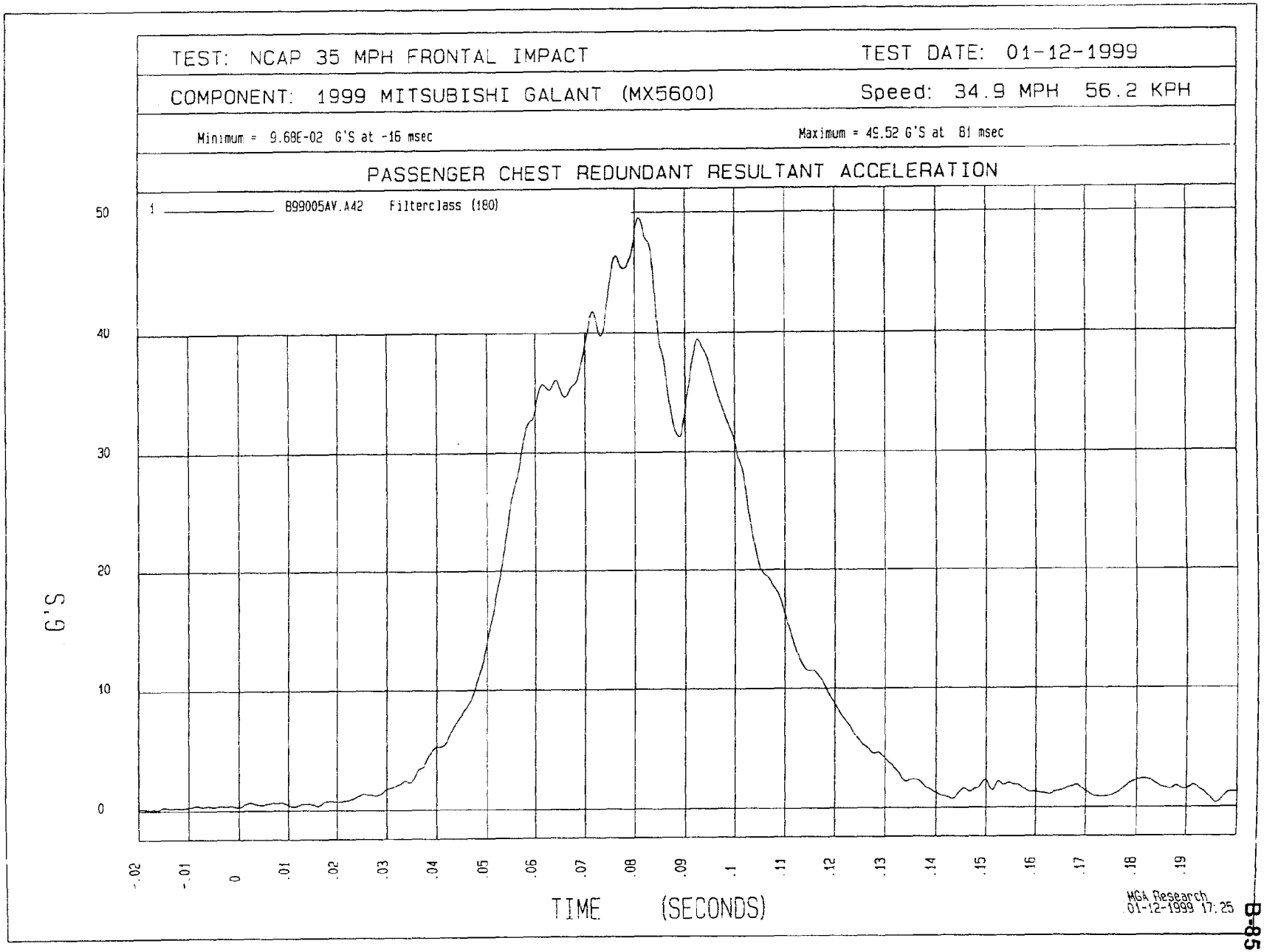
TIME (SECONDS)
MGA Research
01-12-1999 17:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 9.68E-02 G'S at -16 msec
Maximum = 49.52 G'S at 81 msec
PASSENGER CHEST REDUNDANT RESULTANT ACCELERATION
1 B99005AV.A42 Filterclass (180)
G'S
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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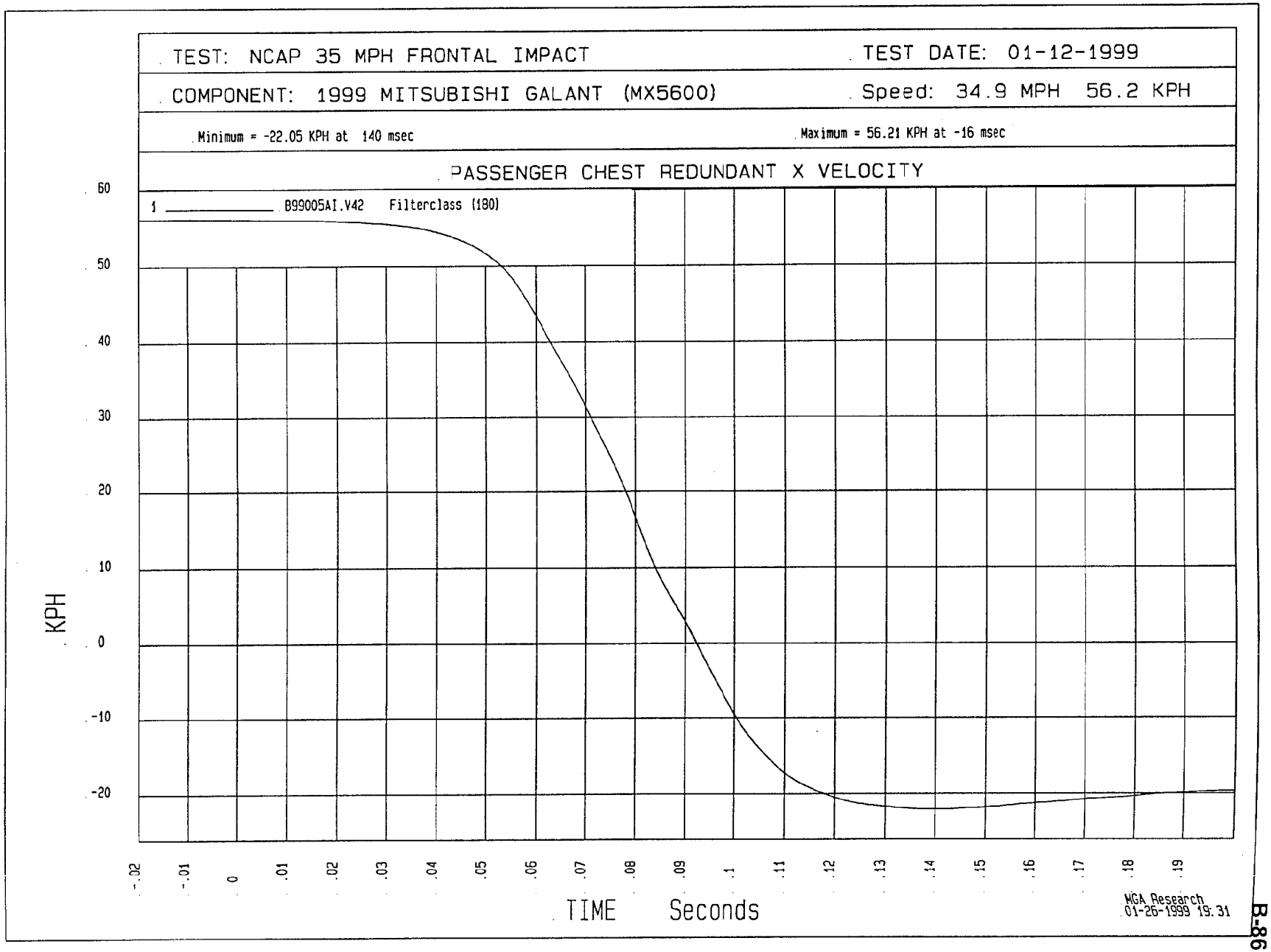
TIME (SECONDS)
MGA Research
01-12-1999 17:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -22.05 KPH at 140 msec
Maximum = 56.21 KPH at -16 msec
PASSENGER CHEST REDUNDANT X VELOCITY
1 B99005AI.V42 Filterclass (180)
KPH
60
50
40
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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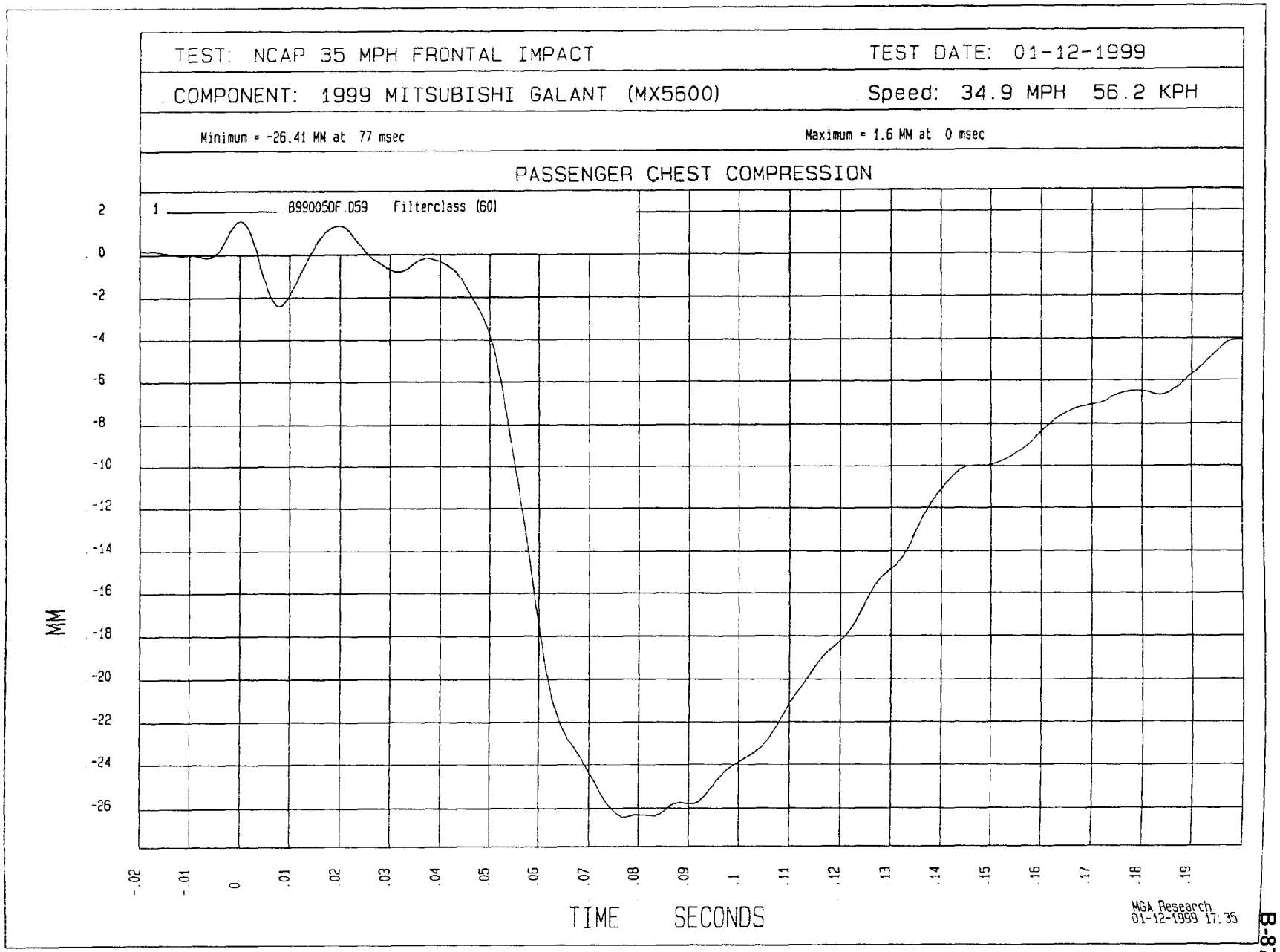
TIME Seconds
NGA Research
01-26-1999 19:31


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -26.41 MM at 77 msec
Maximum = 1.6 MM at 0 msec
PASSENGER CHEST COMPRESSION
1 B990050F.059 Filterclass (60)
MM
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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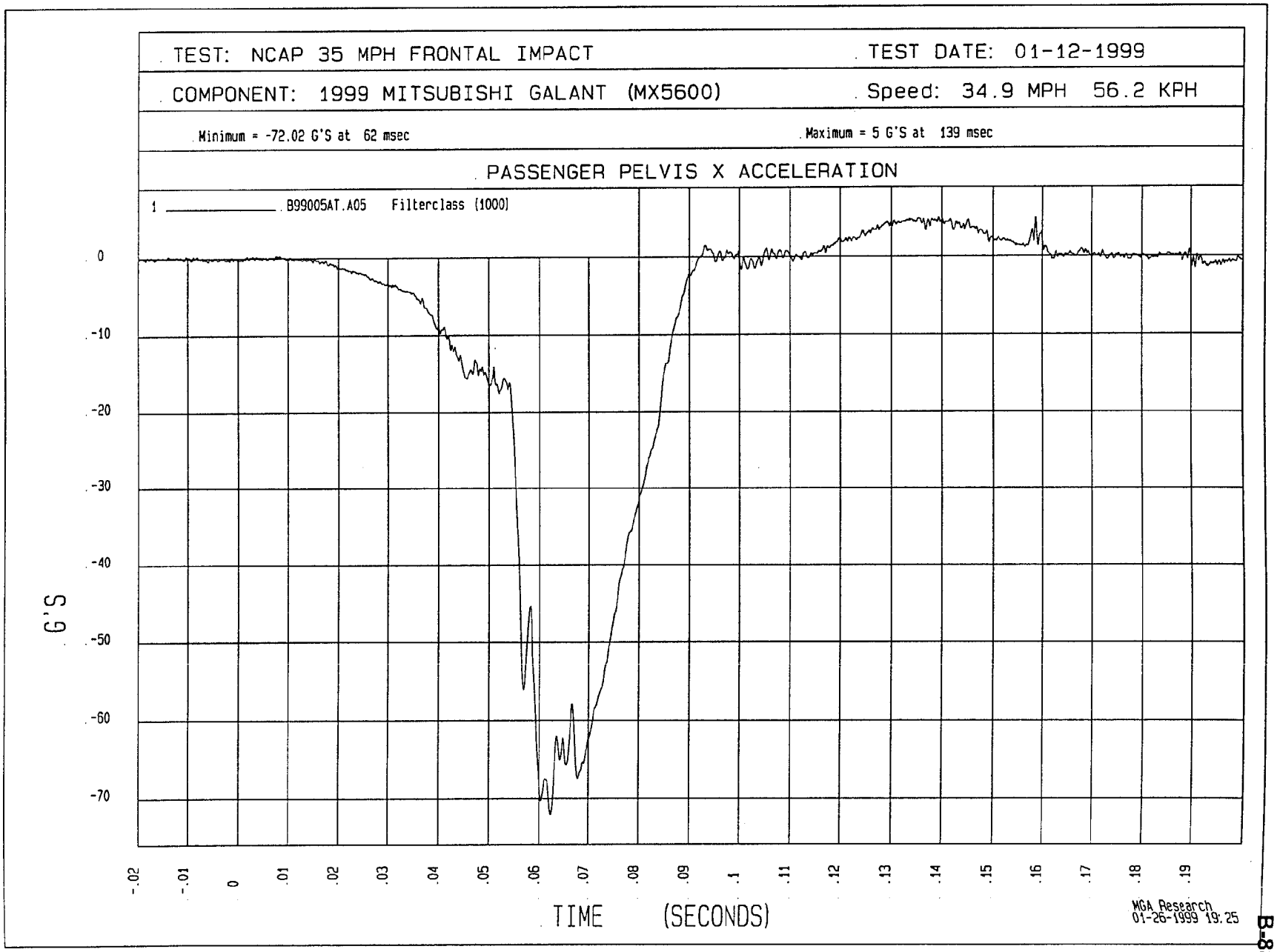
TIME SECONDS
MGA Research
01-12-1999 17:35


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -72.02 G'S at 62 msec
Maximum = 5 G'S at 139 msec
PASSENGER PELVIS X ACCELERATION
1 B99005AT.A05 Filterclass (1000)
0
-10
-20
-30
-40
-50
-60
-70
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
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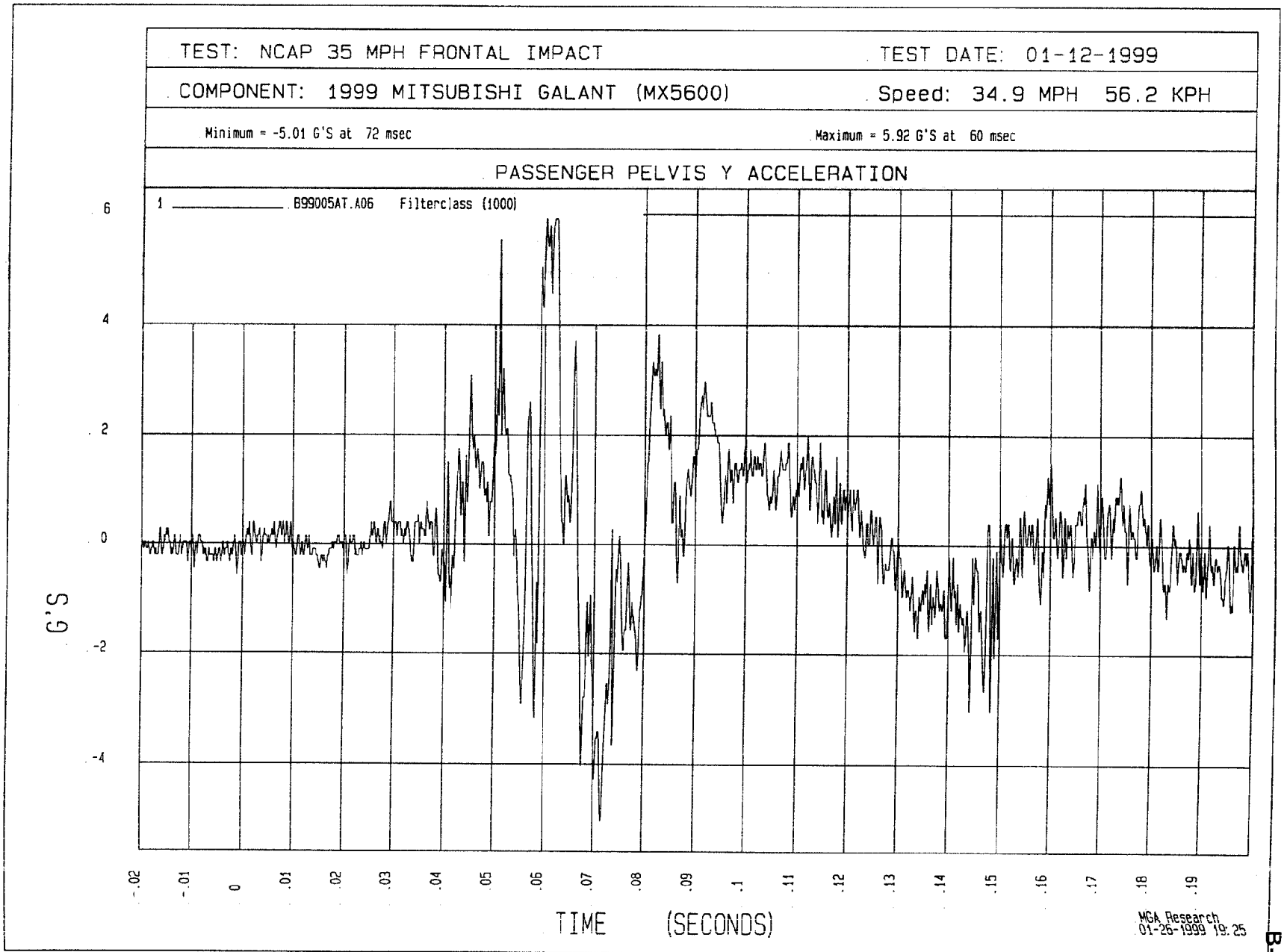
TIME (SECONDS)
MGA Research
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -5.01 G'S at 72 msec
Maximum = 5.92 G'S at 60 msec
PASSENGER PELVIS Y ACCELERATION
1 B99005AT.A06 Filterclass (1000)
6
4
2
0
-2
-4
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
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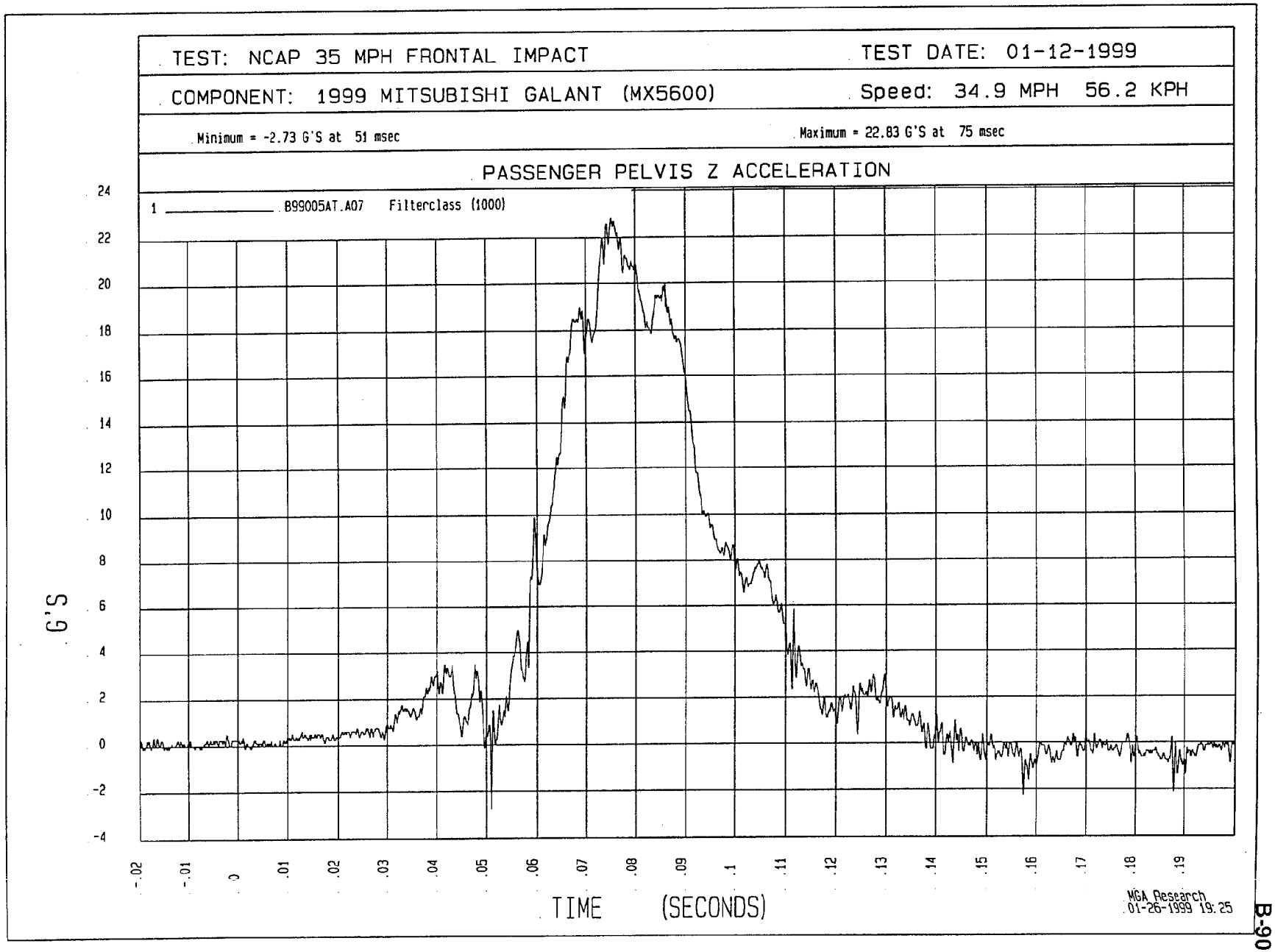
TIME (SECONDS)
MGA Research
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -2.73 G'S at 51 msec
Maximum = 22.83 G'S at 75 msec
PASSENGER PELVIS Z ACCELERATION
1 B99005AT.A07 Filterclass (1000)
G'S
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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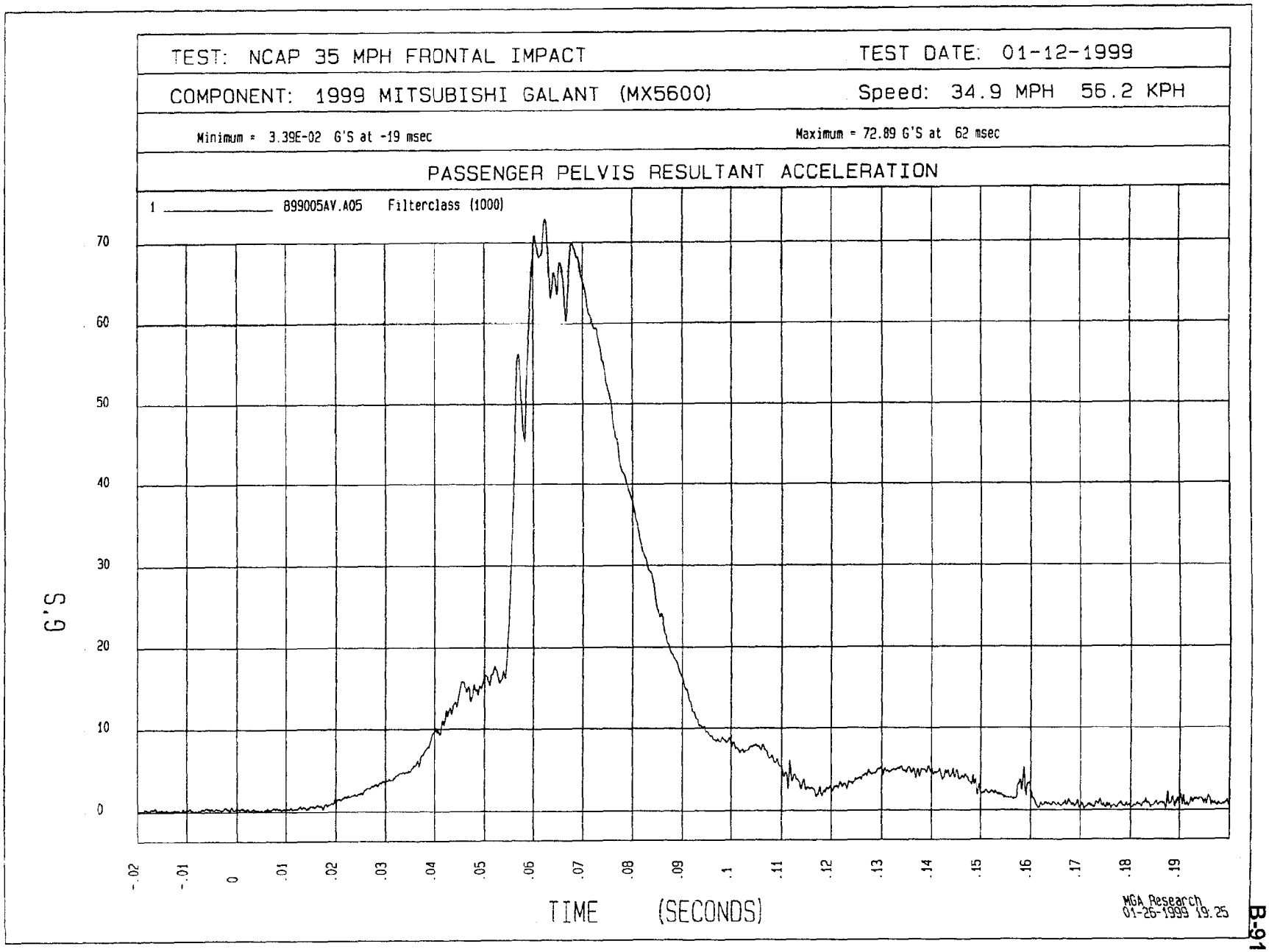
TIME (SECONDS)
MGA Research
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 3.39E-02 G'S at -19 msec
Maximum = 72.89 G'S at 62 msec
PASSENGER PELVIS RESULTANT ACCELERATION
1 899005AV.A05 Filterclass (1000)
G'S
70
60
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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.13
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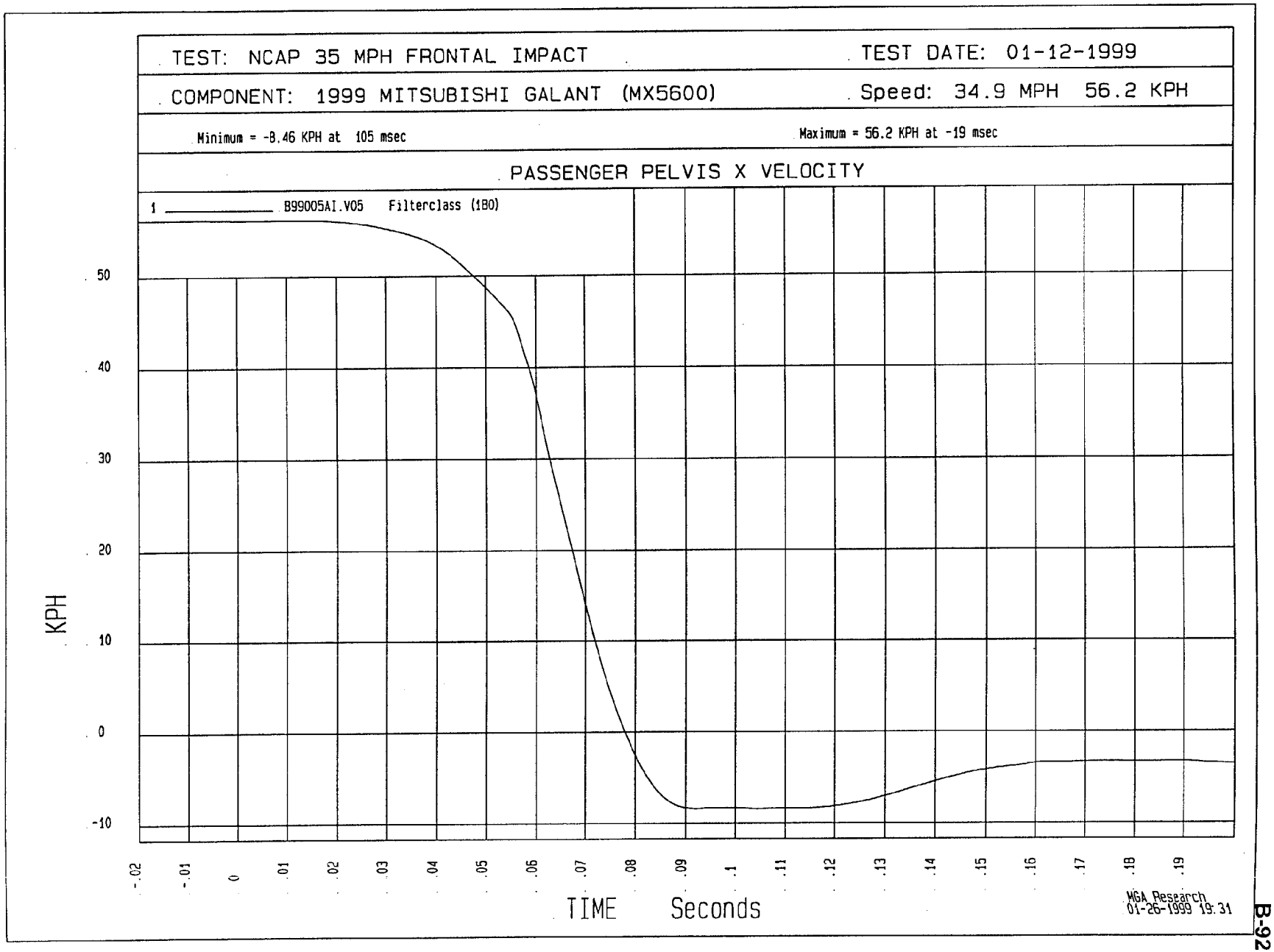
TIME (SECONDS)
MGA Research
01-26-1999 19:25


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -8.46 KPH at 105 msec
Maximum = 56.2 KPH at -19 msec
PASSENGER PELVIS X VELOCITY
1 B99005AI.V05 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
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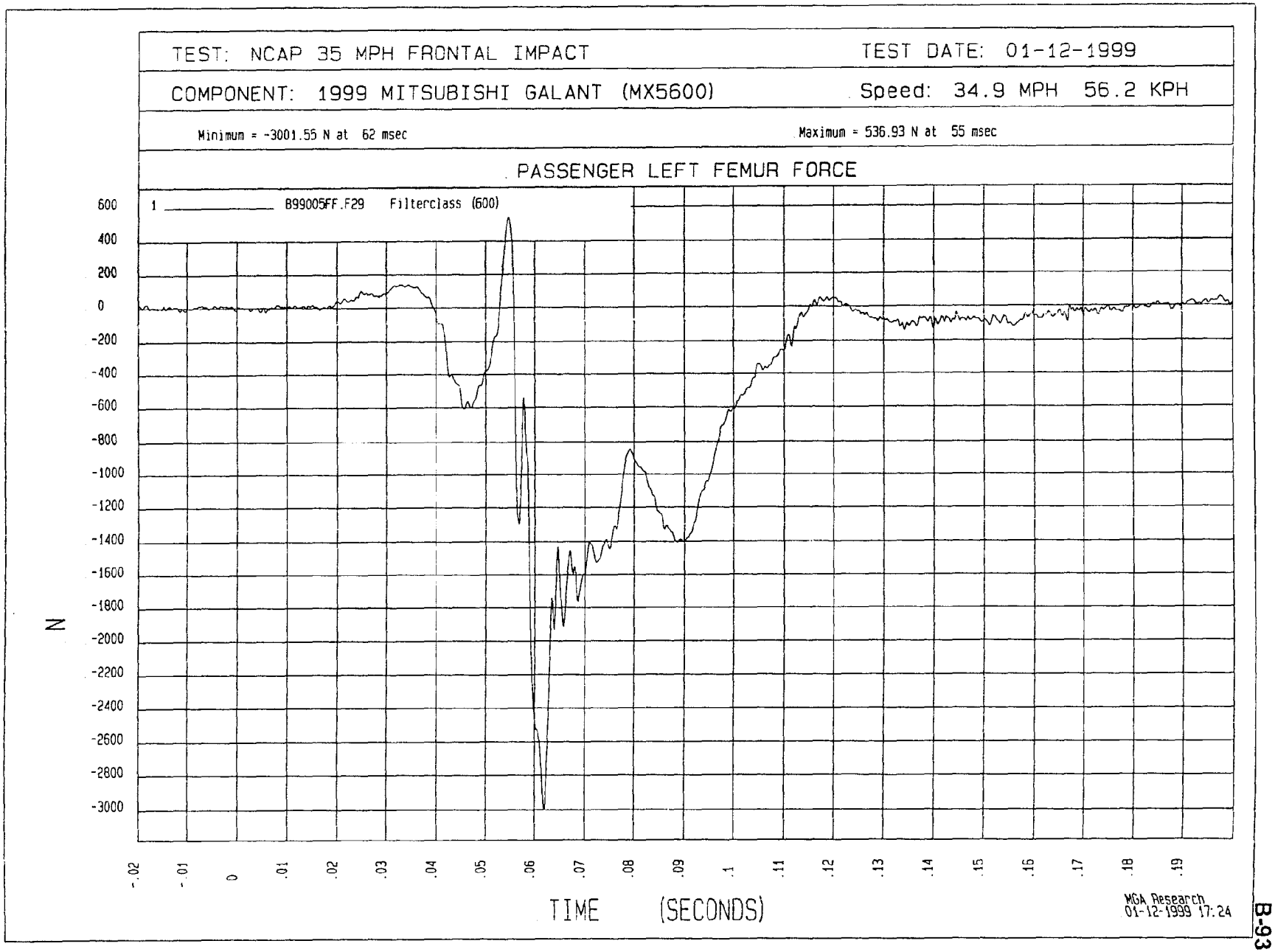
TIME Seconds
MGA Research
01-26-1999 19:31


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -3001.55 N at 62 msec
Maximum = 536.93 N at 55 msec
PASSENGER LEFT FEMUR FORCE
1 B99005FF.F29 Filterclass (600)
600
400
200
0
-200
-400
-600
-800
-1000
-1200
-1400
-1600
-1800
-2000
-2200
-2400
-2600
-2800
-3000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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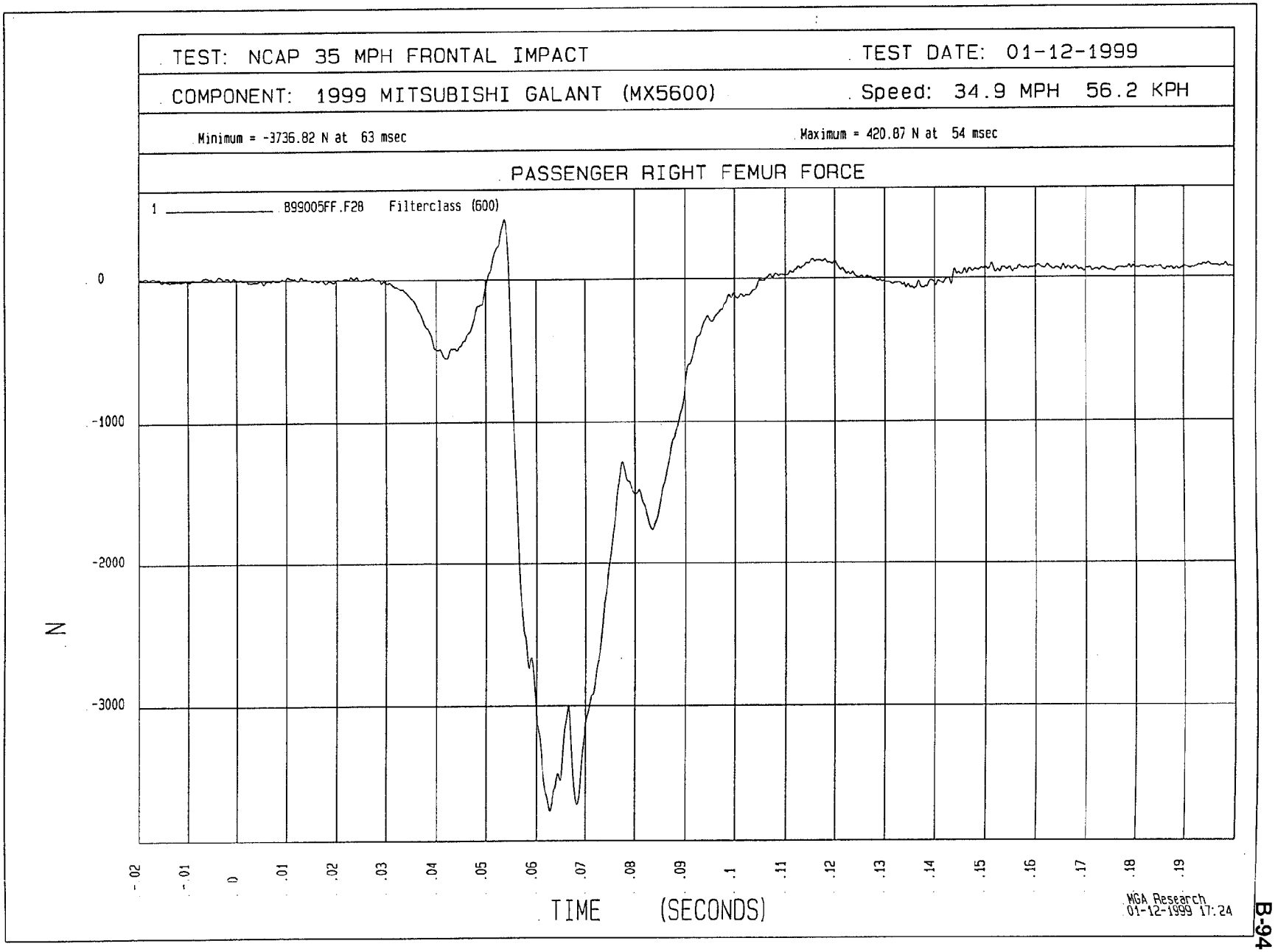
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -3736.82 N at 63 msec
Maximum = 420.87 N at 54 msec
PASSENGER RIGHT FEMUR FORCE
1 B99005FF.F28 Filterclass (600)
0
-1000
-2000
-3000
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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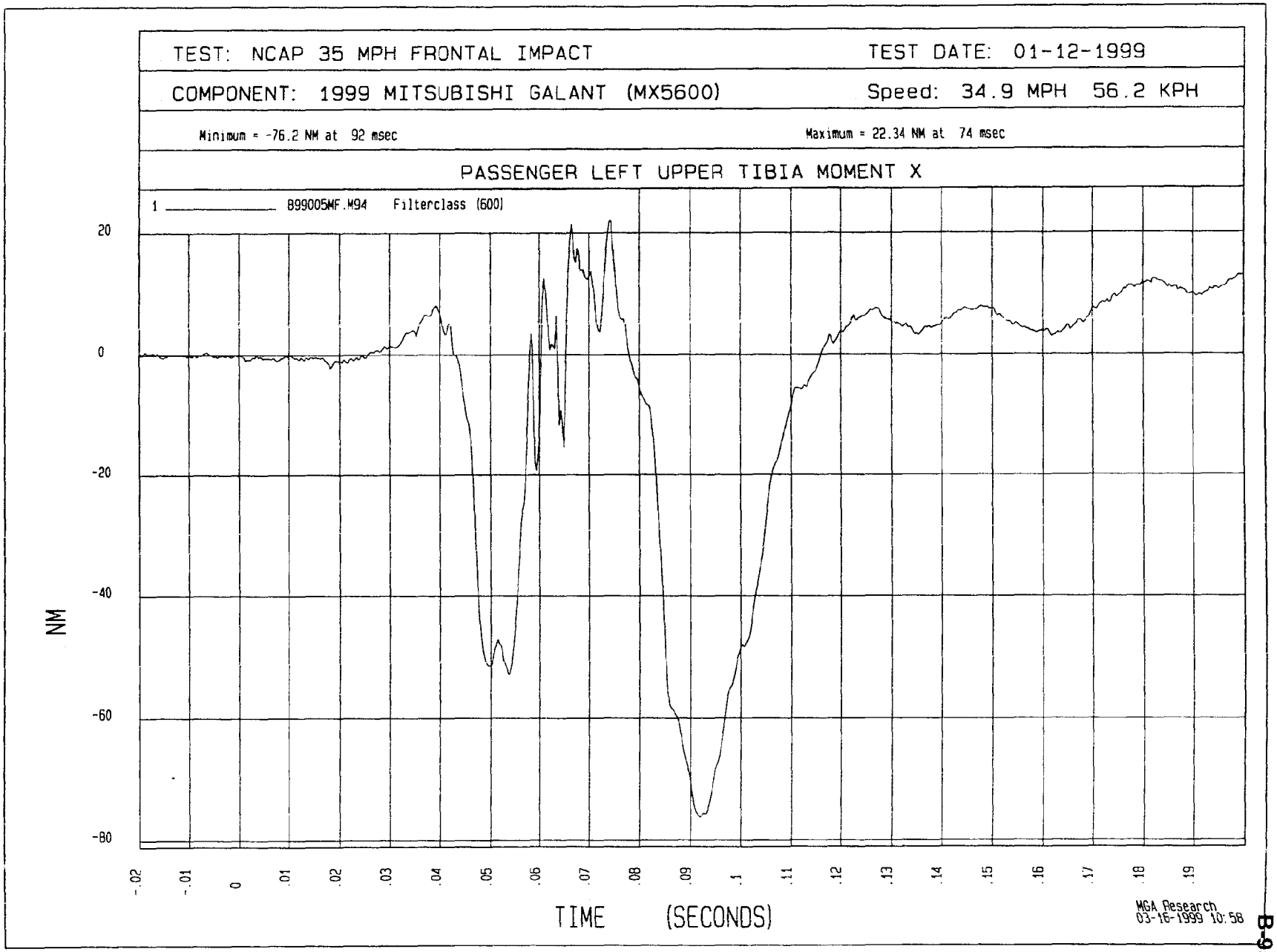
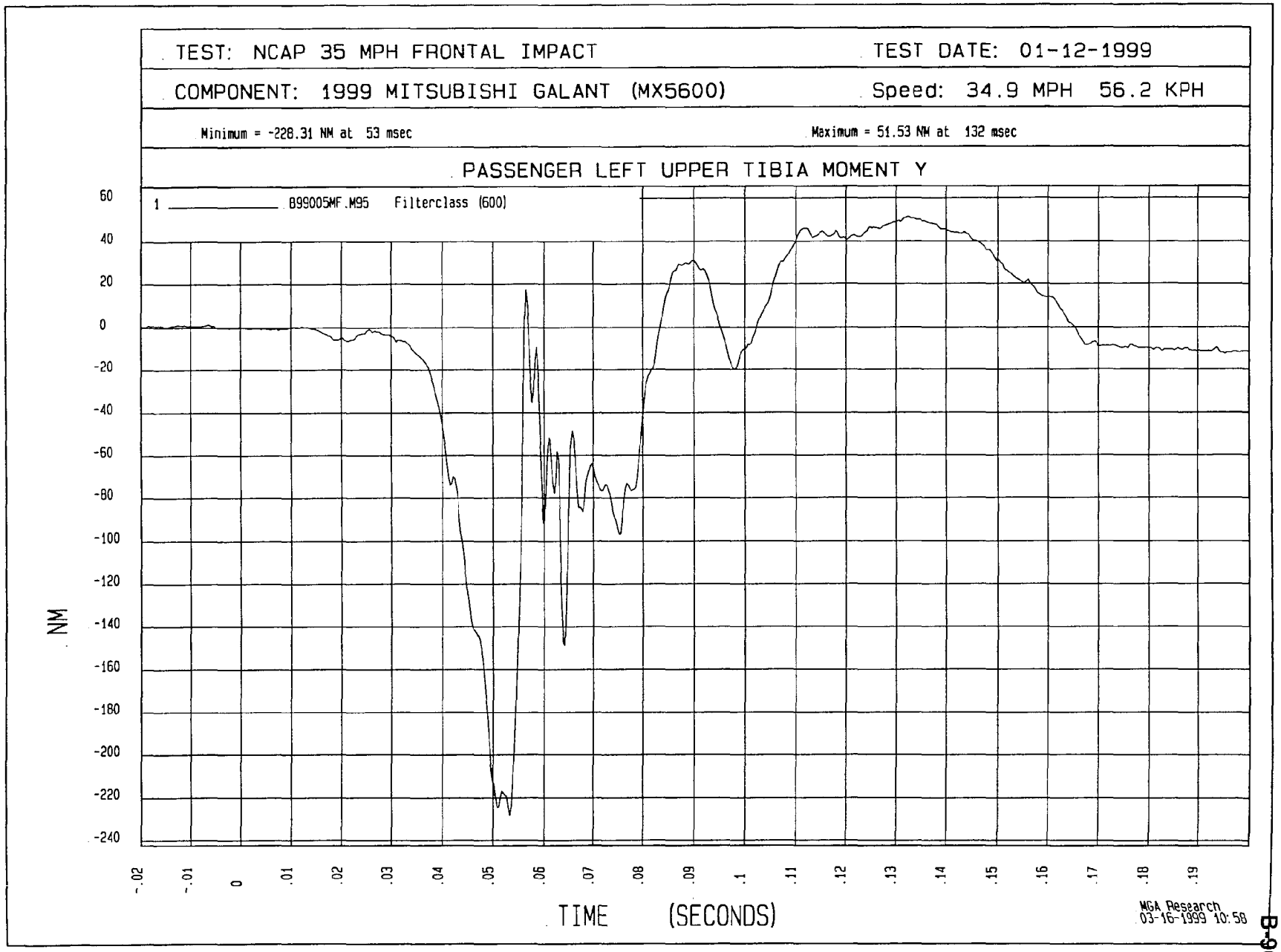
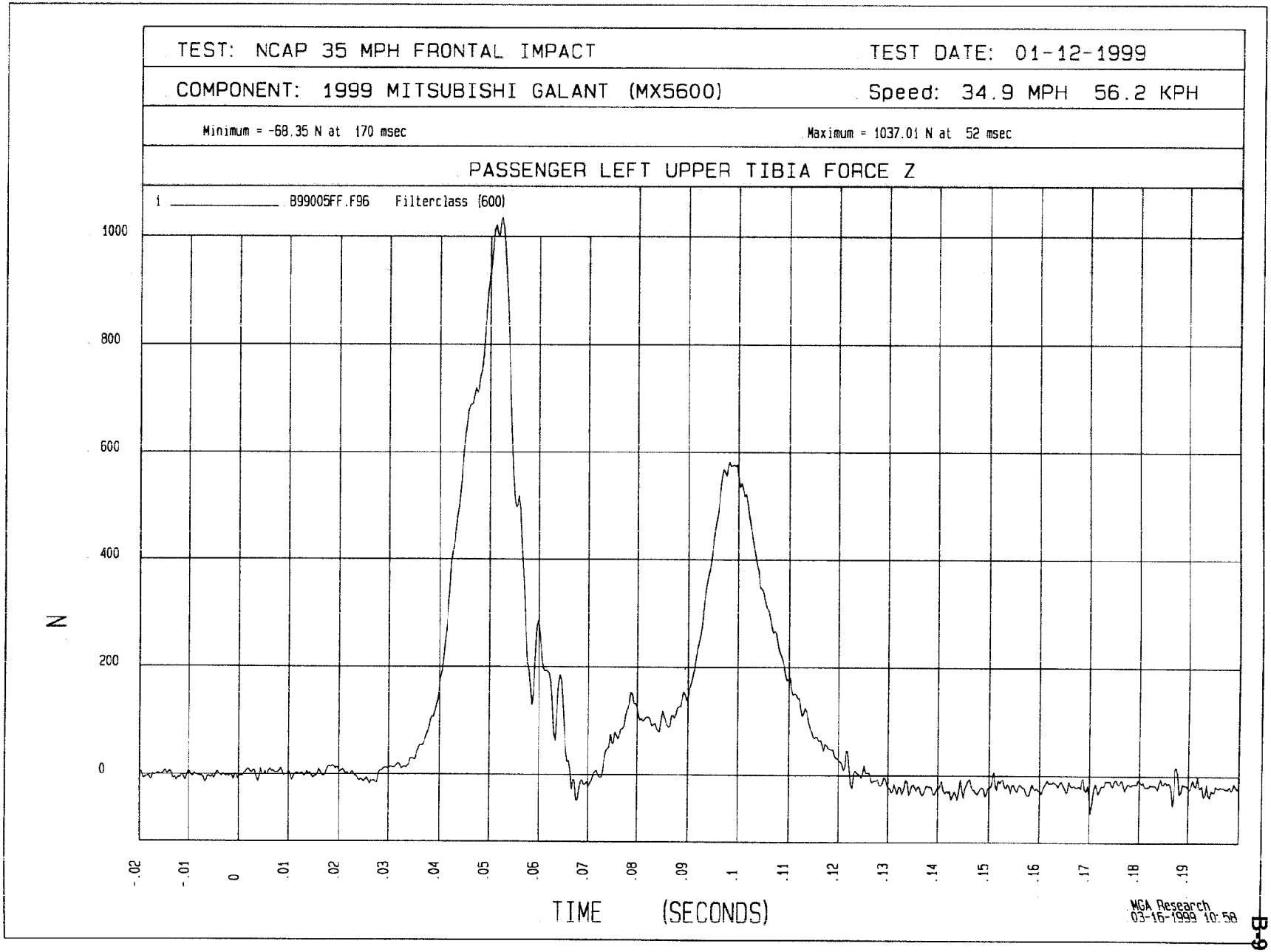
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -76.2 NM at 92 msec
Maximum = 22.34 NM at 74 msec
PASSENGER LEFT UPPER TIBIA MOMENT X
1 B99005MF.M94 Filterclass (600)
20
0
-20
-40
-60
-80
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
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -228.31 NM at 53 msec
Maximum = 51.53 NM at 132 msec
PASSENGER LEFT UPPER TIBIA MOMENT Y
1 B99005MF.M95 Filterclass (600)
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
-220
-240
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)
NGA Research
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -68.35 N at 170 msec
Maximum = 1037.01 N at 52 msec
PASSENGER LEFT UPPER TIBIA FORCE Z
1 B99005FF.F96 Filterclass (600)
1000
800
600
400
200
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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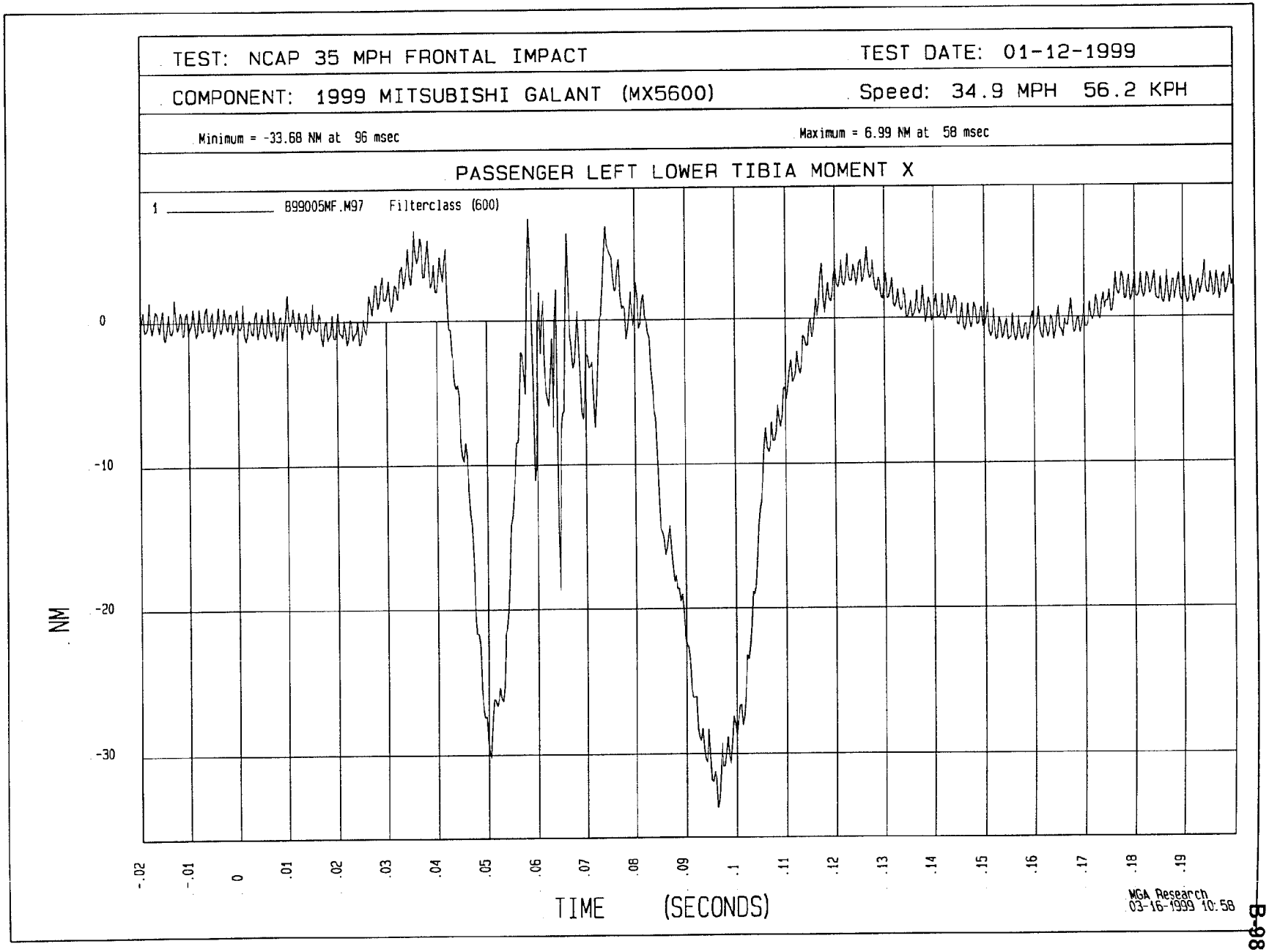
TIME (SECONDS)
MGA Research
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -33.68 NM at 96 msec
Maximum = 6.99 NM at 58 msec
PASSENGER LEFT LOWER TIBIA MOMENT X
1 B99005MF.M97 Filterclass (600)
NM
0
-10
-20
-30
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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.15
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.17
.18
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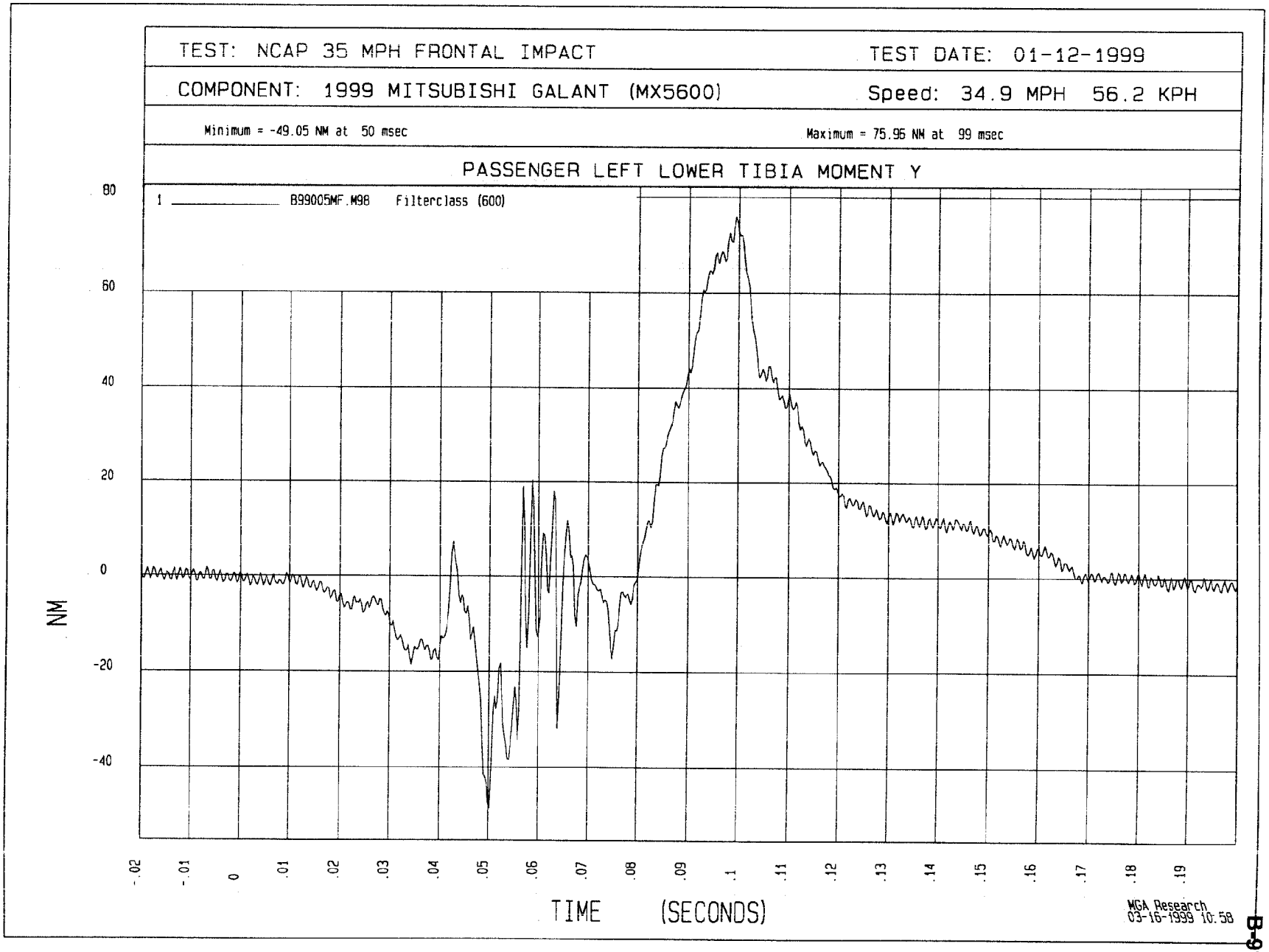
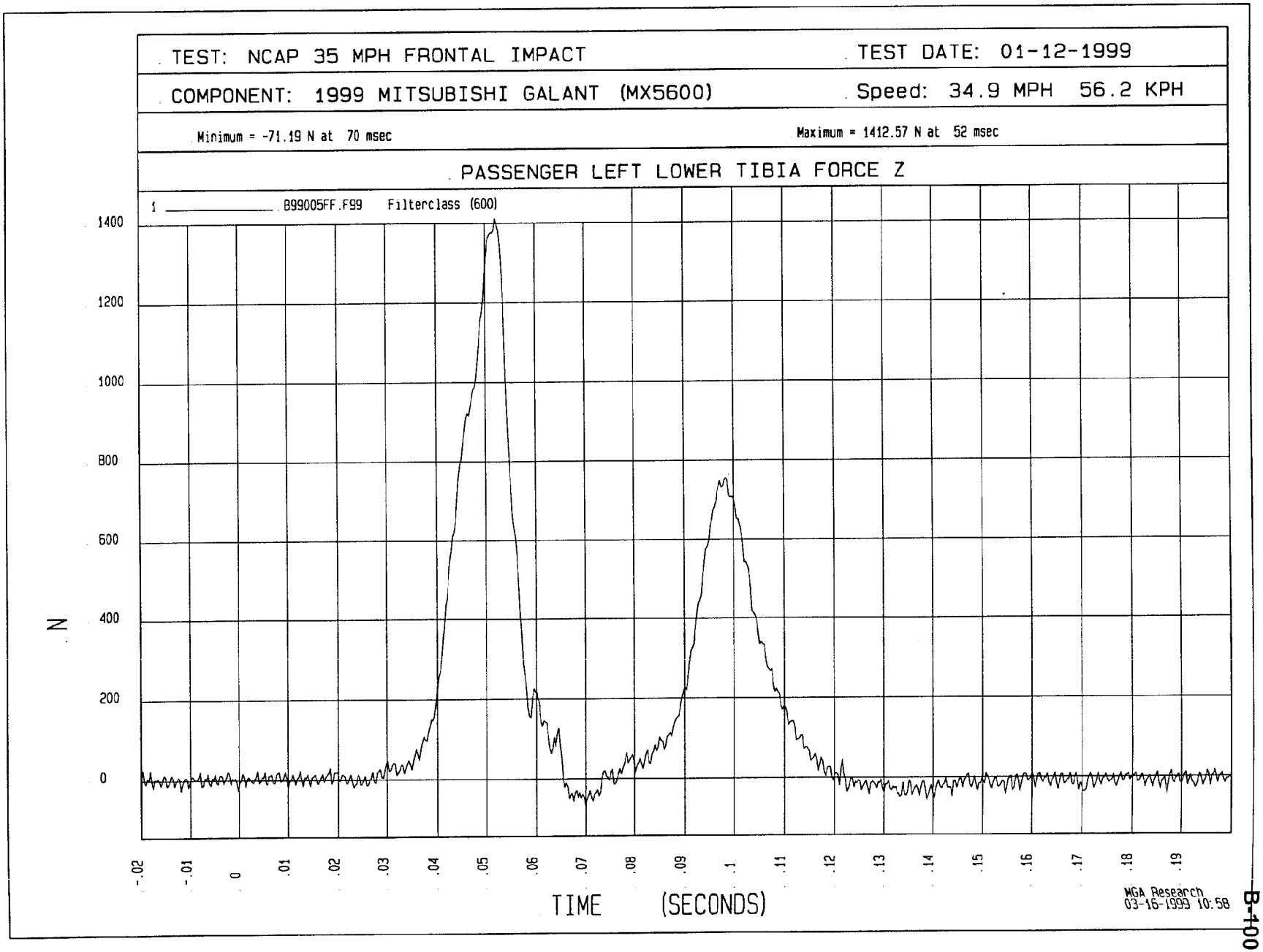
TIME (SECONDS)
MGA Research
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -49.05 NM at 50 msec
Maximum = 75.96 NM at 99 msec
PASSENGER LEFT LOWER TIBIA MOMENT Y
1 B99005MF.M98 Filterclass (600)
NM
80
60
40
20
0
-20
-40
-.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
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -71.19 N at 70 msec
Maximum = 1412.57 N at 52 msec
PASSENGER LEFT LOWER TIBIA FORCE Z
1 899005FF.F99 Filterclass (600)
1400
1200
1000
800
600
400
200
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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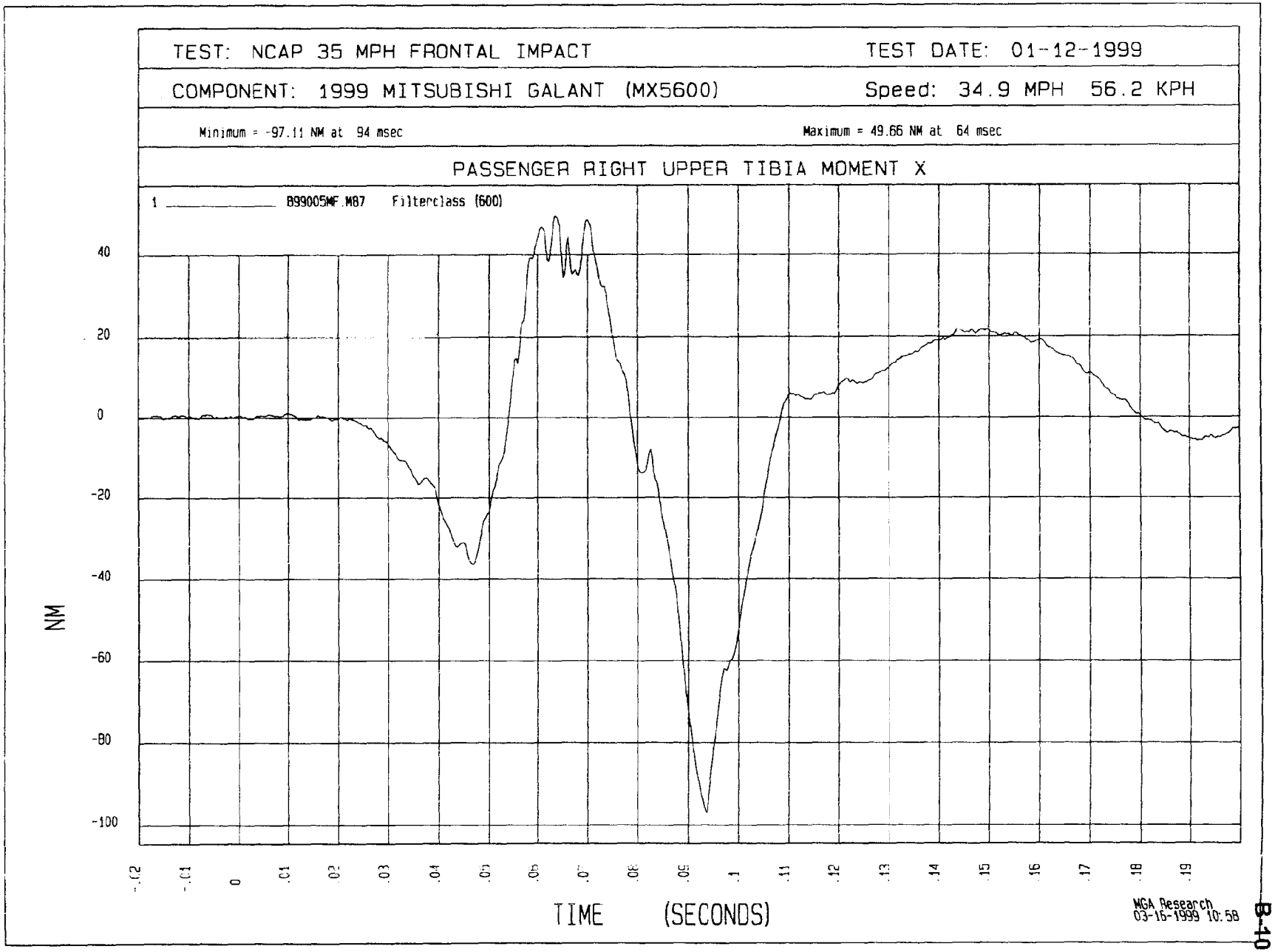
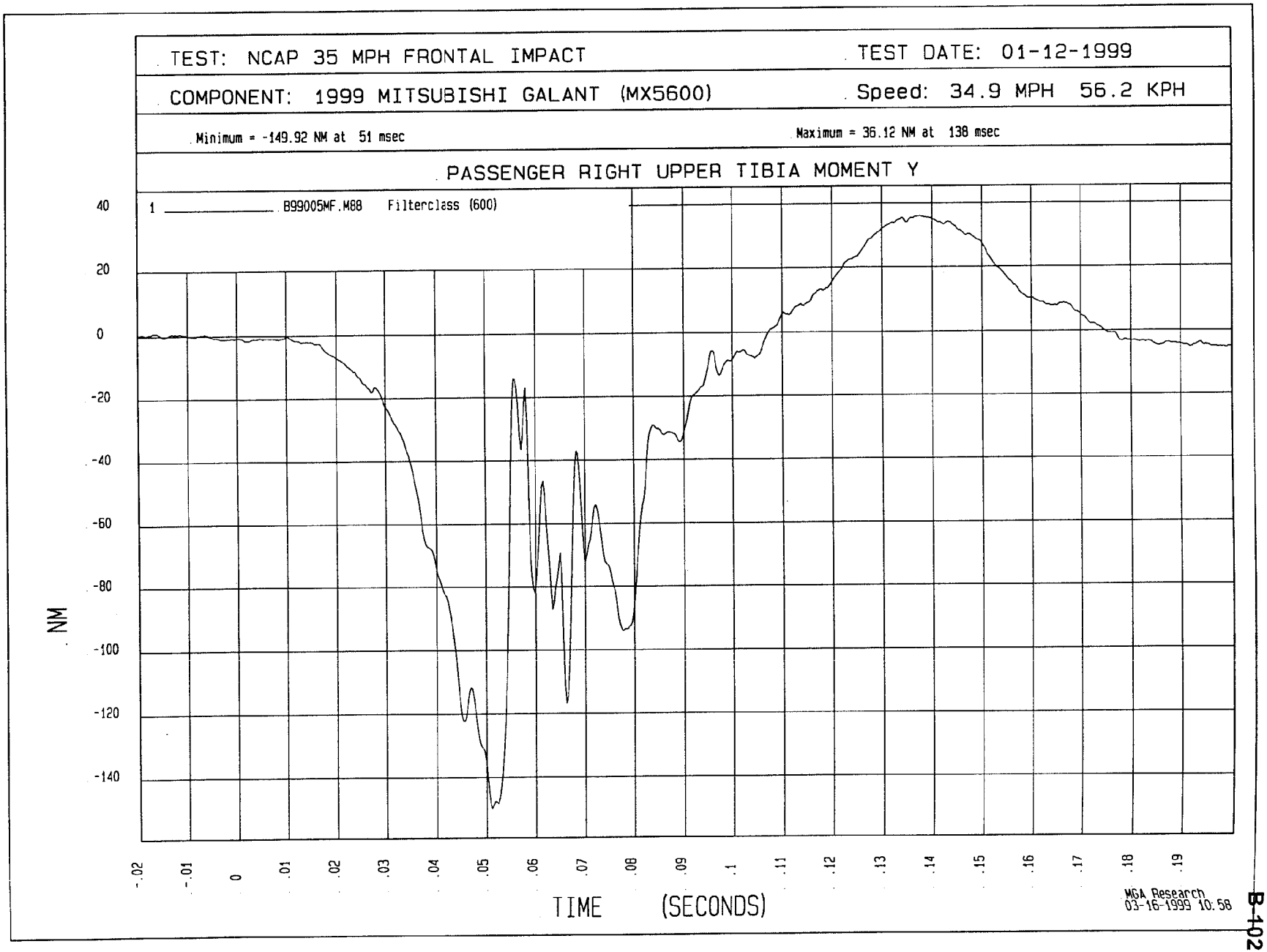
.18
.19
TIME (SECONDS)
MGA Research
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -97.11 NM at 94 msec
Maximum = 49.66 NM at 64 msec
PASSENGER RIGHT UPPER TIBIA MOMENT X
1 B99005MF.M87 Filterclass (600)
NM
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
.18
.19
TIME (SECONDS)
MGA Research
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -149.92 NM at 51 msec
Maximum = 36.12 NM at 138 msec
PASSENGER RIGHT UPPER TIBIA MOMENT Y
1 B99005MF.M88 Filterclass (600)
NM
40
20
0
-20
-40
-60
-80
-100
-120
-140
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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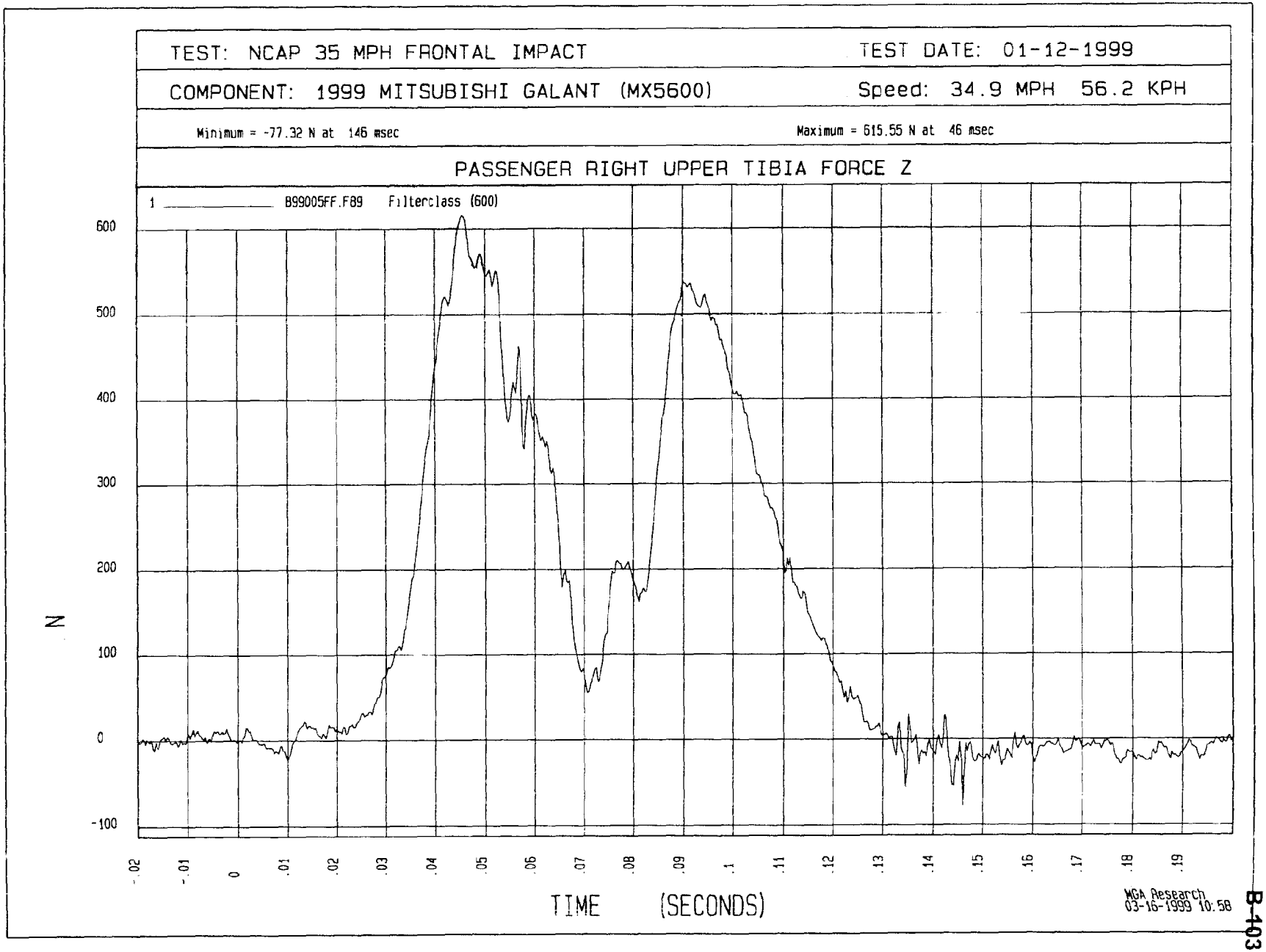
TIME (SECONDS)
MGA Research
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -77.32 N at 146 msec
Maximum = 615.55 N at 46 msec
PASSENGER RIGHT UPPER TIBIA FORCE Z
1 B99005FF.F89 Filterclass (600)
600
500
400
300
200
100
0
-100
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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.17
.18
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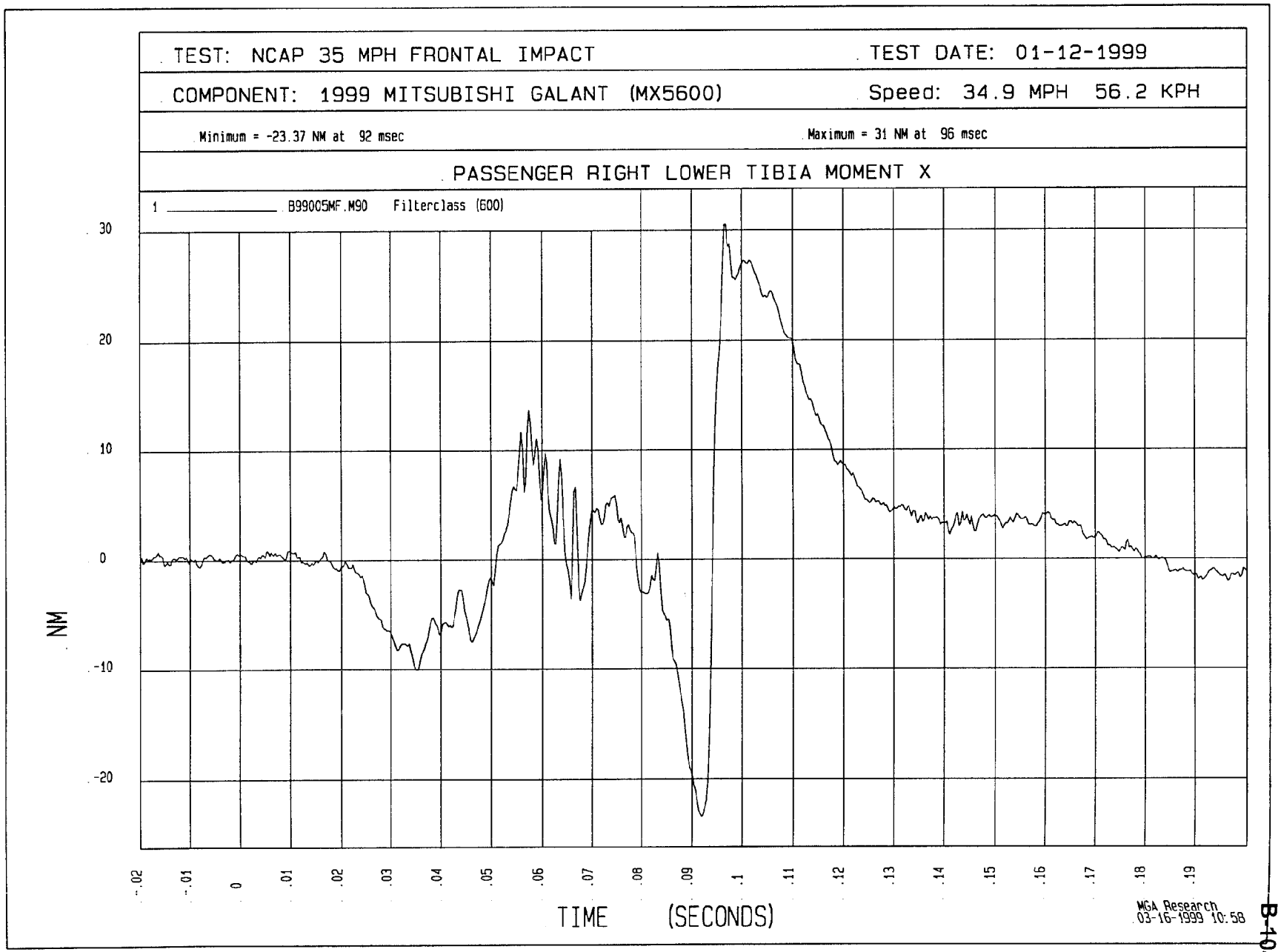
TIME (SECONDS)
MGA Research
03-16-1999 10:58


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -23.37 NM at 92 msec
Maximum = 31 NM at 96 msec
PASSENGER RIGHT LOWER TIBIA MOMENT X
1 B99005MF.M90 Filterclass (600)
NM
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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.14
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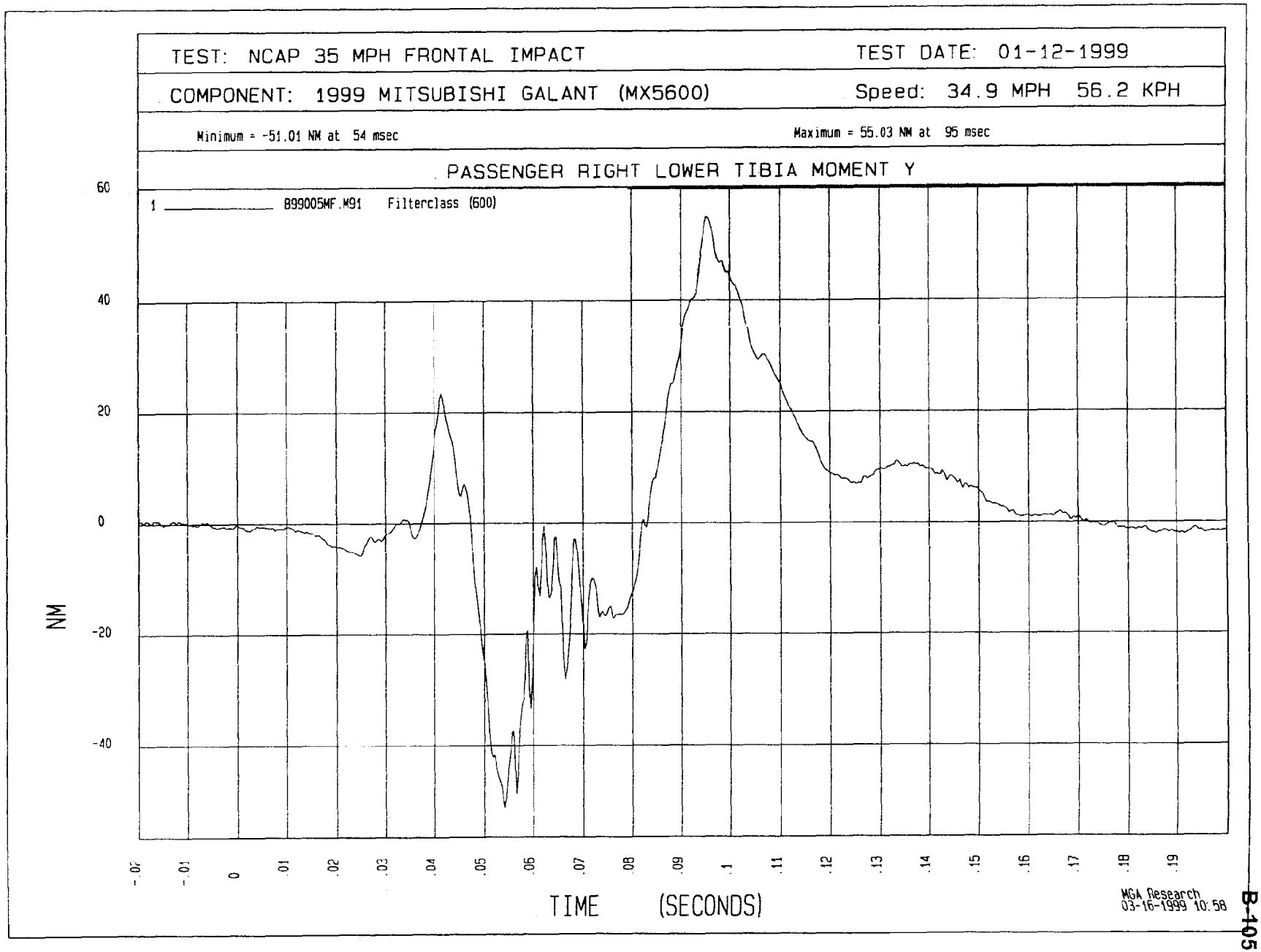
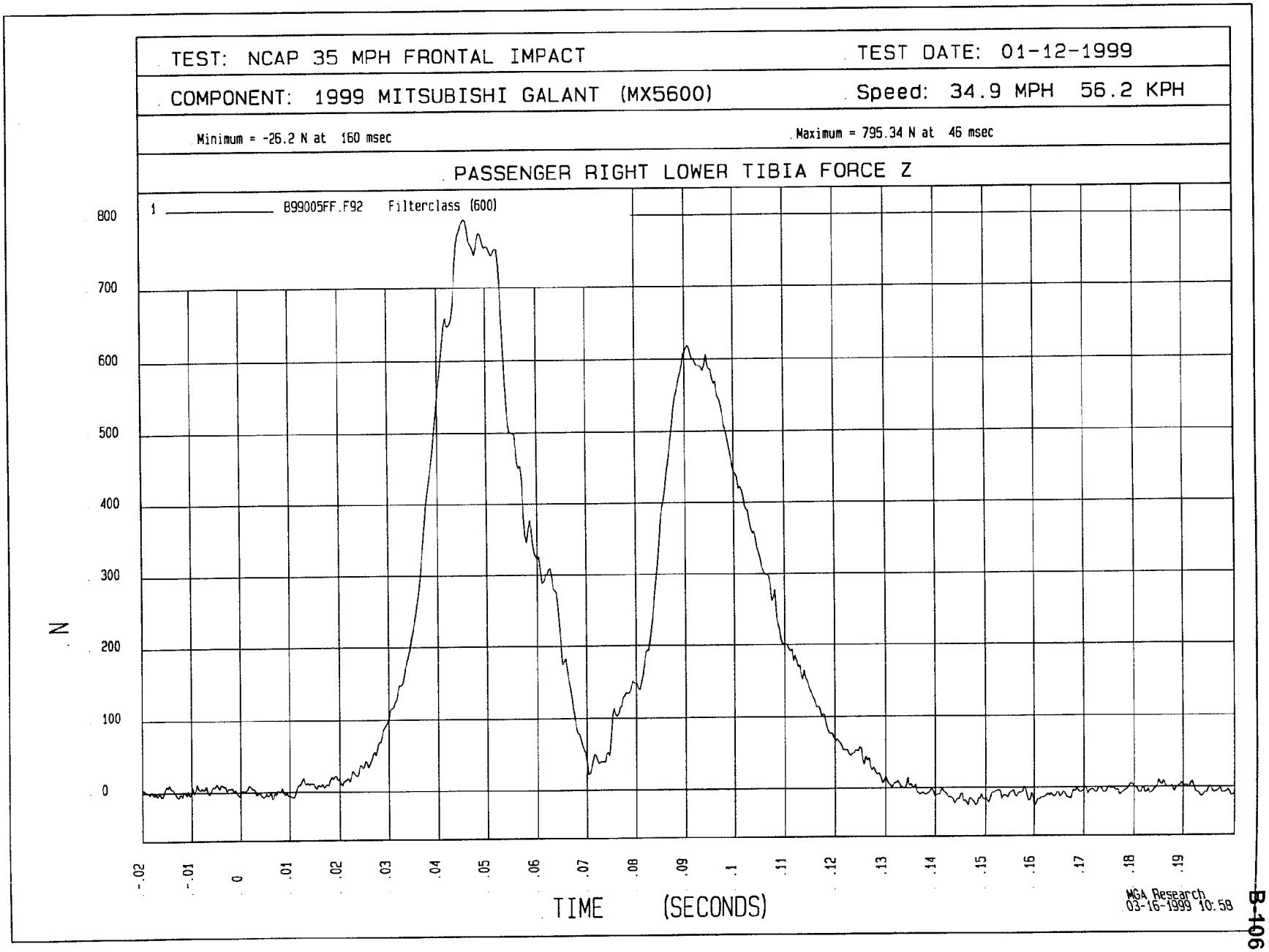
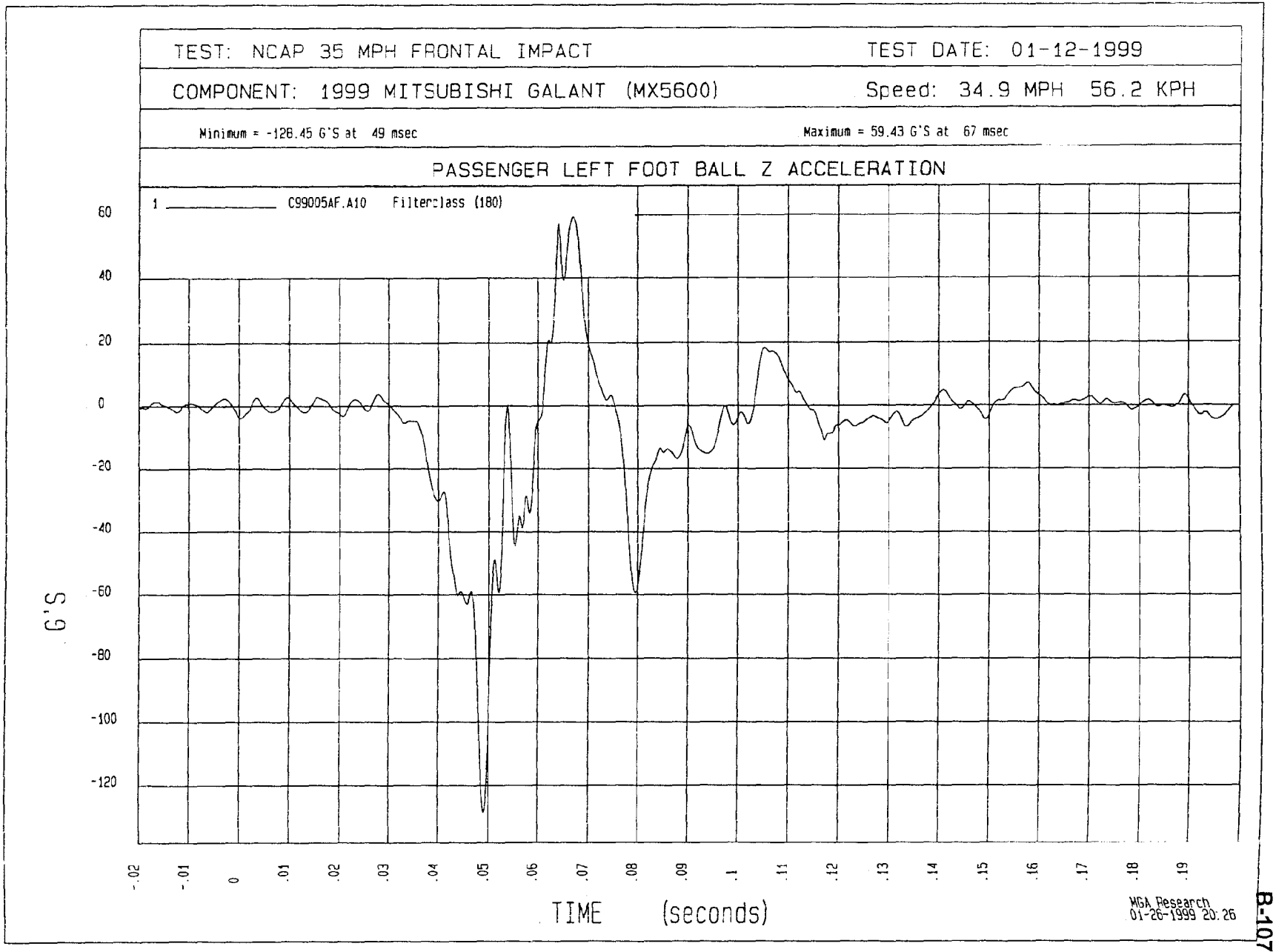
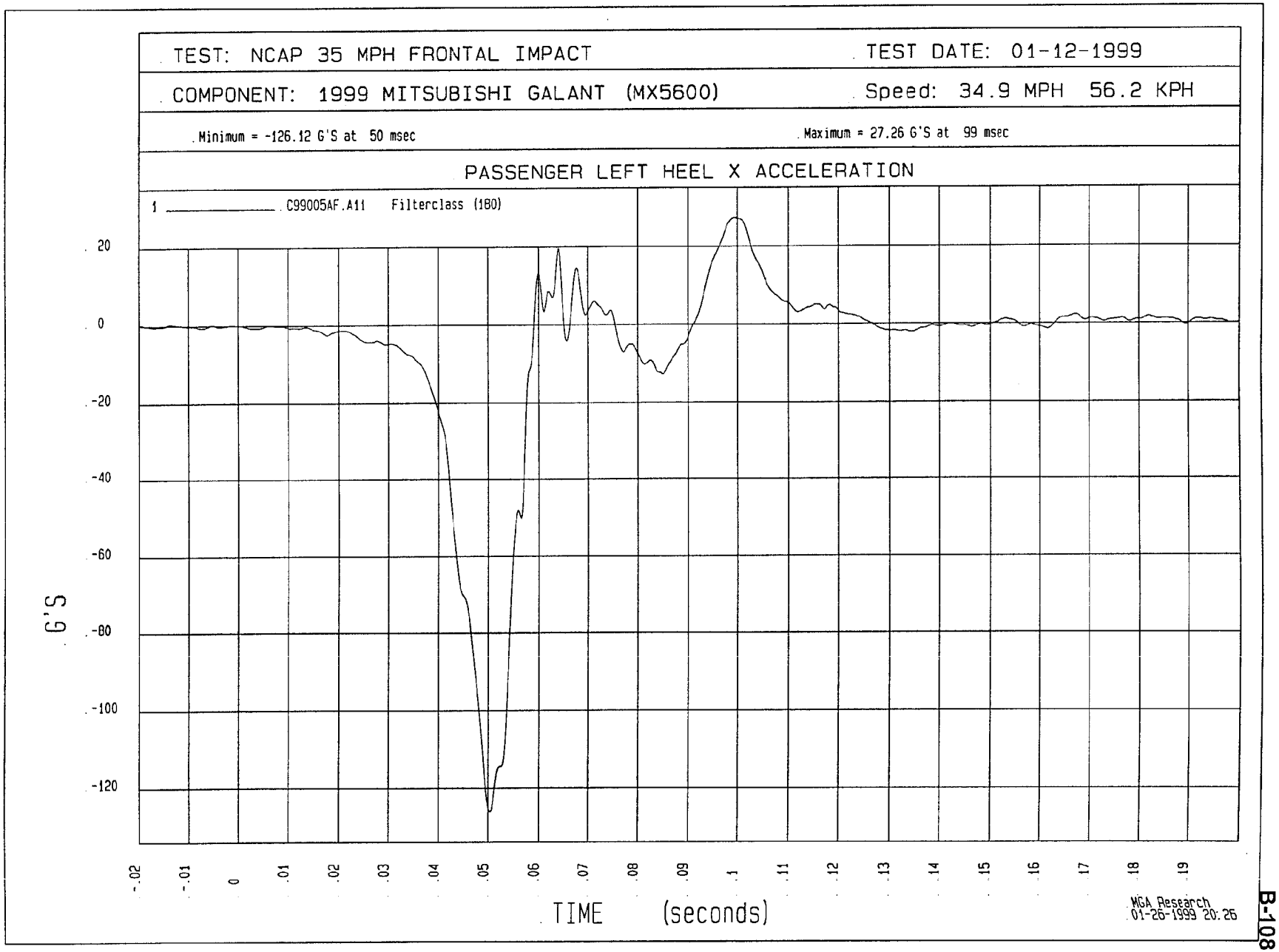
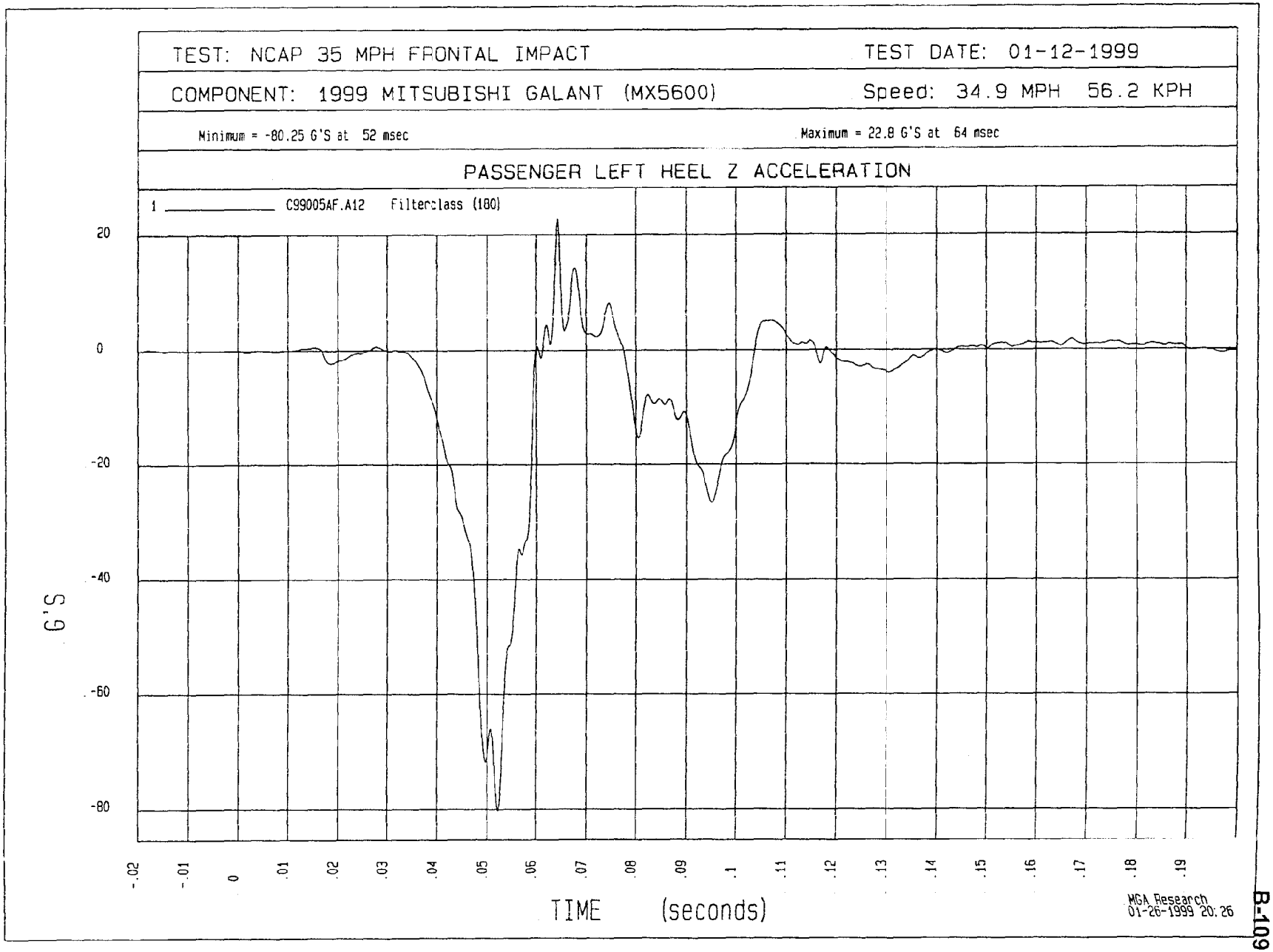
TIME (SECONDS)
MGA Research
03-16-1999 10:58

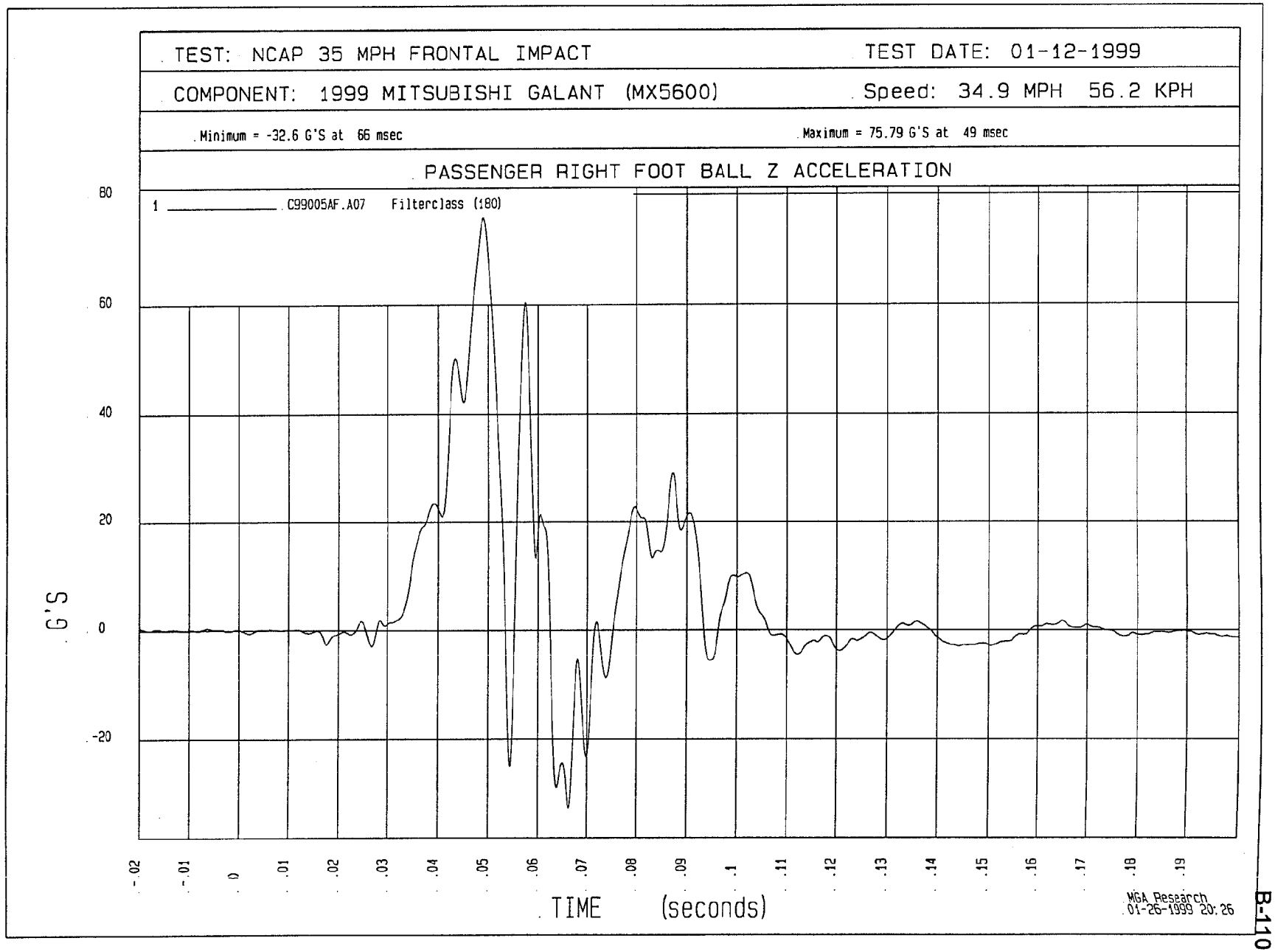

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -51.01 NM at 54 msec
Maximum = 55.03 NM at 95 msec
PASSENGER RIGHT LOWER TIBIA MOMENT Y
1 B99005MF.M91 Filterclass (600)
60
40
20
0
-20
-40
NM
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
03-16-1999 10:58

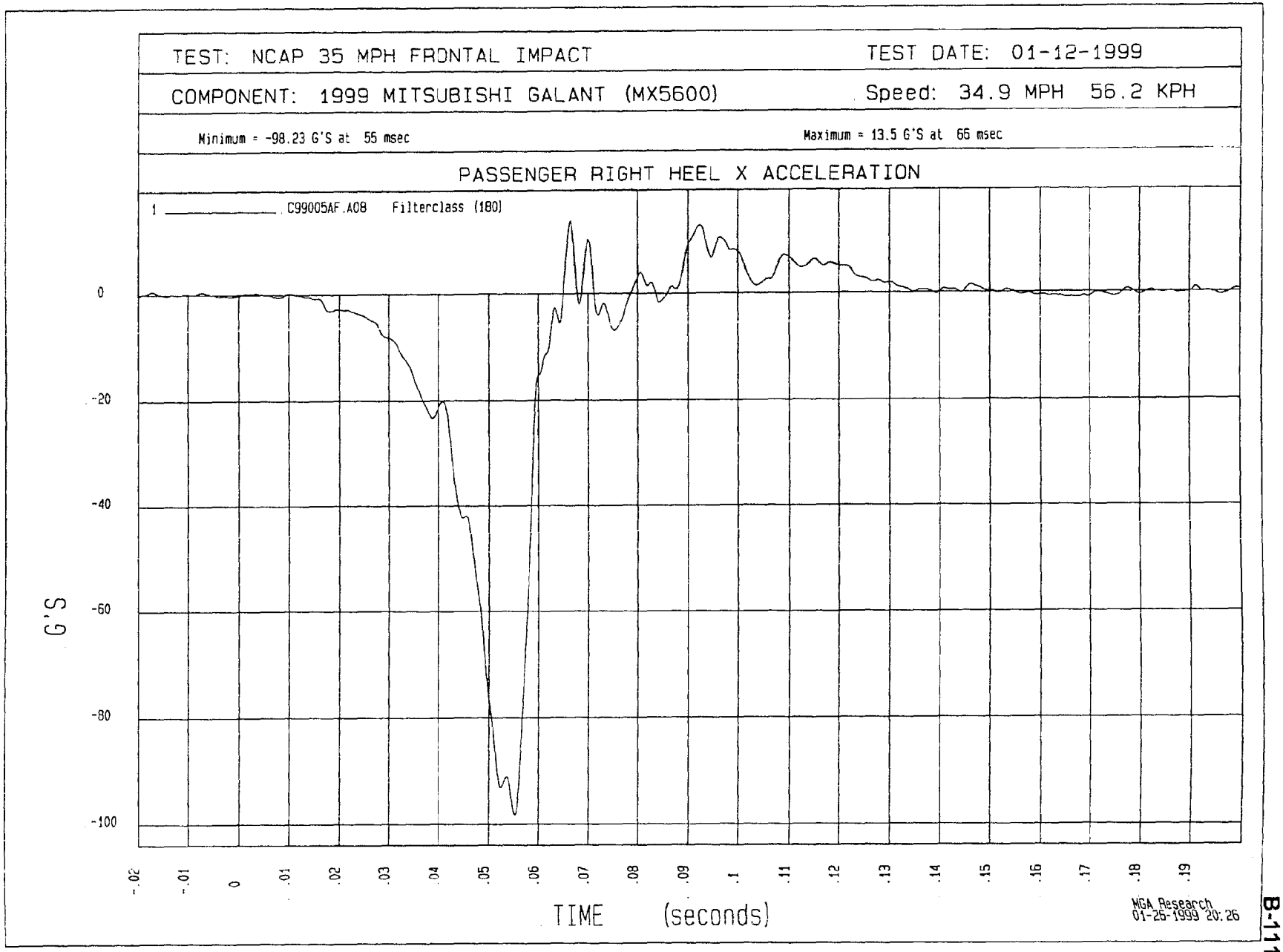

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -26.2 N at 160 msec
Maximum = 795.34 N at 46 msec
PASSENGER RIGHT LOWER TIBIA FORCE Z
1 B99005FF.F92 Filterclass (600)
800
700
600
500
400
300
200
100
0
N
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
03-16-1999 10:58

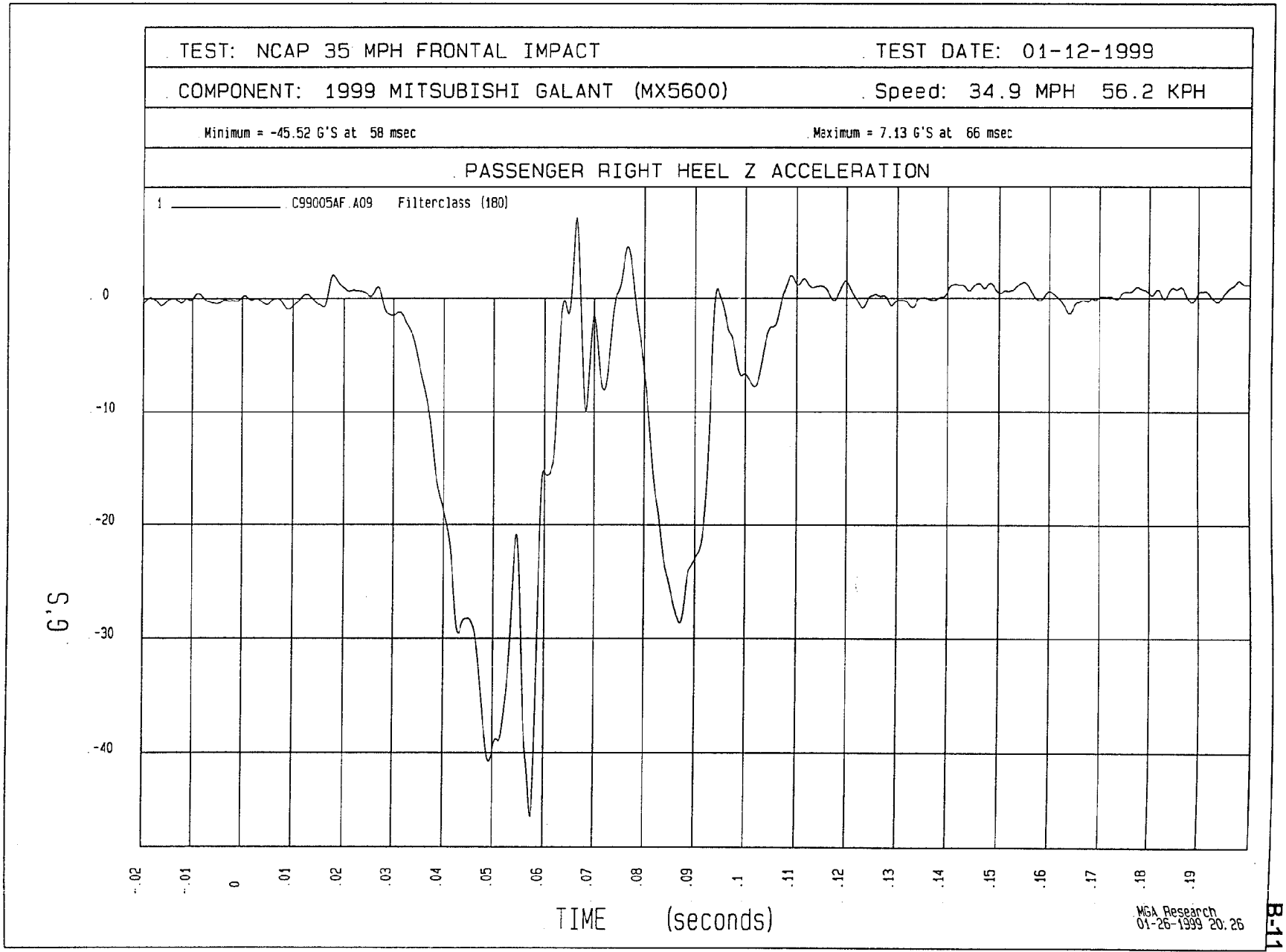

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -128.45 G'S at 49 msec
Maximum = 59.43 G'S at 67 msec
PASSENGER LEFT FOOT BALL Z ACCELERATION
1 C99005AF.A10 Filter Class (180)
60
40
20
0
-20
-40
-60
-80
-100
-120
G'S
-.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
01-26-1999 20:26

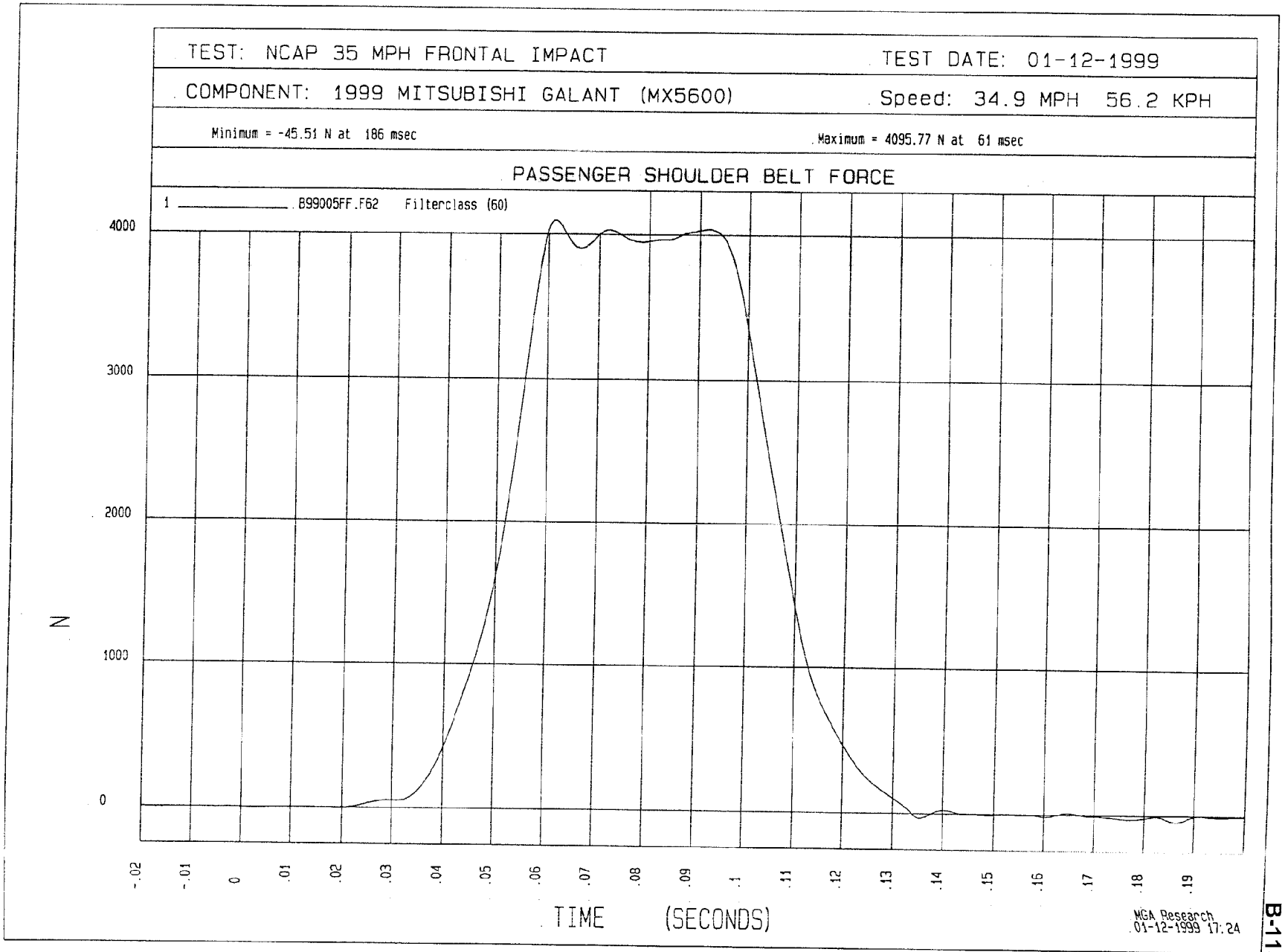

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -126.12 G'S at 50 msec
Maximum = 27.26 G'S at 99 msec
PASSENGER LEFT HEEL X ACCELERATION
1 C99005AF.A11 Filterclass (180)
20
0
-20
-40
-60
-80
-100
-120
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
01-26-1999 20:26

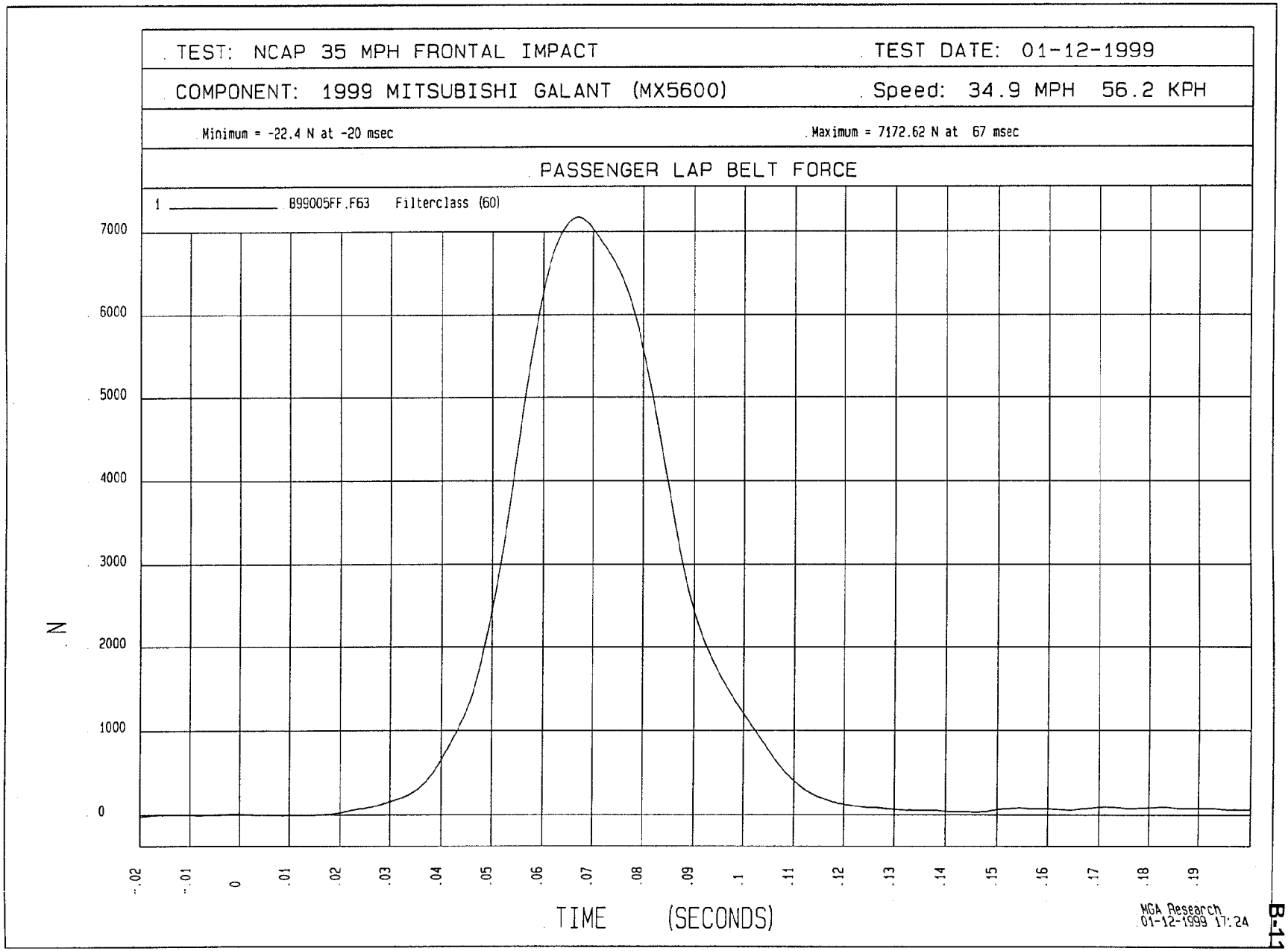

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -80.25 G'S at 52 msec
Maximum = 22.8 G'S at 64 msec
PASSENGER LEFT HEEL Z ACCELERATION
1 C99005AF.A12 Filter:lass (180)
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
01-26-1999 20:26

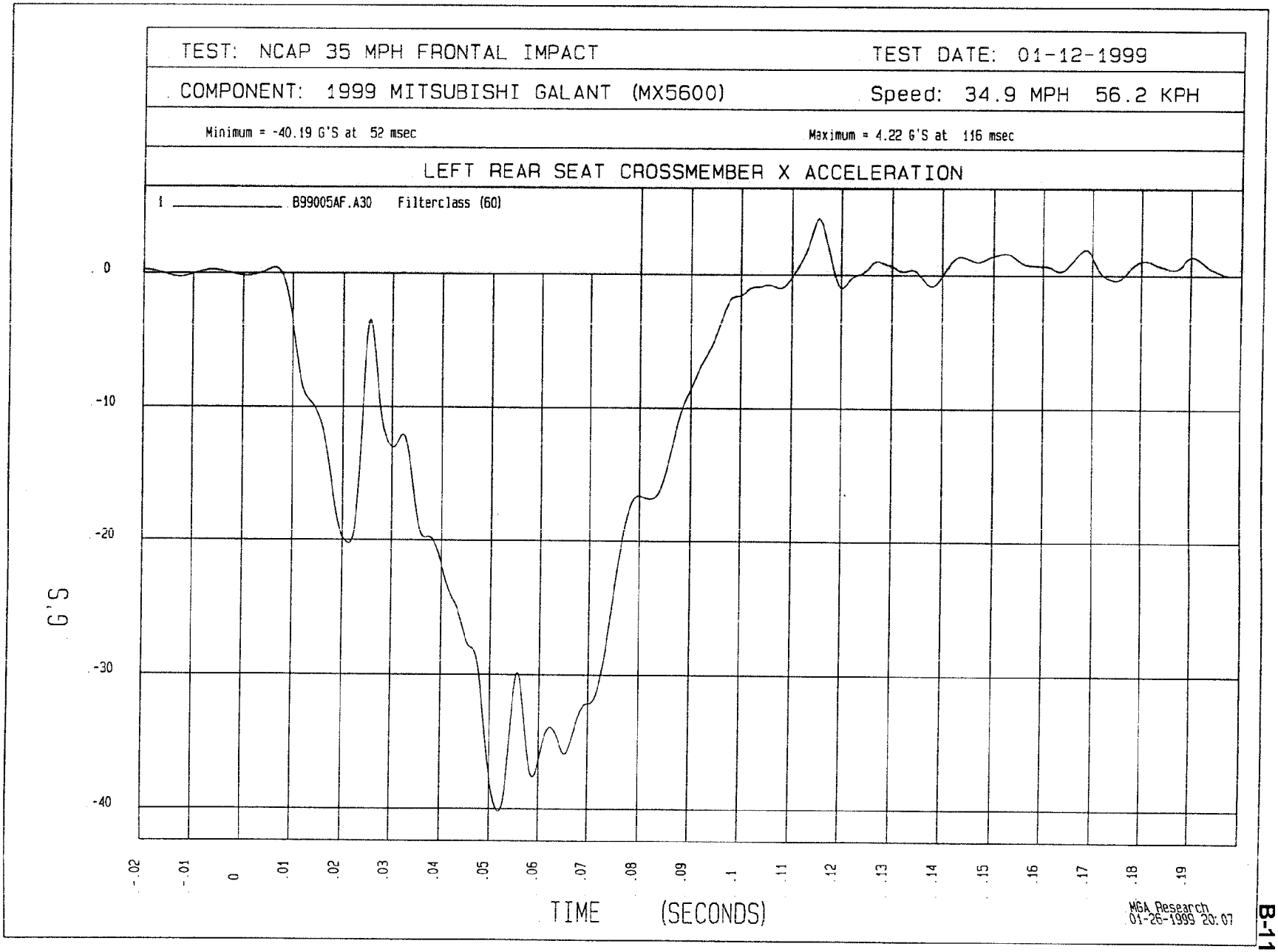

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -32.6 G'S at 66 msec
Maximum = 75.79 G'S at 49 msec
PASSENGER RIGHT FOOT BALL Z ACCELERATION
1 C99005AF.A07 Filterclass (180)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
01-26-1999 20:26

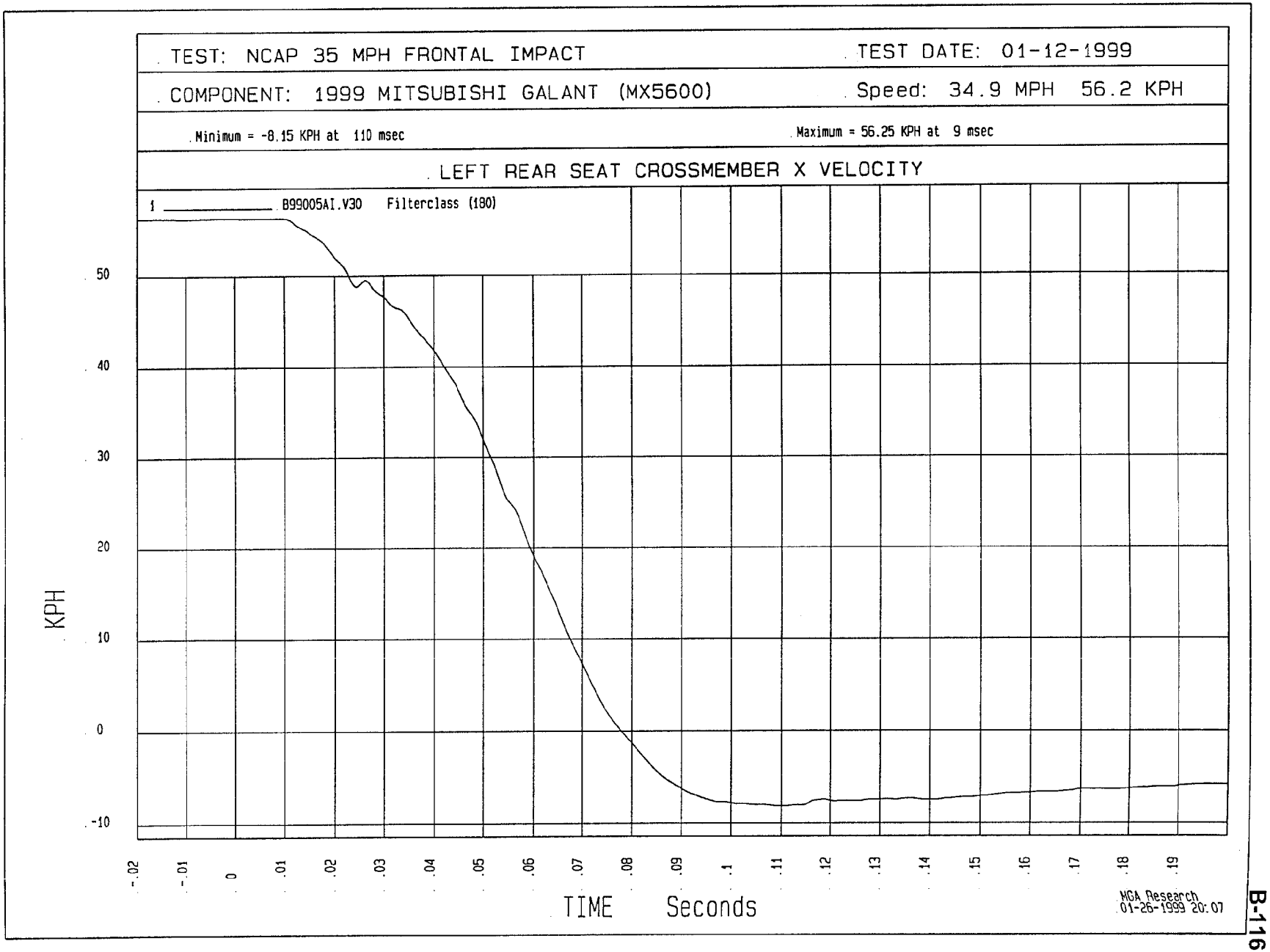

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -98.23 G'S at 55 msec
Maximum = 13.5 G'S at 66 msec
PASSENGER RIGHT HEEL X ACCELERATION
1 C99005AF.AC8 Filterclass (180)
0
-20
-40
-60
-80
-100
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
01-25-1999 20:26

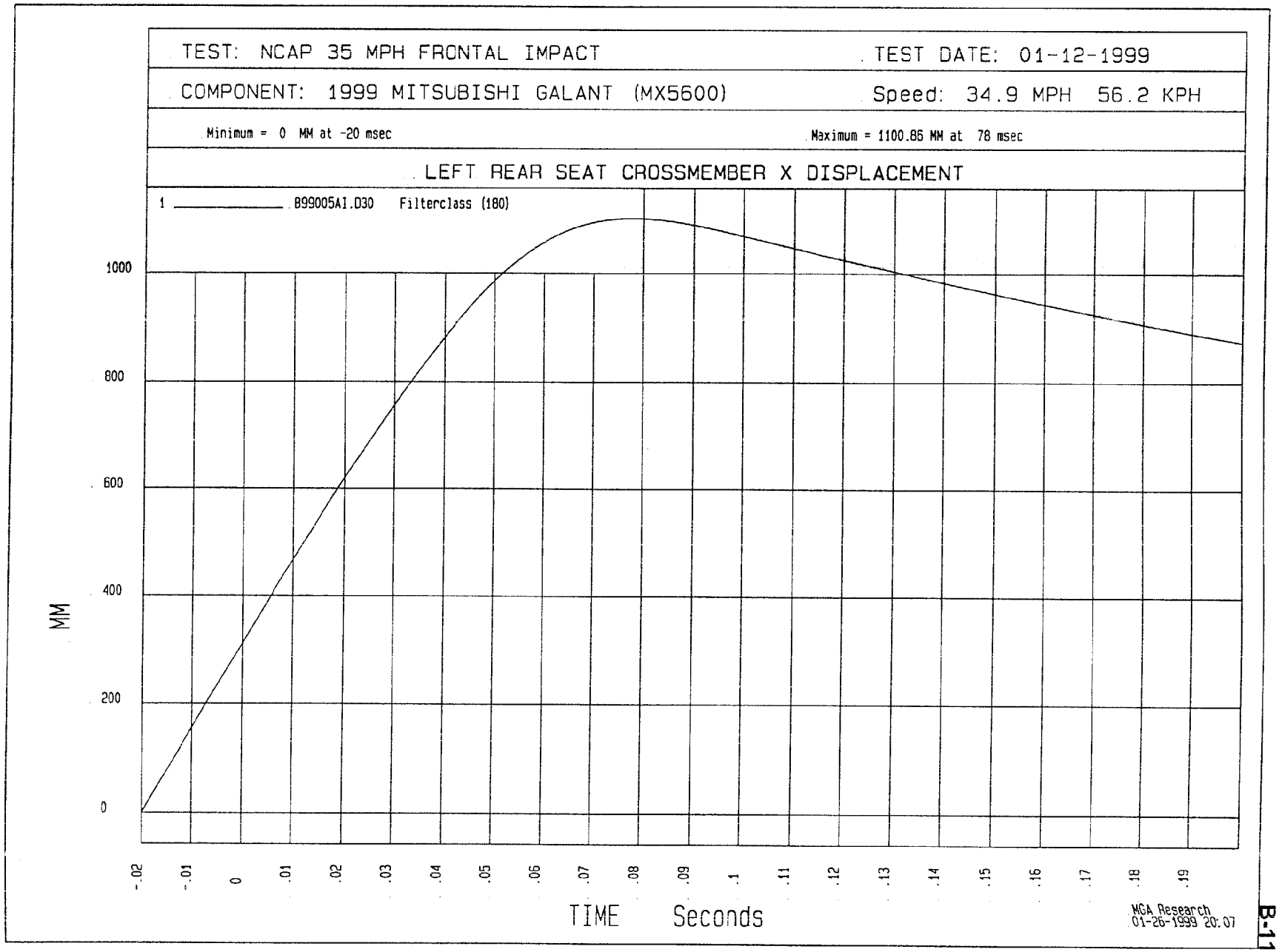

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -45.52 G'S at 58 msec
Maximum = 7.13 G'S at 66 msec
PASSENGER RIGHT HEEL Z ACCELERATION
1 C99005AF.A09 Filterclass (180)
0
-10
-20
-30
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
01-26-1999 20:26


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -45.51 N at 186 msec
Maximum = 4095.77 N at 61 msec
PASSENGER SHOULDER BELT FORCE
1 B99005FF.F62 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
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -22.4 N at -20 msec
Maximum = 7172.62 N at 67 msec
PASSENGER LAP BELT FORCE
1 B99005FF.F63 Filterclass (60)
7000
6000
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
.18
.19
TIME (SECONDS)
MGA Research
01-12-1999 17:24


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -40.19 G'S at 52 msec
Maximum = 4.22 G'S at 116 msec
LEFT REAR SEAT CROSSMEMBER X ACCELERATION
1 B99005AF.A30 Filterclass (60)
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
01-26-1999 20:07


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -8.15 KPH at 110 msec
Maximum = 56.25 KPH at 9 msec
LEFT REAR SEAT CROSSMEMBER X VELOCITY
1 B99005AI.V30 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
01-26-1999 20:07


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 1100.86 MM at 78 msec
LEFT REAR SEAT CROSSMEMBER X DISPLACEMENT
1 B99005AI.D30 Filterclass (180)
MM
1000
800
600
400
200
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
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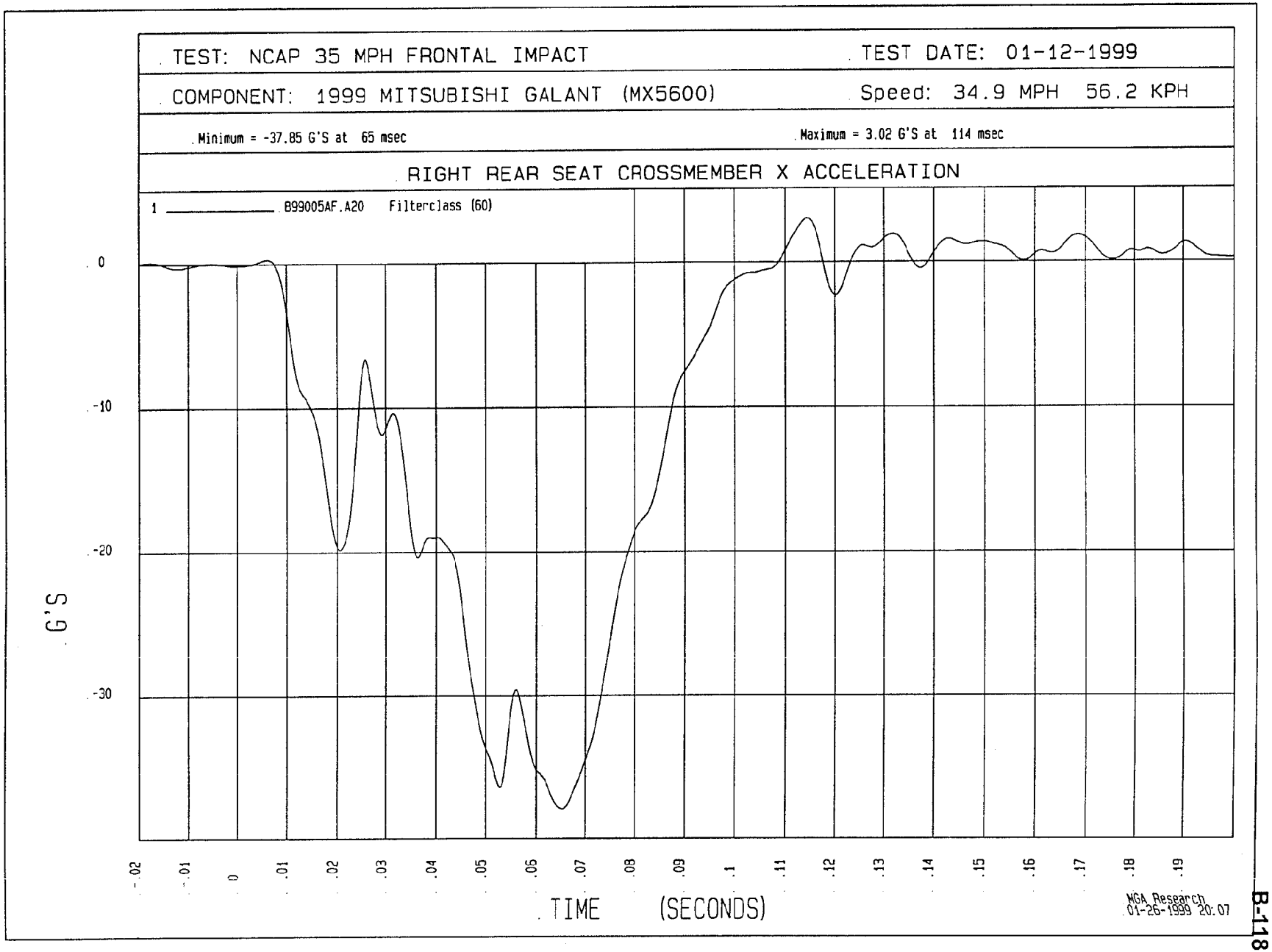
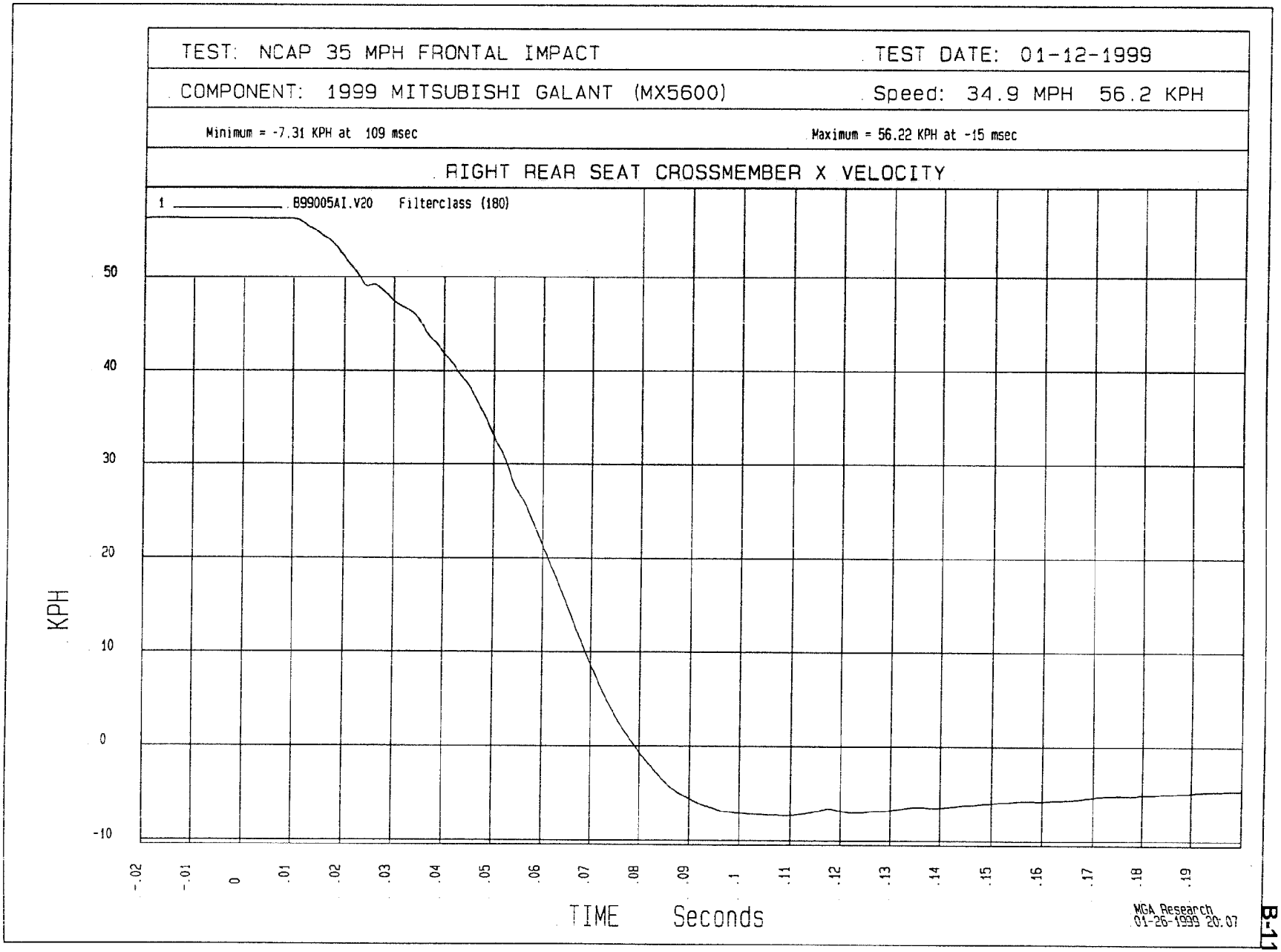
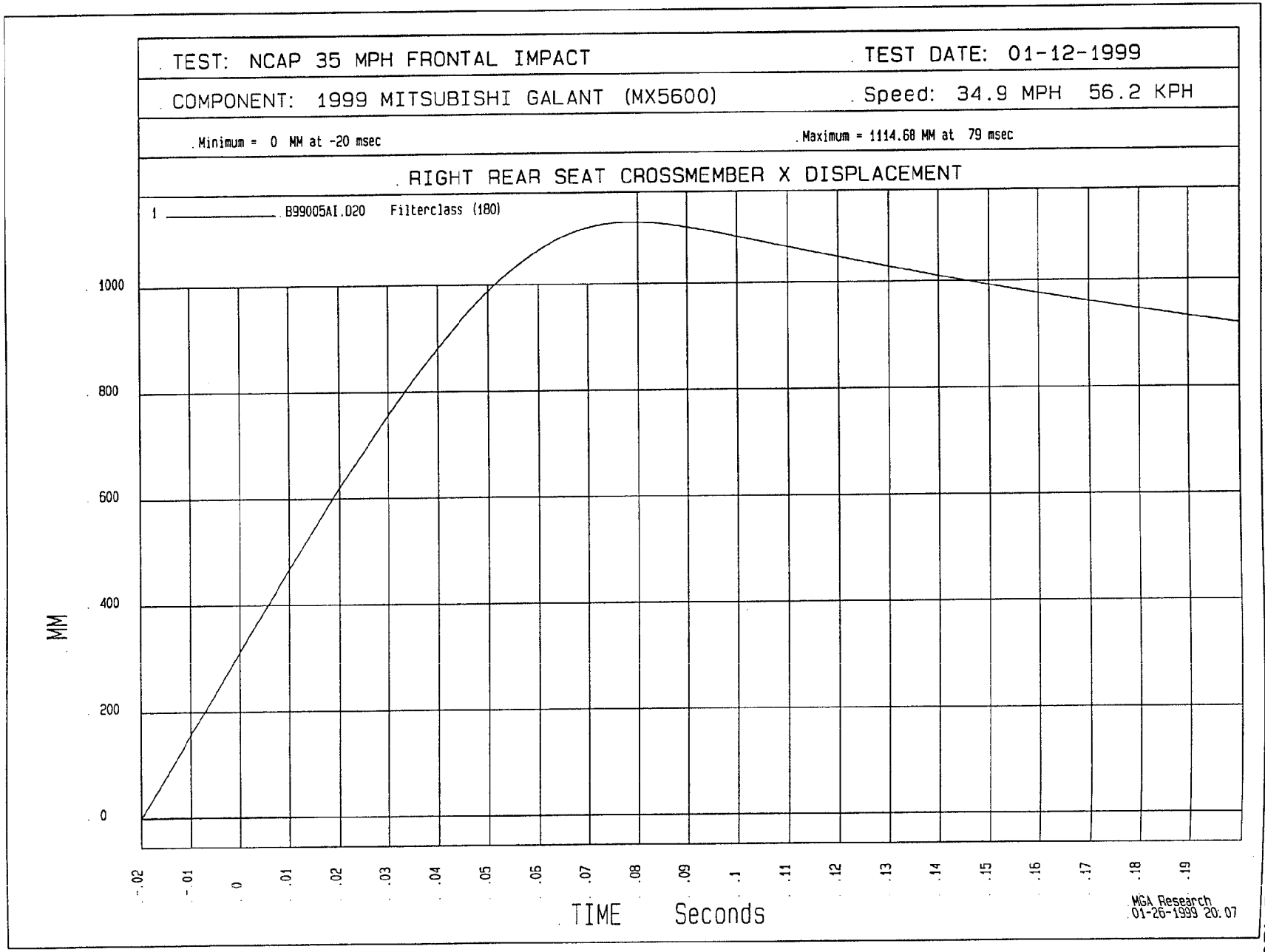
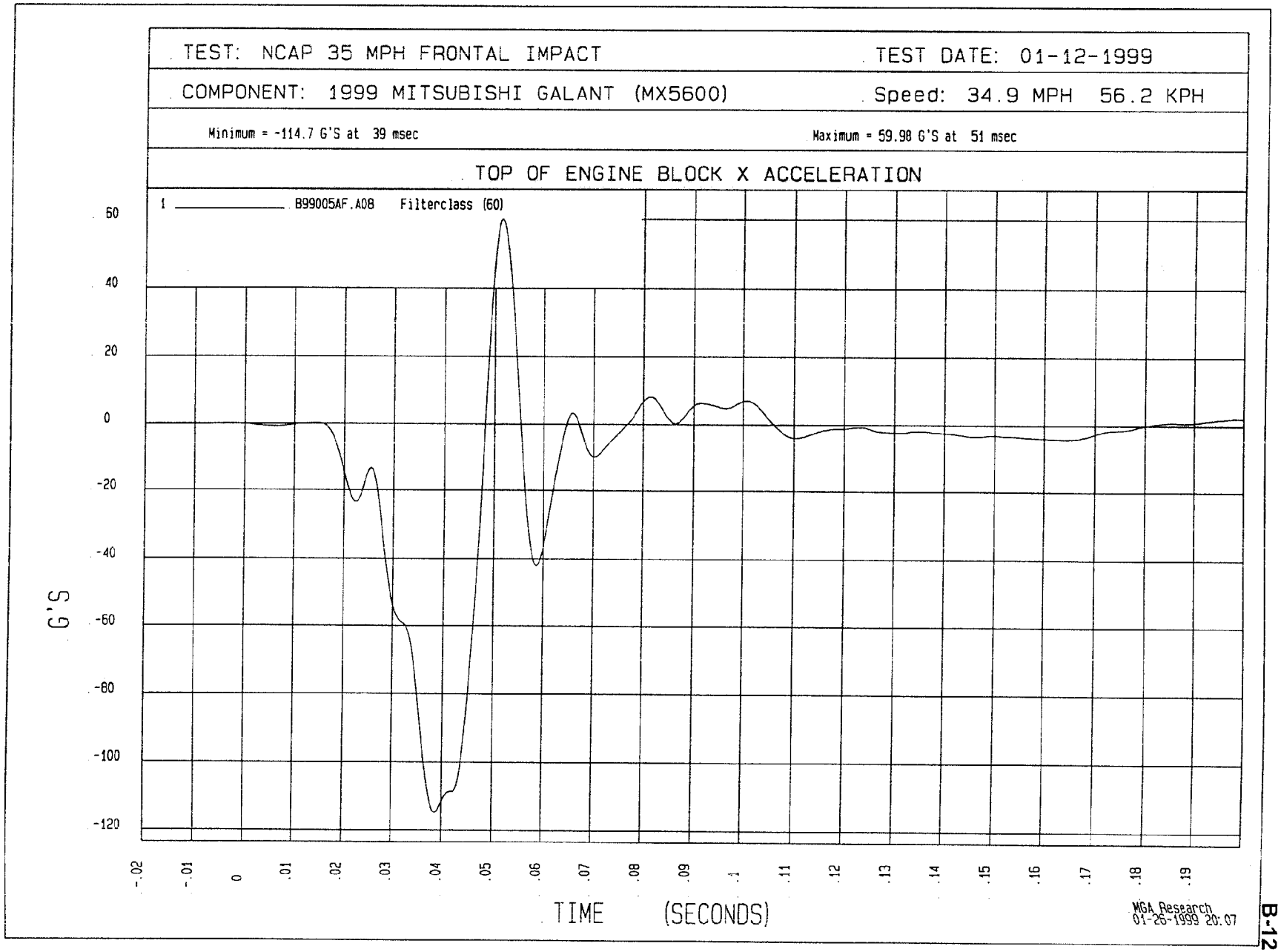
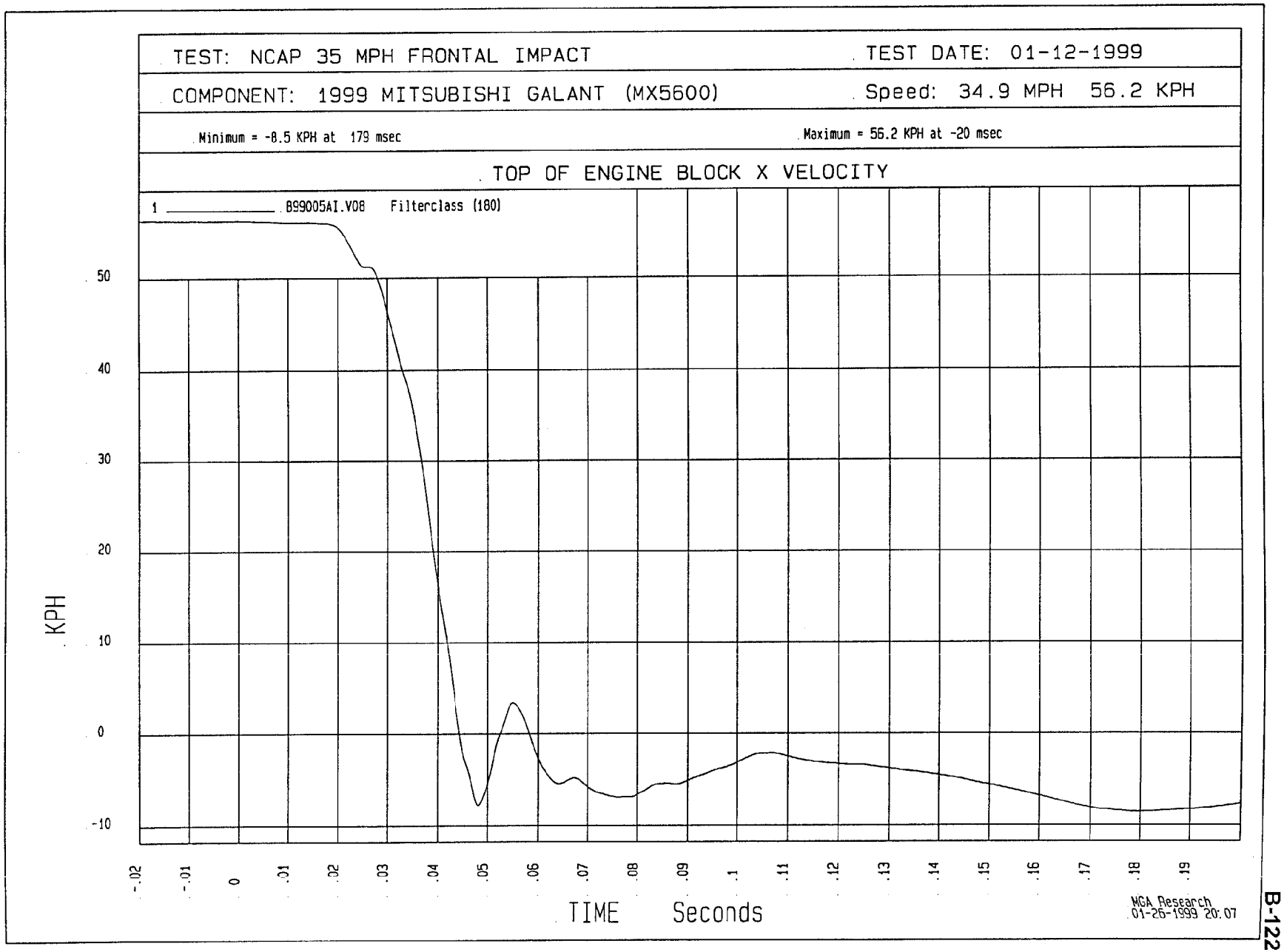
.19
TIME Seconds
MGA Research
01-26-1999 20:07

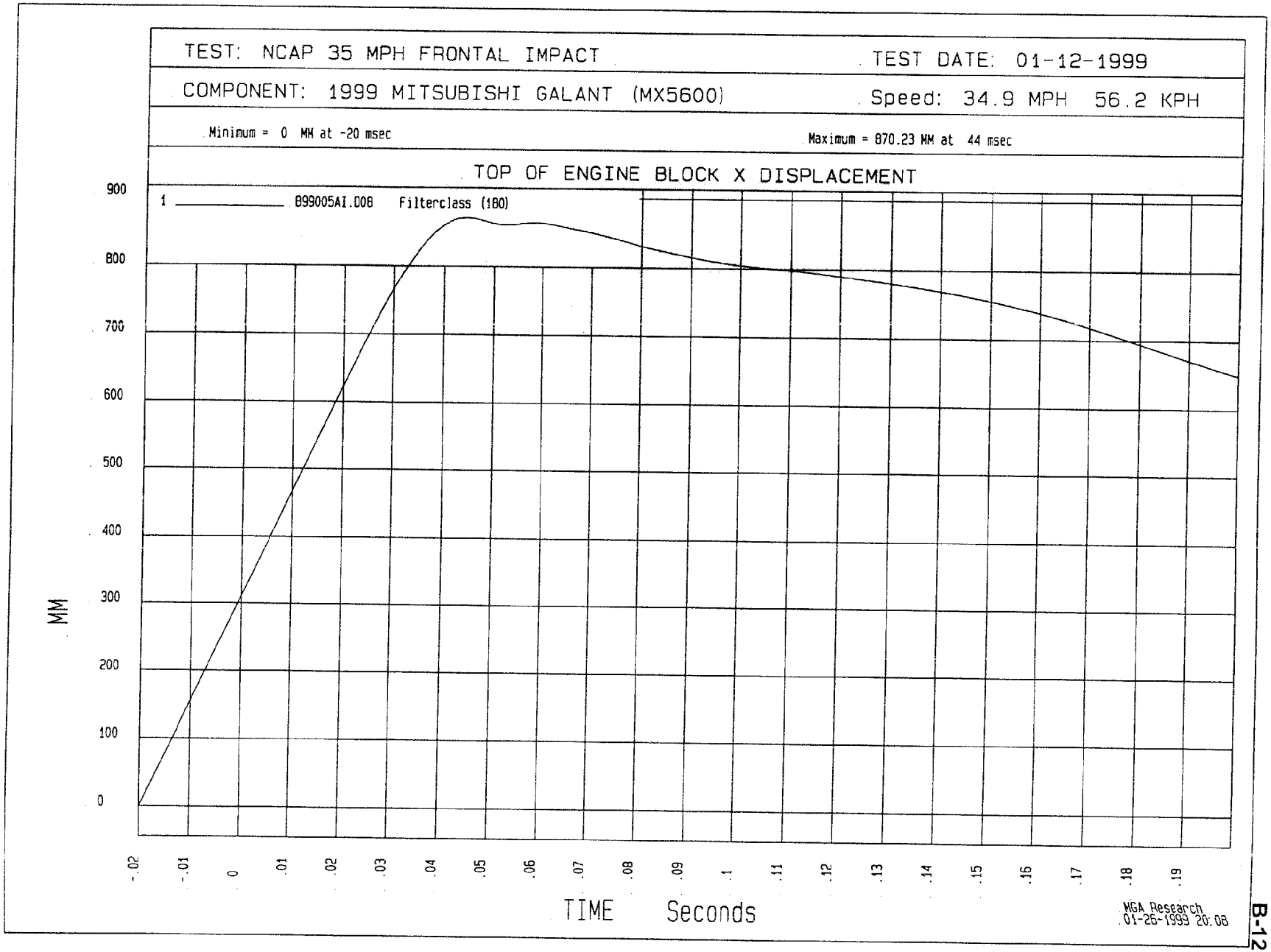

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -37.85 G'S at 65 msec
Maximum = 3.02 G'S at 114 msec
RIGHT REAR SEAT CROSSMEMBER X ACCELERATION
1 B99005AF.A20 Filterclass (60)
0
-10
-20
-30
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 20:07

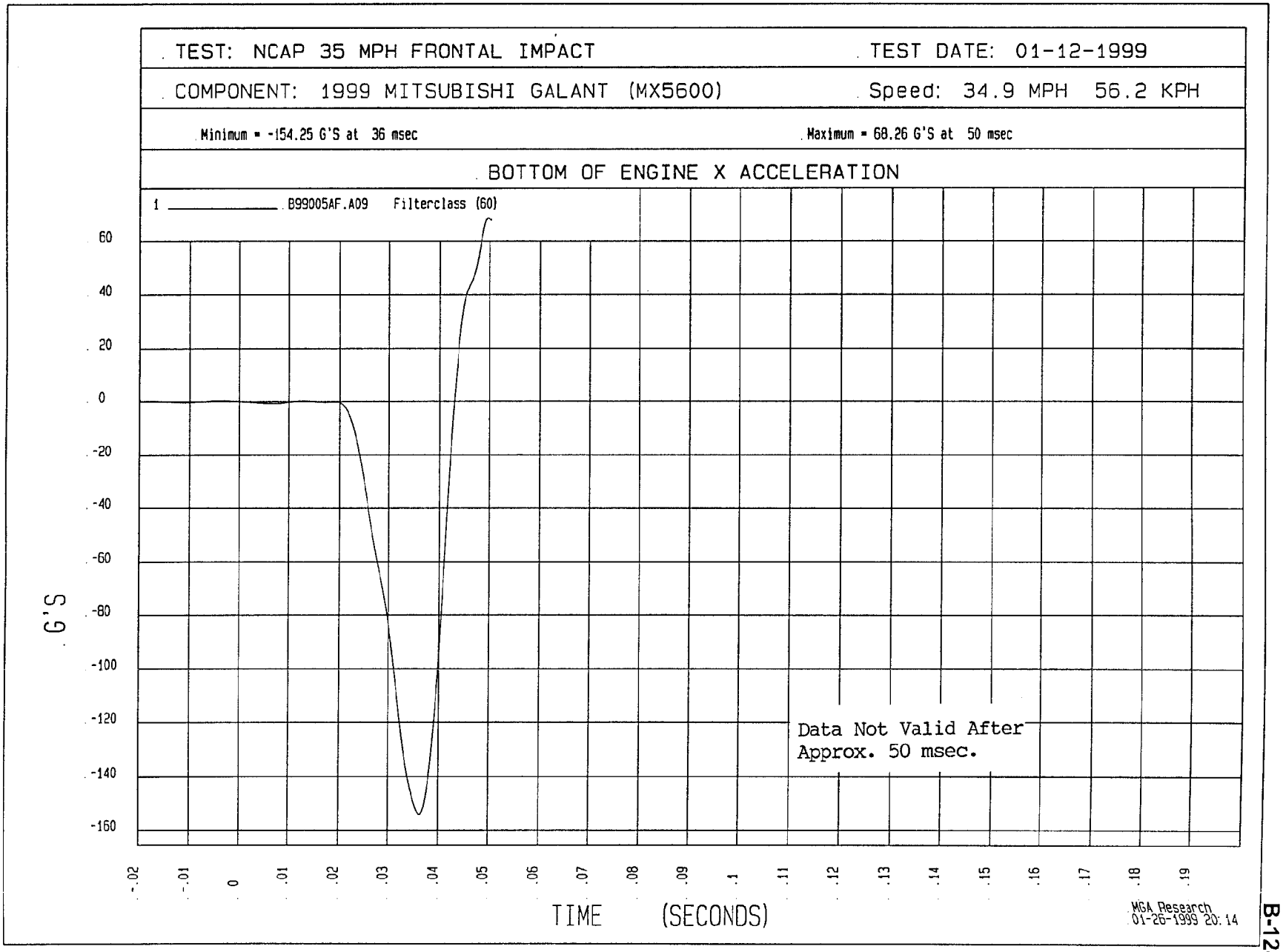

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -7.31 KPH at 109 msec
Maximum = 56.22 KPH at -15 msec
RIGHT REAR SEAT CROSSMEMBER X VELOCITY
1 B99005AI.V20 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:07

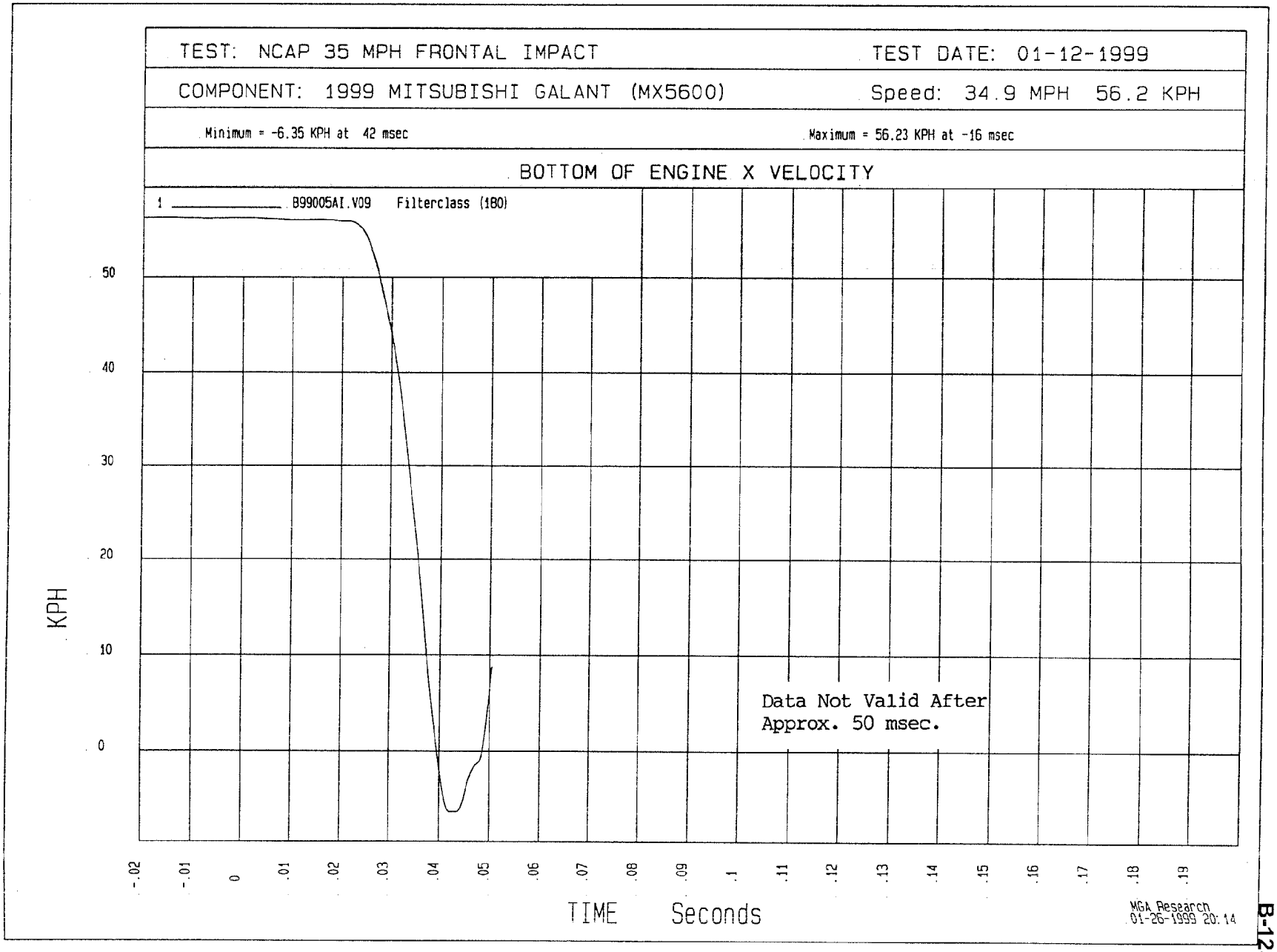

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 1114.68 MM at 79 msec
RIGHT REAR SEAT CROSSMEMBER X DISPLACEMENT
1 B99005AI.D20 Filterclass (180)
MM
1000
800
600
400
200
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:07

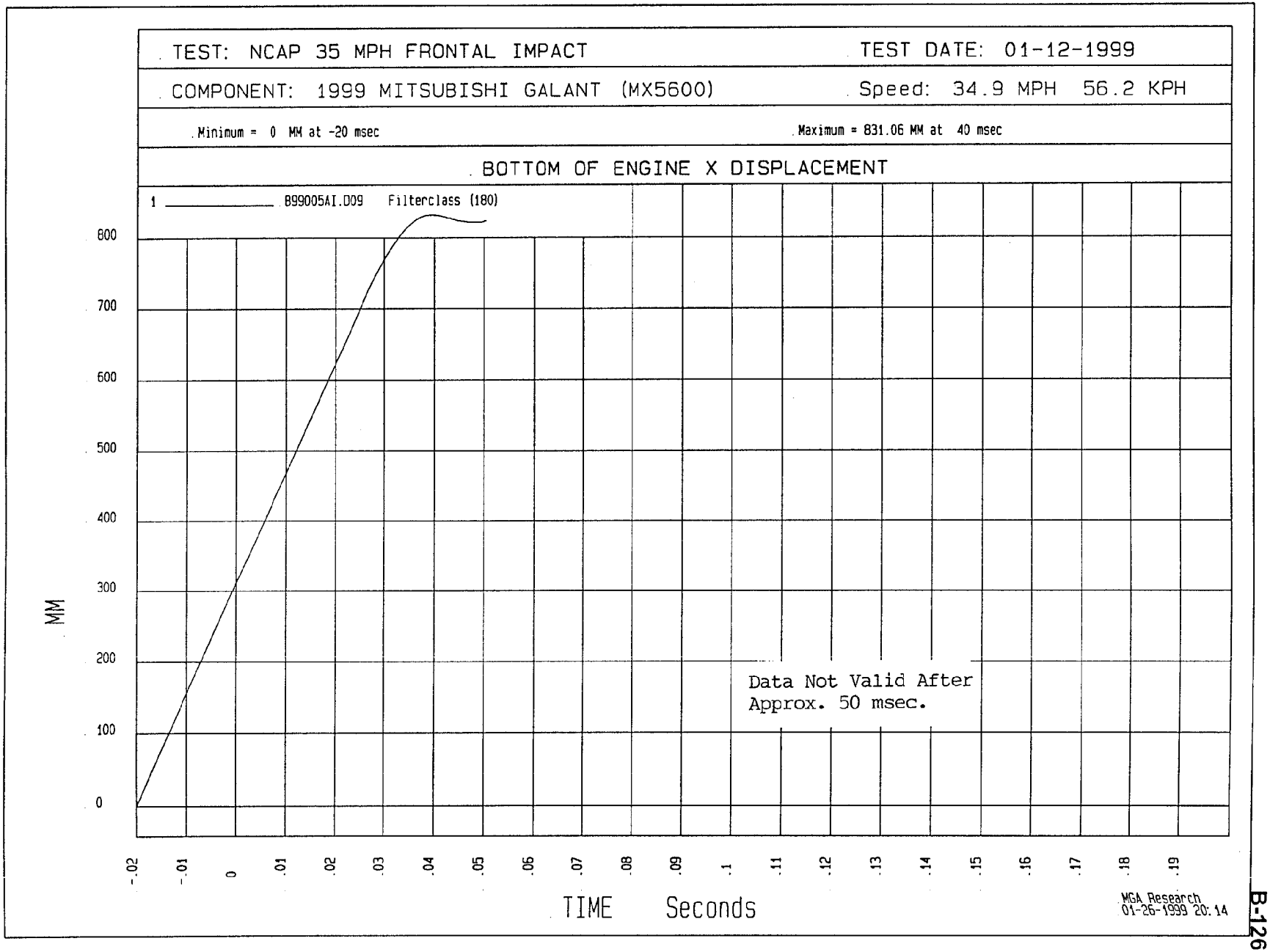

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -114.7 G'S at 39 msec
Maximum = 59.98 G'S at 51 msec
TOP OF ENGINE BLOCK X ACCELERATION
1 B99005AF.A08 Filterclass (60)
60
40
20
0
-20
-40
-60
-80
-100
-120
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 20:07

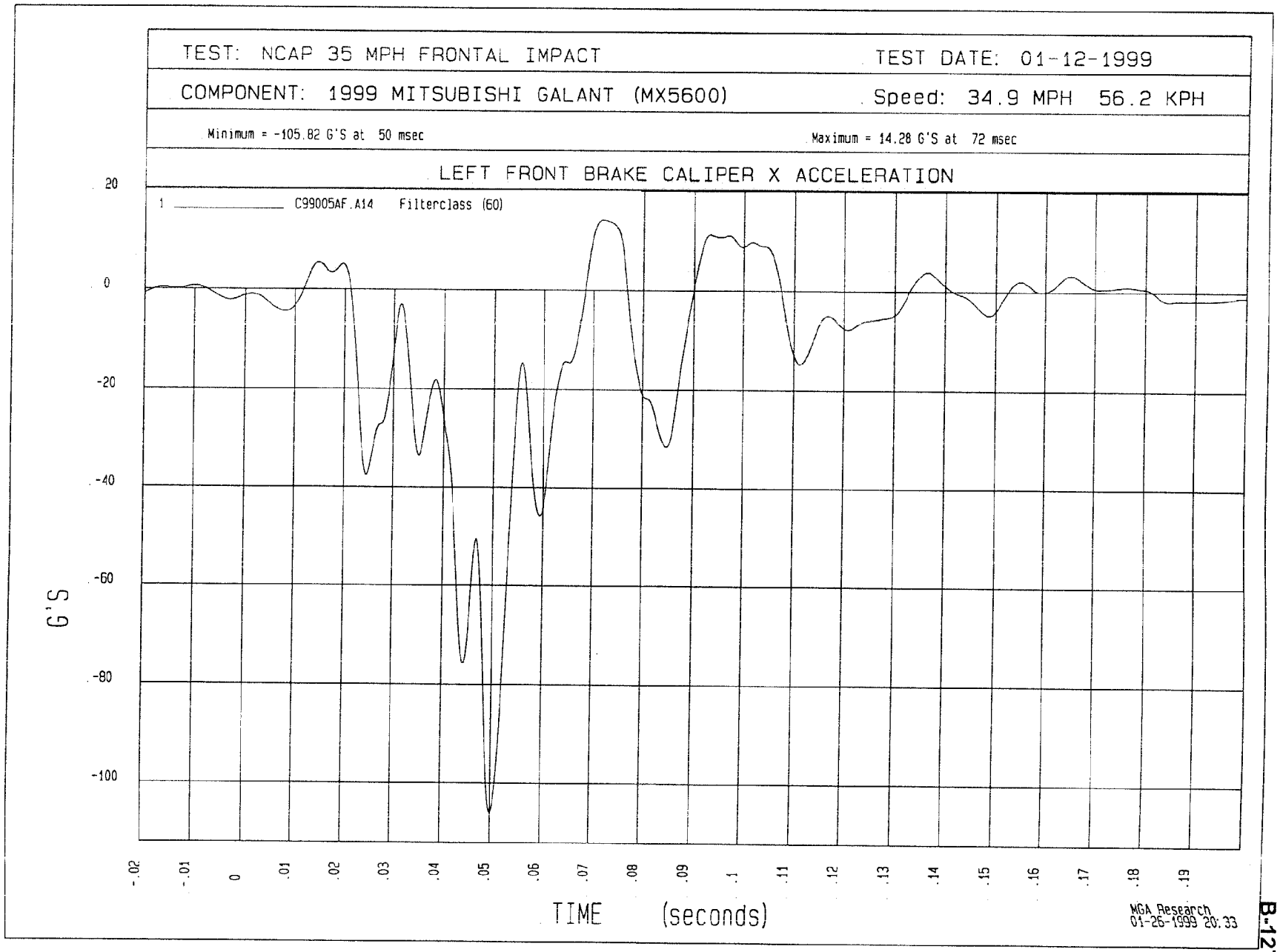

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -8.5 KPH at 179 msec
Maximum = 56.2 KPH at -20 msec
TOP OF ENGINE BLOCK X VELOCITY
1 B99005AI.V08 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
NGA Research
01-26-1999 20:07

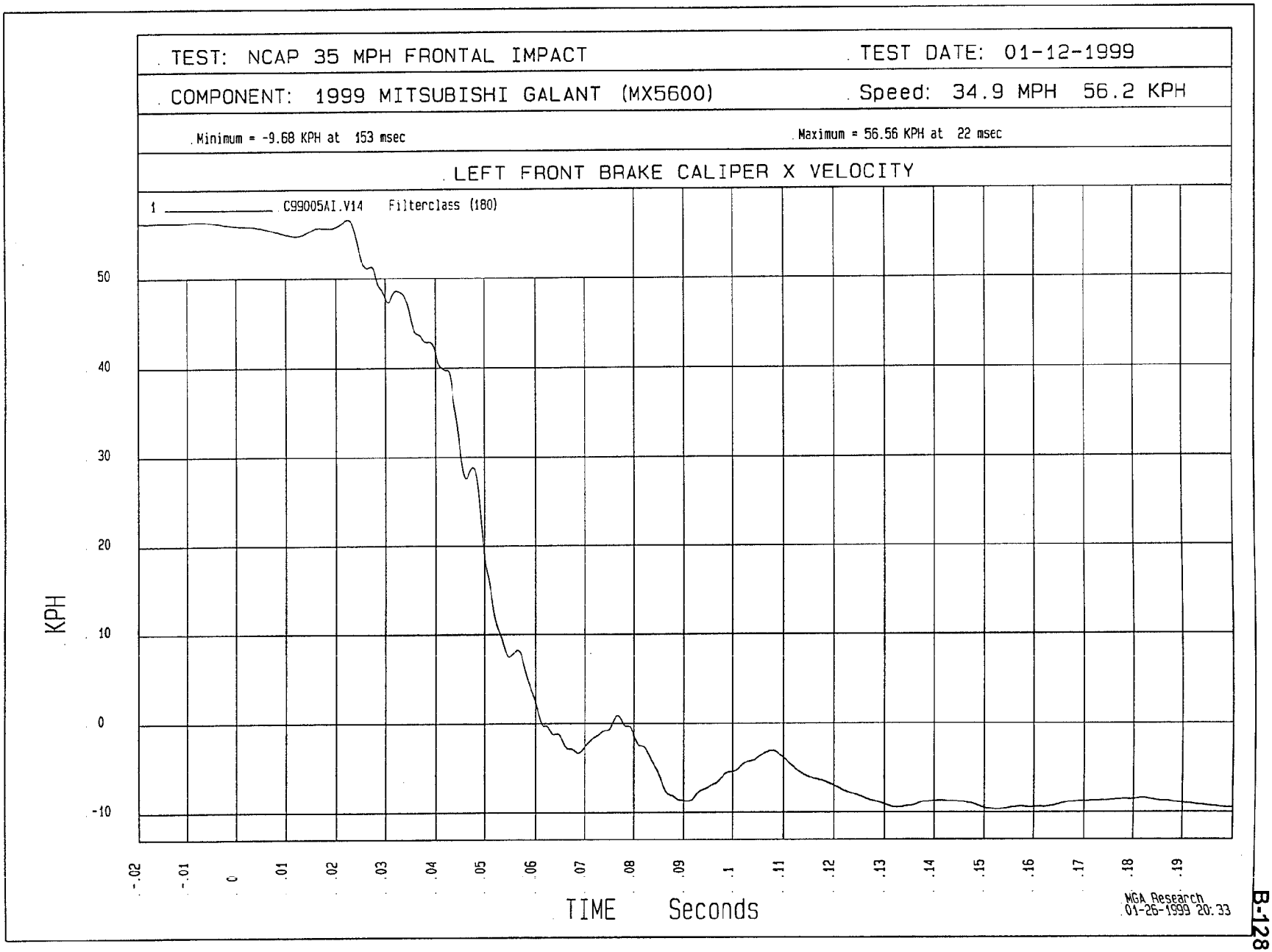

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 870.23 MM at 44 msec
TOP OF ENGINE BLOCK X DISPLACEMENT
1 B99005AI.008 Filterclass (180)
MM
900
800
700
600
500
400
300
200
100
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
NGA Research
01-26-1999 20:06

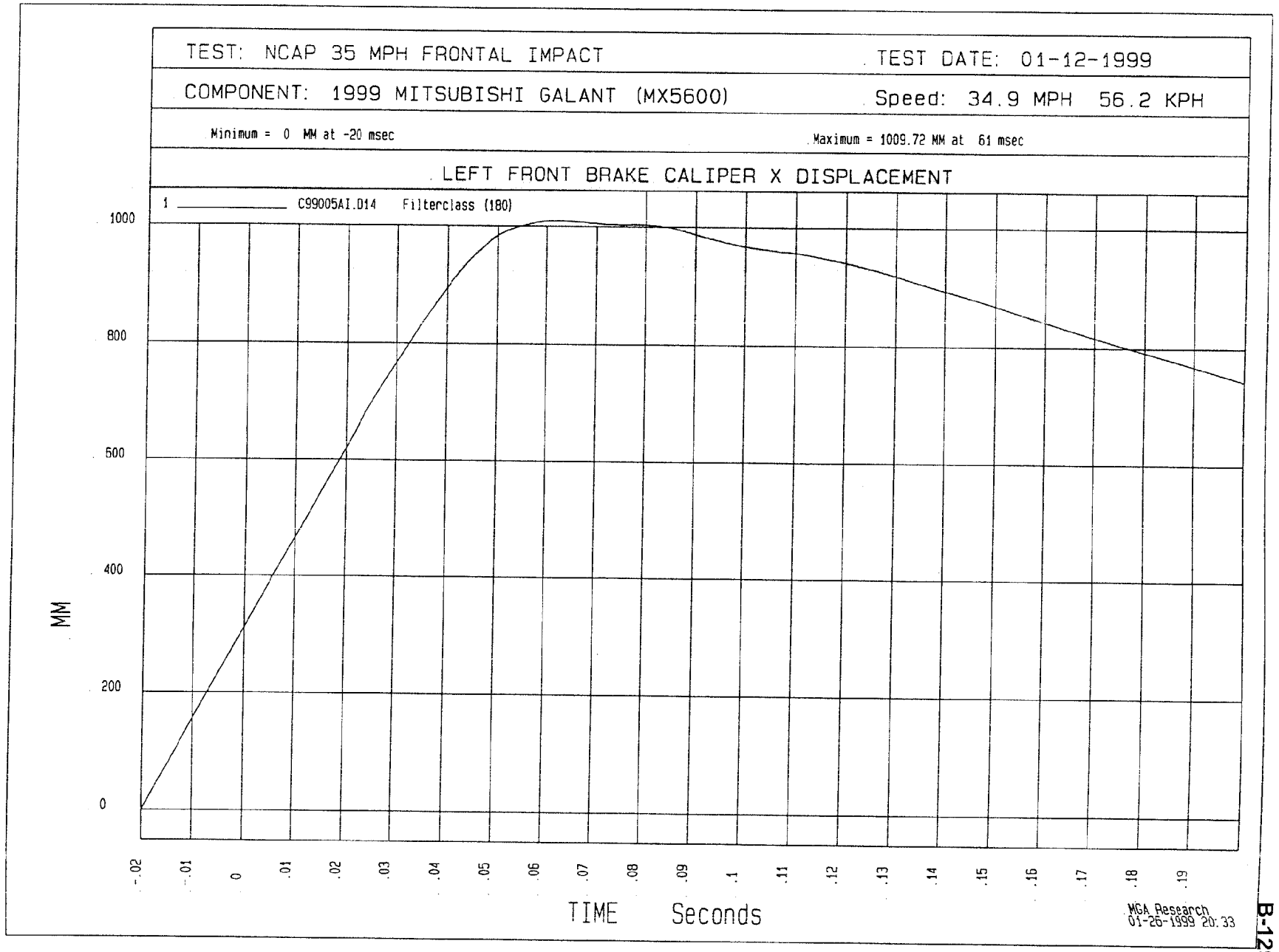

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -154.25 G'S at 36 msec
Maximum = 68.26 G'S at 50 msec
BOTTOM OF ENGINE X ACCELERATION
1 B99005AF.A09 Filterclass (60)
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
Data Not Valid After
Approx. 50 msec.
MGA Research
01-26-1999 20:14

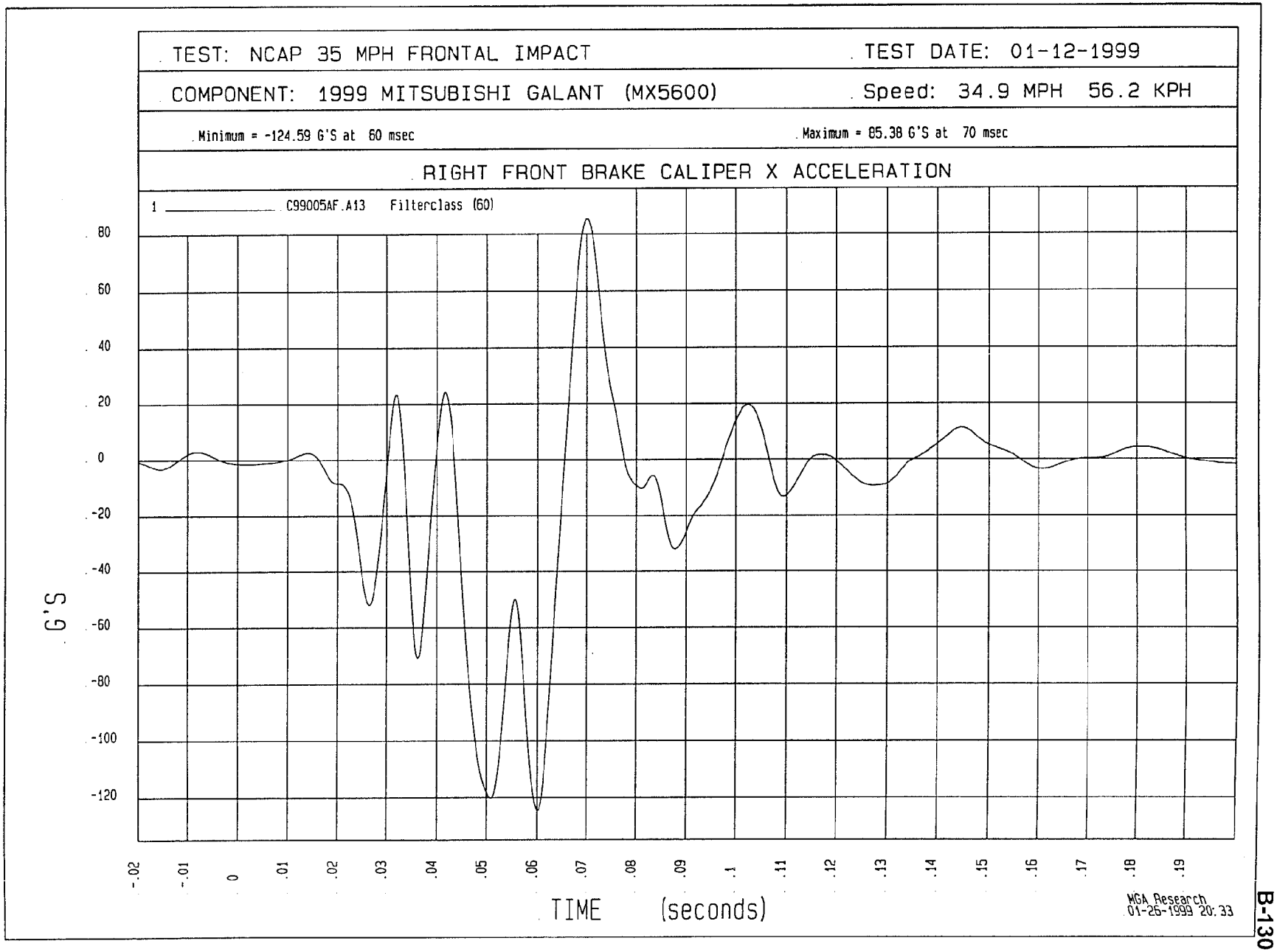

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -6.35 KPH at 42 msec
Maximum = 56.23 KPH at -16 msec
BOTTOM OF ENGINE X VELOCITY
1 B99005AI.V09 Filterclass (180)
KPH
50
40
30
20
10
0
Data Not Valid After
Approx. 50 msec.
-.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
01-26-1999 20:14

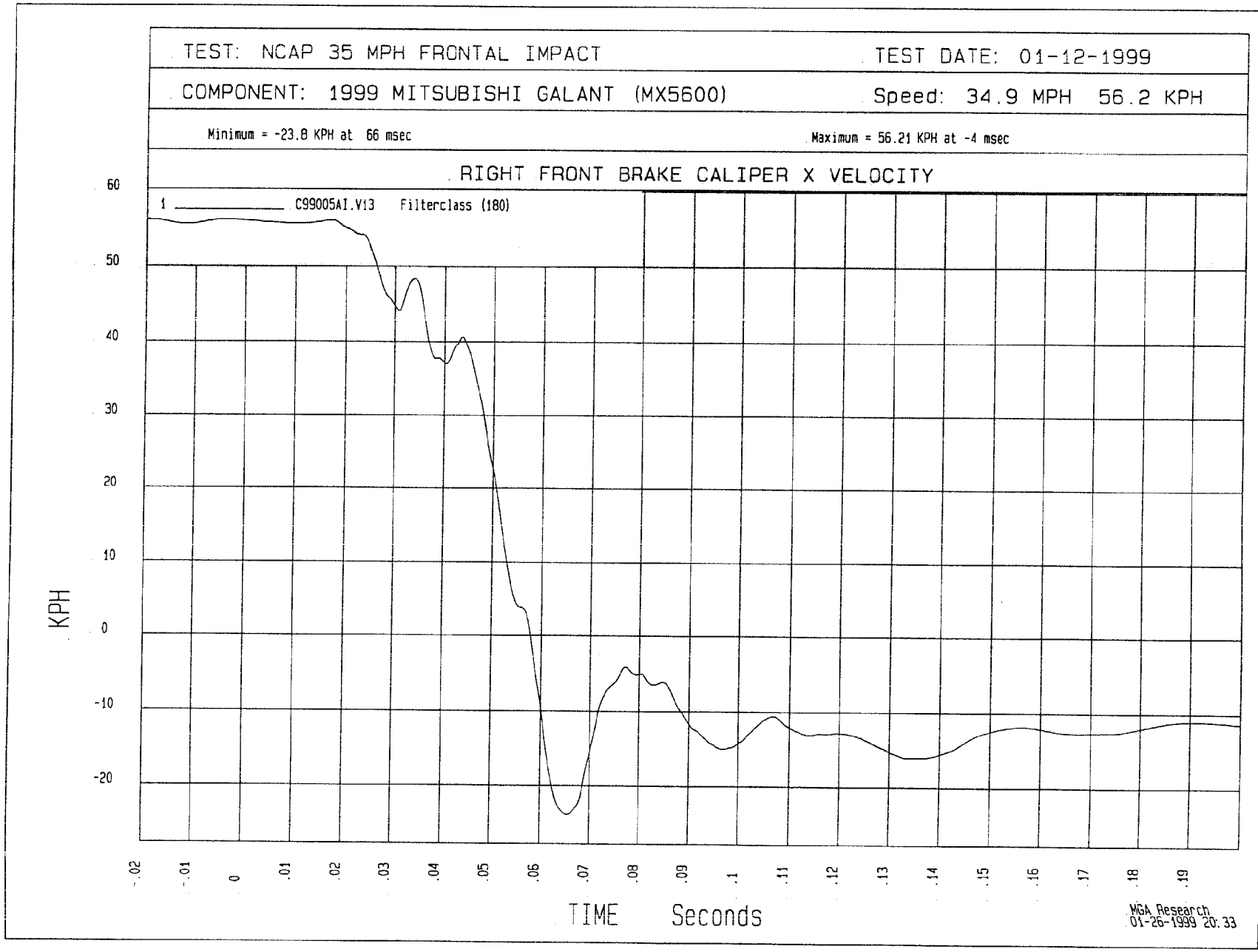

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 831.06 MM at 40 msec
BOTTOM OF ENGINE X DISPLACEMENT
1 B99005AI.D09 Filterclass (180)
MM
800
700
600
500
400
300
200
100
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
Data Not Valid After
Approx. 50 msec.
MGA Research
01-26-1999 20:14

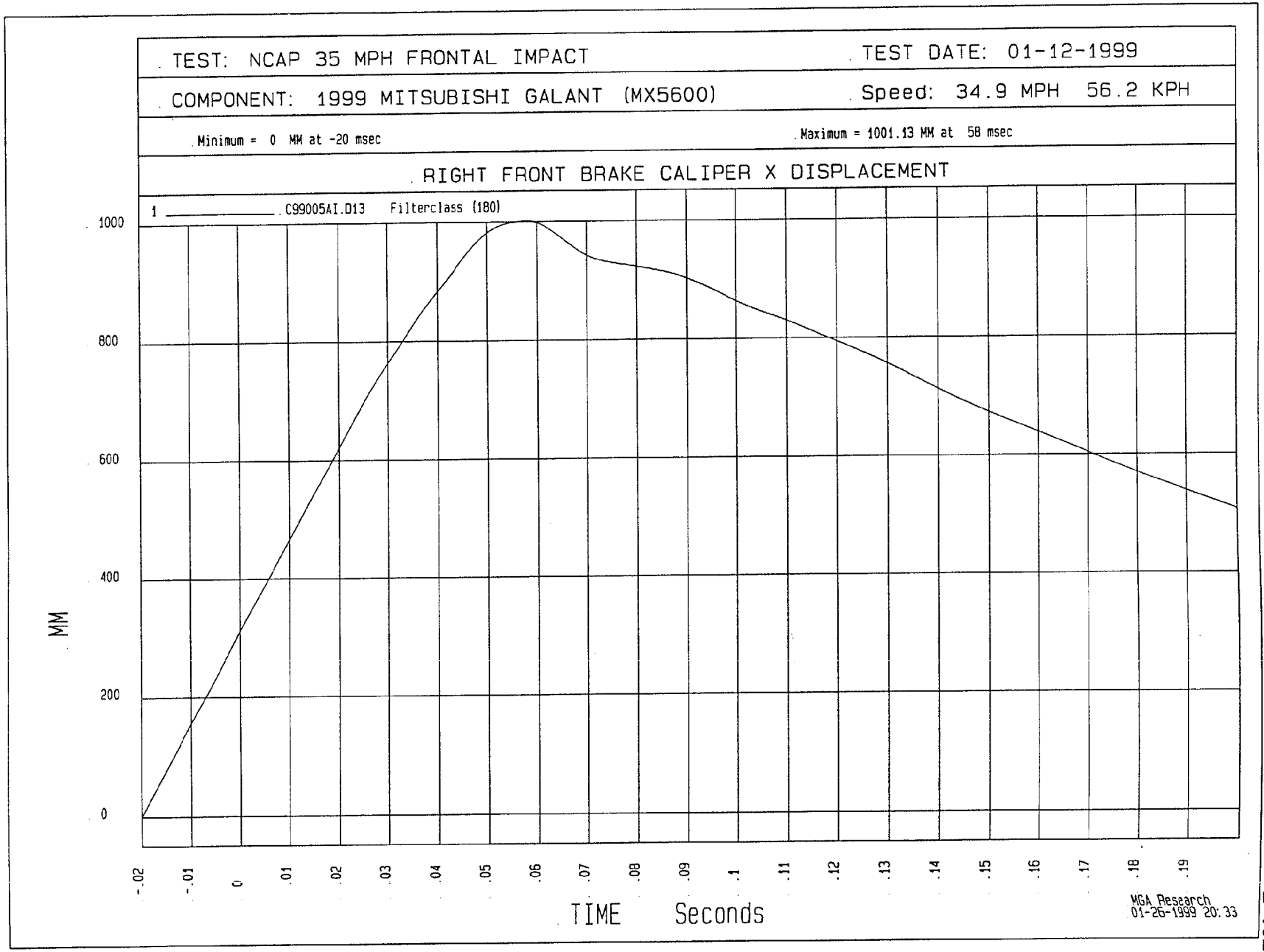

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -105.82 G'S at 50 msec
Maximum = 14.28 G'S at 72 msec
LEFT FRONT BRAKE CALIPER X ACCELERATION
1 C99005AF.A14 Filterclass (60)
20
0
-20
-40
-60
-80
-100
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (seconds)
MGA Research
01-26-1999 20:33

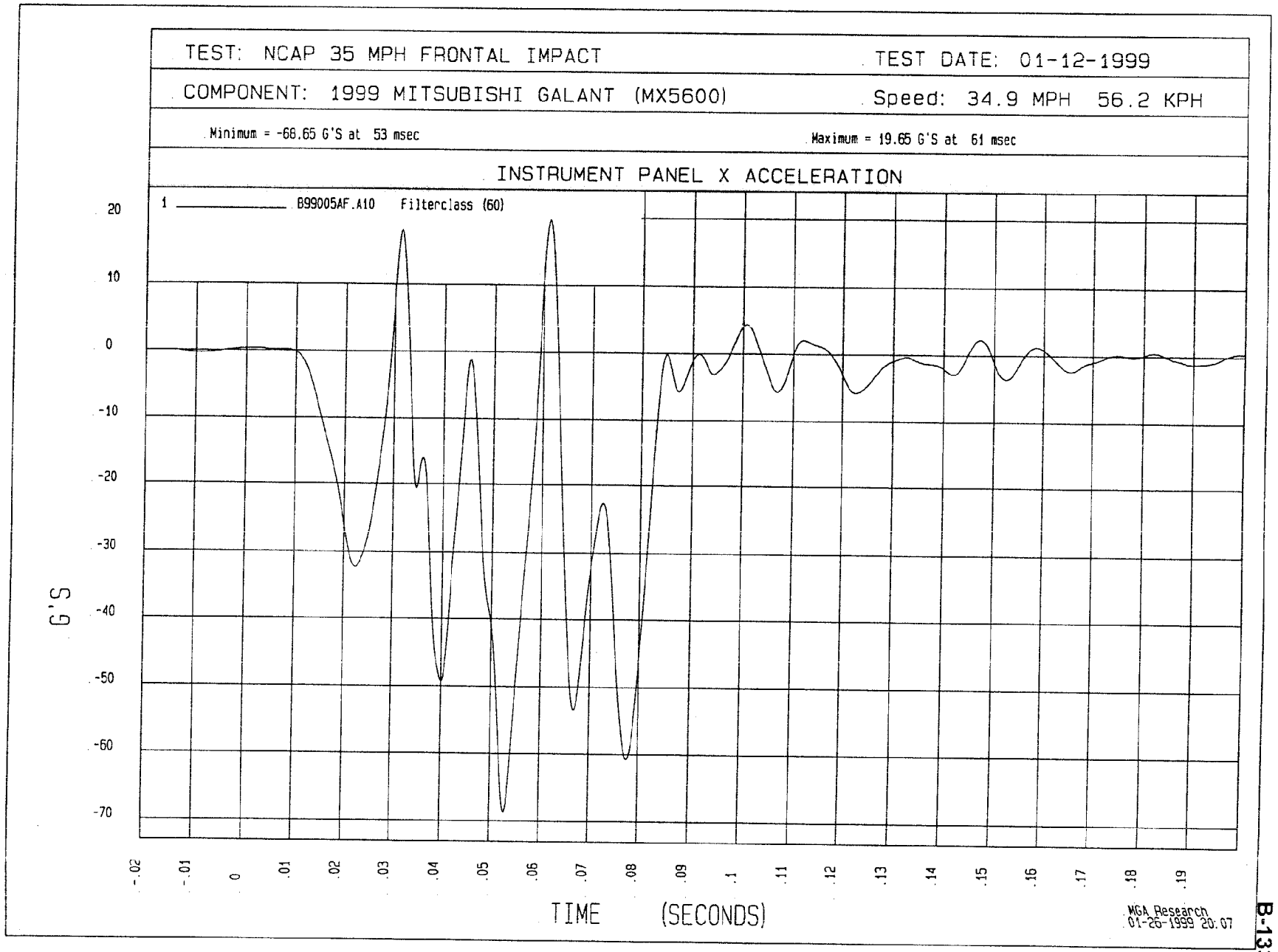

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -9.68 KPH at 153 msec
Maximum = 56.56 KPH at 22 msec
LEFT FRONT BRAKE CALIPER X VELOCITY
1 C99005AI.V14 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:33

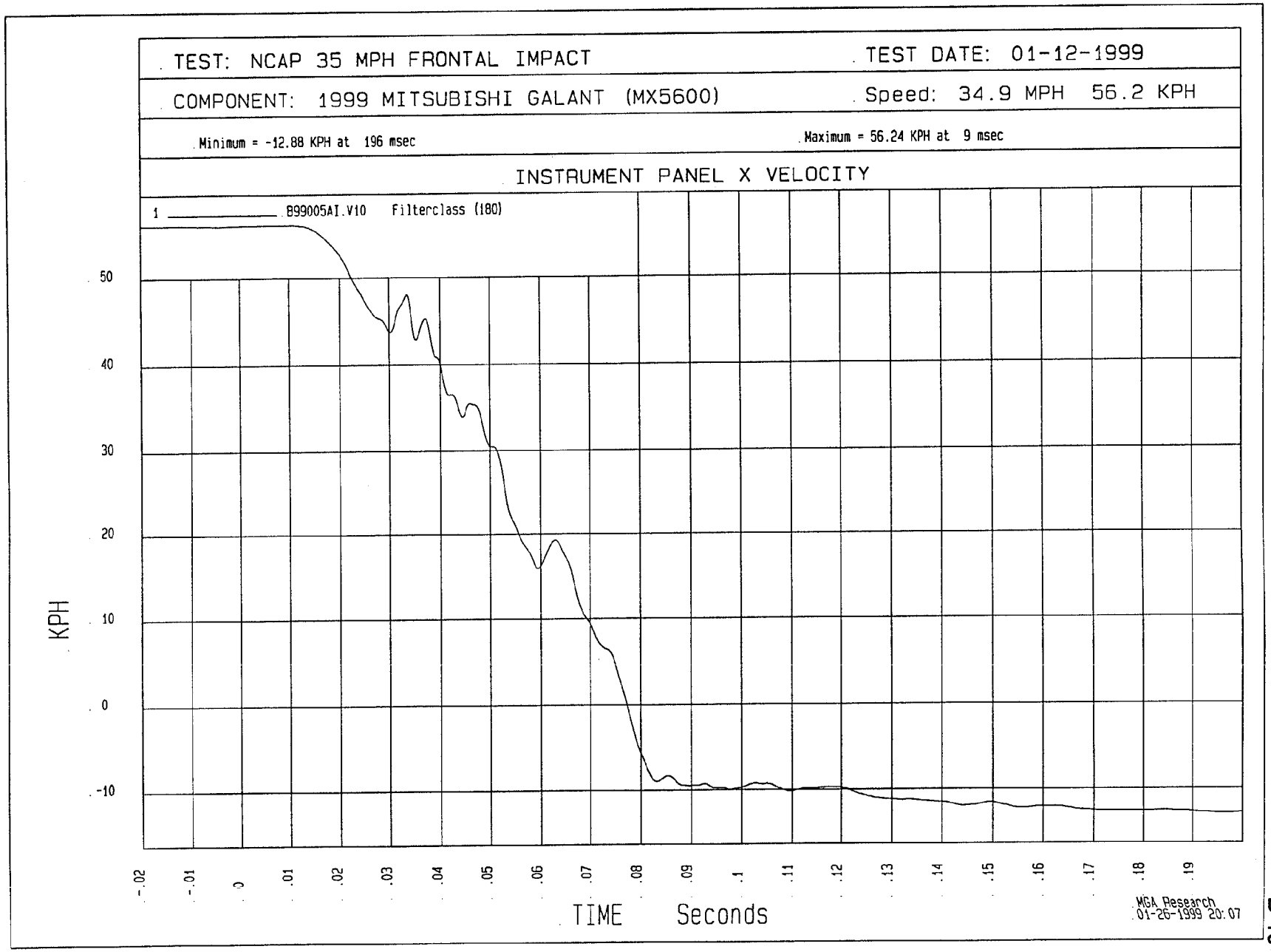

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 1009.72 MM at 61 msec
LEFT FRONT BRAKE CALIPER X DISPLACEMENT
1 C99005AI.D14 Filterclass (180)
MM
1000
800
600
400
200
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:33

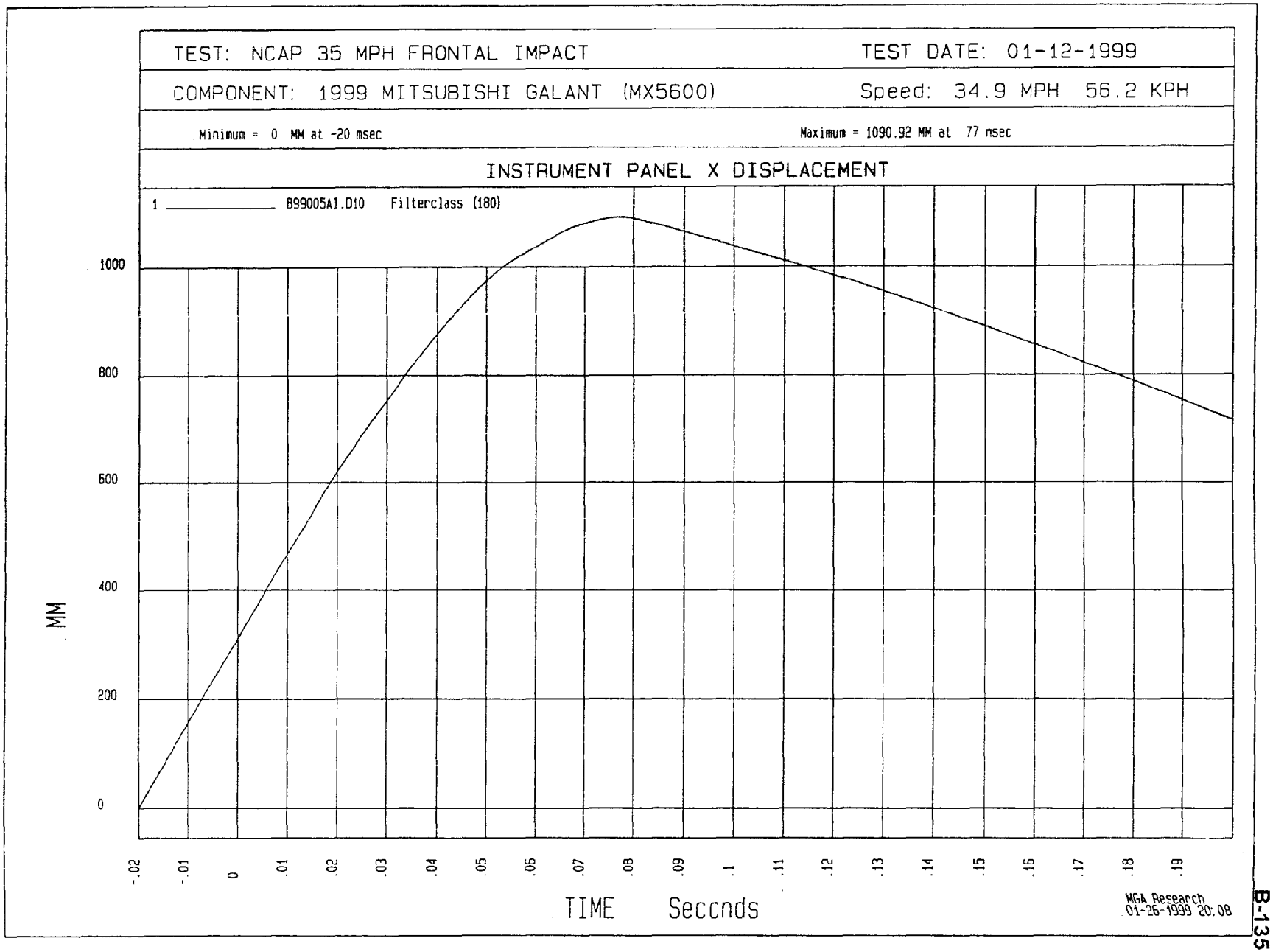

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -124.59 G'S at 60 msec
Maximum = 85.38 G'S at 70 msec
RIGHT FRONT BRAKE CALIPER X ACCELERATION
1 C99005AF.A13 Filterclass (60)
80
60
40
20
0
-20
-40
-60
-80
-100
-120
G'S
-.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
01-26-1999 20:33

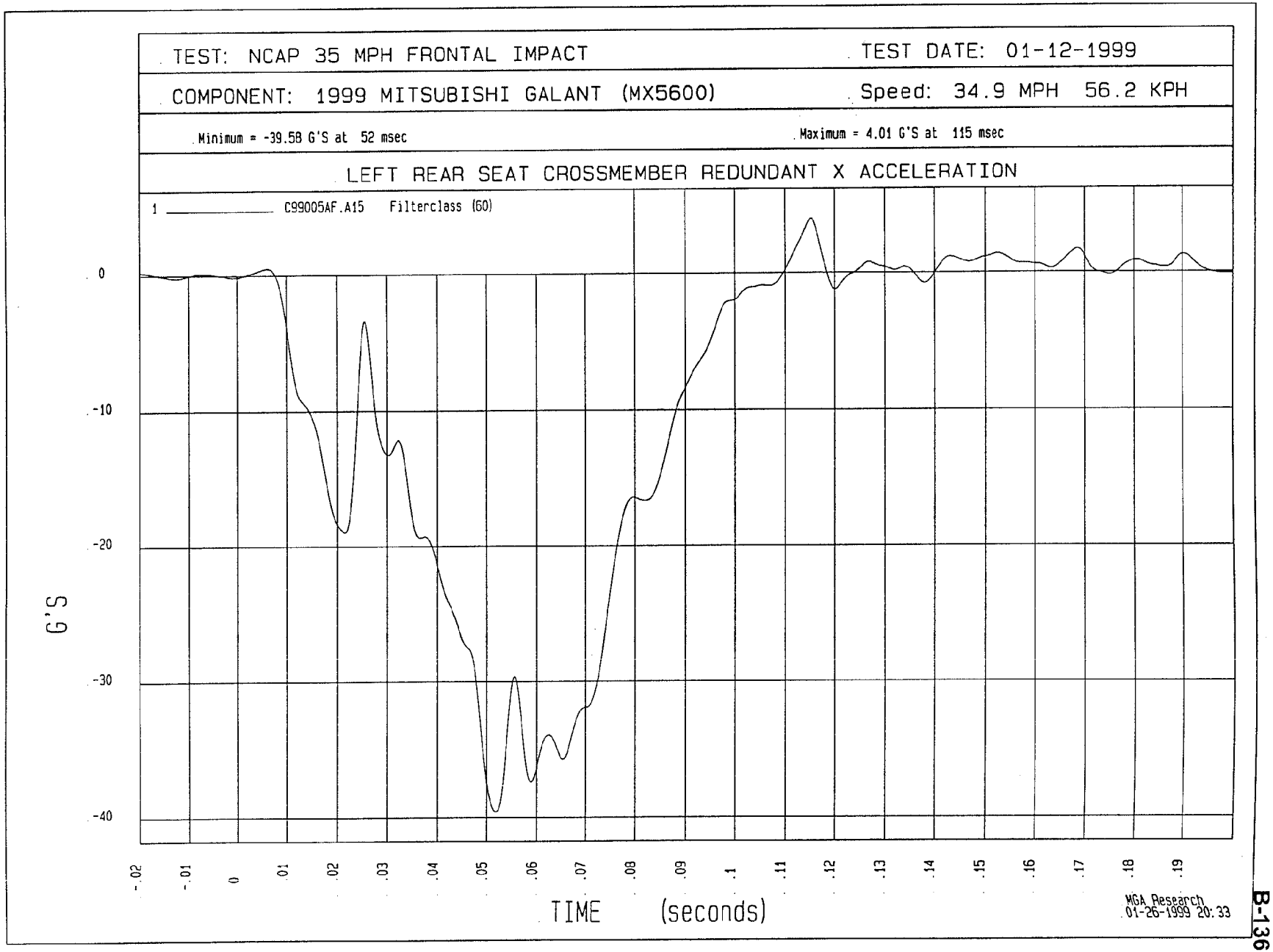

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -23.8 KPH at 66 msec
Maximum = 56.21 KPH at -4 msec
RIGHT FRONT BRAKE CALIPER X VELOCITY
1 C99005AI.V13 Filterclass (180)
KPH
60
50
40
30
20
10
0
-10
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:33

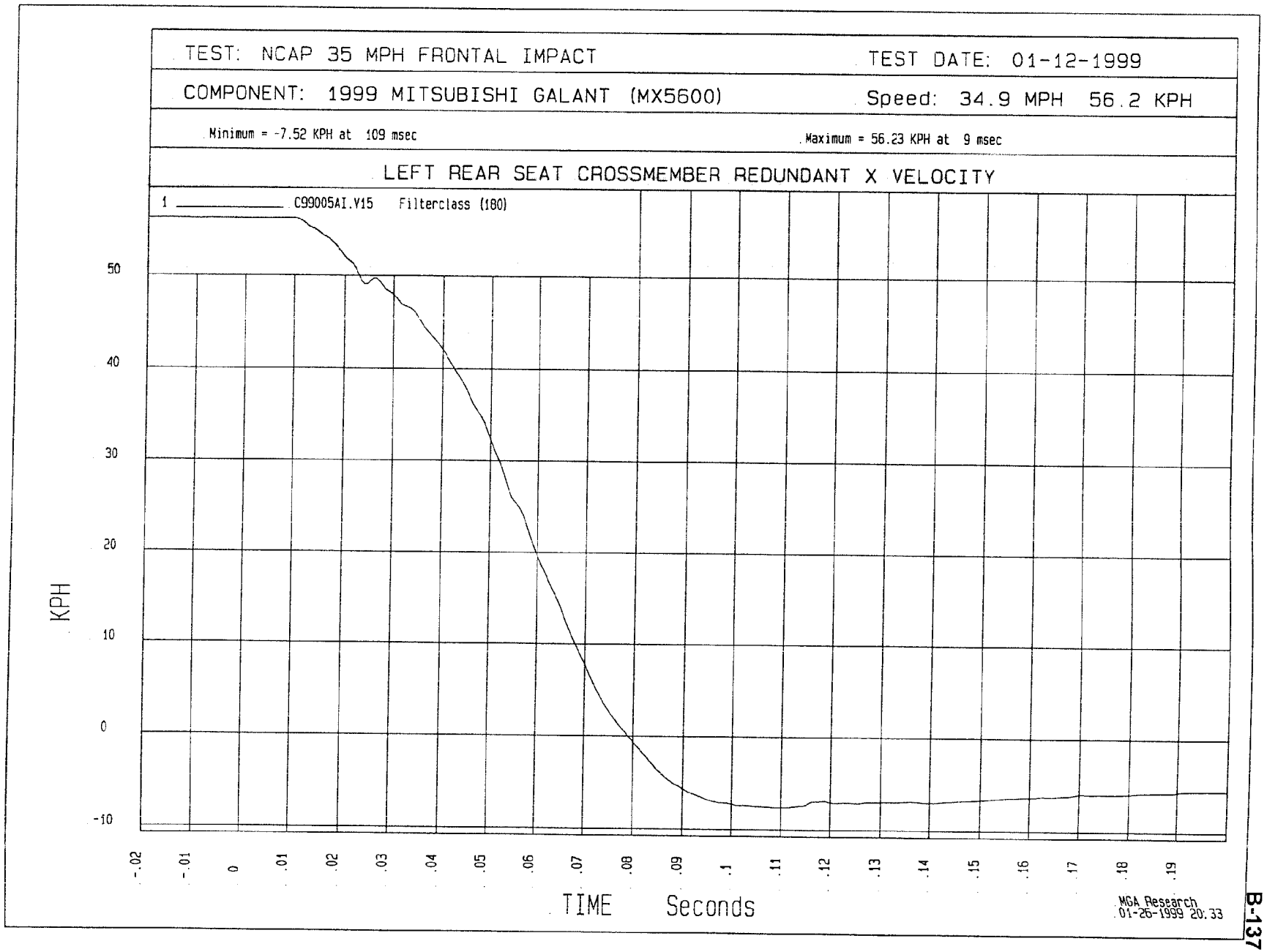

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 1001.13 MM at 58 msec
RIGHT FRONT BRAKE CALIPER X DISPLACEMENT
1 C99005AI.D13 Filterclass (180)
MM
1000
800
600
400
200
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:33

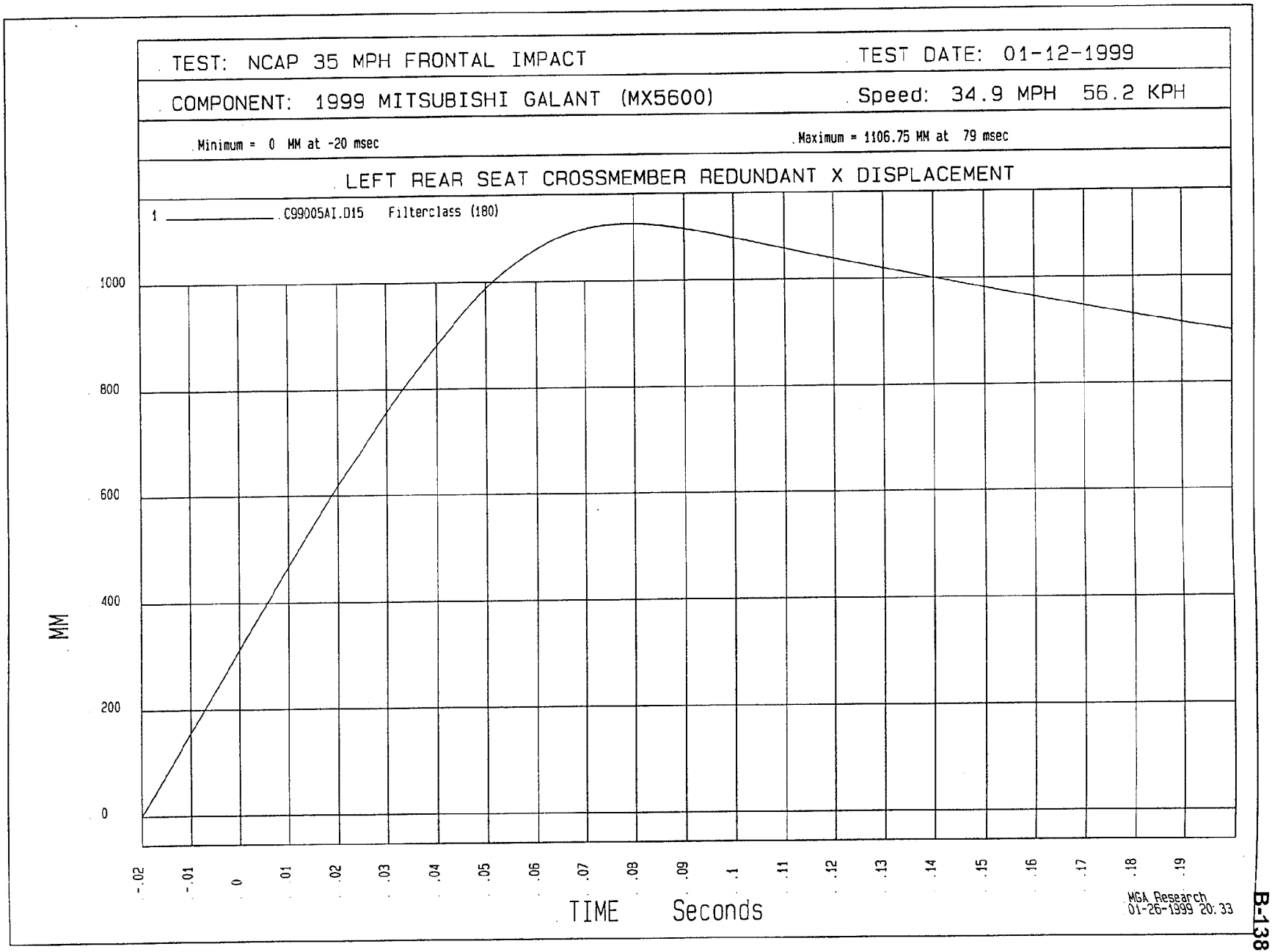

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -68.65 G'S at 53 msec
Maximum = 19.65 G'S at 61 msec
INSTRUMENT PANEL X ACCELERATION
1 B99005AF.A10 Filterclass (60)
20
10
0
-10
-20
-30
-40
-50
-60
-70
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-26-1999 20:07

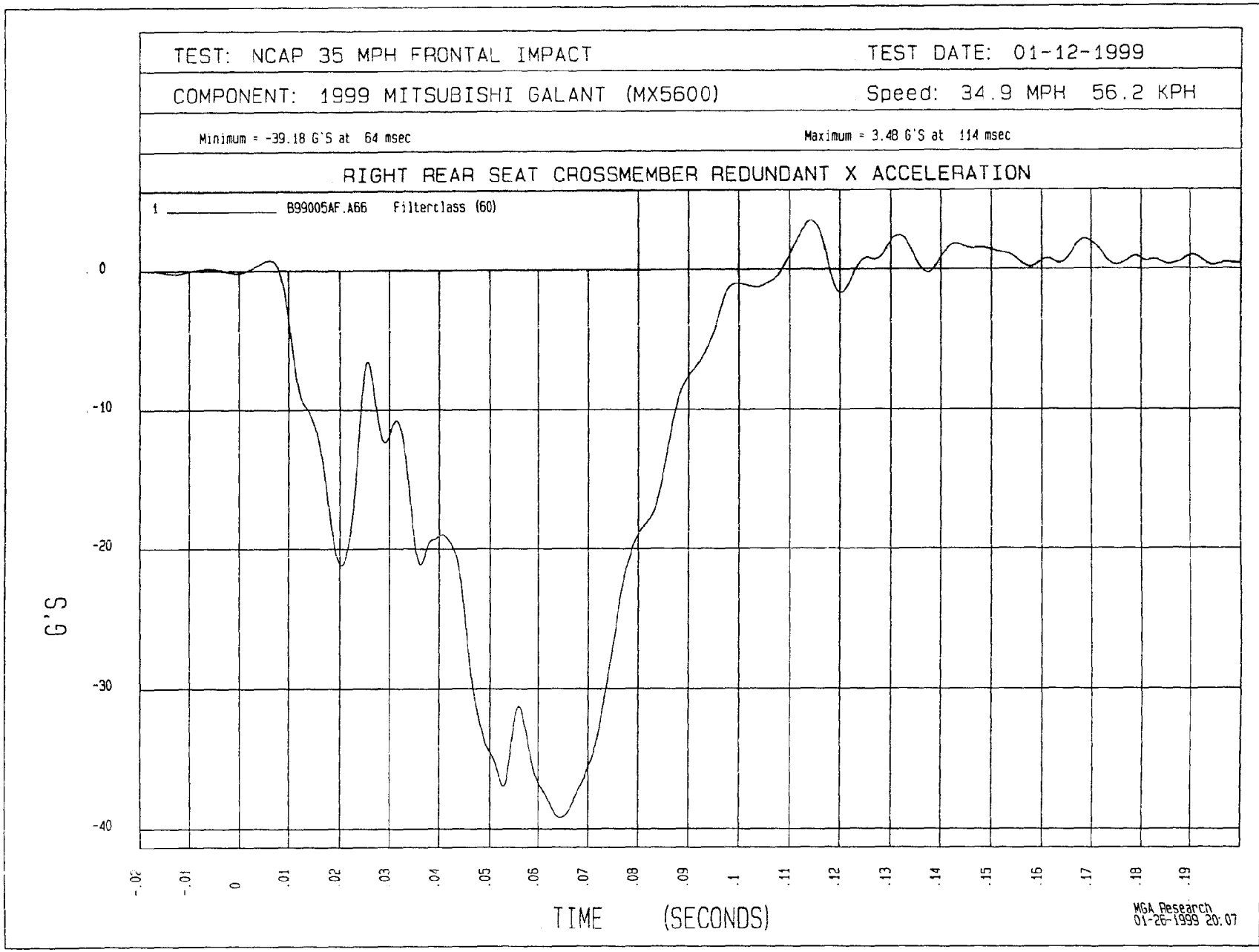

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -12.88 KPH at 196 msec
Maximum = 56.24 KPH at 9 msec
INSTRUMENT PANEL X VELOCITY
1 B99005AI.V10 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:07


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 1090.92 MM at 77 msec
INSTRUMENT PANEL X DISPLACEMENT
1 B99005AI.D10 Filterclass (180)
MM
1000
800
600
400
200
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
01-26-1999 20:08


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -39.58 G'S at 52 msec
Maximum = 4.01 G'S at 115 msec
LEFT REAR SEAT CROSSMEMBER REDUNDANT X ACCELERATION
1 C99005AF.A15 Filterclass (60)
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
01-26-1999 20:33


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -7.52 KPH at 109 msec
Maximum = 56.23 KPH at 9 msec
LEFT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY
1 C99005AI.V15 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
01-26-1999 20:33


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 1106.75 MM at 79 msec
LEFT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT
1 C99005AI.D15 Filterclass (180)
MM
1000
800
600
400
200
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
01-26-1999 20:33


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -39.18 G'S at 64 msec
Maximum = 3.48 G'S at 114 msec
RIGHT REAR SEAT CROSSMEMBER REDUNDANT X ACCELERATION
1 B99005AF.A66 Filterclass (60)
0
-10
-20
-30
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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.13
.14
.15
.16
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.18
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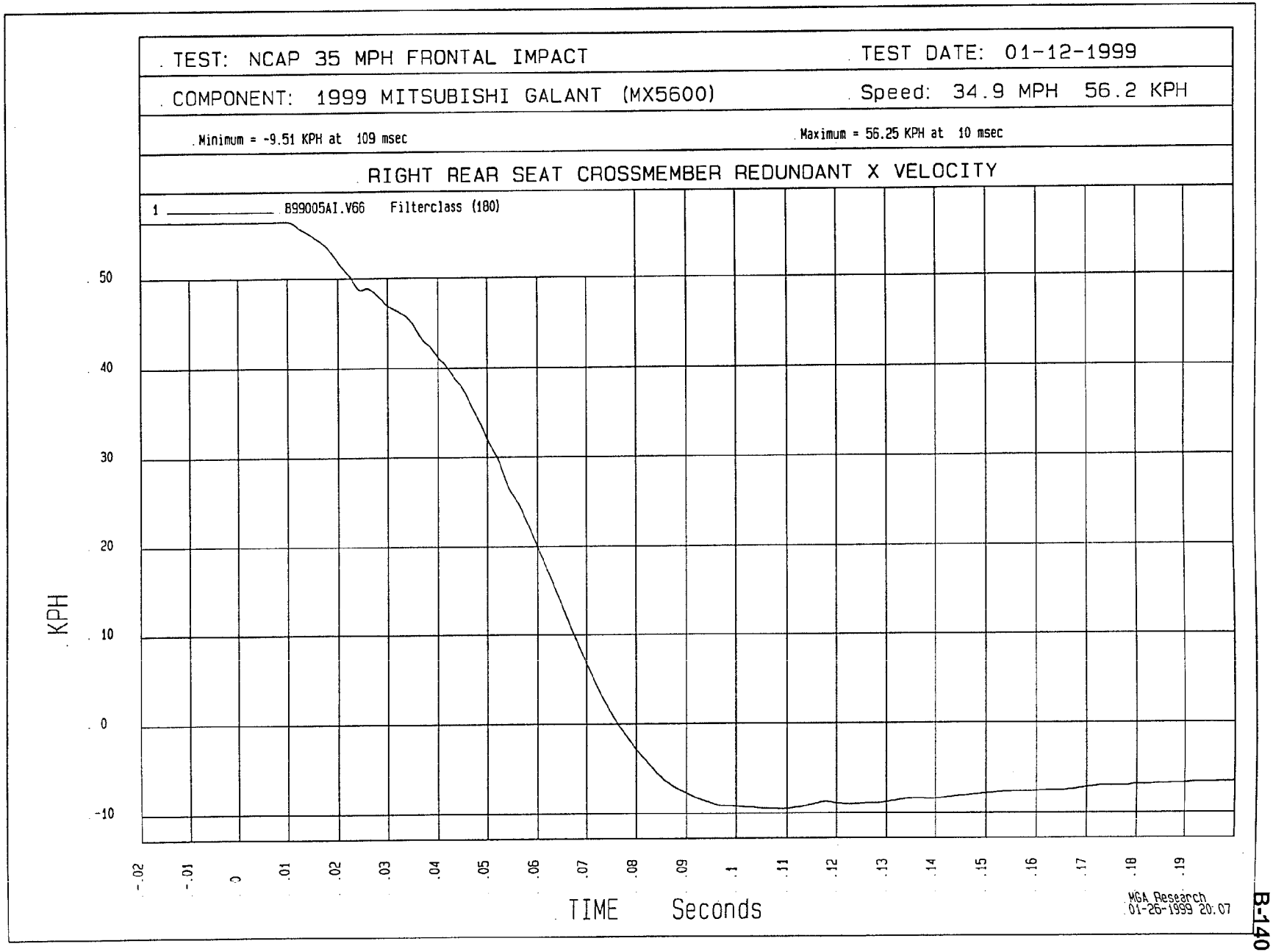
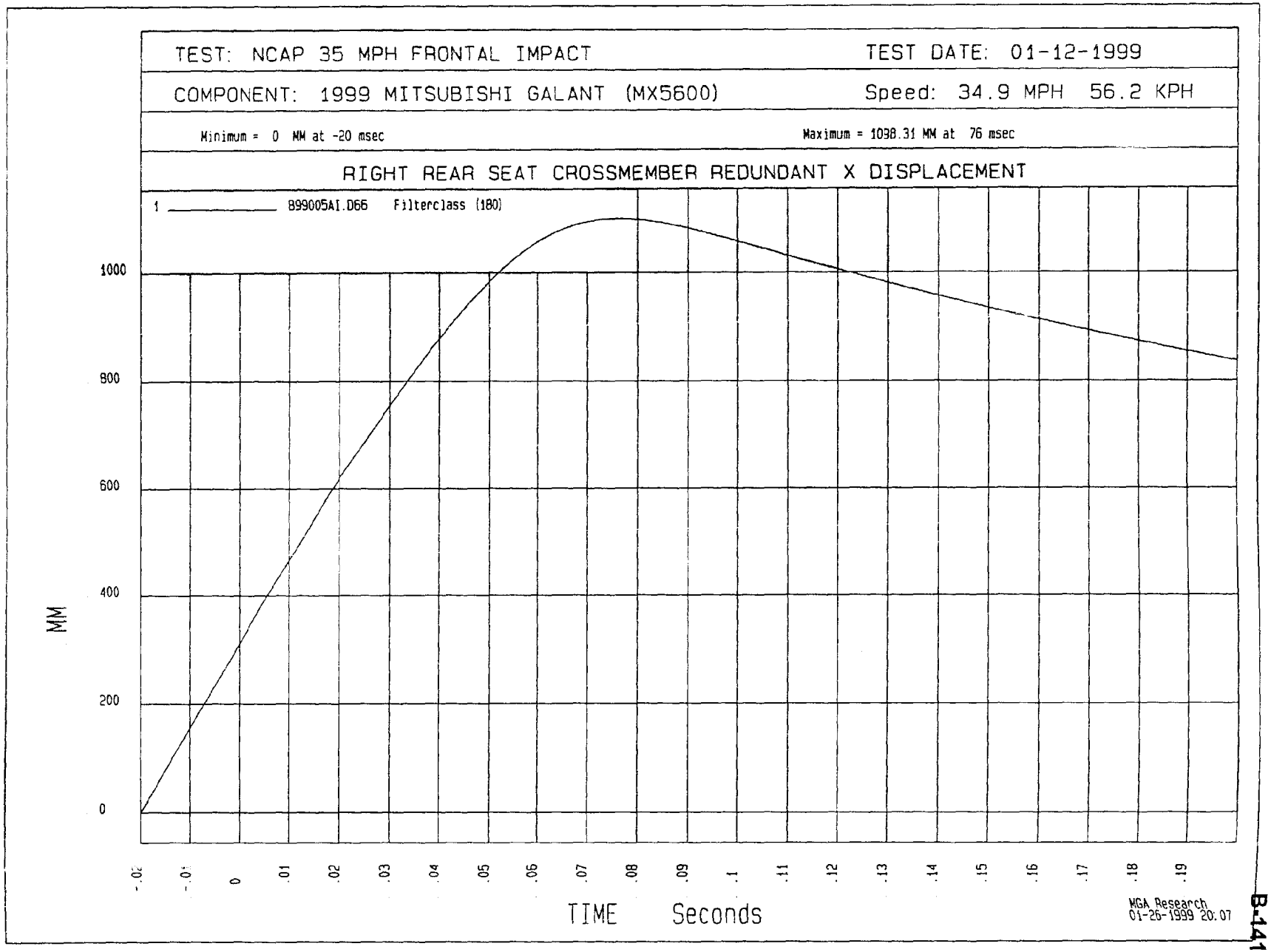
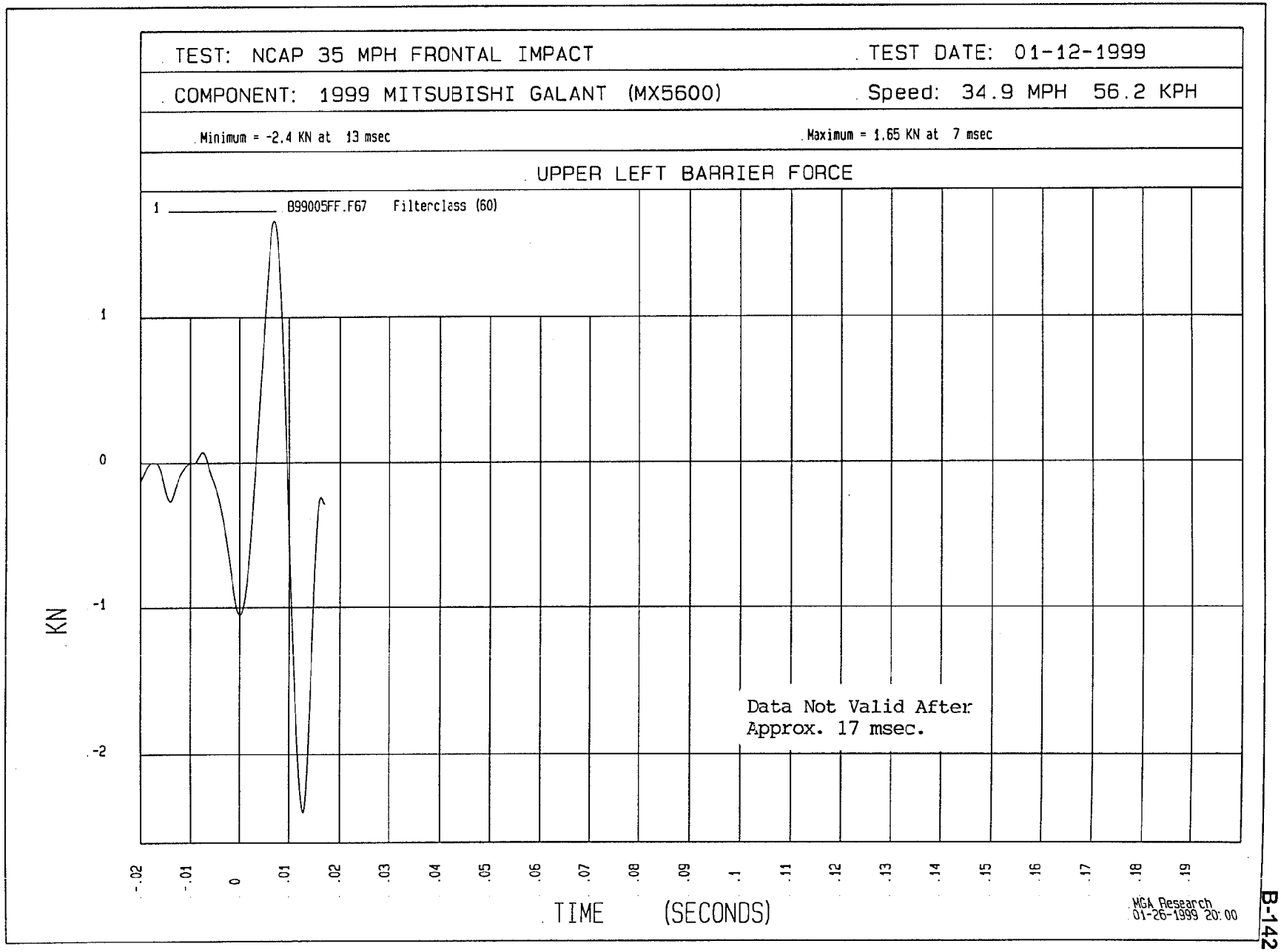
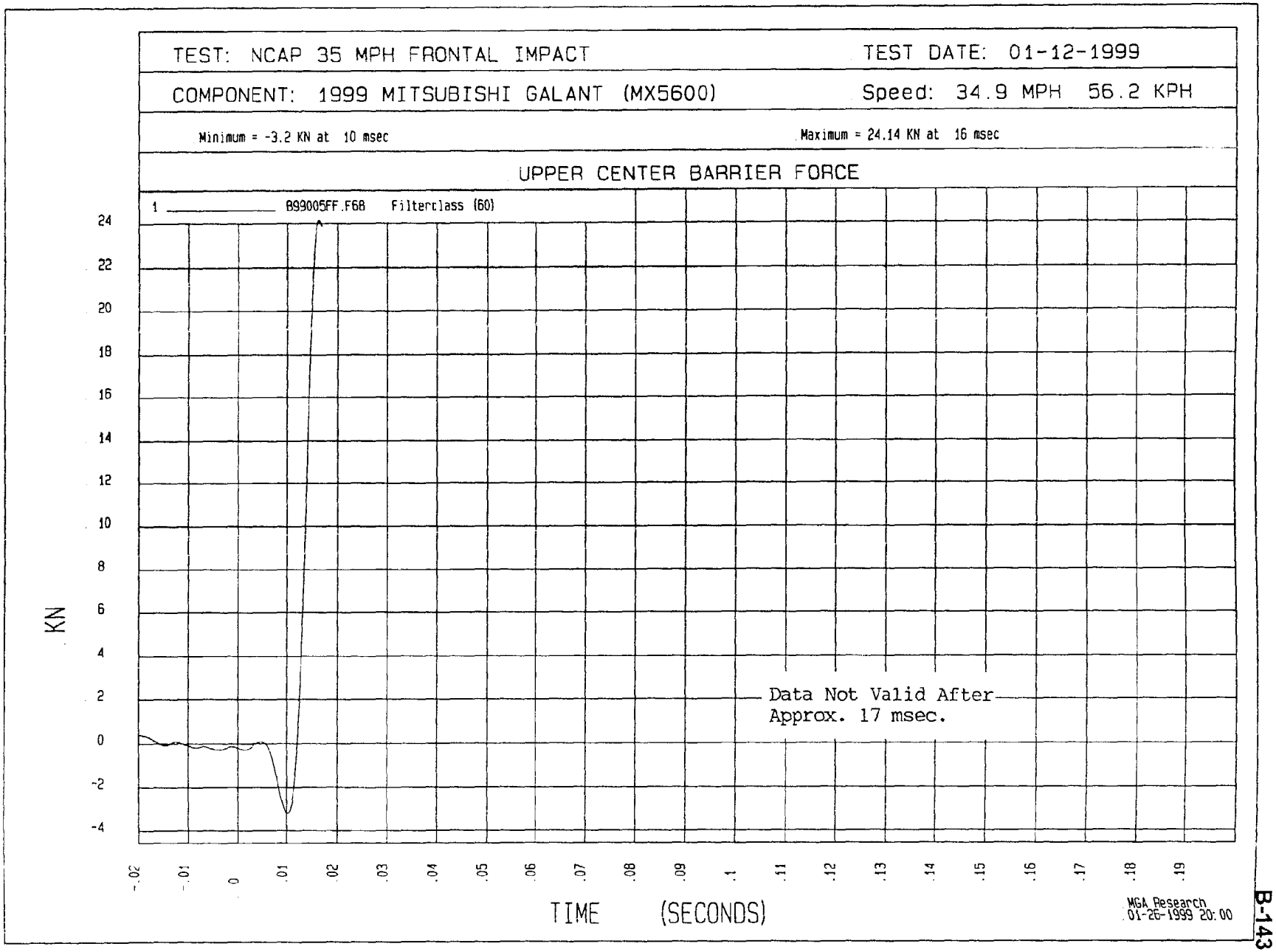
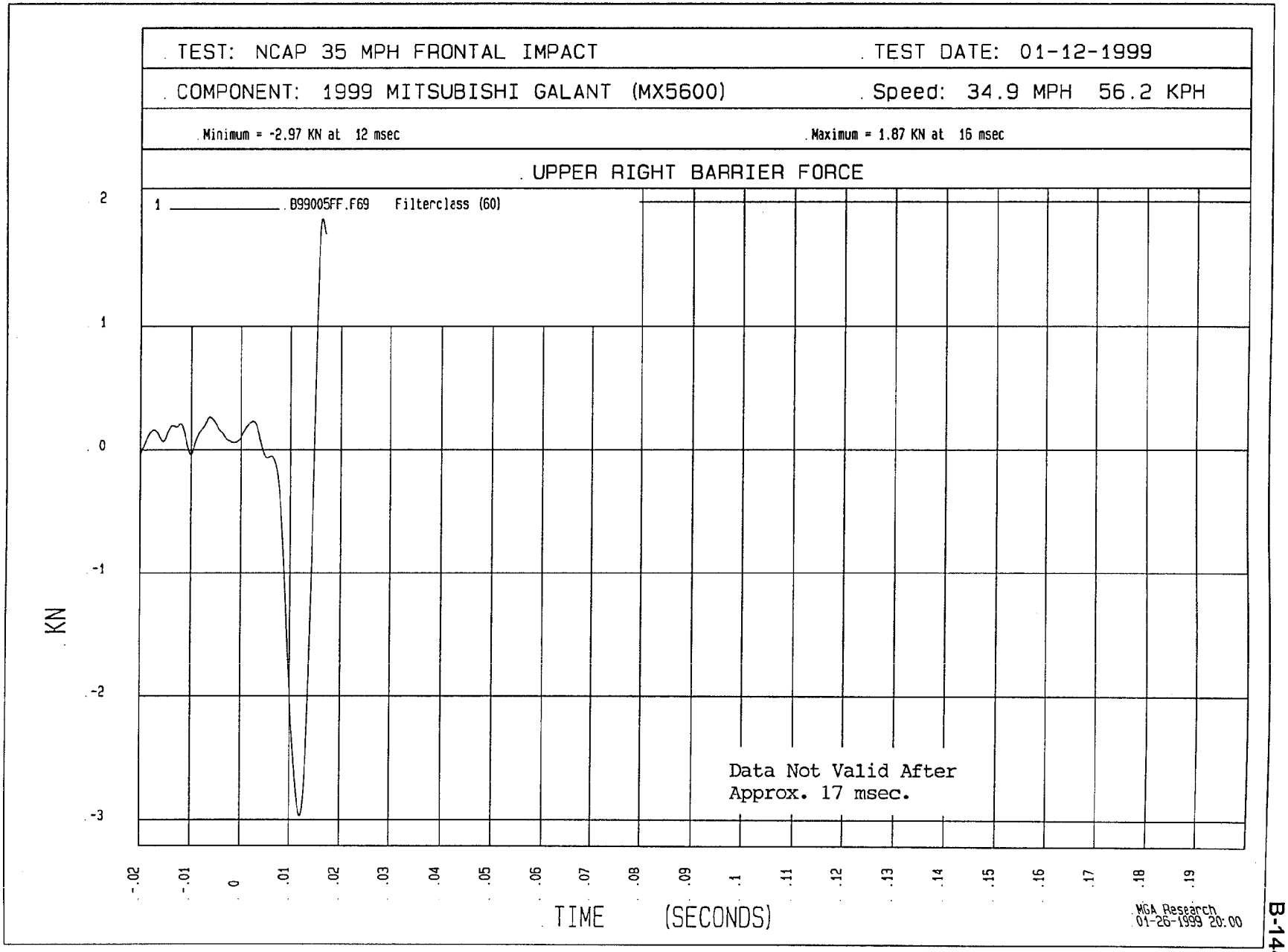
TIME (SECONDS)
MGA Research
01-26-1999 20:07

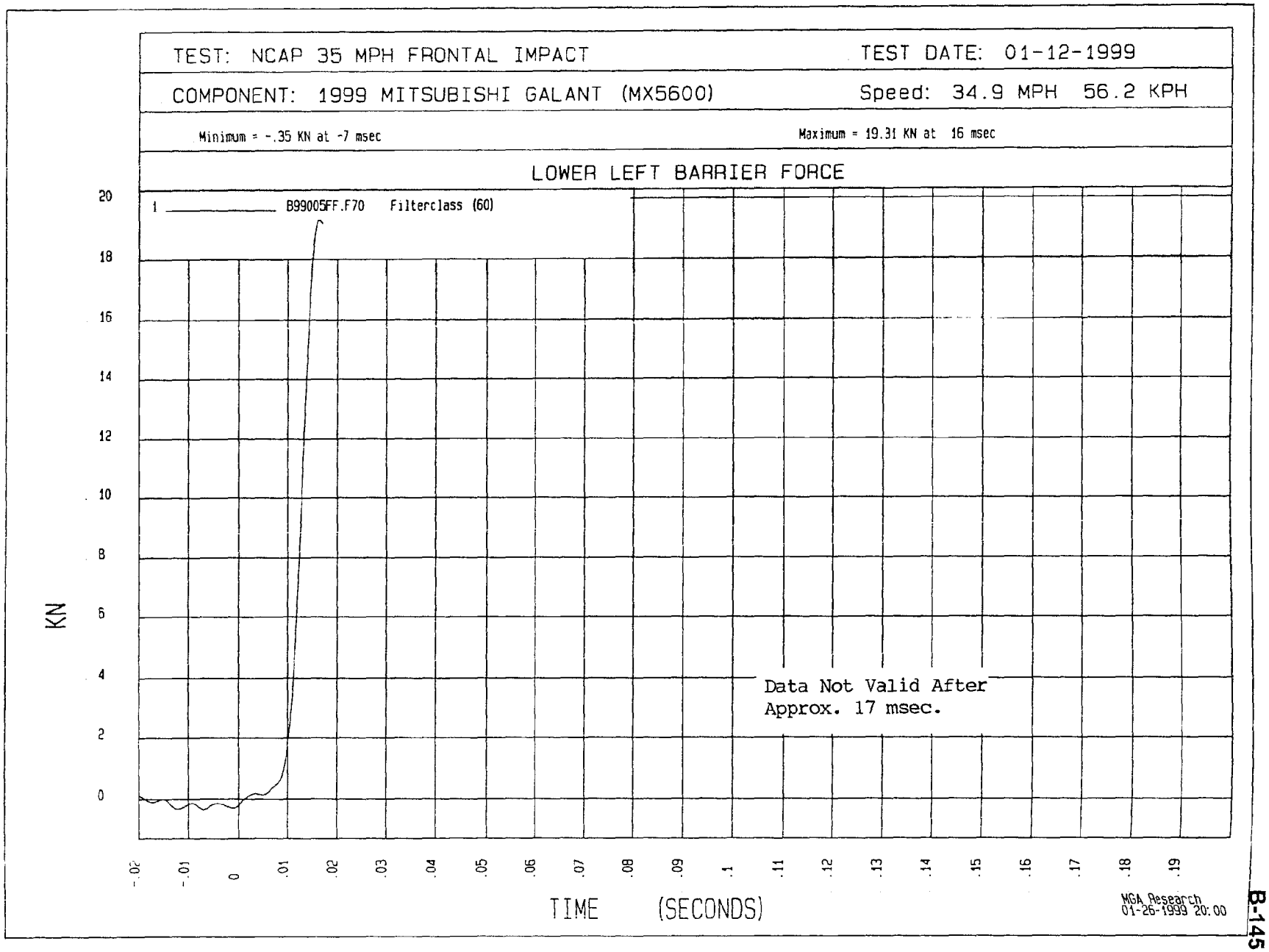

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -9.51 KPH at 109 msec
Maximum = 56.25 KPH at 10 msec
RIGHT REAR SEAT CROSSMEMBER REDUNDANT X VELOCITY
1 B99005AI.V66 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:07

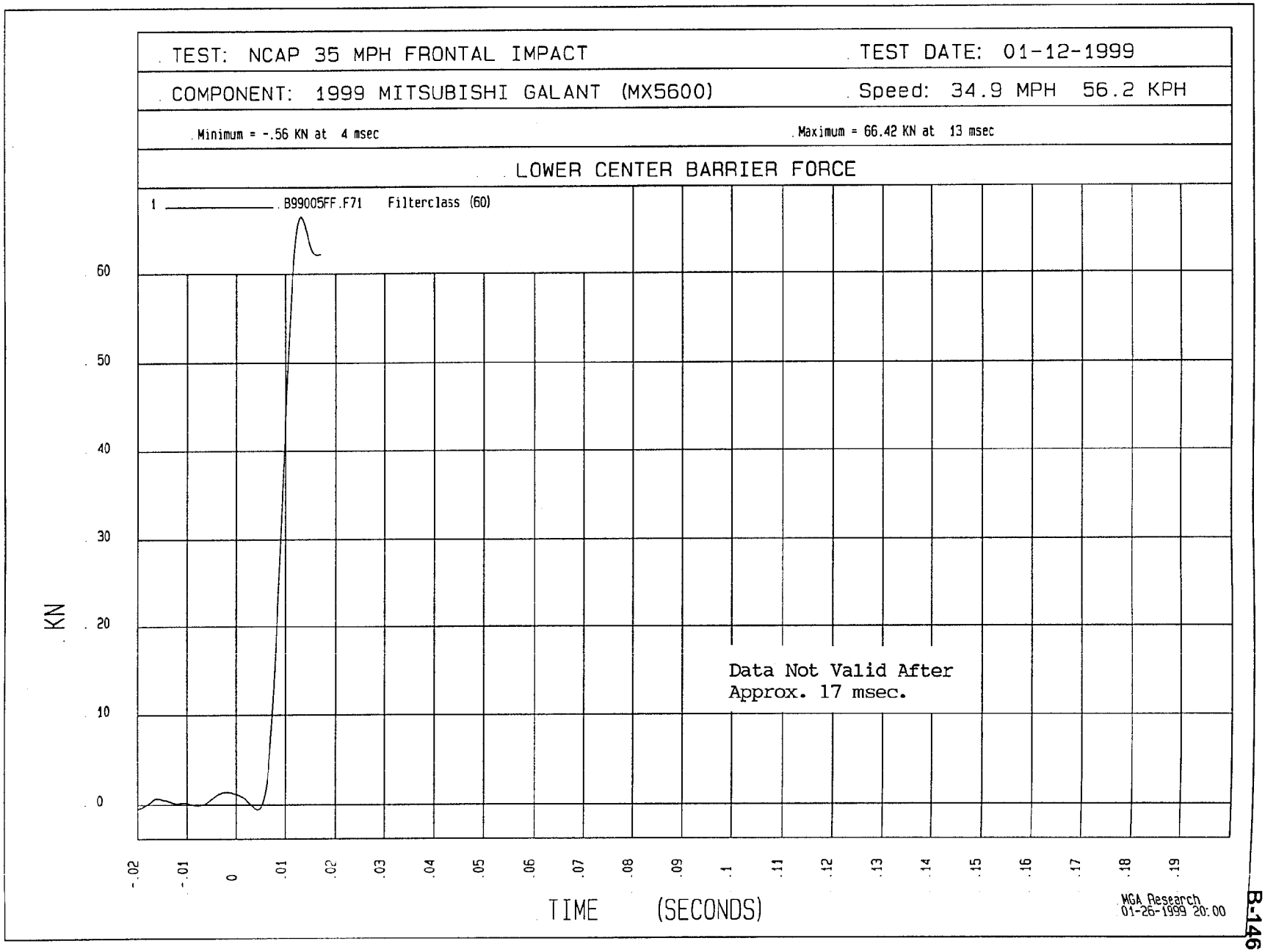

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = 0 MM at -20 msec
Maximum = 1038.31 MM at 76 msec
RIGHT REAR SEAT CROSSMEMBER REDUNDANT X DISPLACEMENT
1 B99005A1.D66 Filterclass (180)
MM
1000
800
600
400
200
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-26-1999 20:07


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -2.4 KN at 13 msec
Maximum = 1.65 KN at 7 msec
UPPER LEFT BARRIER FORCE
1 B99005FF.F67 Filterclass (60)
KN
1
0
-1
-2
Data Not Valid After
Approx. 17 msec.
-.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
01-26-1999 20:00


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -3.2 KN at 10 msec
Maximum = 24.14 KN at 16 msec
UPPER CENTER BARRIER FORCE
1 B99005FF.F68 Filterclass (60)
KN
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
Data Not Valid After
Approx. 17 msec.
TIME (SECONDS)
MGA Research
01-26-1999 20:00


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -2.97 KN at 12 msec
Maximum = 1.87 KN at 16 msec
UPPER RIGHT BARRIER FORCE
1 B99005FF.F69 Filterclass (60)
KN
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
.18
.19
TIME (SECONDS)
Data Not Valid After
Approx. 17 msec.
MGA Research
01-26-1999 20:00


TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -.35 KN at -7 msec
Maximum = 19.31 KN at 16 msec
LOWER LEFT BARRIER FORCE
1 B99005FF.F70 Filterclass (60)
KN
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
.18
.19
TIME (SECONDS)
Data Not Valid After
Approx. 17 msec.
MGA Research
01-26-1999 20:00

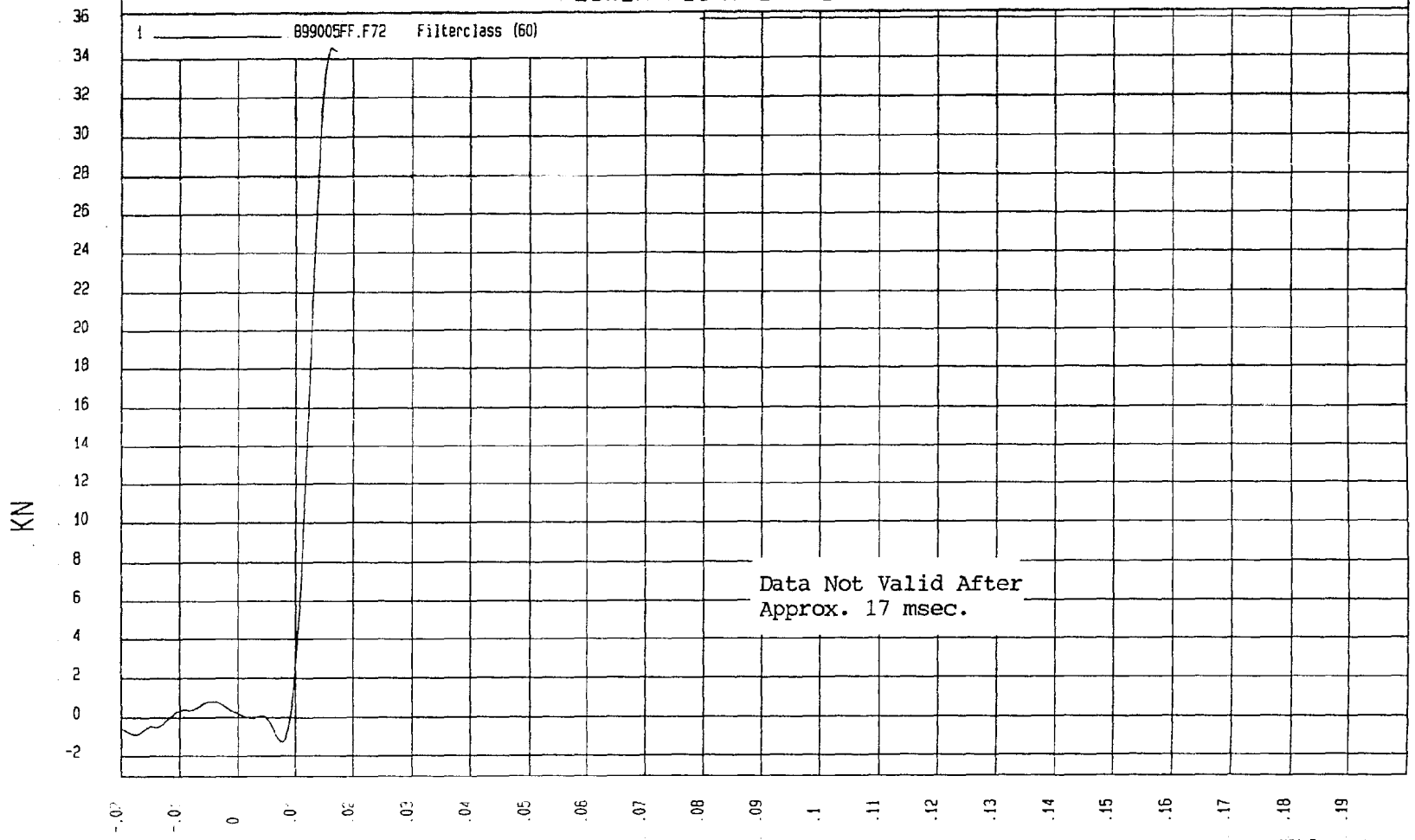

TEST: NCAP 35 MPH FRONTAL IMPACT
TEST DATE: 01-12-1999
COMPONENT: 1999 MITSUBISHI GALANT (MX5600)
Speed: 34.9 MPH 56.2 KPH
Minimum = -.56 KN at 4 msec
Maximum = 66.42 KN at 13 msec
LOWER CENTER BARRIER FORCE
1 B99005FF.F71 Filterclass (60)
Data Not Valid After
Approx. 17 msec.
KN
60
50
40
30
20
10
0
-.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
01-26-1999 20:00

TEST: NCAP 35 MPH FRONTAL IMPACT TEST DATE: 01-12-1999

COMPONENT: 1999 MITSUBISHI GALANT (MX5600) Speed: 34.9 MPH 56.2 KPH

Minimum = -1.29 KN at 8 msec Maximum = 34.55 KN at 16 msec

LOWER RIGHT BARRIER FORCE



MGA Research
01-26-1999 20:00

APPENDIX C

DUMMY CONFIGURATION & PERFORMANCE VERIFICATION DATA

HYBRID III DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 065 DUMMY CALIBRATION BY: Tim Michnay

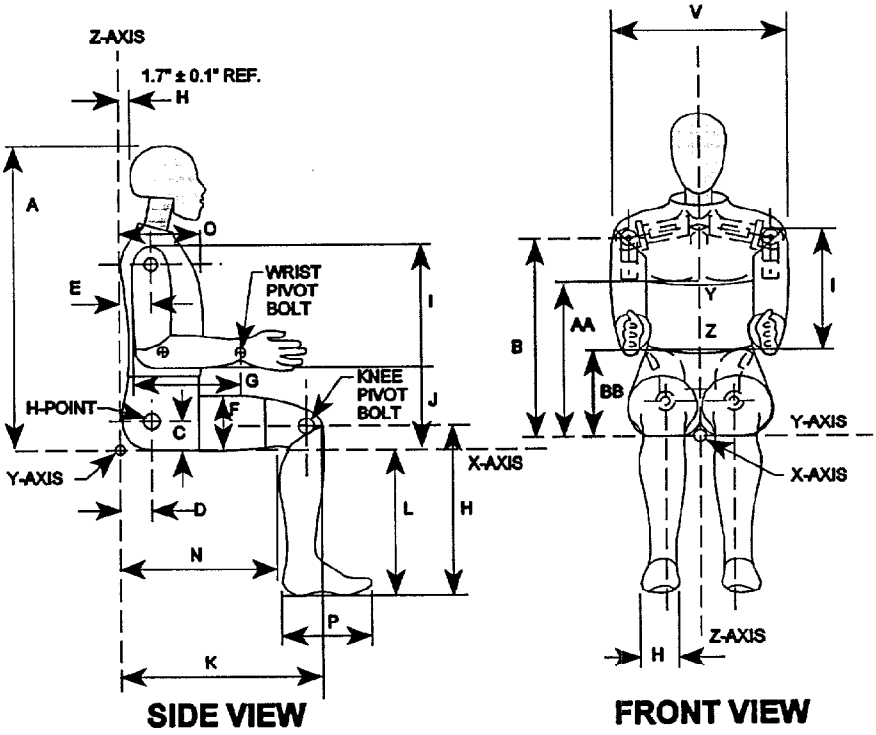
I. CONFIGURATION VERIFICATION DATA

DATE OF VERIFICATION: January 10, 1999

DESCRIPTION	SPECIFICATION (Inches)	ACTUAL MEASUREMENT (inches)
A - Total Sitting Height	34.6 - 35.0	34.7
B - Shoulder Pivot Height	19.9 - 20.5	20.2
C - "H" Point Height	3.3 - 3.5	3.4
D - "H" Point from Seat Back	5.3 - 5.5	5.4
E - Shoulder Pivot From Backline	3.3 - 3.7	3.5
F - Thigh Clearance	5.5 - 6.1	5.8
G - Back of Elbow to Wrist Pivot	11.4 - 12.0	11.6
H - Skull Cap Skin to Backline	1.6 - 1.8	1.7
I - Shoulder Elbow Length	13.0 - 13.6	13.5
J - Elbow Rest Height	7.5 - 8.3	8.0
K - Buttock Knee Length	22.8 - 23.8	23.4
L - Popliteal Height	16.9 - 17.9	17.7
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	8.9
P - Foot Length	9.9 - 10.5	10.4
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	33.8

Note: (See page C-2 for external dimensions)

HYBRID III EXTERNAL DIMENSIONS



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.: 065 DUMMY CALIBRATION BY: Tim Michnay

VERIFICATION DATE: January 10, 1999

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

1.0 HEAD DROP TEST

	SPECIFICATION	MEASUREMENT
Peak Resultant Acceleration	225 - 275 G	257
Peak Lateral Acceleration	15 G. MAX	6
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	24.93
	20 MS	17.60 - 22.60 G	20.86
	30 MS	12.50 - 18.50 G	14.62
Max. Pendulum G Above 30 MS		29.0 G MAX	14.6
Deceleration - Time Curve Decay Time to 5 G		34 - 42 MS	38
D Plane Rotation	MAX	64 - 78 DEG.	75
	TIME	57 - 64 MS	61
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 MS	119
Moment About Occipital Condyle	MAX.	65 - 80 FT.LBS	66
	TIME	47 - 58 MS	51
Positive Moment - Time Curve Decay Time to Zero		97 - 107 MS	106

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

3.0 NECK EXTENSION TEST

		SPECIFICATION	MEASUREMENT
Pendulum Speed		19.50 - 20.30 F/S	19.79
Pendulum Deceleration	10 MS	17.20 - 21.20 G	20.75
	20 MS	14.00 - 19.00 G	16.34
	30 MS	11.00 - 16.00 G	12.97
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	77
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 MS	159
Moment About Occipital Condyle	MIN.	-59.0/-39.0 FT LBS	-49.3
	TIME	65 - 79 MS	73
Positive Moment - Time Curve Decay Time to Zero		120 - 148 MS	139

4.0 CHEST IMPACT TESTS

	SPECIFICATION	MEASUREMENT
Probe Speed	21.6 to 22.4 F/S	22.1
Peak Deflection	2.50 to 2.86 IN.	2.63
Peak Resistive Force	1160 to 1325 LBS.	1245
Internal Hysteresis	69 to 85%	74%

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

5.0 KNEE IMPACT TESTS

RIGHT KNEE	SPECIFICATION	MEASUREMENT
Probe Speed	6.8 to 7.0 F/S	6.8
Maximum Force	1060 - 1300 LBS.	1069

LEFT KNEE	SPECIFICATION	MEASUREMENT
Probe Speed	6.8 to 7.0 F/S	7.0
Maximum Force	1060 - 1300 LBS.	1066

6.0 HIP JOINT-FEMUR FLEXION TEST

LEFT KNEE	SPECIFICATION	MEASUREMENT	
		LEFT	RIGHT
Relative Humidity	10 - 70%	14%	
Rotation Rate	5-10 DEG/SEC.	Yes	Yes
30 DEGREE ROTATION	70 FT-LBF	69	42
150 FT-LBF	40-50 degree maximum rotation	41°	46°

HYBRID III DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 066 DUMMY CALIBRATION BY: Tim Michnay

I. CONFIGURATION VERIFICATION DATA

DATE OF VERIFICATION: January 10, 1999

DESCRIPTION	SPECIFICATION (Inches)	ACTUAL MEASUREMENT (inches)
A - Total Sitting Height	34.6 - 35.0	34.8
B - Shoulder Pivot Height	19.9 - 20.5	20.1
C - "H" Point Height	3.3 - 3.5	3.4
D - "H" Point from Seat Back	5.3 - 5.5	5.4
E - Shoulder Pivot From Backline	3.3 - 3.7	3.4
F - Thigh Clearance	5.5 - 6.1	5.9
G - Back of Elbow to Wrist Pivot	11.4 - 12.0	11.7
H - Skull Cap Skin to Backline	1.6 - 1.8	1.7
I - Shoulder Elbow Length	13.0 - 13.6	13.4
J - Elbow Rest Height	7.5 - 8.3	8.1
K - Buttock Knee Length	22.8 - 23.8	23.5
L - Popliteal Height	16.9 - 17.9	17.6
M - Knee Pivot Height	19.1 - 19.9	19.5
N - Buttock Popliteal Length	17.8 - 18.8	18.2
O - Chest Depth at 3rd Rib	8.4 - 9.0	8.8
P - Foot Length	9.9 - 10.5	10.4
V - Shoulder Breadth	16.6 - 17.2	16.9
W - Foot Breadth	3.5 - 4.2	4.0
Y - Chest Circumference	38.2 - 39.4	39.1
Z - Waist Circumference	32.9 - 34.1	33.5

Note: (See next page for external dimensions)

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET

DUMMY NO.: 066 DUMMY CALIBRATION BY: Tim Michnay

VERIFICATION DATE: January 10, 1999

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

1.0 HEAD DROP TEST

	SPECIFICATION	MEASUREMENT
Peak Resultant Acceleration	225 - 275 G	269
Peak Lateral Acceleration	15 G. MAX	-14
Is Acceleration Curve Unimodel	within 10% of peak	Yes

2.0 NECK FLEXION TEST

		SPECIFICATION	MEASUREMENT
Pendulum Speed		22.6 - 23.4 FT/SEC	22.8
Pendulum Deceleration	10 MS	22.50 - 27.50 G	24.00
	20 MS	17.60 - 22.60 G	19.93
	30 MS	12.50 - 18.50 G	14.11
Max. Pendulum G Above 30 MS		29.0 G MAX	14.1
Deceleration - Time Curve Decay Time to 5 G		34 - 42 MS	41
D Plane Rotation	MAX	64 - 78 DEG.	66
	TIME	57 - 64 MS	59
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 MS	120
Moment About Occipital Condyle	MAX.	65 - 80 FT.LBS	67
	TIME	47 - 58 MS	54
Positive Moment - Time Curve Decay Time to Zero		97 - 107 MS	105

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

3.0 NECK EXTENSION TEST

		SPECIFICATION	MEASUREMENT
Pendulum Speed		19.50 - 20.30 F/S	19.87
Pendulum Deceleration	10 MS	17.20 - 21.20 G	18.73
	20 MS	14.00 - 19.00 G	15.15
	30 MS	11.00 - 16.00 G	13.64
Max. Pendulum G Above 30 MS		22 G Max	14
Deceleration - Time Curve Decay Time to 5 G		38 - 46 MS	43
D Plane Rotation	MAX	81 - 106 DEG.	93
	TIME	72 - 82 MS	78
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 MS	160
Moment About Occipital Condyle	MIN.	-59.0/-39.0 FT LBS	-48.0
	TIME	65 - 79 MS	74
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	22.1
Peak Deflection	2.50 to 2.86 IN.	2.67
Peak Resistive Force	1160 to 1325 LBS.	1232
Internal Hysteresis	69 to 85%	71%

HYBRID III DUMMY CALIBRATION DATA SUMMARY SHEET (CONT.)

5.0 KNEE IMPACT TESTS

RIGHT KNEE	SPECIFICATION	MEASUREMENT
Probe Speed	6.8 to 7.0 F/S	6.9
Maximum Force	1060 - 1300 LBS.	1082

LEFT KNEE	SPECIFICATION	MEASUREMENT
Probe Speed	6.8 to 7.0 F/S	6.9
Maximum Force	1060 - 1300 LBS.	1073

6.0 HIP JOINT-FEMUR FLEXION TEST

LEFT KNEE	SPECIFICATION	MEASUREMENT	
		LEFT	RIGHT
Relative Humidity	10 - 70%	14%	
Rotation Rate	5-10 DEG/SEC.	Yes	Yes
30 DEGREE MAX. ROTATION	70 FT-LBF	59	45
150 FT-LBF	40-50 DEGREE MAX. ROTATION	42°	43°

APPENDIX D

TEST EQUIPMENT & INSTRUMENTATION CALIBRATION

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 065

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	AAMN8	Endevco	January 8, 1999
Head Y	ACC61	Endevco	January 8, 1999
Head Z	ACCW9	Endevco	January 8, 1999
Head X Redundant	AJ621	Endevco	January 8, 1999
Head Y Redundant	AJ619	Endevco	January 8, 1999
Head Z Redundant	AHY54	Endevco	January 8, 1999
Chest X	ACC78	Endevco	January 8, 1999
Chest Y	ACCE6	Endevco	January 8, 1999
Chest Z	ACCY3	Endevco	January 8, 1999
Chest X Redundant	AJ9J7	Endevco	January 8, 1999
Chest Y Redundant	AJ7A2	Endevco	January 8, 1999
Chest Z Redundant	AJ819	Endevco	January 8, 1999
Right Femur Load Cell	259	Denton	January 11, 1999
Left Femur Load Cell	260	Denton	January 11, 1999
Pelvis X	J20298	Endevco	January 8, 1999
Pelvis Y	J17709	Endevco	January 8, 1999
Pelvis Z	J20473	Endevco	January 8, 1999

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 065

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Neck Load Cell X	442	Denton	October 14, 1998
Neck Load Cell Y	442	Denton	October 14, 1998
Neck Load Cell Z	442	Denton	October 14, 1998
Neck Moment X	442	Denton	October 14, 1998
Neck Moment Y	442	Denton	October 14, 1998
Neck Moment Z	442	Denton	October 14, 1998
Chest Deflection Gauge	65	Servo	January 10, 1999
Lap Belt Load Cell	690	Denton	July 14, 1998
Shoulder Belt Load Cell	624	Denton	July 14, 1998

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION
INSTRUMENTS FOR DUMMY NO. 065

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Right Tibia Moment X	103	Denton	December 3, 1998
Upper Right Tibia Moment Y	103	Denton	December 3, 1998
Upper Right Tibia Force Z	103	Denton	December 3, 1998
Lower Right Tibia Moment X	133	Denton	December 4, 1998
Lower Right Tibia Moment Y	133	Denton	December 4, 1998
Lower Right Tibia Force Z	133	Denton	December 4, 1998
Upper Left Tibia Moment X	105	Denton	December 3, 1998
Upper Left Tibia Moment Y	105	Denton	December 3, 1998
Upper Left Tibia Force Z	105	Denton	December 3, 1998
Lower Left Tibia Moment X	134	Denton	December 4, 1998
Lower Left Tibia Moment Y	134	Denton	December 4, 1998
Lower Left Tibia Force Z	134	Denton	December 4, 1998
Left Foot Ball Z Acceleration	J11548	Endevco	July 28, 1998
Left Heel X Acceleration	J10866	Endevco	July 28, 1998
Left Heel Z Acceleration	AP2D6	Endevco	July 28, 1998
Right Foot Ball Z Acceleration	J13653	Endevco	July 28, 1998
Right Heel X Acceleration	J13649	Endevco	July 28, 1998
Right Heel Z Acceleration	J13713	Endevco	July 28, 1998

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION
INSTRUMENTS FOR DUMMY NO. 066

	PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	ACCY6	Endevco	January 7, 1999
Head Y	ACCH1	Endevco	January 7, 1999
Head Z	AAMW5	Endevco	January 7, 1999
Head X Redundant	AJ9D2	Endevco	January 7, 1999
Head Y Redundant	AH1E2	Endevco	January 7, 1999
Head Z Redundant	AJ7K3	Endevco	January 7, 1999
Chest X	ACCY1	Endevco	January 7, 1999
Chest Y	ACCC8	Endevco	January 7, 1999
Chest Z	ACCT7	Endevco	January 7, 1999
Chest X Redundant	AJ9D4	Endevco	January 7, 1999
Chest Y Redundant	AJ9F3	Endevco	January 7, 1999
Chest Z Redundant	AJ9D9	Endevco	January 7, 1999
Right Femur Load Cell	261	Denton	January 11, 1999
Left Femur Load Cell	262	Denton	January 11, 1999
Pelvis X	AJ9H0	Endevco	January 8, 1999
Pelvis Y	ANAN3	Endevco	January 8, 1999
Pelvis Z	ANAN6	Endevco	January 8, 1999

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENTS FOR DUMMY NO. 066

	PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Neck Load Cell X	443	Denton	October 14, 1998
Neck Load Cell Y	443	Denton	October 14, 1998
Neck Load Cell Z	443	Denton	October 14, 1998
Neck Moment X	443	Denton	October 14, 1998
Neck Moment Y	443	Denton	October 14, 1998
Neck Moment Z	443	Denton	October 14, 1998
Chest Deflection Gauge	66	Servo	January 10, 1999
Lap Belt Load Cell	314	Denton	October 14, 1998
Shoulder Belt Load Cell	313	Denton	October 5, 1998

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION
INSTRUMENTS FOR DUMMY NO. 066

	PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Right Tibia Moment X	106	Denton	December 3, 1998
Upper Right Tibia Moment Y	106	Denton	December 3, 1998
Upper Right Tibia Force Z	106	Denton	December 3, 1998
Lower Right Tibia Moment X	135	Denton	December 4, 1998
Lower Right Tibia Moment Y	135	Denton	December 4, 1998
Lower Right Tibia Force Z	135	Denton	December 4, 1998
Upper Left Tibia Moment X	109	Denton	December 3, 1998
Upper Left Tibia Moment Y	109	Denton	December 3, 1998
Upper Left Tibia Force Z	109	Denton	December 3, 1998
Lower Left Tibia Moment X	138	Denton	December 5, 1998
Lower Left Tibia Moment Y	138	Denton	December 5, 1998
Lower Left Tibia Force Z	138	Denton	December 5, 1998
Left Foot Ball Z Acceleration	J18925	Endevco	October 20, 1998
Left Heel X Acceleration	AP0T3	Endevco	July 22, 1998
Left Heel Z Acceleration	AP122	Endevco	October 20, 1998
Right Foot Ball Z Acceleration	AGMT2	Endevco	July 22, 1998
Right Heel X Acceleration	AJ837	Endevco	July 22, 1998
Right Heel Z Acceleration	AHOA2	Endevco	July 22, 1998

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Left Rear Seat Crossmember X	J23-E10	Entran	December 8, 1998
Right Rear Seat Crossmember X	I25-J14	Entran	December 8, 1998
Top of Engine Block X	A09-G06	Entran	December 16, 1998
Bottom of Engine X	MGA095	Entran	December 21, 1998
Left Brake Caliper X	G01-J11	Entran	December 21, 1998
Right Brake Caliper X	I25-J08	Entran	December 21, 1998
Instrument Panel X	H02-J15	Entran	December 21, 1998
Redundant Left Rear Seat Crossmember X	E10-F17	Entran	January 7, 1999
Redundant Right Rear Seat Crossmember X	J23-E07	Entran	December 8, 1998

	LABORATORY INSTRUMENTS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Neck Bending Pendulum Accelerometer	12871	Endevco	January 7, 1999
Neck Bending Head Rotary Potentiometer	018	Spectrol	August 5, 1998
Neck Bending Pendulum Rotary Potentiometer	019	Spectrol	August 5, 1998
Chest Probe Accelerometer	J13780	Endevco	January 7, 1999
Knee Impact Accelerometer	AMHP6	Entran	January 7, 1999

APPENDIX E
VEHICLE OWNER'S OCCUPANT RESTRAINT SYSTEM INSTRUCTIONS

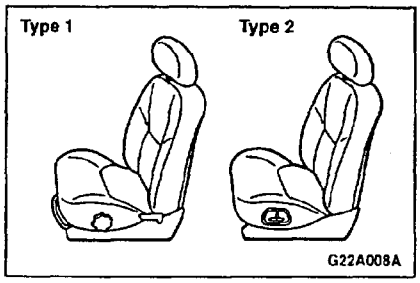
Seats, seat belts, child restraints and air bags

ND01Q-BA

Your car has seat belts and other features that help protect you and your passengers in an accident.
Seat belts are the most important safety device. When worn properly, seat belts can reduce the chance of serious injury or death in a crash. For added protection during a severe frontal collision, your car has a Supplemental Restraint System (SRS) with air bags for the driver and front seat passenger. The seats, head restraints and door locks also are safety equipment, which must be used correctly.
Always check the following before you drive:

(1) Everyone in the car is wearing a seat belt properly.
(2) Infants and small children are properly secured in appropriate child restraints in the rear seat.
(3) All doors are closed and locked.
(4) Seat backs are upright, with head restraints properly adjusted.

No safety equipment can prevent all injuries or deaths that can occur in severe collisions, but by making sure all your passengers follow the instructions in this manual, you can help reduce the risk of injury.



Front seats

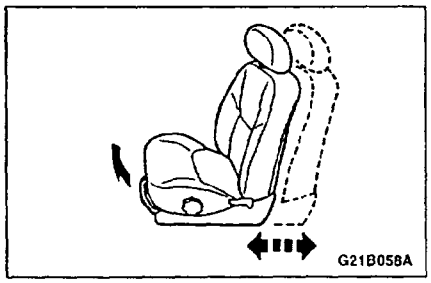
ND01A-DC

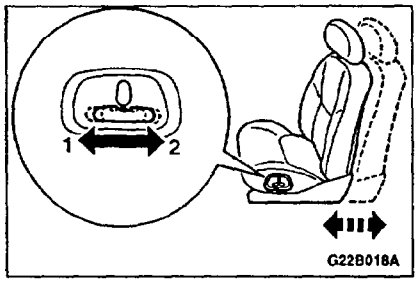
Adjust the driver's seat to the position that enables you to easily control the pedals, steering wheel and switches on the instrument panel, and also gives you a clear front view.

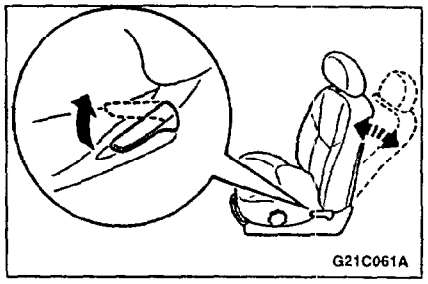
⚠ WARNING
(1) Do not attempt to adjust the seat while driving. This can be dangerous.
(2) After adjusting the seat, make sure that the seat is securely locked into position.
(3) Be sure to have the seat adjusted by an adult. If it is adjusted by a child, the seat may not be properly locked into position.

⚠ WARNING
(4) In order to reduce risk of serious or fatal injury in a collision, including from a deploying front passenger air bag, all front seat passengers should move the front passenger seat as far back as possible, all children 12 years old and under should ride restrained in the rear seat, and all children in rear-facing child restraints must ride in the rear seat.
(5) In order to reduce risk of serious or fatal injury in an accident, including from a deploying driver air bag, the driver should move the driver's seat as far back as possible, while still maintaining good visibility and good control of the steering wheel, accelerator and brake pedals.

⚠ CAUTION
To prevent the battery from running down, operate the power seat with the engine in operation.







To adjust seat forward or backward

ND01B-I

Type 1 (Manual)

Pull up the seat adjusting lever and adjust the seat forward or backward to the desired position. After adjustment, release the adjusting lever to lock the seat in position.

Type 2 (Power, driver's side only)

Slide the switch to adjust the seat forward or backward to the desired position. Release the switch, and the seat will lock at that position.

1- Backward
2- Forward

WARNING

(1) To ensure the seat is locked securely, attempt to move the seat forward or backward without using the adjusting lever or button.

(2) Operate the power seat with care not to have the hand or foot caught by the seat.

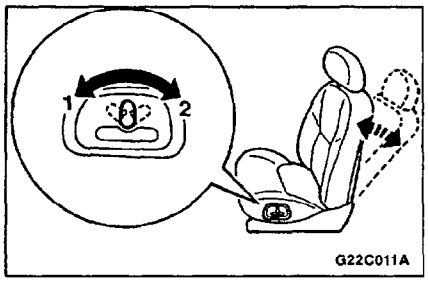
To recline the seatback

ND01C-FC

Type 1 (Manual)

In order to recline the seatback lean forward slightly pull the seatback lock lever up and then lean backward to the desired position and release the lever. The seatback will lock in that position.

Seats, seat belts, child restraints and air bags



Type 2 (Power, driver's side only)
Adjust the seatback angle by operating the switch as indicated by the arrows.

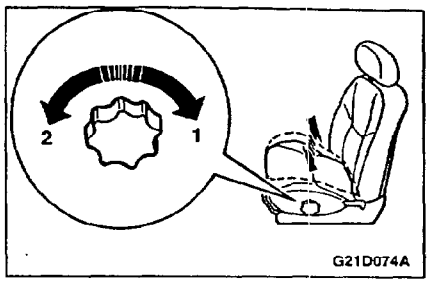
1- To move to forward direction
2- To recline rearward

⚠ *WARNING*

To minimize risk of personal injury in the event of a collision or sudden stop, both the driver and passenger seatbacks should remain in a nearly upright position while the car is in motion. The protection provided by the seat belts may be reduced significantly when the seatback is reclined. There is greater risk that the seat occupant will slide under the belt resulting in serious injury when the seatback is reclined.

⚠ *CAUTION*

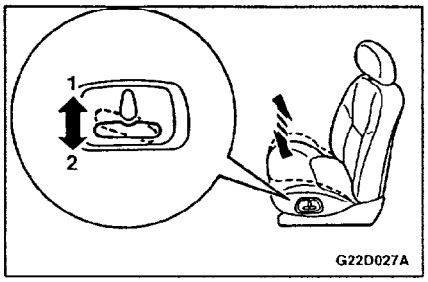
For Type 1 (Manual), pull the seatback lock lever, and the seatback will return to its original position. When operating the lever, sit close to the seatback or check a hand on it.



To adjust height (driver's side only) ND01D-R

Type 1 (Manual)
Turn the knob to raise or lower the whole seat cushion.

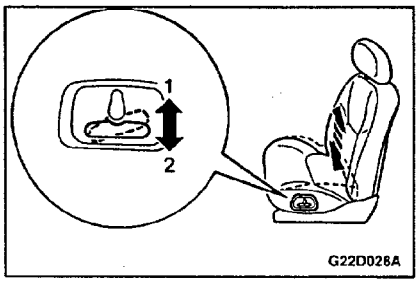
1- Raise
2- Lower



Type 2 (Power)
Front and/or rear part of the seat cushion height can be adjusted.

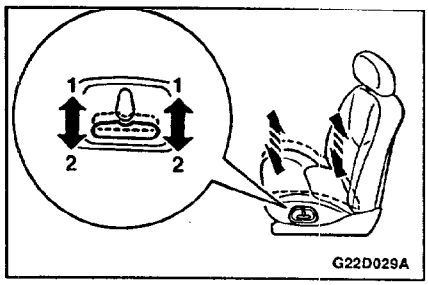
Front part of the seat cushion
Operate the switch to raise or lower the front part of the seat cushion.

1- Raise
2- Lower



Rear part of the seat cushion
Operate the switch to raise or lower the rear part of the seat cushion.

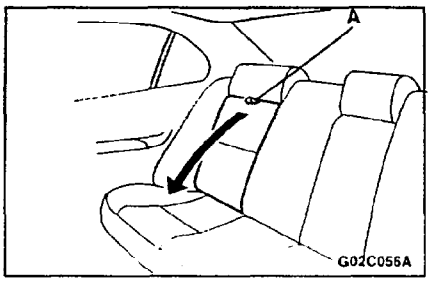
1- Raise
2- Lower

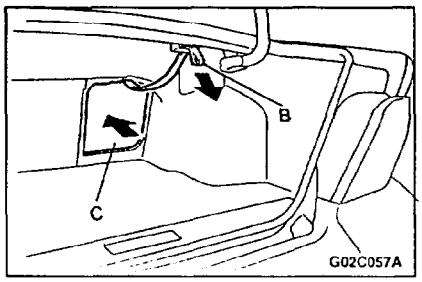


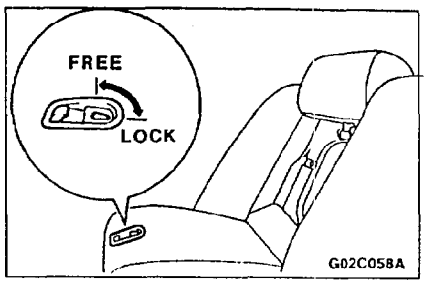
Whole seat cushion
Operate the center of the switch to raise or lower the whole seat cushion.

1- Raise
2- Lower

Seats, seat belts, child restraints and air bags







Rear seat

ND02C-T

Fold down rear seatback (if so equipped)

The rear right seatback can be folded forward to provide an additional luggage compartment.

From the interior side

Pull the release strap (A), and fold the rear seatback forward.

From the luggage compartment side

Pull the release strap (B), and push the rear seatback (C) forward.

⚠ WARNING

The luggage compartment in the rear of the car should never be used as a play area by children. Children should be seated in the rear seat with seat belts fastened when the car is in motion. Be sure that the rear seatback is returned to its fully upright position and locked in place.

Anti-theft lock lever

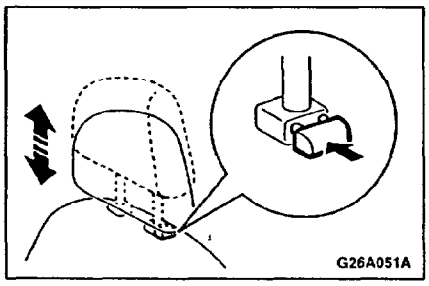
ND02F-E

The anti-theft lock is located on the top of the rear seatback (on the luggage compartment side).

When the lock lever is in the "LOCK" position, the seatback cannot be folded down by using the seatback release strap (from the interior side).

This feature is useful to help prevent theft when the car is parked in an exposed area, because the "trunk through" feature does not then apply.

The seatback can be folded down when the lock lever is returned to the "FREE" position. At other times, leave the lock lever at the "FREE" position.



Head restraints

ND05A-QD

Padded head restraints for the front seats may reduce the risk of whiplash injury in the event of impact from the rear.

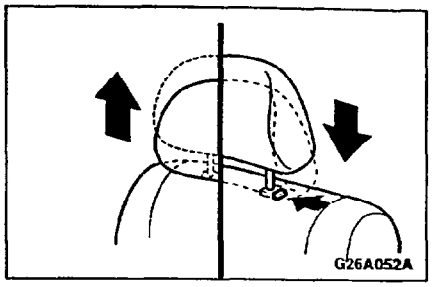
Adjustment of the head restraints

To reduce the chance of injury in the event of collision, adjust the head restraint height so that the center of the restraint is as close as possible to your seated eye level.
To raise the restraint, pull it straight up.
To lower the restraint, push down on it while pressing the height adjusting knob in the direction indicated by the arrow. After adjusting the height, push down on the restraint to confirm that it is locked in position.

⚠ *WARNING*

(1) Failure to have head restraints properly mounted and adjusted may increase the chance of injury in the event of a collision.

(2) A cushion or the like inserted between the back and the seatback will not prevent the possibility of injury in the event of a collision.

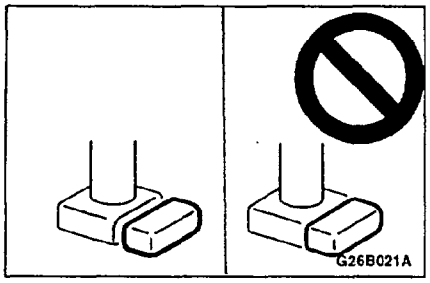


Removal of the head restraint

ND05B-L

To remove the head restraints press the lock knob in the direction indicated by the arrows and pull the head restraints up.
To remount the head restraints first confirm that they are facing the correct direction and then insert them into the seatback and push down while pressing the lock knob until they lock. Confirm that the lock knobs are correct as shown in the illustration and also pull the head restraints up to confirm that they do not come out of the seatback.

Seats, seat belts, child restraints and air bags



⚠ WARNING

Driving with the head restraints removed can lead to serious injury to you and your front passenger in an accident. Always have them mounted, and properly adjusted, before operating the car. Failure to have them properly mounted may increase the chance of injury in the event of a collision.

Seat belts

ND06A-AI

Seat belts are installed in your car for the protection of the driver and passengers. Always use the seat belts. In the event of an accident, injury to the driver and passengers may be reduced if seat belts are properly used.

NOTE

Legislation in your state may require seat belt usage, but even if not required, they should always be used.

⚠ WARNING

(1) Be sure to lock all doors before driving. Locking the doors will reduce the risk of injury or ejection in a collision.

(2) Seat belts should always be worn by every adult who drivers or rides in this car, and by all children who are large enough to wear seat belts properly.

(3) Never use one seat belt for more than one occupant.

(4) Never carry more people in the car than there are seat belts.

(5) Always adjust the belt to a snug fit.

(6) Always route the shoulder belt over your shoulder and across your chest. Never put it behind you, or under your arm.

(7) Always wear the lap belt as low as possible around the hips, not around the waist.

(8) To reduce risk of serious or fatal injury in an accident, including from a deploying driver air bag, the driver should adjust the driver's seat to the rear most position that still allows good visibility and good control of the steering wheel, the brake and accelerator, and vehicle controls.

⚠ WARNING

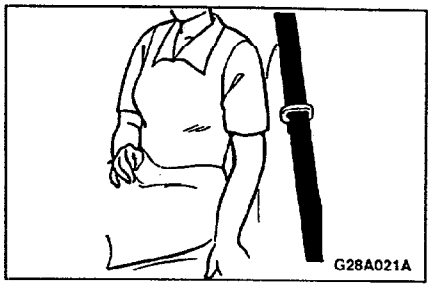
(1) All children 12 years and under old should always ride in the rear seat, properly restrained, in order to reduce risk of serious or fatal injury in a collision, including deployment of a front passenger air bag.

(2) Any child who is too small to properly wear a seat belt must be properly restrained in an appropriate child restraint. To reduce risk of serious or fatal injury in a collision, including deployment of a front passenger air bag, children should be seated only in the rear seat. Infants must be in a rear-facing child restraint and be seated only in the rear seat.

UNIBELT restraint system ND06B-RB

Front seats and both outboard rear seat positions are equipped with a UNIBELT system which uses a single combined lap-and-shoulder belt with an emergency locking retractor.
This system is designed to provide comfort and safety by permitting full extension and automatic retraction of the belts during normal car operation. A sensing device inside the belt retractor is designed to lock the retractor in the event of an abrupt change in car motion.

NOTE
For instruction on how to install a child restraint system, see "Installing a child restraint system with a UNIBELT " on page 2-15.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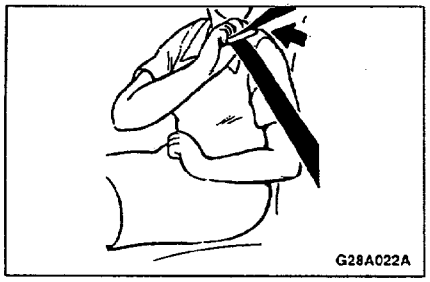
UNIBELT instructions ND06D-AK

1. Get in the car and sit in the normal correct posture. Adjust the seat.

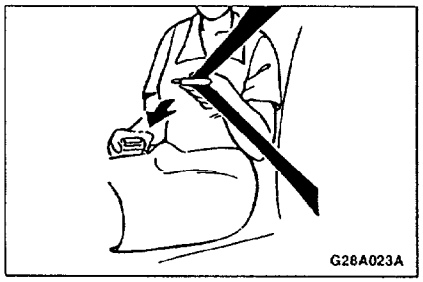
⚠ WARNING

To minimize the risk of personal injury in the event of a collision or sudden stop, both the driver and passenger seatbacks should always be in a nearly upright position while the car is in motion.
The protection provided by the seat belts may be reduced significantly when the seatback is reclined. There is greater risk that the driver or the passenger will slide under the belt and be seriously injured when the seatback is reclined.

Seats, seat belts, child restraints and air bags

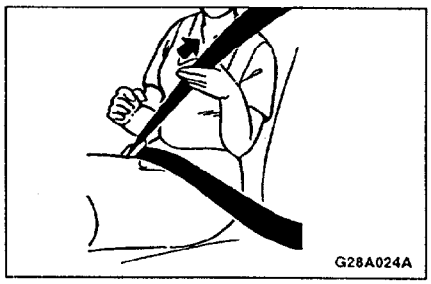


2. Grasp the movable tongue and slide it up the webbing as far as necessary so that it will be easy to pull across your body.
   After a couple of tries this will become an automatic one-handed operation.



3. Pull the seat belt out slowly while holding the tongue. This system will not lock up if you stop or hesitate, so relax and continue to "buckle-up".
   Push the tongue into the buckle until a "click" is heard.

NOTE
When the seat belt cannot be pulled out in a locked condition, pull the belt once with force and then return them.
After that, pull the belt out slowly once again.

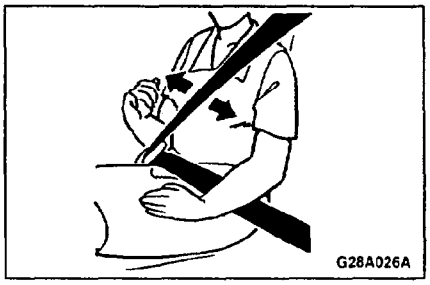


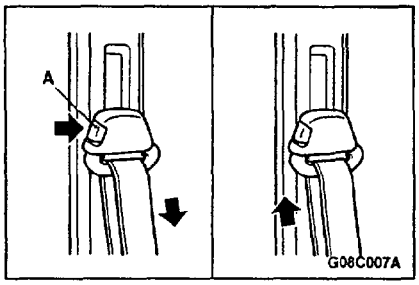
4. Pull up on the shoulder portion of the belt to ensure that there is no extra slack in the seat belt. The belt will retain the small amount of slack necessary for comfort when you return to your normal seating position. If the belt is still too tight, pull out 6 inches or 8 inches of webbing, release the belt and let it return to your chest.

⚠ *WARNING*

(1) Be sure the lap belt portion fits snugly and as low as possible around the hips, not around the waist. Failure to do so may increase the chance or severity of injury in the event of a collision.

(2) Wear the seat belt without twisting it.





5. The shoulder belt portion will allow regular movement under normal conditions. The belt will lock in the event of an abrupt change in car motion.

6. To release the belt, push the button on the buckle. To return the belt to its stowed position, pull the shoulder belt down slightly and release immediately.

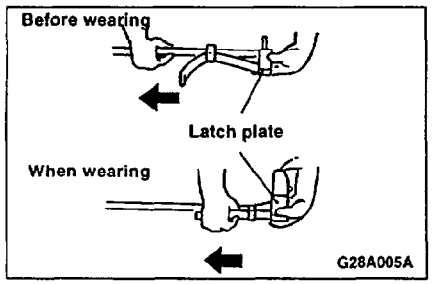
NOTE
The belt retracts automatically, so hold the tongue while the belt retracts when it is released.

Adjustable seat belt shoulder anchor (front seats) ND06E-HA

The seat belt shoulder anchor height can be adjusted.
To move the anchor down, depress the lock knob (A).To move the anchor up, do not depress the lock knob (A).

⚠ WARNING
To reduce risk of serious injury in a collision adjust the anchor at a position so that the belt passes over your shoulder, but does not touch your neck. Always adjust the anchor when car is not in motion.
Make sure the anchor is securely fixed after adjustment.

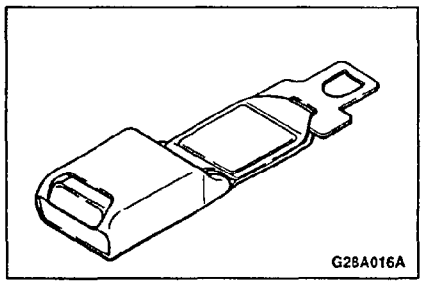
Seats, seat belts, child restraints and air bags



Rear seat lap belt (center rear seat)
ND06C-CF

The center rear seat belt should be adjusted by holding the belt and latch plate at right angles to each other, and then pulling the belt as illustrated above to a snug fit, low around the occupant's hips. Insert the latch plate into the buckle until a "click" is heard.
NEVER USE THE LAP BELT ON MORE THAN ONE PERSON AT A TIME.
To unfasten the belt, press the button on the buckle.

NOTE
The buckle and latch plate of the center rear lap belt are marked "CENTER". Be sure to check the marking before wearing the center rear lap belt.
The center rear lap belt latch plate will not fasten in the outboard rear seat buckles.



Seat belt extender
ND06J-AF

If the seat belt is too short, even when fully extended, a seat belt extender is available from your dealer. The extender may be used for either front seating position.

⚠ WARNING

(1) This extender should only be used if the existing belt is not long enough.
Persons who can use the standard seat belt should not use an extender. Such unnecessary use could result in serious personal injury in the event of a collision.
(2) When not required, it must be removed and stowed because the use of the extender when not required may deactivate the seat belt locking mechanism.

Supplemental Restraint System (SRS) ND10A-G

This car is equipped with a Supplemental Restraint System (SRS), which includes air bags for the driver and front passenger.
The SRS air bag is designed to supplement the seat belts to provide those occupants with protection against head and chest injuries in certain moderate to severe frontal collisions.
The SRS side air bag (if so equipped) is designed to supplement the seat belts and provide the driver and front passenger with protection against chest and abdomen injuries in certain moderate to severe side impact collisions.
The SRS is NOT a substitute for the seat belts; for maximum protection in all types of crashes and accidents, seat belts should ALWAYS be worn by everyone who drives or rides in this vehicle. (With infants and small children in child restraints in the rear seat)

⚠ WARNING

IT IS VERY IMPORTANT TO ALWAYS WEAR YOUR SEAT BELT EVEN WITH AN AIR BAG:

(1) Seat belts help keep the driver and front passenger properly positioned, which reduces injury risk in all collisions, and reduces injury risk when the air bags inflate.

(2) Seat belts reduce the risk of injury in rollovers, side or rear impact collisions, and in lower-speed frontal collisions, because the air bags are not designed to inflate in those situations.

(3) Seat belts reduce the risk of being thrown from your vehicle in a collision or rollover.

⚠ WARNING

IT IS VERY IMPORTANT TO BE PROPERLY SEATED.

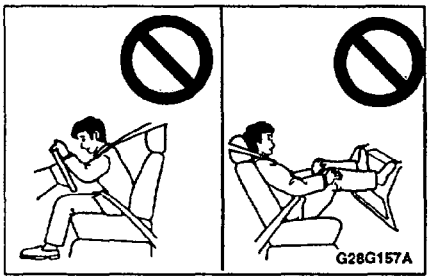
Air bags inflate very fast, and with great force. If the driver and front passenger are not properly seated and restrained, the air bag may not protect you properly, and could cause injury when it inflates. So:

(1) Before driving, adjust the driver's seat as far back as possible while still maintaining complete control of the car.

(2) Before driving, adjust the front passenger seat as far back as possible.

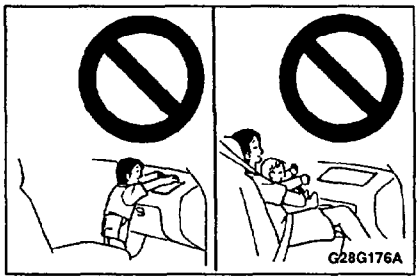
(3) With seat belts properly fastened, the driver and front passenger should sit upright with backs against the seat backs.

Seats, seat belts, child restraints and air bags



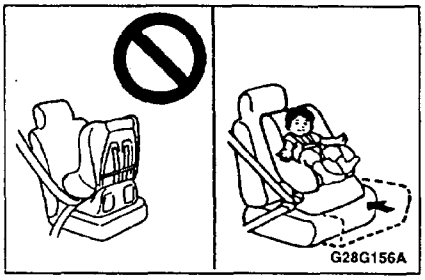
⚠ WARNING

(4) Do not sit on the edge of the seat, or lean head or chest close to the steering wheel or instruments panel. Do not put feet or legs on or against the instrument panel.



⚠ WARNING

(5) Infants and small children should never be unrestrained, stand up against the instrument panel or held in your arms or on your lap. They could be seriously hurt in a collision, including when the air bag inflates. They should be properly seated in the rear seat in an appropriate child restraint system. See the "Child Restraints" section of this owner's manual.

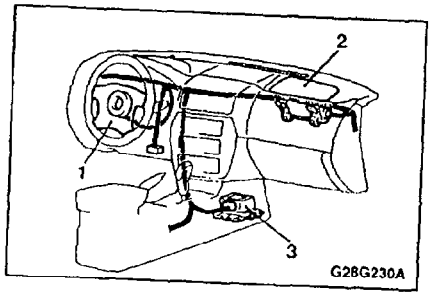


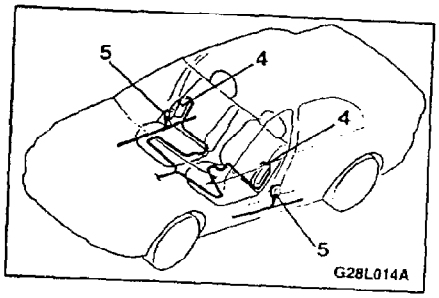
⚠ WARNING

- REAR-FACING CHILD RESTRAINTS must NOT be used in the front passenger seat. The force of an inflating passenger air bag could cause serious or fatal injury to the child. Rear-facing child restraints should only be used in the rear seat.
- FRONT-FACING CHILD RESTRAINTS should be used in the rear seat whenever possible; if they must be used in the front passenger seat, adjust the seat as far back as possible. Failure to do so could result in serious or fatal injury to the child.

⚠ WARNING

(6) Older children, up to and including 12 years old, should be seated in the rear seat, properly wearing the seat belt, with an appropriate booster seat if needed.





How the Supplement Restraint System works

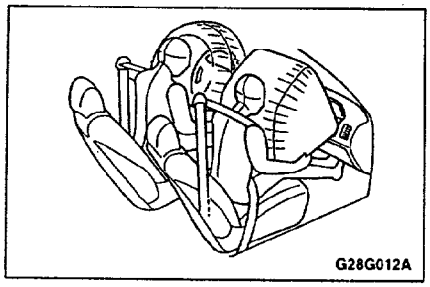
ND10B-J

The SRS includes the following components:

1- Air bag module (Driver)
2- Air bag module (Passenger)
3- Air bag control unit
(including the front impact sensors)
4- Side air bag module (if so equipped)
5- Side impact sensor (if so equipped)

The air bags will operate only when the ignition switch is in the "ON" or "START" position.

Seats, seat belts, child restraints and air bags



Driver's and passenger's front air bag system

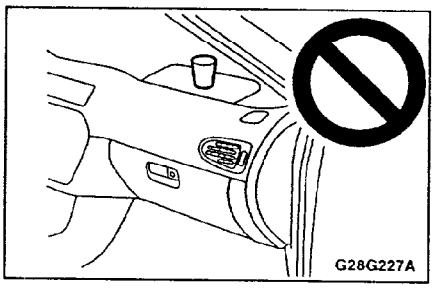
The driver's air bag is located under the padded cover in the middle of the steering wheel. The front passenger air bag is contained in the instrument panel above the glove compartment. The driver air bag and the front passenger air bag are designed to deploy at the same time.

The air bags are designed to deploy only in certain moderate to severe frontal collision. The air bags are not designed to inflate in certain lower-speed frontal collisions, in rollovers, or in side or rear impact collisions.The air bags also may not inflate in certain frontal collisions, even though the car may be severely damaged.
Such non-inflation does not mean that something is wrong with the SRS system, but rather that the collision forces were not severe enough to activate it.

When the impact sensors detect an impact of sufficient frontal force, their switches close a circuit which ignites materials in the inflator to generate gas and inflate the air bags.

Deployment of the air bags produces a sudden, fairly loud noise, and releases some smoke and powder, but these conditions are not injurious, and do not indicate a fire in the car. People with respiratory problems may feel some temporary irritation from chemicals used to produce the deployment; open the windows after deployments, if safe to do so.

After deployment the air bags deflate very rapidly, so there is little danger of obscured vision.
The air bags may not deploy even though the car may be severely damaged.Such non-inflation does not indicate that the SRS system is faulty, but rather that the collision forces were not severe enough to activate it. Similarly, a sharp jolt, such as from an impact to the under carriage, could appropriately cause the air bags to deploy, even though there appears to be little damage to the car.

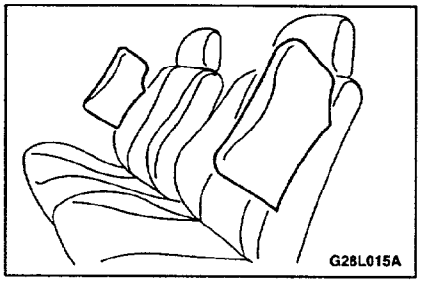


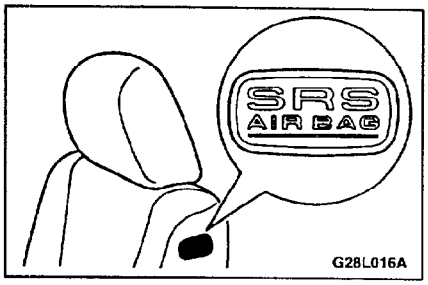
⚠ *WARNING*

(1) Do not attach anything to the steering wheel padded cover, such as trim material, badges, etc. It might strike and injure an occupant if the air bag inflates.
(2) Do not set anything on, or attach anything to, the instrument panel above the glove compartment. It might strike and injure an occupant if the air bag inflates.
(3) Do not attach accessories to, or put them in front of, the windshield. They could restrict air bag inflation, or strike and injure an occupant if the air bags inflate.

⚠ WARNING

(4) Do not put packages, pets or other objects between the air bags and the driver or front passenger. It could affect air bag performance or could cause injury when the air bag inflates.
(5) Right after air bag inflation, several air bag system components will be hot. Do not touch them; you could be burned.
(6) The SRS system is designed to work only once. After the air bags deploy, they will not work again. They must promptly be replaced, and the entire SRS system inspected, by an authorized Mitsubishi dealer.





Side air bag system (if so equipped)

The side air bags are contained in the driver and front passenger seat backs. The label is attached to the seat backs with a side air bag.

The side air bag is designed to inflate only on the side of the car that is impacted. The side air bags are not designed to inflate in certain lower-speed side impact collisions, in roll-overs, or in frontal or rear impact collisions.

When the impact sensor detects an impact of sufficient side force, an automated circuit causes the inflator to inflate the air bag on that side of the car.
In certain side impacts, the side air bag may not inflate, even though that side of the car is damaged. Such non-inflation does not indicate that the side air bag system is faulty, but rather that the impact forces were not severe enough to activate it.
The side air bag deployment produces a sudden, loud noise, and releases some smoke and powder, but these conditions are not injurious, and do not indicate a fire in the car.

Seats, seat belts, child restraints and air bags

⚠ WARNING

(1) The side air bags are designed to supplement the driver and front passenger seat belts in certain side impacts. Seat belts should always be worn, and the driver and front passenger should sit well back and upright in their seats.

⚠ WARNING

(2) The side air bag inflates with great force. The driver and front pasenger should not put their arms out the window, and should not lean against the door, in order to reduce risk of injury from a deploying side air bag.

(3) Do not allow any rear seat occupant to hold onto the seat back of either front seat, in order to reduce risk of injury from a deploying side air bag. Special care should be taken with children.

⚠ WARNING

(4) Do not place any objects near the seat back of either front seat. They could interfere with proper side air bag inflation, and also could cause injury if thrown free by side air bag deployment.

(5) Do not place stickers, labels or additional trim on the seat back of either front seat. They could interfere with proper side air bag inflation.

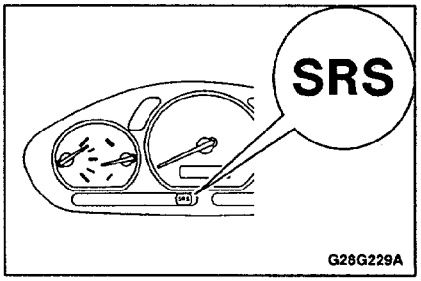
(6) Do not install seat covers on seats with side air bags. Do not re-cover the seats with side air bags. They could interfere with proper side air bag inflation.

(7) Never install a rear-facing child restraint in the front passenger seat. A forward-facing child restraint should be used in the rear seat only, whenever possible. If a forward-facing child restraint must be used in the front passenger seat, adjust the seat as far back as possible, and use care to ensure that the child stays in the child restraint and away from the door.

Failure to follow all of these instructions could lead to serious or fatal injury to the child.

⚠ WARNING

(8) Work around and on the side air bag system components should only be done by an authorized Mitsubishi dealer. Improper work could result in inadvertent deployment of a side air bag, or could render a side air bag inoperative; either situation could result in serious injury.



SRS warning light

There is a Supplemental Restraint System ("SRS") warning light on the instrument panel. The system checks itself each time the ignition is turned on and the light tells you if there is a problem.
When the ignition key is turned to the "ON" or "START" position, the warning light should illuminate for about 7 seconds and then should go out. This means the system is ready.

The air bags will operate only when the ignition switch is in the "ON" or "START" position.

⚠ WARNING

If any of following conditions occur, the SRS is not working properly, and you should immediately have it inspected by an authorized Mitsubishi dealer.

- **The SRS warning light does not illuminate when you start the car.**
- **The SRS warning light does not go off after about 7 seconds.**
- **The SRS warning light illuminates while driving.**

Seats, seat belts, child restraints and air bags

SRS servicing ND10C-G

The entire SRS system must be inspected by an authorized Mitsubishi dealer 10 years after the car manufacture date shown on the certification label located on the center pillar on the driver's side.

⚠ WARNING

(1) Any maintenance performed on or near the components of the SRS should be performed only by an authorized Mitsubishi dealer.
Do not permit anyone else to do service, inspection, maintenance or repair on any SRS components or wiring; similarly, no part of the SRS system should ever be handled or disposed of by anyone except an authorized Mitsubishi dealer. Improper work on the SRS components or wiring could result in inadvertent deployment of the air bags, or could render the SRS system inoperative; either situation could result in serious injury.

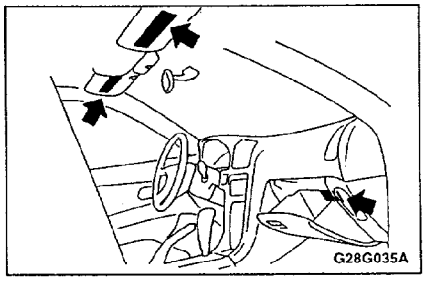
⚠ WARNING

(2) Do not modify your steering wheel or any other SRS components. For example, replacement of the steering wheel, or modifications to the front bumper or body structure can adversely affect SRS performance and lead to possible injury.
(3) If your car has received any front-end damage, you should have the SRS system inspected by an authorized Mitsubishi dealer to ensure it is in proper working order.
(4) On cars with the side air bags, do not modify your front seats, center pillar and center console. It can adversely affect SRS performance and lead to possible injury.
Also, if you have found any tear or open seam in the seat fabric at the portion near the side air bag, have the seat inspected at an authorized Mitsubishi dealer.

⚠ WARNING

(5) On cars with side air bags, if your car has received any damage to either side, you should have the SRS system inspected by an authorized Mitsubishi dealer to ensure it is in proper working order.

NOTE
(1) When you transfer ownership of the car to some other person, we urge you to alert the new owner that it is equipped with the SRS system and refer that owner to the applicable section in this owner's manual.
(2) If you junk or scrap the car, we urge you to first take the car to an authorized Mitsubishi dealer so that the SRS system can be rendered safe.



Service and information label

Service and information labels are attached as shown in the illustration.