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REPORT NO. 208-MGA-2003-002

SAFETY COMPLIANCE SLED TESTING FOR FMVSS 208 OCCUPANT CRASH PROTECTION

Volkswagen AG Germany
2003 Volkswagen Passat 4 Door
NHTSA NO. C35800

MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: March 26, 2003

Report Date: April 15, 2003

FINAL REPORT

Prepared For:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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15. Supplementary Notes

16. Abstract

A compliance test (sled test) was conducted on the subject 2003 Volkswagen Passat 4 Door in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208S-01 for the determination of FMVSS 208 compliance. Test failures identified were as follows:

NONE

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Purpose

This FMVSS 208 compliance sled test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 208 compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by MGA Research Corporation (MGA) under Contract No. DTNH22-98-D-11055. The purpose of this test was to determine if the subject vehicle, a 2003 Volkswagen Passat 4 Door, NHTSA No. C35800, meets the performance requirements of FMVSS 208, "Occupant Crash Protection," in the impact simulation sled test mode.

Test Procedure

This test was conducted in accordance with NHTSA's Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure No. TP-208S-01 dated January 15, 1998. Data was obtained relative to FMVSS 208, "Occupant Crash Protection," performance.

The test vehicle was instrumented with four (4) accelerometers to measure longitudinal axis accelerations.

The test vehicle contained two (2) Part 572 E 50th percentile adult male anthropomorphic test devices (dummies). The dummies were positioned in the front outboard seating positions according to the dummy placement procedures specified in Appendix B of the Laboratory Test Procedure. The dummies were not restrained by seat belts.

Both dummies were instrumented with head and chest accelerometers to measure longitudinal, lateral, and vertical accelerations; chest deflection potentiometers; left and right femur load cells to measure axial forces; and upper neck load cells to measure longitudinal, lateral, and vertical forces and moments.

The thirty-eight (38) data channels were digitally sampled at 10,000 samples per second and processed per Sections 11.7 through 11.9 of the Laboratory Test Procedure.

The crash event was recorded by six (6) high-speed motion picture cameras. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera.

Test Results Summary

This FMVSS 208 compliance sled test was conducted at MGA Research Corporation on March 28, 2003.

The test vehicle, a 2003 Volkswagen Passat 4 Door, NHTSA No. C35800, appeared to comply with the performance requirements of FMVSS 208 in the impact simulation sled test mode as measured by Hybrid III 50th percentile male dummies.

	FMVSS 208 Max. Allowable Injury Assessment Values	Driver (Serial #340)	Passenger (Serial #312)
HIC	1000	303	115
Chest g	60 g	35.7 g	30.7 g
Chest displacement	3 in.	0.8 in.	0.4 in.
Left Femur	2250 lb	818 lb	1030 lb
Right Femur	2250 lb	714 lb	831 lb
Neck Extension	57 Nm	23.1 Nm	15.8 Nm
Neck Flexion	190 Nm	42.7 Nm	59.2 Nm
Neck Tension	3300 N	862 N	601 N
Neck Compression	4000 N	2645 N	730 N
Neck Shear	3100 N	937 N	1013 N

The vehicle also appears to meet the other FMVSS 208 requirements for which it was tested. These results are shown in the data sheets that are included in this report.

The test vehicle was equipped with air bags at the driver and passenger seating positions. The dummies were not restrained by seat belts. The sled carriage was accelerated to 17.1 g with an integrated velocity change of 29.2 mph. After filtering the acceleration signal to Channel Class 60, the airbag system was triggered 21.4 milliseconds after 0.5 g acceleration.

INCLUDE DISCUSSION OF LOST CHANNELS OR OTHER TEST ISSUES.

- None noted.

Sled Test Summary

Vehicle NHTSA No.: C35800 Test Mode: FMVSS 208 SLED TEST

Vehicle Yr/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Test Date: March 28, 2003 Time: 12:30 p.m. Temp: 71°F

Vehicle Test Weight: 3902 lbs.

DUMMY INFO.	DRIVER	PASSENGER
Dummy Type	Part 572E	Part 572E
Serial Number	340	312
Restraint System	Frontal airbag	Frontal airbag
No. Data Channels	15	15

Number of Cameras: 1 Real Time

6 High Speed

Door Opening Data: yes Left Front

yes Right Front

FRONT SEAT(S) DATA	DRIVER	PASSENGER
Seat Track Failure -	0.1 inches shift forward;	0.1 Inches shift forward
Seat Back Failure -	no	no

VISIBLE DUMMY CONTACT POINTS:	DRIVER	PASSENGER
Head	Airbag/windshield/ sunvisor	Airbag/windshield/ sunvisor/header
Chest	Airbag	Airbag
Left Knee	Knee bolster	Glove box
Right Knee	Knee boster	Glove box

General Test And Vehicle Parameter Data

Vehicle Yr/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Vehicle NHTSA No.: C35800 VIN: WVWPD63B13P241080 Color: Silver

Engine Data:

No. Cylinders: 4 ; CID: ; Liters: 1.8 ; CCs:

Placement: Longitudinal/Inline: X ; Transverse/Lateral:

Transmission Data:

Speeds: 5 ; Manual: X ; Automatic: ; Overdrive: X

Final Drive:

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

Major Options:

A/C: X ; Pwr. Strg.: X ; Pwr. Brakes: X ; Pwr. Windows: X

Pwr. Dr. Locks: X ; Other: tilt wheel, cruise control, rear defogger, moon roof

Date Received: 2/11/03 ; Odometer Reading: 18 miles

Selling Dealer: Ernie Von Schledorn - Volkswagen, N88 W14167 Main Street, Menonomee Falls, WI 53052

REMARKS: None

General Test And Vehicle Parameter Data (Cont.)

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: Volkswagen AG Germany

Date of Manufacture: 9/02 ; VIN: WVWPD63B13P241080

GVWR: 4336 lbs; GAWR Front: 2249 lbs.

GAWR Rear: 2183 lbs.

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load:

FRONT: 30 psi REAR: 39 psi

Recommended Tire Size: 195/65R15 91H or 205/60R15 91H or 205/55R16 91H

Recommended Cold Tire Pressure:

FRONT: 28 psi REAR: 28 psi

Size of Tires on Test Vehicle: 195/65R15 91H

Type of Spare Tire: 195/65R15 91H ; Space Saver: ___; Standard: X

Vehicle Capacity Data:

Type of Front Seats:	X Bucket;	__Bench;	__Split Bench	
Number of Occupants:	2 Front;	3 Rear;	__3rd Seat;	5 TOTAL

REMARKS: None

VEHICLE CAPACITY WEIGHT (VCW) = 1070 lbs.

No. Of Occupants x 150 lbs = 750 lbs.

Rated Cargo/Luggage Weight (RCWL) = 320 lbs. (Difference)

General Test And Vehicle Parameter Data (Cont.)

WEIGHT OF TEST VEHICLE AS RECEIVED AT LABORATORY: (with maximum fluids)

Right Front = 965 lbs. Right Rear = 667 lbs.

Left Front = 951 lbs. Left Rear = 655 lbs.

TOTAL FRONT = 1916 lbs. TOTAL REAR = 1322 lbs.

% Total Weight = 59.2 % % Total Weight = 40.8 %

TOTAL DELIVERED WEIGHT = 3238 lbs.

WEIGHT OF FULLY LOADED TEST VEHICLE WITH TWO DUMMIES (344 LB) AND 320 POUNDS OF CARGO WEIGHT:

Right Front = 1022 lbs. Right Rear = 946 lbs.

Left Front = 994 lbs. Left Rear = 940 lbs.

TOTAL FRONT = 2016 lbs. TOTAL REAR = 1886 lbs.

% Total Weight = 51.7 % % Total Weight = 48.3 %

TOTAL WEIGHT = 3902 lbs.

TEST VEHICLE ATTITUDE: (all measurements in degrees)

AS DELIVERED DOOR SILL ANGLE: 0.4° nose down

AS TESTED DOOR SILL ANGLE: 0.2° nose down

FULLY LOADED DOOR SILL ANGLE: 0.6° nose up

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 16.4 gallons

Usable Capacity Figure Furnished by COTR = 16.76 gallons

REMARKS: None

Post-Impact Data

Test number:	HT03032801
NHTSA number:	C35800
Test date:	March 28, 2003
Test time:	12:30 p.m.
Test type:	FMVSS 208 Compliance Sled Test
Impact angle:	0°
Ambient Temperature at Impact Area:	71°F
Temperature in Occupant Compartment:	71°F

Impact Velocity:

Integrated velocity from the integration of the entire sled acceleration:	29.2 mph
Specified integrated velocity range:	28 to 30 mph

Sled Carriage Acceleration:

Acceleration:	17.1 g
Specified Acceleration Range:	16.0 - 18.2 g

Sled Carriage Acceleration Duration:

Time from T-0 (-0.5 g) to 0.0 g:	121.7 msec
Specified Acceleration Duration:	120.0 to 130.0 msec

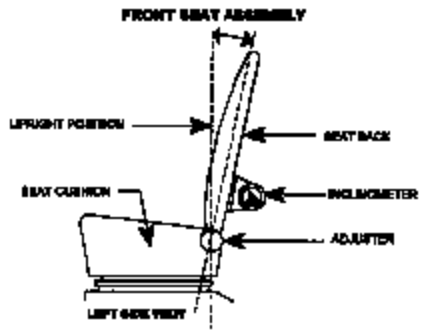
The sled acceleration corridor was achieved.

Seat and Steering Column Positioning Data

Vehicle Yr/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Vehicle NHTSA No.: C35800 Test Date: March 28, 2003

NOMINAL DESIGN RIDING POSITION:



Driver Seat: Seat Back Angle = 19°*

Passenger Seat: Seat Back Angle = 19°*

* - Measured from torso angle of H-point machine.

SEAT FORE AND AFT POSITIONS:

Driver Seat: The seat track had a total position movement of 14 notches and was positioned 7 notches rearward from the foremost position with the forward most locking position as zero.

Passenger Seat: The seat track had a total position movement of 14 notches and was positioned 7 notches rearward from the foremost position with the forward most locking position as zero.

STEERING COLUMN ADJUSTMENTS:

The steering column was placed in the mid position of angular adjustment (68.0° from a range of 66.5° to 69.5°) and telescoping adjustment (22.5 mm of 45 mm total).

Dummy Positioning Measurement Table

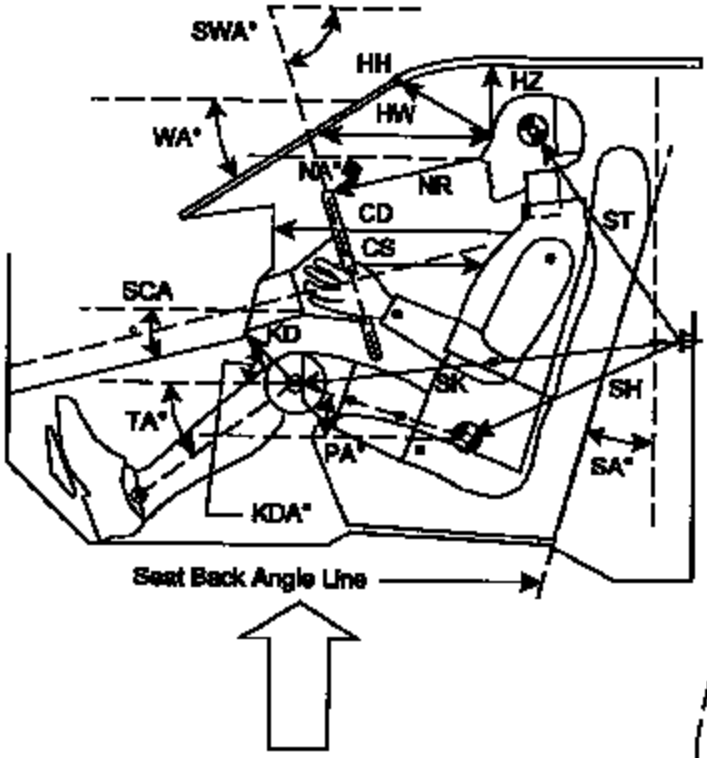
Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Vehicle NHTSA No.: C35800 Test Date: March 28, 2003

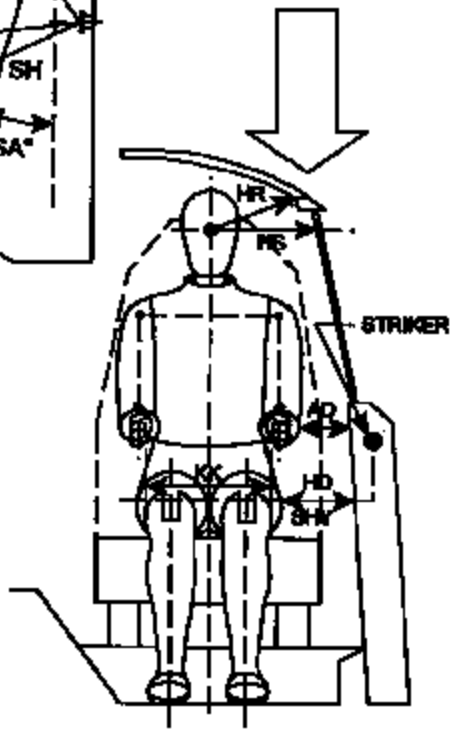
	DRIVER (Serial #340)	PASSENGER (Serial #312)
WA°	28.6°	
SWA°	68.0°	
SCA°	21.7°	
SA°*	14.0°	14.9°
HZ	7.9	7.3
HH	13.6	15.0
HW	24.7	25.7
HR	8.0	7.7
NR	14.5 Angle (NA°) 8.9°	
CD	19.5	21.7
CS	12.1	
RA	8.0	
KDL	8.2 Angle (KDA°) 0.0°	8.7
KDR	8.5	10.1 Angle (KDA°) 0.0°
PA°	24.1°	24.2°
TA°	36.9°	35.1°
KK	14.3	10.6
ST	17.2 Angle 14.3°	17.0 Angle 10.3°
SK	23.7 Angle 100.8°	24.1 Angle 104.0°
SH	11.6 Angle 135.4°	11.4 Angle 138.1°
SHY	10.1	10.1
HS	12.3	12.6
HD	6.0	6.2
AD	5.0	4.4

* - Measured at headrest post

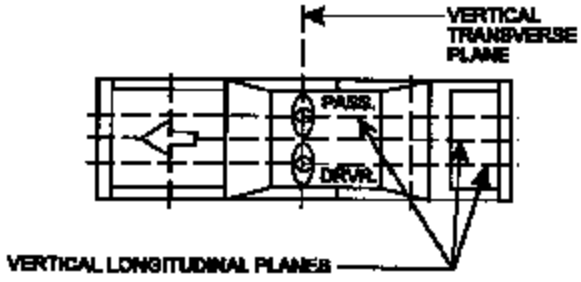
DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



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



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



Description of Dummy Measurements

When a level is to be used, it is to ensure that the line containing the two points described is either parallel or perpendicular to the ground. If a measurement to be made is less than 10 inches ignore the directions to use a level and approximate a level measurement. Also, when a measurement is to be taken to or from the center of a bolt on the dummy, take the measurement from the center of the bolt hole if the bolt is recessed.

The following measurements are to be made within a vertical longitudinal plane.

* HH Head to Header, taken from the point where the dummy's nose meets his forehead (between his eyes) to the furthest point forward on the header.

* HW Head to Windshield, taken from the point where the dummy's nose meets his forehead (between his eyes) to a point on the windshield. Use a level.

HZ Head to Roof, taken from the point where the dummy's nose meets his forehead (between his eyes) to the point on the roof directly above it. Use a level.

* CS Steering Wheel to Chest, taken from the center of the steering wheel hub to the dummy's chest. Use a level.

* CD Chest to Dash, place a tape measure on the tip of the dummy's chin and rotate five inches of it downward toward the dummy to the point of contact on the transverse center of the dummy's chest. Then measure from this point to the closest point on the dashboard either between the upper part of the steering wheel between the hub and the rim, or measure to the dashboard placing the tape measure above the rim, whichever is a shorter measurement. See photograph.

RA Steering Wheel Rim to Abdomen, taken from the bottommost point of the steering wheel rim horizontally rearward to the dummy. Use a level.

NR Nose to Rim, taken from the tip of the dummy's nose to the closest point on the top of the steering wheel rim. Also indicate the angle this line makes with respect to the horizontal (NA).

*[1] KDL, KDR Left and Right Knees to Dashboard, taken from the center of the knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the dashboard. Also reference the angle of this measurement with respect to the horizontal for the outboard knee (KDA). See photograph.

* Measurement used in Data Tape Reference Guide
[1] Only outboard measurement is referenced in Data Tape Reference Guide

Description of Dummy Measurements (Cont.)

SH, SK, ST — Striker to Hip, Knee, and Head, these measurements are to be taken in the X-Z plane measured from the forward most center point on the striker to the center of the H-point, outer knee bolt, and head target. When taking this measurement a firm device that can be rigidly connected to the striker should be used. Use a level. The angles of these measurements with respect to the horizontal should also be recorded. The measurement in the Y (transverse) direction from the striker to the H-point should also be taken (SHY). See photograph.

The following measurements are to be made within a vertical transverse plane.

HS — Head to Side Window, taken from the point where the dummy's nose meets his forehead (between his eyes) to the outside of the side window. In order to make this measurement, roll the window down to the exact height which allows a level measurement. Use a level. See photograph.

* AD — Arm to Door, taken from the outer surface of the elbow pivot bolt on a Hybrid II dummy to the first point it hits on the door. In the case of a Hybrid III dummy, measure from the bolt on the outer biceps. When a SID is used make the measurement from the center of the bottom of the arm segment where it meets the dummy's torso.

* HD — H-point to Door, taken from the H-point on the dummy to the closest point on the door. Use a level.

* HR — Head to Side Header, measure the shortest distance from the point where the dummy's nose meets his forehead (between his eyes) to the side edge of the header just above the window frame, directly adjacent to the dummy.

SHY — Striker to H-point, taken from a rod rigidly connected to the forward most center point on the striker to the H-point. Use a level. See photograph.

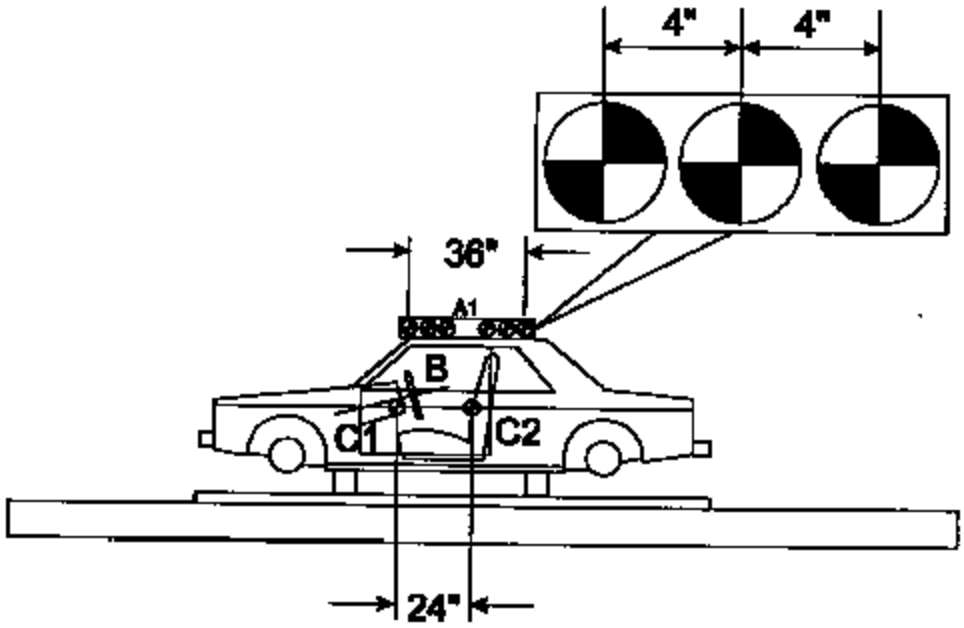
KK — Knee to Knee, for Hybrid II dummies measure the distance between knee pivot bolt head outer surfaces. For Hybrid III dummies measure the distance between the outboard knee clevis flange surfaces. (This measurement may not be exactly transverse)

* Measurement used in Data Tape Reference Guide

Angles

SA	Seat Back Angle, find this angle using the instructions provided by the manufacturer. If the manufacturer doesn't provide clear instructions contact the COTR.
PA	Pelvic or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and taking this angle with respect to the horizontal. Measure the angle of the line connecting the H-point hole and the outer knee pivot bolt hole on a Hybrid II dummy with respect to the horizontal, to find the femur angle.
SWA	Steering Wheel Angle, find this by placing a straight edge against the steering wheel rim along the longitudinal plane. Then measure the acute angle of the straight edge with respect to the horizontal.
SCA	Steering Column Angle, measured with respect to the horizontal by placing an inclinometer on the center of the underside of the steering column.
NA	Measure the angle made when taking the measurement NR with respect to the horizontal.
KDA	Knee to Dash Angle, the angle that the measurement KD is taken at with respect to the horizontal. Only get this angle for the outboard knee. See photograph.
WA	Windshield Angle, place an inclinometer along the transverse center of the windshield exterior (measurement is made with respect to horizontal).
TA	Tibial Angle, use a straight edge to connect the dummy's knee and ankle bolts. Then place an inclinometer on the straight edge and measure the angle with respect to the horizontal.

REFERENCE PHOTO TARGETS

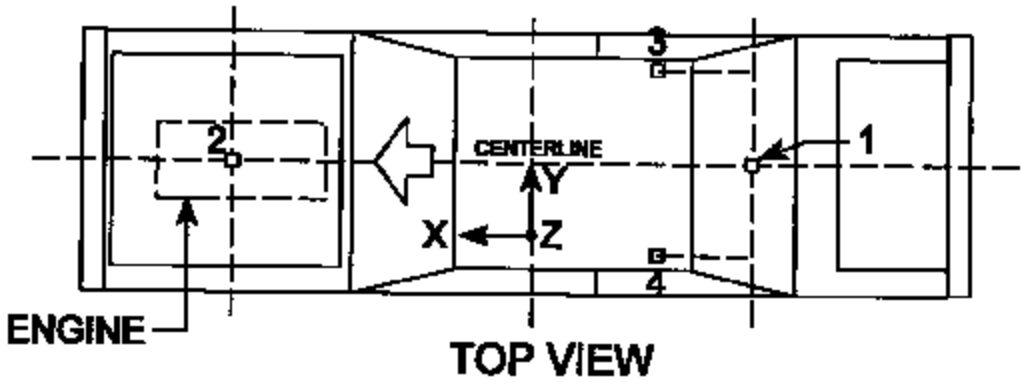


LEFT SIDE VIEW

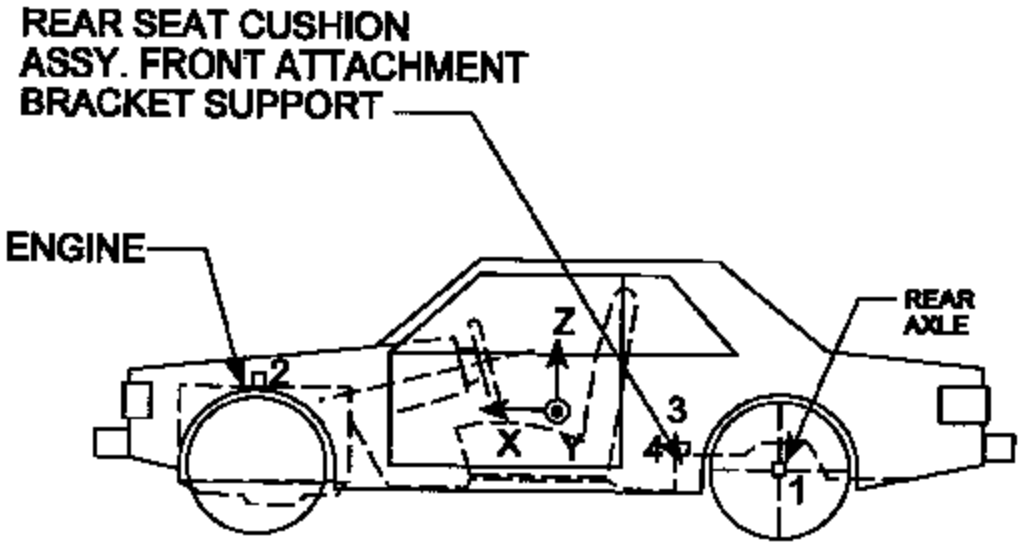
Vehicle Accelerometer Placement and Data Summary

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Vehicle NHTSA No.: C35800 Test Date: March 28, 2003



TOP VIEW



LEFT SIDE VIEW

Vehicle Accelerometer Location Measurements and Data Summary

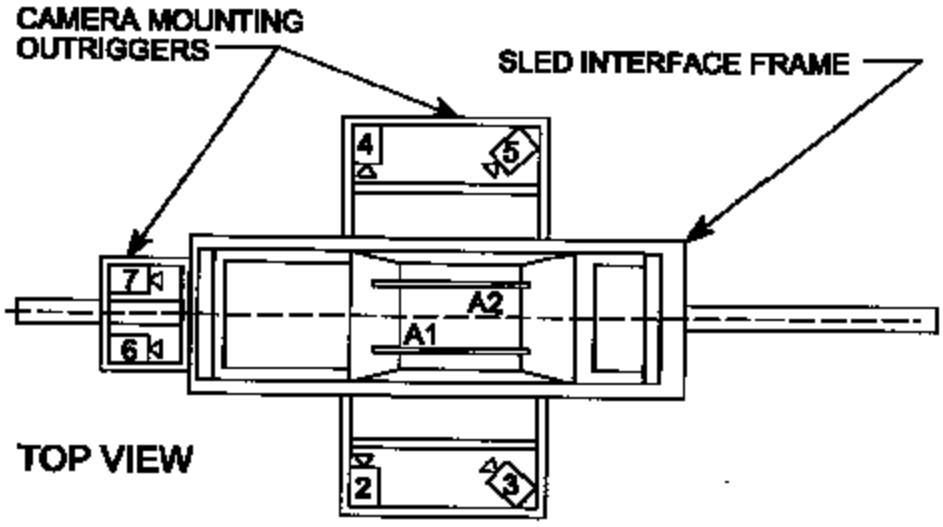
Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Vehicle NHTSA No.: C35800 Test Date: March 28, 2003

No.	Location	X (in)	Y (in)	Positive Direction		Negative Direction	
				Value	Time (msec)	Value	Time (msec)
	Sled Primary Longitudinal	67.0	0	17.1 g	59	-1.5 g	125
	Sled Redundant Longitudinal	67.0	4.0	*	*	*	*
	Sled Velocity Measured Integrated	67.0	0	29.2 mph	122	--	--
1	Rear Axle Longitudinal	51.0	0	17.3 g	68	-0.9 g	126
2	Top Engine Longitudinal	160.0	0	18.0 g	67	-2.1 g	155
3	Right Rear Seat Member Longitudinal	73.0	14.5	18.3 g	58	-1.9 g	195
4	Left Rear Seat Member Longitudinal	73.0	14.5	17.8 g	45	-1.1 g	184

* No valid data collected

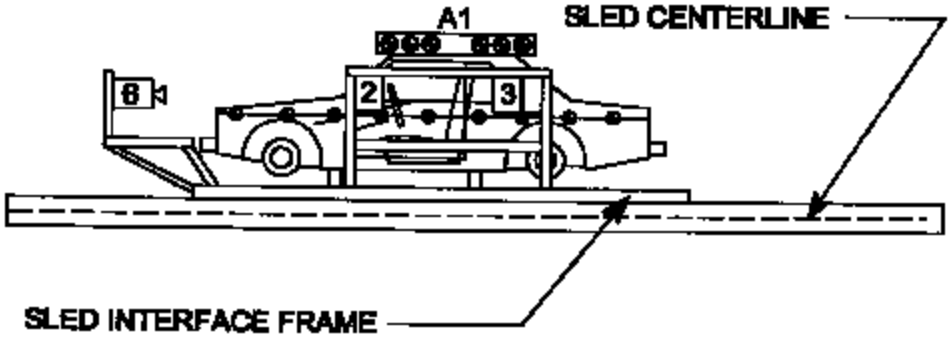
Camera Positions



TOP VIEW

CAMERA FRAME RATES:
#1 = 24 fps
All Others = 1,000 fps

1 REAL TIME CAMERA



LEFT SIDE VIEW

Camera Location Measurements

Camera No.	VIEW	Camera Positions (inches)*			Angle (deg)	Film Plane To Head Target	Lens (mm)	Speed (fps)**
		X	Y	Z				
1	Real-Time (Pre and Post)						10	24
2	Onboard Driver	70.6	88.6	38.4	90	72.4	13	1000
3	Onboard Driver Angle	150.9	91.1	47.8			13	852
4	Onboard Passenger	71.8	89.6	38.5	90	71.1	13	990
5	Onboard Passenger Angle	146.7	88.5	47.9			13	1010
6	Onboard Windshield Driver	18.3	14.1	42.9			13	1000
7	Onboard Windshield Passenger	18.3	13.9	42.9			13	896

Reference* X = Front of sled carriage

Y = Center of sled carriage

Z = Top of sled carriage

** There were no timing marks on the film. Film speed was determined through film analysis.

Occupant Injury Data

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Vehicle NHTSA No.: C35800 Test Date: March 28, 2003

MAXIMUM ACCELERATION VALUES: (g's)	DRIVER DUMMY #340	PASSENGER DUMMY #312
Head Channel X	-59.7	-39.0
Head Channel Y	-43.0	-21.7
Head Channel Z	-96.7	49.2
HEAD RESULTANT	100.6	64.4
Chest Channel X	-27.5	-26.1
Chest Channel Y	-4.4	-2.4
Chest Channel Z	32.5	21.1
CHEST RESULTANT	39.4	31.5

HEAD INJURY CRITERIA (HIC) VALUES:

HIC	303	115
t_1 = (msec)	98.0	91.8
t_2 = (msec)	121.6	127.8

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

CHEST INJURY CRITERIA (CLIP) VALUES: (g's)

CLIP	35.7	30.7
t_1 = (msec)	100.6	109.1
t_2 = (msec)	103.6	112.1
CHEST DEFLECTION (in)	0.8	0.4

Occupant Injury Data (Cont.)

MAX. COMPRESSIVE FEMUR FORCES:	DRIVER DUMMY #340	PASSENGER DUMMY #312
Left Side (lbs)	818	1030
Right Side (lbs)	714	831

NECK INJURY CRITERIA:

Peak Flexion Bending Moment about the Occipital Condyle (N-m)	42.7	59.2
Peak Extension Bending Moment about the Occipital Condyle (N-m)	23.1	15.8
Peak Axial Tension (N)	862	601
Peak Axial Compression (N)	2645	730
Peak Fore Shear (N)	937	1013
Peak Aft Shear (N)	222	136

Seat Belt Warning System Data

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

NHTSA No.: C35800 ; Technician: Chad Gadberry ; Date: February 21, 2003

Complete the following to determine which seat belt warning system option (S7.3(a)(1) or S7.3 (a)(2)) is used. (Manufacturers may use either option.)

A. With occupant in driver's position and lap belt in stowed position and ignition switch placed in "Start/On" position:

A.1 S7.3(a)(1)
Time duration of audible warning signal = ____ seconds
(4 to 8 seconds)

Time duration of reminder light operation = ____ seconds
(no less than 60 seconds)

A.2 S7.3(a)(2)
Time duration of audible warning signal = 6 seconds
(4 to 8 seconds)(see 49 USCS @ 30124)

Time duration of reminder light operation = 6 seconds
(4 to 8 seconds)

B. With occupant in driver's position and lap belt in use and ignition switch placed in "Start/On" position:

B.1 S7.3(a)(1)
Time duration of audible warning signal = ____ seconds
(audible warning not required)

Time duration of reminder light operation = ____ seconds
(reminder light not required)

B.2 S7.3(a)(2)
Time duration of audible warning signal = 0 seconds
(audible warning not required)

Time duration of reminder light operation = 6 seconds
(4 to 8 seconds)

C. Note wording of visual warning:
Fasten seat belt _____
Fasten Belt _____
Symbol 101 X

Readiness Indicator

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

NHTSA No.: C35800 ; Technician: Chad Gadberry ; Date: February 21, 2003

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement. (11/8/94 legal interpretation)

1. Is the system totally mechanical? ( )Yes (X)No
(If YES this Data Sheet is complete.)

2. Describe the location of the readiness indicator: left side of instrument panel

3. Is the readiness indicator clearly visible to the driver?
(X)Yes-Pass ( )No-FAIL

4. Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided?
(X)Yes-Pass ( )No-FAIL

Air Bag Labels Data

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

NHTSA No.: C35800 ; Technician: Chad Gadberry ; Date: February 21, 2003

1. Air bag maintenance label and owner's manual instructions (S4.5.1(a)):

   1.1. Does the manufacturer recommend periodic maintenance or replacement of the airbag? ( )Yes, go to 1.2 (X) No, go to 2

   1.2. Does the vehicle have a maintenance or replacement label?
   ( )Yes-Pass ( ) No-FAIL

   1.3. Does the label contain one of the following?
   ( )Yes-Pass ( ) No-FAIL
   ( ) Schedule on label specifies month and year (Date:_____)
   ( ) Schedule on label specifies vehicle mileage (Mileage:_____)
   ( ) Schedule on label specifies interval measured from date on certification label (Date:_____)

   1.4. Is the label permanently affixed within the passenger compartment?
   ( )Yes-Pass ( ) No-FAIL

   1.5. Is the label lettered in English?
   ( )Yes-Pass ( ) No-FAIL

   1.6. Is the label in block capitals and numerals?
   ( )Yes-Pass ( ) No-FAIL

   1.7. Are the letters and numerals at least 3/32 inches high?
   ( )Yes-Pass ( ) No-FAIL

   1.8. Does the owner's manual set forth the recommended schedule for maintenance or replacement? ( )Yes-Pass ( ) No-FAIL

2. Does the owner's manual (S4.5.1(f)):

   2.1 Include a description of the vehicle's airbag system in an easily understandable format? (X)Yes-Pass ( ) No-FAIL

   2.2 Include a statement that the vehicle is equipped with an airbag and a lap/shoulder belt at the front outboard seating positions?
   (X)Yes-Pass ( ) No-FAIL

2.3 Include a statement that the air bag is a supplemental restraint at the front outboard seating positions?

(X)Yes-Pass ( ) No-FAIL

2.4 Emphasize that all occupants, including the driver, should always wear their seat belts whether or not an airbag is also provided at their seating positions to minimize the risk of severe injury or death in the event of a crash?

(X)Yes-Pass ( ) No-FAIL

2.5 Provide any necessary precautions regarding the proper positioning of occupants, including children, at seating positions equipped with air bags to insure maximum safety protection for those occupants?

(X)Yes-Pass ( ) No-FAIL

2.6 Explain that no objects should be placed over or near the air bag on the steering wheel or on the instrument panel, because any such objects could cause harm if the vehicle is in a crash severe enough to cause the air bag to inflate?

(X)Yes-Pass ( ) No-FAIL

3. Does the vehicle:

3.1. Provide an automatic means to ensure that the airbag does not deploy when a child seat or child with a total mass of 30 kg or less is present on the front outboard passenger? ( )Yes (X) No

3.2. Incorporate sensors, other than or in addition to weight sensors, which automatically prevent the passenger air bag from deploying in situations in which it might have an adverse effect on infants in rear-facing child seats, and unbelted or improperly belted children? ( )Yes (X) No

3.3. Have a passenger air bag designed to deploy in a manner that does not create a risk of serious injury to infants in rear-facing child seats, and unbelted or improperly belted children? ( )Yes (X) No

If yes to 3.1, or 3.2, or 3.3, the vehicle is not required to have a sunvisor warning label (S4.5.1(6)), an airbag alert label (S4.5.1(c)) or a label on the dash (S4.5.2(e)) and this check sheet is complete (S4.5.1). If no to 3.1, 3.2, and 3.3, go to 4.

4. Sun Visor Warning Label

4.1. Is the label permanently affixed (may be permanent marking or molding) to either side of the sunvisor at each front outboard seating position with an airbag? (S4.5.1(b)(2))

Driver Side - (X)Yes-Pass ( ) No-FAIL
Passenger Side - ( ) N/A (X)Yes-Pass ( ) No-FAIL

4.2. Does the label conform in content (vehicles without back seats may omit the statement: "The back seat is the safest place for children.") (S4.5.1(b)(2)(v))) to either label shown on the next page as appropriate at each front outboard seating position with an air bag? (S4.5.1(b)(2))

4.2.1 **Dual air bags:** ( ) Not Applicable

Driver Side -	(X)Yes-Pass	( ) **No-FAIL**
Passenger Side -	(X)Yes-Pass	( ) **No-FAIL**

4.2.2 Vehicle with driver air bag ONLY - either 4.2.2.1 or 4.2.2.2 is applicable, not both. (S4.5.1(b)(2)(iv))

4.2.2.1 Does the label conform in content to either label shown on the following page as appropriate?

(X) Not Applicable

Driver Side -	( )Yes-Pass	( ) **No-FAIL**

4.2.2.2 Does the label conform in content to the first label shown on the following page where the label can be modified to omit the pictogram and the message text may read:

DEATH or SERIOUS INJURY can occur.
- Sit as far back as possible from the air bag.
- ALWAYS use SEAT BELTS and CHILD RESTRAINTS
- The BACK SEAT is the SAFEST place for children.

(X) Not Applicable

Driver Side -	( )Yes-Pass	( ) **No-FAIL**

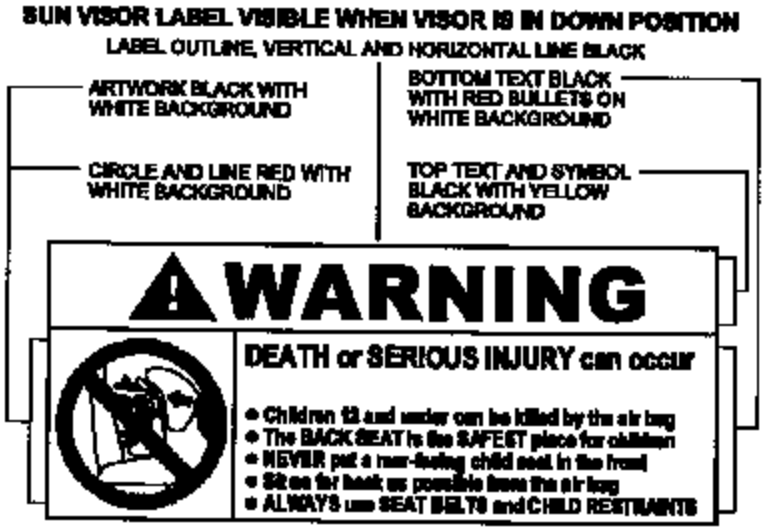


Figure 6a (S4.5.1(b)(2))

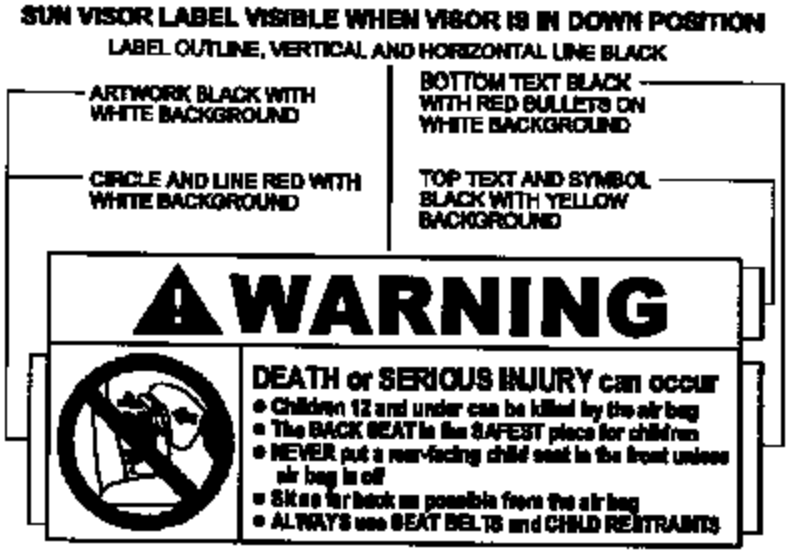


Figure 6b (S4.5.1(b)(2))

4.3 Is the label heading area yellow with the word "warning" and the alert symbol in black? (S4.5.1(b)(2)(i))

Driver Side -		(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( ) No air bag	(X)Yes-Pass	( ) No-FAIL

4.4 Is the message white with black text? (S4.5.1(b)(2)(ii))

Driver Side -		(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( ) No air bag	(X)Yes-Pass	( ) No-FAIL

Air Bag Labels Data (Cont.)

4.5 Is the message area at least 30 cm^2? (S4.5.1(b)(2)(ii))
Actual message area: 41.8 cm^2

	Driver Side -	(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( ) No air bag	(X)Yes-Pass	( ) No-FAIL

4.6 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(b)(2)(iii) & (S4.5.1(b)(2)(iv))
For vehicles with driver side air bag ONLY ( ) Not Applicable

	Driver Side -	(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( ) No air bag	(X)Yes-Pass	( ) No-FAIL

4.7 Is the pictogram at least 30 mm in diameter? (S4.5.1(b)(2)(iii))
Actual diameter: 30 mm
For vehicles with driver side air bag ONLY ( ) Not Applicable

	Driver Side -	(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( ) No air bag	(X)Yes-Pass	( ) No-FAIL

4.8 Is the same side of the sun visor to which the sun visor label is affixed free of other information with the exception of an air bag maintenance label? (S4.5.1(b)(3))

	Driver Side -	(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( ) No air bag	(X)Yes-Pass	( ) No-FAIL

4.9 Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label or the utility vehicle label? (S4.5.1(b)(3))

	Driver Side -	(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( ) No air bag	(X)Yes-Pass	( ) No-FAIL

5. Air Bag Alert Label

5.1 Is the Sun Visor Warning Label visible when the sunvisor is in the stowed position?

Driver Side -		( )Yes, go to 6	(X) No
Passenger Side -	( )No air bag	( )Yes	(X) No

5.2 Does the label conform in content to the label shown below? (S4.5.1(c)(2))

Driver Side -		(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( )No air bag	(X)Yes-Pass	( ) No-FAIL

5.3 Is the message area black with yellow text? (S4.5.1(c)(2)(i))

Driver Side -		(X)Yes-Pass	( ) No-FAIL
Passenger Side -	( )No air bag	(X)Yes-Pass	( ) No-FAIL

5.4 Is the message area at least 20 cm^2? (S4.5.1(c)(2)(i))
Actual message area: 20.9 cm^2
Driver Side - (X)Yes-Pass ( ) **No-FAIL**
Passenger Side - ( )No air bag (X)Yes-Pass ( ) **No-FAIL**

5.5 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(c)(2)(ii))
For vehicles with driver side air bag ONLY ( ) Not Applicable
(X)Yes-Pass ( ) **No-FAIL**

5.6 Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2)(ii))
Actual diameter 20 mm
For vehicles with driver side air bag ONLY ( ) Not Applicable
(X)Yes-Pass ( ) **No-FAIL**

Figure 6c (S4.5.1(c)(2))

6. Label On the Dash

6.1 Does the vehicle have a passenger side air bag?
(X)Yes ( ) No, check sheet is complete.

6.2 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e))
(X)Yes-Pass ( ) **No-FAIL**

6.3 Does the label conform in content (vehicles without back seats may omit the statement: "The back seat is the safest place for children 12 and under." (S4.5.1(e)(ii)) to the label shown below. (S4.5.1(e))
(X)Yes-Pass ( ) **No-FAIL**

6.4 Is the heading area yellow with the word "warning" and the alert symbol in black? (S4.5.1(e)(i)) (X)Yes-Pass ( ) No-FAIL

6.5 Is the message white with black text? (S4.5.1(e)(ii)) (X)Yes-Pass ( ) No-FAIL

6.6 Is the message area at least 30 cm^2? (S4.5.1(e)(ii))
Actual message area: 30.0 cm^2
(X)Yes-Pass ( )No-FAIL

REMOVABLE LABEL ON DASH

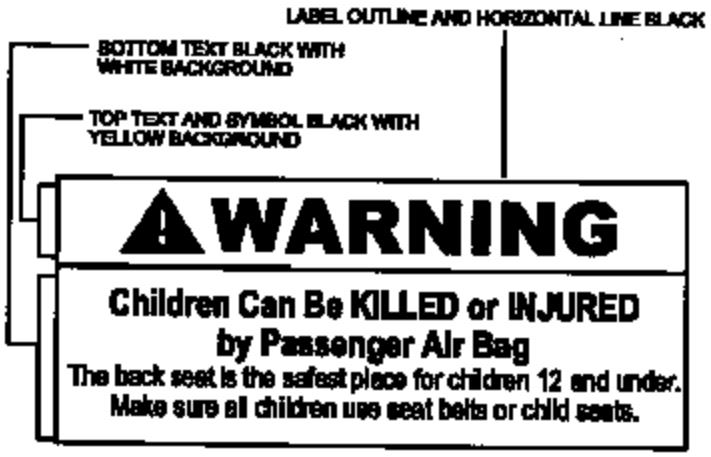


Figure 7 (S4.5.1(e))

Rear Outboard Seating Position Seat Belt Data

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

NHTSA No.: C35800 ; Technician: Chad Gadberry ; Date: February 21, 2003

Do all rear outboard seating positions have type 2 seat belts?

(X)Yes ( )No

If NO, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a type 2 belt was not installed.

Lap Belt Lockability Data

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

NHTSA No.: C35800 ; Technician: Chad Gadberry ; Date: February 21, 2003

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for each designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing and that has seat belt retractors that are not automatic locking retractors. (S7.1.1.5(c))

Designated Seating Position (DSP): Right Front

1. Record the seating position. Fully rearward
(S7.1.1.5(c)(1))
(Any position is acceptable.)

2. Buckle the seat belt. (S7.1.1.5(c)(1))

3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))

(X)Yes-Pass ( ) No-FAIL

5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))

(X)Yes-Pass ( ) No-FAIL

6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? (X)Yes, go to 6.1 ( ) No, go to 7.

   6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

   (X)Yes-Pass ( ) No-FAIL

7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

    Measured distance between A and B is 62.5 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

    The measured force application angle = 10 (spec. 5-15 degrees)

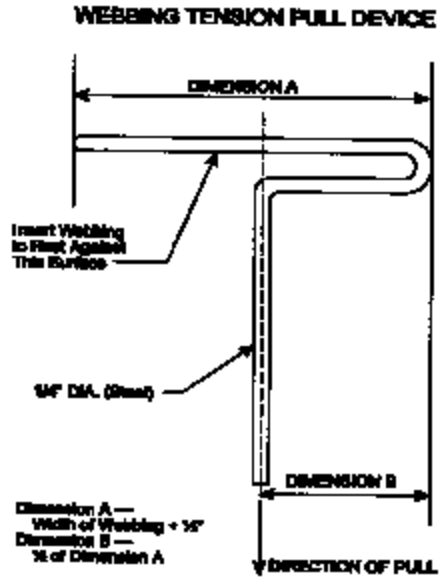


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

    Measured distance between A and B is 30.5 inches.

14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

    Record onset rate: 10 lb/sec (Spec. 10 to 50 lb/sec)

    Measure distance between points A and B 31.1 inches (S7.1.1.5(c)(6))

15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5(c)(7))

    14-13 = 0.6 inches (X)Yes-Pass ( ) No-FAIL

16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more?

    10-14 = 31.4 inches (X)Yes-Pass ( ) No-FAIL

REMARKS: None

Lap Belt Lockability Data (Cont.)

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

NHTSA No.: C35800 ; Technician: Chad Gadberry ; Date: February 21, 2003

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for each designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing and that has seat belt retractors that are not automatic locking retractors. (S7.1.1.5(c))

Designated Seating Position (DSP): Left Rear

1. Record the seating position. Non-adjustable
(S7.1.1.5(c)(1))
(Any position is acceptable.)

2. Buckle the seat belt. (S7.1.1.5(c)(1))

3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))

(X)Yes-Pass ( ) No-FAIL

5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))

(X)Yes-Pass ( ) No-FAIL

6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? (X)Yes, go to 6.1 ( ) No, go to 7.

6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

(X)Yes-Pass ( ) No-FAIL

7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

    Measured distance between A and B is 77.1 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

    The measured force application angle = 10 (spec. 5-15 degrees)

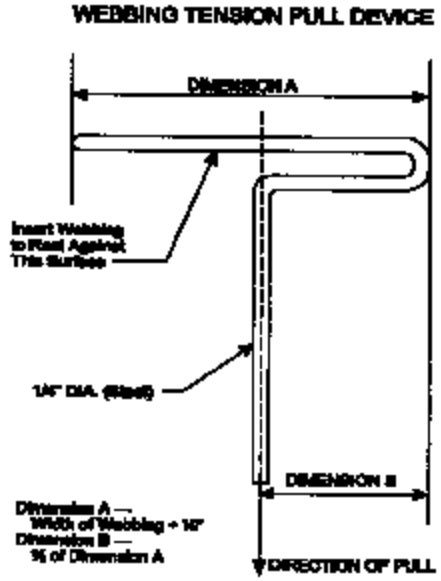


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

    Measured distance between A and B is 30.6 inches.

14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

    Record onset rate: 10 lb/sec (Spec. 10 to 50 lb/sec)

    Measure distance between points A and B 31.2 inches (S7.1.1.5(c)(6))

15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5(c)(7))

    14-13 = 0.4 inches (X)Yes-Pass ( ) No-FAIL

16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more?

    10-14 = 45.9 inches (X)Yes-Pass ( ) No-FAIL

REMARKS: None

Lap Belt Lockability Data (Cont.)

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

NHTSA No.: C35800 ; Technician: Chad Gadberry ; Date: February 21, 2003

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for each designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing and that has seat belt retractors that are not automatic locking retractors. (S7.1.1.5(c))

Designated Seating Position (DSP): Center Rear

1. Record the seating position. Non-adjustable
(S7.1.1.5(c)(1))
(Any position is acceptable.)

2. Buckle the seat belt. (S7.1.1.5(c)(1))

3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))

(X)Yes-Pass ( ) No-FAIL

5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))

(X)Yes-Pass ( ) No-FAIL

6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? (X)Yes, go to 6.1 ( ) No, go to 7.

6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

(X)Yes-Pass ( ) No-FAIL

7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

    Measured distance between A and B is 69.3 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

    The measured force application angle = 10 (spec. 5-15 degrees)

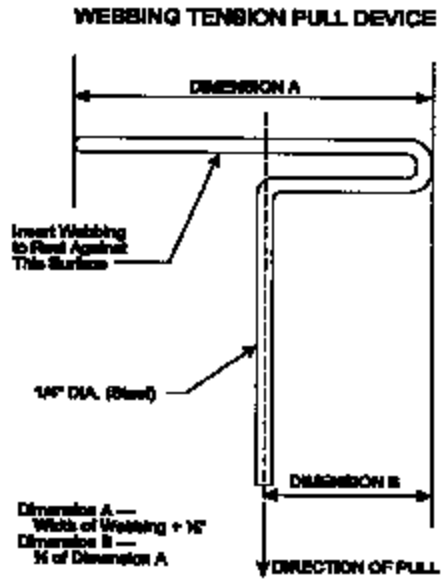


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

    Measured distance between A and B is 35.5 inches.

14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

    Record onset rate: 10 lb/sec (Spec. 10 to 50 lb/sec)

    Measure distance between points A and B 35.8 inches (S7.1.1.5(c)(6))

15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5(c)(7))

    14-13 = 0.3 inches (X)Yes-Pass ( ) No-FAIL

16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more?

    10-14 = 33.5 inches (X)Yes-Pass ( ) No-FAIL

REMARKS: None

Lap Belt Lockability Data (Cont.)

Vehicle Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

NHTSA No.: C35800 ; Technician: Chad Gadberry ; Date: February 21, 2003

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing and that has seat belt retractors that are not automatic locking retractors. (S7.1.1.5(c))

Designated Seating Position (DSP): Right Rear

1. Record the seating position. Non-adjustable
(S7.1.1.5(c)(1))
(Any position is acceptable.)

2. Buckle the seat belt. (S7.1.1.5(c)(1))

3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))

(X)Yes-Pass ( ) No-FAIL

5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))

(X)Yes-Pass ( ) No-FAIL

6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? (X)Yes, go to 6.1 ( ) No, go to 7.

6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

(X)Yes-Pass ( ) No-FAIL

7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

    Measured distance between A and B is 77.1 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

    The measured force application angle = 10 (spec. 5-15 degrees)

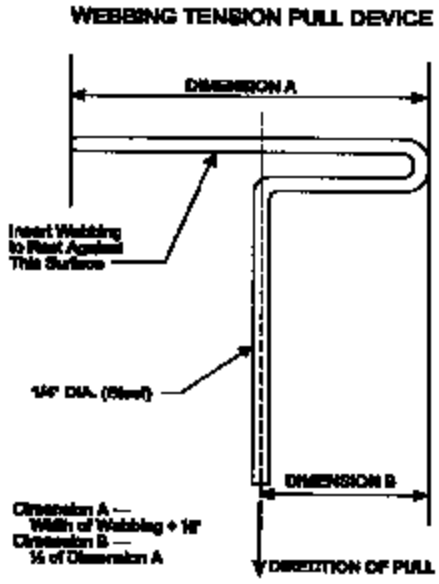


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

    Measured distance between A and B is 36.4 inches.

14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

    Record onset rate: 10 lb/sec (Spec. 10 to 50 lb/sec)

    Measure distance between points A and B 37.5 inches (S7.1.1.5(c)(6))

15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5(c)(7))

    14-13 = 1.1 inches (X)Yes-Pass ( ) No-FAIL

16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more?

    10-14 = 39.6 inches (X)Yes-Pass ( ) No-FAIL

REMARKS: None

Seat Belt Comfort and Convenience Data

1. **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle NHTSA No.:C35800

Vehicle Model Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Designated Seating Position Tested: Left Rear

Date of Comfort/Convenience Check: February 21, 2003

Technician Performing Check: Chad Gadberry

GVWR: 4336 lb

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1.1 Does the vehicle incorporate a webbing tension-relieving device?

( ) Yes - go to latchplate access
(X) No - continue with this check sheet

1.2 Adjustable seats are in adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)

( ) Check
(X) N/A

1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.

( ) Check
(X) N/A

1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.

( ) Check
(X) N/A

1.5 Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.

( ) Check
(X) N/A

1.6 Place each adjustable head restraint in its highest adjustment position.

(X) Check
( ) N/A

1.7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)

( ) Check
(X) N/A

1.8 Position the test dummies according to dummy position placement instructions in Appendix B.

(X) Check

1.9 Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point, pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds.

Contact Force 0.6 lb.

(X) 0.0 to 0.7 pounds - Pass
( ) greater than 0.7 pounds - FAIL*

* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

Seat Belt Comfort and Convenience Data (Cont.)

1. **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle NHTSA No.: C35800

Vehicle Model Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Designated Seating Position Tested: Center Rear

Date of Comfort/Convenience Check: February 21, 2003

Technician Performing Check: Chad Gadberry

GVWR: 4336 lb

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1.1 Does the vehicle incorporate a webbing tension-relieving device?
( ) Yes - go to latchplate access
(X) No - continue with this check sheet

1.2 Adjustable seats are in adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)
( ) Check
(X) N/A

1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.
( ) Check
(X) N/A

1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.
( ) Check
(X) N/A

1.5 Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.
( ) Check
(X) N/A

1.6 Place each adjustable head restraint in its highest adjustment position.
(X) Check
( ) N/A

Seat Belt Comfort and Convenience Data (Cont.)

1.7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)

( ) Check
(X) N/A

1.8 Position the test dummies according to dummy position placement instructions in Appendix B.

(X) Check

1.9 Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point, pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds.

Contact Force 0.5 lb.

(X) 0.0 to 0.7 pounds - Pass
( ) greater than 0.7 pounds - FAIL*

* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

1. **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle NHTSA No.: C35800

Vehicle Model Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Designated Seating Position Tested: Right Rear

Date of Comfort/Convenience Check: February 21, 2003

Technician Performing Check: Chad Gadberry

GVWR: 4336 lb

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1.1 Does the vehicle incorporate a webbing tension-relieving device?

( ) Yes - go to latchplate access
(X) No - continue with this check sheet

1.2 Adjustable seats are in adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)

( ) Check
(X) N/A

1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.

( ) Check
(X) N/A

1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.

( ) Check
(X) N/A

1.5 Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.

( ) Check
(X) N/A

1.6 Place each adjustable head restraint in its highest adjustment position.

(X) Check
( ) N/A

1.7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)

( ) Check
(X) N/A

1.8 Position the test dummies according to dummy position placement instructions in Appendix B.

(X) Check

1.9 Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point, pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds.

Contact Force 0.6 lb.

(X) 0.0 to 0.7 pounds - Pass
( ) greater than 0.7 pounds - FAIL*

* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

2. LATCHPLATE ACCESS (S7.4.4)

Test Vehicle NHTSA No.:C35800

Vehicle Model Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Designated Seating Position Tested: **Not applicable - passenger car**

Date of Comfort/Convenience Check:_____

Technician Performing Check:_____

GVWR: _____

Test **all** front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

2.1 Position the seat in its forward most adjustment position.
( ) Check

2.2 Position the test dummy using the procedures in Appendix B. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position.)
( ) Check

2.3 Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant.
( ) Check

2.4 Attach the inboard and outboard reach string following the instructions on Figure 1C.
( ) Check

2.5 Place the latch plate in the stowed position.
( ) Check

2.6 Extend each line backward and outboard to generate arcs of the reach envelop of the test dummy's arms. Is the latch plate within the reach envelope?
( )Yes-Pass ( ) **No-FAIL**

2.7 Using the clearance test block, specified in Figure 2C, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?
( )Yes-Pass ( ) **No-FAIL**

3. **RETRACTION (S7.4.5)**

Test Vehicle NHTSA No.:C35800

Vehicle Model Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Designated Seating Position Tested: **Not applicable - passenger car**

Date of Comfort/Convenience Check:_____

Technician Performing Check:_____

GVWR: _____

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

3.1 Is the vehicle a passenger car or walk-in van-type vehicle?

( )Yes If yes, go to seat belt guides and hardware.
( ) No

3.2 Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)

( ) Check

3.3 If separately adjustable in a vertical direction, the seats are at the lowest position.

( ) Check

3.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.

( ) Check

3.5 Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.

( ) Check

3.6 Place each adjustable head restraint in its highest adjustment position.

( ) Check

3.7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position (S8.1.3)

( ) Check

3.8 Use anthropomorphic test dummies whose arms have been removed and position the dummies in the front outboard designated seating positions according to instructions in Appendix B.

( ) Check

3.9 Restrain the dummies using the belt systems for the position being tested.

( ) Check

3.10 Stow outboard armrests which are capable of being stowed.

( ) Check

3.11 Check the statement that applies to this test vehicle:

(A) The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released.

( ) Pass

(B) The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released.

( ) Pass

(C) Neither A or B apply.

( ) FAIL

3.12 With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?

( )Yes - Pass
( ) No - FAIL

3.13 If this test vehicle has an open body (without doors) and has a seat belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?

( ) N/A
( ) Yes - Pass
( ) No - FAIL

4. SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle NHTSA No.: C35800

Vehicle Model Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Designated Seating Position Tested: Left Rear

Date of Comfort/Convenience Check: February 21, 2003

Technician Performing Check: Chad Gadberry

GVWR: 4336 lb

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b))

B. Seats which are removable.

C. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above determine the following:

4.1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?

( )Yes - Go to 4.2
(X) No - this form is complete

4.2 Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?

( )Yes - Pass
( ) No - FAIL

4.3 Are the remaining two seat belt parts accessible under normal conditions?

( )Yes - Pass
( ) No - FAIL

4.4 The buckle and latch plate do not pass through the guidee or conduits provided and fall behind the seat when the following events occur in order:

(A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. ( ) Check

(B) The seat is moved to any position to which it is designed to be adjusted.
( ) Check

(C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.
( ) Check

( )Yes - Pass
( ) **No - FAIL**

4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
( ) Yes - Pass
( ) **No - FAIL**

4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**

Test Vehicle NHTSA No.:C35800

Vehicle Model Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Designated Seating Position Tested: Center Rear

Date of Comfort/Convenience Check: February 21, 2003

Technician Performing Check: Chad Gadberry

GVWR: 4336 lb

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b))

B. Seats which are removable.

C. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above determine the following:

4.1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?

( )Yes - Go to 4.2.
(X) No - this form is complete

4.2 Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?

( )Yes - Pass
( ) No - FAIL

4.3 Are the remaining two seat belt parts accessible under normal conditions?

( )Yes - Pass
( ) No - FAIL

4.4 The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

(A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. ( ) Check

(B) The seat is moved to any position to which it is designed to be adjusted.
( ) Check

(C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.
( ) Check

( )Yes - Pass
( ) No - FAIL

4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
( ) Yes - Pass
( ) No - FAIL

Seat Belt Comfort and Convenience Data (Cont.)

4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**

Test Vehicle NHTSA No.: C35800

Vehicle Model Year/Make/Model/Body Style: 2003/Volkswagen/Passat/4 Door

Designated Seating Position Tested: Right Rear

Date of Comfort/Convenience Check: February 21, 2003

Technician Performing Check: Chad Gadberry

GVWR: 4336 lb

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b))

B. Seats which are removable.

C. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above determine the following:

4.1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?

( )Yes - Go to 4.2.
(X) No - this form is complete

4.2 Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?

( )Yes - Pass
( ) No - FAIL

4.3 Are the remaining two seat belt parts accessible under normal conditions?

( )Yes - Pass
( ) No - FAIL

4.4 The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

(A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. ( ) Check

(B) The seat is moved to any position to which it is designed to be adjusted.
( ) Check

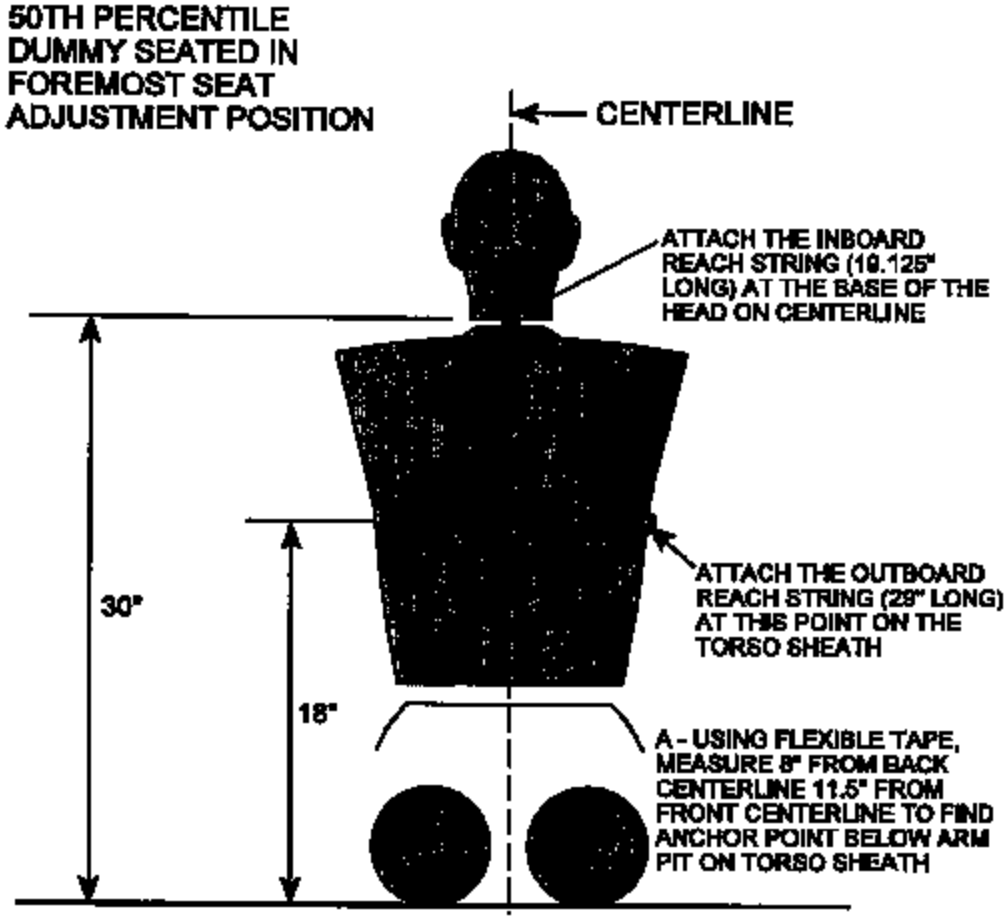
(C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.
( ) Check

( )Yes - Pass
( ) No - FAIL

4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
( ) Yes - Pass
( ) No - FAIL

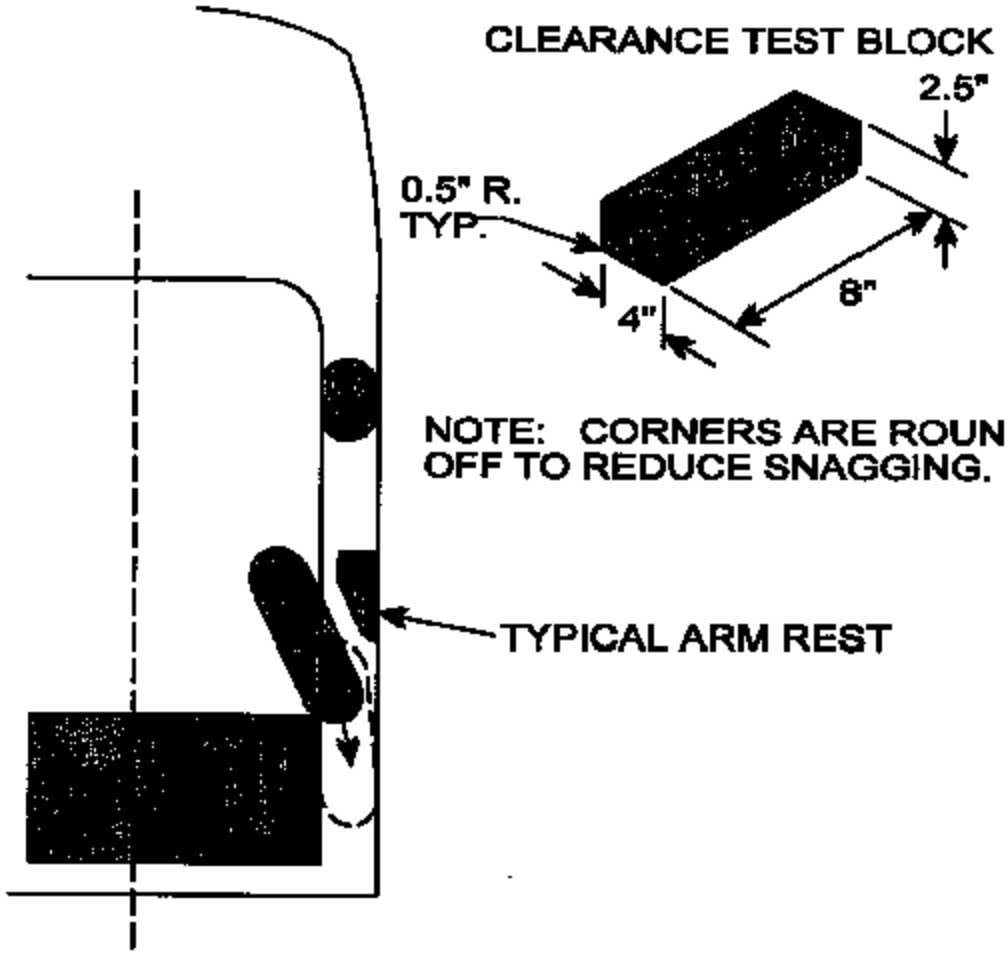
LOCATION OF ANCHORING POINTS FOR LATCHPLATE REACH LIMITING CHAINS OR STRINGS TO TEST FOR LATCHPLATE ACCESSIBILITY

PART 572E DUMMY



REAR VIEW

USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS



APPENDIX A
PHOTOGRAPHS

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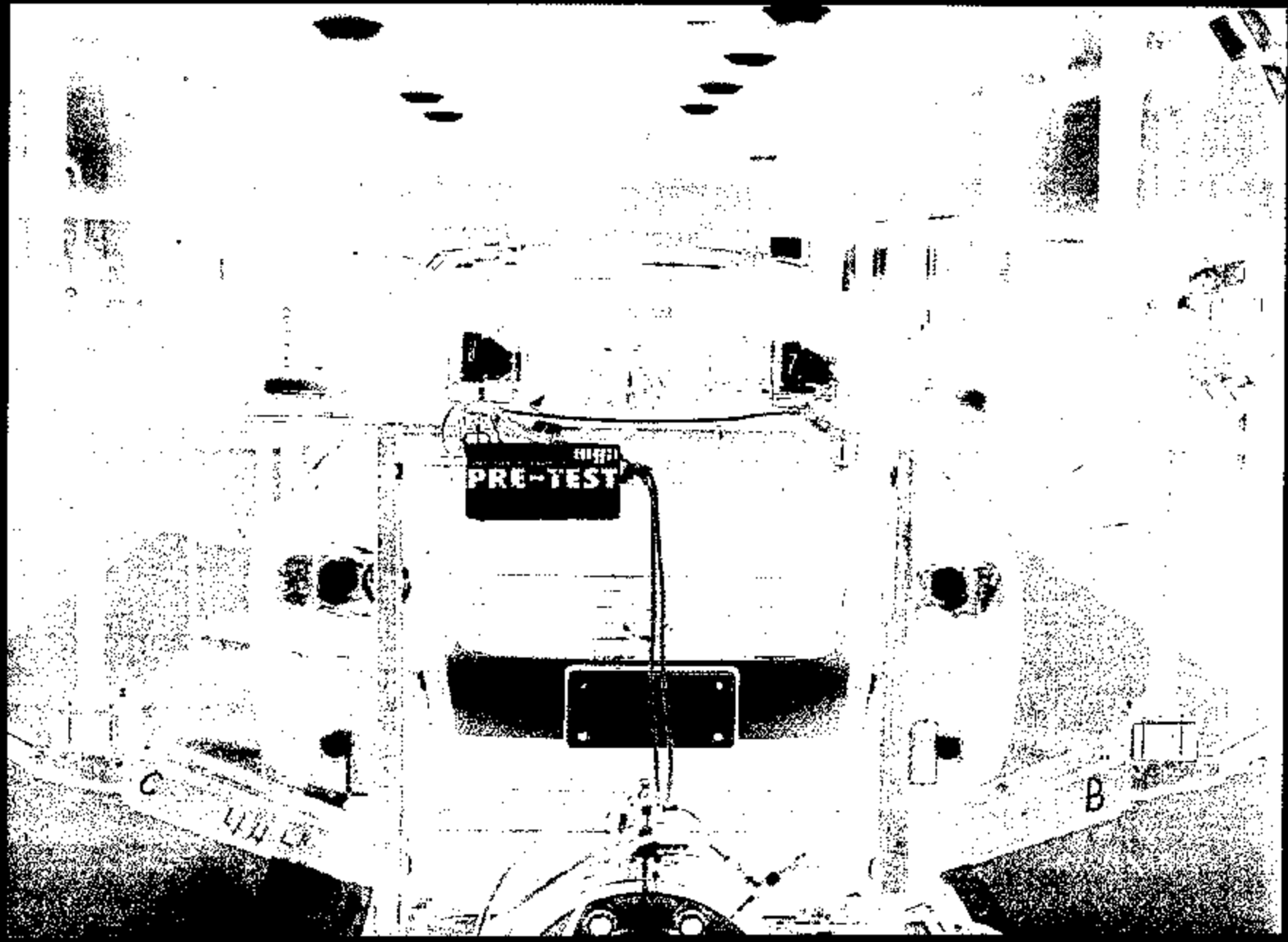
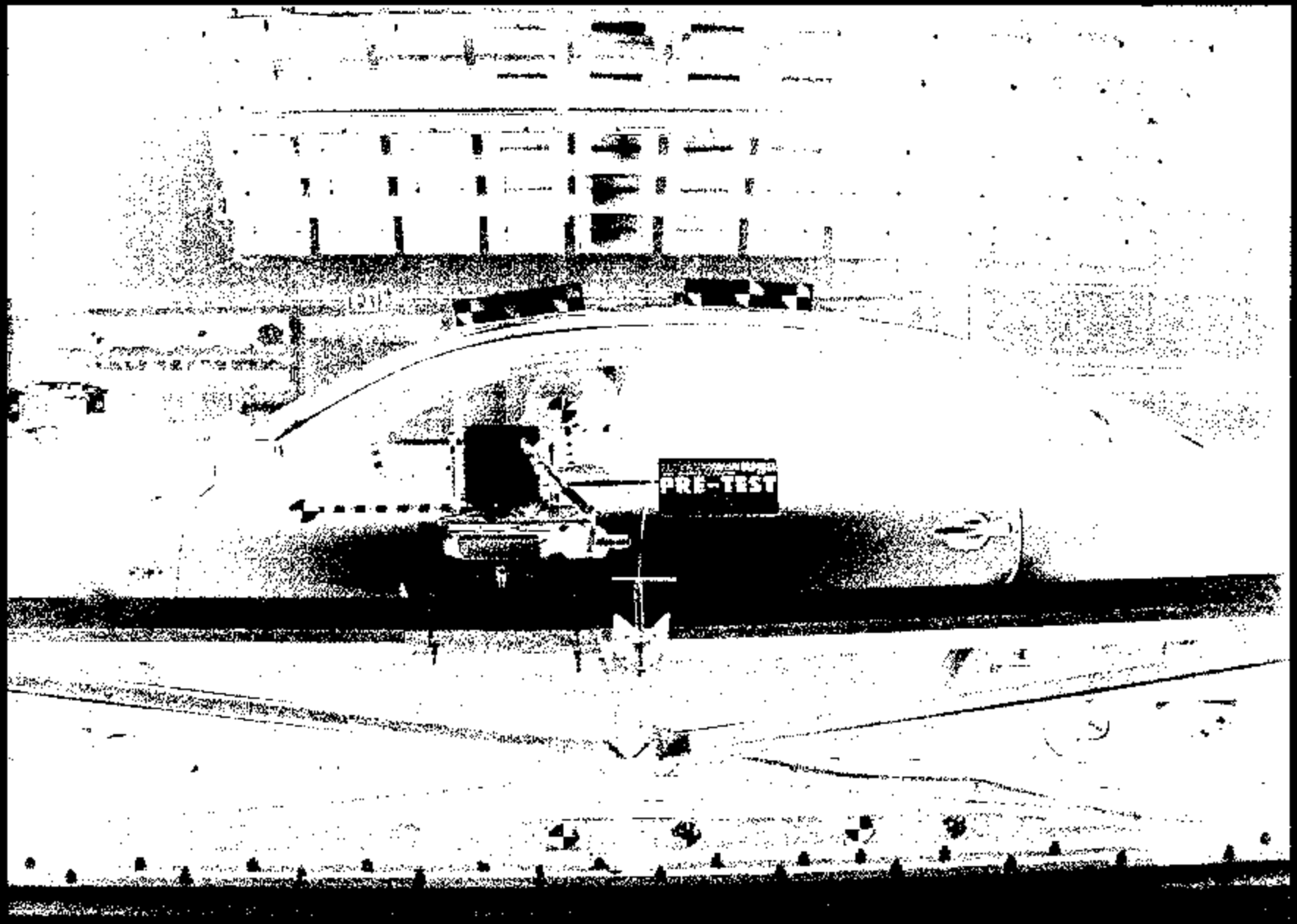
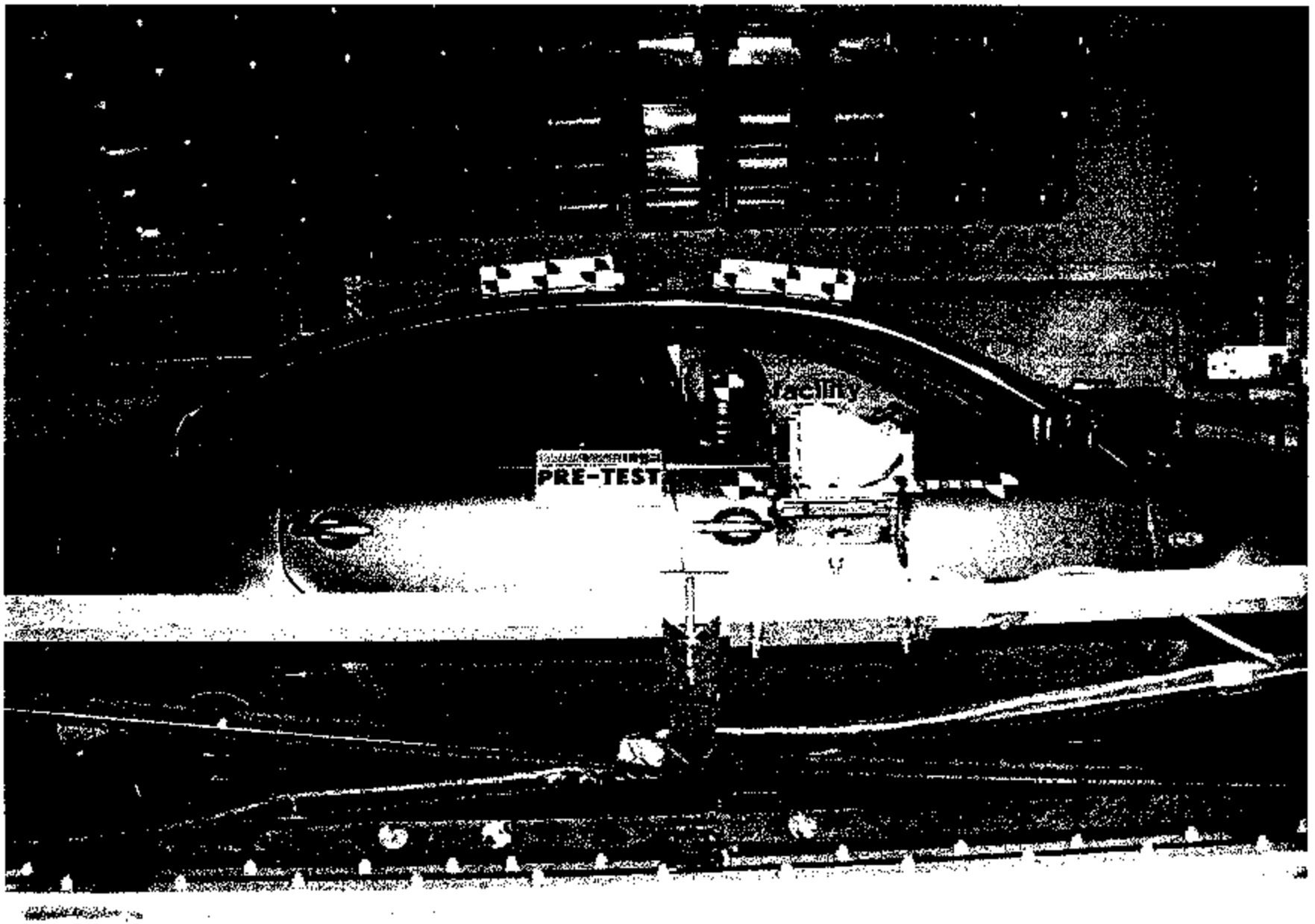


Pre-Test Frontal View

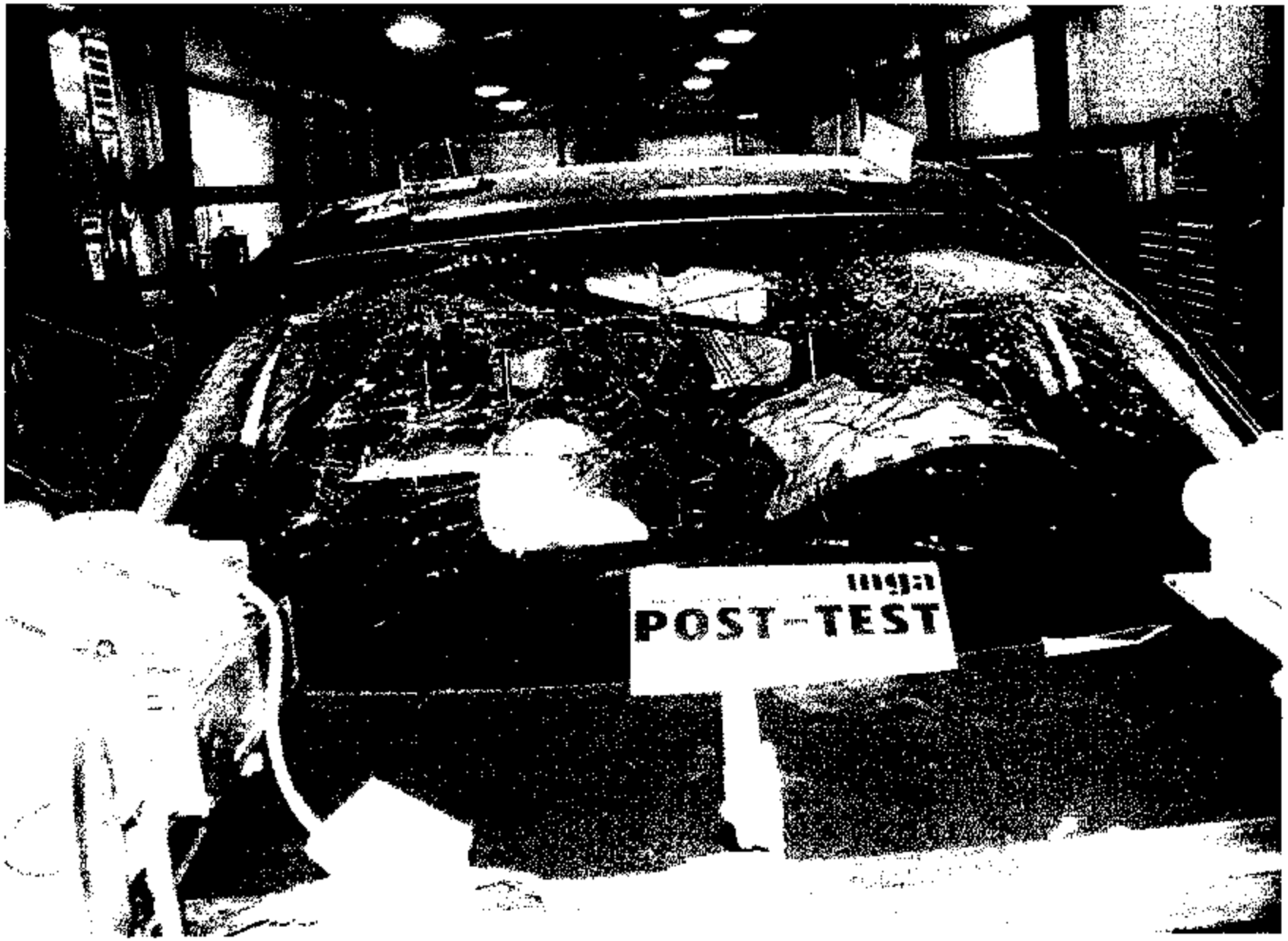


Pre-Test Left Side View

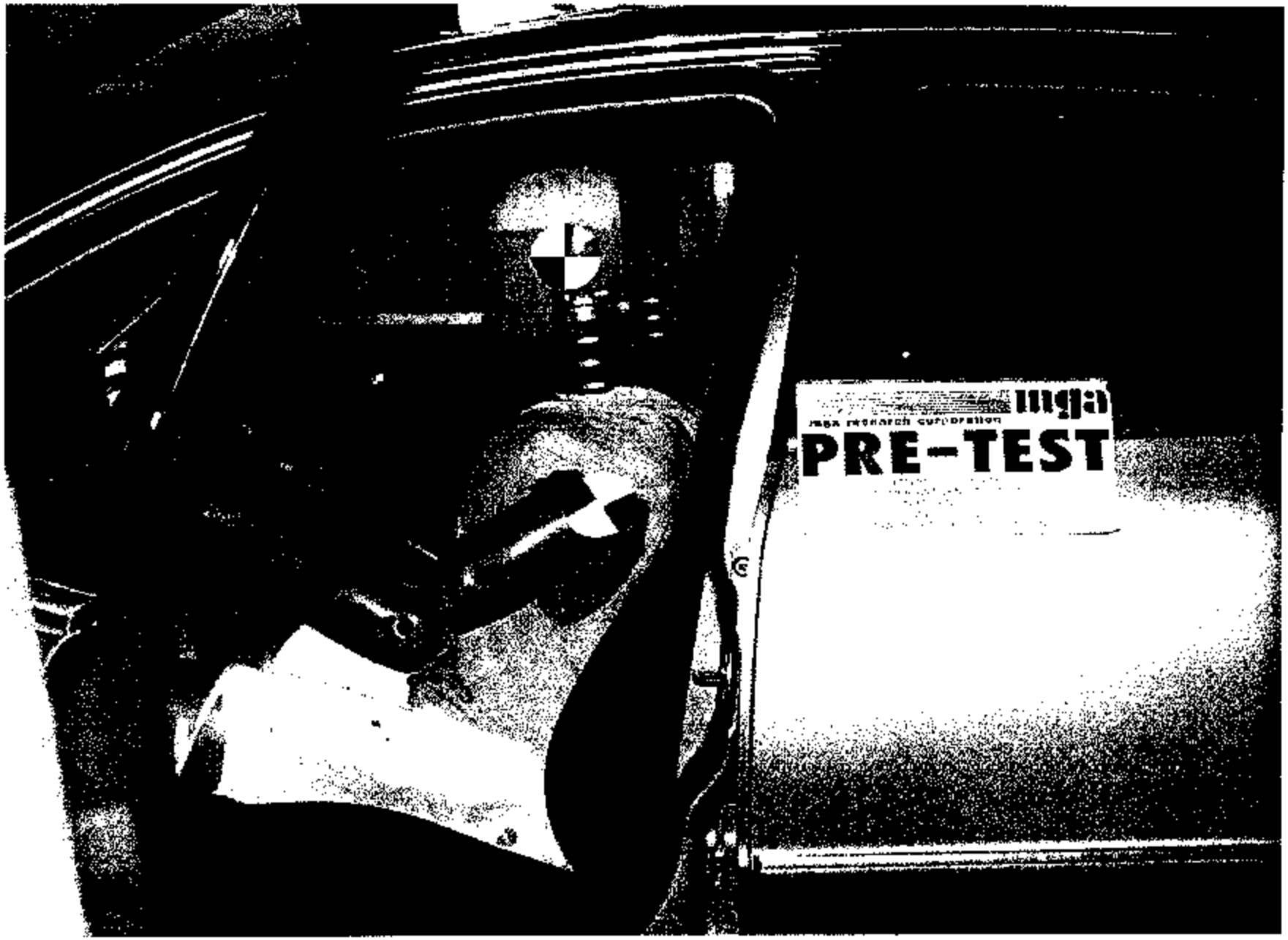


Pre-Test Right Side View

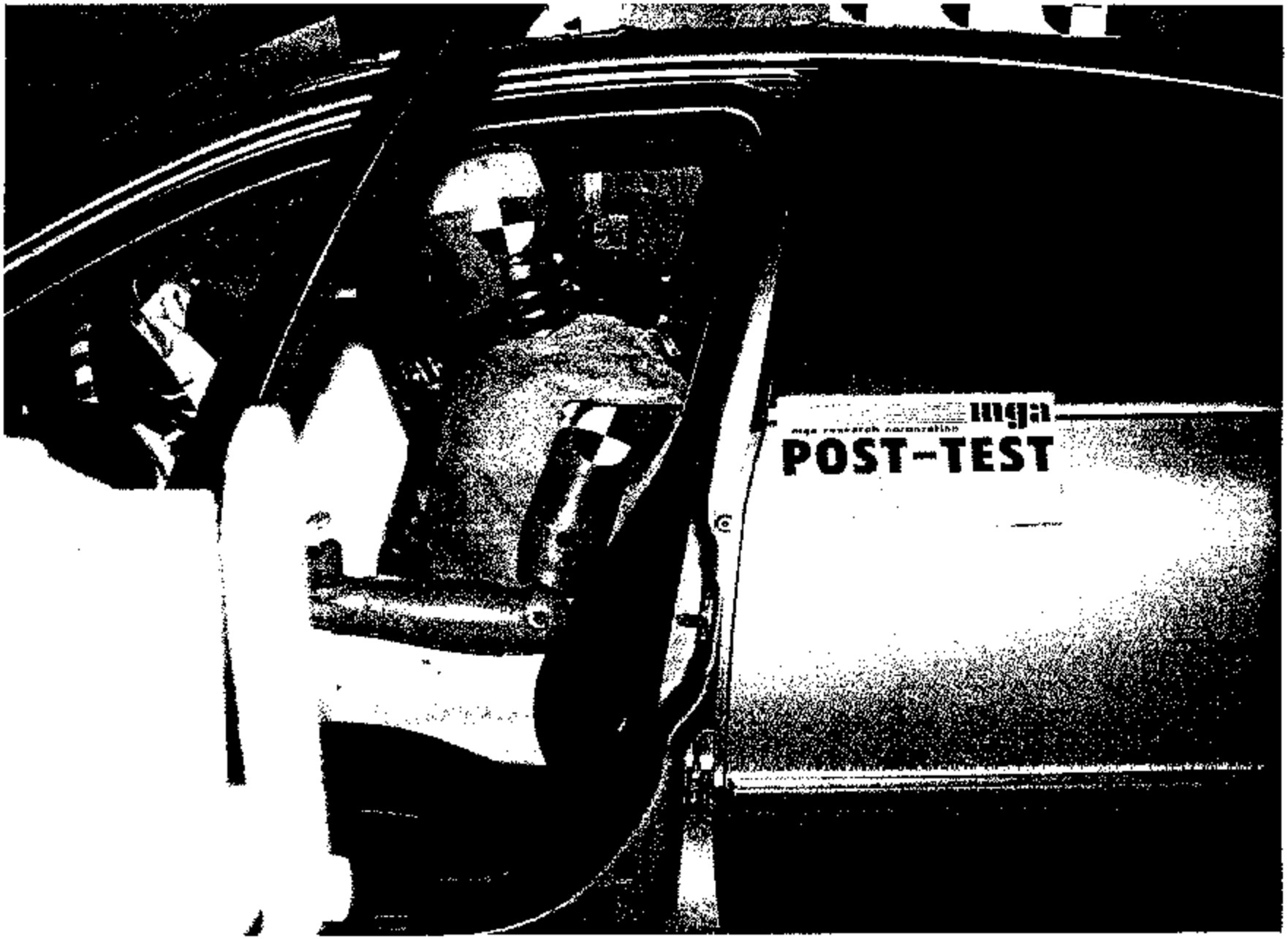
Pre-Test Windshield View



Post-Test Windshield View



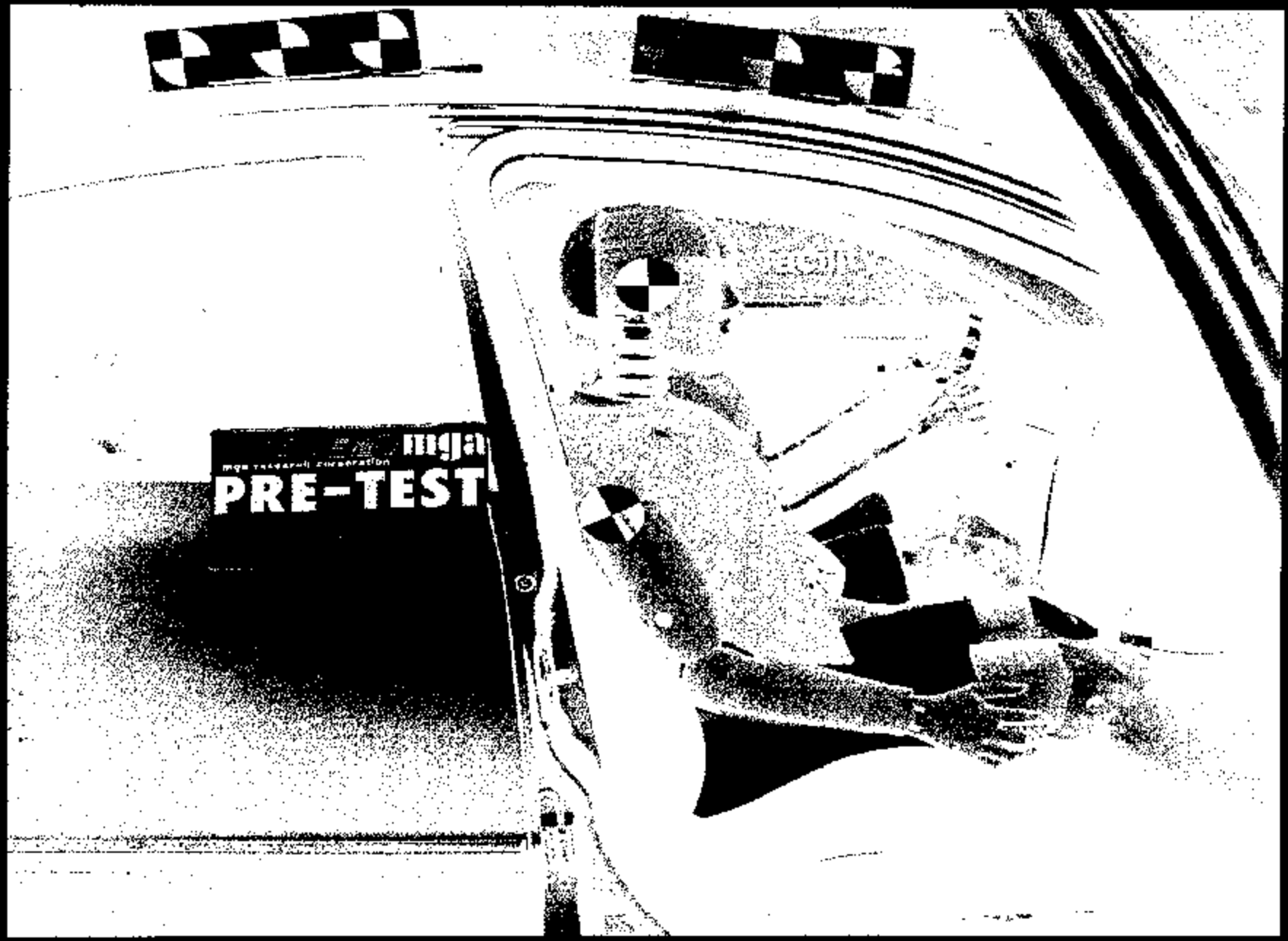
Pre-Test Driver Dummy Position View (Door Open)



Post-Test Driver Dummy Position View (Door Open)

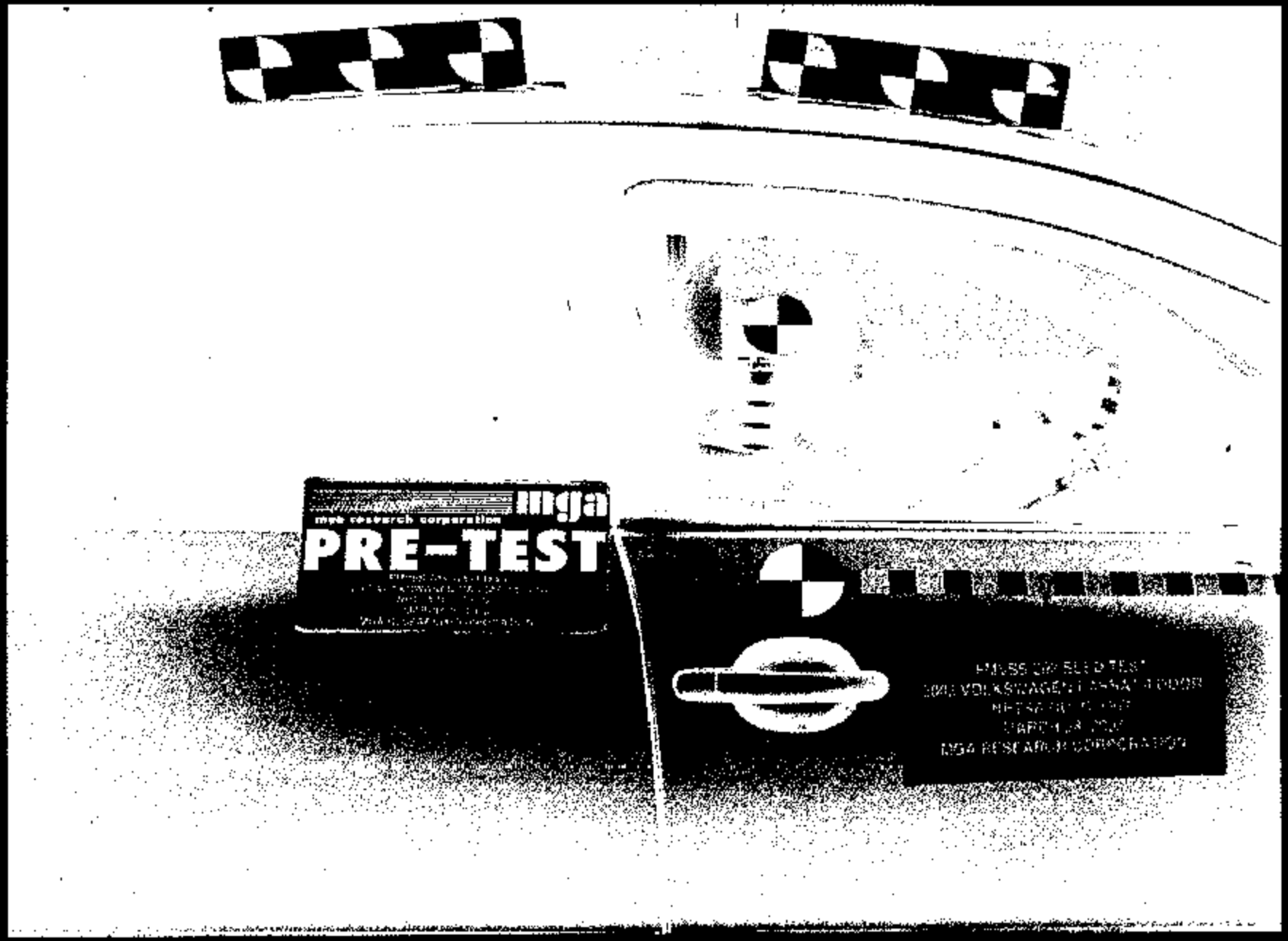
Pre-Test Driver Dummy Position View

Post-Test Driver Dummy Position View

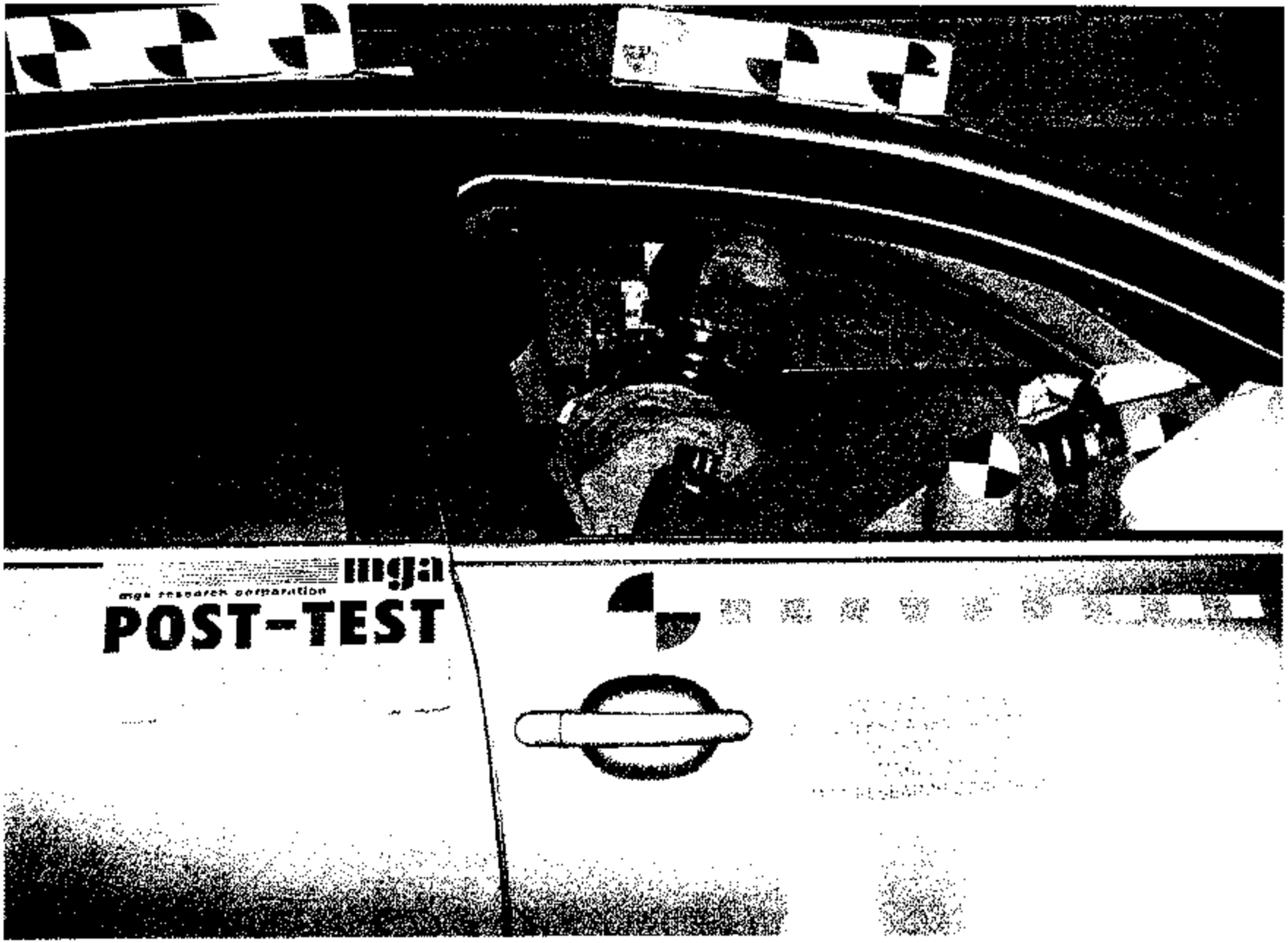


Pre-Test Passenger Dummy Position View (Door Open)

Post-Test Passenger Dummy Position View (Door Open)



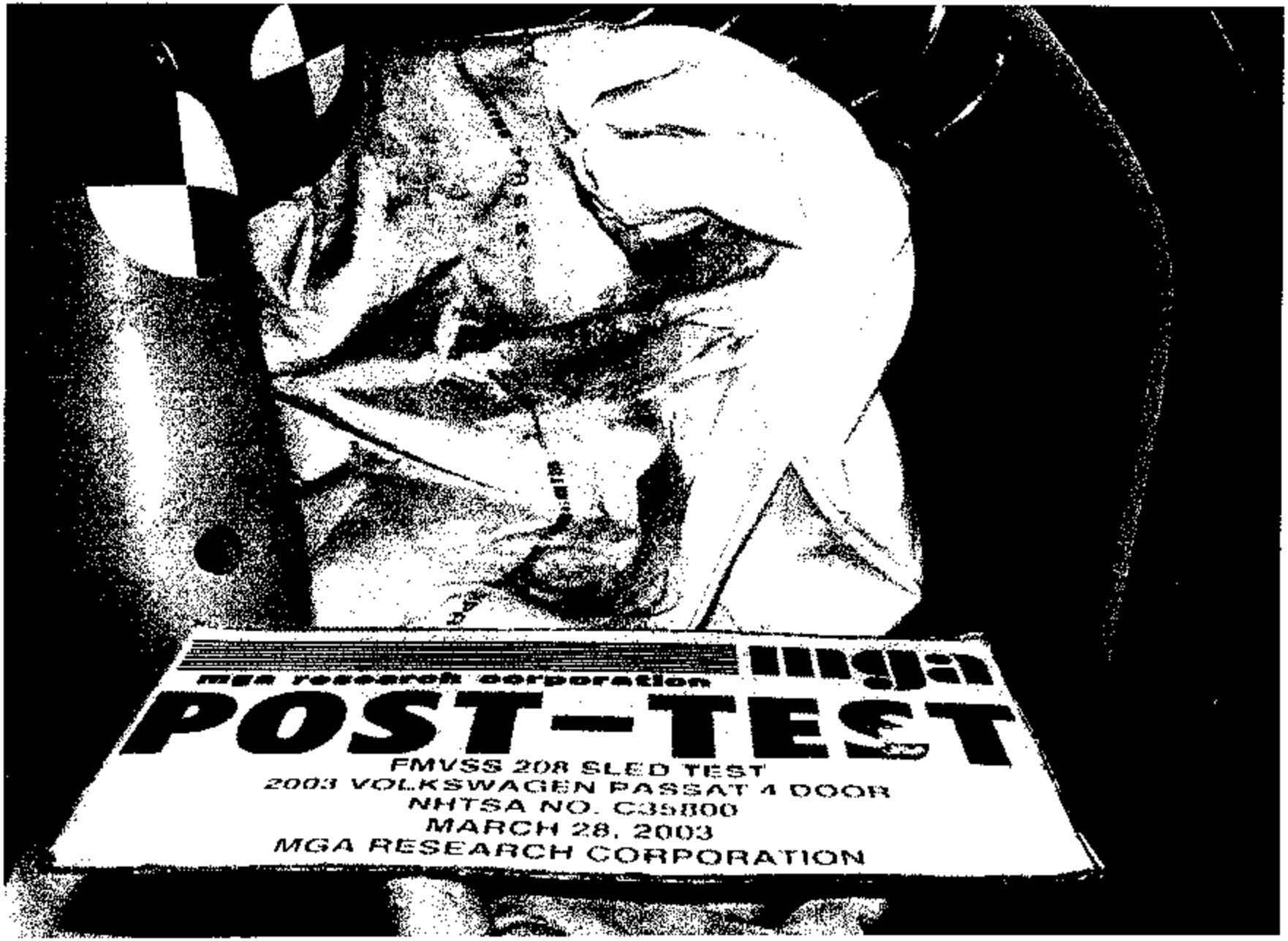
Pre-Test Passenger Dummy Position View



Post-Test Passenger Dummy Position View

Post-Test Driver Airbag View

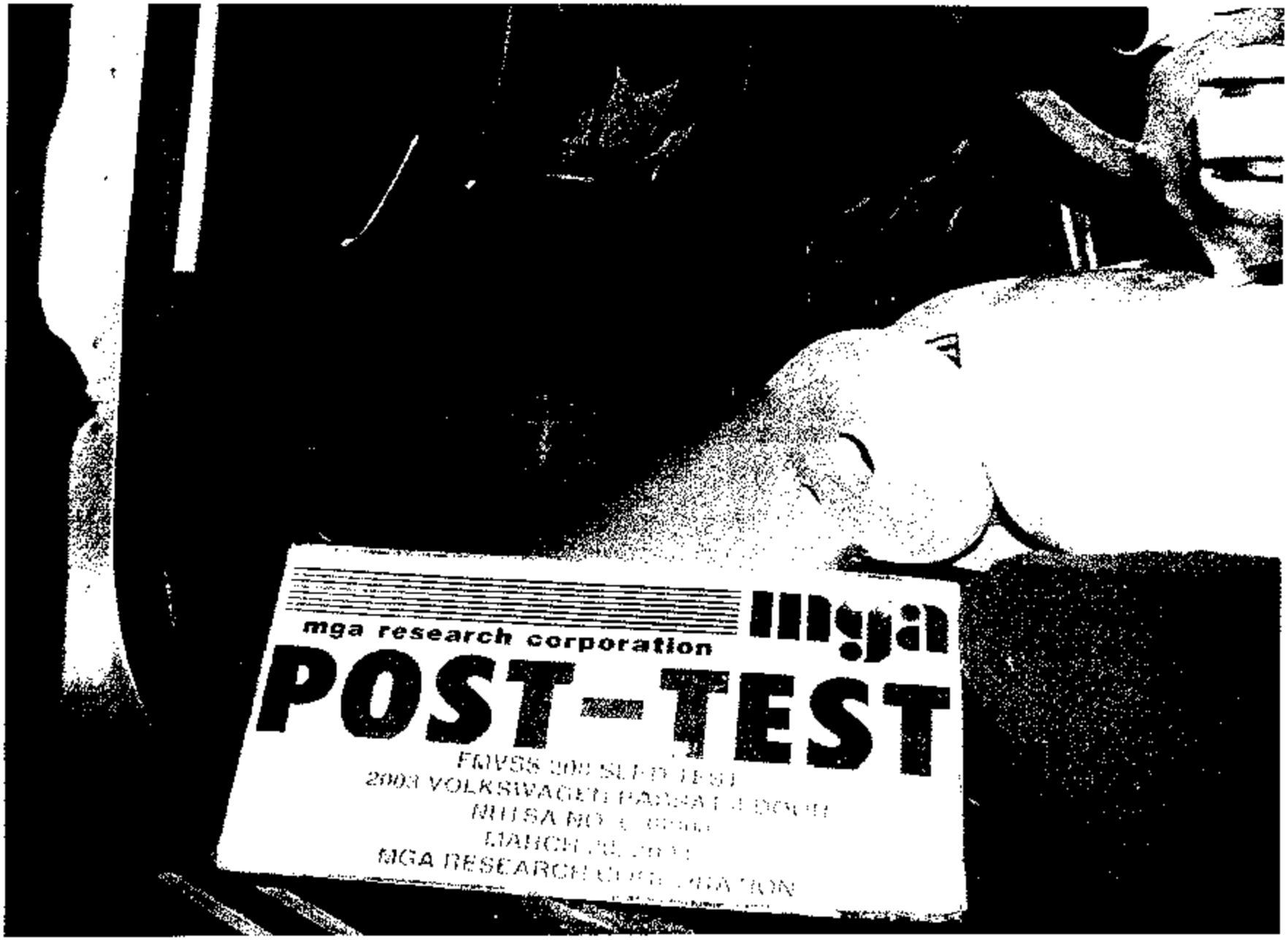
Post-Test Driver Dummy Head Contact View (visor and windshield)



Post-Test Passenger Dummy Airbag View

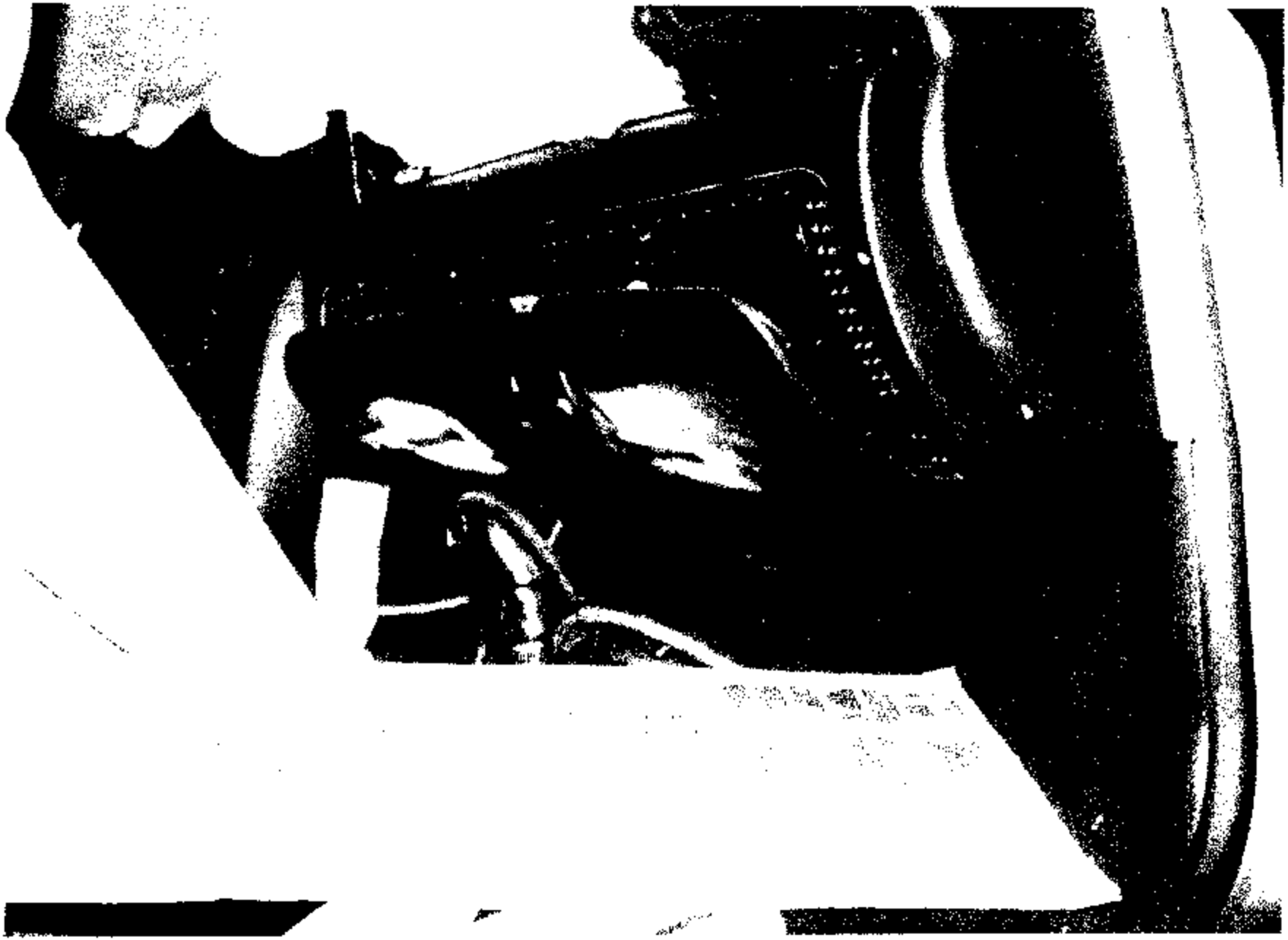
Post-Test Passenger Dummy Head Contact View (visor, windshield, and windshield header)

Pre-Test Driver Knee Bolster View



Post-Test Driver Knee Bolster View

Pre-Test Passenger Knee Bolster View

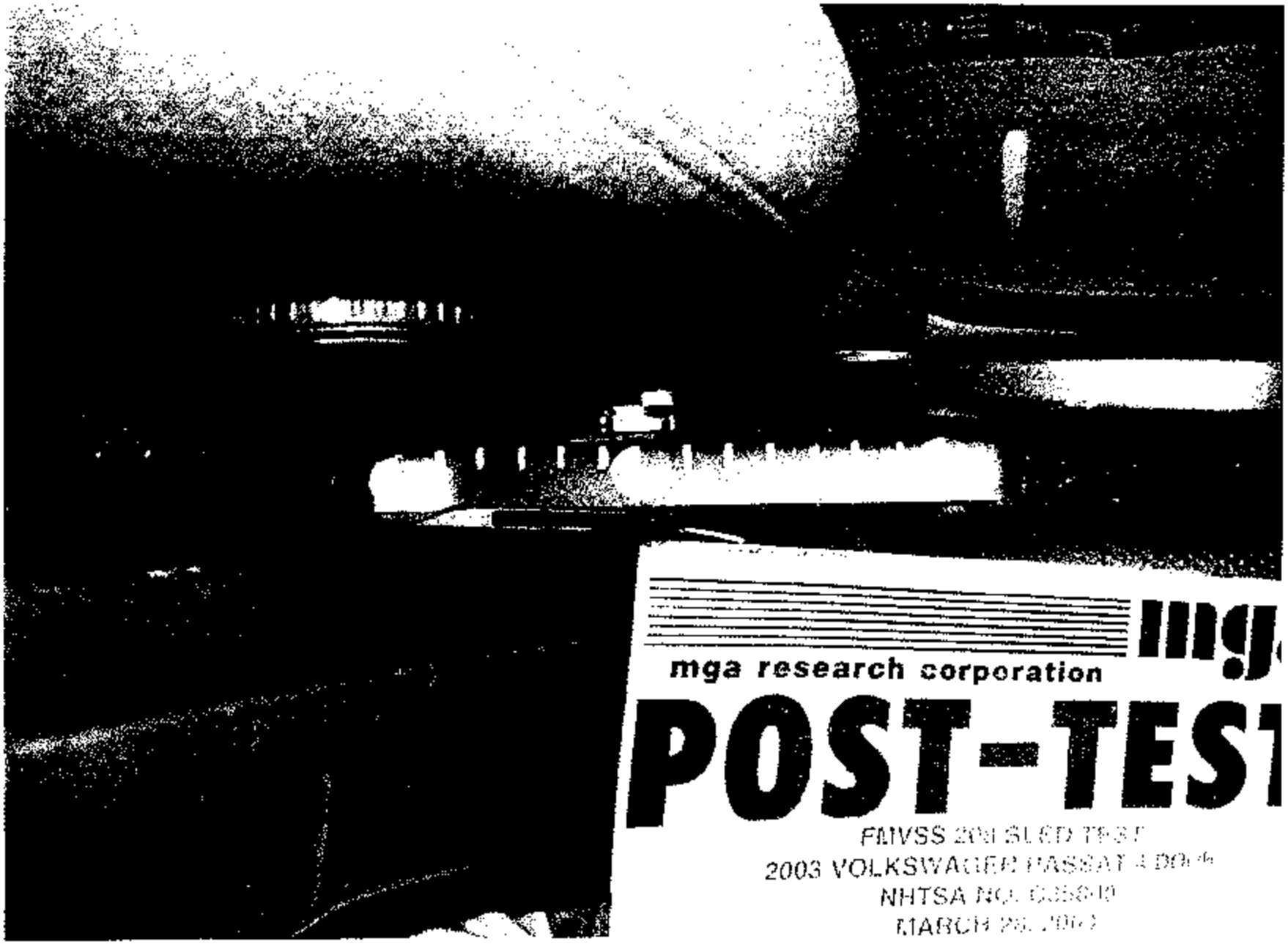


Post-Test Passenger Knee Bolster View

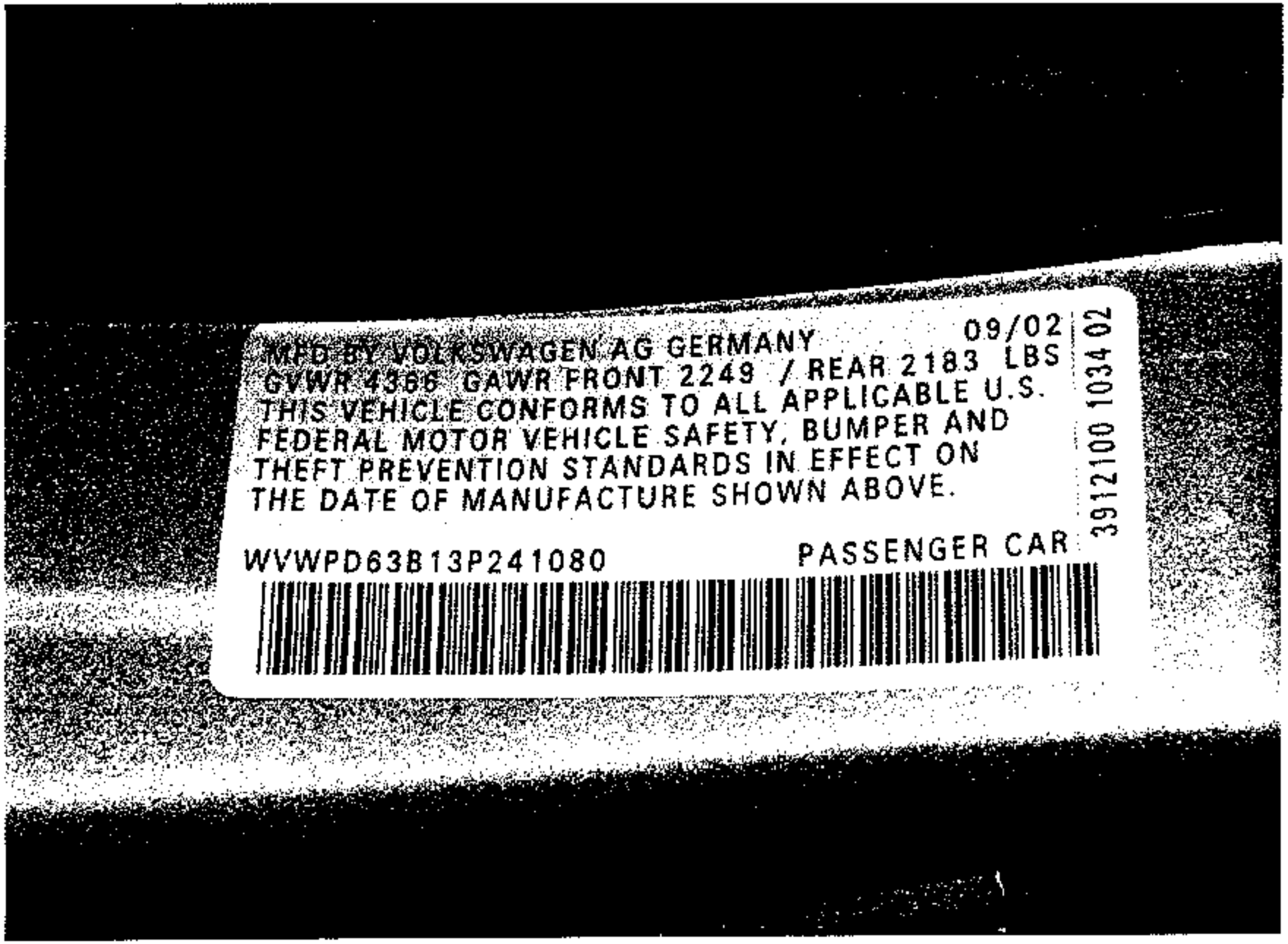
Pre-Test Driver Seat Position View

Post-Test Driver Seat Position View

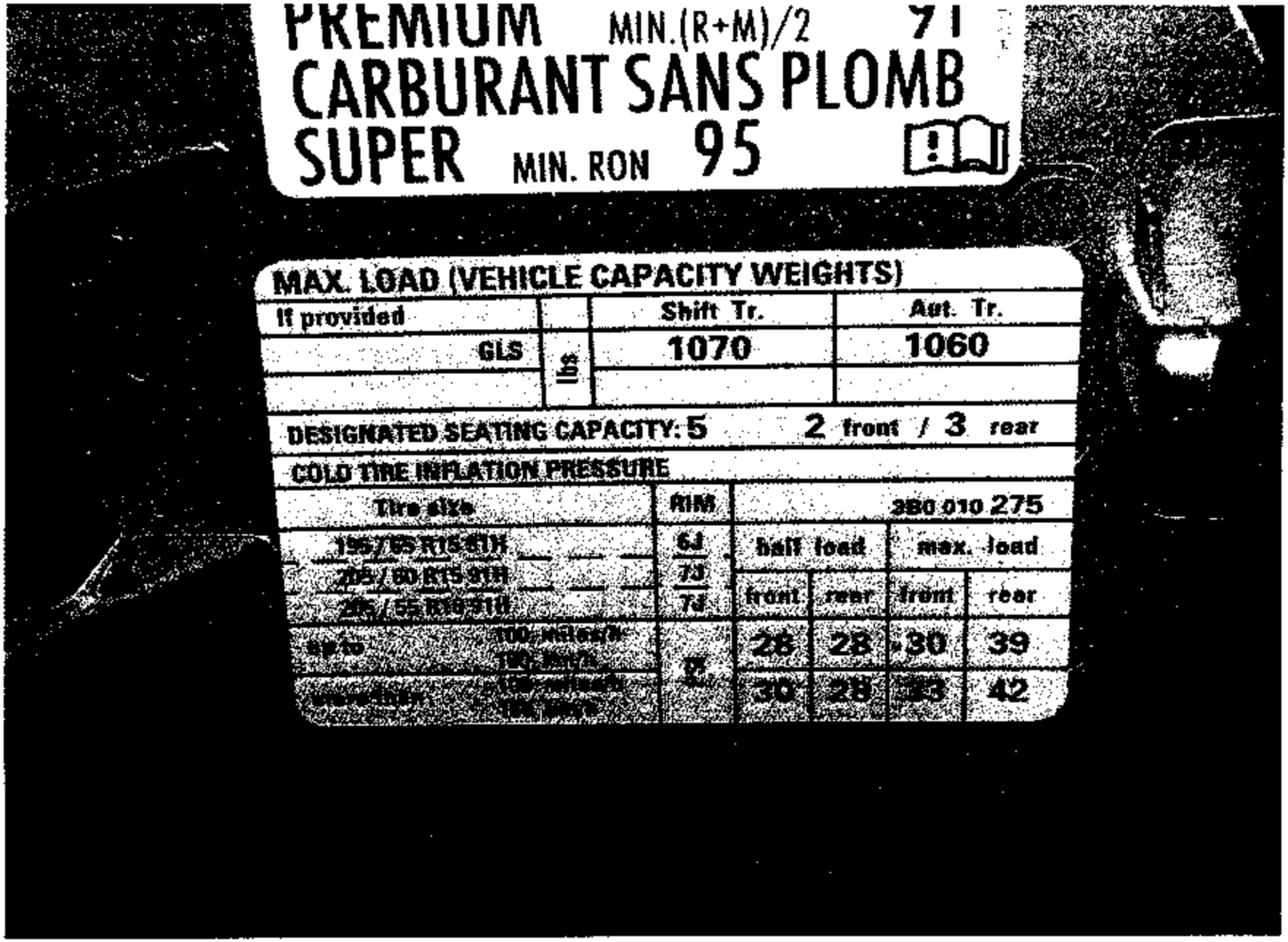
Pre-Test Passenger Seat Position View



Post-Test Passenger Seat Position View



Vehicle Certification Label



FMVSS 110 Label

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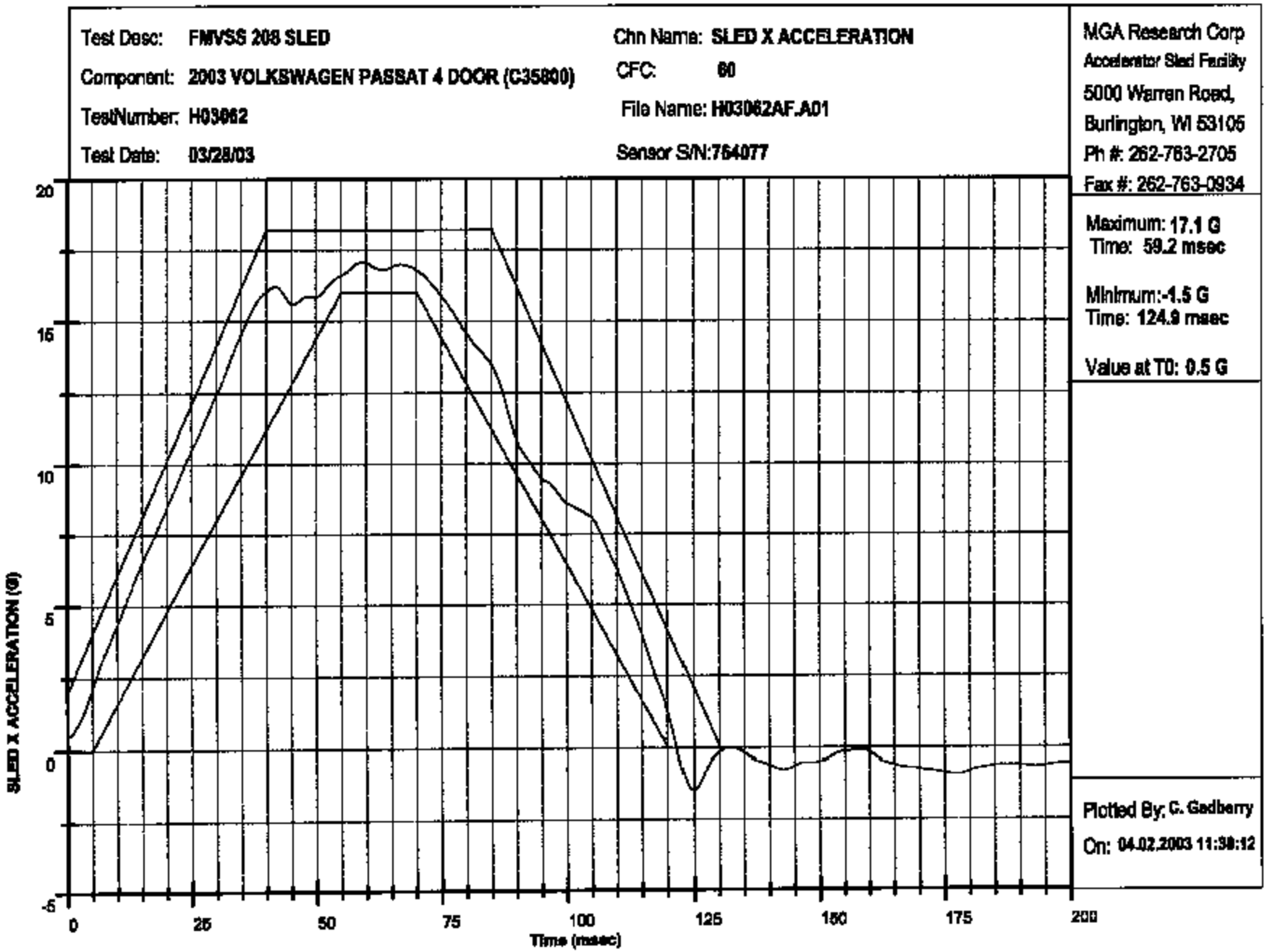
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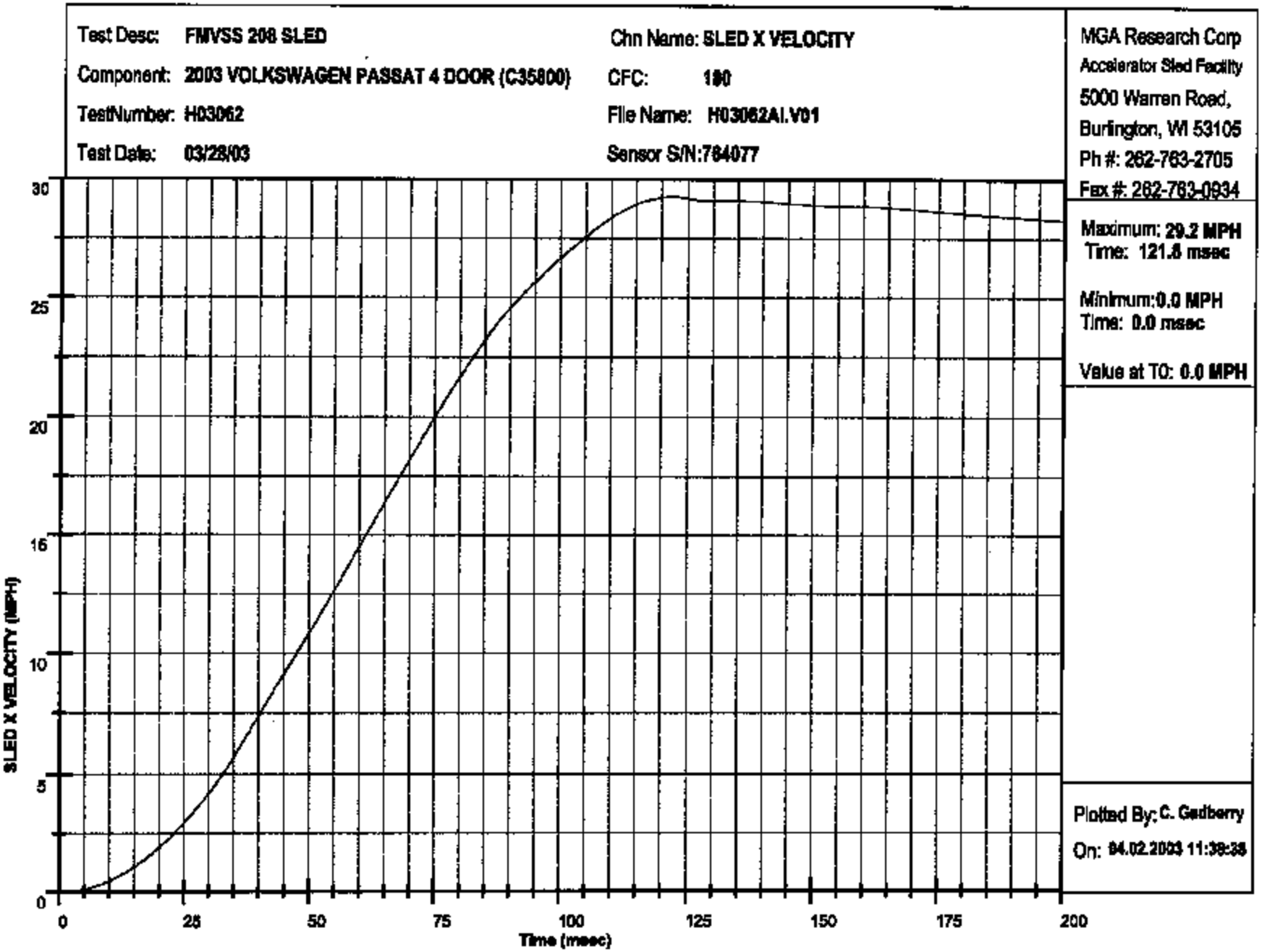
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: SLED X ACCELERATION
CFC: 60
File Name: H03062AF.A01
Sensor S/N:764077
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 17.1 G
Time: 59.2 msec
Minimum:-4.5 G
Time: 124.9 msec
Value at T0: 0.5 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:12
SLED X ACCELERATION (G)
20
15
10
5
0
-5
0
25
50
75
100
125
150
175
200
Time (msec)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Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: SLED X VELOCITY
CFC: 180
File Name: H03062AI.V01
Sensor S/N:784077
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 29.2 MPH
Time: 121.5 msec
Minimum:0.0 MPH
Time: 0.0 msec
Value at T0: 0.0 MPH
Plotted By: C. Gadberry
On: 04.02.2003 11:39:38
SLED X VELOCITY (MPH)
Time (msec)
0
5
10
15
20
25
30
0
25
50
75
100
125
150
175
200

Test Desc: FMVSS 208 SLED

Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)

TestNumber: H030626

Test Date: 03/26/03

Chn Name: SLED X DISPLACEMENT

CFC: 180

File Name: H03062ALD01

Sensor S/N:764077

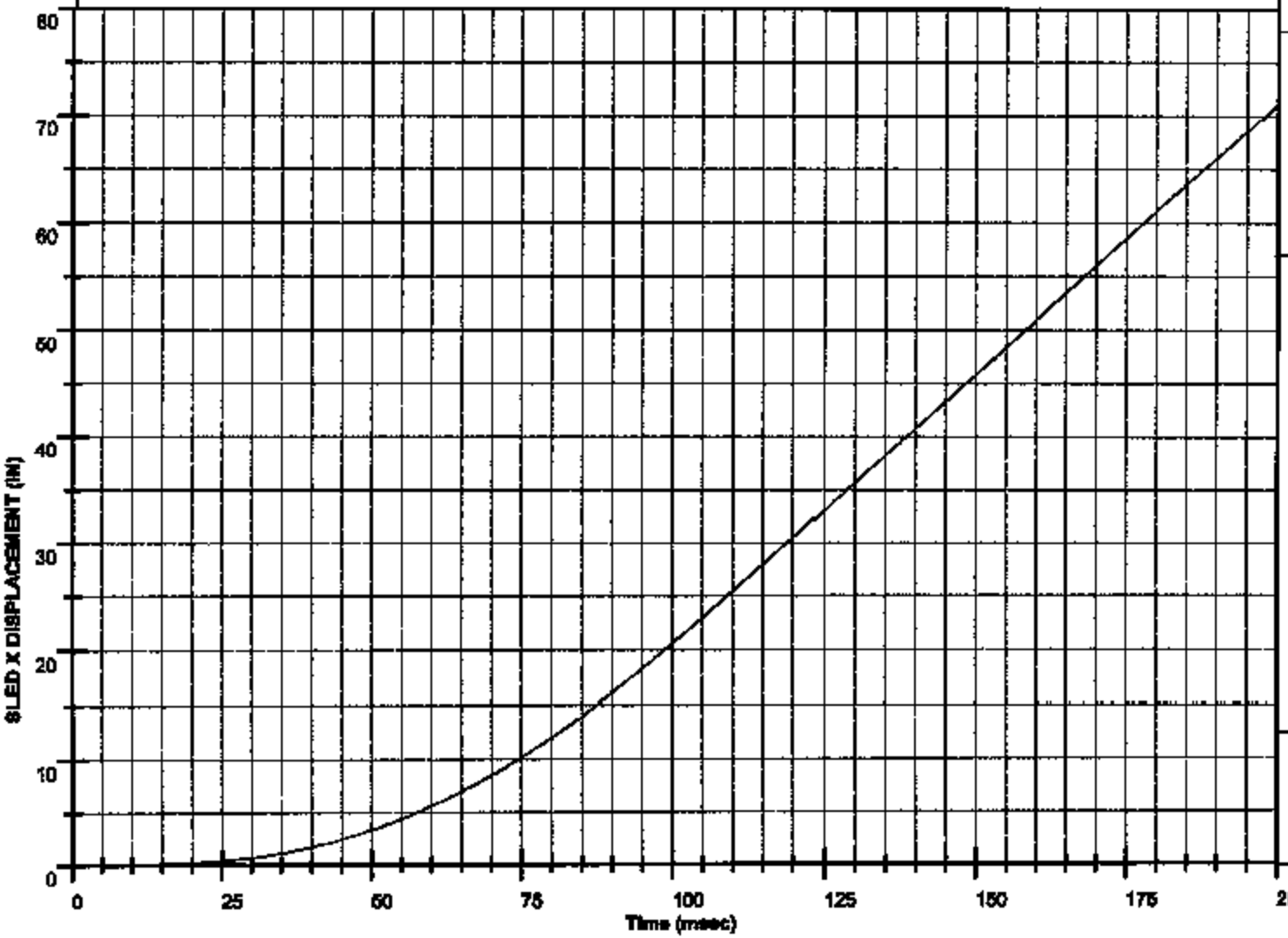
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934

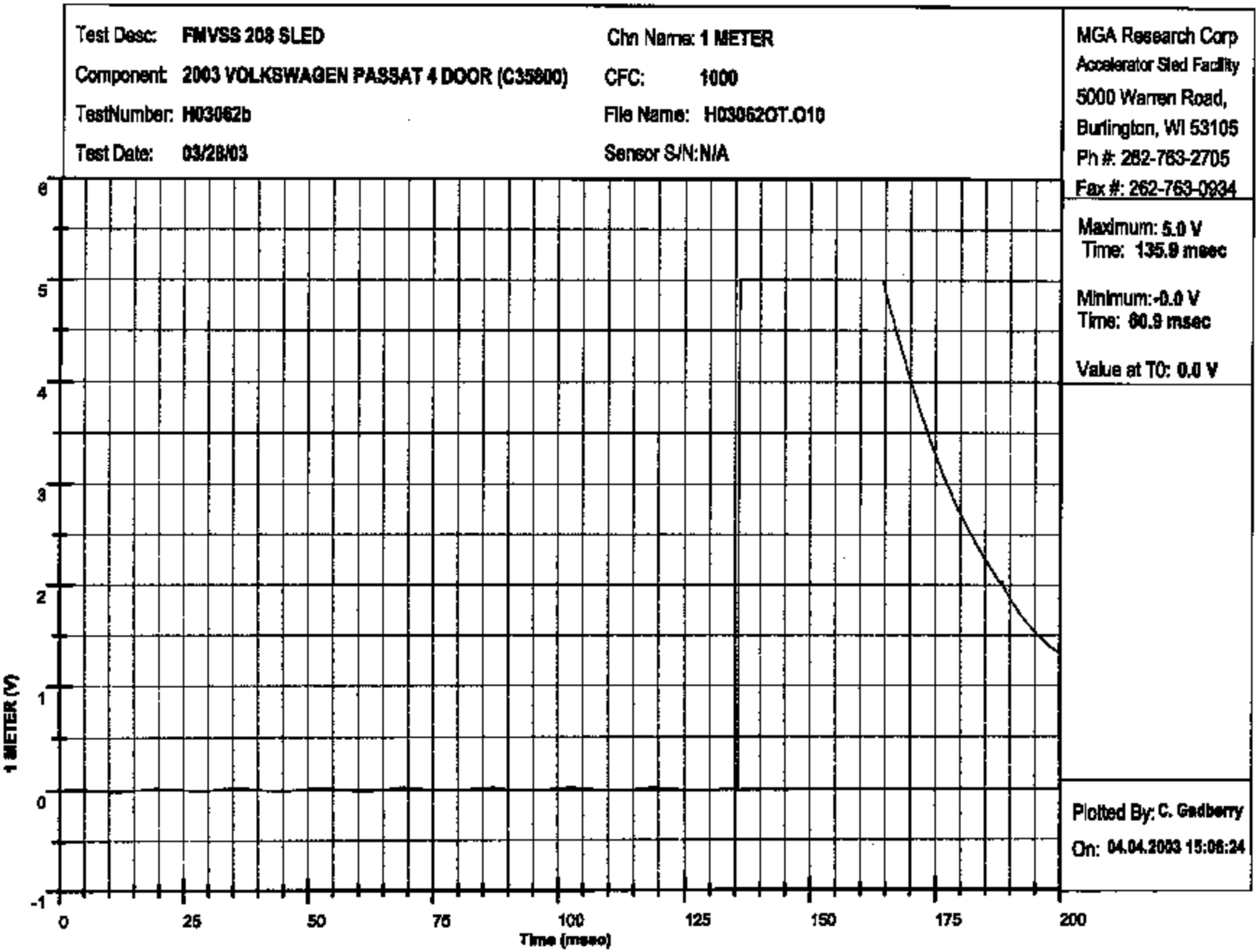
Maximum: 71.0 IN
Time: 199.9 msec

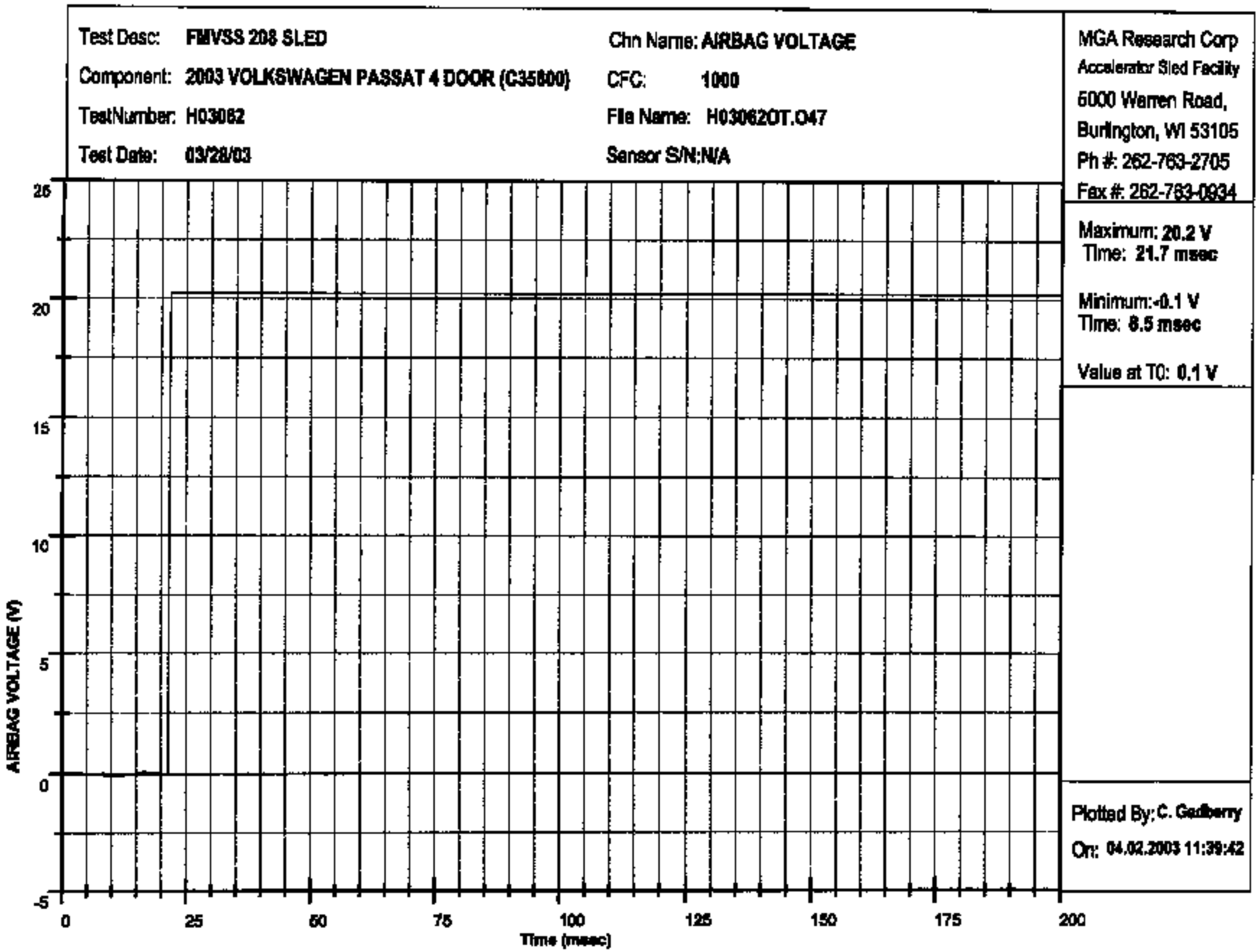
Minimum: 0.0 IN
Time: 0.0 msec

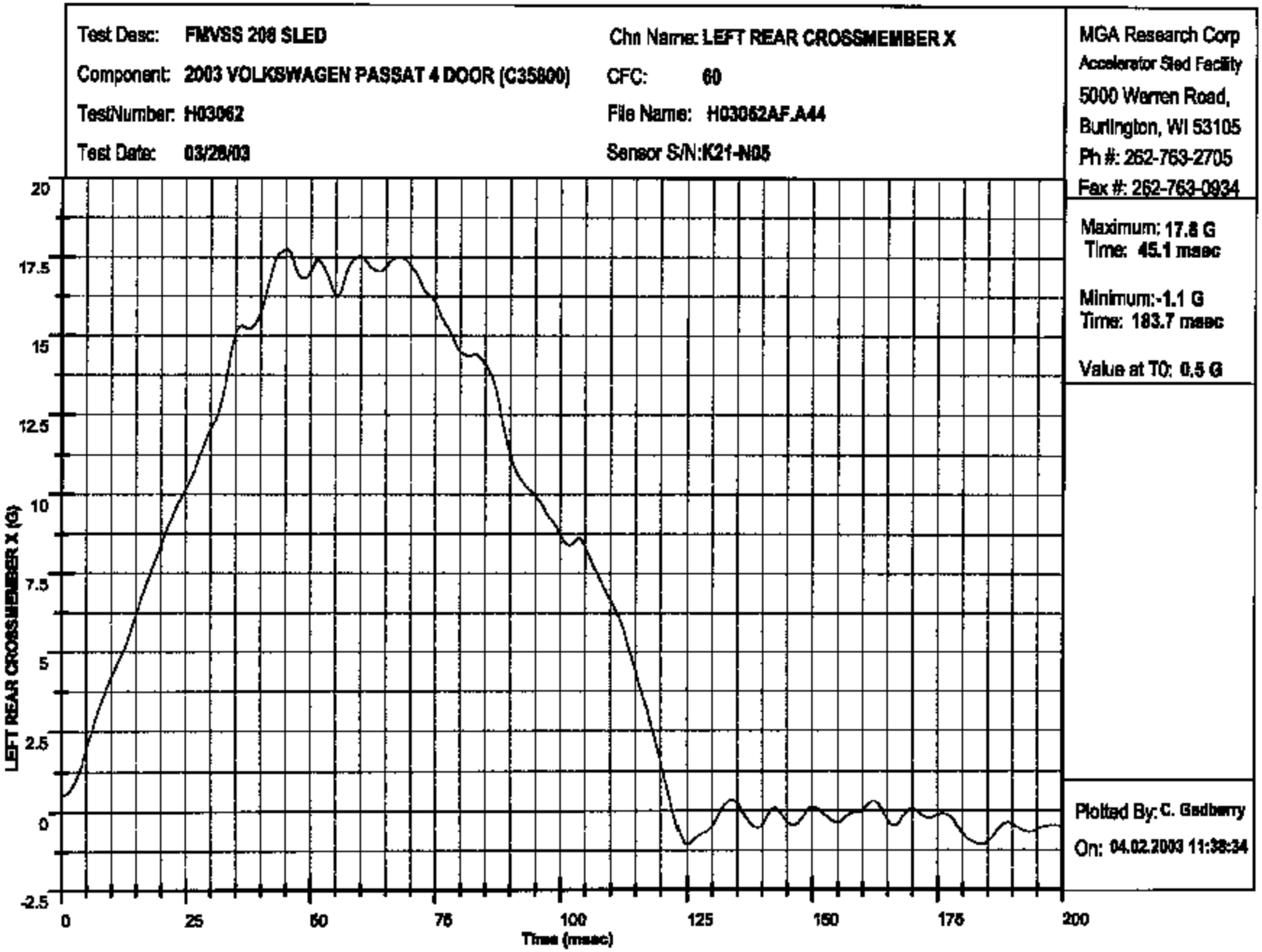
Value at T0: 0.0 IN

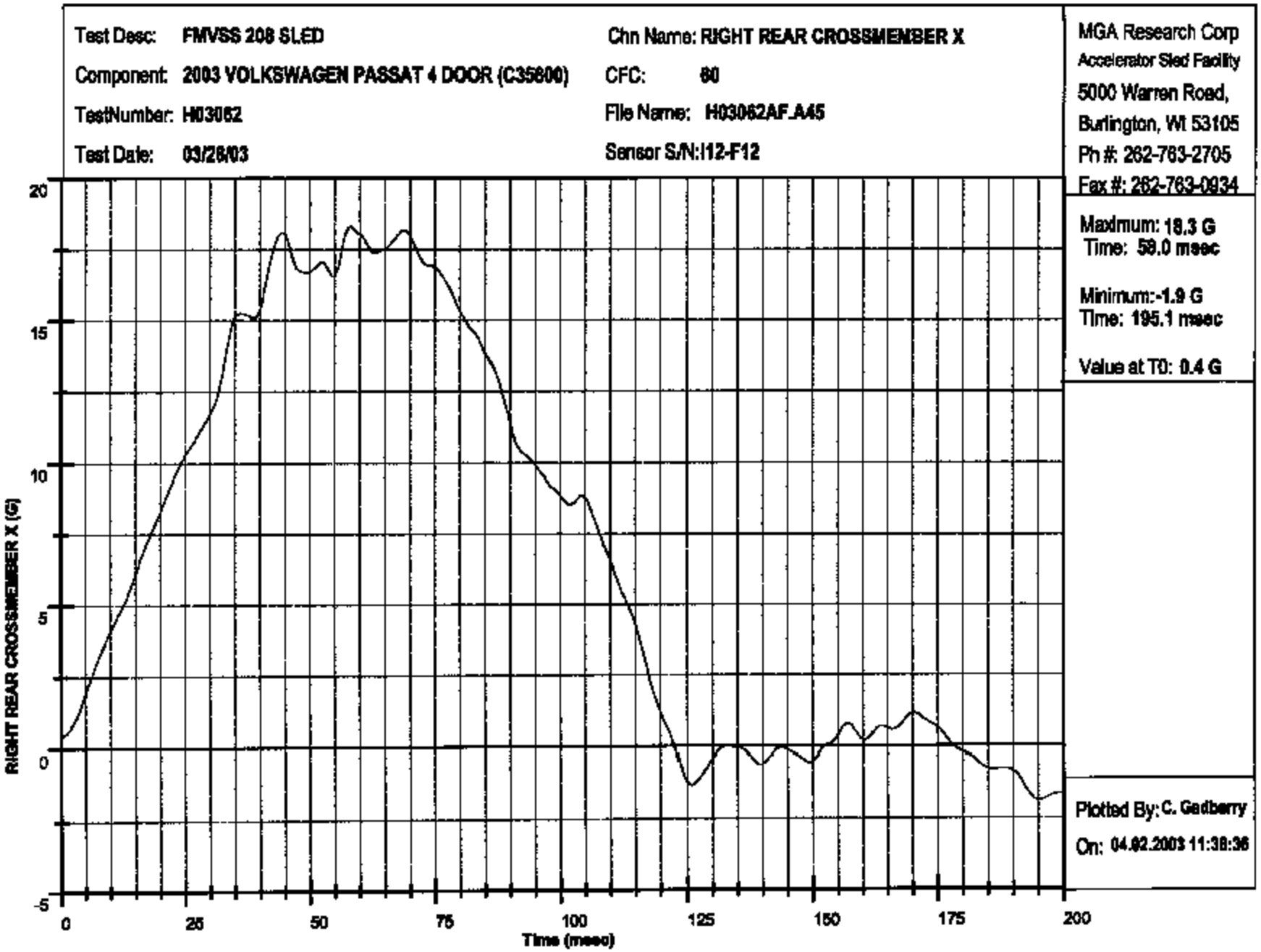
Plotted By: C. Gadberry
On: 04.04.2003 16:06:20

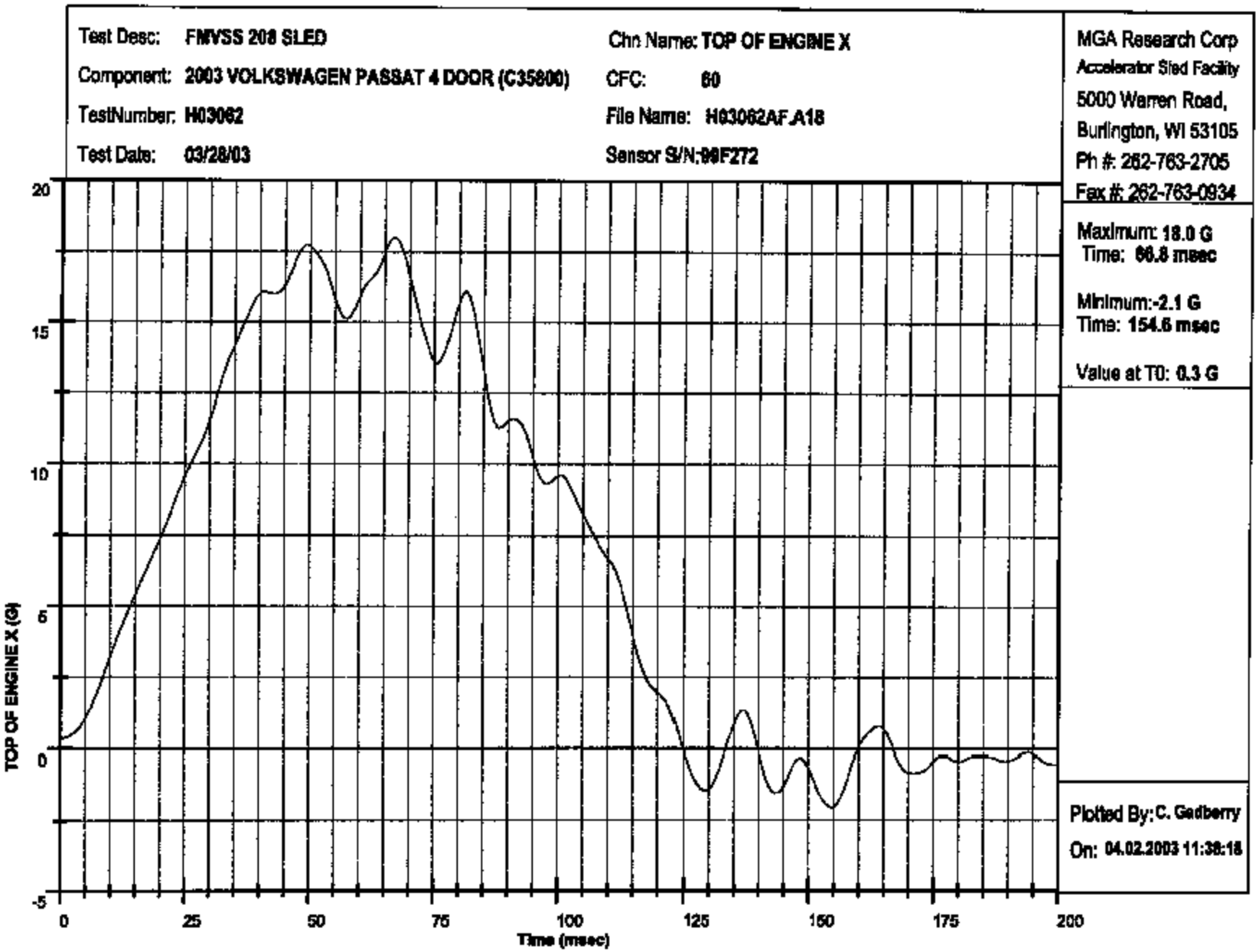



Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062b
Test Date: 03/28/03
Chn Name: 1 METER
CFC: 1000
File Name: H03062OT.O10
Sensor S/N:N/A
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 5.0 V
Time: 135.9 msec
Minimum:-0.0 V
Time: 60.9 msec
Value at T0: 0.0 V
Plotted By: C. Gadberry
On: 04.04.2003 15:06:24
1 METER (V)
Time (msec)
6
5
4
3
2
1
0
-1
0
25
50
75
100
125
150
175
200


Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: AIRBAG VOLTAGE
CFC: 1000
File Name: H03062OT.O47
Sensor S/N:N/A
MGA Research Corp
Accelerator Sled Facility
6000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 20.2 V
Time: 21.7 msec
Minimum:-0.1 V
Time: 8.5 msec
Value at T0: 0.1 V
Plotted By: C. Gadberry
On: 04.02.2003 11:39:42
AIRBAG VOLTAGE (V)
25
20
15
10
5
0
-5
0
25
50
75
100
125
150
175
200
Time (msec)


Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
Test/Number: H03062
Test Date: 03/28/03
Chn Name: LEFT REAR CROSSMEMBER X
CFC: 60
File Name: H03062AF.A44
Sensor S/N:K21-N05
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 17.8 G
Time: 45.1 msec
Minimum:-1.1 G
Time: 183.7 msec
Value at T0: 0.5 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:34
LEFT REAR CROSSMEMBER X (G)
20
17.5
15
12.5
10
7.5
5
2.5
0
-2.5
0
25
50
75
100
125
150
175
200
Time (msec)


Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/26/03
Chn Name: RIGHT REAR CROSSMEMBER X
CFC: 60
File Name: H03062AF.A45
Sensor S/N:I12-F12
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 18.3 G
Time: 59.0 msec
Minimum:-1.9 G
Time: 195.1 msec
Value at T0: 0.4 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:36
RIGHT REAR CROSSMEMBER X (G)
Time (msec)
20
15
10
5
0
-5
0
25
50
75
100
125
150
175
200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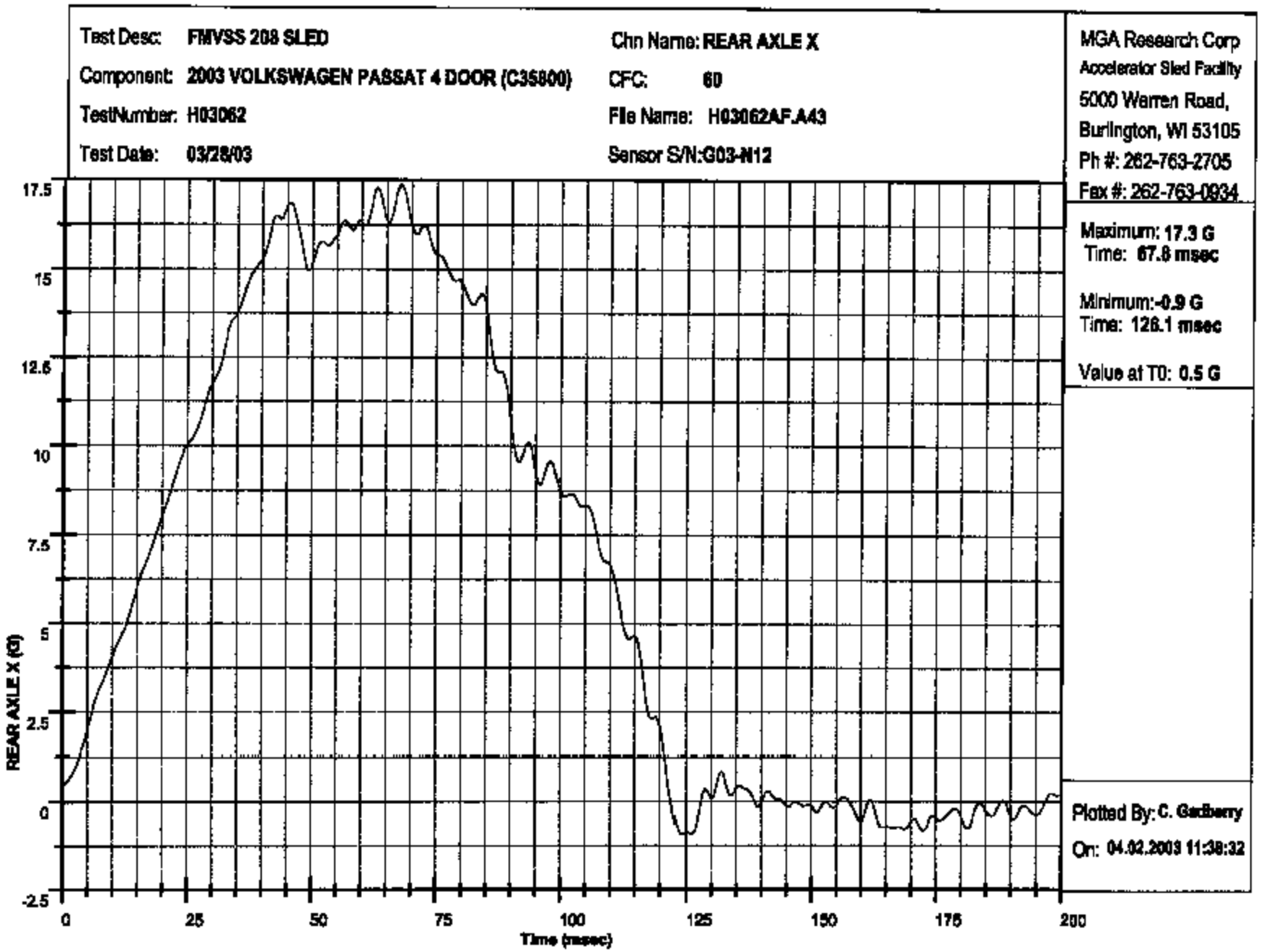
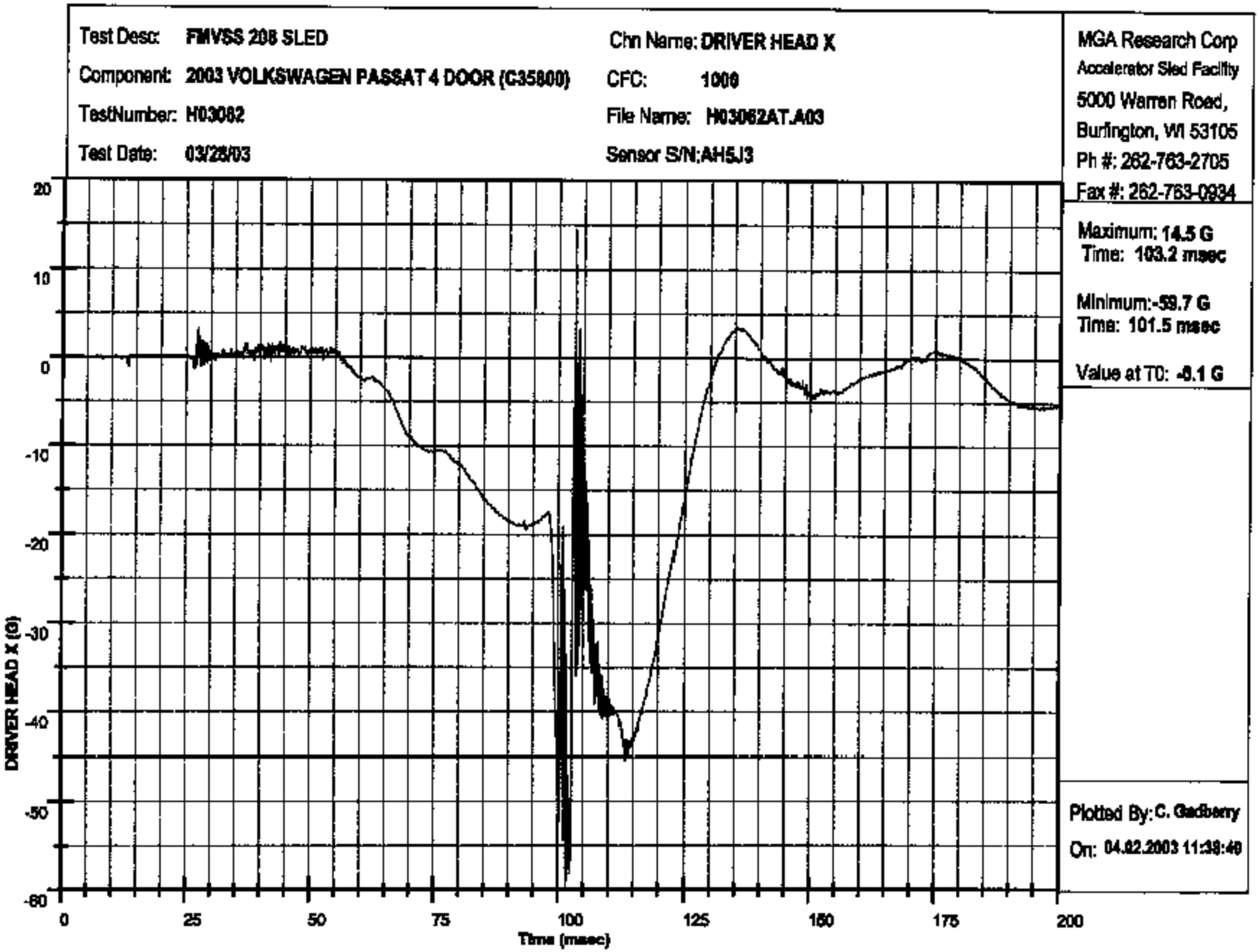
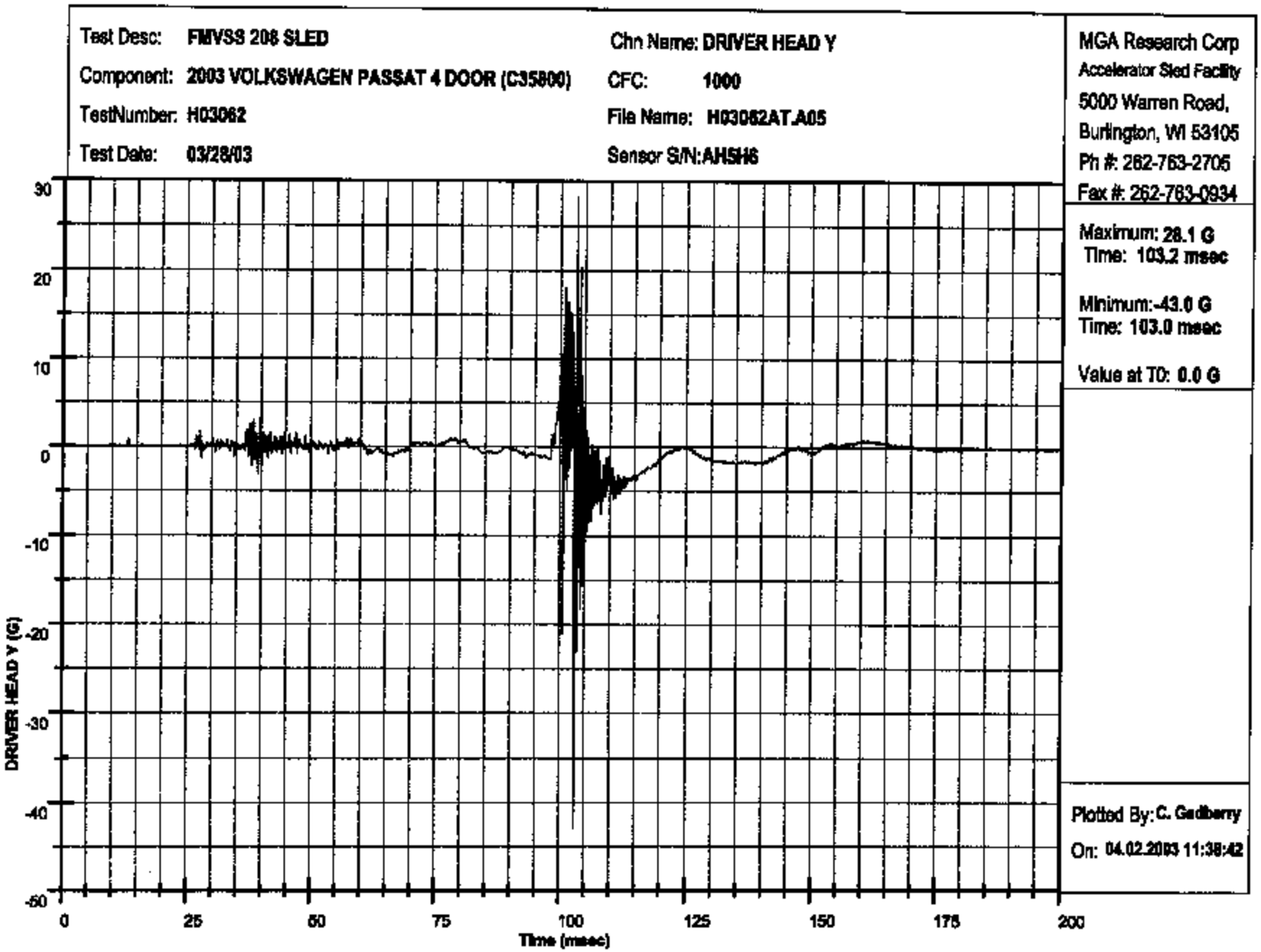
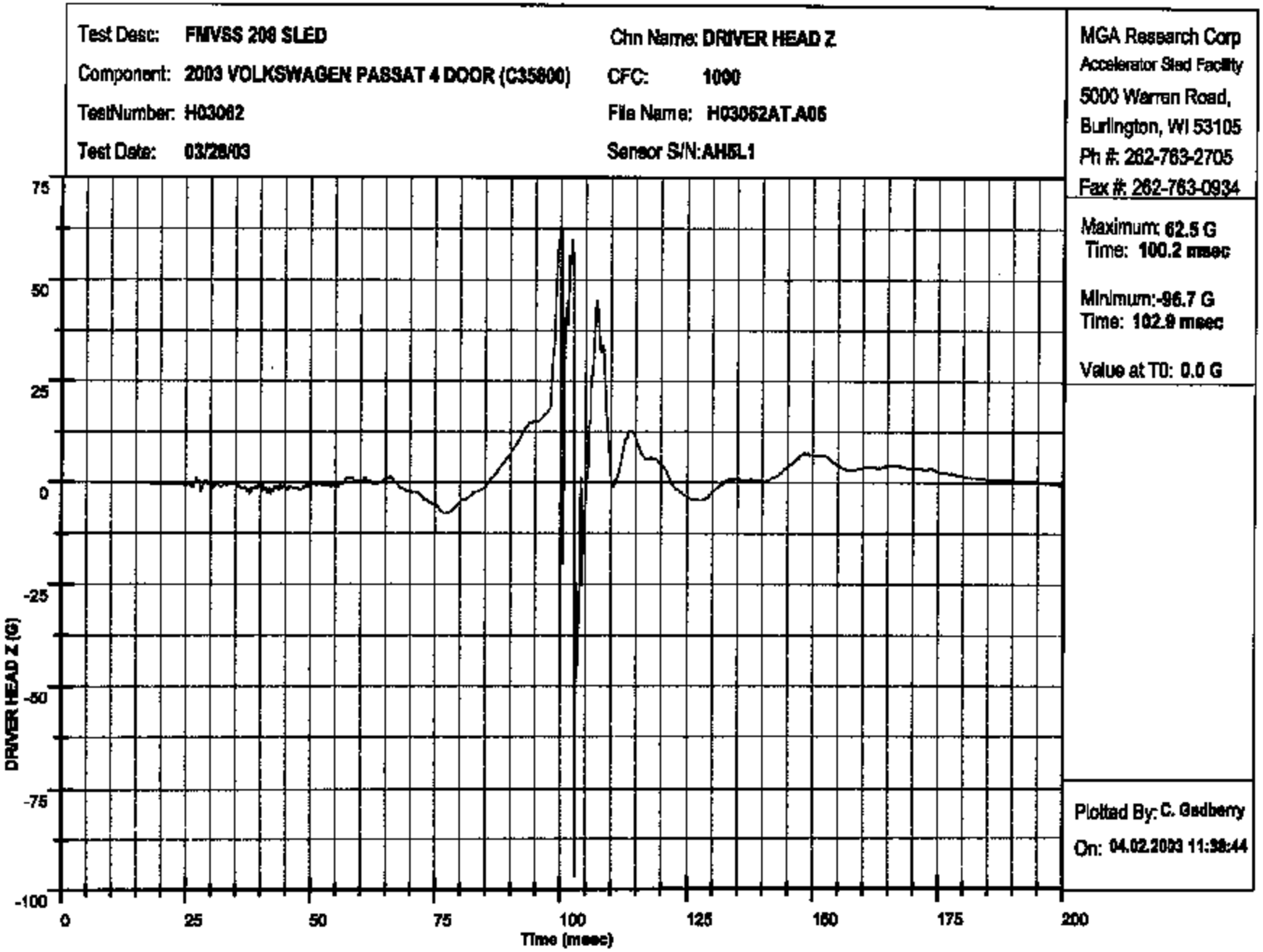
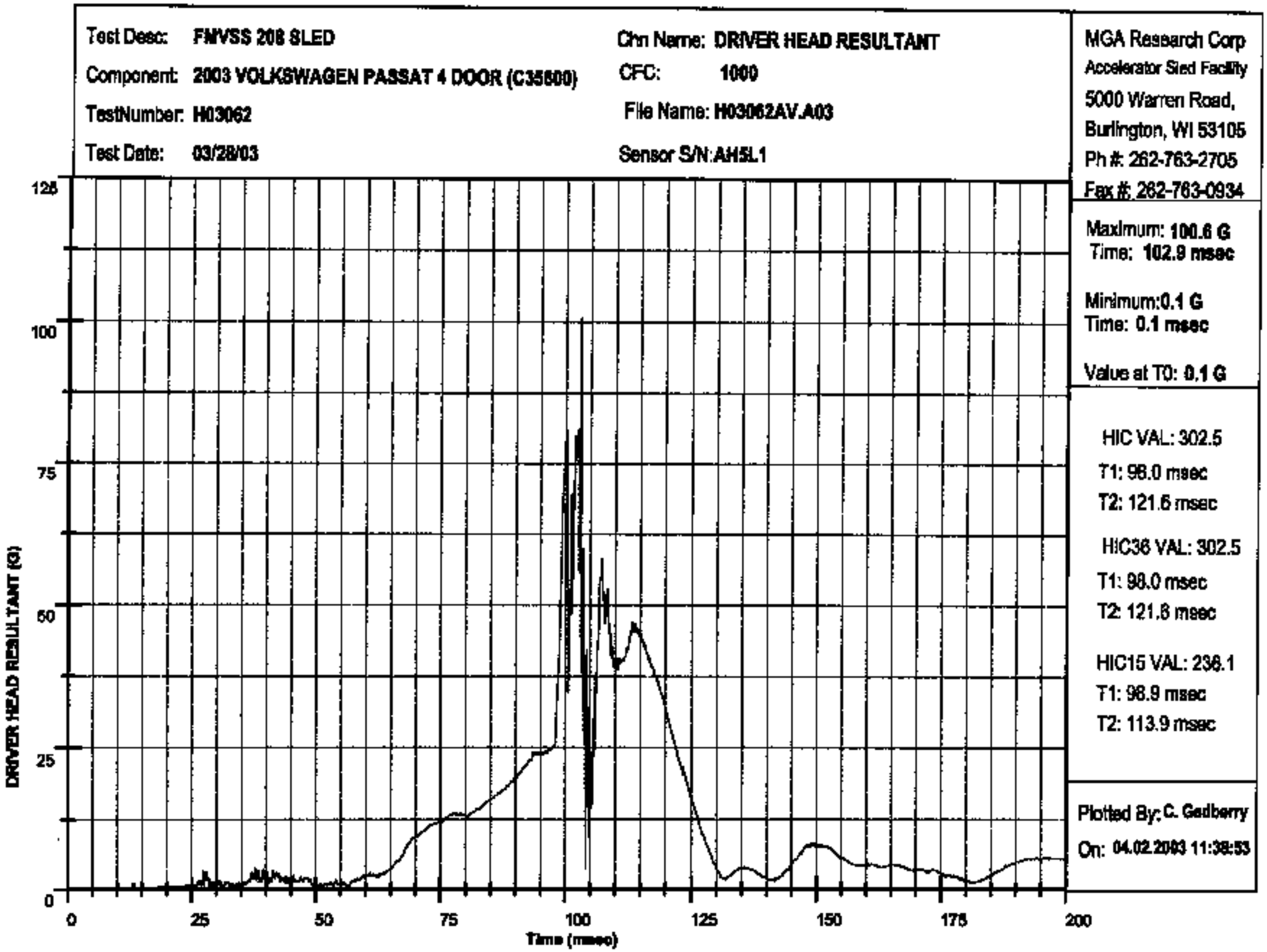
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: TOP OF ENGINE X
CFC: 60
File Name: H03062AF.A18
Sensor S/N:99F272
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 18.0 G
Time: 66.8 msec
Minimum:-2.1 G
Time: 154.6 msec
Value at T0: 0.3 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:18
TOP OF ENGINE X (G)
Time (msec)
20
15
10
5
0
-5
0
25
50
75
100
125
150
175
200

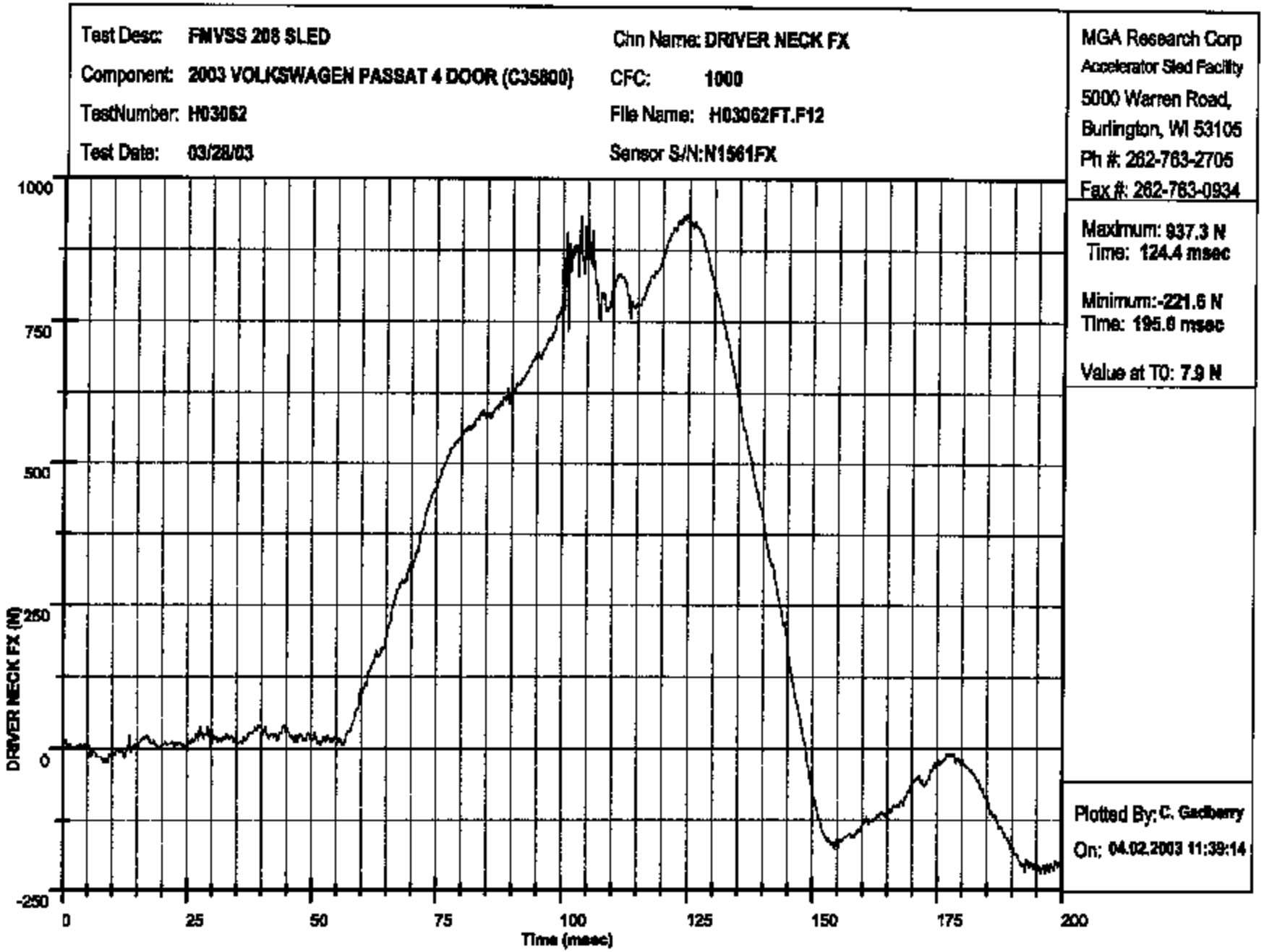

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: REAR AXLE X
CFC: 60
File Name: H03062AF.A43
Sensor S/N:G03-N12
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 17.3 G
Time: 67.8 msec
Minimum:-0.9 G
Time: 126.1 msec
Value at T0: 0.5 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:32
REAR AXLE X (G)
17.5
15
12.5
10
7.5
5
2.5
0
-2.5
0
25
50
75
100
125
150
175
200
Time (msec)

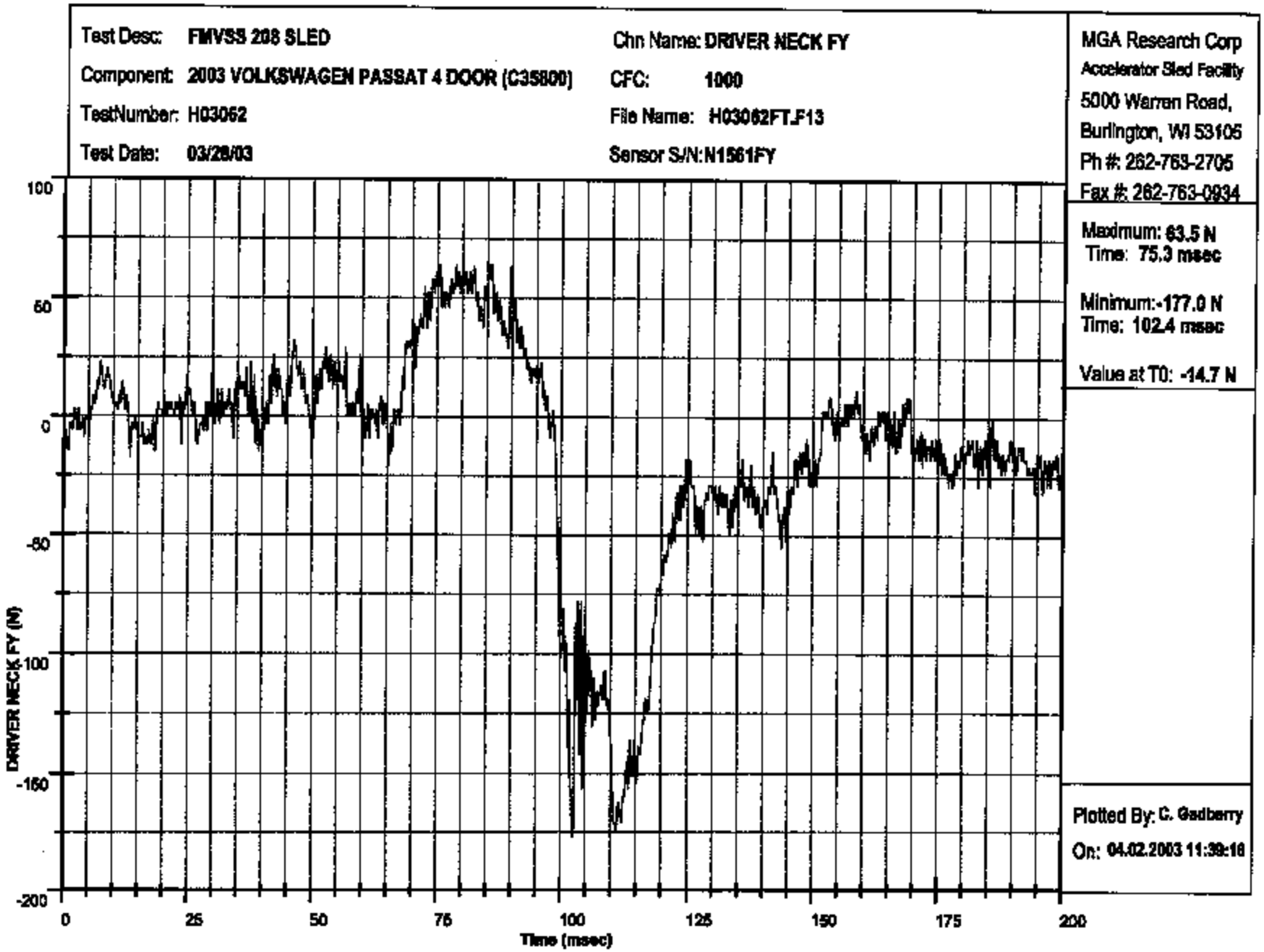

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER HEAD X
CFC: 1000
File Name: H03062AT.A03
Sensor S/N:AH5J3
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 14.5 G
Time: 103.2 msec
Minimum:-59.7 G
Time: 101.5 msec
Value at T0: -6.1 G
Plotted By: C. Gadberry
On: 04.02.2003 11:39:49
DRIVER HEAD X (G)
20
10
0
-10
-20
-30
-40
-50
-60
0
25
50
75
100
125
150
175
200
Time (msec)

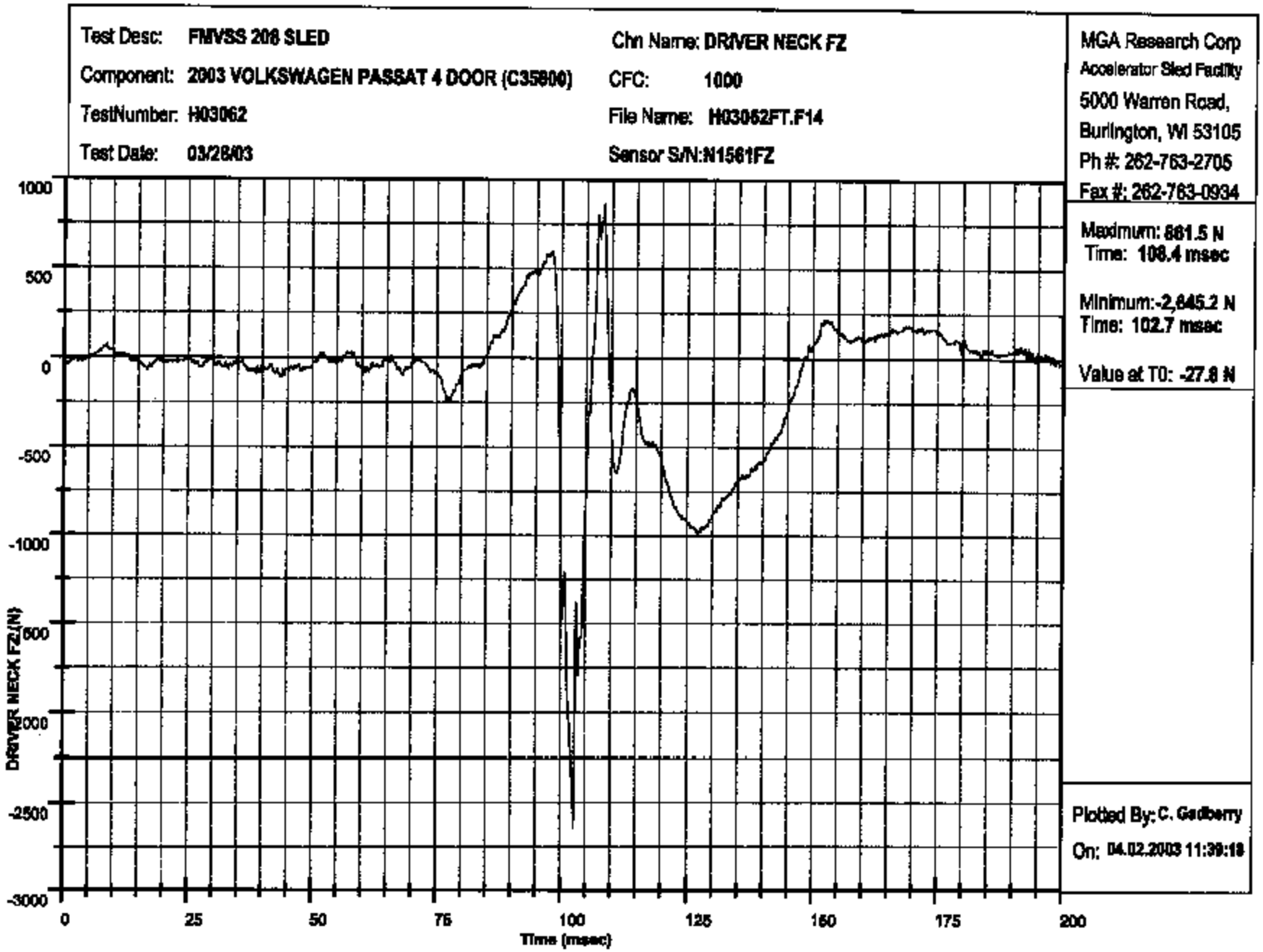

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER HEAD Y
CFC: 1000
File Name: H03062AT.A05
Sensor S/N:AH5H6
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 28.1 G
Time: 103.2 msec
Minimum:-43.0 G
Time: 103.0 msec
Value at T0: 0.0 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:42
DRIVER HEAD Y (G)
30
20
10
0
-10
-20
-30
-40
-50
0
25
50
75
100
125
150
175
200
Time (msec)

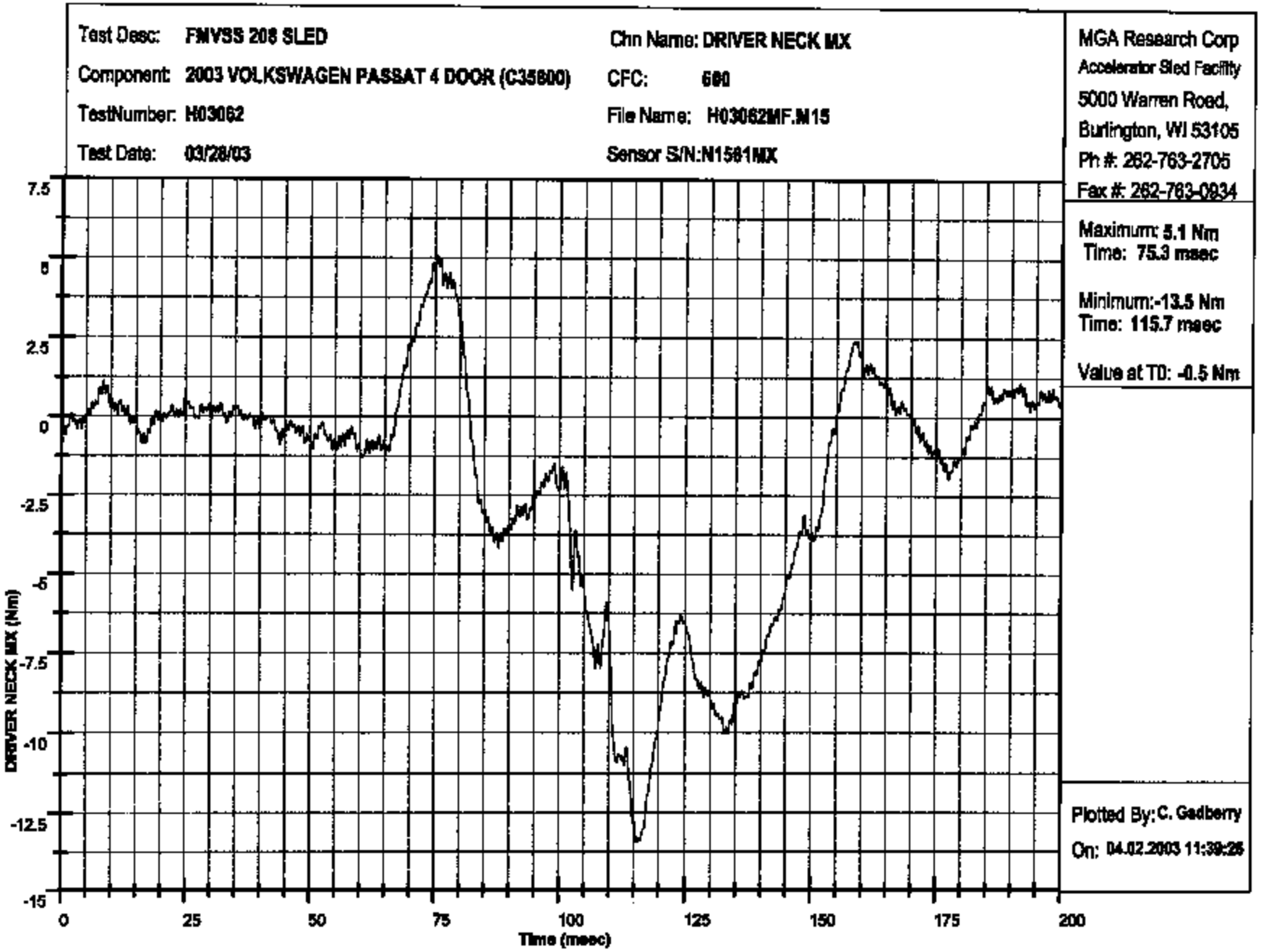

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER HEAD Z
CFC: 1000
File Name: H03062AT.A06
Sensor S/N:AH5L1
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 62.5 G
Time: 100.2 msec
Minimum:-96.7 G
Time: 102.9 msec
Value at T0: 0.0 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:44
DRIVER HEAD Z (G)
75
50
25
0
-25
-50
-75
-100
0
25
50
75
100
125
150
175
200
Time (msec)

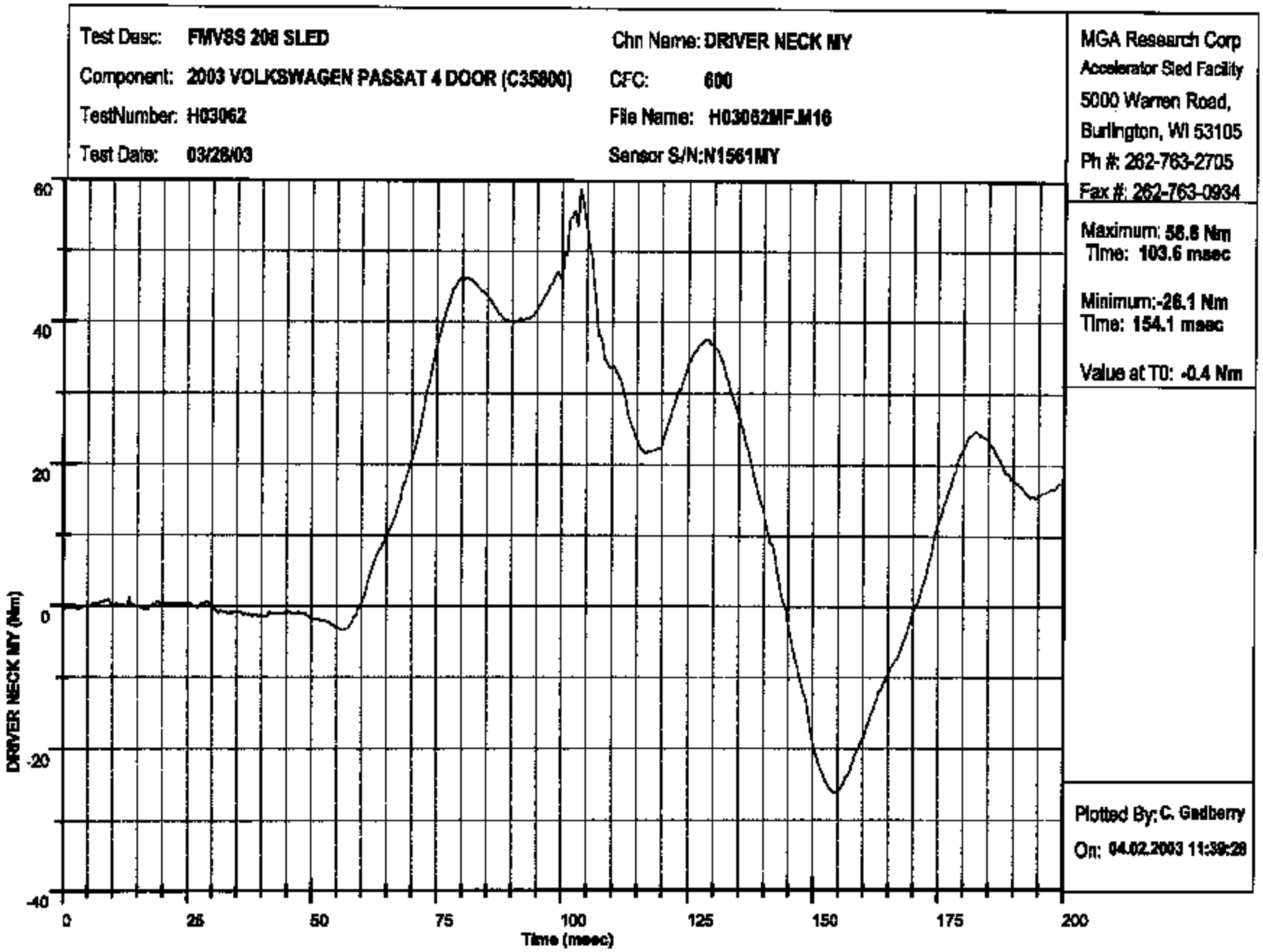

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35600)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER HEAD RESULTANT
CFC: 1000
File Name: H03062AV.A03
Sensor S/N:AH5L1
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 100.6 G
Time: 102.9 msec
Minimum:0.1 G
Time: 0.1 msec
Value at T0: 0.1 G
HIC VAL: 302.5
T1: 98.0 msec
T2: 121.6 msec
HIC36 VAL: 302.5
T1: 98.0 msec
T2: 121.6 msec
HIC15 VAL: 236.1
T1: 98.9 msec
T2: 113.9 msec
Plotted By: C. Gadberry
On: 04.02.2003 11:38:53
DRIVER HEAD RESULTANT (G)
Time (msec)
0
25
50
75
100
125
150
175
200

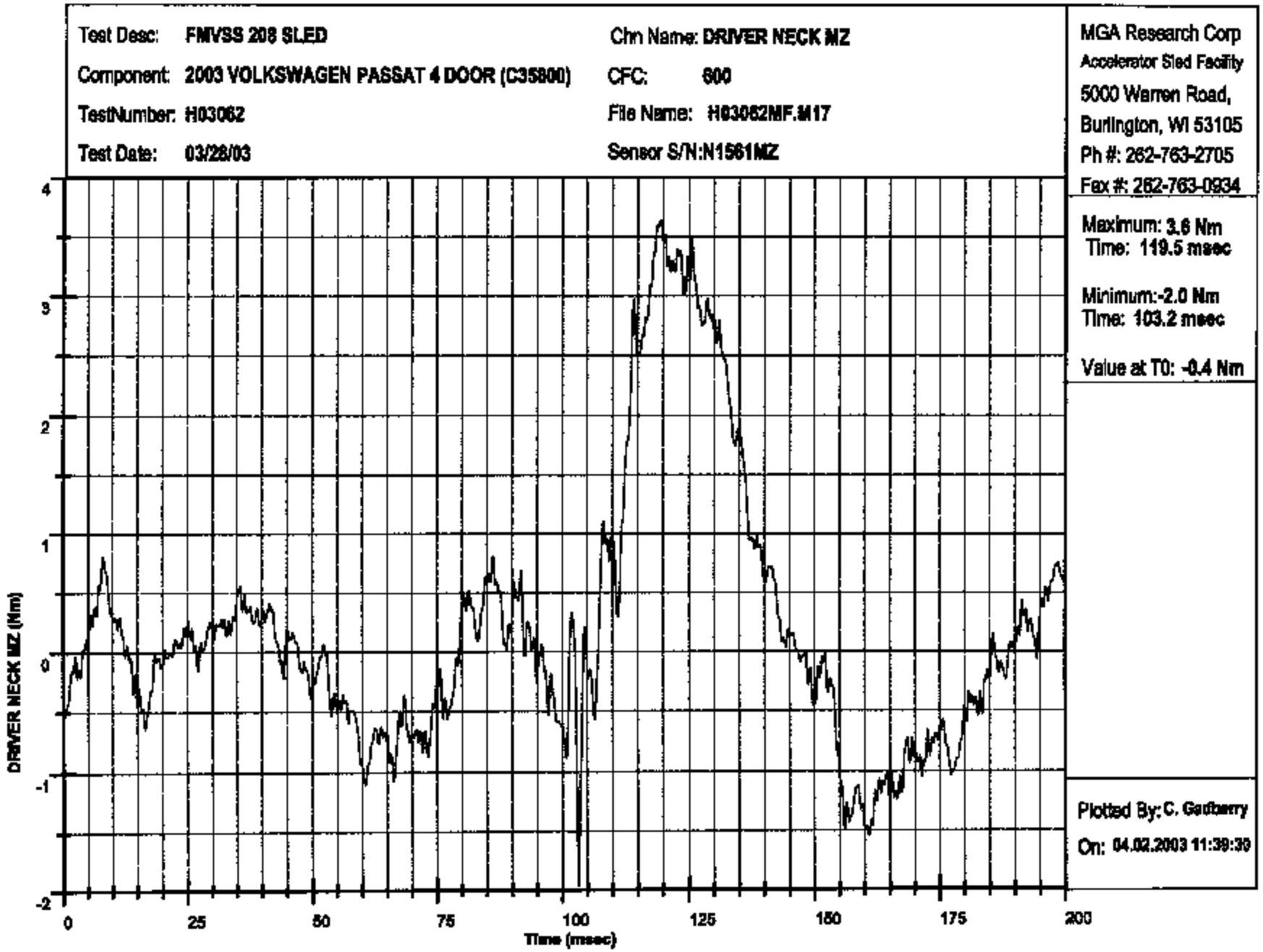

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER NECK FX
CFC: 1000
File Name: H03062FT.F12
Sensor S/N:N1561FX
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 937.3 N
Time: 124.4 msec
Minimum:-221.6 N
Time: 195.6 msec
Value at T0: 7.9 N
Plotted By: C. Gadberry
On: 04.02.2003 11:39:14
DRIVER NECK FX (N)
1000
750
500
250
0
-250
0
25
50
75
100
125
150
175
200
Time (msec)

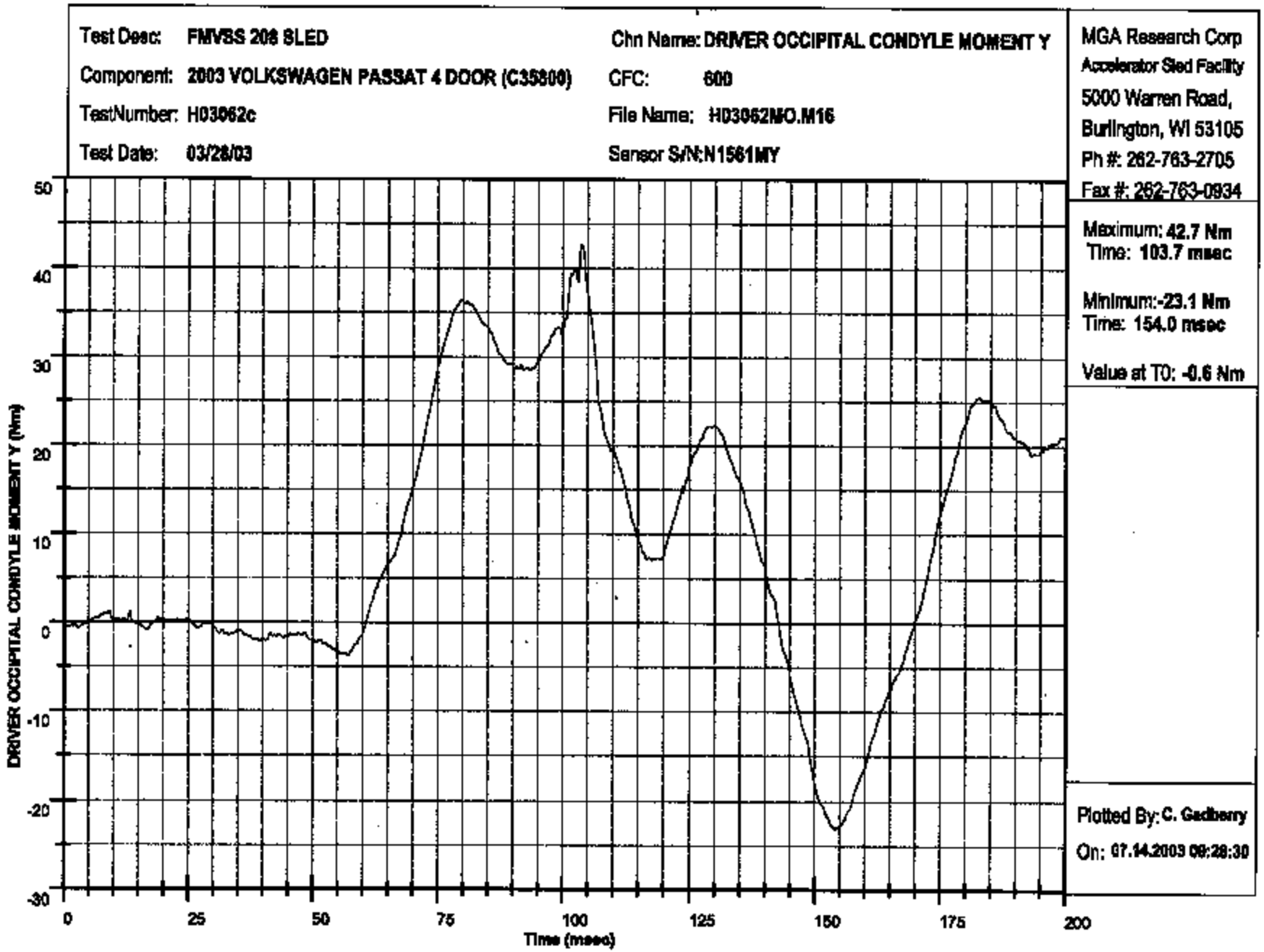

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER NECK FY
CFC: 1000
File Name: H03062FTJF13
Sensor S/N: N1561FY
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 63.5 N
Time: 75.3 msec
Minimum: -177.0 N
Time: 102.4 msec
Value at T0: -14.7 N
Plotted By: C. Gadberry
On: 04.02.2003 11:39:16
DRIVER NECK FY (N)
100
50
0
-50
-100
-150
-200
0
25
50
75
100
125
150
175
200
Time (msec)

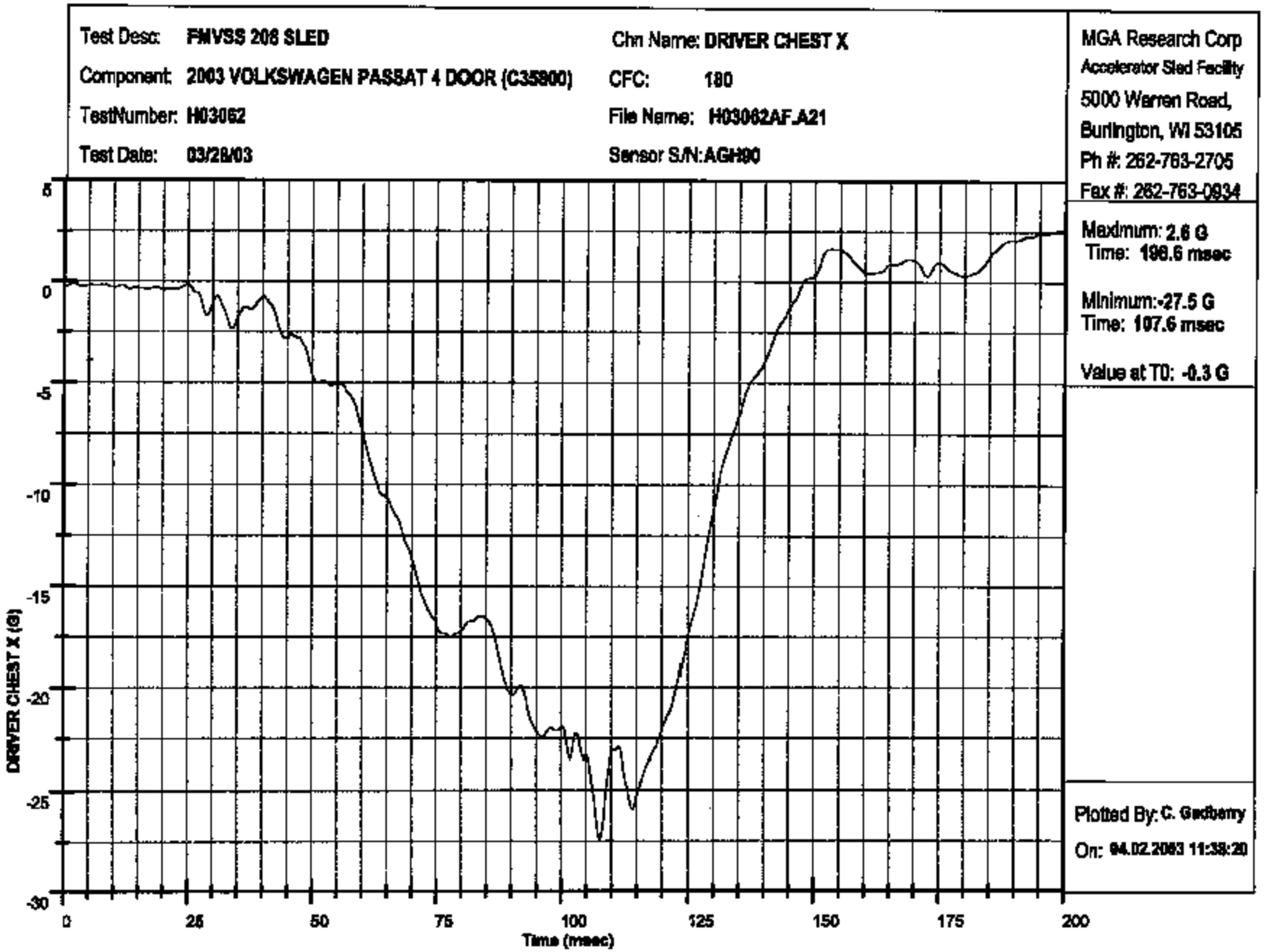

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER NECK FZ
CFC: 1000
File Name: H03062FT.F14
Sensor S/N:N1561FZ
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 861.5 N
Time: 108.4 msec
Minimum:-2,645.2 N
Time: 102.7 msec
Value at T0: -27.8 N
Plotted By: C. Gadberry
On: 04.02.2003 11:39:18
DRIVER NECK FZ (N)
1000
500
0
-500
-1000
-1500
-2000
-2500
-3000
0
25
50
75
100
125
150
175
200
Time (msec)

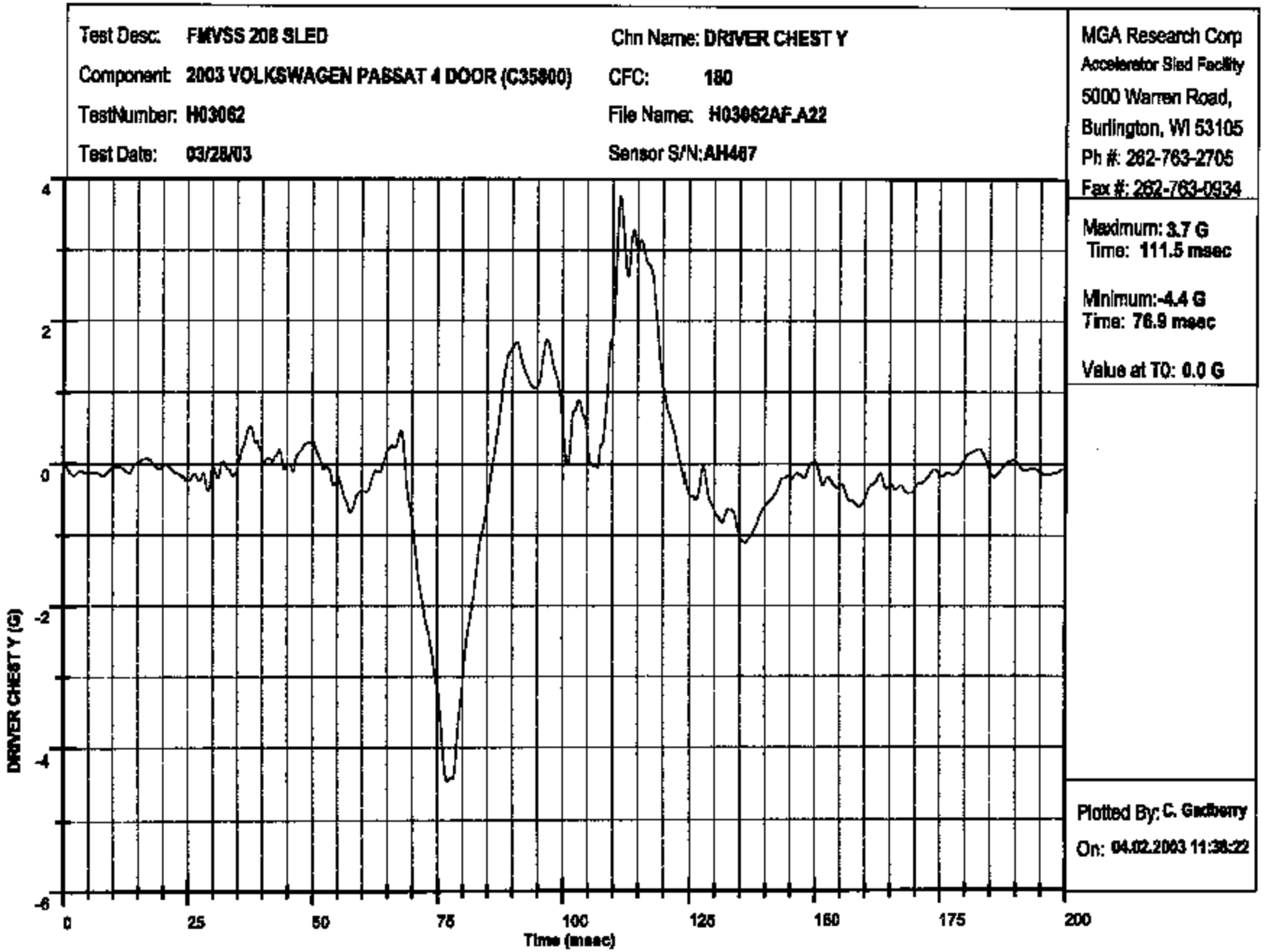

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35600)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER NECK MX
CFC: 600
File Name: H03062MF.M15
Sensor S/N:N1561MX
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 5.1 Nm
Time: 75.3 msec
Minimum:-13.5 Nm
Time: 115.7 msec
Value at T0: -0.5 Nm
Plotted By: C. Gadberry
On: 04.02.2003 11:39:25
DRIVER NECK MX (Nm)
7.5
5
2.5
0
-2.5
-5
-7.5
-10
-12.5
-15
0
25
50
75
100
125
150
175
200
Time (msec)

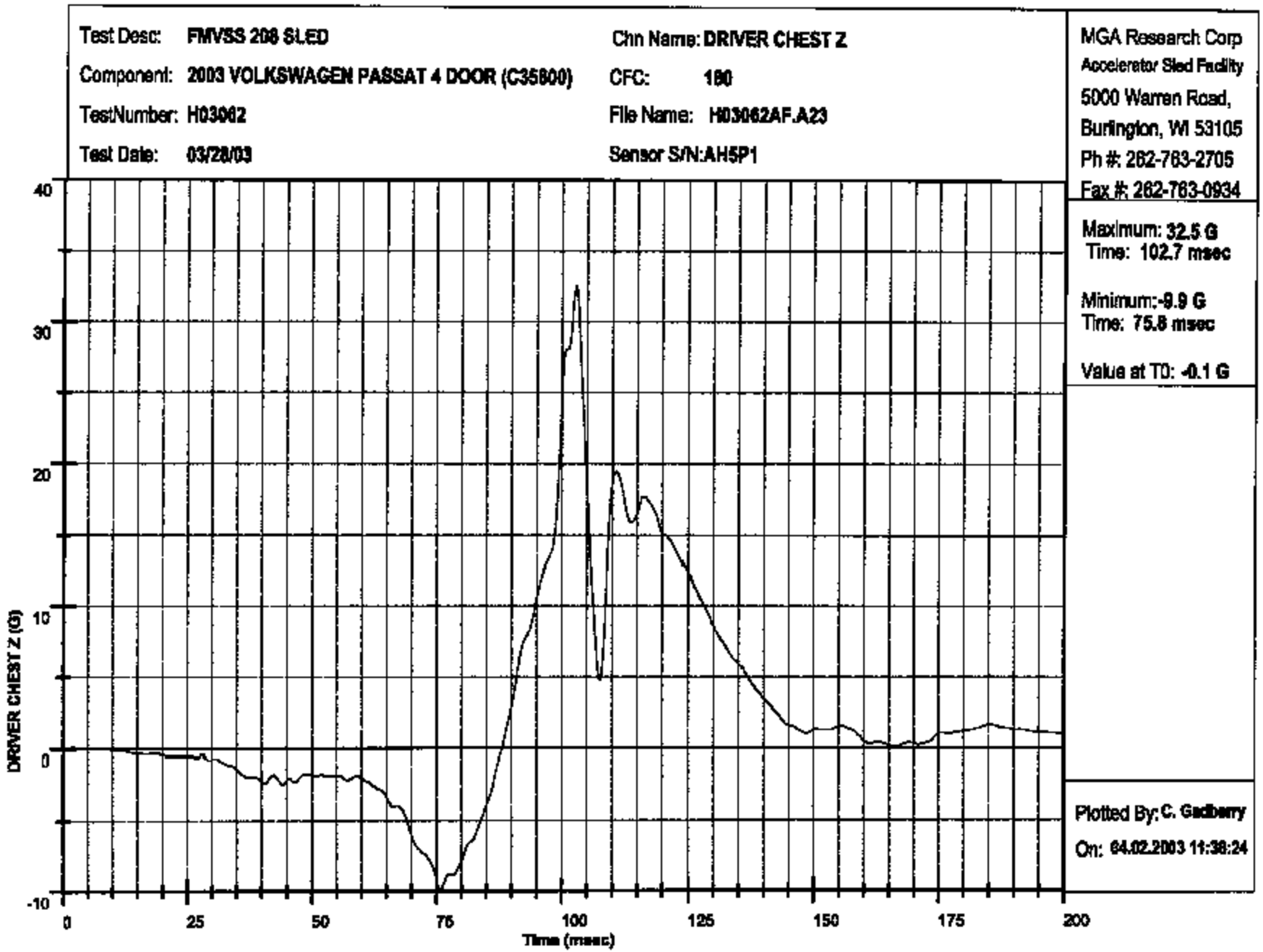

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER NECK MY
CFC: 600
File Name: H03062MF.M16
Sensor S/N:N1561MY
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 56.6 Nm
Time: 103.6 msec
Minimum:-26.1 Nm
Time: 154.1 msec
Value at T0: -0.4 Nm
Plotted By: C. Gadberry
On: 04.02.2003 11:39:28
DRIVER NECK MY (Nm)
60
40
20
0
-20
-40
0
25
50
75
100
125
150
175
200
Time (msec)

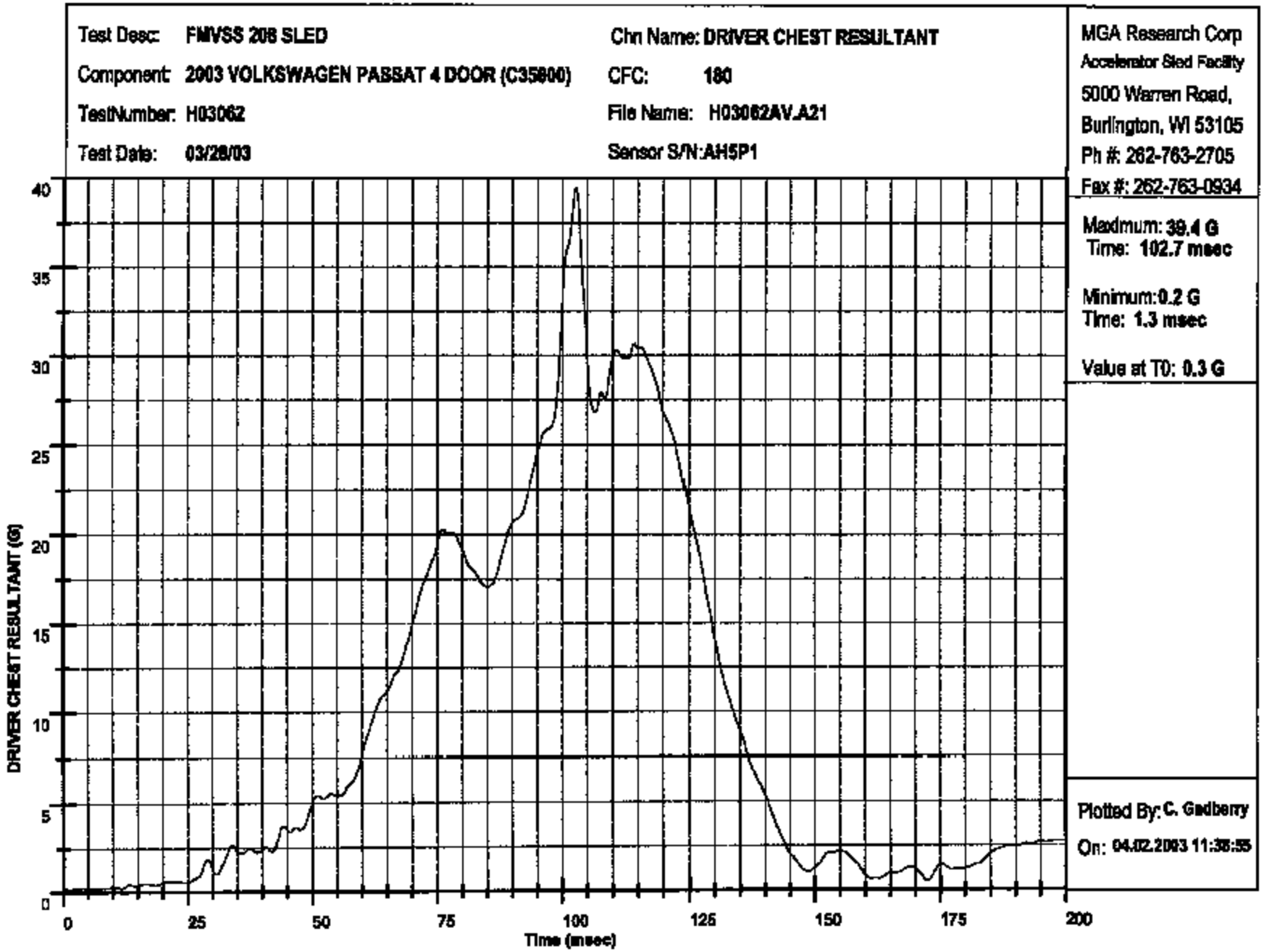

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER NECK MZ
CFC: 600
File Name: H03062MF.M17
Sensor S/N:N1561MZ
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 3.6 Nm
Time: 119.5 msec
Minimum:-2.0 Nm
Time: 103.2 msec
Value at T0: -0.4 Nm
Plotted By: C. Gadberry
On: 04.02.2003 11:39:30
DRIVER NECK MZ (Nm)
Time (msec)
4
3
2
1
0
-1
-2
0
25
50
75
100
125
150
175
200

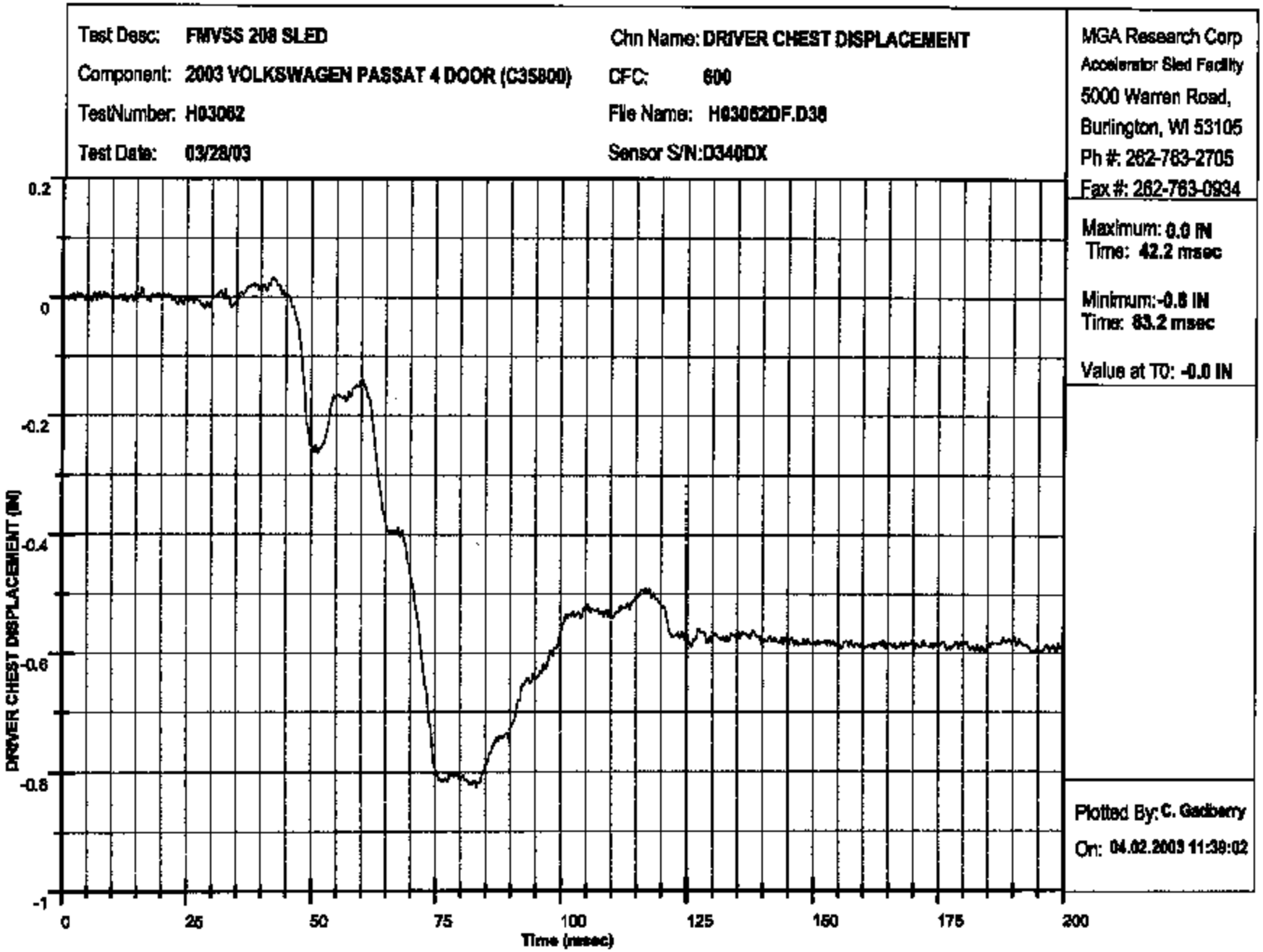

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
Test/Number: H03062c
Test Date: 03/28/03
Chn Name: DRIVER OCCIPITAL CONDYLE MOMENT Y
CFC: 600
File Name: H03062MO.M16
Sensor S/N:N1561MY
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 42.7 Nm
Time: 103.7 msec
Minimum:-23.1 Nm
Time: 154.0 msec
Value at T0: -0.6 Nm
Plotted By: C. Gadberry
On: 07.14.2003 09:28:30
DRIVER OCCIPITAL CONDYLE MOMENT Y (Nm)
50
40
30
20
10
0
-10
-20
-30
0
25
50
75
100
125
150
175
200
Time (msec)

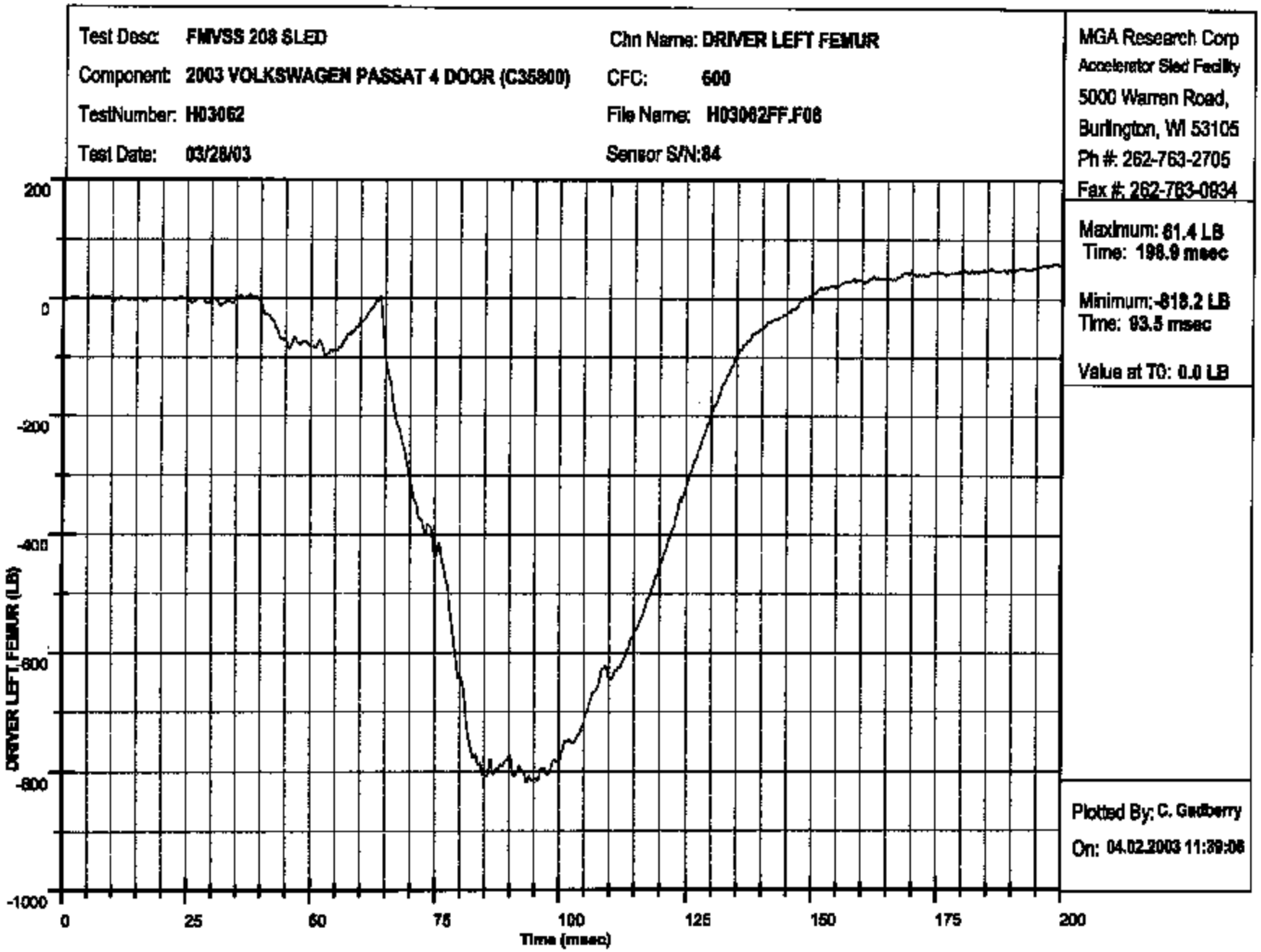

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35900)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER CHEST X
CFC: 180
File Name: H03062AF.A21
Sensor S/N:AGH90
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 2.6 G
Time: 196.6 msec
Minimum:-27.5 G
Time: 107.6 msec
Value at T0: -0.3 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:20
DRIVER CHEST X (G)
5
0
-5
-10
-15
-20
-25
-30
0
25
50
75
100
125
150
175
200
Time (msec)

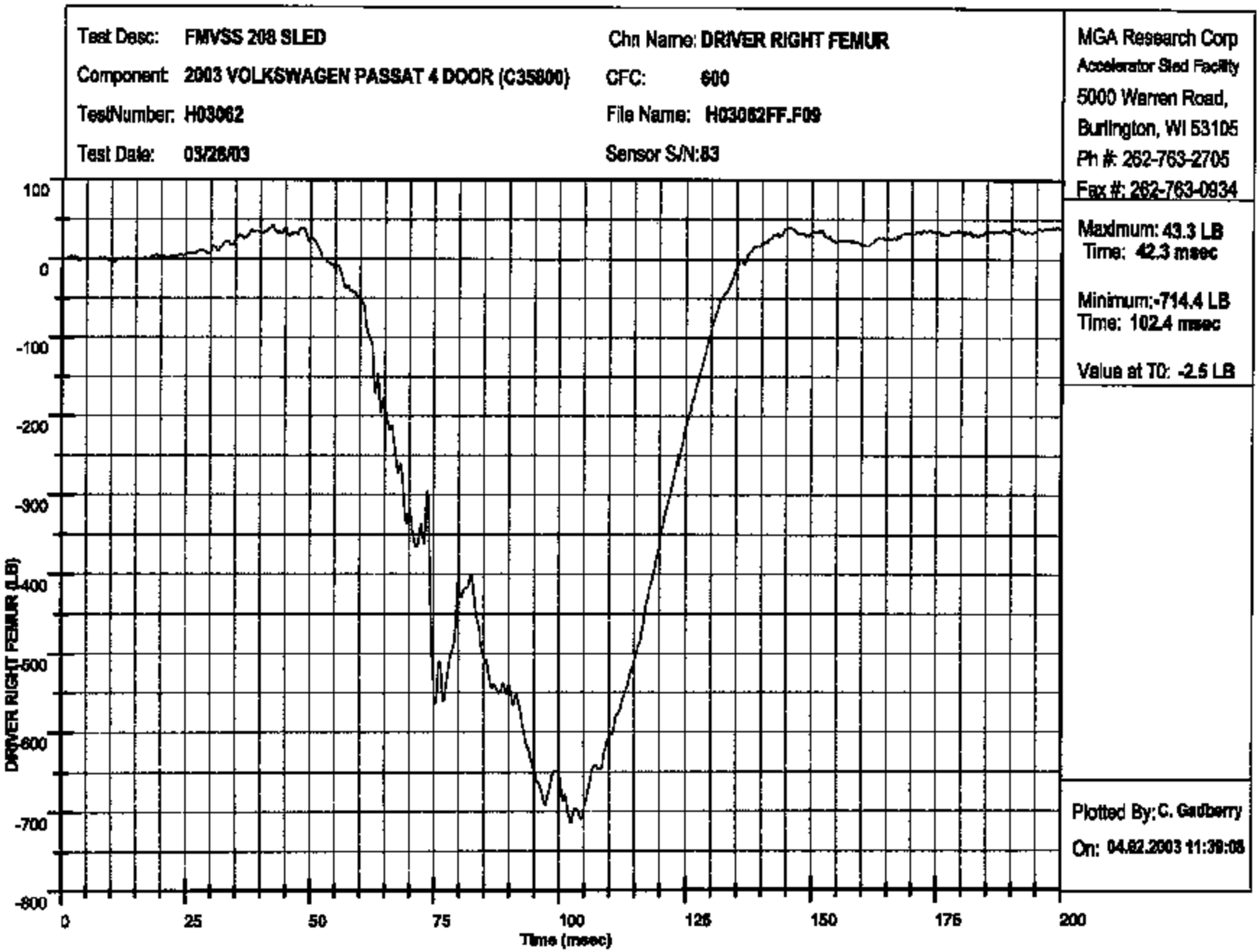

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER CHEST Y
CFC: 180
File Name: H03062AF.A22
Sensor S/N:AH467
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 3.7 G
Time: 111.5 msec
Minimum:-4.4 G
Time: 76.9 msec
Value at T0: 0.0 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:22
DRIVER CHEST Y (G)
4
2
0
-2
-4
-6
0
25
50
75
100
125
150
175
200
Time (msec)

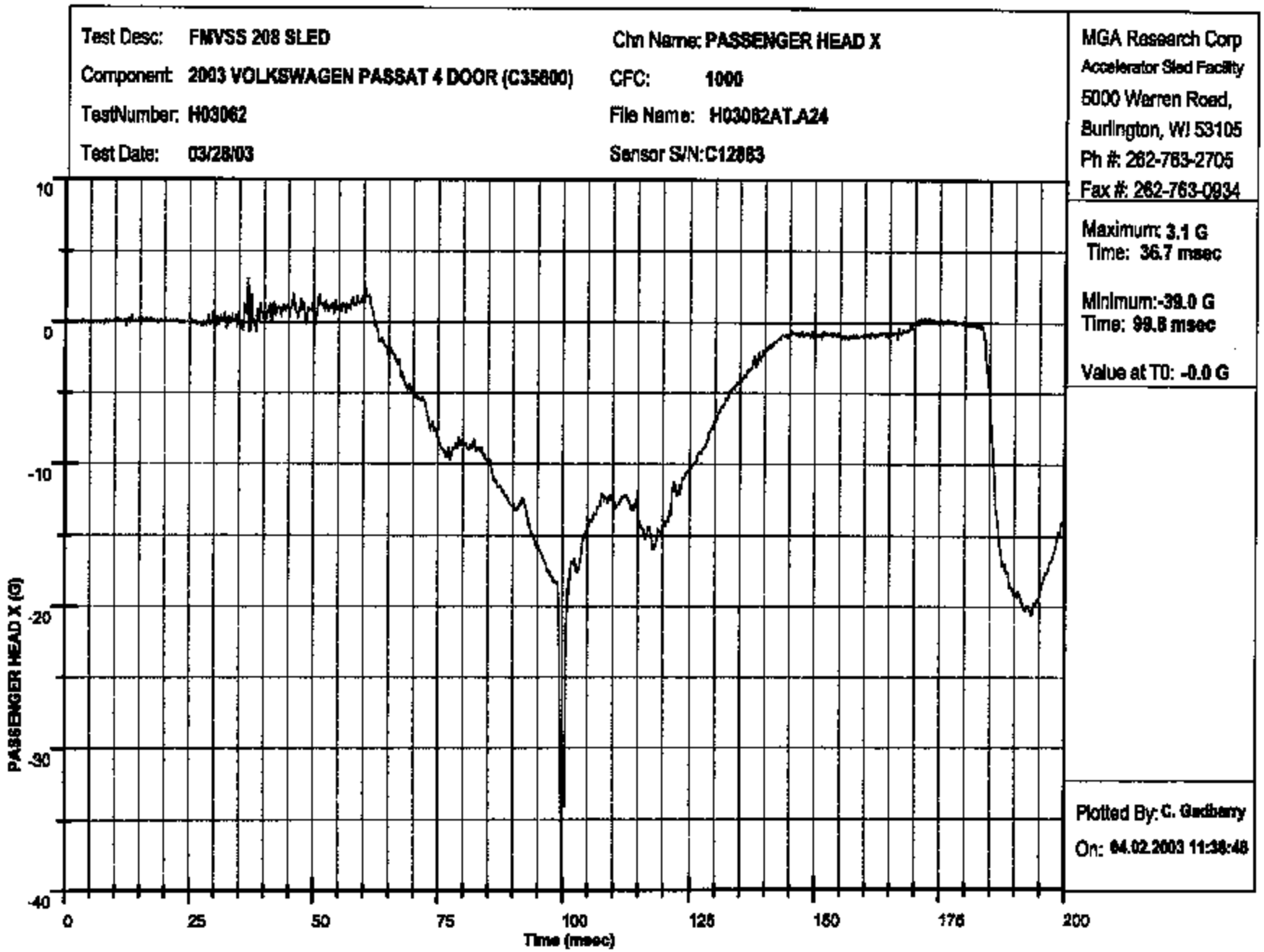

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
Test/Number: H03062
Test Date: 03/28/03
Chn Name: DRIVER CHEST Z
CFC: 180
File Name: H03062AF.A23
Sensor S/N:AH5P1
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 32.5 G
Time: 102.7 msec
Minimum:-9.9 G
Time: 75.8 msec
Value at T0: -0.1 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:24
DRIVER CHEST Z (G)
Time (msec)
40
30
20
10
0
-10
0
25
50
75
100
125
150
175
200

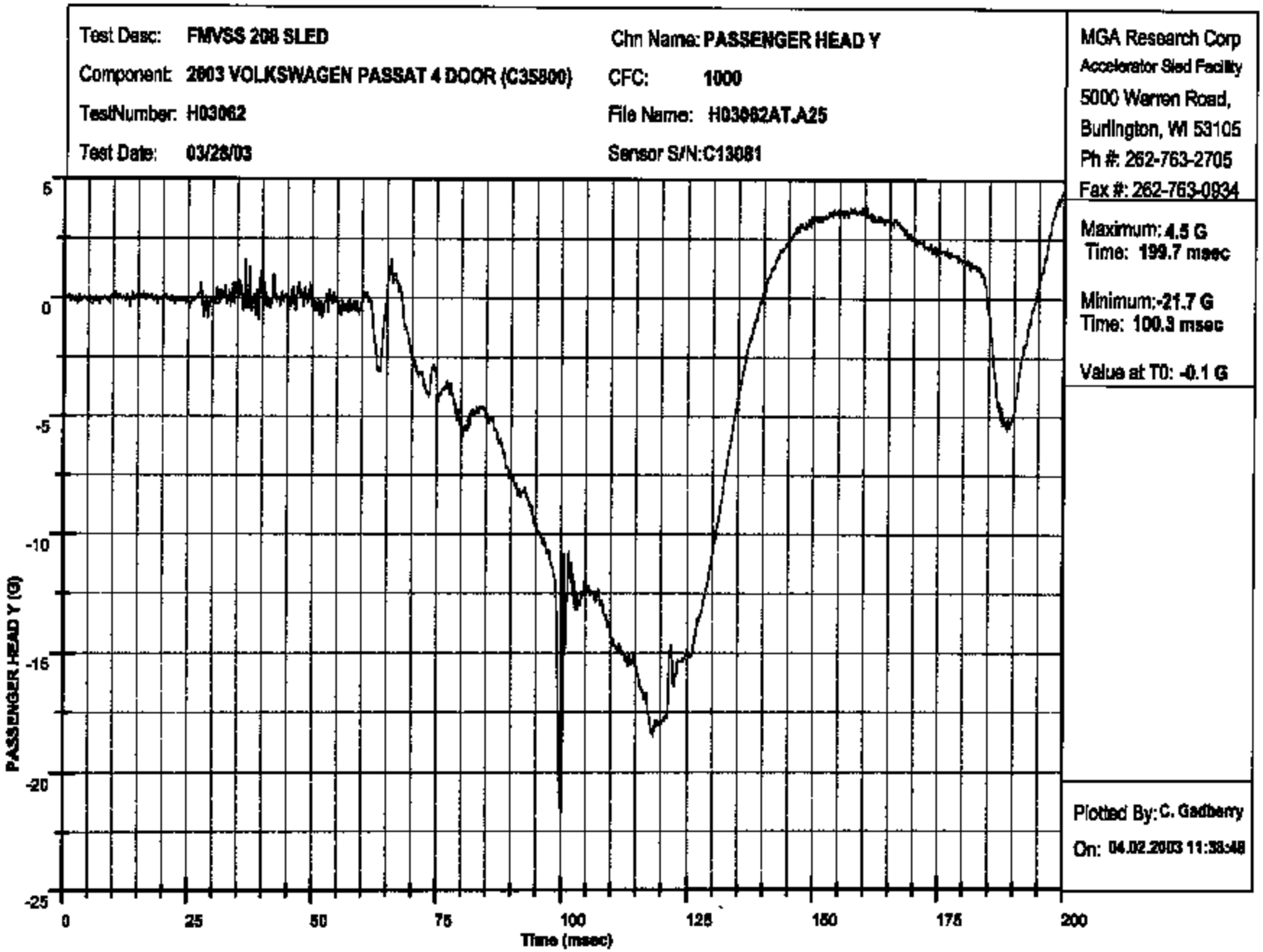

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER CHEST RESULTANT
CFC: 180
File Name: H03062AV.A21
Sensor S/N:AH5P1
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 39.4 G
Time: 102.7 msec
Minimum: 0.2 G
Time: 1.3 msec
Value at T0: 0.3 G
Plotted By: C. Gadberry
On: 04.02.2003 11:36:55
DRIVER CHEST RESULTANT (G)
Time (msec)
0
5
10
15
20
25
30
35
40
0
25
50
75
100
125
150
175
200

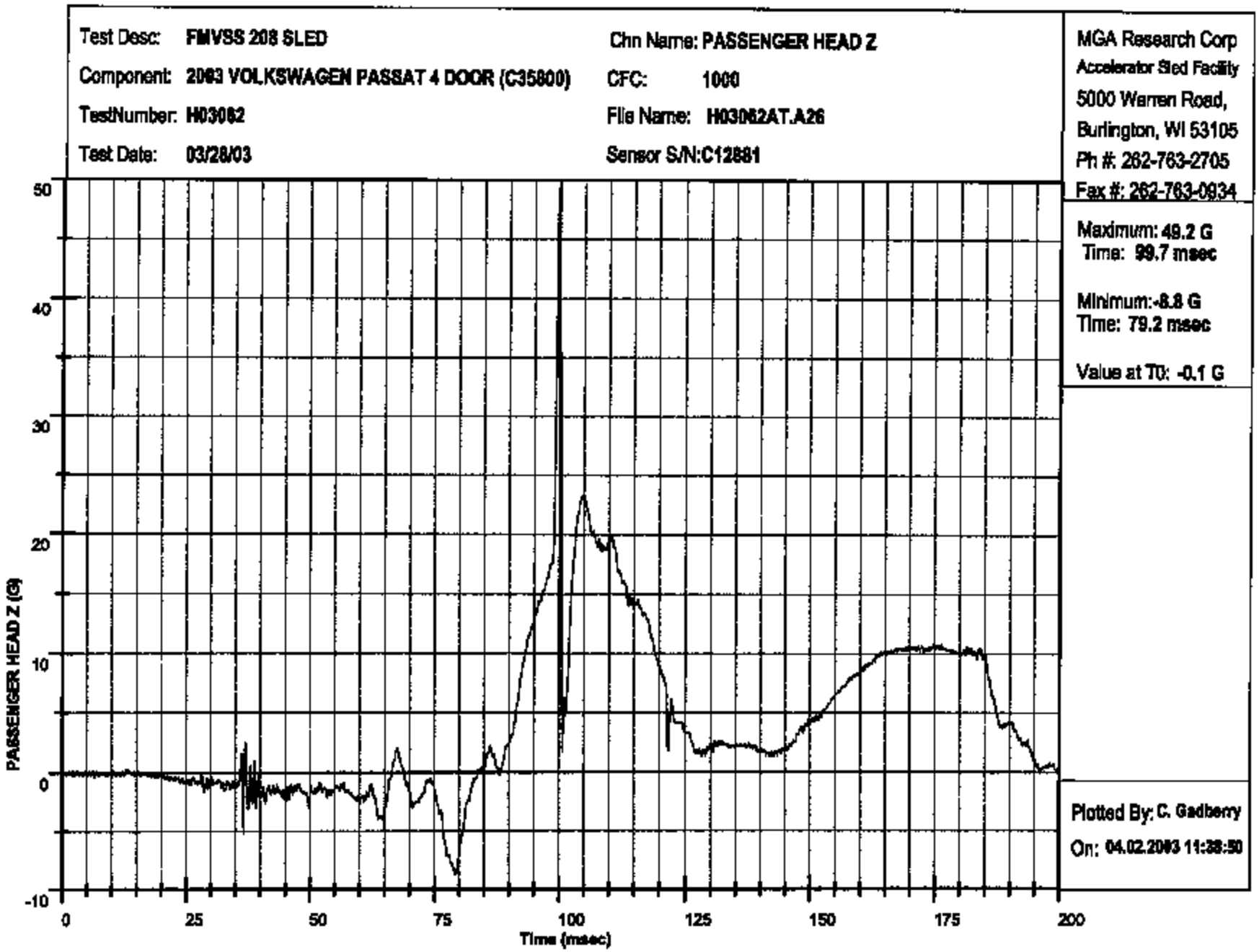

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C3S800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER CHEST DISPLACEMENT
CFC: 600
File Name: H03062DF.D38
Sensor S/N:D340DX
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 0.0 IN
Time: 42.2 msec
Minimum: -0.8 IN
Time: 83.2 msec
Value at T0: -0.0 IN
Plotted By: C. Gadberry
On: 04.02.2003 11:39:02
DRIVER CHEST DISPLACEMENT (IN)
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
0
25
50
75
100
125
150
175
200
Time (msec)

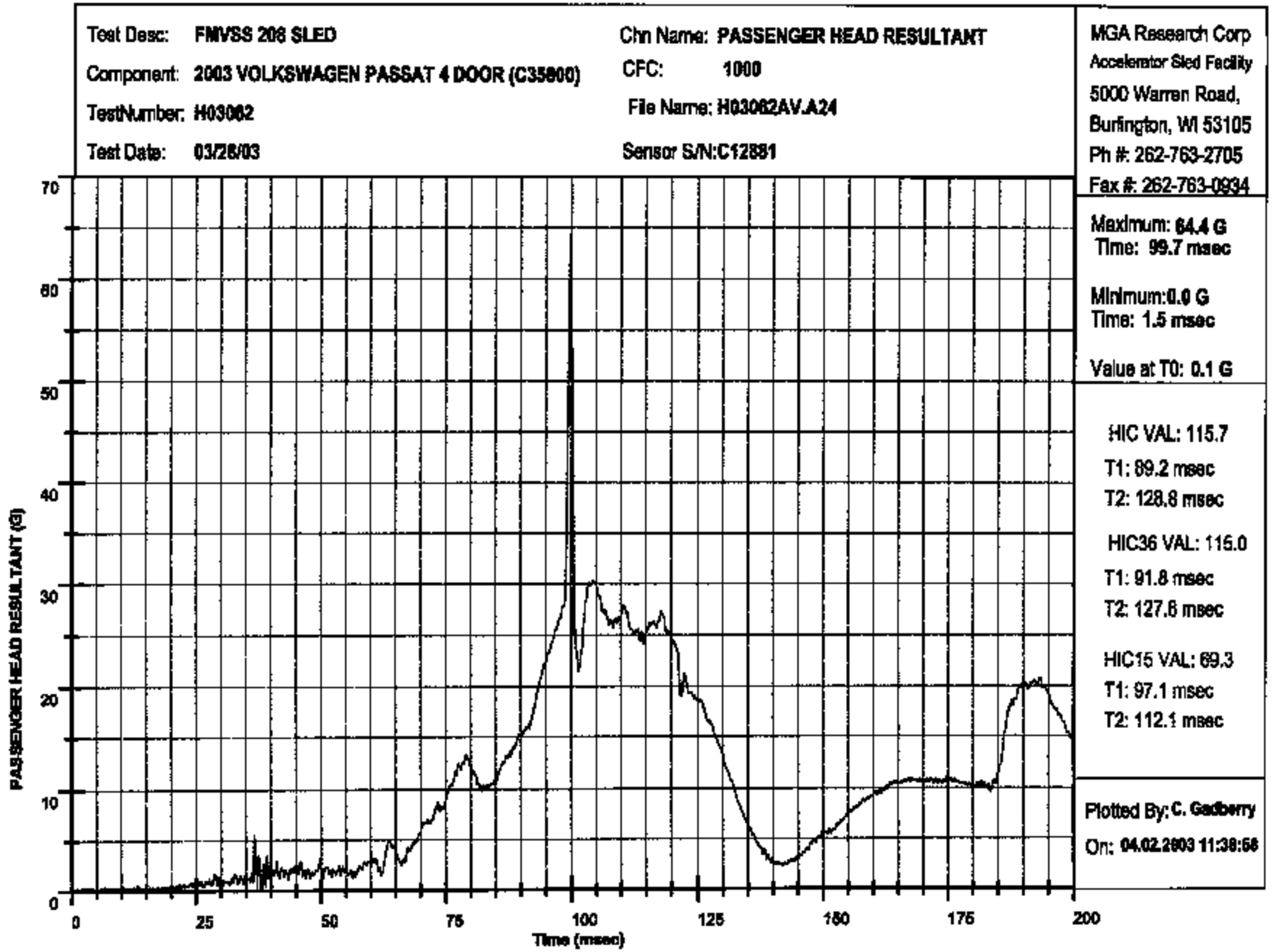

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER LEFT FEMUR
CFC: 600
File Name: H03062FF.F08
Sensor S/N:84
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 61.4 LB
Time: 198.9 msec
Minimum: -818.2 LB
Time: 93.5 msec
Value at T0: 0.0 LB
Plotted By: C. Gadberry
On: 04.02.2003 11:39:06
DRIVER LEFT FEMUR (LB)
200
0
-200
-400
-600
-800
-1000
0
25
50
75
100
125
150
175
200
Time (msec)

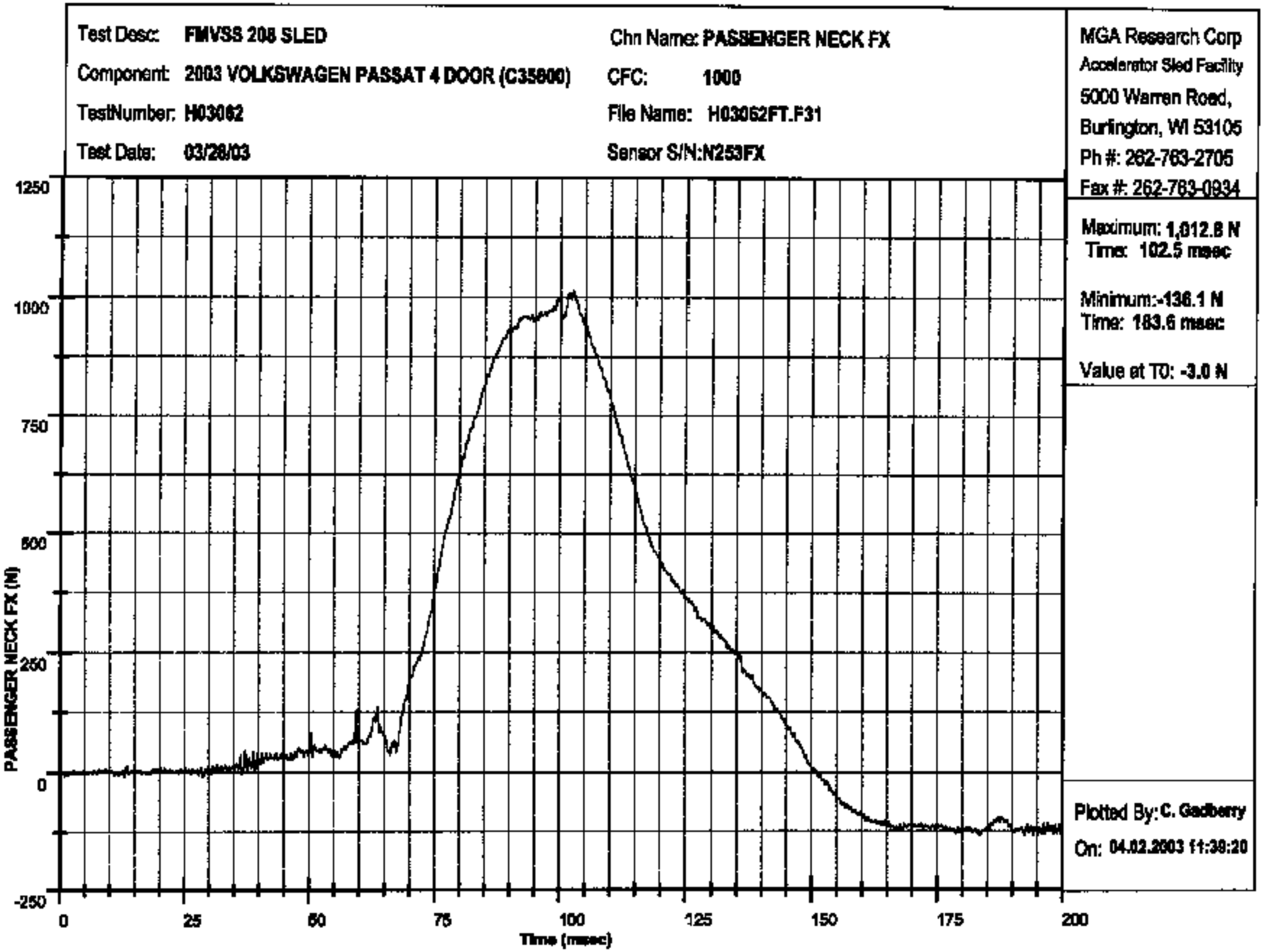

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: DRIVER RIGHT FEMUR
CFC: 600
File Name: H03062FF.F09
Sensor S/N:83
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 43.3 LB
Time: 42.3 msec
Minimum:-714.4 LB
Time: 102.4 msec
Value at T0: -2.5 LB
Plotted By: C. Gadberry
On: 04.02.2003 11:39:08
DRIVER RIGHT FEMUR (LB)
100
0
-100
-200
-300
-400
-500
-600
-700
-800
0
25
50
75
100
125
150
175
200
Time (msec)

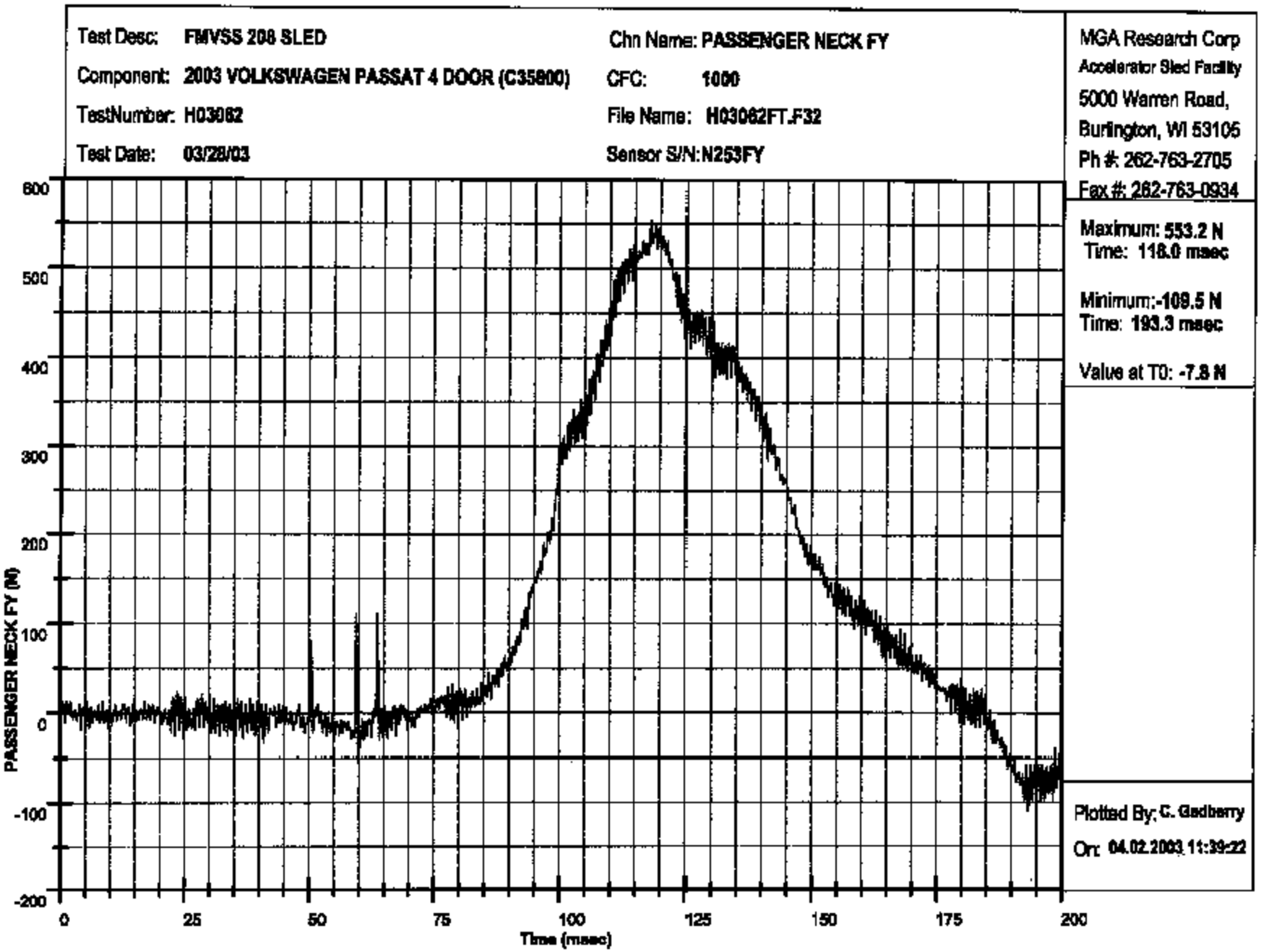

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER HEAD X
CFC: 1000
File Name: H03062AT.A24
Sensor S/N:C12883
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 3.1 G
Time: 36.7 msec
Minimum:-39.0 G
Time: 99.8 msec
Value at T0: -0.0 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:48
PASSENGER HEAD X (G)
10
0
-10
-20
-30
-40
0
25
50
75
100
125
150
175
200
Time (msec)

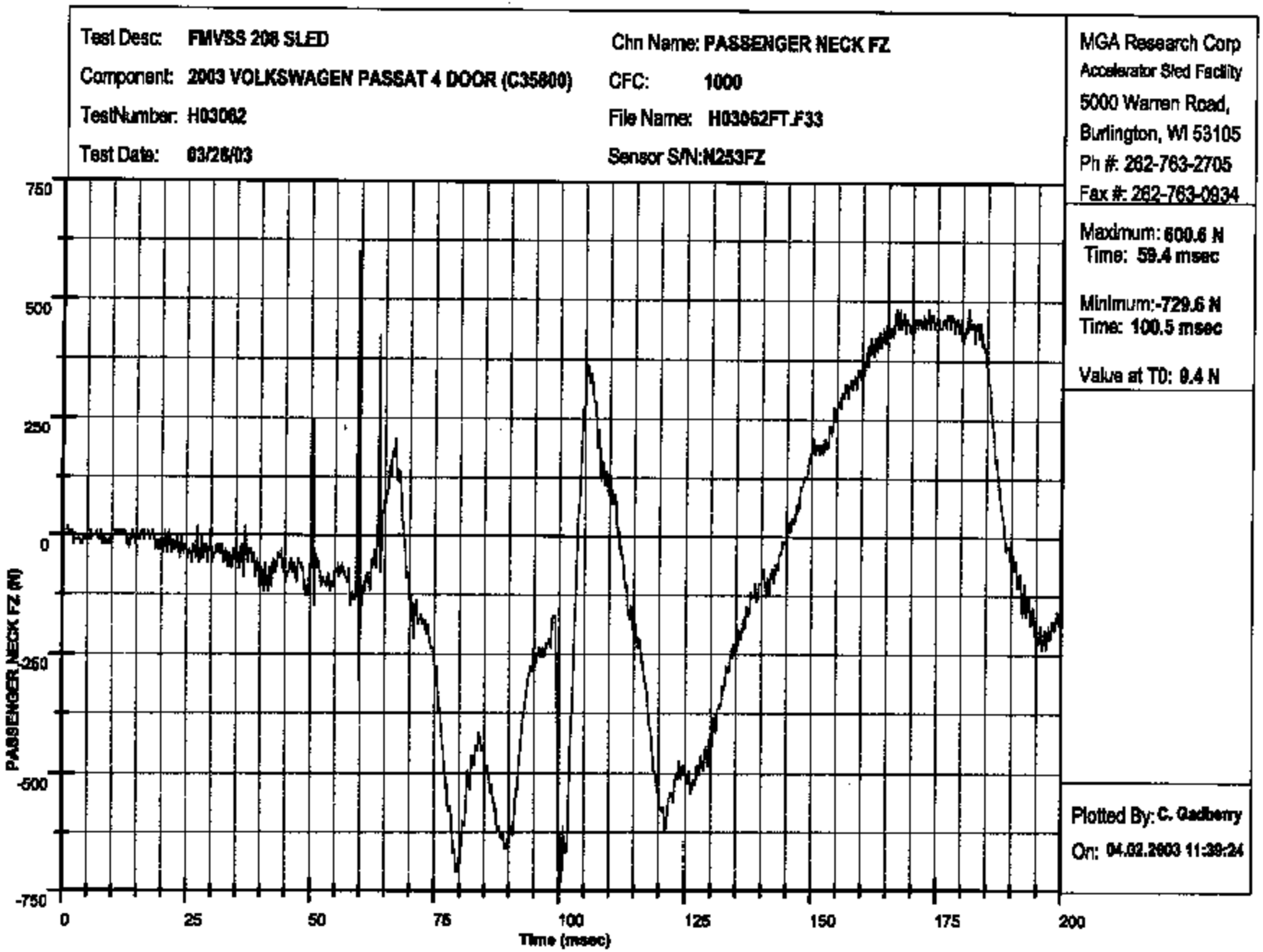

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
Test/Number: H03062
Test Date: 03/28/03
Chn Name: PASSENGER HEAD Y
CFC: 1000
File Name: H03062AT.A25
Sensor S/N:C13081
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 4.5 G
Time: 199.7 msec
Minimum: -21.7 G
Time: 100.3 msec
Value at T0: -0.1 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:48
PASSENGER HEAD Y (G)
Time (msec)
5
0
-5
-10
-15
-20
-25
0
25
50
75
100
125
150
175
200

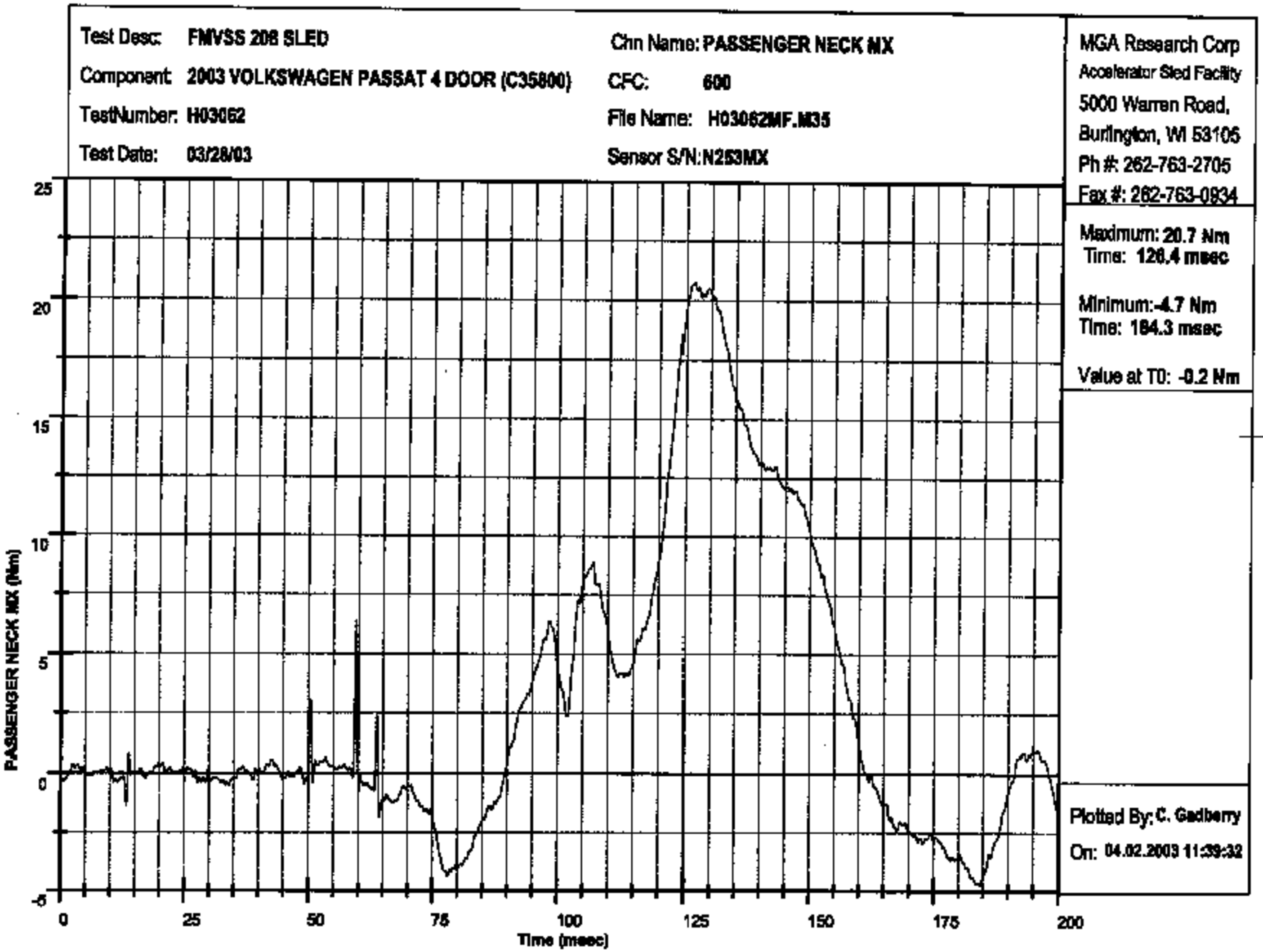

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER HEAD Z
CFC: 1000
File Name: H03062AT.A26
Sensor S/N:C12881
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 49.2 G
Time: 99.7 msec
Minimum:-8.8 G
Time: 79.2 msec
Value at T0: -0.1 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:50
PASSENGER HEAD Z (G)
50
40
30
20
10
0
-10
0
25
50
75
100
125
150
175
200
Time (msec)

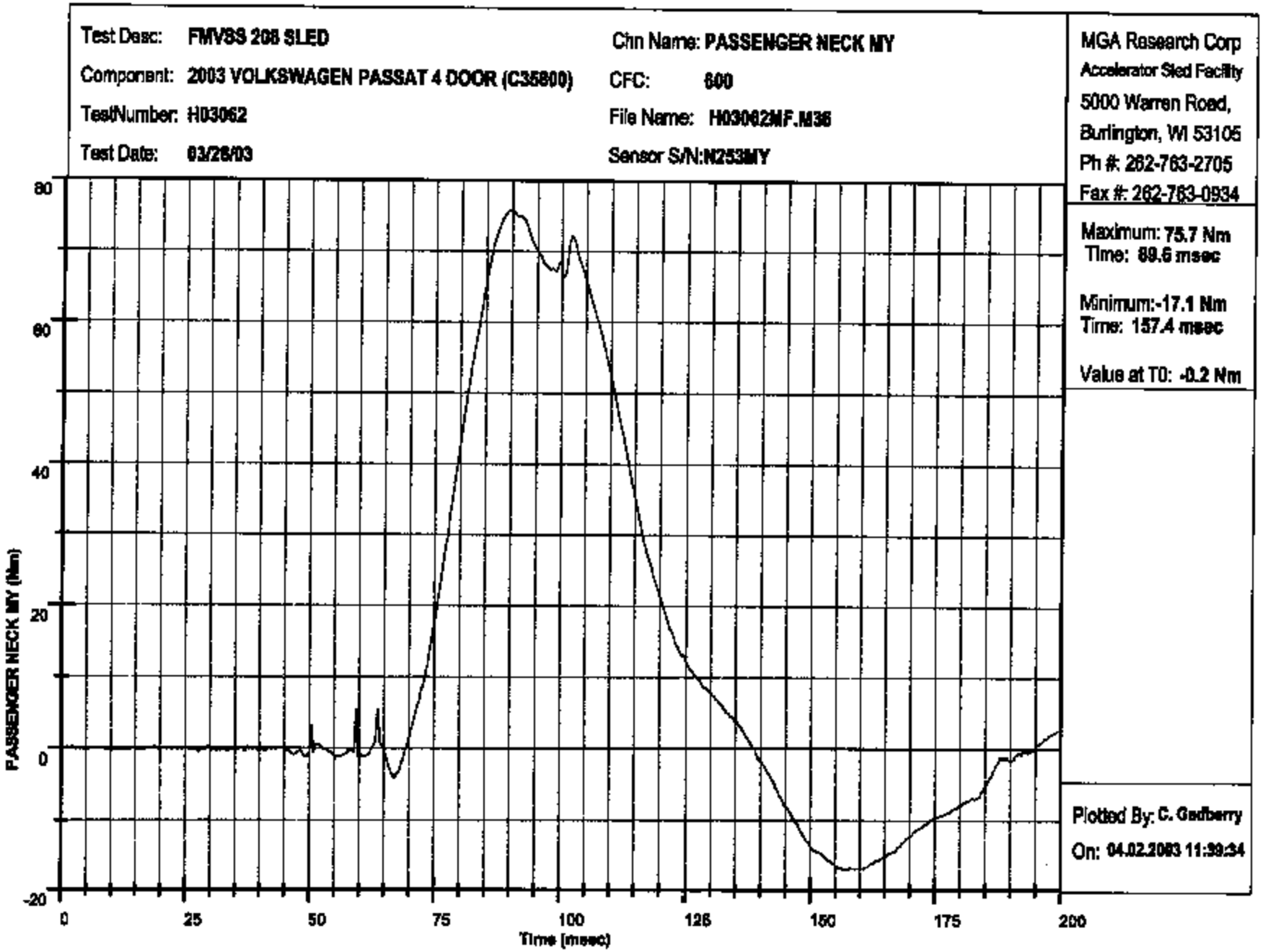

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/26/03
Chn Name: PASSENGER HEAD RESULTANT
CFC: 1000
File Name: H03062AV.A24
Sensor S/N:C12881
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 64.4 G
Time: 99.7 msec
Minimum:0.0 G
Time: 1.5 msec
Value at T0: 0.1 G
HIC VAL: 115.7
T1: 89.2 msec
T2: 128.8 msec
HIC36 VAL: 116.0
T1: 91.8 msec
T2: 127.6 msec
HIC15 VAL: 69.3
T1: 97.1 msec
T2: 112.1 msec
Plotted By: C. Gadberry
On: 04.02.2003 11:38:56
PASSENGER HEAD RESULTANT (G)
Time (msec)
0
10
20
30
40
50
60
70
0
25
50
75
100
125
150
175
200

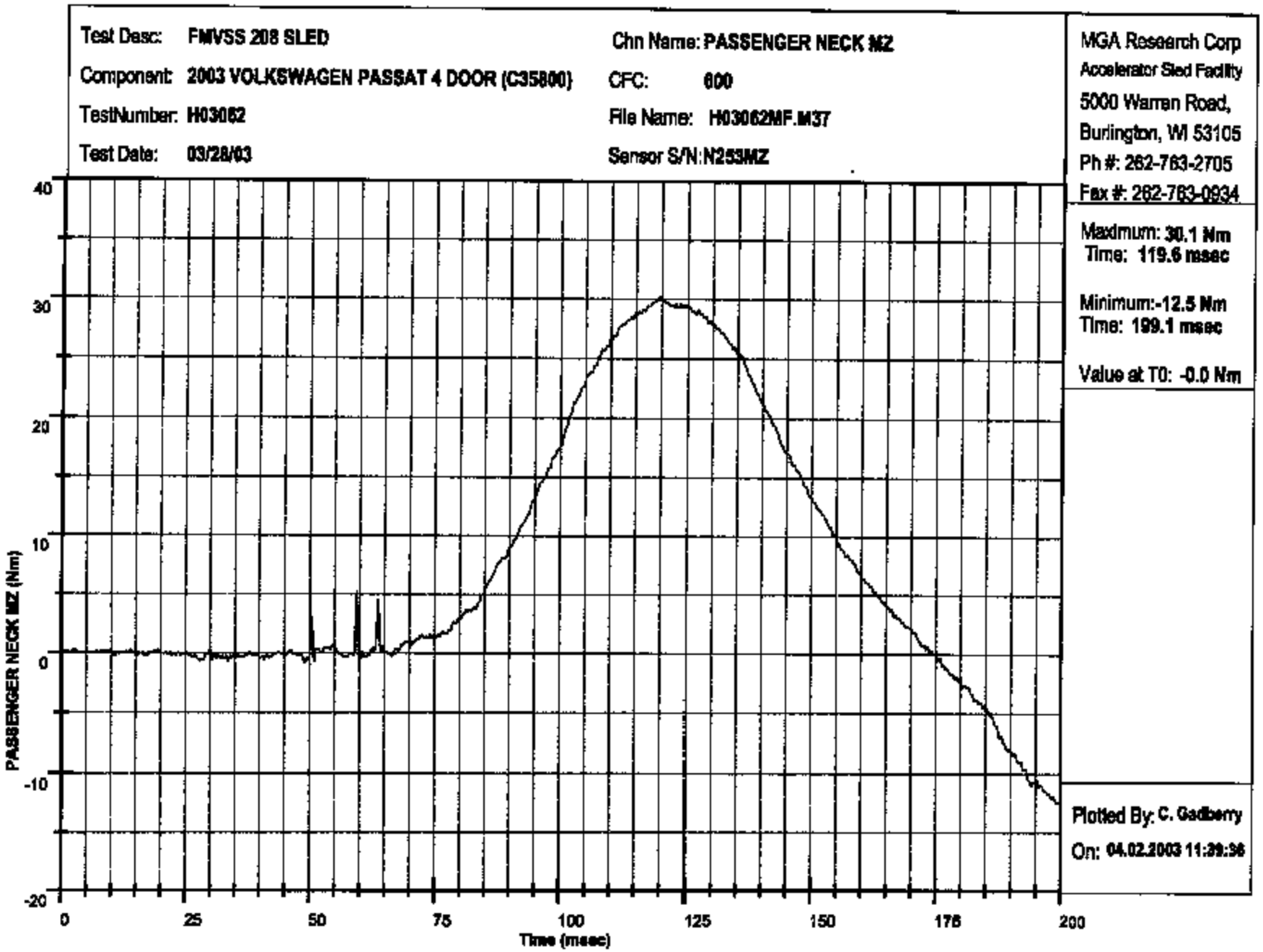

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER NECK FX
CFC: 1000
File Name: H03062FT.F31
Sensor S/N:N253FX
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 1,012.8 N
Time: 102.5 msec
Minimum:-136.1 N
Time: 163.6 msec
Value at T0: -3.0 N
Plotted By: C. Gadberry
On: 04.02.2003 11:39:20
PASSENGER NECK FX (N)
1250
1000
750
500
250
0
-250
0
25
50
75
100
125
150
175
200
Time (msec)

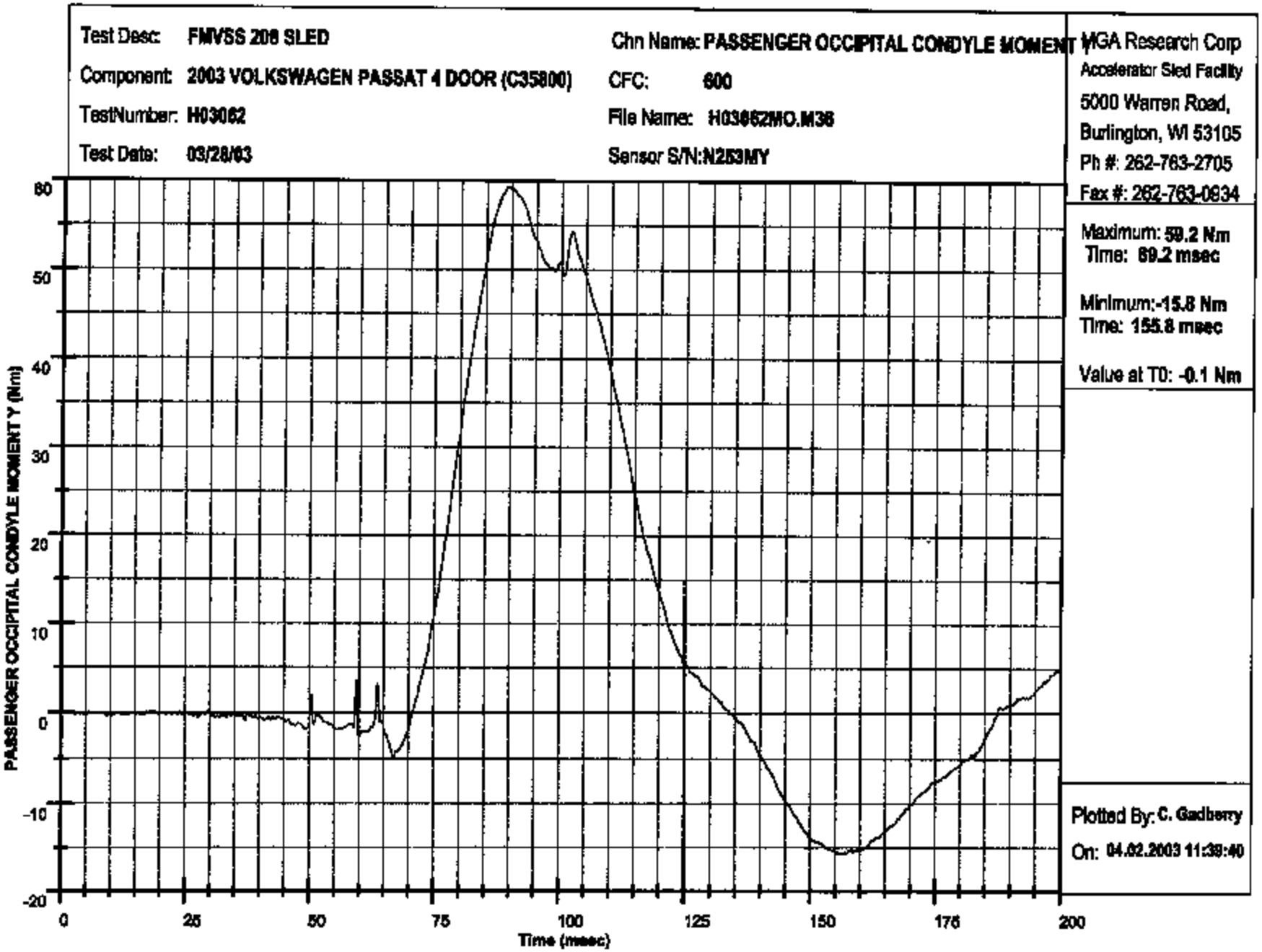

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER NECK FY
CFC: 1000
File Name: H03062FT.F32
Sensor S/N:N253FY
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 553.2 N
Time: 118.0 msec
Minimum: -109.5 N
Time: 193.3 msec
Value at T0: -7.8 N
Plotted By: C. Gadberry
On: 04.02.2003 11:39:22
PASSENGER NECK FY (N)
600
500
400
300
200
100
0
-100
-200
0
25
50
75
100
125
150
175
200
Time (msec)

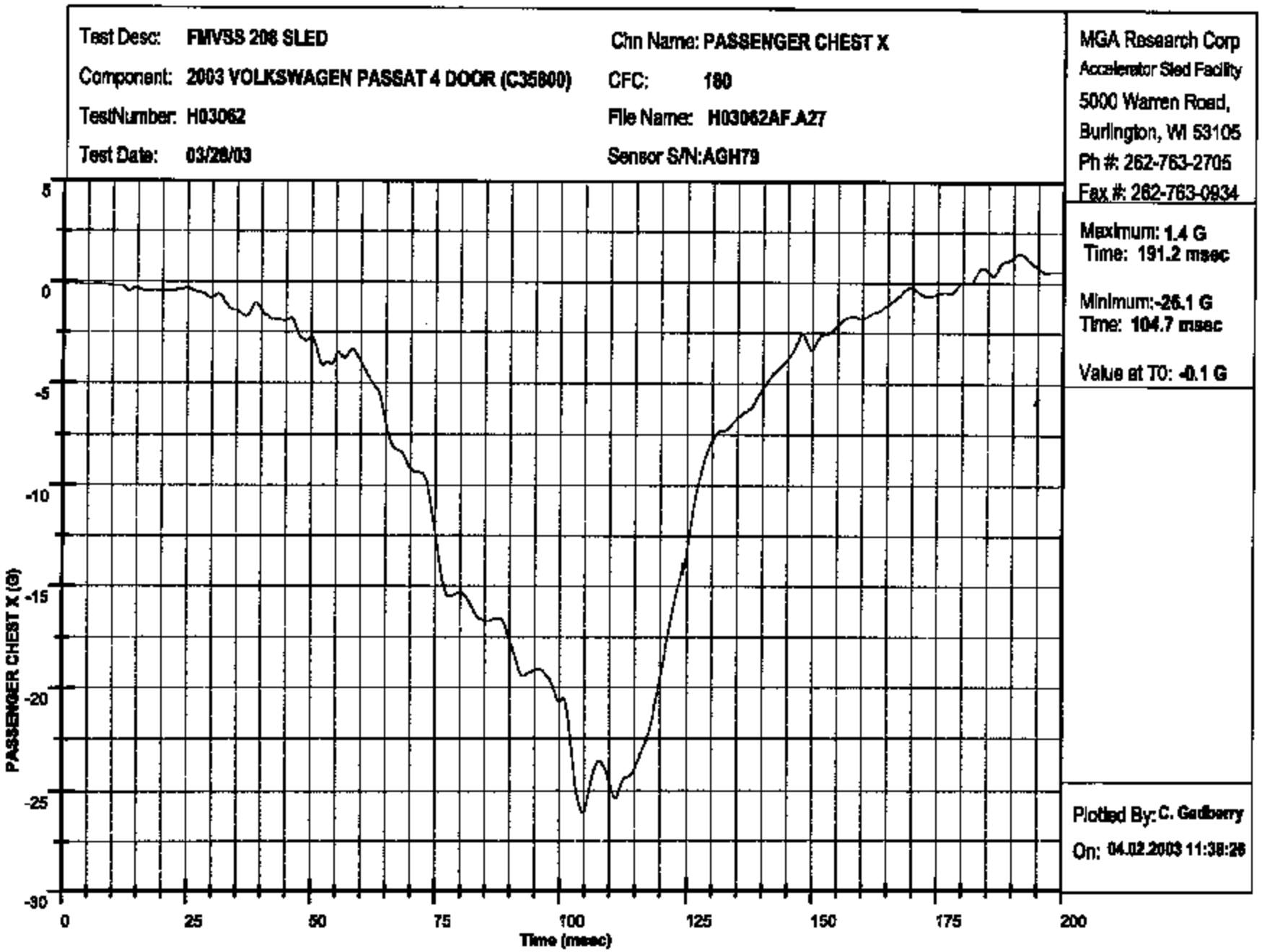

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/26/03
Chn Name: PASSENGER NECK FZ
CFC: 1000
File Name: H03062FT.F33
Sensor S/N:N253FZ
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 600.6 N
Time: 59.4 msec
Minimum:-729.6 N
Time: 100.5 msec
Value at T0: 9.4 N
Plotted By: C. Gadberry
On: 04.02.2003 11:39:24
PASSENGER NECK FZ (N)
750
500
250
0
-250
-500
-750
0
25
50
75
100
125
150
175
200
Time (msec)

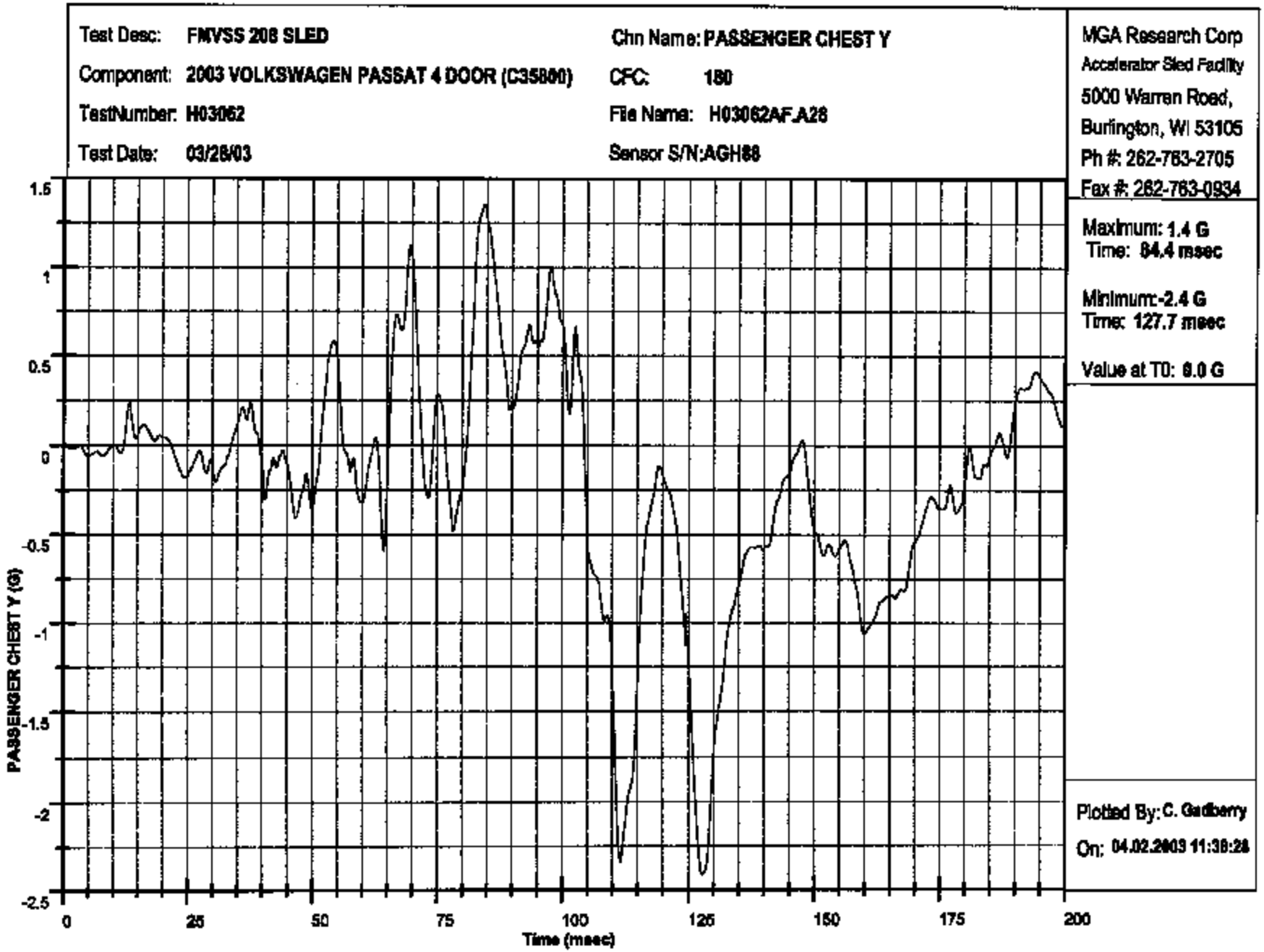

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER NECK MX
CFC: 600
File Name: H03062MF.M35
Sensor S/N: N253MX
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 20.7 Nm
Time: 126.4 msec
Minimum: -4.7 Nm
Time: 184.3 msec
Value at T0: -0.2 Nm
Plotted By: C. Gadberry
On: 04.02.2003 11:39:32
PASSENGER NECK MX (Nm)
Time (msec)
25
20
15
10
5
0
-5
0
25
50
75
100
125
150
175
200

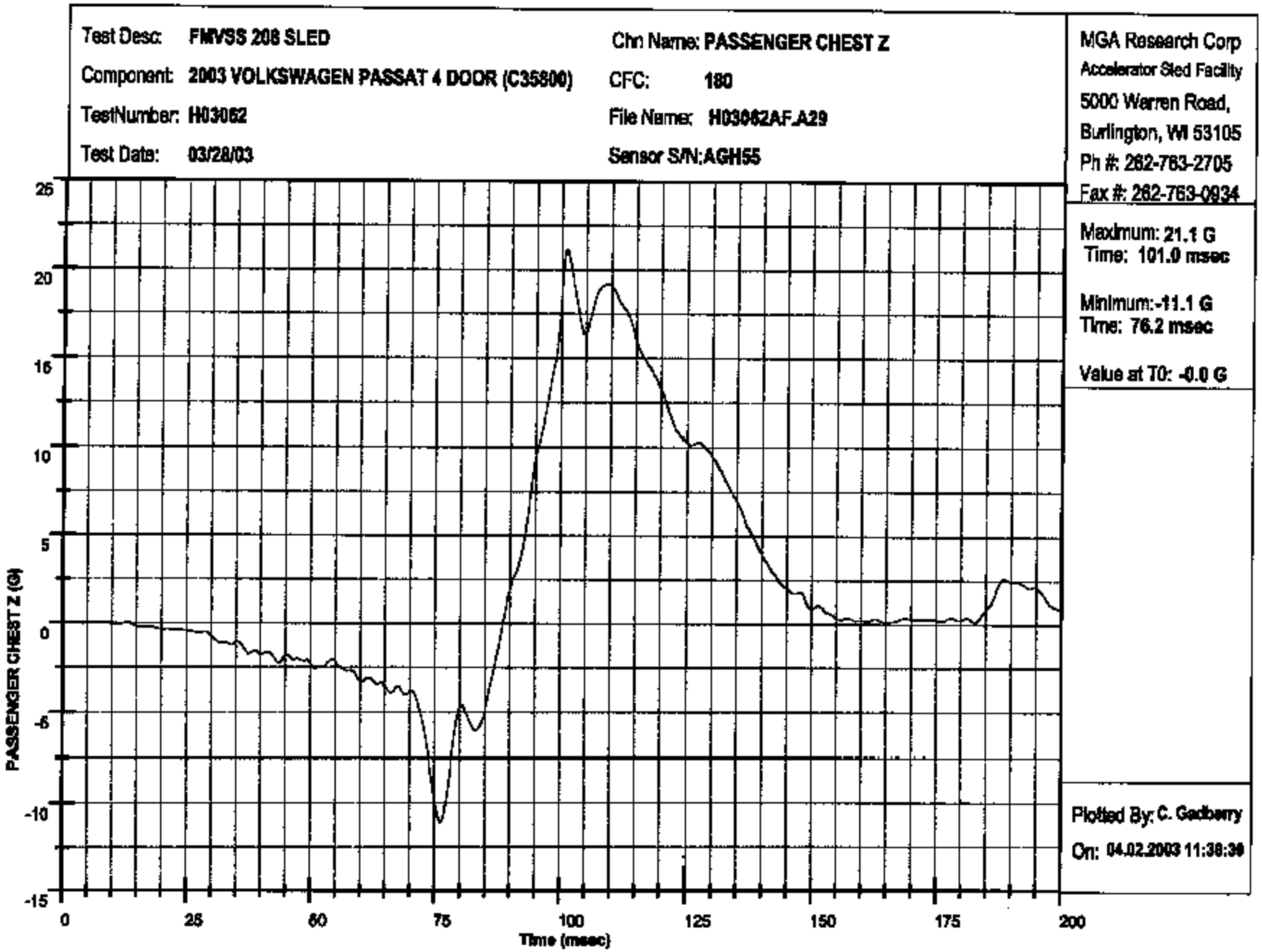

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
Test/Number: H03062
Test Date: 03/26/03
Chn Name: PASSENGER NECK MY
CFC: 600
File Name: H03062MF.M36
Sensor S/N:N253MY
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 75.7 Nm
Time: 89.6 msec
Minimum:-17.1 Nm
Time: 157.4 msec
Value at T0: -0.2 Nm
Plotted By: C. Gadberry
On: 04.02.2003 11:39:34
PASSENGER NECK MY (Nm)
80
60
40
20
0
-20
0
25
50
75
100
125
150
175
200
Time (msec)

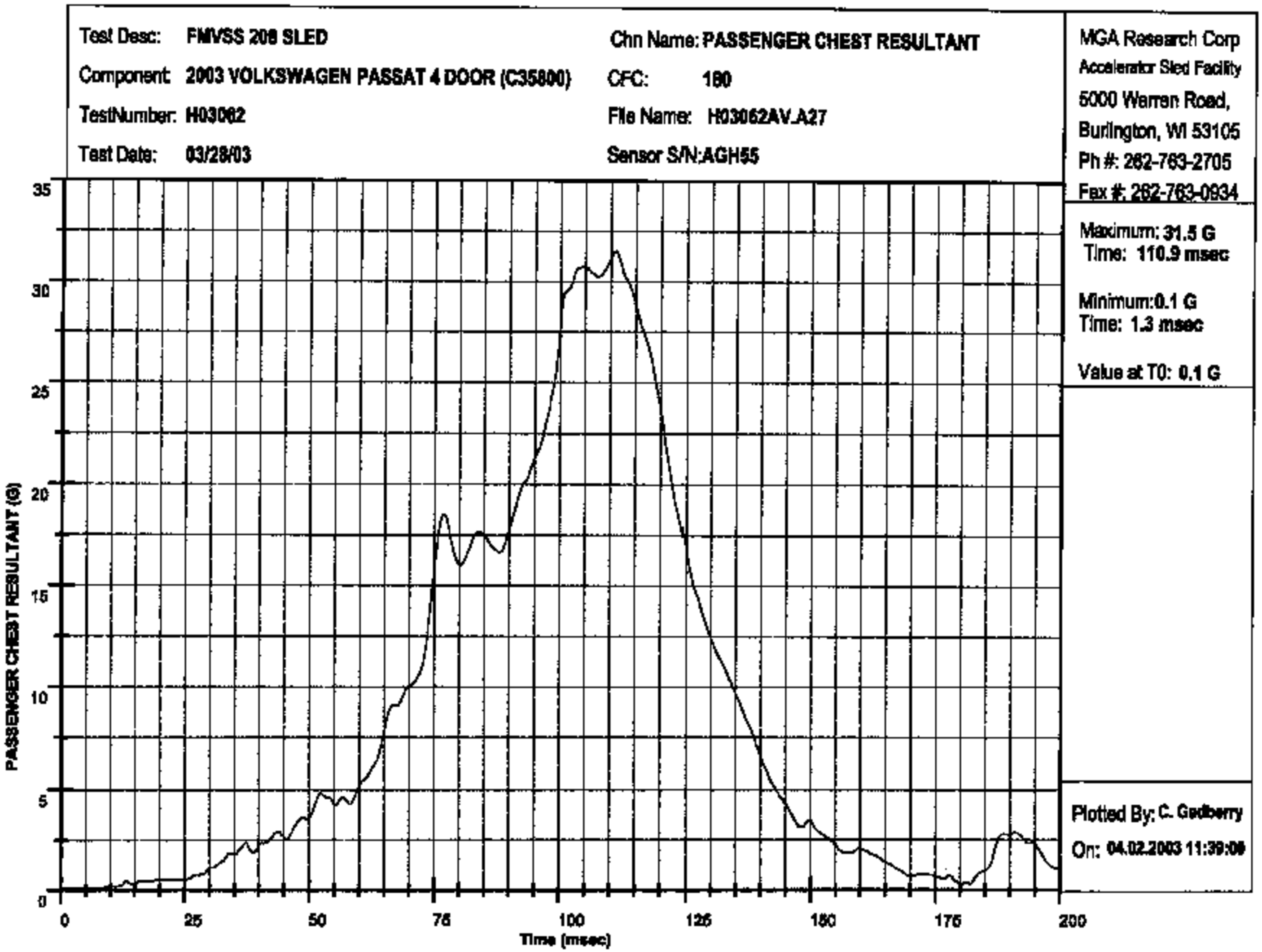

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER NECK MZ
CFC: 600
File Name: H03062MF.M37
Sensor S/N:N253MZ
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 30.1 Nm
Time: 119.6 msec
Minimum:-12.5 Nm
Time: 199.1 msec
Value at T0: -0.0 Nm
Plotted By: C. Gadberry
On: 04.02.2003 11:39:36
PASSENGER NECK MZ (Nm)
40
30
20
10
0
-10
-20
0
25
50
75
100
125
150
175
200
Time (msec)

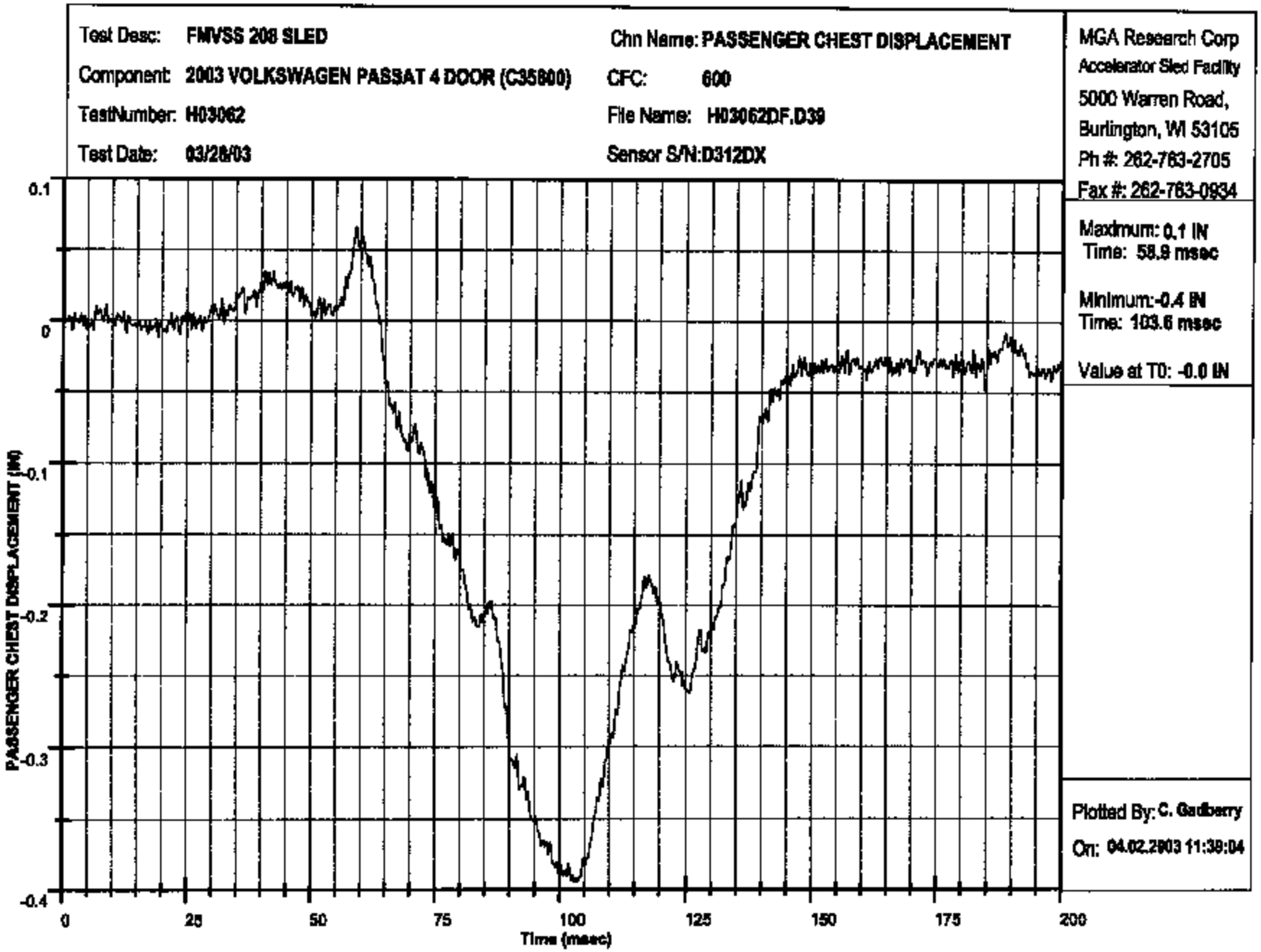

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER OCCIPITAL CONDYLE MOMENT Y
CFC: 600
File Name: H03062MO.M36
Sensor S/N:N253MY
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 59.2 Nm
Time: 69.2 msec
Minimum:-15.8 Nm
Time: 155.8 msec
Value at T0: -0.1 Nm
Plotted By: C. Gadberry
On: 04.02.2003 11:39:40
PASSENGER OCCIPITAL CONDYLE MOMENT Y (Nm)
60
50
40
30
20
10
0
-10
-20
0
25
50
75
100
125
150
175
200
Time (msec)

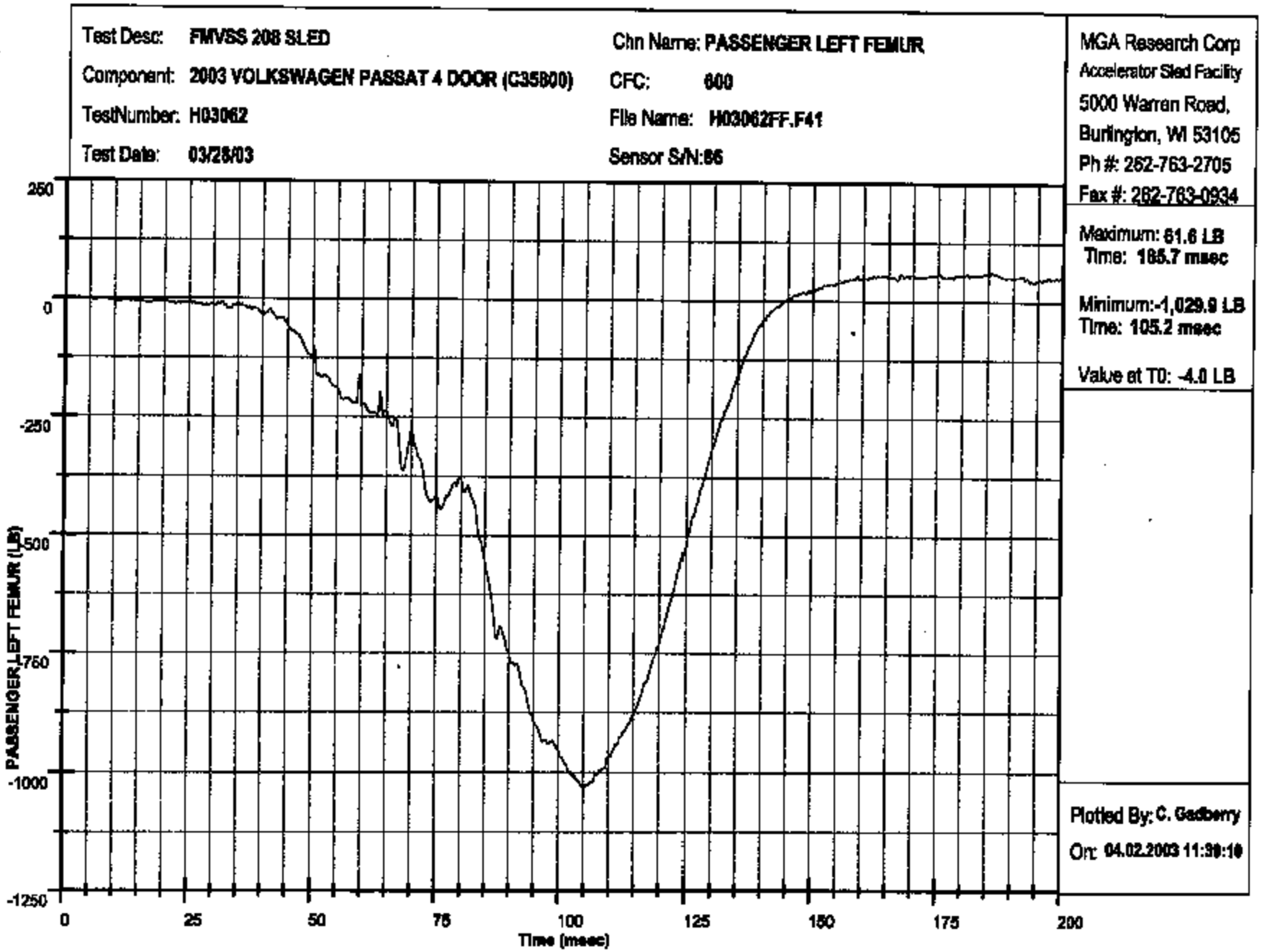

Test Desc: FMVSS 206 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER CHEST X
CFC: 180
File Name: H03062AF.A27
Sensor S/N:AGH79
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 1.4 G
Time: 191.2 msec
Minimum:-26.1 G
Time: 104.7 msec
Value at T0: -0.1 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:26
PASSENGER CHEST X (G)
5
0
-5
-10
-15
-20
-25
-30
0
25
50
75
100
125
150
175
200
Time (msec)

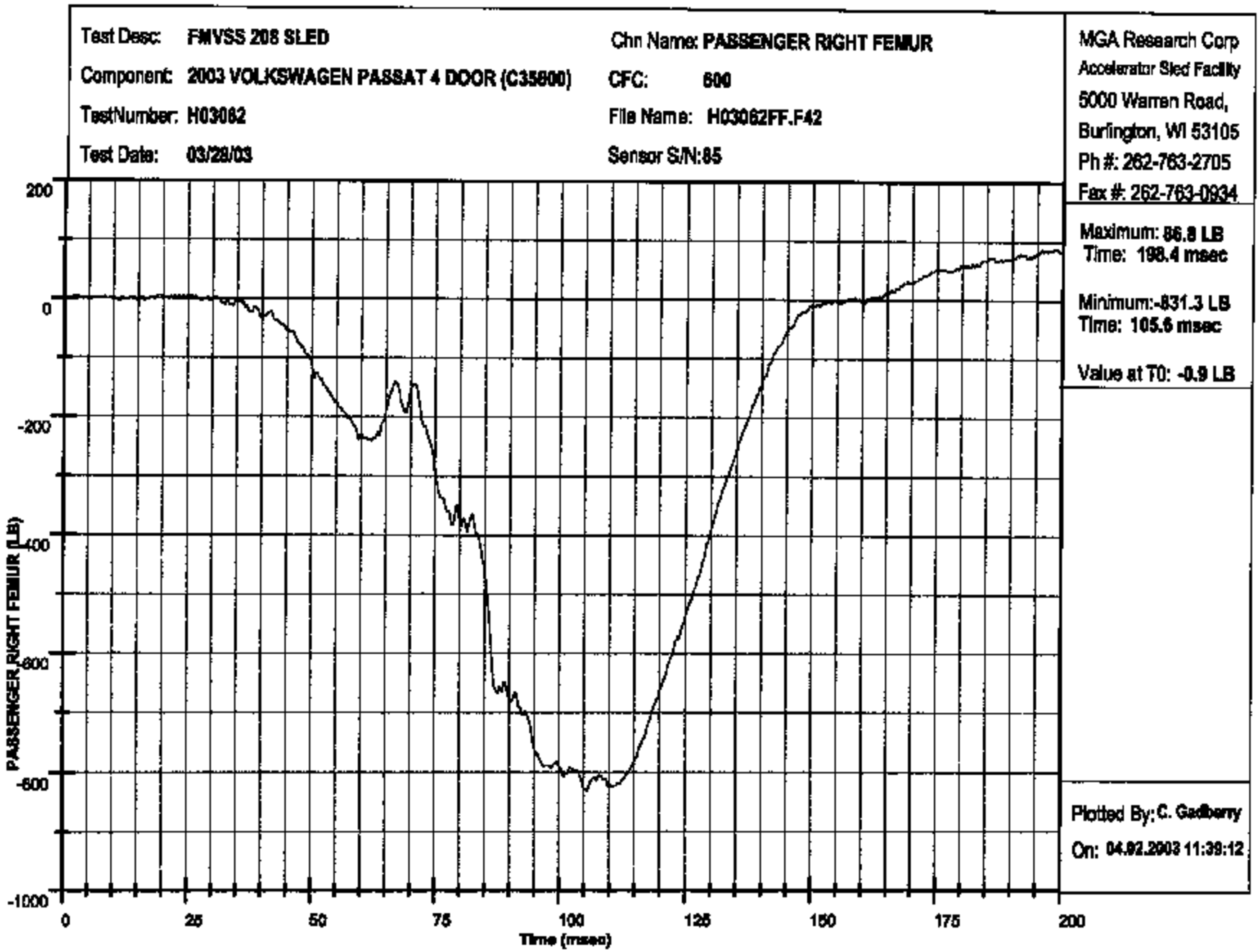

Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER CHEST Y
CFC: 180
File Name: H03062AF.A28
Sensor S/N:AGH88
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 1.4 G
Time: 84.4 msec
Minimum:-2.4 G
Time: 127.7 msec
Value at T0: 0.0 G
Plotted By: C. Gadberry
On: 04.02.2003 11:36:28
PASSENGER CHEST Y (G)
Time (msec)
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
0
25
50
75
100
125
150
175
200


Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER CHEST Z
CFC: 180
File Name: H03062AF.A29
Sensor S/N:AGH55
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 21.1 G
Time: 101.0 msec
Minimum:-11.1 G
Time: 76.2 msec
Value at T0: -0.0 G
Plotted By: C. Gadberry
On: 04.02.2003 11:38:30
PASSENGER CHEST Z (G)
25
20
15
10
5
0
-5
-10
-15
0
25
50
75
100
125
150
175
200
Time (msec)


Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER CHEST RESULTANT
CFC: 180
File Name: H03062AV.A27
Sensor S/N:AGH55
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 31.5 G
Time: 110.9 msec
Minimum:0.1 G
Time: 1.3 msec
Value at T0: 0.1 G
Plotted By: C. Gadberry
On: 04.02.2003 11:39:09
PASSENGER CHEST RESULTANT (G)
Time (msec)
0
5
10
15
20
25
30
35
0
25
50
75
100
125
150
175
200


Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER CHEST DISPLACEMENT
CFC: 600
File Name: H03062DF.D39
Sensor S/N:D312DX
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 0.1 IN
Time: 58.9 msec
Minimum:-0.4 IN
Time: 103.6 msec
Value at T0: -0.0 IN
Plotted By: C. Gadberry
On: 04.02.2003 11:39:04
PASSENGER CHEST DISPLACEMENT (IN)
0.1
0
-0.1
-0.2
-0.3
-0.4
0
25
50
75
100
125
150
175
200
Time (msec)


Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/28/03
Chn Name: PASSENGER LEFT FEMUR
CFC: 600
File Name: H03062FF.F41
Sensor S/N:86
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 61.6 LB
Time: 185.7 msec
Minimum:-1,029.9 LB
Time: 105.2 msec
Value at T0: -4.0 LB
Plotted By: C. Gadberry
On: 04.02.2003 11:39:10
PASSENGER LEFT FEMUR (LB)
250
0
-250
-500
-750
-1000
-1250
0
25
50
75
100
125
150
175
200
Time (msec)


Test Desc: FMVSS 208 SLED
Component: 2003 VOLKSWAGEN PASSAT 4 DOOR (C35800)
TestNumber: H03062
Test Date: 03/29/03
Chn Name: PASSENGER RIGHT FEMUR
CFC: 600
File Name: H03062FF.F42
Sensor S/N:85
MGA Research Corp
Accelerator Sled Facility
5000 Warren Road,
Burlington, WI 53105
Ph #: 262-763-2705
Fax #: 262-763-0934
Maximum: 86.8 LB
Time: 198.4 msec
Minimum:-831.3 LB
Time: 105.6 msec
Value at T0: -0.9 LB
Plotted By: C. Gadberry
On: 04.02.2003 11:39:12
PASSENGER RIGHT FEMUR (LB)
200
0
-200
-400
-600
-800
-1000
0
25
50
75
100
125
150
175
200
Time (msec)

APPENDIX C

MANUFACTURER'S VEHICLE INFORMATION

VOLKSWAGEN

29 October 2002

Safety Affairs and
Vehicle Testing
Mail Code 5C02
3800 Hamlin Road
Auburn Hills, MI 48326
Tel. (248) 754-5000
Fax (248) 754-5049

Ms. Marilynne Jacobs, Director
Office of Vehicle Safety Compliance
National Highway Traffic
Safety Administration
Room 6111
400 Seventh St., S.W.
Washington, D.C. 20590

Subject: *FMVSS 208 "Occupant Crash Protection"; 2003 MY Volkswagen Passat*
Reference: NVS-221CCs/OA: 208-020916-S

Dear Jacobs:

This responds to your letter dated September 27, 2002, in which you informed us that the 2003 MY Volkswagen Passat has potentially been selected for FMVSS 208 "Occupant Crash Protection" compliance testing. I am pleased to provide you with the following information. Your questions have been repeated and are followed by the Volkswagen response.

1. *Many options are available for certification to FMVSS 208. Please identify the sections of FMVSS 208 to which the subject vehicles are certified. Provide a copy of the certification test reports for all the applicable impact tests and sled tests with respect to these sections. If the subject vehicles are certified to the low risk deployment requirements of S14, provide a copy of the certification tests. In addition, provide the test reports and any analysis used to determine the air bag inflator stages to trigger for the low risk deployment tests.*

   If the subject vehicles are certified to any of the air bag suppression sections of S14, provide a representative test report for each type of suppression test. (i.e., rear facing child restraint suppression test (12-month old dummy), 3-year old dummy or human suppression test conducted with and without using a child restraint, 6-year old dummy or human suppression test conducted with and without using a child restraint.) Also provide a test report for reactivation of the air bag system using a 5th percentile female.

   The air bag restraint system is certified to meet the requirements of FMVSS 208 S13.

   The following is a list of the test reports:

   The results of a 30 mph 0 degree frontal impact test are shown in Test Report 02/0/10 (Attachment 1).

The results of a 30 mph 30 degree right frontal impact test are shown in Test Report 02/011 (Attachment 2).

The results of a 30 mph 30 degree left frontal impact test are shown in Test Report 02/012 (Attachment 3).

The results of a 0 degree sled test are shown in Test Report 02/013 (Attachment 4).

2. *Provide the following (1) describe the difference between the MY 2003 air bag system and the MY 2002 air bag system, (2) explain what other restraint changes have been made, (3) explain what other vehicle changes have been made that may affect FMVSS 208 performance, and (4) describe any features that may affect occupant protection performance with respect to children and out of position occupants.*

There are no differences between the MY 2003 and MY 2002 Passat air bag or restraint system. No vehicle changes were made between the MY 2003 and MY 2002 Passat thay may affect FMVSS 208 performance. The Passat does not have any features that might affect occupant protection performance with respect to children and out-of-position occupants.

3. *If the subject vehicles were certified with unrestrained dummies to meet the requirements of S13, describe how to disconnect the air bags from the vehicle sensors and connect them to the triggering mechanism used in the sled test. Describe the method used in certification to determine when to trigger the air bag and the system used to trigger the air bag.*

For air bags with dual stage or multistage inflators describe when the stages are triggered and provide data to show that this is similar to what would occur in a crash of similar severity.

First, the vehicle battery needs to be disconnected. Then, wait at least one minut before unplugging the cables that are attached to the gas generator at their connectors. These cables need to be connected directly to the timer. The air bags are activated 20 ms after the sled acceleration crosses the 9.5 g level.

The MY 2003 Passat is not equipped with dual stage or multistage inflators.

4. *For the subject vehicles certified to the advanced air bag requirements, describe how to disconnect the air bags and trigger the appropriate inflator stages for the low risk deployment tests.*

The MY 2003 Passat is not equipped with advanced air bags.

5. *State for each safety belt system in the subject vehicles whether or not it is equipped with a tension-relieving device. Provide a copy of the information furnished in accordance with S7.4.2 if the tension-relieving device is used.*

A tension-relieving device is not used.

6. *State for each crash test (frontal, angular, and offset) that the subject vehicles are certified as meeting whether the moveable windows and vents were opened or closed.*

The front windows were opened in our tests.

7. *Submit dummy placement measurements, including diagrams or photographs that show exactly where each measurement was taken. For the subject vehicles certified to the advanced air bag requirements provide measurements for both the 50th percentile male and the 5th percentile female. Enclosed is a diagram of some of OVSC's dummy measurements. Where possible, use each dimension shown in the diagram to provide the individual dummy placement measurements.*

The dummy placement measurements are included in the test reports. A summary is given in Attachment 5.

8. *For the subject vehicles certified to the advanced air bag requirements, provide the width of the vehicle as defined in S18.2.4, the location at which the maximum dimension was measured, and other information and measurements used to position the vehicle for the certification offset crash test at 40 percent overlap.*

The MY 2003 Volkswagen Passat is not equipped with advanced air bag requirements.

9. *For the subject vehicles certified to the advanced air bag suppression requirements, describe the telltale to determine air bag activation and deactivation. State whether humans or dummies were used for the suppression tests. If humans were used, provide the method to deactivate the air bag during suppression tests, identify any parts or equipment necessary for deactivation, and provide the method to assure that the same test results would be obtained if the air bag were not deactivated.*

The MY 2003 Volkswagen Passat is not equipped with advanced air bag requirements.

10. *State whether the subject vehicles have a footrest for the driver.*

The vehicle has a footrest for the driver.

11. *Provide the seat positioning, steering column positioning, and fuel tank data on the enclosed form. If more than one front seating configuration, steering column or fuel tank configuration are available on this vehicle, provide separate information for each. For certification tests using the 5th percentile female, provide the seat fore-aft position, seat height, and seat back angle used in the certification test. In addition, provide the seating reference point for each seat for the lockable seat belt requirement in S7.1.1.5.*

For seating position steering column positioning and fuel tank data see Attachment 6. Seating reference points are shown in Attachment 7. The measurements refer to the center of the front wheels.

12. *For the subject vehicles certified to the low risk deployment sections of the advanced air bag requirements, provide the location of the "geometric center of the opening through which the air bag deploys into the occupant compartment".*

The MY 2003 Volkswagen Passat is not equipped with advanced air bags.

13. *If the subject vehicles are equipped with adjustable seat belt anchorages, provide the manufacturer's nominal design position for a 50th percentile adult male occupant and, if certified to the advanced air bag requirements, the position for the 5th percentile female.*

The adjustable seat belt anchorages should be set to the third position from the top (center position) for a 50th percentile adult male occupant.

14. *For all tests that are performed to certify the subject vehicles to injury assessment performance requirements, provide a summary of the injury results. In addition, for crash tests, provide the measured test speed.*

For a summary of the injury results of all tests, see Attachment 6.

15. *When vehicle components must be removed to obtain the proper test weight for crash tests, what components do you recommend for removal, and in what priority order do you recommend removal?*

First – remove the spare wheel, then the rear seat and then the trunk lid.

16. *If the subject vehicles use a pressure vessel to inflate the air bag, provide a copy of the test reports or engineering analysis to demonstrate that it meets all the requirements of S9.1.*

The Volkswagen Passat does not have an airbag with an inflator that uses a pressure vessel.

17. *If the subject vehicles use an explosive device to inflate the air bag, provide a copy of the test report or engineering analysis to demonstrate that it meets all the requirements of S9.2.*

For certification to FMVSS 208 S9.1, please see Attachments 9 and 10 for driver side and passenger side air bag modules, respectively.

Should you have any questions, regarding this submission, please feel free to contact me at 248-754-5095.

Sincerely,

VOLKSWAGEN OF AMERICA, INC.

Dietmar K. Haenchen
Process Leader
Safety Affairs and Vehicle Testing

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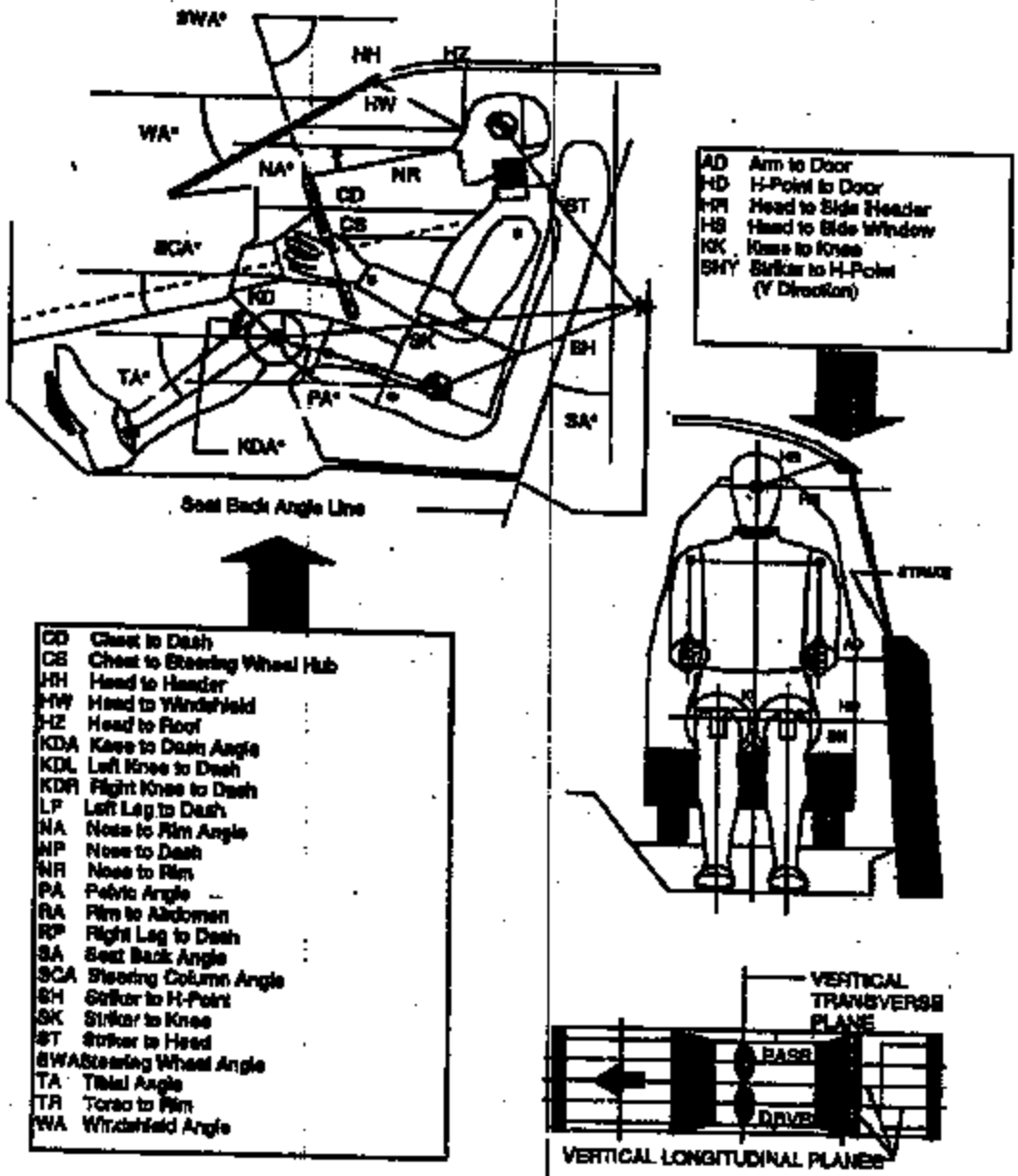
Attachment 5

FRONT SEAT MEASUREMENT

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



FRONT SEAT MEASUREMENT TABLE

Test Vehicle: Volkswagen Passat

Test Program: Sled Test unbelted 30mph (FMVSS 208, S13)

Test Number: G2980229

	DRIVER		PASSENGER	
	DISTANCE (mm)	ANGLE (°)	DISTANCE (mm)	ANGLE (°)
WA°		--		--
SWA°		66		
SCA°		22		
SA°		15		15,5
Torso°		19		19
HZ	170 (from top of head)	--	170 (from top of head)	
HH	365	--	360	
HW	--	--	--	
HR	--		--	
NR	395	--		
CD			505	0
CS	300	0		
RA	215	0		
KDL/KDR	90 / 100	--	105 / 95	--
PA°		23,5		20,5
TA°		--		--
KK	260 (middle-middle)		190 (middle-middle)	
ST	--	--	--	--
SK	--	--	--	--
SH	--	--	--	--
SHY	--		--	
HS	--		--	
HD	--		--	
AD	--		--	

FRONT SEAT MEASUREMENT TABLE

Test Vehicle: Volkswagen Passat

Test Program: Crash Test 30mph 0° belted (FMVSS 208)

Test Number: PG016059

	DRIVER		PASSENGER	
	DISTANCE (mm)	ANGLE (°)	DISTANCE (mm)	ANGLE (°)
WA°		--		--
SWA°		66		
SCA°		22		
SA°		--		--
Torso°		19		19
HZ	160 (from top of head)	--	145 (from top of head)	
HH	370	--	370	
HW	--	--	--	
HR	--		--	
NR	390	--		
CD			505	--
CS	300	0		
RA	215	0		
KDL/KDR	129 / 105	--	100 / 100	--
PA°		22		22
TA°		--		--
KK	230 (middle-middle)		190 (middle-middle)	
ST	--	--	--	--
SK	--	--	--	--
SH	--	--	--	--
SHY	--		--	
HS	--		--	
HD	--		--	
AD	--		--	

FRONT SEAT MEASUREMENT TABLE

Test Vehicle: Volkswagen Passat

Test Program: Crash Test 30mph 30° right belted (FMVSS 208)

Test Number: PG006015

	DRIVER		PASSENGER	
	DISTANCE (mm)	ANGLE (°)	DISTANCE (mm)	ANGLE (°)
WA°		--		--
SWA°		68		
SCA°		22		
SA°		15,2		15,6
Torso°		19		19
HZ	150 (from top of head)	--	151 (from top of head)	
HH	374	--	381	
HW	--	--	--	
HR	--		--	
NR	397	--	--	
CD			530	--
CS	307	0		
RA	--	0		
KDL/KDR	163 / --	--	-- / 200	--
PA°		21,6		22,2
TA°		--		--
KK	280		275	
ST	--	--	--	--
SK	--	--	--	--
SH	--	--	--	--
SHY	--		--	
HS	--		--	
HD	--		--	
AD	--		--	

FRONT SEAT MEASUREMENT TABLE

Test Vehicle: Volkswagen Passat

Test Program: Crash Test 30mph 30° left belted (FMVSS 208)

Test Number: PG010358

	DRIVER		PASSENGER	
	DISTANCE (mm)	ANGLE (°)	DISTANCE (mm)	ANGLE (°)
WA°		--		--
SWA°		66		
SCA°		22		
SA°		--		--
Torso°		19		19
HZ	120 (from top of head)	--	115 (from top of head)	
HH	345	--	360	
HW	--	--	--	
HR	--		--	
NR	370	--	--	
CD			495	--
CS	280	0		
RA	205	0		
KDL/KDR	90 / 95	--	110 / 120	--
PA°		23,0		21,4
TA°		--		--
KK	250 (middle-middle)		210 (middle-middle)	
ST	--	--	--	--
SK	--	--	--	--
SH	--	--	--	--
SHY	--		--	
HS	--		--	
HD	--		--	
AD	--		--	

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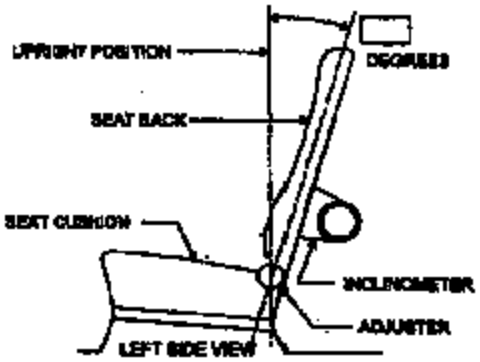
Attachment 6

FORM 1
Page 1 of 2

TEST VEHICLE INFORMATION

Vehicle Model Year and Make: MY 2003, Volkswagen
Vehicle Model and Body Style: Passat

1. NOMINAL DESIGN RIDING POSITION –
For adjustable driver and passenger seat backs, describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent if applicable.



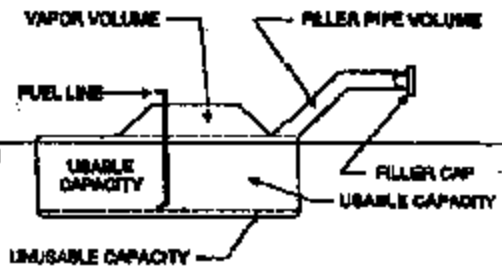
Seat back angle for driver's seat = 19 .
Measurement instructions:
Measured at dummy torso.

Seat back angle for passenger's seat = 19 .
Measurement instructions:
Measured at dummy torso.

2. SEAT FORE AND AFT POSITIONS –
Provide instructions for positioning the driver and front outboard passenger seat(s) in the center of fore and aft travel. For example, provide information to locate the detent in which the seat track is to be locked.
Position of the driver's seat:
Adjustment in Longitudinal direction: Mid position from rearmost position. Height adjustment: lowest position

Position of the passenger's seat (if applicable):
Same as driver.

3. FUEL TANK CAPACITY DATA –



3.1 A. "Usable Capacity" of standard equipment fuel tank = 16.76 gallons.
B. "Usable Capacity" of optional equipment fuel tank = _____ gallons.
C. Capacity used when certification testing to requirements of FMVSS 301 = 16.76 gallons.
Operational Instructions:

FORM 1
Page 2 of 2

3.2 Amount of Stoddard solvent added to vehicle for certification test = 14.08 gallons.

3.3 Is vehicle equipped with electric fuel pump? ____ YES ____ NO

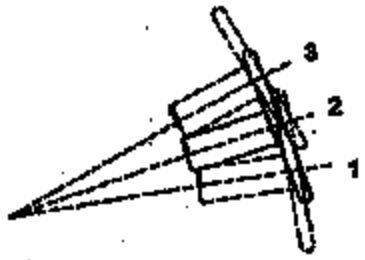
If YES, does pump normally operate when vehicle's electrical system is activated?
__X__ YES ____ NO

4. STEERING COLUMN ADJUSTMENTS –

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions.

If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center.
Operational instructions:
Steering wheel position is in middle position for longitudinal and heigh adjustment.

STEERING COLUMN ASSEMBLY



LEFT SIDE VIEW

3.3 Vehicle operating conditions:
The fuel pump will pump fuel when the ignition is on and the engine is running. It is also activated, when the ignition is in the "start" position. The fuel will cease to pump fuel if the engine stops running, i.e., stalls or when the electrical system is deactivated.

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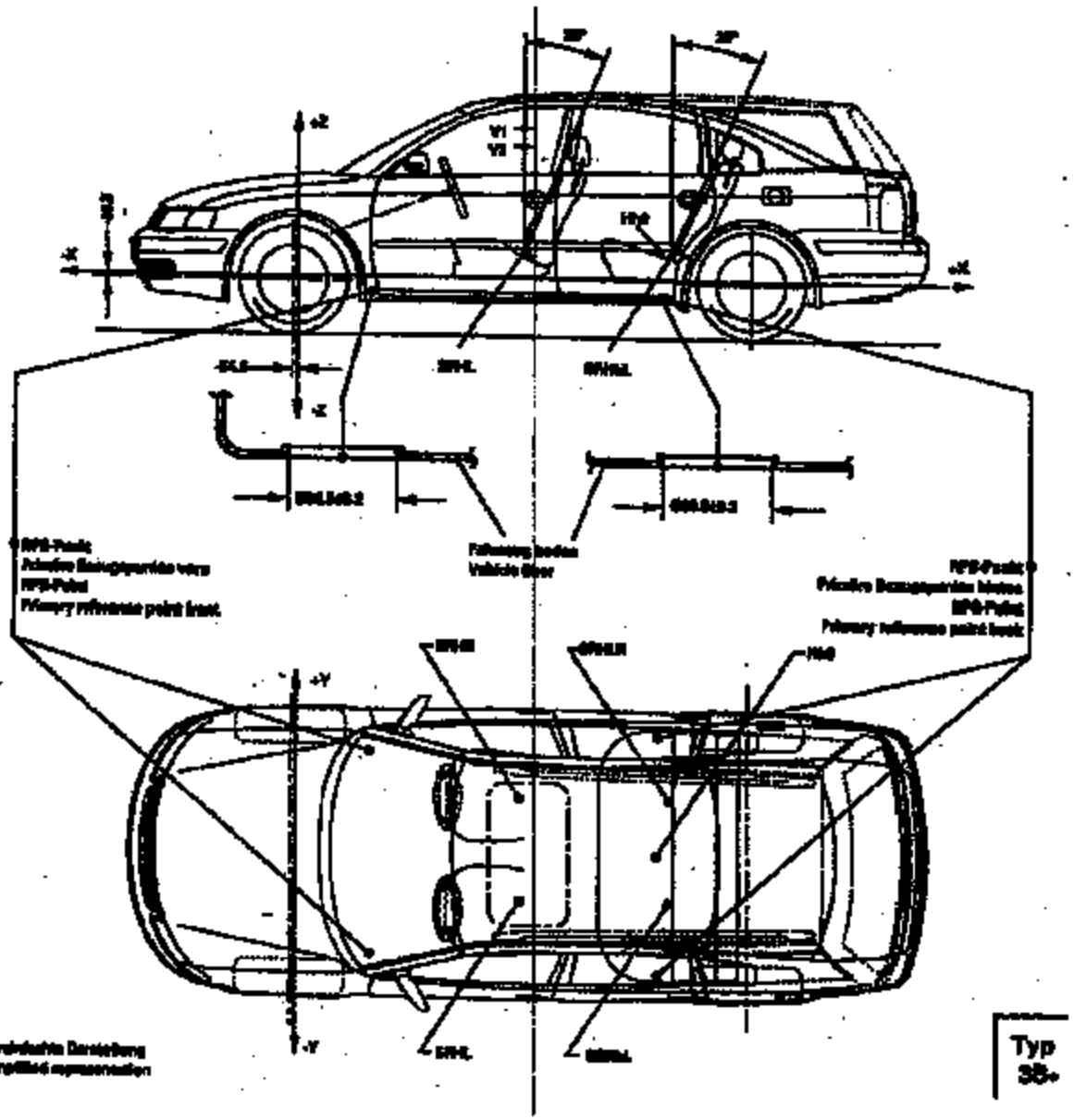
Attachment 7



Typ
38-

H-Punkte
Mit Vordersitz links
H-points
With front seat left

	X	Y	Z
H1	1079	-358	238
H2	1323	-356	219
H5	1184	-356	218
SRHL	1374	-356	268
H6	1347	-350	199
H9	1122	-350	199
H7	1364	-356	167

Vereinfachte Darstellung
simplified representation

Lage von Mitte Wagen 200
Location from C of car 200
Höhenverstellbar
Zwischen tiefster und höchster
Stellung des Sitzes infolge elektrische
Height adjustment
Adjust seat to middle
of highest and lowest position

Längsverstellung
Axial Adjustment

200H Punkt manuell
Sitz in E. Raststellung von hinten
H point in E. detent position from
the rear

200H Punkt für E-Sitz.
Aus der hintersten Stellung des Sitzes
20mm nach vorn verstellen.
H-point for Elec-seat. Move 20mm forward
from the furthest back position.

RPS Punkte
(Primäre Bezugspunkte) links
RPS Point
(Primary reference point) left

	X	Y	Z
RPS rear	313	-358	-116
RPS front	1668	-370	-116

Lage Aussenkante links
outer points left

	X	Y	Z
V1	1342	-486	668
V2	1348	-386	791

H-Punkte
SR Hintersitz links
H-points
SR back seat left

	X	Y	Z
SRHL	2132	-488	215

SR Hintersitz mitte
SR back seat center

	X	Y	Z
H30	2664	0	268

Für Höhenverstellbaren Sitz
zusätzlicher Verstellbereich
For height adjusting seat
additional total seat travel

	X	Y	Z
H8	1379	-356	236
H9	1337	-350	218
H10	1108	-346	166
H11	1370	-350	183