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REPORT NO. 208-MGA-2002-007

SAFETY COMPLIANCE SLED TESTING FOR FMVSS 208
OCCUPANT CRASH PROTECTION

Fuji Heavy Industries Ltd.
2002 Subaru Impreza Wagon
NHTSA NO. C25500

MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: May 17, 2002

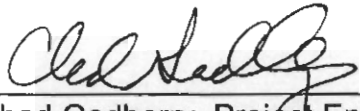
Report Date: May 27, 2002

FINAL REPORT

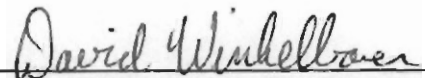
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DATE: 5/28/02

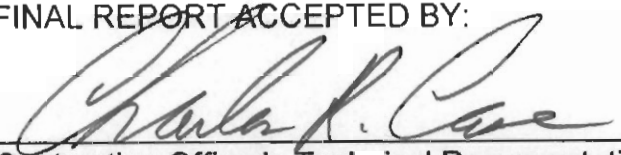
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Contracting Officer's Technical Representative (COTR)
NHTSA, Office of Vehicle Safety Compliance

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16. Abstract A compliance test (sled test) was conducted on the subject 2002 Subaru Impreza Wagon in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208S-01 for the determination of FMVSS 208 compliance. Test failures identified were as follows: NONE			
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Purpose

This FMVSS 208 compliance sled test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 208 compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by MGA Research Corporation (MGA) under Contract No. DTNH22-98-D-11055. The purpose of this test was to determine if the subject vehicle, a 2002 Subaru Impreza Wagon, NHTSA No. C25500, 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 17, 2002.

The test vehicle, a 2002 Subaru Impreza Wagon, NHTSA No. C25500, 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 #401)	Passenger (Serial #403)
HIC	1000	168	255
Chest g	60 g	39.9 g	48.4 g
Chest displacement	3 in.	1.0 in.	0.7 in.
Left Femur	2250 lb	1503 lb	1221 lb
Right Femur	2250 lb	1535 lb	1659 lb
Neck Extension	57 Nm	6.2 Nm	9.3 Nm
Neck Flexion	190 Nm	29.4 Nm	43.3 Nm
Neck Tension	3300 N	1494 N	783 N
Neck Compression	4000 N	137 N	967 N
Neck Shear	3100 N	773 N	946 N

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

The test vehicle was equipped with air bags at the driver and passenger seating positions. The dummies were not restrained by seat belts. The sled carriage was accelerated to 17.9 g with an integrated velocity change of 30.4 mph. After filtering the acceleration signal to Channel Class 60, the airbag system was triggered 21.3 milliseconds after 0.5 g acceleration.

INCLUDE DISCUSSION OF LOST CHANNELS OR OTHER TEST ISSUES.

No test issues noted.

Sled Test SummaryVehicle NHTSA No.: C25500 Test Mode: FMVSS 208 SLED TESTVehicle Yr/Make/Model/Body Style: 2002/Subaru/Impreza/WagonTest Date: May 17, 2002 Time: 1:00 p.m. Temp: 71°FVehicle Test Weight: 3580 lbs.**DUMMY INFO.****DRIVER****PASSENGER**

Dummy Type

Part 572EPart 572E

Serial Number

401403

Restraint System

Frontal airbagFrontal airbag

No. Data Channels

1515

Number of Cameras:

1 Real Time6 High Speed

Door Opening Data:

yes Left Frontyes Right Front**FRONT SEAT(S) DATA****DRIVER****PASSENGER**

Seat Track Failure -

0.0 inches shift;0.0 inches shift

Seat Back Failure -

nono**VISIBLE DUMMY
CONTACT POINTS:****DRIVER****PASSENGER**

Head

AirbagAirbag

Chest

AirbagAirbag

Left Knee

Knee bolsterGlove box

Right Knee

Knee bolsterGlove box

General Test And Vehicle Parameter DataVehicle Yr/Make/Model/Body Style: 2002/Subaru/Impreza/WagonVehicle NHTSA No.: C25500 VIN: JF1GG65562G817880 Color: Silver

Engine Data:

No. Cylinders: 4; CID: ; Liters: 2.5; CCs: Placement: Longitudinal/Inline: X; Transverse/Lateral:

Transmission Data:

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

Final Drive:

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

Major Options:

A/C: X; Pwr. Strg.: X; Pwr. Brakes: X; Pwr. Windows: XPwr. Dr. Locks: X; Other: Tilt wheelDate Received: 4/16/02; Odometer Reading: 110 milesSelling Dealer: Gary Lang Subaru, 1103 S. Route 31, McHenry, IL 60050

REMARKS: None

General Test And Vehicle Parameter Data (Cont.)

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: Fuji Heavy Industries Ltd.Date of Manufacture: 9/01; VIN: JF1GG65562G817880GVWR: 4040 lbs; GAWR Front: 2070 lbs.GAWR Rear: 2040 lbs.

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load:

FRONT: 32 psi REAR: 29 psiRecommended Tire Size: P195/60R15 87H ;

Recommended Cold Tire Pressure:

FRONT: 32 psi REAR: 29 psiSize of Tires on Test Vehicle: P195/60R15 87HType of Spare Tire: T135/70D16 ; Space Saver: X ; Standard:

Vehicle Capacity Data:

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

REMARKS: None

VEHICLE CAPACITY WEIGHT (VCW) = 900 lbs.No. Of Occupants x 150 lbs = 750 lbs.Rated Cargo/Luggage Weight (RCWL) = 150 lbs. (Difference)

General Test And Vehicle Parameter Data (Cont.)

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

Right Front =	<u>868</u> lbs.	Right Rear =	<u>658</u> lbs.
Left Front =	<u>879</u> lbs.	Left Rear =	<u>681</u> lbs.
TOTAL FRONT =	<u>1747</u> lbs.	TOTAL REAR =	<u>1339</u> lbs.
% Total Weight =	<u>56.6</u> %	% Total Weight =	<u>43.4</u> %
TOTAL DELIVERED WEIGHT = <u>3086</u> lbs.			

WEIGHT OF FULLY LOADED TEST VEHICLE WITH TWO DUMMIES (344 LB) AND 150 POUNDS OF CARGO WEIGHT:

Right Front =	<u>938</u> lbs.	Right Rear =	<u>836</u> lbs.
Left Front =	<u>955</u> lbs.	Left Rear =	<u>851</u> lbs.
TOTAL FRONT =	<u>1893</u> lbs.	TOTAL REAR =	<u>1687</u> lbs.
% Total Weight =	<u>52.9</u> %	% Total Weight =	<u>47.1</u> %
TOTAL WEIGHT = <u>3580</u> lbs.			

TEST VEHICLE ATTITUDE: (all measurements in degrees)

AS DELIVERED DOOR SILL ANGLE:	<u>0.0°</u>
AS TESTED DOOR SILL ANGLE:	<u>0.4° nose up</u>
FULLY LOADED DOOR SILL ANGLE:	<u>0.4° nose up</u>

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 15.9 gallons
 Usable Capacity Figure Furnished by COTR = 15.9 gallons

REMARKS: None

Post-Impact Data

Test number: HT02051701
NHTSA number: C25500
Test date: May 17, 2002
Test time: 1:00 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: 30.4 mph
Specified integrated velocity range: 28 to 30 mph

Sled Carriage Acceleration:

Acceleration: 17.9 g
Specified Acceleration Range: 16.0 - 18.2 g

Sled Carriage Acceleration Duration:

Time from T-0 (-0.5 g) to 0.0 g: 122.9 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: 2002/Subaru/Impreza/Wagon

Vehicle NHTSA No.: C25500 Test Date: May 17, 2002

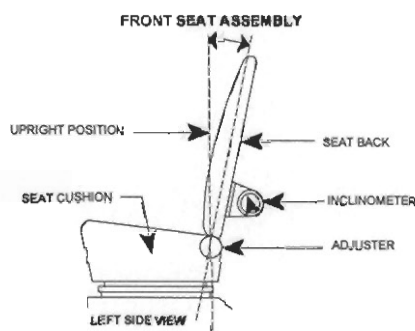
NOMINAL DESIGN RIDING POSITION:

Driver Seat: Seat Back Angle = 6.5° *

Passenger Seat: Seat Back Angle = 6.5° **

* relates to 3rd notch from fully upright as measured from headrest post

** relates to 4th notch from fully upright as measured from headrest post



SEAT FORE AND AFT POSITIONS:

Driver Seat: The seat track had a total position movement of 17 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 17 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 (23.1°) of its continuous angular adjustment range (21.0° - 25.2°).

Dummy Positioning Measurement Table

Vehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

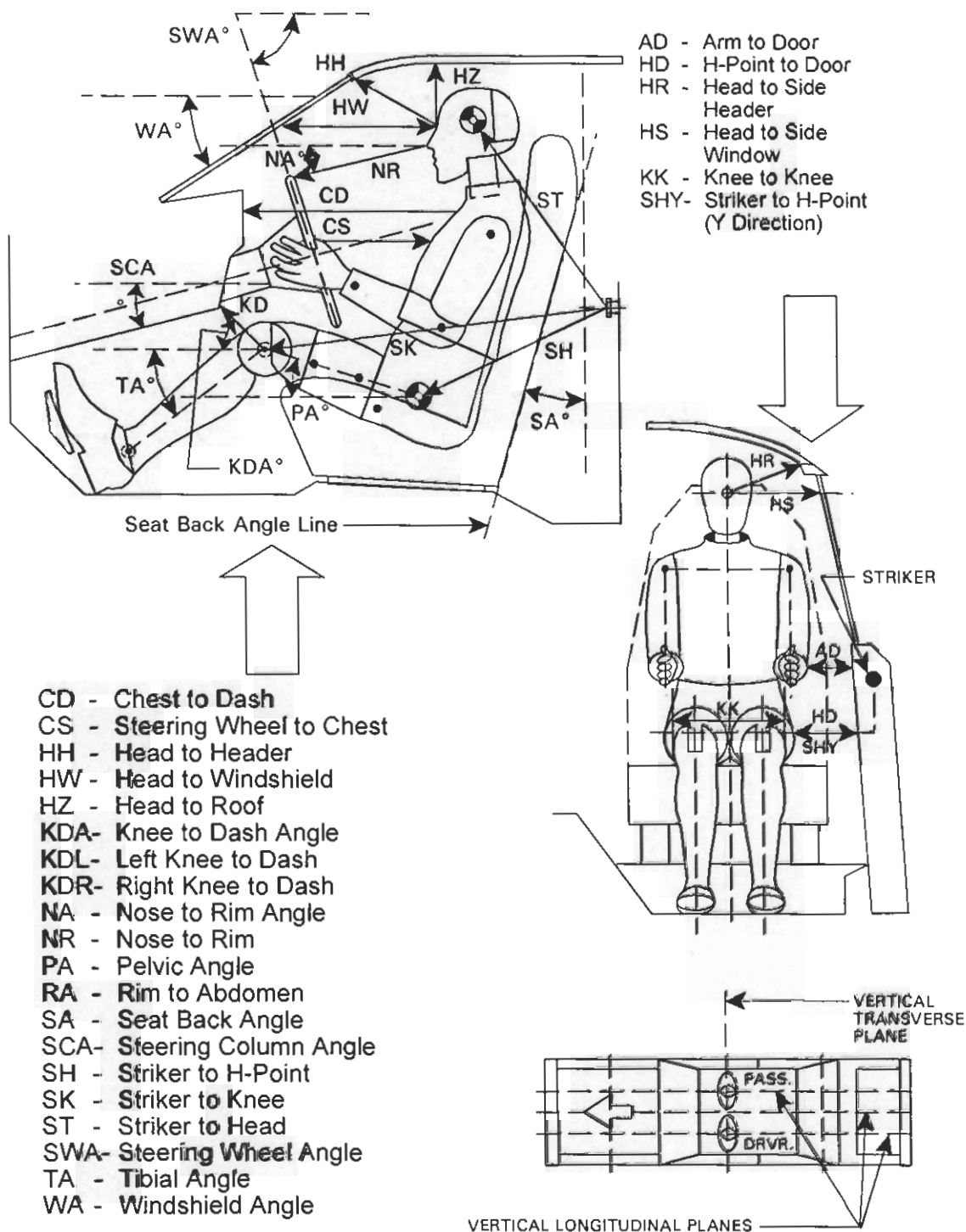
Vehicle NHTSA No.: C25500 Test Date: May 17, 2002

	DRIVER (Serial #401)	PASSENGER (Serial #403)
WA°	30.5°	
SWA°	66.9°	
SCA°	23.5°	
SA°*	6.5°	6.5°
HZ	8.7	7.9
HH	12.4	11.8
HW	23.7	22.0
HR	9.1	8.4
NR	14.8 Angle (NA°) 11.3°	
CD	20.2	20.4
CS	12.0	
RA	7.2	
KDL	8.3 Angle (KDA°) 0.0°	7.4
KDR	8.0	7.7 Angle (KDA°) 0.0°
PA°	23.9°	24.6°
TA°	35.7°	43.9°
KK	12.0	10.6
ST	21.3 Angle 6.3°	21.3 Angle 3.8°
SK	20.7 Angle 88.2°	20.9 Angle 84.5°
SH	6.2 Angle 132.2°	6.3 Angle 116.2°
SHY	9.6	9.9
HS	12.5	12.2
HD	4.7	5.2
AD	4.3	4.5

* - 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) |

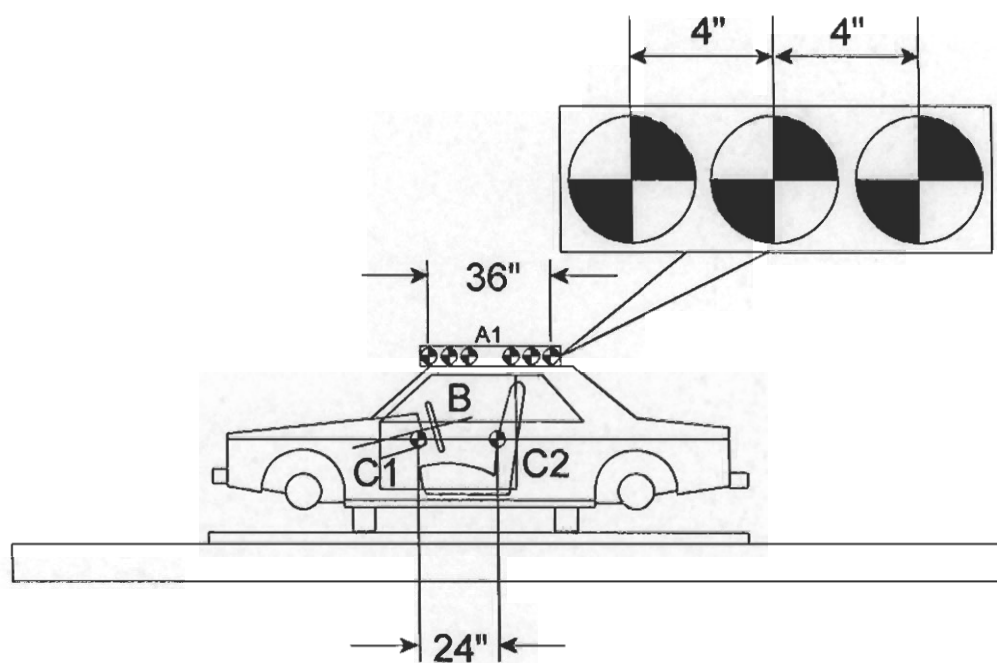
* Measurement used in Data Tape Reference Guide

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

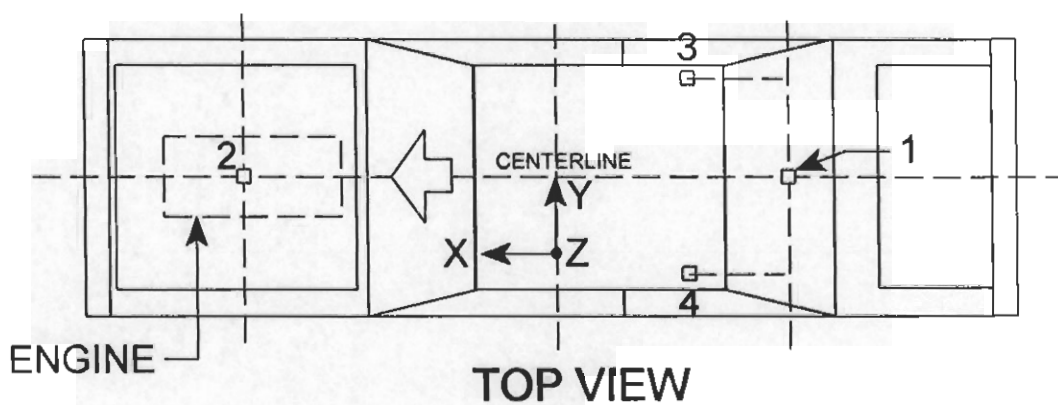
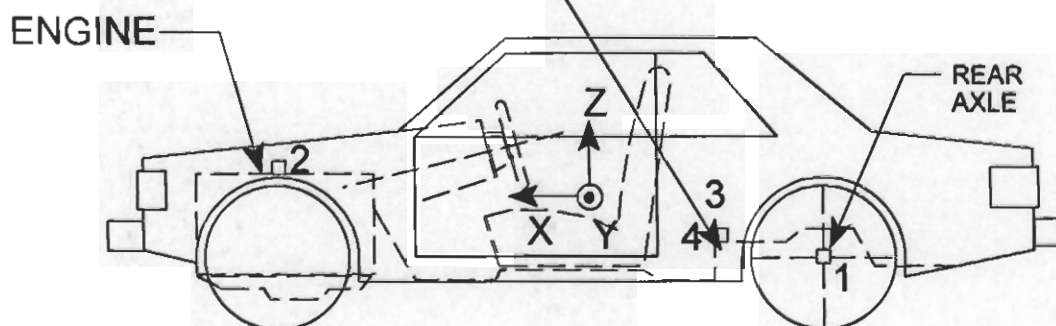
SA	Seat Back Angle, find this angle using the instructions provided by the manufacturer. If the manufacturer doesn't provide clear instructions contact the COTR.
PA	Pelvic or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and 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: 2002/Subaru/Impreza/WagonVehicle NHTSA No.: C25500 Test Date: May 17, 2002REAR SEAT CUSHION
ASSY. FRONT ATTACHMENT
BRACKET SUPPORT

LEFT SIDE VIEW

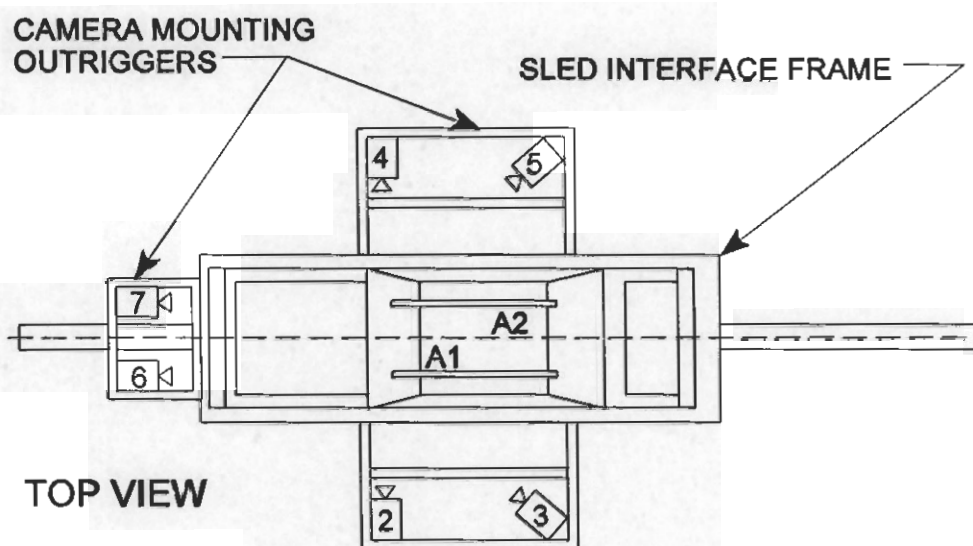
Vehicle Accelerometer Location Measurements and Data Summary

Vehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

Vehicle NHTSA No.: C25500 Test Date: May 17, 2002

No.	Location	X (in)	Y (in)	Positive Direction		Negative Direction	
				Value	Time (msec)	Value	Time (msec)
	Sled Primary Longitudinal	67.0	0	17.9 g	52	-1.4 g	126
	Sled Redundant Longitudinal	67.0	4.0	17.9 g	52	-1.4 g	126
	Sled Velocity Measured Integrated	67.0	0	30.4 mph	123	--	--
1	Rear Axle Longitudinal	33.0	0	18.8 g	52	-4.7 g	6
2	Top Engine Longitudinal	150.0	0	18.6 g	55	-1.3 g	161
3	Right Rear Seat Member Longitudinal	65.0	16.0	17.4 g	55	-1.4 g	159
4	Left Rear Seat Member Longitudinal	65.0	16.0	18.5 g	55	-1.4 g	126

Camera Positions



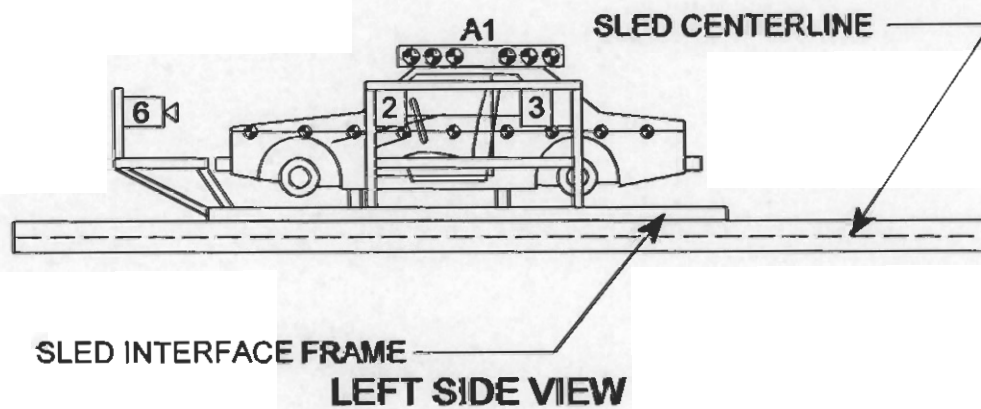
CAMERA FRAME RATES:

#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	70.6	88.6	38.4	90	72.4	13	952
3	Onboard Driver Angle	150.9	91.1	47.8			13	1000
4	Onboard Passenger	71.8	89.6	38.5	90	71.1	13	1000
5	Onboard Passenger Angle	146.7	88.5	47.9			13	769
6	Onboard Windshield Driver	18.3	14.1	42.9			13	1000
7	Onboard Windshield Passenger	18.3	13.9	42.9			13	909

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: 2002/Subaru/Impreza/Wagon

Vehicle NHTSA No.: C25500 Test Date: May 17, 2002

MAXIMUM ACCELERATION VALUES: (g's)	DRIVER DUMMY #401	PASSENGER DUMMY #403
Head Channel X	-30.1	-37.5
Head Channel Y	5.6	-15.9
Head Channel Z	18.6	28.3
HEAD RESULTANT	35.5	41.0
Chest Channel X	-39.0	-47.8
Chest Channel Y	-3.7	4.3
Chest Channel Z	15.9	22.3
CHEST RESULTANT	41.7	50.6

HEAD INJURY CRITERIA (HIC) VALUES:

HIC	168	255
t_1 = (msec)	80.8	82.6
t_2 = (msec)	116.8	118.6

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

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

CLIP	39.9	48.4
t_1 = (msec)	87.9	86.6
t_2 = (msec)	90.9	89.6
CHEST DEFLECTION (in)	1.0	0.7

Occupant Injury Data (Cont.)

MAX. COMPRESSIVE FEMUR FORCES:	DRIVER DUMMY #401	PASSENGER DUMMY #403
Left Side (lbs)	1503	1221
Right Side (lbs)	1535	1659

NECK INJURY CRITERIA:

Peak Flexion Bending Moment about the Occipital Condyle (N-m)	29.4	43.3
Peak Extension Bending Moment about the Occipital Condyle (N-m)	6.2	9.3
Peak Axial Tension (N)	1494	783
Peak Axial Compression (N)	137	967
Peak Fore Shear (N)	773	946
Peak Aft Shear (N)	230	409

Seat Belt Warning System Data

Vehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

NHTSA No.: C25500 ; Technician: Chad Gadberry ; Date: April 18, 2002

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 DataVehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/WagonNHTSA No.: C25500 ; Technician: Chad Gadberry; Date: April 18, 2002

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? (X)Yes, go to 1.2 () No, go to 2
 - 1.2. Does the vehicle have a maintenance or replacement label? (X)Yes-Pass () No-FAIL
 - 1.3. Does the label contain one of the following? (X)Yes-Pass () No-FAIL
 - () Schedule on label specifies month and year (Date:_____)
 - () Schedule on label specifies vehicle mileage (Mileage:_____)
 - (X) Schedule on label specifies interval measured from date on certification label (Date: 10 years)
 - 1.4. Is the label permanently affixed within the passenger compartment? (X)Yes-Pass () No-FAIL
 - 1.5. Is the label lettered in English? (X)Yes-Pass () No-FAIL
 - 1.6. Is the label in block capitals and numerals? (X)Yes-Pass () No-FAIL
 - 1.7. Are the letters and numerals at least 3/32 inches high? (X)Yes-Pass () No-FAIL
 - 1.8. Does the owner's manual set forth the recommended schedule for maintenance or replacement? (X)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-Pass ☐ **No-FAIL**
 Passenger Side - ☒ Yes-Pass ☐ **No-FAIL**

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

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

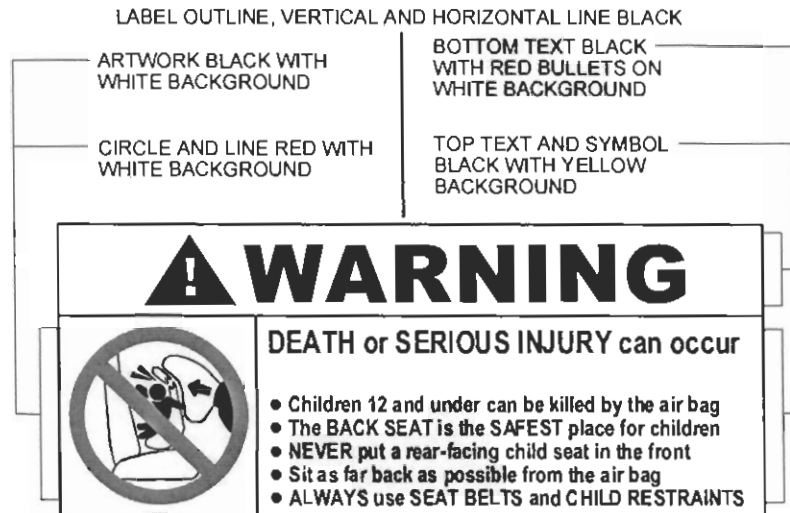


Figure 6a (S4.5.1(b)(2))

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

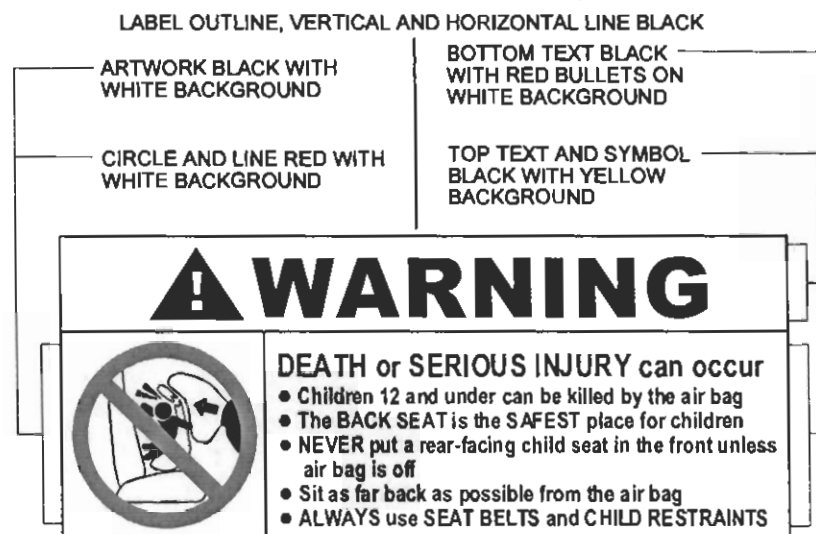


Figure 6b (S4.5.1(b)(2))

- 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: 30 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 - | (X)Yes, go to 6 | () No |
| Passenger Side - () No air bag | (X)Yes | () No |
- 5.2 Does the label conform in content to the label shown below? (S4.5.1(c)(2))
- | | | |
|---------------------------------|--------------|-------------|
| Driver Side - | () Yes | () No-FAIL |
| Passenger Side - () No air bag | () Yes-Pass | () No-FAIL |
- 5.3 Is the message area black with yellow text? (S4.5.1(c)(2)(i))
- | | | |
|---------------------------------|--------------|-------------|
| Driver Side - | () Yes-Pass | () No-FAIL |
| Passenger Side - () No air bag | () 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: _____ cm²
 Driver Side - ☐ Yes-Pass ☐ No-FAIL
 Passenger Side - ☐ No air bag ☐ 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
☐ Yes-Pass ☐ No-FAIL
- 5.6 Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2)(ii))
 Actual diameter _____ mm
 For vehicles with driver side air bag ONLY ☐ Not Applicable
☐ 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?
☒ 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

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)) (X)Yes-Pass () No-FAIL
- 6.5 Is the message white with black text? (S4.5.1(e)(ii))
(X)Yes-Pass () No-FAIL
- 6.6 Is the message area at least 30 cm²? (S4.5.1(e)(ii))
Actual message area: 31 cm²
(X)Yes-Pass () No-FAIL

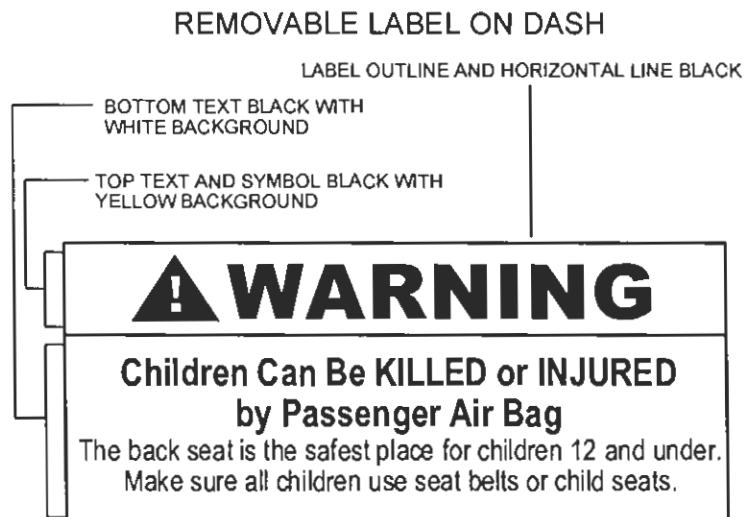


Figure 7 (S4.5.1(e))

Rear Outboard Seating Position Seat Belt DataVehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/WagonNHTSA No.: C25500; Technician: Chad Gadberry; Date: April 18, 2002

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 Data

Vehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

NHTSA No.: C25500 ; Technician: Chad Gadberry ; Date: April 18, 2002

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

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

Designated Seating Position (DSP): Right Front

1. Record the seating position. Fully rearward
(S7.1.1.5(c)(1))
(Any position is acceptable.)
2. Buckle the seat belt. (S7.1.1.5(c)(1))
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))
4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))

(X)Yes-Pass () No-FAIL
5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))

(X)Yes-Pass () No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? (X)Yes, go to 6.1 () No, go to 7.
 - 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

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

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 63.3 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))
12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

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

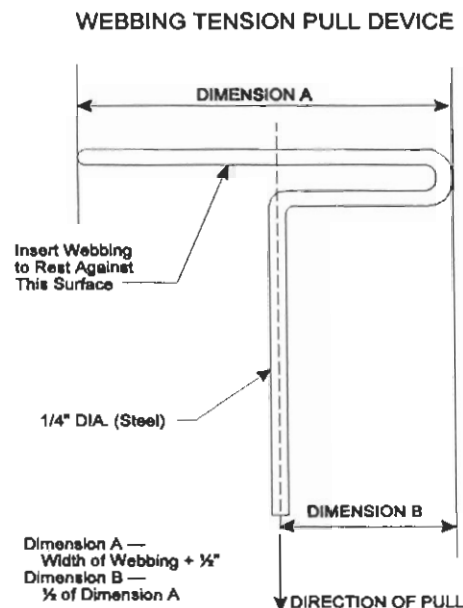


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

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

Measured distance between A and B is 27.5 inches.

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

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

Measure distance between points A and B 28.1 inches (S7.1.1.5(c)(6))

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

14-13 = 0.6 inches

(X)Yes-Pass

() No-FAIL

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

10-14 = 35.2 inches

(X)Yes-Pass

() No-FAIL

REMARKS: None

Lap Belt Lockability Data (Cont.)

Vehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

NHTSA No.: C25500; Technician: Chad Gadberry; Date: April 18, 2002

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

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

Designated Seating Position (DSP): Left Rear

1. Record the seating position. Non-adjustable
(S7.1.1.5(c)(1))
(Any position is acceptable.)
2. Buckle the seat belt. (S7.1.1.5(c)(1))
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))
4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))

(X)Yes-Pass () No-FAIL
5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))

(X)Yes-Pass () No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? (X)Yes, go to 6.1 () No, go to 7.
 - 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

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

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 62.7 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)

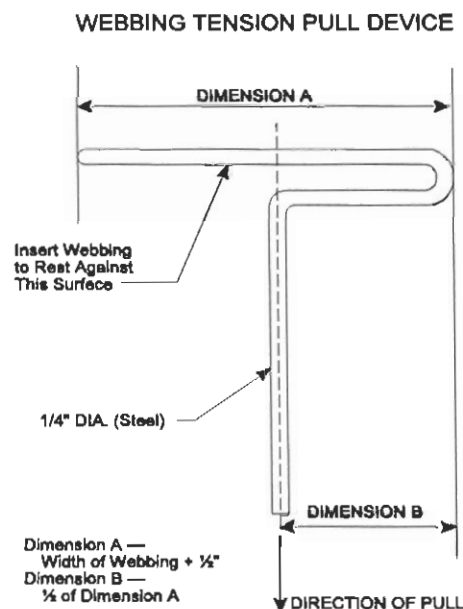


Figure 5 (S7.1.1.5(c)(4))

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 19.9 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 21.4 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 = 1.5 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 = 41.3 inches

(X)Yes-Pass

() No-FAIL

REMARKS: None

Lap Belt Lockability Data (Cont.)

Vehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

NHTSA No.: C25500; Technician: Chad Gadberry; Date: April 18, 2002

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

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

Designated Seating Position (DSP): Center Rear

1. Record the seating position. Non-adjustable
(S7.1.1.5(c)(1))
(Any position is acceptable.)
2. Buckle the seat belt. (S7.1.1.5(c)(1))
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))
4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))

(X)Yes-Pass () No-FAIL
5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))

(X)Yes-Pass () No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? (X)Yes, go to 6.1 () No, go to 7.
 - 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

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

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 56.9 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)

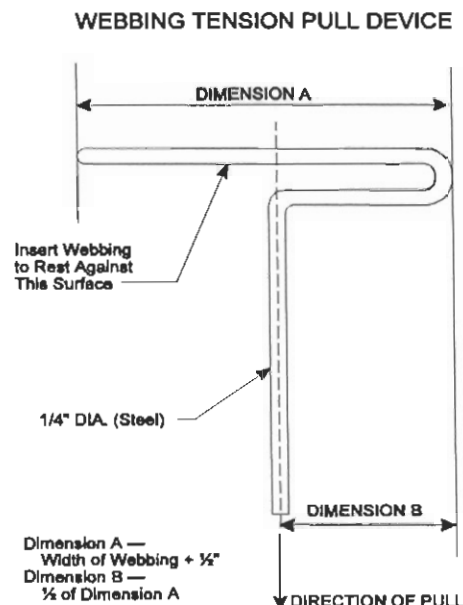


Figure 5 (S7.1.1.5(c)(4))

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 17.7 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 20.1 inches (S7.1.1.5(c)(6))

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

14-13 = 0.4 inches

(X)Yes-Pass

() No-FAIL

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

10-14 = 36.8 inches

(X)Yes-Pass

() No-FAIL

REMARKS: None

Lap Belt Lockability Data (Cont.)Vehicle Year/Make/Model/Body Style: 2002/Subaru/Impreza/WagonNHTSA No.: C25500 ; Technician: Chad Gadberry ; Date: April 18, 2002

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

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

Designated Seating Position (DSP): Right Rear

1. Record the seating position. Non-adjustable
(S7.1.1.5(c)(1))
(Any position is acceptable.)
2. Buckle the seat belt. (S7.1.1.5(c)(1))
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))
4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))

(X)Yes-Pass () No-FAIL
5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))

(X)Yes-Pass () No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? (X)Yes, go to 6.1 () No, go to 7.
 - 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

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

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 62.7 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)

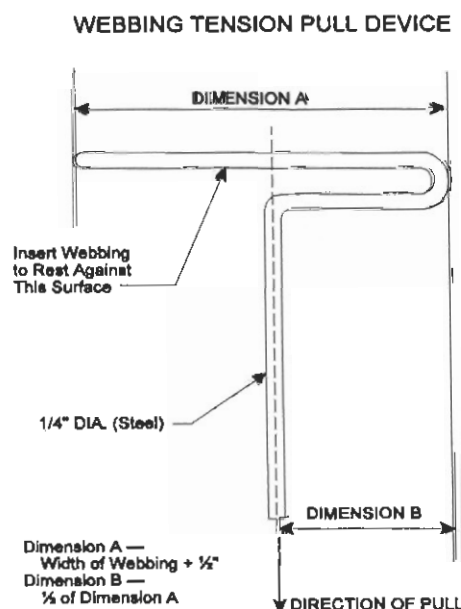


Figure 5 (S7.1.1.5(c)(4))

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 25.8 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 26.2 inches (S7.1.1.5(c)(6))

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

14-13 = 0.4 inches

(X)Yes-Pass

() No-FAIL

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

10-14 = 36.5 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.: C25500Vehicle Model Year/Make/Model/Body Style: 2002/Subaru/Impreza/WagonDesignated Seating Position Tested: Left RearDate of Comfort/Convenience Check: April 18, 2002Technician Performing Check: Chad GadberryGVWR: 4040 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.
(X) Check
() 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 0.4 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.)

1. BELT CONTACT FORCE (S7.4.3)

Test Vehicle NHTSA No.: C25500

Vehicle Model Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

Designated Seating Position Tested: Center Rear

Date of Comfort/Convenience Check: April 18, 2002

Technician Performing Check: Chad Gadberry

GVWR: 4040 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
☒ 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
☒ N/A
- 1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.
☐ Check
☒ N/A
- 1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.
☐ Check
☒ 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
☒ N/A
- 1.6 Place each adjustable head restraint in its highest adjustment position.
☒ 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 0.5 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.)

1. BELT CONTACT FORCE (S7.4.3)

Test Vehicle NHTSA No.: C25500

Vehicle Model Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

Designated Seating Position Tested: Right Rear

Date of Comfort/Convenience Check: April 18, 2002

Technician Performing Check: Chad Gadberry

GVWR: 4040 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
☒ 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
☒ N/A
- 1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.
☐ Check
☒ N/A
- 1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.
☐ Check
☒ 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
☐ N/A
- 1.6 Place each adjustable head restraint in its highest adjustment position.
☒ 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 0.4 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.: C25500

Vehicle Model Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

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

Date of Comfort/Convenience Check: _____

Technician Performing Check: _____

GVWR: _____

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

- 2.1 Position the seat in its forward most adjustment position.
() Check
- 2.2 Position the test dummy using the procedures in Appendix B. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position.)
() Check
- 2.3 Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant.
() Check
- 2.4 Attach the inboard and outboard reach string following the instructions on Figure 1C.
() Check
- 2.5 Place the latch plate in the stowed position.
() Check
- 2.6 Extend each line backward and outboard to generate arcs of the reach envelop of the test dummy's arms. Is the latch plate within the reach envelope?
() Yes-Pass () **No-FAIL**
- 2.7 Using the clearance test block, specified in Figure 2C, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?
() Yes-Pass () **No-FAIL**

Seat Belt Comfort and Convenience Data (Cont.)**3. RETRACTION (S7.4.5)**Test Vehicle NHTSA No.: C25500Vehicle Model Year/Make/Model/Body Style: 2002/Subaru/Impreza/WagonDesignated 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.: C25500

Vehicle Model Year/Make/Model/Body Style: 2002/Subaru/Impreza/Wagon

Designated Seating Position Tested: Left Rear

Date of Comfort/Convenience Check: April 18, 2002

Technician Performing Check: Chad Gadberry

GVWR: 4040 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. ☐ Check
 - (B) The seat is moved to any position to which it is designed to be adjusted. ☐ Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. ☐ Check
- ☐ Yes - Pass
☐ **No - FAIL**
- 4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
- ☐ Yes - Pass
☐ **No - FAIL**

Seat Belt Comfort and Convenience Data (Cont.)4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**Test Vehicle NHTSA No.: C25500Vehicle Model Year/Make/Model/Body Style: 2002/Subaru/Impreza/WagonDesignated Seating Position Tested: Center RearDate of Comfort/Convenience Check: April 18, 2002Technician Performing Check: Chad GadberryGVWR: 4040 lb

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

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

- A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b))
- B. Seats which are removable.
- C. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

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

- 4.1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
 - () Yes - Go to 4.2.
 - (X) No - this form is complete
- 4.2 Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
 - () Yes - Pass
 - () **No - FAIL**
- 4.3 Are the remaining two seat belt parts accessible under normal conditions?
 - () Yes - Pass
 - () **No - FAIL**

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. ☐ Check
 - (B) The seat is moved to any position to which it is designed to be adjusted. ☐ Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. ☐ Check
- ☐ Yes - Pass
☐ **No - FAIL**
- 4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
- ☐ Yes - Pass
☐ **No - FAIL**

Seat Belt Comfort and Convenience Data (Cont.)4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**Test Vehicle NHTSA No.: C25500Vehicle Model Year/Make/Model/Body Style: 2002/Subaru/Impreza/WagonDesignated Seating Position Tested: Right RearDate of Comfort/Convenience Check: April 18, 2002Technician Performing Check: Chad GadberryGVWR: 4040 lb

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

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

- A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b))
- B. Seats which are removable.
- C. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

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

- 4.1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
 - () Yes - Go to 4.2.
 - (X) No - this form is complete
- 4.2 Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
 - () Yes - Pass
 - () No - FAIL
- 4.3 Are the remaining two seat belt parts accessible under normal conditions?
 - () Yes - Pass
 - () No - FAIL

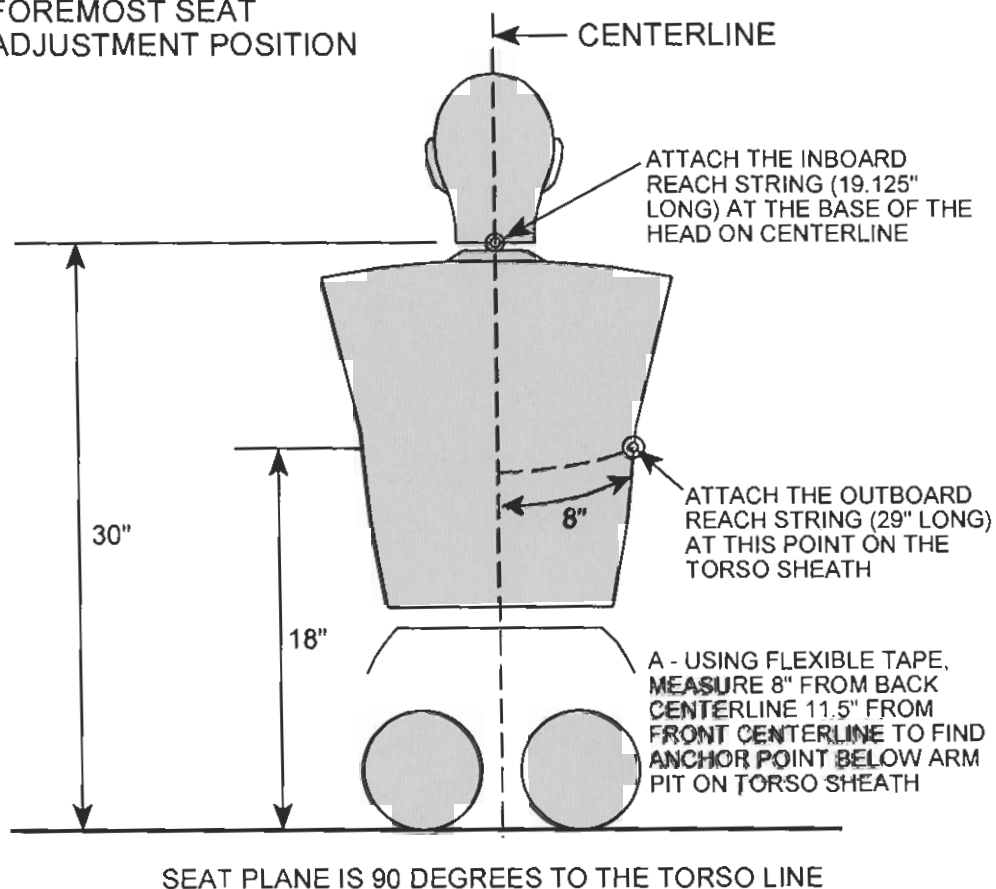
Seat Belt Comfort and Convenience Data (Cont.)

- 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. ☐ Check
 - (B) The seat is moved to any position to which it is designed to be adjusted. ☐ Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. ☐ Check
- ☐ Yes - Pass
☐ **No - FAIL**
- 4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
- ☐ Yes - Pass
☐ **No - FAIL**

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

PART 572E DUMMY

50TH PERCENTILE
DUMMY SEATED IN
FOREMOST SEAT
ADJUSTMENT POSITION



REAR VIEW

USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

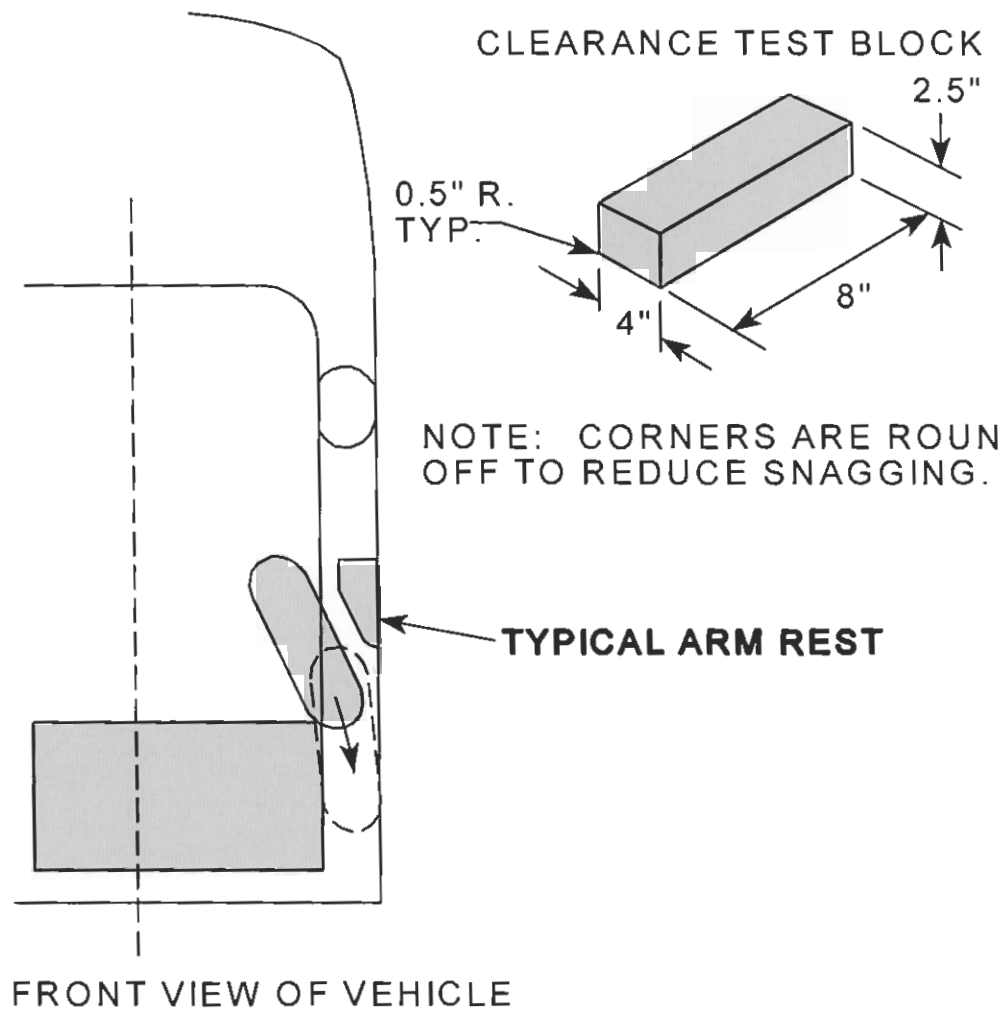


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Photo No. A-1 - Pre-Test Frontal View

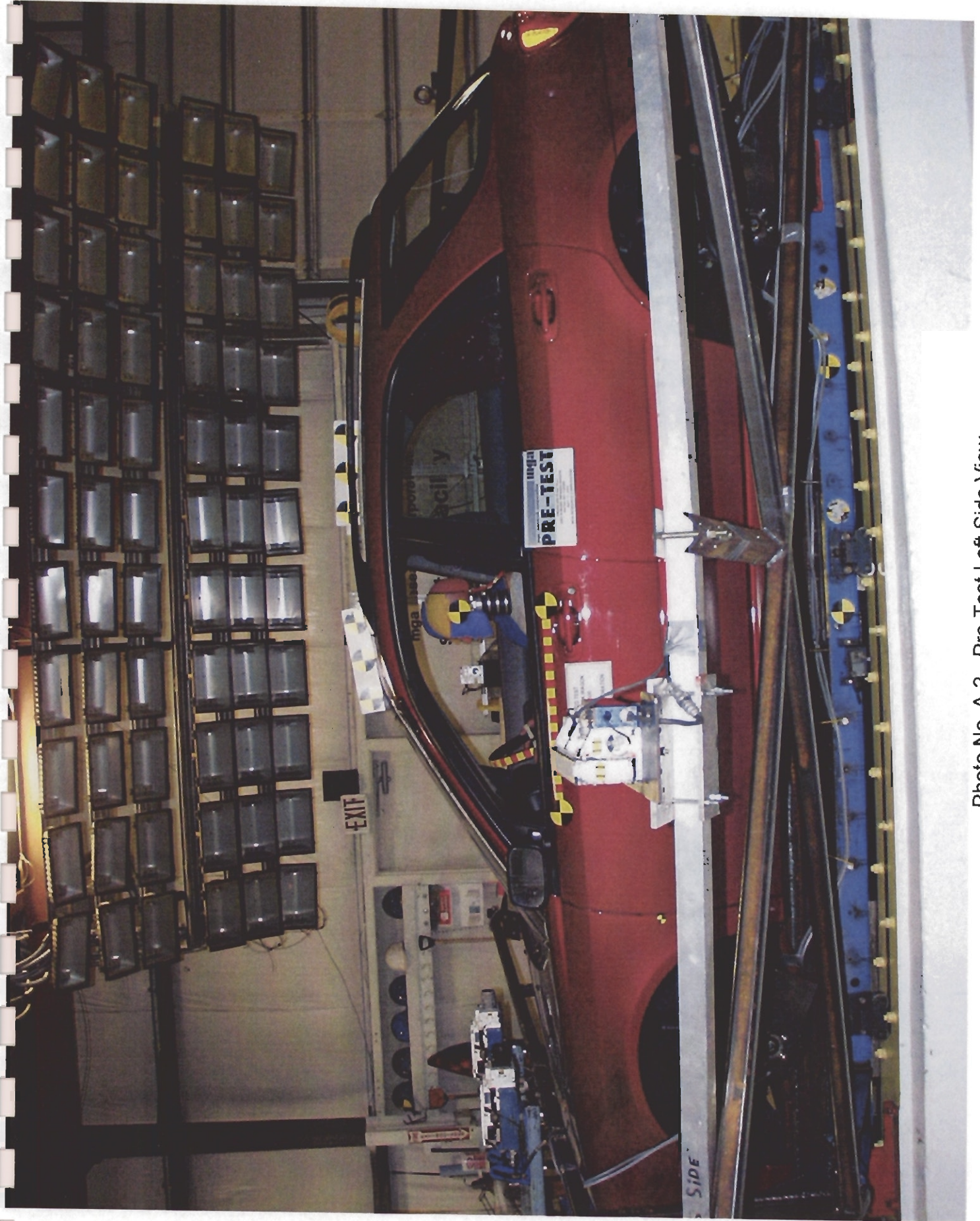


Photo No. A-2 - Pre-Test Left Side View



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)

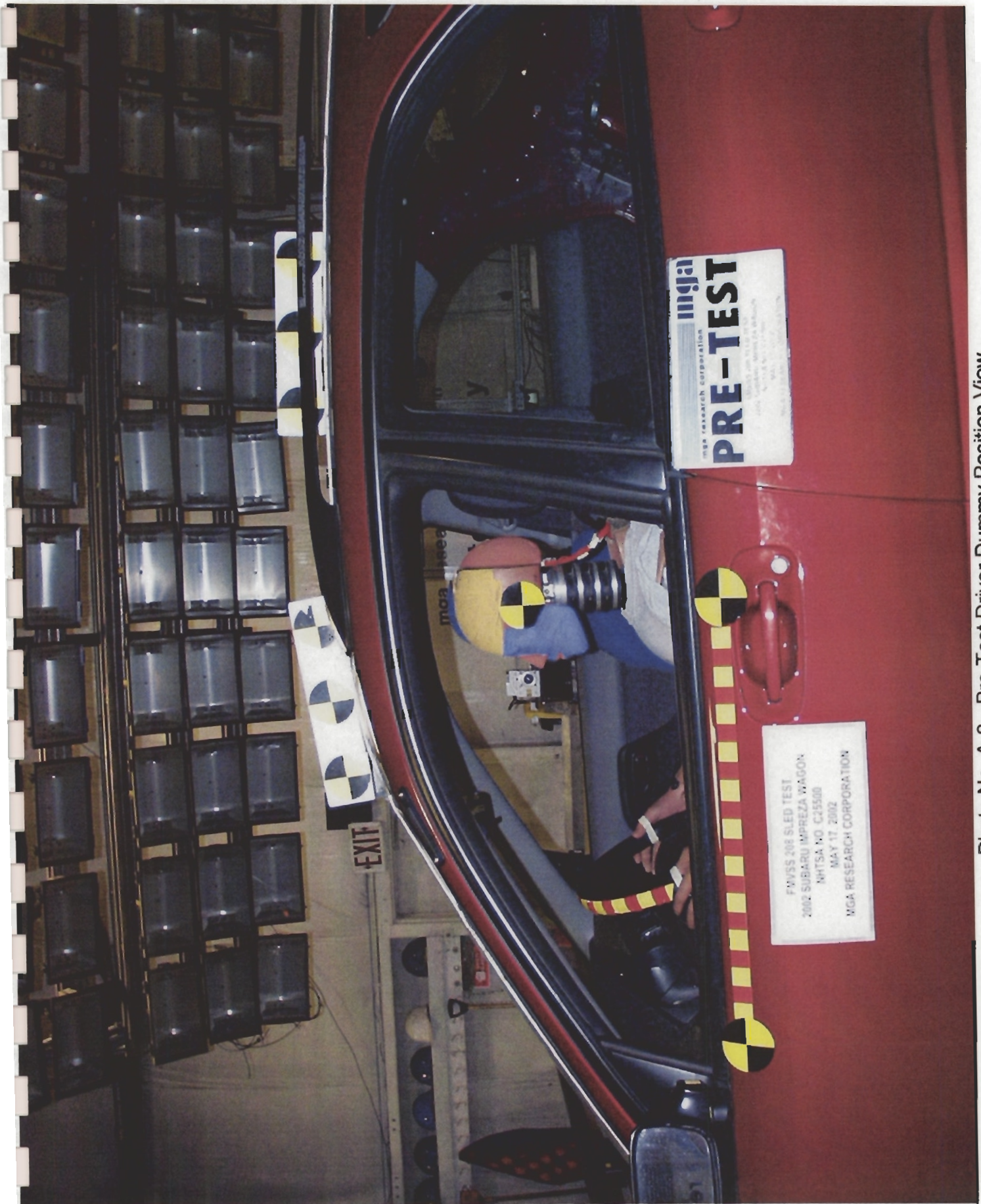


Photo No. A-8 - Pre-Test Driver Dummy Position View



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)



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PRE-TEST
FMVSS 208 SLED TEST
2002 SUBARU IMPREZA WAGON
NHTSA NO. C25500
MAY 17, 2002
MGA RESEARCH CORPORATION

FMVSS 208 SLED TEST
2002 SUBARU IMPREZA WAGON
NHTSA NO. C25500
MAY 17, 2002
MGA RESEARCH CORPORATION

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 Passenger Dummy Airbag View



Photo No. A-16 - Pre-Test Driver Knee Bolster View



Photo No. A-17 - Post-Test Driver Knee Bolster View



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

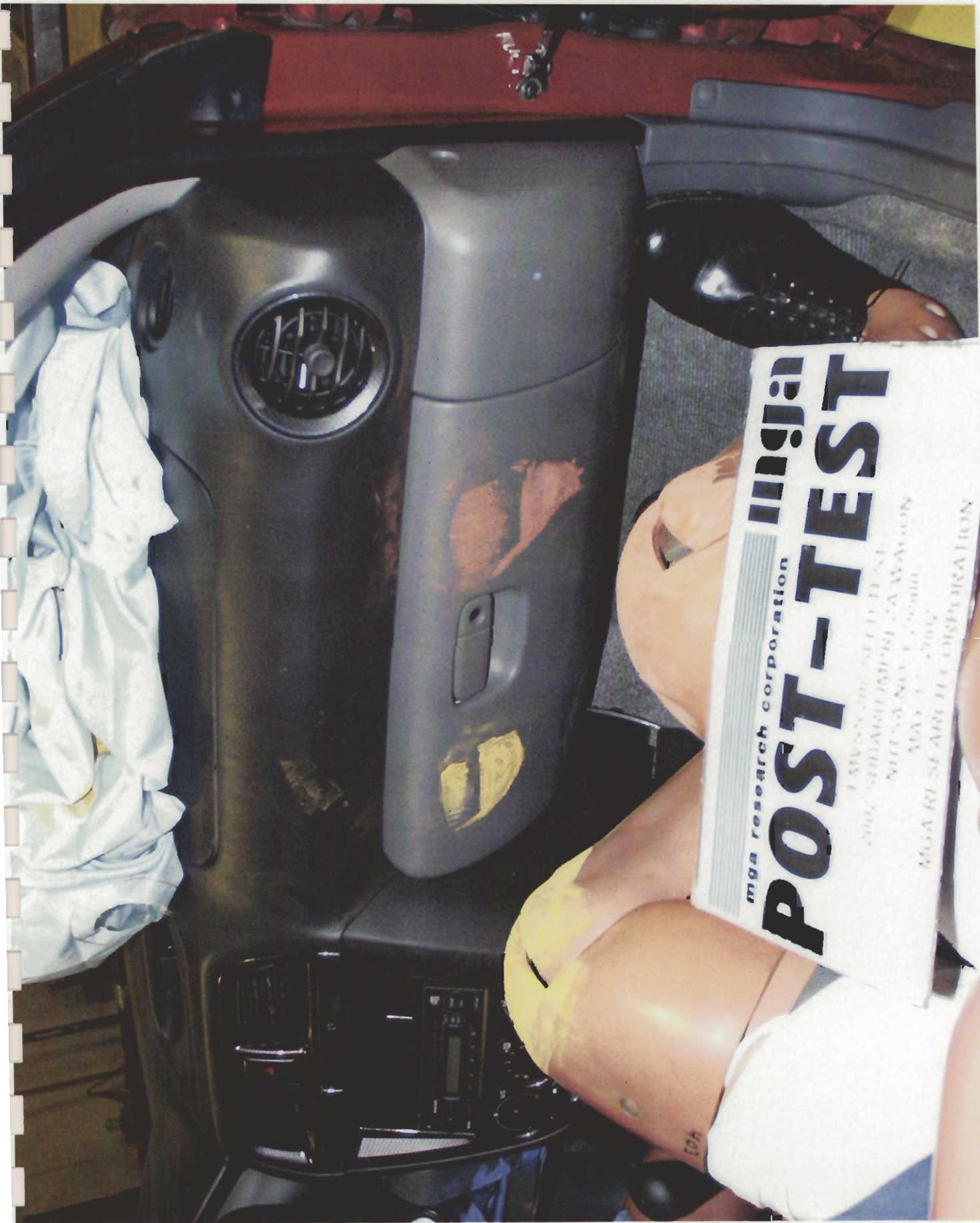


Photo No. A-19 - Post-Test Passenger Knee Bolster View



Photo No. A-20 - Pre-Test Driver Seat Position View



Photo No. A-21 - Post-Test Driver Seat Position View



Photo No. A-22 - Pre-Test Passenger Seat Position View



Photo No. A-23 - Post-Test Passenger Seat Position View

MFD BY FUJI HEAVY IND. LTD., JAPAN

MFD IN 09/01

GVWR/PNBV: 4040LB(1833KG)

GAWR/PNBE: FRONT-2070LB(939KG)

REAR -2040LB(925KG)

THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY, BUMPER, AND
THEFT PREVENTION STANDARDS IN EFFECT ON
THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN

JF1GG655626817880

(FN)

PASSENGER CAR
TYPE:PC/VT

APPENDIX B
DATA PLOTS

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TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

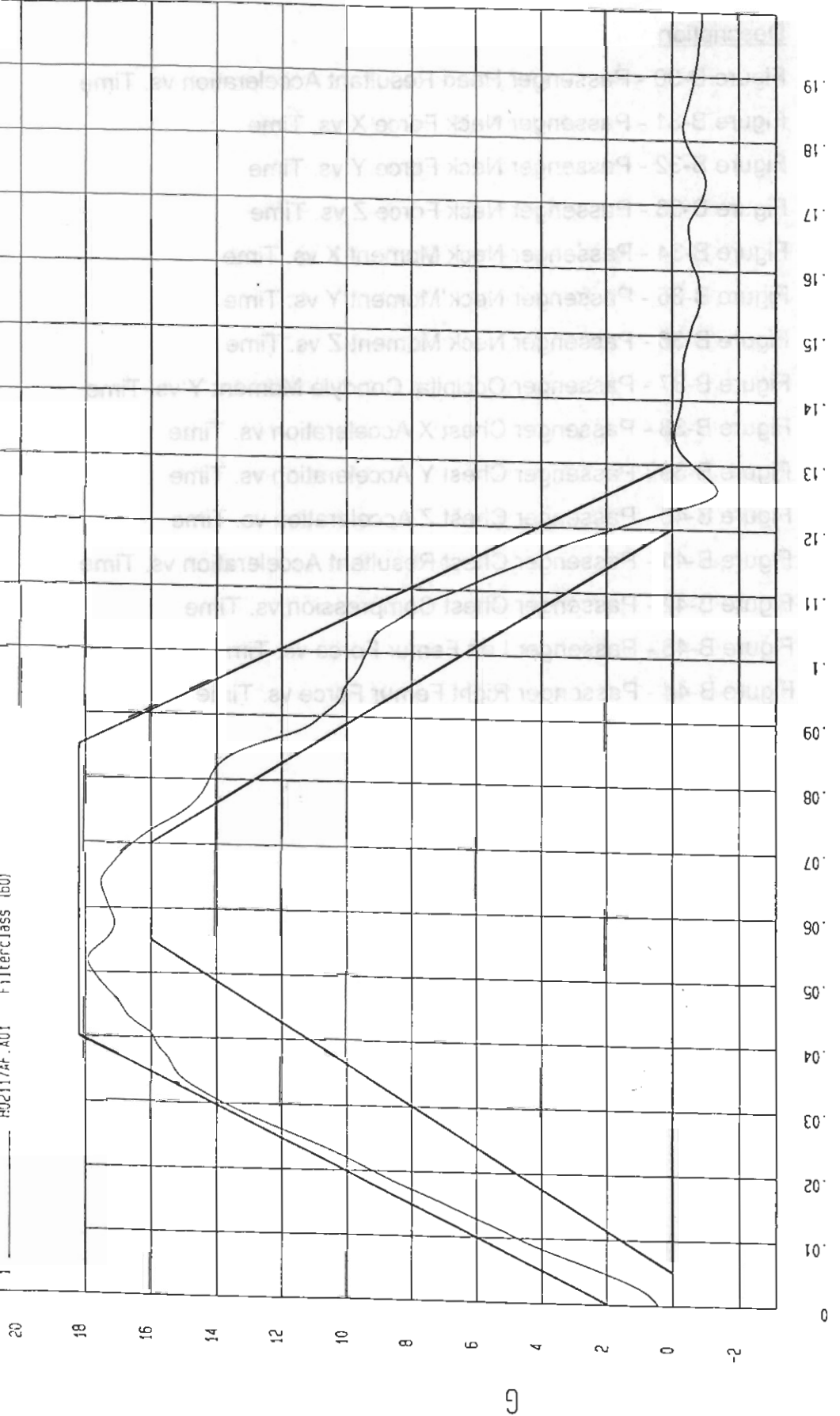
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -1.35 G at 126.1 msec

Maximum = 17.92 G at 51.9 msec

SLED X ACCELERATION

1 H02117AF.A01 FilterClass (50)



TIME (SECONDS)

MCA Research
05-20-2002 14:46

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

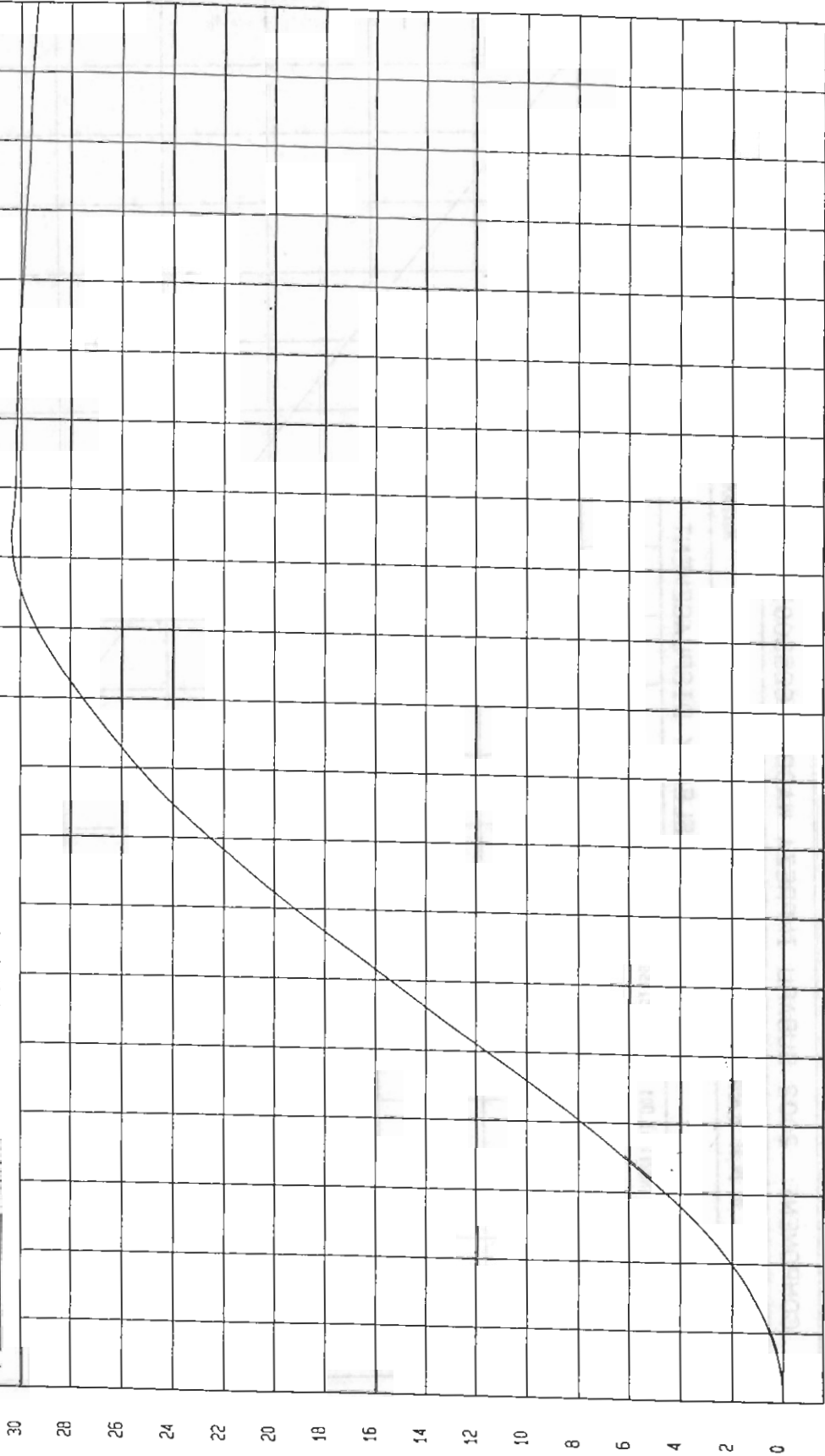
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = 0 MPH at 0 msec

Maximum = 30.36 MPH at 123 msec

SLED X VELOCITY

H02117A1.V01 Filterclass (180)



MPH

TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

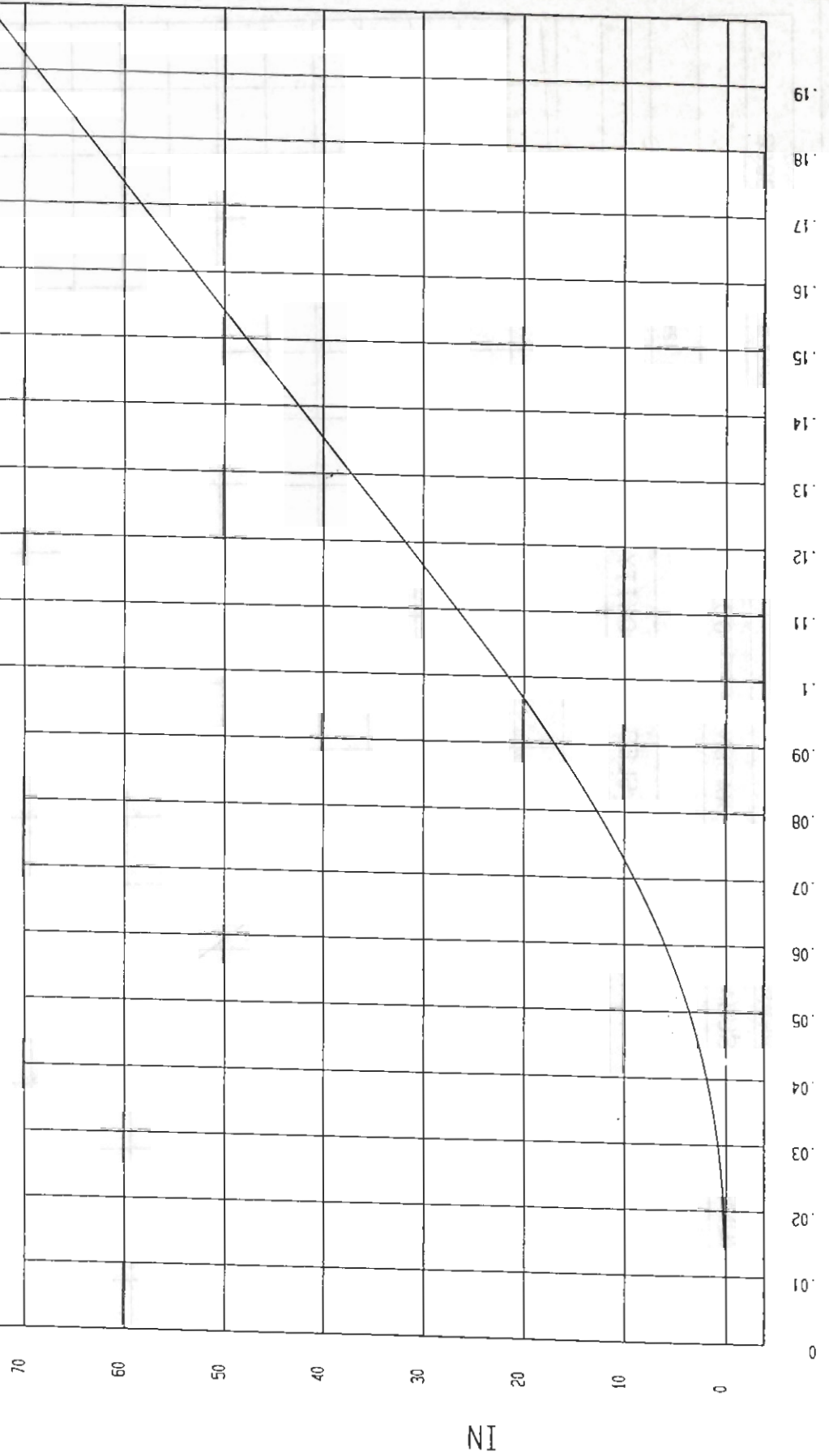
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = 0 IN at 0 msec

Maximum = 73.89 IN at 200 msec

SLED X DISPLACEMENT

1 H02117A1.001 Filterclass (180)



TIME Seconds

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 21.3 V at 22 msec

Minimum = -.11 V at 7 msec

AIRBAG VOLTAGE

1 H021170T.047 Filterclass (1000)

22

20

18

16

14

12

10

8

6

4

2

0

V

TIME (SECONDS)

19

18

17

16

15

14

13

12

11

10

09

08

07

06

05

04

03

02

01

0

MCA Research
05-17-2002 13:18

TEST: FMVSS 208 SLED (H02117)

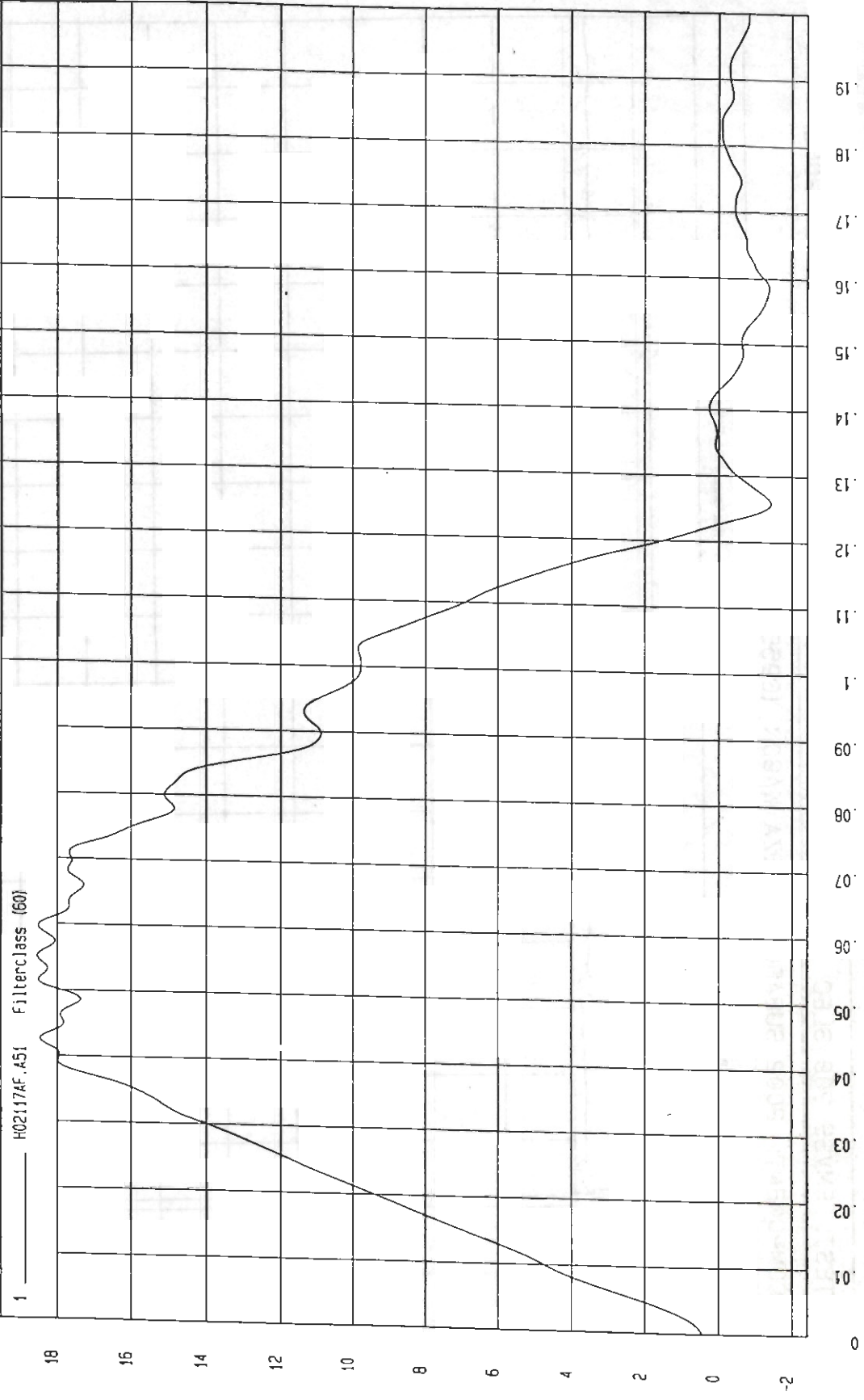
TEST DATE: 05-17-2002

COMPONENT: 2002 SUBARU IMPREZA WAGON (C255500)

Minimum = -1.42 G at 126 msec

Maximum = 18.52 G at 55 msec

LEFT REAR SEAT CROSSMEMBER X ACCELERATION



TEST DATE: 05-17-2002

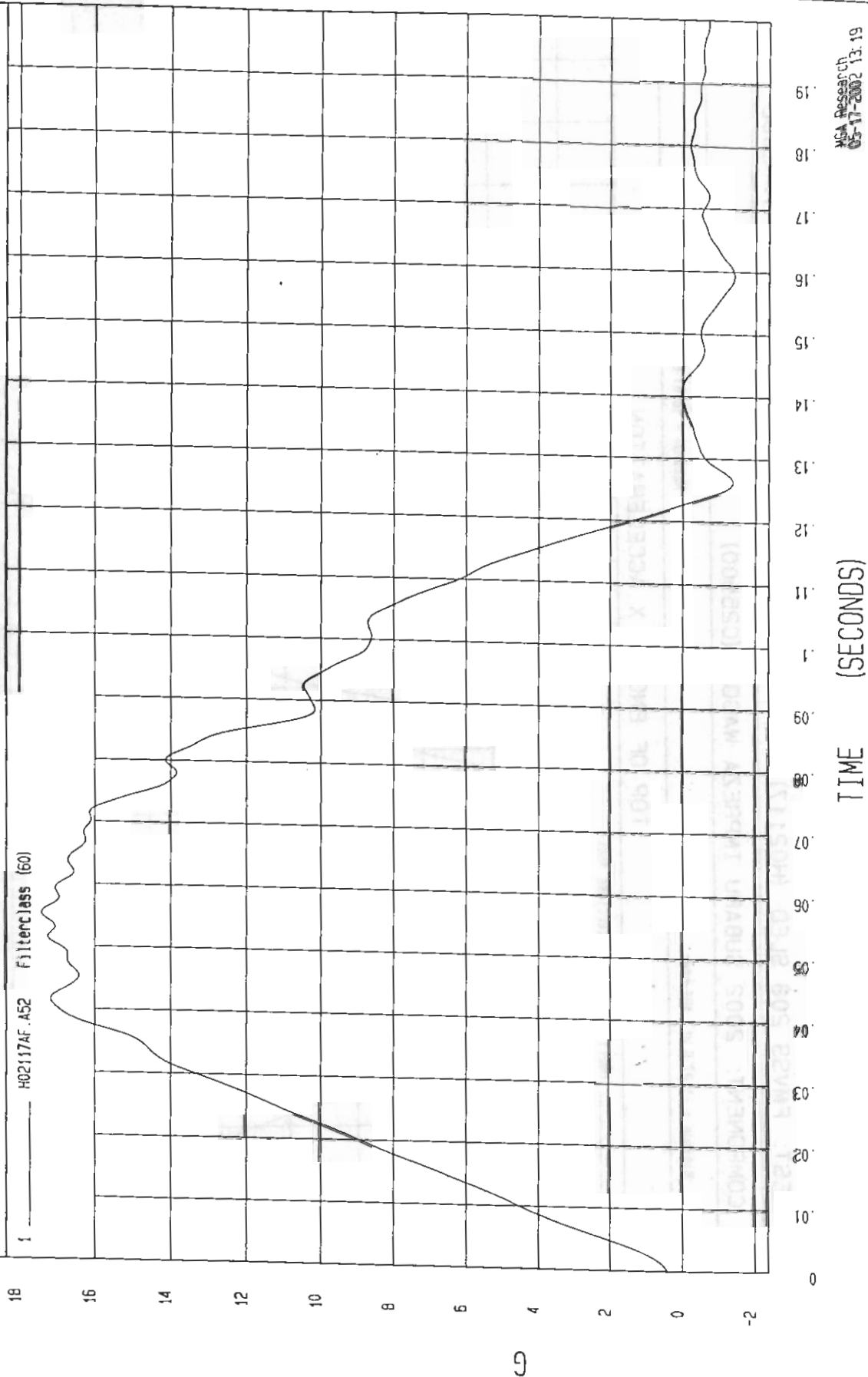
TEST: FMVSS 208 SLED (H02117)

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -1.41 G at 159 msec

Maximum = 17.42 G at 55 msec

RIGHT REAR SEAT CROSSMEMBER X ACCELERATION



TEST DATE: 05-17-2002

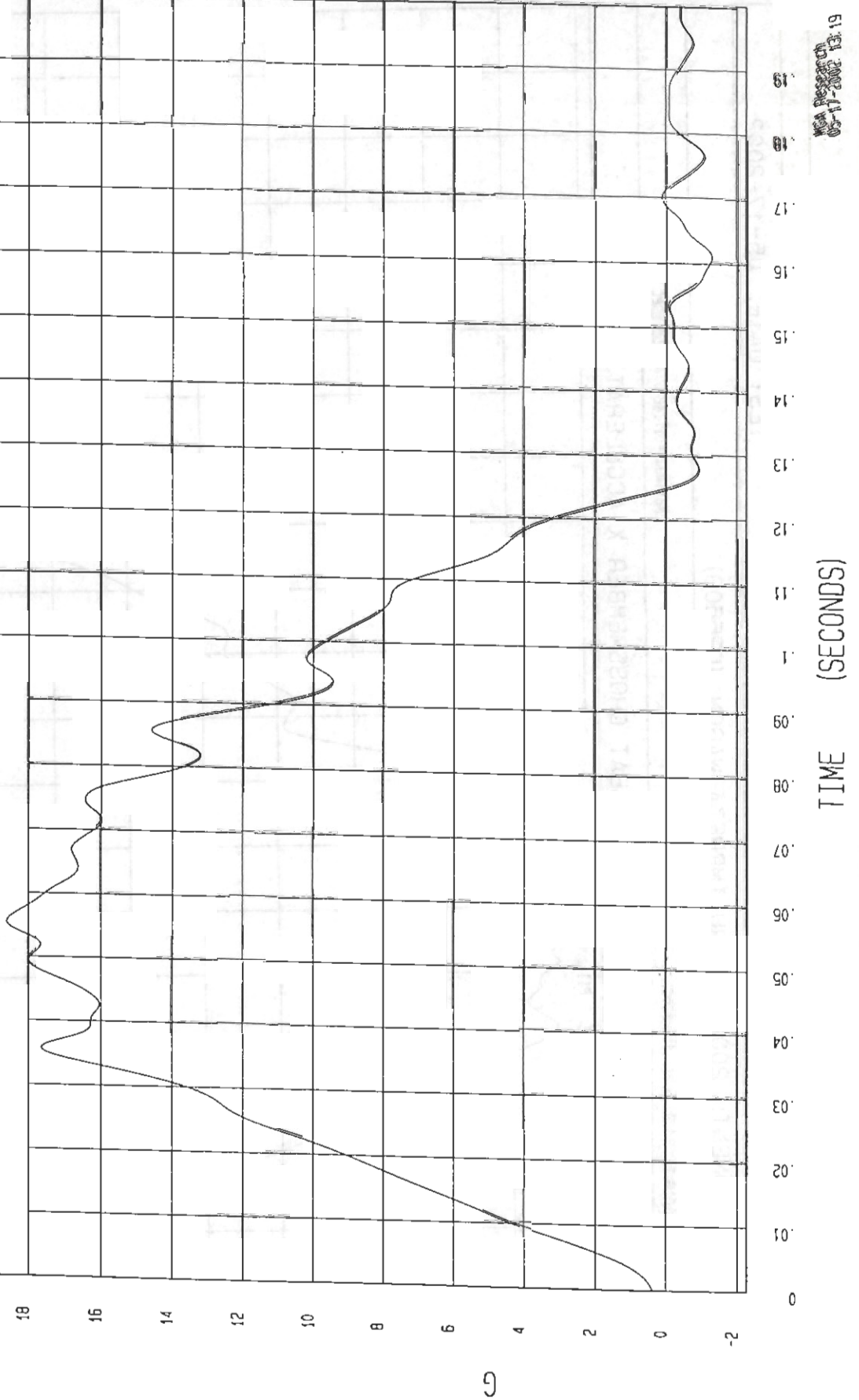
TEST: FMVSS 208 SLED (H02117)

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -1.27 G at 161 msec Maximum = 18.61 G at 55 msec

TOP OF ENGINE X ACCELERATION

1 H02117AF.A44 Filterclass (50)



TEST: FMVSS 208 SLED (H02117)

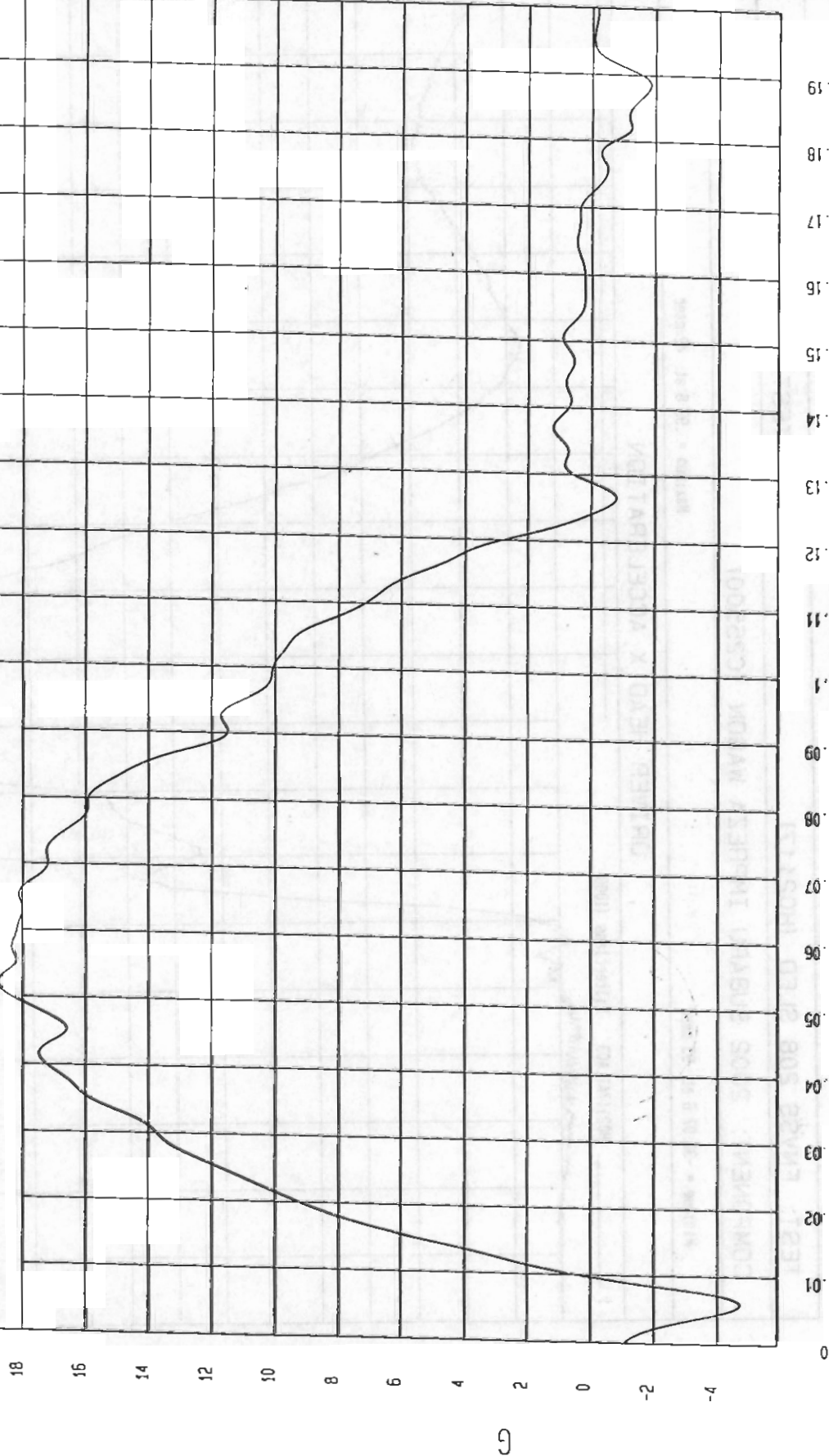
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -4.71 G at 6 msec

Maximum = 18.82 G at 52 msec

REAR AXLE X ACCELERATION

1	H02117AF.A45	Filterclass (60)



TIME (SECONDS)

TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

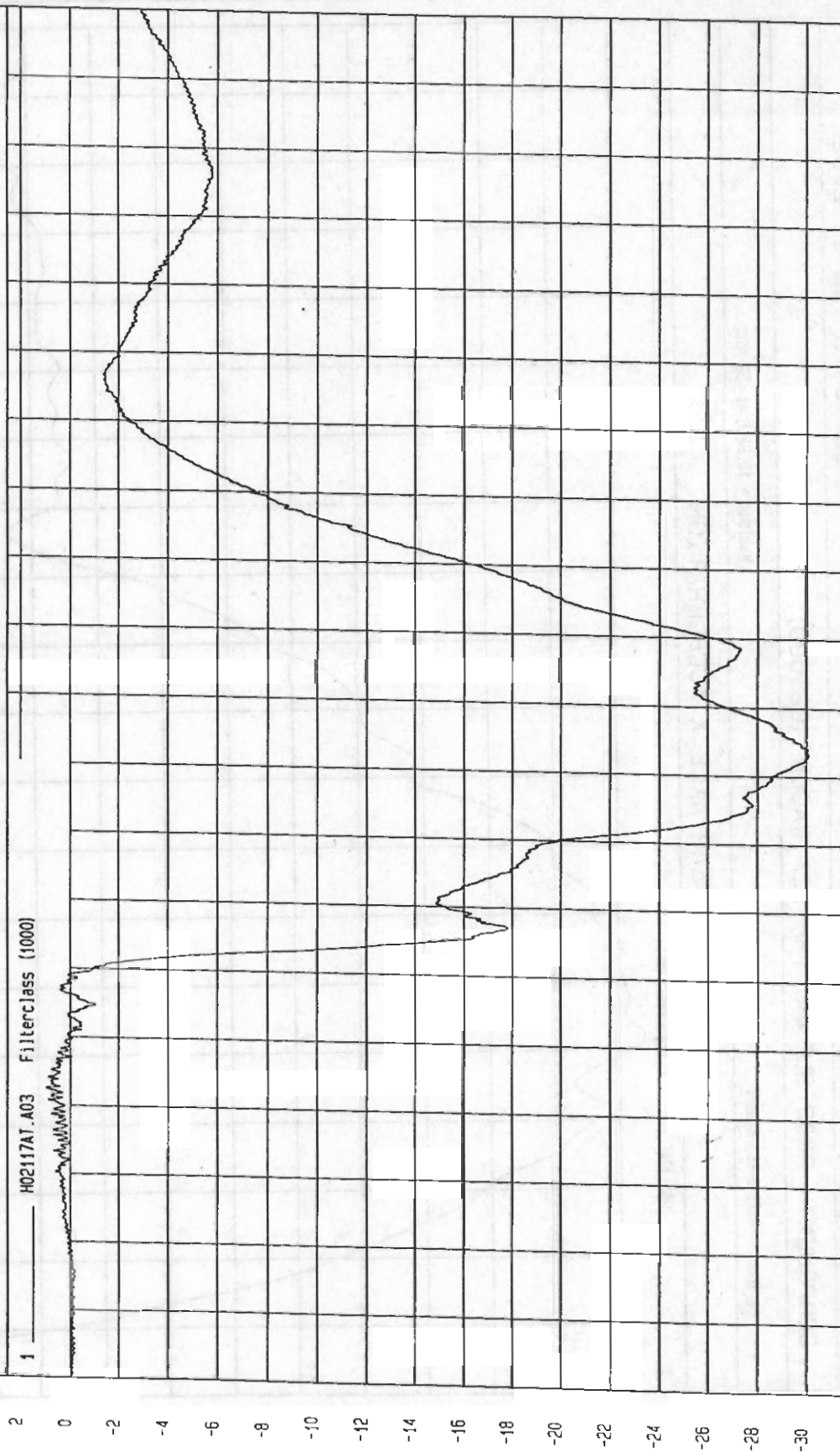
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -30.07 G at 93 msec

Maximum = .99 G at 42 msec

DRIVER HEAD X ACCELERATION

1 H02117A1.A03 Filterclass (1000)



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

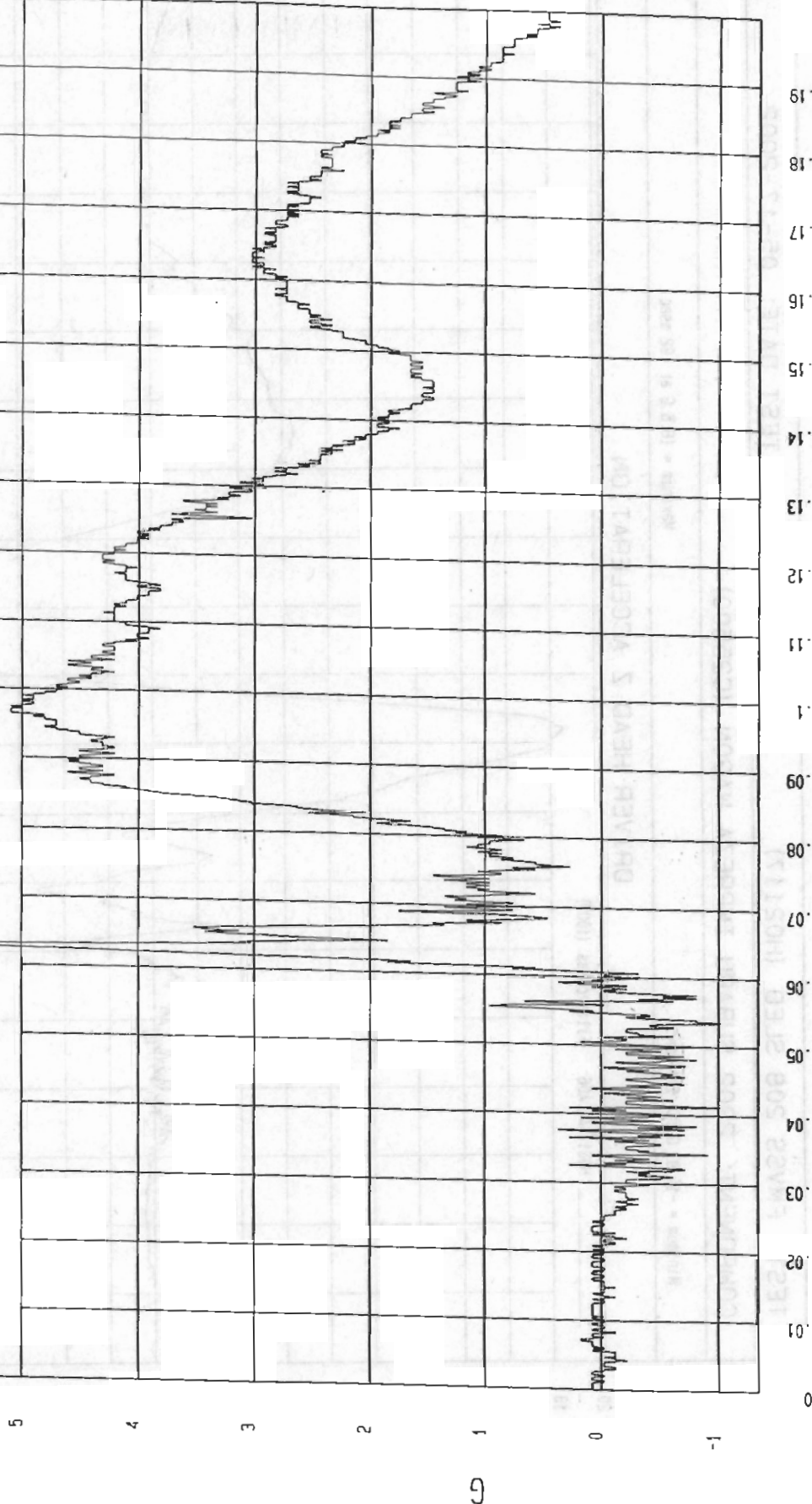
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -1.01 G at 41 msec

Maximum = 5.59 G at 63 msec

DRIVER HEAD Y ACCELERATION

1 — H02117AT.A05 FilterClass (1000)



TIME (SECONDS)

MOA Research
05-17-2002 13:17

TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

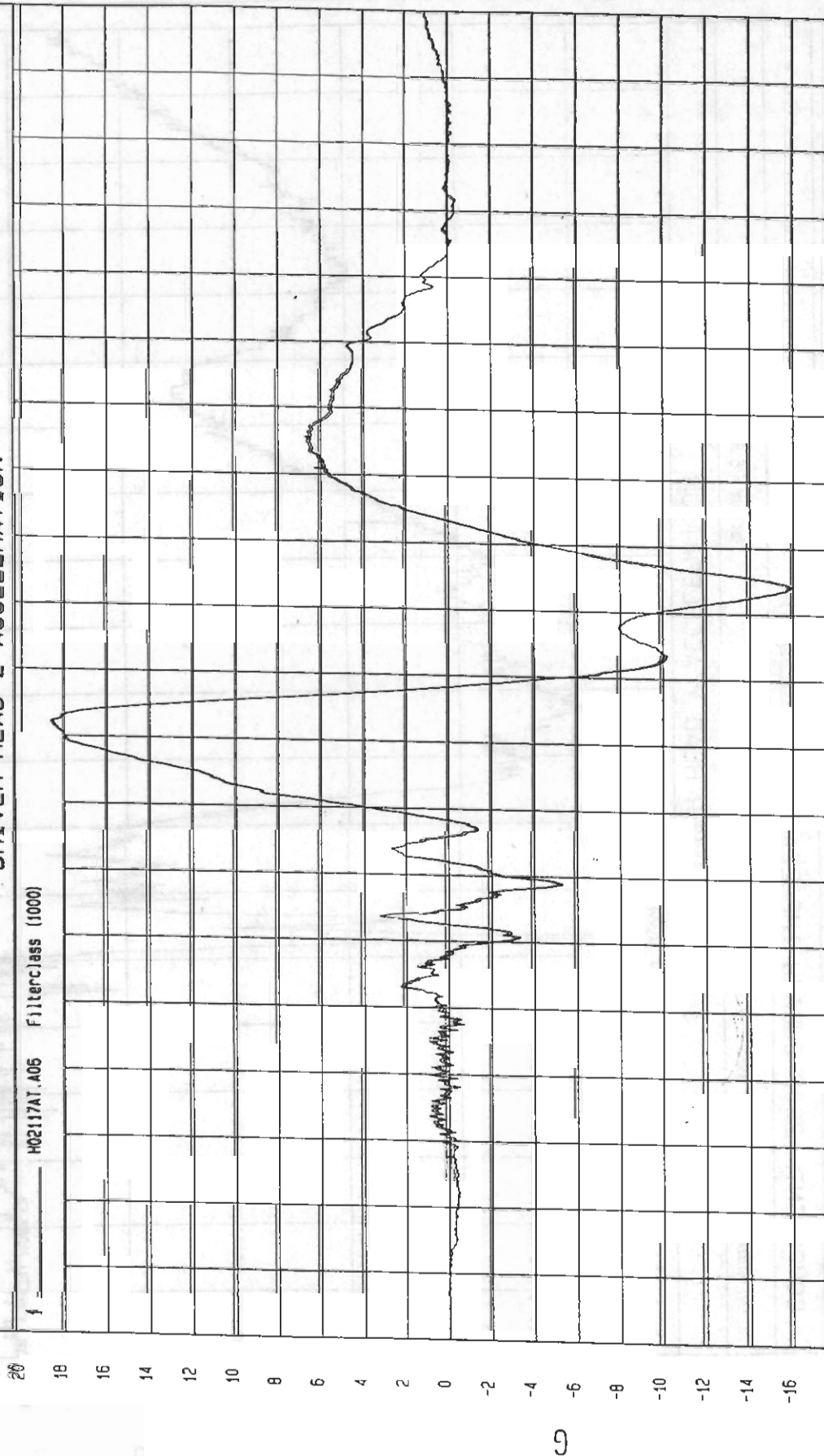
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -15.97 G at 114 msec

Maximum = 18.6 G at 92 msec

DRIVER HEAD Z ACCELERATION

f H02117AT.A05 Filterclass (1000)



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

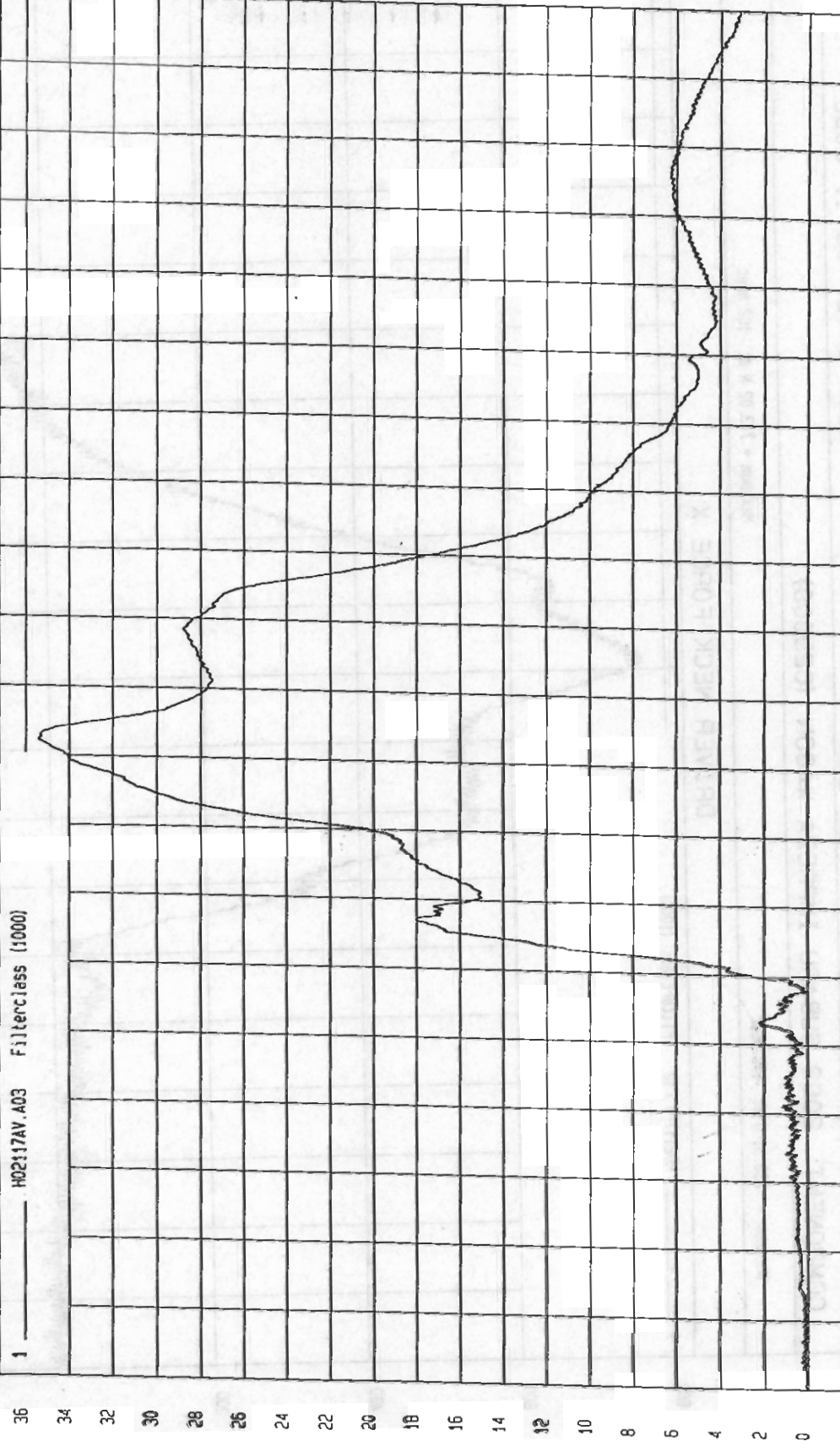
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = 2.79E-02 G at 1 msec

Maximum = 35.45 G at 92 msec

DRIVER HEAD RESULTANT ACCELERATION

1 H02117AV.A03 Filterclass (1000)



TIME (SECONDS)

MCA Research
05-17-2002 13:17

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

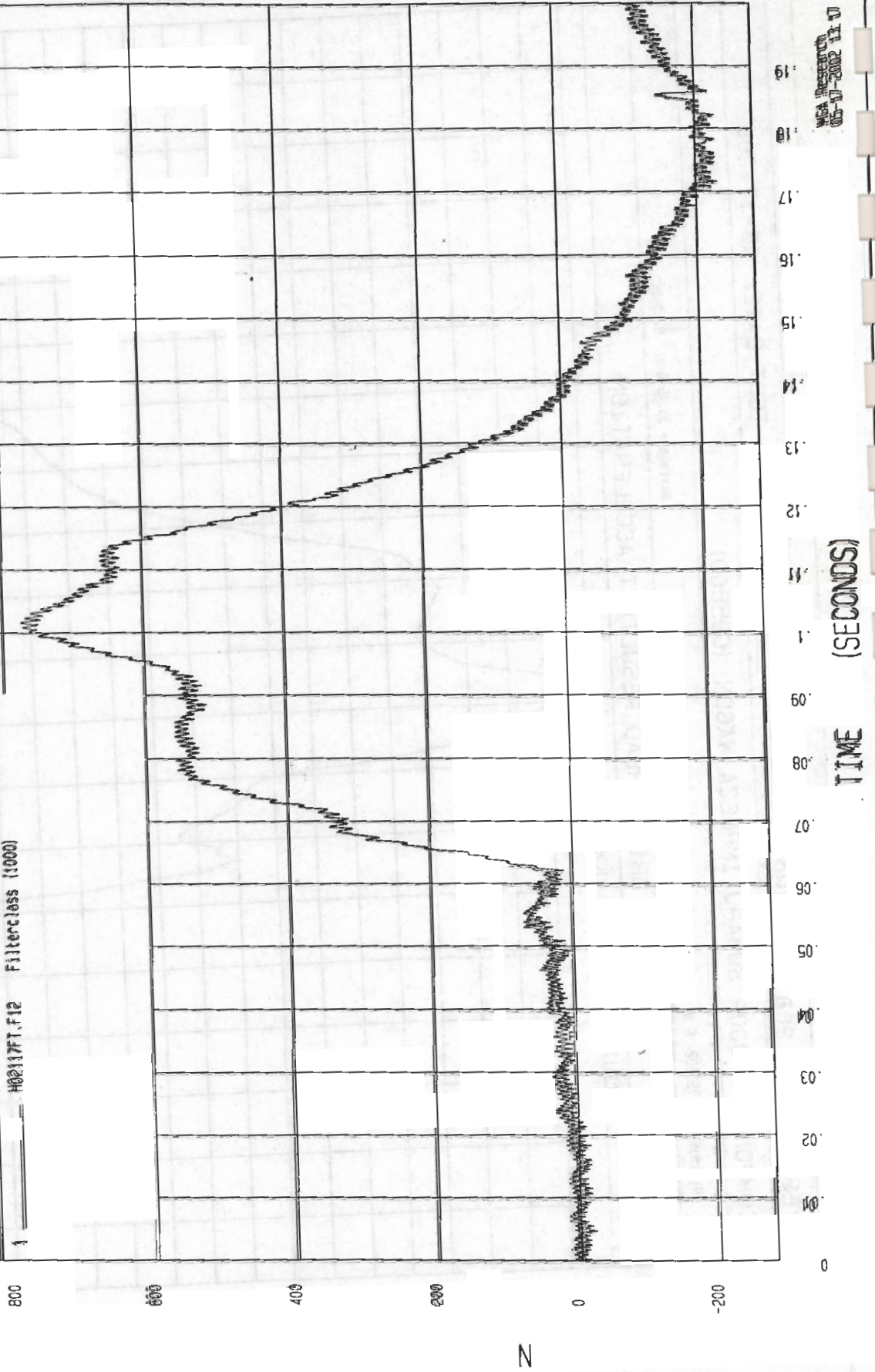
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 773.02 N at 102 msec

Minimum = -230.31 N at 172 msec

DRIVER NECK FORCE X

1 H02117T.F12 Filterless (1000)



SEA Research
05-17-2002 11:00

TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

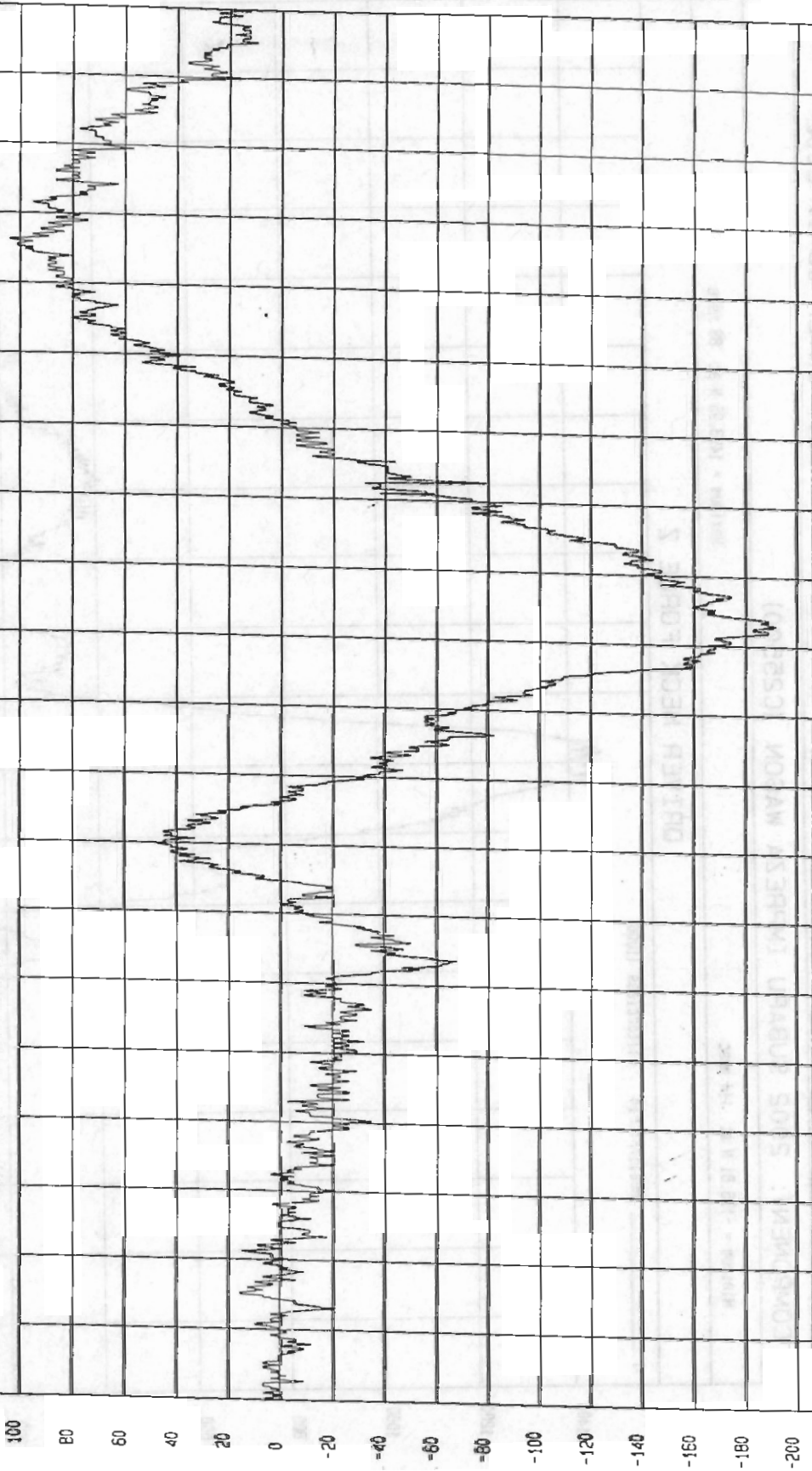
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -191.74 N at 113 msec

Maximum = 104.05 N at 166 msec

DRIVER NECK FORCE Y

1 H02117.F13 Filterclass (1000)



TIME (SECONDS)

MCA Research
05-17-2002 13:17

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

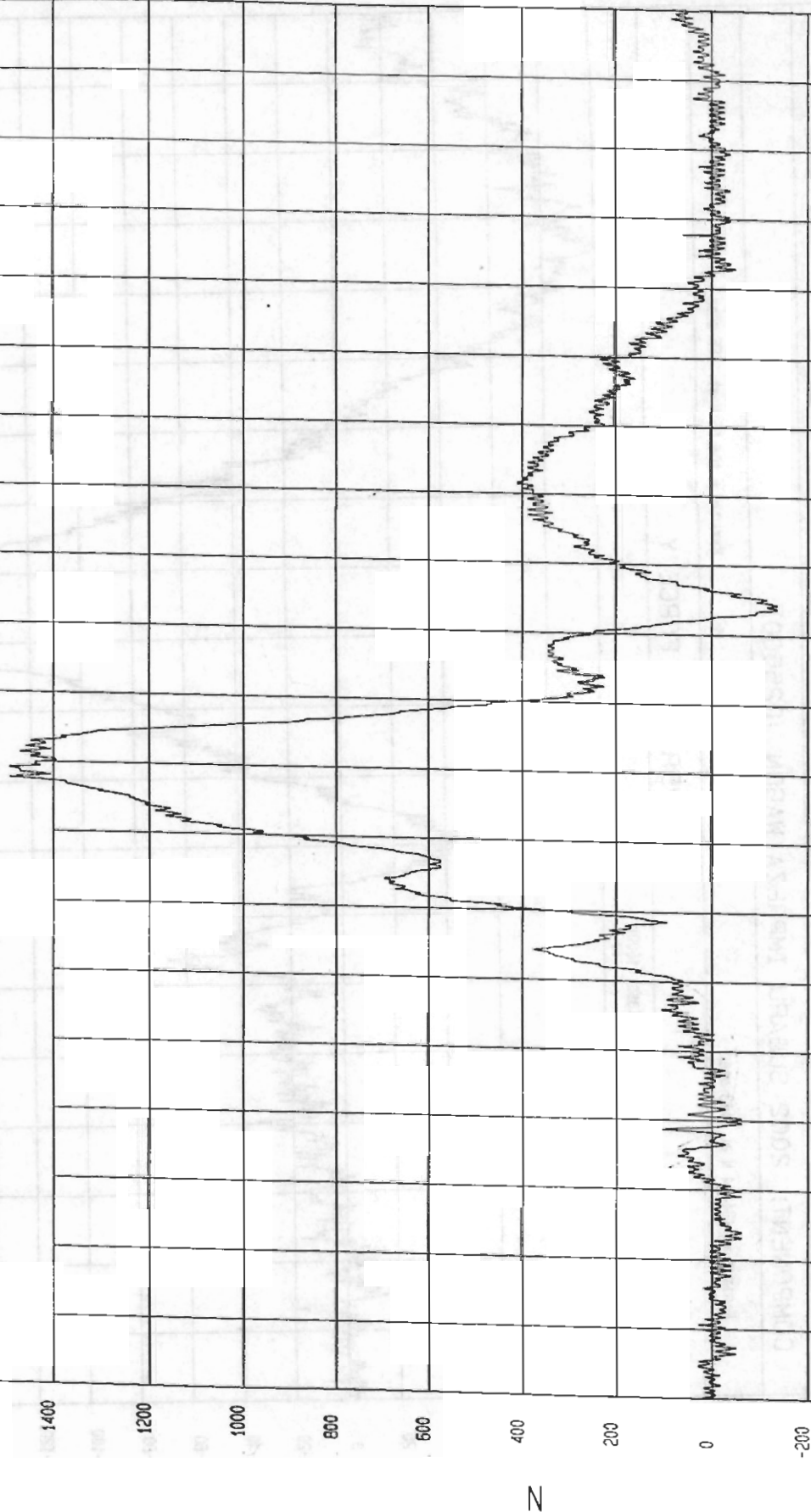
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -135.81 N at 114 msec

Maximum = 1493.95 N at 88 msec

DRIVER NECK FORCE Z

1 H02117.F14 Filterclass (1003)



MCA Research
05-17-2002 13:17

TIME (SECONDS)

61
18
17
16
15
14
13
12
11
1
09
08
07
06
05
04
03
02
01
0

DRIVER NECK MOMENT X

10

8

6

4

2

0

Nm

1 — H02117NF.M15 FilterClass (500)

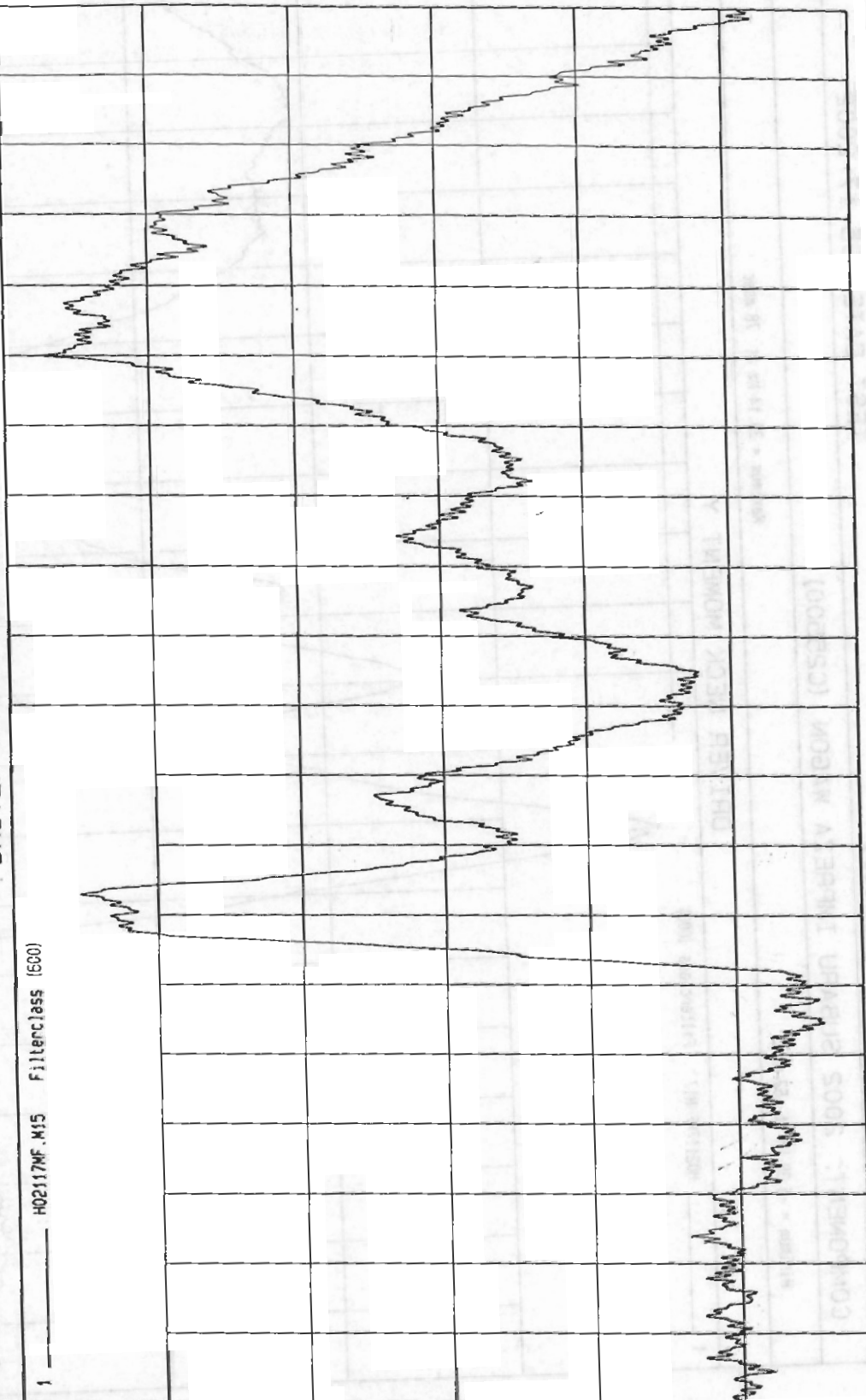
TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -1.21 Nm at 54 msec

Maximum = 9.48 Nm at 150 msec



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

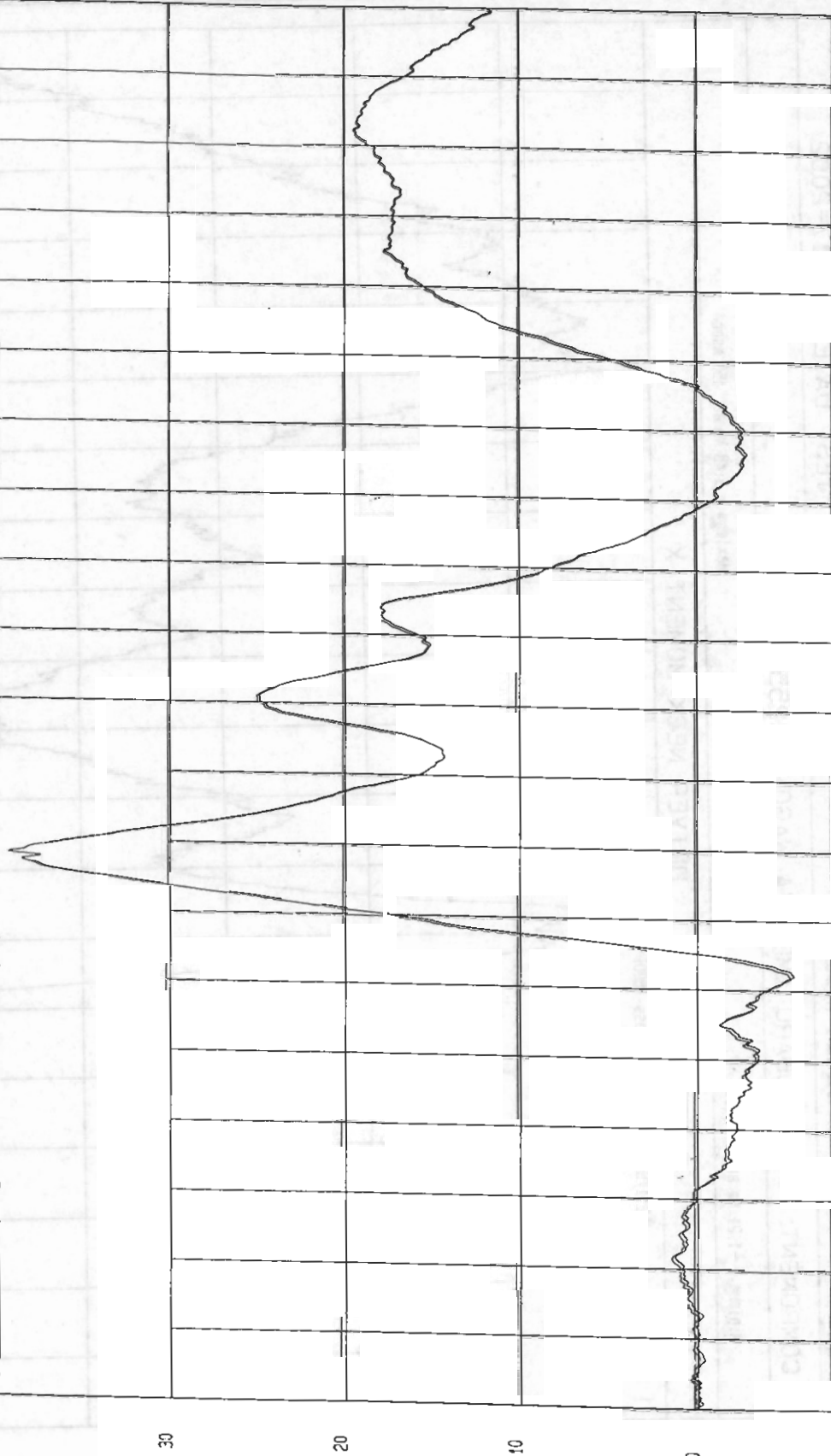
Minimum = -5.39 Nm at 62 msec

Maximum = 39.14 Nm at 78 msec

DRIVER NECK MOMENT Y

H02117F.N17 Filterclass (600)

40



05-17-2002 13:17

TIME (SECONDS)

0

Nm

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

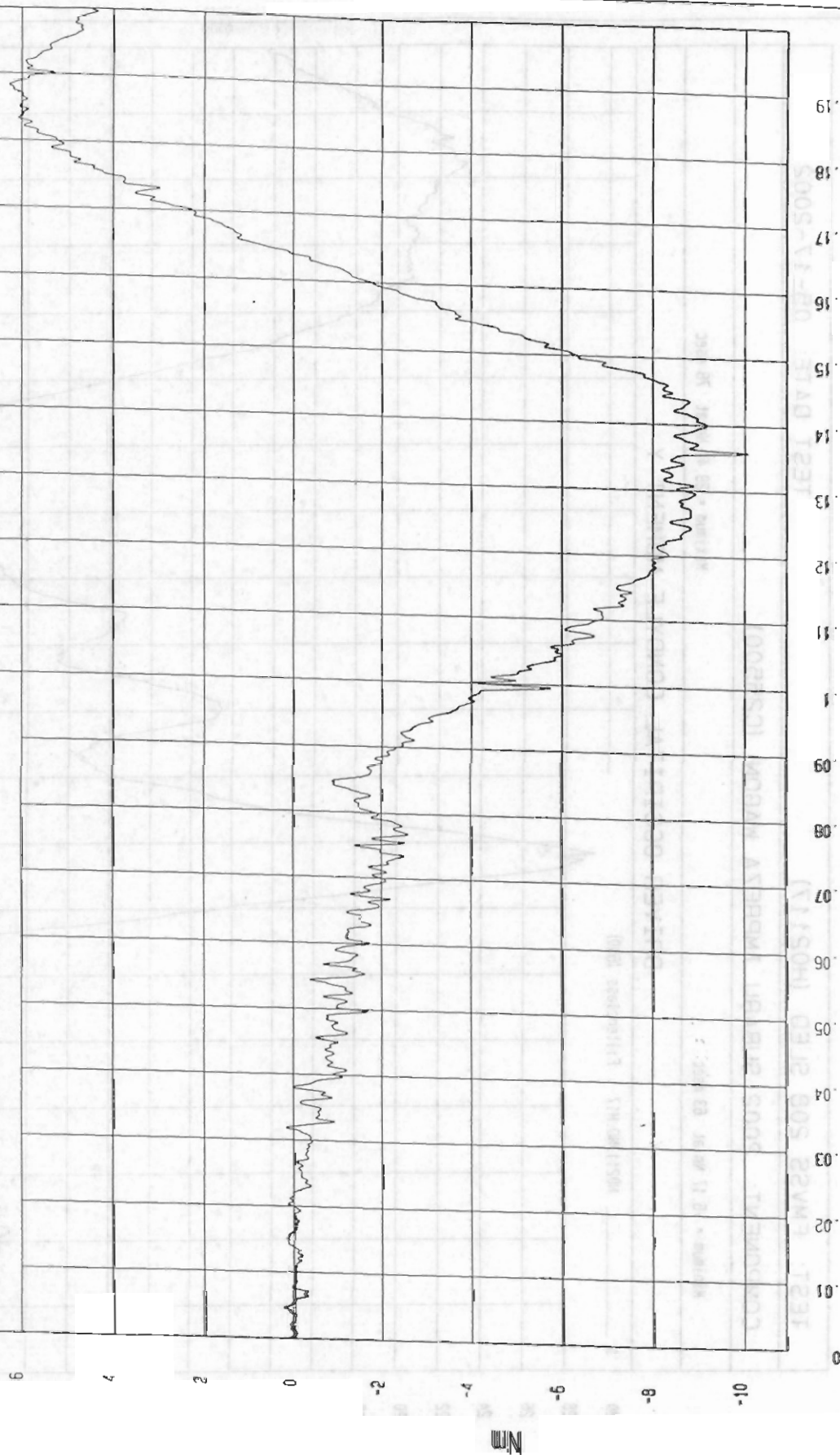
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -10.07 Nm at 136 msec

Maximum = 6.28 Nm at 188 msec

DRIVER NECK MOMENT Z

1 H02117MF.M18 Filterclass (600)

MGA Research
05-17-2002 13:17

TIME (SECONDS)

TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

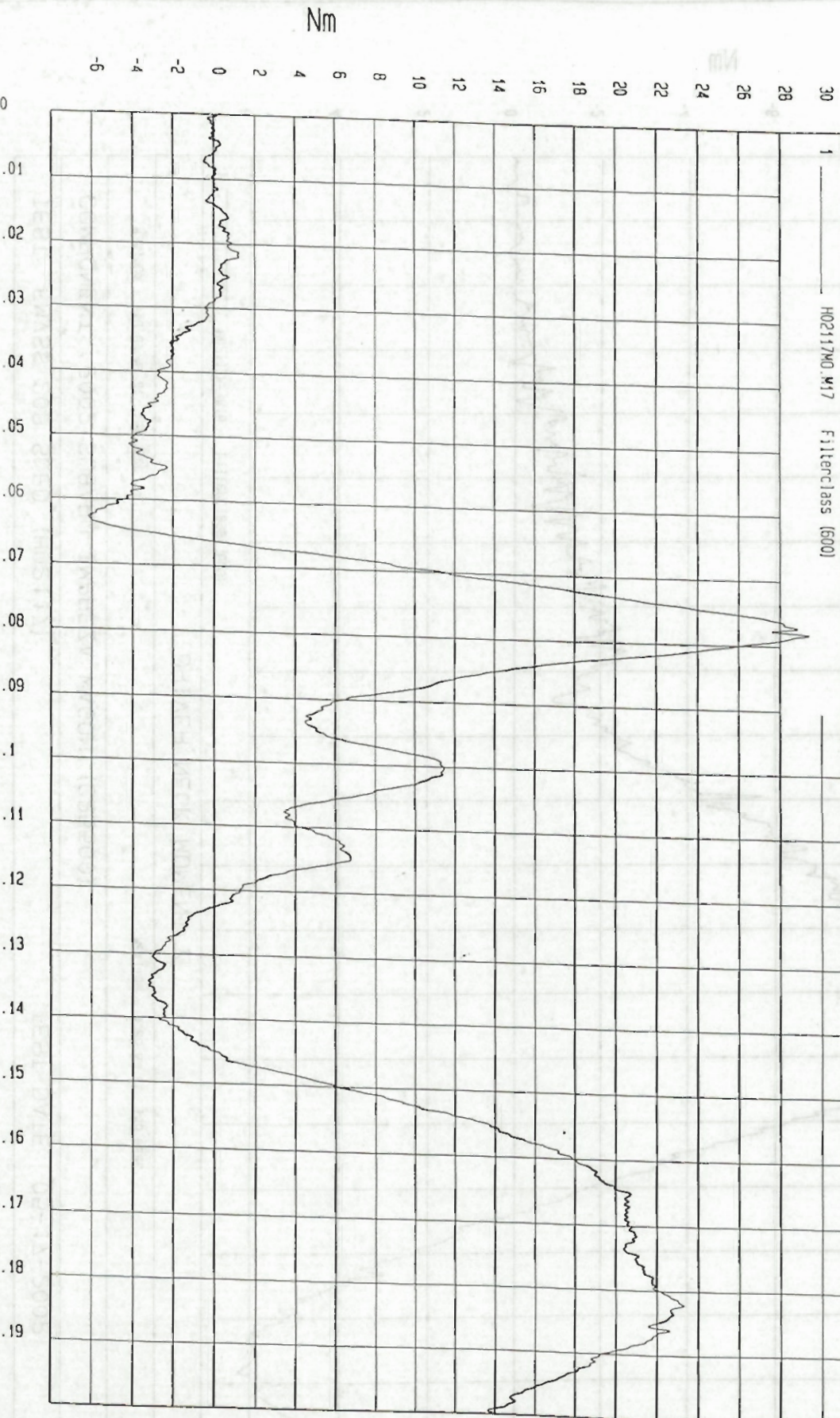
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -6.17 Nm at 63 msec

Maximum = 29.41 Nm at 78 msec

DRIVER OCCIPITAL CONDYLE MOMENT Y

1 H02117MO.M17 Filterclass (500)



TIME (SECONDS)

MSA Research
05-17-2002 13:21

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

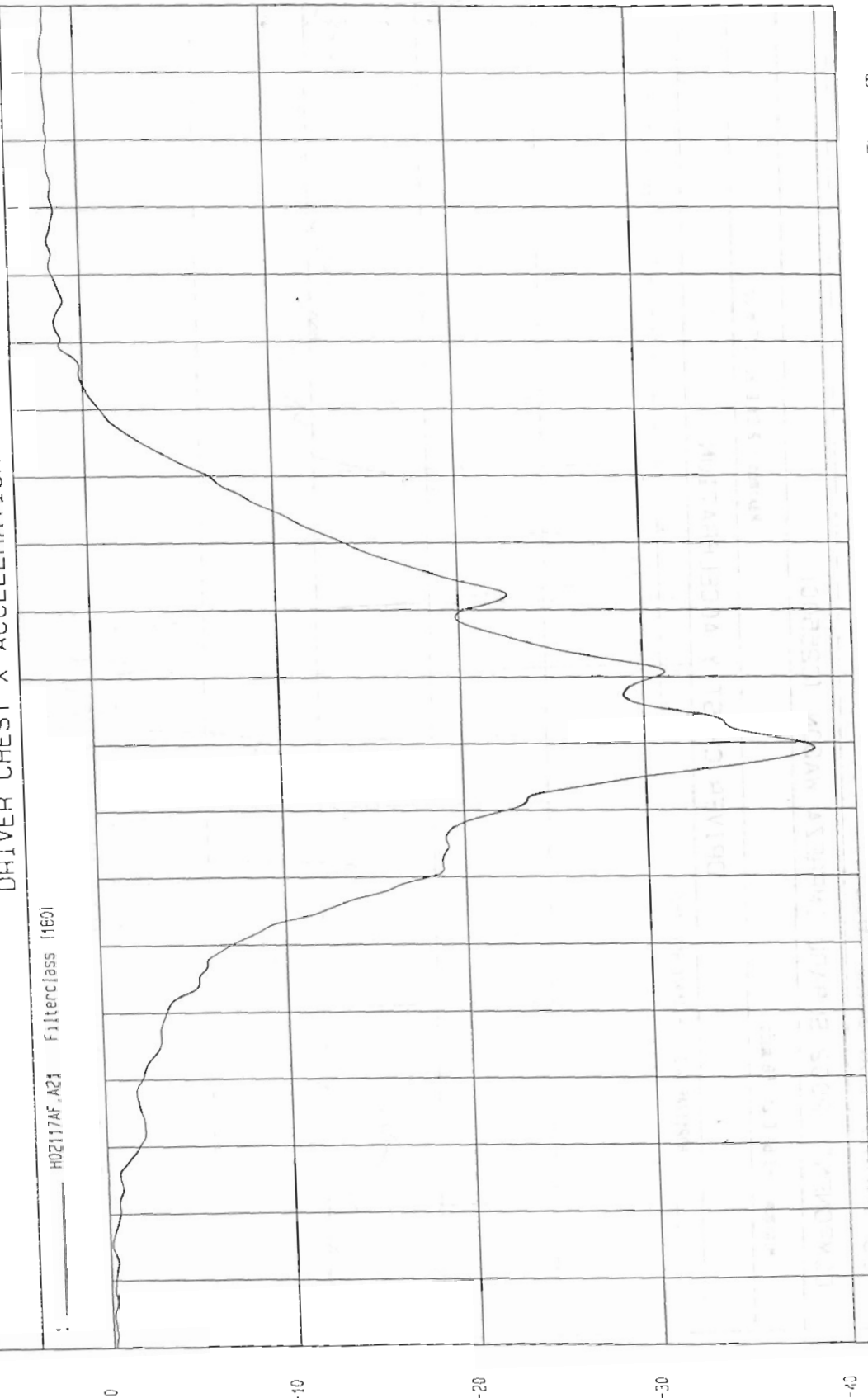
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 1.82 G at 193 msec

Minimum = -38.99 G at 89 msec

DRIVER CHEST X ACCELERATION

: H02117AF.A21 Filterclass (160)



MGA Research
05-17-2002 13.18

TIME (SECONDS)

TEST DATE: 05-17-2002

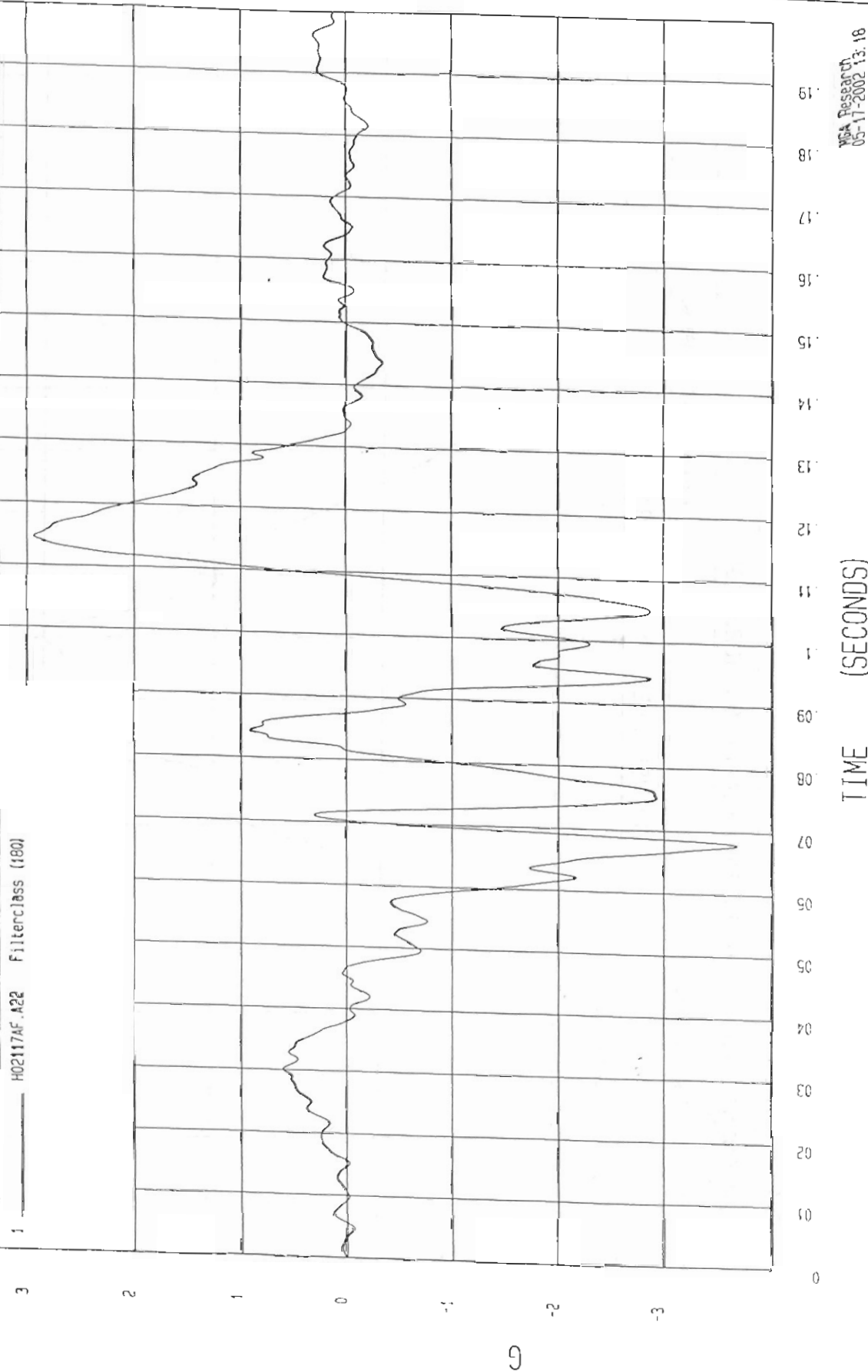
TEST: FMVSS 208 SLED (H02117)

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -3.67 G at 68 msec

Maximum = 2.94 G at 115 msec

DRIVER CHEST Y ACCELERATION



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

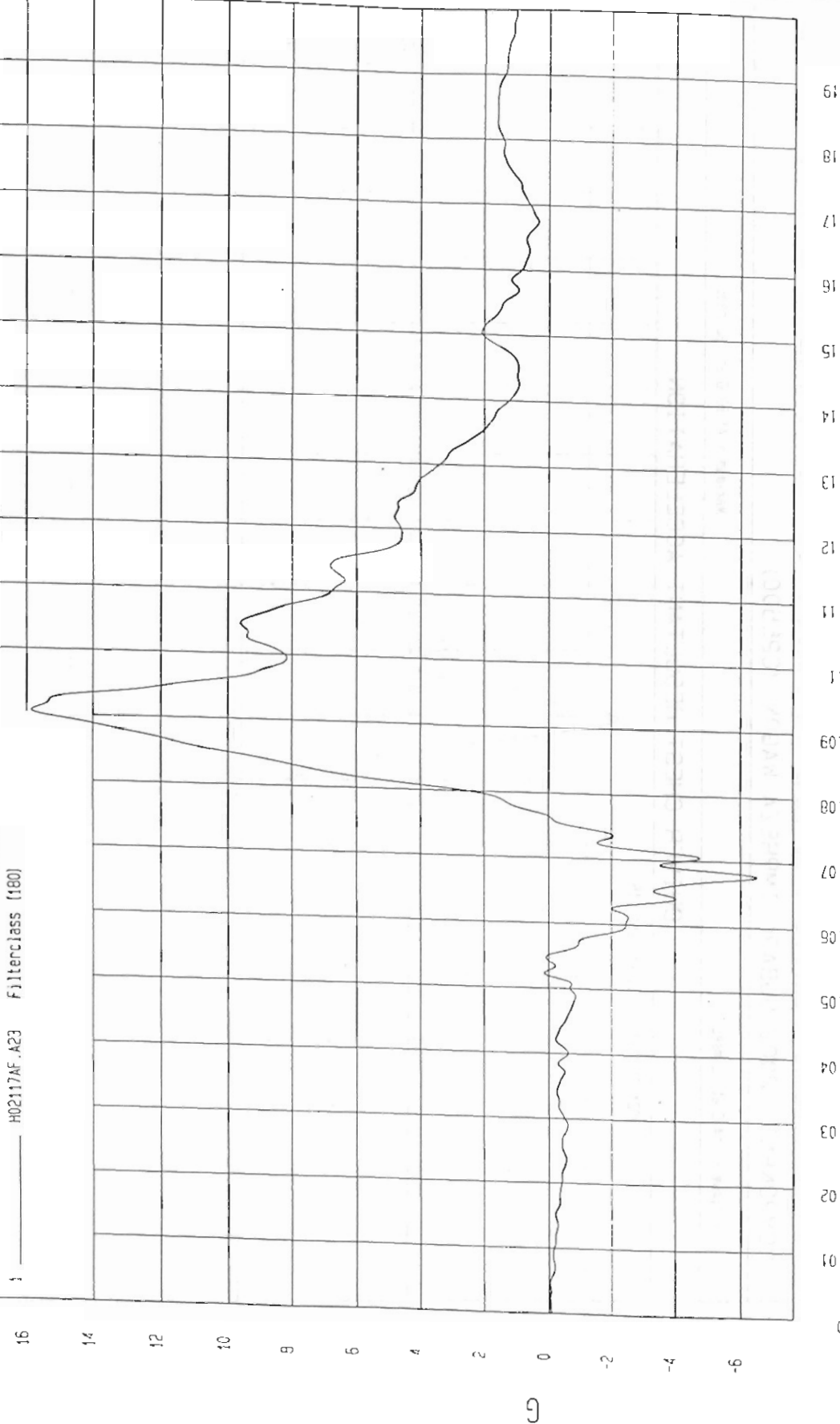
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -6.51 G at 68 msec

Maximum = 15.85 G at 91 msec

DRIVER CHEST Z ACCELERATION

1 H02117AF.A23 Filterclass (180)

NCA Research
05-17-2002 13:18

TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

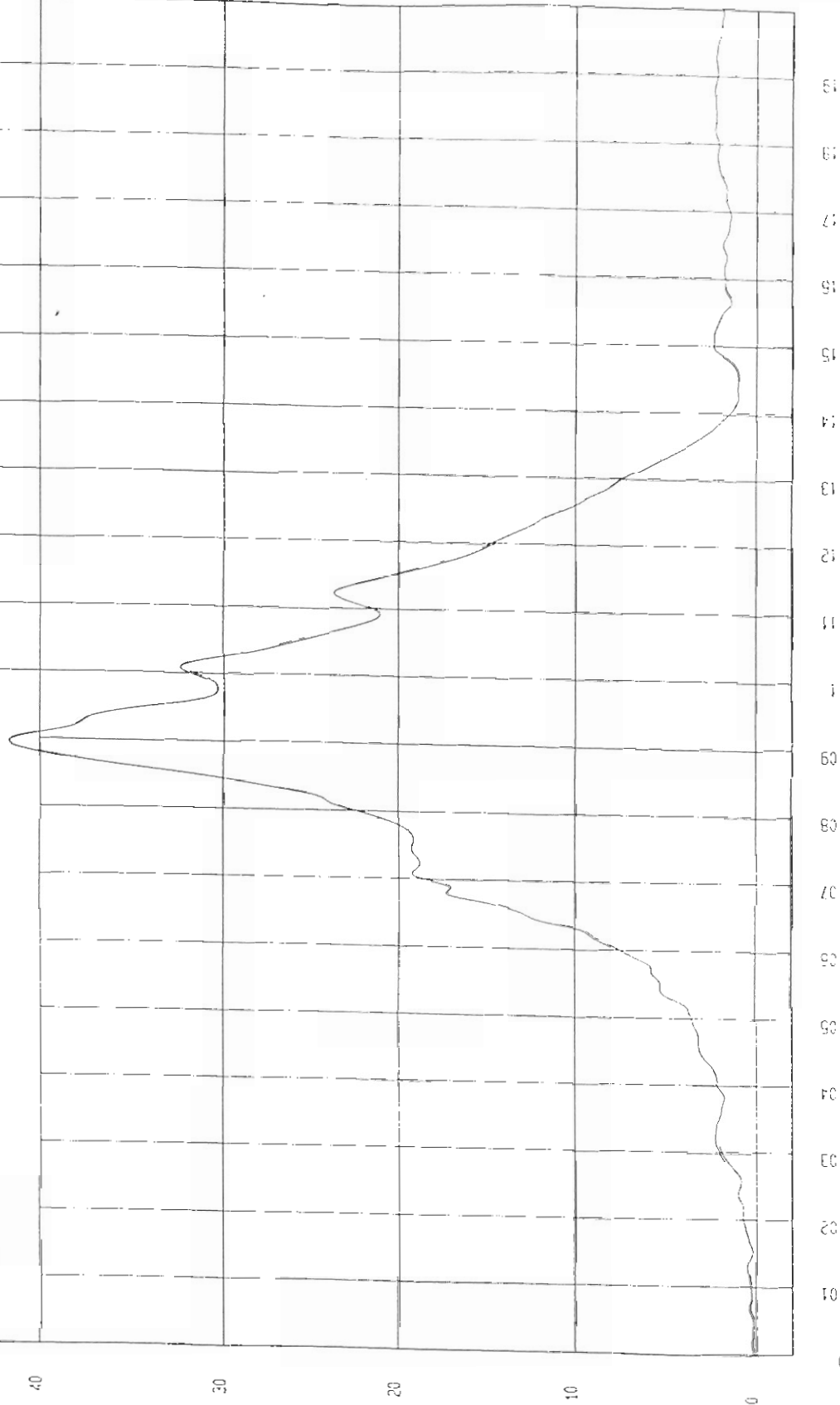
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = .14 G at 5 msec

Maximum = 41.69 G at 90 msec

DRIVER CHEST RESULTANT ACCELERATION

1 H02117AV A21 FilterClass (150)



TIME (SECONDS)

MCA Research
05-17-2002 13:18

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

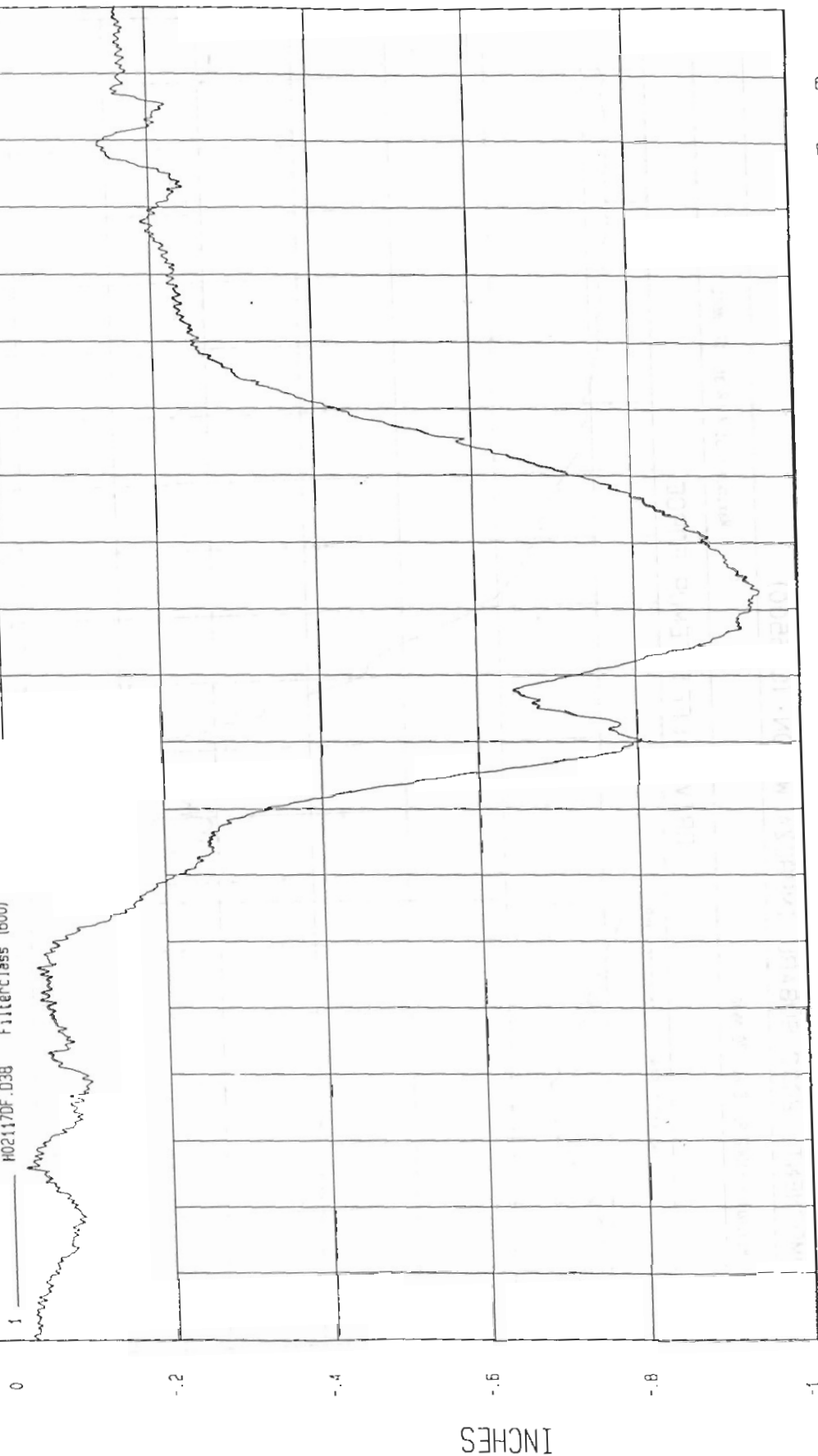
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = -1.55E-02 INCHES at 26 msec

Minimum = -.96 INCHES at 113 msec

DRIVER CHEST COMPRESSION

1 H02117DF.D38 Filterclass (600)

MGA Research
05-17-2002 13:19

TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

COMPONENT: 2002 SUBARU IMPREZA WAGON (C255500)

Minimum = -1502.92 LB at 70 msec

Maximum = 51.4 LB at 172 msec

DRIVER LEFT FEMUR FORCE



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -1535.3 LB at 74 msec

Maximum = 40.45 LB at 182 msec

DRIVER RIGHT FEMUR FORCE

1 H02117FF.F09 Filterclass (600)



NCA Research
05-17-2002 13:18

TIME (SECONDS)

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

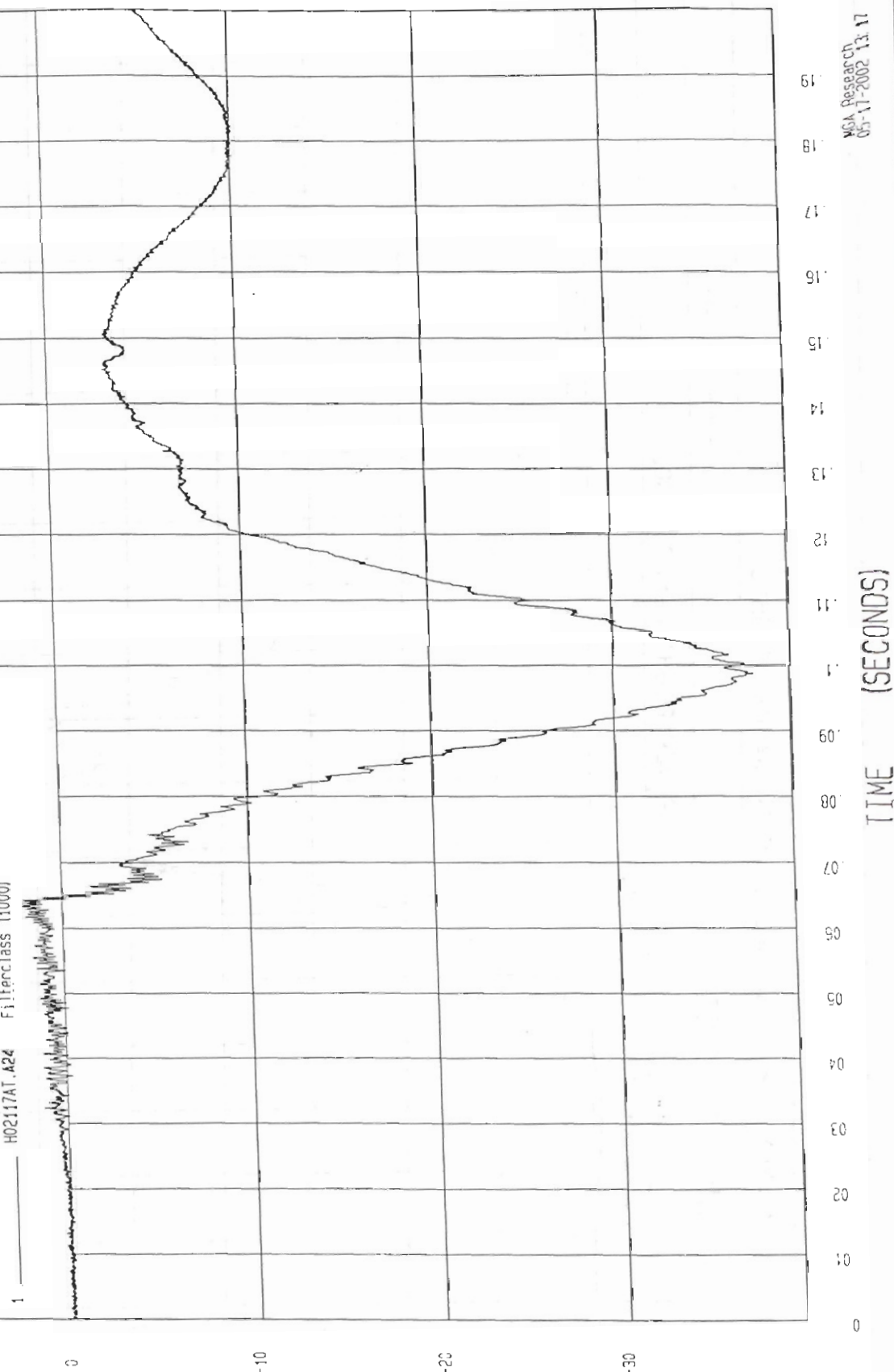
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 2.15 G at 63 msec

Minimum = -37.52 G at 99 msec

PASSENGER HEAD X ACCELERATION

1 H02117AT.A24 Filterclass (1000)



TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

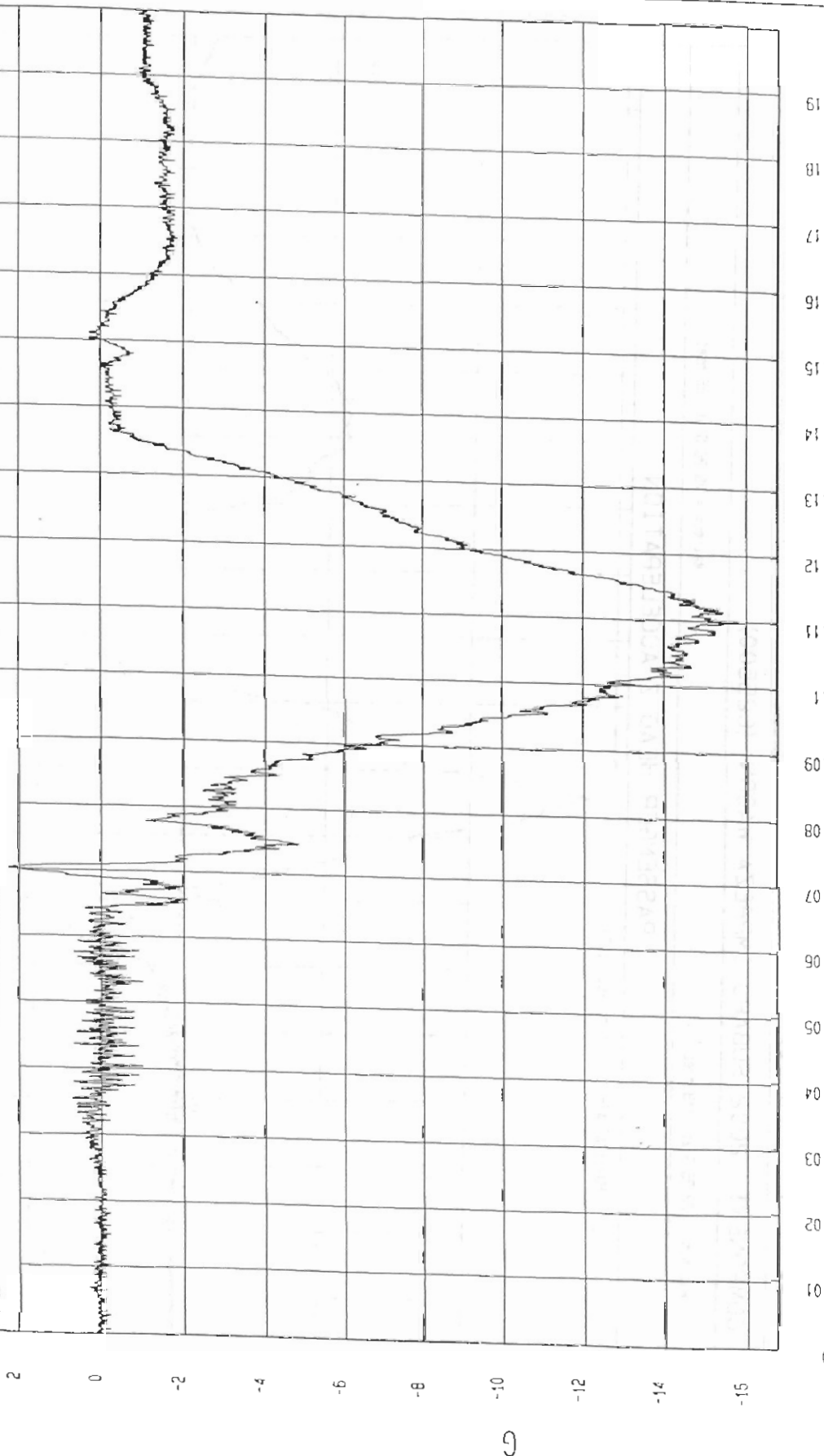
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -15.85 G at 110 msec

Maximum = 2.25 G at 70 msec

PASSENGER HEAD Y ACCELERATION

1 H02117AT.A25 Filterclass (1000)

MSA Research
05-17-2002 13.17

TIME (SECONDS)

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

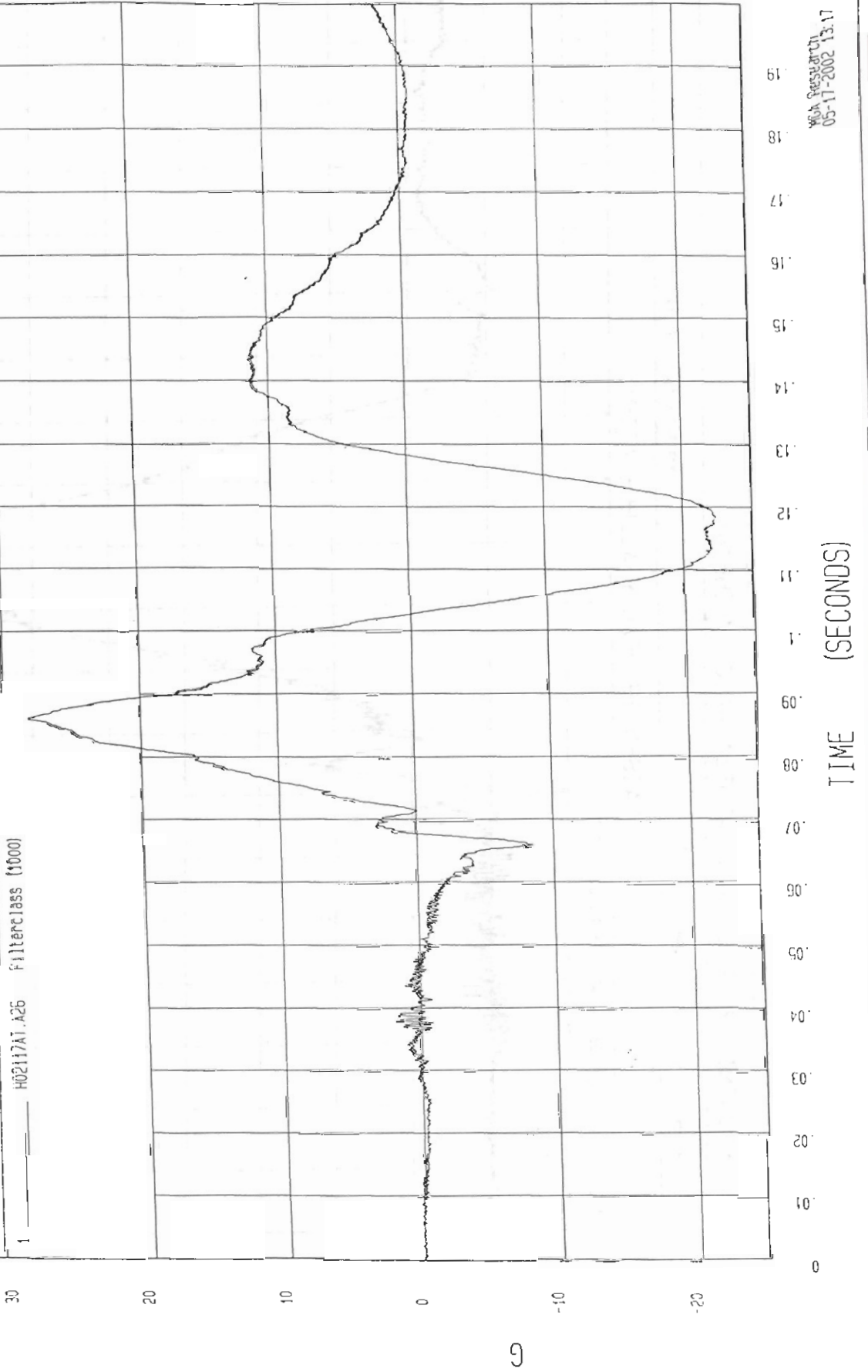
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 28.28 G at 85 msec

Minimum = -22.36 G at 118 msec

PASSENGER HEAD Z ACCELERATION

1 H02117A1.A26 Filterclass (1000)



Wich Research
05-17-2002 13:17

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = 1.52E-02 G at 1 msec

Maximum = 40.99 G at 99 msec

PASSENGER HEAD RESULTANT ACCELERATION

1 H02117AV.A24 Filterclass (1000)

MCA Research
05-17-2002 13.17

TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

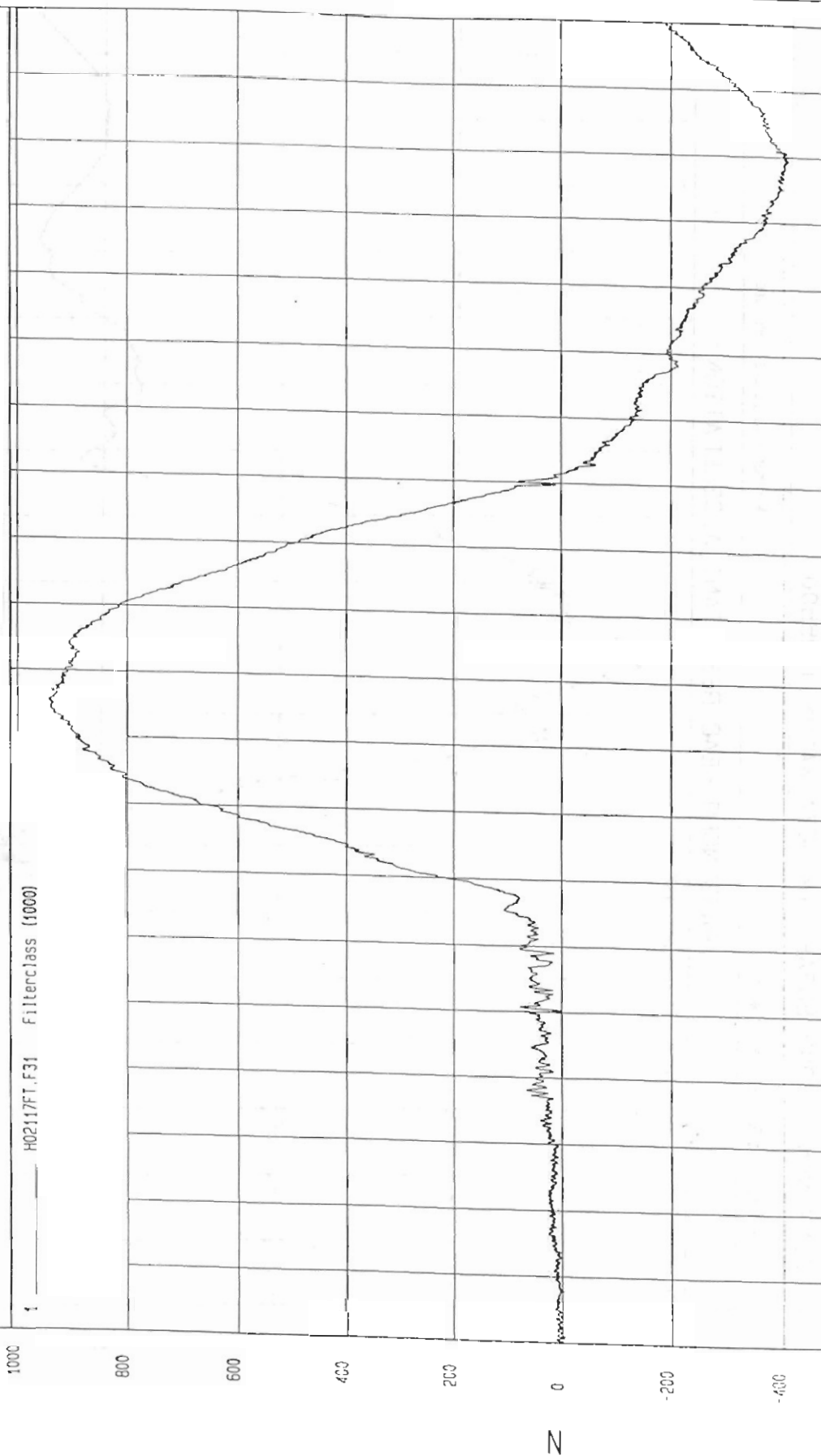
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 945.61 N at 56 msec

Minimum = -409.17 N at 179 msec

PASSENGER NECK FORCE X

1 H02117T.F31 Filterclass (1000)



TEST: FMVSS 208 SLED (H02117)

TEST DATE: 05-17-2002

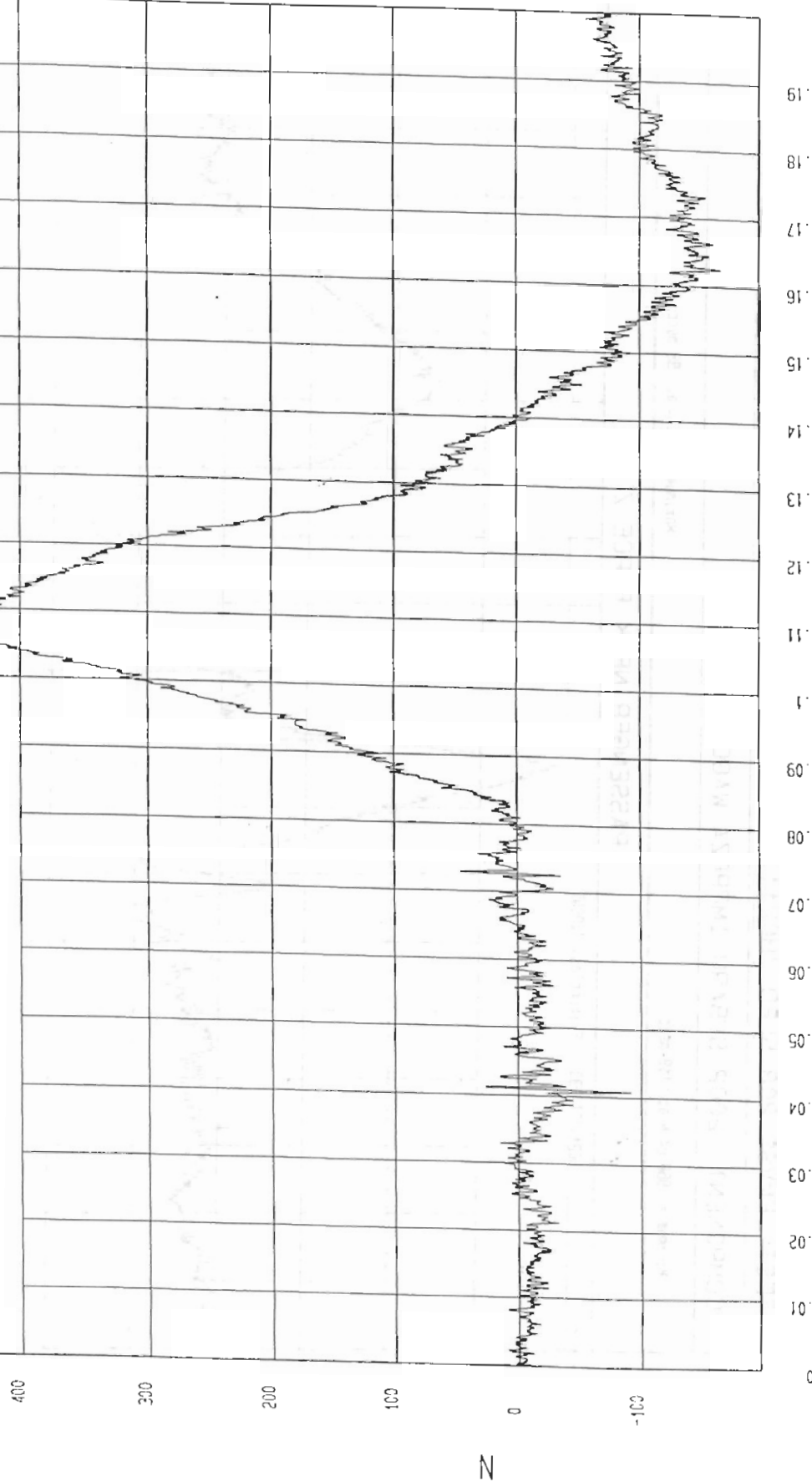
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -165.35 N at 162 msec

Maximum = 449.43 N at 108 msec

PASSENGER NECK FORCE Y

1 H02117T.F32 Filterclass (1000)

MSA Research
05-17-2002 13:17

TIME (SECONDS)

TEST: FMVSS 208 SLED (H02117)

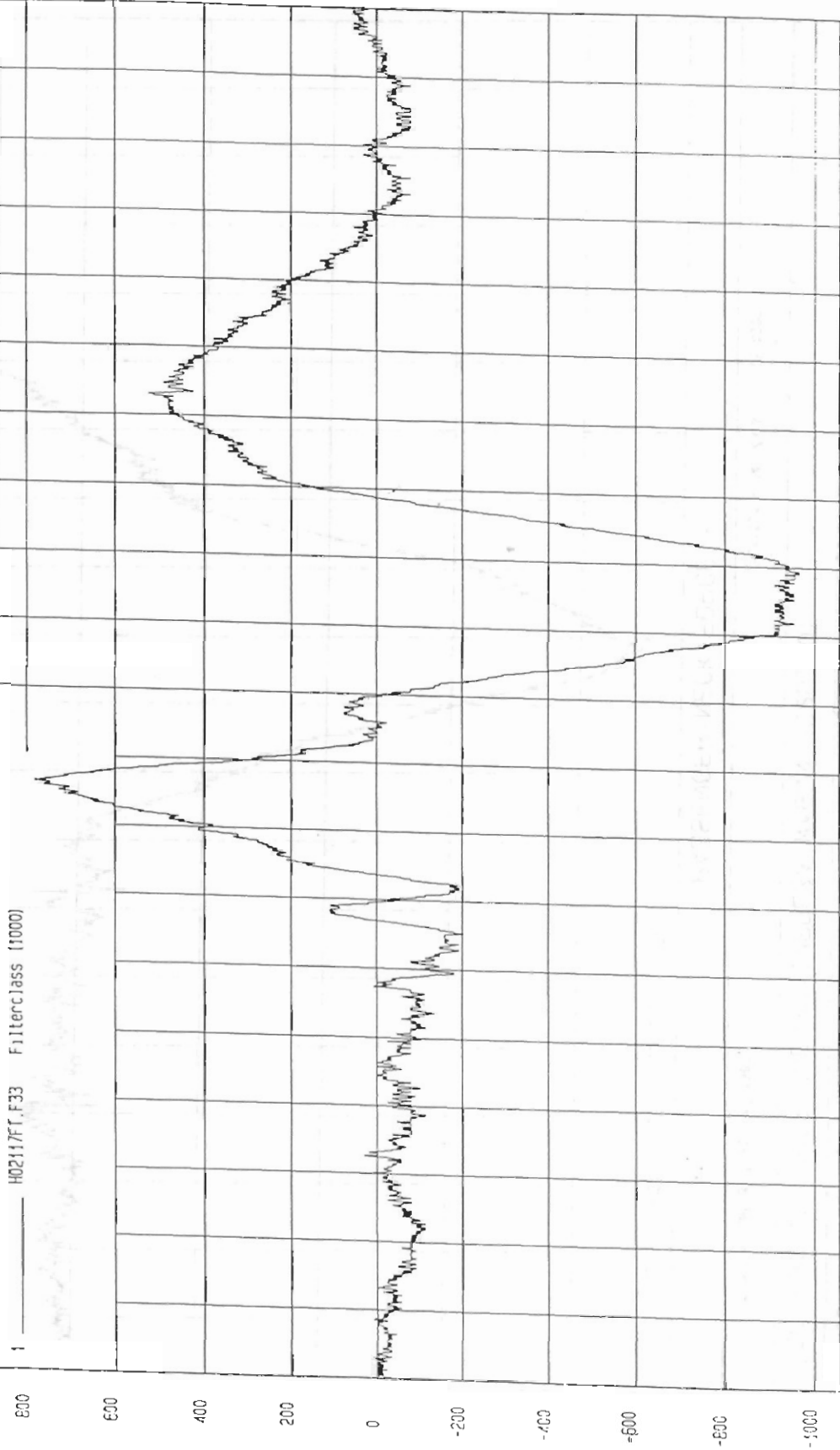
TEST DATE: 05-17-2002

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -955.84 N at 119 msec

Maximum = 783 N at 86 msec

PASSENGER NECK FORCE Z



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

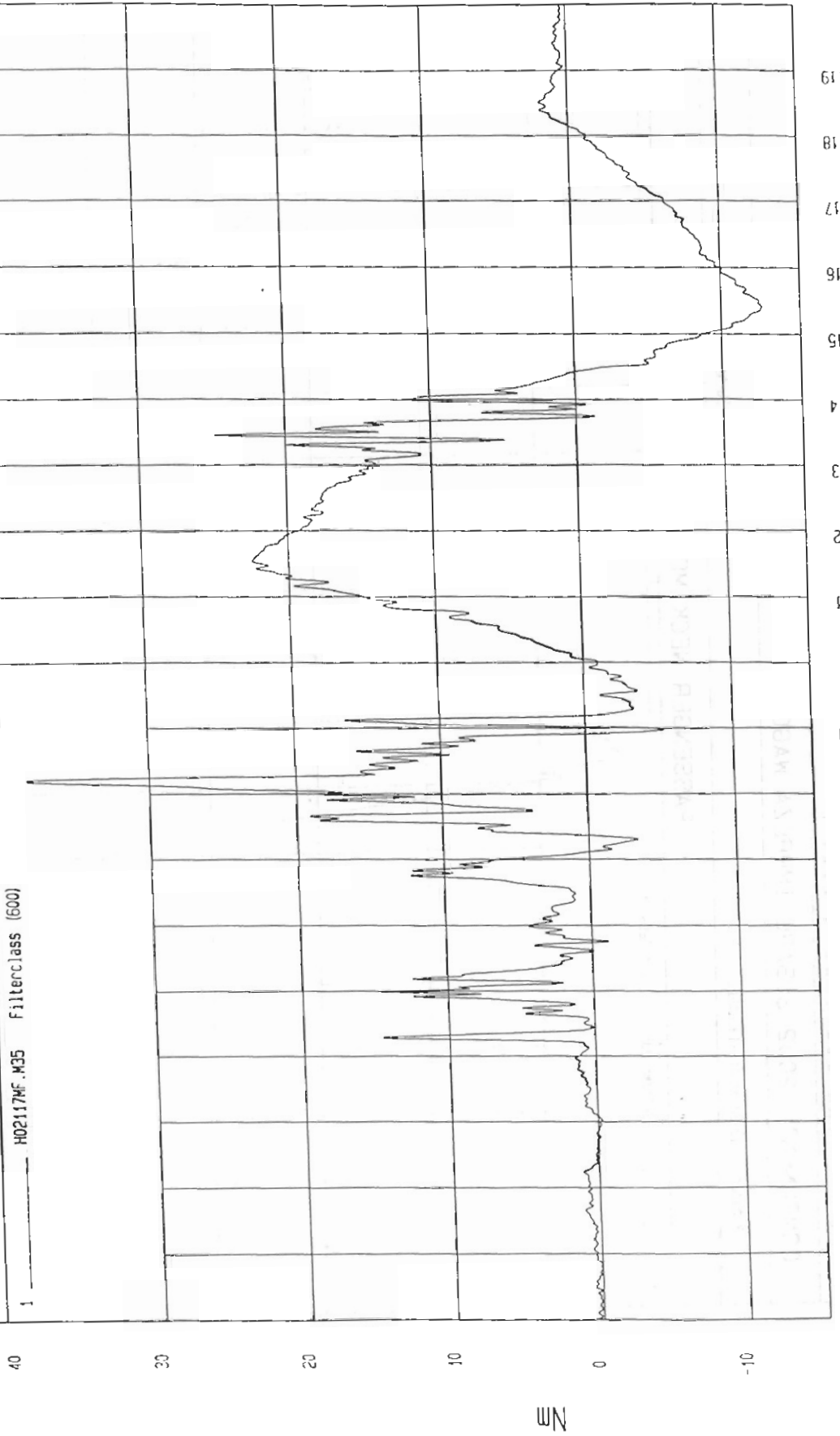
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 39.22 Nm at 82 msec

Minimum = -12.7 Nm at 154 msec

PASSENGER NECK MOMENT X

1 H02117.MF.M35 Filterclass (500)



MCA Research
05-17-2002 13:18

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

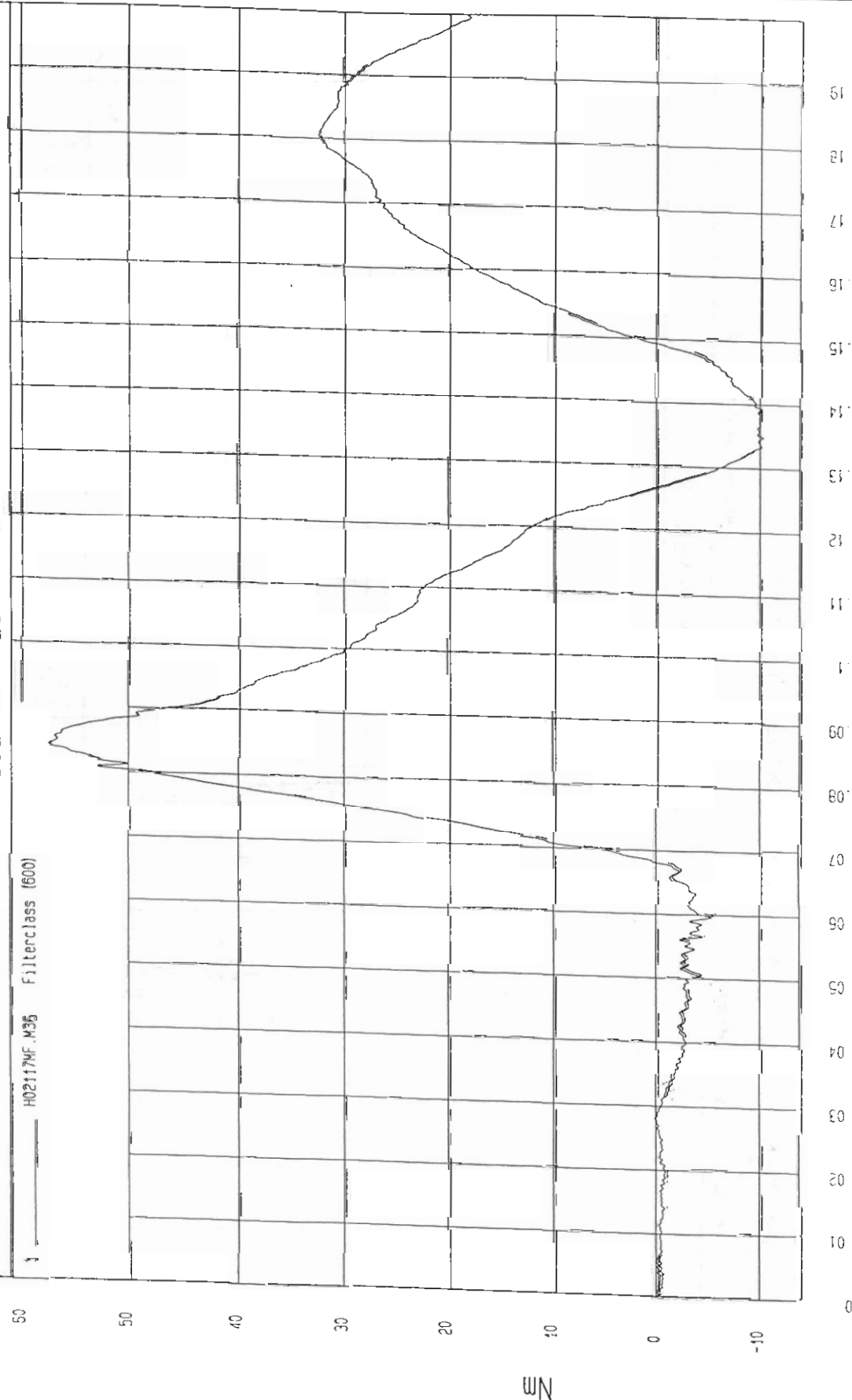
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -10.32 Nm at 135 msec

Maximum = 57.66 Nm at 84 msec

PASSENGER NECK MOMENT Y

1 H02117NF.M35 Filterclass (600)



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

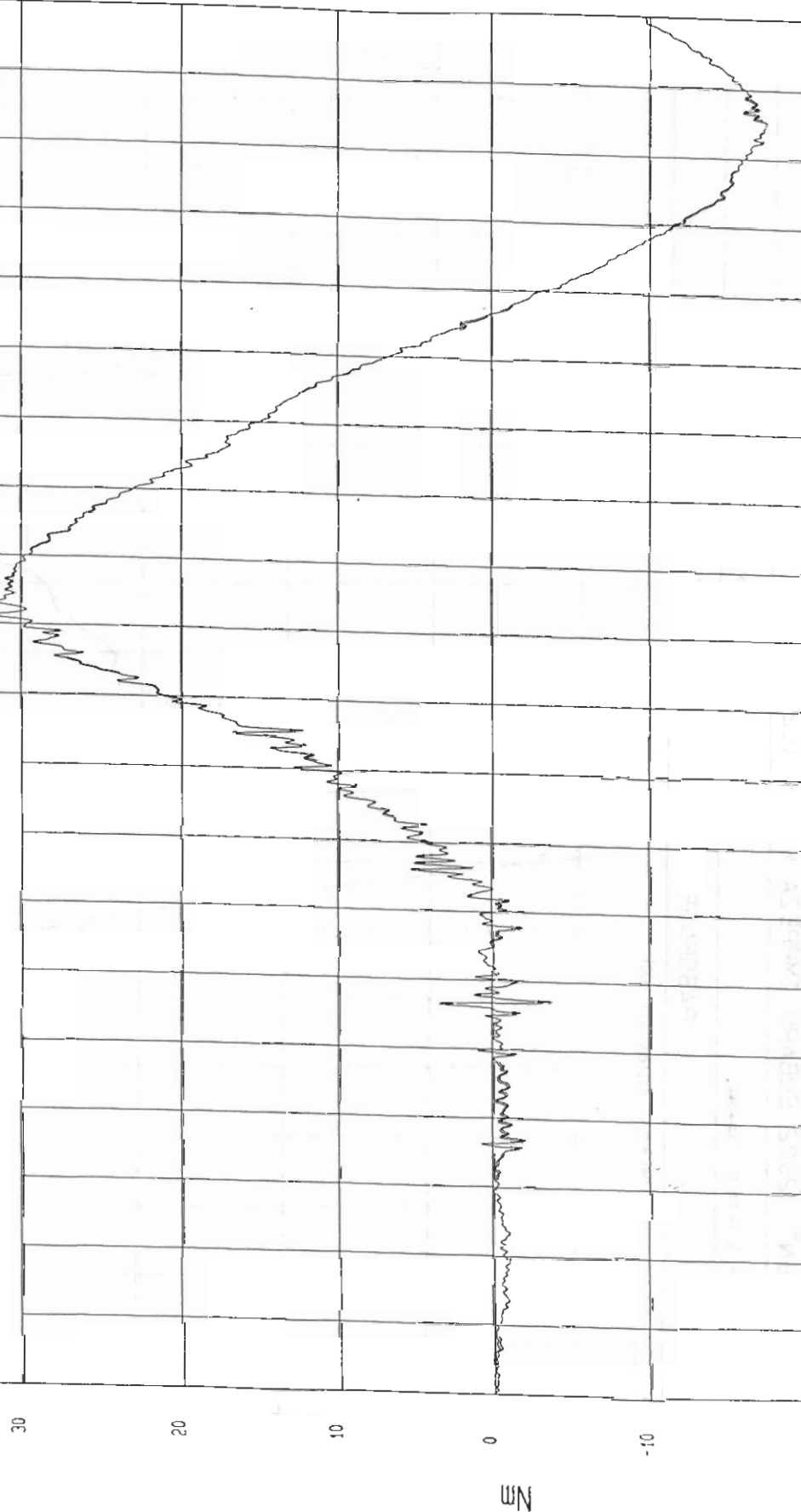
COMPONENT: 2002 SUBARU IMPREZA WAGON (C255500)

Minimum = -17.29 Nm at 185 msec

Maximum = 31.92 Nm at 111 msec

PASSENGER NECK MOMENT Z

1 H02117MF.M37 Filtenclass (500)

MCA Research
05-17-2002 13:10

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

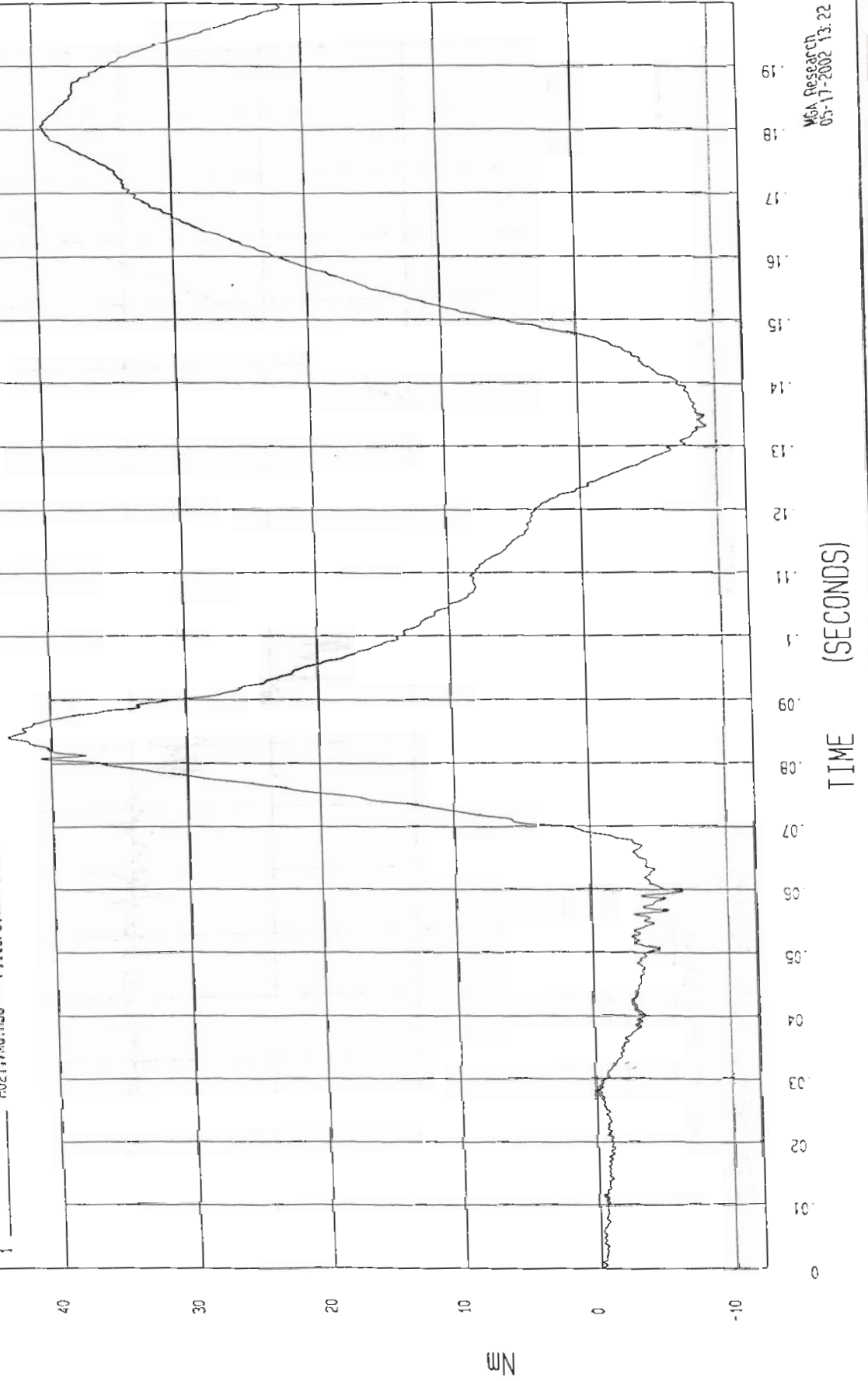
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 43.3 Nm at 84 msec

Minimum = -9.34 Nm at 133 msec

PASSENGER OCCIPITAL CONDYLE MOMENT Y

1 H02117M0.M36 FilterClass (600)



WGA Research
05-17-2002 13:22

TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

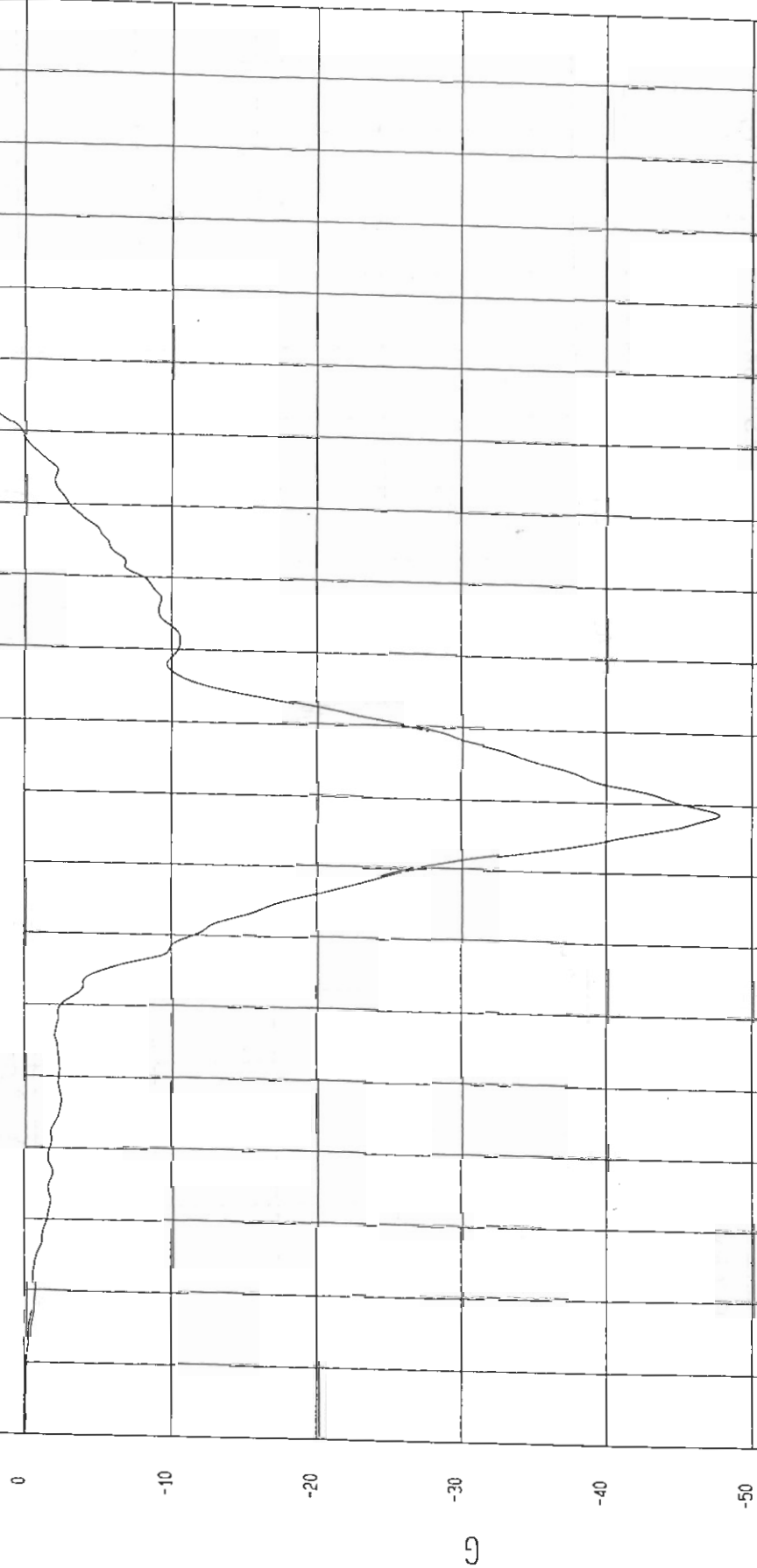
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -47.8 G at 89 msec

Maximum = 6.5 G at 173 msec

PASSENGER CHEST X ACCELERATION

1 H02117AF.A27 Filterclass (180)

WCA Research
05-17-2002 13:18

TIME (SECONDS)

TEST: FMVSS 208 SLED (H02117)

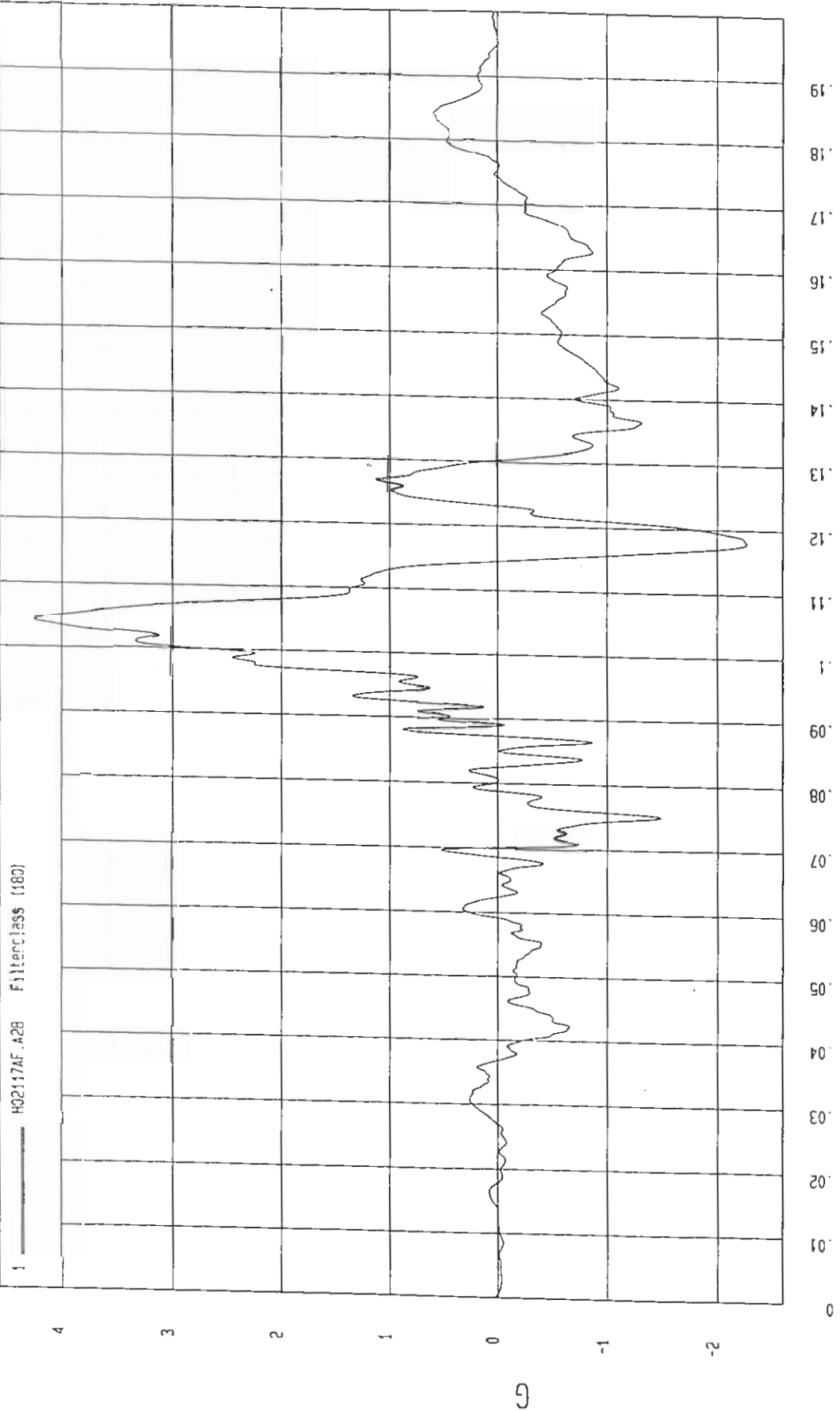
TEST DATE: 05-17-2002

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

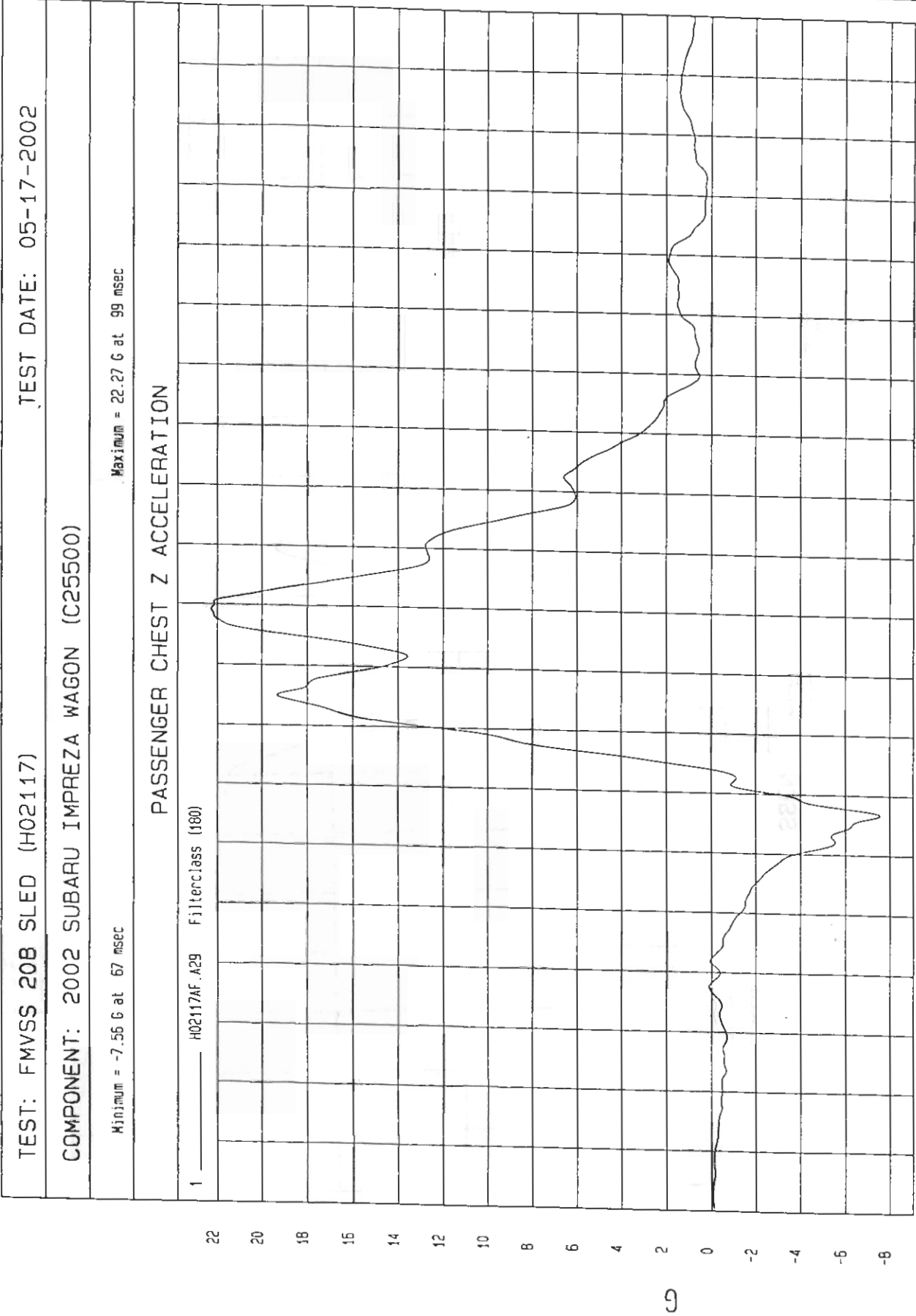
Minimum = -2.27 G at 118 msec

Maximum = 4.26 G at 104 msec

PASSENGER CHEST Y ACCELERATION



TIME (SECONDS)



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

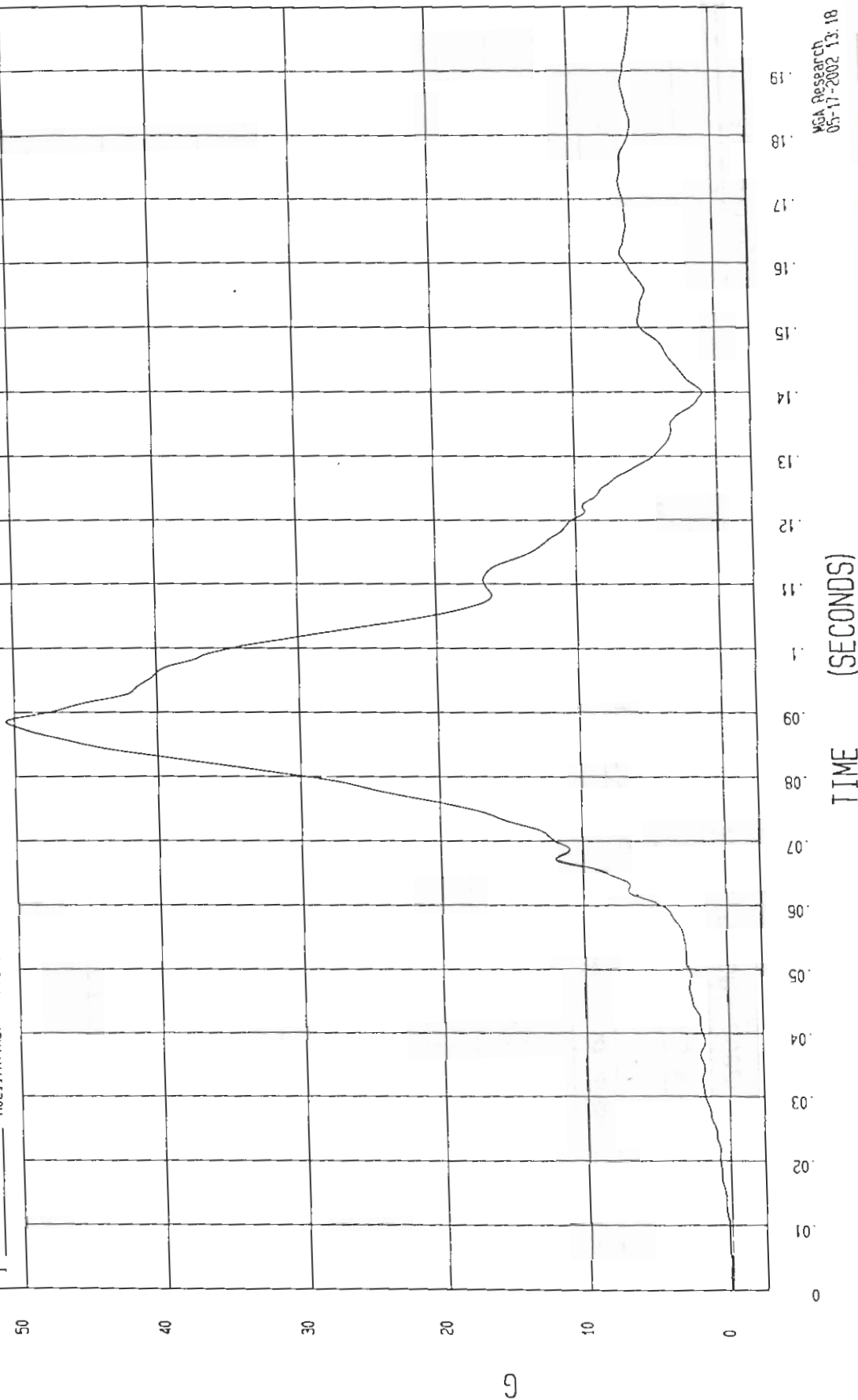
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Maximum = 50.62 G at 88 msec

Minimum = 9.04E-02 G at 4 msec

PASSENGER CHEST RESULTANT ACCELERATION

1 H02117AV.A27 Filterclass (180)



TEST DATE: 05-17-2002

TEST: FMVSS 208 SLED (H02117)

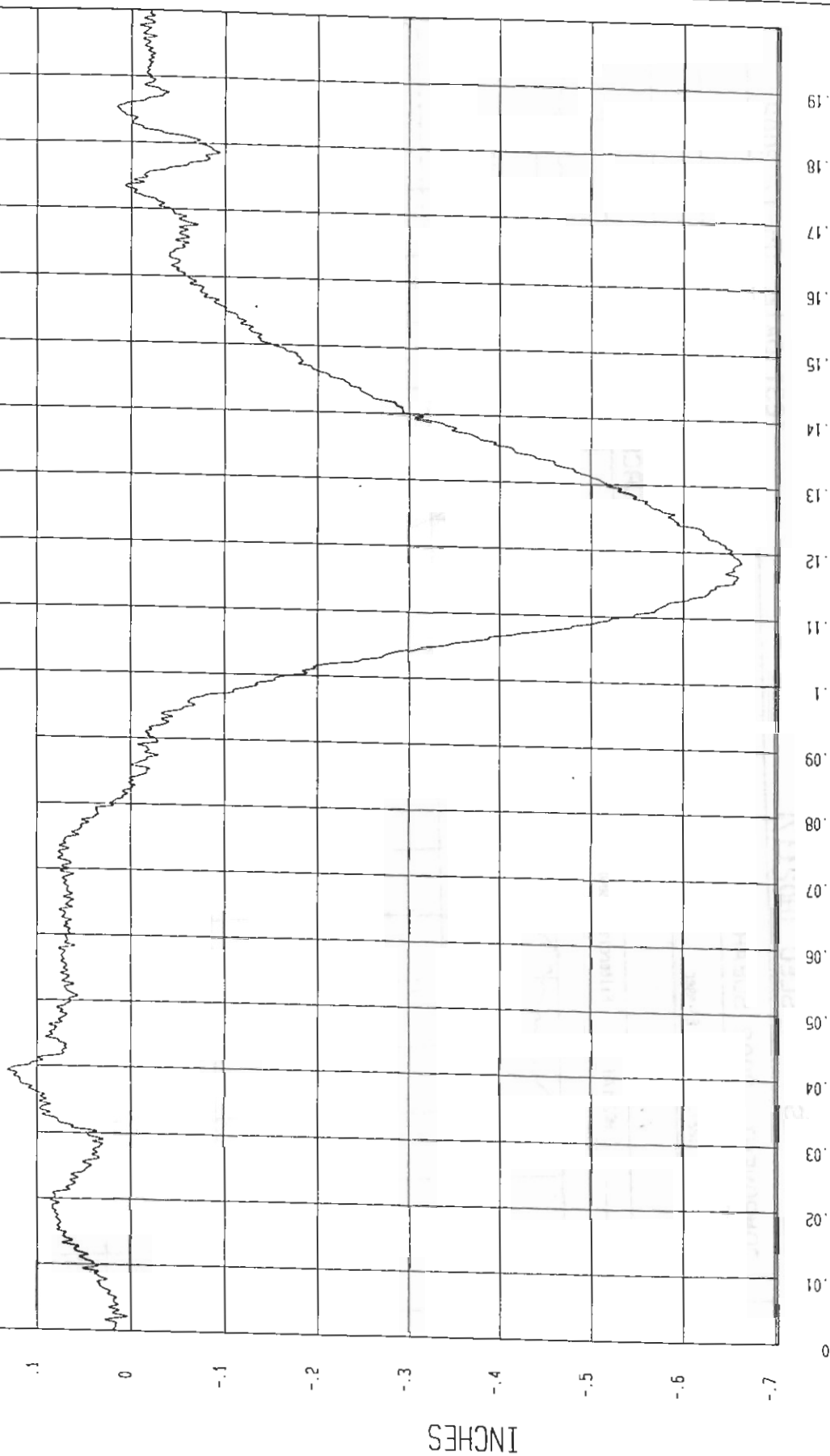
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -.66 INCHES at 118 msec

Maximum = .13 INCHES at 39 msec

PASSENGER CHEST COMPRESSION

1 H02117DF.039 Filterclass (600)



TEST: FMVSS 208 SLED (H02117)

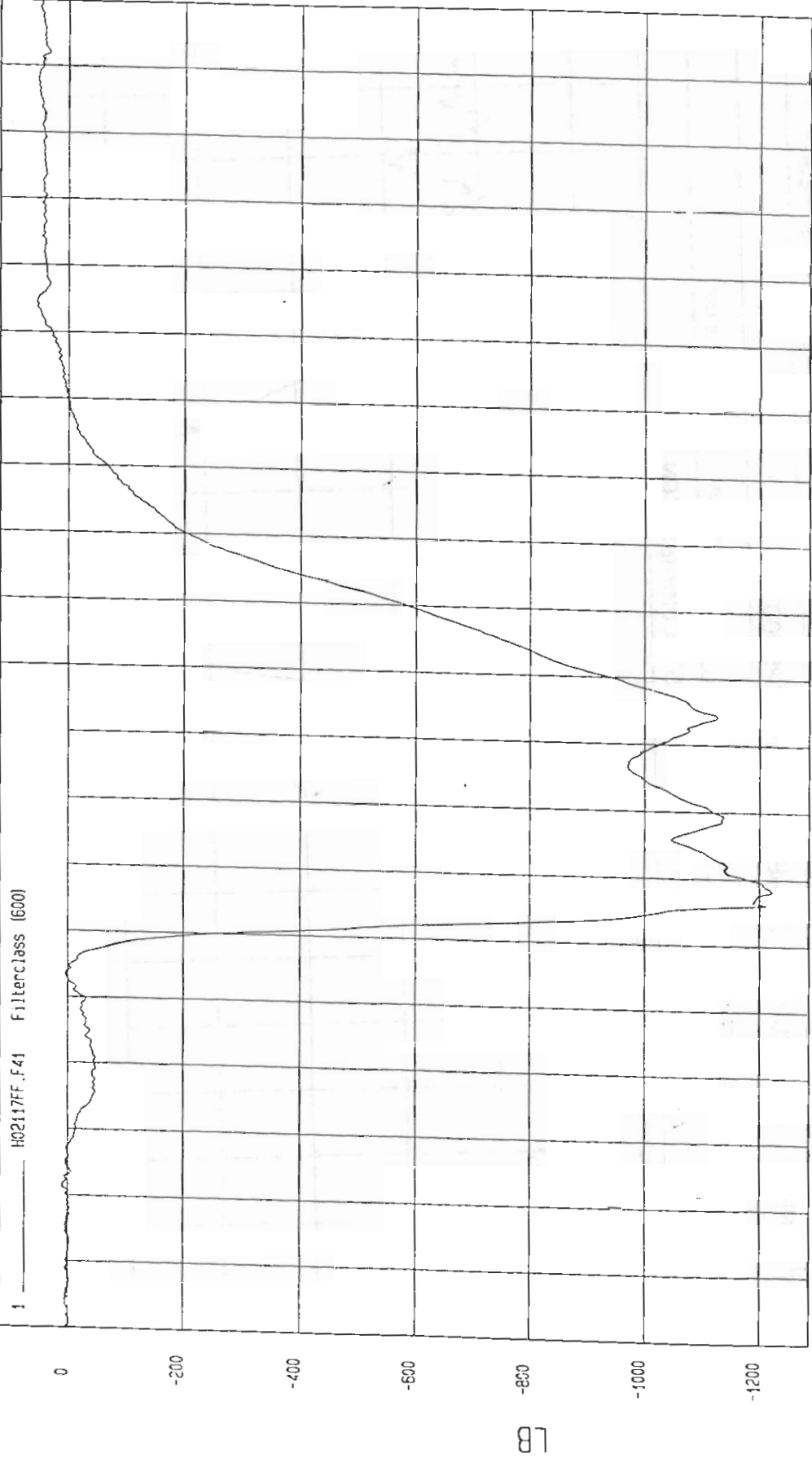
TEST DATE: 05-17-2002

COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -1221.43 LB at 68 msec

Maximum = 55.37 LB at 154 msec

PASSENGER LEFT FEMUR FORCE



TEST: FMVSS 20B SLED (H02117)

TEST DATE: 05-17-2002

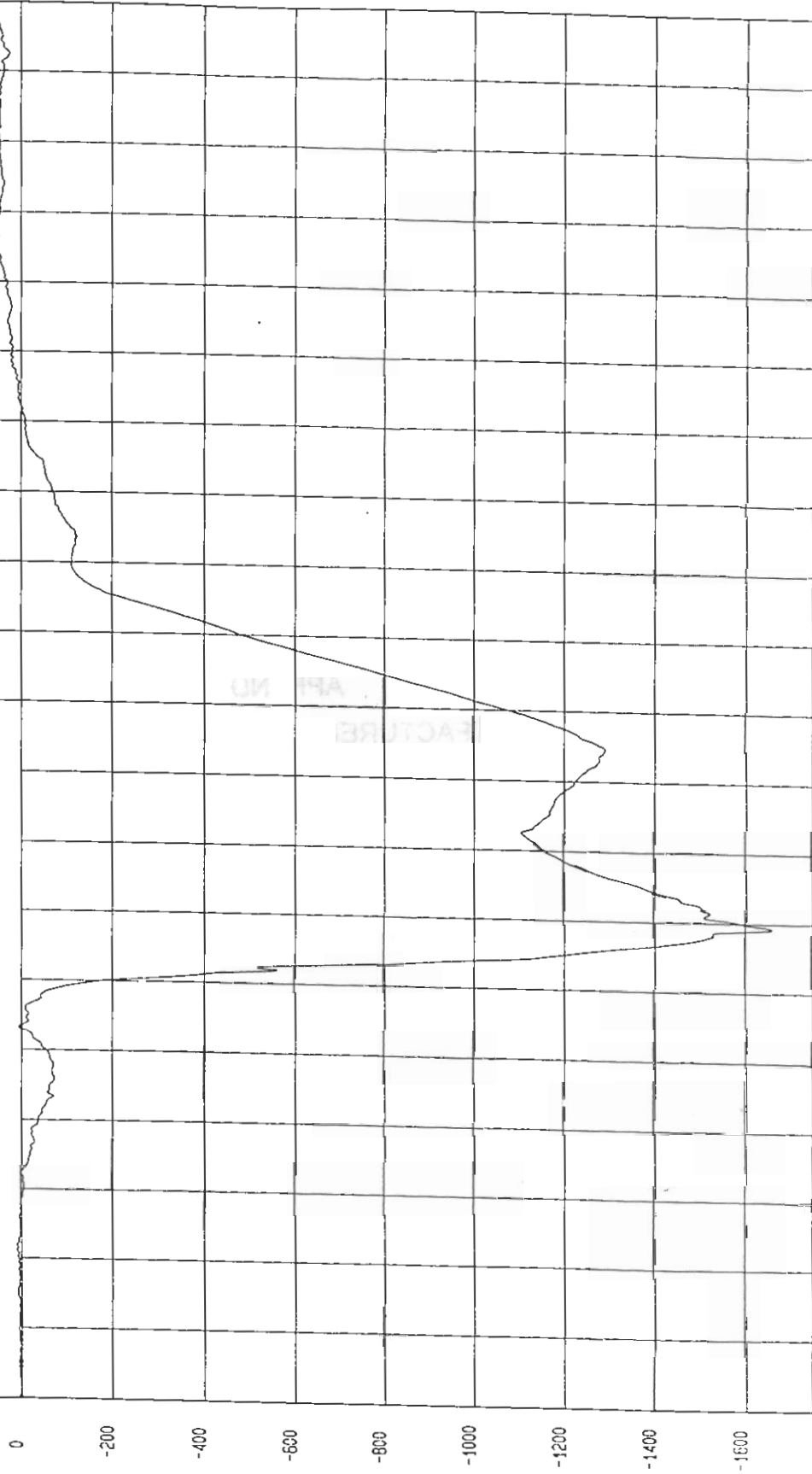
COMPONENT: 2002 SUBARU IMPREZA WAGON (C25500)

Minimum = -1659.14 LB at 69 msec

Maximum = 61.14 LB at 199 msec

PASSENGER RIGHT FEMUR FORCE

1 H02117FF.F43 Filterclass (600)



APPENDIX C
MANUFACTURER'S VEHICLE INFORMATION



Don Bearden
Director - Governmental Affairs
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www.subaru.com

Ms. Marilynne Jacobs, Director
Office of Vehicle Safety Compliance
National Highway Traffic Safety Administration
Attn: NSA-31; Room 6111
400 7th Street, S.W.
Washington, D. C. 20590

October 26, 2001
Ref. No. GA01-044C

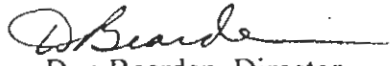
RE: **Your Letter NSA-31CCa, OA-208-010924-T**

Dear Ms. Jacobs:

In response to the NHTSA letter referenced above, we have attached the requested FMVSS 208 information pertaining to our 2002MY Subaru Impreza.

Please contact me at the number shown above or my assistant Gerald Plante (at 856-488-3226 or e-mail at gplante@subaru.com) if you have any questions concerning this information.

Sincerely,


Don Bearden, Director
Governmental Affairs

DB/db
Enclosures

**Information for the compliance test of
FMVSS 208 "Occupant Crash Protection"
The 2002MY SUBARU IMPREZA
[NSA-31CCa / OA-208-010924-T]**

1. Please inform OVSC to which sections of FMVSS 208 the subject vehicle is certified with respect to dynamic tests in which seat belts are fastened and seat belts are unfastened. Provide a copy of the certification test reports for all the applicable impact tests and sled tests with respect to these sections.

Following five (8) test reports are enclosed.

No.	Report No.	Test Item
1.	SJ23-00-361	Sled tests
2.	SJ23-00-362	Frontal barrier crash
3.	SJ23-00-363	Frontal barrier crash
4.	SJ23-00-364	30° angular (Right) frontal barrier crash
5.	SJ23-00-365	30° angular (Left) frontal barrier crash
6.	SJ23-00-366	30° angular (Left) frontal barrier crash
7.	SJ23-01-206	Frontal barrier crash
8.	SJ23-01-227	30° angular (Left) frontal barrier crash

2. Provide the following: (1) describe the difference between the MY 2002 air bag system and the MY 2001 air bag system, (2) explain what other restraint changes have been made, (3) explain what other vehicle changes have been made that might have affected FMVSS 208 performance, and (4) describe any features that might affect performance with respect to children and out of position occupants.

(1) (2) (3) MY 2002 IMPREZA is the brand new model.

(4) There is no special feature.

Note : Some changes(i.e. thicker sheet metal and material change) have been incorporated into vehicles produced from September 2001.
Please refer to test reports Nos.7 and 8 in item 1 above for these changes.

3. If the vehicle was certified with unrestrained dummies to meet the requirements of S 13, 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.

See Appendix 1.

Note: We have conducted the in-house sled test with battery removed. So, the pre-tensioner system of front seat belt does not activate during this test. It does not affect to the sled test results under the unbelted condition.

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

Not Applicable

4. *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.*

2002MY IMPREZA is not equipped with a tension-relieving device.

5. *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.*

In frontal test, all windows were opened. In angular test, only front door windows were closed.

Please refer to each test report in details.

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

See Appendix 2.

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

Yes

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.*

See Appendix 3.

In addition, provide the seating reference point for each seat for the lockable seat belt requirement in S7.1.1.5.

See Appendix 4.

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.*

See Page 2 of Appendix 3.

10. *For all certification barrier tests, provide the speed at impact, vehicle test weight, and resulting injury criteria (i.e., HIC, chest acceleration, chest compression, femur loads, and where applicable neck moments and forces). For all certification sled tests, provide the resulting injury criteria (i.e., HIC, chest acceleration, chest compression, femur loads, and neck moments and forces).*

See Appendix 5.

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?*

1. Tonneau cover
2. Jack
3. Rear floor mat
4. Rear floor & quarter insulator
5. Rear seat back & cushion
6. Rear quarter trim
7. Rear bumper
8. Sub trunk box

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.*

See Appendix 6.

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.*

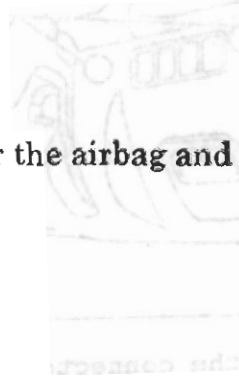
See Appendix 6.

Appendix 1

Disconnecting method of the airbags from the vehicle sensors and connecting method to the triggering mechanism used in the sled test

and

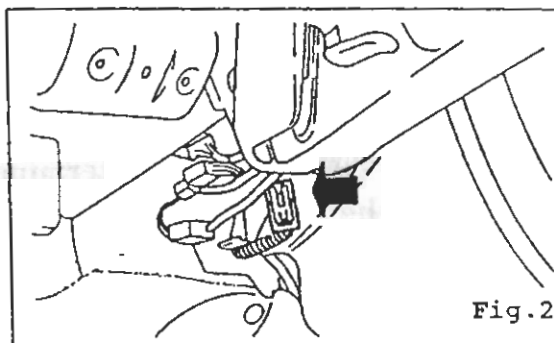
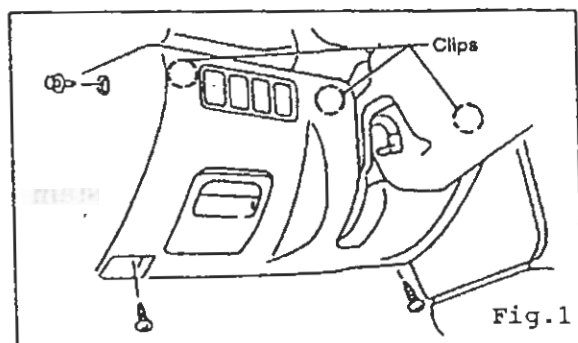
Method used in certification to determine when to trigger the airbag and the system used to trigger the airbag



How to disconnect the connector of airbag modules and connect them to the triggering mechanism.

1.Driver's airbag module

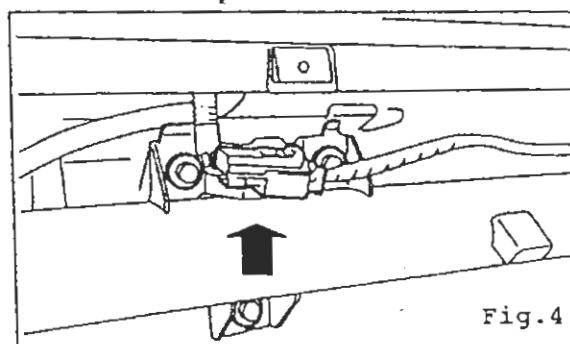
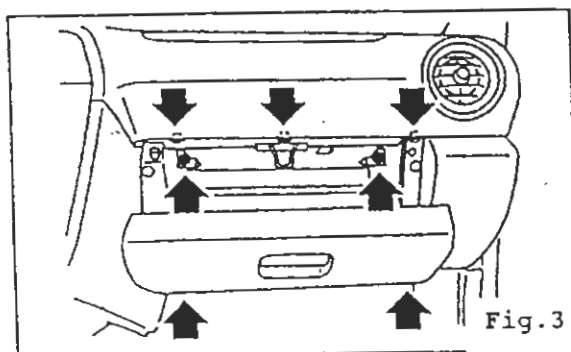
- (1) Turn ignition switch OFF.
 - (2) Disconnect the ground cable from the battery and wait for at least 20 seconds before starting work.
 - (3) Remove instrument panel lower cover (Fig.1).
 - (4) Disconnect airbag connector (yellow: below steering column, Fig.2).
- ⇒ See "How to disconnect the airbag module connector"



- (5) Connect the connector (male) to the triggering mechanism.

2.Passenger's airbag module

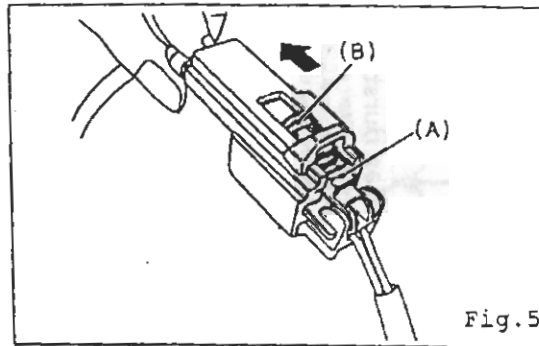
- (1) Turn ignition switch OFF.
 - (2) Disconnect the ground cable from the battery and wait for at least 20 seconds before starting work.
 - (3) Remove glove box (Fig.3).
 - (4) Disconnect airbag connector (yellow: attach support beam bracket, Fig.4).
- ⇒ See "How to disconnect the airbag module connector"



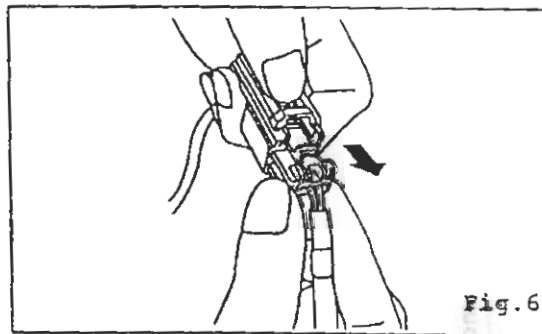
- (5) Connect the connector (male) to the triggering mechanism.

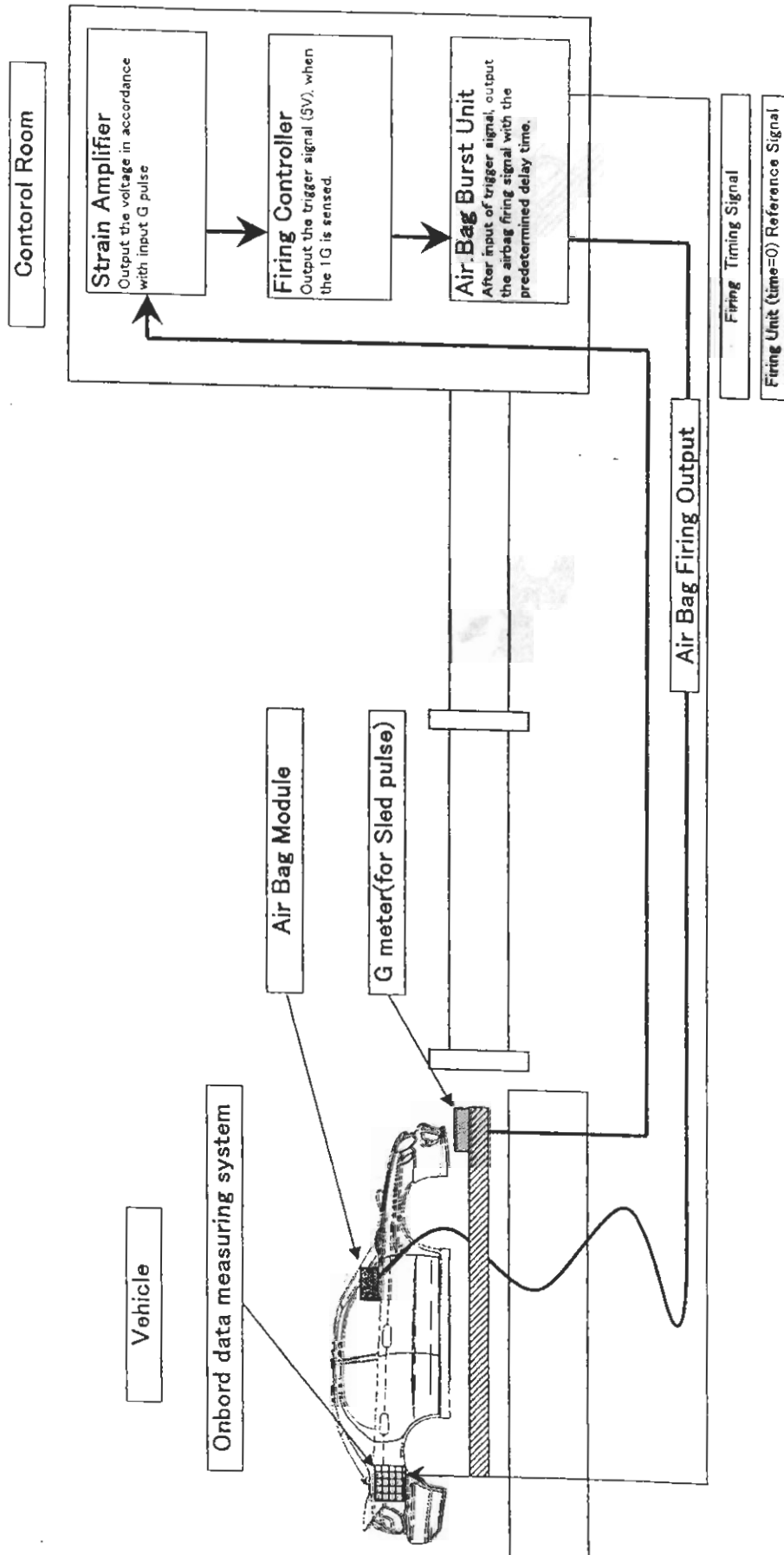
How to disconnect the airbag module connector

- (1) Push lock arm (A) (Fig.5).
- (2) With lock arm (A) pushed in, move slide lock (B) in the direction of the arrow (Fig.5).



- (3) With slide lock (B) pulled, remove lock arm (A) to its original position, and then pull in the direction of the arrow and separate the connector (Fig.6).





Form for General Vehicle Information

H2H

COMPARTMENT ADJUSTMENTS

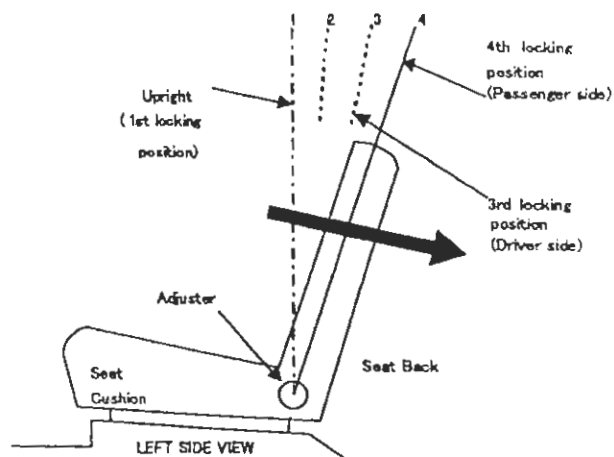
1. NOMINAL DESIGN RIDING POSITION

Frontal impact

Driver side : Seat back can be located by positioning seat back to the 3rd locking position from upright as illustrated.

Passenger side: Seat back can be located by positioning seat back to the 4th locking position from upright as illustrated.

See Page A-4, 5

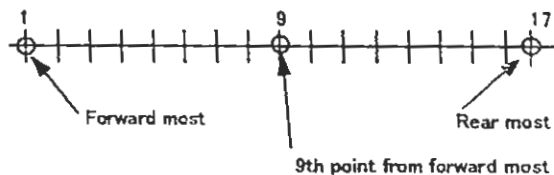


1.1 SEAT FORE & AFT POSITIONS

Driver side: Position seat track to the 9th latch position from the forward most position.

Passenger side: Same as driver data

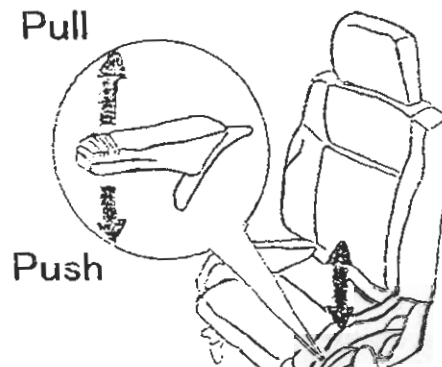
See Page A-6



1.2 SEAT CHSHION HEIGHT ADJUSTMENT POSITION (Driver's seat only)

Push lever to adjust the height of the seat cushion to the lowest position.

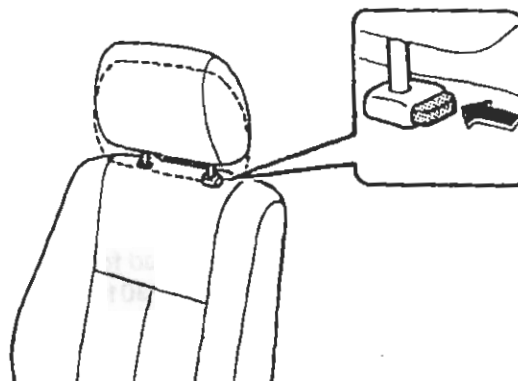
See Page A-7



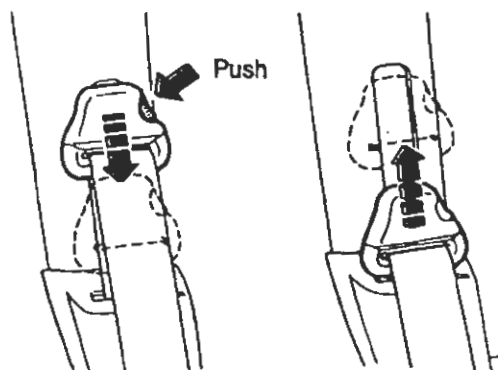
1.3 HEAD RESTRAINT POSITION

Place the head restraint to the upper most position.

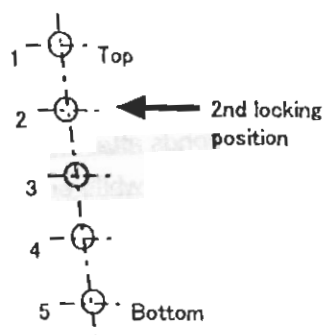
See Page A-8



2. ADJUSTABLE UPPER ANCHORAGE POSITION --

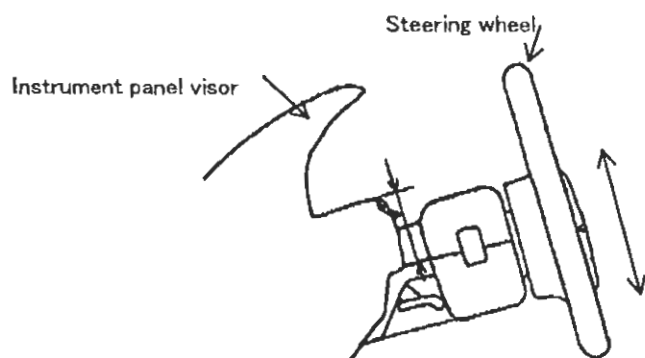


Locate adjustable upper anchorage to the 2nd locking position from the top.



See Page A-9

3. STEERING COLUMN ADJUSTMENTS



Check the highest and lowest position or steering column to find mid position.
Set the mid position of steering column.

See Page A-10

LEFT SIDE VIEW

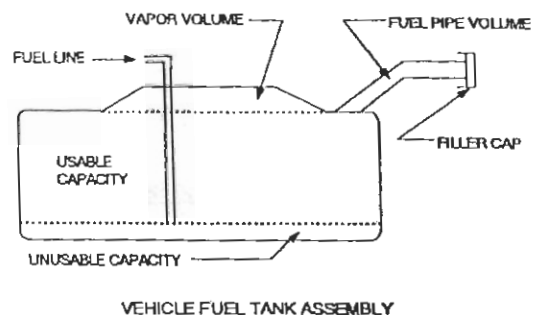
4. FUEL TANK CAPACITY DATA

4.1

A. "Usable Capacity" of standard equipment fuel tank

= 15.9 gallons (60 L)B: "Usable Capacity" of optional equipment fuel tank = (N.A.) gallons.

C: "Usable Capacity" of vehicle(s) used for certification testing to requirements of FMVSS 301

= 15.9 gallons (60 L)

4.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s)

= 14.8 gallons (56 L)

4.3 Is vehicle equipped with electric fuel pump?

Yes - X

No - _____

If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel.

Pump operates a few seconds after an ignition switch is turned ON.After that, pump operates only while engine is running.