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REPORT NO. 208-MGA-2000-07

SAFETY COMPLIANCE SLED TESTING FOR FMVSS 208
OCCUPANT CRASH PROTECTION

Volkswagen of America Inc.
2000 Volkswagen Jetta 4 Door
NHTSA NO. CY5801

MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: May 11, 2000

Report Date: June 16, 2000

FINAL REPORT

Prepared For:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY ASSURANCE
OFFICE OF VEHICLE SAFETY COMPLIANCE
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16. Abstract A compliance test (sled test) was conducted on the subject 2000 Volkswagen Jetta 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:			
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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 2000 Volkswagen Jetta 4 Door, NHTSA No. CY5801, 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-seven(37) 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 May 11, 2000.

The test vehicle, a 2000 Volkswagen Jetta 4 Door, NHTSA No. CY5801, 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 #403)	Passenger (Serial #401)
HIC	1000	274	116
Chest g	60 g	39.9 g	27.3 g
Chest displacement	3 inches	1.2 in.	0.4 in.
Left Femur	2250 lb	829 lb	922 lb
Right Femur	2250 lb	998 lb	1244 lb
Neck Extension	57 Nm	14.7 Nm	18.5 Nm
Neck Flexion	190 Nm	45.1 Nm	53.9 Nm
Neck Tension	3300 N	1175 N	656 N
Neck Compression	4000 N	2121 N	745 N
Neck Shear	3100 N	1166 N	813 N

The vehicle also appears to meet the other FMVSS 208 requirements for which it was tested, with the exception of the absence of an airbag label on the dash or steering wheel hub. 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 16.7 g with an integrated velocity change of 28.8 mph. After filtering the acceleration signal to Channel Class 60, the airbag system was triggered 19.6 milliseconds after 0.5 g acceleration.

INCLUDE DISCUSSION OF LOST CHANNELS OR OTHER TEST ISSUES.

None noted

Sled Test Summary

Vehicle NHTSA No.: CY5801 Test Mode: FMVSS 208 SLED TEST

Vehicle Yr/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 Door

Test Date: May 11, 2000 Time: 12:15 p.m. Temp: 71°F

Vehicle Test Weight: 3441 lbs.

DUMMY INFO.

DRIVER

PASSENGER

Dummy Type

Part 572E

Part 572E

Serial Number

403

401

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 inches shift;

0 inches shift

Seat Back Failure -

No

No

VISIBLE DUMMY CONTACT POINTS:

DRIVER

PASSENGER

Head

airbag/windshield

airbag/windshield

Chest

airbag

airbag

Left Knee

knee bolster

glove box

Right Knee

knee bolster

glove box

General Test And Vehicle Parameter DataVehicle Yr/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorVehicle NHTSA No.: CY5801 VIN: 3VWRA29M2YM065699 Color: Blue

Engine Data:

No. Cylinders: 4; CID: ; Liters: 2.0; CCs: Placement: Longitudinal/Inline: ; Transverse/Lateral: X

Transmission Data:

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

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: XPwr. Dr. Locks: X; Other: tilt wheel, rear defogger, tinted glassDate Received: 12/22/99; Odometer Reading: 11 milesSelling Dealer: Ernie Von Schledorn VWN88 W14167 Main StreetMenomonee Falls, WI 53052

REMARKS: None

General Test And Vehicle Parameter Data (Cont.)

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: Volkswagen de Mexico S.A. de C.V.Date of Manufacture: October 1999; VIN: 3VWRA29M2YM065699GVWR: 3925 lbs; GAWR Front: 2051 lbs.GAWR Rear: 2095 lbs.

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load:

FRONT: 30 psi REAR: 41 psiRecommended Tire Size: P205/55R16 or P195/65R15;

Recommended Cold Tire Pressure:

FRONT: 26 psi REAR: 26 psiSize of Tires on Test Vehicle: P195/55R15Type of Spare Tire: P195/65R15; Space Saver: ; Standard: X

Vehicle Capacity Data:

Type of Front Seats: X Bucket; Bench; Split BenchNumber of Occupants: 2 Front; 3 Rear; 3rd Seat; 5 TOTAL

REMARKS:

VEHICLE CAPACITY WEIGHT (VCW) = 945 lbs.No. Of Occupants x 150 lbs = 750 lbs.Rated Cargo/Luggage Weight (RCWL) = 195 lbs. (Difference)

General Test And Vehicle Parameter Data (Cont.)

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

Right Front =	<u>846</u> lbs.	Right Rear =	<u>604</u> lbs.
Left Front =	<u>866</u> lbs.	Left Rear =	<u>586</u> lbs.
TOTAL FRONT =	<u>1712</u> lbs.	TOTAL REAR =	<u>1190</u> lbs.
% Total Weight =	<u>59.0</u> %	% Total Weight =	<u>41.0</u> %

TOTAL DELIVERED WEIGHT = 2902 lbs.WEIGHT OF FULLY LOADED TEST VEHICLE WITH TWO DUMMIES AND 195 POUNDS OF CARGO WEIGHT:

Right Front =	<u>932</u> lbs.	Right Rear =	<u>785</u> lbs.
Left Front =	<u>950</u> lbs.	Left Rear =	<u>774</u> lbs.
TOTAL FRONT =	<u>1882</u> lbs.	TOTAL REAR =	<u>1559</u> lbs.
% Total Weight =	<u>54.7</u> %	% Total Weight =	<u>45.3</u> %

TOTAL WEIGHT = 3441 lbs.

TEST VEHICLE ATTITUDE: (all measurements in degrees)

AS DELIVERED DOOR SILL ANGLE:	<u>1.0° nose down</u>
AS TESTED DOOR SILL ANGLE:	<u>1.0° nose down</u>
FULLY LOADED DOOR SILL ANGLE:	<u>0.3° nose down</u>

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 14.5 gallonsUsable Capacity Figure Furnished by COTR = 14.5 gallons

REMARKS: None

Post-Impact Data

Test number: HT00051101

NHTSA number: CY5801

Test date: May 11, 2000

Test time: 12:55 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: 28.8 mph

Specified integrated velocity range: 28 to 30 mph

Sled Carriage Acceleration:

Acceleration: 16.7 g

Specified Acceleration Range: 16.0 - 18.2 g

Sled Carriage Acceleration Duration:

Time from T-0 (-0.5 g) to 0.0 g: 123.8 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: 2000/Volkswagen/Jetta/4 Door

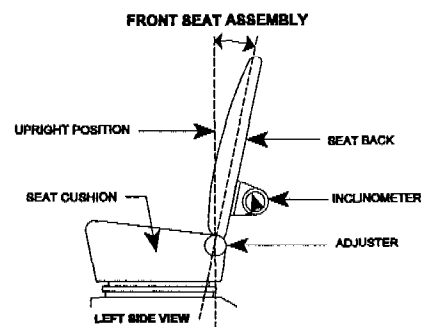
Vehicle NHTSA No.: CY5801 Test Date: May 11, 2000

NOMINAL DESIGN RIDING POSITION:

Driver Seat: Seat Back Angle = 21° *

Passenger Seat: Seat Back Angle = 21° *

* - As measured with H-point machine



SEAT FORE AND AFT POSITIONS:

Driver Seat: The seat track had a total position movement of 14 notches and was positioned 8 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 8 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 (up/down and in/out)

Dummy Positioning Measurement Table

Vehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 Door

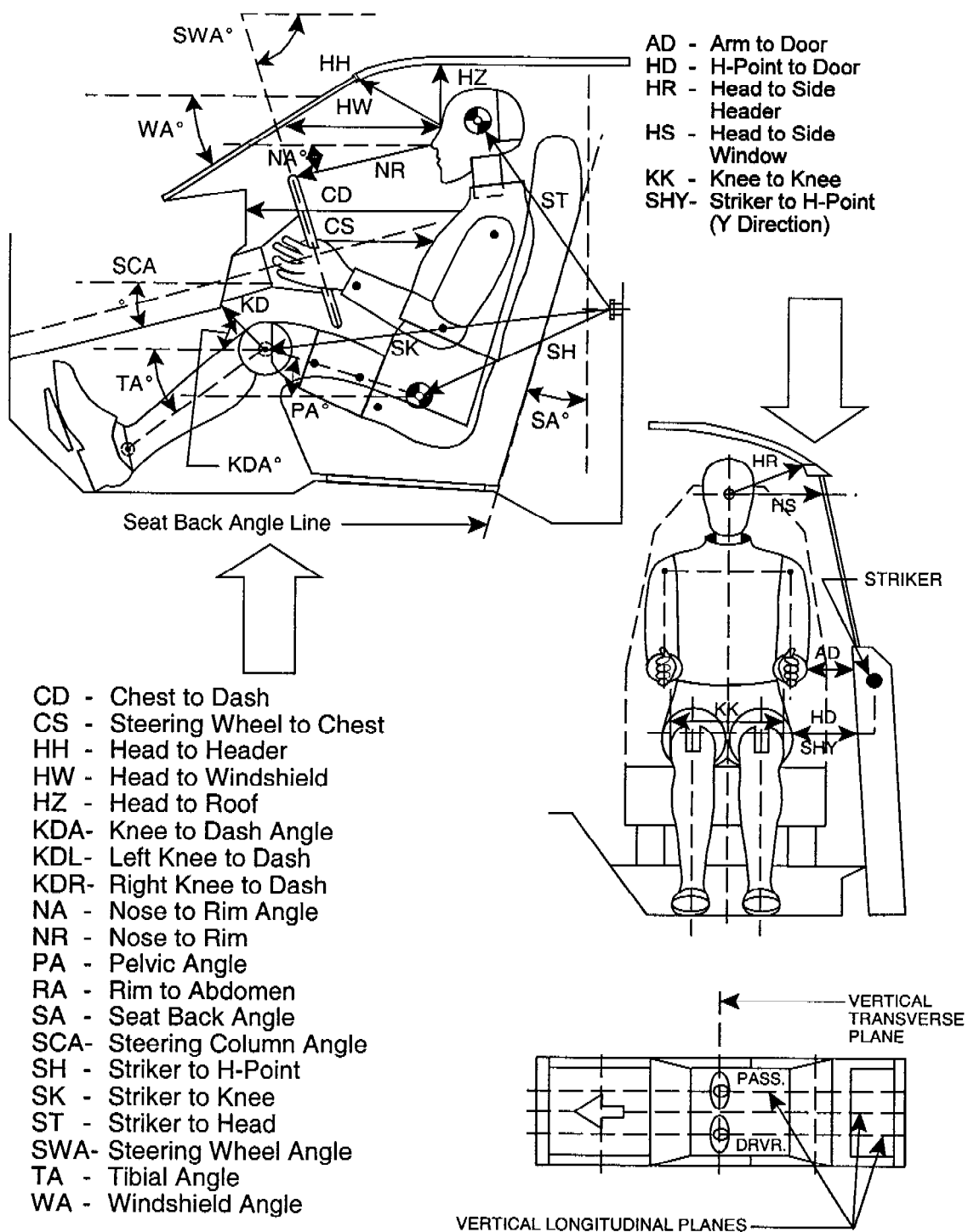
Vehicle NHTSA No.: CY5801 Test Date: May 11, 2000

	DRIVER (Serial #403)	PASSENGER (Serial #401)
WA°	30.8°	
SWA°	25.8°	N/A
SCA°	24.5°	N/A
SA°	16.9°*	16.7°*
HZ	8.4	8.4
HH	14.3	14.2
HW	25.1	25.1
HR	10.2	10.4
NR	15.9 Angle (NA°) 12.3°	N/A
CD	20.5	19.7
CS	12.8	N/A
RA	8.2	N/A
KDL	7.4 Angle (KDA°) 9.3°	6.4
KDR	7.3	6.5 Angle (KDA°) 22.5°
PA°	23.2°	24.1°
TA°	43.7°	40.9°
KK	12.0	10.8
ST	17.9 Angle 4.0°	22.6 Angle 11.9°
SK	20.8 Angle 98.4°	17.6 Angle 96.8°
SH	9.3 Angle 127.6°	9.8 Angle 127.8°
SHY	10.6	10.0
HS	13.2	13.4
HD	6.1	5.9
AD	4.6	3.3

* - Measured at headrest post

Dummy Positioning Measurement Locations

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



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)

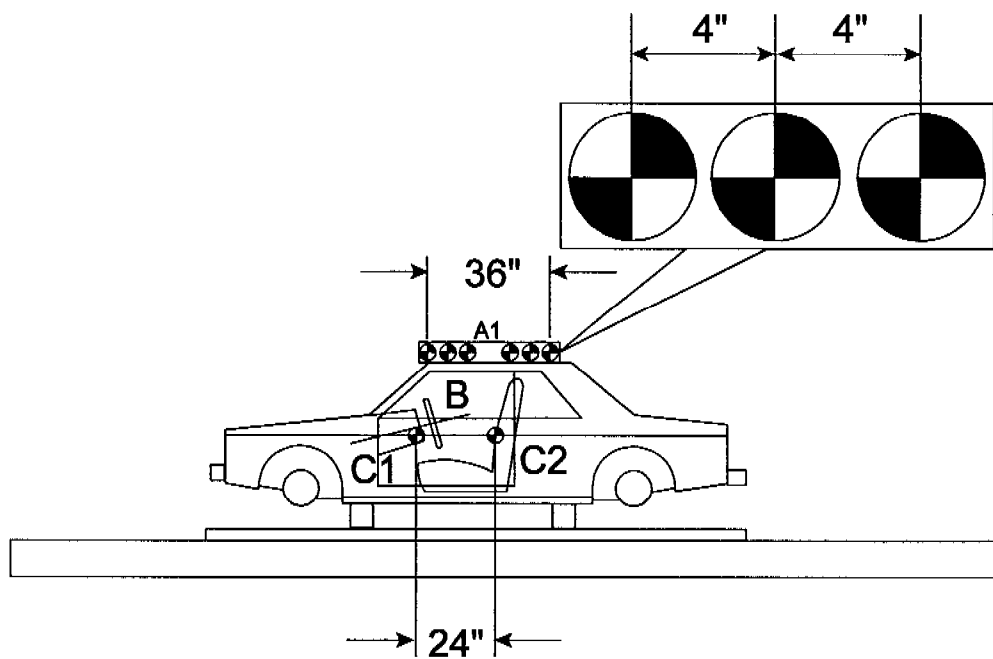
* Measurement used in Data Tape Reference Guide

Description of Dummy Measurements (Cont.)**Angles**

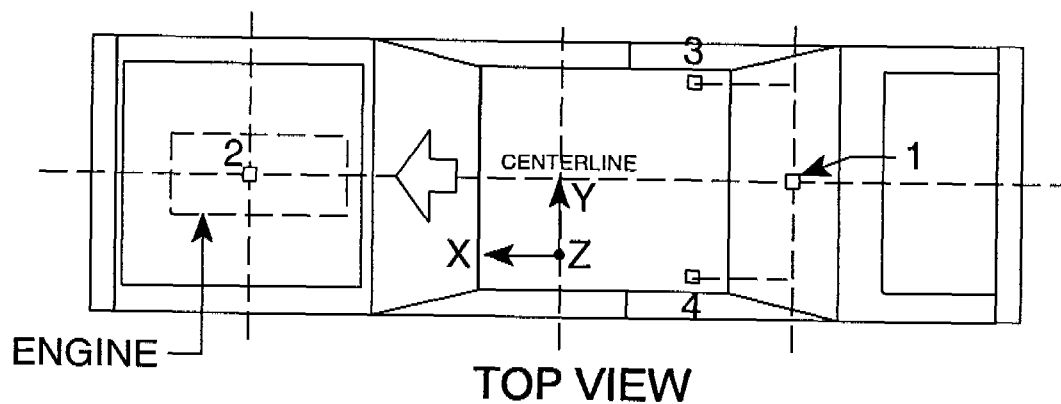
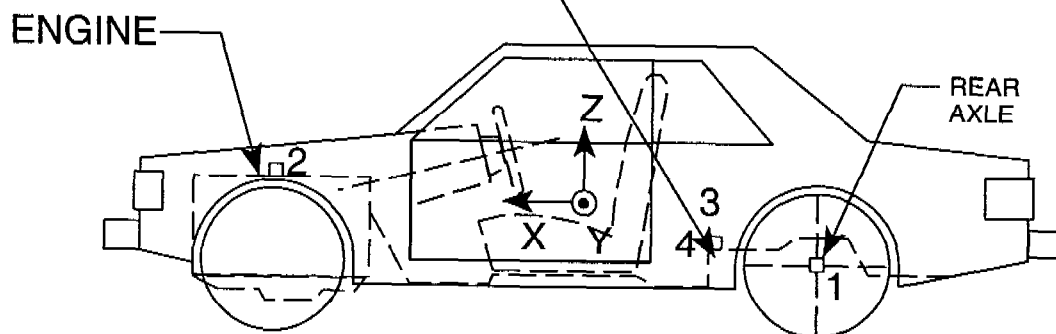
SA	Seat Back Angle, find this angle using the instructions provided by the manufacturer. If the manufacturer doesn't provide clear instructions contact the COTR.
PA	Pelvic or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and 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.

Vehicle Targeting Measurements

REFERENCE PHOTO TARGETS



LEFT SIDE VIEW

Vehicle Accelerometer Placement and Data SummaryVehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorVehicle NHTSA No.: CY5801 Test Date: May 11, 2000REAR SEAT CUSHION
ASSY. FRONT ATTACHMENT
BRACKET SUPPORT

LEFT SIDE VIEW

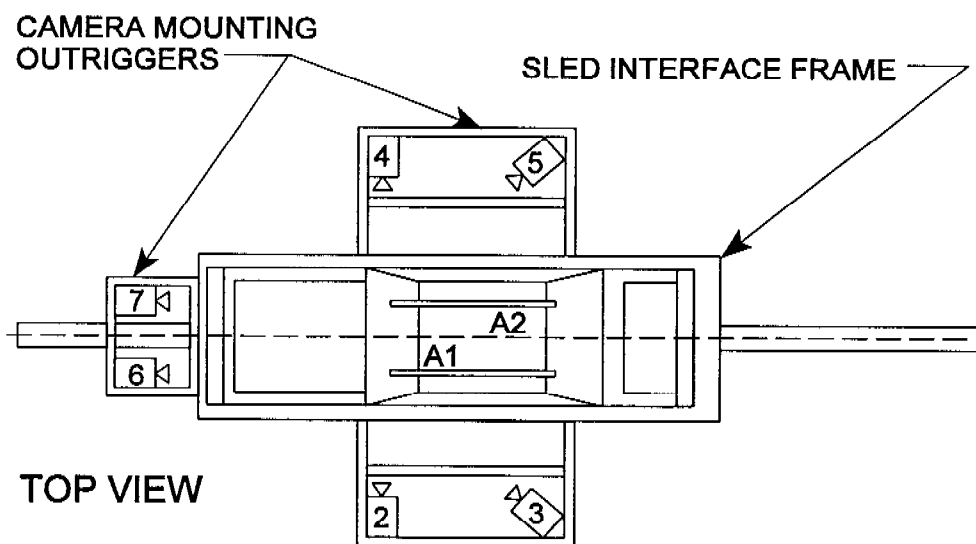
Vehicle Accelerometer Location Measurements and Data Summary

Vehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 Door

Vehicle NHTSA No.: CY5801 Test Date: May 11, 2000

No.	Location	X (in)	Y (in)	Positive Direction		Negative Direction	
				Value	Time (msec)	Value	Time (msec)
	Sled Primary Longitudinal	67.0	0	16.7 g	67	-1.2 g	175
	Sled Redundant Longitudinal	114.0	0	16.7 g	67	-1.2 g	175
	Sled Velocity Measured Integrated	67.0	0	28.8 mph	124	--	--
1	Rear Axle Longitudinal	49.5	0	16.9 g	67	-1.3 g	176
2	Top Engine Longitudinal	138.0	0	16.9 g	68	-1.3 g	127
3	Right Rear Seat Member Longitudinal	69.0	18.5	18.8 g	58	-2.8 g	169
4	Left Rear Seat Member Longitudinal	69.0	18.5	19.4 g	50	-2.2 g	129

Camera Positions



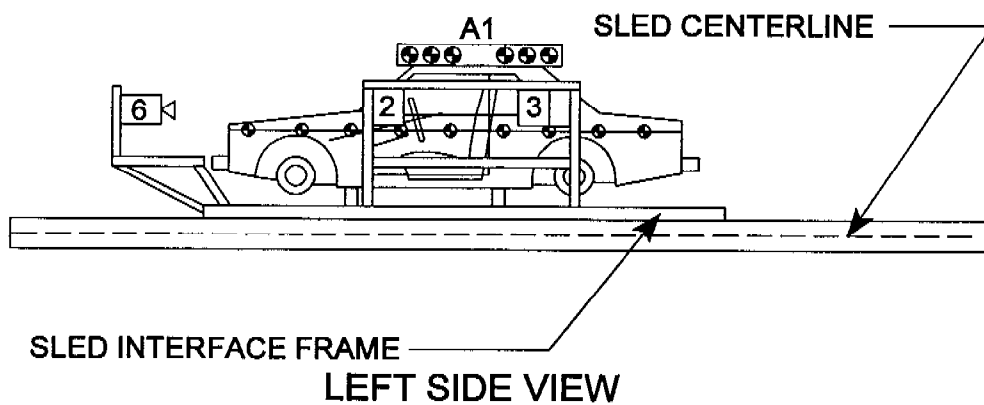
CAMERA FRAME RATES:

#1 = 24 fps

All Others = 1,000 fps



REAL TIME CAMERA



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	71.0	84.3	41.5	90	65.7	13	741
3	Onboard Driver Angle	148.0	90.9	52.0			13	885
4	Onboard Passenger	68.5	85.1	42.7	90	67.9	13	913
5	Onboard Passenger Angle	147.0	89.8	52.6			13	1010
6	Onboard Windshield Driver	22.2	13.5	45.9			13	905
7	Onboard Windshield Passenger	22.2	13.6	45.9			13	1000

Reference* X = Front of sled carriage
 Y = Center of sled carriage
 Z = Top of sled carriage

Occupant Injury Data

Vehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 Door

Vehicle NHTSA No.: CY5801 Test Date: May 11, 2000

MAXIMUM ACCELERATION VALUES: (g's)	DRIVER DUMMY #403	PASSENGER DUMMY #401
Head Channel X	-49.1	-44.2
Head Channel Y	-8.1	-12.5
Head Channel Z	42.7	23.8
HEAD RESULTANT	58.9	45.9
Chest Channel X	-32.7	-23.8
Chest Channel Y	-4.4	-5.4
Chest Channel Z	30.0	14.9
CHEST RESULTANT	42.5	27.5

HEAD INJURY CRITERIA (HIC) VALUES:

HIC	274	116
t_1 = (msec)	87.6	87.9
t_2 = (msec)	121.6	123.9

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

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

CLIP	39.9	27.3
t_1 = (msec)	103.0	98.9
t_2 = (msec)	106.1	101.9
CHEST DEFLECTION (in)	1.2	0.4

Occupant Injury Data (Cont.)

MAX. COMPRESSIVE FEMUR FORCES:	DRIVER DUMMY #403	PASSENGER DUMMY #401
Left Side (lbs)	829	922
Right Side (lbs)	998	1244

NECK INJURY CRITERIA:

Peak Flexion Bending Moment about the Occipital Condyle (N-m)	45.1	53.9
Peak Extension Bending Moment about the Occipital Condyle (N-m)	14.7	18.5
Peak Axial Tension (N)	1175	656
Peak Axial Compression (N)	2121	745
Peak Fore Shear (N)	1166	813
Peak Aft Shear (N)	138	134

Seat Belt Warning System Data

Vehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 Door

NHTSA No.: CY5801 ; Technician: Chad Gadberry;

Date: February 8, 2000

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

Air Bag Labels Data

Vehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 Door

NHTSA No.: CY5801; Technician: Chad Gadberry;

Date: February 8, 2000

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

Air Bag Labels Data (Cont.)

- 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 |

Air Bag Labels Data (Cont.)

- 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 - ☒ Yes ☐ **No-FAIL**
 Passenger Side - ☒ Yes ☐ **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?
 ☒ 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.

☒ Not Applicable
 Driver Side - ☐ Yes-Pass ☐ **No-FAIL**

Air Bag Labels Data (Cont.)

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK

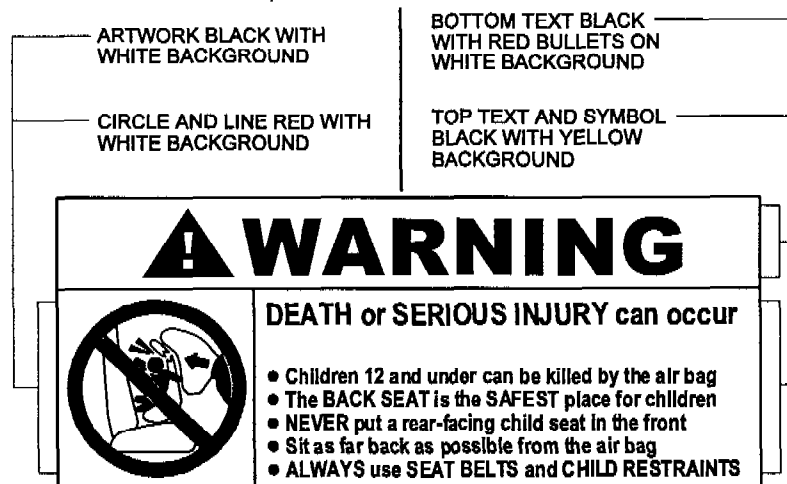


Figure 6a (S4.5.1(b)(2))

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK

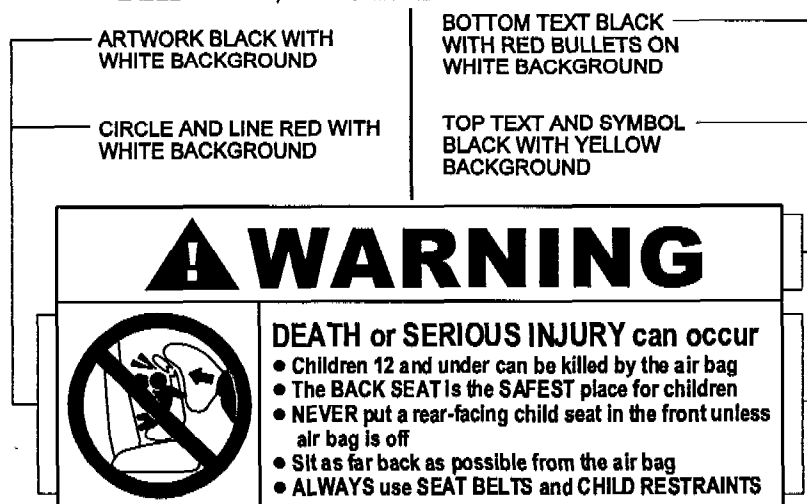


Figure 6b (S4.5.1(b)(2))

- 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 cm²? (S4.5.1(b)(2)(ii))
 Actual message area: 42 cm²
- | | | |
|---------------------------------|--------------|-------------|
| 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 | () 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 |

Air Bag Labels Data (Cont.)

- 5.4 Is the message area at least 20 cm²? (S4.5.1(c)(2)(i))
 Actual message area: 21 cm²
 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

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN UP POSITION

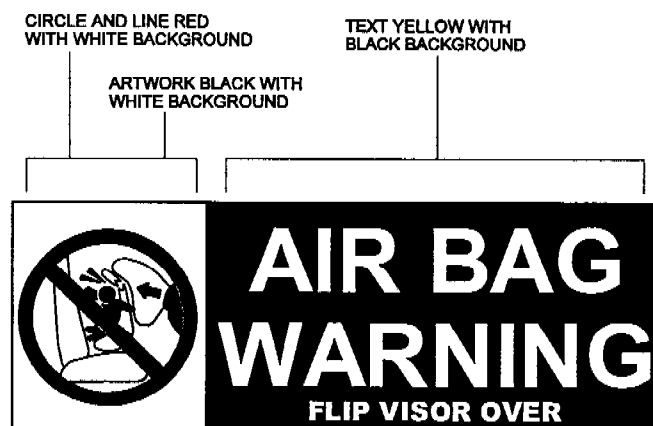


Figure 6c (S4.5.1(c)(2))

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))
 () 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)(iii)) to the label shown below. (S4.5.1(e))
 () Yes-Pass () No-FAIL

* It is not known whether the label was removed by the dealer, by a potential customer, or not installed at all.

Air Bag Labels Data (Cont.)

- 6.4 Is the heading area yellow with the word "warning" and the alert symbol in black?
(S4.5.1(e)(i)) ☐ Yes-Pass ☐ No-FAIL
- 6.5 Is the message white with black text? (S4.5.1(e)(ii))
☐ Yes-Pass ☐ No-FAIL
- 6.6 Is the message area at least 30 cm²? (S4.5.1(e)(ii))
Actual message area: ____ cm² ☐ Yes-Pass ☐ No-FAIL



Figure 7 (S4.5.1(e))

Rear Outboard Seating Position Seat Belt DataVehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorNHTSA No.: CY5801; Technician: Chad Gadberry;Date: February 8, 2000

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

☒ 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 DataVehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorNHTSA No.: CY5801 ; Technician: Chad Gadberry ;Date: February 8, 2000

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?

() Yes, go to 6.1 (X) 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))

() Yes-Pass () No-FAIL
7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

Lap Belt Lockability Data (Cont.)

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 68 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)

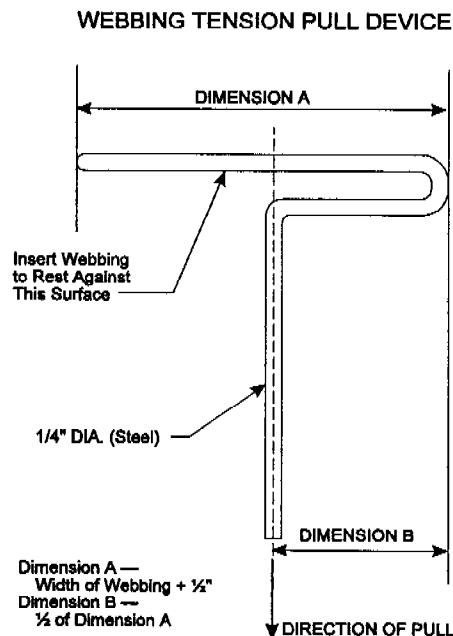


Figure 5 (S7.1.1.5(c)(4))

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 26 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 27 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 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 = 41 inches

(X)Yes-Pass

() No-FAIL

REMARKS: None

Lap Belt Lockability DataVehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorNHTSA No.: CY5801; Technician: Chad Gadberry;Date: February 8, 2000

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? () Yes, go to 6.1 (X) 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))

() Yes-Pass () No-FAIL
7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

Lap Belt Lockability Data (Cont.)

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 71 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)

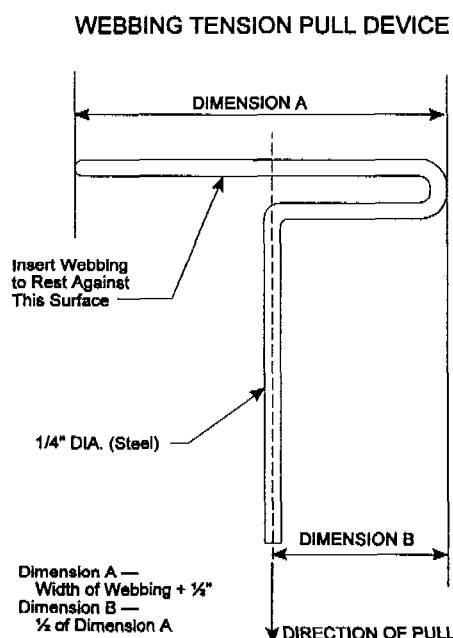


Figure 5 (S7.1.1.5(c)(4))

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 13 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 13.5 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 = 0.5 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 = 57.5 inches

(X)Yes-Pass

() No-FAIL

REMARKS: None

Lap Belt Lockability DataVehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorNHTSA No.: CY5801 ; Technician: Chad Gadberry ;Date: February 8, 2000

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? () Yes, go to 6.1 (X) 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))

() Yes-Pass () No-FAIL
7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

Lap Belt Lockability Data (Cont.)

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 72 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)

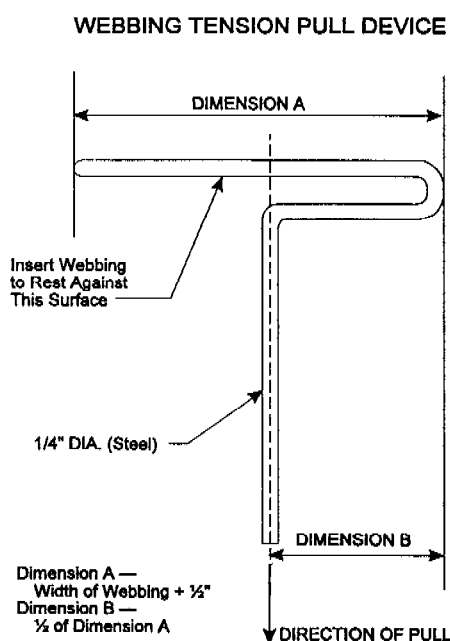


Figure 5 (S7.1.1.5(c)(4))

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 12 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 13 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 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 = 59 inches

(X)Yes-Pass

() No-FAIL

REMARKS: None

Lap Belt Lockability DataVehicle Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorNHTSA No.: CY5801 ; Technician: Chad Gadberry ;Date: February 8, 2000

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? () Yes, go to 6.1 (X) 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))

() Yes-Pass () No-FAIL
7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

Lap Belt Lockability Data (Cont.)

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 71 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)

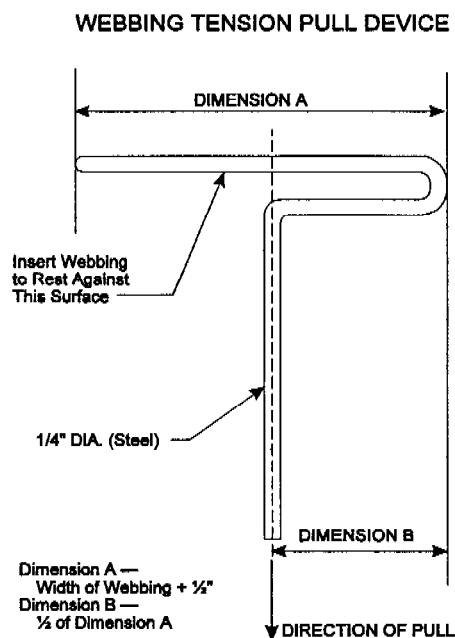


Figure 5 (S7.1.1.5(c)(4))

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 13 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 13.5 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 = 0.5 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 = 57.5 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.: CY5801Vehicle Model Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorDesignated Seating Position Tested: Left rearDate of Comfort/Convenience Check: February 8, 2000Technician Performing Check: Chad GadberryGVWR: 3925 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
☒ N/A
- 1.8 Position the test dummies according to dummy position placement instructions in Appendix B.
☒ 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 0.3 lb. ☒ 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**1. BELT CONTACT FORCE (S7.4.3)**Test Vehicle NHTSA No.: CY5801Vehicle Model Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorDesignated Seating Position Tested: Center rearDate of Comfort/Convenience Check: February 8, 2000Technician Performing Check: Chad GadberryGVWR: 3925 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.
() Check
(X) 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
☒ N/A
- 1.8 Position the test dummies according to dummy position placement instructions in Appendix B.
☒ 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 0.2 lb. ☒ 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**1. BELT CONTACT FORCE (S7.4.3)**Test Vehicle NHTSA No.: CY5801Vehicle Model Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorDesignated Seating Position Tested: Right rearDate of Comfort/Convenience Check: February 8, 2000Technician Performing Check: Chad GadberryGVWR: 3925 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
☒ N/A
- 1.8 Position the test dummies according to dummy position placement instructions in Appendix B.
☒ 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 0.3 lb. ☒ 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.)2. **LATCHPLATE ACCESS (S7.4.4)**Test Vehicle NHTSA No.: CY5801Vehicle Model Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorDesignated 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**

Seat Belt Comfort and Convenience Data (Cont.)3. **RETRACTION (S7.4.5)**Test Vehicle NHTSA No.: CY5801Vehicle Model Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorDesignated 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

Seat Belt Comfort and Convenience Data (Cont.)

- 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**

Seat Belt Comfort and Convenience Data (Cont.)4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**Test Vehicle NHTSA No.: CY5801Vehicle Model Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorDesignated Seating Position Tested: Left rearDate of Comfort/Convenience Check: February 8, 2000Technician Performing Check: Chad GadberryGVWR: 3925 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.
 - ☐ 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**

Seat Belt Comfort and Convenience Data (Cont.)

- 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. (X) Check
 - (B) The seat is moved to any position to which it is designed to be adjusted. (X) Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. (X) Check
- (X) 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)?
- (X) Yes - Pass
() No - **FAIL**

Seat Belt Comfort and Convenience Data (Cont.)4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**Test Vehicle NHTSA No.: CY5801Vehicle Model Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorDesignated Seating Position Tested: Center rearDate of Comfort/Convenience Check: February 8, 2000Technician Performing Check: Chad GadberryGVWR: 3925 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.
☐ 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**

Seat Belt Comfort and Convenience Data (Cont.)

- 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. (X) Check
 - (B) The seat is moved to any position to which it is designed to be adjusted. (X) Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. (X) Check
- (X) 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)?
- (X) Yes - Pass
() No - **FAIL**

Seat Belt Comfort and Convenience Data (Cont.)4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**Test Vehicle NHTSA No.: CY5801Vehicle Model Year/Make/Model/Body Style: 2000/Volkswagen/Jetta/4 DoorDesignated Seating Position Tested: Right rearDate of Comfort/Convenience Check: February 8, 2000Technician Performing Check: Chad GadberryGVWR: 3925 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?
 - (X) Yes - Go to 4.2.
 - () 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)?
 - (X) Yes - Pass
 - () No - FAIL
- 4.3 Are the remaining two seat belt parts accessible under normal conditions?
 - (X) Yes - Pass
 - () No - FAIL

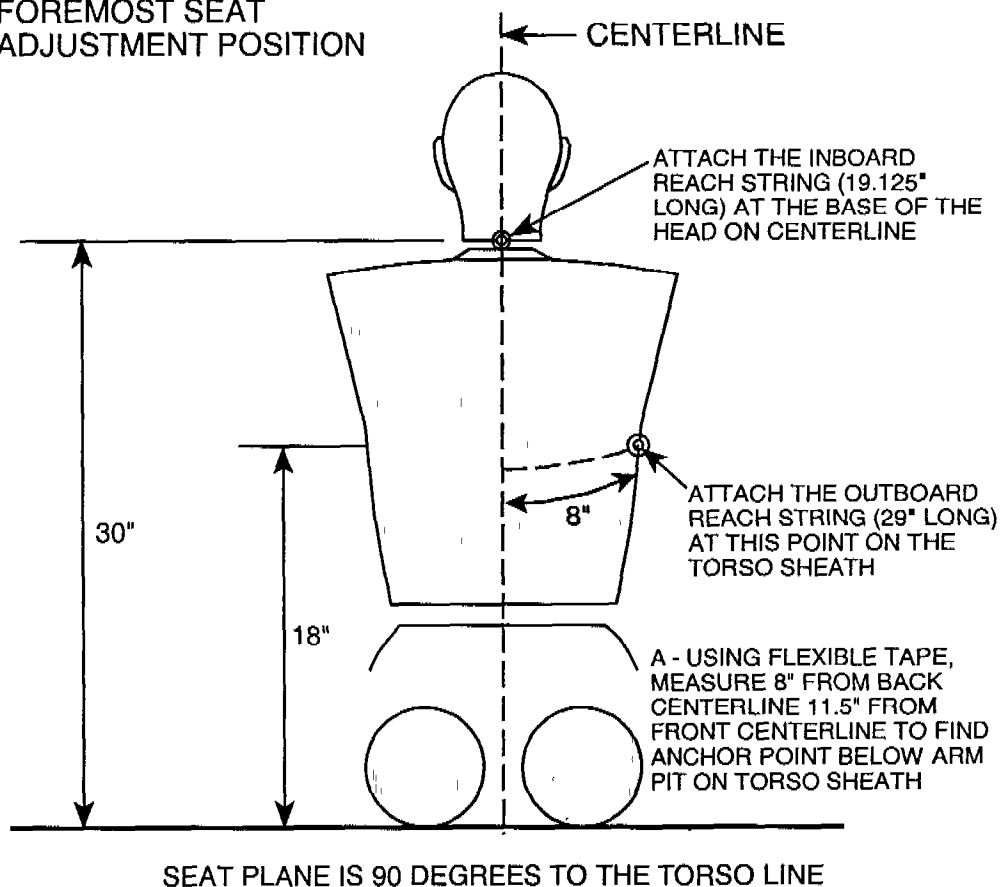
Seat Belt Comfort and Convenience Data (Cont.)

- 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. (X) Check
 - (B) The seat is moved to any position to which it is designed to be adjusted. (X) Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. (X) Check
- (X) 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)?
- (X) Yes - Pass
() No - FAIL

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

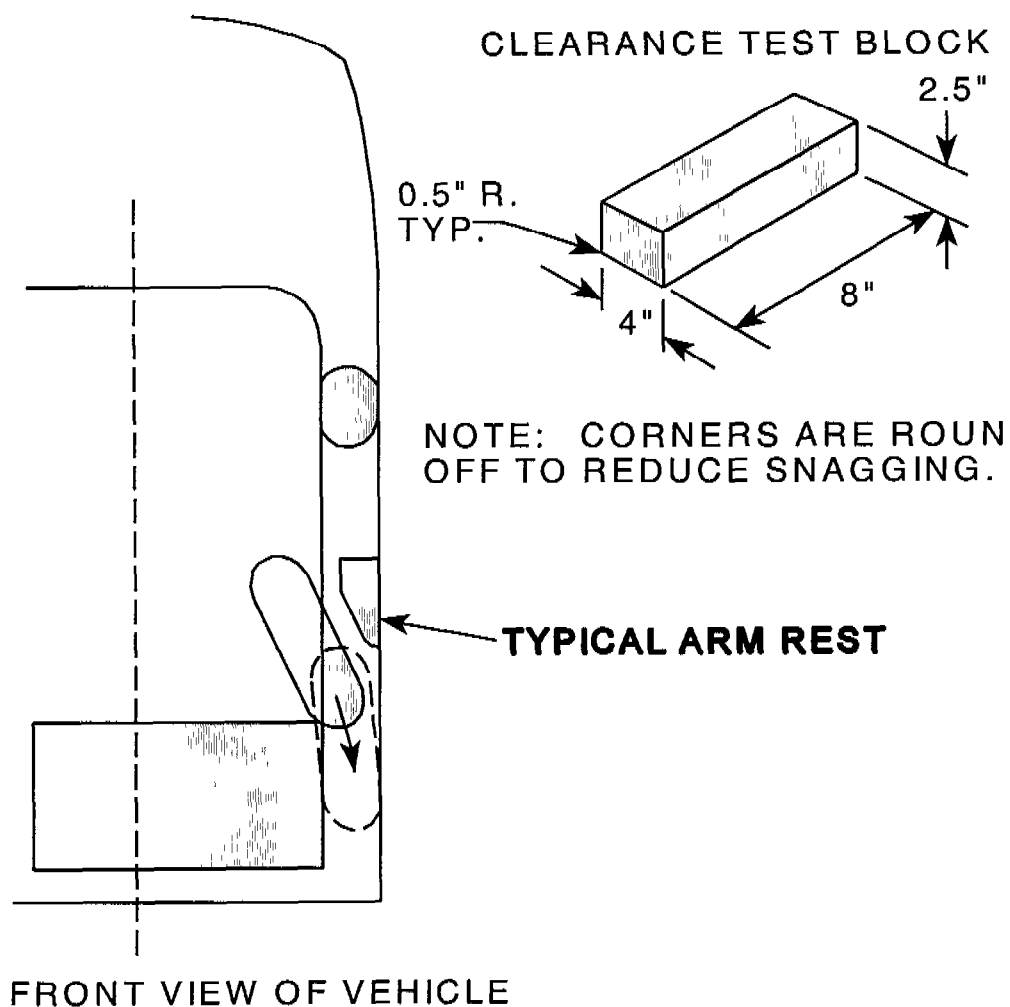
PART 572E DUMMY

50TH PERCENTILE
DUMMY SEATED IN
FOREMOST SEAT
ADJUSTMENT POSITION



REAR VIEW

USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS



APPENDIX A
PHOTOGRAPHS

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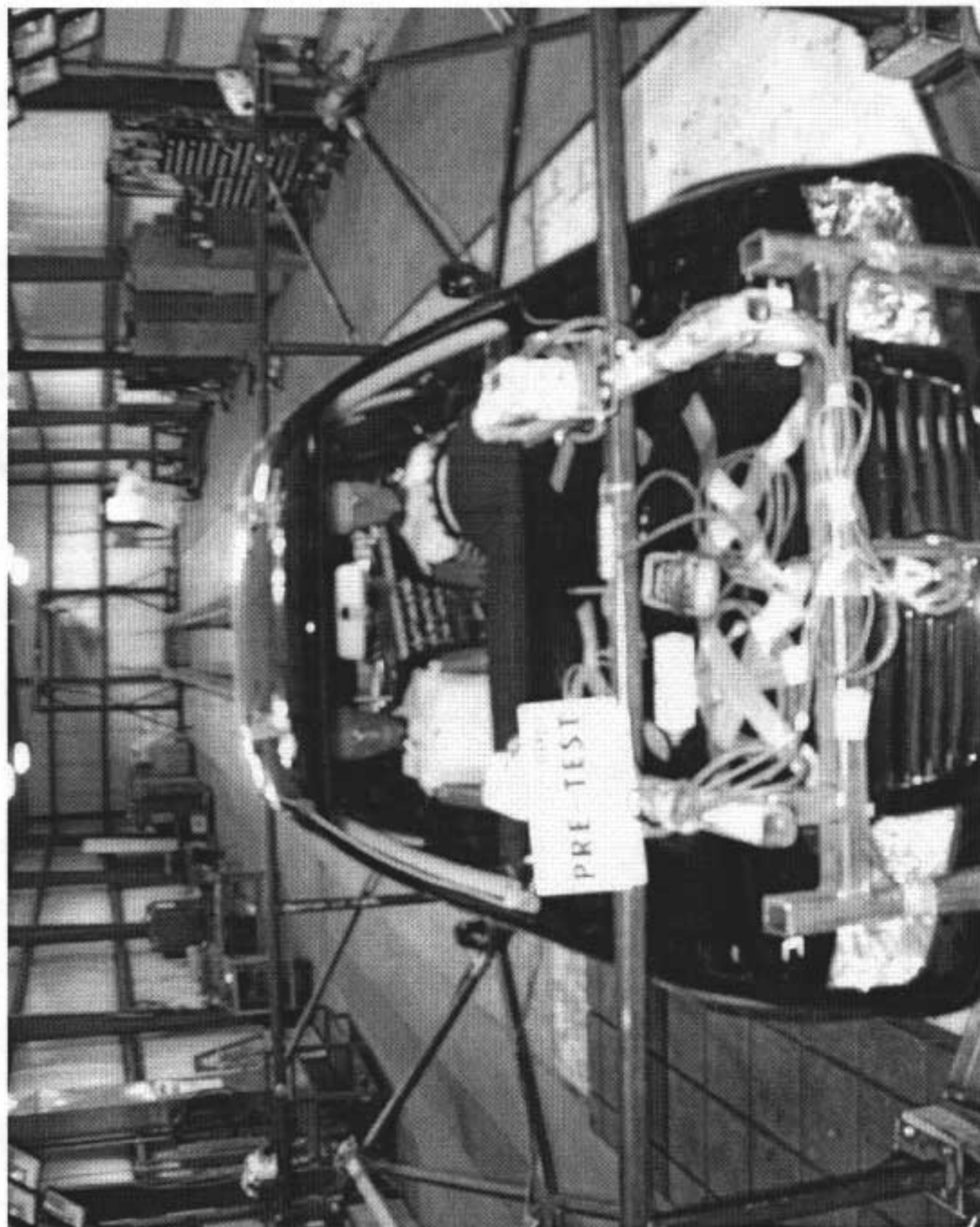


Photo No. A-1 - Pre-Test Frontal View

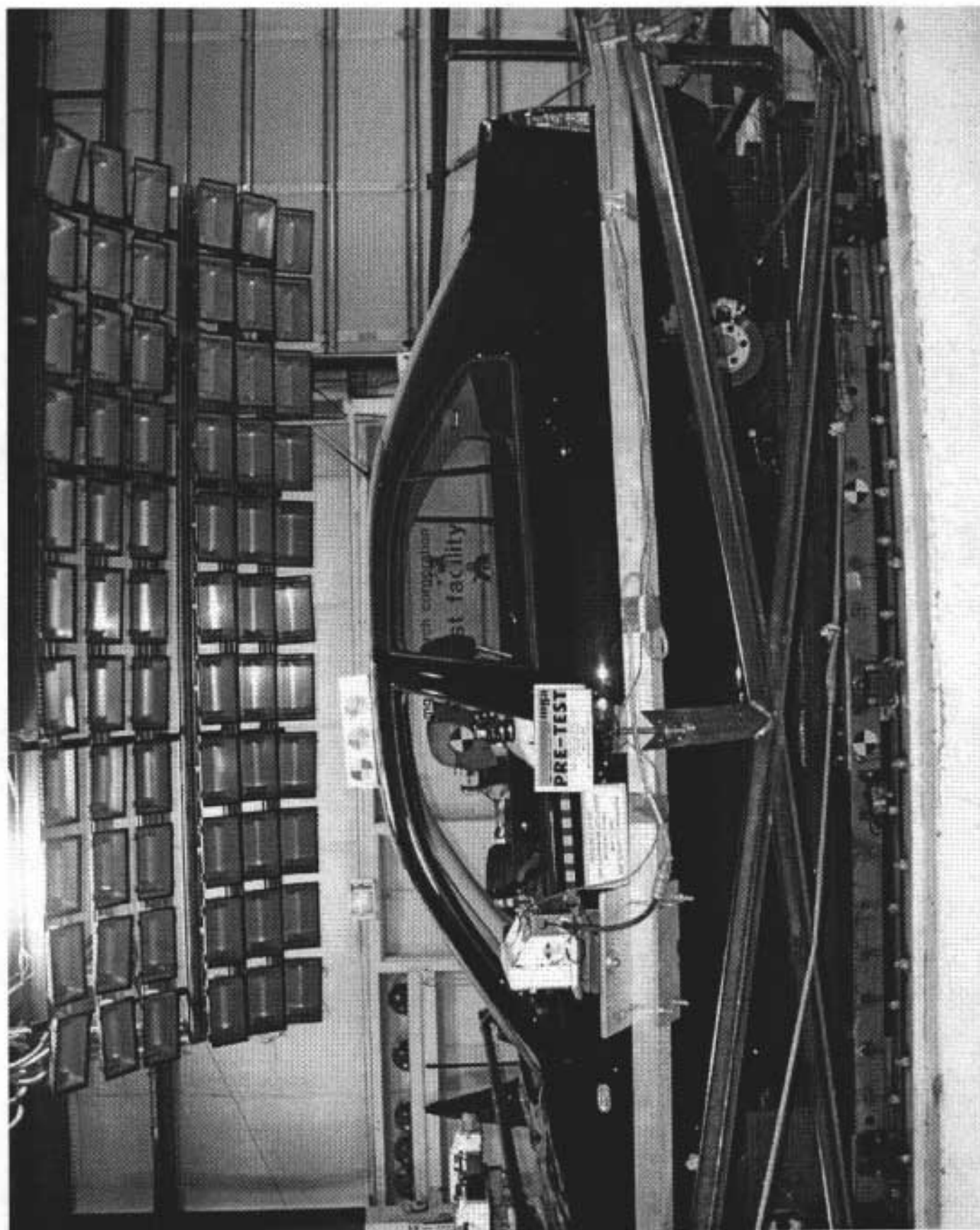


Photo No. A-2 - Pre-Test Left Side View

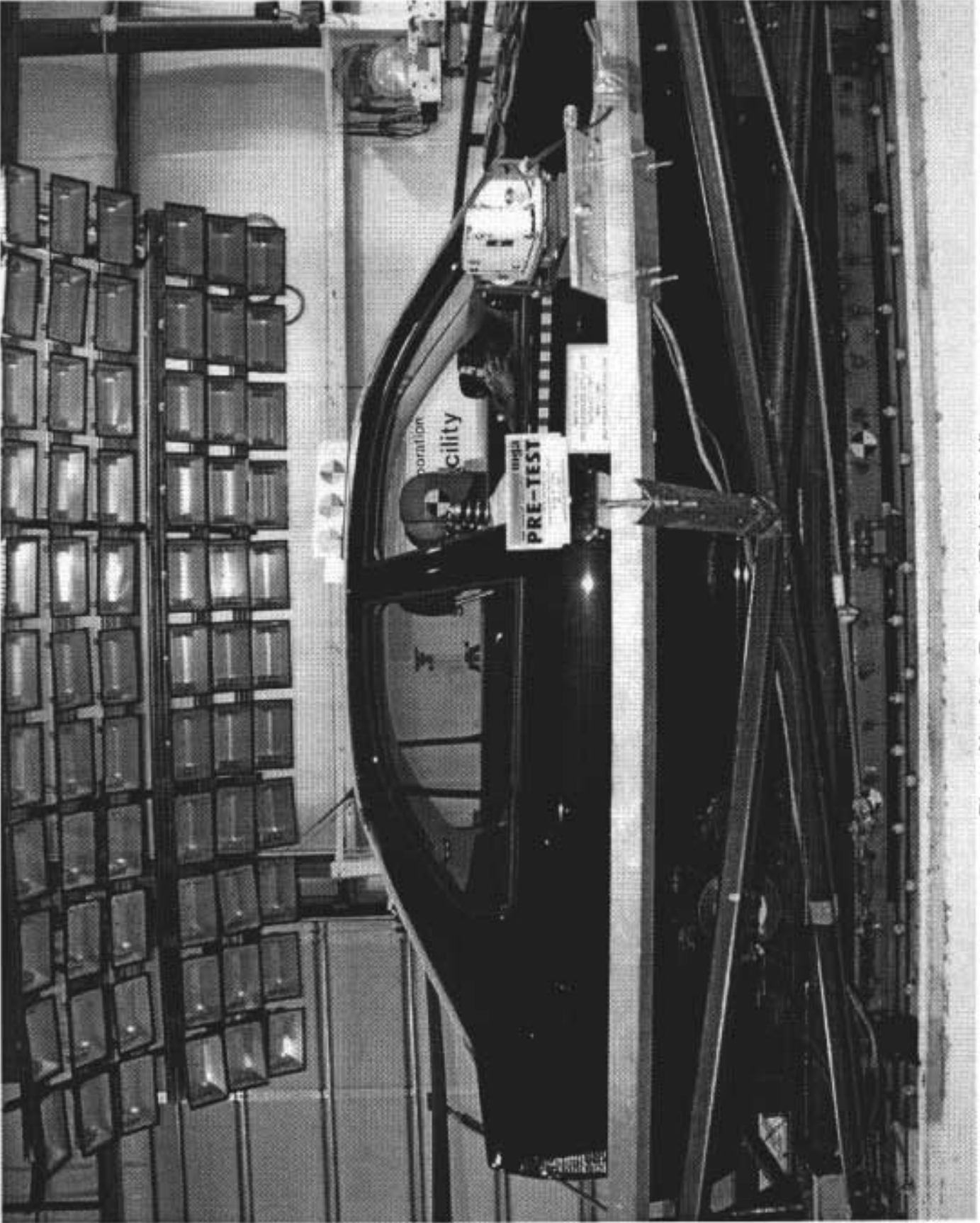


Photo No. A-3 - Pre-Test Right Side View



Photo No. A-4 - Pre-Test Windshield View



Photo No. A-5 - Post-Test Windshield View



Photo No. A-6 - Pre-Test Driver Dummy Position View (Door Open)



Photo No. A-7 - Post-Test Driver Dummy Position View (Door Open)



Photo No. A-8 - Pre-Test Driver Dummy Position View



Photo No. A-9 - Post-Test Driver Dummy Position View

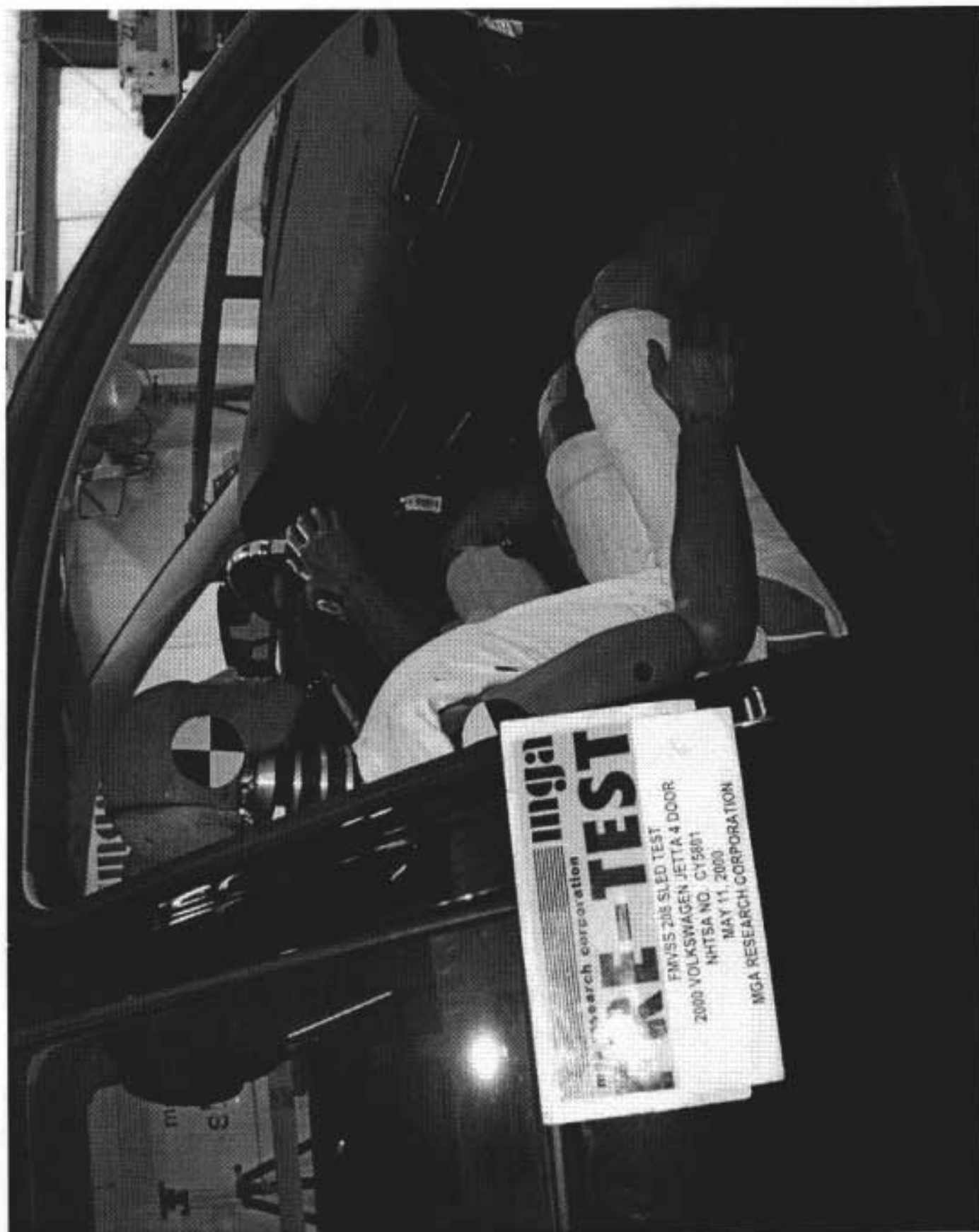


Photo No. A-10 - Pre-Test Passenger Dummy Position View (Door Open)



Photo No. A-11 - Post-Test Passenger Dummy Position View (Door Open)



Photo No. A-12 - Pre-Test Passenger Dummy Position View



Photo No. A-13 - Post-Test Passenger Dummy Position View

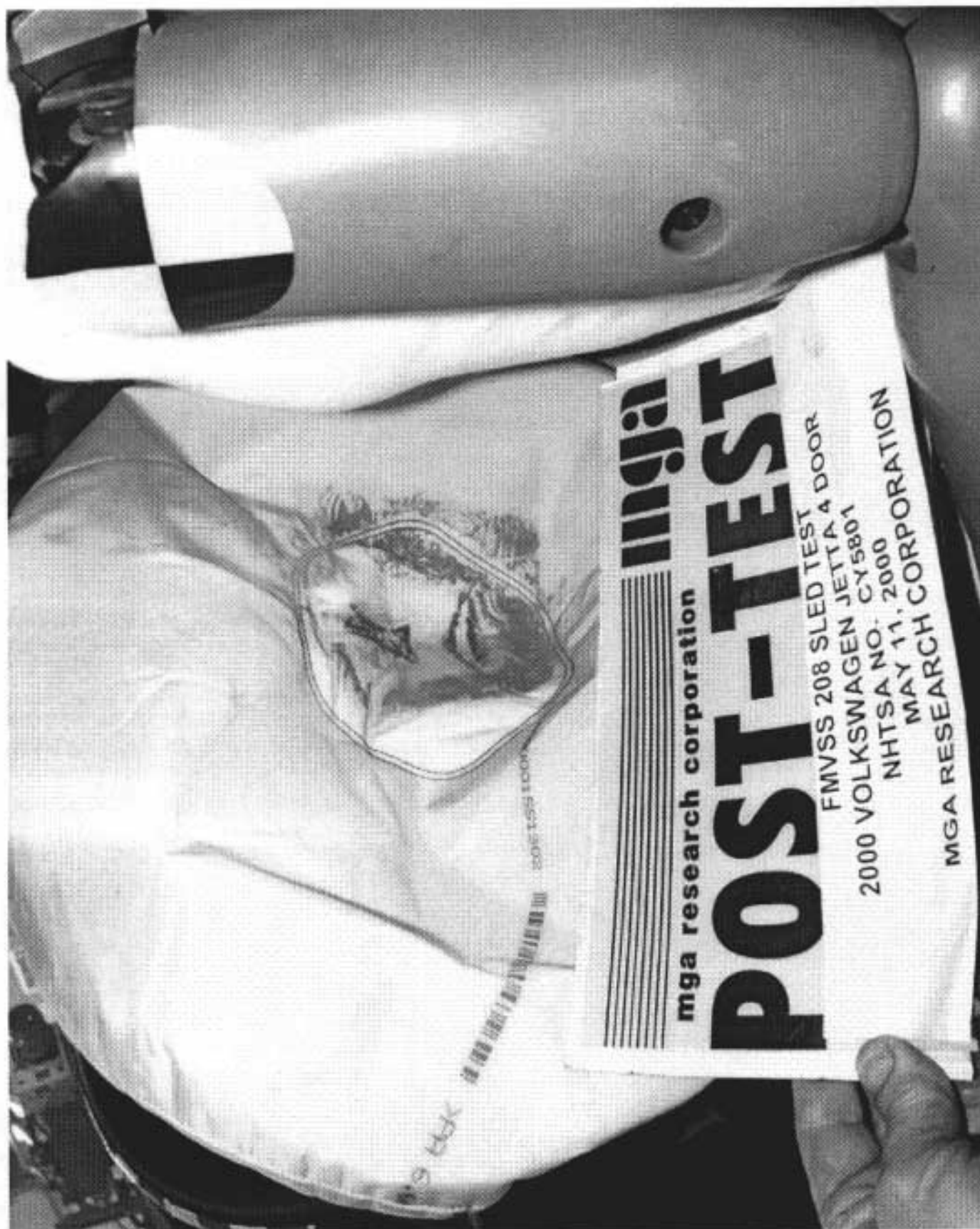


Photo No. A-14 - Post-Test Driver Airbag View



Photo No. A-15 - Post-Test Driver Head Contact View (windshield)

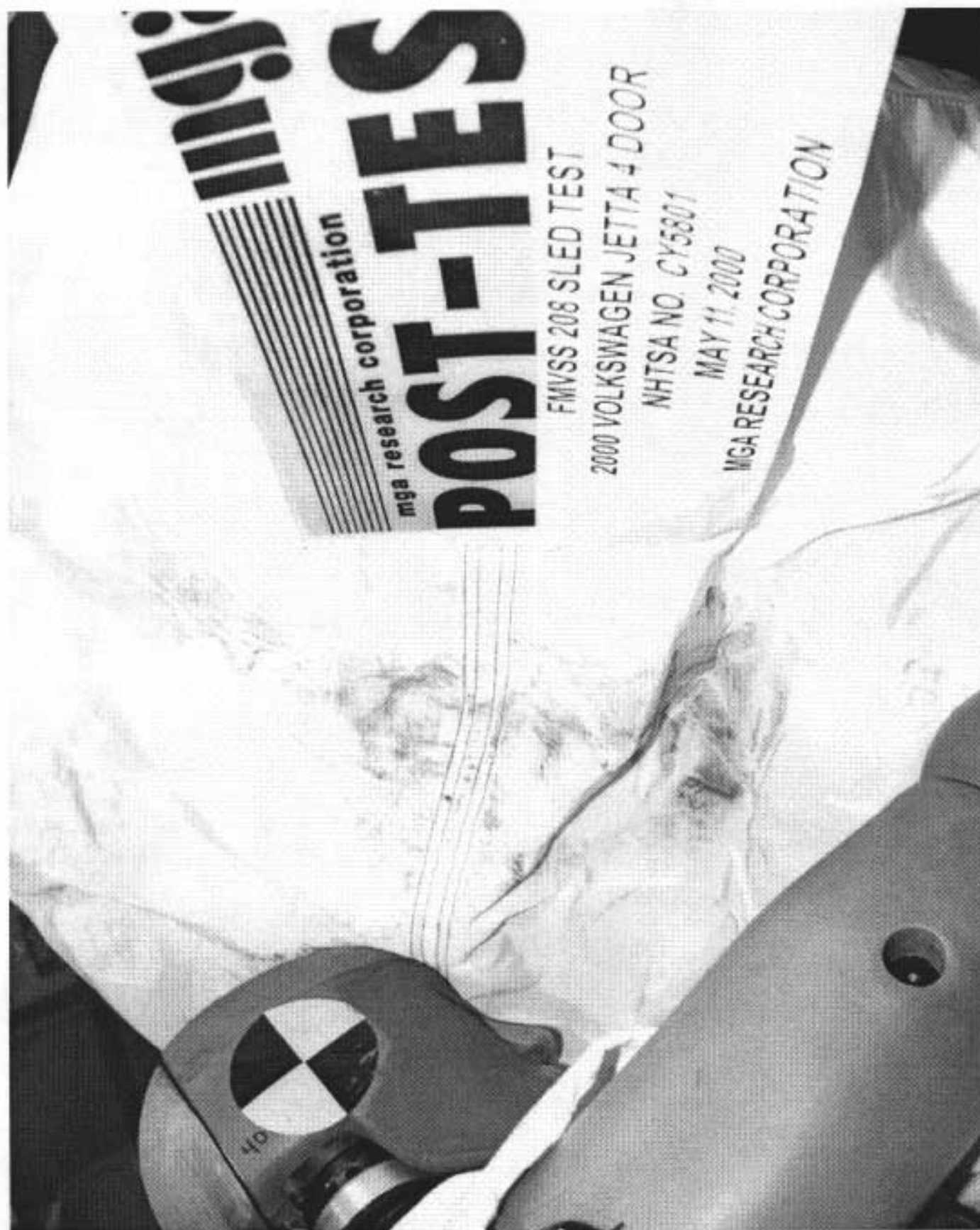


Photo No. A-16 - Post-Test Passenger Dummy Airbag View



Photo No. A-17 - Post-Test Passenger Dummy Head Contact View (windshield)



Photo No. A-18 - Pre-Test Driver Knee Bolster View



Photo No. A-19 - Post-Test Driver Knee Bolster View

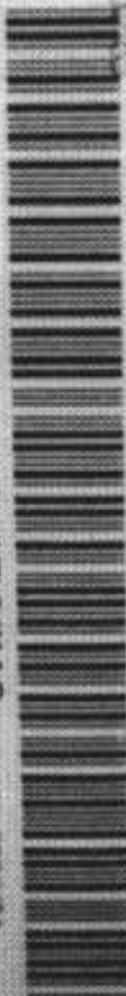


Photo No. A-20 - Pre-Test Passenger Knee Bolster View



Photo No. A-21 - Post-Test Passenger Knee Bolster View

MANUFACTURED BY VOLKSWAGEN DE MEXICO S.A. DE C.V. DATE 10.99
GVWR 3925 LBS GAWR FRONT 2051 LBS GAWR REAR 2095 LBS
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY, BUMPER,
AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE
VEHICLE I.D. NO. 3VWRA29M2YM065699 TYPE: PASSENGER CAR



COUNTRY OF ORIGIN: MEXICO

MAX. LOAD (VEHICLE CAPACITY WEIGHTS)

IF PROVIDED		SHIFT TR.	AUT. TR.
LBS		945	935
DESIGNATED SEATING CAPACITY : 5			
2 FRONT / 3 REAR			
COLD TIRE INFLATION PRESSURE		PSI	
TIRE SIZE	RIM	HALF LOAD	MAX. LOAD
195/65 R15 91H	6J	FRONT REAR	FRONT REAR
205/55 R16 91H	6 1/2 J	26 26	30 41
1J0 010 251 M			
C: 2 / 99			

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DATA PLOTS

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TEST: FMVSS 208 SLED (H00133)

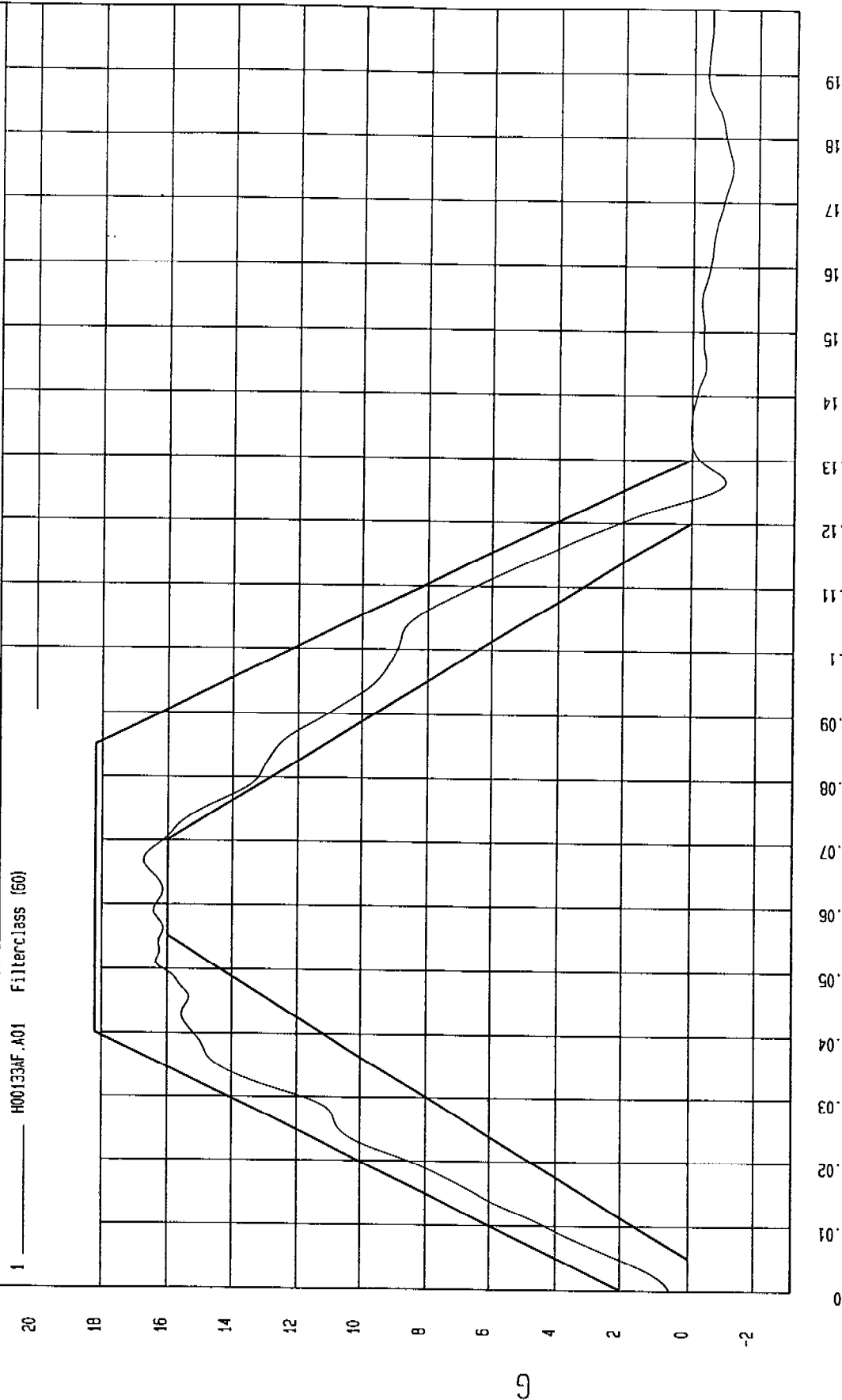
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -1.21 G at 175.3 msec

Maximum = 16.74 G at 66.9 msec

SLED ACCELERATION



NSA Research
05-11-2000 12:47

MCA Research
05-11-2000 12:45

TIME Seconds

0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.1 0.11 0.12 0.13 0.14 0.15 0.16 0.17 0.18 0.19

MPH

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

SLED X VELOCITY

1 H00133A1.V01 Filterclass (180)

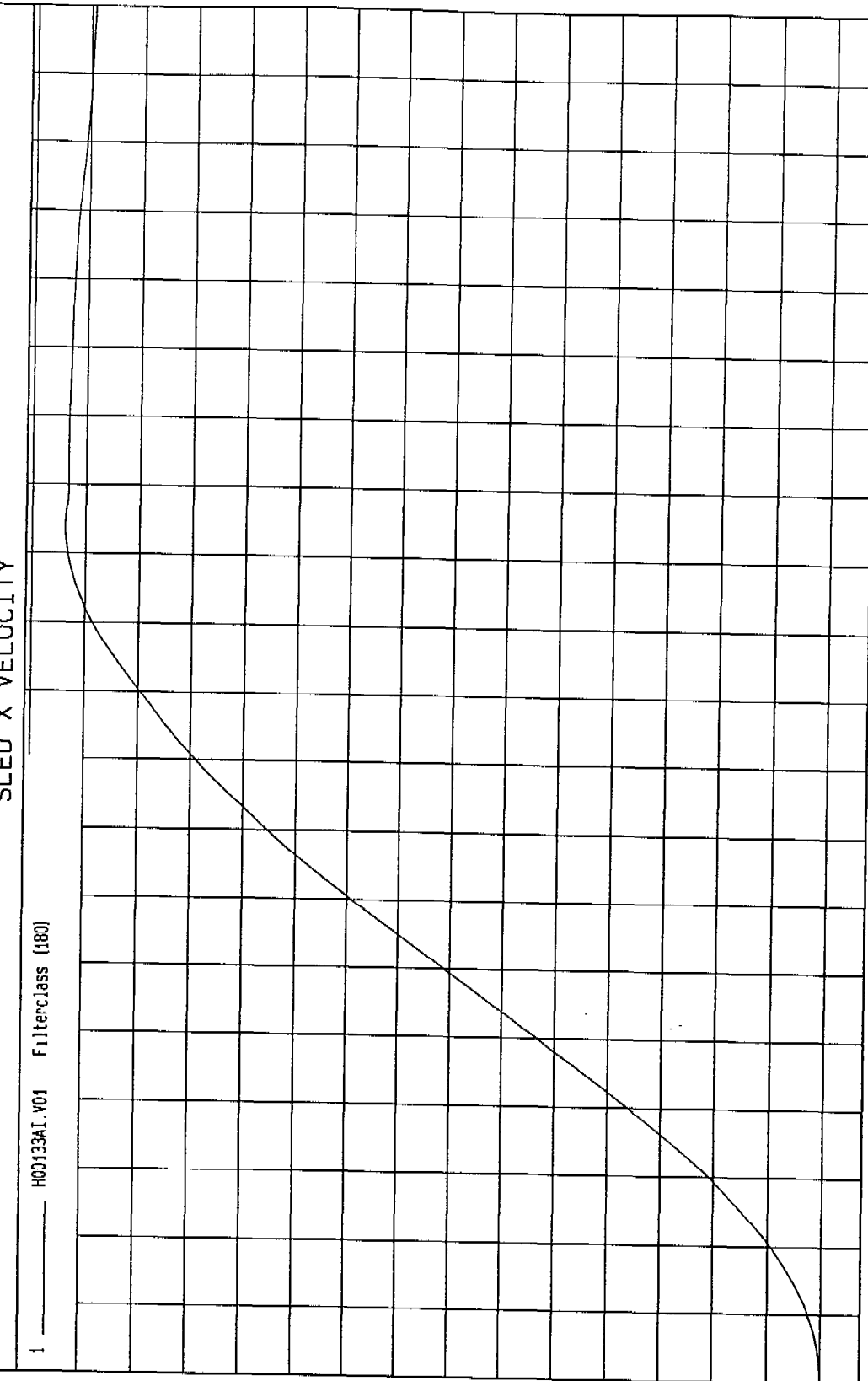
Minimum = 0 MPH at 0 msec

Maximum = 28.78 MPH at 124 msec

TEST: FMVSS 208 SLED (H00133)

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

TEST DATE: 05-11-2000



MGA Research
06-15-2000 15:30

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

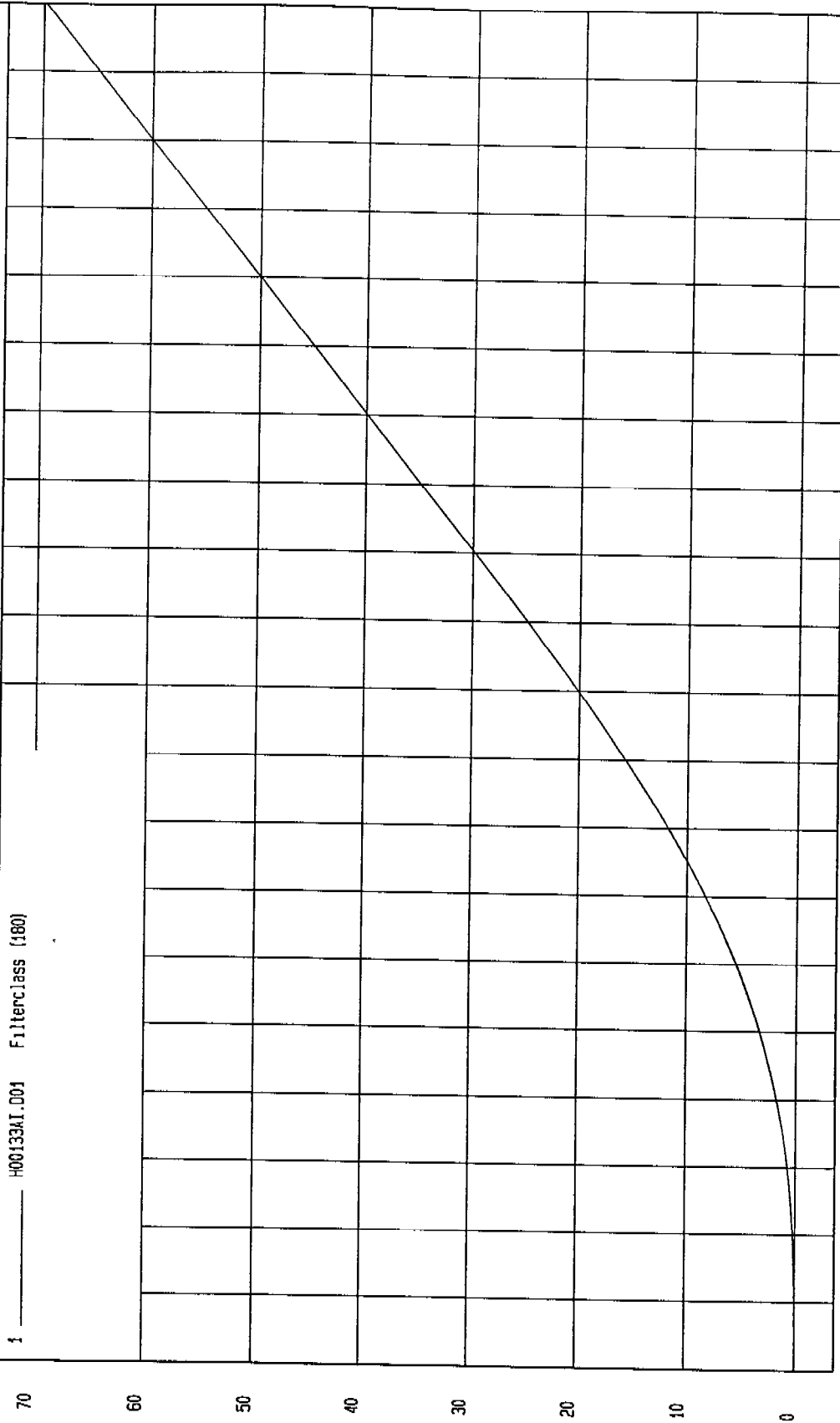
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = 0 IN at 0 msec

Maximum = 69.75 IN at 200 msec

SLED X DISPLACEMENT

1 — H00133A1.001 Filterclass (180)



TIME Seconds

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

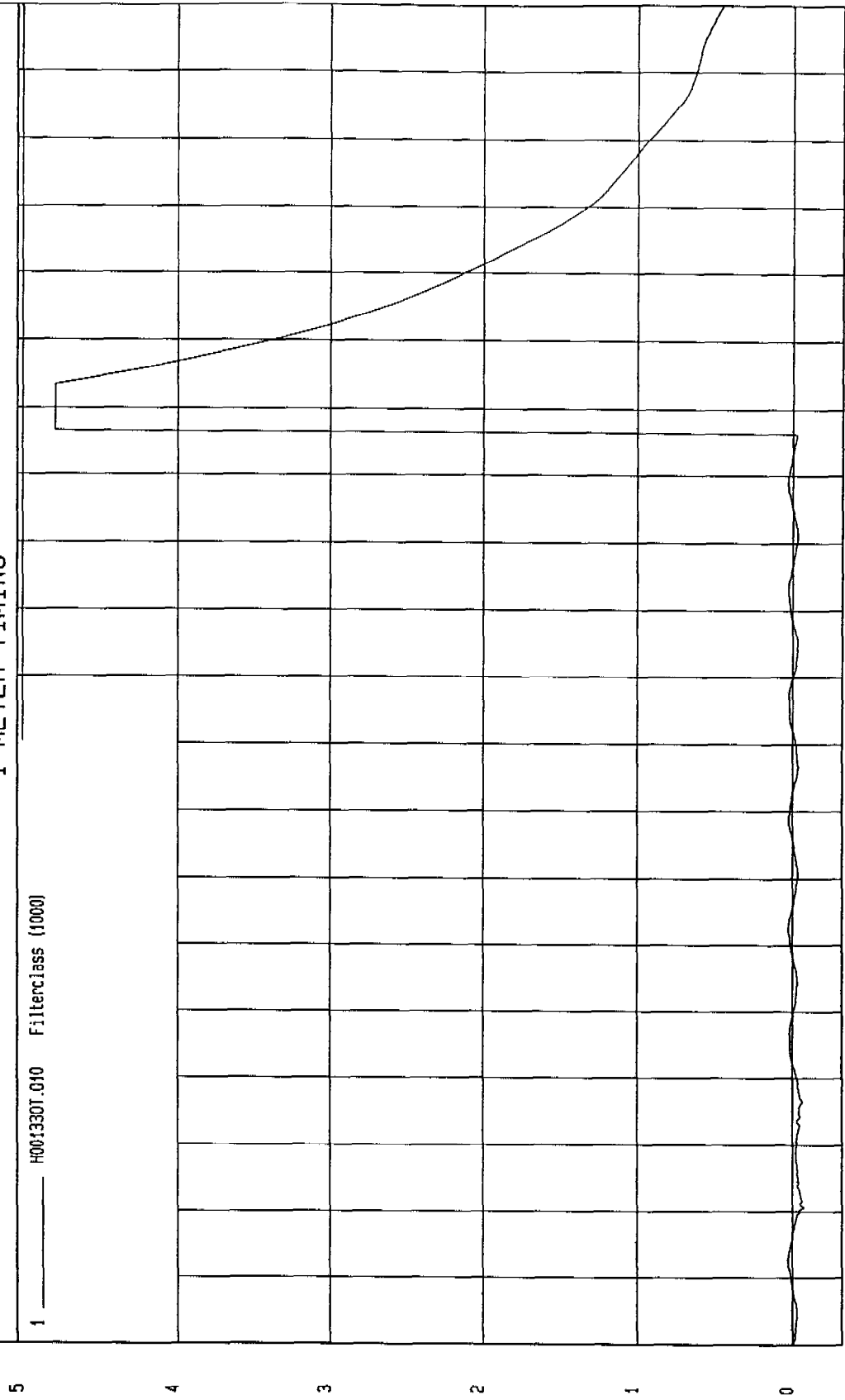
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -.07 VOLTS at 21 msec

Maximum = 4.79 VOLTS at 137 msec

1 METER TIMING

1 _____ H001330T.010 Filterclass (1000)



NSA Research
05-11-2000 12:45

TEST: FMVSS 208 SLED (H00133)

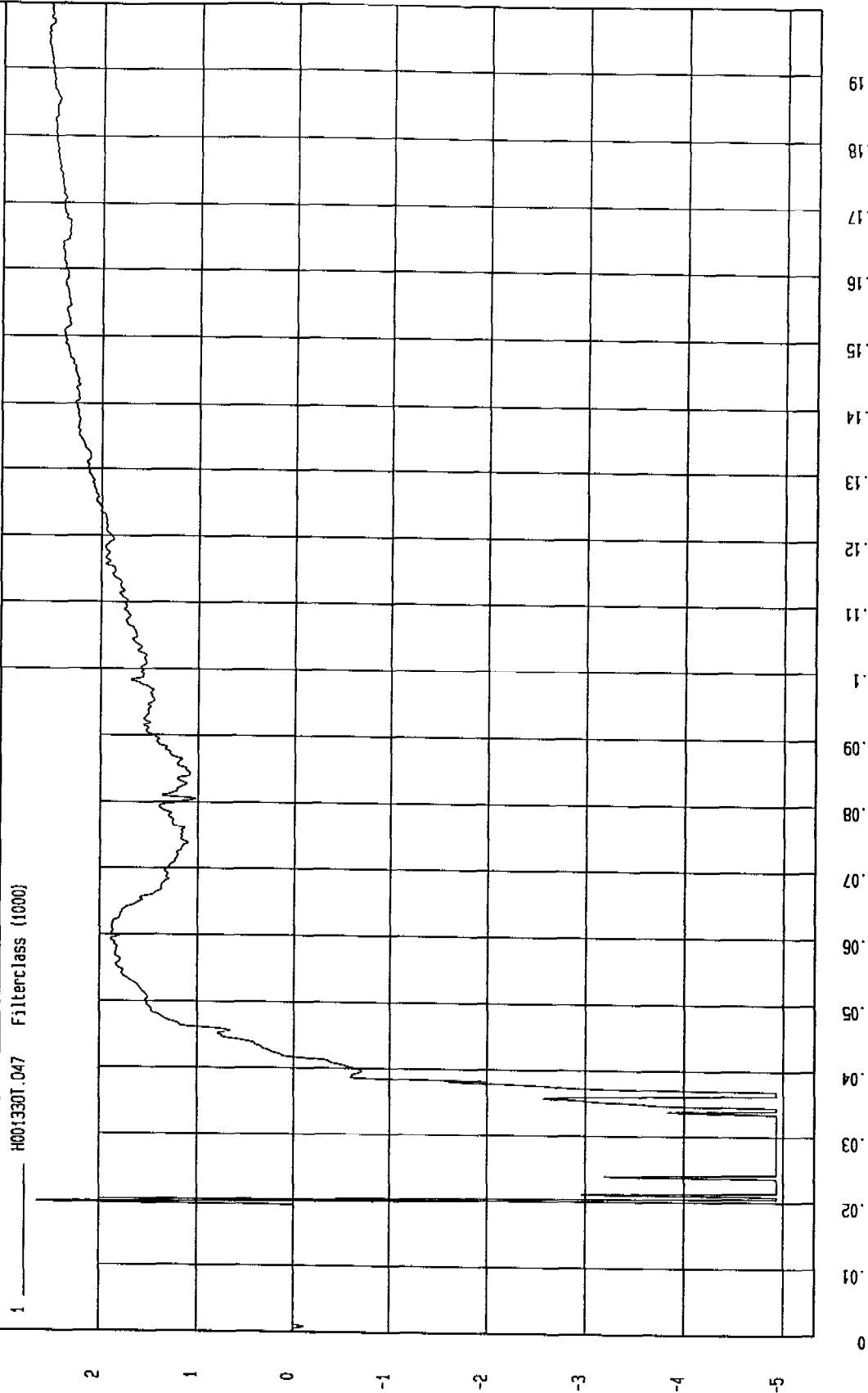
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -4.93 V at 20 msec

Maximum = 2.62 V at 20 msec

AIRBAG TIMING



MSA Research
05-11-2000 12:47

TEST: FMVSS 208 SLED (H00133)

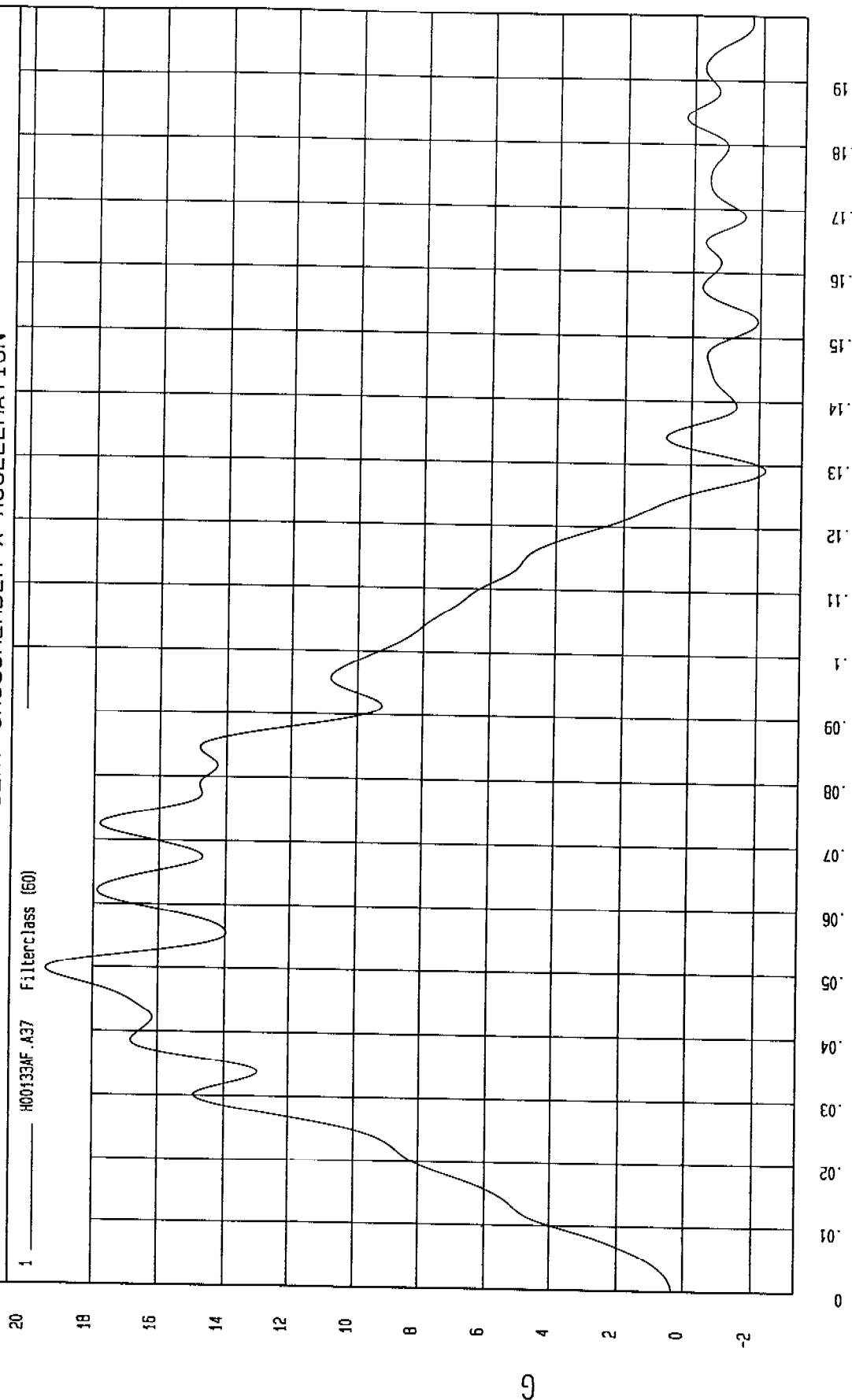
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -2.21 G at 129 msec

Maximum = 19.39 G at 50 msec

LEFT REAR SEAT CROSSMEMBER X ACCELERATION

MCA Research
05-11-2000 12:47

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

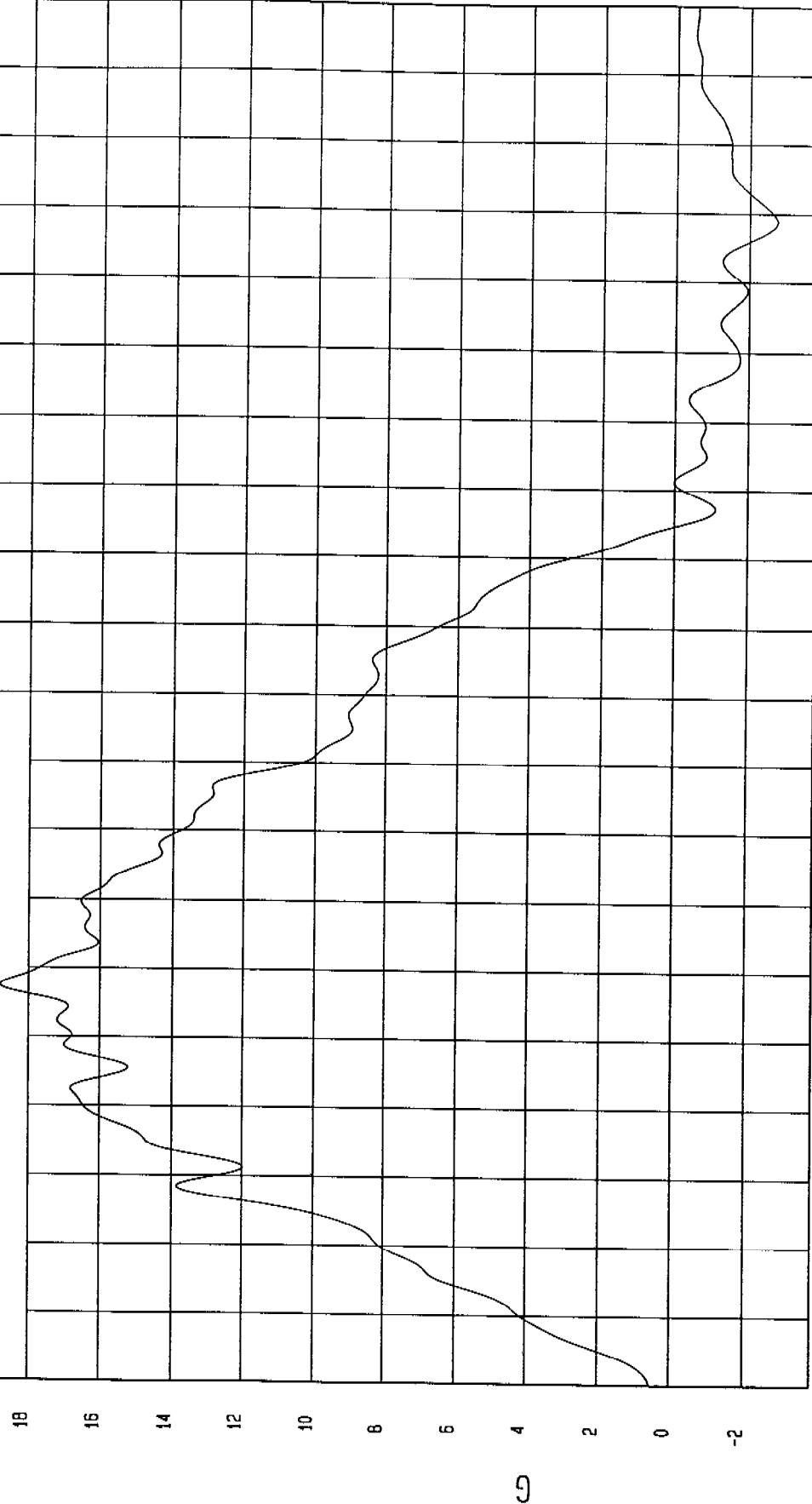
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5804)

Minimum = -2.77 G at 169 msec

Maximum = 18.77 G at 58 msec

RIGHT REAR SEAT CROSSMEMBER X ACCELERATION

1 ——— H00133AF.A41 FilterClass (50)



MSA Research
05-11-2000 12:47

TEST: FMVSS 208 SLED (H00133)

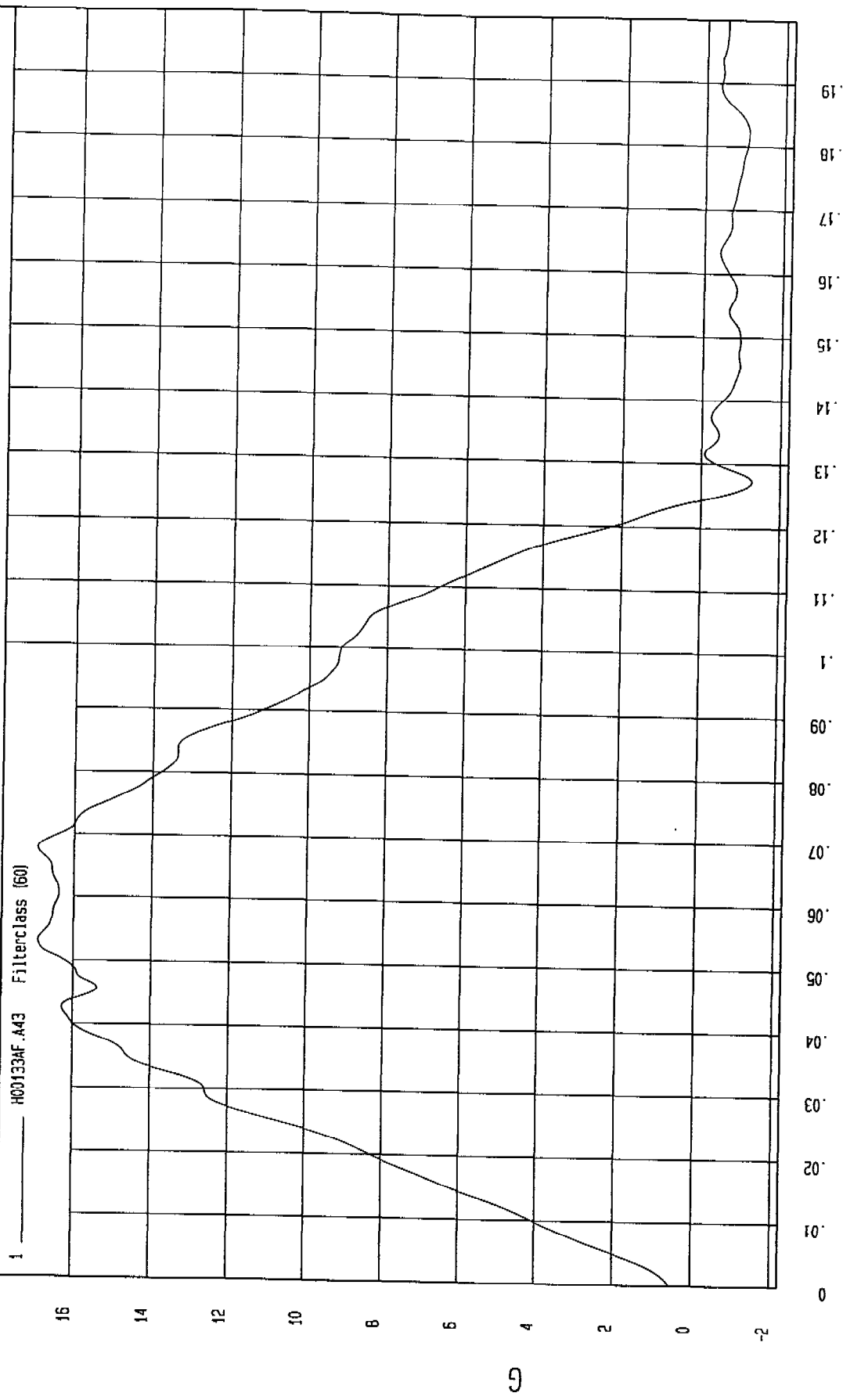
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -1.29 G at 127 msec

Maximum = 16.91 G at 68 msec

TOP OF ENGINE X ACCELERATION



MCA Research
05-11-2000 12:47

TEST DATE: 05-11-2000

TEST: FMVSS 208 SLED (H00133)

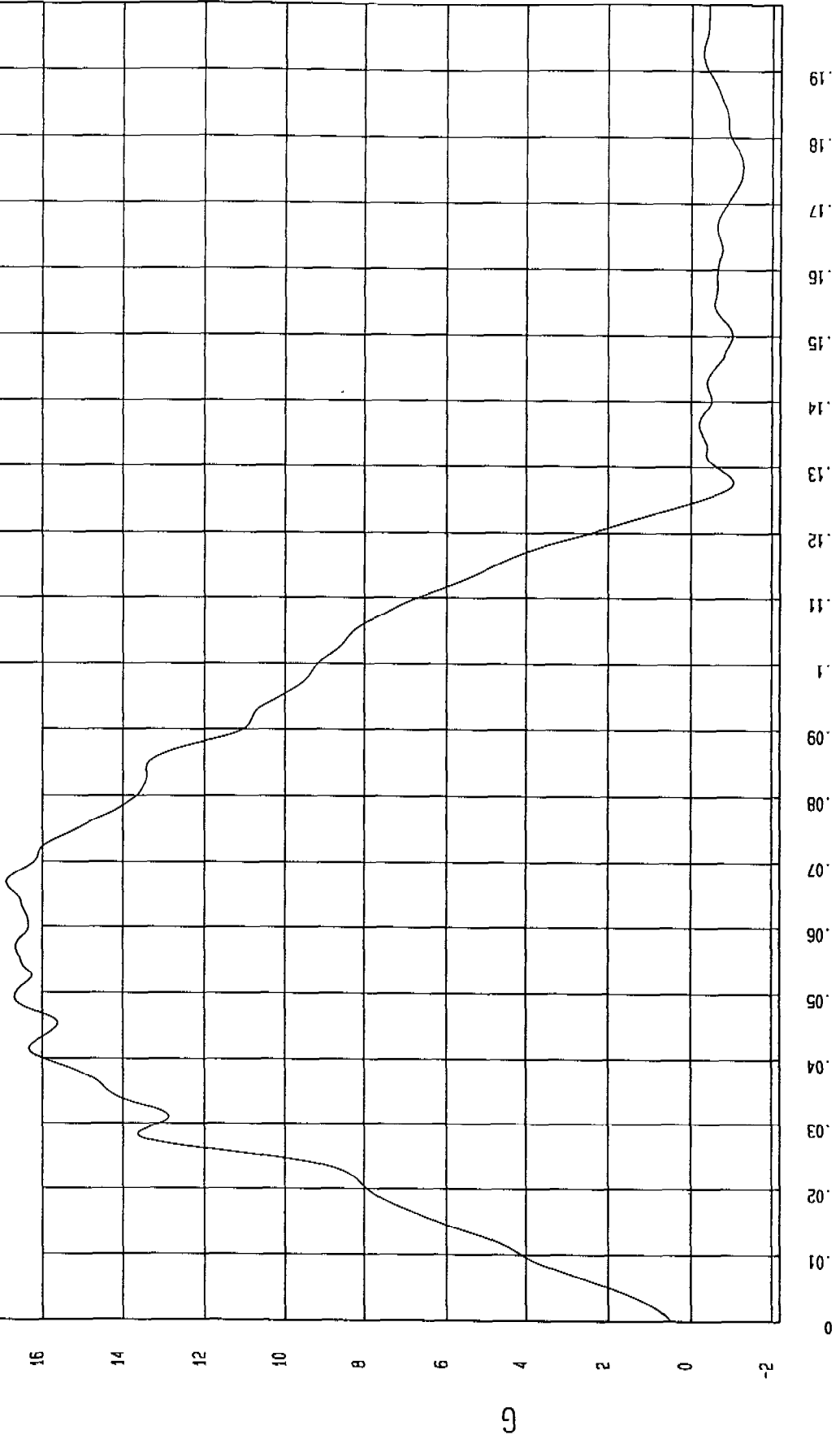
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Maximum = 16.87 G at 57 msec

Minimum = -1.29 G at 175 msec

REAR AXLE X ACCELERATION

1 H00133AF.A44 Filterclass (60)



WCA Research
05-11-2000 12:47

TEST DATE: 05-11-2000

TEST: FMVSS 208 SLED (H00133)

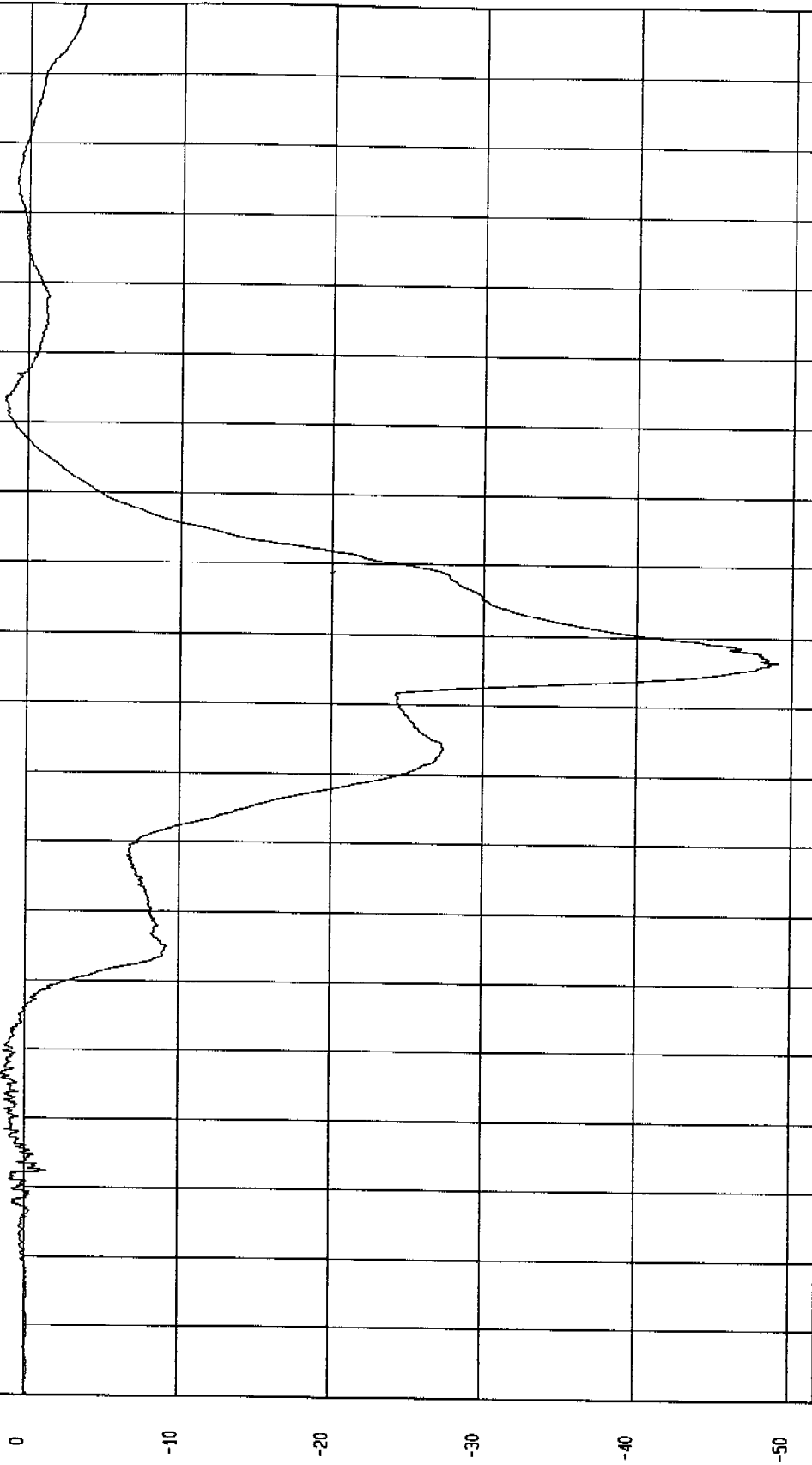
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -49.13 G at 107 msec

Maximum = 1.57 G at 46 msec

DRIVER HEAD X ACCELERATION

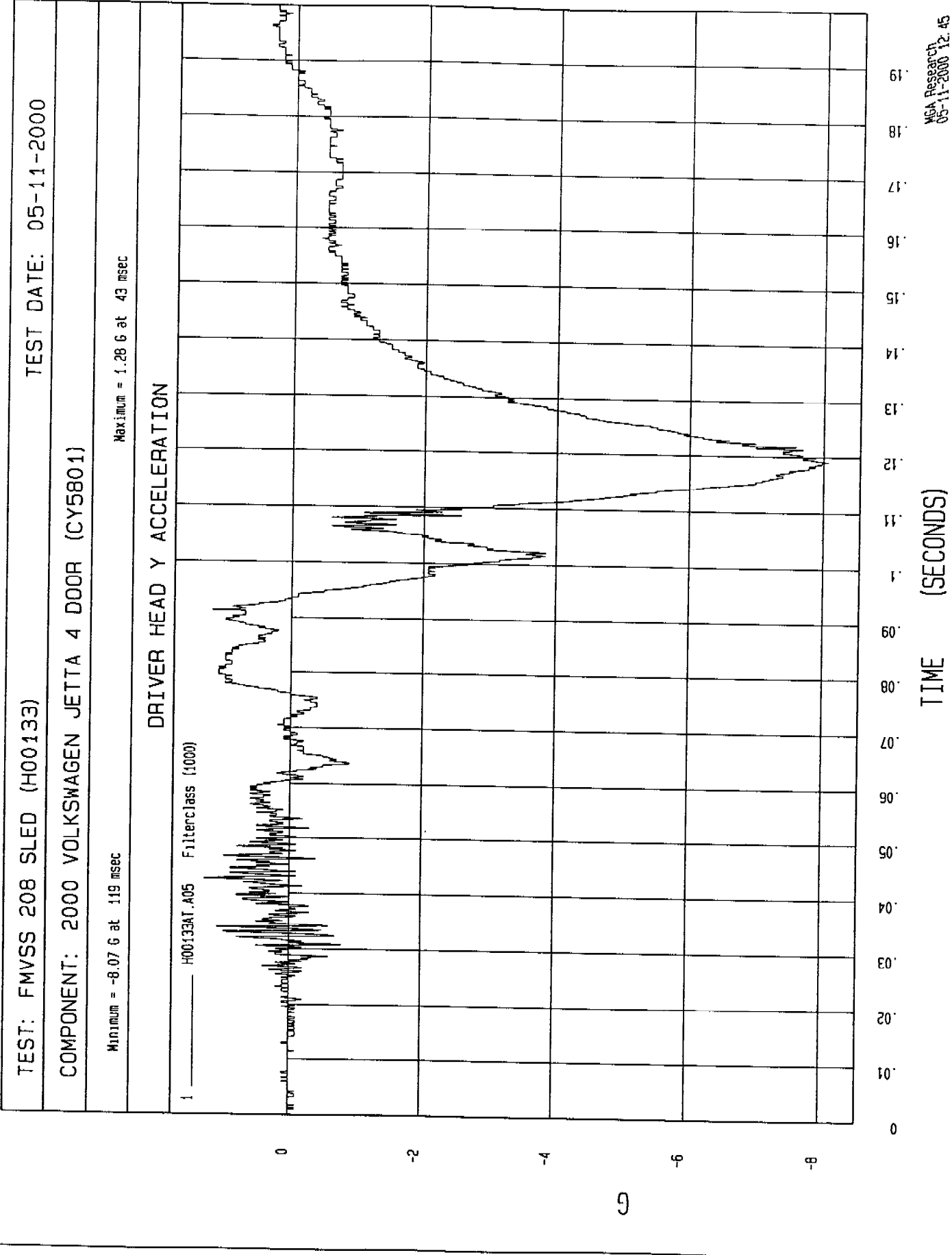
1 H00133AT.A03 Filterclass (1000)



MCA Research
05-11-2000 12:45

TIME (SECONDS)

G



MEA Research
05-11-2000 12:45

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

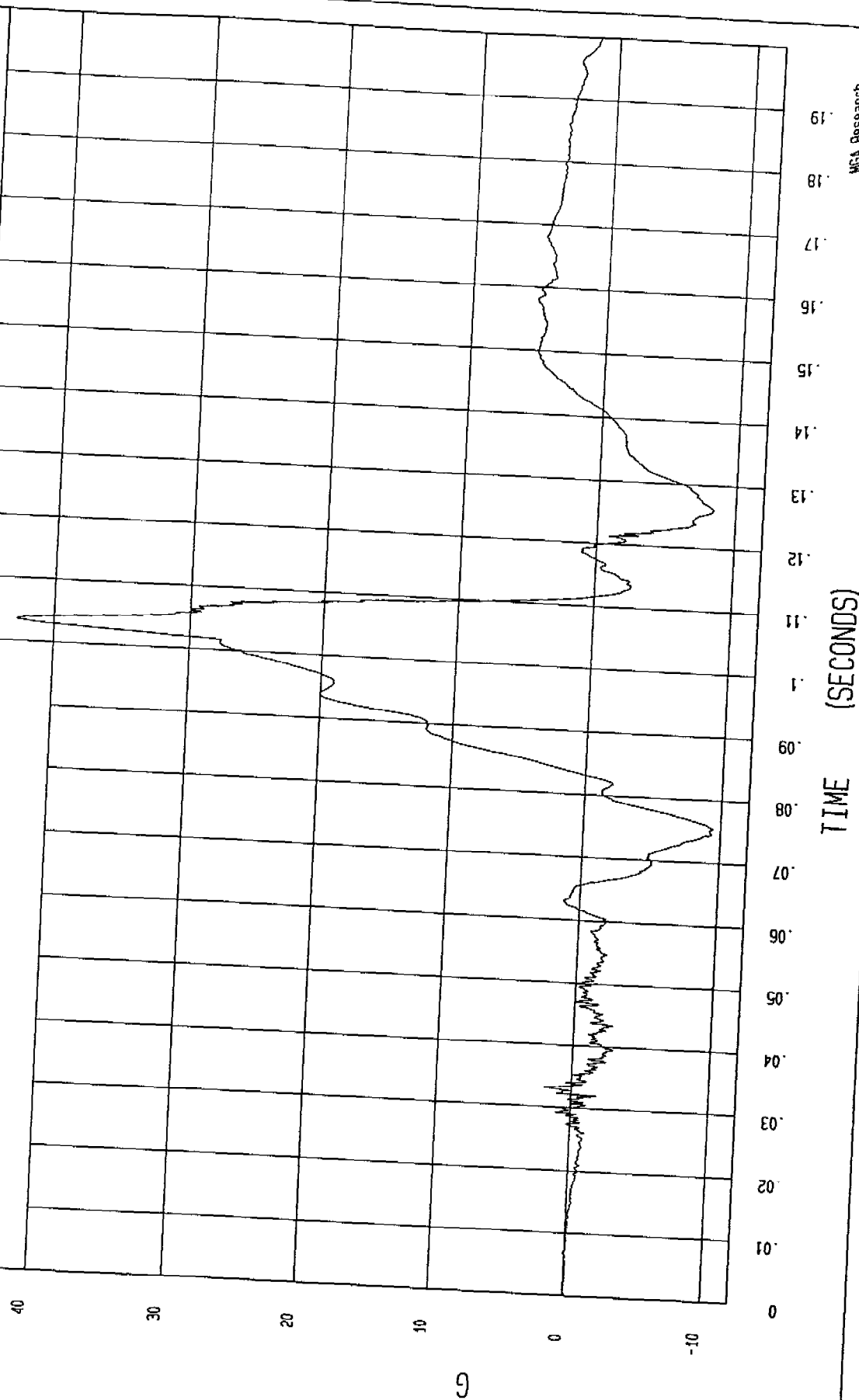
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -9.41 G at 75 msec

Maximum = 42.67 G at 104 msec

DRIVER HEAD Z ACCELERATION

1 H00133AT.A06 FilterClass (1000)



TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = 5.08E-02 G at 0 msec

Maximum = 58.94 G at 104 msec

DRIVER HEAD RESULTANT ACCELERATION

1 H00133AV.A03 FilterClass (1000)

60

50

40

30

20

10

0

G

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

.16

.17

.18

.19

TIME (SECONDS)

MCA Research
05-11-2000 12:45

TEST: FMVSS 208 SLED (H00133)

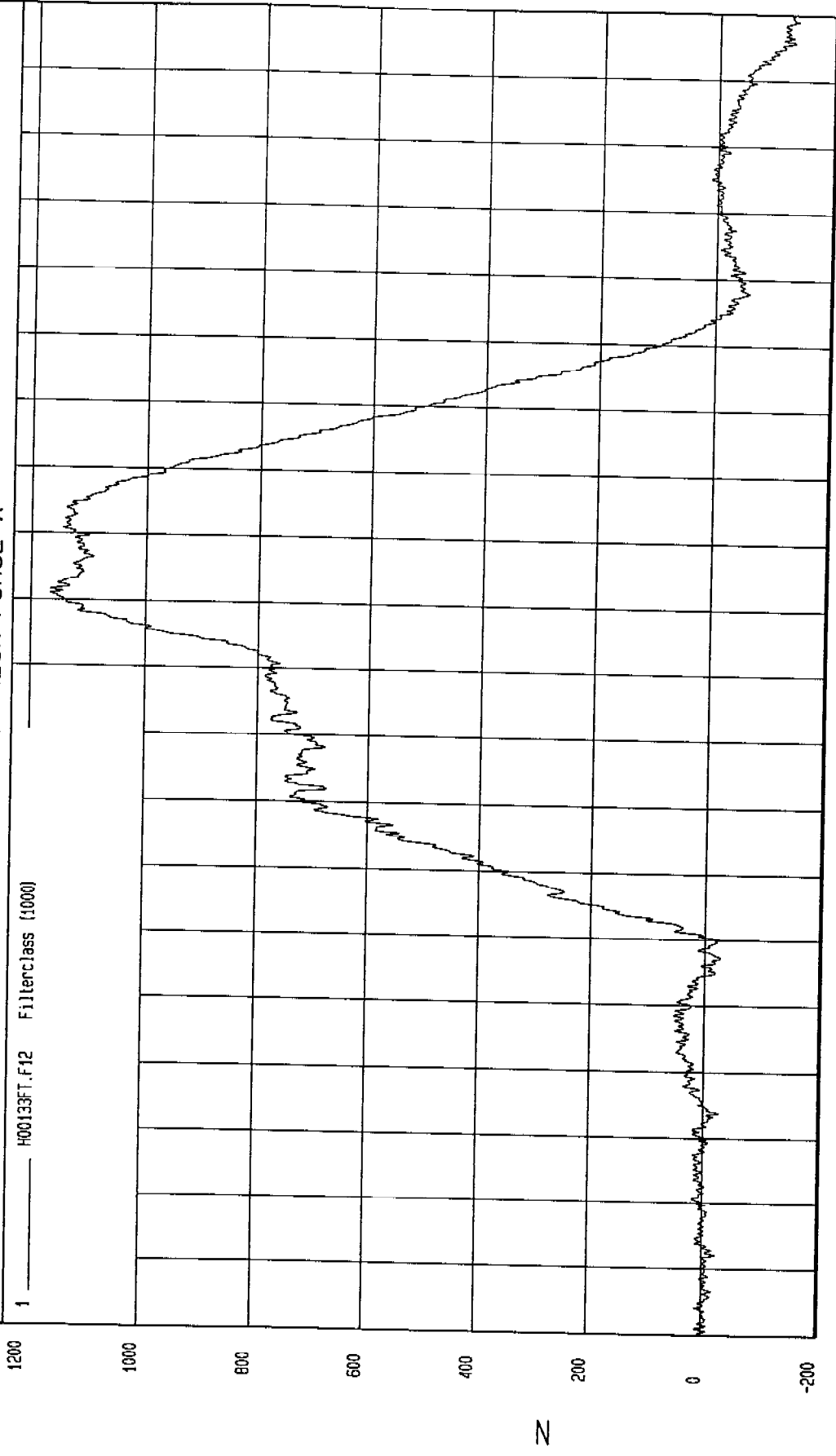
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -136.27 N at 199 msec

Maximum = 1166.12 N at 111 msec

DRIVER NECK FORCE X



MGA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

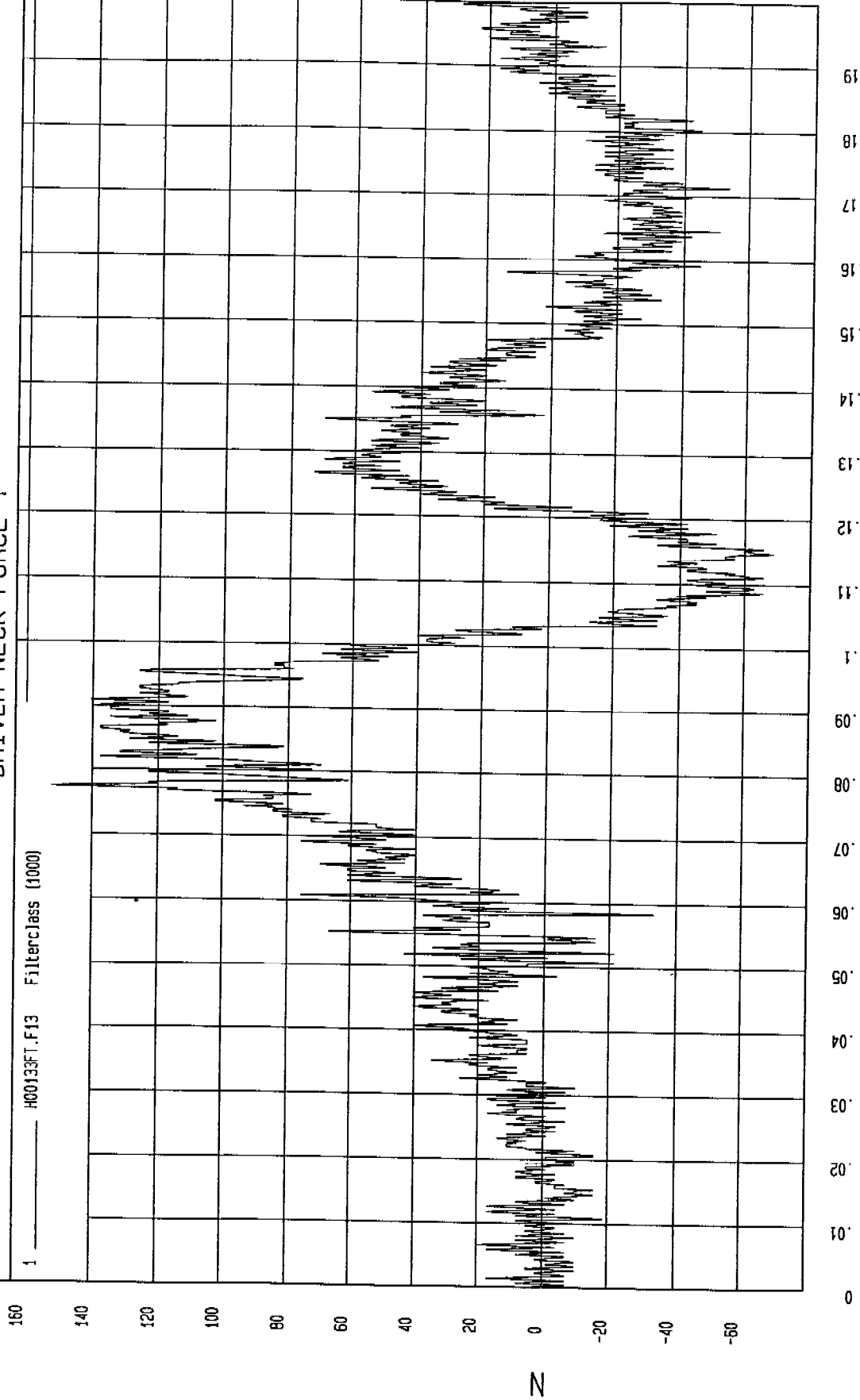
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -68.62 N at 115 msec

Maximum = 152.3 N at 77 msec

DRIVER NECK FORCE Y

1 H00133FT.F13 Filterclass (1000)



TEST: FMVSS 208 SLED (H00133)

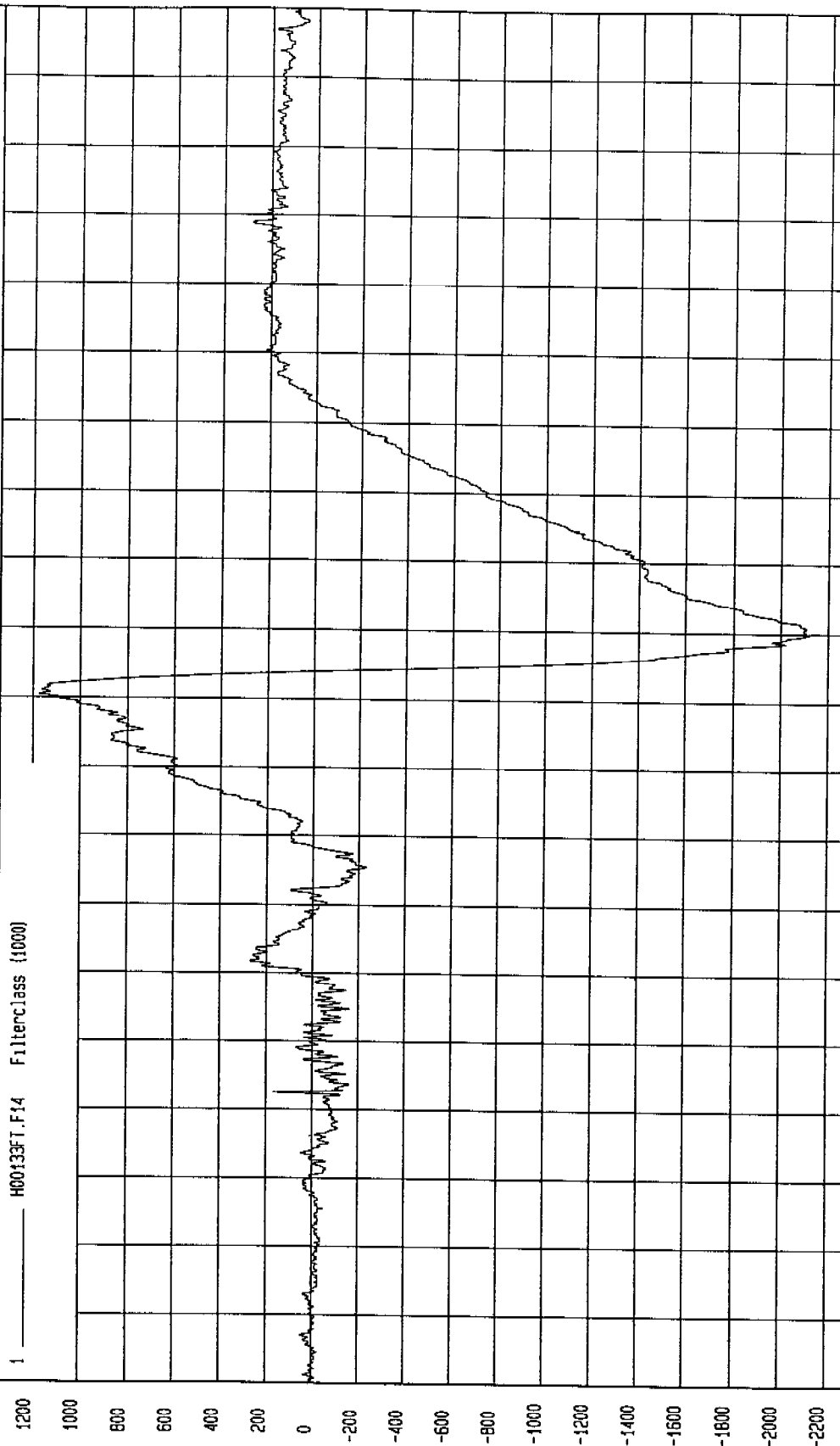
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -2121.18 N at 110 msec

Maximum = 1174.98 N at 100 msec

DRIVER NECK FORCE Z



MCA Research
05-11-2000 12:46

TIME (SECONDS)

N

TEST: FMVSS 208 SLED (H00133)

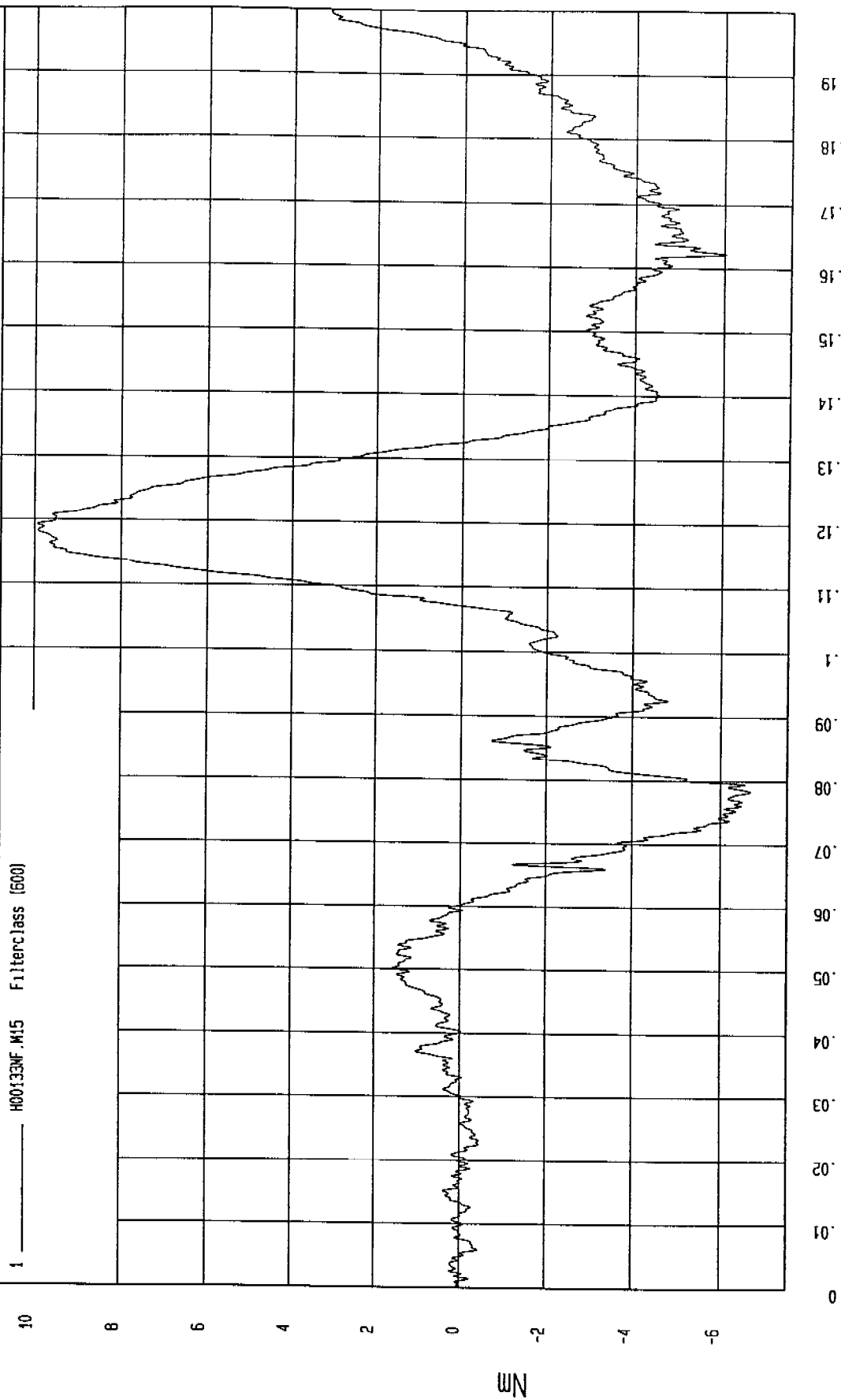
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -6.7 Nm at 78 msec

Maximum = 9.94 Nm at 119 msec

DRIVER NECK MOMENT X

MGA Research
05-11-2000 12:46

TIME (SECONDS)

MOA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

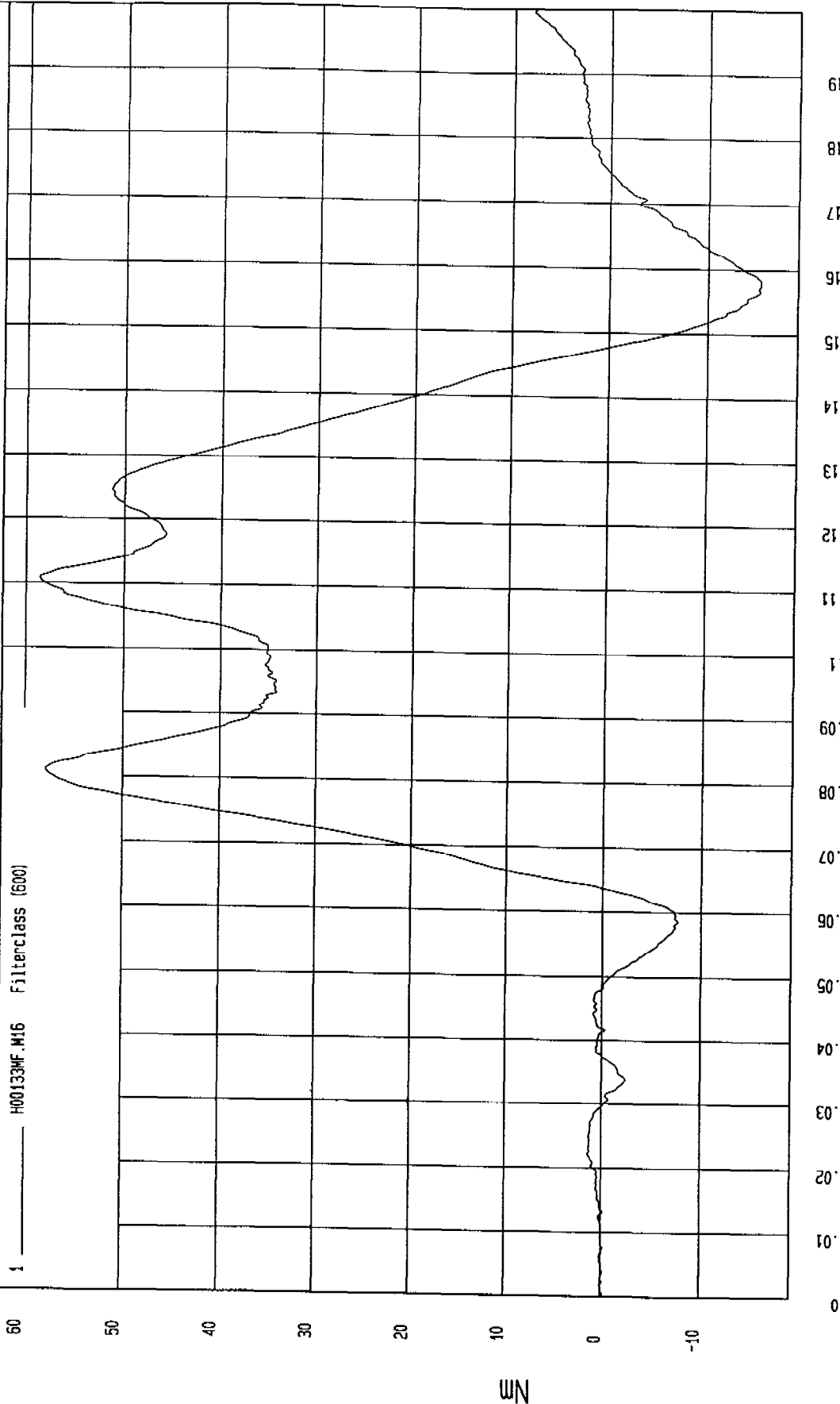
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -15.36 Nm at 158 msec

Maximum = 58.62 Nm at 111 msec

DRIVER NECK MOMENT Y

1 — H00133MF.M16 Filterclass (600)



TEST: FMVSS 208 SLED (H00133)

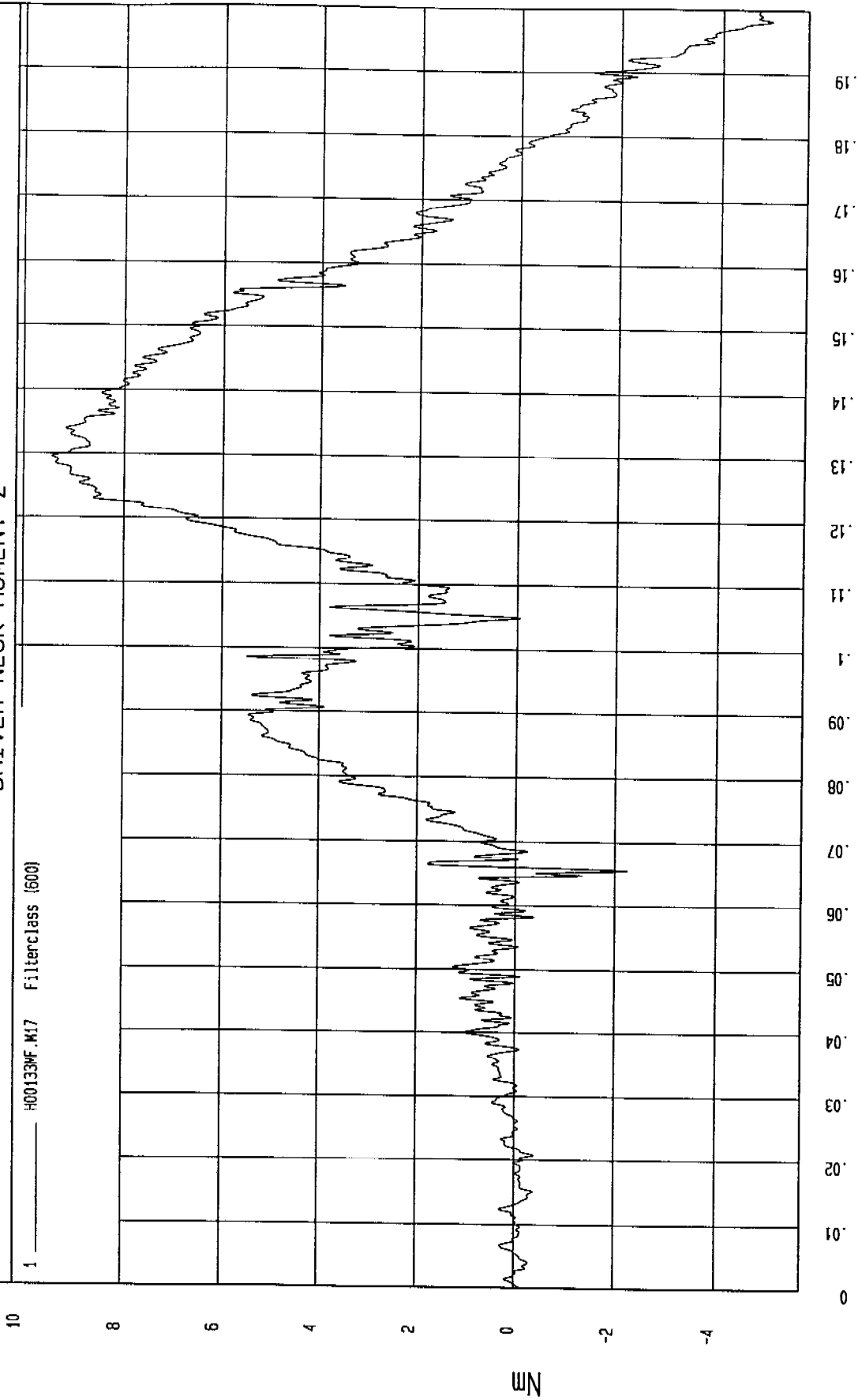
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -4.97 Nm at 198 msec

Maximum = 9.43 Nm at 130 msec

DRIVER NECK MOMENT Z



TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

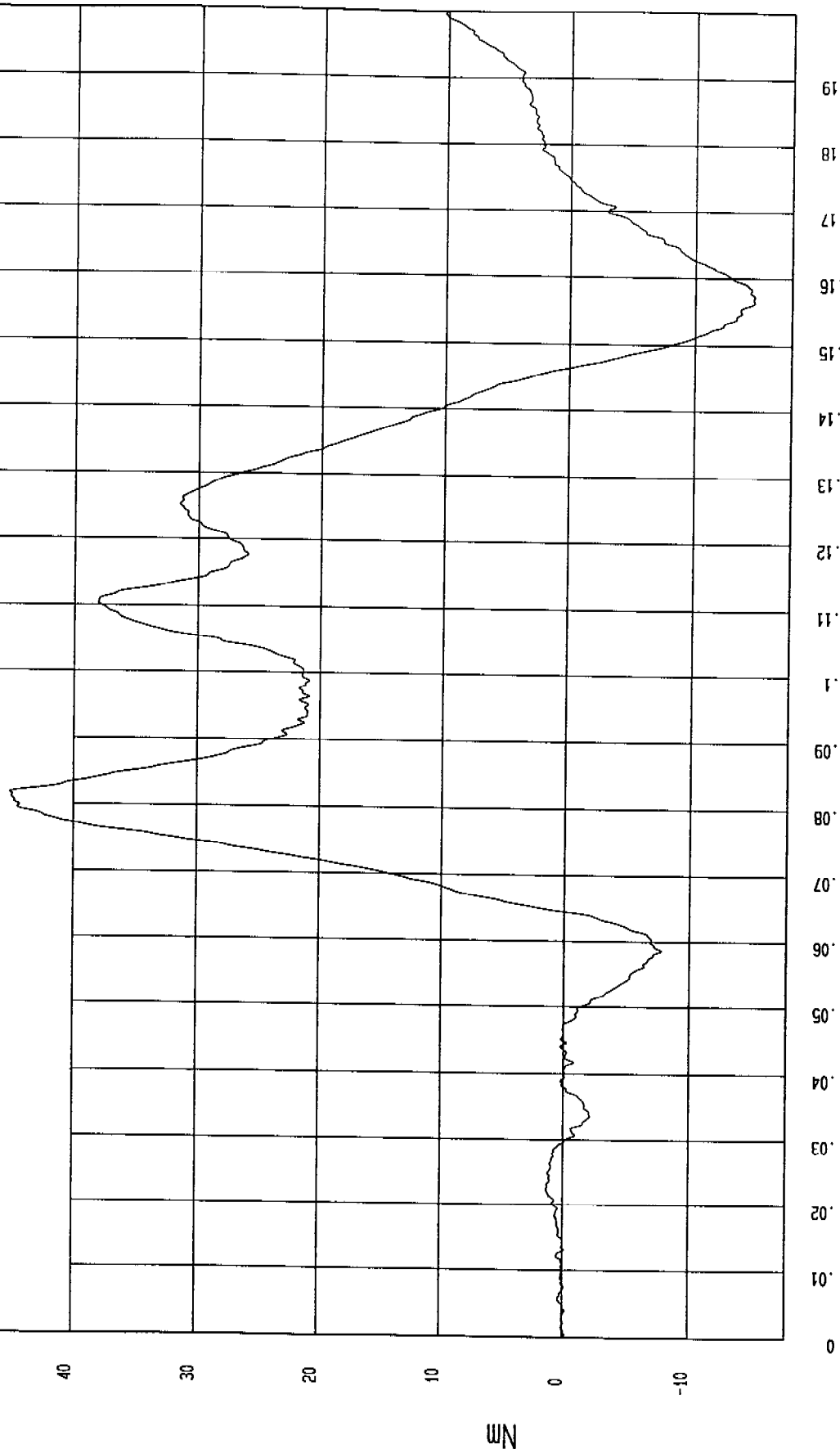
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -14.68 Nm at 155 msec

Maximum = 45.05 Nm at 82 msec

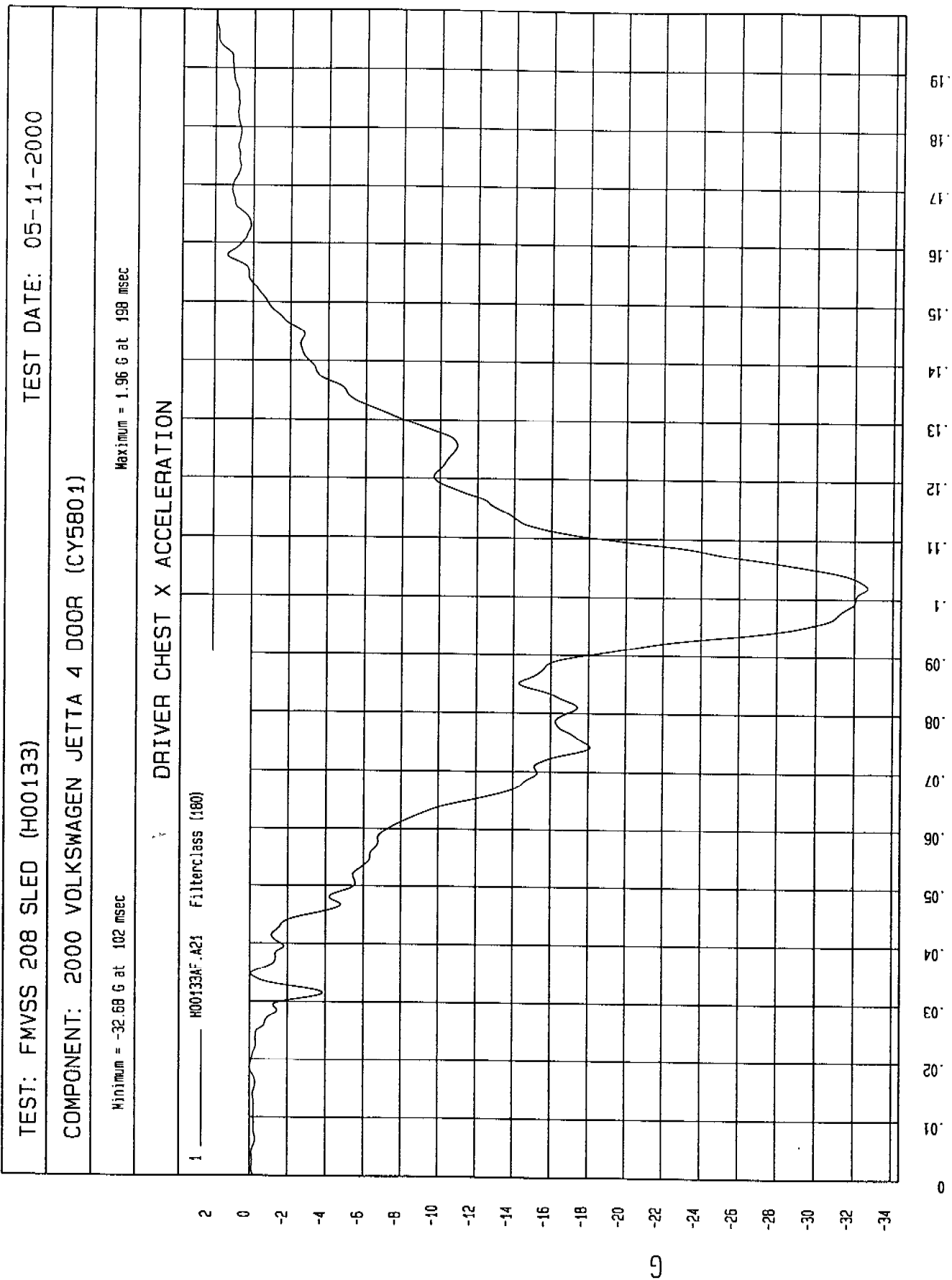
DRIVER OCCIPITAL CONDYLE MOMENT Y

1 H00133MO.M16 Filterclass (500)



TIME (SECONDS)

MGA Research
05-11-2000 12:54



MGA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

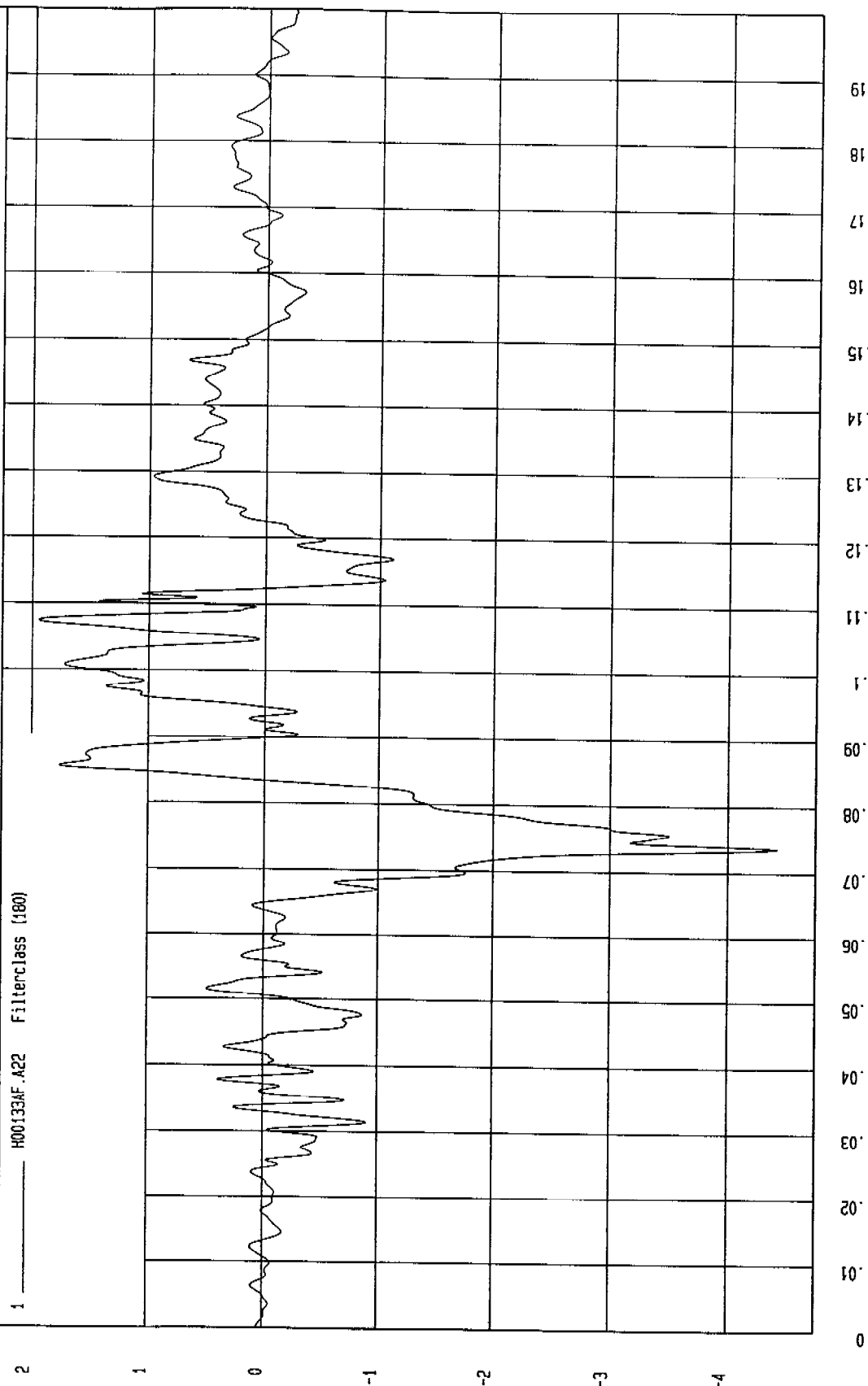
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -4.42 G at 74 msec

Maximum = 1.94 G at 108 msec

DRIVER CHEST Y ACCELERATION

MCA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

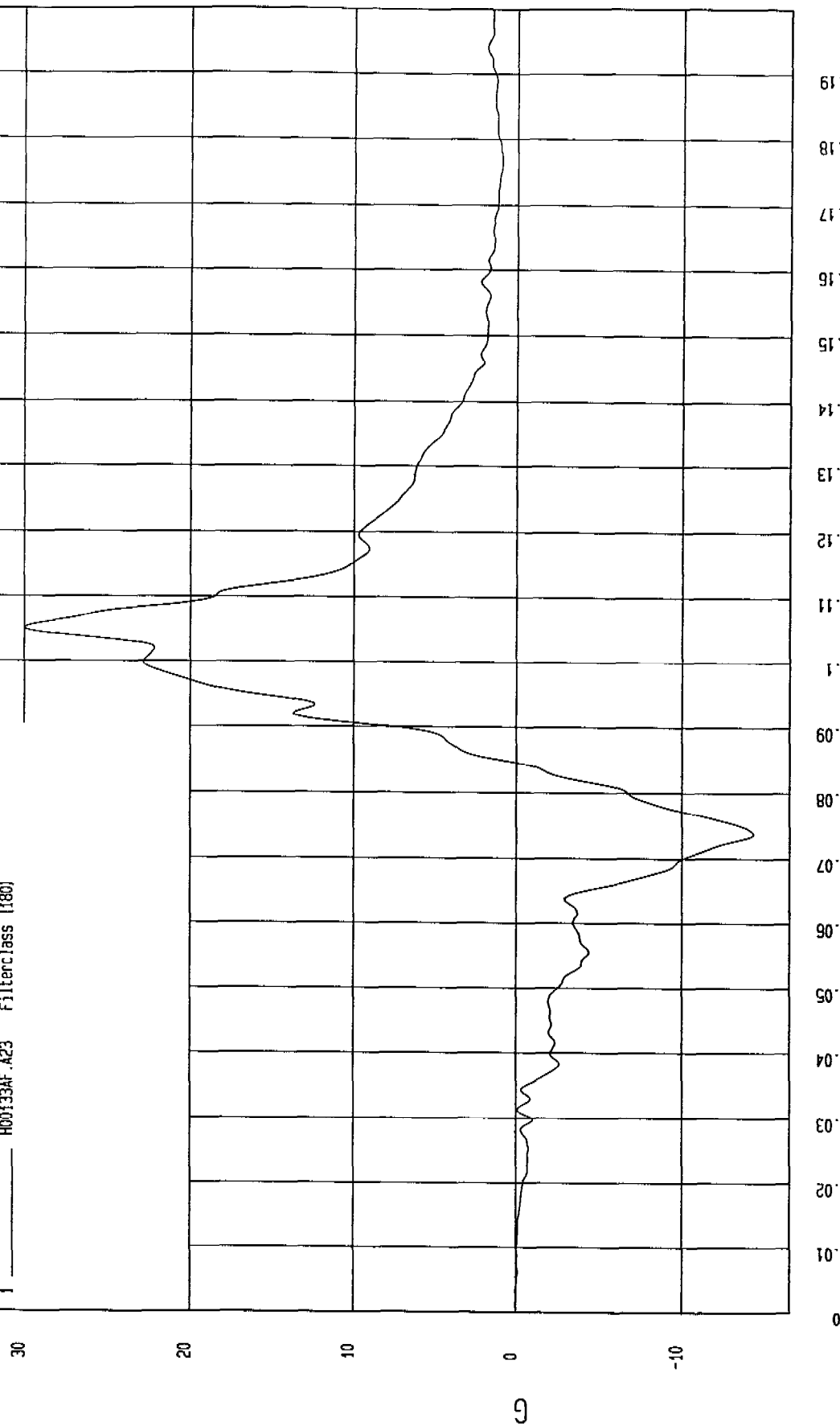
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -14.21 G at 74 msec

Maximum = 29.98 G at 105 msec

DRIVER CHEST Z ACCELERATION

1 H00133AF.A23 FilterClass (180)

MGA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

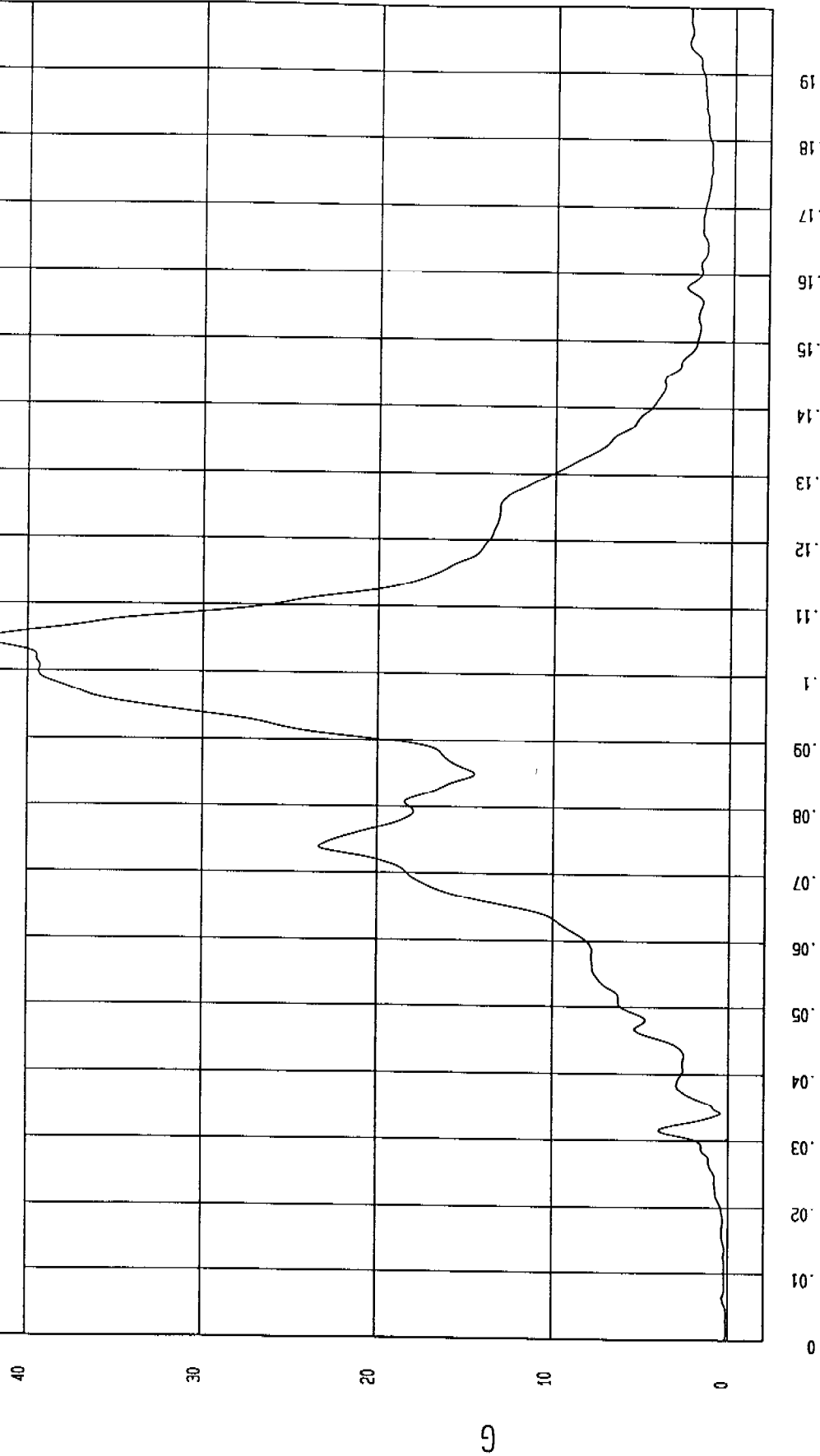
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = .11 G at 1 msec

Maximum = 42.45 G at 105 msec

DRIVER CHEST RESULTANT ACCELERATION

1 H00133AV.A21 Filterclass (180)



MSA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

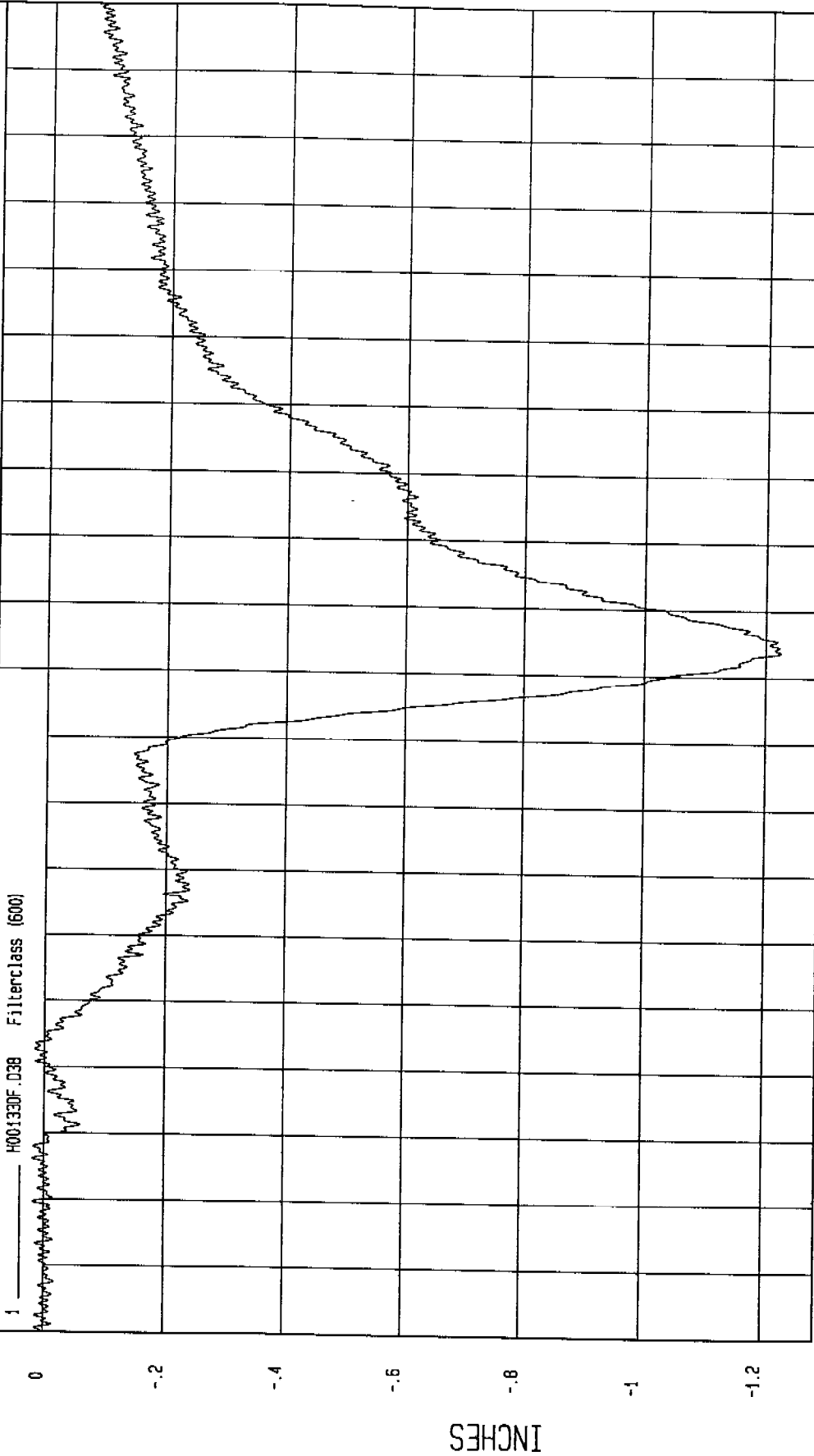
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -1.23 INCHES at 104 msec

Maximum = 1.89E-02 INCHES at 26 msec

DRIVER CHEST COMPRESSION



TEST: FMVSS 208 SLED (H00133)

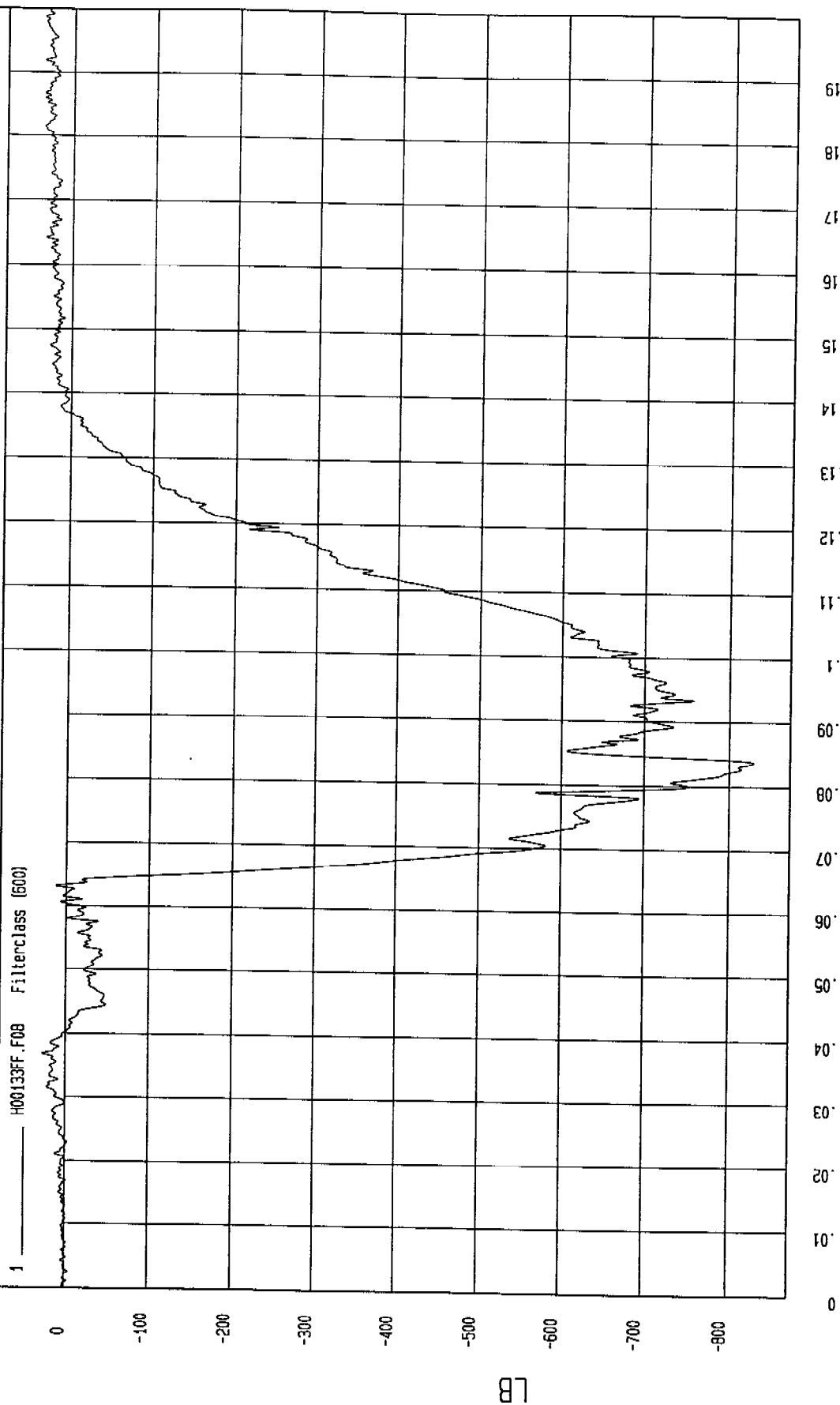
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -829.22 LB at 84 msec

Maximum = 34.57 LB at 199 msec

DRIVER LEFT FEMUR FORCE



TEST: FMVSS 208 SLED (H00133)

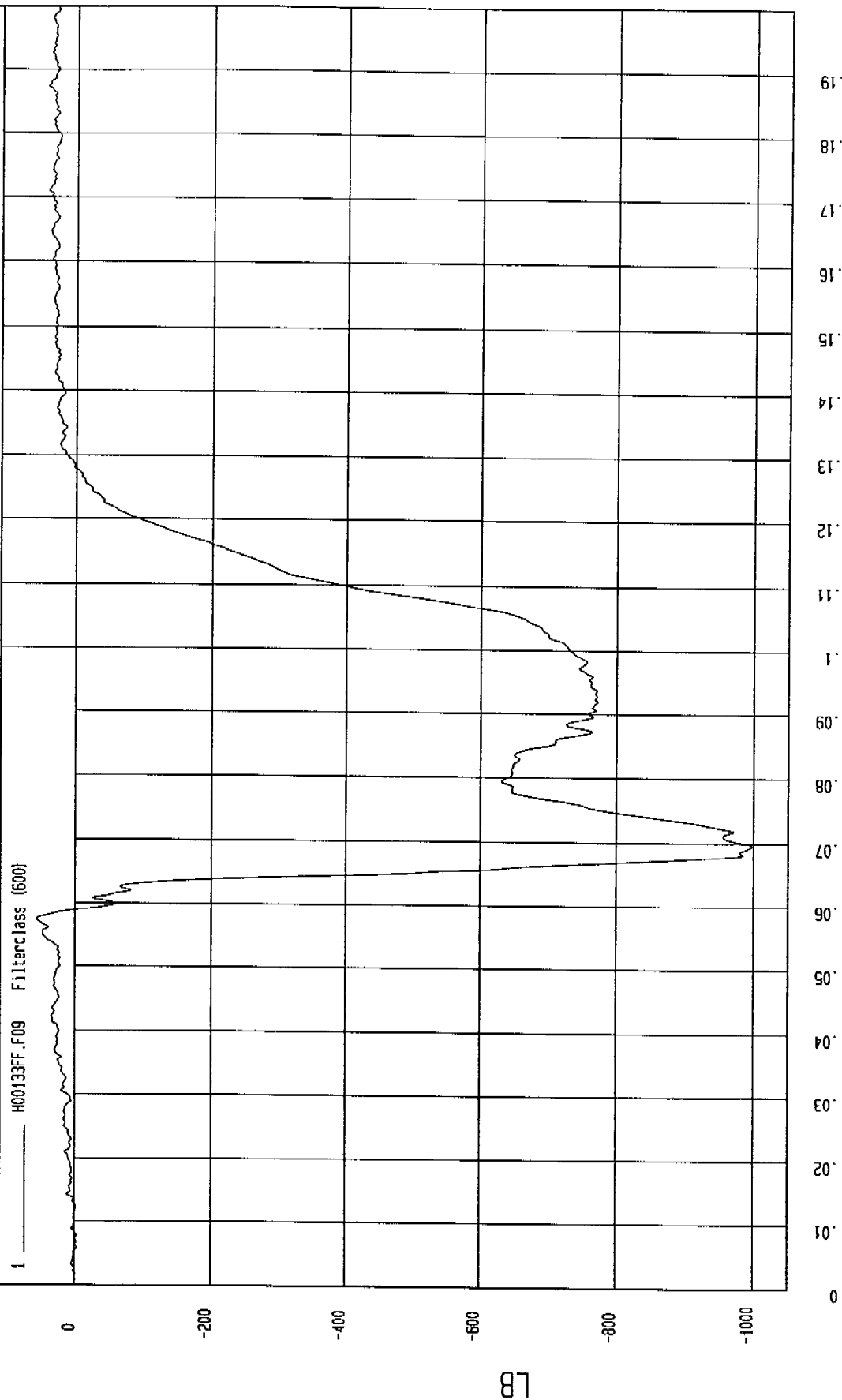
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -997.62 LB at 70 msec

Maximum = 55.73 LB at 57 msec

DRIVER RIGHT FEMUR FORCE



TIME (SECONDS)

MCA Research
05-11-2000 12:47

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

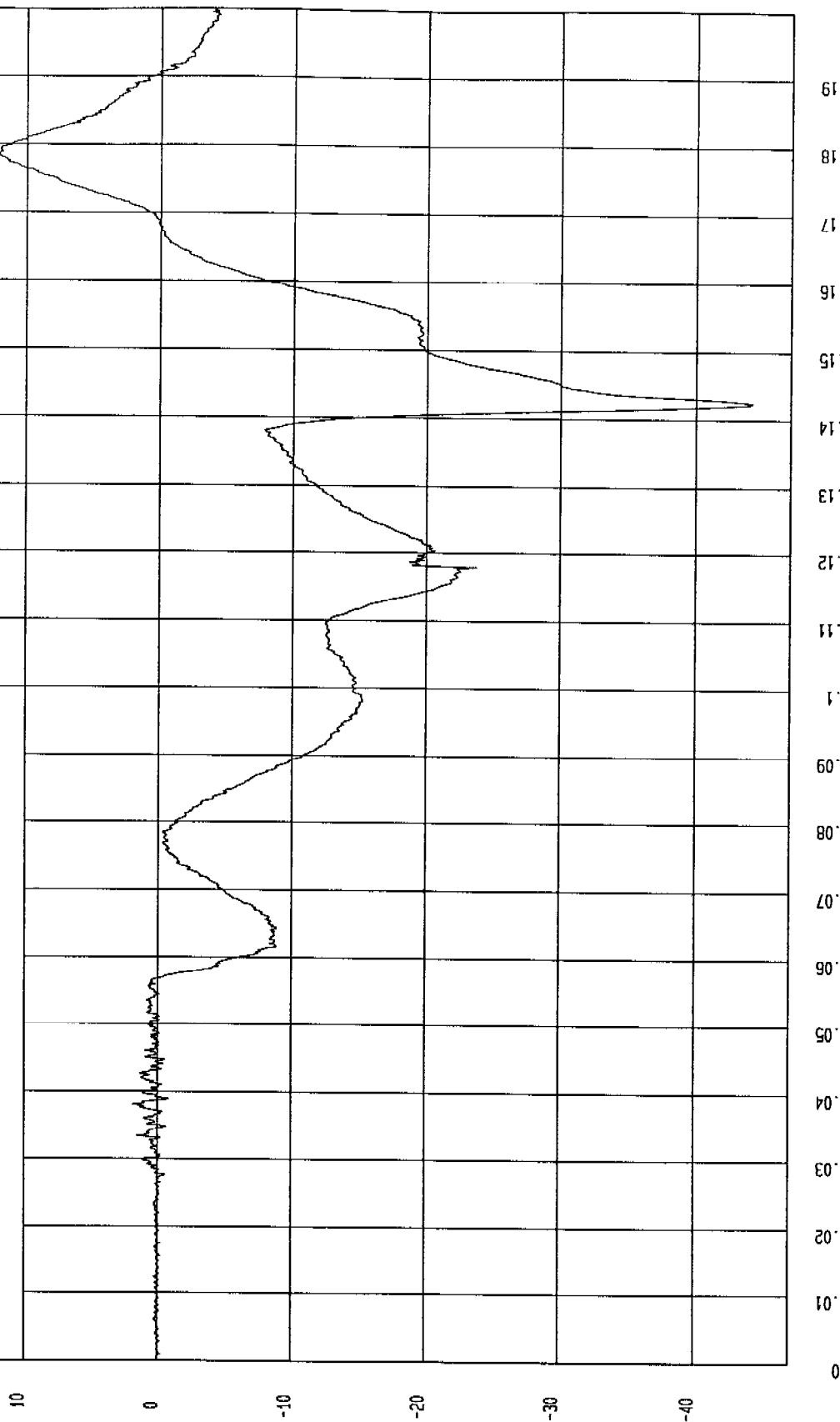
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -44.16 G at 142 msec

Maximum = 12.14 G at 179 msec

PASSENGER HEAD X ACCELERATION

1 H00133AT.A24 Filterclass (1000)

MSA Research
05-11-2000 12:46

TIME (SECONDS)

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

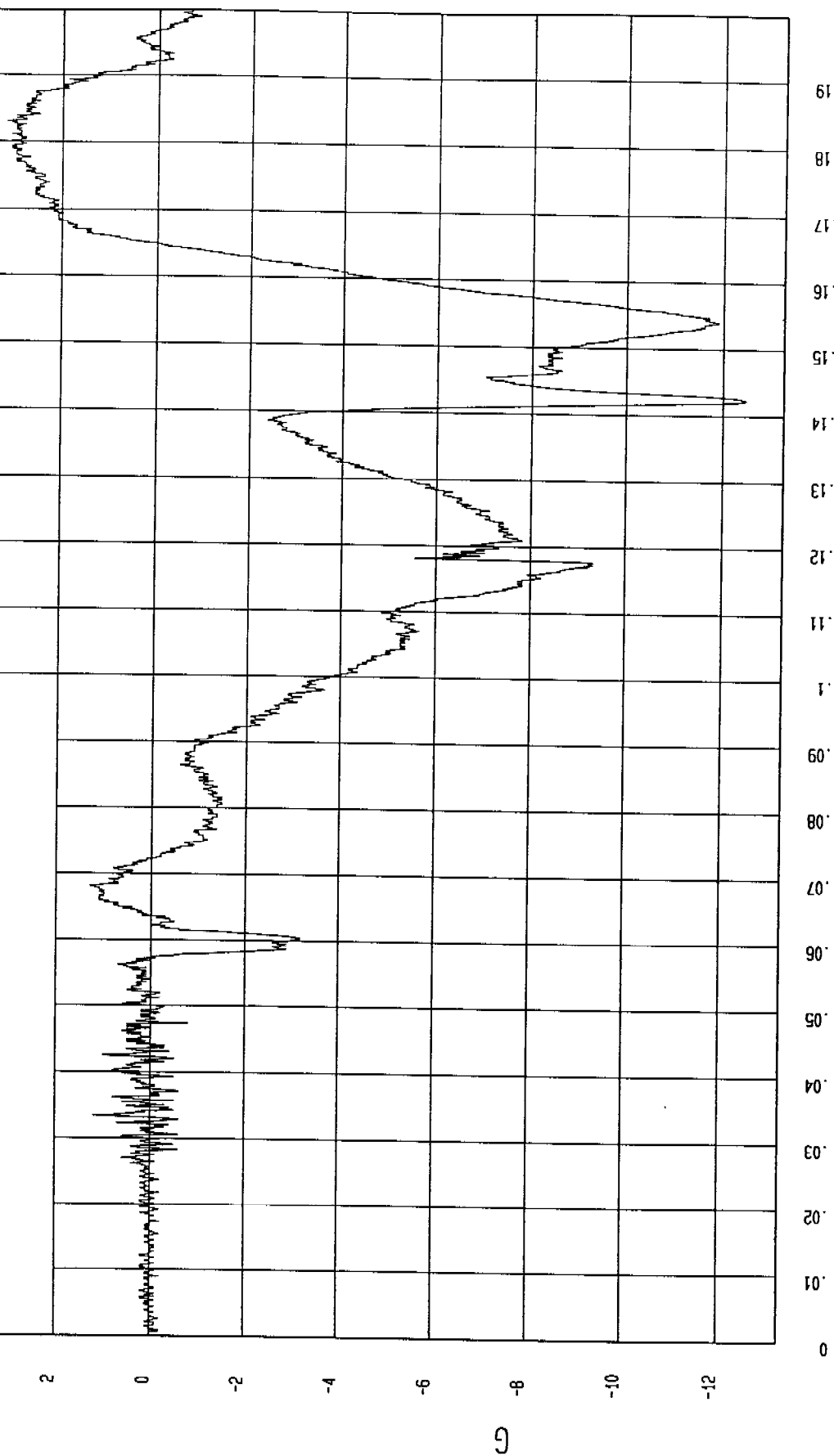
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -12.48 G at 142 msec

Maximum = 3.17 G at 183 msec

PASSENGER HEAD Y ACCELERATION

1 _____ H00133A1.A25 Filterclass (1000)



TIME (SECONDS)

MCA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

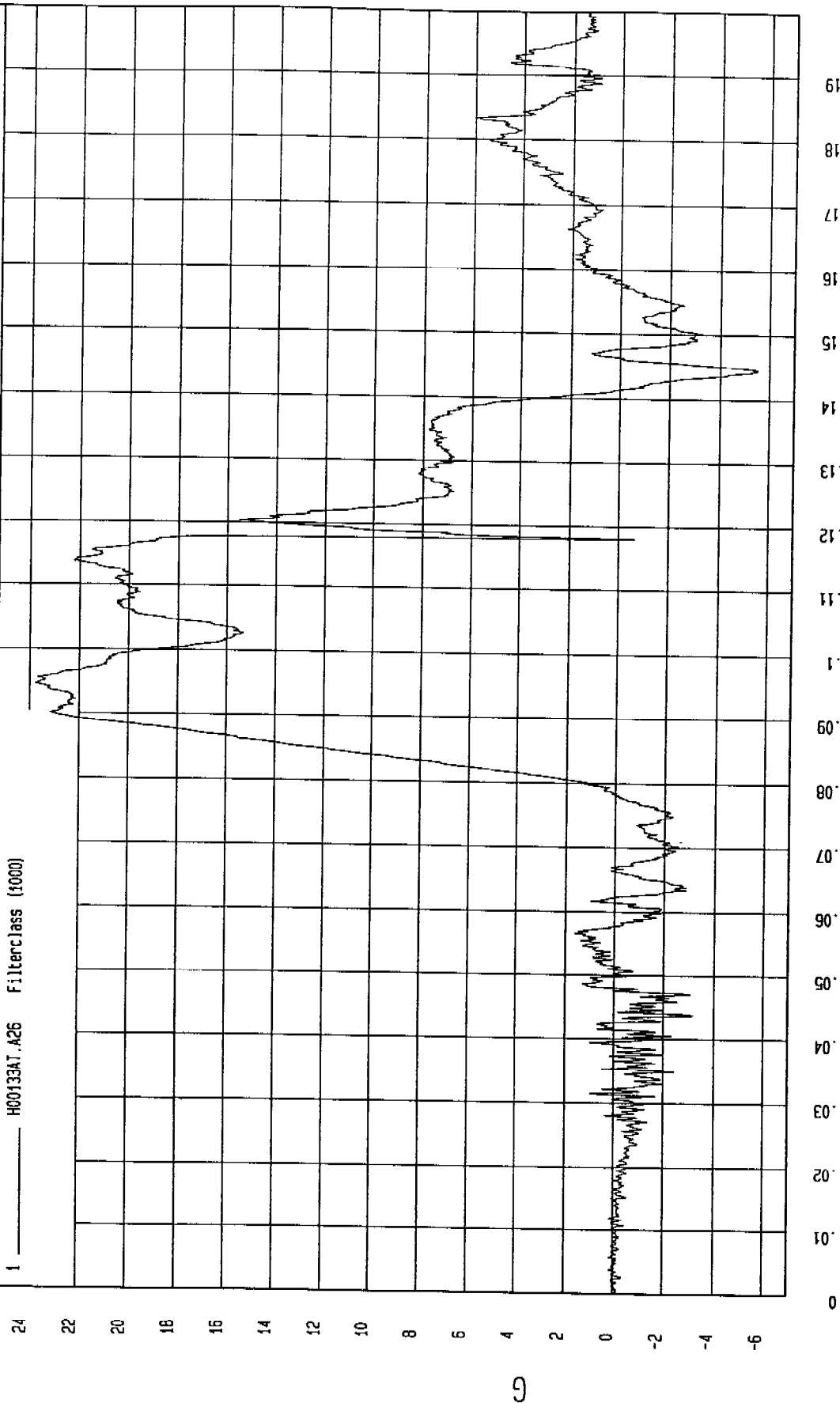
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -5.51 G at 144 msec

Maximum = 23.79 G at 95 msec

PASSENGER HEAD Z ACCELERATION

1 H00133AT.A26 Filterclass (5000)

MCA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

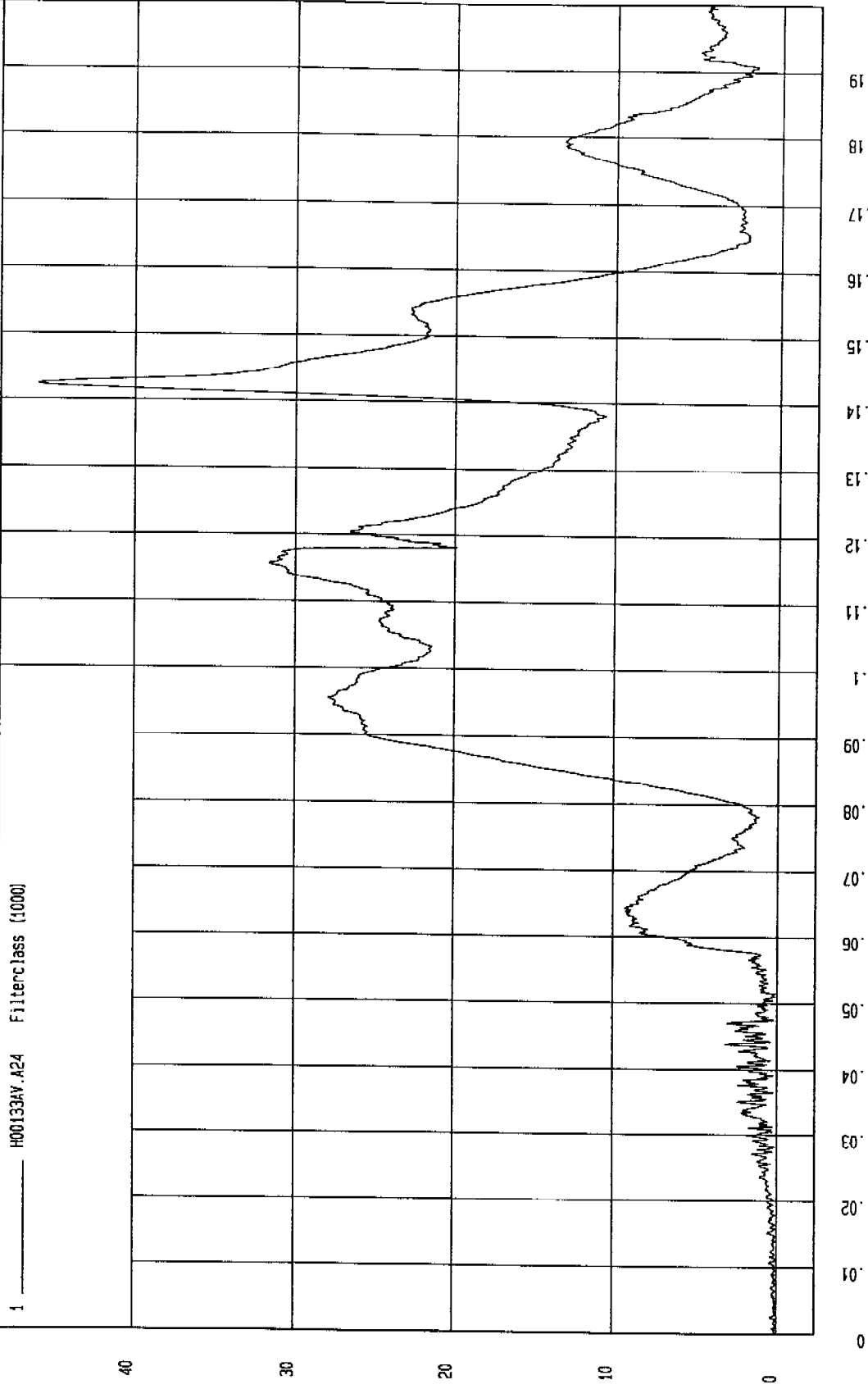
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = 5.07E-02 G at 0 msec

Maximum = 45.88 G at 142 msec

PASSENGER HEAD RESULTANT ACCELERATION



TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

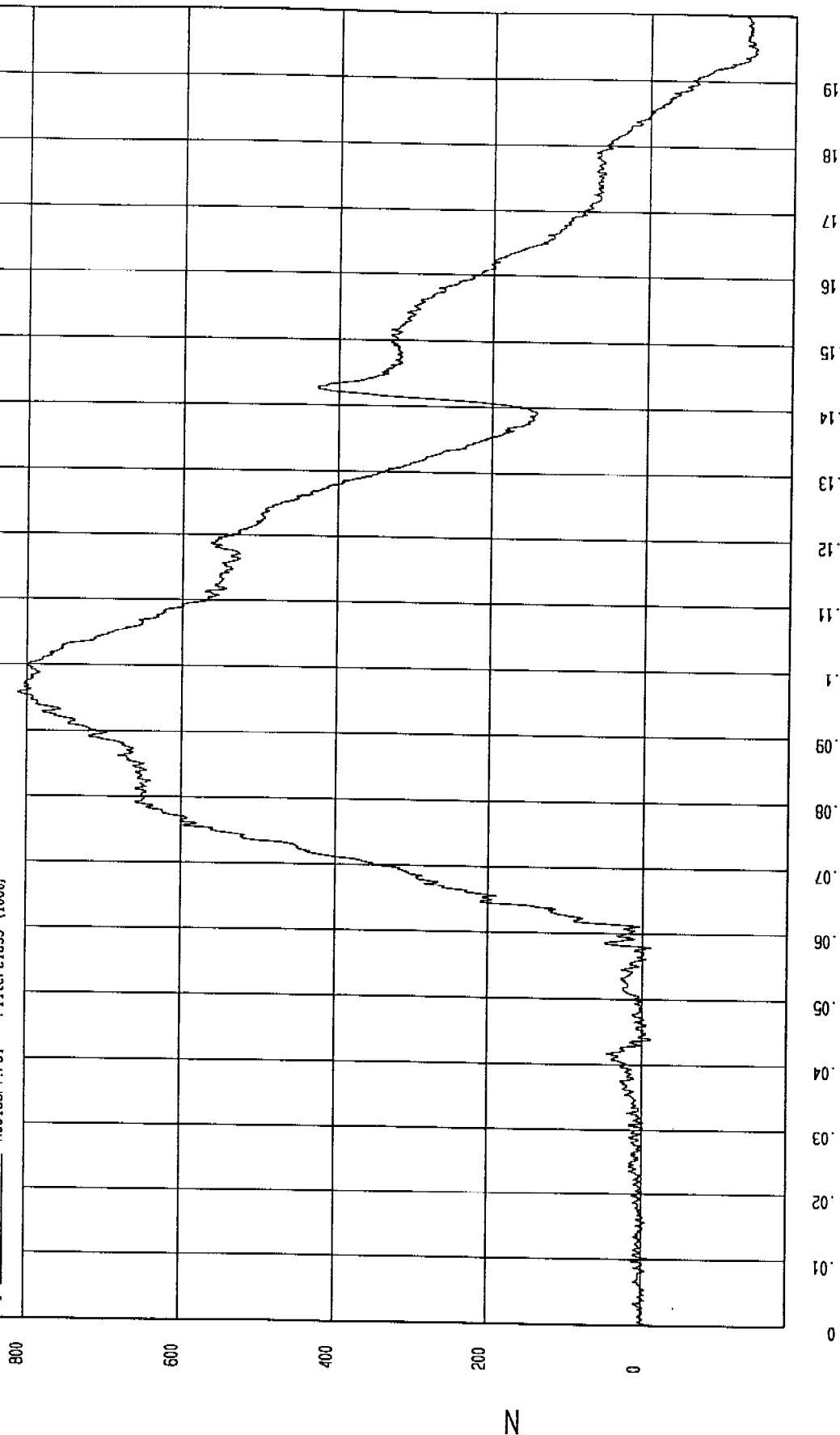
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -134.17 N at 194 msec

Maximum = 812.51 N at 96 msec

PASSENGER NECK FORCE X

1 ——— H00133FT.F31 Filterclass (1000)

MOA Research
05-11-2000 12.46

TEST: FMVSS 208 SLED (H00133)

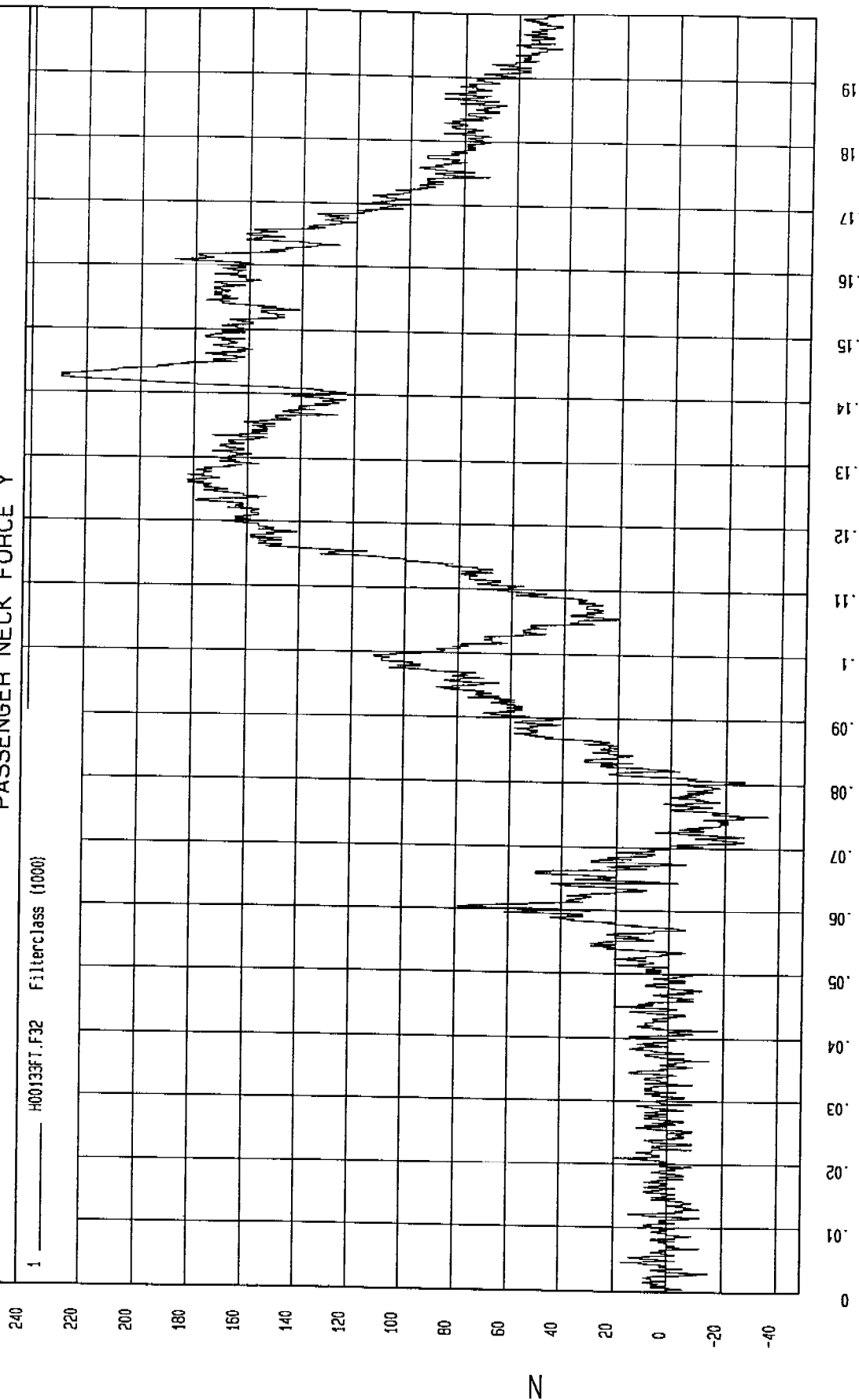
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -35.62 N at 75 msec

Maximum = 229.26 N at 142 msec

PASSENGER NECK FORCE Y

MCA Research
05-11-2000 12:46

MGA Research
05-11-2000 12:46

TIME (SECONDS)

0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.1 0.11 0.12 0.13 0.14 0.15 0.16 0.17 0.18 0.19

PASSENGER NECK FORCE Z

1 H00133FT.F33 Filterclass (1000)

Maximum = 655.5 N at 109 msec

Minimum = -744.52 N at 118 msec

TEST DATE: 05-11-2000

TEST: FMVSS 208 SLED (H00133)

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

600

400

200

0

-200

-400

-600

-800

N

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

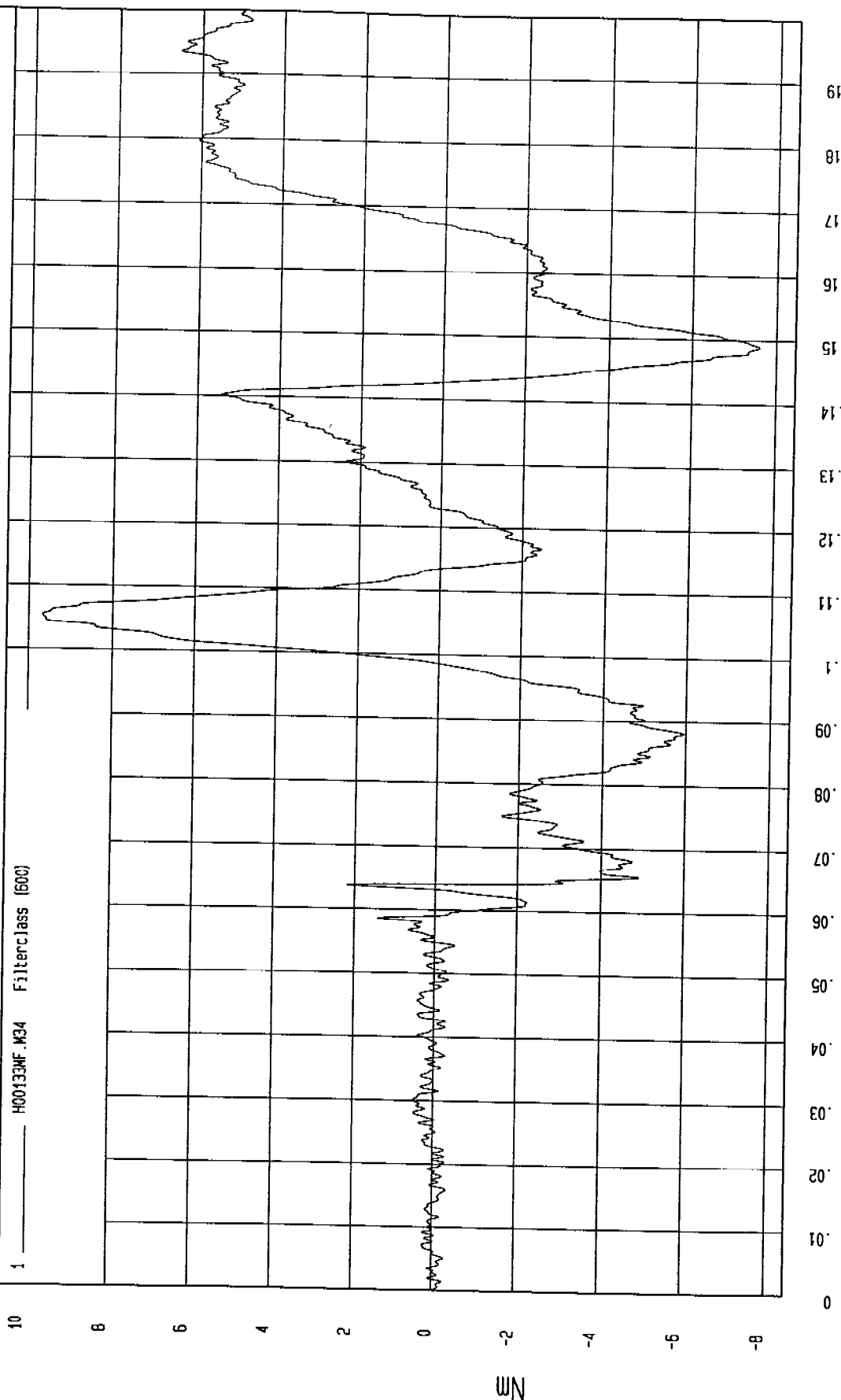
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -7.6 Nm at 149 msec

Maximum = 9.67 Nm at 105 msec

PASSENGER NECK MOMENT X

1 — H00133MF M34 Filterclass (500)



MCA Research
05-11-2000 12:46

TEST DATE: 05-11-2000

TEST: FMVSS 208 SLED (H00133)

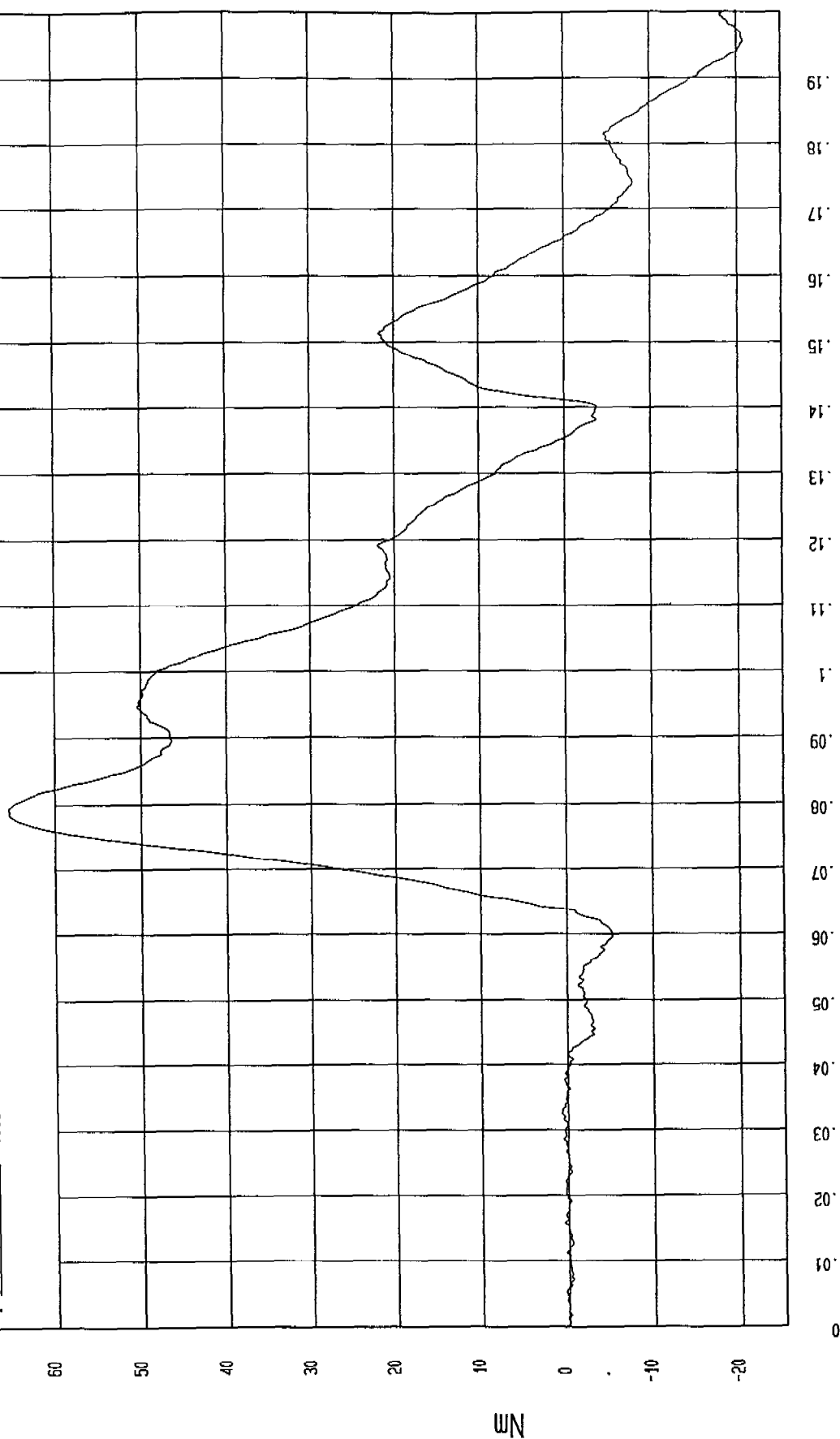
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Maximum = 65.33 Nm at 79 msec

Minimum = -20.71 Nm at 196 msec

PASSENGER NECK MOMENT Y

1 H00133MF.M35 Filterclass (600)

MSA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

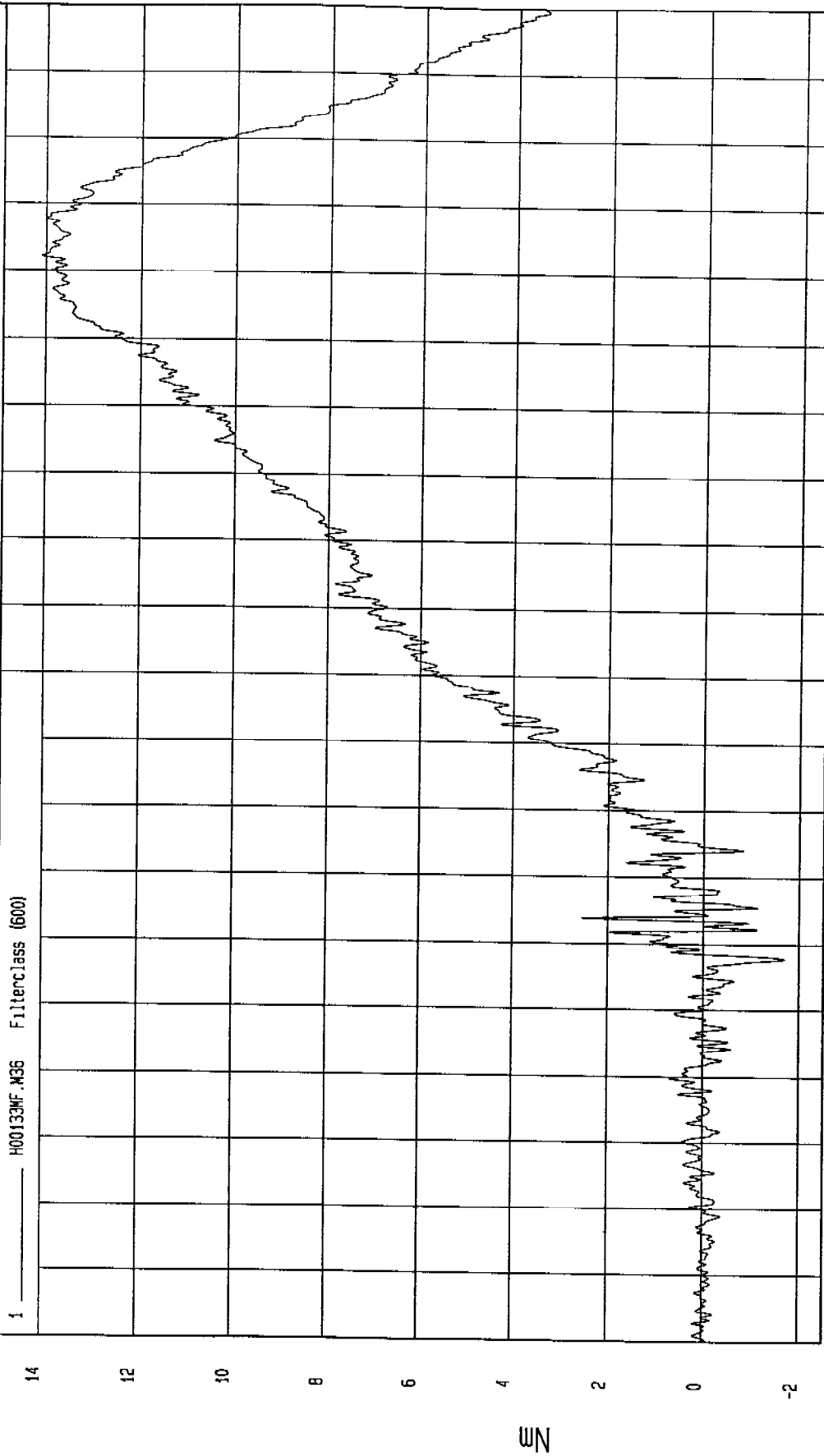
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -1.7 Nm at 58 msec

Maximum = 14.09 Nm at 162 msec

PASSENGER NECK MOMENT Z



TEST: FMVSS 208 SLED (H00133)

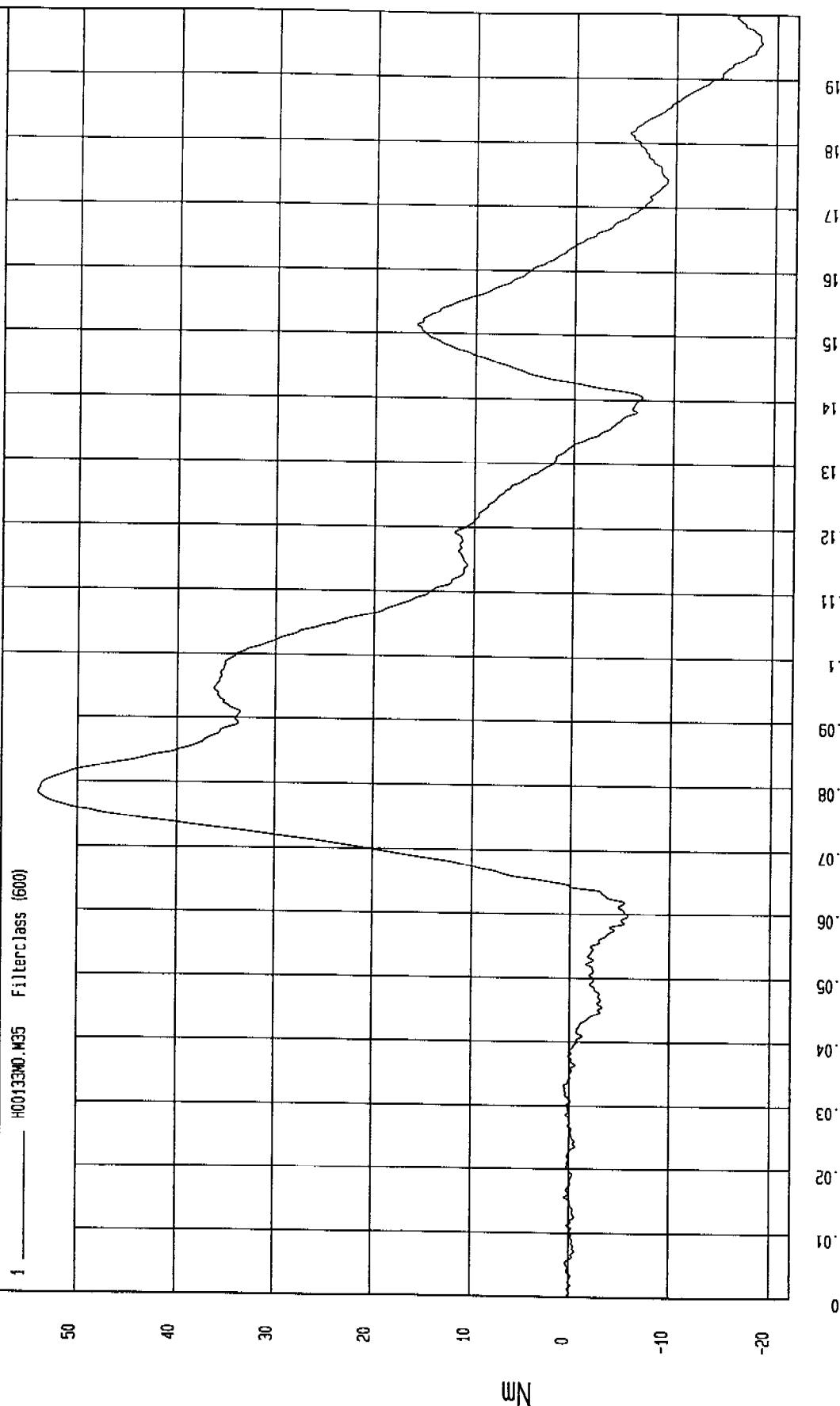
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -18.45 Nm at 196 msec

Maximum = 53.9 Nm at 78 msec

PASSENGER OCCIPITAL CONDYLE MOMENT Y

MCA Research
05-11-2000 12:54

TEST: FMVSS 208 SLED (H00133)

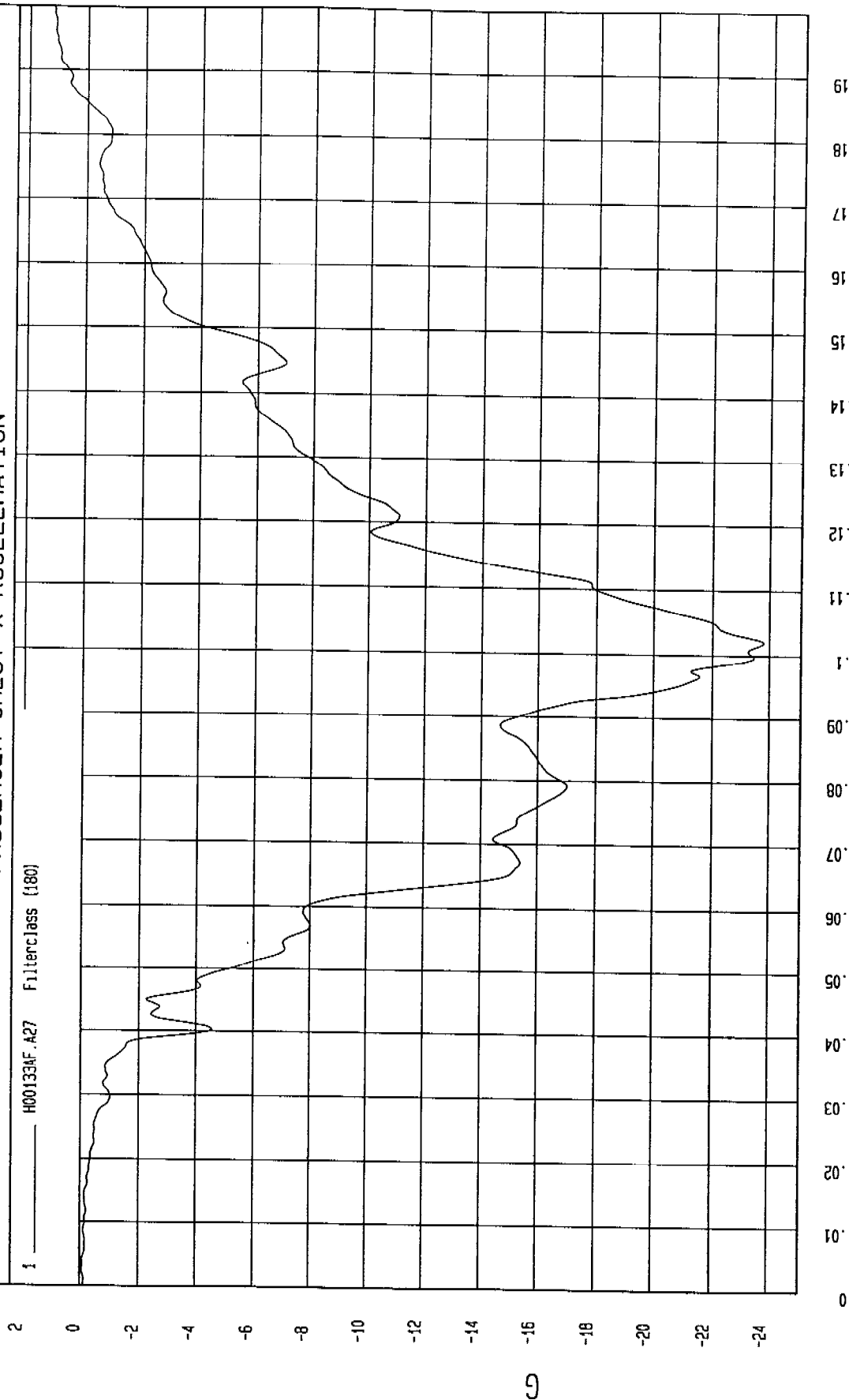
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -23.8 G at 102 msec

Maximum = 1.14 G at 199 msec

PASSENGER CHEST X ACCELERATION



MCA Research
05-11-2000 12.45

TEST: FMVSS 208 SLED (H00133)

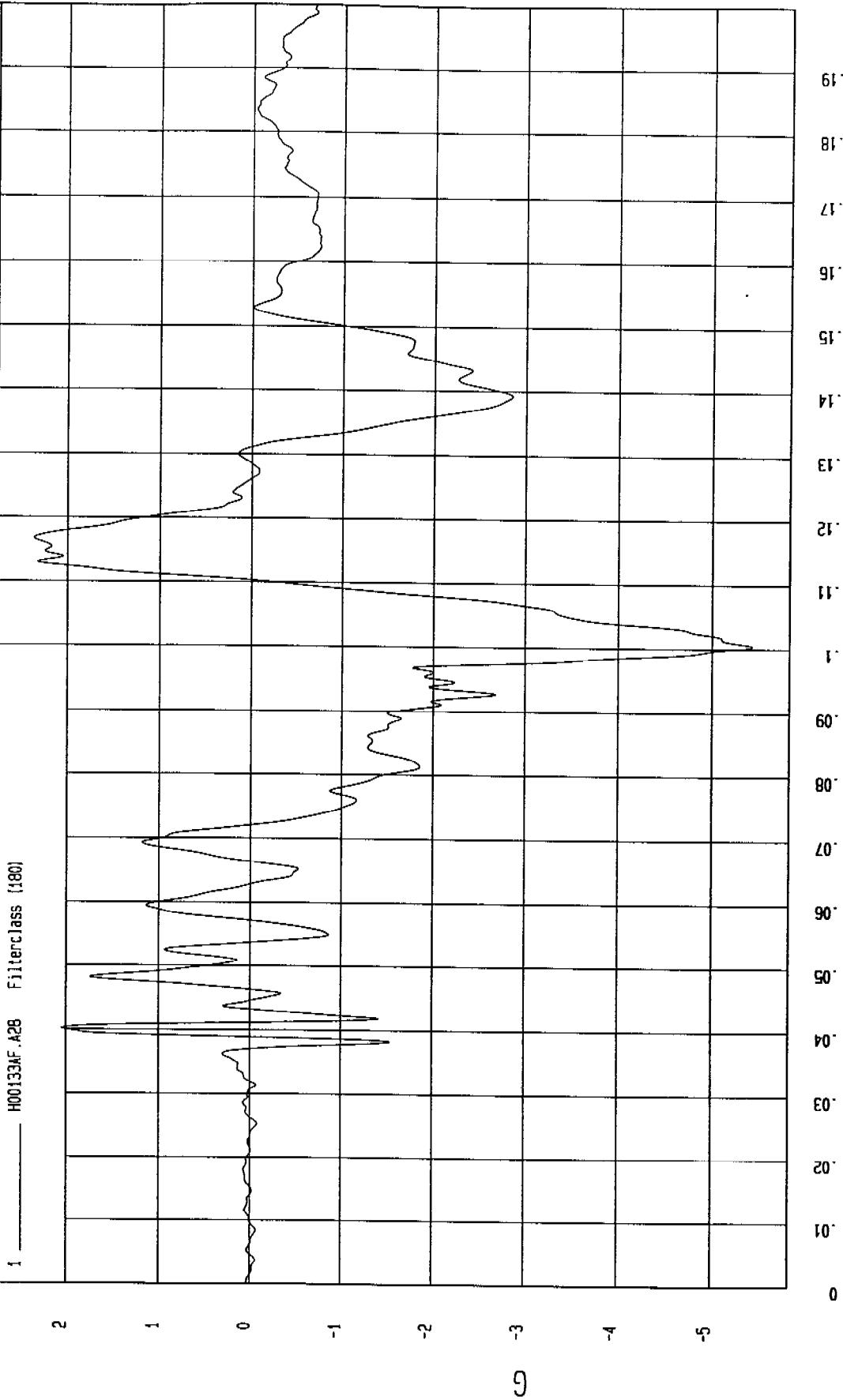
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Maximum = 2.35 G at 117 msec

Minimum = -5.43 G at 100 msec

PASSENGER CHEST Y ACCELERATION



TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

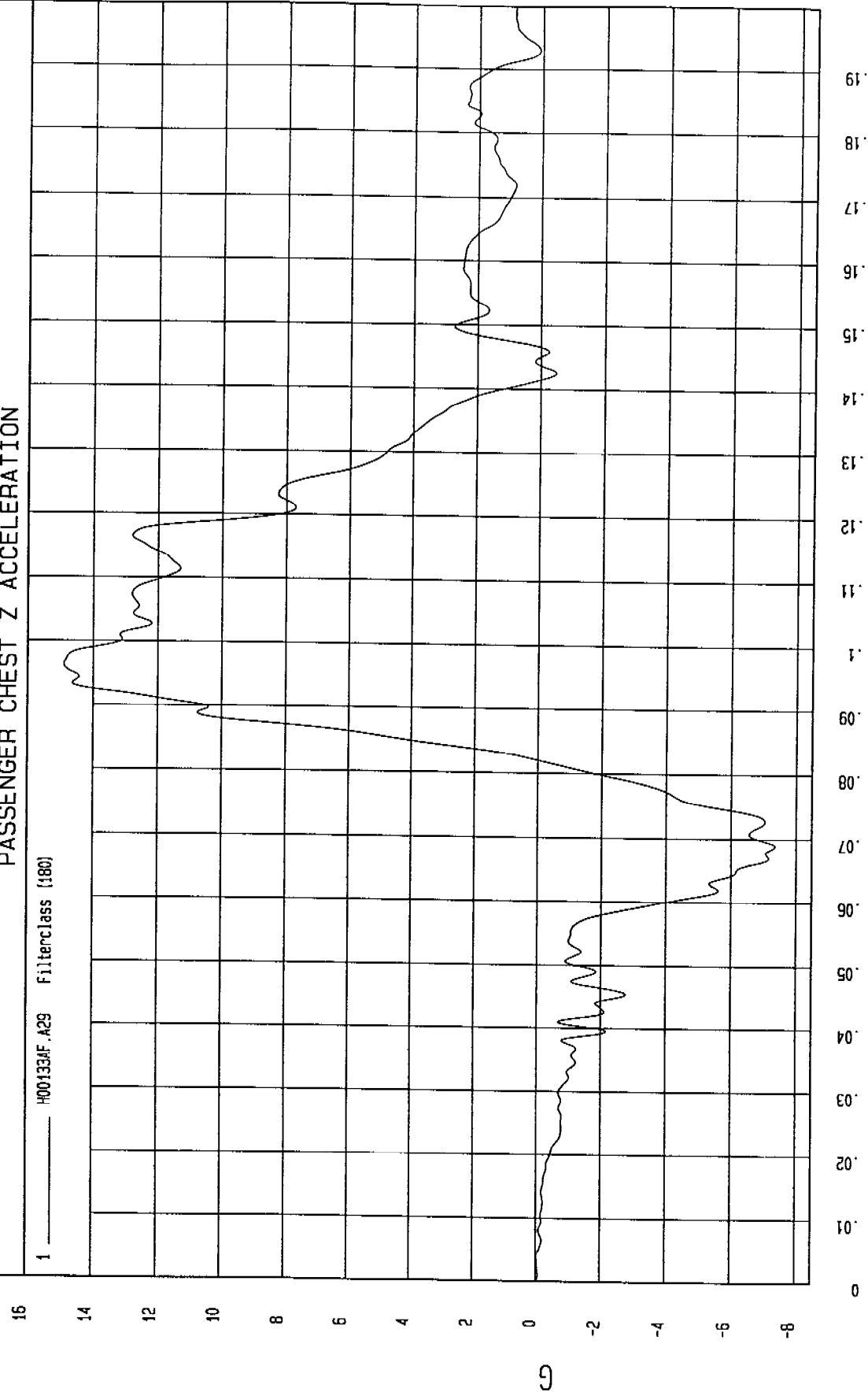
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -7.36 G at 69 msec

Maximum = 14.9 G at 96 msec

PASSENGER CHEST Z ACCELERATION

1 _____ H00133AF.A29 Filterclass (180)



TIME (SECONDS)

MCA Research
05-11-2000 12:46

TEST: FMVSS 208 SLED (H00133)

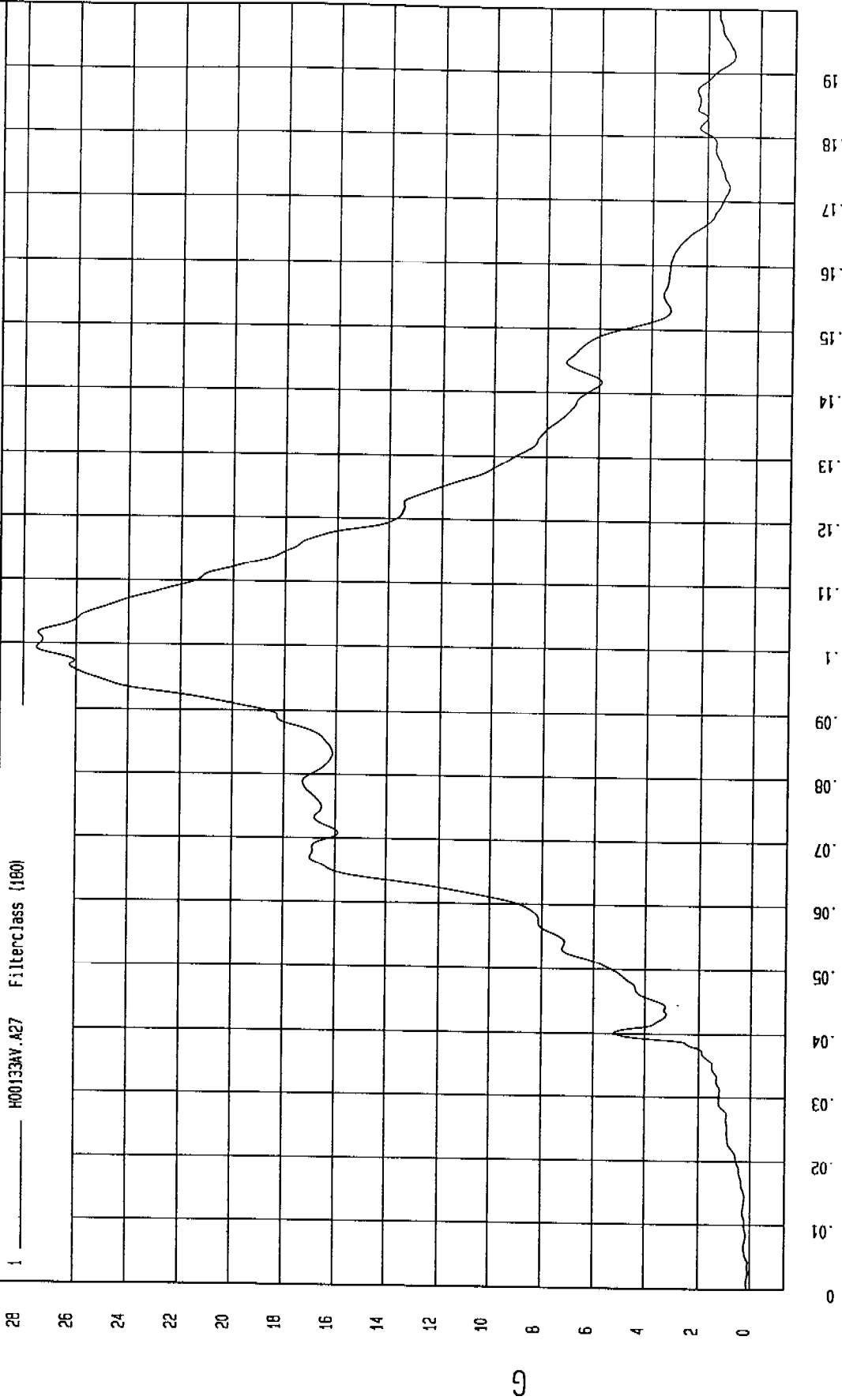
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = 8.73E-02 G at 2 msec

Maximum = 27.51 G at 99 msec

PASSENGER CHEST RESULTANT ACCELERATION



TEST: FMVSS 208 SLED (H00133)

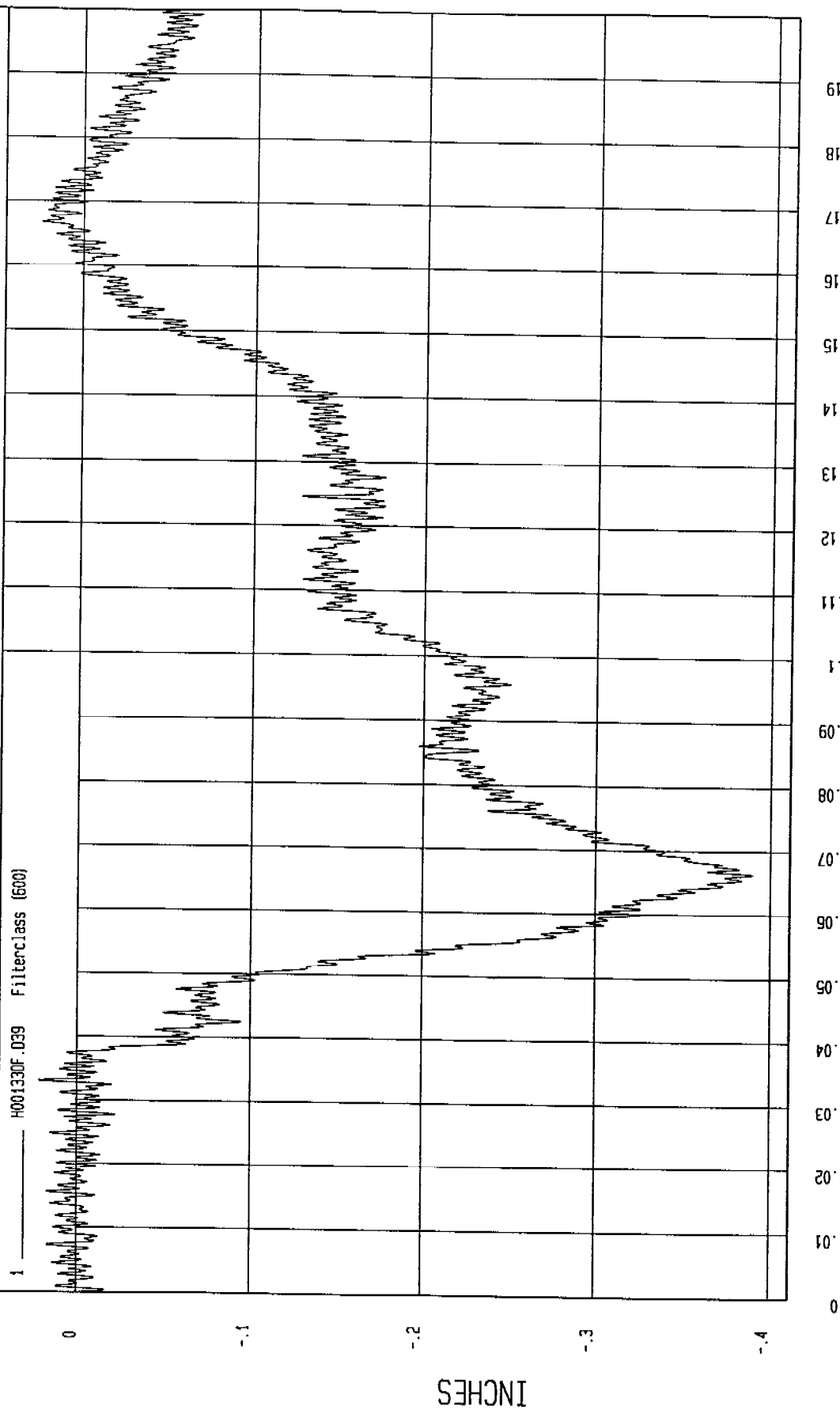
TEST DATE: 05-11-2000

COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -.39 INCHES at 66 msec

Maximum = .02 INCHES at 167 msec

PASSENGER CHEST COMPRESSION

MGA Research
05-11-2000 12:51

TIME SECONDS

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

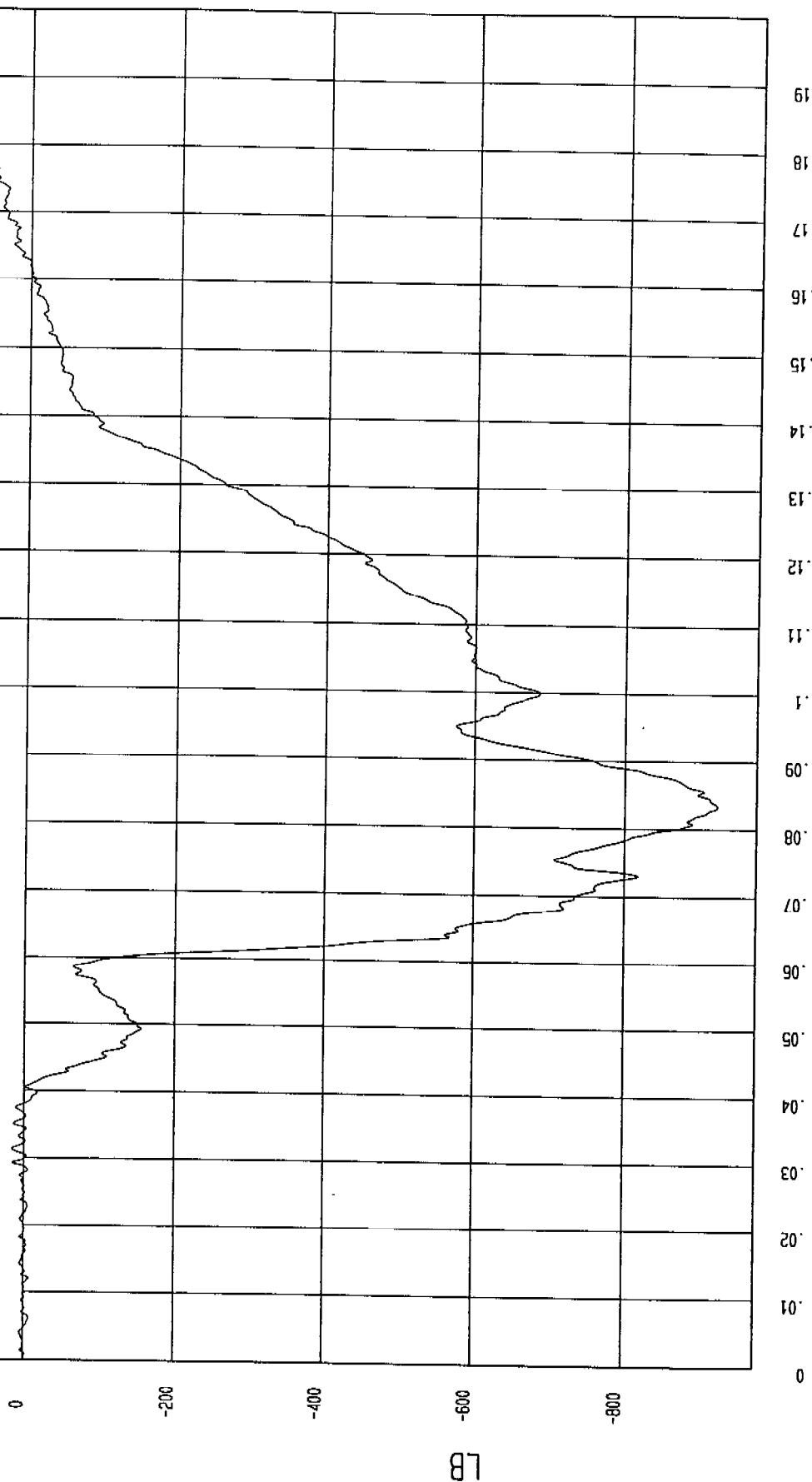
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -922.26 LB at 83 msec

Maximum = 82.67 LB at 193 msec

PASSENGER LEFT FEMUR FORCE

1 ——— H00133FF.F1B FilterClass (500)



TIME (SECONDS)

MCA Research
05-11-2000 12:47

TEST: FMVSS 208 SLED (H00133)

TEST DATE: 05-11-2000

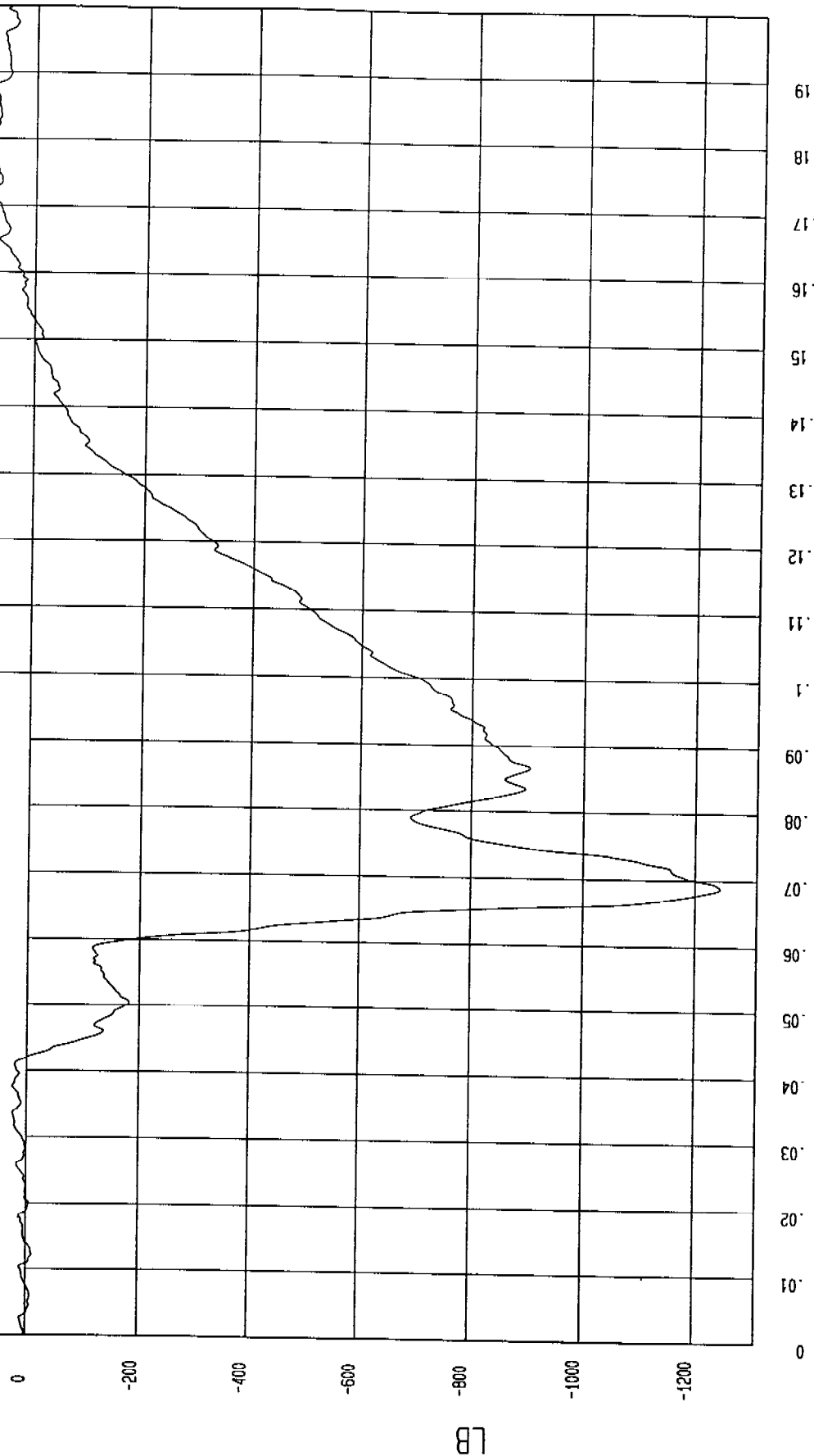
COMPONENT: 2000 VOLKSWAGEN JETTA 4 DOOR (CY5801)

Minimum = -1244.46 LB at 69 msec

Maximum = 88.65 LB at 180 msec

PASSENGER RIGHT FEMUR FORCE

1 ——— H00133FF.F19 FilterClass (600)

MGA Research
05-11-2000 12:47

APPENDIX C
MANUFACTURER'S VEHICLE INFORMATION

VOLKSWAGENRECEIVED
BY NSA-CC

8 December 1999

1999 DEC -9 PM 1:33

Ms. Marlynn Jacobs
Director
Office of Vehicle Safety Compliance
Room 6111
400 Seventh St., S.W.
Washington, D.C. 20590

Safety Affairs and
Vehicle Testing
Mail Code 2A02
3800 Hamlin Road
Auburn Hills, MI 48326
Tel. (248) 340-6000
Fax (248) 340-5099

Subject: NSA-31Cca / OA:208991028Q

A CONFIDENTIALITY REQUEST HAS BEEN SUBMITTED TO THE CHIEF COUNSEL

Dear Ms. Jacobs:

In response to your letter of November 5, 1999 with regard to potential compliance testing of a Volkswagen Jetta to the requirements of FMVSS 208, we provide you with the following information:

1. *Please inform OVSC if the air bag restraint system is certified to meet the requirements of S4.1.5.1(a)(1) or S13.*

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

If the air bags were installed to meet the requirements of S4.1.5.1(a)(1), please provide a copy of the certification test reports for the frontal/angular barrier impact tests of the automatic restraint system with the manual safety belts unfastened and fastened.

Not applicable.

If the air bags were installed to meet the requirements of S13 please provide a copy of the certification test reports for the frontal/angular barrier impact tests of the automatic restraint system with the manual safety belts fastened and the certification test reports for the sled test using only the automatic restraint system.

The results of the 0 degree 35 mph frontal impact test are shown in Test Report No 99/004 (Attachment 1) and Test Report No 99/006 (Attachment 2).

The results of the 30 degree 30 mph right frontal impact tests are shown in Test Reports No 99/005 and 99/007 (Attachments 3 and 4).

The results of the 30 degree 30 mph left frontal impact tests are shown in Test Report No 99/008 and 99/009 (Attachments 5 and 6).

The results of the sled tests are shown in Test Report No 99/10 and 99/11 (Attachments 7 and 8).

2. *If this is a new design vehicle/model, describe any features that might affect performance with respect to children and out of position occupants.*

The 2000 model year Jetta is not a new design

If this is not a new design vehicle/model provide the following: (1) state when the air bag was depowered, (2) describe the difference between the MY 2000 air bag system and the MY 1999 air bag system, (3) explain what other restraint changes have been made, and (4) explain what other vehicle changes have been made that might have affected FMVSS 208 performance. Explain which changes might affect performance with respect to children and out of position occupants.

- (1) The Jetta air bags were depowered with the introduction of the 1999 model new Jetta (A4 platform).
- (2) No changes were made to the 2000 MY air bag system on the Jetta as compared to the 1999 MY.
- (3) No other changes have been made to the restraint system.
- (4) No other vehicle changes have been made that would affect FMVSS 208 performance. No changes that would affect performance with respect to children and out of position occupants have been made.

3. *State if these vehicles have crash event recorders. If yes, explain any procedures needed for the sled or barrier crash event to be recorded. In addition, explain how to retrieve the crash event data from the recorder.*

There is no crash event recorder. However, the air bag electronic control unit records the following information:

- Cumulative time of "ignition on".
- The time period from the reaching the crash threshold to the time when the air bag fires.
- Time duration when the current to the driver air bag squib exceeds 1.75 A.

- Time duration when the current to the passenger air bag squib exceeds 1.75 A.
- Firing of the seat belt pretensioner.
- Firing of the side air bags.
- Whether the software was modified in order to deactivate any of the deployment signals.

4. *If the vehicle was 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.*

Disconnect the vehicle battery. After one minute unplug the cables that are attached to the gas generator at their connectors. Connect these cables directly to the timer. The air bag is activated 22 ms after the sled acceleration crosses the .5 g level.

For more advanced air bag systems, explain how the triggering of the air bag system in the sled test is different from the triggering of the air bag in a crash. For example, if a multistage inflator is used, explain whether the stages are fired simultaneously in the sled test but fired in a staggered sequence in a similar crash situation.

Not applicable.

5. *State for any safety belt system in this vehicle 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. *FMVSS No. 208, S8.1.5 allows the manufacturer the option of having movable vehicle windows and vents placed in the closed position. State whether the vehicle's movable windows and vents were opened or closed for the certification tests.*

The front windows were open in our tests.

7. *Submit dummy placement measurements, including diagrams or photographs which show exactly where measurements were taken. Enclosed is a diagram of some of OVSC's dummy measurements. Where possible, use the dimension shown in the diagram to provide the individual dummy placement measurements.*

The dummy placement measurements are shown in the forms "Data Sheet No. 5" and "Data Sheet No. 6" (Attachment 9). The numbers shown in these sheets are averages of measurements taken from several crash test vehicles.

State whether the vehicle has a foot rest for the driver.

~~The vehicle has~~ a foot rest for the driver.

8. *Provide the seat positioning, steering column positioning, and fuel tank data on the enclosed form. If more than one front seating, steering column or fuel tank configuration are available on this vehicle, provide separate information for each. In addition, provide the seating reference point for each seat for the lockable seat belt requirement in S7.1.1.5.*

The seat positioning, steering column positioning and fuel tank data are shown in the form "Test Vehicle Information" (Attachment 10).

The seating reference points are shown in Attachment 11. The measurements refer to the center hole of the front seat support (see sketch and photographs in Attachment 11).

9. *If the vehicle is equipped with adjustable seat belt anchorages, provide the manufacturer's nominal design position for a 50th percentile adult male occupant.*

The adjustable seat belt anchorages should be set to the third position from the top (center position).

10. *For barrier tests provide the speed at impact, vehicle test weight, and resulting injury criteria (i.e., HIC, chest acceleration, chest compression, and femur loads) recorded for all certification tests conducted to meet the requirements of S4.1.5.1(a)(1). For sled tests, provide the resulting injury criteria (i.e., HIC, chest acceleration, chest compression, femur loads, and neck moments and forces) recorded for all certification tests conducted to meet the requirements of S13.*

A summary of the barrier crash test results is shown in Attachment 12. The results of the sled tests are summarized in Attachment 13.

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

Usually component removal is not necessary to obtain the proper test weight. If necessary, we recommend to remove the following items in the order given below:

- (1) Spare wheel.
- (2) Rear seat.
- (3) Trunk lid.

12. *If the vehicle uses 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.*

Pressure vessels are not used in the Jetta air bag systems.

13. *If the vehicle uses 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.*

We do not have the test reports at this time. However, the suppliers of the air bag inflators have received U.S. Department of Transportation (DOT) "Classification of Explosives" certificates (Attachment 14). These certificates are given to the manufacturer of inflators after documentation was submitted to DOT. If you still require the test reports, we need to submit them at a later date.

14. *Explain any leakage that has occurred from the onboard vapor recovery system pressure relief valve during any frontal impact development or certification testing performed by or for Volkswagen. If any leakage occurred, include the amount. Describe the method used to collect fluid from the onboard vapor recovery system pressure relief valve for the period from impact until motion of the vehicle has ceased.*

No leakage has occurred from the onboard vapor recovery system pressure relief valve in any of the crash tests.

We hope that this information satisfies your needs. Please call me at (248) 340-5095 if you have any questions.

Sincerely,

VOLKSWAGEN OF AMERICA, INC.



Dietmar K. Haenchen

Process Leader

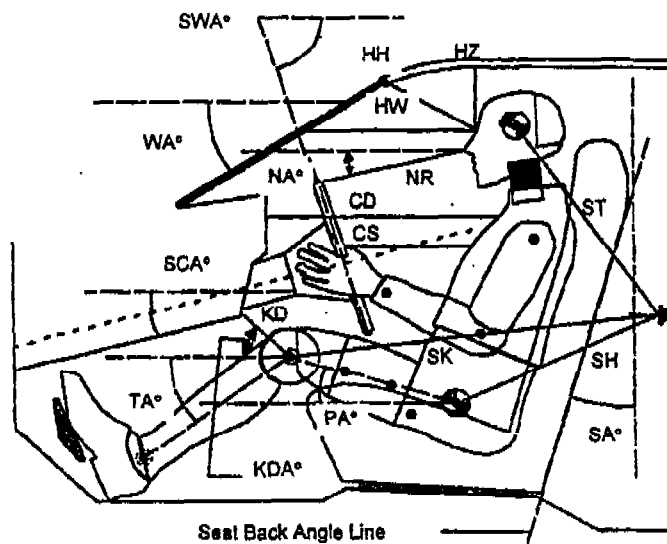
Safety Affairs and Vehicle Testing

DUMMY POSITIONING IN VEHICLE

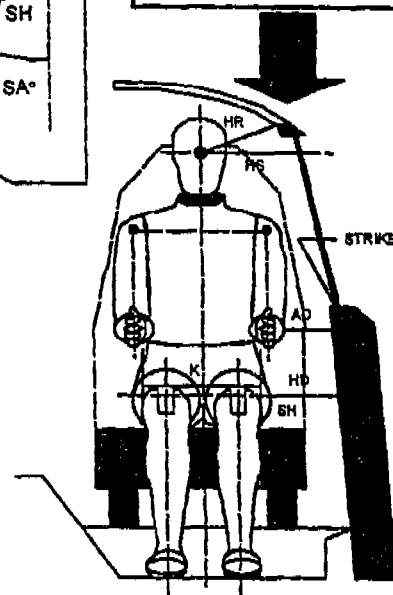
Test Vehicle: 1999 Volkswagen A4

Test Program:

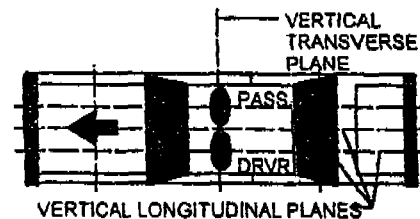
DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



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 Chest to Steering Wheel Hub
 HH Head to Header
 HW Head to Windshield
 HZ Head to Roof
 KDA Knees to Dash Angle
 KDL Left Knee to Dash
 KDR Right Knee to Dash
 LP Left Leg to Dash
 NA Nose to Rim Angle
 NP Nose to Dash
 NR Nose to Rim
 PA Pelvic Angle
 RA Rim to Abdomen
 RP Right Leg to Dash
 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
 TR Torso to Rim
 WA Windshield Angle



1999 DEC -9 PM 1:30

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BY NSA-30

DUMMY POSITIONING IN VEHICLE

Test Vehicle: 1999 Volkswagen A4

Test Program:

FRONT SEAT MEASUREMENT TABLE *

	DRIVER		PASSENGER	
	DISTANCE (mm)	ANGLE (°)	DISTANCE (mm)	ANGLE (°)
WA°		30,5		30,5
SWA°		66		
SCA°		24		
SA°		18		18
HZ	220	90	220	90
HH	370		370	
HW	522	0	522	0
HR	265		265	
NR	400	10		
CD	544		515	
CS	285	0		
RA	215	0		
KDL	178	30	150	
KDR	175		155	25
PA°		14		13
TA°		42		41
KK	265		200	
ST	X 100; y 360; z 462		X 100; y 360; z 462	
SK	X 545; y 235; z 87		X 550; y 285; z 85	
SH	X 184; z 185		X 184; z 185	
SHY	230		230	
HS	355		355	
HD	175		175	
AD	137		80	

* All values are with tolerances of +/- 5%

DATA SHEET NO. 6

SEAT BELT POSITIONING DATA

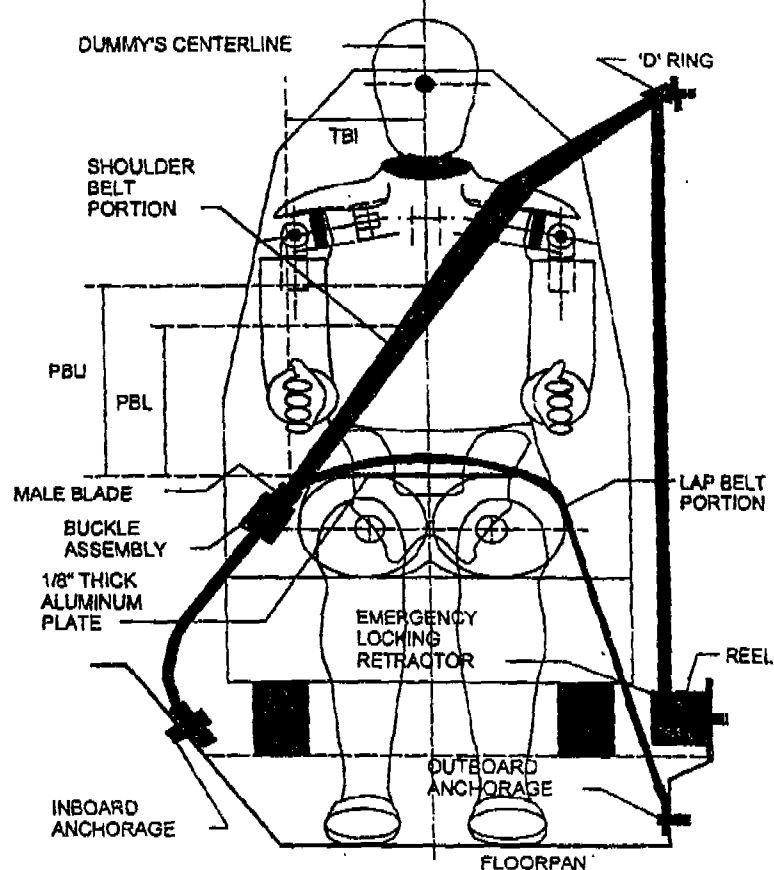
Test Vehicle: 1999 Volkswagen A4

Test Program: 35mph Frontal Impact

SEAT BELT PLACEMENT MEASUREMENTS

Measurement Description	Units	Driver	Passenger
TBI	mm		
TCI - Dummy centerline to shoulder bolt	mm		
PBU - Top surface of reference to belt upper edge	mm		
PBL - Top surface of reference to belt lower edge	mm		
Lap Belt tension	Newtons		
Shoulder Belt tension	N/A		

SEAT BELT POSITIONING DATA



FRONT VIEW OF DUMMY

ATTACHMENT 10

Page 1 of 2

TEST VEHICLE INFORMATION

Vehicle Model Year and Make: MY2000, VolkswagenVehicle Model and Body Style: Jetta, hatchback

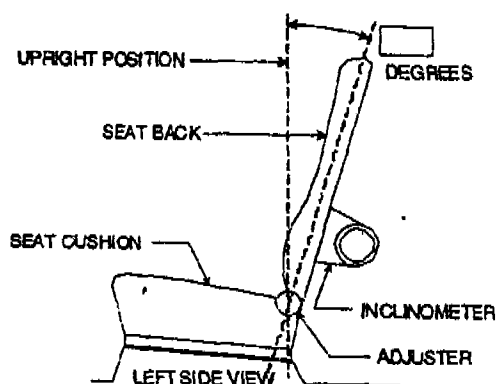
1. NOMINAL DESIGN RIDING POSITION –

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 = 21° E.

Measurement Instructions:

21° torso inclination measured with
THREE DIMENSIONAL "H" POINT
MACHINE



Seat back angle for passenger's seat = 21° E.

Measurement Instructions:

21° torso inclination measured with THREE DIMENSIONAL "H" POINT MACHINE

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: 8th position from front

Adjustment in vertical direction: lowest position

Position of the passenger's seat (if applicable):

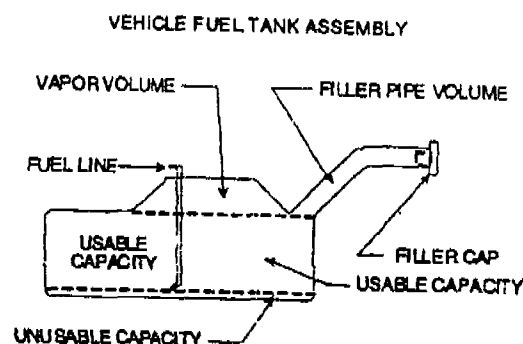
Adjustment in longitudinal direction: 8th position from front

Adjustment in vertical direction: lowest position

3. FUEL TANK CAPACITY DATA -

- 3.1 A. "Usable Capacity" of standard equipment fuel tank = 14.53 gallons.
 B. "Usable Capacity" of optional equipment fuel tank = _____ gallons.
 C. Capacity used when certification testing to requirements of FMVSS 301 = 14.53 gallons.

Operational Instructions:



- 3.2 Amount of Stoddard solvent added to vehicle for certification test = 13.74 gallons.

- 3.3 Is vehicle equipped with electric fuel pump? Gasoline engine: YES Diesel engine: NO

If YES, does pump normally operate when vehicle's electrical system is activated?

✓ YES NO

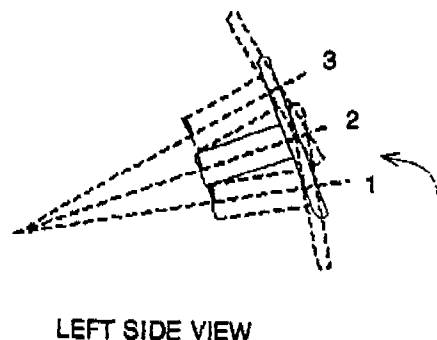
4. STEERING COLUMN ADJUSTMENTS -

STEERING COLUMN ASSEMBLY

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:



LEFT SIDE VIEW

Steering wheel is adjusted at middle position as shown in sketchpoint №2
In addition adjustment in lengthways direction: middle position

ATTACHMENT 11

Location of Seating Reference Points (SRP)

All longitudinal (x) and vertical (z) measurements are made from the front surface of the center hole on the forward seat mounting of each front seat. For the front seats this is also the reference point for the lateral (y) measurements (see enclosed sketch and photographs). For the rear SRPs, the lateral measurements are taken from the center line of the vehicle.

All measurements are in mm.

	SRP Location		
	x	y	z
Front Seats	318	0	232
Left Rear Seat	1065	-358	272
Center Rear Seat	1035	0	282
Right Rear Seat	1065	+358	272

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1999 DEC -9 PM 1:38

