

Report Number: 208S-TRC-02-005

Vehicle Safety Compliance Testing for FMVSS 208

for Occupant Crash Protection

Sled Test

Toyota Motor Company

2002 Toyota Camry LE

NHTSA Number: C25108

TRC Inc. Test Number: S020325

Transportation Research Center Inc.

10820 State Route 347

East Liberty, OH 43319



Test Date: March 25, 2002

Report Date: April 5, 2002

Final Report

Prepared For:

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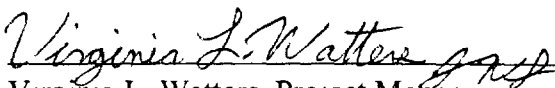
Washington, DC 20590

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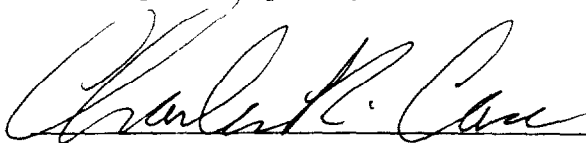
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Date 4/4/02

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Date 5/20/02

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NHTSA, Office of Vehicle Safety Compliance

Technical Report Documentation Page

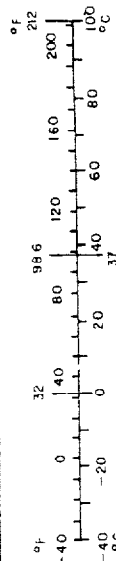
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16	Abstract An FMVSS 208 Section 13 compliance sled test was conducted on a 2002 Toyota Camry LE 4-door sedan, NHTSA No C25108, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No TP208S-01 for the determination of FMVSS 208 compliance. Possible test failures identified were as follows: None				
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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
m	inches	0.025	centimeters	cm
ft	feet	30	centimeters	m
yd	yards	0.9	meters	km
mi	miles	1.6	kilometers	
AREA				
m ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	km ²
mi ²	square miles	2.6	square kilometers	ha
	acres	0.4	hectares	
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
VOLUME				
tsp	teaspoons	5	milliliters	ml
tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	l
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
fl	fluid feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³
TEMPERATURE (exact)				
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



1 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102 104 106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142 144 146 148 150 152 154 156 158 160 162 164 166 168 170 172 174 176 178 180 182 184 186 188 190 192 194 196 198 200 202 204 206 208 210 212 214 216 218 220 222 224 226 228 230 232 234 236 238 240 242 244 246 248 250 252 254 256 258 260 262 264 266 268 270 272 274 276 278 280 282 284 286 288 290 292 294 296 298 300 302 304 306 308 310 312 314 316 318 320 322 324 326 328 330 332 334 336 338 340 342 344 346 348 350 352 354 356 358 360 362 364 366 368 370 372 374 376 378 380 382 384 386 388 390 392 394 396 398 400

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Purpose

This Federal Motor Vehicle safety Standard (FMVSS) 208 compliance sled test is part of the FMVSS compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by the Transportation Research Center Inc (TRC Inc) under Contract No DTNH22-98-D-01055. The purpose of this test was to determine if the subject vehicle, a 2002 Toyota Camry LE 4-door sedan, NHTSA No C25108, 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 sled test vehicle was instrumented with four (4) accelerometers to measure longitudinal accelerations. The sled was instrumented with one (1) longitudinal accelerometer, which is prefiltered with an analog filter to 200 Hz as an integral part of the sled firing circuit, and two (2) additional accelerometers: the primary accelerometer for pulse and integrated velocity determination and a backup accelerometer. In addition, the sled was instrumented with one (1) light trap to measure velocity and four (4) airbag firing timing circuits.

The sled test vehicle contained two (2) Part 572 E 50th percentile adult male anthropomorphic test devices (dummies). The dummies were positioned in the front outboard designated seating positions according to the dummy placement procedure 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 forty-one (41) data channels were digitally sampled at 12,500 samples per second and processed per Sections 11.7 through 11.9 of the Laboratory Test Procedure.

The sled test event was recorded by one (1) real-time motion picture camera and 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 by TRC Inc on March 25, 2002

The test vehicle, a 2002 Toyota Camry LE 4-door sedan, NHTSA No C25108, does appear 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	Passenger
HIC	1000	115	212
Chest g	60 g	37.4	31.0
Chest Displacement	3 in	1.4	0.9
Left Femur	2250 lbs	993	898
Right Femur	2250 lbs	1314	1024 ¹
Neck Extension	57 Nm	15.1	19.0 ¹
Neck Flexion	190 Nm	27.9	89.9 ¹
Neck Tension	3300 N	1336	180 ¹
Neck Compression	4000 N	163	928 ¹
Neck Shear	3100 N	509	1208

The subject vehicle, a 2002 Toyota Camry LE 4-door sedan, NHTSA No C25108, 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 sled 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 17.8 g with an integrated velocity change of 30.1 mph. The primary stages of the airbags were triggered at 20.2 milliseconds after 0.5 g acceleration was measured by the firing circuit. The secondary stages of the airbags were triggered at 50.2 milliseconds after 0.5 g acceleration was measured by the firing circuit. Following subsequent digital data processing and filtering the acceleration signal to Channel Class 60, the primary stages airbag event trigger signal was 22.1 ms after the 0.5 g acceleration level was indicated and the secondary stages airbag event trigger signal was 52.1 ms after the 0.5 g acceleration level was indicated.

¹ See Data Acquisition Explanations

Data Acquisition Explanations

The right front passenger's primary and secondary airbag event firing data channels, PABET1 and PABET2, did not record data during the impact event as a result of an intermittent problem in the airbag monitor cable connector. The cable was repaired following this test.

The right front passenger's neck Y-axis and Z-axis force and moment about the X-axis and Z-axis load cell data channels recorded questionable data spikes at approximately 20 and 50 milliseconds

The right front passenger's right femur force load cell data channel recorded questionable data spikes at approximately 20 and 50 milliseconds.

Sled Test Summary

NHTSA number C25108
Test type Alternate 208 Sled
Test date 03/25/02
Test time 1303
Ambient temperature at impact area 70 1° F
Vehicle year/make/ model/body style 2002/Toyota/Camry LE/4-door sedan

Dummy Info

Driver #314

Passenger #339

Type	Hybrid III 50th	Hybrid III 50th
Location	Left front	Right front
Restraint	Airbag, supplemental	Airbag, supplemental
Number of data channels	15	15

Number of Cameras

Real-time	1
High-speed	6

Door Opening Data

Left Front	Easy
Right Front	Easy

Front Seat Data

Seat track failure	None	None
Seat back failure	None	None

Visible Dummy Contact Points

Head	Airbag, sun visor headliner	Airbag, windshield sun visor, head rest
Chest	Airbag	Airbag
Left knee	Knee bolster	Glove box
Right knee	Knee bolster	Glove box

General Test and Vehicle Parameter Data for the Sled Test Vehicle

Test Vehicle Information

Vehicle year/make/ model/body style	2002/Toyota/Camry LE/4-door sedan
Color	Phantom gray pearl/stone
VIN	JTDBE32K920070156
NHTSA number	C25108
Engine data	
Placement	inline
Cylinders	4
Displacement	2.4
Transmission data	☐ 5 speed, ☒ manual, ☐ automatic, ☐ overdrive
Final drive	☒ fwd, ☐ rwd, ☐ 4wd
Date vehicle received	02/21/02
Odometer reading	92
Dealer's name and address	Jeff Wyler Toyota 1501 Hillcrest Ave Springfield, OH 45504

Major Options

Power steering	Yes	Other	No
Power brakes	Yes		
Power windows	Yes		
Air conditioning	Yes		
Power door locks	Yes		

Remarks

General Test and Vehicle Parameter Data for the Sled Test Vehicle, Cont'd.

Data from Vehicle's Certification Label:

Vehicle manufactured by:	Toyota Motor Corporation
Date of manufacture:	01/02
VIN:	JTDBE32K920070156
GVWR:	4090 lbs
GAWR: Front:	2668 lbs
Rear:	2668 lbs

Data from Vehicle's Tire Placard:

Tire pressure with maximum capacity vehicle load:

Front:	29 psi
--------	--------

Rear:	29 psi
-------	--------

Recommended tire size:	P205/65R15
------------------------	------------

Load index/speed rating:	92T
--------------------------	-----

Recommended cold tire pressure:

Front:	29 psi
--------	--------

Rear:	29 psi
-------	--------

Size of tires on vehicle:	P205/65R15 92T
---------------------------	----------------

Spare tire:	P205/65R15 92T
-------------	----------------

Vehicle capacity data:

Type of front seats:	Bucket
----------------------	--------

Number of occupants:

Front	2
-------	---

Rear	3
------	---

Total	5
-------	---

Remarks:

General Test and Vehicle Parameter Data for the Sled Test Vehicle, Cont'd

Weight of test vehicle as received (with maximum fluids)

Right front	910 9 lbs	Right rear	650 4 lbs
Left front	914 5 lbs	Left rear	658 3 lbs
Total front weight	1825 4 lbs	(58 2% of total vehicle weight)	
Total rear weight	1308 7 lbs	(41 8% of total vehicle weight)	
Total delivered weight	3134 1 lbs		

Calculation of test vehicle's target test weight

RCLW = Rated Cargo and Luggage Weight

UDW = Unloaded Delivered Weight (3134 1 lbs)

DSC = Designated Seating Capacity (5)

RCLW = 150 lbs

Target test weight = UDW + RCLW + (Number of Hybrid III dummies x 167 lbs per dummy)

Target test weight = 3134 1 + 150 + 334 = 3618 1 lbs

Weight of test vehicle with two dummies and #VALUE! lbs of cargo weight

Right front	989 0 lbs	Right rear	807 3 lbs
Left front	999 6 lbs	Left rear	827 6 lbs
Total front weight	1988 6 lbs	(54 9% of total vehicle weight)	
Total rear weight	1634 9 lbs	(45 1% of total vehicle weight)	
Total test weight	3623 5 lbs		

Remarks

Weight of ballast secured in vehicle cargo area N/A

Components removed to meet target test weight N/A

General Test and Vehicle Parameter Data for the Sled Test Vehicle, Cont'd

Test Vehicle Attitude

As delivered door sill angle 0.9° Nose Down

As tested door sill angle 0.7° Nose Down

Fully loaded door sill angle 0.4° Nose Down

Vehicle Wheelbase 107.1 inches

Fuel System Data

Fuel system capacity from owner's manual 18.5 gallons

Useable capacity figure furnished by COTR 18.5 gallons

Remarks The roll angle measurements were within 1 inch of each other

The left and right side measurements were 28.5 inches and 28.4 inches respectively

Post-Impact Data

Test number	S020325
NHTSA number	C25108
Test date	03/25/02
Test time	1303
Test type	Alternate FMVSS 208 sled test
Impact angle	0°
Ambient temperature at impact area	70.1° F
Temperature in occupant compartment	70.6° F

Sled carriage velocity

Integrated velocity from the integration of the entire sled acceleration	30.1 mph
Measured velocity from the light trap device attached to the sled (backup)	29.1 mph
Specified integrated velocity range	28 to 30 mph

Sled carriage acceleration

Acceleration	17.8 g
Specified acceleration range	16.0 g - 18.2 g

Sled carriage acceleration duration

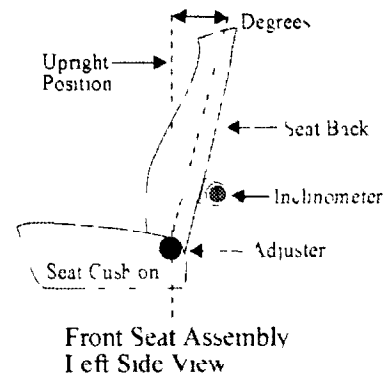
Time from T-0(-0.5 g) to 0.0 g	127.1 ms
Specified acceleration duration	120 - 130 ms

The sled acceleration curve was within the specified corridor

Seat and Steering Column Positioning Data

Vehicle 2002/Toyota/Camry LE/4-door sedan

NHTSA No . C25108



Nominal Design Riding Position

Driver Seat	Seat Back Angle = 2 4° manual Seat back angle was measured on the headrest with the seat reclined 3 notches rearward from the most upright
Passenger Seat	Seat Back Angle = 2 3° manual Seat back angle was measured on the headrest with the seat reclined 3 notches rearward from the most upright

Seat Fore and Aft Positions

Driver Seat	mid Seats were marked by lines at every notch and adjusted to the ninth (mid) manual notch of seventeen notches.
Passenger	mid Seats were marked by lines at every notch and adjusted to the ninth (mid) manual notch of seventeen notches

Steering Column Adjustments

The steering column was infinitely adjustable from 22 9° to 26 7° and was set at 24 8°

Dummy Measurement Data for Front Seat Occupants

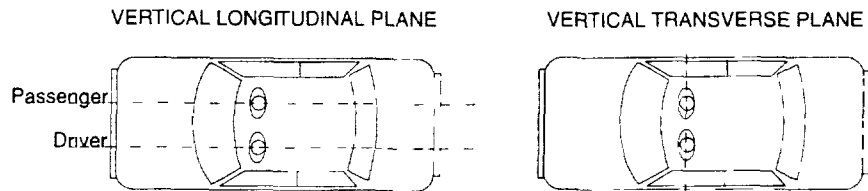
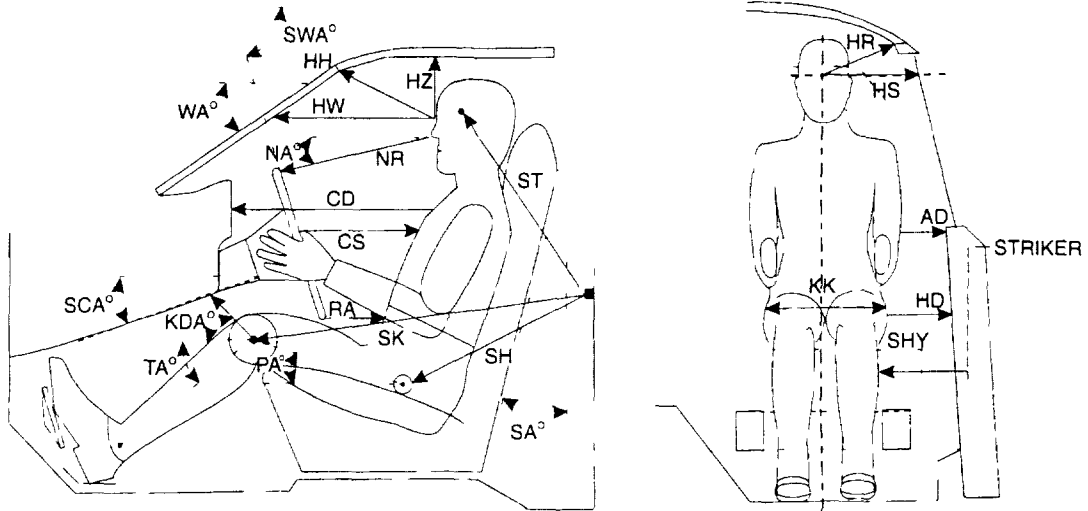
Designation	Type of Measurement	Driver (Serial #314)	Passenger (Serial #339)
WA	Windshield angle	28 3°	N/A
SWA	Steering wheel angle	24 8°	N/A
SCA	Steering column angle	24°	N/A
SA	Seat back angle	2 4°	2 3°
HZ	Head to roof	7 7 in	6 1 in
HH	Head to header	13 6 in	12 6 in
HW	Head to windshield	23 0 in	20 9 in
HR	Head to side header	9 4 in	9 4 in
NR	Nose to rim	16 2 in	N/A
NA	Nose to rim angle	13°	N/A
CD	Chest to dash	21 4 in	20 0 in
CS	Steering wheel to chest	11 6 in	N/A
RA	Rim to abdomen	7 6 in	N/A
KDL	Left knee to dash	7 5 in	5 5 in
KDR	Right knee to dash	5 1 in	6 5 in
KDA	Outboard knee to dash angle	22°	36°
PA	Pelvis angle	23°	22 3°
TA	Tibia angle	39 5°	39 4°
KK	Knee to knee	13 5 in	10 6 in
ST ¹	Striker to head	14 6 in	13 1 in
	Striker to head angle	-75 8°	-66 4°
SK ¹	Striker to knee	9 1 in	11 2 in
	Striker to knee angle	12 7°	14 3°
SH ¹	Striker to H-point	6 1 in	6 4 in
	Striker to H-point angle	50 3°	44 4°
SHY	Striker to H-point (Y dir)	9 9 in	9 4 in
HS	Head to side window	12 7 in	13 4 in
HD	H-point to door	6 3 in	5 5 in
AD	Arm to door	5 5 in	5 5 in

The seat back angle (SA°) is measured relative to vertical

All other angles are measured relative to horizontal

¹ A negative angle indicates the measurement point was located below the striker

Dummy Measurement Locations for Front Seat Occupants



Descriptions 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 diagram
- 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)

* Measurement used in Data Tape Reference Guide

Descriptions of Dummy Measurements, Cont'd

- *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 diagram
- 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 diagram

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 diagram
- * 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

* Measurement used in Data Tape Reference Guide

¹ Only outboard measurement is referenced in Data Tape Reference Guide

Descriptions of Dummy Measurements, Cont'd

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 diagram

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)

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 Pelvis 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

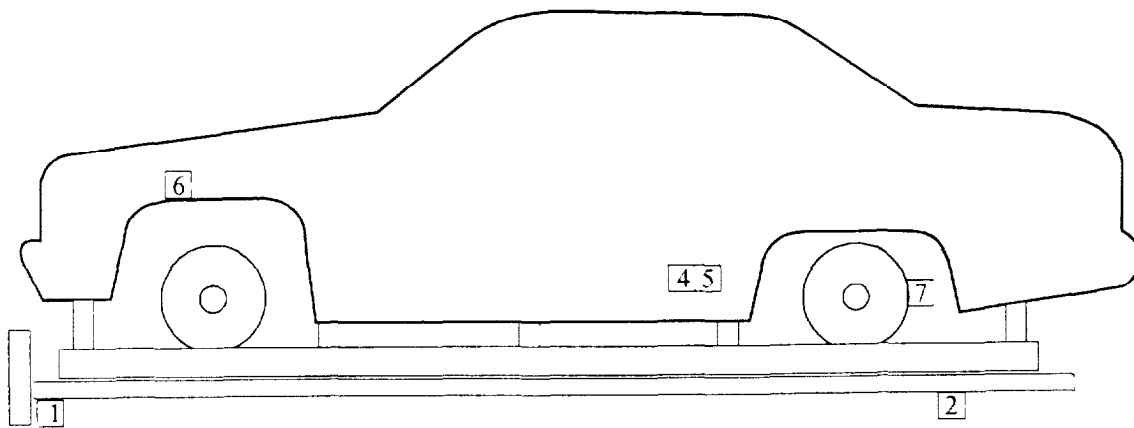
KDA Knee to Dash Angle, the angle that the measurement KD is taken at with respect to the horizontal Only get this angle for the outboard knee See diagram

WA Windshield Angle, place an inclinometer along the transverse center of the windshield exterior (measurement is made with respect to horizontal)

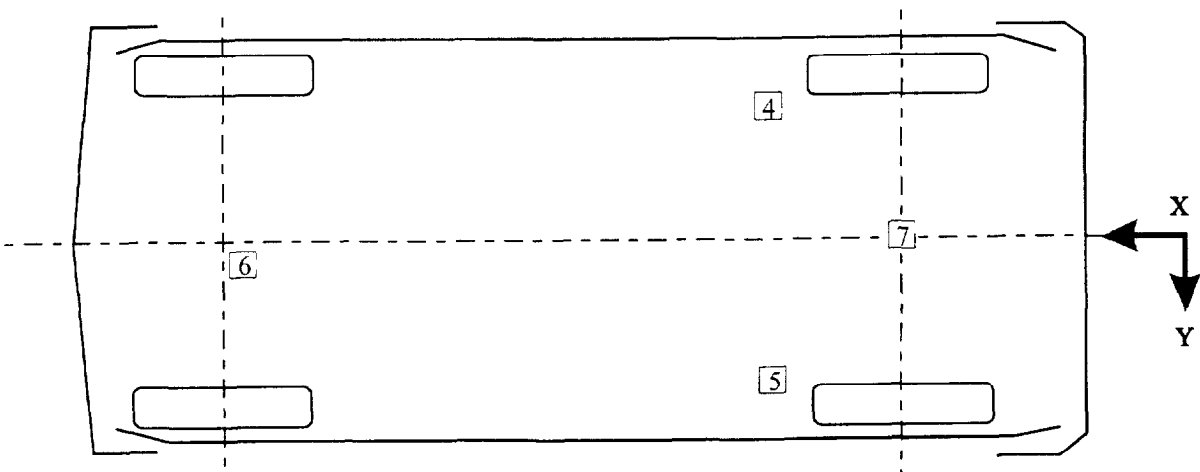
TA Tibia Angle, use a straight edge to connect the dummy's knee and ankle bolts Then place an inclinometer on the straight edge and measure the angle with respect to the horizontal

* Measurement used in Data Tape Reference Guide

Vehicle Accelerometer Placement



Side View

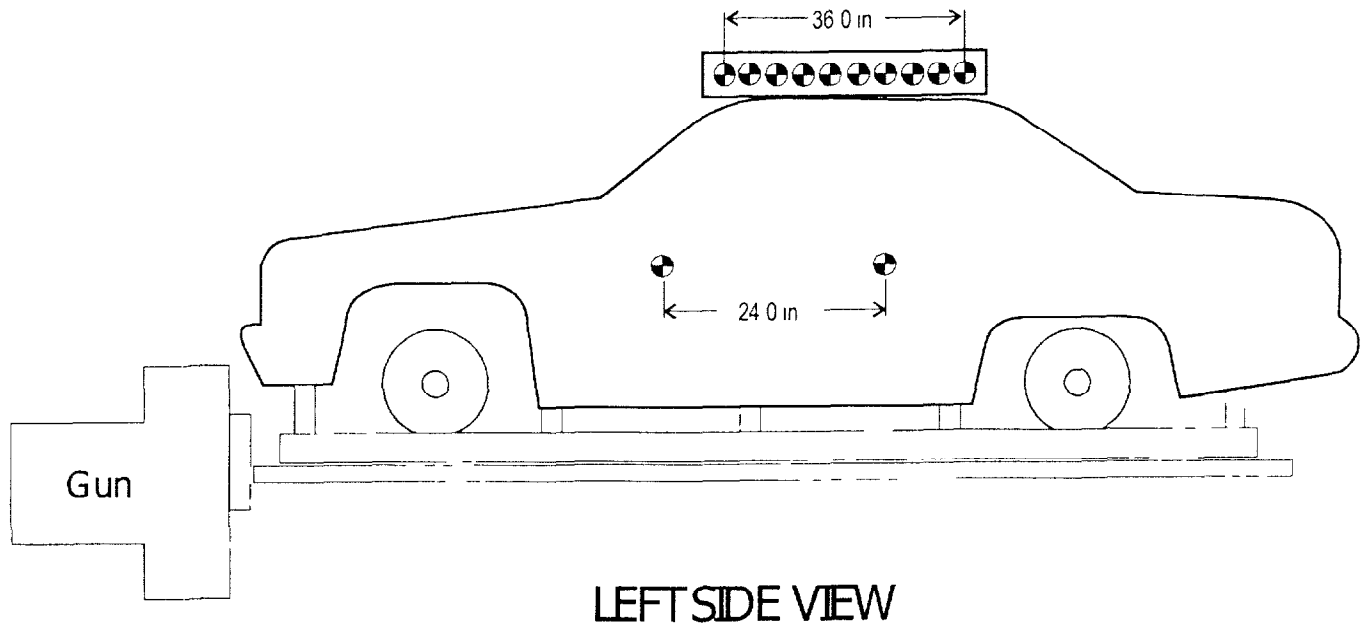


Bottom View

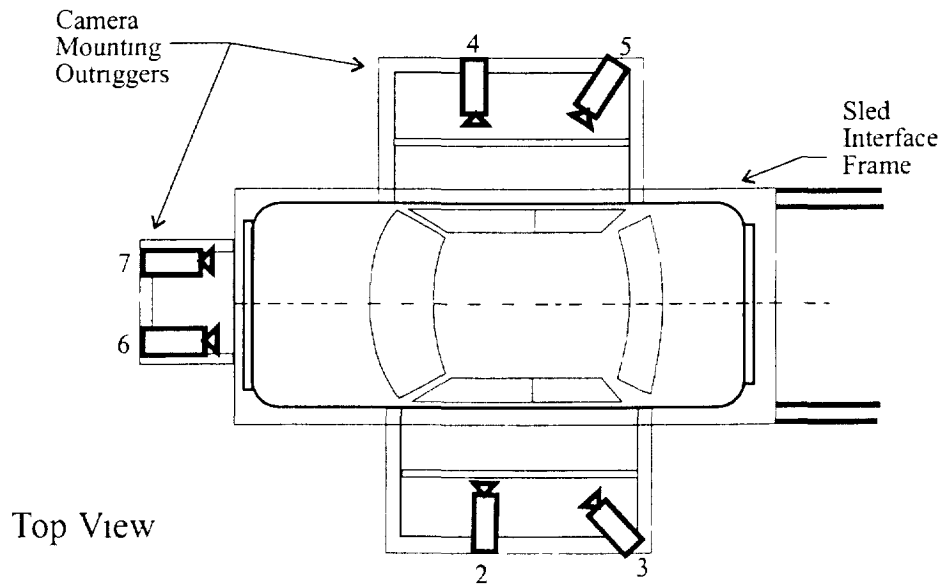
Vehicle Data Summary and Accelerometer Locations

TEST NUMBER: S020325				POSITIVE		NEGATIVE	
No. LOCATION	X	Y	Z	DIRECTION		DIRECTION	
1 SLED ACCELERATION PRIMARY	165.6 in	-1.0 in	NA	0.3 g @ 200.6 ms	17.8 g @ 56.2 ms		
2 SLED ACCELERATION BACKUP REDUNDANT	165.6 in	-1.0 in	NA	0.5 g @ 200.8 ms	17.9 g @ 56.2 ms		
3 SLED VELOCITY MEASURED INTEGRATED ¹	NA	NA	NA	0.1 mph @ 9.2 ms --- ---	29.1 mph @ 127.0 ms 30.1 mph @ 139.0 ms		
4 LEFT BODY AT REAR SEAT LONGITUDINAL	78.8 in	-14.2 in	NA	1.0 g @ 128.6 ms	18.2 g @ 59.3 ms		
5 RIGHT BODY AT REAR SEAT LONGITUDINAL	78.8 in	14.2 in	NA	1.0 g @ 129.0 ms	18.1 g @ 59.8 ms		
6 TOP ENGINE LONGITUDINAL	159.2 in	1.0 in	NA	3.1 g @ 129.3 ms	18.7 g @ 47.4 ms		
7 REAR AXLE LONGITUDINAL	38.3 in	0.2 in	NA	1.4 g @ 129.1 ms	18.4 g @ 59.9 ms		
8 DRIVER PRIMARY AIRBAG EVENT	NA	NA	NA	1.0 volt @ 22.1 ms	---	---	

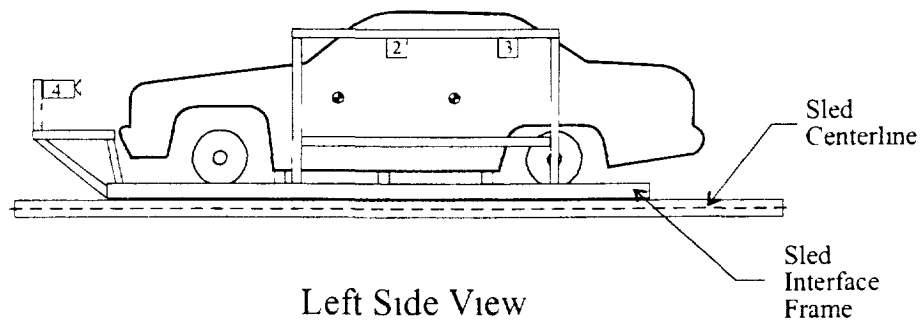
REFERENCE PHOTO TARGETS



Camera Positions



Camera Frame Rates
 #1 = 24 fps
 All Others = 1,000 fps



Motion Picture Camera Locations

Vehicle year/make/model/body style 2002/Toyota/Camry LE/4-door sedan NHTSA No C25108 Test Number S020325

Camera Number	View	Camera Positions ¹			Camera Angle ²	Film Plane to Head Target	Camera Lens	Film Speed
		X	Y	Z				
1	Left side view offboard	93 0 in	305 9 in	49 8 in	0°	286 0 in	10 mm	24 frames/s
2	Left side view wide	71 2 in	72 3 in	52 2 in	7 2°	54 2 in	8 mm	997 frames/s
3	Left side view over shoulder	98 2 in	49 1 in	57 0 in	14 1°	35 8 in	8 mm	950 frames/s
4	Right side view wide	74 0 in	72 4 in	51 8 in	4 2°	56 2 in	8 mm	1000 frames/s
5	Right side view over shoulder	101 5 in	49 5 in	56 2 in	11 7°	37 2 in	8 mm	1000 frames/s
6	Front view - driver	27 1 in	14 4 in	55 7 in	5 9°	56 4 in	8 mm	1000 frames/s
7	Front view - passenger	27 9 in	17 9 in	52 2 in	5 6°	54 5 in	8 mm	1005 frames/s

¹ X Film plane to front of sled

Y Film plane to sled centerline

Z- Film plane to top of sled

² Angle: Film plane of camera downward from horizontal plane

FMVSS 208 Occupant Injury Data

Vehicle: 2002/Toyota/Camry LE/4-door sedan NHTSA No C25108 Date 03/25/02

Maximum Acceleration Values: (g)	Driver Dummy #314	Passenger Dummy #339
Head Channel X	-26.3	-38.5
Head Channel Y	-7.1	-5.8
Head Channel Z	17.6	16.0
HEAD RESULTANT	30.3	41.0
Chest Channel X	36.0	-30.0
Chest Channel Y	4.7	-3.4
Chest Channel Z	14.0	10.6
CHEST RESULTANT	38.6	31.5

Head Injury Criteria (HIC) Values

HIC	115	212
$t_1 =$ (ms)	90.8	82.6
$t_2 =$ (ms)	126.8	118.6

The maximum HIC time interval from t_1 to t_2 is 36 milliseconds

Chest Injury Criteria (Clip) Values

CLIP (g)	37.4	31.0
$t_1 =$ (ms)	97.8	108.4
$t_2 =$ (ms)	100.8	111.4
Chest Deflection (in)	1.4	0.9

FMVSS 208 Occupant Injury Data, Cont'd

Vehicle 2002/Toyota/Camry LE/4-door sedan NHTSA No C25108 Date:03/25/02

Max Compressive Femur Forces	Driver Dummy #314	Passenger Dummy #339
Left Side (lbs)	993	898
Right Side (lbs)	1314	1024 ¹

Neck Injury Criteria	Driver Dummy #314	Passenger Dummy #339
Peak Flexion Bending Moment (N-m)	27 9	89 9 ¹
Peak Extension Bending Moment (N-m)	15 1	19 0 ¹
Peak Axial Tension (N)	1336	180 ¹
Peak Axial Compression (N)	163	928 ¹
Peak Positive X-axis Shear (N)	509	1208
Peak Negative X-axis Shear (N)	251	295

¹ See Data Acquisition Explanations

FMVSS 208 Seat Belt Warning System Check

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician: Steve Bell

Date 03/26/2002

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 = 6 seconds
(4 to 8 seconds)

Time duration of reminder light operation = 5 seconds
(no less than 60 seconds)

A 2 S7 3(a)(2)

Time duration of audible warning signal = seconds
(4 to 8 seconds) (see 49 USCS @ 30124)

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

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

B 1 S7 3(a)(1)

Time duration of audible warning signal = 0 seconds
(audible warning should not operate)

Time duration of reminder light operation = 0 seconds
(reminder light does not operate)

B 2 S7 3(a)(2)

Time duration of audible warning signal = seconds
(audible warning should not operate)

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

C Note wording of visual warning

Fasten Seat Belt

Fasten Belt

Symbol 101



FMVSS 208 Readiness Indicator

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Steve Bell

Date 03/27/2002

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

Is the system totally mechanical?

☐ Yes,

☒ No

Describe the location of the readiness indicator Center of instrument cluster

Is the readiness indicator clearly visible to the driver?

☒ Yes,

☐ No

Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided?

☒ Yes,

☐ No

FMVSS 208 Air Bag Labels

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Steve Bell

Date 03/26/2002

1. Air Bag Maintenance Label and Owner's Manual Instructions

1 1 Does the manufacturer recommend periodic maintenance or replacement of the air bag? ☐ Yes (Go to 1 2)

☒ No (Go to 2)

1 2 Does the Vehicle have a maintenance or replacement label?

☐ Yes-Pass

☐ No-Fail

1 3 Does the label contain one of the following?

☐ Yes-Pass

☐ No-Fail

☐ Schedule on label specifies month and year

☐ Schedule on label specifies vehicle mileage

☐ Schedule on label specifies interval measured from date on certification label

1 4 Is the label permanently affixed within the passenger compartment?

☐ Yes-Pass

☐ No-Fail

1 5 Is the label lettered in English?

☐ Yes-Pass

☐ No-Fail

1 6 Is the label in block capitals and numerals?

☐ Yes-Pass

☐ No-Fail

1 7 Are the letters and numerals at least 3/32 inch high?

☐ Yes-Pass

☐ No-Fail

1 8 Does the owner's manual set forth the recommended schedule for maintenance or replacement?

☐ Yes-Pass

☐ No-Fail

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

2 1 Include a description of the vehicle's air bag system in an easily understandable format? ☒ Yes ☐ No-Fail

2 2 Include a statement that the vehicle is equipped with an air bag and a lap/shoulder belt at the front outboard seating positions? ☒ Yes ☐ No-Fail

FMVSS 208 Air Bag Labels, Cont'd.

- 2 3 Include a statement that the air bag is a supplemental restraint at the front outboard seating positions? ☒ Yes ☐ No-Fail
- 2 4 Emphasize that all occupants, including the driver, should always wear their seat belts whether or not an air bag is also provided at their seating positions to minimize the risk of severe injury or death in the event of a crash? ☒ Yes ☐ 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? ☒ Yes ☐ No-Fail
- 2 6 Explain that no objects should be place 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? ☒ Yes ☐ No-Fail

3 Does the Vehicle

- 3 1 Provide an automatic means to ensure that the air bag does not deploy when a child seat or child with a total mass of 30 kg or less is present on the front outboard seat? ☐ Yes ☒ 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 seat, and unbelted or improperly belted children? ☐ Yes ☒ 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 ☒ No

If yes to 3.1, or 3.2, or 3.3, the vehicle is not required to have a Sun Visor Warning Label (S4 5 1(b)), an air bag alert label (S4 5 1(c)) or a label on the dash (S4 5 1(e)) and this check sheet is complete. (S4.5.1) If no to 3.1, 3.2, and 3.3, go to 4.

FMVSS 208 Air Bag Labels, Cont'd.

4 Sun Visor Warning Label

- 4 1** Is the label permanently affixed (may be permanent marking or molding) to either side of the sun visor at each front outboard seating position with an air bag?

Driver side ☒ Yes-Pass ☐ No-Fail

Passenger side ☒ Yes-Pass ☐ No-Fail

- 4 2** Does the label conform in content (**vehicles without back seats may omit the statement: "The BACK SEAT is the SAFEST place for children."**) (S4 5 1(b)(2)(v)) to the label shown in either Figure 6a or 6b as appropriate at each front outboard seating position with an air bag? (S4 5 1(b)(2))

4 2 1 Dual air bags

Driver side ☒ Yes-Pass ☐ No-Fail

Passenger side ☒ Yes-Pass ☐ No-Fail

- 4 2 2 Vehicles with driver air bag ONLY - either 4 2 1 or 4 2 2 is applicable, not both (S4.5 1(b)(2)(iv))**

- 4 2 2 1** Does the label conform on content to the label shown in either Figure 6a or 6b as appropriate?

☒ N/A

Driver side ☐ Yes-Pass ☐ No-Fail

- 4 2 2 2** Does the label conform in content to the label shown in Figure 6a where the label can be modified to omit the pictogram and the message 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**

☒ N/A

Driver side ☐ Yes-Pass ☐ No-Fail

FMVSS 208 Air Bag Labels, Cont'd.

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK

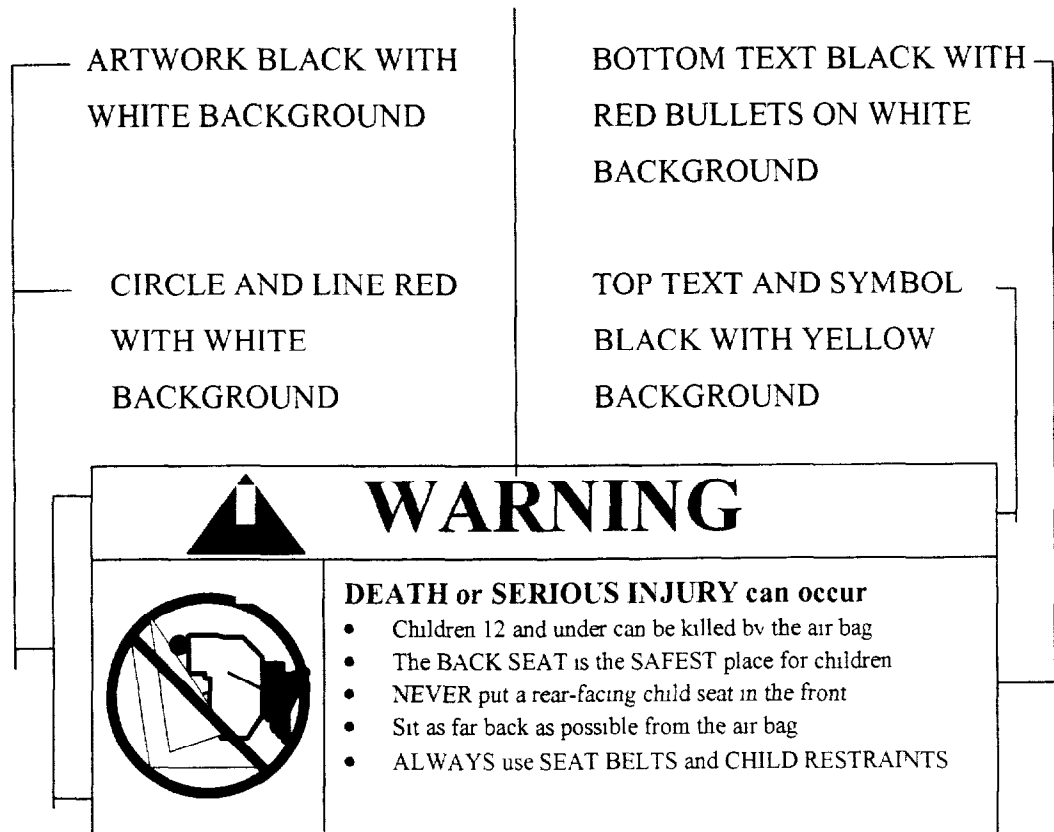


Figure 6a
(S4 5 1(b)(2))

FMVSS 208 Air Bag Labels, Cont'd.

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK

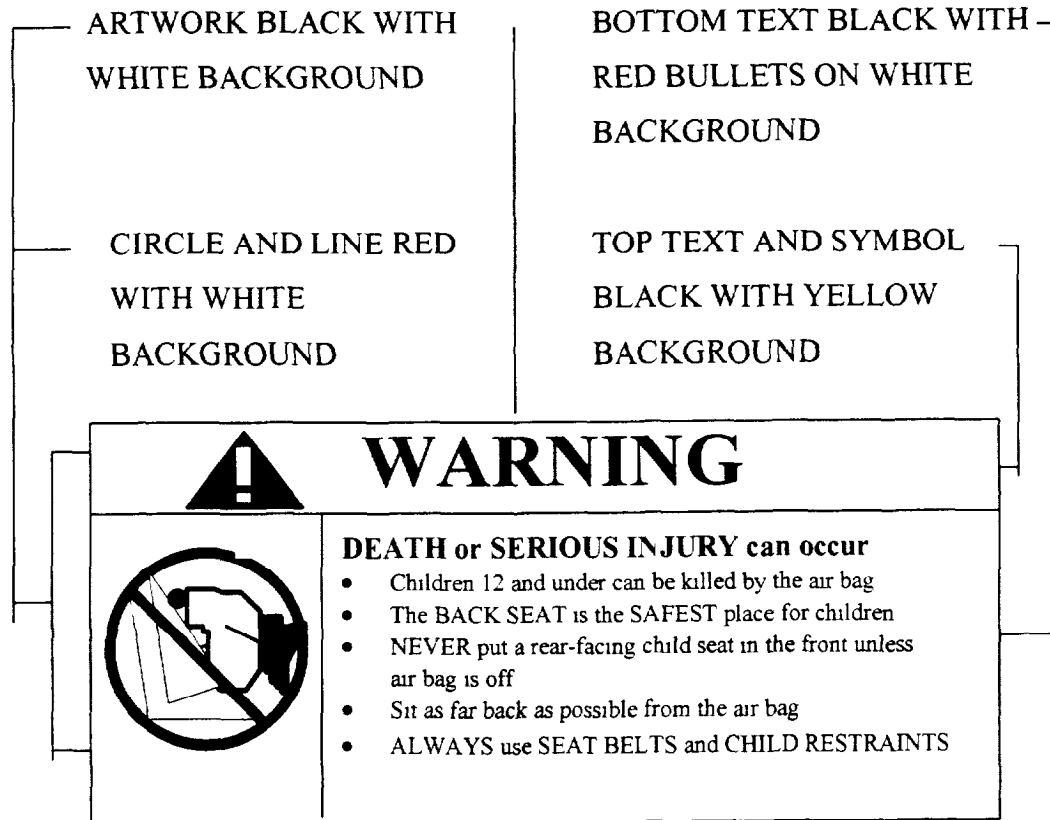


Figure 6b
(S4 5 1(b)(2))

4 3 Is the driver side label heading area yellow with the word "warning" and the alert symbol in black? (S4 5 1 (b)(2)(i))

Driver side ☒ Yes-Pass ☐ No-Fail

Passenger side ☒ Yes-Pass ☐ No-Fail

4 4 Is the message white with black text? (S4 5 1 (b)(2)(ii))

Driver side ☒ Yes-Pass ☐ No-Fail

Passenger side ☐ No air bag ☒ Yes-Pass ☐ No-Fail

4 5 Is the message area at least 30 cm²? (S4.5 1(b)(2)(ii))

Actual message area, driver side **82.62** cm²

Actual message area, passenger side **82.62** cm²

Driver side ☒ Yes-Pass ☐ No-Fail

Passenger side ☐ No air bag ☒ Yes-Pass ☐ No-Fail

FMVSS 208 Air Bag Labels, Cont'd.

- 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 ☐ N/A
- Driver side ☒ Yes-Pass ☐ No-Fail
- Passenger side ☐ No air bag ☒ Yes-Pass ☐ No-Fail
- 4 7 Is the pictogram at least 30 mm in diameter? (S4 5 1(b)(2)(iii))
Actual diameter, driver side 30 mm
Actual diameter, passenger side 30 mm
For vehicles with driver side air bag ONLY ☐ N/A
- Driver side ☒ Yes-Pass ☐ No-Fail
- Passenger side ☐ No air bag ☒ 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)) and/or a rollover warning label specified in 49CFR Part 575 (S575 105)?
- Driver side ☒ Yes-Pass ☐ No-Fail
- Passenger side ☐ No air bag ☒ 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?
- Driver side ☒ Yes-Pass ☐ No-Fail
- Passenger side ☐ No air bag ☒ Yes-Pass ☐ No-Fail

5 Air Bag Alert Label

- 5 1 Is the Sun Visor Warning Label visible when the sun visor is in the stowed position?

Driver	☒ Yes	☐ No
Passenger	☒ Yes	☐ No

If yes, go to 6

- 5 2 Does the label conform in content to the label shown in Figure 6c?
(S4 5 1(c)(2)) ☐ Yes-Pass ☐ No-Fail

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN UP POSITION

Circle and Line Red
with White
Background

Artwork Black with
White Background

Text Yellow with
Black Background

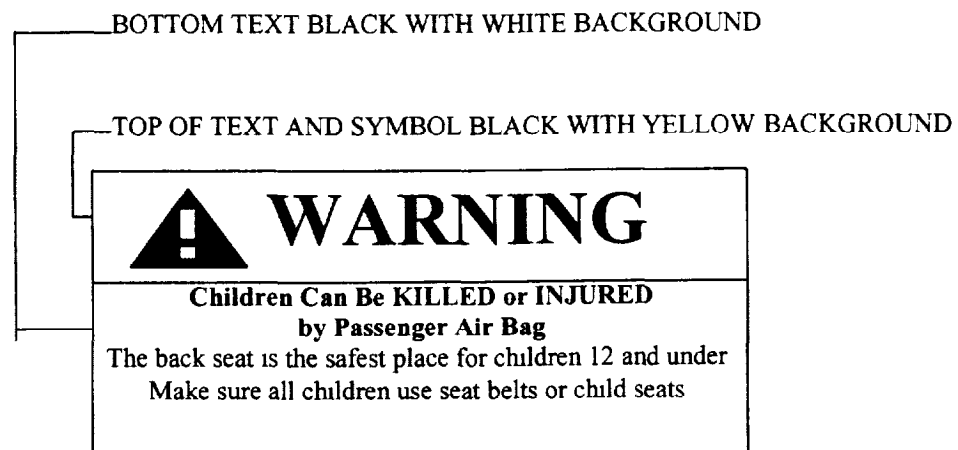
Figure 6c
(S4 5 1(c)(2))



FMVSS 208 Air Bag Labels, Cont'd.

- 5 3 Is the message area black with yellow text? (S4 5 1(c)(2)(i))
☐ Yes-Pass ☐ No-Fail
- 5 4 Is the message area at least 20 cm²? (S4 5 1(c)(2)(i))
Actual message area N/A cm² ☐ 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 ☒ N/A
☐ Yes-Pass ☐ No-Fail
- 5 6 Is the pictogram at least 20 mm in diameter? (S4 5 1(c)(2)(ii))
Actual diameter is N/A mm
For vehicles with driver side air bag ONLY ☒ N/A
☐ Yes-Pass ☐ No-Fail
- 6 Label On the Dash
- 6 1 Does the vehicle have a passenger air bag?
☒ Yes ☐ No
- If no, this checklist 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 in Figure 7? (S4 5 1(e))
☒ Yes-Pass ☐ No-Fail

Figure 7
(S4 5 1(e))



FMVSS 208 Air Bag Labels, Cont'd.

- | | | | |
|-----|--|--|----------------------------------|
| 6 4 | Is the heading area yellow with the word "warning" and the alert symbol in black?
(S4 5 1(e)(1)) | ☒ Yes-Pass | ☐ No-Fail |
| 6 5 | Is the message white with black text? (S4 5 1(e)(11)) | ☒ Yes-Pass | ☐ No-Fail |
| 6 6 | Is the message area at least 30 cm ² ? (S4 5 1(e)(11))
Actual message area <u>30</u> cm ² | ☒ Yes-Pass | ☐ No-Fail |

FMVSS 208 Rear Outboard Seating Position Seat Belts

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Ron Stoner

Date 03/25/02

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

☒ Yes, ☐ No, ☐ N/A (No Back Seat)

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

N/A

FMVSS 208 Lap Belt Lockability

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 retractors (S7.1 1.5(c))

Vehicle Model Year/Make/Model/Body Style: 2002/Toyota/Camry LE/4-door sedan

NHTSA No · C25108

Technician: Steve Bell/Nic Echeverria

Date: 03/27/2002

Designated Seating Position: Front Passenger

- ☒1 Record test seat position: Mid
(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 to the vehicle?
(S7.1 1 5(a)) ☒ 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)) ☒ 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?
If yes, go to 6.1. If no, go to 7. ☒ Yes ☐ No
- 6.1 Does the vehicle owner's manual include a description in words and/or diagrams
describing how to activate the locking feature so that the seat belt assembly can
tightly secure a child restraint system and how to deactivate the locking feature to
remove the child restraint system. (S7.1.1 5(b)) ☒ Yes-Pass ☐ No-Fail

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Steve Bell/Nic Echeverria

Date: 03/27/2002

Designated Seating Position Front Passenger

- ☒7 Locate a reference point A on the seat belt buckle (S7 1 1 5(c)(2))
- ☒8 Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly (S7 1 1 5(c)(2))
- ☒9 Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system (S7 1 1 5(c)(2))
- ☒10 Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly (S7 1 1 5(c)(2)) Measured distance between A and B **62.8** 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 in figure 5. 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)) Measured force application angle **10** degrees (Spec. 5~15 degrees)
- ☒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 **22.4** inches

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Steve Bell/Nic Echeverria

Date 03/27/2002

Designated Seating Position Front Passenger

- ☒ 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 25 lbs/sec (spec 10 ~50 lb/sec)

The measured distance between A and B is 22.6 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= 0.2 inches

☒ Yes-Pass

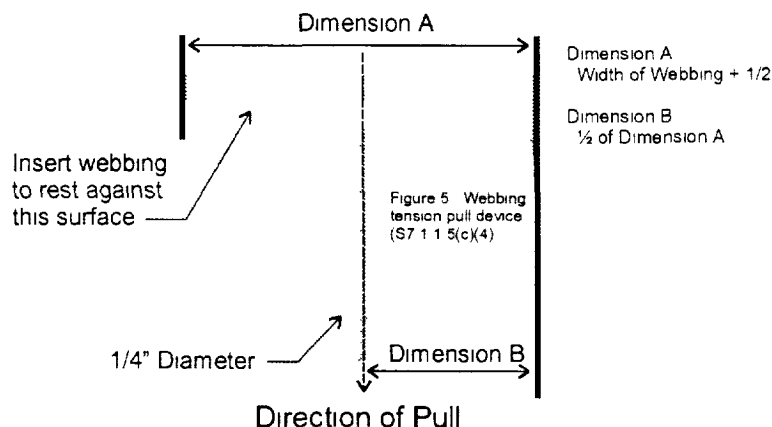
☐ No-Fail

- ☒ 16 Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7 1 1 5(c)(8))

10-14= 40.2 inches

☒ Yes-Pass

☐ No-Fail



FMVSS 208 Lap Belt Lockability

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 retractors. (S7.1.1 5(c))

Vehicle Model Year/Make/Model/Body Style: 2002/Toyota/Camry LE/4-door sedan

NHTSA No : C25108

Technician: Steve Bell/Nic Echeverria

Date: 03/27/2002

Designated Seating Position: Right Rear

- ☒ 1. Record test seat position: Fixed
(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 to the vehicle?
(S7.1.1.5(a)) ☒ 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)) ☒ 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?
If yes, go to 6.1. If no, go to 7. ☒ Yes ☐ No
- 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) ☒ Yes-Pass ☐ No-Fail

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Steve Bell/Nic Echeverria

Date 03/27/2002

Designated Seating Position Right Rear

- ☒ 7 Locate a reference point A on the seat belt buckle (S7 1 1 5(c)(2))
- ☒ 8 Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly (S7 1 1 5(c)(2))
- ☒ 9 Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system (S7 1 1 5(c)(2))
- ☒ 10 Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly (S7 1 1 5(c)(2)) Measured distance between A and B 59.8 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 in figure 5 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)) Measured force application angle 10 degrees (Spec 5~15 degrees)
- ☒ 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 12.4 inches

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Steve Bell/Nic Echeverria

Date 03/27/2002

Designated Seating Position Right Rear

- ☒ 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 25 lbs/sec (spec 10 ~50 lb/sec)

The measured distance between A and B is 13.4 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= 1.0 inches

☒ Yes-Pass

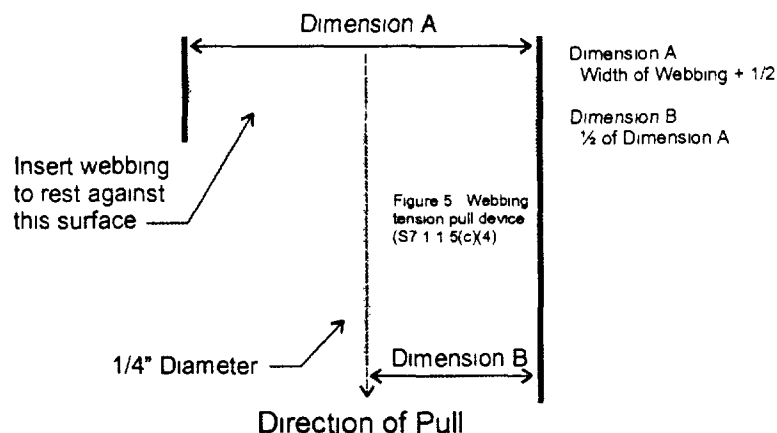
☐ No-Fail

- ☒ 16 Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7 1 1 5(c)(8))

10-14= 46.4 inches

☒ Yes-Pass

☐ No-Fail



FMVSS 208 Lap Belt Lockability

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 retractors (S7 1.1.5(c))

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No.: C25108

Technician: Steve Bell/Nic Echeverria

Date: 03/27/2002

Designated Seating Position: Rear Center

- ☒1 Record test seat position: Fixed
(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 to the vehicle? (S7 1.1 5(a)) ☒ 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)) ☒ 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?
If yes, go to 6.1. If no, go to 7 ☒ Yes ☐ No
- 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system (S7 1.1 5(b)) ☒ Yes-Pass ☐ No-Fail

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No . C25108

Technician: Steve Bell/Nic Echeverria

Date: 03/27/2002

Designated Seating Position. Rear Center

- ☒ 7 Locate a reference point A on the seat belt buckle. (S7 1 1 5(c)(2))
- ☒ 8 Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly (S7 1.1 5(c)(2))
- ☒ 9 Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system (S7 1 1 5(c)(2))
- ☒ 10 Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly (S7 1 1 5(c)(2)) Measured distance between A and B 64.6 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 in figure 5 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)) Measured force application angle 10 degrees (Spec. 5~15 degrees)
- ☒ 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 13.2 inches

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Steve Bell/Nic Echeverria

Date 03/27/2002

Designated Seating Position Rear Center

- ☒ 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 25 lbs/sec (spec 10 ~50 lb/sec)

The measured distance between A and B is 13.4 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= 0.2 inches

☒ Yes-Pass

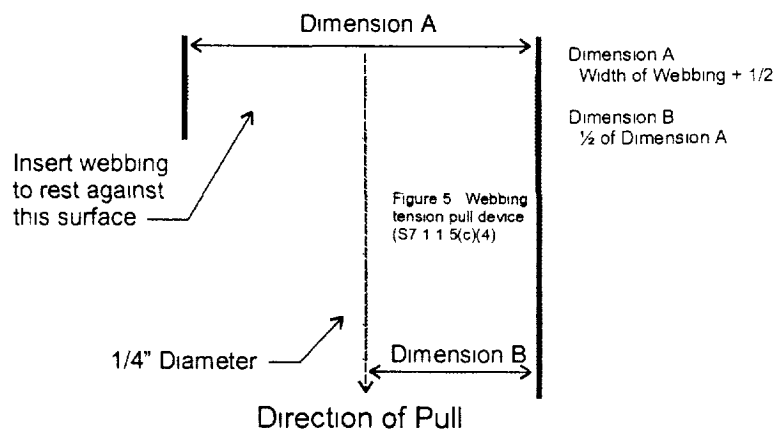
☐ No-Fail

- ☒ 16 Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7 1 1 5(c)(8))

10-14= 51.2 inches

☒ Yes-Pass

☐ No-Fail



FMVSS 208 Lap Belt Lockability

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 retractors. (S7.1.1.5(c))

Vehicle Model Year/Make/Model/Body Style: 2002/Toyota/Camry LE/4-door sedan

NHTSA No.: C25108

Technician: Steve Bell/Nic Echeverria

Date: 03/27/2002

Designated Seating Position: Left Rear

- ☒ 1. Record test seat position: Fixed
(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 to the vehicle? (S7.1.1.5(a)) ☒ 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)) ☒ 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?
If yes, go to 6.1. If no, go to 7. ☒ Yes ☐ No
- 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) ☒ Yes-Pass ☐ No-Fail

FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No C25108
Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan
Designated Seating Position Tested Center Rear
Date of Comfort and Convenience Check 03/27/2002
Technician Performing Check Steve Bell/Nic Echeverria
GVWR 4090 pounds

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 Does the vehicle incorporate a webbing tension-relieving device?

☐ Yes-go to latchplate access
☒ No-continue with this check sheet

- 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
☒ N/A

- 3 If separately adjustable in a vertical direction, the seats are at the lowest position

☐ Check
☒ N/A

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

☐ Check
☒ N/A

- 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

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

NHTSA No C25108

Technician Steve Bell/Nic Echeverria

Date: 03/27/2002

Designated Seating Position Left Rear

- ☒ 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 25 lbs/sec (spec 10 ~50 lb/sec)

The measured distance between A and B is 13.2 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= 0.8 inches

☒ Yes-Pass

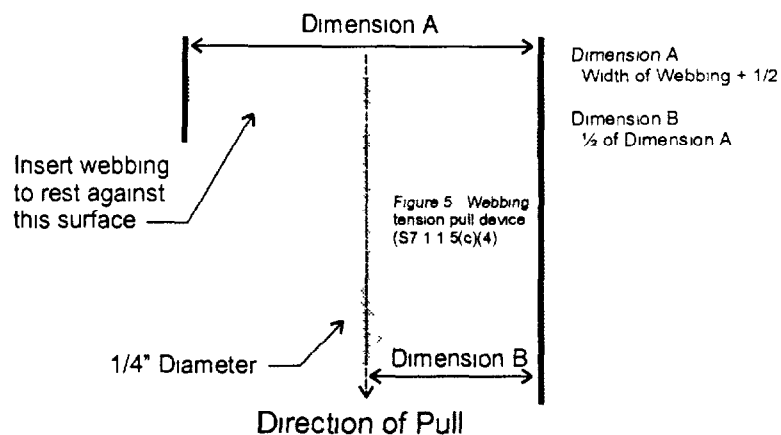
☐ No-Fail

- ☒ 16 Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7 1 1 5(c)(8))

10-14= 46.2 inches

☒ Yes-Pass

☐ No-Fail



FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No · C25108

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

Designated Seating Position Tested Right Rear

Date of Comfort and Convenience Check· 03/27/2002

Technician Performing Check Steve Bell/Nic Echeverria

GVWR 4090 pounds

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 Does the vehicle incorporate a webbing tension-relieving device?

☐ Yes-go to latchplate access
☒ No-continue with this check sheet

- 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
☒ N/A

- 3 If separately adjustable in a vertical direction, the seats are at the lowest position

☐ Check
☒ N/A

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

☐ Check
☒ N/A

- 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

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Belt Contact Force (S7.4.3)

- 6 Place each adjustable head restraint in its highest adjustment position

☒ Check
☐ N/A

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

☐ Check
☒ N/A

- 8 Position the test dummy according to the dummy position placement instructions in Appendix B of the Laboratory Test Procedure

☒ Check

- 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 is **0.583** pounds

☒ 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.

FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No C25108

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

Designated Seating Position Tested Center Rear

Date of Comfort and Convenience Check 03/27/2002

Technician Performing Check Steve Bell Nic Echeverria

GVWR 4090 pounds

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 Does the vehicle incorporate a webbing tension-relieving device?

☐ Yes-go to latchplate access
☒ No-continue with this check sheet

- 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
☒ N/A

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

☐ Check
☒ N/A

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

☐ Check
☒ N/A

- 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

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Belt Contact Force (S7.4.3)

- 6 Place each adjustable head restraint in its highest adjustment position ☐ Check
☒ N/A
- 7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position (S8.1.3) ☐ Check
☒ N/A
- 8 Position the test dummy according to the dummy position placement instructions in Appendix B of the Laboratory Test Procedure ☒ Check
- 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 is 0.617 pounds.
- ☒ 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

FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No C25108

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

Designated Seating Position Tested Left Rear

Date of Comfort and Convenience Check 03/27/2002

Technician Performing Check Steve Bell/Nic Echeverria

GVWR 4090 pounds

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 Does the vehicle incorporate a webbing tension-relieving device?

☐ Yes-go to latchplate access
☒ No-continue with this check sheet

- 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
☒ N/A

- 3 If separately adjustable in a vertical direction, the seats are at the lowest position

☐ Check
☒ N/A

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

☐ Check
☒ N/A

- 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

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Belt Contact Force (S7.4.3)

- 6 Place each adjustable head restraint in its highest adjustment position ☒ Check
☐ N/A
- 7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position (S8.1.3) ☐ Check
☒ N/A
- 8 Position the test dummy according to the dummy position placement instructions in Appendix B of the Laboratory Test Procedure ☒ Check
- 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 is **0.596** pounds ☒ 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.

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Latchplate Access (S7.4.4)

Test Vehicle NHTSA No C25108

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

Designated Seating Position Tested None, not applicable to passenger cars

Date of Comfort and Convenience Check 03/27/2002

Technician Performing Check Steve Bell

GVWR 4090 pounds

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

- 1 Position the seat in its forward most adjustment position ☐ Check
- 2 Position the test dummy using the procedures in Appendix B of the Laboratory Test Procedure (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position) ☐ Check
- 3 Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant ☐ Check
- 4 Attach the inboard and outboard reach string following the instructions on Figure 1C of the Laboratory Test Procedure ☐ Check
- 5 Place the latch plate in the stowed position ☐ Check
- 6 Extend each line backward and outboard to generate arcs of the reach envelope of the test dummy's arms Is the latchplate within the reach envelope?
Yes- ☐ Pass; No- ☐ Fail
- 7 Using the clearance test block, specified in Figure 2C of the Laboratory Test Procedure, determine if there is sufficient clearance between the vehicle seat and the side of vehicle to allow the test block to move unhindered to the latchplate or buckle
Yes- ☐ Pass; No- ☐ Fail

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Retraction (S7.4.5)

Test Vehicle NHTSA No . C25108

Vehicle Model Year/Make/Model/Body Style 2002/Toyota/Camry LE/4-door sedan

Designated Seating Position Tested None, not applicable to passenger cars

Date of Comfort and Convenience Check 03/27/2002

Technician Performing Check Steve Bell

GVWR. 4090 pounds

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

- 1 Is the vehicle a passenger car or walk-in van-type vehicle? ☒ Yes
☐ No

If yes, go to seat belt guides and hardware

- 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 If separately adjustable in a vertical direction, the seats are at the lowest position ☐ Check

- 4 Place any adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer ☐ Check

- 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

- 6 Place each adjustable head restraint in its highest adjustment position. ☐ Check

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Retraction (S7.4.5)

- 7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position (S8 1 3) ☐ Check
- 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 of the Laboratory Test Procedure ☐ Check
- 9 Restrain the dummies using the belt systems for the position being tested ☐ Check
- 10 Stow outboard armrests that are capable of being stowed ☐ Check
- 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 latchplate is released ☐ Pass
- (B) The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latchplate is released ☐ Pass
- (C) Neither A or B apply ☐ Fail
- 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
- 13 If this test vehicle has an open body (without doors) and has a 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

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C25108

Vehicle Model Year/Make/Model/Body Style: 2002/Toyota/Camry LE/4-door sedan

Designated Seating Position Tested: Right Rear

Date of Comfort and Convenience Check: 03/27/2002

Technician Performing Check: Steve Bell/Nic Echeverria

GVWR: 4090 pounds

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 that 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:

1. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
☒ Yes: go to 2.
☐ No: this form is complete
2. Does one of the following three parts, the seat belt latchplate, 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
3. Are the remaining two seat belt parts accessible under normal conditions?
☒ Yes-Pass; ☐ No-Fail

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate 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
- 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

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C25108

Vehicle Model Year/Make/Model/Body Style: 2002/Toyota/Camry LE/4-door sedan

Designated Seating Position Tested: Center Rear

Date of Comfort and Convenience Check: 03/27/2002

Technician Performing Check: Steve Bell/Nic Echeverria

GVWR: 4090 pounds

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 that 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:

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

☒ Yes go to 2.

☐ No this form is complete.

3 Does one of the following three parts, the seat belt latchplate, 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

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

☒ Yes-Pass;

☐ No-Fail

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.
Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:
- (B) 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
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

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C25108

Vehicle Model Year/Make/Model/Body Style: 2002/Toyota/Camry LE/4-door sedan

Designated Seating Position Tested: Left Rear

Date of Comfort and Convenience Check: 03/27/2002

Technician Performing Check: Steve Bell/Nic Echeverria

GVWR: 4090 pounds

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 that 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:

- 1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
☒ Yes: go to 2.
☐ No: this form is complete.
- 4. Does one of the following three parts, the seat belt latchplate, 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
- 3. Are the remaining two seat belt parts accessible under normal conditions?
☒ Yes-Pass; ☐ No-Fail

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

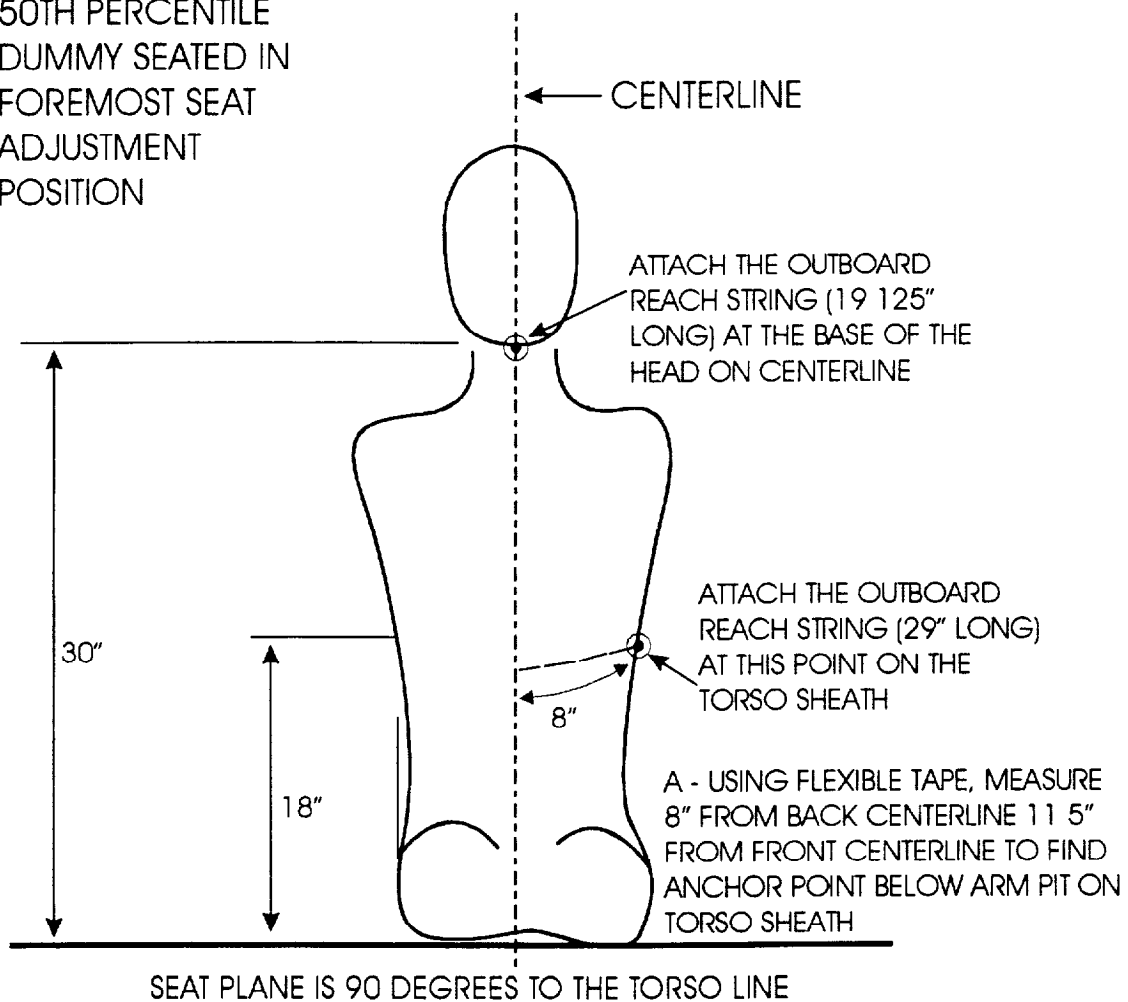
Seat Belt Guides And Hardware (S7.4.6)

- 4 The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order
- (C) 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
- 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

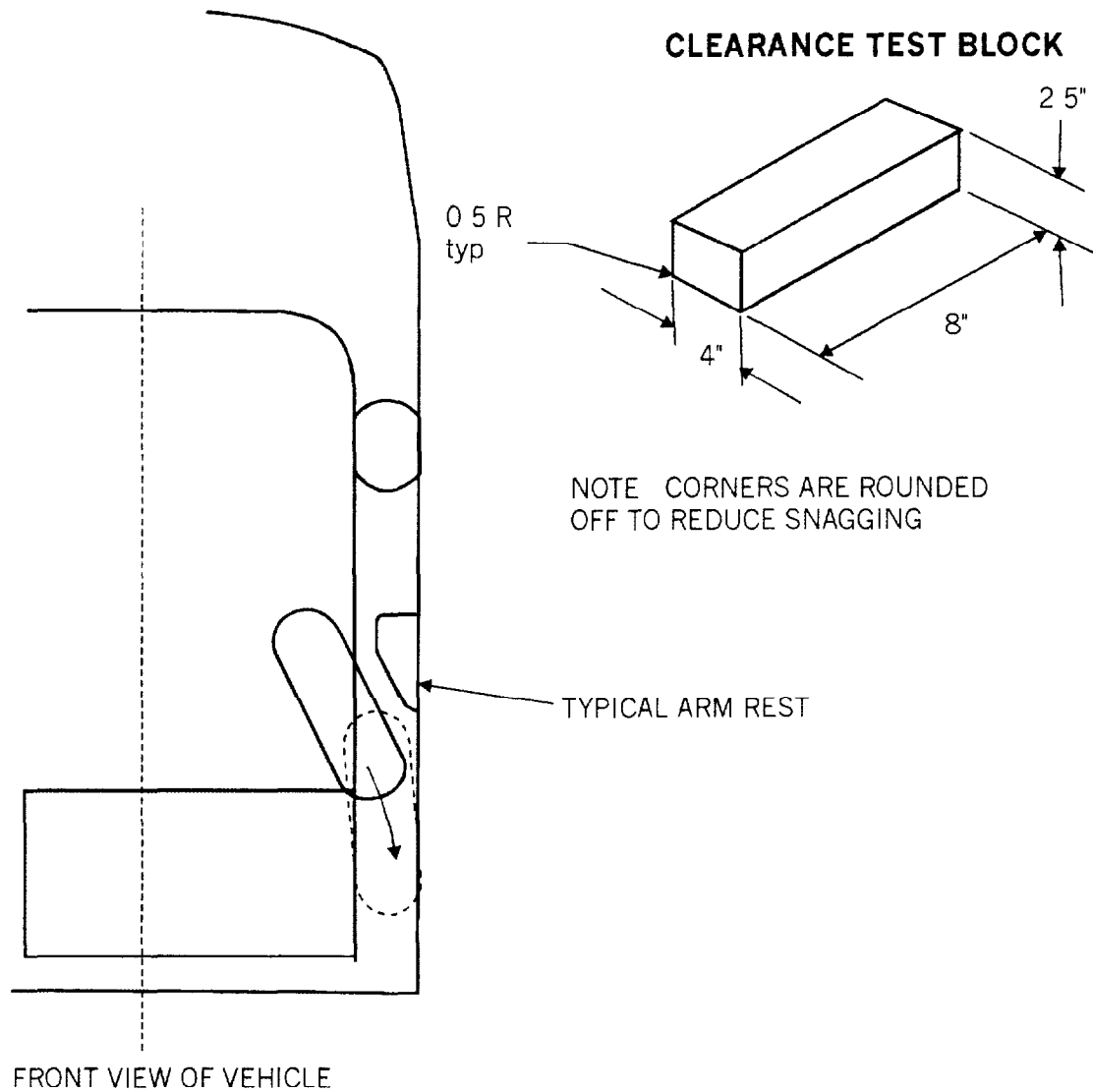
50TH PERCENTILE
DUMMY SEATED IN
FOREMOST SEAT
ADJUSTMENT
POSITION



REAR VIEW

Laboratory Test Procedure Figure 1C

USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS



Laboratory Test Procedure Figure 2C

Appendix A

Photographs

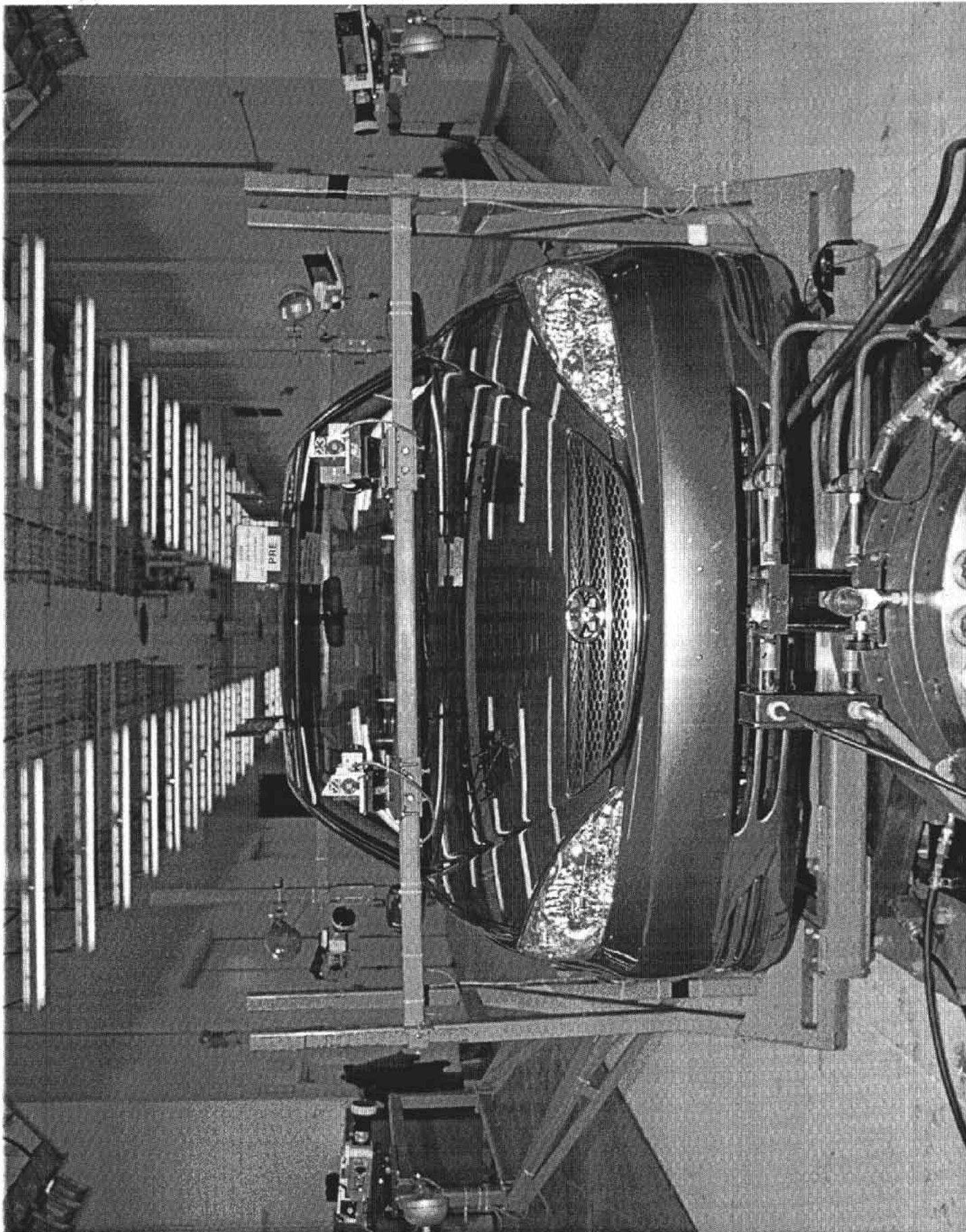


Figure A-1 Pre-Test Front View of Test Vehicle Mounted to Sled
A-2

S020325

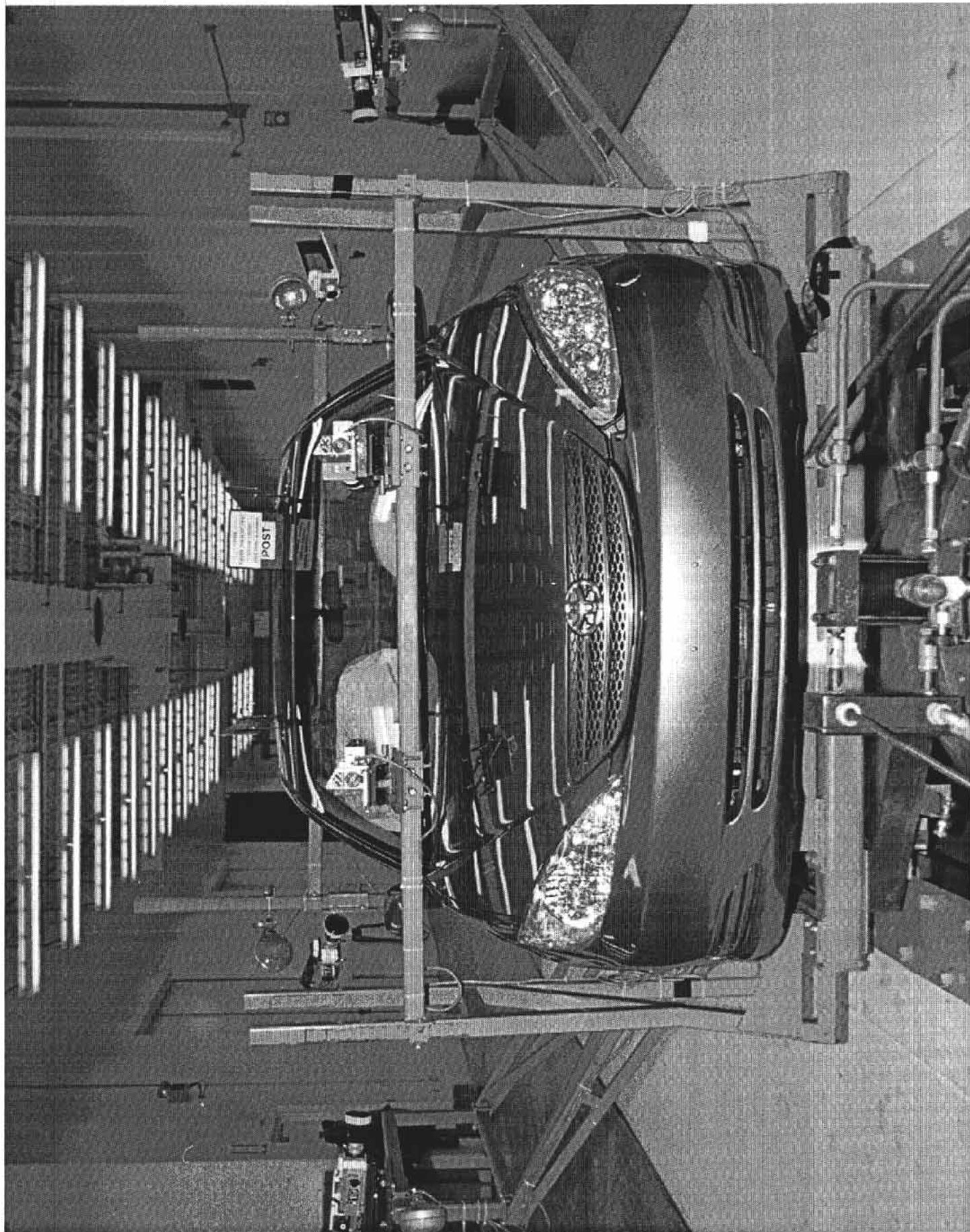


Figure A-2 Post-Test Front View of Test Vehicle Mounted to Sled
A-3

S020325

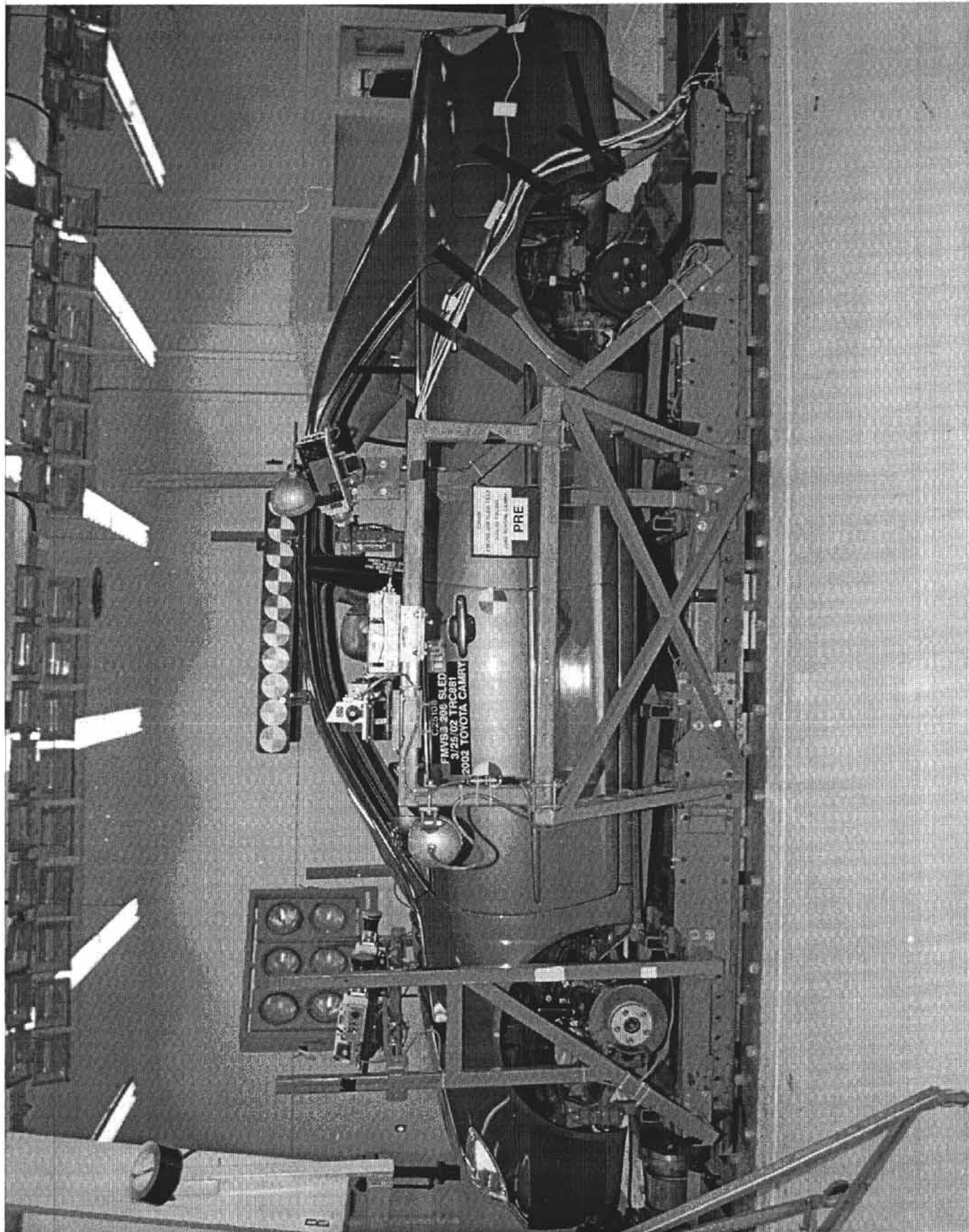


Figure A-3 Pre-Test Left Side View of Test Vehicle Mounted to Sled
A-4

S020325

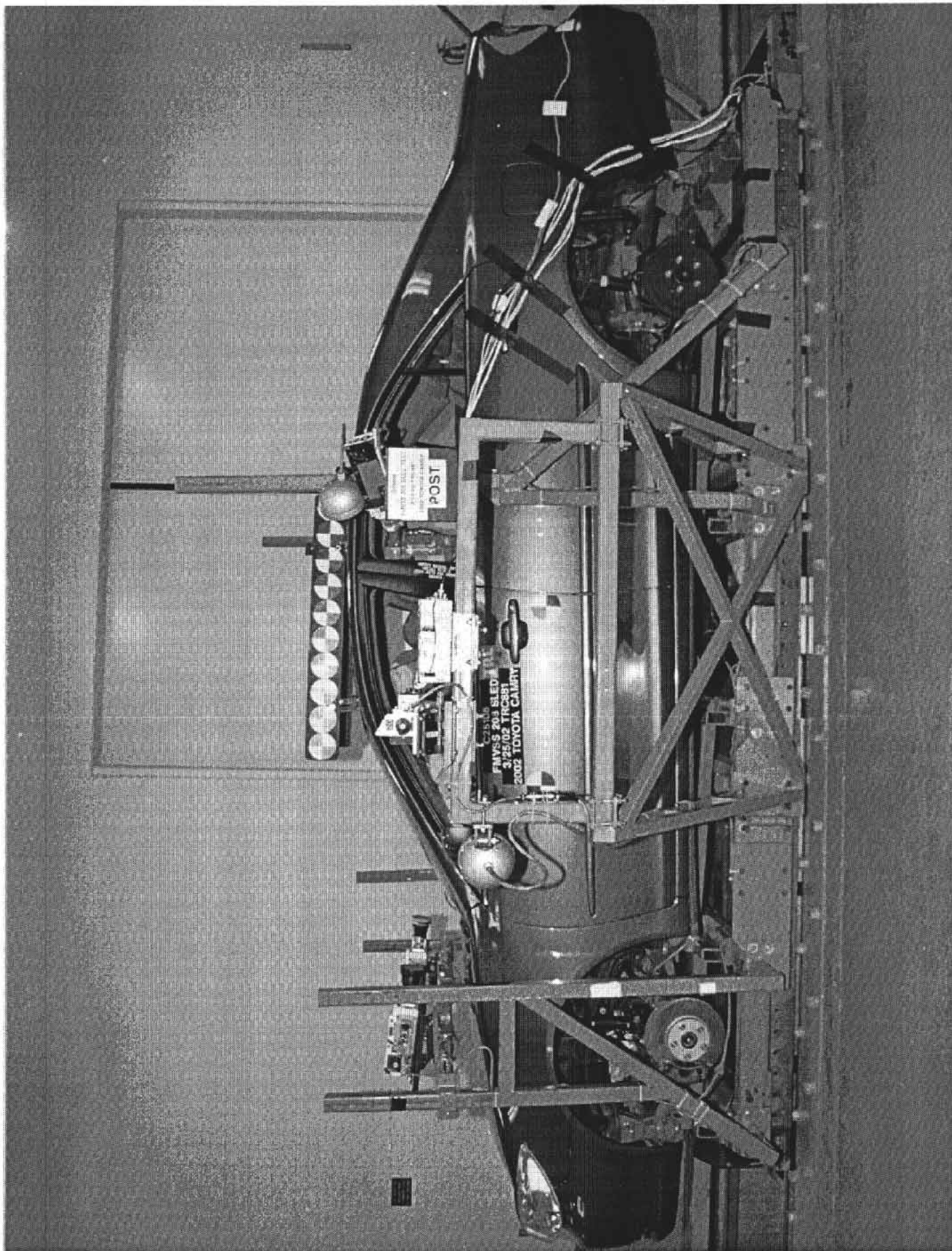


Figure A-4 Post-Test Left Side View of Test Vehicle Mounted to Sled
A-5

S020325

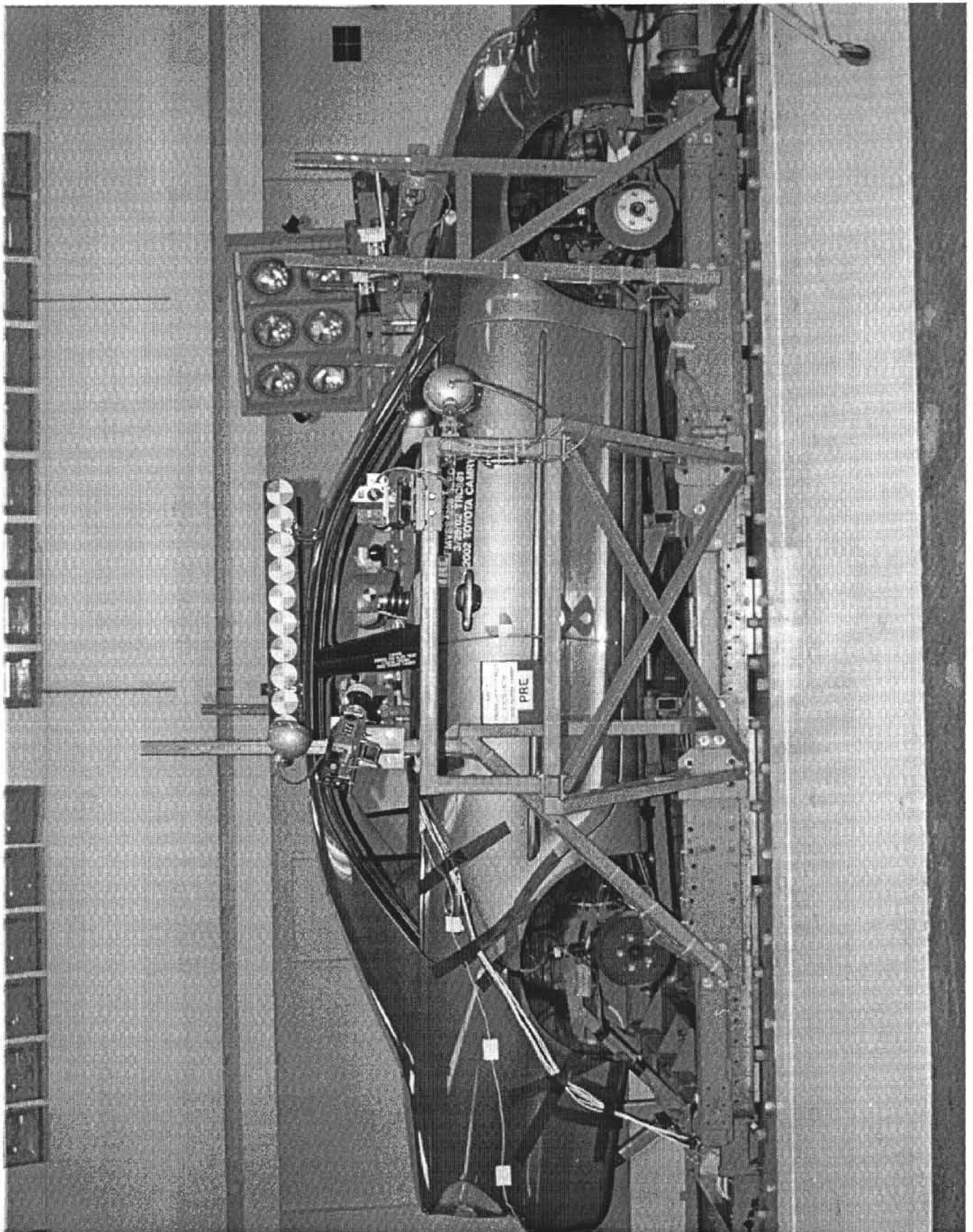


Figure A-5 Pre-Test Right Side View of Test Vehicle Mounted to Sled
A-6

S020325

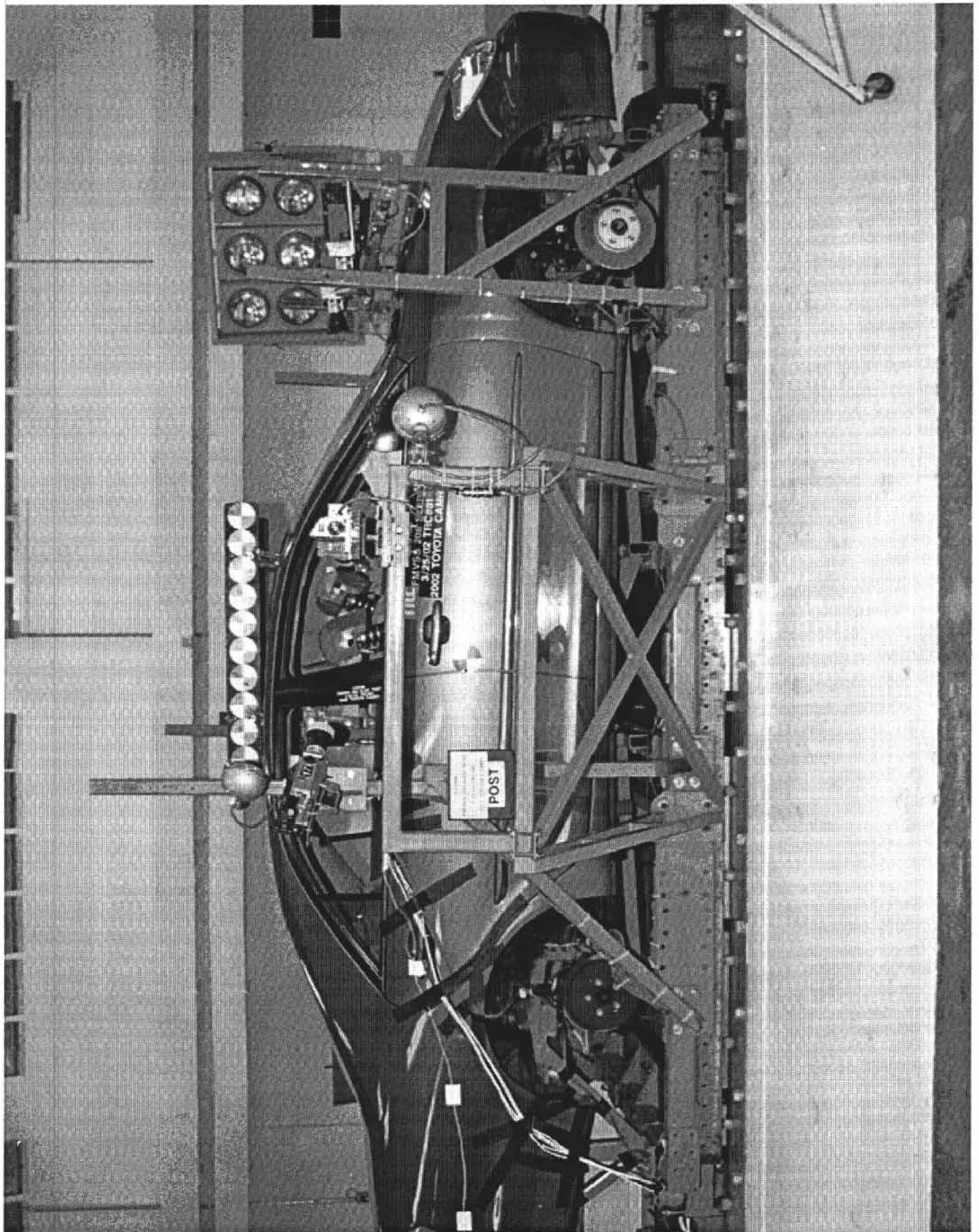


Figure A-6 Post-Test Right Side View of Test Vehicle Mounted to Sled
A-7

S020325

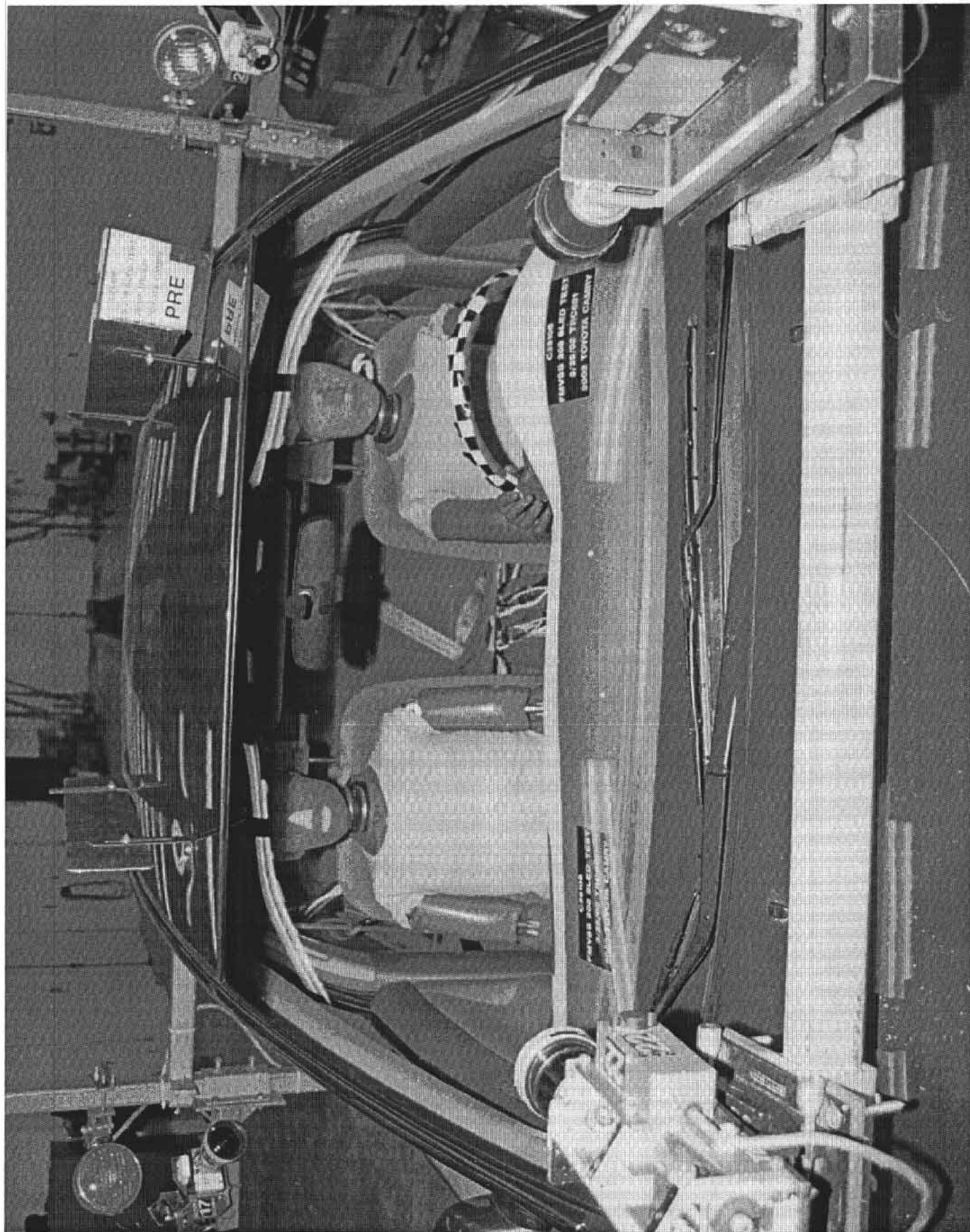


Figure A-7 Pre-Test Windshield View
A-8

S020325

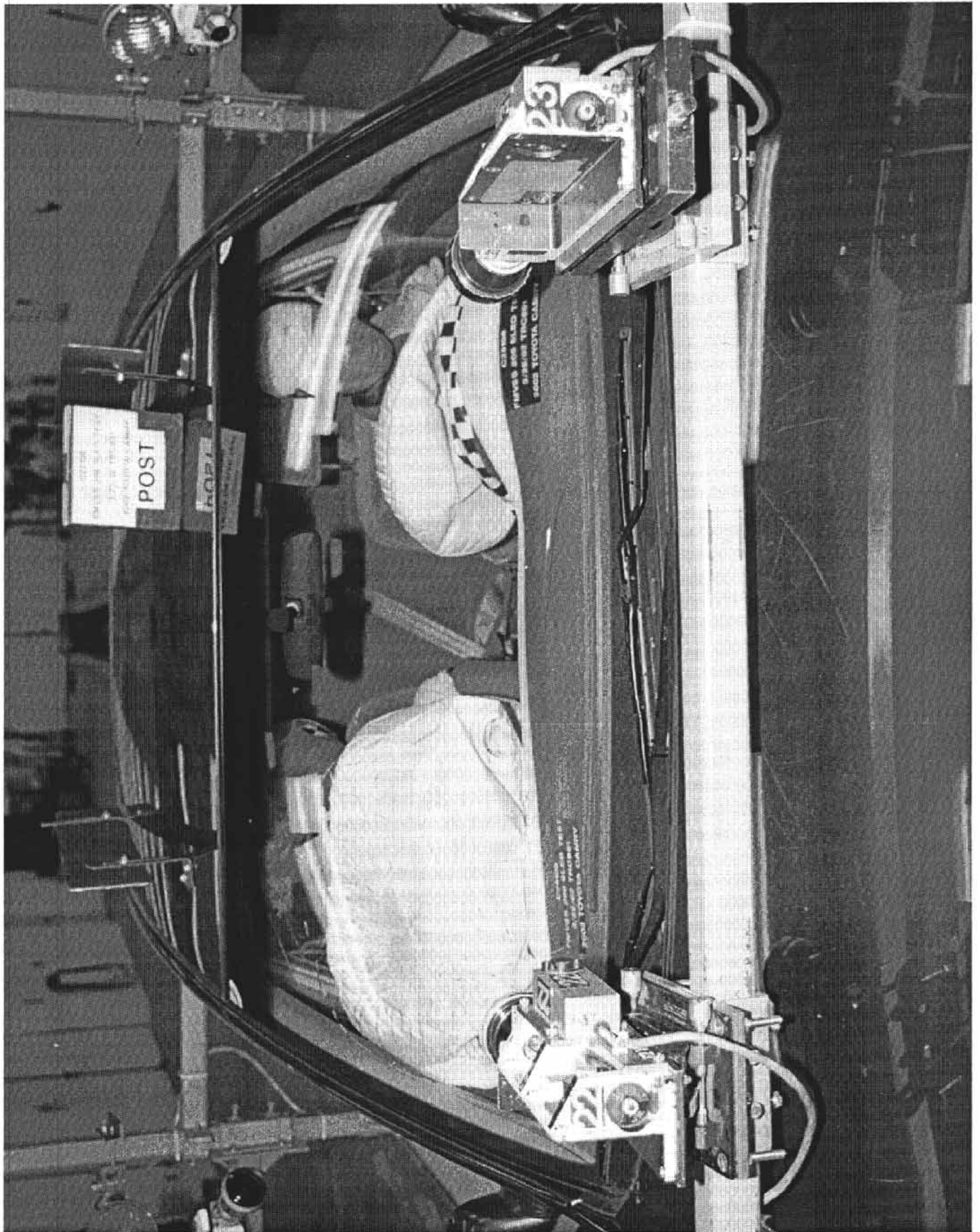


Figure A-8 Post-Test Windshield View
A-9

S020325

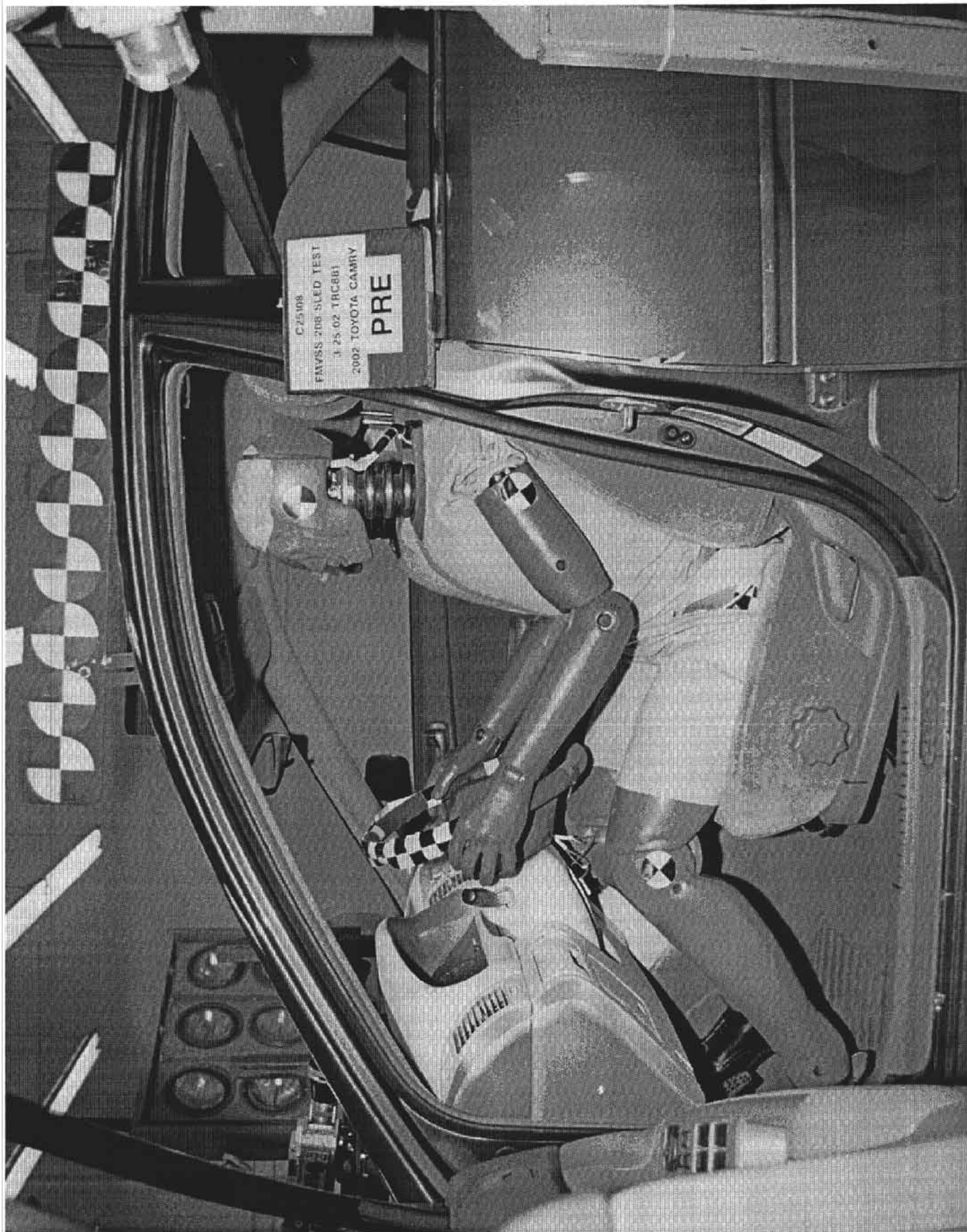


Figure A-9 Pre-Test Driver Dummy Position View with Door Open
A-10

S020325



Figure A-10 Post-Test Driver Dummy Position View with Door Open
A-11

S020325



Figure A-11 Pre-Test Driver Seat Track Position View
A-12

S020325

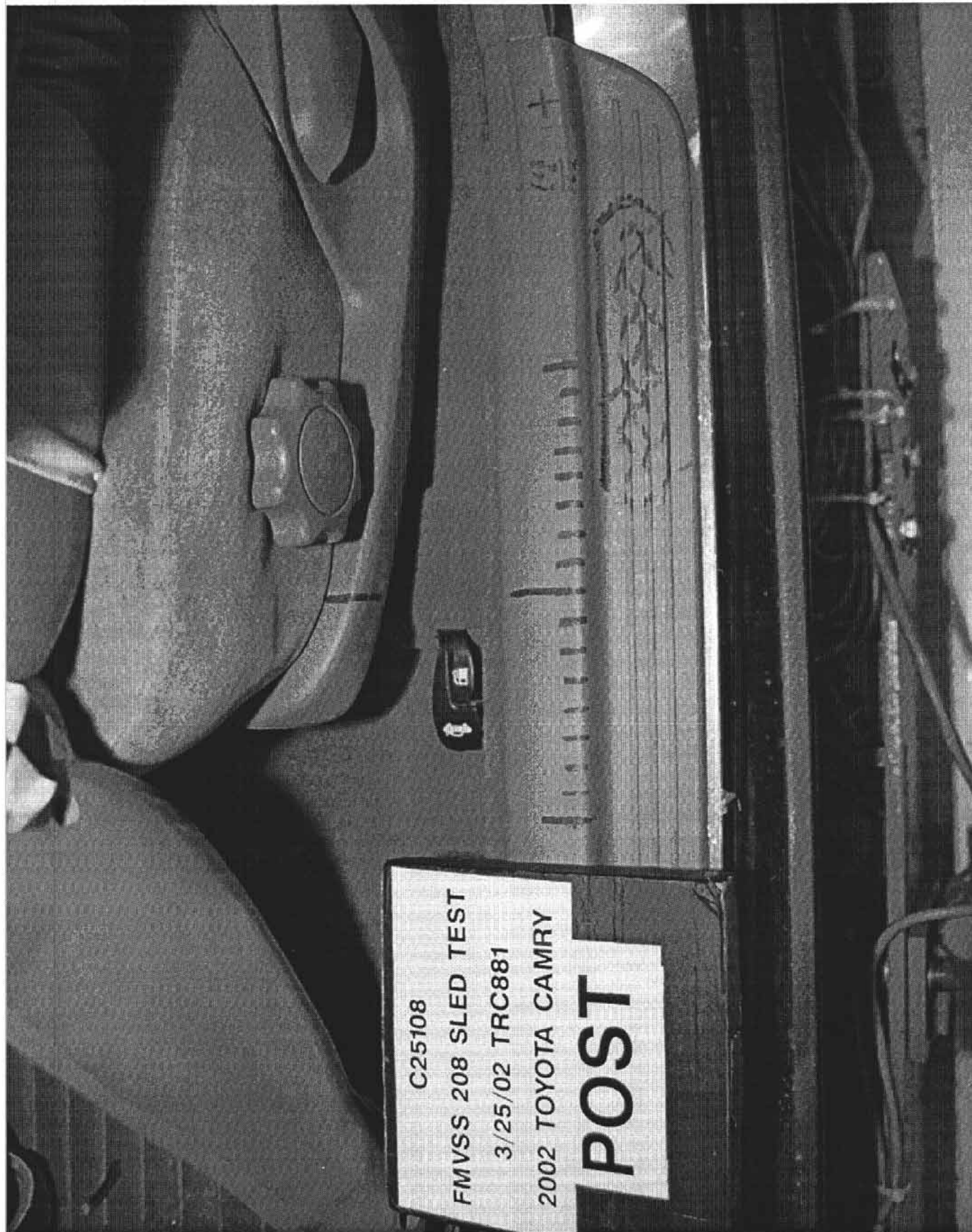


Figure A-12 Post-Test Driver Seat Track Position View
A-13

S020325

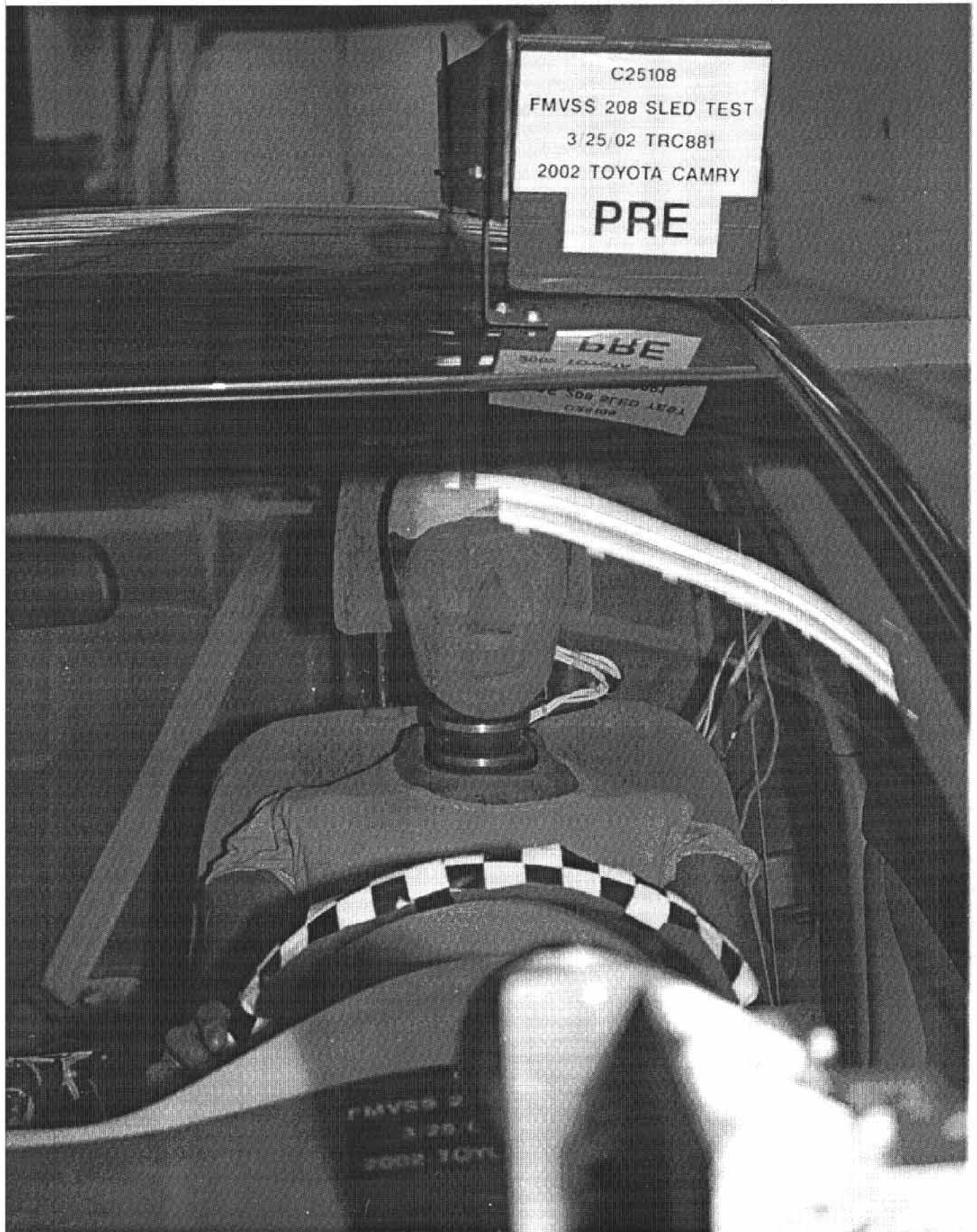


Figure A-13 Pre-Test Driver Dummy Position Front View
A-14

S020325

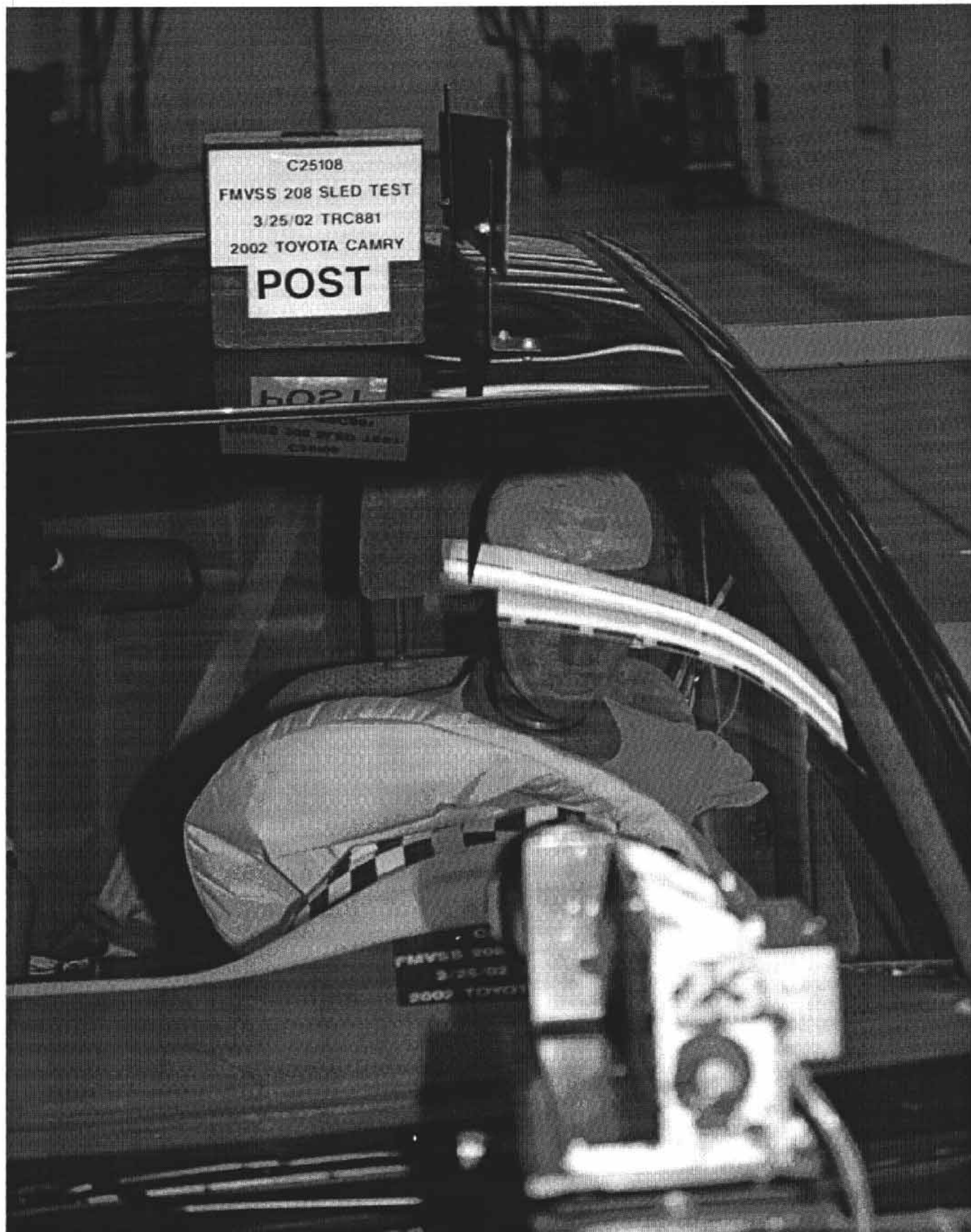


Figure A-14 Post-Test Driver Dummy Position Front View
A-15

S020325



Figure A-15 Pre-Test Passenger Dummy Position View with Door Open

A-16

S020325



Figure A-16 Post-Test Passenger Dummy Position View with Door Open

A-17

S020325

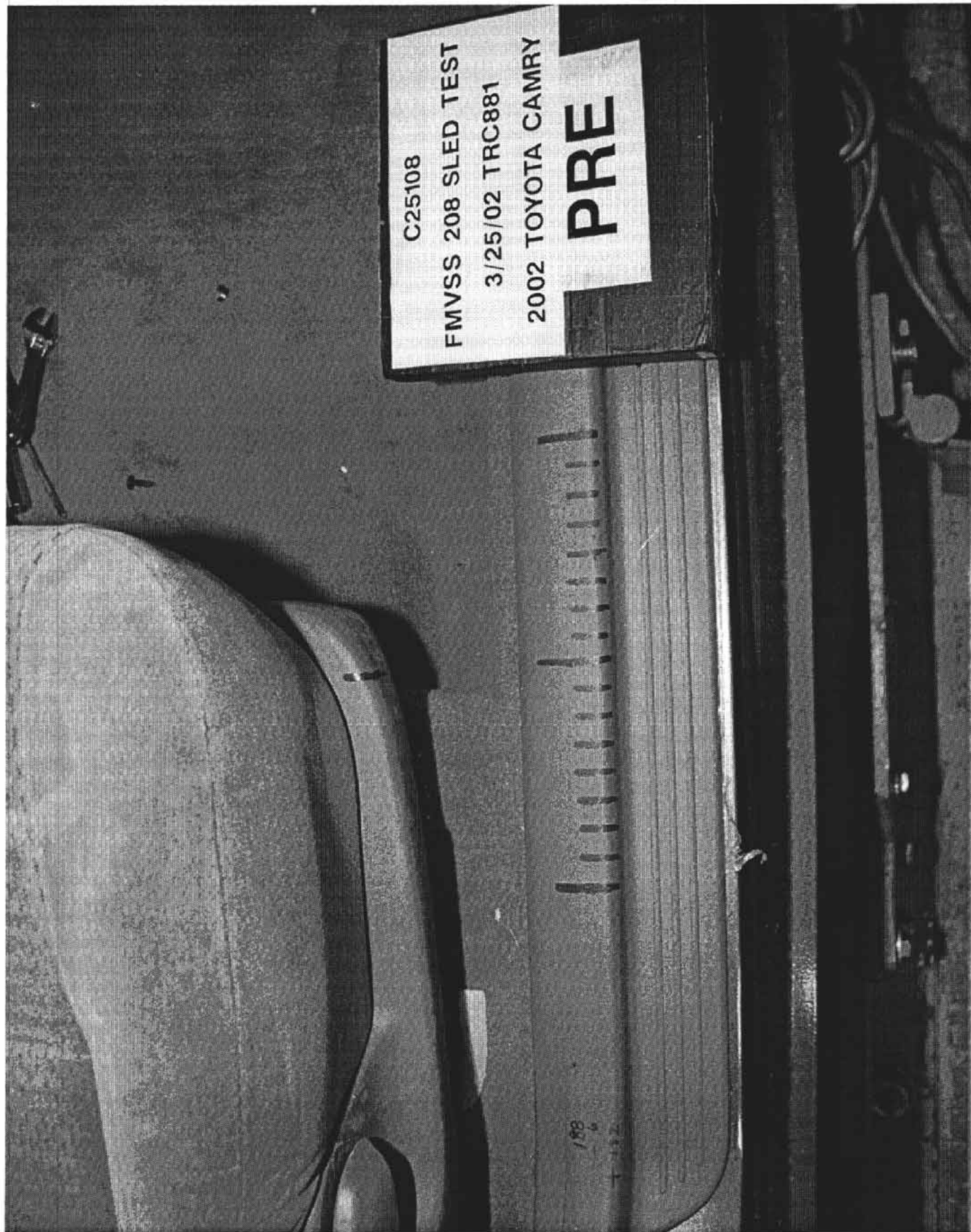


Figure A-17 Pre-Test Passenger Seat Track Position View
A-18

S020325

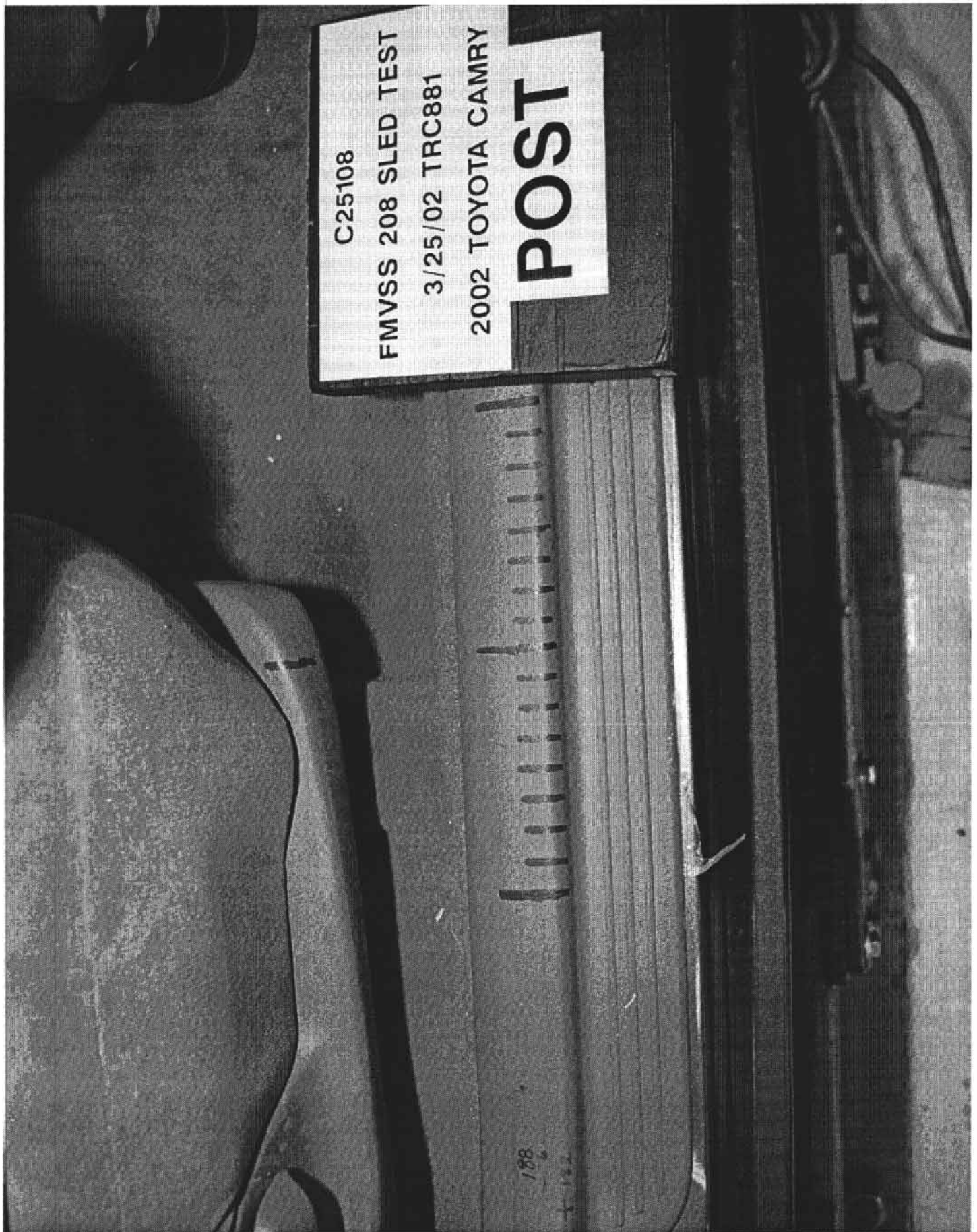


Figure A-18 Post-Test Passenger Seat Track Position View
A-19

S020325

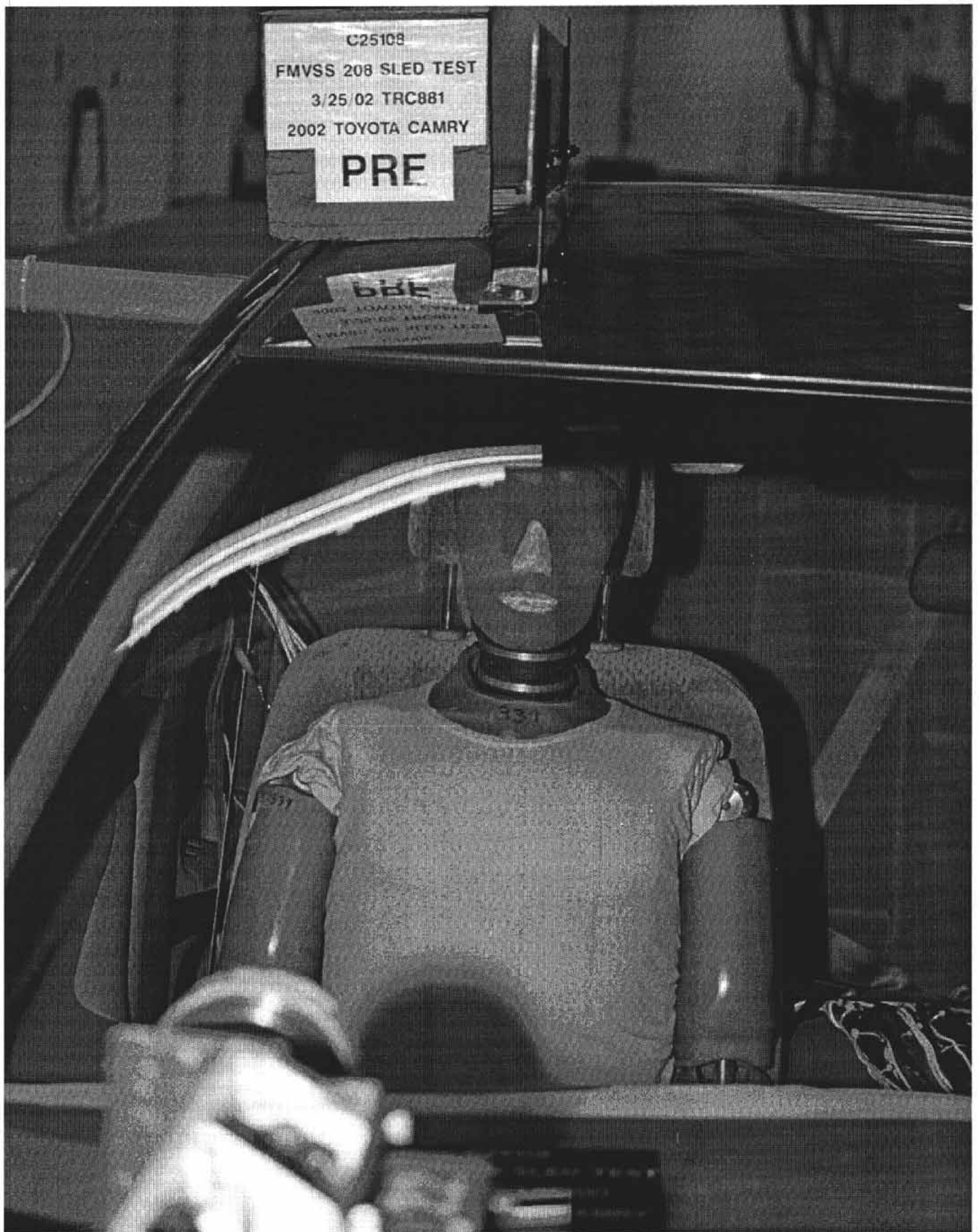


Figure A-19 Pre-Test Passenger Dummy Position Front View

A-20

S020325



Figure A-20 Post-Test Passenger Dummy Position Front View
A-21

S020325

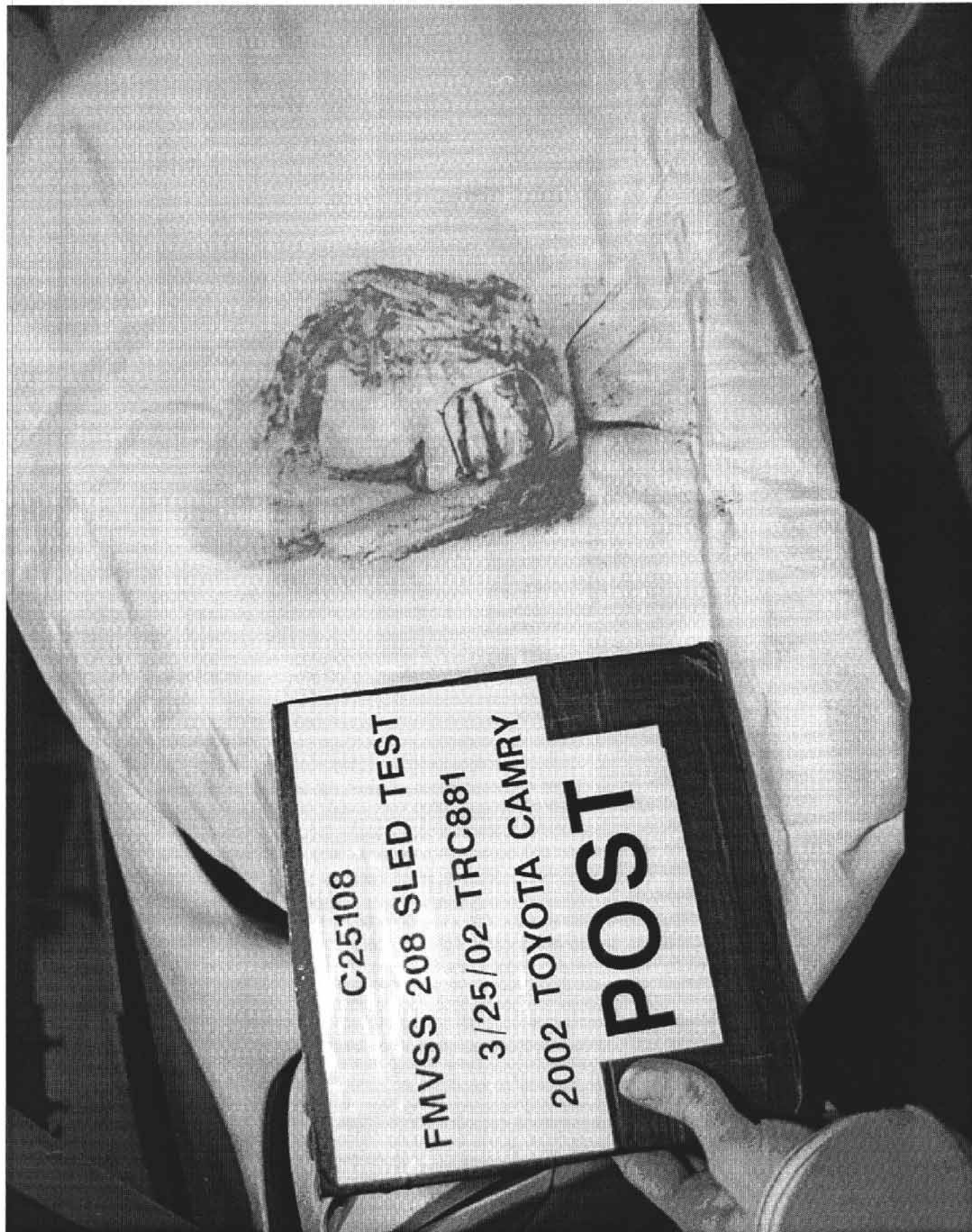


Figure A-21 Post-Test Driver Airbag View
A-22

S020325

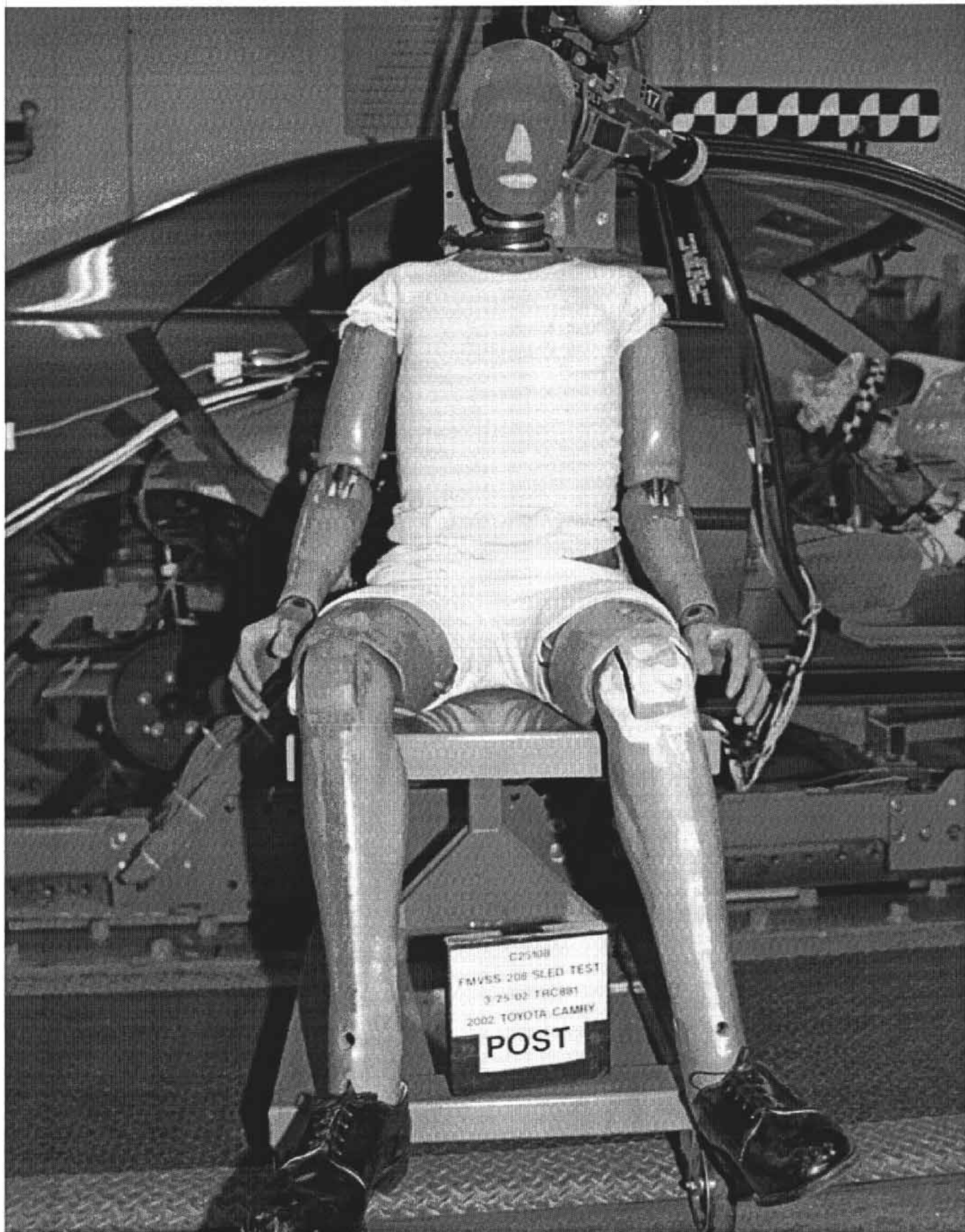


Figure A-22 Post-Test Driver Dummy Removed from Vehicle Overall View

A-23

S020325

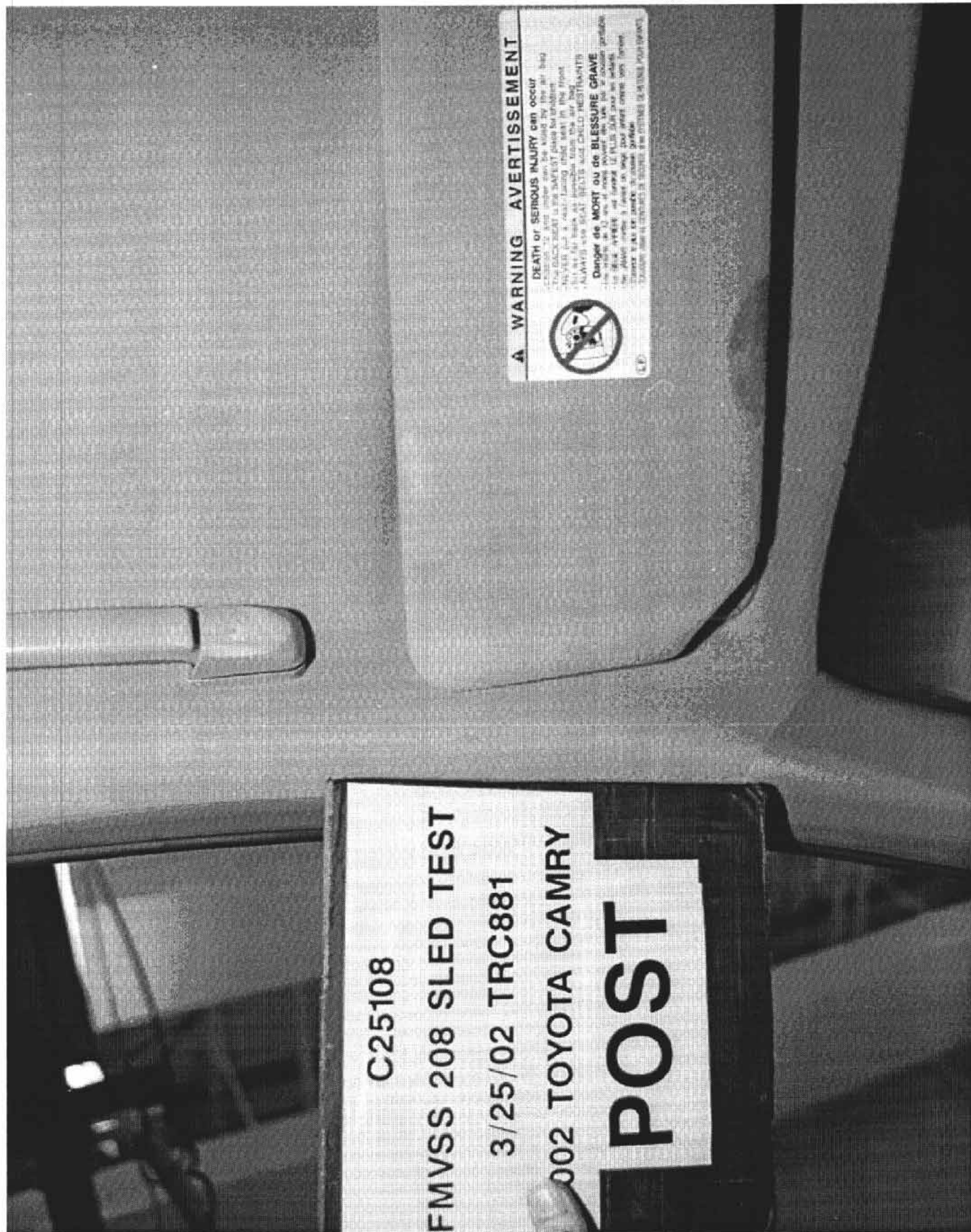


Figure A-23 Post-Test Driver Head Contact View
A-24

S020325

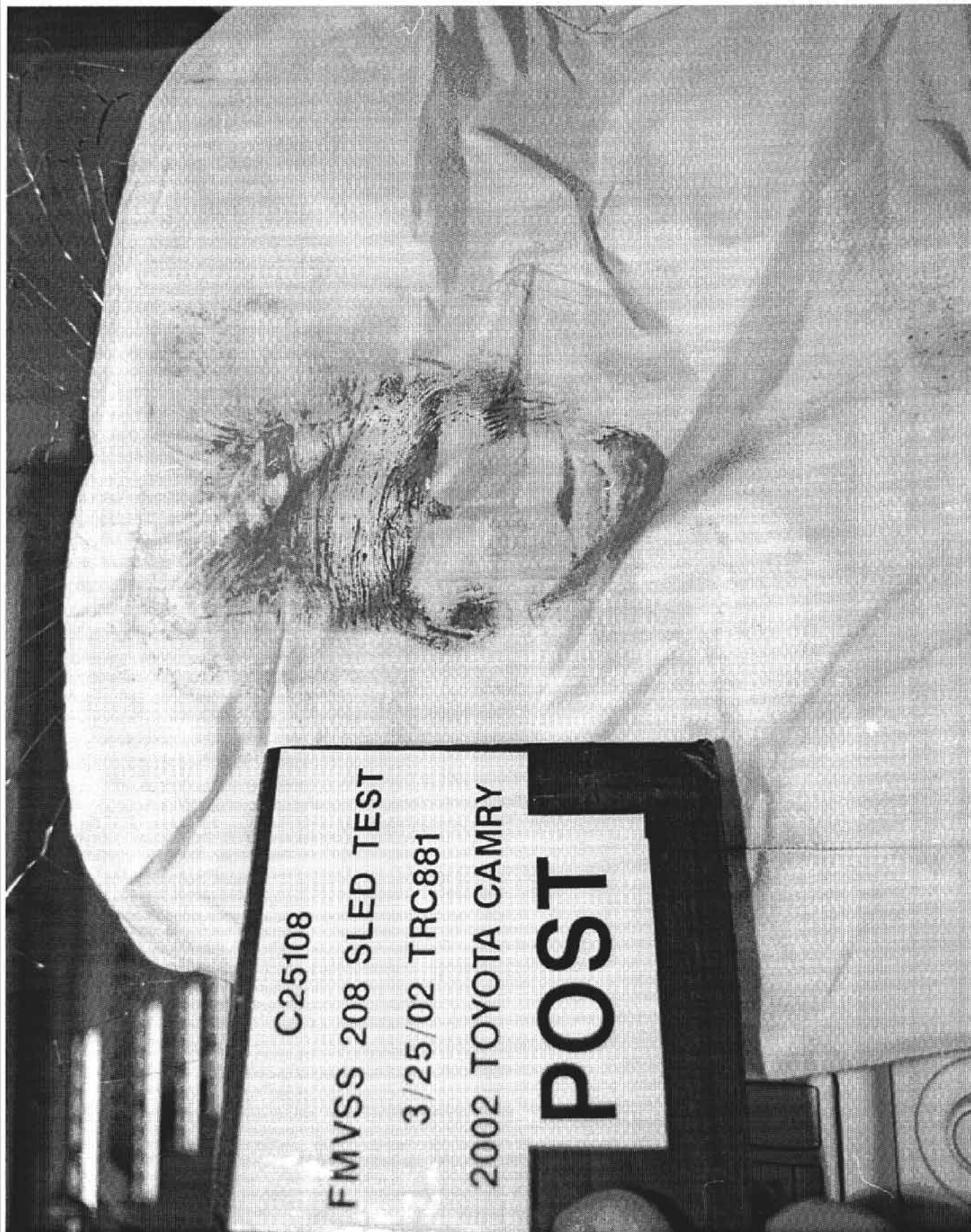


Figure A-24 Post-Test Passenger Airbag View
A-25

S020325

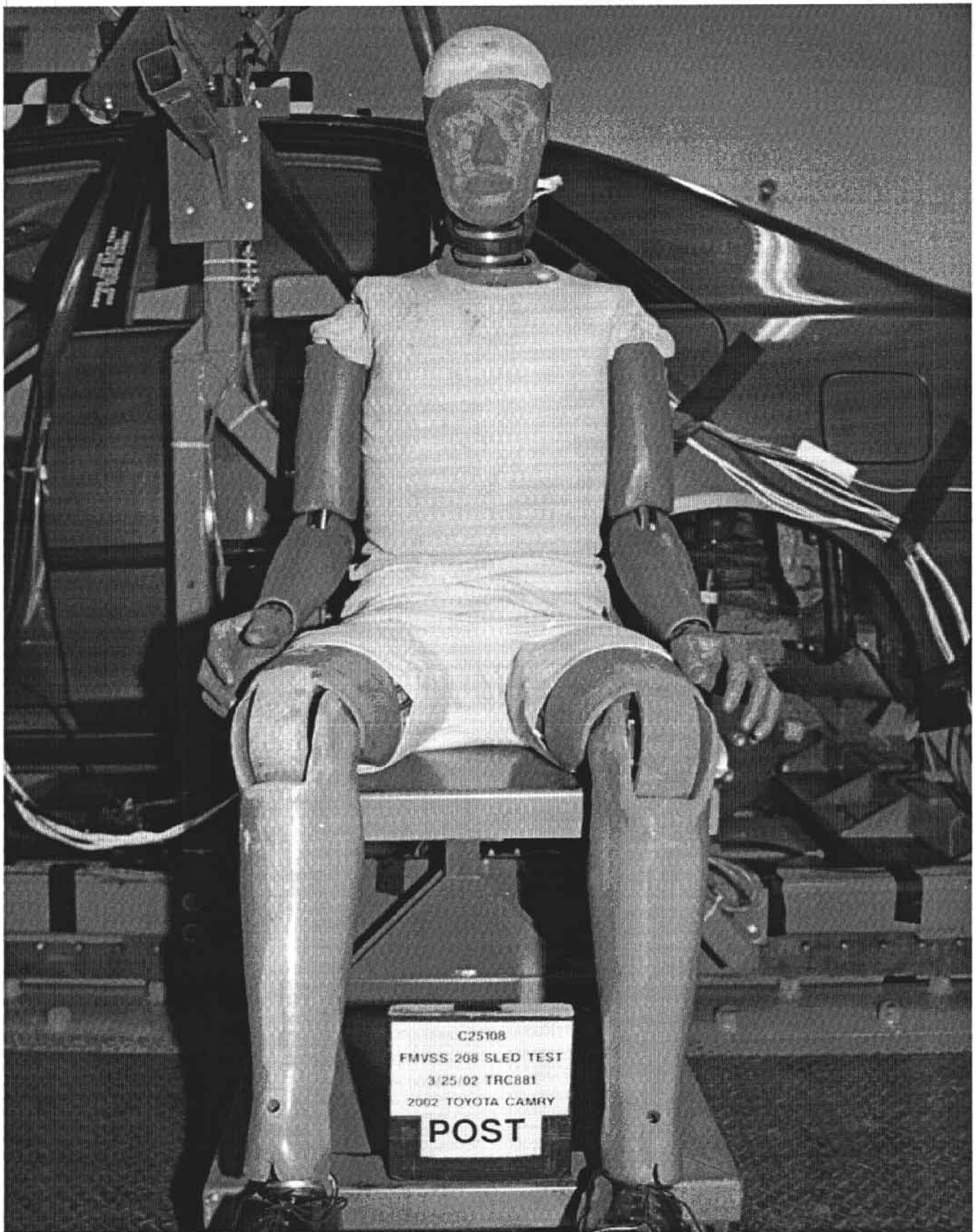


Figure A-25 Post-Test Passenger Dummy Removed from Vehicle Overall View

A-26

S020325



Figure A-26 Post-Test Passenger Head Contact - View 1

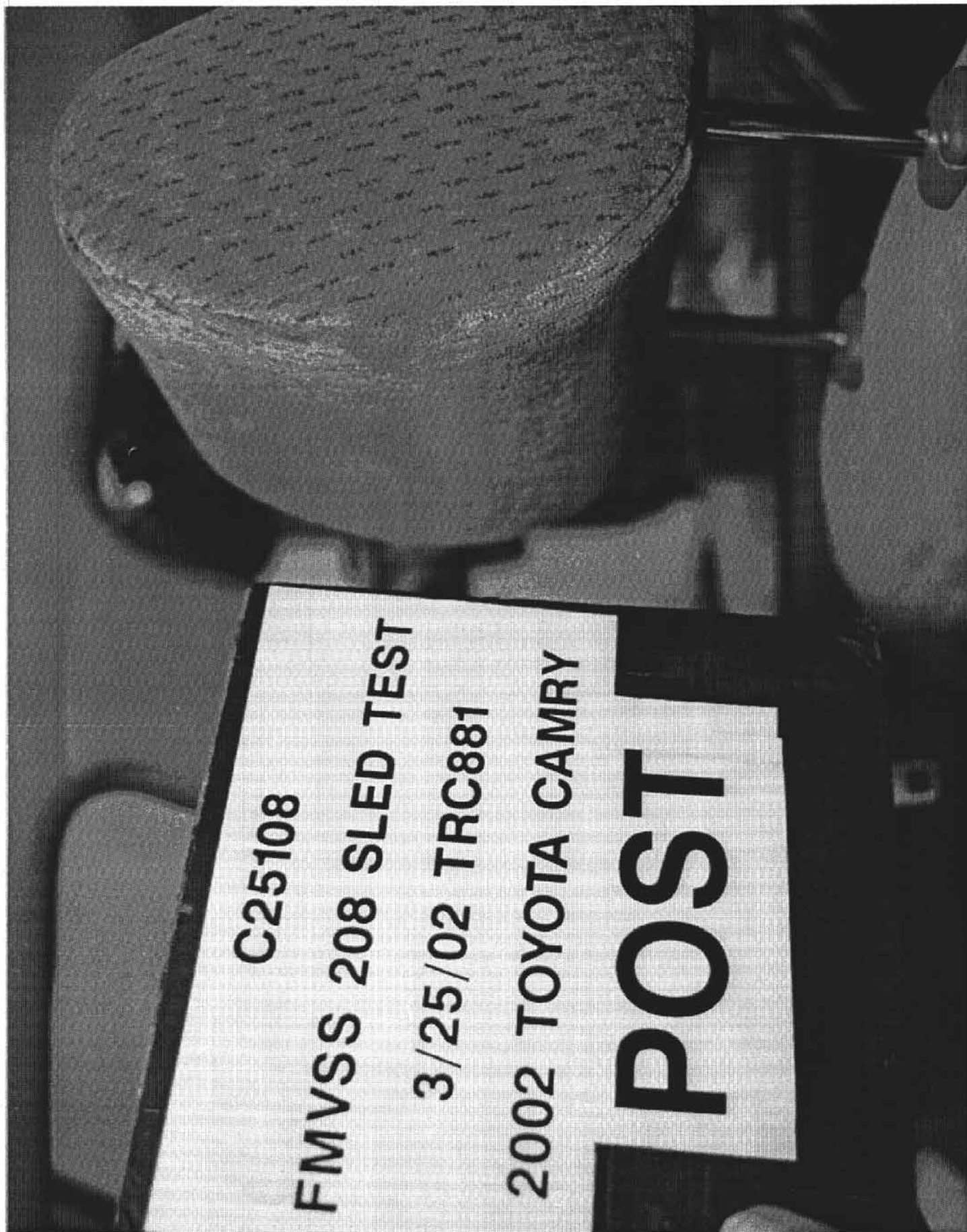


Figure A-27 Post-Test Passenger Head Contact - View 2
A-28

S020325



Figure A-28 Pre-Test Driver Knee Bolster View
A-29

S020325



Figure A-29 Post-Test Driver Knee Bolster View
A-30

S020325



Figure A-30 Pre-Test Passenger Glove Box View
A-31

S020325



Figure A-31 Post-Test Passenger Glove Box View
A-32

S020325

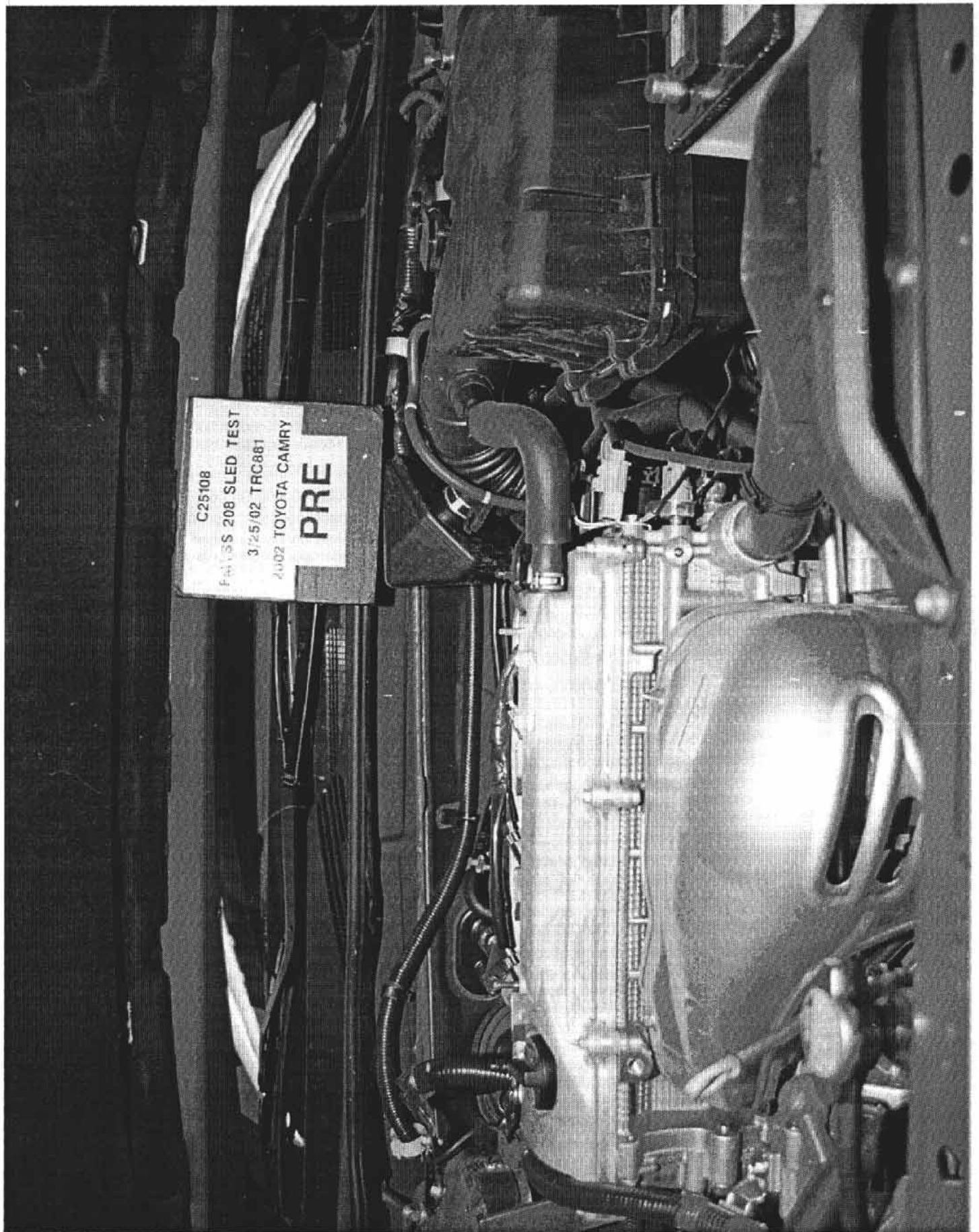


Figure A-32 Pre-Test Steering Column Linkage in Engine Compartment View

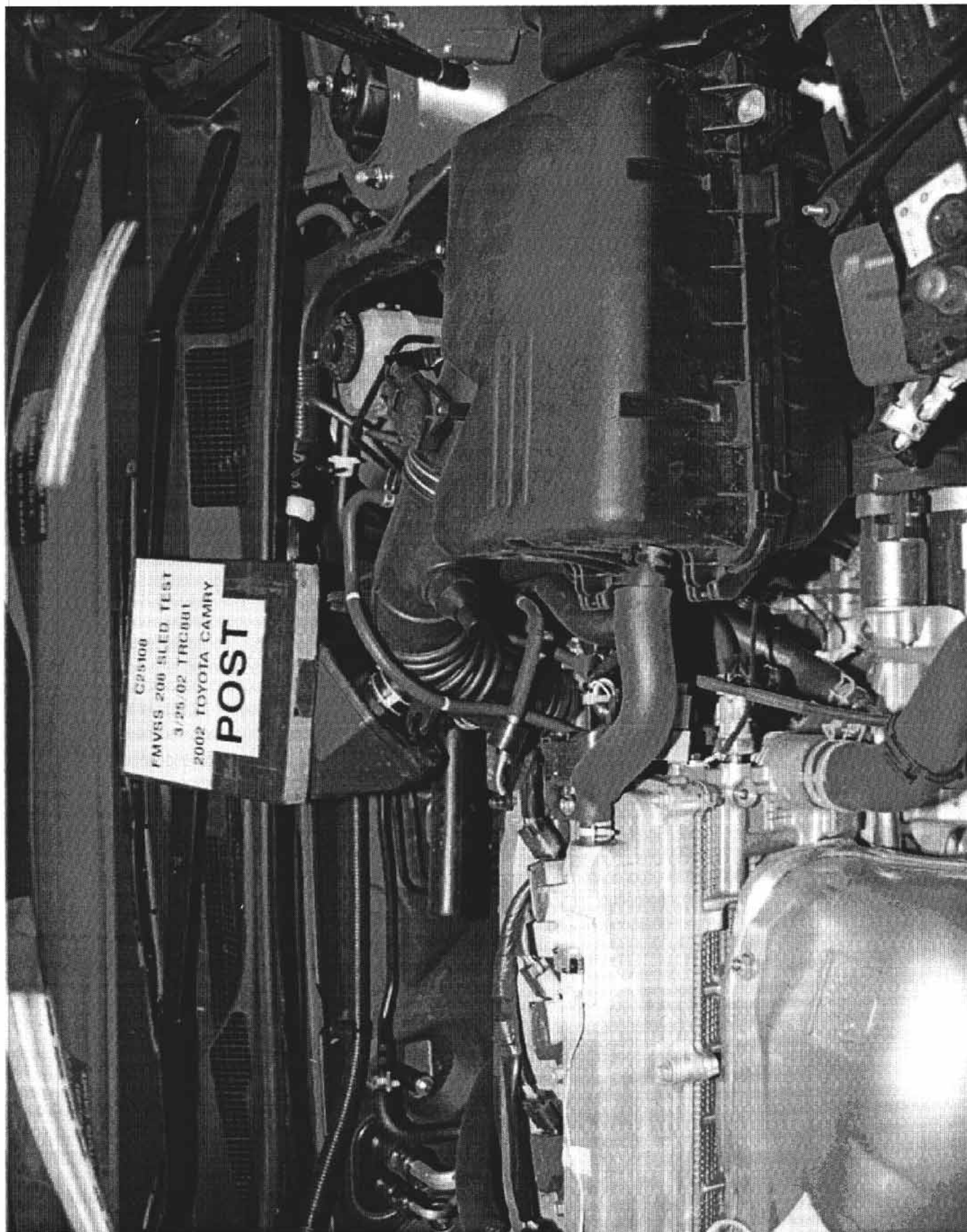


Figure A-33 Post-Test Steering Column Linkage in Engine Compartment View

TIRE-LOADING INFORMATION	
VEHICLE CAPACITY WEIGHT : 410kg (900lbs)	
OCCUPANTS : FRT. 2 RR. 3 TOTAL 5	
TIRE SIZE	P205/65R15 92T, P205/65R15 92H T145-80R16 105M
COLD TIRE PRESSURE FRT. 200 (29) kPa (psi) 420 kPa (60psi)	
SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION	
CHARGE MAXIMALE DU VEHICULE : 410kg (900 LIVRES)	
PERSONNES : AVANT 2, ARRIERE 3 TOTAL 5	
DIMENSION DES PNEUS	P205/65R15 92T, P205/65R15 92H T145-80R16 105M
PRESSION DE PNEUS	AVANT 200 (29) kPa (60psi) 420 kPa (60psi)
POUR DE PLUS AMPLES DETAILS, VOIR LE MANUEL DU PROPRIETAIRE	
33560	A0

* MFD BY: TOYOTA MOTOR CORPORATION 01/02
 GVWR 4090LB GAWR FR 2668LB RR 2668LB
 THIS VEHICLE CONFORMS TO ALL APPLICABLE
 FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON
 THE DATE OF MANUFACTURE SHOWN ABOVE
 THE DATE OF MANUFACTURE SHOWN ABOVE
 JTDBE32K920070156
 C/TR: 1E3/FB13 MODEL: ACV30L-AEMNKA
 A/TM: -01A/E351 MADE IN JAPAN
 NO. 856
 BA5163018 *

C25108
FMVSS 208 SLED TEST
3/25/02 TRC881
2002 TOYOTA CAMRY

Figure A-34 Pre-Test Vehicle Certification and Tire Load Labels View

Appendix B

Data Plots

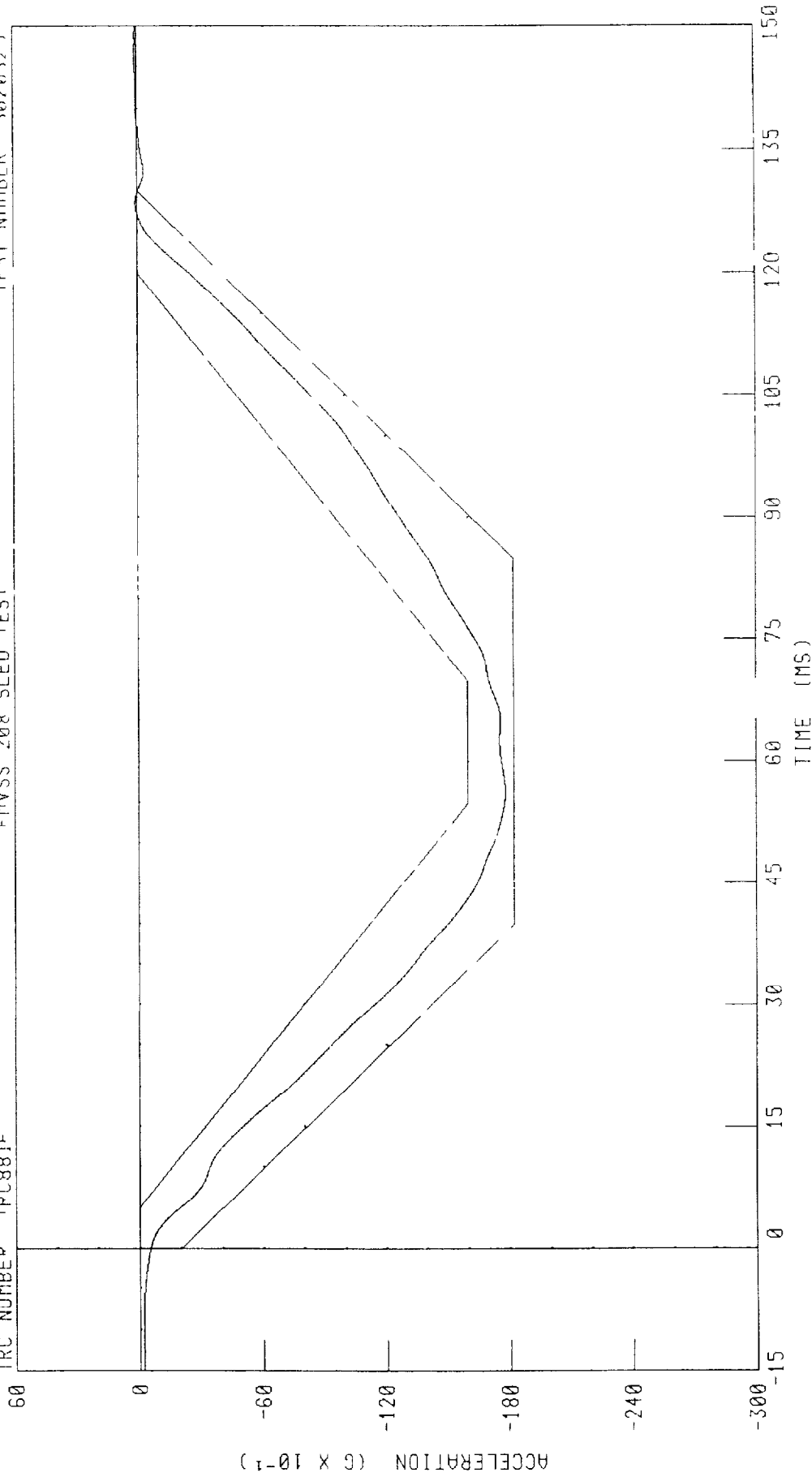
C25108 / 2002 TOYOTA CAMRY

SLED ACCELERATION

FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TPC881F



CHANNEL SLDXC FILTER CH CLASS 60

PEAK DATA 0 10 0 0 145 34 MS

-17 31 0 56 24 11

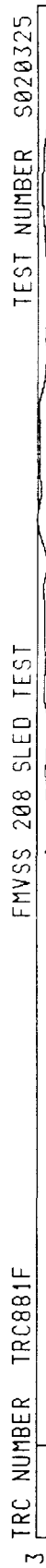
C25108 / 2002 TOYOTA CAMRY

SLED ACCELERATION

FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F



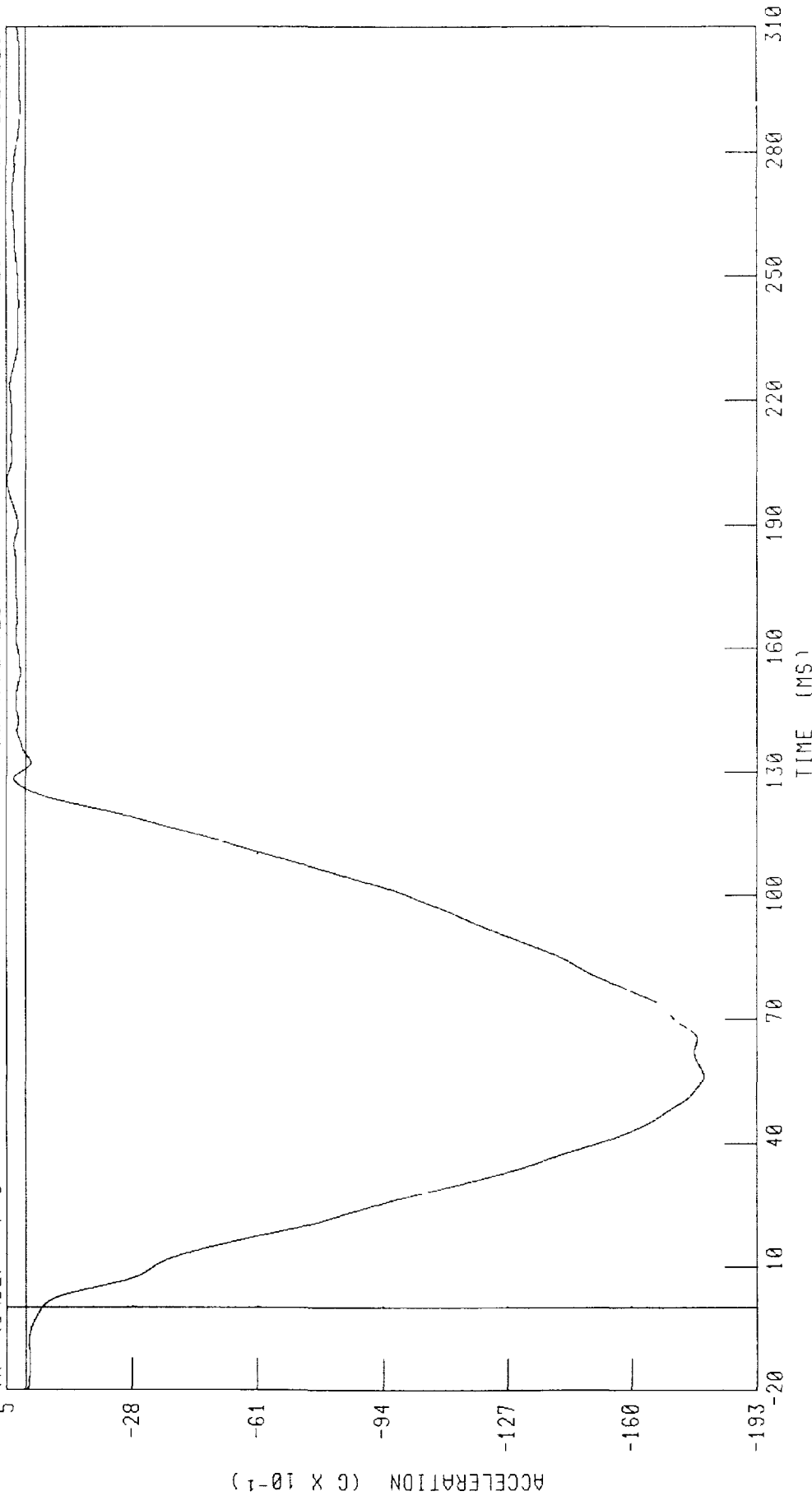
CHANNEL SLOXC FILTER CH CLASS 60

PEAK DATA 0 31 G @ 200 64 MS, -17 81 G @ 56 24 MS

C25108 / 2002 TOYOTA CAMRY
 SLED ACCELERATION - BACKUP
 FMVSS 208 SLED TEST

TEST NUMBER S020325

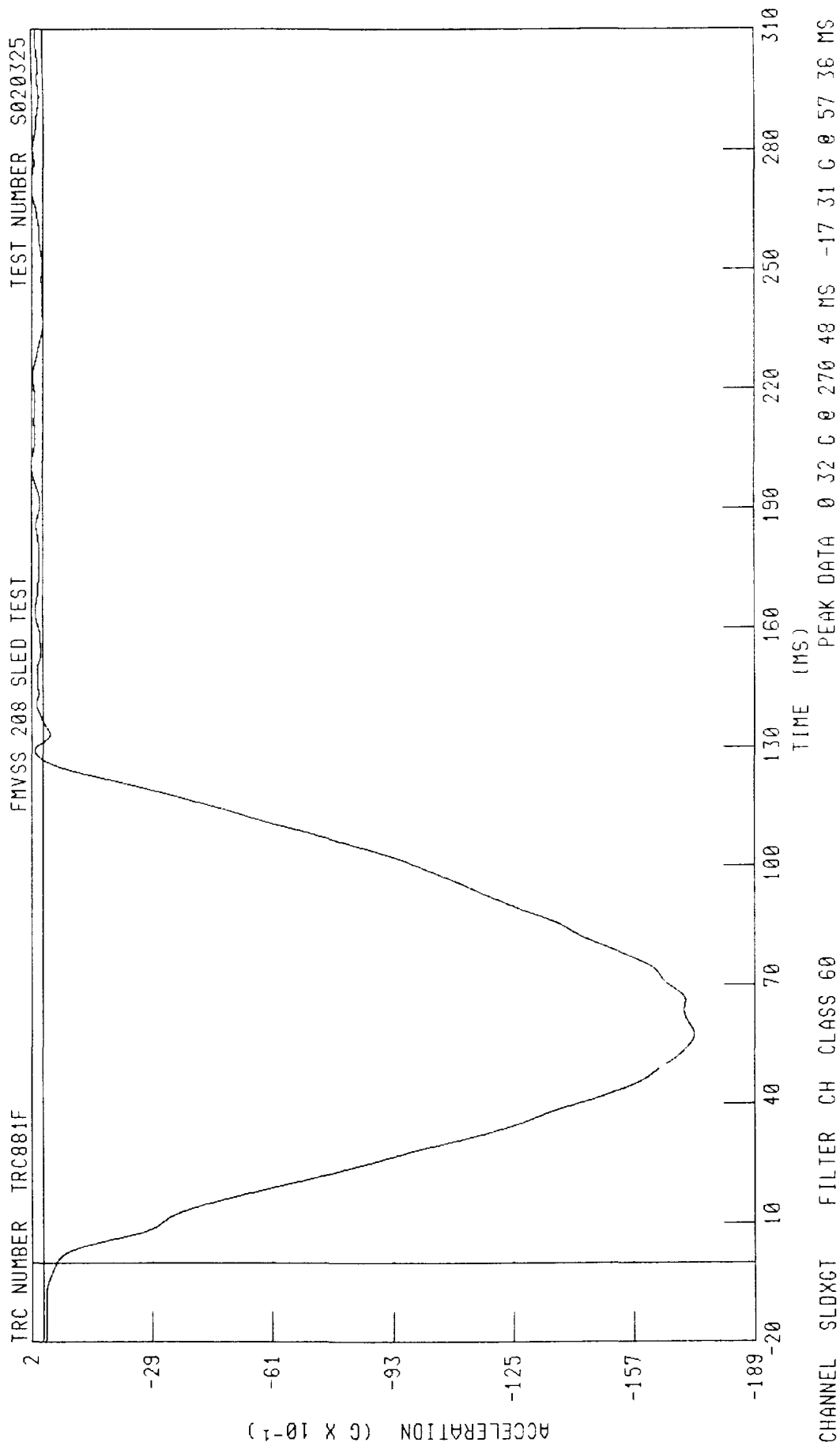
TRC NUMBER TRC881F



CHANNEL SLDXCR FILTER CH CLASS 60

PEAK DATA 0.48 G @ 200 MS -17.90 G @ 56.24 MS

C25108 / 2002 TOYOTA CAMRY
SLED ACCELERATION FOR TIMING CIRCUIT



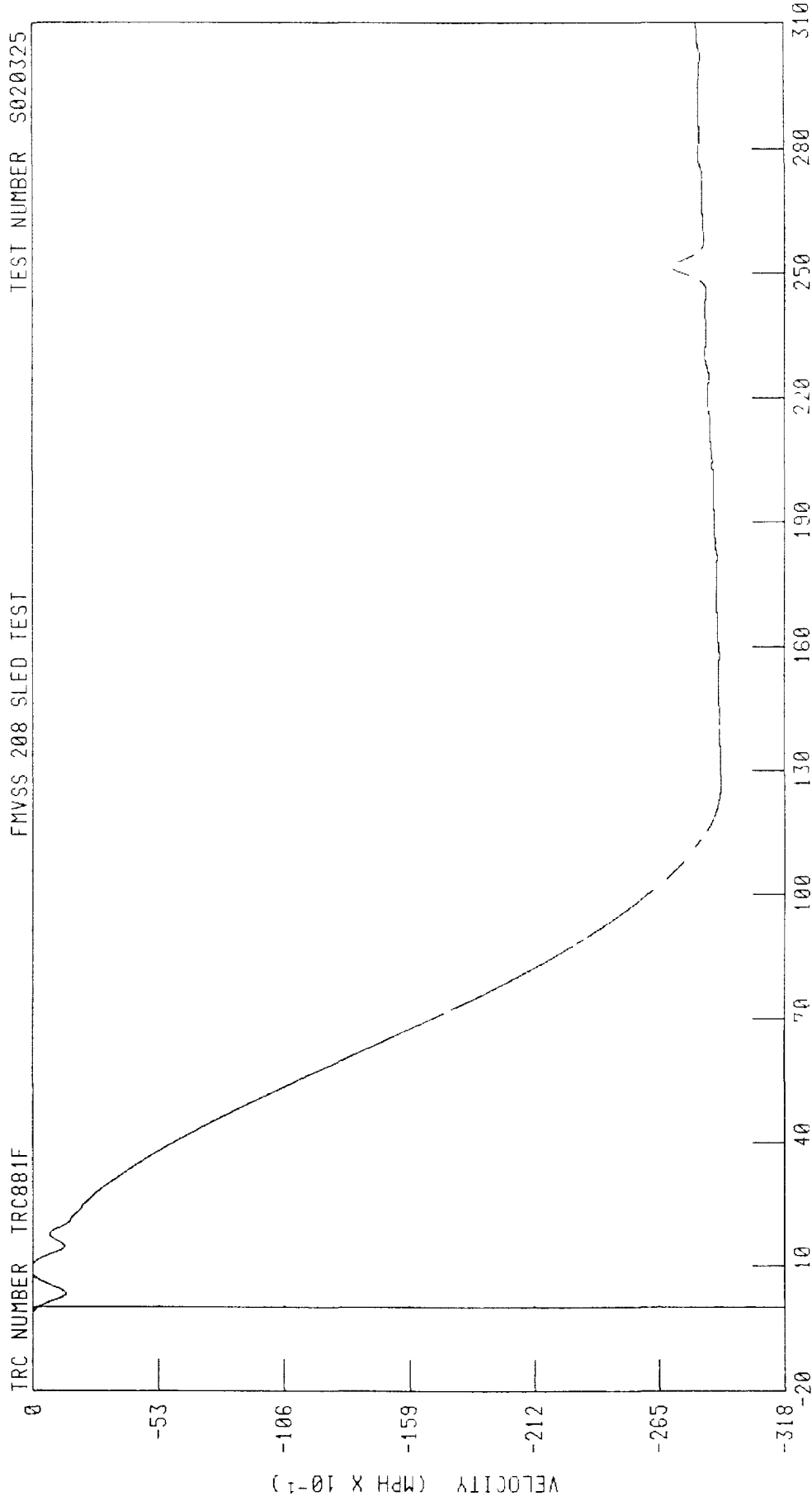
C25108 / 2002 TOYOTA CAMR /

MEASURED VELOCITY TRAP

FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F

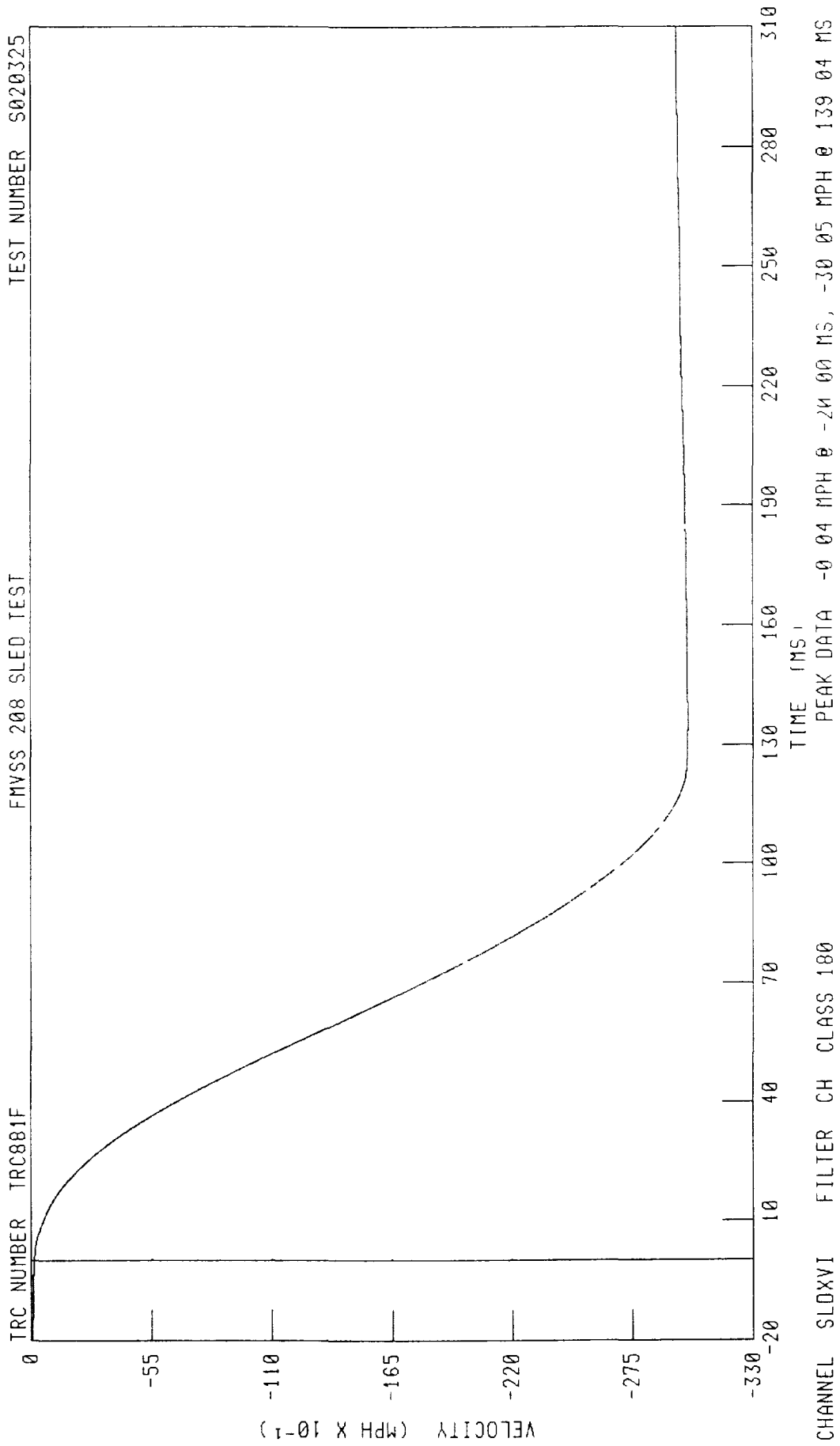


TIME (MS)

PEAK DATA 0 09 MPH @ + 20 MS, -29 12 MPH @ 127 04 MS

CHANNEL SLDXV FILTER CH CLASS 60

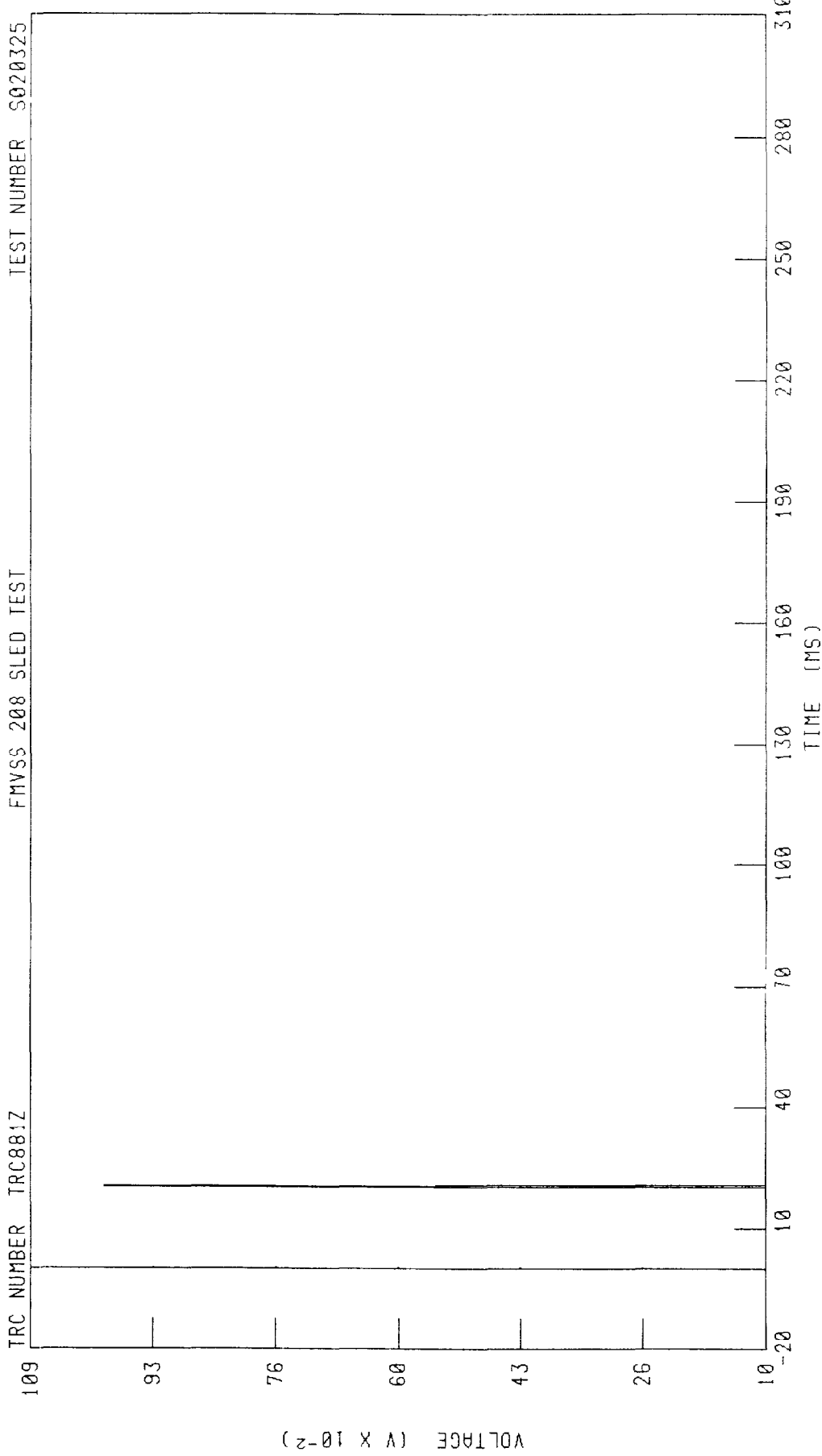
C25108 / 2002 TOYOTA CAMRY
SLED VELOCITY (INTEGRATED)



C25108 / 2002 TOYOTA CAMRY
DRIVER PRIMARY AIRBAG EVENT
FMVSS 208 SLED TEST

TEST NUMBER S020325

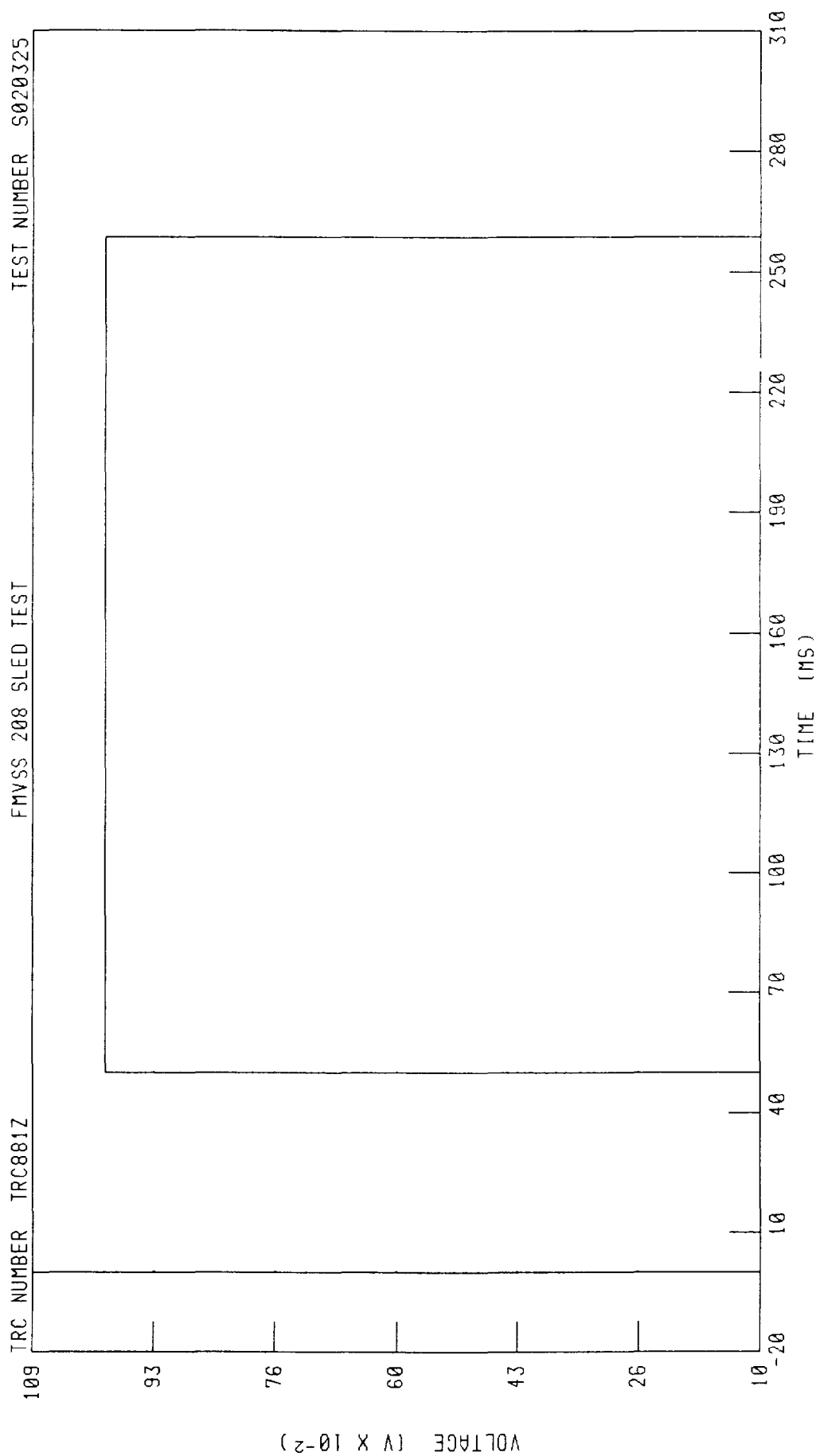
TRC NUMBER TRC881Z



CHANNEL DABET1 FILTER CH CLASS 1000

PEAK DATA 1 00 V 0 20 16 MS, 0 00 V 0 -20 00 MS

C25108 / 2002 TOYOTA CAMRY
DRIVER SECONDARY AIRBAG EVENT
FMVSS 208 SLED TEST



CHANNEL DABET2 FILTER CH CLASS 1000

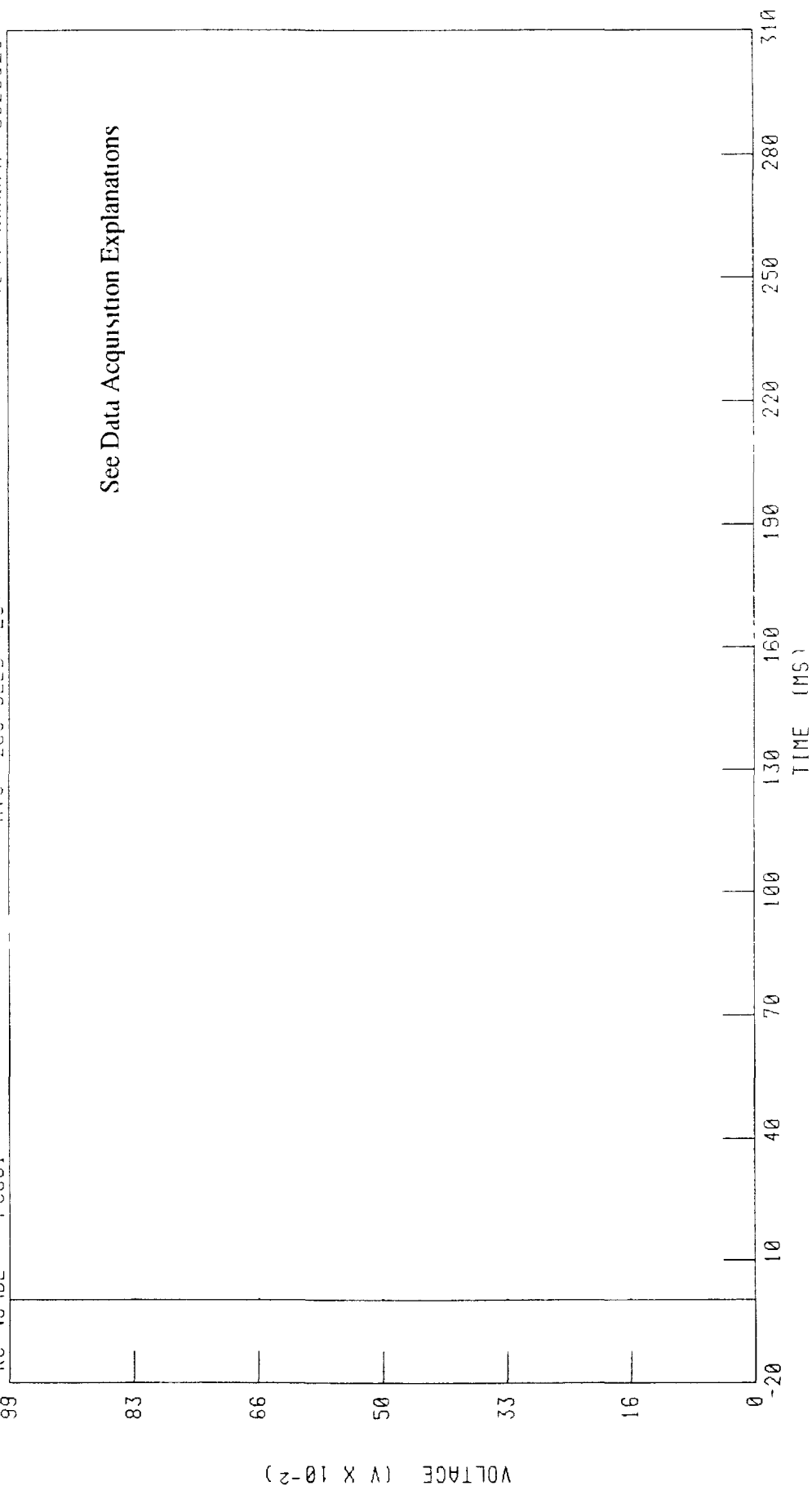
PEAK DATA 1 00 V 0 50 16 MS, 0 00 V 0 -20 00 MS

C25108 / 2002 TOYOTA CAMRY
 PASSENGER PRIMARY AIRBAG EVENT
 FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TPC881F

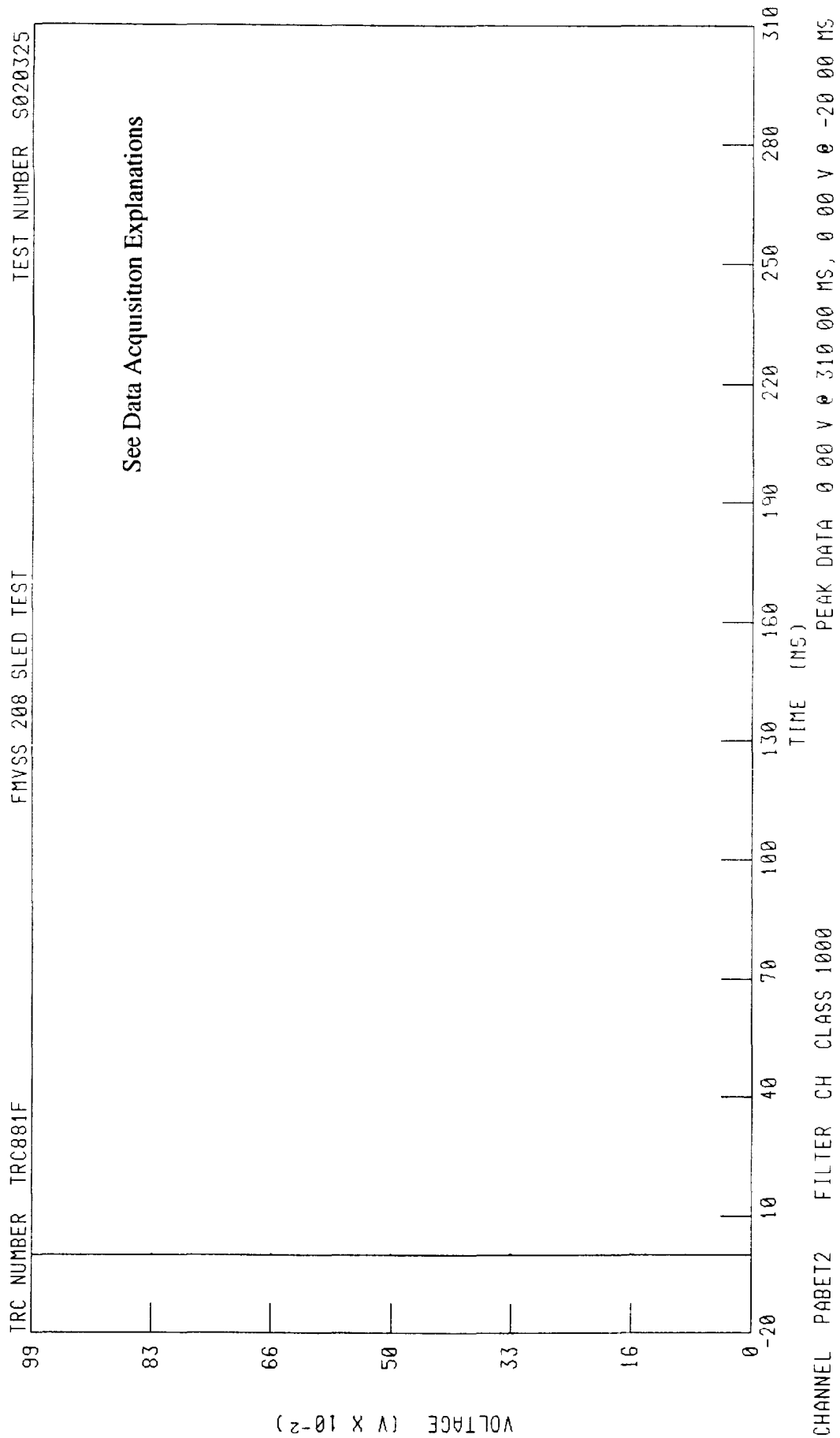
See Data Acquisition Explanations



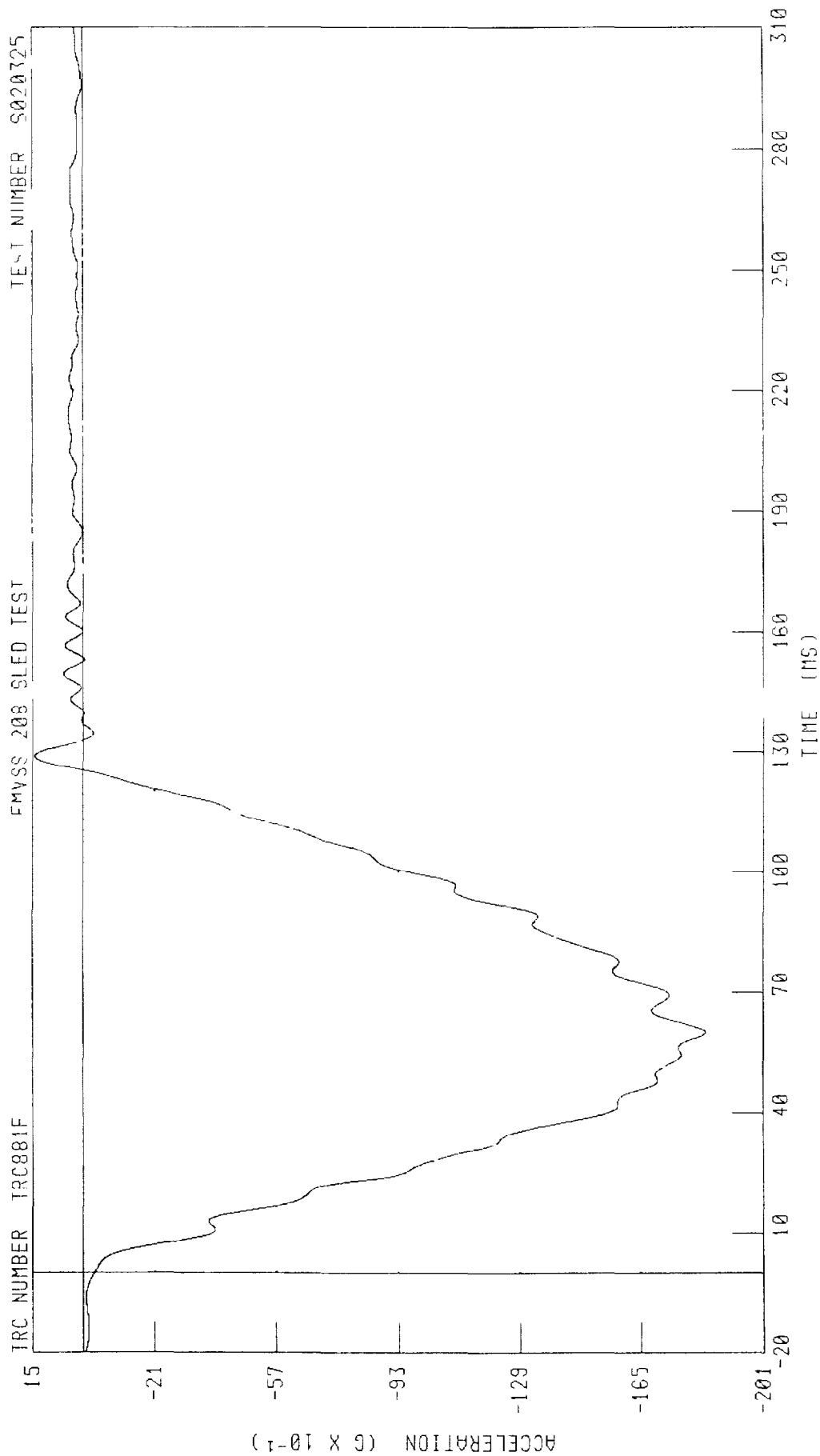
CHANNEL PABET1 FILTER CH CLASS 1000

PEAK DATA 0 00 V @ 110 00 MS, 0 00 V @ -20 00 MS

C25108 / 2002 TOYOTA CAMRY
PASSENGER SECONDARY AIRBAG EVENT



C25108 / 2002 TOYOTA CAMRY
 REAR AXLE X-AXIS ACCELERATION
 FMVSS 208 SLED TEST



PEAK DATA 1 41 G @ 129 12 MS, -18 40 G @ 53 92 MS

CHANNEL RAXG FILTER CH CLASS 60

TEST NUMBER S020325

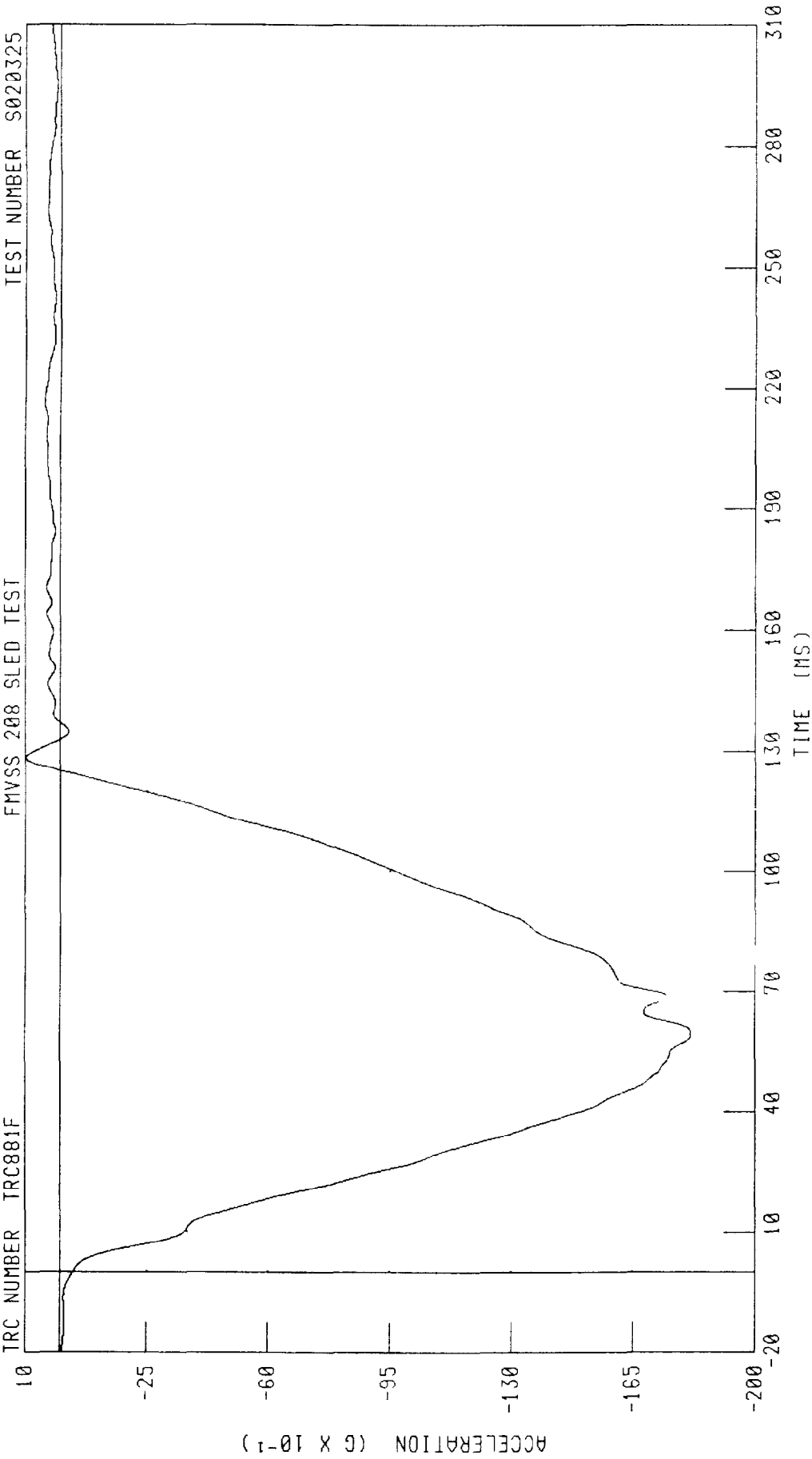
TRC NUMBER TRC881F

C25108 / 2002 TOYOTA CAMRY
LEFT BODY AT REAR SEAT X-AXIS ACCELERATION

TEST NUMBER S020325

TRC NUMBER TRC881F

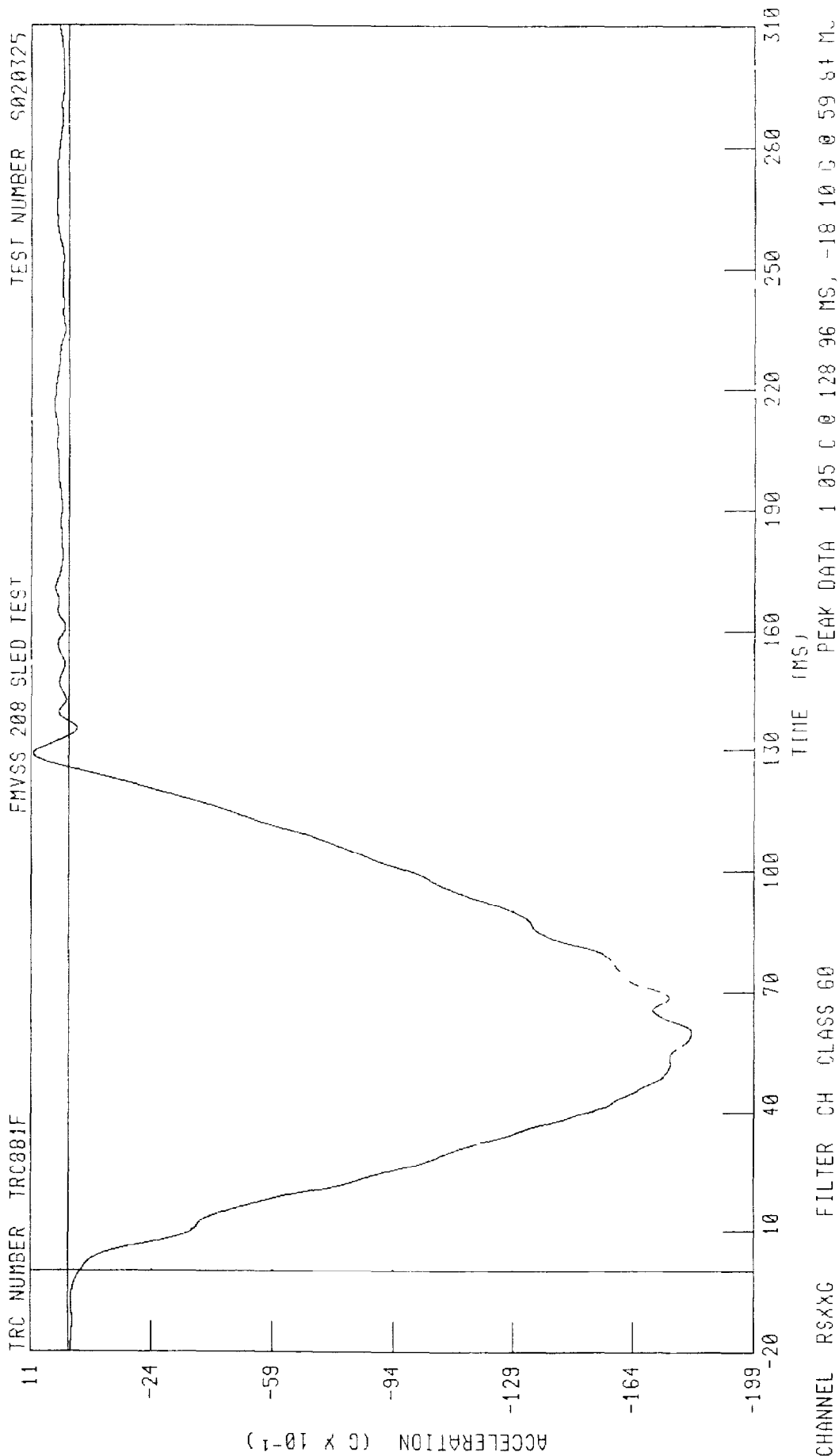
FMVSS 208 SLED TEST



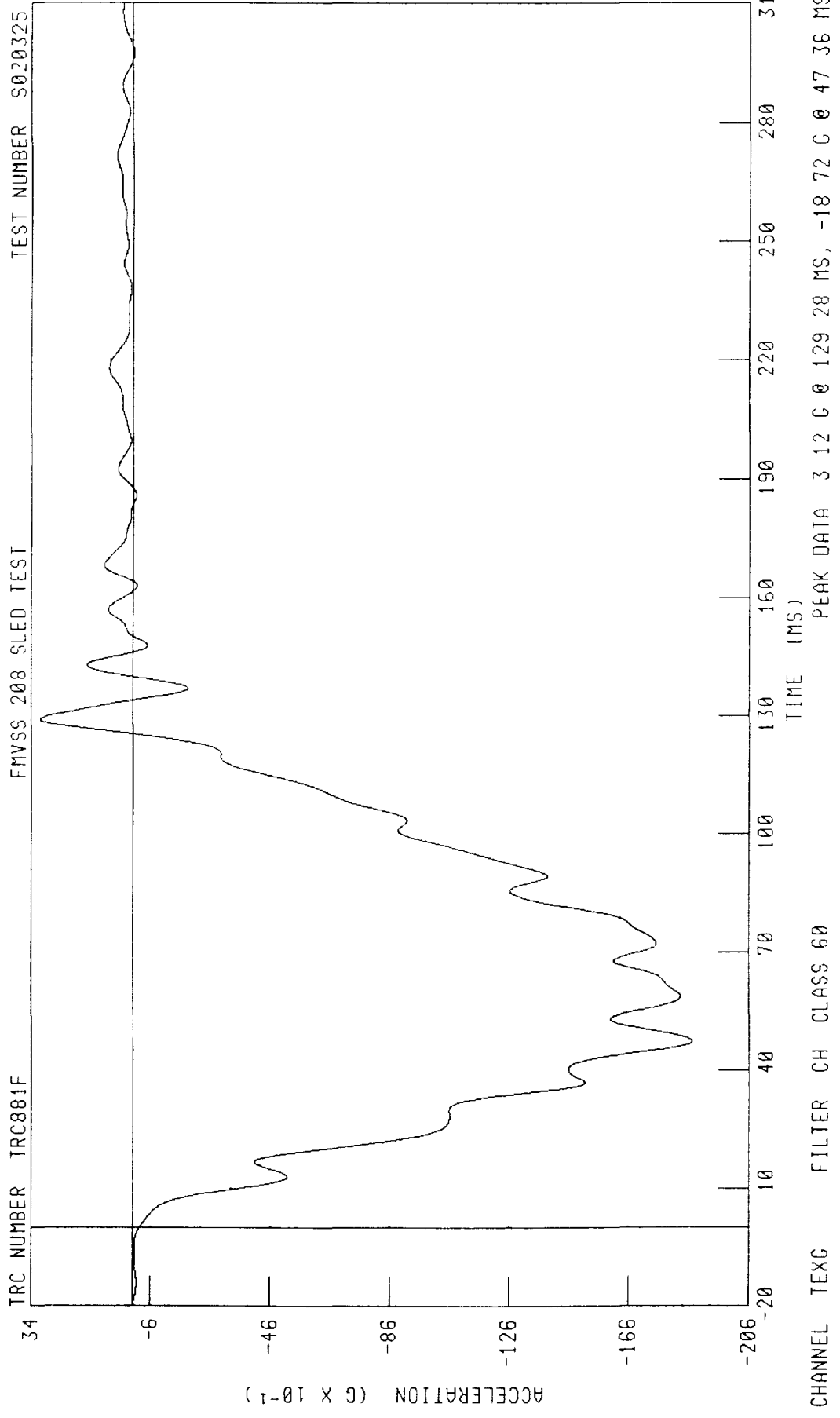
PEAK DATA 0 98 G 0 128 64 MS, -18 18 G 0 59 28 MS

CHANNEL LSXYG FILTER CH CLASS 60

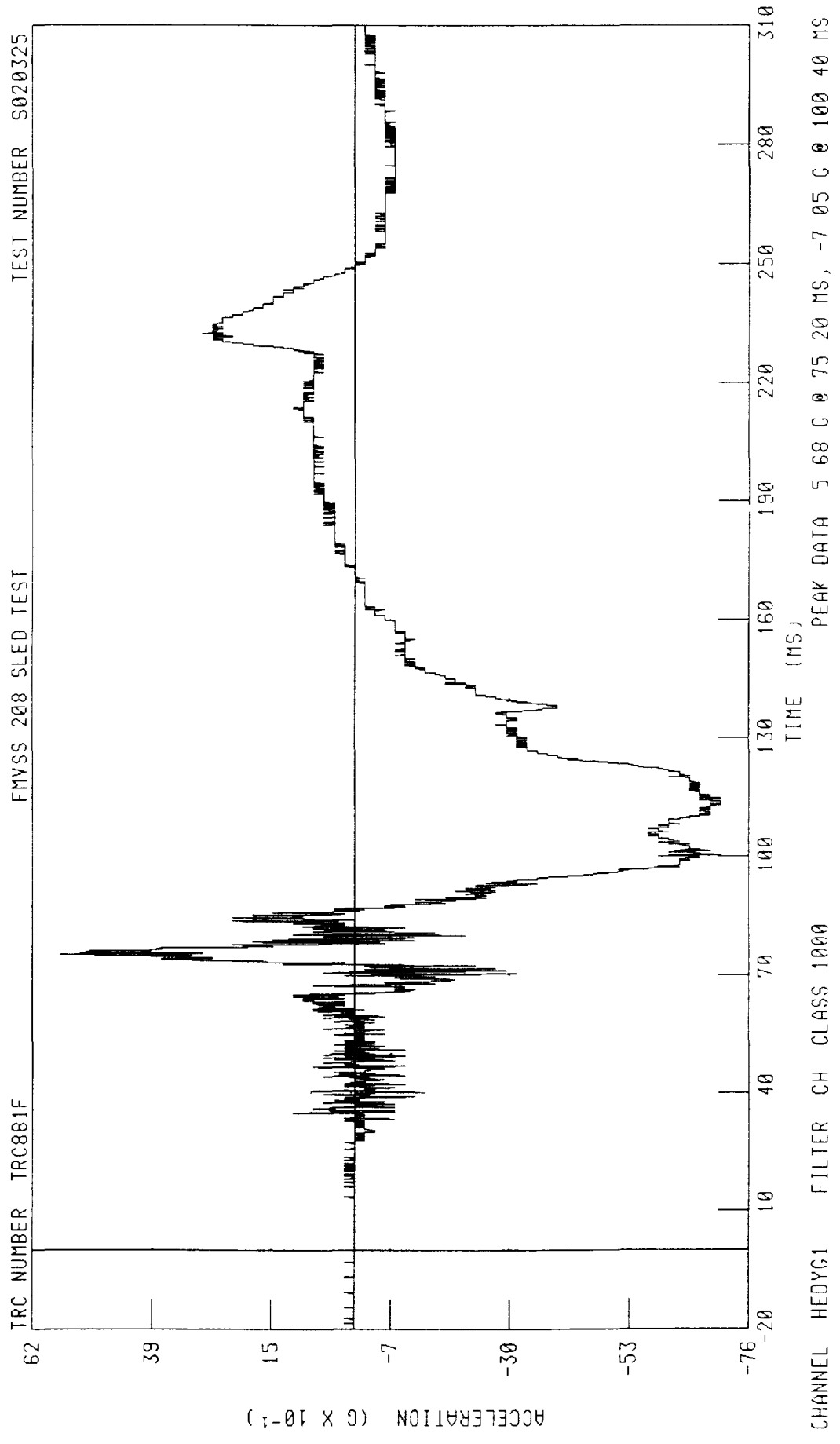
C25108 / 2002 TOYOTA CAMRY
RIGHT BODY AT REAR SEAT X-AXIS ACCELERATION



C25108 / 2002 TOYOTA CAMRY
TOP ENGINE X-AXIS ACCELERATION
FMVSS 208 SLED TEST



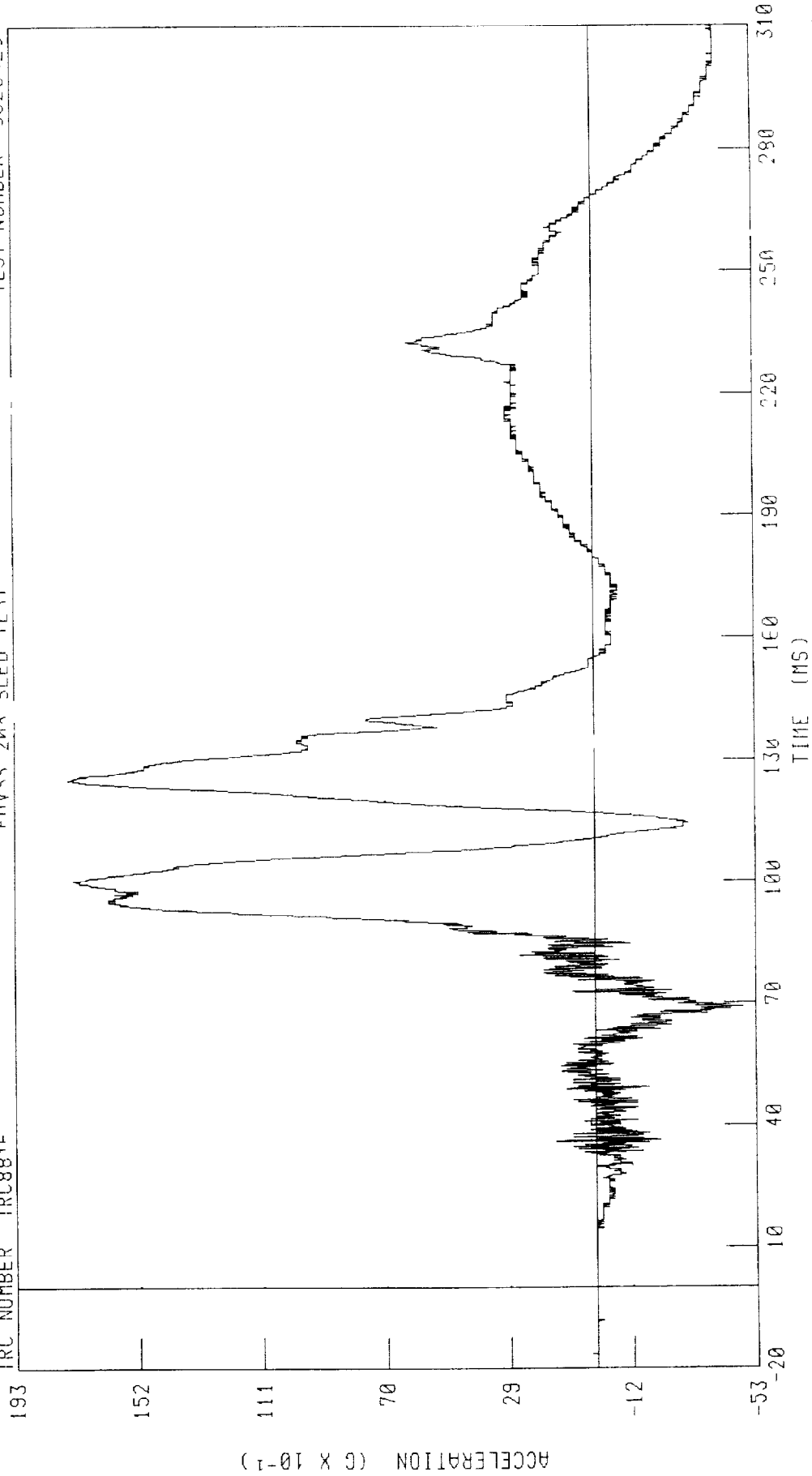
C25108 / 2002 TOYOTA CAMRY
 DRIVER HEAD Y-AXIS ACCELERATION
 FMVSS 208 SLED TEST



C25108 / 2002 TOYOTA CAMRY
 DRIVER HEAD 7-Axis ACCELERATION
 FMVSS 208 SLED TEST

TEST NUMBER S020325

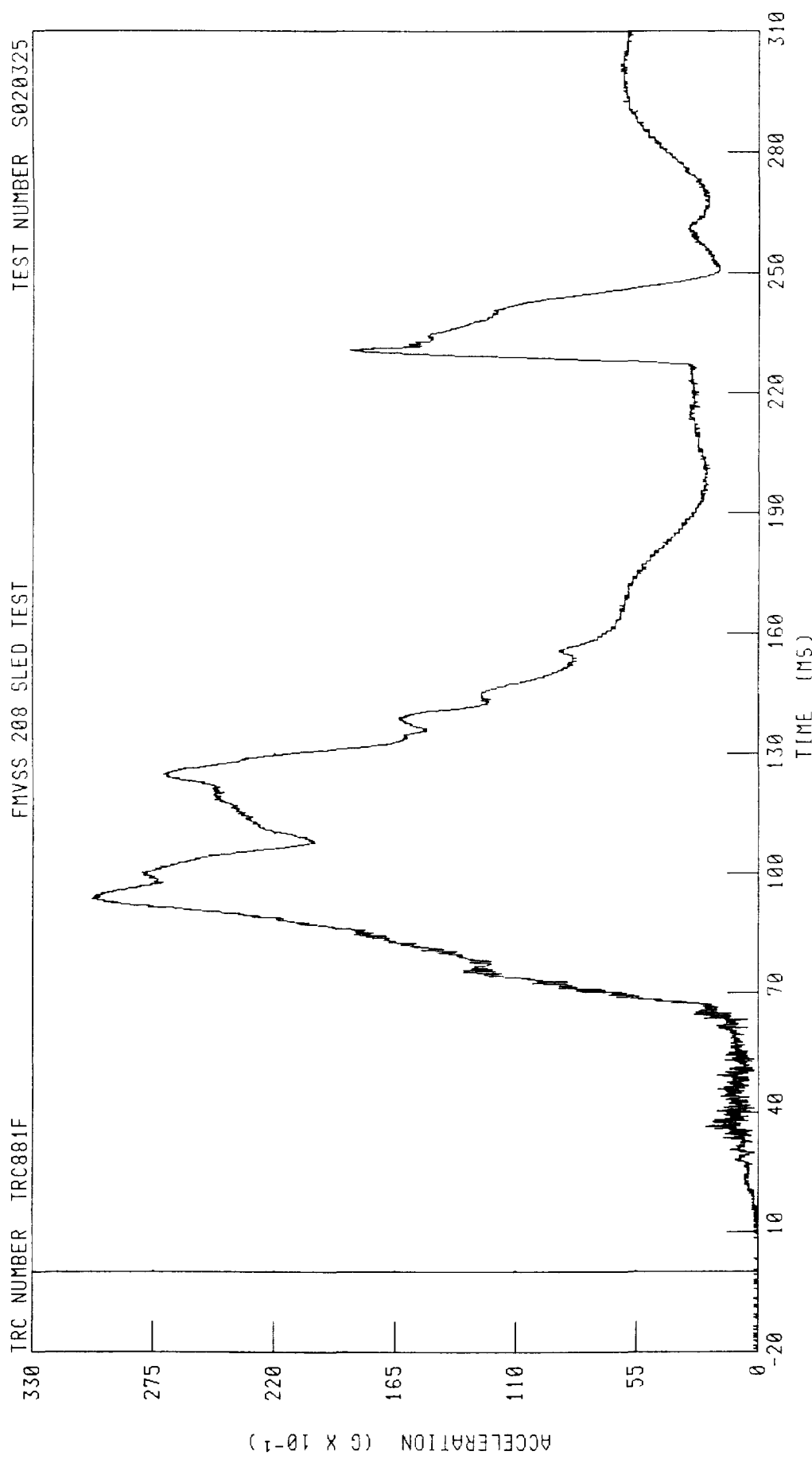
TRC NUMBER TRC881E



CHANNEL HEDZG1 FILTER CH CLASS 1000

PEAK DATA 17 55 G @ 125 MS, -4 88 G @ 15 88 MS

C25108 / 2002 TOYOTA CAMRY
 DRIVER HEAD RESULTANT ACCELERATION
 FMVSS 208 SLED TEST

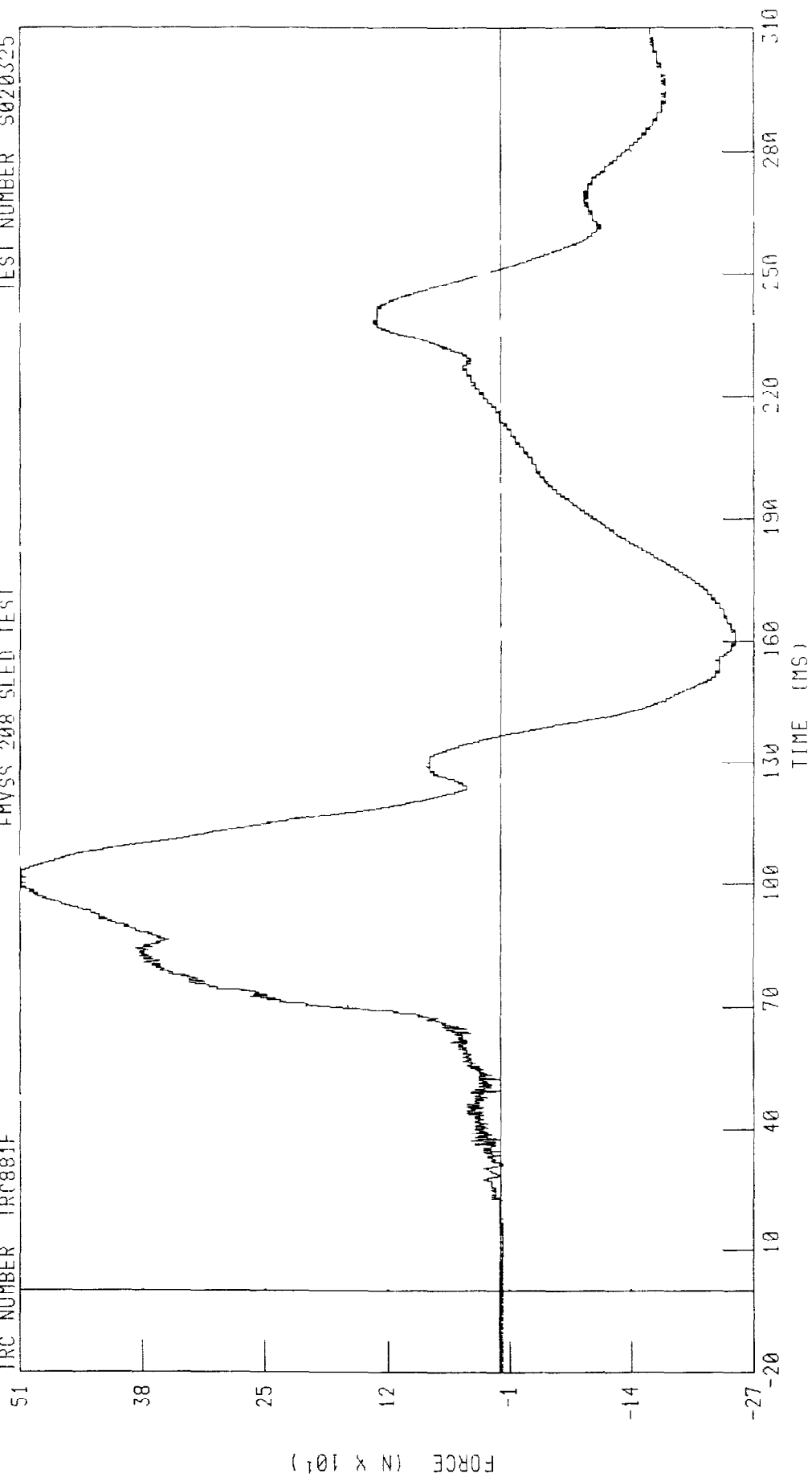


CHANNEL HEDRC1 FILTER CH CLASS 1000 PEAK DATA 30 30 G @ 93 84 MS, 0 01 G @ -20 00 MS

C25108 / 2002 TOYOTA CAMRY
DRIVER NECK X-AXIS SHEAR FORCE
FMVSS 208 SLED TEST

TRC NUMBER TRC881F

TEST NUMBER S020325



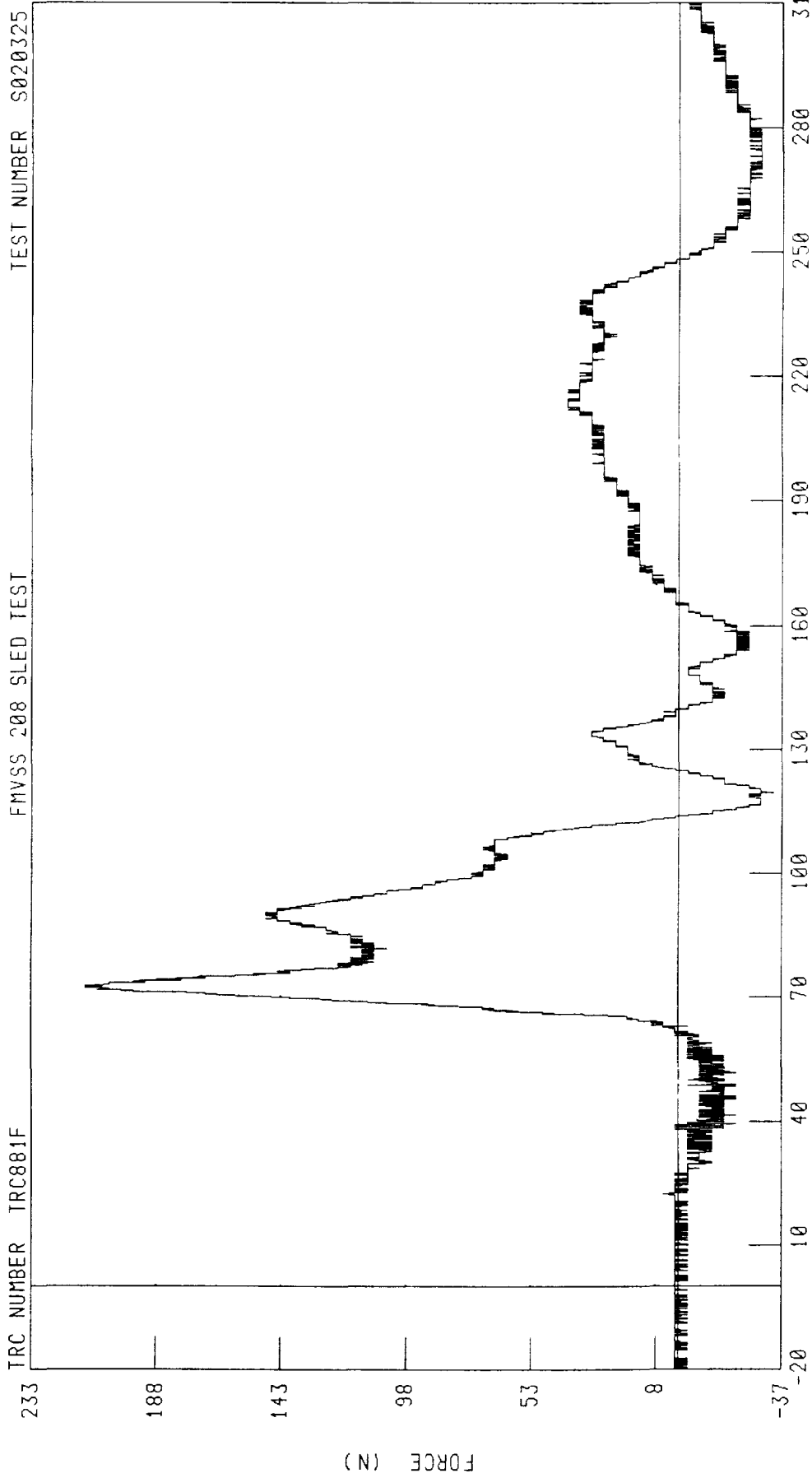
CHANNEL NEKXF1 FILTER CH CLASS 100M

PEAK DATA 509.21 N @ 33.12 ms -250.70 N @ 158.36 ms

C25108 / 2002 TOYOTA CAMRY
DRIVER NECK Y-AXIS SHEAR FORCE
FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F



TIME (MS)

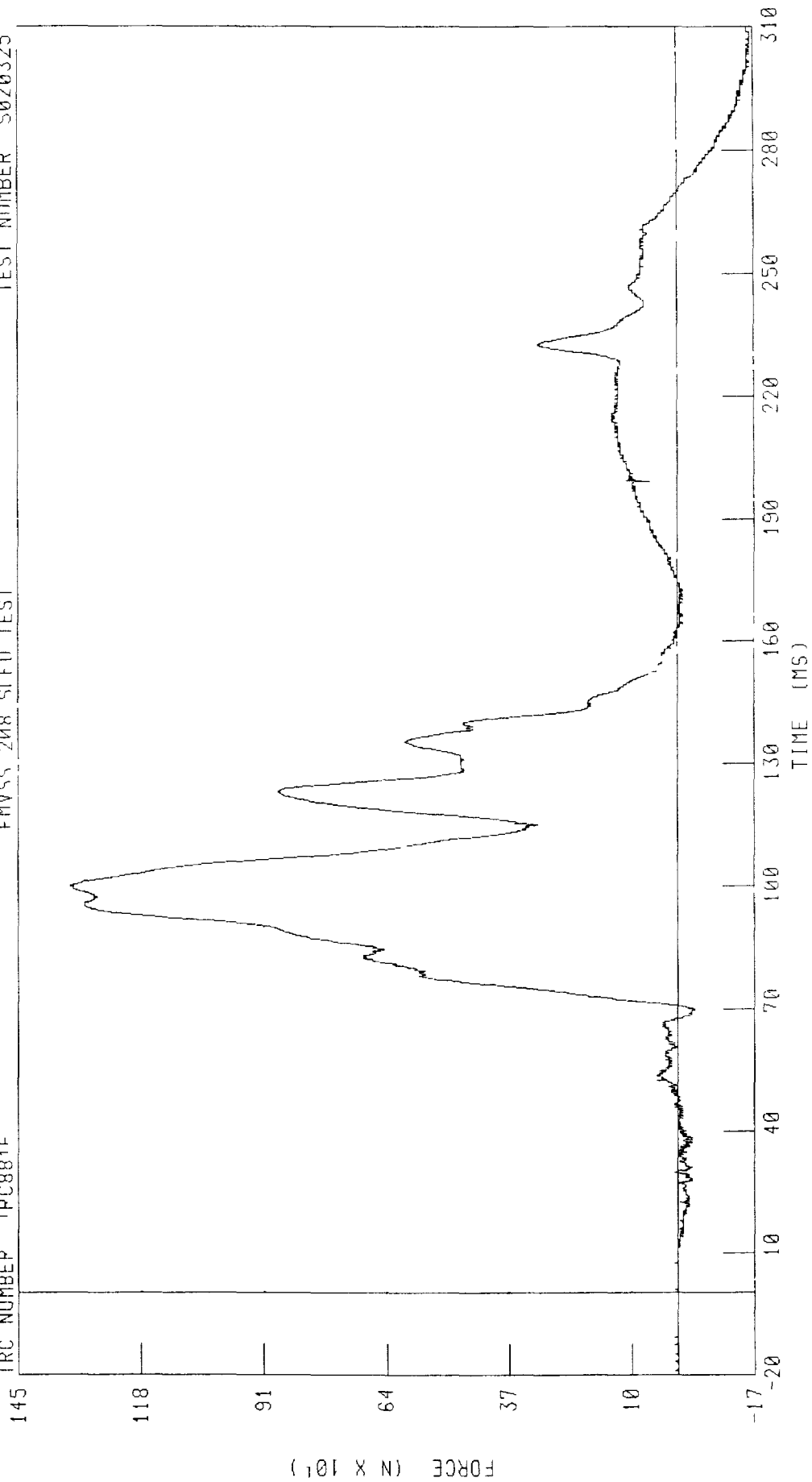
PEAK DATA 217 68 N @ 72 16 MS, -33 87 N @ 119 76 MS

CHANNEL NEKYF1 FILTER CH CLASS 1000

C25108 / 2002 TOYOTA CAMRY
 DRIVER NECK Z-AXIS AXIAL FORCE
 FMVSS 208 SIFD TEST

TRC NUMBER TPC881F

TEST NUMBER S020325

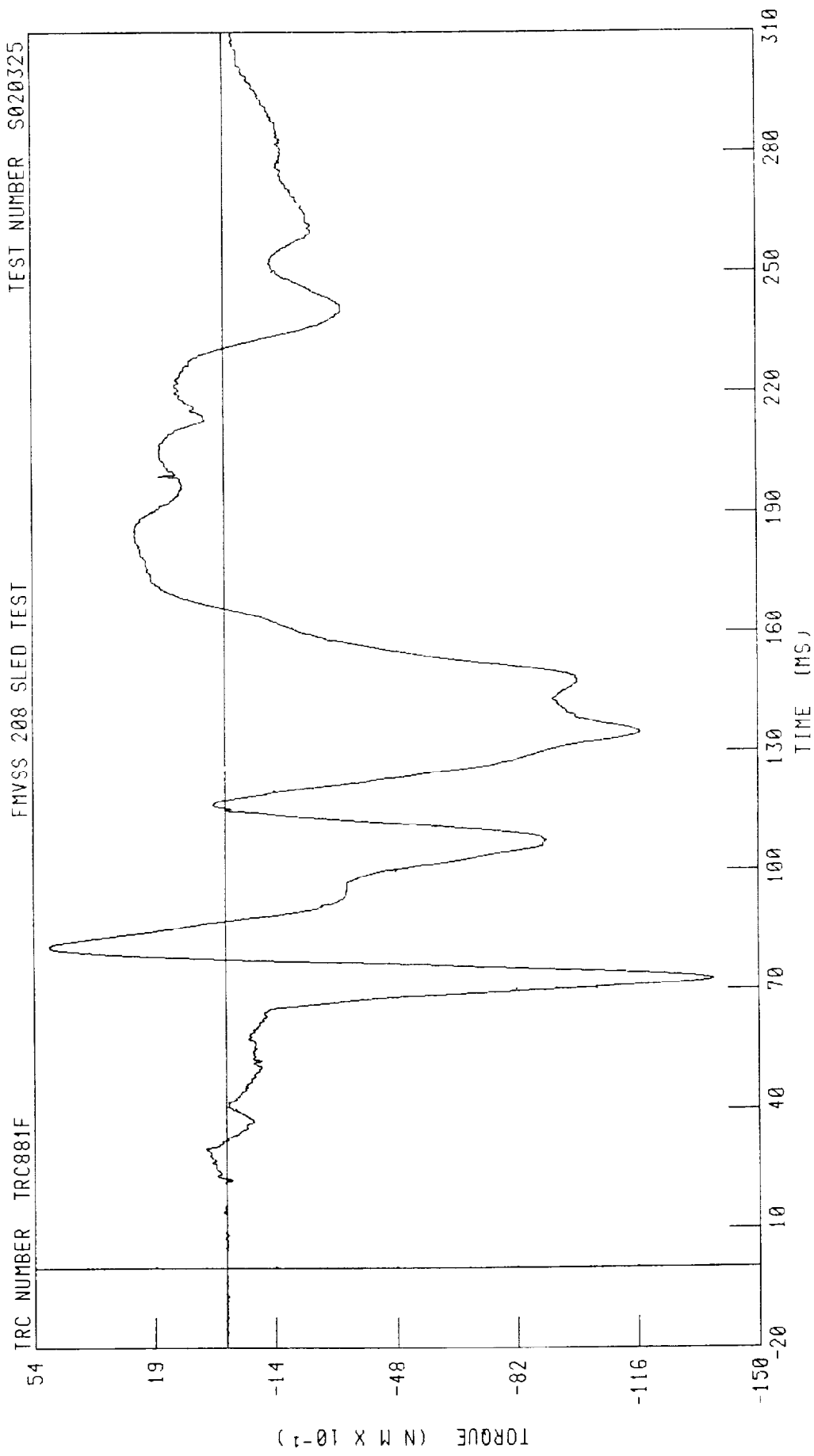


TIME (MS)

PEAK DATA 1376 22 110 100 16 MS, -11 0.4 11 0 300 10 MS

CHANNEL NEKZF1 FILTER CH CLASS 1000

C25108 / 2002 TOYOTA CAMRY
 DRIVER NECK MOMENT ABOUT X AXIS
 FMVSS 208 SLED TEST



TRC NUMBER TRC881F

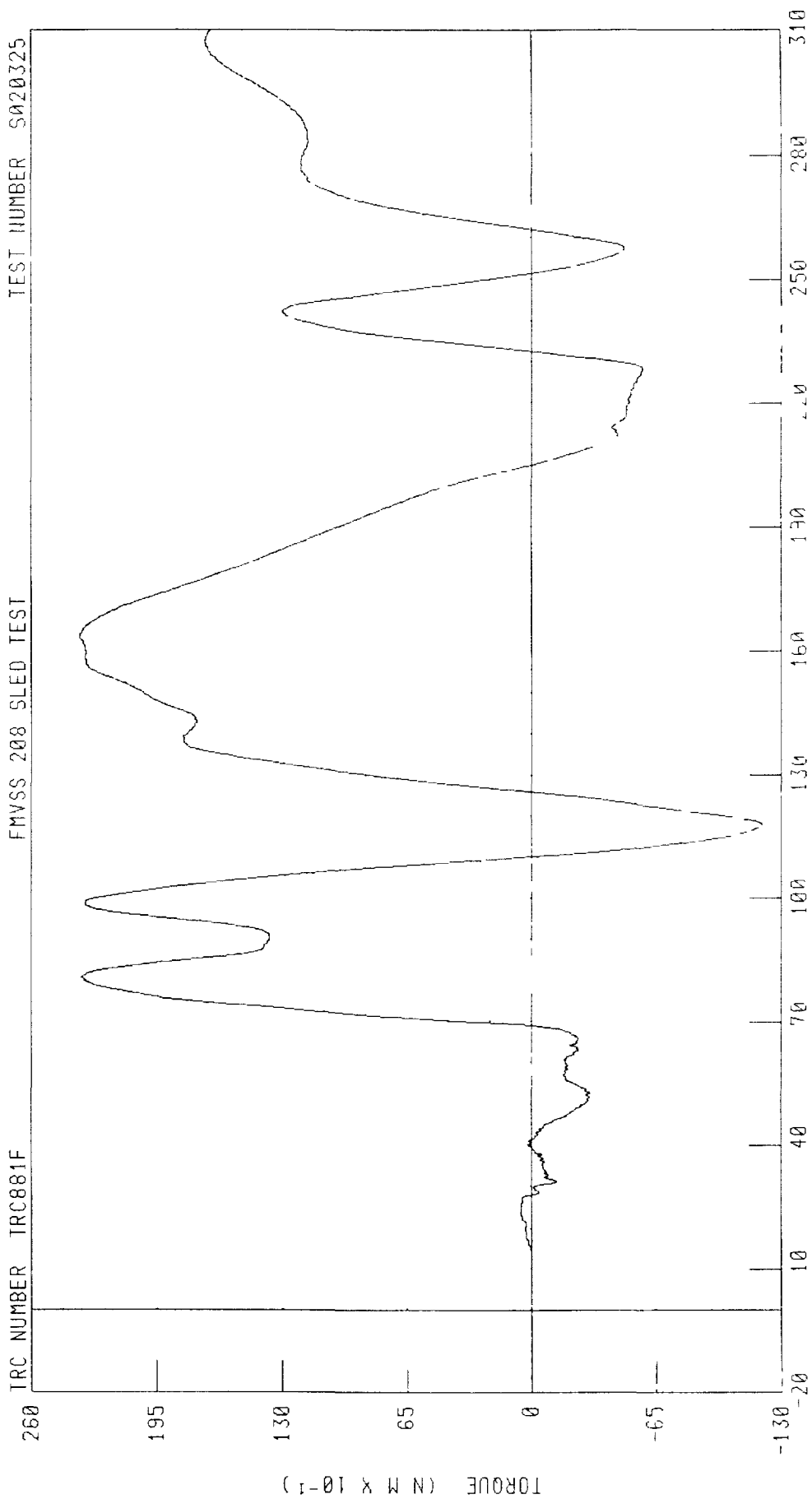
TEST NUMBER S020325

CHANNEL NEKX01 FILTER CH CLASS 500
 PEAK DATA 4 96 N M @ 81 04 MS, -13 73 N M @ 72 48 MS

C25108 / 2002 TOYOTA CAMRY
 DRIVER NECK MOMENT ABOUT Y AXIS
 FMVSS 208 SLED TEST

TEST NUMBER SA20325

TRC NUMBER TRC881F



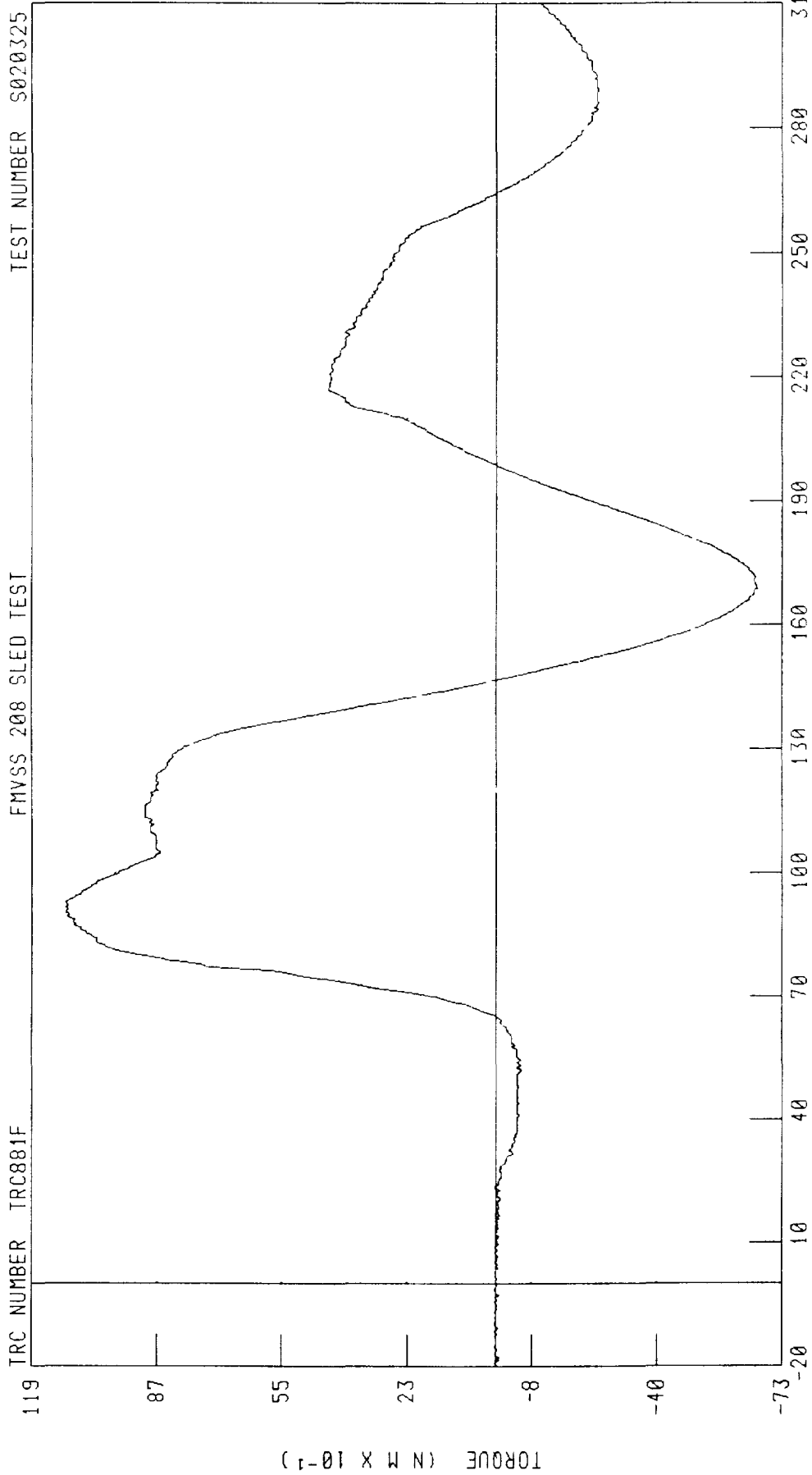
PEAK DATA 23 47 N N 0 100 MS, -12 N N 0 117 92 MS

CHANNEL NEYM1 FILTER CH CLASS 600

C25108 / 2002 TOYOTA CAMRY
 DRIVER NECK MOMENT ABOUT Z AXIS
 FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F



TIME (MS)

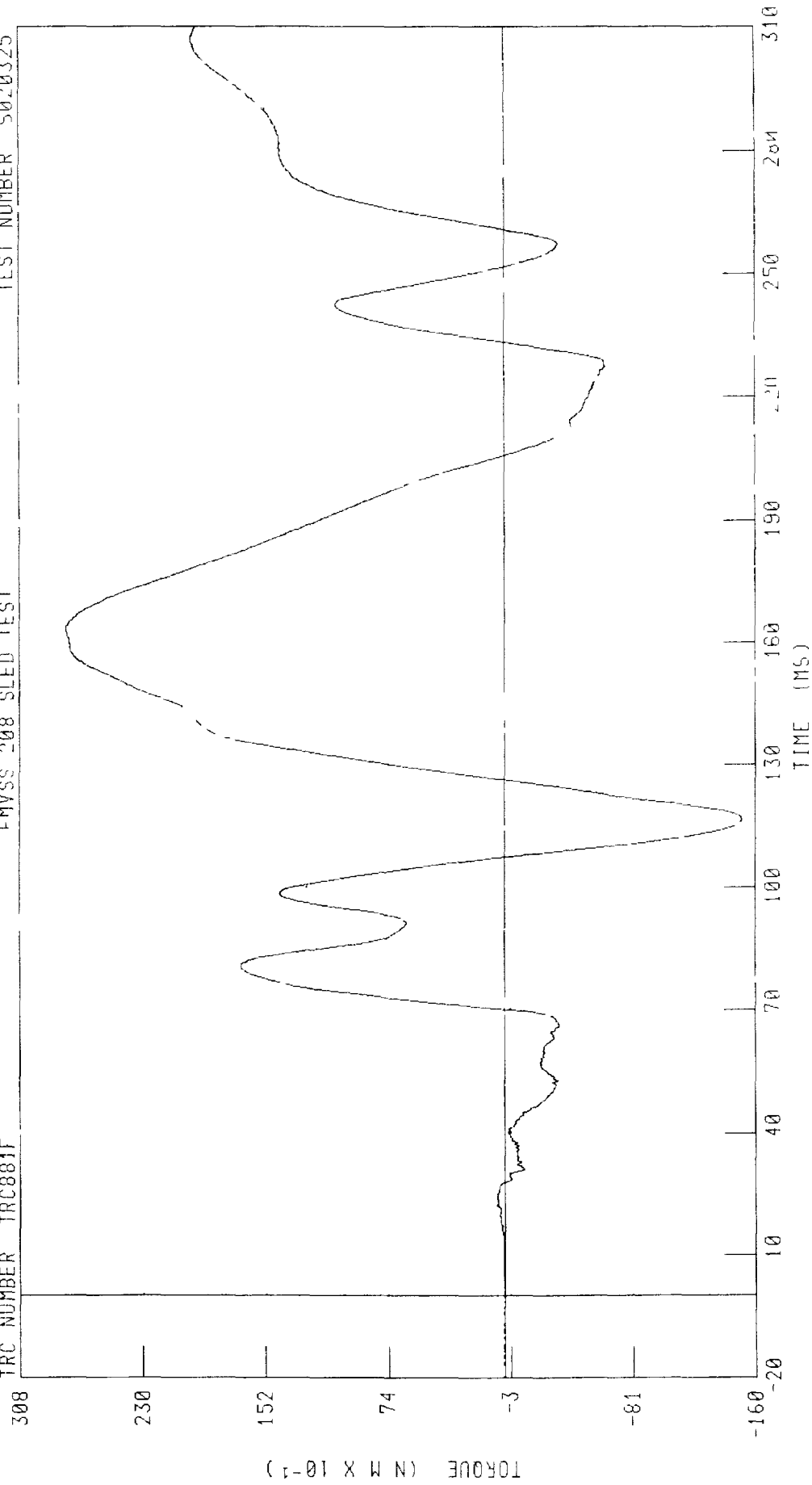
PEAK DATA 11 04 N M @ 91 84 MS, -6 68 N M @ 168 88 MS

CHANNEL NEKZM1 FILTER CH CLASS 600

C25108 / 2002 TOYOTA CAMRY
 DRIVER NECK MOMENT ABOUT X AXIS OCCIPITAL CONDYLE
 FMVSS 208 SLED TEST

TEST NUMBER 5020325

TRC NUMBER TRC881F

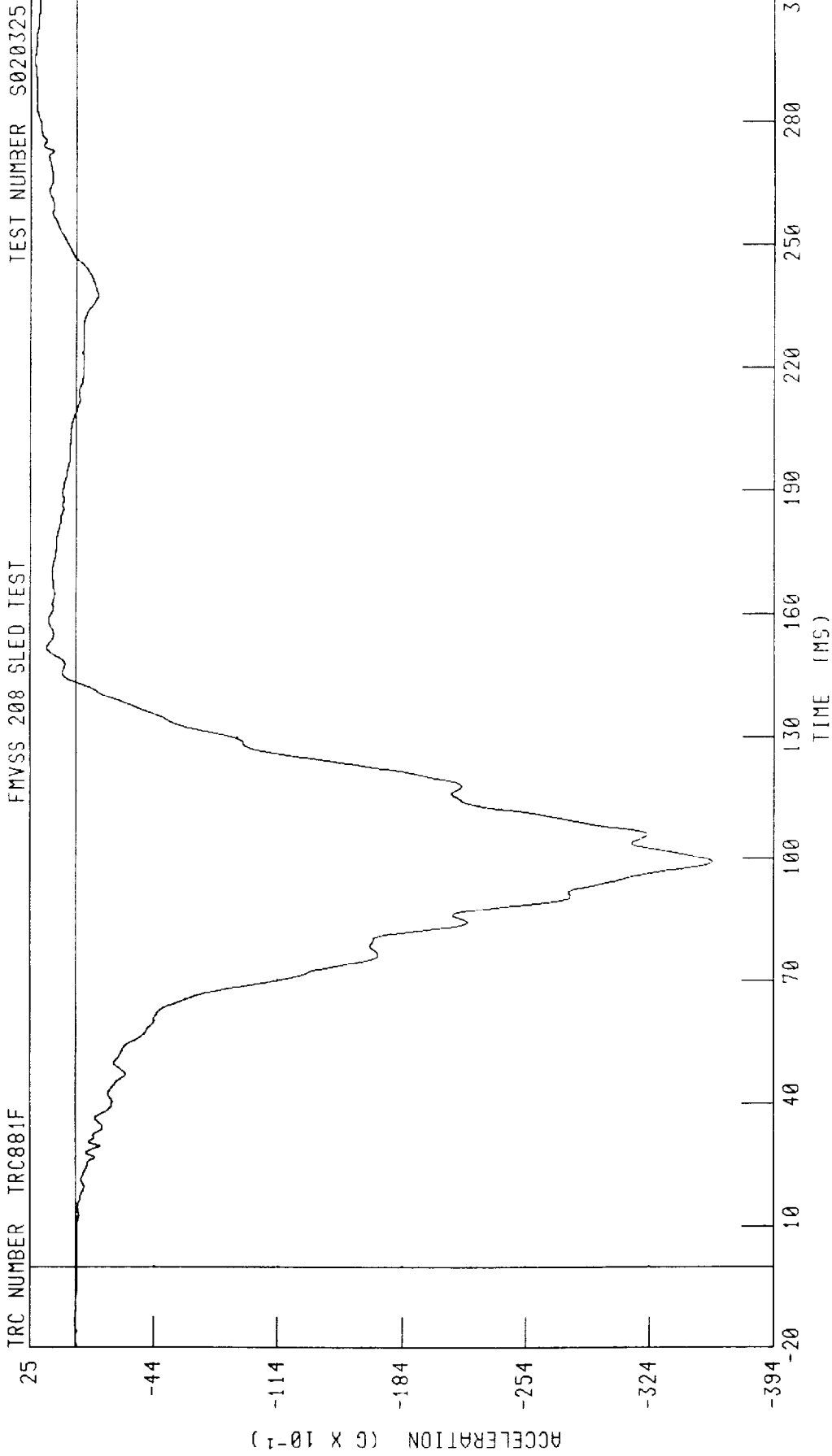


TIME (MS)

PERY DATA 27 95 N 11 0 16.2 9.2 MS -15 14 N 11 0 11.6 4 MS

CHANNEL NEKOM1 FILTER CH CLASS 600

C25108 / 2002 TOYOTA CAMRY
DRIVER CHEST X-AXIS ACCELERATION
FMVSS 208 SLED TEST

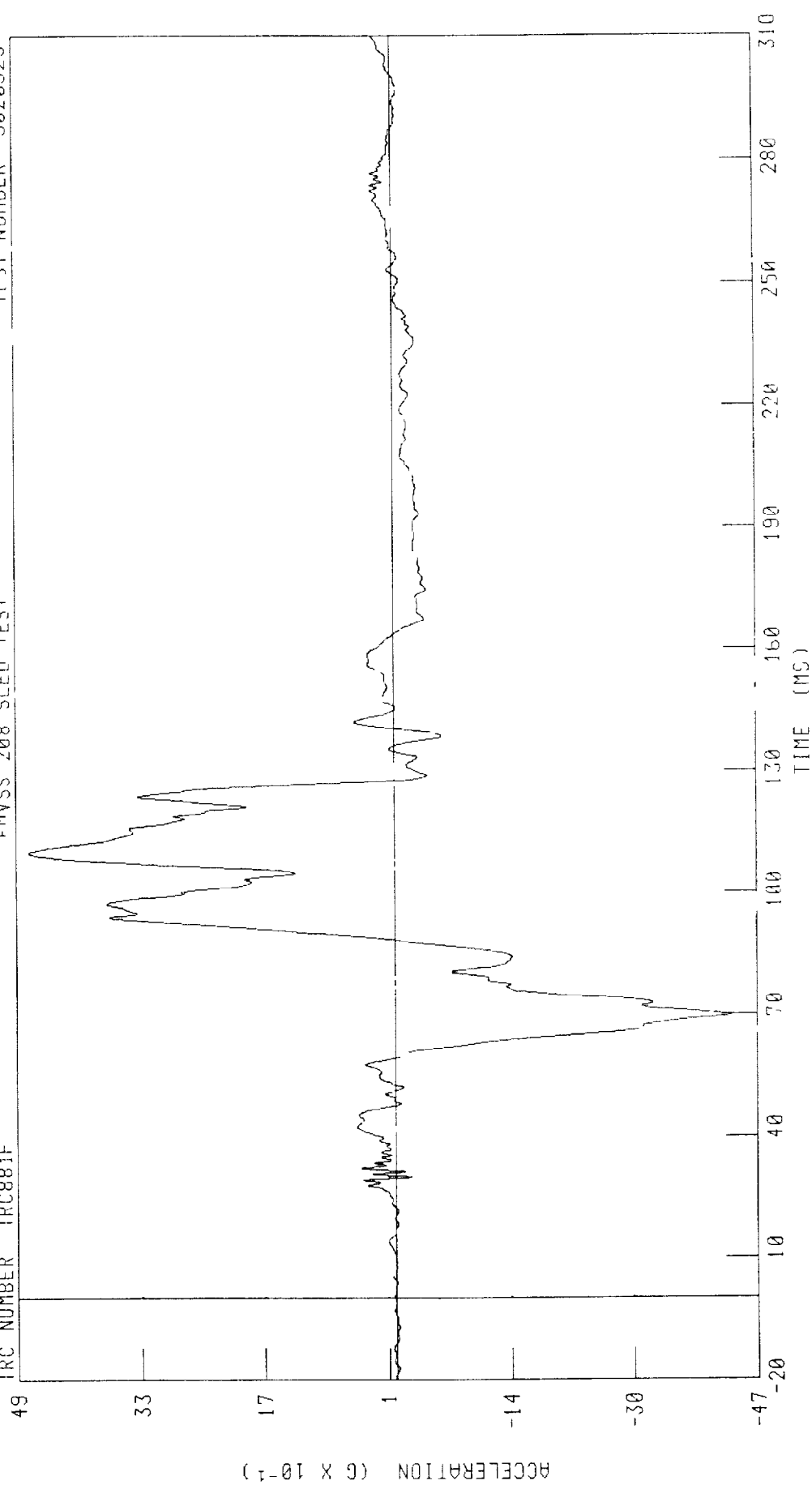


CHANNEL CSTXG1 FILTER CH CLASS 180 PEAK DATA 2 39 G @ 294 48 MS, -35 95 G @ 99 36 MS

C25108 / 2002 TOYOTA CAMRY
 DRIVER CHEST Y-AXIS ACCELERATION
 FMVSS 208 SLED TEST

TEST NUMBER S020325

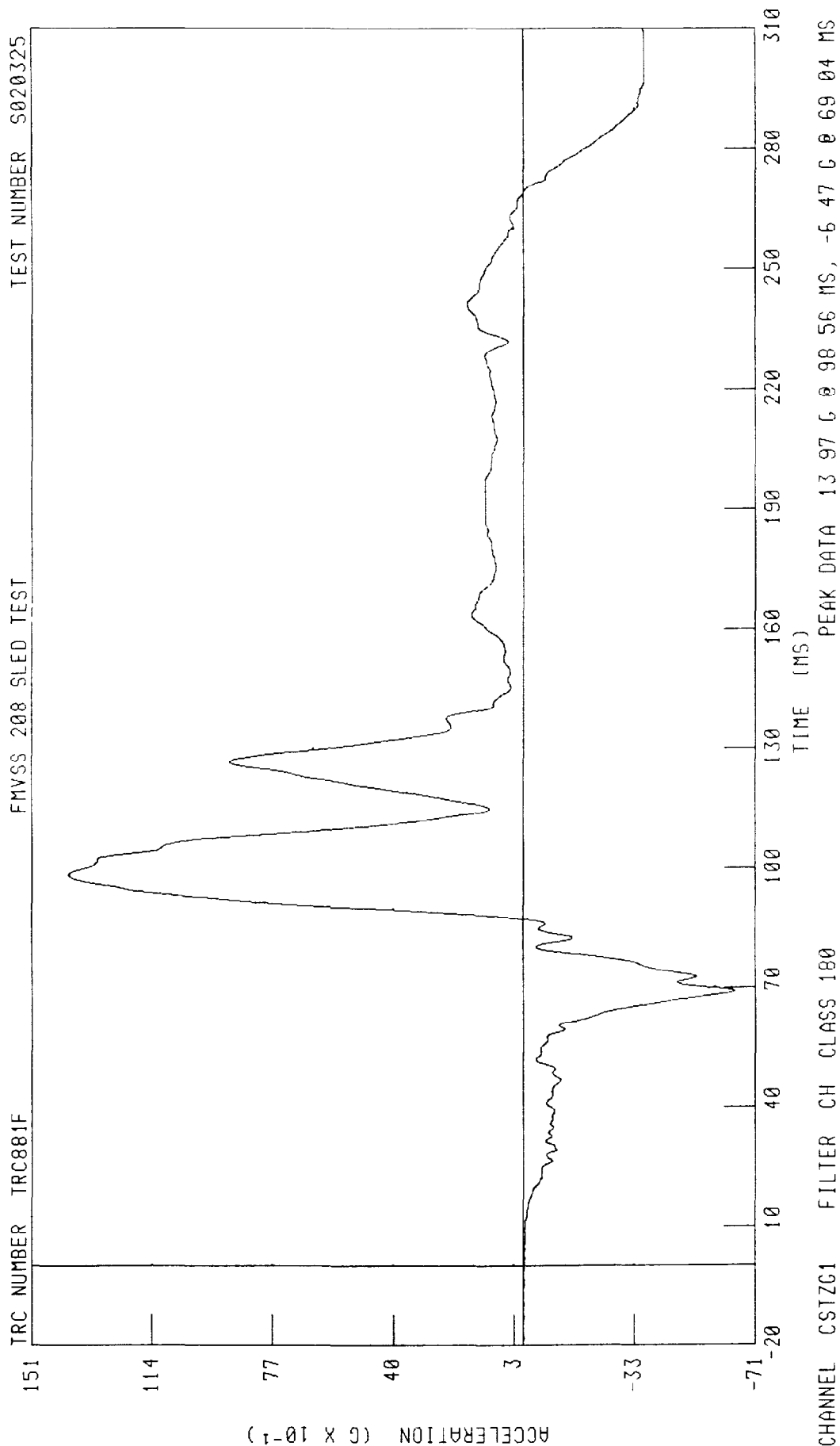
TRC NUMBER TRC881F



PEAK DATA 4 74 C @ 110 08 MS -+ 36 G @ 69 68 MS

CHANNEL CSTYG1 FILTER CH CLASS 180

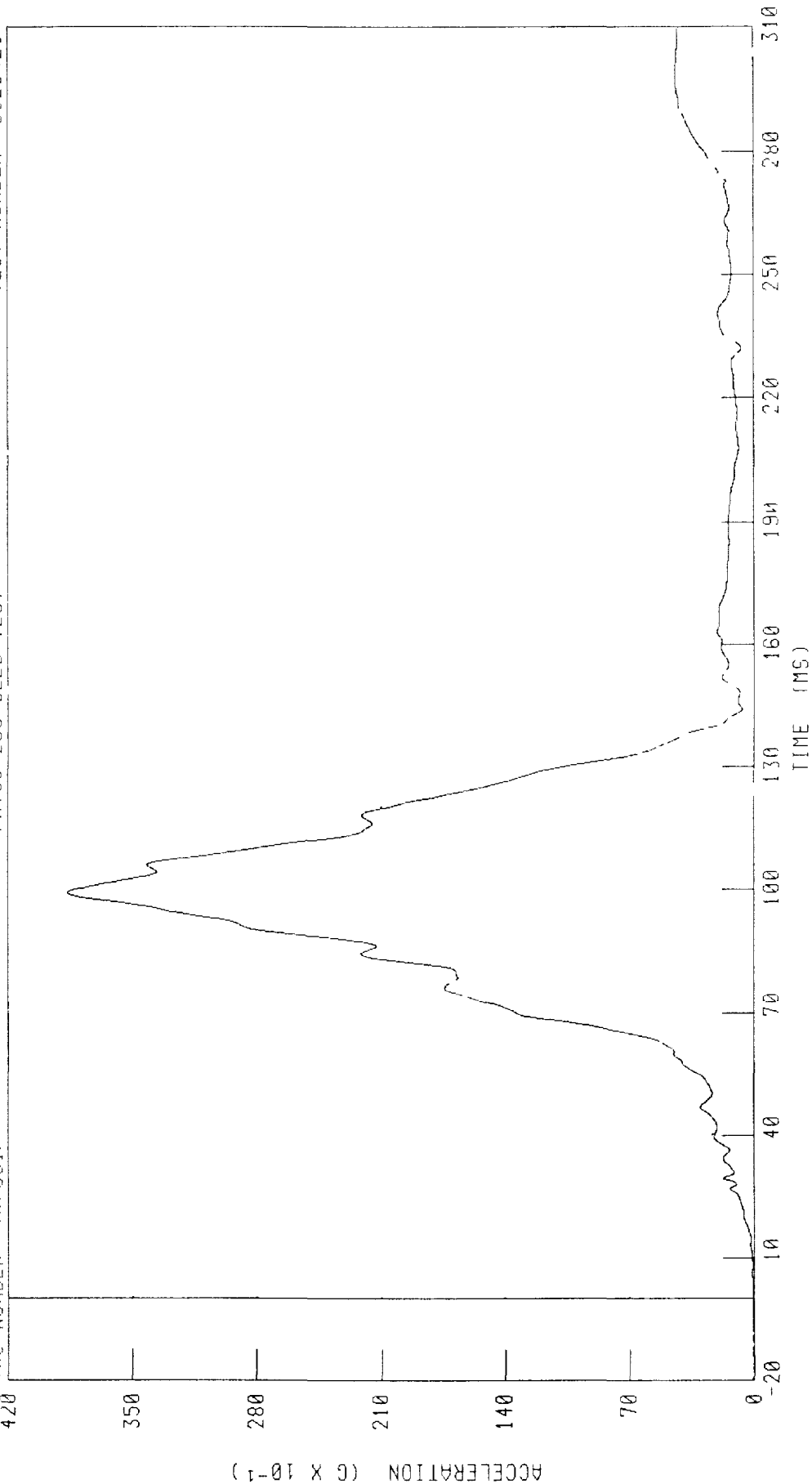
C25108 / 2002 TOYOTA CAMRY
 DRIVER CHEST Z-AXIS ACCELERATION



C25108 / 2002 TOYOTA CAMRY
 DRIVER CHEST RESULTANT ACCELERATION
 FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TR0881F



CHANNEL CSTR01 FILTER CH CLASS 130

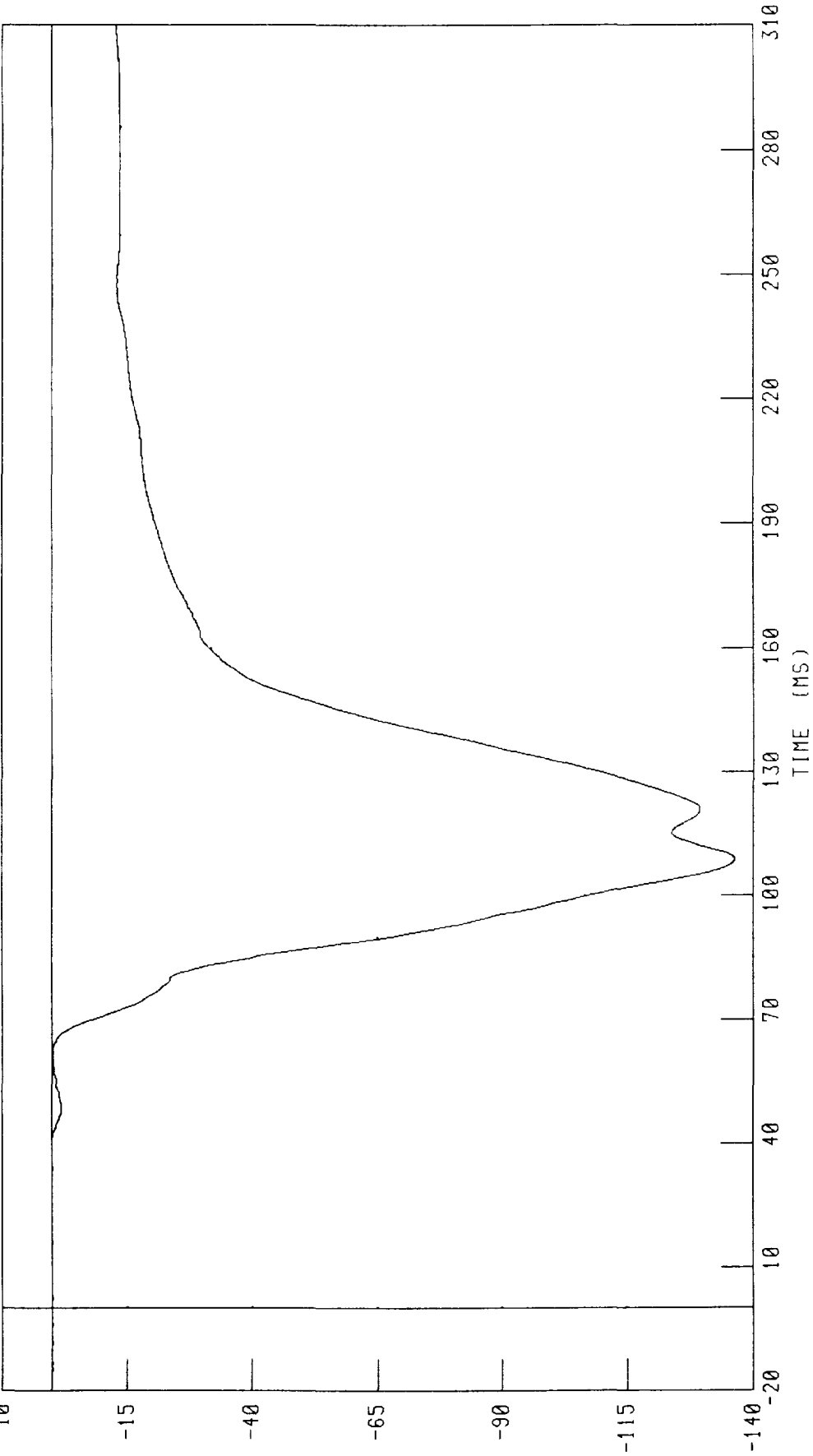
PEAK DATA 38.65 C W +J 28 MS, 0.01 G, 0 -8.64 MS

C25108 / 2002 TOYOTA CAMRY
 DRIVER CHEST DEFLECTION
 FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F

10



PEAK DATA 0 00 IN @ 31 28 MS, -1 36 IN @ 109 04 MS

CHANNEL CSTX01 FILTER CH CLASS 600

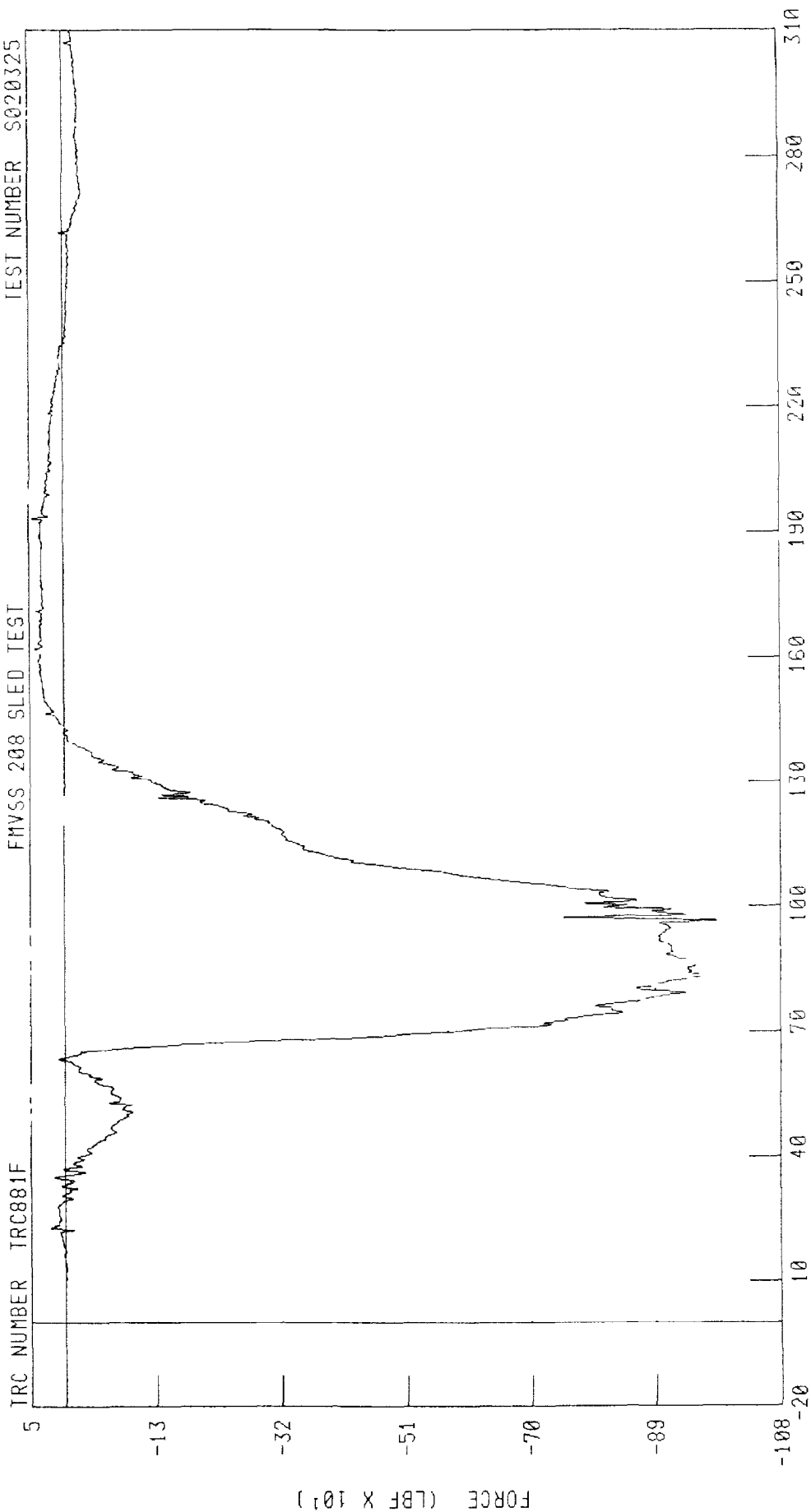
C25108 / 2002 TOYOTA CAMRY

DRIVER LEFT FEMUR FORCE

FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F

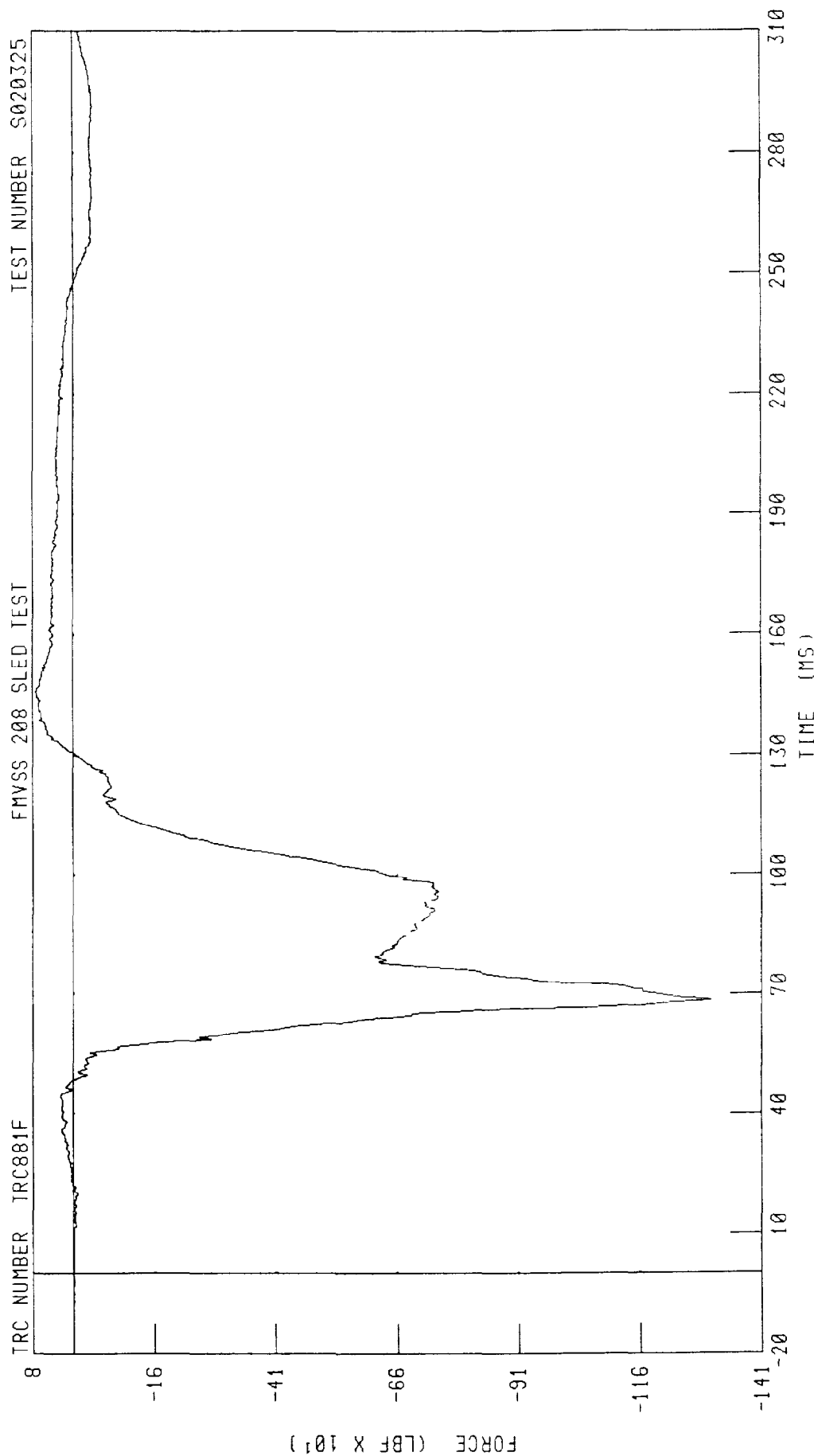


TIME (MS)

PEAK DATA 47 21 LBF @ 133 52 ms, -992 63 LBF @ 36 14 ms

CHANNEL LFMZF1 FILTER CH CLASS 500

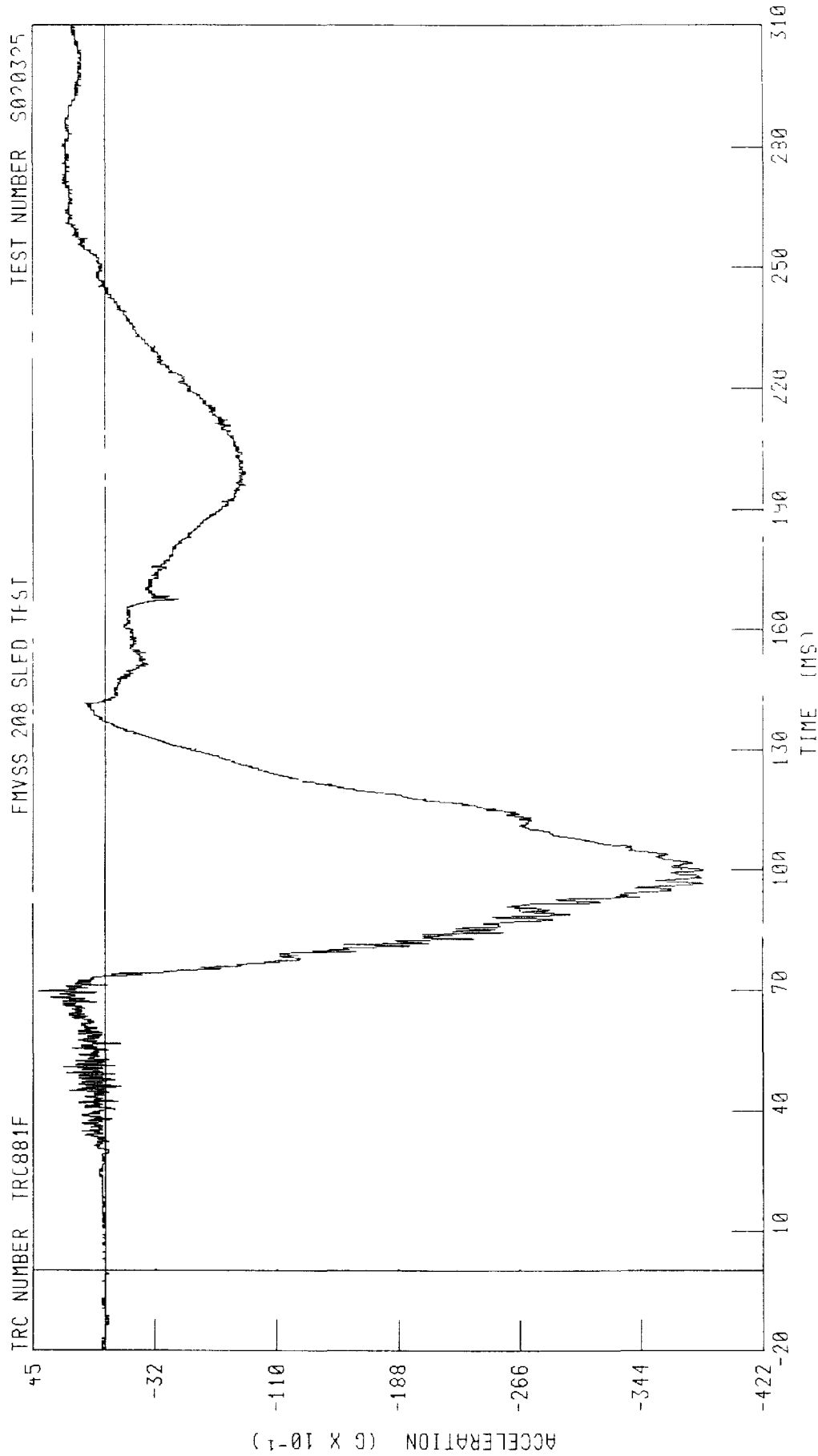
C25108 / 2002 TOYOTA CAMRY
DRIVER RIGHT FEMUR FORCE



PEAK DATA 76 23 LBF @ 145 84 MS, -1314 15 LBF @ 68 40 MS

CHANNEL RFMZFI FILTER CH CLASS 600

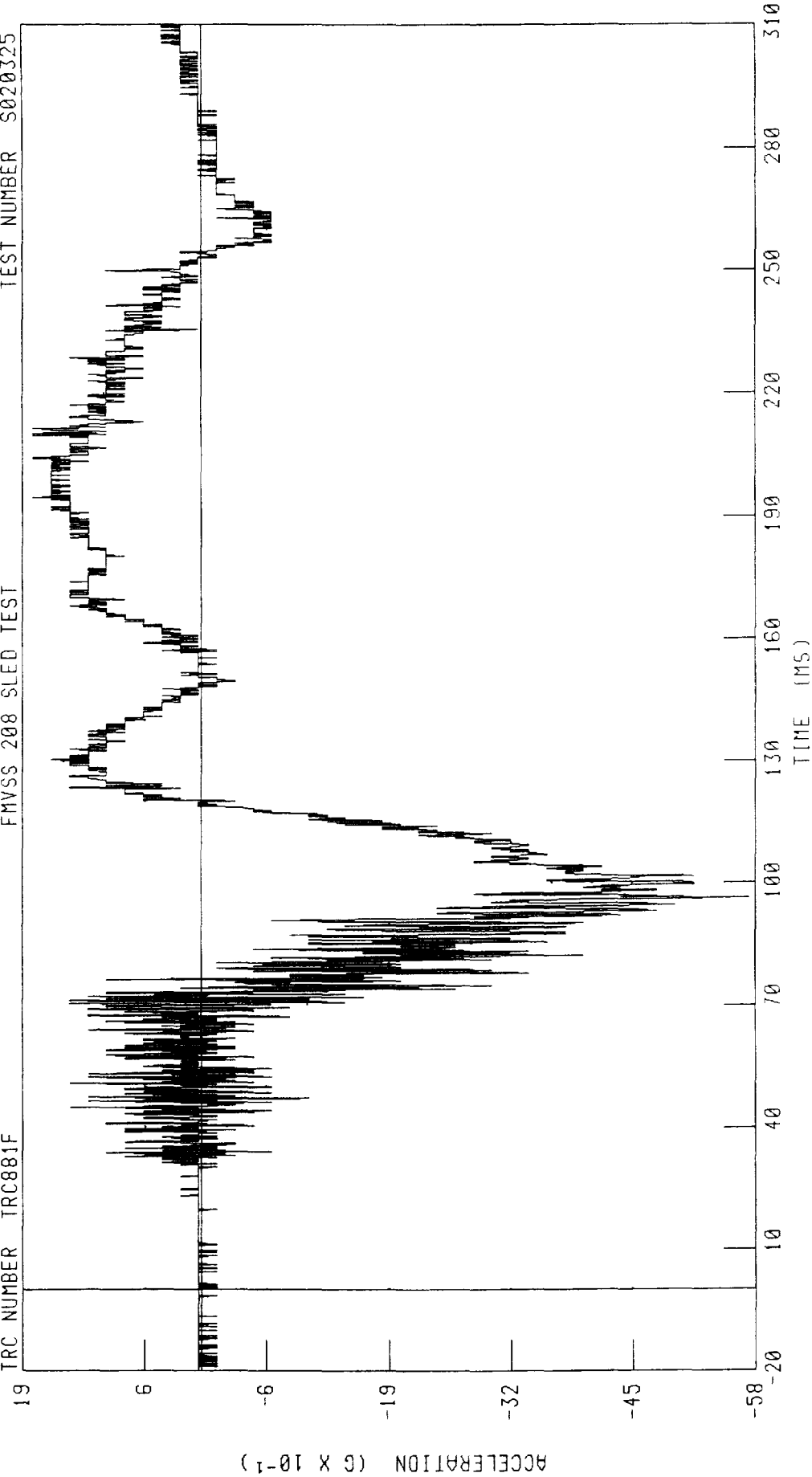
C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER HEAD X-AXIS ACCELERATION
 FMVSS 208 SLED TEST



C25108 / 2002 TOYOTA CAMRY
RIGHT FRONT PASSENGER HEAD Y-AXIS ACCELERATION
FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F



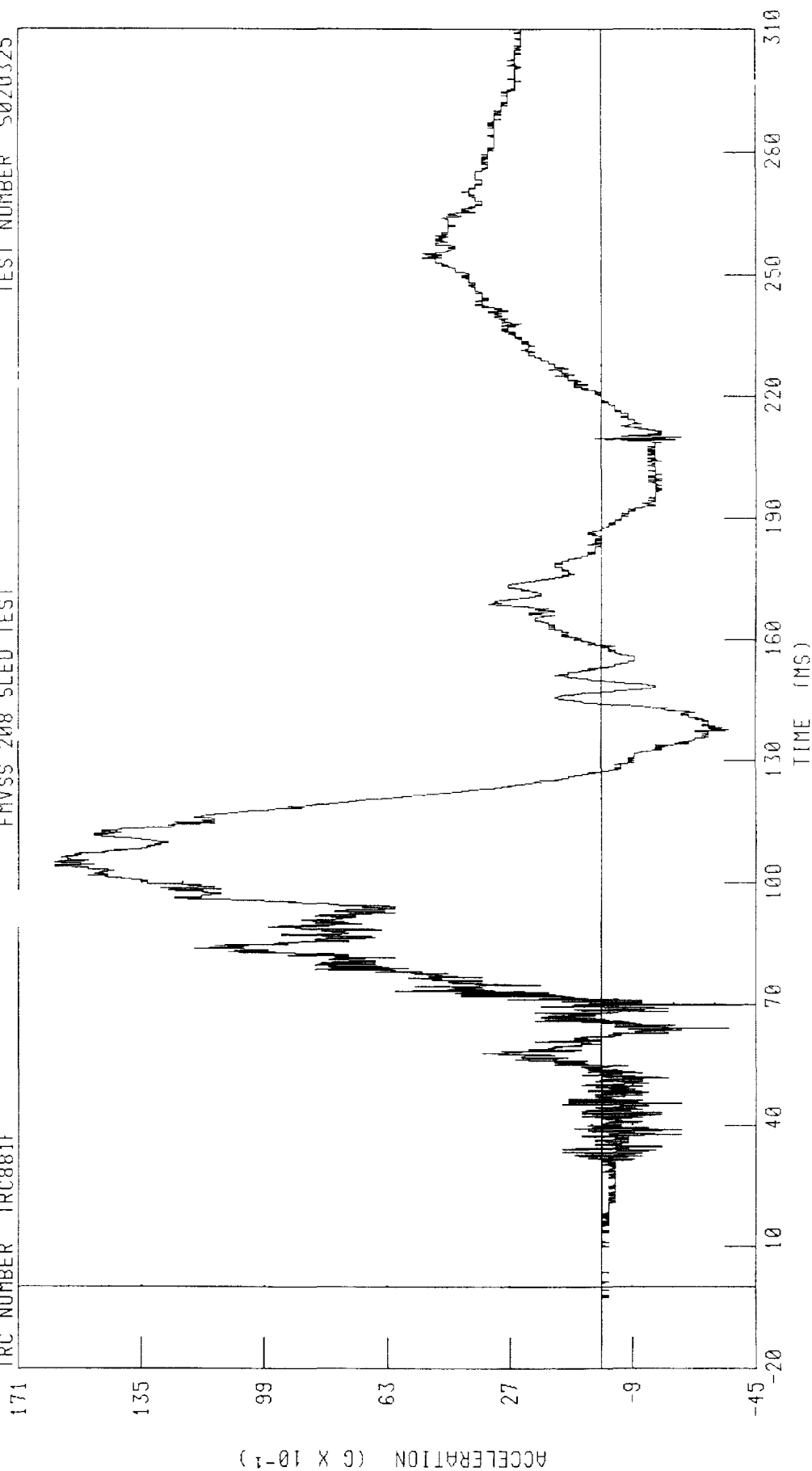
PEAK DATA 1 79 G @ 194 88 MS, -5 84 G @ 96 32 MS

CHANNEL HEDYG2 FILTER CH CLASS 1000

C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER HEAD Z-AXIS ACCELERATION
 FMVSS 208 SLED TEST

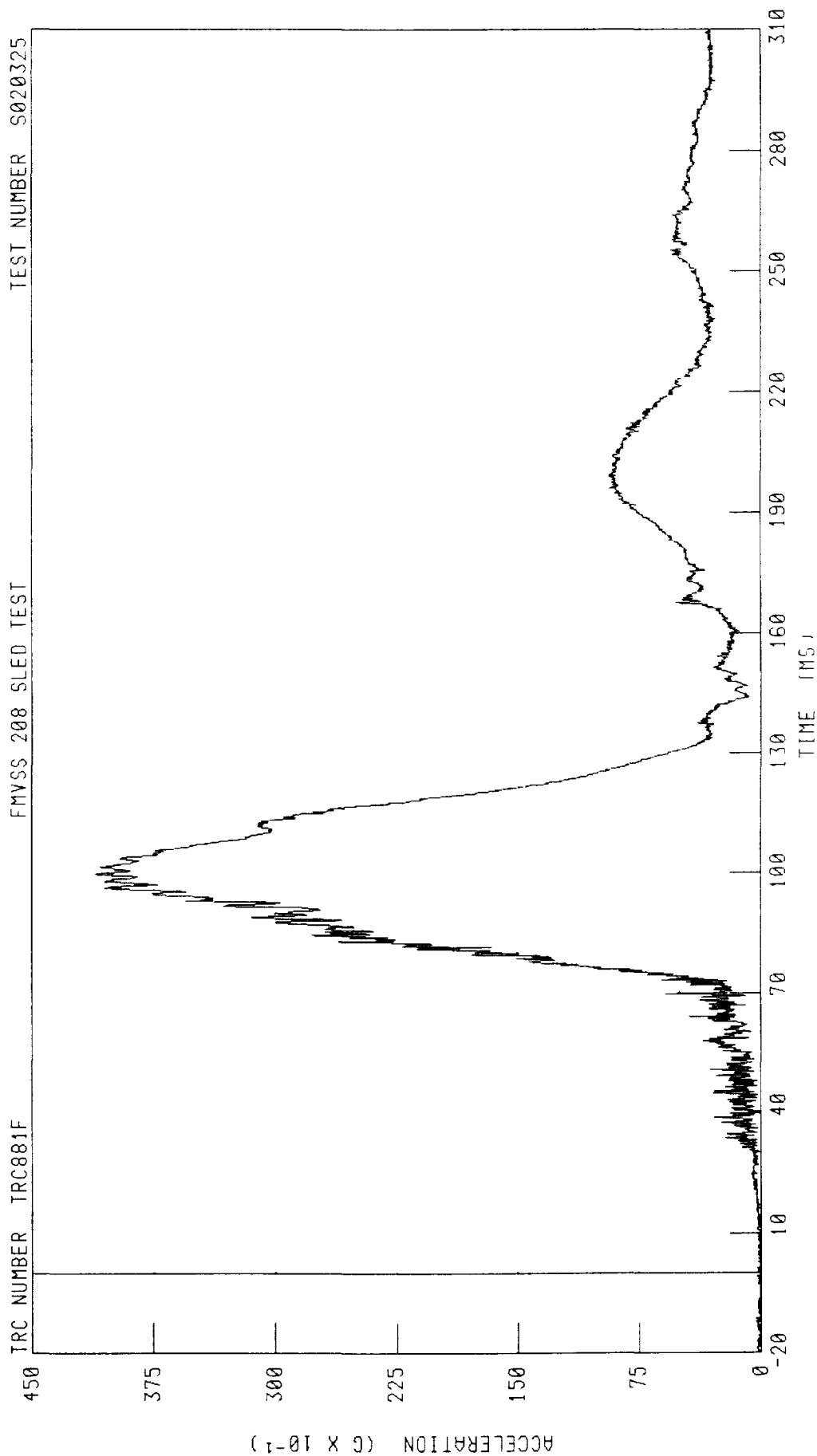
TEST NUMBER S020325

TRC NUMBER TRC881F



CHANNEL HEDZG2 FILTER FH CLASS 1000 PEAK DATA 16 05 0 @ 161 24 MS, -4 11 G @ 69 68 MS

C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER HEAD RESULTANT ACCELERATION
 FMVSS 208 SLED TEST



PEAK DATA 41 05 0 100 00 MS, 0 04 0 -19 92 MS

CHANNEL HEDRC2 FILTER CH CLASS 1000

C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER NECK X-AXIS SHEAR FORCE
 FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F

130

103

76

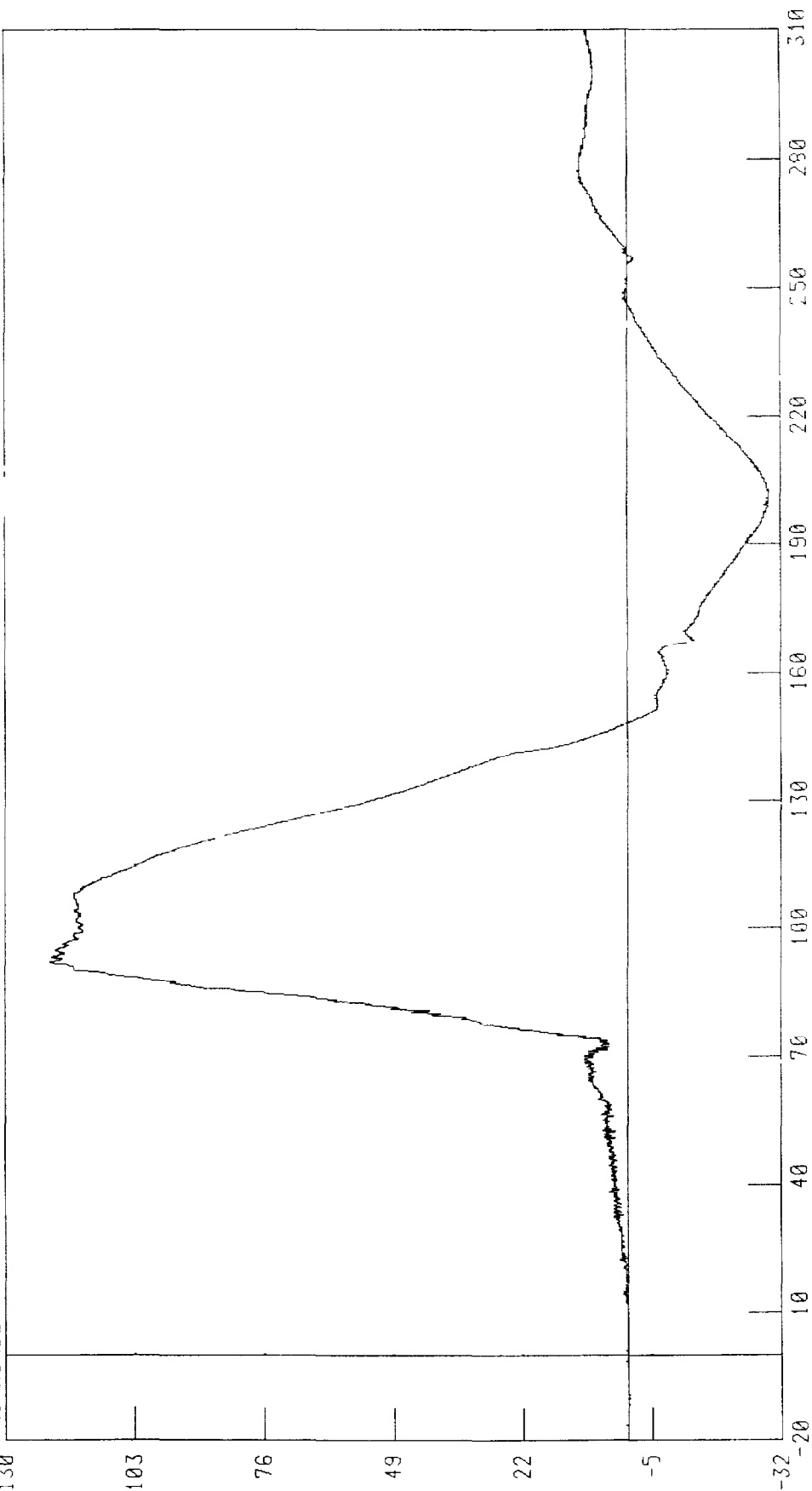
49

22

-5

-32

FORCE (N X 10³)



TIME (MS)

PEAK DATA 1207 73 N @ 3.08 MS, -295 39 N @ 192 56 MS

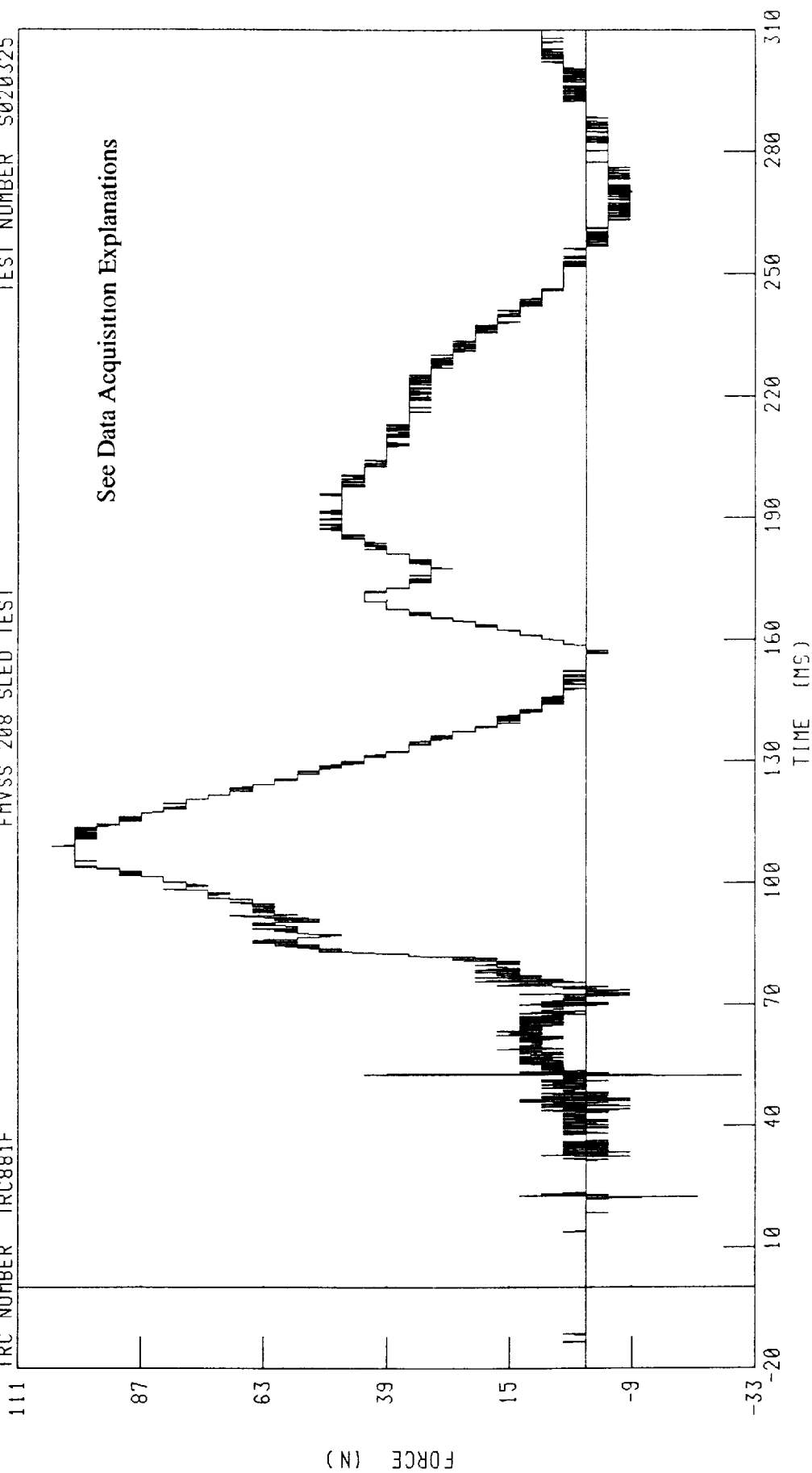
CHANNEL NEKF2 FILTER CH CLASS 1000

C25108 / 2002 TOYOTA CAMRY
RIGHT FRONT PASSENGER NECK Y-AXIS SHEAR FORCE
FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F

See Data Acquisition Explanations



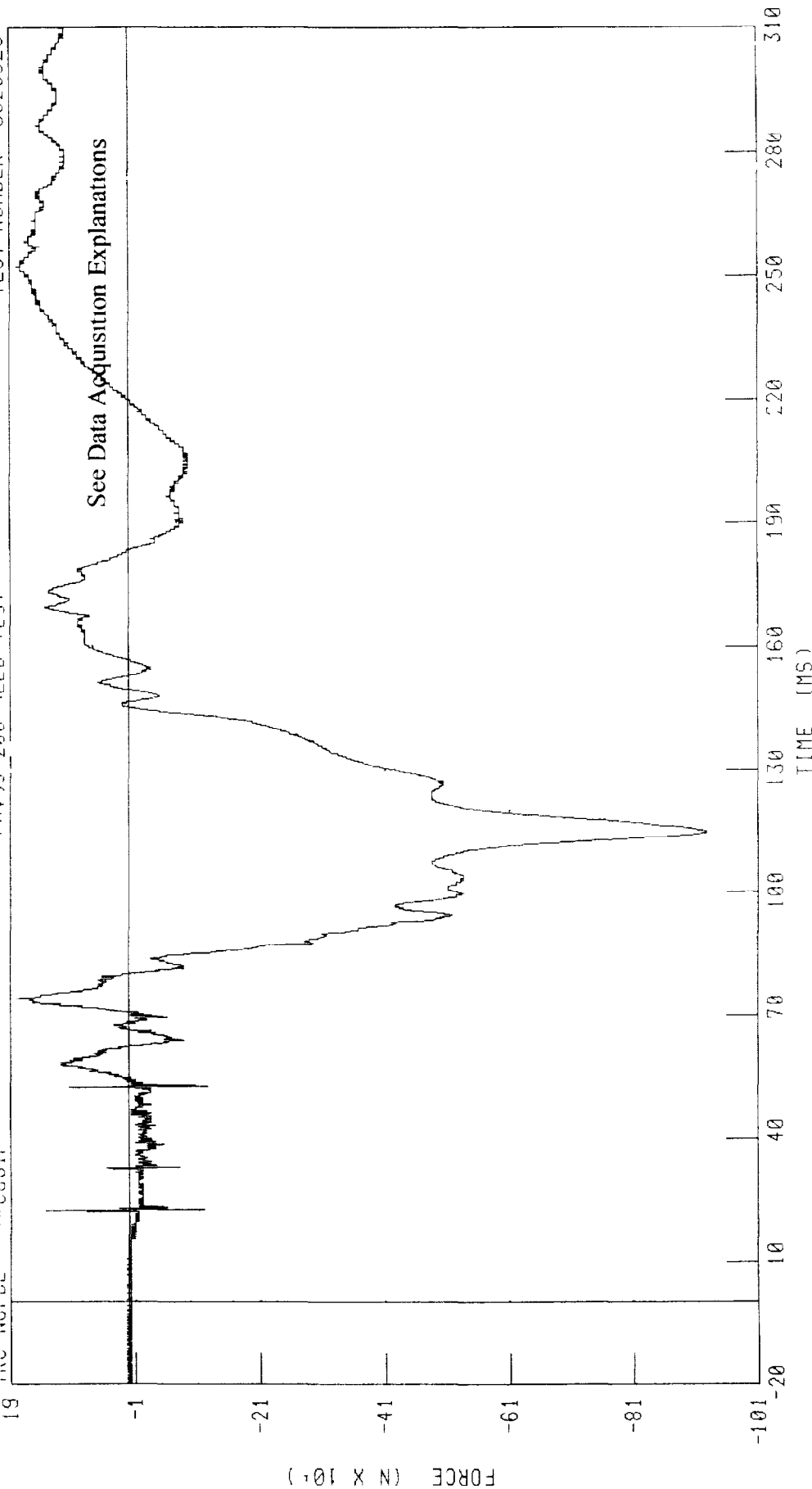
PEAK DATA 104 26 N @ 109 04 MS, -30 47 N @ 52 40 MS

CHANNEL NEKYF2 FILTER CH CLASS 1000

C25108 2002 TOYOTA CAMRY
RIGHT FRONT PASSENGER NECK Z-AXIS AXIAL FORCE
FMVSS 208 SLED TEST

TRC NUMBER TPC881F

TEST NUMBER S020325



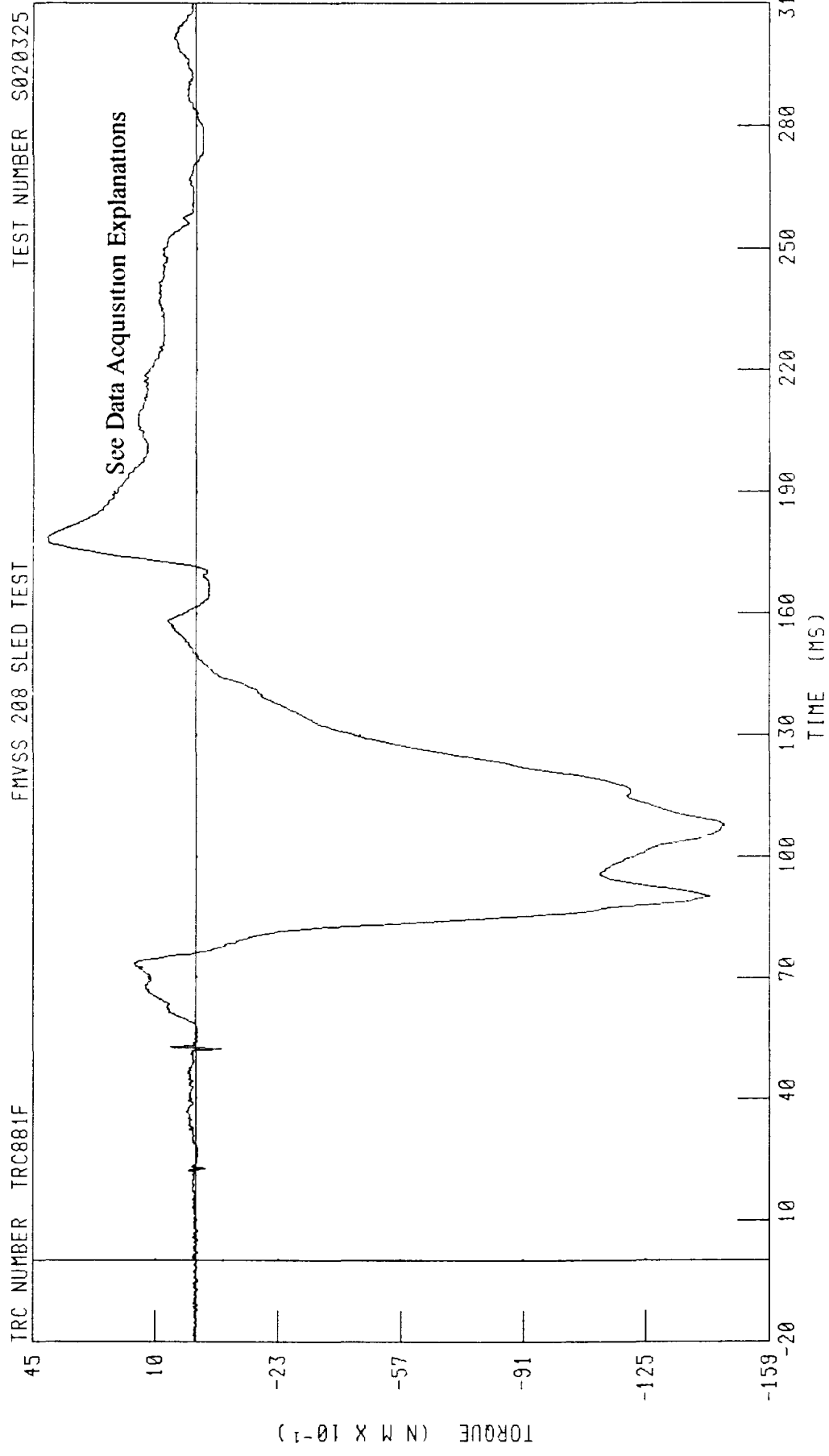
CHANNEL NEKZF2 FILTER CH CLASS 1000

PEAK DATA 18 15 N @ 74 00 MS, -927 62 N @ 114 56 MS

C25108 / 2002 TOYOTA CAMRY
RIGHT FRONT PASSENGER NECK MOMENT ABOUT X AXIS
FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F



CHANNEL NEKXN2 FILTER CH CLASS 600
PEAK DATA 4 09 N M @ 179 12 MS, -14 68 N M @ 108 00 MS

C25108 / 2002 TOYOTA CAMRY
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS
FMVSS 208 SLFD TEST

TEST NUMBER S020325

TRC NUMBER TRC881F

122

98

74

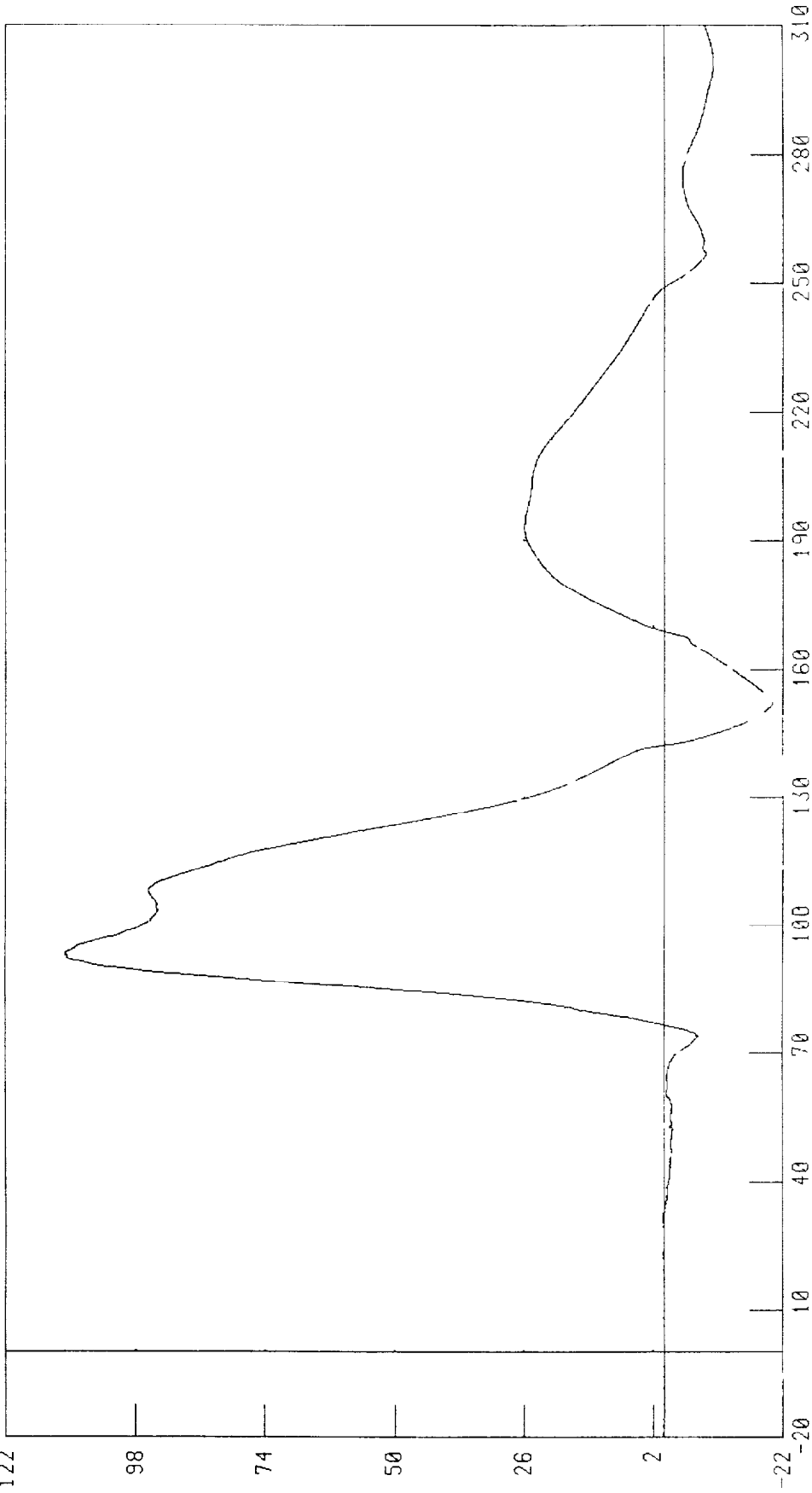
50

26

2

-22

TORQUE (N·M)



TIME (MS)

CHANNEL NEKYM2 FILTER CH CLASS 600

FEAR DATA 111 16 N H 0 93 36 MS -20 16 N H 0 15 56 MS

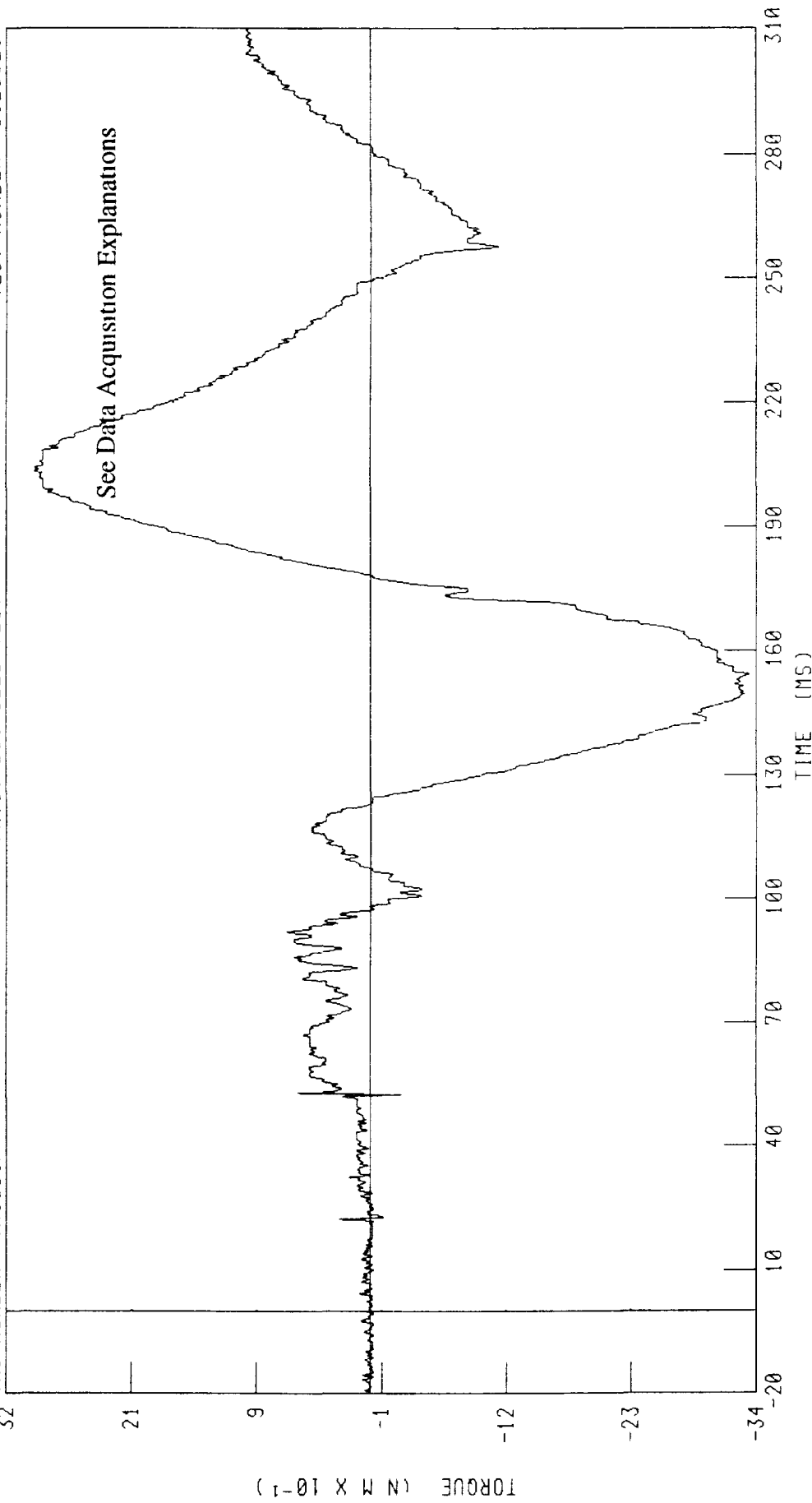
C25108 / 2002 TOYOTA CAMRY

RIGHT FRONT PASSENGER NECK MOMENT ABOUT Z AXIS

TRC NUMBER TRC881F

FMVSS 208 SLED TEST

TEST NUMBER S020325



CHANNEL NEKM2 FILTER CH CLASS 600

PEAK DATA 2 95 N M @ 204 40 MS, -3 33 N M @ 154 40 MS

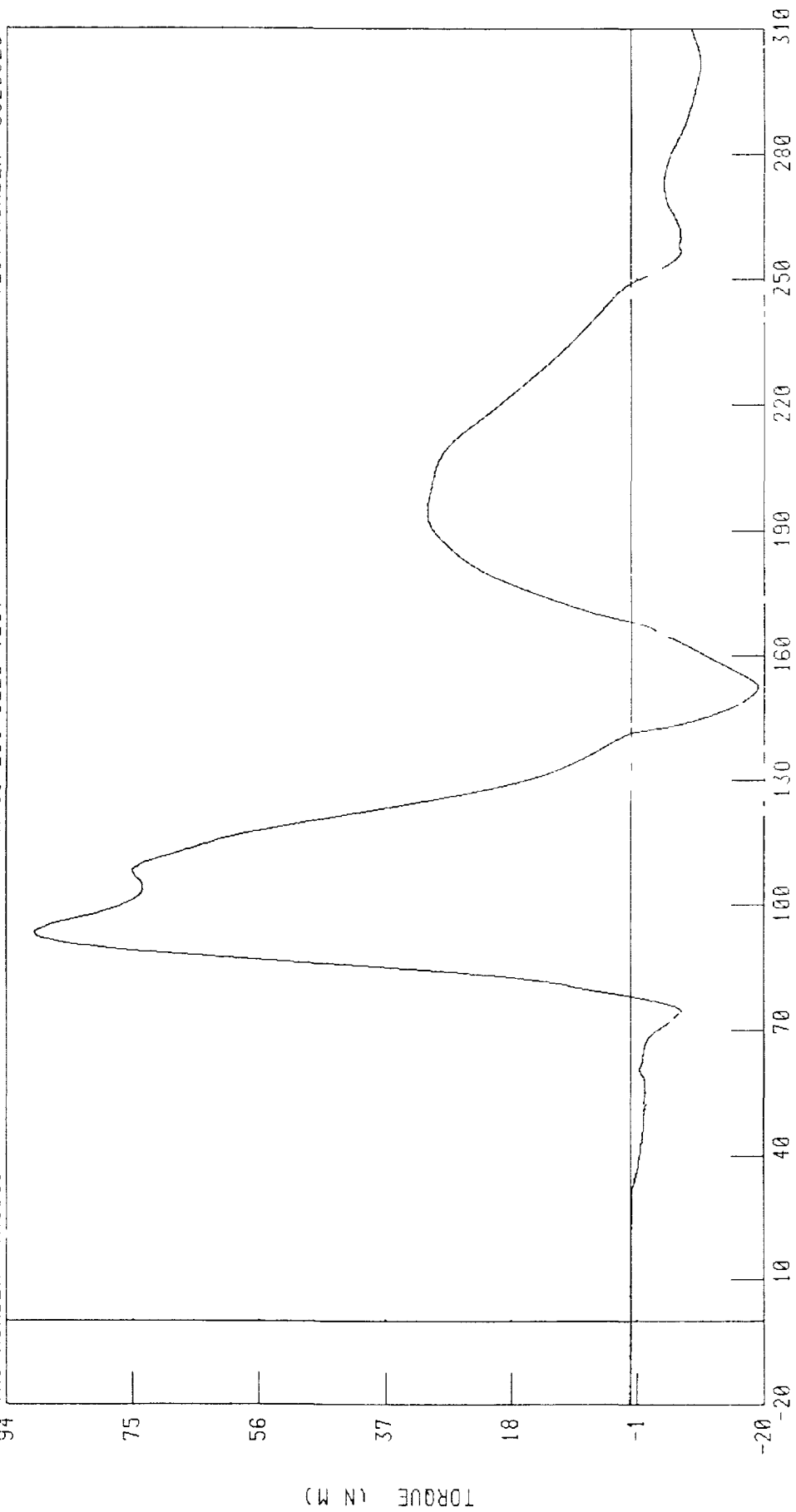
C25108 / 2002 TOYOTA CAMRY

RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS OCCIPITAL CONDYLE

TEST NUMBER S020325

TRC NUMBER TRC881F

FMVSS 208 SLED TEST

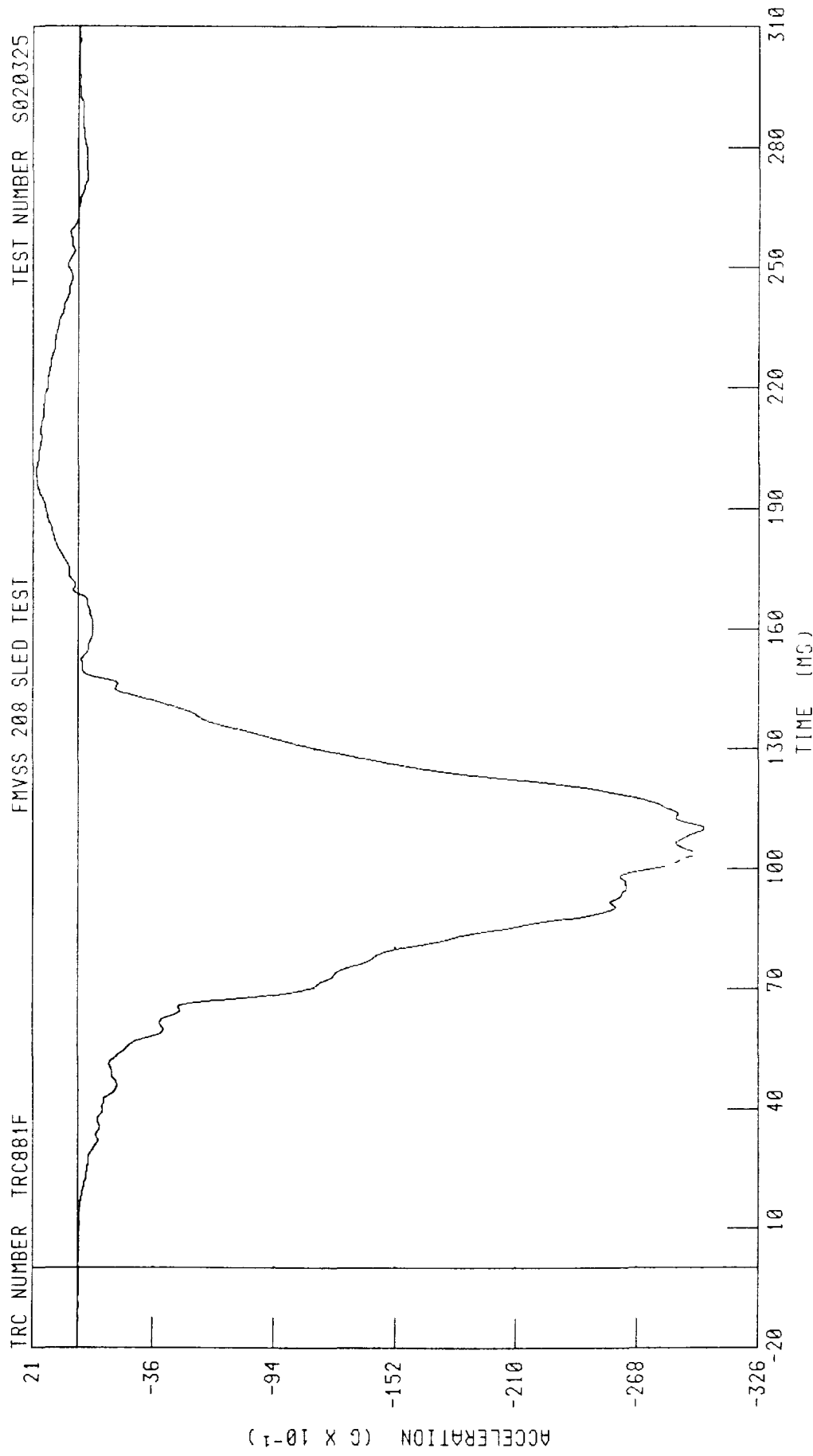


TIME (MS)

PEAK DATA 89 25 N M Ø 95 36 M, -19 00 N M Ø 152 7, 115

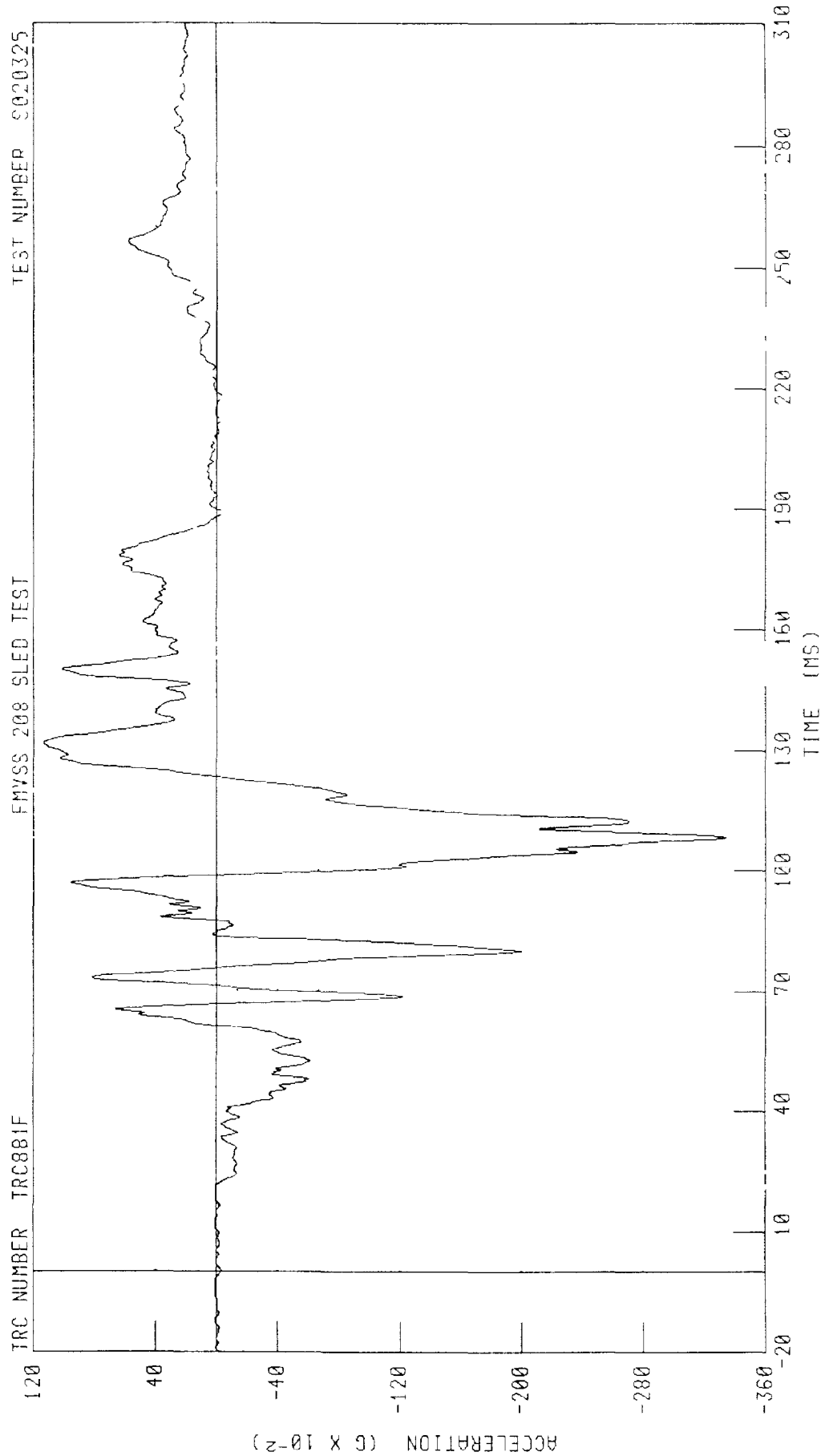
CHANNEL NEKOM2 FILTER CH CLASS 600

C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER CHEST X-AXIS ACCELERATION
 FMVSS 208 SLED TEST



CHANNEL CSTXG2 FILTER CH CLASS 180 PEAK DATA 2 09 G @ 198 96 MS, -30 03 G @ 110 08 MS

C25103 / 2002 TOYOTA CAMRY
RIGHT FRONT PASSENGER CHEST Y-AXIS ACCELERATION

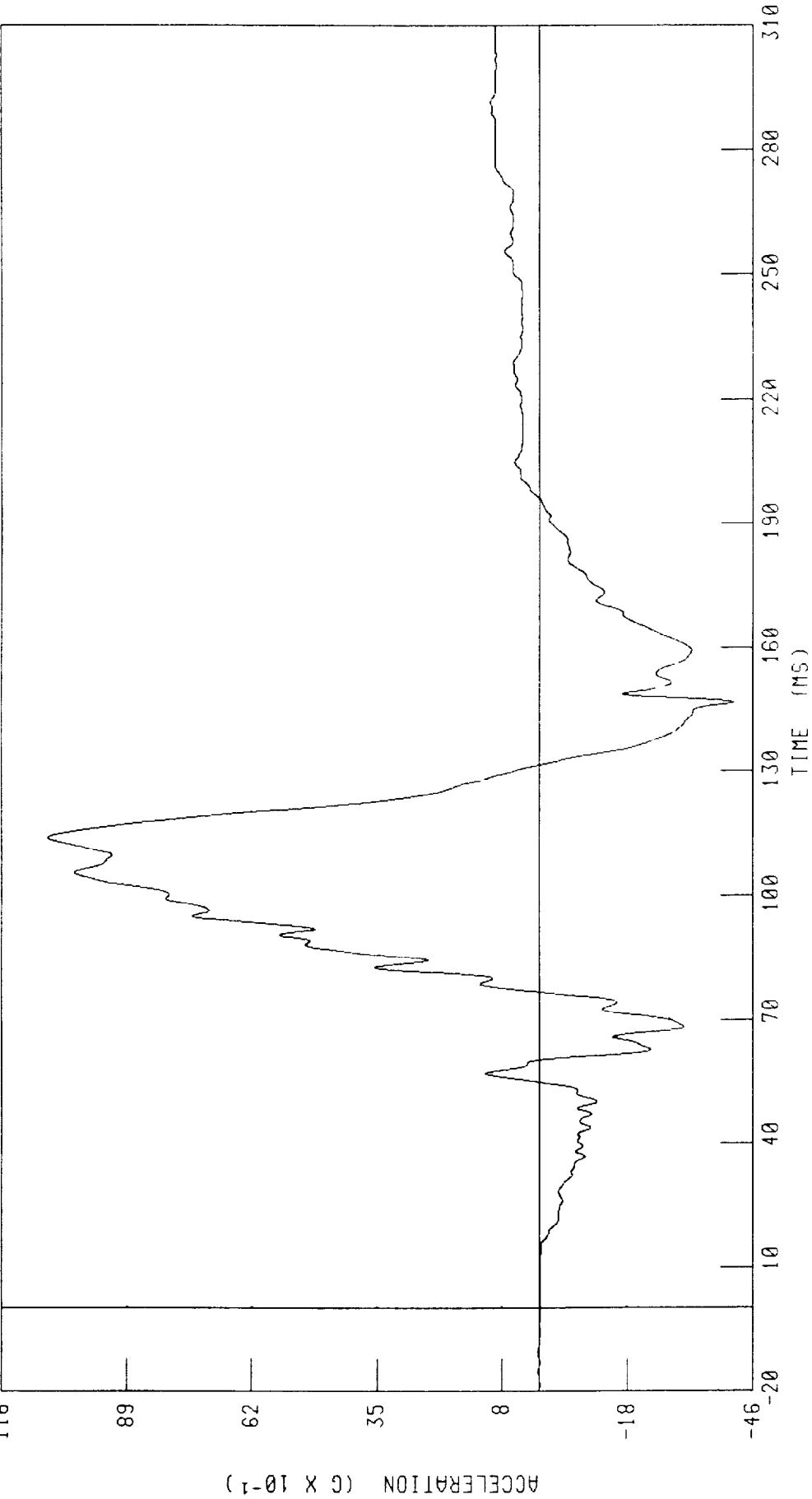


C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER CHEST Z-AXIS ACCELERATION
 FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F

116



PEAK DATA 10 60 G @ 114 08 MS, -4 20 G @ 146 80 MS

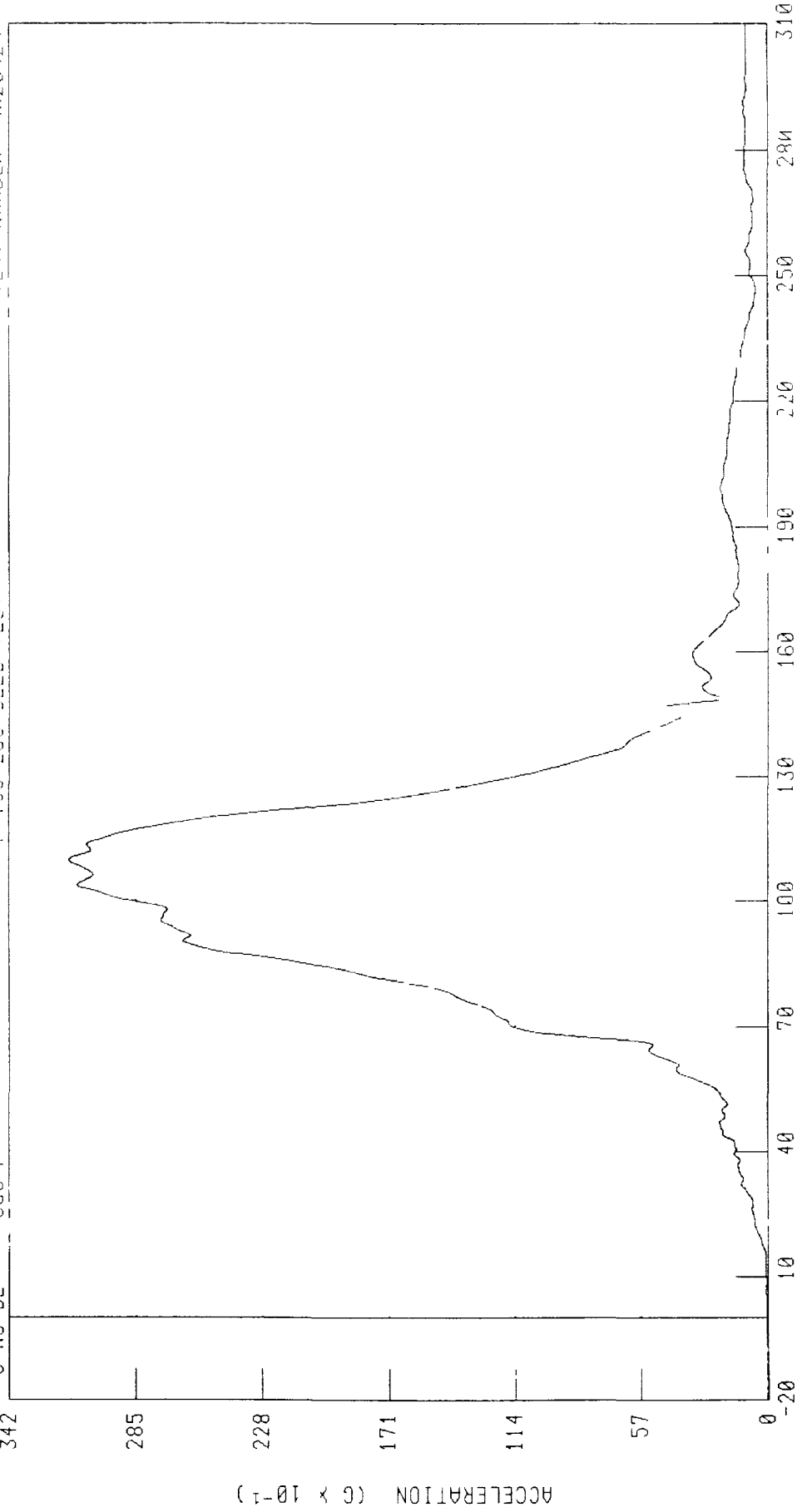
CHANNEL CSTZC2 FILTER CH CLASS 160

C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER CHEST RESULTANT ACCELERATION
 FMVSS 208 SLED TEST

TEST NUMBER 5020325

TRC NUMBER TRC881F

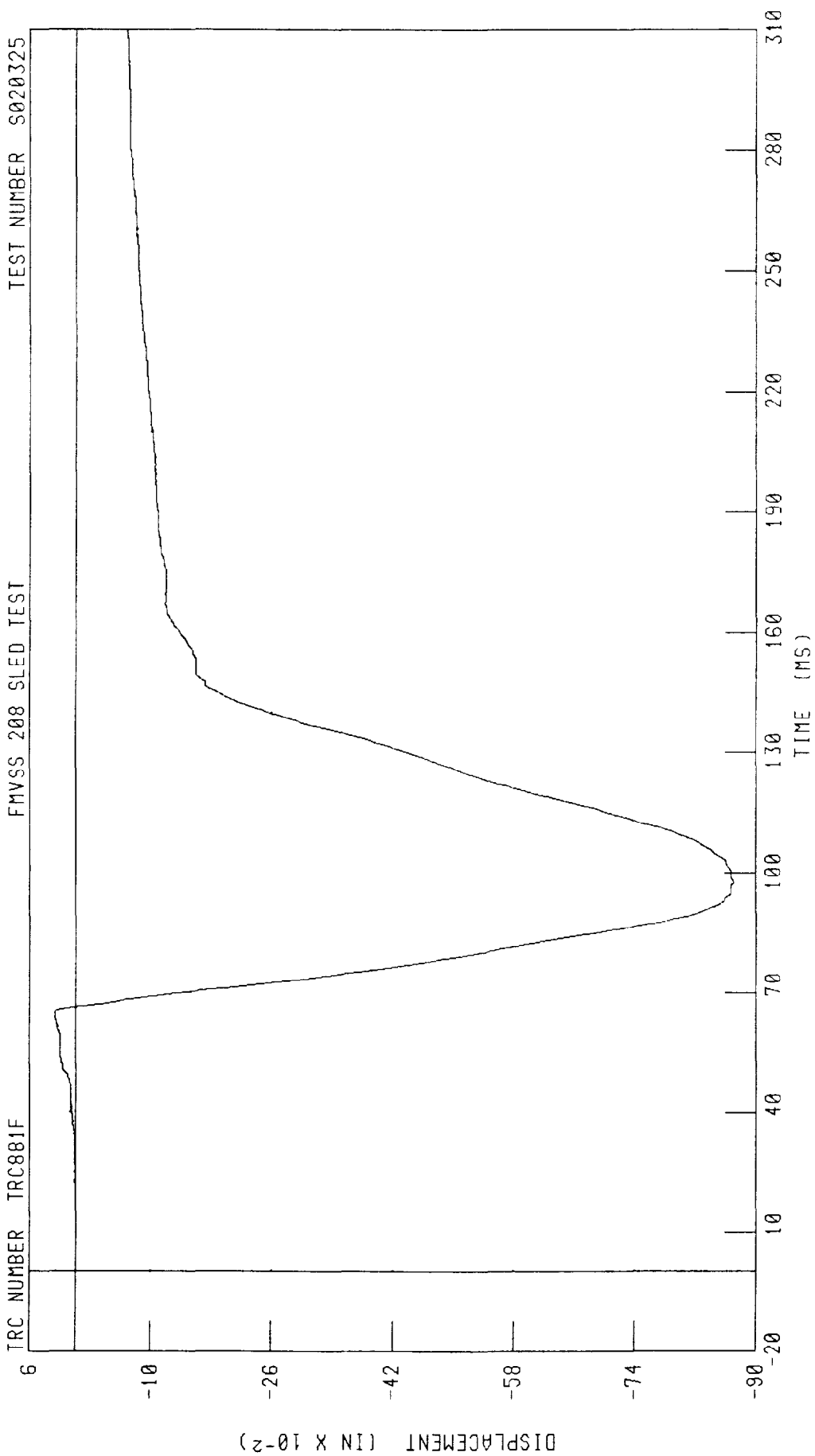
342



PEAK DATA 51 51 0 110 00 MS, 0 00 0 00 -1 1 1 MS

CHANNEL CSTRG2 FILTER CH CLASS 180

C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER CHEST DEFLECTION
 FMVSS 208 SLED TEST



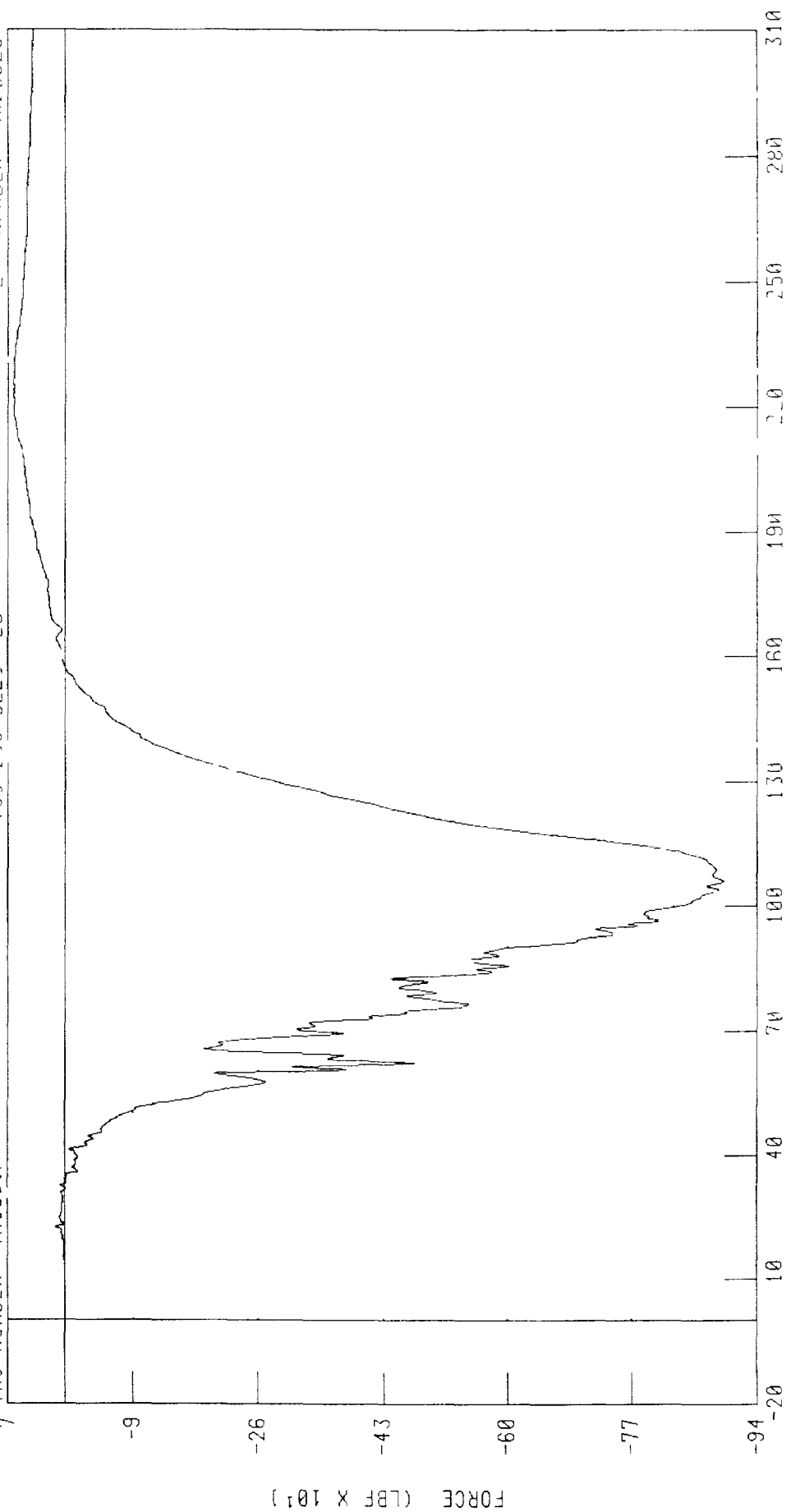
CHANNEL CSTXD2 FILTER CH CLASS 600

PEAK DATA 0 03 IN @ 63 68 MS, -0 87 IN @ 97 68 MS

C25108 / 2002 TOYOTA CAMRY
 RIGHT FRONT PASSENGER LEFT FEMUR FORCE
 FMVSS 208 SLED TEST

7 TRC NUMBER TRC881F

TEST NUMBER 5u20325



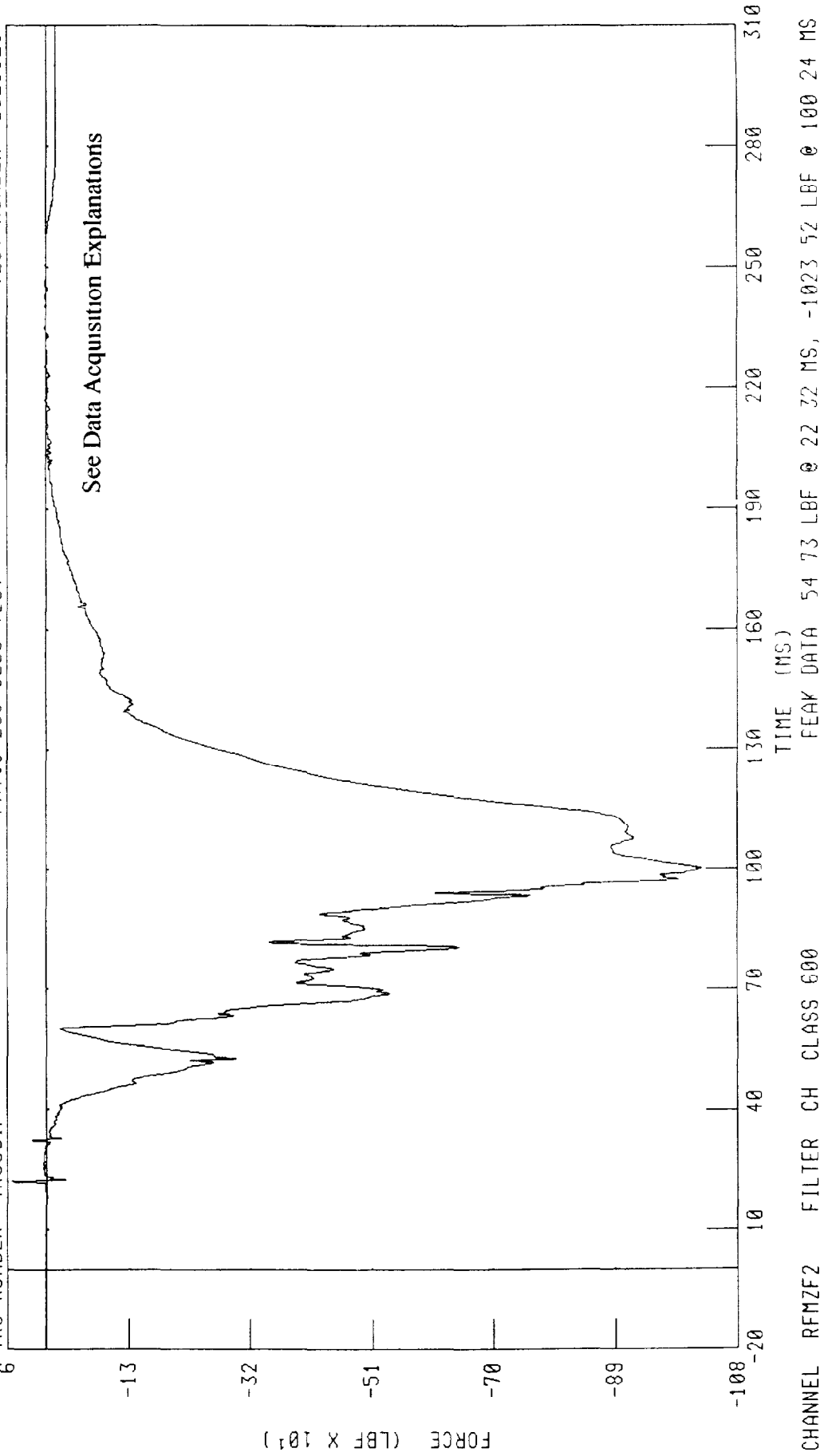
TIME (MS)
 PEAK DATA 70 39 LBF @ 22.4 H, -893 17 LBF @ 104.24 Hs

CHANNEL LFMZF2 FILTER CH CLASS 600

C25108 / 2002 TOYOTA CAMRY
RIGHT FRONT PASSENGER RIGHT FEMUR FORCE
FMVSS 208 SLED TEST

TEST NUMBER S020325

TRC NUMBER TRC881F



CHANNEL RFMZP2 FILTER CH CLASS 600

TIME (MS)
PEAK DATA 54 73 LBF @ 22 32 MS, -1023 52 LBF @ 100 24 MS

Appendix C

Manufacturer's Vehicle Information

SECTION 1-3

OPERATION OF INSTRUMENTS AND CONTROLS

Seats, Seat belts, Steering wheel and Mirrors

Seats	36
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Auto anti-glare inside rear view mirror	84
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Seats

While the vehicle is being driven all vehicle occupants should have the seatback upright, sit well back in the seat and properly wear the seat belts provided

CAUTION

Do not drive the vehicle unless the occupants are properly seated. Do not allow sitting on top of a folded-down seatback, or in the luggage compartment or cargo area. Persons not properly seated and/or properly restrained by seat belts can be severely injured in the event of emergency braking or a collision.

- During driving, do not allow passengers to stand up or move around between seats. Severe injuries can occur in the event of emergency braking or a collision.

Front seats—

—Front seat precautions

(on vehicles with SRS side airbags)

CAUTION

The SRS side airbags are installed in the driver and front passenger seats. Observe the following precautions

- Do not lean against the front door when the vehicle is in use, since the side airbag inflates with considerable speed and force. Otherwise, you may be killed or seriously injured.
- Do not use accessories for the seats which cover the parts where the side airbags inflate. Such accessories may prevent the side airbags from activating correctly, causing death or serious injury
- Do not modify or replace the seats or upholstery of the front seats with the side airbags. Such changes may disable the system or cause the side airbags to inflate accidentally, resulting in death or serious injury. Consult your Toyota dealer if you insist on modifications of this kind.

—Seat adjustment precautions

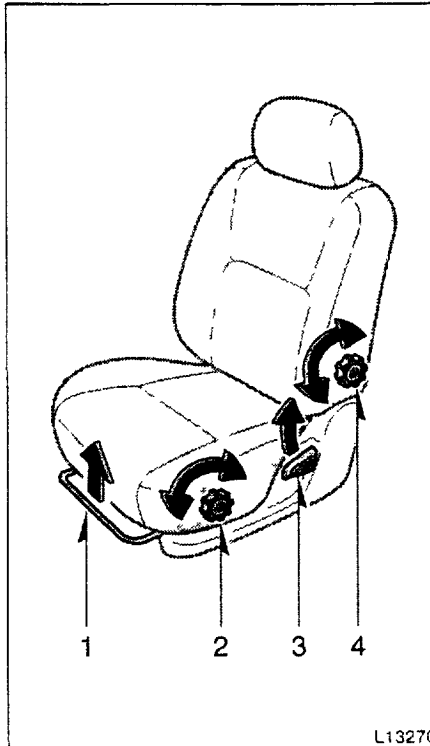
Adjust the driver's seat so that the foot pedals, steering wheel and instrument panel controls are within easy reach of the driver

CAUTION

- Adjustments should not be made while the vehicle is moving, as the seat may unexpectedly move and cause the driver to lose control of the vehicle
- When adjusting the seat, be careful that the seat does not hit a passenger or luggage
- After adjusting the seat position, try sliding it forward and backward to make sure it is locked in position.
- After adjusting the seatback, push back your body to make sure it is locked in position.
- Do not put objects under the seats. Otherwise, the objects may interfere with the seat-lock mechanism or unexpectedly push up the seat position adjusting lever and the seat may suddenly move, causing the driver to lose control of the vehicle

—Adjusting front seats
(manual seat)

• While adjusting the seat, do not put your hands under the seat or near the moving parts. Otherwise, you may catch and injure your hands or fingers.



1. SEAT POSITION ADJUSTING LEVER
Hold the center of the lever and pull it up. Then slide the seat to the desired position with slight body pressure and release the lever.

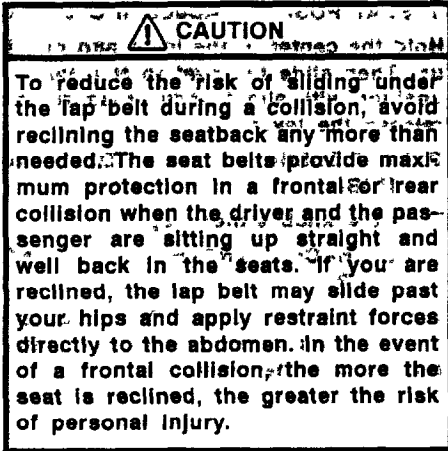
2. SEAT CUSHION HEIGHT ADJUSTING KNOB

Turn the knob either way.

3. SEATBACK ANGLE ADJUSTING LEVER

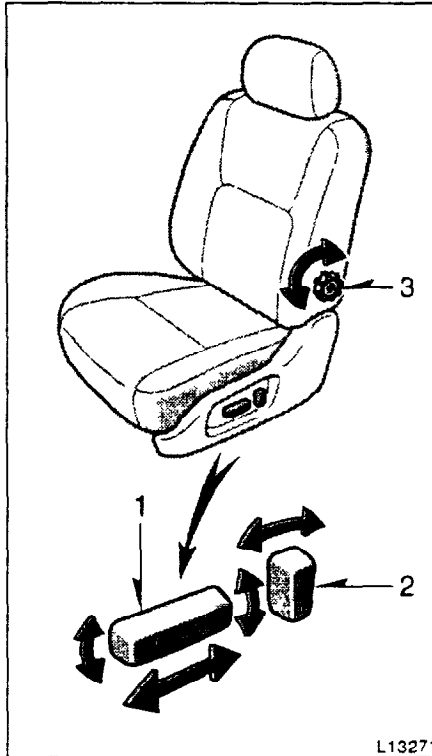
Lean forward and pull the lever up. Then lean back to the desired angle and release the lever.

—Adjusting front seats
(power seat)



**4 SEAT LUMBAR SUPPORT
ADJUSTING KNOB**

Turn the knob either way.



**1. SEAT POSITION AND SEAT CUSHION
HEIGHT ADJUSTING SWITCH**

Move the control switch in the desired direction.

Releasing the switch will stop the seat at that position.

Do not place anything under the front seats as this might interfere with the seat movement.

**2. SEATBACK ANGLE ADJUSTING
SWITCH**

Move the control switch in the desired direction.

Releasing the switch will stop the seatback at that position.

L13271

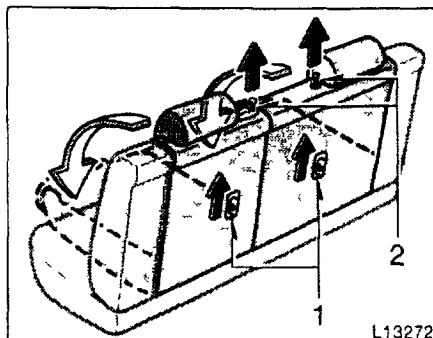
CAUTION

To reduce the risk of sliding under the lap belt during a collision, avoid reclining the seatback any more than needed. The seat belts provide maximum protection in a frontal or rear collision when the driver and the passenger are sitting up straight and well back in the seats. If you are reclined, the lap-belt may slide past your hips and apply restraint forces directly to the abdomen. In the event of a frontal collision, the more the seat is reclined, the greater the risk of personal injury.

3 SEAT LUMBAR SUPPORT ADJUSTING KNOB

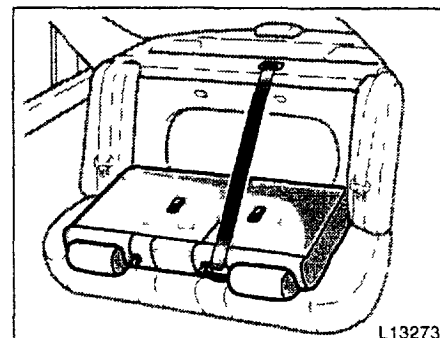
Turn the knob either way

Fold-down rear seat



1. Pull up the seatback security lock lever 1 to the unlock position.
- 2 Pull up the lock release button 2
- 3 Fold down the seatback

Each seatback can be folded separately



This will enlarge the trunk as far as the seatbacks. See "Luggage stowage precautions" on page 192 in Section 2 for precautions in loading luggage

NOTICE

Make sure the luggage loaded in the enlarged trunk will not damage the webbing of the rear center seat belt when the left seatback is folded down.

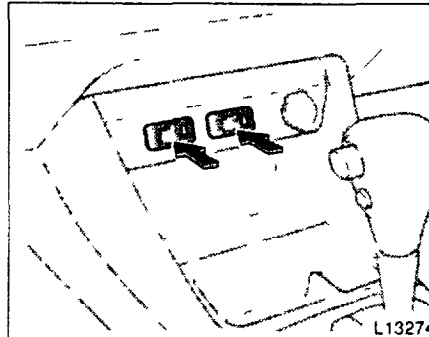
CAUTION

When returning the seatback to the upright position, observe the following precautions in order to prevent personal injury in a collision or sudden stop:

Make sure the seatback is securely locked by pushing forward and rearward on the top of the seatback and that the red mark at the button on the top of the seatback cannot be seen. Failure to do so will prevent the seat belt from operating properly.

Make sure the seat belts are not twisted or caught in the seatback and are arranged in the proper position and are ready to use.

Seat heaters



To turn on the seat heater, push the switch. To turn off the seat heater, push the switch once again.

The key must be in the 'ON' position.

CAUTION

Occupants must use caution when operating the seat heater because it may make them feel too hot or cause burns at low temperatures (erythema, varicella). Use extra caution for:

- Babies, small children, elderly persons, sick persons or handicapped persons

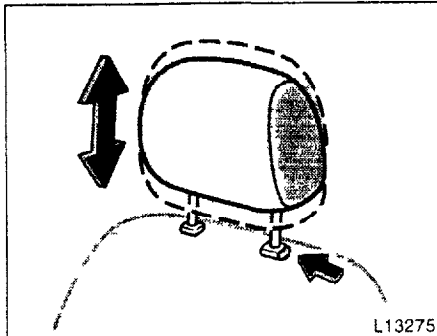
- Persons who have delicate skin
- Persons who are exhausted
- Persons who have taken alcohol or drugs which induce sleep (sleeping drug, cold remedy, etc.).

To prevent the seat overheating, do not use the seat heater with a blanket, cushion, or other insulating objects which cover the seat.

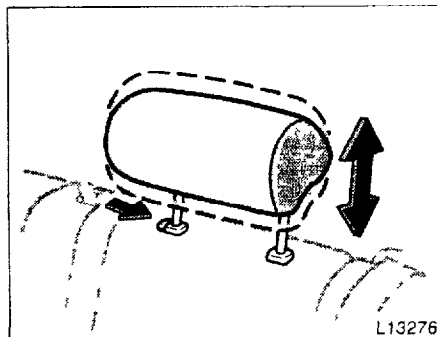
NOTICE

- ◆ Do not put unevenly weighed objects on the seat and do not stick sharp objects (needles, nails, etc.) into the seat.
- ◆ When cleaning the seats, do not use organic substances (paint thinner, benzene, alcohol, gasoline, etc.) They may damage the heater and seat surface.
- ◆ To prevent the battery from being discharged, turn the switch off when the engine is not running.

Head restraints



Front



Rear

For your safety and comfort, adjust the head restraint before driving

To raise Pull it up

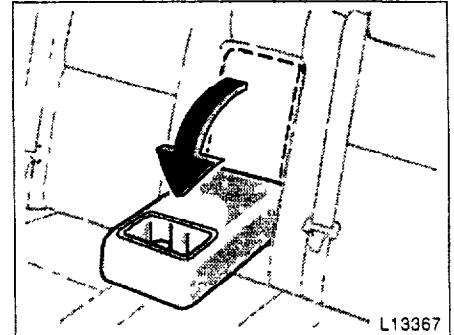
To lower Push it down while pressing the lock release button

The head restraint is most effective when it is close to your head. Therefore using a cushion on the seatback is not recommended

CAUTION

- Adjust the center of the head restraint so that it is closest to the top of your ears.
- After adjusting the head restraint, make sure it is locked in position
- Do not drive with the head restraints removed

Armrest



To use the armrest, pull it out as shown above

Seat belts—

—Seat belt precautions

Toyota strongly urges that the driver and passengers in the vehicle be properly restrained at all times with the seat belts provided. Failure to do so could increase the chance of injury and/or the severity of injury in accidents.

Child. Use a child restraint system appropriate for the child until the child becomes large enough to properly wear the vehicle's seat belts. See "Child restraint" on page 66 for details.

If a child is too large for a child restraint system, the child should sit in the rear seat and must be restrained using the vehicle's seat belt. According to accident statistics, the child is safer when properly restrained in the rear seat than in the front seat.

If a child must sit in the front seat, the seat belts should be worn properly. If an accident occurs and the seat belts are not worn properly, the force of the rapid inflation of the airbag may cause death or serious injury to the child.

Do not allow the child to stand up or kneel on either rear or front seats. An unrestrained child could suffer serious injury or death during emergency braking or a collision. Also, do not let the child sit on your lap. It does not provide sufficient restraint.

Pregnant woman. Toyota recommends the use of a seat belt. Ask your doctor for specific recommendations. The lap belt should be worn securely and as low as possible over the hips and not on the waist.

Injured person. Toyota recommends the use of a seat belt. Depending on the injury, first check with your doctor for specific recommendations.

CAUTION

Persons should ride in their seats properly wearing their seat belts whenever the vehicle is moving. Otherwise, they are much more likely to suffer serious bodily injury or death in the event of sudden braking or a collision.

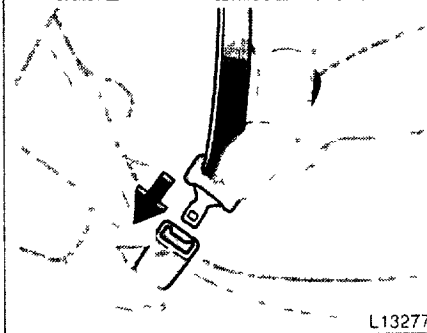
When using the seat belts, observe the following:

- Use the belt for only one person at a time. Do not use a single belt for two or more people—even children.
- Avoid reclining the seatbacks too much. The seat belts provide maximum protection when the seatbacks are in the upright position. (Refer to the seat adjustment instructions.)
- Be careful not to damage the belt webbing or hardware. Take care that they do not get caught or pinched in the seat or doors.
- Inspect the belt system periodically. Check for cuts, fraying, and loose parts. Damaged parts should be replaced. Do not disassemble or modify the system.

Keep the belts clean and dry. If they need cleaning, use a mild soap solution or lukewarm water. Never use bleach, dye, or abrasive cleaners—they may severely weaken the belts. (See "Cleaning the Interior" on page 235 in Section 5.)

- Replace the belt assembly (including bolts) if it has been used in a severe impact. The entire assembly should be replaced even if damage is not obvious.

—Front and rear seat belts



Adjust the seat as needed (front seats only) and sit up straight and well back in the seat. To fasten your belt, pull it out of the retractor and insert the tab into the buckle.

You will hear a click when the tab locks into the buckle.

The seat belt length automatically adjusts to your size and the seat position.

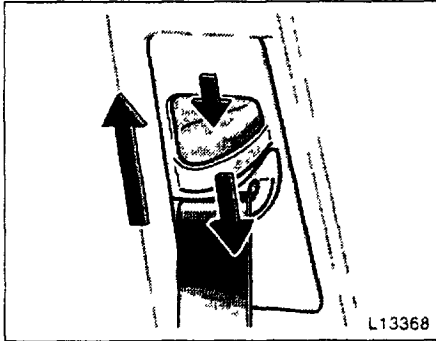
The retractor will lock the belt during a sudden stop or on impact. It also may lock if you lean forward too quickly. A slow, easy motion will allow the belt to extend, and you can move around freely.

If the seat belt cannot be pulled out of the retractor, firmly pull the belt and release it. You will then be able to smoothly pull the belt out of the retractor.

When a passenger's shoulder belt is completely extended and is then retracted even slightly, the belt is locked in that position and cannot be extended. This feature is used to hold the child restraint system securely. (For details, see Child restraint on page 66 in this section.) To free the belt again, fully retract the belt and then pull the belt out once more.

CAUTION

- After inserting the tab, make sure the tab and buckle are locked and that the belt is not twisted.
- Do not insert coins, clips, etc. in the buckle as this may prevent you from properly latching the tab and buckle.
- If the seat belt does not function normally, immediately contact your Toyota dealer. Do not use the seat until the seat belt is fixed. It cannot protect an adult occupant or your child from injury.



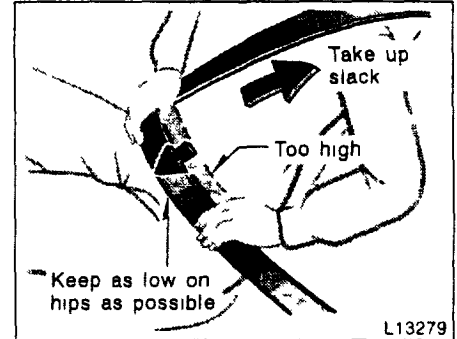
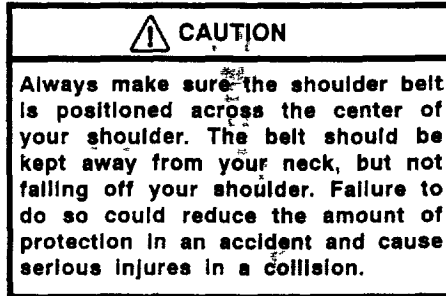
Seat belts with an adjustable shoulder anchor—

Adjust the shoulder anchor position to your size.

To raise Slide the anchor up

To lower Push in the lock release button and slide the anchor down

After adjustment make sure the anchor is locked in position

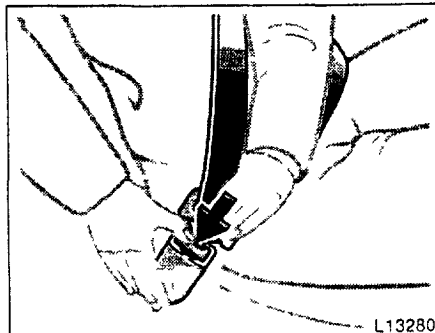


Adjust the position of the lap and shoulder belts

Position the lap belt as low as possible on your hips—not on your waist then adjust it to a snug fit by pulling the shoulder portion upward through the latch plate

⚠ CAUTION

- Both high-positioned lap belts and loose-fitting belts could cause serious injuries due to sliding under the lap belt during a collision or other unintended result. Keep the lap belt positioned as low on hips as possible.
- For your safety, do not place the shoulder belt under your arm.



To release the belt, press the buckle-release button and allow the belt to retract

If the belt does not retract smoothly pull it out and check for kinks or twists. Then make sure it remains untwisted as it retracts

—Seat belt extender

If your seat belts cannot be fastened securely because they are not long enough a personalized seat belt extender is available from your Toyota dealer free of charge

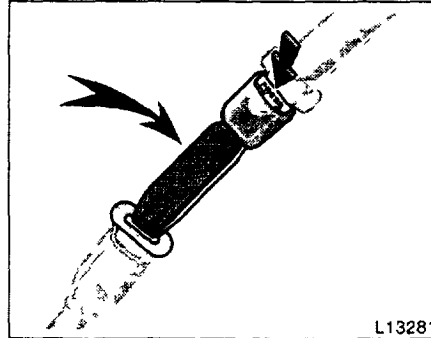
Please contact your local Toyota dealer so that the dealer can order the proper required length for the extender. Bring the heaviest coat you expect to wear for proper measurement and selection of length. Additional ordering information is available at your Toyota dealer

⚠ CAUTION

When using the seat belt extender, observe the following precautions. Failure to follow these instructions could reduce the effectiveness of the seat belt restraint system in case of vehicle accident, increasing the chance of personal injury.

- Never use the seat belt extender if you can fasten the seat belt without it

- Remember that the extender provided for you may not be safe when used on a different vehicle, for another person, or at a different seating position than the one originally intended.



To connect the extender to the seat belt, insert the tab into the seat belt buckle so that the "PRESS" signs on the buckle-release buttons of the extender and the seat belt are both facing outward as shown

You will hear a click when the tab locks into the buckle

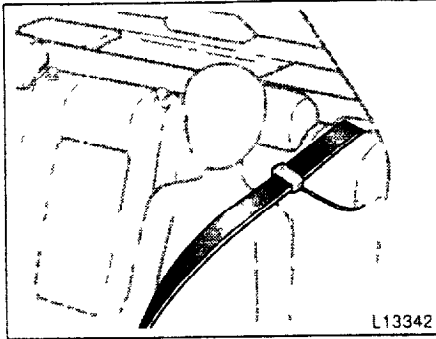
When releasing the seat belt press on the buckle-release button on the extender not on the seat belt. This helps prevent damage to the vehicle interior and extender itself

When not in use remove the extender and store in the vehicle for future use

CAUTION

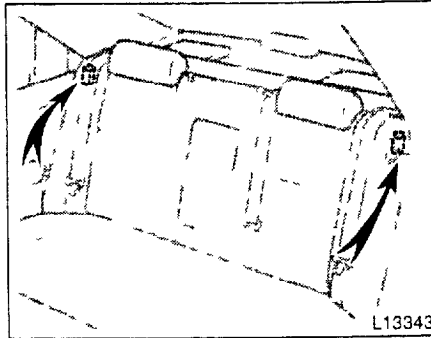
- After inserting the tab, make sure the tab and buckle are locked and that the seat belt extender is not twisted.
- Do not insert coins, clips, etc. in the buckle as this may prevent you from properly latching the tab and buckle
- If the seat belt does not function normally, immediately contact your Toyota dealer. Do not use the seat until the seat belt is fixed. It cannot protect an adult occupant or your child from injury.

—Seat belt comfort guides

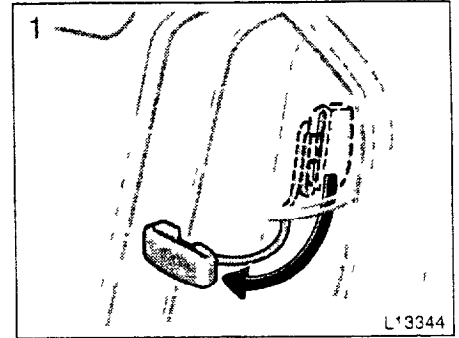


The outside shoulder belt comfort guides for the rear seat outside positions will provide added seat belt comfort for children who have outgrown child restraints and for small adults. When the outside shoulder belt is inserted through the guide, the comfort guide pulls the belt away from the neck and head of an occupant.

To use the comfort guide, do as follows:

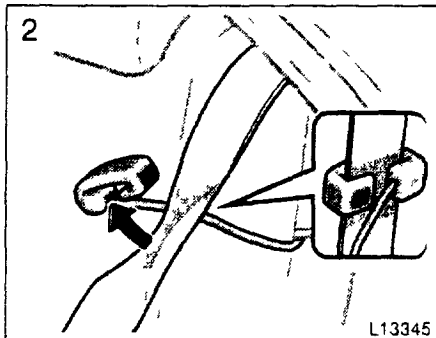


Seat belt comfort guides are stored in the both pockets on the sides of the rear seatback.



INSTALLING THE COMFORT GUIDE

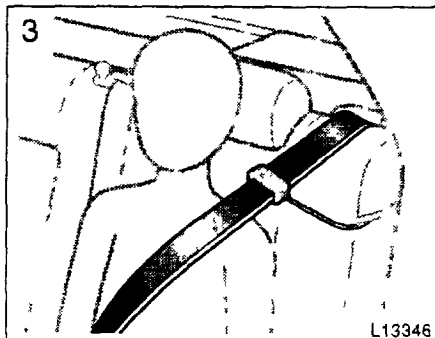
- 1 Pull the comfort guide from the pocket.



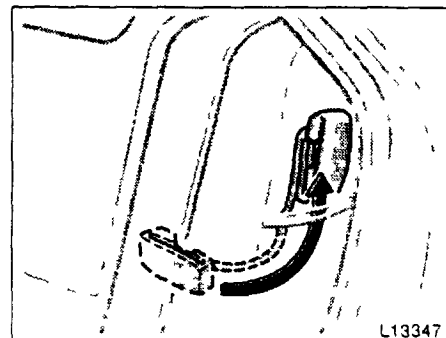
- 2 Pinch the two edges of the shoulder belt for the rear seat outside position with your fingers and slide the belt past the slot of the guide as shown above. At this time, the elastic cord must be behind the seat belt.

CAUTION

Make sure the belt is not twisted and that it lies flat. The elastic cord must be behind the belt and the guide must be on the front.



- 3 Buckle, position and release the seat belt. (For wearing the seat belt, see "—Front and rear seat belts" on page 43 in this section.) Make sure the shoulder belt crosses the shoulder.



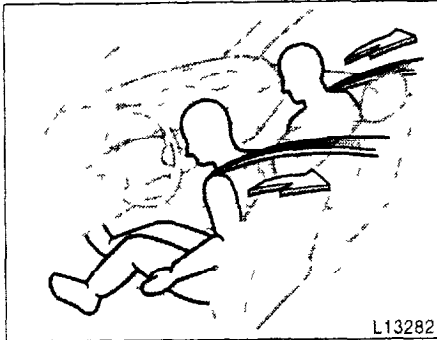
REMOVING AND STORING THE COMFORT GUIDE

Pinch the two edges of the seat belt together so that you can slide them out of the guide. Store the guide with the elastic cord into the pocket.

CAUTION

To reduce the chance of injury in case of an accident or a sudden stop while driving, remove and store the comfort guide in its pocket when it is not in use.

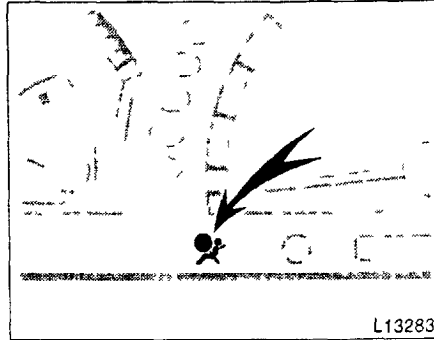
—Front seat belt pretensioners



The driver and front passenger's seat belt pretensioners are designed to be activated in response to a severe frontal impact

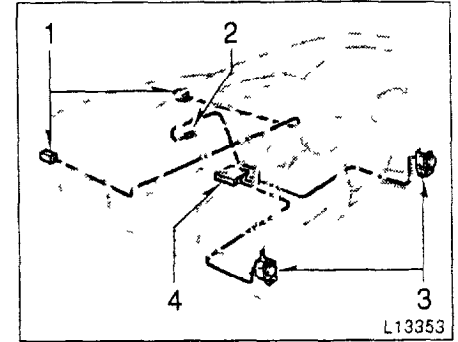
When the airbag sensor detects the shock of a severe frontal impact the front seat belts are quickly drawn back in by the retractors so that the belts snugly restrain the front seat occupants

The front seat belt pretensioners are activated even with no passenger in the front seat



This indicator comes on when the ignition key is turned to the "ON" position. It goes off after about 6 seconds. This means the front seat belt pretensioners are operating properly

This warning light system monitors the airbag sensor assembly front airbag sensors side and curtain shield airbag sensors curtain shield airbag sensors driver's seat position sensor driver's seat belt buckle switch front seat belt pretensioner assemblies inflators warning light interconnecting wiring and power sources (For details see Service reminder indicators and warning buzzers on page 100 in Section 1-5)



The front seat belt pretensioner system mainly consists of the following components and their locations are shown in the illustration

- 1 Front airbag sensors
- 2 SRS warning light
- 3 Front seat belt pretensioner assemblies
- 4 Airbag sensor assembly

The front seat belt pretensioners are controlled by the airbag sensor assembly The airbag sensor assembly consists of a safing sensor and airbag sensor

When the front seat belt pretensioners are activated an operating noise may be heard and a small amount of smoke-like gas may be released. This gas is harmless and does not indicate that a fire is occurring.

Once the front seat belt pretensioners have been activated the seat belt retractors remain locked.



CAUTION

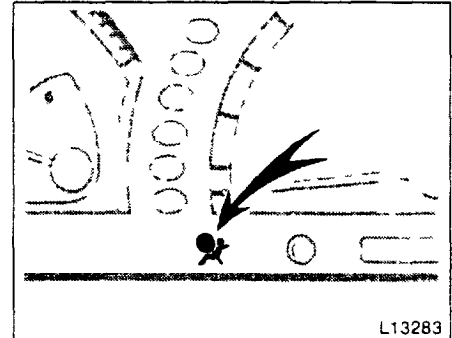
Do not modify, remove, strike or open the front seat belt pretensioner assemblies, airbag sensor or surrounding area or wiring. Doing so may cause sudden operation of the front seat belt pretensioners or disable the system, which could result in death or serious injury.

Failure to follow these instructions can result in death or serious injuries. Consult your Toyota dealer about any repairs and modifications.

NOTICE

Do not perform any of the following changes without consulting your Toyota dealer. Such changes can interfere with proper operation of the front seat belt pretensioners in some cases.

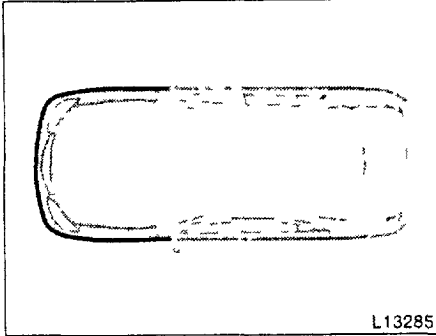
- ◆ *Installation of electronic devices such as a mobile two-way radio, cassette tape player or compact disc player*
- ◆ *Repairs on or near the front seat belt retractor assemblies*
- ◆ *Modification of the suspension system*
- ◆ *Modification of the front end structure*
- ◆ *Attachment of a grille guard (bull bar, kangaroo bar, etc.), snowplow, winches or any other equipment to the front end*
- ◆ *Repairs made on or near the front fenders, front end structure or console*



This front seat belt pretensioner system has a service reminder indicator to inform the driver of operating problems. If any of the following conditions occurs, this indicates a malfunction of the airbags or pretensioners. Contact your Toyota dealer as soon as possible to service the vehicle.

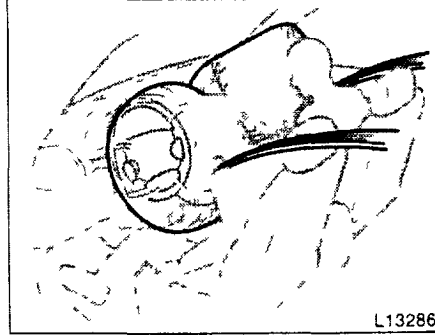
- The light does not come on when the ignition key is turned to the ON position or the light remains on.
- The light comes on or flashes while driving.
- If either front seat belt does not retract or can not be pulled out due to a malfunction or activation of the relevant front seat belt pretensioner.

SRS driver airbag and front passenger airbag



In the following cases contact your Toyota dealer as soon as possible

- The front of the vehicle (shaded in the illustration) was involved in an accident that was not severe enough to cause the front seat belt pretensioners to operate
- Either front seat belt pretensioner assembly or surrounding area is scratched cracked or otherwise damaged



The SRS (Supplemental Restraint System) front airbags are designed to provide further protection for the driver and front passenger in addition to the primary safety protection provided by the seat belts

In response to a severe frontal impact the SRS front airbags work together with the seat belts to help reduce injury by inflating. The SRS front airbags help to reduce injuries mainly to the driver's or front passenger's head or chest caused by directly hitting the steering wheel or dashboard. The front passenger airbag is activated even with no passenger in the front seat.

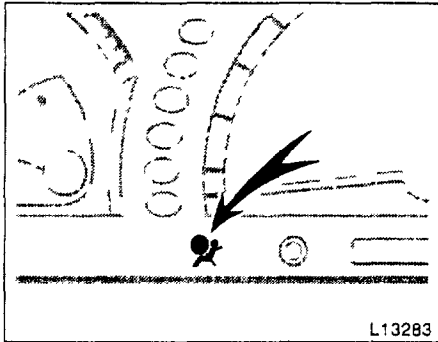
Be sure to wear your seat belt properly

Your vehicle is equipped with a crash sensing and diagnostic module which will record the use of the seat belt restraint system by the driver when the SRS airbags are inflated

CAUTION

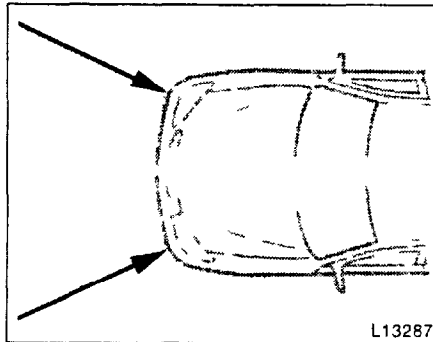
The driver or front passenger who is too close to the steering wheel or dashboard during airbag deployment can be killed or seriously injured. Toyota strongly recommends that:

- The driver sit as far back as possible from the steering wheel while still maintaining control of the vehicle
- The front passenger sit as far back as possible from the dashboard.
- All vehicle occupants be properly restrained using the available seat belts



This Indicator comes on when the ignition key is turned to the "ON" position. It goes off after about 6 seconds. This means the SRS front airbags are operating properly.

This warning light system monitors the airbag sensor assembly, front airbag sensors, side and curtain shield airbag sensors, curtain shield airbag sensors, driver's seat position sensor, driver's seat belt buckle switch, front seat belt pretensioner assemblies, inflators, warning light, interconnecting wiring and power sources. (For details see Service reminder indicators and warning buzzers on page 100 in Section 1-5.)



The SRS front airbag system is designed to activate in response to a severe frontal impact within the shaded area between the arrows in the illustration.

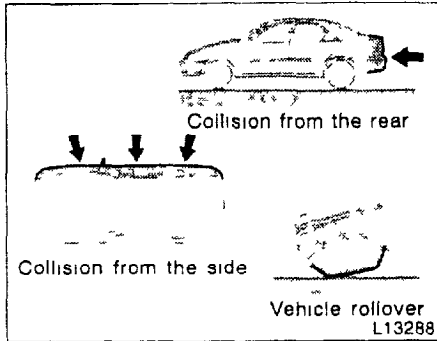
The SRS front airbags will deploy if the severity of the impact is above the designed threshold level, comparable to an approximate 25 km/h (15 mph) collision when impacting straight into a fixed barrier that does not move or deform.

If the severity of the impact is below the above threshold level, the SRS front airbags may not deploy.

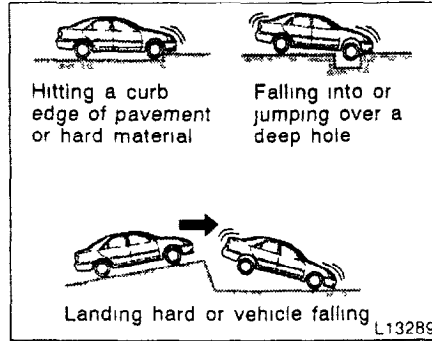
However, this threshold velocity will be considerably higher if the vehicle strikes an object such as a parked vehicle or sign pole which can move or deform on impact, or if it is involved in an underride collision (e.g. a collision in which the nose of the vehicle underrides or goes under the bed of a truck, etc.).

It is possible that in some collisions at the lower zone of airbag sensor detection and activation, the SRS airbags and seat belt pretensioners will not operate all together.

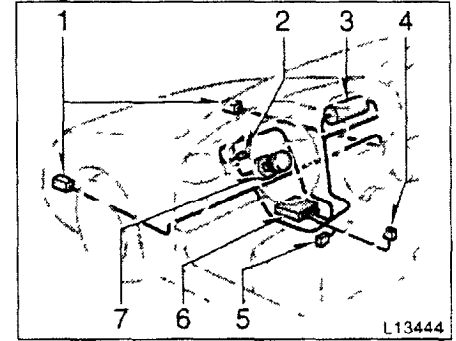
For the safety of all occupants, always wear your seat belts properly.



The SRS front airbags are not designed to inflate if the vehicle is involved in a side or rear collision, if it rolls over, or if it is involved in a low-speed frontal collision



The front SRS airbags may deploy if a serious impact occurs to the underside of your vehicle. Some examples are shown in the illustration.



The SRS airbag system consists mainly of the following components and their locations are shown in the illustration:

- 1 Front airbag sensors
- 2 SRS warning light
- 3 Airbag module for front passenger (airbag and inflator)
- 4 Driver's seat belt buckle switch
- 5 Driver's seat position sensor
- 6 Airbag sensor assembly
- 7 Airbag module for driver (airbag and inflator)

The airbag sensor assembly consists of a safing sensor and airbag sensor.

In a severe frontal impact the sensor detects deceleration and the system triggers the airbag inflators. At this time a chemical reaction in the inflators quickly fills the airbags with non-toxic gas to help restrain the forward motion of the occupants.

When the airbags inflate they produce a fairly loud noise and release some smoke and residue along with non-toxic gas. This does not indicate a fire. This gas is normally harmless; however, for those who have delicate skin it may cause a minor skin irritation. Be sure to wash off any residue as soon as possible to prevent any potential skin irritation.

Deployment of the airbags happens in a fraction of a second, so the airbags must inflate with considerable force. While the system is designed to reduce serious injuries, it may also cause minor burns or abrasions and swelling.

Parts of the airbag module (steering wheel hub, dashboard) may be hot for several minutes, but the airbags themselves will not be hot. The airbags are designed to inflate only once.

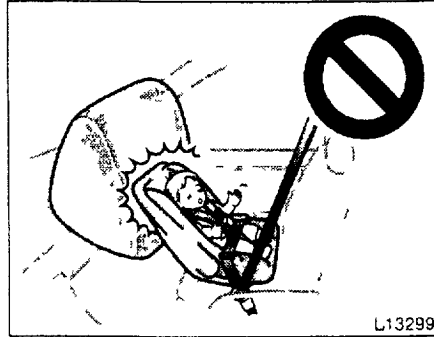
A crash severe enough to inflate the airbags may break the windshield as the vehicle buckles. In vehicles with a passenger airbag the windshield may also be damaged by absorbing some of the force of the inflating airbag.



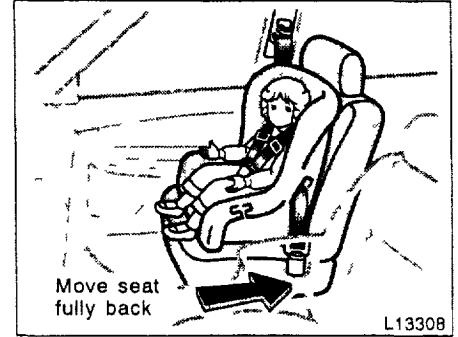
CAUTION

• The SRS airbag system is designed only as a supplement to the primary protection of the driver side and front passenger side seat belt systems. The front seat occupants can be killed or seriously injured by the inflating airbags if they do not wear the available seat belts properly. During sudden braking just before a collision, an unrestrained driver or front passenger can move forward into direct contact with or close proximity to the airbag which may then deploy during the collision. To ensure maximum protection in an accident, the driver and all passengers in the vehicle must wear their seat belts properly. Wearing a seat belt properly during an accident reduces the chances of death or serious injury or being thrown out of the vehicle. For instructions and precautions concerning the seat belt system, see "Seat belts" on page 42 in this section.

● Improperly seated and/or restrained infants and children can be killed or seriously injured by the deploying front airbags. An infant or child who is too small to use a seat belt should be properly secured using a child restraint system. Toyota strongly recommends that all infants and children be placed in the rear seat of the vehicle and properly restrained. The rear seat is the safest for infants and children. For instructions concerning the installation of a child restraint system, see "Child restraint" on page 66 in this section.



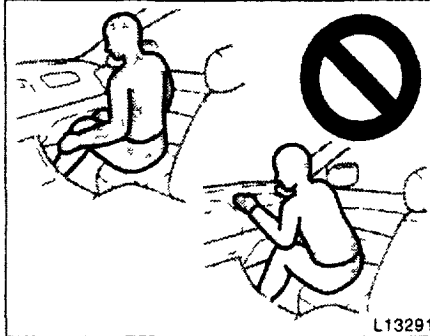
● Never install a rear-facing child restraint system on the front passenger seat because the force of the rapid inflation of the front passenger airbag can cause death or serious injury to the child.



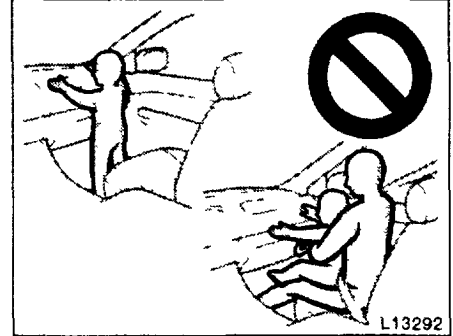
● A forward-facing child restraint system should be allowed to be installed on the front passenger seat only when it is unavoidable. Always move the seat as far back as possible, because the force of the deploying front passenger airbag could cause death or serious injury to the child.

On vehicles with side airbags and curtain shield airbags, do not allow the child to lean against the door or around the door even if the child is seated in the child restraint system. It is dangerous if the side airbag and curtain shield airbag inflate, and the impact could cause death or serious injury to the child.

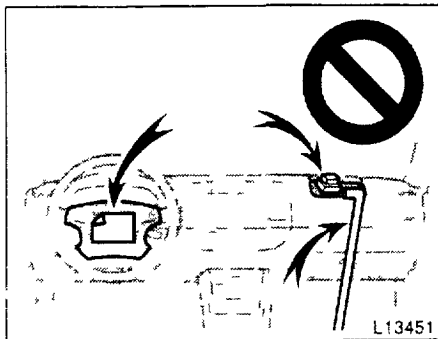
- For instructions concerning the installation of a child restraint system, see "Child restraint" on page 66 in this section.



- Do not sit on the edge of the seat or lean over the dashboard when the vehicle is in use, since the front airbags inflate with considerable speed and force. Otherwise, you may be killed or seriously injured. Sit up straight and well back in the seat, and always use your seat belt properly.



- Do not allow a child to stand up or to kneel on the front passenger seat, since the front airbag inflates with considerable speed and force. Otherwise, the child may be killed or seriously injured.
- Do not hold a child on your lap or in your arms. Use a child restraint system in the rear seat. For instructions concerning the installation of a child restraint system, see "Child restraint" on page 66 in this section.



- Do not put objects or your pets on or in front of the dashboard or steering wheel pad that houses the front airbag system. They might restrict inflation or cause death or serious injury as they are projected rearward by the force of the deploying airbags. Likewise, the driver and front passenger should not hold objects in their arms or on their knees.

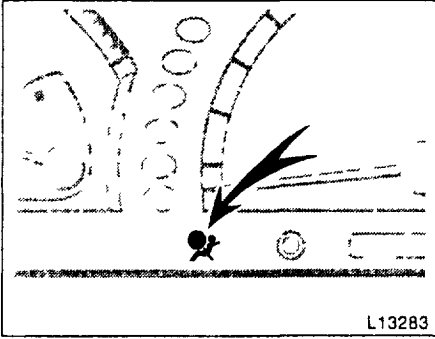
- Do not modify or remove any wiring. Do not modify, remove, strike or open any components such as the steering wheel pad, steering wheel, column cover or front passenger airbag cover, front passenger airbag, airbag sensor assembly. Doing so may cause sudden SRS front airbag inflation or disable the system, which could result in death or serious injury.

Failure to follow these instructions can result in death or serious injury. Consult your Toyota dealer about any repairs and modifications.

NOTICE

Do not perform any of the following changes without consulting your Toyota dealer. Such changes can interfere with proper operation of the SRS front airbag system in some cases.

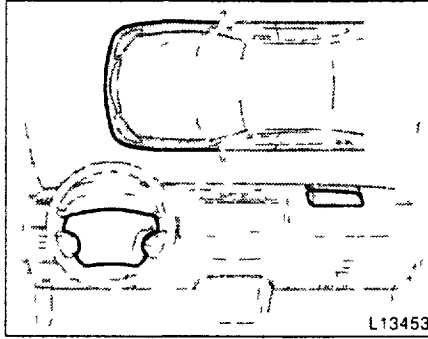
- ◆ Installation of electronic devices such as a mobile two-way radio, cassette tape player or compact disc player
- ◆ Modification of the suspension system
- ◆ Modification of the front end structure
- ◆ Attachment of a grille guard (bull bar, kangaroo bar, etc.), snowplow, winches or any other equipment to the front end
- ◆ Repairs made on or near the front fenders, front end structure, console, steering column, steering wheel or dashboard near the front passenger airbag



L13283

This SRS front airbag system has a service reminder indicator to inform the driver of operating problems. If either of the following conditions occurs, this indicates a malfunction of the airbags. Contact your Toyota dealer as soon as possible to service the vehicle.

- The light does not come on when the ignition key is turned to the "ON" position or the light remains on.
- The light comes on while driving.



L13453

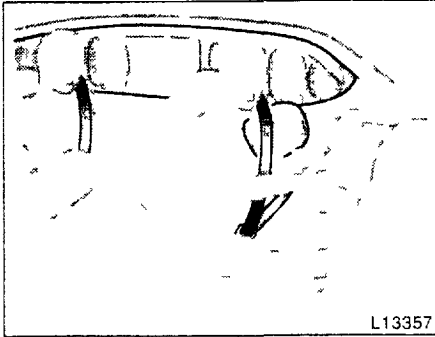
In the following cases, contact your Toyota dealer as soon as possible:

- The SRS front airbags have been inflated.
- The front of the vehicle (shaded in the illustration) was involved in an accident that was not severe enough to cause the SRS front airbags to inflate.
- The pad section of the steering wheel or front passenger airbag cover (shaded in the illustration) is scratched, cracked, or otherwise damaged.

NOTICE

Do not disconnect the battery cables before contacting your Toyota dealer.

SRS side airbags and curtain shield airbags



The SRS (Supplemental Restraint System) side airbags and curtain shield airbags are designed to provide further protection for the driver, front passenger and rear outside passengers in addition to the primary safety protection provided by the seat belts

In response to a severe side impact the SRS side airbags and curtain shield airbags work with the seat belts to help reduce injury by inflating. The SRS side airbags help to reduce injuries mainly to the driver's or front passenger's chest and the SRS curtain shield airbags help to reduce injuries mainly to the driver's, front passenger's or rear outside passenger's head. The SRS side airbag and curtain shield airbag on the passenger side are activated even with no passenger in the front seat or rear seat.

The curtain shield airbags may activate even when the side airbags are not activated.

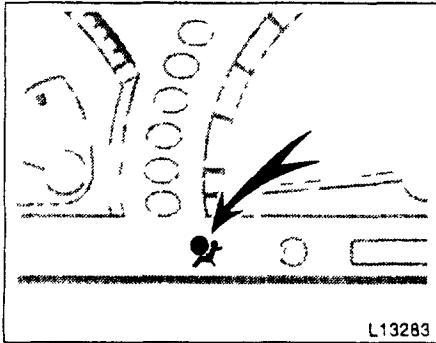
Be sure to wear your seat belt properly.

Your vehicle is equipped with a crash sensing and diagnostic module which will record the use of the seat belt restraint system by the driver when the SRS side airbags and curtain shield airbags are inflated.

CAUTION

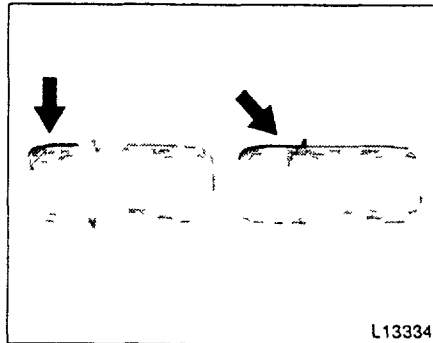
SRS side airbags and curtain shield airbags inflate with considerable force. To avoid potential death or serious injury when they inflate, the driver, front passenger and rear outside passengers must:

- Wear their seat belts properly.
- Remain properly seated with their back upright and against the seat at all times.



This indicator comes on when the ignition key is turned to the "ON" position. It goes off after about 6 seconds. This means the SRS side airbags and curtain shield airbags are operating properly.

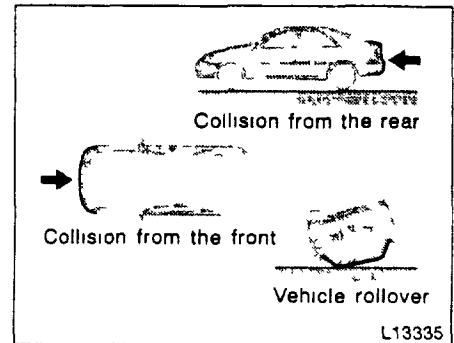
This warning light system monitors the airbag sensor assembly, front airbag sensors, side and curtain shield airbag sensors, curtain shield airbag sensors, driver's seat position sensor, driver's seat belt buckle switch, front seat belt pretensioner assemblies, inflators, warning light, interconnecting wiring and power sources. (For details, see Service reminder indicators and warning buzzers on page 100 in Section 1-5.)



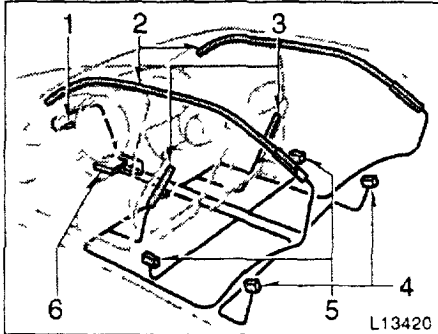
The SRS side airbag and curtain shield airbag system may not inflate if the vehicle is subjected to a collision from the side at certain angles, or a collision to the side of the vehicle body other than the passenger compartment as shown in the illustration.

The SRS side airbags and curtain shield airbags are designed to inflate when the passenger compartment area suffers a severe impact from the side.

For the safety of all occupants, always wear your seat belts properly.



The SRS side airbags and curtain shield airbags are not designed to inflate if the vehicle is involved in a front or rear collision, if it rolls over, or if it is involved in a low-speed side collision.



The SRS side airbag and curtain shield airbag system consists mainly of the following components and their locations are shown in the illustration

- 1 SRS warning light
- 2 Curtain shield airbag modules (airbag and inflator)
- 3 Side airbag modules (airbag and inflator)
- 4 Curtain shield airbag sensors
- 5 Side and curtain shield airbag sensors
- 6 Airbag sensor assembly

The SRS side airbag and curtain shield airbag system is controlled by the airbag sensor assembly. The airbag sensor assembly consists of a safing sensor and airbag sensor.

In a severe side impact, the side and curtain shield airbag sensor and/or the curtain shield airbag sensor trigger(s) the side airbag and curtain shield airbag inflators and/or the curtain shield airbag inflators. At this time a chemical reaction in the inflators quickly fills the airbags with non-toxic gas to help restrain the lateral motion of the occupants.

When the airbags inflate, they produce a fairly loud noise and release some smoke and residue along with non-toxic gas. This does not indicate a fire. This gas is normally harmless, however, for those who have delicate skin, it may cause a minor skin irritation. Be sure to wash off any residue as soon as possible to prevent any potential skin irritation.

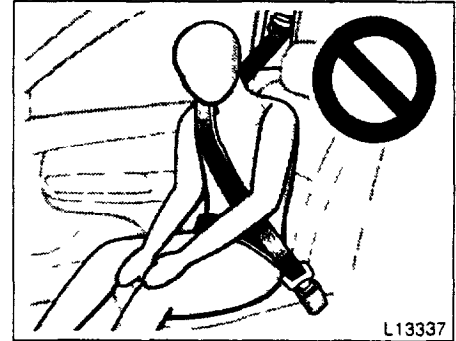
Deployment of the airbags happens in a fraction of a second, so the airbags must inflate with considerable force. While the system is designed to reduce serious injuries, it may also cause minor burns or abrasions and swelling.

Front seats as well as parts of the front and rear pillars and roof side may be hot for several minutes, but the airbags themselves will not be hot. The airbags are designed to inflate only once.

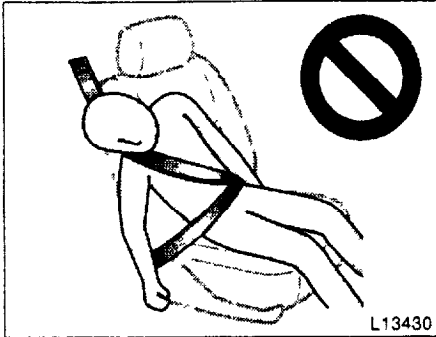
 CAUTION
• The SRS side airbag and curtain shield airbag system is designed only as a supplement to the primary protection of the driver side, and front and rear outside passenger side seat belt systems. To ensure maximum protection in an accident, the driver and all passengers in the vehicle must wear their seat belts. Wearing a seat belt during an accident reduces the chances of death or serious injury or being thrown out of the vehicle. For instructions and precautions concerning the seat belt system, see "Seat belts" on page 42 in this section.

- Improperly seated and/or restrained infants and children can be killed or seriously injured by a deploying airbag. An infant or child who is too small to use a seat belt should be properly secured using a child restraint system. Toyota strongly recommends that all infants and children be placed in the rear seat of the vehicle and properly restrained. The rear seat is the safest for infants and children. For instructions concerning the installation of a child restraint system, see "Child restraint" on page 66 in this section.

- Do not allow a child to lean his/her head or any part of his/her body against the front door or the area of the seat, front pillar, rear pillar or roof side from which the side airbag and curtain shield airbag deploy even if he/she is seated in the child restraint system. It is dangerous if the side airbag and curtain shield airbag inflate, and the impact could cause death or serious injury to the child. For instructions concerning the installation of a child restraint system, see "Child restraint" on page 66 in this section.

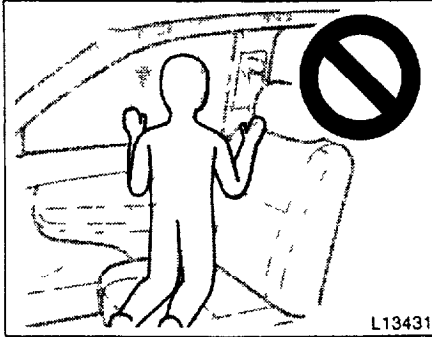


- Do not lean against the door when the vehicle is in use, since the side airbag and curtain shield airbag inflate with considerable speed and force. Otherwise, you may be killed or seriously injured. Special care should be taken especially when you have a small child in the vehicle.
- Sit up straight and well back in the seat, distributing your weight evenly in the seat. Do not apply excessive weight to the outer side of the front seats with a side airbag, and to the front pillar, rear pillar and roof side rail with a curtain shield airbag.



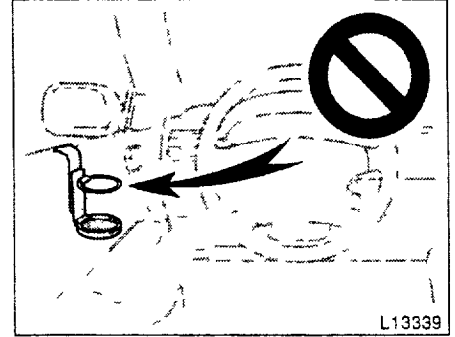
L13430

- Do not get your head closer to the area where the side airbag and curtain shield airbag inflate. These airbags inflate with considerable speed and force. Otherwise, you may be killed or seriously injured. Special care should be taken especially when you have a small child in the vehicle.



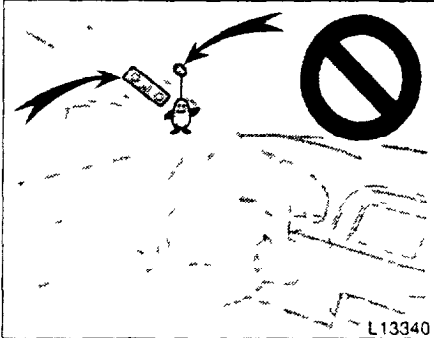
L13431

- Do not allow a child to kneel on the passenger seat facing the passenger's side door. The side airbag and curtain shield airbag inflate with considerable speed and force; the child may be killed or seriously injured.



L13339

- Do not attach a cup holder or any other device or object on or around the door. When the side airbag inflates, the cup holder or any other device or object will be hurled with great force or the side airbag may not activate correctly, resulting in death or serious injury. Likewise, the driver and front passenger should not hold objects in their arms or on their knees.



- Do not attach a microphone or any other device or object around the part where the curtain shield airbag activates such as on the windshield glass, side door glass, front and rear pillars, roof side and assist grips. When the curtain shield airbag inflates, the microphone or other device or object will be hurled with great force or the curtain shield airbag may not activate correctly, resulting in death or serious injury.

- Do not hook a hanger, heavy or sharp pointed objects on the coat hook. If the curtain shield airbag inflates, those items will be hurled away with great force or the curtain shield airbag may not activate correctly. When you hang clothes, hang them on the coat hook directly.
- Do not use seat accessories which cover the parts where the side airbags inflate. Such accessories may prevent the side airbags from activating correctly, causing death or serious injury.
- Do not modify or replace the seats or upholstery of front seats with side airbags. Such changes may disable the system or cause the side airbags to inflate accidentally, resulting in death or serious injury.

- Do not disassemble or repair the front pillar, rear pillar and roof side rail containing the curtain shield airbags. Such changes may disable the system or cause the curtain shield airbags to inflate accidentally, resulting in death or serious injury.

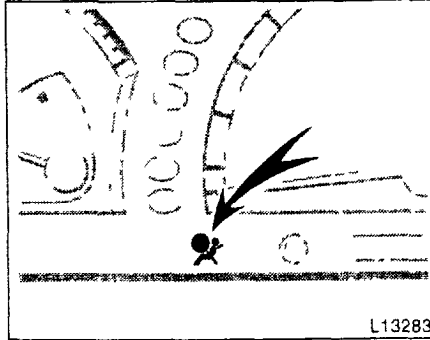
Failure to follow these instructions can result in death or serious injury. Consult your Toyota dealer about any repairs and modifications.

NOTICE

Do not perform any of the following changes without consulting your Toyota dealer. Such changes can interfere with proper operation of the SRS side airbag and curtain shield airbag system in some cases.

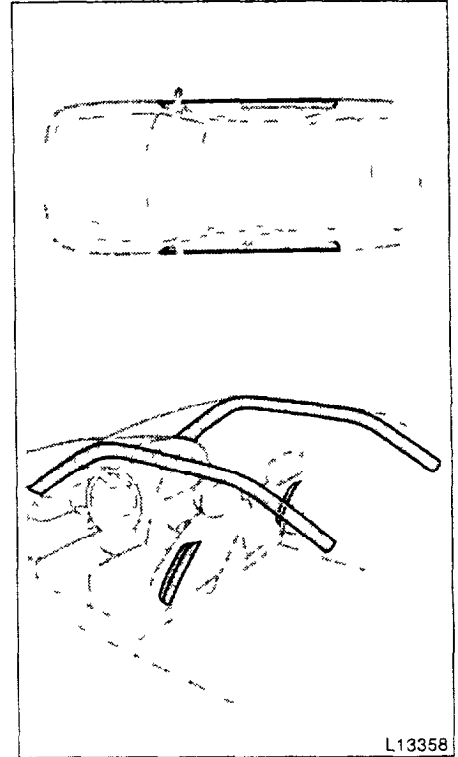
- ◆ Installation of electronic devices such as a mobile two-way radio, cassette tape player or compact disc player
- ◆ Modification of the suspension system

- ◆ **Modification of the side structure of the passenger compartment**
- ◆ **Repairs made on or near the console**



This SRS side airbag and curtain shield airbag system has a service reminder indicator to inform the driver of operating problems. If either of the following conditions occurs, this indicates a malfunction of the airbags. Contact your Toyota dealer as soon as possible to service the vehicle.

- The light does not come on when the ignition key is turned to the ON position or the light remains on.
- The light comes on or flashes while driving.



In the following cases contact your Toyota dealer as soon as possible

The SRS side airbags and curtain shield airbags have been inflated

- The portion of the doors (shaded in the illustration) was involved in an accident that was not severe enough to cause the SRS side airbags and curtain shield airbags to inflate

The surface of the seats with the side airbag (shaded in the illustration) is scratched cracked or otherwise damaged

The portion of the front pillars rear pillars and roof side rail garnishes (padding) containing the curtain shield airbags inside (shaded in the illustration) is scratched cracked or otherwise damaged

NOTICE

Do not disconnect the battery cables before contacting your Toyota dealer.

Child restraint— —Child restraint precautions

Toyota strongly urges the use of child restraint systems for children small enough to use them.

The laws of all 50 states in the U S A and Canada now require the use of a child restraint system

Your vehicle conforms to SAEJ1819

If a child is too large for a child restraint system the child should sit in the rear seat and must be restrained using the vehicle's seat belt See 'Seat belts' on page 42 for details

CAUTION

- For effective protection in automobile accidents and sudden stops, a child must be properly restrained, using a seat belt or child restraint system depending on the age and size of the child Holding a child in your arms is not a substitute for a child restraint system In an accident, the child can be crushed against the windshield, or between you and the vehicle's interior

- Toyota strongly urges use of a proper child restraint system which conforms to the size of the child, installed on the rear seat According to accident statistics, the child is safer when properly restrained in the rear seat than in the front seat.

- Never install a rear-facing child restraint system on the front seat. In the event of an accident, the force of the rapid inflation of the airbag can cause death or serious injury if a rear-facing child restraint system is installed on the front seat.

- Unless it is unavoidable, do not install a child restraint system on the front seat.

- A forward-facing child restraint system should be allowed to be installed on the front passenger seat only when it is unavoidable. Always move the seat as far back as possible, because the force of the deploying front passenger airbag could cause death or serious injury to the child.
- On vehicles with side airbags and curtain shield airbags, do not allow the child to lean against the door or around the door even if the child is seated in the child restraint system. It is dangerous if the side airbag and curtain shield airbag inflate, and the impact could cause death or serious injury to the child.
- Make sure that you have complied with all installation instructions provided by the child restraint manufacturer and that the system is properly secured.

—Child restraint system

A child restraint system for a small child or baby must itself be properly restrained on the seat with the lap portion of the lap/shoulder belt. You must carefully consult the manufacturer's instructions which accompany the child restraint system.

To provide proper restraint, use a child restraint system following the manufacturer's instructions about the appropriate age and size of the child for the child restraint system.

Install the child restraint system correctly following the instructions provided by its manufacturer. General directions are also provided under the following illustrations.

The child restraint system should be installed on the rear seat. According to accident statistics, the child is safer when properly restrained in the rear seat than in the front seat.


CAUTION

- Never install a rear-facing child restraint system on the front seat. In the event of an accident, the force of the rapid inflation of the airbag can cause death or serious injury if a rear-facing child restraint system is installed on the front seat.
- Unless it is unavoidable, do not install a child restraint system on the front seat.
- A forward-facing child restraint system should be allowed to be installed on the front passenger seat only when it is unavoidable. Always move the seat as far back as possible, because the force of the deploying front passenger airbag could cause death or serious injury to the child.

- On vehicles with side airbags and curtain-shield airbags, do not allow the child to lean against the door or around the door even if the child is seated in the child restraint system. It is dangerous if the side airbag and curtain shield airbag inflate, and the impact could cause death or serious injury to the child.
- After installing the child restraint system, make sure it is secured in place following the manufacturer's instructions. If it is not restrained securely, it may cause death or serious injury to the child in the event of a sudden stop or accident.

When not using the child restraint system, keep it secured with the seat belt or place it in the trunk or somewhere other than the passenger compartment. This will prevent it from injuring passengers in the event of a sudden stop or accident.

—Types of child restraint system

Child restraint systems are classified into the following 3 types depending on the child's age and size

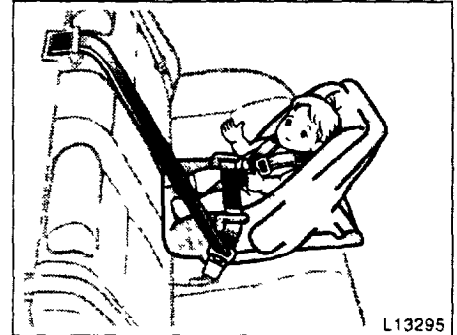
- (A) Infant seat
- (B) Convertible seat
- (C) Booster seat

Install the child restraint system following the instructions provided by its manufacturer

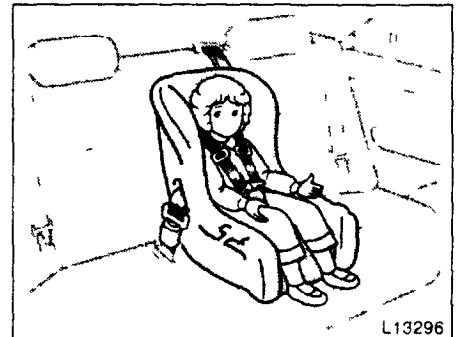
Your vehicle has anchor brackets for securing the top strap of a child restraint system

For instructions about how to use the anchor bracket, see "—Using a top strap" on page 78 in this section

The child restraint lower anchorages approved for your vehicle may also be used. See "—Installation with the child restraint lower anchorages" on page 80 in this section

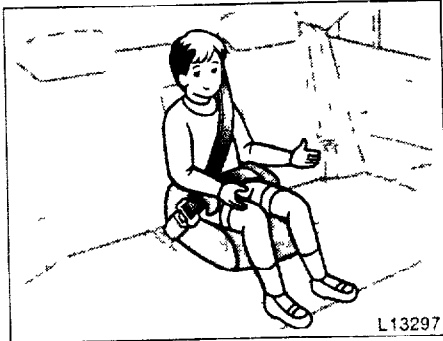


(A) Infant seat

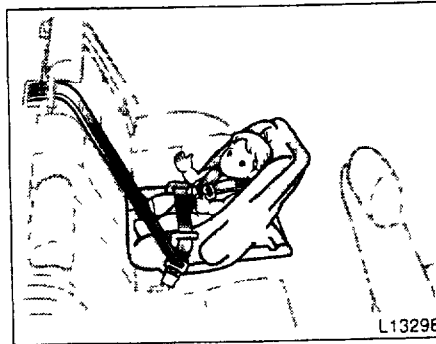


(B) Convertible seat

—Installation with seat belt

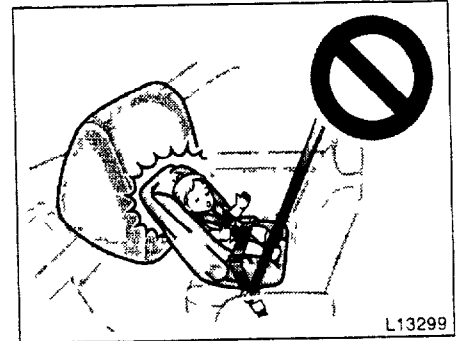


(C) Booster seat



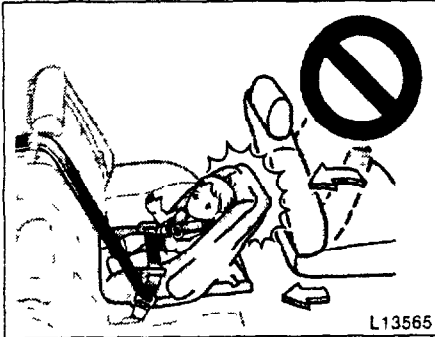
(A) INFANT SEAT INSTALLATION

An infant seat is used in rear-facing position only



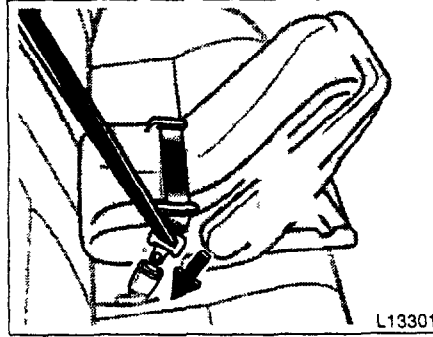
CAUTION

- Never install a rear-facing child restraint system on the front passenger seat because the force of the rapid inflation of the front passenger airbag can cause death or serious injury to the child.



Do not install a child restraint system on the rear seat if it interferes with the lock mechanism of the front seats. This can cause death or serious injury to the child and front passenger in case of sudden braking or a collision.

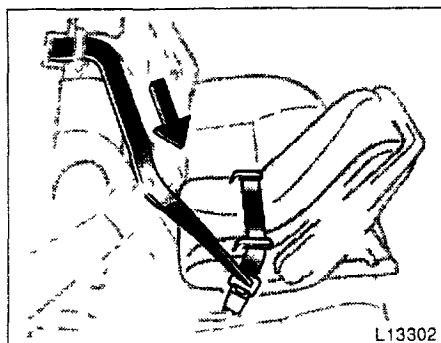
- If the driver's seat position does not allow sufficient space for safe installation, install the child restraint system at another position.



- 1 Run the lap and shoulder belt through or around the infant seat following the instructions provided by its manufacturer and insert the tab into the buckle taking care not to twist the belt. Keep the lap portion of the belt tight.

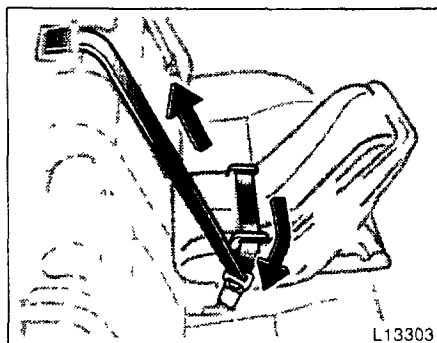
CAUTION

- After inserting the tab, make sure the tab and buckle are locked and that the lap and shoulder portions of the belt are not twisted.
- Do not insert coins, clips, etc. in the buckle as this may prevent you from properly latching the tab and buckle.
- If the seat belt does not function normally, it cannot protect your child from injury. Contact your Toyota dealer immediately. Do not use the child restraint system until the seat belt is fixed.

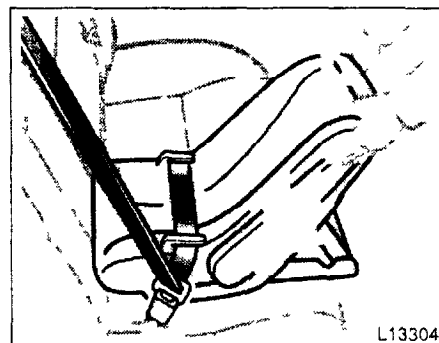


- 2 Fully extend the shoulder belt to put it in the lock mode. When the belt is then retracted even slightly it cannot be extended.

To hold the infant seat securely, make sure the belt is in the lock mode before letting the belt retract.

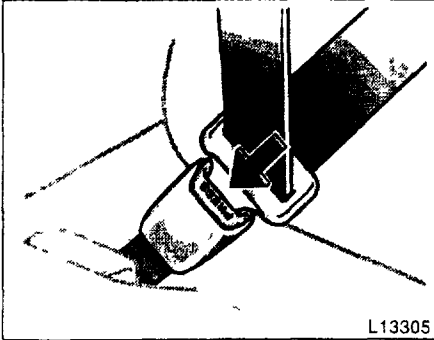


- 3 While pressing the infant seat firmly against the seat cushion and seatback, let the shoulder belt retract as far as it will go to hold the infant seat securely.



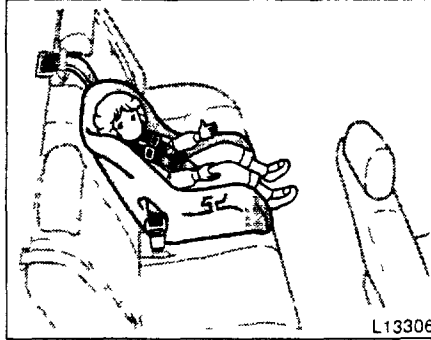
CAUTION

Push and pull the child restraint system in different directions to be sure it is secure. Follow all the installation instructions provided by its manufacturer.



L13305

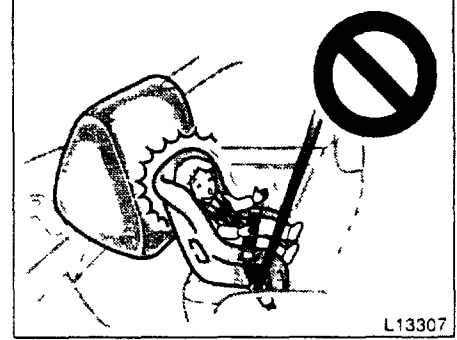
- 4 To remove the infant seat press the buckle-release button and allow the belt to retract completely. The belt will move freely again and be ready to work for an adult or older child passenger.



L13306

(B) CONVERTIBLE SEAT INSTALLATION

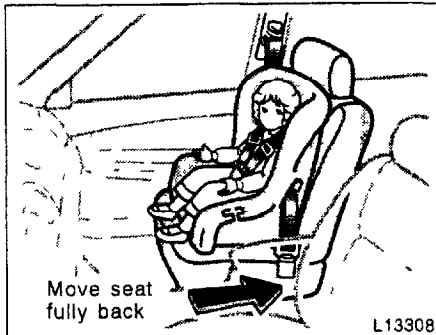
A convertible seat is used in forward-facing or rear-facing position depending on the child's age and size. When installing, follow the manufacturer's instructions about the applicable child's age and size as well as directions for installing the child restraint system.



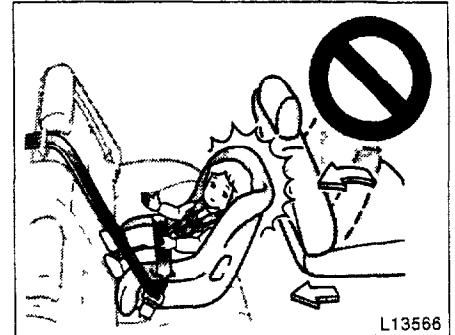
L13307

⚠ CAUTION

- Never install a rear-facing child restraint system on the front passenger seat because the force of the rapid inflation of the front passenger airbag can cause death or serious injury to the child.

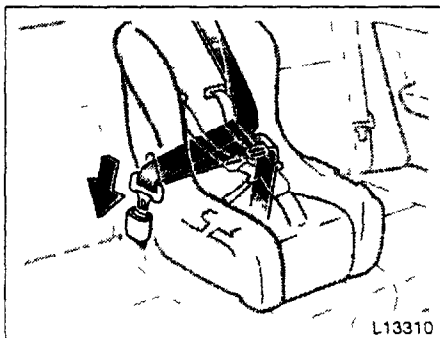


- On vehicles with side airbags and curtain shield airbags, do not allow the child to lean against the door or around the door even if the child is seated in the child restraint system. It is dangerous if the side airbag and curtain shield airbag inflate, and the impact could cause death or serious injury to the child



- A forward-facing child restraint system should be allowed to be installed on the front passenger seat only when it is unavoidable. Always move the seat as far back as possible, because the force of the deploying front passenger airbag could cause death or serious injury to the child

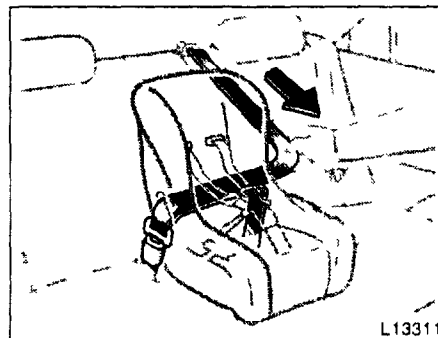
- Do not install a child restraint system on the rear seat if it interferes with the lock mechanism of the front seats. This can cause death or serious injury to the child and front passenger in case of sudden braking or a collision
- If the driver's seat position does not allow sufficient space for safe installation, install the child restraint system at another position



- 1 Run the lap and shoulder belt through or around the convertible seat following the instructions provided by its manufacturer and insert the tab into the buckle taking care not to twist the belt. Keep the lap portion of the belt tight.

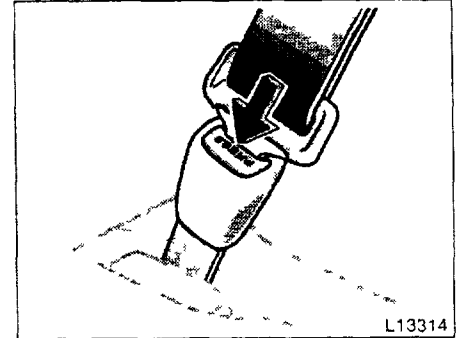
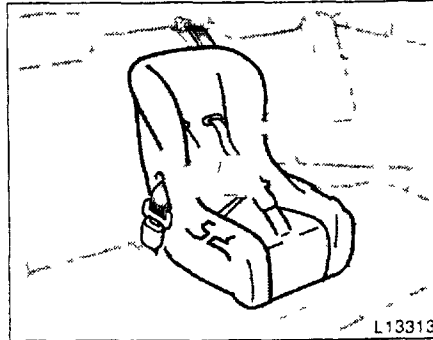
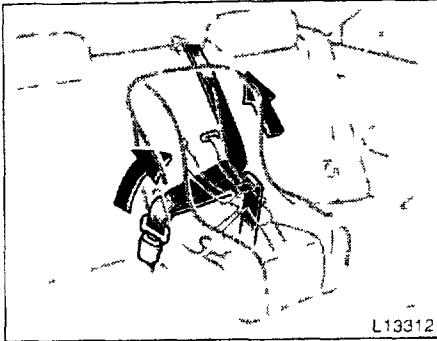
CAUTION

- After inserting the tab, make sure the tab and buckle are locked and that the lap and shoulder portions of the belt are not twisted.
- Do not insert coins, clips, etc. in the buckle as this may prevent you from properly latching the tab and buckle.
- If the seat belt does not function normally, it cannot protect your child from injury. Contact your Toyota dealer immediately. Do not use the child restraint system until the seat belt is fixed.



- 2 Fully extend the shoulder belt to put it in the lock mode. When the belt is then retracted even slightly it cannot be extended.

To hold the convertible seat securely make sure the belt is in the lock mode before letting the belt retract.

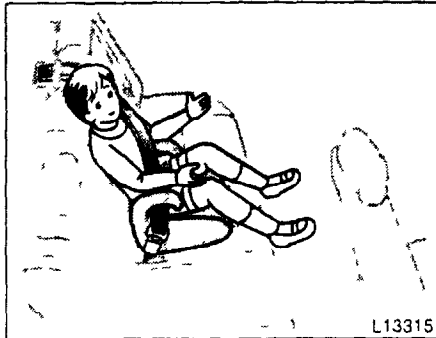


3 While pressing the convertible seat firmly against the seat cushion and seatback let the shoulder belt retract as far as it will go to hold the convertible seat securely

⚠ CAUTION

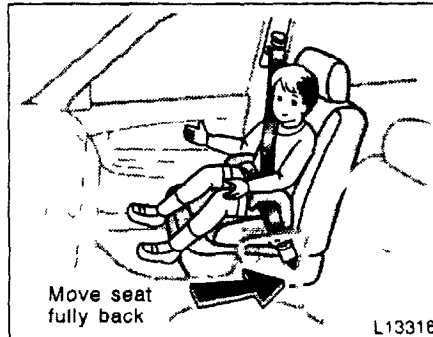
Push and pull the child restraint system in different directions to be sure it is secure. Follow all the installation instructions provided by its manufacturer.

4 To remove the convertible seat press the buckle-release button and allow the belt to retract completely. The belt will move freely again and be ready to work for an adult or older child passenger



(C) BOOSTER SEAT INSTALLATION

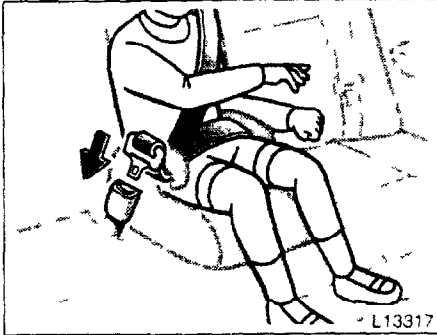
A booster seat is used in forward-facing position only



● On vehicles with side airbags and curtain shield airbags, do not allow the child to lean against the door or around the door even if the child is seated in the child restraint system. It is dangerous if the side airbag and curtain shield airbag inflate, and the impact could cause death or serious injury to the child.

⚠ CAUTION

● A forward-facing child restraint system should be allowed to be install on the front seat only when it is unavoidable. Always move the seat as far back as possible, because the force of the deploying airbag could cause death or serious injury to the child



- 1 Sit the child on a booster seat. Run the lap and shoulder belt through or around the booster seat and child following the instructions provided by its manufacturer and insert the tab into the buckle taking care not to twist the belt.

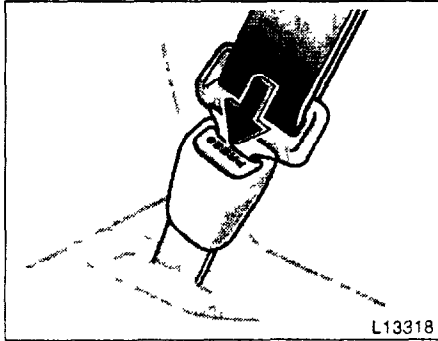
Make sure the shoulder belt is correctly across the child's shoulder and that the lap belt is positioned as low as possible on child's hips. See Seat belts on page 42 for details.

⚠ CAUTION

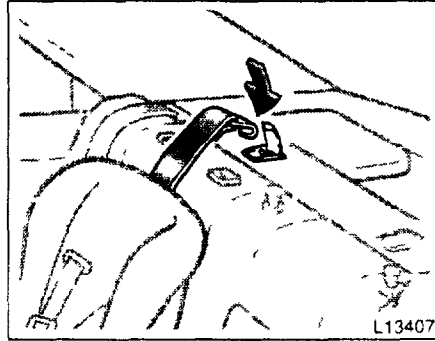
- Always make sure the shoulder belt is positioned across the center of child's shoulder. The belt should be kept away from child's neck, but not falling off child's shoulder. Failure to do so could reduce the amount of protection in an accident and cause serious injuries in a collision.
- Both high-positioned lap belts and loose-fitting belts could cause serious injuries due to sliding under the lap belt during a collision or other unintended result. Keep the lap belt positioned as low on a child's hips as possible.
- For child's safety, do not place the shoulder belt under child's arm.
- After inserting the tab, make sure the tab and buckle are locked and that the lap and shoulder portions of the belt are not twisted.
- Do not insert coins, clips, etc. in the buckle as this may prevent your child from properly latching the tab and buckle.

- If the seat belt does not function normally, it cannot protect your child from injury. Contact your Toyota dealer immediately. Do not use the child restraint system until the seat belt is fixed.

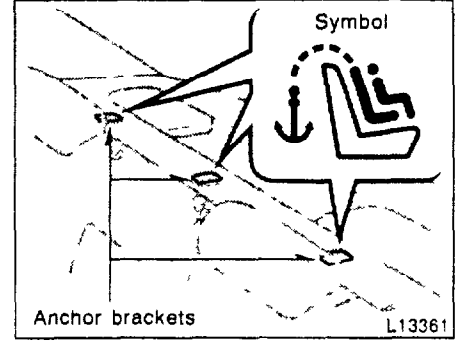
—Using a top strap



2 To remove the child restraint system press the buckle-release button and allow the belt to retract



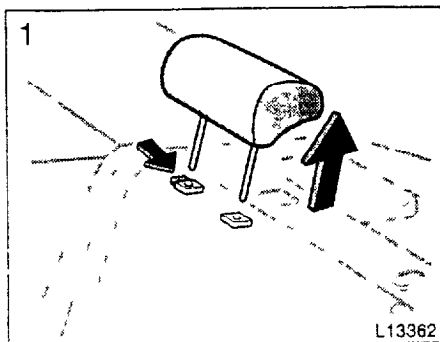
Follow the procedure below for a child restraint system that requires the use of a top strap



Use the anchor bracket on the package tray behind the rear seat to attach the top strap

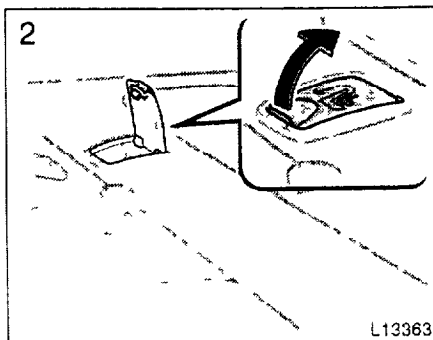
Anchor brackets are installed for each rear seating position

This symbol indicates the location of the anchor brackets

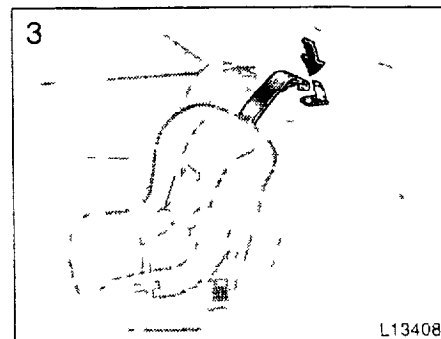


TO USE THE ANCHOR BRACKET

- 1 Outside anchor brackets only—
Remove the head restraint**



- 2 Open the lid of the anchor bracket
to open**



- 3 Securely fasten the child restraint
system with the seat belt**

**Latch the hook onto the anchor
bracket and tighten the top strap**

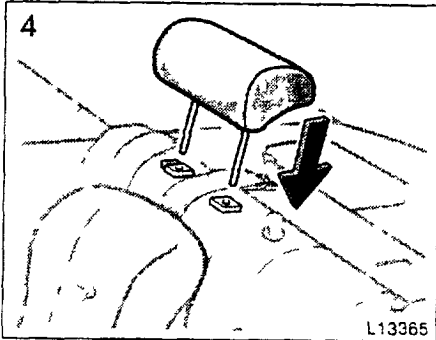
For instructions to install the child re-
straint system see Child restraint on
page 66 in this section



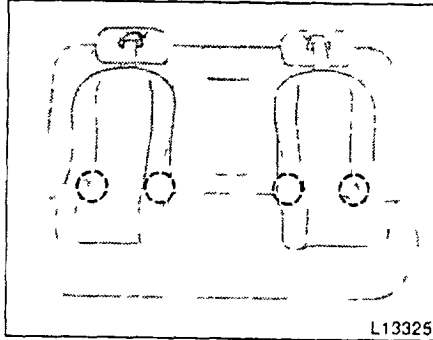
CAUTION

**Make sure the top strap is securely
latched, and check that the child re-
straint system is secure by pushing
and pulling it in different directions.
Follow all the installation instructions
provided by its manufacturer**

—Installation with child
restraint lower anchorages



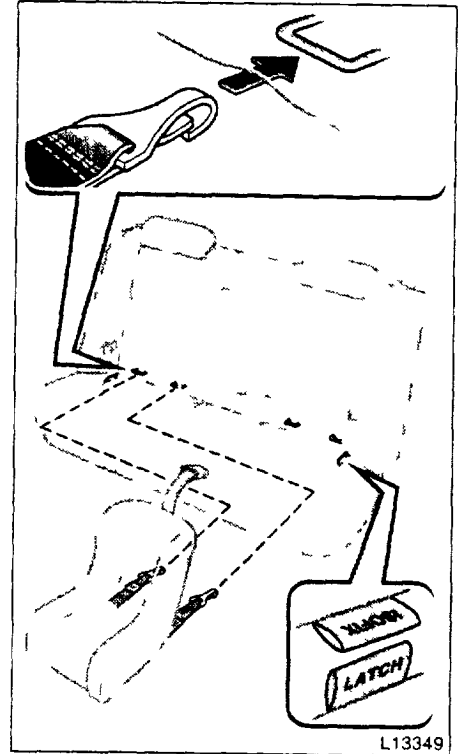
4 Outside anchor brackets only—
Replace the head restraint.



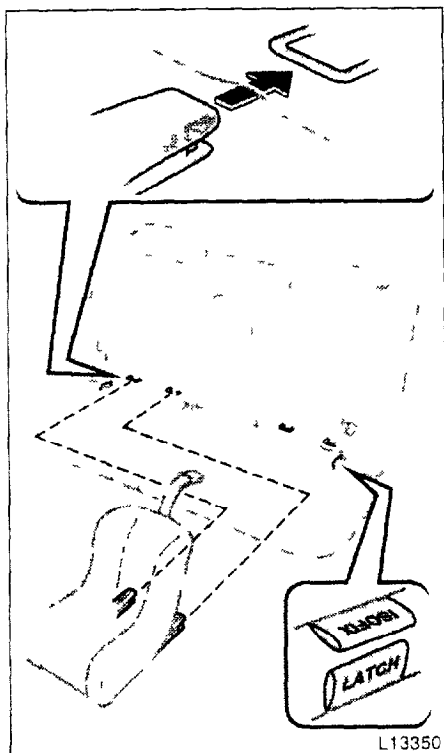
The lower anchorages for the child restraint system interfaced with the FMVSS225 specification are installed in the rear seat

The anchorages are installed in the clearance between the seat cushion and seat-back of both outside rear seats

Child restraint system interfaced with the FMVSS225 specification can be fixed with these anchorages. In this case it is not necessary to fix the child restraint system with a seat belt on the vehicle



Type A



Type B

CHILD RESTRAINT SYSTEM INSTALLATION

Type A—

1. Widen the clearance between the seat cushion and seatback a little and confirm the position of the lower anchorages around the tag on the seat cushion
2. Latch the hooks of lower straps onto the anchorages and tighten the lower straps

Type B—

1. Widen the clearance between the seat cushion and seatback a little and confirm the position of the lower anchorages around the tag on the seat cushion
2. Latch the buckles onto the anchorages.

If your child restraint system has a top strap it should be anchored (For the installation of the top strap see —Using a top strap on page 78 in this section)

For the installation details refer to the instruction manual equipped with each product

CAUTION

- When using the lower anchorages for the child restraint system, be sure that there are no irregular objects around the anchorages or that the seat belt is not caught.
- Push and pull the child restraint system in different directions to be sure it is secure. Follow all the installation instructions provided by its manufacturer
- Do not install a child restraint system on the rear seat if it interferes with the lock mechanism of the front seats. This can cause death or serious injury to the child and front passenger in case of sudden braking or a collision

Appendix D

Miscellaneous Test Information

Channel Report

Name fTest 020325-1

Name of DAU DAU3

System K3600

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal. Date/Status	Group	Mfg.	Model
3000	EVENT	EVENT	Event Low		10.24	+	11/21/2002	OK	TRC	Fvent
3001	C15253	SIDXG	SLED G LONG	Rear	199 5533434 g	-	01/28/2002	OK	Endevco	7231C
3002	AN4B3	SLDXGR	SLED G LONG	Rear	200 3337591 g	-	01/28/2002	OK	Endevco	7231C
3003	SLDXV	SLDXV	SLED VELOCITY		164 7679732 km/h	-	04/03/2001	OK	TRC	SLDXV
3004	SIDXGT	SIDXGT	SLFD TRIGGR	Rear	202 3835405 g	-	10/19/2001	OK	Endevco	7231C
3005	APDJ3	HFDXG1	Head X-Axis Accel	Rwd	399 5536236 g	-	10/04/2001	OK	Endevco	7231C
3006	AGHP8	HFDYG1	Head Y-Axis Accel	Left	401 1438868 g	-	10/04/2001	OK	Endevco	7231C
3007	APD60	HLDZG1	Head Z-Axis Accel	Up	399 3261371 g	-	10/04/2001	OK	Endevco	7231C
3008	1716-0534-FX	NFKXF1	Neck X-Axis Force	Hd	8893 142466 N	-	10/04/2001	OK	Denton	1716
3009	1716-0534-FY	NEKYF1	Neck Y-Axis Force	Hd	8894 495432 N	+	10/04/2001	OK	Denton	1716
3010	1716-0534-FZ	NEKZF1	Neck Z-Axis Force	Hd	13351 06103 N	+	10/04/2001	OK	Denton	1716
3011	1716-0534-MX	NEKXM1	Neck X-Axis Moment	Rt Ear	282 6315241 N m	-	10/04/2001	OK	Denton	1716
3012	1716-0534-MY	NFKYM1	Neck Y-Axis Moment	Chn	282 6783859 N m	+	10/04/2001	OK	Denton	1716
3013	1716-0534-MZ	NFKZM1	Neck Z-Axis Moment	Chn	282 8151229 N m	+	10/04/2001	OK	Denton	1716
3014	C13010	CSTXG1	Chest X-Axis Accel	Fwd	399 2576303 g	+	10/04/2001	OK	Endevco	7231C
3015	C14563	CSTYG1	Chest Y-Axis Accel	Left	399 2949947 g	-	10/04/2001	OK	Endevco	7231C
3016	AD343	CST7G1	Chest Z-Axis Accel	Down	401 3231121 g	+	10/04/2001	OK	Endevco	7231C
3017	14CB1-2847-041	CSTXD1	Chest Displacement	Strnm	101 0221637 mm	+	10/10/2001	OK	Servo	14CB1-2847
3018	2430T-962	1FMZF1	Left Femur Z-Axis 91	Knee	13343 42429 N	+	10/04/2001	OK	GSE	2430T
3019	2430T-982	RFMZ/F1	Right Femur Z-Axis 98	Knee	13351 71976 N	+	10/04/2001	OK	GSE	2430T
3020	GB86	HEDXG2	Head X-Axis Accel	Rwd	399 6315896 g	-	11/20/2001	OK	Endevco	7231C
3021	GB77	HEDYG2	Head Y-Axis Accel	Lft	400 3769173 g	-	11/20/2001	OK	Endevco	7231C
3022	A54F	HFD7G2	Head Z-Axis Accel	Up	400 9083078 g	-	11/20/2001	OK	Endevco	7231C
3023	1716A-1222-FX	NEKXF2	Neck X-Axis Force	Hd	8897 066853 N	-	10/05/2001	OK	Denton	1716A
3024	1716A-1222-FY	NEKYF2	Neck Y-Axis Force	Hd	8900 708133 N	+	10/05/2001	OK	Denton	1716A
3025	1716A-1222-FZ	NEKZF2	Neck Z-Axis Force	Hd	13345 37892 N	+	10/05/2001	OK	Denton	1716A
3026	1716A-1222-MX	NEKXM2	Neck X-Axis Moment	Rt Ear	282 3386017 N m	-	10/05/2001	OK	Denton	1716A
3027	1716A-1222-MY	NEKYM2	Neck Y-Axis Moment	Chn	282 5783165 N m	+	10/05/2001	OK	Denton	1716A
3028	1716A-1222-MZ	NEKZM2	Neck Z-Axis Moment	Chn	282 7451904 N m	+	10/05/2001	OK	Denton	1716A
3029	C14135	CSTXG2	Chest X-Axis Accel	Lwd	398 0130442 g	+	10/04/2001	OK	Endevco	7231C

Channel Report

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3030	C14317	CSTYG2	Chest Y-Axis Accel	Lft	398 1585168 g	-	10/04/2001	OK	339n	Endevco	7231C
3031	C14341	CSTZG2	Chest Z-Axis Accel	Down	398 6762701 g	+	10/04/2001	OK	339n	Endevco	7231C
3032	14CB1-2847-339	CSTXD2	Chest Displacement X	Strum	100 0231889 mm	+	10/10/2001	OK	339n	Servo	14CB1-2847
3033	2430T-901	IFMZF2	Left Femur Z-Axis 603	Knee	13351 89524 N	+	10/04/2001	OK	339n	GSE	2430T
3034	2430T-902	RFMZP2	Right Femur Z-Axis 744	Knee	13353 93804 N	+	10/04/2001	OK	339n	GSE	2430T
3035	J40181	ISXXG	Rear Seat X- Member @ Left Side	Fwd	200 0664283 g	+	01/02/2002	OK	-1	Endevco	7264-2000TZ
3036	J38975	RSXXG	Rear Seat X- Member @ Right	Fwd	199 9968750 g	+	01/02/2002	OK	-1	Endevco	7264-2000TZ
3037	J39144	TEXG	Top of Engine Block	Fwd	199 9718789 g	+	01/02/2002	OK	-1	Endevco	7264-2000TZ
3038	J39033	RAXG	Rear Axle	Rr	200 3788412 g	-	01/02/2002	OK	-1	Endevco	7264-2000TZ

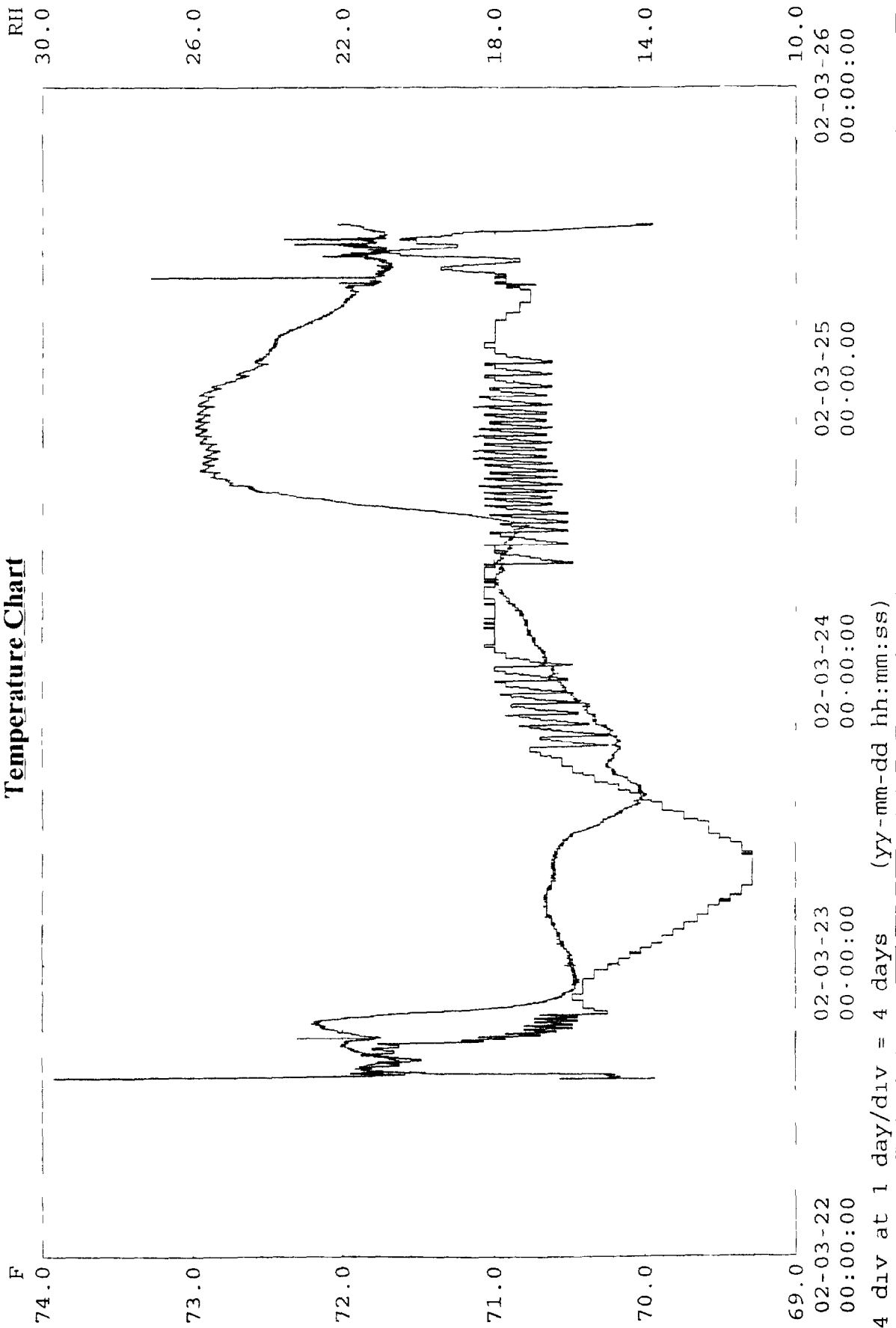
Digital and System Channel Report

2002-03-22 14 14 25

Name of Test		020325-1	System		K3600	Name of DAU		DAU3	description	
enabled Channel			I type			Data File			Module Type	
Yes		3500	Dig3			DAT33500			KM3650 Sequencer	

bit position	bit selector	short name	long name	description
MSB = bit 15	1	Switch	Pull-Apart Switch	Backup Trigger switch
bit 14	1	DABET1	Driv Airbag Event - Pn	1
bit 13	1	DABET2	Driv Airbag Event - Sec	2
bit 12	1	PABET1	Pass Airbag Event - Pn	3
bit 11	1	PABET2	Pass Airbag Event - Sec	4
bit 10	0			
bit 09	0			
bit 08	0			
bit 07	0			
bit 06	0			
bit 05	0			
bit 04	0			
bit 03	0			
bit 02	0			
bit 01	0			
LSB = bit 00	0			

Temperature Chart



020325.SPL,
020325.SPL

F
RH



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East Liberty, Ohio 43319-0367