Report Number: 040521

New Car Assessment Program (NCAP)
Frontal Barrier Impact Test

DaimlerChrysler

2004 Dodge Ram 1500 Quad Cab SLT Pickup Truck

NHTSA Number: L40300

Prepared By:

Transportation Research Center Inc.

10820 State Route 347

East Liberty, OH 43319

June 8, 2004

Final Report

Prepared For:

U. S. Department of Transportation

National Highway Traffic Safety Administration

Rulemaking

Office of Crashworthiness Standards

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Approved By: _____ Date: 6-8-04

Michael R. Tonneman, Project Manager
Transportation Research Center Inc.

FINAL REPORT ACCEPTED BY:

_____
Manager, New Car Assessment Program

_____
Date of Acceptance

_____
COTR, NCAP Frontal Impact Program

_____
Date of Acceptance

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15. Supplemental Notes

16. Abstract

A 35 mph (56.3 km/h) frontal barrier impact test was conducted on a 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck at Transportation Research Center Inc. on May 21, 2004. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301 and footwell intrusion performance. The impact velocity was 56.5 km/h. The ambient temperature at the barrier face at the time of impact was 21° C. The vehicle's maximum post-test static crush was 545 mm at the right of the vehicle's centerline. The test vehicle was equipped with a three-point continuous belt system and second generation supplemental airbags in both front outboard seating positions. With respect to FMVSS 208, "Occupant Crash Protection", the occupant injury criteria are as follows:

Measurement Description	Units	Threshold	Driver ATD	Passenger ATD
Head Injury Criteria (HIC)	N/A	1000	411	378
Max. Chest Accel. (3 ms Clip)	g's	60	39.0	41.0
Left Femur Force	Newtons	10008	2406	3449
Right Femur Force	Newtons	10008	3655	1737

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Section 1

Purpose and Test Summary of Test L40300

1.1 Purpose

This 35 mph (56.3 km/h) frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA). The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 30 mph (48.3 km/h) requirements.

The 35 mph (56.3 km/h) frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Test Procedure

1.2 Summary

A load cell barrier consisting of 36 load cells was impacted by a 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck at an impact velocity of 56.5 km/h. The test was performed by TRC Inc. on May 21, 2004.

One (1) real-time and fourteen (14) high-speed motion picture cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in this report.

Two Part 572E 50th percentile adult male anthropomorphic test devices (ATDs) were positioned in the driver and right front passenger seating positions according to the dummy placement procedures specified in the Laboratory Indicant Test Procedure.

Both ATDs were instrumented with head (primary and redundant), chest (primary and redundant), and pelvis triaxial accelerometers, chest deflection potentiometers, six-axis upper neck transducers, left and right femur load cells and lower leg instrumentation. Seat belt load cells were also placed on the driver's and passenger's lap and shoulder belts to measure dummy torso and pelvic loading. The driver (position 1) ATD (serial no. 65) and the right front passenger (position 2) ATD (serial no. 66) were calibrated prior to this test.

One hundred forty-seven (147) data channels were recorded using an onboard data acquisition system. Appendix A contains pre-test and post-test still photographs; Appendix B contains the vehicle and dummy response data traces. Appendix C contains Load Cell Barrier information. Appendix D contains the Instrumentation Data Channel assignments. Appendix E contains the Dummy Calibration data and Appendix F contains the Child Restraint System (CRS) information.

There was 100.0% windshield periphery retention and no penetration through the windshield during the impact event. There was no Stoddard solvent spilled from the vehicle's fuel system after the impact event or during any phase of the static rollover.

The vehicle's maximum static crush was 545 mm and both the driver's and passenger's doors remained closed during the impact event and were operable after the impact.

The driver's visible contact points were as follows: the driver ATD's head contacted the airbag and head restraint, the ATD's chest contacted the 3 point unibelt belt and the ATD's abdomen contacted the 3 point unibelt. The ATD's left and right knees contacted the knee bolster.

The right front passenger's visible contact points were as follows: the passenger ATD's head contacted the airbag and head restraint, the ATD's chest contacted the 3 point unibelt, and the airbag and the ATD's abdomen contacted the 3 point unibelt. The ATD's left and right knees contacted the glove box.

Occupant injury data is contained in the table below.

Occupant Data Summary

ATD Position	HIC	Clip (g)	Chest Deflection (mm)	Left Femur (N)	Right Femur (N)	Belt Spoolout (mm)
Driver	411	39.0	42	2406	3655	206
Passenger	378	41.0	33	3449	1737	257

Section 2
Occupant and Vehicle Information/Data Sheets

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Conversion Factors Used in This Report*

Quantity	Typical Application	Std. Units	Metric Units	Multiply By
Mass	Vehicle Weight	pounds	kg	.4536
Linear Velocity	Impact Velocity	mph	km/h	1.6093
Length or Distance	Measurements	inches	mm	25.4
Volume	Fuel Systems	gallons	L	3.785
Volume	Small Fluids	fluid ounces	mL	29.57
Pressure	Tire Pressures	psi	kPa	6.896
Volume	Liquid	gallons	liter	3.785
Temperature	General Use	°F	°C	=(°F-32)(5/9)
Force	Dynamic Forces	pounds	N	4.4482
Moment	Torque	ft·lbs.	Nm	1.3558

* Based on SAE Technical Standards Board Standard TSB003, May 1999.

Data Sheet No. 1
Crash Test Summary

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Primary Impact Data

Measured Parameter	Units	Value
Velocity at Impact	km/h	56.5
Test Weight	kg	2535.7
Impact Angle	degrees	0º
Average Rebound	mm	150
Maximum Static Crush	mm	545

Door Opening and Seat Track Information

Description	Driver	Passenger
Front Door Opening	Remained latched; open without tools	Remained latched; open without tools
Rear Door Opening	Remained latched; open without tools	Remained latched; open without tools
Seat Track Shift	None	None
Seat Back Failure	None	None

Test Dummy Information

Description	Driver	Passenger
Dummy Type/Serial No.	50% Male Hybrid III No. 65	50% Male Hybrid III No. 66
Head Contact	Airbag, head restraint	Airbag, head restraint
Chest Contact	3 point unibelt	3 point unibelt, airbag
Abdomen Contact	3 point unibelt	3 point unibelt
Left Knee Contact	Knee bolster	Glove box
Right Knee Contact	Knee bolster	Glove box

Motion Picture Camera Coverage

High-speed	14
Real-time	1
Total	15

Data Channels

Driver ATD Sensors	48
Right Front Passenger Sensors	48
Belt Assessment Sensors	6
Vehicle Structure Sensors	9
Rigid Barrier Load Cells	36
Total	147

Data Sheet No. 2
General Test and Vehicle Parameter Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Test Vehicle Information and Options

NHTSA No.	N/A	Anti-Lock Brakes	Yes
Make	Dodge	All Wheel Drive	No
Model	Ram 1500 Quad Cab SLT	Power Steering	Yes
Body Style	Pickup truck	Driver Front Airbag	Yes
VIN No.	1D7HA18NX4J215574	Driver Side Airbag	No
Color	White	Driver Head Airbag	No
Delivery Date	05/15/04	Driver Curtain Airbag	No
Odometer	9	Pass. Front Airbag	Yes
Dealer	Champion Jeep Dodge	Pass. Side Airbag	No
Transmission	5 speed manual	Pass. Head Airbag	No
Final Drive	Rear wheel drive	Pass. Curtain Airbag	No
Type/No. Cyl.	V/8	Pre-Tensioners	Yes
Engine Displ. (L)	4.7	Load Limiters	Yes
Engine Placement	Inline	Bucket Seats	No
Roof Rack	No	Air Conditioning	Yes
Sunroof/T-Top	No	AM/FM Cassette	Yes
Tinted Glass	Yes	Tilt Steering	Yes
Traction Control	No	Power Door Locks	Yes
Power Brakes	Yes	Power Windows	Yes
Front Disc	Yes	Power Seats	No
Rear Disc	Yes	Other	None

Data From Certification Label

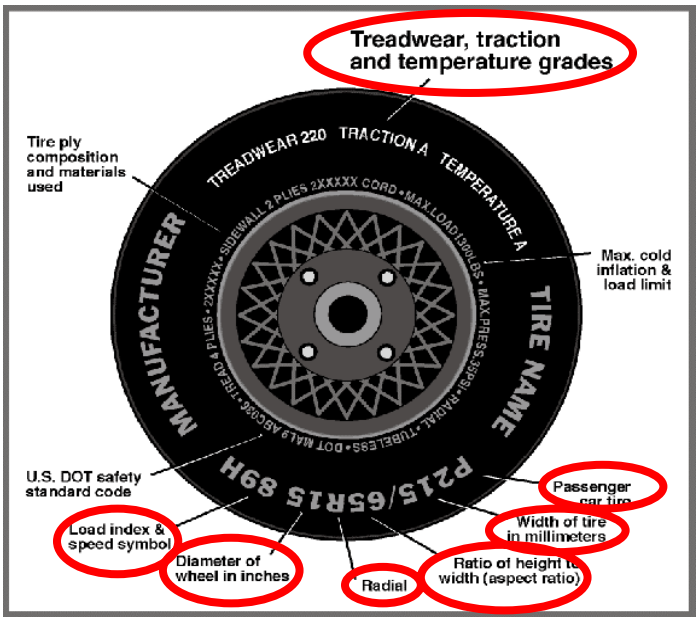
Manufactured By	DaimlerChrysler	GVWR (kg)	3017
		GAWR Front (kg)	1656
Date of Manufacture	02/04	GAWR Rear (kg)	1770

Vehicle Seating and Capacity Weight Information

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Split bench	Bench	N/A	2
Number of Occupants	3	3	N/A	6
Capacity Weight (VCW) (kg)	N/A	N/A	N/A	N/A
Cargo Weight (RCLW) (kg)	N/A	N/A	N/A	N/A

Data Sheet No. 2 (continued)
General Test and Vehicle Parameter Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



Tire Information

Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	300	300
Cold Pressure (kPa)	241	241
Recommended Tire Size	P265/70R17	P265/70R17
Tire Size on Vehicle	P265/70R17	P265/70R17
Tire Manufacturer	Goodyear	Goodyear
Treadwear Grade	360	360
Traction Grade	A	A
Temperature Grade	B	B
Tire Plies Sidewall	2	2
Tire Plies Body	4	4
Load Index/Speed Symbol	113 R	113 R
Tire Material	Polyester/Steel	Polyester/Steel
DOT Safety Code Right	T 307718-GRF-97M2MWD	T307719-GRF-97M2MWD
DOT Safety Code Left	T 307710-GRF-97M2MWD	T307722-GRF-97M2MWD

Data Sheet No. 2 (continued)
General Test and Vehicle Parameter Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Test Vehicle Weights

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	634	502	1136	720.6	562.5	1283.1
Right	kg	625	494	1119	682.2	570.4	1252.6
Ratio	%	55.8	44.2	100	55.3	44.7	100
Total	kg	1259	996	2255	1402.8	1132.9	2535.7

Target Test Weight Calculation

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	2255
Weight of 2 Part 572E ATD's	kg	152
Rated Cargo/Luggage Weight (RCLW)	kg	136
Calculated Vehicle Target Test Weight (TVTW)	kg	2543

Test Vehicle Attitude and CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	916	910	1012	1010	1577
As Tested	mm	886	880	982	978	1595

Vehicle Wheelbase (mm) 3570
Weight of ballast secured in cargo area (kg) None
Vehicle Components Removed tailgate, muffler and exhaust, 41.6 liters of stoddard, spare tire, taillights

*Ballast weight does not include cameras, instrumentation and brake abort system.

Fuel System Data
Fuel system capacity from owner's manual (l) 98.4
Usable capacity furnished by COTR (l) 98.4
Target test volume with entire fuel system filled (l) 93.5
Actual test volume with 1/3 of Usable Capacity (l) 32.8
Test Fluid Type Stoddard
Kinematic Viscosity 0.99 centistoke
Is Vehicle Fuel Pump Electric or Mechanical? Electric
If electric, does pump operate with ignition switch "On" and engine "Off"? No
Fuel System Particulars: The fuel tank is located inside the left frame rail forward of rear axle. The fuel filler neck is located in the left quarter panel. The fuel filler cap is located at the end of the fuel filler neck. The fuel lines run along the inside of the left frame rail.

Data Sheet No. 3
Post-Test Impact Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Speed Trap Data

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	55.5 to 57.1	56.5
Trap No. 1 Entry Distance	mm	<1524	306
Trap No. 1 Exit Distance	mm	<1524	51
Trap No. 2 Velocity (Redundant)	km/h	55.5 to 57.1	56.5
Trap No. 2 Entry Distance	mm	<1524	661
Trap No. 2 Exit Distance	mm	<1524	355

Vehicle Static Crush

Measured Parameter	Units	Pre-Test	Post-Test	Difference
Left Side	mm	5660	5311	349
Center	mm	5775	5231	544
Right Side	mm	5650	5288	362

Vehicle Rebound From Flat Rigid Barrier

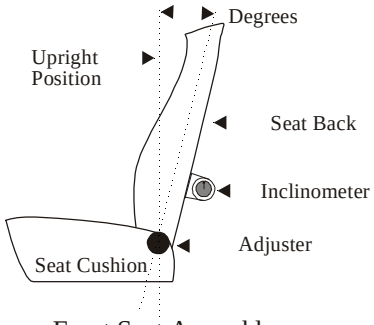
Measured Parameter	Units	Value
Left Side	mm	150
Center	mm	135
Right Side	mm	165
Average	mm	150

Data Sheet 4
Test Vehicle Information

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Nominal Design Riding Position

The driver and passenger seat backs are positioned to the manufacturer's designated angle. The procedure is as follows: A special tool with pointed probes is inserted through the fabric to make contact with the rigid portion of the lower seat frame assembly, approximately 13 inches above the pivot point of the seat back. An inclinometer is placed against the flat surface of the tool and the seat back angle is measured.



Front Seat Assembly
Left Side View

Seat Back Angles

	Degrees
Driver w/ seated dummy	22.1
Passenger w/seated dummy	22

Seat Fore/Aft Positions

The first or forward most position is counted as number one (1). The fore/aft position is set aft of the middle position for both the driver and passenger.

Seat Fore/Aft Positioning

	Total Fore/Aft Travel	Placed in Position #
Driver's Seat	235 mm	117.5 mm
Passenger's Seat	235 mm	117.5 mm

Seat Belt Upper Anchorage

Position number one (1) is the uppermost position.

Seat Belt Upper Anchorage

	Total # of Positions	Placed in Position #
Driver's Seat	4	1 down from top
Passenger's Seat	4	1 down from top

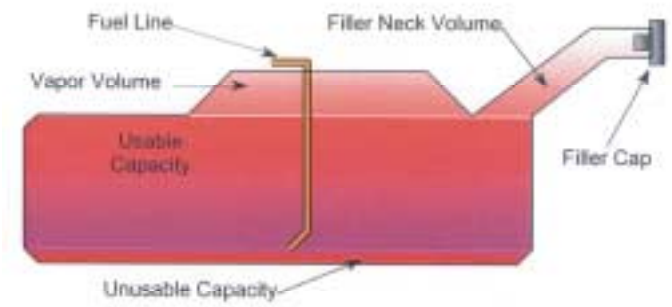
Data Sheet 4 (continued)
Test Vehicle Information

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Fuel Tank Capacity

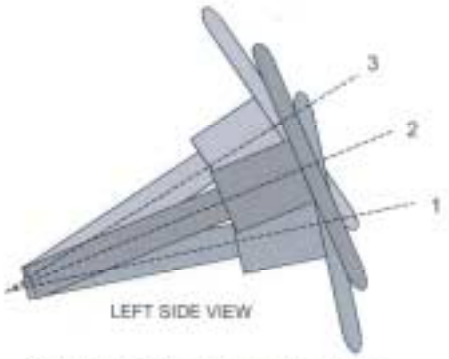
	Liters
Usable Capacity of "Standard Tank"	98.4
Usable Capacity of "Optional Tank"	N/A[1]
Usable Capacity used for FMVSS 301	90.5 to 92.5
Actual Amount of Stoddard Used	32.8
1/3 of Usable Capacity	32.8

The test vehicle is equipped with an electric fuel pump. The fuel pump runs for approximately 2 sec. After the ignition is placed in the "On" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear quarter panel. The standard/optional fuel tank is located inside the left frame rail forward of the rear axle.



VEHICLE FUEL TANK ASSEMBLY

Steering Column Adjustment
Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when moved through its full range of motion. An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed on the plate and the angle is measured.



STEERING COLUMN ASSEMBLY

Steering Column Positions

	Degrees
Lowermost position No. 1	16.4
Geometric center position No. 2	26.0
Uppermost position No. 3	35.6

[1] Test vehicle not equipped with optional tank.

Data Sheet No. 5
Dummy Positioning In Vehicle

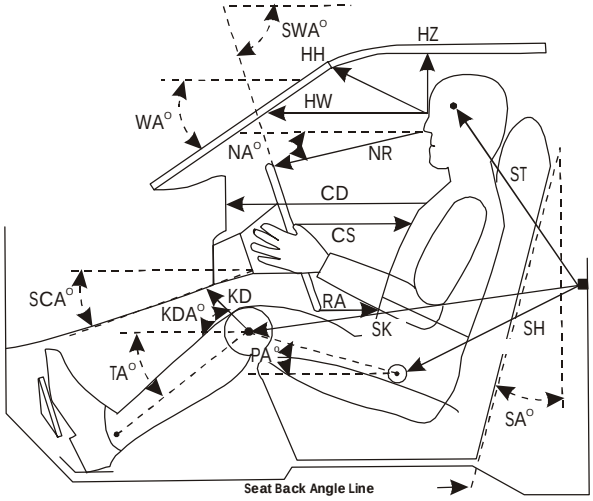
Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Test Dummy Positioning Measurements

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (deg.)	Length (mm)	Angle (deg.)
WA	Windshield Angle	N/A	30.9	N/A	N/A
SWA	Steering Wheel Angle	N/A	64.0	N/A	N/A
SCA	Steering Column Angle	N/A	26.0	N/A	N/A
SA	Seat Back Angle	N/A	22.1	N/A	22.0
HZ	Head to Roof (Z)	265	90	255	90
HH	Head to Header	455	N/A	430	N/A
HW	Head to Windshield	725	N/A	700	N/A
HR	Head to Side Header (V)	220	N/A	210	N/A
NR	Nose to Rim Mm	440	13.6	N/A	N/A
CD	Chest to Dash	565	N/A	580	N/A
CS	Chest to Steering Hub	362	N/A	N/A	N/A
RA	Rim to Abdomen	205	N/A	N/A	N/A
KDL	Left Knee to Dash	170	35.1	175	N/A
KDR	Right Knee to Dash	160	N/A	185	26
PA	Pelvic Angle	N/A	23.6	N/A	20.7
TA	Tibia Angle	N/A	59.7	N/A	53.9
KK	Knee to Knee (Y)	325	N/A	265	N/A
ST	Striker to Head	660	-80.1	660	-82.7
SK	Striker to Knee	615	-9.2	610	-7.2
SH	Striker to H-point	230	0.6	220	0.8
SHY	Striker to H-point (Y dir.)	235	N/A	230	N/A
HS	Head to side window	330	N/A	330	N/A
HD	H-point to door(Y)	165	N/A	165	N/A
AD	Arm to door(Y)	140	N/A	150	N/A

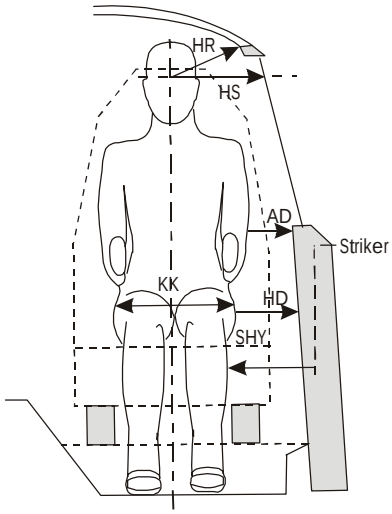
Data Sheet No. 5 (continued)
Dummy Positioning In Vehicle

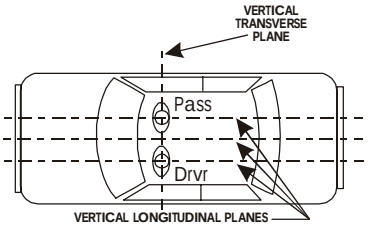
Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



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

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

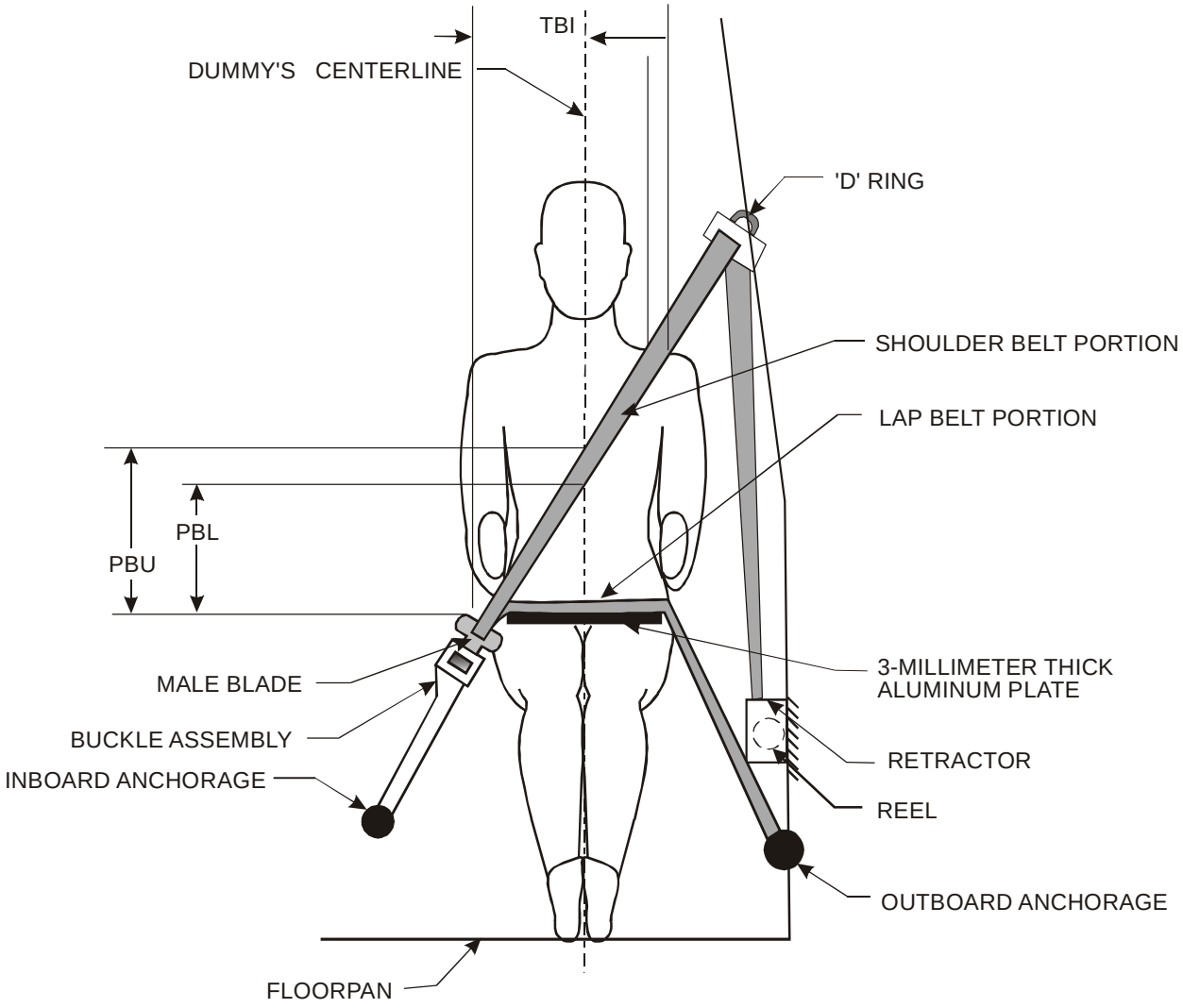




DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS

Data Sheet No. 6
Seat Belt Positioning Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



Seat Belt Positioning Measurements

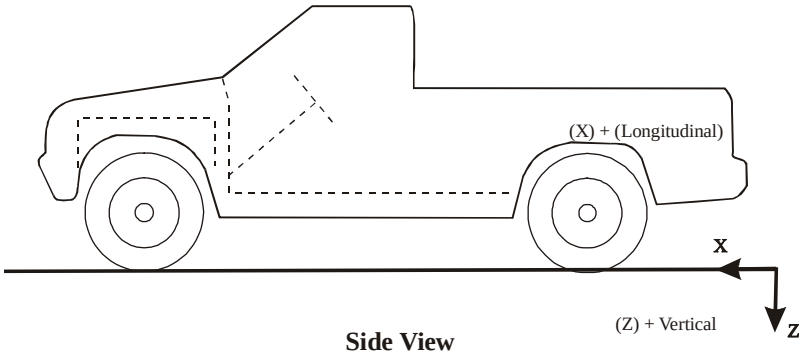
Measured Parameter	Units	Driver	Passenger
TBI - Dummy C/L to Lap/Shoulder Belt Intersect	mm	200	205
PBU - Top surface of reference to belt upper edge	mm	330	350
PBL - Top surface of reference to belt lower edge	mm	260	260
Lap Belt Tension	Newtons	13	13
Shoulder Belt Tension	N/A	Retractor	Retractor

Data Sheet No. 7
Vehicle Accelerometer Locations and Data Summary

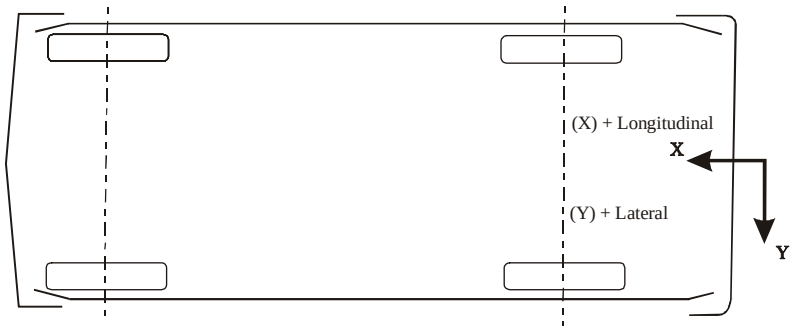
Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Vehicle Accelerometer Peak Data and Pre-Test Locations

No.	Accelerometer Location	Measurements (mm)			Peak Values				
		X	Y	Z	Units	Max.	Time	Min.	Time
1	Left Rear Floorpan/Door Sill	2890	-745	-588	g's				
	Longitudinal					2.6	147.9	-39.5	16.1
	Vertical					15.6	24.1	-15.4	18.4
2	Right Rear Floorpan/ Door Sill	2890	740	-591	g's				
	Longitudinal					2.3	138.5	-40.2	16.2
	Vertical					22.4	24.7	-14.5	29.8
3	Engine Top	4893	-215	-945	g's	39.7	15.3	---[1]	---[1]
4	Engine Bottom	4545	65	-305	g's	6.3	159.3	-38.7	44.8
5	Right Brake Caliper	4648	726	-396	g's	---[1]	---[1]	---[1]	---[1]
6	Instrument Panel	3430	0	-1337	g's	16.8	97.3	-50.6	30.0
7	Left Brake Caliper	4648	-726	-394	g's	16.3	52.8	-82.4	44.9



Side View



Bottom View

[1] See data acquisition explanations.

Data Sheet No. 8

Hybrid III ATD Injury Criteria and Sensor Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Head Primary Peak Accelerations

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Head CG	X	g's	9.3	249.7	-46.1	80.6	4.0	302.6	-48.9	79.6
Head CG	Y	g's	5.3	55.6	-3.3	39.4	6.0	38.8	-9.5	85.6
Head CG	Z	g's	24.6	74.1	-2.2	133.8	25.7	76.3	-1.6	148.1
Head CG Resultant	N/A	g's	51.6	75.7	N/A	N/A	54.3	78.5	N/A	N/A

Chest Primary Peak Accelerations

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Chest CG	X	g's	2.9	286.7	-39.5	79.3	1.4	188.9	-42.3	75.6
Chest CG	Y	g's	4.8	93.0	-3.9	54.9	4.1	41.6	-9.1	82.3
Chest CG	Z	g's	10.1	52.7	-8.5	103.9	12.1	77.9	-9.3	110.4
Chest CG Resultant	N/A	g's	39.8	79.2	N/A	N/A	43.5	75.6	N/A	N/A

Femur Peak Forces

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Left Femur	Z	Newtons	982.6	41.0	-2406.0	49.1	1071.8	41.3	-3448.6	65.3
Right Femur	Z	Newtons	820.0	41.2	-3655.2	49.5	576.4	41.2	-1737.1	57.9

Seat Belt Sensor Peak Values

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Shoulder Belt Pullout	N/A	mm	205.9	100.1	-191.1	309.3	257.5	95.5	-299.8	233.2
Shoulder Belt Stretch	N/A	mm/cm	0.0[1]	0.0[1]	0.0[1]	0.0[1]	0.0[1]	0.0[1]	0.0[1]	0.0[1]
Lap Belt Force	N/A	Newtons	5838.5	53.6	-145.1	74.3	6970.4	54.3	-7.4	13.7
Shoulder Belt Force	N/A	Newtons	4459.1	43.2	-12.1	240.4	4186.5	74.8	-24.0	256.4

Primary Head Injury Criteria (HIC)

Location	Driver				Passenger			
	HIC	T^1	T^2	Avg. g	HIC	T^1	T^2	Avg. g
Head CG Primary	411	58.8	94.8	41.9	378	63.1	99.1	40.6

Primary Chest Clip (3ms)

Location	Driver			Passenger		
	Clip	T^1	T^2	Clip	T^1	T^2
Chest CG Primary	39.0	77.5	80.5	41.0	74.2	77.2

[1] Not used. Test vehicle equipped with pretensioners.

Data Sheet No. 8 (continued)
Hybrid III ATD Injury Criteria and Sensor Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Pelvic Peak Accelerations

Location	Axis	Units	Driver				Passenger			
			Max.	Time	M-in.	Time	Max.	Time	Min.	Time
Pelvis X	X	g's	3.7	155.5	-62.7	48.8	3.9	122.9	-57.4	64.1
Pelvis Y	Y	g's	9.7	79.6	-6.2	49.2	6.6	50.3	-7.9	77.6
Pelvis Z	Z	g's	2.0	304.4	-16.5	81.0	1.7	270.7	-18.1	81.1
Pelvis Resultant	N/A	g's	64.3	48.8	N/A	N/A	58.7	64.1	N/A	N/A

Upper Neck Peak Forces and Moments

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Neck Force	X	Newtons	331.1	78.0	-583.6	137.9	125.9	284.1	-609.1	143.5
Neck Force	Y	Newtons	155.2	124.3	-169.4	84.3	130.0	75.7	-106.8	113.9
Neck Force	Z	Newtons	1511.8	74.1	-179.7	289.6	1685.0	76.4	-76.7	133.2
Neck Force Resultant	N/A	Newtons	1546.4	74.1	-2.4	22.6	1690.6	76.4	N/A	N/A
Neck Moment	X	N·m	14.7	60.7	-4.2	101.7	6.0	59.2	-14.0	73.3
Neck Moment	Y	N·m	39.8	130.6	-21.9	288.5	40.3	137.9	-25.3	47.5
Neck Moment	Z	N·m	2.9	134.4	-6.9	91.0	11.7	101.5	-6.0	153.2
Neck Moment Resultant	N/A	N·m	41.1	130.6	N/A	N/A	40.7	137.9	N/A	N/A

Foot Peak Accelerations

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Left Foot Aft	X	g's	4.2	81.4	-90.1	39.0	12.4	79.7	-83.3	49.1
Left Foot Aft	Z	g's	16.6	49.5	-20.9	63.0	238.8	28.4	-23.3	68.3
Left Foot Fore	Z	g's	22.9	45.6	-66.1	35.7	97.8	38.3	-60.0	43.6
Right Foot Aft	X	g's	15.8	58.2	-118.5	43.2	12.6	79.7	-123.5	46.0
Right Foot Aft	Z	g's	5.8	56.1	-67.8	41.6	18.5	47.5	-25.0	39.5
Right Foot Fore	Z	g's	31.9	36.2	-196.2	41.1	55.8	35.0	-135.4	43.5

Upper and Lower Tibia Peak Forces and Moments

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Left Upper Moment	X	N·m	28.3	43.9	-24.4	200.9	28.5	182.0	-97.8	55.1
Left Upper Moment	Y	N·m	21.8	114.8	-91.8	64.3	90.4	67.6	-53.3	41.1
Left Upper Force	Z	Newtons	166.5	110.5	-1185.7	39.4	213.0	112.1	-1507.6	63.5
Right Upper Moment	X	N·m	54.2	57.6	-21.8	173.6	21.4	145.4	-44.0	58.9
Right Upper Moment	Y	N·m	17.7	103.5	-127.0	67.9	71.4	68.0	-26.2	44.4
Right Upper Force	Z	Newtons	191.3	106.7	-2859.6	67.0	216.9	108.6	-2460.7	47.3
Left Lower Moment	X	N·m	33.2	74.9	-6.4	96.1	36.2	50.4	-35.0	67.3
Left Lower Moment	Y	N·m	6.3	90.5	-44.3	61.8	21.3	93.1	-25.2	44.4
Left Lower Force	Z	Newtons	107.1	116.7	-1701.4	39.4	133.7	113.9	-1314.8	87.2
Right Lower Moment	X	N·m	8.6	43.8	-6.6	174.2	46.0	65.1	-13.2	56.1
Right Lower Moment	Y	N·m	15.8	88.0	-70.9	44.5	53.8	70.7	-38.1	44.1
Right Lower Force	Z	Newtons	87.3	105.4	-3080.2	66.5	151.1	110.5	-2418.6	45.5

Data Sheet No. 8 (continued)
Hybrid III ATD Injury Criteria and Sensor Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Chest Peak Displacements

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Chest CG	X	mm	0.0	18.9	-42.2	86.9	0.0	17.7	-32.6	80.6

Head Redundant Peak Accelerations

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Head CG	X	g's	9.6	249.3	-46.4	80.2	4.0	302.7	-47.5	78.9
Head CG	Y	g's	4.5	53.0	-3.3	249.3	5.3	38.4	-10.5	85.6
Head CG	Z	g's	24.8	74.0	-2.0	133.4	26.3	75.8	-1.6	148.2
Head CG Resultant	N/A	g's	51.8	75.2	N/A	N/A	53.5	78.9	N/A	N/A
Head Left	X	g's	10.7	247.8	-45.7	76.3	4.4	302.4	-53.3	78.4
Head Left	Z	g's	25.3	74.7	-3.4	133.3	26.7	74.4	-1.5	148.0
Head Front	Y	g's	9.2	54.9	-3.8	36.8	10.0	38.5	-13.0	35.4
Head Front	Z	g's	30.6	54.4	-8.9	134.3	29.6	63.6	-6.4	149.3
Head Top	X	g's	17.2	245.2	-52.1	75.8	6.8	274.0	-46.9	86.2
Head Top	Y	g's	8.5	62.5	-6.3	247.6	3.8	42.5	-9.5	89.4

Chest Redundant Peak Accelerations

Location	Axis	Units	Driver				Passenger			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Chest CG	X	g's	2.9	286.7	-39.1	79.1	1.5	189.3	-41.1	75.6
Chest CG	Y	g's	4.5	93.4	-4.5	52.6	4.4	41.3	-9.3	82.3
Chest CG	Z	g's	9.6	52.6	-8.2	103.2	11.8	77.9	-9.4	110.4
Chest CG Resultant	N/A	g's	39.4	79.0	N/A	N/A	42.6	75.6	N/A	N/A

Redundant Head Injury Criteria (HIC)

Location	Driver				Passenger			
	HIC	T^1	T^2	Avg. g	HIC	T^1	T^2	Avg. g
Head CG Redundant	413	58.8	94.8	42.0	353	62.6	98.6	39.5

Redundant Chest Clip (3ms)

Location	Driver			Passenger		
	Clip	T^1	T^2	Clip	T^1	T^2
Chest CG Redundant	38.7	82.8	85.8	39.8	74.2	77.2

Data Sheet No. 9
Seat Belt Assessment Test Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Seat Belt Positioning Measurements

Measurement Description	Units	Driver	Passenger
TBI - Dummy C/L to Lap/Shoulder Belt Intersect	mm	200	205
PBU - Top surface of reference to belt upper edge	mm	330	350
PBL - Top surface of reference to belt lower edge	mm	260	260
Lap Belt Tension	Newtons	13	143
Shoulder Belt Tension	N/A	Retractor	Retractor

Seat Belt Positioning Measurements

Measurement Description	Units	Driver	Passenger
Retractor Reel to "D" Ring	mm	757	757
Shoulder Belt Length as Measured on ATD	mm	790	800
Lap Belt Length as Measured on ATD	mm	870	840
Remainder of Belt on Reel	mm	N/A[2]	N/A[2]
Total Belt Length for Continuous Webbing Systems	mm	2312	2464

Shoulder Belt Spool-Off Data

Measurement Description	Units	Driver	Passenger
As Determined Mechanically	mm	N/A	N/A
As Determined Electronically	mm	205.9	257.5

Belt Stretch Data

Measurement Description	Units	Driver	Passenger
Electronically Between Belt Load Cell and "D" Ring	mm/cm	0[1]	0[1]
Mechanically	mm/cm	0[1]	0[1]

[1] Not used. Test vehicle equipped with pretensioners.
[2] Not measured.

Data Sheet No. 10
Summary of FMVSS 212 Test Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

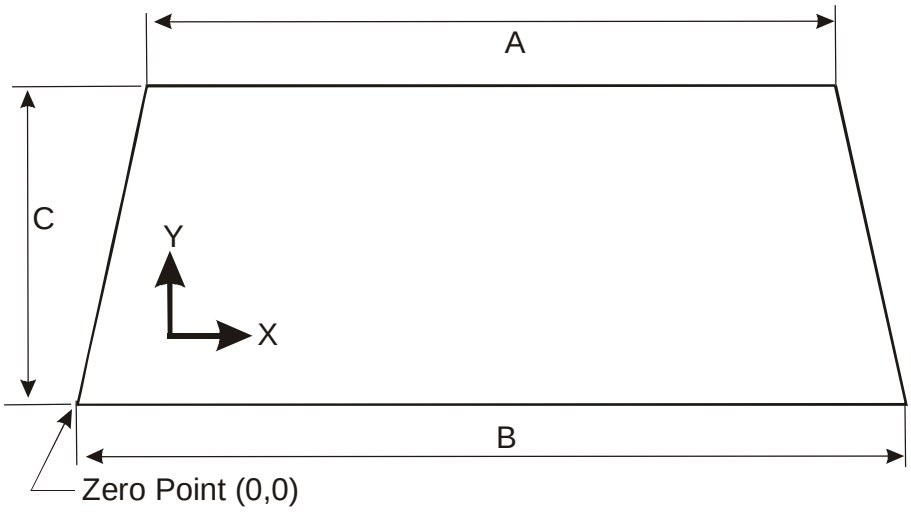
Windshield Mounting Details: Plastic trim

The standard requires that the post-test periphery retention measurement be a minimum of 75% of the pre-test total periphery measurement for vehicles not equipped with occupant passive restraints and 50% for each side of windshield for vehicles that are equipped with occupant passive restraints.

Temperature of windshield molding during test: 21 º C

Windshield Periphery Measurements

Measurement	Pre-Test (mm)	Post-Test (mm)	% of Retention
Left Side	2422.5	2422.5	100.0
Right Side	2422.5	2422.5	100.0
Total	4845	4845	100.0



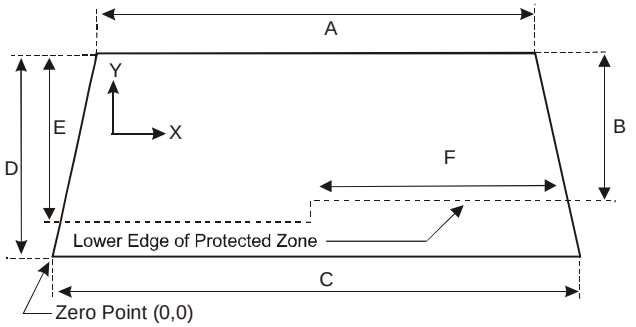
Front View of Windshield

Windshield Dimensions

Item	Units	Segment Length	Molding Width
A	mm	1420	0
B	mm	1785	0
C-Left	mm	820	26
D-Left	mm	820	26

Data Sheet No. 11
Windshield Zone Intrusion FMVSS 219 Data (Partial)

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



Front View of Windshield

Windshield and Protected Zone

Item	Units	Value
A	mm	1420
B	mm	430
C	mm	1785
D	mm	820
E	mm	556
F	mm	680

Area of Protected Zone Failures

A. Provide coordinates of the area that the protected zone was penetrated more than .25 inch by a vehicle component other than one that is normally in contact with the windshield.

X	Y
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

B. Provide coordinates of the area beneath the protected zone that the inner surface was penetrated by a vehicle component.

X	Y
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Data Sheet No. 12
FMVSS 301 Fuel System Integrity Post-Impact Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Test Time: 1401 Temperature: 21 ºC

Stoddard Solvent Spillage Measurements:

A. From impact until vehicle motion ceases: 0 oz.
(Maximum Allowable = 1 ounce)

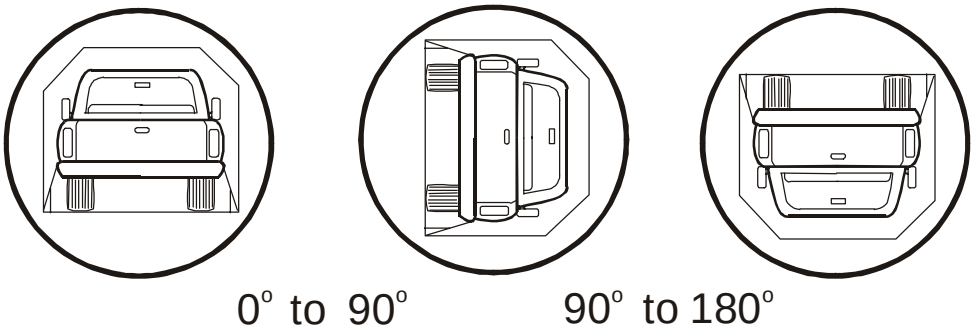
B. For the 5-minute period after motion ceases 0 oz.
(Maximum Allowable = 5 ounces)

C. For the following 25 minutes 0 oz.
(Maximum Allowable = 1 oz/minute)

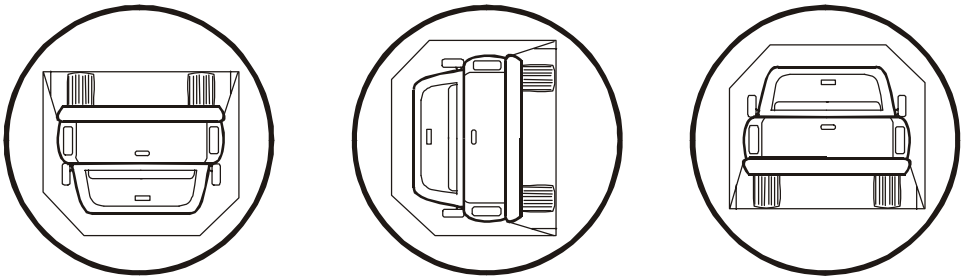
D. Spillage Location Details: None

Data Sheet No. 13
FMVSS 301 Static Rollover Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



0° to 90° 90° to 180°



180° to 270° 270° to 360°

1. The specified fixture rollover rate for each 90º of rotation is 60 to 120 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. No solvent leakage occurred during the rollover.

Data Sheet No. 13 (continued)
FMVSS 301 Static Rollover Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Solvent Collection Time Table in Seconds

Test Phase	Rotation Time	Hold Time	Total Time
0º to 90º	120	300	420
90º to 180º	120	300	420
180º to 270º	120	300	420
270º to 360º	120	300	420

FMVSS 301 Spillage Table Requirement (oz.)

First Five Minutes	5.0
Sixth Minute	1.0
Seventh Minute	1.0
Eight Minute	N/A[1]

Actual Test Vehicle Solvent Spillage Table (oz.)

Test Phase	First 5 Minutes	Sixth Minute	Seventh Minute	Eight Minute
0º to 90º	0	0	0	N/A[1]
90º to 180º	0	0	0	N/A[1]
180º to 270º	0	0	0	N/A[1]
270º to 360º	0	0	0	N/A[1]

Solvent Spillage Location Table

Test Phase	Spillage Location
0º to 90º	None
90º to 180º	None
180º to 270º	None
270º to 360º	None

[1] Test is concluded after 7th minute.

Data Sheet No. 14
Vehicle Measurements

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Vehicle Measurement Table

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
1	Total Length of Vehicle at Centerline	mm	5775	5231	544
2	Rear Surface of Vehicle to Front of Engine	mm	5005	4971	34
3	Rear Surface of Vehicle to Firewall Centerline	mm	4635	4636	-1
4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	mm	4280	4264	16
5	Rear Surface of Vehicle. to Upper Leading Edge of Left Door	mm	4280	4267	13
6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	mm	4210	4180	30
7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	mm	4217	4190	27
8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	mm	3137	3123	14
9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	mm	3138	3126	12
10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	mm	3133	3105	28
11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	mm	3145	3120	25
12	Rear Surface of Vehicle to Bottom of Right " A " Pillar	mm	4167	4162	5
13	Rear Surface of Vehicle to Bottom of Left " A " Pillar	mm	4167	4149	18
14	Rear Surface of Vehicle to Firewall on Right Side	mm	4620	4640	-20
15	Rear Surface of Vehicle to Firewall on Left Side	mm	4635	4650	-15
16	Rear Surface of Vehicle to Steering Column	mm	3790	3722	68
17	Center of Steering Column to Left " A " Pillar	mm	285	275	10
18	Center of Steering Column to Headliner	mm	440	480	-40
19	Rear Surface of Vehicle to Right Side of Front Bumper	mm	5650	5288	362
20	Rear Surface of Vehicle to Left Side of Front Bumper	mm	5660	5311	349
21	Length of Engine Block	mm	500	500	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	mm	4025	4020	5
CD	Rear Surface of Vehicle to Center of Dash Panel	mm	3995	3957	38
LD	Rear Surface of Vehicle to Left Side of Dash Panel	mm	3985	3981	4

All distance measurements are in millimeters.

Data Sheet No. 14 (continued)
Vehicle Measurements

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

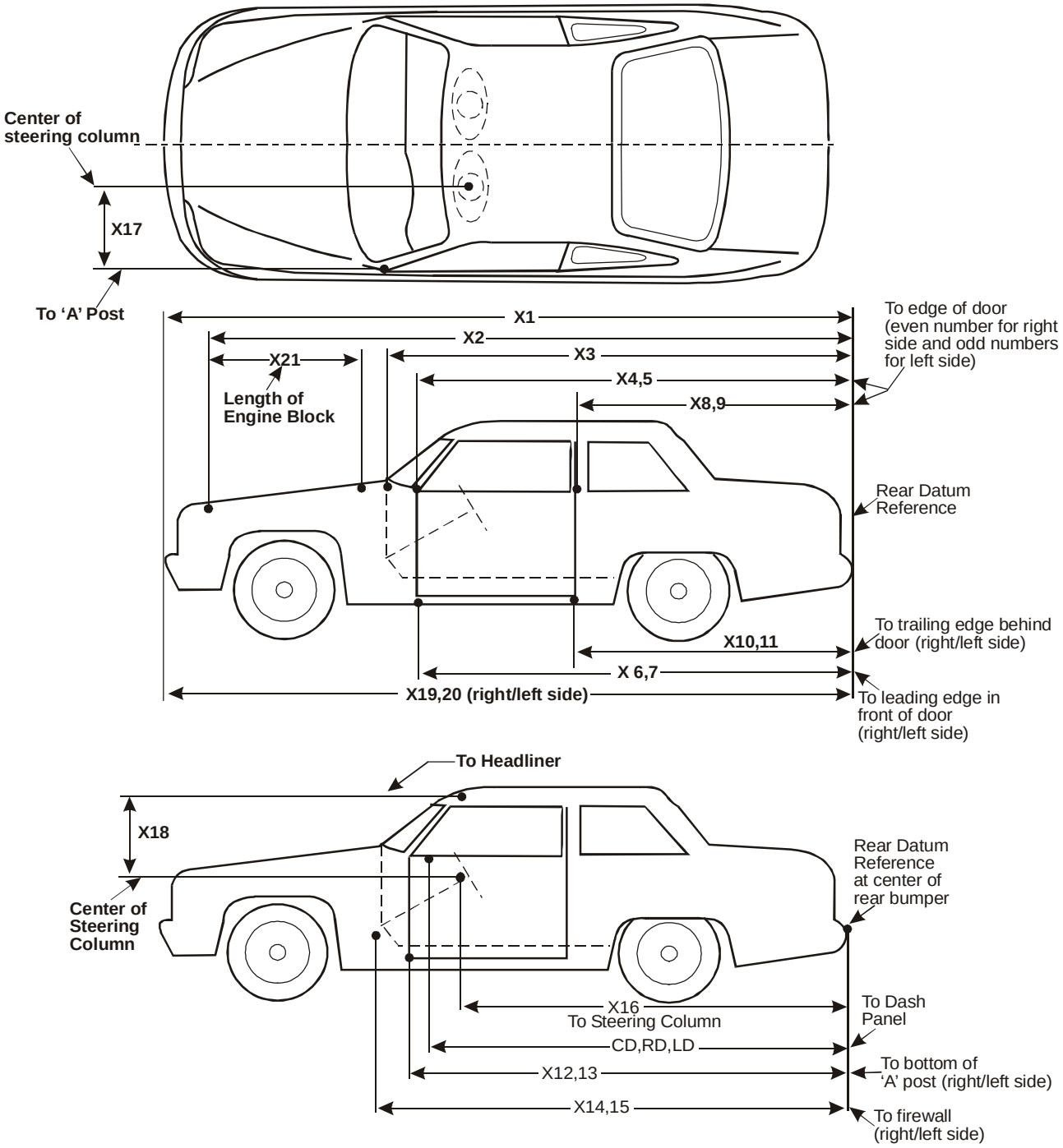
Vehicle Structural Measurements

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
1	Total Length	mm	5775	5231	544
2	Total Width	mm	2030	2025	5
3	Bumper Top Height	mm	541	507	34
4	Bumper Bottom Height	mm	411	325	86
5	Longitudinal Member Top Height	mm	634	553	81
6	Longitudinal Member Bottom Height	mm	328	395	-67
7	Distance Between Longitudinal Members	mm	920	910	10
8	Longitudinal Member Width	mm	70	60	10
9	Engine Top Height	mm	1014	946	68
10	Engine Bottom Height	mm	469	233	236
11	Engine and Gearbox Width	mm	450	450	0
12	Front Bumper to Engine Distance	mm	737	444	293
13	Front Shock Absorber Fixing Height	mm	577	542	35
14	Bonnet Leading Edge Height	mm	1037	825	212
15	Front Shock Absorber Fixing Width	mm	980	1046	-66
16	Front Bumper to Front Axle Distance	mm	977	595	382
17	Front Axle to A Pillar Distance	mm	660	580	80
18	A Pillar to B Pillar Distance	mm	1000	1000	0
19	B Pillar to Rear Axle Distance	mm	1888	1933	-45
20	B Pillar to C Pillar Distance	mm	1770	1785	-15
21	Roof Sill Bottom Height	mm	1726	1725	1
22	Roof Sill Top Height	mm	1804	1632	172
23	Floor Sill Bottom Height	mm	481	377	104
24	Floor Sill Top Height	mm	526	427	99

All distance measurements are in millimeters.

Data Sheet No. 14 (continued)
Vehicle Measurements

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



Data Sheet No. 15
Camera Locations

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Vehicle Camera Measurement Table

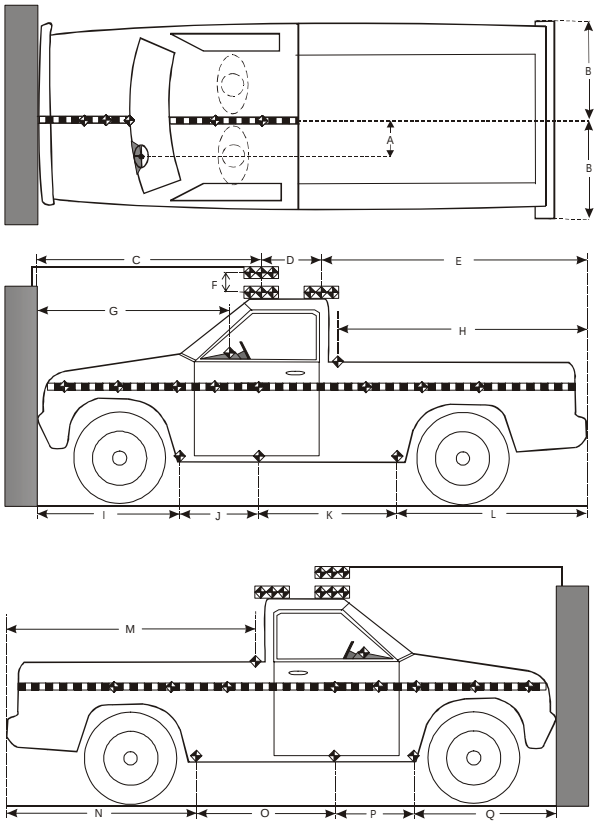
No.	Camera View	Location (mm)			Angle (deg.)	Film Plane to Head	Lens (mm)	Film Speed (fps)
		X	Y	Z				
1	Real-time					N/A	Zoom	30
2	Left side barrier face to rear of front seatbacks	520	9750	1290	-2.0	9300	25	1000
3	Left side A-pillar occupant compartment	1300	7400	1500	-0.4	6800	75	1000
4	Left side B-pillar angle	5500	3900	2060	-7.9	4450	50	1000
5	Left side steering column	2300	5050	2280	-10.9	4500	25	1000
6	Left side	2350	5050	1430	-3.9	4450	25	1000
7	Right side wide	2000	9100	1050	0.6	8500	12.5	1000
8	Right side A-pillar occupant compartment	1200	8000	1310	1.5	7500	70	1000
9	Right side B-pillar angle	4850	3500	2070	-8.0	3800	50	1000
10	Right side at door view	1400	7150	1130	-0.3	6650	Zoom	1000
11	Overhead front	1120	0	5650	-85.6	N/A	13	1000
12	Barrier driver	0	350	2300	-35.6	2400	17	1000
13	Barrier passenger	0	350	2300	-40.0	2400	13	1000
14	Pit front	640	70	590	90.0	N/A	13	1000
15	Pit rear	3540	100	620	89.3	N/A	13	1000

X = Barrier Face Y = Monorail Centerline Z = Ground

Data Sheet No. 16
Photographic Reference Target Locations

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

All Dimensions in (mm)	
Item	Value
A	460
B	720
C	610
D	1705
E	2876
F	4502
G	1220
H	1251
I	2310
J	6215
K	3565
L	3257
M	2890
N	2310
O	1237
P	1220
Q	3278
R	3553
S	6205



Data Sheet No. 17
Vehicle Intrusion Measurements

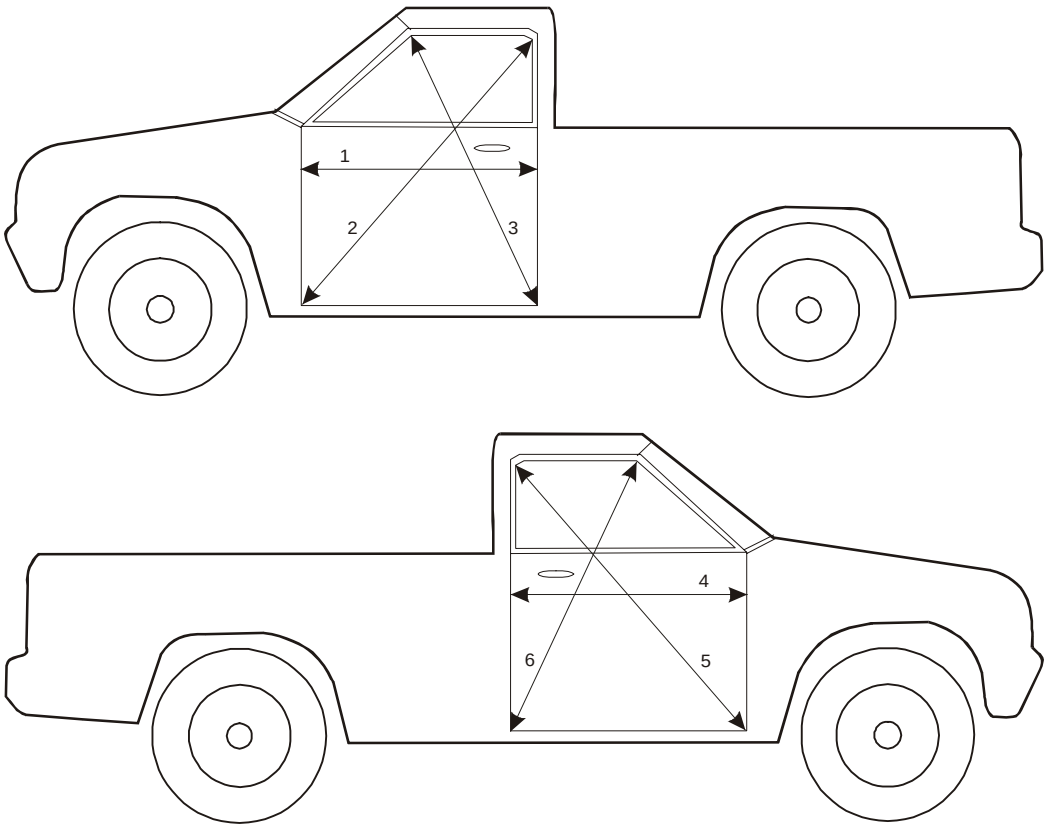
Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Door Opening Width Table

Item	Description	Units	Pre-Test	Post-Test	Difference
1	Left Front Side to Rear Side	mm	990	995	-5
2	Left Lower Front Corner to Upper Rear Corner	mm	1595	1600	-5
3	Left Lower Rear Corner to Upper Front Corner	mm	1260	1270	-10
4	Front Side to Rear Side	mm	980	978	2
5	Right Lower Front Corner to Upper Rear Corner	mm	1600	1596	4
6	Right Lower Rear Corner To Upper Front Corner	mm	1260	1264	-4

Wheelbase Measurement Table

Item	Description	Units	Pre-Test	Post-Test	Difference
C	Left Side Wheelbase	mm	3570	3545	25
F	Right Side Wheelbase	mm	3570	3560	10



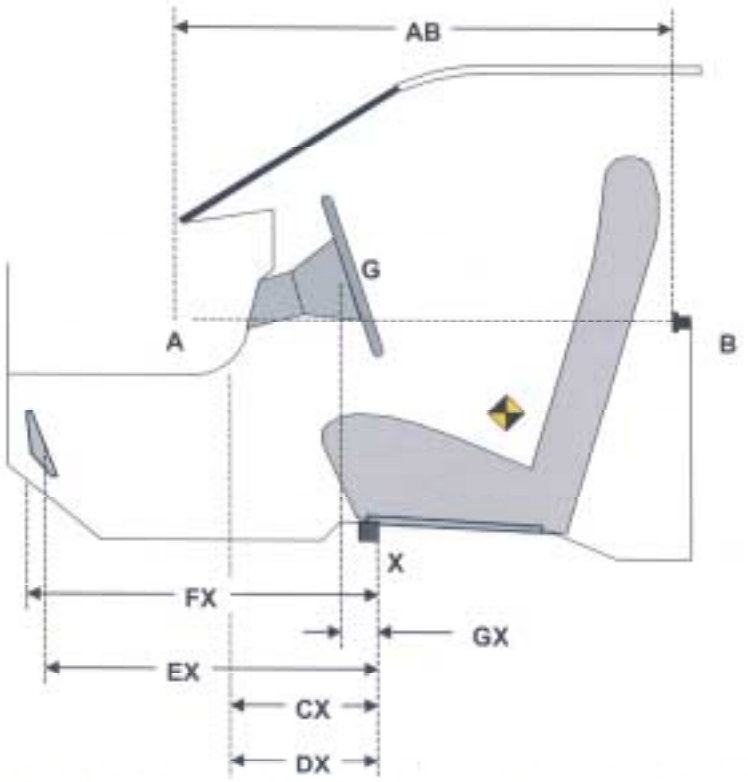
Data Sheet No. 17 (continued)
Vehicle Intrusion Measurements

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Driver Compartment Intrusion Table

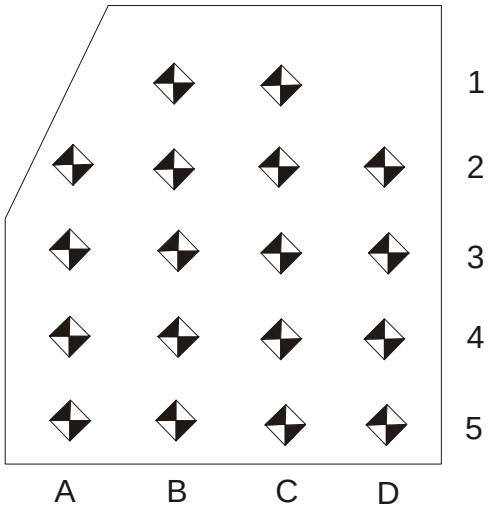
Item	Description	Units	Pre-Test	Post-Test	Difference
AB	Door Opening (Inside Window Jam)	mm	990	995	-5
CX	Left Knee Bolster to X	mm	340	360	-20
DX	Right Knee Bolster to X	mm	350	366	-16
EX	Brake Pedal to X	mm	493	501	-8
FX	Foot Rest to X	mm	643	643	0
GX	Center of Steering Wheel Hub to X	mm	61	79	-18

X = Left Front Seat Outboard Anchor Bolt Head



Data Sheet No. 17 (continued)
Vehicle Intrusion Measurements

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



Measurement reference point for X and Z-axis is the forward outboard seat mounting bolt.

Columns A through D are evenly spaced.

Rows 1 and 2 are on the toe kick portion of the floor pan. Rows 3, 4 and 5 are located on the most level portion of the floor pan.

Row 3 will be at the intersection of the toe kick and the level sections of the floor pan.

Driver Floor Pan X-Axis

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1		4439	4426			4435	4420			4	6	
2	4308	4300	4301	4308	4303	4296	4294	4301	5	4	7	7
3	4137	4139	4139	4142	4134	4135	4133	4136	3	4	6	6
4	3961	3965	3976	3970	3957	3960	3970	3966	4	5	6	4
5	3786	3779	3782	3781	3783	3778	3779	3777	3	1	3	4

Driver Floor Pan Z-Axis

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1		-121	-112			-109	-104			2	8	
2	-58	-52	-53	-66	-43	-39	-45	-59	15	13	8	7
3	27	25	25	24	42	38	36	34	-15	-13	11	10
4	32	31	30	31	47	46	43	43	-15	15	13	-12
5	27	27	29	28	46	45	46	43	-19	-18	-17	-15

Data Sheet No. 17 (continued)
Vehicle Intrusion Measurements

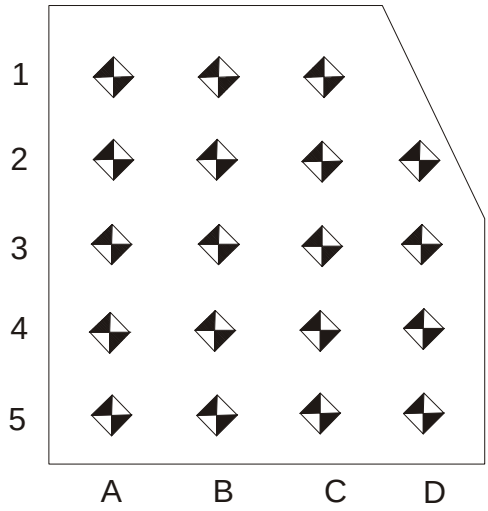
Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Measurement reference point for X and Z-axis is the forward outboard seat mounting bolt.

Columns A through D are evenly spaced.

Rows 1 and 2 are on the toe kick portion of the floor pan. Rows 3, 4 and 5 are located on the most level portion of the floor pan.

Row 3 will be at the intersection of the toe kick and the level sections of the floor pan.



Passenger Floor Pan X-Axis

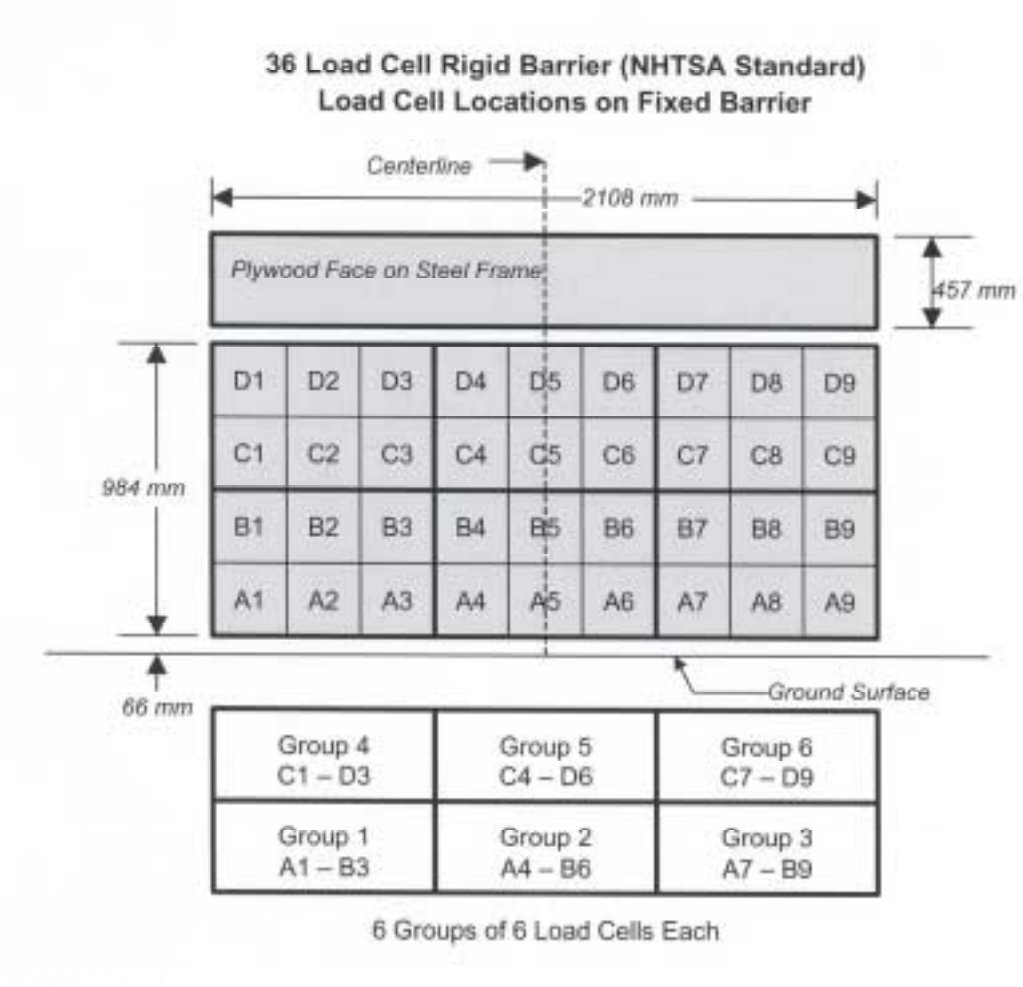
	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	4380	4429	4445		4361	4417	4436		19	12	9	
2	4280	4312	4311	4323	4260	4297	4303	4317	20	15	8	6
3	4155	4180	4171	4179	4139	4168	4166	4175	16	12	5	4
4	4006	3997	4000	4004	3995	3989	3995	4000	11	8	5	4
5	3794	3799	3798	3802	3784	3793	3792	3797	10	6	6	5

Passenger Floor Pan Z-Axis

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-233	-178	-133		-230	-182	-135		3	-4	-2	
2	-166	-75	-49	-57	-171	-78	-49	-58	5	-3	0	-1
3	-84	21	28	29	-84	26	29	30	0	-5	-1	-1
4	35	32	35	36	44	39	40	39	-9	-7	-5	-3
5	31	32	31	31	42	43	40	38	-11	-11	-9	-7

Data Sheet No. 18
Fixed Barrier Load Cell Locations

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



The data is presented in Appendix C with the following requirements:

1.) Data from the 36 individual load cells.

2.) Sum data from 6 groupings shown above (6 cells/group)

3.) Total or sum of all 36 individual load cells.

4.) Sum for all 36 individual load cells vs. vehicle dynamic crush.

Data Sheet No. 19
Accident Investigation Division Data

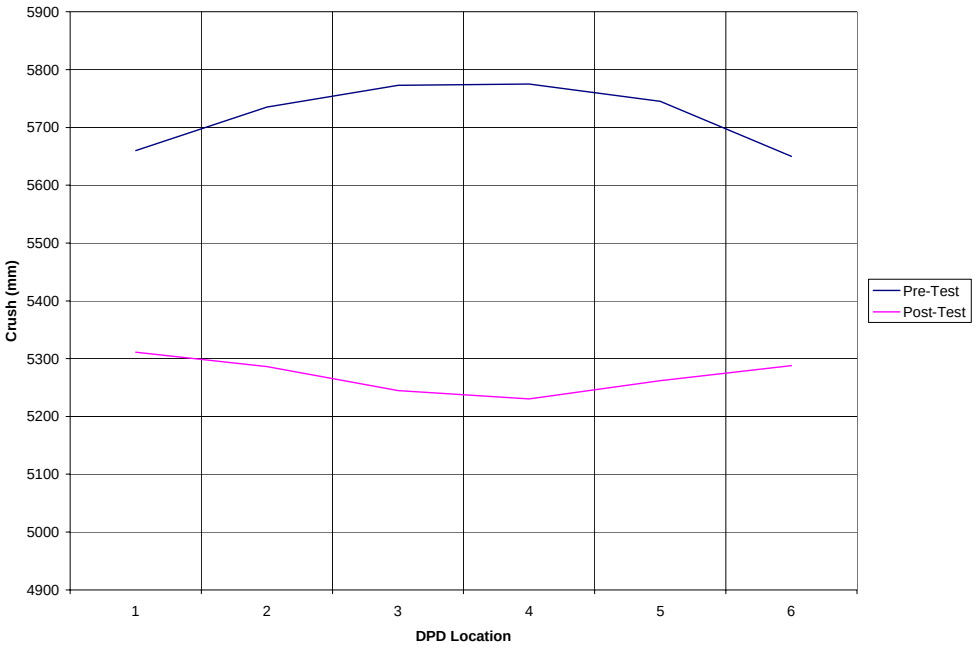
Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Vehicle Information
VIN: 1D7HA18NX4J215574 Wheelbase (mm): 3570
Vehicle size category: 4-door Test weight (kg): 2535.7

Accelerometer Data
Accelerometer Location: Left rear floor pan
Cal. Procedure/Interval: 6 months/shake test
Integration Algorithm: NHTSA Standard Linearity: Good
Impact Velocity (km/h): 56.5
Velocity Change (km/h): 62.4 Time of Separation (ms): 72.3

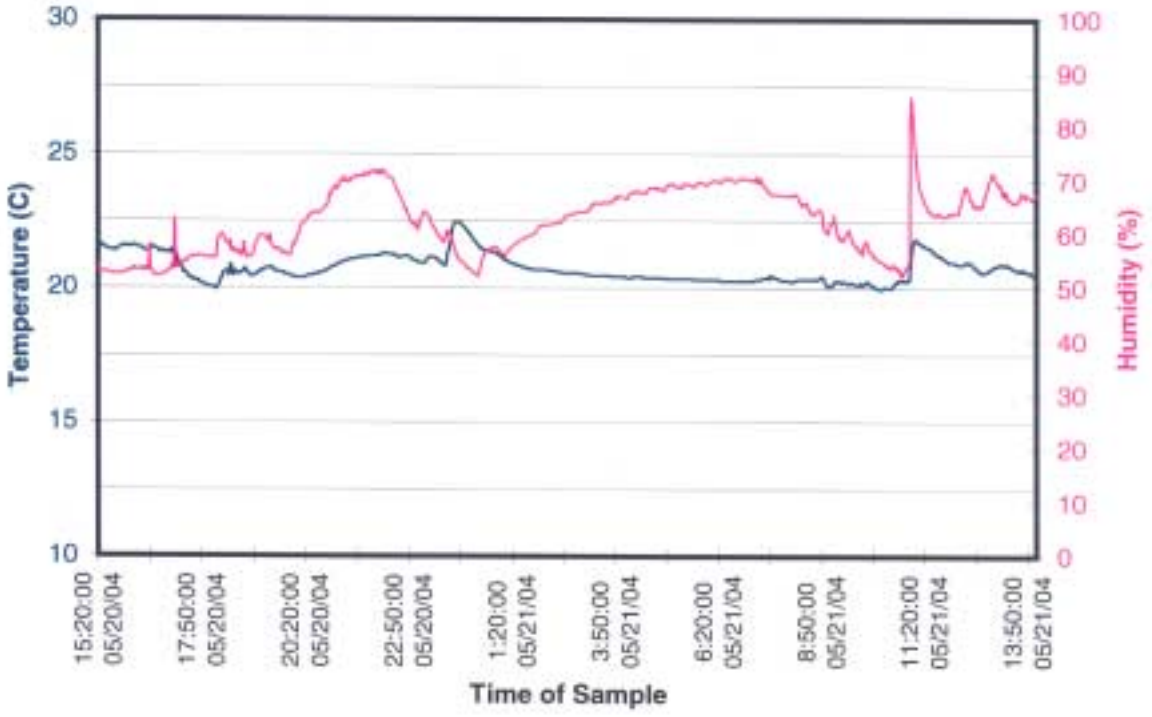
Crush Profile
Collision Deformation Classification: 12FDEW Midpoint of Damage: Vehicle Centerline
Damage Region Length (mm): 1524 Impact Mode: Full Frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush Zone 1 at Left Side	mm	5660	5311	349
C2	Crush Zone 2 on Left Side	mm	5735	5286	449
C3	Crush Zone 3 on Left Side	mm	5773	5245	528
C4	Crush Zone 4 on Right Side	mm	5775	5230	545
C5	Crush Zone 5 on Right Side	mm	5745	5262	483
C6	Crush Zone 6 at Right Side	mm	5650	5288	362



Data Sheet No. 20
Dummy/Vehicle Temperature Stabilization

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



Appendix A

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Figure A-1 Load Cell Configuration View



Figure A-2 Vehicle Certification Label View



Figure A-3 Vehicle Tire Label View



Figure A-4 Right Front Three-Quarter View, As Received



Figure A-5 Left Rear Three-Quarter View, As Received



Figure A-6 Pre-Test Front View



Figure A-7 Post-Test Front View



Figure A-8 Pre-Test Left Side View



Figure A-9 Post-Test Left Side View



Figure A-10 Pre-Test Right Side View



Figure A-11 Post-Test Right Side View



Figure A-12 Pre-Test Right Front Three-Quarter View



Figure A-13 Post-Test Right Front Three-Quarter View



Figure A-14 Pre-Test Left Rear Three-Quarter View



Figure A-15 Post-Test Left Rear Three-Quarter View



Figure A-16 Left Rear Three-Quarter View of Doors After Impact



Figure A-17 Right Rear Three-Quarter View of Doors After Impact



Figure A-18 Pre-Test Windshield View



Figure A-19 Post-Test Windshield View



Figure A-20 Pre-Test Engine Compartment View



Figure A-21 Post-Test Engine Compartment View



Figure A-22 Pre-Test Fuel Filler Cap View



Figure A-23 Post-Test Fuel Filler Cap View

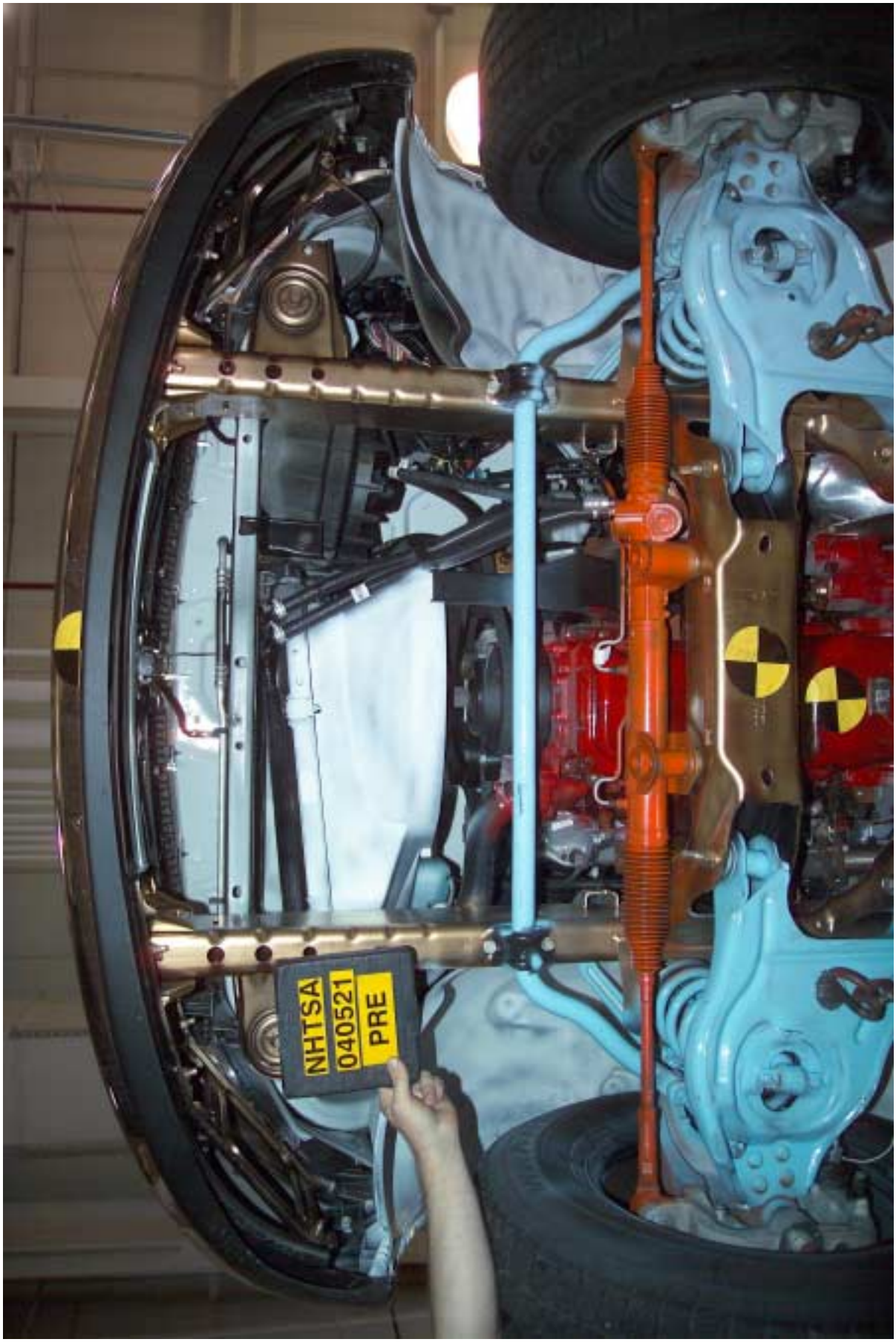


Figure A-24 Pre-Test Front Underbody View

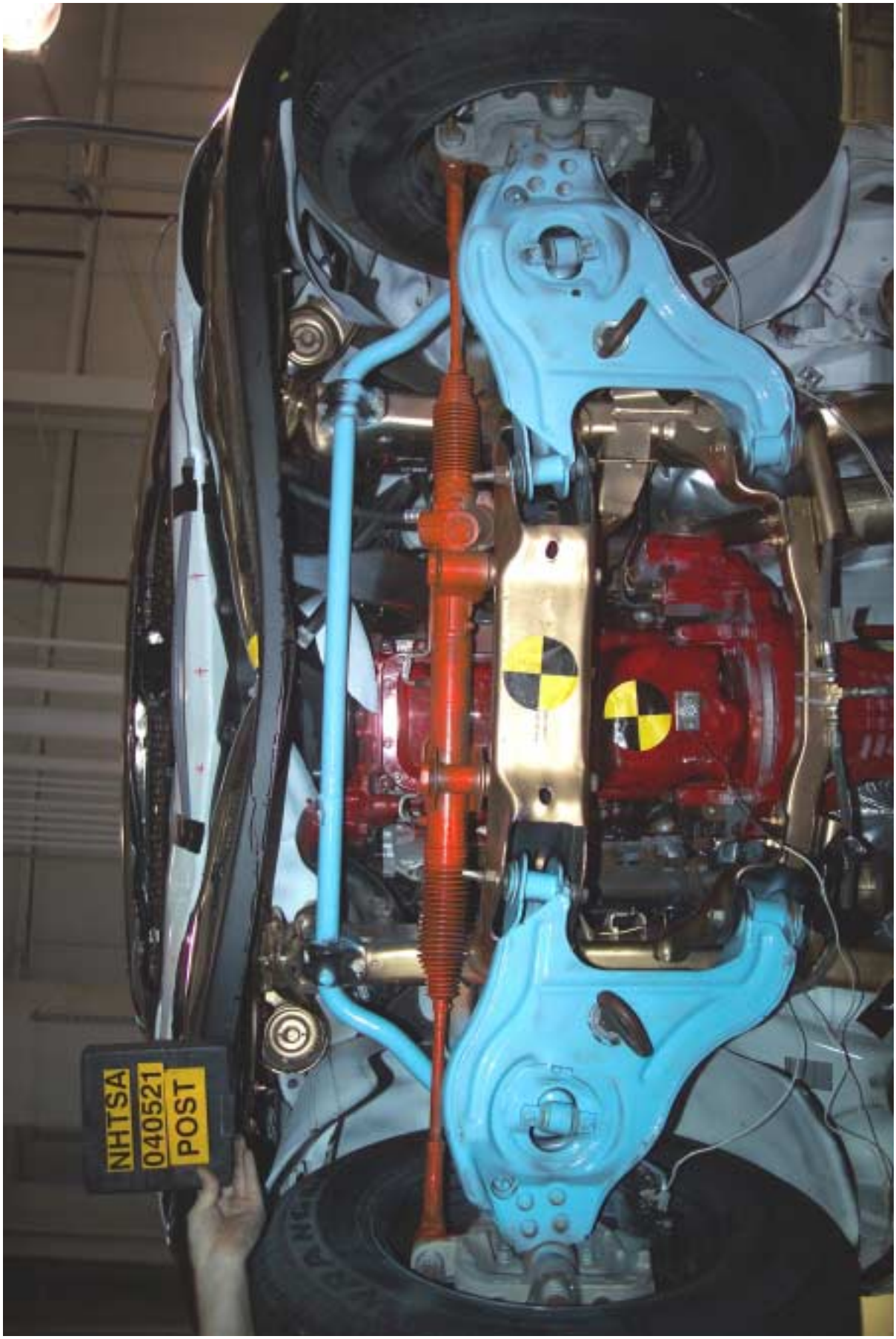


Figure A-25 Post-Test Front Underbody View



Figure A-26 Pre-Test Mid Underbody View

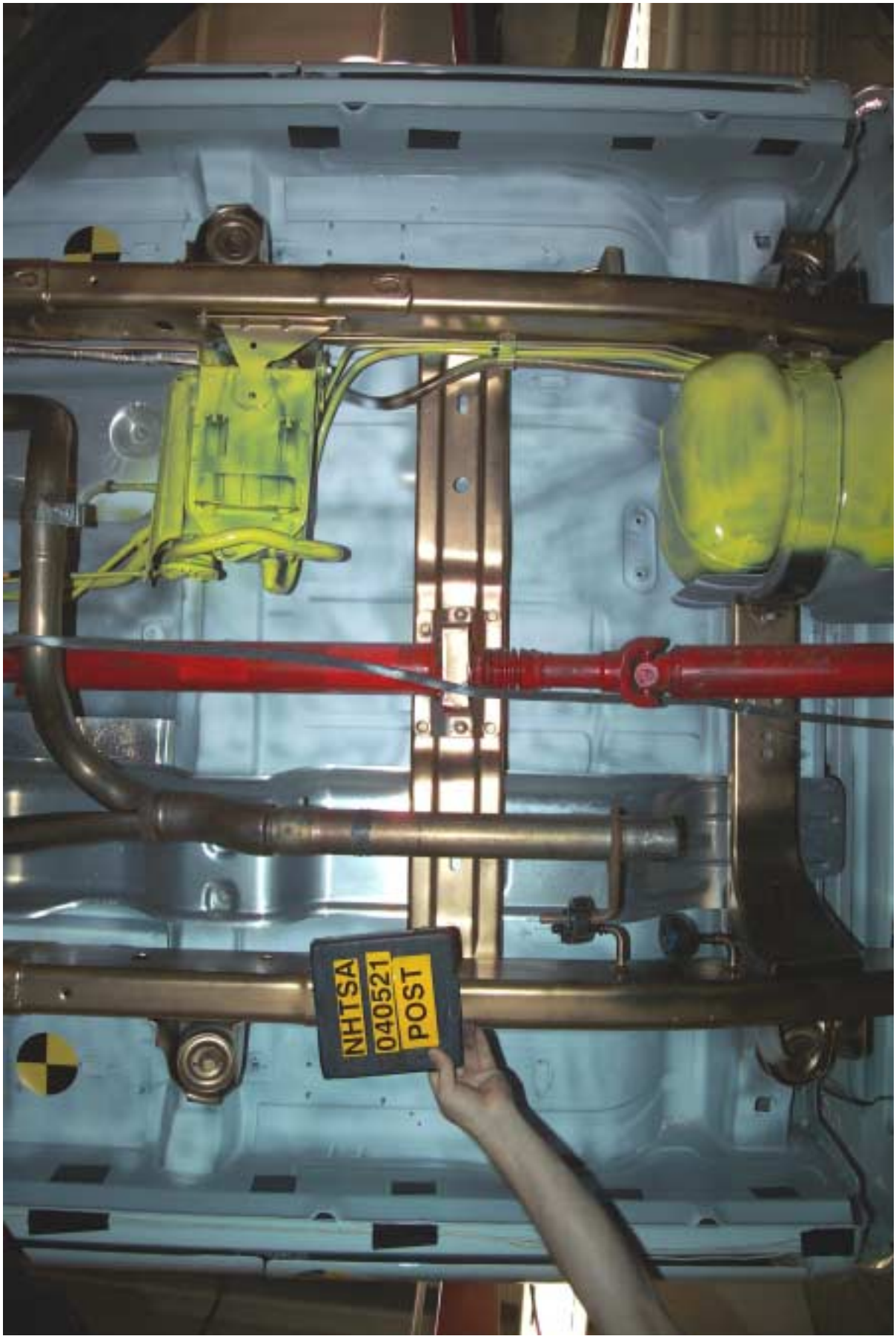


Figure A-27 Post-Test Mid Underbody View

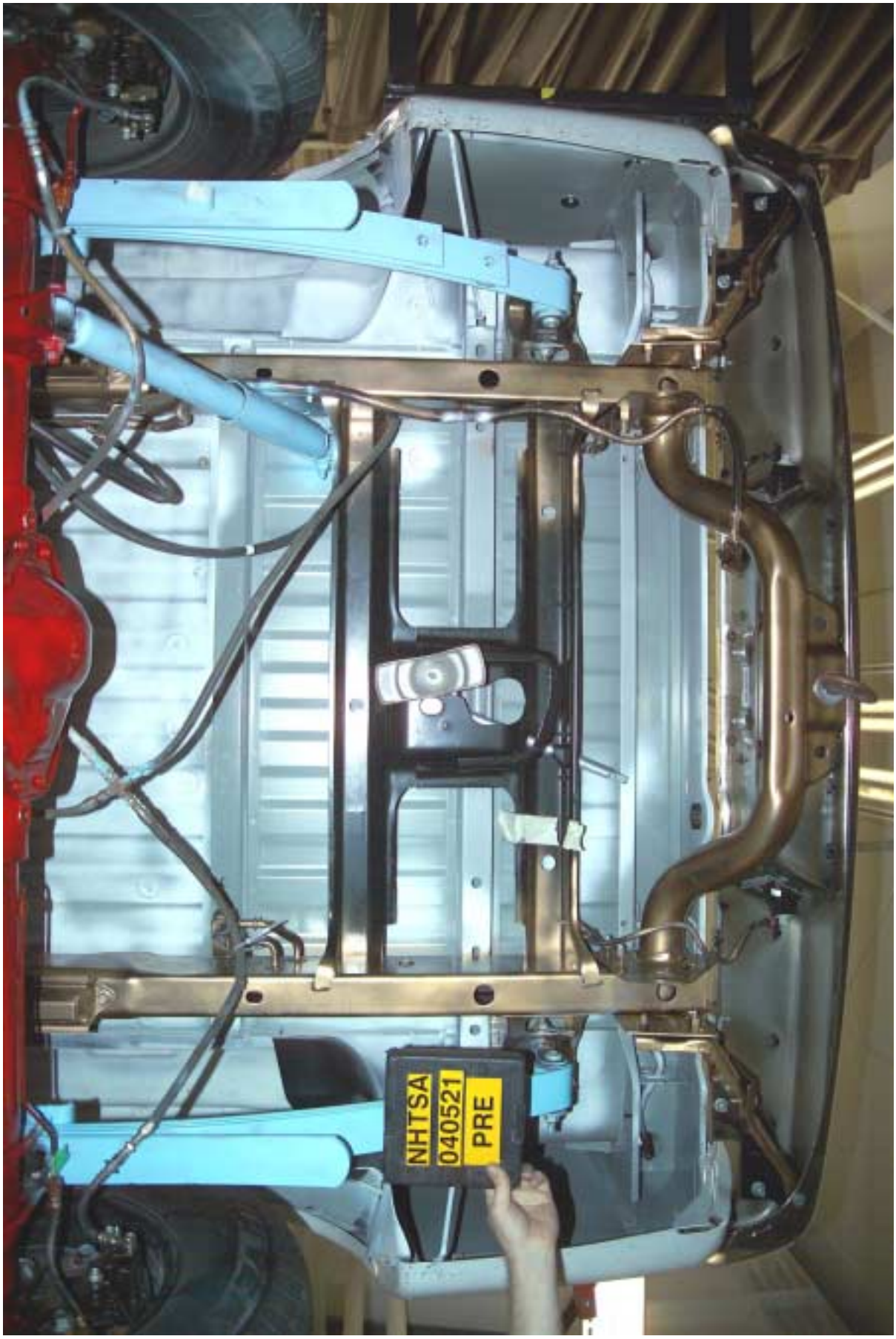


Figure A-28 Pre-Test Rear Underbody View

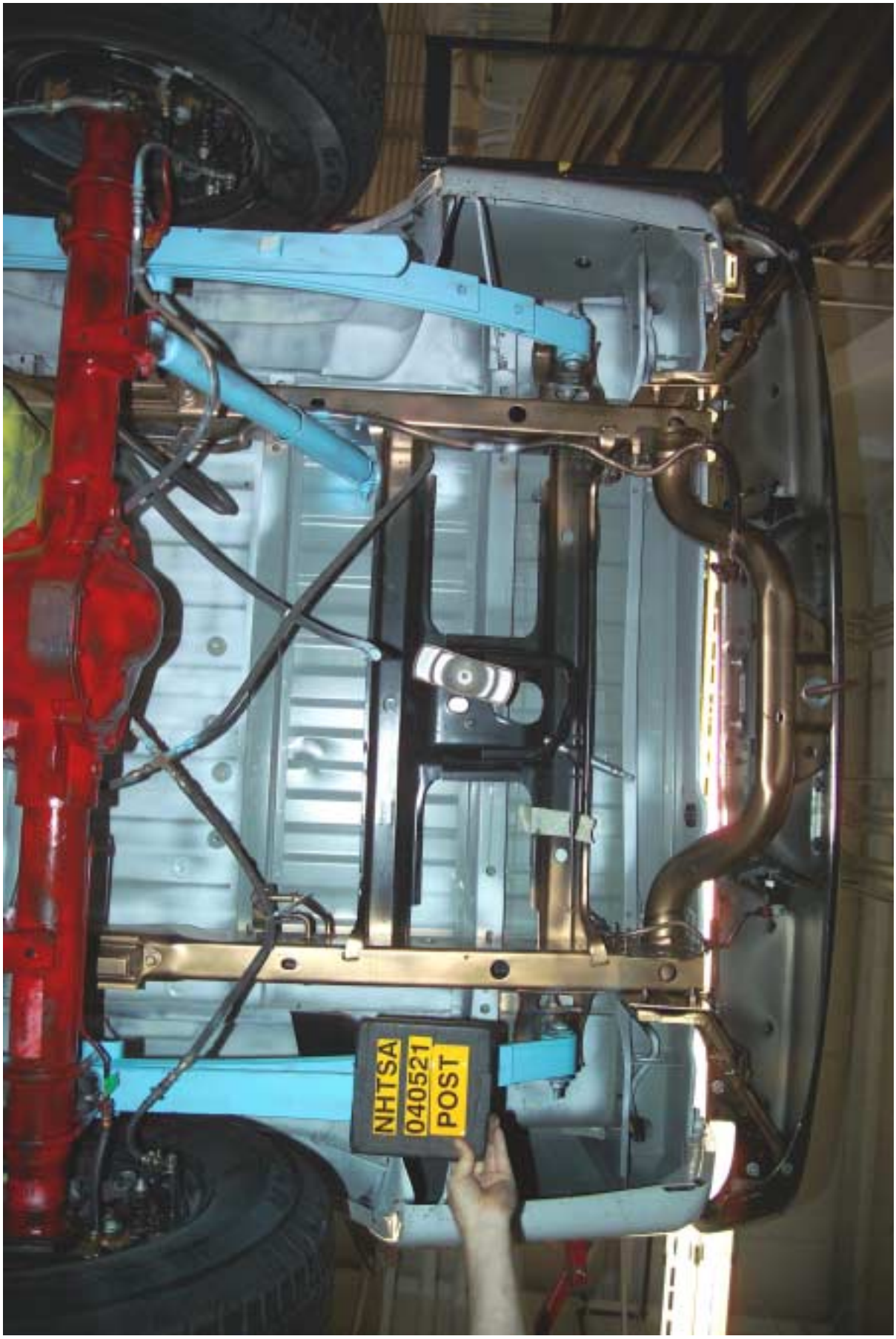


Figure A-29 Post-Test Rear Underbody View

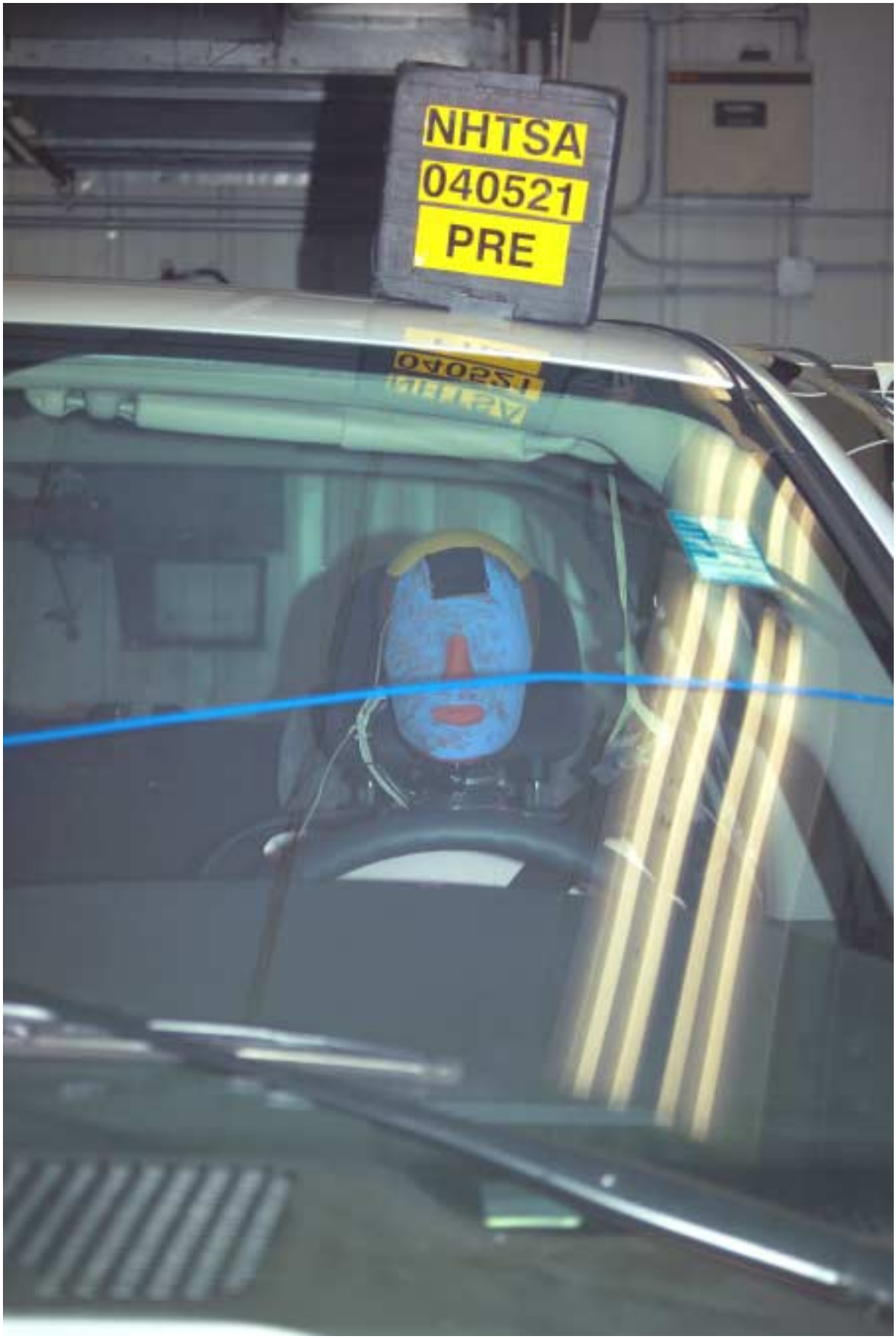


Figure A-30 Pre-Test Driver Dummy Front View (Head Position)



Figure A-31 Post-Test Driver Dummy Front View (Head Position)



Figure A-32 Pre-Test Driver Dummy Front View Through Window



Figure A-33 Post-Test Driver Dummy Front View Through Window



Figure A-34 Pre-Test Driver Dummy Door Open



Figure A-35 Post-Test Driver Dummy Door Open



Figure A-36 Pre-Test Driver Dummy Feet



Figure A-37 Post-Test Driver Dummy Feet



Figure A-38 Pre-Test Driver Side Knee Bolster

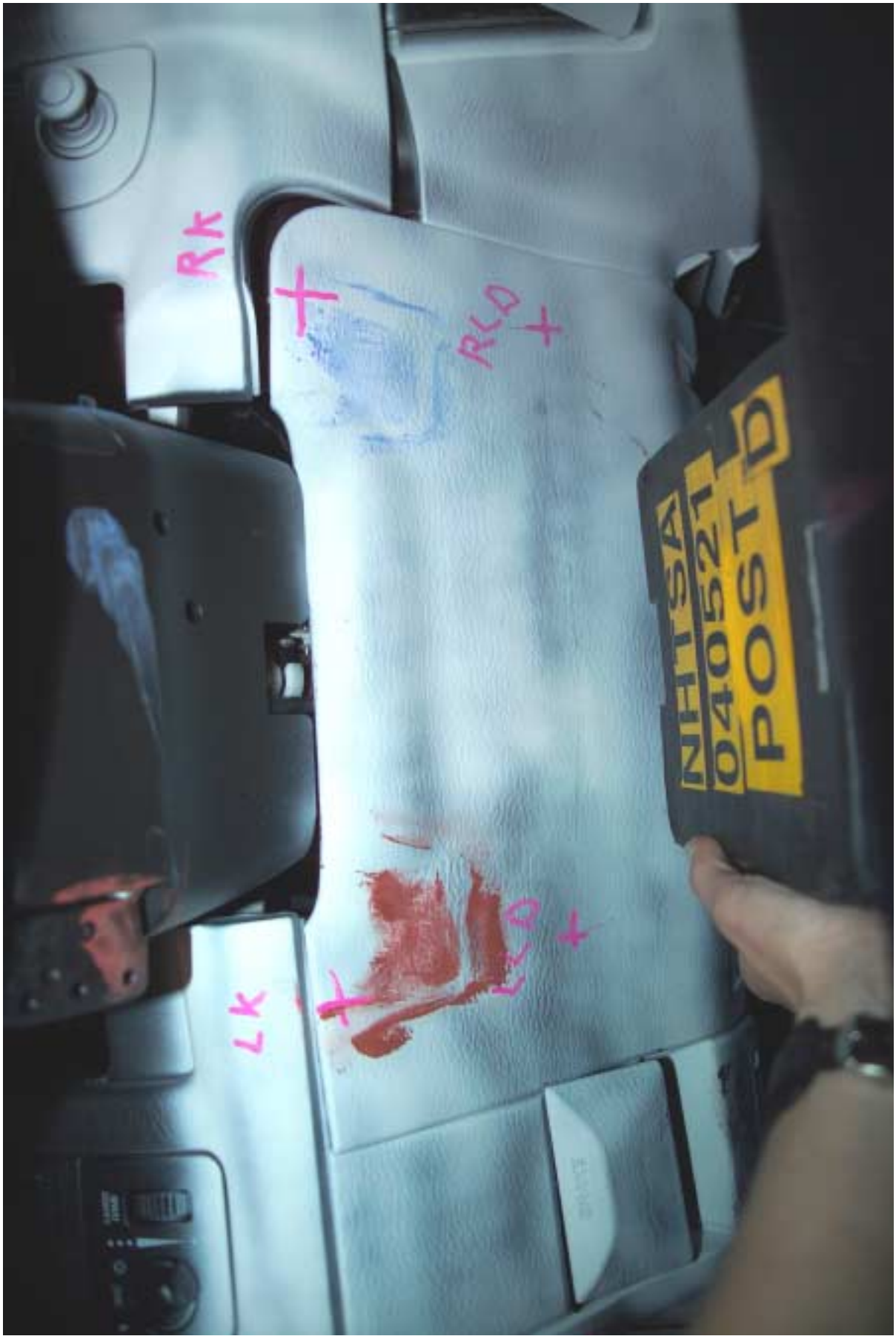


Figure A-39 Post-Test Driver Side Knee Bolster

Photograph Not Available

Figure A-40 Pre-Test Driver Side Floor Pan



Figure A-41 Post-Test Driver Side Floor Pan



Figure A-42 Post-Test Driver Dummy Head



Figure A-43 Post-Test Driver Dummy Contact to Airbag



Figure A-44 Pre-Test Passenger Dummy Front View (Head Position)



Figure A-45 Post-Test Passenger Dummy Front View (Head Position)



Figure A-46 Pre-Test Passenger Dummy Front View Through Window



Figure A-47 Post-Test Passenger Dummy Front View Through Window



Figure A-48 Pre-Test Passenger Dummy Door Open



Figure A-49 Post-Test Passenger Dummy Door Open

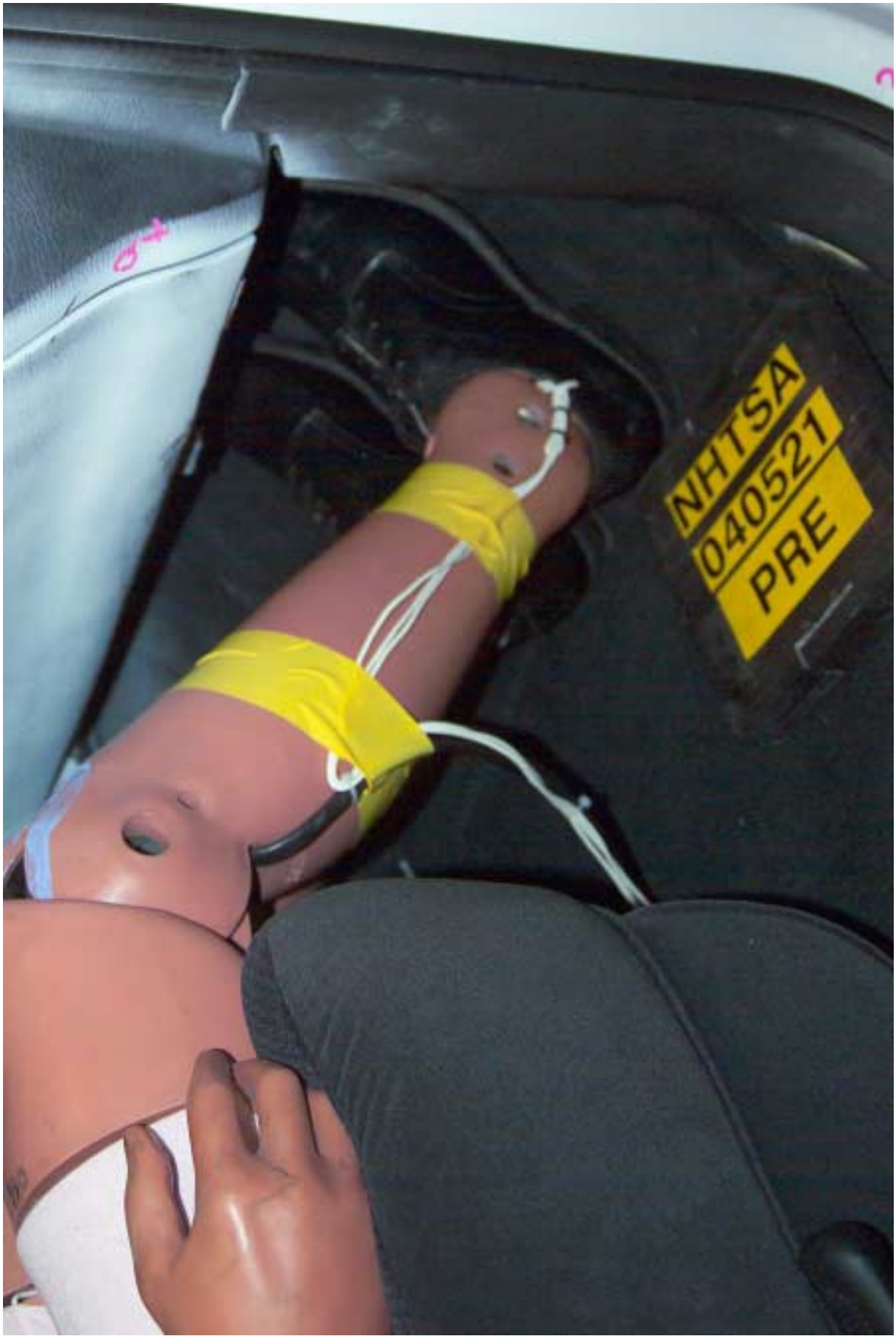


Figure A-50 Pre-Test Passenger Dummy Feet



Figure A-51 Post-Test Passenger Dummy Feet

Photograph Not Available

Figure A-52 Pre-Test Passenger Side Floor Pan



Figure A-53 Post-Test Passenger Side Floor Pan



Figure A-54 Pre-Test Passenger Side Knee Bolster



Figure A-55 Post-Test Passenger Side Knee Bolster



Figure A-56 Post-Test Passenger Dummy Head



Figure A-57 Post-Test Passenger Dummy Contact to Airbag



Figure A-58 Post-Test Vehicle on Rollover Device



Figure A-59 Vehicle During Impact

Figure A-60 Dealer Sticker

Appendix B

Data Plots

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B-65	Driver Right Foot Aft Z	B-65
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List of Data Plots (continued)

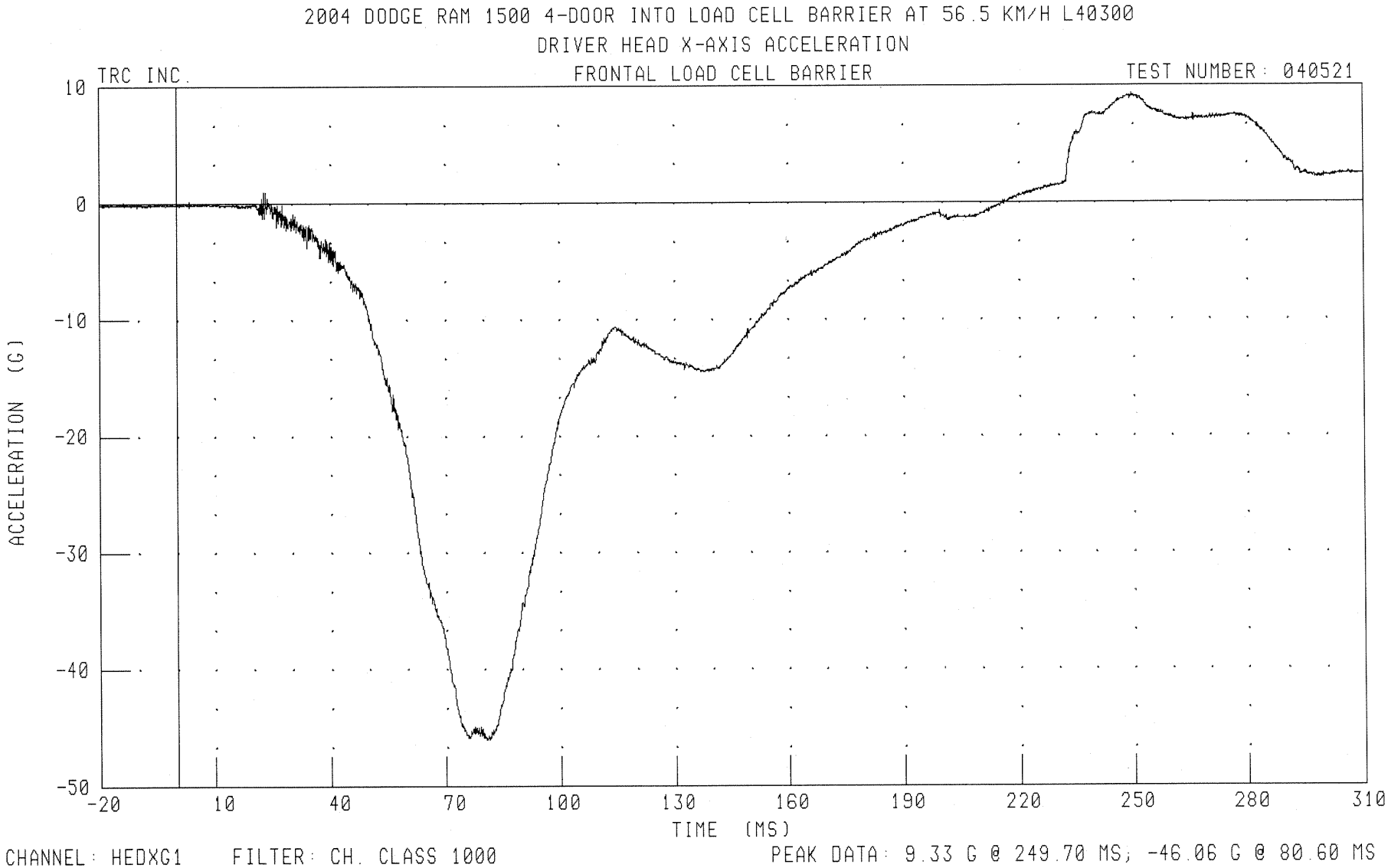
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List of Data Plots, (continued)

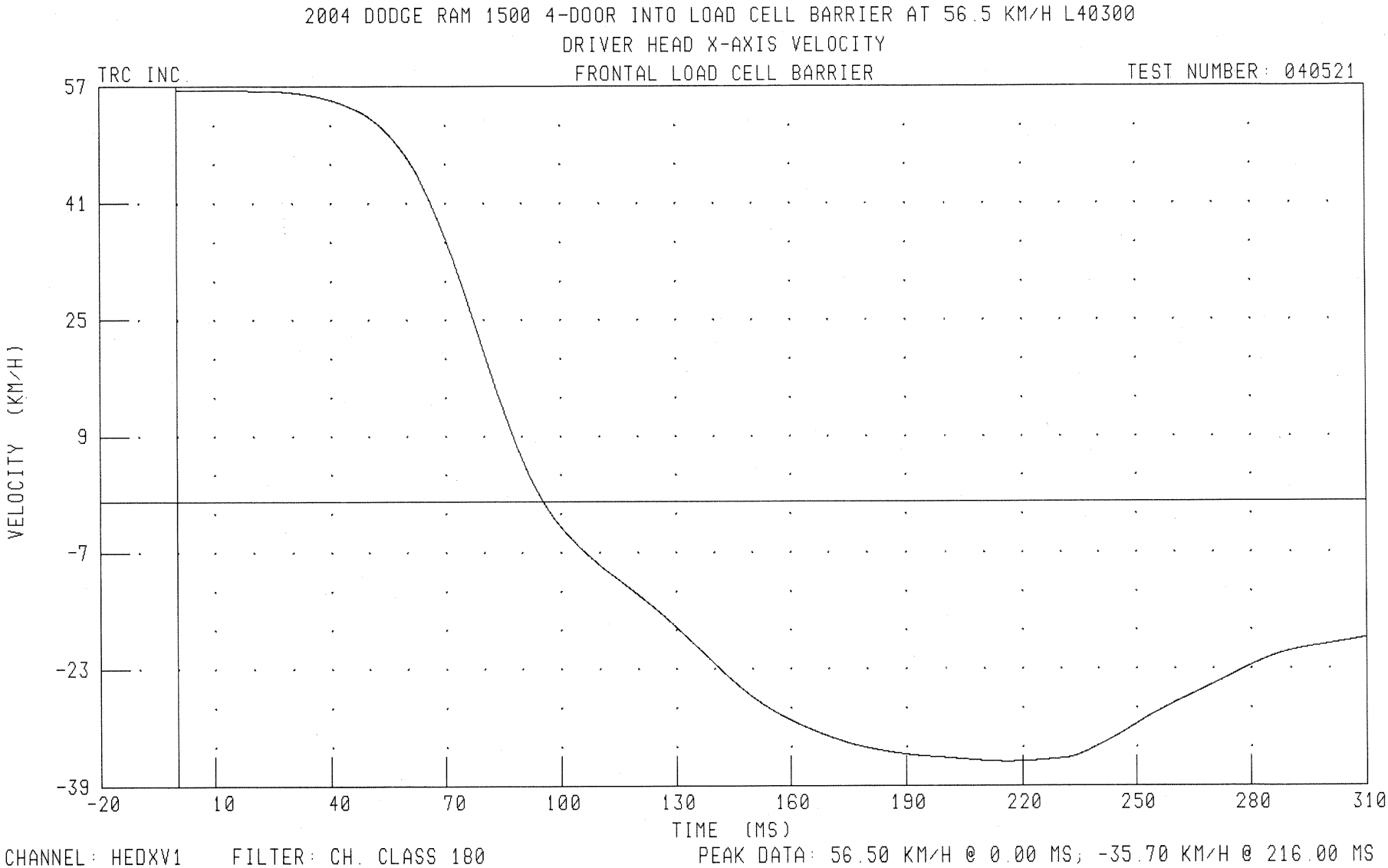
Data Plot		Page
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B-104	Passenger Chest Redundant X	B-104
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B-126	Passenger Left Lower Tibia Moment Y	B-126
B-127	Passenger Left Lower Tibia Force Z	B-127
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B-136	Passenger Right Foot Fore Z	B-136

List of Data Plots, (continued)

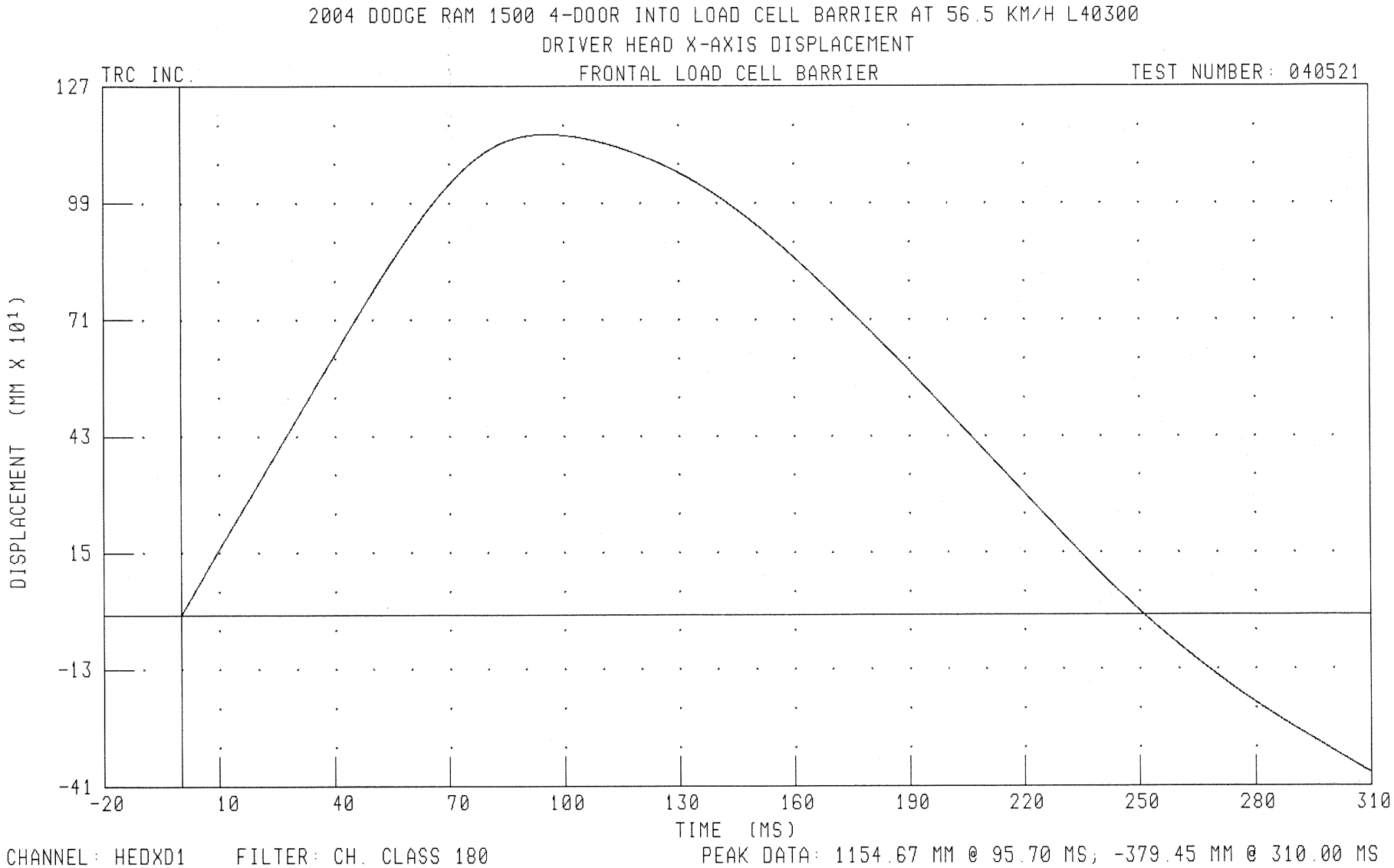
Data Plot		Page
B-137	Passenger Lap Belt Force	B-137
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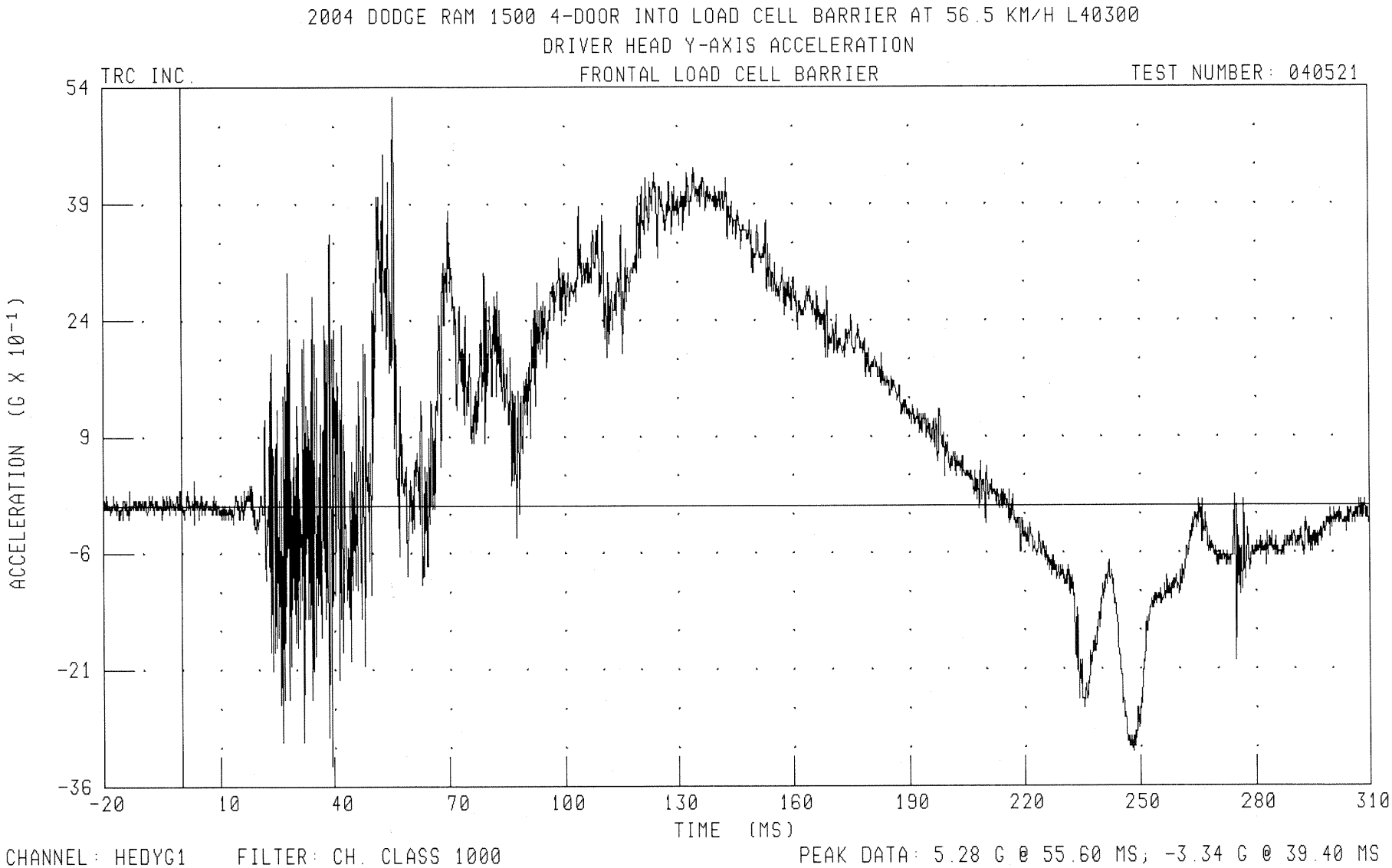

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
10
0
-10
-20
-30
-40
-50
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDXG1
FILTER: CH. CLASS 1000
PEAK DATA: 9.33 G @ 249.70 MS; -46.06 G @ 80.60 MS

040521

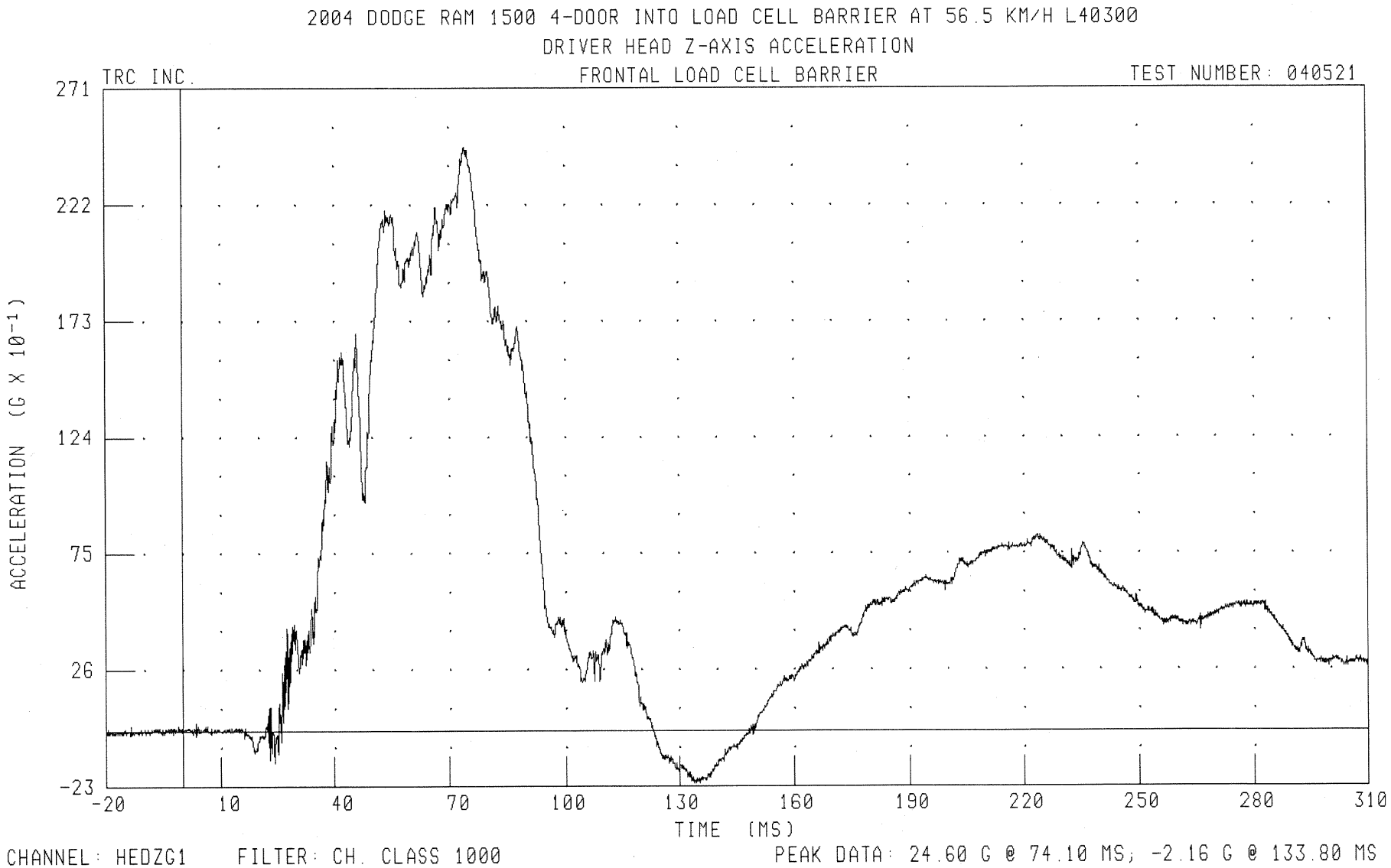

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD X-AXIS VELOCITY
TRC INC
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
57
41
25
9
-7
-23
-39
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDXV1
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -35.70 KM/H @ 216.00 MS

040521

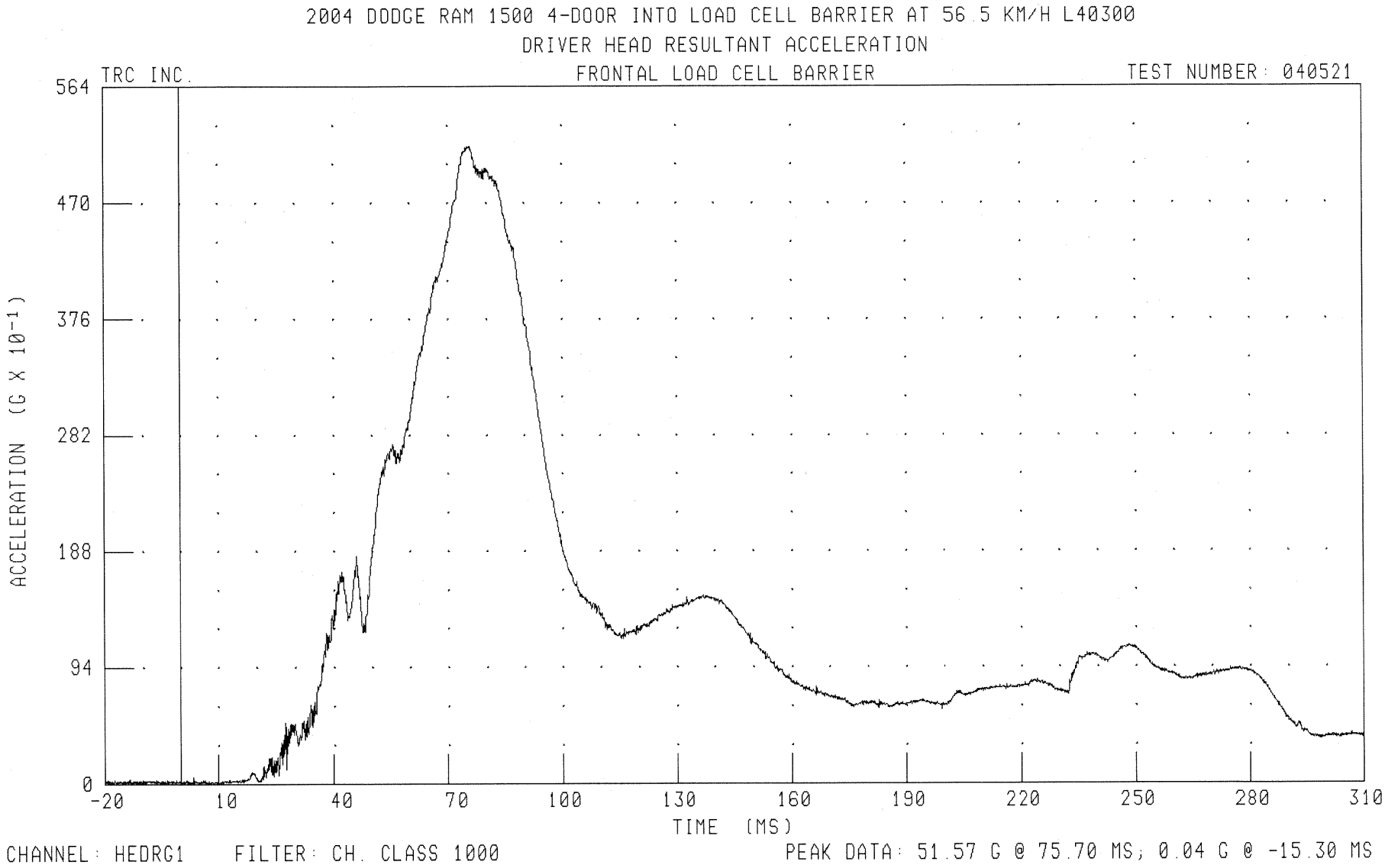

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
127
99
71
43
15
-13
-41
DISPLACEMENT (MM X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDXD1
FILTER: CH. CLASS 180
PEAK DATA: 1154.67 MM @ 95.70 MS; -379.45 MM @ 310.00 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
54
39
24
9
-6
-21
-36
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDYG1
FILTER: CH. CLASS 1000
PEAK DATA: 5.28 G @ 55.60 MS; -3.34 G @ 39.40 MS

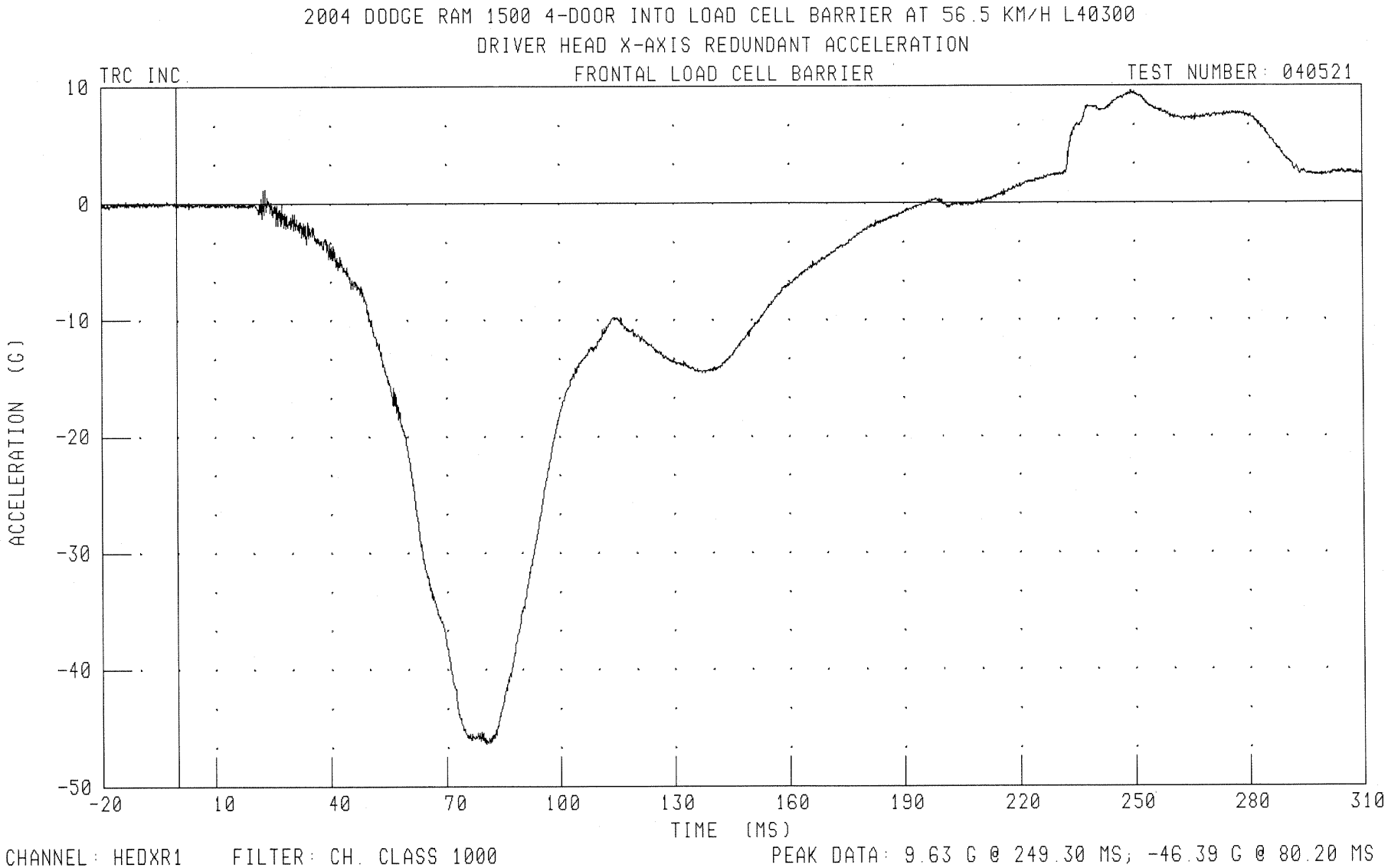
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
271
222
173
124
75
26
-23
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDZG1
FILTER: CH. CLASS 1000
PEAK DATA: 24.60 G @ 74.10 MS; -2.16 G @ 133.80 MS

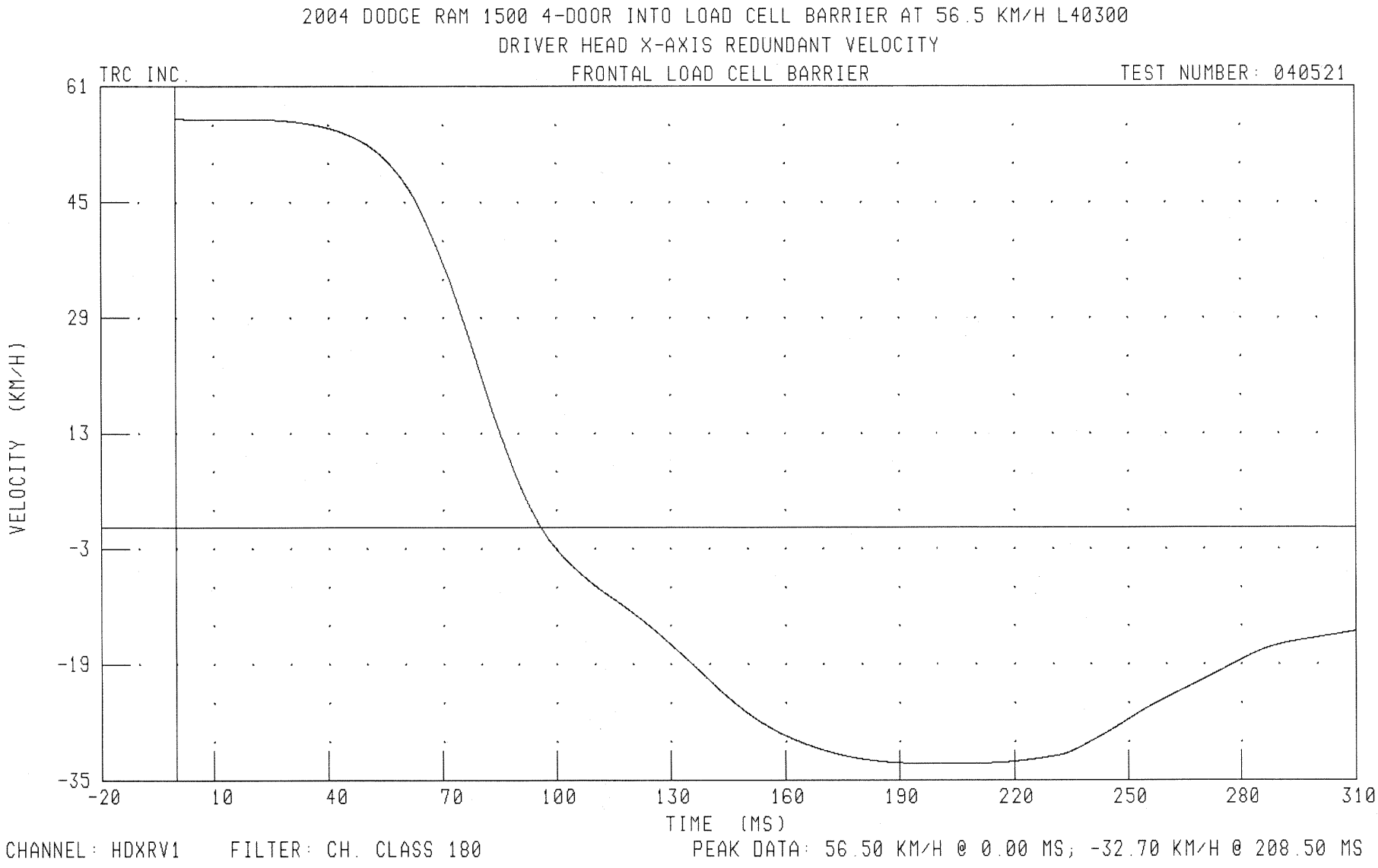
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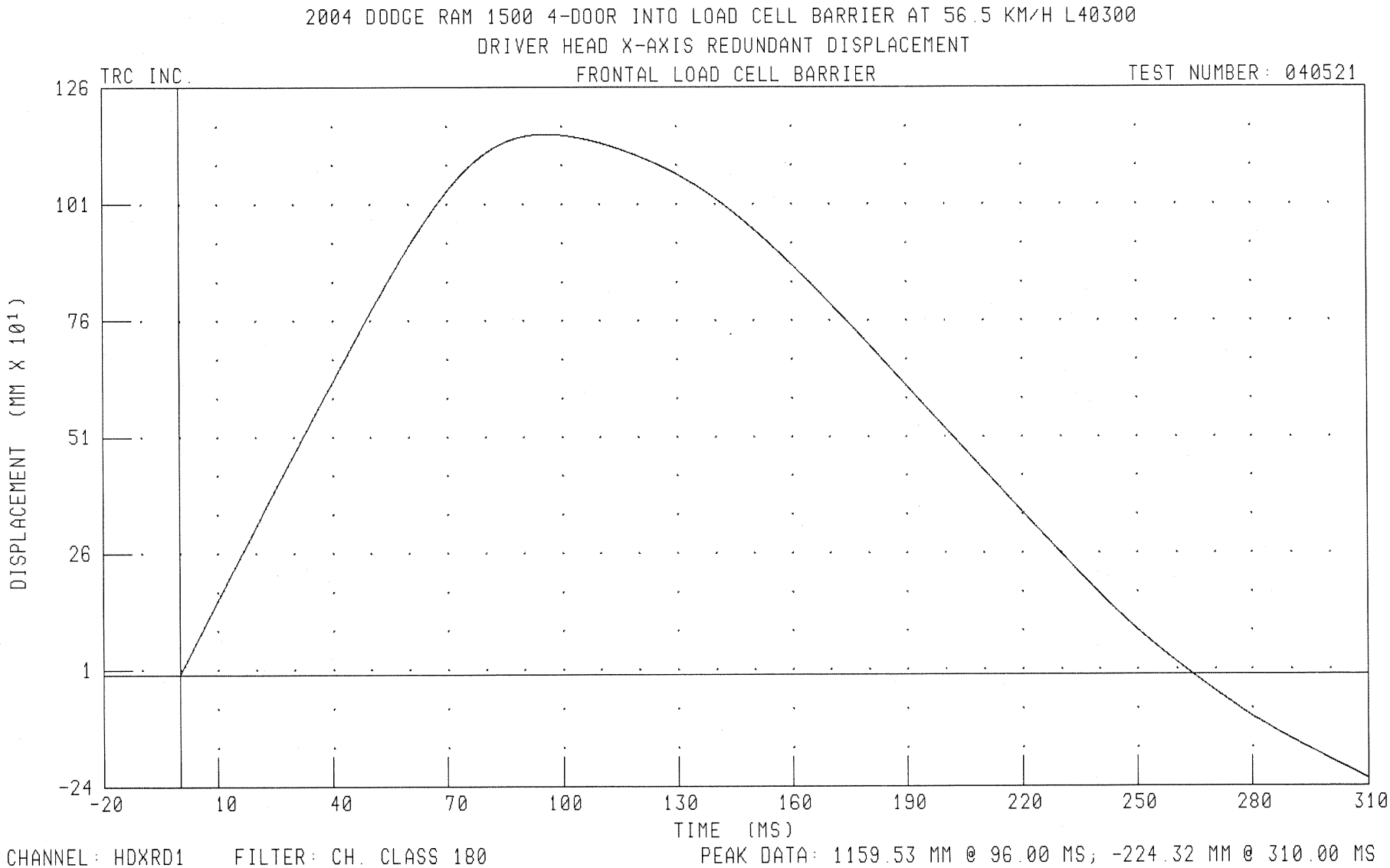

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
564
470
376
282
188
94
0
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDRG1
FILTER: CH. CLASS 1000
PEAK DATA: 51.57 G @ 75.70 MS; 0.04 G @ -15.30 MS

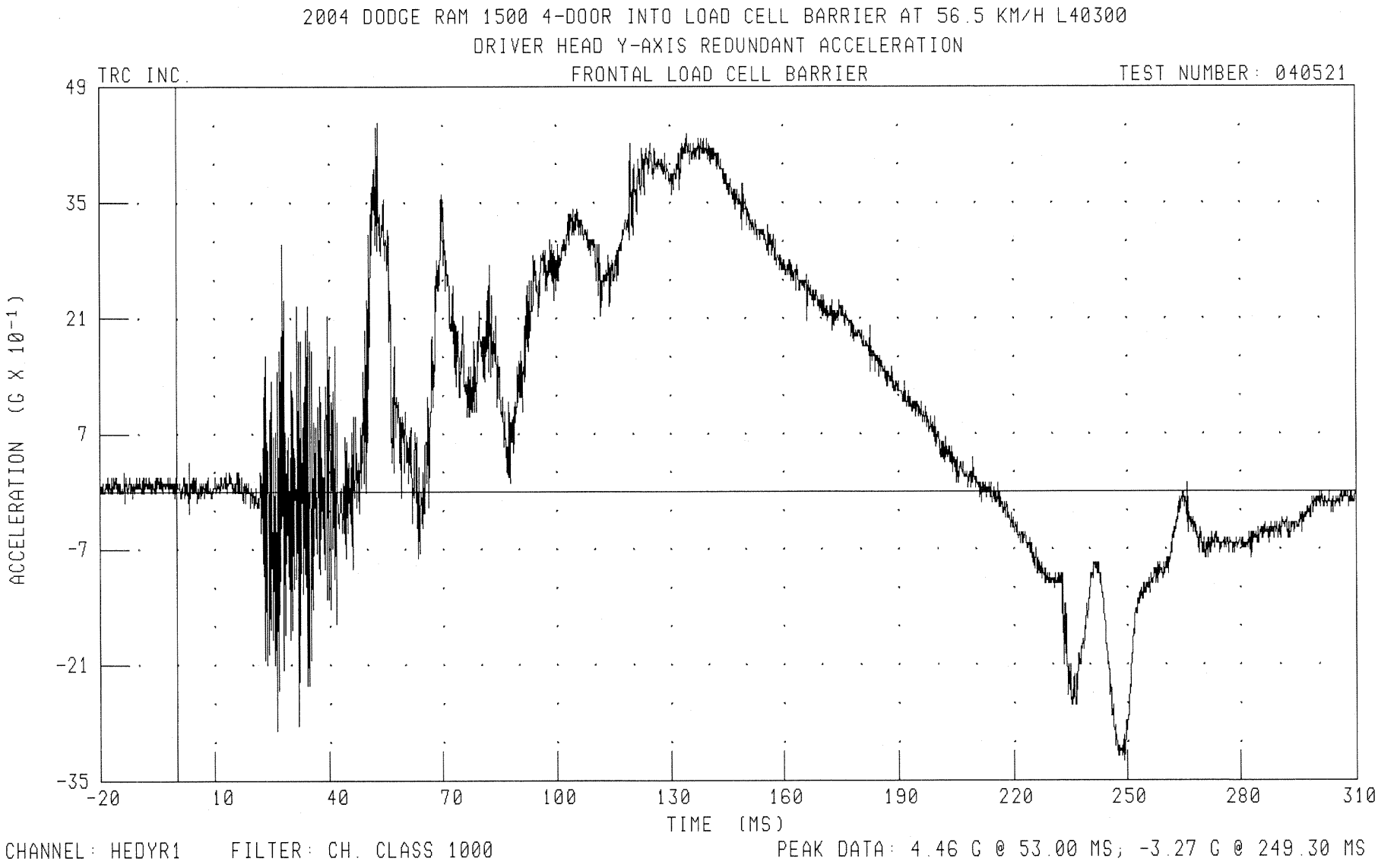
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD X-AXIS REDUNDANT ACCELERATION
TRC INC
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G)
10
0
-10
-20
-30
-40
-50
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDXR1
FILTER: CH. CLASS 1000
PEAK DATA: 9.63 G @ 249.30 MS; -46.39 G @ 80.20 MS

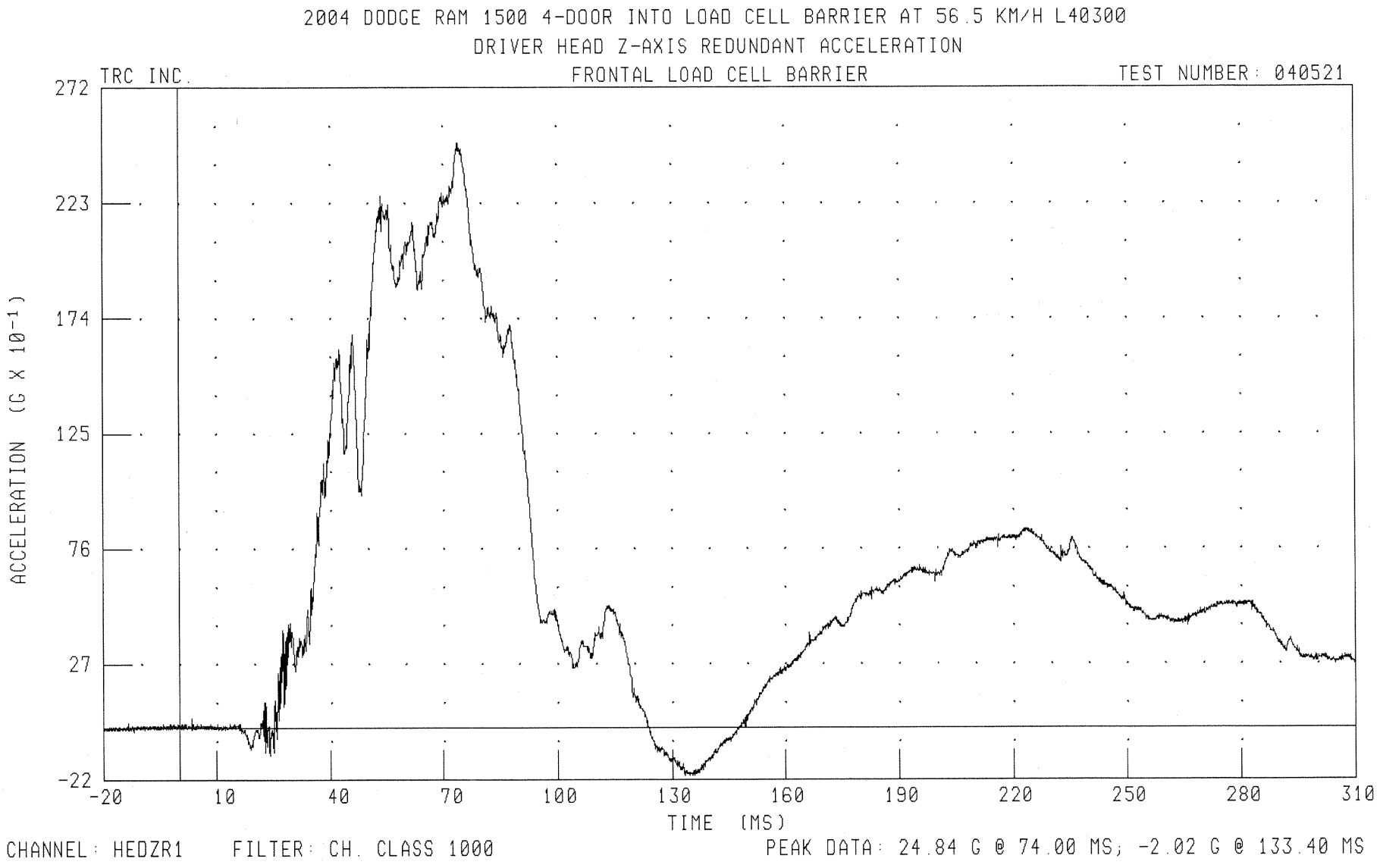
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD X-AXIS REDUNDANT VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
61
45
29
13
-3
-19
-35
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HDXRV1
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -32.70 KM/H @ 208.50 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD X-AXIS REDUNDANT DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
126
101
76
51
26
1
-24
DISPLACEMENT (MM X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HDXRD1
FILTER: CH. CLASS 180
PEAK DATA: 1159.53 MM @ 96.00 MS; -224.32 MM @ 310.00 MS

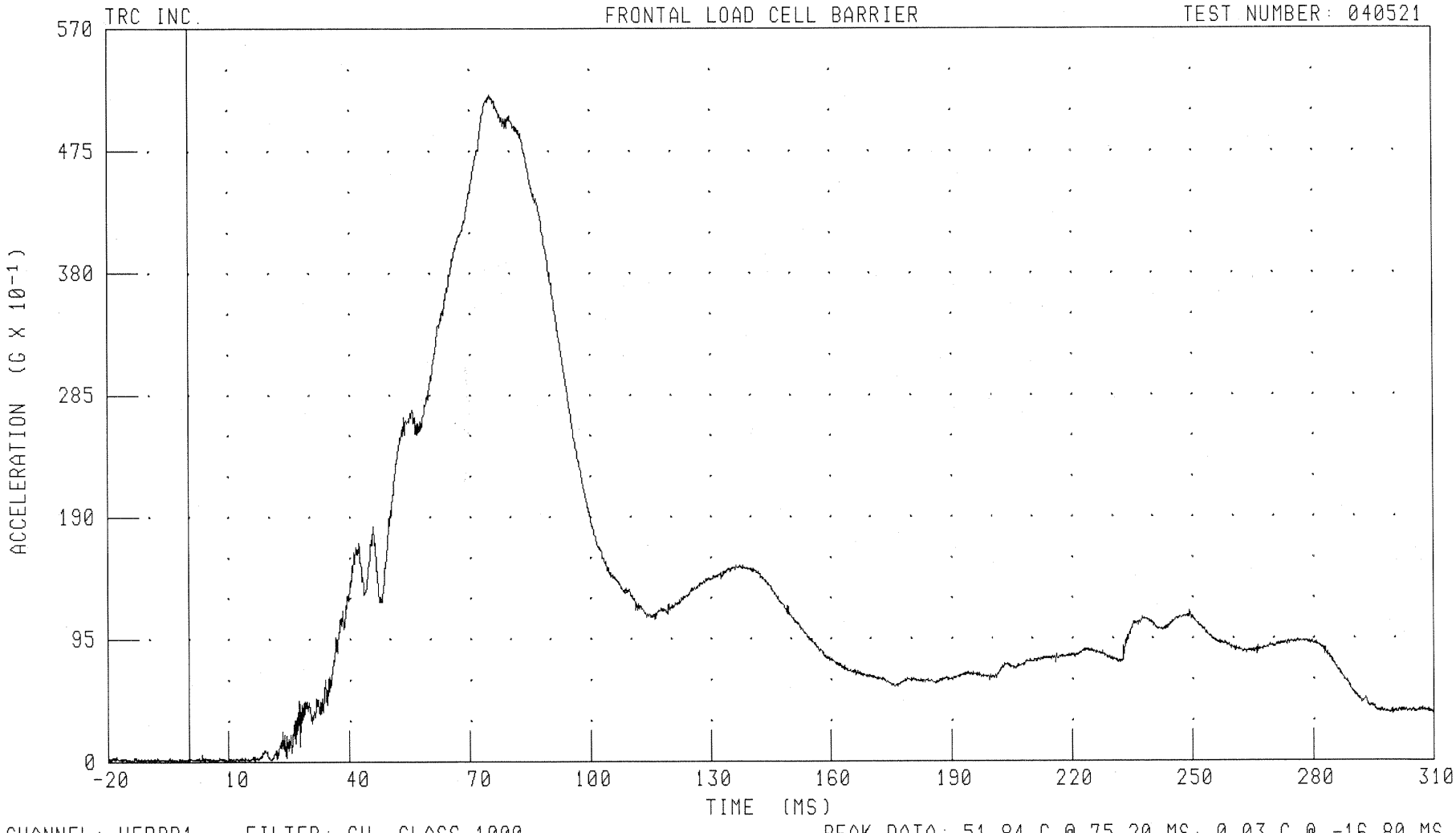

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD Y-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
49
35
21
7
-7
-21
-35
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDYR1
FILTER: CH. CLASS 1000
PEAK DATA: 4.46 G @ 53.00 MS; -3.27 G @ 249.30 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD Z-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
272
223
174
125
76
27
-22
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDZR1
FILTER: CH. CLASS 1000
PEAK DATA: 24.84 G @ 74.00 MS; -2.02 G @ 133.40 MS

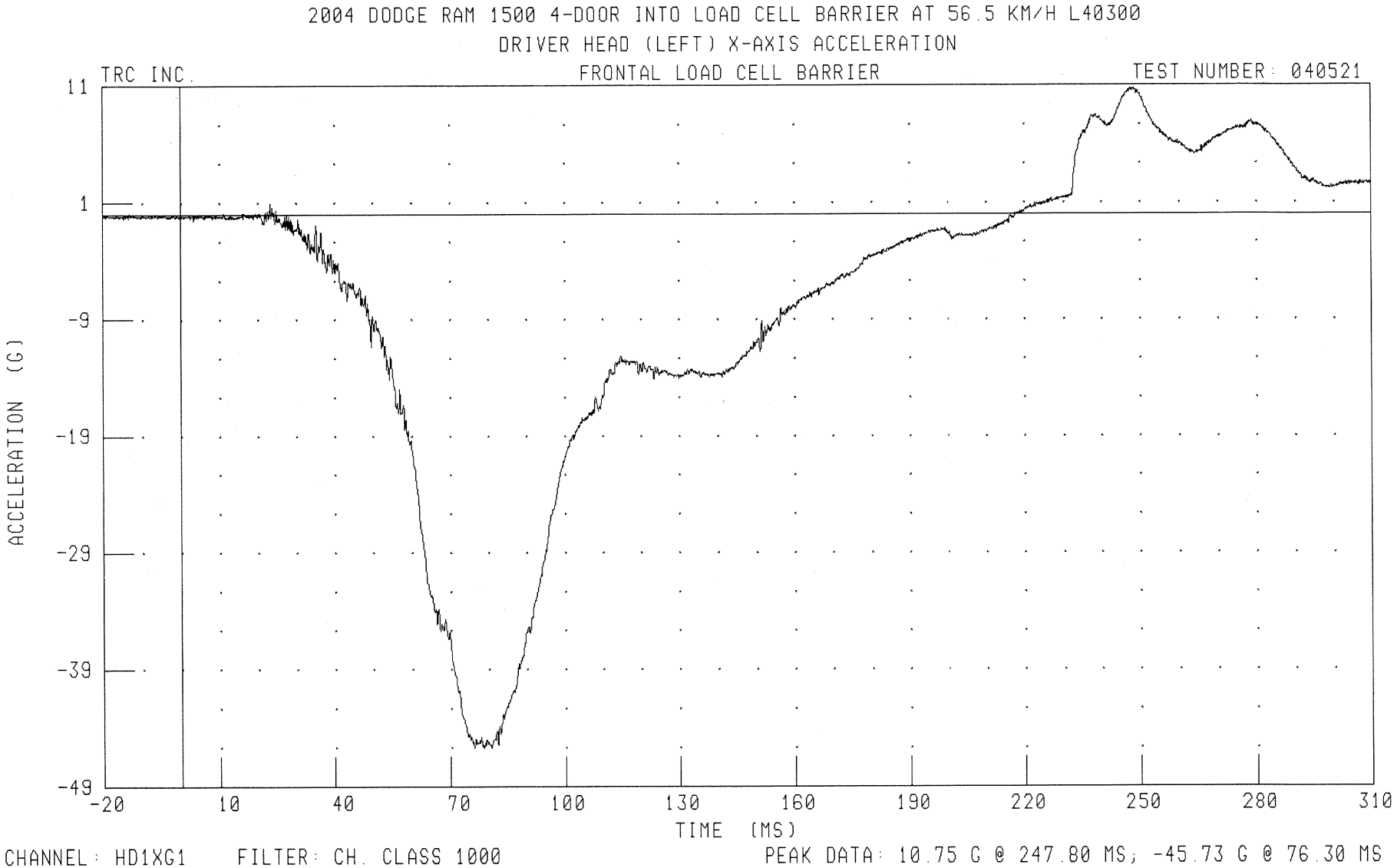
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD RESULTANT REDUNDANT ACCELERATION

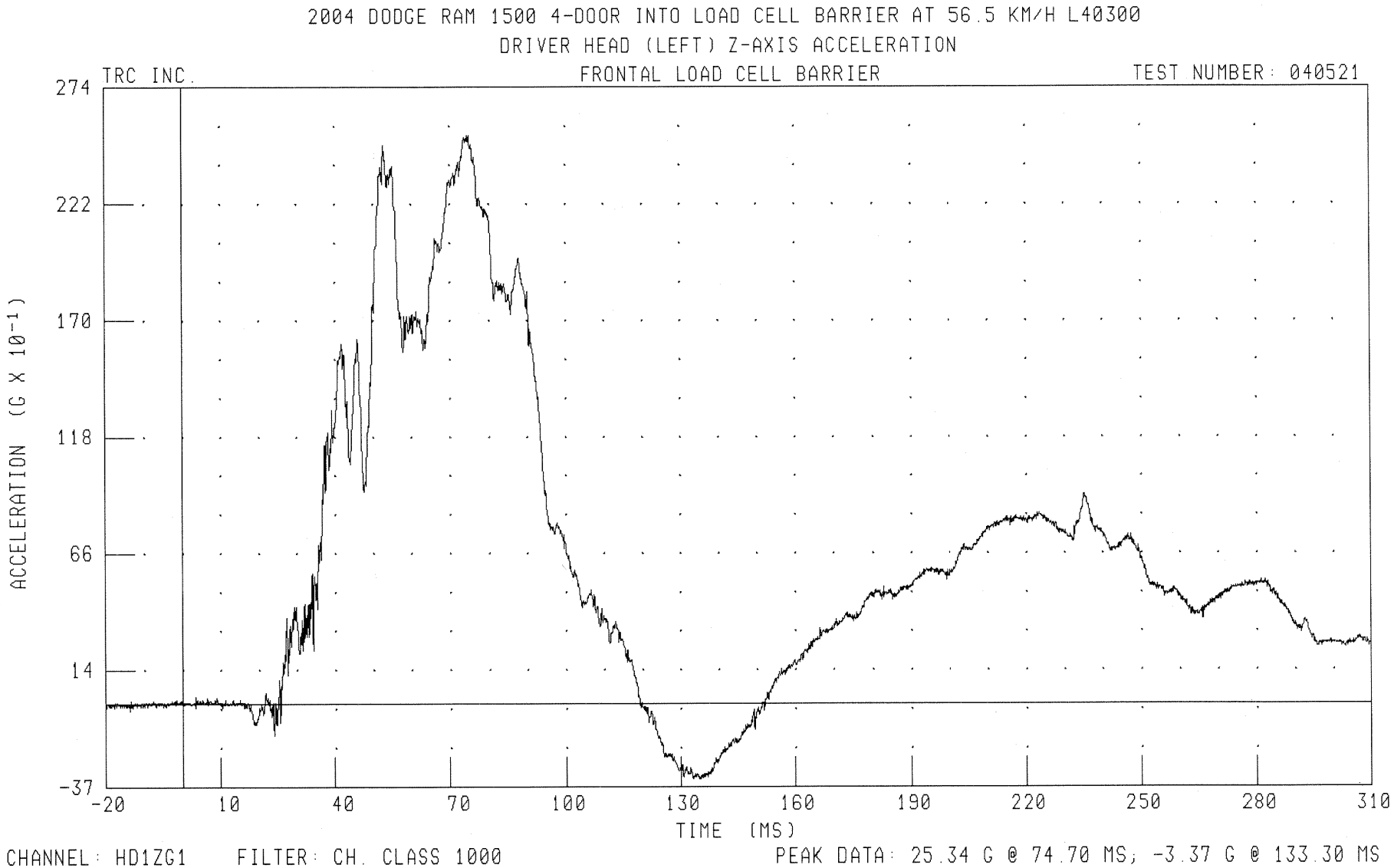


CHANNEL: HEDRR1 FILTER: CH. CLASS 1000 PEAK DATA: 51.84 G @ 75.20 MS; 0.03 G @ -16.80 MS

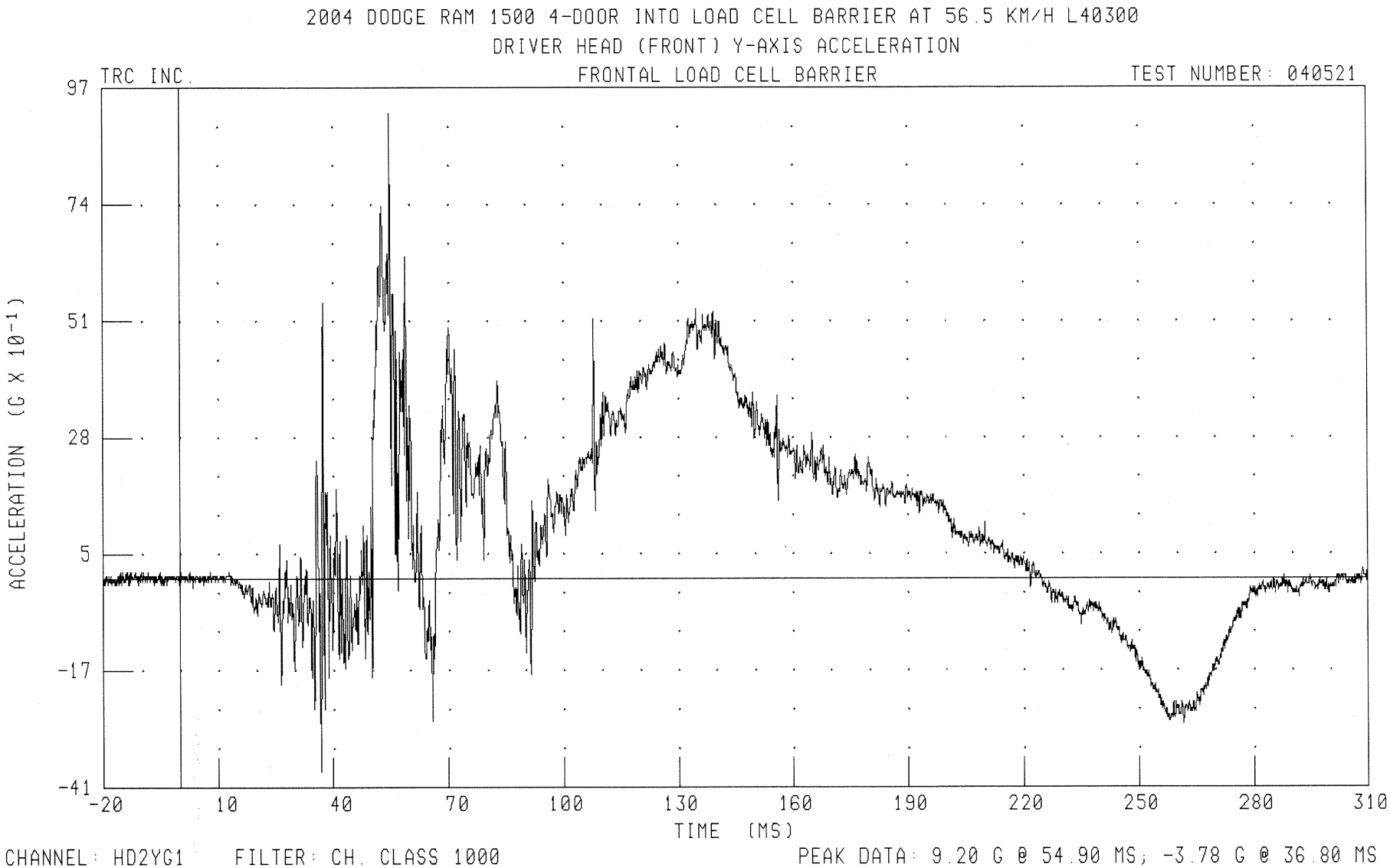
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD (LEFT) X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
11
1
-9
-19
-29
-39
-49
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD1XG1
FILTER: CH. CLASS 1000
PEAK DATA: 10.75 G @ 247.80 MS; -45.73 G @ 76.30 MS

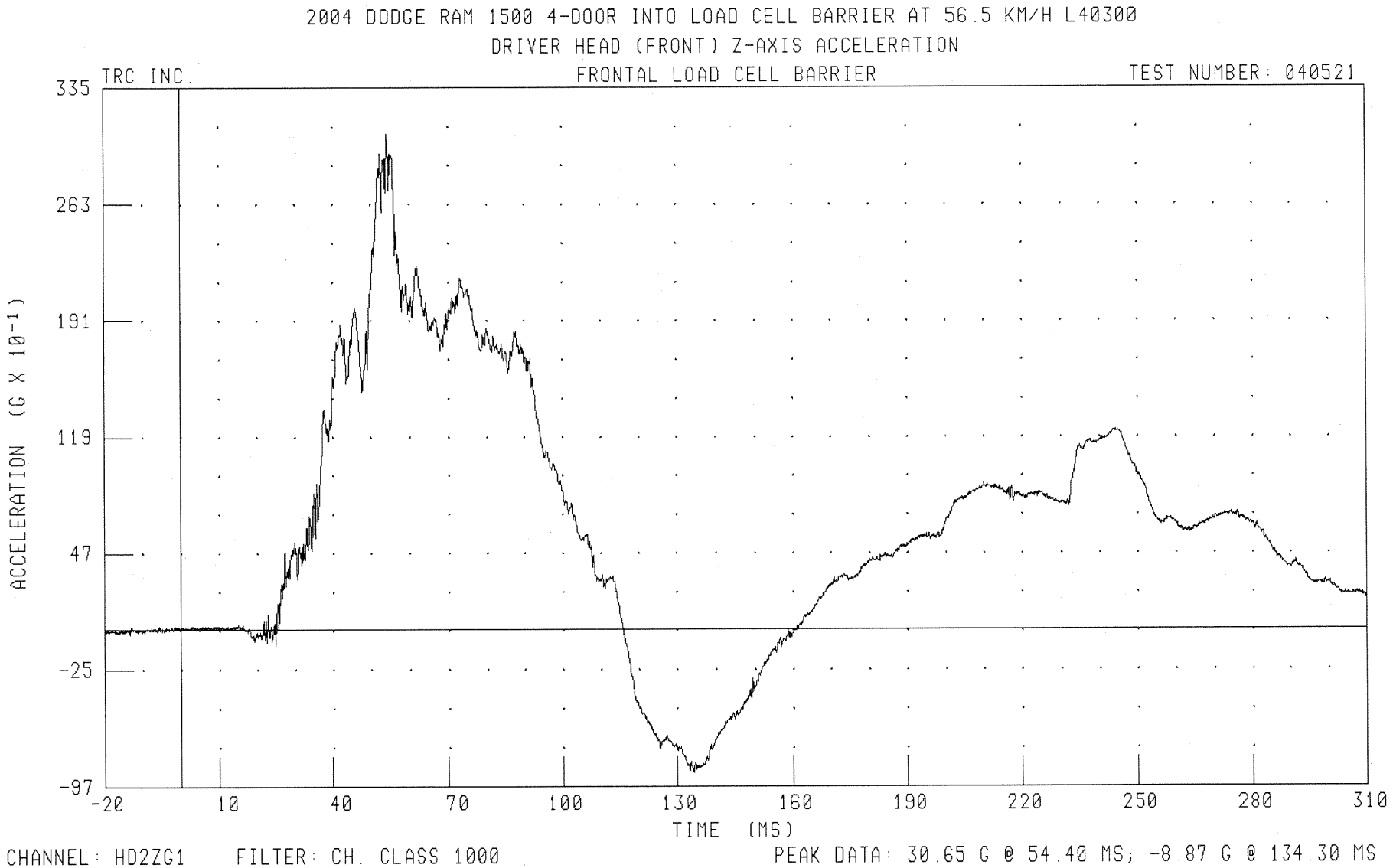
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD (LEFT) Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
274
222
170
118
66
14
-37
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD1ZG1
FILTER: CH. CLASS 1000
PEAK DATA: 25.34 G @ 74.70 MS; -3.37 G @ 133.30 MS

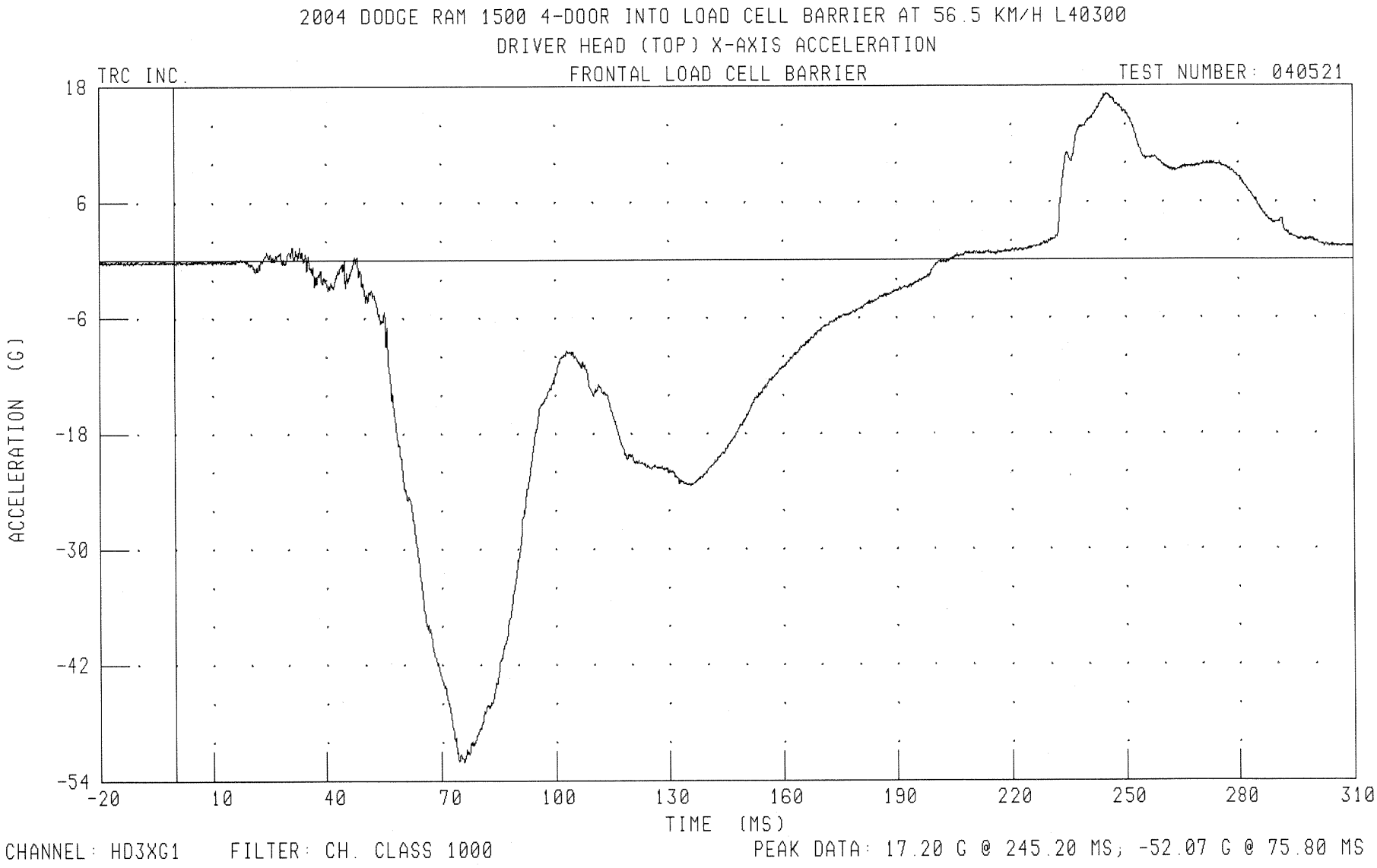
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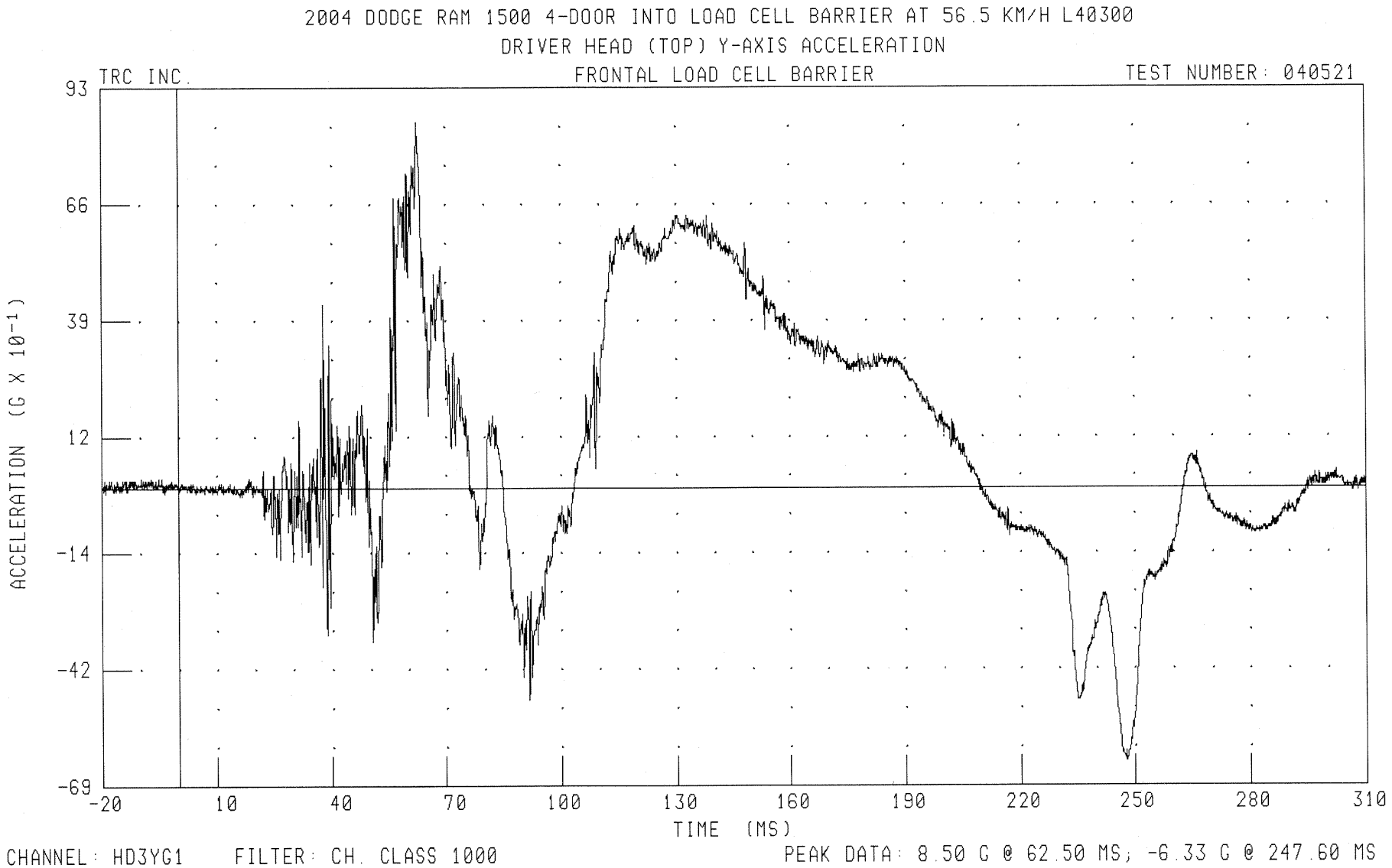

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD (FRONT) Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
97
74
51
28
5
-17
-41
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD2YG1
FILTER: CH. CLASS 1000
PEAK DATA: 9.20 G @ 54.90 MS; -3.78 G @ 36.80 MS

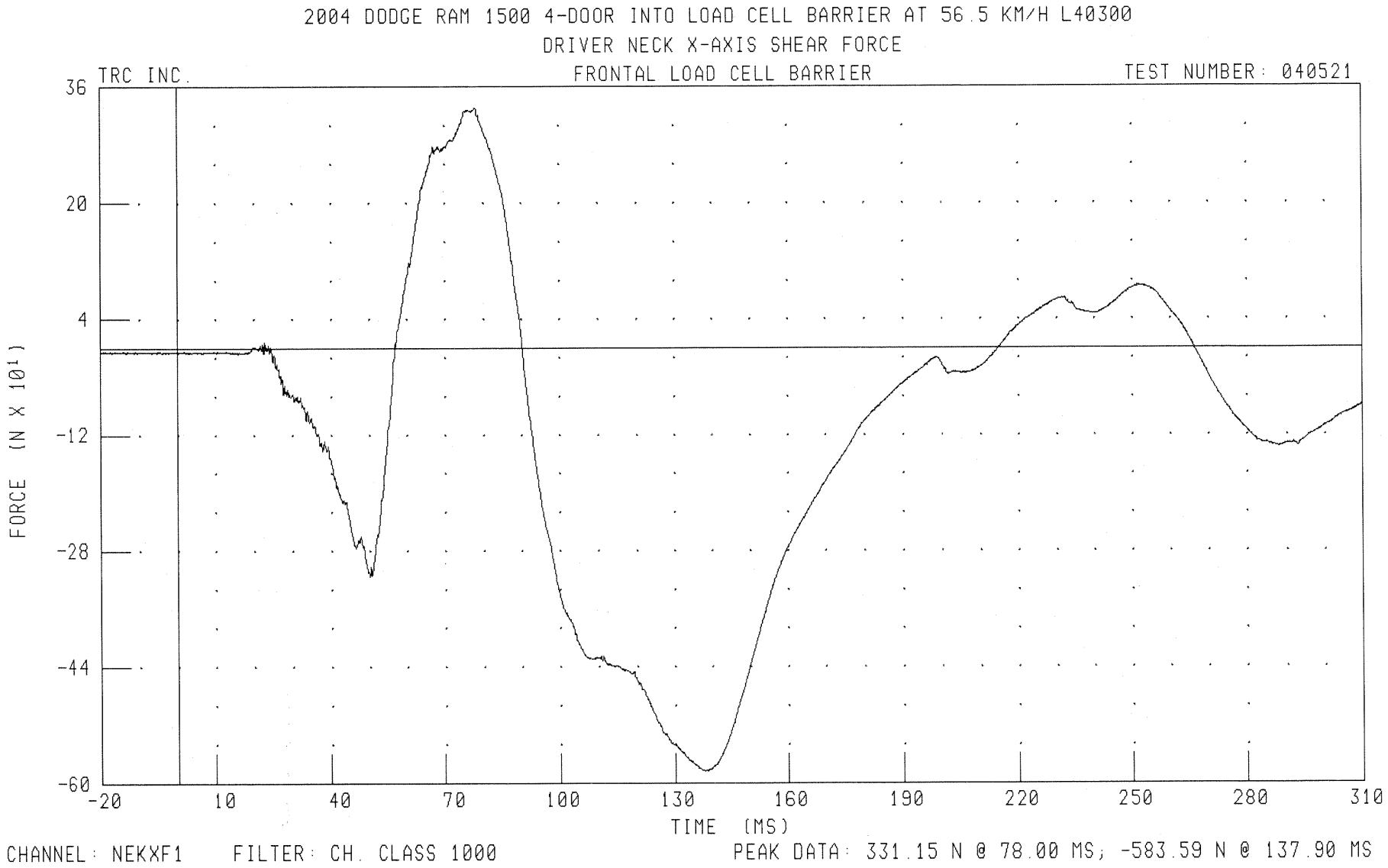
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD (FRONT) Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
335
263
191
119
47
-25
-97
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD2ZG1
FILTER: CH. CLASS 1000
PEAK DATA: 30.65 G @ 54.40 MS; -8.87 G @ 134.30 MS

040521

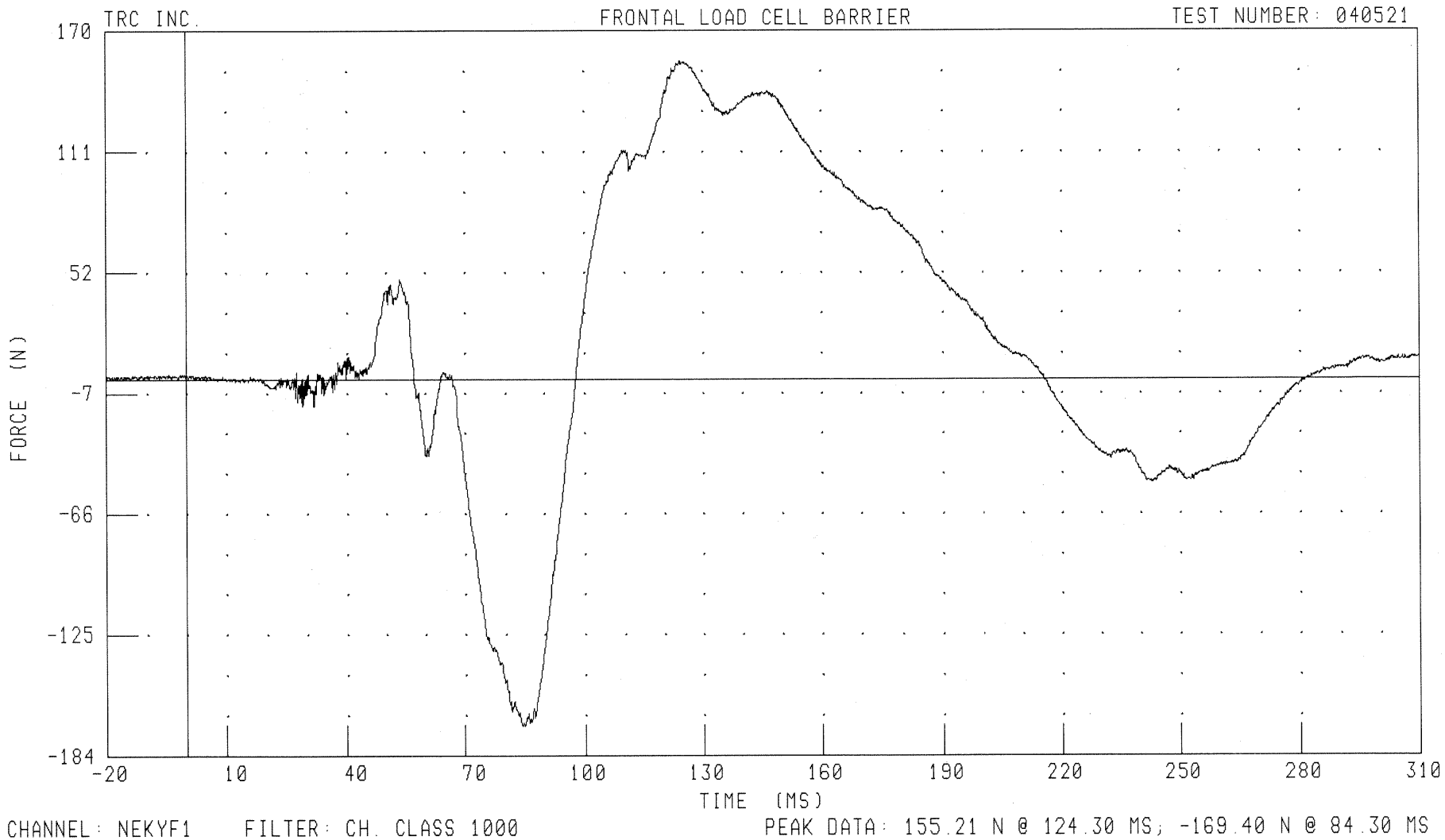

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD (TOP) X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
18
6
-6
-18
-30
-42
-54
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD3XG1
FILTER: CH. CLASS 1000
PEAK DATA: 17.20 G @ 245.20 MS; -52.07 G @ 75.80 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER HEAD (TOP) Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
93
66
39
12
-14
-42
-69
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD3YG1
FILTER: CH. CLASS 1000
PEAK DATA: 8.50 G @ 62.50 MS; -6.33 G @ 247.60 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK X-AXIS SHEAR FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
36
20
4
-12
-28
-44
-60
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKXF1
FILTER: CH. CLASS 1000
PEAK DATA: 331.15 N @ 78.00 MS; -583.59 N @ 137.90 MS

040521

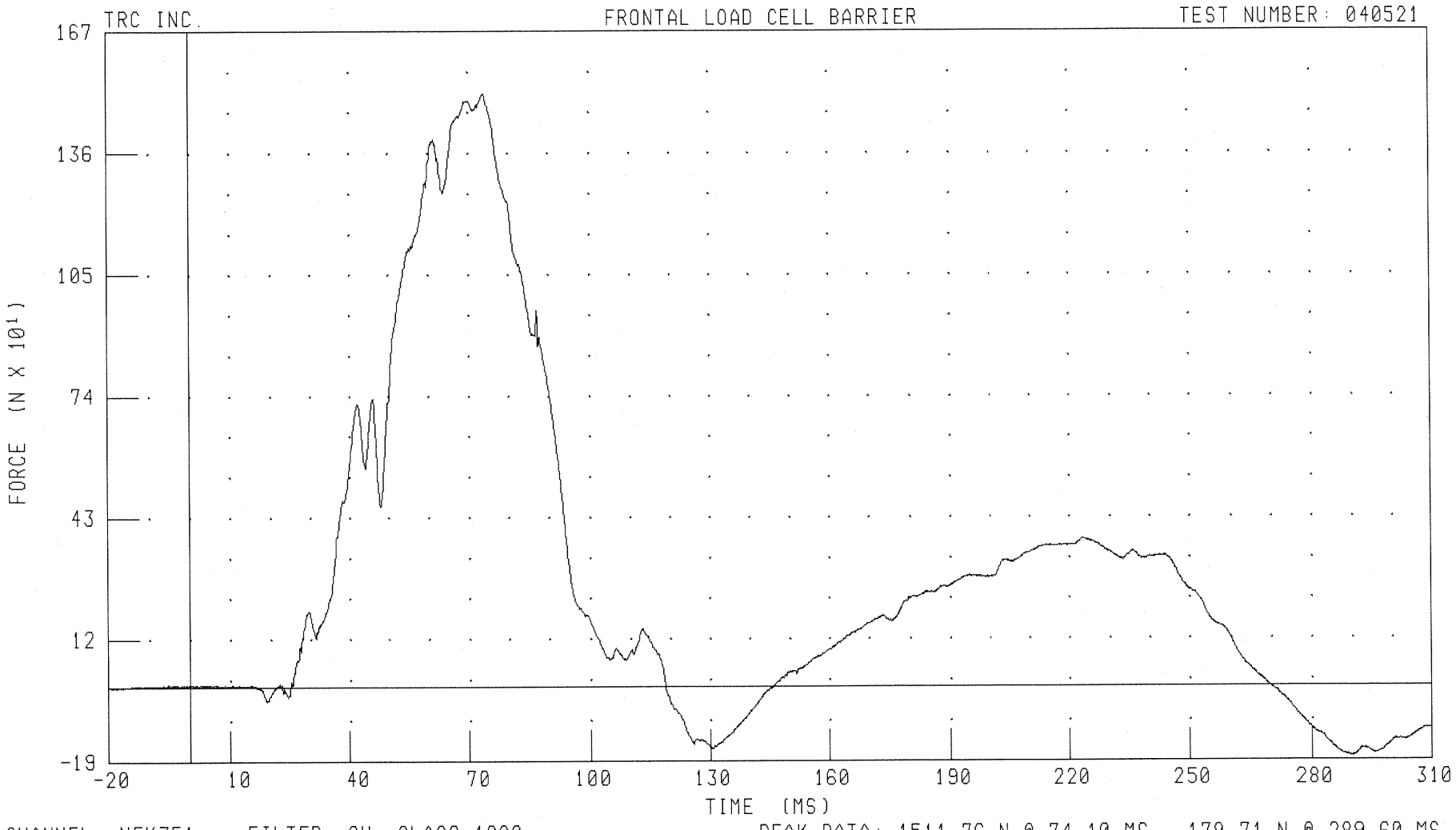
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK Y-AXIS SHEAR FORCE



CHANNEL: NEKYF1 FILTER: CH. CLASS 1000 PEAK DATA: 155.21 N @ 124.30 MS; -169.40 N @ 84.30 MS

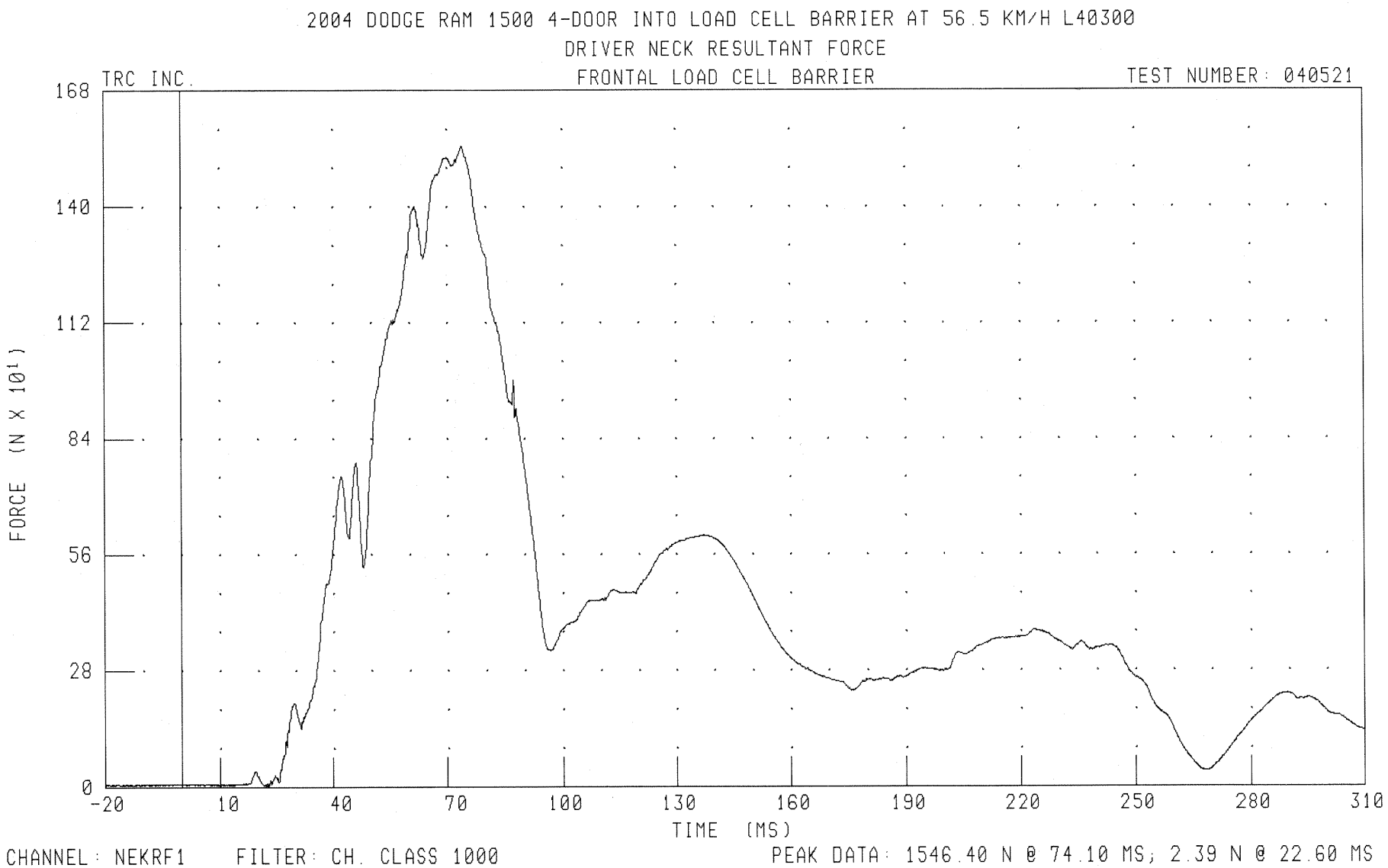
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK Z-AXIS AXIAL FORCE

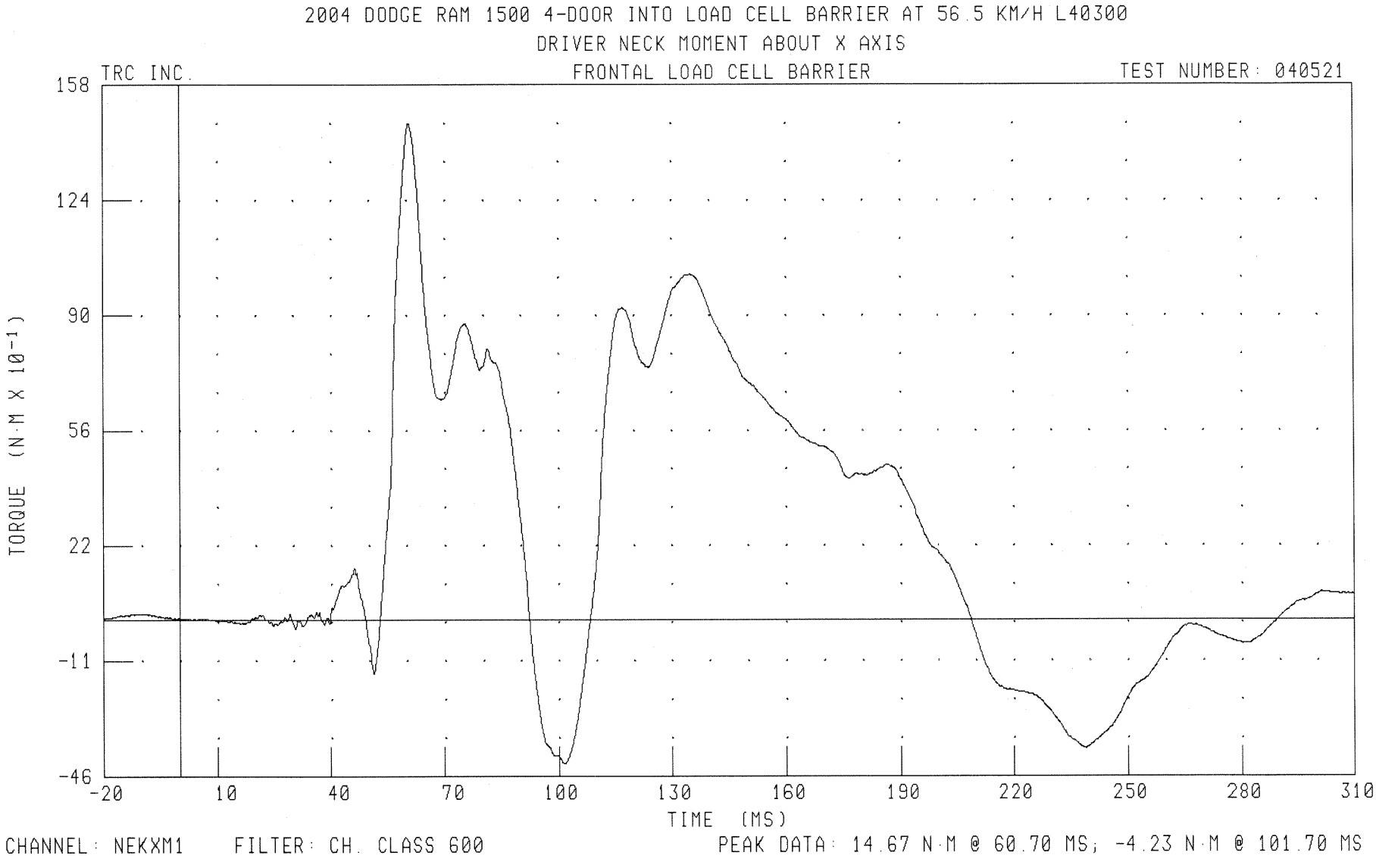


CHANNEL: NEKZF1 FILTER: CH. CLASS 1000 PEAK DATA: 1511.76 N @ 74.10 MS; -179.71 N @ 289.60 MS

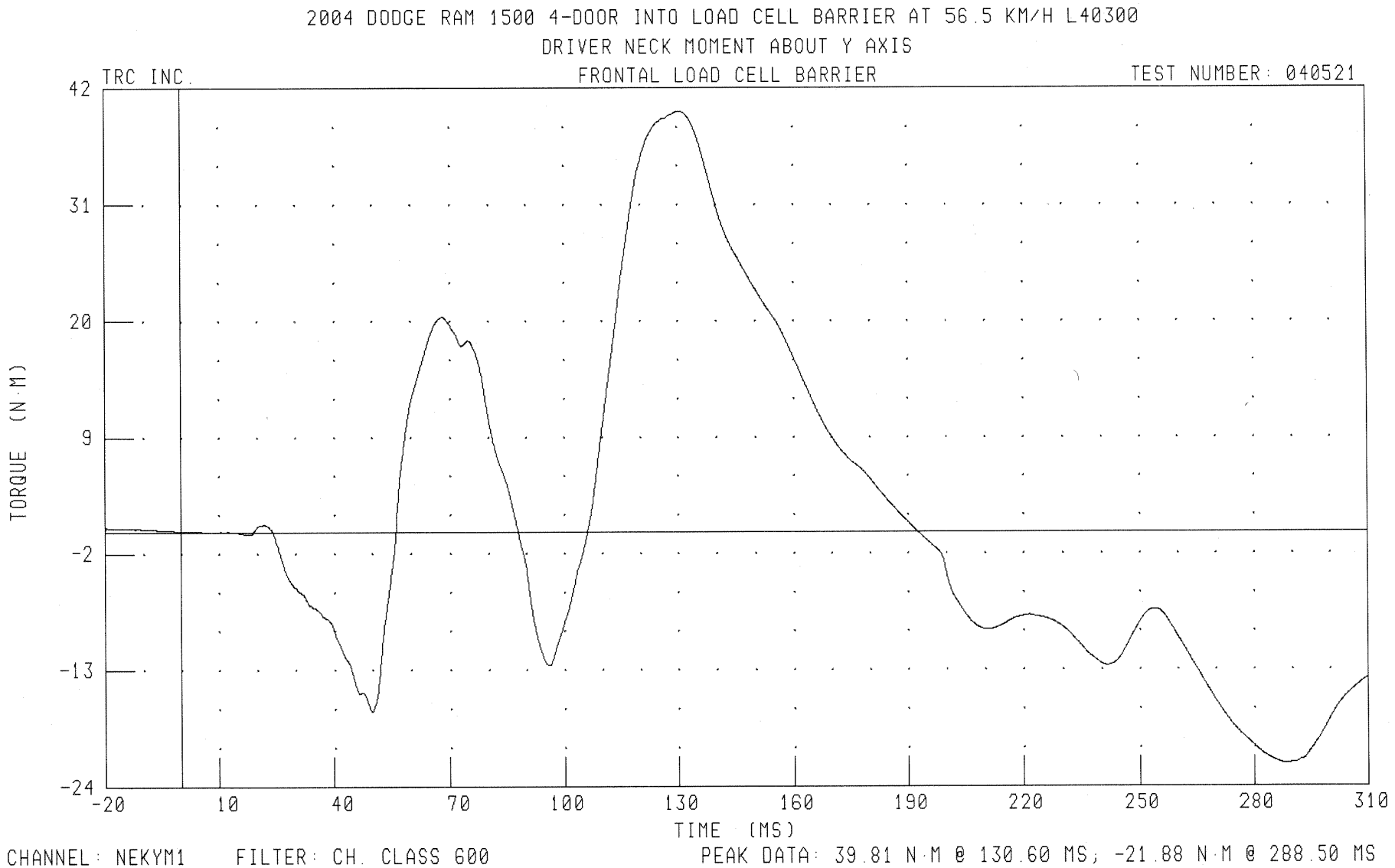
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK RESULTANT FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
168
140
112
84
56
28
0
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKRF1
FILTER: CH. CLASS 1000
PEAK DATA: 1546.40 N @ 74.10 MS; 2.39 N @ 22.60 MS

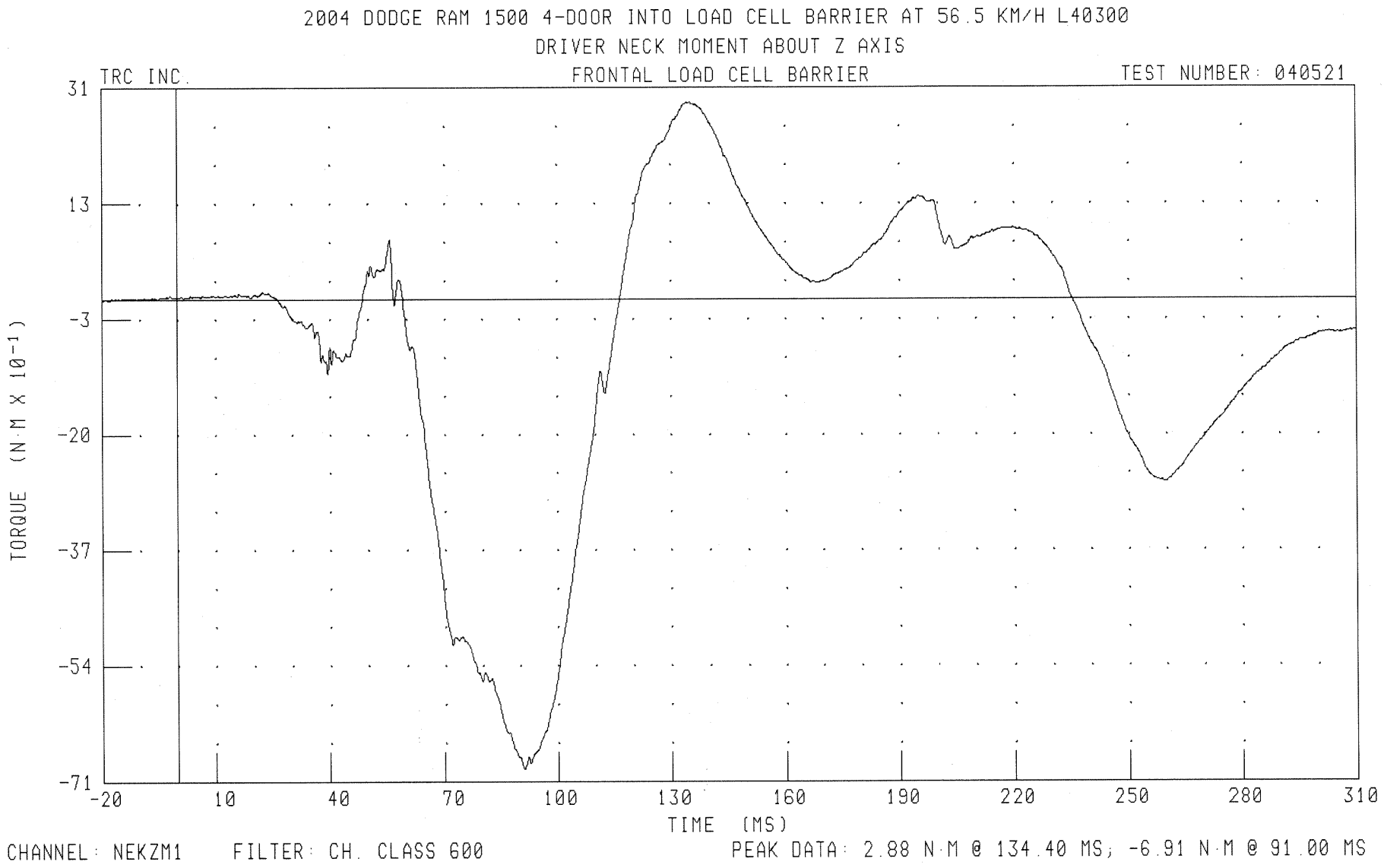
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK MOMENT ABOUT X AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
158
124
90
56
22
-11
-46
TORQUE (N·M X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKXM1
FILTER: CH. CLASS 600
PEAK DATA: 14.67 N·M @ 60.70 MS; -4.23 N·M @ 101.70 MS

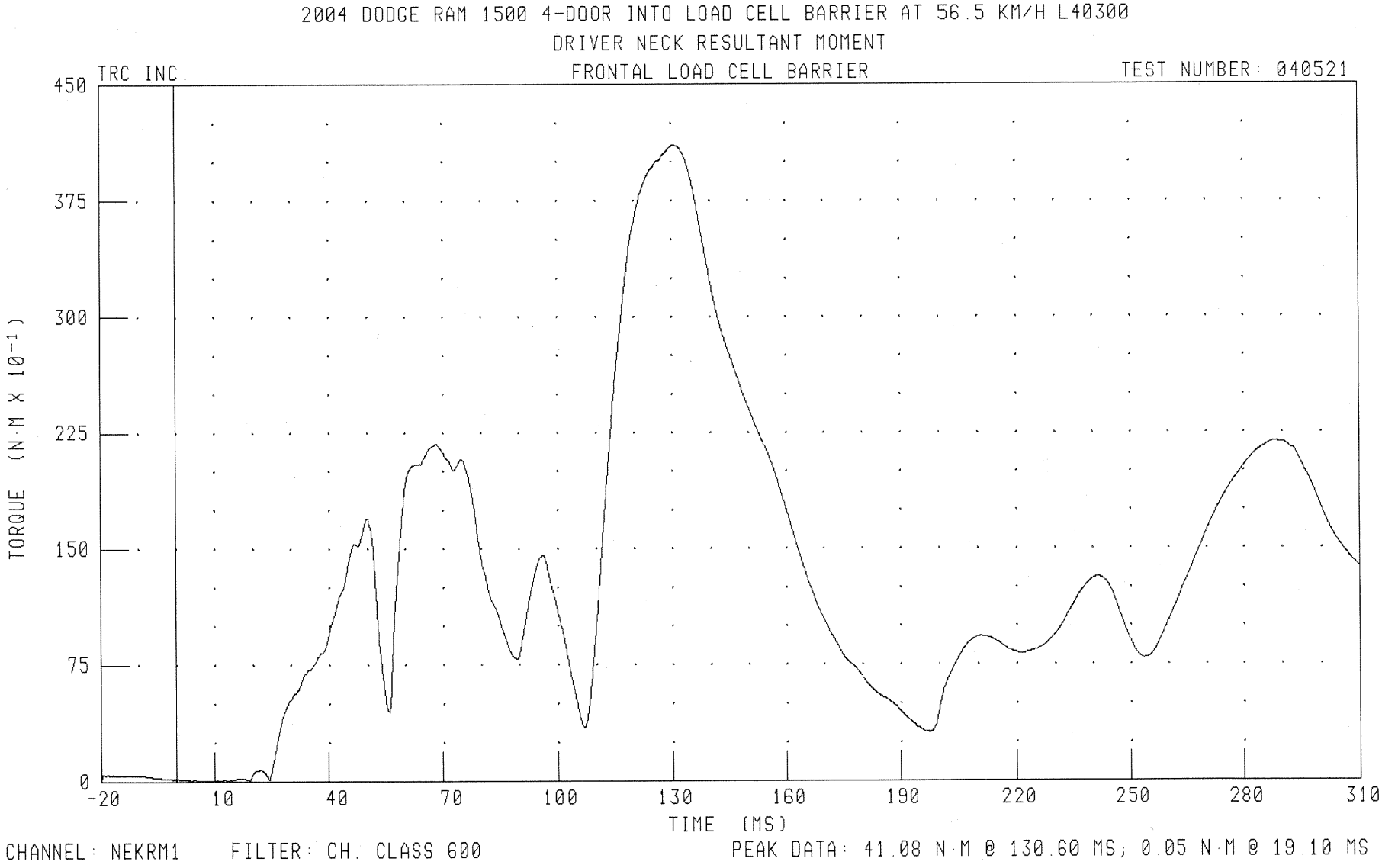
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK MOMENT ABOUT Y AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
42
31
20
9
-2
-13
-24
TORQUE (N-M)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKYM1
FILTER: CH. CLASS 600
PEAK DATA: 39.81 N-M @ 130.60 MS; -21.88 N-M @ 288.50 MS

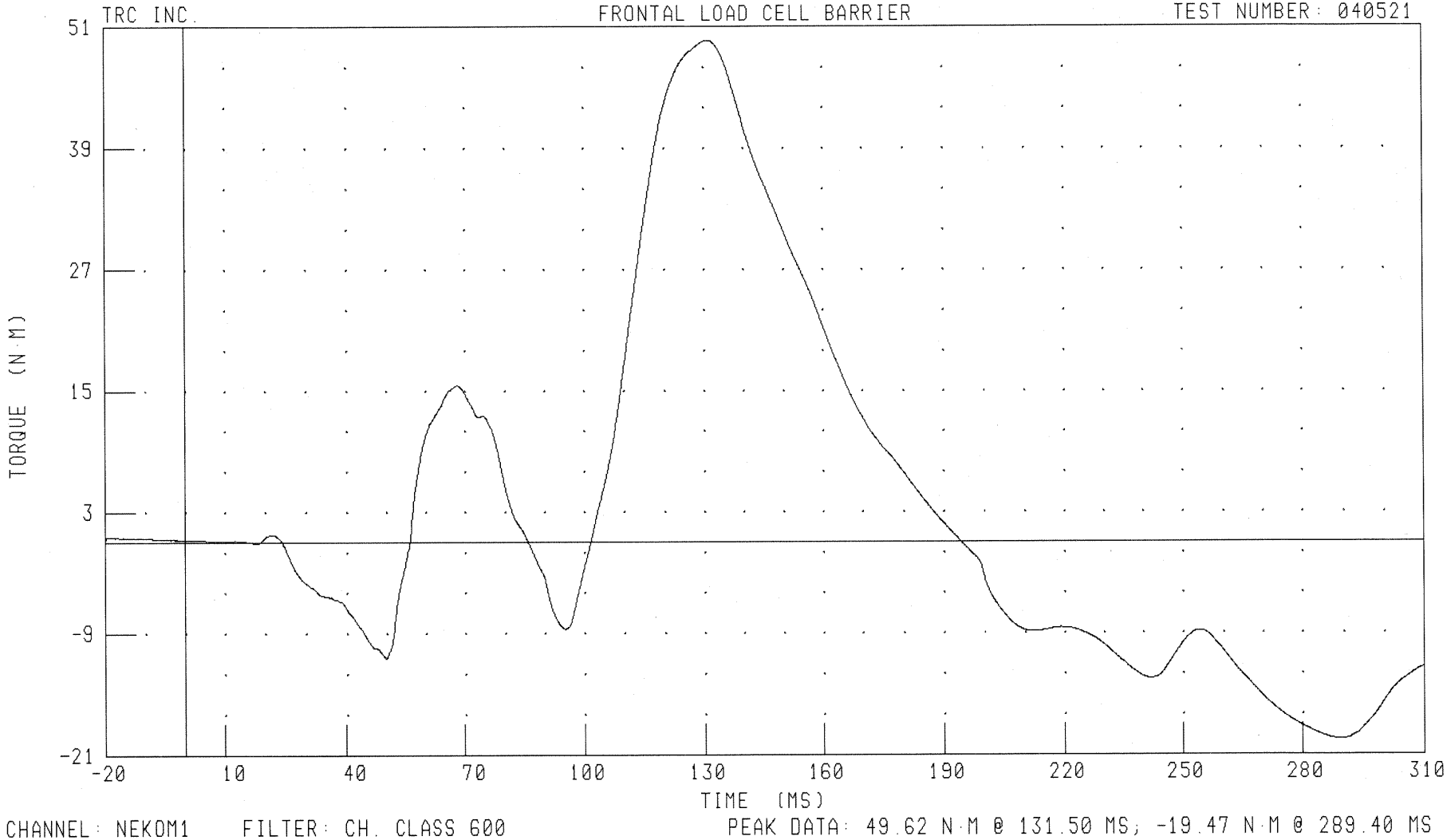
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK MOMENT ABOUT Z AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
31
13
-3
-20
-37
-54
-71
TORQUE (N-M X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKZM1
FILTER: CH. CLASS 600
PEAK DATA: 2.88 N-M @ 134.40 MS; -6.91 N-M @ 91.00 MS

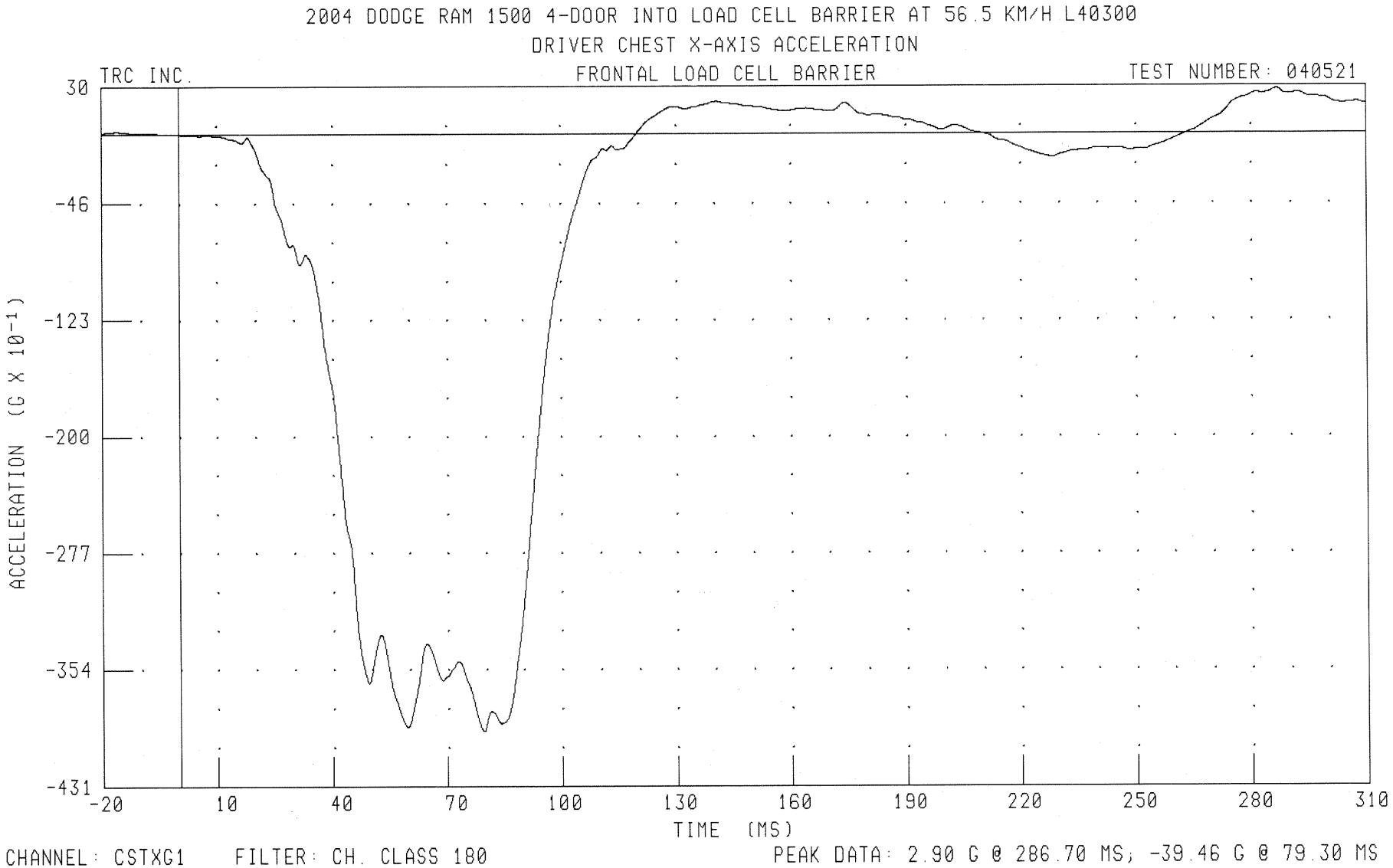
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK RESULTANT MOMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
TORQUE (N-M X 10-1)
450
375
300
225
150
75
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKRM1
FILTER: CH. CLASS 600
PEAK DATA: 41.08 N-M @ 130.60 MS; 0.05 N-M @ 19.10 MS

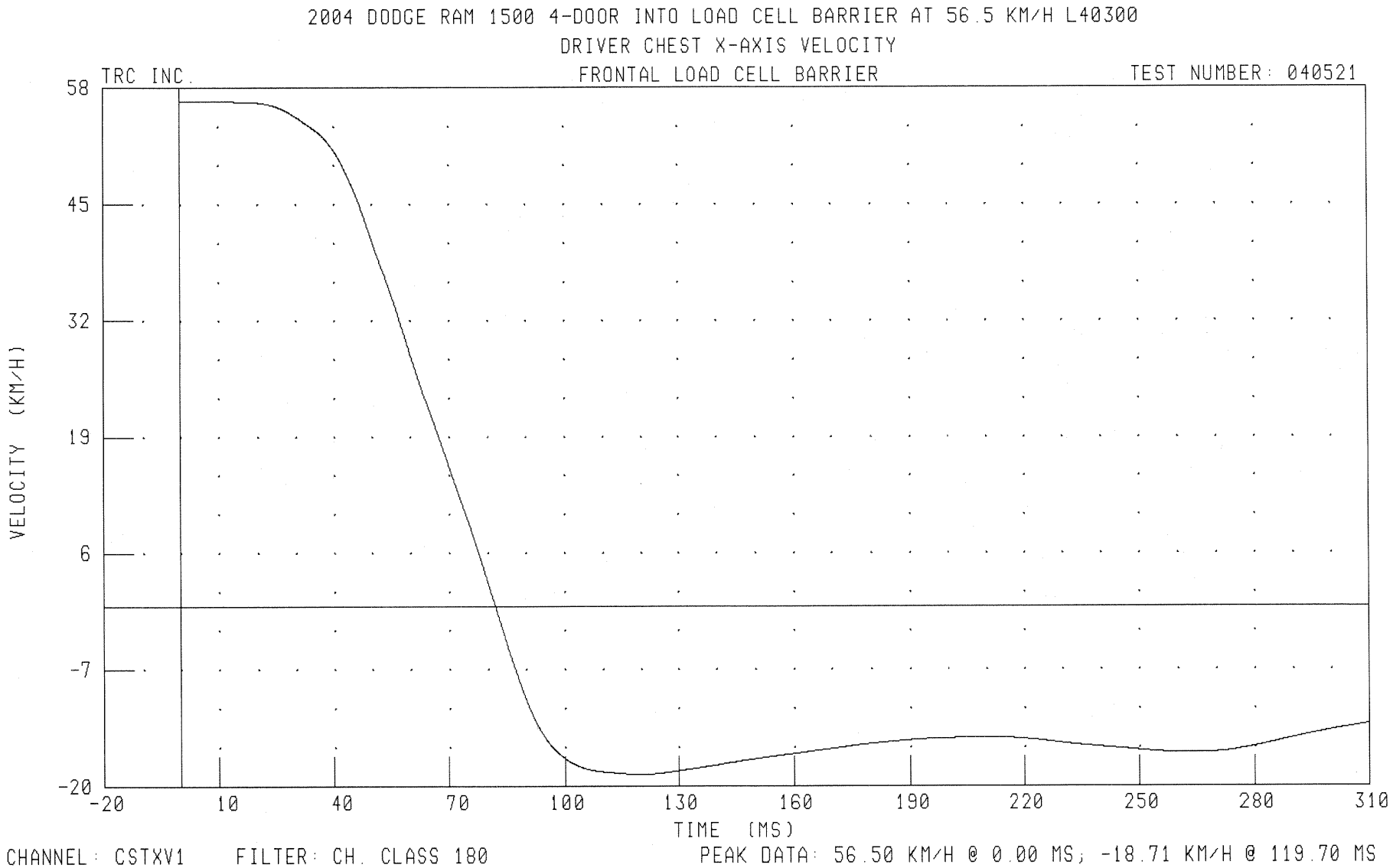
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER NECK MOMENT OCCIPITAL CONDYLE ABOUT Y AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
TORQUE (N-M)
51
39
27
15
3
-9
-21
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKOM1
FILTER: CH. CLASS 600
PEAK DATA: 49.62 N-M @ 131.50 MS; -19.47 N-M @ 289.40 MS

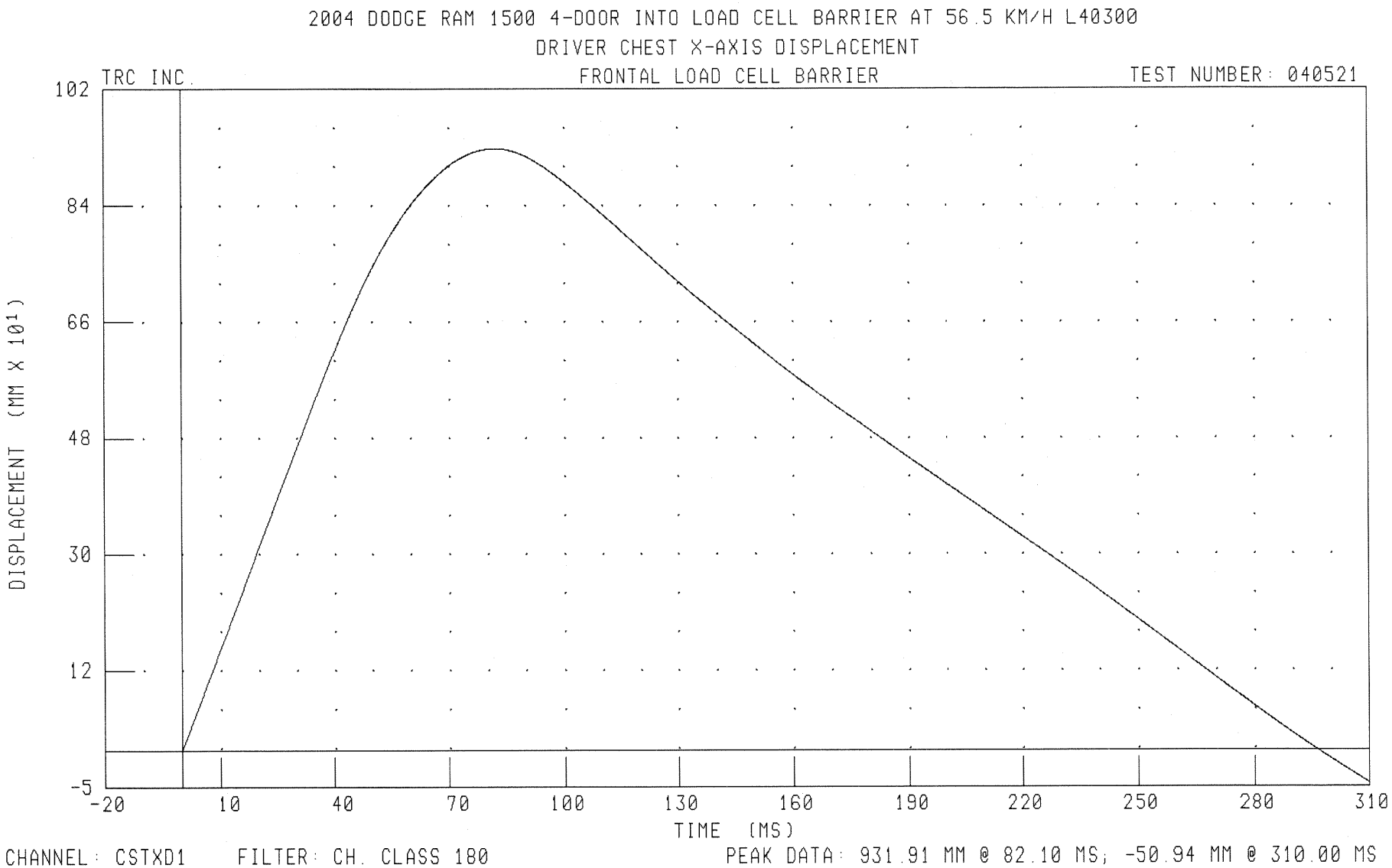
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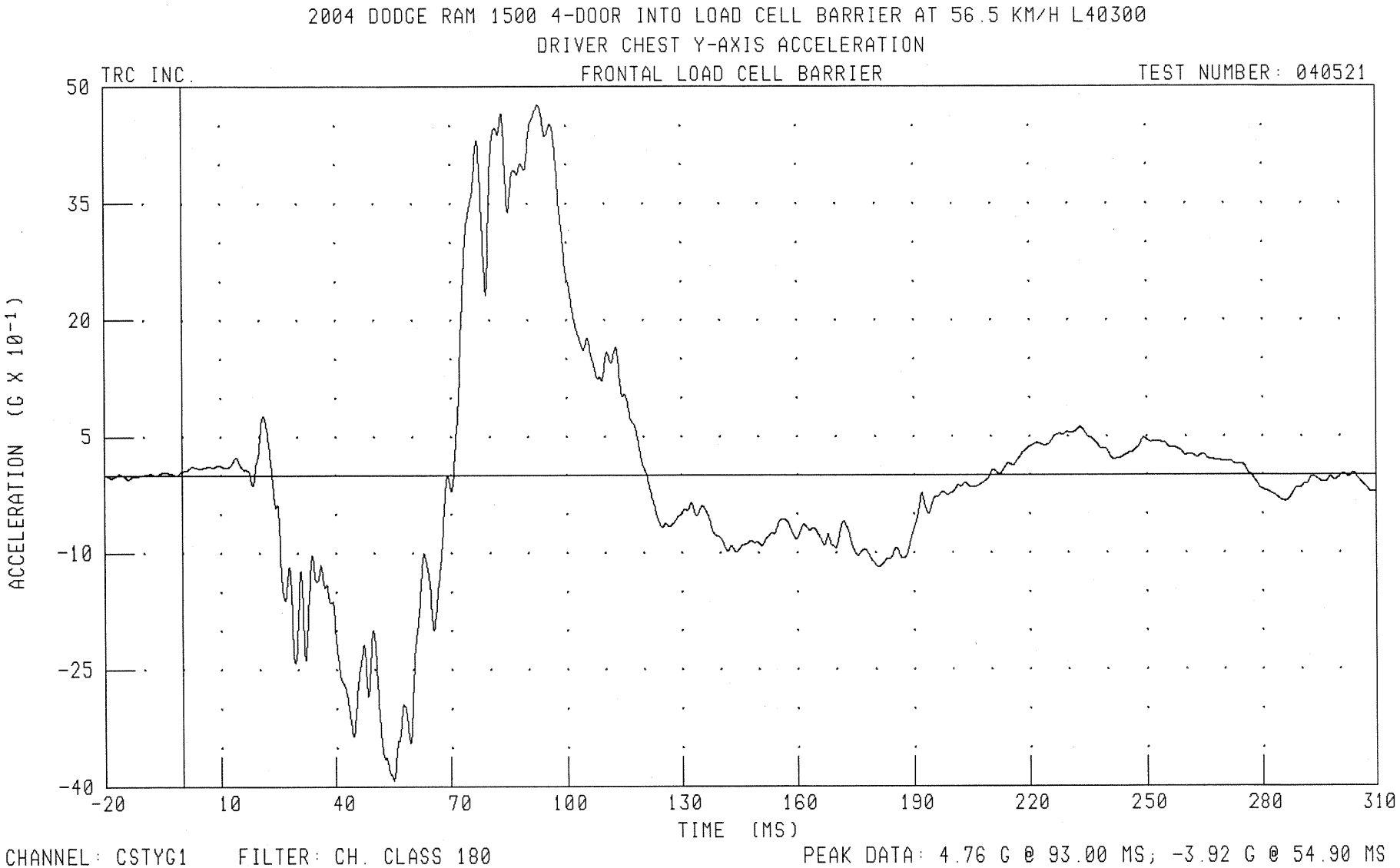

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
30
-46
-123
-200
-277
-354
-431
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXG1
FILTER: CH. CLASS 180
PEAK DATA: 2.90 G @ 286.70 MS; -39.46 G @ 79.30 MS

040521

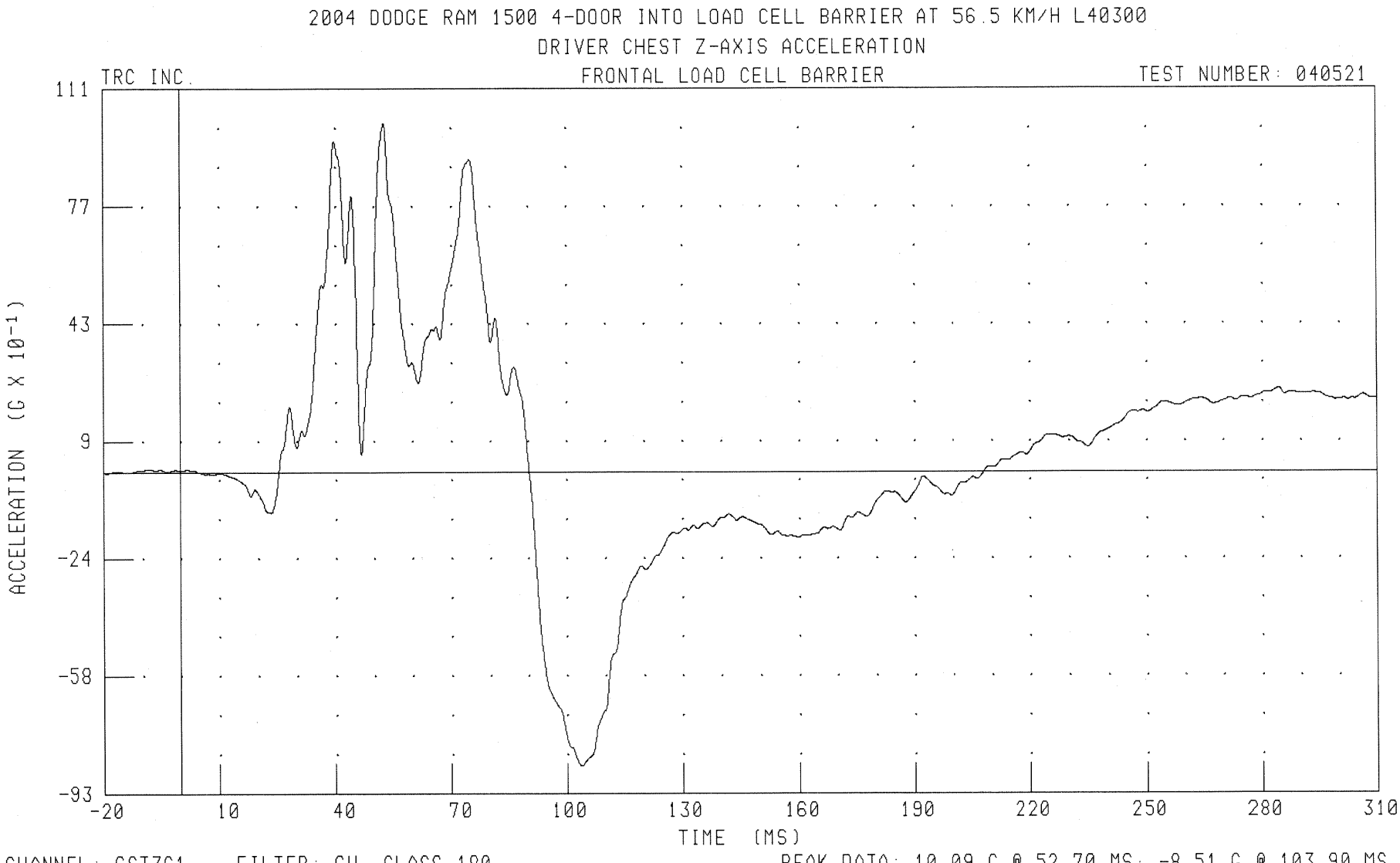

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST X-AXIS VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
58
45
32
19
6
-7
-20
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXV1
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -18.71 KM/H @ 119.70 MS

040521

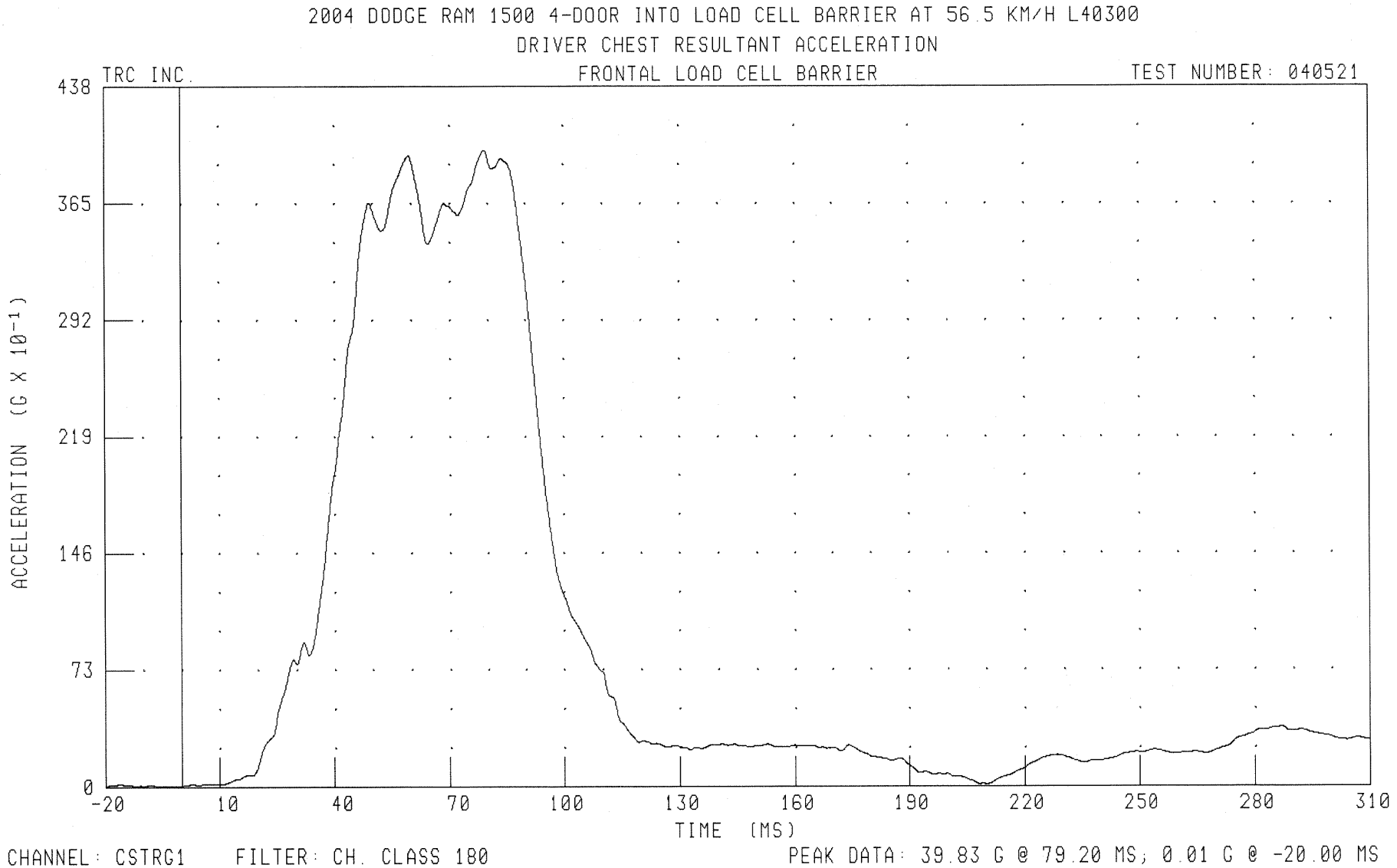

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
102
84
66
48
30
12
-5
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXD1
FILTER: CH. CLASS 180
PEAK DATA: 931.91 MM @ 82.10 MS; -50.94 MM @ 310.00 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
50
35
20
5
-10
-25
-40
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTYG1
FILTER: CH. CLASS 180
PEAK DATA: 4.76 G @ 93.00 MS; -3.92 G @ 54.90 MS

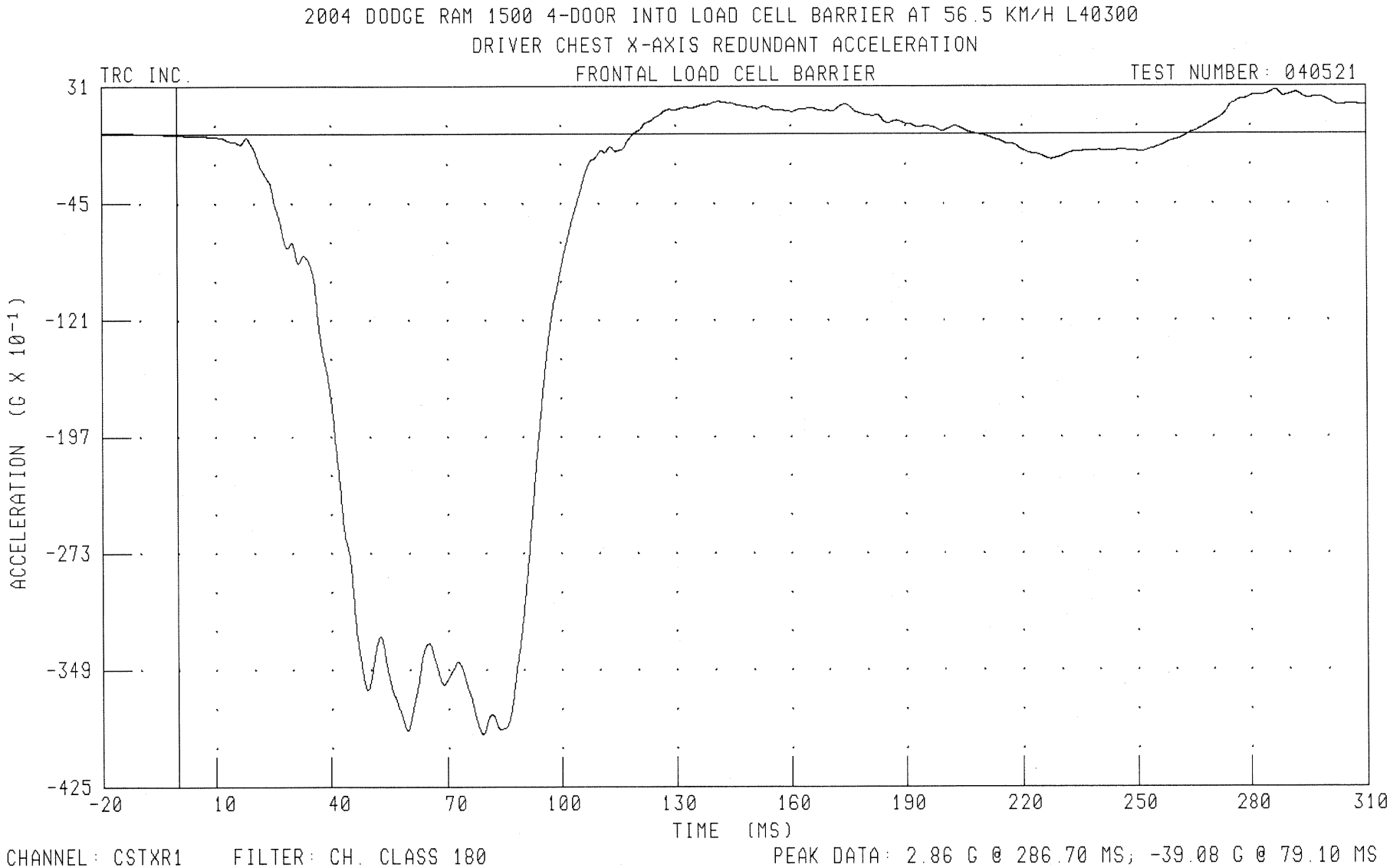
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
111
77
43
9
-24
-58
-93
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTZG1
FILTER: CH. CLASS 180
PEAK DATA: 10.09 G @ 52.70 MS; -8.51 G @ 103.90 MS

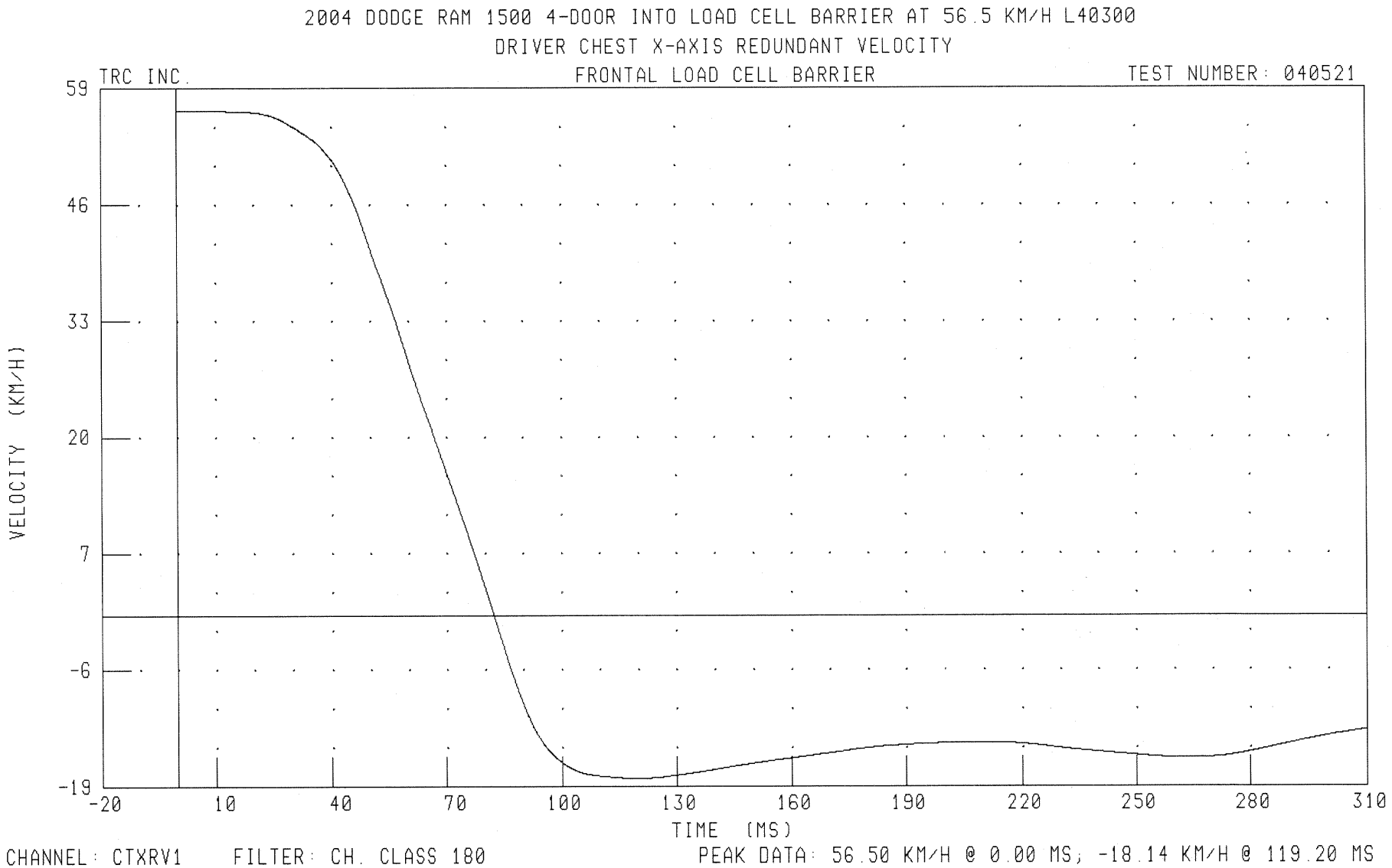
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
438
365
292
219
146
73
0
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTRG1
FILTER: CH. CLASS 180
PEAK DATA: 39.83 G @ 79.20 MS; 0.01 G @ -20.00 MS

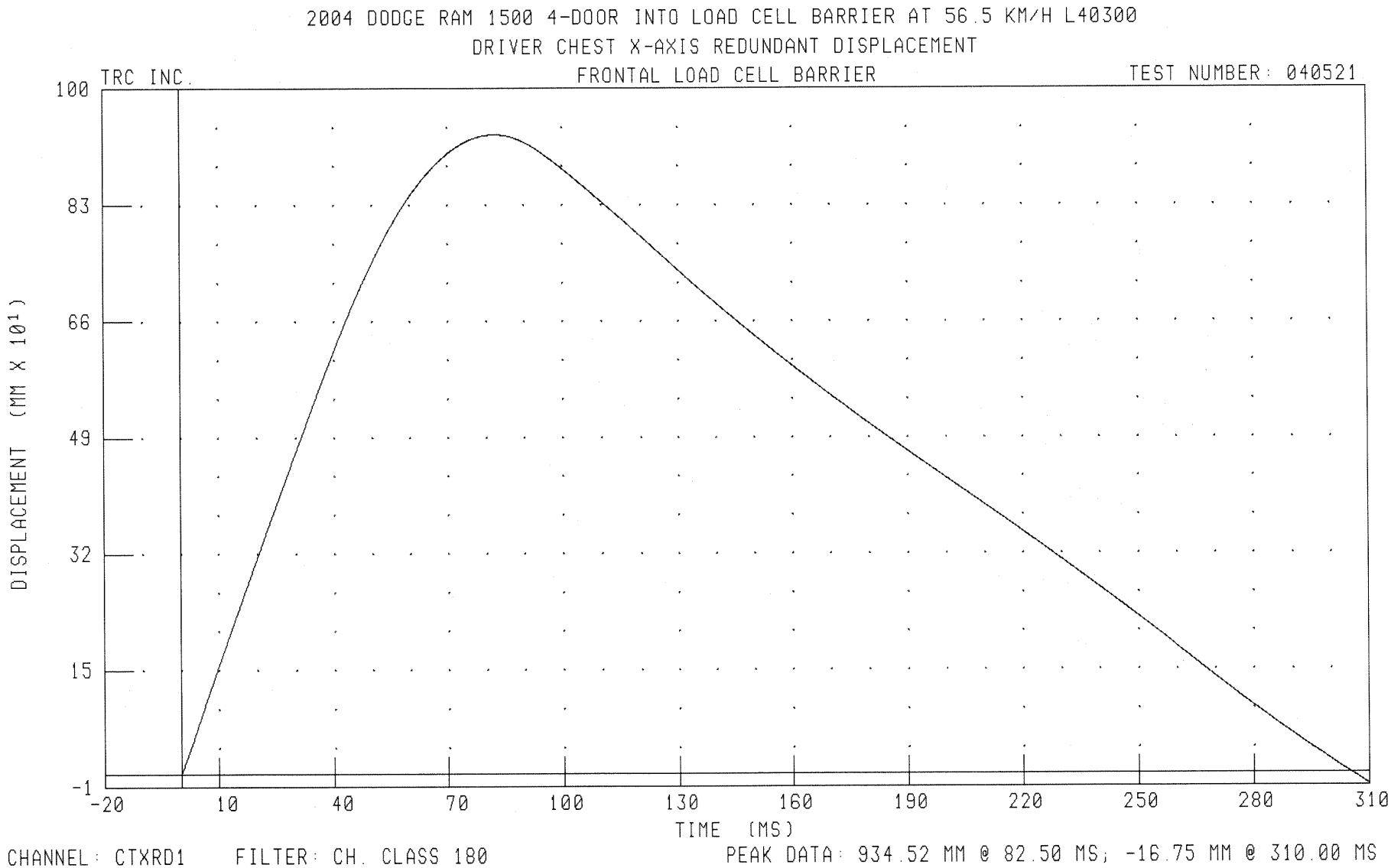
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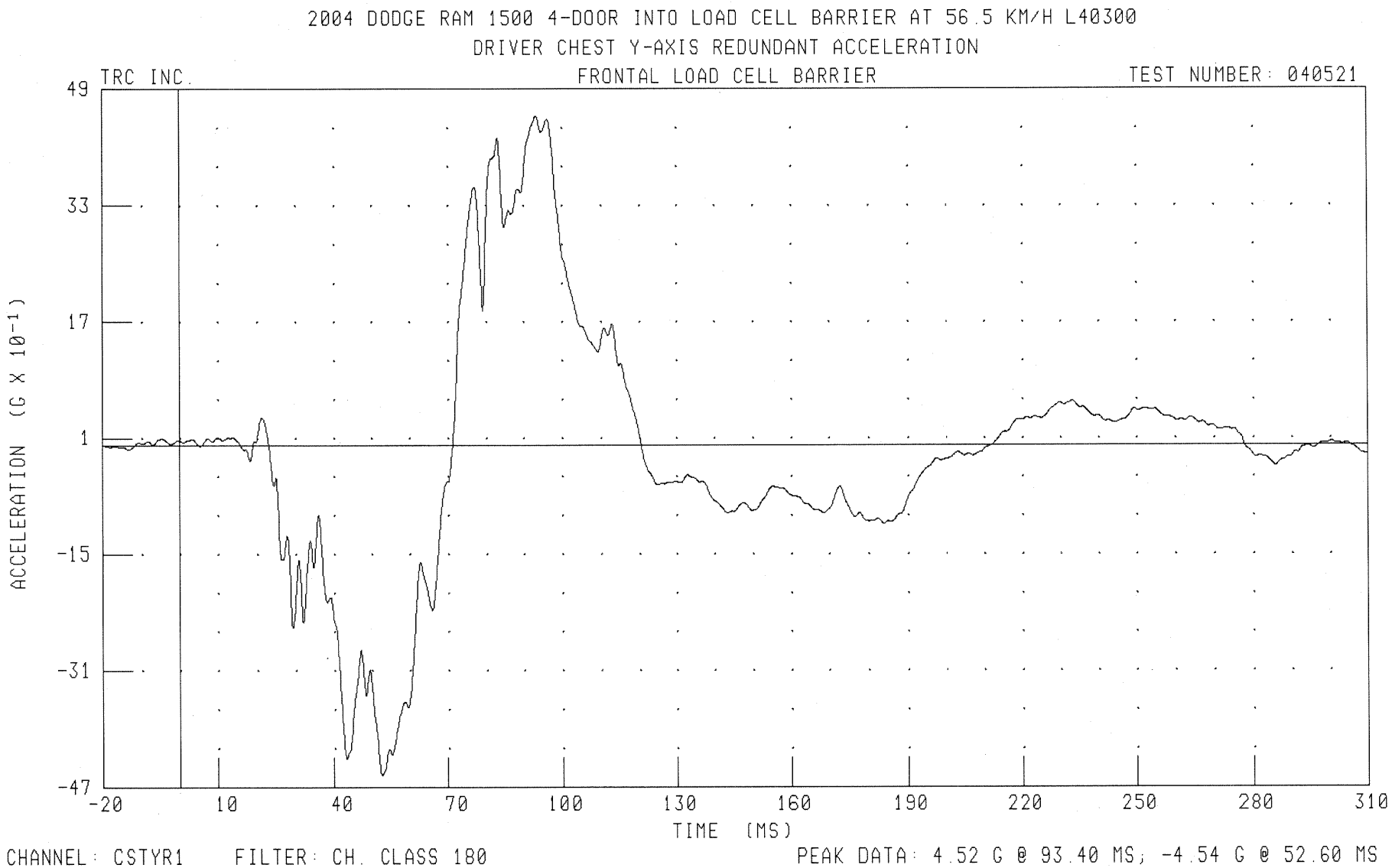

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST X-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
31
-45
-121
-197
-273
-349
-425
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXR1
FILTER: CH. CLASS 180
PEAK DATA: 2.86 G @ 286.70 MS; -39.08 G @ 79.10 MS

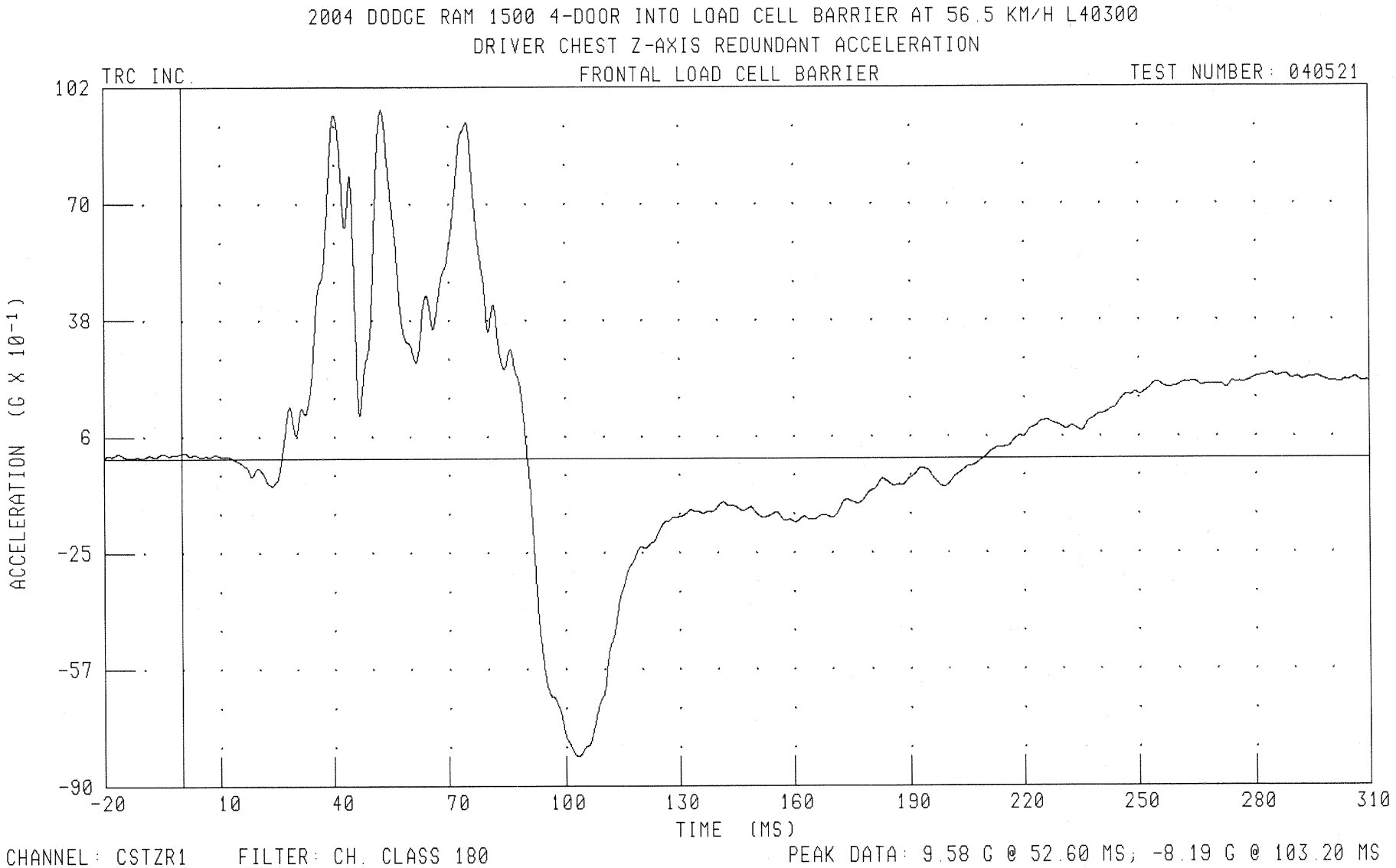
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST X-AXIS REDUNDANT VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
59
46
33
20
7
-6
-19
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CTXRV1
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -18.14 KM/H @ 119.20 MS

040521

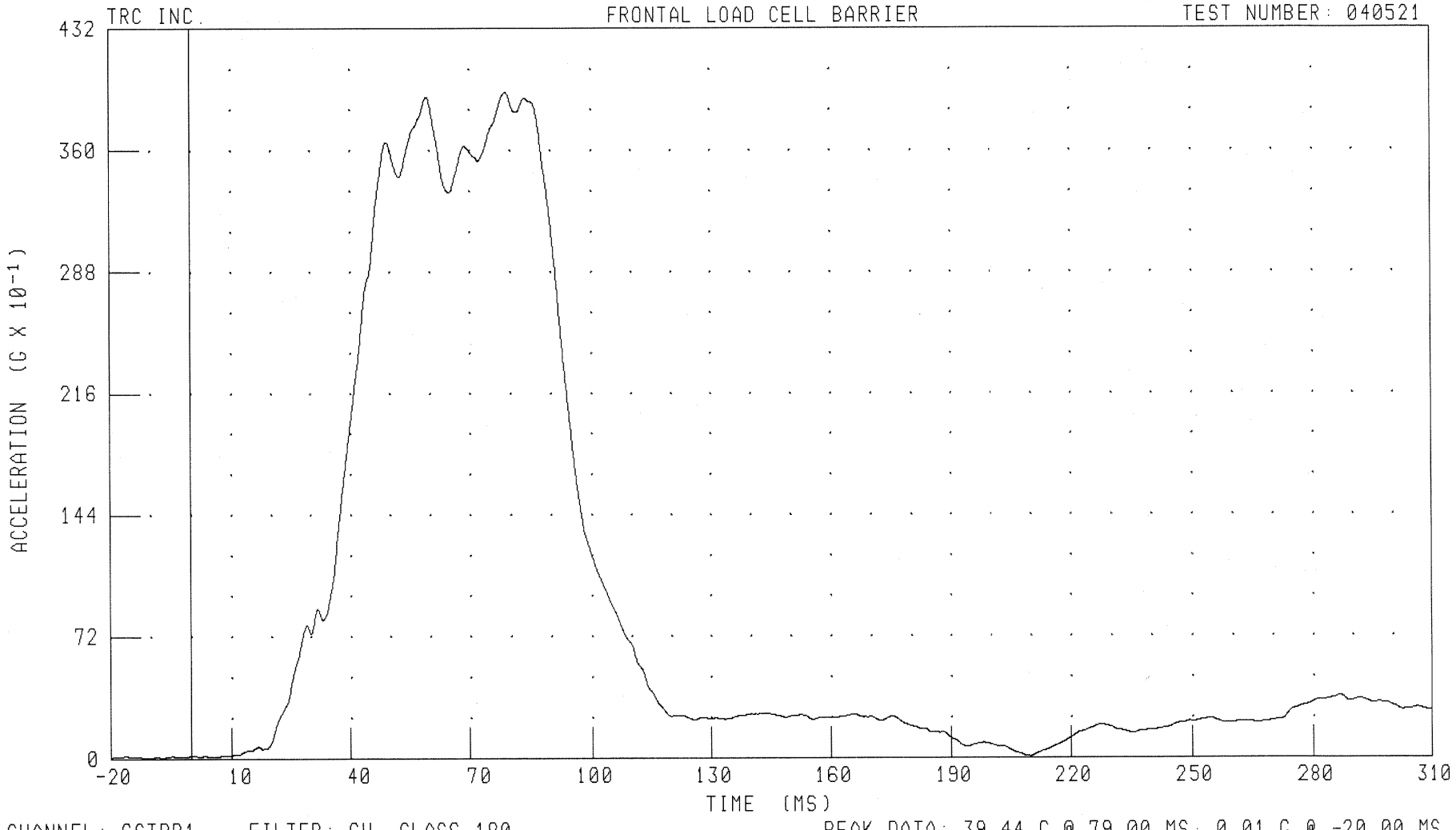

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST X-AXIS REDUNDANT DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
100
83
66
49
32
15
-1
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CTXRD1
FILTER: CH. CLASS 180
PEAK DATA: 934.52 MM @ 82.50 MS; -16.75 MM @ 310.00 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST Y-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
49
33
17
1
-15
-31
-47
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTYR1
FILTER: CH. CLASS 180
PEAK DATA: 4.52 G @ 93.40 MS; -4.54 G @ 52.60 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST Z-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
102
70
38
6
-25
-57
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTZR1
FILTER: CH. CLASS 180
PEAK DATA: 9.58 G @ 52.60 MS; -8.19 G @ 103.20 MS

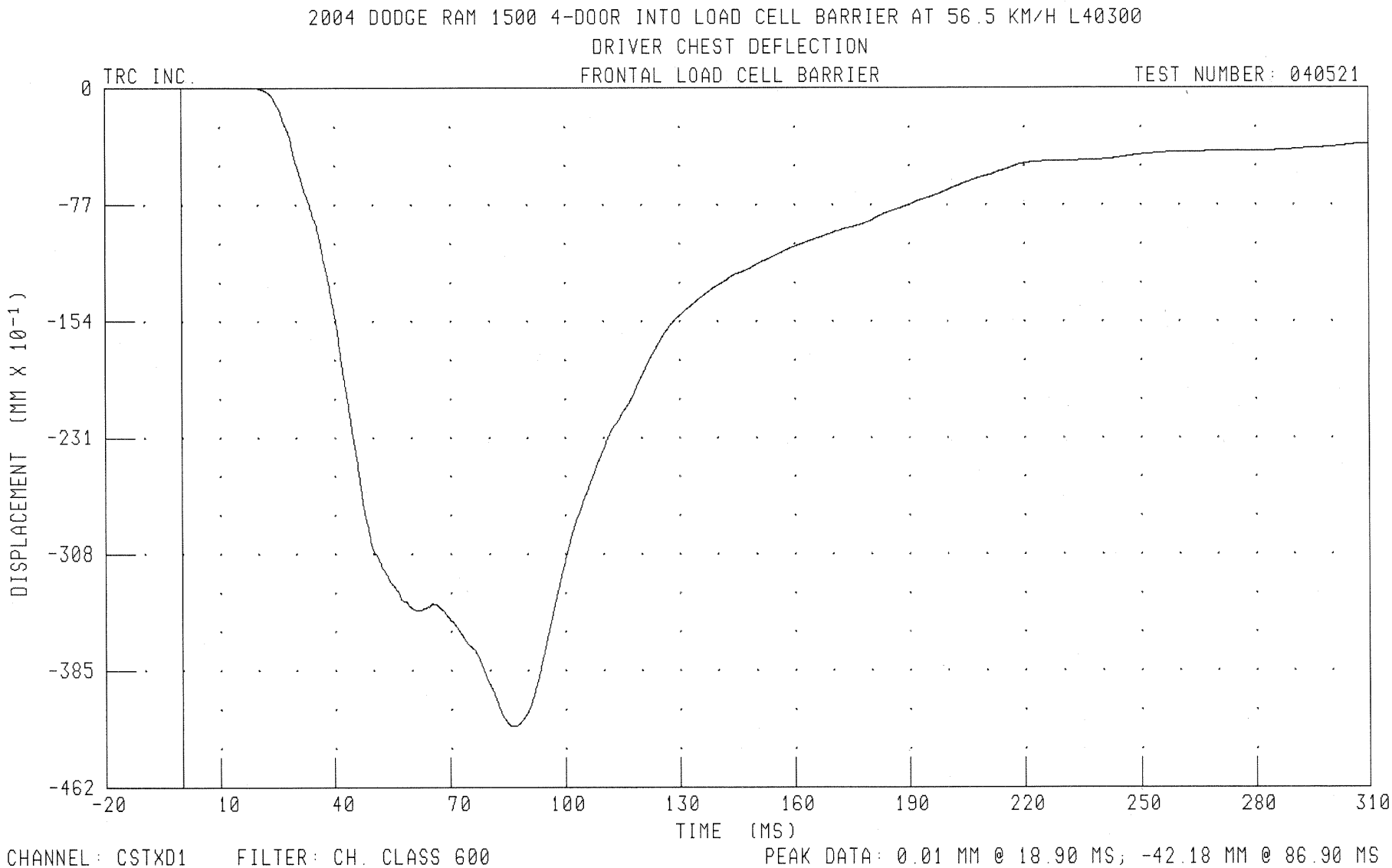
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST RESULTANT REDUNDANT ACCELERATION

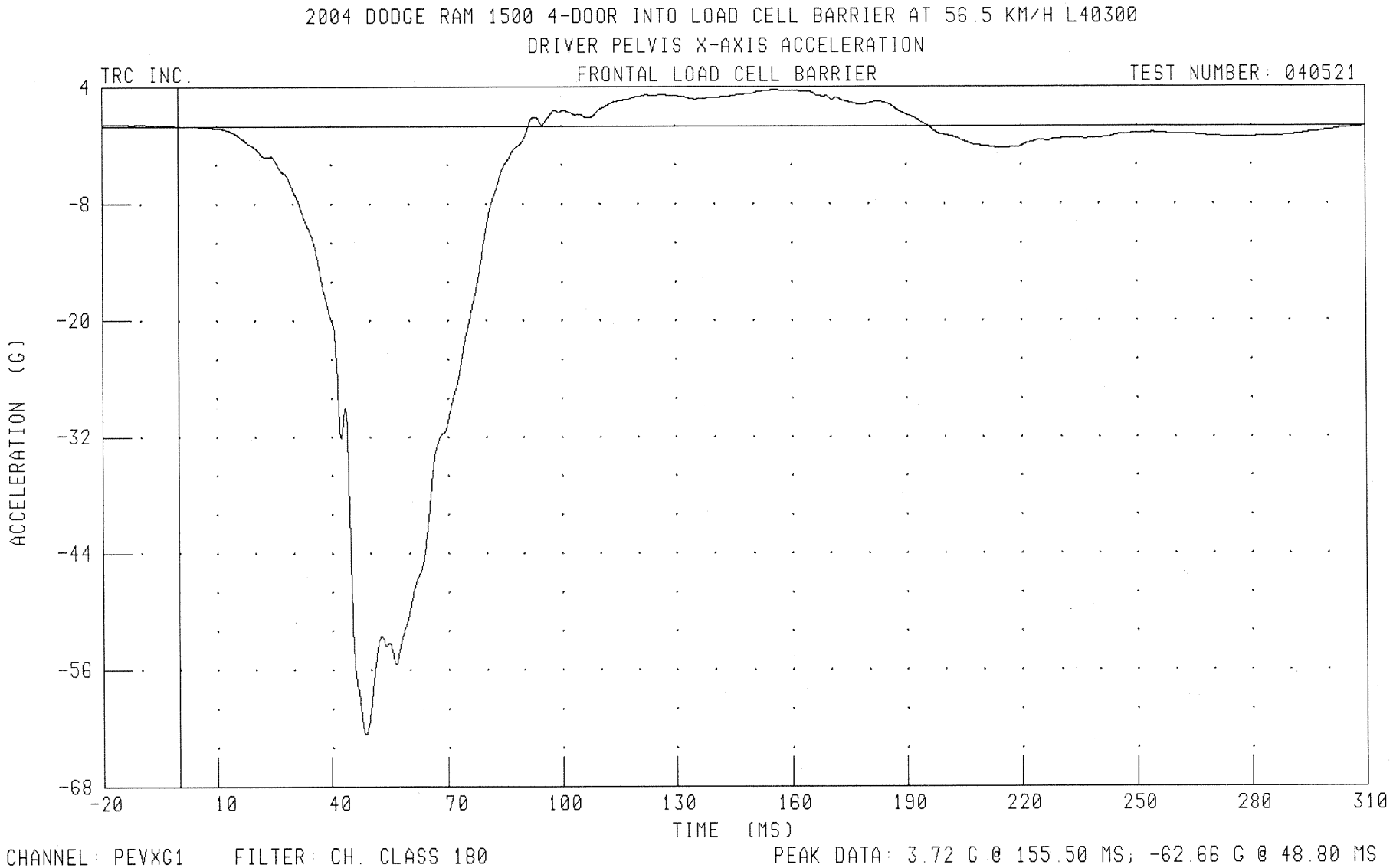


CHANNEL: CSTRR1 FILTER: CH. CLASS 180 PEAK DATA: 39.44 G @ 79.00 MS; 0.01 G @ -20.00 MS

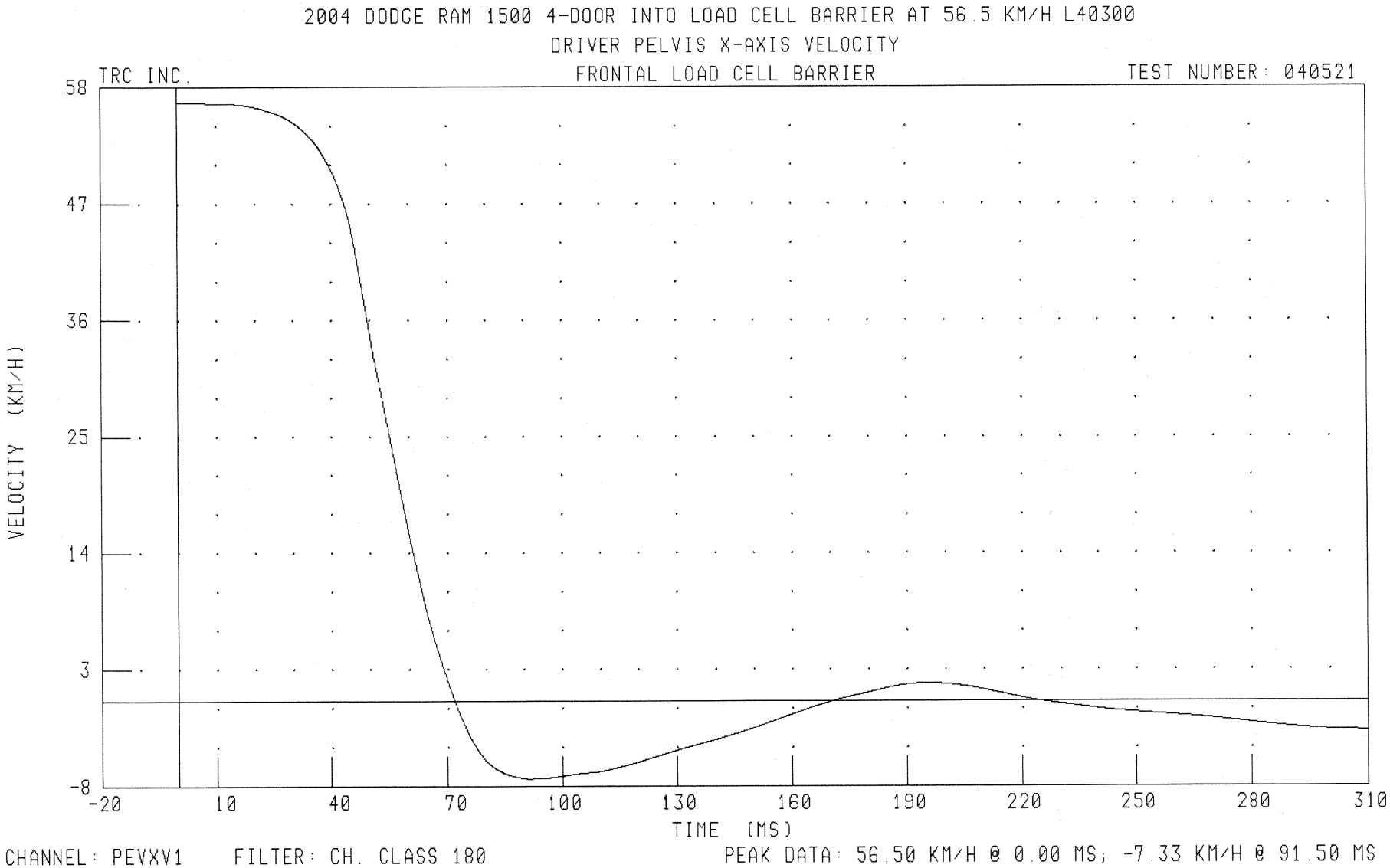
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER CHEST DEFLECTION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
0
-77
-154
-231
-308
-385
-462
DISPLACEMENT (MM X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXD1
FILTER: CH. CLASS 600
PEAK DATA: 0.01 MM @ 18.90 MS; -42.18 MM @ 86.90 MS

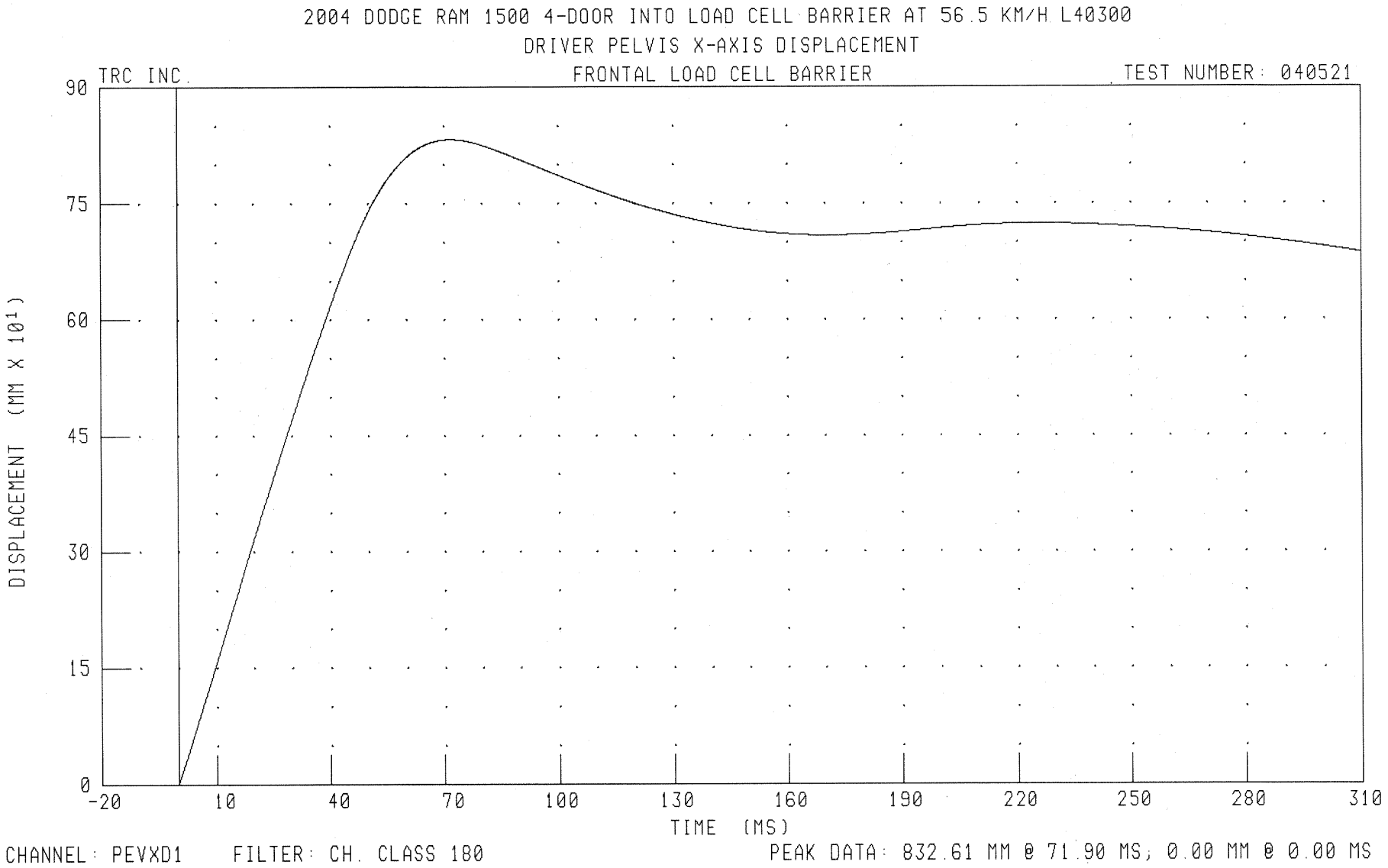
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER PELVIS X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G)
4
-8
-20
-32
-44
-56
-68
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVXG1
FILTER: CH. CLASS 180
PEAK DATA: 3.72 G @ 155.50 MS; -62.66 G @ 48.80 MS

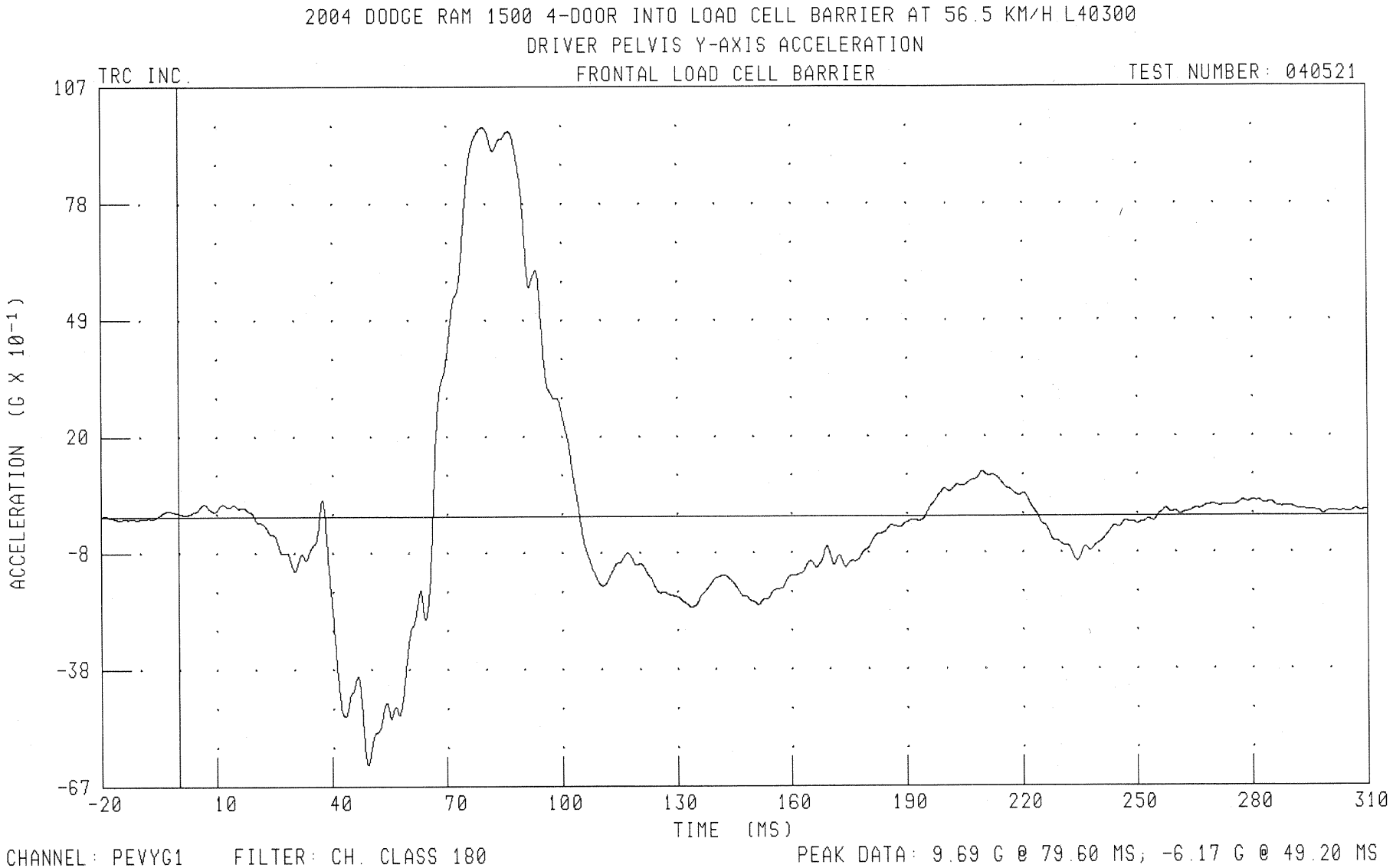
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER PELVIS X-AXIS VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
58
47
36
25
14
3
-8
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVXV1
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -7.33 KM/H @ 91.50 MS

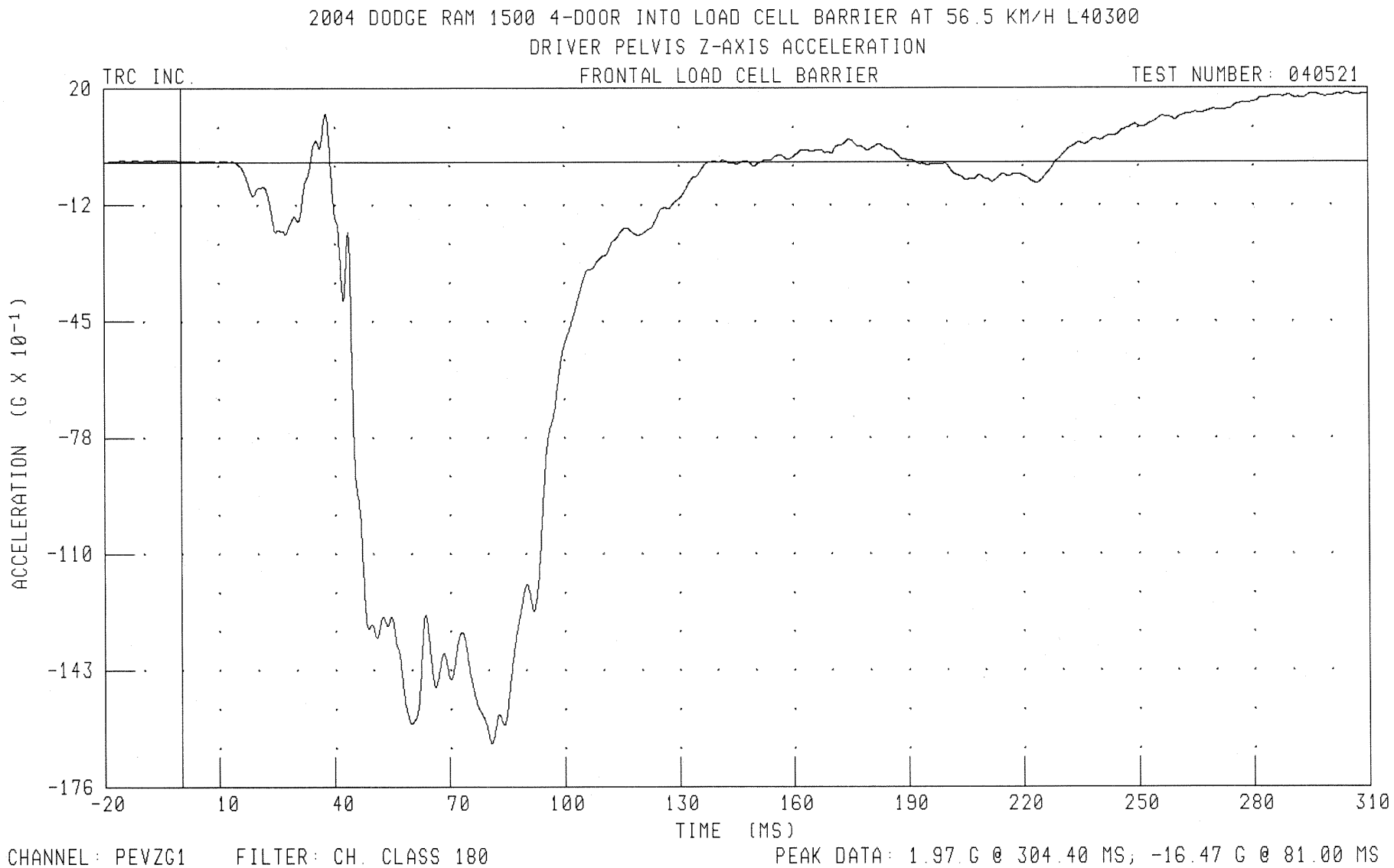
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER PELVIS X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
90
75
60
45
30
15
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVXD1
FILTER: CH. CLASS 180
PEAK DATA: 832.61 MM @ 71.90 MS, 0.00 MM @ 0.00 MS

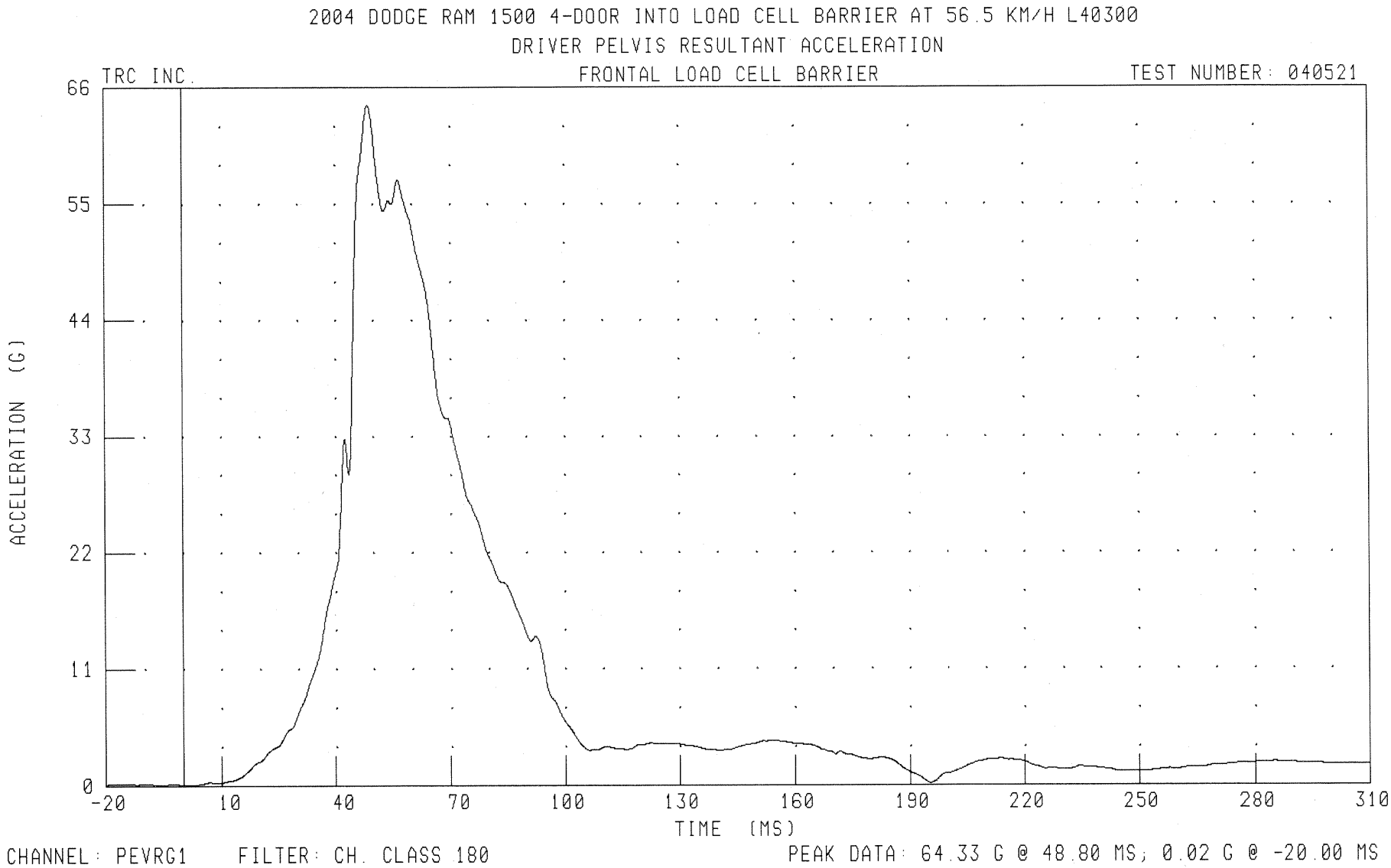
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER PELVIS Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
107
78
49
20
-8
-38
-67
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVYG1
FILTER: CH. CLASS 180
PEAK DATA: 9.69 G @ 79.60 MS; -6.17 G @ 49.20 MS

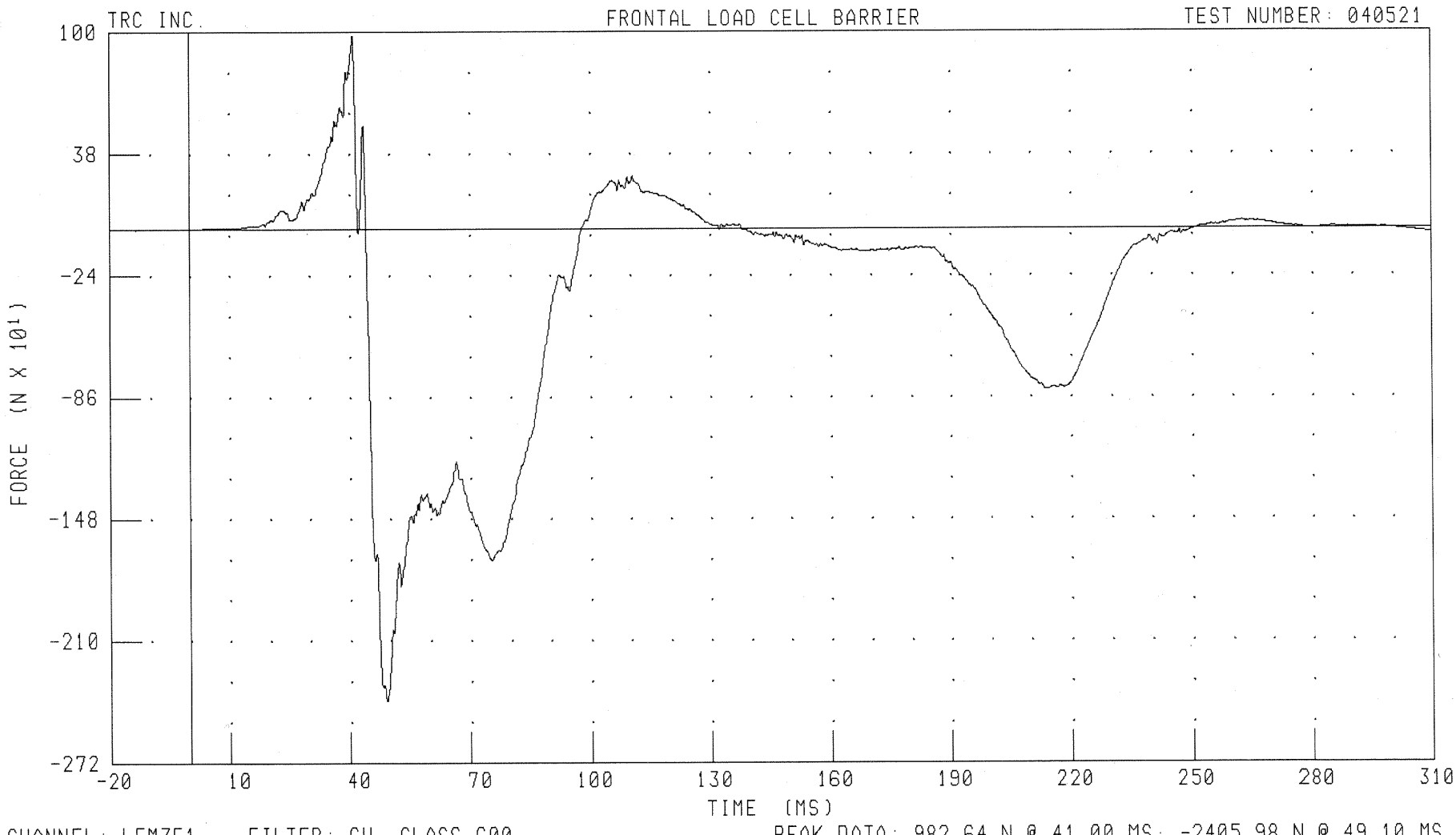
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER PELVIS Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
20
-12
-45
-78
-110
-143
-176
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVZG1
FILTER: CH. CLASS 180
PEAK DATA: 1.97 G @ 304.40 MS, -16.47 G @ 81.00 MS

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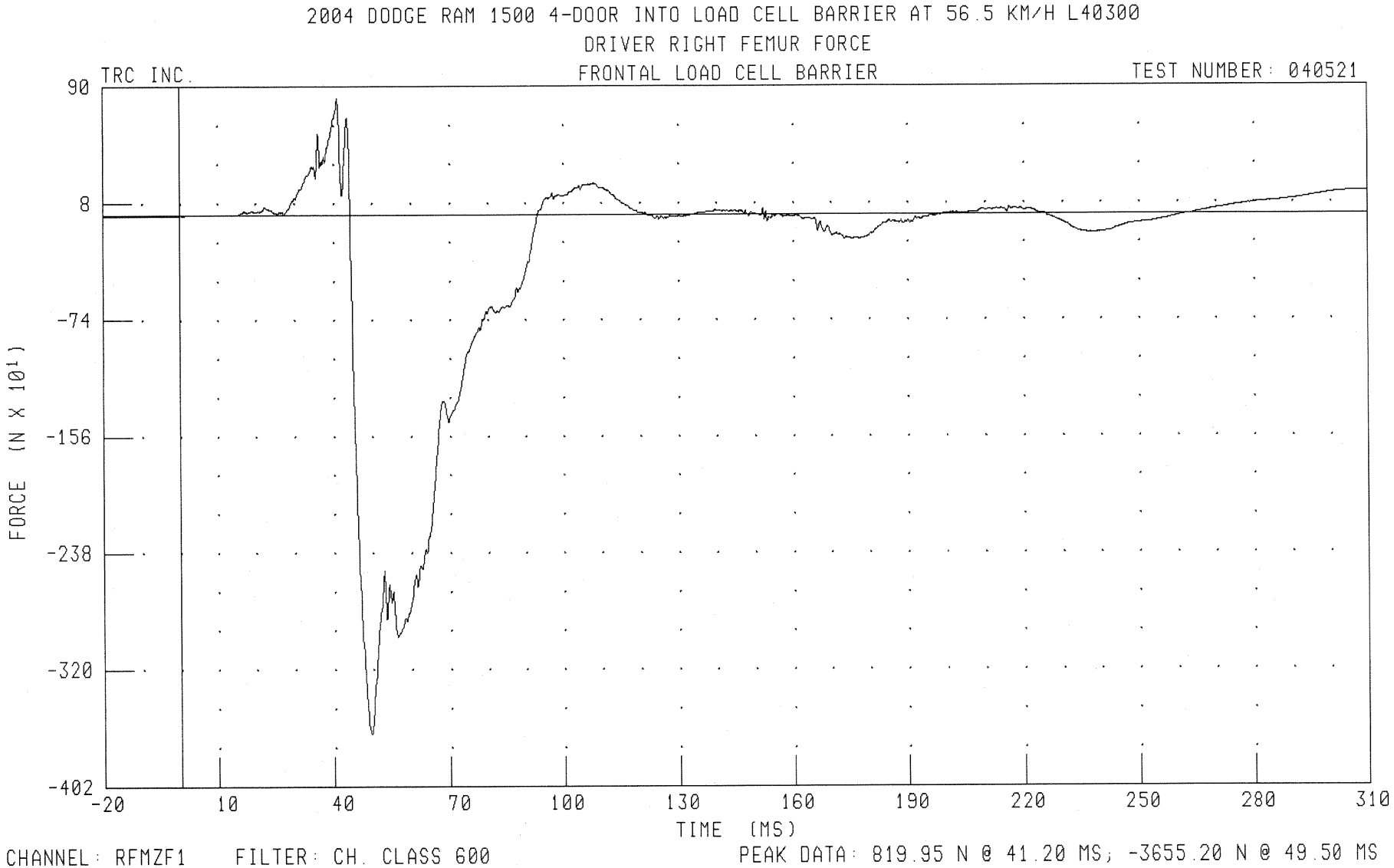

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER PELVIS RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
66
55
44
33
22
11
0
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVRG1
FILTER: CH. CLASS 180
PEAK DATA: 64.33 G @ 48.80 MS; 0.02 G @ -20.00 MS

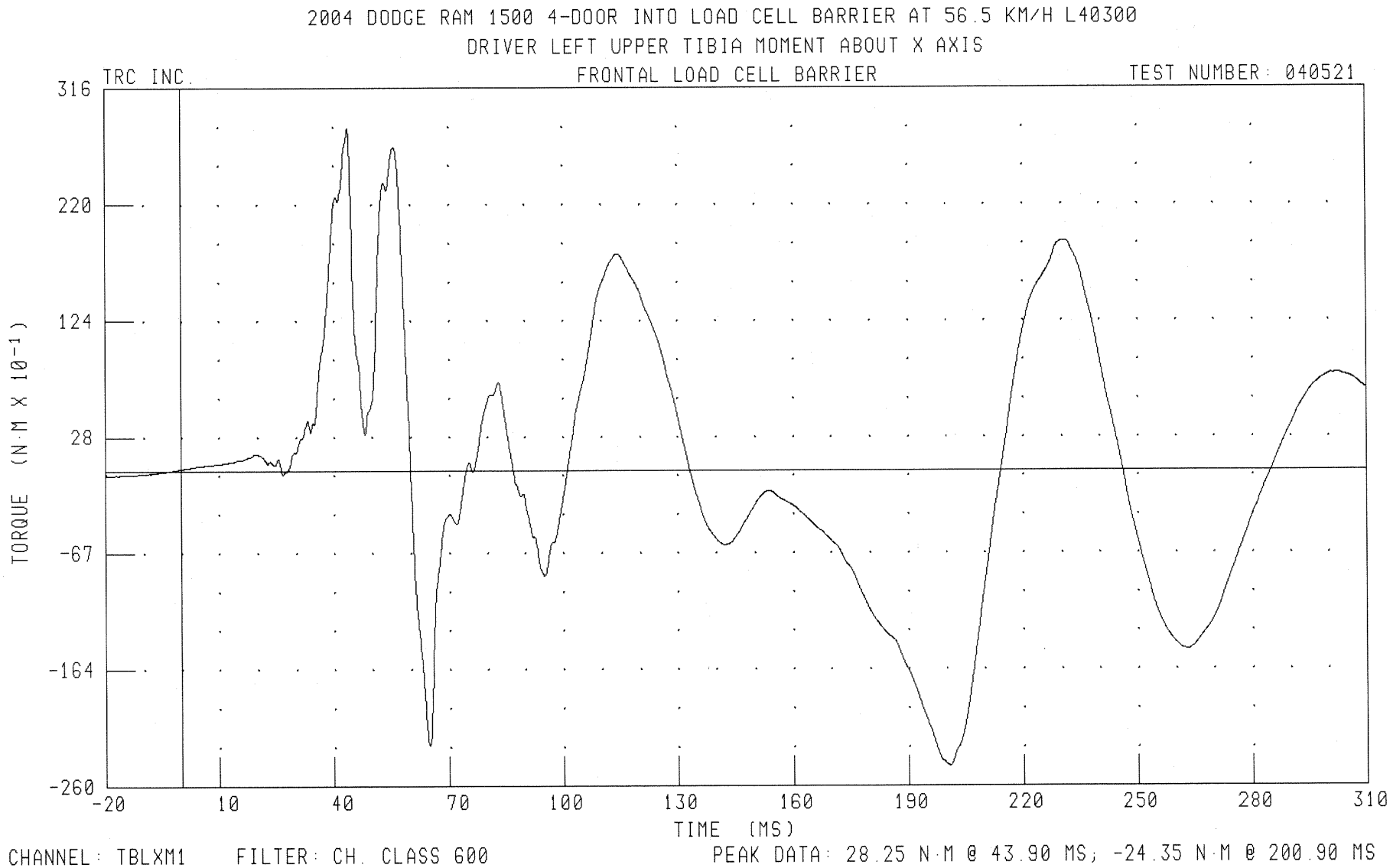
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT FEMUR FORCE



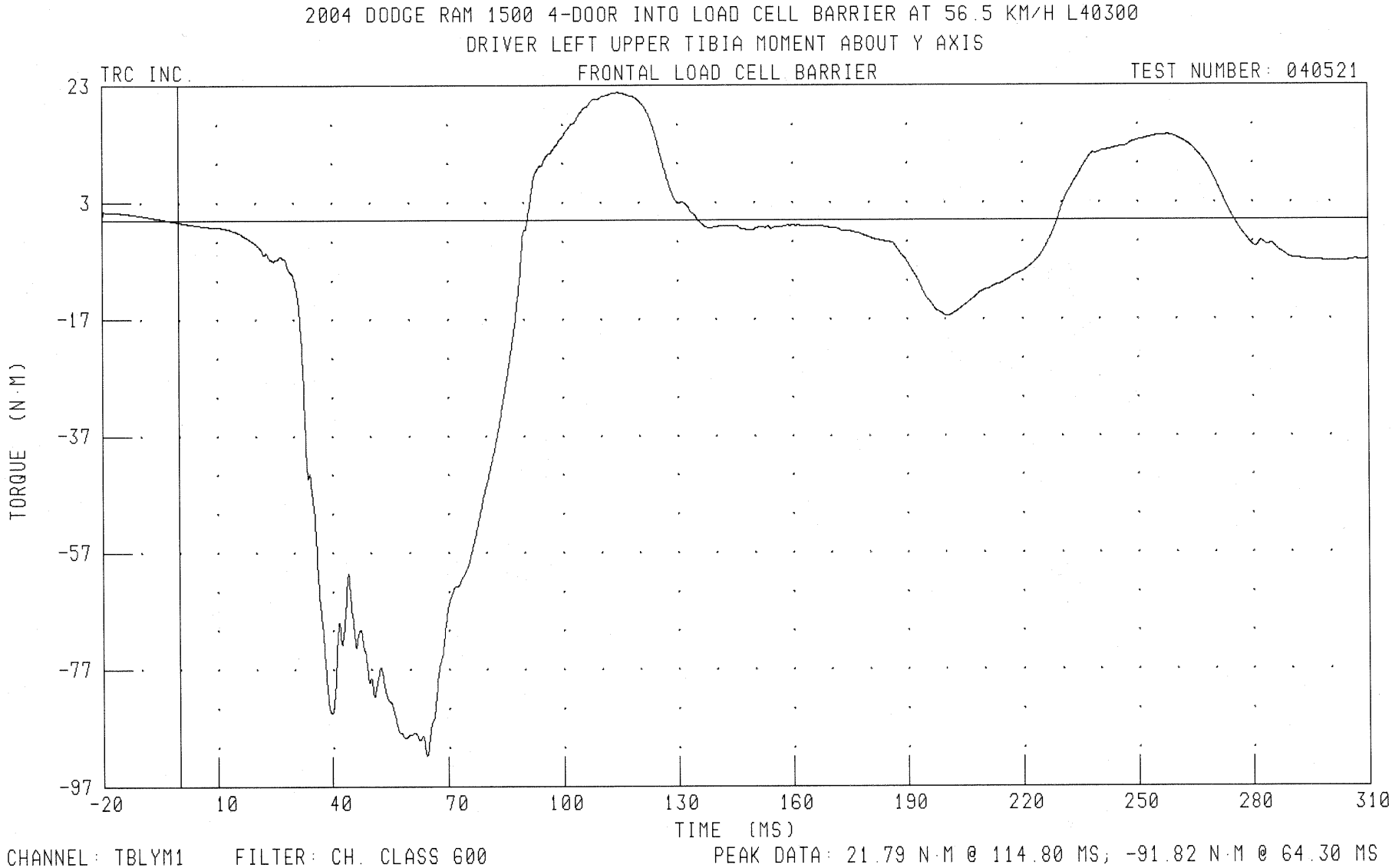
CHANNEL: LFMZF1 FILTER: CH. CLASS 600 PEAK DATA: 982.64 N @ 41.00 MS; -2405.98 N @ 49.10 MS

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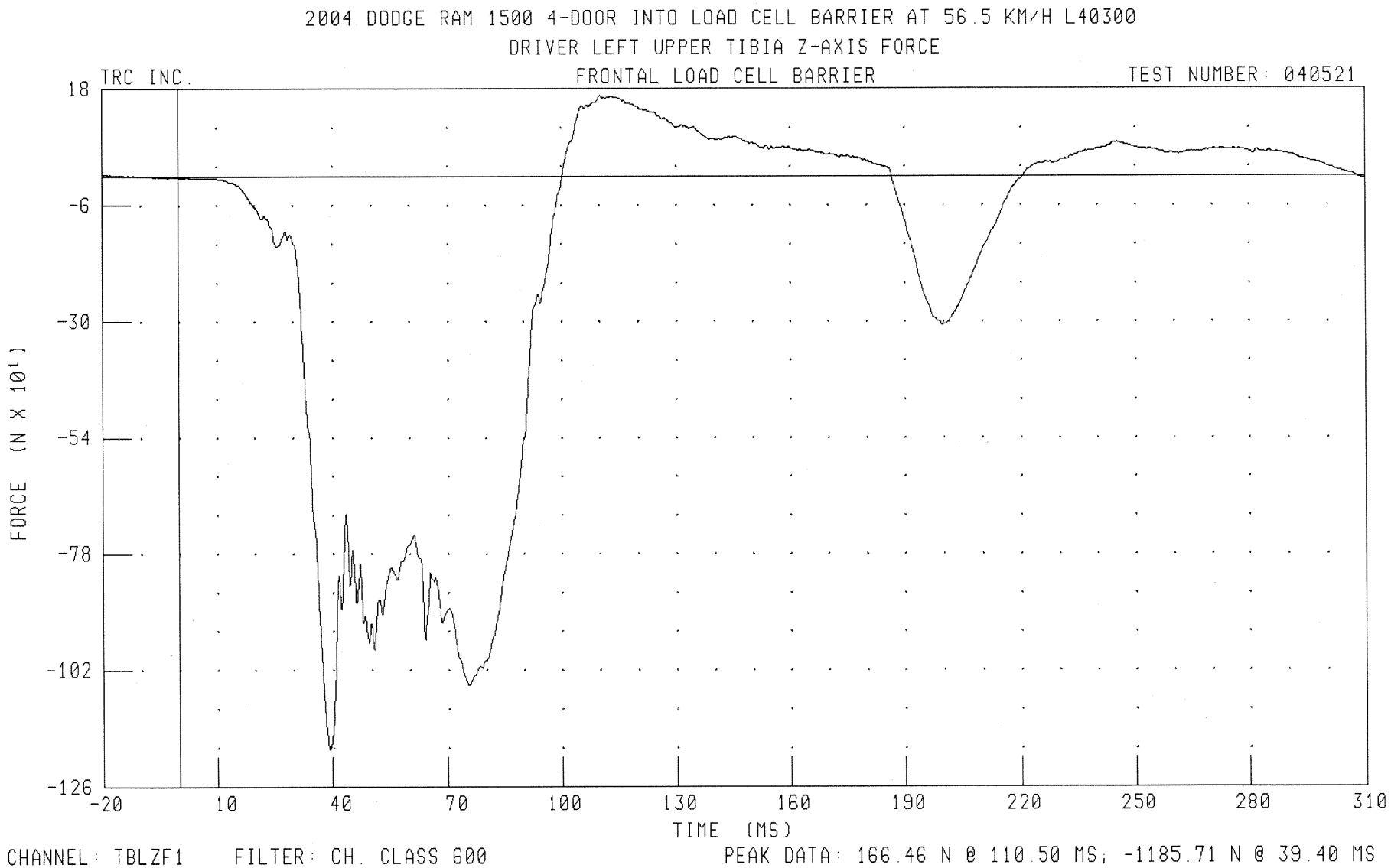

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT FEMUR FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
90
8
-74
-156
-238
-320
-402
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RFMZF1
FILTER: CH. CLASS 600
PEAK DATA: 819.95 N @ 41.20 MS; -3655.20 N @ 49.50 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT UPPER TIBIA MOMENT ABOUT X AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
316
220
124
28
-67
-164
-260
TORQUE (N-M X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: TBLXM1
FILTER: CH. CLASS 600
PEAK DATA: 28.25 N-M @ 43.90 MS; -24.35 N-M @ 200.90 MS

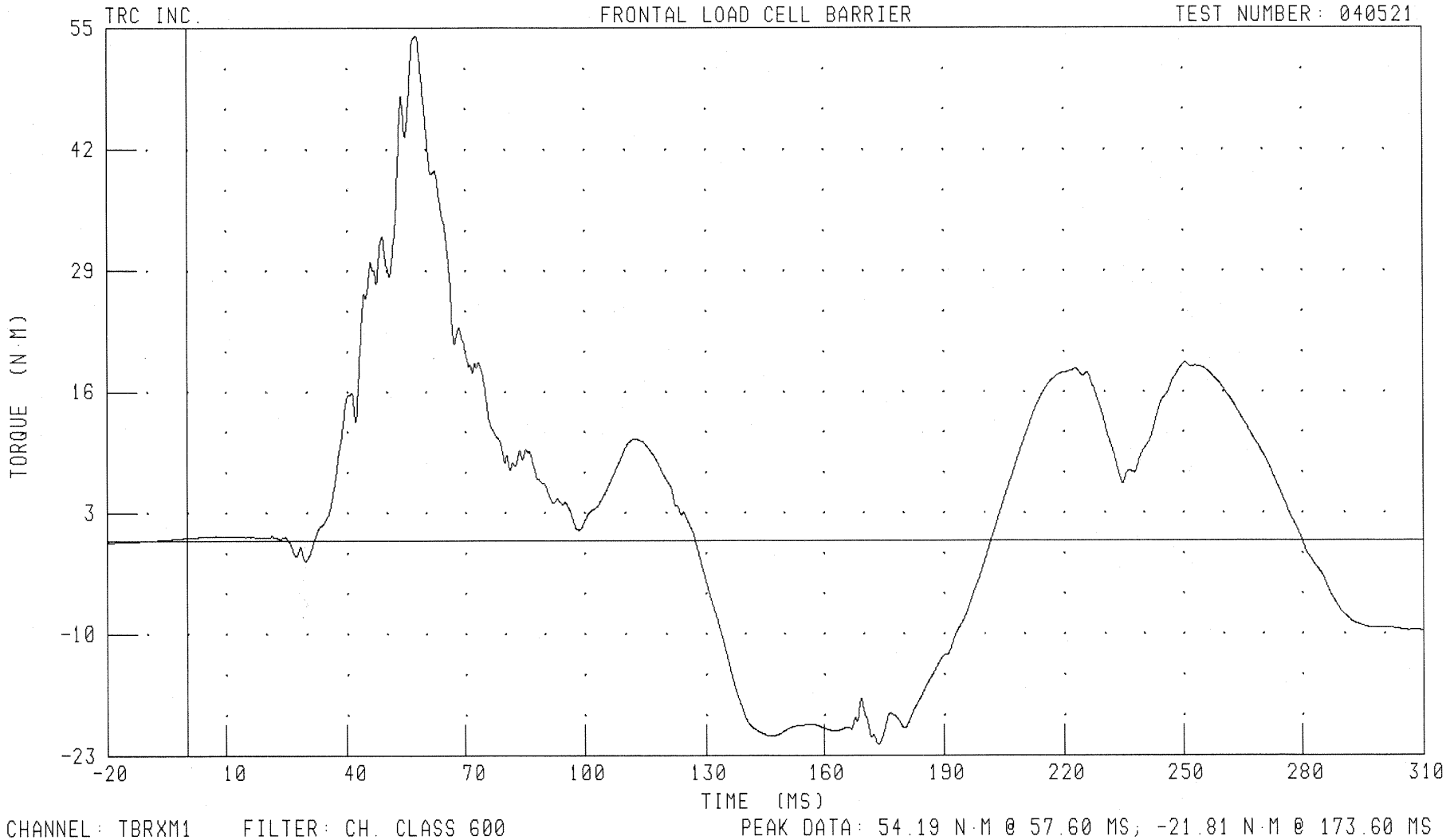
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
23
3
-17
-37
-57
-77
-97
TORQUE (N-M)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: TBLYM1
FILTER: CH. CLASS 600
PEAK DATA: 21.79 N-M @ 114.80 MS; -91.82 N-M @ 64.30 MS

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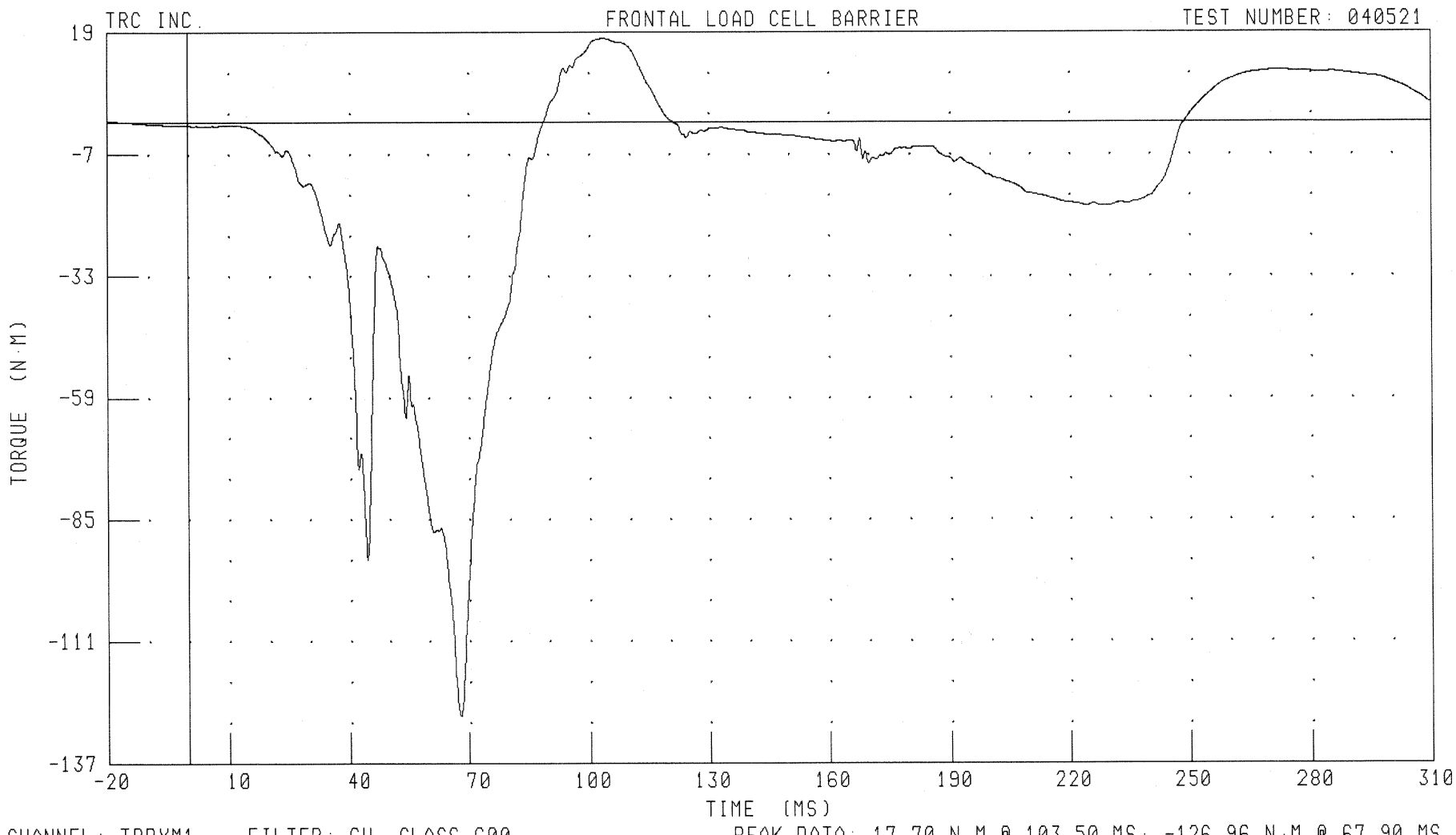

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT UPPER TIBIA Z-AXIS FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
18
-6
-30
-54
-78
-102
-126
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: TBLZF1
FILTER: CH. CLASS 600
PEAK DATA: 166.46 N @ 110.50 MS, -1185.71 N @ 39.40 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
55
42
29
16
3
-10
-23
TORQUE (N·M)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: TBRXM1
FILTER: CH. CLASS 600
PEAK DATA: 54.19 N·M @ 57.60 MS; -21.81 N·M @ 173.60 MS

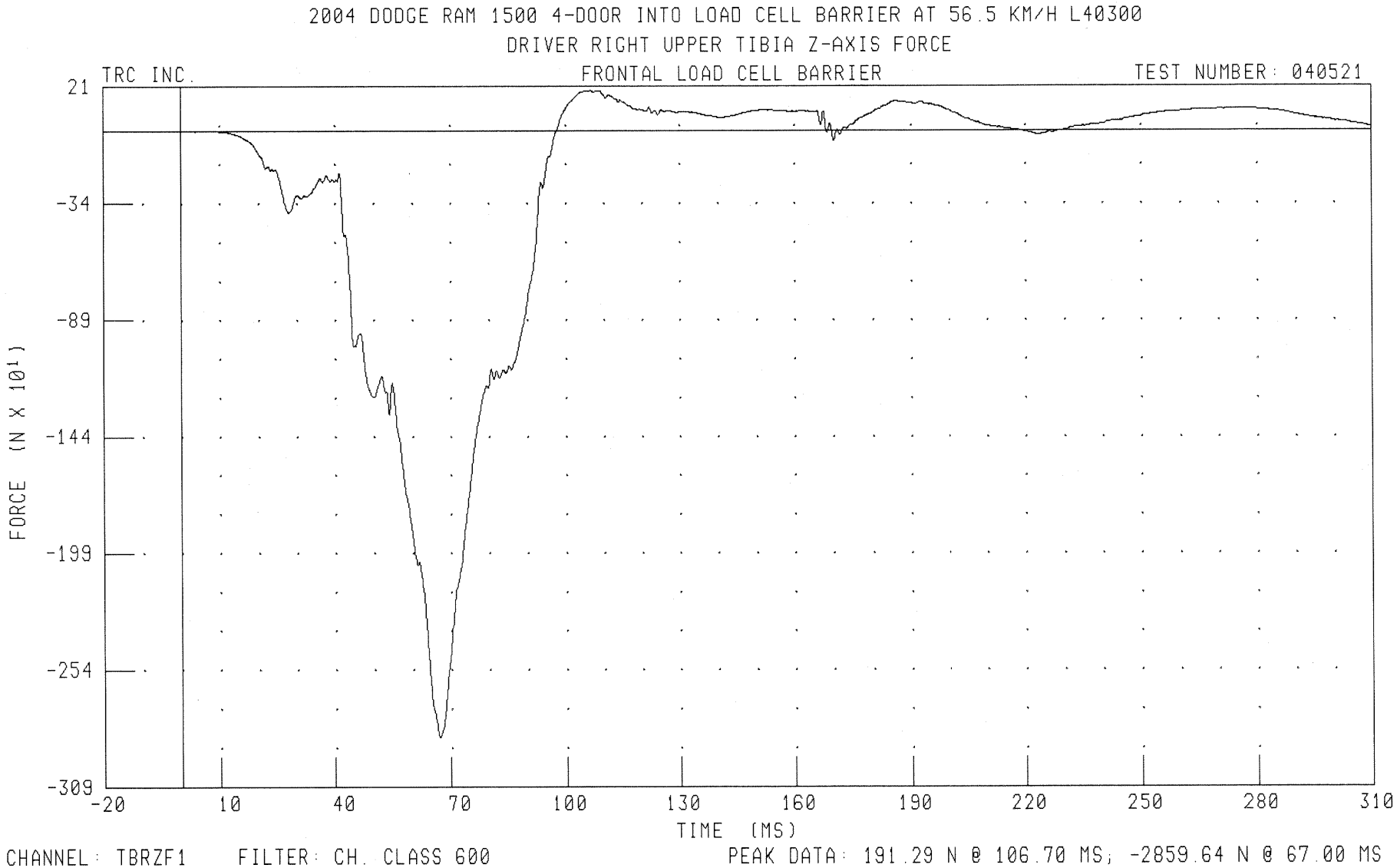
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS

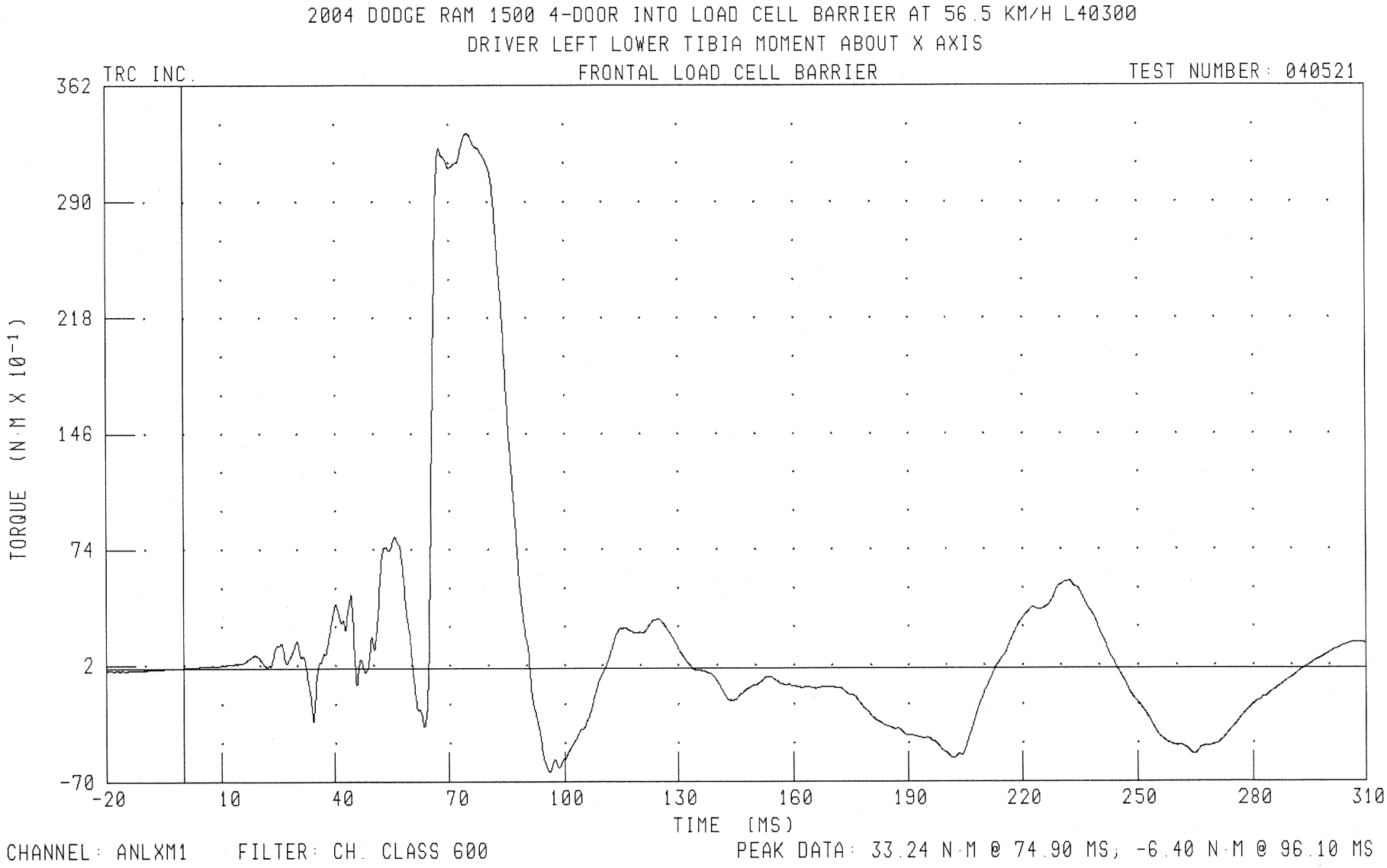


CHANNEL: TBRYM1 FILTER: CH. CLASS 600 PEAK DATA: 17.70 N-M @ 103.50 MS; -126.96 N-M @ 67.90 MS

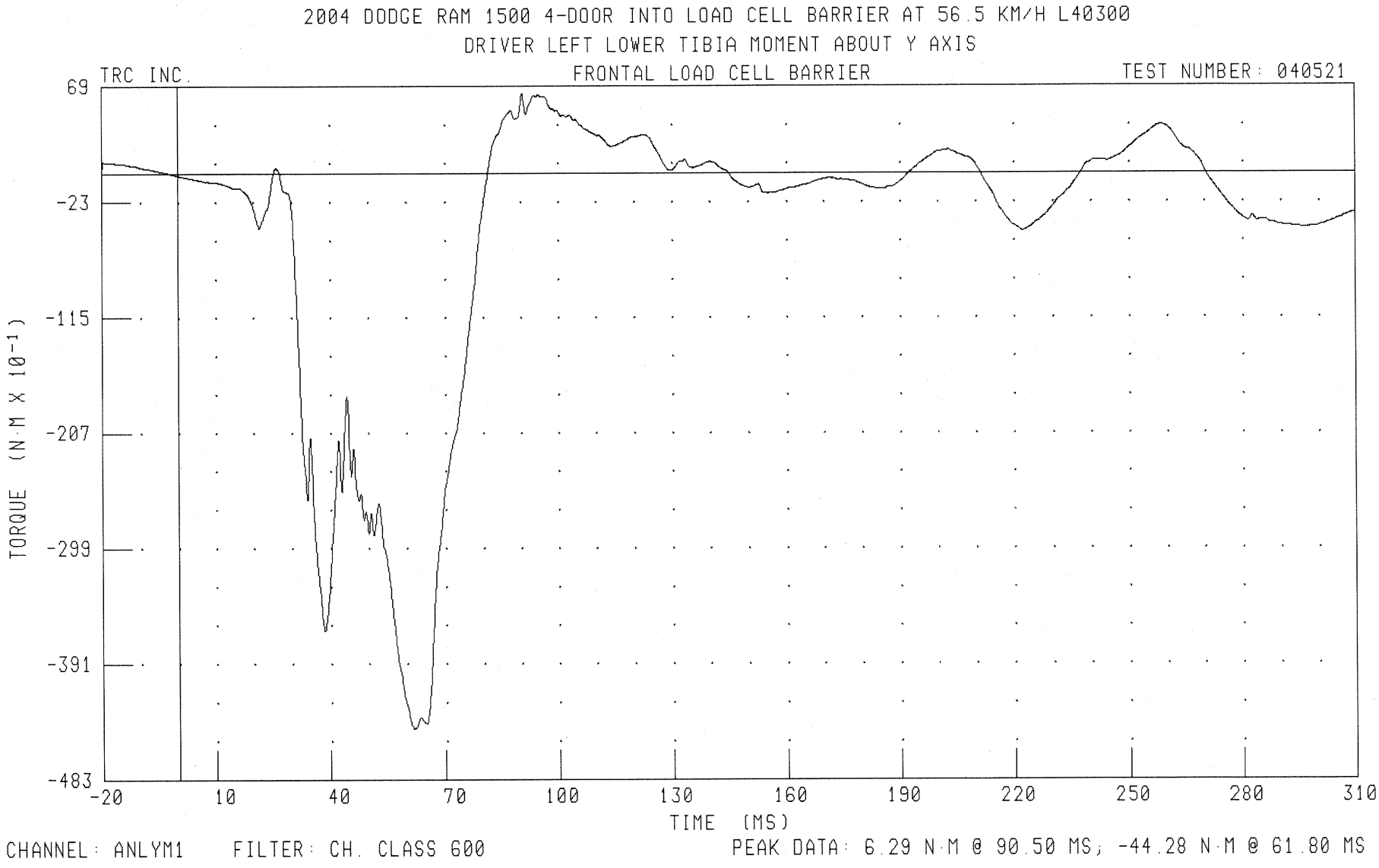
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT UPPER TIBIA Z-AXIS FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
21
-34
-89
-144
-199
-254
-309
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: TBRZF1
FILTER: CH. CLASS 600
PEAK DATA: 191.29 N @ 106.70 MS; -2859.64 N @ 67.00 MS

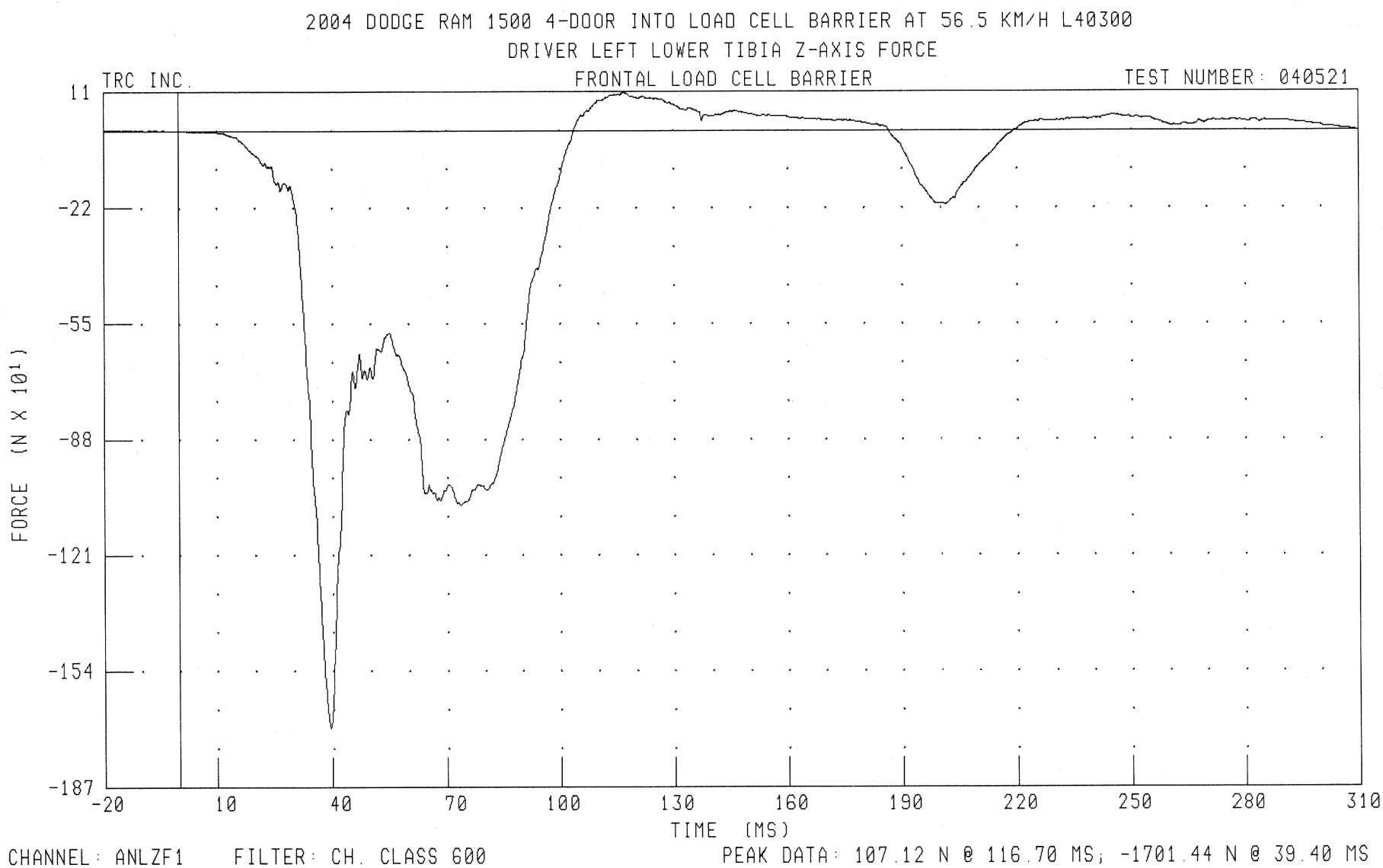
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT LOWER TIBIA MOMENT ABOUT X AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
362
290
218
146
74
2
-70
TORQUE (N·M X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANLXM1
FILTER: CH. CLASS 600
PEAK DATA: 33.24 N·M @ 74.90 MS; -6.40 N·M @ 96.10 MS

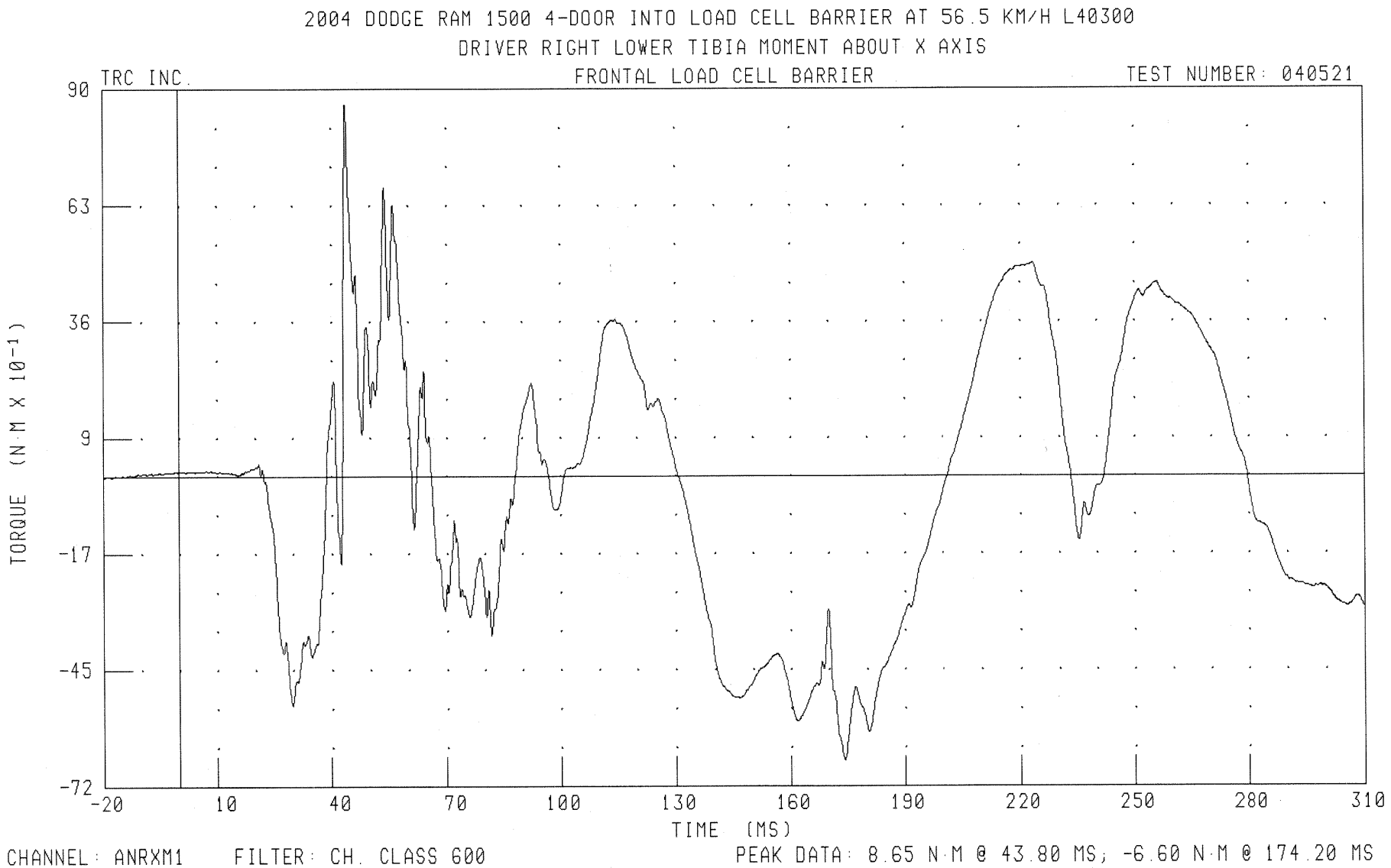
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
69
-23
-115
-207
-299
-391
-483
TORQUE (N·M X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANLYM1
FILTER: CH. CLASS 600
PEAK DATA: 6.29 N·M @ 90.50 MS; -44.28 N·M @ 61.80 MS

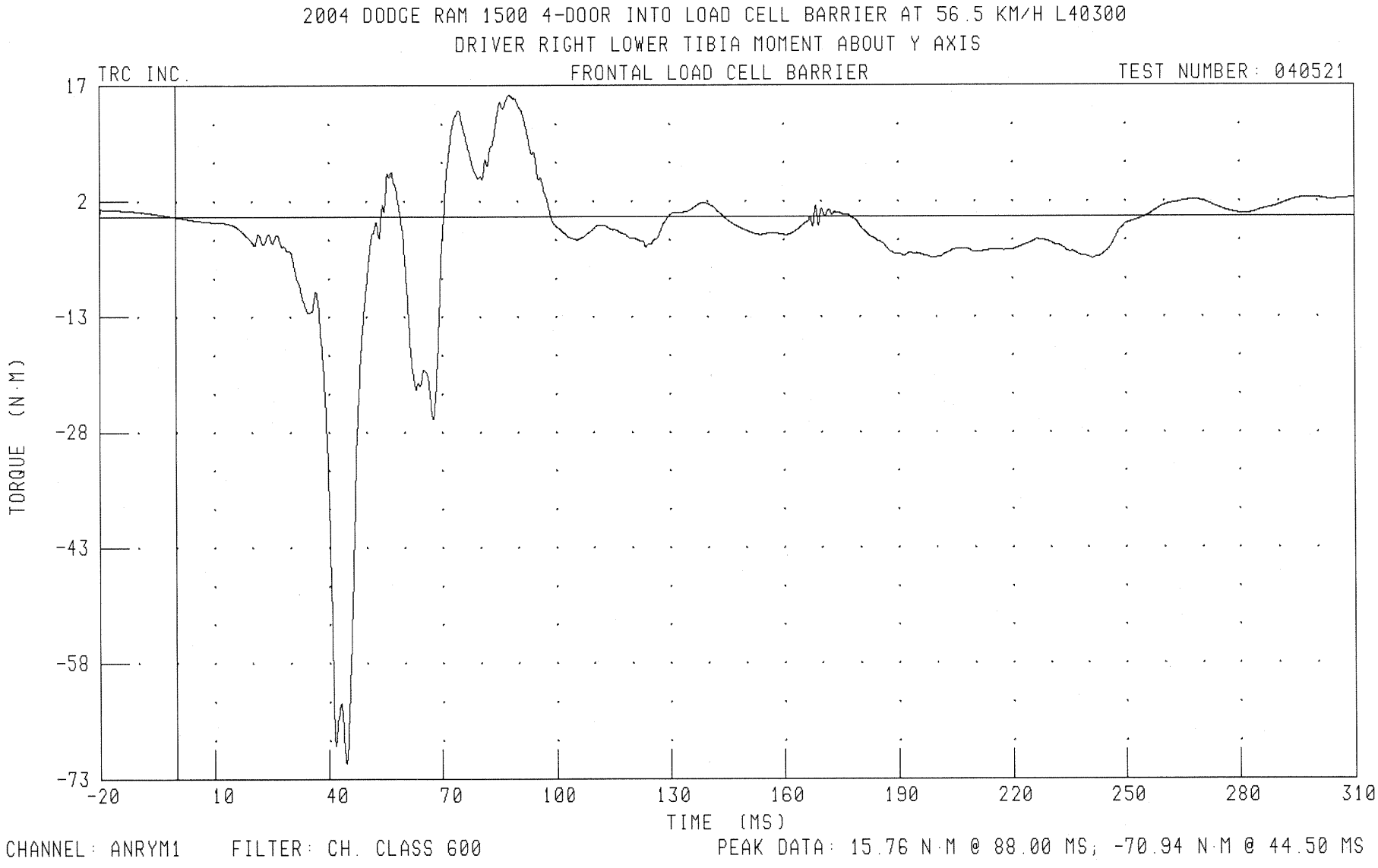
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT LOWER TIBIA Z-AXIS FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
11
-22
-55
-88
-121
-154
-187
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANLZF1
FILTER: CH. CLASS 600
PEAK DATA: 107.12 N @ 116.70 MS; -1701.44 N @ 39.40 MS

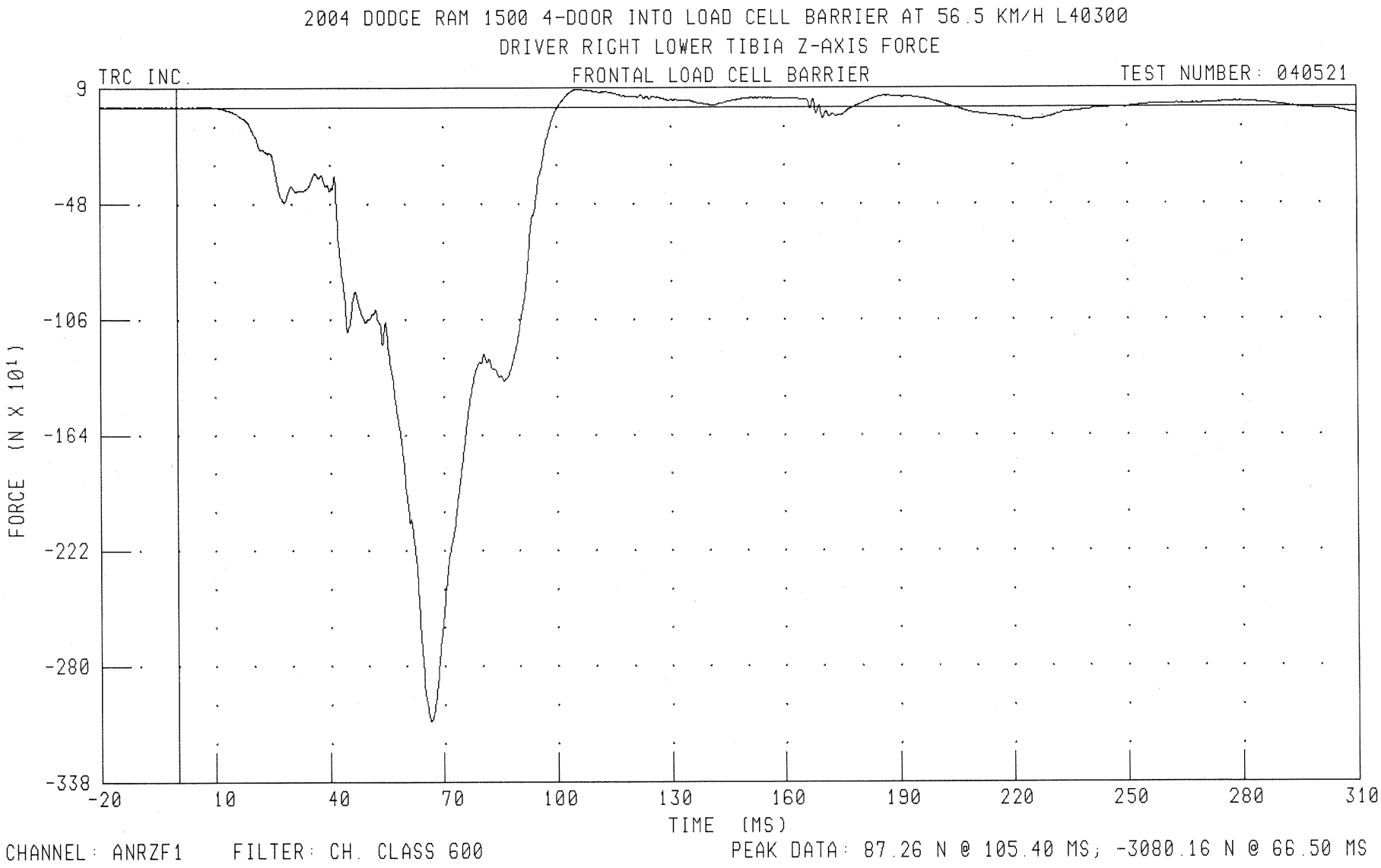
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
90
63
36
9
-17
-45
-72
TORQUE (N-M X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANRXM1
FILTER: CH. CLASS 600
PEAK DATA: 8.65 N-M @ 43.80 MS; -6.60 N-M @ 174.20 MS

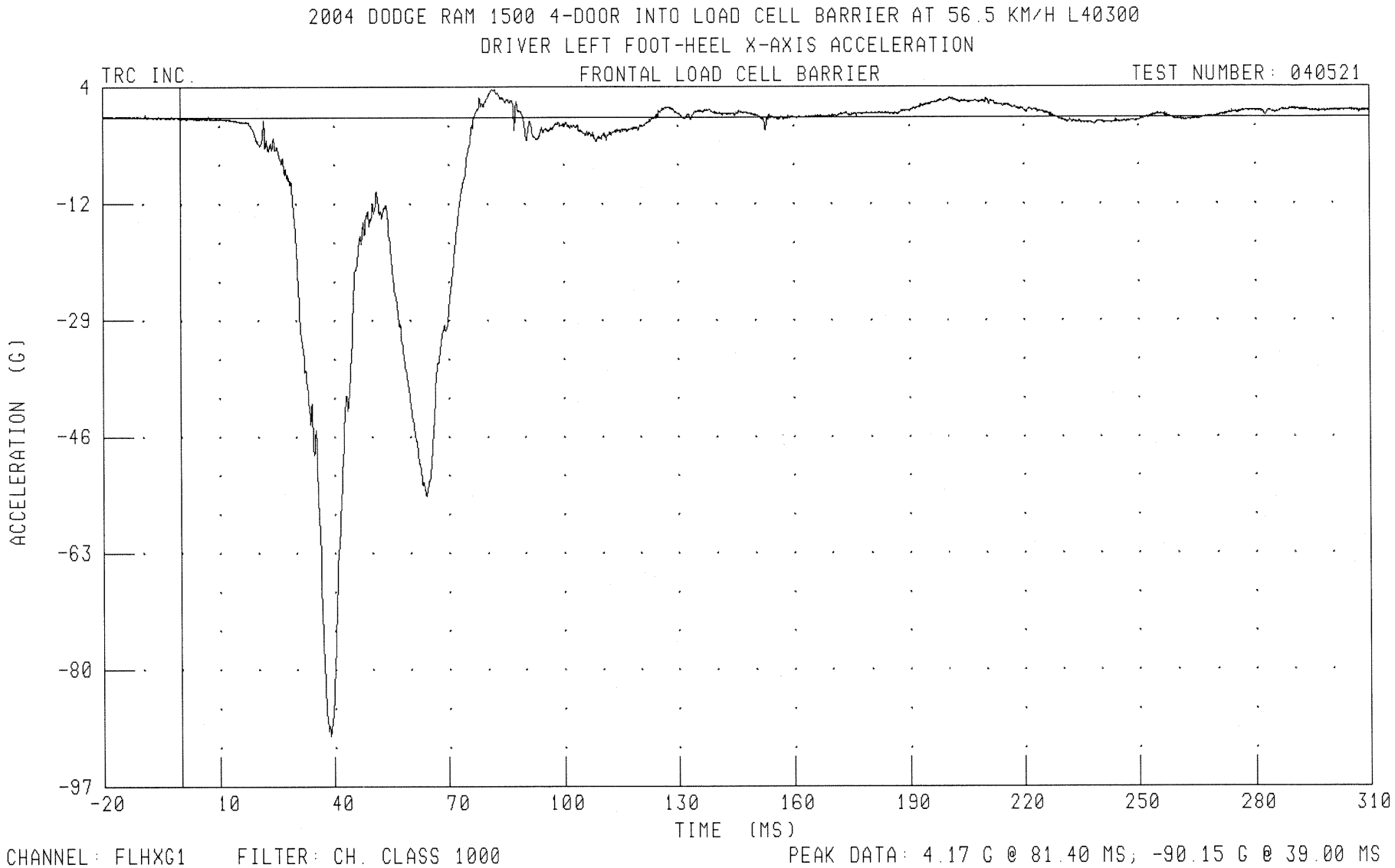
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
17
2
-13
-28
-43
-58
-73
TORQUE (N-M)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANRYM1
FILTER: CH. CLASS 600
PEAK DATA: 15.76 N-M @ 88.00 MS; -70.94 N-M @ 44.50 MS

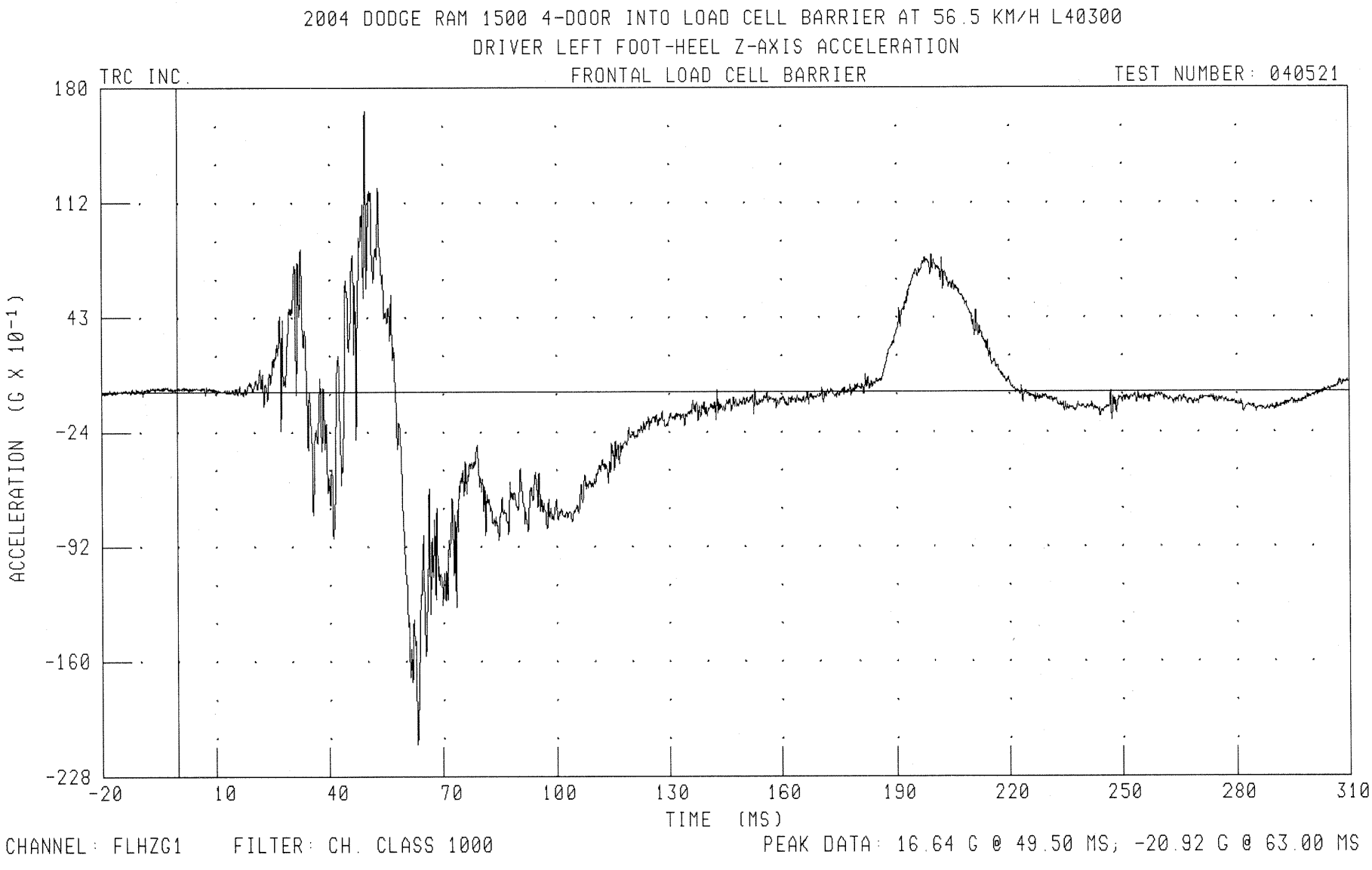
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT LOWER TIBIA Z-AXIS FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
9
-48
-106
-164
-222
-280
-338
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANRZF1
FILTER: CH. CLASS 600
PEAK DATA: 87.26 N @ 105.40 MS; -3080.16 N @ 66.50 MS

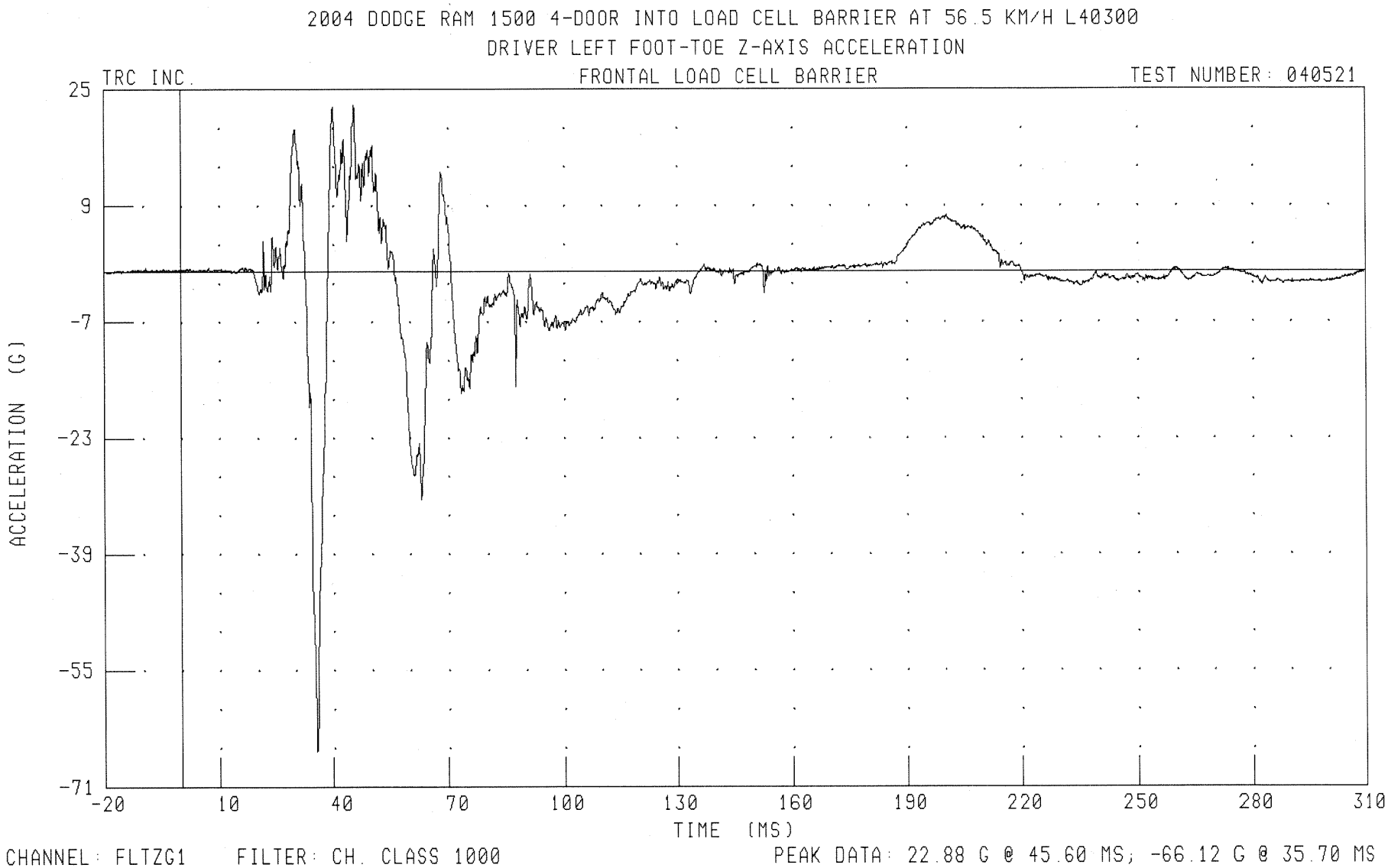
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT FOOT-HEEL X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
4
-12
-29
-46
-63
-80
-97
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FLHXG1
FILTER: CH. CLASS 1000
PEAK DATA: 4.17 G @ 81.40 MS, -90.15 G @ 39.00 MS

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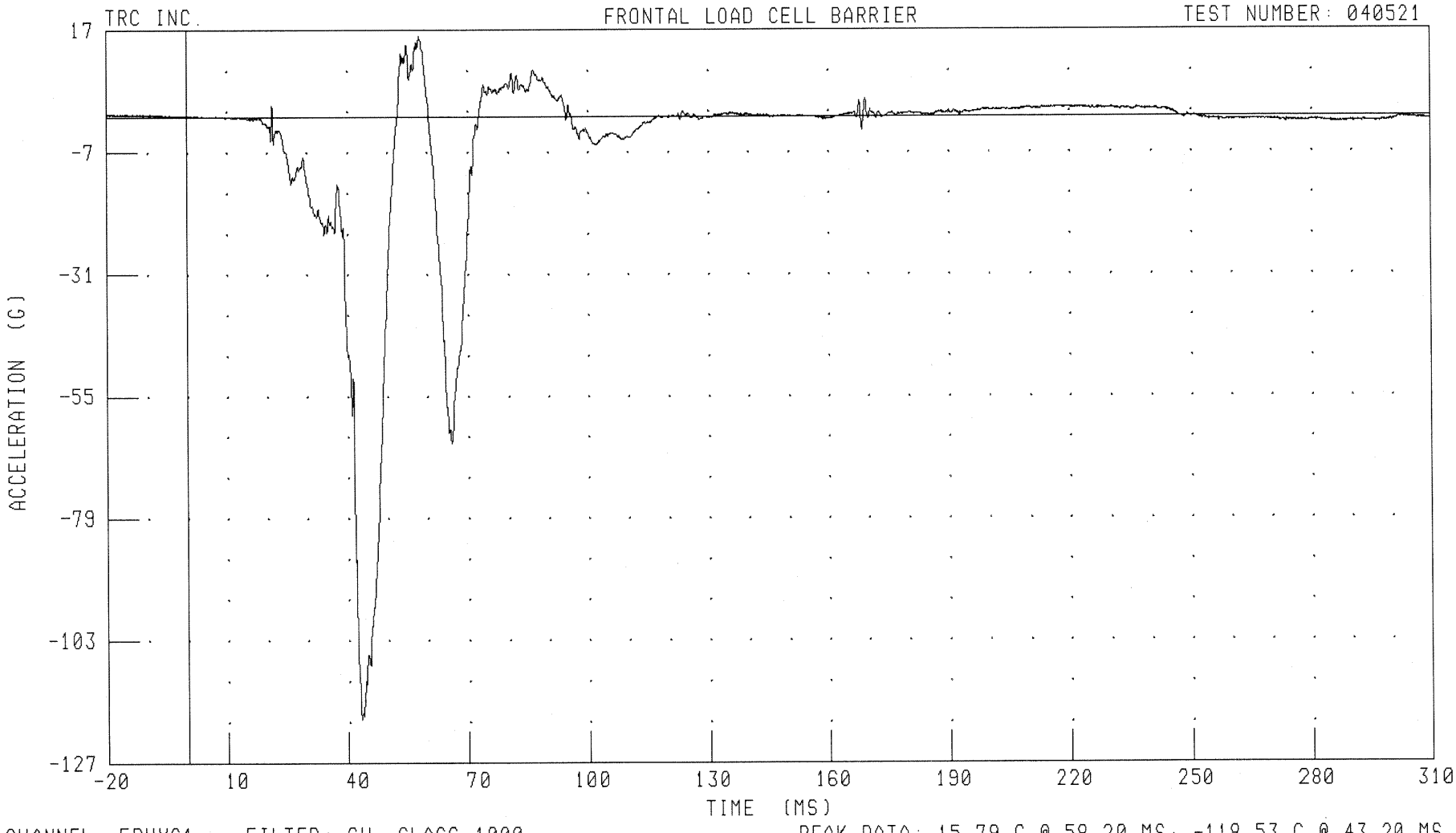

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT FOOT-HEEL Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
180
112
43
-24
-92
-160
-228
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FLHZG1
FILTER: CH. CLASS 1000
PEAK DATA: 16.64 G @ 49.50 MS; -20.92 G @ 63.00 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER LEFT FOOT-TOE Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
25
9
-7
-23
-39
-55
-71
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FLTZG1
FILTER: CH. CLASS 1000
PEAK DATA: 22.88 G @ 45.60 MS; -66.12 G @ 35.70 MS

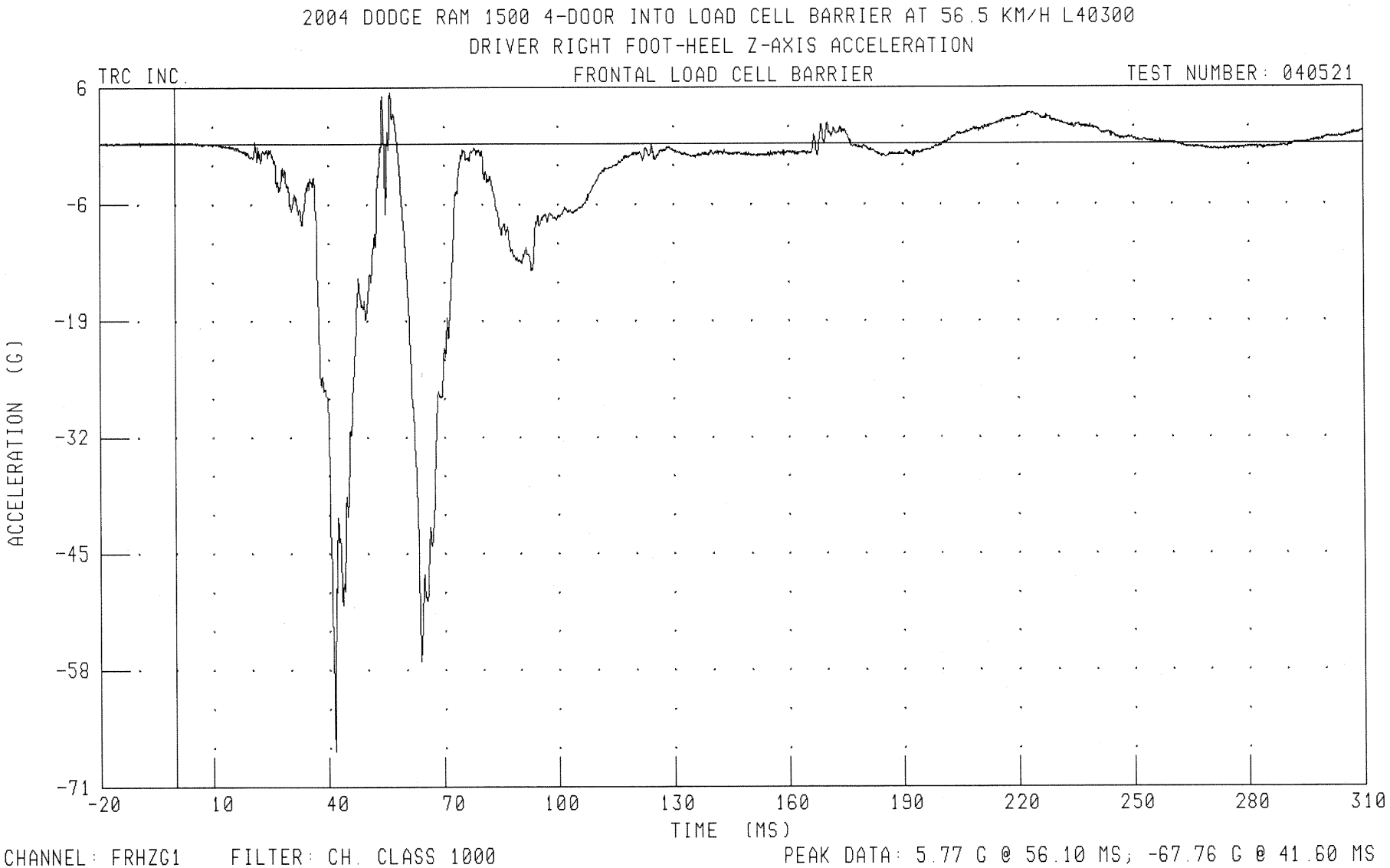
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

DRIVER RIGHT FOOT-HEEL X-AXIS ACCELERATION

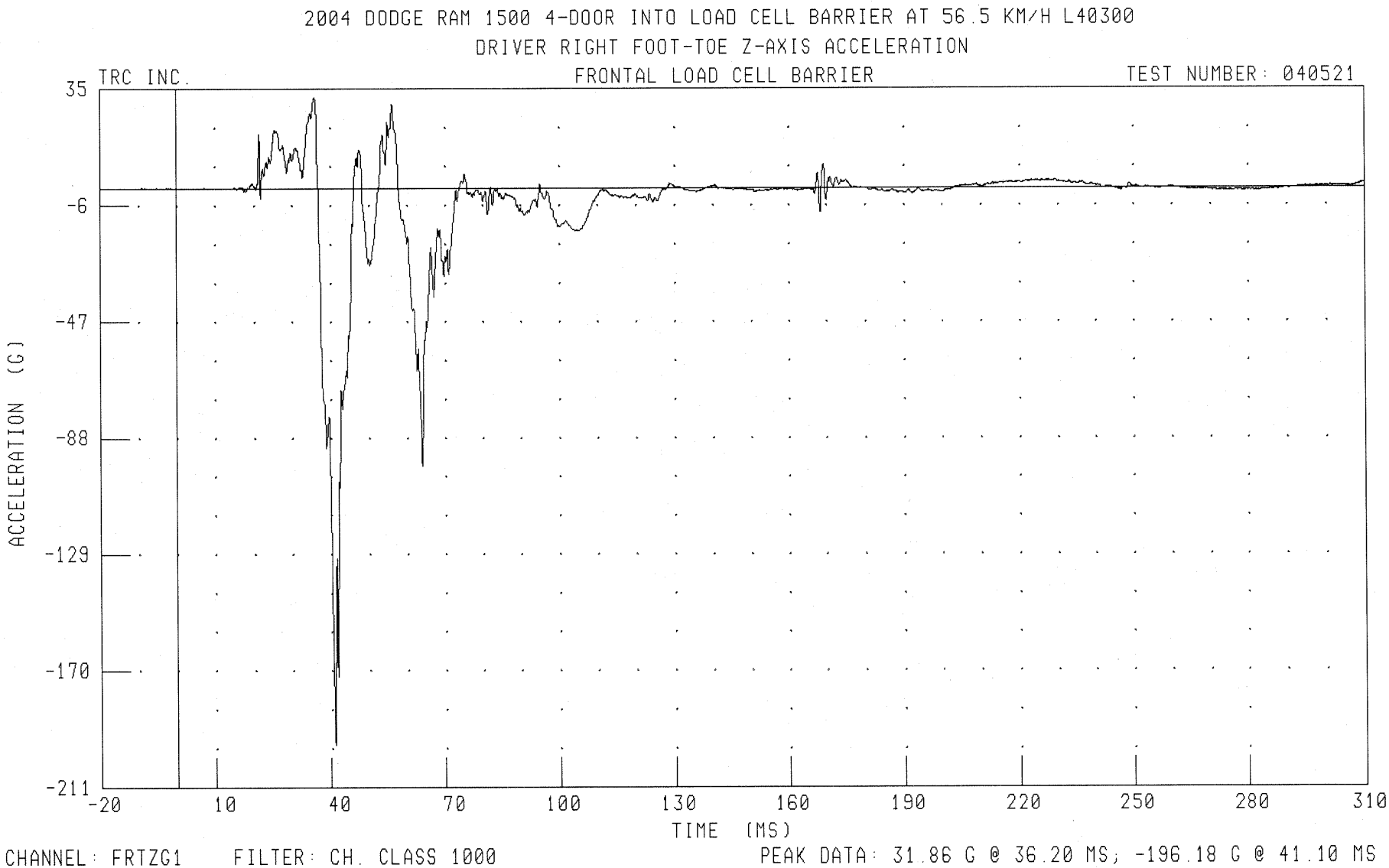


CHANNEL: FRHXG1 FILTER: CH. CLASS 1000 PEAK DATA: 15.79 G @ 58.20 MS; -118.53 G @ 43.20 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT FOOT-HEEL Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
6
-6
-19
-32
-45
-58
-71
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FRHZG1
FILTER: CH. CLASS 1000
PEAK DATA: 5.77 G @ 56.10 MS; -67.76 G @ 41.60 MS

040521

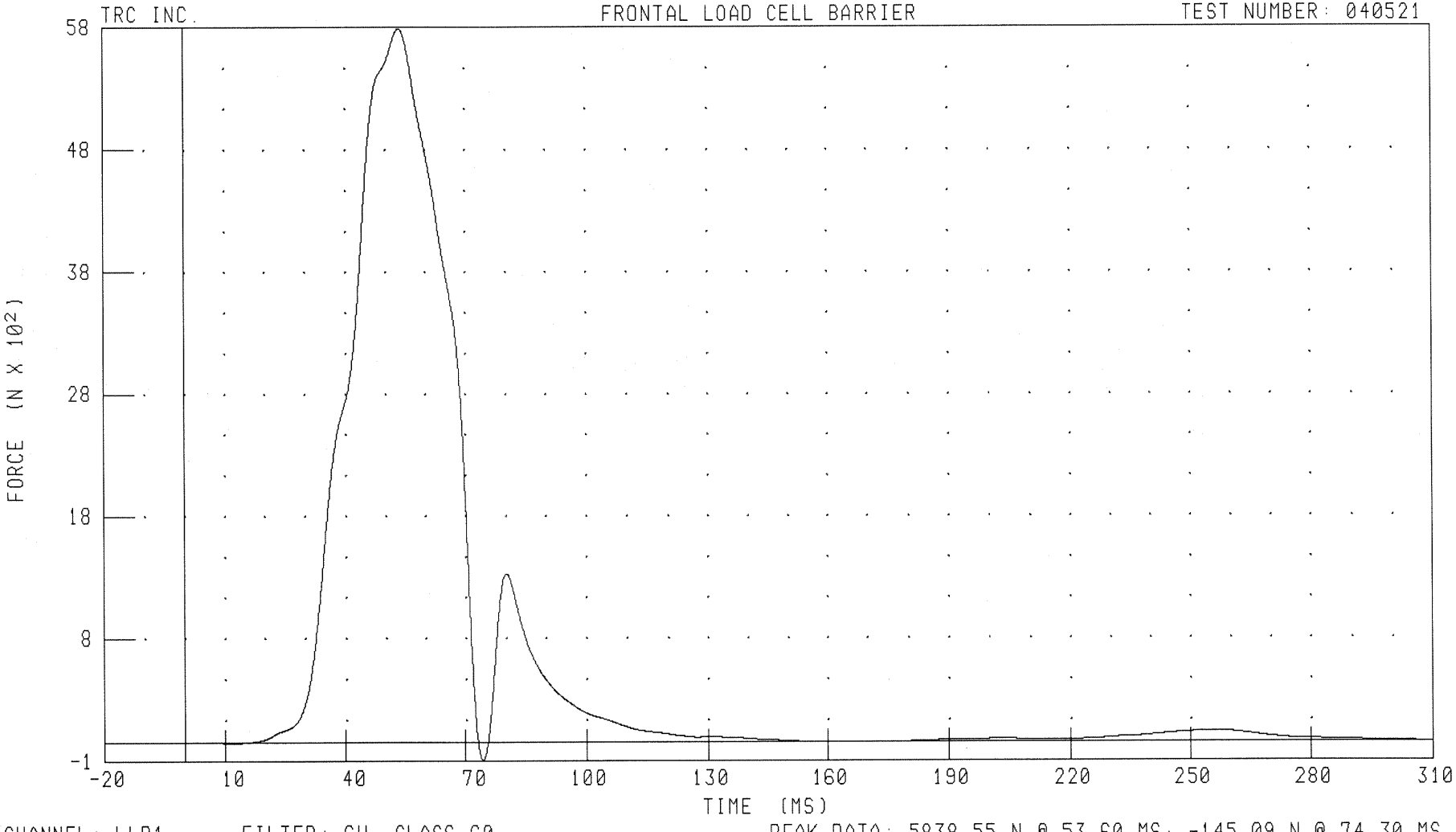

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER RIGHT FOOT-TOE Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
35
-6
-47
-88
-129
-170
-211
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FRTZG1
FILTER: CH. CLASS 1000
PEAK DATA: 31.86 G @ 36.20 MS; -196.18 G @ 41.10 MS

040521

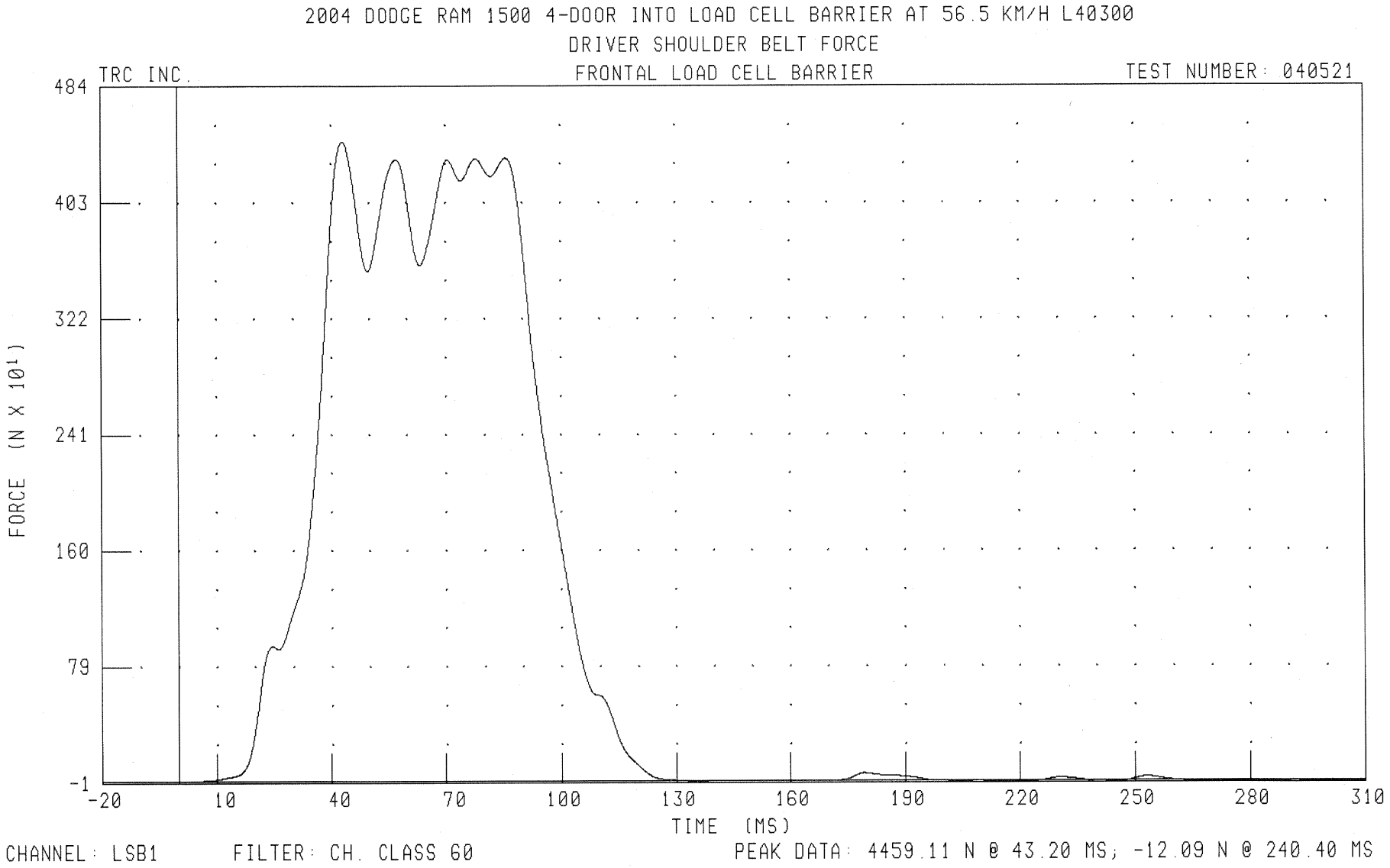
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

DRIVER LAP BELT FORCE

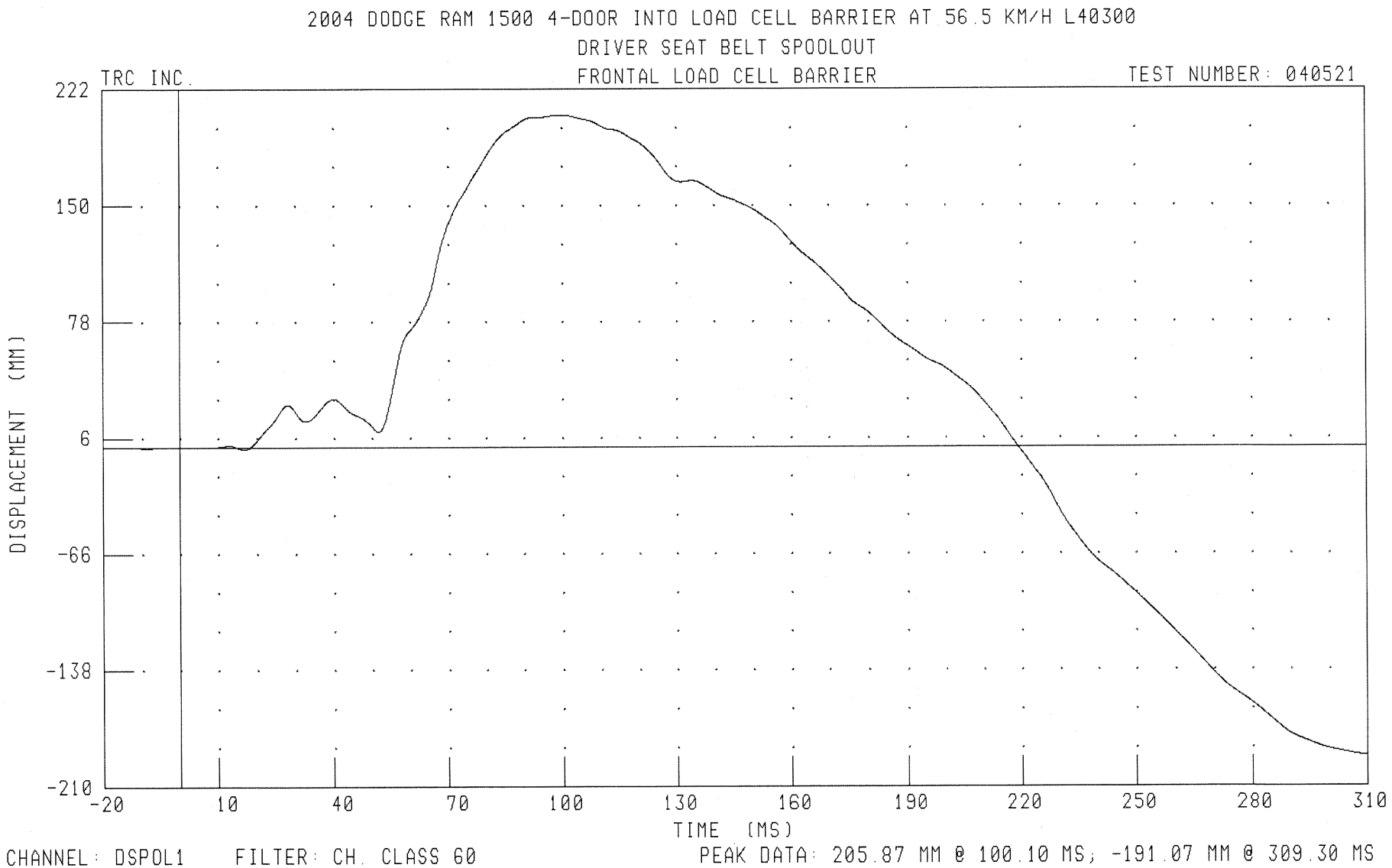
TRC INC. FRONTAL LOAD CELL BARRIER TEST NUMBER: 040521



CHANNEL: LLB1 FILTER: CH. CLASS 60 PEAK DATA: 5838.55 N @ 53.60 MS; -145.09 N @ 74.30 MS

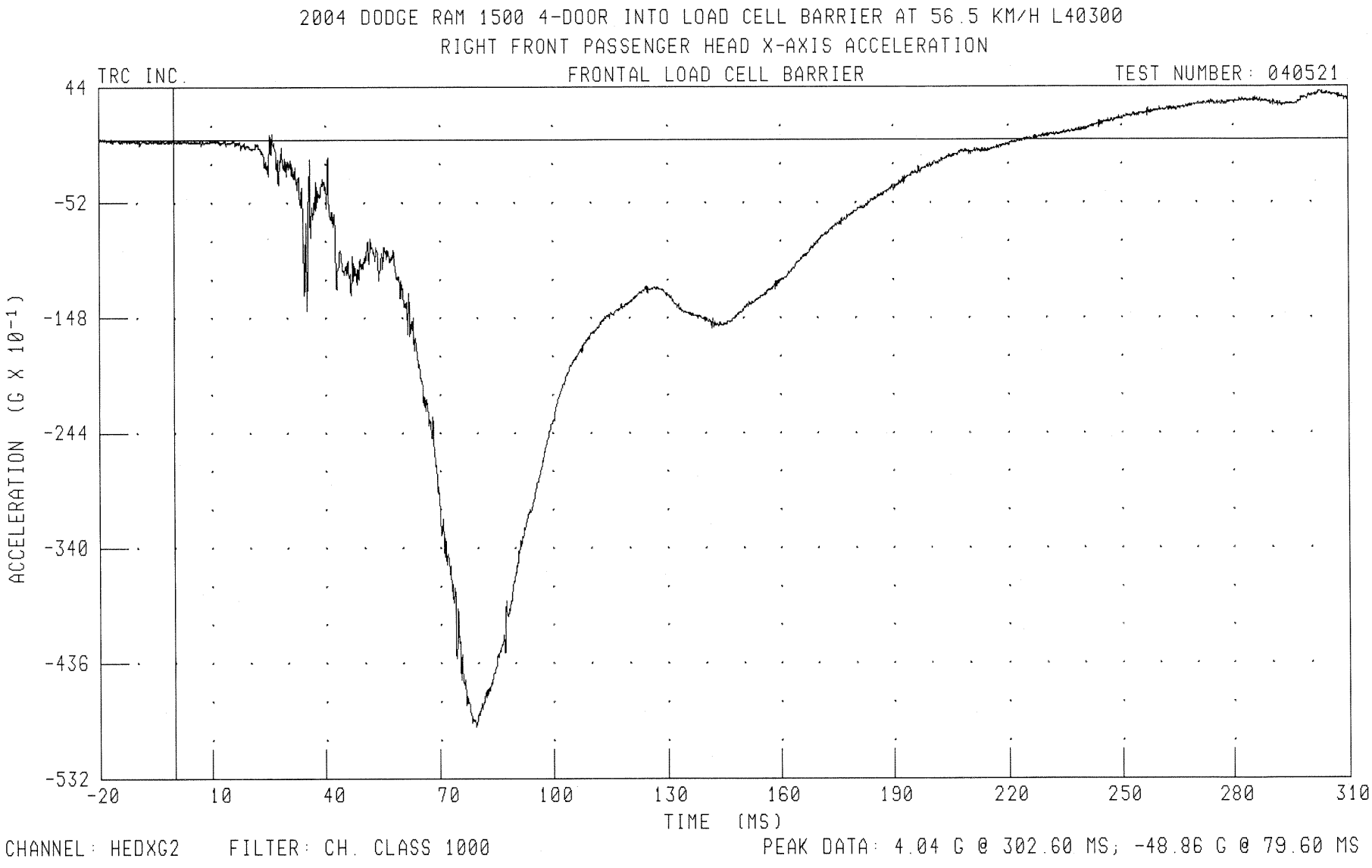

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER SHOULDER BELT FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
484
403
322
241
160
79
-1
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LSB1
FILTER: CH. CLASS 60
PEAK DATA: 4459.11 N @ 43.20 MS; -12.09 N @ 240.40 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
DRIVER SEAT BELT SPOOLOUT
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
DISPLACEMENT (MM)
222
150
78
6
-66
-138
-210
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: DSPOL1
FILTER: CH. CLASS 60
PEAK DATA: 205.87 MM @ 100.10 MS; -191.07 MM @ 309.30 MS

040521

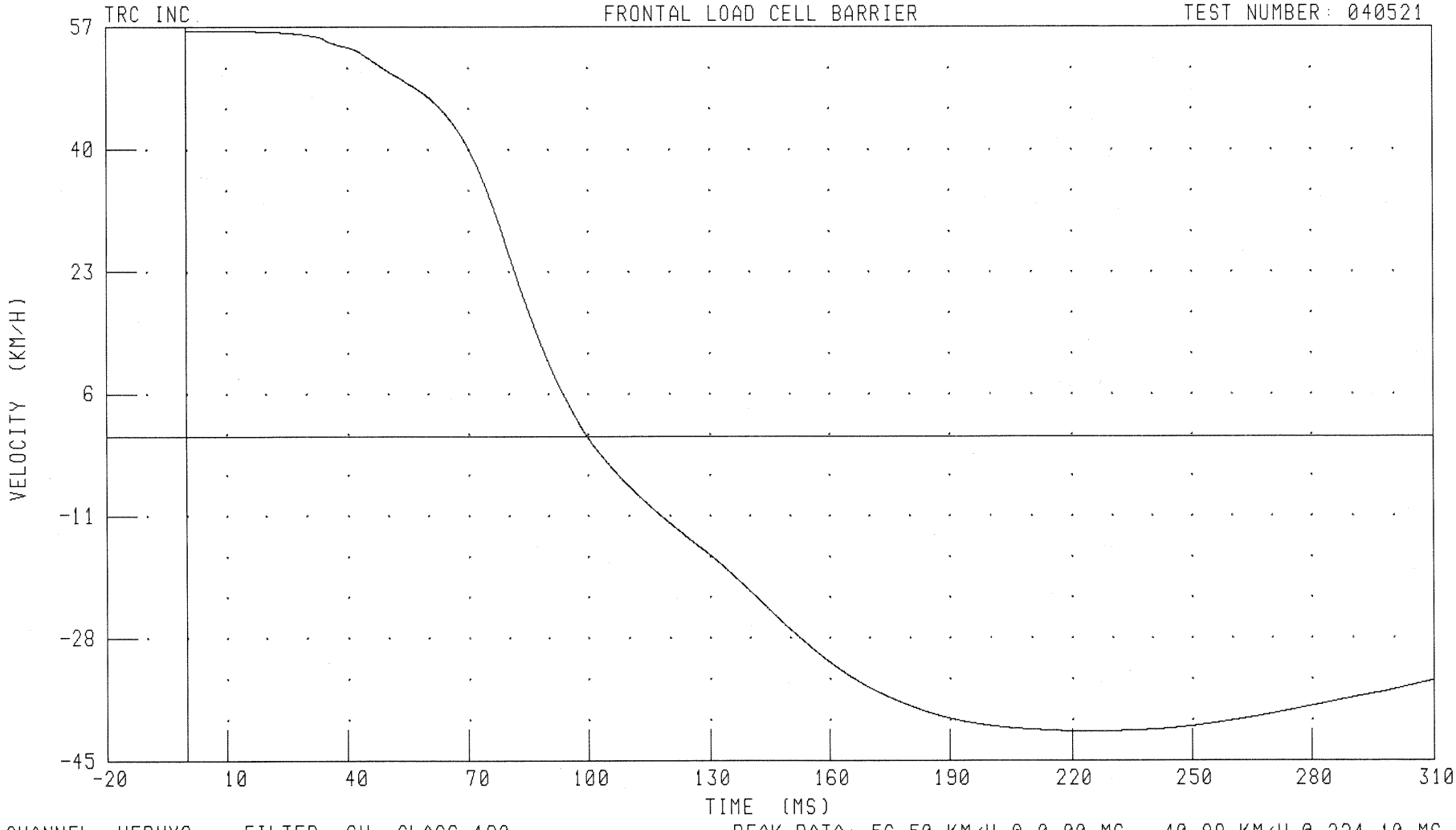
Driver Shoulder Belt Elongation Was Not Installed
(no accessible mounting location)


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
44
-52
-148
-244
-340
-436
-532
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDXG2
FILTER: CH. CLASS 1000
PEAK DATA: 4.04 G @ 302.60 MS; -48.86 G @ 79.60 MS

040521

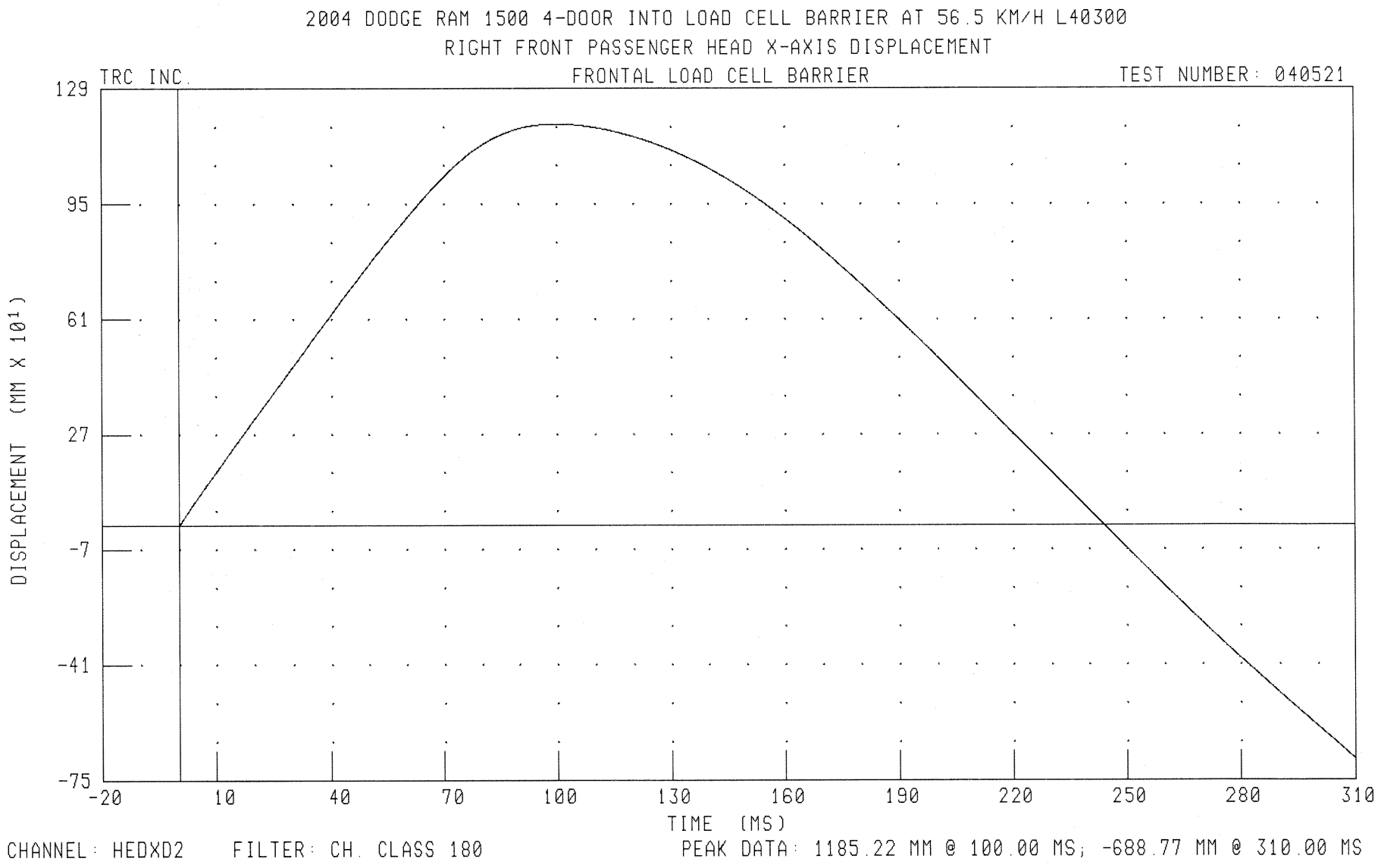
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

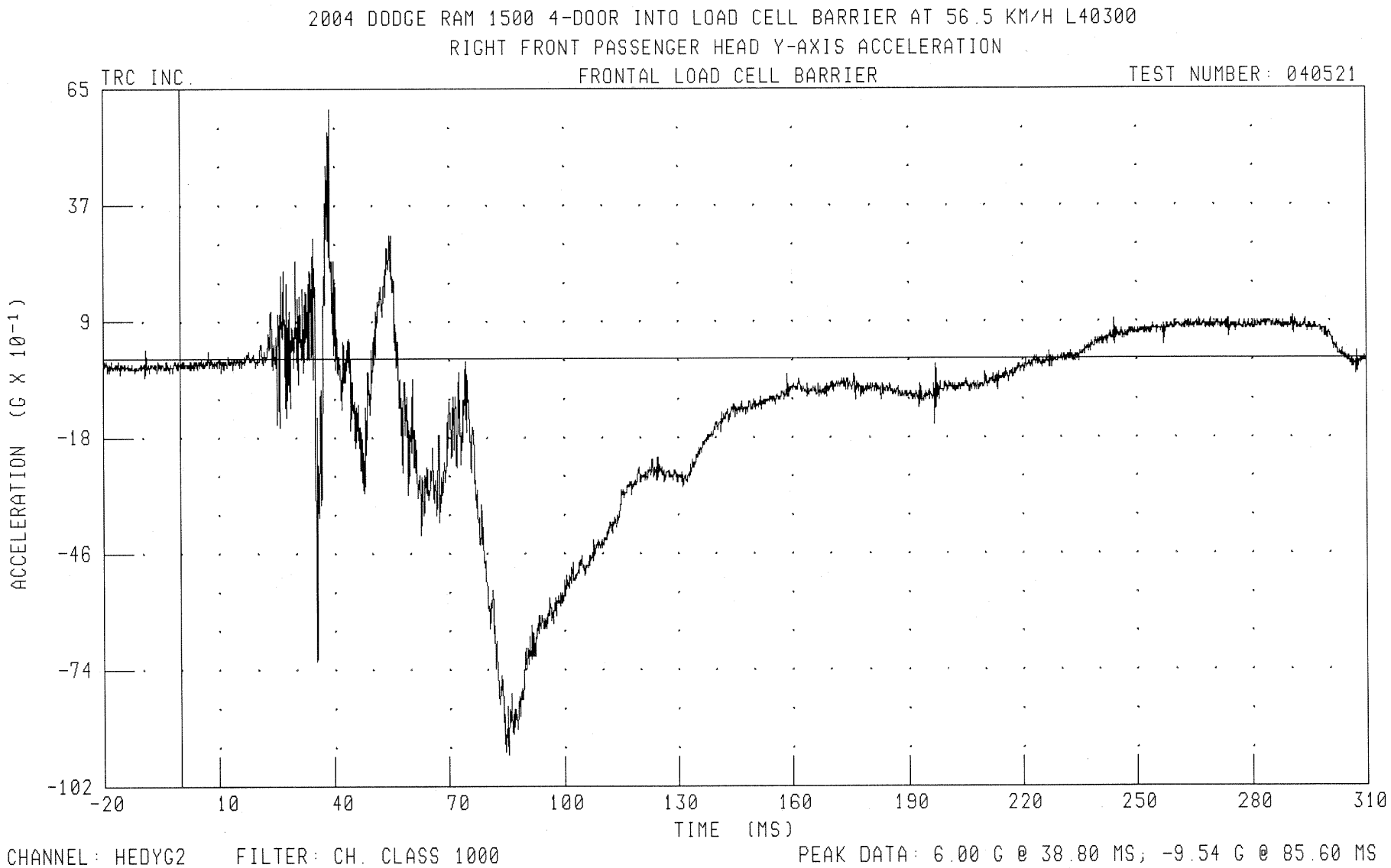
RIGHT FRONT PASSENGER HEAD X-AXIS VELOCITY



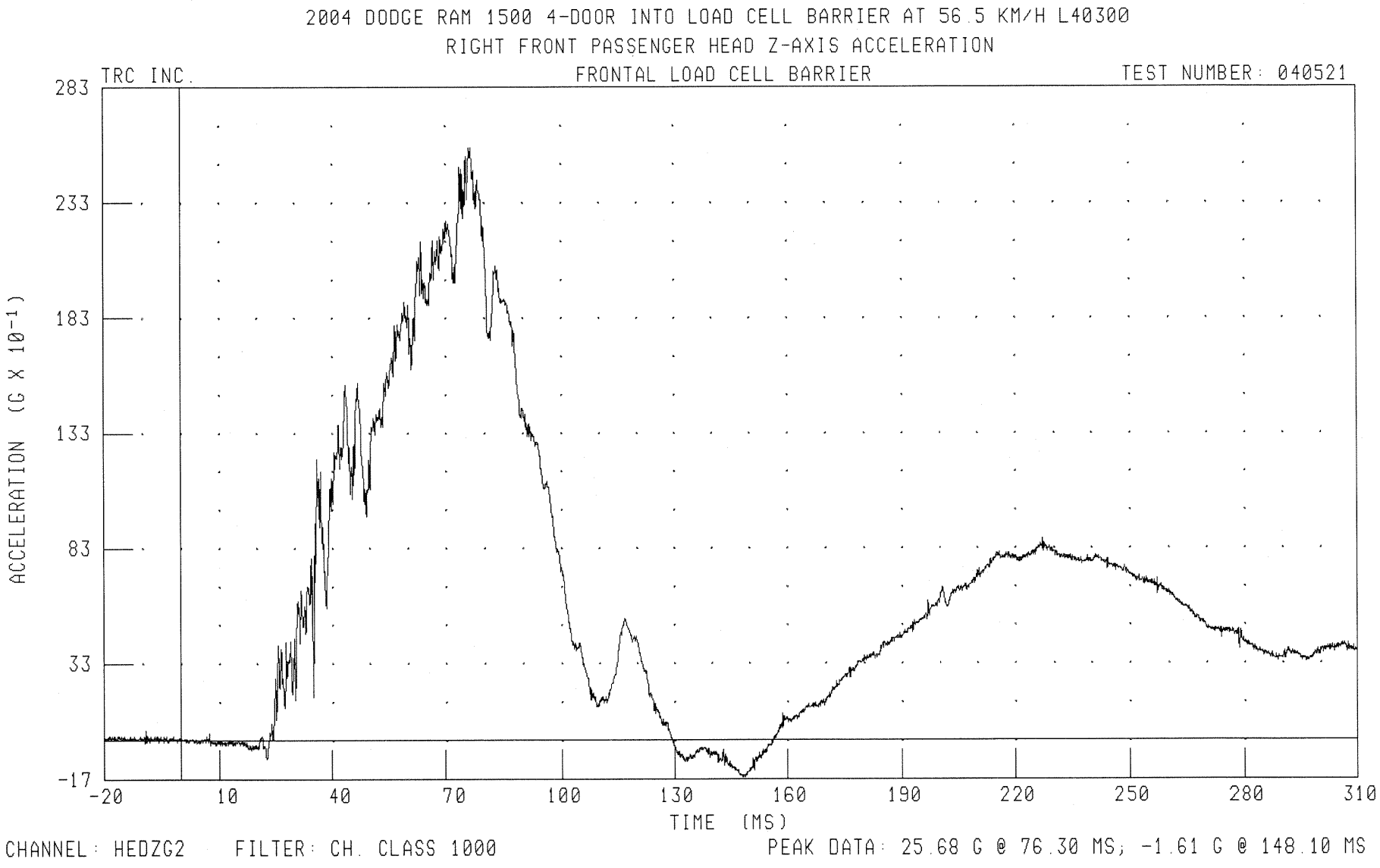
CHANNEL: HEDXV2 FILTER: CH. CLASS 180 PEAK DATA: 56.50 KM/H @ 0.00 MS; -40.99 KM/H @ 224.10 MS

040521

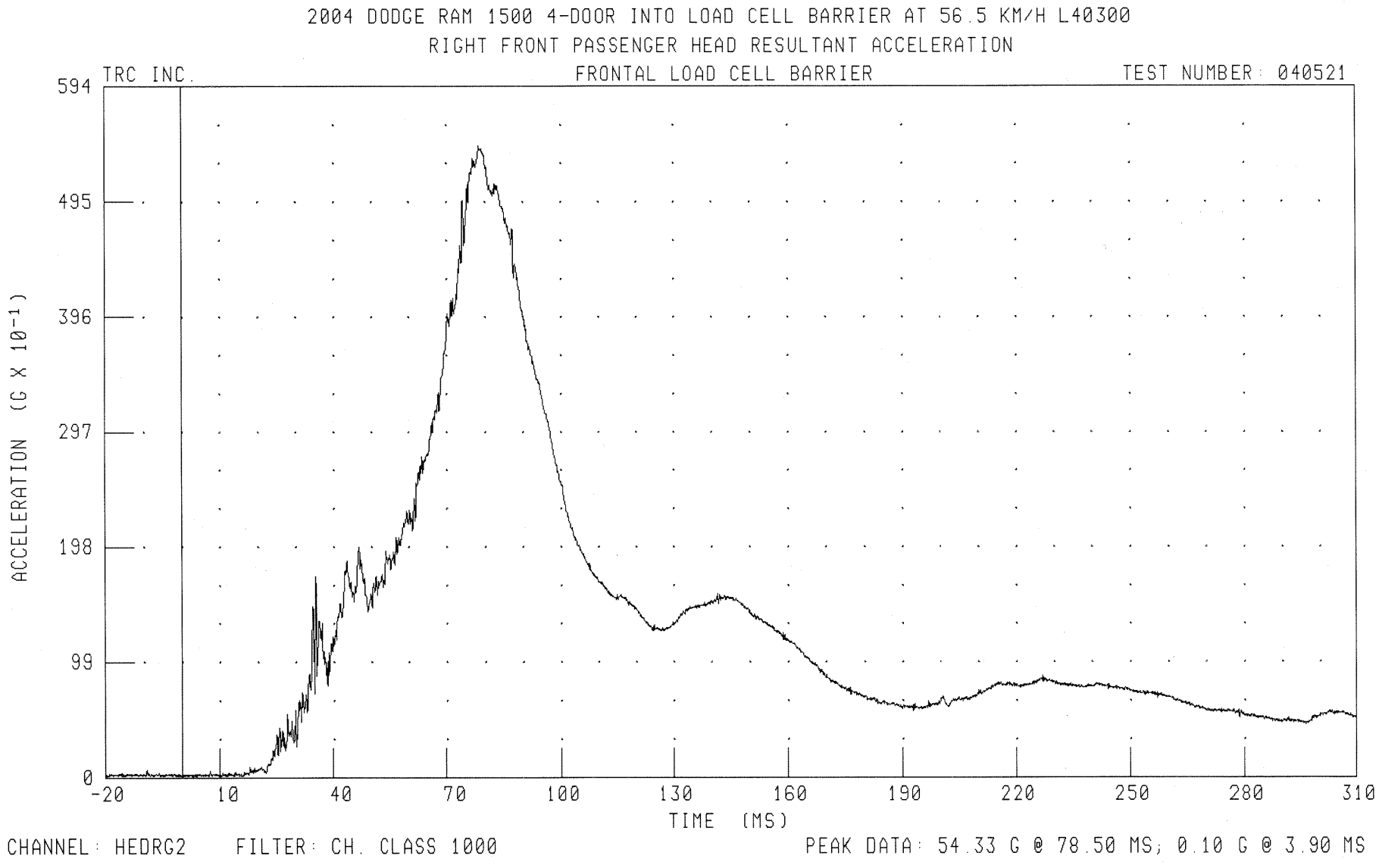

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
129
95
61
27
-7
-41
-75
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDXD2
FILTER: CH. CLASS 180
PEAK DATA: 1185.22 MM @ 100.00 MS; -688.77 MM @ 310.00 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
65
37
9
-18
-46
-74
-102
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDYG2
FILTER: CH. CLASS 1000
PEAK DATA: 6.00 G @ 38.80 MS; -9.54 G @ 85.60 MS

040521

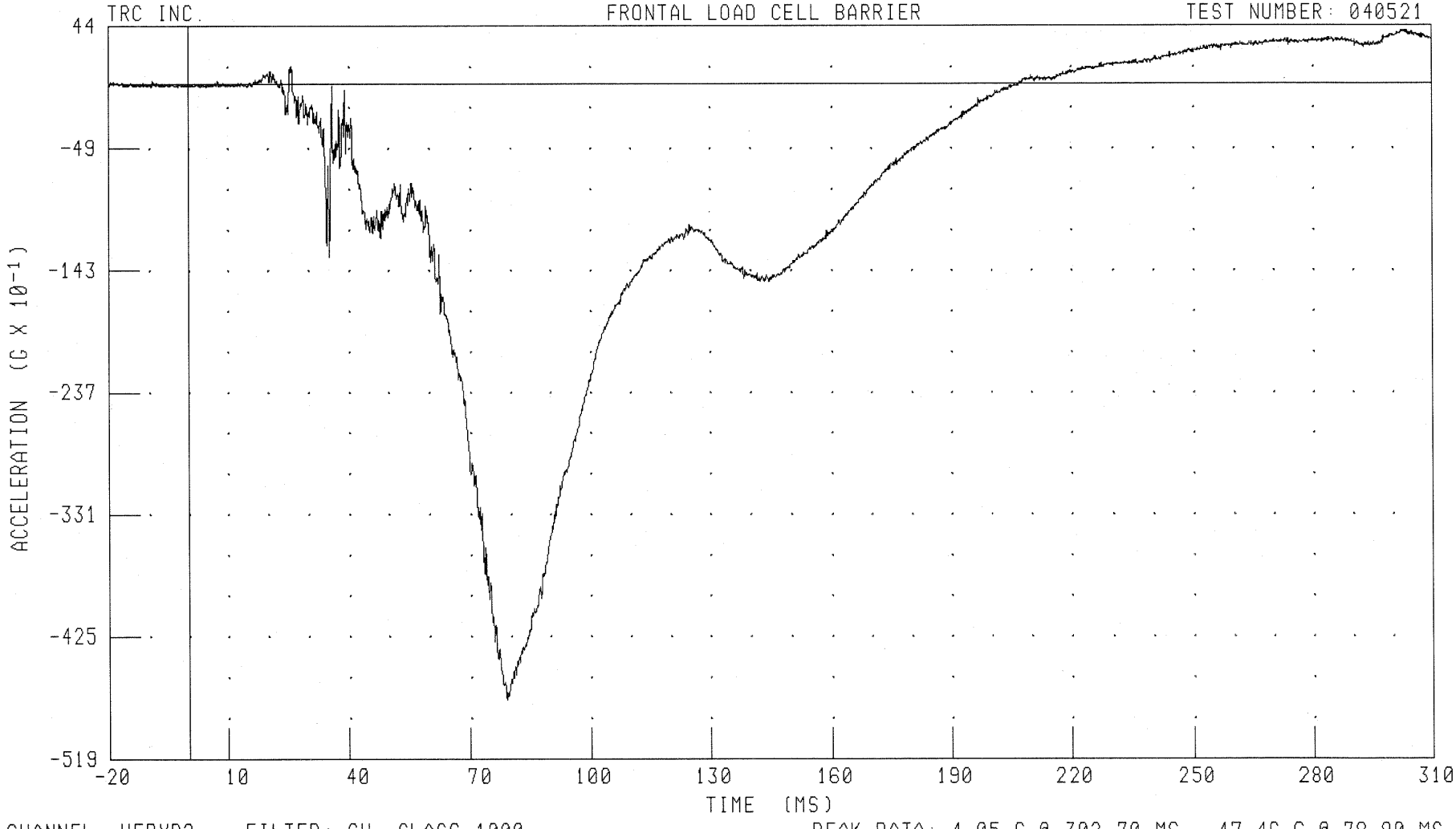

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
283
233
183
133
83
33
-17
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDZG2
FILTER: CH. CLASS 1000
PEAK DATA: 25.68 G @ 76.30 MS; -1.61 G @ 148.10 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
594
495
396
297
198
99
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDRG2
FILTER: CH. CLASS 1000
PEAK DATA: 54.33 G @ 78.50 MS; 0.10 G @ 3.90 MS

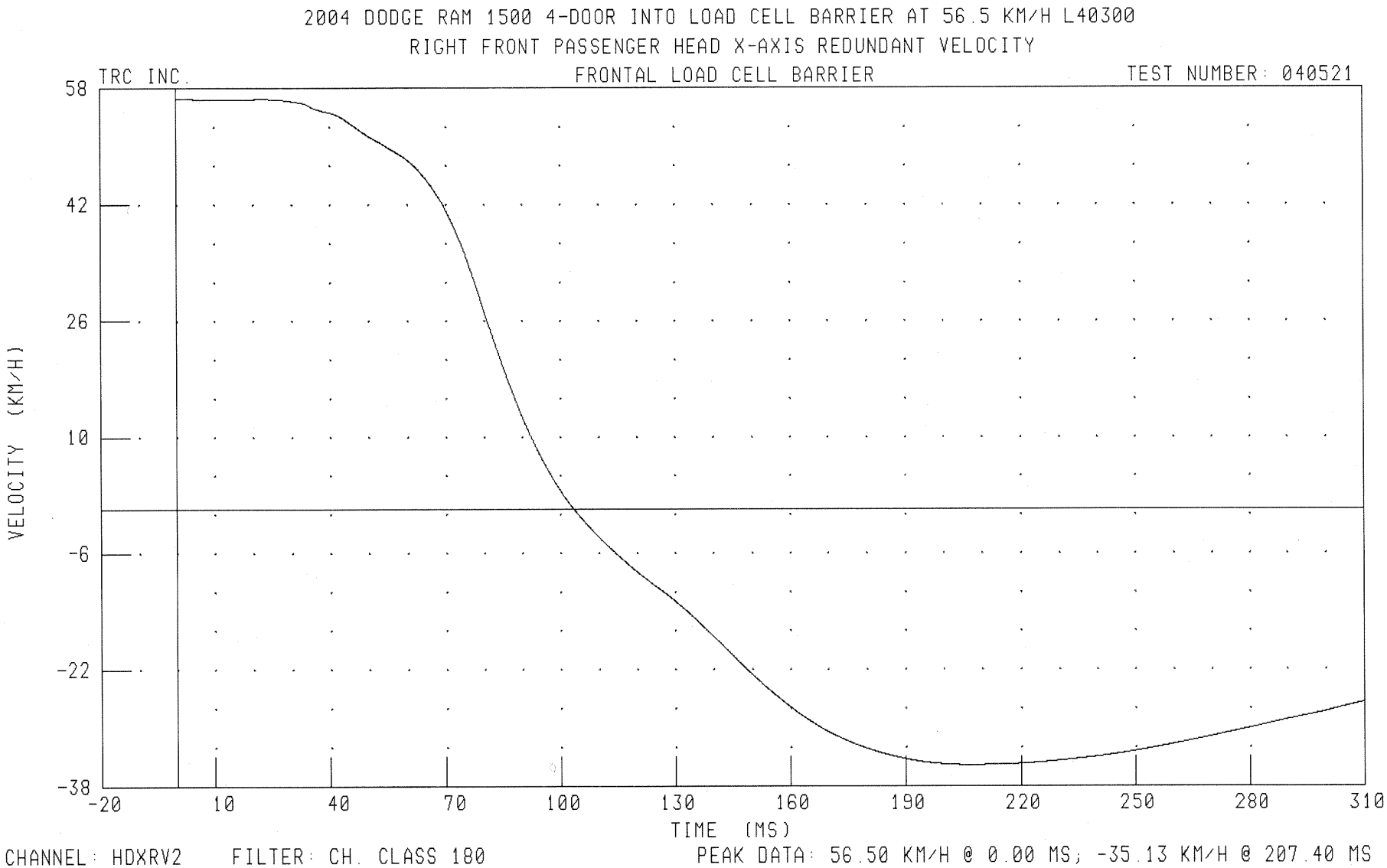
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD X-AXIS REDUNDANT ACCELERATION

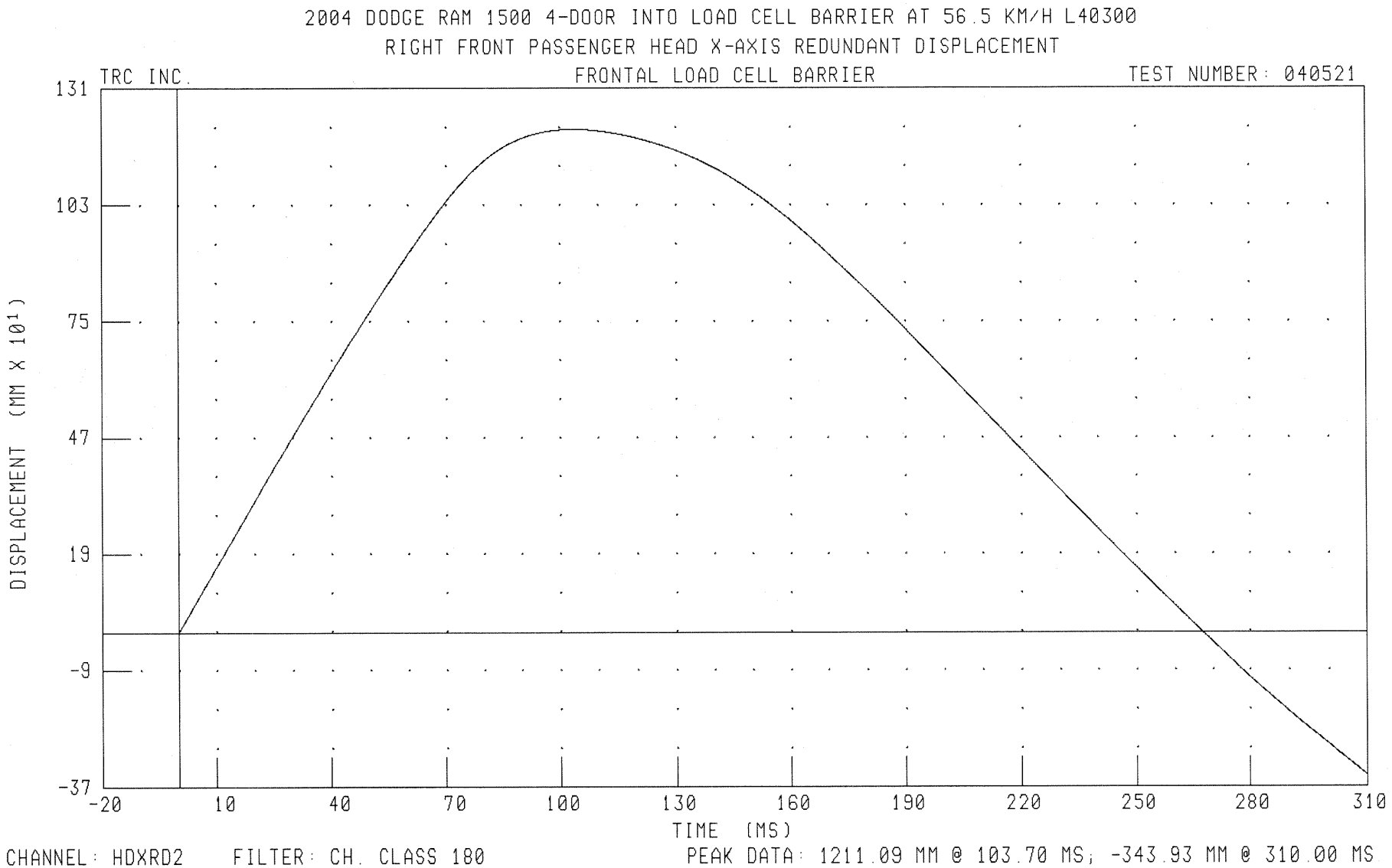


CHANNEL: HEDXR2 FILTER: CH. CLASS 1000 PEAK DATA: 4.05 G @ 302.70 MS; -47.46 G @ 78.90 MS

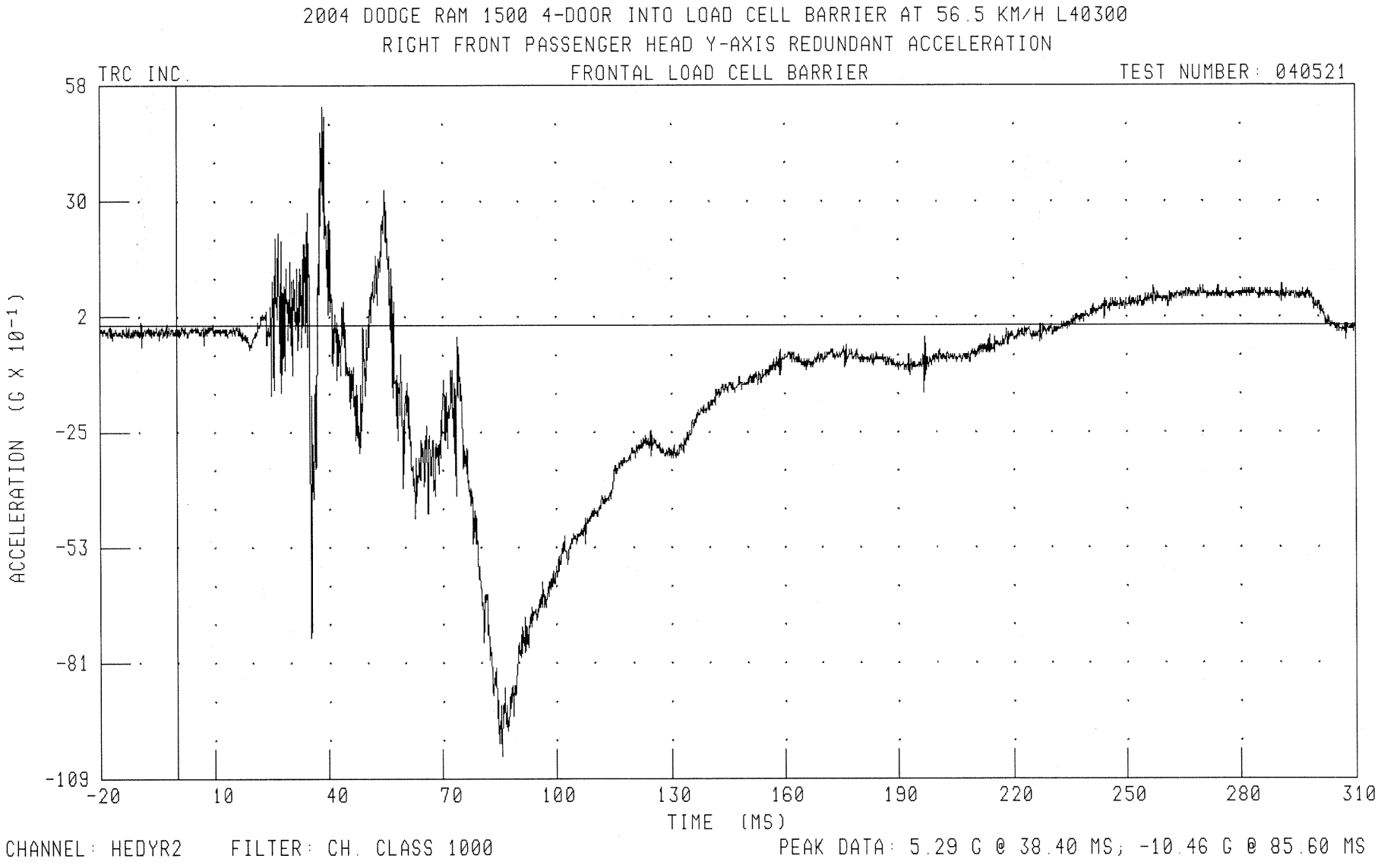
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD X-AXIS REDUNDANT VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
58
42
26
10
-6
-22
-38
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HDXRV2
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -35.13 KM/H @ 207.40 MS

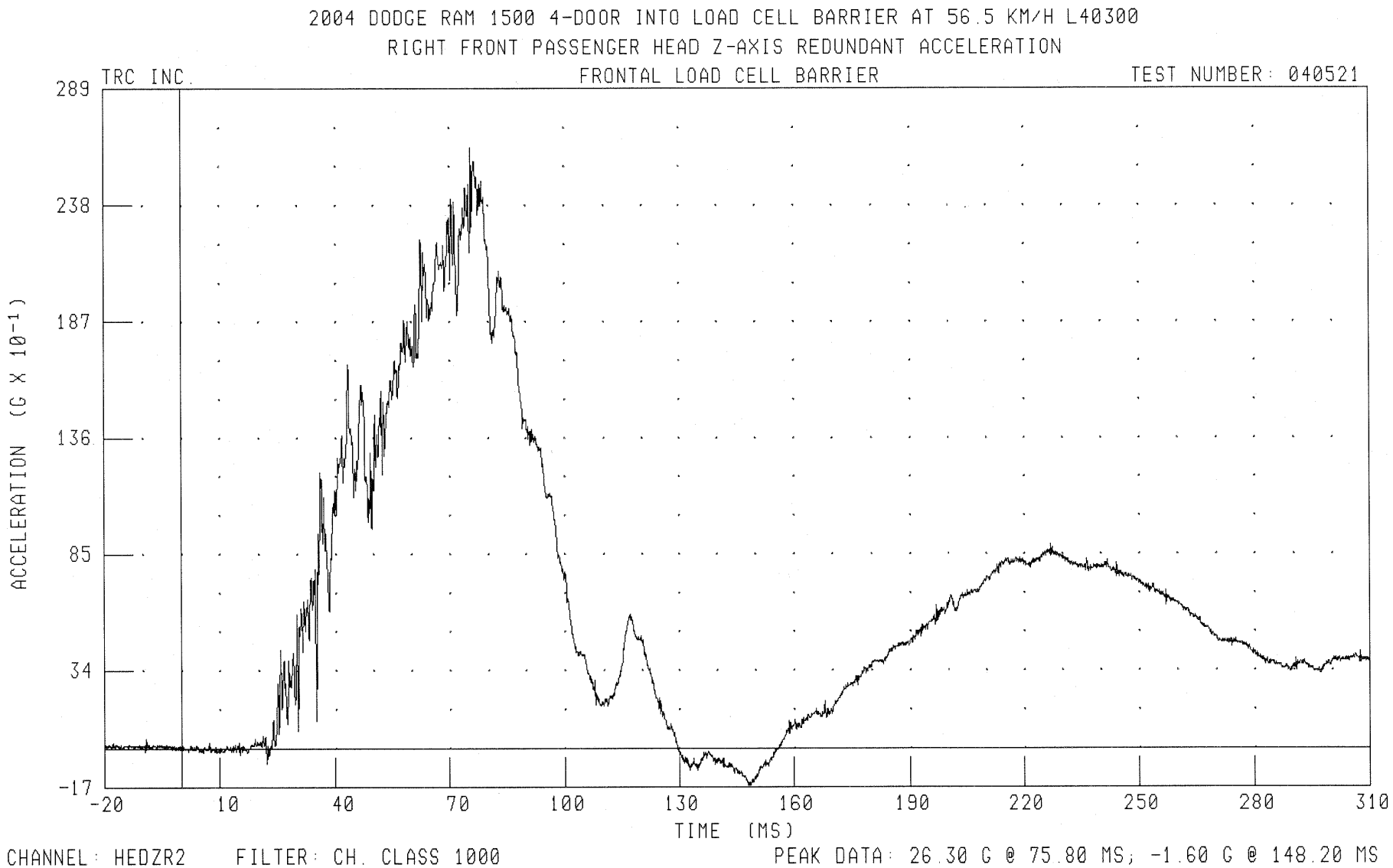
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD X-AXIS REDUNDANT DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
131
103
75
47
19
-9
-37
DISPLACEMENT (MM X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HDXRD2
FILTER: CH. CLASS 180
PEAK DATA: 1211.09 MM @ 103.70 MS; -343.93 MM @ 310.00 MS

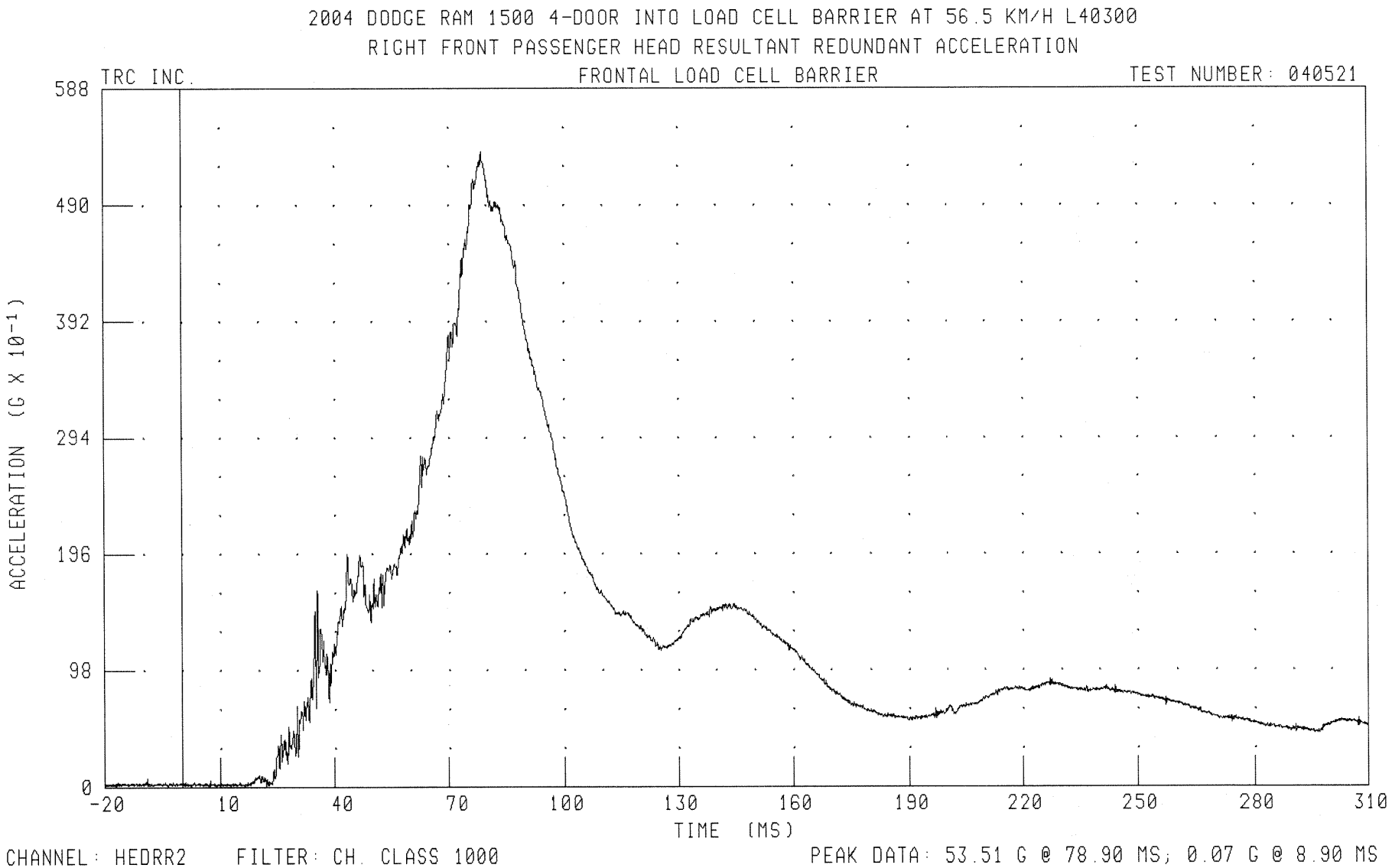
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD Y-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
58
30
2
-25
-53
-81
-109
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDYR2
FILTER: CH. CLASS 1000
PEAK DATA: 5.29 G @ 38.40 MS; -10.46 G @ 85.60 MS

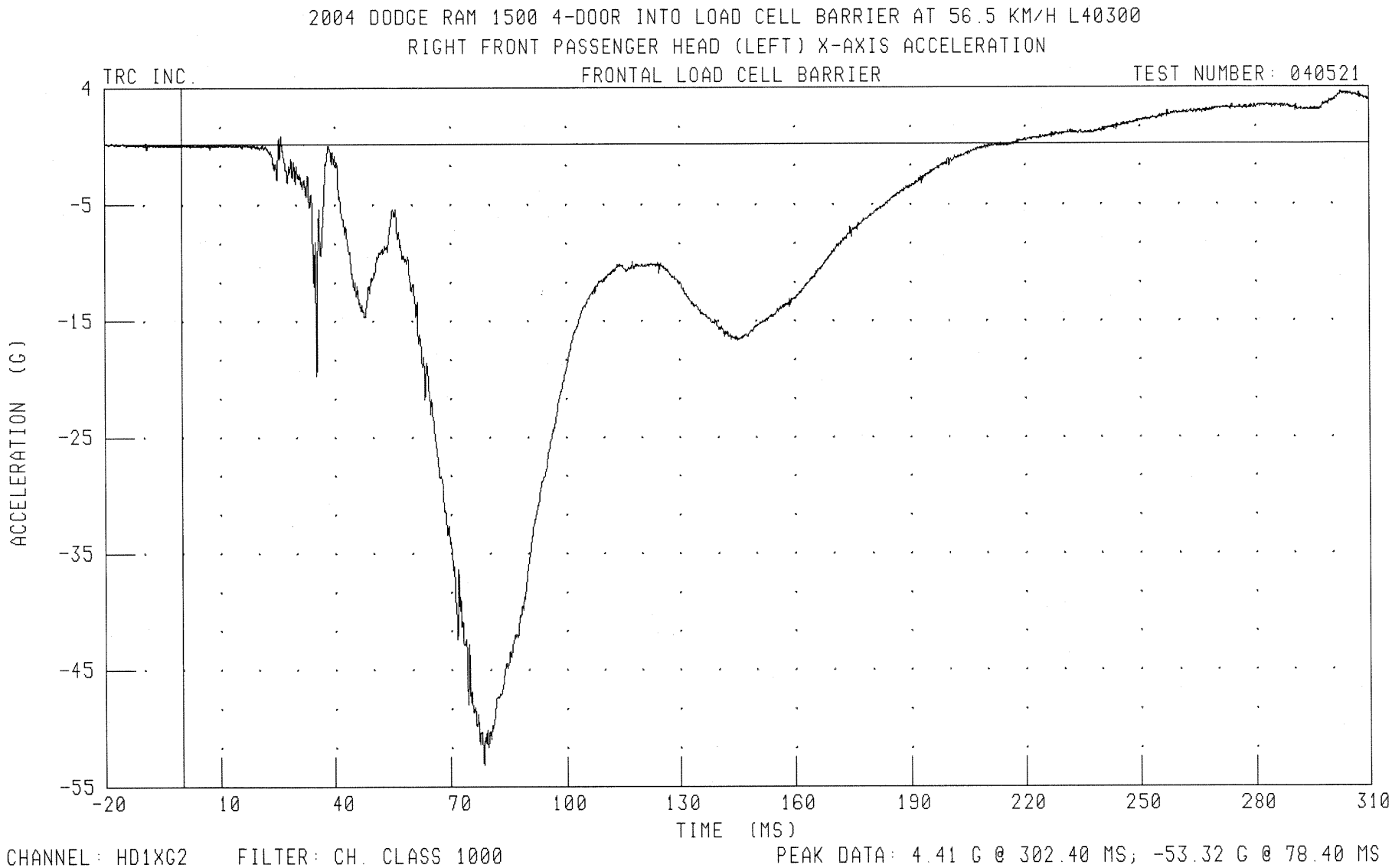
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD Z-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
289
238
187
136
85
34
-17
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDZR2
FILTER: CH. CLASS 1000
PEAK DATA: 26.30 G @ 75.80 MS; -1.60 G @ 148.20 MS

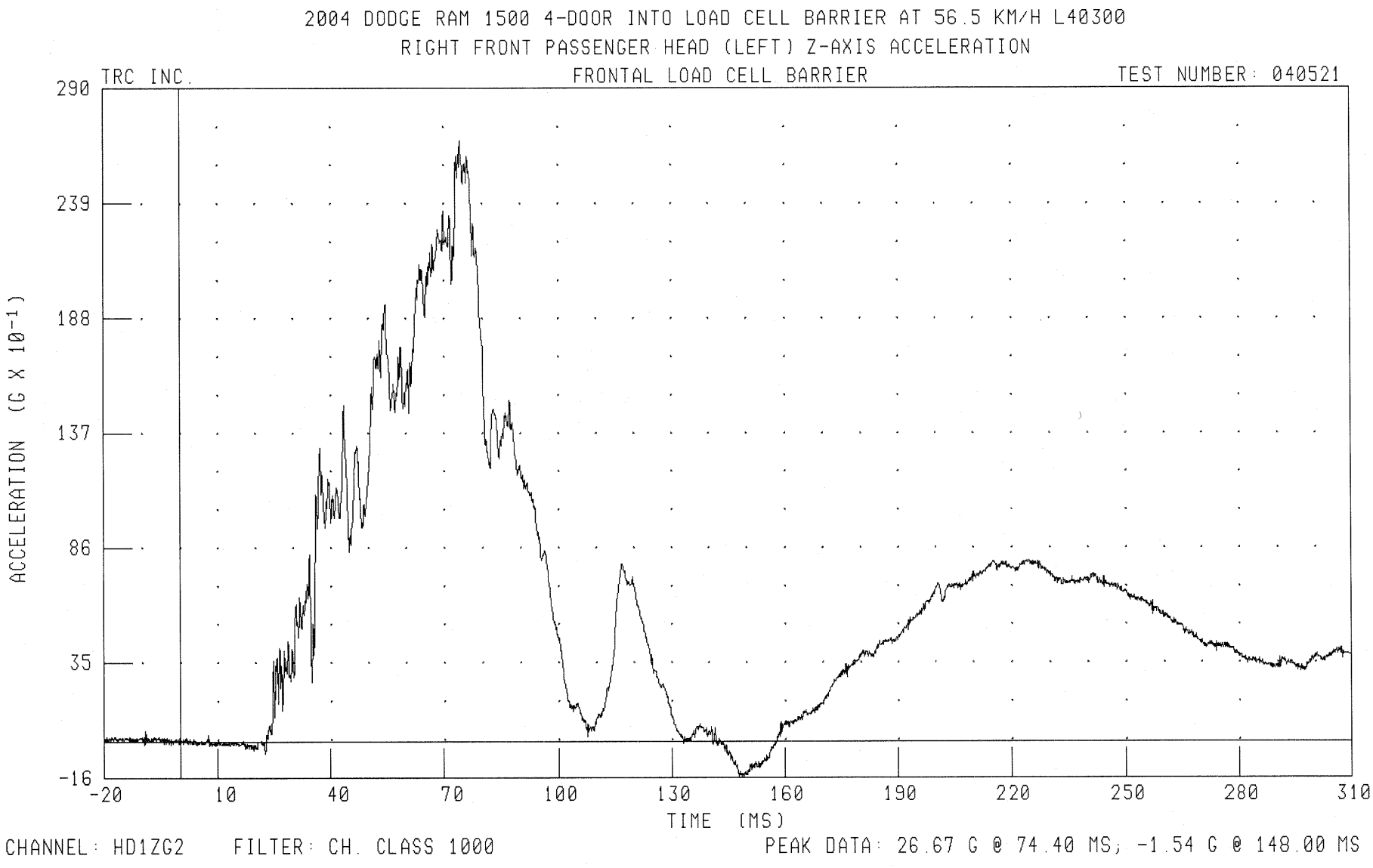
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD RESULTANT REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
588
490
392
294
196
98
0
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDRR2
FILTER: CH. CLASS 1000
PEAK DATA: 53.51 G @ 78.90 MS; 0.07 G @ 8.90 MS

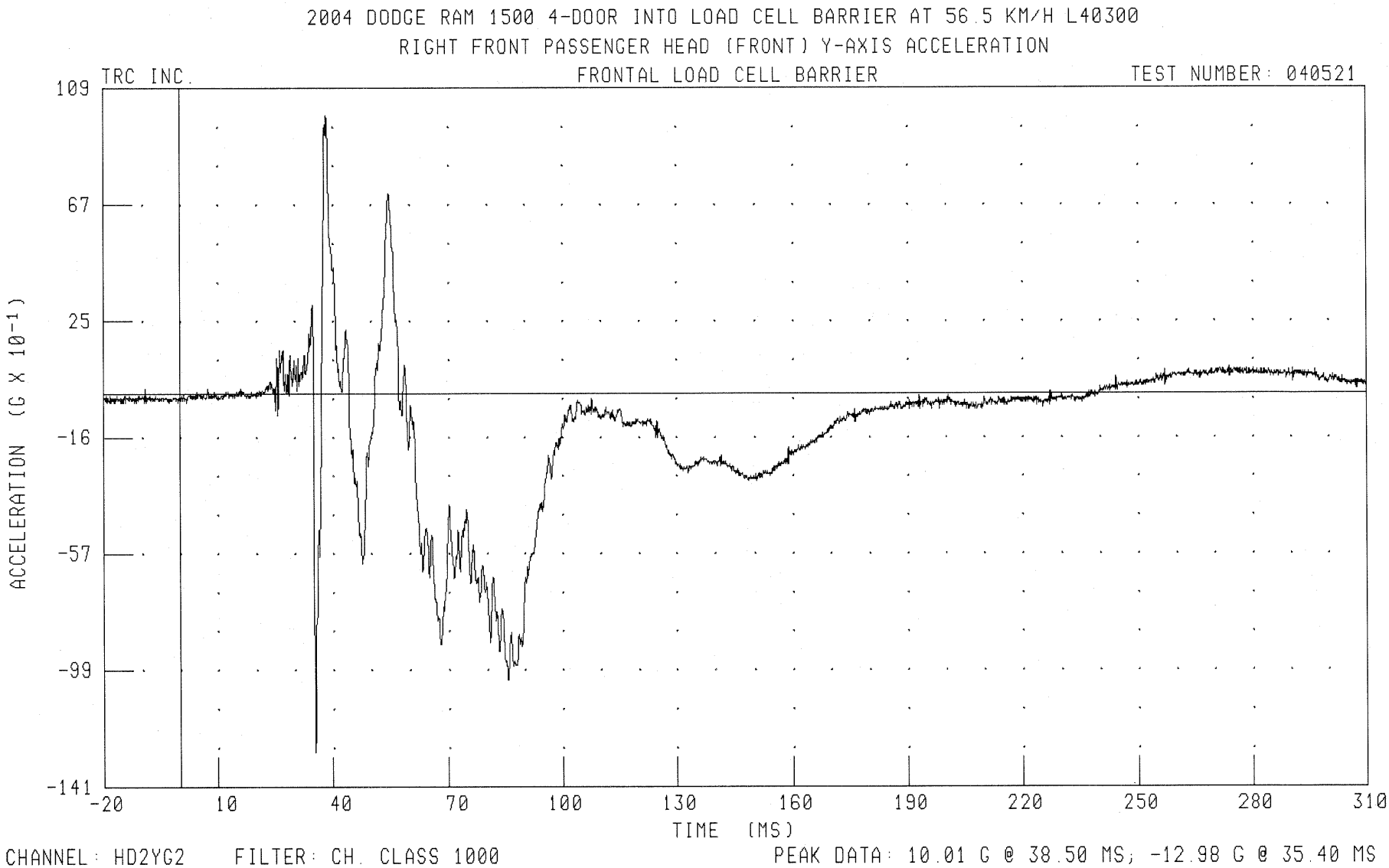
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD (LEFT) X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
4
-5
-15
-25
-35
-45
-55
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD1XG2
FILTER: CH. CLASS 1000
PEAK DATA: 4.41 G @ 302.40 MS; -53.32 G @ 78.40 MS

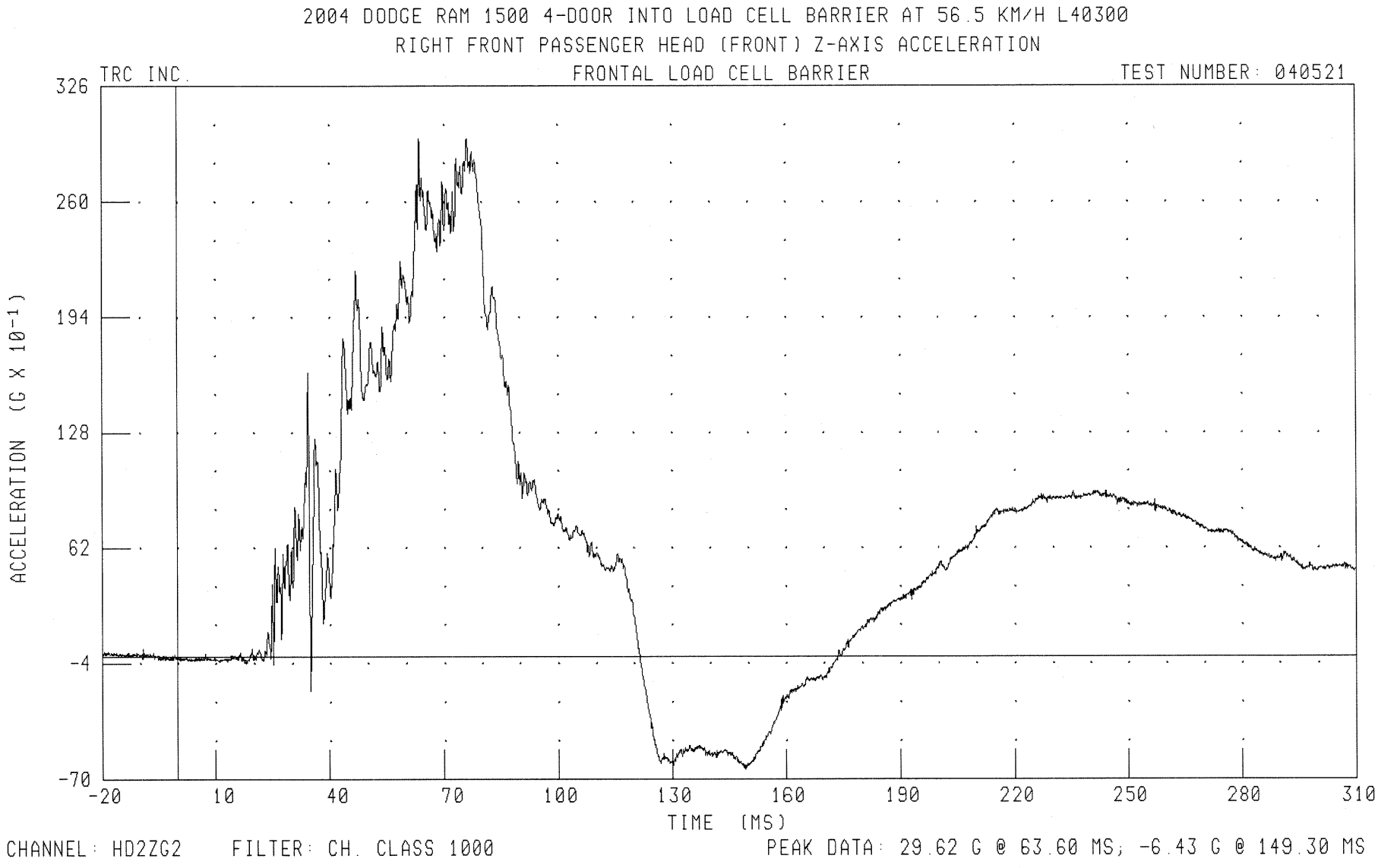
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD (LEFT) Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
290
239
188
137
86
35
-16
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD1ZG2
FILTER: CH. CLASS 1000
PEAK DATA: 26.67 G @ 74.40 MS; -1.54 G @ 148.00 MS

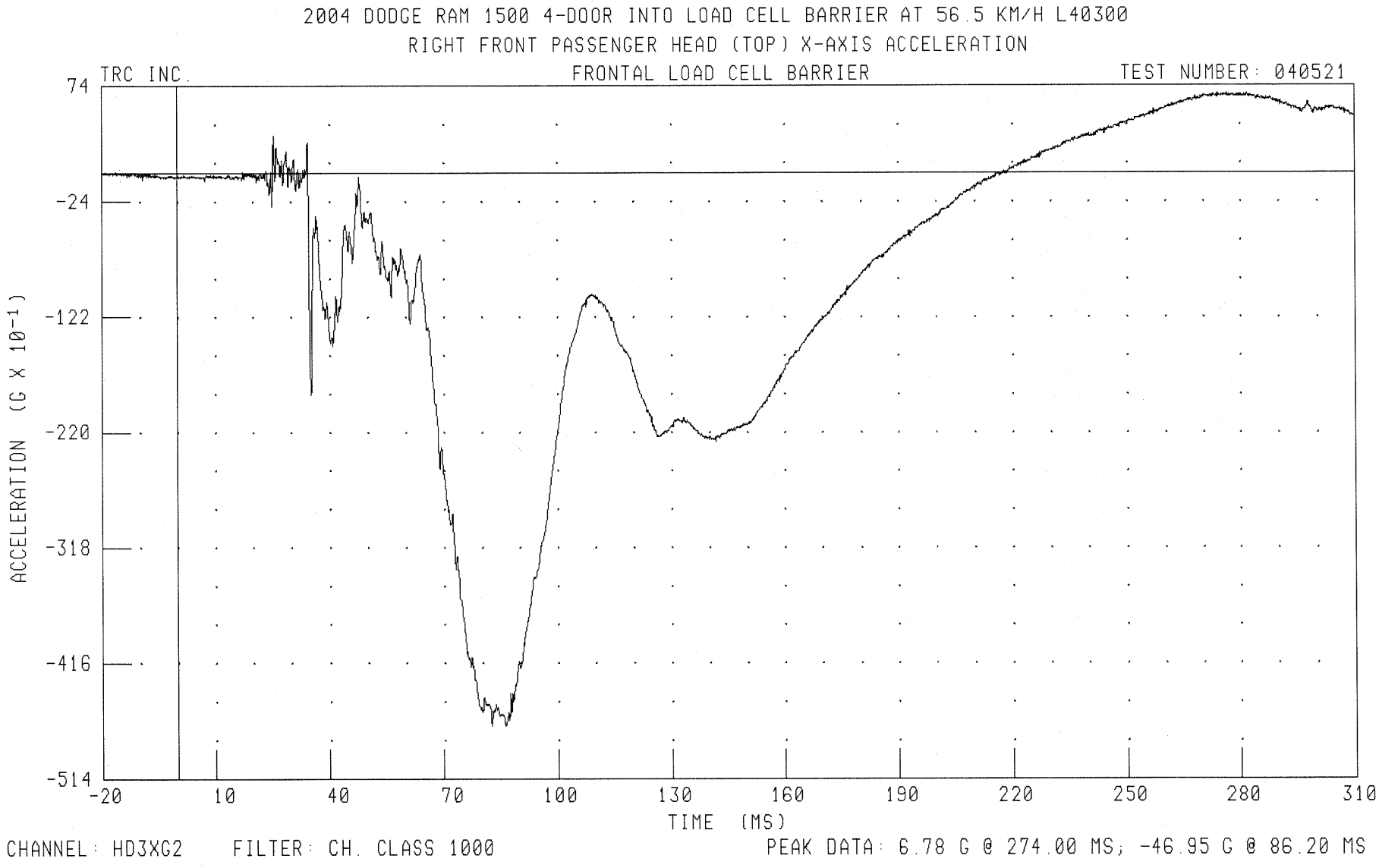
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD (FRONT) Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
109
67
25
-16
-57
-99
-141
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD2YG2
FILTER: CH. CLASS 1000
PEAK DATA: 10.01 G @ 38.50 MS; -12.98 G @ 35.40 MS

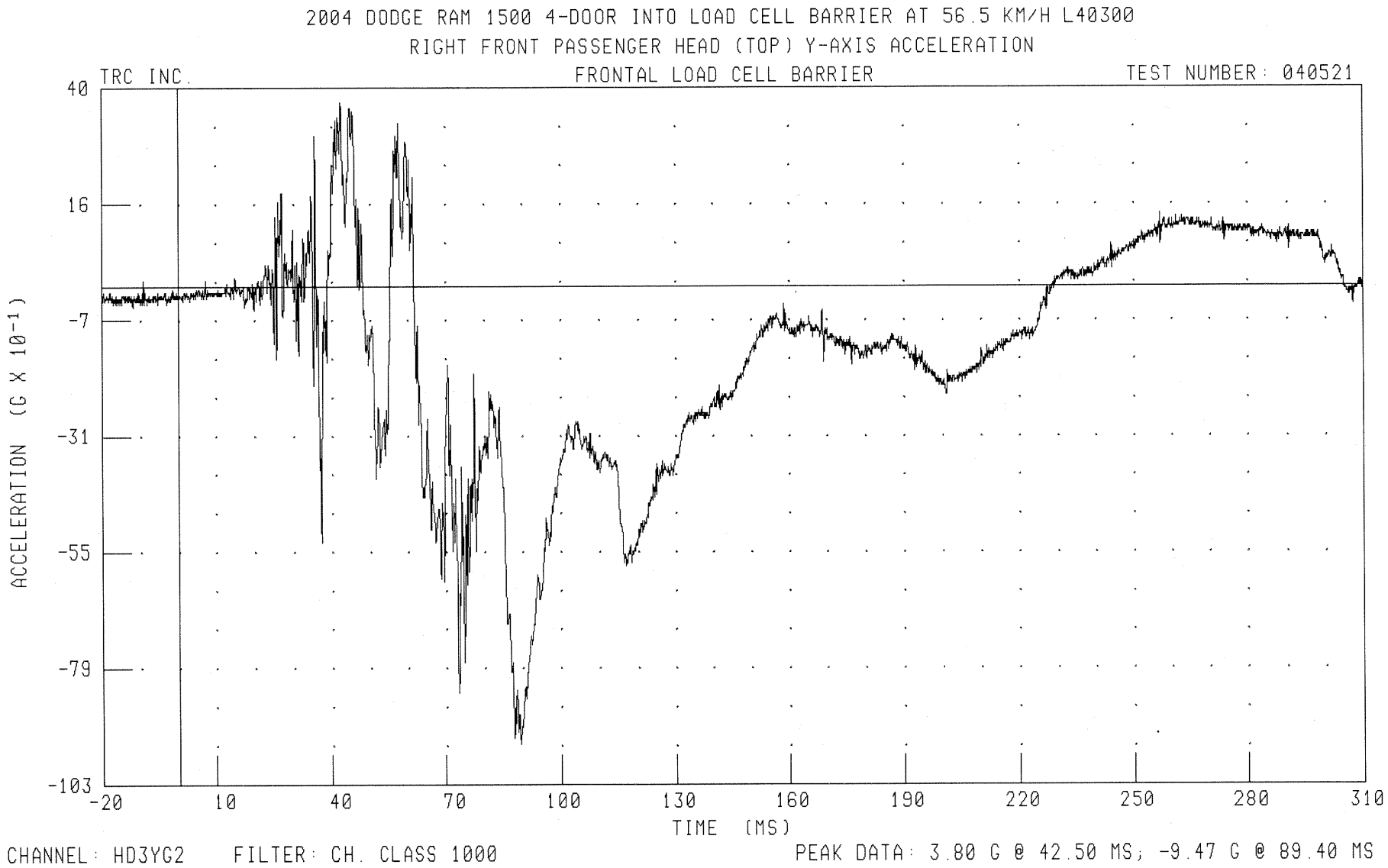
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD (FRONT) Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
326
260
194
128
62
-4
-70
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD2ZG2
FILTER: CH. CLASS 1000
PEAK DATA: 29.62 G @ 63.60 MS; -6.43 G @ 149.30 MS

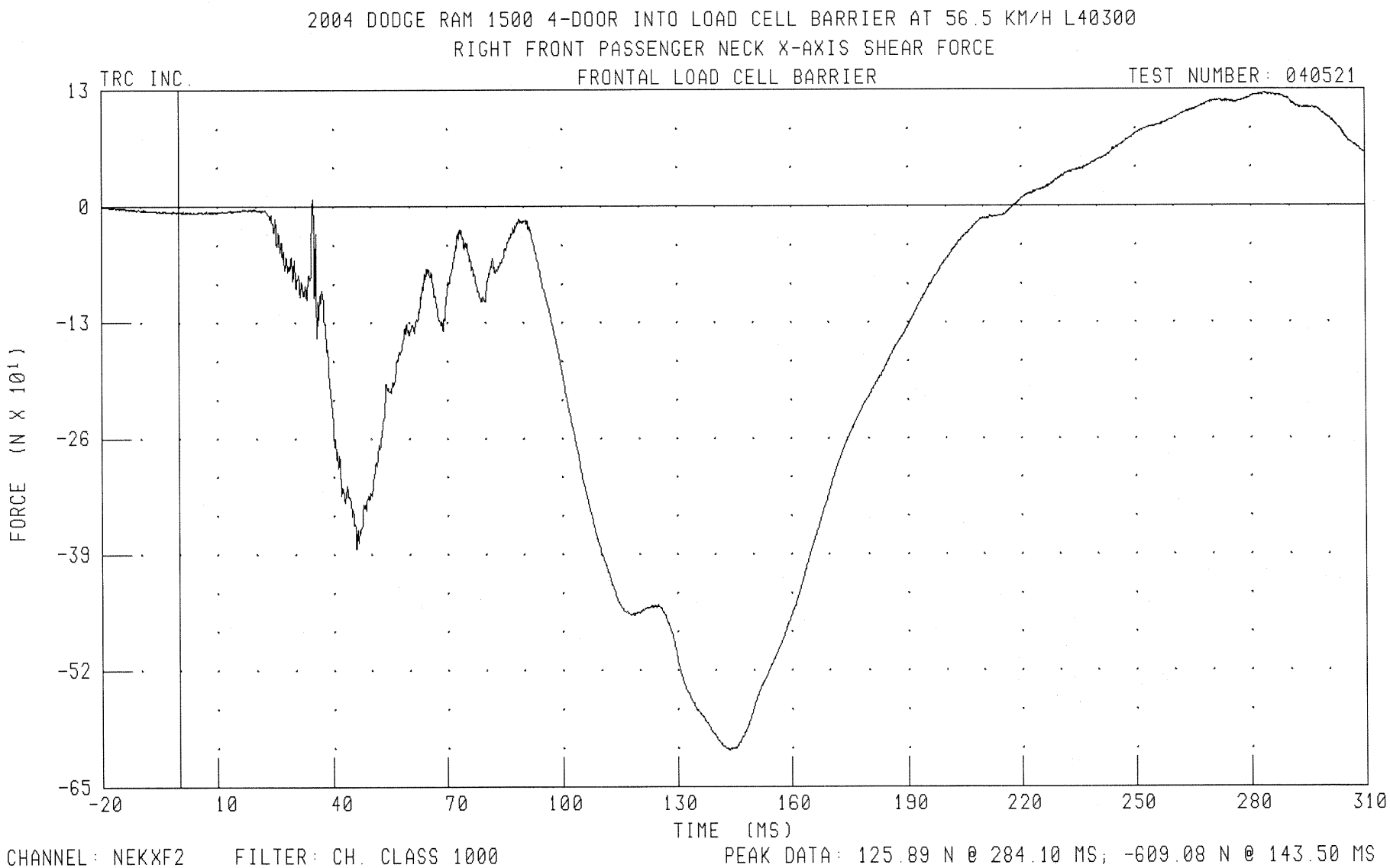
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD (TOP) X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
74
-24
-122
-220
-318
-416
-514
ACCELERATION (G X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD3XG2
FILTER: CH. CLASS 1000
PEAK DATA: 6.78 G @ 274.00 MS; -46.95 G @ 86.20 MS

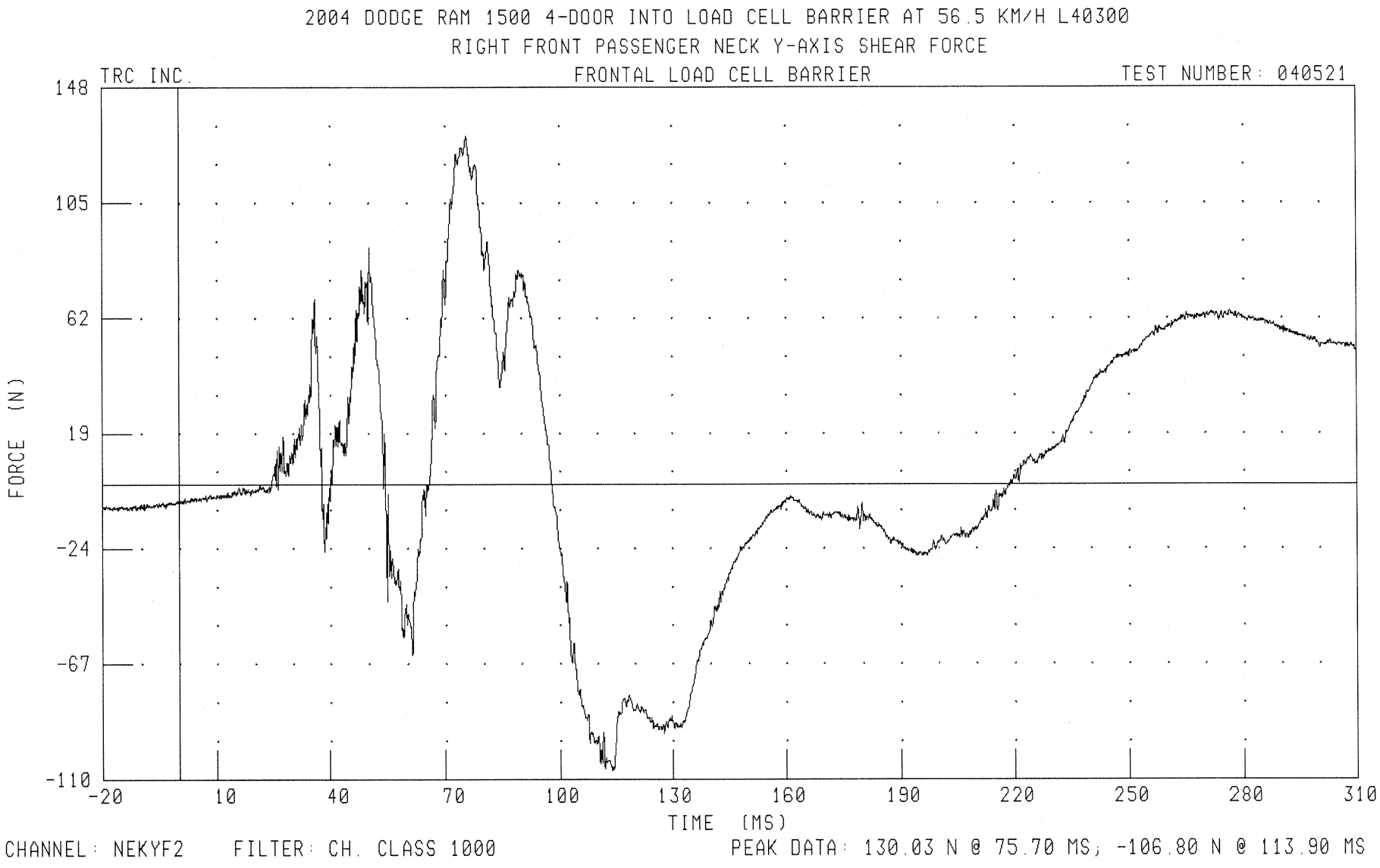
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER HEAD (TOP) Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
40
16
-7
-31
-55
-79
-103
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HD3YG2
FILTER: CH. CLASS 1000
PEAK DATA: 3.80 G @ 42.50 MS; -9.47 G @ 89.40 MS

040521

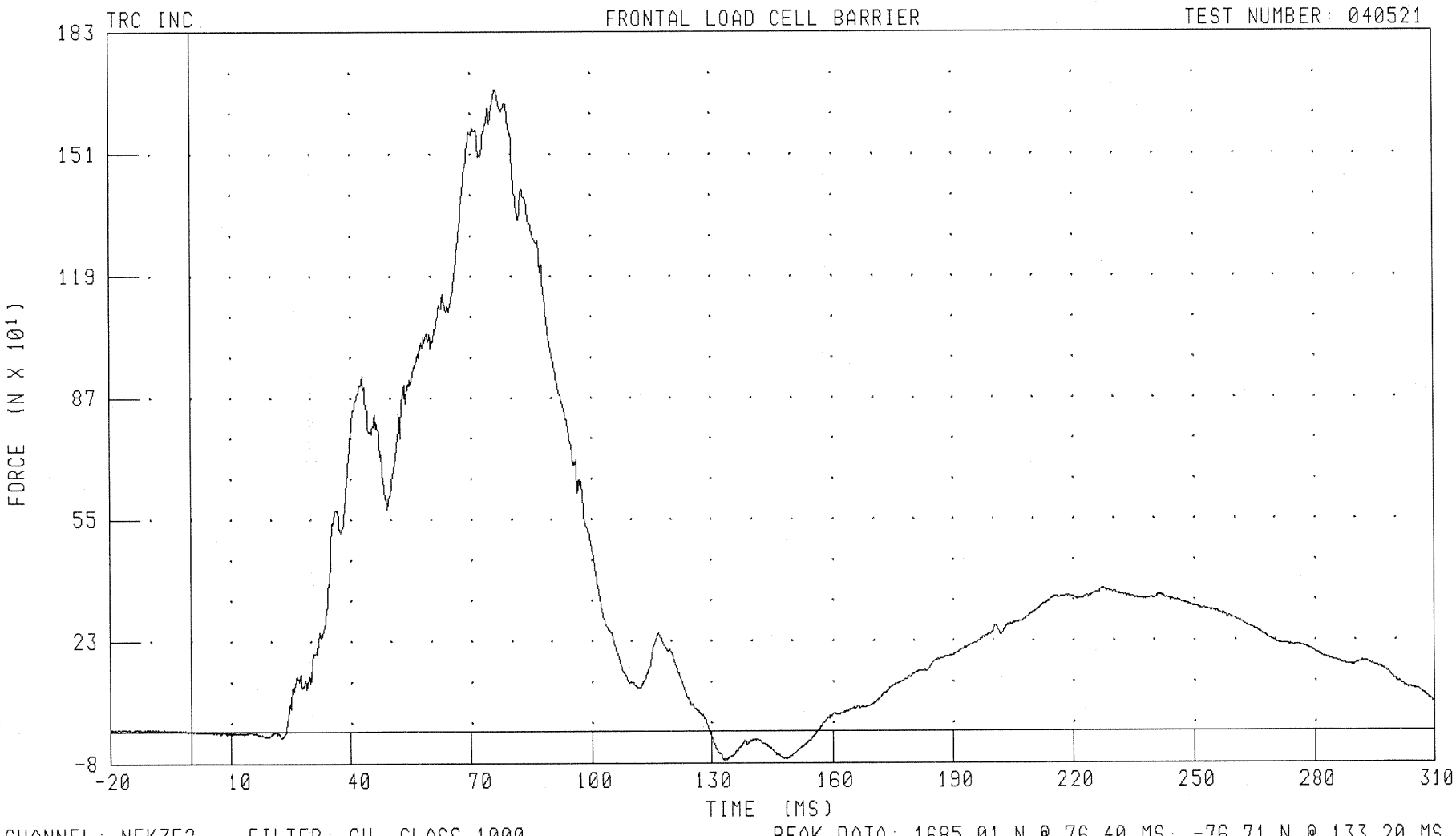

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK X-AXIS SHEAR FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
13
0
-13
-26
-39
-52
-65
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKXF2
FILTER: CH. CLASS 1000
PEAK DATA: 125.89 N @ 284.10 MS; -609.08 N @ 143.50 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK Y-AXIS SHEAR FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
148
105
62
19
-24
-67
-110
FORCE (N)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKYF2
FILTER: CH. CLASS 1000
PEAK DATA: 130.03 N @ 75.70 MS; -106.80 N @ 113.90 MS

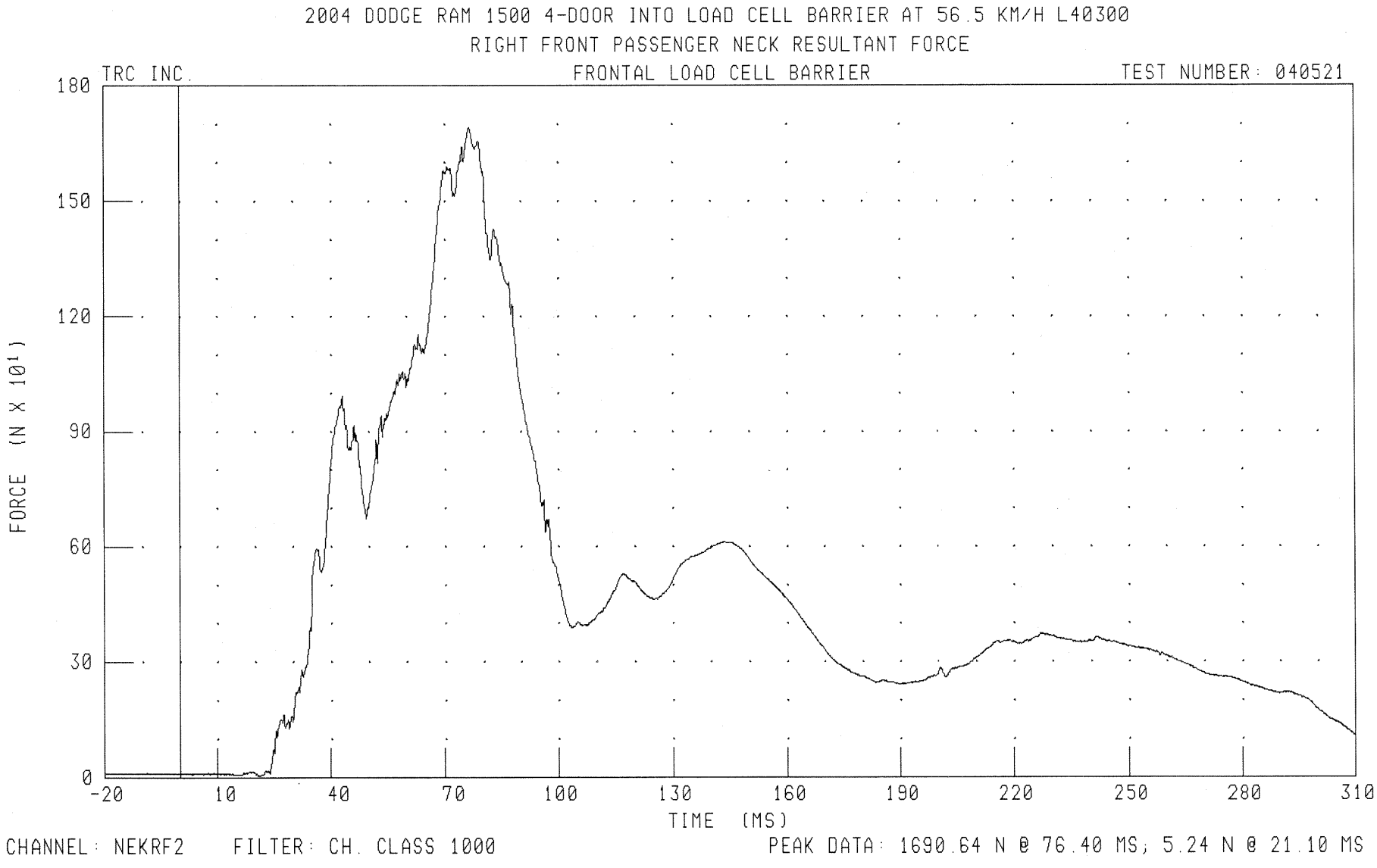
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK Z-AXIS AXIAL FORCE



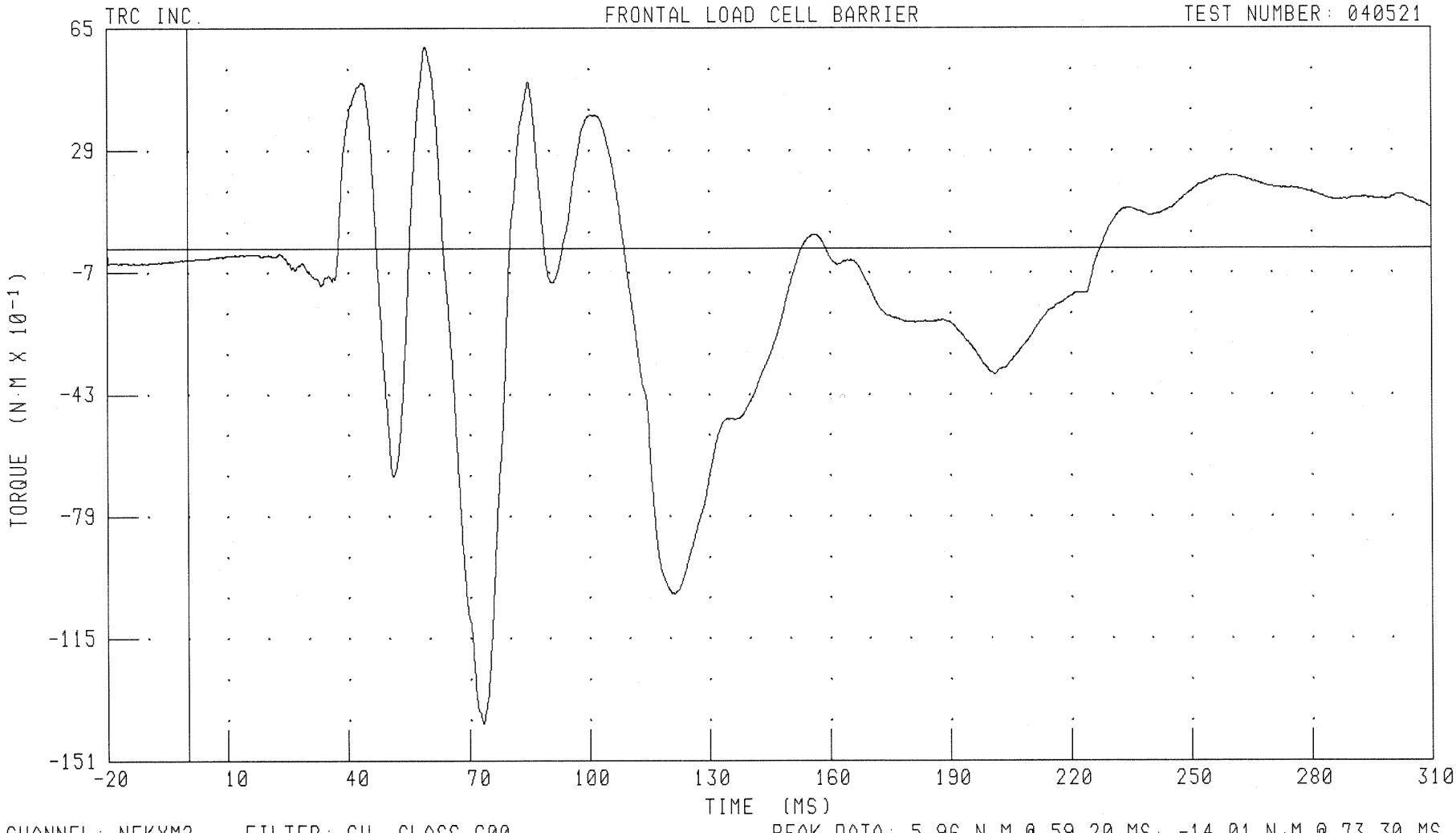
CHANNEL: NEKZF2 FILTER: CH. CLASS 1000 PEAK DATA: 1685.01 N @ 76.40 MS; -76.71 N @ 133.20 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK RESULTANT FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
FORCE (N X 10¹)
180
150
120
90
60
30
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKRF2
FILTER: CH. CLASS 1000
PEAK DATA: 1690.64 N @ 76.40 MS; 5.24 N @ 21.10 MS

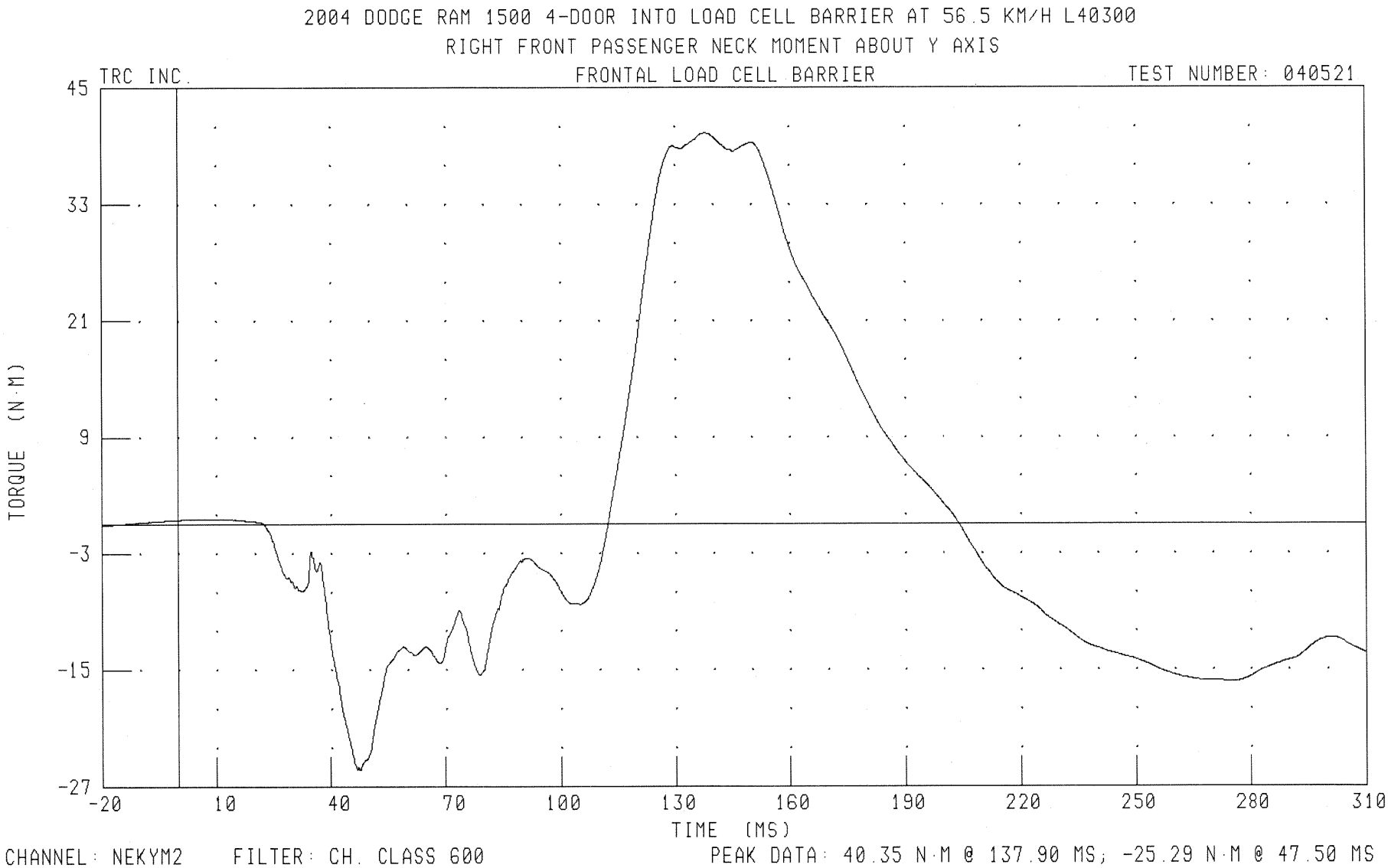
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK MOMENT ABOUT X AXIS

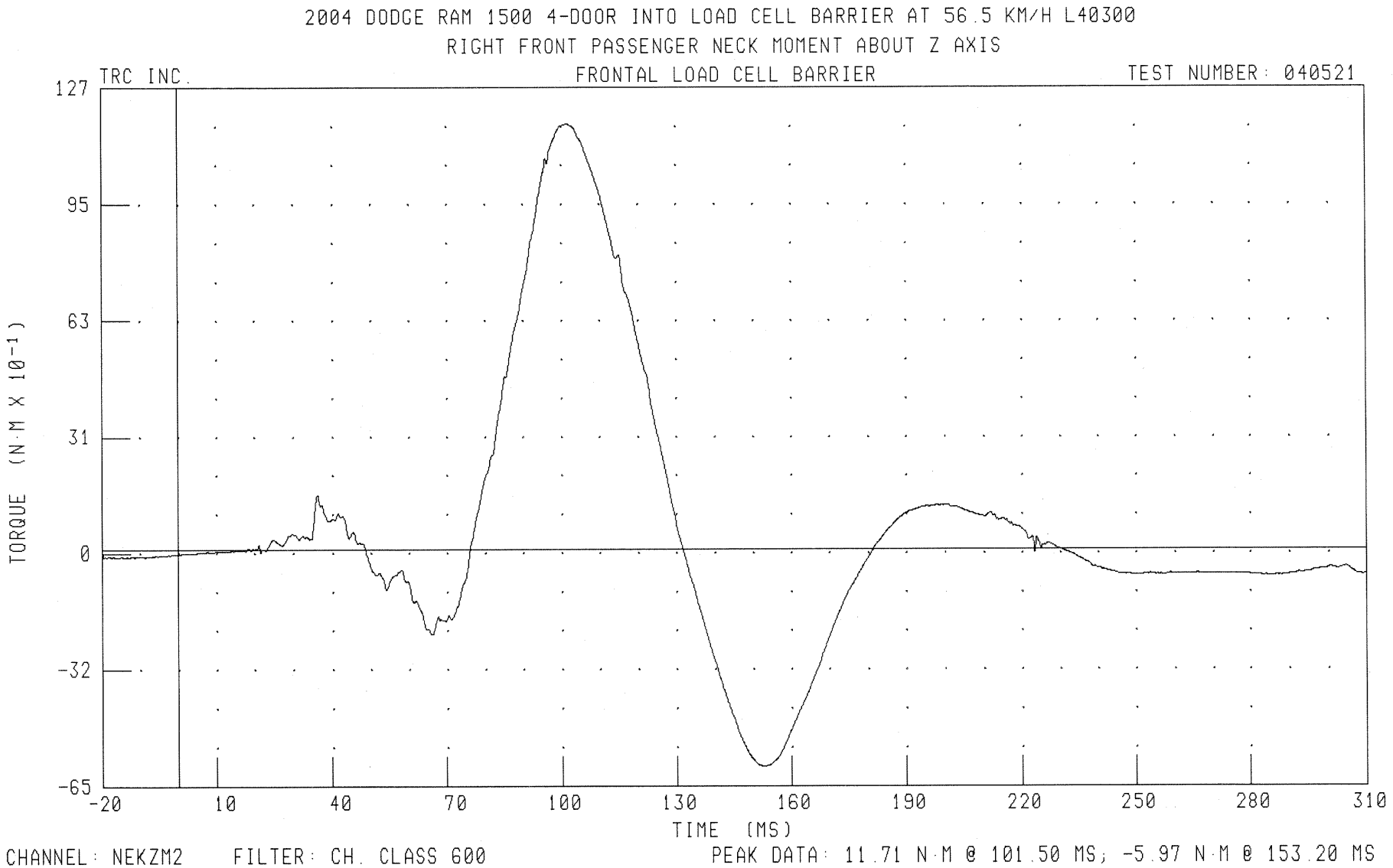


CHANNEL: NEKXM2 FILTER: CH. CLASS 600 PEAK DATA: 5.96 N·M @ 59.20 MS; -14.01 N·M @ 73.30 MS

040521

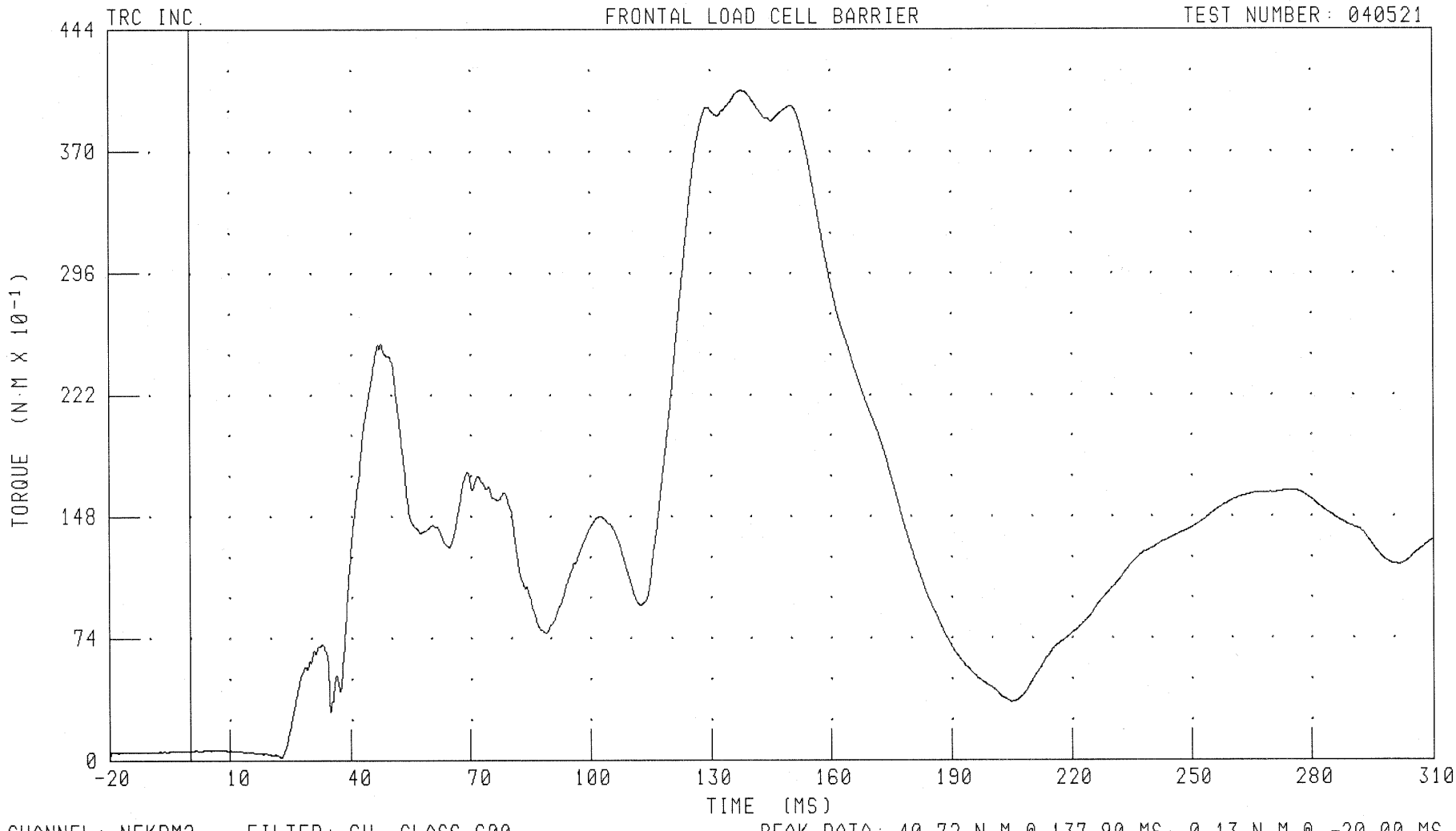

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
TORQUE (N-M)
45
33
21
9
-3
-15
-27
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKYM2
FILTER: CH. CLASS 600
PEAK DATA: 40.35 N-M @ 137.90 MS; -25.29 N-M @ 47.50 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Z AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
127
95
63
31
0
-32
-65
TORQUE (N-M X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKZM2
FILTER: CH. CLASS 600
PEAK DATA: 11.71 N-M @ 101.50 MS; -5.97 N-M @ 153.20 MS

040521

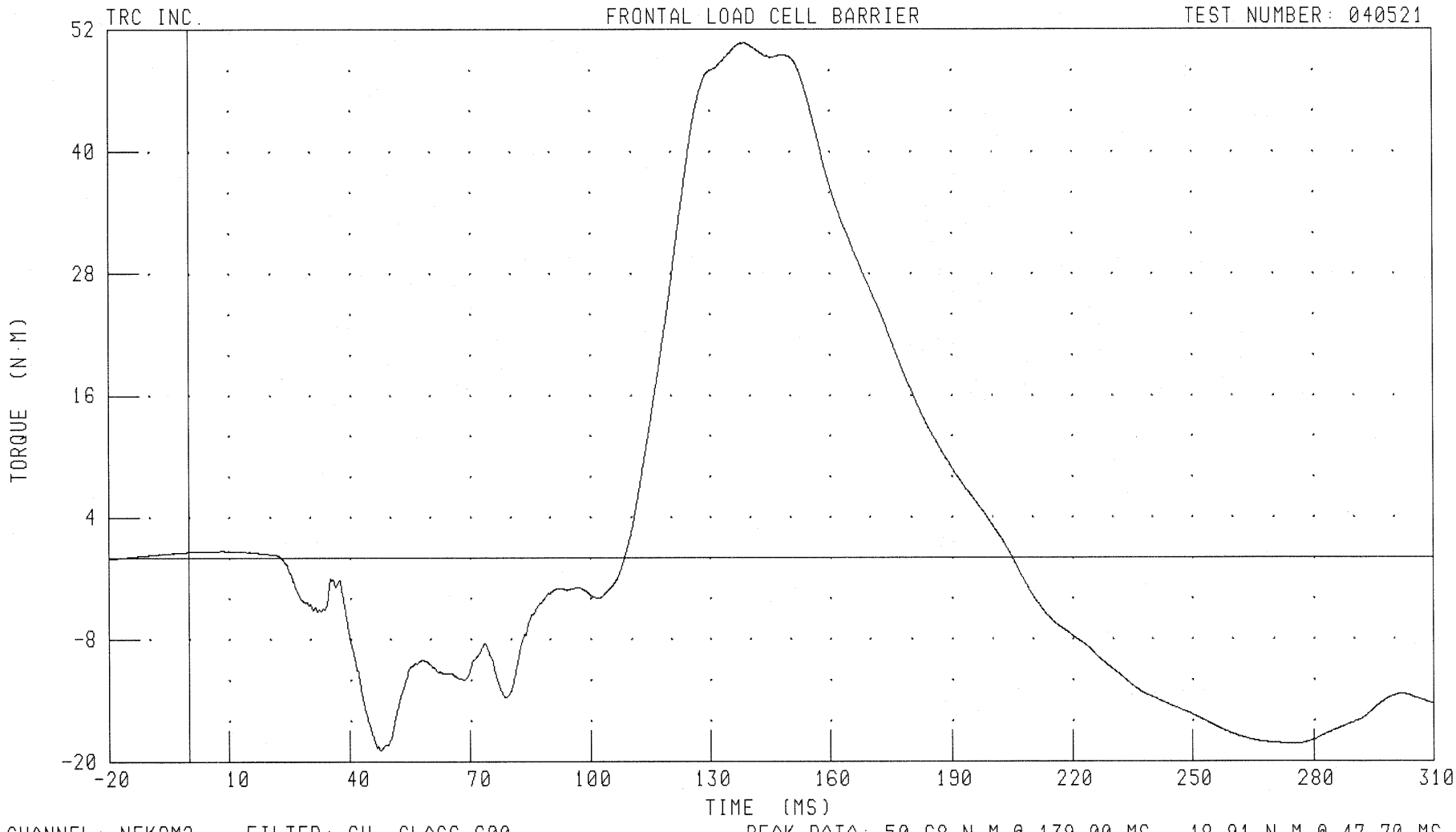
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK MOMENT RESULTANT



CHANNEL: NEKRM2 FILTER: CH. CLASS 600 PEAK DATA: 40.72 N·M @ 137.90 MS; 0.13 N·M @ -20.00 MS

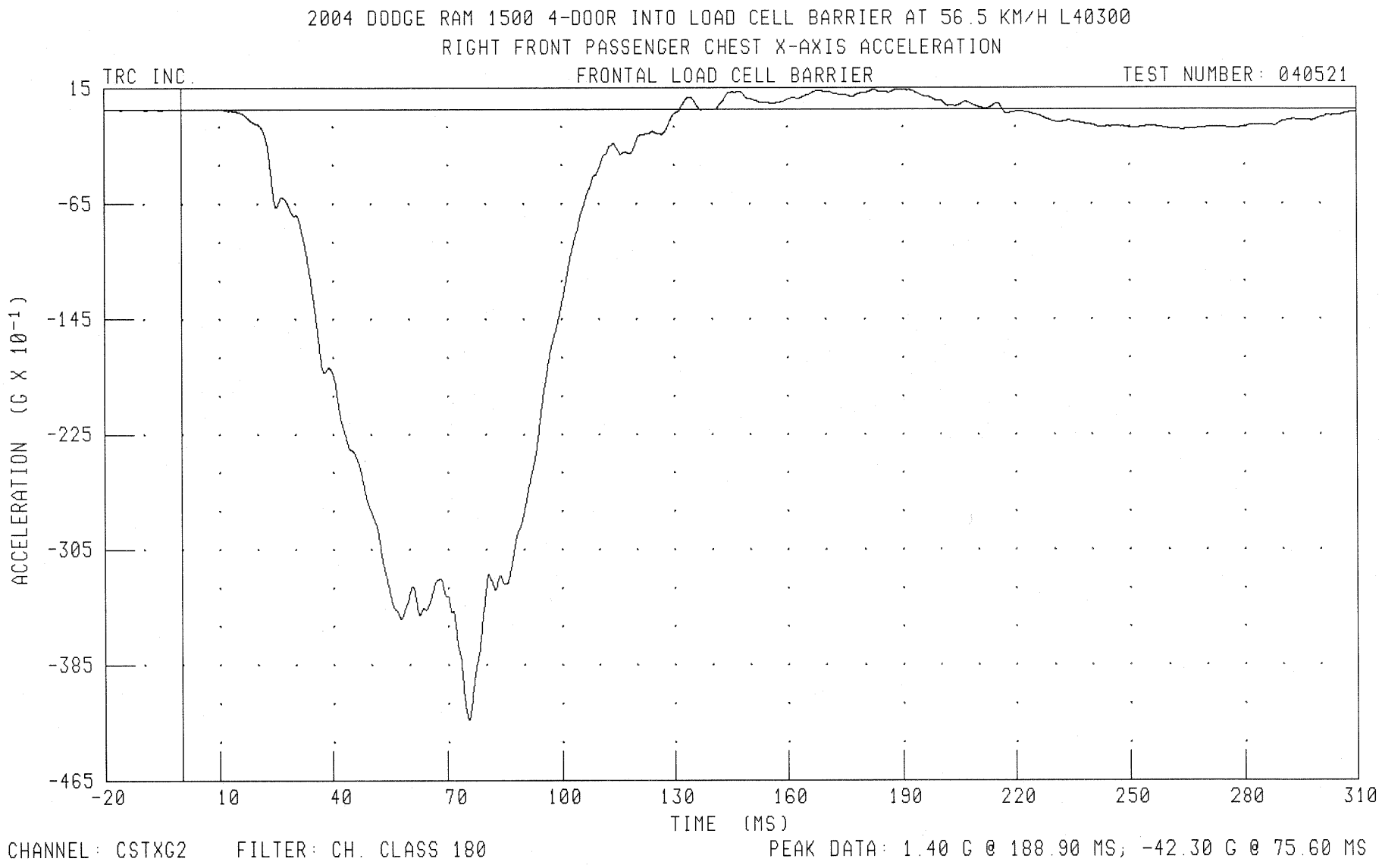
040521

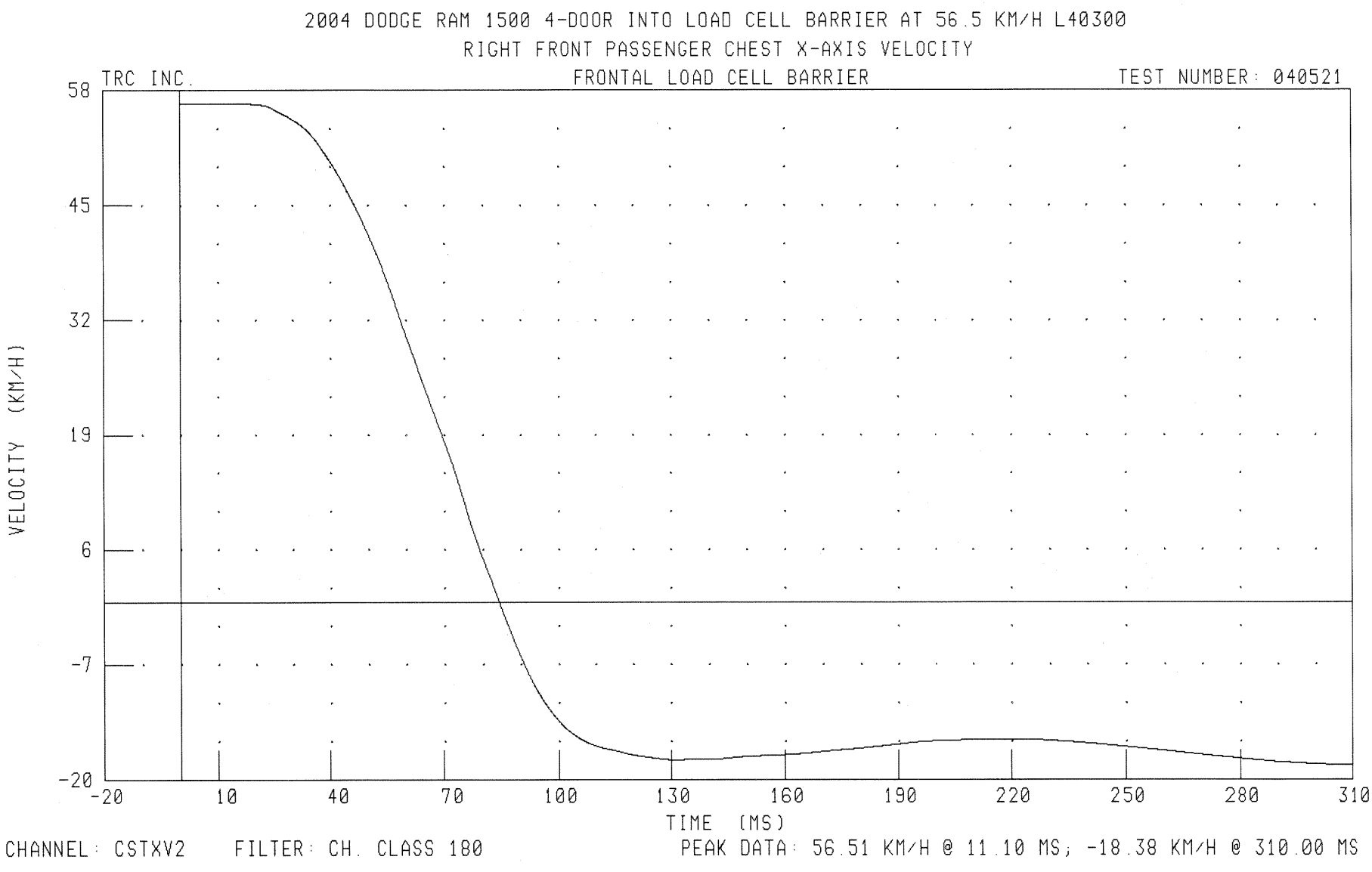
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER NECK MOMENT OCCIPITAL CONDYLE ABOUT Y AXIS

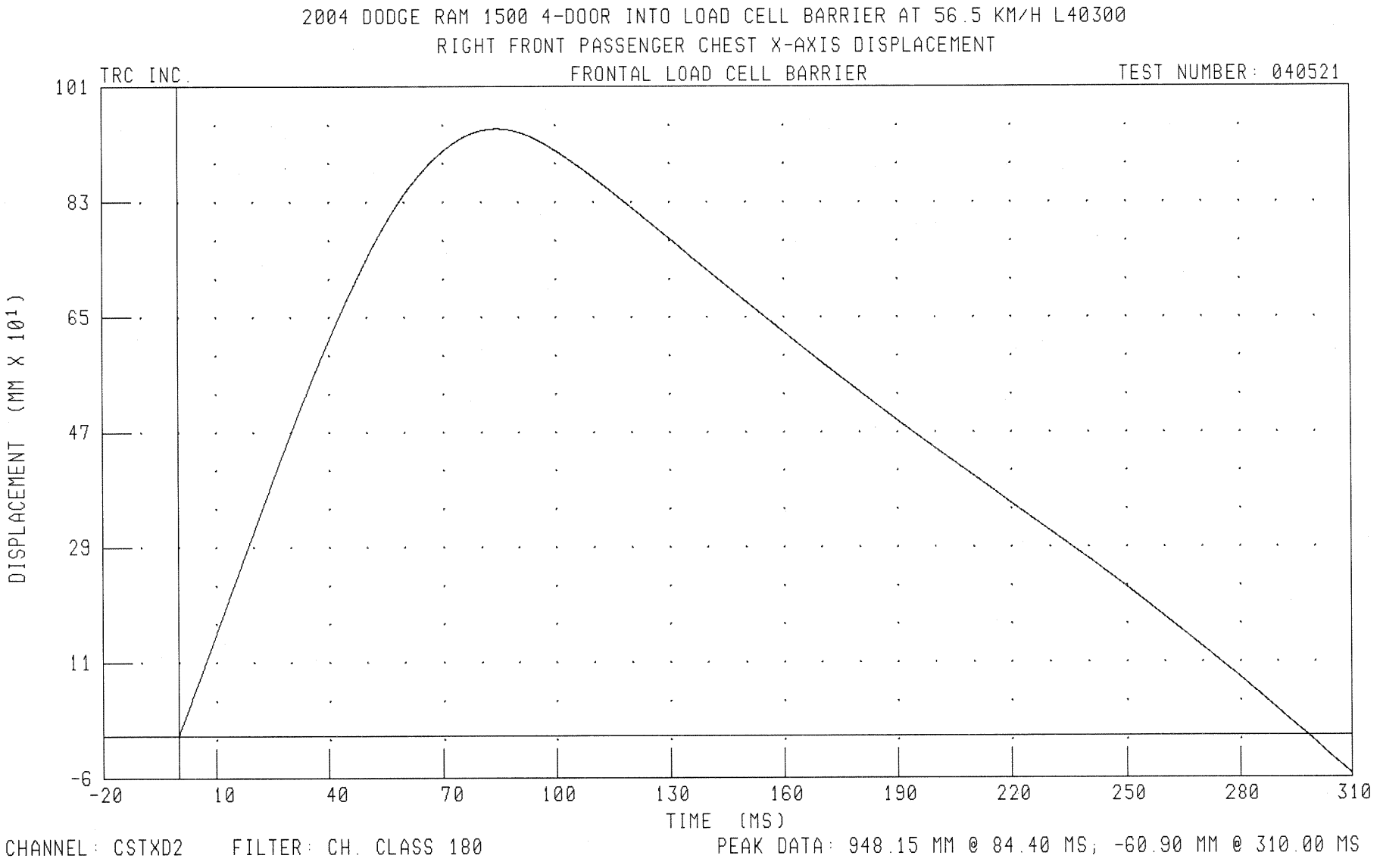


CHANNEL: NEKOM2 FILTER: CH. CLASS 600 PEAK DATA: 50.68 N-M @ 139.00 MS; -18.91 N-M @ 47.70 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
15
-65
-145
-225
-305
-385
-465
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXG2
FILTER: CH. CLASS 180
PEAK DATA: 1.40 G @ 188.90 MS; -42.30 G @ 75.60 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST X-AXIS VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
58
45
32
19
6
-7
-20
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXV2
FILTER: CH. CLASS 180
PEAK DATA: 56.51 KM/H @ 11.10 MS; -18.38 KM/H @ 310.00 MS

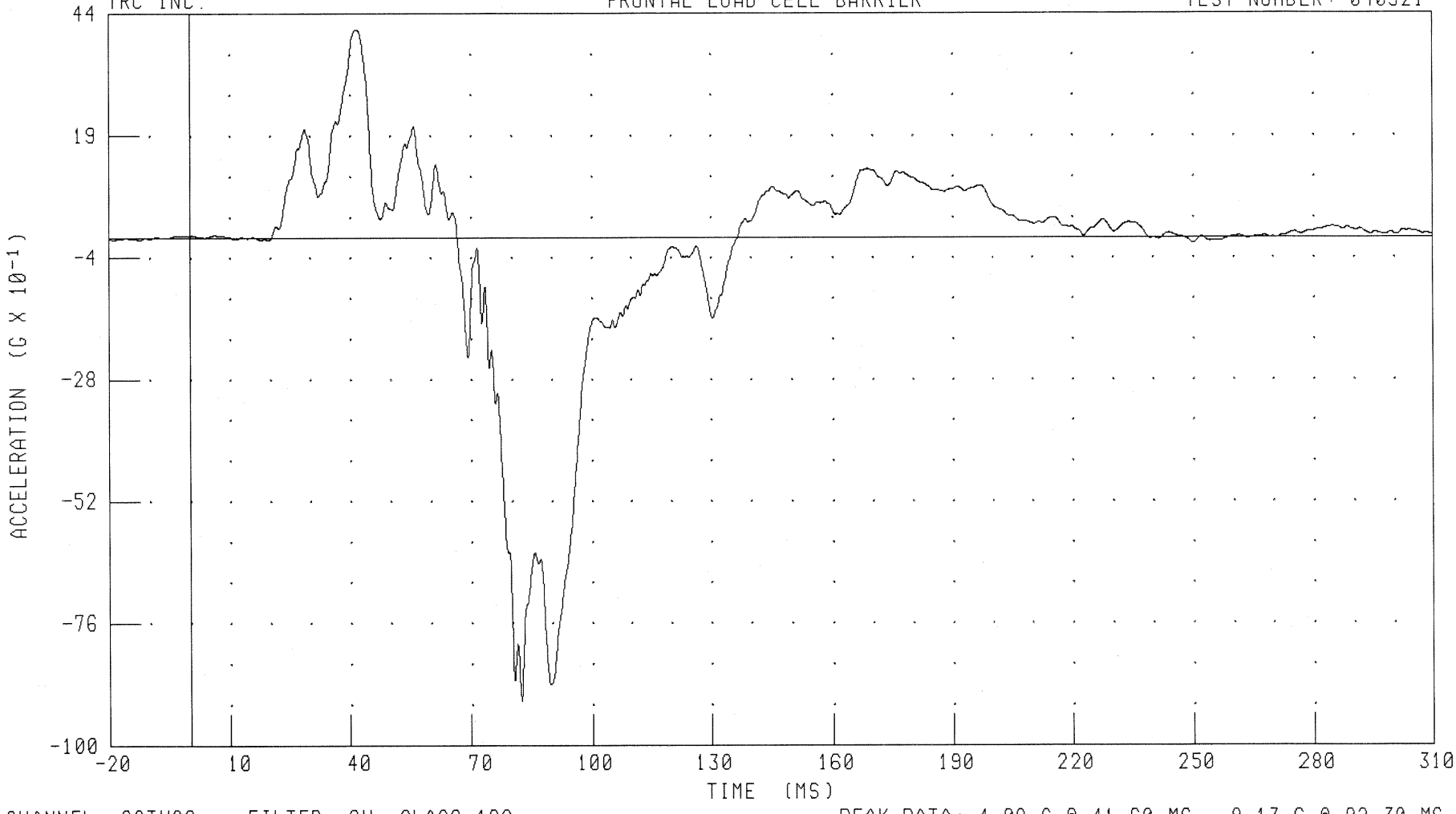

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
101
83
65
47
29
11
-6
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXD2
FILTER: CH. CLASS 180
PEAK DATA: 948.15 MM @ 84.40 MS; -60.90 MM @ 310.00 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT FRONT PASSENGER CHEST Y-AXIS ACCELERATION

TRC INC. FRONTAL LOAD CELL BARRIER TEST NUMBER: 040521



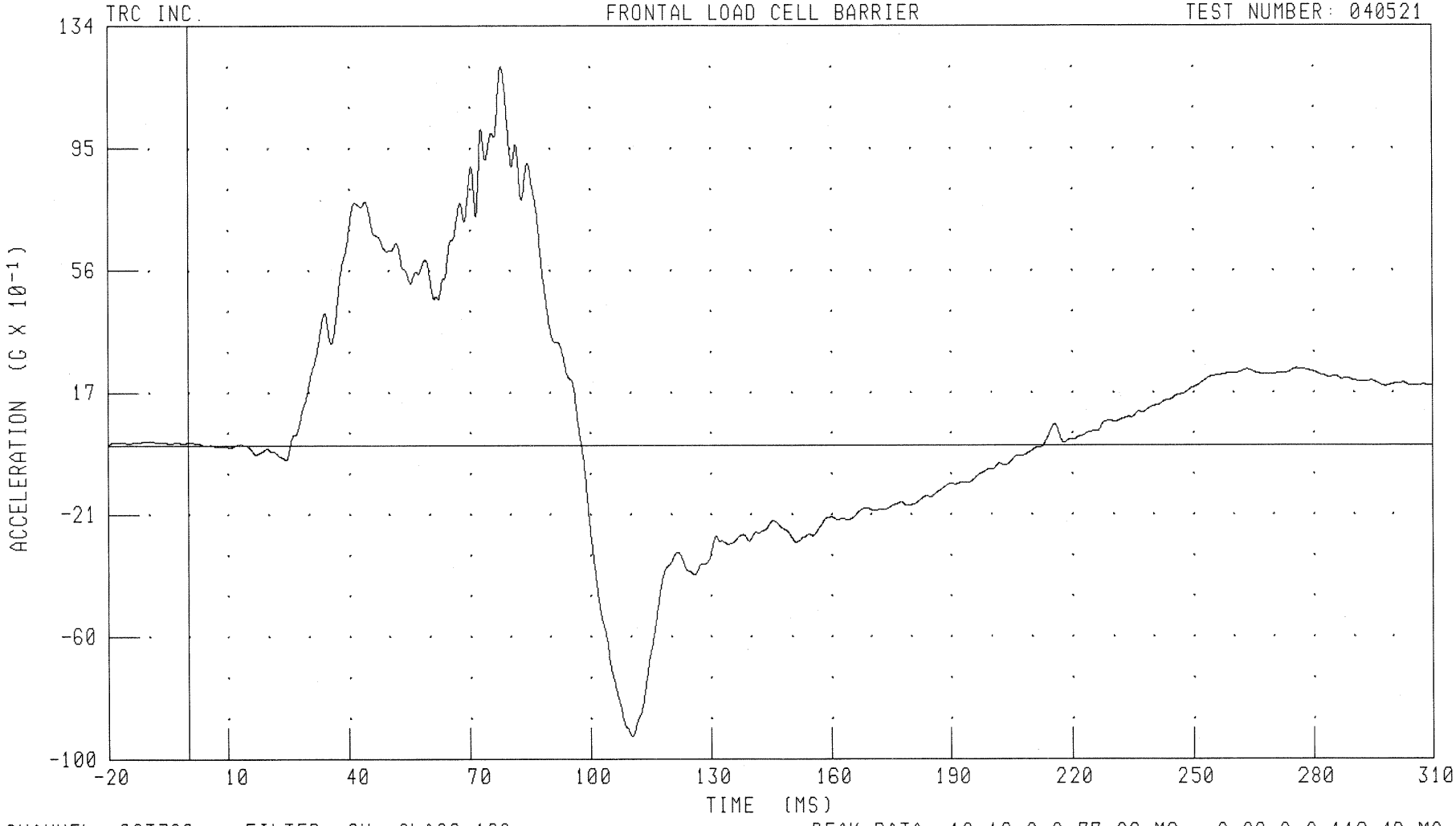
CHANNEL: CSTYG2 FILTER: CH. CLASS 180 PEAK DATA: 4.09 G @ 41.60 MS; -9.13 G @ 82.30 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT FRONT PASSENGER CHEST Z-AXIS ACCELERATION

TRC INC. FRONTAL LOAD CELL BARRIER TEST NUMBER: 040521

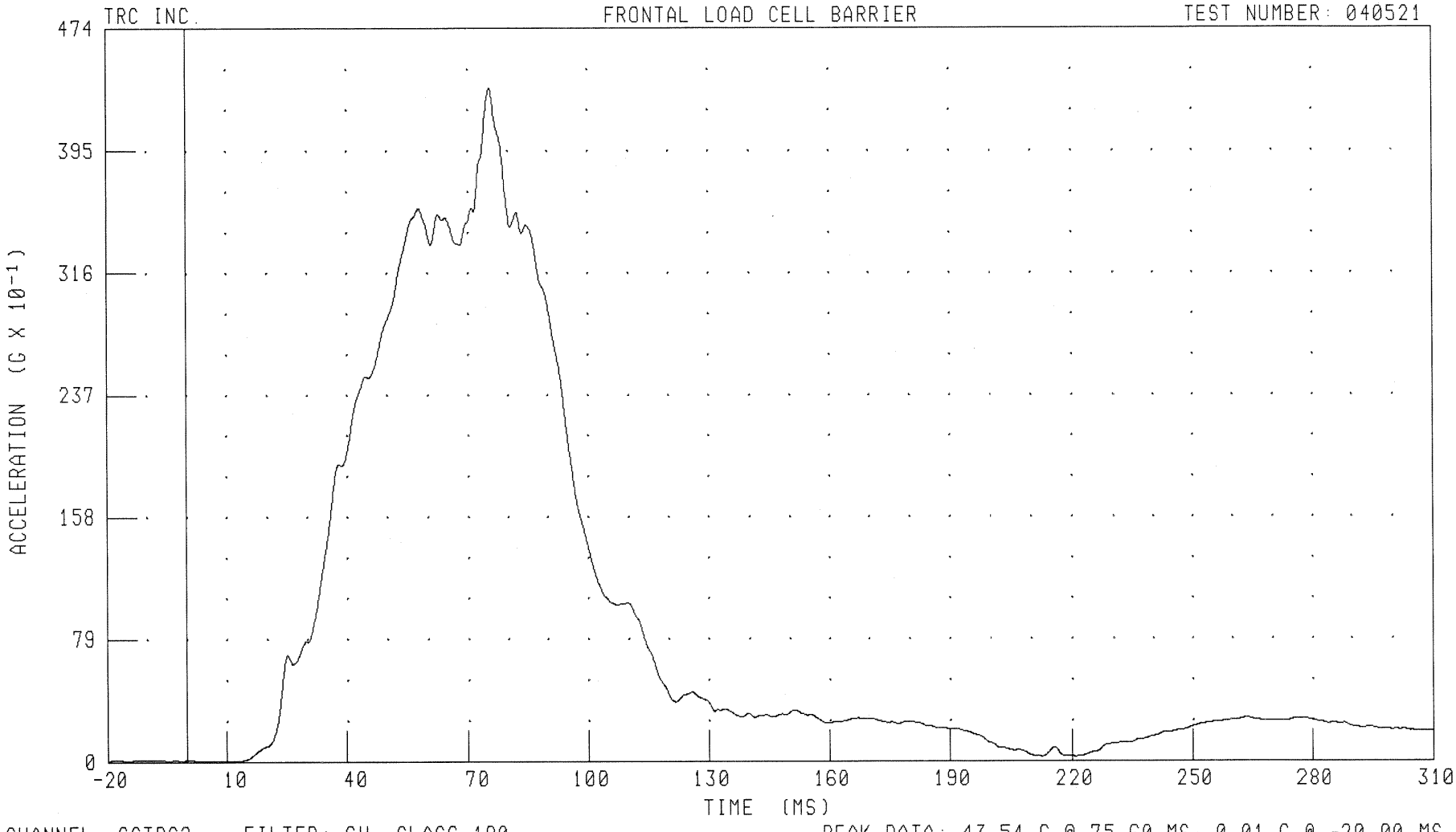


CHANNEL: CSTZG2 FILTER: CH. CLASS 180 PEAK DATA: 12.10 G @ 77.90 MS; -9.28 G @ 110.40 MS

040521

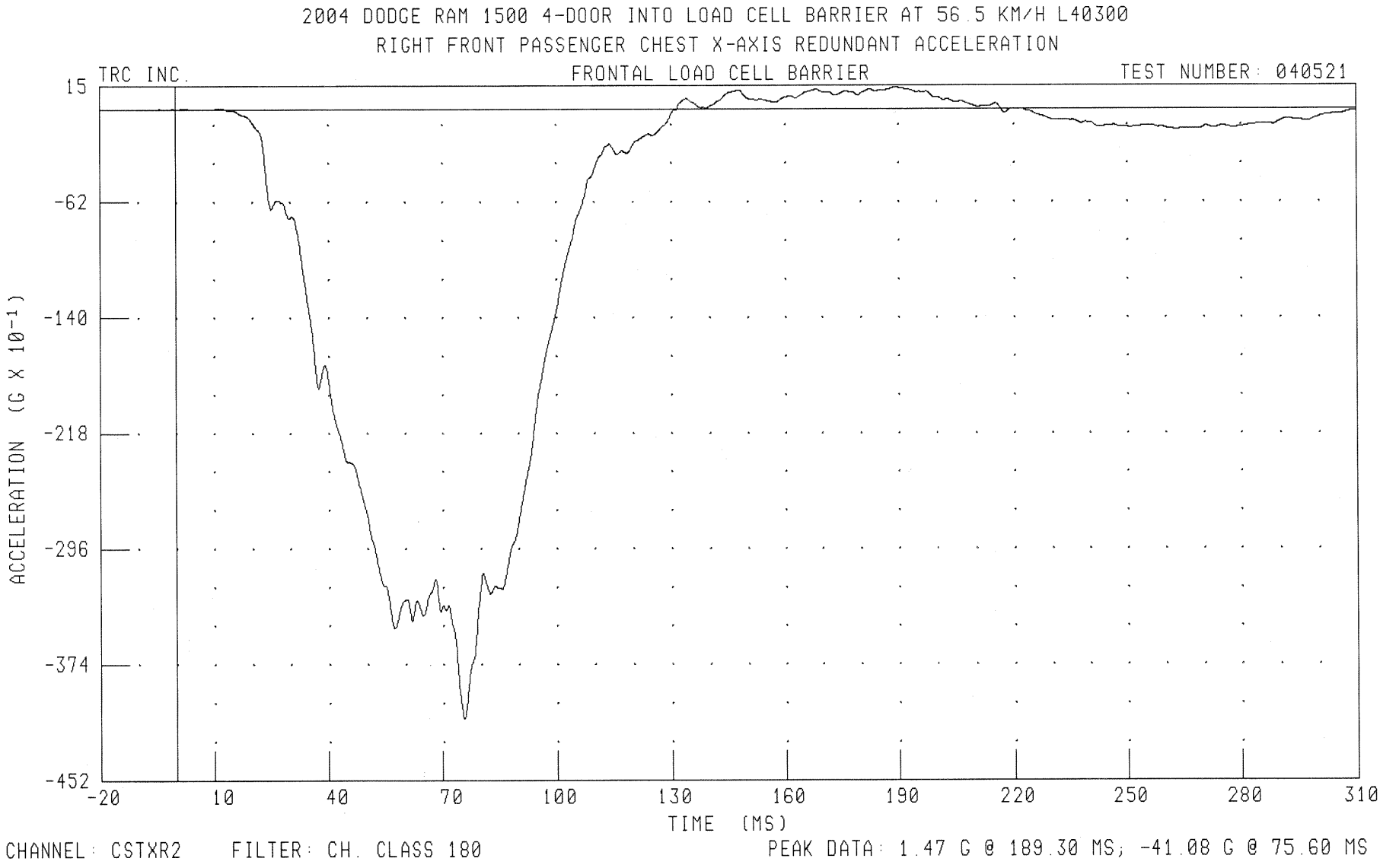
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT FRONT PASSENGER CHEST RESULTANT ACCELERATION

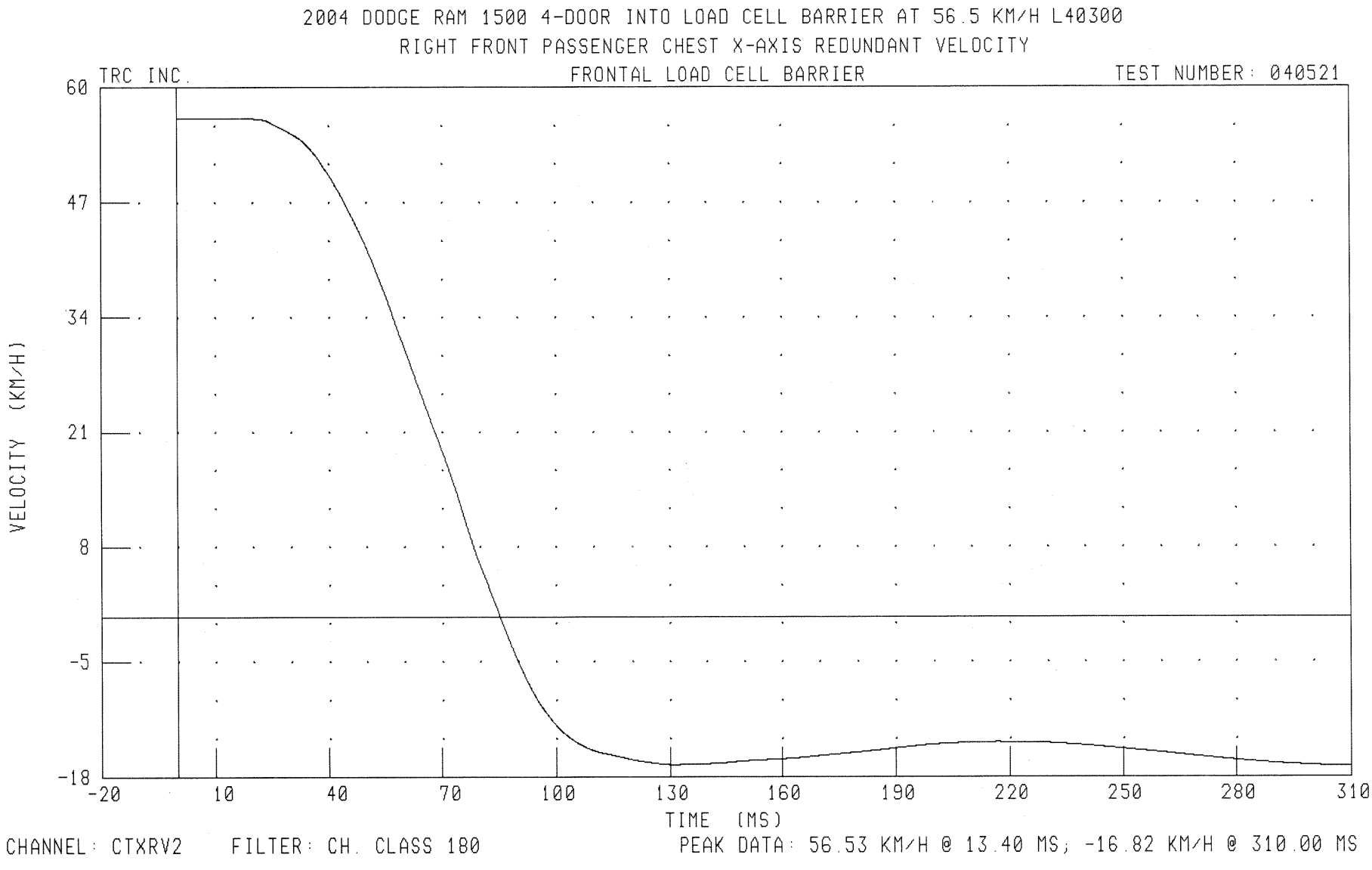


CHANNEL: CSTRG2 FILTER: CH. CLASS 180 PEAK DATA: 43.54 G @ 75.60 MS; 0.01 G @ -20.00 MS

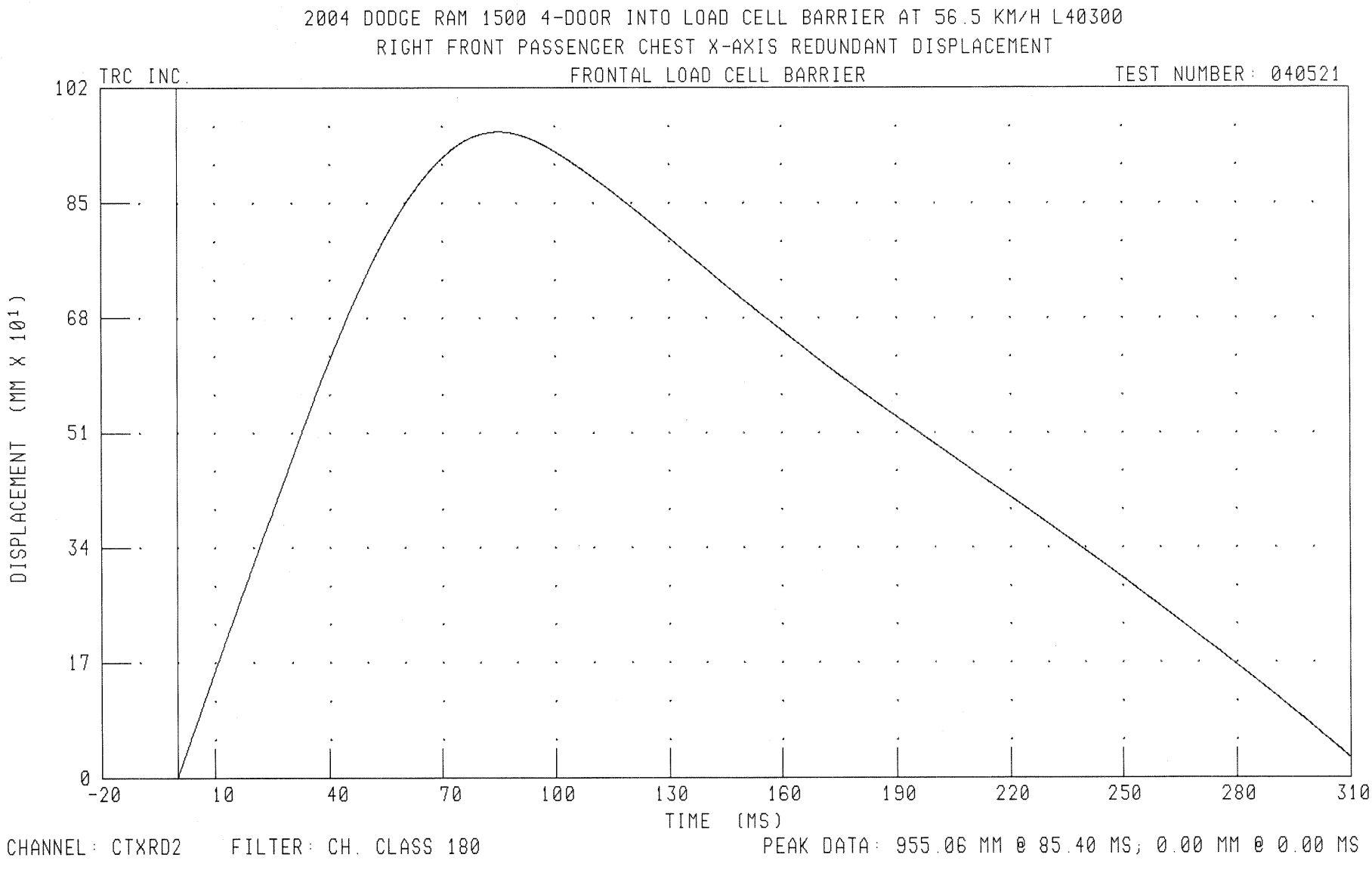
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST X-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
15
-62
-140
-218
-296
-374
-452
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXR2
FILTER: CH. CLASS 180
PEAK DATA: 1.47 G @ 189.30 MS; -41.08 G @ 75.60 MS

040521

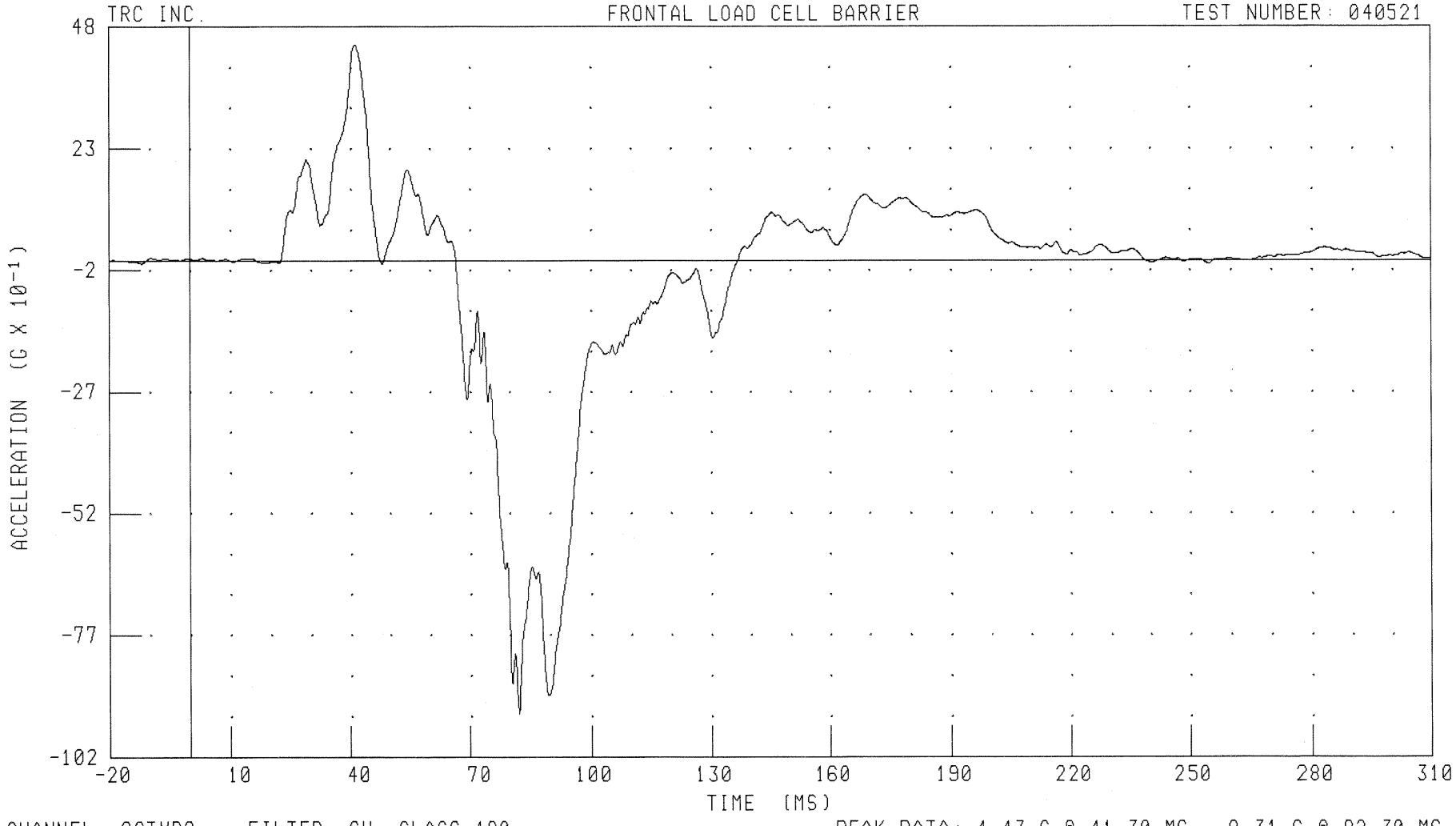

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST X-AXIS REDUNDANT VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
60
47
34
21
8
-5
-18
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CTXRV2
FILTER: CH. CLASS 180
PEAK DATA: 56.53 KM/H @ 13.40 MS; -16.82 KM/H @ 310.00 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST X-AXIS REDUNDANT DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
102
85
68
51
34
17
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CTXRD2
FILTER: CH. CLASS 180
PEAK DATA: 955.06 MM @ 85.40 MS; 0.00 MM @ 0.00 MS

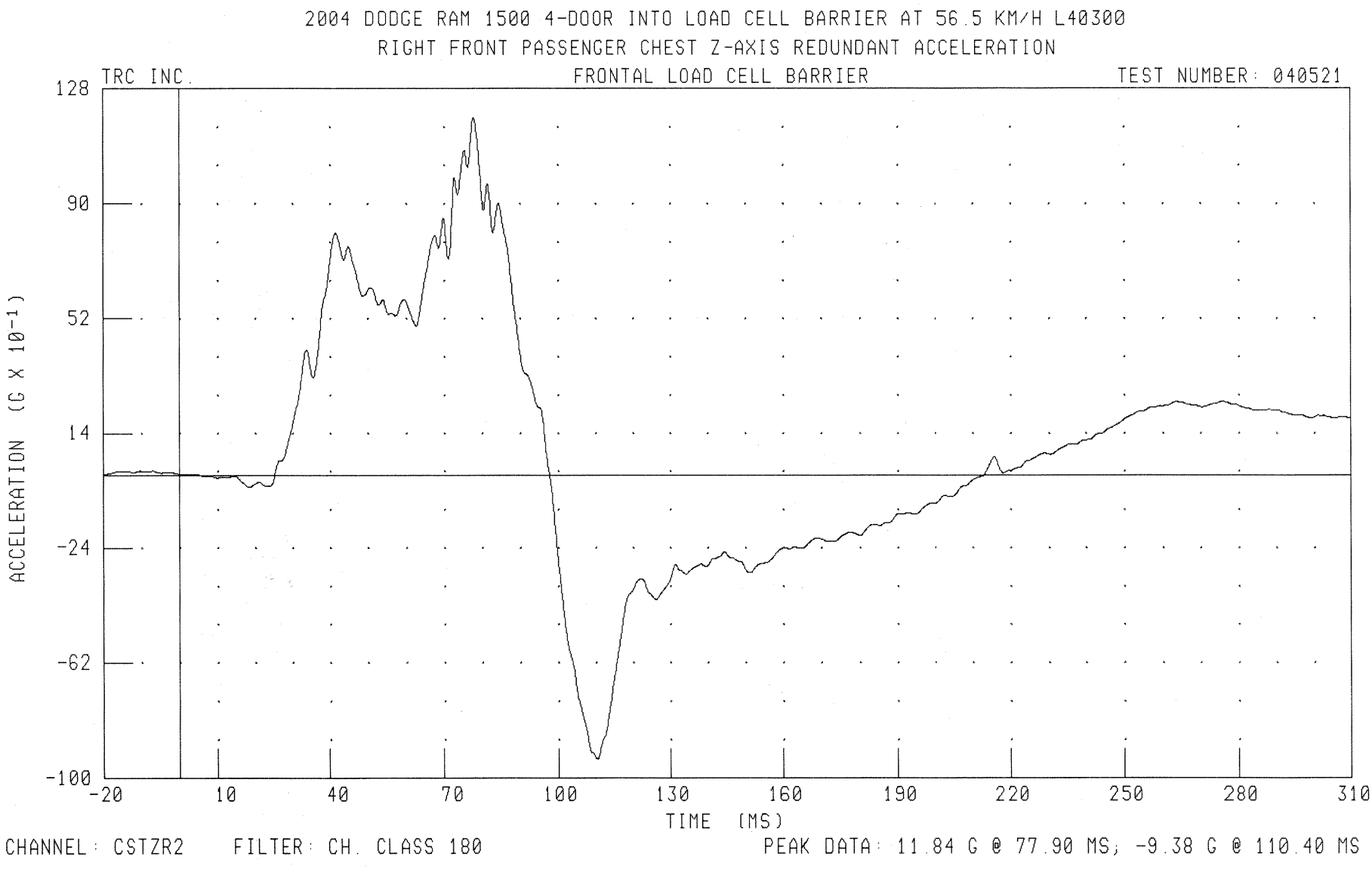
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST Y-AXIS REDUNDANT ACCELERATION

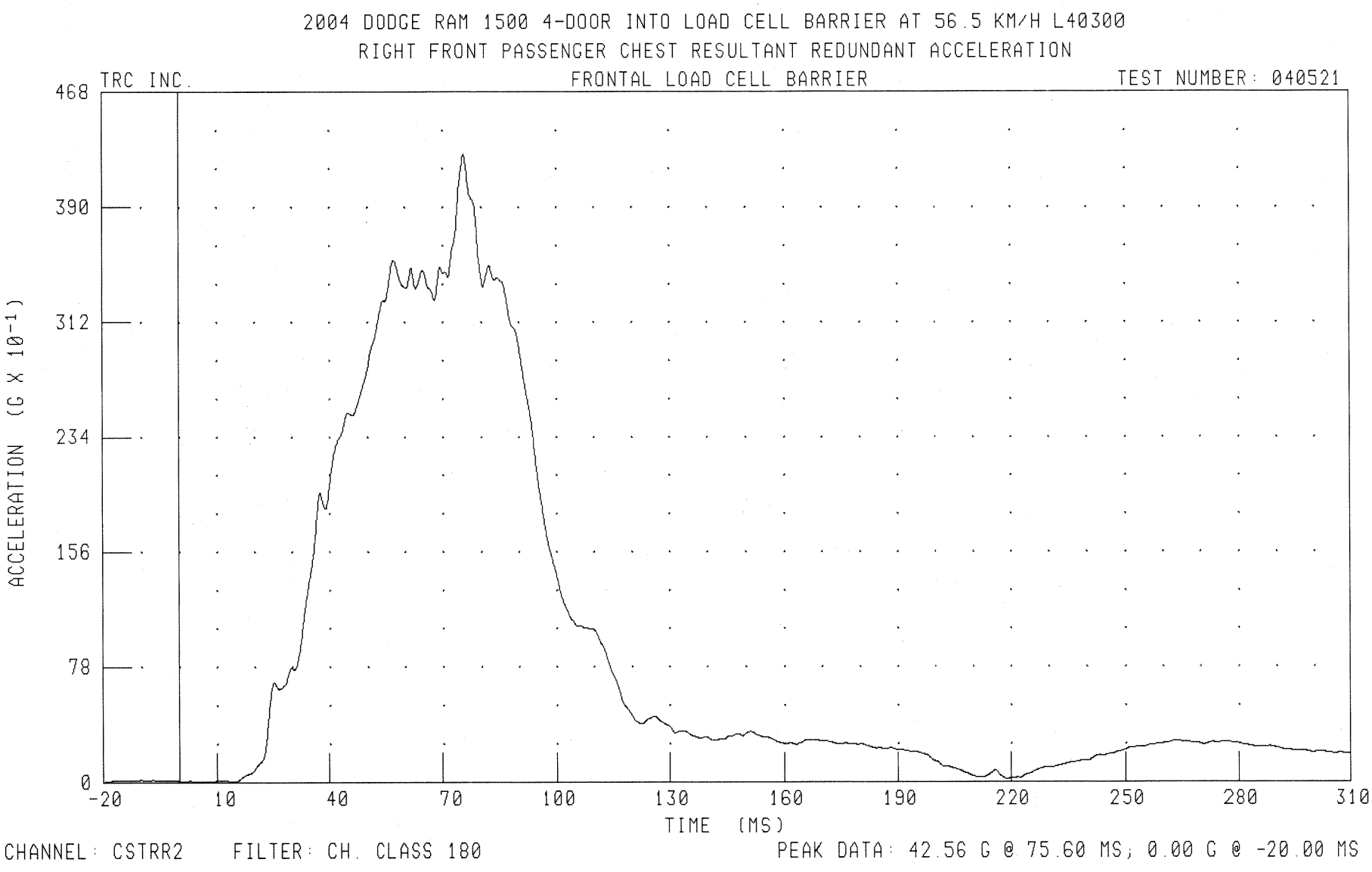


CHANNEL: CSTYR2 FILTER: CH. CLASS 180 PEAK DATA: 4.43 G @ 41.30 MS; -9.31 G @ 82.30 MS

040521

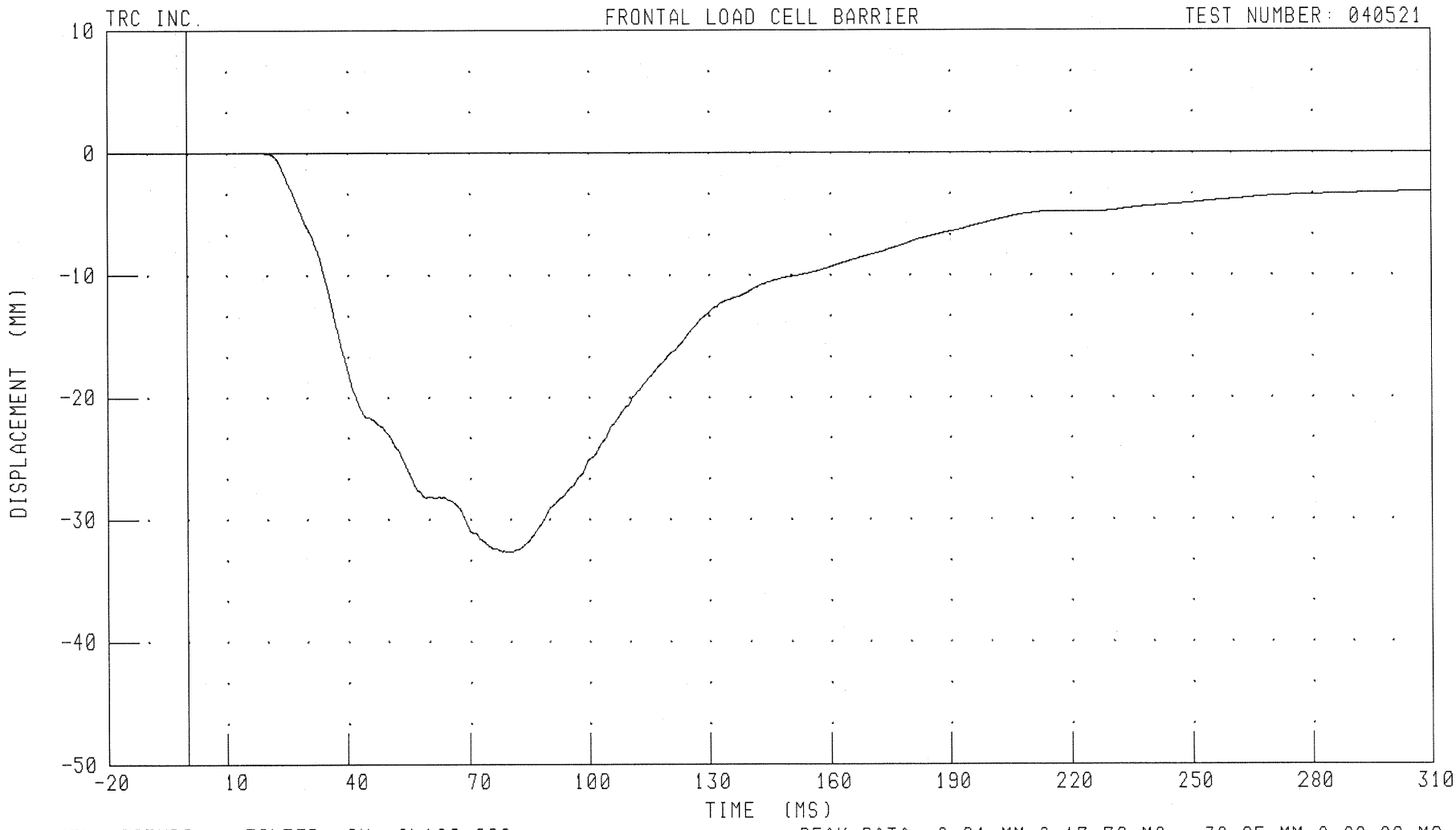

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST Z-AXIS REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
128
90
52
14
-24
-62
-100
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTZR2
FILTER: CH. CLASS 180
PEAK DATA: 11.84 G @ 77.90 MS; -9.38 G @ 110.40 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST RESULTANT REDUNDANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
468
390
312
234
156
78
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTRR2
FILTER: CH. CLASS 180
PEAK DATA: 42.56 G @ 75.60 MS; 0.00 G @ -20.00 MS

040521

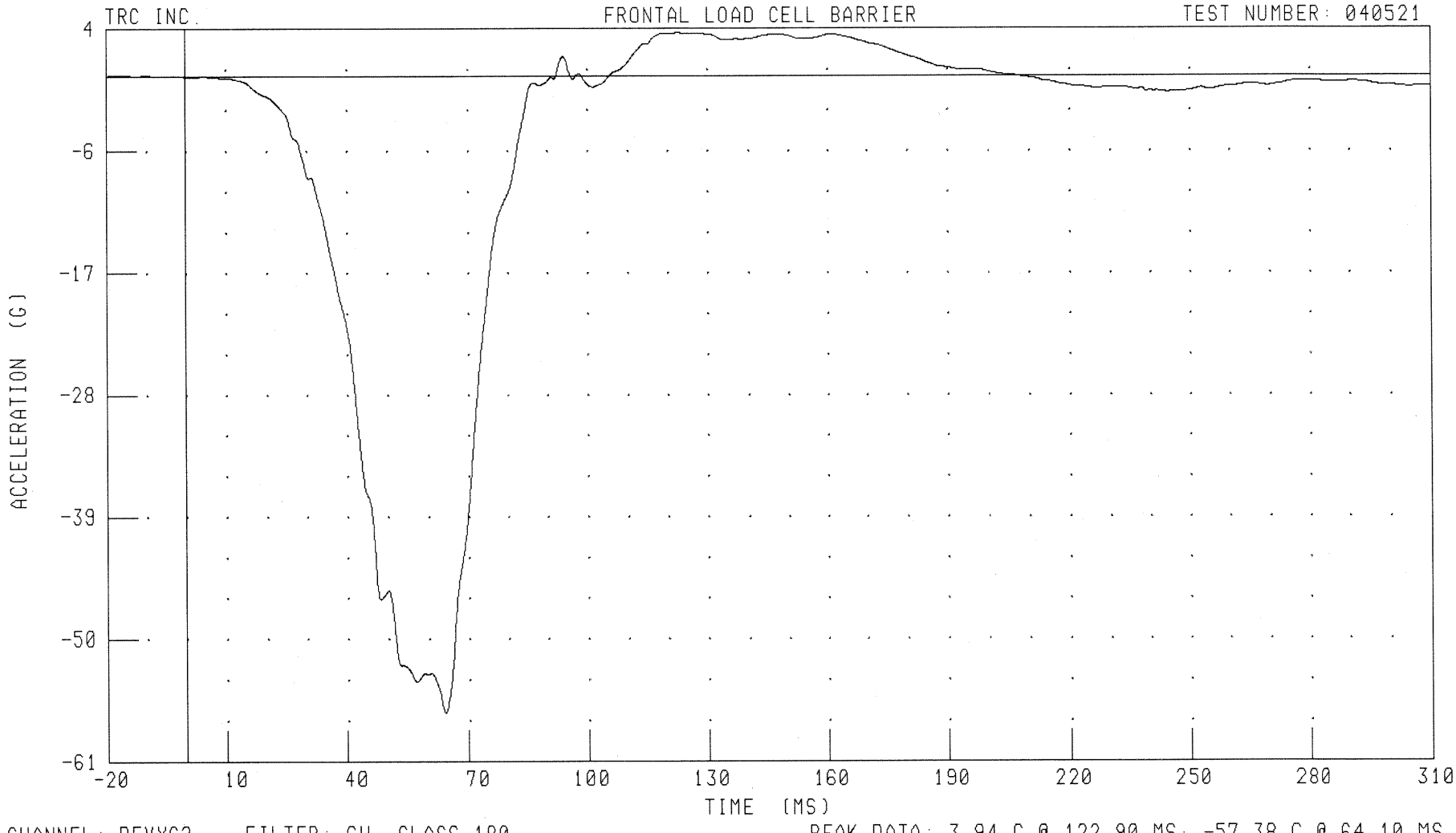
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER CHEST DEFLECTION



CHANNEL: CSTXD2 FILTER: CH. CLASS 600 PEAK DATA: 0.01 MM @ 17.70 MS; -32.65 MM @ 80.60 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER PELVIS X-AXIS ACCELERATION

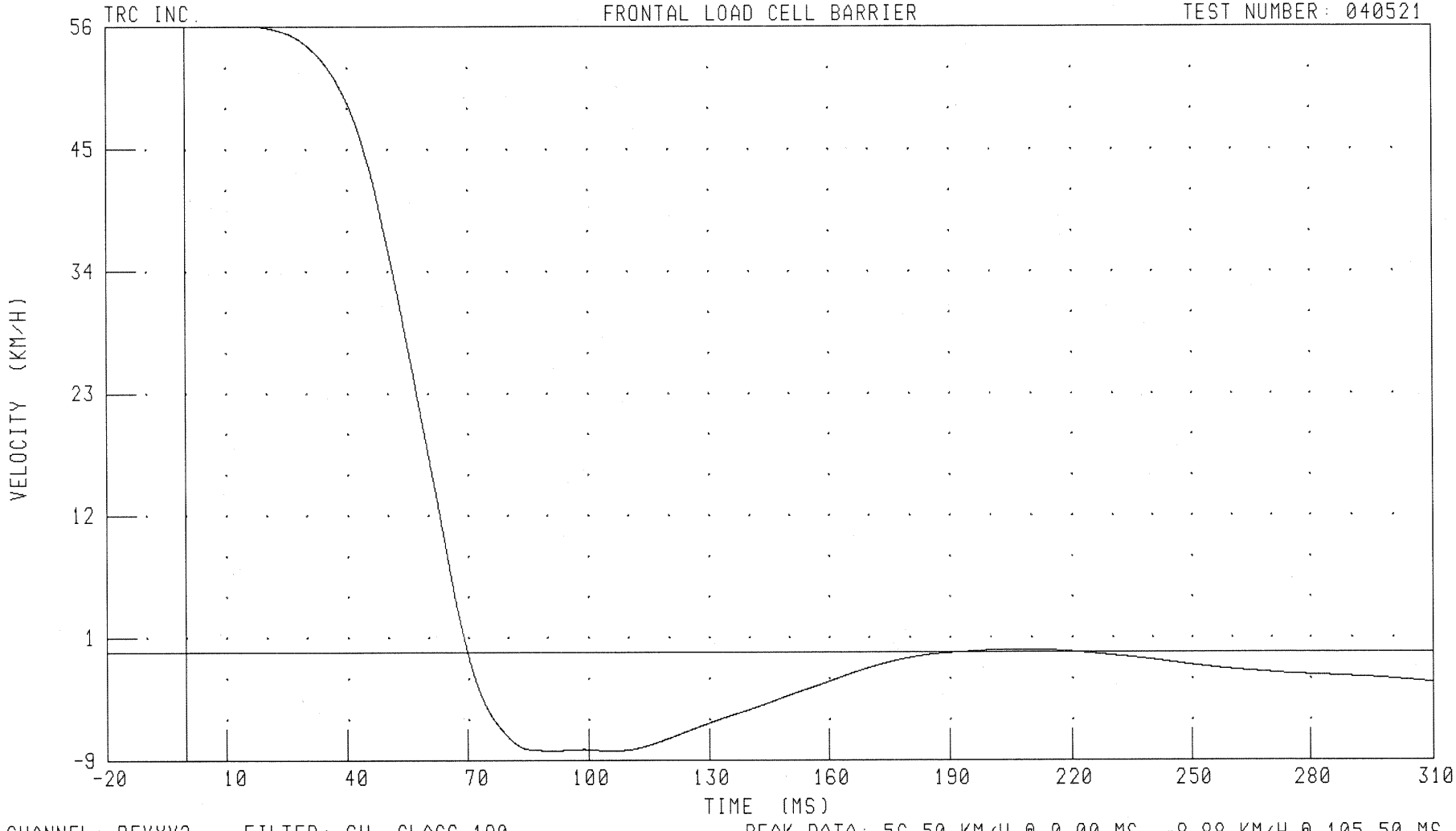


CHANNEL: PEVXG2 FILTER: CH. CLASS 180 PEAK DATA: 3.94 G @ 122.90 MS; -57.38 G @ 64.10 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT FRONT PASSENGER PELVIS X-AXIS VELOCITY

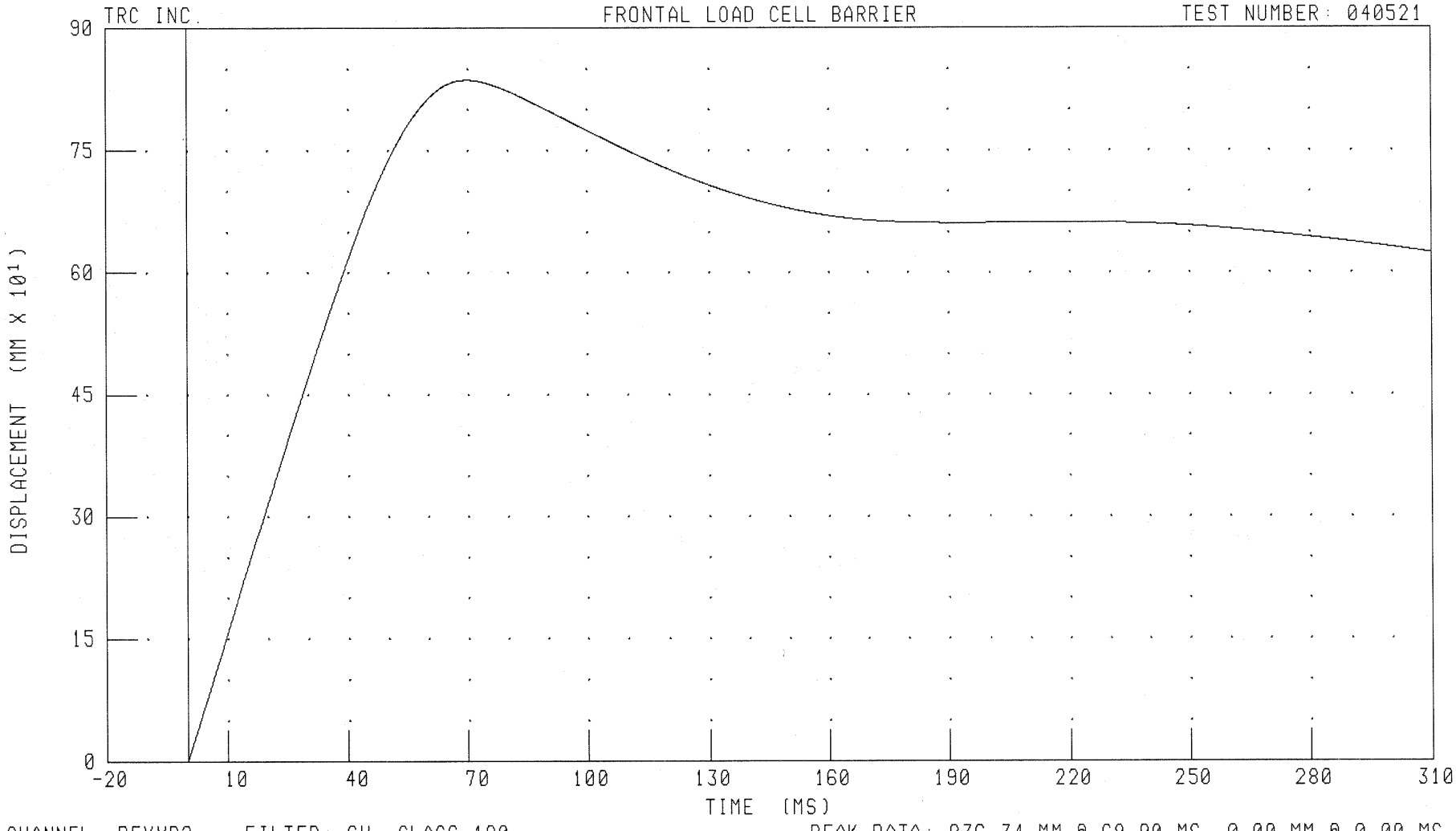


CHANNEL: PEVXV2 FILTER: CH. CLASS 180 PEAK DATA: 56.50 KM/H @ 0.00 MS; -8.88 KM/H @ 105.50 MS

040521

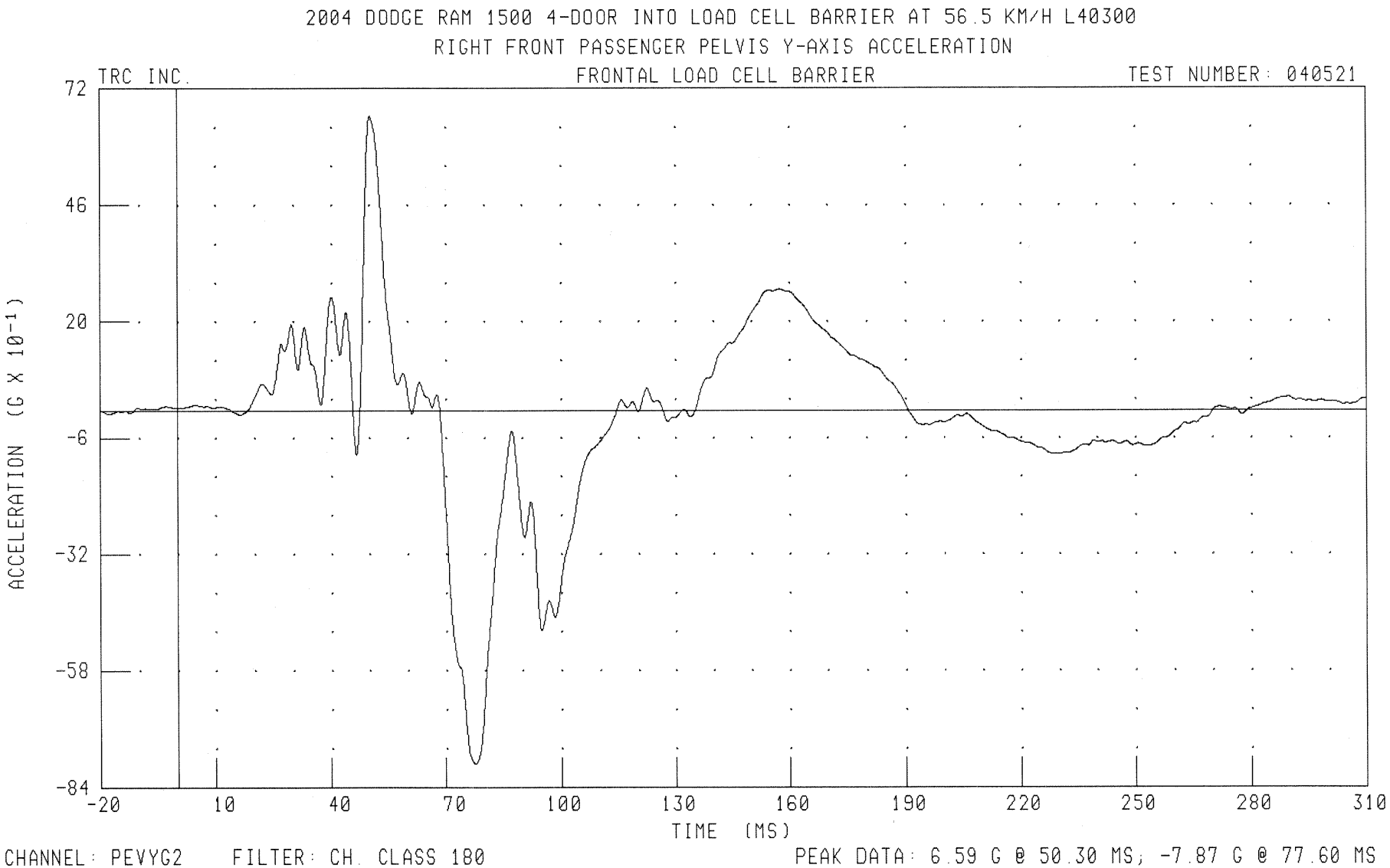
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT FRONT PASSENGER PELVIS X-AXIS DISPLACEMENT

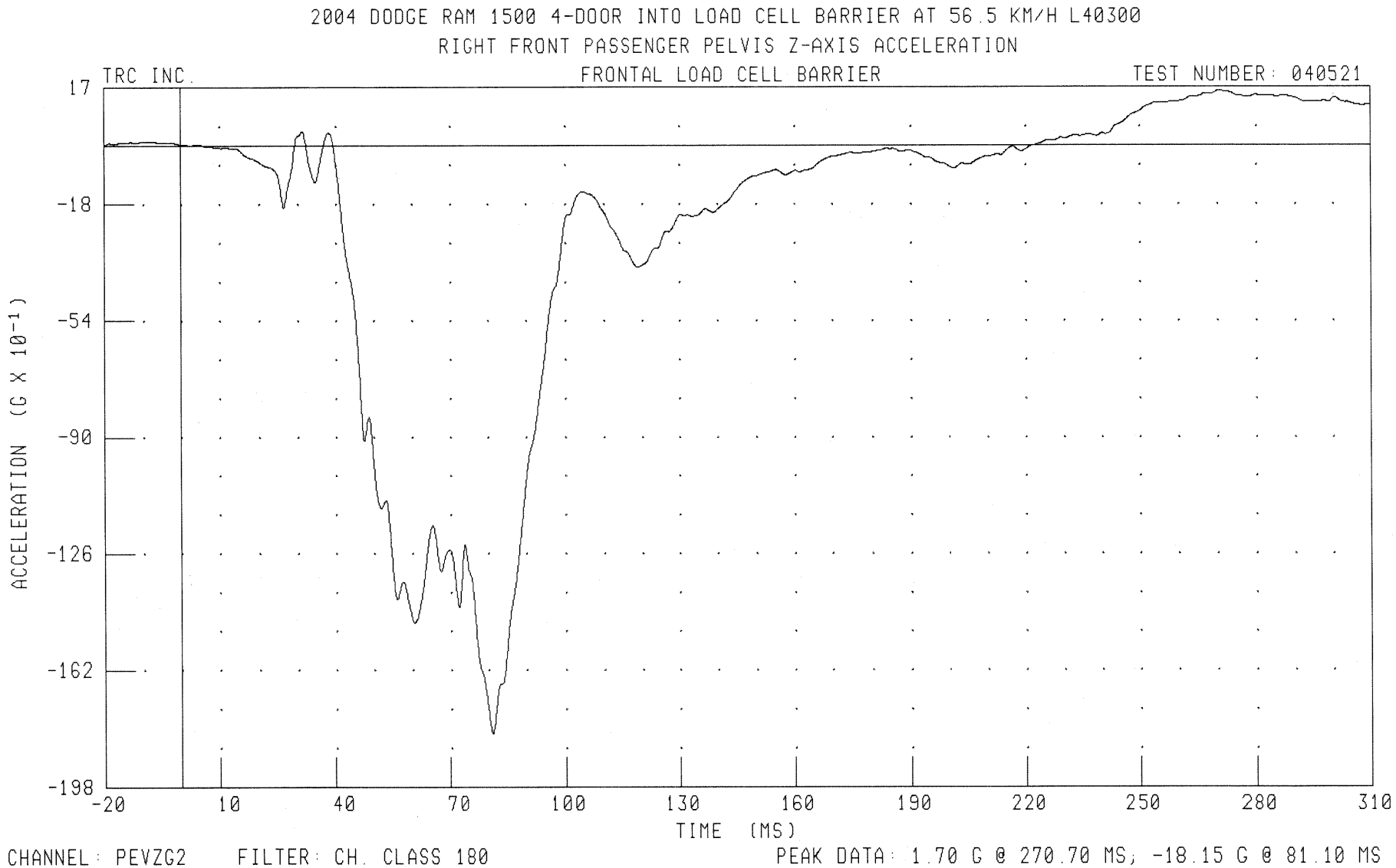


CHANNEL: PEVXD2 FILTER: CH. CLASS 180 PEAK DATA: 836.34 MM @ 69.90 MS; 0.00 MM @ 0.00 MS

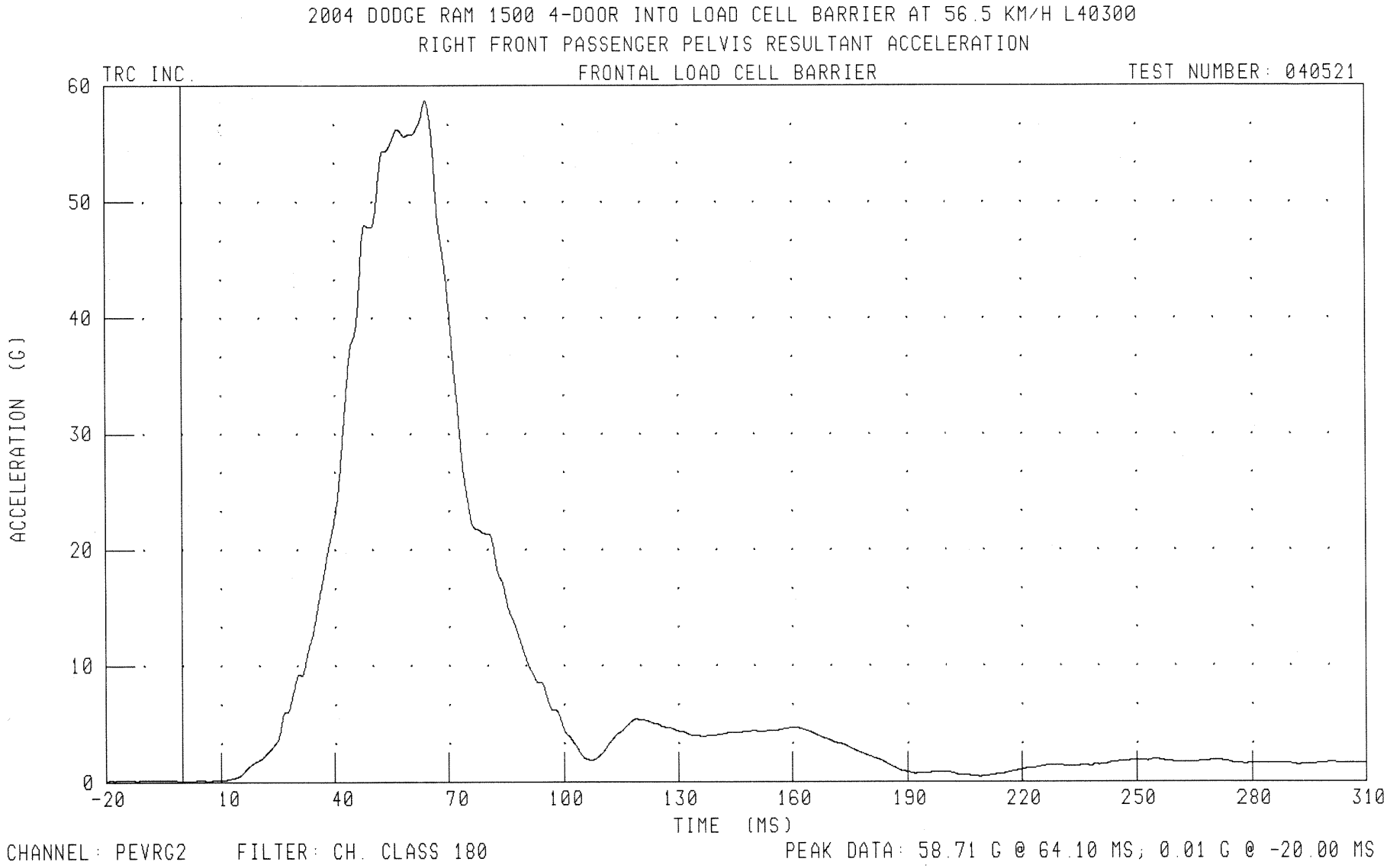
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER PELVIS Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
72
46
20
-6
-32
-58
-84
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVYG2
FILTER: CH. CLASS 180
PEAK DATA: 6.59 G @ 50.30 MS; -7.87 G @ 77.60 MS

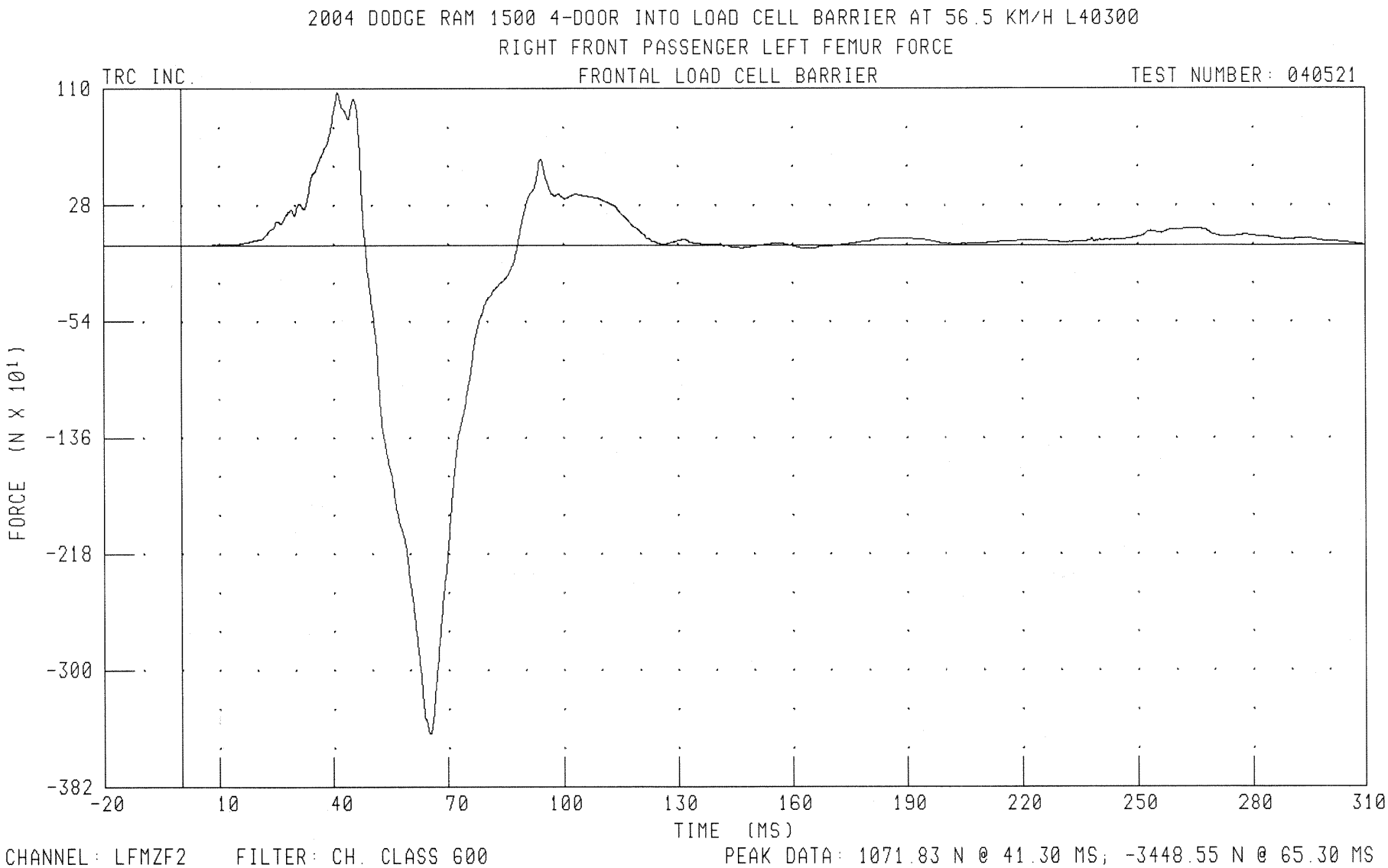
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER PELVIS Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
17
-18
-54
-90
-126
-162
-198
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVZG2
FILTER: CH. CLASS 180
PEAK DATA: 1.70 G @ 270.70 MS; -18.15 G @ 81.10 MS

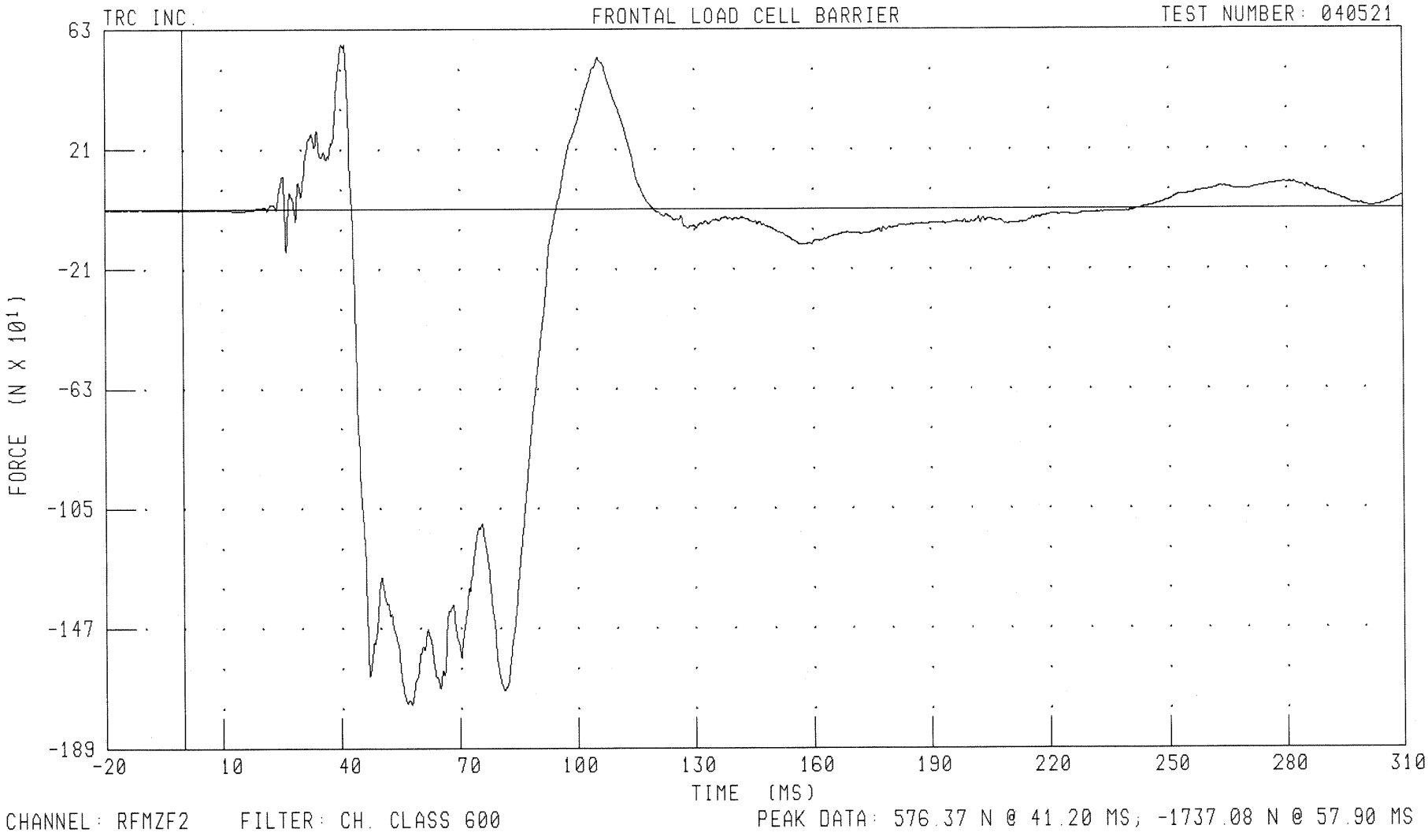
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER PELVIS RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G)
60
50
40
30
20
10
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVRG2
FILTER: CH. CLASS 180
PEAK DATA: 58.71 G @ 64.10 MS; 0.01 G @ -20.00 MS

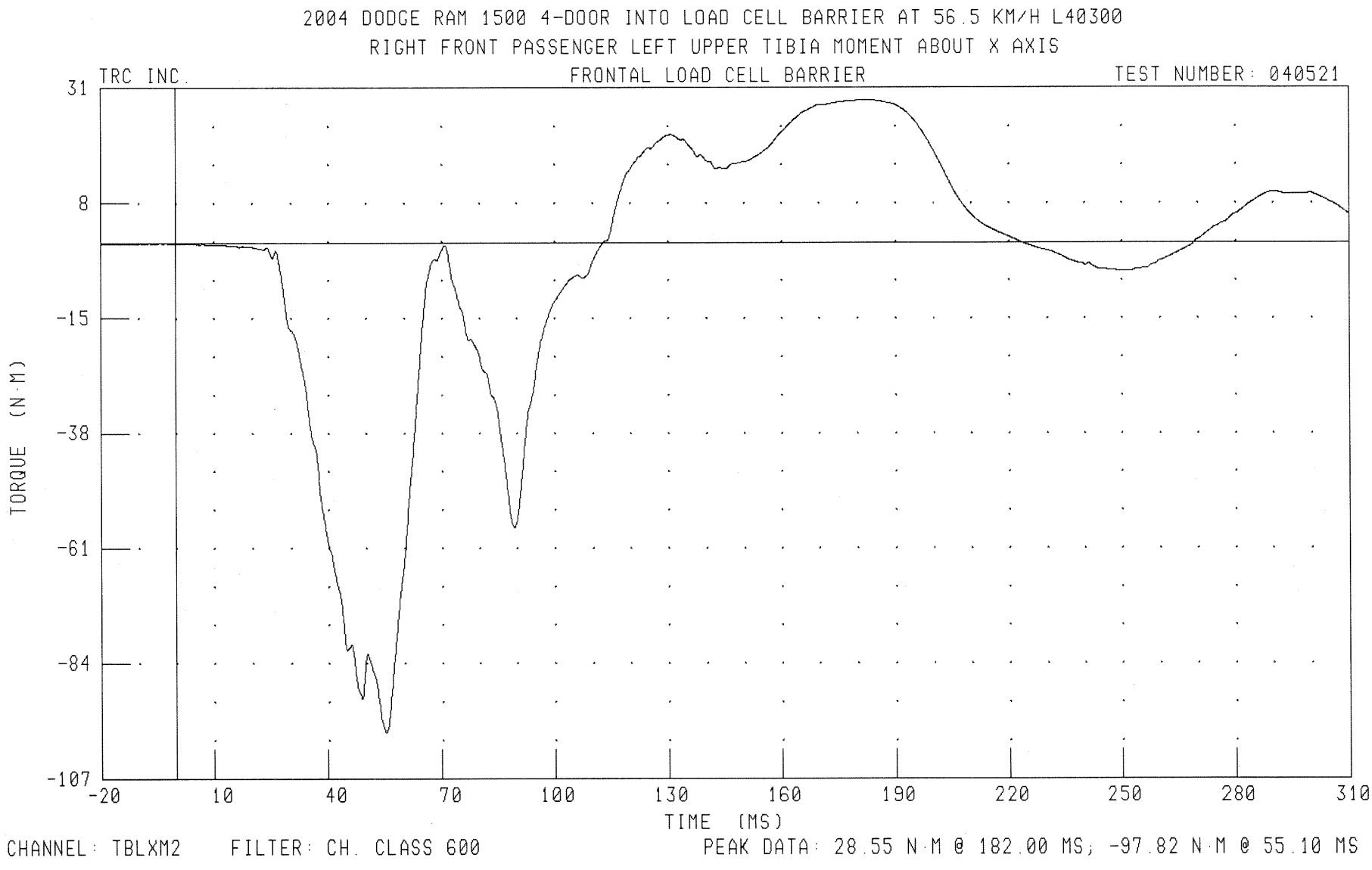
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT FEMUR FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
110
28
-54
-136
-218
-300
-382
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LFMZF2
FILTER: CH. CLASS 600
PEAK DATA: 1071.83 N @ 41.30 MS; -3448.55 N @ 65.30 MS

040521

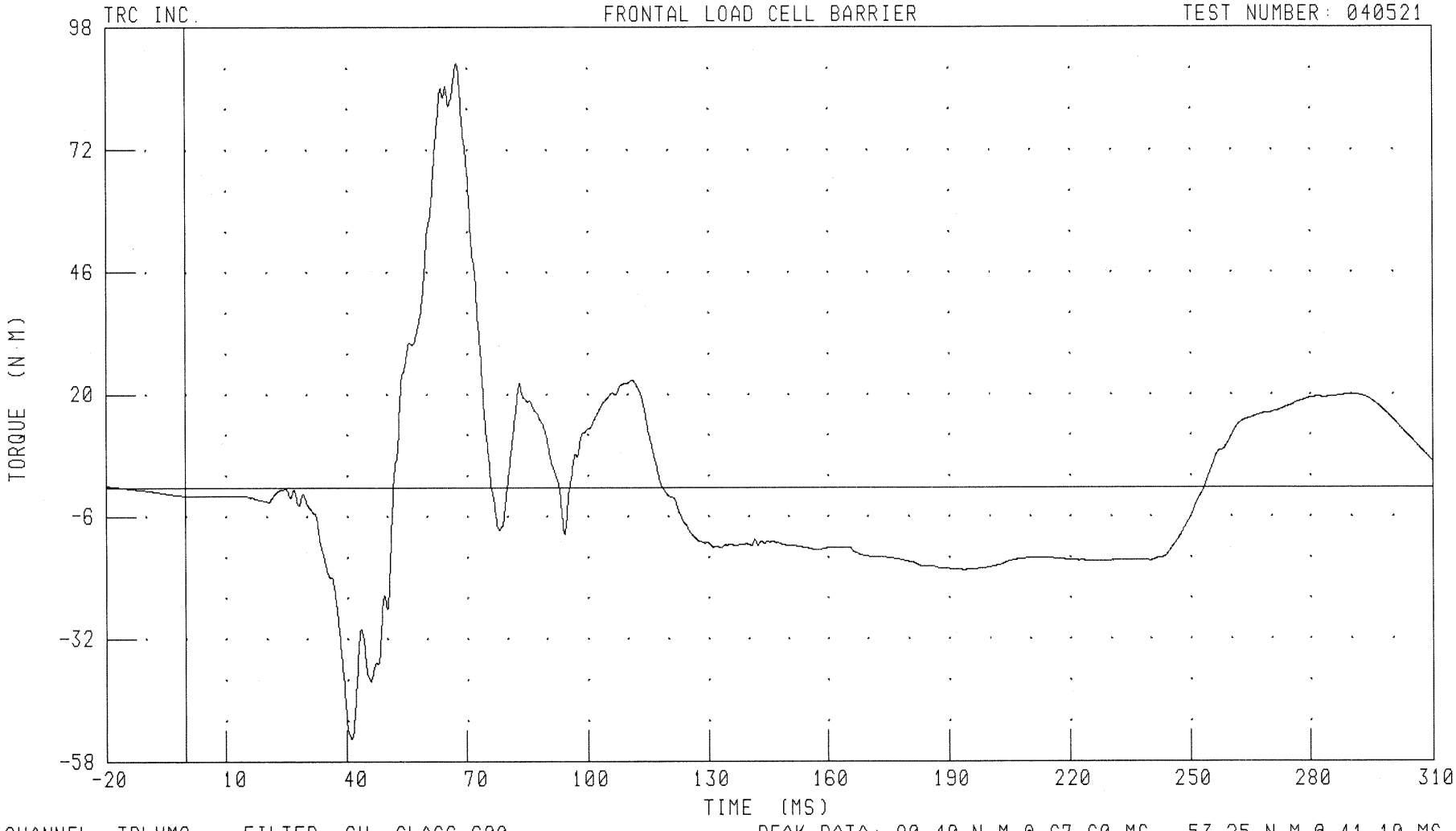

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT FEMUR FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
63
21
-21
-63
-105
-147
-189
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RFMZF2
FILTER: CH. CLASS 600
PEAK DATA: 576.37 N @ 41.20 MS; -1737.08 N @ 57.90 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT UPPER TIBIA MOMENT ABOUT X AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
31
8
-15
-38
-61
-84
-107
TORQUE (N-M)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: TBLXM2
FILTER: CH. CLASS 600
PEAK DATA: 28.55 N-M @ 182.00 MS; -97.82 N-M @ 55.10 MS

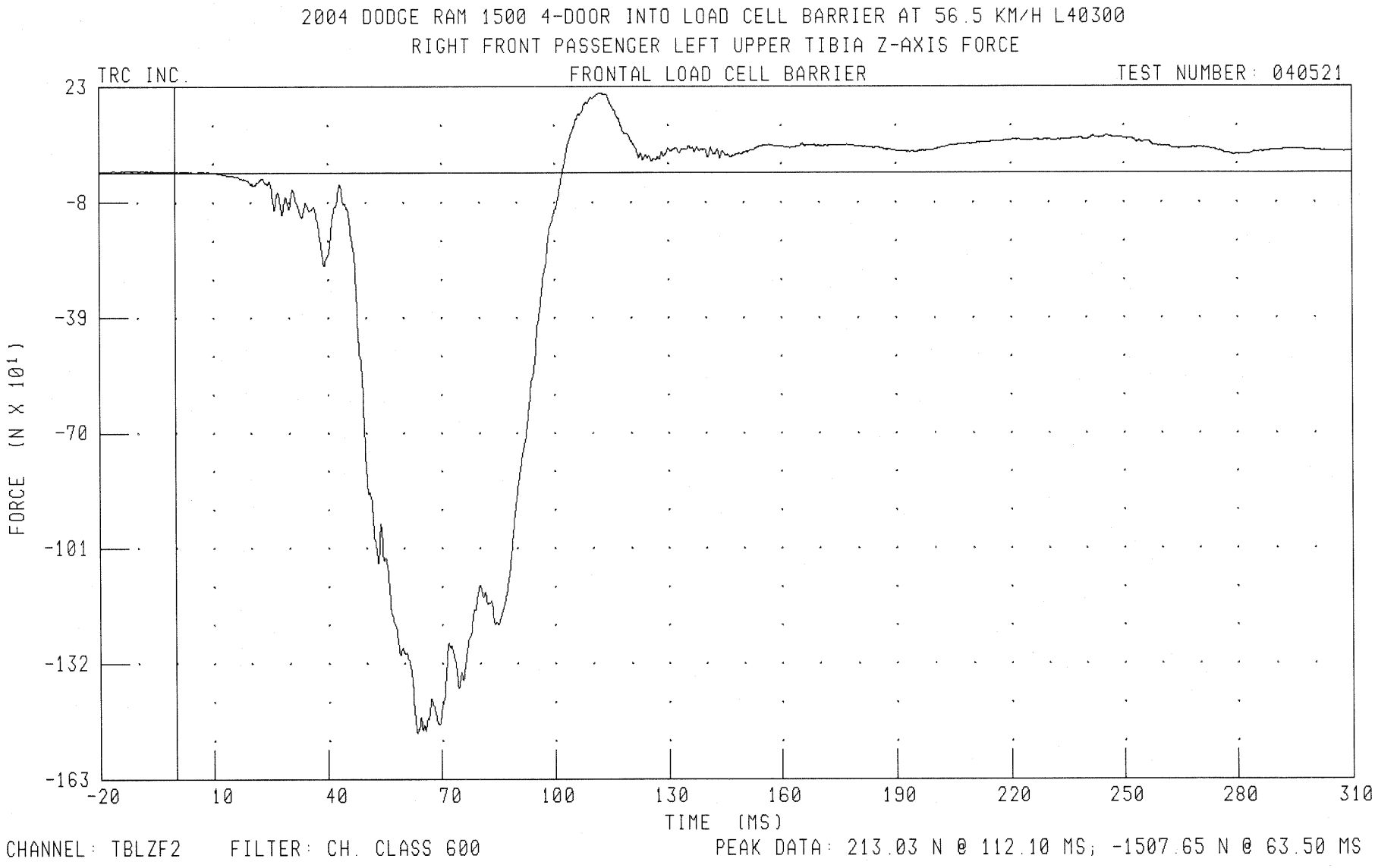
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT UPPER TIBIA MOMENT ABOUT Y AXIS



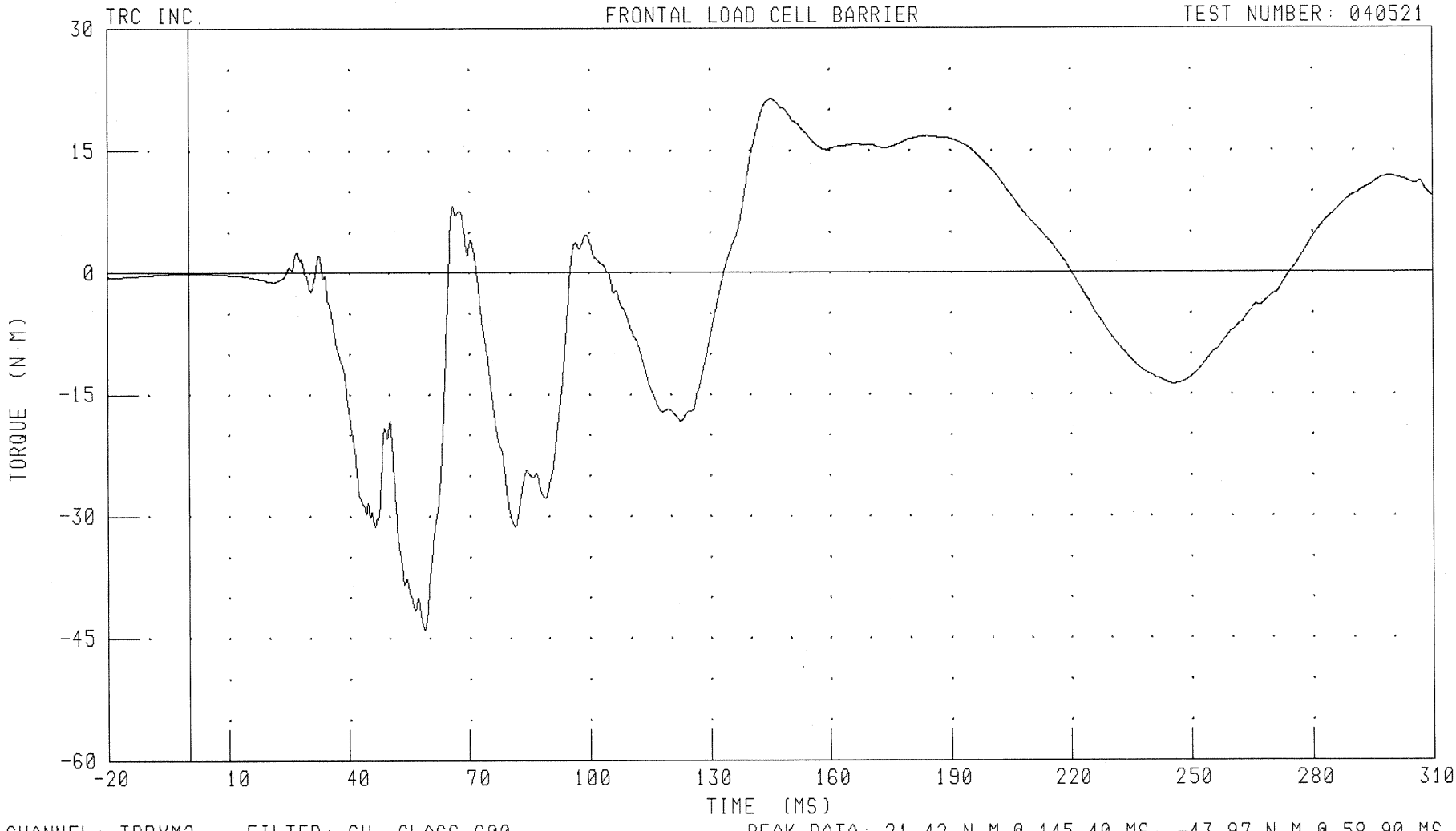
CHANNEL: TBLYM2 FILTER: CH. CLASS 600 PEAK DATA: 90.40 N-M @ 67.60 MS; -53.25 N-M @ 41.10 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT UPPER TIBIA Z-AXIS FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
23
-8
-39
-70
-101
-132
-163
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: TBLZF2
FILTER: CH. CLASS 600
PEAK DATA: 213.03 N @ 112.10 MS; -1507.65 N @ 63.50 MS

040521

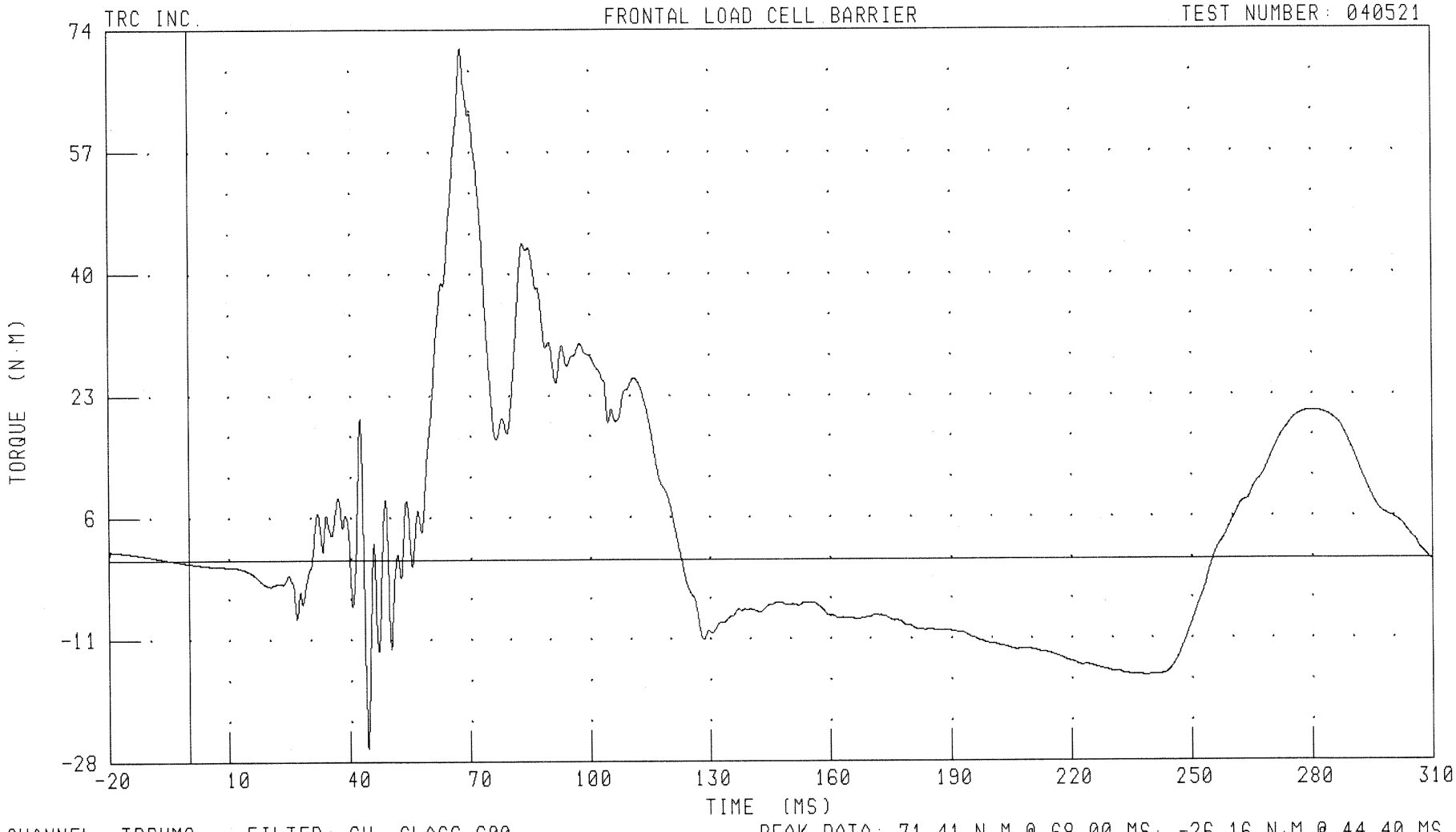
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT UPPER TIBIA MOMENT ABOUT X AXIS



CHANNEL: TBRXM2 FILTER: CH. CLASS 600 PEAK DATA: 21.42 N-M @ 145.40 MS; -43.97 N-M @ 58.90 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT UPPER TIBIA MOMENT ABOUT Y AXIS

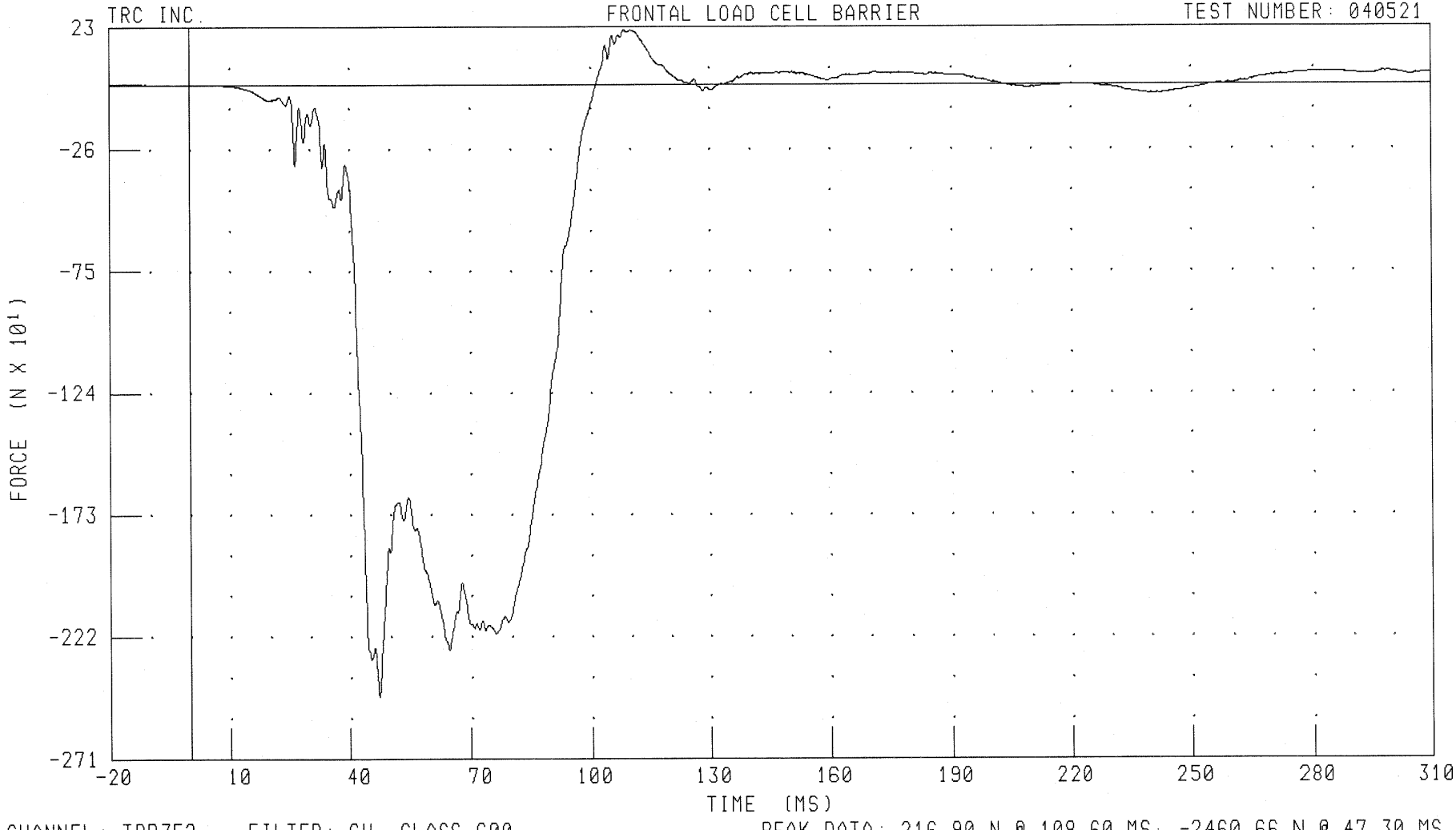


CHANNEL: TBRYM2 FILTER: CH. CLASS 600 PEAK DATA: 71.41 N-M @ 68.00 MS; -26.16 N-M @ 44.40 MS

040521

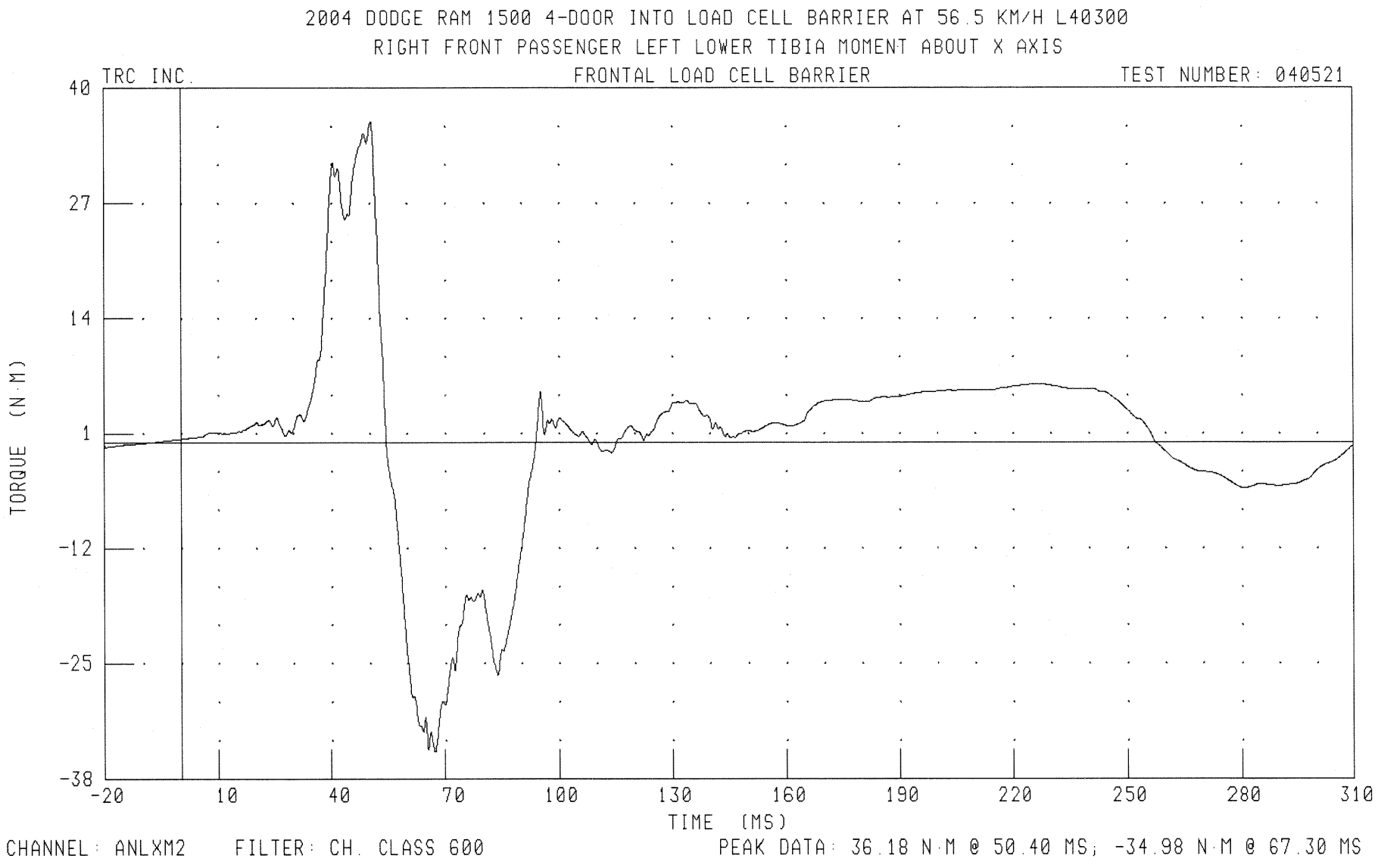
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT FRONT PASSENGER RIGHT UPPER TIBIA Z-AXIS FORCE

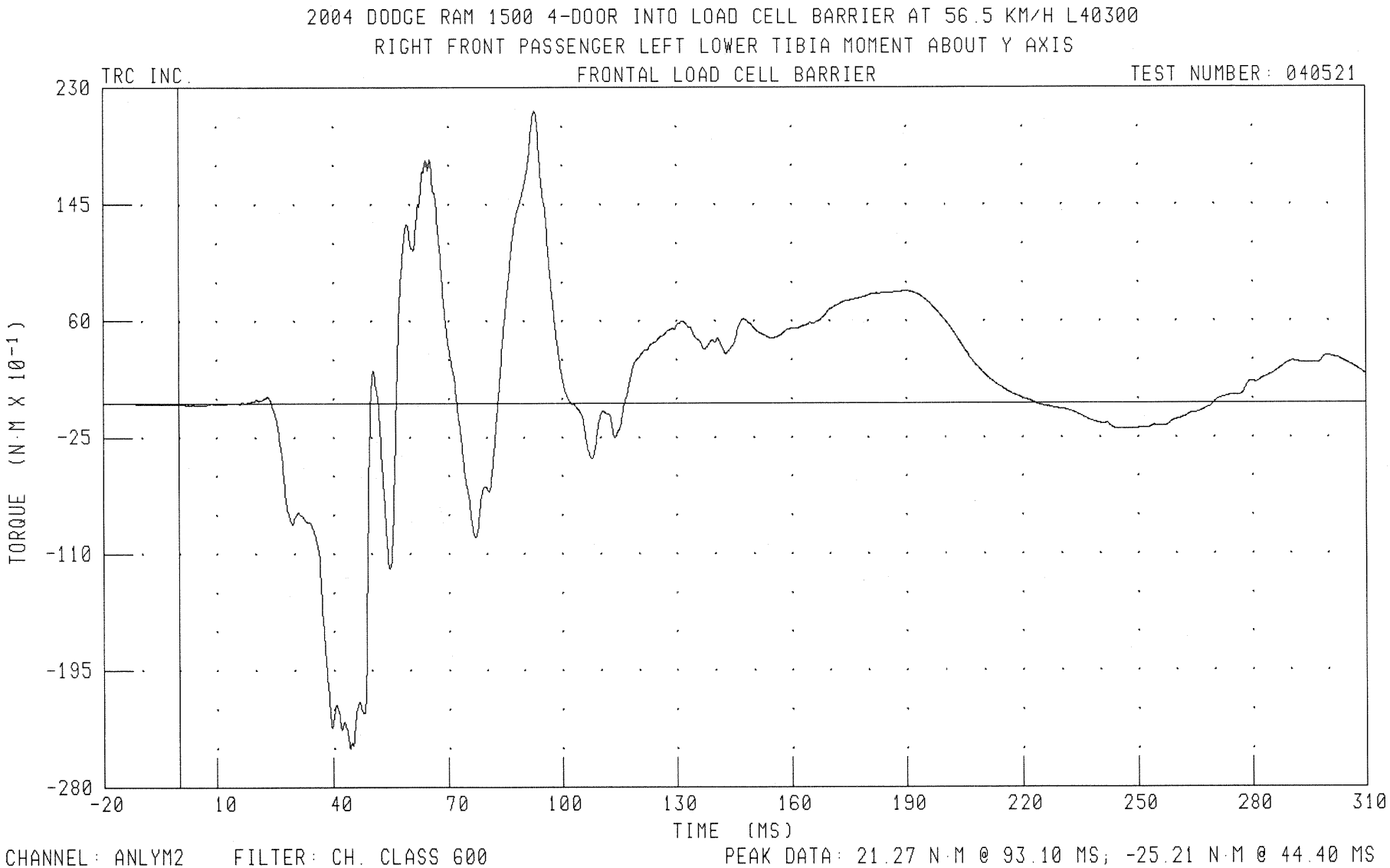


CHANNEL: TBRZF2 FILTER: CH. CLASS 600 PEAK DATA: 216.90 N @ 108.60 MS; -2460.66 N @ 47.30 MS

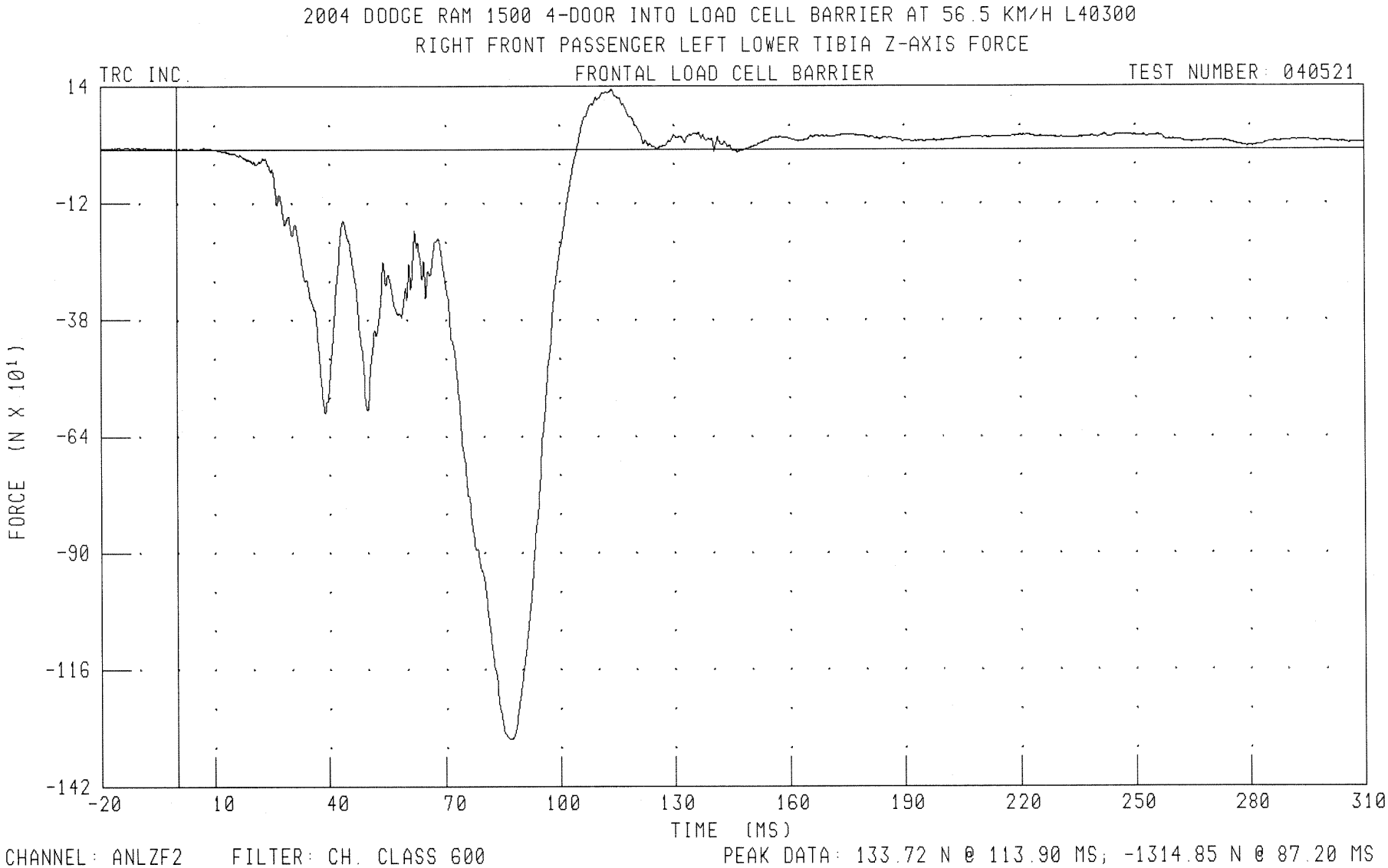
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT LOWER TIBIA MOMENT ABOUT X AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
40
27
14
1
-12
-25
-38
TORQUE (N-M)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANLXM2
FILTER: CH. CLASS 600
PEAK DATA: 36.18 N-M @ 50.40 MS; -34.98 N-M @ 67.30 MS

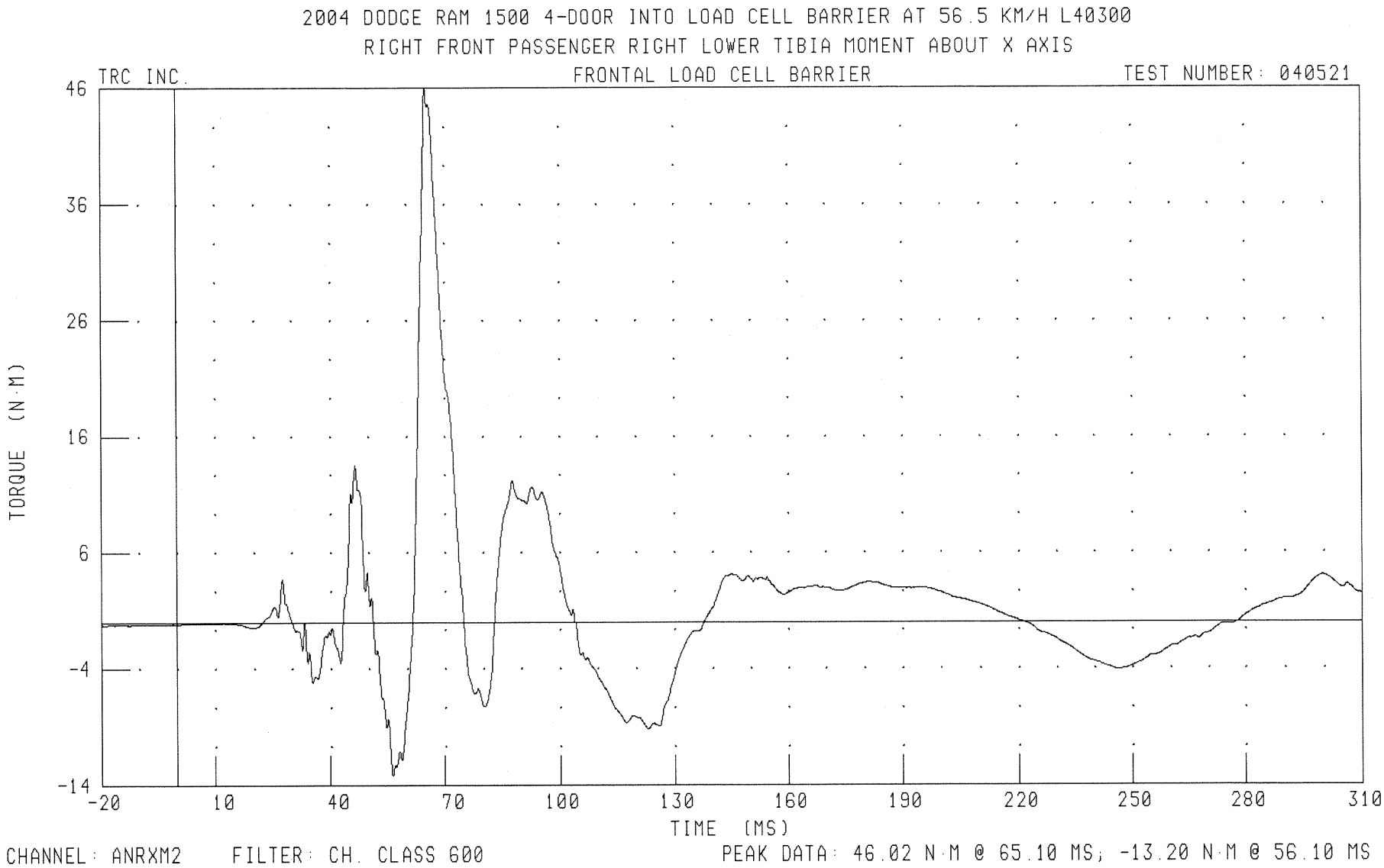
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT LOWER TIBIA MOMENT ABOUT Y AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
230
145
60
-25
-110
-195
-280
TORQUE (N·M X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANLYM2
FILTER: CH. CLASS 600
PEAK DATA: 21.27 N·M @ 93.10 MS; -25.21 N·M @ 44.40 MS

040521

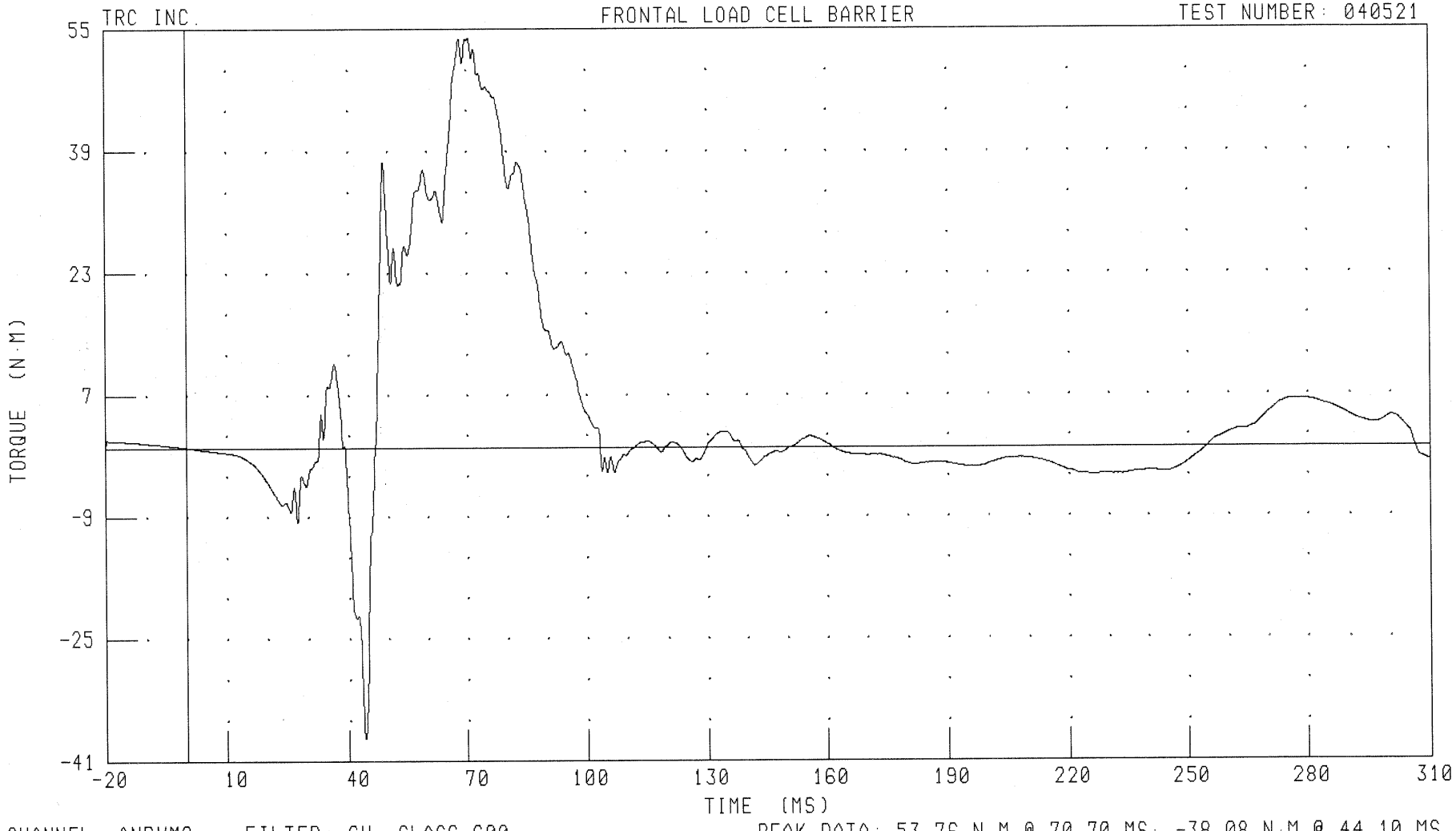

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT LOWER TIBIA Z-AXIS FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
14
-12
-38
-64
-90
-116
-142
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANLZF2
FILTER: CH. CLASS 600
PEAK DATA: 133.72 N @ 113.90 MS; -1314.85 N @ 87.20 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT LOWER TIBIA MOMENT ABOUT X AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
TORQUE (N·M)
46
36
26
16
6
-4
-14
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANRXM2
FILTER: CH. CLASS 600
PEAK DATA: 46.02 N·M @ 65.10 MS; -13.20 N·M @ 56.10 MS

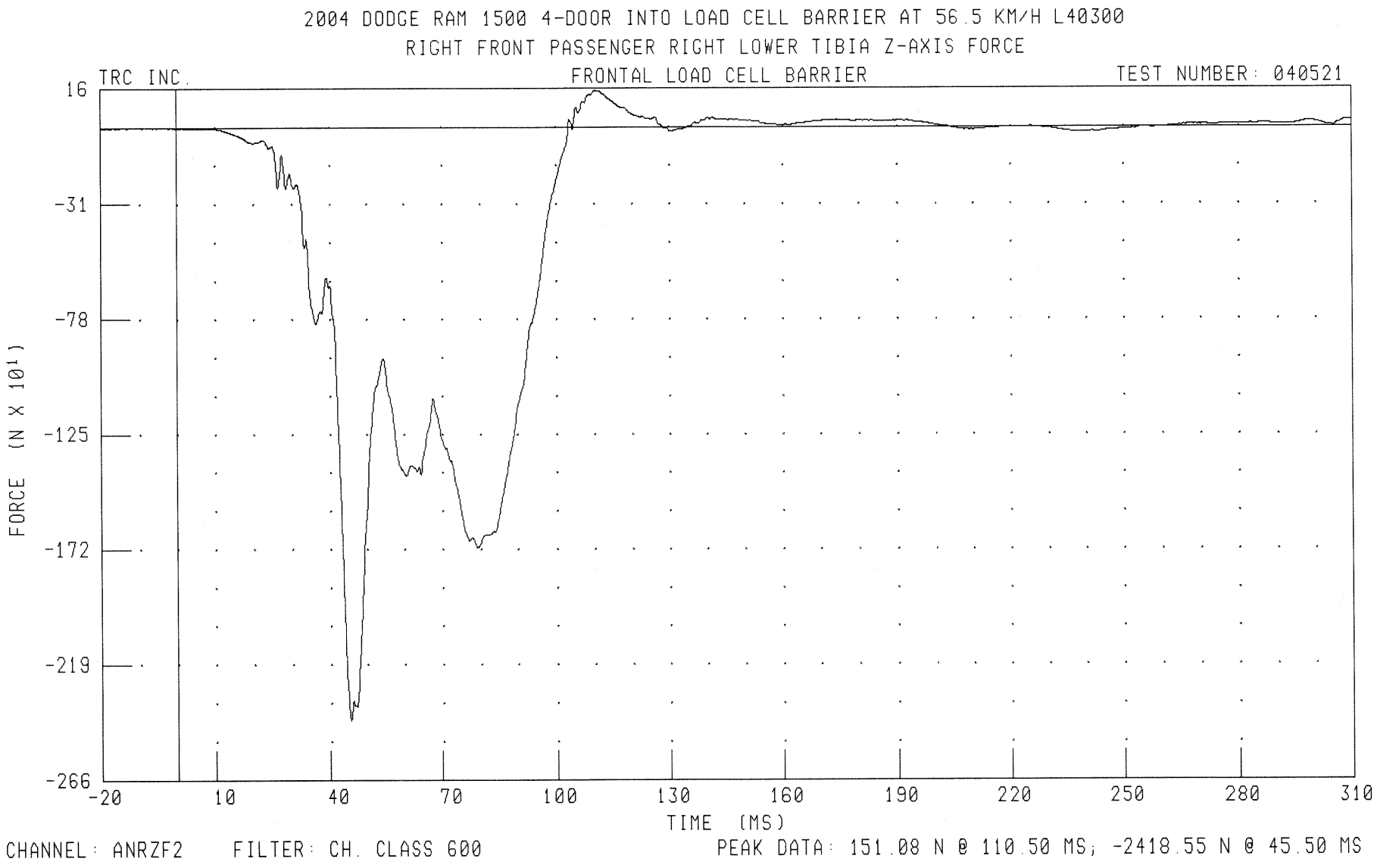
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT LOWER TIBIA MOMENT ABOUT Y AXIS

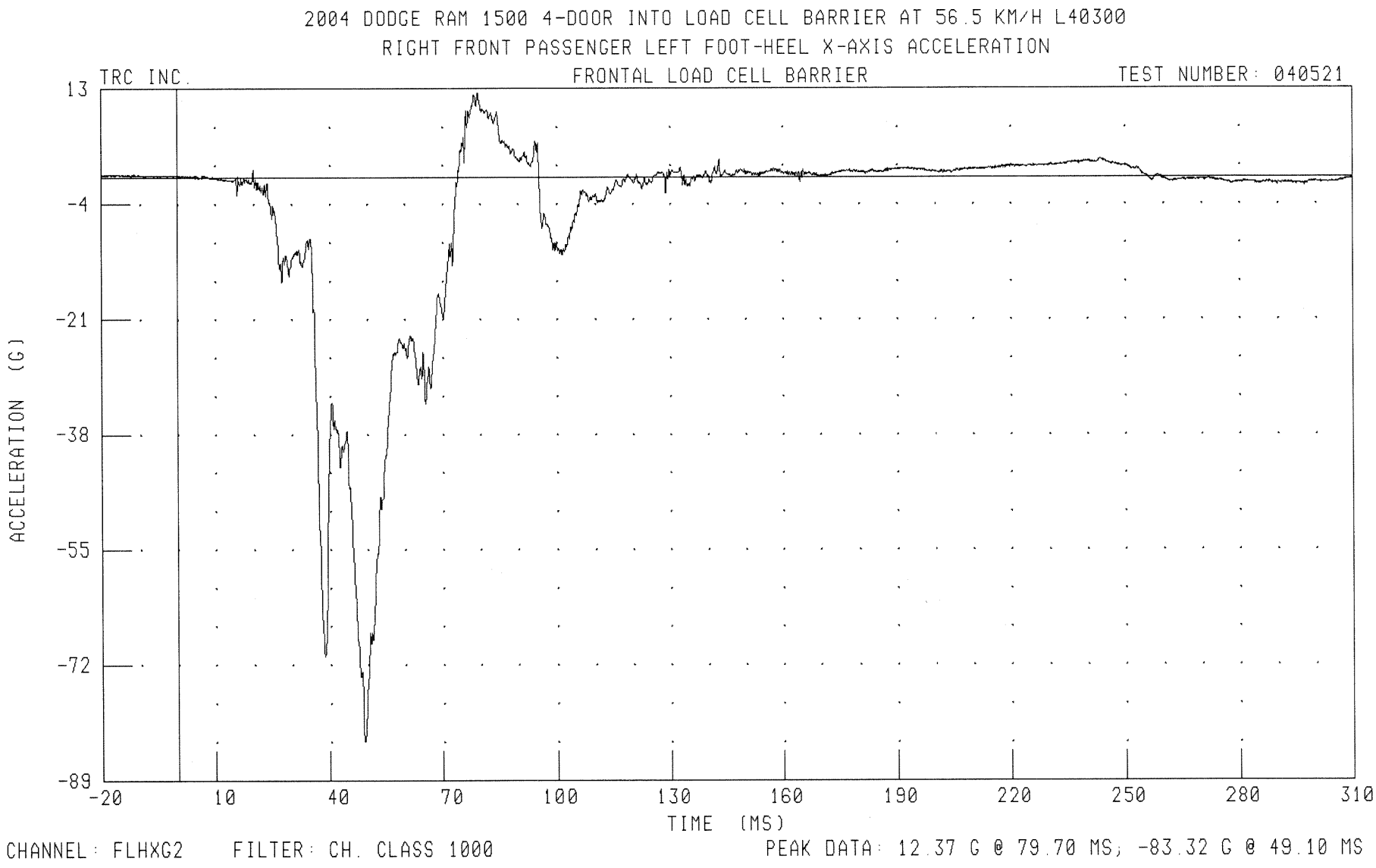


CHANNEL: ANRYM2 FILTER: CH. CLASS 600 PEAK DATA: 53.76 N-M @ 70.70 MS; -38.08 N-M @ 44.10 MS

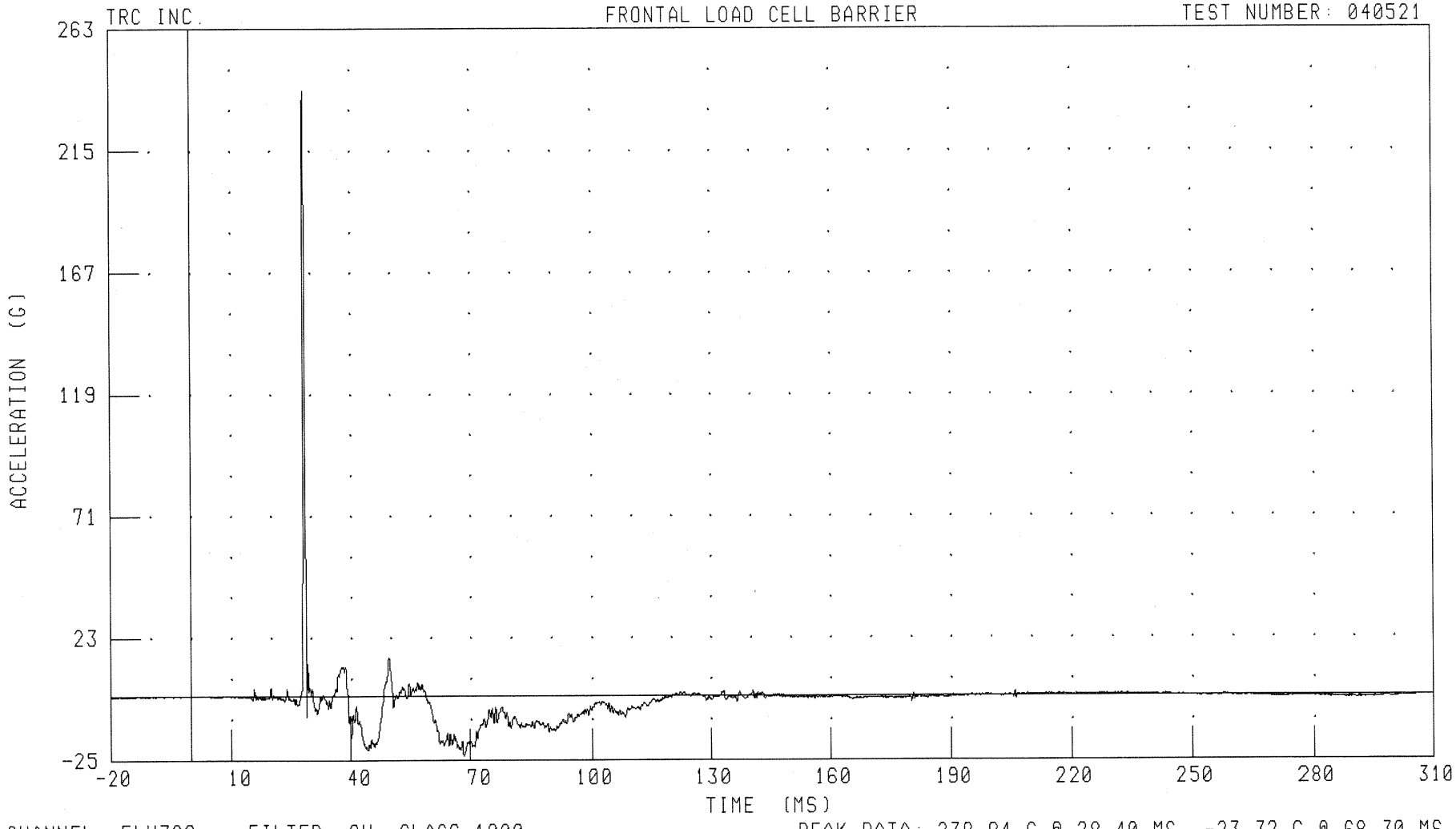
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT LOWER TIBIA Z-AXIS FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
16
-31
-78
-125
-172
-219
-266
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ANRZF2
FILTER: CH. CLASS 600
PEAK DATA: 151.08 N @ 110.50 MS; -2418.55 N @ 45.50 MS

040521

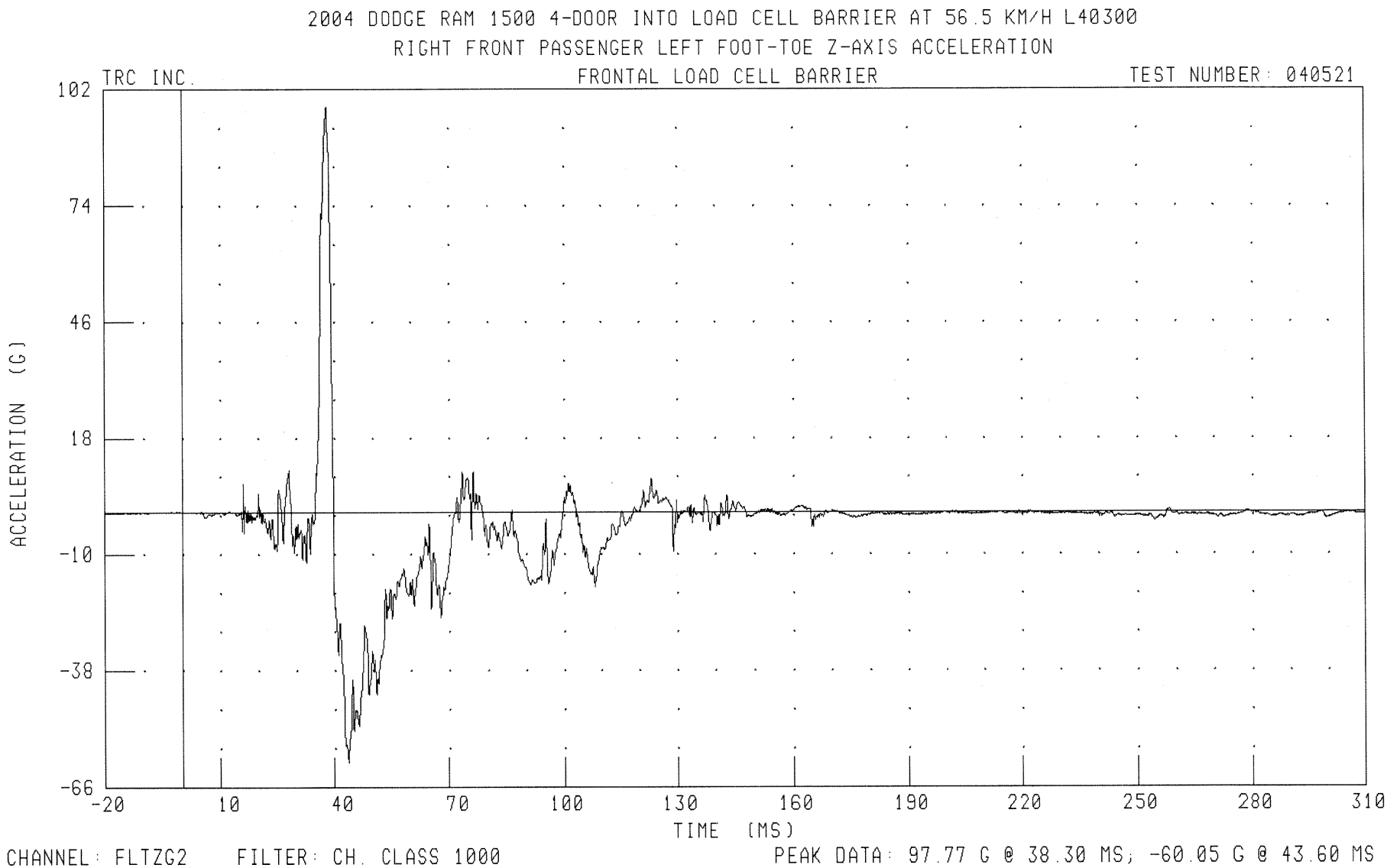

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT FOOT-HEEL X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
13
-4
-21
-38
-55
-72
-89
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FLHXG2
FILTER: CH. CLASS 1000
PEAK DATA: 12.37 G @ 79.70 MS; -83.32 G @ 49.10 MS

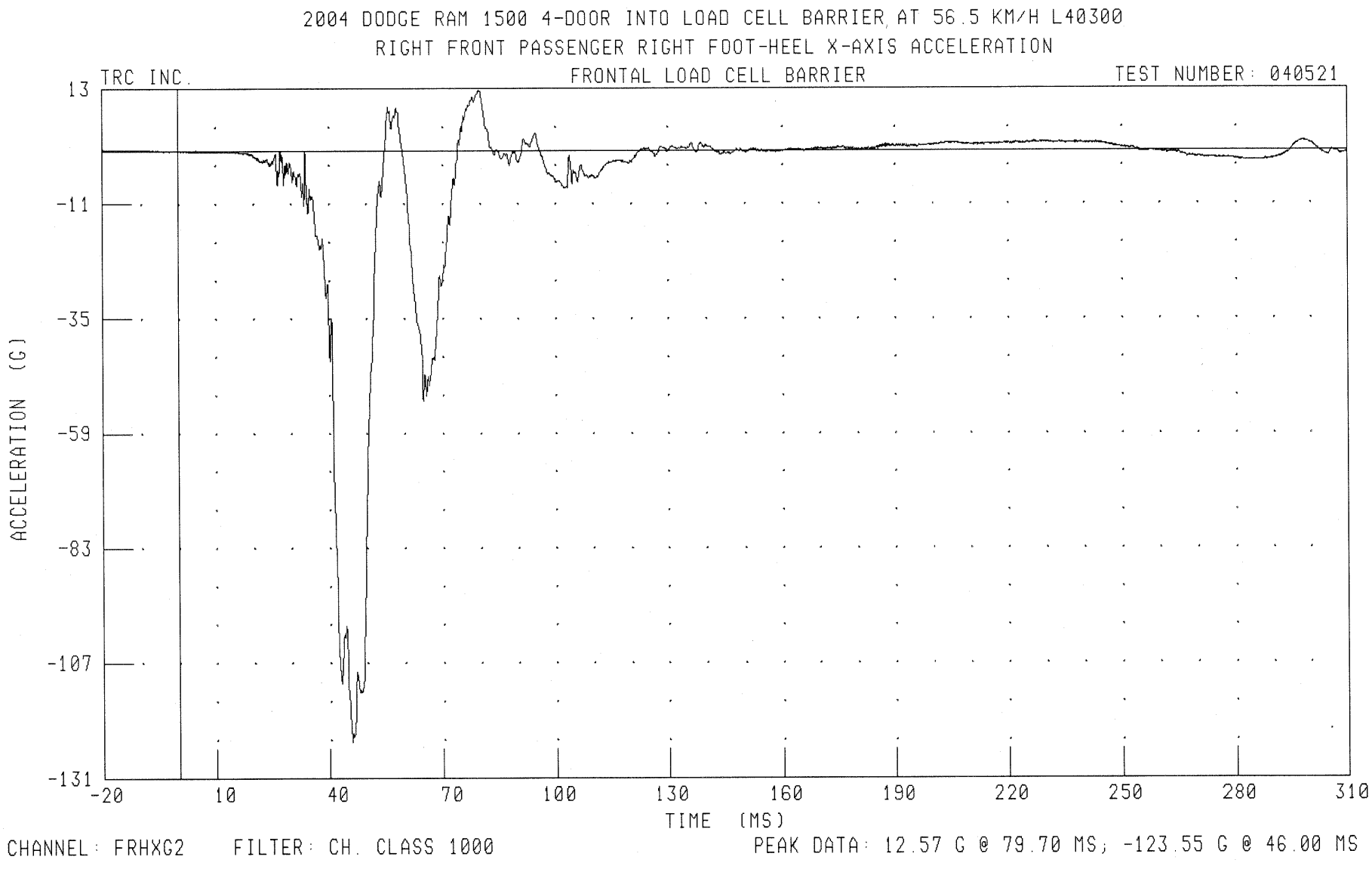
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT FOOT-HEEL Z-AXIS ACCELERATION



CHANNEL: FLHZG2 FILTER: CH. CLASS 1000 PEAK DATA: 238.84 G @ 28.40 MS; -23.32 G @ 68.30 MS

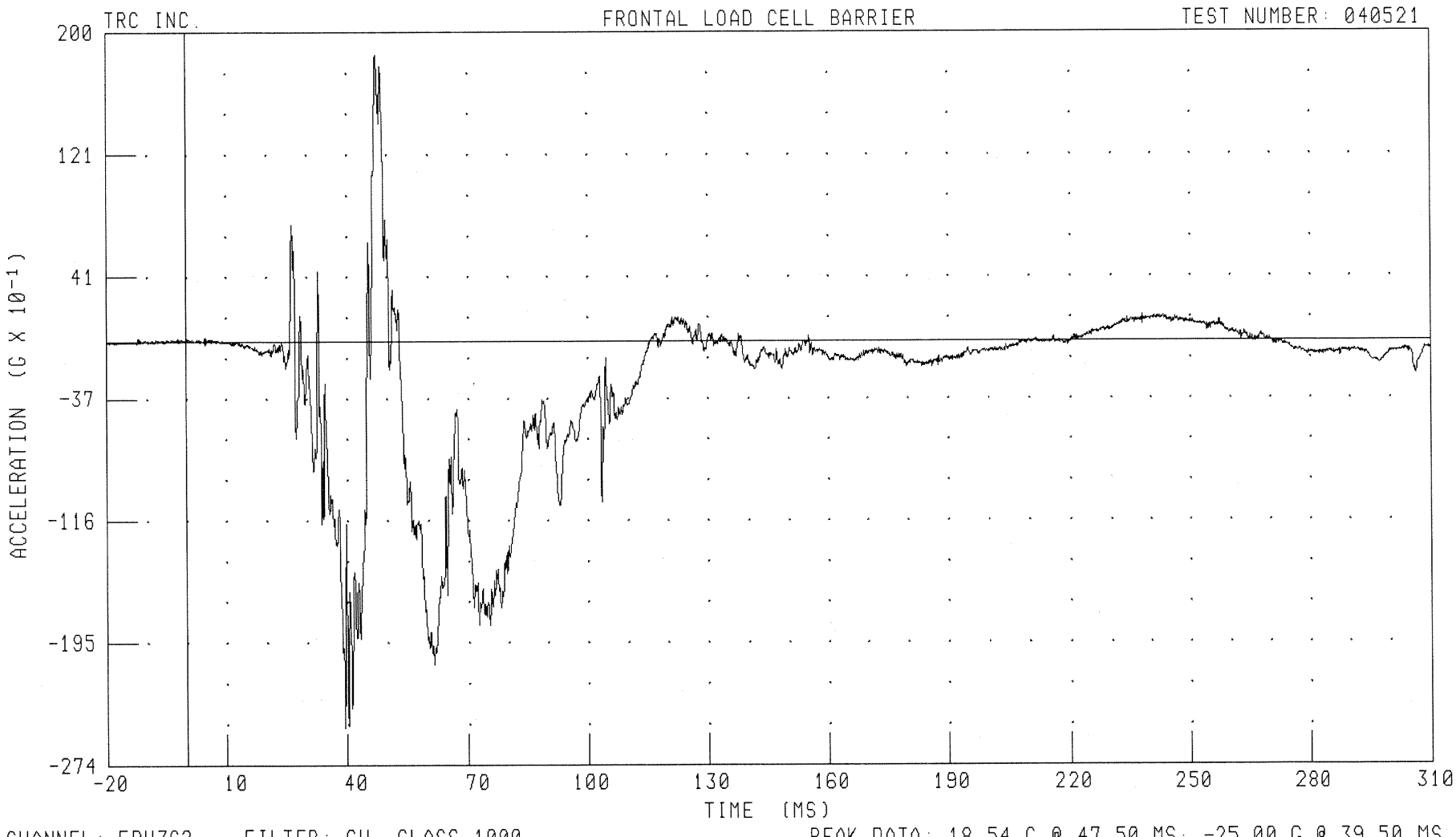
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LEFT FOOT-TOE Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G)
102
74
46
18
-10
-38
-66
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FLTZG2
FILTER: CH. CLASS 1000
PEAK DATA: 97.77 G @ 38.30 MS; -60.05 G @ 43.60 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT FOOT-HEEL X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
13
-11
-35
-59
-83
-107
-131
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FRHXG2
FILTER: CH. CLASS 1000
PEAK DATA: 12.57 G @ 79.70 MS; -123.55 G @ 46.00 MS

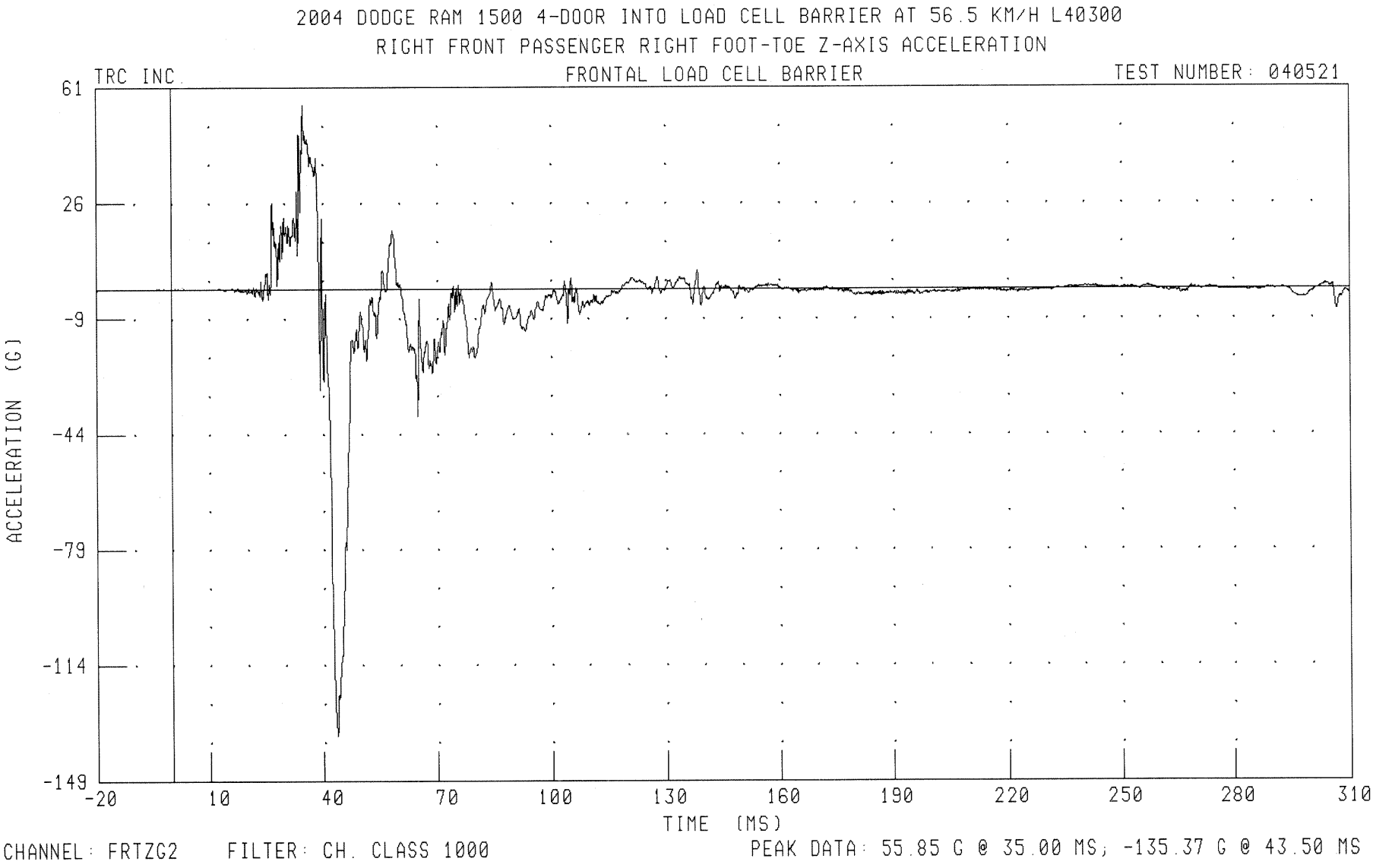
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT FOOT-HEEL Z-AXIS ACCELERATION

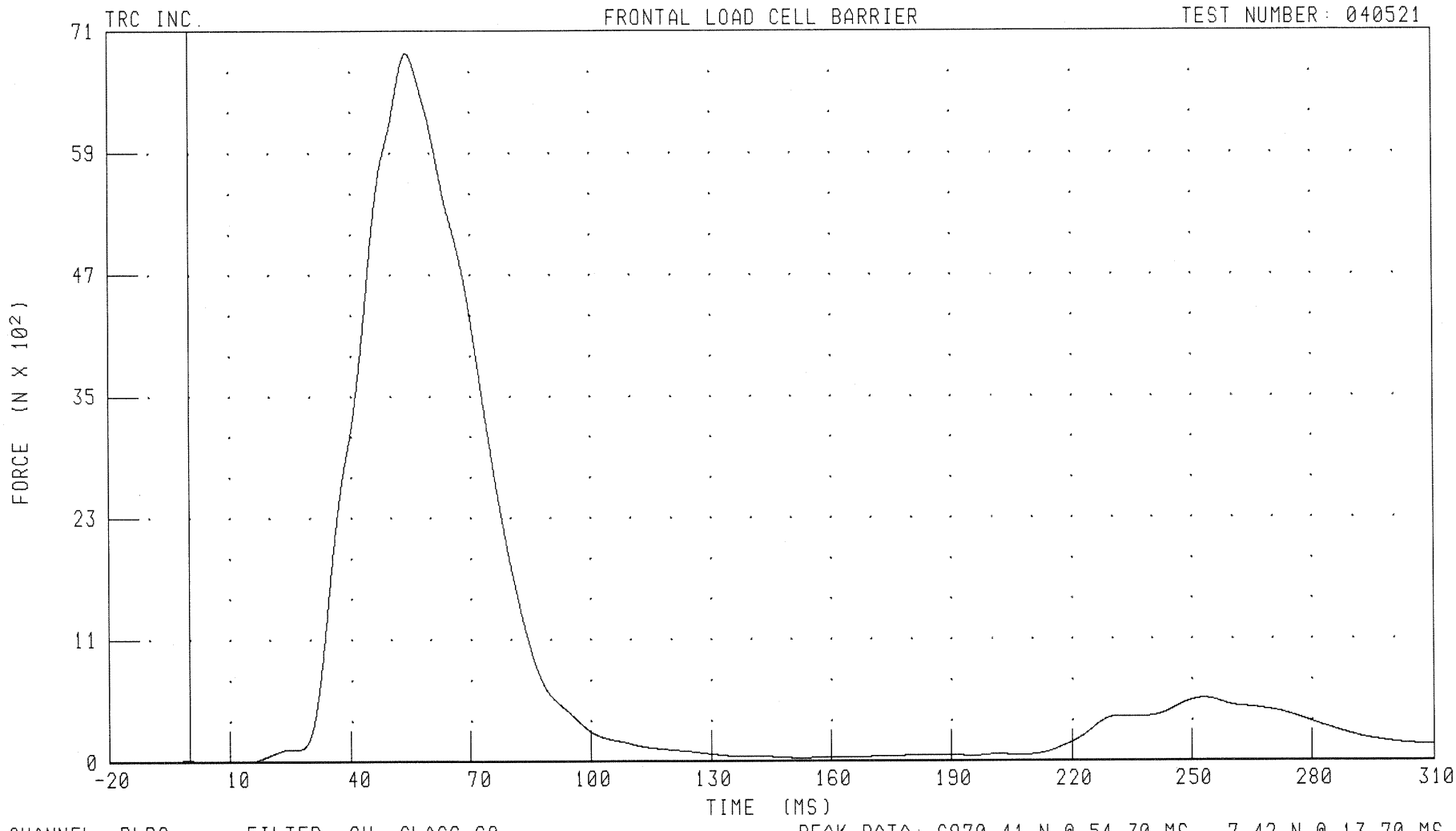


CHANNEL: FRHZG2 FILTER: CH. CLASS 1000 PEAK DATA: 18.54 G @ 47.50 MS; -25.00 G @ 39.50 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER RIGHT FOOT-TOE Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
61
26
-9
-44
-79
-114
-149
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FRTZG2
FILTER: CH. CLASS 1000
PEAK DATA: 55.85 G @ 35.00 MS; -135.37 G @ 43.50 MS

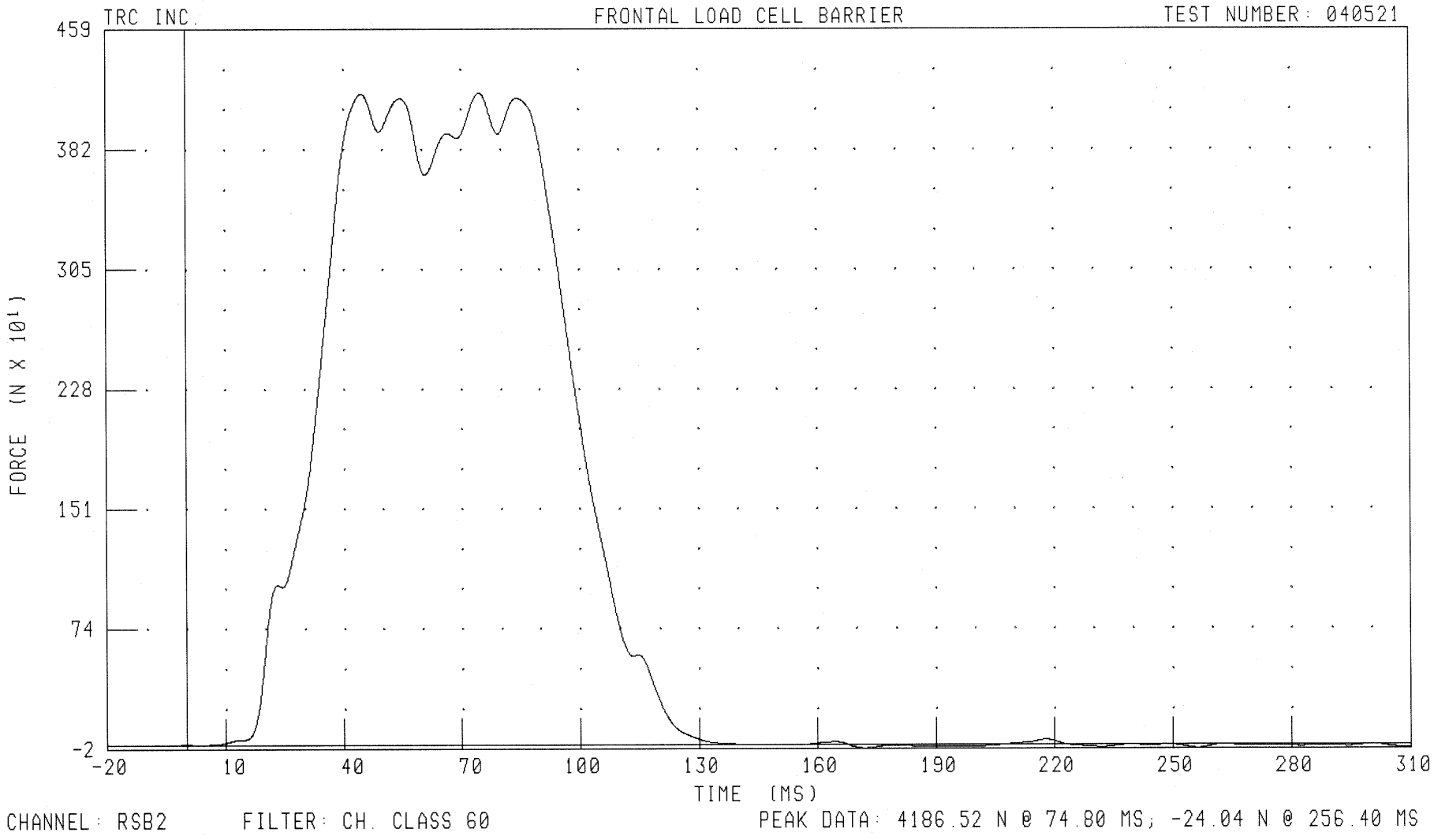
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER LAP BELT FORCE



CHANNEL: RLB2 FILTER: CH. CLASS 60 PEAK DATA: 6970.41 N @ 54.30 MS; -7.42 N @ 13.70 MS

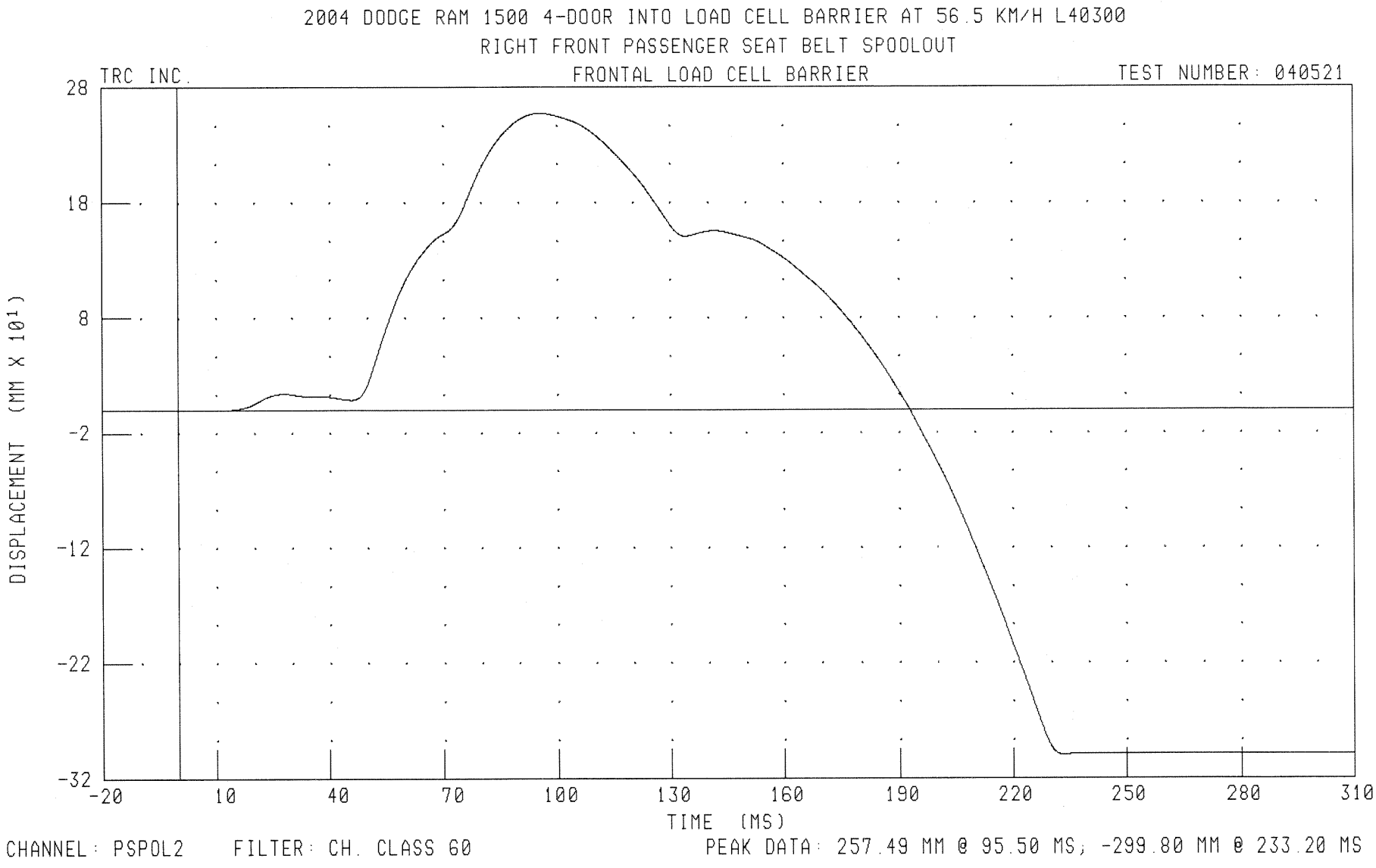
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER SHOULDER BELT FORCE



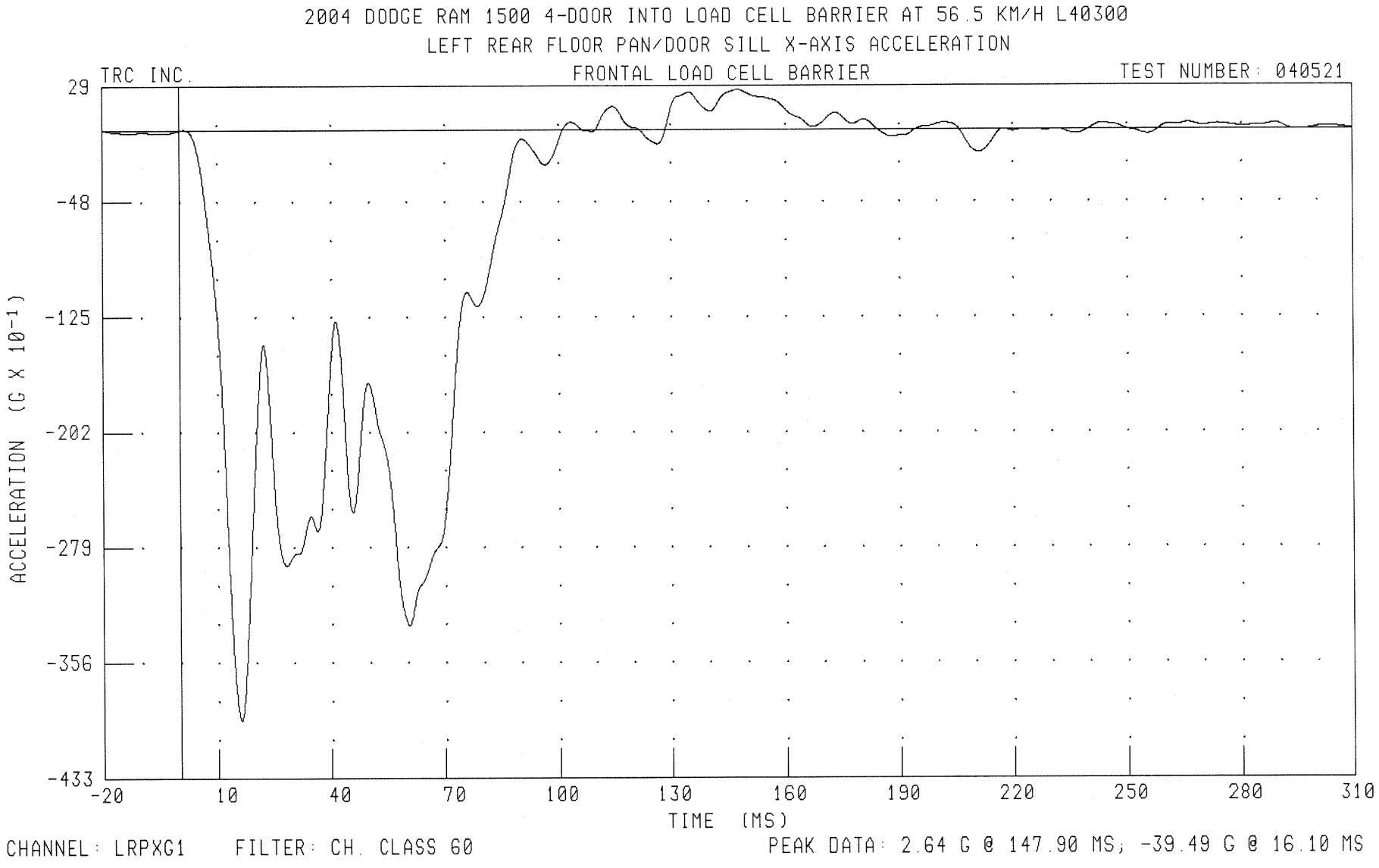
CHANNEL: RSB2 FILTER: CH. CLASS 60 PEAK DATA: 4186.52 N @ 74.80 MS; -24.04 N @ 256.40 MS

040521

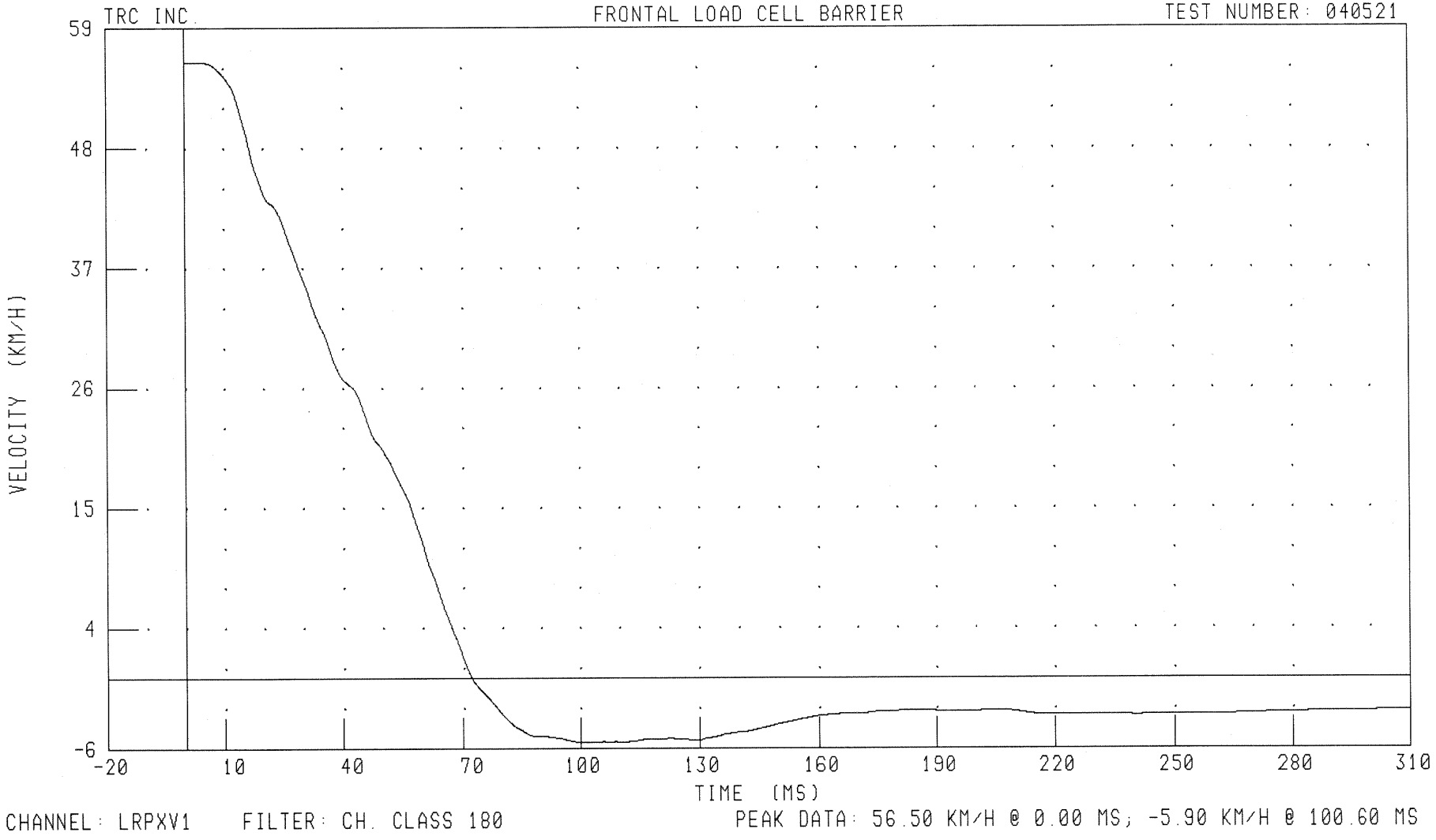

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT PASSENGER SEAT BELT SPOOLOUT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
28
18
8
-2
-12
-22
-32
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PSPOL2
FILTER: CH. CLASS 60
PEAK DATA: 257.49 MM @ 95.50 MS; -299.80 MM @ 233.20 MS

040521

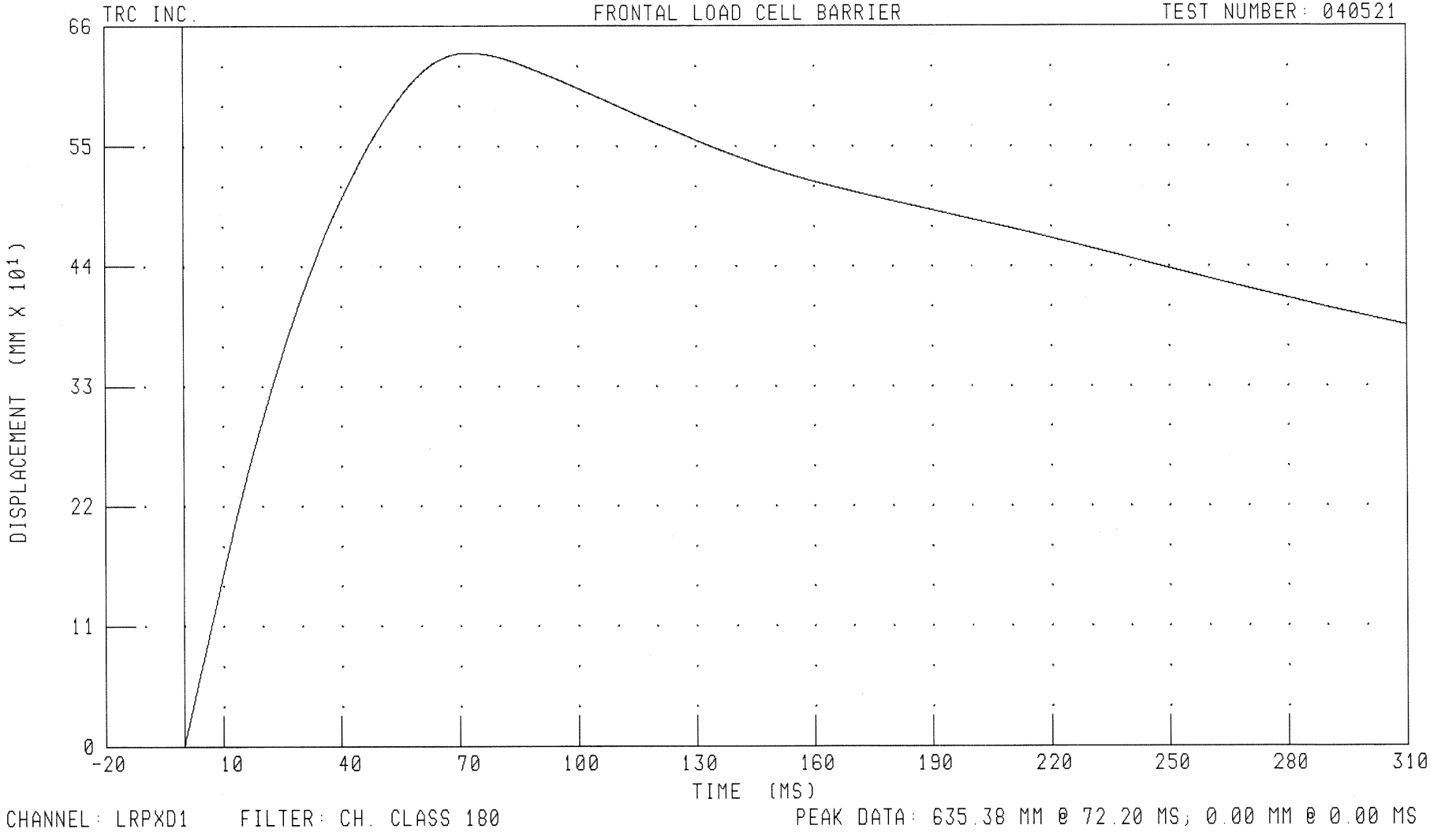
Passenger Shoulder Belt Elongation Was Not Installed
(no accessible mounting location)


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR FLOOR PAN/DOOR SILL X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
29
-48
-125
-202
-279
-356
-433
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LRPXG1
FILTER: CH. CLASS 60
PEAK DATA: 2.64 G @ 147.90 MS; -39.49 G @ 16.10 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR FLOOR PAN/DOOR SILL X-AXIS VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
59
48
37
26
15
4
-6
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LRPXV1
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -5.90 KM/H @ 100.60 MS

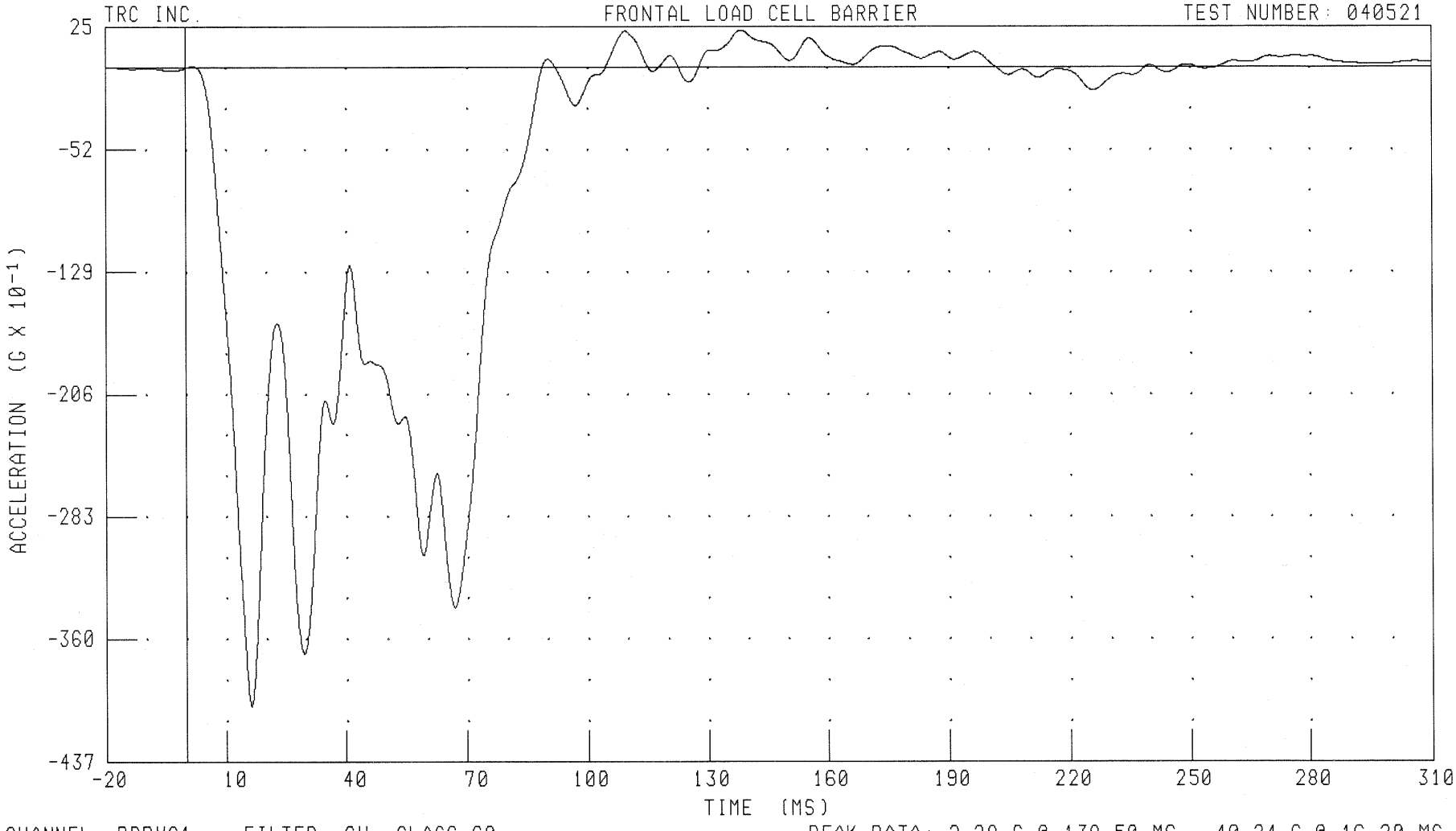
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR FLOOR PAN/DOOR SILL X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
66
55
44
33
22
11
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LRPXD1
FILTER: CH. CLASS 180
PEAK DATA: 635.38 MM @ 72.20 MS; 0.00 MM @ 0.00 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT REAR FLOOR PAN/DOOR SILL X-AXIS ACCELERATION

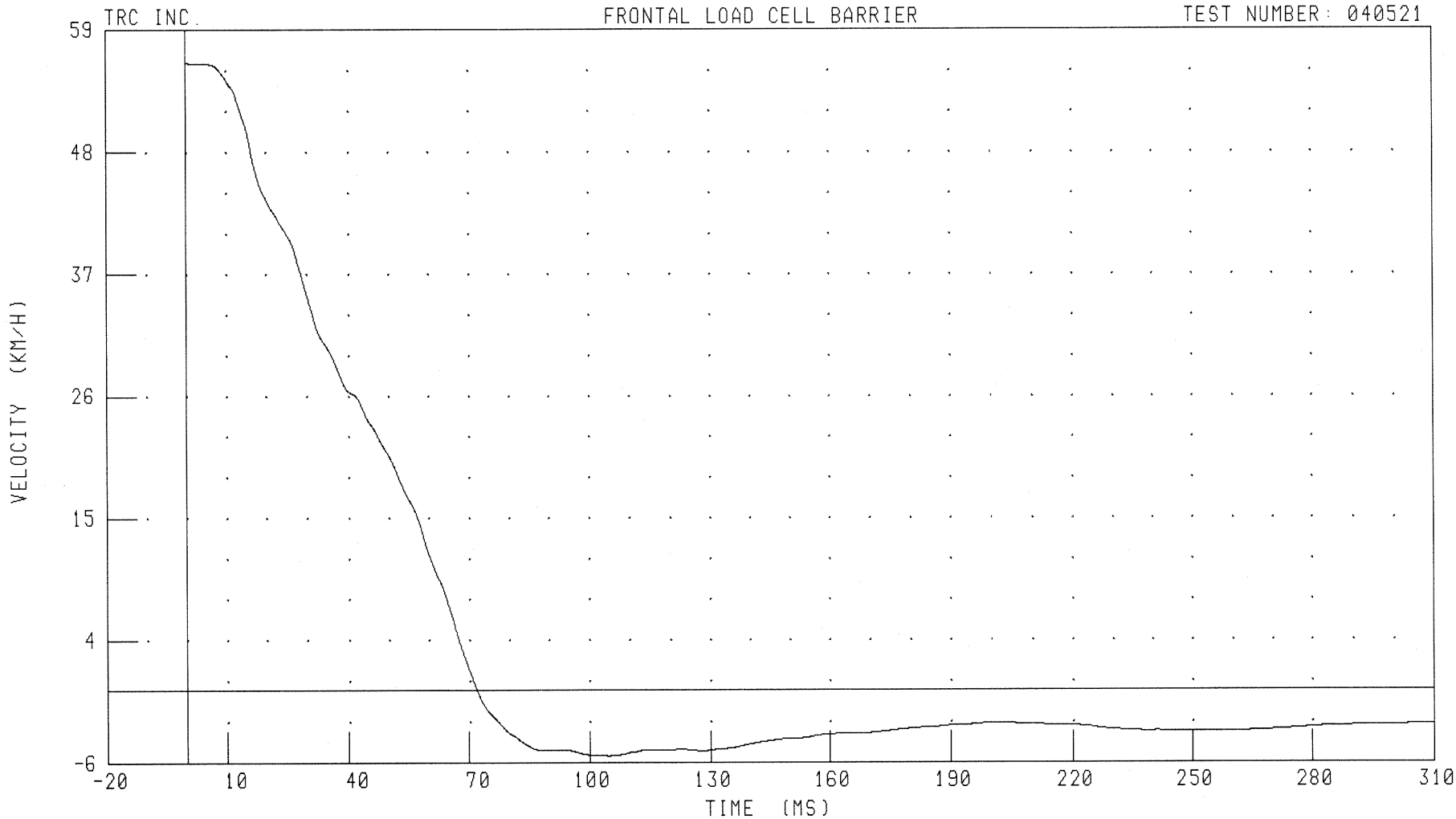


CHANNEL: RRPXG1 FILTER: CH. CLASS 60 PEAK DATA: 2.28 G @ 138.50 MS; -40.24 G @ 16.20 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

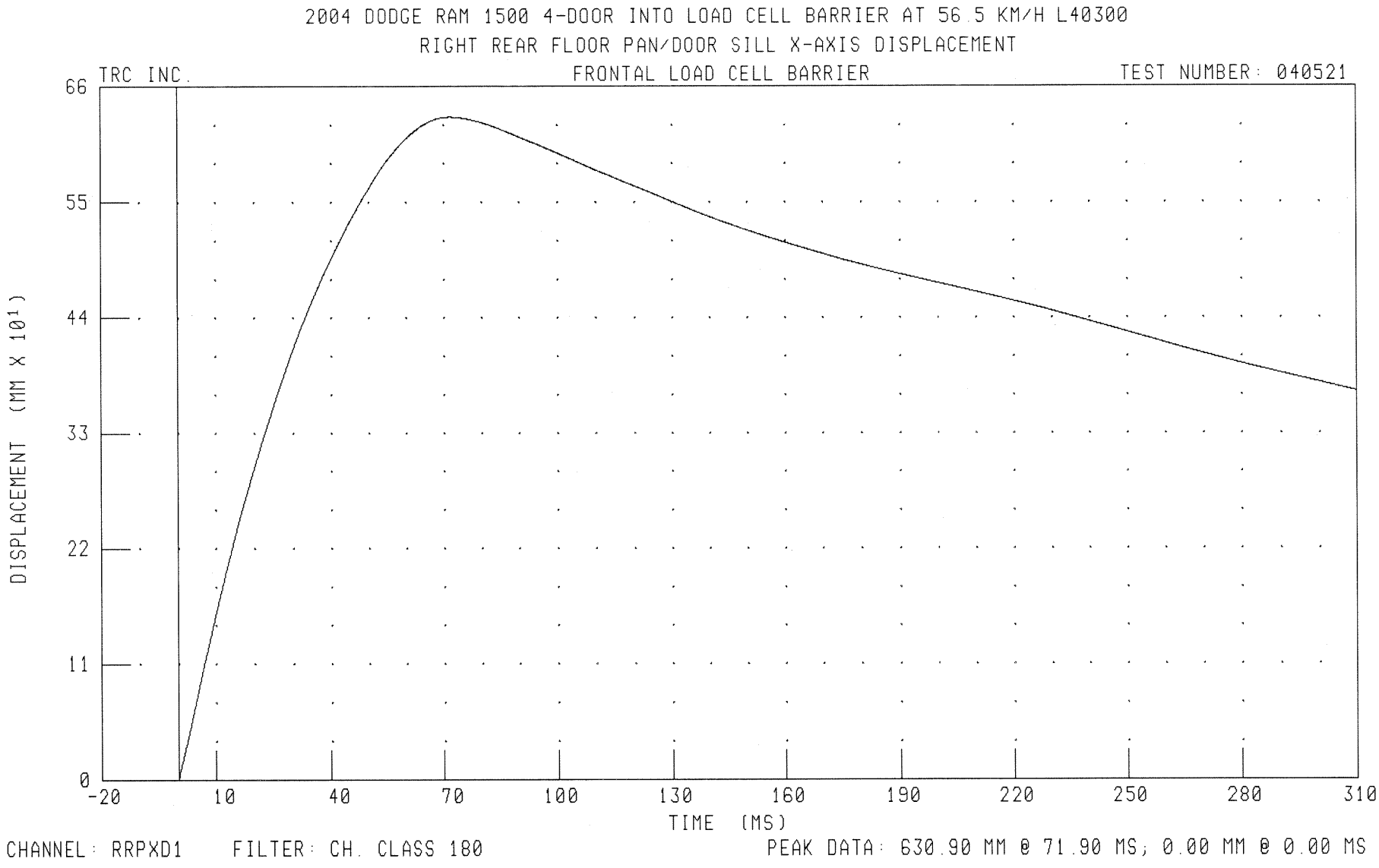
RIGHT REAR FLOOR PAN/DOOR SILL X-AXIS VELOCITY



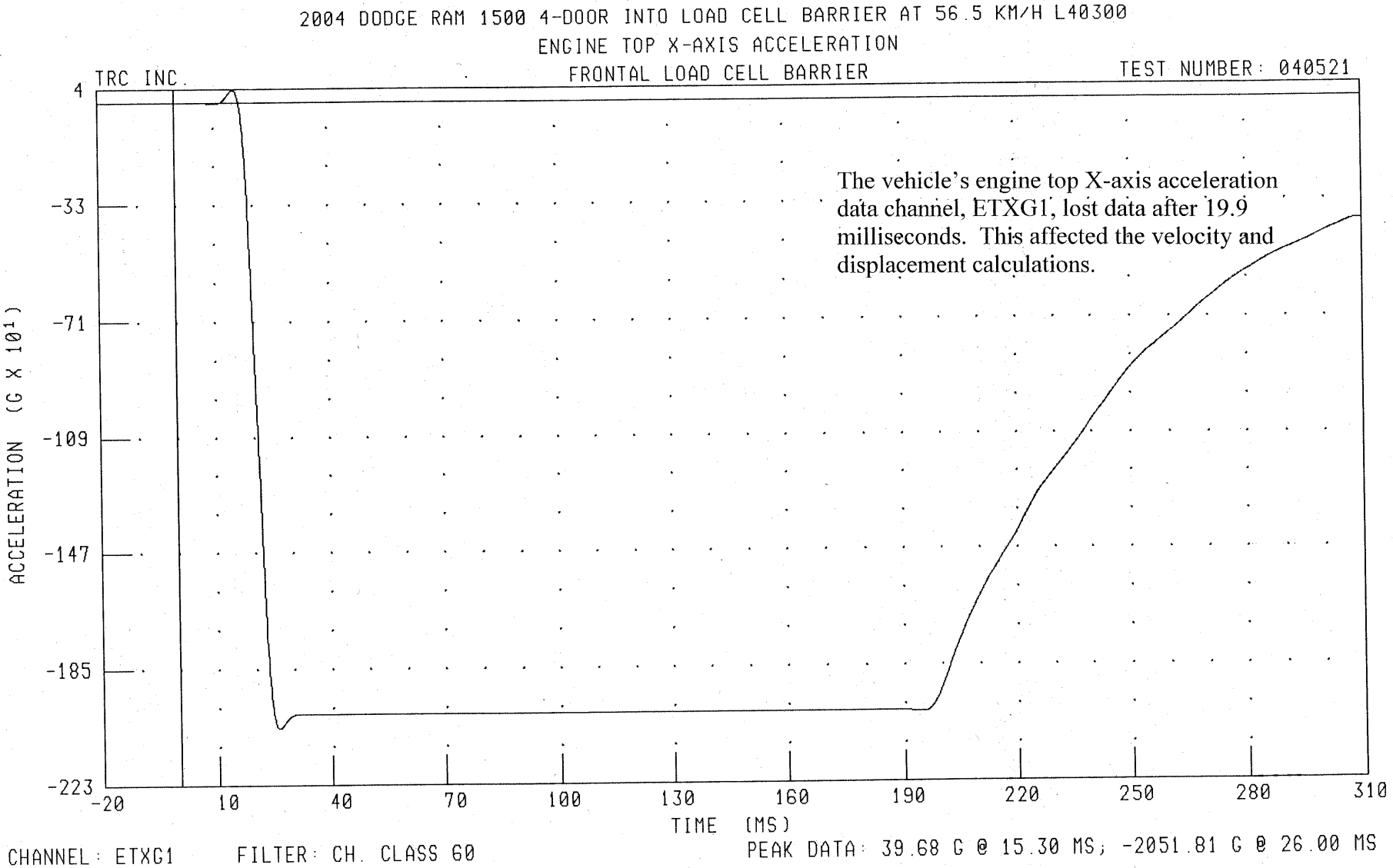
CHANNEL: RRPXV1 FILTER: CH. CLASS 180

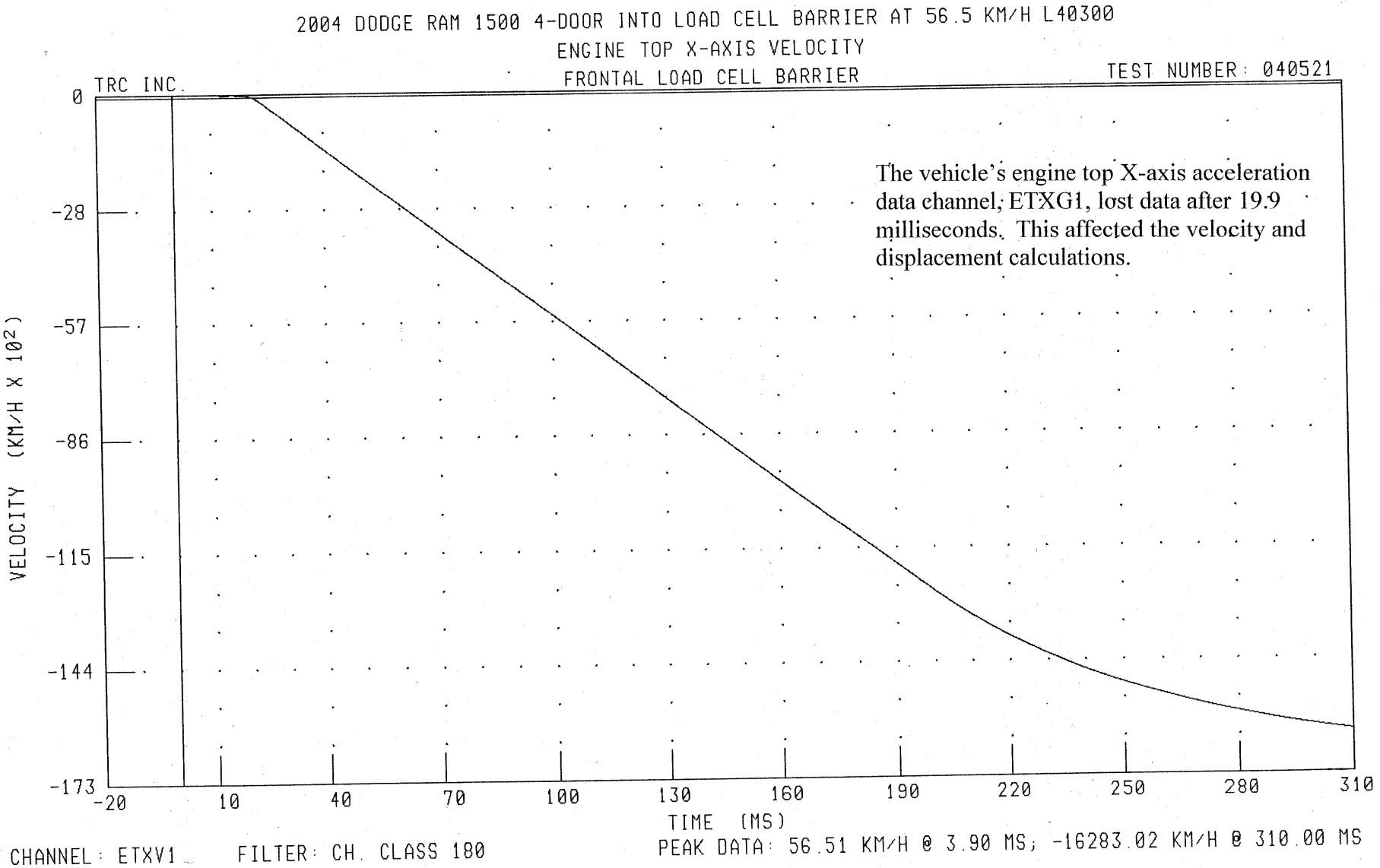
PEAK DATA: 56.50 KM/H @ 0.00 MS; -5.91 KM/H @ 104.80 MS

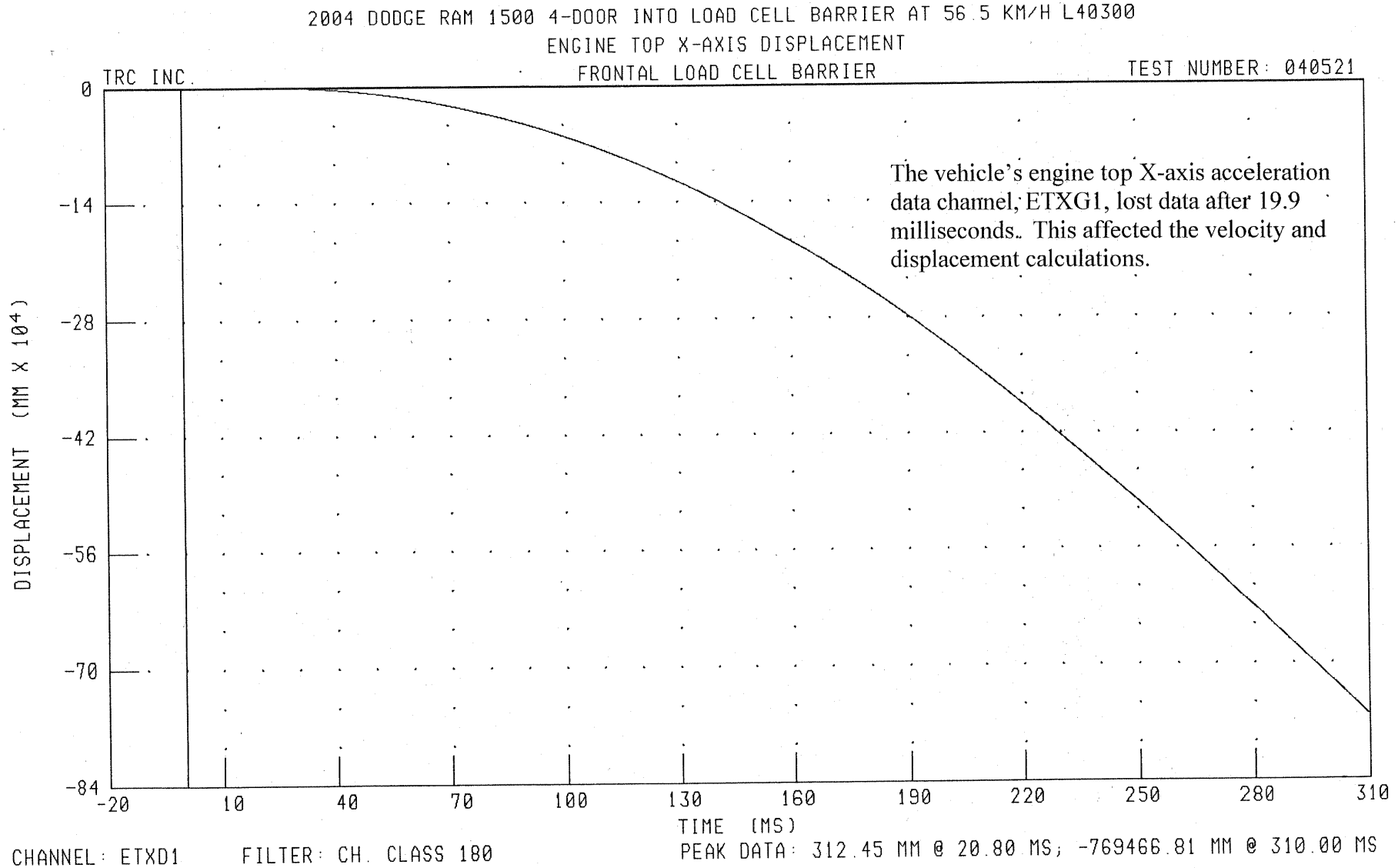
040521

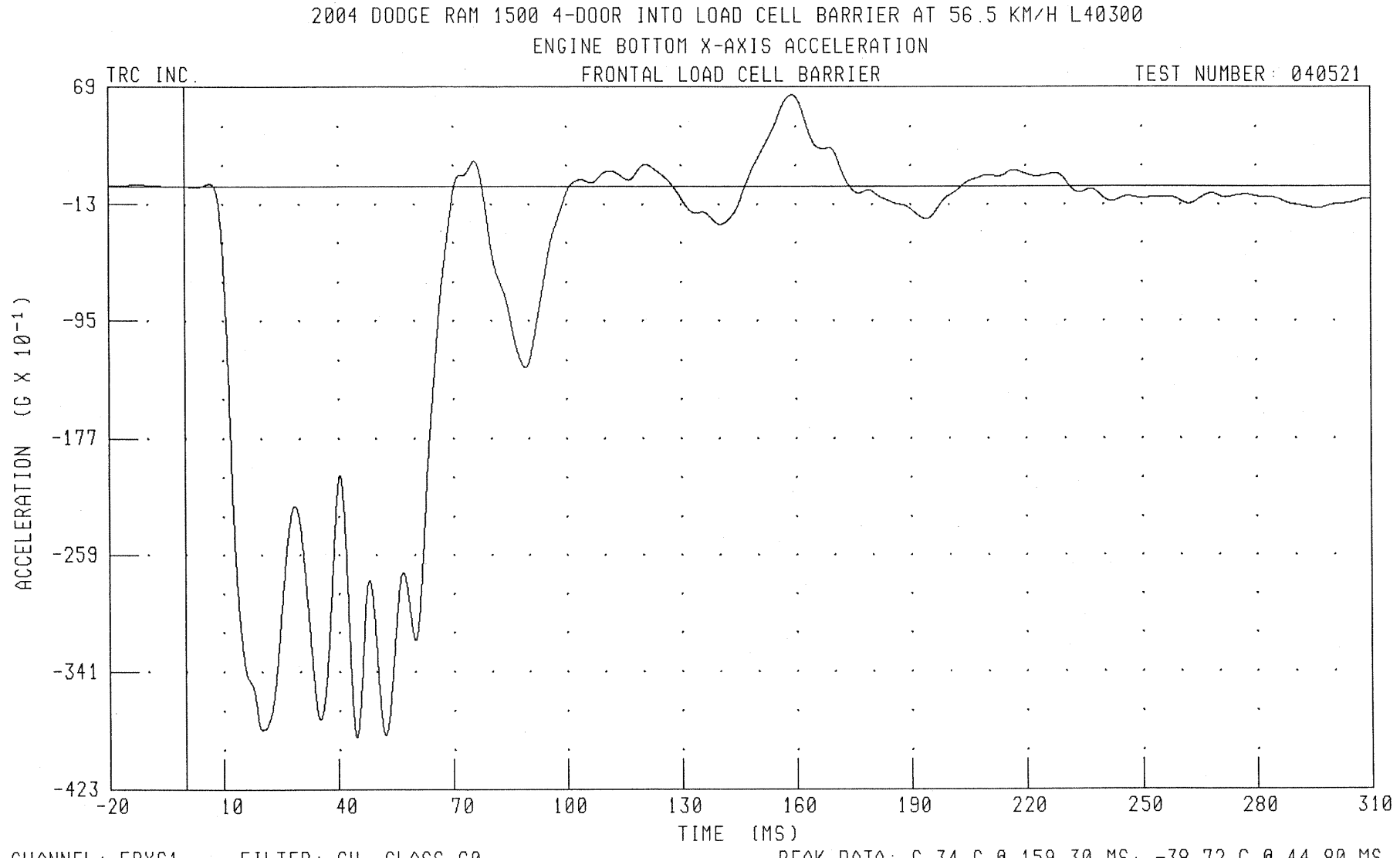

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR FLOOR PAN/DOOR SILL X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
66
55
44
33
22
11
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RRPXD1
FILTER: CH. CLASS 180
PEAK DATA: 630.90 MM @ 71.90 MS; 0.00 MM @ 0.00 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
ENGINE TOP X-AXIS ACCELERATION
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
The vehicle's engine top X-axis acceleration data channel, ETXG1, lost data after 19.9 milliseconds. This affected the velocity and displacement calculations.
ACCELERATION (G X 10¹)
4
-33
-71
-109
-147
-185
-223
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ETXG1
FILTER: CH. CLASS 60
PEAK DATA: 39.68 G @ 15.30 MS; -2051.81 G @ 26.00 MS

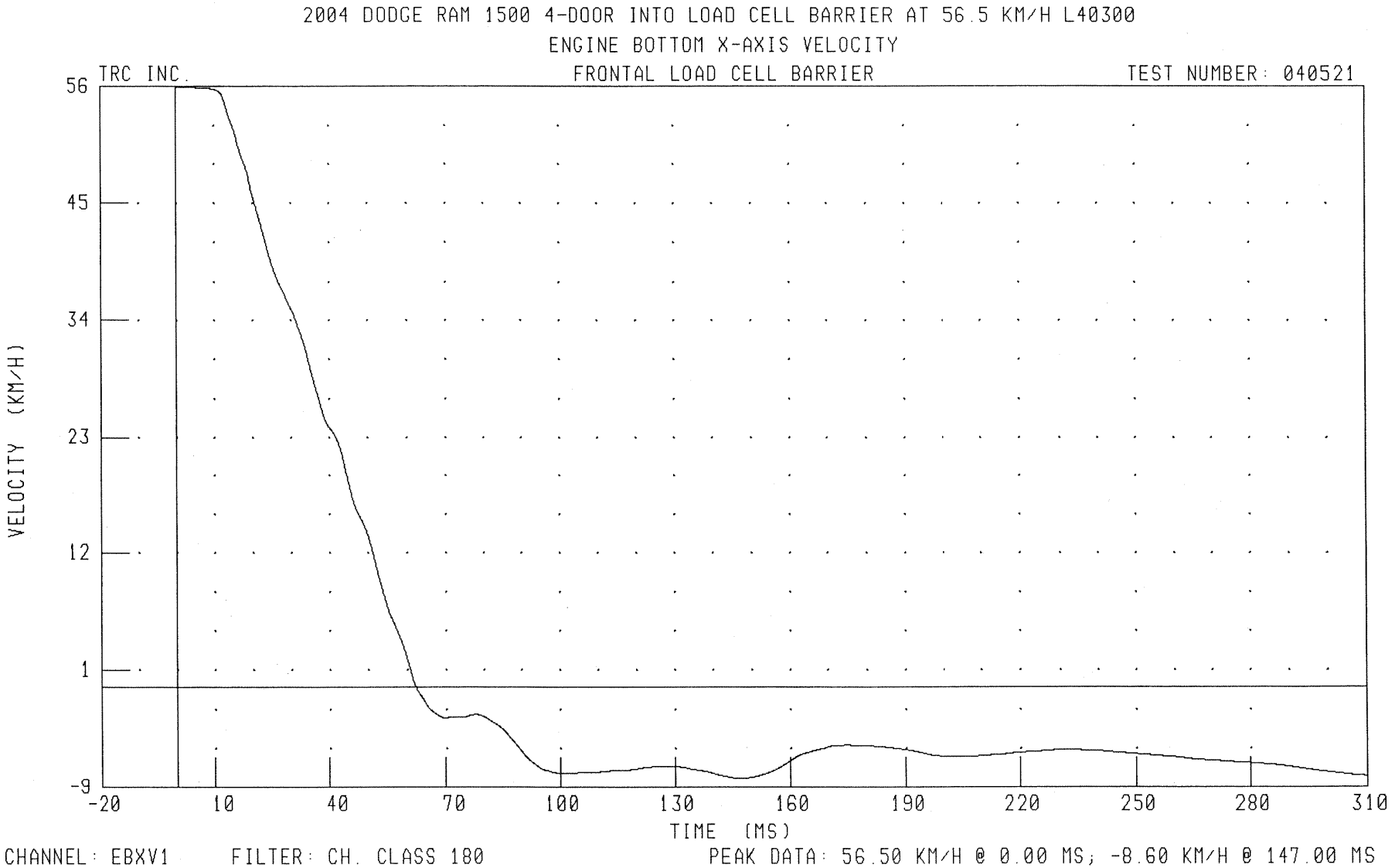

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
ENGINE TOP X-AXIS VELOCITY
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
0
-28
-57
-86
-115
-144
-173
VELOCITY (KM/H X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
The vehicle's engine top X-axis acceleration data channel, ETXG1, lost data after 19.9 milliseconds. This affected the velocity and displacement calculations.
CHANNEL: ETXV1
FILTER: CH. CLASS 180
PEAK DATA: 56.51 KM/H @ 3.90 MS; -16283.02 KM/H @ 310.00 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
ENGINE TOP X-AXIS DISPLACEMENT
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
0
-14
-28
-42
-56
-70
-84
DISPLACEMENT (MM X 10⁴)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: ETXD1
FILTER: CH. CLASS 180
PEAK DATA: 312.45 MM @ 20.80 MS; -769466.81 MM @ 310.00 MS
The vehicle's engine top X-axis acceleration data channel, ETXG1, lost data after 19.9 milliseconds. This affected the velocity and displacement calculations.

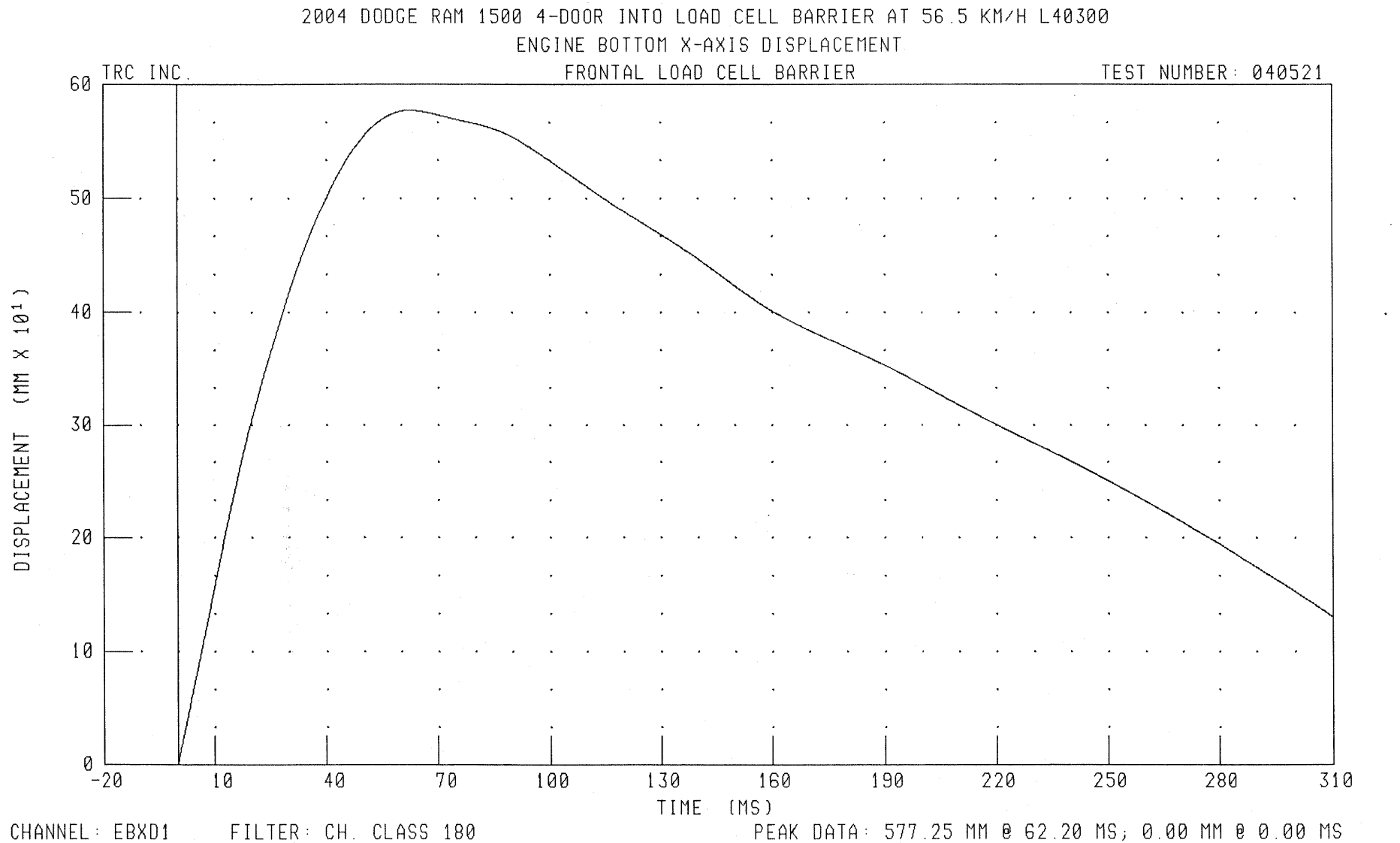

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
ENGINE BOTTOM X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
69
-13
-95
-177
-259
-341
-423
ACCELERATION (G X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: EBXG1
FILTER: CH. CLASS 60
PEAK DATA: 6.34 G @ 159.30 MS; -38.72 G @ 44.80 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
ENGINE BOTTOM X-AXIS VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
56
45
34
23
12
1
-9
VELOCITY (KM/H)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: EBXV1
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -8.60 KM/H @ 147.00 MS

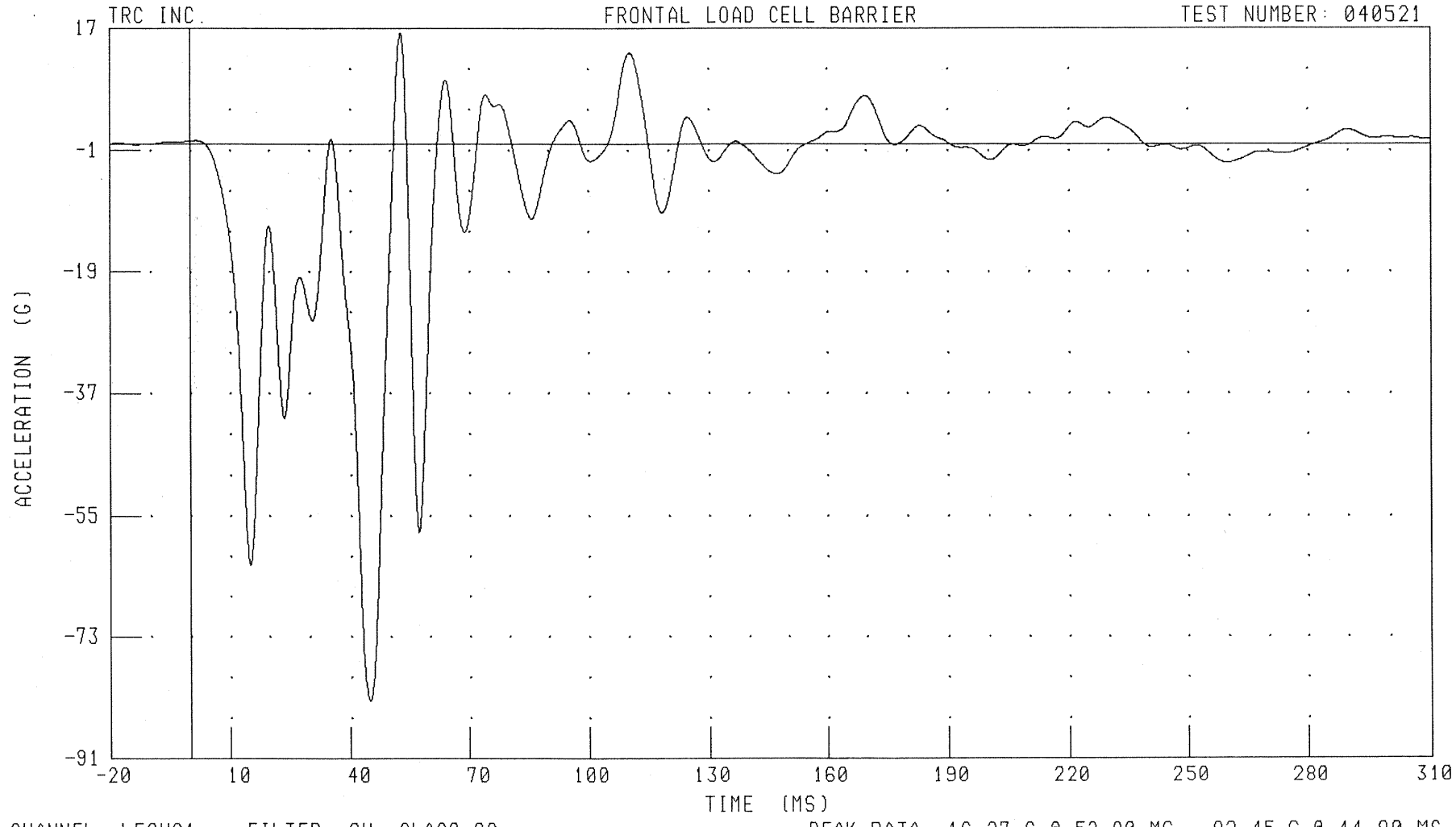
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
ENGINE BOTTOM X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
60
50
40
30
20
10
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: EBXD1
FILTER: CH. CLASS 180
PEAK DATA: 577.25 MM @ 62.20 MS; 0.00 MM @ 0.00 MS

040521

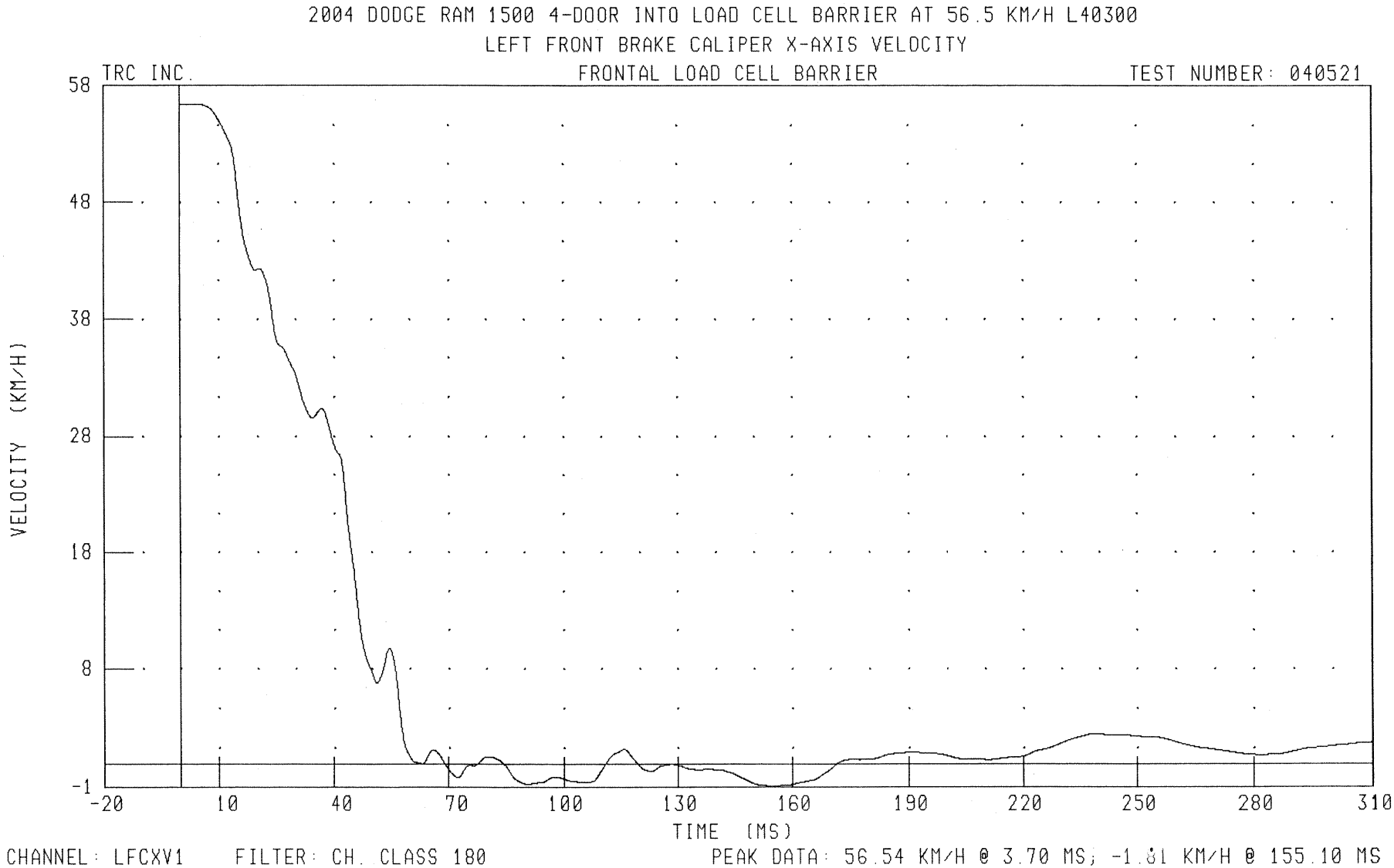
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

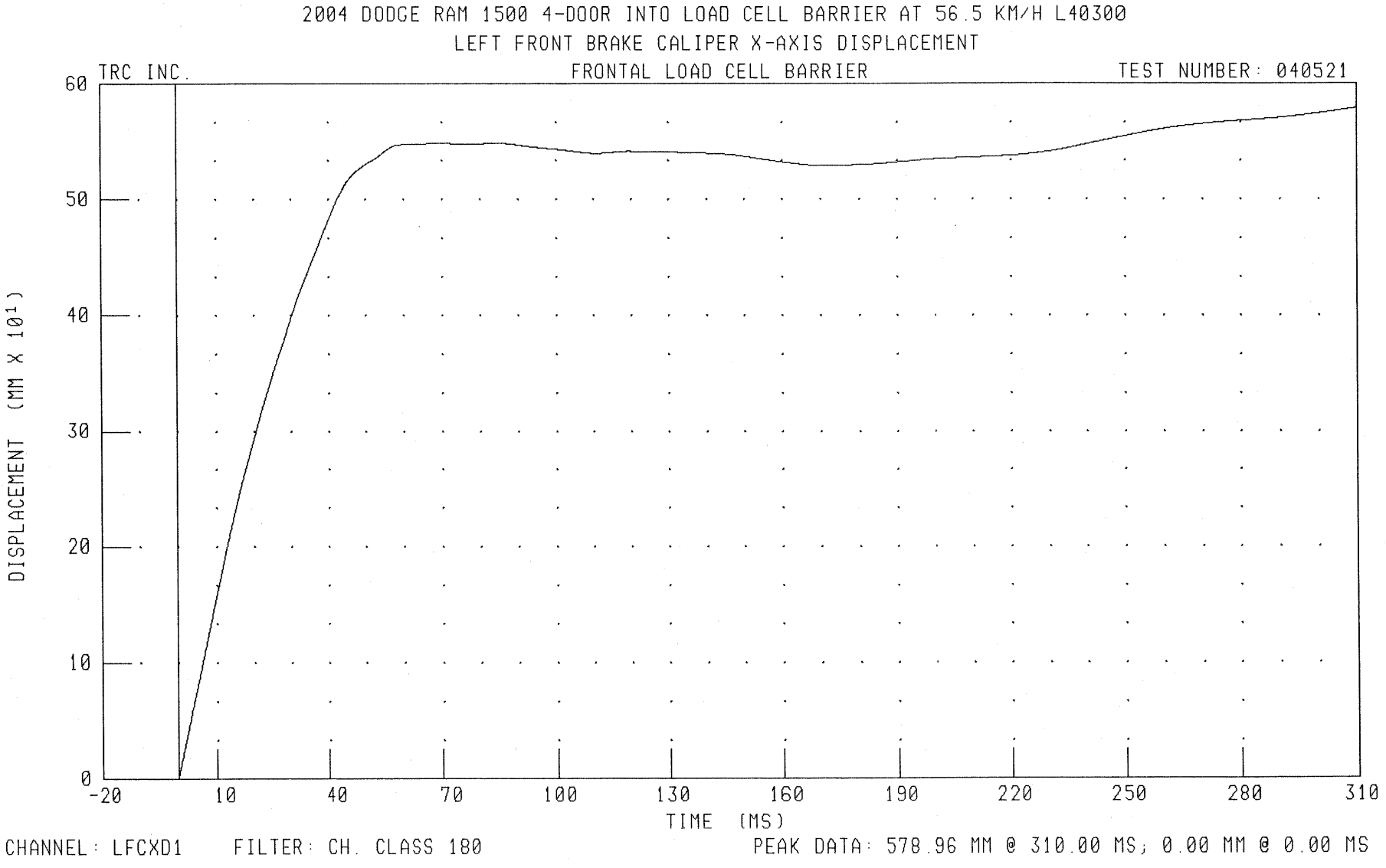
LEFT FRONT BRAKE CALIPER X-AXIS ACCELERATION

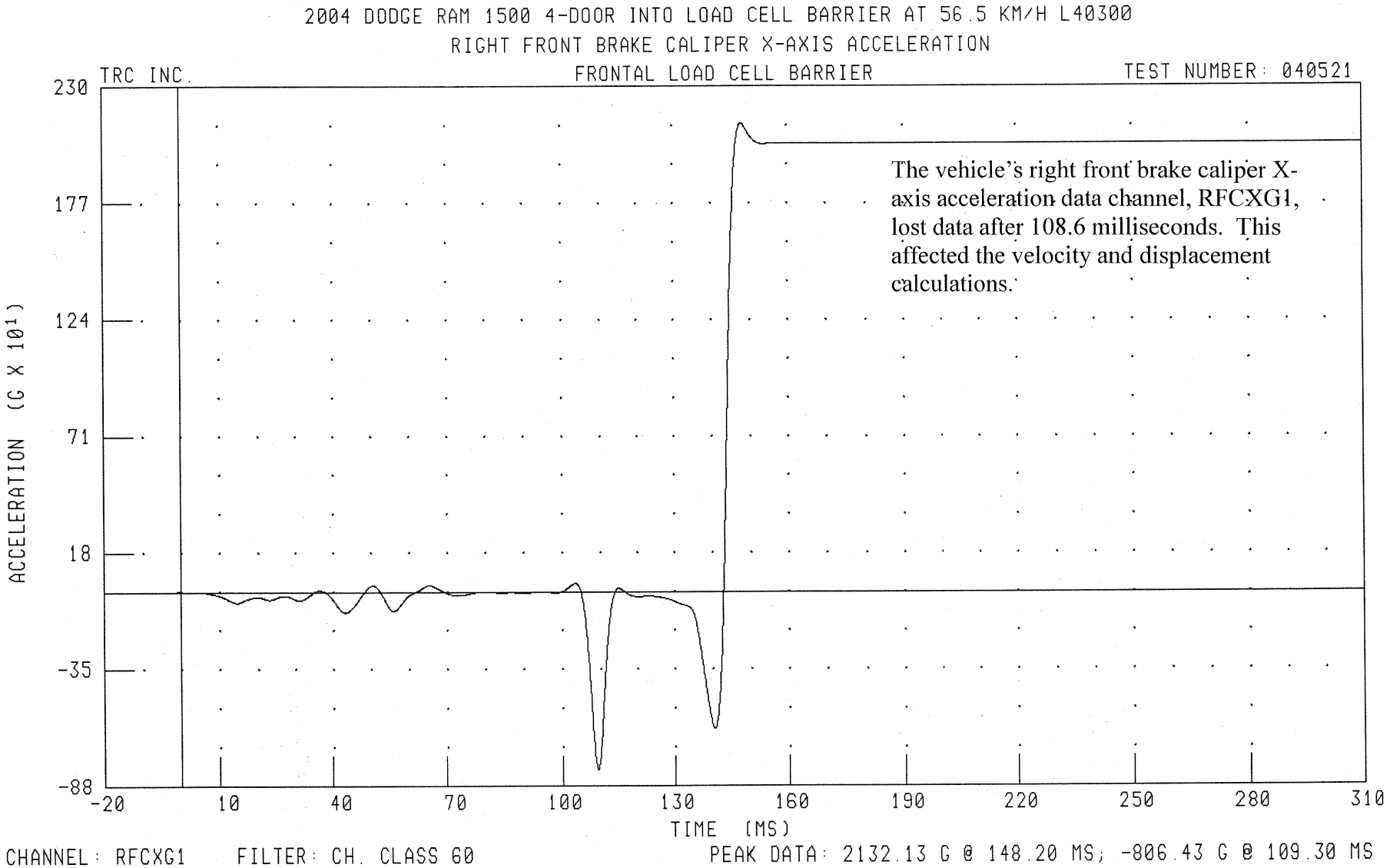


CHANNEL: LFCXG1 FILTER: CH. CLASS 60 PEAK DATA: 16.27 G @ 52.80 MS; -82.45 G @ 44.90 MS

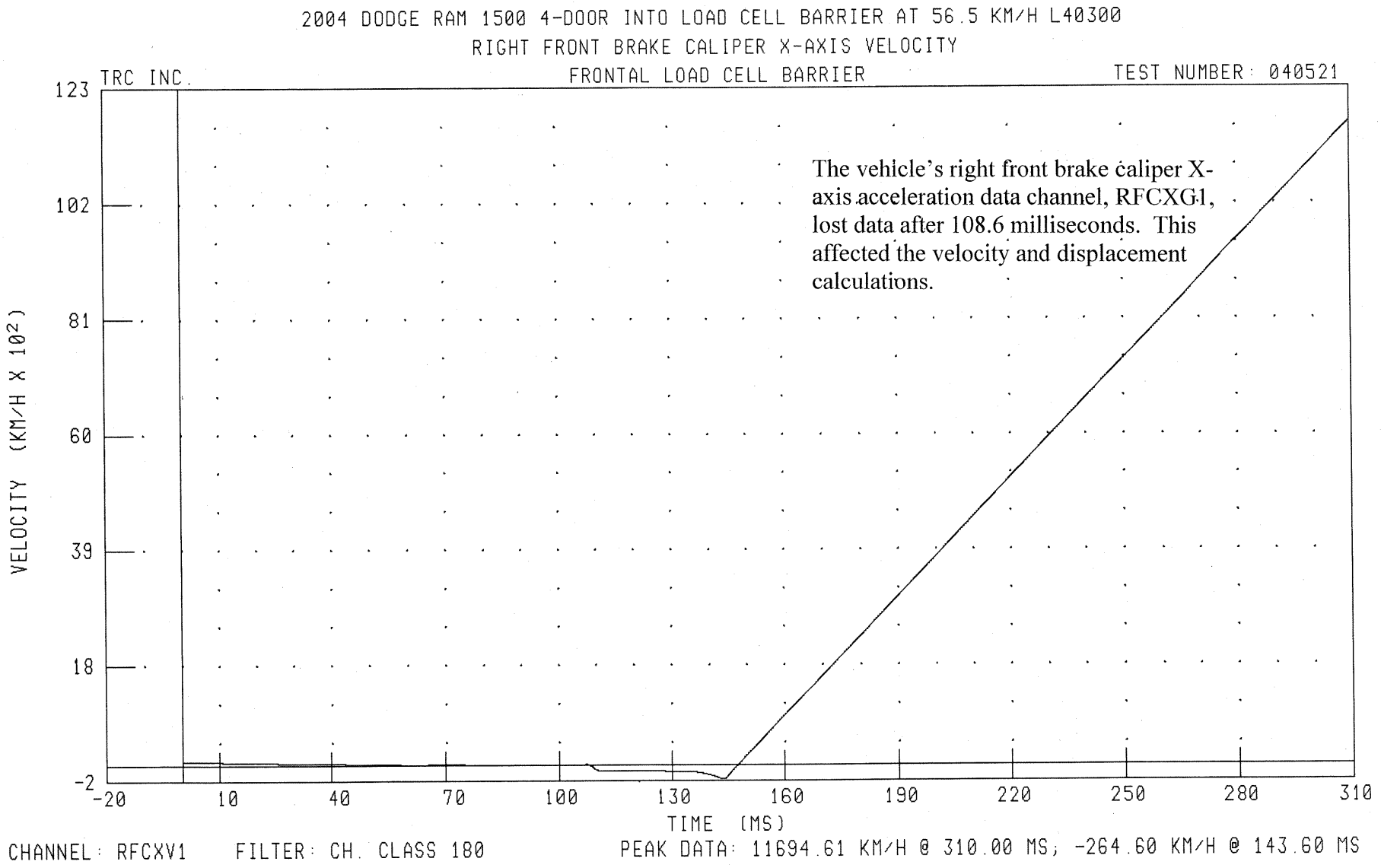
040521

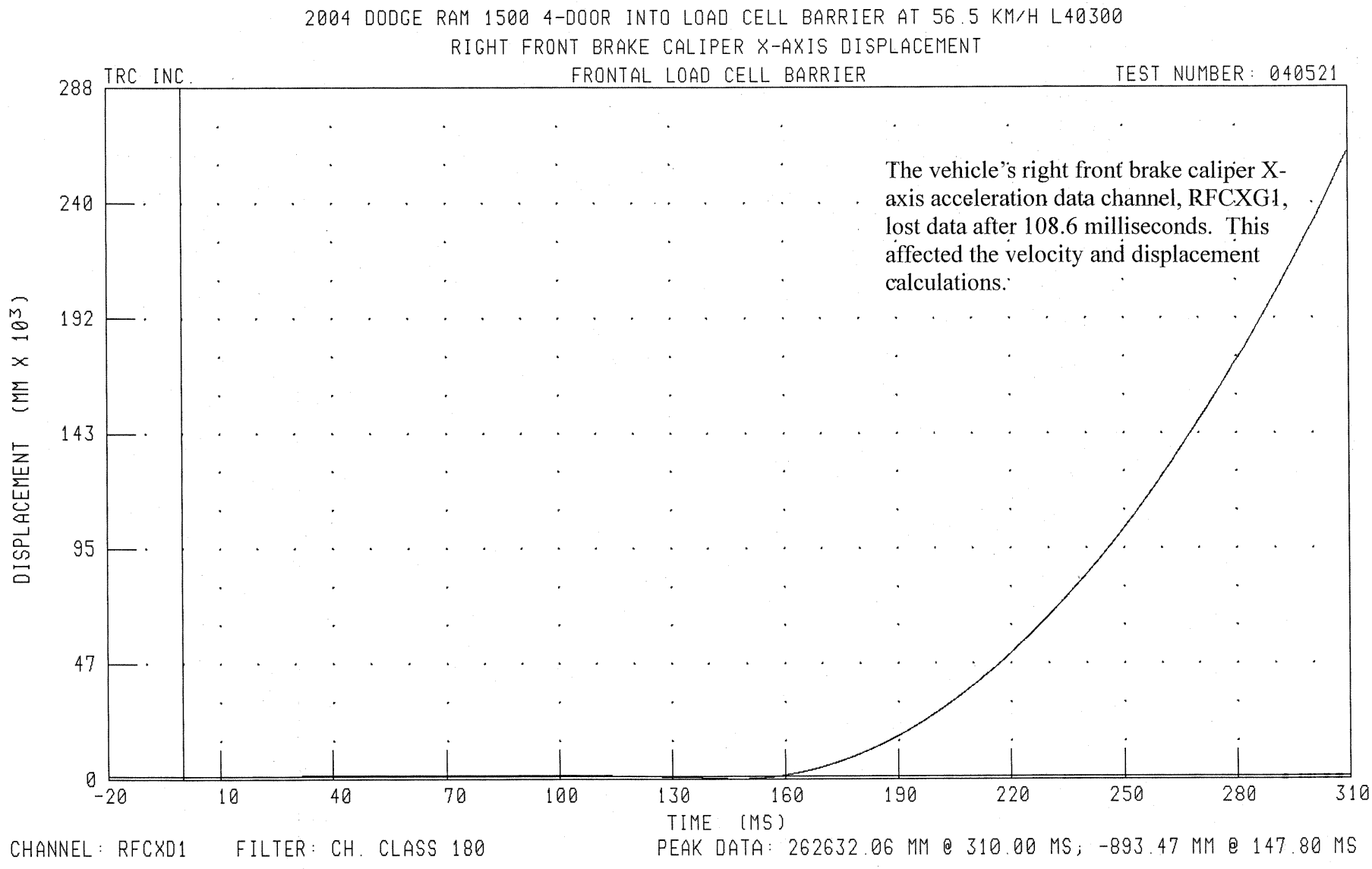

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT FRONT BRAKE CALIPER X-AXIS VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
58
48
38
28
18
8
-1
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LFCXV1
FILTER: CH. CLASS 180
PEAK DATA: 56.54 KM/H @ 3.70 MS; -1.81 KM/H @ 155.10 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT FRONT BRAKE CALIPER X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10¹)
60
50
40
30
20
10
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LFCXD1
FILTER: CH. CLASS 180
PEAK DATA: 578.96 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

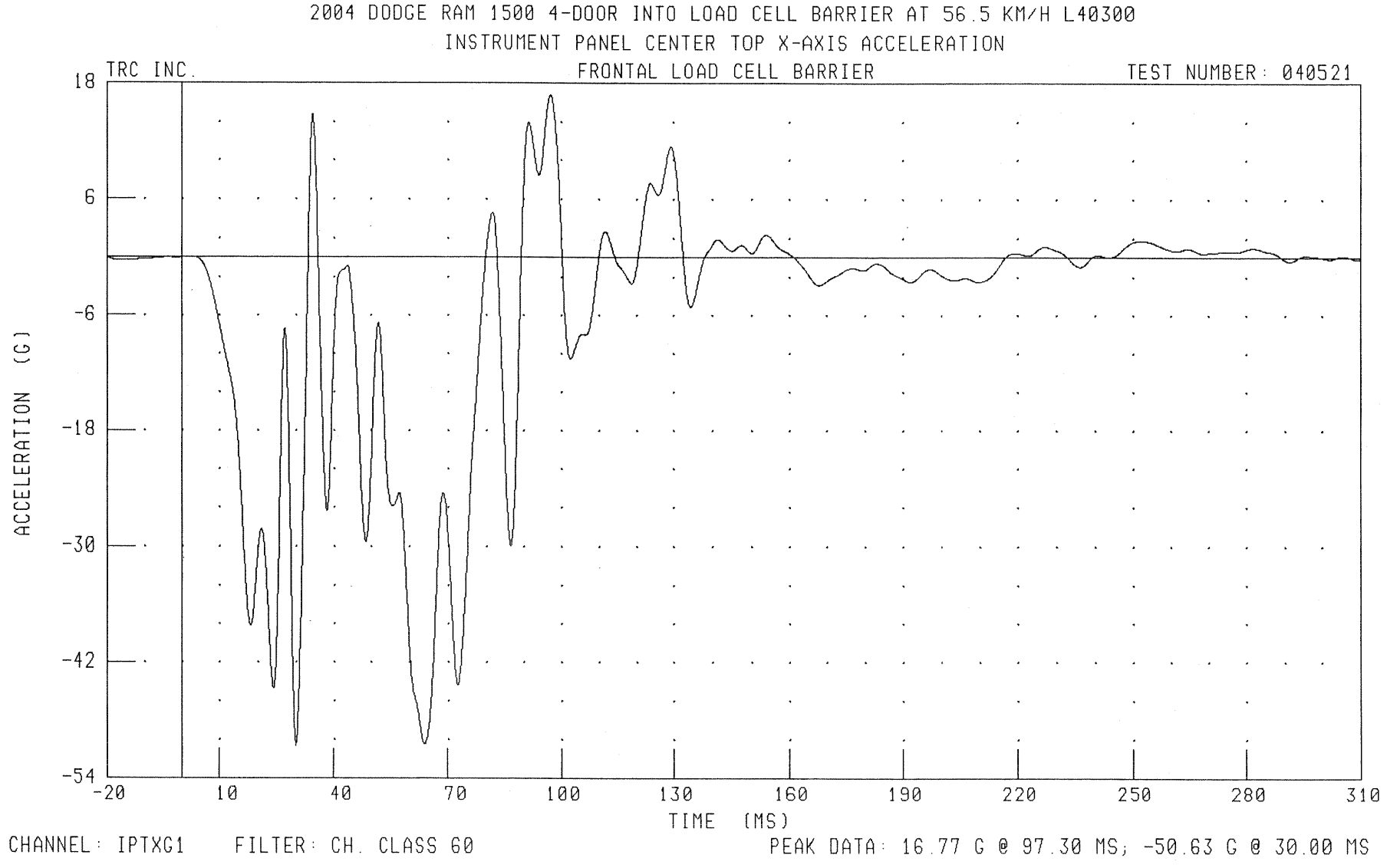

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT BRAKE CALIPER X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
The vehicle's right front brake caliper X-axis acceleration data channel, RFCXG1, lost data after 108.6 milliseconds. This affected the velocity and displacement calculations.
ACCELERATION (G X 10¹)
230
177
124
71
18
-35
-88
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RFCXG1
FILTER: CH. CLASS 60
PEAK DATA: 2132.13 G @ 148.20 MS; -806.43 G @ 109.30 MS

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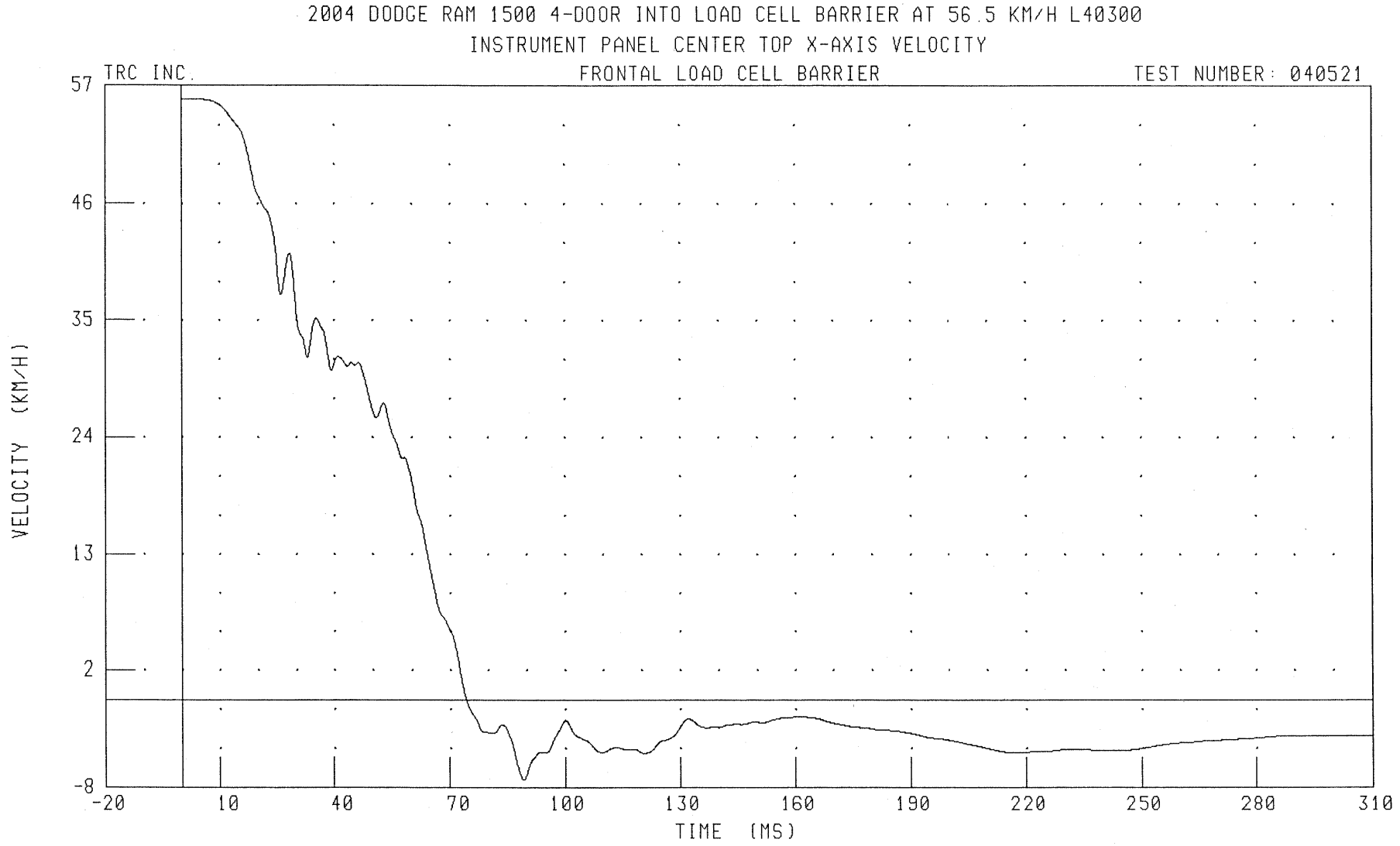

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT BRAKE CALIPER X-AXIS VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
The vehicle's right front brake caliper X-axis acceleration data channel, RFCXG1, lost data after 108.6 milliseconds. This affected the velocity and displacement calculations.
VELOCITY (KM/H X 10²)
123
102
81
60
39
18
-2
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RFCXV1
FILTER: CH. CLASS 180
PEAK DATA: 11694.61 KM/H @ 310.00 MS; -264.60 KM/H @ 143.60 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT FRONT BRAKE CALIPER X-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10³)
288
240
192
143
95
47
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
The vehicle's right front brake caliper X-axis acceleration data channel, RFCXG1, lost data after 108.6 milliseconds. This affected the velocity and displacement calculations.
CHANNEL: RFCXD1
FILTER: CH. CLASS 180
PEAK DATA: 262632.06 MM @ 310.00 MS; -893.47 MM @ 147.80 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
INSTRUMENT PANEL CENTER TOP X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G)
18
6
-6
-18
-30
-42
-54
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: IPTXG1
FILTER: CH. CLASS 60
PEAK DATA: 16.77 G @ 97.30 MS; -50.63 G @ 30.00 MS

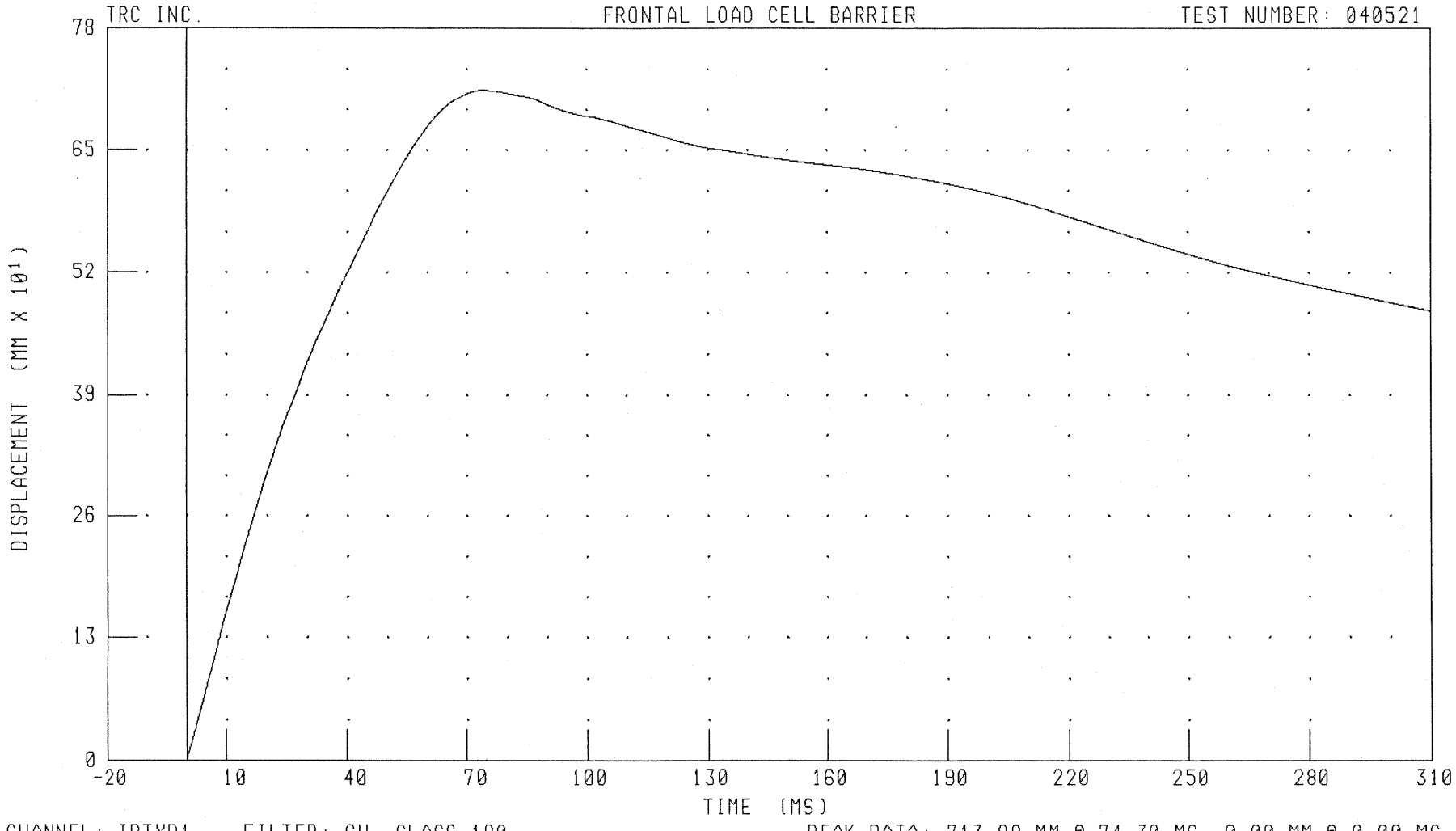
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
INSTRUMENT PANEL CENTER TOP X-AXIS VELOCITY
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
VELOCITY (KM/H)
57
46
35
24
13
2
-8
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: IPTXV1
FILTER: CH. CLASS 180
PEAK DATA: 56.50 KM/H @ 0.00 MS; -7.51 KM/H @ 89.20 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

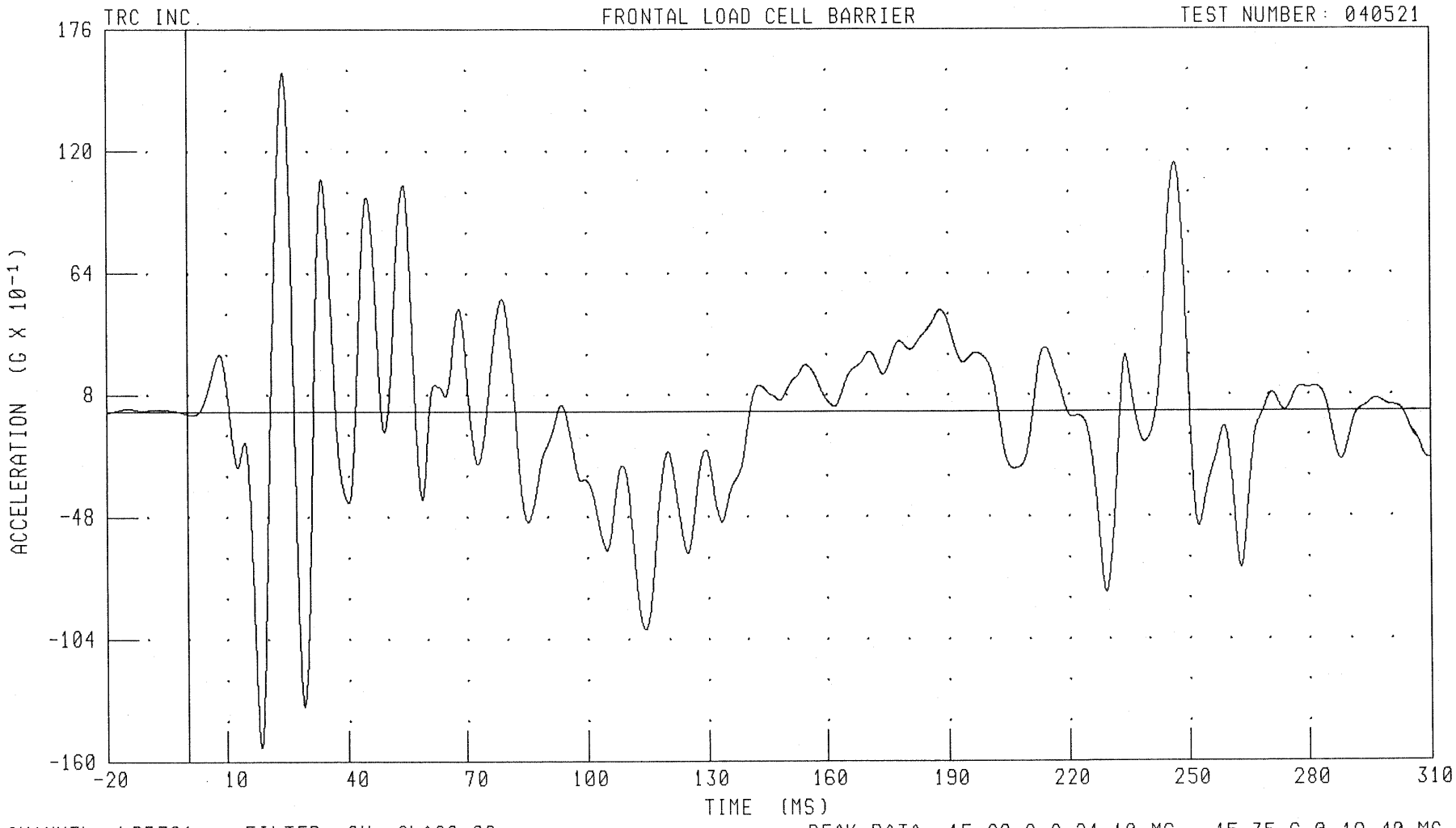
INSTRUMENT PANEL CENTER TOP X-AXIS DISPLACEMENT



CHANNEL: IPTXD1 FILTER: CH. CLASS 180 PEAK DATA: 713.88 MM @ 74.30 MS; 0.00 MM @ 0.00 MS

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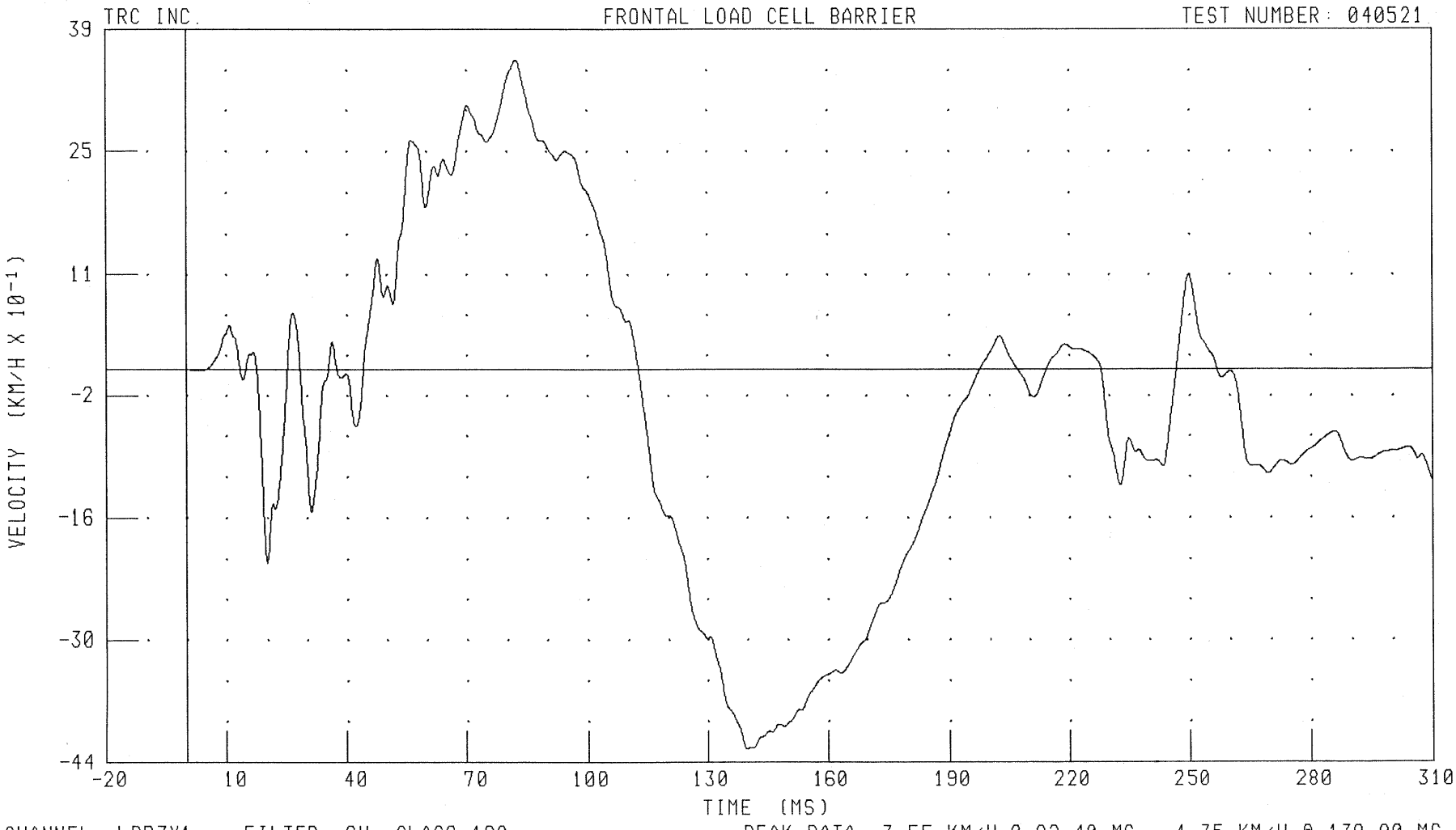
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR FLOOR PAN/DOOR SILL Z-AXIS ACCELERATION



CHANNEL: LRPZG1 FILTER: CH. CLASS 60 PEAK DATA: 15.60 G @ 24.10 MS; -15.35 G @ 18.40 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR FLOOR PAN/DOOR SILL Z-AXIS VELOCITY

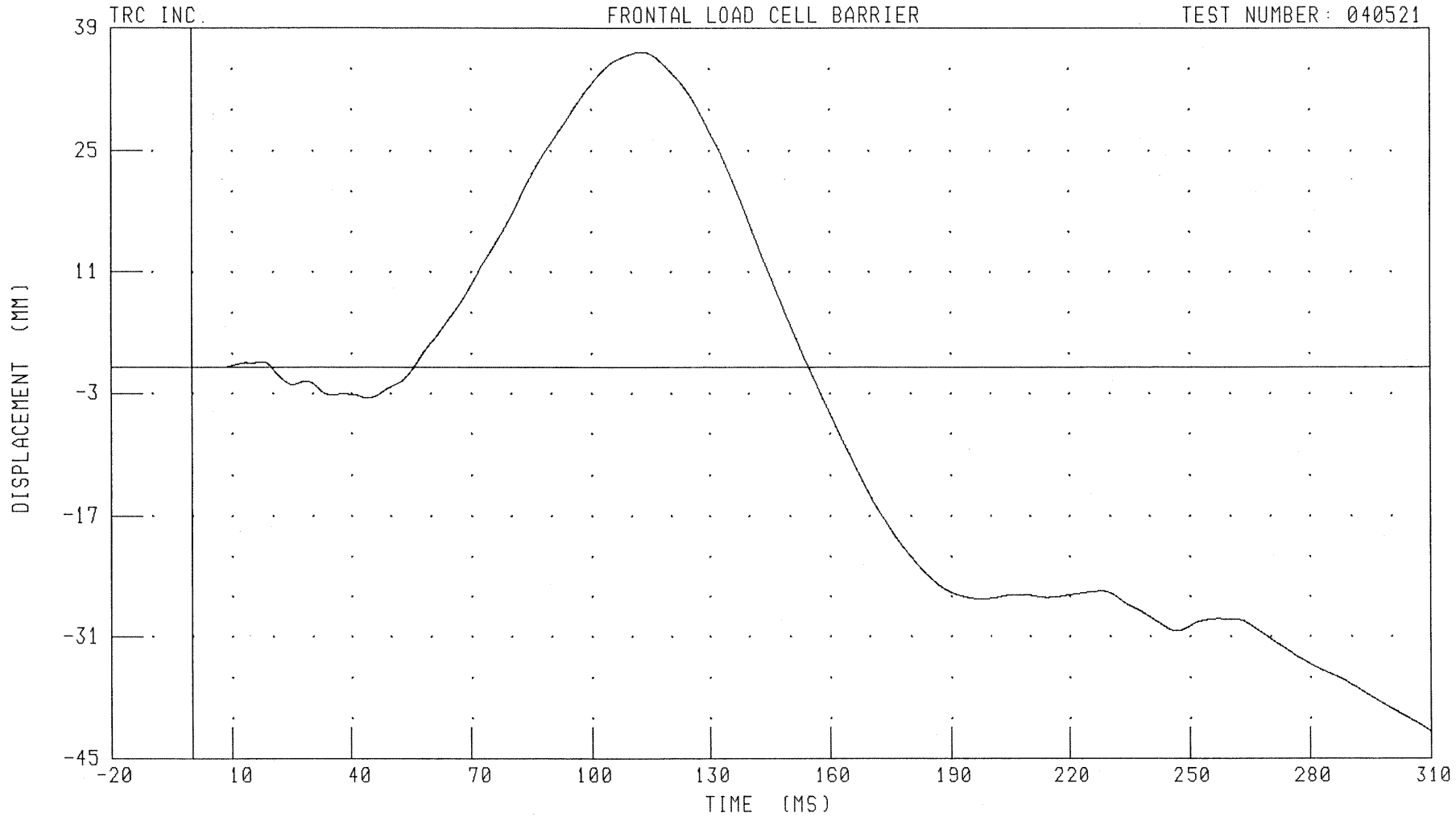


CHANNEL: LRPZV1 FILTER: CH. CLASS 180 PEAK DATA: 3.55 KM/H @ 82.40 MS; -4.35 KM/H @ 139.80 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

LEFT REAR FLOOR PAN/DOOR SILL Z-AXIS DISPLACEMENT



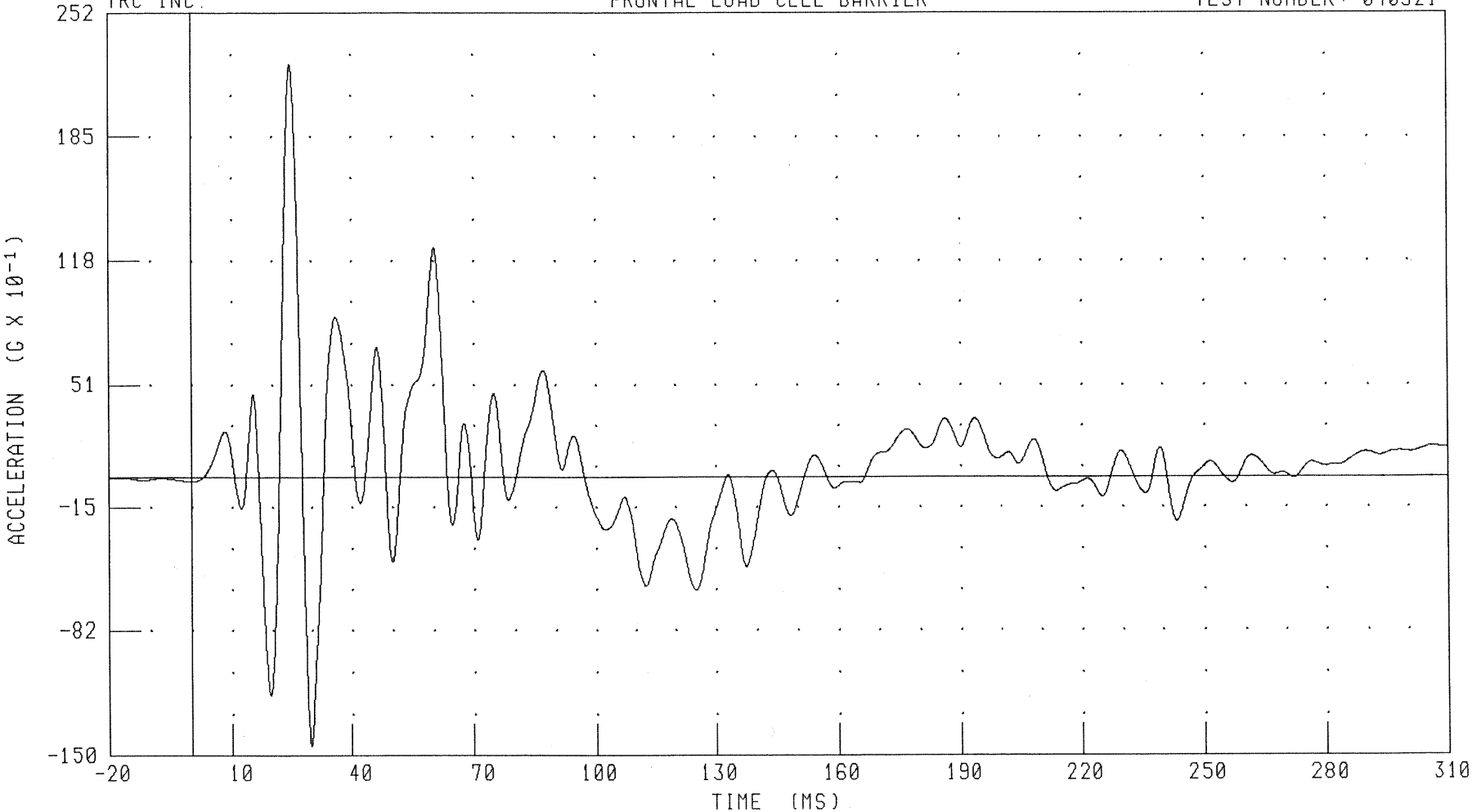
CHANNEL: LRPZD1 FILTER: CH. CLASS 180 PEAK DATA: 36.24 MM @ 112.80 MS; -42.00 MM @ 310.00 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT REAR FLOOR PAN/DOOR SILL Z-AXIS ACCELERATION

TRC INC. FRONTAL LOAD CELL BARRIER TEST NUMBER: 040521

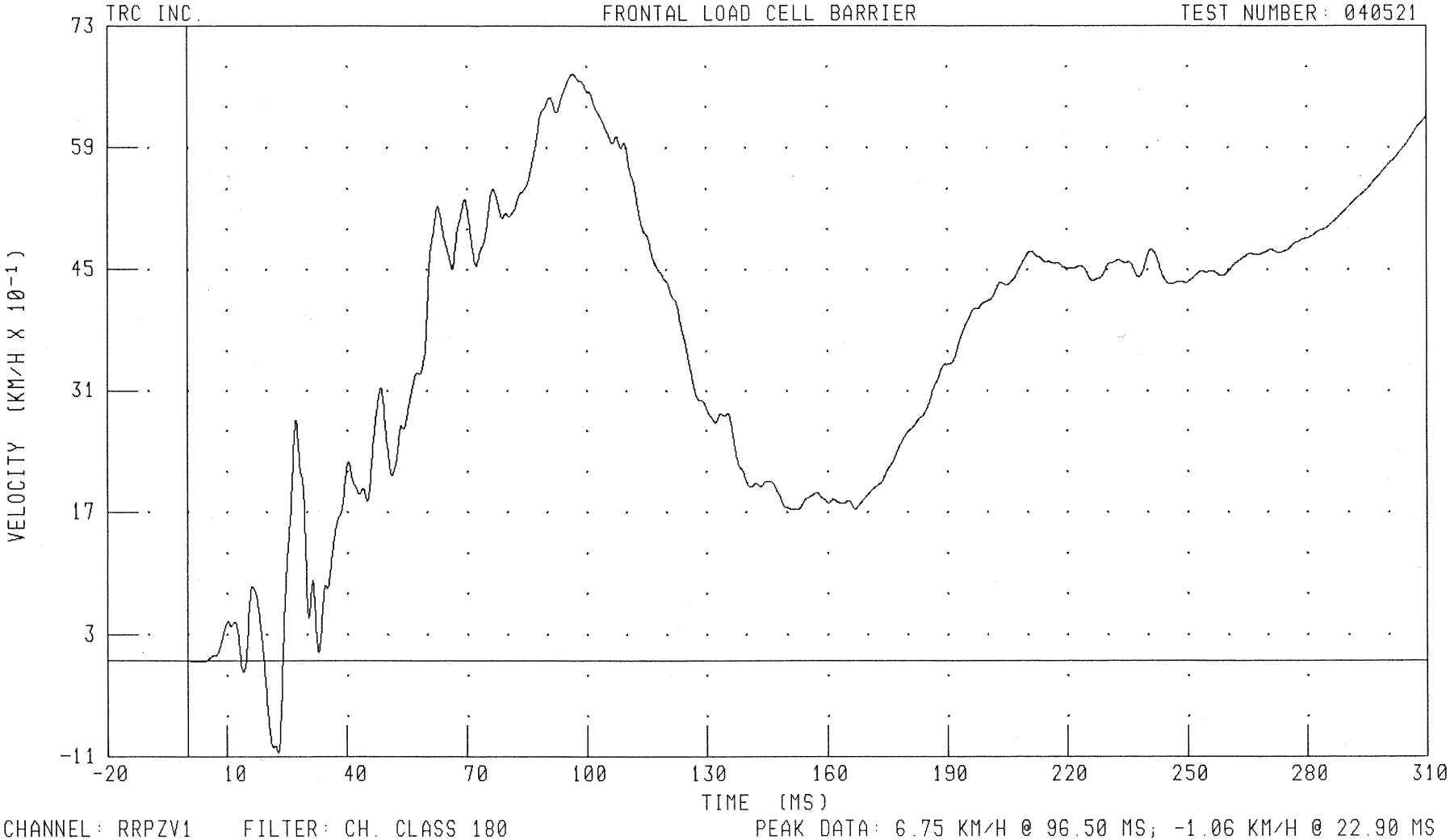


CHANNEL: RRPZG1 FILTER: CH. CLASS 60 PEAK DATA: 22.41 G @ 24.70 MS; -14.48 G @ 29.80 MS

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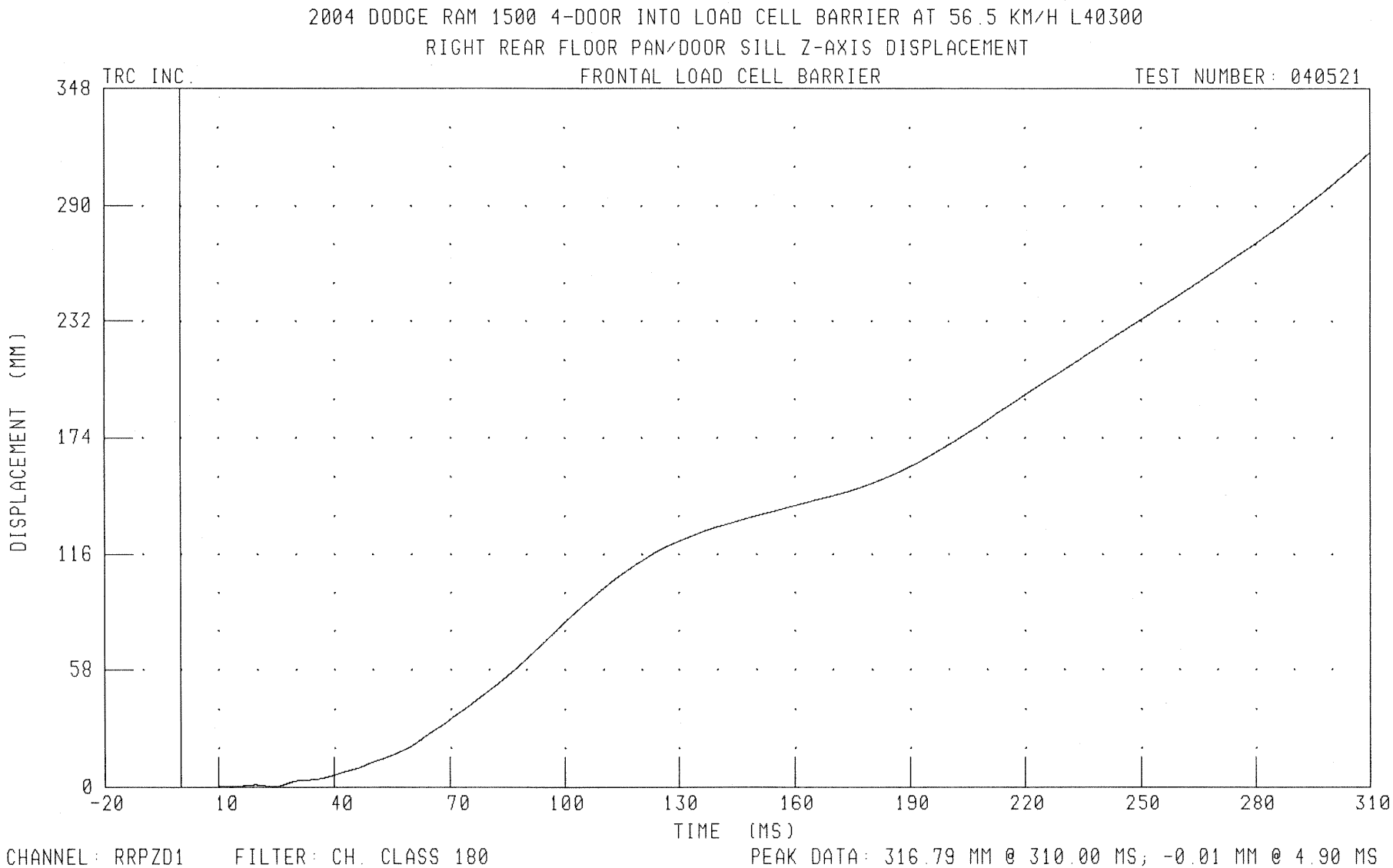
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT REAR FLOOR PAN/DOOR SILL Z-AXIS VELOCITY



CHANNEL: RRPZV1 FILTER: CH. CLASS 180 PEAK DATA: 6.75 KM/H @ 96.50 MS; -1.06 KM/H @ 22.90 MS

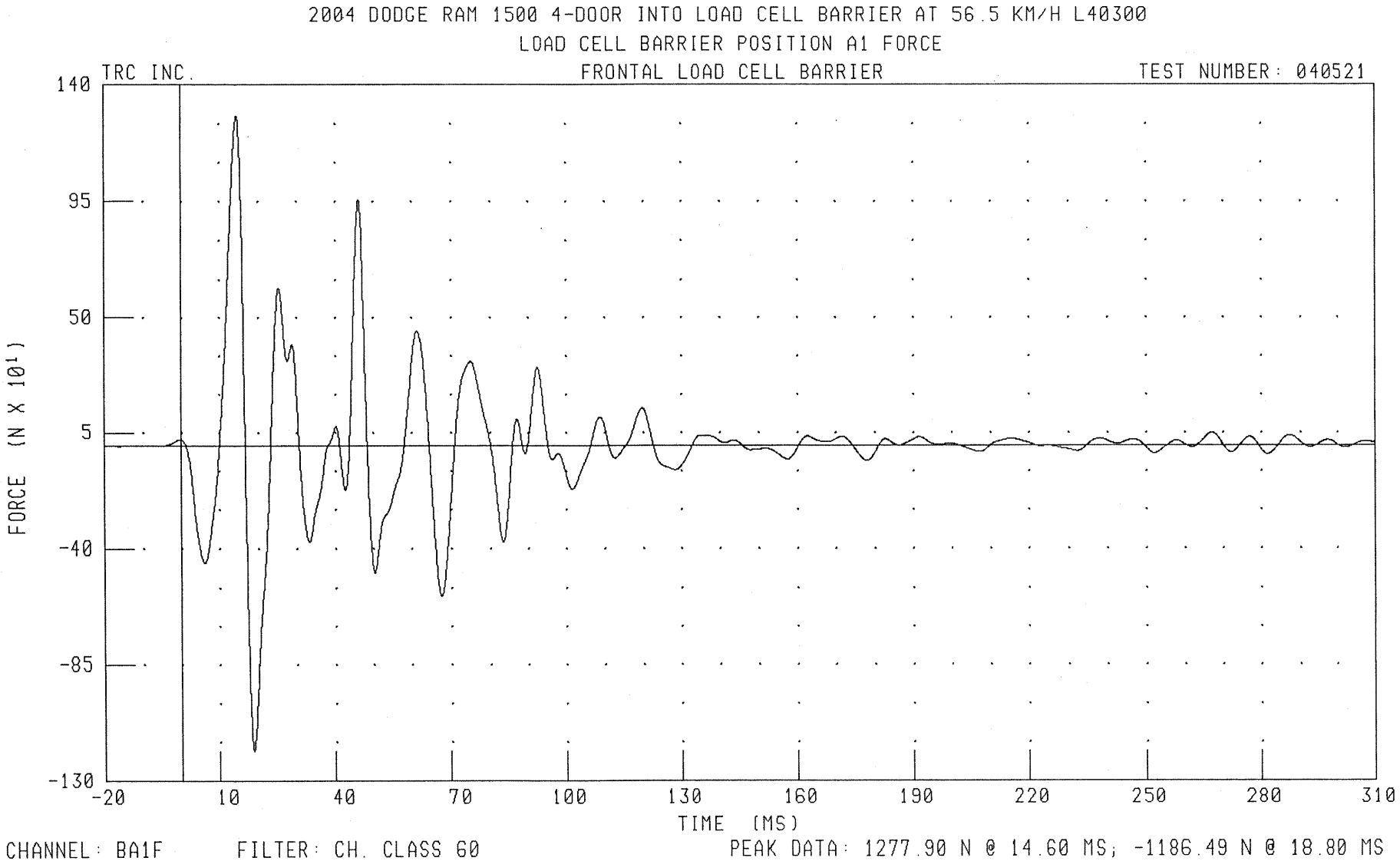
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR FLOOR PAN/DOOR SILL Z-AXIS DISPLACEMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
348
290
232
174
116
58
0
DISPLACEMENT (MM)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RRPZD1
FILTER: CH. CLASS 180
PEAK DATA: 316.79 MM @ 310.00 MS; -0.01 MM @ 4.90 MS

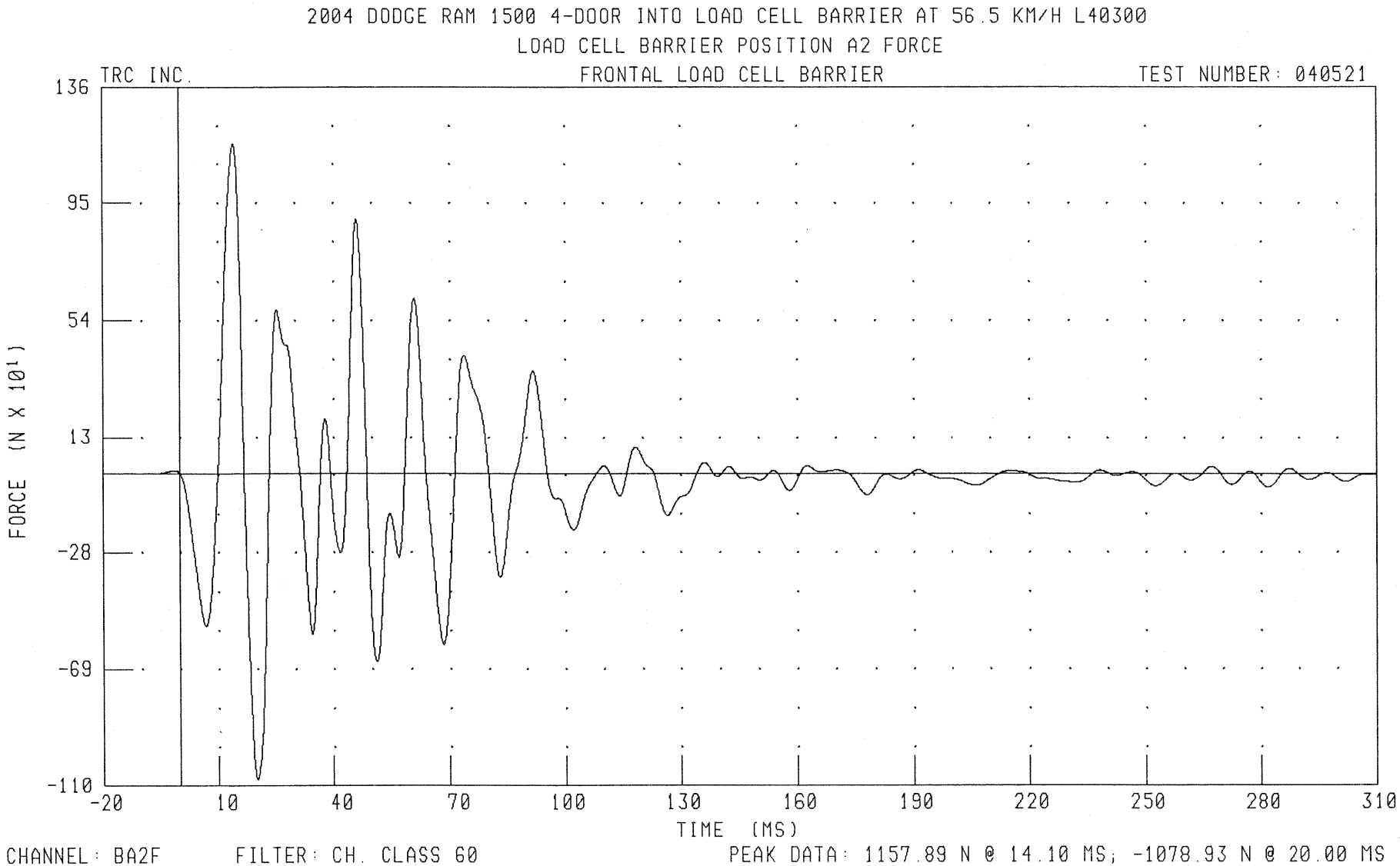
040521

Appendix C

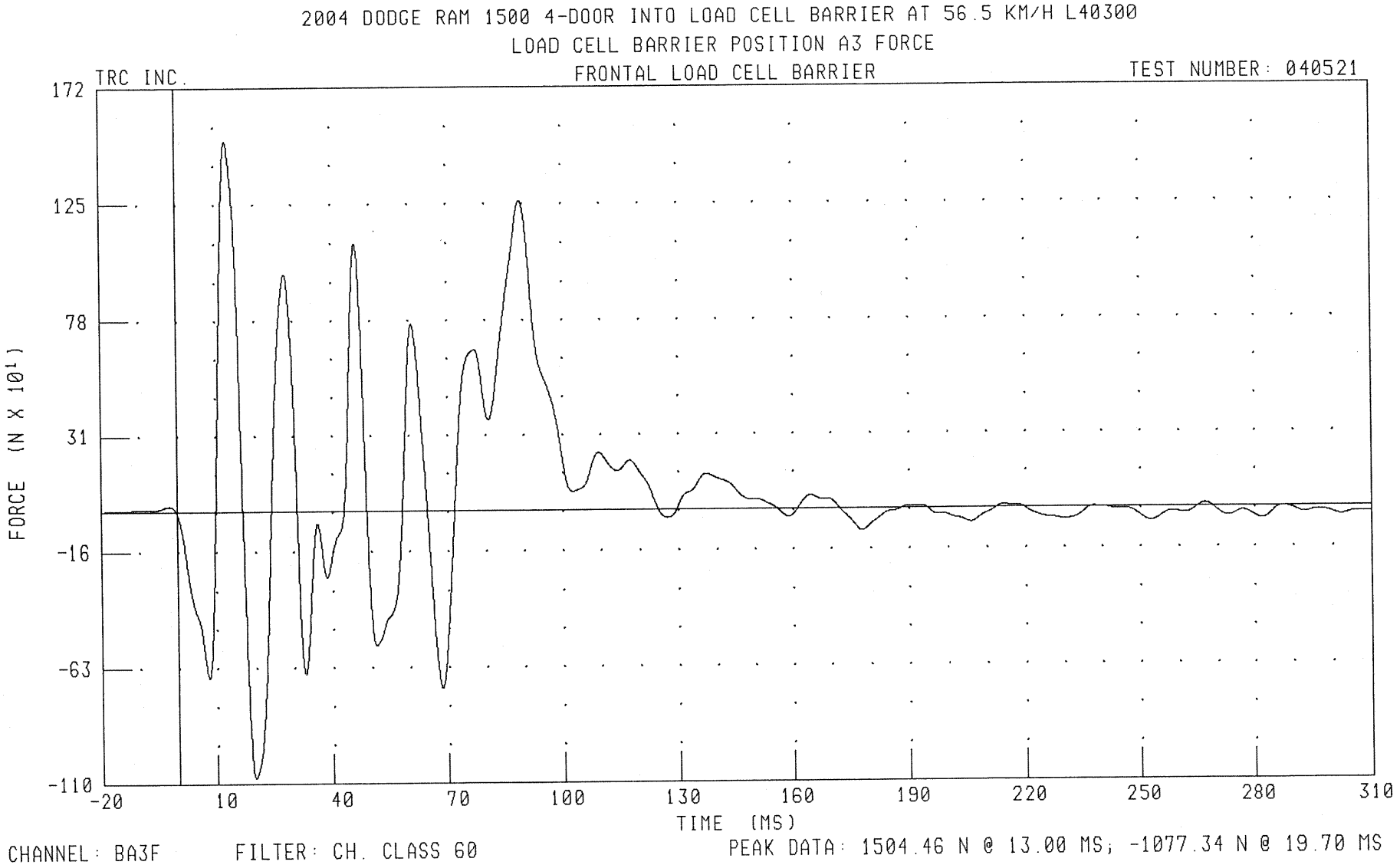
Load Cell Barrier Data Plots

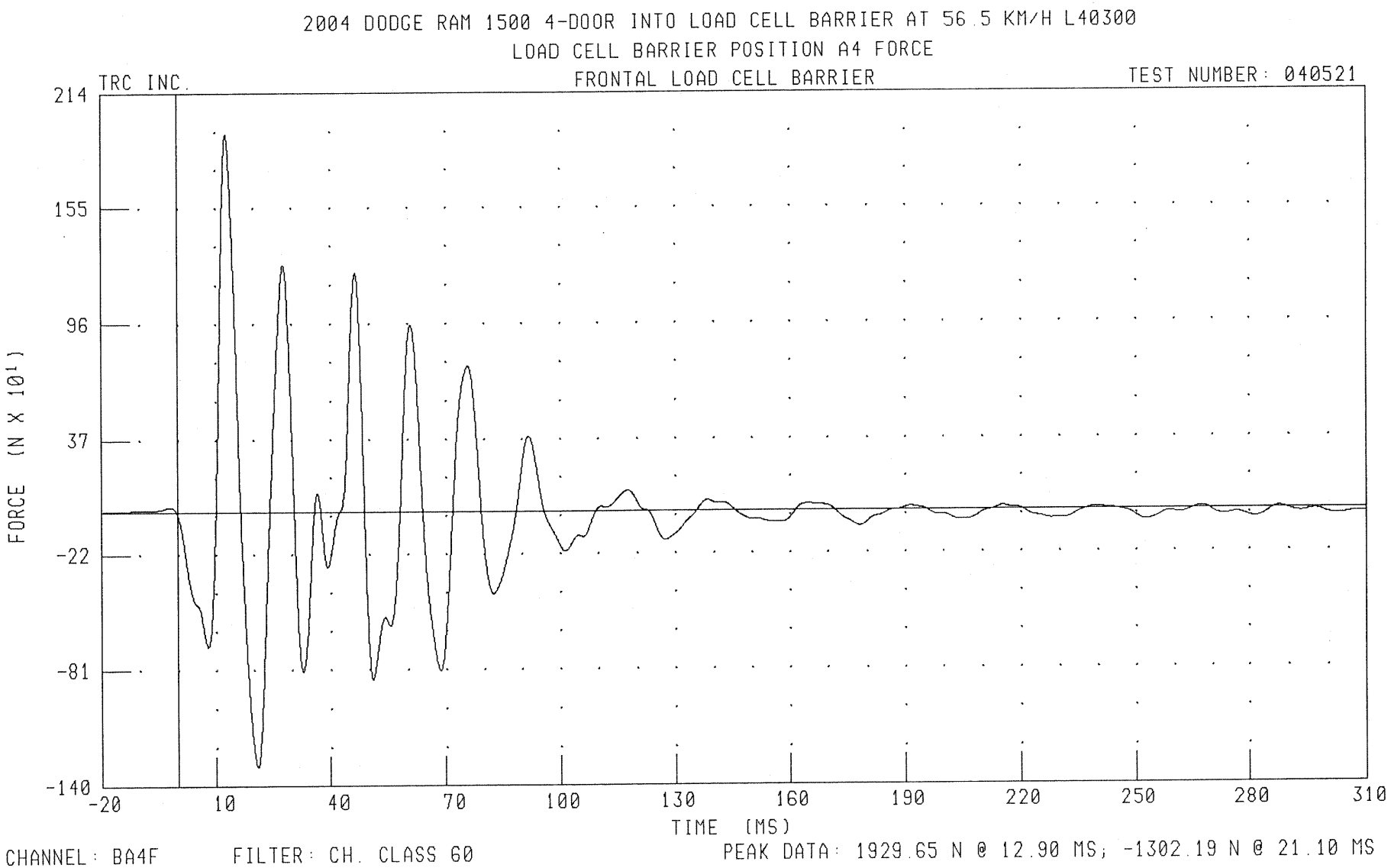

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A1 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
140
95
50
5
-40
-85
-130
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA1F
FILTER: CH. CLASS 60
PEAK DATA: 1277.90 N @ 14.60 MS; -1186.49 N @ 18.80 MS

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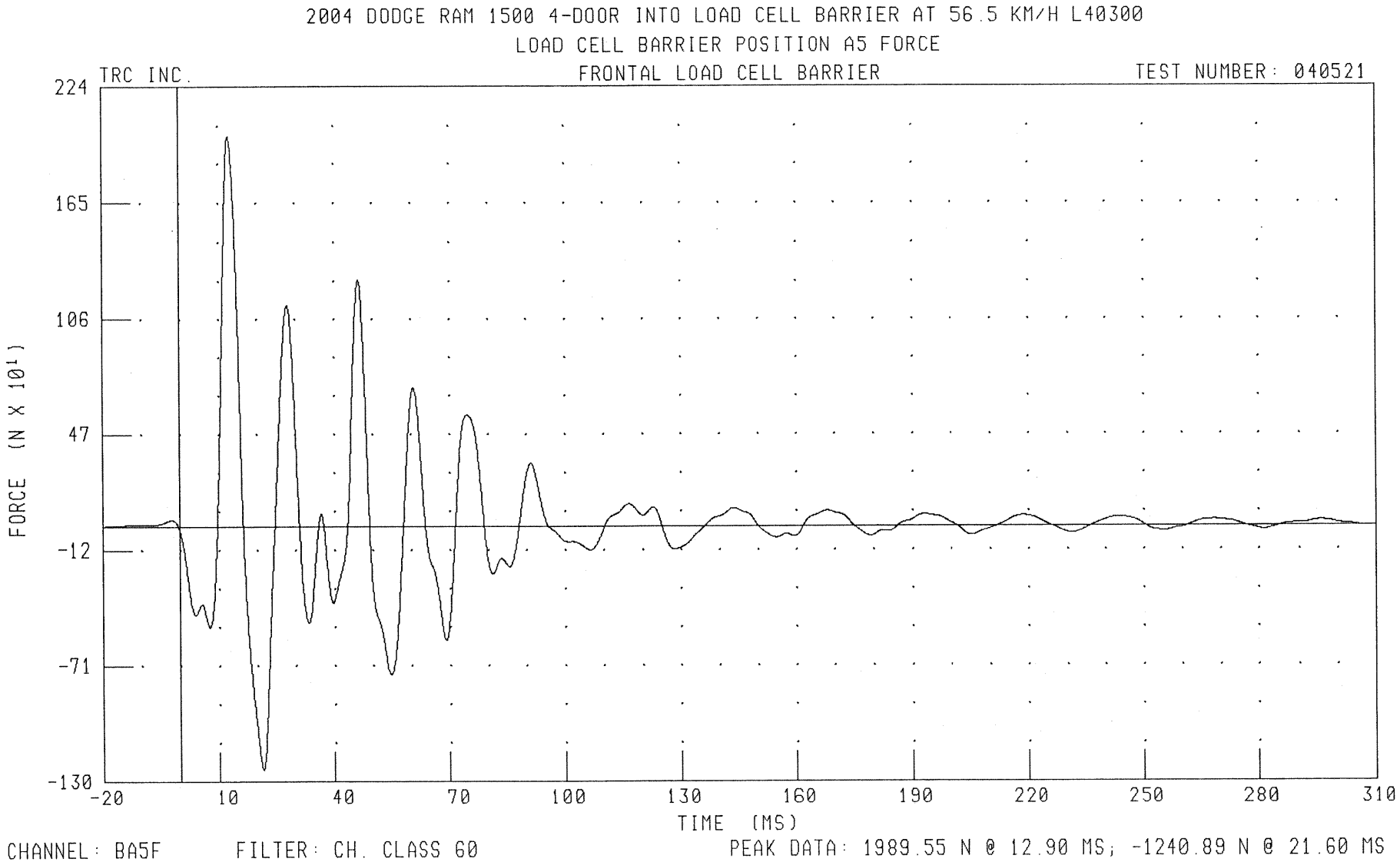

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A2 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
136
95
54
13
-28
-69
-110
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA2F
FILTER: CH. CLASS 60
PEAK DATA: 1157.89 N @ 14.10 MS; -1078.93 N @ 20.00 MS

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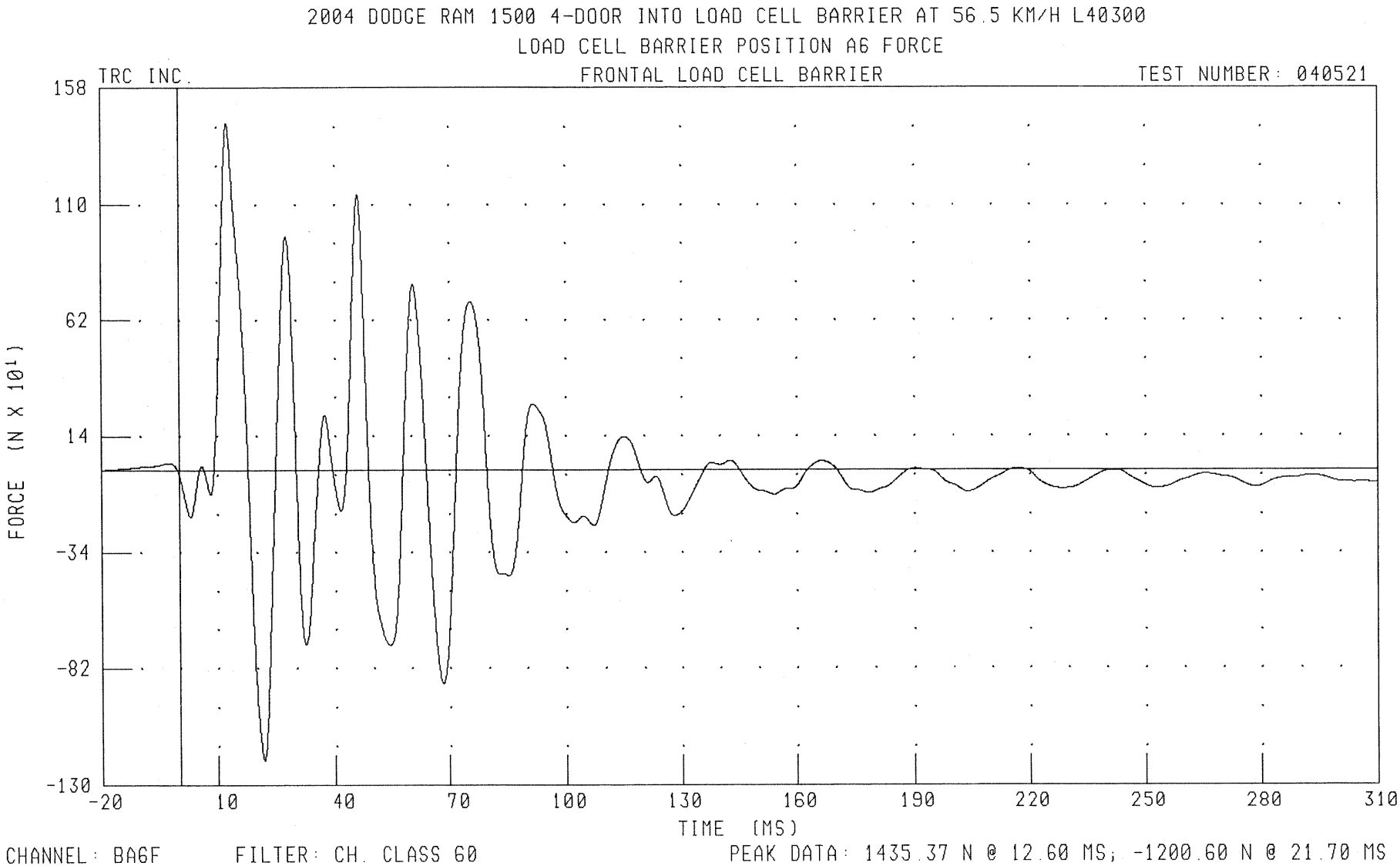

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A3 FORCE
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
172
125
78
31
-16
-63
-110
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA3F
FILTER: CH. CLASS 60
PEAK DATA: 1504.46 N @ 13.00 MS; -1077.34 N @ 19.70 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A4 FORCE
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
214
155
96
37
-22
-81
-140
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA4F
FILTER: CH. CLASS 60
PEAK DATA: 1929.65 N @ 12.90 MS; -1302.19 N @ 21.10 MS

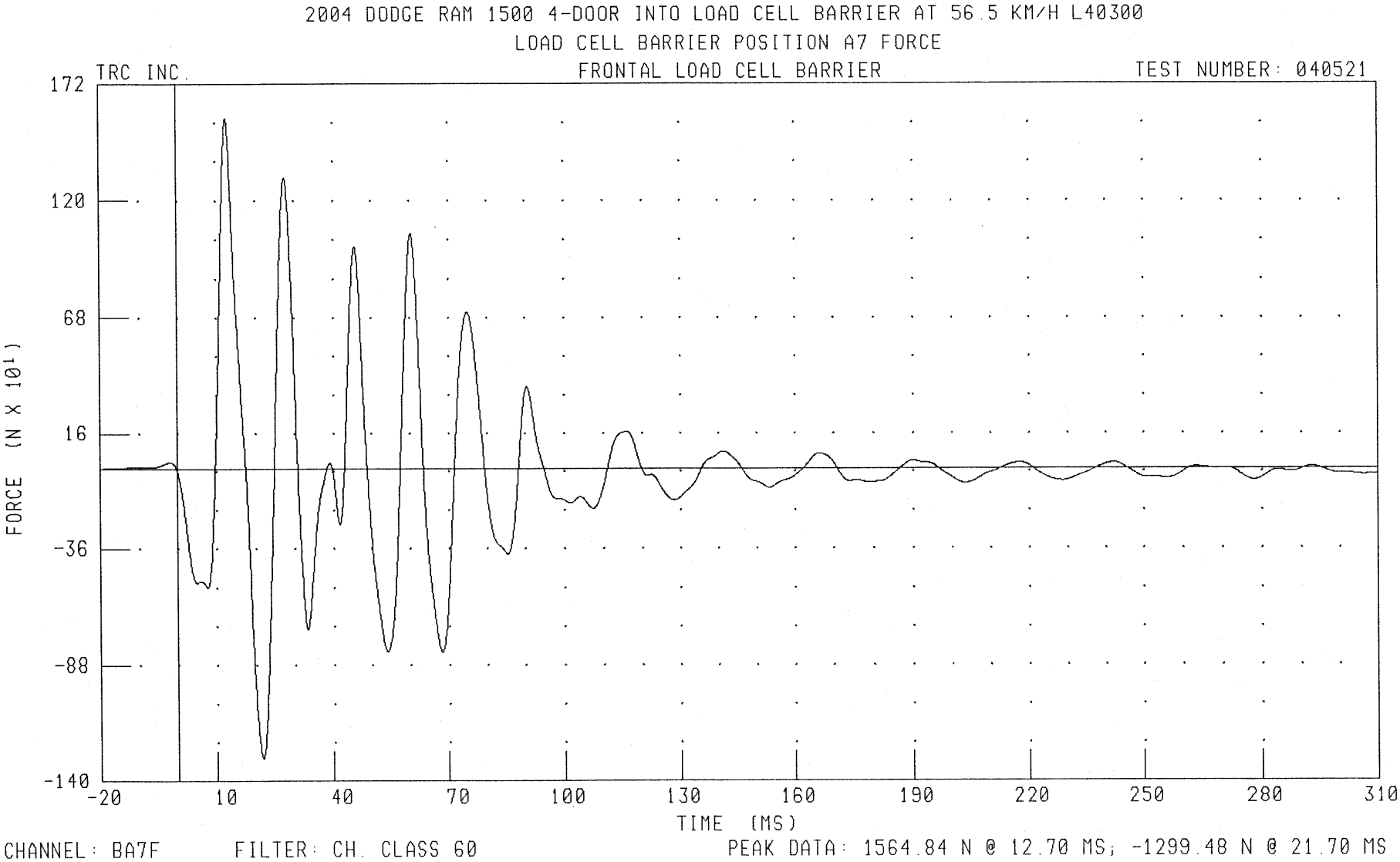
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A5 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
224
165
106
47
-12
-71
-130
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA5F
FILTER: CH. CLASS 60
PEAK DATA: 1989.55 N @ 12.90 MS; -1240.89 N @ 21.60 MS

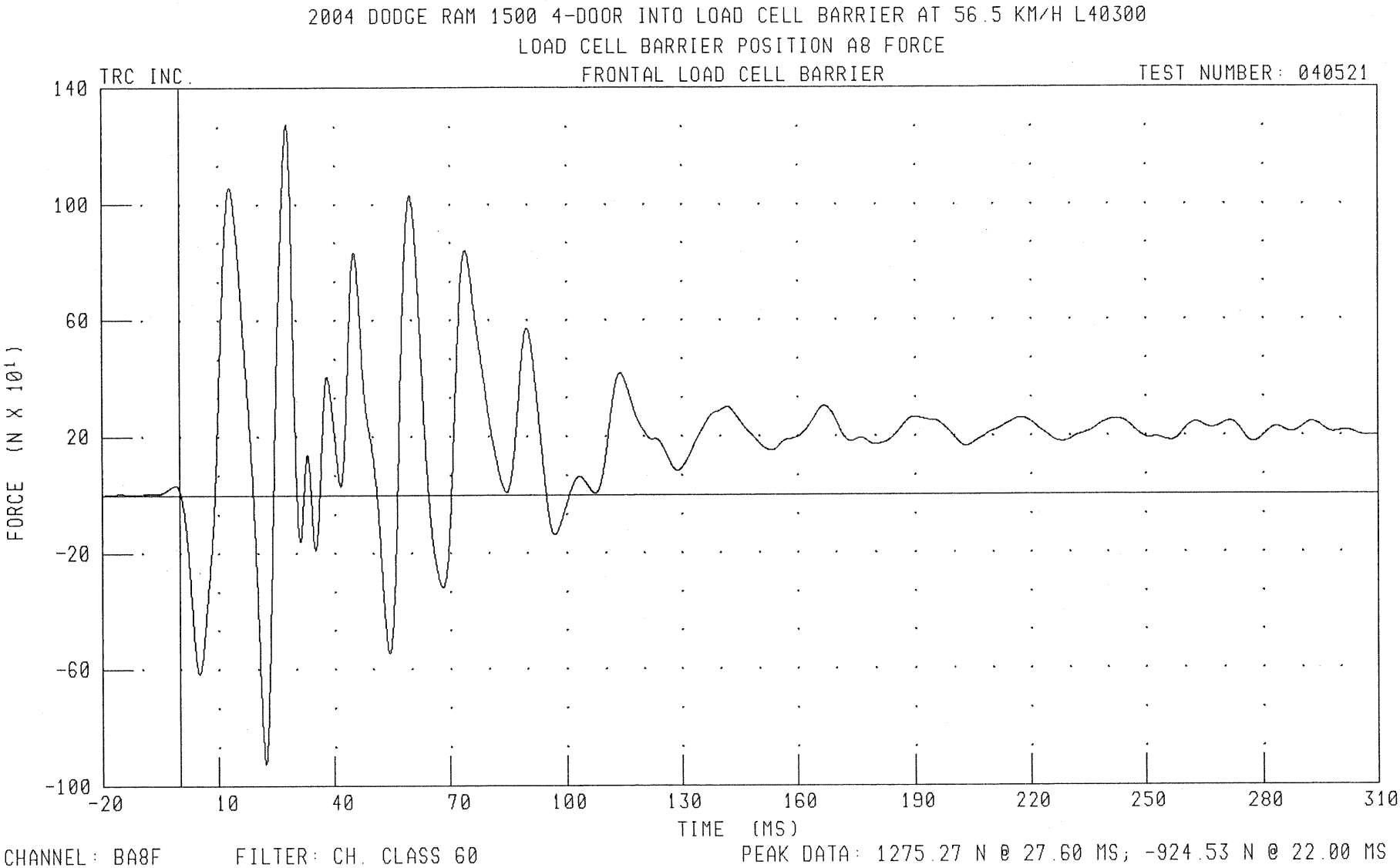
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A6 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
158
110
62
14
-34
-82
-130
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA6F
FILTER: CH. CLASS 60
PEAK DATA: 1435.37 N @ 12.60 MS; -1200.60 N @ 21.70 MS

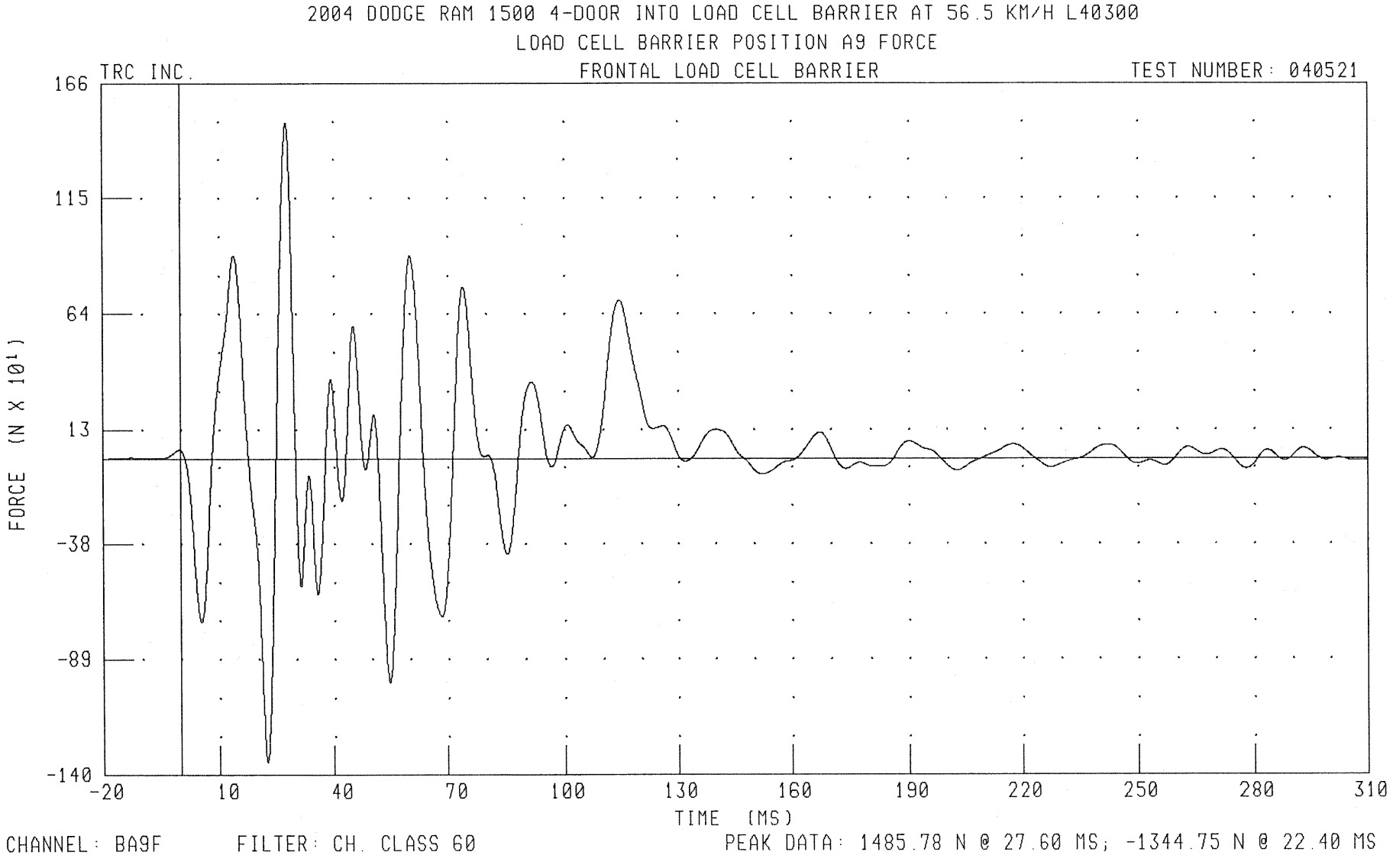
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A7 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
172
120
68
16
-36
-88
-140
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA7F
FILTER: CH. CLASS 60
PEAK DATA: 1564.84 N @ 12.70 MS; -1299.48 N @ 21.70 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A8 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
140
100
60
20
-20
-60
-100
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA8F
FILTER: CH. CLASS 60
PEAK DATA: 1275.27 N @ 27.60 MS; -924.53 N @ 22.00 MS

040521

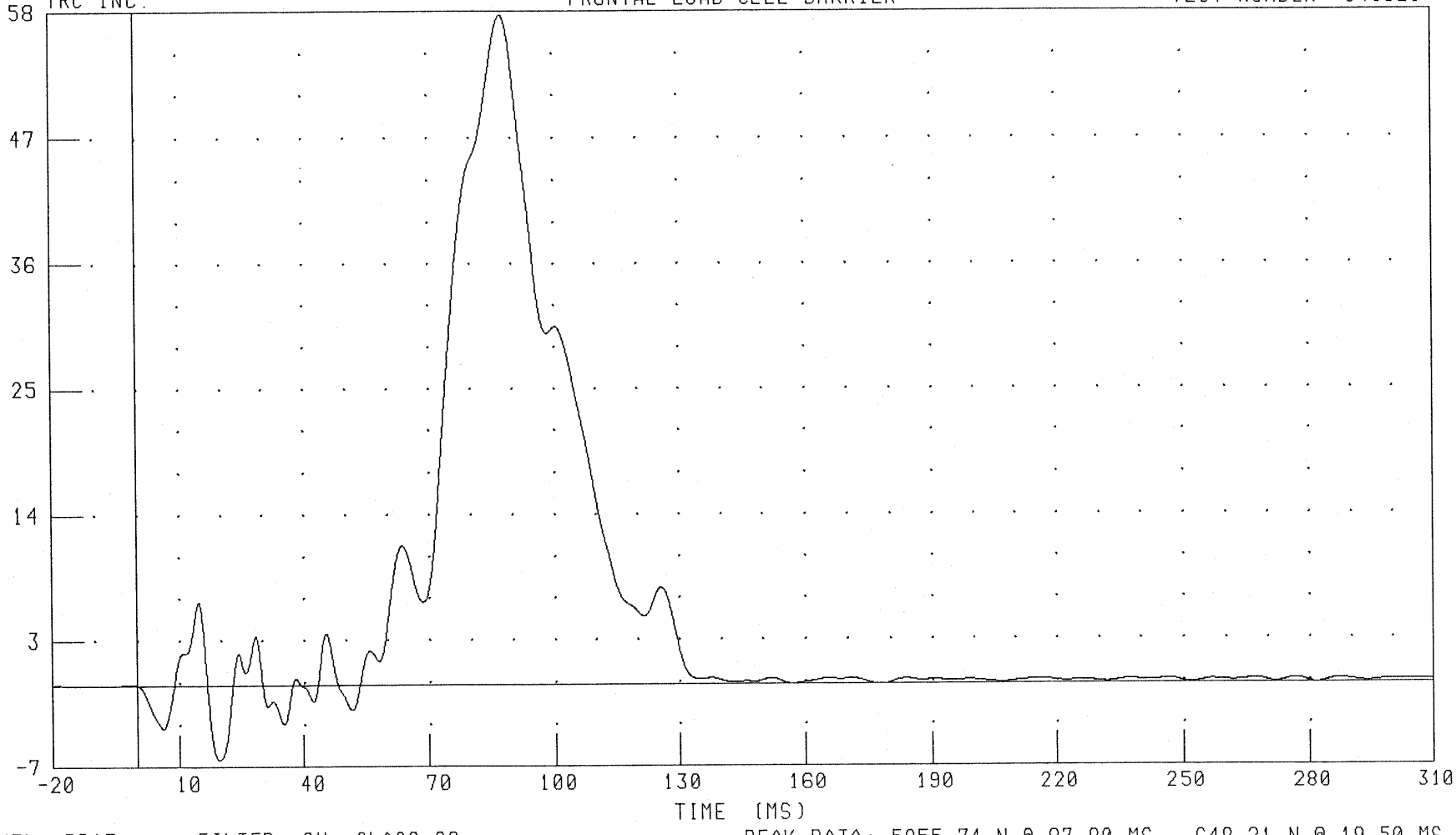

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION A9 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
166
115
64
13
-38
-89
-140
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BA9F
FILTER: CH. CLASS 60
PEAK DATA: 1485.78 N @ 27.60 MS; -1344.75 N @ 22.40 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

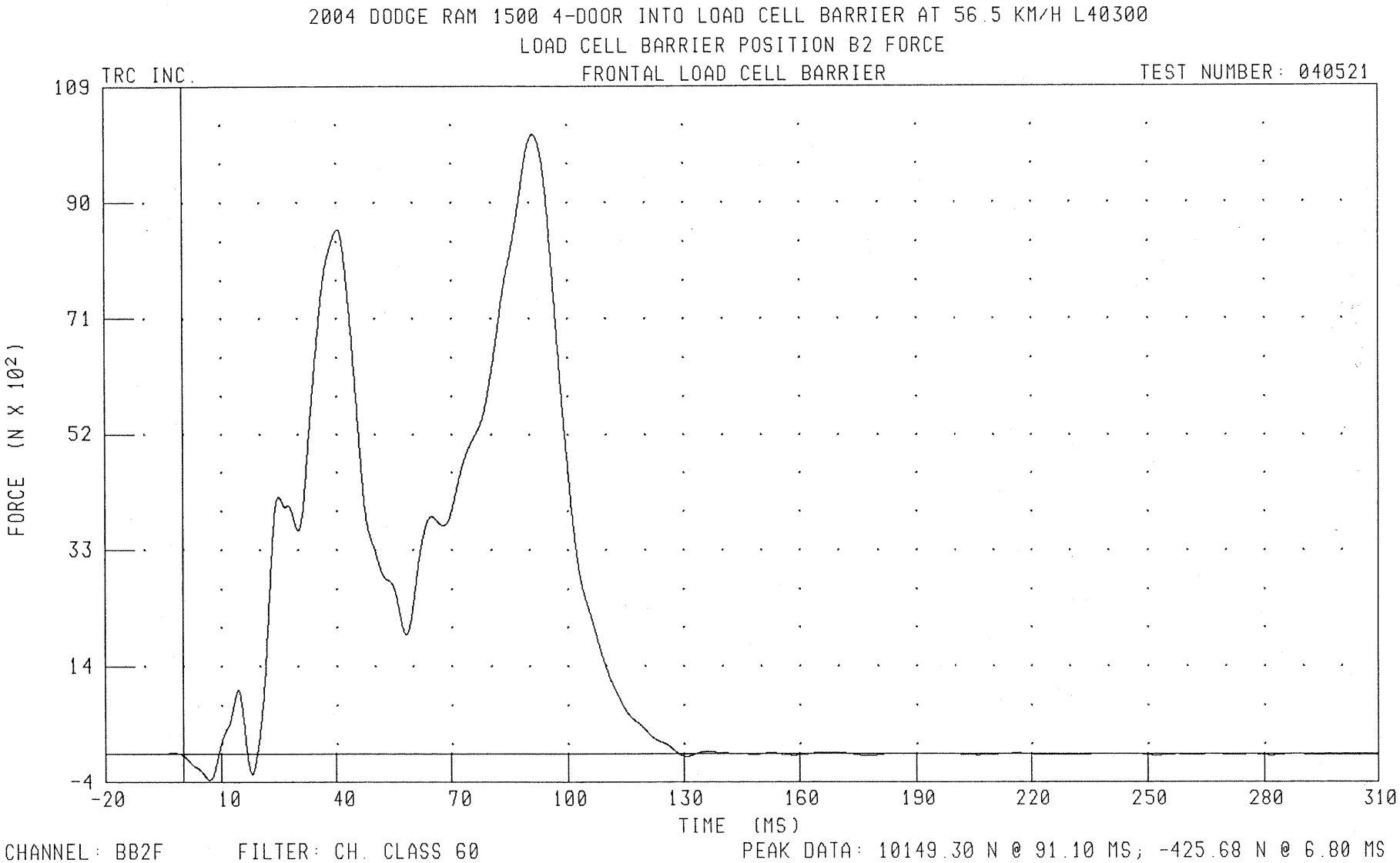
LOAD CELL BARRIER POSITION B1 FORCE

TRC INC. FRONTAL LOAD CELL BARRIER TEST NUMBER: 040521

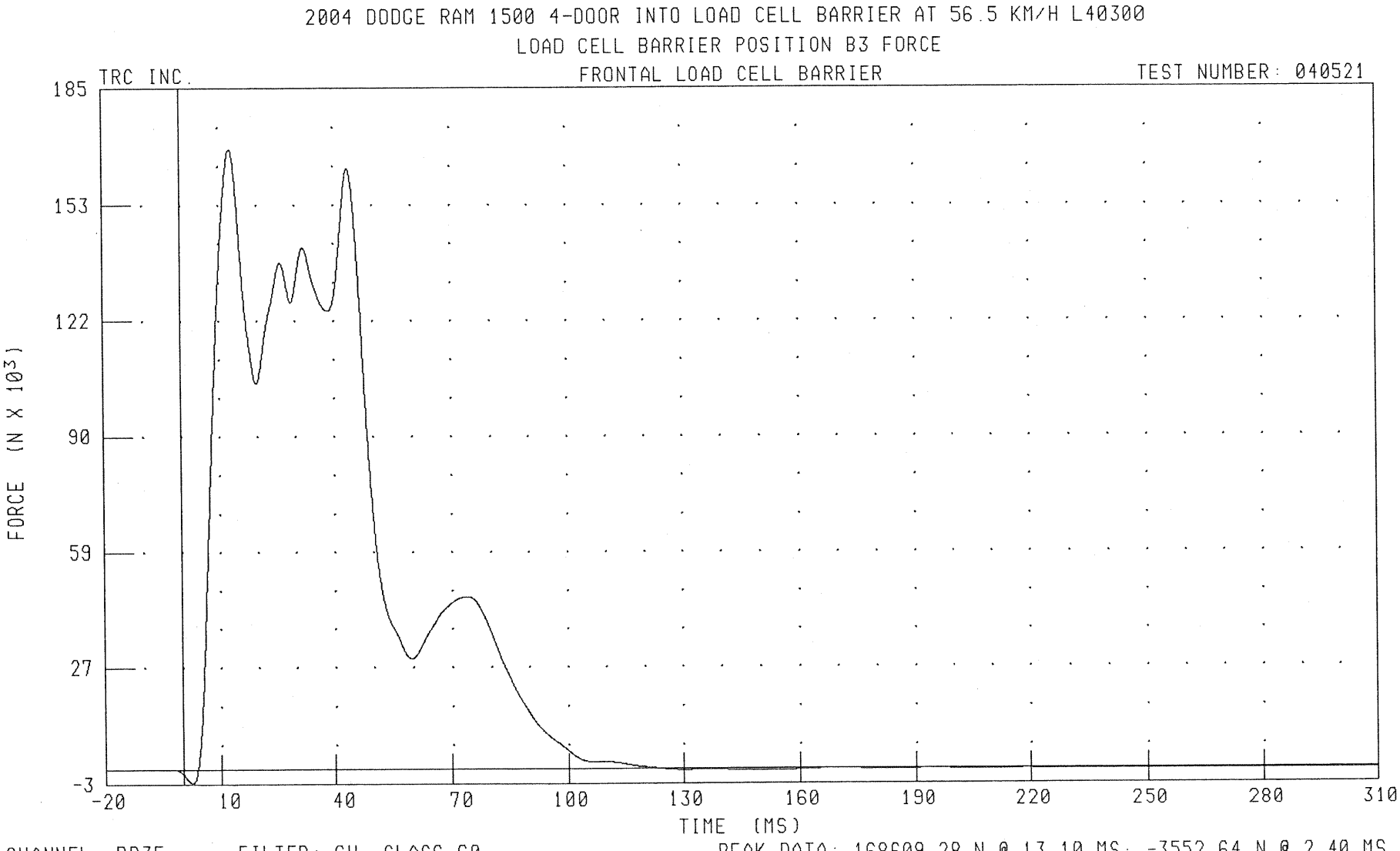


CHANNEL: BB1F FILTER: CH. CLASS 60 PEAK DATA: 5855.74 N @ 87.80 MS; -648.21 N @ 19.50 MS

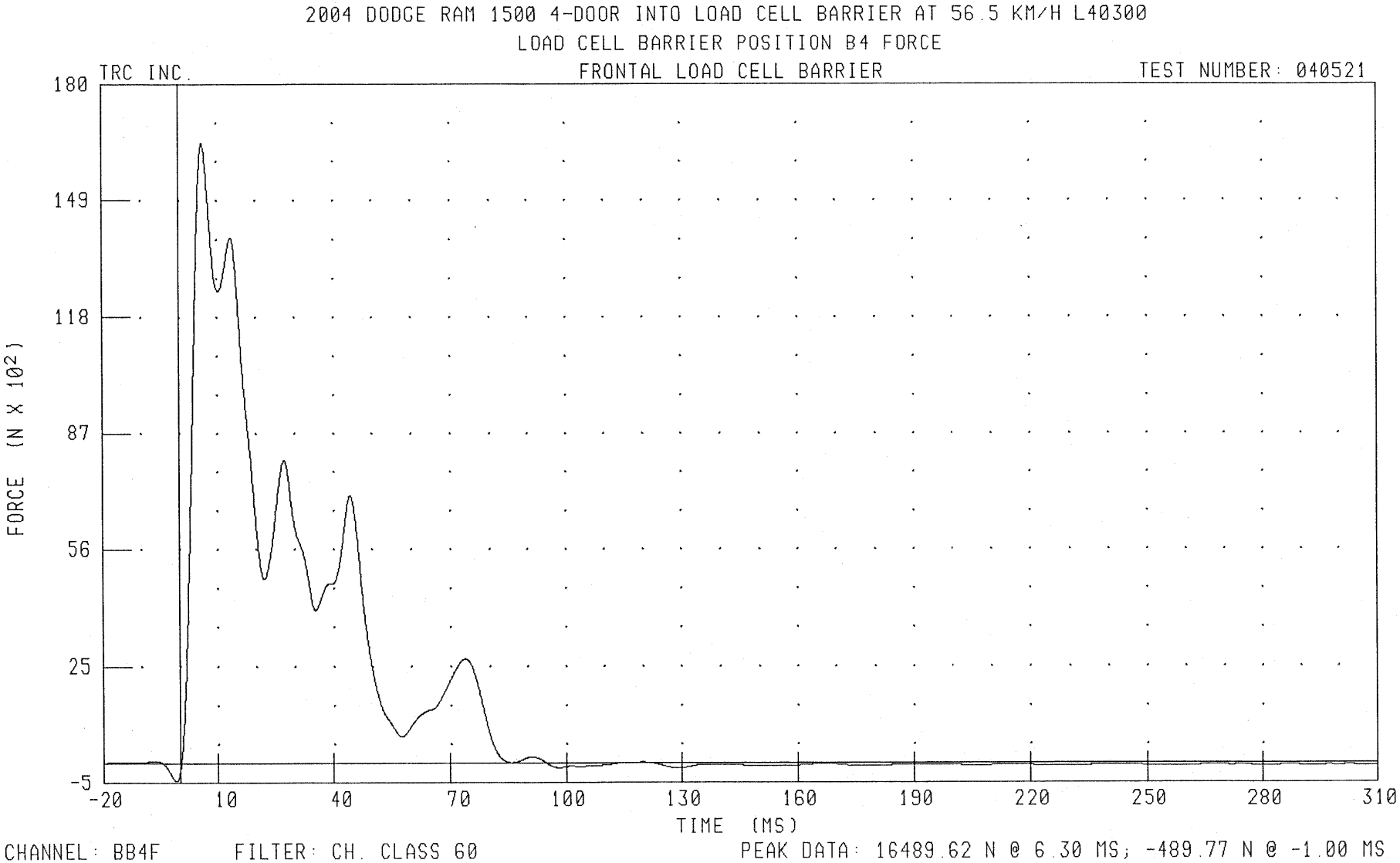
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION B2 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
109
90
71
52
33
14
-4
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BB2F
FILTER: CH. CLASS 60
PEAK DATA: 10149.30 N @ 91.10 MS; -425.68 N @ 6.80 MS

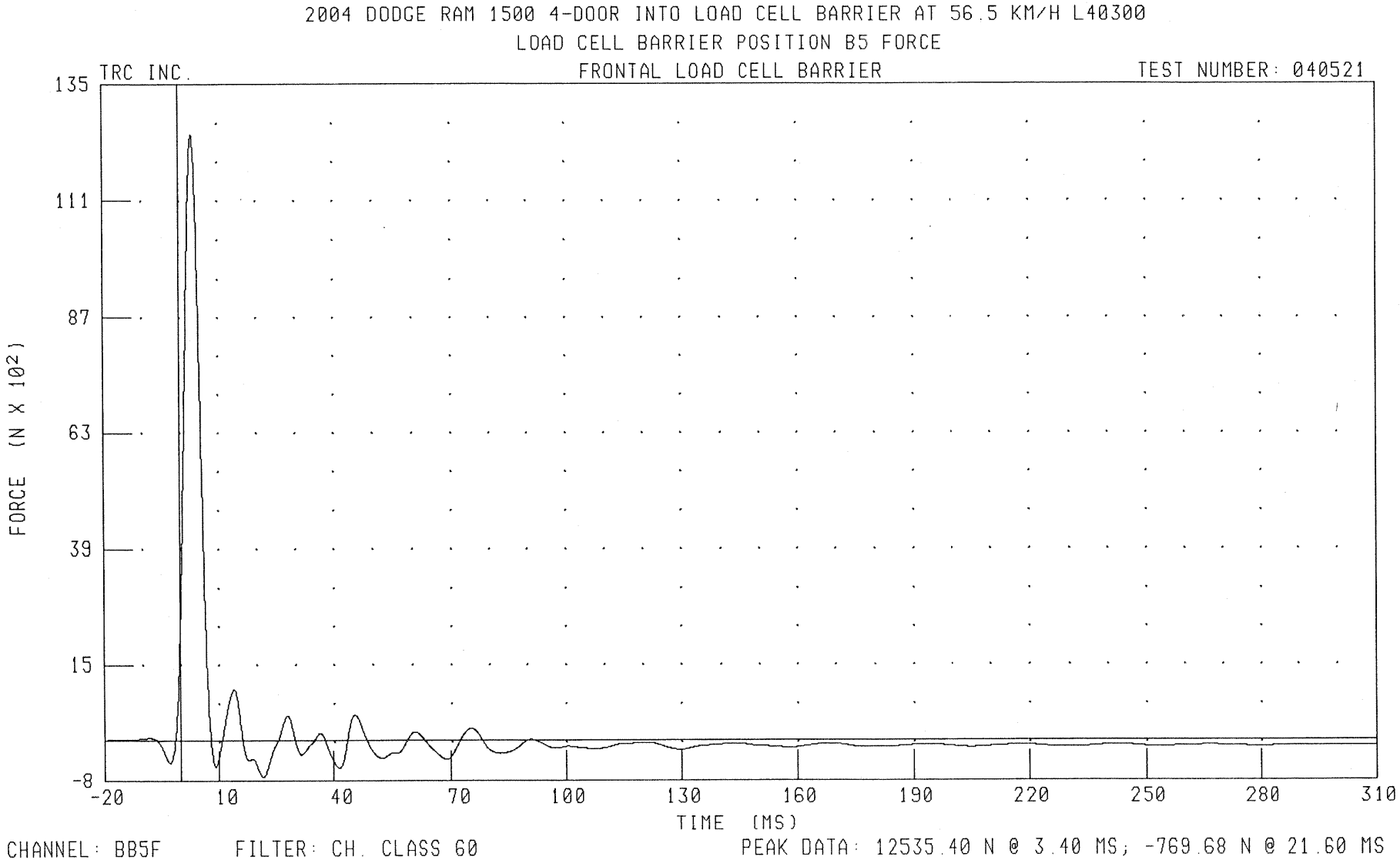
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION B3 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
185
153
122
90
59
27
-3
FORCE (N X 10³)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BB3F
FILTER: CH. CLASS 60
PEAK DATA: 168609.28 N @ 13.10 MS; -3552.64 N @ 2.40 MS

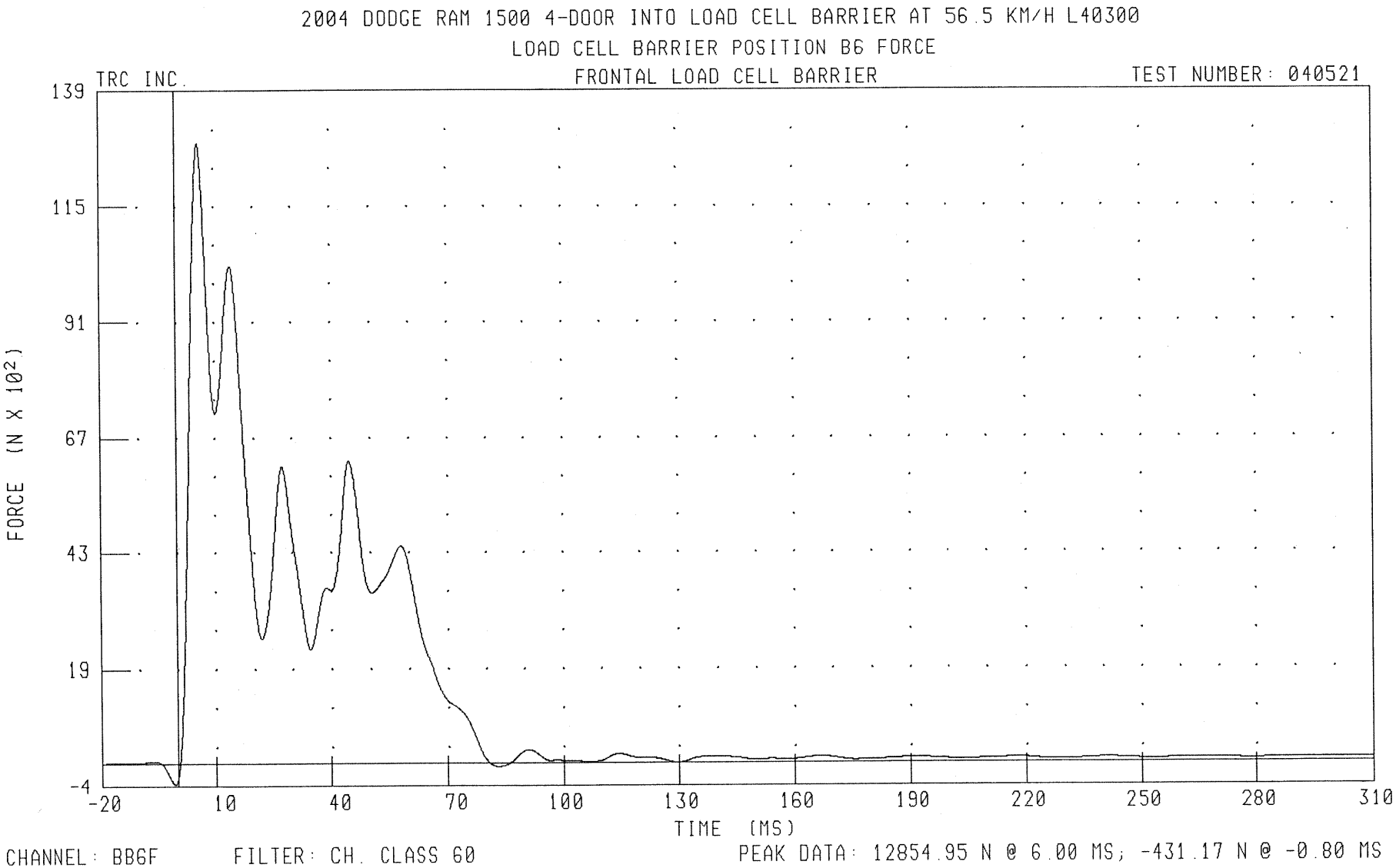
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION B4 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
180
149
118
87
56
25
-5
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BB4F
FILTER: CH. CLASS 60
PEAK DATA: 16489.62 N @ 6.30 MS; -489.77 N @ -1.00 MS

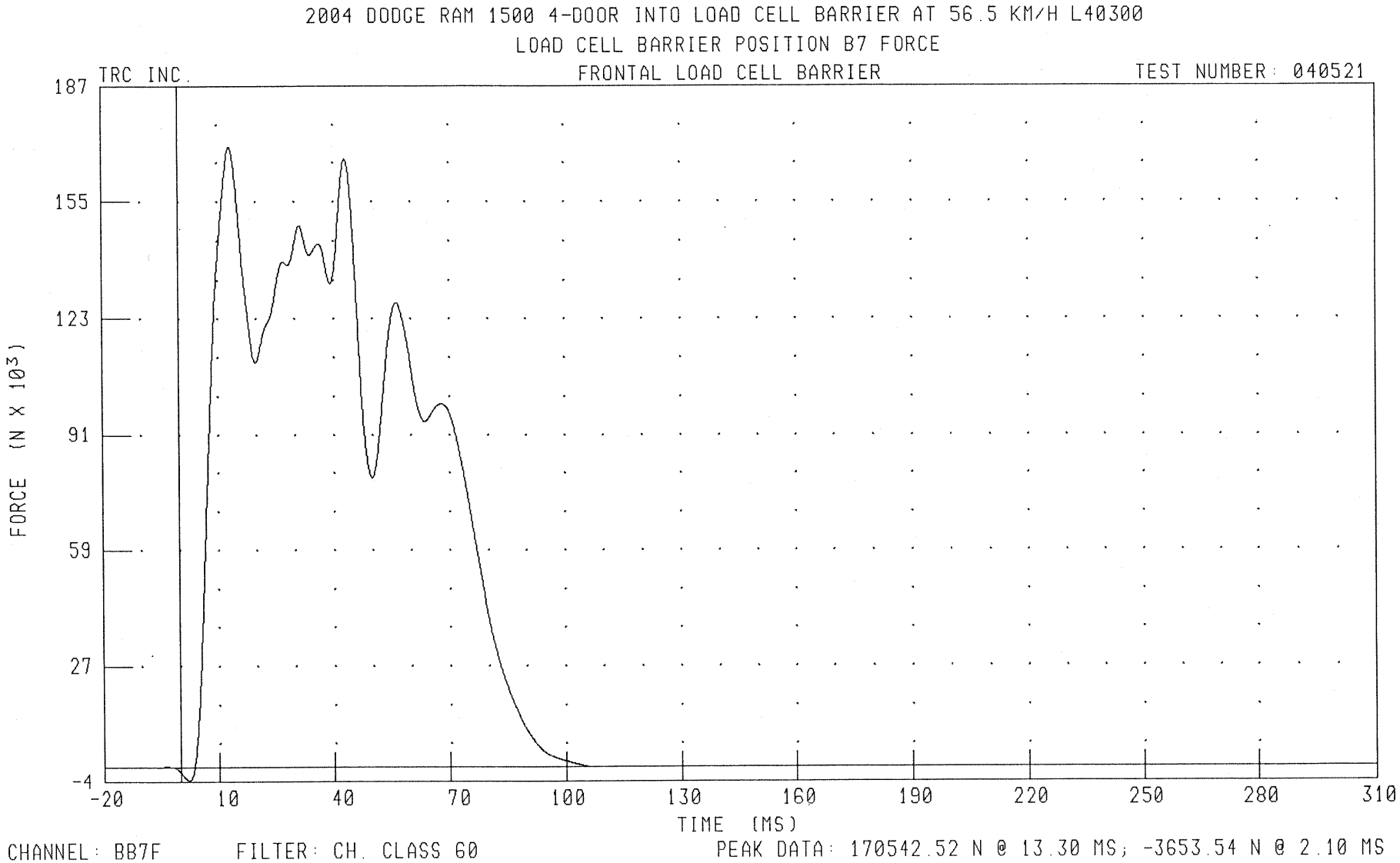
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION B5 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
135
111
87
63
39
15
-8
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BB5F
FILTER: CH. CLASS 60
PEAK DATA: 12535.40 N @ 3.40 MS; -769.68 N @ 21.60 MS

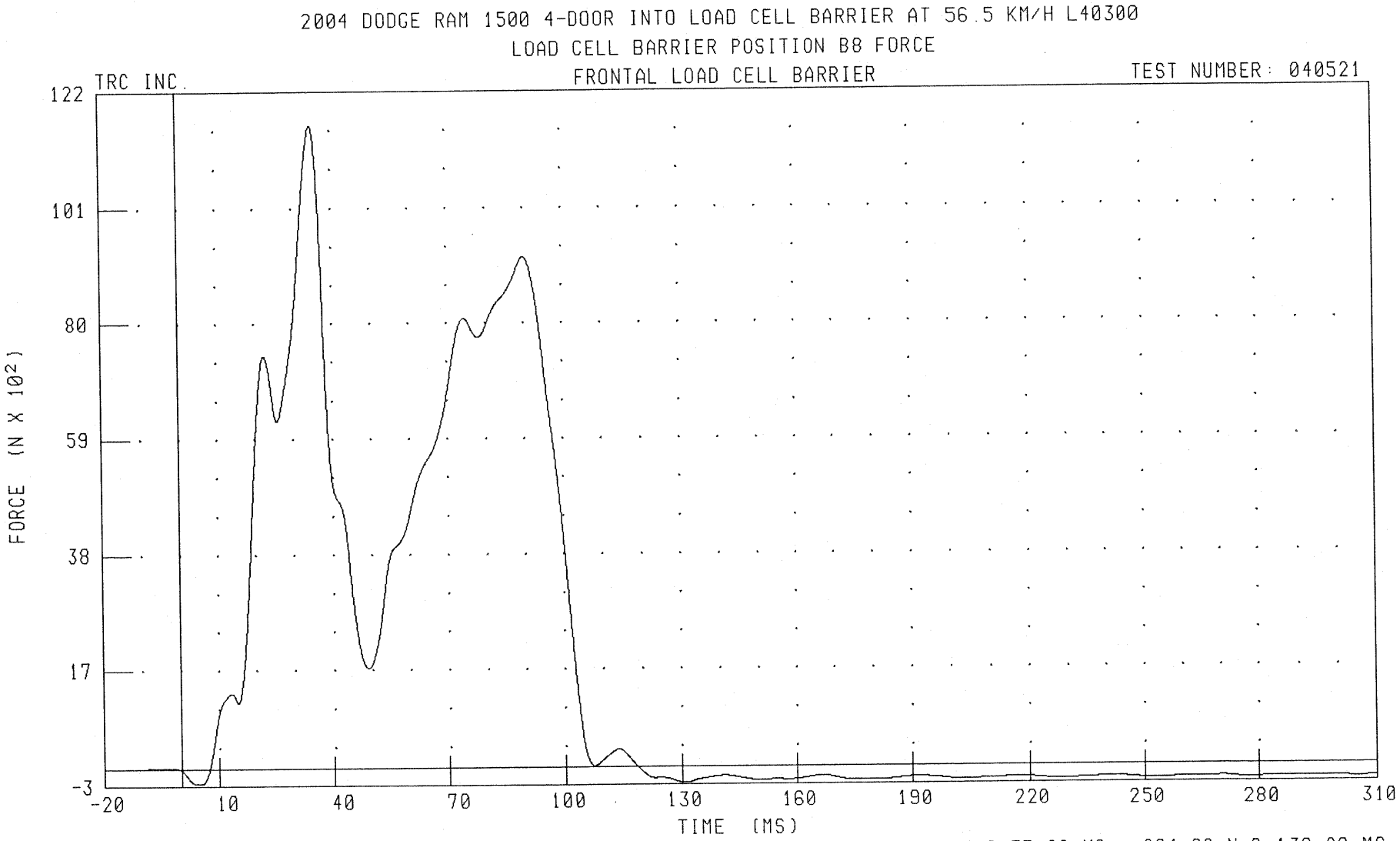
040521

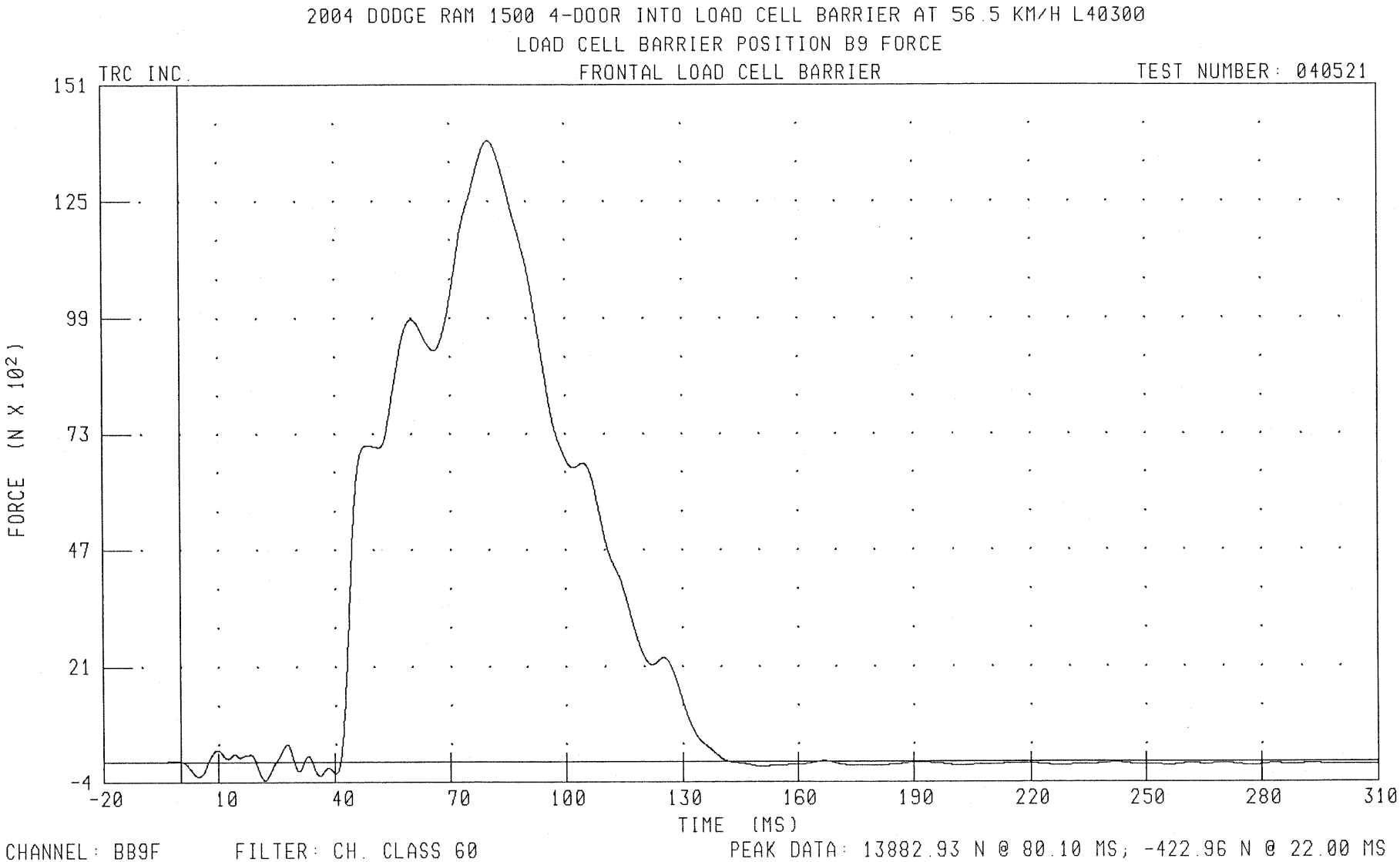

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION B6 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
139
115
91
67
43
19
-4
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BB6F
FILTER: CH. CLASS 60
PEAK DATA: 12854.95 N @ 6.00 MS; -431.17 N @ -0.80 MS

040521

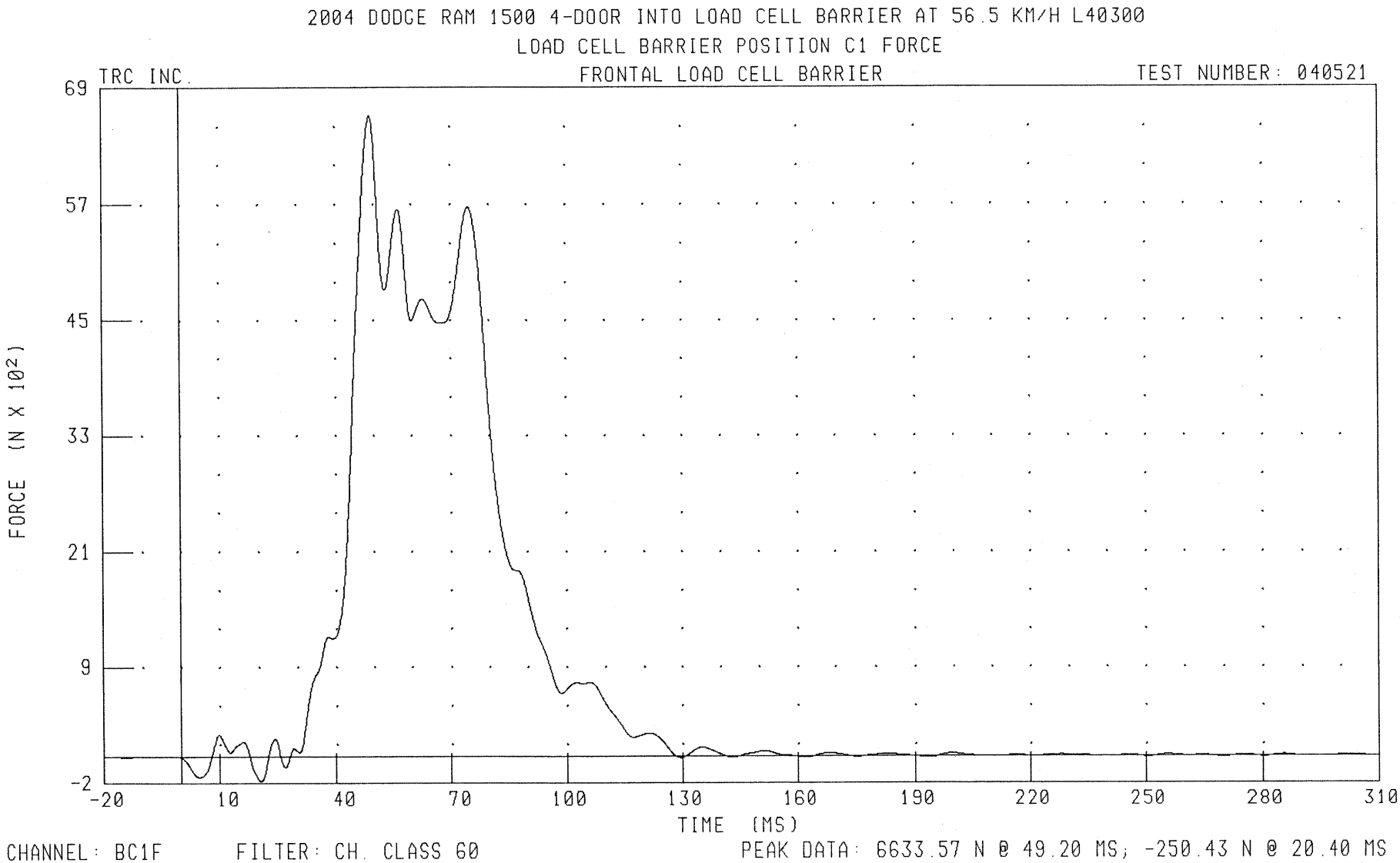

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION B7 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
187
155
123
91
59
27
-4
FORCE (N X 10³)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BB7F
FILTER: CH. CLASS 60
PEAK DATA: 170542.52 N @ 13.30 MS; -3653.54 N @ 2.10 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION B8 FORCE
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
122
101
80
59
38
17
-3
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BB8F
FILTER: CH. CLASS 60
PEAK DATA: 11669.35 N @ 35.20 MS; -294.08 N @ 130.90 MS


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION B9 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
151
125
99
73
47
21
-4
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BB9F
FILTER: CH. CLASS 60
PEAK DATA: 13882.93 N @ 80.10 MS; -422.96 N @ 22.00 MS

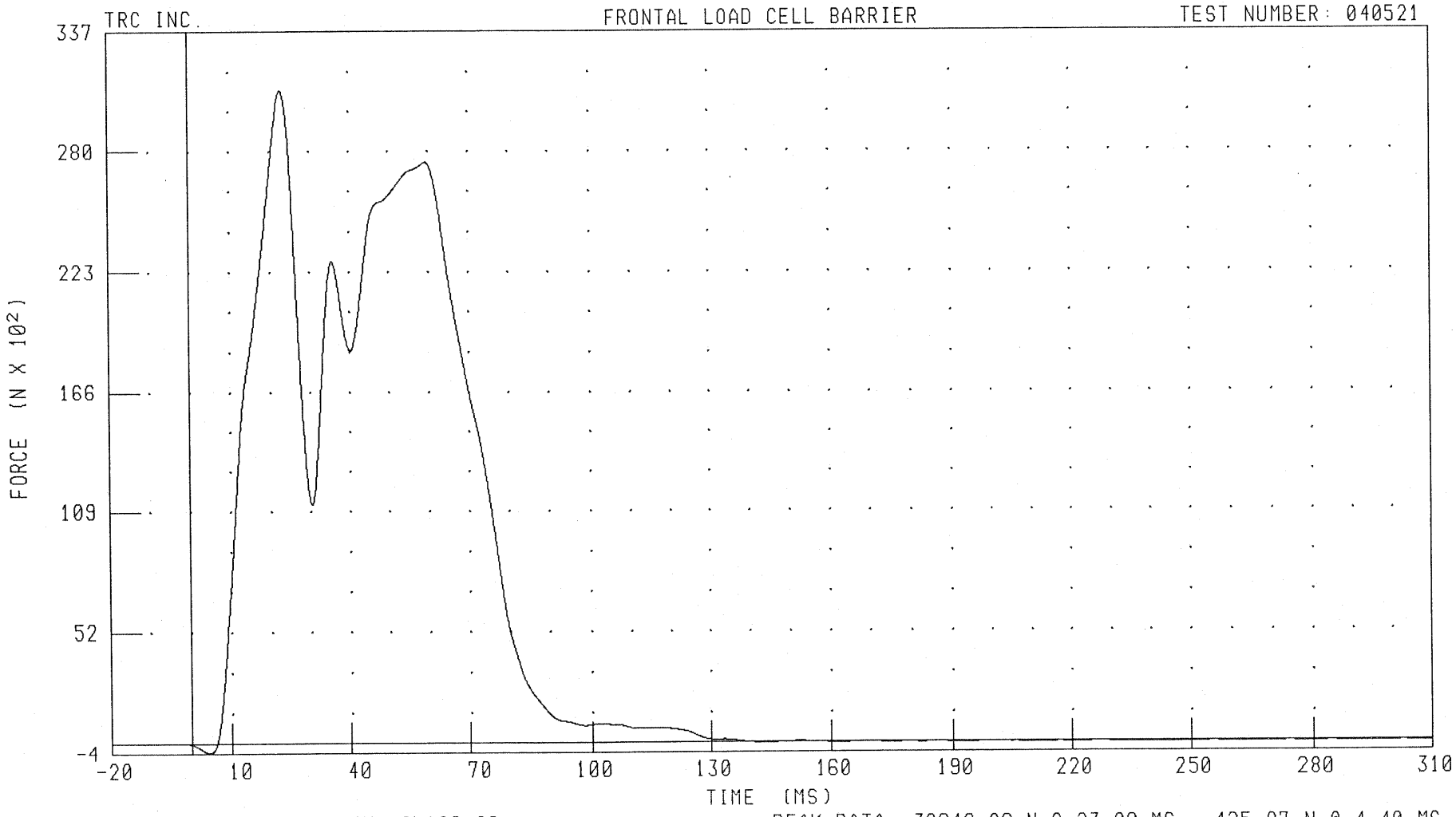
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION C1 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
69
57
45
33
21
9
-2
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BC1F
FILTER: CH. CLASS 60
PEAK DATA: 6633.57 N @ 49.20 MS; -250.43 N @ 20.40 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

LOAD CELL BARRIER POSITION C2 FORCE

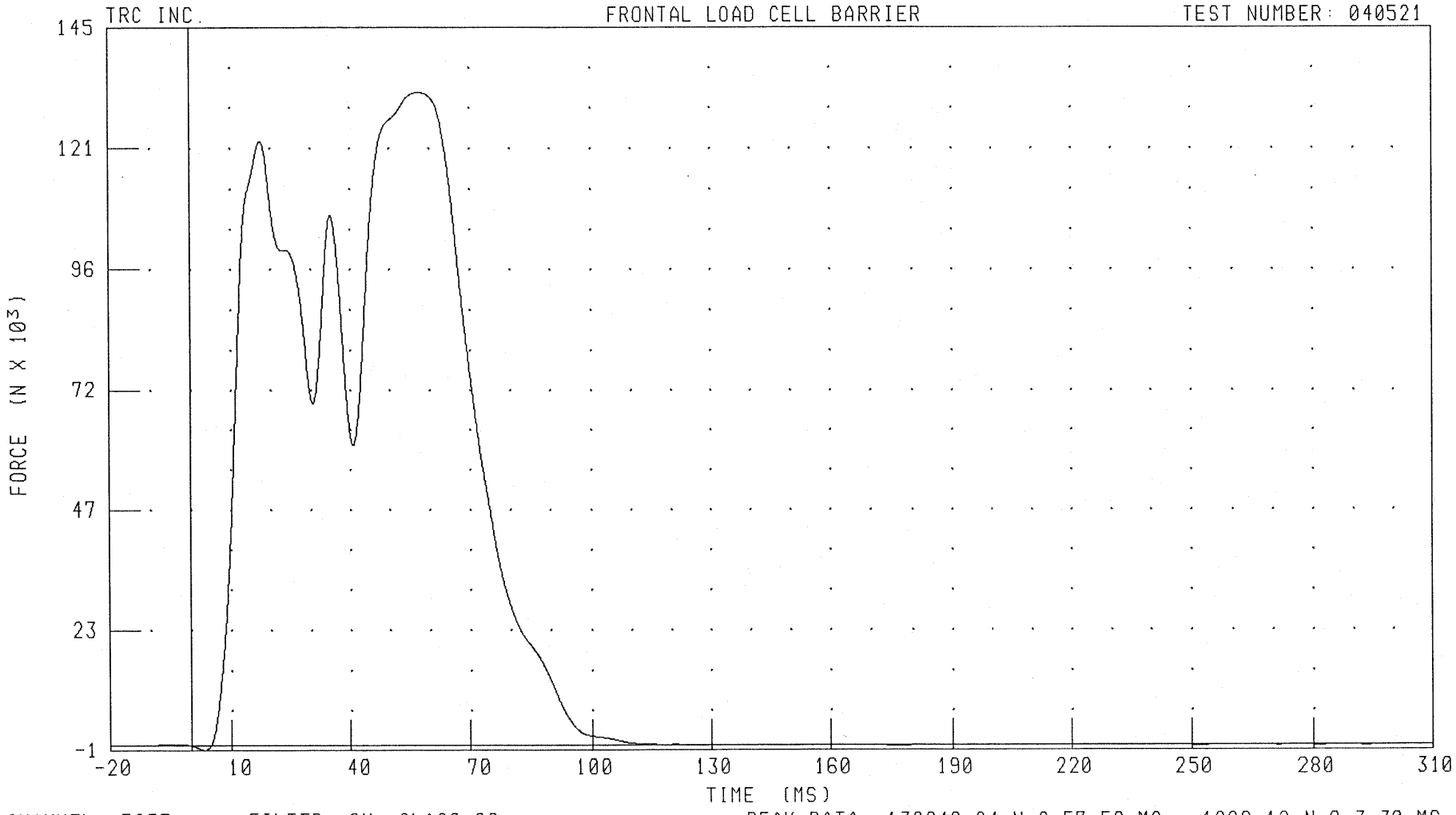


CHANNEL: BC2F FILTER: CH. CLASS 60 PEAK DATA: 30946.86 N @ 23.00 MS; -425.87 N @ 4.40 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

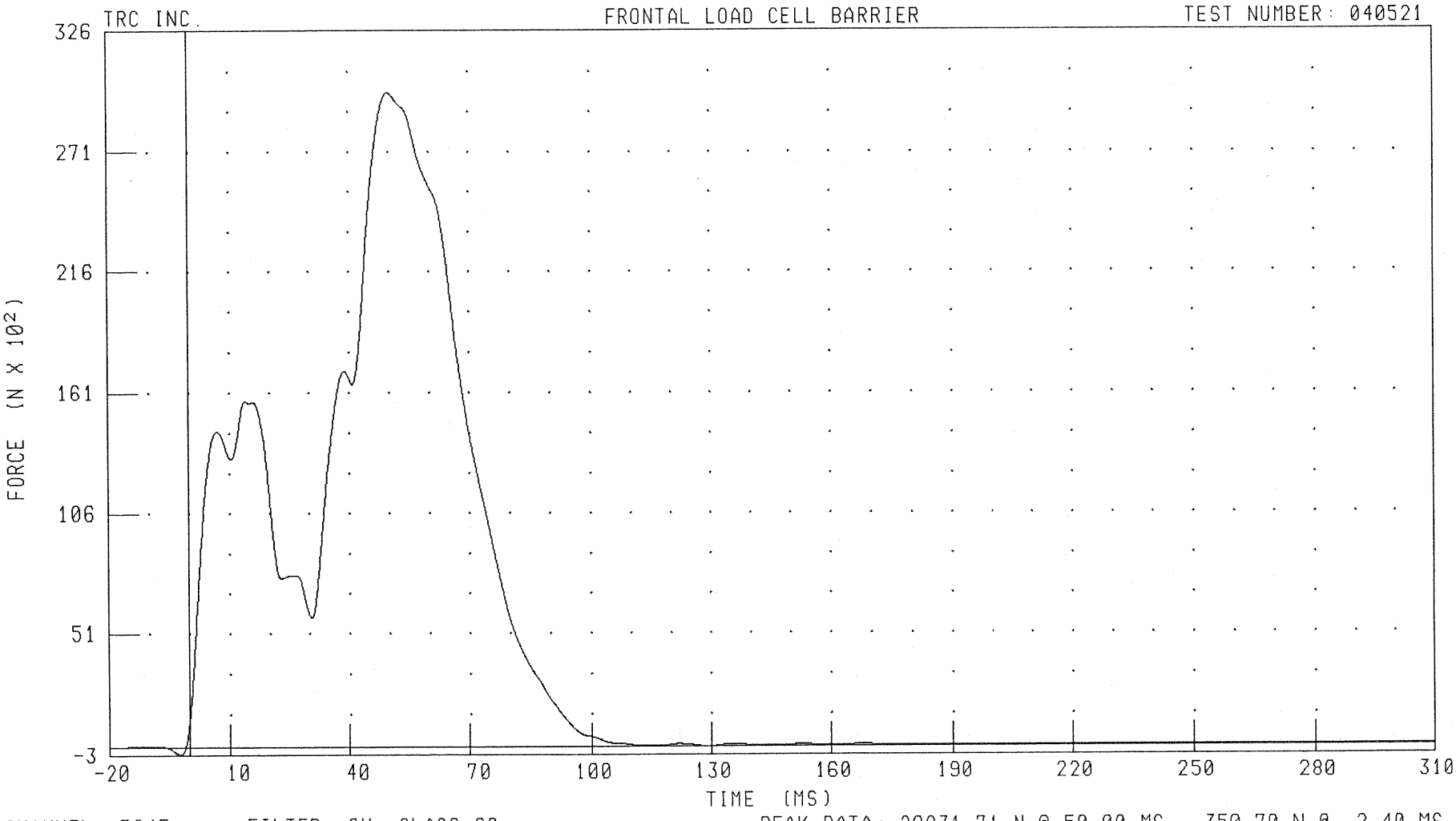
LOAD CELL BARRIER POSITION C3 FORCE



CHANNEL: BC3F FILTER: CH. CLASS 60 PEAK DATA: 132649.94 N @ 57.50 MS; -1069.12 N @ 3.30 MS

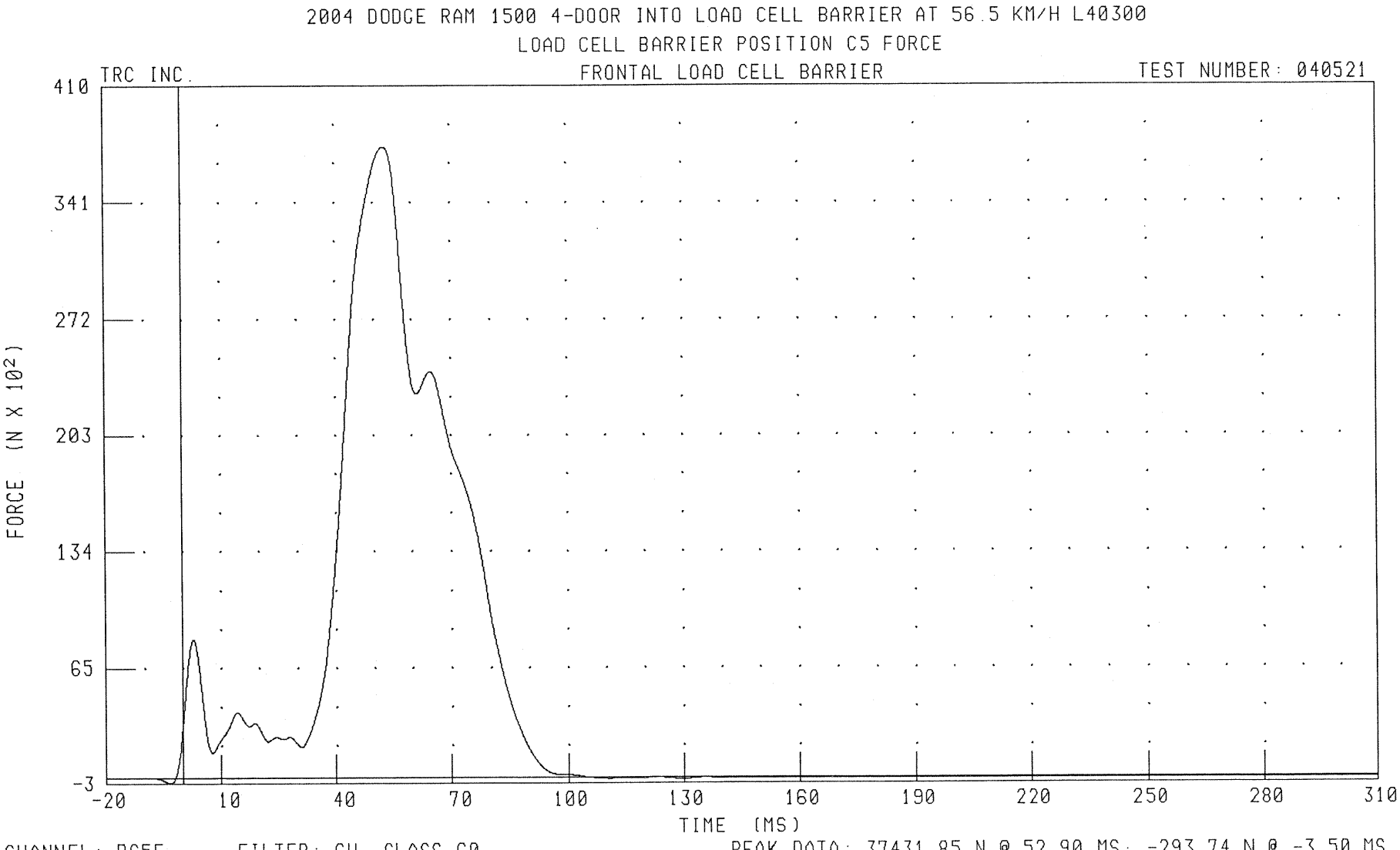
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION C4 FORCE

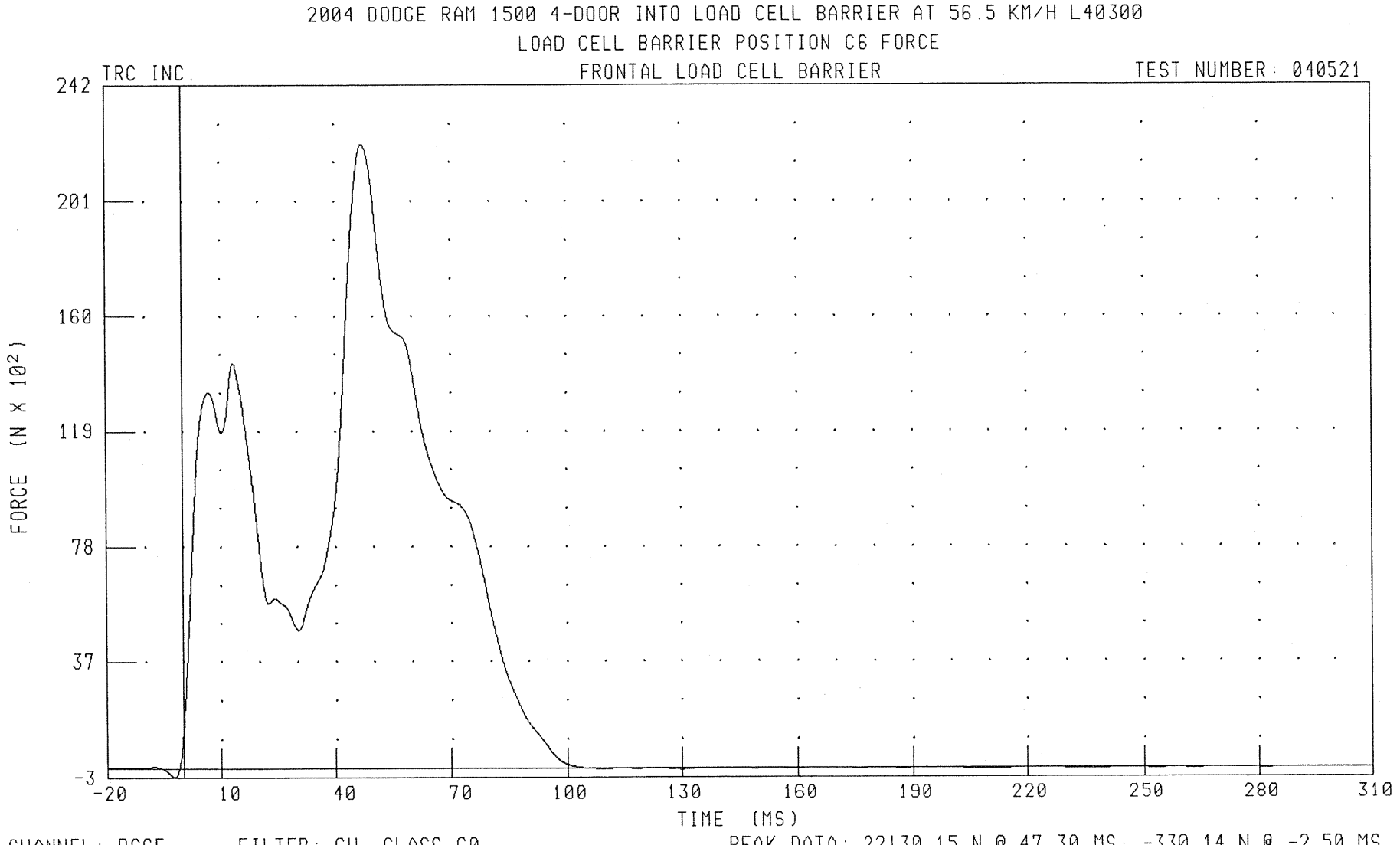


CHANNEL: BC4F FILTER: CH. CLASS 60 PEAK DATA: 29831.71 N @ 50.00 MS; -350.70 N @ -2.40 MS

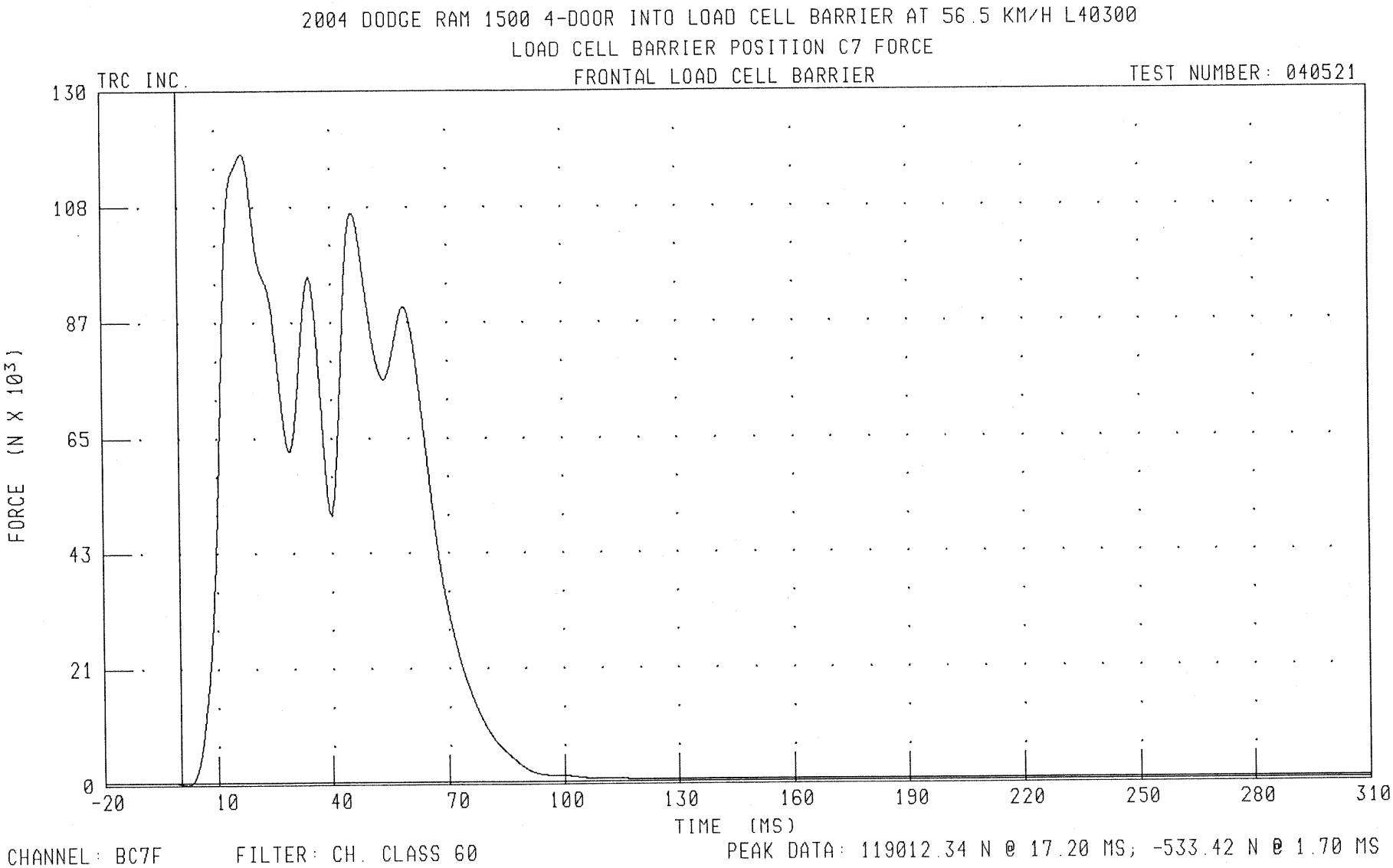
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION C5 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
410
341
272
203
134
65
-3
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BC5F
FILTER: CH. CLASS 60
PEAK DATA: 37431.85 N @ 52.90 MS; -293.74 N @ -3.50 MS

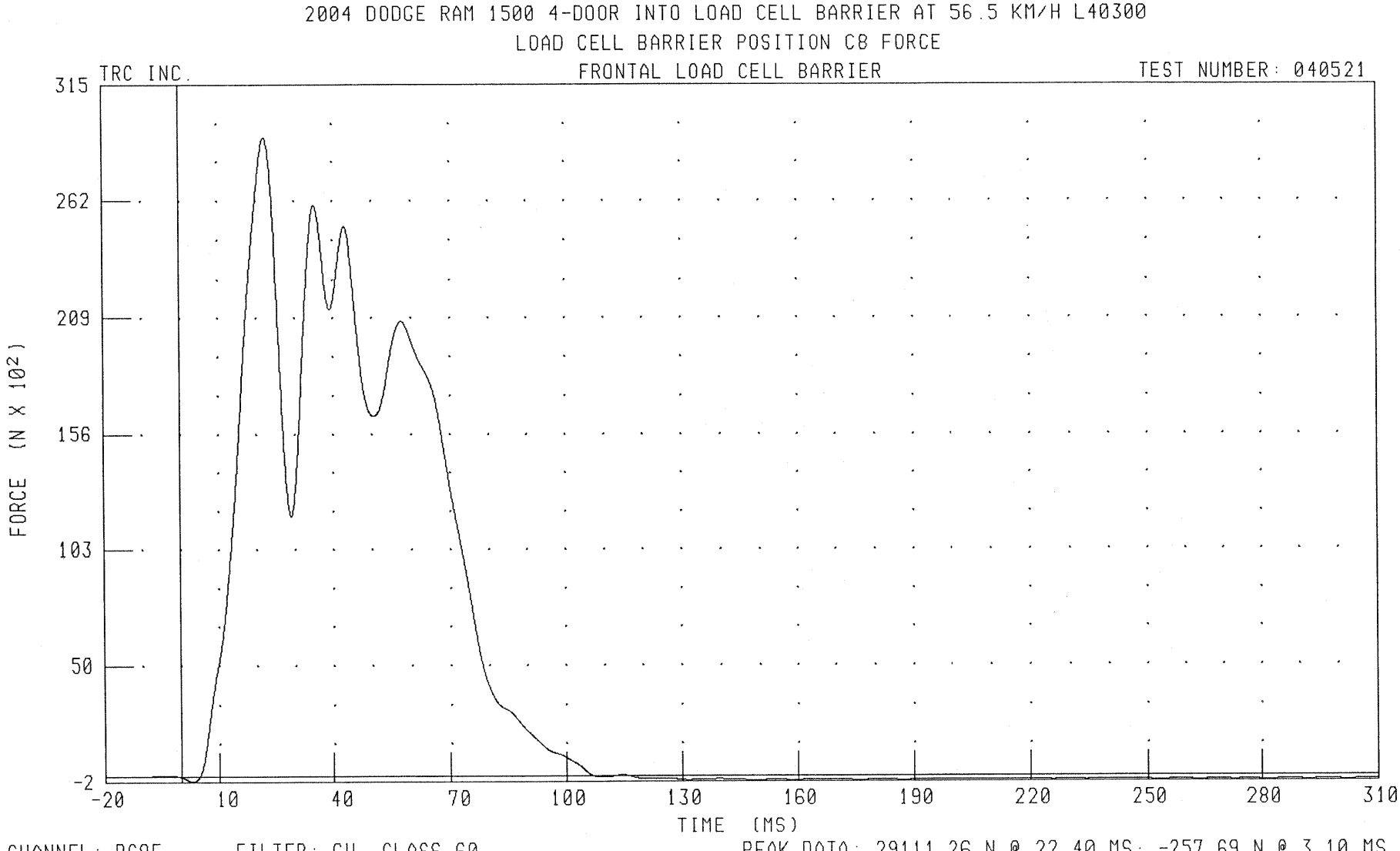
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION C6 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
242
201
160
119
78
37
-3
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BC6F
FILTER: CH. CLASS 60
PEAK DATA: 22130.15 N @ 47.30 MS; -330.14 N @ -2.50 MS

040521

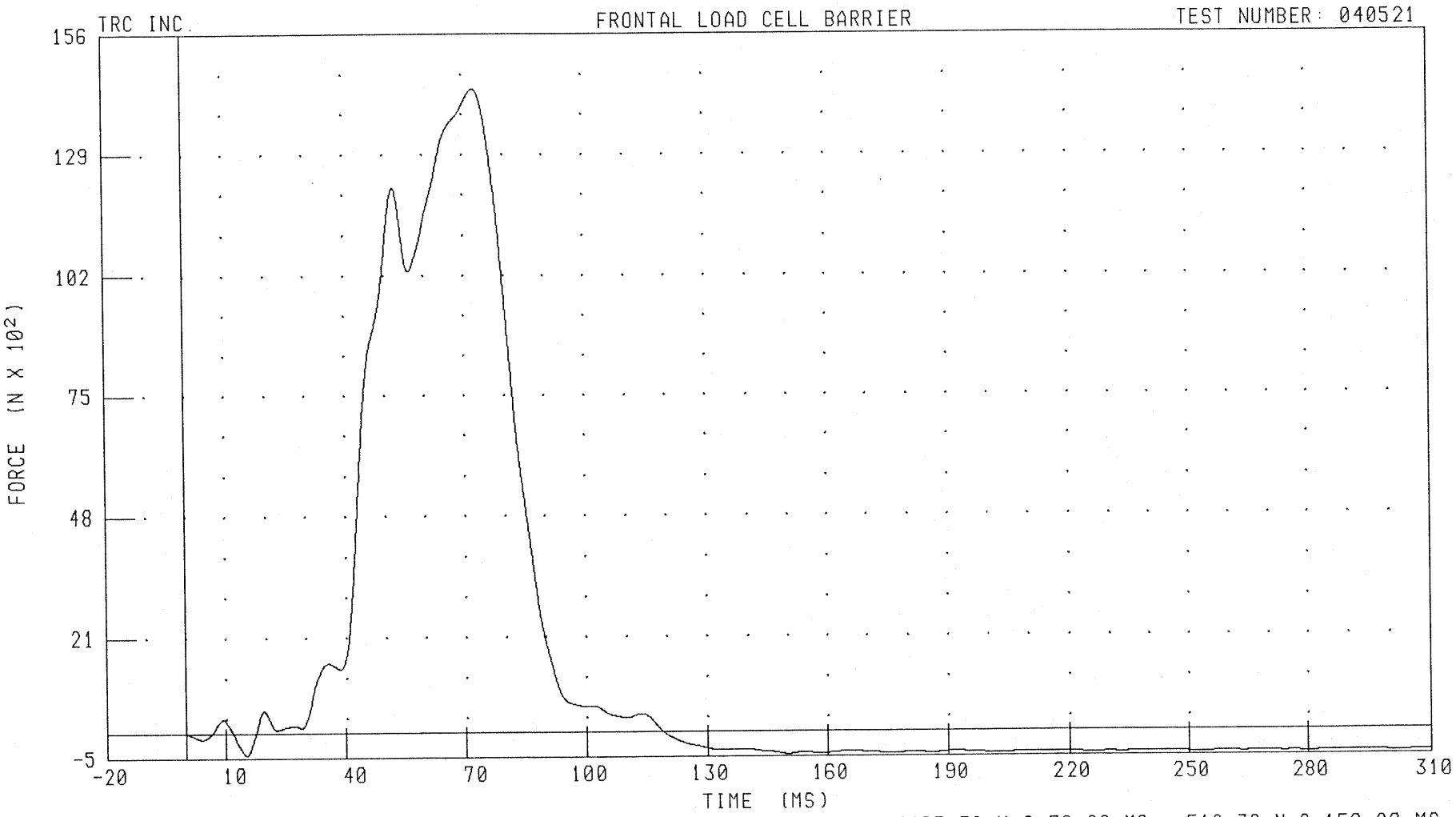

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION C7 FORCE
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
130
108
87
65
43
21
0
FORCE (N X 10³)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BC7F
FILTER: CH. CLASS 60
PEAK DATA: 119012.34 N @ 17.20 MS; -533.42 N @ 1.70 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION C8 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
315
262
209
156
103
50
-2
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BC8F
FILTER: CH. CLASS 60
PEAK DATA: 29111.26 N @ 22.40 MS; -257.69 N @ 3.10 MS

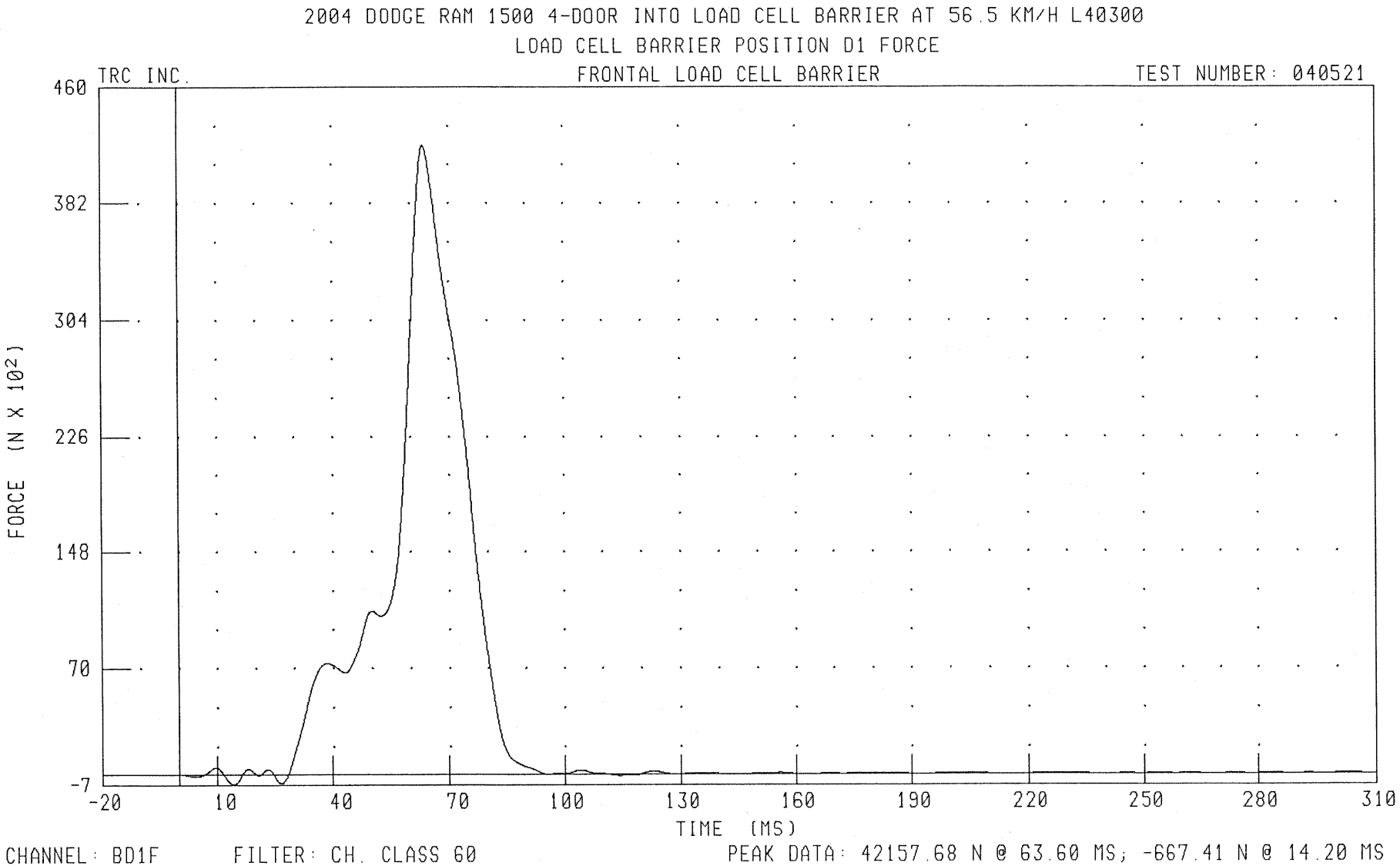
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION C9 FORCE
FRONTAL LOAD CELL BARRIER

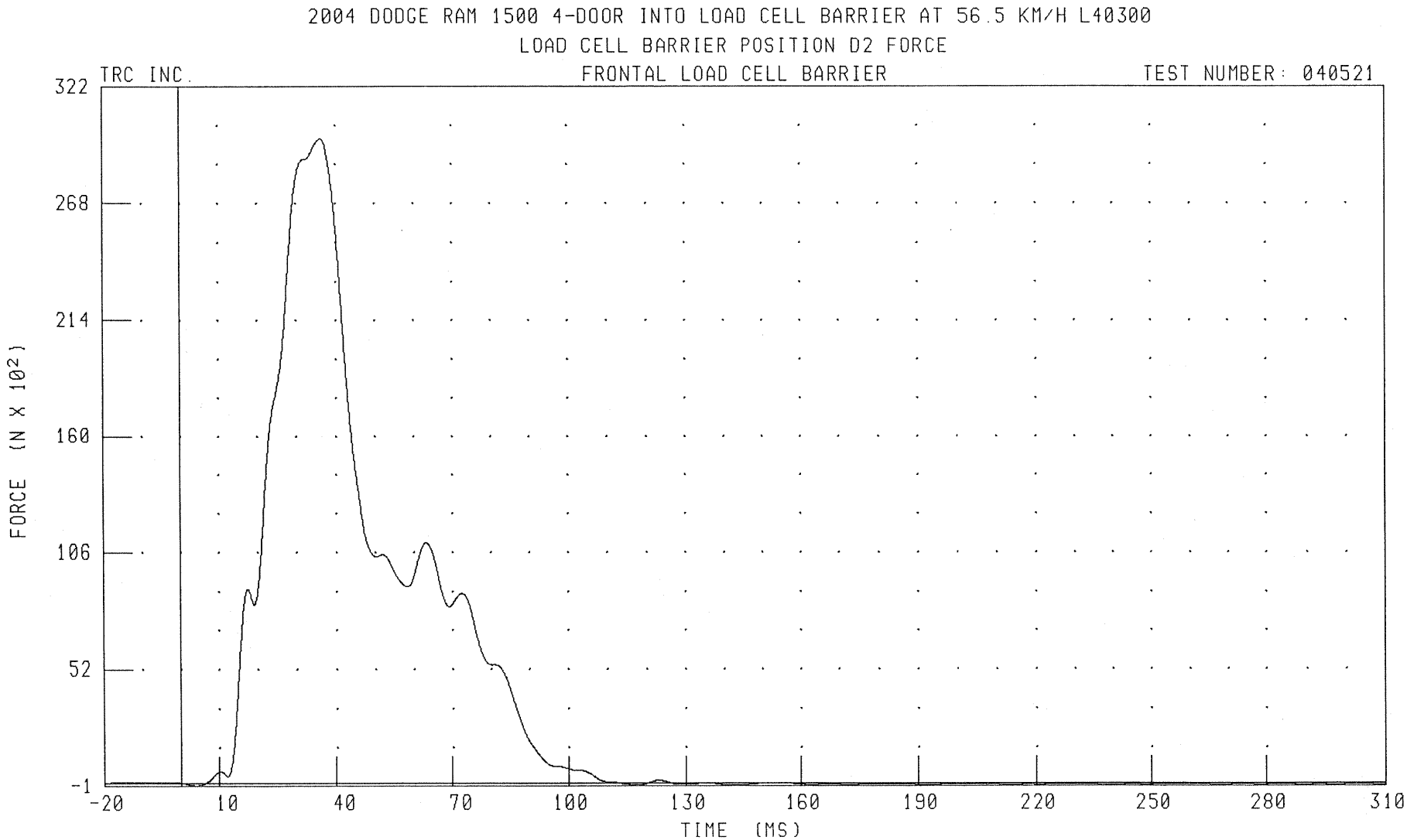


CHANNEL: BC9F FILTER: CH. CLASS 60 PEAK DATA: 14407.58 N @ 72.90 MS; -510.39 N @ 150.00 MS

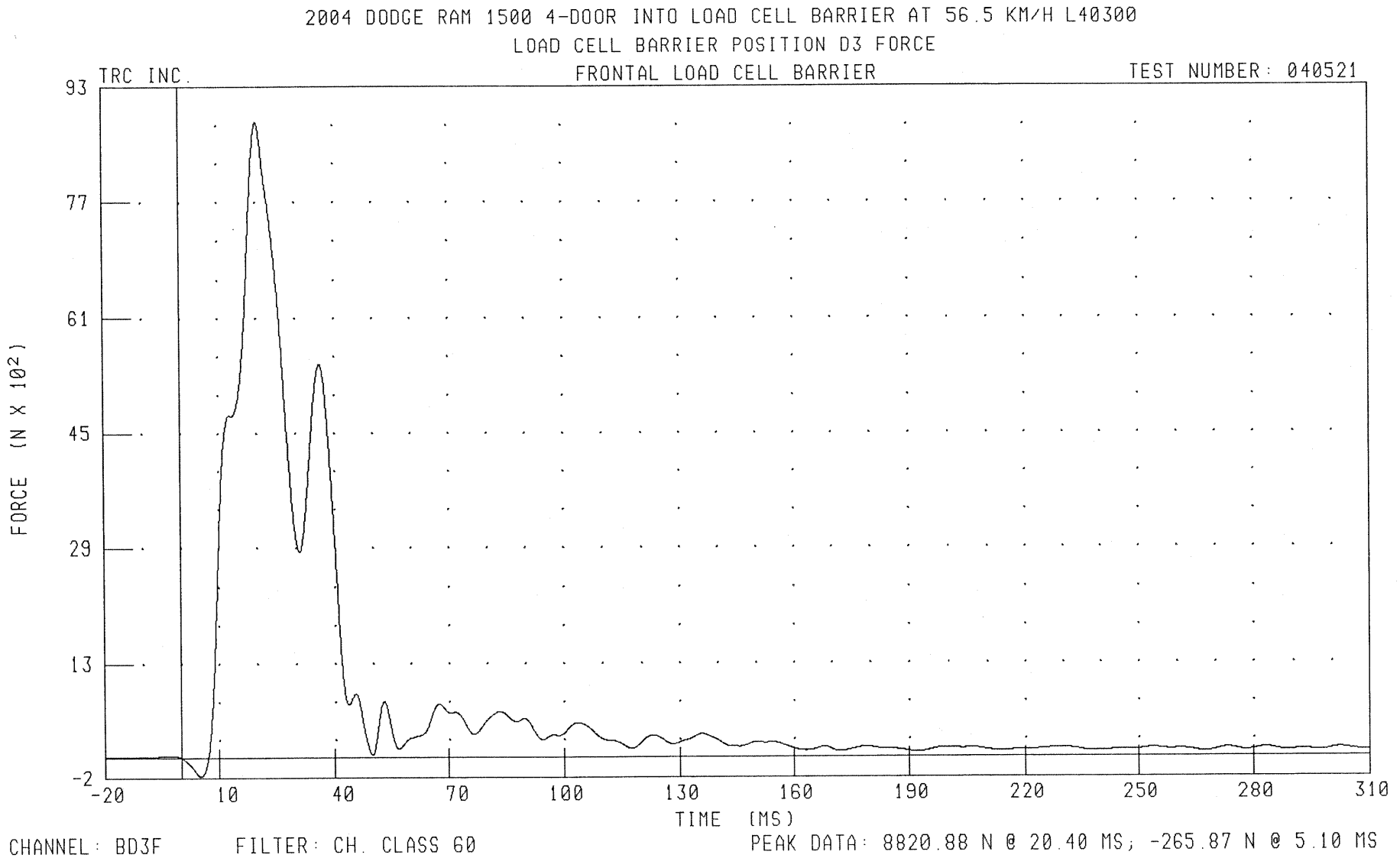
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D1 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
460
382
304
226
148
70
-7
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD1F
FILTER: CH. CLASS 60
PEAK DATA: 42157.68 N @ 63.60 MS; -667.41 N @ 14.20 MS

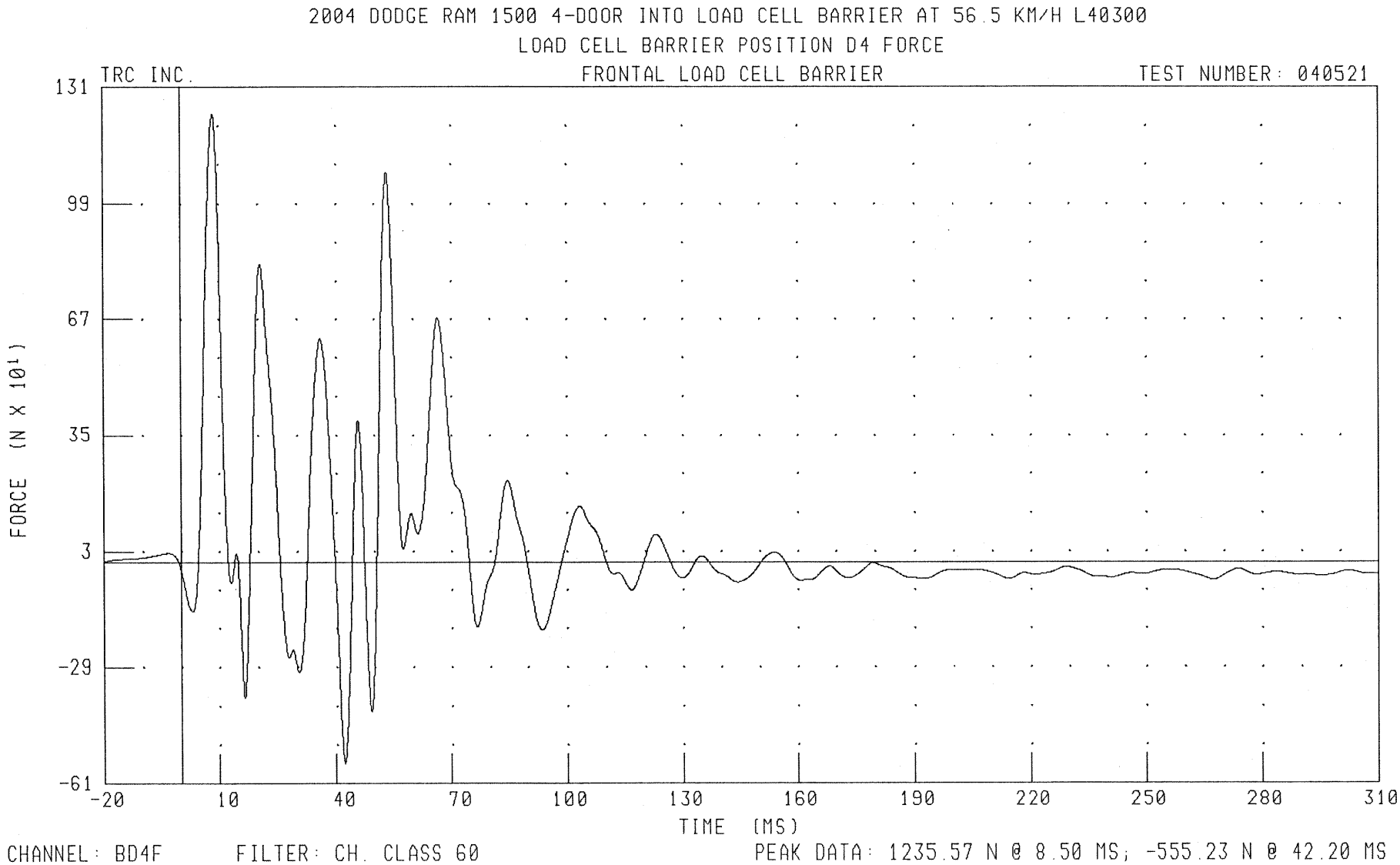
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D2 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
322
268
214
160
106
52
-1
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD2F
FILTER: CH. CLASS 60
PEAK DATA: 29827.86 N @ 36.50 MS; -141.96 N @ 4.00 MS

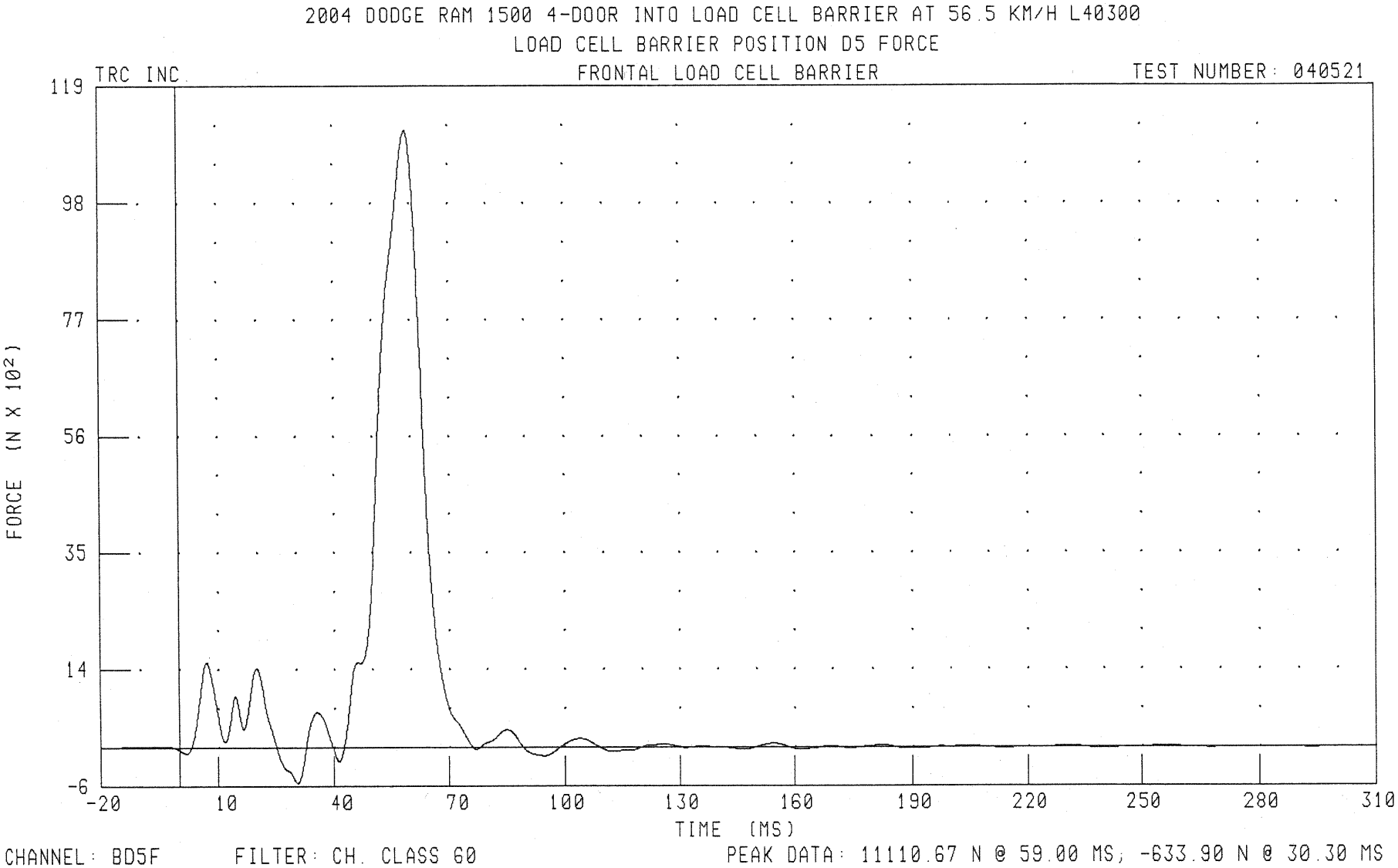
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D3 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
93
77
61
45
29
13
-2
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD3F
FILTER: CH. CLASS 60
PEAK DATA: 8820.88 N @ 20.40 MS; -265.87 N @ 5.10 MS

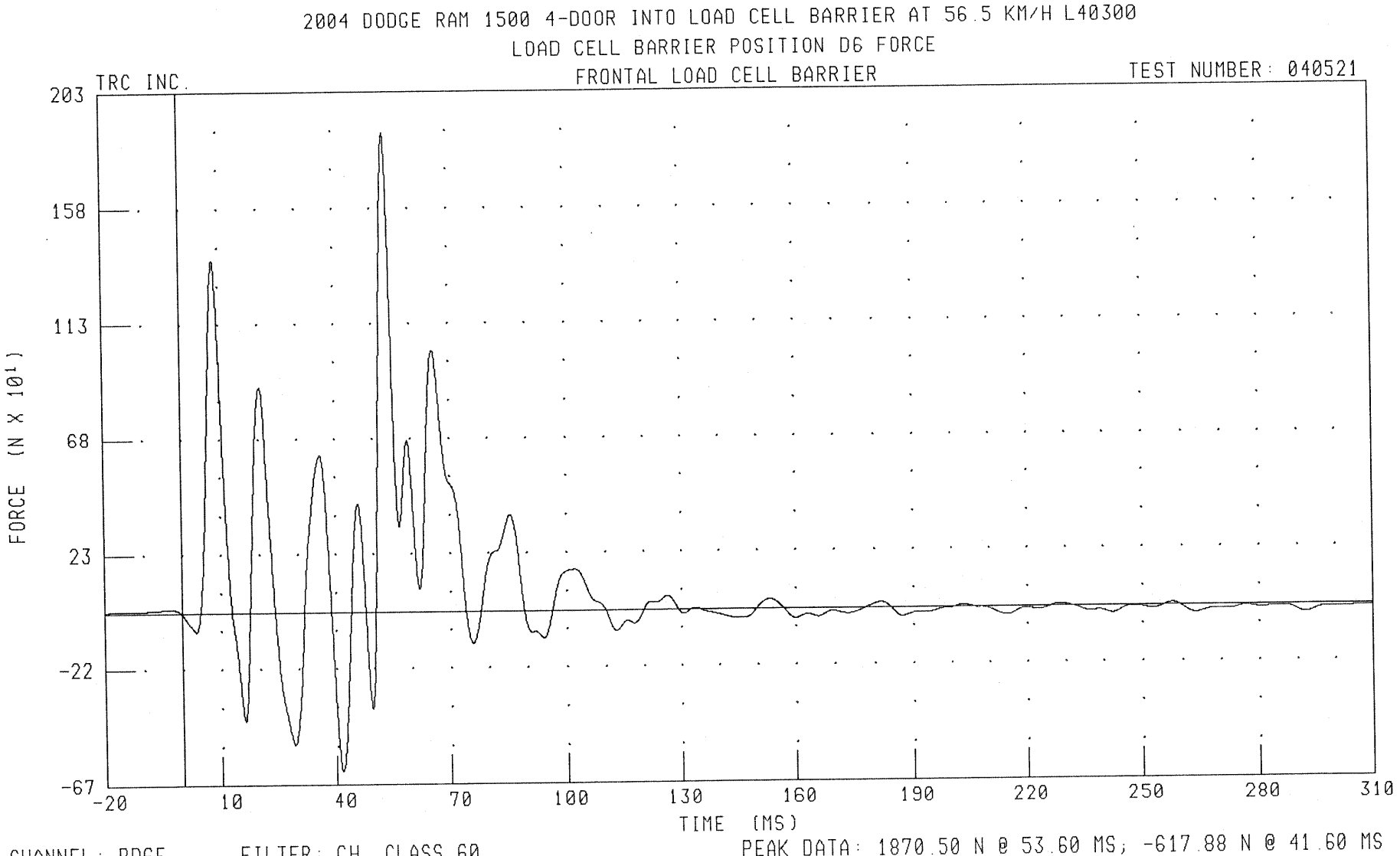
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D4 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
131
99
67
35
3
-29
-61
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD4F
FILTER: CH. CLASS 60
PEAK DATA: 1235.57 N @ 8.50 MS; -555.23 N @ 42.20 MS

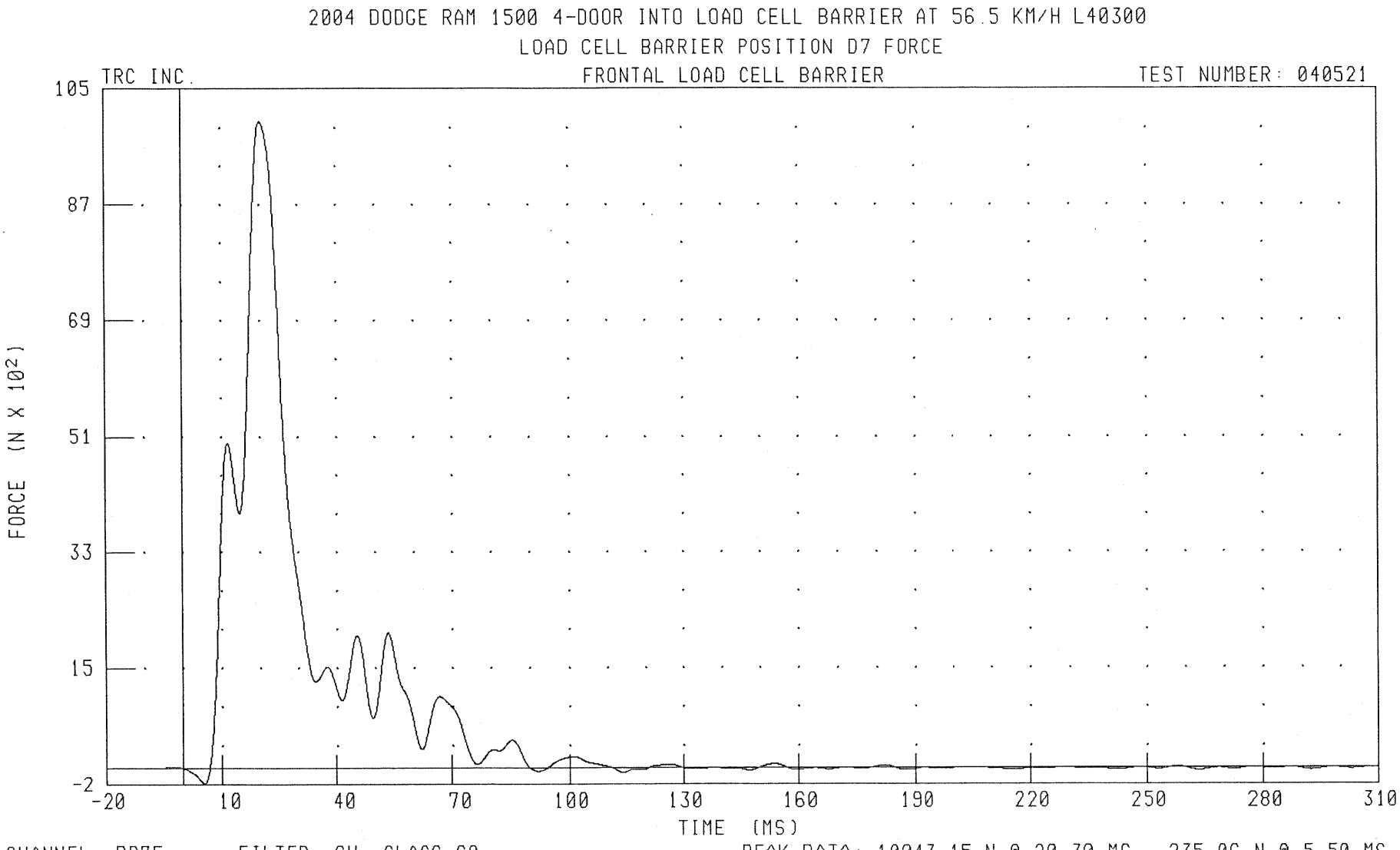
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D5 FORCE
TRC INC
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
119
98
77
56
35
14
-6
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD5F
FILTER: CH. CLASS 60
PEAK DATA: 11110.67 N @ 59.00 MS; -633.90 N @ 30.30 MS

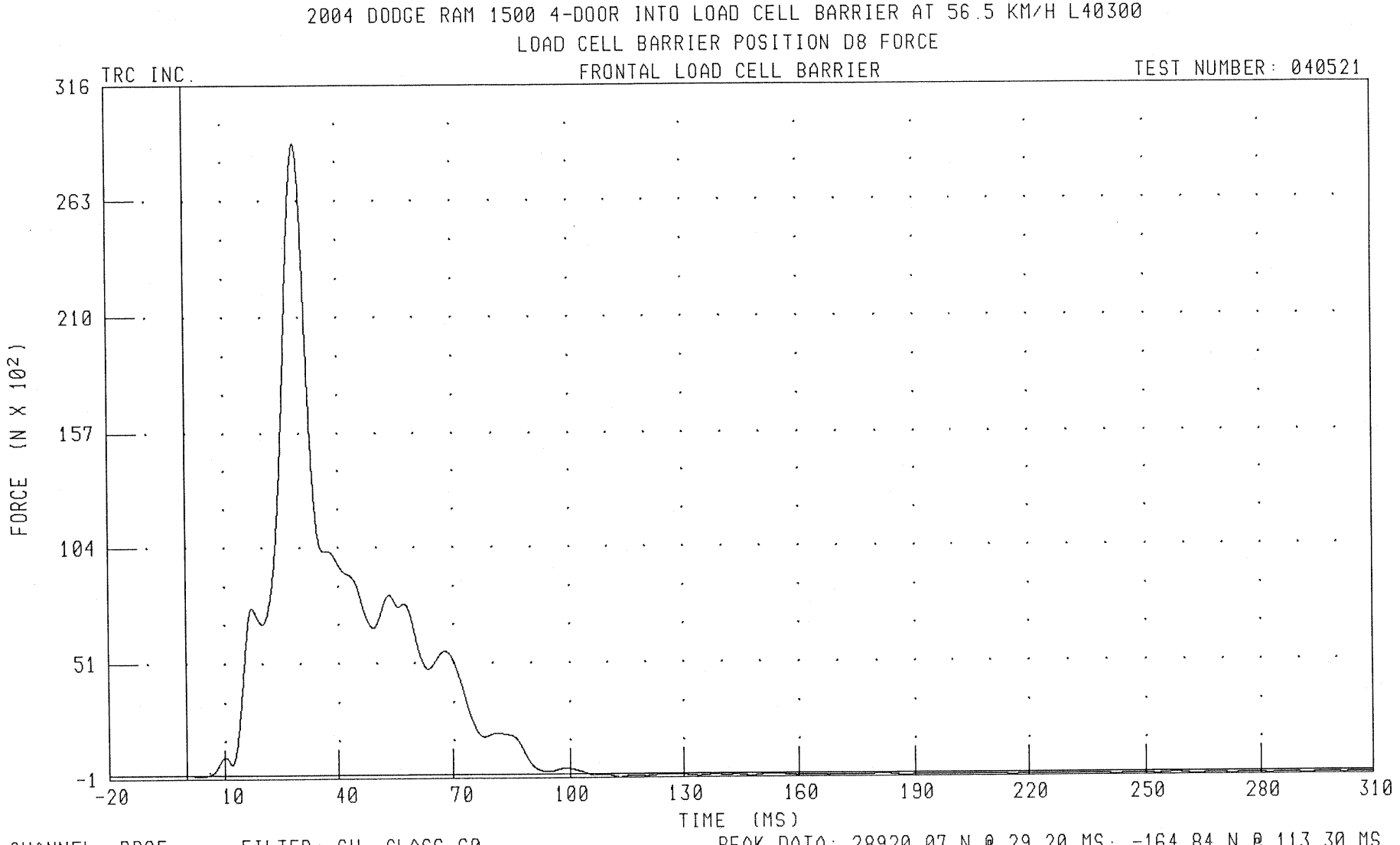
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D6 FORCE
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
203
158
113
68
23
-22
-67
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD6F
FILTER: CH. CLASS 60
PEAK DATA: 1870.50 N @ 53.60 MS; -617.88 N @ 41.60 MS

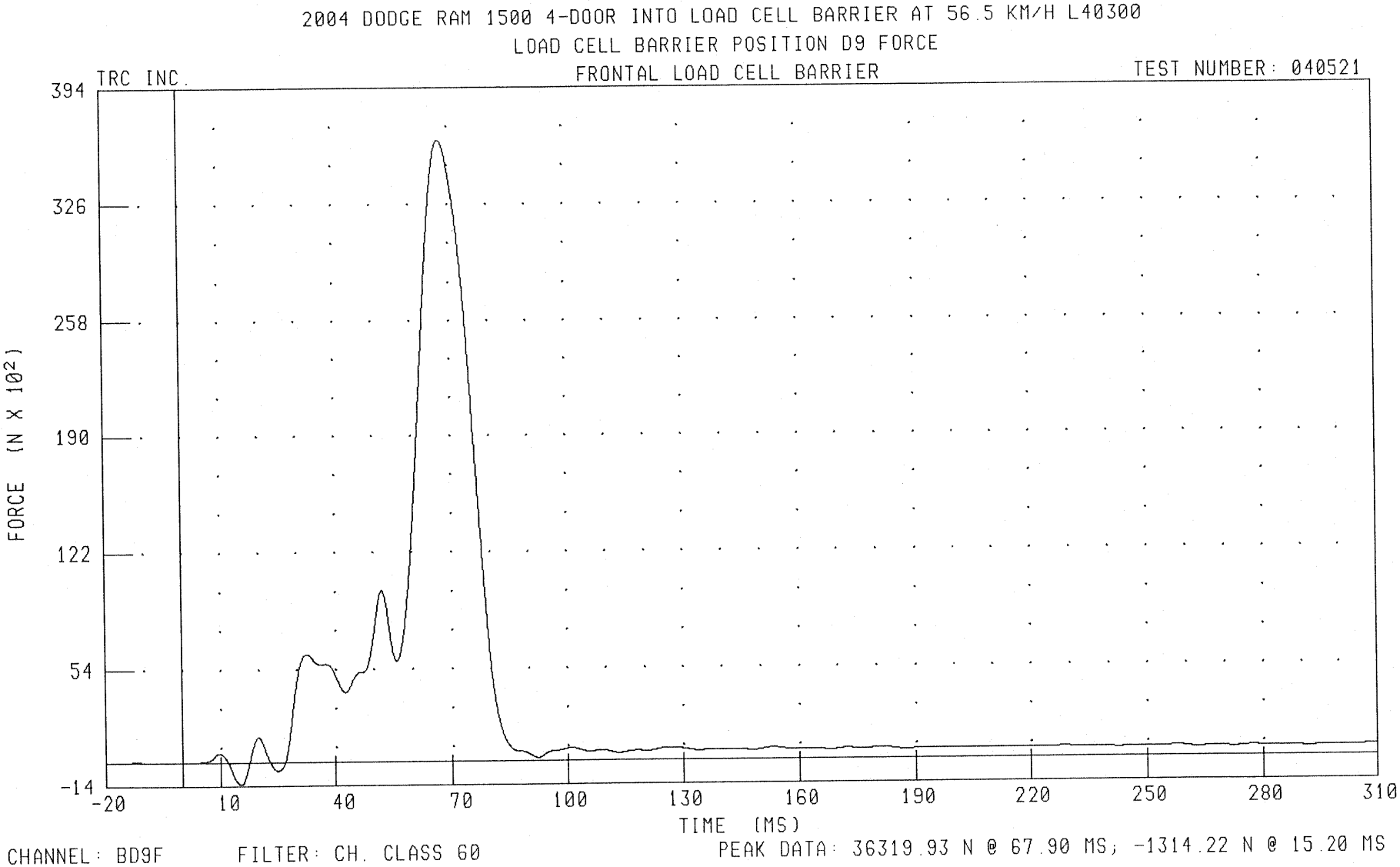
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D7 FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
105
87
69
51
33
15
-2
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD7F
FILTER: CH. CLASS 60
PEAK DATA: 10043.15 N @ 20.30 MS; -235.06 N @ 5.50 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D8 FORCE
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
316
263
210
157
104
51
-1
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD8F
FILTER: CH. CLASS 60
PEAK DATA: 28920.07 N @ 29.20 MS; -164.84 N @ 113.30 MS

040521

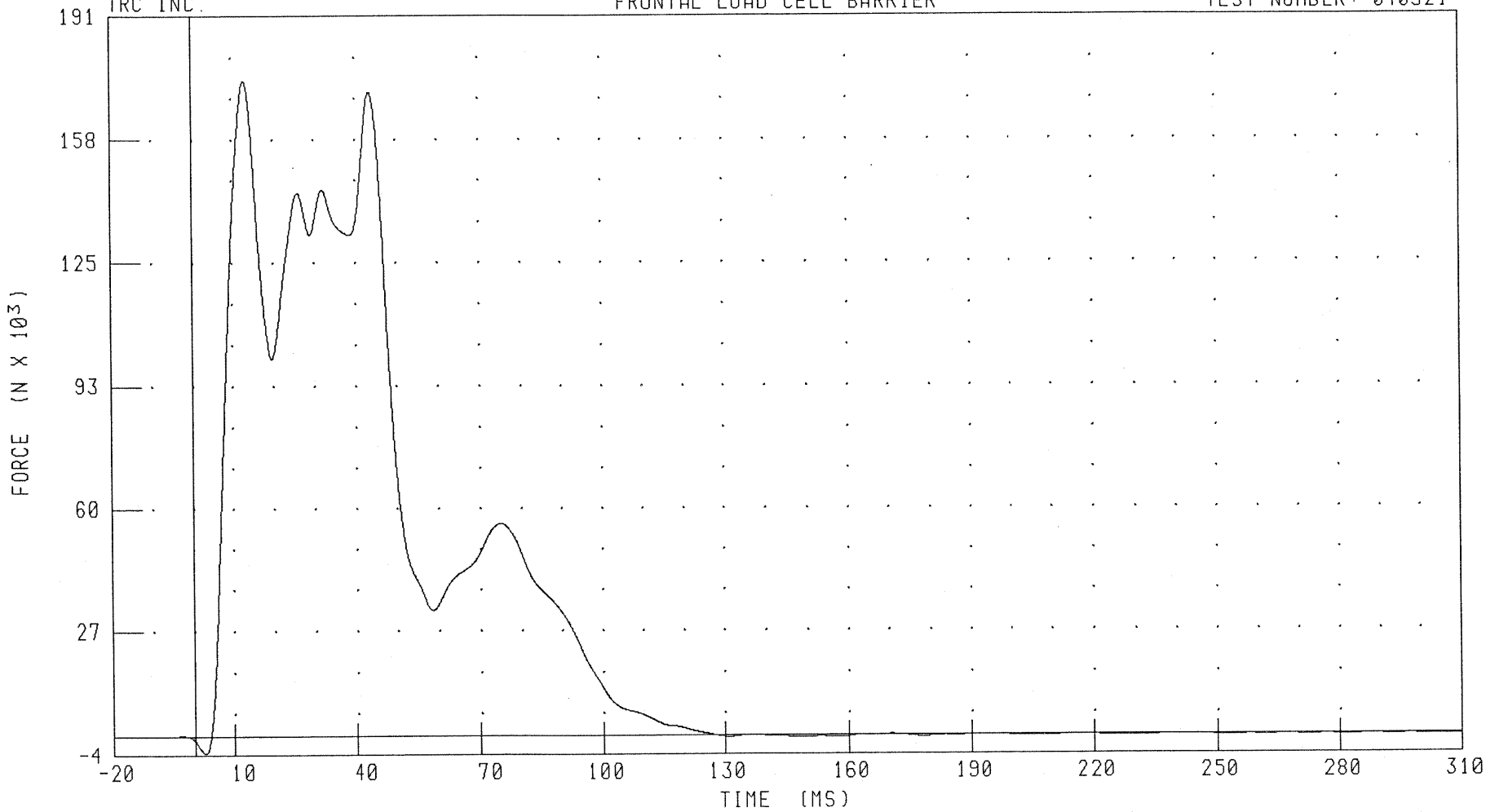

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER POSITION D9 FORCE
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
394
326
258
190
122
54
-14
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD9F
FILTER: CH. CLASS 60
PEAK DATA: 36319.93 N @ 67.90 MS; -1314.22 N @ 15.20 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

LOAD CELL BARRIER GROUP # 1 FORCE TOTAL

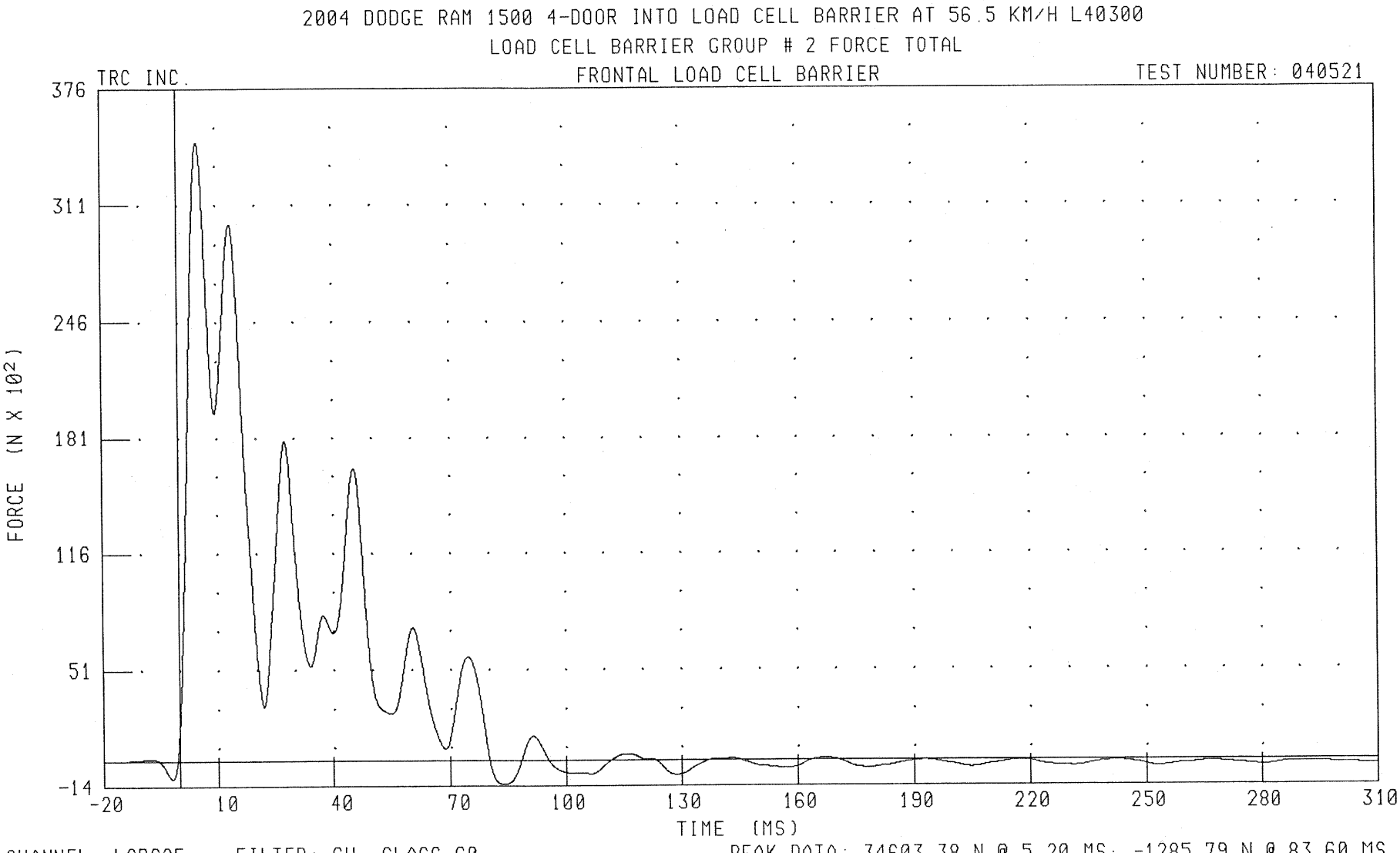
TRC INC. FRONTAL LOAD CELL BARRIER TEST NUMBER: 040521



CHANNEL: LCBG1F FILTER: CH. CLASS 60

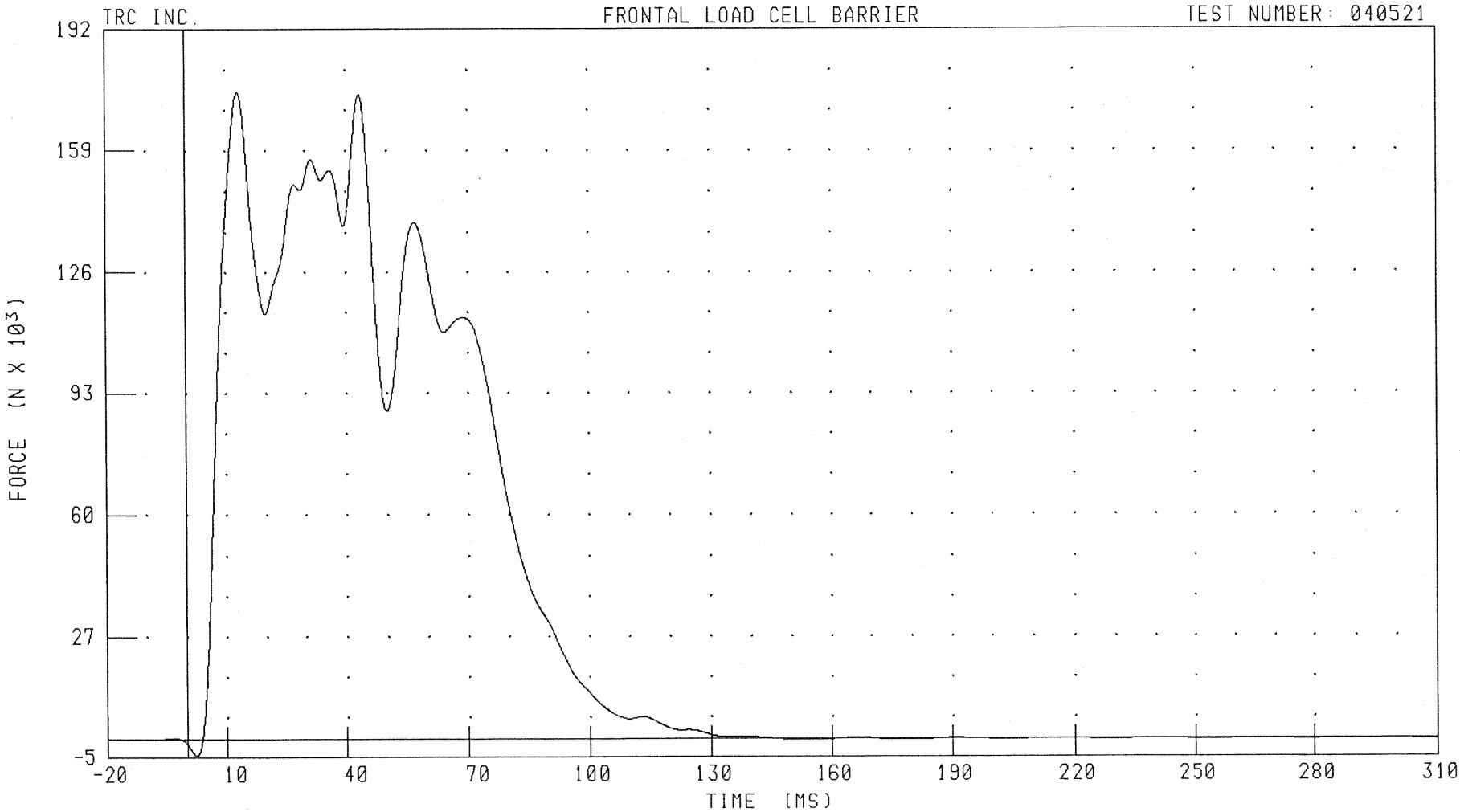
PEAK DATA: 174292.88 N @ 13.20 MS; -4465.87 N @ 2.60 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER GROUP # 2 FORCE TOTAL
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
376
311
246
181
116
51
-14
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LCBG2F
FILTER: CH. CLASS 60
PEAK DATA: 34603.38 N @ 5.20 MS; -1285.79 N @ 83.60 MS

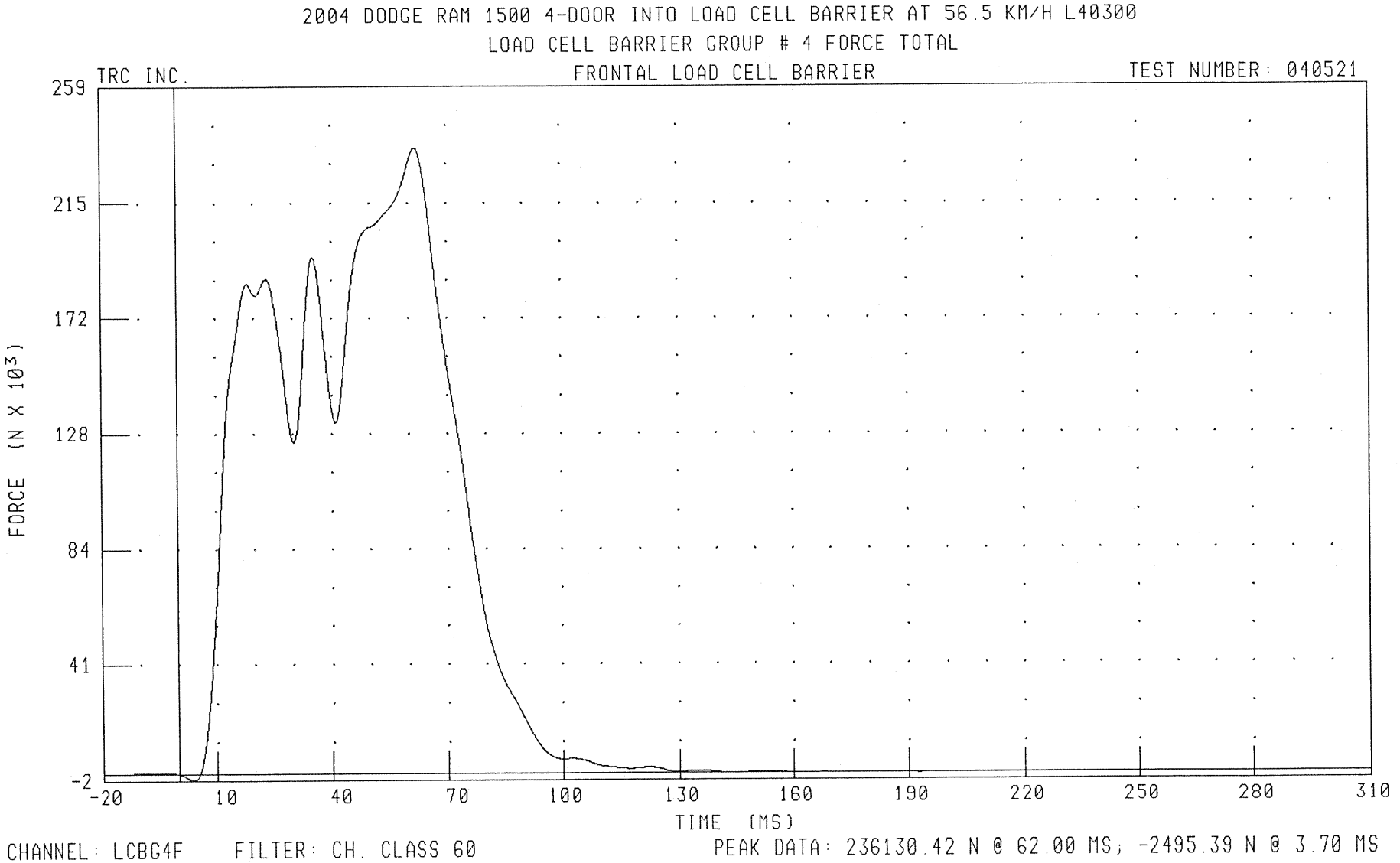
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER GROUP # 3 FORCE TOTAL



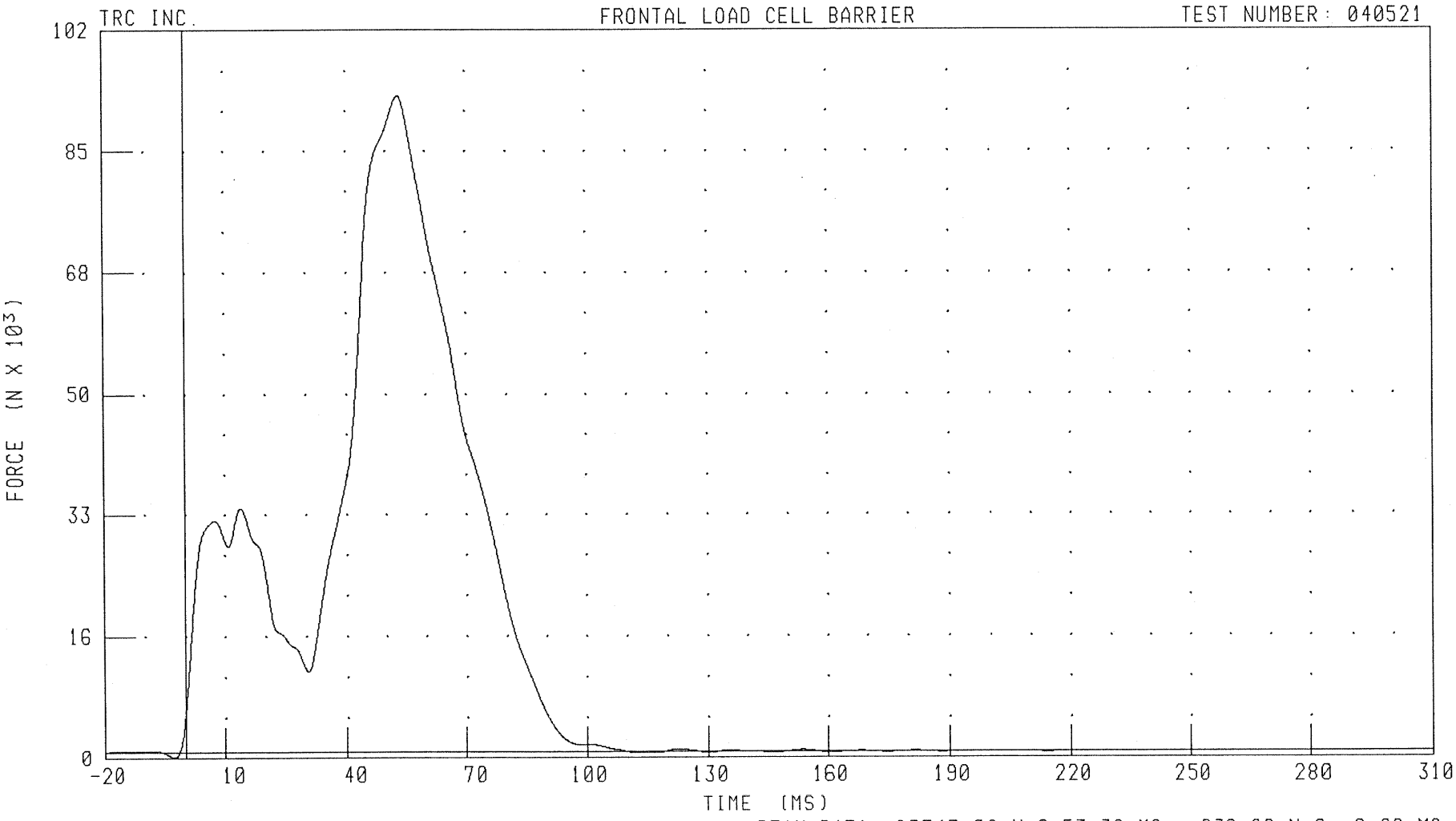
CHANNEL: LCBG3F FILTER: CH. CLASS 60 PEAK DATA: 175374.86 N @ 13.30 MS; -4606.39 N @ 2.40 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER GROUP # 4 FORCE TOTAL
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
259
215
172
128
84
41
-2
FORCE (N X 10³)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LCBG4F
FILTER: CH. CLASS 60
PEAK DATA: 236130.42 N @ 62.00 MS; -2495.39 N @ 3.70 MS

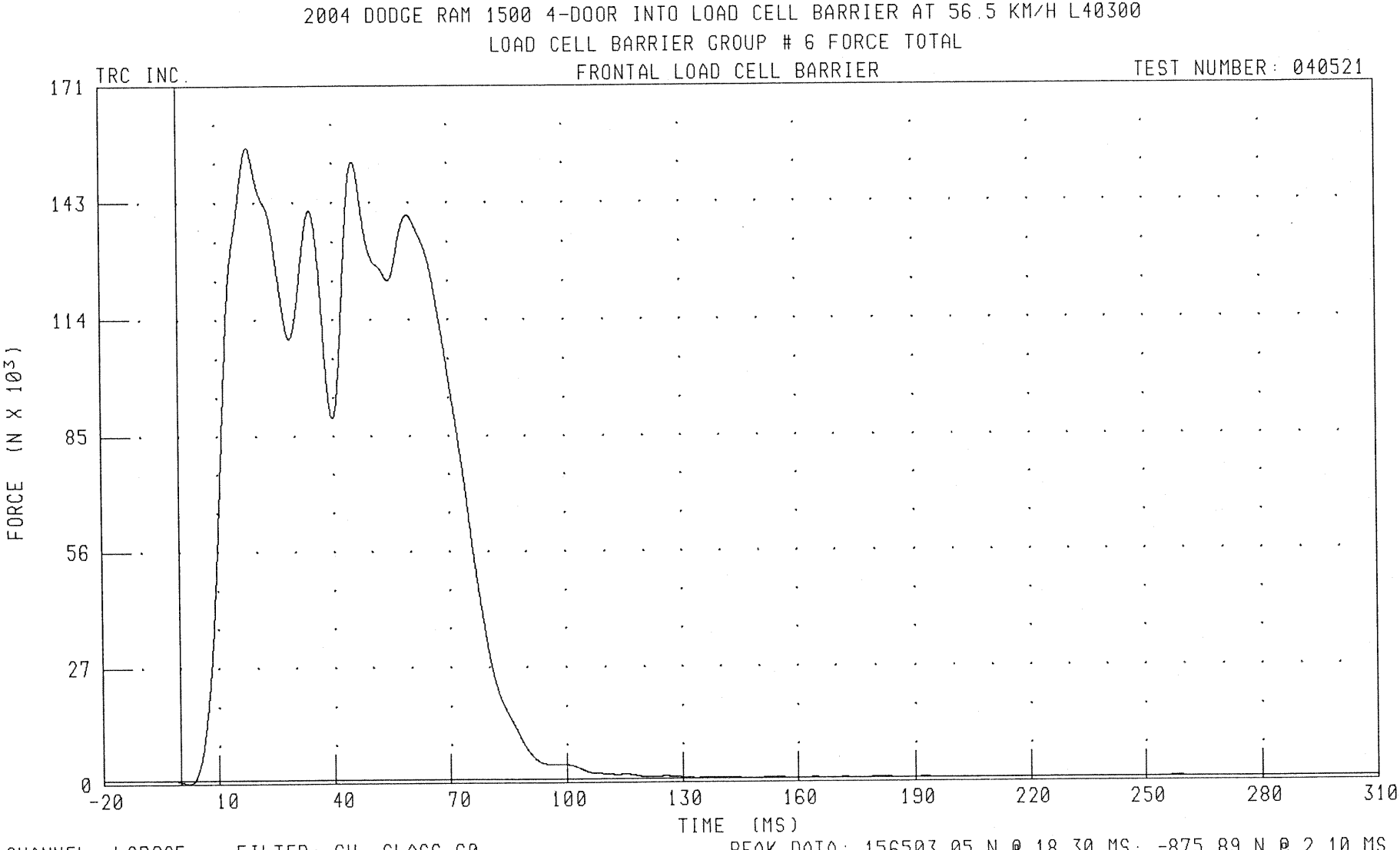
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER GROUP # 5 FORCE TOTAL



CHANNEL: LCBG5F FILTER: CH. CLASS 60 PEAK DATA: 93547.68 N @ 53.30 MS; -830.29 N @ -2.90 MS

040521

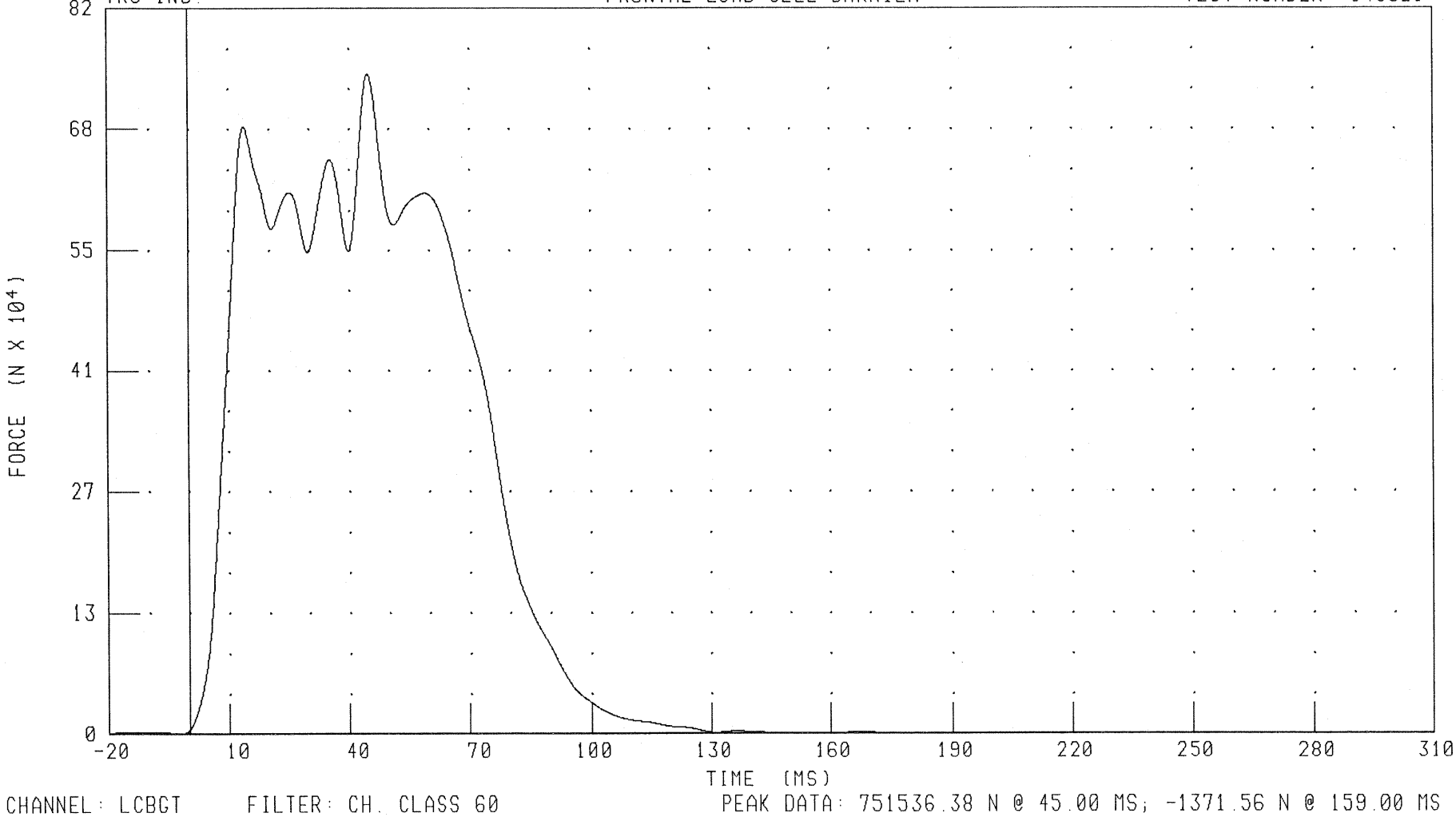

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LOAD CELL BARRIER GROUP # 6 FORCE TOTAL
FRONTAL LOAD CELL BARRIER
TRC INC.
TEST NUMBER: 040521
171
143
114
85
56
27
0
FORCE (N X 10³)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LCBG6F
FILTER: CH. CLASS 60
PEAK DATA: 156503.05 N @ 18.30 MS; -875.89 N @ 2.10 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

TOTAL LOAD CELL BARRIER FORCE

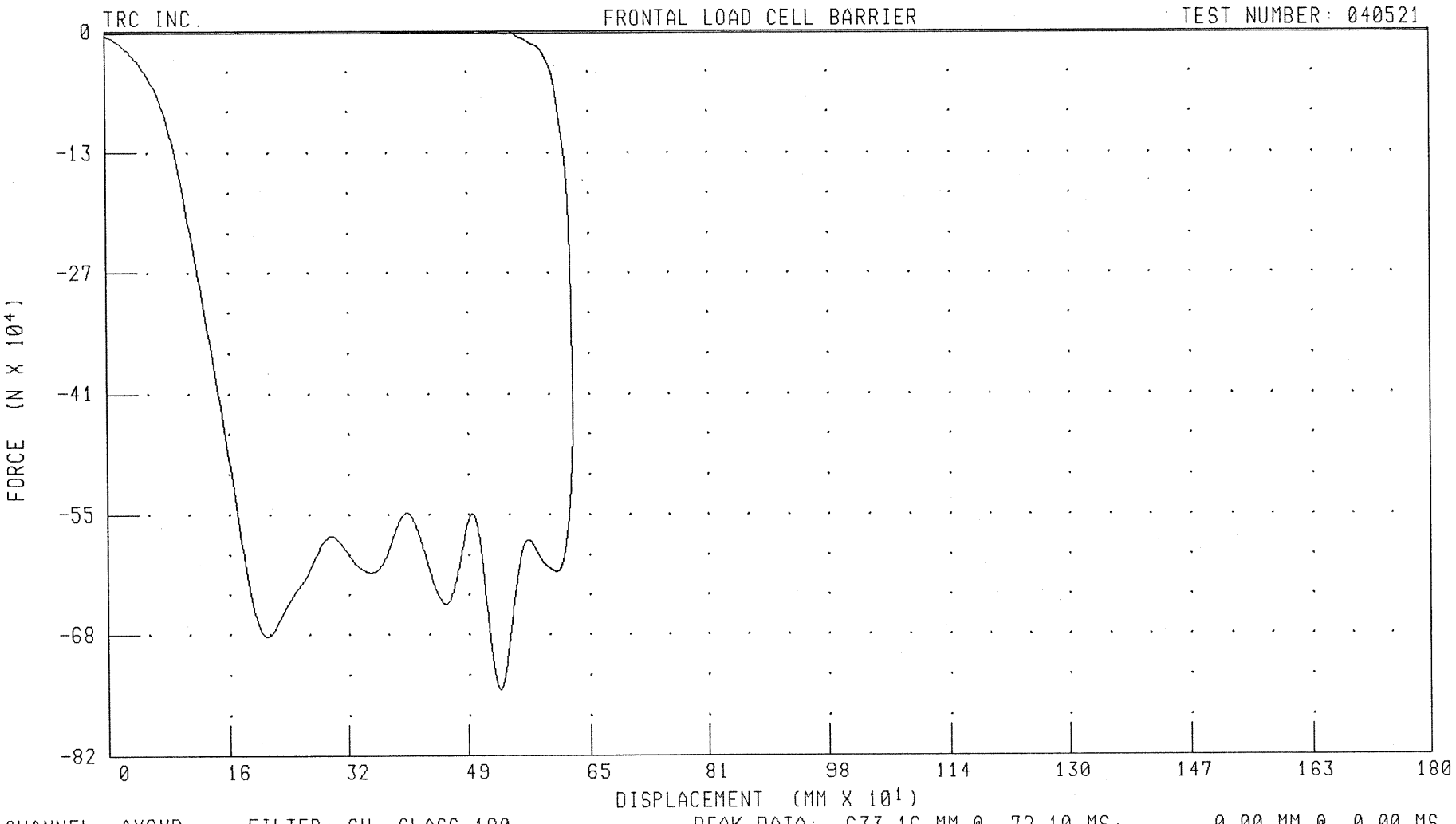
TRC INC FRONTAL LOAD CELL BARRIER TEST NUMBER: 040521



CHANNEL: LCBGT FILTER: CH. CLASS 60 PEAK DATA: 751536.38 N @ 45.00 MS; -1371.56 N @ 159.00 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
TOTAL LOAD CELL BARRIER FORCE VS AVERAGE VEHICLE X-AXIS DISPLACEMENT



CHANNEL: AVGXD FILTER: CH. CLASS 180
LCBGT CH. CLASS 60

PEAK DATA: 633.16 MM @ 72.10 MS; 0.00 MM @ 0.00 MS
1371.56 N @ 159.00 MS; -751536.38 N @ 45.00 MS

040521

BARRIER LOAD CELL SUMMARY DATA

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Location	Units	Max	Time	Min	Time
Barrier Force A1	Newtons	1182.7	18.8	-1274.0	14.6
Barrier Force A2	Newtons	1077.5	20.0	-1155.9	14.1
Barrier Force A3	Newtons	1076.4	19.7	-1502.4	13.0
Barrier Force A4	Newtons	1301.1	21.1	-1925.1	12.9
Barrier Force A5	Newtons	1239.4	21.5	-1985.7	12.9
Barrier Force A6	Newtons	1198.9	21.7	-1432.6	12.6
Barrier Force A7	Newtons	1297.8	21.7	-1561.1	12.7
Barrier Force A8	Newtons	921.5	22.0	-1271.8	27.6
Barrier Force A9	Newtons	1340.8	22.4	-1480.9	27.6
Barrier Force B1	Newtons	647.3	19.5	-5855.1	87.8
Barrier Force B2	Newtons	424.9	6.8	-10149.0	91.1
Barrier Force B3	Newtons	3557.4	2.3	-168561.0	13.1
Barrier Force B4	Newtons	489.8	-1.0	-16476.6	6.3
Barrier Force B5	Newtons	768.3	21.6	-12511.2	3.4
Barrier Force B6	Newtons	431.1	-0.8	-12839.6	6.0
Barrier Force B7	Newtons	3658.1	2.1	-170499.0	13.3
Barrier Force B8	Newtons	294.0	130.9	-11663.9	35.2
Barrier Force B9	Newtons	421.4	22.0	-13882.4	80.1
Barrier Force C1	Newtons	249.4	20.3	-6630.1	49.2
Barrier Force C2	Newtons	426.9	4.4	-30940.6	23.0
Barrier Force C3	Newtons	1074.6	3.3	-132652.9	57.5
Barrier Force C4	Newtons	351.0	-2.4	-29831.9	50.0
Barrier Force C5	Newtons	293.4	-3.5	-37432.2	52.9
Barrier Force C6	Newtons	330.5	-2.5	-22128.5	47.3
Barrier Force C7	Newtons	535.8	1.7	-119008.6	17.2
Barrier Force C8	Newtons	257.7	3.1	-29104.4	22.4
Barrier Force C9	Newtons	510.3	150.0	-14407.3	72.9
Barrier Force D1	Newtons	665.2	14.2	-42146.4	63.6
Barrier Force D2	Newtons	141.6	4.0	-29827.3	36.5
Barrier Force D3	Newtons	266.1	5.1	-8816.8	20.4
Barrier Force D4	Newtons	552.8	42.2	-1233.1	8.5
Barrier Force D5	Newtons	632.5	30.3	-11108.0	59.0
Barrier Force D6	Newtons	615.8	41.6	-1864.9	53.6
Barrier Force D7	Newtons	234.5	5.5	-10040.6	20.3
Barrier Force D8	Newtons	164.5	113.3	-28902.6	29.2
Barrier Force D9	Newtons	1310.6	15.2	-36318.6	67.9
Barrier Force Sum Group 1	Newtons	4465.9	2.6	174292.9	13.2
Barrier Force Sum Group 2	Newtons	1285.8	83.6	34603.4	5.2
Barrier Force Sum Group 3	Newtons	4606.4	2.4	175374.9	13.3
Barrier Force Sum Group 4	Newtons	2495.4	3.7	236130.4	62.0
Barrier Force Sum Group 5	Newtons	830.3	-2.9	93547.7	53.3
Barrier Force Sum Group 6	Newtons	875.9	2.1	156503.0	18.3
Barrier Force Total Sum	Newtons	1371.6	159.0	751536.4	45.0

Appendix D

Instrumentation Data Channel Assignments

Channel Report

6/4/2004 2:01:49 PM

Name of Test 040521 **System** MINIDAU **Name of DAU** DAU8

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
8001	AF9Y5	HEDXG1	Head Accel X	Fd	1920.3583	g	+	5/14/2004	OK	065n	Endevco	7264-2000LC
8002	AJ509	HEDYG1	Head Accel Y	Lt	2001.4277	g	-	5/14/2004	OK	065n	Endevco	7264-2000T
8003	P14936	HEDZG1	Head Accel Z	Up	2002.3543	g	-	5/14/2004	OK	065n	Endevco	7264C-2KLC-2-
8004	J19501	HEDXR1	Head Accel X Red	Rd	2023.5474	g	-	5/14/2004	OK	065n	Endevco	7264-2KM5T
8005	FJ66J	HEDYR1	Head Accel Y Red	Rt	2009.4014	g	+	5/14/2004	OK	065n	Endevco	7264-2KM5T
8006	P16428	HEDZR1	Head Accel Z Red	Up	2037.6746	g	-	5/14/2004	OK	065n	Endevco	7264C-2KLC-2-
8007	J35562	HD1XG1	Head (LT) Accel X	Fwd	2000.8206	g	+	5/14/2004	OK	065n	Endevco	7264-2000LC
8008	AJ4H3	HD1ZG1	Head (LT) Accel Z	Up	2001.2855	g	-	5/14/2004	OK	065n	Endevco	7264-2KM5T
8009	J20004	HD2YG1	Head (FT) Accel Y	Lft	2006.0707	g	-	5/14/2004	OK	065n	Endevco	7264-2KM5T
8010	J19611	HD2ZG1	Head (FT) Accel Z	Up	2001.6314	g	-	5/13/2004	OK	065n	Endevco	7264-2KM5T
8011	ACCP9	HD3XG1	Head (TP) Accel X	Fwd	2090.2310	g	+	5/14/2004	OK	065n	Endevco	7264-2000LC
8012	J19925	HD3YG1	Head (TP) Accel Y	Lft	1920.3043	g	-	5/14/2004	OK	065n	Endevco	7264-2KM5T
8013	1716-0442-FX	NEKXF1	Neck Force X	Hd	8907.5855	N	-	5/13/2004	OK	065n	Denton	1716
8014	1716-0442-FY	NEKYF1	Neck Force Y	Hd	8908.5619	N	+	5/13/2004	OK	065n	Denton	1716
8015	1716-0442-FZ	NEKZF1	Neck Force Z	Hd	13329.931	N	+	5/13/2004	OK	065n	Denton	1716
8016	1716-0442-MX	NEKXM1	Neck Moment X	Rt Ear	282.72740	N·m	-	5/13/2004	OK	065n	Denton	1716
8017	1716-0442-MY	NEKYM1	Neck Moment Y	Chn	283.02666	N·m	+	5/13/2004	OK	065n	Denton	1716
8018	1716-0442-MZ	NEKZM1	Neck Moment Z	Chn	282.80305	N·m	+	5/13/2004	OK	065n	Denton	1716
8019	DC73J	CSTXG1	Chest Accel X	Fwd	2002.7763	g	+	5/14/2004	OK	065n	Endevco	7264-2KM5T
8020	AJ7M9	CSTYG1	Chest Accel Y	Lft	1981.8467	g	-	5/14/2004	OK	065n	Endevco	7264-2KM5T
8021	AJ4L1	CSTZG1	Chest Accel Z	Up	1993.7570	g	-	5/14/2004	OK	065n	Endevco	7264-2KM5T
8022	AJ7M6	CSTXR1	Chest Accel X Red	Rwd	1952.3683	g	-	5/14/2004	OK	065n	Endevco	7264-2KM5T
8023	BD15J	CSTYR1	Chest Accel Y Red	Lft	2014.6632	g	-	5/14/2004	OK	065n	Endevco	7264-2000T
8024	AAMP6	CSTZR1	Chest Accel Z Red	Up	2005.1340	g	-	5/14/2004	OK	065n	Endevco	7264-2000LC
8025	CST065	CSTXD1	Chest Deflection X	Strnm	91.380433	mm	+	5/17/2004	OK	065n	Servo	14CB1-2981
8026	P17559	PEVXG1	Pelvis Accel X	Rwd	2032.0218	g	-	5/14/2004	OK	065n	Endevco	7264C-2KLC-2-
8027	AAKA2	PEVYG1	Pelvis Accel Y	Lft	1995.7909	g	-	5/13/2004	OK	065n	Endevco	7264-2000LC
8028	AJ4P6	PEVZG1	Pelvis Accel Z	Up	1914.5604	g	-	5/14/2004	OK	065n	Endevco	7264-2000T
8029	2121-0262	LFMZF1	Left Femur Force Z	Knee	13346.680	N	+	5/13/2004	OK	065n	Denton	2121
8030	3292-105-MX	TBLXM1	Left Upper Tibia Moment X	Tib	400.12375	N·m	-	5/17/2004	OK	065n	Denton	3292
8031	3292-105-MY	TBLYM1	Left Upper Tibia Moment Y	Tib	398.98657	N·m	+	5/17/2004	OK	065n	Denton	3292
8032	3292-105-FZ	TBLZF1	Left Upper Tibia Force Z	Tib	15552.288	N	+	5/17/2004	OK	065n	Denton	3292

Channel Report

6/4/2004 2:01:50 PM

Name of Test 040521 **System** MINIDAU **Name of DAU** DAU9

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
9001	3093-134-FZ	ANLZF1	Left Lower Tibia Force Z	Ank	11123.567	N	+	5/17/2004	OK	065n	Denton	3093
9002	3093-134-MX	ANLXM1	Left Lower Tibia Moment X	Ank	500.66641	N·m	-	5/17/2004	OK	065n	Denton	3093
9003	3093-134-MY	ANLYM1	Left Lower Tibia Moment Y	Ank	501.51433	N·m	+	5/17/2004	OK	065n	Denton	3093
9004	P17837	FLHXG1	Left Foot-Heel Accel X	Rwd	2029.2963	g	-	5/14/2004	OK	065n	Endevco	7264C-2KLC-2-
9005	AJ534	FLHZG1	Left Foot-Heel Accel Z	Dwn	1923.0957	g	+	5/14/2004	OK	065n	Endevco	7264-2KM5T
9006	AAKE2	FLTZG1	Left Foot-Toe Accel Z	Up	2023.7154	g	-	5/14/2004	OK	065n	Endevco	7264-2000LC
9007	2121-0259	RFMZF1	Right Femur Force Z	Knee	13354.791	N	+	5/13/2004	OK	065n	Denton	2121
9008	3292-103-MX	TBRXM1	Right Upper Tibia Moment X	Tib	399.83153	N·m	-	5/17/2004	OK	065n	Denton	3292
9009	3292-103-MY	TBRYM1	Right Upper Tibia Moment Y	Tib	399.32383	N·m	+	5/17/2004	OK	065n	Denton	3292
9010	3292-103-FZ	TBRZF1	Right Upper Tibia Force Z	Tib	15546.007	N	+	5/17/2004	OK	065n	Denton	3292
9011	3093-133-FZ	ANRZF1	Right Lower Tibia Force Z	Ank	11122.697	N	+	5/17/2004	OK	065n	Denton	3093
9012	3093-133-MX	ANRXM1	Right Lower Tibia Moment X	Ank	498.70628	N·m	-	5/17/2004	OK	065n	Denton	3093
9013	3093-133-MY	ANRYM1	Right Lower Tibia Moment Y	Ank	499.93970	N·m	+	5/17/2004	OK	065n	Denton	3093
9014	P15951	FRHXG1	Right Foot-Heel Accel X	Rwd	1997.9661	g	-	5/14/2004	OK	065n	Endevco	7264C-2KLC-2-
9015	P17848	FRHZG1	Right Foot-Heel Accel Z	Dwn	2033.1345	g	+	5/14/2004	OK	065n	Endevco	7264C-2KLC-2-
9016	P12566	FRTZG1	Right Foot-Toe Accel Z 4	Up	2028.3573	g	-	5/14/2004	OK	065n	Endevco	7264C-2K-2-180
9017	AAKB3	HEDXG2	Head Accel X	Fd	2006.2853	g	+	5/13/2004	OK	066n	Endevco	7264-2000LC
9018	J14232	HEDYG2	Head Accel Y	Lt	1988.9475	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
9019	J14668	HEDZG2	Head Accel Z	Up	1991.9078	g	-	1/22/2004	OK	066n	Endevco	7264-2000T
9020	J29006	HEDXR2	Head Accel X Red	Rd	2030.9723	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
9021	AF973	HEDYR2	Head Accel Y Red	Rt	2007.6185	g	+	5/13/2004	OK	066n	Endevco	7264-2000LC
9022	J27467	HEDZR2	Head Accel Z Red	Up	2073.1649	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
9023	J27523	HD1XG2	Head (LT) Accel X	Fwd	1991.3965	g	+	5/14/2004	OK	066n	Endevco	7264-2KM5T
9024	J36611	HD1ZG2	Head (LT) Accel Z	Up	2001.3082	g	-	5/13/2004	OK	066n	Endevco	7264-2000TZ
9025	BD88J	HD2YG2	Head (FT) Accel Y	Lft	1992.8103	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
9026	J27457	HD2ZG2	Head (FT) Accel Z	Up	1992.1738	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
9027	J17822	HD3XG2	Head (TP) Accel X	Fwd	1991.8186	g	+	5/13/2004	OK	066n	Endevco	7264-2000T
9028	J27466	HD3YG2	Head (TP) Accel Y	Lft	2042.8471	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
9030	1716-0443-FX	NEKXF2	Neck Force X	Hd	8893.5209	N	-	5/13/2004	OK	066n	Denton	1716
9031	1716-0443-FY	NEKYF2	Neck Force Y	Hd	8889.2592	N	+	5/13/2004	OK	066n	Denton	1716
9032	1716-0443-FZ	NEKZF2	Neck Force Z	Hd	13332.118	N	+	5/13/2004	OK	066n	Denton	1716

Channel Report

6/4/2004 2:01:50 PM

Name of Test 040521 **System** MINIDAU **Name of DAU** DAUA

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	1716-0443-MX	NEKXM2	Neck Moment X	Rt Ear	283.18245	N·m	-	5/13/2004	OK	066n	Denton	1716
0002	1716-0443-MY	NEKYM2	Neck Moment Y	Chn	282.79590	N·m	+	5/13/2004	OK	066n	Denton	1716
0003	1716-0443-MZ	NEKZM2	Neck Moment Z	Chn	283.17894	N·m	+	5/13/2004	OK	066n	Denton	1716
0004	AJ4F8	CSTXG2	Chest Accel X	Fwd	1994.1111	g	+	5/13/2004	OK	066n	Endevco	7264-2KM5T
0005	J19865	CSTYG2	Chest Accel Y	Lft	1990.9319	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
0006	J23772	CSTZG2	Chest Accel Z	Up	1993.9701	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
0007	AGN47	CSTXR2	Chest Accel X Red	Rwd	1981.1872	g	-	5/13/2004	OK	066n	Endevco	7264-2000LC
0008	BE68J	CSTYR2	Chest Accel Y Red	Lft	1989.7557	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
0009	J35987	CSTZR2	Chest Accel Z Red	Up	2003.0852	g	-	5/13/2004	OK	066n	Endevco	7264-2000TZ
0010	CST066	CSTXD2	Chest Deflection X	Strnm	90.431403	mm	+	5/17/2004	OK	066n	Servo	14CB1-2981
0011	J14660	PEVXG2	Pelvis Accel X	Rwd	2000.9733	g	-	5/13/2004	OK	066n	Endevco	7264-2KM5T
0012	AJ4N7	PEVYG2	Pelvis Accel Y	Lft	2007.4030	g	-	5/13/2004	OK	066n	Endevco	7264-2000T
0013	ACC59	PEVZG2	Pelvis Accel Z	Up	1928.0012	g	-	5/13/2004	OK	066n	Endevco	7264-2000T
0014	2121-0256	LFMZF2	Left Femur Force Z	Knee	13336.667	N	+	5/13/2004	OK	066n	Denton	2121
0015	3292-108-MX	TBLXM2	Left Upper Tibia Moment X	Tib	399.91176	N·m	-	5/14/2004	OK	066n	Denton	3292
0016	3292-108-MY	TBLYM2	Left Upper Tibia Moment Y	Tib	400.23091	N·m	+	5/14/2004	OK	066n	Denton	3292
0017	3292-108-FZ	TBLZF2	Left Upper Tibia Force Z	Tib	15530.399	N	+	5/14/2004	OK	066n	Denton	3292
0018	3093-113-MX	ANLXM2	Left Lower Tibia Moment X	Ank	501.11498	N·m	-	5/14/2004	OK	066n	Denton	3093
0019	3093-113-MY	ANLYM2	Left Lower Tibia Moment Y	Ank	500.05645	N·m	+	5/14/2004	OK	066n	Denton	3093
0020	3093-113-FZ	ANLZF2	Left Lower Tibia Force Z	Ank	11113.474	N	+	5/14/2004	OK	066n	Denton	3093
0021	P16225	FLHXG2	Left Foot-Heel Accel X	Rwd	2053.5132	g	-	5/14/2004	OK	066n	Endevco	7264C-2KLC-2-
0022	J14384	FLHZG2	Left Foot-Heel Accel Z	Dwn	2005.2390	g	+	5/14/2004	OK	066n	Endevco	7264-2KM5T
0023	P14914	FLTZG2	Left Foot-Toe Accel Z	Up	2003.6394	g	-	5/14/2004	OK	066n	Endevco	7264C-2KLC-2-
0024	2121-0261	RFMZF2	Right Femur Force Z	Knee	13336.667	N	+	5/13/2004	OK	066n	Denton	2121
0025	3292-107-MX	TBRXM2	Right Upper Tibia Moment X	Tib	399.89752	N·m	-	5/14/2004	OK	066n	Denton	3292
0026	3292-107-MY	TBRYM2	Right Upper Tibia Moment Y	Tib	399.00871	N·m	+	5/14/2004	OK	066n	Denton	3292
0027	3292-107-FZ	TBRZF2	Right Upper Tibia Force Z	Tib	15559.236	N	+	5/14/2004	OK	066n	Denton	3292
0028	3093-136-MX	ANRXM2	Right Lower Tibia Moment X	Ank	500.82553	N·m	-	5/14/2004	OK	066n	Denton	3093
0029	3093-136-MY	ANRYM2	Right Lower Tibia Moment Y	Ank	501.60847	N·m	+	5/14/2004	OK	066n	Denton	3093
0030	3093-136-FZ	ANRZF2	Right Lower Tibia Force Z	Ank	11129.370	N	+	5/14/2004	OK	066n	Denton	3093
0031	P17846	FRHXG2	Right Foot-Heel Accel X	Rwd	1974.4448	g	-	5/14/2004	OK	066n	Endevco	7264C-2KLC-2-
0032	P17858	FRHZG2	Right Foot-Heel Accel Z	Dwn	1962.2722	g	+	5/14/2004	OK	066n	Endevco	7264C-2KLC-2-

Channel Report

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Name of Test 040521 **System** MINIDAU **Name of DAU** DAUC

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	P15638	FRTZG2	Right Foot-Toe Accel Z	Up	1951.9299	g	-	5/14/2004	OK	066n	Endevco	7264C-2KLC-2-
0002	J20125	HEDXG3	Head Accel X	Fwd	1996.7949	g	+	5/13/2004	OK	040n	Endevco	7264-2000T
0003	J35564	HEDYG3	Head Accel Y	Lft	1915.1434	g	-	5/13/2004	OK	040n	Endevco	7264-2000LC
0004	J14688	HEDZG3	Head Accel Z	Up	2013.1171	g	-	5/13/2004	OK	040n	Endevco	7264-2KM5T
0005	IF-234-121-FX	NEKXF3	Neck Force X	Hd	8913.4826	N	+	8/26/2003	OK	040n	FTSS	IF-234
0006	IF-234-121-FY	NEKYF3	Neck Force Y	Hd	8905.2448	N	+	8/26/2003	OK	040n	FTSS	IF-234
0007	IF-234-121-FZ	NEKZF3	Neck Force Z	Hd	13324.583	N	+	8/26/2003	OK	040n	FTSS	IF-234
0008	IF-234-121-MX	NEKXM3	Neck Moment X	Lt Ear	282.64952	N·m	+	8/26/2003	OK	040n	FTSS	IF-234
0009	IF-234-121-MY	NEKYM3	Neck Moment Y	Chn	282.35615	N·m	+	8/26/2003	OK	040n	FTSS	IF-234
0010	IF-234-121-MZ	NEKZM3	Neck Moment Z	Chn	284.18247	N·m	+	8/26/2003	OK	040n	FTSS	IF-234
0011	J17705	CSTXG3	Chest Accel X	Fwd	1991.0790	g	+	5/13/2004	OK	040n	Endevco	7264-2KM5T
0012	AAKB1	CSTYG3	Chest Accel Y	Lft	2007.1481	g	-	5/13/2004	OK	040n	Endevco	7264-2000LC
0013	AGAG0	CSTZG3	Chest Accel Z	Up	2062.7062	g	-	5/13/2004	OK	040n	Endevco	7264-2000LC
0014	08C1-3179-CST0	CSTXD3	Chest Deflection X	Strnm	89.247319	mm	+	5/14/2004	OK	040n	Servo	08C1-3179
0015	J27470	PEVXG3	Pelvis Accel X	Rwd	2056.2761	g	+	5/13/2004	OK	040n	Endevco	7264-2KM5T
0016	J20293	PEVYG3	Pelvis Accel Y	Lft	1924.0496	g	-	5/13/2004	OK	040n	Endevco	7264-2000T
0017	J36744	PEVZG3	Pelvis Accel Z	Up	2028.3188	g	-	5/13/2004	OK	040n	Endevco	7264-2000TZ
0018	J36721	HEDXG4	Head Accel X	Fwd	2000.1631	g	+	5/13/2004	OK	042n	Endevco	7264-2000TZ
0019	J19873	HEDYG4	Head Accel Y	Lft	2074.6131	g	-	5/13/2004	OK	042n	Endevco	7264-2KM5T
0020	J21985	HEDZG4	Head Accel Z	Up	2006.8439	g	-	5/13/2004	OK	042n	Endevco	7264-2000T
0021	IF-234-120-FX	NEKXF4	Neck Force X	Hd	8899.0865	N	+	8/26/2003	OK	042n	FTSS	IF-234
0022	IF-234-120-FY	NEKYF4	Neck Force Y	Hd	8940.0949	N	+	8/26/2003	OK	042n	FTSS	IF-234
0023	IF-234-120-FZ	NEKZF4	Neck Force Z	Hd	13344.392	N	+	8/26/2003	OK	042n	FTSS	IF-234
0024	IF-234-120-MX	NEKXM4	Neck Moment X	Lt Ear	282.63836	N·m	+	8/26/2003	OK	042n	FTSS	IF-234
0025	IF-234-120-MY	NEKYM4	Neck Moment Y	Chn	283.49333	N·m	+	8/26/2003	OK	042n	FTSS	IF-234
0026	IF-234-120-MZ	NEKZM4	Neck Moment Z	Chn	281.64626	N·m	+	8/26/2003	OK	042n	FTSS	IF-234
0027	AJ5P9	CSTXG4	Chest Accel X	Fwd	2004.2643	g	+	5/13/2004	OK	042n	Endevco	7264-2KM5T
0028	AAKA1	CSTYG4	Chest Accel Y	Lft	1994.0509	g	-	5/13/2004	OK	042n	Endevco	7264-2000LC
0029	J20209	CSTZG4	Chest Accel Z	Up	2012.0455	g	-	5/13/2004	OK	042n	Endevco	7264-2000T
0030	08C1-3179-CST0	CSTXD4	Chest Deflection X	Strnm	89.588801	mm	+	5/14/2004	OK	042n	Servo	08C1-3179
0031	AGT82	PEVXG4	Pelvis Accel X	Rwd	1982.0945	g	+	5/13/2004	OK	042n	Endevco	7264-2000LC
0032	ALAB9	PEVYG4	Pelvis Accel Y	Lft	2090.2822	g	-	5/13/2004	OK	042n	Endevco	7264-2000T

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Name of Test 040521 **System** MINIDAU **Name of DAU** DAUD

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	J19547	PEVZG4	Pelvis Accel Z	Up	2000.2161	g	-	5/13/2004	OK	042n	Endevco	7264-2000T
0002	P34106	LRPXG1	LT RR FLOOR PAN/DOOR	FWD	2010.5238	g	+	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0003	P33638	LRPZG1	LT RR FLOOR PAN/DOOR	UP	1994.1577	g	-	3/16/2004	OK	-1	Endevco	7264C-2K-2-180
0004	P29629	RRPXG1	RT RR FLOOR PAN/DOOR	FWD	1991.9078	g	+	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
0005	P29904	RRPZG1	RT RR FLOOR PAN/DOOR	UP	2083.8420	g	-	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
0006	P32815	ETXG1	ENGINE TOP X-AXIS	FWD	2005.5623	g	+	5/24/2004	OK	-1	Endevco	7264C-2K-2-180
0007	P27961	EBXG1	ENGINE BOTTOM X-AXIS	FWD	1987.9635	g	+	2/6/2004	OK	-1	Endevco	7264C-2K-2-180
0008	P34105	RFCXG1	RT FT CALIPER X-AXIS	FWD	2041.9558	g	+	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0009	P34324	IPTXG1	IP CENTER TOP X-AXIS	FWD	2065.0157	g	+	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0010	P34104	LFCXG1	LT FRONT CALIPER X-AXIS	FWD	1961.9865	g	+	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0011	G1303648A	DSPOL1	DR SEAT BELT SPOOLOUT	SP04	300.01549	mm	+	2/6/2004	OK	-1	Celesco	PT-101-0050-11
0013	A12897	PSPOL2	PASS SEAT BELT SPOOLOUT	SP03	302.71229	mm	+	1/14/2004	OK	-1	Celesco	PT-101-50B
0015	3419T-831	LLB1	DR LAP BELT FORCE	2011	15558.715	N	+	3/23/2004	OK	-1	Lebow	3419T
0016	3419T-829	LSB1	DR SHOULDER BELT FORCE	25	15554.036	N	+	12/3/2003	---	-1	Lebow	3419T
0017	3419T-236	RLB2	PASS LAP BELT FORCE		15597.962	N	+	4/12/2004	OK	-1	Lebow	3419T
0018	3419T-828	RSB2	PASS SHOULDER BELT	6	15600.956	N	+	11/25/2003	---	-1	Lebow	3419T
0021	P24668	LCSXRG4	LT RR CHILD SEAT X-AXIS	FWD	1995.1679	g	+	1/6/2004	OK	-1	Endevco	7264C-2K-2-180
0022	P33598	RCSXRG3	RT RR CHILD SEAT X-AXIS	RR	2000.2344	g	-	3/16/2004	OK	-1	Endevco	7264C-2K-2-180
0023	P34119	LCSXG4	LT RR CHILD SEAT X-AXIS	FWD	2041.7115	g	+	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0024	P34210	LCSYG4	LT RR CHILD SEAT Y-AXIS	LT	2061.1916	g	-	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0025	P34010	LCSZG4	LT RR CHILD SEAT Z-AXIS	UP	1964.0939	g	-	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0026	P33594	RCSXG3	RT RR CHILD SEAT X-AXIS	FWD	2012.7368	g	+	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0027	P33881	RCSYG3	RT RR CHILD SEAT Y-AXIS	LT	1954.5714	g	-	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0028	P33592	RCSZG3	RT RR CHILD SEAT Z-AXIS	UP	2051.2820	g	-	4/19/2004	OK	-1	Endevco	7264C-2K-2-180

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Name of Test 040521 **System** MINIDAU **Name of DAU** DAUG

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	EVENT	EVENT	EVENT		5.12	V	+	4/19/2004	OK	-1	TRC	Event
0002	62467	BA1F	ROW A CELL 1		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0003	122042A	BA2F	ROW A CELL 2		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220BZY-50K
0004	68054	BA3F	ROW A CELL 3		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0005	68061	BA4F	ROW A CELL 4		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0006	68058	BA5F	ROW A CELL 5		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0007	68042	BA6F	ROW A CELL 6		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0008	68032	BA7F	ROW A CELL 7		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0009	68026	BA8F	ROW A CELL 8		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0010	68045	BA9F	ROW A CELL 9		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0011	68027	BB1F	ROW B CELL 1		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0012	68055	BB2F	ROW B CELL 2		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0013	68046	BB3F	ROW B CELL 3		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0014	68068	BB4F	ROW B CELL 4		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0015	68024	BB5F	ROW B CELL 5		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0016	68044	BB6F	ROW B CELL 6		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0017	68069	BB7F	ROW B CELL 7		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0018	68034	BB8F	ROW B CELL 8		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0019	68047	BB9F	ROW B CELL 9		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0020	62466	BC1F	ROW C CELL 1		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0021	62510	BC2F	ROW C CELL 2		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0022	68052	BC3F	ROW C CELL 3		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0023	68028	BC4F	ROW C CELL 4		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0024	68064	BC5F	ROW C CELL 5		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0025	68012	BC6F	ROW C CELL 6		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0026	68063	BC7F	ROW C CELL 7		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0027	68015	BC8F	ROW C CELL 8		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0028	62453	BC9F	ROW C CELL 9		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0029	68050	BD1F	ROW D CELL 1		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0030	68021	BD2F	ROW D CELL 2		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0031	68039	BD3F	ROW D CELL 3		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0032	68018	BD4F	ROW D CELL 4		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K

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Name of Test 040521 **System** MINIDAU **Name of DAU** DAUH

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	68067	BD5F	ROW D CELL 5		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0002	62456	BD6F	ROW D CELL 6		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0003	68014	BD7F	ROW D CELL 7		221731.41	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0004	68051	BD8F	ROW D CELL 8		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K
0005	68033	BD9F	ROW D CELL 9		222977.09	N	+	12/19/2003	OK	TRC	Interface	1220TX-50K

Dummy 065n **Type** HYBRID III 50th **Descriptio** NHTSA - 065v HIII 50th w/ Red accels & Lwr Legs ICAL'd 5-13-04(DKS 5-19-04)J211

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264-2000LC	AF9Y5	Endevco	0.0242379	g	2000	5/14/2004	Fd	0
HEDYG	Head Accel Y	7264-2000T	AJ509	Endevco	0.0281118	g	2000	5/14/2004	Lt	1
HEDZG	Head Accel Z	7264C-2KLC-2	P14936	Endevco	0.0142055	g	2000	5/14/2004	Up	1
HEDXR	Head Accel X Red	7264-2KM5T	J19501	Endevco	0.0253021	g	2000	5/14/2004	Rd	1
HEDYR	Head Accel Y Red	7264-2KM5T	FJ66J	Endevco	0.0330912	g	2000	5/14/2004	Rt	0
HEDZR	Head Accel Z Red	7264C-2KLC-2	P16428	Endevco	0.0147804	g	2000	5/14/2004	Up	1
HD1XG	Head (LT) Accel X	7264-2000LC	J35562	Endevco	0.0255895	g	2000	5/14/2004	Fwd	0
HD1ZG	Head (LT) Accel Z	7264-2KM5T	AJ4H3	Endevco	0.0275092	g	2000	5/14/2004	Up	1
HD2YG	Head (FT) Accel Y	7264-2KM5T	J20004	Endevco	0.0232023	g	2000	5/14/2004	Lft	1
HD2ZG	Head (FT) Accel Z	7264-2KM5T	J19611	Endevco	0.0287406	g	2000	5/13/2004	Up	1
HD3XG	Head (TP) Accel X	7264-2000LC	ACCP9	Endevco	0.0244949	g	2000	5/14/2004	Fwd	0
HD3YG	Head (TP) Accel Y	7264-2KM5T	J19925	Endevco	0.0222187	g	2000	5/14/2004	Lft	1
NEKXF	Neck Force X	1716	1716-0442-FX	Denton	0.0001897	N	8896	5/13/2004	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716	1716-0442-FY	Denton	0.0001848	N	8896	5/13/2004	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716	1716-0442-FZ	Denton	0.0000869	N	13344	5/13/2004	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716	1716-0442-MX	Denton	0.0058988	N·	282.4	5/13/2004	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716	1716-0442-MY	Denton	0.0057612	N·	282.4	5/13/2004	Chn to Strnm	0
NEKZM	Neck Moment Z	1716	1716-0442-MZ	Denton	0.0083817	N·	282.4	5/13/2004	Chn to Lt Shld	0
CSTXG	Chest Accel X	7264-2KM5T	DC73J	Endevco	0.0266297	g	2000	5/14/2004	Fwd	0
CSTYG	Chest Accel Y	7264-2KM5T	AJ7M9	Endevco	0.0234859	g	2000	5/14/2004	Lft	1
CSTZG	Chest Accel Z	7264-2KM5T	AJ4L1	Endevco	0.029182	g	2000	5/14/2004	Up	1
CSTXR	Chest Accel X Red	7264-2KM5T	AJ7M6	Endevco	0.0218538	g	2000	5/14/2004	Rwd	1
CSTYR	Chest Accel Y Red	7264-2000T	BD15J	Endevco	0.0409898	g	2000	5/14/2004	Lft	1
CSTZR	Chest Accel Z Red	7264-2000LC	AAMP6	Endevco	0.0307644	g	2000	5/14/2004	Up	1
CSTXD	Chest Deflection X	14CB1-2981	CST065	Servo	1.12059	m	100	5/17/2004	Strnm Away Frm Spn	0
PEVXG	Pelvis Accel X	7264C-2KLC-2	P17559	Endevco	0.0139981	g	2000	5/14/2004	Rwd	1

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
PEVYG	Pelvis Accel Y	7264-2000LC	AAKA2	Endevco	0.0270042	g	2000	5/13/2004	Lft	1
PEVZG	Pelvis Accel Z	7264-2000T	AJ4P6	Endevco	0.0243113	g	2000	5/14/2004	Up	1
LFMZF	Left Femur Force Z	2121	2121-0262	Denton	0.0000999	N	13344.6	5/13/2004	Knee Fd,Pel Rr	0
RFMZF	Right Femur Force Z	2121	2121-0259	Denton	0.0001001	N	13344.6	5/13/2004	Knee Fd,Pel Rr	0
TBLZF	Left Upper Tibia Force Z	3292	3292-105-FZ	Denton	0.0000974	N	11120	5/17/2004	Tib Dn,Knee Up	0
TBLXM	Left Upper Tibia Moment X	3292	3292-105-MX	Denton	0.0076623	N·	395.5	5/17/2004	Tib Rt,Hld Knee	1
TBLYM	Left Upper Tibia Moment Y	3292	3292-105-MY	Denton	0.0076384	N·	395.5	5/17/2004	Tib Fd,Hld Knee	0
ANLZF	Left Lower Tibia Force Z	3093	3093-134-FZ	Denton	0.0000951	N	11120	5/17/2004	Ank Dn,Tib Up	0
ANLXM	Left Lower Tibia Moment X	3093	3093-134-MX	Denton	0.007689	N·	395.5	5/17/2004	Ank Rt,Hld Knee	1
ANLYM	Left Lower Tibia Moment Y	3093	3093-134-MY	Denton	0.007676	N·	395.5	5/17/2004	Ank Fd,Hld Knee	0
FLHXG	Left Foot-Heel Accel X	7264C-2KLC-2	P17837	Endevco	0.0140169	g	2000	5/14/2004	Rwd	1
FLHZG	Left Foot-Heel Accel Z	7264-2KM5T	AJ534	Endevco	0.0242034	g	2000	5/14/2004	Dwn	0
FLTZG	Left Foot-Toe Accel Z	7264-2000LC	AAKE2	Endevco	0.0253	g	2000	5/14/2004	Up	1
TBRZF	Right Upper Tibia Force Z	3292	3292-103-FZ	Denton	0.0000995	N	11120	5/17/2004	Tib Dn,Knee Up	0
TBRXM	Right Upper Tibia Moment X	3292	3292-103-MX	Denton	0.0076679	N·	395.5	5/17/2004	Tib Rt,Hld Knee	1
TBRYM	Right Upper Tibia Moment Y	3292	3292-103-MY	Denton	0.0077239	N·	395.5	5/17/2004	Tib Fd,Hld Knee	0
ANRZF	Right Lower Tibia Force Z	3093	3093-133-FZ	Denton	0.0000959	N	11120	5/17/2004	Ank Dn,Tib Up	0
ANRXM	Right Lower Tibia Moment X	3093	3093-133-MX	Denton	0.0077777	N·	395.5	5/17/2004	Ank Rt,Hld Knee	1
ANRYM	Right Lower Tibia Moment Y	3093	3093-133-MY	Denton	0.0075861	N·	395.5	5/17/2004	Ank Fd,Hld Knee	0
FRHXG	Right Foot-Heel Accel X	7264C-2KLC-2	P15951	Endevco	0.0134874	g	2000	5/14/2004	Rwd	1
FRHZG	Right Foot-Heel Accel Z	7264C-2KLC-2	P17848	Endevco	0.0132541	g	2000	5/14/2004	Dwn	0
FRTZG	Right Foot-Toe Accel Z 4	7264C-2K-2-18	P12566	Endevco	0.019417	g	2000	5/14/2004	Up	1

Dummy 066n **Type** HYBRID III 50th **Descriptio** NHTSA - 066n HIII 50th w/Red accels & Legs ICAL'd 1-22-04 (DKS 5-20-04)J211

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264-2000LC	AAKB3	Endevco	0.0255198	g	2000	5/13/2004	Fd	0
HEDYG	Head Accel Y	7264-2KM5T	J14232	Endevco	0.0362567	g	2000	5/13/2004	Lt	1
HEDZG	Head Accel Z	7264-2000T	J14668	Endevco	0.0357	g	2000	1/22/2004	Up	1
HEDXR	Head Accel X Red	7264-2KM5T	J29006	Endevco	0.0252096	g	2000	5/13/2004	Rd	1
HEDYR	Head Accel Y Red	7264-2000LC	AF973	Endevco	0.0262916	g	2000	5/13/2004	Rt	0
HEDZR	Head Accel Z Red	7264-2KM5T	J27467	Endevco	0.0224514	g	2000	5/13/2004	Up	1
HD1XG	Head (LT) Accel X	7264-2KM5T	J27523	Endevco	0.0214255	g	2000	5/14/2004	Fwd	0
HD1ZG	Head (LT) Accel Z	7264-2000TZ	J36611	Endevco	0.0263745	g	2000	5/13/2004	Up	1
HD2YG	Head (FT) Accel Y	7264-2KM5T	BD88J	Endevco	0.0333667	g	2000	5/13/2004	Lft	1
HD2ZG	Head (FT) Accel Z	7264-2KM5T	J27457	Endevco	0.0279354	g	2000	5/13/2004	Up	1
HD3XG	Head (TP) Accel X	7264-2000T	J17822	Endevco	0.0259648	g	2000	5/13/2004	Fwd	0
HD3YG	Head (TP) Accel Y	7264-2KM5T	J27466	Endevco	0.0227846	g	2000	5/13/2004	Lft	1
NEKXF	Neck Force X	1716	1716-0443-FX	Denton	0.00019	N	8896	5/13/2004	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716	1716-0443-FY	Denton	0.0001864	N	8896	5/13/2004	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716	1716-0443-FZ	Denton	0.0000863	N	13344	5/13/2004	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716	1716-0443-MX	Denton	0.0058702	N·	282.4	5/13/2004	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716	1716-0443-MY	Denton	0.0058403	N·	282.4	5/13/2004	Chn to Strnm	0
NEKZM	Neck Moment Z	1716	1716-0443-MZ	Denton	0.008332	N·	282.4	5/13/2004	Chn to Lt Shld	0
CSTXG	Chest Accel X	7264-2KM5T	AJ4F8	Endevco	0.0256756	g	2000	5/13/2004	Fwd	0
CSTYG	Chest Accel Y	7264-2KM5T	J19865	Endevco	0.0214305	g	2000	5/13/2004	Lft	1
CSTZG	Chest Accel Z	7264-2KM5T	J23772	Endevco	0.0273164	g	2000	5/13/2004	Up	1
CSTXR	Chest Accel X Red	7264-2000LC	AGN47	Endevco	0.0198793	g	2000	5/13/2004	Rwd	1
CSTYR	Chest Accel Y Red	7264-2KM5T	BE68J	Endevco	0.0325719	g	2000	5/13/2004	Lft	1
CSTZR	Chest Accel Z Red	7264-2000TZ	J35987	Endevco	0.0365151	g	2000	5/13/2004	Up	1
CSTXD	Chest Deflection X	14CB1-2981	CST066	Servo	1.13235	m	100	5/17/2004	Strnm Away Frm Spn	0
PEVXG	Pelvis Accel X	7264-2KM5T	J14660	Endevco	0.0323893	g	2000	5/13/2004	Rwd	1

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
PEVYG	Pelvis Accel Y	7264-2000T	AJ4N7	Endevco	0.0231869	g	2000	5/13/2004	Lft	1
PEVZG	Pelvis Accel Z	7264-2000T	ACC59	Endevco	0.02213	g	2000	5/13/2004	Up	1
LFMZF	Left Femur Force Z	2121	2121-0256	Denton	0.0000992	N	13344.6	5/13/2004	Knee Fd,Pel Rr	0
RFMZF	Right Femur Force Z	2121	2121-0261	Denton	0.0000992	N	13344.6	5/13/2004	Knee Fd,Pel Rr	0
TBLZF	Left Upper Tibia Force Z	3292	3292-108-FZ	Denton	0.0000996	N	11120	5/14/2004	Tib Dn,Knee Up	0
TBLXM	Left Upper Tibia Moment X	3292	3292-108-MX	Denton	0.0078066	N·	395.5	5/14/2004	Tib Rt,Hld Knee	1
TBLYM	Left Upper Tibia Moment Y	3292	3292-108-MY	Denton	0.0077531	N·	395.5	5/14/2004	Tib Fd,Hld Knee	0
ANLZF	Left Lower Tibia Force Z	3093	3093-113-FZ	Denton	0.0000974	N	11120	5/14/2004	Ank Dn,Tib Up	0
ANLXM	Left Lower Tibia Moment X	3093	3093-113-MX	Denton	0.0079822	N·	395.5	5/14/2004	Ank Rt,Hld Knee	1
ANLYM	Left Lower Tibia Moment Y	3093	3093-113-MY	Denton	0.0077567	N·	395.5	5/14/2004	Ank Fd,Hld Knee	0
FLHXG	Left Foot-Heel Accel X	7264C-2KLC-2	P16225	Endevco	0.0146664	g	2000	5/14/2004	Rwd	1
FLHZG	Left Foot-Heel Accel Z	7264-2KM5T	J14384	Endevco	0.0323204	g	2000	5/14/2004	Dwn	0
FLTZG	Left Foot-Toe Accel Z	7264C-2KLC-2	P14914	Endevco	0.0255535	g	2000	5/14/2004	Up	1
TBRZF	Right Upper Tibia Force Z	3292	3292-107-FZ	Denton	0.0000965	N	11120	5/14/2004	Tib Dn,Knee Up	0
TBRXM	Right Upper Tibia Moment X	3292	3292-107-MX	Denton	0.007621	N·	395.5	5/14/2004	Tib Rt,Hld Knee	1
TBRYM	Right Upper Tibia Moment Y	3292	3292-107-MY	Denton	0.00773	N·	395.5	5/14/2004	Tib Fd,Hld Knee	0
ANRZF	Right Lower Tibia Force Z	3093	3093-136-FZ	Denton	0.0000983	N	11120	5/14/2004	Ank Dn,Tib Up	0
ANRXM	Right Lower Tibia Moment X	3093	3093-136-MX	Denton	0.0079249	N·	395.5	5/14/2004	Ank Rt,Hld Knee	1
ANRYM	Right Lower Tibia Moment Y	3093	3093-136-MY	Denton	0.0077327	N·	395.5	5/14/2004	Ank Fd,Hld Knee	0
FRHXG	Right Foot-Heel Accel X	7264C-2KLC-2	P17846	Endevco	0.0144063	g	2000	5/14/2004	Rwd	1
FRHZG	Right Foot-Heel Accel Z	7264C-2KLC-2	P17858	Endevco	0.0130461	g	2000	5/14/2004	Dwn	0
FRTZG	Right Foot-Toe Accel Z	7264C-2KLC-2	P15638	Endevco	0.0138055	g	2000	5/14/2004	Up	1

Appendix E

Dummy Calibration Data

Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions
Serial No. 065 Calibration No. 01
Date: 5/19/04

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	880	Yes
B	Shoulder Pivot Height	505.5 - 520.7	507	Yes
C	H-Point Height	83.8 - 88.9	85	Yes
D	H-Point From Seatback	134.6 - 139.7	137	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	93	Yes
F	Thigh Clearance	139.7 - 154.9	145	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	292	Yes
H	Skull Cap To Backline	40.6 - 45.7	43	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	342	Yes
J	Elbow Rest Height	190.5 - 210.8	200	Yes
K	Buttock Knee Length	579.1 - 604.5	602	Yes
L	Popliteal Height	429.3 - 454.7	431	Yes
M	Knee Pivot Height	485.1 - 500.4	493	Yes
N	Buttock Popliteal Length	452.1 - 477.5	470	Yes
O	Chest Depth	213.4 - 228.6	220	Yes
P	Foot Length	251.5 - 266.7	262	Yes
V	Shoulder Breadth	421.6 - 436.9	425	Yes
W	Foot Breadth	91.4 - 106.7	97	Yes
Y	Chest Circumference	970.3 - 1000.8	985	Yes
Z	Waist Circumference	835.7 - 866.1	853	Yes
AA	Location For Chest Circumference	429.3 - 434.3	432	Yes
BB	Location For Waist Circumference	226.1 - 231.1	229	Yes

Technician

Approved

Transportation Research Center Inc.

572E Head Drop Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Peak Resultant Acceleration	225 - 275 g	251.0 g	Yes
Peak Lateral Acceleration	15 g Max	9.9 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 14:39:15 2490

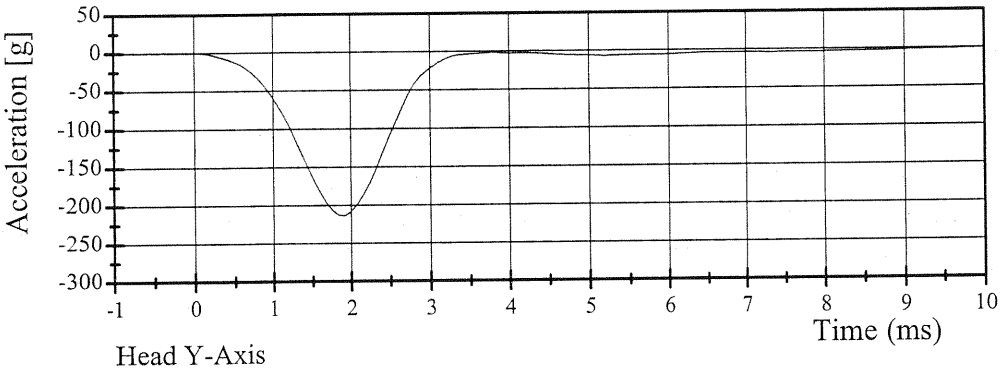
Transportation Research Center Inc.

572E Head Drop Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Head X-Axis

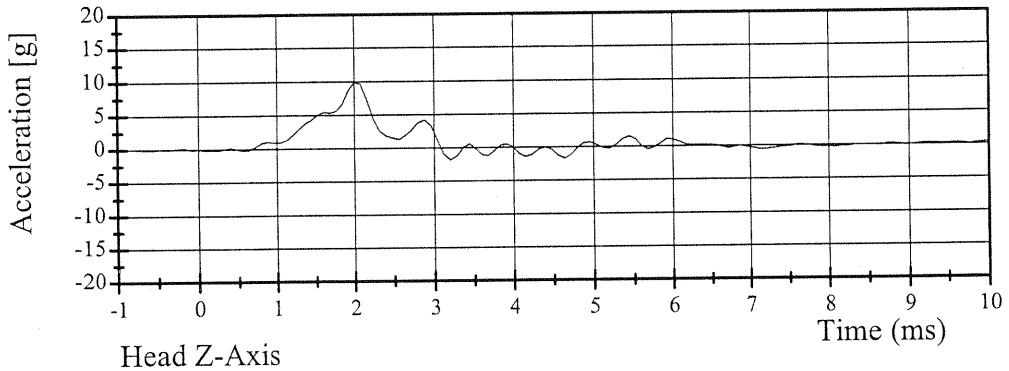


Filter Class: 1000

Max: -0.1 g at 0.0 ms

Min: -213.3 g at 1.9 ms

Head Y-Axis

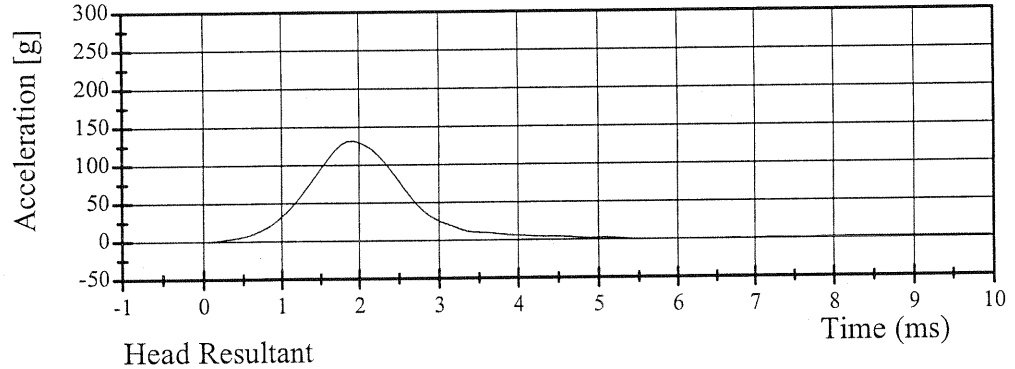


Filter Class: 1000

Max: 9.9 g at 2.0 ms

Min: -1.8 g at 3.2 ms

Head Z-Axis

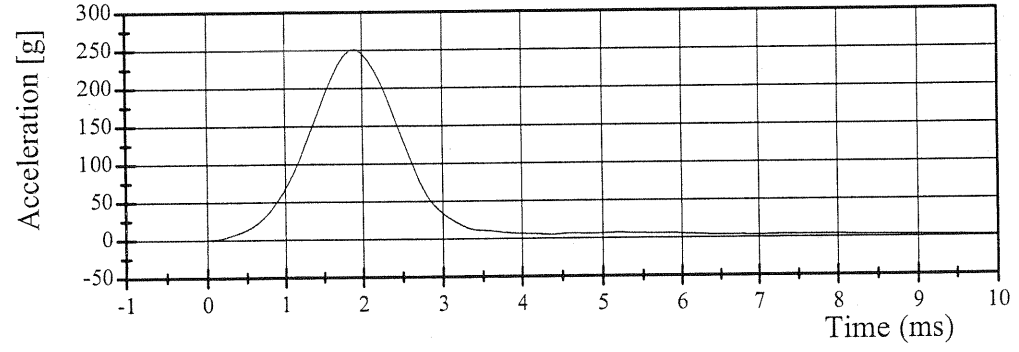


Filter Class: 1000

Max: 131.9 g at 1.9 ms

Min: -0.1 g at 5.5 ms

Head Resultant



Filter Class: 1000

Max: 251.0 g at 1.9 ms

Min: 0.0 g at 0.0 ms

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Transportation Research Center Inc.

572E Neck Flexion Test - 6 Channel Transducer

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Impact Velocity	6.89 - 7.13 m/s	6.97 m/s	Yes
Pendulum Deceleration			
10 ms	22.50 - 27.50 g	23.27 g	Yes
20 ms	17.60 - 22.60 g	20.22 g	Yes
30 ms	12.50 - 18.50 g	15.57 g	Yes
Max Pendulum Deceleration	29.00 g	24.26 g	Yes
Max Pendulum Deceleration After 30 ms	29.00 g	15.51 g	Yes
Deceleration-Time Curve Decay Time To 5g	34 - 42 ms	39.76 ms	Yes
D Plane Rotation			
Max	64 - 78 °	70.18 °	Yes
Time	57 - 64 ms	61.36 ms	Yes
Moment About Occipital Condyle			
Max	88.1 - 108.5 N·m	94.02 N·m	Yes
Time	47 - 58 ms	53.76 ms	Yes
Rotation Angle-Time Curve Decay Time To Zero	113 - 128 ms	118.80 ms	Yes
Positive Moment-Time Curve Decay Time To Zero	97 - 107 ms	105.84 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 14:47:49 520

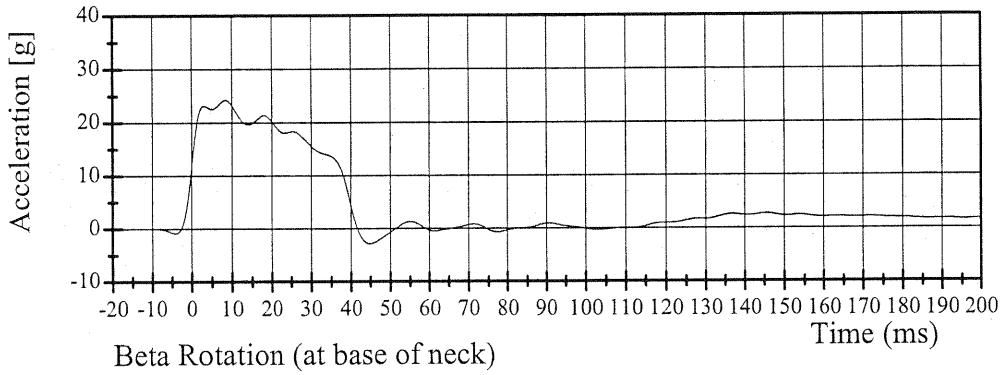
Transportation Research Center Inc.

572E Neck Flexion Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Pendulum Deceleration

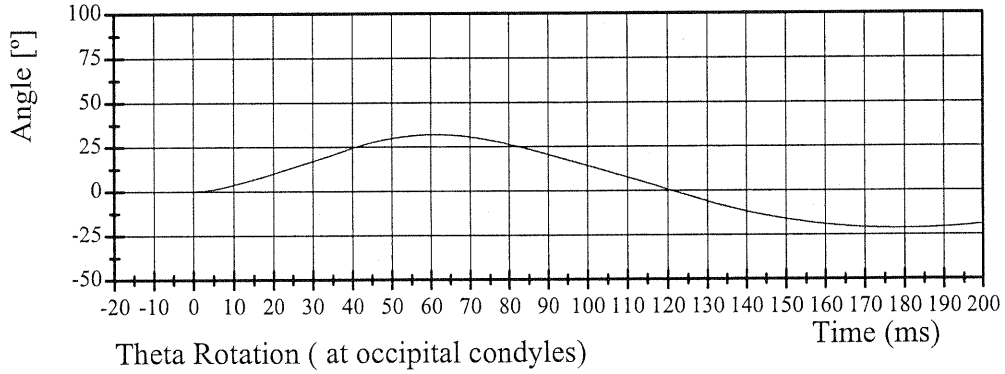


Filter Class: 60

Max: 24.3 g at 8.4 ms

Min: -2.8 g at 44.8 ms

Beta Rotation (at base of neck)

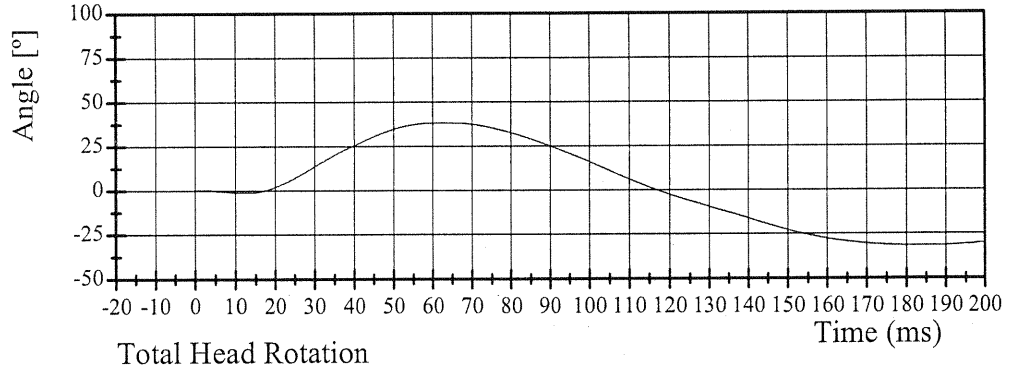


Filter Class: 60

Max: 32.0 ° at 61.0 ms

Min: -21.5 ° at 180.0 ms

Theta Rotation (at occipital condyles)

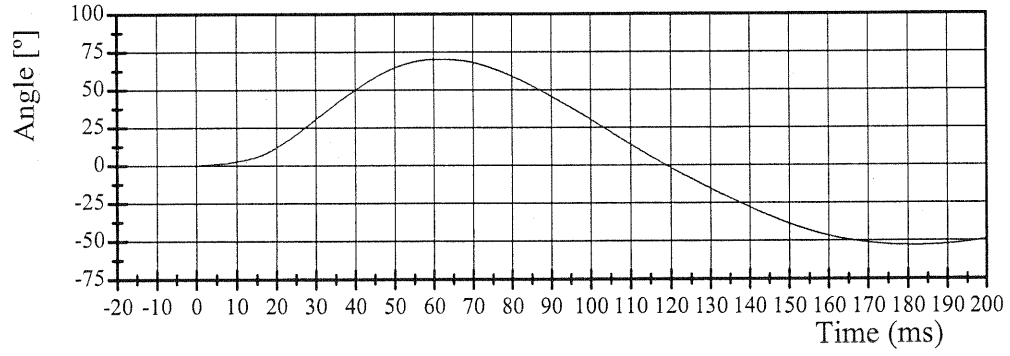


Filter Class: 60

Max: 38.2 ° at 62.6 ms

Min: -31.7 ° at 184.7 ms

Total Head Rotation



Filter Class: 60

Max: 70.2 ° at 61.4 ms

Min: -53.2 ° at 181.9 ms

05.26.2004 14:47:50 520

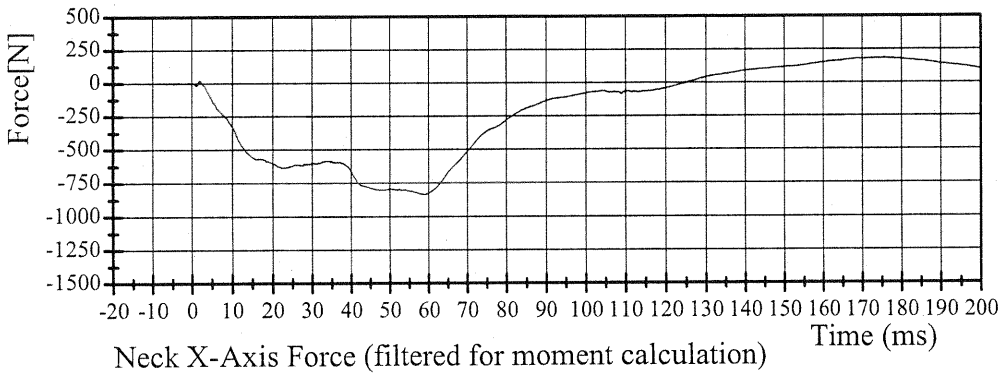
Transportation Research Center Inc.

572E Neck Flexion Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Neck X-Axis Force

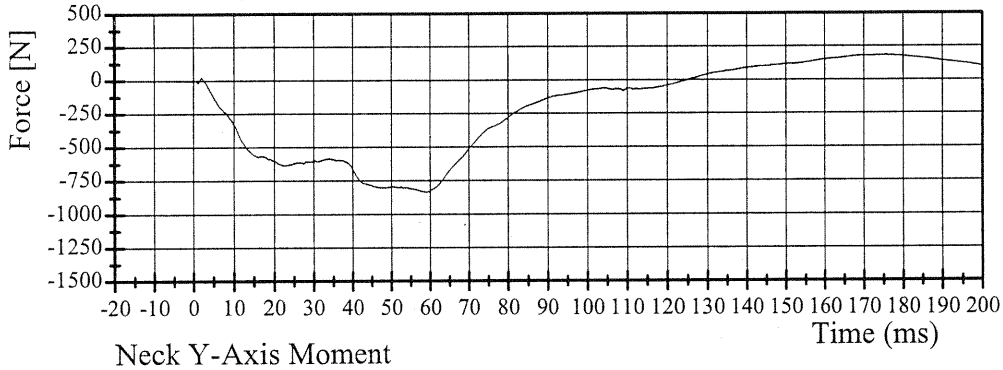


Filter Class: 1000

Max: 183.7 N at 175.4 ms

Min: -835.2 N at 58.9 ms

Neck X-Axis Force (filtered for moment calculation)

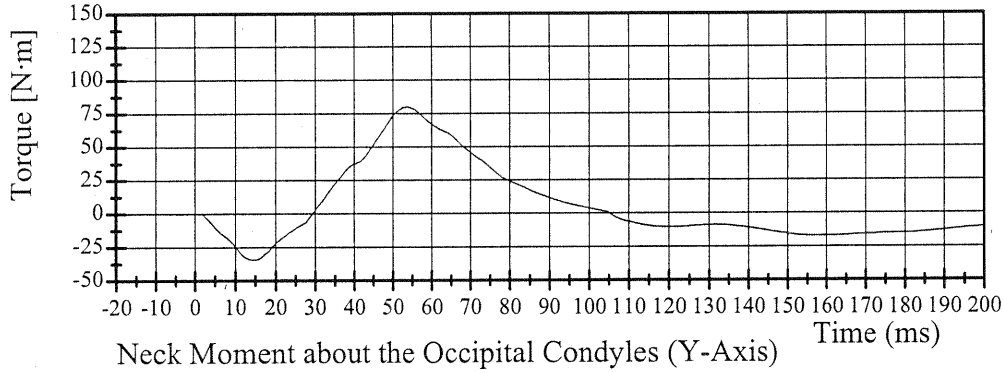


Filter Class: 600

Max: 183.4 N at 175.5 ms

Min: -834.8 N at 59.0 ms

Neck Y-Axis Moment

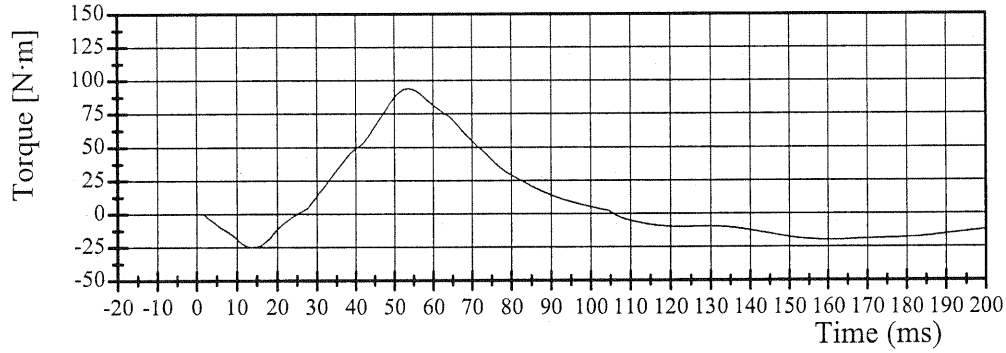


Filter Class: 600

Max: 79.9 N·m at 53.8 ms

Min: -34.3 N·m at 14.7 ms

Neck Moment about the Occipital Condyles (Y-Axis)



Filter Class: 600

Max: 94.0 N·m at 53.8 ms

Min: -24.8 N·m at 13.8 ms

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Transportation Research Center Inc.

572E Neck Extension Test - 6 Channel Transducer

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.05 m/s	Yes
Pendulum Deceleration			
10 ms	17.20 - 21.20 g	18.84 g	Yes
20 ms	14.00 - 19.00 g	16.52 g	Yes
30 ms	11.00 - 16.00 g	14.16 g	Yes
Max Pendulum Deceleration	22.00 g	19.67 g	Yes
Max Pendulum Deceleration After 30 ms	22.00 g	14.13 g	Yes
Deceleration-Time Curve Decay Time To 5g	38 - 46 ms	42.00 ms	Yes
D Plane Rotation			
Max	81 - 106 °	98.42 °	Yes
Time	72 - 82 ms	78.80 ms	Yes
Moment About Occipital Condyle			
Min	-80.0 - (-52.9) N·m	-71.76 N·m	Yes
Time	65 - 79 ms	73.92 ms	Yes
Rotation Angle-Time Curve Decay Time To Zero	147 - 174 ms	161.20 ms	Yes
Negative Moment-Time Curve Decay Time To Zero	120 - 148 ms	146.88 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 14:58:58 606

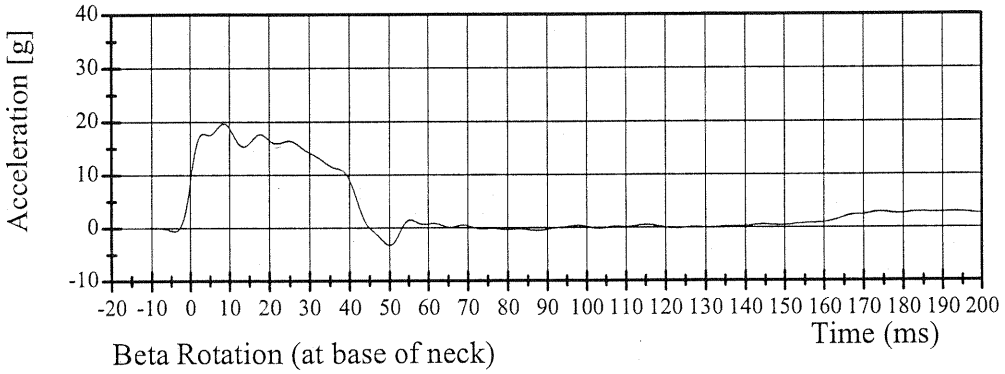
Transportation Research Center Inc.

572E Neck Extension Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Pendulum Deceleration

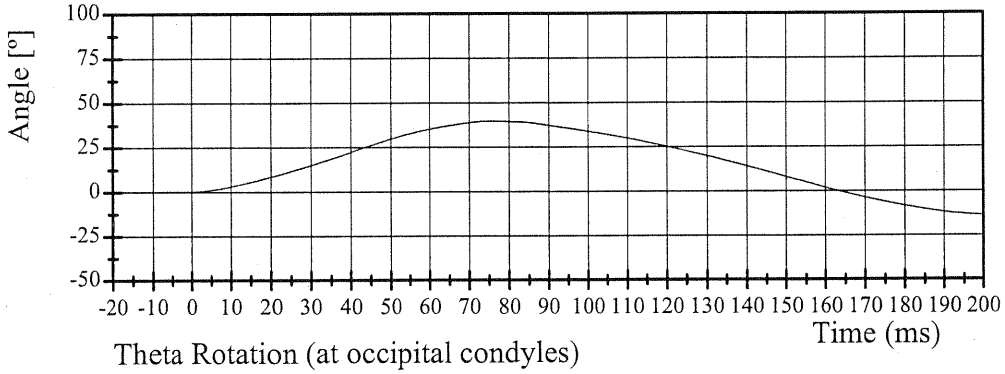


Filter Class: 60

Max: 19.7 g at 8.6 ms

Min: -3.3 g at 49.9 ms

Beta Rotation (at base of neck)

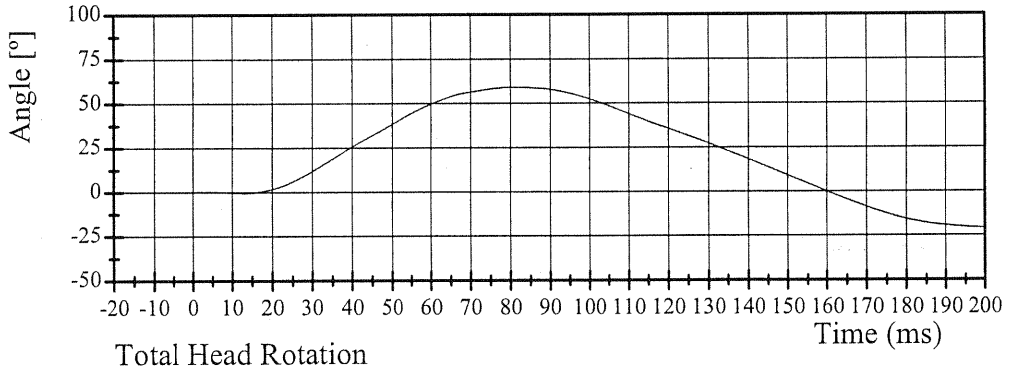


Filter Class: 60

Max: 39.7 ° at 75.4 ms

Min: -14.0 ° at 205.8 ms

Theta Rotation (at occipital condyles)

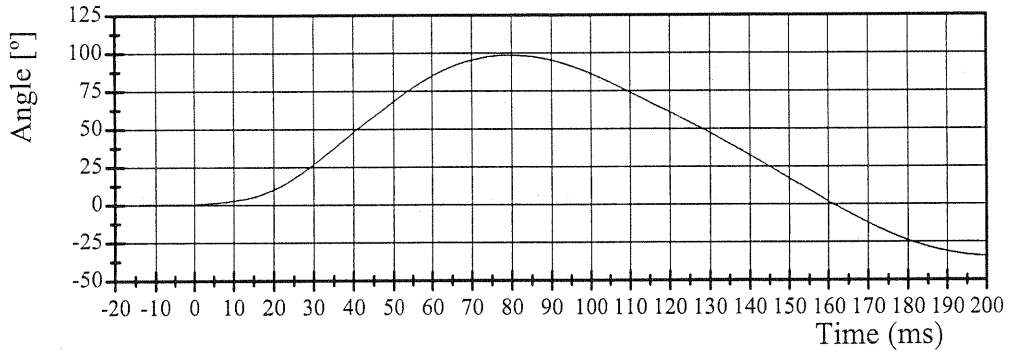


Filter Class: 60

Max: 59.0 ° at 80.6 ms

Min: -20.8 ° at 203.8 ms

Total Head Rotation



Filter Class: 60

Max: 98.4 ° at 78.8 ms

Min: -34.8 ° at 204.8 ms

05.26.2004 14:58:59 606

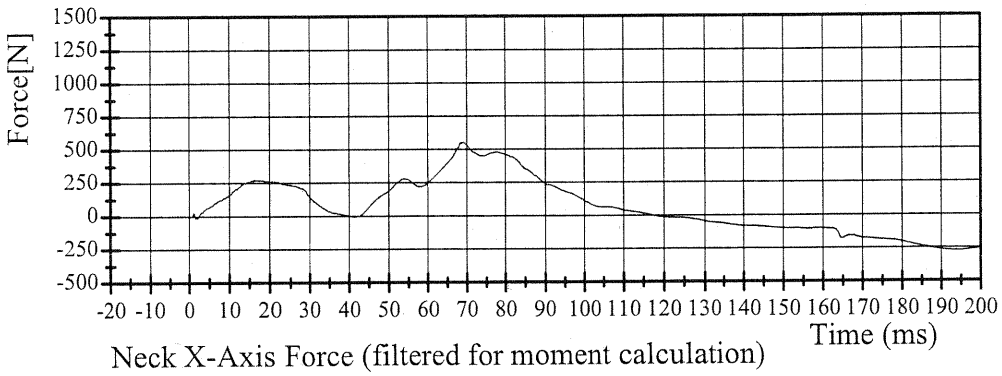
Transportation Research Center Inc.

572E Neck Extension Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Neck X-Axis Force

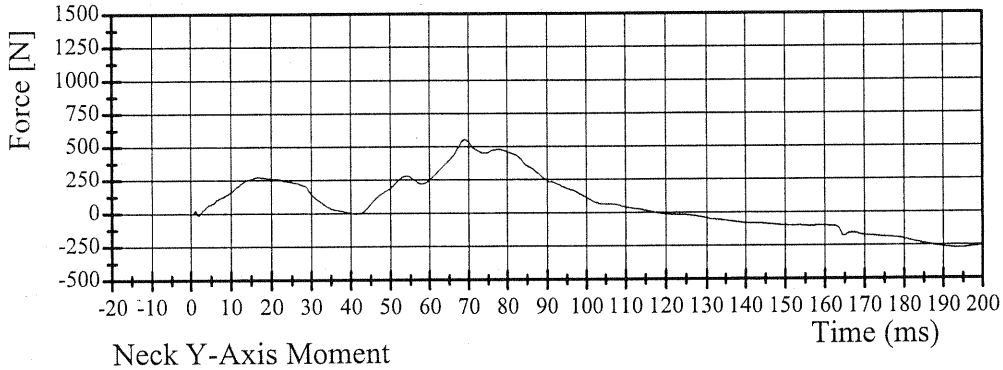


Filter Class: 1000

Max: 554.3 N at 69.1 ms

Min: -271.8 N at 193.9 ms

Neck X-Axis Force (filtered for moment calculation)

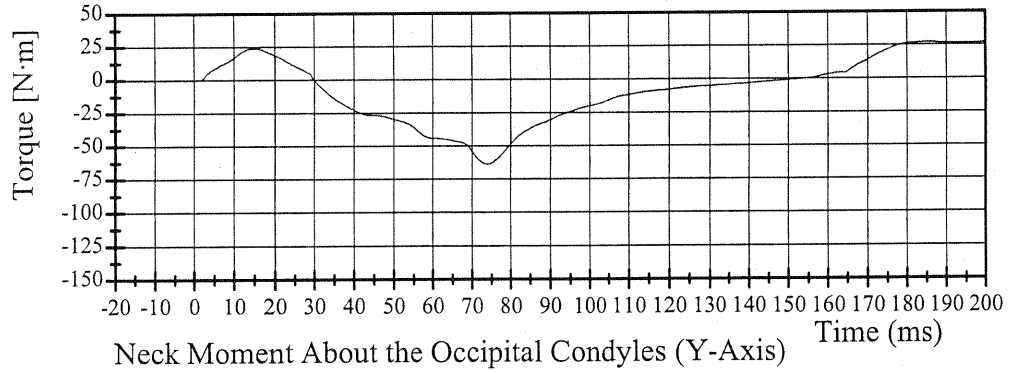


Filter Class: 600

Max: 554.1 N at 69.0 ms

Min: -271.5 N at 193.9 ms

Neck Y-Axis Moment

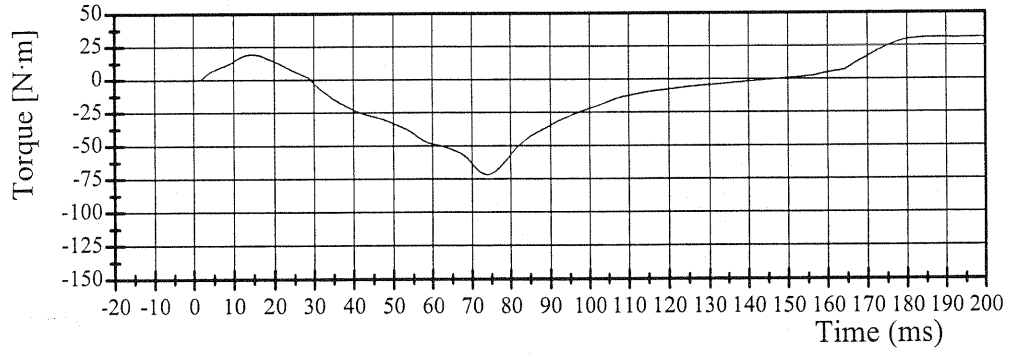


Filter Class: 600

Max: 26.9 N·m at 185.7 ms

Min: -63.8 N·m at 73.9 ms

Neck Moment About the Occipital Condyles (Y-Axis)



Filter Class: 600

Max: 31.3 N·m at 198.2 ms

Min: -71.8 N·m at 73.9 ms

05.26.2004 14:59:00 606

Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.61 m/s	Yes
Maximum Chest Deflection	-72.6 - (-63.5) mm	-67.5 mm	Yes
Maximum Resistive Force	5160 - 5894 N	5708 N	Yes
Internal Hysteresis	69 - 85 %	72 %	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:01:20 952

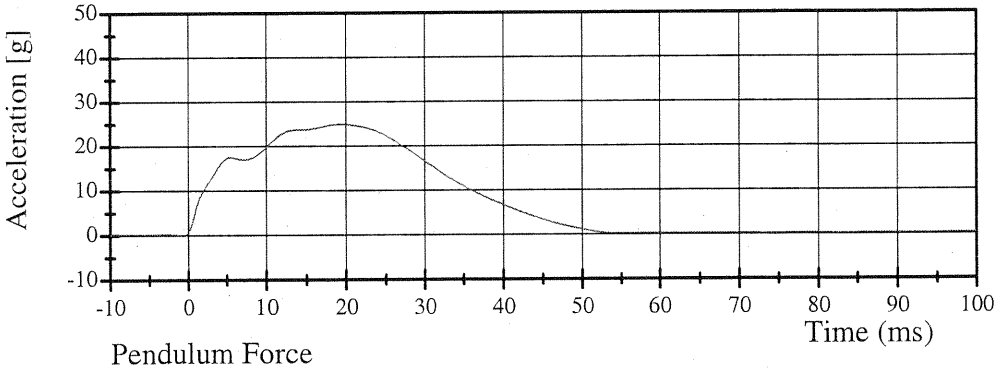
Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/20/2004

Pendulum Deceleration

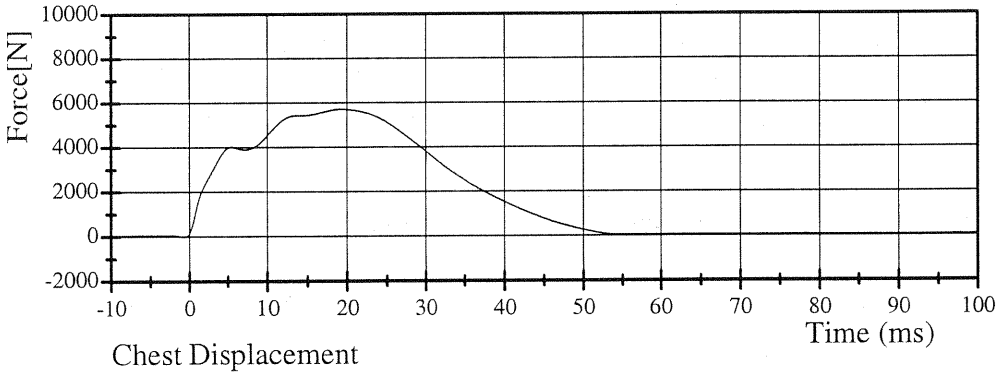


Filter Class: 180

Max: 24.9 g at 19.3 ms

Min: -0.1 g at -0.6 ms

Pendulum Force

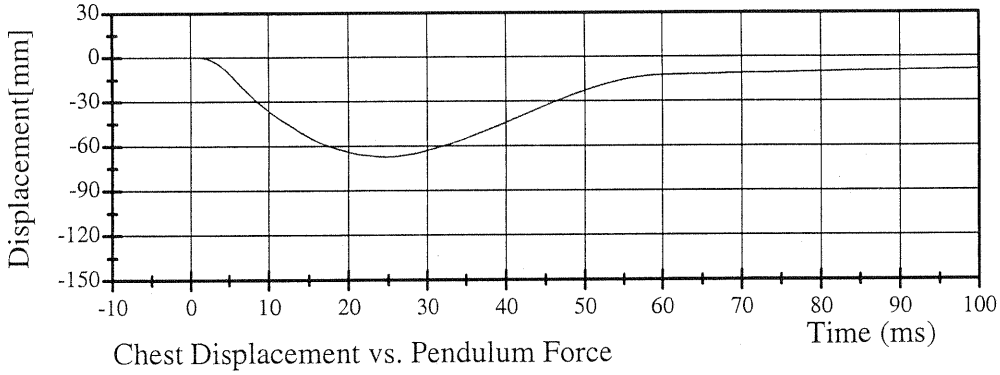


Filter Class: 180

Max: 5708.2 N at 19.3 ms

Min: -13.0 N at -0.6 ms

Chest Displacement

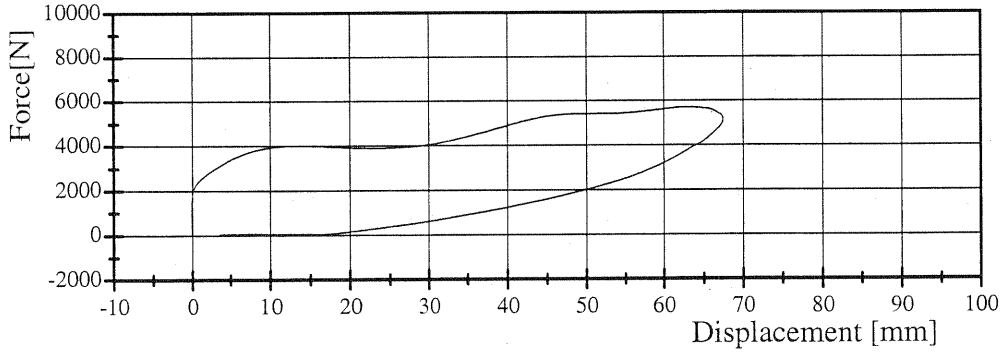


Filter Class: 180

Max: 0.1 mm at 0.8 ms

Min: -67.5 mm at 24.7 ms

Chest Displacement vs. Pendulum Force



05.26.2004 16:01:21 952

Transportation Research Center Inc

Hybrid III Hip Range of Motion

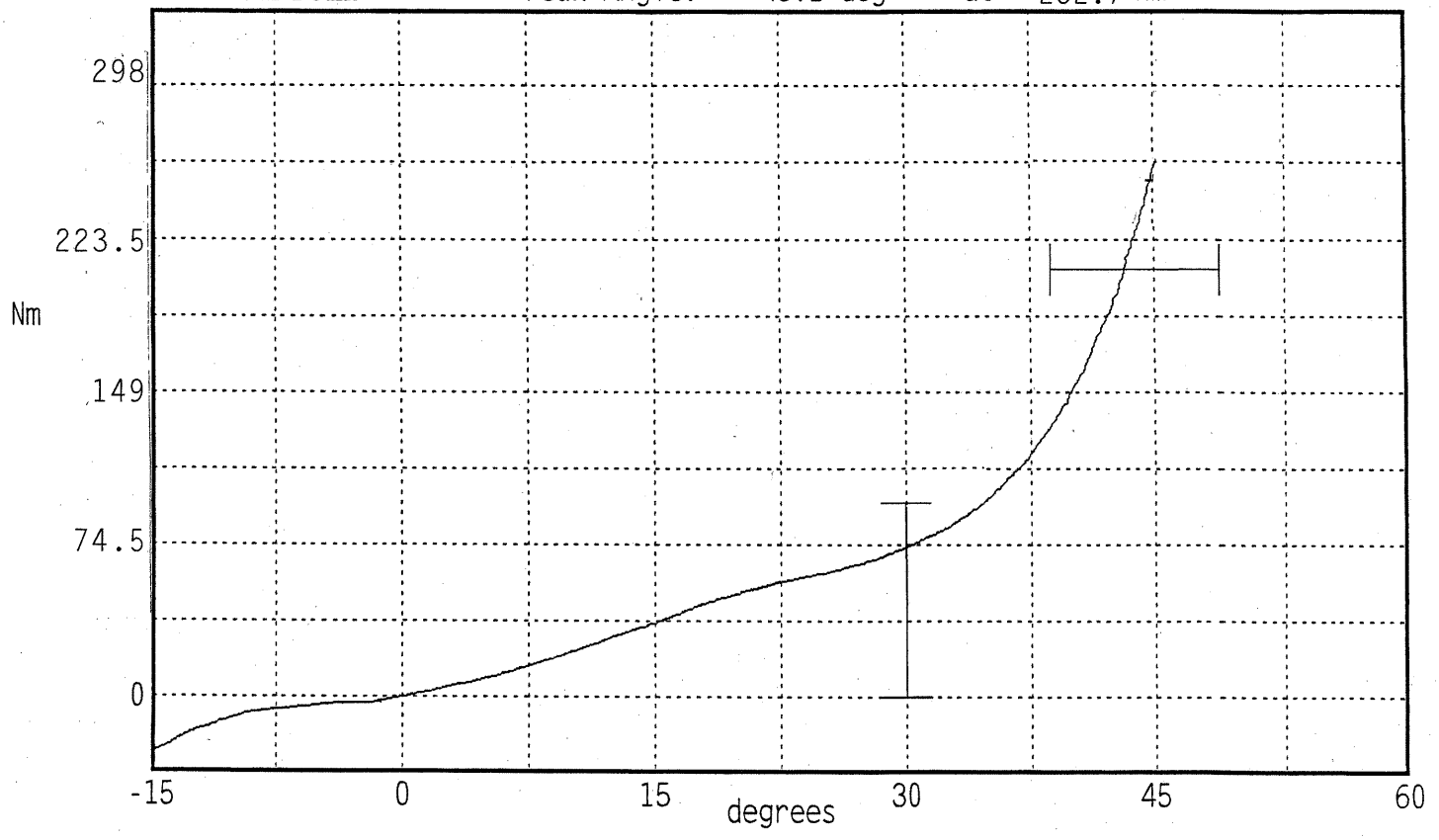
Serial Number: 065L
Test Number: 065C01
Comments:

Date: 05/19/2004
Time: 12:53

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	20.6	°C	Pass
Humidity	10 - 70	51	%	Pass
Moment at 30 deg	<= 94.9	73.8	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	43.0	deg	Pass
Average Velocity	5.0 - 10.0	7.4	deg/sec	Pass

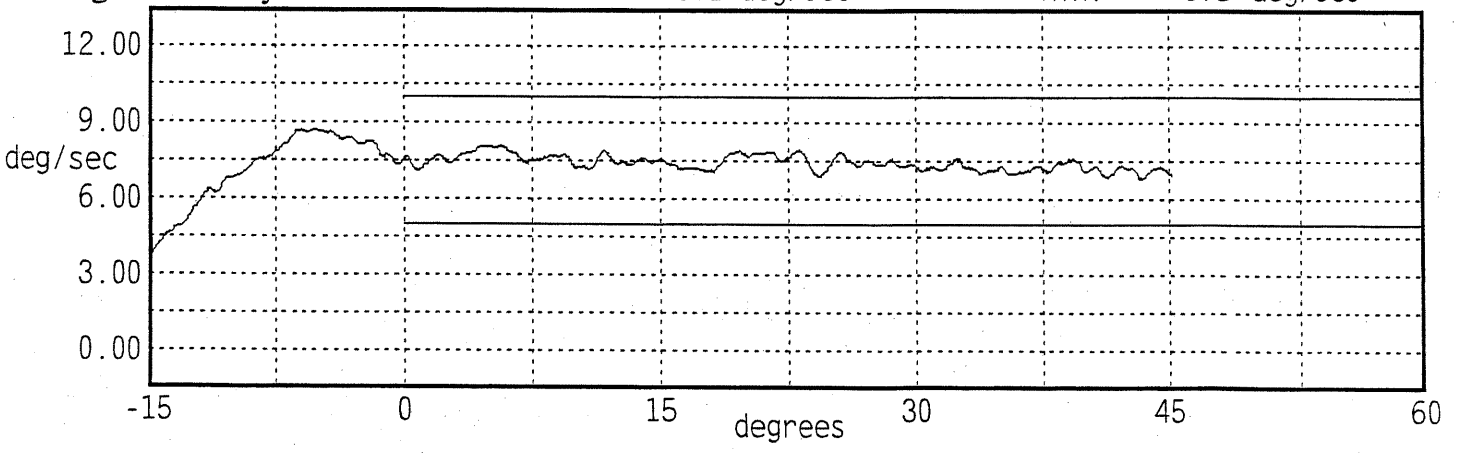
Moment About H-Point

Peak Moment: 262.7 Nm at 45.1 deg
Peak Angle: 45.1 deg at 262.7 Nm



Angular Velocity

Max: 8.1 deg/sec Min: 6.8 deg/sec



Transportation Research Center Inc

Hybrid III Hip Range of Motion

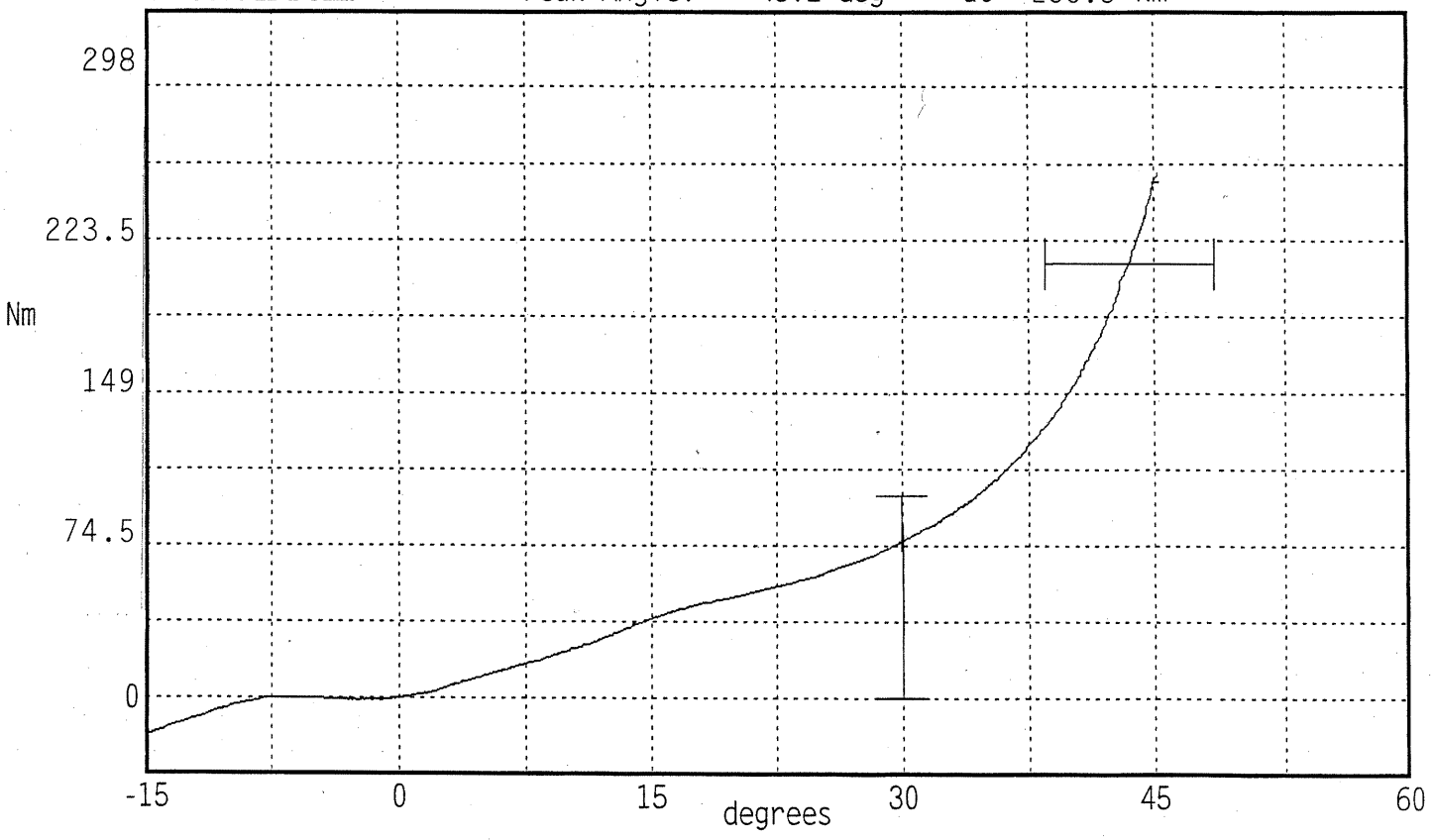
Serial Number: 065R
Test Number: 065C01
Comments:

Date: 05/19/2004
Time: 12:38

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	20.6	°C	Pass
Humidity	10 - 70	52	%	Pass
Moment at 30 deg	<= 94.9	77.3	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	43.0	deg	Pass
Average Velocity	5.0 - 10.0	7.4	deg/sec	Pass

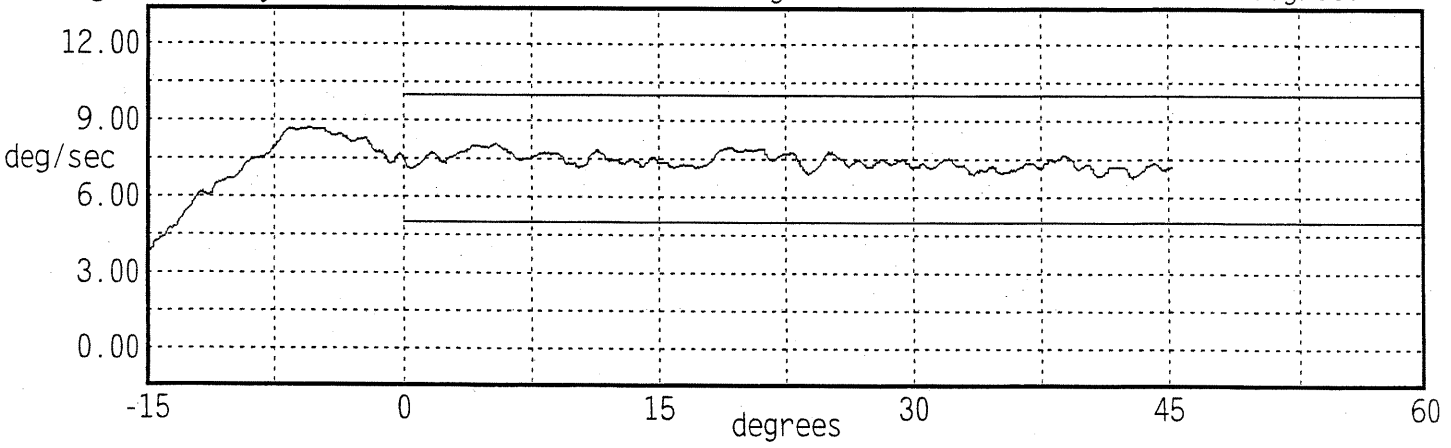
Moment About H-Point

Peak Moment: 256.3 Nm at 45.2 deg
Peak Angle: 45.2 deg at 256.3 Nm



Angular Velocity

Max: 8.1 deg/sec Min: 6.8 deg/sec



Transportation Research Center Inc.

572E Left Knee Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.10 m/s	Yes
Maximum Pendulum Force	4715 - 5783 N	5399 N	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:05:17 2078

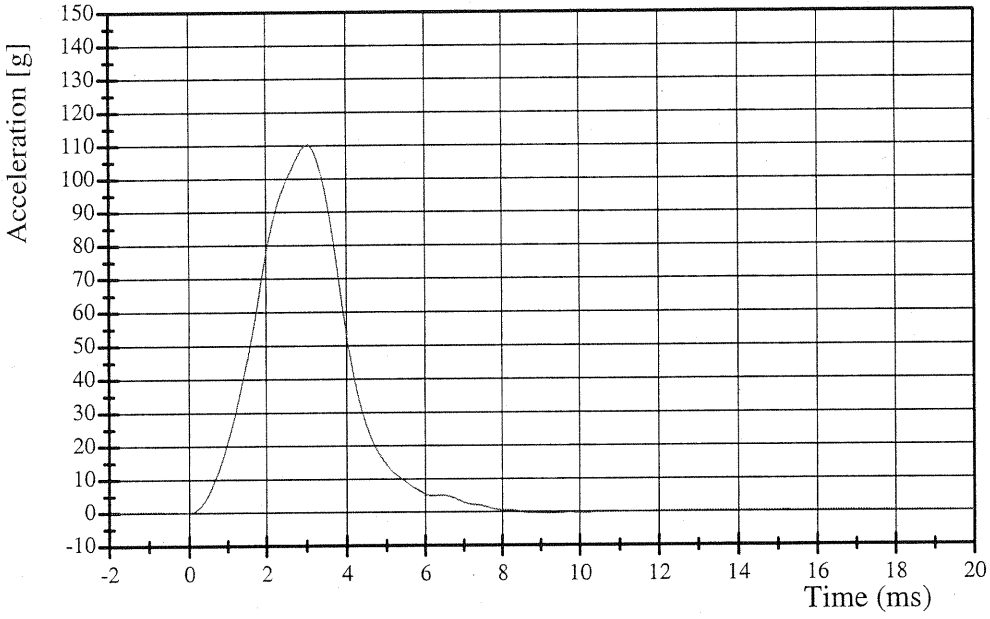
Transportation Research Center Inc.

572E Left Knee Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Pendulum Deceleration

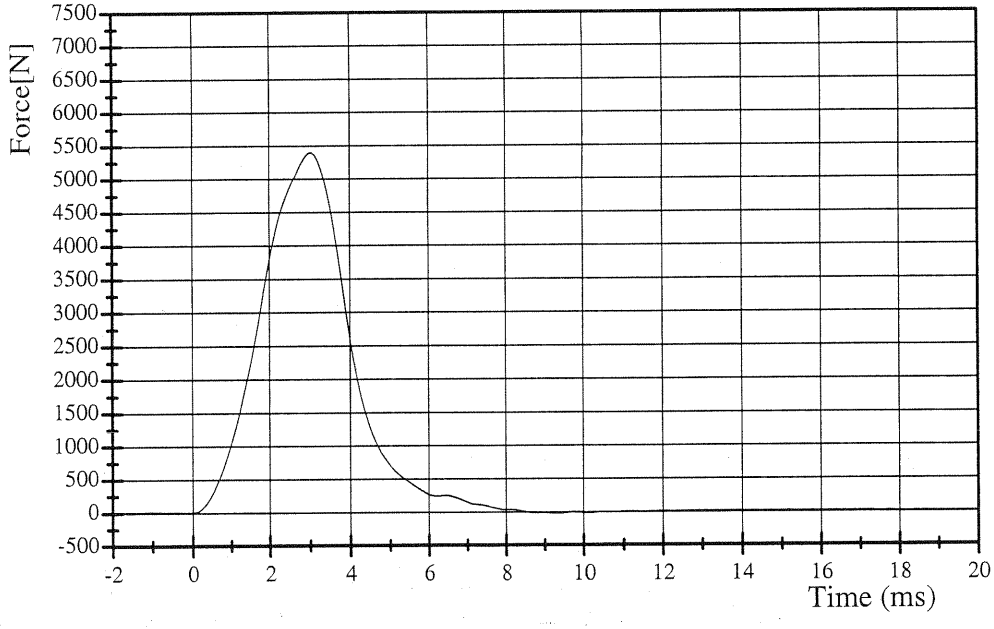


Filter Class: 600

Max: 110.3 g at 3.0 ms

Min: -0.4 g at 9.3 ms

Pendulum Force



Filter Class: 600

Max: 5399.1 N at 3.0 ms

Min: -20.9 N at 9.3 ms

05.26.2004 16:05:17 2078

Transportation Research Center Inc.

572E Right Knee Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.7 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.10 m/s	Yes
Maximum Pendulum Force	4715 - 5783 N	5726 N	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:07:22 2079

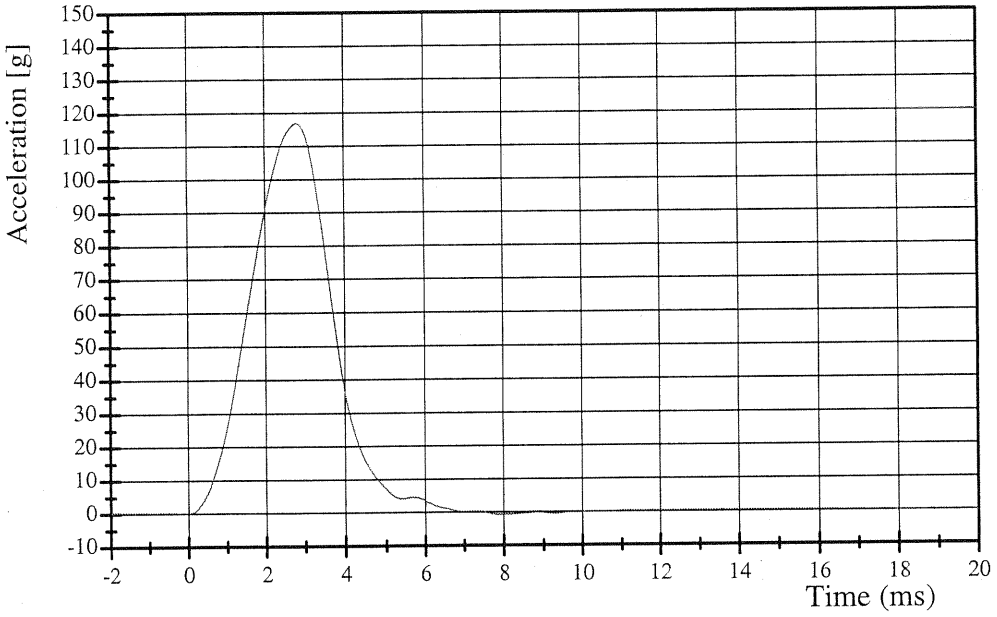
Transportation Research Center Inc.

572E Right Knee Test

HIII 50th Male Serial No. 065 Calibration No. 01 - 1

Test Date 05/19/2004

Pendulum Deceleration

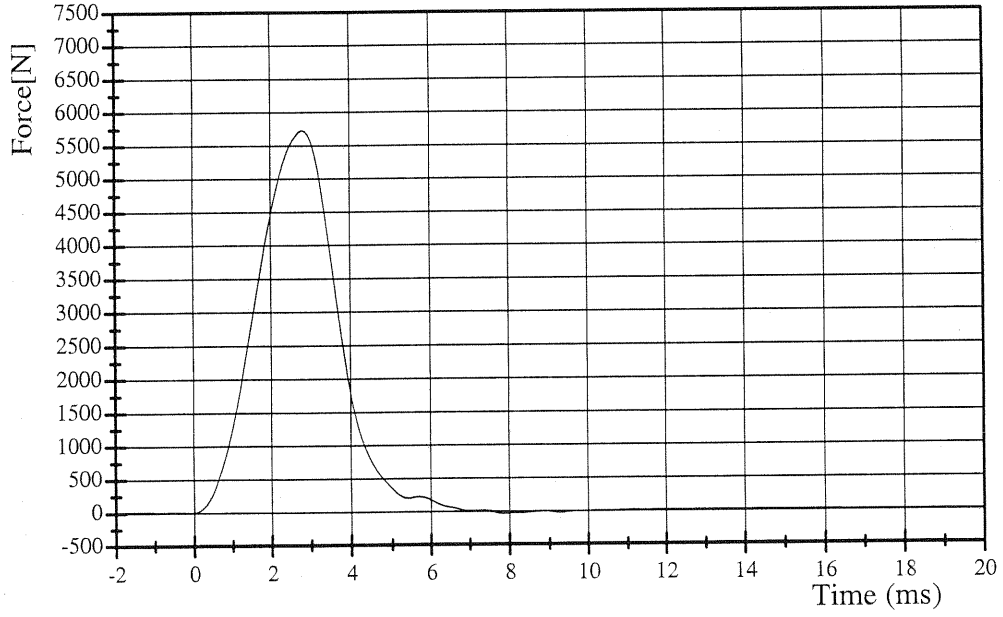


Filter Class: 600

Max: 117.0 g at 2.8 ms

Min: -0.8 g at 7.8 ms

Pendulum Force



Filter Class: 600

Max: 5726.4 N at 2.8 ms

Min: -37.1 N at 7.8 ms

05.26.2004 16:07:22 2079

Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions Serial No. 066 Calibration No. 01
Date: 5/20/04

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	886	Yes
B	Shoulder Pivot Height	505.5 - 520.7	515	Yes
C	H-Point Height	83.8 - 88.9	85	Yes
D	H-Point From Seatback	134.6 - 139.7	136	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	93	Yes
F	Thigh Clearance	139.7 - 154.9	148	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	291	Yes
H	Skull Cap To Backline	40.6 - 45.7	44	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	335	Yes
J	Elbow Rest Height	190.5 - 210.8	205	Yes
K	Buttock Knee Length	579.1 - 604.5	593	Yes
L	Popliteal Height	429.3 - 454.7	435	Yes
M	Knee Pivot Height	485.1 - 500.4	496	Yes
N	Buttock Popliteal Length	452.1 - 477.5	468	Yes
O	Chest Depth	213.4 - 228.6	217	Yes
P	Foot Length	251.5 - 266.7	260	Yes
V	Shoulder Breadth	421.6 - 436.9	423	Yes
W	Foot Breadth	91.4 - 106.7	98	Yes
Y	Chest Circumference	970.3 - 1000.8	982	Yes
Z	Waist Circumference	835.7 - 866.1	859	Yes
AA	Location For Chest Circumference	429.3 - 434.3	432	Yes
BB	Location For Waist Circumference	226.1 - 231.1	229	Yes

Technician

Approved

Transportation Research Center Inc.

572E Head Drop Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.7 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Peak Resultant Acceleration	225 - 275 g	271.6 g	Yes
Peak Lateral Acceleration	15 g Max	11.7 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:25:34 2490

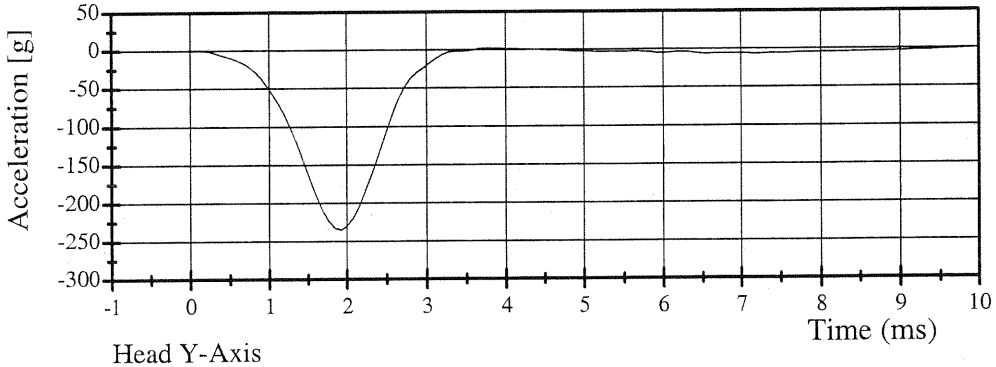
Transportation Research Center Inc.

572E Head Drop Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/19/2004

Head X-Axis

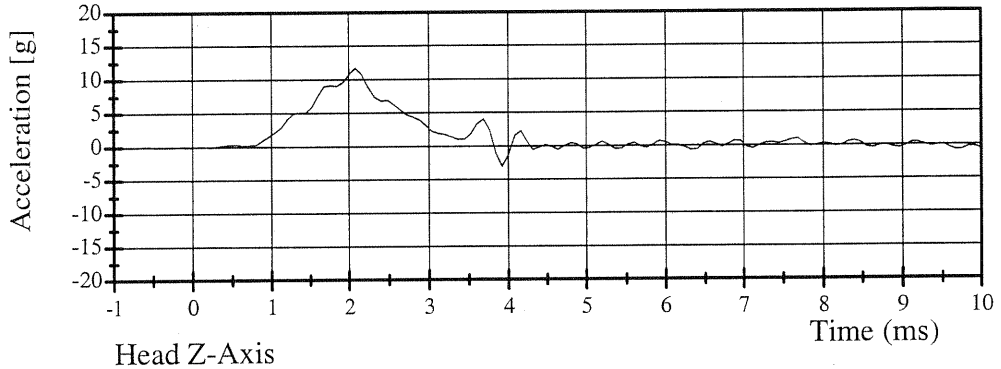


Filter Class: 1000

Max: 2.1 g at 3.8 ms

Min: -234.8 g at 1.9 ms

Head Y-Axis

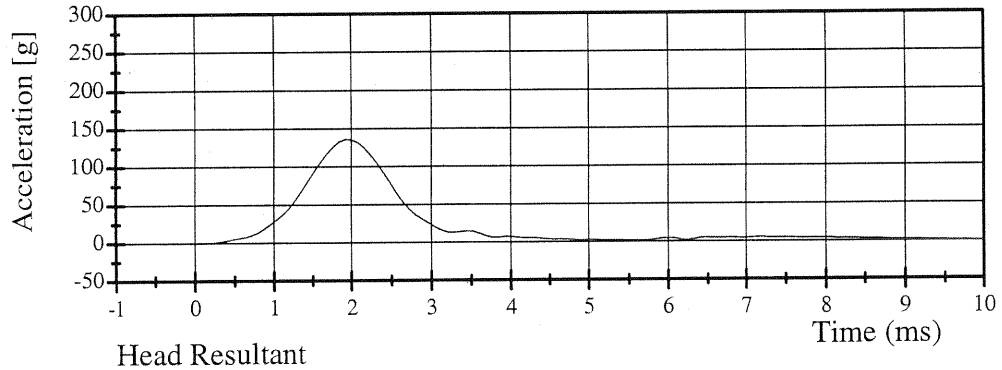


Filter Class: 1000

Max: 11.7 g at 2.1 ms

Min: -3.0 g at 3.9 ms

Head Z-Axis

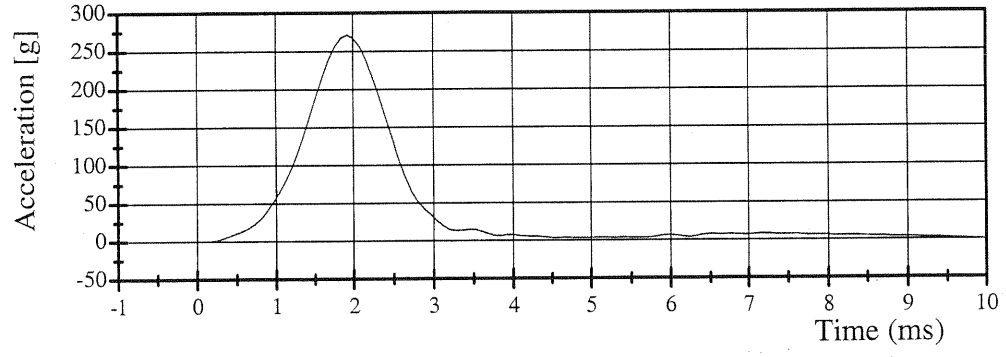


Filter Class: 1000

Max: 136.1 g at 1.9 ms

Min: -0.1 g at 0.0 ms

Head Resultant



Filter Class: 1000

Max: 271.6 g at 1.9 ms

Min: 0.0 g at 2.9 ms

05.26.2004 16:25:34 2490

Transportation Research Center Inc.

572E Neck Flexion Test - 6 Channel Transducer

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.01 m/s	Yes
Pendulum Deceleration			
10 ms	22.50 - 27.50 g	22.77 g	Yes
20 ms	17.60 - 22.60 g	20.35 g	Yes
30 ms	12.50 - 18.50 g	16.43 g	Yes
Max Pendulum Deceleration	29.00 g	23.89 g	Yes
Max Pendulum Deceleration After 30 ms	29.00 g	16.38 g	Yes
Deceleration-Time Curve Decay Time To 5g	34 - 42 ms	39.60 ms	Yes
D Plane Rotation			
Max	64 - 78 °	69.63 °	Yes
Time	57 - 64 ms	60.88 ms	Yes
Moment About Occipital Condyle			
Max	88.1 - 108.5 N·m	95.98 N·m	Yes
Time	47 - 58 ms	53.52 ms	Yes
Rotation Angle-Time Curve Decay Time To Zero	113 - 128 ms	118.00 ms	Yes
Positive Moment-Time Curve Decay Time To Zero	97 - 107 ms	103.28 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:28:33 519

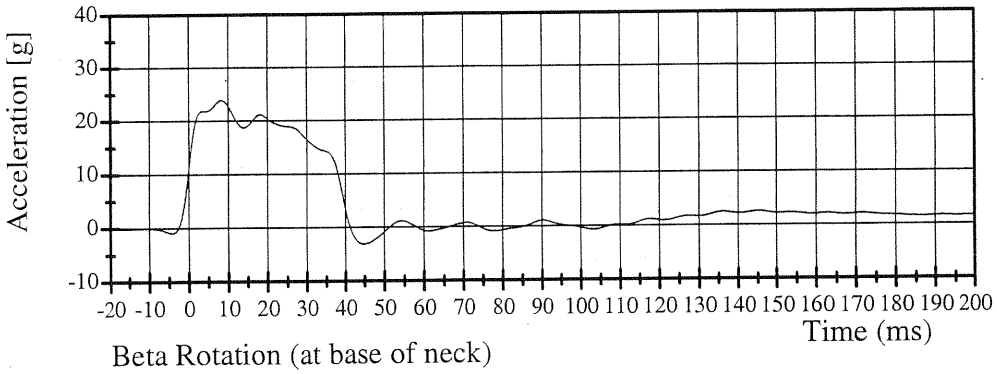
Transportation Research Center Inc.

572E Neck Flexion Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/19/2004

Pendulum Deceleration

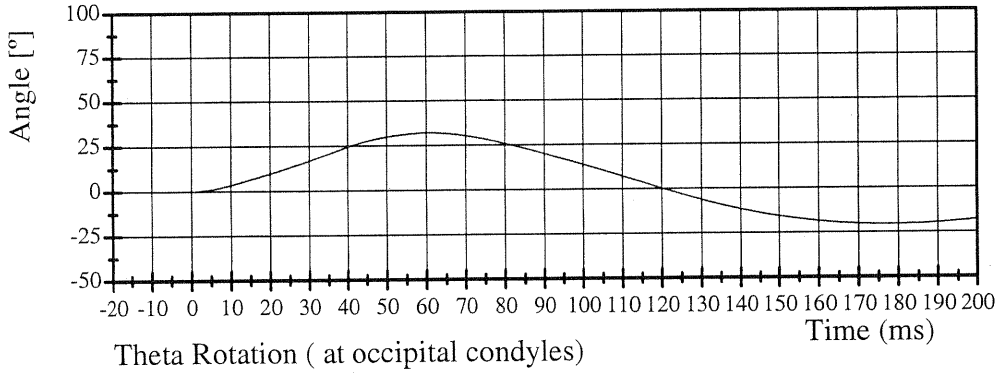


Filter Class: 60

Max: 23.9 g at 8.2 ms

Min: -3.1 g at 44.9 ms

Beta Rotation (at base of neck)

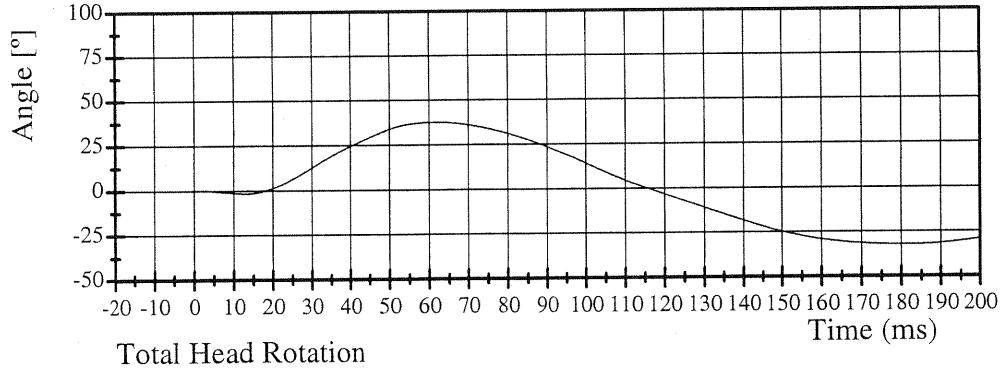


Filter Class: 60

Max: 32.0 ° at 60.4 ms

Min: -20.4 ° at 177.4 ms

Theta Rotation (at occipital condyles)

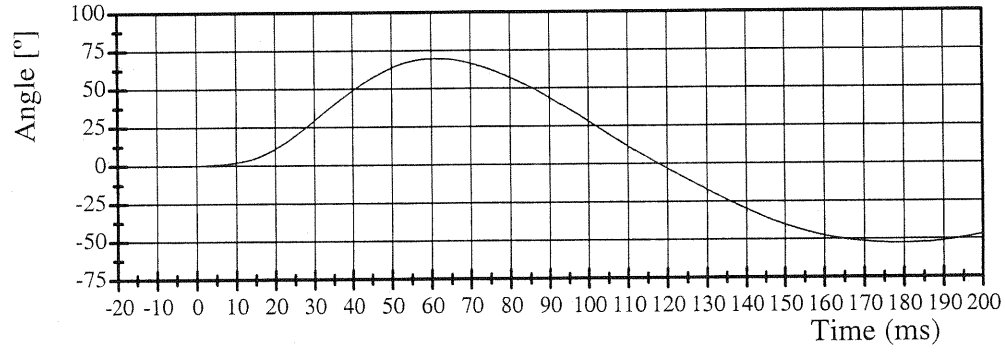


Filter Class: 60

Max: 37.6 ° at 61.7 ms

Min: -32.2 ° at 181.0 ms

Total Head Rotation



Filter Class: 60

Max: 69.6 ° at 60.9 ms

Min: -52.6 ° at 179.1 ms

05.26.2004 16:28:33 519

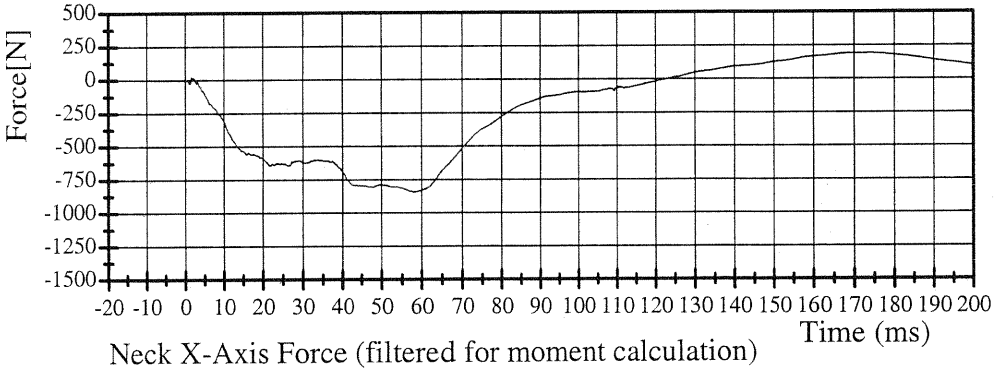
Transportation Research Center Inc.

572E Neck Flexion Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/19/2004

Neck X-Axis Force

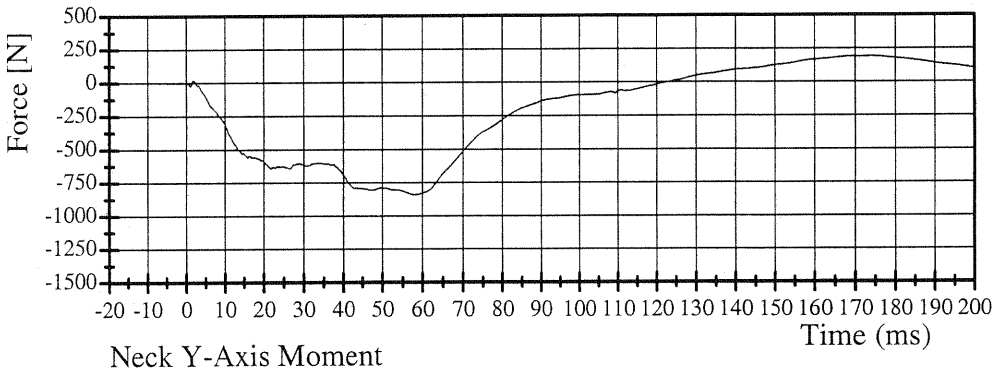


Filter Class: 1000

Max: 190.5 N at 174.1 ms

Min: -841.9 N at 57.8 ms

Neck X-Axis Force (filtered for moment calculation)

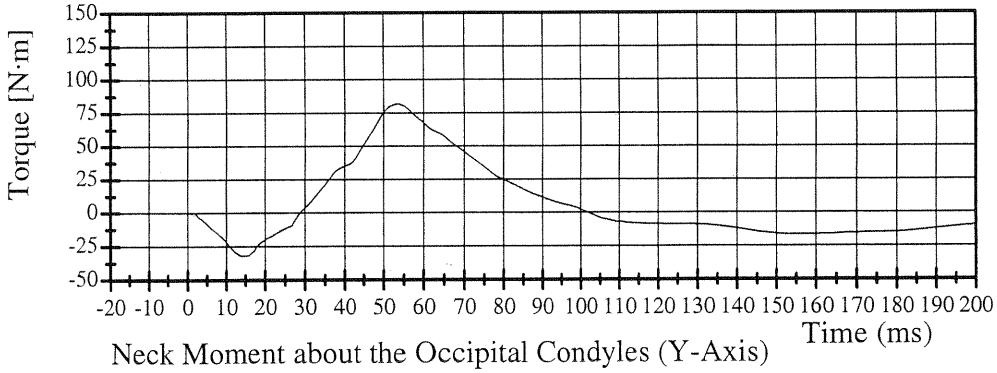


Filter Class: 600

Max: 190.3 N at 174.2 ms

Min: -841.8 N at 58.0 ms

Neck Y-Axis Moment

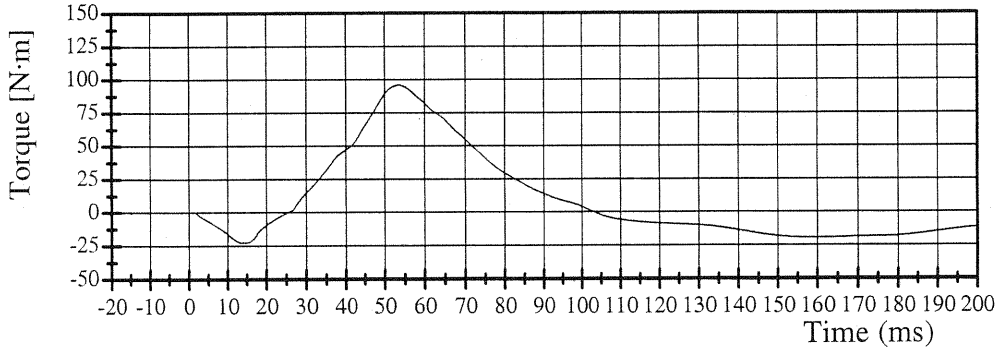


Filter Class: 600

Max: 81.8 N·m at 53.5 ms

Min: -32.1 N·m at 14.6 ms

Neck Moment about the Occipital Condyles (Y-Axis)



Filter Class: 600

Max: 96.0 N·m at 53.5 ms

Min: -22.7 N·m at 14.6 ms

05.26.2004 16:28:34 519

Transportation Research Center Inc.

572E Neck Extension Test - 6 Channel Transducer

HIII 50th Male Serial No. 066 Calibration No. 01 - 1

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.05 m/s	Yes
Pendulum Deceleration			
10 ms	17.20 - 21.20 g	19.89 g	Yes
20 ms	14.00 - 19.00 g	17.78 g	Yes
30 ms	11.00 - 16.00 g	14.17 g	Yes
Max Pendulum Deceleration	22.00 g	20.24 g	Yes
Max Pendulum Deceleration After 30 ms	22.00 g	14.13 g	Yes
Deceleration-Time Curve Decay Time To 5g	38 - 46 ms	39.12 ms	Yes
D Plane Rotation			
Max	81 - 106 °	96.36 °	Yes
Time	72 - 82 ms	75.84 ms	Yes
Moment About Occipital Condyle			
Min	-80.0 - (-52.9) N·m	-73.72 N·m	Yes
Time	65 - 79 ms	71.28 ms	Yes
Rotation Angle-Time Curve Decay Time To Zero	147 - 174 ms	155.92 ms	Yes
Negative Moment-Time Curve Decay Time To Zero	120 - 148 ms	143.20 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:29:29 606

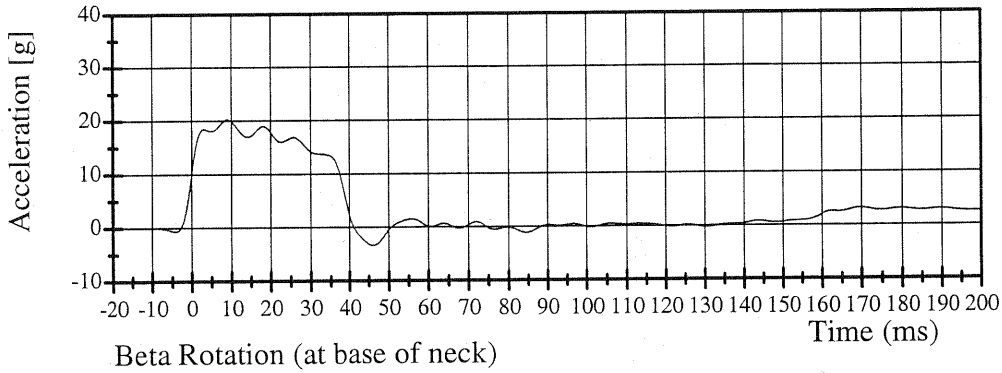
Transportation Research Center Inc.

572E Neck Extension Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 1

Test Date 05/19/2004

Pendulum Deceleration

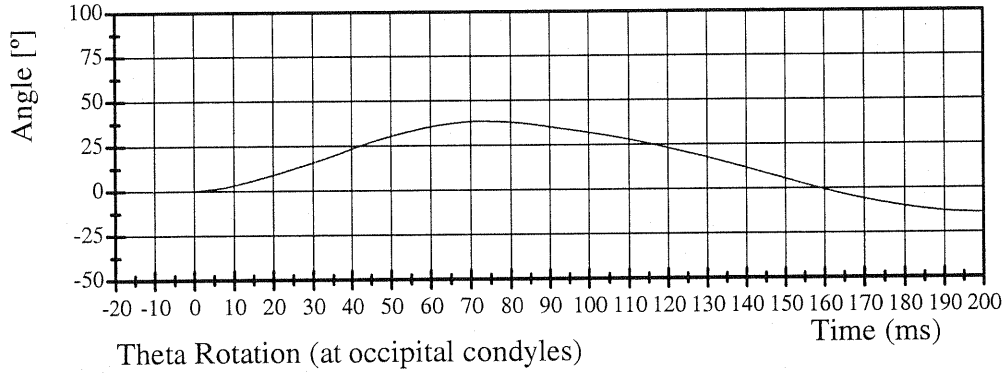


Filter Class: 60

Max: 20.2 g at 9.0 ms

Min: -3.4 g at 46.1 ms

Beta Rotation (at base of neck)

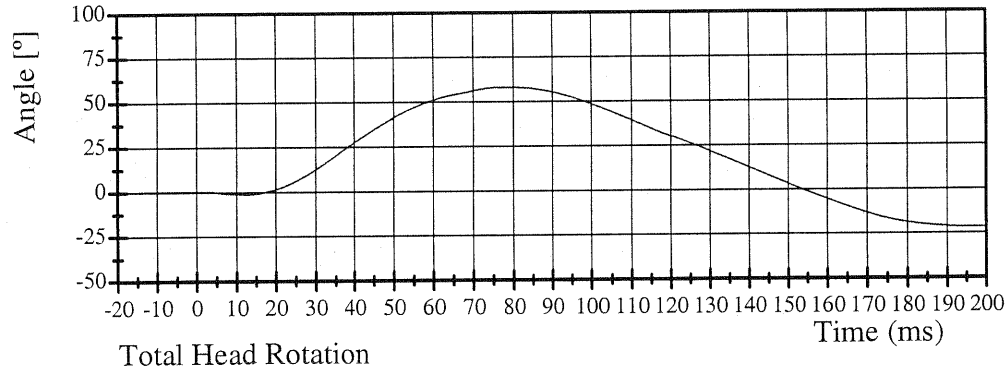


Filter Class: 60

Max: 38.5 ° at 72.4 ms

Min: -13.8 ° at 200.0 ms

Theta Rotation (at occipital condyles)

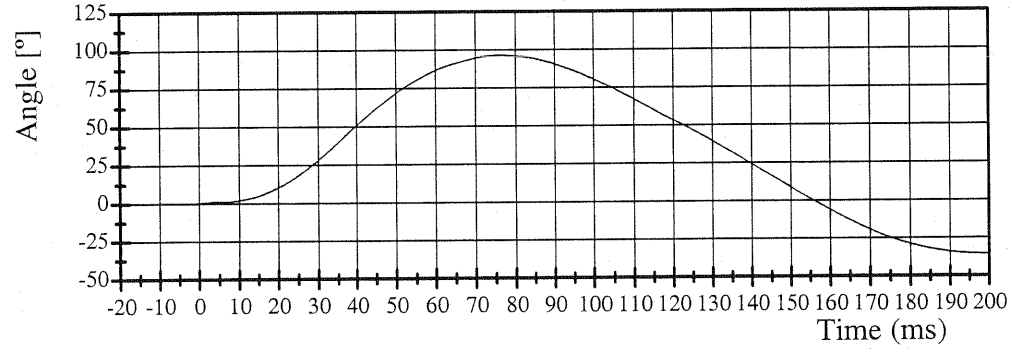


Filter Class: 60

Max: 58.1 ° at 77.4 ms

Min: -21.6 ° at 197.5 ms

Total Head Rotation



Filter Class: 60

Max: 96.4 ° at 75.8 ms

Min: -35.4 ° at 199.0 ms

05.26.2004 16:29:29 606

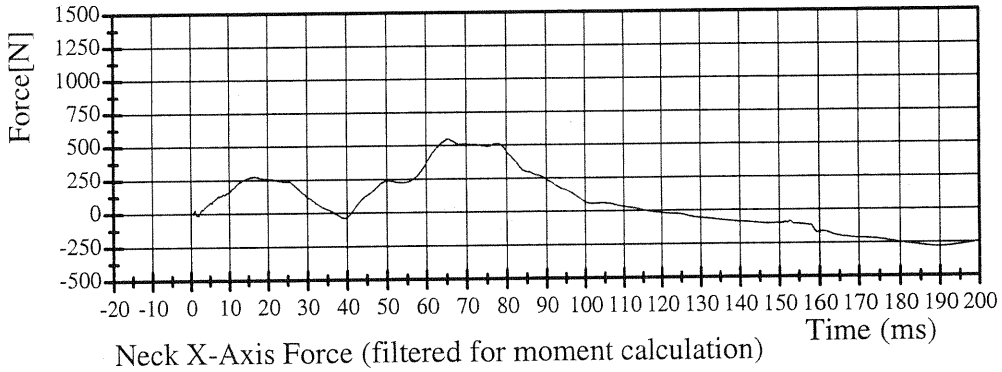
Transportation Research Center Inc.

572E Neck Extension Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 1

Test Date 05/19/2004

Neck X-Axis Force

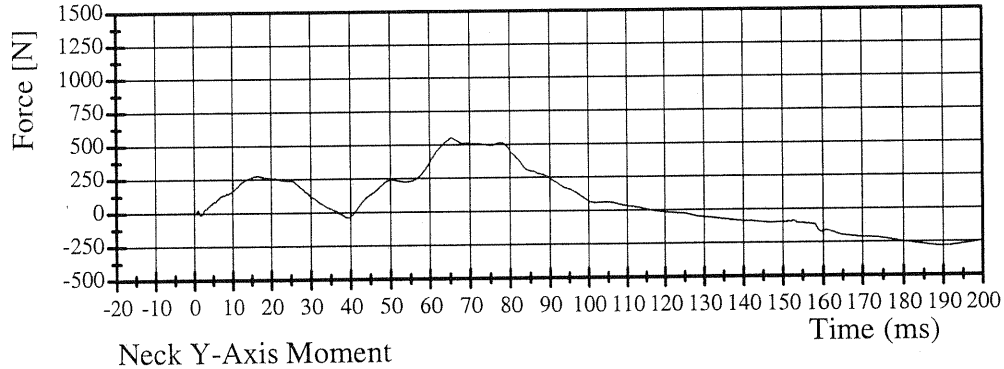


Filter Class: 1000

Max: 550.5 N at 65.4 ms

Min: -283.3 N at 189.7 ms

Neck X-Axis Force (filtered for moment calculation)

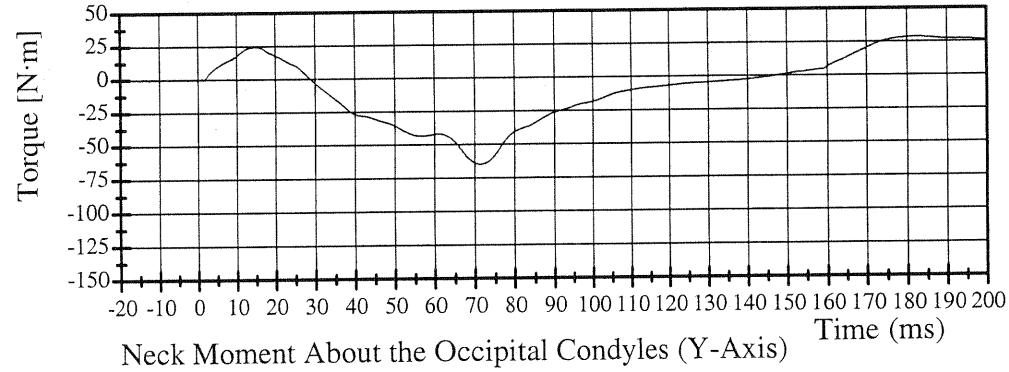


Filter Class: 600

Max: 548.9 N at 65.4 ms

Min: -283.1 N at 189.6 ms

Neck Y-Axis Moment

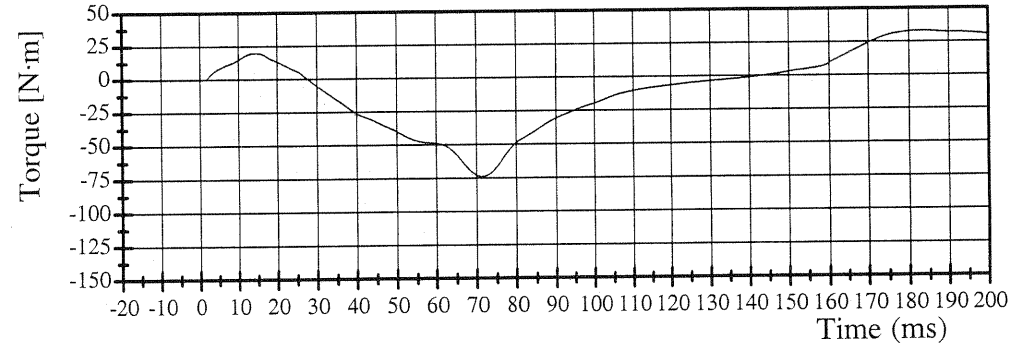


Filter Class: 600

Max: 28.5 N·m at 181.8 ms

Min: -64.8 N·m at 71.3 ms

Neck Moment About the Occipital Condyles (Y-Axis)



Filter Class: 600

Max: 33.1 N·m at 183.5 ms

Min: -73.7 N·m at 71.3 ms

05.26.2004 16:29:30 606

Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 1

Test Date 05/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.61 m/s	Yes
Maximum Chest Deflection	-72.6 - (-63.5) mm	-66.1 mm	Yes
Maximum Resistive Force	5160 - 5894 N	5503 N	Yes
Internal Hysteresis	69 - 85 %	75 %	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:32:09 995

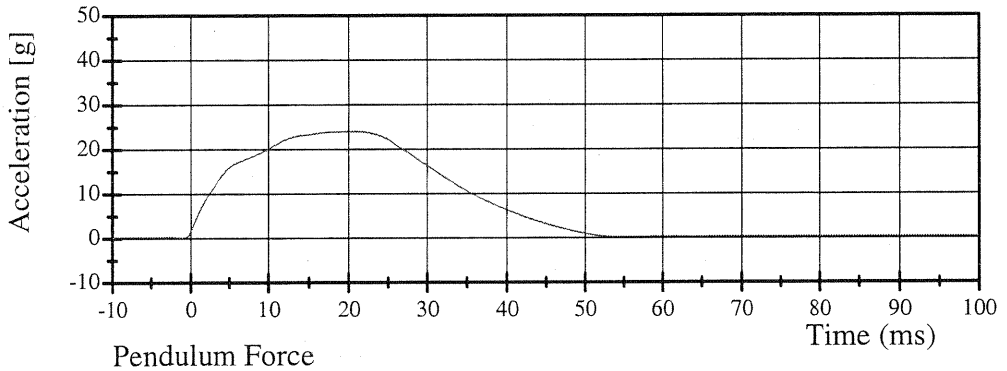
Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 1

Test Date 05/20/2004

Pendulum Deceleration

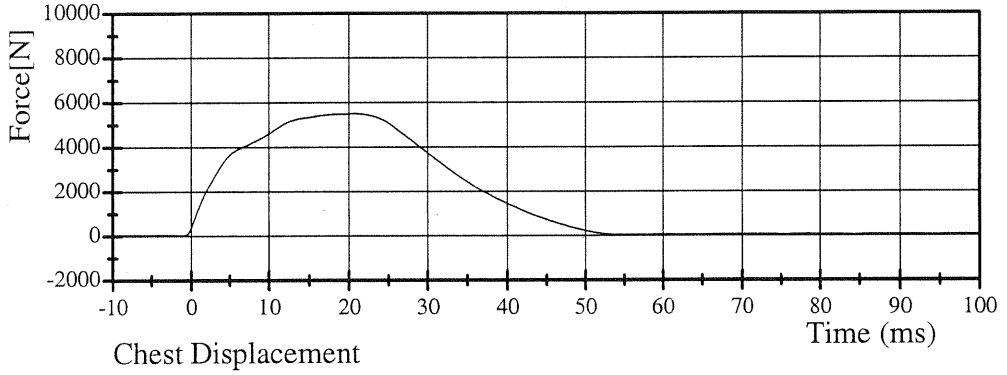


Filter Class: 180

Max: 24.0 g at 20.7 ms

Min: -1.0 g at 455.8 ms

Pendulum Force

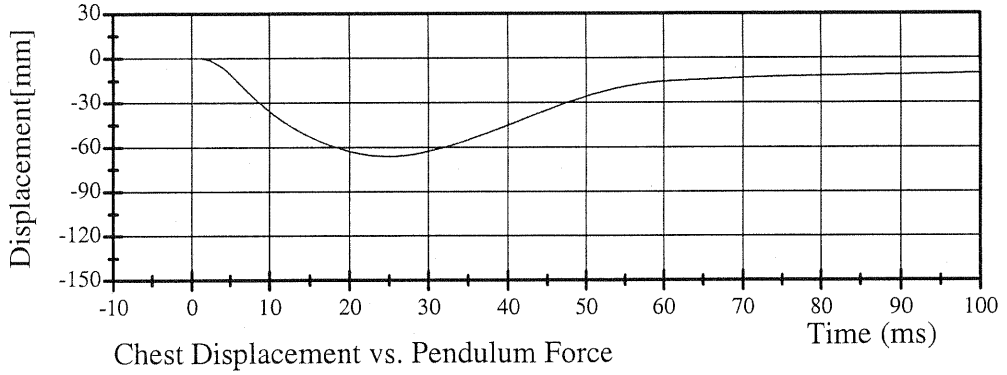


Filter Class: 180

Max: 5503.5 N at 20.7 ms

Min: -228.2 N at 455.8 ms

Chest Displacement

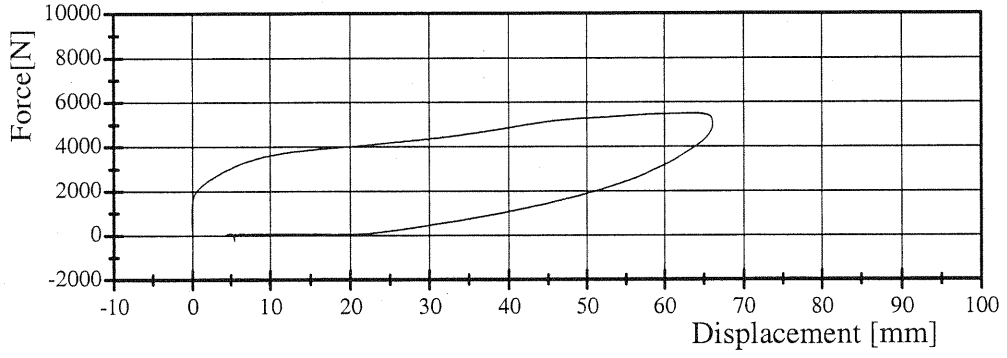


Filter Class: 180

Max: 0.1 mm at 0.6 ms

Min: -66.1 mm at 25.2 ms

Chest Displacement vs. Pendulum Force



05.26.2004 16:32:10 995

Transportation Research Center Inc

Hybrid III Hip Range of Motion

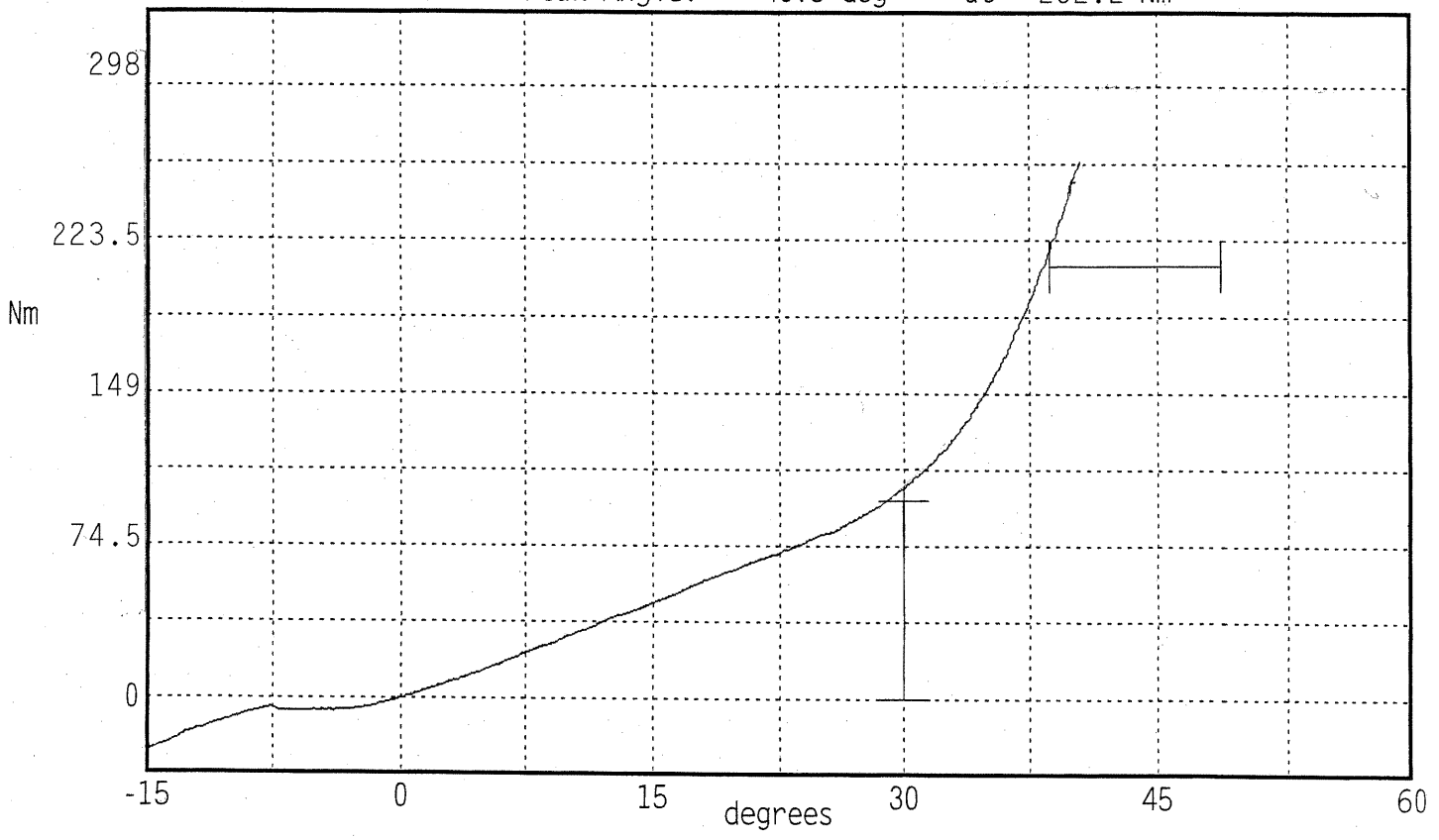
Serial Number: 066L
Test Number: 066C01
Comments:

Date: 05/18/2004
Time: 14:32

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	20.6	°C	Pass
Humidity	10 - 70	52	%	Pass
Moment at 30 deg	<= 94.9	104.0	Nm	Fail
Angle at 203 Nm	40.0 - 50.0	38.0	deg	Fail
Average Velocity	5.0 - 10.0	7.4	deg/sec	Pass

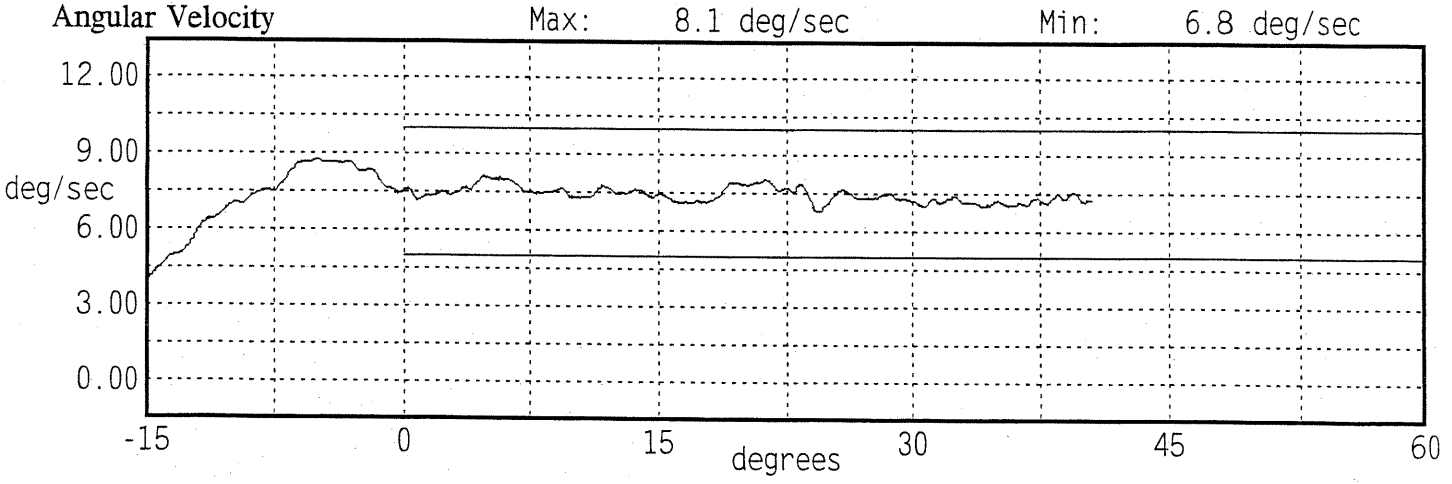
Moment About H-Point

Peak Moment: 262.2 Nm at 40.5 deg
Peak Angle: 40.5 deg at 262.2 Nm



Angular Velocity

Max: 8.1 deg/sec Min: 6.8 deg/sec



Transportation Research Center Inc

Hybrid III Hip Range of Motion

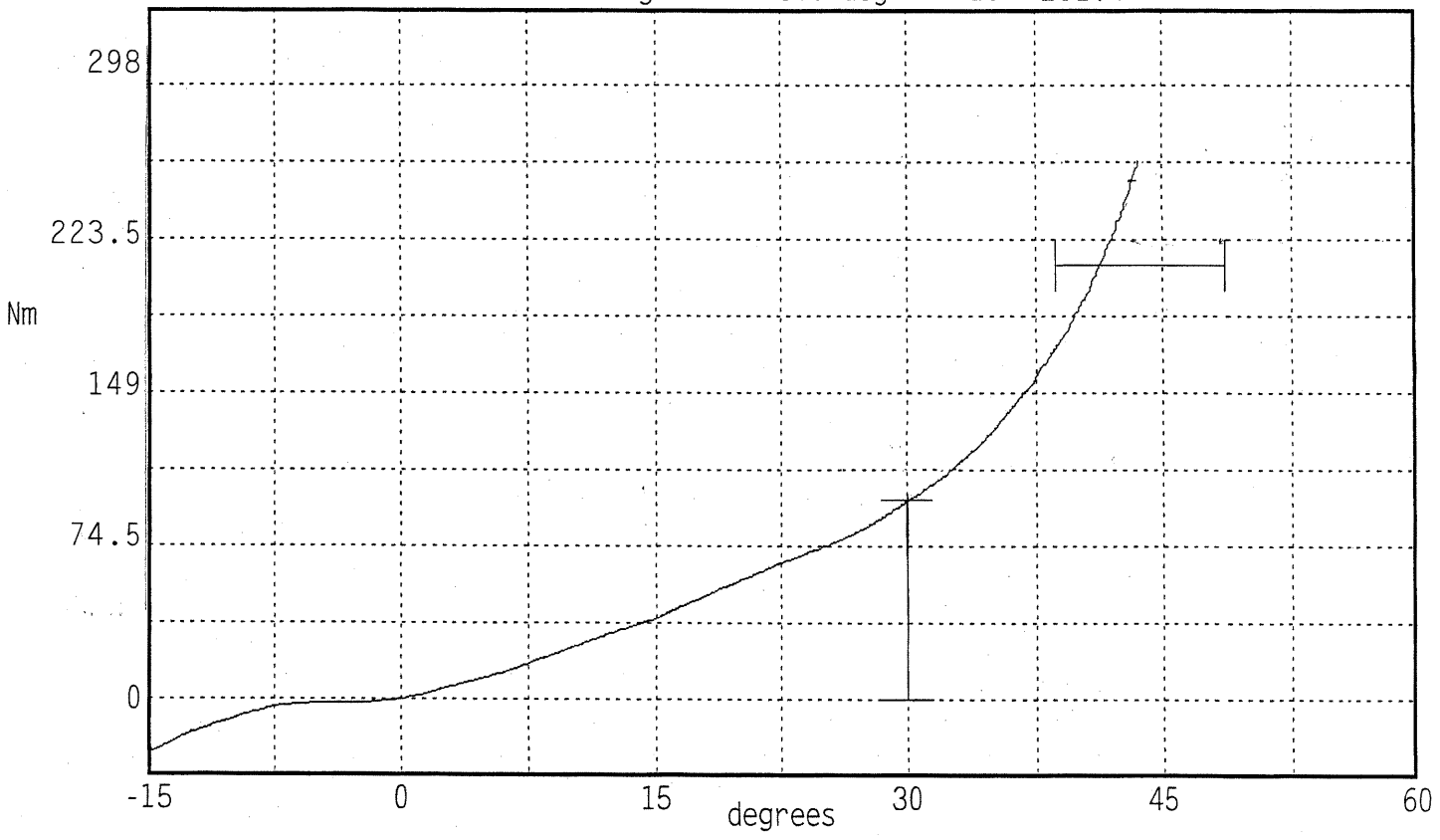
Serial Number: 066R
Test Number: 066C01
Comments:

Date: 05/18/2004
Time: 14:52

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	20.6	°C	Pass
Humidity	10 - 70	52	%	Pass
Moment at 30 deg	<= 94.9	96.4	Nm	Fail
Angle at 203 Nm	40.0 - 50.0	41.0	deg	Pass
Average Velocity	5.0 - 10.0	7.4	deg/sec	Pass

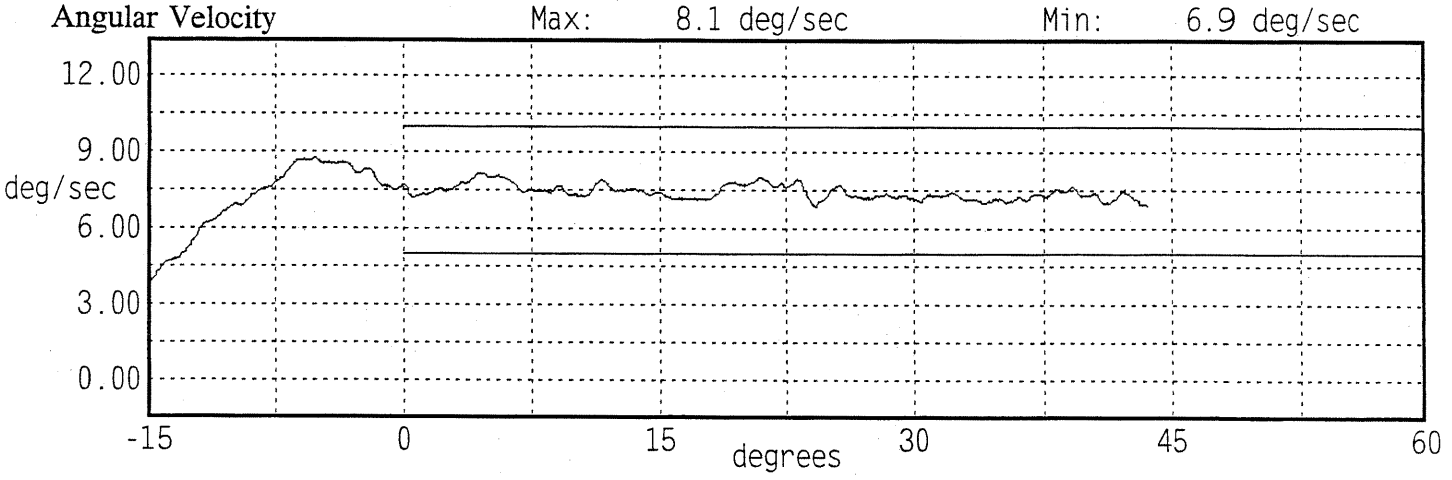
Moment About H-Point

Peak Moment: 261.4 Nm at 43.6 deg
Peak Angle: 43.6 deg at 261.4 Nm



Angular Velocity

Max: 8.1 deg/sec Min: 6.9 deg/sec



Transportation Research Center Inc.

572E Left Knee Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.7 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.09 m/s	Yes
Maximum Pendulum Force	4715 - 5783 N	5280 N	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:34:34 2118

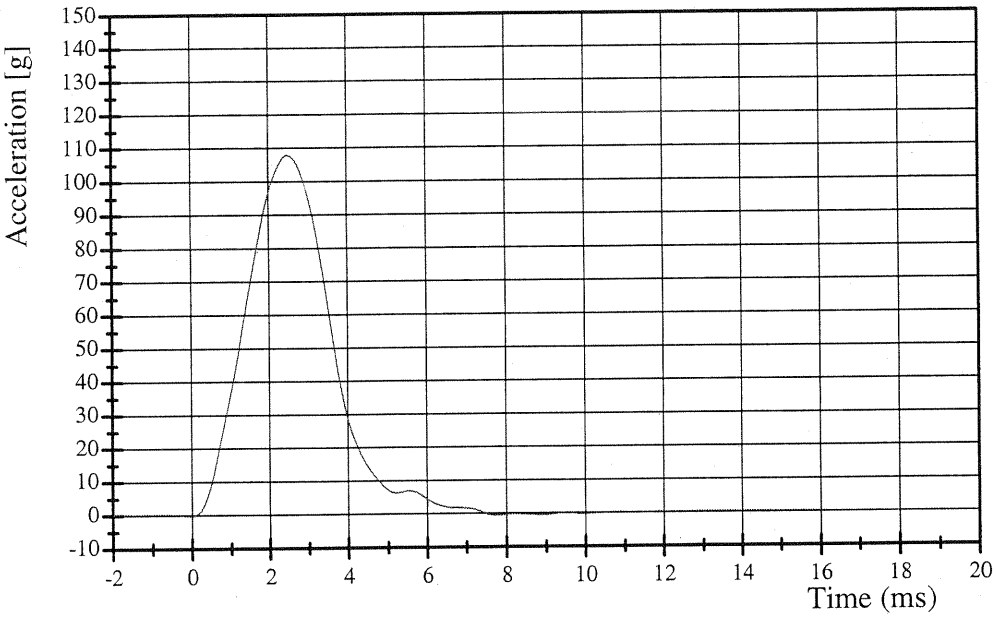
Transportation Research Center Inc.

572E Left Knee Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/20/2004

Pendulum Deceleration

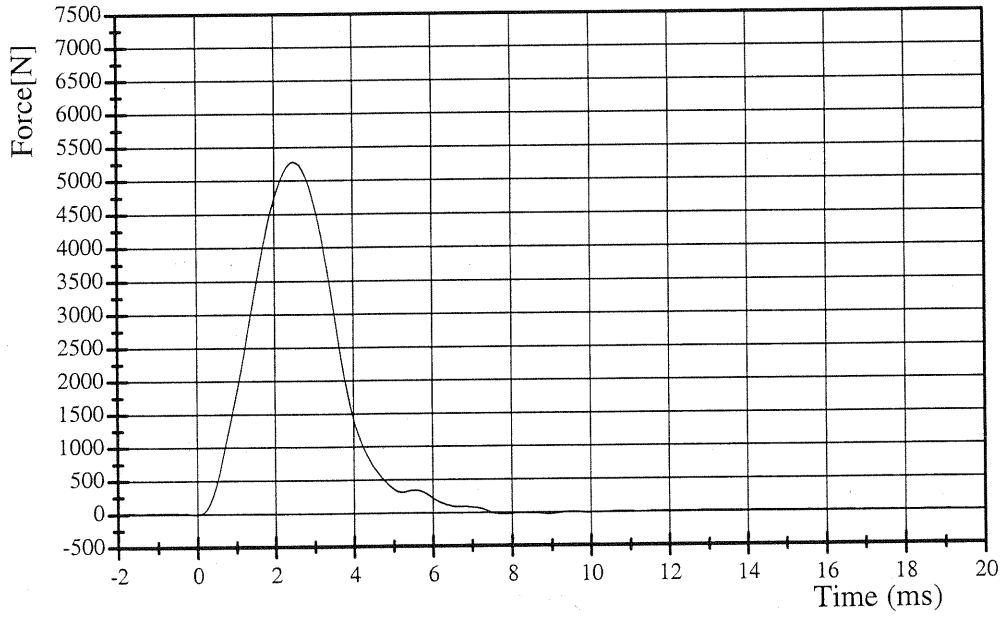


Filter Class: 600

Max: 107.9 g at 2.5 ms

Min: -2.4 g at 35.4 ms

Pendulum Force



Filter Class: 600

Max: 5279.7 N at 2.5 ms

Min: -115.8 N at 35.4 ms

05.26.2004 16:34:34 2118

Transportation Research Center Inc.

572E Right Knee Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.11 m/s	Yes
Maximum Pendulum Force	4715 - 5783 N	4954 N	Yes

Test meets specifications.

Comments:

Technician

Approved

05.26.2004 16:35:10 2106

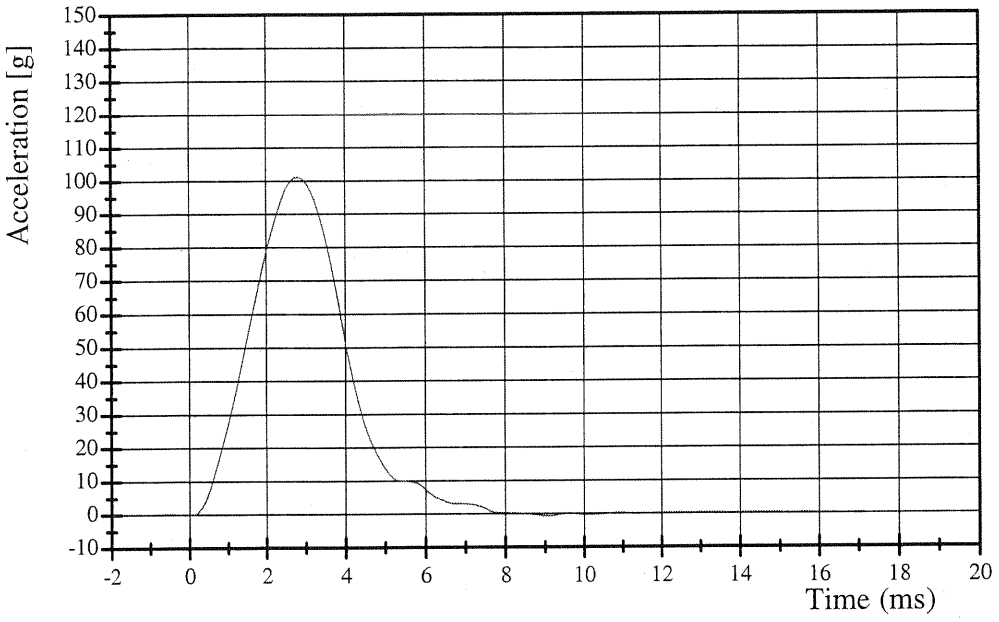
Transportation Research Center Inc.

572E Right Knee Test

HIII 50th Male Serial No. 066 Calibration No. 01 - 2

Test Date 05/20/2004

Pendulum Deceleration

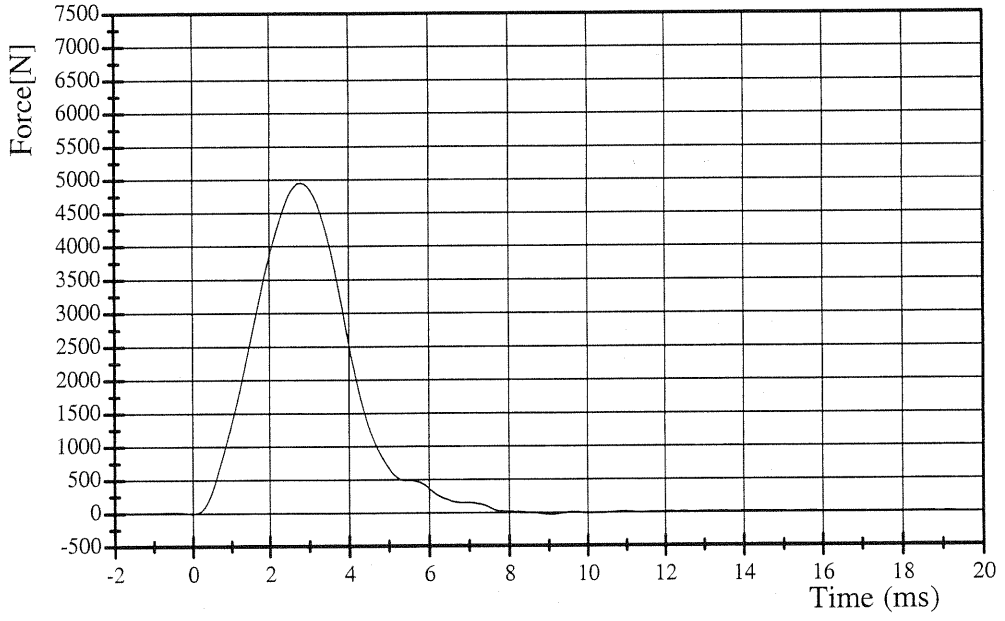


Filter Class: 600

Max: 101.2 g at 2.8 ms

Min: -0.7 g at 9.1 ms

Pendulum Force



Filter Class: 600

Max: 4954.0 N at 2.8 ms

Min: -33.6 N at 9.1 ms

05.26.2004 16:35:10 2106

Appendix F

Child Restraint System

Report Number: 040521

New Car Assessment Program (NCAP)
Frontal Barrier Impact Test

DaimlerChrysler

2004 Dodge Ram 1500 Quad Cab SLT Pickup truck

NHTSA Number: L40300

Prepared By:

Transportation Research Center Inc.

10820 State Route 347

East Liberty, OH 43319



June 8, 2004

Final Report

Prepared For:

U. S. Department of Transportation

National Highway Traffic Safety Administration

Rulemaking

Office of Crashworthiness Standards

Mail Code: NVS-111

400 Seventh Street, S.W., Room 5311

Washington, DC 20590

This final test report was prepared for the U. S. Department of Transportation, National Highway Traffic Safety Administration.

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Approved By: _____ Date: 6-8-04

Michael R. Tonneman, Project Manager
Transportation Research Center Inc.

FINAL REPORT ACCEPTED BY:

_____
Manager, New Car Assessment Program

_____
Date of Acceptance

_____
COTR, NCAP Frontal Impact Program

_____
Date of Acceptance

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
040521		

4. Title and Subtitle	5. Report Date
Final Report of New Car Assessment Program Testing of a 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No. L40300	June 8, 2004
	6. Performing Organization Code: TRC
7. Author(s): Michael R. Tonneman, Project Manager	8. Performing Organization Report No.: 040521
9. Performing Organization Name and Address: Transportation Research Center Inc., 10820 State Route 347, East Liberty, OH 43319-0367	10. Work Unit No. (TRAIS)
	11. Contract or Grant No.
12. Sponsoring Agency Name and Address: U. S. Department of Transportation, National Highway Traffic Safety Administration, Rulemaking, Office of Crashworthiness Standards, Mail Code NVS-111, 400 Seventh Street, S. W., Room 5313, Washington, DC 20590	13. Type of Report and Period Covered: Final Report, May-June 2004
	14. Sponsoring Agency Code: DOT/NHTSA/NPM/OCS

15. Supplemental Notes

16. Abstract

A frontal test was conducted on the subject CRS's, an Evenflo Vanguard 5 and a Britax Expressway Isofix, in conjunction with frontal NCAP testing on a 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck in accordance with the specifications of the Office of Crashworthiness Standards Test procedure.

Measurement Description	Units		Left Rear	Right Rear
Head Injury Criteria (HIC) 36	N/A		933	1255
Head Injury Criteria (HIC) 15	N/A		548	695
Max. Chest Accel. (3 ms Clip)	g's		40.7	39.6
Peak Chest Displacement	g's		21.2	21.9

17. Key Words	18. Distribution Statement
56.3 km/h NCAP Frontal Barrier Impact Test New Car Assessment Program (NCAP) 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No. L40300	Copies of this report are available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh Street, S. W., Room 5108 Washington, DC 20590

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. Number of Pages	22. Price
Unclassified	Unclassified	155	

Form DOT F 1700.7 (8-72)

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F-4	Child Dummy Instrumentation Information	F4-1 – F4-2
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2	CRS Parameter Data	F1-3
3	Child Dummy Positioning In Vehicle	F1-4
4	Child Dummy Injury Criteria Values	F1-6
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Section F-1

Purpose and Test Summary of Test L40300

The purpose of this test was to obtain Child Restraint Seat (CRS) performance data during an NCAP (35 mph) frontal impact test.

The 56.3 km/h NCAP frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) NCAP Laboratory Test Procedure

Summary

The three-year-old child dummies were instrumented with head, chest and pelvis triaxial accelerometers. In addition, chest deflection potentiometers and upper six-axis neck force and moment load cell sensors were utilized. Triaxial accelerometers were installed on each CRS.

The right rear passenger (position 3) ATD (serial no. 040) and the left rear passenger (position 4) ATD (serial no. 042) were calibrated prior to this test. Child dummy certification information is found in Section F-5.

Child Dummy Values

Location	HIC 36 Values	HIC 15 Values	3 ms Chest Clip	Peak Chest Displacement
Right Rear Child	1255	695	39.6	22 mm
Left Rear Child	933	548	40.7	21 mm

Section F-1
Data Sheet No. 1, Crash Test Summary

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Child Restraint Device Information

Description	Position #3 CRS	Position #4 CRS
Manufacturer	Evenflo	Britax
Model Name	Vanguard 5	Expressway Isofix
Serial No.	3691331P1	E9L 29061220
Type	Convertible	Forward facing
Forward/Rearward	Forward	Forward

Visible Dummy Contact Points

Description	Position #3 CRS	Position #4 CRS
Dummy Type/Serial No.	Hybrid III Three-year-old ATD No. 040	Hybrid III Three-year-old ATD No. 042
Head Contact	CRS	CRS
Chest Contact	CRS harness	CRS harness
Abdomen Contact	CRS harness	CRS harness
Left Knee Contact	None	None
Right Knee Contact	None	None
Left Toe Contact	Front seat back	Front seat back
Right Toe Contact	Front seat back	Front seat back

Post-Test Door Opening

Description	Position #3 CRS	Position #4 CRS
Left Side Doors	Remained latched; open without tools	Remained latched; open without tools
Right Side Doors	Remained latched; open without tools	Remained latched; open without tools
Hatch/Other Door	N/A	N/A

Post-Test Seat Data

Description	Seat Movement (mm)	Seat Back Failure
Left Front	None	None
Right Front	None	None
Left Rear	None	None
Right Rear	None	None

Motion Picture Camera Coverage

High-speed	2
Real-time	1
Total	3

Section F-1
Data Sheet No. 2, CRS Parameter Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Test Vehicle Weights

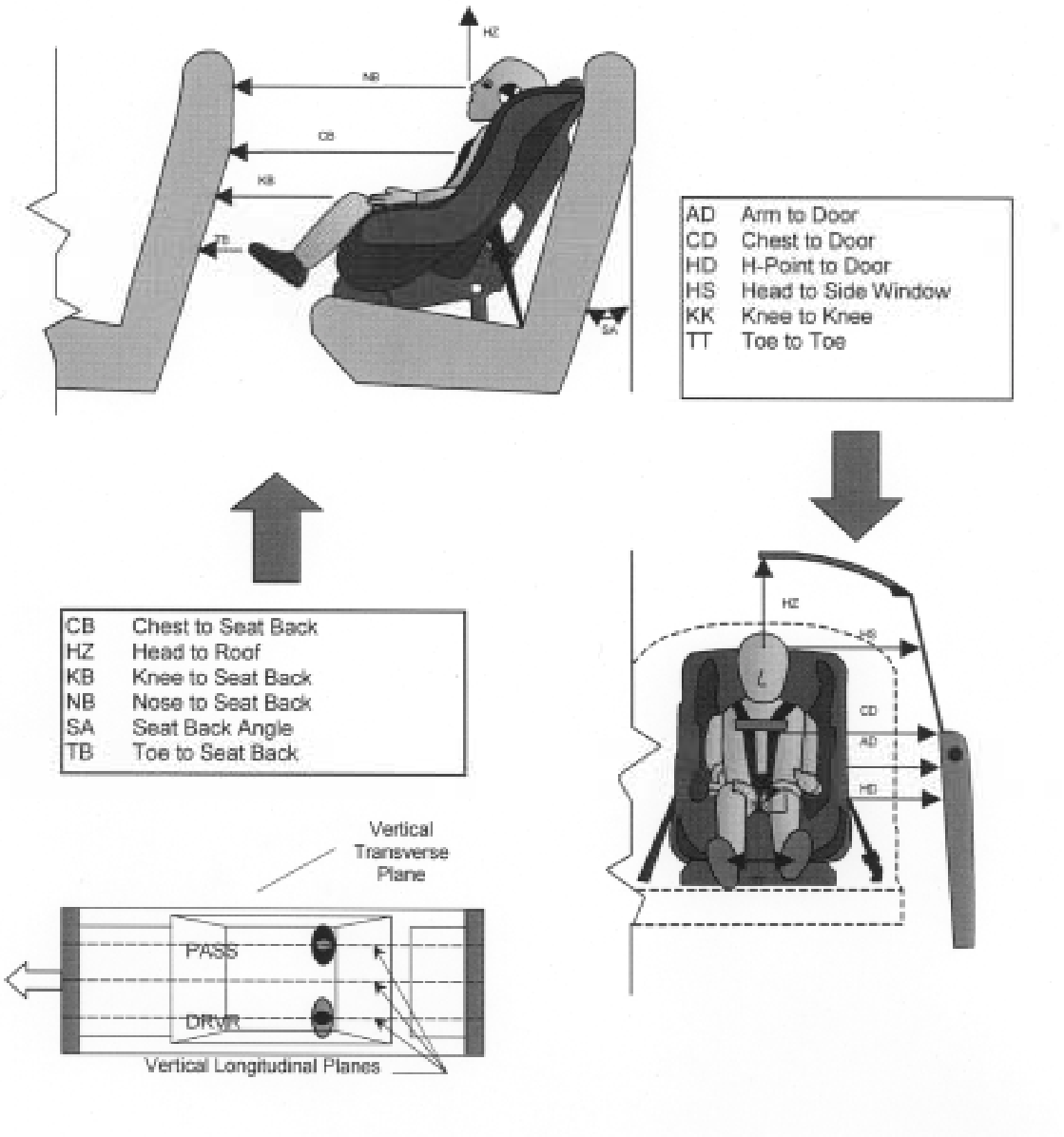
	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	634	502	N/A	720.6	562.5	N/A
Right	kg	625	494	N/A	682.2	570.4	N/A
Ratio	%	55.8	44.2	N/A	55.3	44.7	N/A
Total	kg	1259	996	2255	1402.8	1132.9	2535.7

Target Test Weight Calculation

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	2255
Weight of 2 Part 572E ATD's	kg	152
Rated Cargo/Luggage Weight (RCLW)	kg	136
Calculated Vehicle Target Test Weight (TVTW)	kg	2543

Section F-1
Data Sheet No. 3, Child Dummy Positioning In Vehicle

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04



DUMMY MEASUREMENTS FOR REAR SEAT OCCUPANTS

Section F-1
Data Sheet No. 3, Child Dummy Positioning In Vehicle (continued)

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Child Dummy Position Measurements

Code	Measurement	Units	Pos. 3 CRS Serial No. 040	Pos. 4 CRS Serial No. 042
			Pre-Test	Pre-Test
SA	Seat Back Angle	deg.	72.3-17.7	
HS	Head to Side Window	mm	400	380
CD	Chest to Door	mm	368	383
AD	Arm to Door	mm	238	248
HD	H-point to Door (Y)	mm	306	309
HZ	Head to Roof (Z)	mm	410	400
NB	Nose to Seat Back	mm	460	400
CB	Chest to Seat Back	mm	480	430
KK	Knee to Knee	mm	160	180
FF	Foot to Foot	mm	175	160
KBL	Left Knee to Seat Back	mm	250	240
KBR	Right Knee to Seat Back[1]	mm		
TBL	Left Knee to Seat Back[1]	mm		
TBR	Right Knee to Seat Back[1]	mm		

[1] Measurements were not taken.

Section F-1
Data Sheet No. 4, 3-Year-Old Hybrid III ATD Injury Criteria and Sensor Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Head Primary Peak Accelerations

Location	Axis	Units	Left Rear (3 Yr.)				Right Rear (3Yr.)			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Head CG	X	g's	16.6	222.1	-41.0	92.3	74.1	200.4	-33.8	109.8
Head CG	Y	g's	22.7	90.1	-26.7	92.2	4.4	198.6	-3.8	73.3
Head CG	Z	g's	70.3	81.6	-0.9	267.5	74.1	85.7	-10.7	49.7
Head CG Resultant	N/A	g's	74.5	92.0	N/A	N/A	79.7	20.4	N/A	N/A

Primary Head Injury Criteria (HIC)

Location	Left Rear (3 Yr.)				Right Rear (3Yr.)			
	HIC	T^1	T^2	Avg. g	HIC	T^1	T^2	Avg. g
Head CG Primary (HIC 36)	933	64.6	100.6	58.2	1255	68.8	104.8	65.6
Head CG Primary (HIC 15)	548	77.7	92.7	66.9	695	75.9	90.9	73.5

Chest Primary Peak Accelerations

Location	Axis	Units	Left Rear (3 Yr.)				Right Rear (3Yr.)			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Chest CG	X	g's	11.9	251.1	-39.5	41.8	12.1	208.0	-38.7	91.3
Chest CG	Y	g's	4.1	149.8	-4.7	75.5	3.9	160.0	-4.9	63.2
Chest CG	Z	g's	21.1	87.0	-18.8	45.0	18.2	202.9	-29.9	50.0
Chest CG Resultant	N/A	g's	42.3	42.3	N/A	N/A	40.9	91.3	N/A	N/A

Primary Chest Clip (3ms)

Location	Left Rear (3 Yr.)			Right Rear (3Yr.)		
	Clip	T^1	T^2	Clip	T^1	T^2
Chest CG Primary	40.7	40.9	43.9	39.6	89.5	92.5

Chest Peak Displacements

Location	Axis	Units	Left Rear (3 Yr.)				Right Rear (3Yr.)			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Chest CG	X	mm	0.1	19.6	-21.2	113.7	0.0	13.5	-21.9	116.1

Pelvic Peak Accelerations

Location	Axis	Units	Left Rear (3 Yr.)				Right Rear (3Yr.)			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Pelvis X	X	g's	16.5	143.1	-63.0	42.5	8.7	138.1	-55.5	45.2
Pelvis Y	Y	g's	6.4	57.0	-10.5	65.5	5.9	154.3	-8.2	50.4
Pelvis Z	Z	g's	13.0	212.4	-26.6	42.0	17.4	202.5	-38.4	44.4
Pelvis Resultant	N/A	g's	68.2	42.4	N/A	N/A	66.9	44.8	N/A	N/A

Section F-1
Data Sheet No. 4, 3-Year-Old Hybrid III ATD Injury Criteria and Sensor Data (continued)

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Upper Neck Peak Forces and Moments

Location	Axis	Units	Left Rear (3 Yr.)				Right Rear (3Yr.)			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Neck Force	X	Newtons	68.4	185.8	-817.8	108.7	36.0	193.8	-906.3	110.7
Neck Force	Y	Newtons	29.5	110.4	-105.0	90.5	32.5	127.2	-49.5	70.9
Neck Force	Z	Newtons	1729.3	83.0	-114.7	249.6	1716.6	93.7	-425.9	210.4
Neck Force Resultant	N/A	Newtons	1760.4	83.0	-1.9	16.3	1837.7	101.3	N/A	N/A
Neck Moment	X	N·m	4.9	146.9	-3.7	92.6	2.8	155.9	-3.8	79.1
Neck Moment	Y	N·m	7.7	178.0	-16.3	206.8	7.2	277.9	-20.7	208.8
Neck Moment	Z	N·m	2.4	151.3	-1.5	173.0	2.5	160.3	-1.7	183.5
Neck Moment Resultant	N/A	N·m	16.3	206.8	0.0	16.6	20.7	208.8	N/A	N/A

Child Seat Tether Belt Sensor Peak Values[1]

Location	Axis	Units	Left Rear (3 Yr.)				Right Rear (3Yr.)			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Tether Belt Force	N/A	Newtons	0	0	0	0	0	0	0	0

Child Seat Accelerometer Peak Values

Location	Axis	Units	Left Rear (3 Yr.)				Right Rear (3Yr.)			
			Max.	Time	Min.	Time	Max.	Time	Min.	Time
Child Seat	X	g's	13.2	121.4	-43.1	25.2	12.2	154.3	-63.1	37.3
Child Seat	Y	g's	14.5	152.2	-21.9	147.1	5.5	151.7	-9.5	40.3
Child Seat	Z	g's	22.7	42.0	-16.2	123.0	26.0	35.1	-19.7	43.4
Child Seat Resultant	N/A	g's	44.0	25.1	N/A	N/A	66.0	37.1	N/A	N/A

[1] Load cells could not be fitted on this vehicle.

Section F-1
Data Sheet No. 5, CRS Performance Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

CRS Performance Data

Location	Pos. 3 CRS Serial No. 3691331P1		Pos. 4 CRS Serial No. E9L 29061220	
	Damage	Description	Damage	Description
Upper Tether Strap	No		No	
Upper Tether Buckle	No		No	
Upper Tether Hook	No		No	
Vehicle Upper Tether Anchor	No		No	
Lower Anchor Strap	No		No	
Lower Anchor Buckle	No		No	
Lower Anchor Hooks	No		No	
Vehicle Lower CRS Anchors	No		No	
5-point Harness Connections	No		No	
Cracks on CRS	No		No	
Fabric Tears on CRS	No		No	
Vehicle Seat Structure	No		No	
Vehicle Seat Fabric Tears	No		No	

Post-Test CRS Chest Clip Movement

Location	Measurement (mm)	
	Left Clip	Right Clip
Left Rear Passenger	55	55
Right Rear Passenger	100	110

Section F-1
Data Sheet No. 15, CRS Camera Data

Test Vehicle: 2004 Dodge Ram 1500 Quad Cab SLT Pickup truck NHTSA No.: L40300
Test Program: NHTSA 35 mph NCAP Test Date: 05/21/04

Camera Locations

No.	Camera View	Location (mm)			Angle (deg.)	Film Plane to Head	Lens (mm)	Film Speed (fps)
		X	Y	Z				
1	Real-time					N/A	Zoom	30
2	Driver Side Child Dummy	2000	1000	1500	14.8	600	8.5	1000
3	Passenger Side Child Dummy	2840	800	1460	17.5	500	5	1000

X = Barrier Face Y = Monorail Centerline Z = Ground

Section F-2

Photographs

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5	Post-Test Rear View of Position 3 CRS	F2-5
6	Pre-Test Left Side View of Position 3 CRS	F2-6
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Figure F2-1 Close-up View Position 3 CRS Label

Photograph Not Available

Figure F2-2 Pre-Test Frontal View of Position 3 CRS



Figure F2-3 Post-Test Frontal View of Position 3 CRS

Photograph Not Available

Figure F2-4 Pre-Test Rear View of Position 3 CRS



Figure F2-5 Post-Test Rear View of Position 3 CRS



Figure F2-6 Pre-Test Left Side View of Position 3 CRS



Figure F2-7 Post-Test Left Side View of Position 3 CRS

Photograph Not Available

Figure F2-8 Pre-Test Right Side View of Position 3 CRS



Figure F2-9 Post-Test Right Side View of Position 3 CRS

Photograph Not Available

Figure F2-10 Pre-Test Position 3 Front View



Figure F2-11 Post-Test Position 3 Front View

Photograph Not Available

Figure F2-12 Pre-Test Position 3 Left Side View

Photograph Not Available

Figure F2-13 Post-Test Position 3 Left Side View



Figure F2-14 Pre-Test Position 3 Right Side View



Figure F2-15 Post-Test Position 3 Right Side View



Figure F2-16 Post-Test Position 3 Contact Point (Back of Right Front Seat)



Figure F2-17 Close-up View Position 4 CRS Label

Photograph Not Available

Figure F2-18 Pre-Test Frontal View of Position 4 CRS



Figure F2-19 Post-Test Frontal View of Position 4 CRS

Photograph Not Available

Figure F2-20 Pre-Test Rear View of Position 4 CRS



Figure F2-21 Post-Test Rear View of Position 4 CRS

Photograph Not Available

Figure F2-22 Pre-Test Left Side View of Position 4 CRS



Figure F2-23 Post-Test Left Side View of Position 4 CRS



Figure F2-24 Pre-Test Right Side View of Position 4 CRS



Figure F2-25 Post-Test Right Side View of Position 4 CRS

Photograph Not Available

Figure F2-26 Pre-Test Position 4 Front View



Figure F2-27 Post-Test Position 4 Front View



Figure F2-28 Pre-Test Position 4 Left Side View



Figure F2-29 Post-Test Position 4 Left Side View

Photograph Not Available

Figure F2-30 Pre-Test Position 4 Right Side View

Photograph Not Available

Figure F2-31 Post-Test Position 4 Right Side View

Photograph Not Available

Figure F2-32 Post-Test Position 4 Right Side View

Photograph Not Available

Figure F2-33 Post-Test Movement of Position 4 Seat Cushion

Photograph Not Available

Figure F2-34 Post-Test Movement of Position 4 Seat Cushion



Figure F2-35 Post-Test Position 4 Contact Point (Back of Left Front Seat)

Section F-3

Child Dummy Response and CRS Data Traces

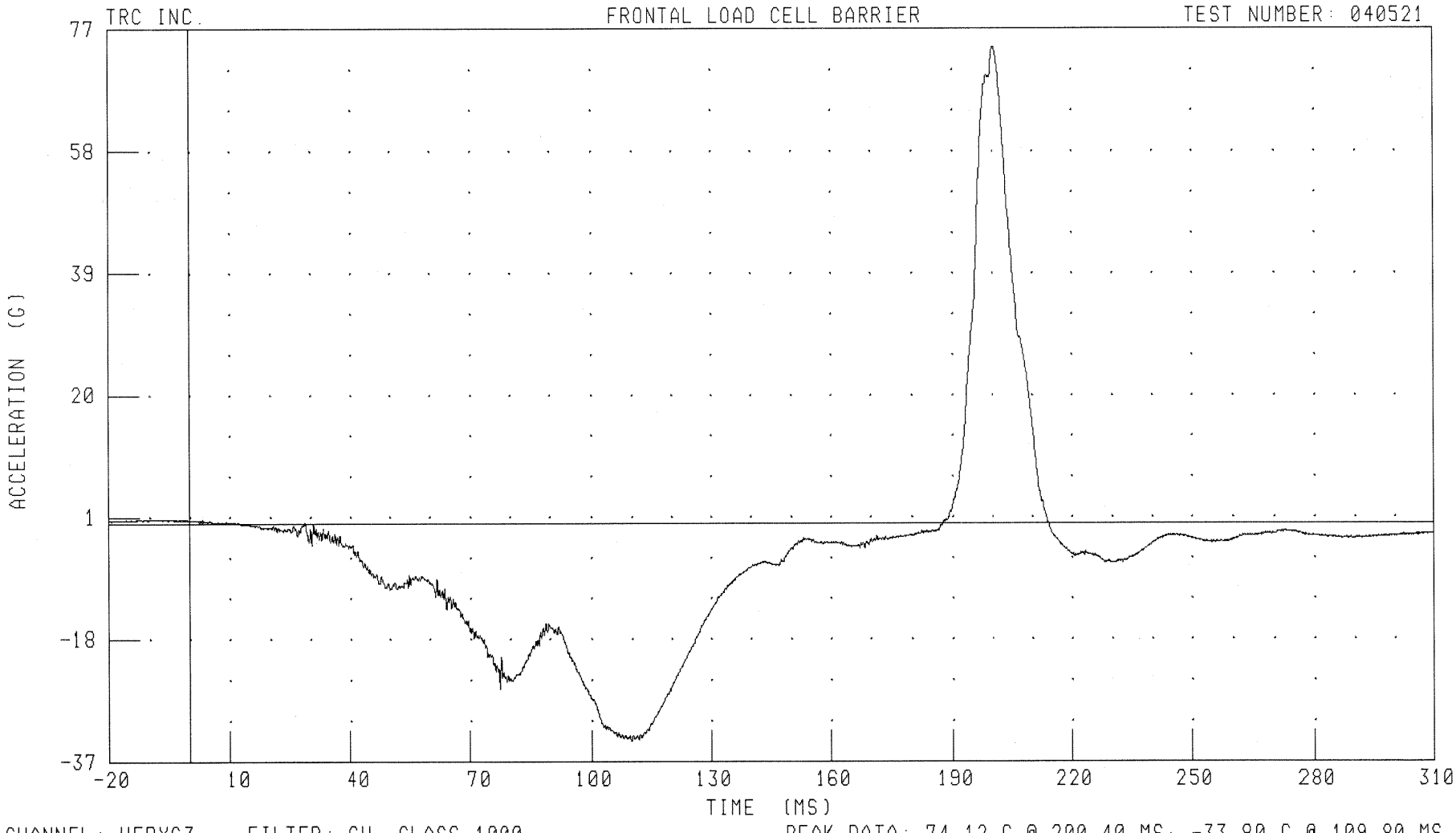
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) HEAD X-AXIS ACCELERATION



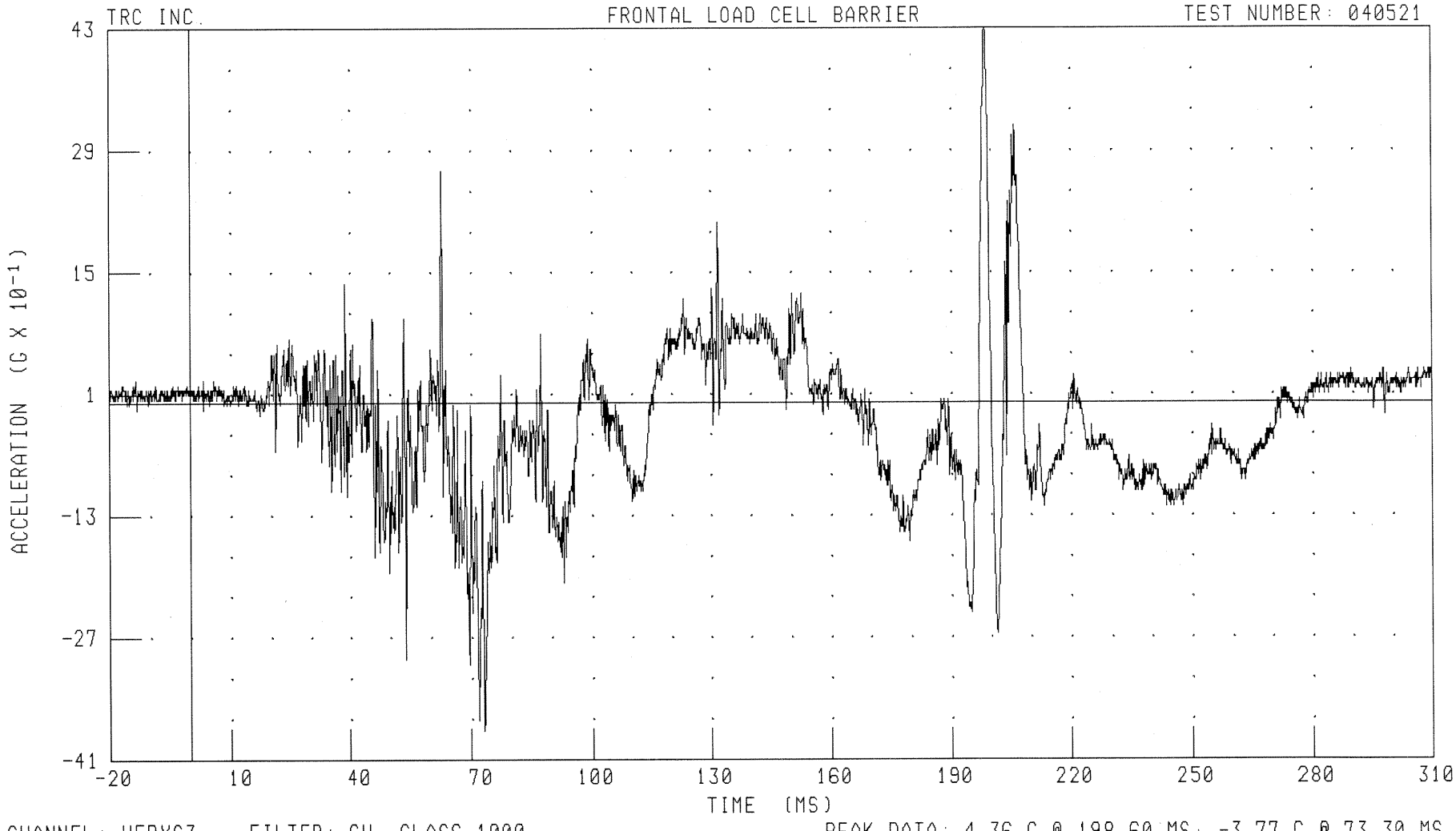
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F3-1

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

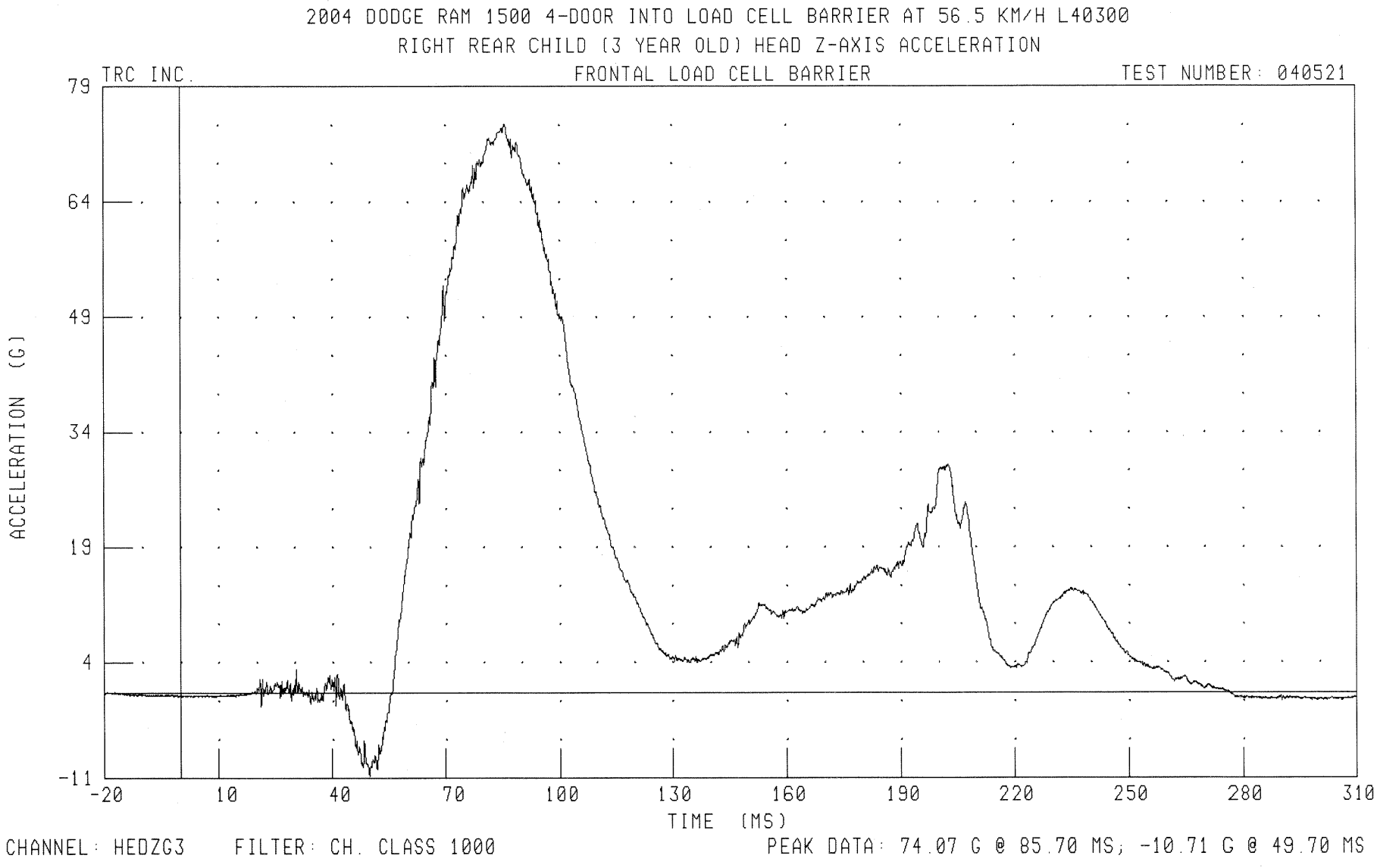
RIGHT REAR CHILD (3 YEAR OLD) HEAD Y-AXIS ACCELERATION



CHANNEL: HEDYG3 FILTER: CH. CLASS 1000 PEAK DATA: 4.36 G @ 198.60 MS; -3.77 G @ 73.30 MS

F3-2

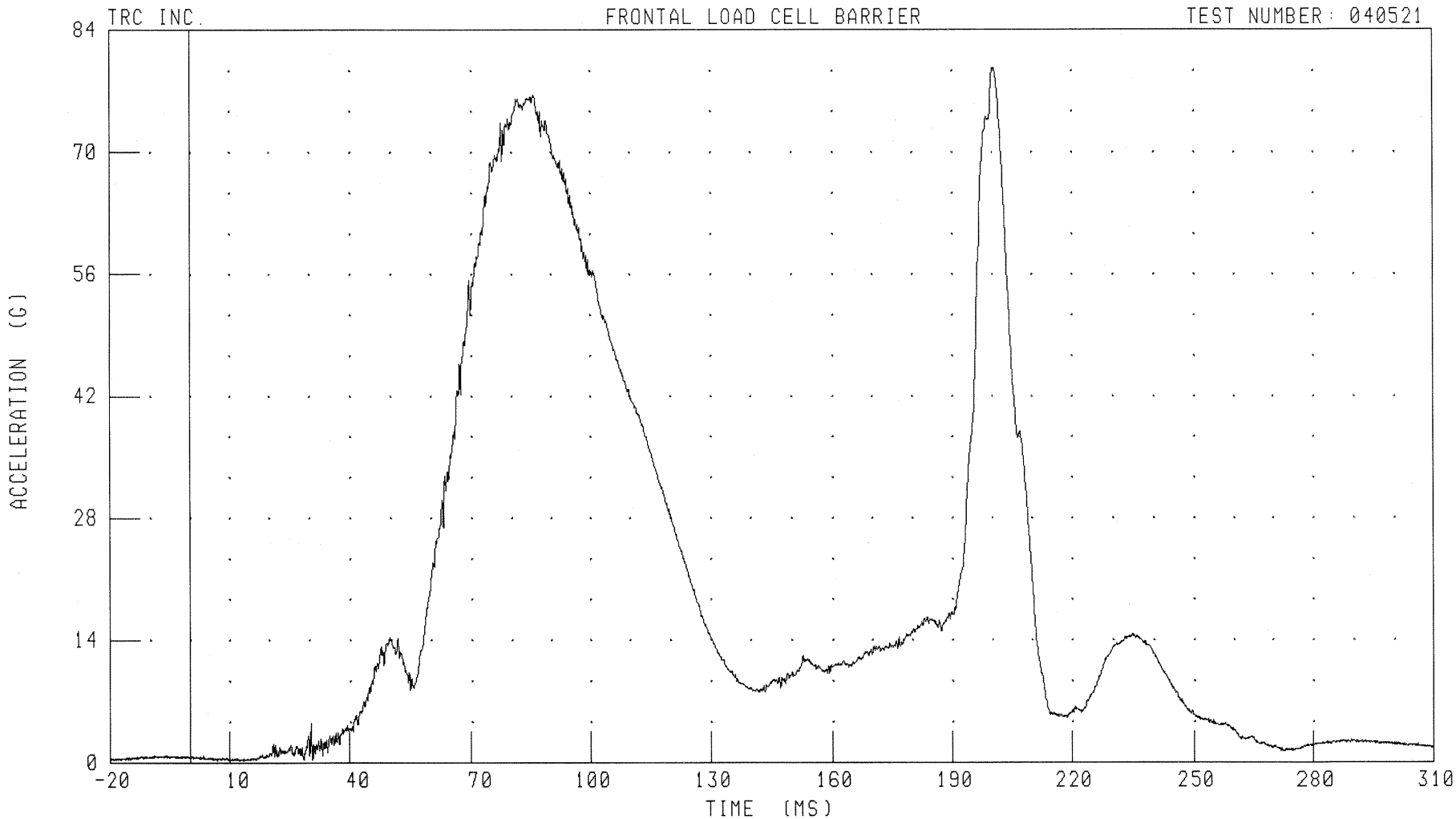
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) HEAD Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
79
64
49
34
19
4
-11
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDZG3
FILTER: CH. CLASS 1000
PEAK DATA: 74.07 G @ 85.70 MS; -10.71 G @ 49.70 MS

F3-3

040521

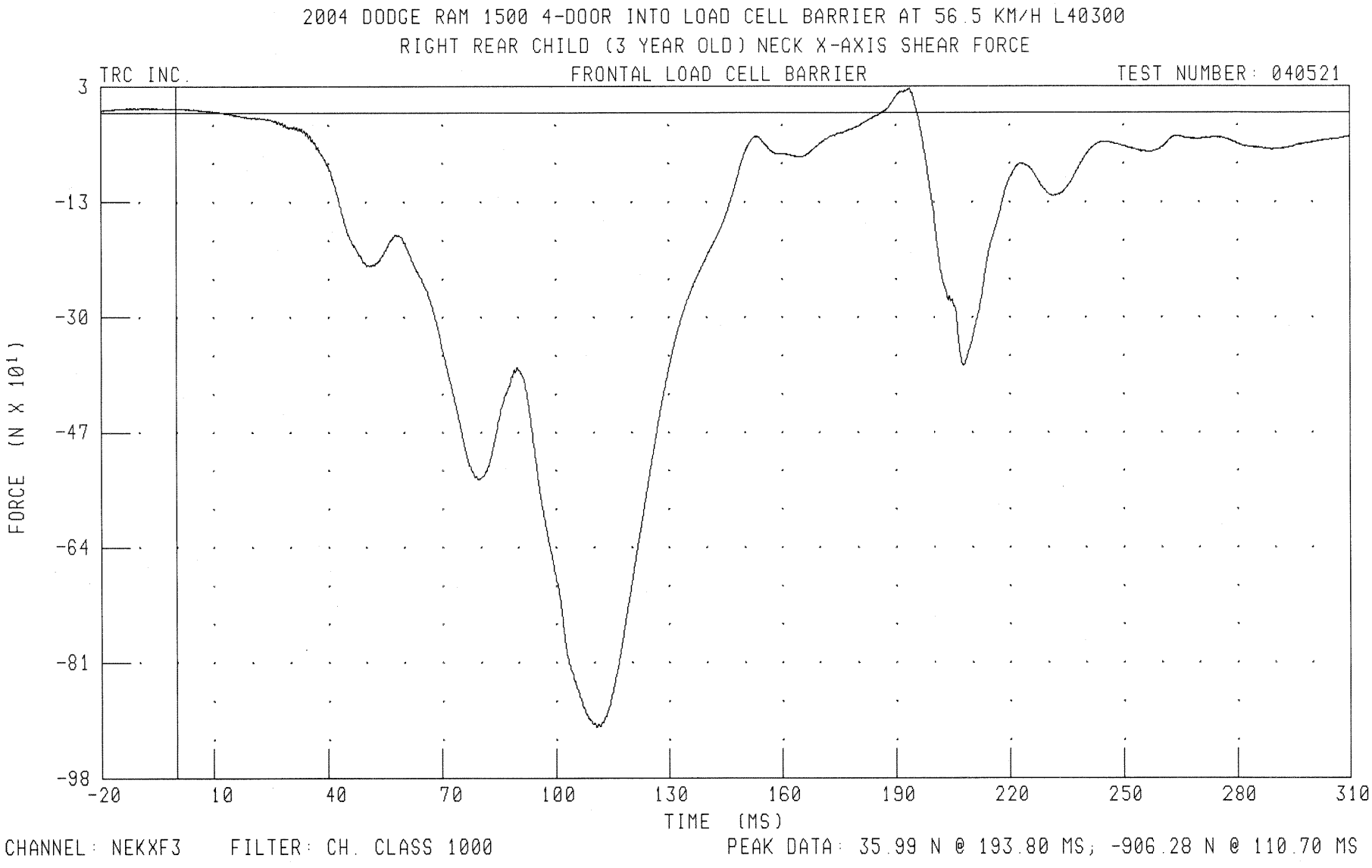
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) HEAD RESULTANT ACCELERATION



CHANNEL: HEDRG3 FILTER: CH. CLASS 1000 PEAK DATA: 79.65 G @ 200.40 MS; 0.23 G @ 13.60 MS

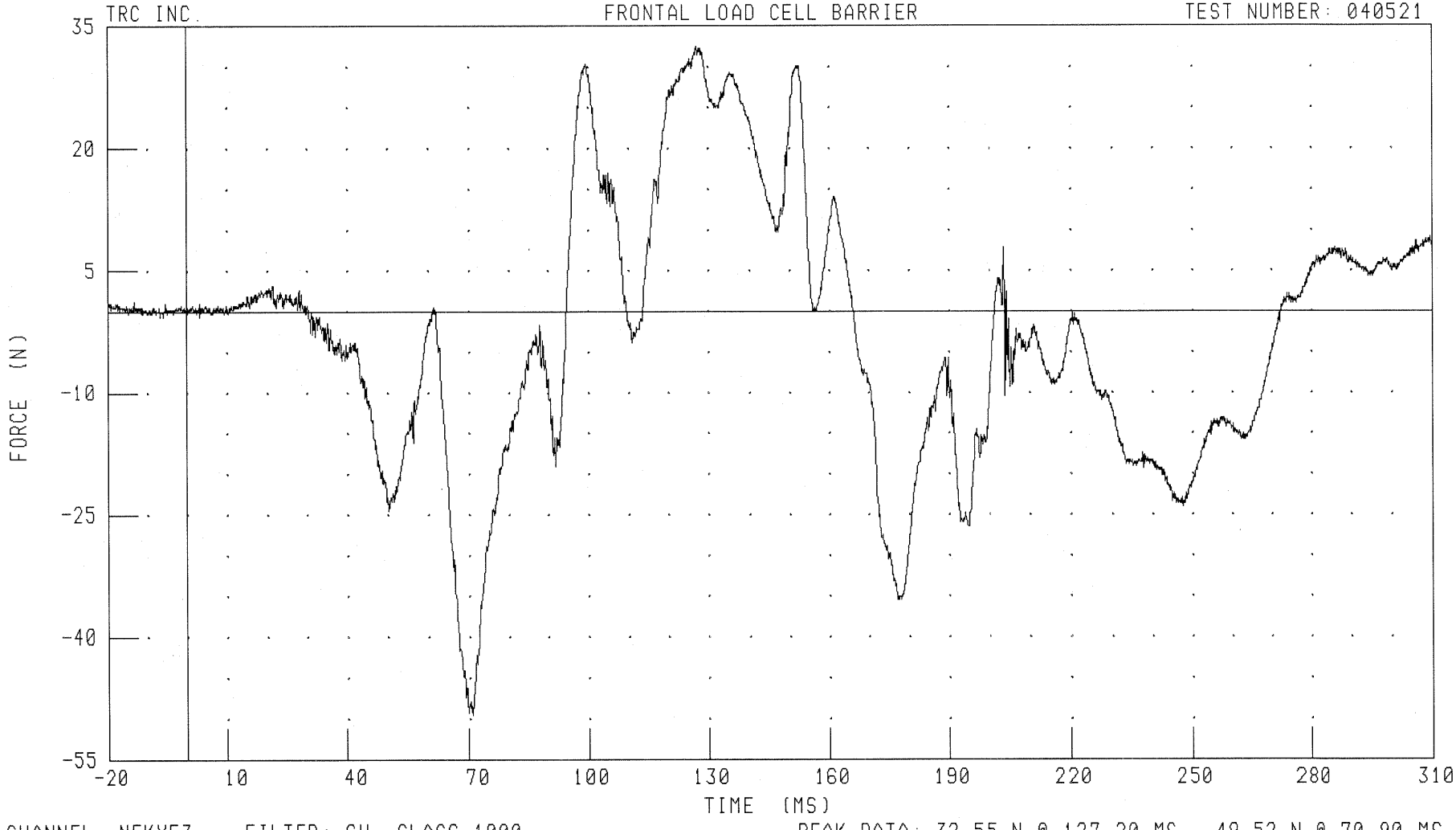
F3-4

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) NECK X-AXIS SHEAR FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
3
-13
-30
-47
-64
-81
-98
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKXF3
FILTER: CH. CLASS 1000
PEAK DATA: 35.99 N @ 193.80 MS; -906.28 N @ 110.70 MS

040521

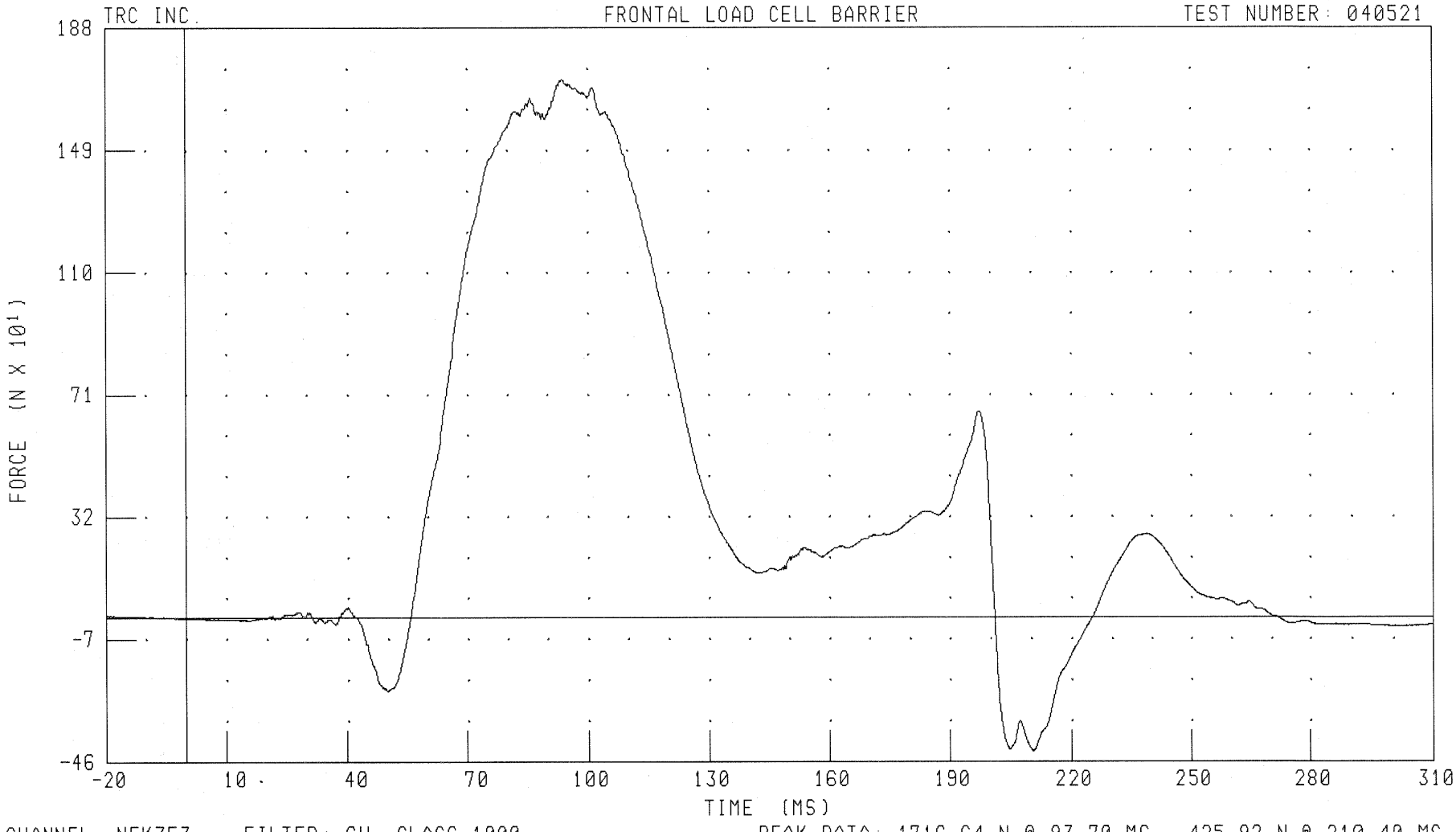
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) NECK Y-AXIS SHEAR FORCE



CHANNEL: NEKYF3 FILTER: CH. CLASS 1000 PEAK DATA: 32.55 N @ 127.20 MS; -49.52 N @ 70.90 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) NECK Z-AXIS AXIAL FORCE

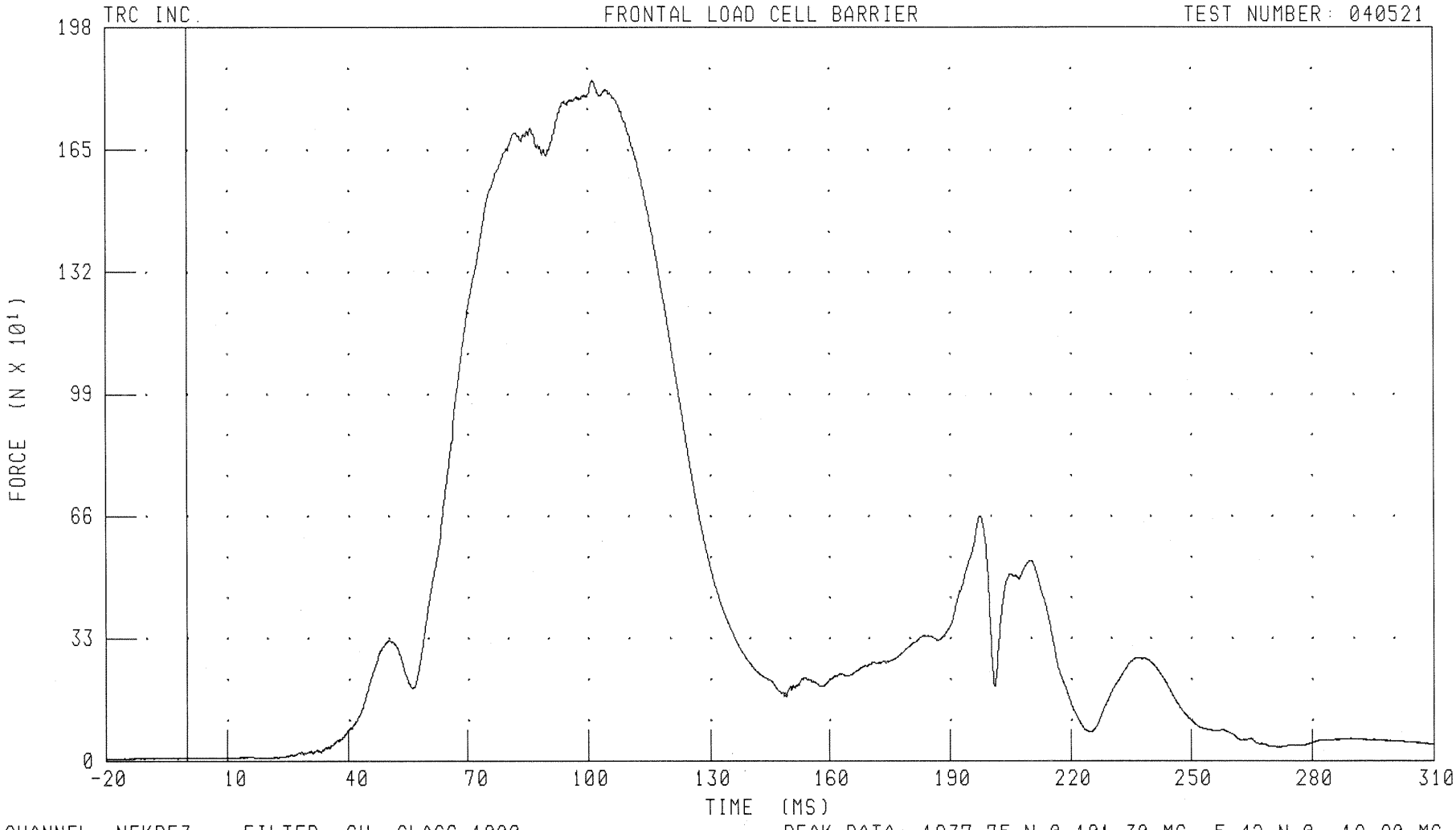


CHANNEL: NEKZF3 FILTER: CH. CLASS 1000 PEAK DATA: 1716.64 N @ 93.70 MS; -425.92 N @ 210.40 MS

F3-7

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) NECK RESULTANT FORCE

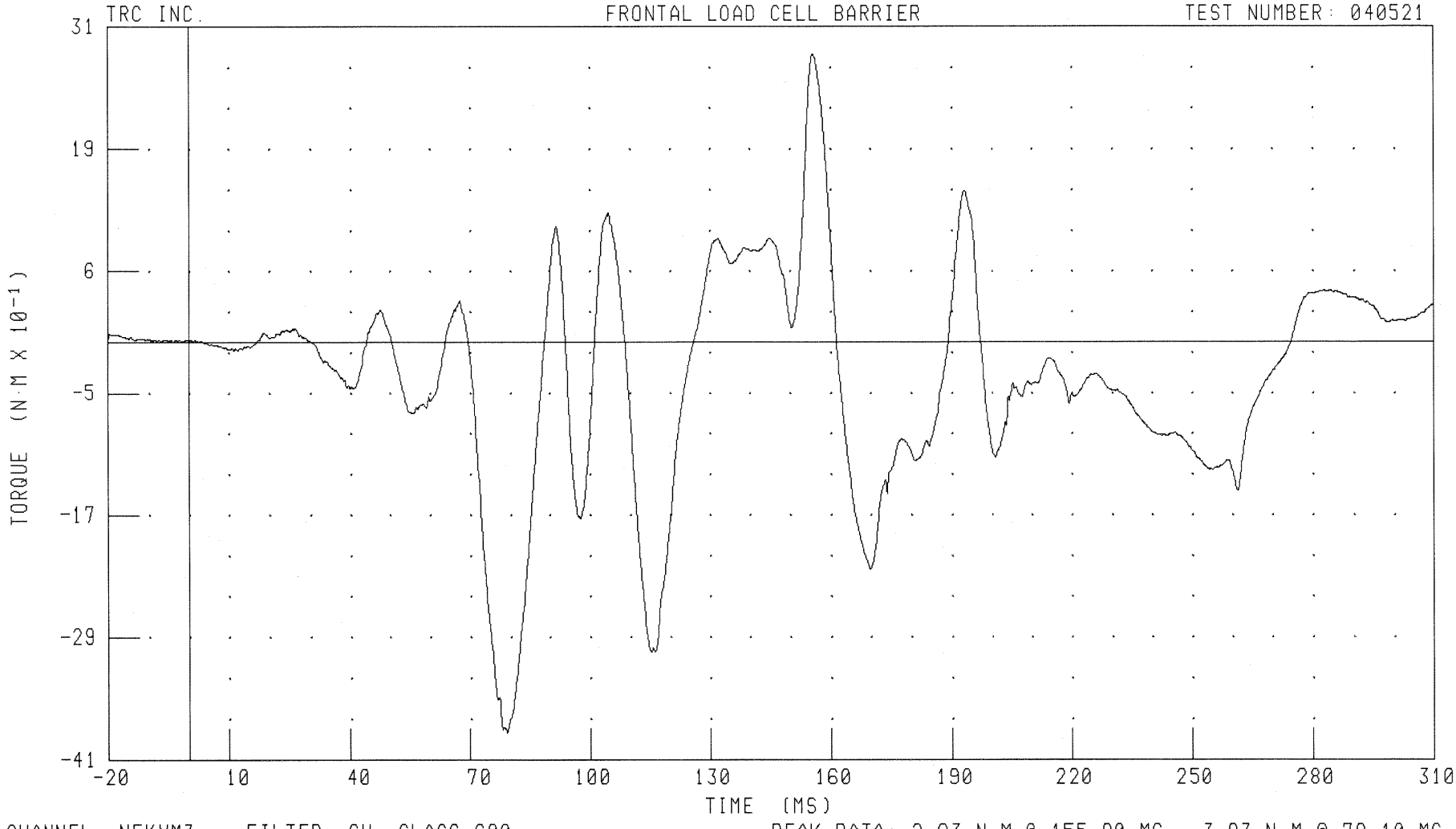


CHANNEL: NEKRF3 FILTER: CH. CLASS 1000 PEAK DATA: 1837.75 N @ 101.30 MS; 5.42 N @ -19.90 MS

F3-8

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) NECK MOMENT ABOUT X AXIS

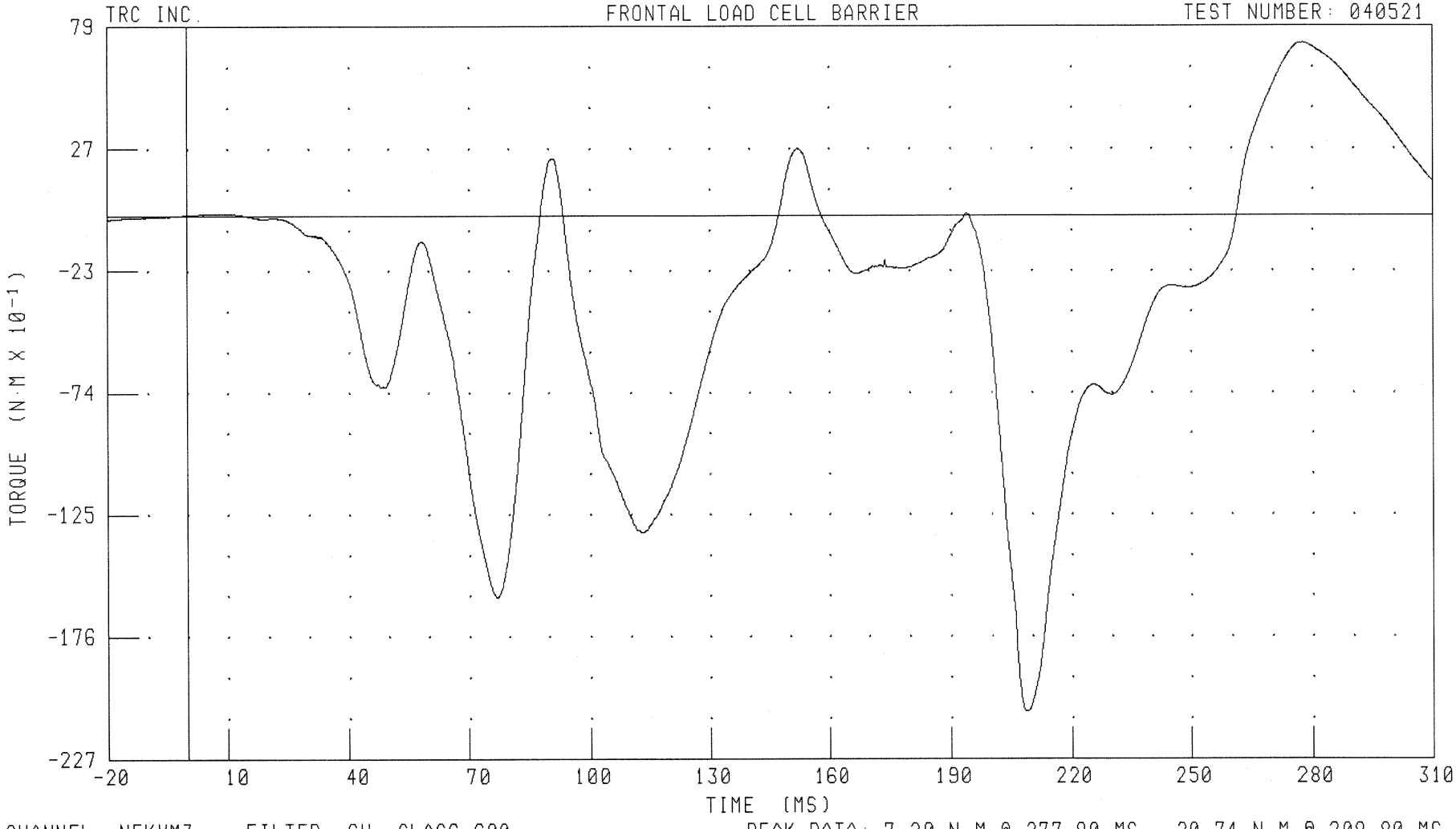


CHANNEL: NEKXM3 FILTER: CH. CLASS 600 PEAK DATA: 2.83 N-M @ 155.90 MS; -3.83 N-M @ 79.10 MS

F3-9

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) NECK MOMENT ABOUT Y AXIS

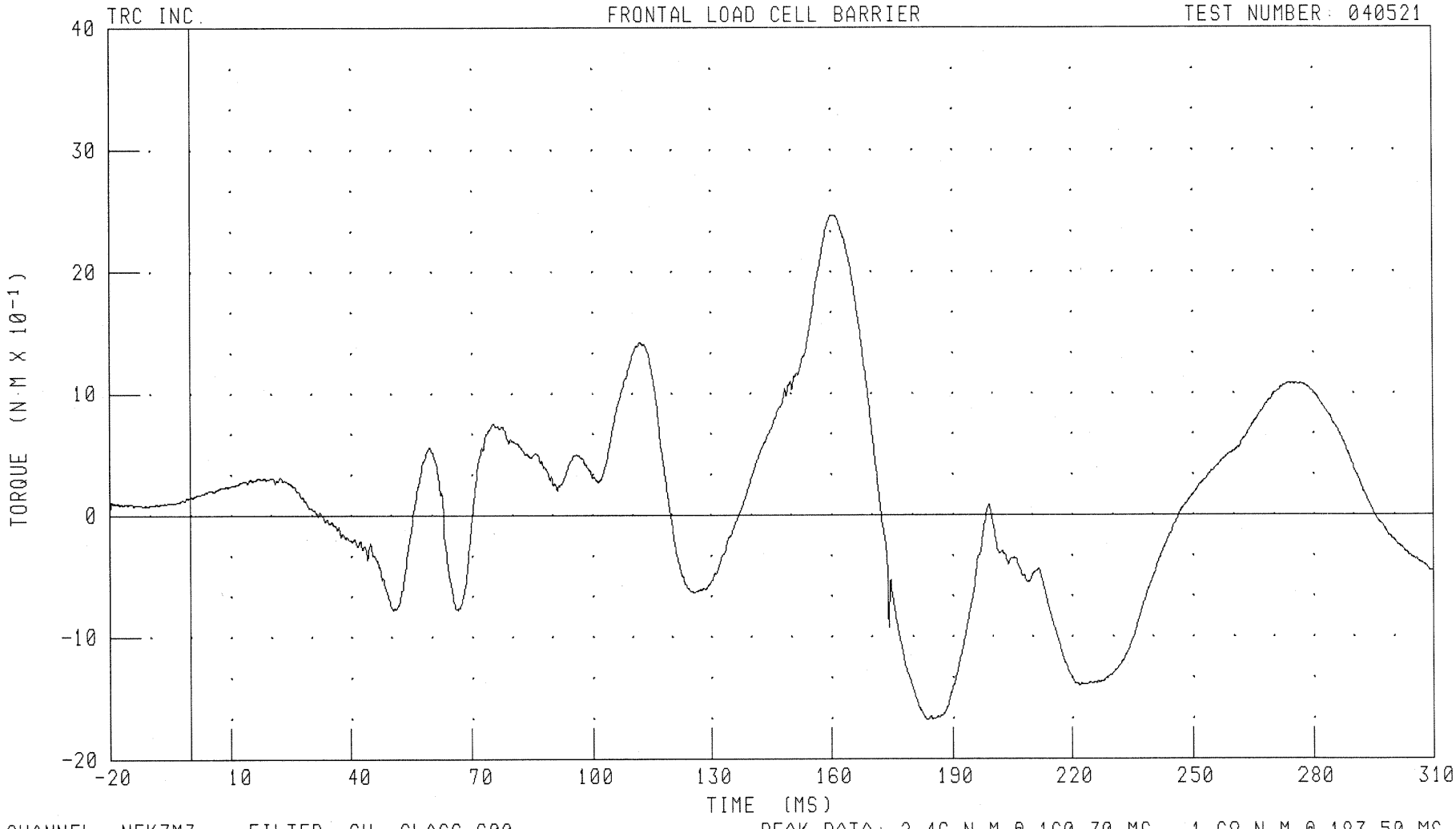


CHANNEL: NEKYM3 FILTER: CH. CLASS 600 PEAK DATA: 7.20 N·M @ 277.90 MS; -20.74 N·M @ 208.80 MS

F3-10

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) NECK MOMENT ABOUT Z AXIS



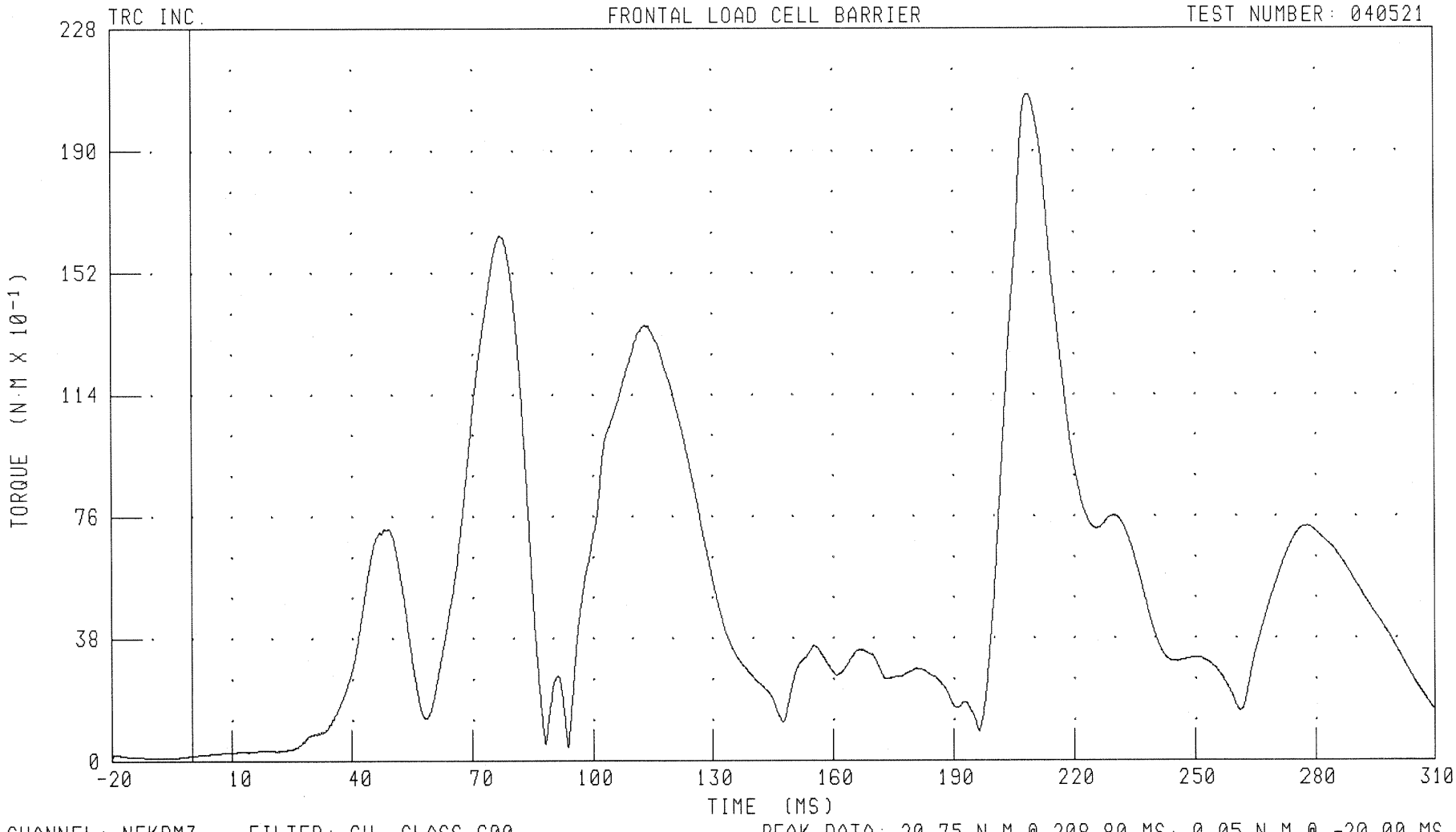
CHANNEL: NEKZM3 FILTER: CH. CLASS 600 PEAK DATA: 2.46 N-M @ 160.30 MS; -1.68 N-M @ 183.50 MS

F3-11

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300

RIGHT REAR CHILD (3 YEAR OLD) NECK RESULTANT MOMENT

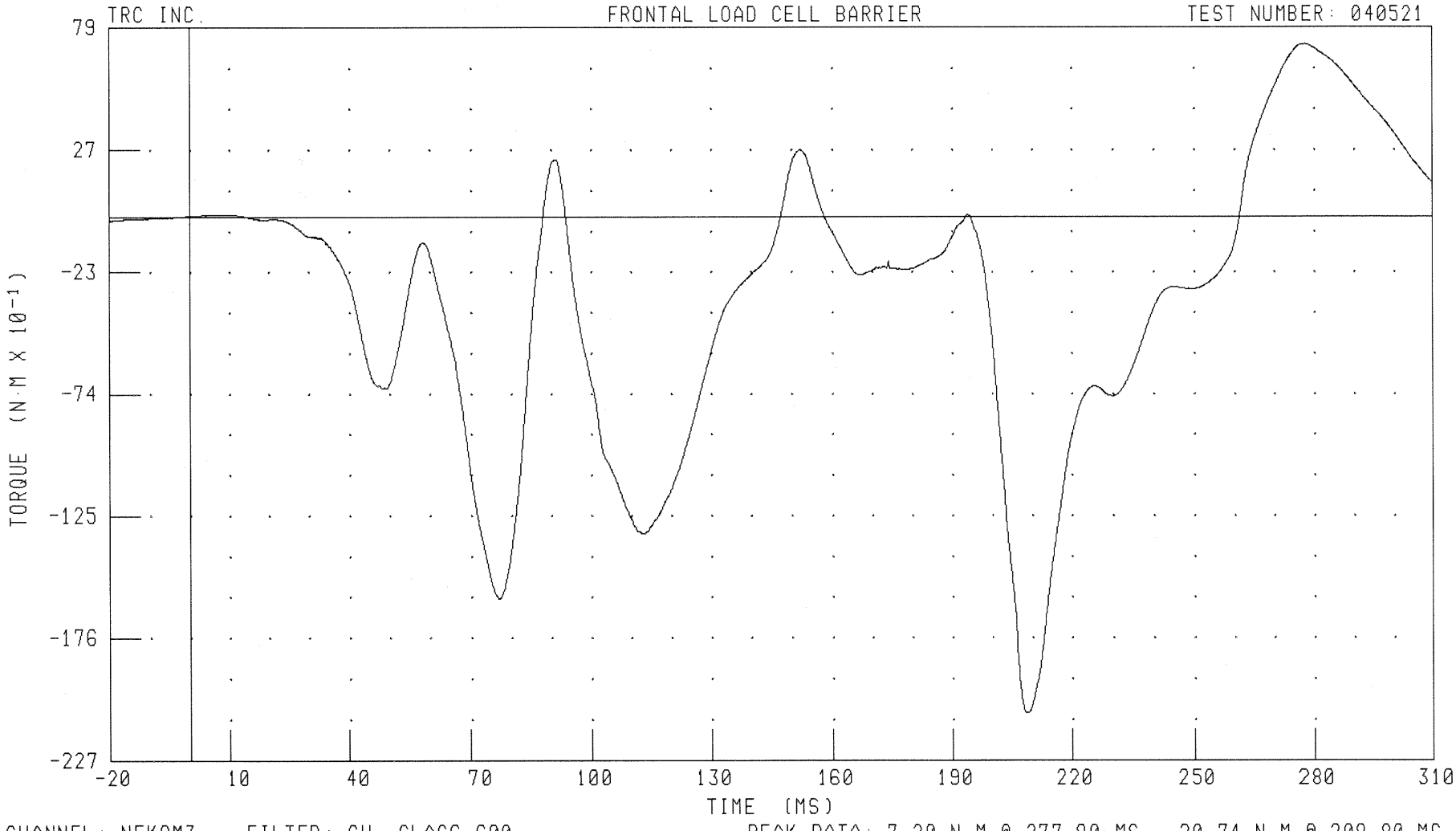


CHANNEL: NEKRM3 FILTER: CH. CLASS 600 PEAK DATA: 20.75 N·M @ 208.80 MS; 0.05 N·M @ -20.00 MS

F3-12

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) NECK MOMENT OCCIPITAL CONDYLE ABOUT Y AXIS



CHANNEL: NEKOM3 FILTER: CH. CLASS 600 PEAK DATA: 7.20 N-M @ 277.90 MS; -20.74 N-M @ 208.80 MS

F3-13

040521

Right Rear Child (3 yr. old) Lower Neck Force X Was Not Installed

Right Rear Child (3 yr. old) Lower Neck Force Y Was Not Installed

Right Rear Child (3 yr. old) Lower Neck Force Z Was Not Installed

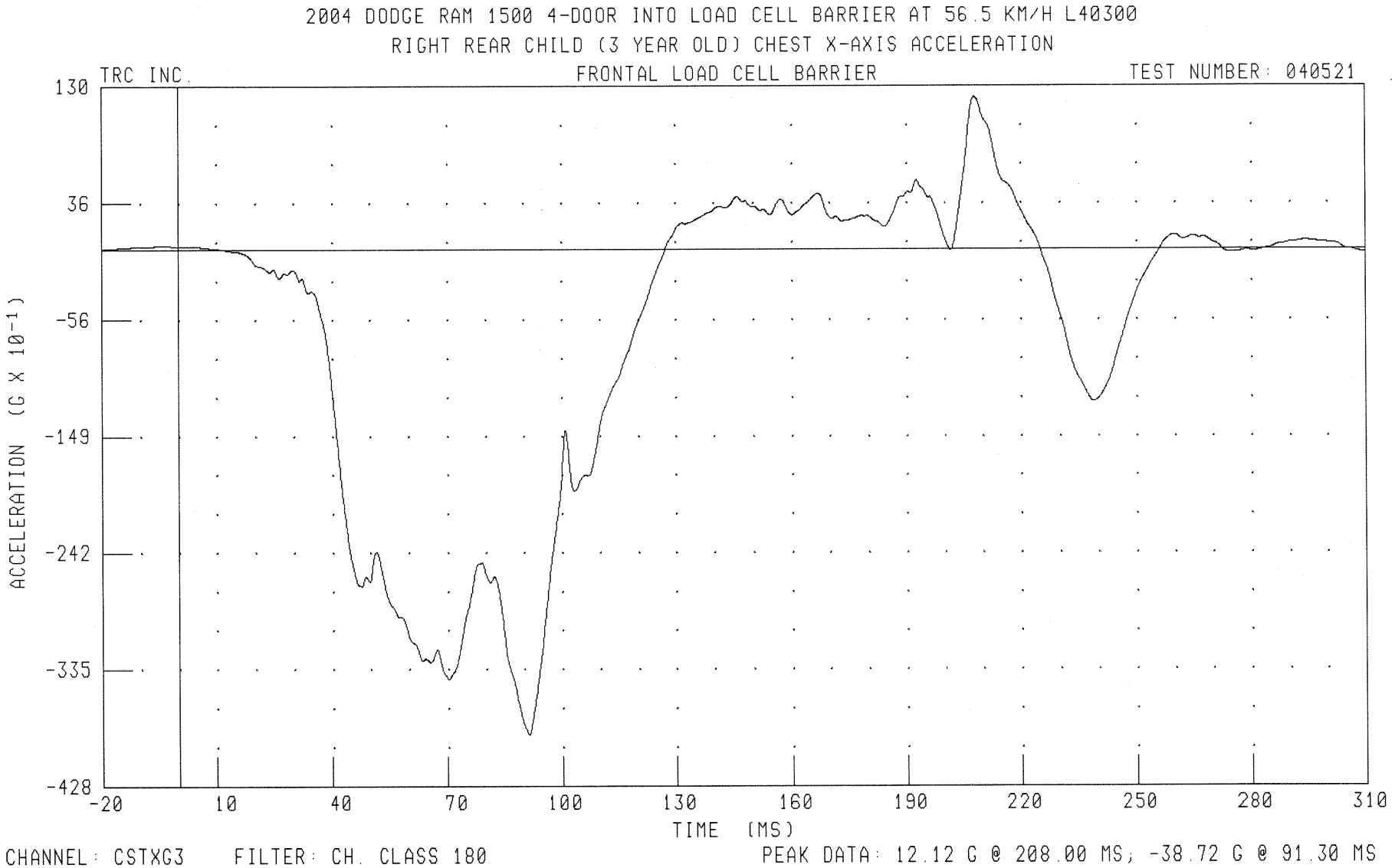
Right Rear Child (3 yr. old) Lower Neck Force Resultant Could Not Be Calculated

Right Rear Child (3 yr. old) Lower Neck Moment X Was Not Installed

Right Rear Child (3 yr. old) Lower Neck Moment Y Was Not Installed

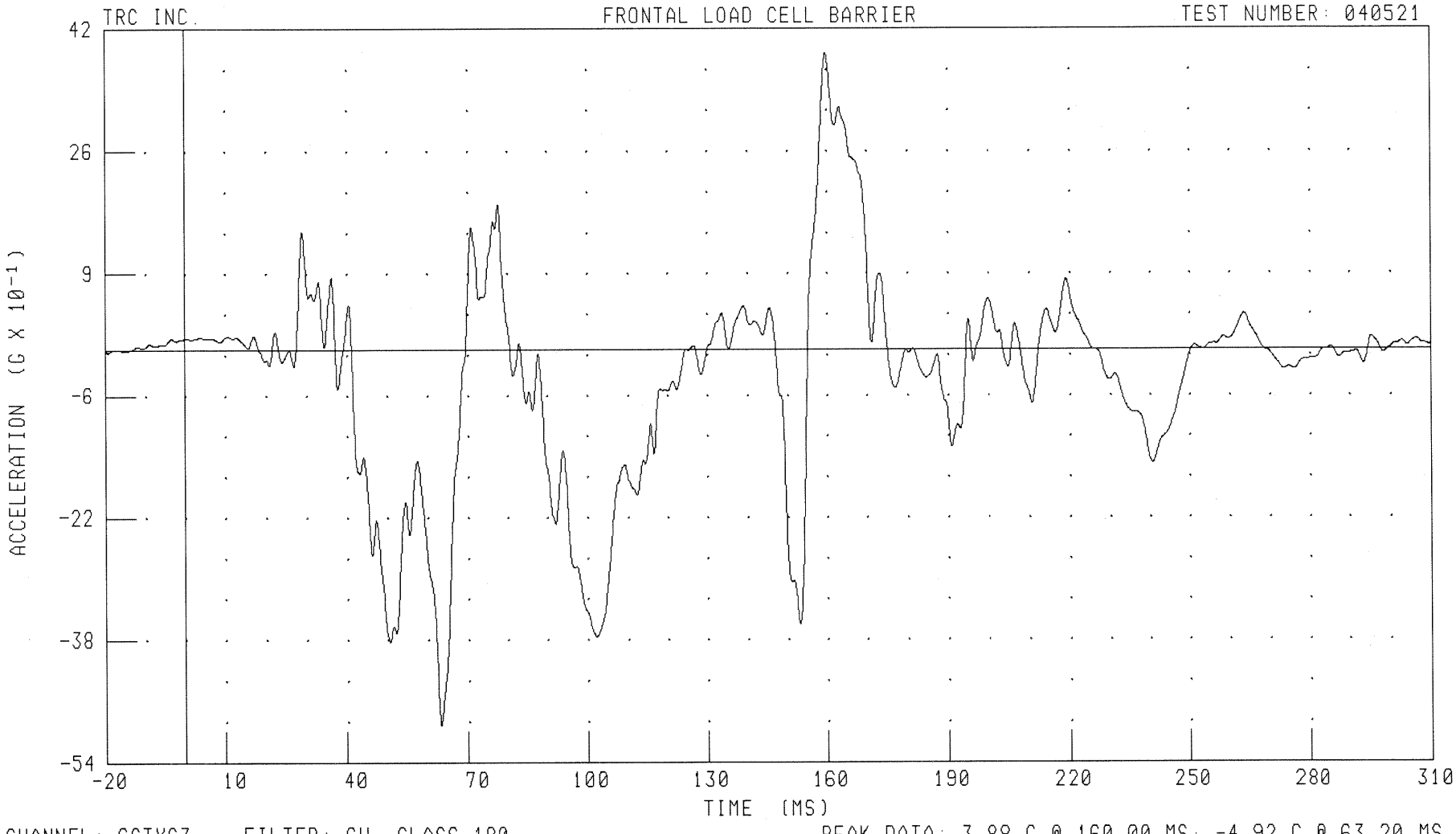
Right Rear Child (3 yr. old) Lower Neck Moment Z Was Not Installed

Right Rear Child (3 yr. old) Lower Neck Moment Resultant Could Not Be Calculated


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHEST X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
130
36
-56
-149
-242
-335
-428
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXG3
FILTER: CH. CLASS 180
PEAK DATA: 12.12 G @ 208.00 MS; -38.72 G @ 91.30 MS

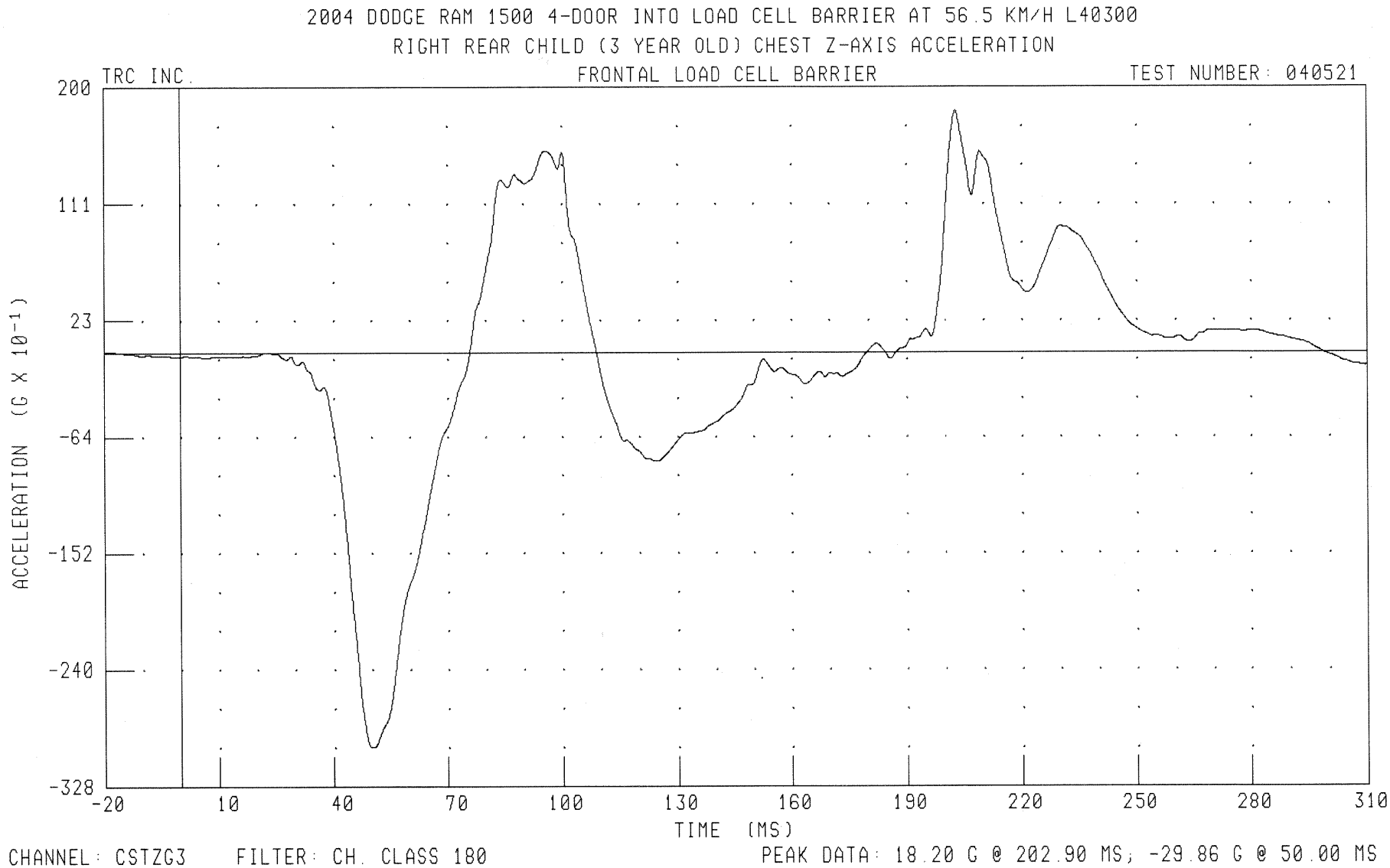
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHEST Y-AXIS ACCELERATION

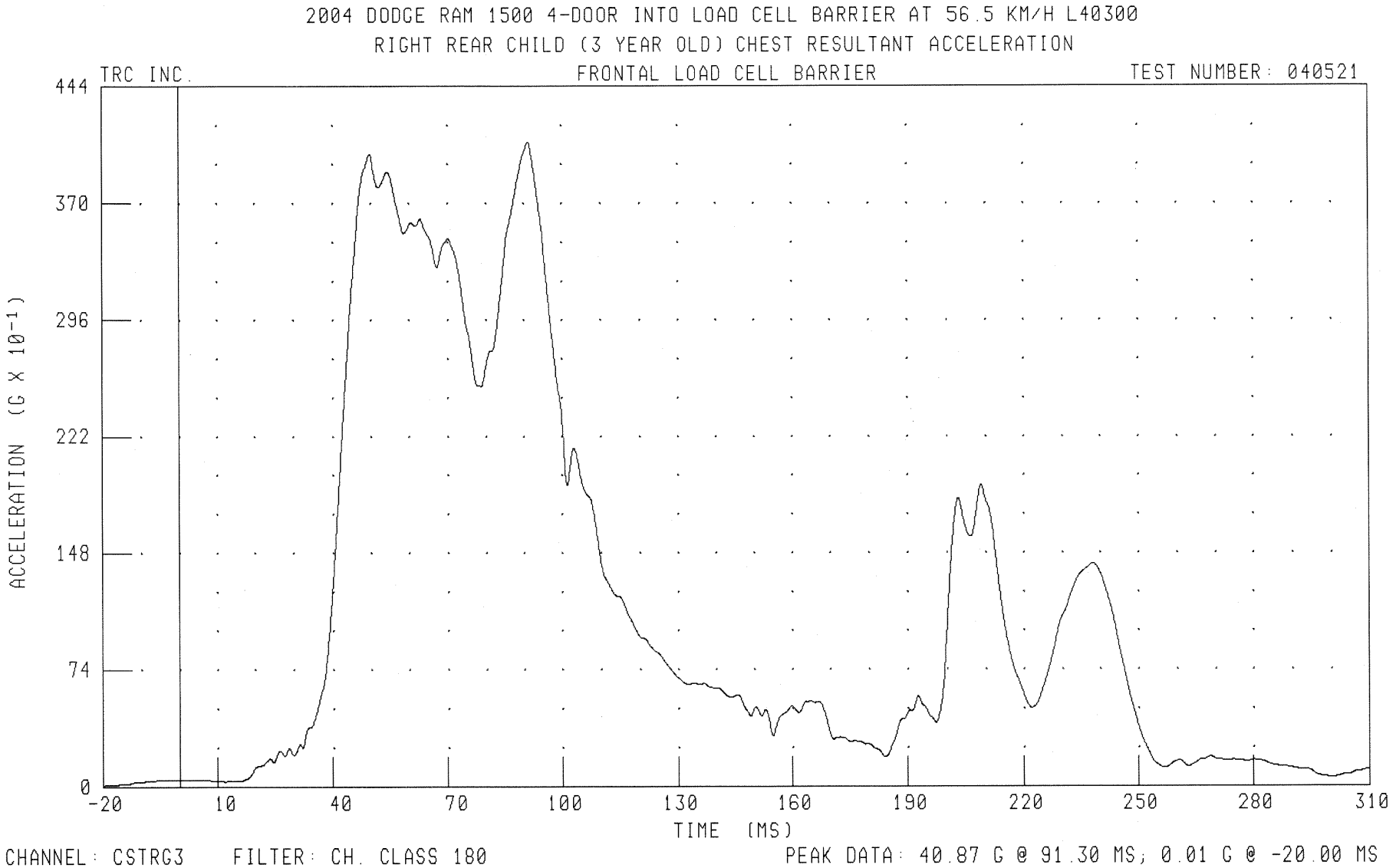


CHANNEL: CSTYG3 FILTER: CH. CLASS 180 PEAK DATA: 3.88 G @ 160.00 MS; -4.92 G @ 63.20 MS

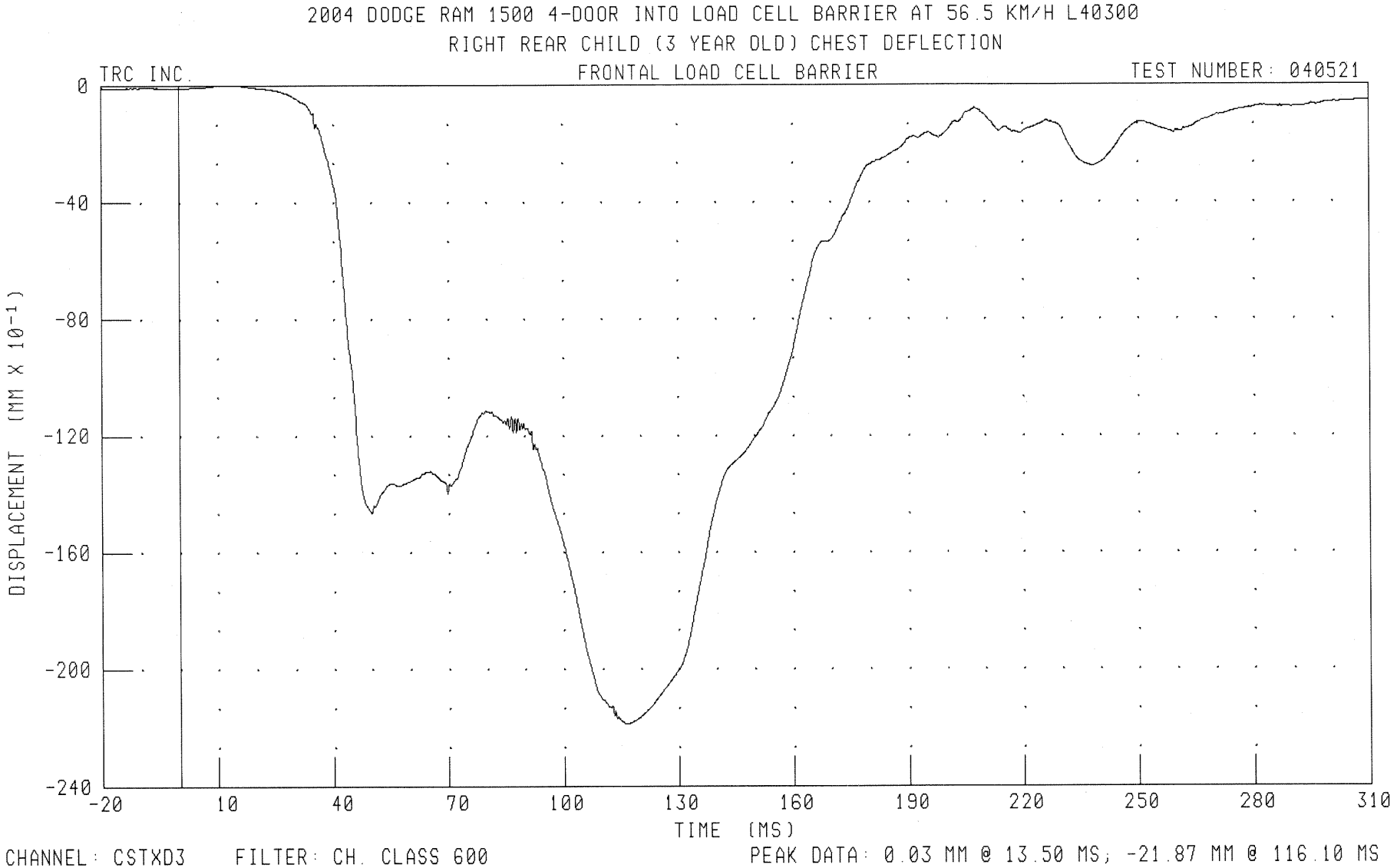
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHEST Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
200
111
23
-64
-152
-240
-328
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTZG3
FILTER: CH. CLASS 180
PEAK DATA: 18.20 G @ 202.90 MS; -29.86 G @ 50.00 MS

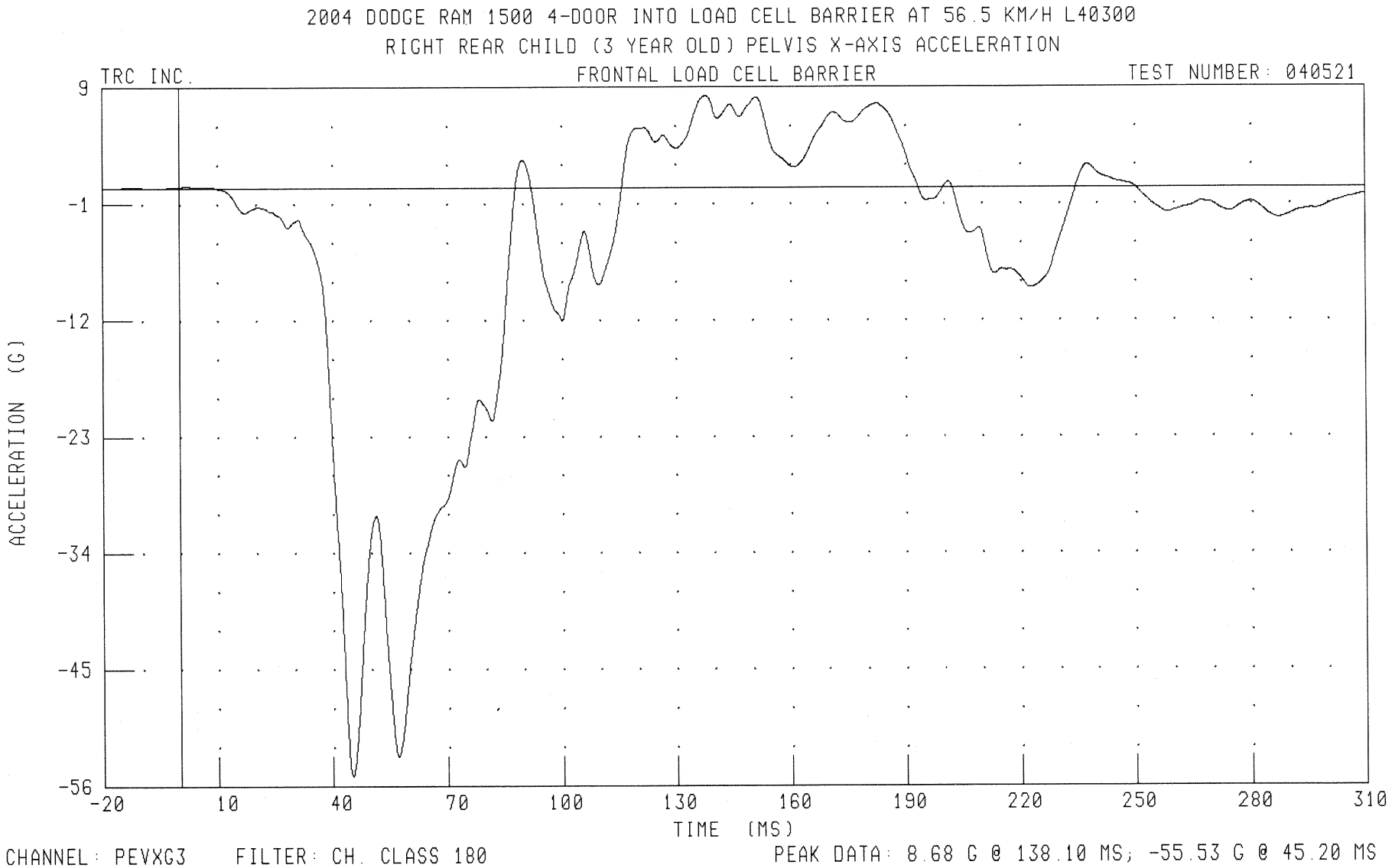
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHEST RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
444
370
296
222
148
74
0
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTRG3
FILTER: CH. CLASS 180
PEAK DATA: 40.87 G @ 91.30 MS; 0.01 G @ -20.00 MS

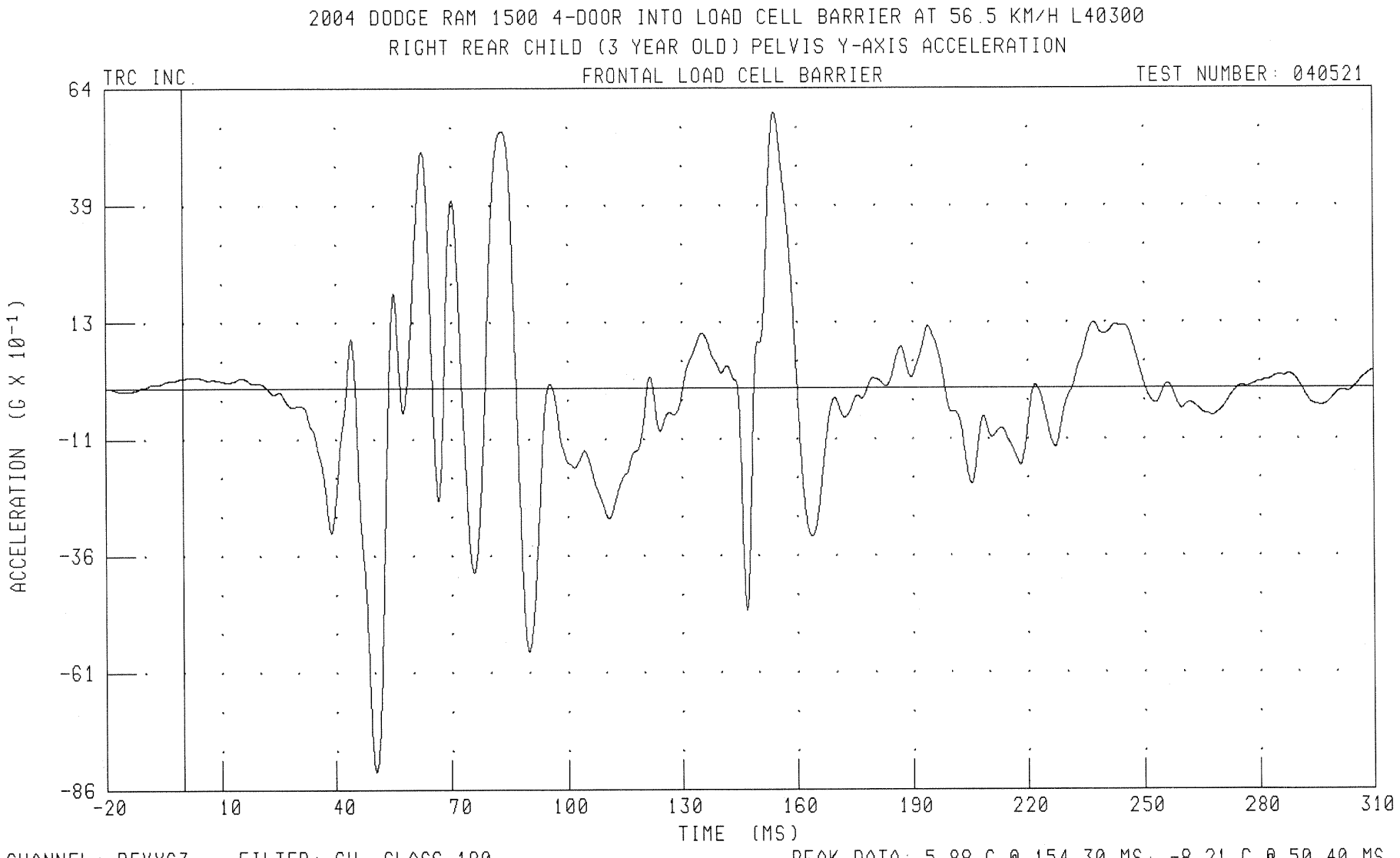
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHEST DEFLECTION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
0
-40
-80
-120
-160
-200
-240
DISPLACEMENT (MM X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXD3
FILTER: CH. CLASS 600
PEAK DATA: 0.03 MM @ 13.50 MS; -21.87 MM @ 116.10 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) PELVIS X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
9
-1
-12
-23
-34
-45
-56
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVXG3
FILTER: CH. CLASS 180
PEAK DATA: 8.68 G @ 138.10 MS; -55.53 G @ 45.20 MS

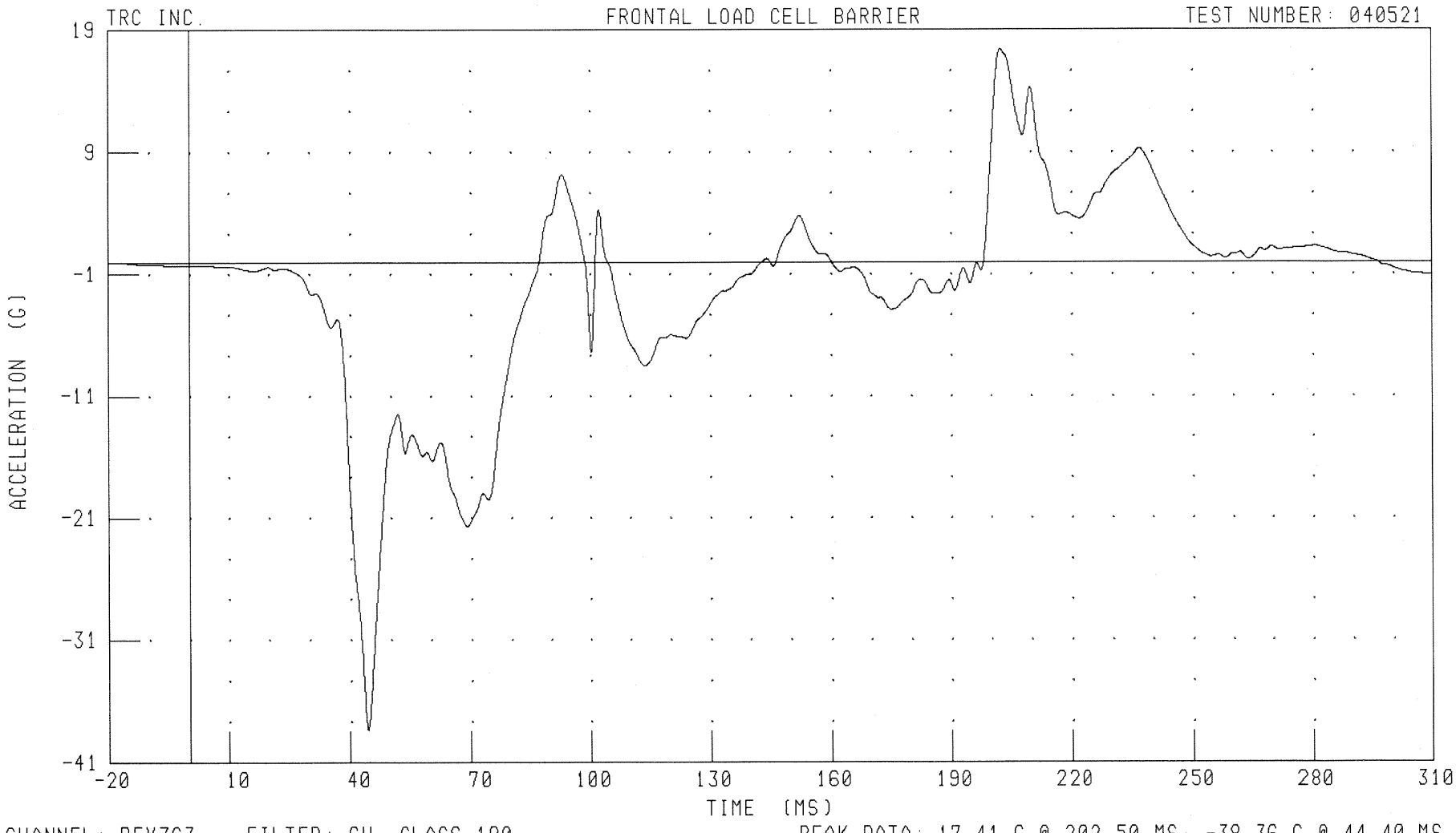
040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) PELVIS Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
64
39
13
-11
-36
-61
-86
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVYG3
FILTER: CH. CLASS 180
PEAK DATA: 5.88 G @ 154.30 MS; -8.21 G @ 50.40 MS

F3-28

040521

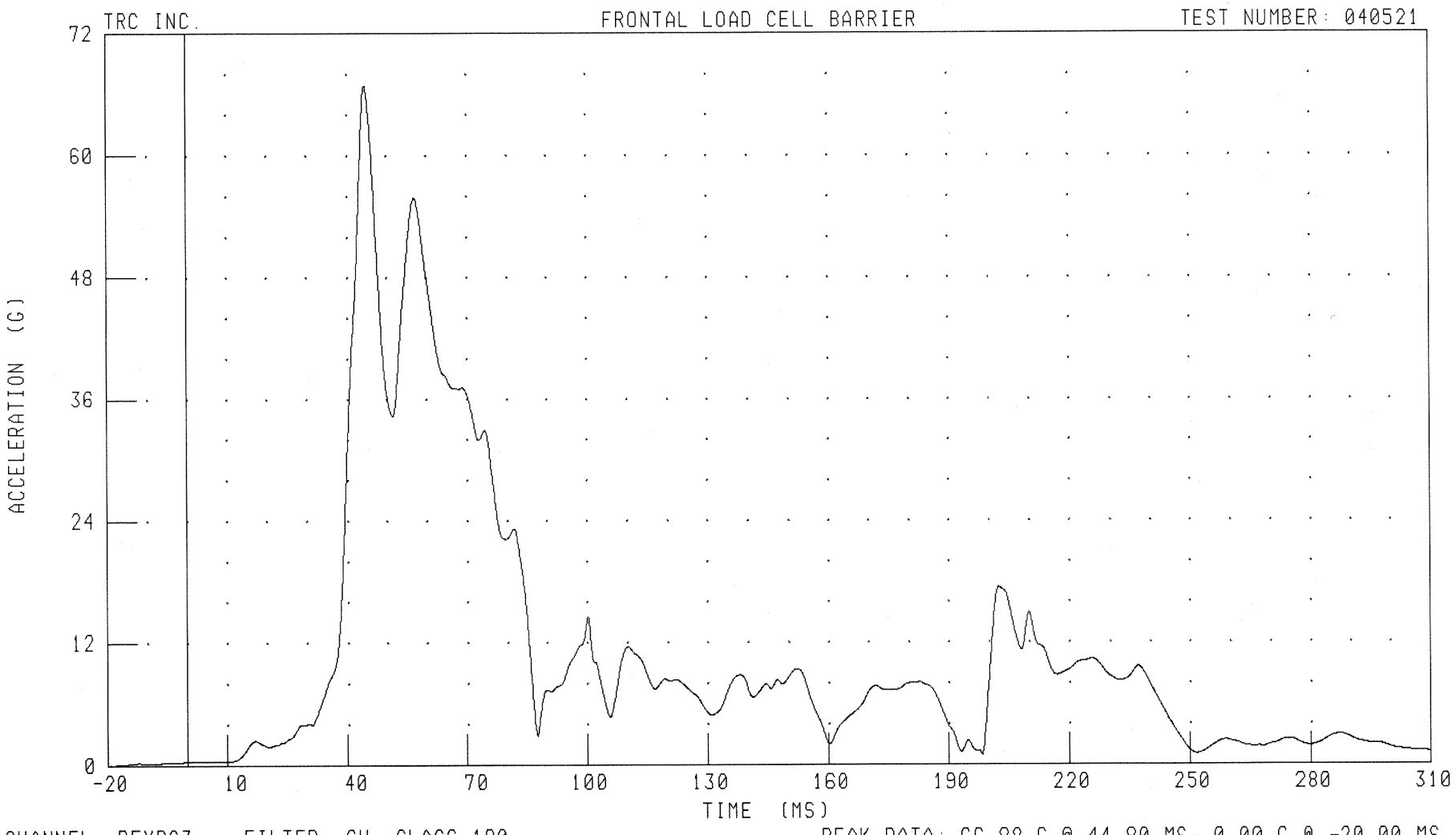
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) PELVIS Z-AXIS ACCELERATION



CHANNEL: PEVZG3 FILTER: CH. CLASS 180 PEAK DATA: 17.41 G @ 202.50 MS; -38.36 G @ 44.40 MS

040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) PELVIS RESULTANT ACCELERATION

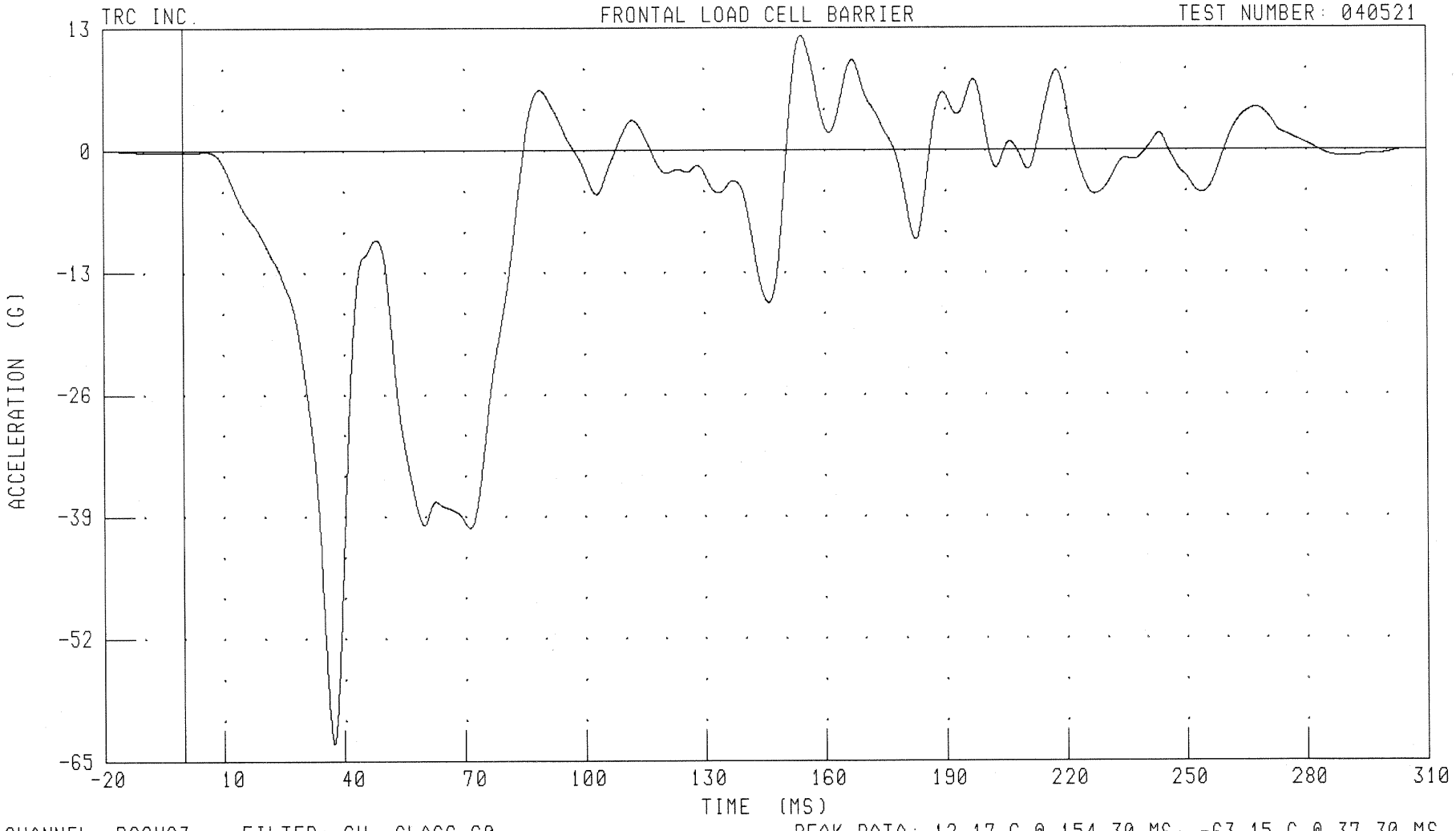


CHANNEL: PEVRG3 FILTER: CH. CLASS 180 PEAK DATA: 66.88 G @ 44.80 MS; 0.00 G @ -20.00 MS

F3-30

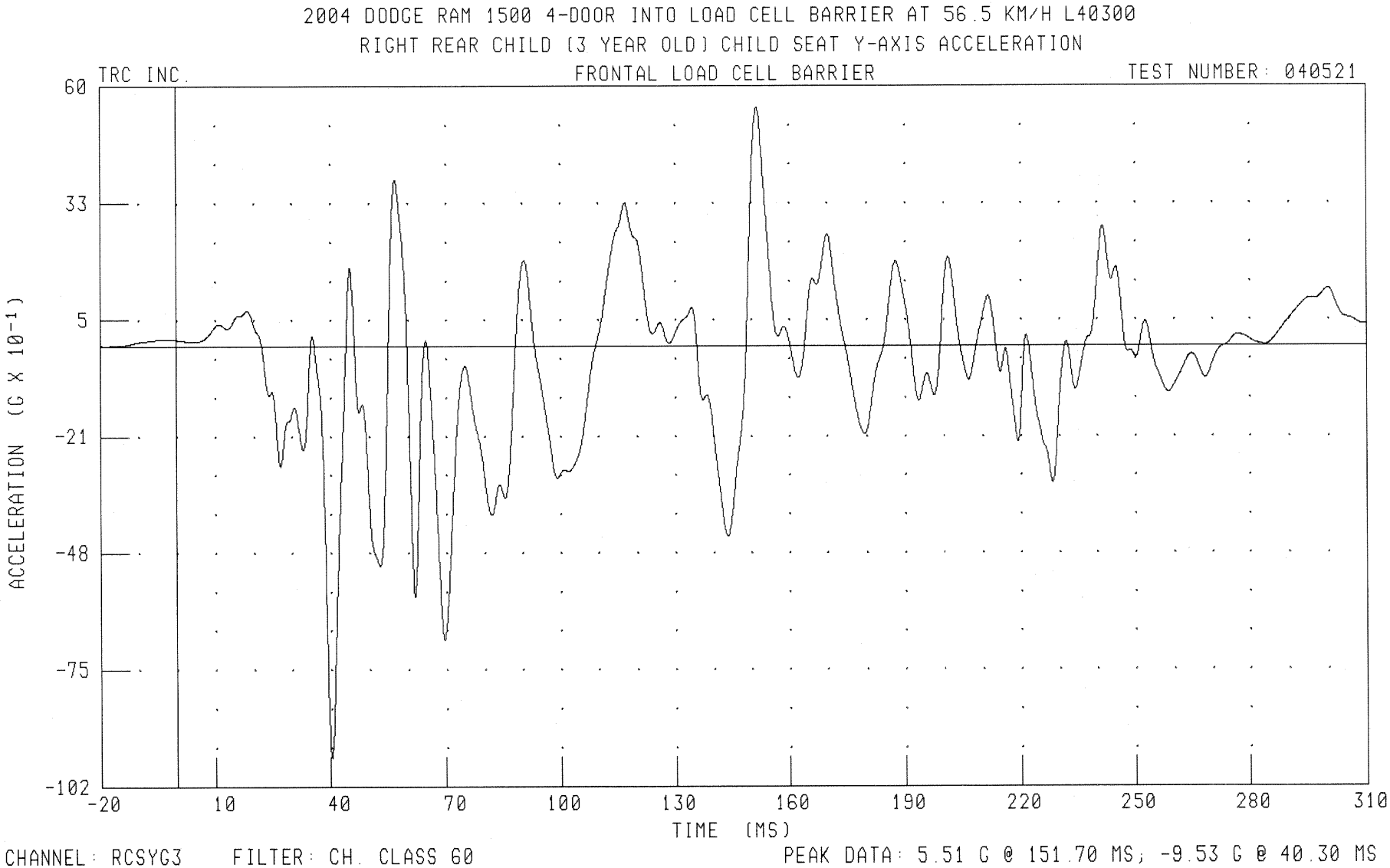
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHILD SEAT X-AXIS ACCELERATION

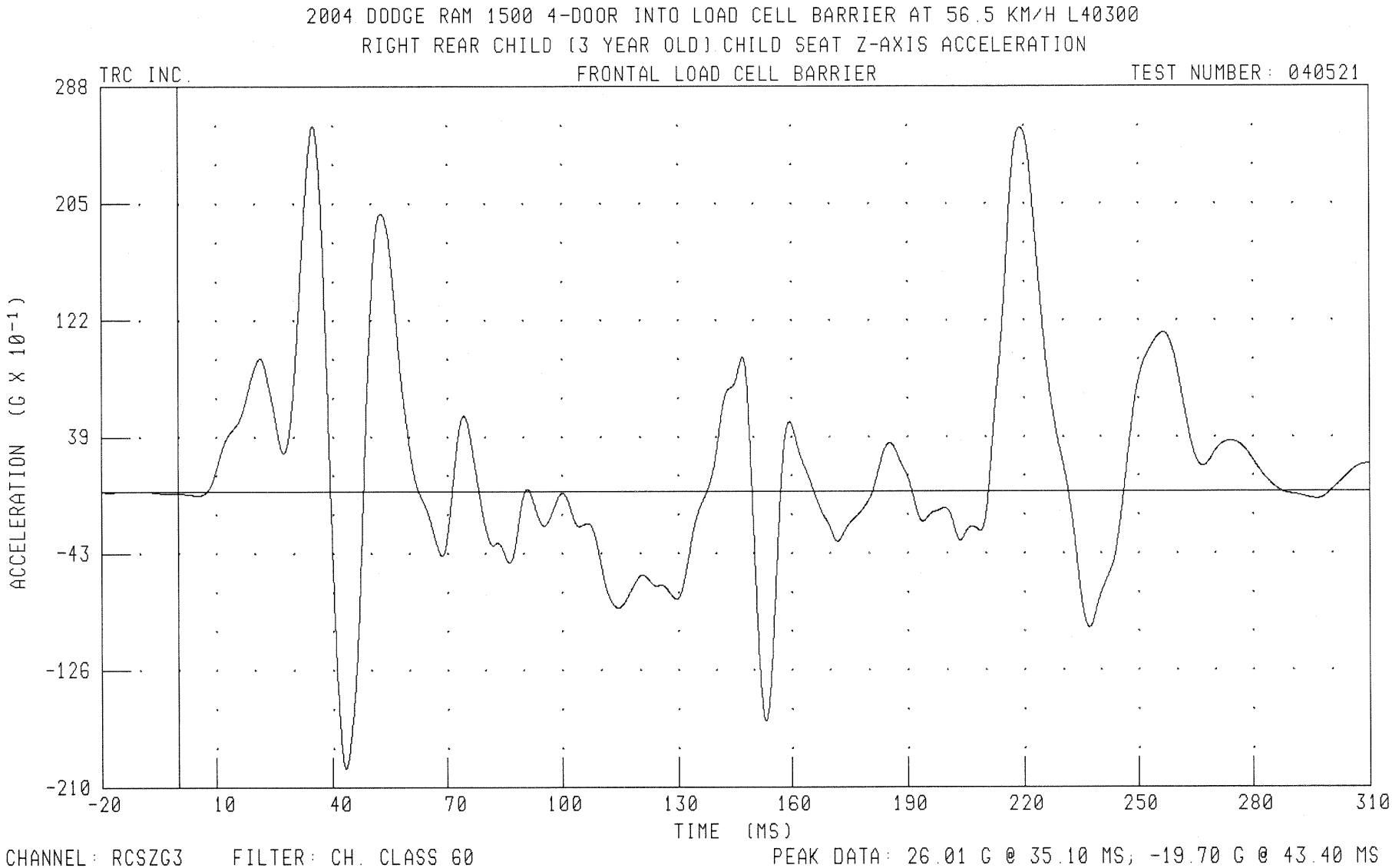


CHANNEL: RCSXG3 FILTER: CH. CLASS 60 PEAK DATA: 12.17 G @ 154.30 MS; -63.15 G @ 37.30 MS

040521

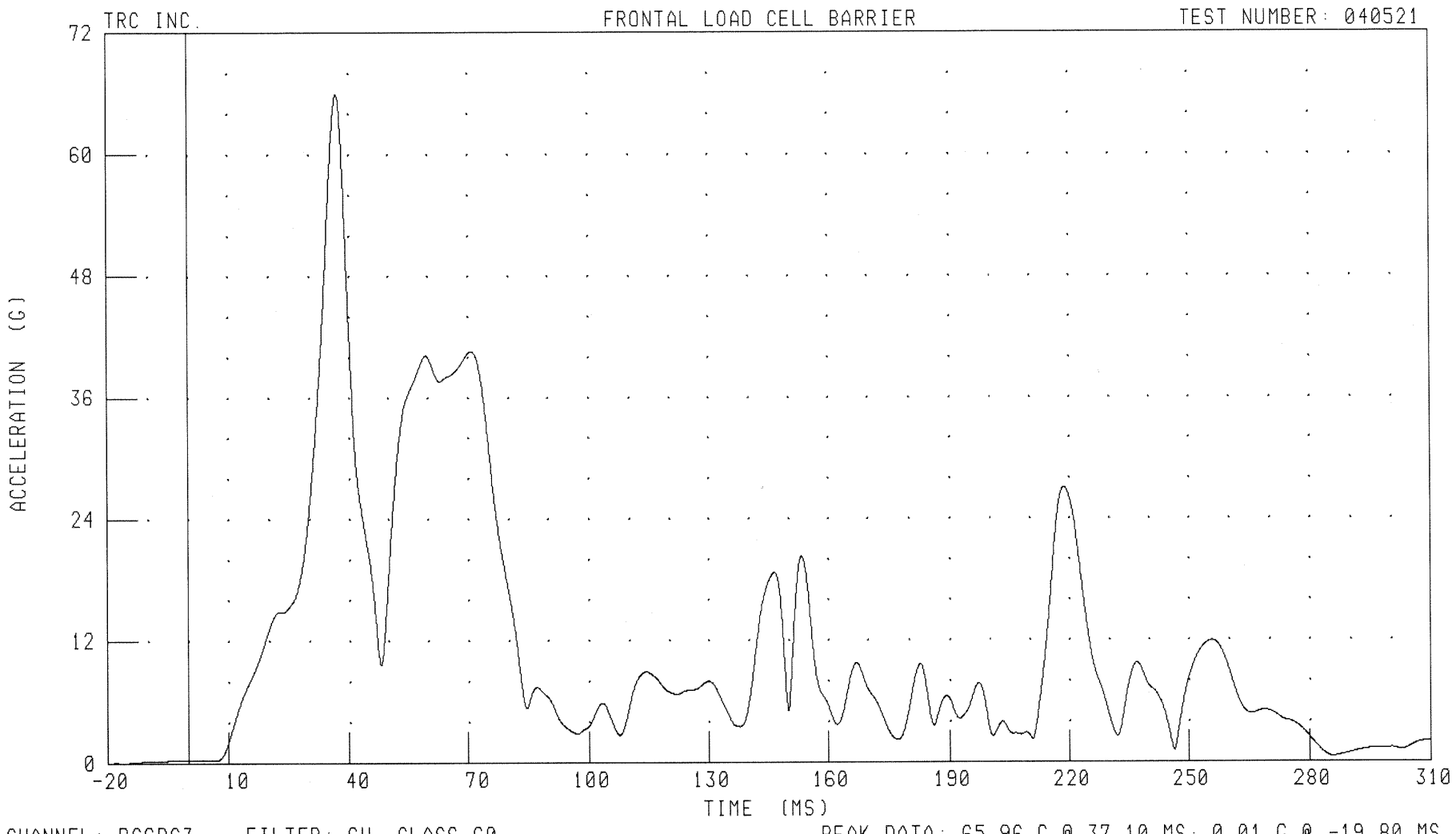

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHILD SEAT Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
60
33
5
-21
-48
-75
-102
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RCSYG3
FILTER: CH. CLASS 60
PEAK DATA: 5.51 G @ 151.70 MS; -9.53 G @ 40.30 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHILD SEAT Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
288
205
122
39
-43
-126
-210
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RCSZG3
FILTER: CH. CLASS 60
PEAK DATA: 26.01 G @ 35.10 MS; -19.70 G @ 43.40 MS

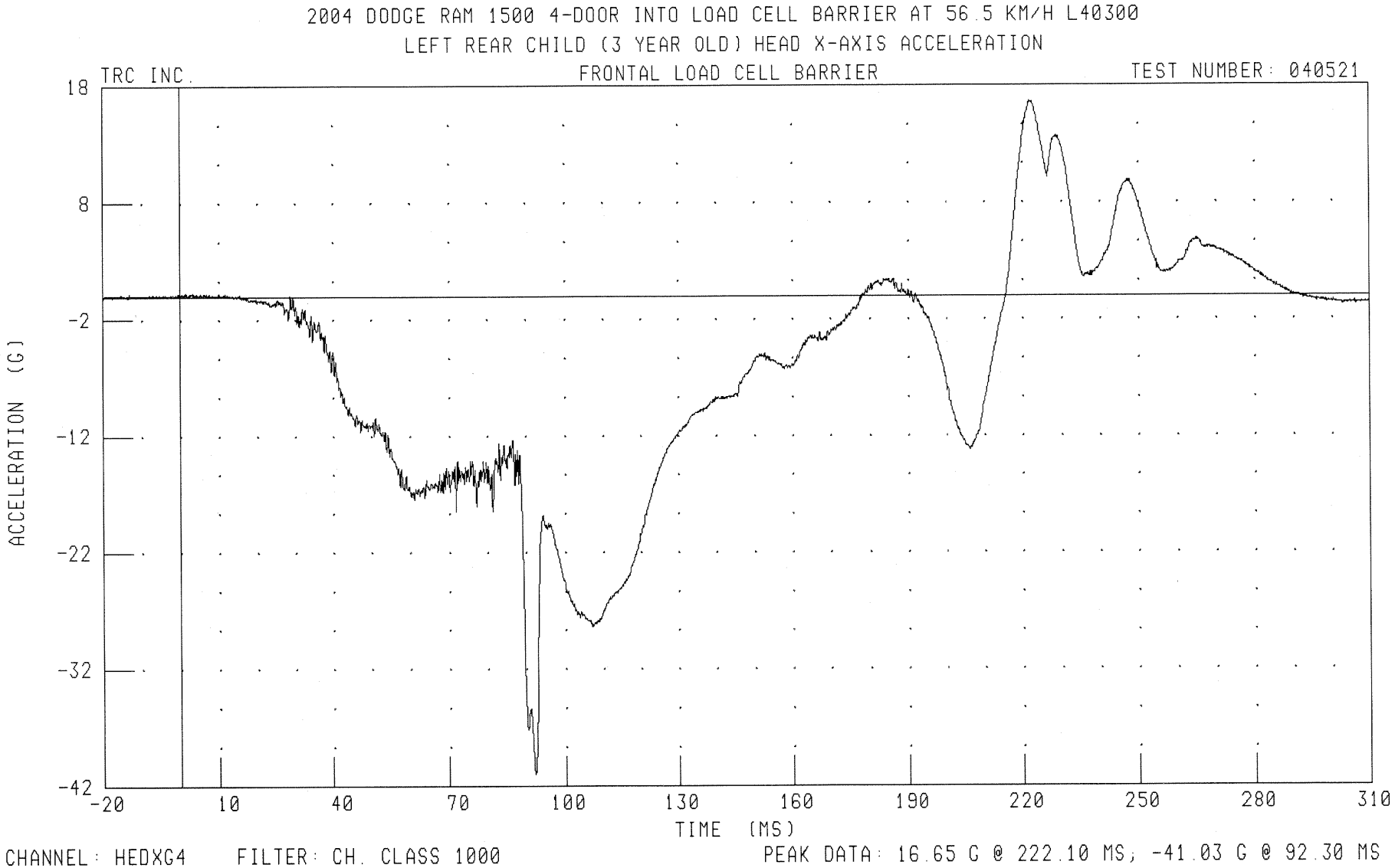
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
RIGHT REAR CHILD (3 YEAR OLD) CHILD SEAT RESULTANT ACCELERATION

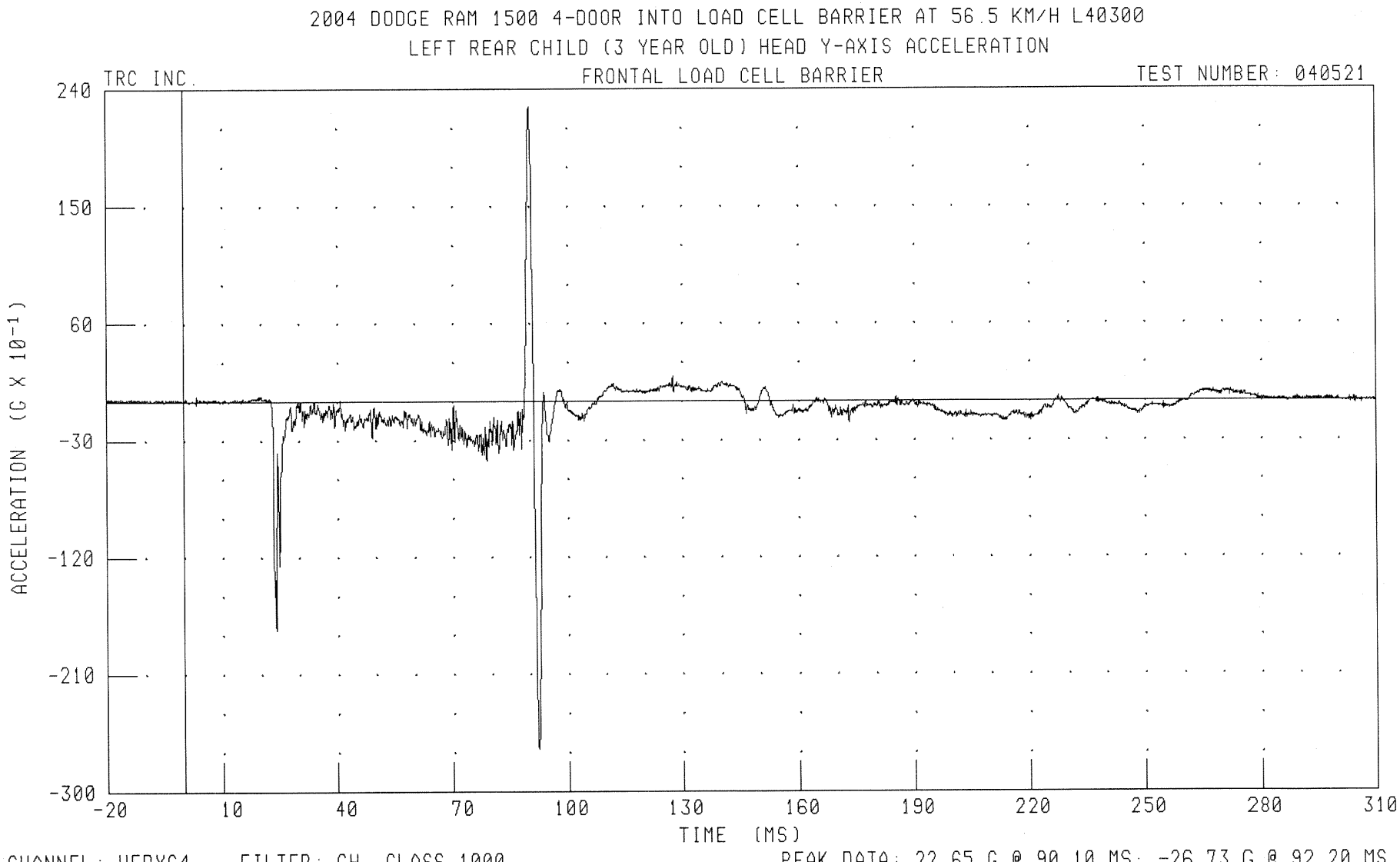


CHANNEL: RCSRG3 FILTER: CH. CLASS 60 PEAK DATA: 65.96 G @ 37.10 MS; 0.01 G @ -19.80 MS

040521

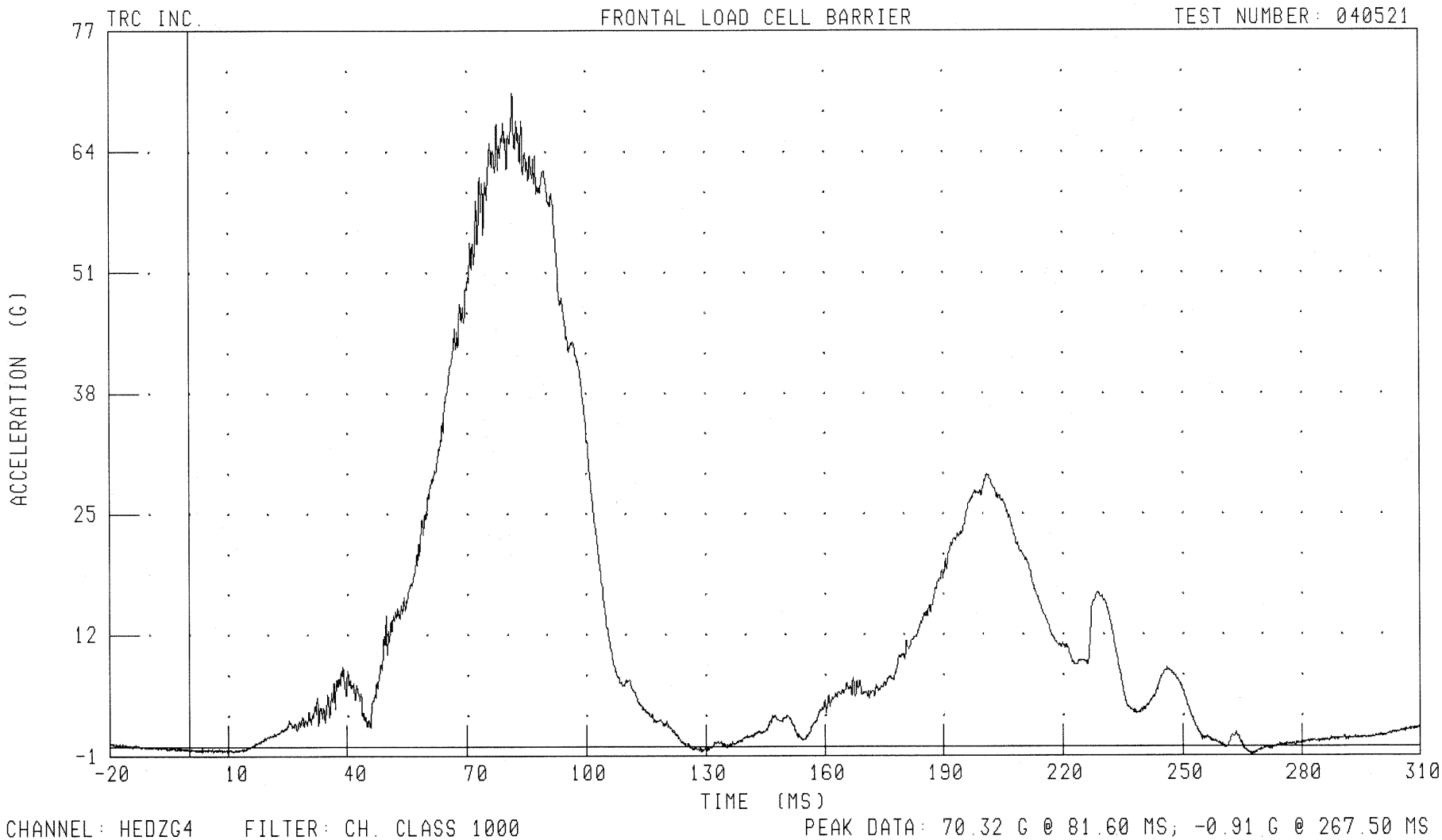

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) HEAD X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
18
8
-2
-12
-22
-32
-42
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDXG4
FILTER: CH. CLASS 1000
PEAK DATA: 16.65 G @ 222.10 MS; -41.03 G @ 92.30 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) HEAD Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
240
150
60
-30
-120
-210
-300
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDYG4
FILTER: CH. CLASS 1000
PEAK DATA: 22.65 G @ 90.10 MS; -26.73 G @ 92.20 MS

040521

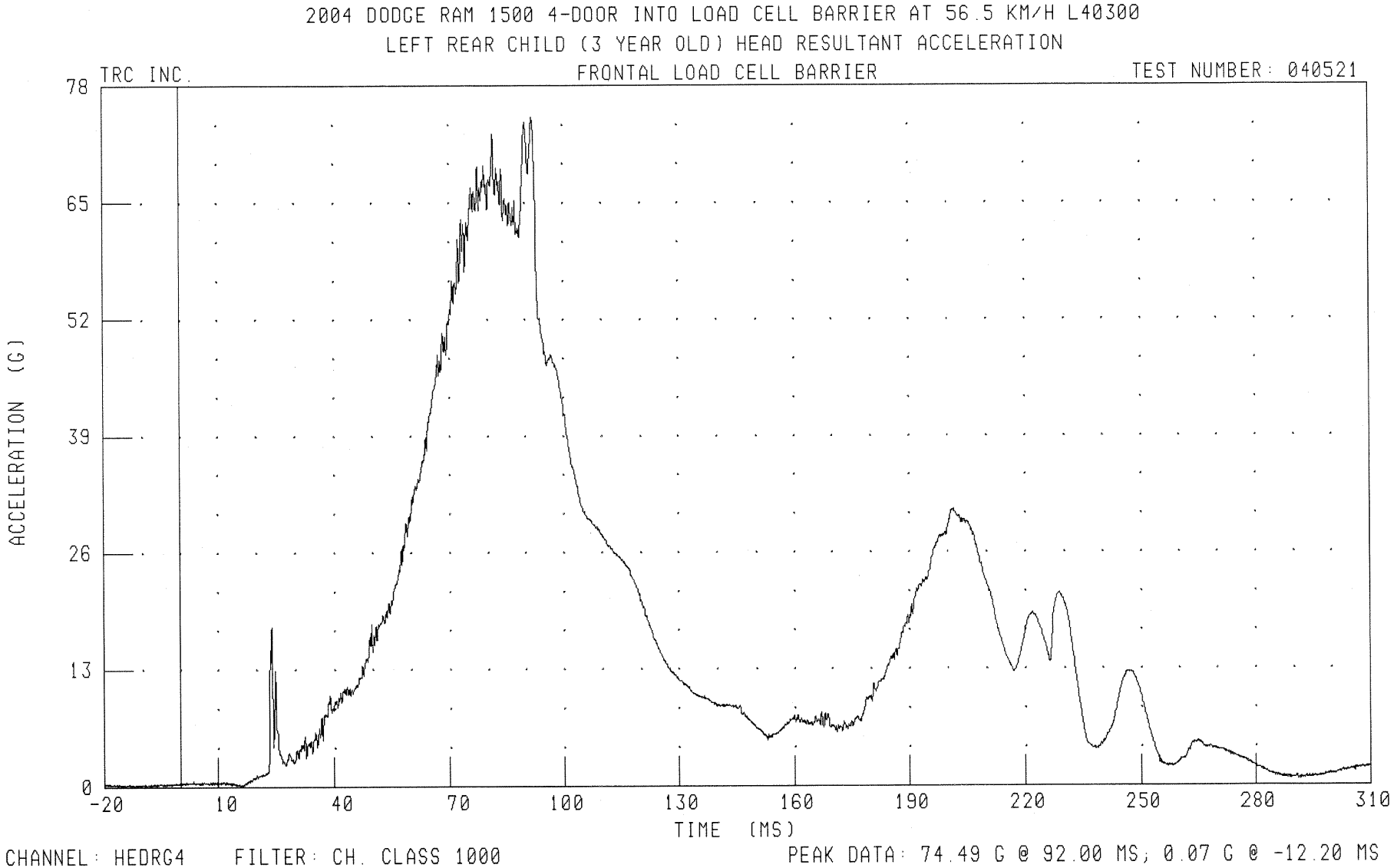
2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) HEAD Z-AXIS ACCELERATION



CHANNEL: HEDZG4 FILTER: CH. CLASS 1000 PEAK DATA: 70.32 G @ 81.60 MS; -0.91 G @ 267.50 MS

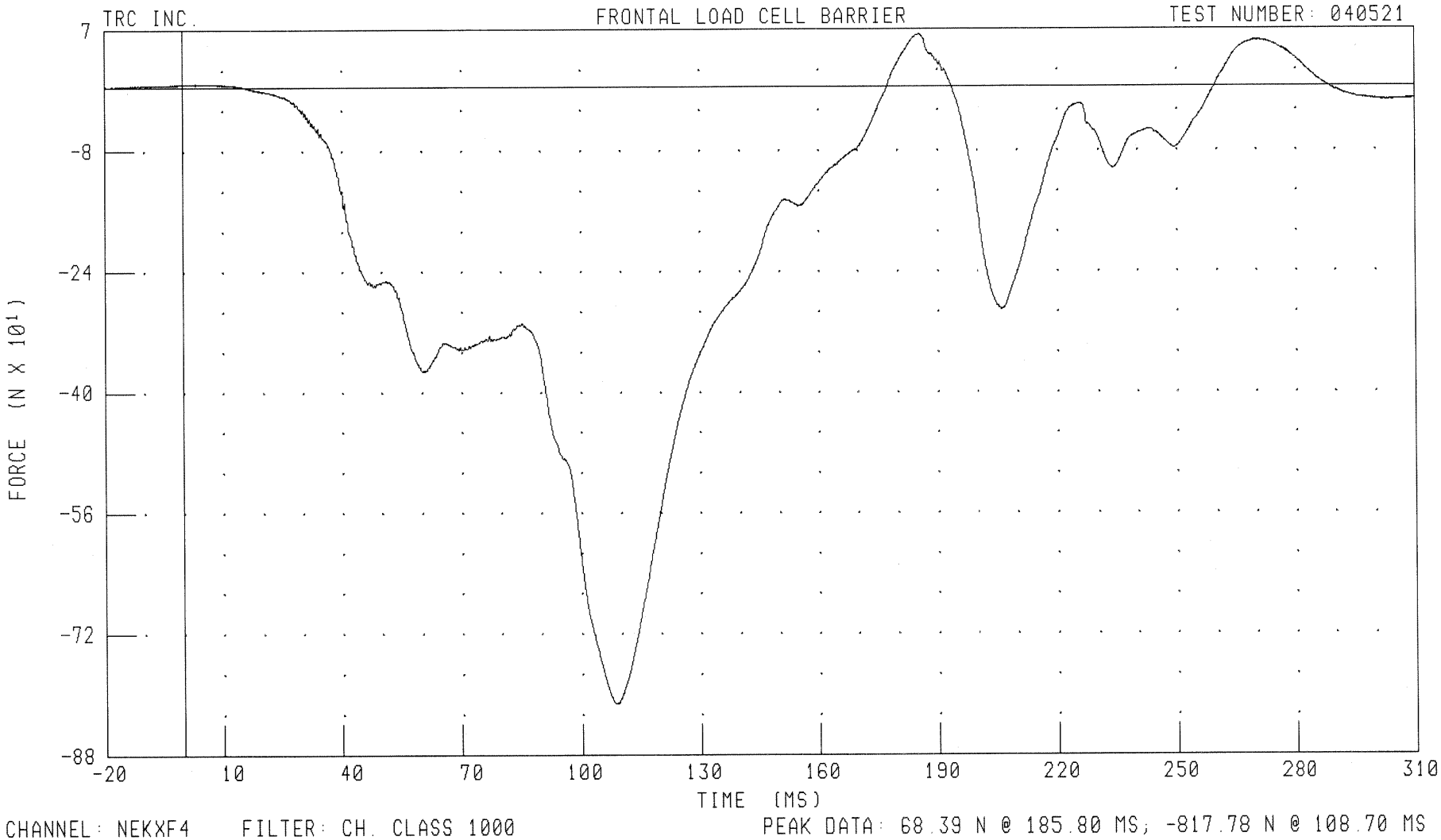
F3-37

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) HEAD RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G)
78
65
52
39
26
13
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDRG4
FILTER: CH. CLASS 1000
PEAK DATA: 74.49 G @ 92.00 MS; 0.07 G @ -12.20 MS

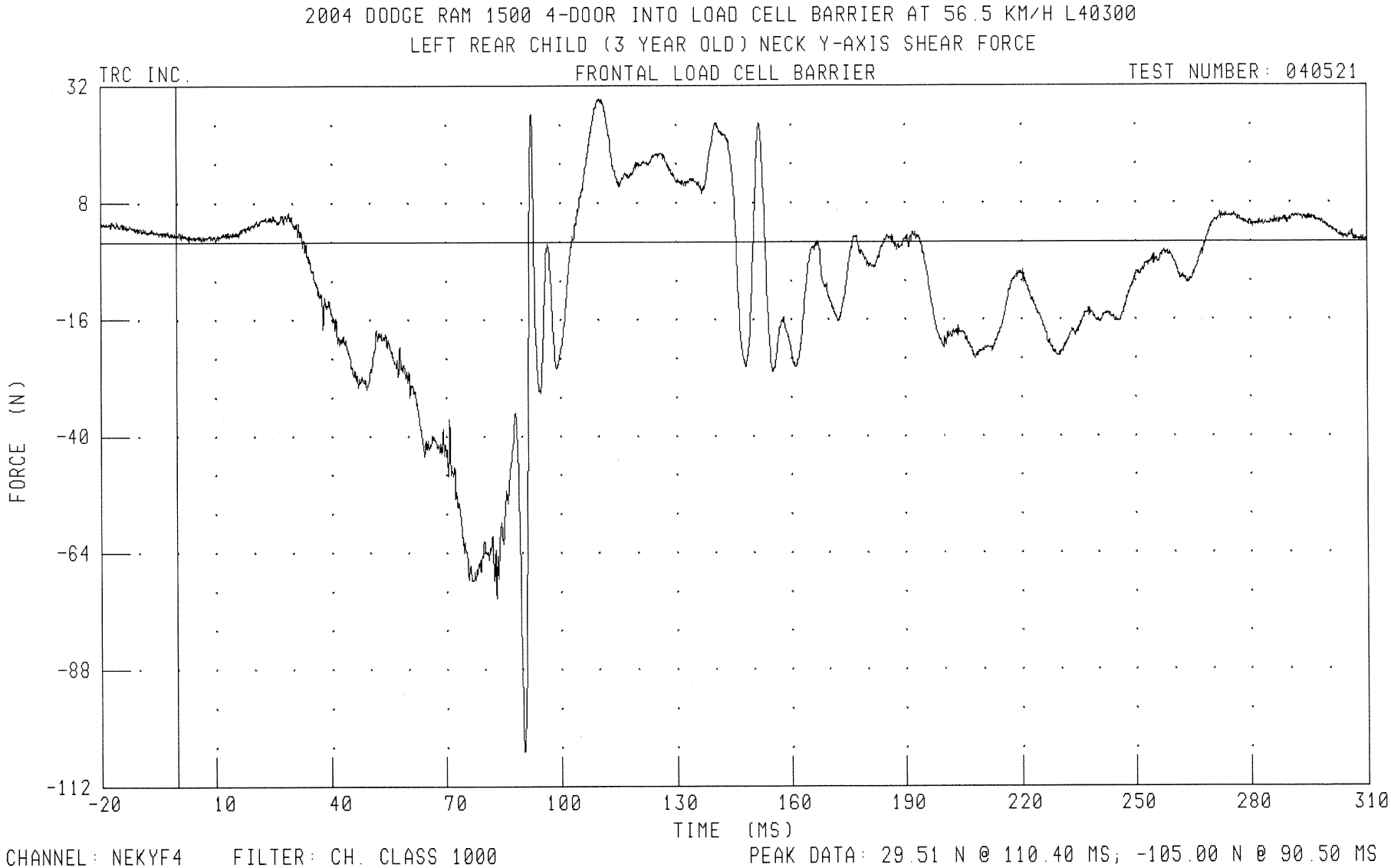
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK X-AXIS SHEAR FORCE



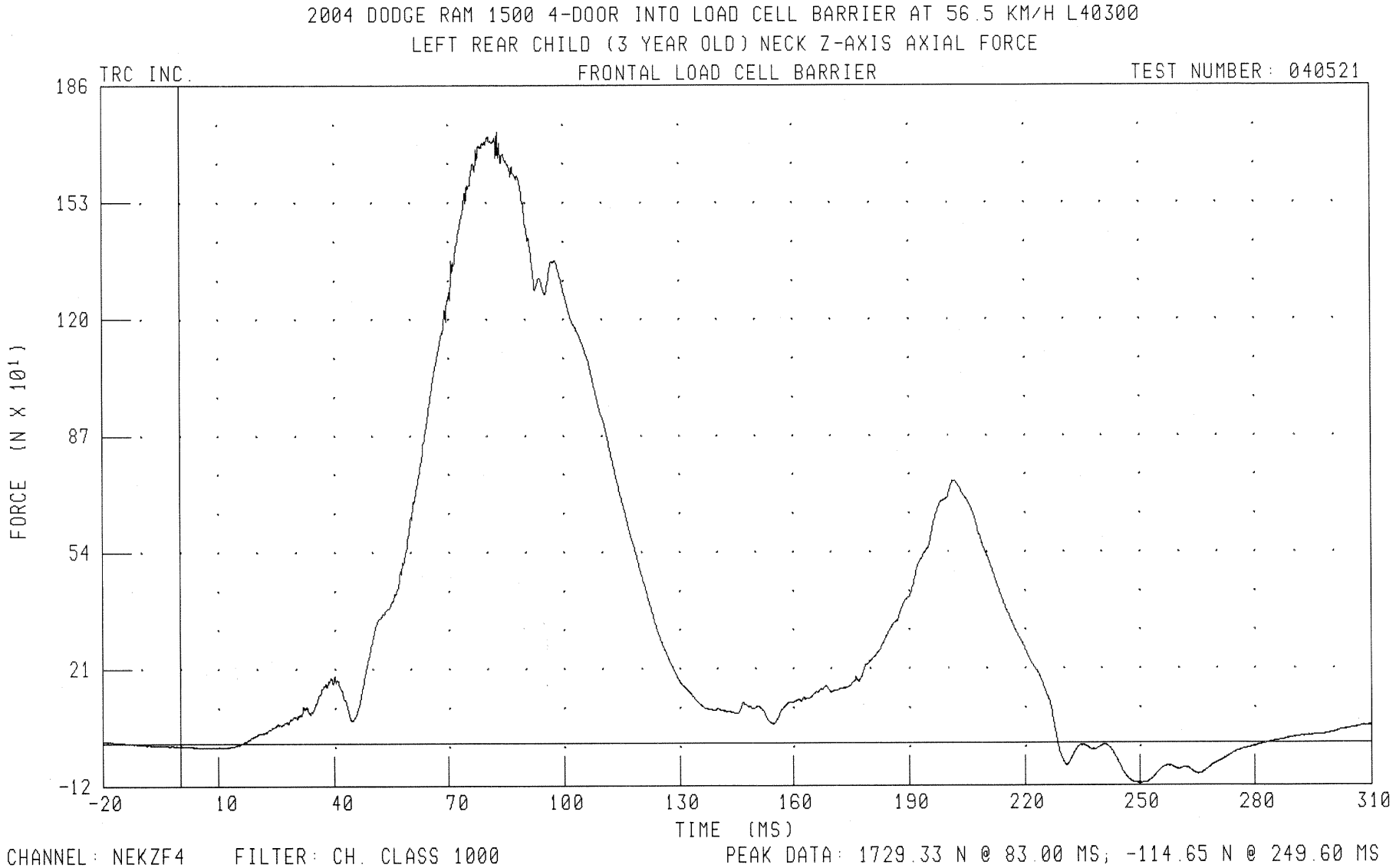
CHANNEL: NEKXF4 FILTER: CH. CLASS 1000 PEAK DATA: 68.39 N @ 185.80 MS; -817.78 N @ 108.70 MS

040521

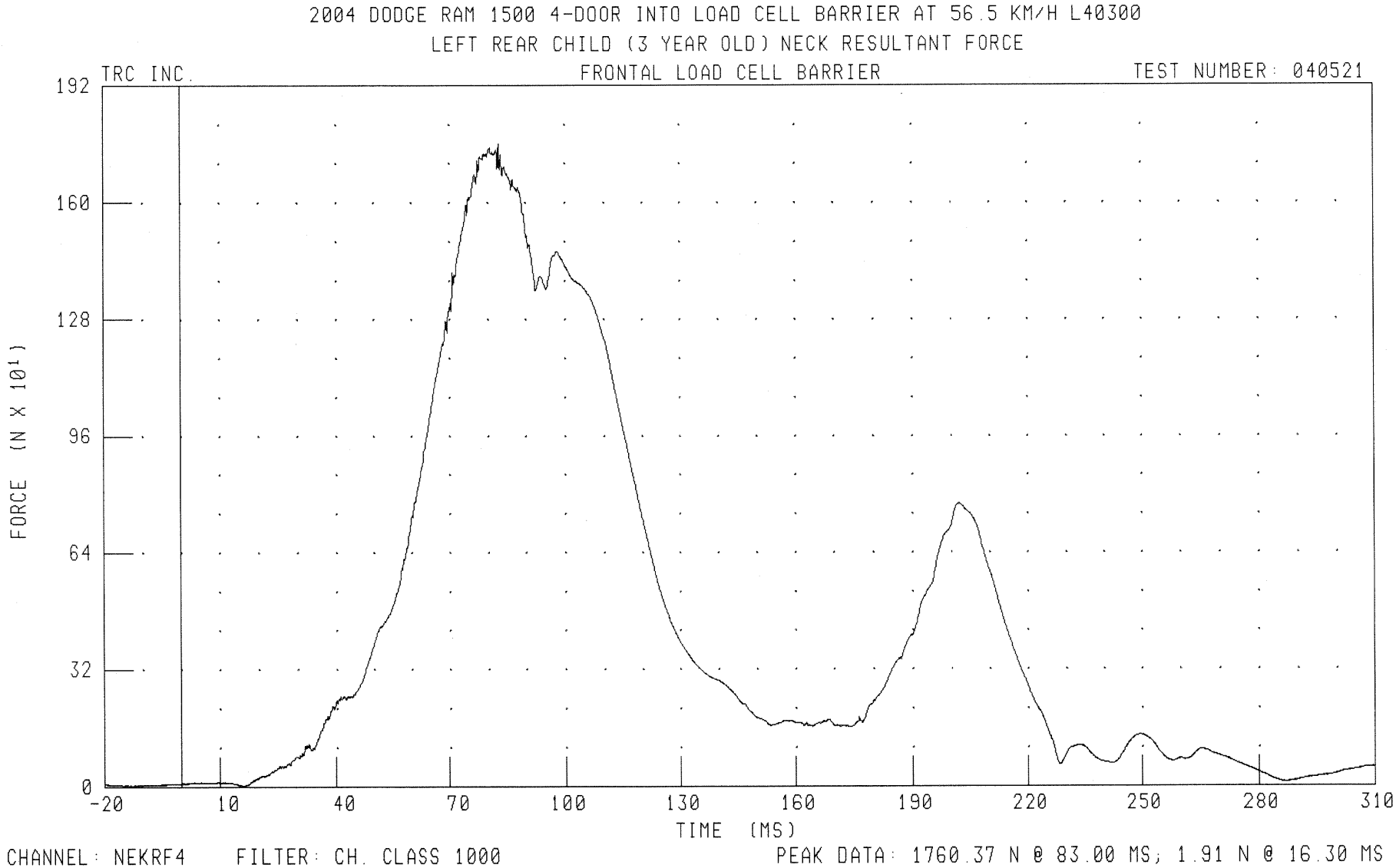

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK Y-AXIS SHEAR FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
32
8
-16
-40
-64
-88
-112
FORCE (N)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKYF4
FILTER: CH. CLASS 1000
PEAK DATA: 29.51 N @ 110.40 MS; -105.00 N @ 90.50 MS

F3-40

040521

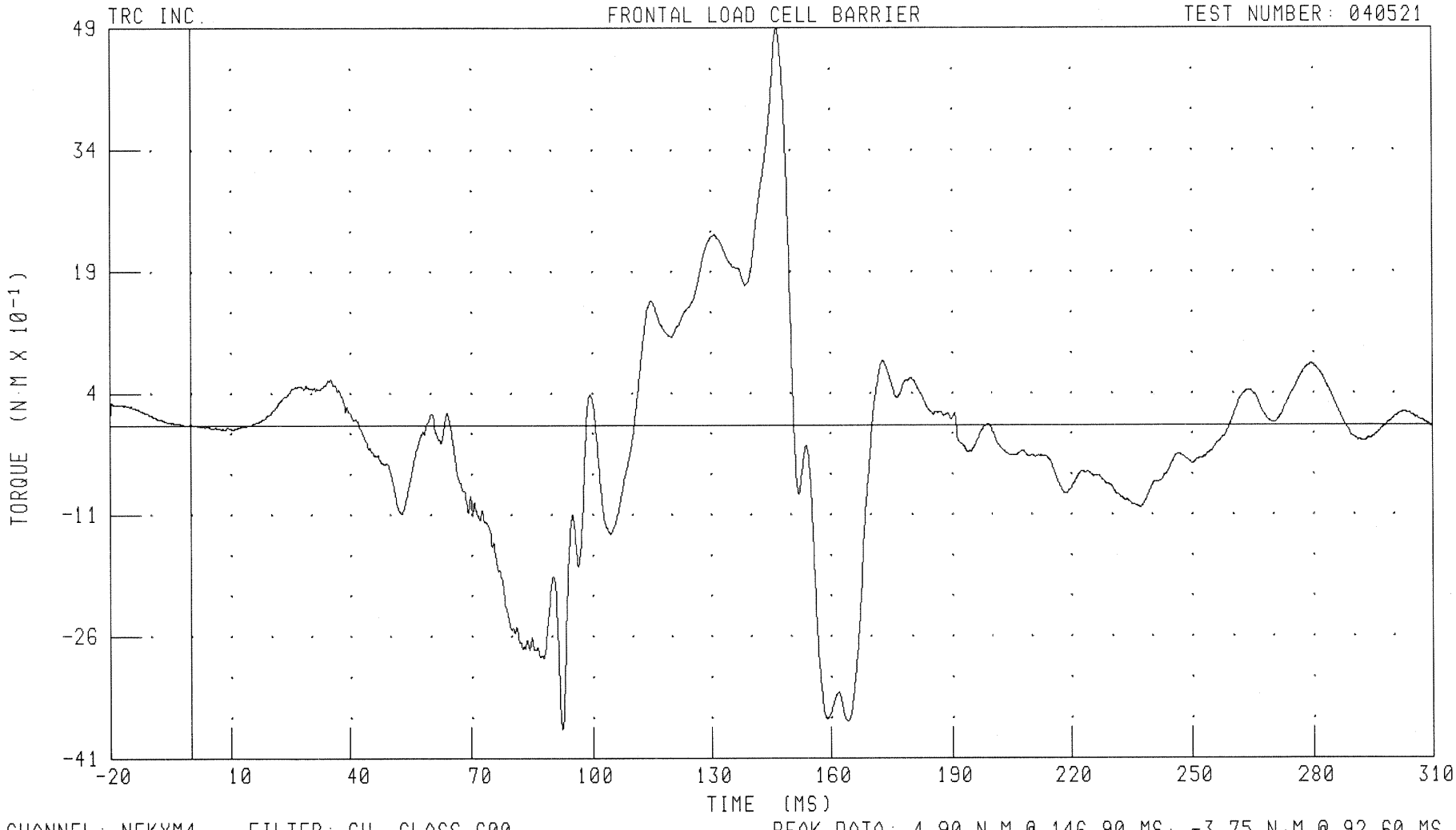

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK Z-AXIS AXIAL FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
186
153
120
87
54
21
-12
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKZF4
FILTER: CH. CLASS 1000
PEAK DATA: 1729.33 N @ 83.00 MS; -114.65 N @ 249.60 MS

040521


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK RESULTANT FORCE
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
192
160
128
96
64
32
0
FORCE (N X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKRF4
FILTER: CH. CLASS 1000
PEAK DATA: 1760.37 N @ 83.00 MS; 1.91 N @ 16.30 MS

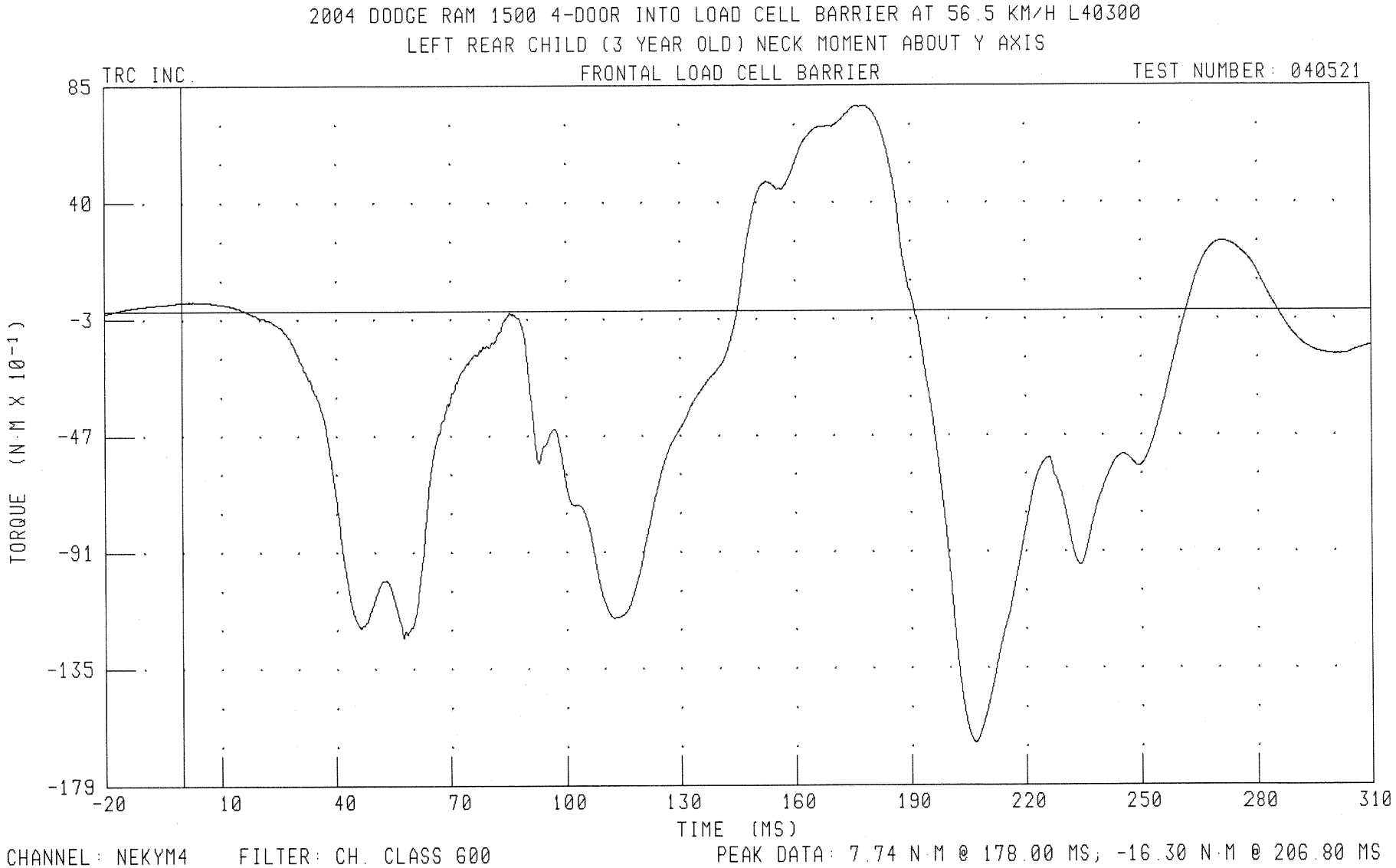
040521

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK MOMENT ABOUT X AXIS

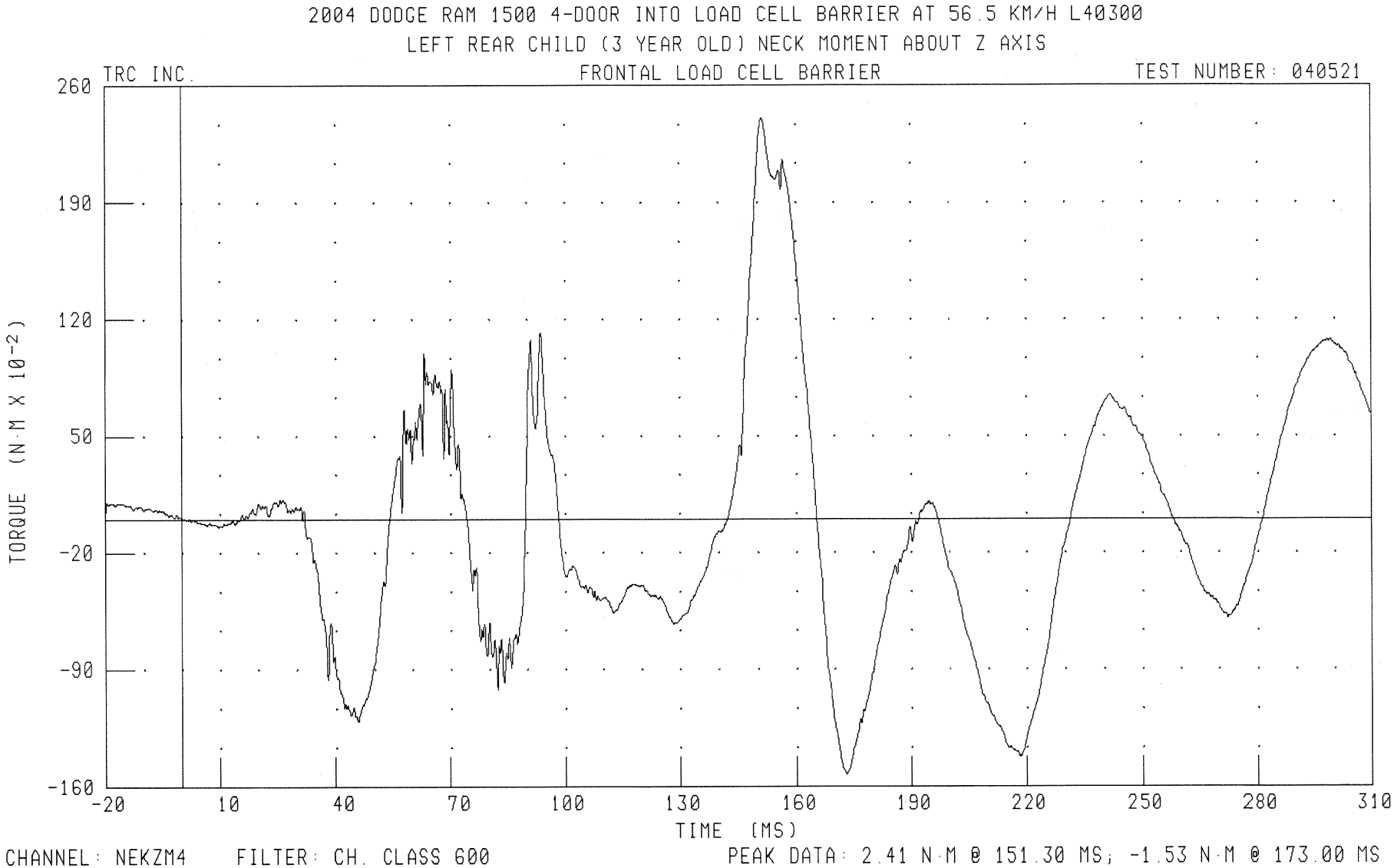


CHANNEL: NEKXM4 FILTER: CH. CLASS 600 PEAK DATA: 4.90 N·M @ 146.90 MS; -3.75 N·M @ 92.60 MS

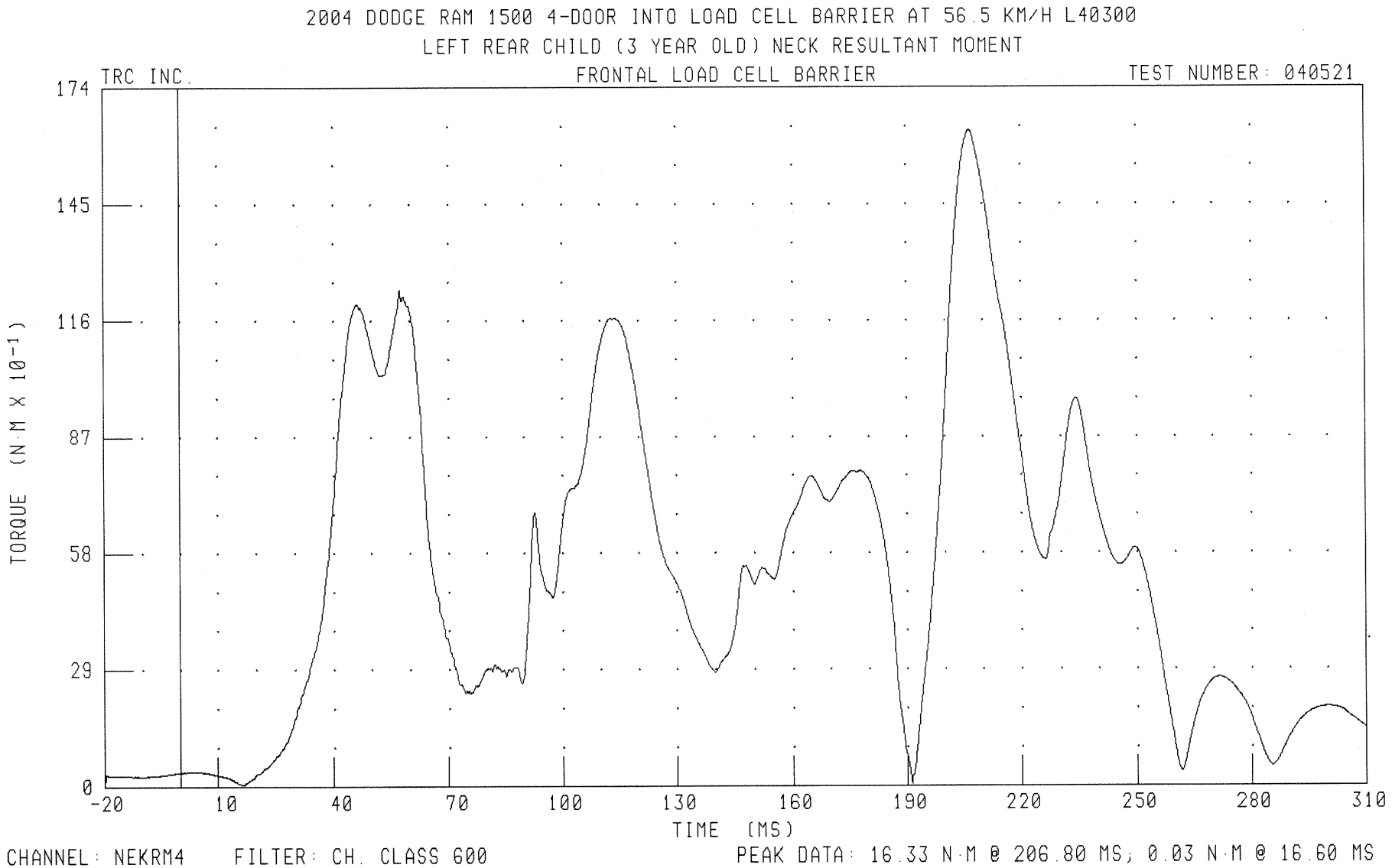
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK MOMENT ABOUT Y AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
85
40
-3
-47
-91
-135
-179
TORQUE (N·M X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKYM4
FILTER: CH. CLASS 600
PEAK DATA: 7.74 N·M @ 178.00 MS; -16.30 N·M @ 206.80 MS

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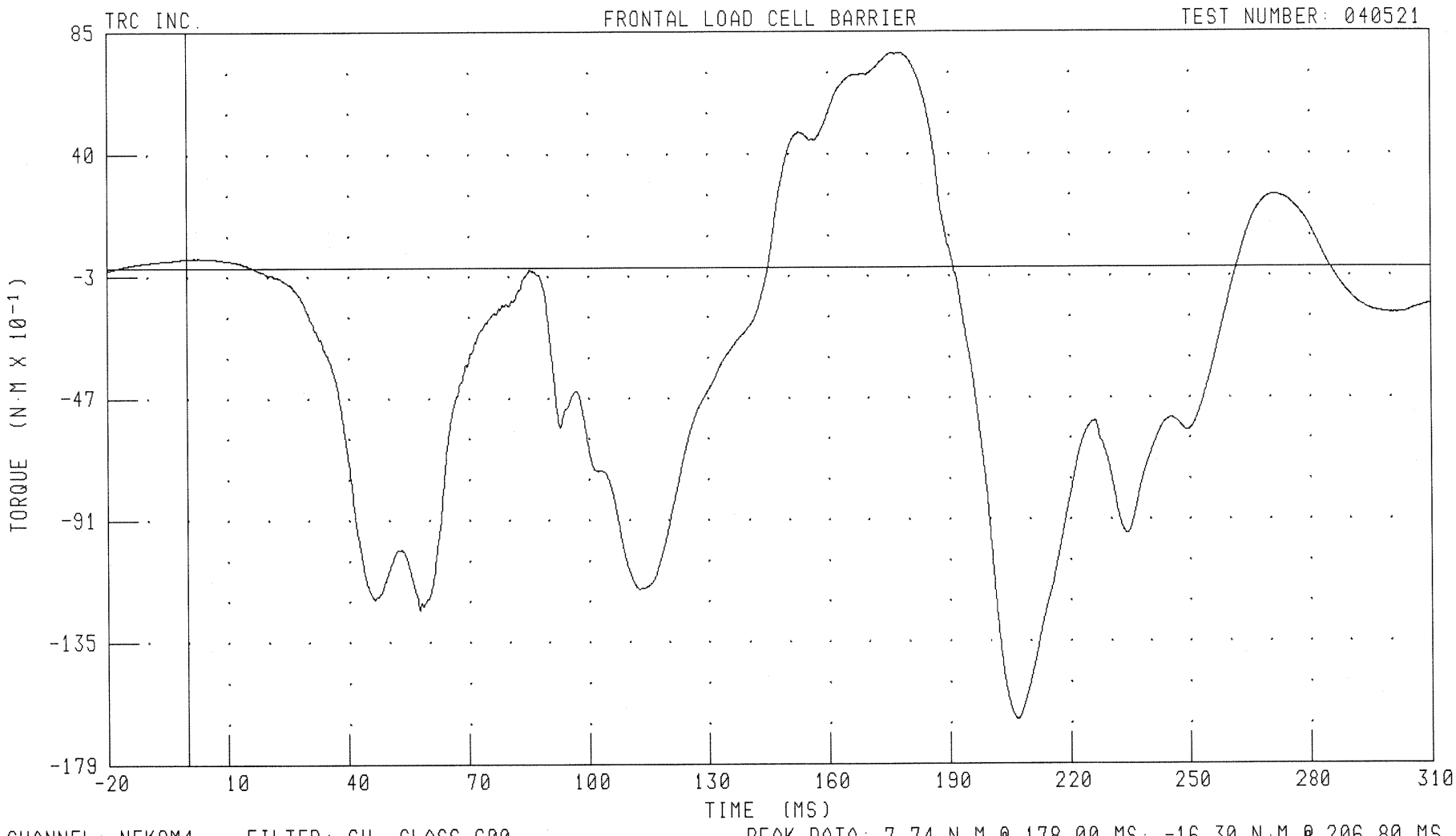

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK MOMENT ABOUT Z AXIS
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
TORQUE (N·M X 10⁻²)
260
190
120
50
-20
-90
-160
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKZM4
FILTER: CH. CLASS 600
PEAK DATA: 2.41 N·M @ 151.30 MS; -1.53 N·M @ 173.00 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK RESULTANT MOMENT
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
TORQUE (N-M X 10-1)
174
145
116
87
58
29
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: NEKRM4
FILTER: CH. CLASS 600
PEAK DATA: 16.33 N-M @ 206.80 MS; 0.03 N-M @ 16.60 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) NECK MOMENT OCCIPITAL CONDYLE ABOUT Y AXIS



CHANNEL: NEKOM4 FILTER: CH. CLASS 600 PEAK DATA: 7.74 N·M @ 178.00 MS; -16.30 N·M @ 206.80 MS

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Left Rear Child (3 yr. old) Lower Neck Force X Was Not Installed

Left Rear Child (3 yr. old) Lower Neck Force Y Was Not Installed

Left Rear Child (3 yr. old) Lower Neck Force Z Was Not Installed

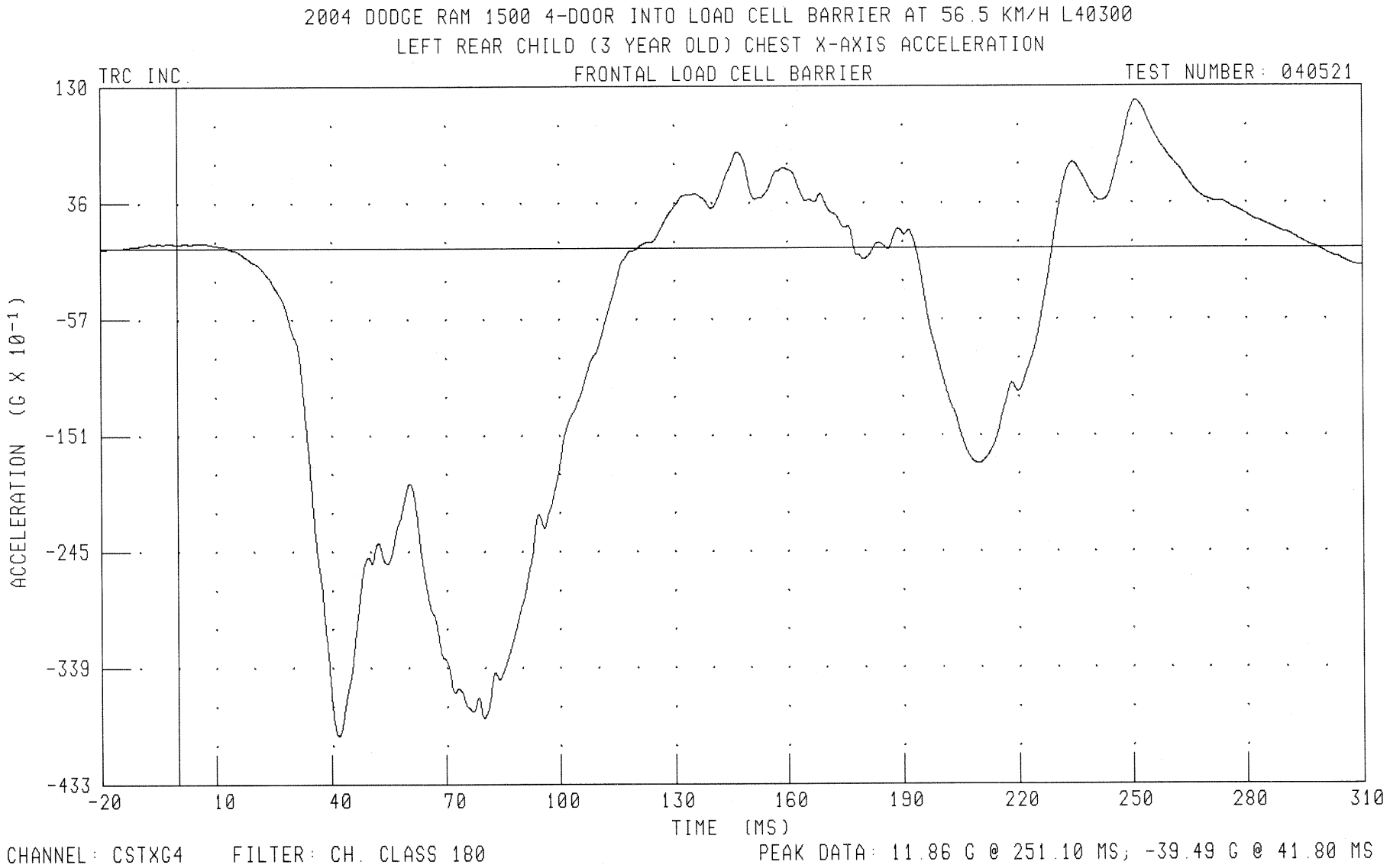
Left Rear Child (3 yr. old) Lower Neck Force Resultant Could Not Be Calculated

Left Rear Child (3 yr. old) Lower Neck Moment X Was Not Installed

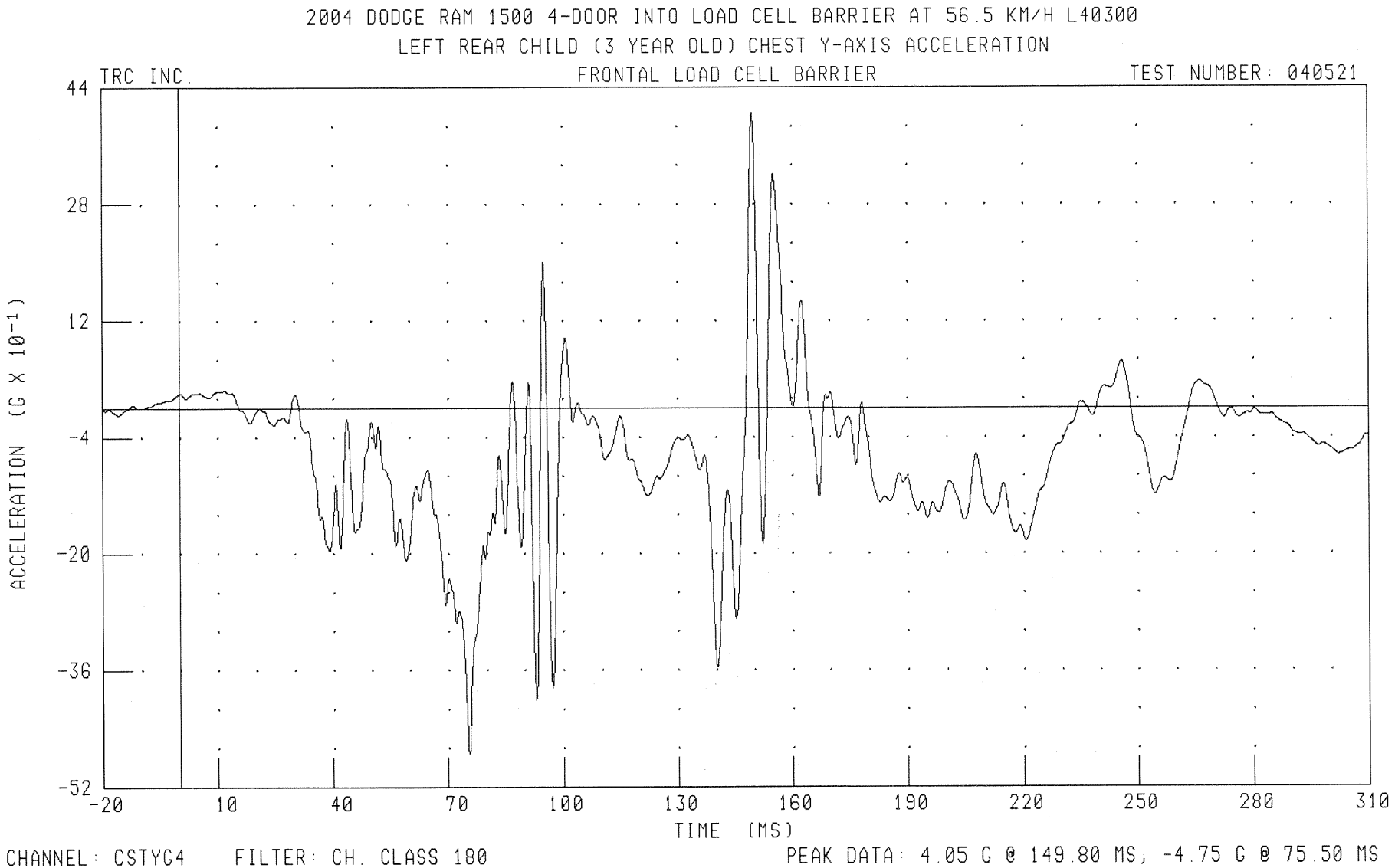
Left Rear Child (3 yr. old) Lower Neck Moment Y Was Not Installed

Left Rear Child (3 yr. old) Lower Neck Moment Z Was Not Installed

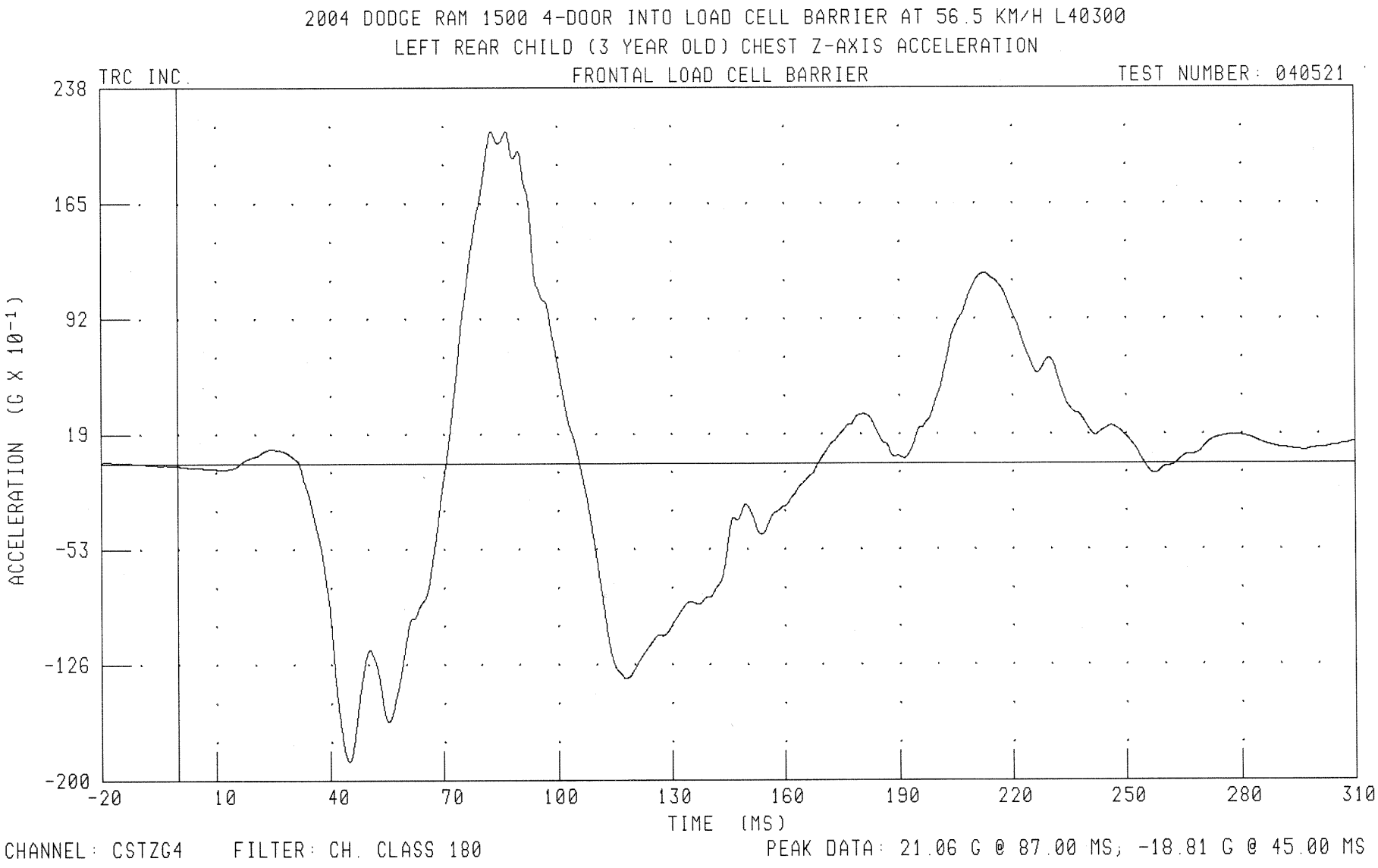
Left Rear Child (3 yr. old) Lower Neck Moment Resultant Could Not Be Calculated


2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHEST X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
130
36
-57
-151
-245
-339
-433
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXG4
FILTER: CH. CLASS 180
PEAK DATA: 11.86 G @ 251.10 MS; -39.49 G @ 41.80 MS

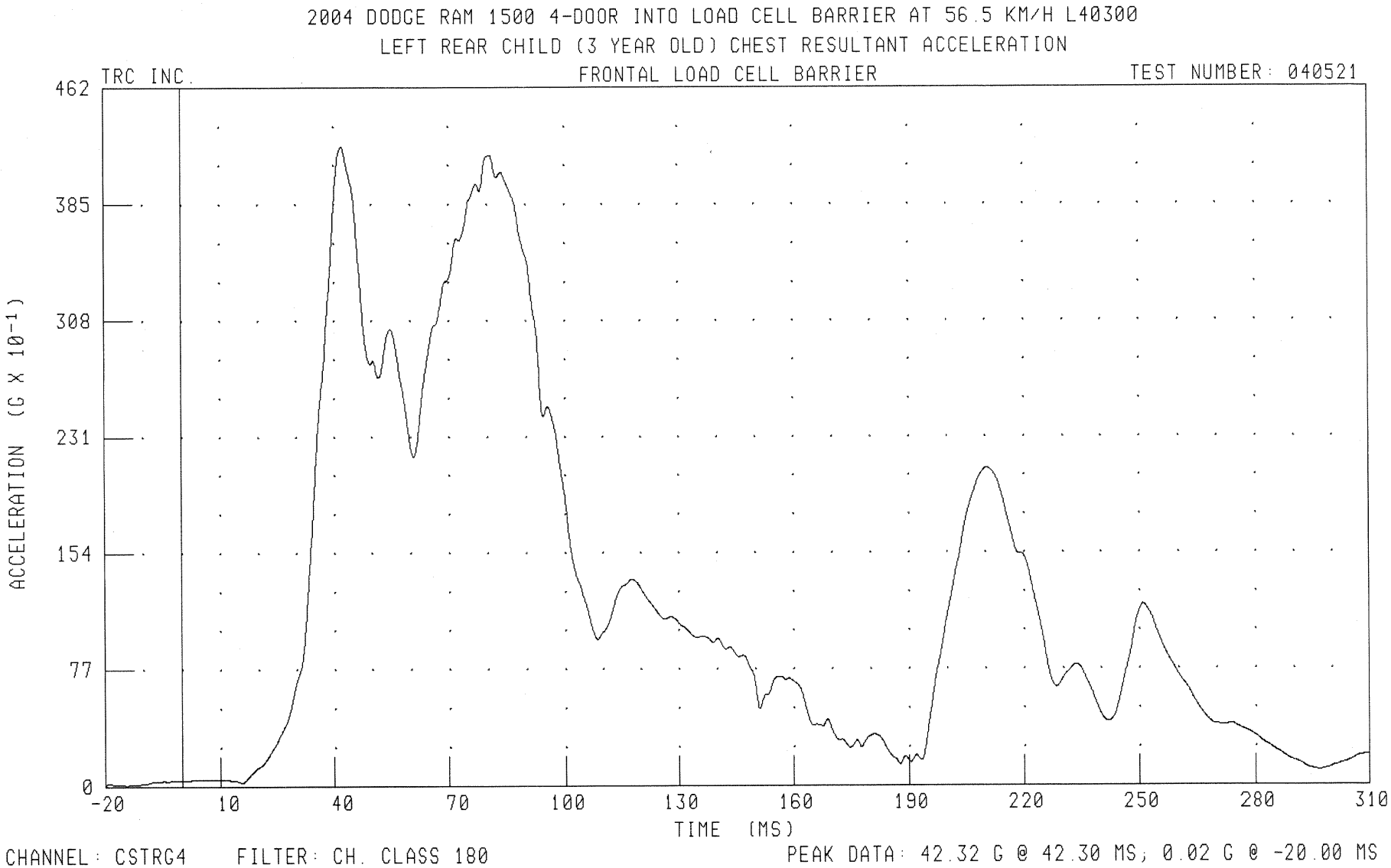
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHEST Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
44
28
12
-4
-20
-36
-52
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTYG4
FILTER: CH. CLASS 180
PEAK DATA: 4.05 G @ 149.80 MS; -4.75 G @ 75.50 MS

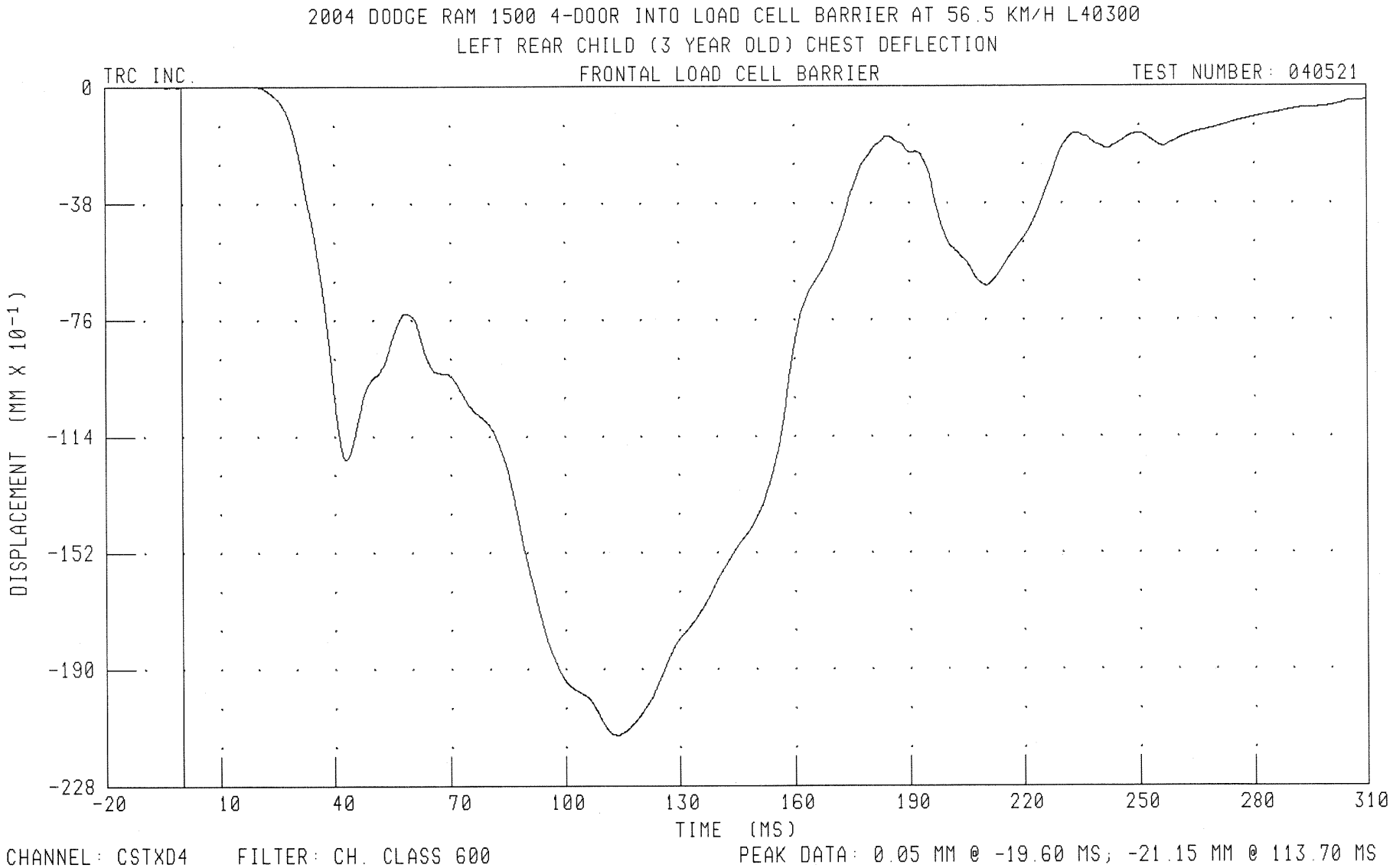
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHEST Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
238
165
92
19
-53
-126
-200
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTZG4
FILTER: CH. CLASS 180
PEAK DATA: 21.06 G @ 87.00 MS; -18.81 G @ 45.00 MS

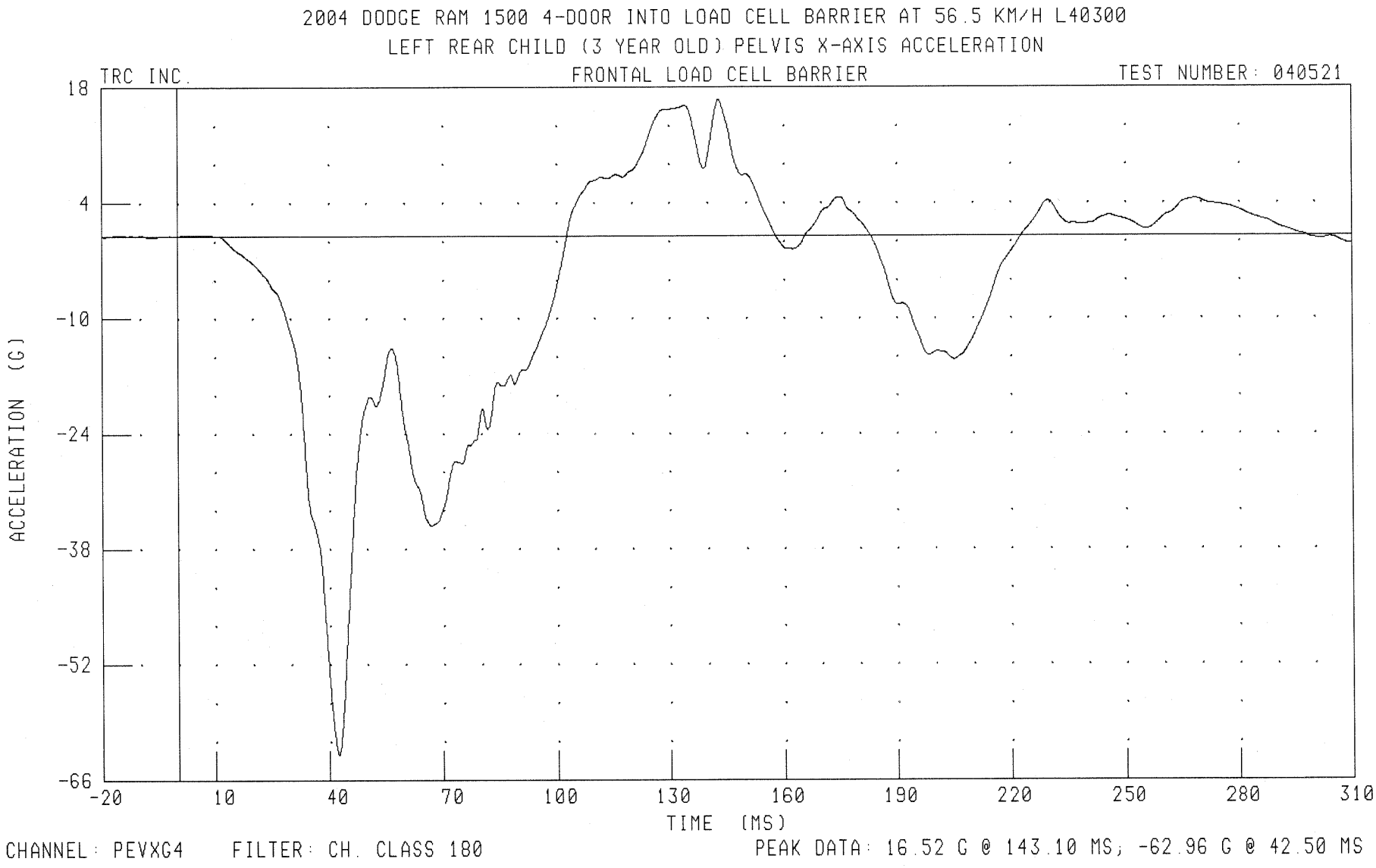
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHEST RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
462
385
308
231
154
77
0
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTRG4
FILTER: CH. CLASS 180
PEAK DATA: 42.32 G @ 42.30 MS; 0.02 G @ -20.00 MS

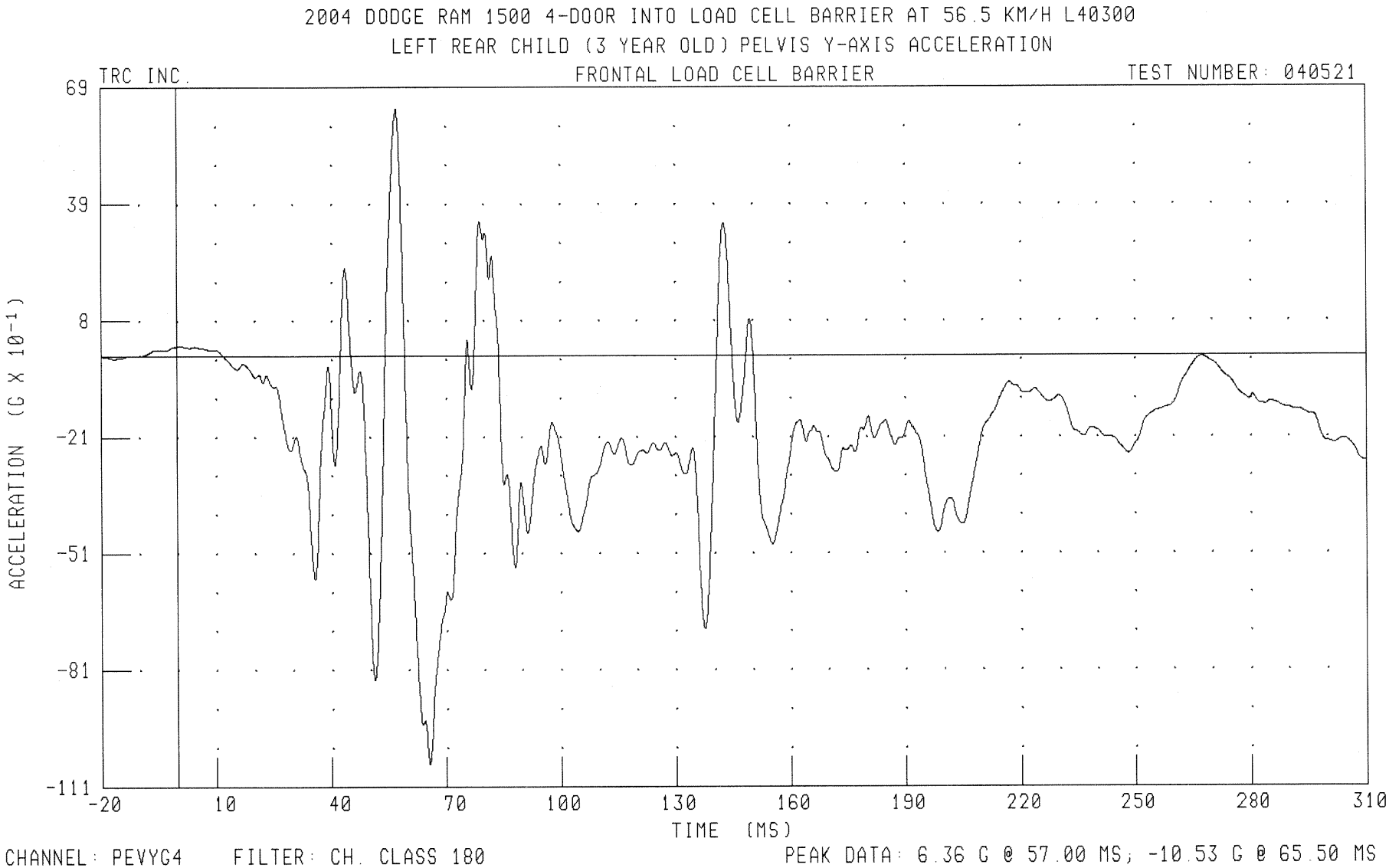
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHEST DEFLECTION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
DISPLACEMENT (MM X 10-1)
0
-38
-76
-114
-152
-190
-228
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXD4
FILTER: CH. CLASS 600
PEAK DATA: 0.05 MM @ -19.60 MS; -21.15 MM @ 113.70 MS

040521

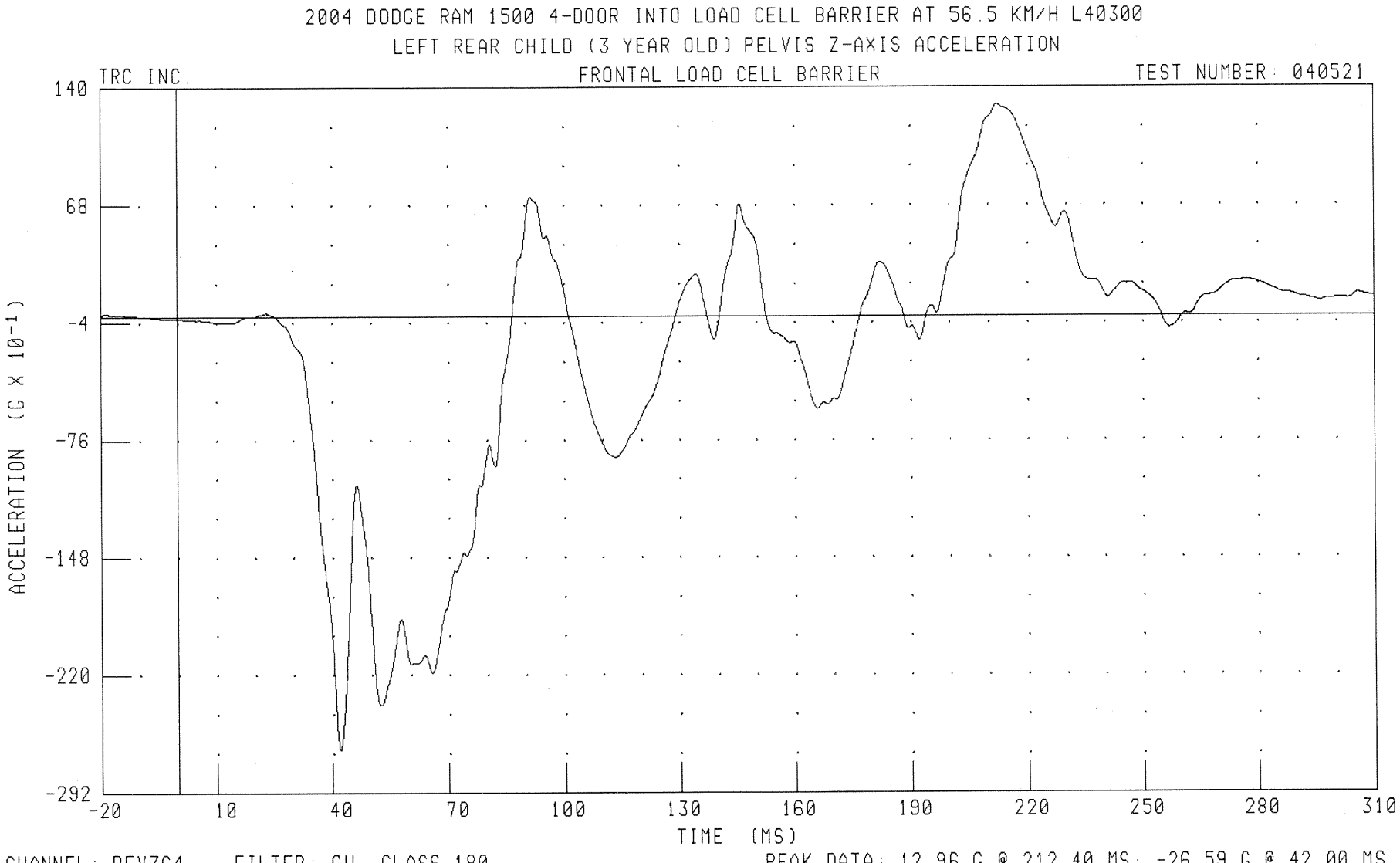

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) PELVIS X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
18
4
-10
-24
-38
-52
-66
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVXG4
FILTER: CH. CLASS 180
PEAK DATA: 16.52 G @ 143.10 MS; -62.96 G @ 42.50 MS

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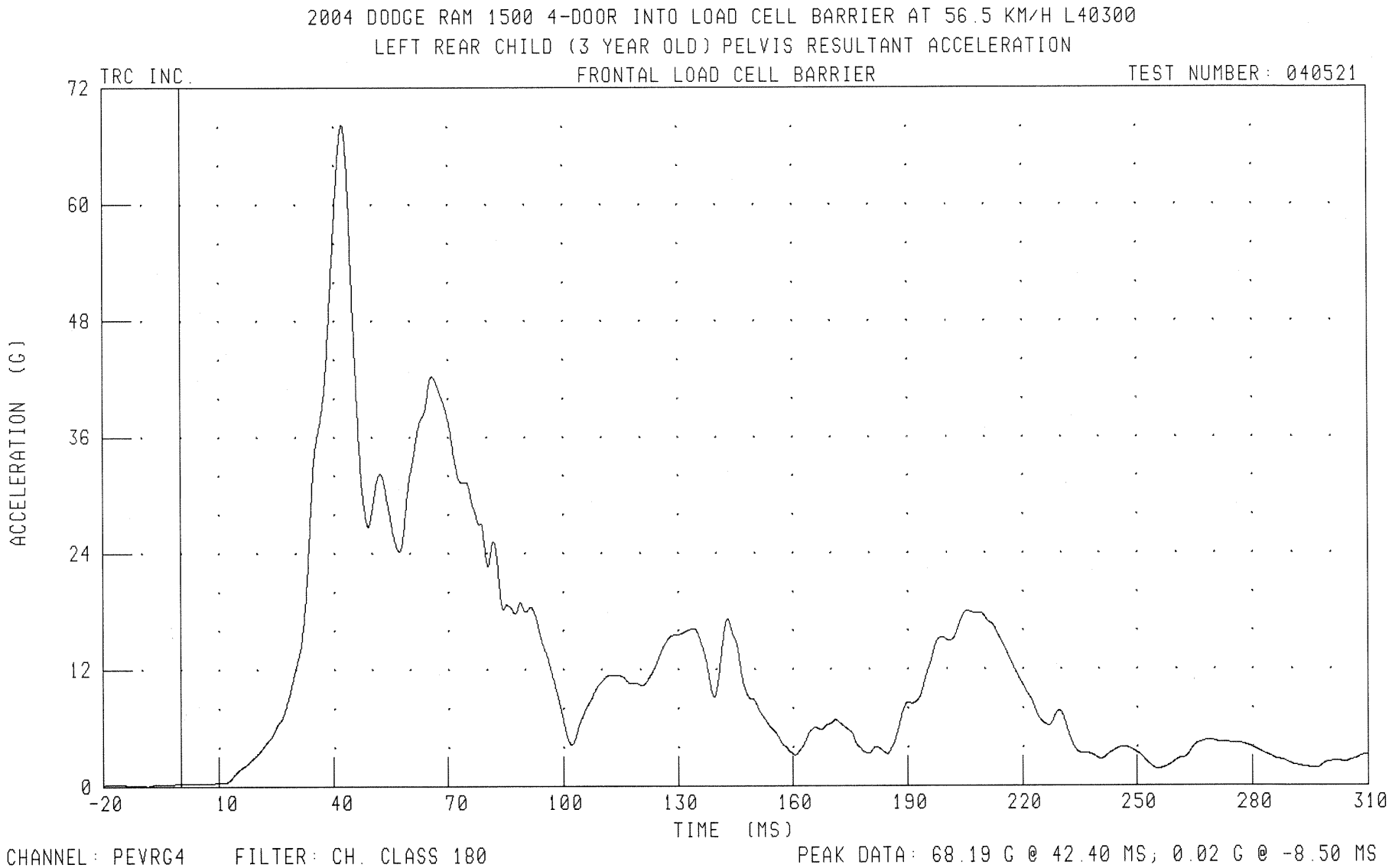

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) PELVIS Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
69
39
8
-21
-51
-81
-111
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVYG4
FILTER: CH. CLASS 180
PEAK DATA: 6.36 G @ 57.00 MS; -10.53 G @ 65.50 MS

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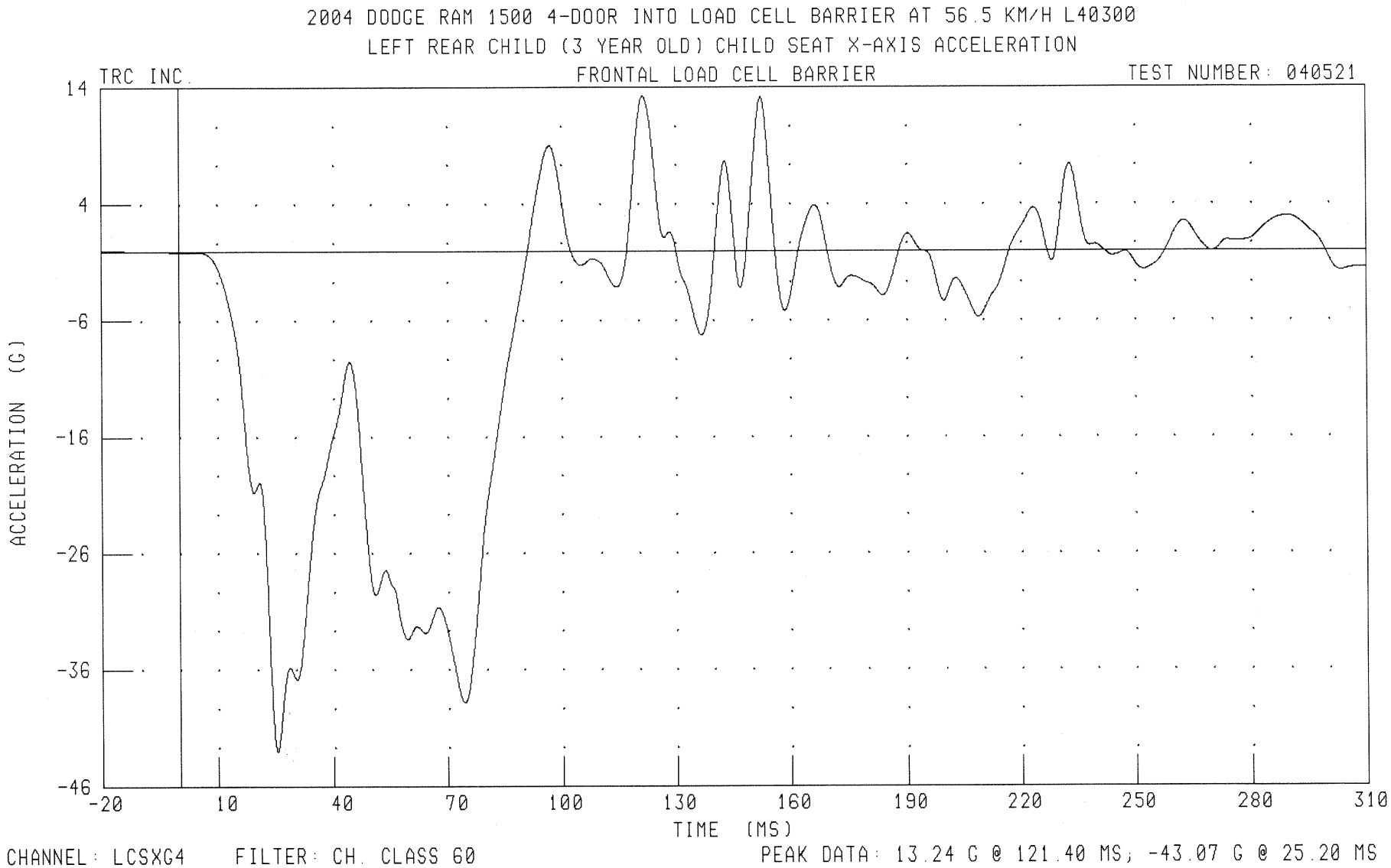
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) PELVIS Z-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
140
68
-4
-76
-148
-220
-292
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVZG4
FILTER: CH. CLASS 180
PEAK DATA: 12.96 G @ 212.40 MS; -26.59 G @ 42.00 MS

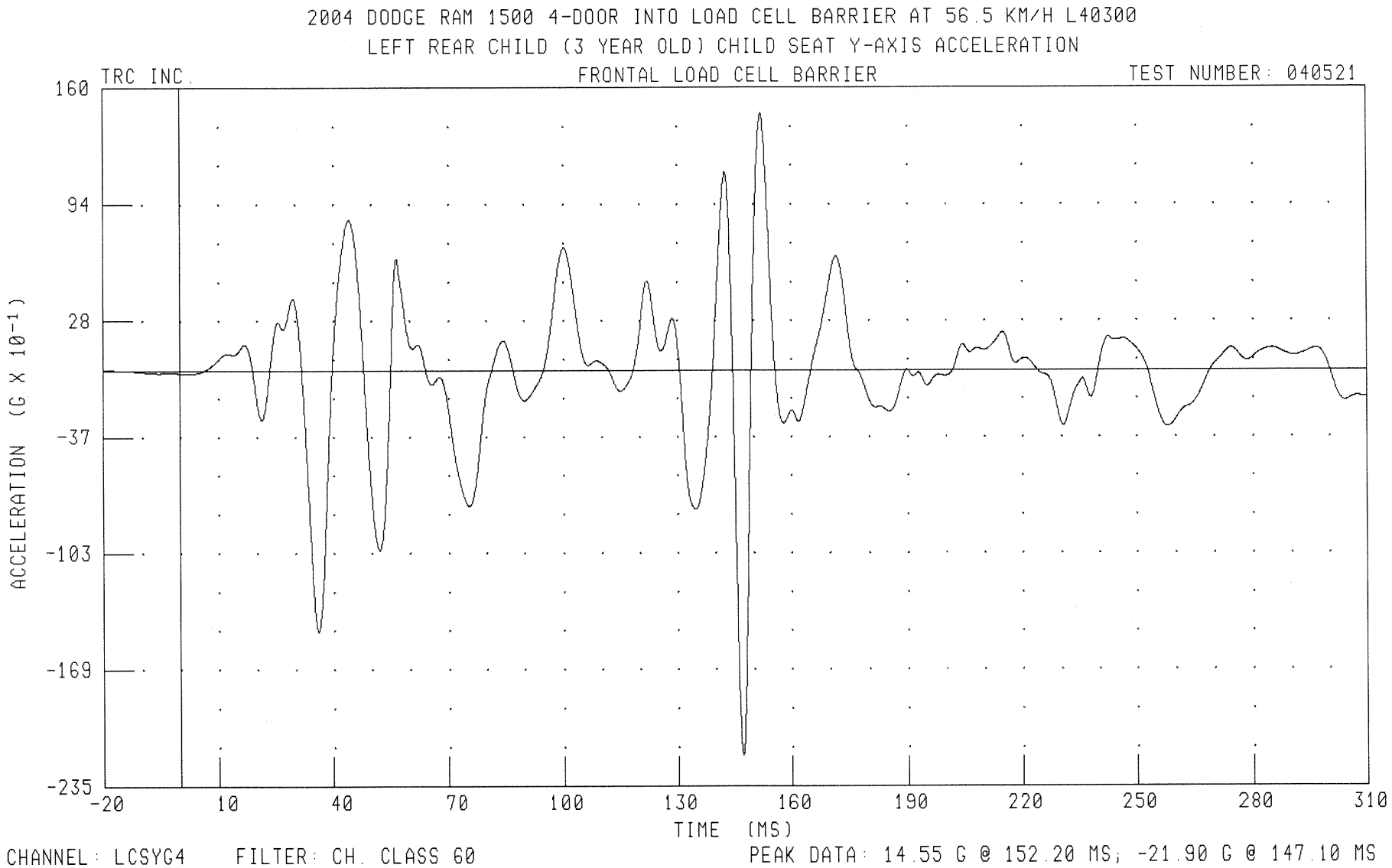
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) PELVIS RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G)
72
60
48
36
24
12
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVRG4
FILTER: CH. CLASS 180
PEAK DATA: 68.19 G @ 42.40 MS; 0.02 G @ -8.50 MS

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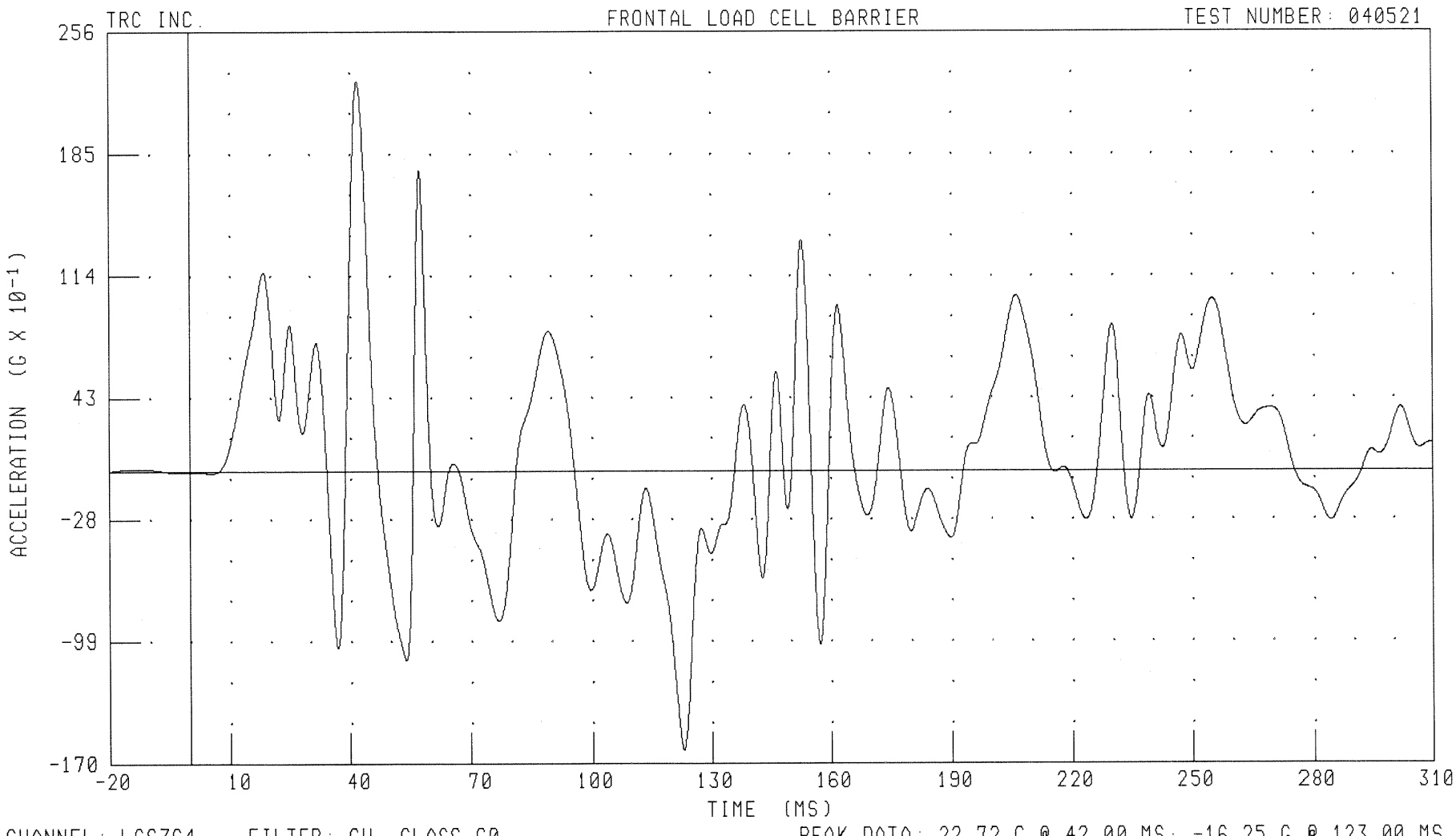

2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHILD SEAT X-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
14
4
-6
-16
-26
-36
-46
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LCSXG4
FILTER: CH. CLASS 60
PEAK DATA: 13.24 G @ 121.40 MS; -43.07 G @ 25.20 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHILD SEAT Y-AXIS ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
160
94
28
-37
-103
-169
-235
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LCSYG4
FILTER: CH. CLASS 60
PEAK DATA: 14.55 G @ 152.20 MS; -21.90 G @ 147.10 MS

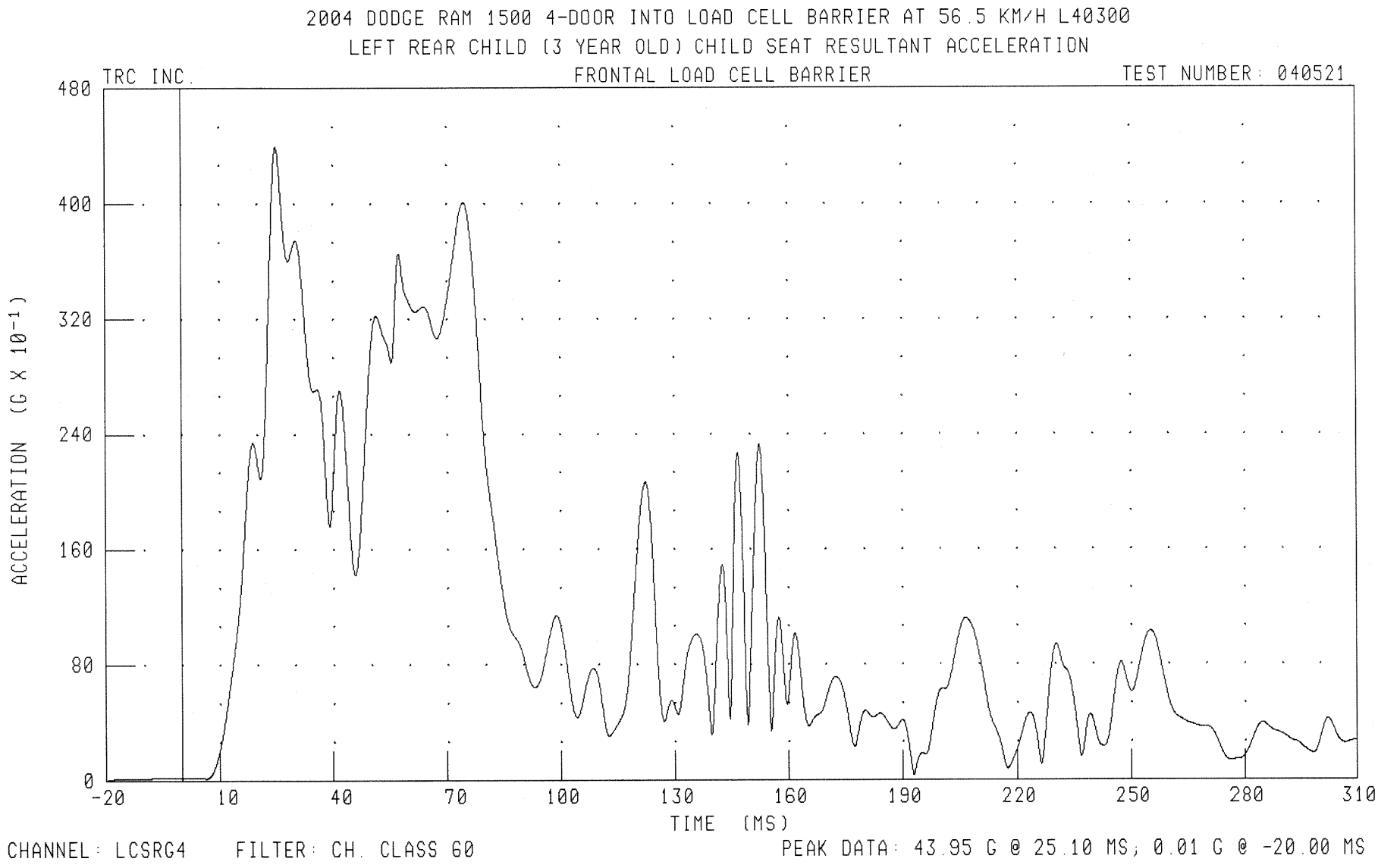
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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHILD SEAT Z-AXIS ACCELERATION



CHANNEL: LCSZG4 FILTER: CH. CLASS 60 PEAK DATA: 22.72 G @ 42.00 MS; -16.25 G @ 123.00 MS

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2004 DODGE RAM 1500 4-DOOR INTO LOAD CELL BARRIER AT 56.5 KM/H L40300
LEFT REAR CHILD (3 YEAR OLD) CHILD SEAT RESULTANT ACCELERATION
TRC INC.
FRONTAL LOAD CELL BARRIER
TEST NUMBER: 040521
ACCELERATION (G X 10-1)
480
400
320
240
160
80
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LCSRG4
FILTER: CH. CLASS 60
PEAK DATA: 43.95 G @ 25.10 MS; 0.01 G @ -20.00 MS

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Section F-4

Child Dummy Instrumentation Information

Dummy 040n **Type** HIII 3-YEAR OLD **Descriptio** NHTSA - 040n HIII 3 Y.O. ICAL'd 8-26-03 (DKS 5-18-04)J211

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264-2000T	J20125	Endevco	0.0284901	g	2000	5/13/2004	Fwd	0
HEDYG	Head Accel Y	7264-2000LC	J35564	Endevco	0.0243039	g	2000	5/13/2004	Lft	1
HEDZG	Head Accel Z	7264-2KM5T	J14688	Endevco	0.0358214	g	2000	5/13/2004	Up	1
!HDZGR	Head Accel Redundant Z	7264-2000TZ	J27322	Endevco	0.02414	g	2000	10/1/2003	Up	1
NEKXF	Neck Force X	IF-234	IF-234-121-FX	FTSS	0.000592176	N	4448.2	8/26/2003	Hd Rd,Cst Fd	0
NEKYF	Neck Force Y	IF-234	IF-234-121-FY	FTSS	0.000598898	N	4448.2	8/26/2003	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	IF-234	IF-234-121-FZ	FTSS	0.000215872	N	6672.3	8/26/2003	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	IF-234	IF-234-121-MX	FTSS	0.012492625	N·	169.48	8/26/2003	Lt Ear to Lt Shld	0
NEKYM	Neck Moment Y	IF-234	IF-234-121-MY	FTSS	0.012505605	N·	169.48	8/26/2003	Chn to Strnm	0
NEKZM	Neck Moment Z	IF-234	IF-234-121-MZ	FTSS	0.020243363	N·	112.9	8/26/2003	Chn to Lt Shld	0
CSTXG	Chest Accel X	7264-2KM5T	J17705	Endevco	0.023377	g	2000	5/13/2004	Fwd	0
CSTYG	Chest Accel Y	7264-2000LC	AAKB1	Endevco	0.0268514	g	2000	5/13/2004	Lft	1
CSTZG	Chest Accel Z	7264-2000LC	AGAG0	Endevco	0.0206848	g	2000	5/13/2004	Up	1
CSTXD	Chest Deflection X	08C1-3179	08C1-3179-CST040	Servo	2.49429	m	100	5/14/2004	Strnm Away Frm Spn	0
PEVXG	Pelvis Accel X	7264-2KM5T	J27470	Endevco	0.0226358	g	2000	5/13/2004	Rwd	0
PEVYG	Pelvis Accel Y	7264-2000T	J20293	Endevco	0.0241914	g	2000	5/13/2004	Lft	1
PEVZG	Pelvis Accel Z	7264-2000TZ	J36744	Endevco	0.0229478	g	2000	5/13/2004	Up	1

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Dummy 042n **Type** HIII 3-YEAR OLD **Descriptio** NHTSA - 042n HIII 3 Y.O. ICAL'd 8-26-03 (DKS 5-18-04)J211

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264-2000TZ	J36721	Endevco	0.0263896	g	2000	5/13/2004	Fwd	0
HEDYG	Head Accel Y	7264-2KM5T	J19873	Endevco	0.0246793	g	2000	5/13/2004	Lft	1
HEDZG	Head Accel Z	7264-2000T	J21985	Endevco	0.0257704	g	2000	5/13/2004	Up	1
!HDZGR	Head Accel Redundant Z	7264-2000TZ	J27322	Endevco	0.02414	g	2000	10/1/2003	Up	1
NEKXF	Neck Force X	IF-234	IF-234-120-FX	FTSS	0.000605621	N	4448.2	8/26/2003	Hd Rd,Cst Fd	0
NEKYF	Neck Force Y	IF-234	IF-234-120-FY	FTSS	0.000602843	N	4448.2	8/26/2003	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	IF-234	IF-234-120-FZ	FTSS	0.000218001	N	6670	8/26/2003	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	IF-234	IF-234-120-MX	FTSS	0.012667847	N·	170	8/26/2003	Lt Ear to Lt Shld	0
NEKYM	Neck Moment Y	IF-234	IF-234-120-MY	FTSS	0.012718584	N·	170	8/26/2003	Chn to Strnm	0
NEKZM	Neck Moment Z	IF-234	IF-234-120-MZ	FTSS	0.017479646	N·	110	8/26/2003	Chn to Lt Shld	0
CSTXG	Chest Accel X	7264-2KM5T	AJ5P9	Endevco	0.0263356	g	2000	5/13/2004	Fwd	0
CSTYG	Chest Accel Y	7264-2000LC	AAKA1	Endevco	0.0302075	g	2000	5/13/2004	Lft	1
CSTZG	Chest Accel Z	7264-2000T	J20209	Endevco	0.0231334	g	2000	5/13/2004	Up	1
CSTXD	Chest Deflection X	08C1-3179	08C1-3179-CST042	Servo	2.54	m	100	5/14/2004	Strnm Away Frm Spn	0
PEVXG	Pelvis Accel X	7264-2000LC	AGT82	Endevco	0.0198702	g	2000	5/13/2004	Rwd	0
PEVYG	Pelvis Accel Y	7264-2000T	ALAB9	Endevco	0.0244943	g	2000	5/13/2004	Lft	1
PEVZG	Pelvis Accel Z	7264-2000T	J19547	Endevco	0.0263889	g	2000	5/13/2004	Up	1

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Section F-5

Child Dummy Calibration Information

Transportation Research Center Inc.
572P HIII 3 Year Old Dummy
External Dimensions
Serial No. 040 Calibration No. 03
05/18/04

Test Parameter	Dimension	Specification	Results	Pass
Total Sitting Height	A	538.5 - 553.7 mm	545 mm	Yes
Shoulder Pivot Height	B	307.3 - 322.6 mm	315 mm	Yes
Hip Pivot Height	C	33.0 - 43.2 mm	40 mm	Yes
Hip Pivot from Backline	D	56.9 - 67.1 mm	66 mm	Yes
Shoulder Pivot from Backline	E	58.4 - 68.6 mm	64 mm	Yes
Thigh Clearance	F	81.0 - 91.2 mm	86 mm	Yes
Back of Elbow to Wrist Pivot	G	247.4 - 262.6 mm	251 mm	Yes
Head Back to Backline	H	48.3 - 58.4 mm	53 mm	Yes
Shoulder to Elbow Length	I	185.0 - 200.7 mm	196 mm	Yes
Elbow Rest Height	J	133.6 - 148.8 mm	139 mm	Yes
Buttock to Knee Length	K	287.3 - 302.5 mm	297 mm	Yes
Popliteal Height	L	221.0 - 236.2 mm	229 mm	Yes
Knee to Floor Height	M	241.6 - 256.8 mm	254 mm	Yes
Buttock Popliteal Height	N	217.9 - 233.2 mm	225 mm	Yes
Chest Depth without Jacket	O	134.6 - 149.9 mm	145 mm	Yes
Foot Length	P	137.7 - 147.8 mm	140 mm	Yes
Stature	Q	932.2 - 957.6 mm	945 mm	Yes
Buttock to Knee Pivot Length	R	251.5 - 261.6 mm	254 mm	Yes
Head Breadth	S	128.3 - 143.5 mm	138 mm	Yes
Head Depth	T	167.4 - 182.6 mm	178 mm	Yes
Hip Breadth	U	200.7 - 215.9 mm	204 mm	Yes
Shoulder Breadth	V	236.5 - 251.7 mm	239 mm	Yes
Foot Breadth	W	53.6 - 63.8 mm	57 mm	Yes
Head Circumference	X	500.4 - 515.6 mm	503 mm	Yes
Chest Circumference with Jacket	Y	527.1 - 552.5 mm	548 mm	Yes
Waist Circumference	Z	527.1 - 552.5 mm	540 mm	Yes
Reference Location for Chest Circumference	AA	248.9 - 259.1 mm	255 mm	Yes
Reference Location for Waist Circumference	BB	160.0 - 170.2 mm	165 mm	Yes

Technician

Vincent Olmi

Approved

V. F. Walter

Transportation Research Center Inc.

572P Head Drop Test

HIII 3 Year Old Serial No. 040 Calibration No. 03 - 1

Test Date 05/18/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Peak Resultant Acceleration	250 - 280 g	264.8 g	Yes
Peak Lateral Acceleration	15 g Max	8.0 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

05.18.2004 09:15:44 616

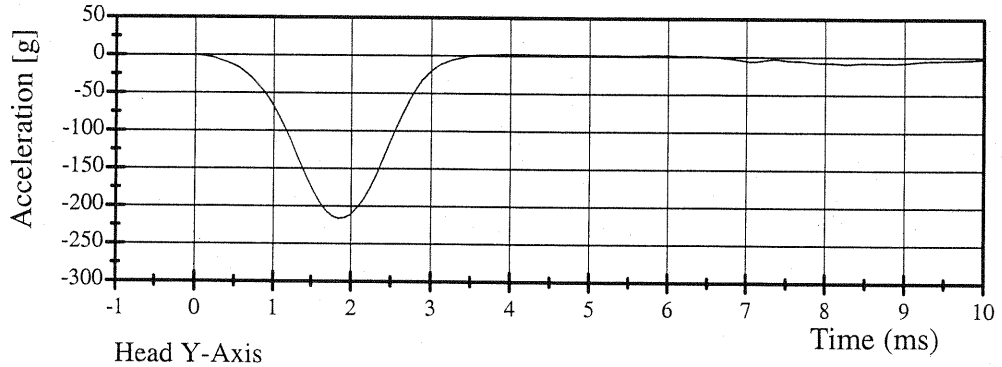
Transportation Research Center Inc.

572P Head Drop Test

HIII 3 Year Old Serial No. 040 Calibration No. 03 - 1

Test Date 05/18/2004

Head X-Axis

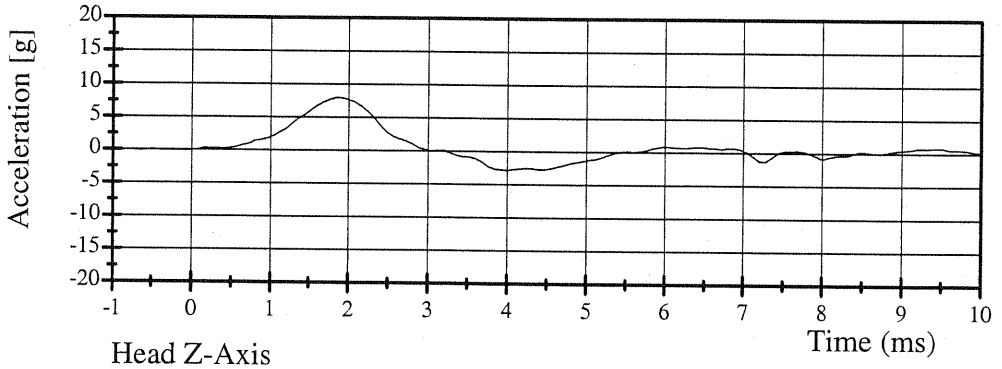


Filter Class: 1000

Max: 2.5 g at 4.0 ms

Min: -216.6 g at 1.8 ms

Head Y-Axis

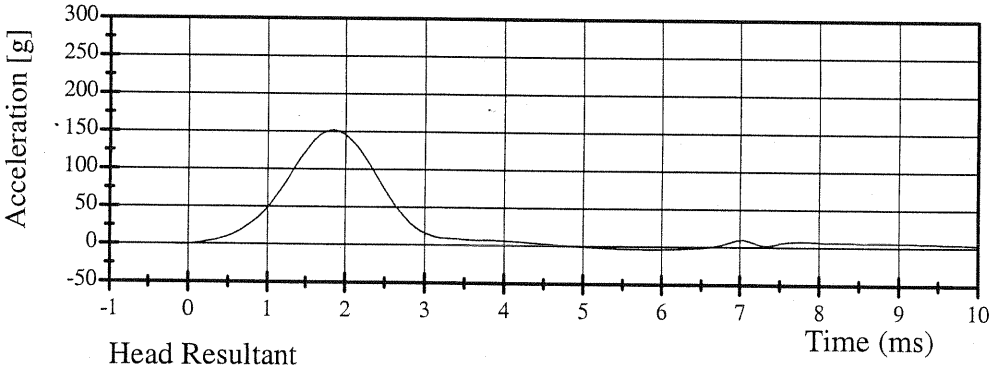


Filter Class: 1000

Max: 8.0 g at 1.8 ms

Min: -2.8 g at 4.0 ms

Head Z-Axis

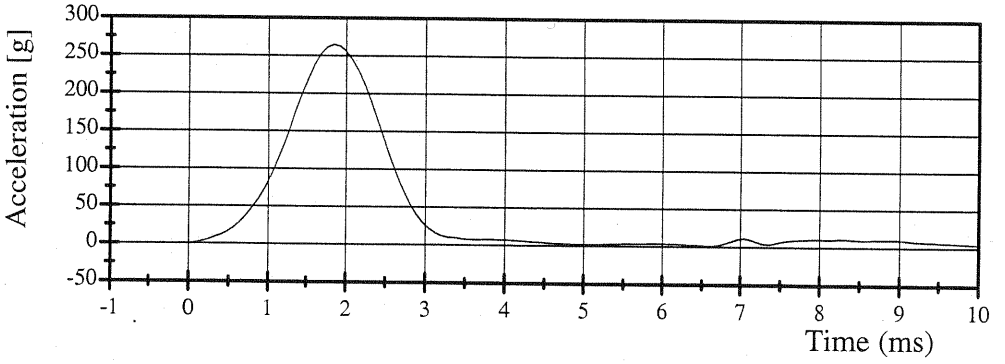


Filter Class: 1000

Max: 152.1 g at 1.8 ms

Min: -3.4 g at 5.8 ms

Head Resultant



Filter Class: 1000

Max: 264.8 g at 1.8 ms

Min: 0.0 g at 3.3 ms

05.18.2004 09:15:46 616

Transportation Research Center Inc.

572P Neck Flexion Test - 6 Channel Transducer

HIII 3yr Old Serial No. 040 Calibration No. 03 - 3

Test Date 05/18/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.7 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Impact Velocity	5.40 - 5.60 m/s	5.58 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.00 - 2.70 m/s	2.60 m/s	Yes
15 ms	3.00 - 4.00 m/s	3.76 m/s	Yes
20 ms	4.00 - 5.10 m/s	5.07 m/s	Yes
Peak D Plane Rotation	70 - 82 °	71.0 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	42.0 - 53.0 N·m	45.49 N·m	Yes
Positive Moment Decay Time To 10 N·m	60 - 80 ms	71.60 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

06.01.2004 13:55:34 653

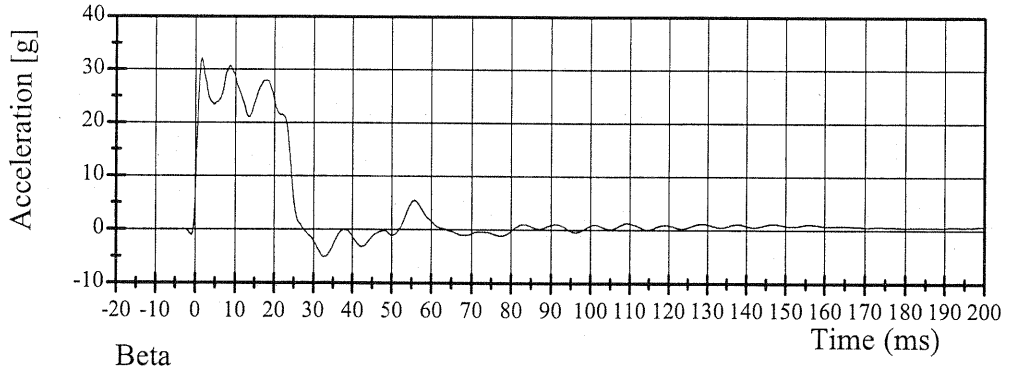
Transportation Research Center Inc.

572P Neck Flexion Test

HIII 3yr Old Serial No. 040 Calibration No. 03 - 3

Test Date 05/18/2004

Pendulum Deceleration

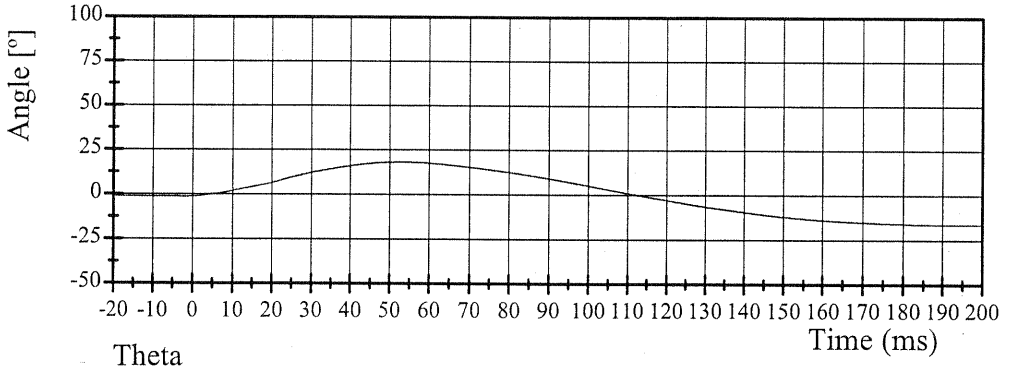


Filter Class: 180

Max: 32.1 g at 1.6 ms

Min: -5.1 g at 32.7 ms

Beta

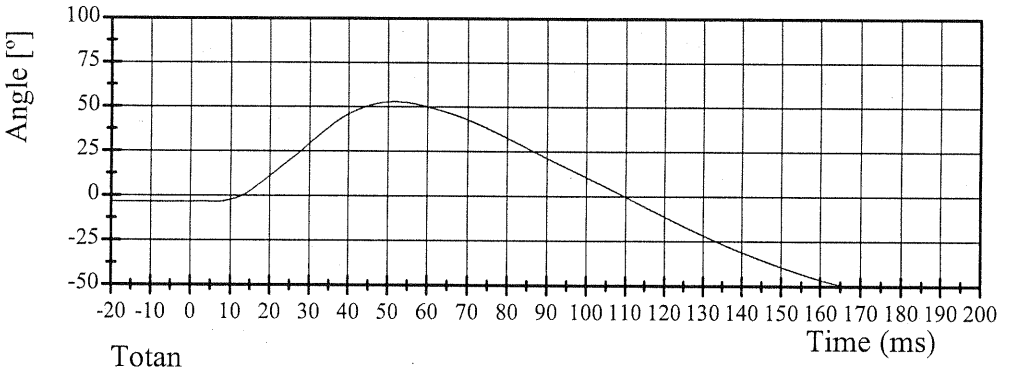


Filter Class: 60

Max: 18.1 ° at 53.4 ms

Min: -16.3 ° at 195.1 ms

Theta

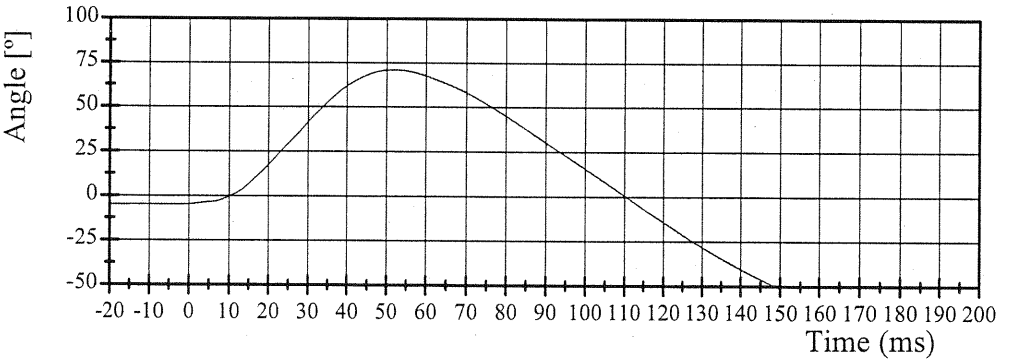


Filter Class: 60

Max: 52.9 ° at 51.6 ms

Min: -57.1 ° at 194.9 ms

Totan



Filter Class: 60

Max: 71.0 ° at 52.1 ms

Min: -73.4 ° at 195.0 ms

06.01.2004 13:55:36 653

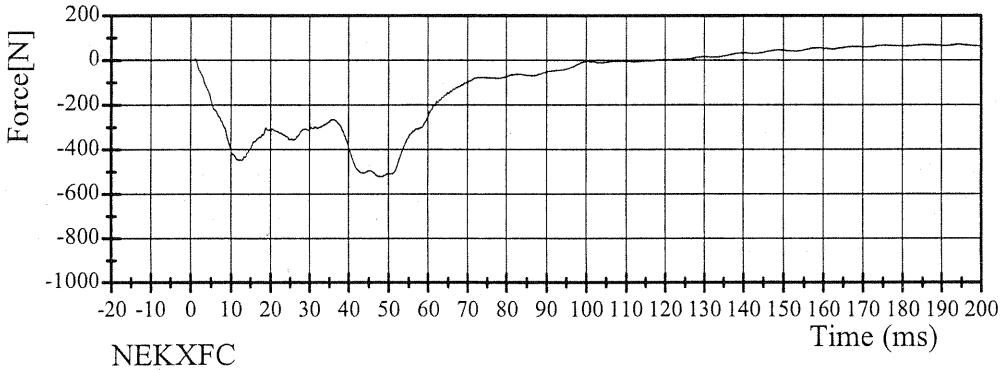
Transportation Research Center Inc.

572P Neck Flexion Test

HIII 3yr Old Serial No. 040 Calibration No. 03 - 3

Test Date 05/18/2004

NEKXF

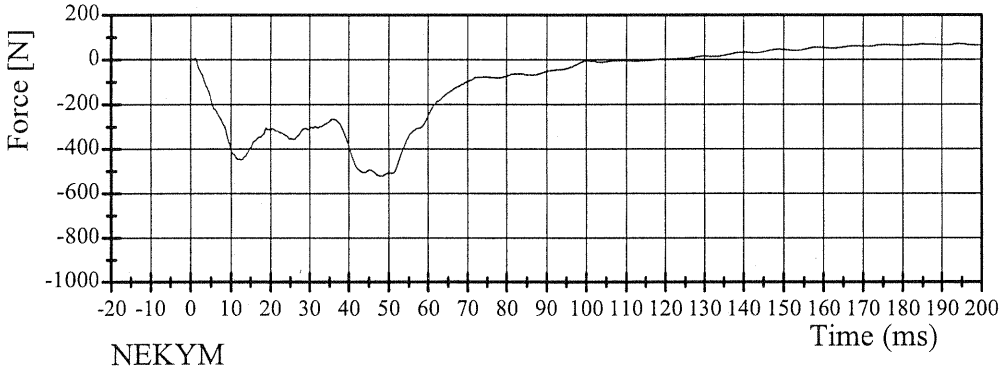


Filter Class: 1000

Max: 71.1 N at 194.4 ms

Min: -521.6 N at 48.0 ms

NEKXFC

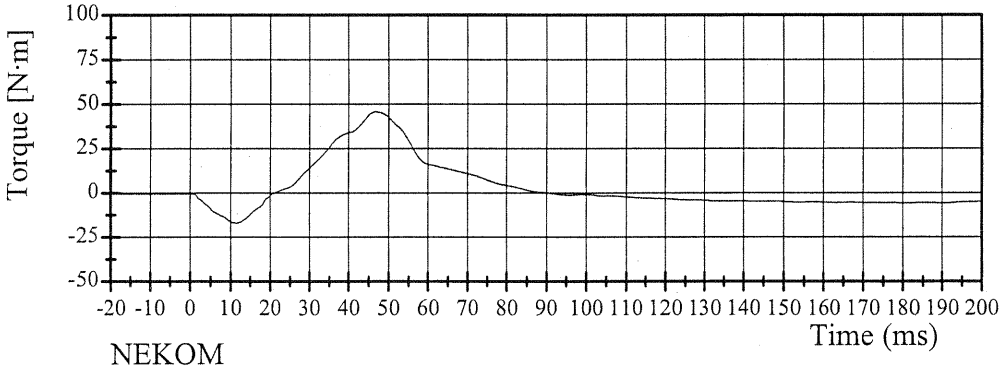


Filter Class: 600

Max: 71.1 N at 194.4 ms

Min: -521.5 N at 48.2 ms

NEKYM

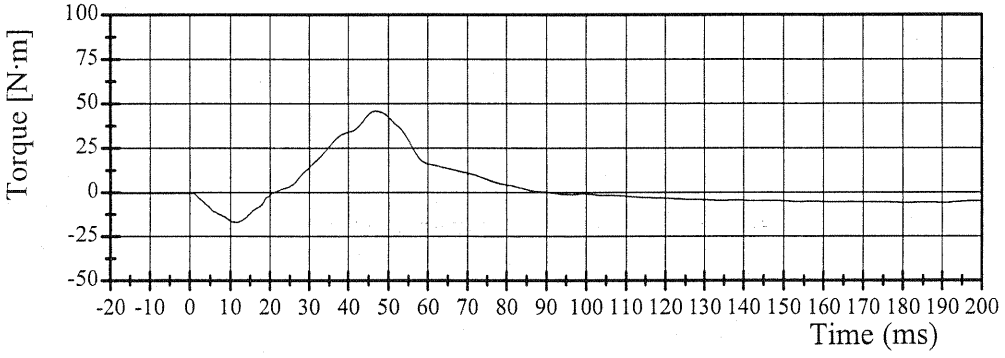


Filter Class: 600

Max: 45.8 N·m at 46.7 ms

Min: -17.1 N·m at 11.4 ms

NEKOM



Filter Class: 600

Max: 45.8 N·m at 46.7 ms

Min: -17.1 N·m at 11.4 ms

06.01.2004 13:55:37 653

Transportation Research Center Inc.

572P Neck Extension Test - 6 Channel Transducer

HIII 3yr Old Serial No. 040 Calibration No. 03 - 2

Test Date 05/18/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.7 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Impact Velocity	3.55 - 3.75 m/s	3.71 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.00 - 1.40 m/s	1.25 m/s	Yes
15 ms	1.90 - 2.50 m/s	2.18 m/s	Yes
20 ms	2.80 - 3.50 m/s	2.96 m/s	Yes
Peak D Plane Rotation	83 - 93 °	86.7 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-53.3 - (-43.7) N·m	-45.06 N·m	Yes
Positive Moment Decay Time To -10 N·m	60 - 80 ms	70.56 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

06.01.2004 13:12:24 995

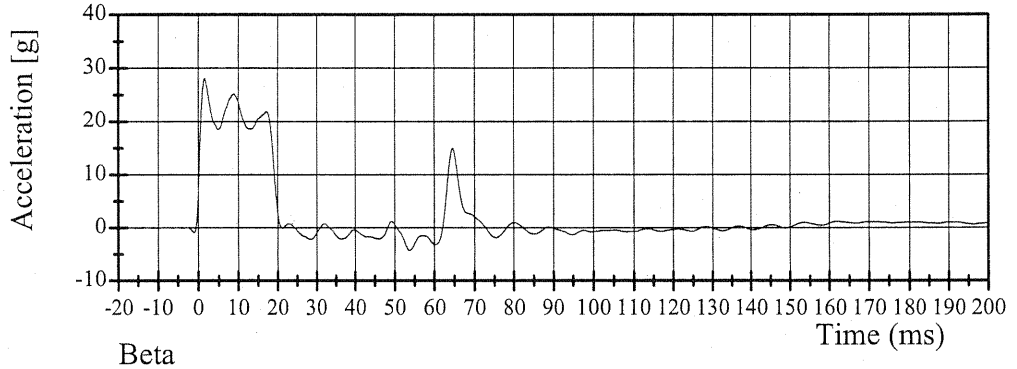
Transportation Research Center Inc.

572P Neck Extension Test

HIII 3yr Old Serial No. 040 Calibration No. 03 - 2

Test Date 05/18/2004

Pendulum Deceleration

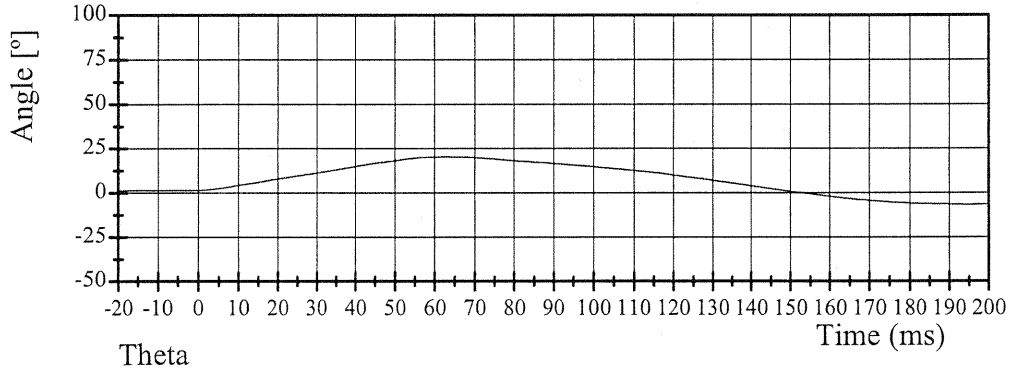


Filter Class: 180

Max: 28.1 g at 1.6 ms

Min: -4.3 g at 53.8 ms

Beta

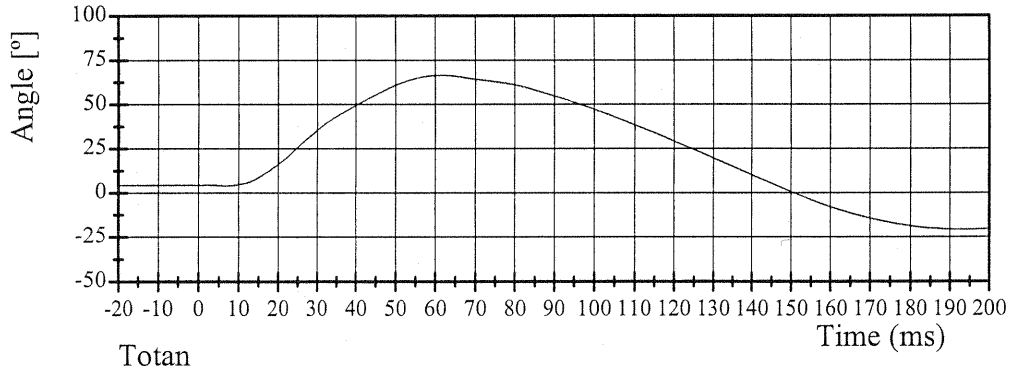


Filter Class: 60

Max: 20.3 ° at 62.1 ms

Min: -6.6 ° at 194.7 ms

Theta

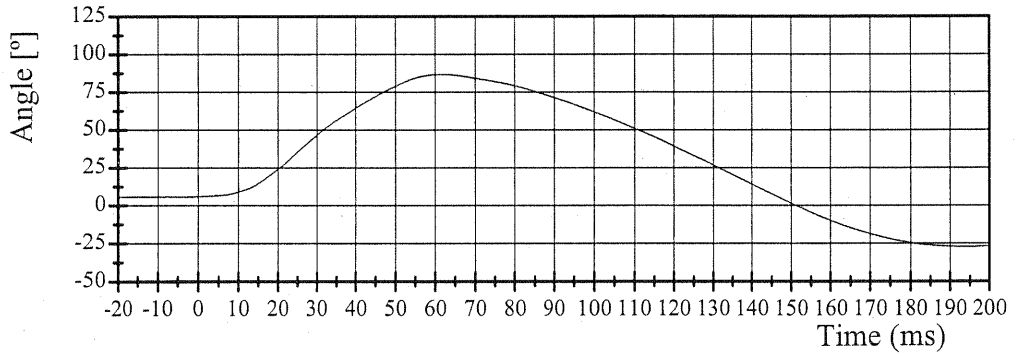


Filter Class: 60

Max: 66.4 ° at 61.5 ms

Min: -20.8 ° at 193.5 ms

Totan



Filter Class: 60

Max: 86.7 ° at 61.5 ms

Min: -27.4 ° at 193.8 ms

06.01.2004 13:12:25 995

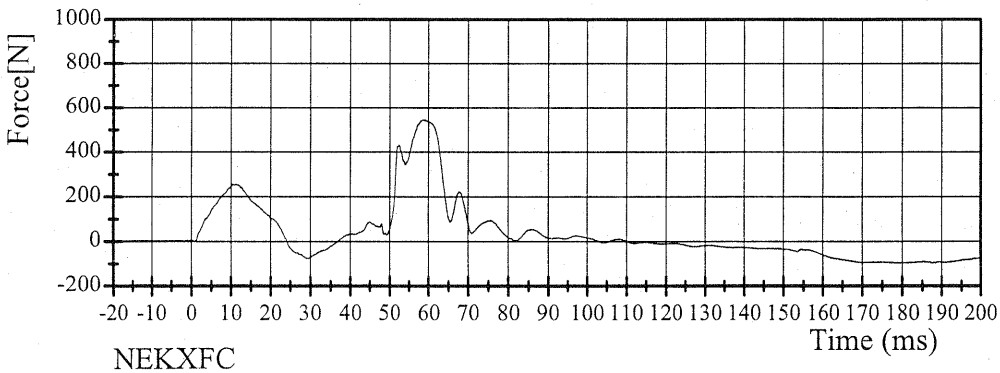
Transportation Research Center Inc.

572P Neck Extension Test

HIII 3yr Old Serial No. 040 Calibration No. 03 - 2

Test Date 05/18/2004

NEKXF

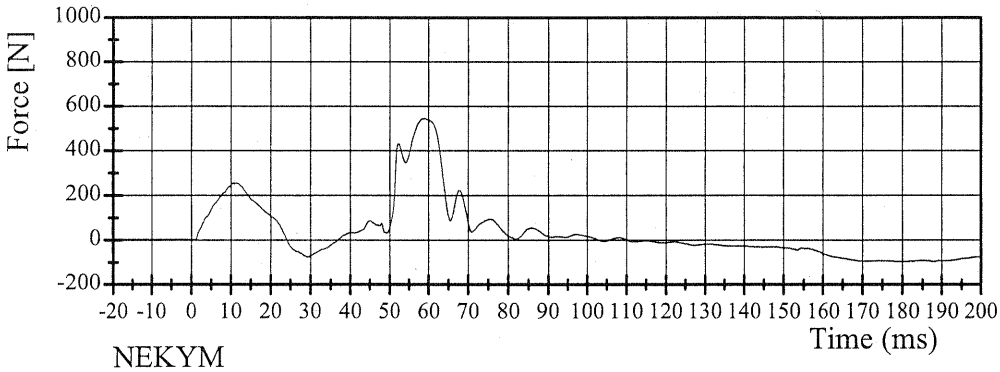


Filter Class: 1000

Max: 544.9 N at 59.1 ms

Min: -97.3 N at 179.2 ms

NEKXFC

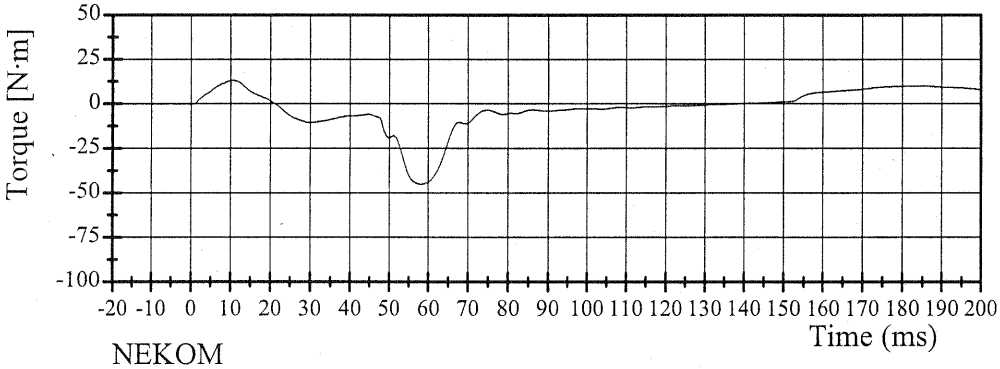


Filter Class: 600

Max: 544.2 N at 59.0 ms

Min: -96.9 N at 179.3 ms

NEKYM

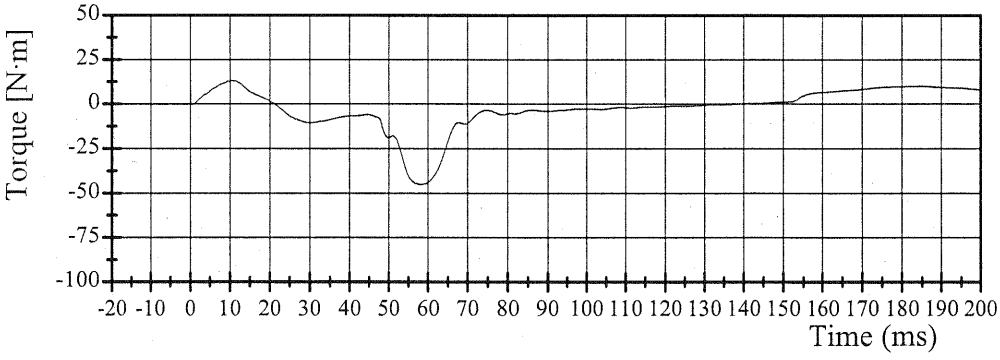


Filter Class: 600

Max: 13.2 N·m at 10.5 ms

Min: -45.1 N·m at 58.2 ms

NEKOM



Filter Class: 600

Max: 13.2 N·m at 10.5 ms

Min: -45.1 N·m at 58.2 ms

06.01.2004 13:12:26 995

Transportation Research Center Inc.

572P Thorax Test

HIII 3 Year Old Serial No. 040 Calibration No. 03 - 1

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	5.90 - 6.10 m/s	5.95 m/s	Yes
Maximum Chest Deflection	-38.0 - (-32.0) mm	-32.4 mm	Yes
Peak Impact Probe Force Within Compression Corridor	680 - 810 N	730 N	Yes
Internal Hysteresis	65 - 85 %	70 %	Yes
Maximum Force Between 12.5 mm & 32 mm Of Deflection	<= 910	811	Yes

Test meets specifications.

Comments:

Technician

Approved

05.19.2004 11:20:44 1000

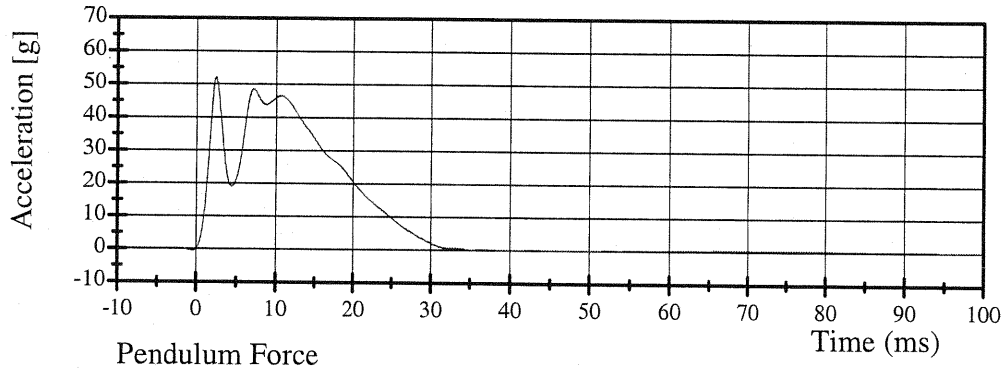
Transportation Research Center Inc.

572P Thorax Test

HIII 3 Year Old Serial No. 040 Calibration No. 03 - 1

Test Date 05/19/2004

Pendulum Deceleration

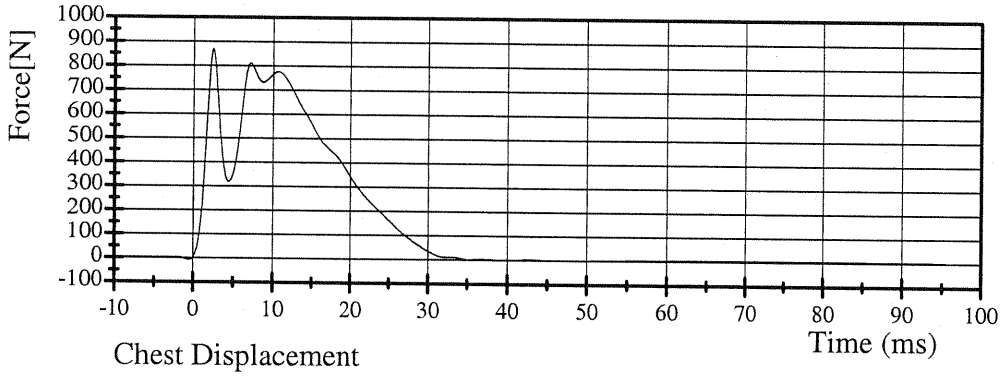


Filter Class: 180

Max: 52.2 g at 2.4 ms

Min: -0.4 g at -0.4 ms

Pendulum Force

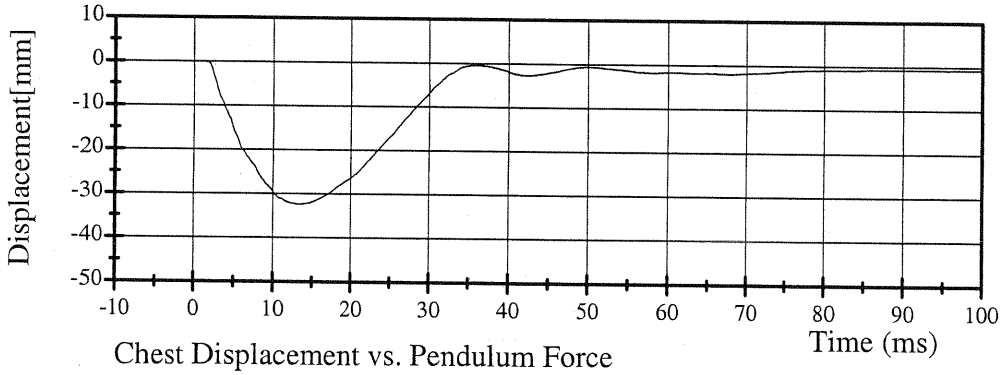


Filter Class: 180

Max: 869.5 N at 2.4 ms

Min: -6.8 N at -0.4 ms

Chest Displacement

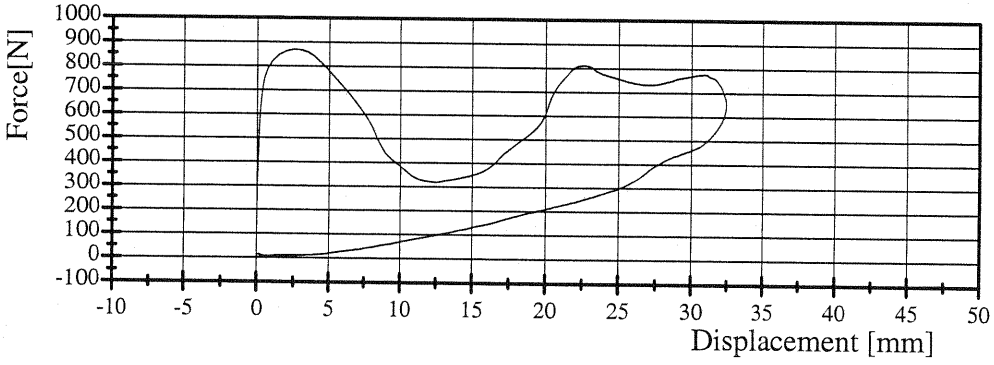


Filter Class: 600

Max: 0.0 mm at -29.3 ms

Min: -32.4 mm at 13.3 ms

Chest Displacement vs. Pendulum Force



05.19.2004 11:20:45 1000

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III THREE-YEAR-OLD

CAL DATE: 18-May-04

TRC, INC. **TEST NO: 040C03TF1** **572 P SN 040 TORSO FLEX CAL 03**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6 DEG. C	20.7 DEG. C
RELATIVE HUMIDITY	10 – 70 %	55 %
INITIAL ANGLE OF UNSUPPORRTED DUMMY	<= 15 DEG. REFERENCED TO VERTICAL	5.1 DEG.
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	130 – 180 N	170.7 N
RETURN ANGLE		1.3 °
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	3.8 °
RATE	0.5° - 1.5°/sec	1.05 °/sec

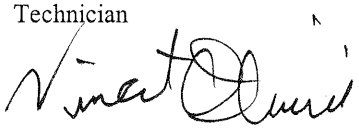
TEST MEETS SPECIFICATIONS

TECHNICIAN 

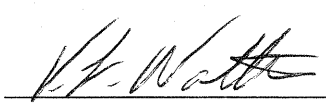
Transportation Research Center Inc.
572P HIII 3 Year Old Dummy
External Dimensions
Serial No. 042 Calibration No. 03

Test Parameter	Dimension	Specification	Results	Pass
Total Sitting Height	A	538.5 - 553.7 mm	544 mm	Yes
Shoulder Pivot Height	B	307.3 - 322.6 mm	315 mm	Yes
Hip Pivot Height	C	33.0 - 43.2 mm	40 mm	Yes
Hip Pivot from Backline	D	56.9 - 67.1 mm	63 mm	Yes
Shoulder Pivot from Backline	E	58.4 - 68.6 mm	63 mm	Yes
Thigh Clearance	F	81.0 - 91.2 mm	87 mm	Yes
Back of Elbow to Wrist Pivot	G	247.4 - 262.6 mm	253 mm	Yes
Head Back to Backline	H	48.3 - 58.4 mm	50 mm	Yes
Shoulder to Elbow Length	I	185.0 - 200.7 mm	193 mm	Yes
Elbow Rest Height	J	133.6 - 148.8 mm	136 mm	Yes
Buttock to Knee Length	K	287.3 - 302.5 mm	293 mm	Yes
Popliteal Height	L	221.0 - 236.2 mm	228 mm	Yes
Knee to Floor Height	M	241.6 - 256.8 mm	249 mm	Yes
Buttock Popliteal Height	N	217.9 - 233.2 mm	229 mm	Yes
Chest Depth without Jacket	O	134.6 - 149.9 mm	145 mm	Yes
Foot Length	P	137.7 - 147.8 mm	141 mm	Yes
Stature	Q	932.2 - 957.6 mm	934 mm	Yes
Buttock to Knee Pivot Length	R	251.5 - 261.6 mm	258 mm	Yes
Head Breadth	S	128.3 - 143.5 mm	136 mm	Yes
Head Depth	T	167.4 - 182.6 mm	176 mm	Yes
Hip Breadth	U	200.7 - 215.9 mm	209 mm	Yes
Shoulder Breadth	V	236.5 - 251.7 mm	243 mm	Yes
Foot Breadth	W	53.6 - 63.8 mm	57 mm	Yes
Head Circumference	X	500.4 - 515.6 mm	510 mm	Yes
Chest Circumference with Jacket	Y	527.1 - 552.5 mm	548 mm	Yes
Waist Circumference	Z	527.1 - 552.5 mm	543 mm	Yes
Reference Location for Chest Circumference	AA	248.9 - 259.1 mm	255 mm	Yes
Reference Location for Waist Circumference	BB	160.0 - 170.2 mm	165 mm	Yes

Technician



Approved



Transportation Research Center Inc.

572P Head Drop Test

HIII 3 Year Old Serial No. 042 Calibration No. 03 - 1

Test Date 05/18/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Peak Resultant Acceleration	250 - 280 g	268.4 g	Yes
Peak Lateral Acceleration	15 g Max	13.1 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

05.18.2004 12:16:34 616

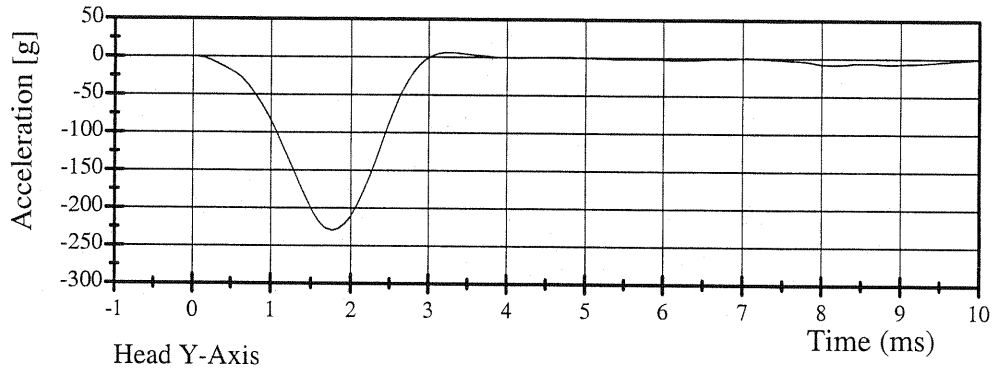
Transportation Research Center Inc.

572P Head Drop Test

HIII 3 Year Old Serial No. 042 Calibration No. 03 - 1

Test Date 05/18/2004

Head X-Axis

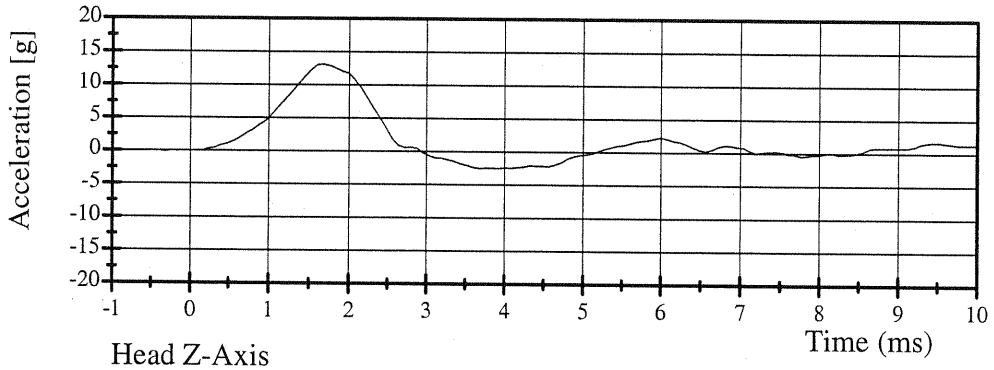


Filter Class: 1000

Max: 6.1 g at 3.3 ms

Min: -229.5 g at 1.8 ms

Head Y-Axis

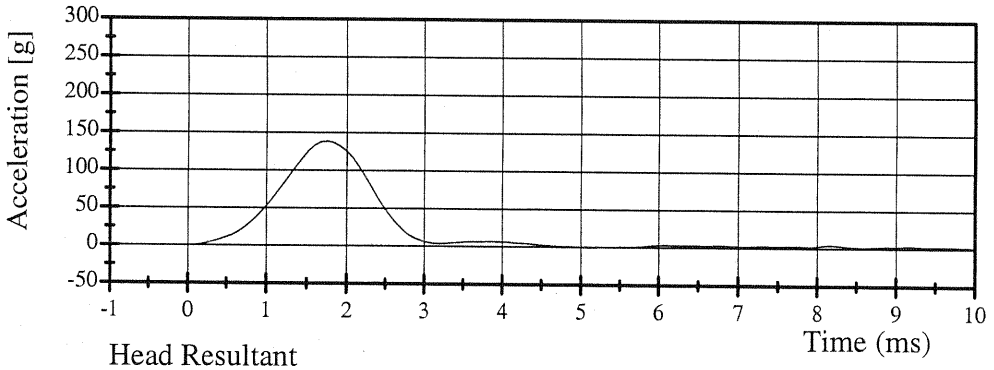


Filter Class: 1000

Max: 13.1 g at 1.7 ms

Min: -2.5 g at 3.7 ms

Head Z-Axis

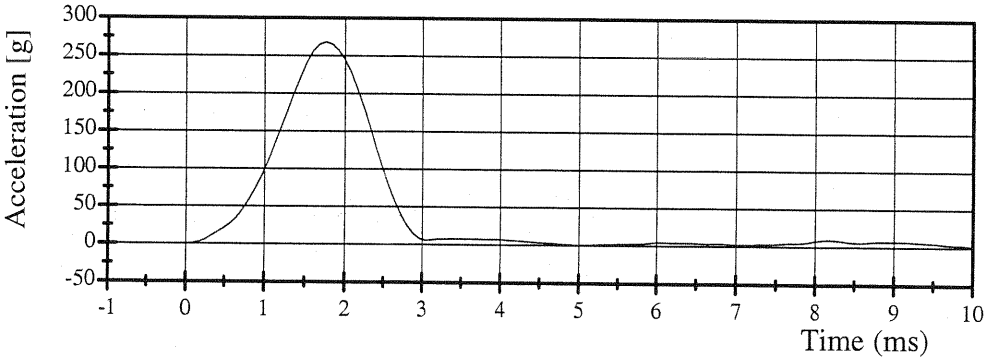


Filter Class: 1000

Max: 138.6 g at 1.8 ms

Min: -0.1 g at 5.0 ms

Head Resultant



Filter Class: 1000

Max: 268.4 g at 1.8 ms

Min: 0.0 g at 4.3 ms

05.18.2004 12:16:35 616

Transportation Research Center Inc.

572P Neck Flexion Test - 6 Channel Transducer

HIII 3yr Old Serial No. 042 Calibration No. 03 - 1

Test Date 06/02/2004

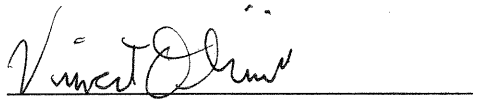
Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Impact Velocity	5.40 - 5.60 m/s	5.47 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.00 - 2.70 m/s	2.21 m/s	Yes
15 ms	3.00 - 4.00 m/s	3.19 m/s	Yes
20 ms	4.00 - 5.10 m/s	4.29 m/s	Yes
Peak D Plane Rotation	70 - 82 °	70.8 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	42.0 - 53.0 N·m	37.82 N·m	No
Positive Moment Decay Time To 10 N·m	60 - 80 ms	74.56 ms	Yes

Test does not meet specifications.

Comments:

This test was originally processed and accepted with an incorrect neck load cell Y-axis sensitivity that indicated a passing test.
The neck load cell X-axis force channel has an anomaly that does not affect the occipital condyle moment results.

Technician



Approved



06.02.2004 09:50:16 667

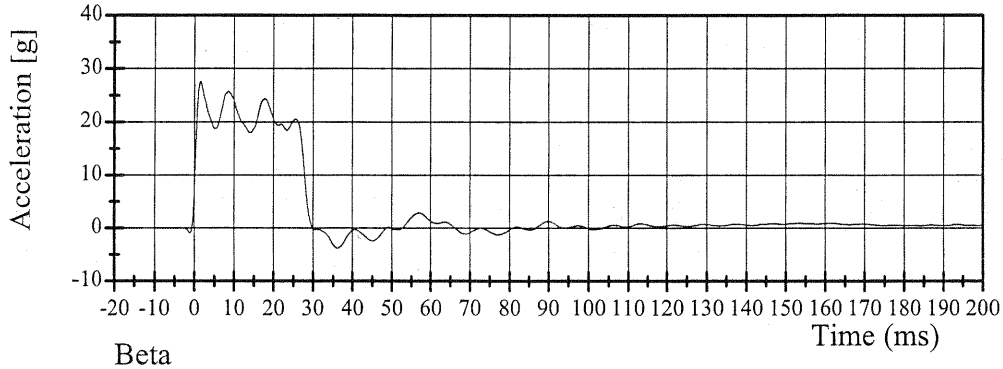
Transportation Research Center Inc.

572P Neck Flexion Test

HIII 3yr Old Serial No. 042 Calibration No. 03 - 1

Test Date 06/02/2004

Pendulum Deceleration

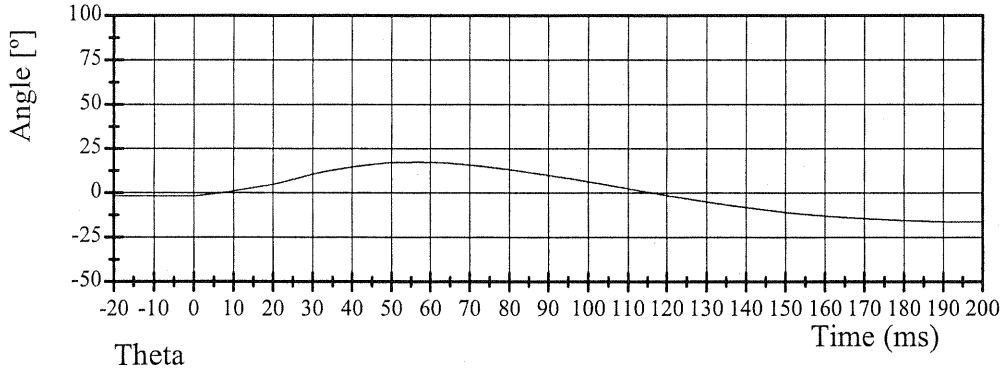


Filter Class: 180

Max: 27.6 g at 1.5 ms

Min: -3.8 g at 36.2 ms

Beta

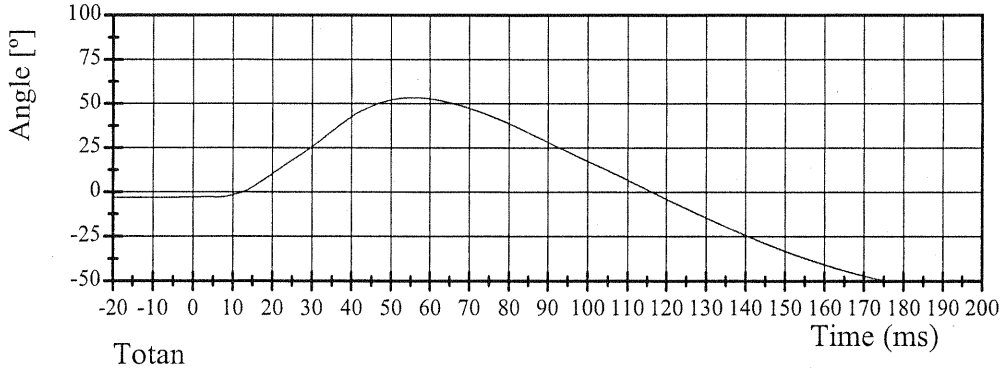


Filter Class: 60

Max: 17.4 ° at 56.9 ms

Min: -16.4 ° at 205.8 ms

Theta

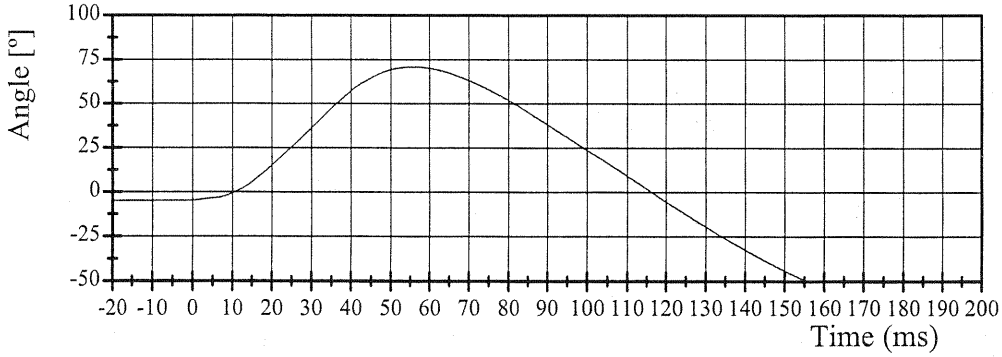


Filter Class: 60

Max: 53.4 ° at 55.9 ms

Min: -55.5 ° at 201.1 ms

Totan



Filter Class: 60

Max: 70.8 ° at 56.2 ms

Min: -71.9 ° at 201.4 ms

06.02.2004 09:50:17 667

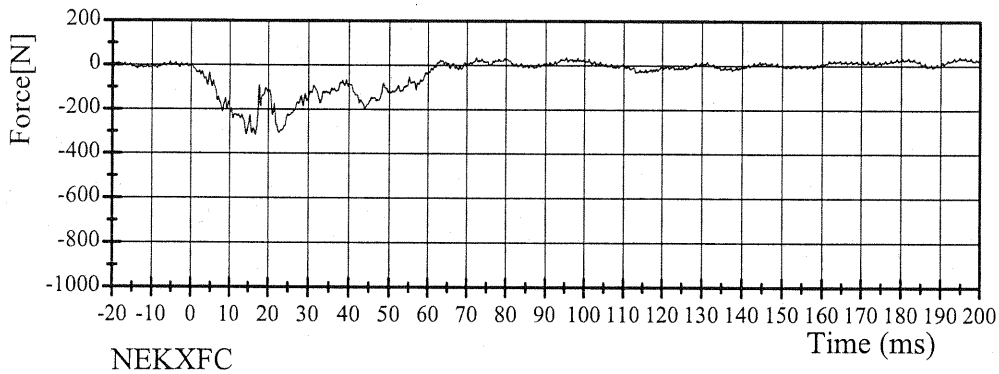
Transportation Research Center Inc.

572P Neck Flexion Test

HIII 3yr Old Serial No. 042 Calibration No. 03 - 1

Test Date 06/02/2004

NEKXF

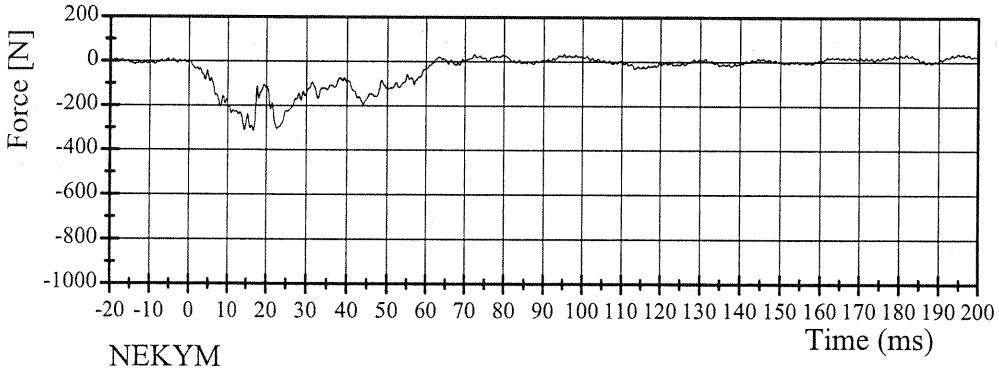


Filter Class: 1000

Max: 60.1 N at 511.5 ms

Min: -314.4 N at 16.7 ms

NEKXFC

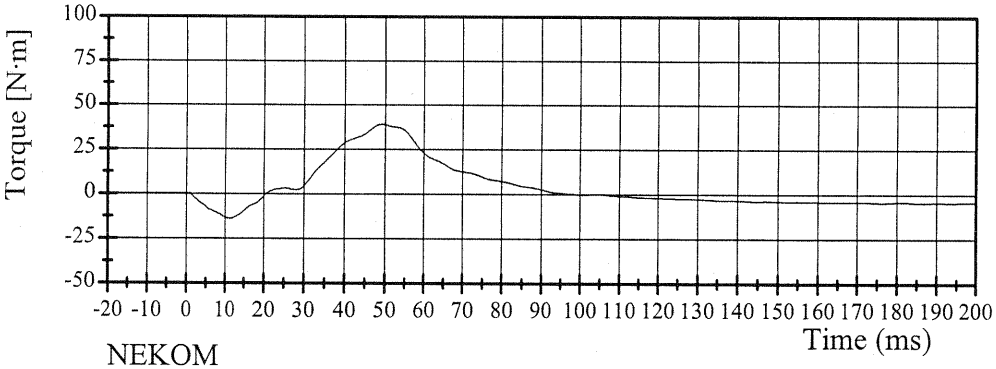


Filter Class: 600

Max: 57.2 N at 513.0 ms

Min: -312.8 N at 16.7 ms

NEKYM

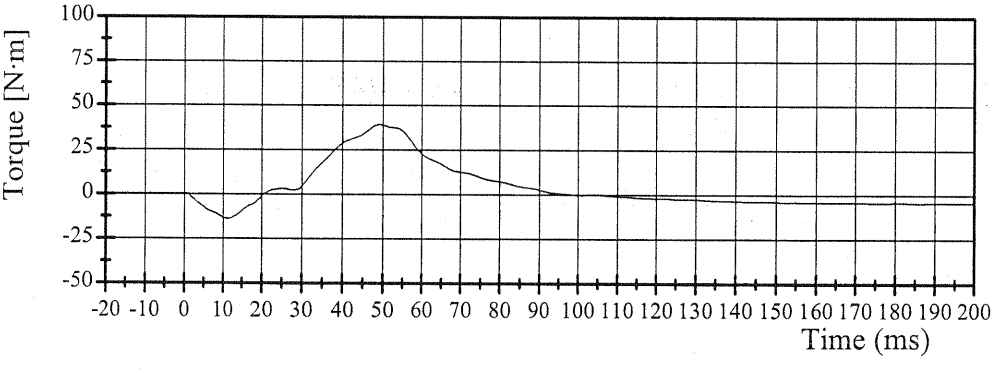


Filter Class: 600

Max: 39.2 N·m at 49.1 ms

Min: -13.9 N·m at 11.4 ms

NEKOM



Filter Class: 600

Max: 39.2 N·m at 49.1 ms

Min: -13.9 N·m at 11.4 ms

06.02.2004 09:50:18 667

Transportation Research Center Inc.

572P Neck Extension Test - 6 Channel Transducer

HIII 3yr Old Serial No. 042 Calibration No. 03 - 1

Test Date 05/18/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Impact Velocity	3.55 - 3.75 m/s	3.63 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.00 - 1.40 m/s	1.26 m/s	Yes
15 ms	1.90 - 2.50 m/s	2.18 m/s	Yes
20 ms	2.80 - 3.50 m/s	2.95 m/s	Yes
Peak D Plane Rotation	83 - 93 °	85.6 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-53.3 - (-43.7) N·m	-40.92 N·m	No
Positive Moment Decay Time To -10 N·m	60 - 80 ms	72.64 ms	Yes

Test does not meet specifications.

Comments:

This test was originally processed and accepted with an incorrect neck load cell Y-axis sensitivity that indicated a passing test.
The neck load cell X-axis force channel has an anomaly that does not affect the occipital condyle moment results.

Technician

Approved

06.02.2004 09:47:21 1015

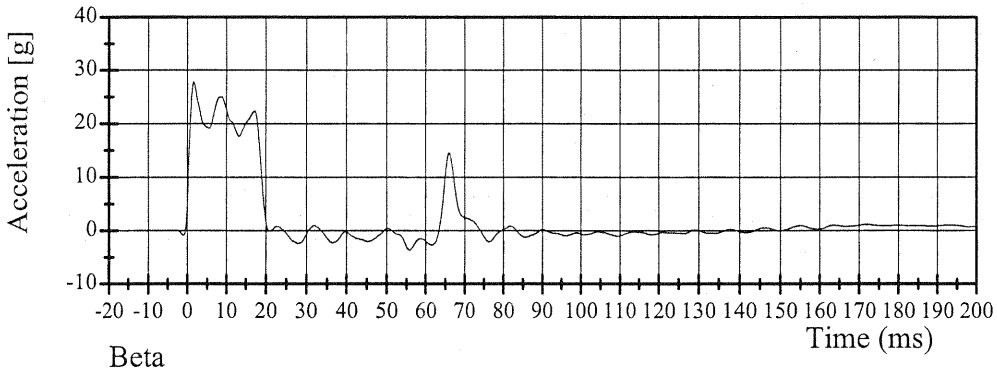
Transportation Research Center Inc.

572P Neck Extension Test

HIII 3yr Old Serial No. 042 Calibration No. 03 - 1

Test Date 05/18/2004

Pendulum Deceleration

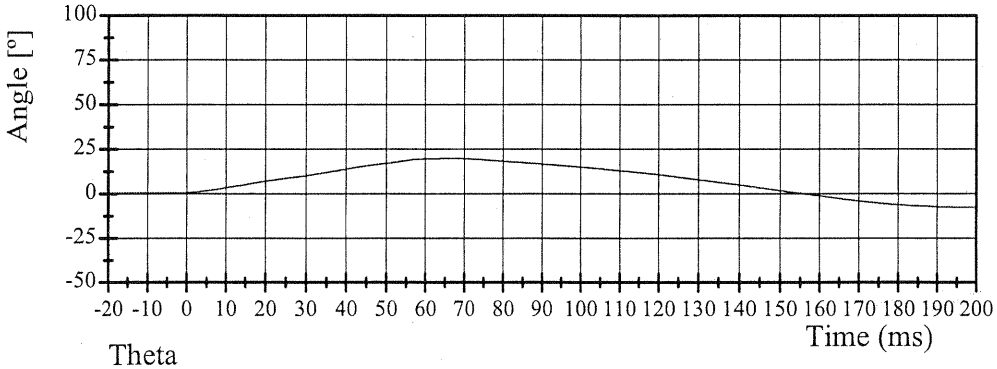


Filter Class: 180

Max: 27.8 g at 1.6 ms

Min: -3.6 g at 55.7 ms

Beta

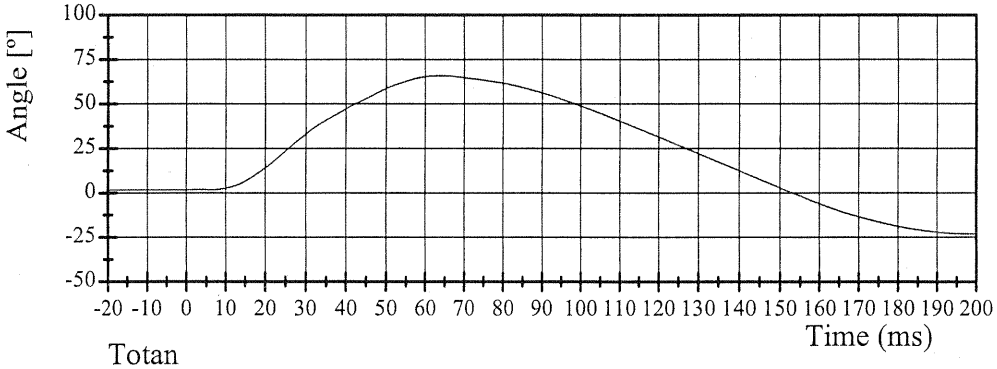


Filter Class: 60

Max: 19.8 ° at 67.5 ms

Min: -7.6 ° at 199.9 ms

Theta

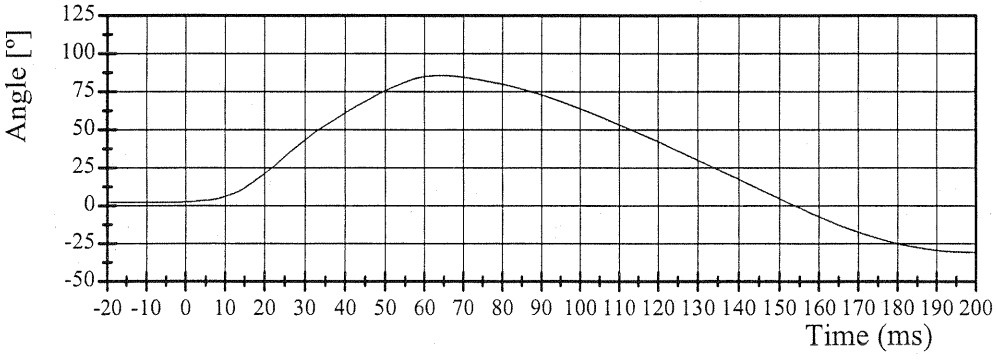


Filter Class: 60

Max: 65.9 ° at 63.8 ms

Min: -23.1 ° at 200.6 ms

Totan



Filter Class: 60

Max: 85.6 ° at 64.2 ms

Min: -30.8 ° at 200.4 ms

06.02.2004 09:47:23 1015

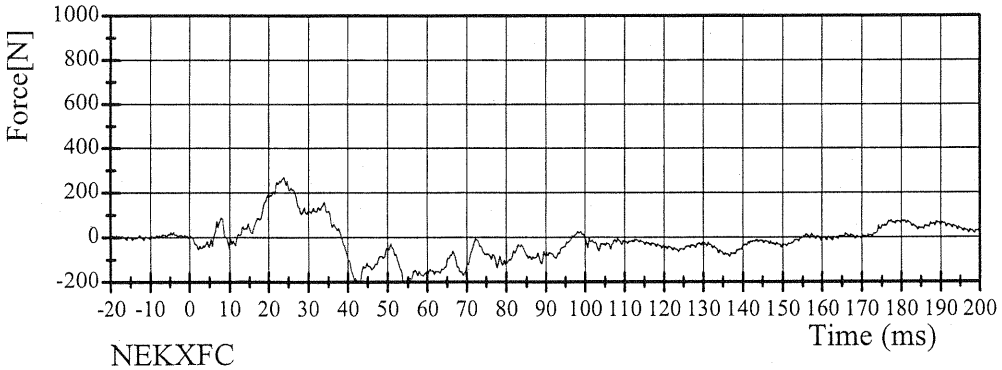
Transportation Research Center Inc.

572P Neck Extension Test

HIII 3yr Old Serial No. 042 Calibration No. 03 - 1

Test Date 05/18/2004

NEKXF

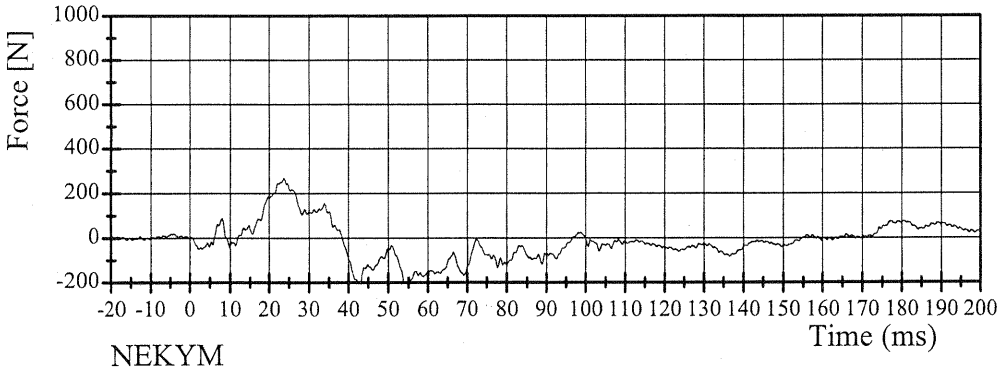


Filter Class: 1000

Max: 268.1 N at 23.8 ms

Min: -235.2 N at 54.6 ms

NEKXFC

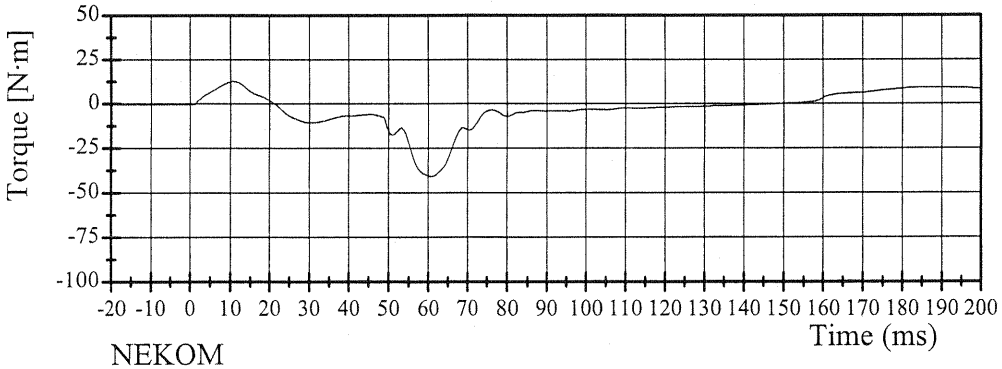


Filter Class: 600

Max: 266.8 N at 23.8 ms

Min: -232.1 N at 54.5 ms

NEKYM

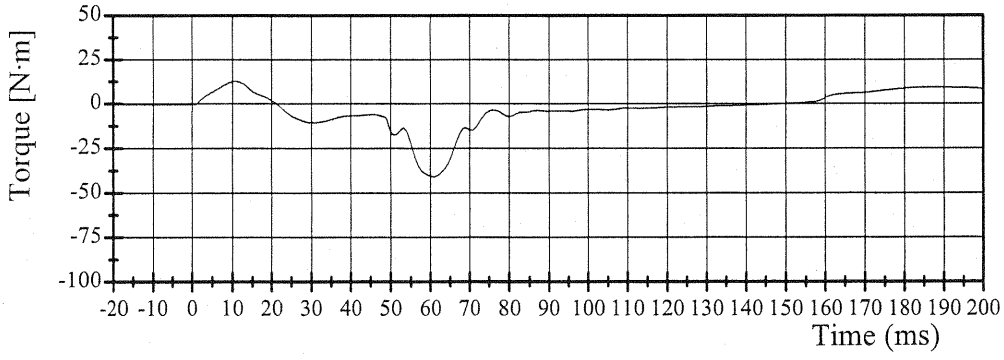


Filter Class: 600

Max: 12.8 N·m at 10.6 ms

Min: -40.9 N·m at 60.8 ms

NEKOM



Filter Class: 600

Max: 12.8 N·m at 10.6 ms

Min: -40.9 N·m at 60.8 ms

06.02.2004 09:47:24 1015

Transportation Research Center Inc.

572P Thorax Test

HIII 3 Year Old Serial No. 042 Calibration No. 03 - 1

Test Date 05/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.6 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Pendulum Velocity	5.90 - 6.10 m/s	5.93 m/s	Yes
Maximum Chest Deflection	-38.0 - (-32.0) mm	-34.6 mm	Yes
Peak Impact Probe Force Within Compression Corridor	680 - 810 N	728 N	Yes
Internal Hysteresis	65 - 85 %	68 %	Yes
Maximum Force Between 12.5 mm & 32 mm Of Deflection	<= 910	785	Yes

Test meets specifications.

Comments:

Technician

Approved

05.19.2004 15:38:51 1068

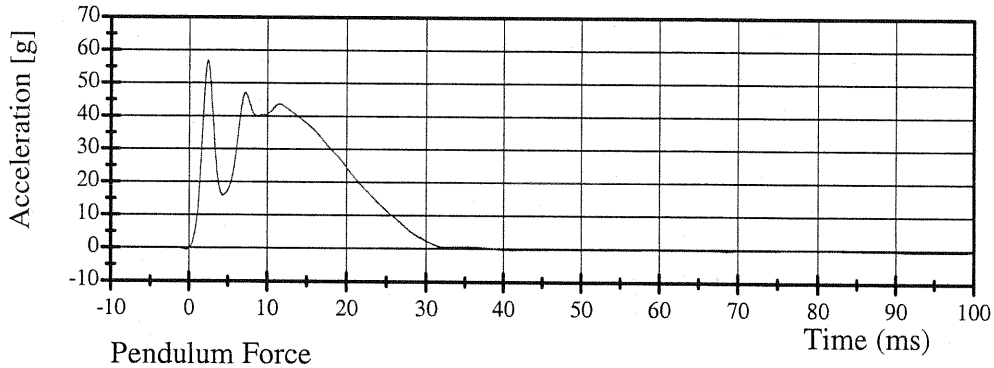
Transportation Research Center Inc.

572P Thorax Test

HIII 3 Year Old Serial No. 042 Calibration No. 03 - 1

Test Date 05/19/2004

Pendulum Deceleration

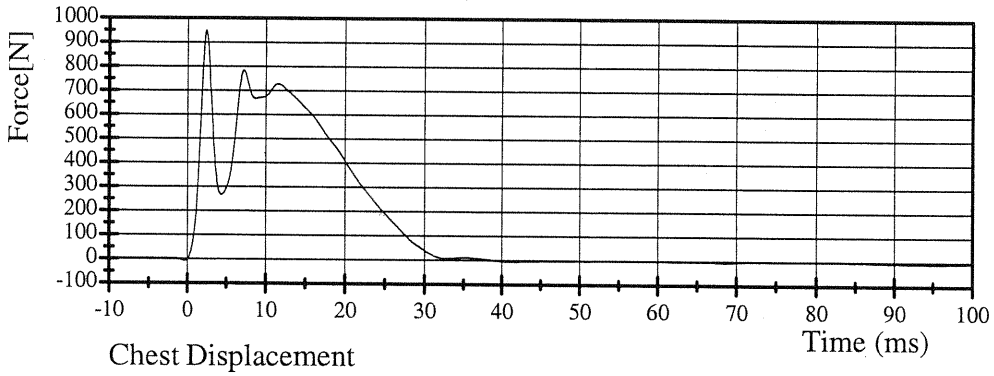


Filter Class: 180

Max: 56.9 g at 2.4 ms

Min: -0.6 g at 659.2 ms

Pendulum Force

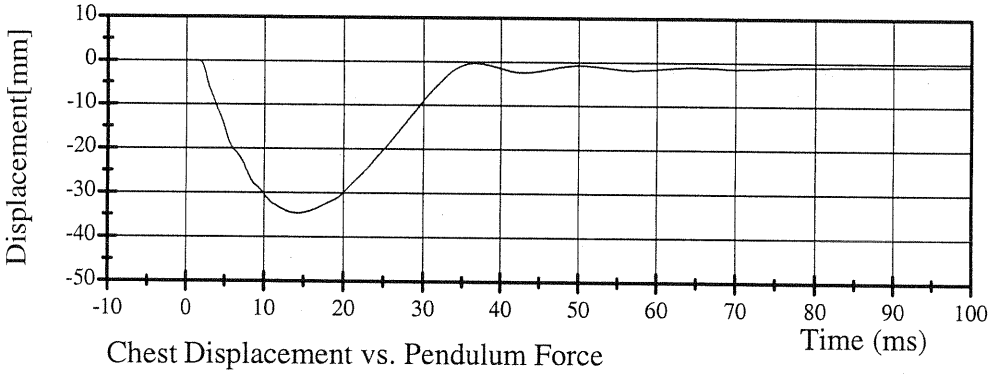


Filter Class: 180

Max: 948.4 N at 2.4 ms

Min: -9.3 N at 659.2 ms

Chest Displacement

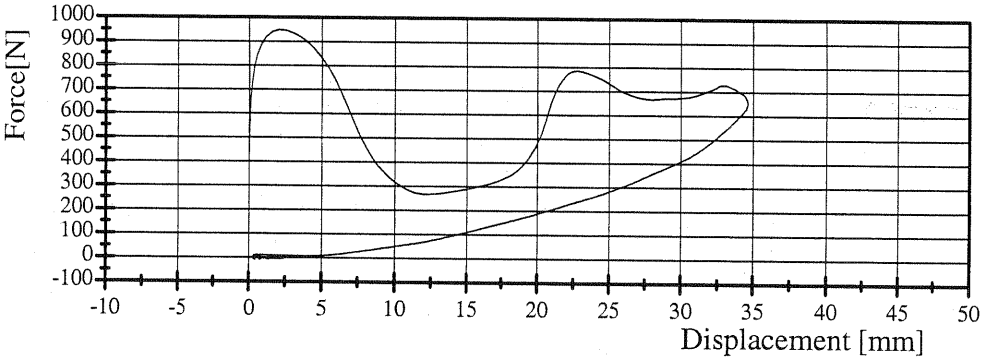


Filter Class: 600

Max: 0.0 mm at -34.8 ms

Min: -34.6 mm at 14.3 ms

Chest Displacement vs. Pendulum Force



05.19.2004 15:38:52 1068

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

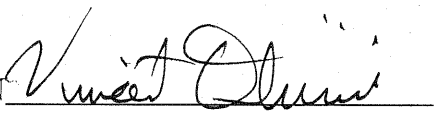
HYBRID III THREE-YEAR-OLD

CAL DATE: 18-May-04

TRC, INC. **TEST NO: 042C03TF1** **572 P SN 042 TORSO FLEX CAL 03**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6 DEG. C	20.6 DEG. C
RELATIVE HUMIDITY	10 – 70 %	53 %
INITIAL ANGLE OF UNSUPPORRTED DUMMY	<= 15 DEG. REFERENCED TO VERTICAL	9.3 DEG.
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	130 – 180 N	163.1 N
RETURN ANGLE		5.3 °
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	4.0 °
RATE	0.5° - 1.5°/sec	1.06 °/sec

TEST MEETS SPECIFICATIONS

TECHNICIAN 

Transportation Research Center Inc.

572P Neck Flexion Test - 6 Channel Transducer

HIII 3yr Old Serial No. 042 Calibration No. 04 - 3

Test Date 05/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	57 %	Yes
Impact Velocity	5.40 - 5.60 m/s	5.52 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.00 - 2.70 m/s	2.50 m/s	Yes
15 ms	3.00 - 4.00 m/s	3.59 m/s	Yes
20 ms	4.00 - 5.10 m/s	4.85 m/s	Yes
Peak D Plane Rotation	70 - 82 °	73.1 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	42.0 - 53.0 N·m	43.83 N·m	Yes
Positive Moment Decay Time To 10 N·m	60 - 80 ms	71.76 ms	Yes

Test meets specifications.

Comments:

Post-test calibration.

Technician

Approved

05.28.2004 14:03:23 665

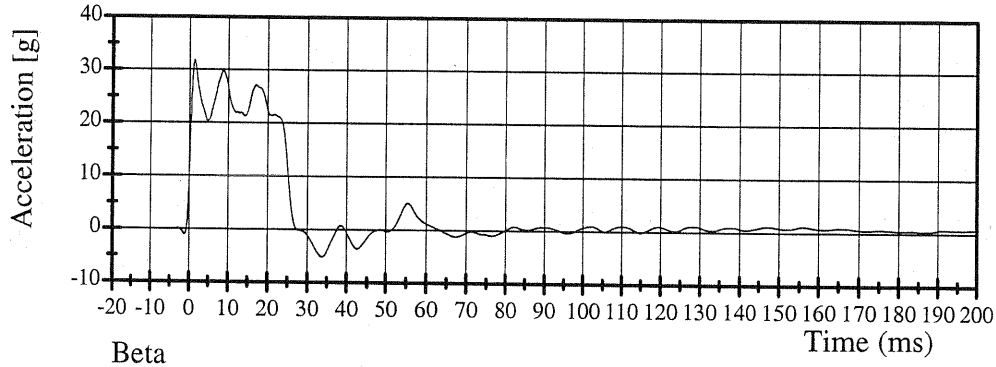
Transportation Research Center Inc.

572P Neck Flexion Test

HIII 3yr Old Serial No. 042 Calibration No. 04 - 3

Test Date 05/28/2004

Pendulum Deceleration

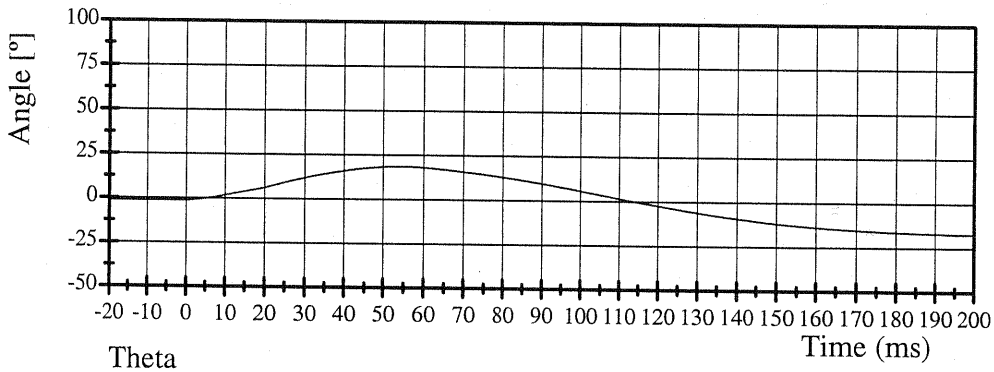


Filter Class: 180

Max: 31.8 g at 1.4 ms

Min: -5.2 g at 33.8 ms

Beta

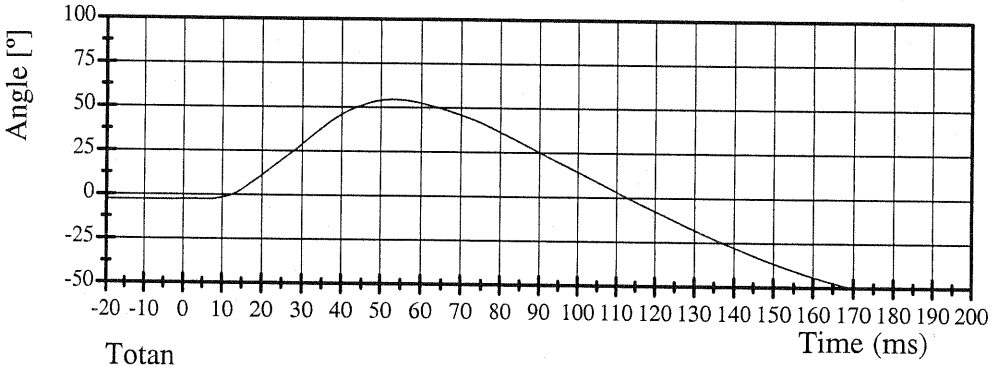


Filter Class: 60

Max: 18.7 ° at 54.0 ms

Min: -17.1 ° at 198.7 ms

Theta

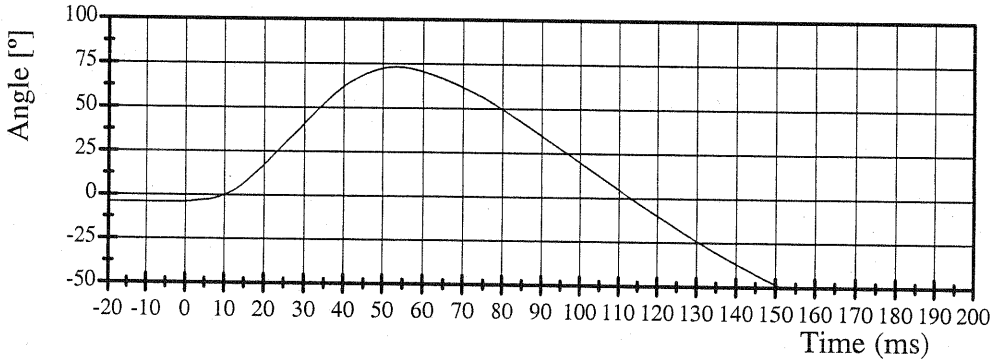


Filter Class: 60

Max: 54.5 ° at 53.1 ms

Min: -57.0 ° at 198.3 ms

Totan



Filter Class: 60

Max: 73.1 ° at 53.4 ms

Min: -74.2 ° at 198.4 ms

05.28.2004 14:03:25 665

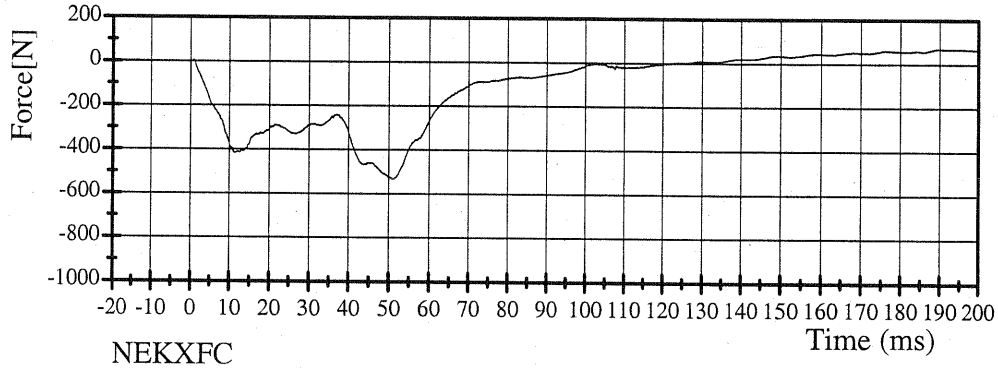
Transportation Research Center Inc.

572P Neck Flexion Test

HIII 3yr Old Serial No. 042 Calibration No. 04 - 3

Test Date 05/28/2004

NEKXF

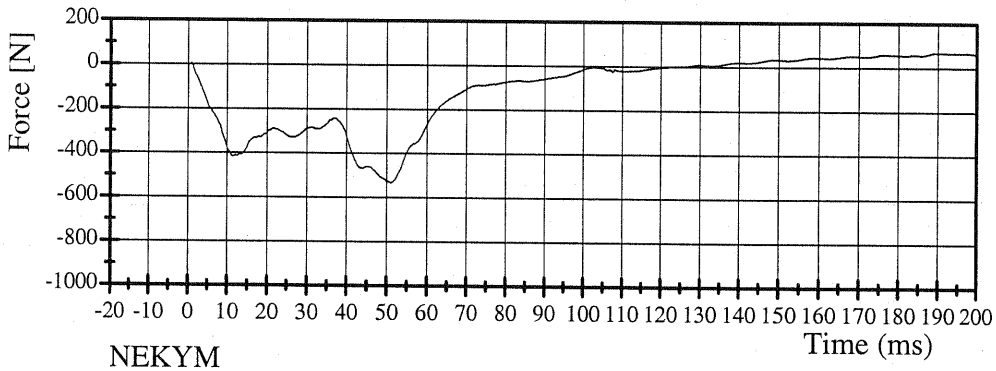


Filter Class: 1000

Max: 69.6 N at 190.0 ms

Min: -532.2 N at 51.1 ms

NEKXFC

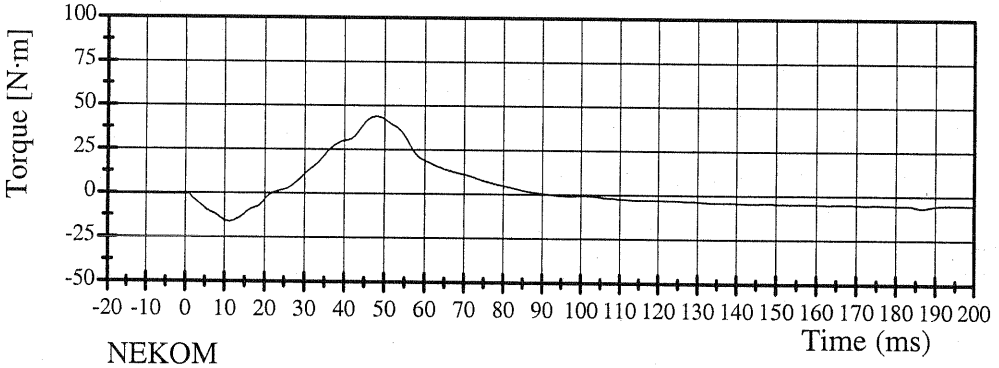


Filter Class: 600

Max: 69.4 N at 190.1 ms

Min: -532.2 N at 51.0 ms

NEKYM

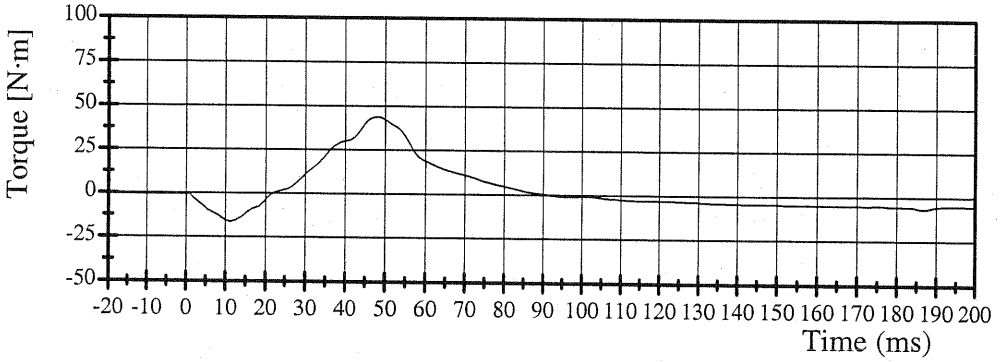


Filter Class: 600

Max: 43.8 N·m at 47.8 ms

Min: -16.3 N·m at 11.1 ms

NEKOM



Filter Class: 600

Max: 43.8 N·m at 47.8 ms

Min: -16.3 N·m at 11.1 ms

05.28.2004 14:03:26 665

Transportation Research Center Inc.

572P Neck Extension Test - 6 Channel Transducer

HIII 3yr Old Serial No. 042 Calibration No. 04 - 2

Test Date 05/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Impact Velocity	3.55 - 3.75 m/s	3.72 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.00 - 1.40 m/s	1.27 m/s	Yes
15 ms	1.90 - 2.50 m/s	2.19 m/s	Yes
20 ms	2.80 - 3.50 m/s	2.95 m/s	Yes
Peak D Plane Rotation	83 - 93 °	88.8 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-53.3 - (-43.7) N·m	-44.93 N·m	Yes
Positive Moment Decay Time To -10 N·m	60 - 80 ms	70.88 ms	Yes

Test meets specifications.

Comments:

Post-test calibration.

Technician

Approved

05.28.2004 15:52:02 993

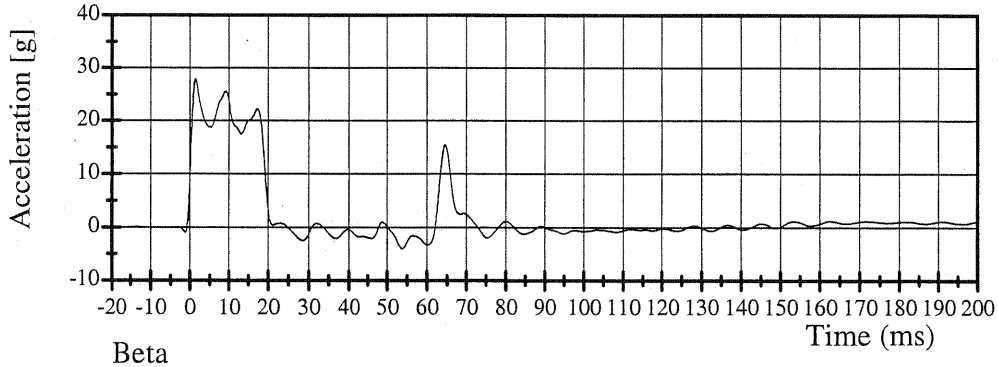
Transportation Research Center Inc.

572P Neck Extension Test

HIII 3yr Old Serial No. 042 Calibration No. 04 - 2

Test Date 05/28/2004

Pendulum Deceleration

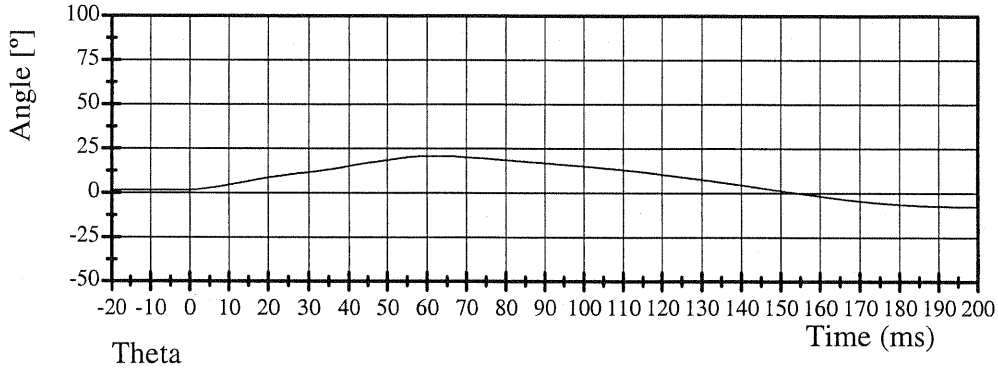


Filter Class: 180

Max: 27.9 g at 1.4 ms

Min: -4.0 g at 53.8 ms

Beta

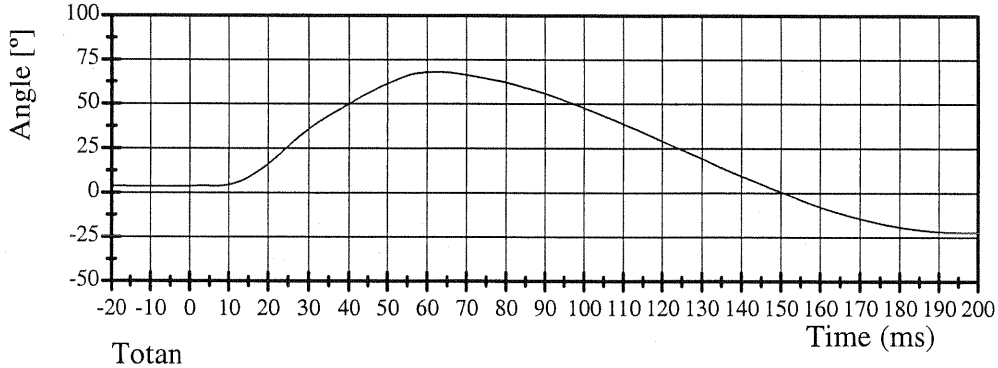


Filter Class: 60

Max: 20.8 ° at 63.4 ms

Min: -7.5 ° at 200.3 ms

Theta

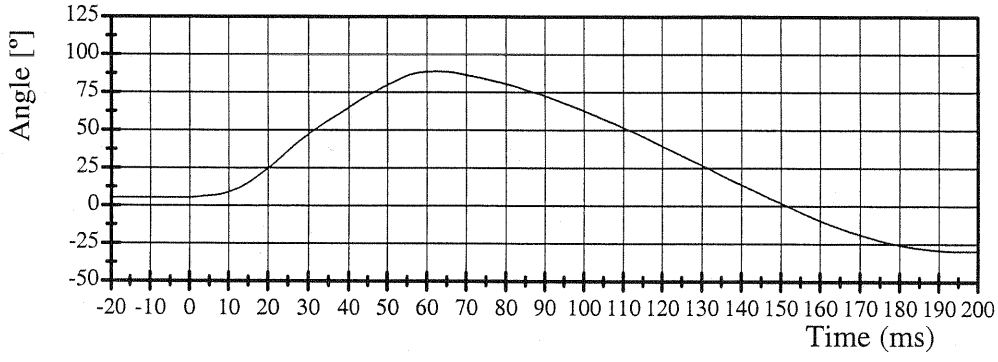


Filter Class: 60

Max: 68.0 ° at 62.6 ms

Min: -22.2 ° at 197.8 ms

Totan



Filter Class: 60

Max: 88.8 ° at 62.7 ms

Min: -29.7 ° at 198.4 ms

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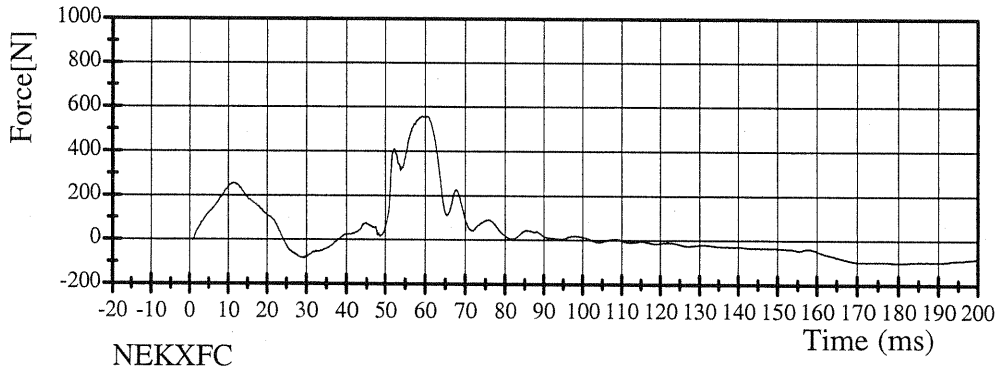
Transportation Research Center Inc.

572P Neck Extension Test

HIII 3yr Old Serial No. 042 Calibration No. 04 - 2

Test Date 05/28/2004

NEKXF

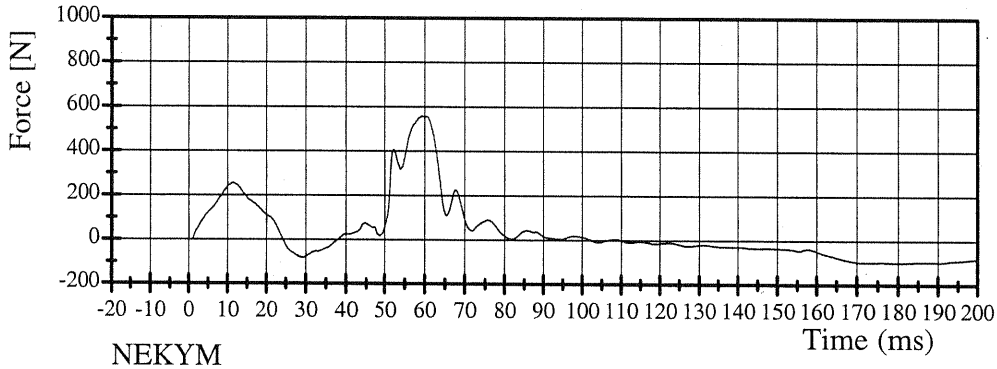


Filter Class: 1000

Max: 557.7 N at 59.2 ms

Min: -99.8 N at 179.8 ms

NEKXFC

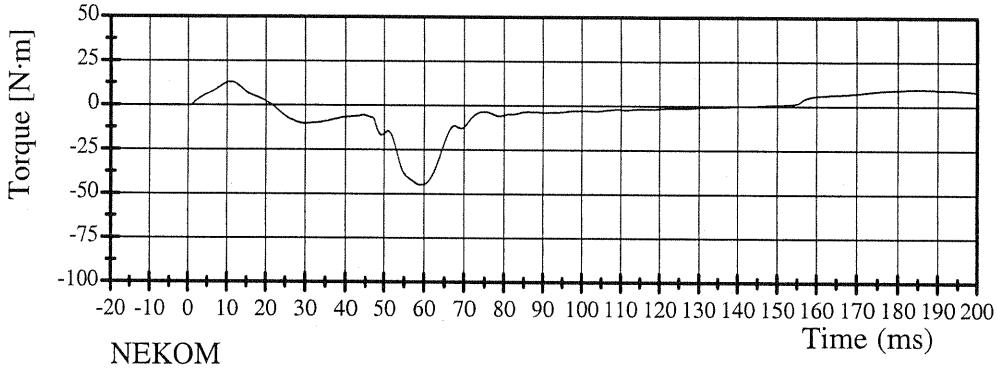


Filter Class: 600

Max: 557.2 N at 59.3 ms

Min: -99.7 N at 179.9 ms

NEKYM

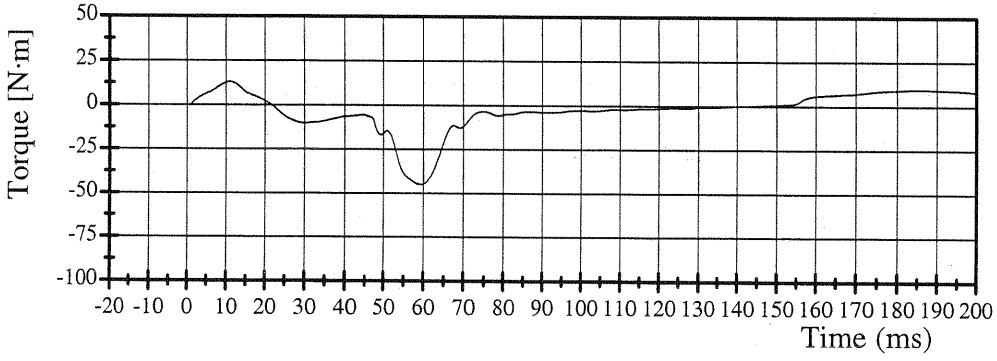


Filter Class: 600

Max: 13.0 N·m at 11.1 ms

Min: -44.9 N·m at 59.5 ms

NEKOM



Filter Class: 600

Max: 13.0 N·m at 11.1 ms

Min: -44.9 N·m at 59.5 ms

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