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Report Number: 208S-TRC-01-006

Vehicle Safety Compliance Testing for FMVSS 208 for Occupant Crash Protection Sled Test

Isuzu Motor Company

2001 Isuzu Rodeo 4-door SUV

NHTSA Number: C15700

TRC Inc. Test Number: S010214

Transportation Research Center Inc.

10820 State Route 347

East Liberty, OH 43319

Test Date: February 14, 2001

Report Date: March 2, 2001

Final Report

Prepared For:

U. S. Department of Transportation

National Highway Traffic Safety Administration

Safety Assurance

Office of Vehicle Safety Compliance (NSA-30)

400 Seventh Street, S.W., Room No. 6115

Washington, DC 20590

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Report Approved By:

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Transportation Research Center Inc.

Date 3/5/01

Final Report Accepted By:

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

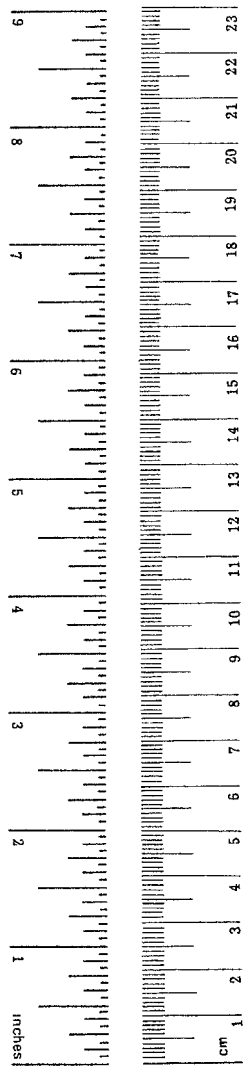
Date 5/16/01

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

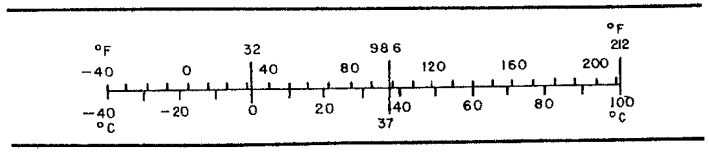
Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2 5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0 9	meters	m
mi	miles	1 6	kilometers	km
		AREA		
in^2	square inches	6 5	square centimeters	cm^2
ft^2	square feet	0 09	square meters	m^2
yd^2	square yards	0 8	square meters	m^2
mi^2	square miles	2 6	square kilometers	km^2
	acres	0 4	hectares	ha
		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	ml
c	cups	0 24	liters	l
pt	pints	0 47	liters	l
qt	quarts	0 95	liters	l
gal	gallons	3 8	liters	l
ft^3	cubic 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

1 in = 2 54 (exactly). For other exact conversions and more detailed tables see NBS Misc. Publ. 286, Units of Weights and Measures. Price $2 25. SD Catalog No. C13 10 286



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0 04	inches	in
cm	centimeters	0 4	inches	in
m	meters	3 3	feet	ft
m	meters	1 1	yards	yd
km	kilometers	0 6	miles	mi
		AREA		
cm^2	square centimeters	0 16	square inches	in^2
m^2	square meters	1 2	square yards	yd^2
km^2	square kilometers	0 4	square miles	mi^2
ha	hectares (10 000 m^2)	2 5	acres	
		MASS (weight)		
g	grams	0 035	ounces	oz
kg	kilograms	2 2	pounds	lb
t	tonnes (1000 kg)	1 1	short tons	
		VOLUME		
ml	milliliters	0 03	fluid ounces	fl oz
l	liters	2 1	pints	pt
l	liters	1 06	quarts	qt
l	liters	0 26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1 3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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16 Abstract

An FMVSS 208 Section 13 compliance sled test was conducted on a 2001 Isuzu Rodeo 4-door SUV, NHTSA No C15700, 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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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 2001 Isuzu Rodeo 4-door SUV, NHTSA No. C15700, 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 six (6) accelerometers to measure longitudinal axis 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 (this data is not recorded by the TRC data acquisition system), and two (2) additional longitudinal 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 two (2) 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 February 14, 2001.

The test vehicle, a 2001 Isuzu Rodeo 4-door SUV, NHTSA No. C15700, 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	131	102
Chest g	60 g	31.1	22.9
Chest Displacement	3 inches	1.0	0.7
Left Femur	2250 lbs	697	770
Right Femur	2250 lbs	831	996
Neck Extension	57 Nm	6.4	9.0
Neck Flexion	190 Nm	48.8	77.4
Neck Tension	3300 N	507	437
Neck Compression	4000 N	1428	397
Neck Shear	3100 N	834	852

The subject vehicle, a 2001 Isuzu Rodeo, NHTSA No. C15700, 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 17.1 g with an integrated velocity change of 29.2 mph. The air bags were triggered at 20.2 milliseconds after 0.5 g acceleration was measured by the firing circuit. Following subsequent digital data processing and filtering the primary sled acceleration signal to Channel Class 60, the air bag event trigger signal was 21.6 ms after the 0.5 g acceleration level was indicated.

Data Acquisition Explanations

The sled X-axis acceleration, SLDXG, was less than the minimum required for the specified sled corridor from approximately 68 to 71 milliseconds.

The sled measured velocity trap data channel, SLDXV, recorded a data spike at approximately 160 milliseconds. The peak data reported in this report's tables excludes this spike.

Sled Test Summary

NHTSA number:	C15700
Test type:	Sled Test
Test date:	02/14/01
Test time:	12:17
Ambient temperature at impact area:	70.6° F
Vehicle year/make/model/body style:	2001/Isuzu/Rodeo/4-door SUV

Dummy Info:	Driver #230	Passenger #314
Type:	HIII - Part 572E	HIII - Part 572E
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, headliner, and sun visor	Airbag and windshield
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:	2001/Isuzu/Rodeo/4-door SUV			
Color:	Palazzo Red			
VIN:	4S2CK58D114325962			
NHTSA number:	C15700			
Engine data:				
Placement:	Inline			
Cylinders:	4 cylinder			
Displacement:	2.2 liter DOHC			
Transmission data:	_4_ speed,	__manual,	_X_ automatic,	_X_ overdrive
Final drive:	___fwd,	_X_ rwd,	___4wd	
Date vehicle received:	02/01/2001			
Odometer reading:	66 miles			
Dealer's name and address:	Hatfield Isuzu 1400 Automall Drive Columbus, Ohio 43228			

Major Options:

Power steering	Yes	Other: Center armrest pad, child seat tethers
Power brakes	Yes	
Power windows	No	
Air conditioning	Yes	
Power door locks	No	

Remarks: None

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

Data from Vehicle's Certification Label:

Vehicle manufactured by:		Isuzu Motor Limited
Date of manufacture:		November-00
VIN:		4S2CK58D114325962
GVWR:		4850 lbs
GAWR:	Front:	2500 lbs
	Rear:	2900 lbs
Recommended tire size:		P225/75R16
Recommended cold tire pressure:		
Front:		29 psi
Rear:		29 psi

Tire pressure with maximum capacity vehicle load:

Front:	29 psi
Rear:	29 psi
Load range:	N/A lbs
Size of tires on vehicle:	P225/75R16
Spare tire:	P225/75R16
Vehicle capacity data:	
Type of front seats:	Bucket
Number of occupants:[1]	
Front	2
Rear	3
Total	5

Remarks: None

[1] Number of occupants determined from the number of seat belts in the vehicle.

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

Weight of test vehicle as received (with maximum fluids):

Right front	909.6	lbs	Right rear	896.8 lbs
Left front	988.5	lbs	Left rear	872.6 lbs
Total front weight	1898.1	lbs	(51.7% of total vehicle weight)	
Total rear weight	1769.4	lbs	(48.3% of total vehicle weight)	
Total delivered weight	3667.5	lbs		

Calculation of test vehicle's target test weight:

RCLW = Rated Cargo and Luggage Weight

UDW = Unloaded Delivered Weight (3667.5 lbs)

DSC = Designated Seating Capacity (5)

RCLW[1] = 300 lbs

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

Target test weight = 3667.5 + 300 +334 = 4301.5 lbs

Weight of test vehicle with two dummies and 304.5 lbs of cargo weight:

Right front	1002.2	lbs	Right rear	1126.5 lbs
Left front	1080.7	lbs	Left rear	1096.6 lbs
Total front weight	2082.9	lbs	(48.4% of total vehicle weight)	
Total rear weight	2223.1	lbs	(51.6% of total vehicle weight)	
Total test weight	4306.0	lbs		

Remarks:

Weight of ballast secured in vehicle cargo area: 0 lbs

Components removed to meet target test weight: None

[1] RCLW is the vehicle's cargo capacity or 300 lbs, whichever is less.

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

Test Vehicle Attitude:

As delivered door sill angle: 1.2° Nose Down

As tested door sill angle: 0.7° Nose Down

Fully loaded door sill angle: 0.1° Nose Down

Vehicle Wheelbase: 106.4 inches

Fuel System Data:

Fuel system capacity from owner's manual: 19.5 gallons

Useable capacity figure furnished by COTR: 19.3 gallons

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

The left and right side measurements were 30.0 inches and 29.9 inches respectively.

Post-Impact Data

Test number:	S010214
NHTSA number:	C15700
Test date:	02/14/01
Test time:	12:17
Test type:	Sled Test
Impact angle:	0°
Ambient temperature at impact area:	70.6° F
Temperature in occupant compartment:	70.6° F

Sled carriage velocity:

Integrated velocity from the integration of the entire sled acceleration:	29.2 mph[1]
Measured velocity from the light trap device attached to the sled (backup):	28.5 mph[1]
Specified integrated velocity range:	28 to 30 mph

Sled carriage acceleration:

Acceleration:	17.1 g[1]
Specified acceleration range:	16 g - 18.2 g

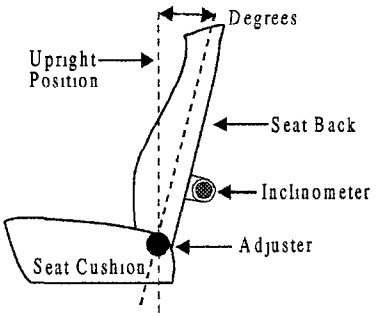
Sled carriage acceleration duration:

Time from T-0(-0.5 g) to 0.0 g:	126.6 ms
Specified acceleration duration:	120 - 130 ms

[1] See Data Acquisition Explanations

Seat and Steering Column Positioning Data

Vehicle: 2001/Isuzu/Rodeo/4-door SUV NHTSA No.: C15700



Front Seat Assembly
Left Side View

Nominal Design Riding Position:

Driver Seat: Seat Back Angle = 21.7° Manual adjustable. The seat back was adjusted to the 5th latch position rearward from the upright position.[1]

Passenger Seat: Seat Back Angle = 22.3° Manual adjustable. The seat back was adjusted to the 5th latch position rearward from the upright position.[1]

Seat Fore and Aft Positions:

Driver Seat: Mid - The seat was positioned in the 11th latch forward from the rearmost latching position.

Passenger: Mid - The seat was positioned in the 11th latch forward from the rearmost latching position.

Steering Column Adjustments:

The steering column was not adjustable.

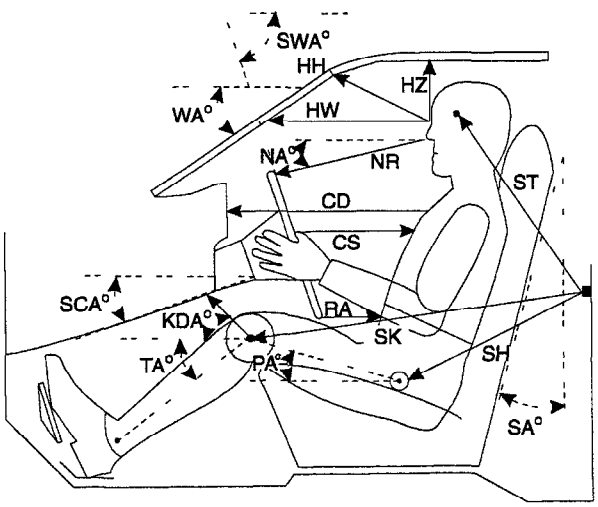
[1] Isuzu personnel on site clarified that the upright position was the "zero" position and the seat back was to be moved 5 more notches.

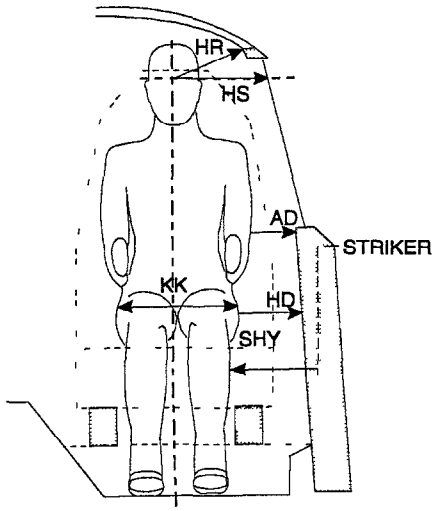
Dummy Measurement Data for Front Seat Occupants

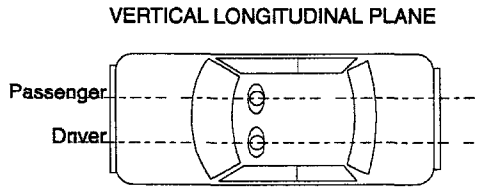
Designation	Type of Measurement	Driver (Serial #230)	Passenger (Serial #314)
WA	Windshield angle	37.0°	N/A
SWA	Steering wheel angle	25.1°	N/A
SCA	Steering column angle	24.7°	N/A
SA	Seat back angle (Fixed)	21.7°	22.3°
HZ	Head to roof	7.1 in	7.0 in
HH	Head to header	14.8 in	14.9 in
HW	Head to windshield	20.7 in	20.9 in
HR	Head to side header	8.7 in	9.4 in
NR	Nose to rim	16.3 in	N/A
NA	Nose to rim angle	15°	N/A
CD	Chest to dash	20.4 in	21.2 in
CS	Steering wheel to chest	11.2 in	N/A
RA	Rim to abdomen	7.2 in	N/A
KDL	Left knee to dash	6.0 in	6.3 in
KDR	Right knee to dash	5.4 in	6.3 in
KDA	Outboard knee to dash angle	34°	15°
PA	Pelvis angle	24.1°	22.3°
TA	Tibia angle	43°	40.2°
KK	Knee to knee	11.0 in	11.0 in
ST[1]	Striker to head	22.9 in	22.7 in
	Striker to head angle	-75.4°	-72.4°
SK[1]	Striker to knee	25.5 in	26.3 in
	Striker to knee angle	-5.7°	-1.6°
SH[1]	Striker to H-point	11.8 in	11.6 in
	Striker to H-point angle	12.5°	18.3°
SHY	Striker to H-point (Y dir.)	8.4 in	8.5 in
HS	Head to side window	12.0 in	12.6 in
HD	H-point to door	4.9 in	5.0 in
AD	Arm to door	4.4 in	5.0 in

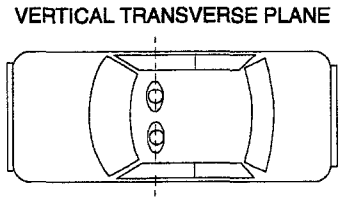
The seat back angle (SA°) is measured relative to vertical.
All other angles are measured relative to horizontal.
[1] A negative angle indicates the measurement point was located below the striker.

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).

*[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.

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

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.

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.

* Measurement used in Data Tape Reference Guide

PA Pelvic or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and taking this angle with respect to the horizontal. Measure the angle of the line connecting the H-point hole and the outer knee pivot bolt hole on a Hybrid II dummy with respect to the horizontal, to find the femur angle.

SWA Steering Wheel Angle, find this by placing a straight edge against the steering wheel rim along the longitudinal plane. Then measure the acute angle of the straight edge with respect to the horizontal.

SCA Steering Column Angle, measured with respect to the horizontal by placing an inclinometer on the center of the underside of the steering column.

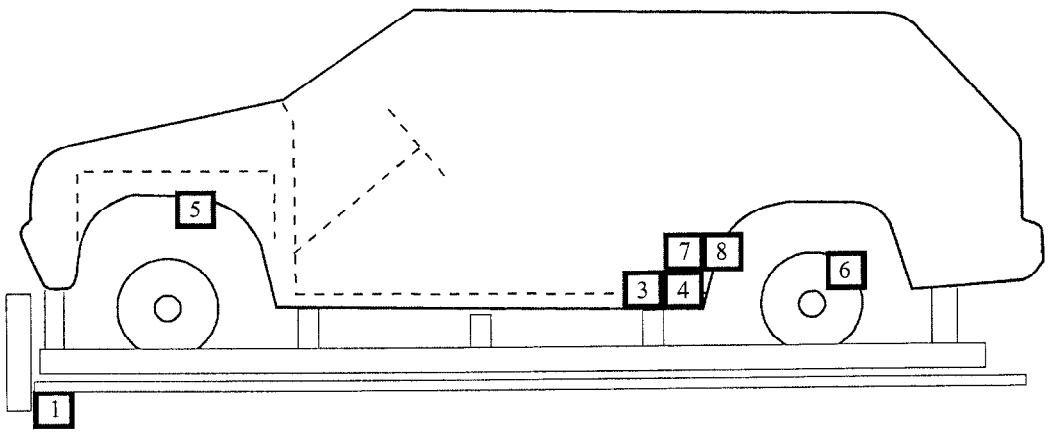
NA Measure the angle made when taking the measurement NR with respect to the horizontal.

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

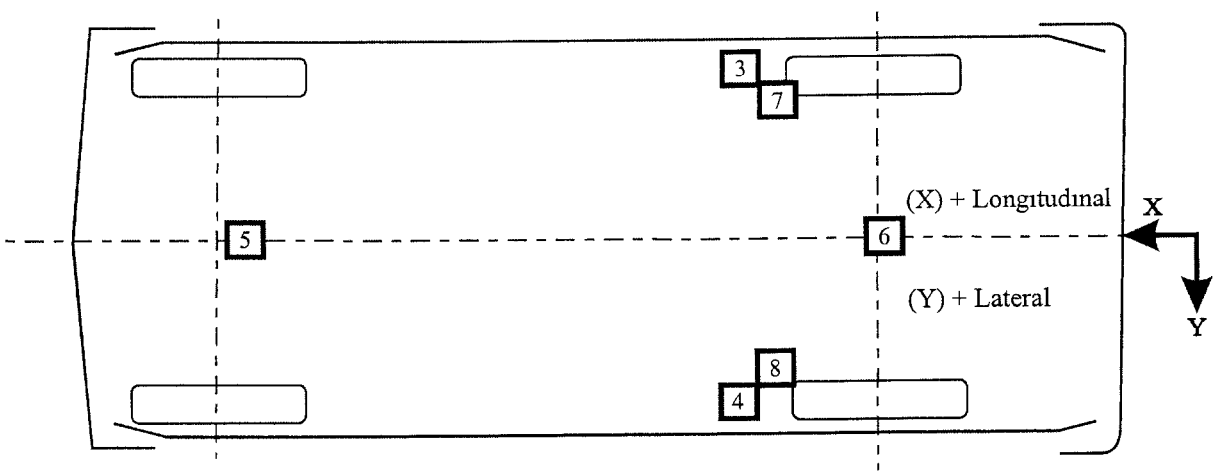
WA Windshield Angle, place an inclinometer along the transverse center of the windshield exterior (measurement is made with respect to horizontal).

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

Vehicle Accelerometer Placement



Side View



Bottom View

Vehicle Data Summary and Accelerometer Locations

TEST NUMBER: S010214 No. LOCATION	X	Y	POSITIVE DIRECTION		NEGATIVE DIRECTION	
1 SLED ACCELERATION	165.6 in	-1.0 in				
PRIMARY			0.6 g	@ 203.8 ms	17.1 g	@ 55.4 ms
BACKUP			1.7 g	@ 191.8 ms	17.8 g	@ 44.7 ms
2 SLED VELOCITY						
MEASURED[1]			0.0 mph	@ 7.1 ms	28.5 mph	@ 135.6 ms
INTEGRATED[2]			---	@ ---	29.2 mph	@ 126.7 ms
3 LEFT BODY AT REAR SEAT	58.8 in	-25.3 in				
LONGITUDINAL			1.3 g	@ 129.8 ms	17.7 g	@ 54.9 ms
4 RIGHT BODY AT REAR SEAT	59.2 in	26.2 in				
LONGITUDINAL			1.3 g	@ 129.8 ms	17.5 g	@ 55.3 ms
5 TOP ENGINE	150.6 in	0.2 in				
LONGITUDINAL			3.3 g	@ 136.4 ms	18.2 g	@ 58.9 ms
6 REAR AXLE	35.4 in	1.0 in				
LONGITUDINAL			2.1 g	@ 131.0 ms	17.5 g	@ 53.9 ms
7 LEFT VEHICLE FRAME	56.3 in	-22.6 in				
LONGITUDINAL			1.1 g	@ 129.7 ms	17.6 g	@ 55.4 ms
8 RIGHT VEHICLE FRAME	55.4 in	22.2 in				
LONGITUDINAL			1.3 g	@ 129.7 ms	17.5 g	@ 55.7 ms

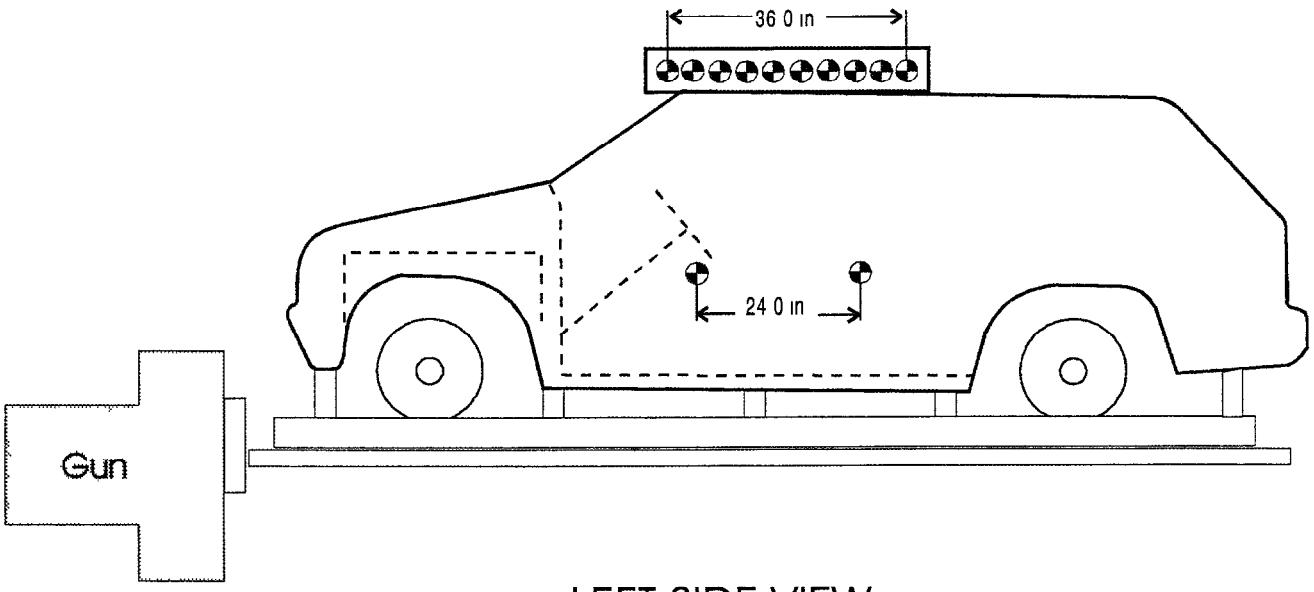
Vehicle Data Summary and Accelerometer Locations, Cont'd.

TEST NUMBER: S010214 No. LOCATION	X	Y	POSITIVE DIRECTION	NEGATIVE DIRECTION
9 DRIVER AIRBAG EVENT			21.6 ms	
10 PASSENGER AIRBAG EVENT			21.6 ms	

REFERENCE: X: + FORWARD FROM VEHICLE REAR SURFACE
Y: + RIGHTWARD FROM SLED CARRIAGE CENTERLINE

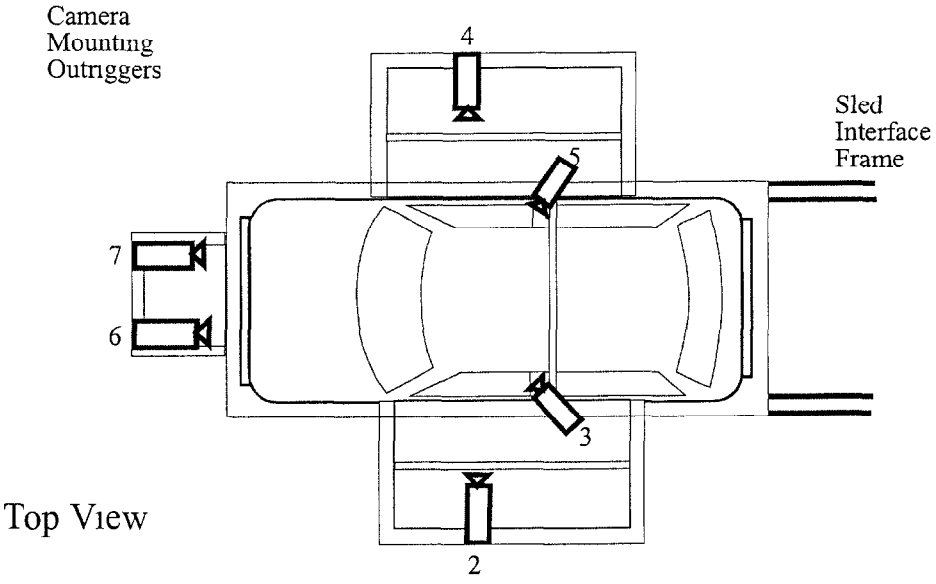
[1]See DATA ACQUISITION EXPLANATIONS
[2]No positive data in time frame of interest.

REFERENCE PHOTO TARGETS



LEFT SIDE VIEW

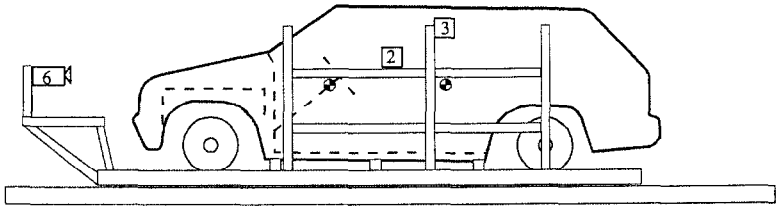
Camera Positions



Top View

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

Real-Time
Camera



Left Side View

Motion Picture Camera Locations

Vehicle year/make/model/body style: 2001/Isuzu/Rodeo/4-door SUV NHTSA No.: C15700 Test Number: S010214

Camera Number	View	Camera Positions[1] X	Y	Z	Camera Angle[2]	Film Plane to Head Target	Camera Lens	Film Speed
1	Left side view offboard	93.0 in	312.0 in	58.3 in	0°	295.0 in	10 mm	24 frames/s
2	Left side view wide	75.5 in	72.5 in	53.1 in	0.8°	55.0 in	8 mm	997 frames/s
3	Left side view over shoulder	98.6 in	49.6 in	60.6 in	13.1°	36.0 in	8 mm	1007 frames/s
4	Right side view wide	99.5 in	91.6 in	53.6 in	3.5°	75.2 in	13 mm	995 frames/s
5	Right side view over shoulder	77.4 in	49.3 in	62.2 in	11.8°	37.0 in	8 mm	1002 frames/s
6	Front view - driver	27.5 in	12.7 in	60.1 in	7.1°	54.5 in	8 mm	992 frames/s
7	Front view - passenger	26.7 in	15.8 in	61.9 in	7 6°	54.8 in	8 mm	1000 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: 2001/Isuzu/Rodeo/4-door SUV NHTSA No.: C15700 Date: 02/14/01

Maximum Acceleration Values: (g's)[1]	Driver Dummy #230	Passenger Dummy #314
Head Channel X	-31.7	-21.8
Head Channel Y	12.3	-10.3
Head Channel Z	12.9	16.7
HEAD RESULTANT	33.7	28.3
Chest Channel X	-31.5	-23.1
Chest Channel Y	-3.1	-2.5
Chest Channel Z	7.2	-9.2
CHEST RESULTANT	31.7	23.3

Head Injury Criteria (HIC) Values:

HIC	131	102
t_1 = (ms)	75.92	92.56
t_2 = (ms)	111.92	128.56

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

Chest Injury Criteria (Clip) Values: (g's)

CLIP	31.1	22.9
t^1 = (ms)	93.76	89.44
t^2 = (ms)	96.80	92.40
Chest Deflection (in)	1.0	0.7

[1] Sign Convention per SAE J211, MAR95

FMVSS 208 Occupant Injury Data, Cont'd.

Vehicle: 2001/Isuzu/Rodeo/4-door SUV NHTSA No.: C15700 Date: 02/14/01

Max. Compressive Femur Forces (lbs.):	Driver Dummy #230	Passenger Dummy #314
Left Side (lbs)	697	770
Right Side (lbs)	831	996

Neck Injury Criteria:	Driver Dummy #230	Passenger Dummy #314
Peak Flexion Bending Moment (N-m)	48.8	77.4
Peak Extension Bending Moment (N-m)	6.4	9.0
Peak Axial Tension (N)	507	437
Peak Axial Compression (N)	1428	397
Peak Positive X-axis Shear (N)	834	852
Peak Negative X-axis Shear (N)	204	194

FMVSS 208 Seat Belt Warning System Check

Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

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 = 4 seconds
(4 to 8 seconds)

Time duration of reminder light operation = continuous
(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: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, R. Stoner Date: 02/14/01

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: Upper left 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: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

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**

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK

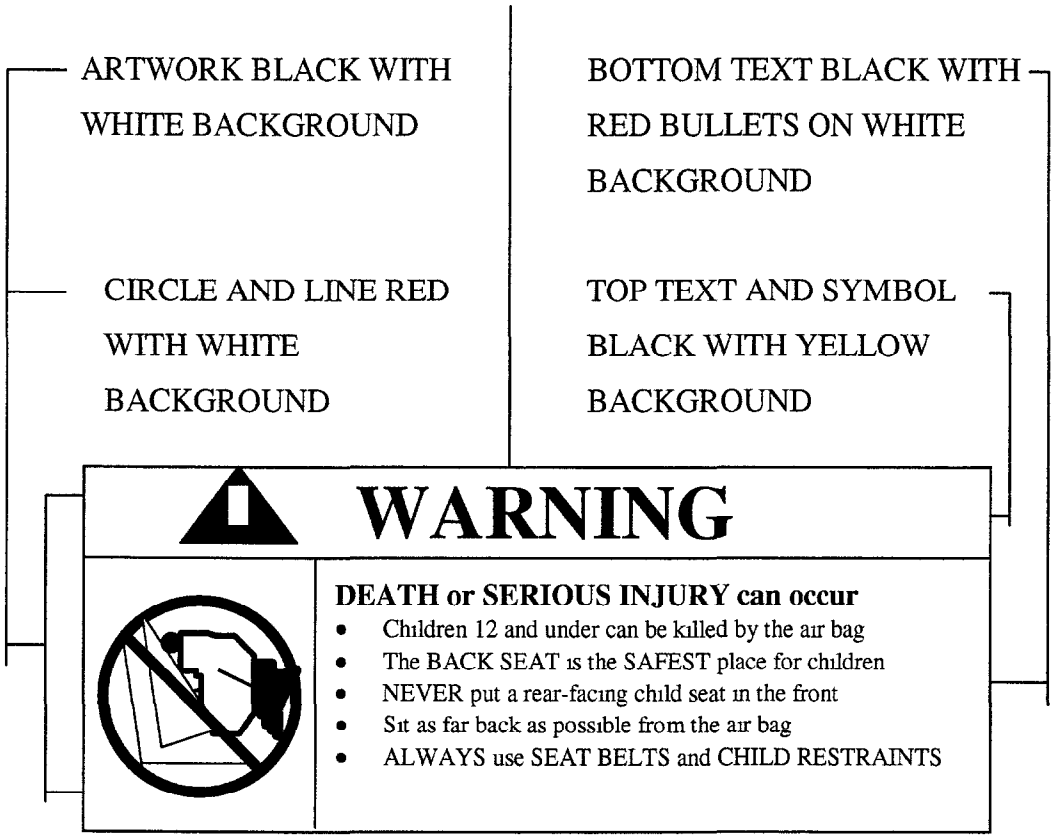


Figure 6a
(S4 5 1(b)(2))

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK

ARTWORK BLACK WITH WHITE BACKGROUND

BOTTOM TEXT BLACK WITH RED BULLETS ON WHITE BACKGROUND

CIRCLE AND LINE RED WITH WHITE BACKGROUND

TOP TEXT AND SYMBOL BLACK WITH YELLOW BACKGROUND

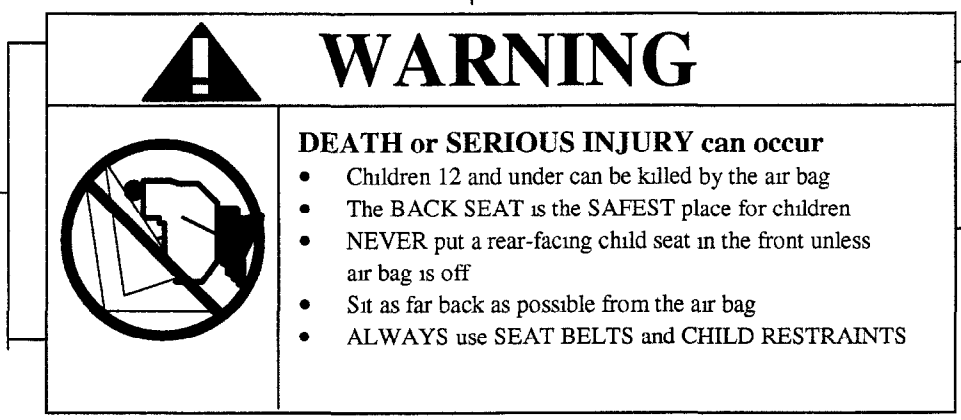


Figure 6b
(S4 5 1(b)(2))

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 cm^2? (S4.5.1(b)(2)(ii))

Actual message area, driver side **34** cm^2

Actual message area, passenger side **34** cm^2

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 **35** mm
Actual diameter, passenger side **35** 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 rollover warning label specified in 49 CFR Part 575 §575.105? 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 cm^2? (S4.5.1(c)(2)(i))

Actual message area ____ cm^2 ☐ 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 ____ 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 check list 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**

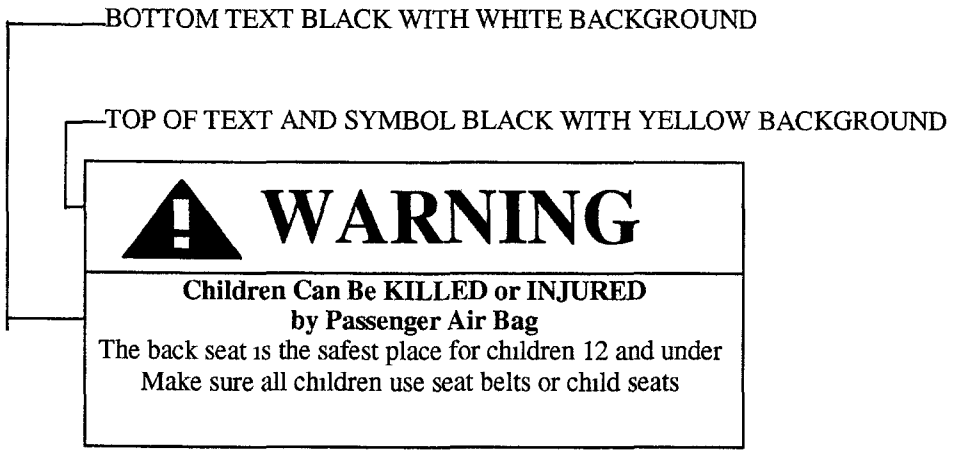


Figure 7
(S4 5 1(e))

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)(i))

☒ Yes-Pass ☐ **No-Fail**

6.5 Is the message white with black text? (S4.5.1(e)(ii))

☒ Yes-Pass ☐ **No-Fail**

6.6 Is the message area at least 30 cm^2? (S4.5.1(e)(ii))
Actual message area **35** cm^2

☒ Yes-Pass ☐ **No-Fail**

FMVSS 208 Rear Outboard Seating Position Seat Belts

Vehicle Model Year/Make/Model/Body Style: 2001/IsuzuRodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

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.

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: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

Designated Seating Position: Right Front

☒1. Record test seat position: 11th notch (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: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

Designated Seating Position: Right Front

☒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 **58.3** inches.

☒11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1 1.5(c)(3))

☒12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device 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 **35.4** inches.

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

Designated Seating Position: Right Front

☒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 **37.1** inches (S7.1.1.5(c)(6))

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

14-13= **1.7** 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= **21.2** inches. ☒ Yes-Pass ☐ **No-Fail**

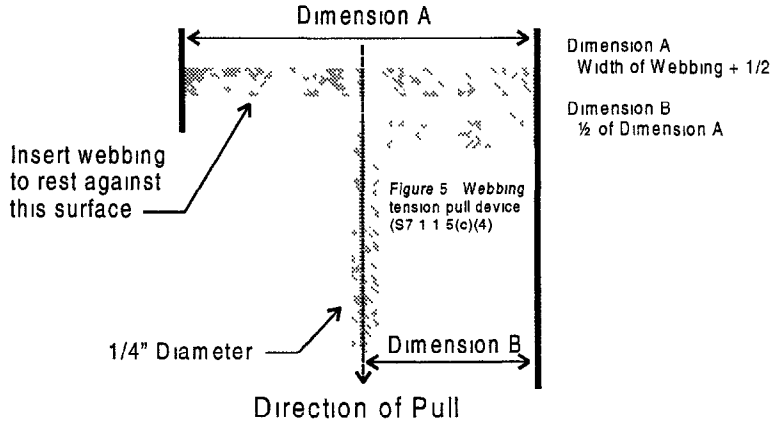


Figure 5 Webbing tension pull device (S7 1 1 5(c)(4)

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: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S Bell, N. Kinney Date: 02/14/01

Designated Seating Position: Left Rear

☒1. Record test seat position: Not adjustable (S7.1.1.5(c)(1)) (Any position is acceptable.)

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

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

☒4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part 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: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

Designated Seating Position: Left 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 **62.0** 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 **30.3** inches.

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

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)

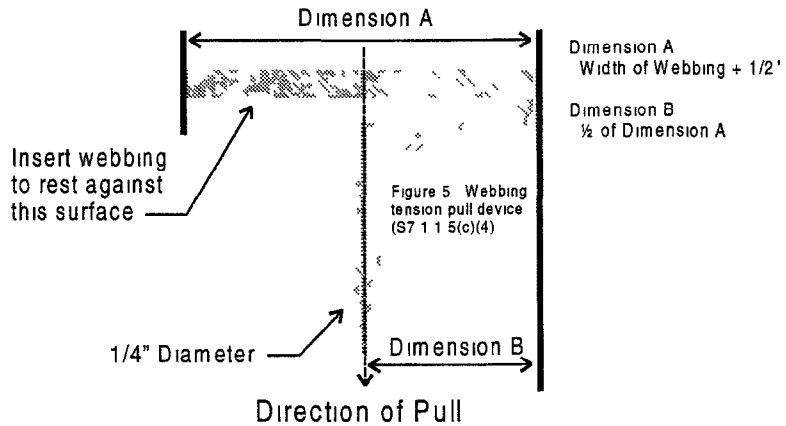
The measured distance between A and B is **30.6** inches (S7.1.1.5(c)(6))

☒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= **0.3** 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= **31.4** 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: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

Designated Seating Position: Right Rear

☒1. Record test seat position: Not adjustable (S7.1.1.5(c)(1)) (Any position is acceptable.)

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

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

☒4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part 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: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

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 **62.7** inches.

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

☒12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device 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 **27.2** inches.

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV

NHTSA No.: C15700 Technician: S. Bell, N. Kinney Date: 02/14/01

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 **27.4** 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= **35.3** inches. ☒ Yes-Pass ☐ **No-Fail**

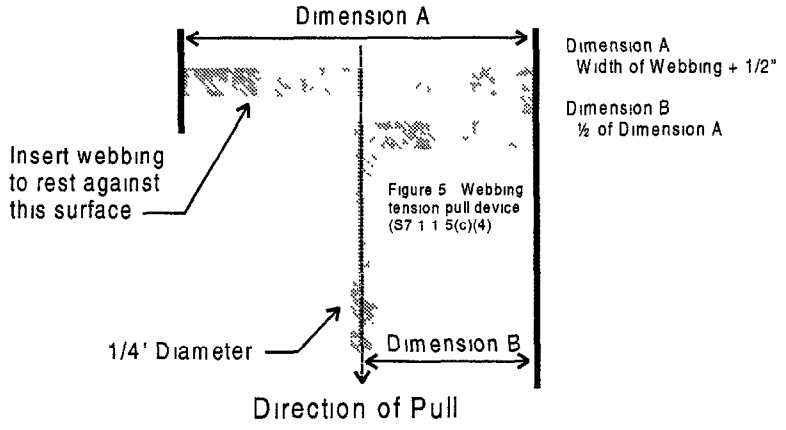


Figure 5 Webbing tension pull device (S7 1 1 5(c)(4)

FMVSS 208 Seat Belt Comfort And Convenience Test
Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Driver's seat
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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 dummies according to dummy position placement instructions in Appendix B.

☒ 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 **0.62** pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL***

FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Left Front Passenger
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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 dummies according to dummy position placement instructions in Appendix B.

☒ 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 **0.69** pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL***

FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Left Rear
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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 dummies according to dummy position placement instructions in Appendix B.

☒ 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 **0.34** pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL***

FMVSS 208 Seat Belt Comfort And Convenience Test

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Right Rear
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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 dummies according to dummy position placement instructions in Appendix B.

☒ 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 **0.43** pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL***

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

Latchplate Access (S7.4.4)

Test Vehicle NHTSA No.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Driver's seat
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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. (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.
☒ 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 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.

Latchplate Access (S7.4.4)

Test Vehicle NHTSA No.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Right Front Passenger
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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. (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 ☒ 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 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.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Driver's seat
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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

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. ☒ Check

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

Retraction (S7.4.5)

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.

Retraction (S7.4.5)

Test Vehicle NHTSA No.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Right Front Passenger
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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

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. ☒ Check

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

Retraction (S7.4.5)

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.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Driver's Seat
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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**

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

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

Seat Belt Guides And Hardware (S7.4.6)

(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.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo /4-door SUV
Designated Seating Position Tested: Right Front Passenger
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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**

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

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

Seat Belt Guides And Hardware (S7.4.6)

(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.: C15700
Vehicle Model Year/Make/Model/Body Style: 2001/Isuzu/Rodeo/4-door SUV
Designated Seating Position Tested: Not applicable to Left, Center, and Right rear seats due to item C below.
Date of Comfort and Convenience Check: 02/12/01
Technician Performing Check: S. Bell, N. Kinney
GVWR: 4850 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**

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

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

Seat Belt Guides And Hardware (S7.4.6)

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

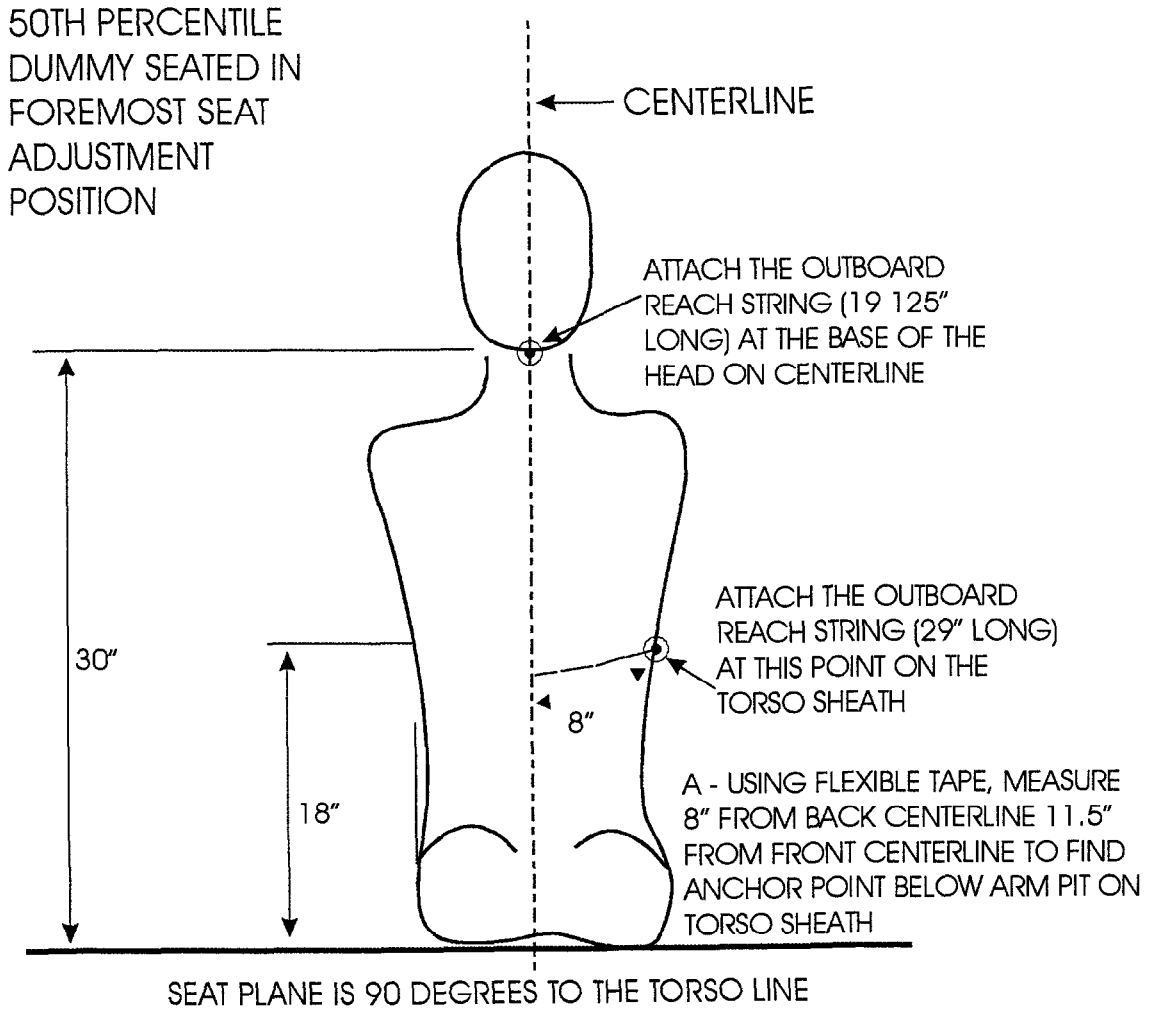
(C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. ☐ Check

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



REAR VIEW

Figure 1C

USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

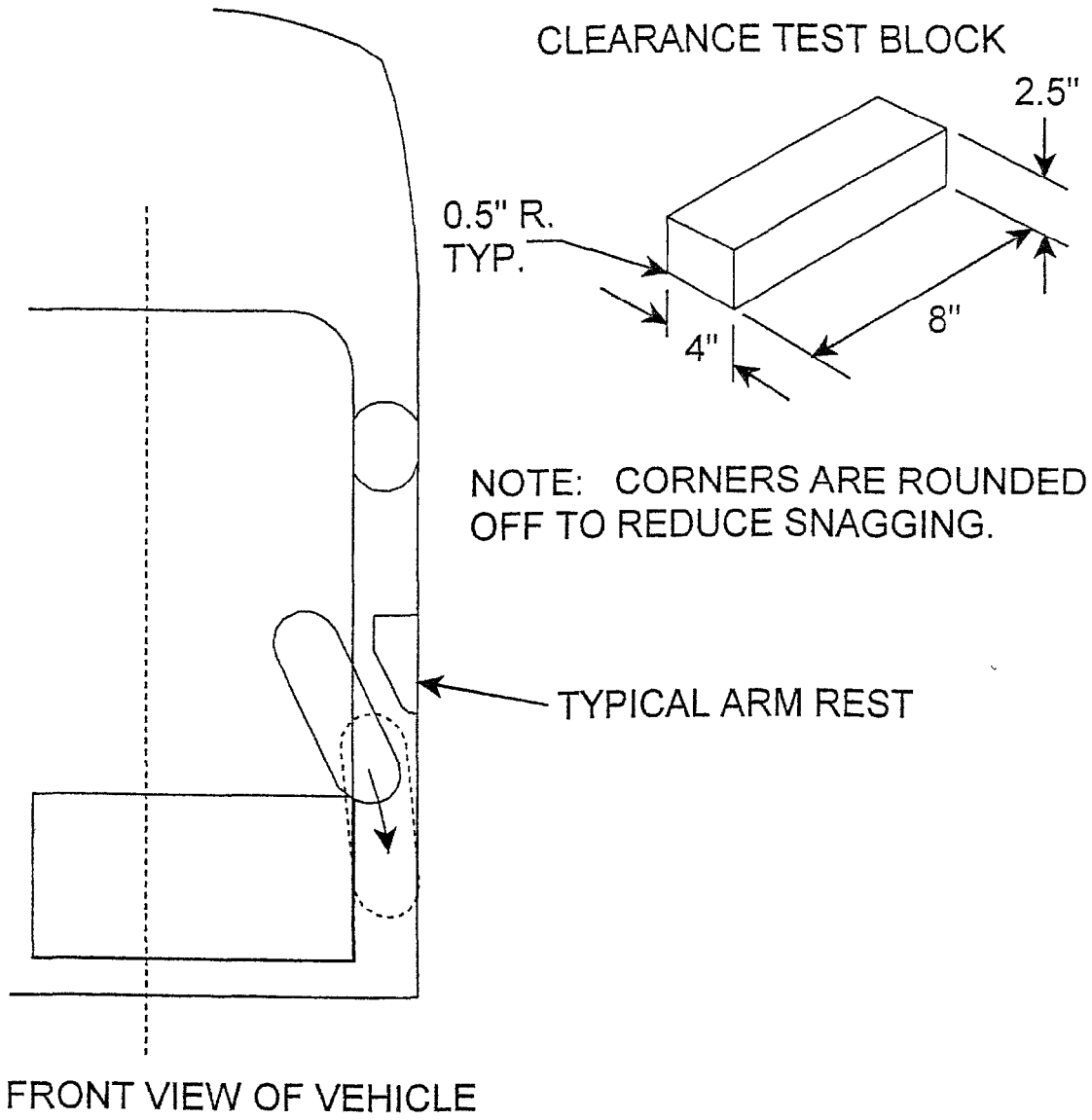


Figure 2C

Appendix A

Photographs

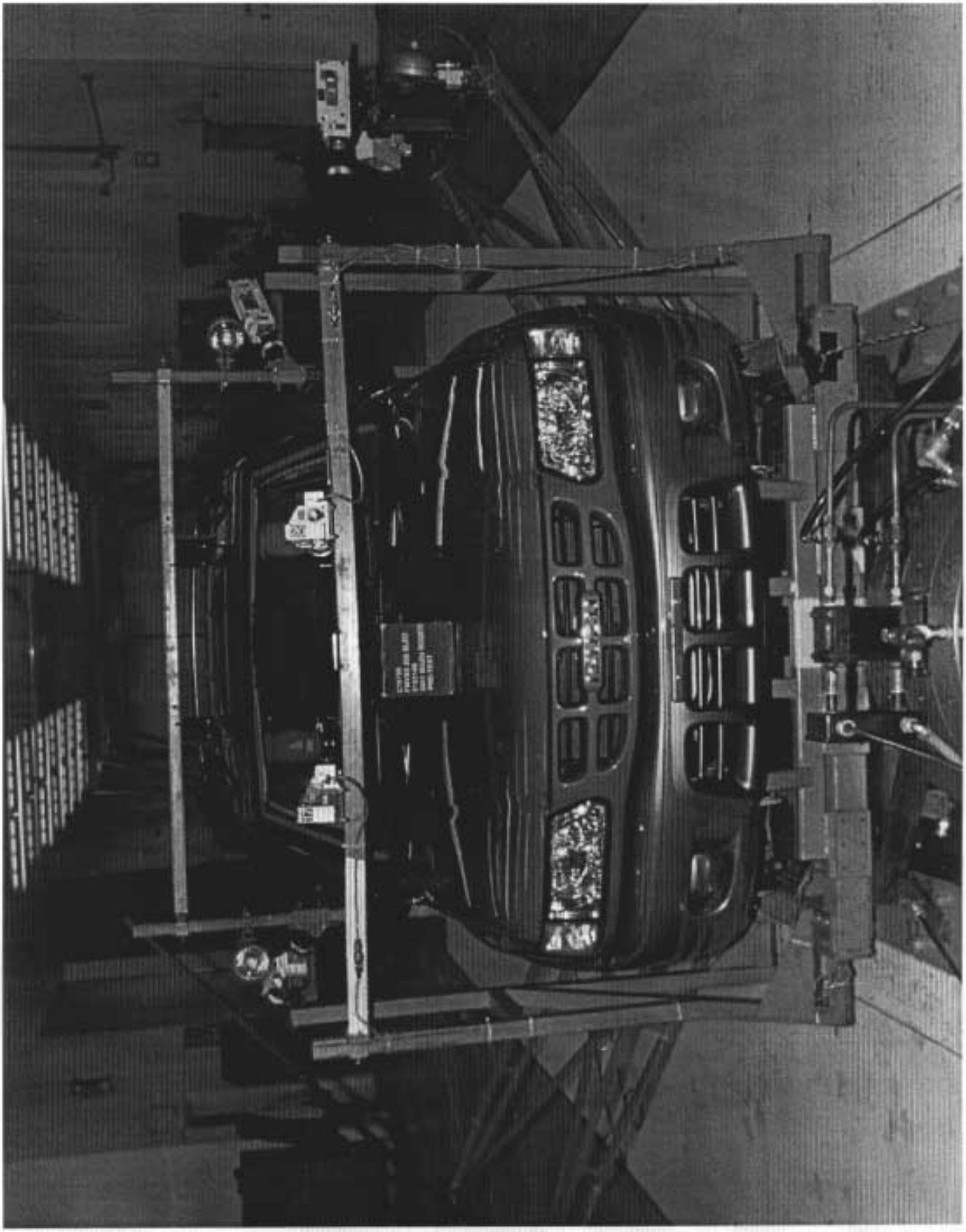


Figure A-1 Pre-Test Front View of Test Vehicle Mounted to Sled

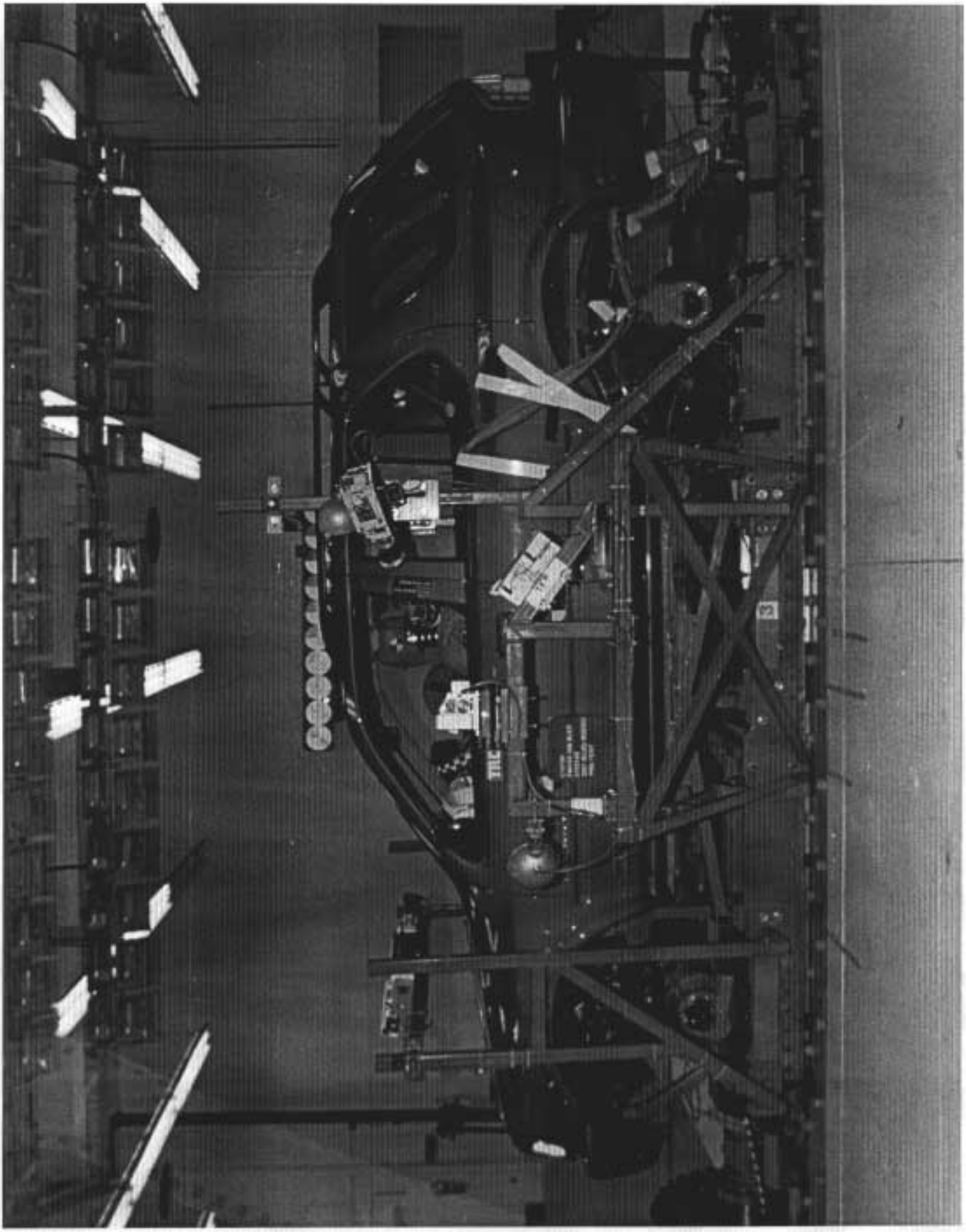


Figure A-2 Pre-Test Left Side View of Test Vehicle Mounted to Sled

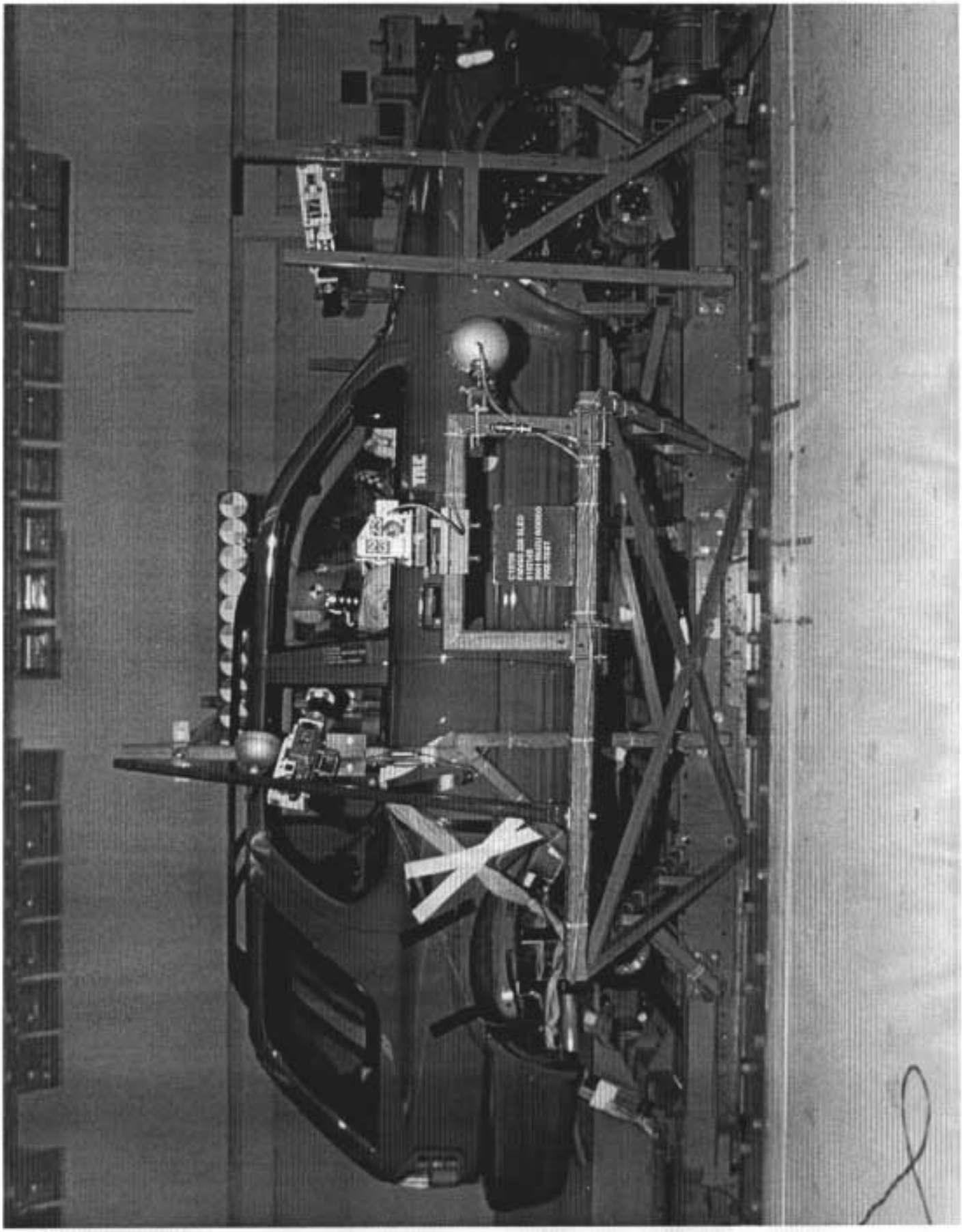


Figure A-3 Pre-Test Right Side View of Test Vehicle Mounted to Sled

Figure A-4 Pre-Test Windshield View

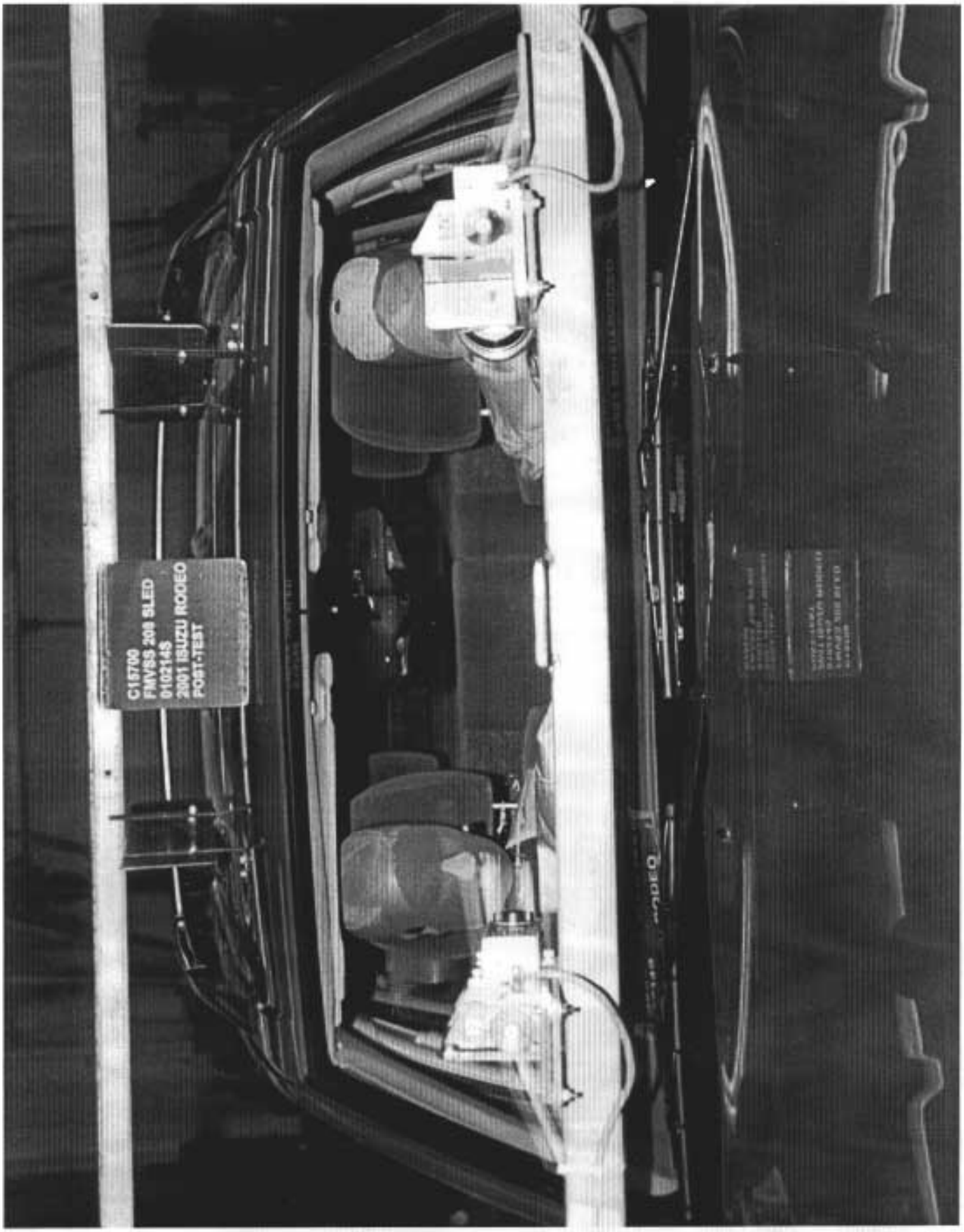


Figure A-5 Post-Test Windshield View

Figure A-6 Pre-Test Driver Dummy Position View with Door Open

Figure A-7 Post-Test Driver Dummy Position View with Door Open

Figure A-8 Pre-Test Driver Seat Track Position View

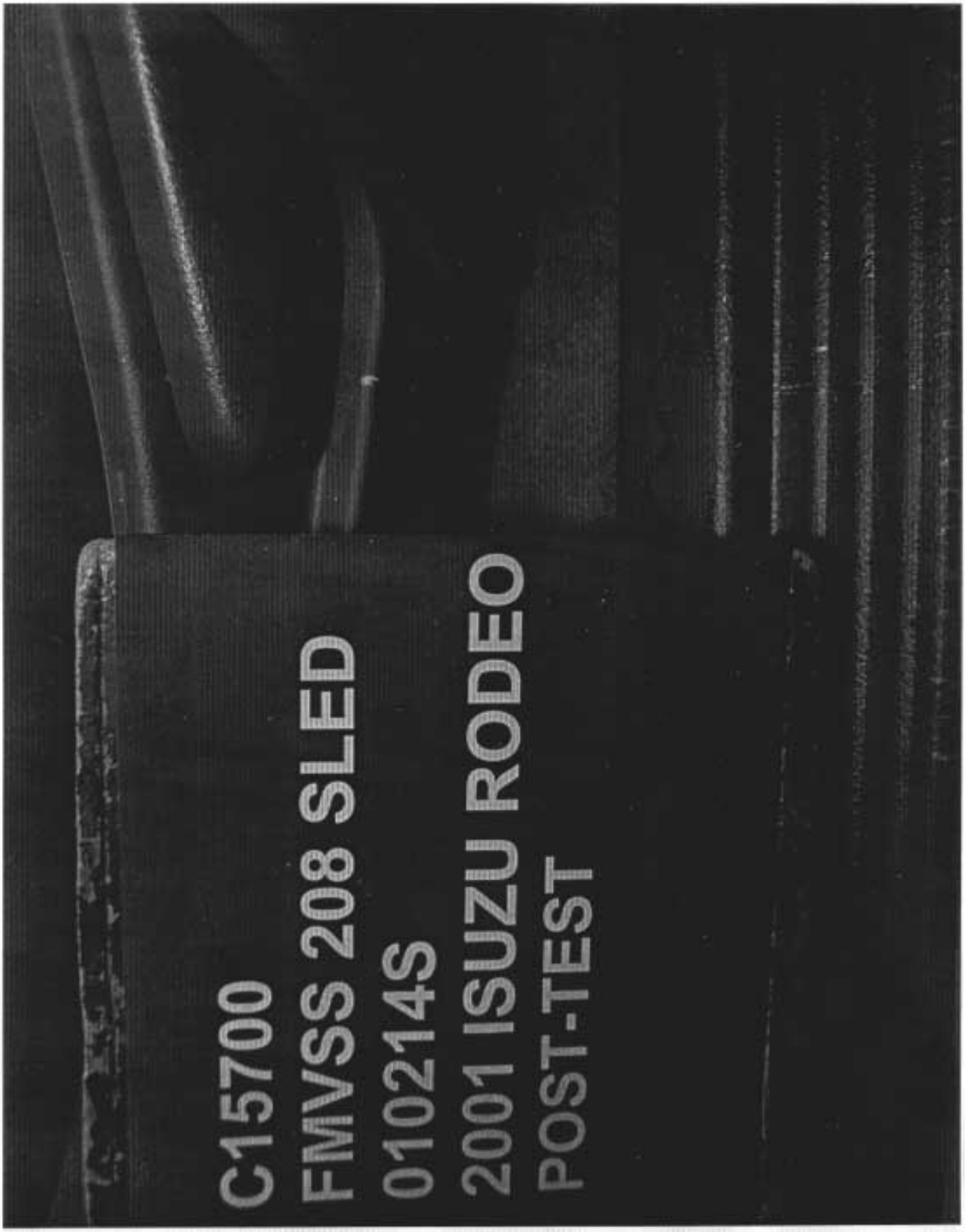


Figure A-9 Post-Test Driver Seat Track Position View

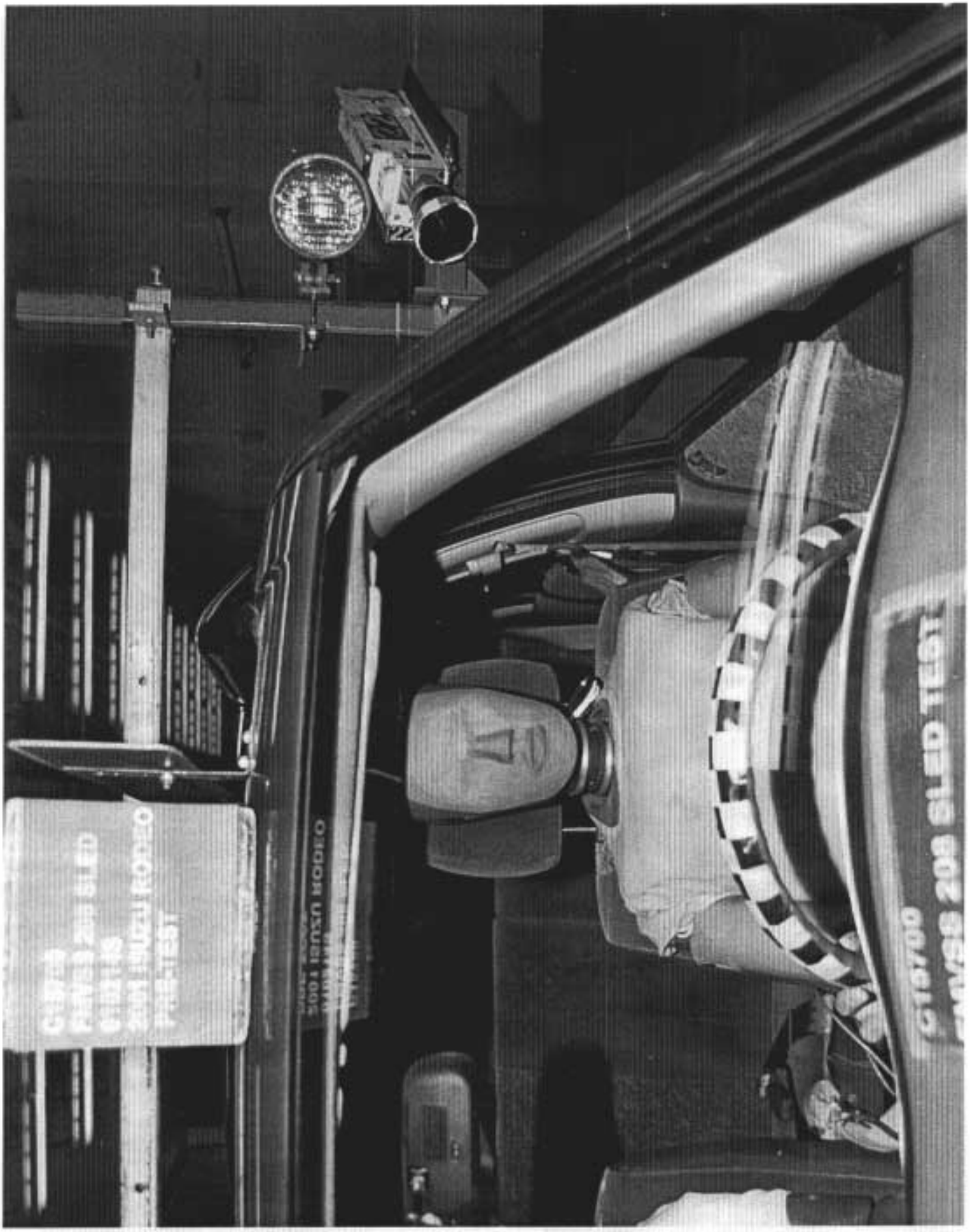


Figure A-10 Pre-Test Driver Dummy Position Front View

S010214

Figure A-11 Post-Test Driver Dummy Position Front View

Figure A-12 Pre-Test Passenger Dummy Position View with Door Open

Figure A-13 Post-Test Passenger Dummy Position View with Door Open

Figure A-14 Pre-Test Passenger Seat Track Position View

Figure A-15 Post-Test Passenger Seat Track Position View

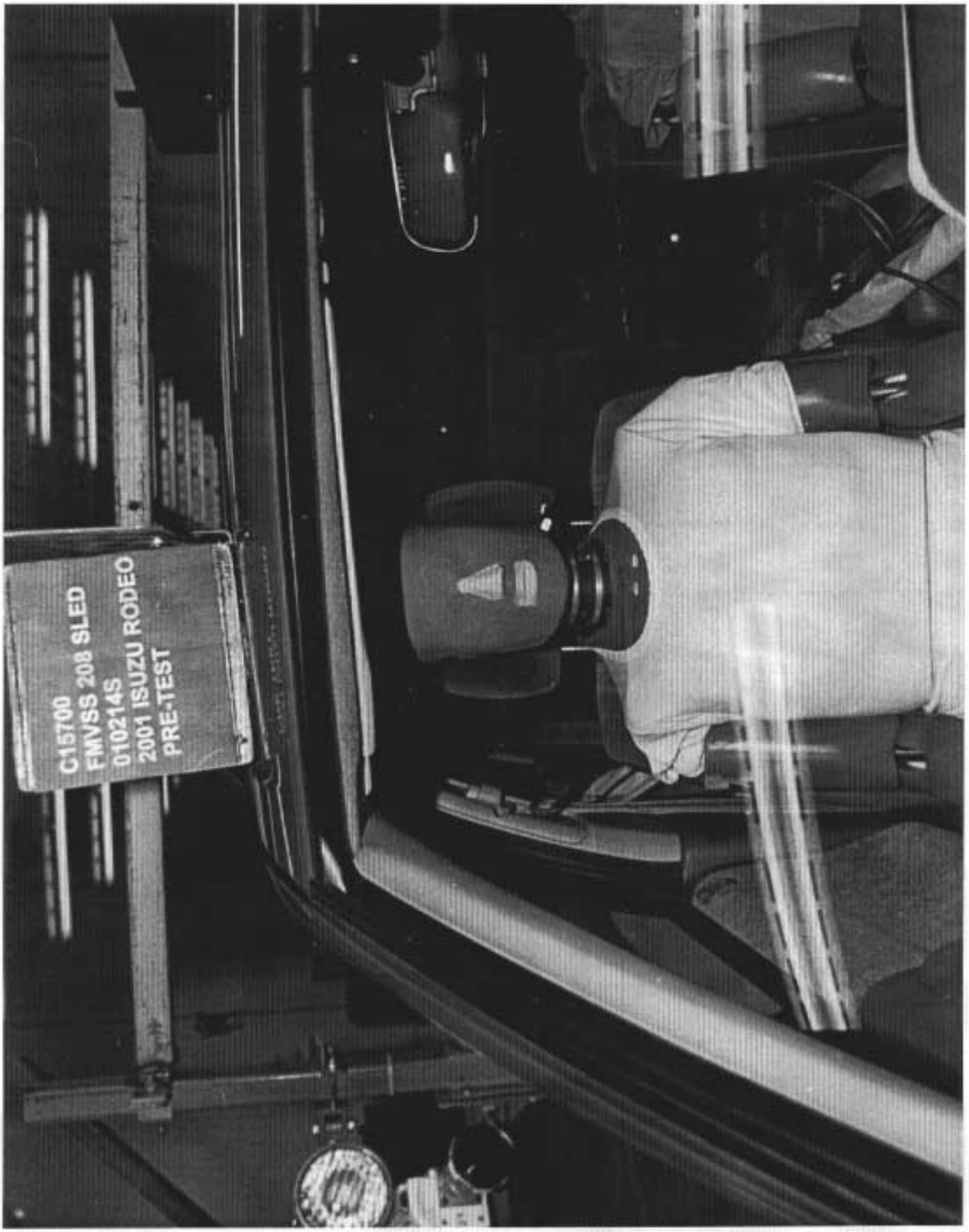


Figure A-16 Pre-Test Passenger Dummy Position Front View

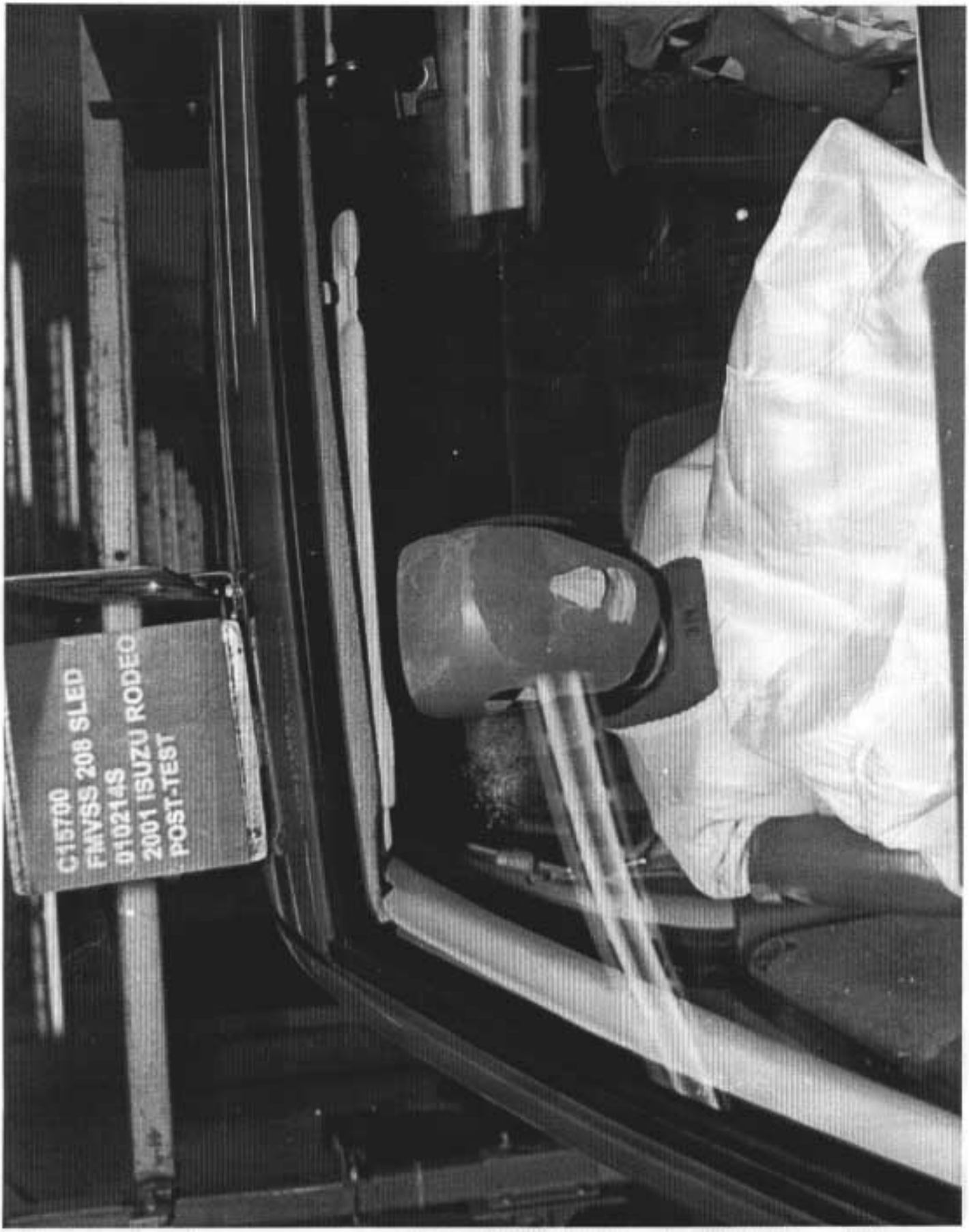


Figure A-17 Post-Test Passenger Dummy Position Front View

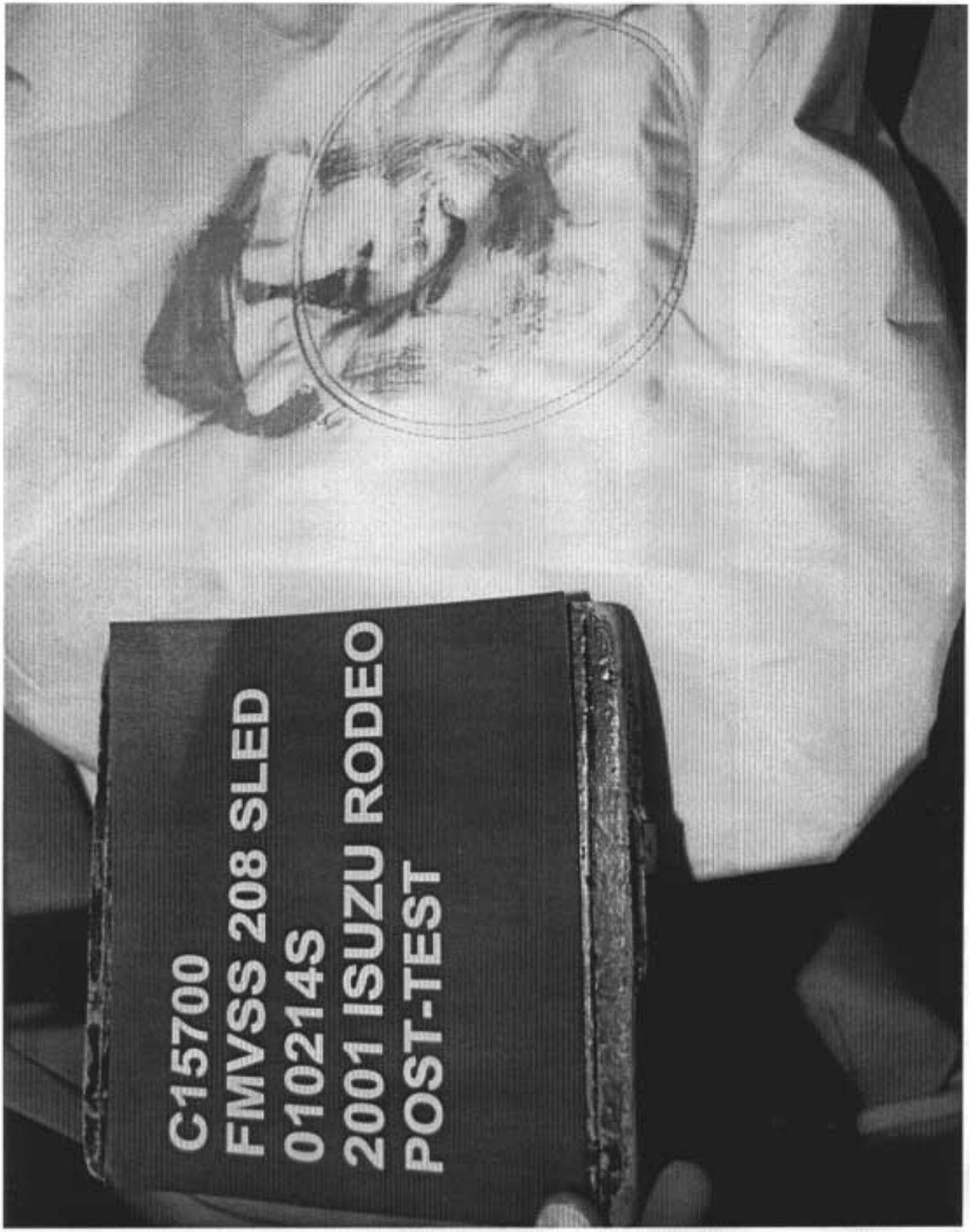


Figure A-18 Post-Test Driver Airbag View

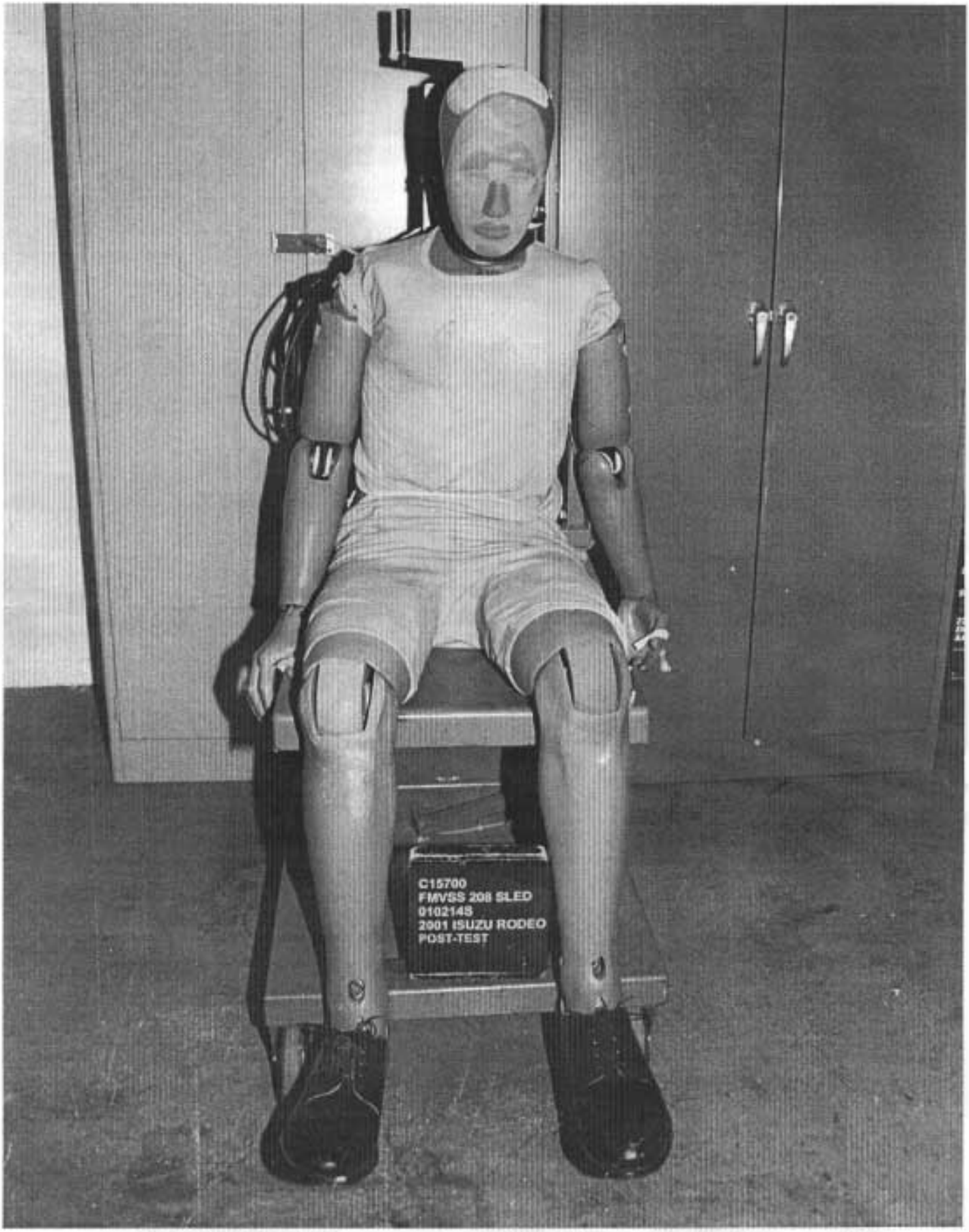


Figure A-19 Post-Test Driver Dummy Removed from Vehicle Overall View

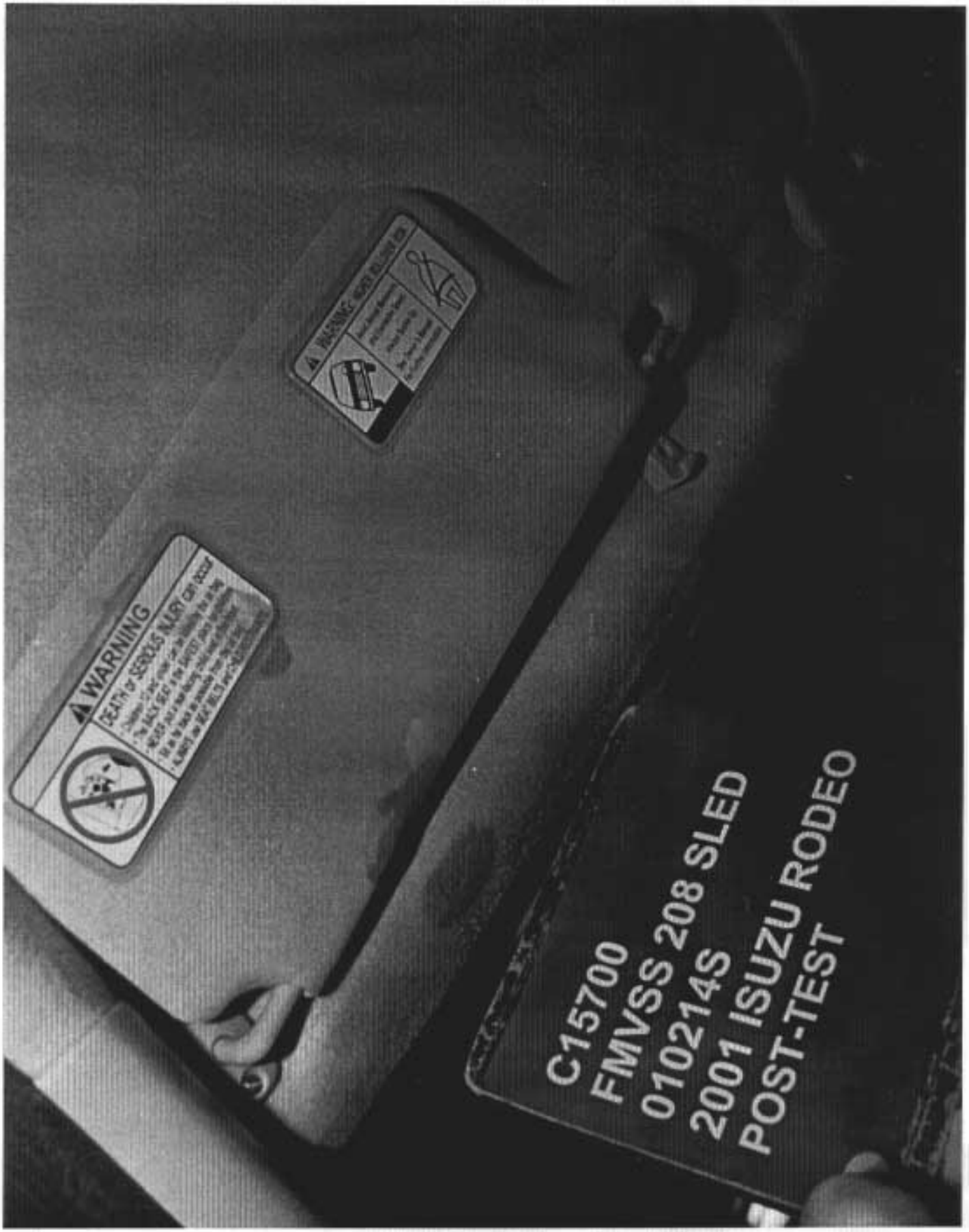


Figure A-20 Post-Test Driver Dummy Head Contact View

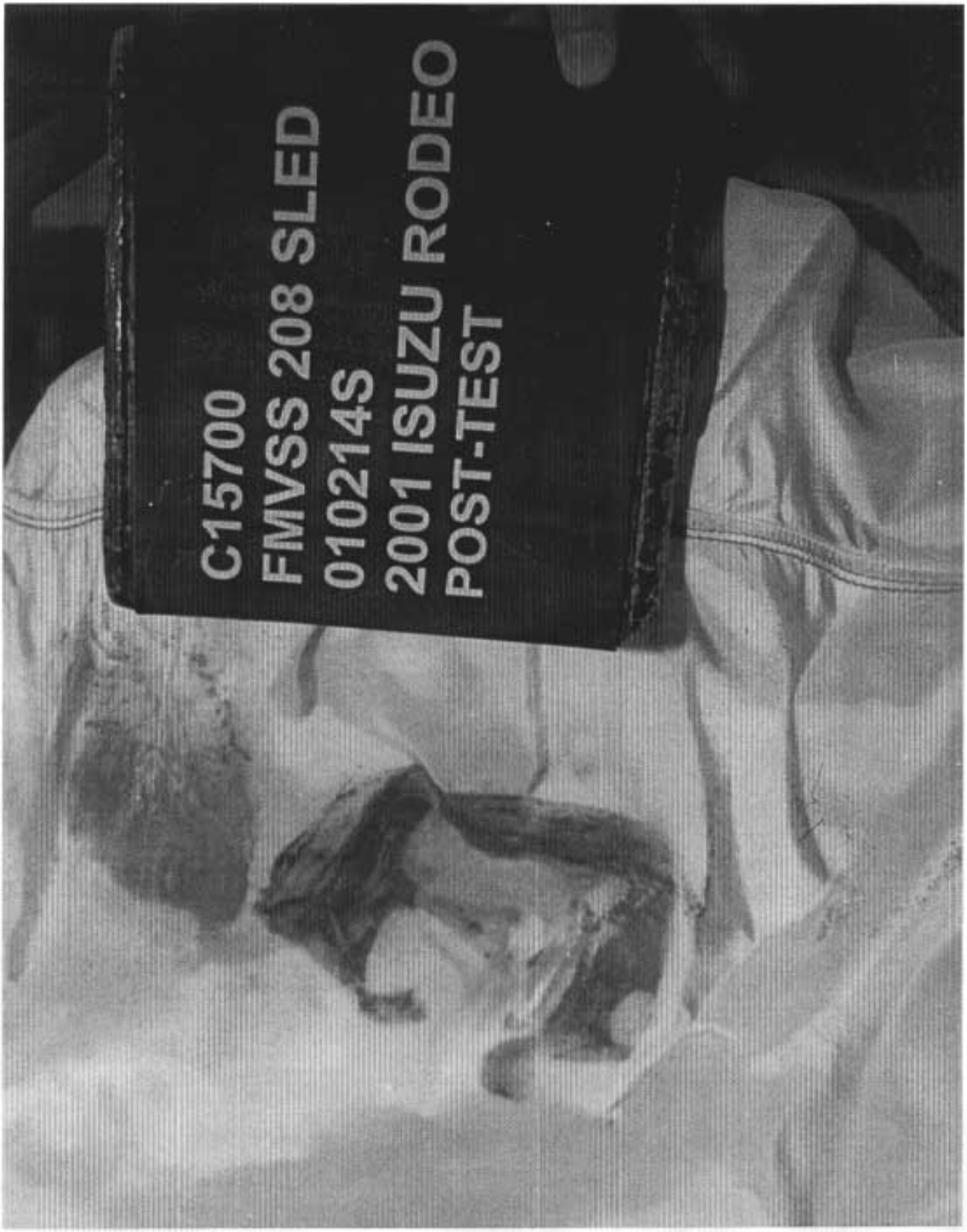


Figure A-21 Post-Test Passenger Airbag View

S010214

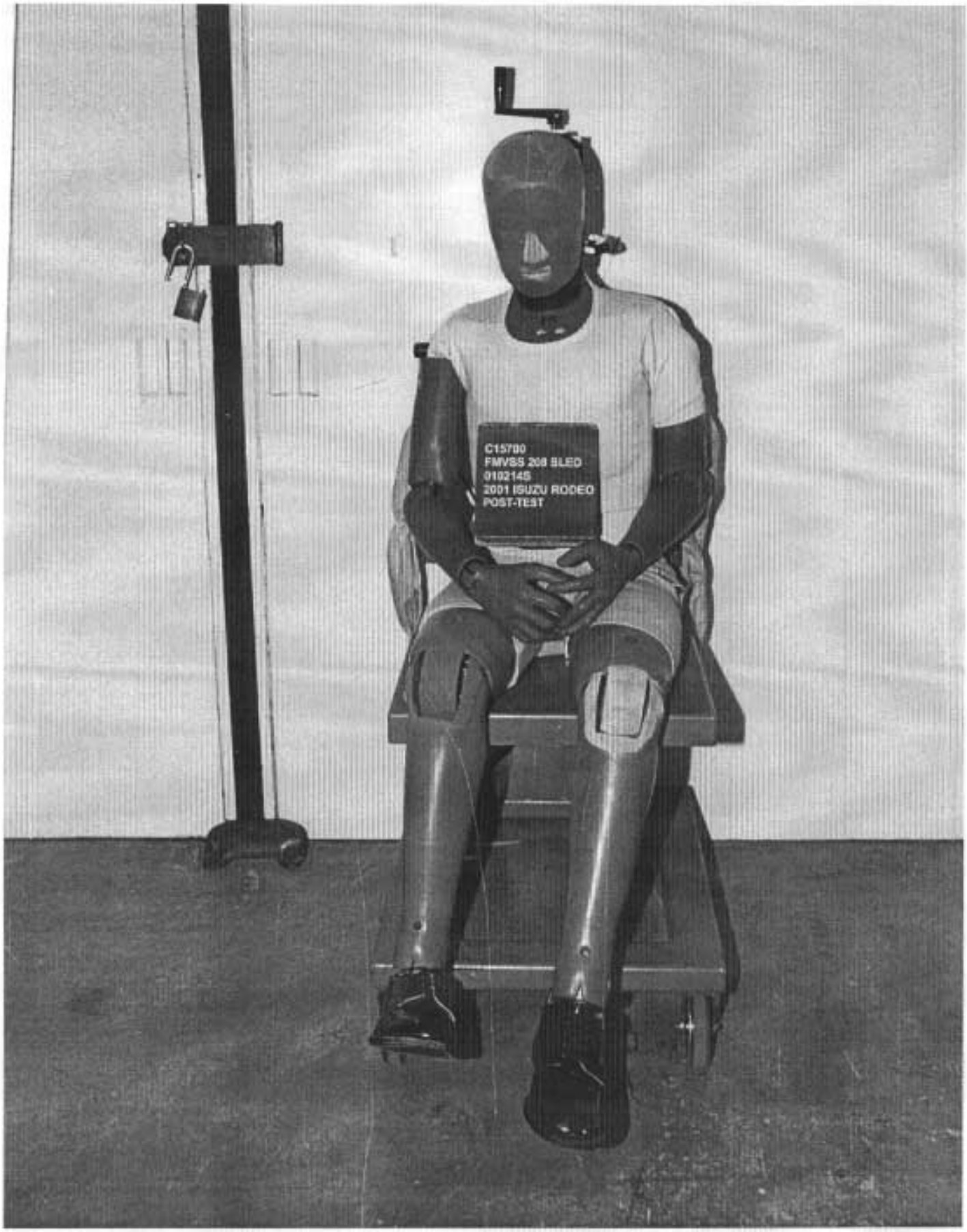


Figure A-22 Post-Test Passenger Dummy Removed from Vehicle Overall View

Figure A-23 Post-Test Passenger Dummy Head Contact - View 1

Figure A-24 Post-Test Passenger Dummy Head Contact - View 2

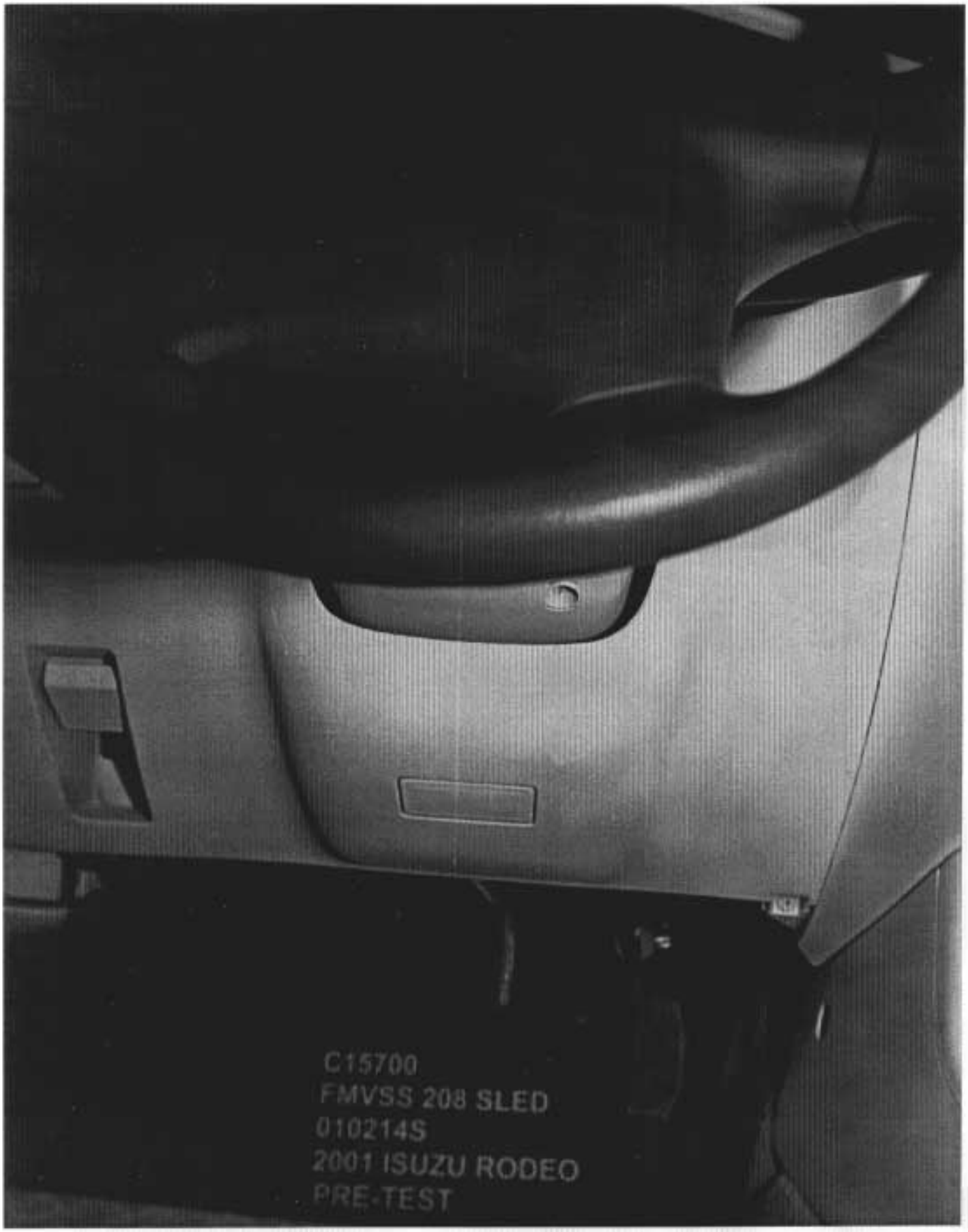


Figure A-25 Pre-Test Driver Knee Bolster View

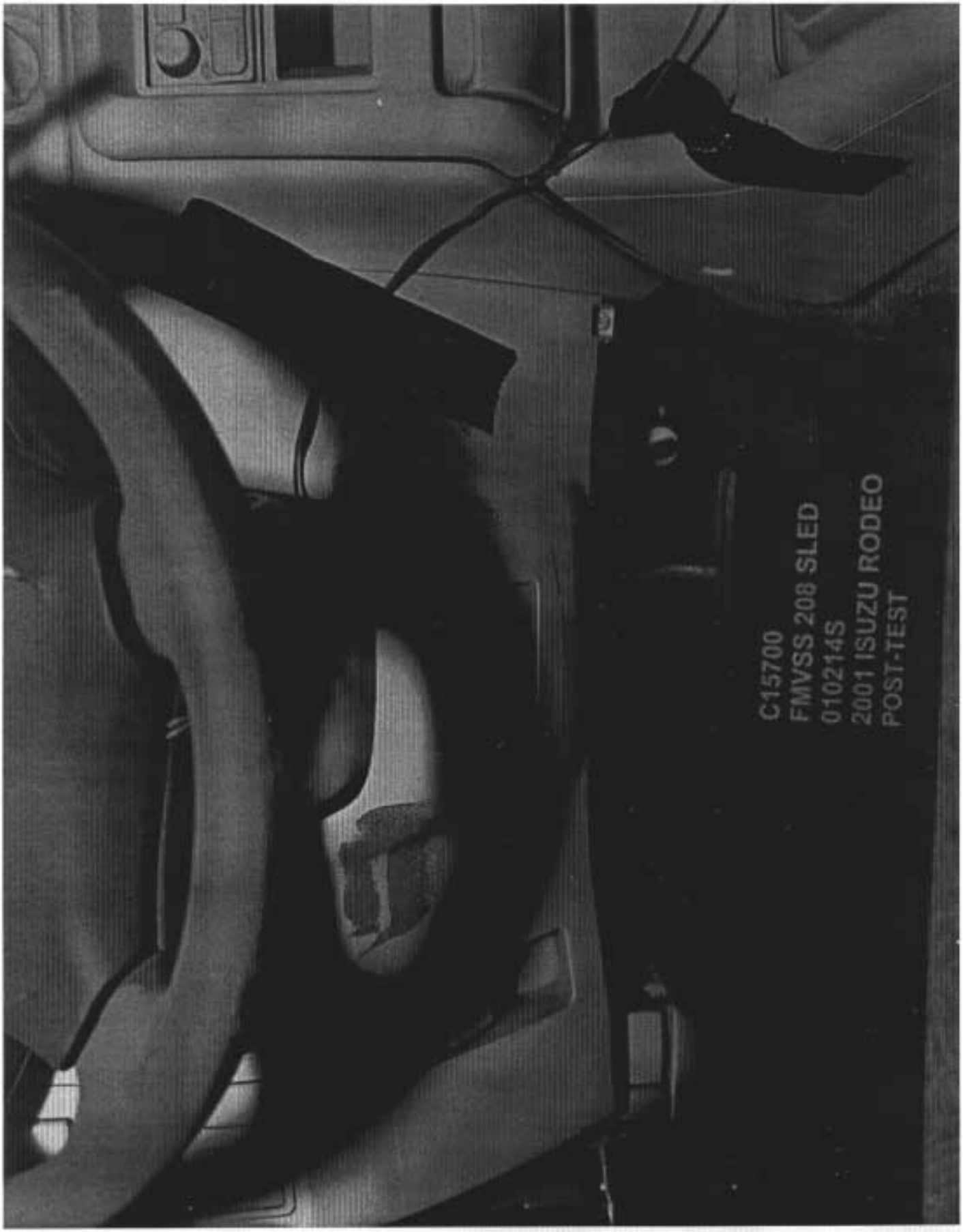


Figure A-26 Post-Test Driver Knee Bolster View

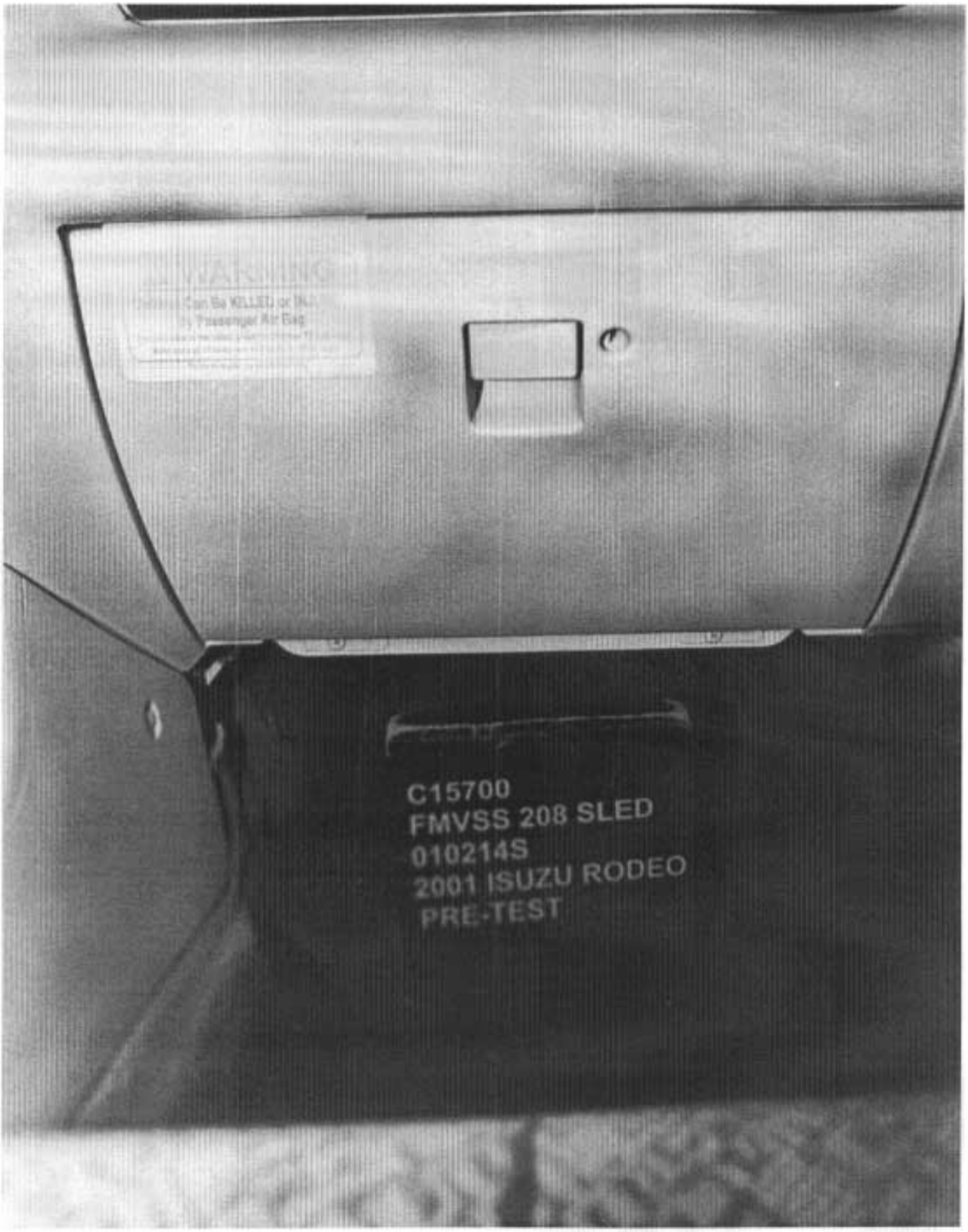


Figure A-27 Pre-Test Passenger Glove Box View

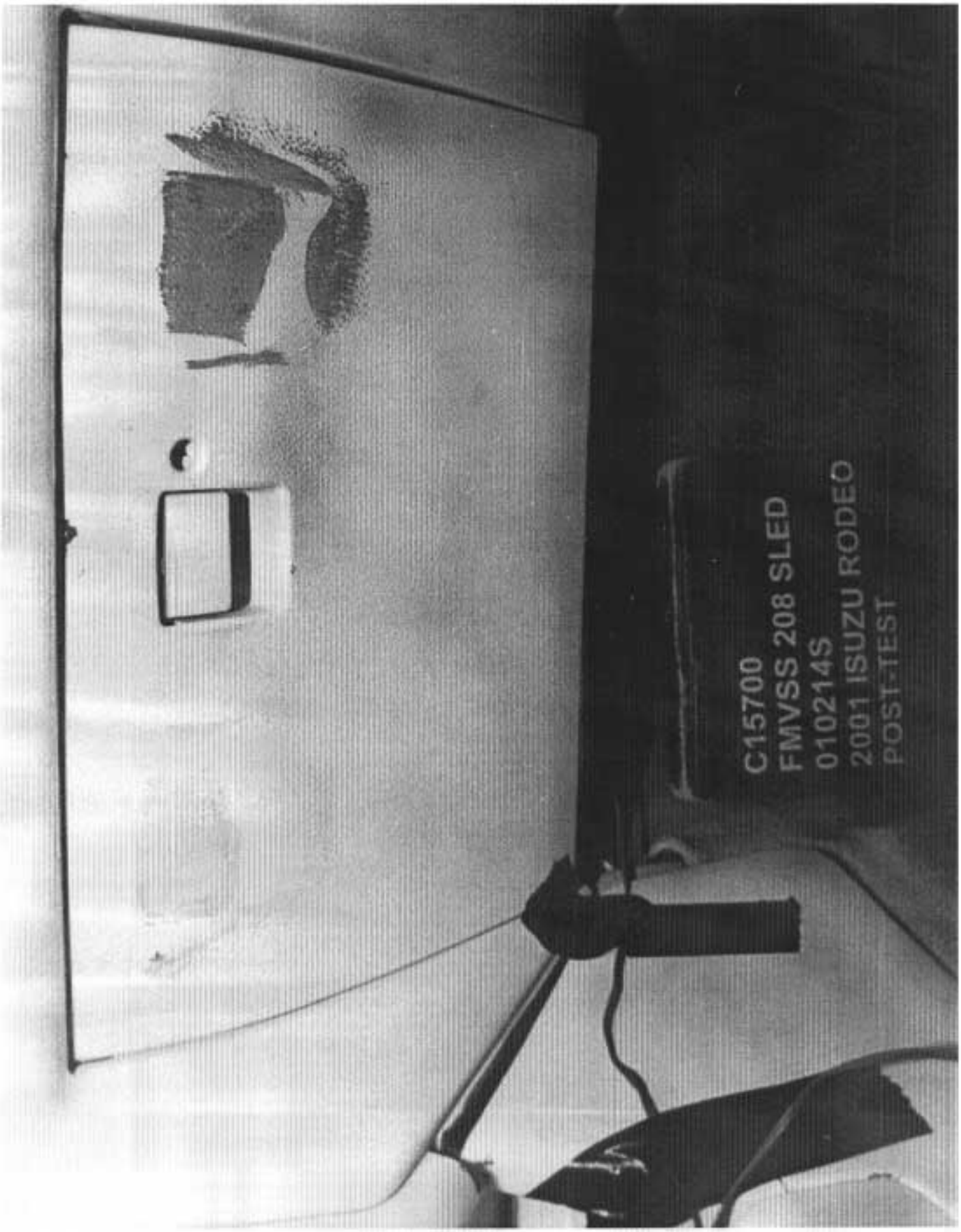


Figure A-28 Post-Test Passenger Glove Box View

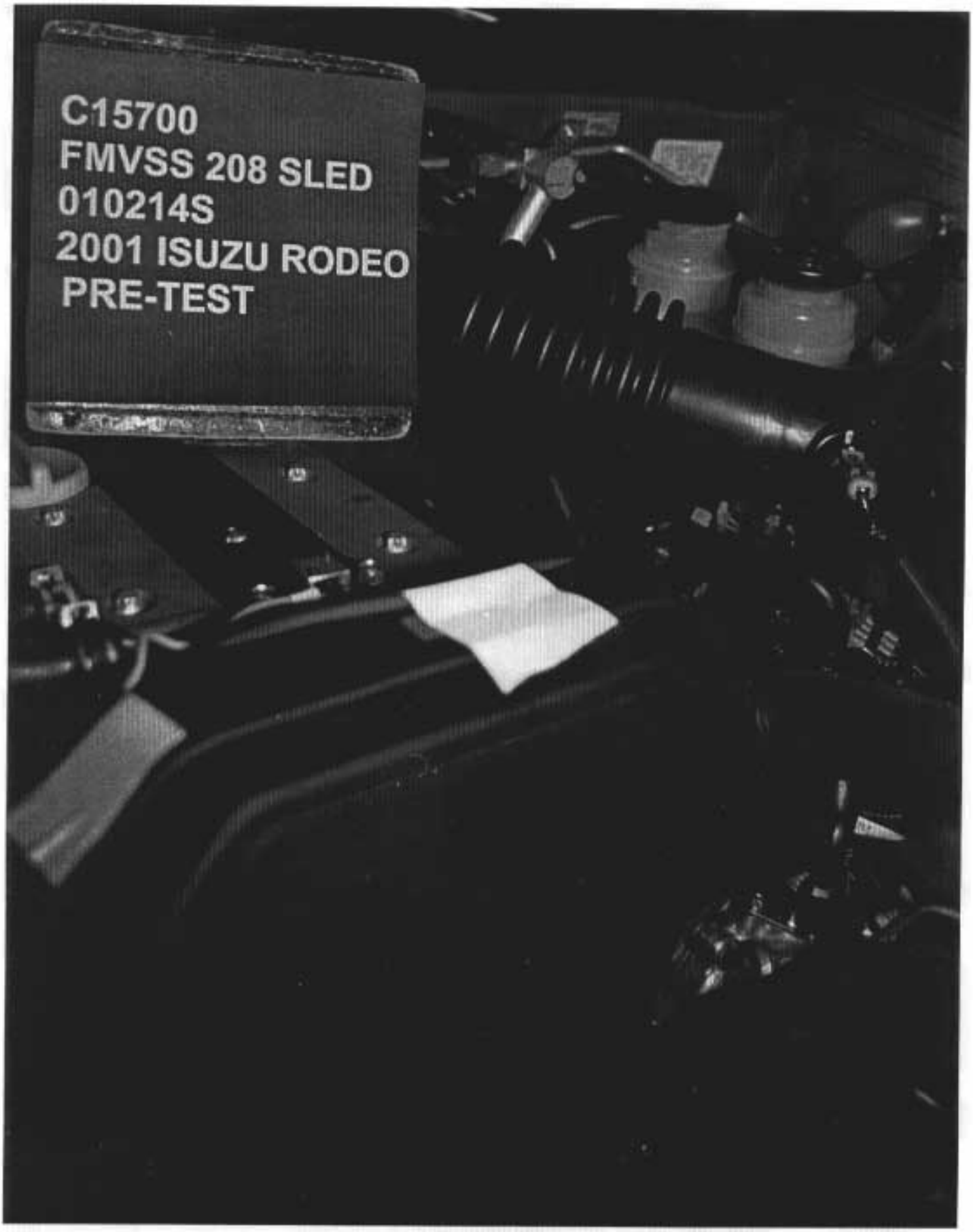


Figure A-29 Pre-Test Steering Column Linkage in Engine Compartment View

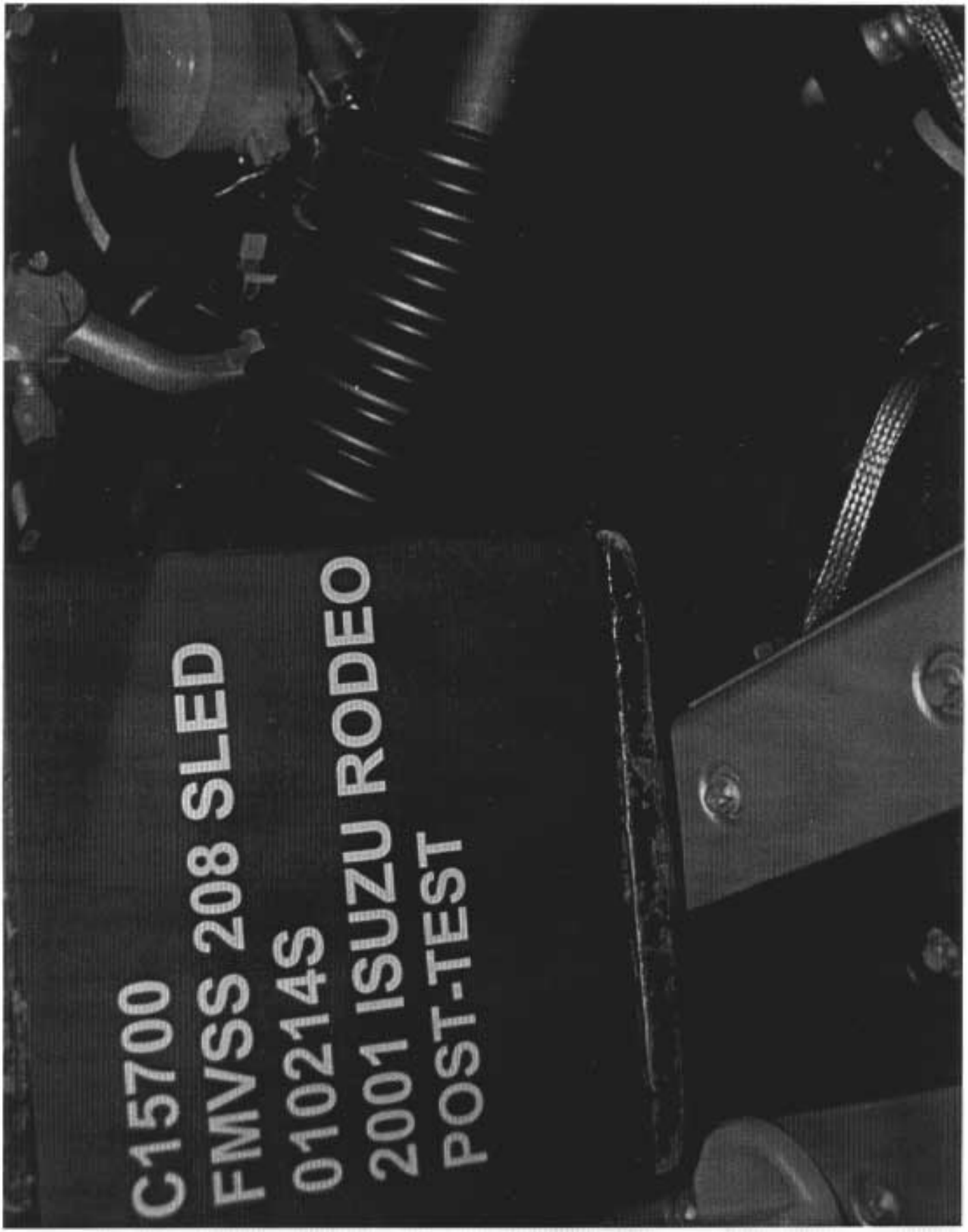


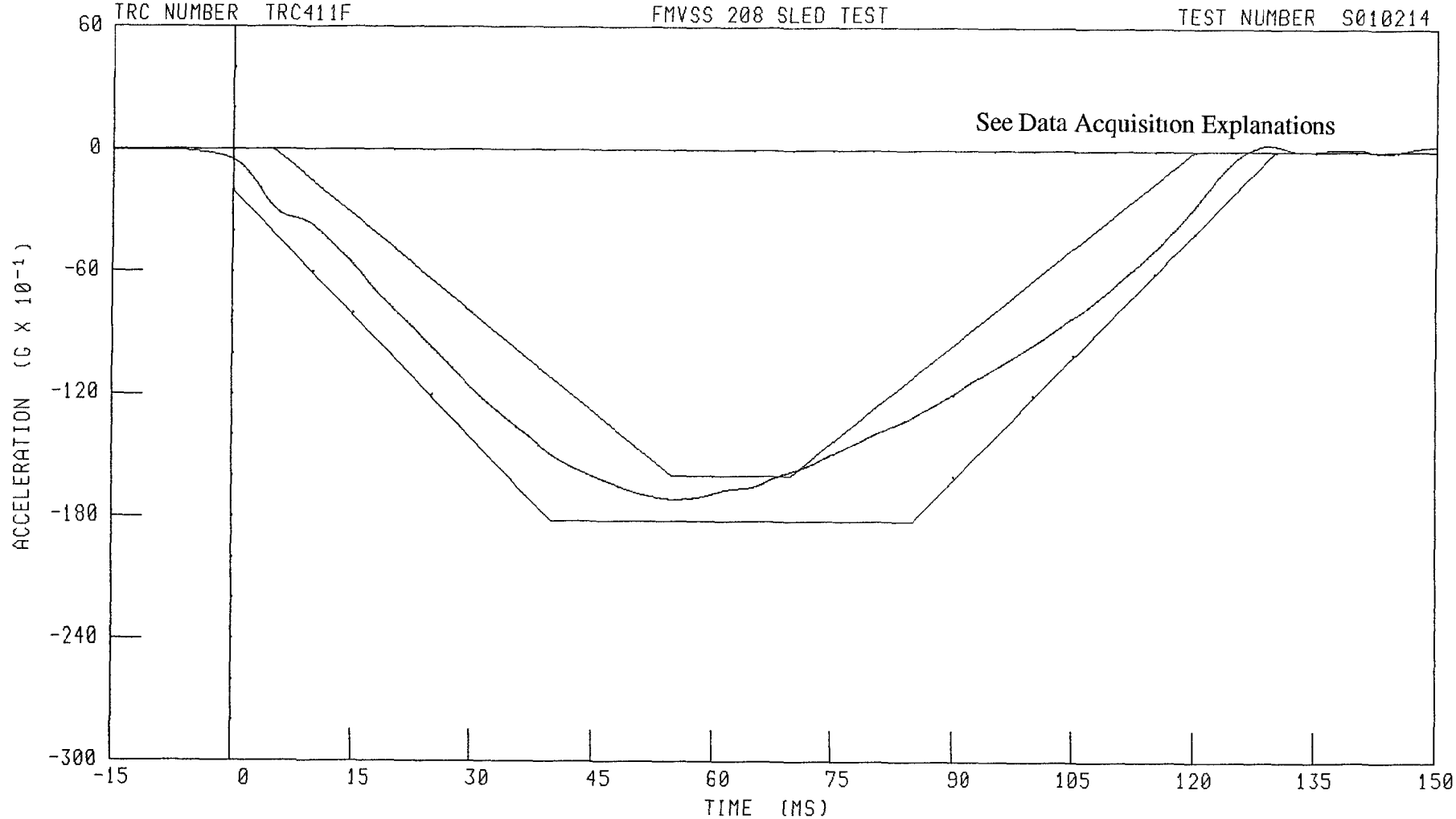
Figure A-30 Post-Test Steering Column Linkage in Engine Compartment View

Figure A-31 Pre-Test Vehicle Certification Label View

Appendix B

Data Plots

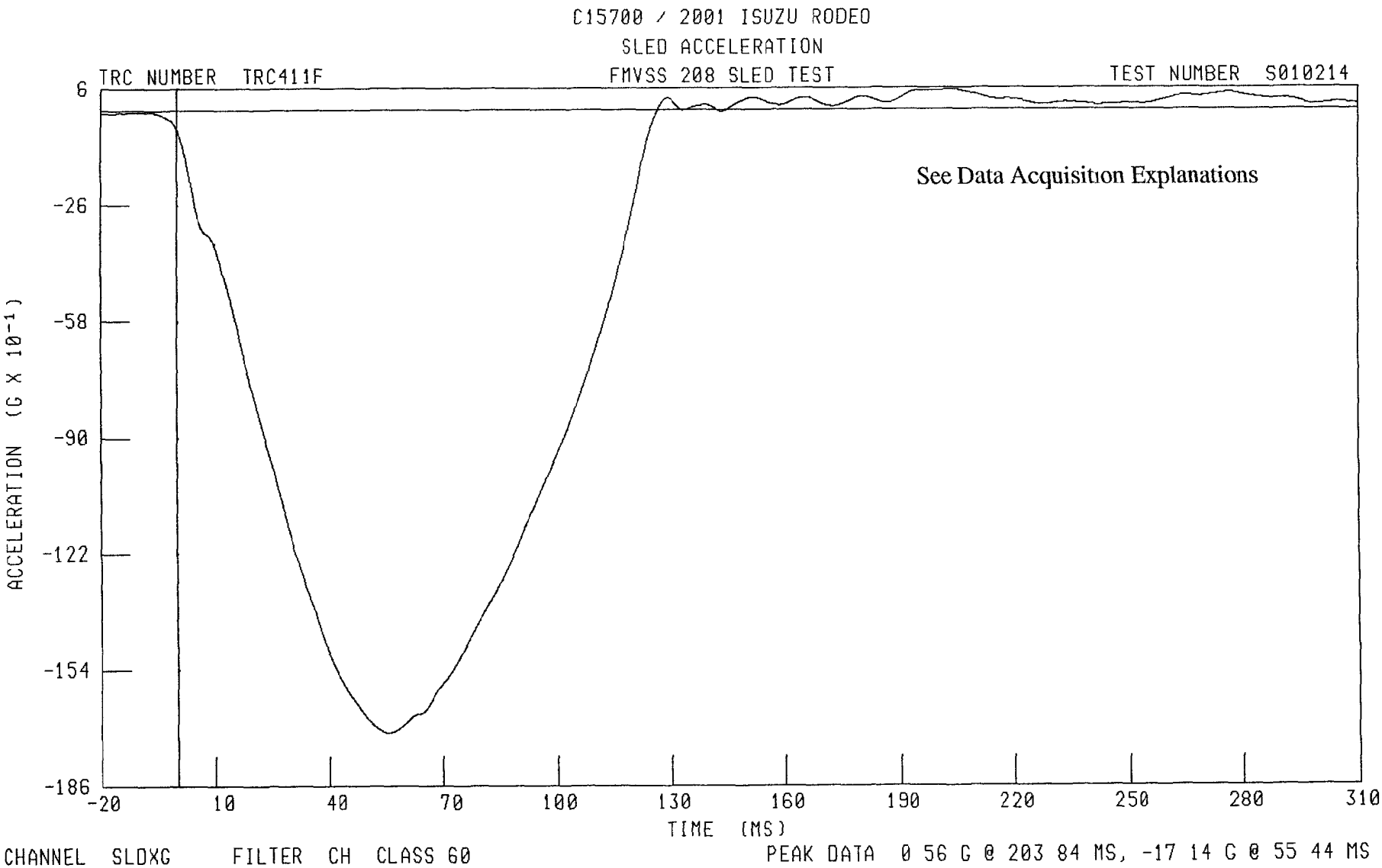
C15700 / 2001 ISUZU RODEO
SLED ACCELERATION
FMVSS 208 SLED TEST



CHANNEL SLDXG FILTER CH CLASS 60

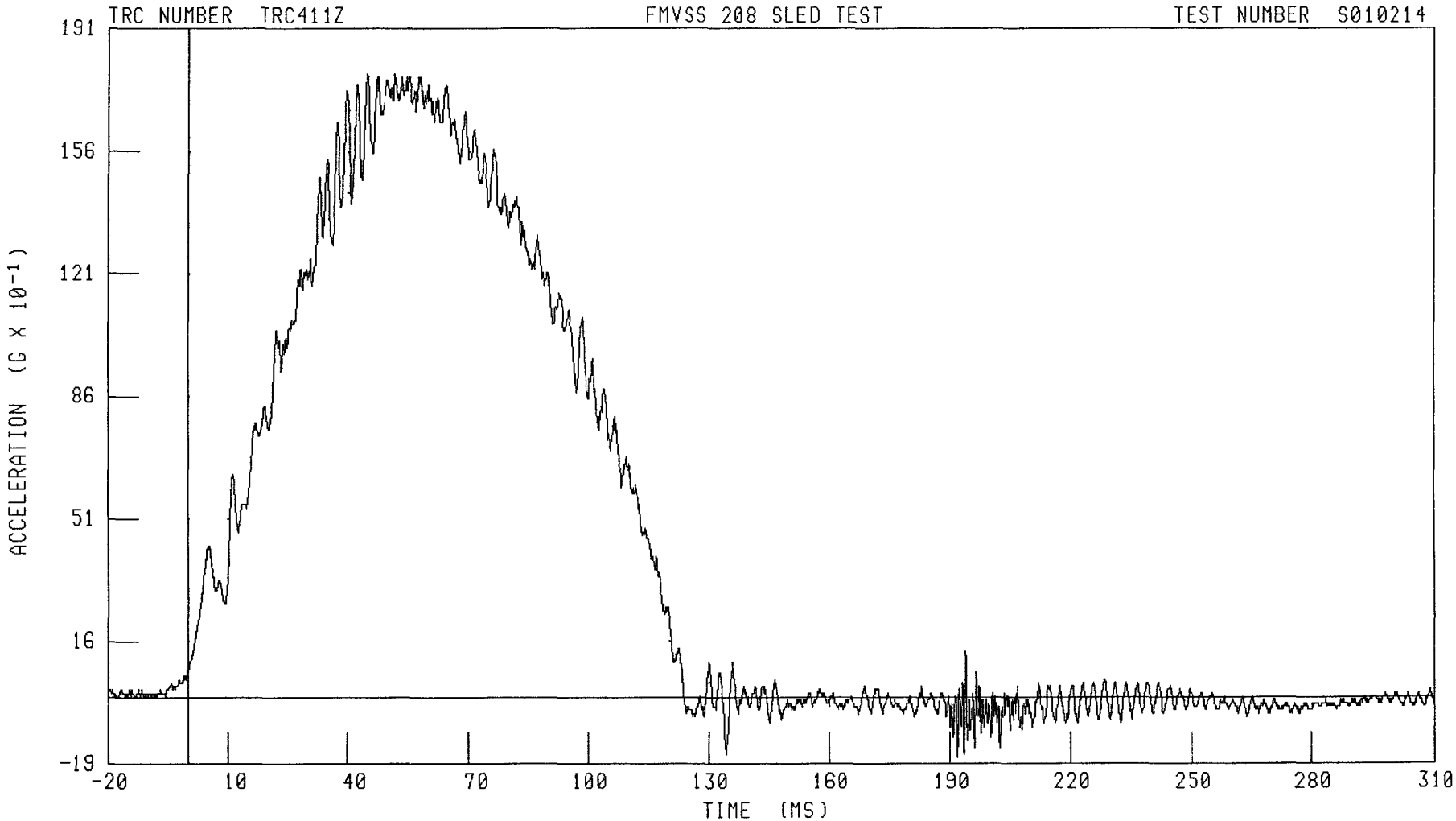
PEAK DATA 0 33 G @ 129 28 MS, -17 14 G @ 55 44 MS

010214


C15700 / 2001 ISUZU RODEO
SLED ACCELERATION
TRC NUMBER TRC411F
FMVSS 208 SLED TEST
TEST NUMBER S010214
See Data Acquisition Explanations
ACCELERATION (G X 10⁻¹)
6
-26
-58
-90
-122
-154
-186
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL SLDXG FILTER CH CLASS 60
PEAK DATA 0 56 G @ 203 84 MS, -17 14 G @ 55 44 MS

010214

C15700 / 2001 ISUZU RODEO
SLED ACCELERATION - BACKUP



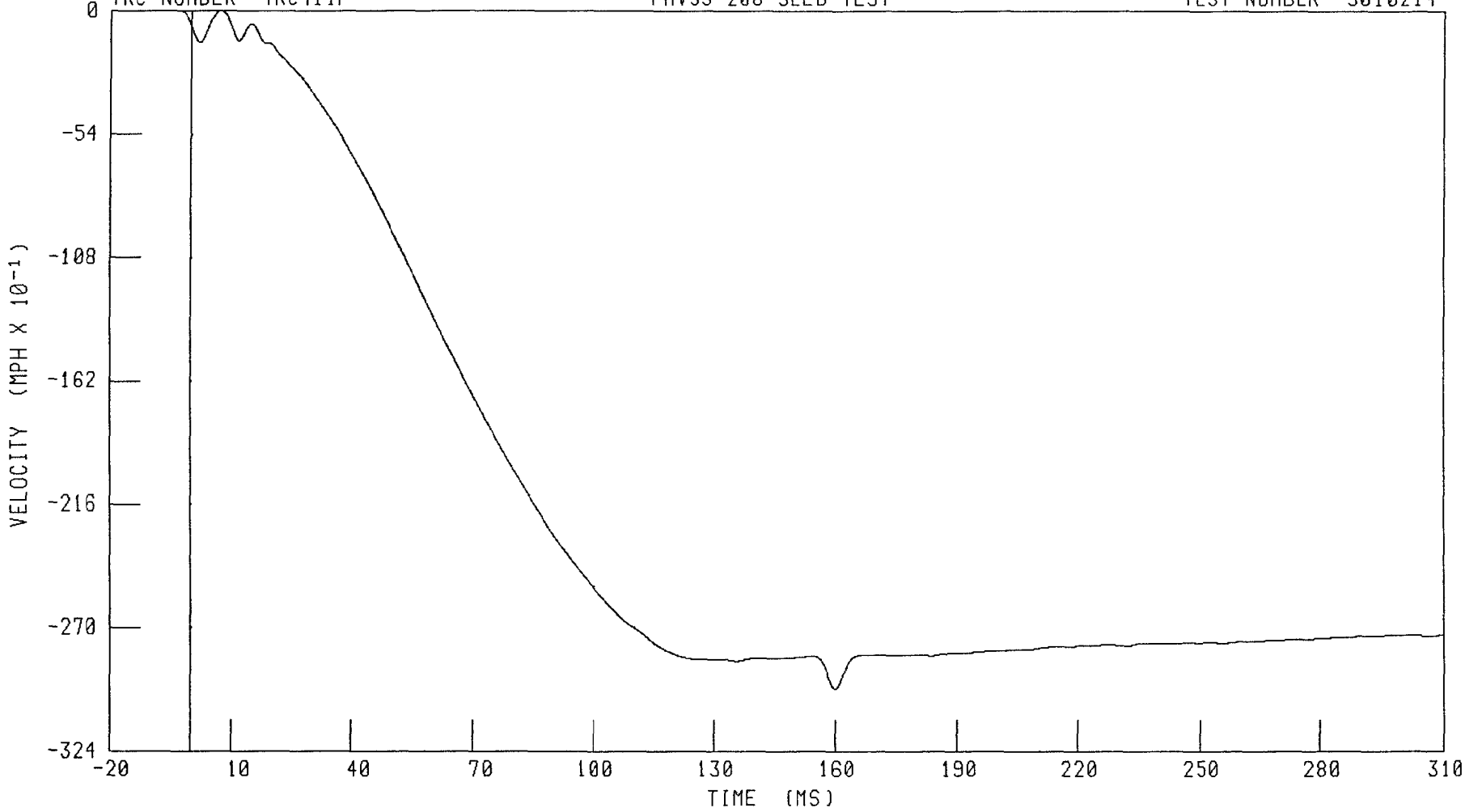
CHANNEL SLDXGA FILTER CH CLASS 1000 PEAK DATA 17 81 G @ 44 72 MS, -1 74 G @ 191 84 MS

010214

C15700 / 2001 ISUZU RODEO
MEASURED VELOCITY TRAP
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214

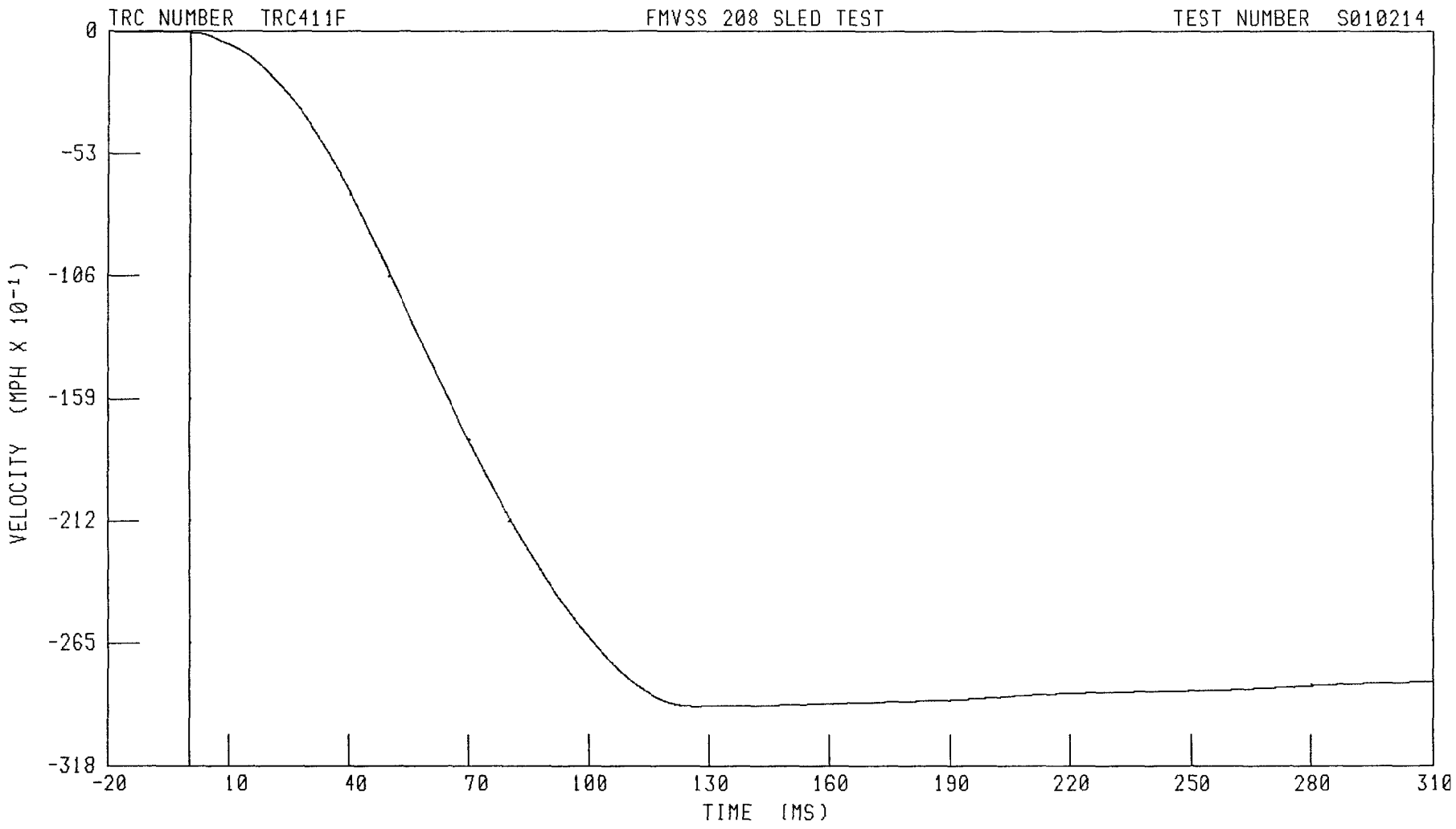


CHANNEL SLDXV FILTER CH CLASS 60

PEAK DATA 0 06 MPH @ -3 76 MS, -29 68 MPH @ 160 00 MS

010214

C15700 / 2001 ISUZU RODEO
SLED VELOCITY (INTEGRATED)



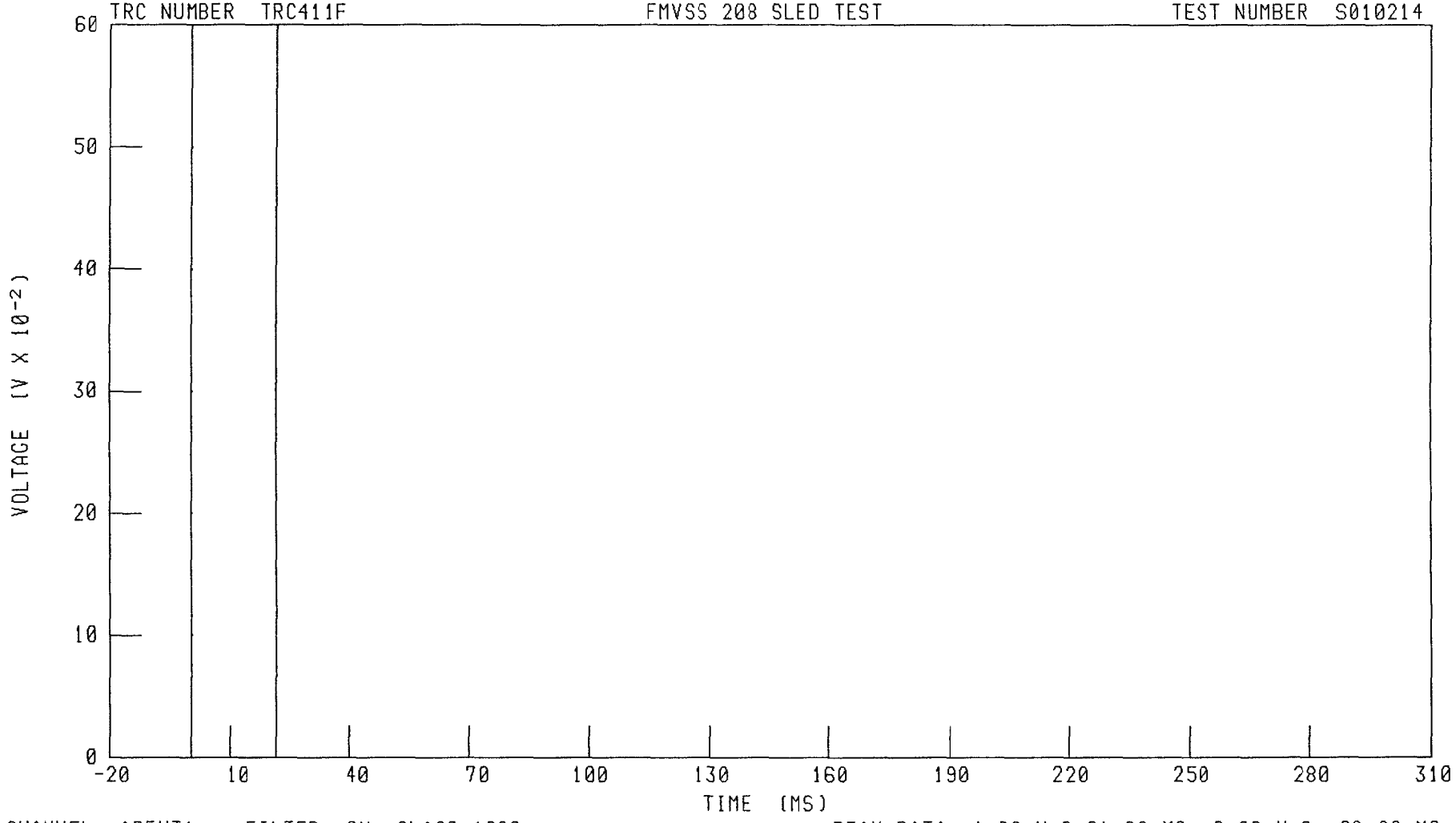
CHANNEL SLDXVI FILTER CH CLASS 180 PEAK DATA -0 01 MPH @ -20 00 MS, -29 23 MPH @ 126 72 MS

010214

C15700 / 2001 ISUZU RODEO
DRIVER AIRBAG EVENT
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

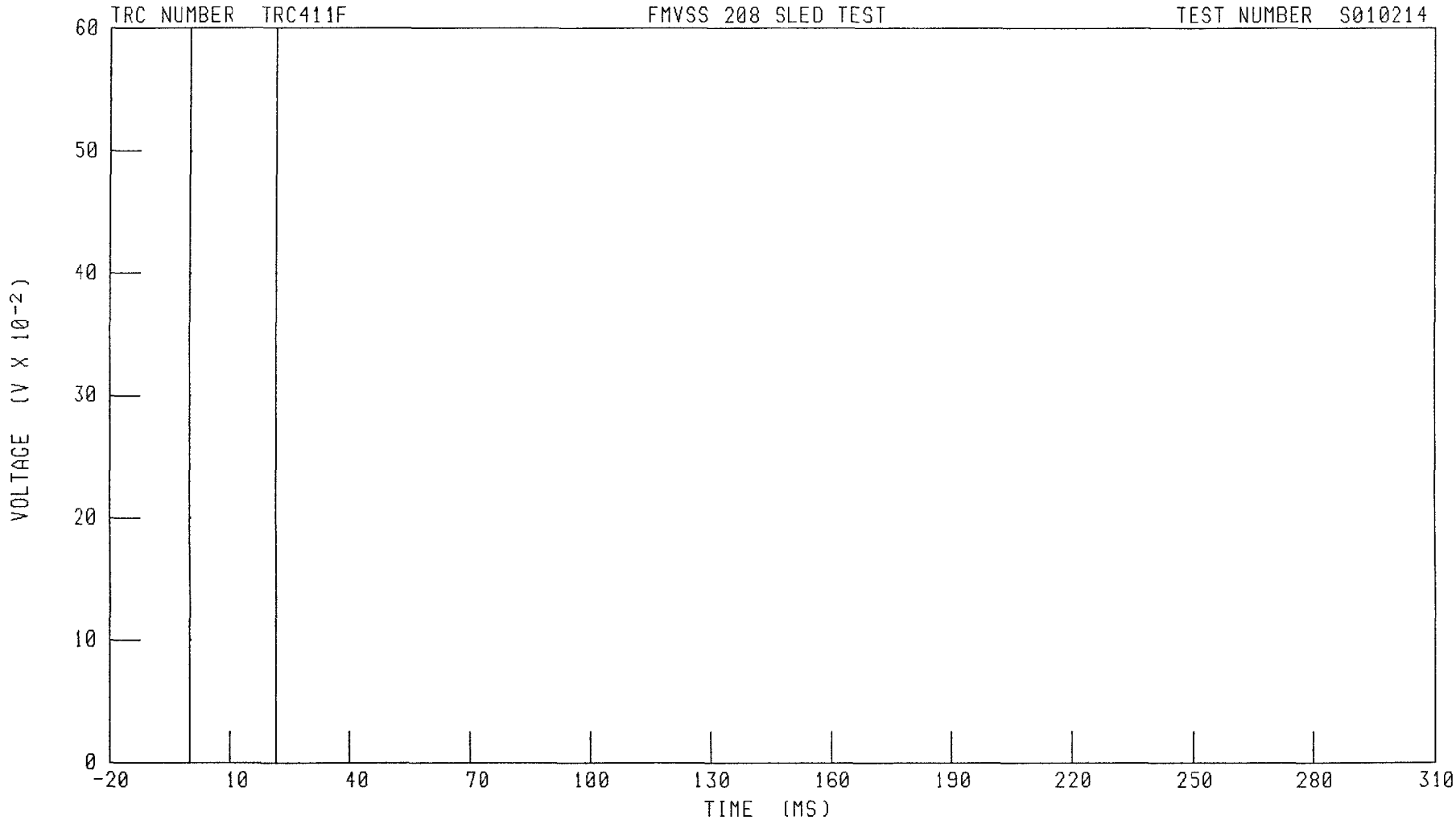
TEST NUMBER S010214



CHANNEL ABEVT1 FILTER CH CLASS 1000

PEAK DATA 1 00 V @ 21 60 MS, 0 00 V @ -20 00 MS

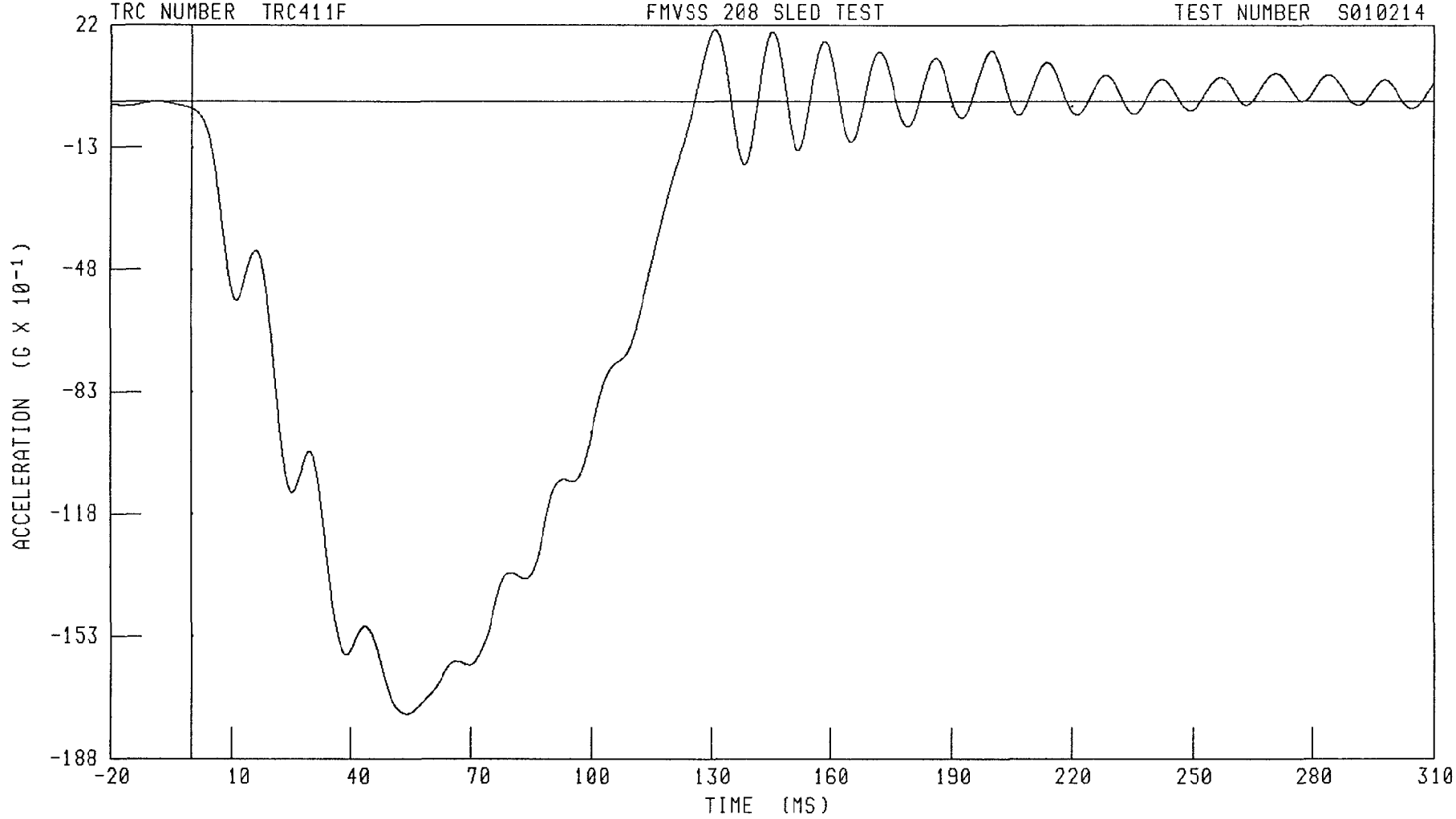
C15700 / 2001 ISUZU RODEO
PASSENGER AIRBAG EVENT



CHANNEL ABEVT2 FILTER CH CLASS 1000 PEAK DATA 1 00 V @ 21 60 MS, 0 00 V @ -20 00 MS

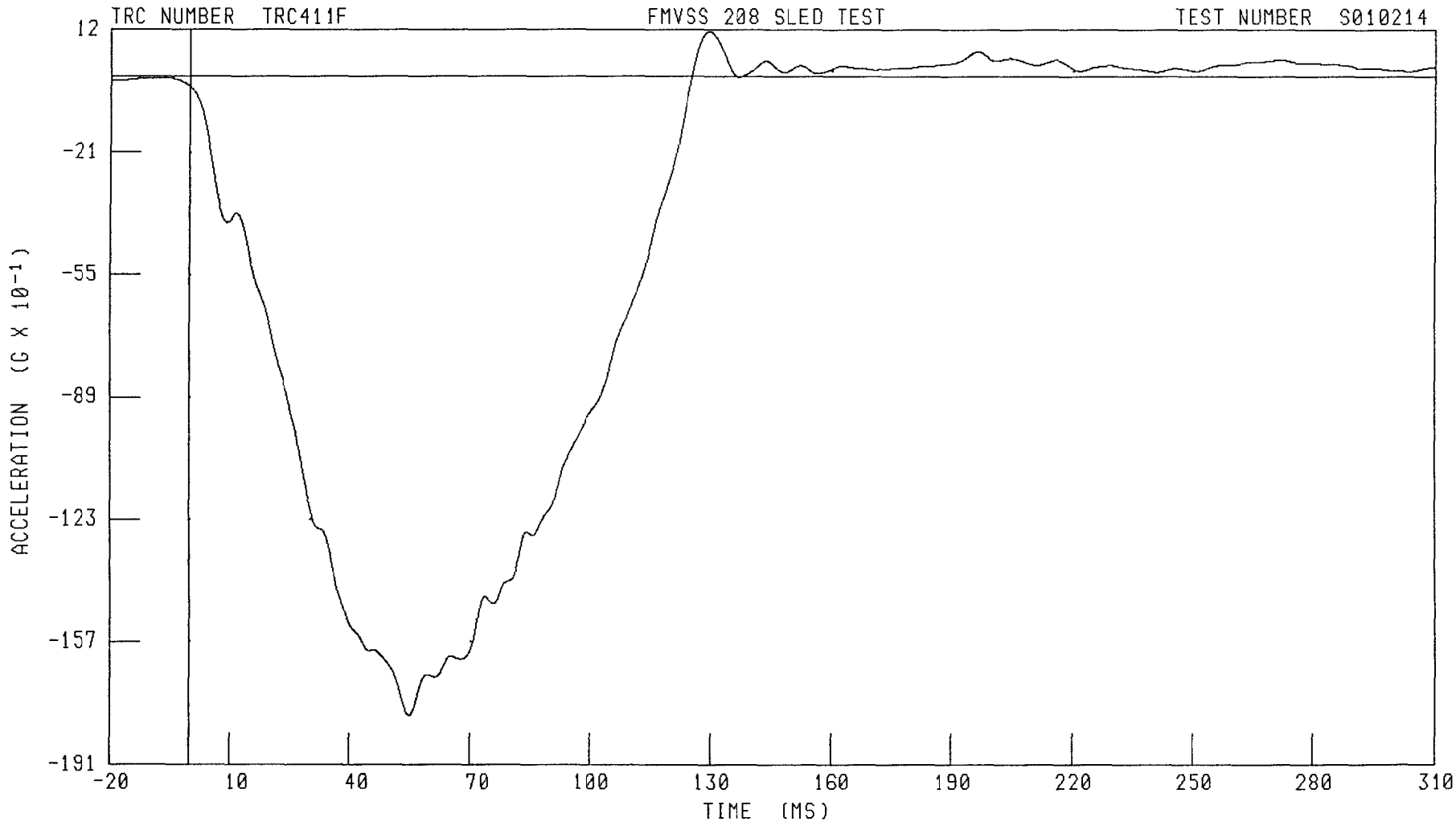
010214

C15700 / 2001 ISUZU RODEO
REAR AXLE X-AXIS ACCELERATION



CHANNEL RAXG FILTER CH CLASS 60 PEAK DATA 2 07 G @ 130 96 MS, -17 52 G @ 53 92 MS

C15700 / 2001 ISUZU RODEO
LEFT BODY AT REAR SEAT X-AXIS ACCELERATION

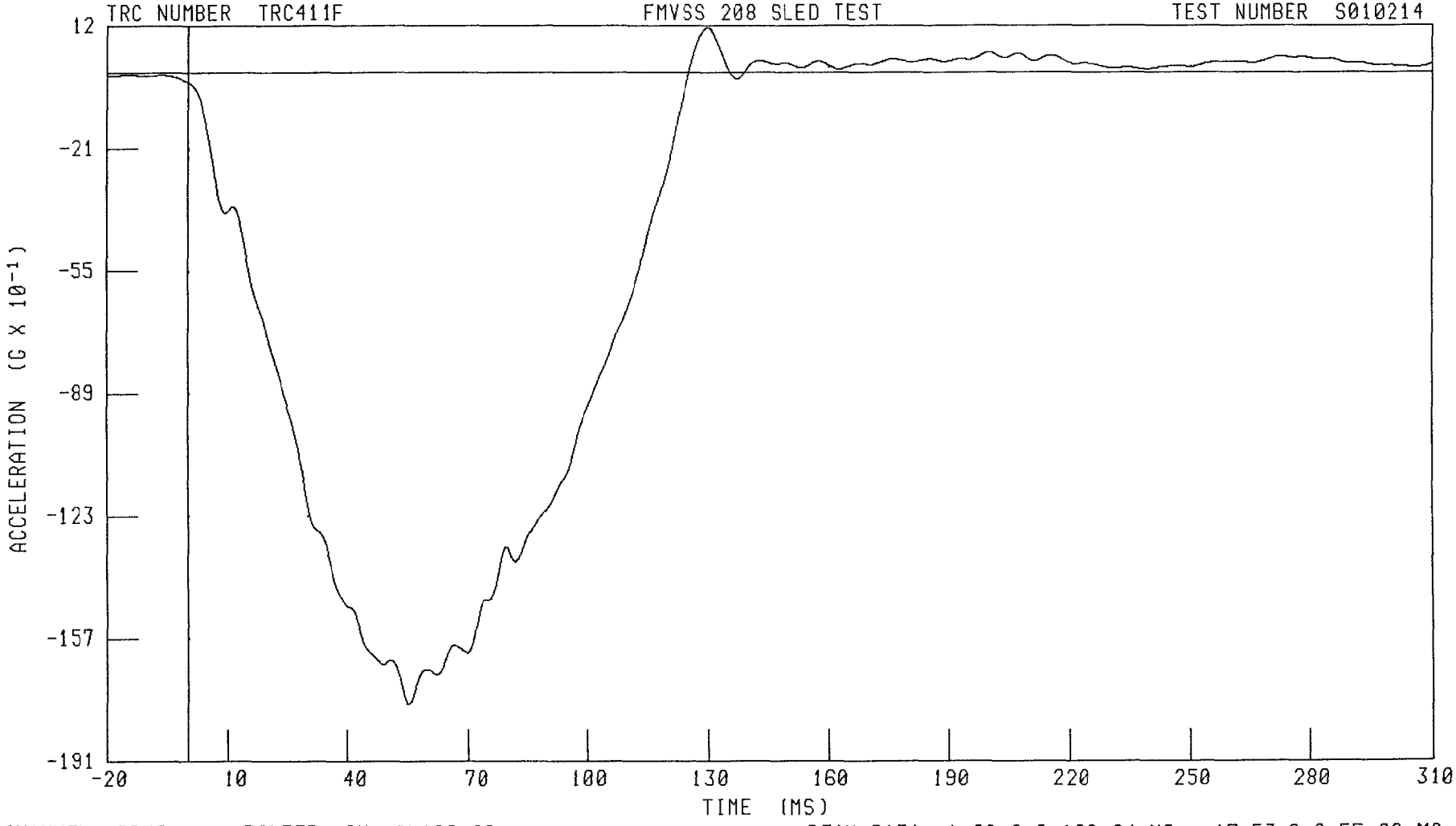


CHANNEL LBXG FILTER CH CLASS 60 PEAK DATA 1 25 G @ 129 76 MS, -17 75 G @ 54 88 MS

C15700 / 2001 ISUZU RODEO

RIGHT BODY AT REAR SEAT X-AXIS ACCELERATION

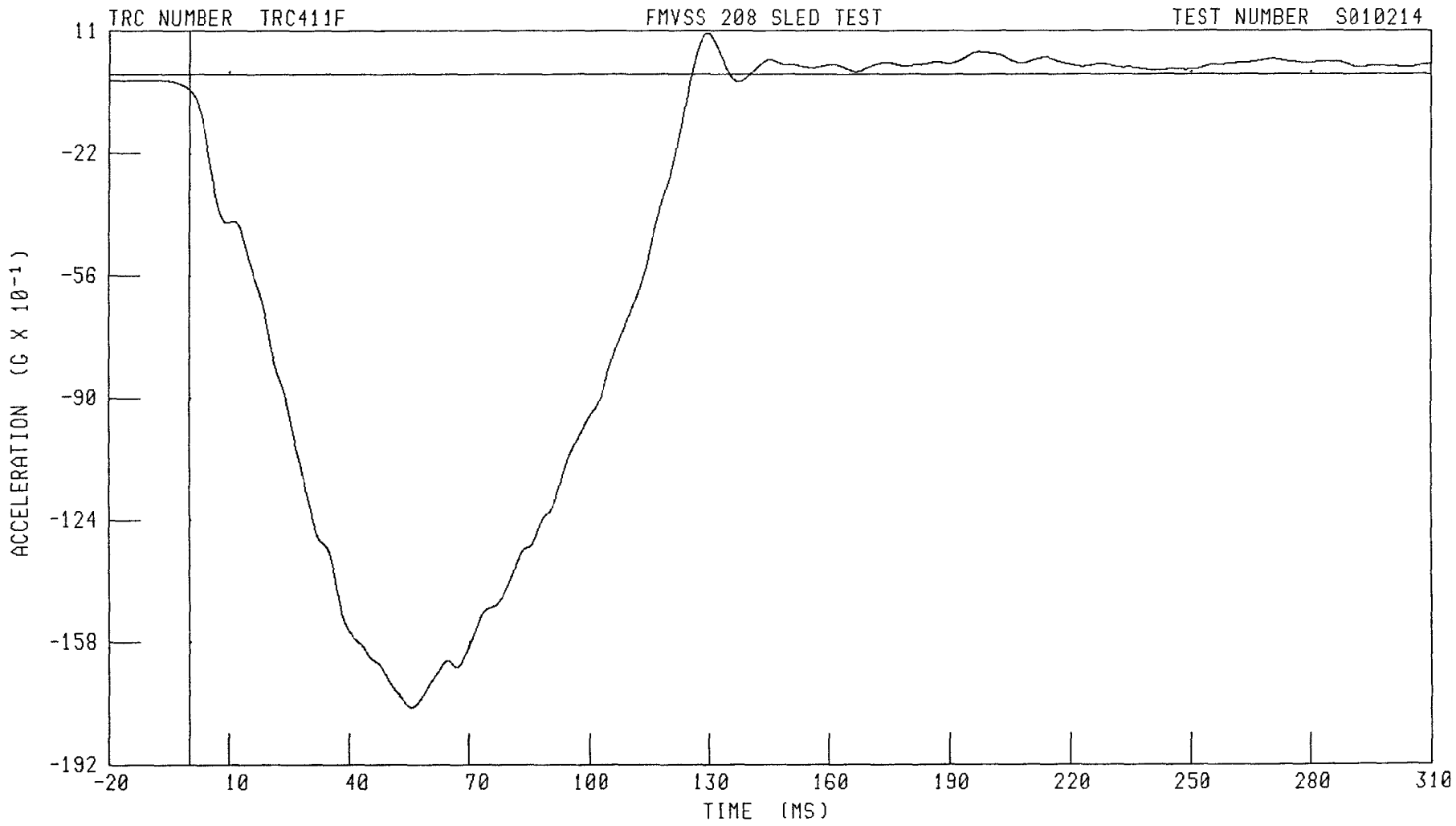
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL RBXG FILTER CH CLASS 60 PEAK DATA 1 26 G @ 129 84 MS, -17 53 G @ 55 28 MS

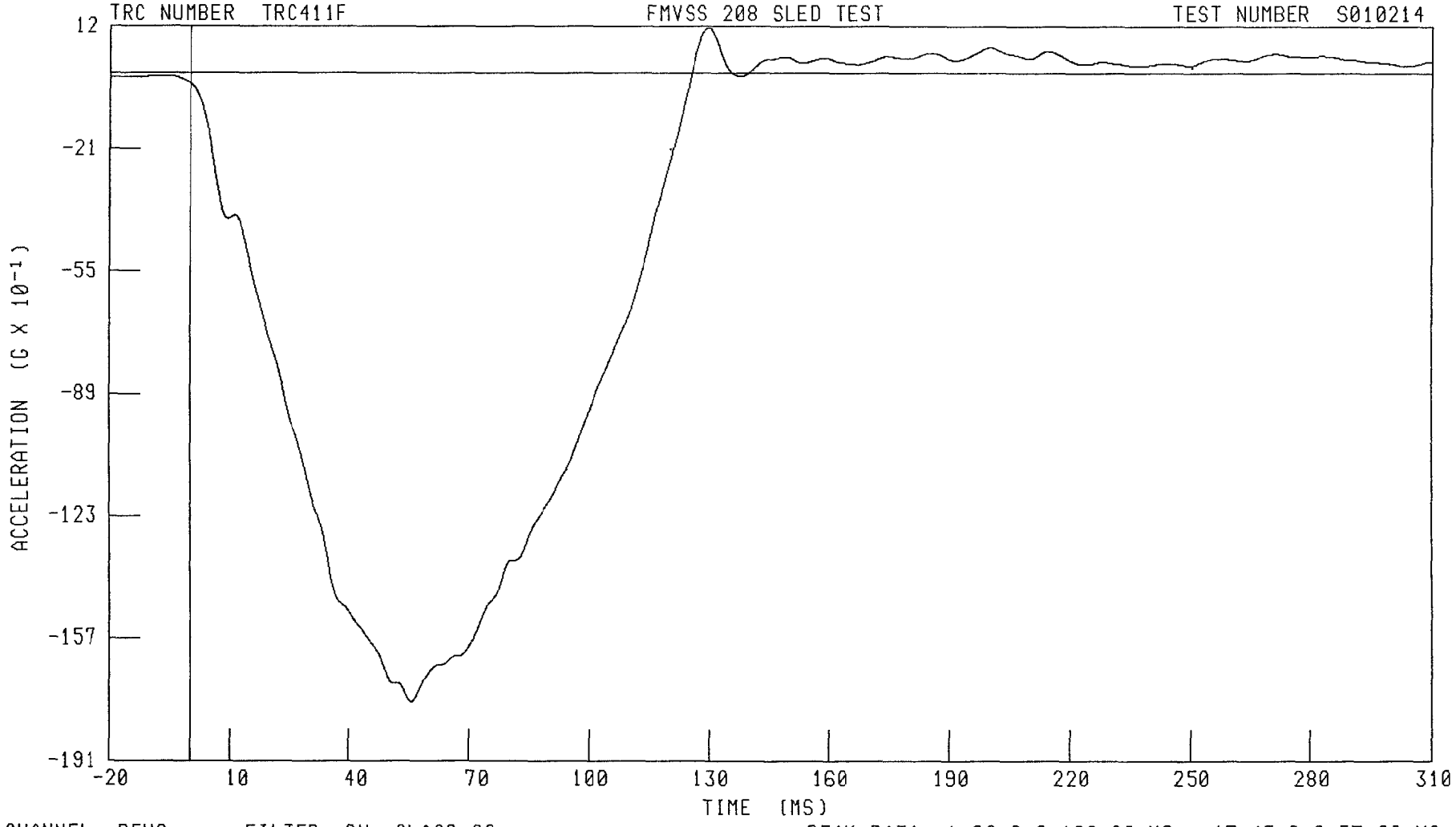
010214

C15700 / 2001 ISUZU RODEO
LEFT FRAME X-AXIS ACCELERATION



CHANNEL LFXG FILTER CH CLASS 60 PEAK DATA 1 13 G @ 129 68 MS, -17 61 G @ 55 44 MS

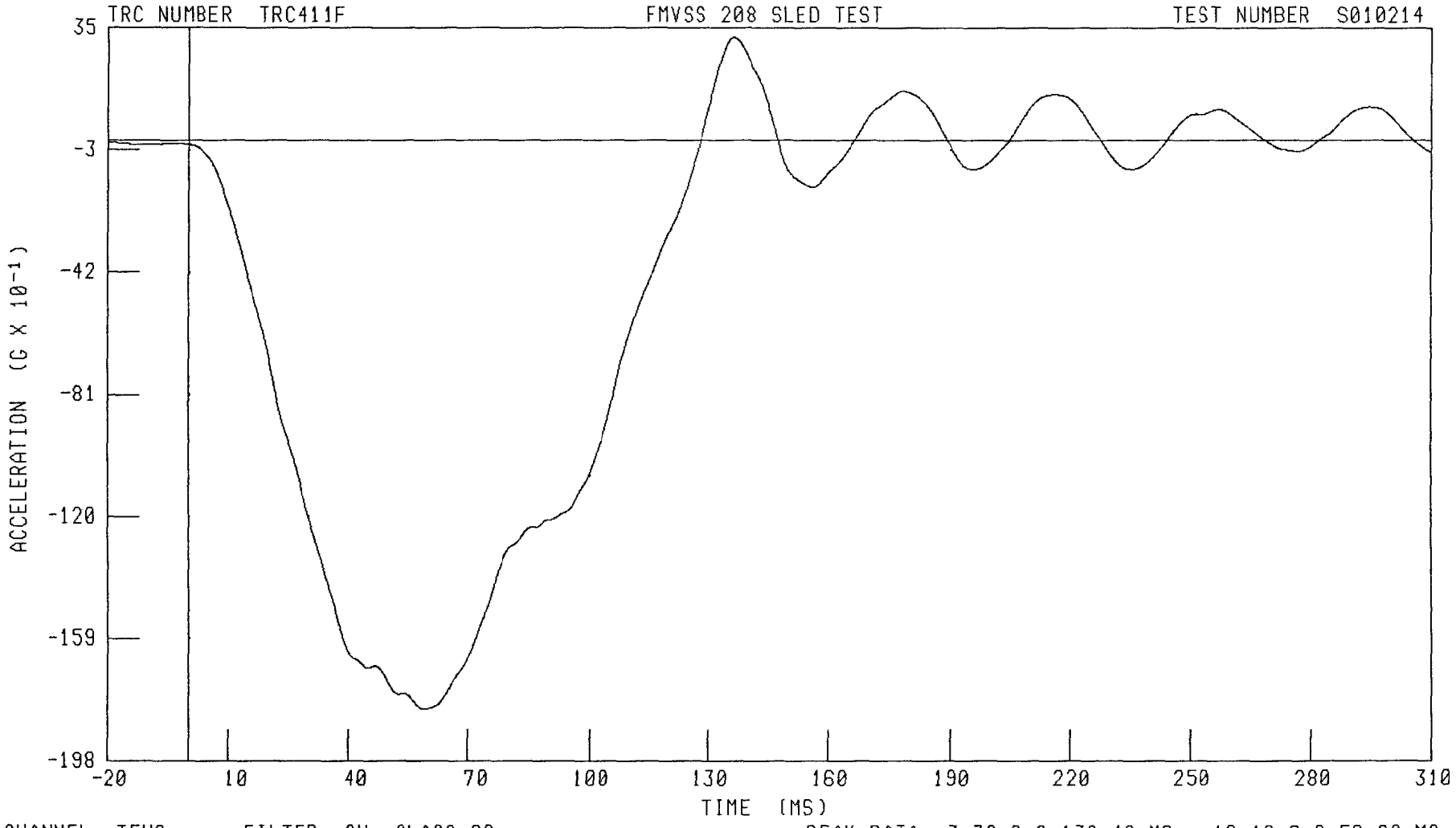
C15700 / 2001 ISUZU RODEO
RIGHT FRAME X-AXIS ACCELERATION



CHANNEL RFXG FILTER CH CLASS 60 PEAK DATA 1 26 G @ 129 68 MS, -17 45 G @ 55 68 MS

010214

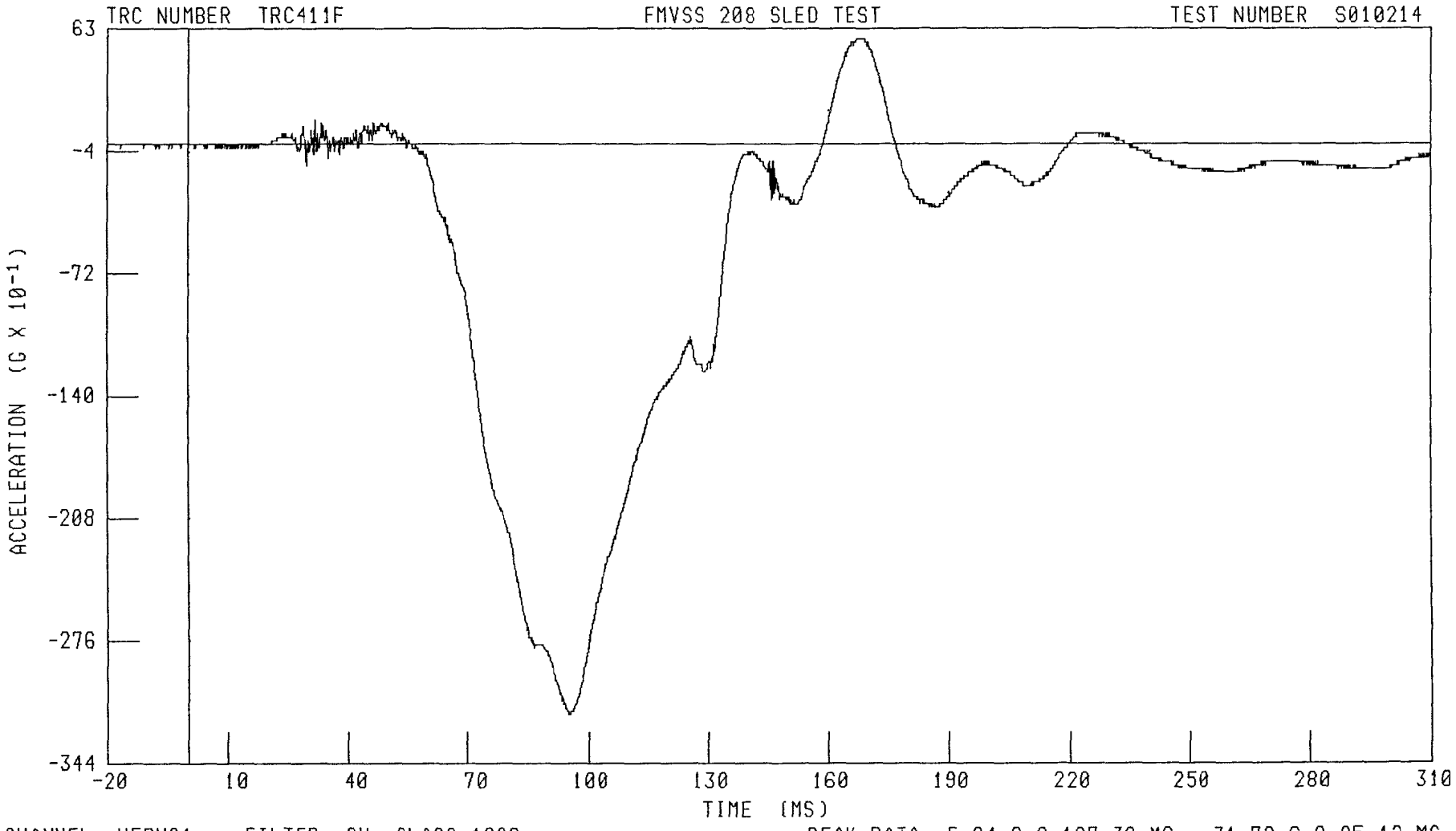
C15700 / 2001 ISUZU RODEO
TOP ENGINE X-AXIS ACCELERATION



CHANNEL TEXG FILTER CH CLASS 60 PEAK DATA 3 30 G @ 136 40 MS, -18 16 G @ 58 88 MS

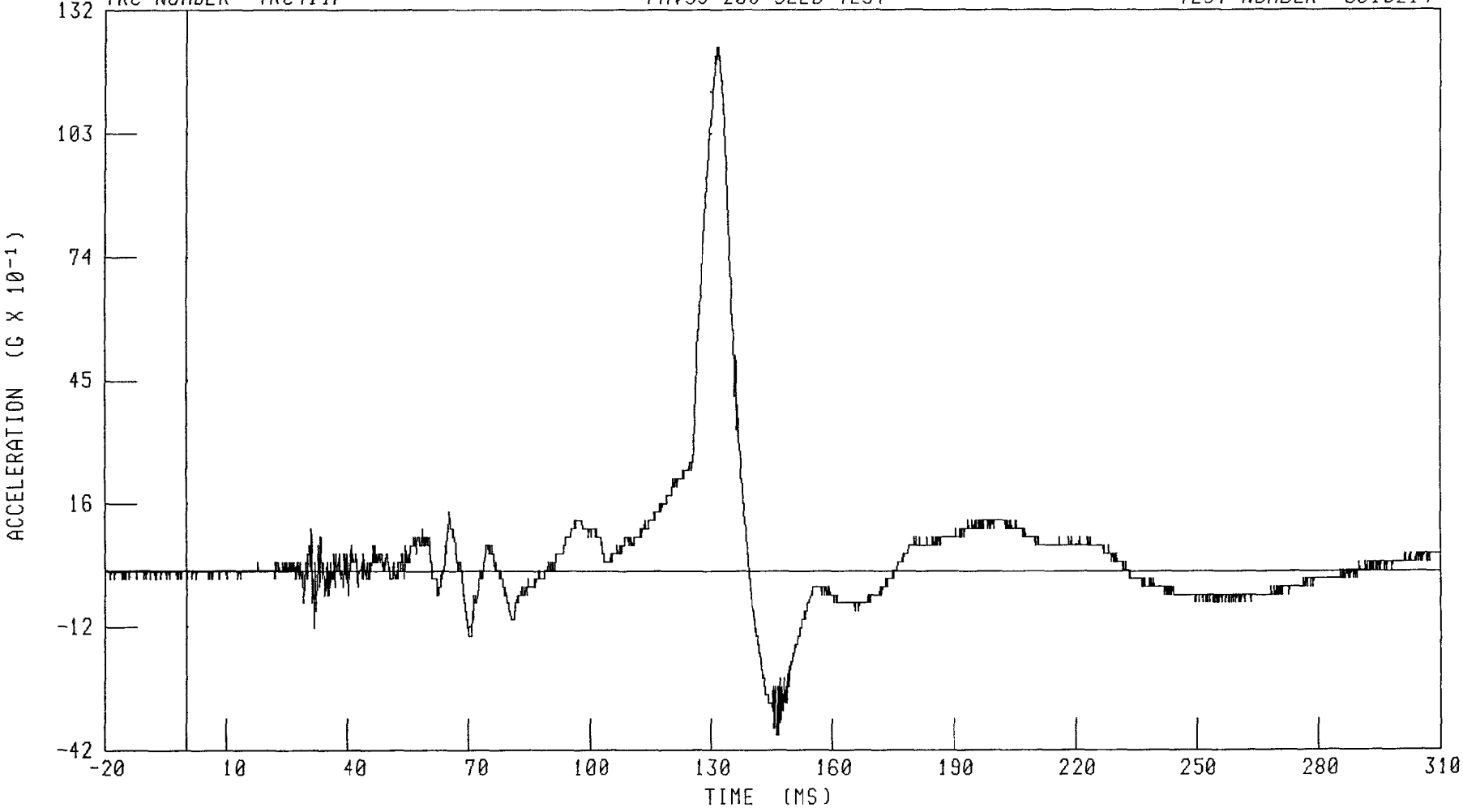
010214

C15700 / 2001 ISUZU RODEO
DRIVER HEAD X-AXIS ACCELERATION



CHANNEL HEDXG1 FILTER CH CLASS 1000 PEAK DATA 5 84 G @ 167 36 MS, -31 72 G @ 95 12 MS

C15700 / 2001 ISUZU RODEO
DRIVER HEAD Y-AXIS ACCELERATION
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



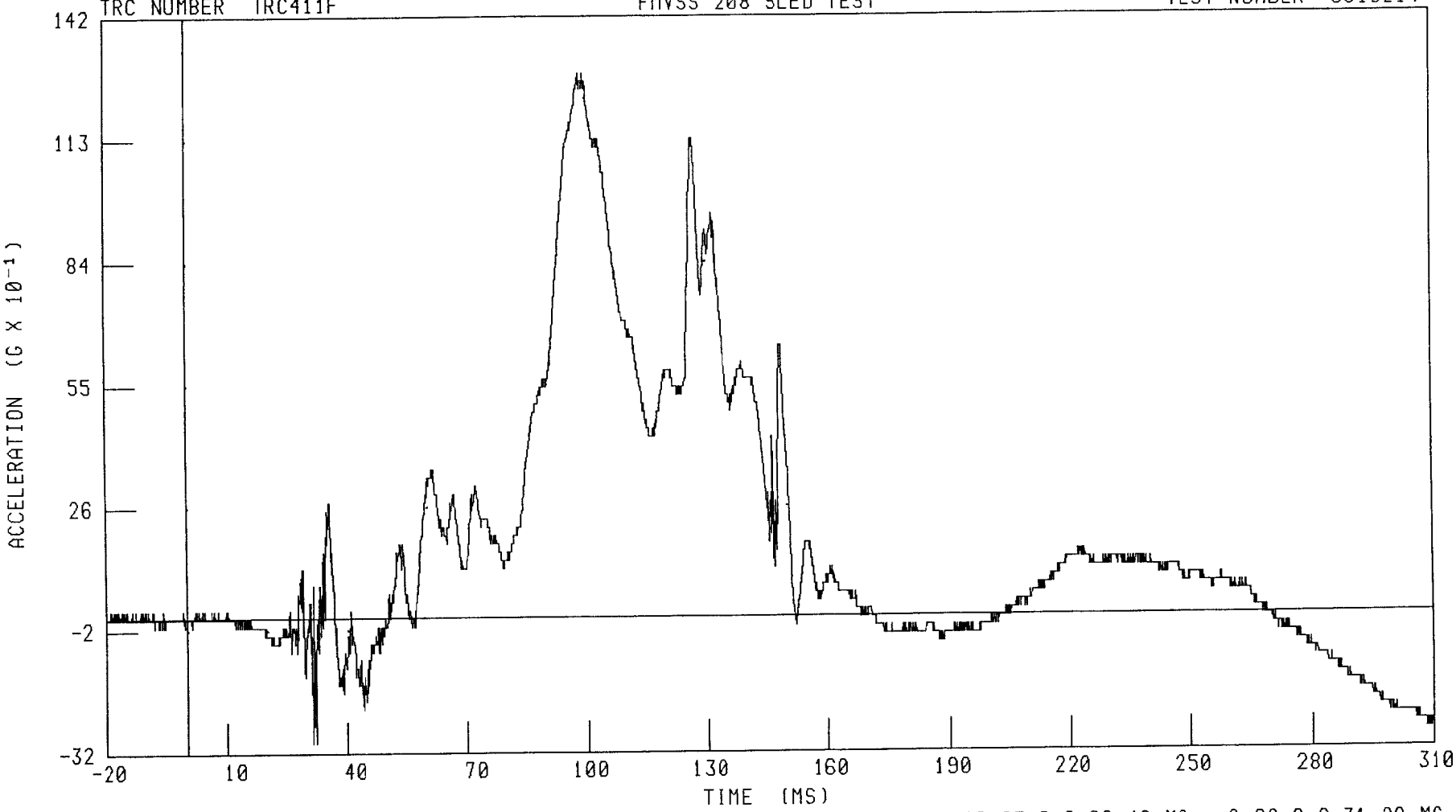
CHANNEL HEDYG1 FILTER CH CLASS 1000 PEAK DATA 12 31 G @ 131 68 MS, -3 87 G @ 146 40 MS

010214

C15700 / 2001 ISUZU RODEO
DRIVER HEAD Z-AXIS ACCELERATION
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



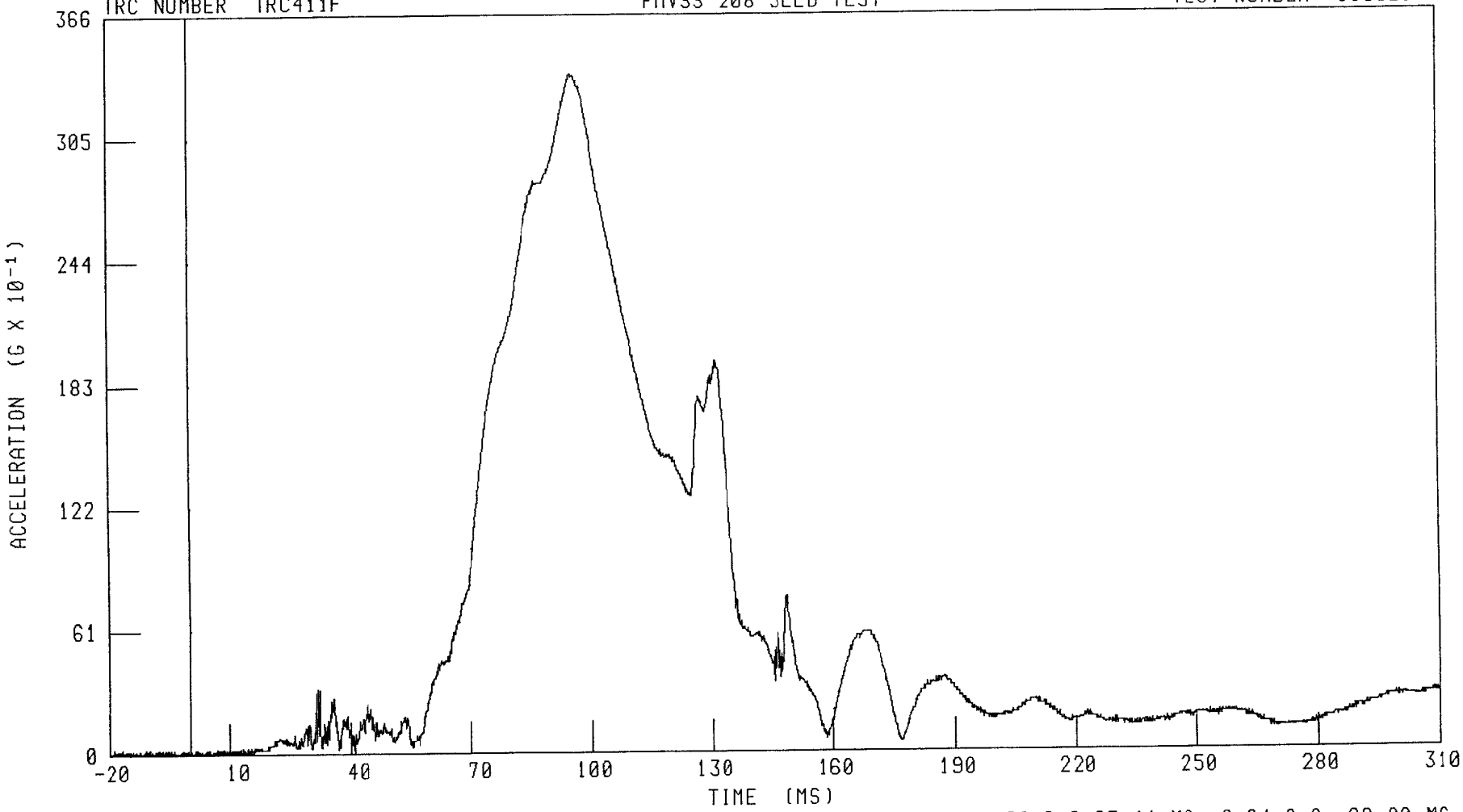
CHANNEL HEDZG1 FILTER CH CLASS 1000

PEAK DATA 12 87 G @ 98 48 MS, -2 96 G @ 31 28 MS

C15700 / 2001 ISUZU RODEO
DRIVER HEAD RESULTANT ACCELERATION
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



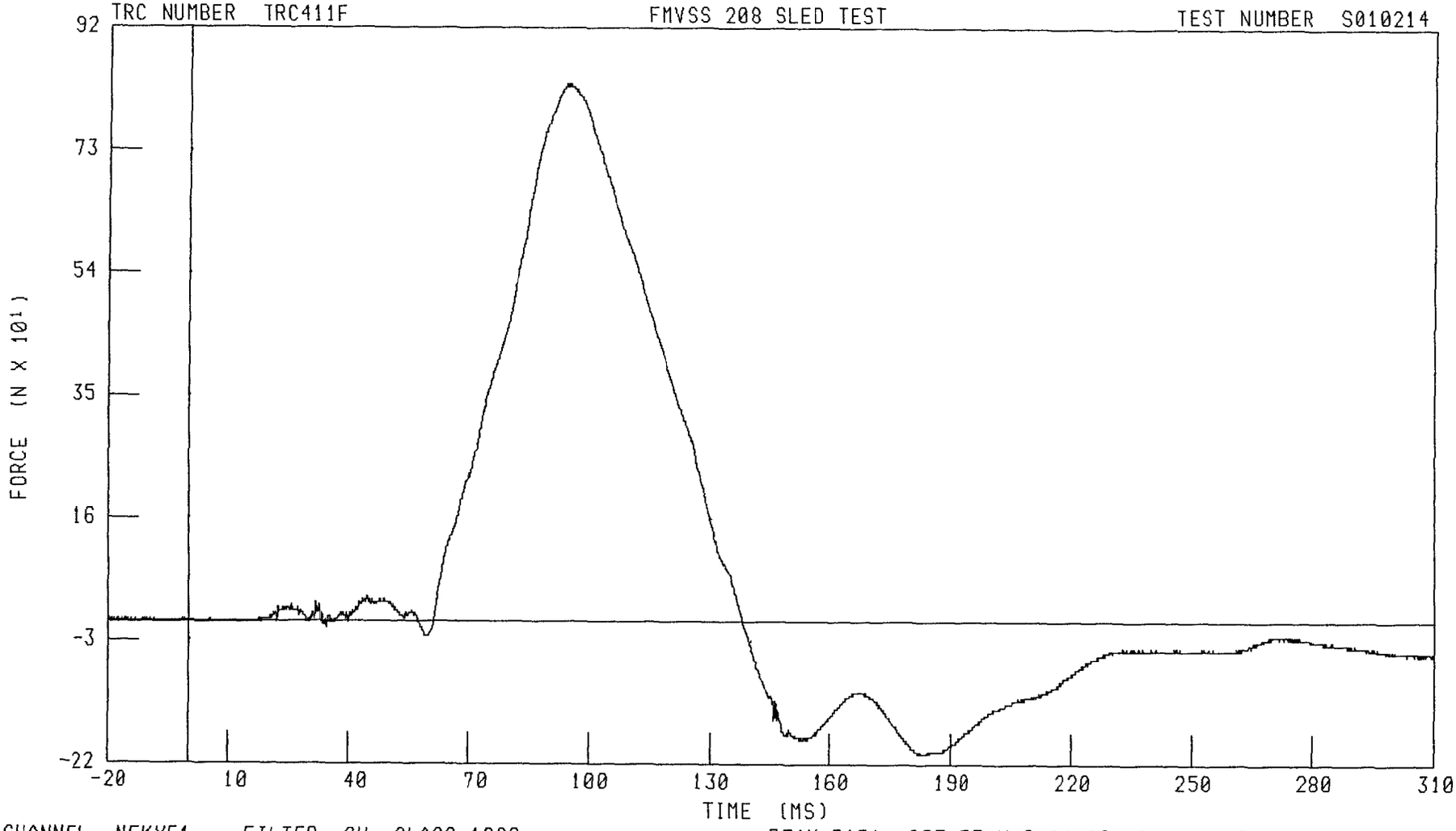
CHANNEL HEDRG1 FILTER CH CLASS 1000

PEAK DATA 33 69 G @ 95 44 MS, 0 04 G @ -20 00 MS

C15700 / 2001 ISUZU RODEO
DRIVER NECK X-AXIS SHEAR FORCE
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



CHANNEL NEKXF1 FILTER CH CLASS 1000

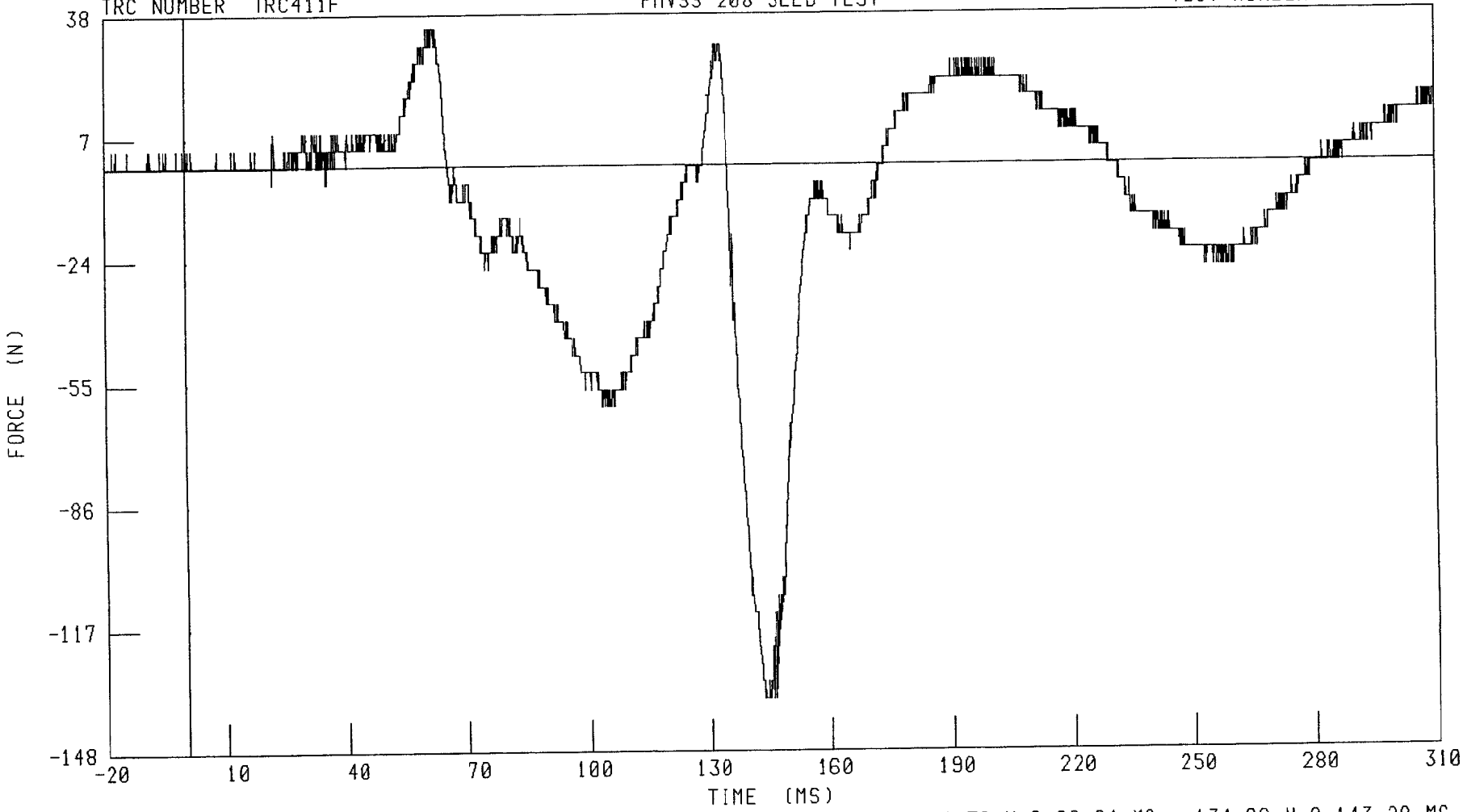
PEAK DATA 833 57 N @ 94 08 MS, -204 77 N @ 181 92 MS

010214

C15700 / 2001 ISUZU RODEO
DRIVER NECK Y-AXIS SHEAR FORCE
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



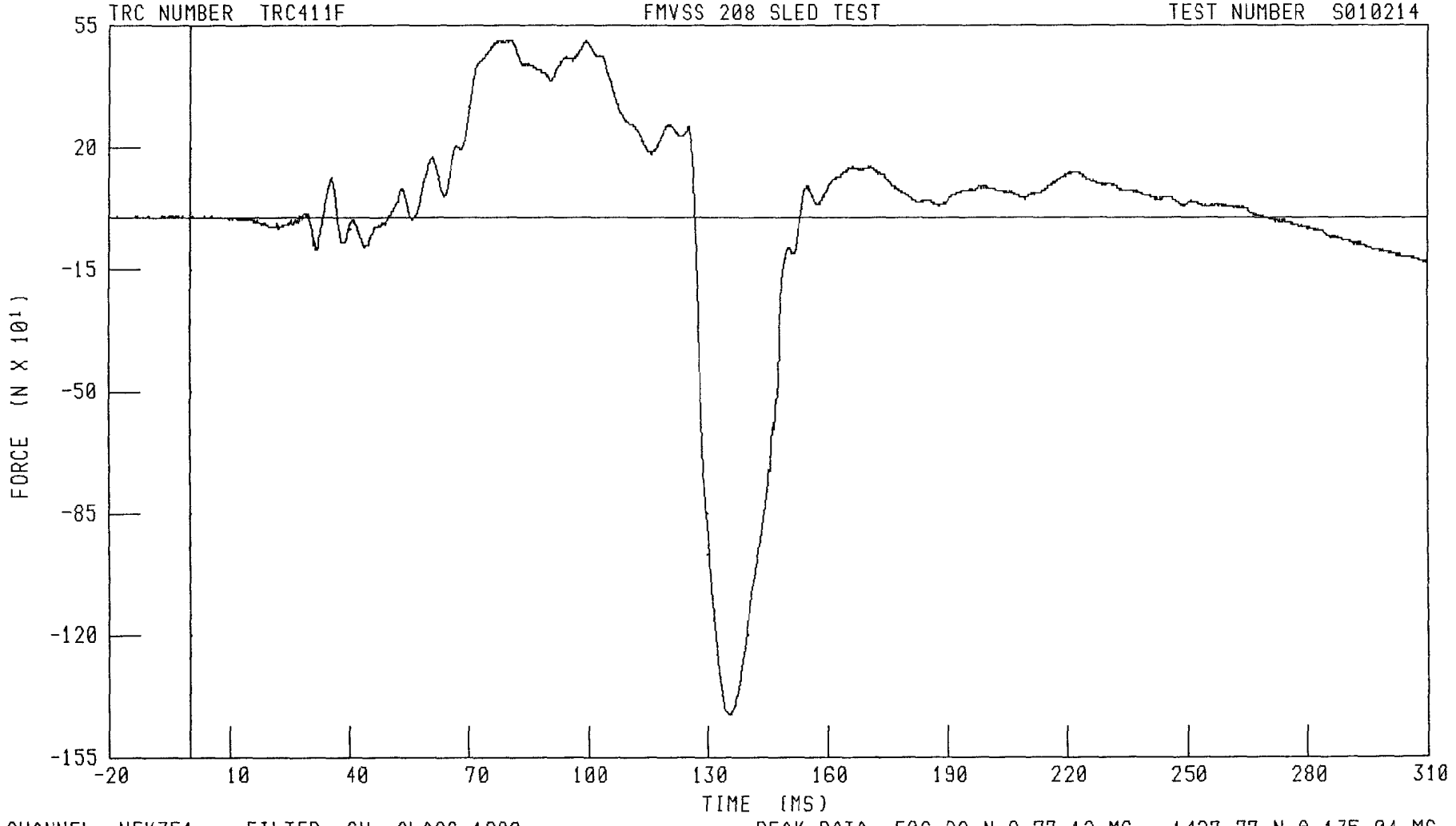
CHANNEL NEKYF1 FILTER CH CLASS 1000

PEAK DATA 34 59 N @ 60 24 MS, -134 86 N @ 143 28 MS

010214

C15700 / 2001 ISUZU RODEO
DRIVER NECK Z-AXIS AXIAL FORCE

TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



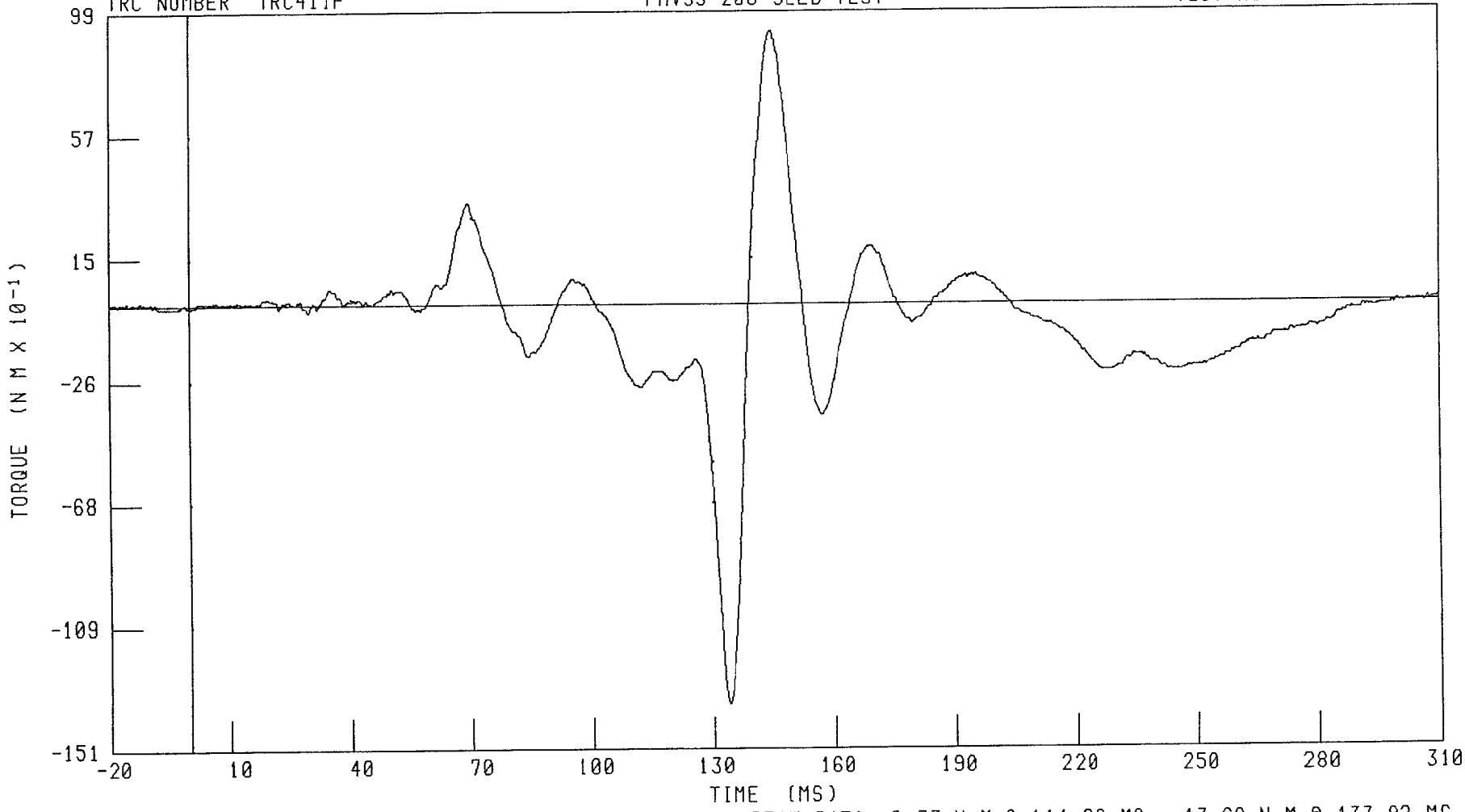
CHANNEL NEKZF1 FILTER CH CLASS 1000 PEAK DATA 506 89 N @ 77 12 MS, -1427 77 N @ 135 04 MS

010214

C15700 / 2001 ISUZU RODEO
DRIVER NECK MOMENT ABOUT X AXIS
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214

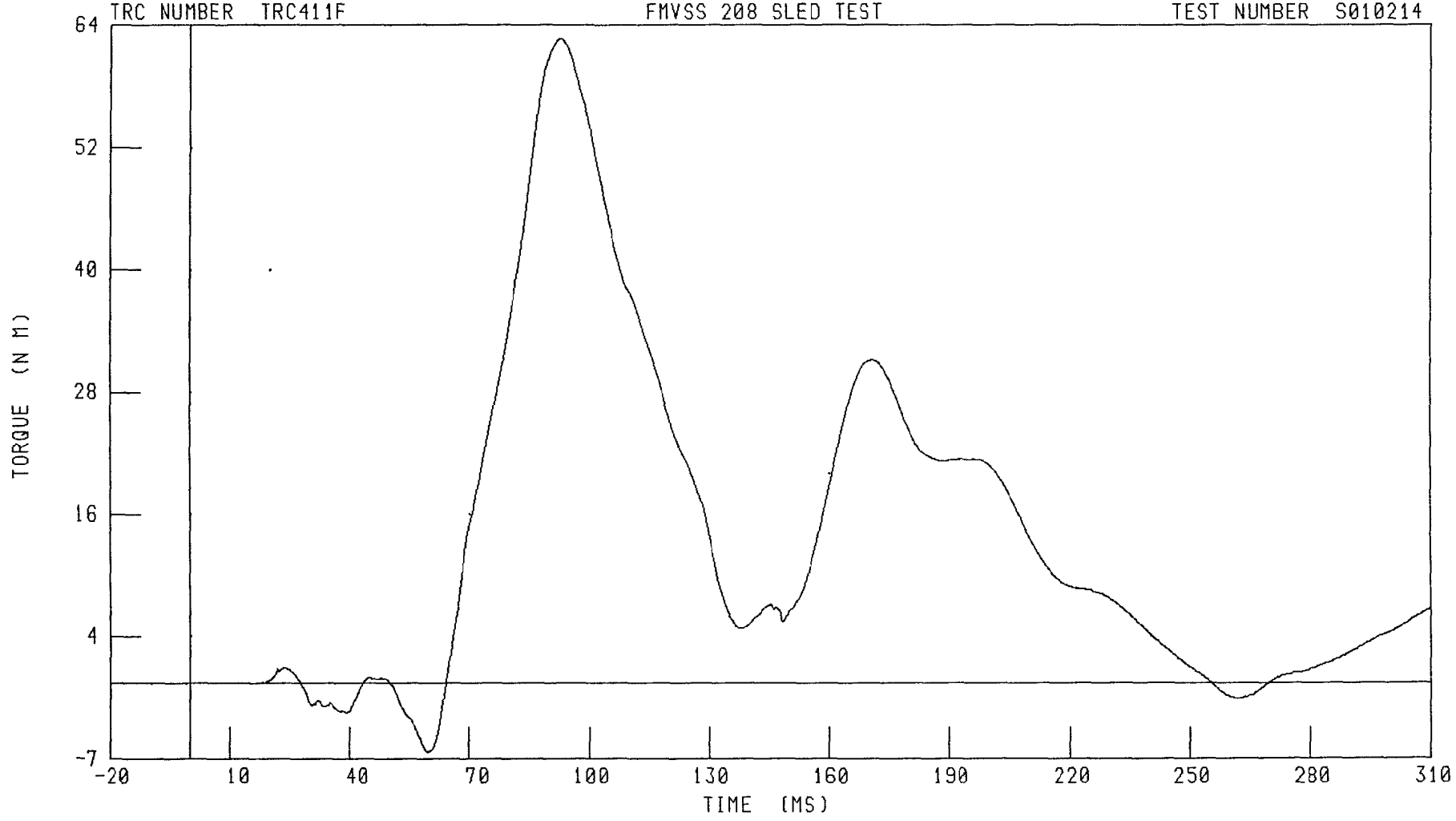


CHANNEL NEKXM1 FILTER CH CLASS 600

PEAK DATA 9 33 N M @ 144 96 MS, -13 69 N M @ 133 92 MS

010214

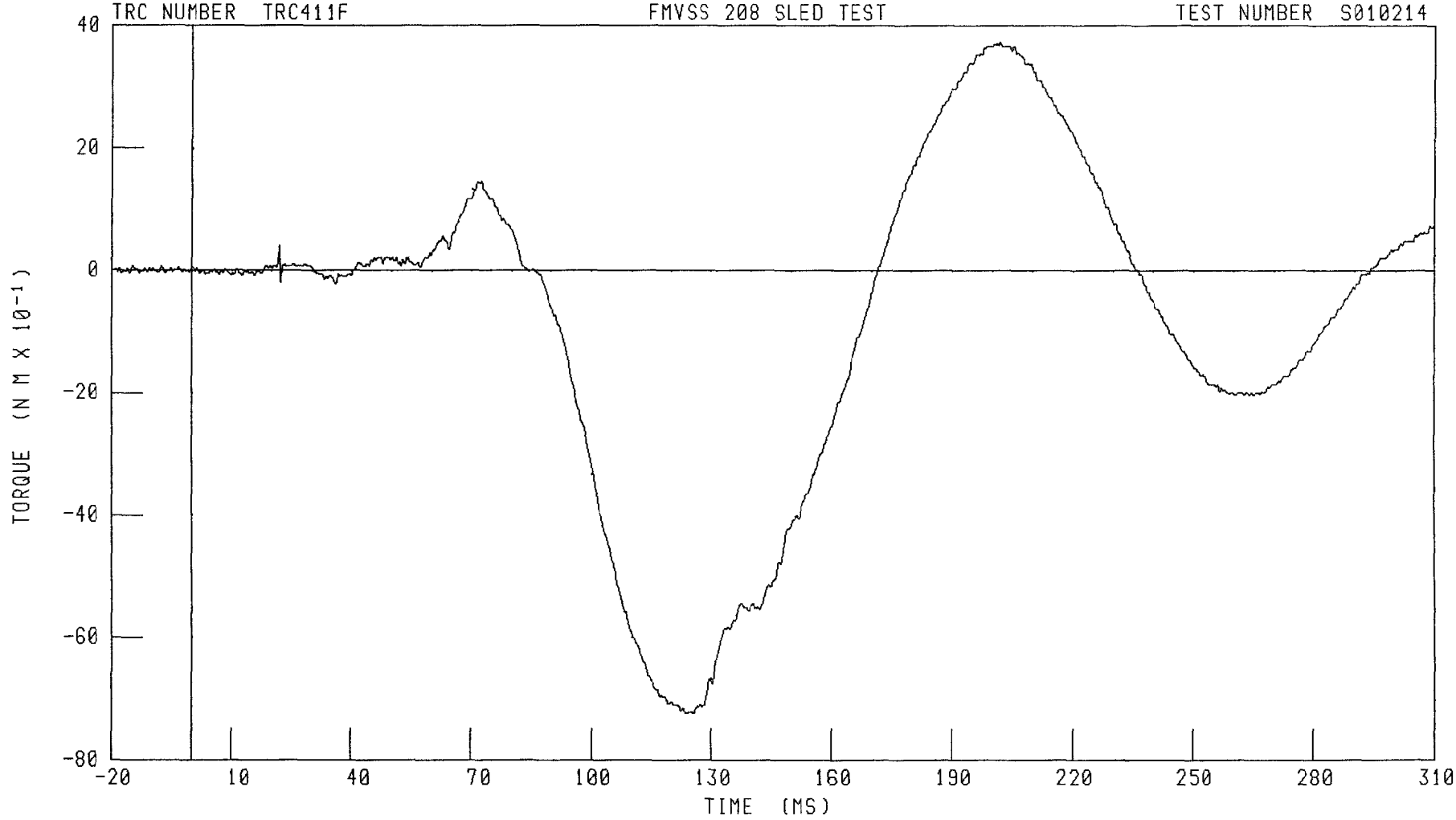
C15700 / 2001 ISUZU RODEO
DRIVER NECK MOMENT ABOUT Y AXIS
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL NEKYM1 FILTER CH CLASS 600 PEAK DATA 63 32 N M @ 92 56 MS, -6 76 N M @ 59 52 MS

010214

C15700 / 2001 ISUZU RODEO
DRIVER NECK MOMENT ABOUT Z AXIS
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214

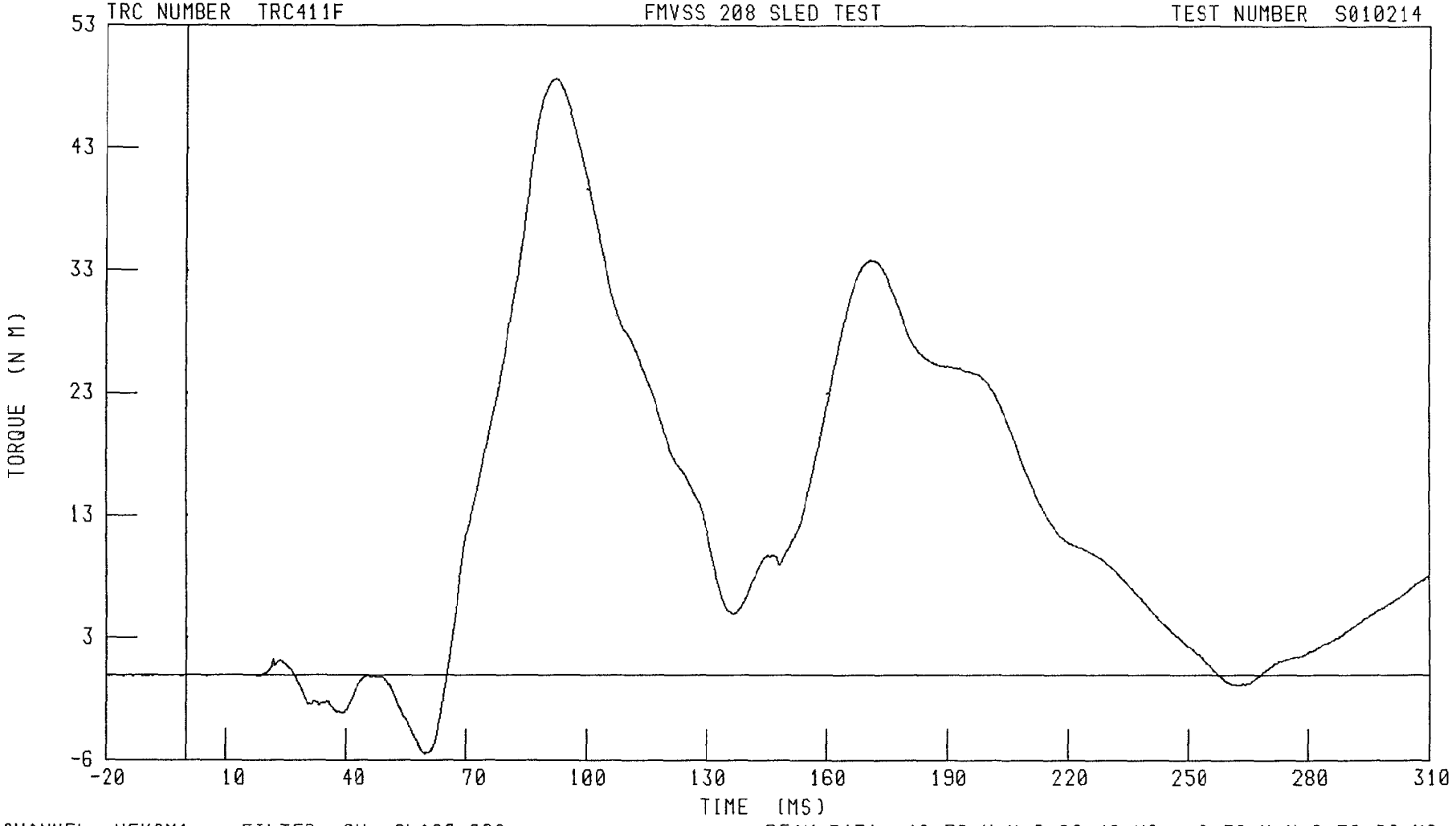


CHANNEL NEKZM1 FILTER CH CLASS 600 PEAK DATA 3 73 N M @ 201 76 MS, -7 25 N M @ 123 60 MS

C15700 / 2001 ISUZU RODEO

DRIVER NECK MOMENT ABOUT Y AXIS OCCIPITAL CONDYLE

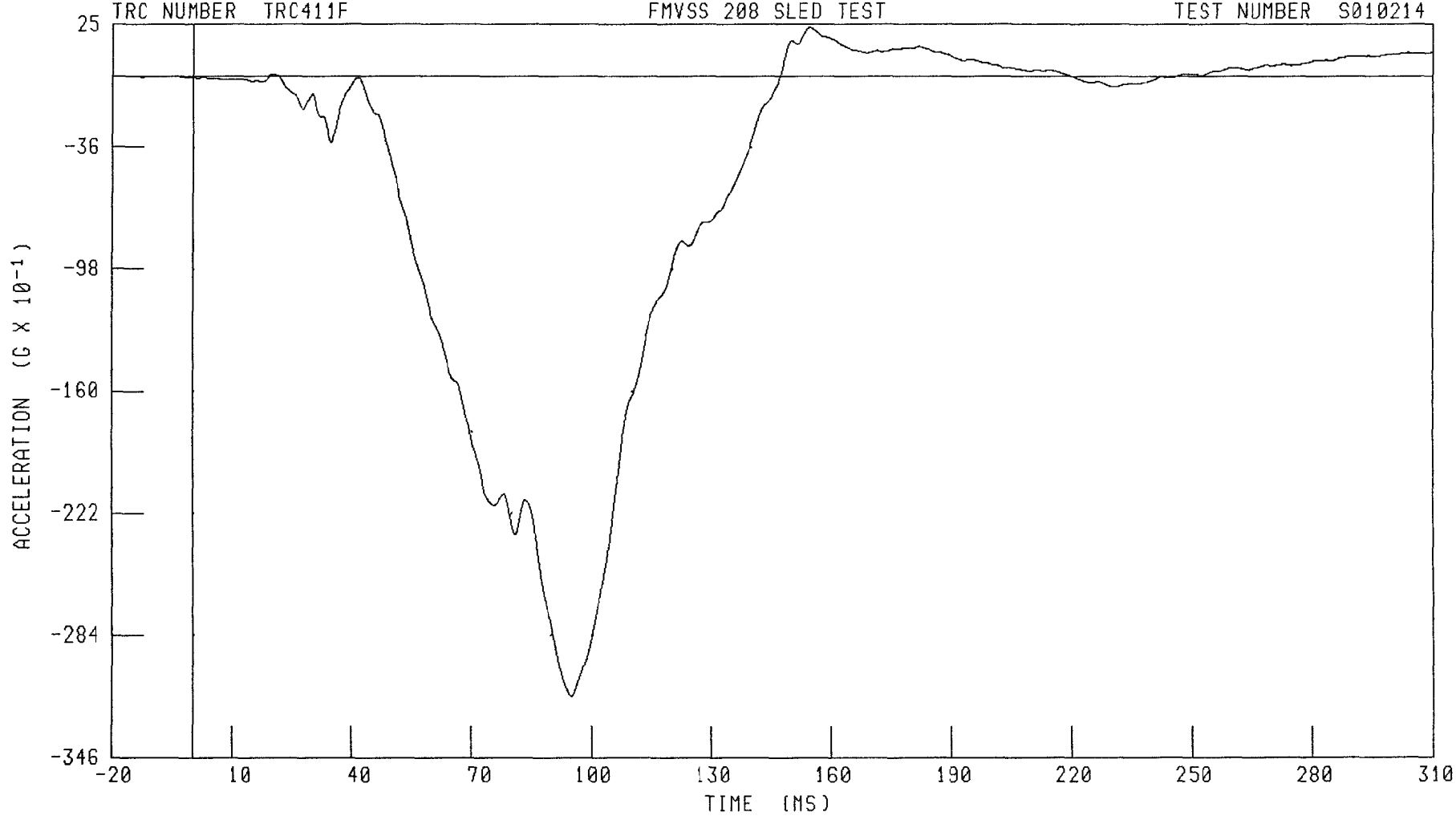
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL NEKOM1 FILTER CH CLASS 600 PEAK DATA 48 78 N M @ 92 40 MS, -6 36 N M @ 59 60 MS

C15700 / 2001 ISUZU RODEO
DRIVER CHEST X-AXIS ACCELERATION

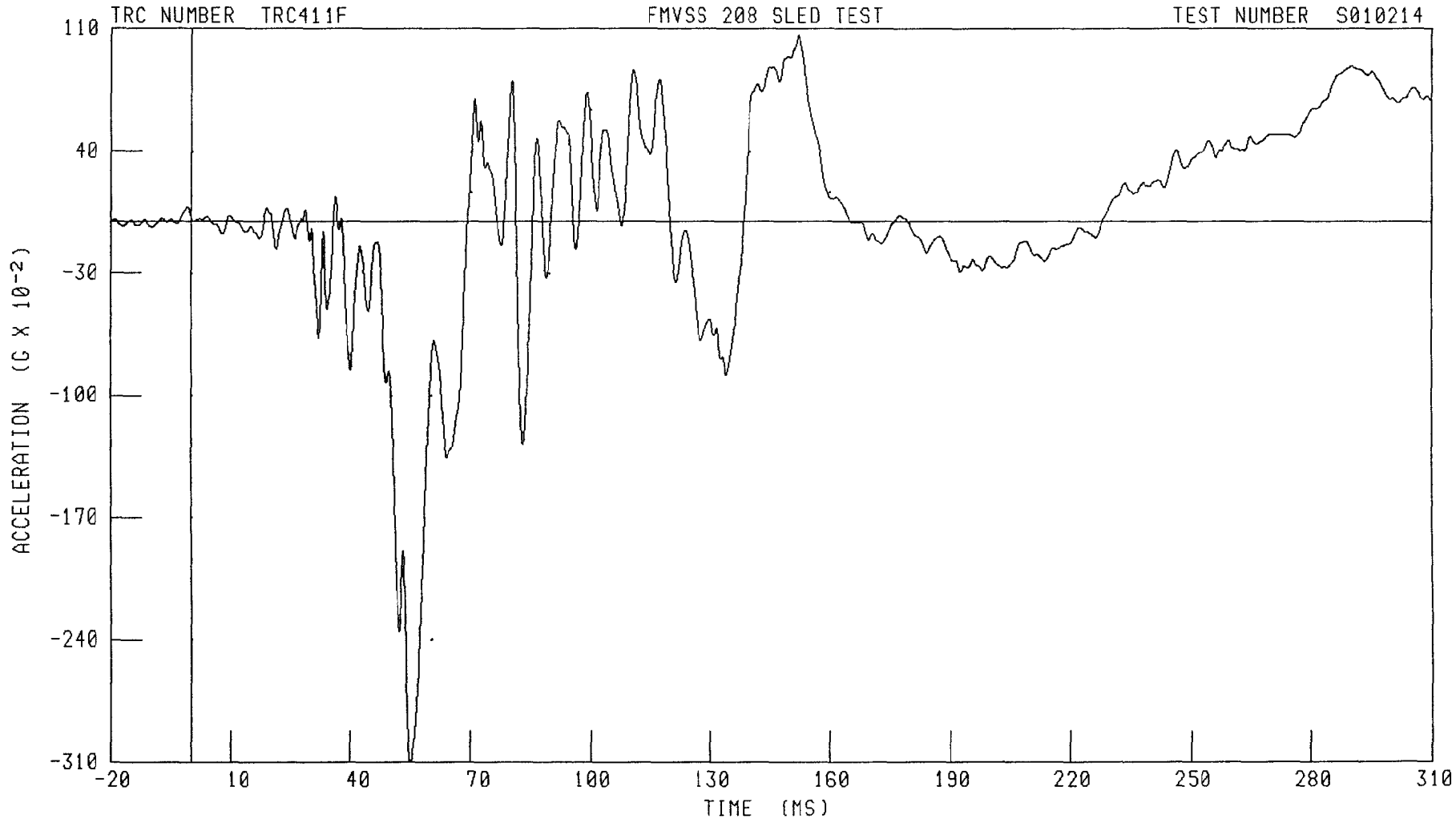
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL CSTXG1 FILTER CH CLASS 180 PEAK DATA 2 44 G @ 154 80 MS, -31 49 G @ 95 04 MS

010214

C15700 / 2001 ISUZU RODEO
DRIVER CHEST Y-AXIS ACCELERATION



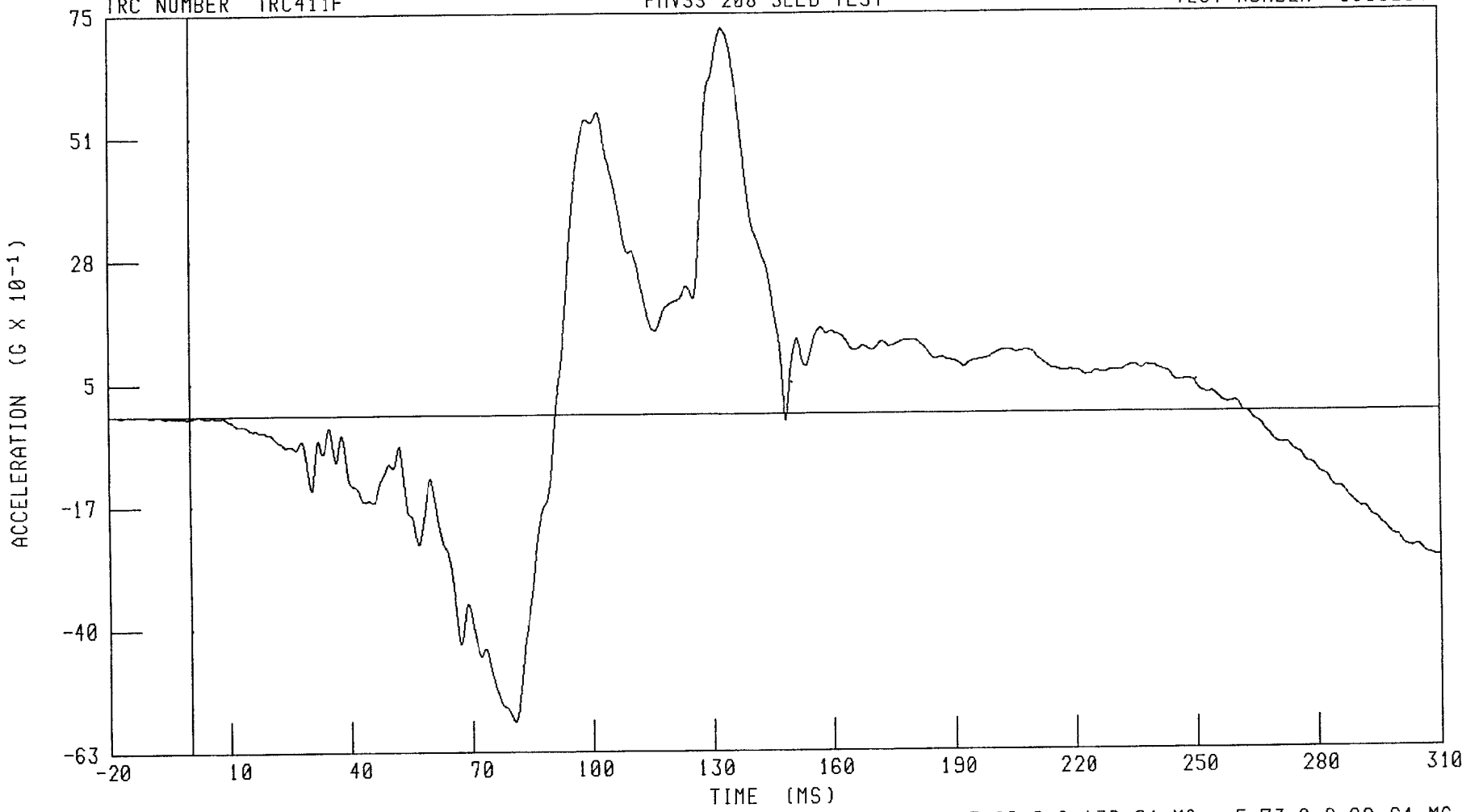
CHANNEL CSTYG1 FILTER CH CLASS 180

PEAK DATA 1 06 G @ 152 40 MS, -3 12 G @ 54 88 MS

C15700 / 2001 ISUZU RODEO
DRIVER CHEST Z-AXIS ACCELERATION
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



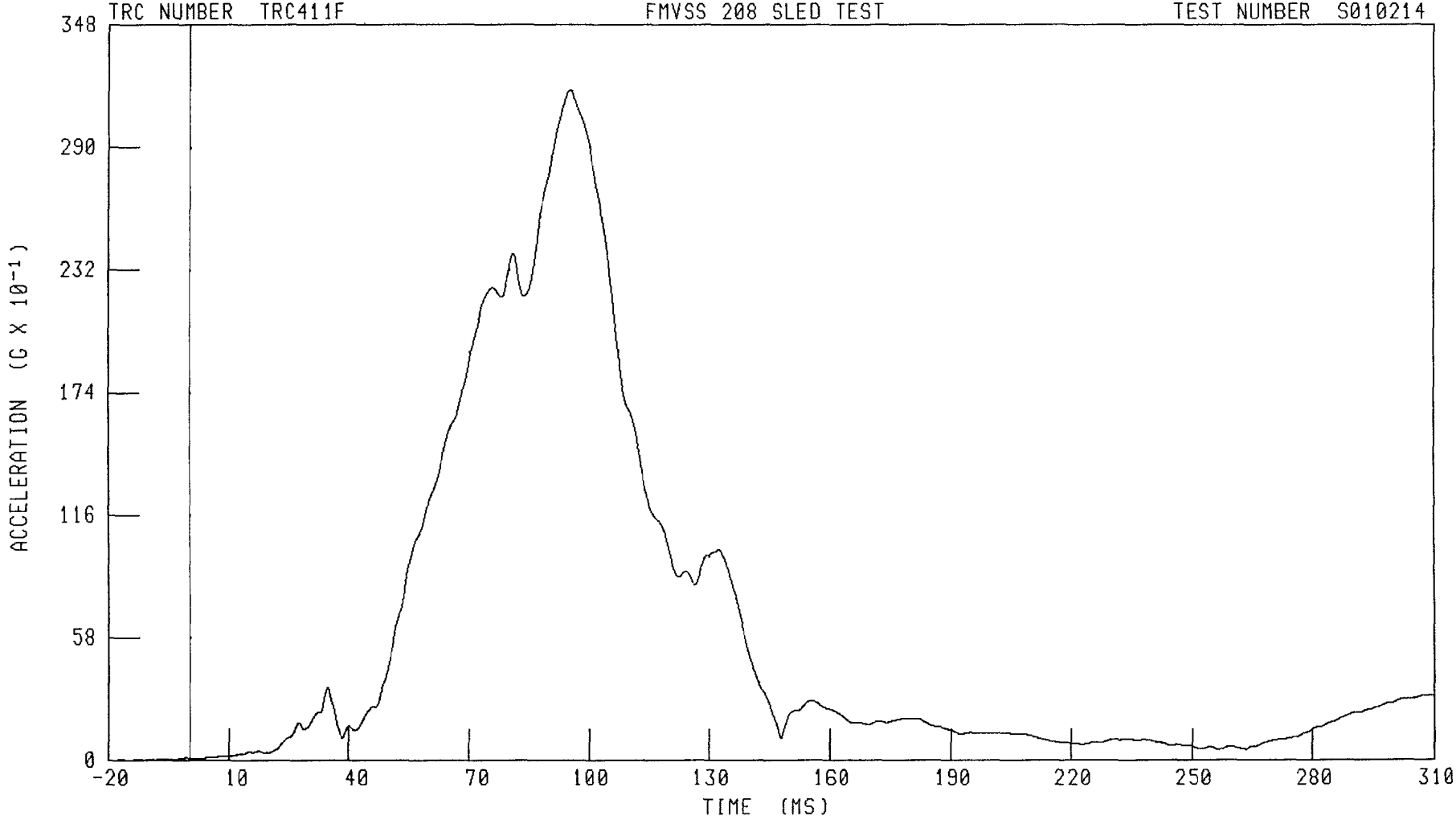
CHANNEL CSTZG1 FILTER CH CLASS 180

PEAK DATA 7 22 G @ 132 64 MS, -5 73 G @ 80 64 MS

010214

C15700 / 2001 ISUZU RODEO
DRIVER CHEST RESULTANT ACCELERATION

TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214

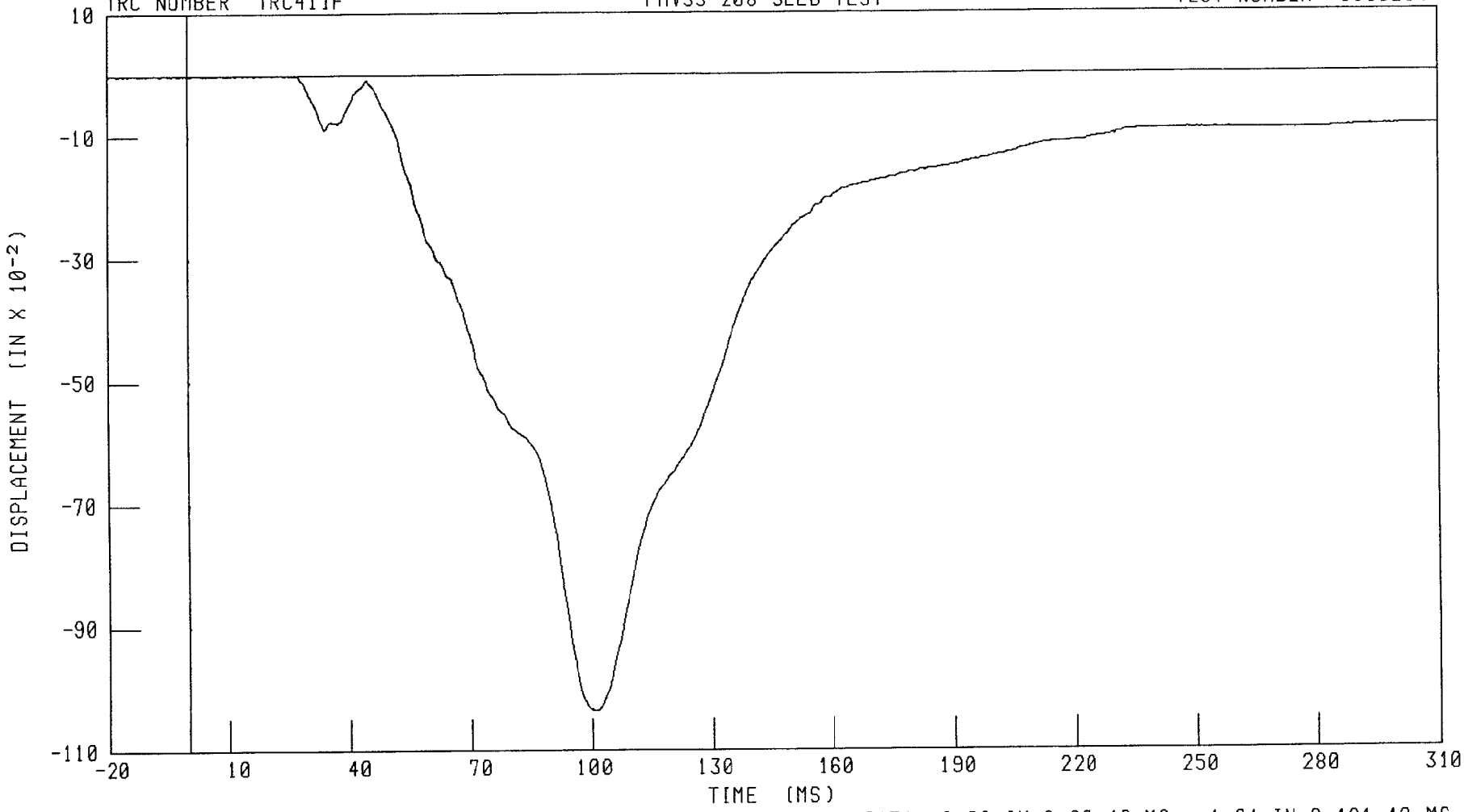


CHANNEL CSTRG1 FILTER CH CLASS 180 PEAK DATA 31 71 G @ 95 28 MS, 0 01 G @ -19 68 MS

C15700 / 2001 ISUZU RODEO
DRIVER CHEST DEFLECTION
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

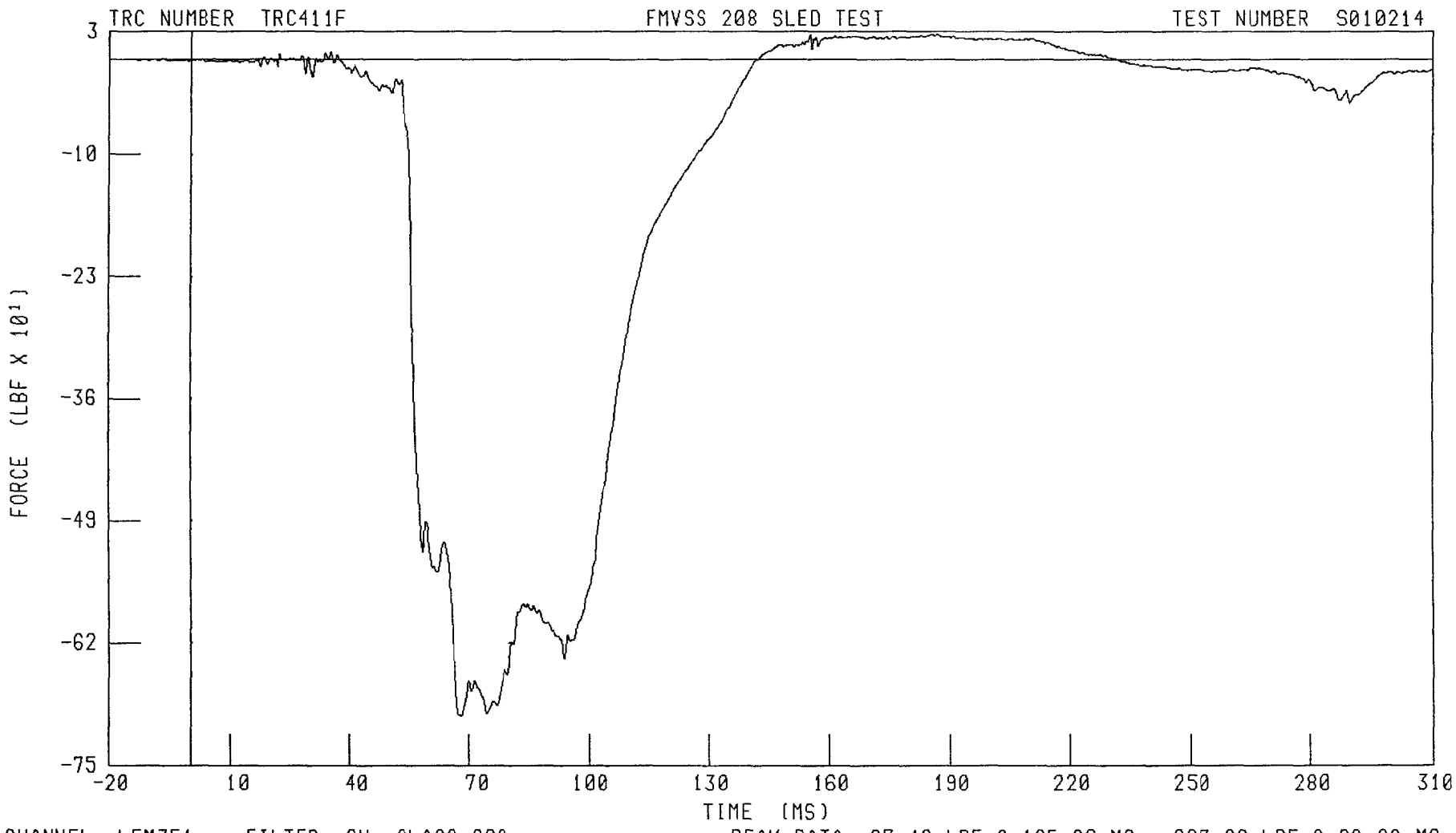
TEST NUMBER S010214



CHANNEL CSTXD1 FILTER CH CLASS 600

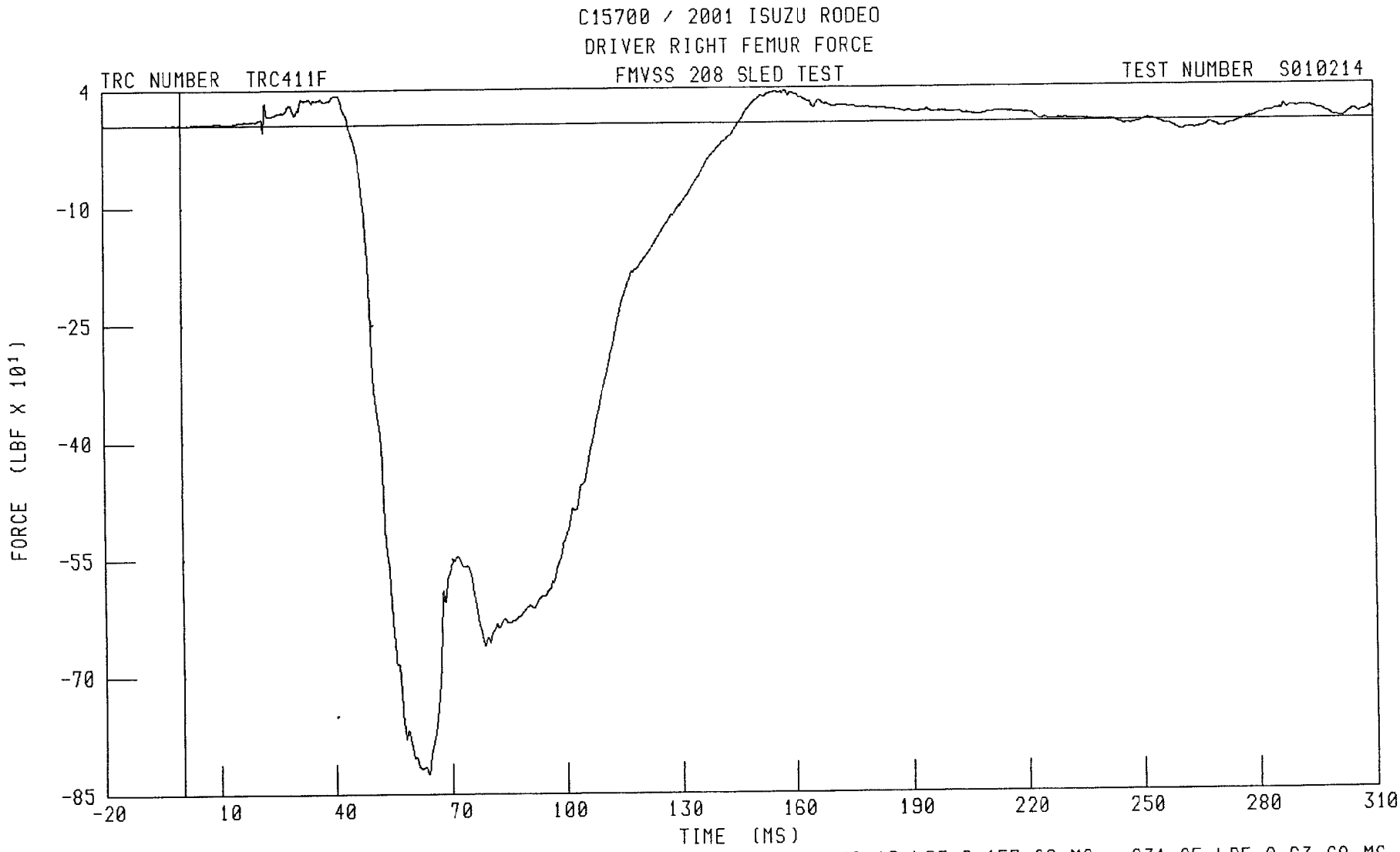
PEAK DATA 0 00 IN @ 20 40 MS, -1 04 IN @ 101 12 MS

C15700 / 2001 ISUZU RODEO
DRIVER LEFT FEMUR FORCE

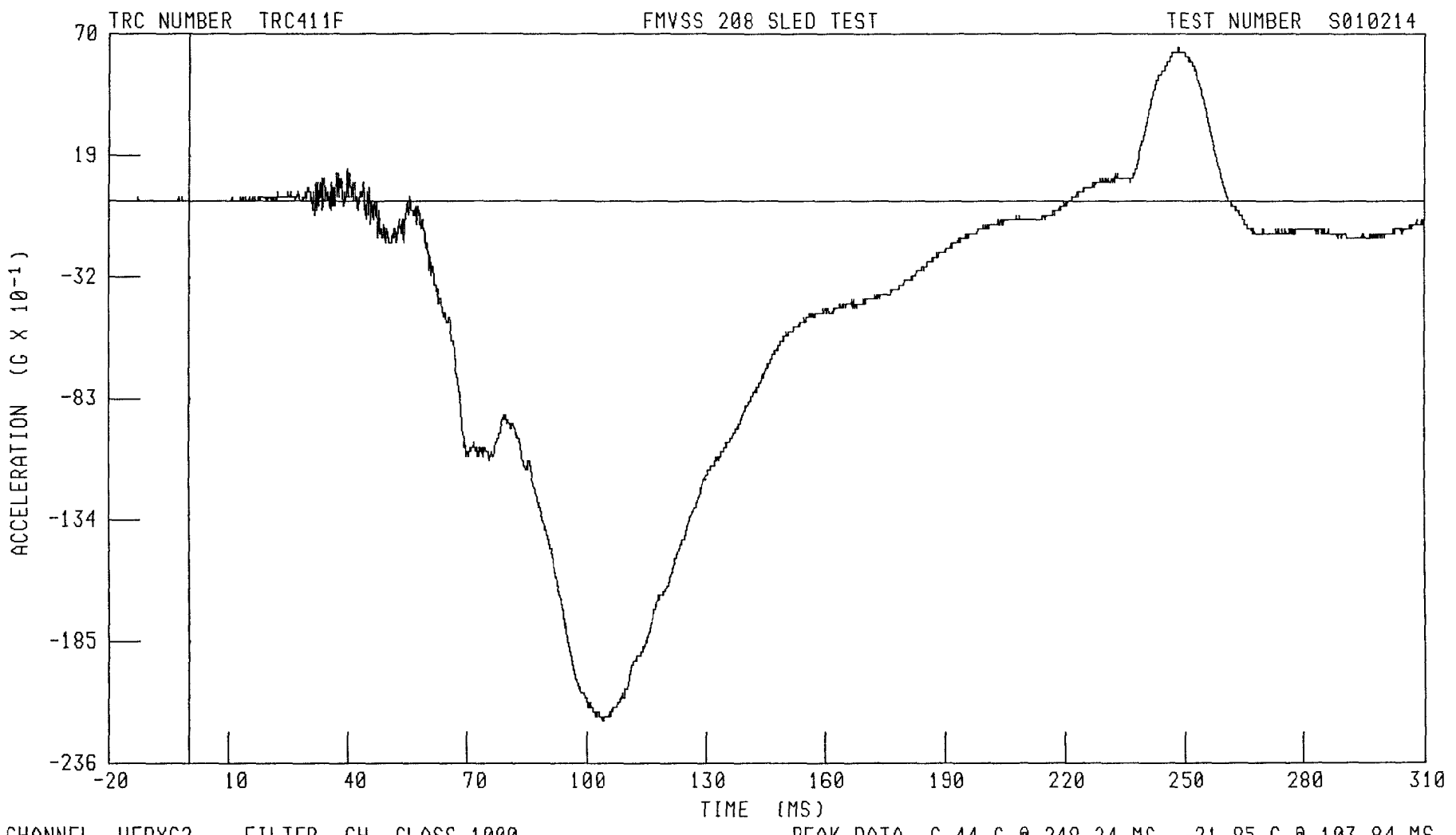


CHANNEL LFMZF1 FILTER CH CLASS 600
PEAK DATA 27 40 LBF @ 185 28 MS, -697 20 LBF @ 68 00 MS

010214


C15700 / 2001 ISUZU RODEO
DRIVER RIGHT FEMUR FORCE
FMVSS 208 SLED TEST
TRC NUMBER TRC411F
TEST NUMBER S010214
4
-10
-25
-40
-55
-70
-85
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL RFMZF1 FILTER CH CLASS 600
PEAK DATA 40 13 LBF @ 157 60 MS, -831 05 LBF @ 63 68 MS

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER HEAD X-AXIS ACCELERATION



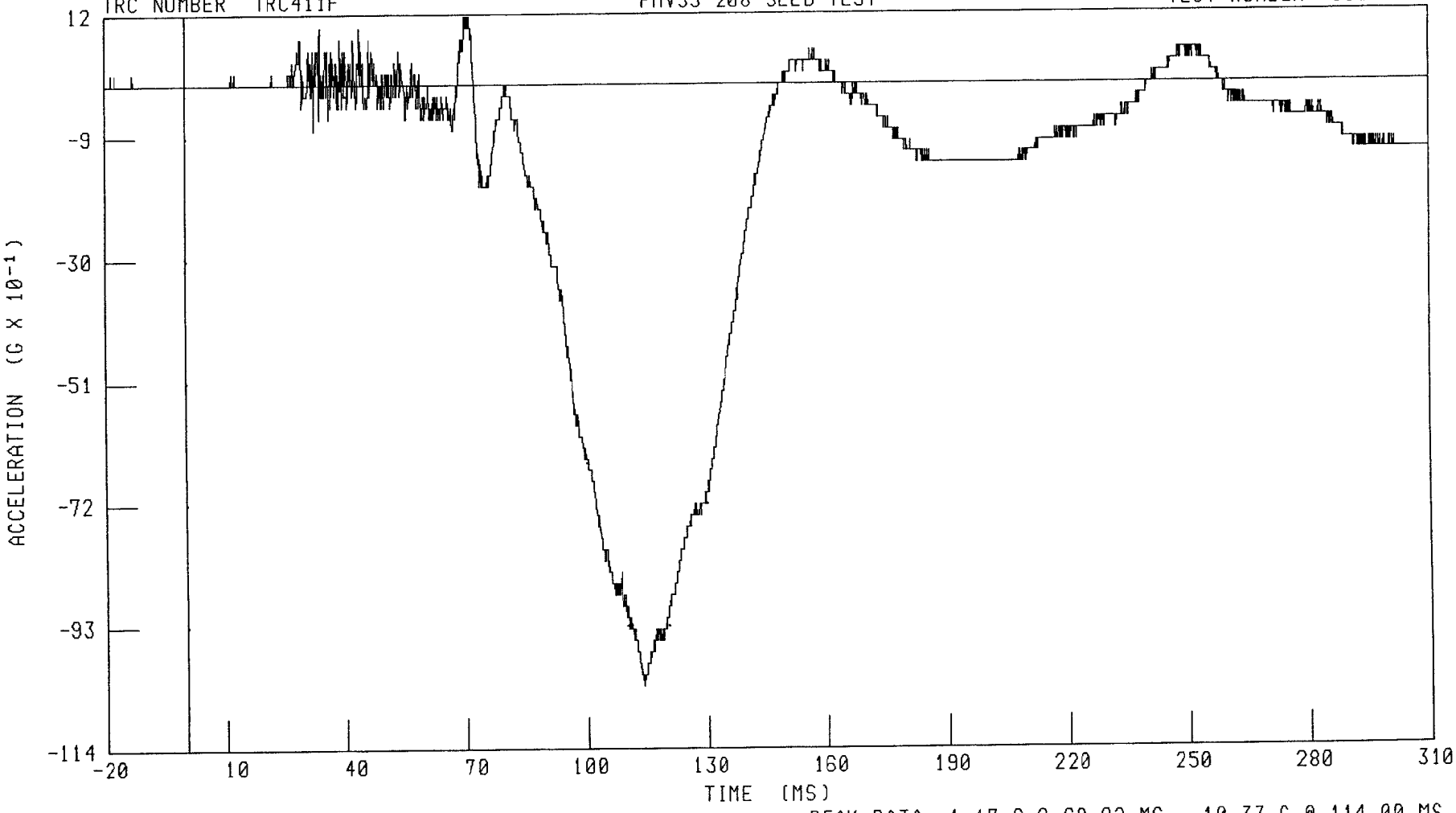
CHANNEL HEDXG2 FILTER CH CLASS 1000 PEAK DATA G 44 G @ 248 24 MS, -21 85 G @ 103 84 MS

010214

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER HEAD Y-AXIS ACCELERATION
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



CHANNEL HEDYG2 FILTER CH CLASS 1000

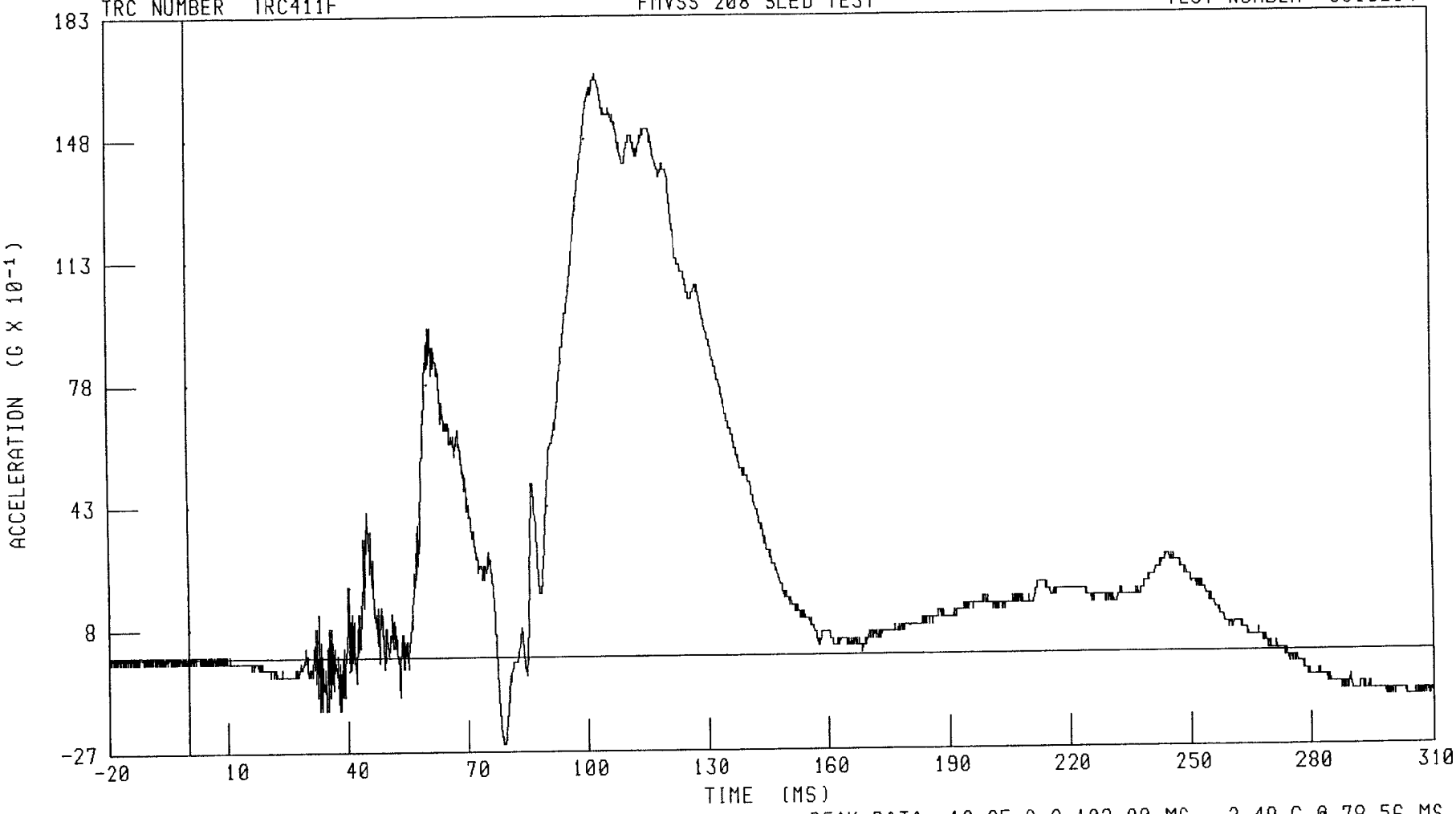
PEAK DATA 1 17 G @ 69 92 MS, -10 33 G @ 114 00 MS

010214

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER HEAD Z-AXIS ACCELERATION
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



CHANNEL HEDZG2 FILTER CH CLASS 1000

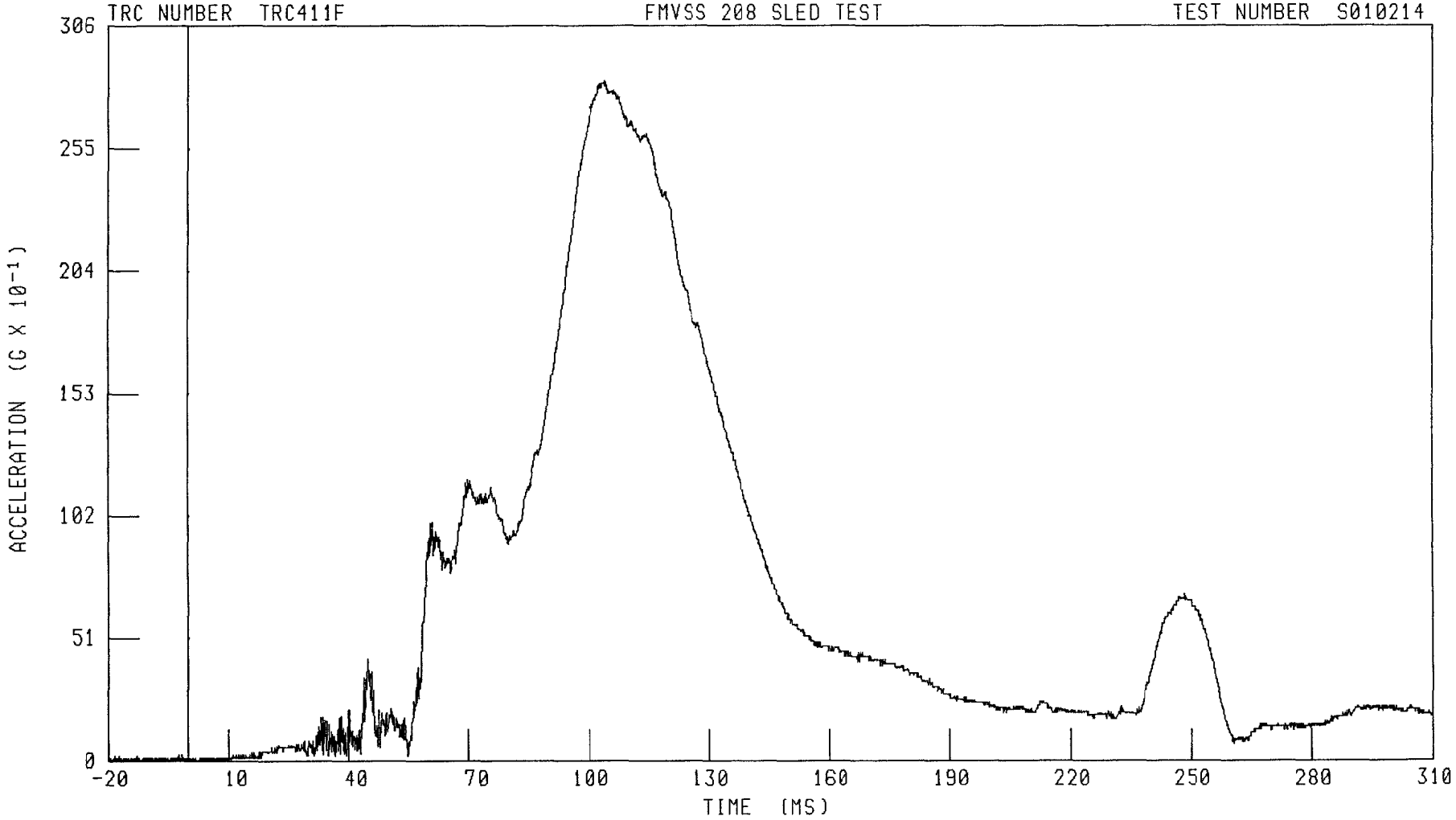
PEAK DATA 16 65 G @ 102 80 MS, -2 49 G @ 78 56 MS

010214

C15700 / 2001 ISUZU RODEO

RIGHT FRONT PASSENGER HEAD RESULTANT ACCELERATION

TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214

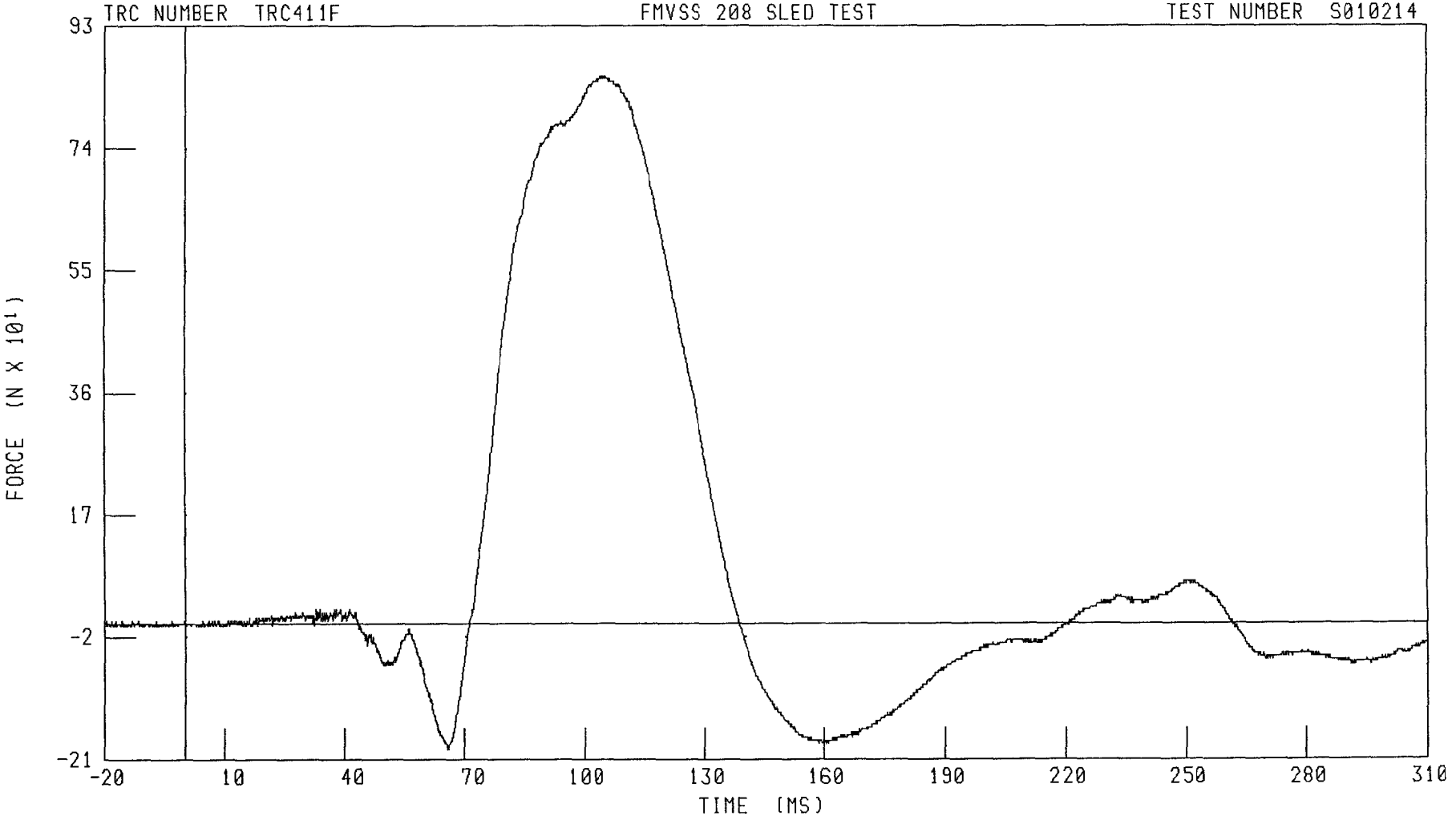


CHANNEL HEDRG2 FILTER CH CLASS 1000 PEAK DATA 28 33 G @ 103 84 MS, 0 05 G @ -19 92 MS

C15700 / 2001 ISUZU RODEO

RIGHT FRONT PASSENGER NECK X-AXIS SHEAR FORCE

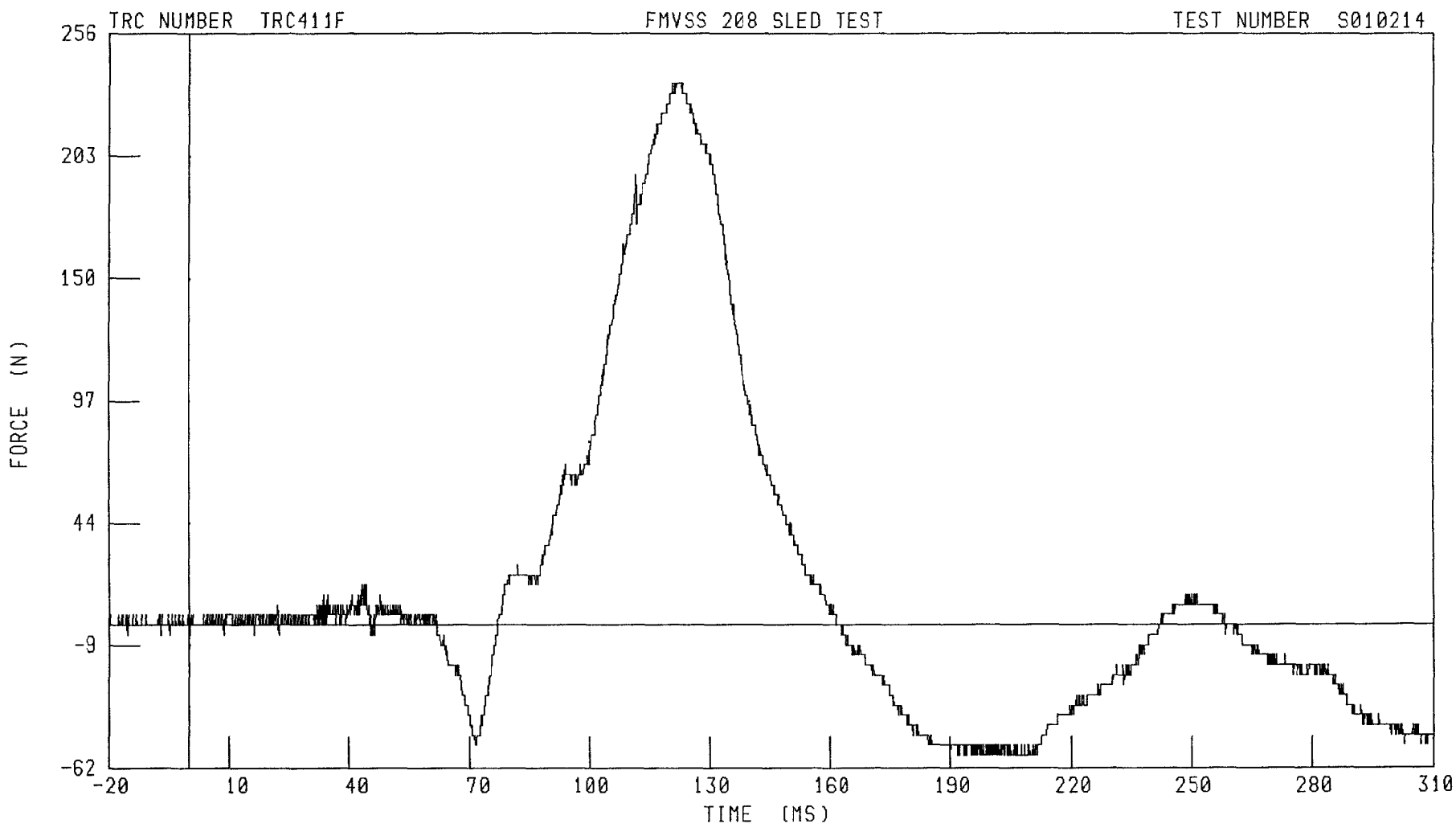
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL NEKXF2 FILTER CH CLASS 1000 PEAK DATA 852 10 N @ 104 00 MS, -194 30 N @ 65 60 MS

010214

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER NECK Y-AXIS SHEAR FORCE



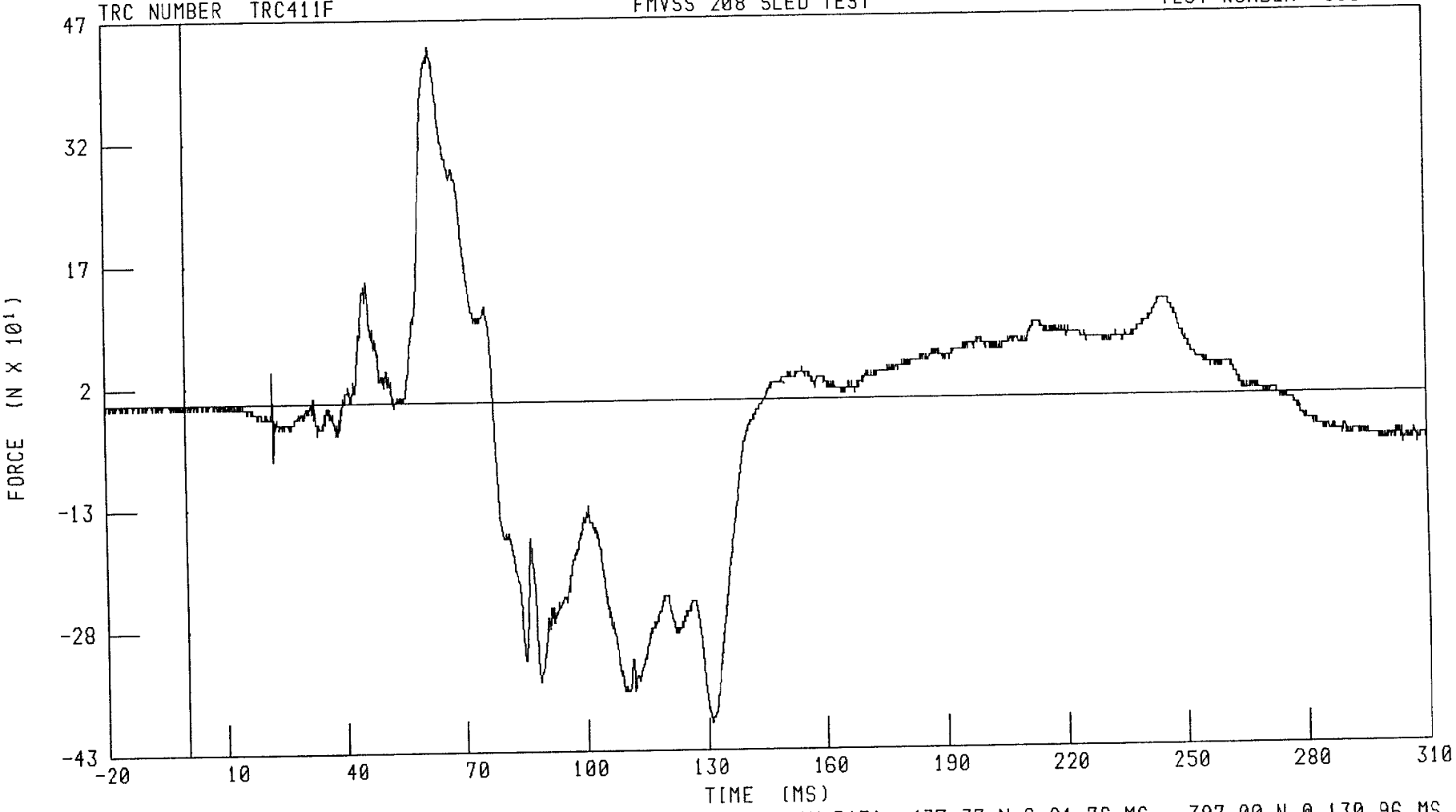
CHANNEL NEKYF2 FILTER CH CLASS 1000 PEAK DATA 234 38 N @ 120 64 MS, -56 66 N @ 190 08 MS

010214

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER NECK Z-AXIS AXIAL FORCE
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



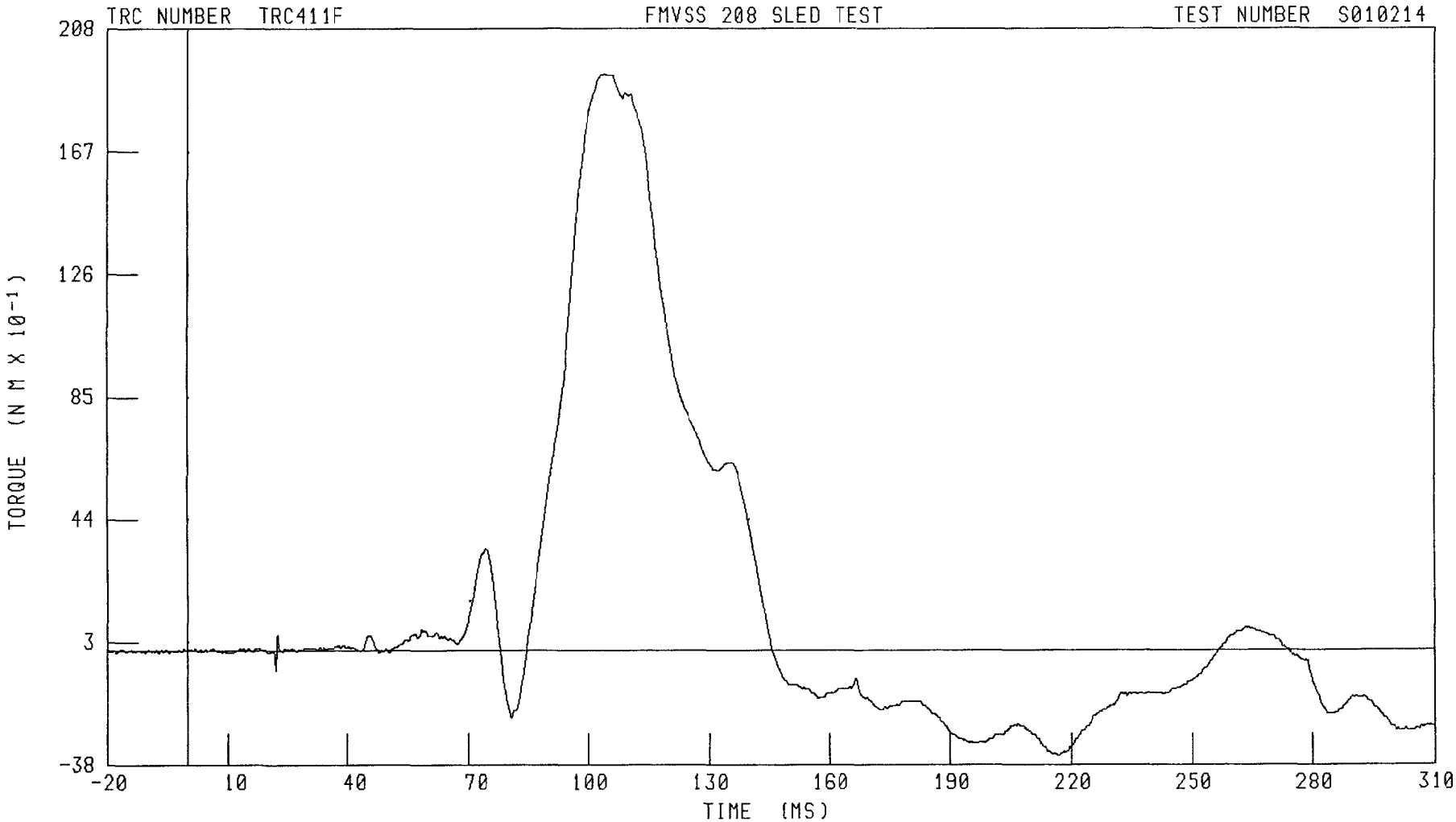
CHANNEL NEKZF2 FILTER CH CLASS 1000

PEAK DATA 437 37 N @ 61 76 MS, -397 00 N @ 130 96 MS

010214

C15700 / 2001 ISUZU RODEO

RIGHT FRONT PASSENGER NECK MOMENT ABOUT X AXIS



CHANNEL NEKXM2 FILTER CH CLASS 600

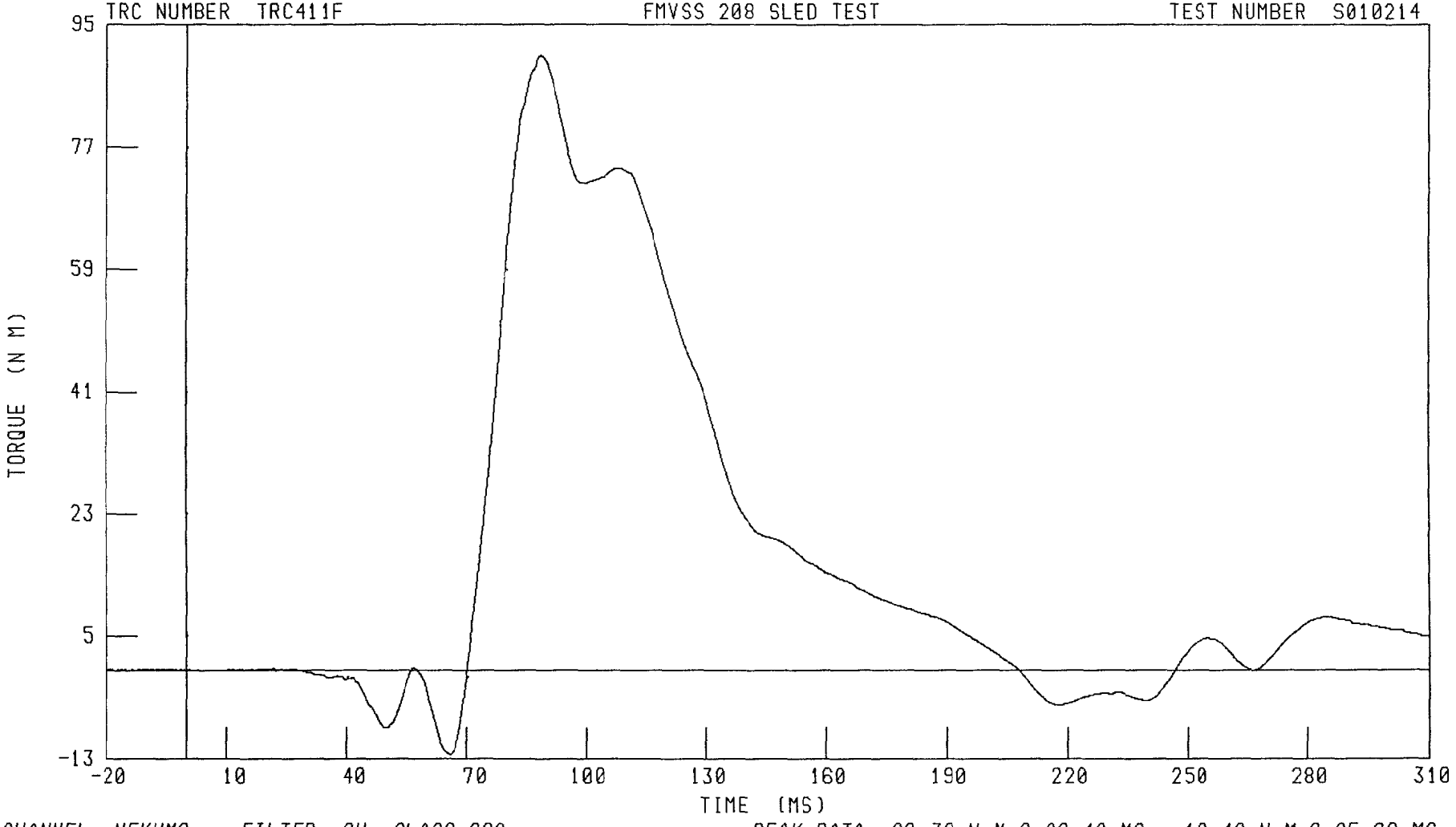
PEAK DATA 19 29 N M @ 104 08 MS, -3 49 N M @ 216 72 MS

010214

C15700 / 2001 ISUZU RODEO

RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS

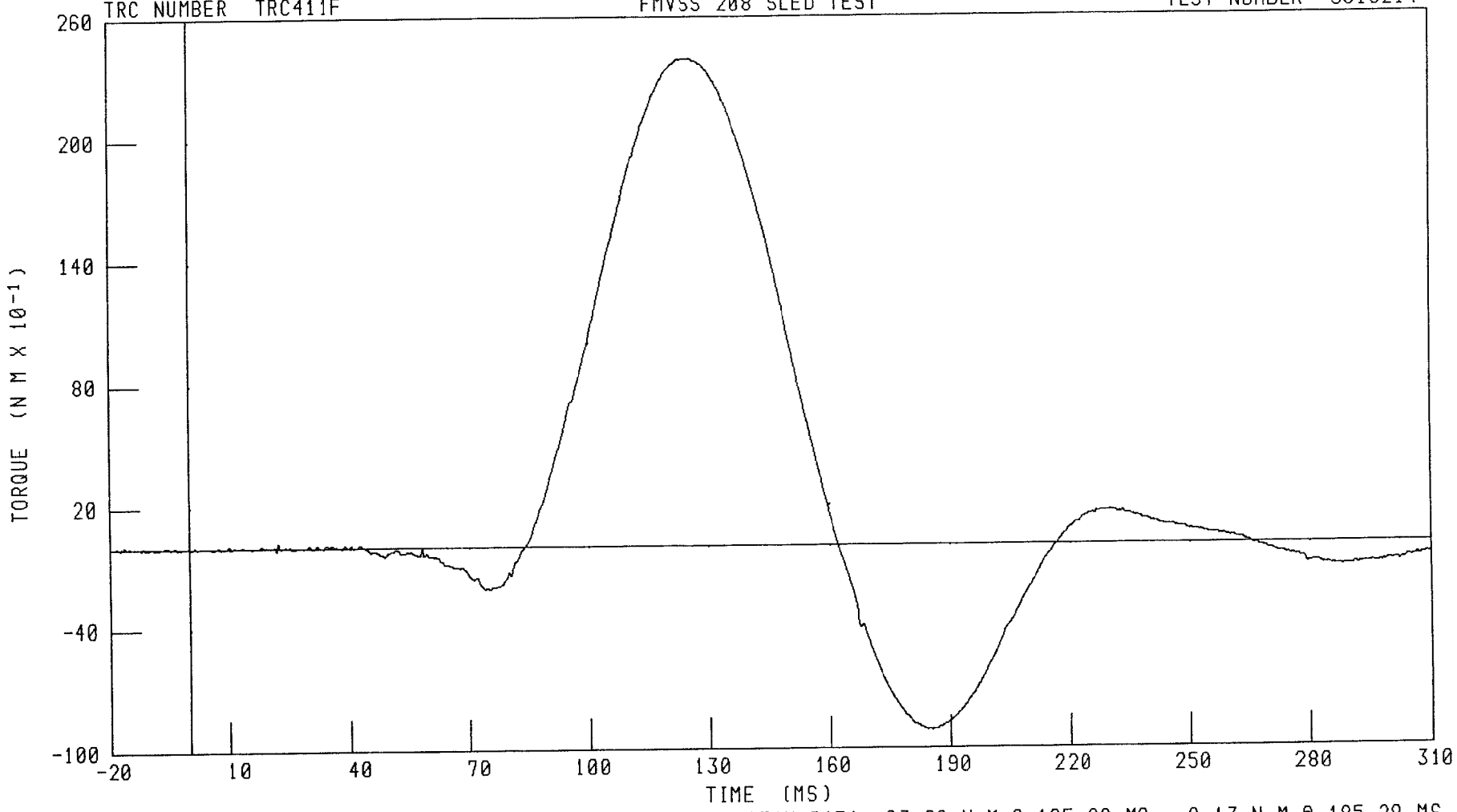
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL NEKYM2 FILTER CH CLASS 600 PEAK DATA 90 39 N M @ 88 48 MS, -12 40 N M @ 65 68 MS

010214

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Z AXIS
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



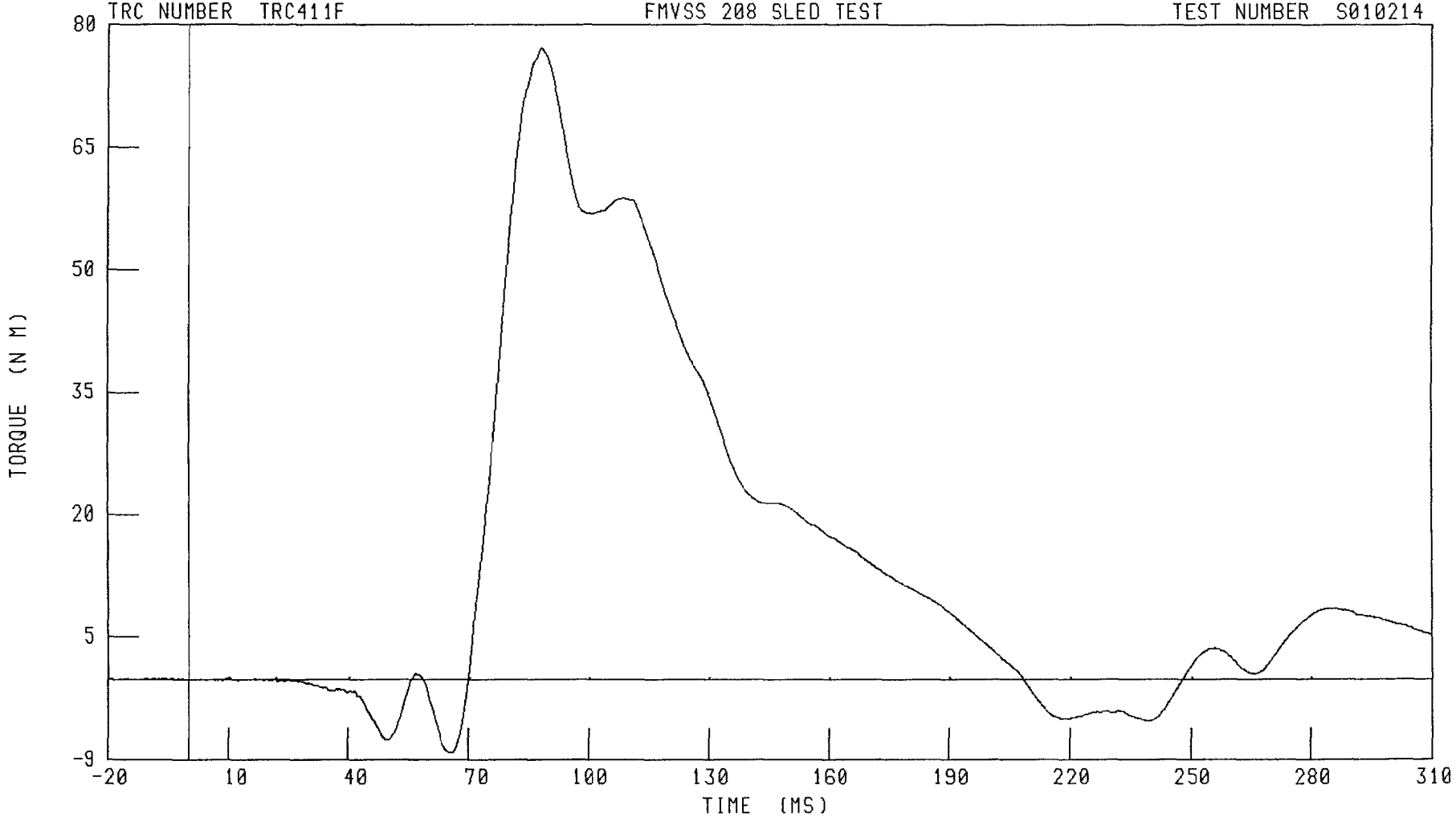
CHANNEL NEKZM2 FILTER CH CLASS 600
PEAK DATA 23 96 N M @ 125 92 MS, -9 13 N M @ 185 28 MS

010214

C15700 / 2001 ISUZU RODEO

RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS OCCIPITAL CONDYLE

TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



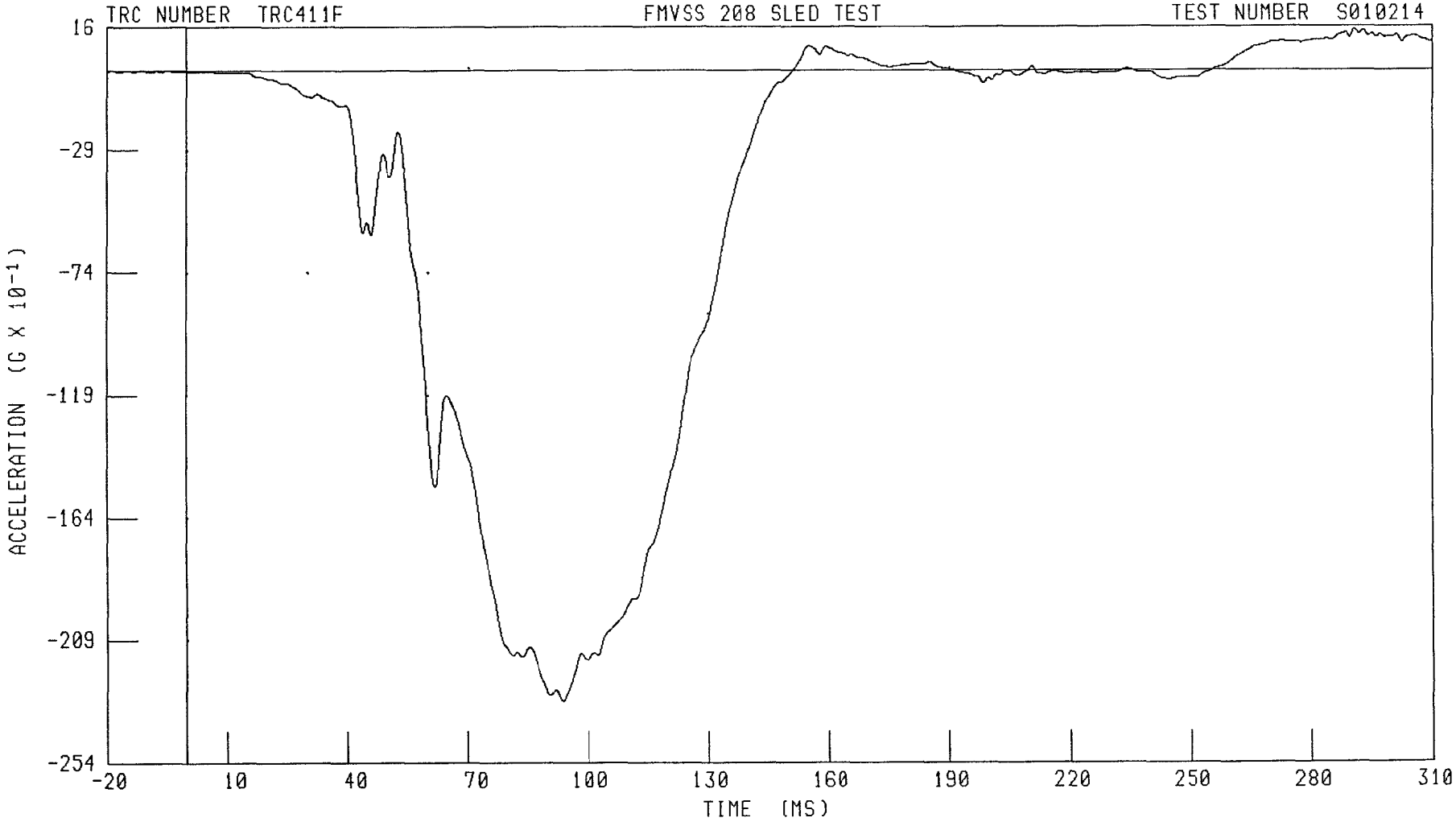
CHANNEL NEKOM2 FILTER CH CLASS 600 PEAK DATA 77 39 N M @ 88 16 MS, -8 98 N M @ 65 92 MS

010214

C15700 / 2001 ISUZU RODEO

RIGHT FRONT PASSENGER CHEST X-AXIS ACCELERATION

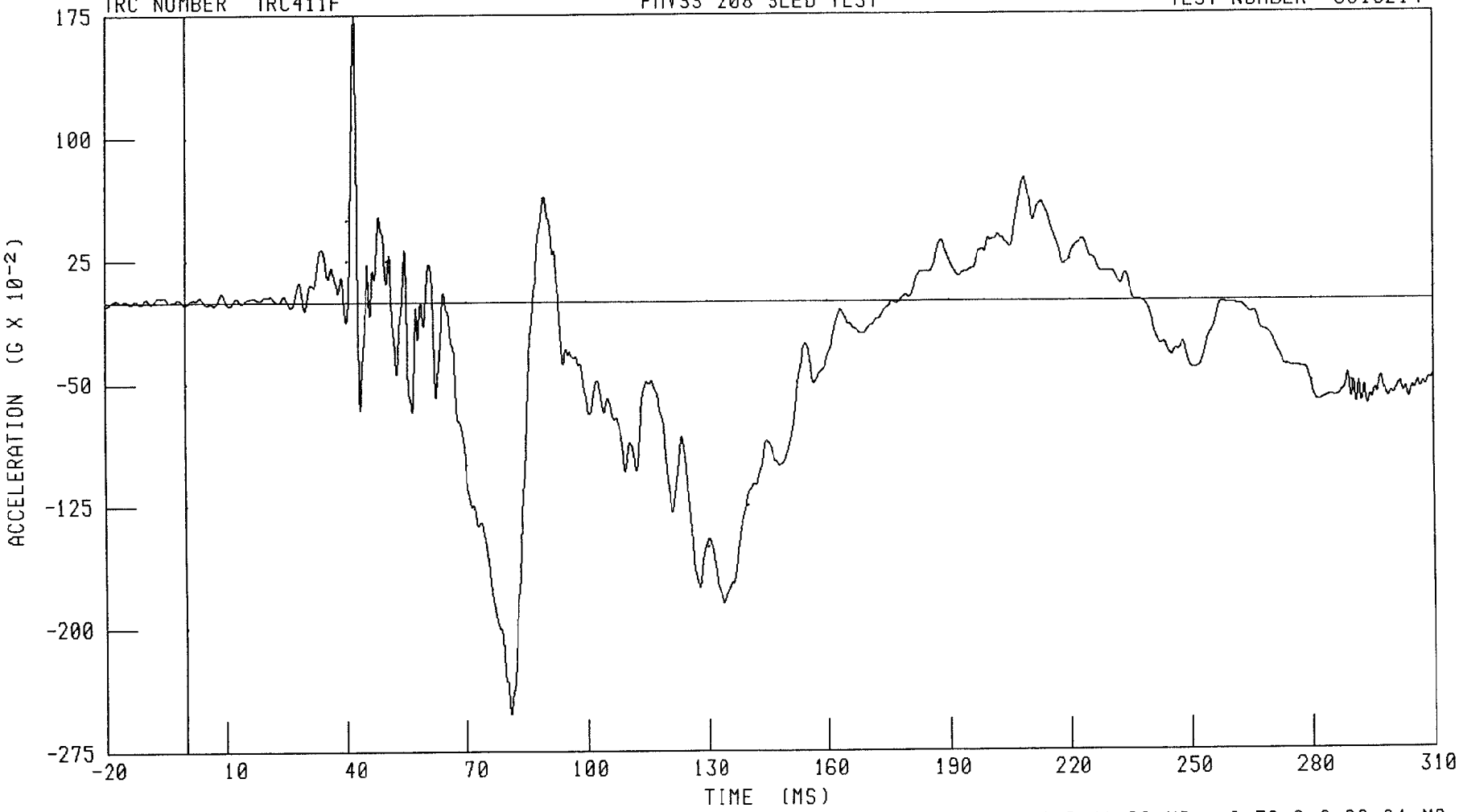
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL CSTXG2 FILTER CH CLASS 180 PEAK DATA 1 50 G @ 290 72 MS, -23 14 G @ 93 92 MS

010214

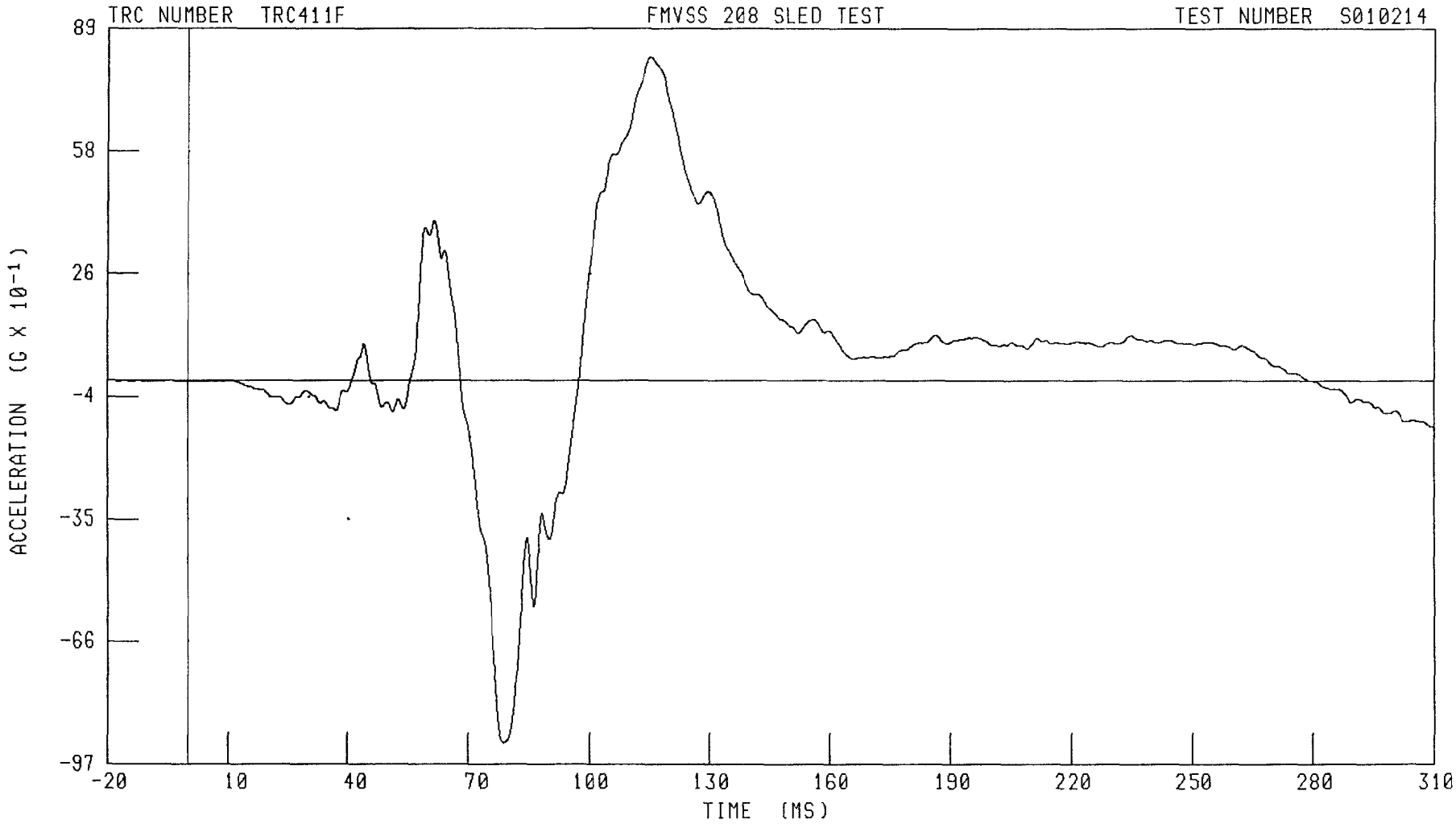
C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER CHEST Y-AXIS ACCELERATION
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL CSTYG2 FILTER CH CLASS 180 PEAK DATA 1 75 G @ 41 92 MS, -2 52 G @ 80 64 MS

010214

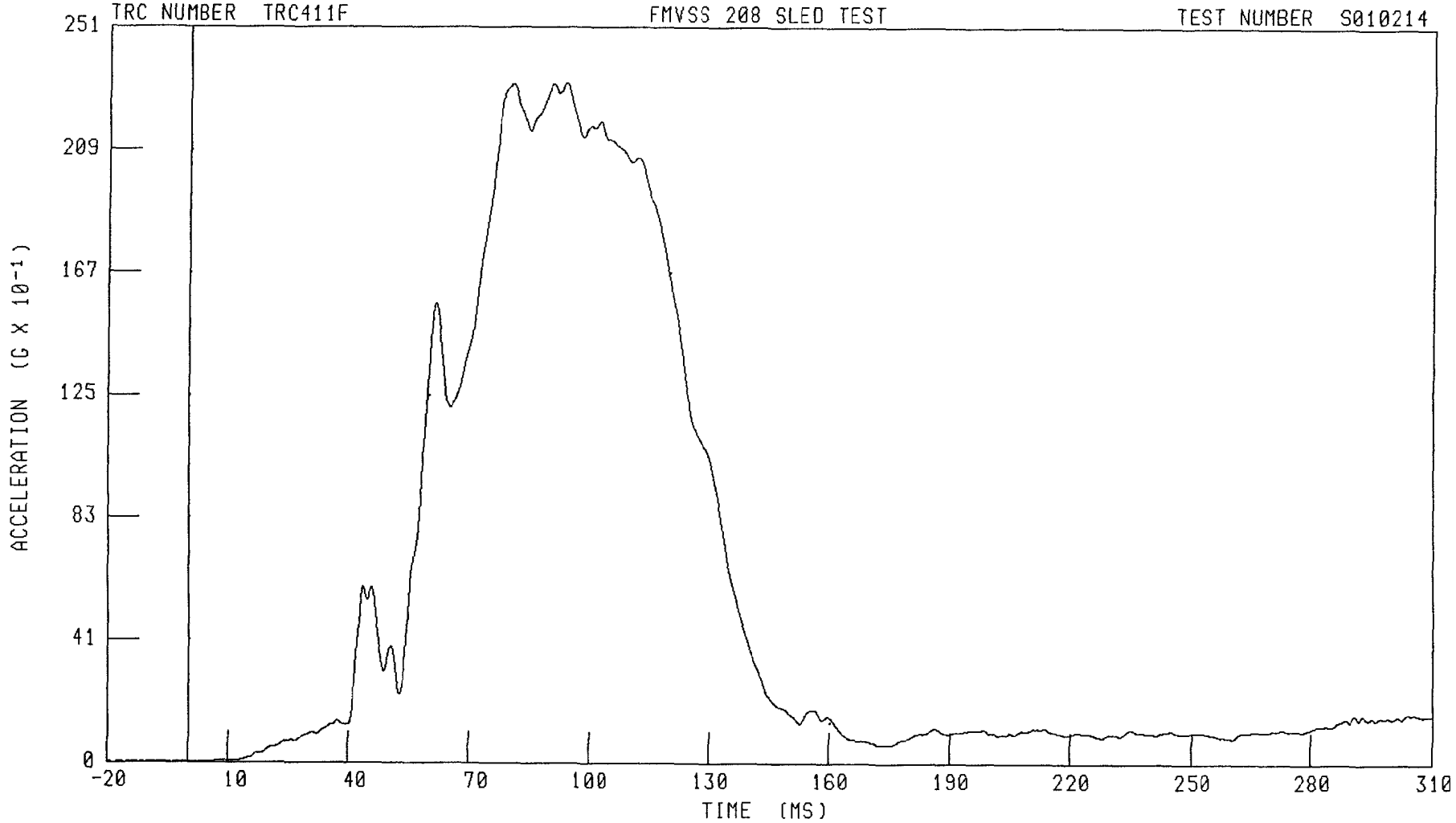
C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER CHEST Z-AXIS ACCELERATION



CHANNEL CSTZG2 FILTER CH CLASS 180 PEAK DATA 8 18 G @ 115 20 MS, -9 17 G @ 78 72 MS

010214

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER CHEST RESULTANT ACCELERATION



CHANNEL CSTRG2 FILTER CH CLASS 180

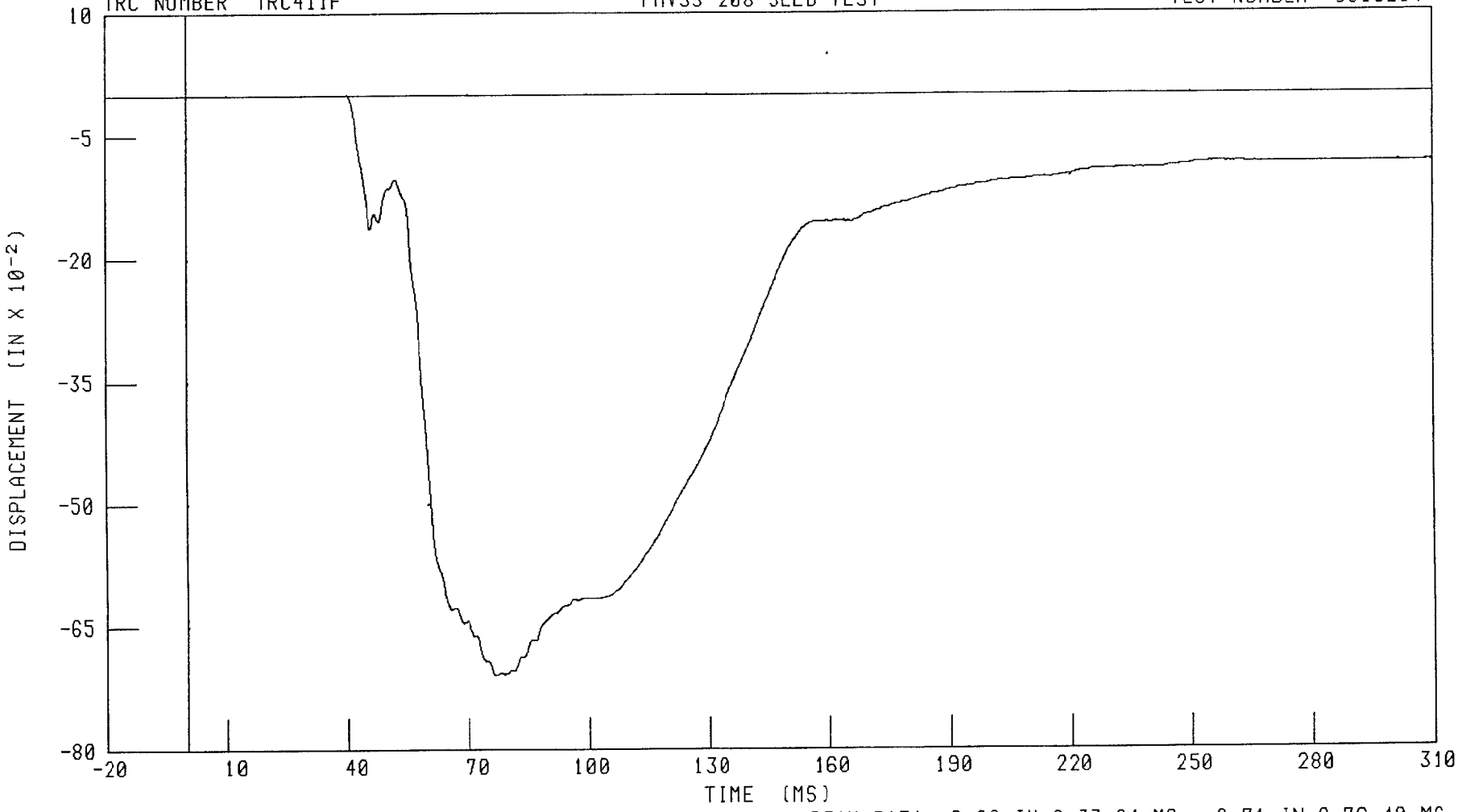
PEAK DATA 23 31 G @ 93 84 MS, 0 00 G @ -15 60 MS

010214

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER CHEST DEFLECTION
FMVSS 208 SLED TEST

TRC NUMBER TRC411F

TEST NUMBER S010214



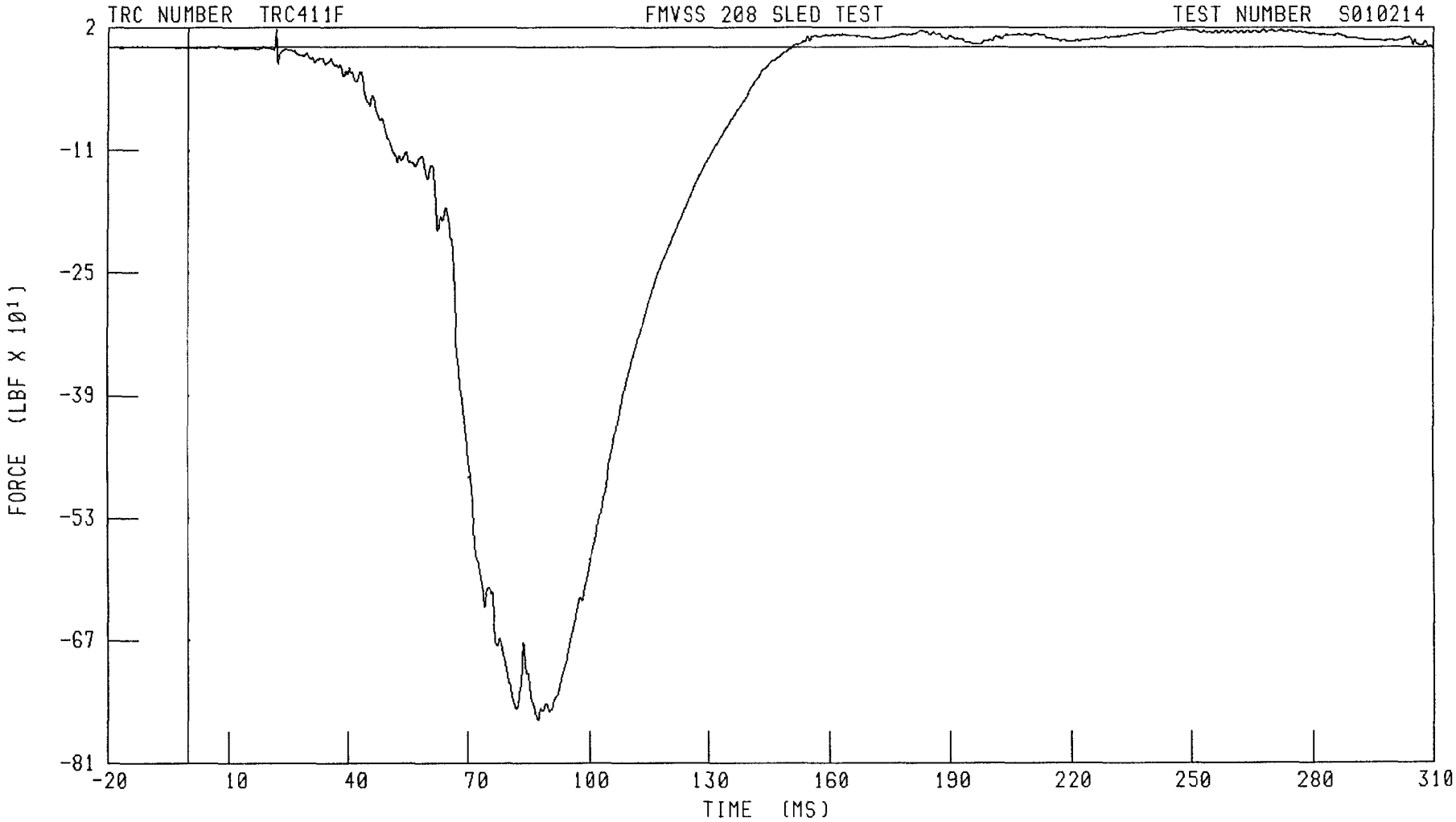
CHANNEL CSTXD2 FILTER CH CLASS 600

PEAK DATA 0 00 IN @ 33 04 MS, -0 71 IN @ 76 40 MS

010214

C15700 / 2001 ISUZU RODEO

RIGHT FRONT PASSENGER LEFT FEMUR FORCE

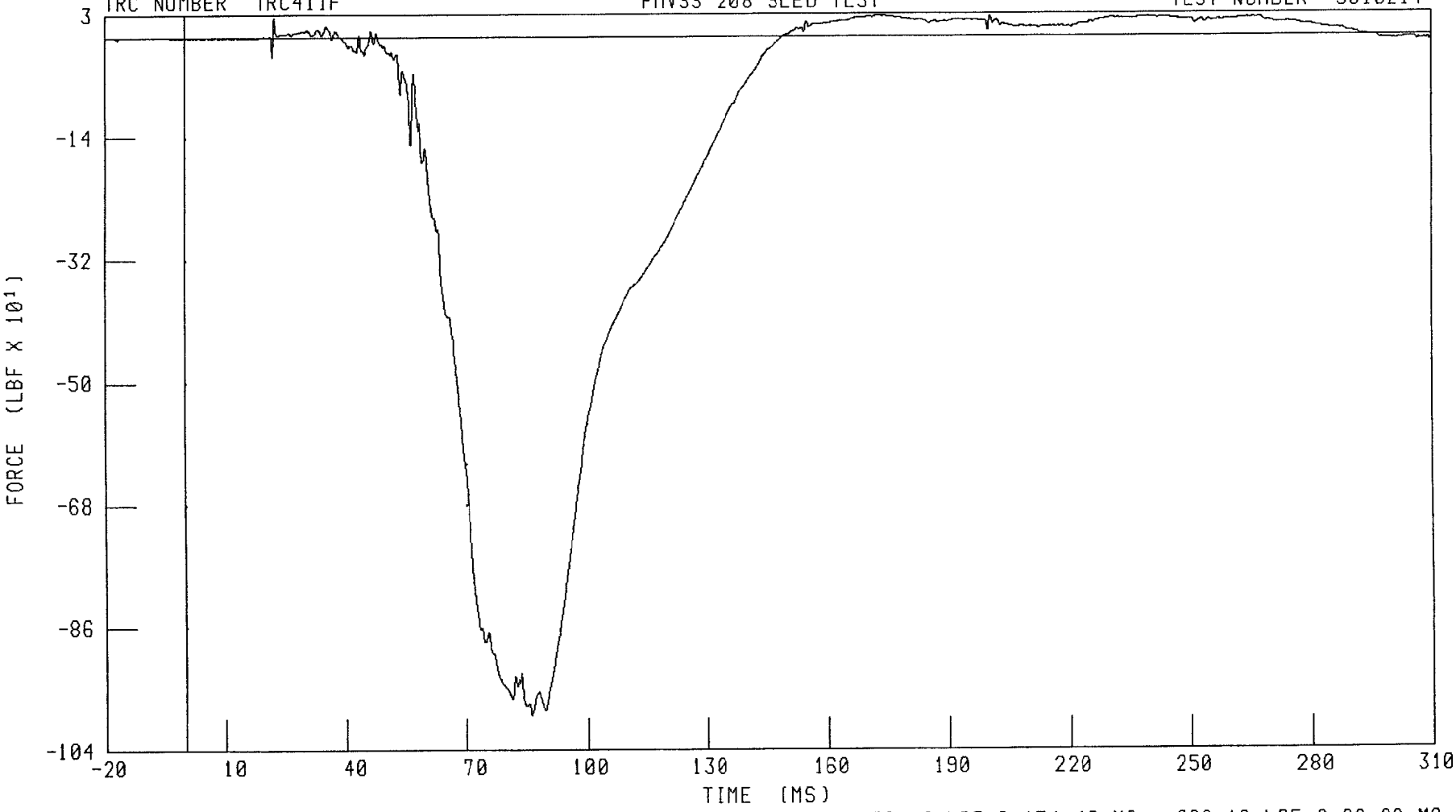


CHANNEL LFMZF2 FILTER CH CLASS 600

PEAK DATA 20 38 LBF @ 21 92 MS, -769 81 LBF @ 87 12 MS

010214

C15700 / 2001 ISUZU RODEO
RIGHT FRONT PASSENGER RIGHT FEMUR FORCE
TRC NUMBER TRC411F FMVSS 208 SLED TEST TEST NUMBER S010214



CHANNEL RFMZF2 FILTER CH CLASS 600 PEAK DATA 30 40 LBF @ 174 48 MS, -996 18 LBF @ 86 08 MS

B-50

010214

Appendix C

Manufacturer's Vehicle Information

RECEIVED
BY NHTSA
27 NOV 00

ISUZU

DET-00-241

November 21, 2000

Ms. Marilynne Jacobs
Director, Office of Vehicle Safety Compliance NSA-30
National Highway Traffic Safety Administration
400 Seventh Street, SW Room 6111
Washington, DC 20590

Subject: NSA-31CCa/OA-208-001018U
MY 2001 Isuzu Rodeo - FMVSS 208 Compliance Test

Dear Ms. Jacobs

This is in response to the above referenced letter dated October 23, 2000.

For your information, the model year (MY) 2001 Isuzu Rodeo has three different versions depending on engine and drive train combination. Some of our responses to your questions, refer to these different versions. The following table lists the engine type, drive train, and gross vehicle weight rating (GVWR) of each version.

Isuzu Model No.	Engine Type	Drive-train	GVWR (lbs.)
UER30F	L4 - 2.2L	4 X 2	4750
UER25F	V6 - 3.2L	4 X 2	4950
UES25F	V6 - 3.2L	4 X 4	5200

The following are our responses to each question in your letter. For your convenience, we are reproducing your questions.

1 *Please inform OVSC if the air bag restraint system is certified to meet the requirements of S4 1 5 1(a)(1) or S13*

If the air bags were installed to meet the requirements of S4 1.5 1(a)(1) please provide a copy of the certification test reports for the frontal/angular barrier impact tests of the automatic restraint system with the manual safety belts unfastened and fastened

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

Isuzu Motors America, Inc
46401 Commerce Center Drive
Plymouth MI 48170 2473

734 455 7595
734 455 7452 FAX

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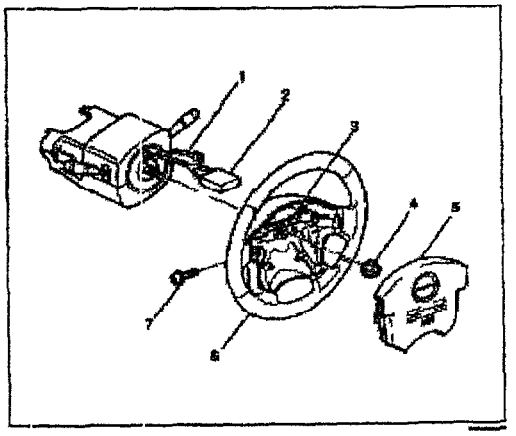
Air Bag Assembly Set Up Procedure

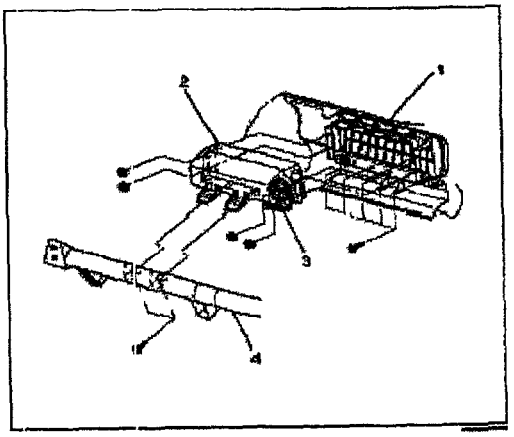
1. Disabling the SRS
   Remove SRS fuse SRS-1, from left dash side lower fuse block or disconnect battery.

2. Driver Air Bag Assembly
   a. Remove air bag assembly (5) from steering wheel (6) by removing two bolts (7). Lift air bag assembly out of steering wheel.



   b. Disconnect yellow 2-pin connector (2) at the base of steering column.
   c Connect the SRS connector of air bag assembly side to the firing device.

3. Passenger Air Bag Assembly
   a. Remove glove box.

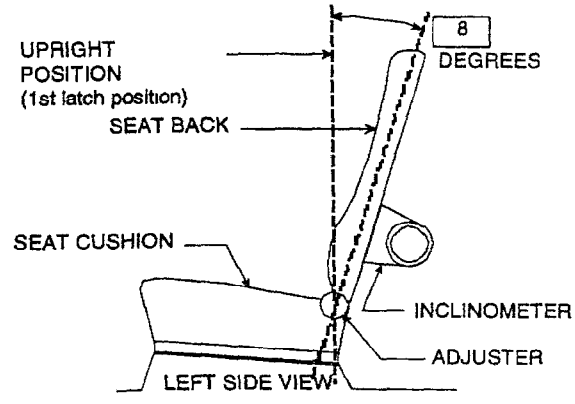


   b. Disconnect yellow 2-pin connector (3).
   c Connect the SRS connector of air bag assembly side to the firing device.

TEST VEHICLE INFORMATION

Vehicle Model Year and Make: 2001MY Isuzu
Vehicle Model and Body Style: Rodeo 4-door SUV

1. NOMINAL DESIGN RIDING POSITION –
For adjustable driver and passenger seat backs, describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent if applicable.
Seat back angle for driver's seat = 8 °.
Measurement Instructions:
Release the seat back adjuster lever, and adjust the seat back into the 5th latch position rearward from the upright position (1st latch position).



Seat back angle for passenger's seat = 8 °.
Measurement Instructions:
Same as driver's seat back.

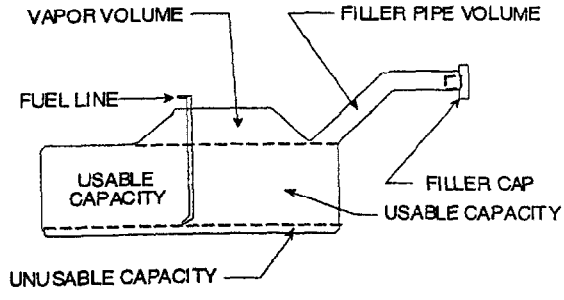
2. SEAT FORE AND AFT POSITIONS –
Provide instructions for positioning the driver and front outboard passenger seat(s) in the center of fore and aft travel. For example, provide information to locate the detent in which the seat track is to be locked.
Position of the driver's seat:
Release the seat adjuster lever, and adjust the seat into the 11th latch detent position forward from the rearmost position (1st latch detent position).

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

3. FUEL TANK CAPACITY DATA –

3.1 A. "Usable Capacity" of standard equipment fuel tank = 19.3 gallons.
B. "Usable Capacity" of optional equipment fuel tank = ____ gallons. **NOT AVAILABLE**
C. Capacity used when certification testing to requirements of FMVSS 301 = 18.1 gallons.
Operational Instructions:
Operate the engine until it stop. Add the stoddard solvent to the fuel tank. Then operate the engine until the entire fuel system is filled with the stoddard solvent.

VEHICLE FUEL TANK ASSEMBLY



3 2 Amount of Stoddard solvent added to vehicle for certification test = 18 5 gallons.

3.3 Is vehicle equipped with electric fuel pump? X YES ___ NO

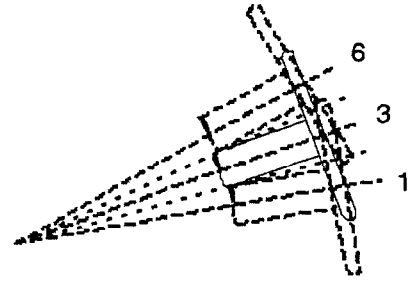
If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel.
The engine control key is in "ON" position and engine is running.

4 STEERING COLUMN ADJUSTMENTS –

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

If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center.
Operational Instructions:

STEERING COLUMN ASSEMBLY

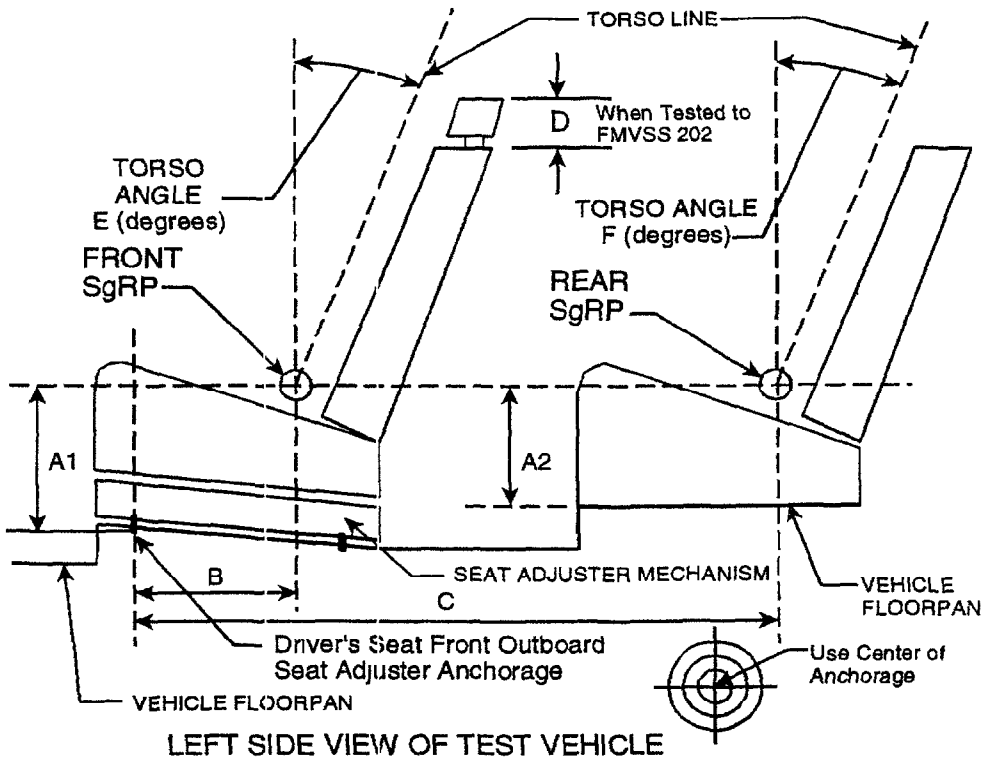


LEFT SIDE VIEW

The steering wheel has six(6) adjustment positions. The 3rd position upward from the lowest position (1st position) is the geometric center of the full range of adjustments.
The adjustment release lever is on the left side of the steering column and can be unlocked when the lever is pulled upward.

SEAT REFERENCE POINT (SRP) AND TORSO ANGLE DATA FOR FMVSS 201, 202, 203, 207 & 210
(All dimensions in mm)

Model Year 2001 Make: Isuzu Model: Rodeo
Body Style: 4-door SUV Seat Style: Front - Bucket, Rear - Bench



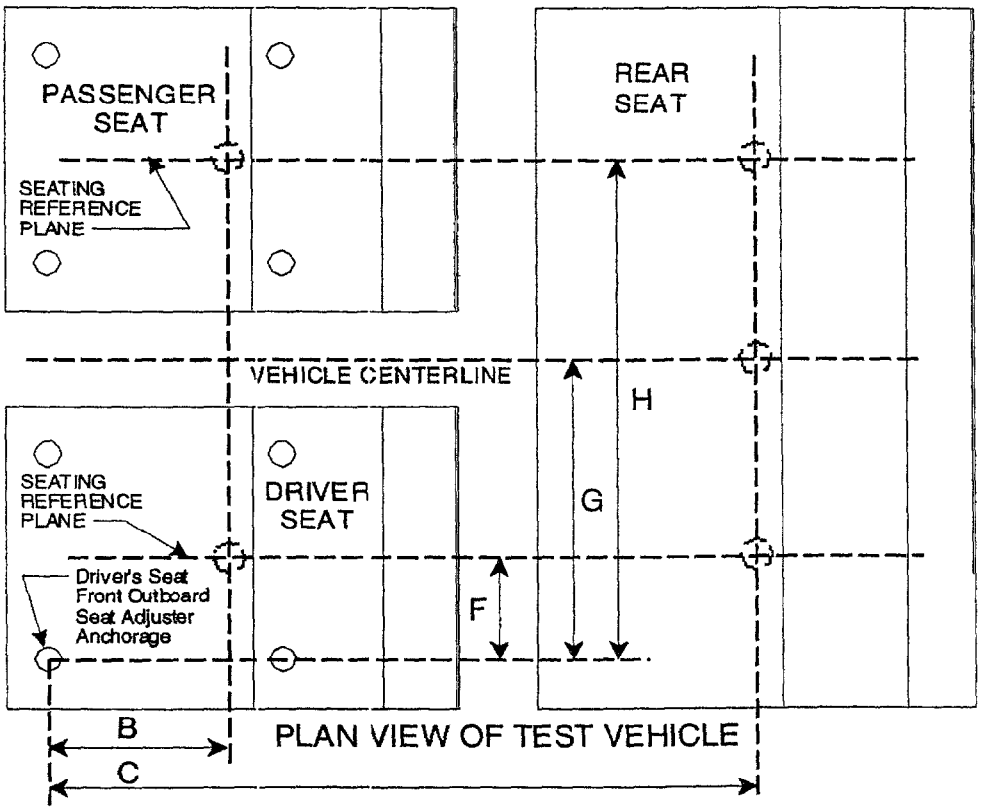
LEFT SIDE VIEW OF TEST VEHICLE

DIMENSION	FRONT, A1	REAR, A2
A	177.4	200.8
B	322.8	
C	1182.8	
D		
E	____ °	
F	____ °	

SEATING REFERENCE POINT (SRP) AND TORSO ANGLE DATA FOR FMVSS 201, 202, 203, 207 & 210

(All dimensions in mm)

Model Year 2001 Make: Isuzu Model: Rodeo
Body Style: 4-door SUV Seat Style: Front - Bucket, Rear - Bench



	Front	Rear
B	322.8	
C	1182.8	
F*	199	164
G	569	
H*	939	974

* Provide all dimensions needed to locate SRP.

S010214

Response 1

The air bag restraint system was certified to meet the requirements of S13. Attachment 1 provides the reports of testing used to support certification of this model.

2 *Provide the following (1) describe the difference between the MY 2001 air bag system and the MY 2000 air bag system, (2) explain what other restraint changes have been made, (3) explain what other vehicle changes have been made that might have affected FMVSS 208 performance, and (4) describe any features that might affect performance with respect to children and out of position occupants*

Response 2

Air bag systems used in the MY 2001 vehicles are the same as MY 2000 vehicles. Other restraint systems used in the MY 2001 vehicles are the same as MY 2000 vehicles. We have not identified any other changes from MY 2000 to MY 2001 that would be expected to affect FMVSS 208 performance.

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

For air bags with dual stage or multistage inflators describe when the stages are trigged and provide data to show that this is similar to what would occur in a crash of similar severity (see enclosure 1)

Response 3

Information on disconnecting the airbags from the vehicles sensors is shown in Attachment 2. For information on the method used to determine when to trigger the airbag, see Attachment 1.1 page 1 to letter from Akira Nogami, Chief Representative, to Frank Seales, Jr. Chief Council, (Sept. 20, 2000) (DET-00-178).

4 *State for any safety belt system in this vehicle whether or not it is equipped with a tension-relieving device Provide a copy of the information furnished in accordance with S7 4 2 if the tension-relieving device is used*

Response 4

The safety belt system of this vehicle is not equipped with any tension-relieving devices.

5 *FMVSS No 208, S8 1 5 allows the manufacturer the option of having movable vehicle windows and vents placed in the closed position State whether the vehicle's movable windows and vents were opened or closed for the certification tests*

Response 5

Each of the front side windows was open and all other windows were closed during the certification testing of this vehicle.

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

State whether the vehicle has a foot rest for the driver

Response 6

The dummy measurements for front seat passengers are shown in each test report. This vehicle has a foot rest for the driver

7 *Provide the seat positioning steering column positioning, and fuel tank data on the enclosed form If more than one front seating, steering column or fuel tank configuration are available on this vehicle, provide separate information for each In addition, provide the seating reference point for each seat for the lockable seat belt requirement in S7 1 1 5*

Response 7

The seat and steering column positioning and fuel tank data information is given in Attachment 3 Only one front seating, steering column or fuel tank configuration is available on this vehicle The seating reference point for each designated seating position is given in Attachment 4.

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

Response 8

The adjustable upper anchorages have five (5) adjustment positions. The mid position is the manufacturer's nominal design position.

9 *For barrier tests provide the speed at impact, vehicle test weight, and resulting injury criteria (i e , HIC, chest acceleration, chest compression, and femur loads) recorded for all certification tests conducted to meet the requirements of S4 1 5 1(a)(1) For sled tests, provide the resulting injury criteria (i e , HIC, chest acceleration, chest compression, femur loads, and neck moments and forces) recorded for all certification tests conducted to meet the requirements of S13*

Response 9

The required information is given in Attachment 5.

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

Response 10

In our certification testing for this vehicle, we remove, if necessary, the rear seat, the carpet in the rear seating position, and the rear glass hatch-gate in that priority order.

11 If the vehicle uses a pressure vessel to inflate the air bag, provide a copy of the test reports or engineering analysis to demonstrate that it meets all the requirements of S9.1

Response 11

Attachment 6 shows an engineering analysis that demonstrates the compliance of the pressure vessel with S9.1.

12 If the vehicle uses an explosive device to inflate the air bag, provide a copy of the test report or engineering analysis to demonstrate that it meets all the requirement of S9.2

Response 12

Attachment 7 shows an engineering analysis that demonstrates the compliance of the explosive device with S9.2.

If you have any question about this, please feel to contact Mr. Yoshiyuki Ishihara of my staff at 734-455-7557 extension 264 or myself at extension 261.

Sincerely yours,

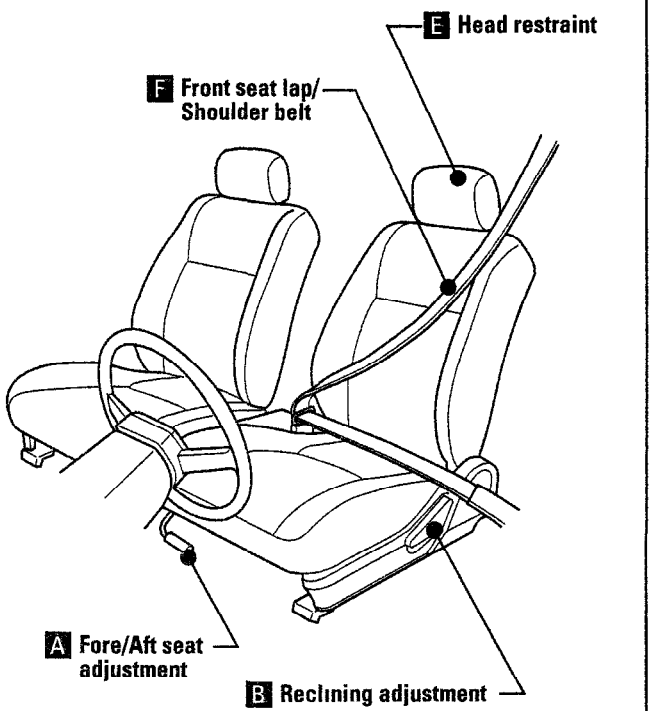
Akira Nogami
Chief Representative
Emissions & Safety
Isuzu Motors America, Inc.

Attachments

Appendix D

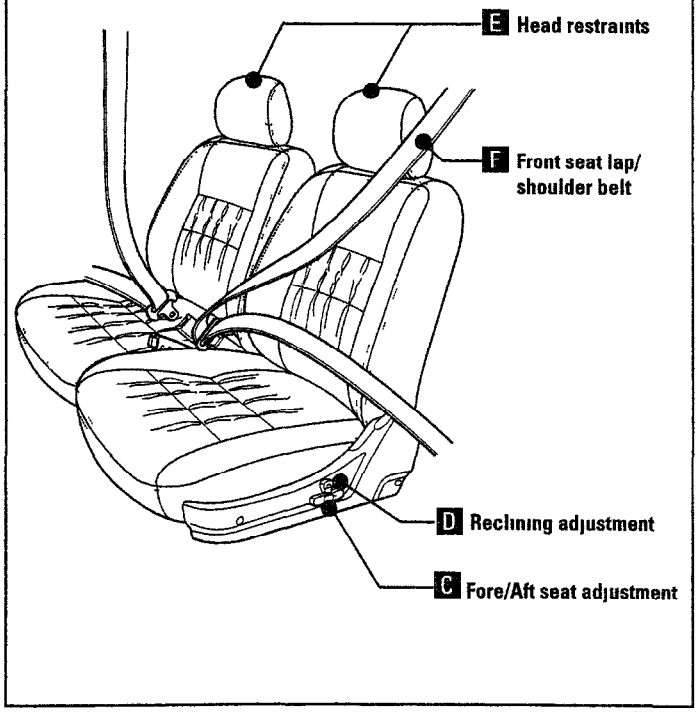
Miscellaneous Test Information

Front Manual Seats



760R100028

Front Pow r Seats



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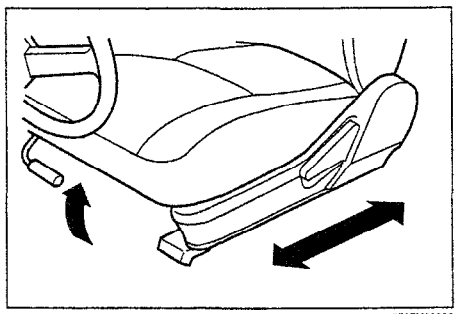
A FORE/AFT SEAT ADJUSTMENT (Manual Seats)



750RY00022

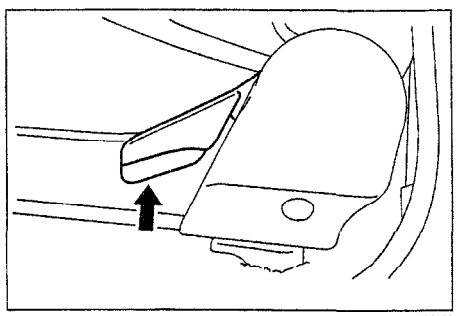
The front seats may be adjusted forward or backward by pulling up the lever at the front of the seat and then using body pressure to move the seat to the desired position Let go of the lever and the seat will lock into the desired position

WARNING

⚠ **•After adjusting a manually operated seat, always use body weight to push forward and backward on the seat to be sure the seat adjusters have latched. Movement of the seat indicates that at least one latch did not engage. This could increase the chance of injury and/or the degree of injury in an accident. Take the vehicle to your Isuzu Dealer for service if you find that your seat adjusters do not latch.**

• Do not attempt to adjust the driver's seat while the vehicle is in motion. The seat could move suddenly, causing you to lose control of your vehicle.

B RECLINING ADJUSTMENT (Manual Seats)



750RY00023

Front seatbacks can be tilted backward if so desired, using the lever on the door side of each front seat. Raise the lever and use body pressure to move the seatback to the desired position
Let go of the lever and the seatback will lock into the desired position
Keep seat belt webbing and latch clear of the seat parts when you tilt the folding seats forward or backward This helps to prevent damage to the seat belt system

WARNING

⚠ •To reduce the risk of injury and to ensure maximum seat belt effectiveness during a collision or a sudden stop, the seat should not be reclined any more than needed for comfort. The seatback and seat belts work b st only when the occupant is sitting well back and straight up in the seat. If the seat is reclined, you may slide under the lap belt, causing force to be applied to your abdomen, or you may not be fully restrained, depending on the nature of the accident, increasing the likelihood of injuries.

- Do not adjust the driver's seatback while the vehicle is in motion. The seatback could move un xpectedly and cause the driv r to lose control of the vehicle.

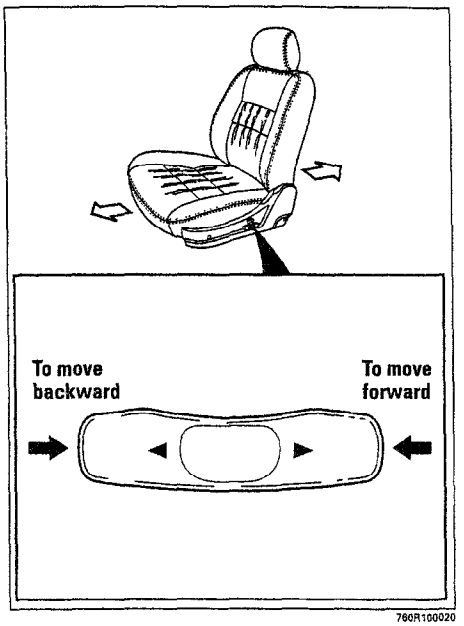
C FORE/AFT SEAT ADJUSTMENT (Power Seats)

The front seats can be moved forward or backward to desired positions by moving the switch on the door side of each front seat (If so equipped) The seat will move (within its range) as long as the switch is held, it will stop when the switch is released

WARNING

⚠ •When adjusting the seat, make sure all occupants keep their hands and feet clear of the seat. If they get caught in the seat, it could result in injuries.

- Do not attempt to adjust the driver's seat while the vehicle is in motion.



CAUTION

- The seats continue to move, even if they interfere with anything, while the switch is operated (within the movable range). To avoid damage to the seats, avoid the application of unusual force to any parts of the seats when they are being adjusted. Seat adjustment is possible even when the ignition switch is in any position. However, because seat adjustment requires considerable electrical power, we recommend that you adjust the seat with the engine running whenever possible. This avoids putting a heavy load on the battery.

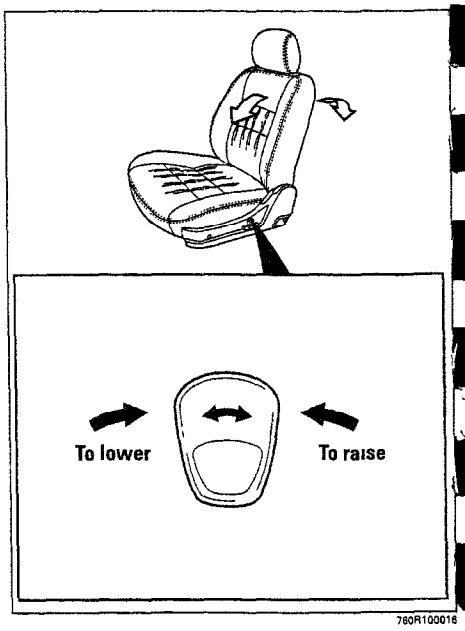
D RECLINING ADJUSTMENT

The seatback will move (within its range) as long as the switch is held, it will stop when the switch is released

WARNING

⚠ •To reduce the risk of injury and to ensure maximum seat belt effectiveness during a collision or a sudden stop, the seat should not be reclined any more than needed for comfort. The seatback and seat belts work best only when the occupant is sitting well back and straight up in the seat. If the seat is reclined, you may slide under the belt.

- Do not adjust the driver's seatback while the vehicle is in motion. The seatback could move unexpectedly and cause the driver to lose control of the vehicle.
- When adjusting the s at, make sure all occupants keep their hands and f et clear of the seat. If they get caught in the seat, it could result in injuri s.

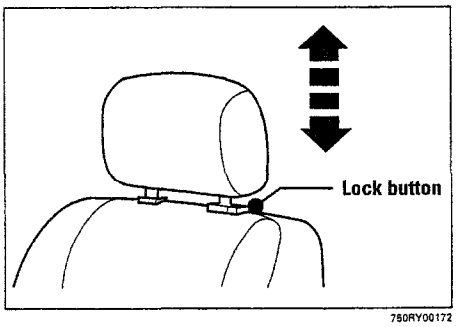


S010214

CAUTION

- **The seats continu to move, even if they interfere with anything, while the switch is operated (within the movable range). To avoid damage to the seats, avoid the application of unusual force to any parts of the seats when they are being adjusted.**
  Seat adjustment is possible even when the ignition switch is in the any position. However, because seat adjustment requires considerable electrical power, we recommend that you adjust the seat with the engine running whenever possible. This avoids putting a heavy load on the battery.

E HEAD RESTRAINT



750RY00172

Head restraints are designed to help reduce the risk of neck injuries Head restraint height is adjustable (3-positions) Choose the position which places the top of the head restraint closest to the top of your ears
To raise the head restraint, press and hold the lock button toward the head restraint and lift the head restraint To lower the head restraint, press and hold the lock button and allow the head restraint to drop

WARNING

- **Do not attempt to adjust the driver's head restraint while the vehicle is in motion. A sudden movement could cause you to lose control of the vehicl .**
- **Do not operate the vehicle with the head restraint removed, since it will increase the risk of neck injury in the event of an accident.**

F REAR SEAT

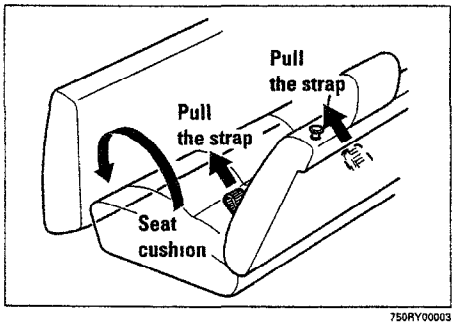
WARNING

- **To avoid injury, keep your hands and fe t clear of the rear seat when folding and unfolding th seat.**
  Carefully follow the instructions below.

The rear seat can be folded forward to provide additional cargo area

FOLDING

1 • Pull the strap forward and fold the seat cushion up
Pull the seat belts through the cushions to the rear so they do not interfere with folding operation of the rear seat



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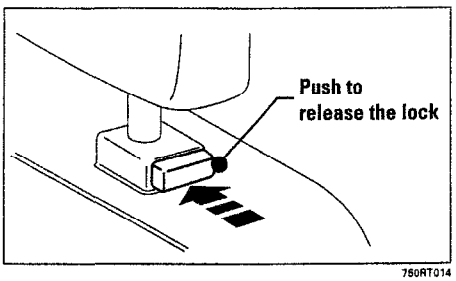
2 To remove the head restraints, press the release knob and pull up on the restraint



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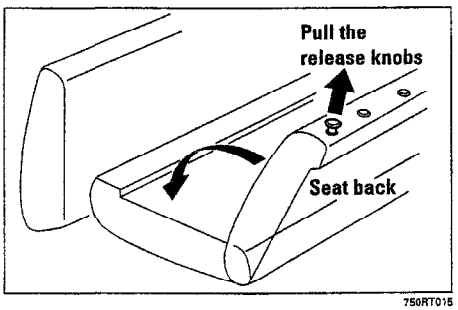
3 Pull the release knobs on both the right and left, and pull the seat back forward to fold it down



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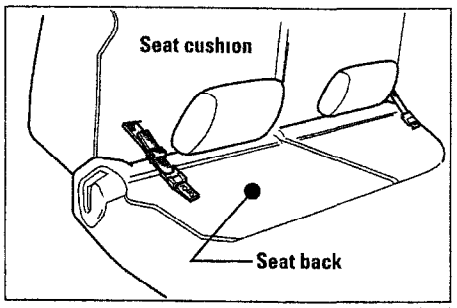
4 Attach the band on the bottom of the cushion to the clasp on the back of the seat back.
5 Insert the head restraints between seat back and seat cushion



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WARNING

- **When the rear seats are folded in the down position, the head restraints should always be properly secured between the seat back and seat cushion to prevent them from becoming a hazard in the event of a sudden stop or an accident.**

UNFOLDING

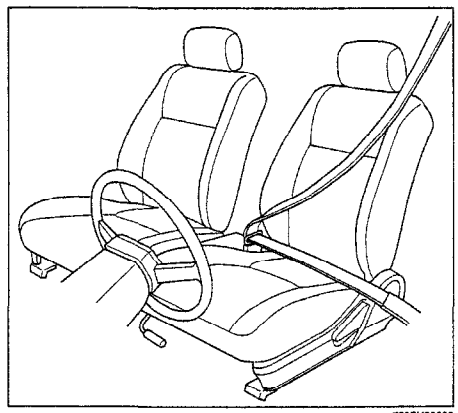
1 To raise the seatback, pull the seatback up to the locked upright position
2 When latching the rear seat cushion to the floor, push the cushion with enough force to lock it
After this, confirm it is locked by pulling the seat belt buckle upward
3 Make sure that the head restraints are properly reinstalled on the top of the seat back

WARNING

•Do not permit anyone to ride in the cargo area or on a rear seat while it is folded down during vehicle operation. Rear seat occupants should b seated in the seat only in its locked upright position and properly restrained at all the times.
• Always check to see that both the seat back latches are engaged.
• Failure to lock the rear seat securely to the floor and engage the seat back latches could increase the risk of personal injury in an accident.

• Failur to properly route the s at b lts could result in damage to belts, reducing their ffectiven ss in case of an accident.

G FRONT AND REAR SEAT LAP/SHOULDER BELTS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Safety Belt/Air Bag Relationship

The Air Bag is formally called a Supplemental Restraint System (SRS) The SRS may not provide protection for an unbelted driver and an unbelted right front passenger Both the driver and the right front passenger must always use the seat belts That's true not only in frontal collisions, but especially in side and other collisions

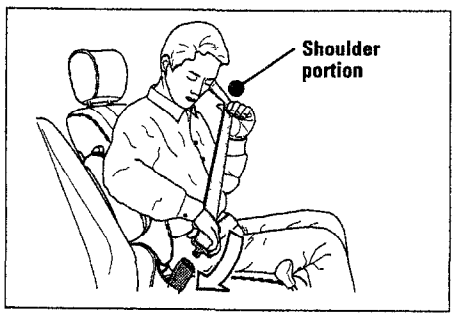
WARNING

•To help lessen the chance of injury in accidents or sudden stops, people riding in the vehicle must be properly restrained at all times, using the seat belts provided. This includes children and pregnant women. See the following pages for use of restraints by children and pregnant women.

To Fasten the Seat Lap/Should r Belt

1 Adjust the front seat as needed Sit up straight and well back in the seat
2 Grasp the latch plate and
• Pull the lap-shoulder belt webbing across the body
• At the same time, slide the latch along the belt until it reaches the buckle

• Push the latch plate into the buckle until it clicks



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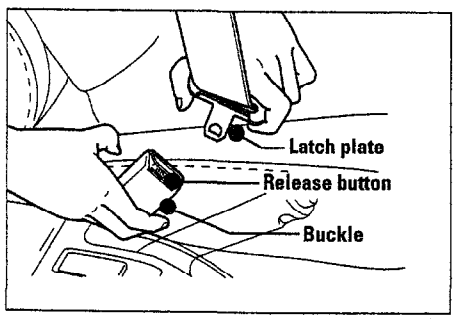

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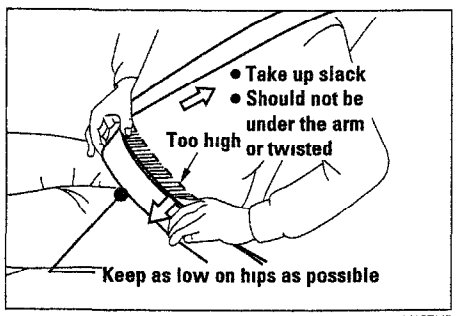
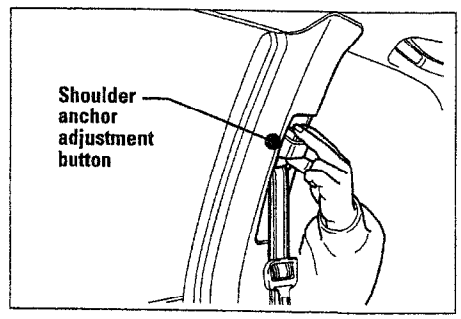
3 Position the "lap" portion of the belt across the lap as LOW ON THE HIPS as possible



760RT017

Shoulder Belt Height

4 With the shoulder anchor adjustment button pushed, move it up and down to adjust the position of the shoulder belt so that it comes right onto the shoulder The adjustment position is available in 5 steps at the front shoulder belts, 3 steps at rear shoulder belts

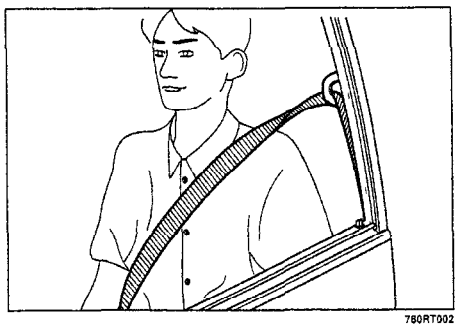


760RX002

5 Then, adjust to a SNUG FIT by holding the "shoulder" portion of the front seat belt and pulling it UPWARD through the latch plate until the lap portion is snug across the lap This reduces the risk of sliding under the belt during an accident

To Unfasten Seat Lap/Shoulder Belt

6 To unfasten the belt, push in the button on the buckle The belt should retract when the buckle is unlatched but hold the latch plate until the belt is fully retracted, to keep it from hitting people or nearby objects To help prevent damage to the safety belt and interior trim, before closing the door be sure the belt is fully retracted and the latch plate is out of the way


760RT002

WARNING

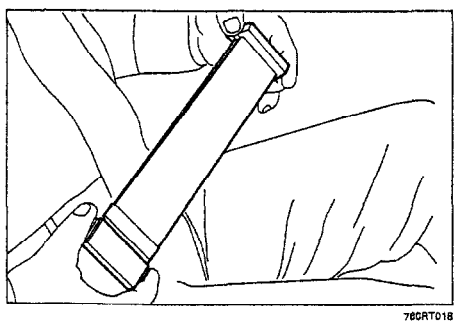
•A snug fit with the lap belt positioned low on the hips is necessary to lessen the chance of injury and/or the degree of injury in an accident. This spreads the force of the lap belt over the hip bone instead of across the abdomen.
• Never use the same seat belt for more than one person at a time. A seat belt worn by more than one person will not provid ad quate protection in the event of a collision.
• Never w ar twisted seat belts.
• Be v ry careful not to damage seat belts or seat belt buckles by pinching them in the seat or the door.
• Too much slack could increase the amount of injury because the belt would not be able to properly restrain you in an accident. DO NOT wear the shoulder belt under the arm or out of position. Such use could increase the chance of injury and/or the degree of injury in an accident.
• According to Federal accident statistics, children are the safest when properly restrained in rear seating positions.
It is advisable to have children seated in the rear center seat and restrained with the vehicle's safety belt.
Children who have outgrown child restraint systems should use the vehicle's safety belts and sit in the rear seat.
• If the child's seating position has a shoulder belt which is on or very close to the face or neck, position the child so that the belt is properly positioned.

NOTE

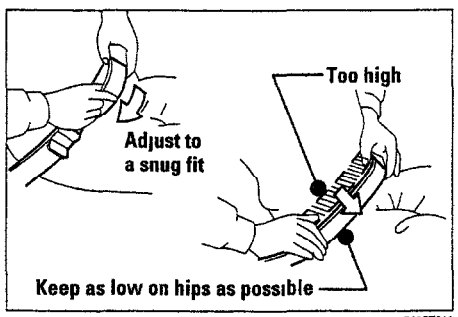
• The retractor will lock the belt only during a sudden stop or on impact.
• At other times you can move around freely.
• The seat belts for the passenger seats have an additional locking mechanism designed for securing child restraint seats. When the belt is pulled all the way out, the locking mechanism will only permit the belt to retract. Do not pull the belt all the way out except when using it to secure a child restraint seat. If the belt is inadvertently pulled all the way out, let the belt fully retract before using it for normal passenger restraint.

H REAR CENTER SEAT LAP BELTS (Non-retractor type)

1 Sit up straight and well back in the seat
2 Take hold of the latch plate at an angle to the webbing and slide it toward the front of the vehicle
Then pull it slowly across your lap and push the latch plate into the buckle until it clicks


760RT018

3 Position the belt across the lap as LOW ON THE HIPS as possible
Then, adjust to SNUG FIT by holding the free end of the webbing and pulling it through the latch plate until the belt is snug across the lap. This reduces the risk of sliding under the belt during an accident
4 To unfasten the belt, push in the button on the buckle



760RT019

I SAFETY BELT EXTENDER

Use the original equipment safety belt as much as possible. But if the existing safety belt isn't long enough to fasten around you, your dealer can order you an extender Bring with you your heaviest coat when you go in to orde one It will be fitted just for you and the seat in your vehicle
Don't let someone else use it, and use it only for the seat it is made to fit To wear it, just attach it to the regular safety belt.

J SEAT BELT INSPECTION

• Occasionally check that the belts, buckles, latch plates, retractors, reminder systems, guide loops, and anchors work properly Also check for damage that could keep the restraint system from doing its job
• Keep sharp edges and damaging objects away from the belts and other parts of the restraint system
• Replace belts if cut, weakened, or frayed Also, have belts replaced if they have been worn in a collision.
• If there is any doubt, have all related parts including belts replaced
• Keep belts clean and dry

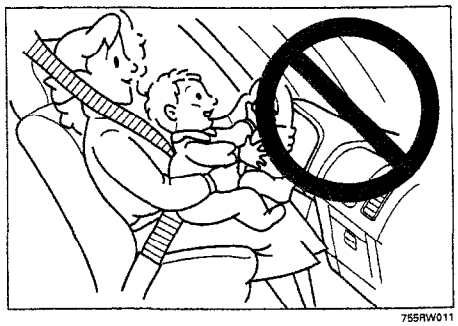
WARNING

•Do not bleach r dye th belts since it may severely weak n th m. In the event of an accident or a sudden stop, the belts may n t adequately restrain the occupants. Clean th safety b lts nly with mild soap and luk warm water.

K CHILD RESTRAINT

Children in vehicles should be restrained to help lessen the chance and/or severity of injuries in the event of an accident or a sudden stop Never let a child of any age stand or kneel on any seat Use of infant or child restraint systems which conform to Federal motor vehicle safety standards and which are installed according to their instructions is the surest way of minimizing the risk of injury to young passengers Older children should be placed on a seat and restrained with the seat belts provided with your vehicle Both lap and shoulder belts should be used

The use of infant or child restraint systems may be required by the laws of your state You should check with the appropriate state authorities to ensure that you are in compliance with these laws



755RW011

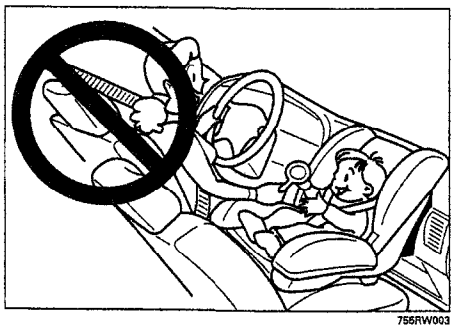
WARNING

•For effective protection in automobile accidents and sudden stops, children should not be transported unrestrained. The preferred restraint for small children is a child restraint system. Children should be placed in the rear seat and restrained with a seat belt if they are old enough to sit alone.

- **Holding a child in your arms is dangerous. In an accident, a child held in a person's arms can be struck or crushed by any unrestrained occupant. An unrestrained child can be killed or seriously injur d be an inflating air bag or by being ejected from the vehicle in an accident.**
- **All child restraint systems are designed to be secured in vehicle seats by lap belts or the lap portion of a lap-shoulder belt.**
- **Children could be injured in a collision or sudden stop if the child restraint is not properly secured in your vehicle. An unsecured safety seat could also injure other passengers in the vehicle.**
- **According to Federal accident statistics, children are safest when properly restrained in rear seating positions.**
- **It is recommended that children or infants be restrained in an appropriate child or infant restraint secured in the rear seating position.**
- **Children 12 and under can be killed or seriously injured by inflation of the front passenger's air bag.**
- **Do not install rearward-facing**

child seats in front passenger seat position.

- **Do not use a rear-facing child restraint system in the rear seat if it interferes with the lock mechanism of the front seats. This may cause severe injury to the child and front passengers in case of sudden braking or a collision.**
- **Children should not ride in the cargo area.**



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WARNING

•Do not install a rear-facing child restraint system in the front passenger seat. In the event the front passenger's air bag inflates, it can cause death or even fatally injuring the child.

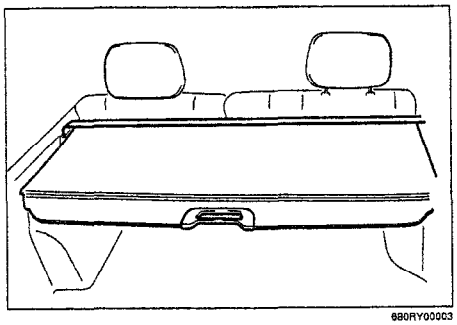
- **If it is absolutely necessary to put a child in a front facing child restraint in the front passenger seat, the passenger seat should be moved as far back as possible.**

L RESTRAINT OF PREGNANT WOMEN

It is recommended that pregnant women use seat belts Check with your doctor for specific recommendations The lap belt should be snug and positioned as low as possible around the hips Do not position the lap belt around the waist This can be very dangerous in the event of an accident or sudden stop

Ⓜ CARGO COVER (If so equipped)

The cargo cover is provided to cover the compartment behind the rear seat When not in use, the cargo cover should be stored in its retractor



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3. *Seats, Seat Belt, Child Restraint and Air Bags* / CHILD RESTRAINT

The use of infant or child restraint systems which conform to Federal motor vehicle safety standards and which are installed according to their instructions is the safest way of minimizing the risk of injury to young passengers

Tips for selecting a child Seat

Seat belts are designed primarily for adults and large children, not for infants or small children

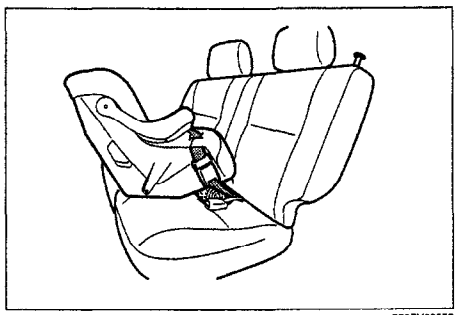
In order to select a child seat (for the correct type and size), to effectively accommodate your child, be sure to take into consideration your child's weight, height and physical size

Infants up to one year require adequate head, back and neck support and therefore should only be restrained using a rear-facing child seat

Infants or toddlers old enough (over one year) to sit upright may be restrained in a front-facing child seat.

There are three standard types of child seats One is a "cradle type" child seat designed for use as a rear-facing child seat only The other is a "seat type" child seat designed for use as both a front-facing or rear-facing child seat It is recommended that when using a seat type child seat, use the rear-facing position for as long as possible

• Seat type child seat (Rear-facing)



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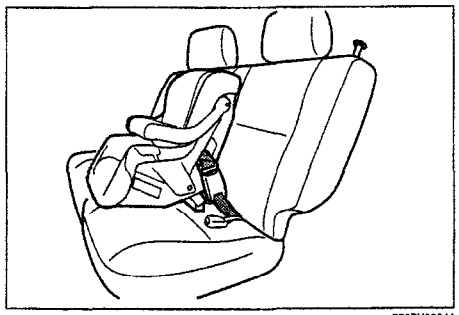
• Seat type child seat (Front-facing)



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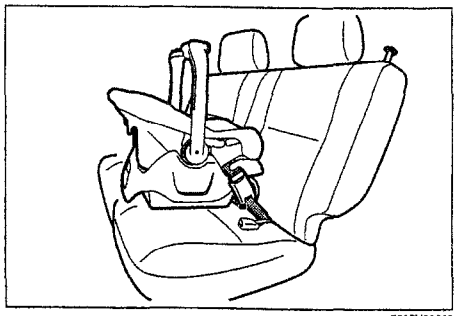
• Cradle type child seat (With Base)



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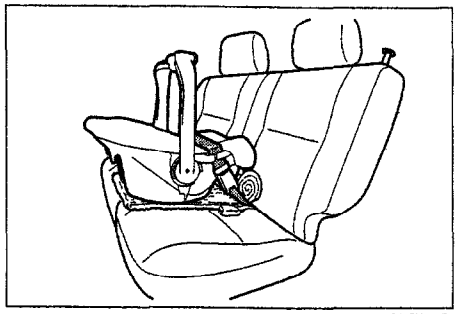
• Cradle type child seat (Without Base)



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CHILD SEAT INSTALLATION POSITIONS

Prior to installation of the child seat, complete the following prepartions
• Be sure to read this manual thoroughly

When you install a child seat in your RODEO be sure to install it in the back seat using the seat belt If it is absolutely necessary to put a child in a forward-facing child restraint in the front passenger seat, the passenger seat, should be moved as far back as possible

WARNING

•Only if this position is unavailable, install the child seat behind the front passenger's seat. When this is not possible (e.g., if the split seat is folded), the child s at can be installed to one side, either behind the driver's seat or behind the front passeng r's seat.
• When one side of the split seat back is folded, the child seat can not be placed in the center of the rear seat. In this case, install the child seat to the side behind the driv r. Only if this position is unavailable, install the child s at to th side behind the pass nger.
• Selection of the Child Seat Attachment Position:
When selecting, give priority to rear seat.
In case when lower anchorage and tether anchorage loading apparatus is equipped on the child seat, select the outer seat of the rear.
In case when the child seat cannot be loaded on the rear seat.
Select front passenger seat. Do not load the child seat facing backwards on the front passenger seat.

REAR SEAT CENTER INSTALLATION

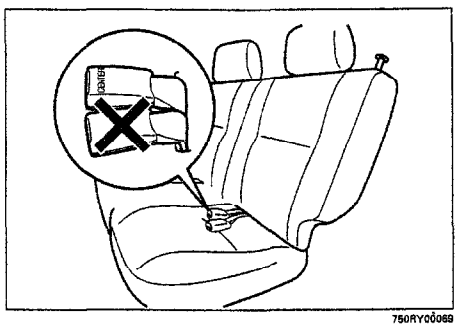
There are two standard types of child seats One is a "cradle type" child seat designed for use as a rear-facing child seat only, which can be installed with or without a base The other is "seat type" child seat designed for use as both a front-facing or rear-facing child seat Be sure to read this manual thoroughly prior to installation

WARNING

•Before beginning installation of the child seat, ensure that the vehicle is parked in a safe location with the engine turned off.
• It is recommended to install the child seat in the center of the rear seat.
• Refer to "Child Seat Installation Positions" on page 3-16 for further information on selecting an installation position.

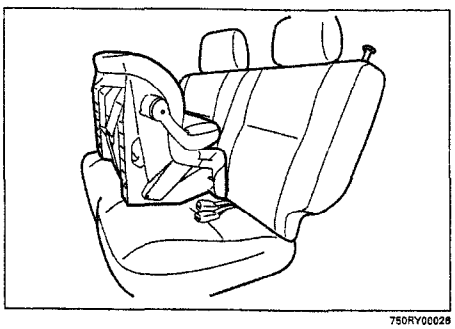
NOTE

• The installation procedures provided in this manual apply to the RODEO.
• To allow for adequate installation space, adjust the front seat and seat back as needed.
• In order to ensure that the latch plate locks into place when buckling the seat belt, be sure to select the buckle inscribed with the word "CENTER". Buckles without this inscription are intended for side use only and therefore cannot be locked into place.

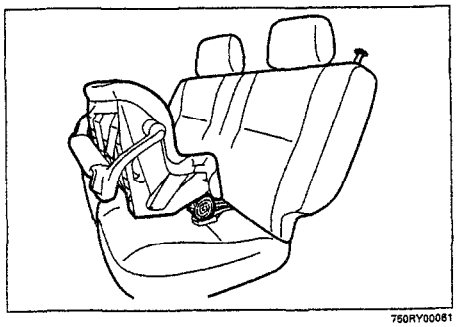


INSTALLING A REAR-FACING CHILD SEAT (SEAT TYPE)

Be sure to read the WARNINGS and NOTES on this page thoroughly



① Make sure that the seat back is in the upright position
② Place the child seat in the center of the rear seat

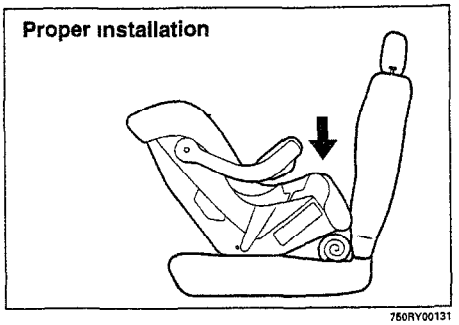


③ Roll the towel tightly

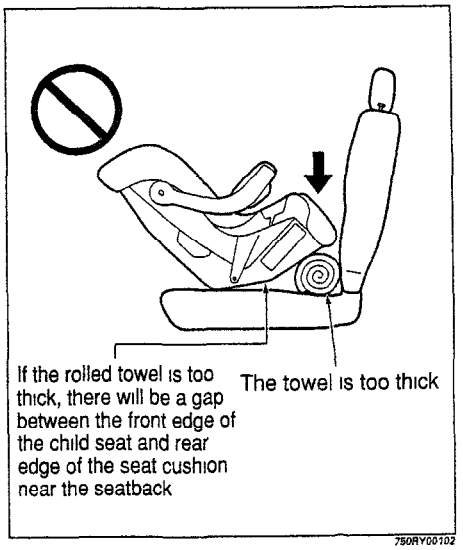
NOTE

- *The length of the rolled towel should be slightly longer than the width of the child seat base.*

Proper installation

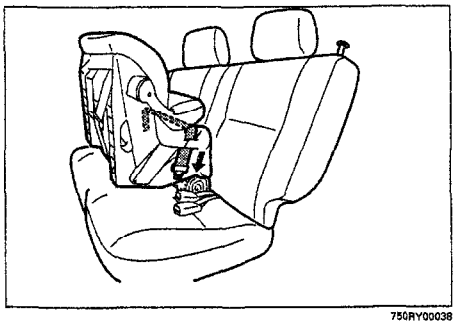


④ Make sure that the rolled towel supports the child seat properly.

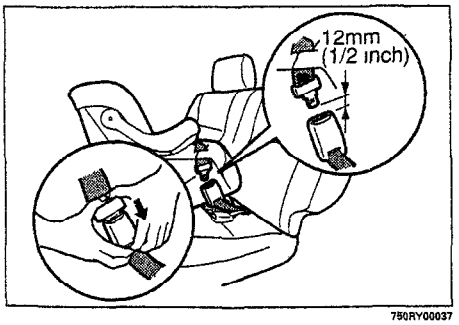


WARNING

•Be sure to check that the bottom of the child seat fits snugly to the surfac of the seat cushion when pressing firmly down on the child seat.

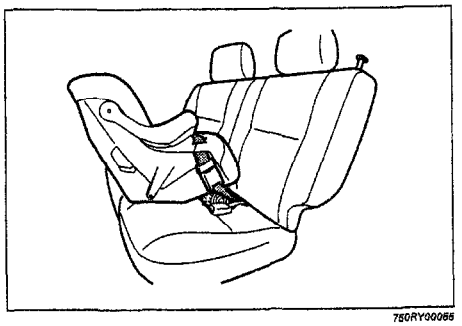


⑤ Adjust the length of the seat belt using the attached metal fitting and run the seat belt through the side slots of the child seat



⑥ Adjust the length of the seat belt to approximately 12 mm (1/2 inch) The length is appropriate if the latch plate appears ready to slip from the side slot of the child seat when you are pressing down firmly on the child seat

⑦ Fasten the latch plate into the buckle



NOTE

- *Make sure that the child seat is secured properly by rocking it forwards, backwards and side to side. If the child seat is easily tipped over or inches forward, repeat this entire procedure from step one.*

WARNING

•Prior to operating the (driving) vehicle, confirm that the child seat is secured properly by rocking it forward, backward and side to side.

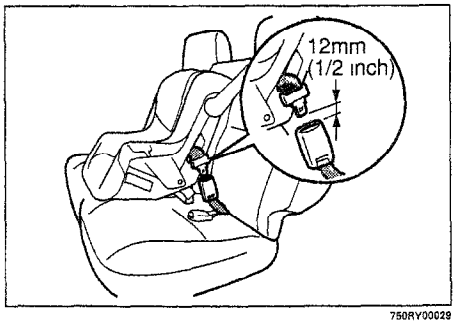
- **When traveling long distances, occasionally stop to mak sure the child seat is secur d properly by rocking it forward, backward and side to side.**

INSTALLING A FRONT-FACING CHILD SEAT (SEAT TYPE)

① Make sure that the seat back is locked in the upright position
② Place the child seat in the rear seat

WARNING

•Be sure to check that the bottom of the child seat fits closely to the surface the seat cushion.



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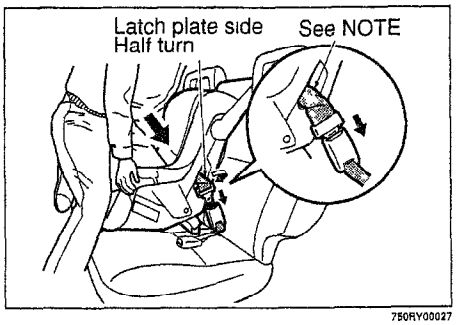
③ Run the seat belt through the side slots of the child seat

Adjust the length of the seat belt to approximately 12 mm (1/2 inch)

WARNING

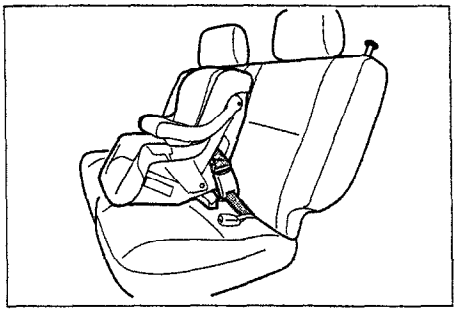
•Prevent the latch plate from lodging into the buckle slot.

④ The length is appropriate if the latch plate appears ready to slip from the side slot of the child seat when you are pressing down firmly on the child seat



750RY00027

⑤ Twist the latch plate over a half-turn and fasten the buckle


750RY00044

NOTE

- *Make sure that the child seat is secured properly by rocking it forward, backward and side to side.*
  If the child seat is easily tipped over or inches forward, repeat this entire procedure from step one

WARNING

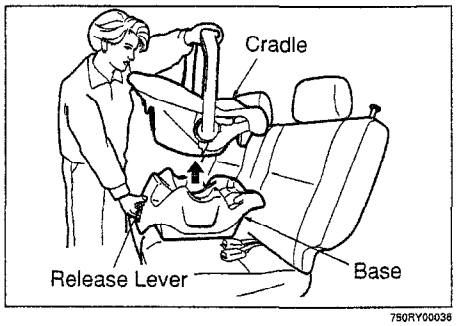
•Prior to operation (driving) of the vehicle, confirm that the child seat is secured properly by rocking it forward, backward and side to side.
- **When traveling long distances, occasionally stop to make sure the child seat is secured properly by rocking it forward, backward and side to side.**
- **When the child seat is removed for adult seating, untwist the seat belt to normal position.**

INSTALLING A CHILD SEAT (CRADLE TYPE) WITH BASE

Prior to installation of the child seat, complete the following preparations
- Be sure to read the WARNINGS and NOTES on page 3-15 thoroughly

WARNING

⚠ **•Be sure to position a cradl type child seat in th rear-facing position only.**

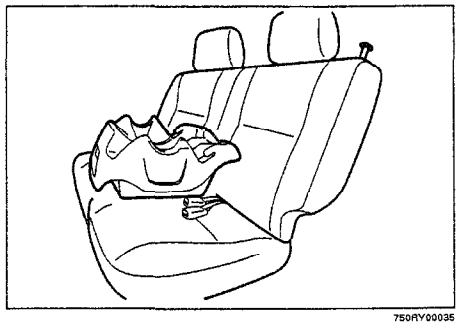


750RY00036

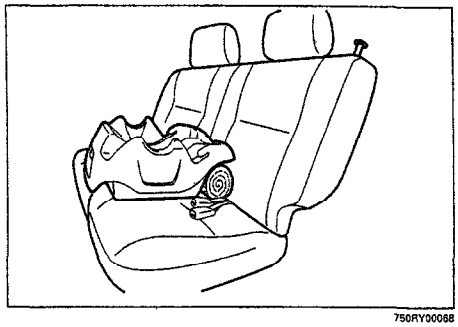
① Make sure that the seat back is locked in the upright position
② Remove the base from the cradle

NOTE

- *Generally a cradle type child seat consists of a cradle and a base. Refer to the manual that comes with the child seat for instructions on how to remove the base.*


750RY00035

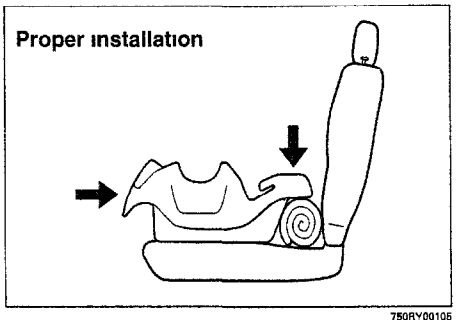
③ Place the base of the child seat in the center of the rear seat


750RY00068

④ Roll the towel and place it between the base of the child seat and the rear seat cushion

NOTE

- *Roll the towel so that it is a little thicker than the clearance between the base and seat cushion.*
- *The length of the rolled towel should be slightly longer than the width of the child seat base.*

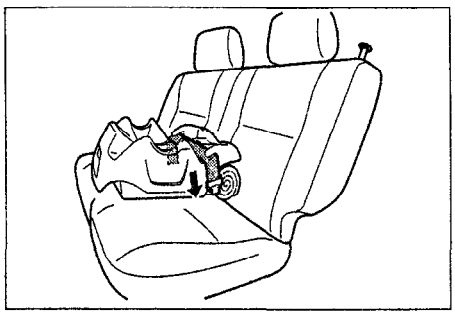


750RY00105

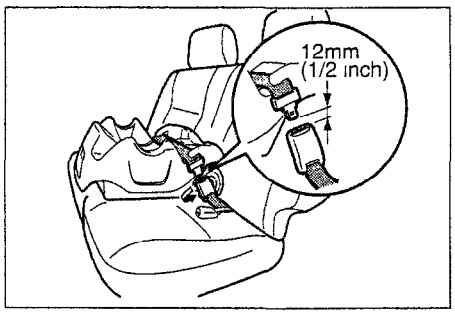
⑤ Make sure that the rolled towel supports the base properly

750RY00104

750RY00103


750RY00040

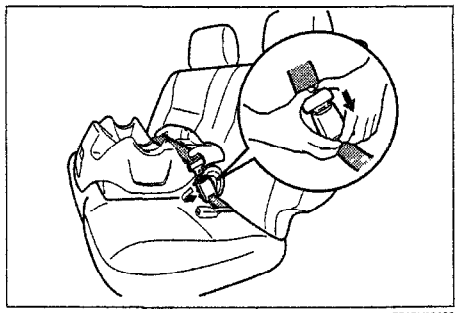
⑥ Adjust the length of the seat belt using the attached metal fitting and run the seat belt through the side slots of the child seat base



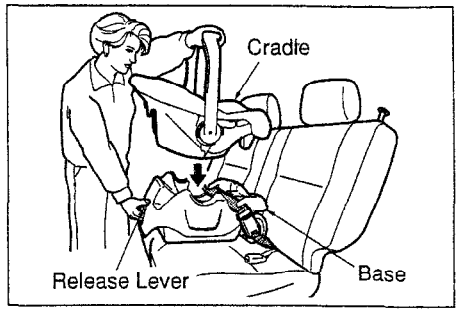
750RY00053

⑦ Adjust the length of the seat belt to approximately 12 mm (1/2 inch) The length is appropriate if the latch plate appears ready to slip from the side slot of the child seat base when you are pressing down firmly on the child seat

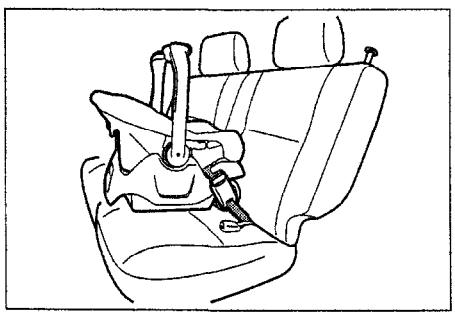
⑧ Fasten the latch plate into the buckle


750RY00130

⑨ Fasten the latch plate into the buckle



750RY00087


750RY00043

NOTE

- *Make sure that the child seat base is secured properly by rocking it forwards, backwards and side to side. If the child seat is easily tipped over or inches forward, repeat this entire procedure from step one.*
- *Attach the cradle of the child seat to the base according to the manufacturer instructions provided with the child seat. If the child seat cradle is equipped with a level indicator, use it to confirm the cradle position is correct. The following illustrations show the completed installation.*

WARNING

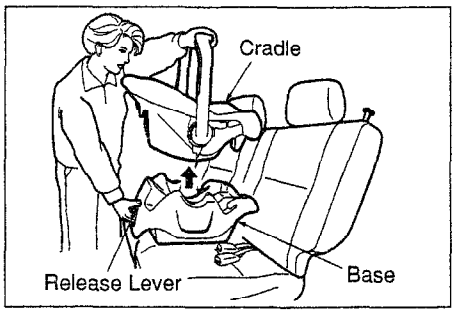
•Prior to operation (driving) of the vehicle, make sure that the child seat is secured properly by rocking it forwards, backwards and side to side.
- **When traveling long distances, occasionally stop to make sure the child seat is secured properly by rocking it forward, backward and side to side.**
- **When the child seat is removed for adult seating, untwist the seat belt to normal position.**

INSTALLING A CHILD SEAT (CRADLE TYPE) WITHOUT BASE

Prior to installation of the child seat, complete the following preparations
- Be sure to read the WARNINGS and NOTES on page 3-15 thoroughly

WARNING

•Be sure to position a cradle type child seat in the rear-facing position only.



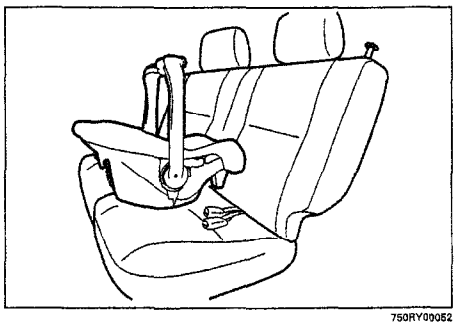
750RY00036

① Make sure that the seat back is locked in the upright position

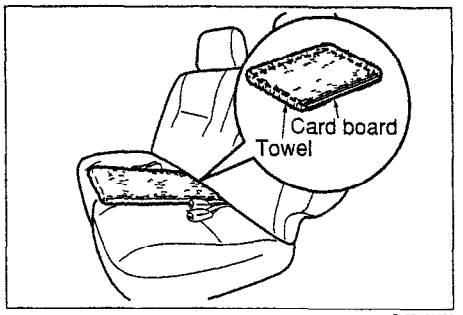
② Remove the base from the cradle

NOTE

- *Generally a cradle type child seat consists of a cradle and a base. Refer to the manual that comes with the child seat for instructions on how to remove the base.*


750RY00052

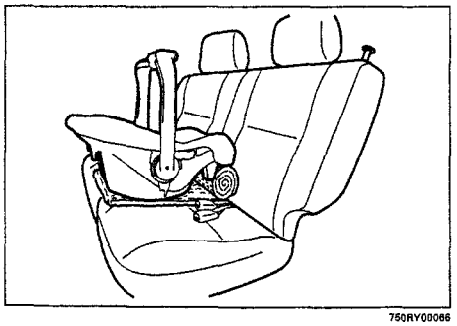
③ Place the cradle of the child seat in the center of the rear seat



750RY00051

WARNING

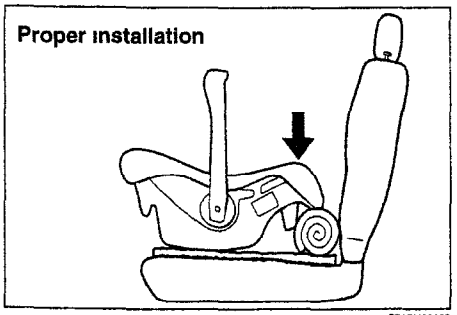
•Place a piece of cardboard or similar material wrapped with a towel on the seat cushion in the position where the child seat is to be installed. Be sure the size of the cardboard is the same size as the base of the child seat cradle.
• Refer to the illustration for an example of how to use the cardboard.


750RY00066

④ Roll the towel tightly

NOTE

- *The length of the rolled towel should be slightly longer than the width of the child seat base.*

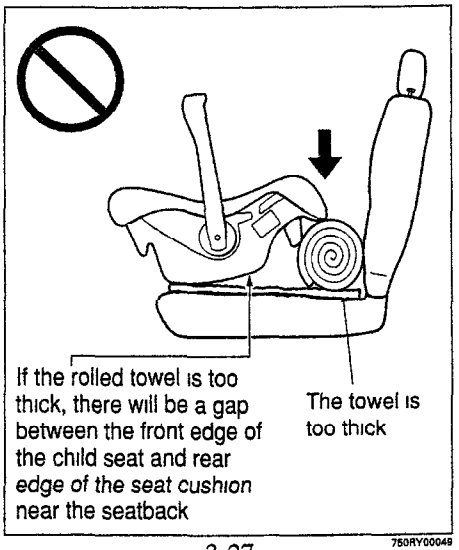


750RY00129

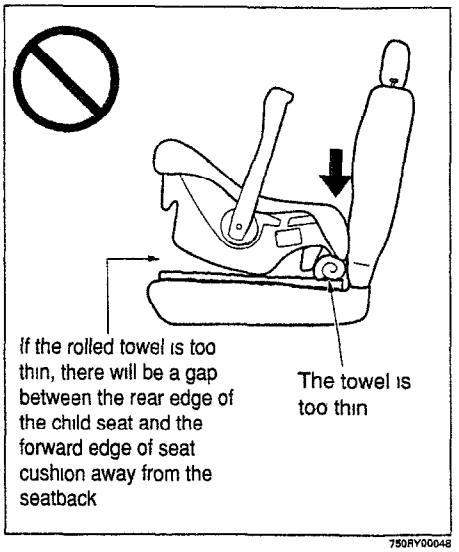
⑤ Make sure that the rolled towel supports the top of the cradle when you press firmly on the child seat

WARNING

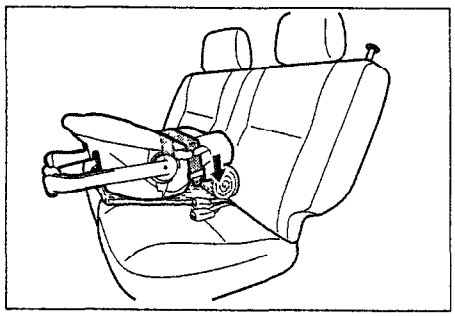
•Be sure to check that the legs of the cradle fit properly to the surface of the back seat when you press down the cradle.



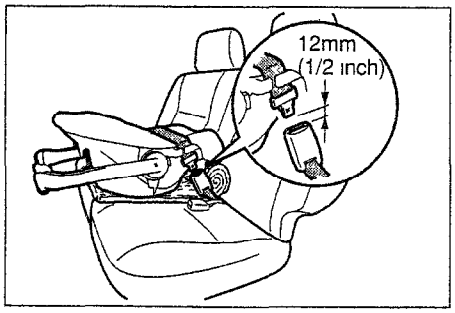
750RY00049



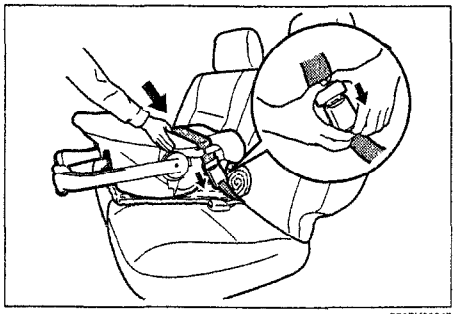
750RY00048



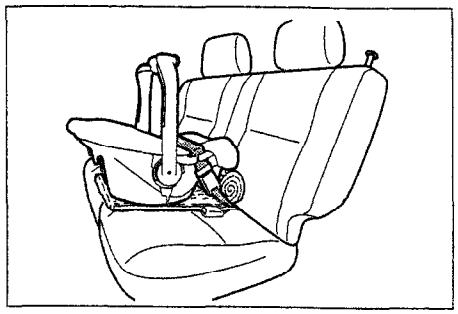
⑥ Adjust the length of the seat belt using the attached metal fitting and run the seat belt through the side slots of the child seat cradle



⑦ Adjust the length of the seat belt to approximately 12 mm (1/2 inch) The length is appropriate if the latch plate appears ready to slip from the side slot of the child seat base when you are pressing down firmly on the child seat



⑧ Fasten the latch plate into the buckle



NOTE

- *Make sure that the child seat cradle is secured properly by rocking it forwards, backwards and side to side. If the child seat cradle is easily tipped over or inches forward, repeat this entire procedure from step one. If the child seat cradle is equipped with a level indicator, use it to confirm the cradle position is correct The following illustrations show the completed installation.*

WARNING

⚠ **•Prior to operation (driving) of the vehicle, make sure that the child seat is secured properly by rocking it forward, backward and side to side.**
- **When traveling long distances, occasionally stop to make sure the child seat is secured properly by rocking it forward, backward and side to side.**

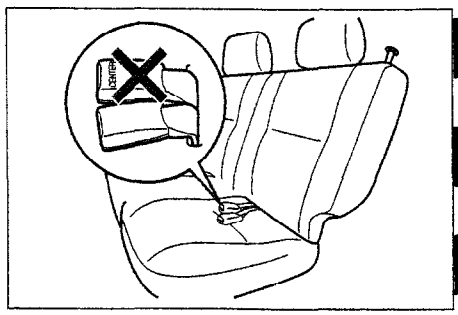
REAR SEAT SIDE INSTALLATION

WARNING

⚠ **•Before beginning installation of the child seat, ensure that the vehicle is parked in a safe location with the engine turned off.**
- **It is recommended to install the child seat in the center of the rear seat. When this is not possible (e.g., if the split seat is folded), the child seat can be installed to one side, either behind the driver or passenger side.**
- **For more information on installation locations, refer to page 3-16 "Child Seat Installation Positions".**
- **Before beginning installation of the child seat, ensure that the seat back is in the upright position. (Refer to the vehicle owner's manual for further information on this procedure.)**
- **Set the shoulder anchor to the lowest position by pr ssing in the shoulder anchor knob while adjusting the shoulder anchor.**

NOTE

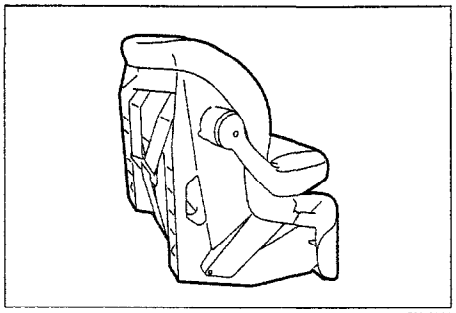
- *The installation procedures provided in this manual apply to the RODEO*
- *To allow for adequate installation space, adjust the front seat and seat back as needed.*
- *In order to ensure that the latch plate fasten into place when buckling the seat belt, be sure to select the buckle inscribed with the word "CENTER". Buckles without this inscription are intended for side use only and therefore cannot be fastened into place.*



INSTALLATION OF A REAR-facing CHILD SEAT (SEAT TYPE)

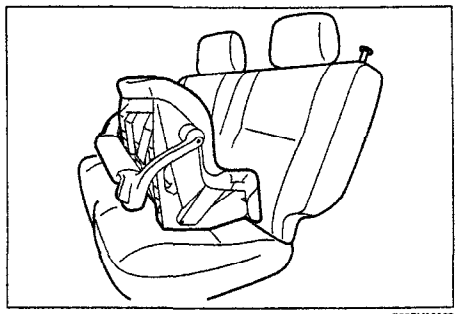
Prior to installation of the child seat, complete the following preparations

- Be sure to read the WARNINGS and NOTES on page 3-27 thoroughly



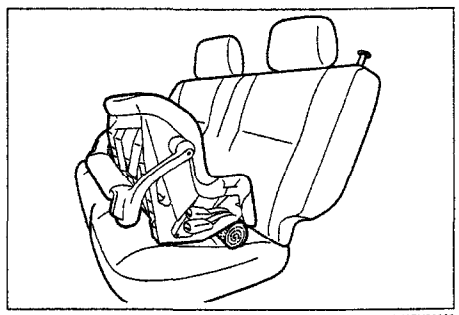
750RY00064

- If the child seat is equipped with a retractable stand, ensure that the stand is fully retracted



750RY00063

① Place the child seat in the selected rear seat installation position

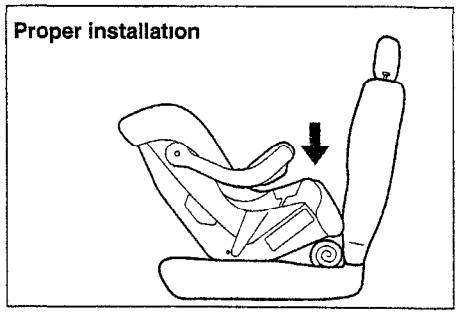


750RY00062

② Roll the towel and place between the child seat and the rear seat

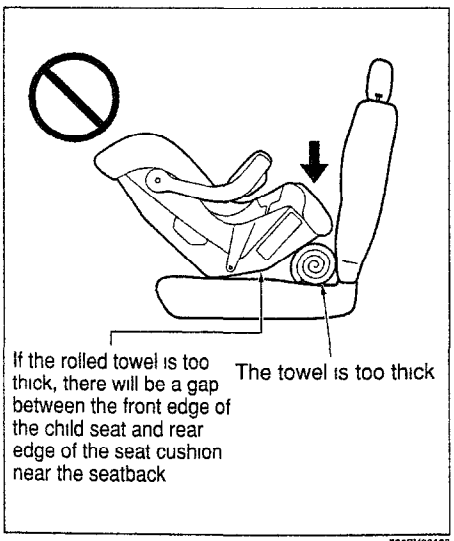
NOTE

- *Roll the towel so that it is a little thicker than the clearance between the child seat and rear seat.*
- *The length of the rolled towel should be slightly longer than the width of the child seat base.*



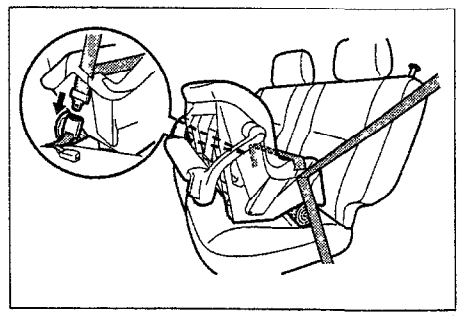
750RY00131

③ Make sure that the rolled towel supports the child seat properly



750RY00102

750RY00101

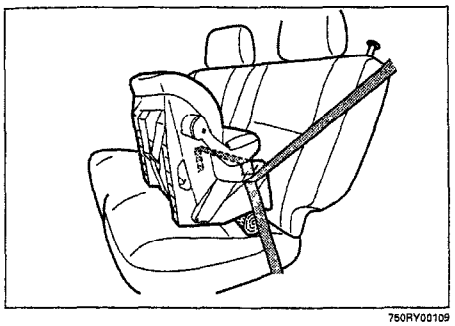


750RY00106

④ Grasp the seat belt and run the "lap" belt webbing through the side slot of the child seat closest to the door Then run both the "lap" and "shoulder" belt webbing through the opposite side slot of the child seat and fasten the latch plate into the buckle

WARNING

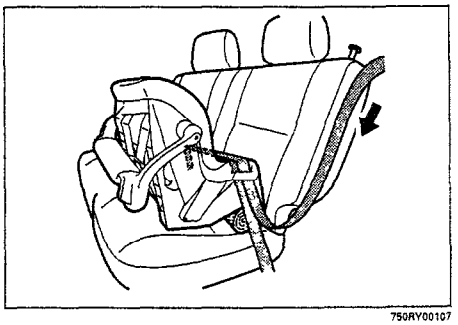
•Be sure to check that the bottom of the child seat fits snugly to the surface of the seat cushion when pressing down firmly on the child seat.



⑤ Run the "Shoulder" belt webbing back through the side slot of the child seat closest to the door

NOTE

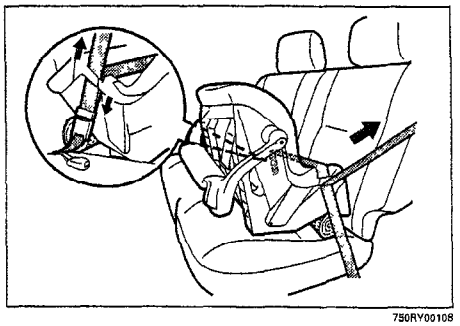
- *Take care not to twist the seat belt webbing.*
- *Do not pull the belt out all the way. Doing so activates the automatic locking mechanism. If the belt is inadvertently pulled all the way out, let the belt fully retract to release the automatic locking mechanism before using it.*



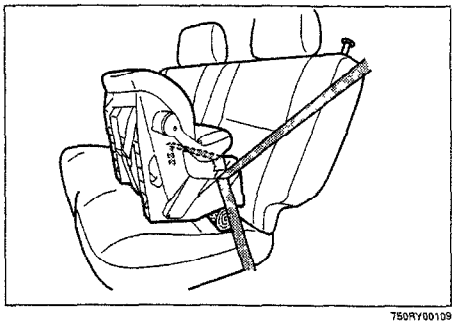
⑥ Pull the seat belt out all the way and let the belt slowly retract

NOTE

- *When the belt is pulled all the way out, the locking mechanism will only permit the belt to retract. Use this feature to remove any slack in the belt to secure the child seat properly.*



⑦ Press down on the child seat while removing slack from the belt Ensure that the child seat is secured properly by pressing down on the belt over the child seat while retracting



NOTE

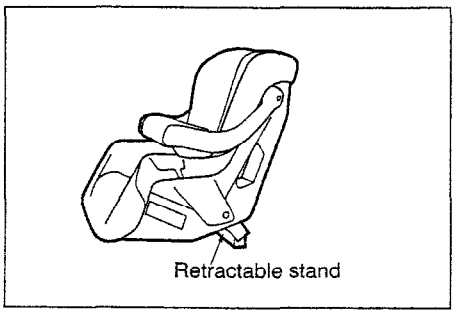
- *Make sure that the child seat is secured properly by rocking it forward, backward and side to side. If the child seat is easily tipped over or inches forward, repeat this entire procedure from step one.*

WARNING

⚠ **•Prior to operation (driving) of the vehicle, make sure that the child seat is secured properly by rocking it forward, backward and side to side.**
• When traveling long distances, occasionally stop to make sure the child seat is secured properly by rocking it forward, backward and side to side.

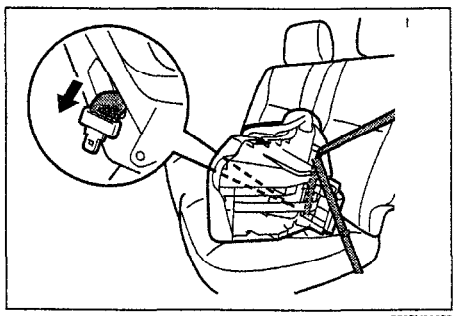
INSTALLATION OF A FRONT-FACING CHILD SEAT (SEAT TYPE)

Prior to installation of the child seat, complete the following preparations
- Be sure to read the WARNINGS and NOTES on page 3-27 thoroughly



750RY00086

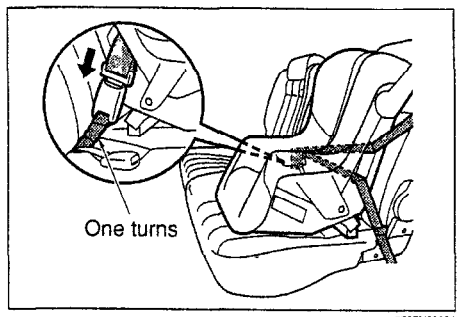
- If the child seat is equipped with a retractable stand, ensure that the stand is fully extended


750RY00085

① Lay the child seat sideways on the rear seat cushion and run the belt webbing through the slot on the bottom of the child seat

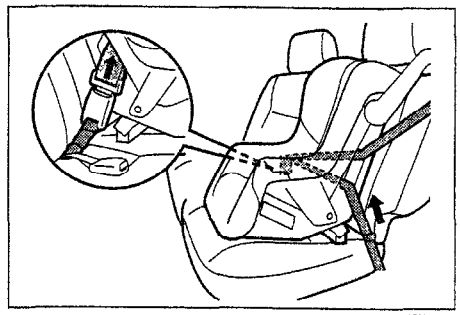
NOTE

- *Take care not to twist the seat belt webbing.*
- *Do not pull the belt out all the way. Doing so activates the automatic locking mechanism. If the belt is inadvertently pulled all the way out, let the belt fully retract to release the automatic locking mechanism before using it.*

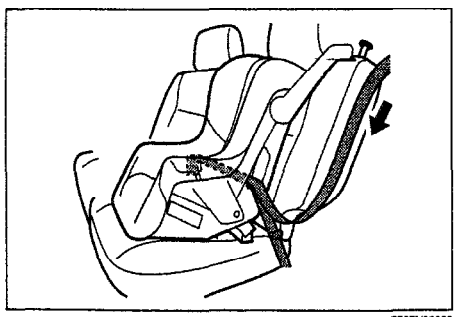


750RY00084

② Twist the buckle once and fasten the latch plate into the buckle


750RY00083

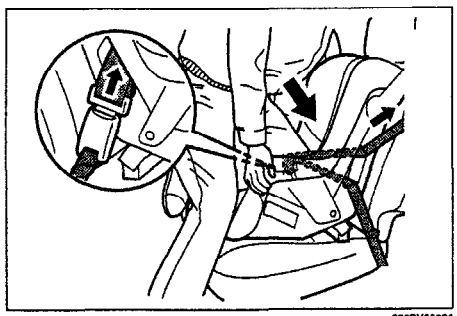
③ Pull on the "shoulder" belt webbing to remove any slack in the belt


750RY00082

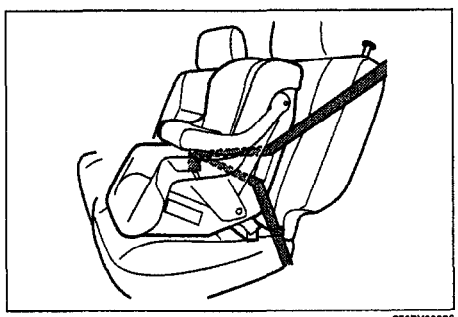
④ Pull the seat belt out all the way and let the belt slowly retract

NOTE

- *When the belt is pulled all the way out, the locking mechanism will only permit the belt to retract. Use this feature to remove any slack in the belt to secure the child seat properly.*


750RY00081

⑤ Ensure that the child seat is secured properly by pressing down on the child seat while retracting the belt to remove any slack.


750RY00080

NOTE

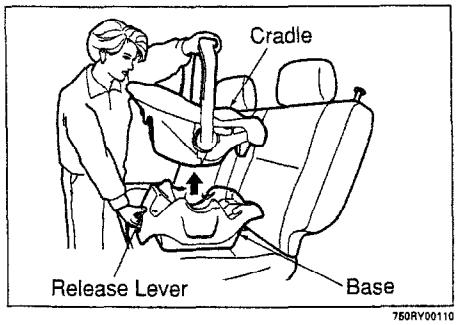
- *Make sure that the child seat is secured properly by rocking it forward, backward and side to side.*
  If the child seat is easily tipped over or inches forward, repeat this entire procedure from step one.

WARNING

⚠ **•Prior to operation (driving) of the vehicl , mak sure that the child seat is secured properly by rocking it forward, backward and side to side.**
• Wh n trav ling long distances, occasionally stop to make sure the child s at is secured properly by rocking it forward, backward and side to side.

INSTALLATION OF A CHILD SEAT (CRADLE TYPE) WITH BASE

Prior to installation of the child seat, complete the following preparations
• Be sure to read the WARNINGS and NOTES on page 3-27 thoroughly

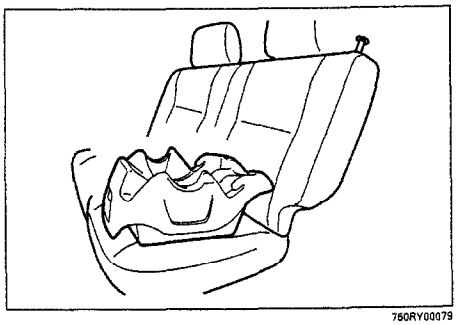


750RY00110

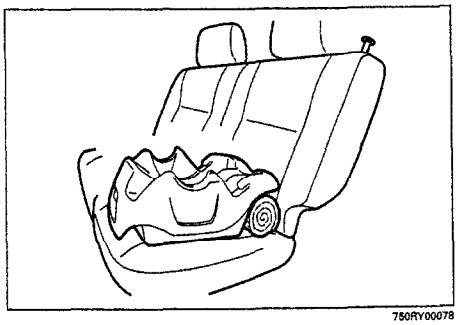
① Remove the cradle from the base

NOTE

• Generally a cradle type child seat consists of a cradle and a base Refer to the manual that comes with the child seat for instructions on how to remove the base.


750RY00079

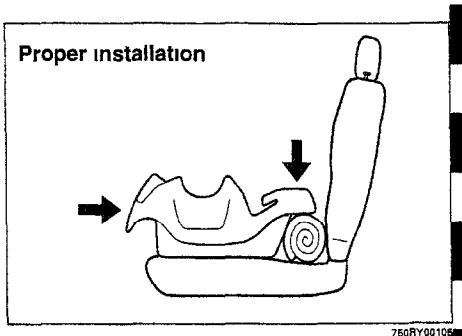
② Place the base of the child seat in the selected rear seat installation position


750RY00078

③ Roll the towel and place it between the base of the child seat and the rear seat cushion

NOTE

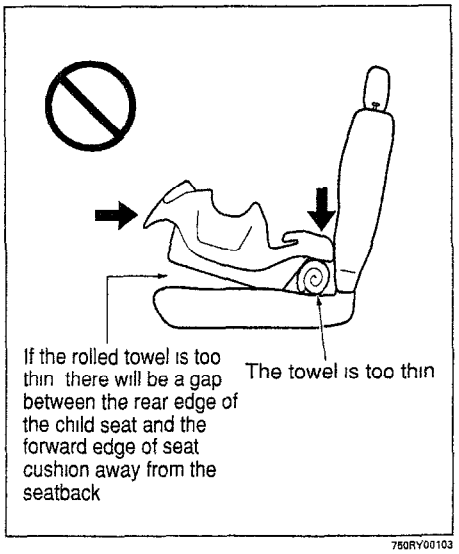
• Roll the towel so that it is a little thicker than the clearance between the base and seat cushion.
• The length of the rolled towel should be slightly longer than the width of the child seat base.



750RY00105

④ Make sure that the rolled towel supports the base properly

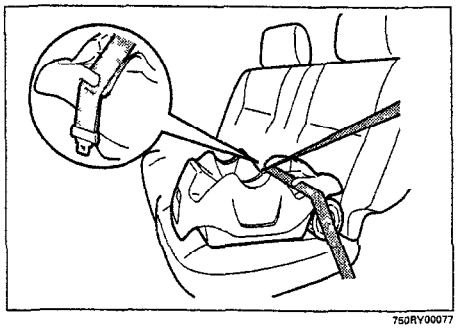
750RY00104



750RY00103

WARNING

⚠ **•Be sure to check that the bottom of the base fits snugly to the surface of the seat cushion by pressing down on the base.**

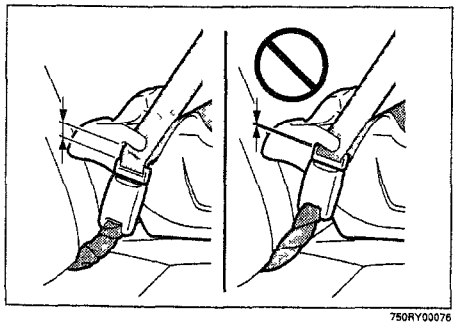


750RY00077

⑤ Grasp the seat belt and run the "lap" belt webbing through the side slot of the child seat base closest to the door Then run both the "lap" and "shoulder" belt webbing through the opposite side slot of the child seat and fasten the latch plate into the buckle

NOTE

- *Take care not to twist the seat belt webbing.*
- *Do not pull the belt out all the way. Doing so activates the automatic locking mechanism. If the belt is inadvertently pulled all the way out, let the belt fully retract to release the automatic locking mechanism before using it.*



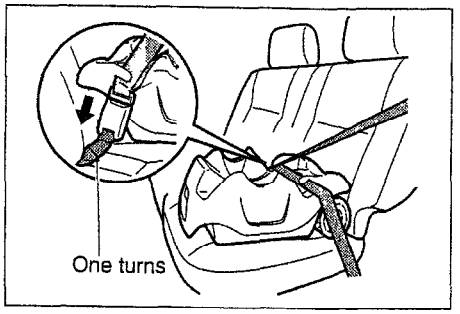
750RY00076

⑥ Fasten the latch plate into the buckle

WARNING

⚠ **•When the latch plate is buckled, be sure that the latch plate holder does not interfere with the child seat base slot. Ensure that the latch plate holder does not interfere with the slot of the child seat base. If it does, confirm that the towel is the appropriate size. If the towel is appropriately sized, twist the latch plate holder webbing a few more twists to correct the interference.**

- **When the child seat is removed for adult seating, untwist the seat belt to normal position.**

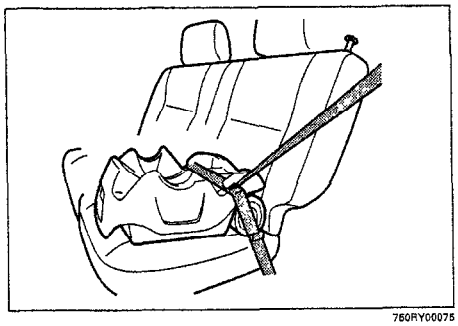


750RY00071

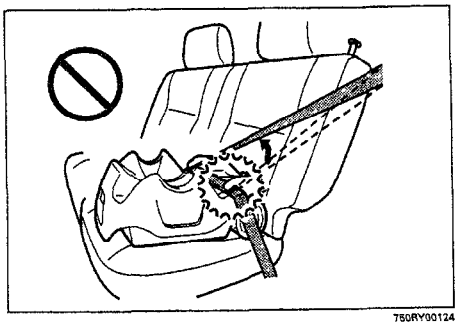
⑦ Twist the buckle once or more and fasten the latch plate into the buckle

NOTE

- *Avoid child seat and buckle contact. Twist the buckle until child seat and buckle contact is no longer present.*

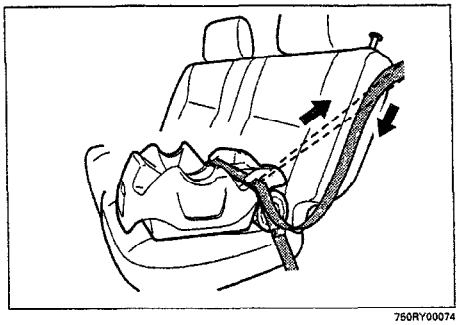


⑧ Run the "shoulder" belt webbing back through the side slot of the child seat base closest to the door



WARNING

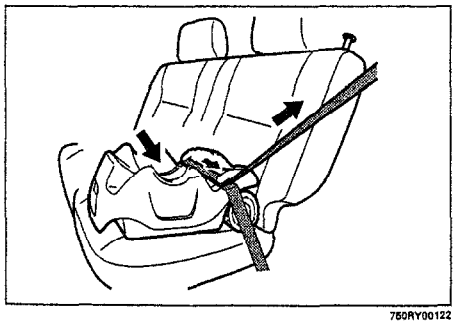
•If the slot of the child seat base is not wide enough to accommodate the seat belt webbing, the belt may become easily dislodged from the slot. To prevent this from happening, only install the child seat in the center position.



⑨ Pull the seat belt out all the way and let the belt slowly retract

NOTE

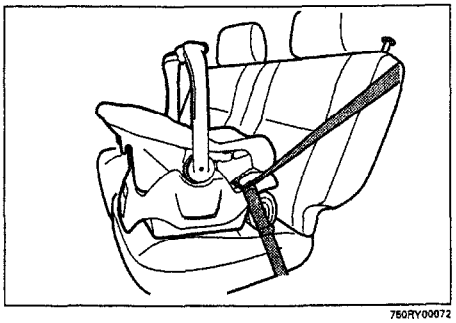
• When the belt is pulled all the way out, the locking mechanism will only permit the belt to retract Use this feature to remove any slack in the belt to secure the child seat properly



⑩ Press down on the child seat while removing slack from the belt Ensure that the child seat base is secured properly by pressing down on the belt over the child seat while retracting

NOTE

• Make sure that the child seat is secured properly by rocking it forward, backward and side to side. If the child seat is easily tipped over or inches forward, repeat this entire procedure from step one.



NOTE

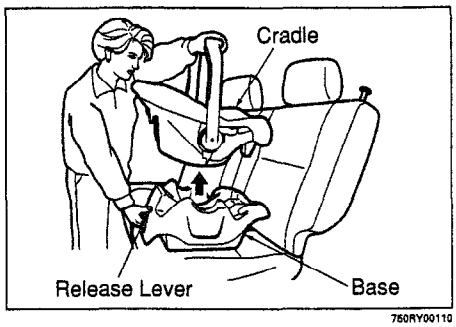
• Attach the cradle to the base and check the level indicator (if equipped) to confirm that the cradle installation position is correct. Use the level indicator (if equipped), to check the angle position.
If the angle is not appropriate, start again the procedure from step 1.
The above illustration shows the completed installation.

WARNING

•Prior to operating (driving) the vehicle, confirm that the child seat is secured properly by rocking it forward, backward and side to side.
• When traveling long distances, occasionally stop to make sur the child seat is secur d properly by rocking it forward, backward and side to side.

INSTALLATION OF A CHILD SEAT (CRADLE TYPE) WITHOUT BASE

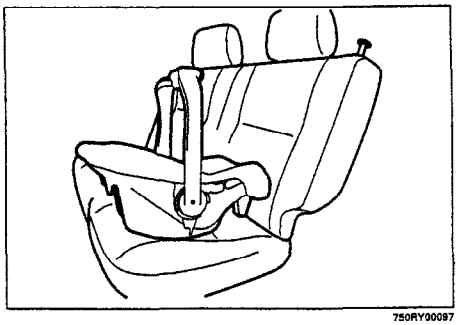
Prior to installation of the child seat, complete the following preparations:
- Be sure to read the WARNINGS and NOTES on page 3-27 thoroughly.



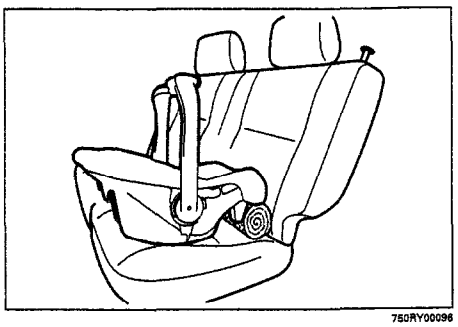
① Make sure that the seatback is locked in the upright position.
② Remove the base from the cradle

NOTE

- *Generally a cradle type child seat consists of a cradle and a base. Refer to the manual that comes with the child seat for instructions on how to remove the base.*



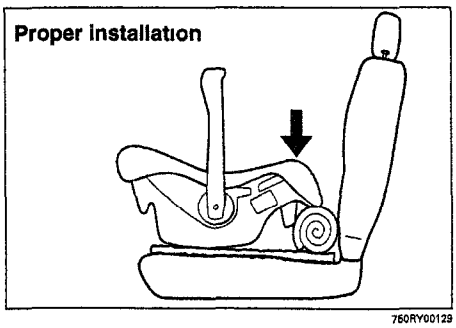
③ Place the cradle of the child seat in the selected rear seat installation position.



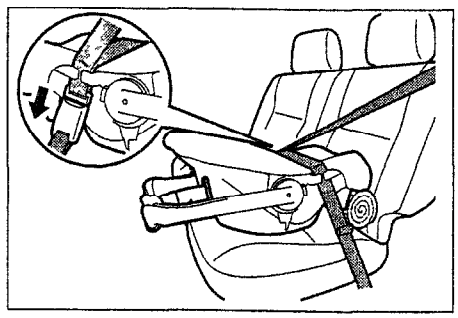
④ Roll the towel and place it between the base of the child seat and the rear seat cushion

NOTE

- *Roll the towel so that it is a little thicker than the clearance between the base and seat cushion.*
- *The length of the rolled towel should be slightly longer than the width of the child seat base.*



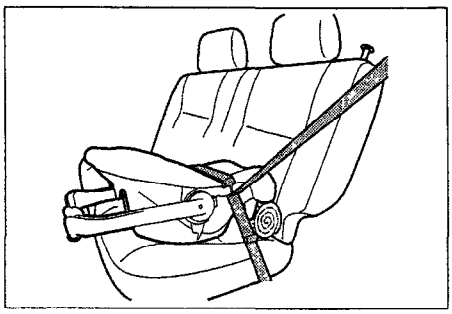
⑤ Make sure that the rolled towel supports the top of cradle when you press it



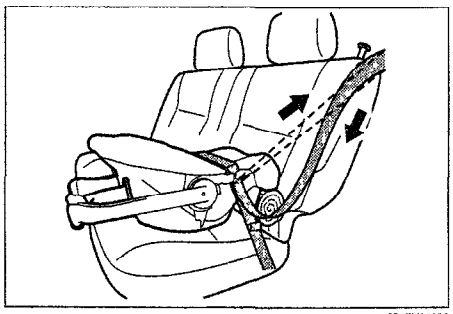
⑥ Grasp the seat belt and run the "lap" belt webbing through the side slot of the child seat cradle closest to the door Then run both the "lap" and "shoulder" belt webbing through the opposite side slot of the child seat and fasten the latch plate into the buckle

NOTE

- *Do not twist the seat belt webbing.*
- *Do not pull the belt out all the way. Doing so activates the automatic locking mechanism. If the belt is inadvertently pulled all the way out, let the belt fully retract to release the automatic locking mechanism before using it.*



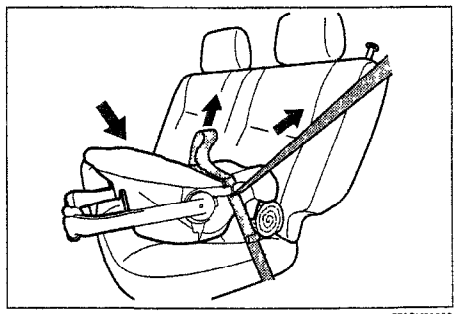
⑦ Run the "shoulder" belt webbing back through the side slot of the child seat cradle closest to the door



⑧ Pull the seat belt out all the way and let the belt slowly retract

NOTE

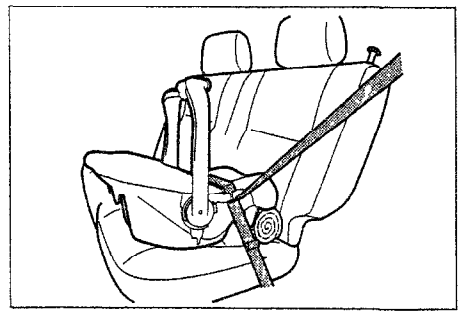
- *When the belt is pulled all the way out, the locking mechanism will only permit the belt to retract. Use this feature to remove any slack in the belt to secure the child seat properly*
- *The retractor will emit a rattling sound while retracting with the locking mechanism activated.*



⑨ Press down on the child seat cradle while removing slack from the belt Ensure that the child seat cradle is secured properly by pressing down on the belt over the child seat while retracting

NOTE

- *Make sure that the child seat cradle is secured properly by rocking it forward, backward and side to side. If the child seat is easily tipped over or inches forward, repeat this entire procedure from step one.*



NOTE

- *Check if the child seat cradle is equipped with a level indicator, use it to confirm the cradle installation position is correct. The above illustration shows the completed installation.*

WARNING

⚠ **•Prior to operation (driving) of the vehicle, confirm that the child s at is secured properly by rocking it forward, backward and side to side.**

- **When traveling long distances, occasionally stop to make sure the child seat is secured properly by rocking it forward, backward and side to side.**

REMOVING THE CHILD SEAT

Be sure to read and fully understand this procedure before removing the child seat

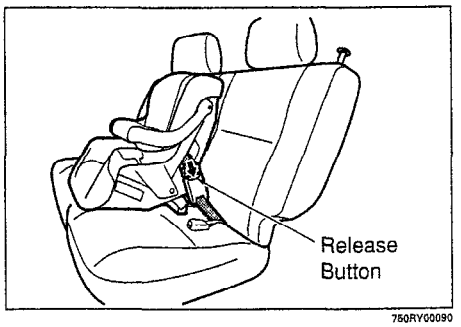
WARNING

•Before beginning removal of the child seat, ensure that the vehicle is parked in a safe location with the engine turned off.

NOTE

• To allow for adequate removal space, adjust the front seat and seatback as needed

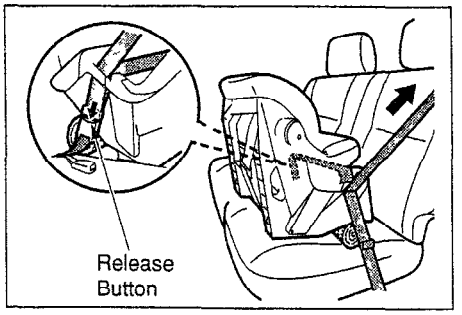
REMOVAL FROM THE CENTER POSITION OF THE REAR SEAT



750RY00090

Unbuckle the seat belt by pressing the release button to disengage the latch plate from the belt buckle

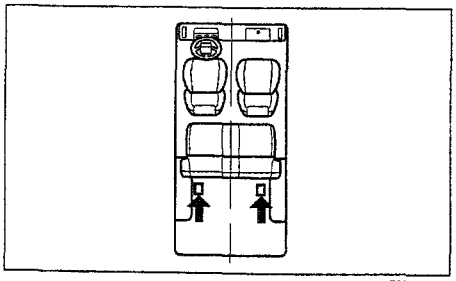
REMOVAL FROM THE SIDE POSITION OF THE REAR SEAT



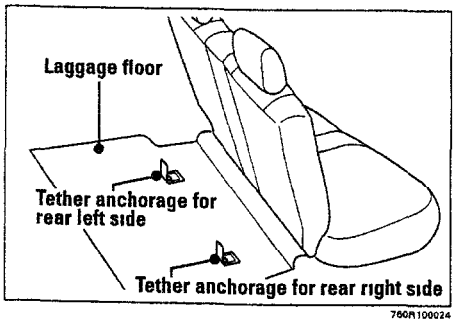
750RY00126

Pull the seat belt on the side of the shoulder anchor toward you and make a slack While keeping the slack in the seat belt, remove the seat belt from the child seat

CHILD RESTRAINT LOWER AND TETHER ANCHORAGE

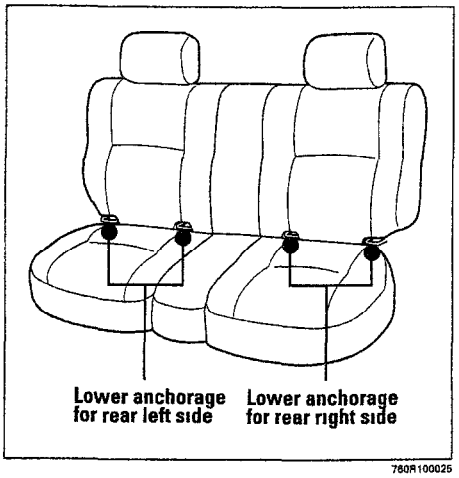


760R100019



760R100024

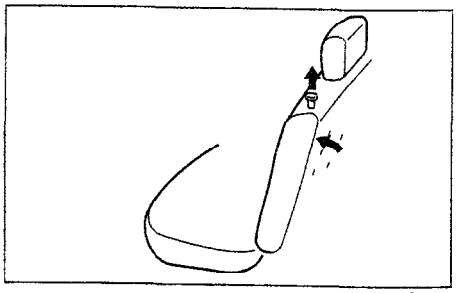
Child restraints have a top tether strap, which is designed to be anchored to the vehicle Child restraint anchorage brackets are installed on both sides of the luggage compartment floor



760R100025

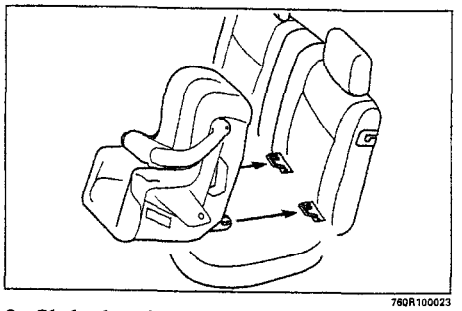
Child restraint lower anchorages are installed on either side

Anchoring a child seat



760R100022

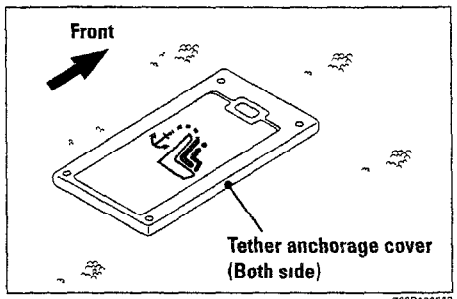
1 Move the seat back to its most vertical position Make sure the seatback is locked in position



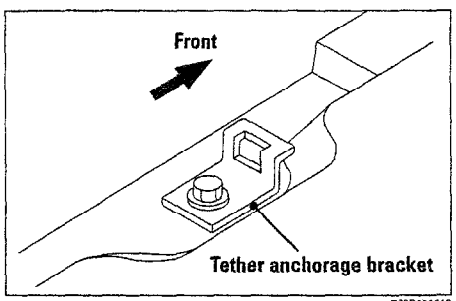
760R100023

2 Slide the child seat locking portions into the lower anchors Make sure that both anchors and locking portions are latched together

Refer to the Instruction Manual provided by the manufacturer of the child seat for latching instructions

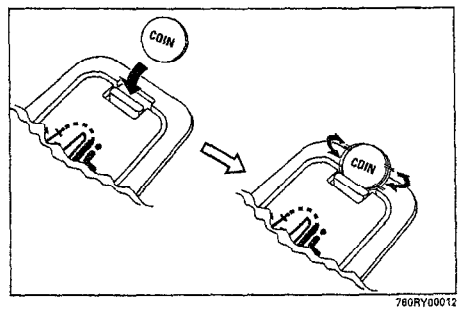


760R100013



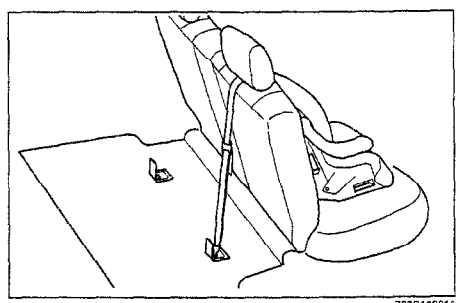
760R100012

Tether anchors are installed to the luggage compartment floor behind the rear seat

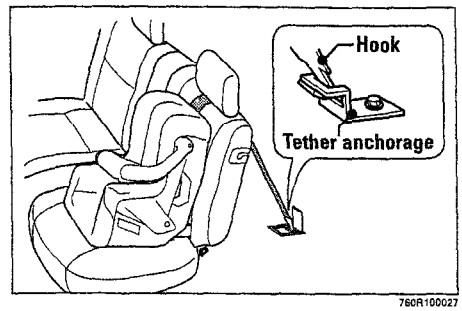


760RY00012

3 Use a coin or similar object to pry open the tether anchor cover


760R100011

4 Run the tether strap between the upper portion of the seat back and the lower portion of the head restraint



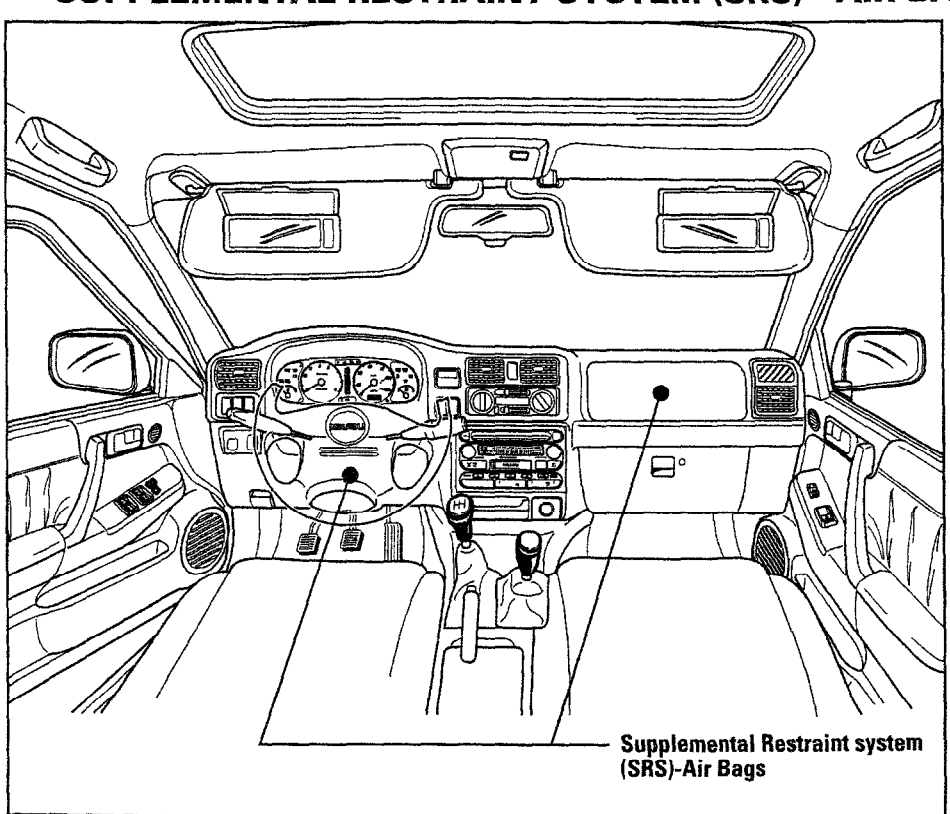
760R100027

5 Attach the end of the tether strap to the tether anchor hook
6 Adjust the tether strap length to remove all slack from the strap

Refer to the Instruction Manual provided by the manufacturer of the child seat for information on adjusting the length of the tether strap

3. *Seat, Seat Belts, Child Restraint and Air Bags /*

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) - AIR BAGS



740R100004

Supplemental Restraint Syst m (SRS)-Air Bags

This section explains the Supplemental Restraint System (SRS) - Air Bags Your vehicle has an air bag for both the driver and the right-front passenger

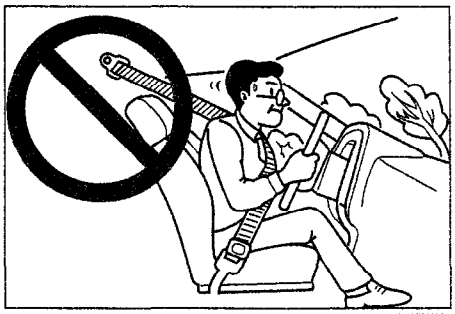
Here's the most important thing to know:

WARNING

•The Supplemental Restraint System (SRS) - Air Bags may not provide protection for an unbelted driver and a right front passenger. Air bags are not designed to inflate in rollovers or in rear, side or low-speed frontal crashes. You must wear your seat belt to reduce the chance of hitting things inside the vehicle or being ejected from your seat. Always wear your seat belt, even though your vehicle is equipped with air bags. Also refer to the supplement "Supplemental R straint System (AIR BAG)".

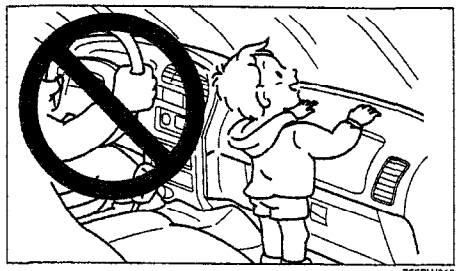
WARNING

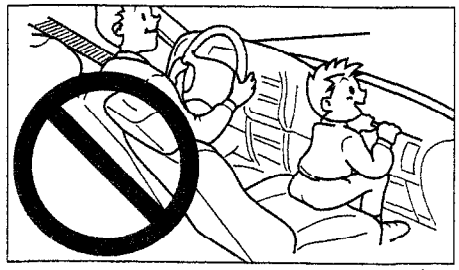
- If you are too clos to an inflating air bag, it can kill or seriously injure you, since it inflates with great force, faster than the blink of an eye.
- While th air bag can reduce serious injuries and even save your life, the air bag might cause facial abrasions or other injuries.
  Seat belts help keep you in position for an air bag inflation in a crash. Always wear your seat belt even though your vehicle is equipped with air bags.
- Childr n 12 and under can be seriously or even fatally injured by inflation of the front passenger's air bag.



WARNING

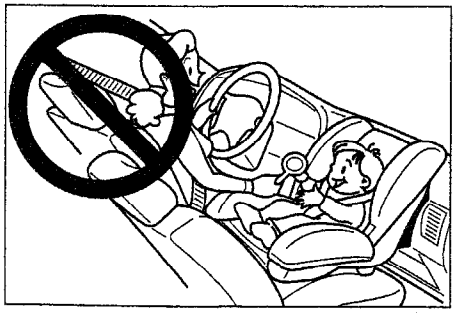
- The driver should sit as far back as possible while still maintaining control of the vehicle and the front passenger should also sit as far back as possible.
- If you are sitting too close to the air bag, it can cause death or seriously injure you when it inflates.





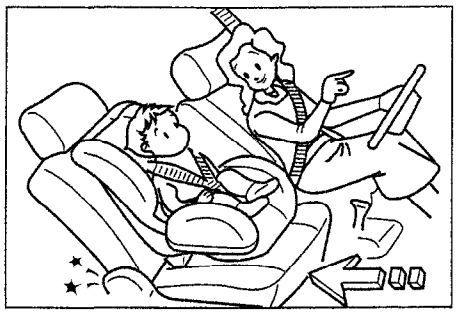
WARNING

- Always secure children properly in your vehicle. Do not allow a child to stand or kneel on the front passenger's seat. Do not hold a child in your lap or hands. The inflating air bag can cause death or seriously injure the child.



WARNING

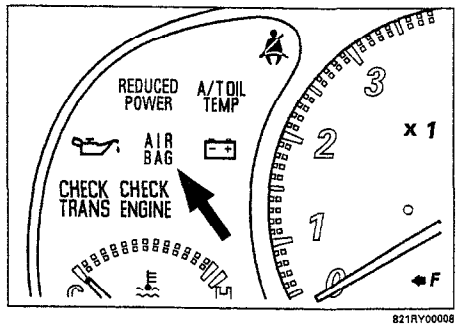
- Do not install rearward-facing child seats in the front passenger seat position.
  In the event the front passenger's air bag inflates, it can cause death or seriously injur the child.



WARNING

- Children 12 and under can be seriously or even fatally injured by inflation of the front passenger's air bag.
- A child who is too small for seat belts should be properly secured in a child restraint. However, a child is safest when properly restrained in the rear seat.
  The child can be killed or seriously injured if the air bag deploys. If it is absolutely n cessary to put a child in a front facing child r straint in the front pass ng r seat, th passenger seat should be moved as far back as possibl .

AIR BAG READINESS INDICATOR LIGHT



There is an air bag readiness indicator light on the instrument panel, which has "AIR BAG" on it The system checks itself and the light tells you if there is a problem You will see this light blink 7 times when you turn your ignition to ON or START Then the light should go out which means the system is ready
If the air bag readiness indicator light illuminates at any other time, or the indicator fails to perform properly when you turn your ignition to ON or START, the Air Bag System needs repair Until it

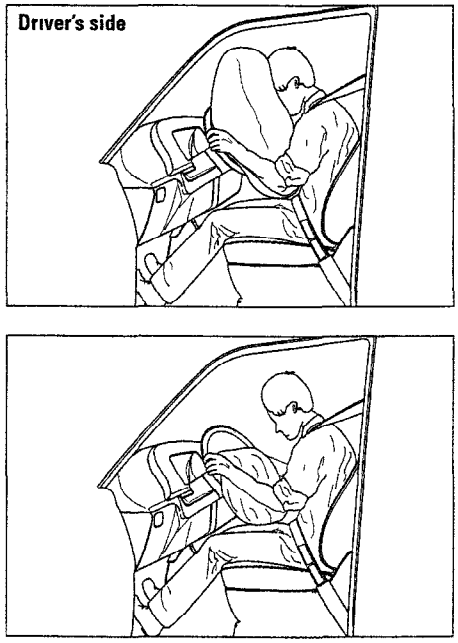
is serviced, the system may not inflate in the event of the type of collision that would normally activate
The air bag readiness indicator light monitors itself and the electrical system that connects the air bags and various electronic components and power sources Your Isuzu Dealer is best qualified to check and repair the system if needed

WARNING

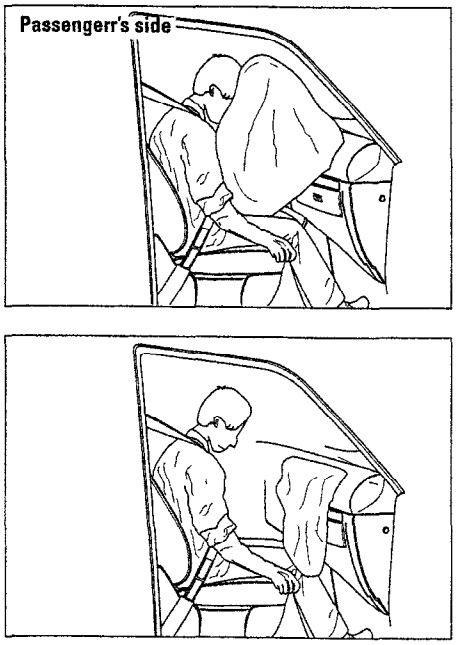
If the air bag readiness indicator light doesn't com on and blink 7 tim s when you turn your ignition to ON or START, your air bag system may not work properly. Have your vehicle servic d right away at your near st Isuzu Dealer.

HOW THE AIR BAG SYSTEM WORKS

Where are the air bags?
The driver's air bag is in the middle of the steering wheel

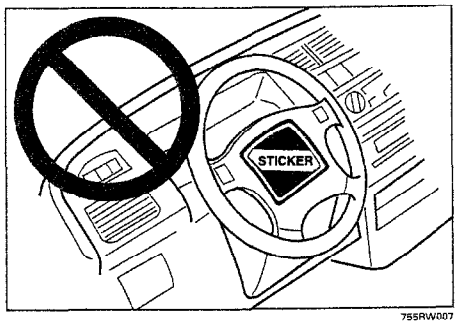


The right-front passenger's air bag is located in the instrument panel on the passenger's side

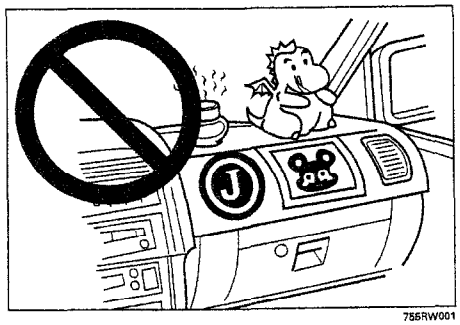


What will you see after an air bag inflation?

After the air bag has inflated, it will then quickly deflate This occurs so quickly that some people may not even realize that the air bag inflated The air bag will not impede the driver's vision or ability to steer the vehicle, nor will it hinder the occupants from exiting the vehicle There will be small amounts of smoke coming from vents in the deflated air bags Some components of the air bag module in the steering wheel hub for the driver's air bag or the instrument panel for the passenger's bag may be hot for a short time
The gas in both driver and front passenger sides used to inflate the air bag will have vented into the passenger compartment and the bag will be deflated within seconds after the collision
As the gas vents from the bag, small particles are also vented into the passenger compartment
In many crashes severe enough to inflate an air bag, windshields are broken by vehicle deformation Additional windshield breakage may occur in vehicles with passenger air bags because the windshield acts as a reaction surface for the inflating air bag



755RW007


755RW001

WARNING

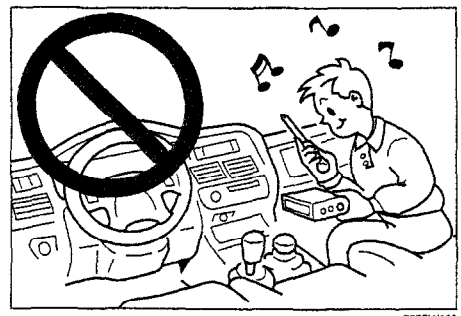
•Don't put anything on, or attach anything to, th steering wh el pad or the instrument panel. Also, don't put anything (such as objects or pets) between any occupant and the steering wheel pad or instrument panel. If anything is between the occupant and the air bag, it could affect the performance of the air bag, or, worse, it could cause injuries to the occupants.
• The air bags are designed to inflate only once. After they inflate, you'll need some new parts for your air bag system. If the air bag is not replaced, the unrepaired area will incr ase the risk of injury in a collision. A new system will include air bag modules, control unit; SRS and possibly other parts.
• Let only qualified technicians work on your air bag system. Improp r service can mean that your air bag system w n't work prop rly. See your Isuzu Deal r for service.

SERVICING YOUR ISUZU WITH THE AIR BAG SYSTEM

Please tell or remind anyone who works on your Isuzu that it has an air bag system There are parts of the air bag system in several places around your vehicle You don't want the system to inflate while someone is working on your vehicle The air bag system does not need regular maintenance Scrapping a damaged vehicle that has an undeployed air bag(s) can be dangerous Ask your authorized Isuzu Dealer for assistance if your involvement in the disposal or the repair of the vehicle is required

WARNING

Do not attempt to repair or service the air bag system by yourself. Tampering with it could cause it to activate, and this could result in s rious injuries. For service and repairs, have an authorized Isuzu Dealer do the work.



755RW002

WARNING

•Do not attempt repairs around the steering wheel, instrument panel, center console or dashboard or the installation of stereo equipment etc.
The air bag system may not function properly when modifications are made to the vehicle, including such things as the installation of a bumper guard, snow plow or altering the frame, the front of the vehicle, the height of the vehicle, etc. If you plan to make any of these changes, consult the nearest Isuzu Dealer for advice.

NOTE

Contact your nearest Isuzu Dealer when the steering wheel pad or the cover on the instrument panel for the passenger's air bag is scratched, cracked or damaged. If you damage the door for the right-front passenger's air bag, it may not work properly. You may have to replace the air bag. Don't open or break the air bag door.

WARNING

For up to 15 seconds after the ignition key is turned off and the battery disconnected, an air bag can still inflate during improper service. You can be injured if you are close to an air bag when it inflates. Be sure to follow proper service procedures, and make sure the person performing the work for you is qualified to do so.

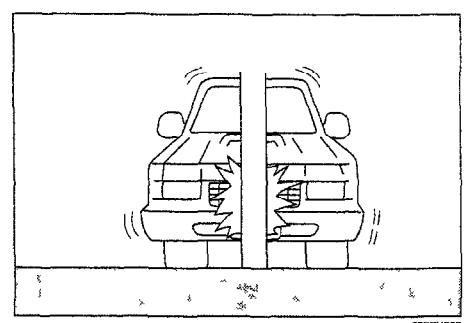
Wh n is an air bag expected to inflate?

The air bag is designed to inflate in moderate to severe frontal or near-frontal crashes In frontal collisions of sufficient force, the air bags inflate even though the front passenger seat is unoccupied If the frame or suspension strikes hard against an obstacle on the roadway, the air bag may sometimes inflate The air bags will only inflate if the velocity of the impact is above the designed threshold level When impacting straight into a wall that does not move or deform, the threshold level is between 7 and 15 mph (11 2 and 24 km/h) However, this velocity threshold may be several miles-per-hour faster or slower In addition, this threshold velocity will be considerably higher if the vehicle strikes an object such as a parked car which will move and deform on impact The air bag is also not designed to inflate in rollovers, side impacts, or rear impacts where the inflation would provide no occupant protection benefit
In any particular crash, the determination of whether the air bag should have inflated cannot be based solely on the level of damage on the vehicle(s). Inflation is determined by the angle of the impact and the vehicle's deceleration of which vehicle damage is only one indication Repair cost is not a good indicator of whether an air bag should have deployed

When the air bag may not inflate.

In certain types of accidents, the air bag may not inflate, even though your vehicle may appear severely damaged This does not mean there is a problem with the air bag, but rather the forces of the collision were insufficient to activate the air bag system In other words, the air bag inflates only in collisions of sufficient force to require a supplement to seat belt protection
If the air bag fails to inflate in a frontal collision, have the air bag system inspected as soon as possible by your Isuzu Dealer.

- Depending on the severity of impact, a collision with a pole may or may not activate the air bag



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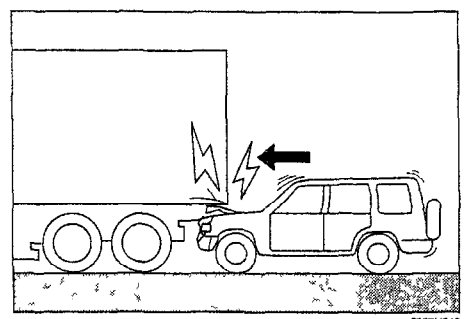
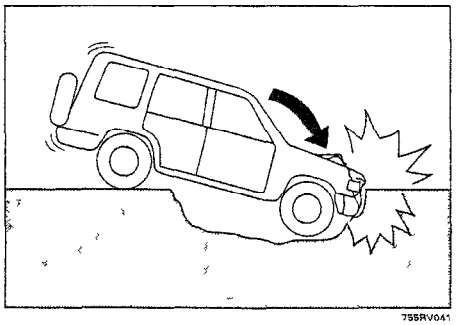
- If an automobile underrides the bed of a truck, the impact may not be severe enough to activate the system

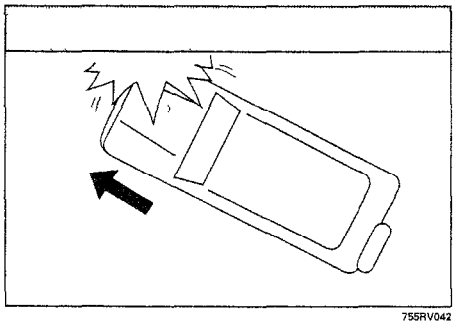


755RV040

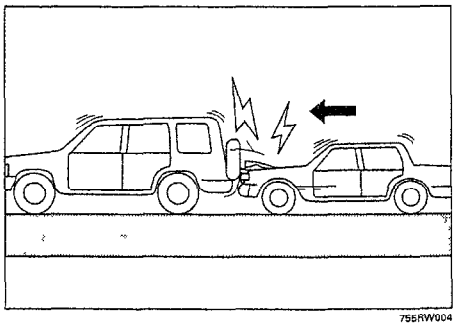
- An impact caused by dropping into a large pothole or depression in the roadway may or may not inflate the air bag



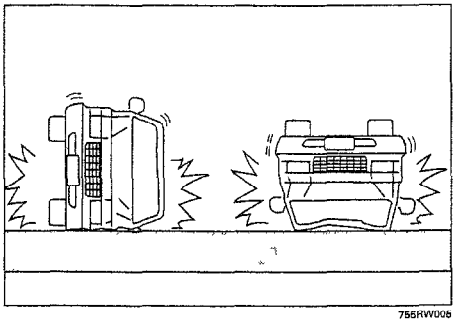
- A frontal angle collision may not inflate the air bag



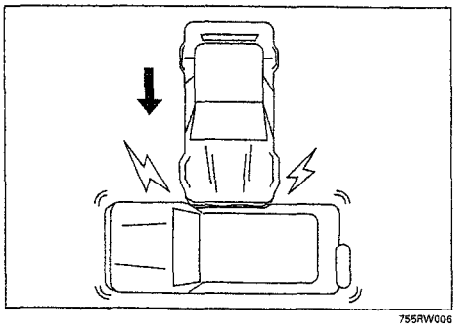
- A rear-end collision may not inflate the air bag



- A rollover may not inflate the air bag

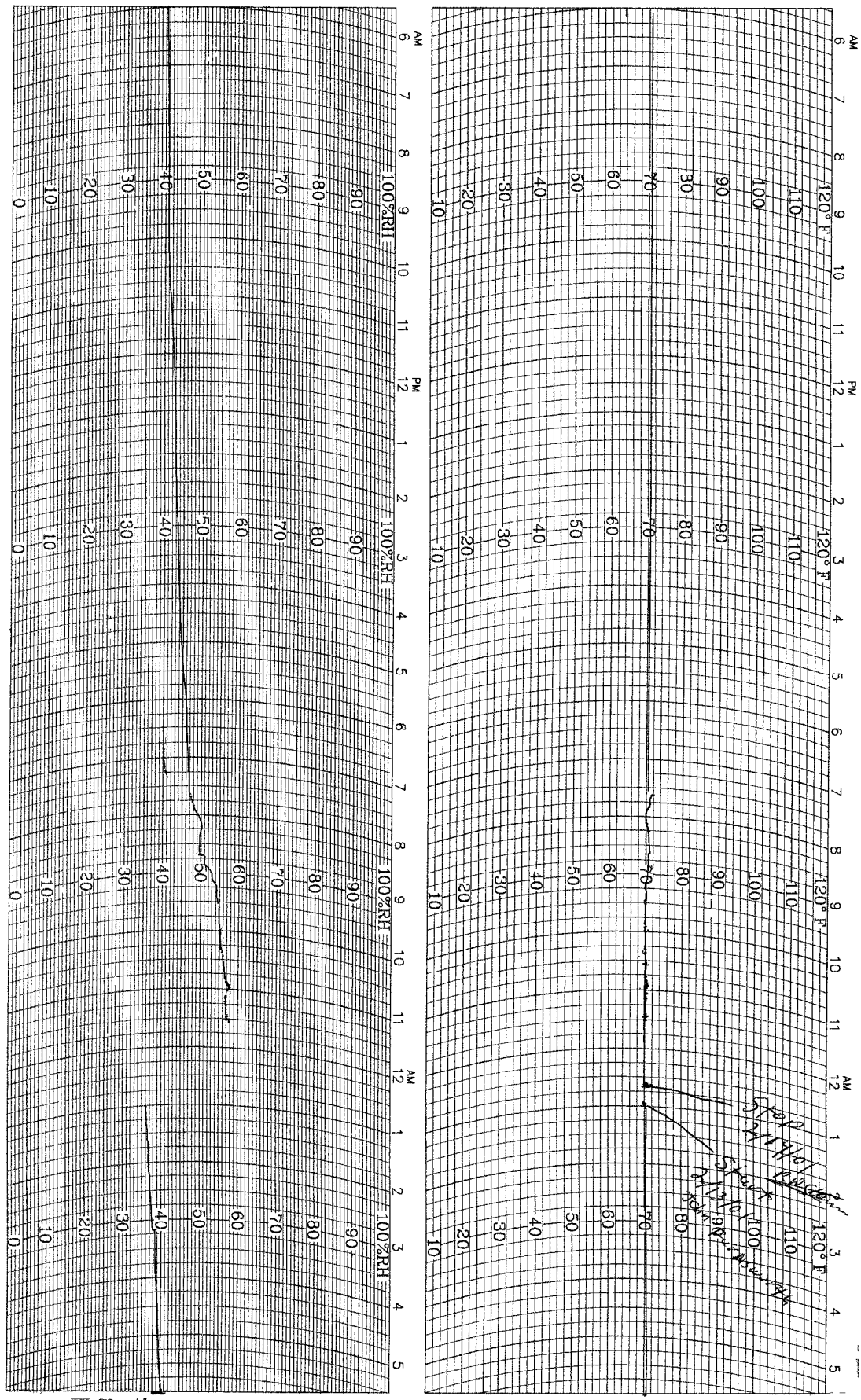


- A side collision may not inflate the air bag



What makes an air bag inflate?
In a frontal or near-frontal impact of sufficient severity, control units strategically located on the vehicle detect that the vehicle is suddenly stopping as a result of a crash The control units complete an electrical circuit, triggering a chemical reaction the inflator The reaction produces gas in both driver and front passenger sides which inflates a cloth bag The inflator, cloth bag, and related hardware are all part of the air bag inflator modules packed inside the steering wheel and in the instrument panel in front of the passenger

How does an air bag restrain?
In moderate to severe frontal or near-frontal collisions, even belted occupants can contact the steering wheel or the instrument panel The air bag supplements the protection provided by safety belts Air bags distribute the force of the impact more evenly over the occupant's upper body, stopping the occupant more gradually But air bags will not provide protection in many types of collisions, including rollovers and rear and side impacts, primarily because an occupant's motion is not toward the air bag Air bags should never be regarded as anything more than a supplement to safety belt protection in moderate to severe frontal and near-frontal collisions



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