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**National Highway
Traffic Safety
Administration**



DOT HS 808 394

March 1995


Final Report

Final Report of a Non-Deformable Impactor into the Left Side of a 1992 Chevrolet Caprice CRASH3 Damage Algorithm Reformulation

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16. Abstract <p>Five (5) non-deformable impactor side impact tests were conducted for research and development in support of the CRASH3 damage algorithm reformulation. These tests were conducted on a 1992 Chevrolet Caprice, VIN 1G1BL5374NW138451, at Transportation Research Center Inc. on January 31 and February 6, 1995. The following five tests were conducted on the vehicle:</p> <table border="1" data-bbox="211 1324 1323 1575"> <thead> <tr> <th>Test No.</th> <th>Date</th> <th>Time</th> <th>Speed (Kph)</th> <th>Maximum Cumulative Crush (mm)</th> </tr> </thead> <tbody> <tr> <td>950131-1</td> <td>01/31/95</td> <td>1135</td> <td>8.0</td> <td>27</td> </tr> <tr> <td>950131-2</td> <td>01/31/95</td> <td>1342</td> <td>24.1</td> <td>135</td> </tr> <tr> <td>950131-3</td> <td>01/31/95</td> <td>1559</td> <td>32.2</td> <td>271</td> </tr> <tr> <td>950206-1</td> <td>02/06/95</td> <td>1124</td> <td>32.2</td> <td>356</td> </tr> <tr> <td>950206-2</td> <td>02/06/95</td> <td>1348</td> <td>56.3</td> <td>670</td> </tr> </tbody> </table>		Test No.	Date	Time	Speed (Kph)	Maximum Cumulative Crush (mm)	950131-1	01/31/95	1135	8.0	27	950131-2	01/31/95	1342	24.1	135	950131-3	01/31/95	1559	32.2	271	950206-1	02/06/95	1124	32.2	356	950206-2	02/06/95	1348	56.3	670	13. Type of Report and Period Covered Final Report January - March 1995	
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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
m ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
VOLUME				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³

TEMPERATURE (exact)

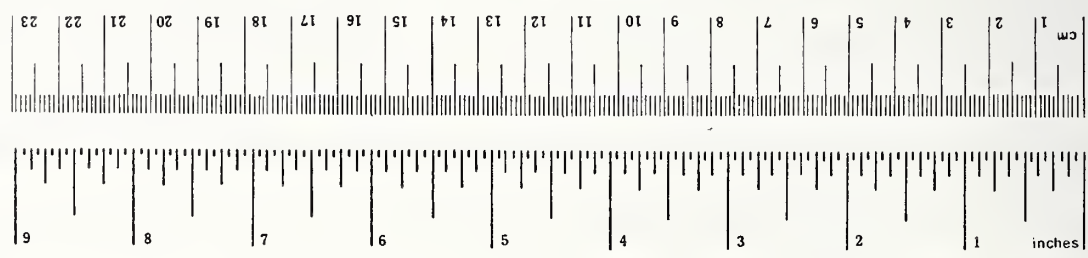
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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Approximate Conversions from Metric Measures

When You Know	Multiply by	To Find	Symbol
LENGTH			
millimeters	0.04	inches	in
centimeters	0.4	inches	in
meters	3.3	feet	ft
meters	1.1	yards	yd
kilometers	0.6	miles	mi
AREA			
square centimeters	0.16	square inches	in ²
square meters	1.2	square yards	yd ²
square kilometers	0.4	square miles	mi ²
hectares (10,000 m ²)	2.5	acres	acres
MASS (weight)			
grams	0.035	ounces	oz
kilograms	2.2	pounds	lb
tonnes (1000 kg)	1.1	short tons	short tons
VOLUME			
milliliters	0.03	fluid ounces	fl oz
liters	2.1	pints	pt
liters	1.06	quarts	qt
liters	0.26	gallons	gal
cubic meters	35	cubic feet	ft ³
cubic meters	1.3	cubic yards	yd ³

TEMPERATURE (exact)

°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F
----	---------------------	-------------------	------------------------	----



*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price \$2.25, SD Catalog No. C13.10286.

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Section 1.0

Purpose and Test Procedure

Purpose and Test Procedure

The purpose of the five (5) non-deformable impactor side impact tests was for research and development in support of the CRASH3 damage algorithm reformulation.

The subject vehicle, a 1992 Chevrolet Caprice, was equipped with a 5.7-liter, 8-cylinder, inline, gasoline engine with a 3-speed automatic transmission. The test weight of the vehicle was 1794 kilograms and the vehicle was instrumented with eleven (11) accelerometers oriented to measure X-, Y-, and Z-axis accelerations.

The vehicle was impacted by an FMVSS 214 type impactor with a non-deformable contoured face and straight wheels. The impactor's test weight was 1739 kg.

Each crash test event was recorded by five (5) high-speed motion picture cameras operating at approximately 1000 frames per second.

The left edge of the impactor's face was aligned with the point 480 mm behind the subject vehicle's front wheel centerline.

Section 2.0

Vehicle and Test Data

Table 1 Test Vehicle Information, Cont'd.

Tires On Vehicle (Mfr., Line, Size): Goodyear, P235/70R15

Tire Pressure With Maximum Capacity Vehicle Load: Front: 300 kPa
Rear: 300 kPa

Spare Tire (Mfr., Line, Size): Goodyear, P235/70R15

Type Of Seats: Front: Split bench
Rear: Bench

Type Of Front Seat Backs: Fixed

Maximum Width: 1956 mm

Wheelbase: 2945 mm

Location of Label Stating Tire Data:

The label was located on the driver's door.

Tire & Capacity Data From Vehicle's Label:

Recommended Tire Size: P235/70R15

Recommended Cold Tire Pressure: Front: 35 psi; Rear: 35 psi

Designated Seating Capacity: Front: 3
Rear: 3
Total: 6

Vehicle Capacity Weight: 1100 lbs.

¹Pre-test attitude measured with third axle installed.

Table 1 Test Vehicle Information, Cont'd.

Weight Of Test Vehicle:

Right Front	530	kg	Right Rear	375	kg
Left Front	511	kg	Left Rear	378	kg
Total Front Weight	1041	kg	(58.0% of Total Vehicle Weight)		
Total Rear Weight	753	kg	(42.0% of Total Vehicle Weight)		
Total Test Weight	1794	kg			

Weight of ballast secured in vehicle cargo area: 0 kg

Components removed to meet target test weight: None

CG = 1236 mm rearward of front wheel centerline

Vehicle Attitudes:

Pre-test: LF 722; RF 723; LR 558; RR 544

Table 2 Impactor Information

Impactor Type: FMVSS 214
Crabbed Angle: 0°
Impactor Face Type: Contoured non-deformable

Weight of Impactor:

Right Front:	379 kg	Right Rear:	490 kg
Left Front:	220 kg	Left Rear:	650 kg
Total Front Weight	599 kg		
Total Rear Weight	1140 kg		
Total Test Weight	1739 kg		

Table 3 Crush Measurements At Vehicle Side Sill Height 245 mm

Location	0		1		2		3		4		5		6		7	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
Pre-Test	1705	792	1779	776	1867	775	1939	776	2018	774	2094	771	2170	772	2249	771
Post-Test 1	1707	801	1780	779	1867	777	1941	778	2016	778	2095	776	2170	775	2252	774
Post-Test 2	1695	851	1770	838	1860	824	1960	804	2036	805	2110	806	2185	802	2260	810
Post-Test 3	1742	947	1789	912	1873	884	1964	881	2048	884	2127	887	2197	895	2272	899
Post-Test 4	1711	1035	1759	992	1849	955	1957	958	2041	964	2125	971	2212	979	2281	985
Post-Test 5	1777	1223	1848	1219	1915	1195	2040	1249	2119	1256	2201	1257	2269	1261	2362	1265

Location	8		9		10		11		12		13		14		15	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
Pre-Test	2324	770	2401	765	2475	766	2551	766	2629	764	2703	264	2778	763	2849	754
Post-Test 1	2326	773	2403	769	2475	769	2552	770	2630	766	2703	767	2778	767	2850	758
Post-Test 2	2325	808	2410	810	2484	810	2558	812	2640	811	2712	814	2885	816	2958	820
Post-Test 3	2364	898	2431	899	2505	908	2575	910	2654	914	2728	916	2809	921	2888	930
Post-Test 4	2357	986	2441	987	2507	991	2598	992	2672	997	2709	1006	2799	1008	2859	1015
Post-Test 5	2444	1269	2513	1277	2577	1278	2656	1285	2724	1294	2782	1298	2882	1309	2946	1320

Location	16		17		18		19		20		21		22		23	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
Pre-Test	2920	761	2994	767	3068	764	3147	759	3225	760	3302	761	3379	764	3452	764
Post-Test 1	2922	766	2995	771	3069	762	3148	762	3227	761	3303	759	3380	764	3451	762
Post-Test 2	2930	820	3000	825	3075	830	3152	826	3230	825	3306	822	3385	818	3458	811
Post-Test 3	2954	934	3047	941	3124	946	3202	945	3314	941	3316	939	3376	938	3476	922
Post-Test 4	2928	1022	2993	1029	3079	1042	3137	1032	3216	1023	3310	1016	3391	1004	3457	988
Post-Test 5	3022	1332	3095	1349	3097	1369	3197	1345	3291	1324	3343	1275	3402	1269	3508	1212

All measurements are in millimeters. Column readings are 75 millimeters apart starting on the left side of the vehicle.

All X-axis measurements taken from a reference plane 225 millimeters from and parallel to the front bumper.

All Y-axis measurements taken from a reference plane 1200 millimeters from and parallel to the vehicle's longitudinal centerline

Table 3, Cont'd.

Location	24	25	26	27	28	29	30	31
Pre-Test	X	Y	X	Y	X	Y	X	Y
Post-Test 1	3526	766	6306	765	3681	765	3681	765
Post-Test 2	3525	766	6308	764	3683	764	3683	764
Post-Test 3	3525	812	3605	800	3678	803	3678	803
Post-Test 4	3538	972	3590	955	3682	943	3682	943
Post-Test 5	3522	1171	3559	1141	3609	1106	3609	1106

Location	32	33	34	35	36	37	38	39
Pre-Test	X	Y	X	Y	X	Y	X	Y
Post-Test 1	814	716	NA	NA	NA	NA	NA	NA
Post-Test 2	814	716	NA	NA	NA	NA	NA	NA
Post-Test 3	814	716	NA	NA	NA	NA	NA	NA
Post-Test 4	814	716	NA	NA	NA	NA	NA	NA
Post-Test 5	814	716	NA	NA	NA	NA	NA	NA

Location	40	41	42	43	44	45	46	47
Pre-Test	X	Y	X	Y	X	Y	X	Y
Post-Test 1	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 2	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 3	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 4	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 5	NA	NA	NA	NA	NA	NA	NA	NA

All measurements are in millimeters. Column readings are 75 millimeters apart starting on the left side of the vehicle.

All X-axis measurements taken from a reference plane 225 millimeters from and parallel to the front bumper.

All Y-axis measurements taken from a reference plane 1200 millimeters from and parallel to the vehicle's longitudinal centerline

Table 4 Crush Measurements At Vehicle Axle Height 335 mm

Location	0	1	2	3	4	5	6	7								
	X	Y	X	Y	X	Y	X	Y								
Pre-Test	242	1571	233	1494	227	1419	319	1357	336	1279	343	1201	354	1125	367	1047
Post-Test 1	242	1571	233	1494	227	1419	319	1357	336	1279	343	1201	354	1125	367	1047
Post-Test 2	242	1571	233	1494	227	1419	319	1357	336	1279	343	1201	354	1125	367	1047
Post-Test 3	242	1571	233	1494	227	1419	319	1357	336	1279	343	1201	354	1125	367	1047
Post-Test 4	242	1571	233	1494	227	1419	319	1357	336	1279	343	1201	354	1125	367	1047
Post-Test 5	242	1571	233	1494	227	1419	319	1357	336	1279	343	1201	354	1125	367	1047

Location	8	9	10	11	12	13	14	15								
	X	Y	X	Y	X	Y	X	Y								
Pre-Test	386	971	407	895	447	830	529	791	596	769	671	756	752	741	831	741
Post-Test 1	386	971	407	895	447	830	529	791	596	769	671	756	752	741	831	741
Post-Test 2	386	971	407	895	447	830	529	791	596	769	671	756	752	741	831	741
Post-Test 3	386	971	407	895	447	830	529	791	596	769	671	756	752	741	831	741
Post-Test 4	386	971	407	895	447	830	529	791	596	769	671	756	752	741	831	741
Post-Test 5	386	971	407	895	447	830	529	791	596	769	671	756	752	741	831	741

Location	16	17	18	19	20	21	22	23
	X	Y	X	Y	X	Y	X	Y
Pre-Test	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 1	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 2	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 3	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 4	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 5	NA	NA	NA	NA	NA	NA	NA	NA

All measurements are in millimeters. Column readings are 75 millimeters apart starting on the left side of the vehicle.

All X-axis measurements taken from a reference plane 225 millimeters from and parallel to the front bumper.

All Y-axis measurements taken from a reference plane 1200 millimeters from and parallel to the vehicle's longitudinal centerline

Table 4, Cont'd.

Location	24	25	26	27	28	29	30	31
Pre-Test	NA	NA	NA	1737	1807	1889	1964	2041
Post-Test 1	NA	NA	NA	1725	1803	1877	1952	2031
Post-Test 2	NA	NA	NA	1725	1800	1890	1963	2040
Post-Test 3	NA	NA	NA	1740	1828	1902	1967	2052
Post-Test 4	NA	NA	NA	1738	1803	1892	1972	2057
Post-Test 5	NA	NA	NA	1799	1863	1991	2045	2137

Location	32	33	34	35	36	37	38	39
Pre-Test	2116	2194	2270	2344	2423	2490	2565	2641
Post-Test 1	2106	2186	2264	2344	2426	2455	2578	2653
Post-Test 2	2115	2194	2270	2345	2419	2501	2574	2650
Post-Test 3	2124	2201	2280	2361	2439	2519	2591	2665
Post-Test 4	2128	2204	2286	2367	2441	2520	2602	2673
Post-Test 5	2209	2284	2365	2452	2519	2597	2671	2745

Location	40	41	42	43	44	45	46	47
Pre-Test	2719	2794	2865	2939	3013	3094	3168	3244
Post-Test 1	2728	2803	2877	2957	3029	3107	3177	3258
Post-Test 2	2727	2805	2878	2953	3021	3102	3179	3254
Post-Test 3	2742	2814	2892	2972	3034	3121	3197	3282
Post-Test 4	2749	2821	2893	2972	3037	3124	3199	3275
Post-Test 5	2802	2901	2962	3053	3107	3177	3243	3323

All measurements are in millimeters. Column readings are 75 millimeters apart starting on the left side of the vehicle.

All X-axis measurements taken from a reference plane 225 millimeters from and parallel to the front bumper.

All Y-axis measurements taken from a reference plane 1200 millimeters from and parallel to the vehicle's longitudinal centerline.

Table 4, Cont'd.

Location	48	49	50	51	52	53	54	55
	X	Y	X	Y	X	Y	X	Y
Pre-Test	2527	652	2444	649	2290	649	2212	650
Post-Test 1	2515	664	2442	659	2291	654	2210	652
Post-Test 2	3327	761	3398	738	3545	703	3622	689
Post-Test 3	333	899	3402	860	3559	811	3626	786
Post-Test 4	351	970	3420	924	3543	861	3607	833
Post-Test 5	3369	1271	3407	1193	3482	1066	3553	1011

Location	56	57	58	59	60	61	62	63
	X	Y	X	Y	X	Y	X	Y
Pre-Test	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 1	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 2	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 3	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 4	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 5	NA	NA	NA	NA	NA	NA	NA	NA

Location	64	65	66	67	68	69	70	71
	X	Y	X	Y	X	Y	X	Y
Pre-Test	NA	NA	NA	NA	4654	682	4729	688
Post-Test 1	NA	NA	NA	NA	4654	682	4729	688
Post-Test 2	NA	NA	NA	NA	4654	682	4729	688
Post-Test 3	NA	NA	NA	NA	4654	682	4729	688
Post-Test 4	NA	NA	NA	NA	4654	682	4729	688
Post-Test 5	NA	NA	NA	NA	4654	682	4729	688

All measurements are in millimeters. Column readings are 75 millimeters apart starting on the left side of the vehicle.

All X-axis measurements taken from a reference plane 225 millimeters from and parallel to the front bumper.

All Y-axis measurements taken from a reference plane 1200 millimeters from and parallel to the vehicle's longitudinal centerline

Table 5 Crush Measurements At Vehicle Mid-Door Height 562 mm

Location	0		1		2		3		4		5		6		7	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
Pre-Test	1644	653	1715	651	1790	649	1865	646	1940	645	2017	640	2094	639	2169	637
Post-Test 1	1644	653	1717	653	1791	650	1868	650	1941	649	2017	641	2091	639	2166	639
Post-Test 2	1647	679	1724	691	1801	681	1874	678	1949	670	2023	676	2100	673	2178	677
Post-Test 3	1667	754	1738	768	1832	769	1897	769	1971	747	2043	774	2122	784	2195	785
Post-Test 4	1665	837	1723	856	1822	857	1898	858	1984	960	2059	868	2129	871	2200	873
Post-Test 5	1766	1057	1779	1103	1718	1047	1992	1156	2072	1158	2136	1163	2205	1171	2273	1174

Location	8		9		10		11		12		13		14		15	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
Pre-Test	2239	635	2315	631	2391	629	2467	627	2539	625	2615	626	2690	623	2765	622
Post-Test 1	2244	633	2318	632	2398	629	2469	629	2545	631	2621	630	2692	630	2770	629
Post-Test 2	2249	678	2323	681	2400	680	2479	680	2548	678	2620	683	2698	685	2772	689
Post-Test 3	2271	787	2343	787	2424	803	2497	801	2566	807	2640	810	2714	812	2788	814
Post-Test 4	2279	877	2349	878	2436	878	2509	788	2582	889	2659	896	2729	891	2797	897
Post-Test 5	2363	1175	2444	1179	2512	1184	2588	1191	2669	1196	2729	1200	2802	1204	2891	1208

Location	16		17		18		19		20		21		22		23	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
Pre-Test	2838	622	2917	625	2990	625	3067	623	3141	625	3219	626	3292	624	3365	622
Post-Test 1	2840	631	2920	635	2991	639	3068	633	3144	629	3217	632	3290	630	3366	633
Post-Test 2	2847	690	2925	685	3002	686	3075	691	3150	689	3225	690	3295	677	3368	657
Post-Test 3	2861	815	2934	819	3007	822	3085	825	3151	830	3226	828	3304	812	3359	783
Post-Test 4	2879	901	2949	903	3014	904	3076	907	3159	911	3219	902	3330	881	3373	839
Post-Test 5	2962	1210	3042	1213	3106	1217	3148	1231	3198	1227	3285	1209	3346	1191	3383	1134

All measurements are in millimeters. Column readings are 75 millimeters apart starting on the left side of the vehicle.

All X-axis measurements taken from a reference plane 225 millimeters from and parallel to the front bumper.

All Y-axis measurements taken from a reference plane 1200 millimeters from and parallel to the vehicle's longitudinal centerline

Table 5, Cont'd.

Location	24	25	26	27	28	29	30	31						
Pre-Test	3848	622	3515	625	3595	625	3742	628	3815	628	3890	633	3965	637
Post-Test 1	3439	625	3517	627	3595	626	3745	630	3815	630	3889	633	3965	637
Post-Test 2	3440	633	3515	632	3600	626	3743	628	3815	628	3890	632	3965	638
Post-Test 3	3429	754	3551	732	3584	722	3727	705	3805	703	3879	702	3952	697
Post-Test 4	3452	813	3514	784	3551	767	3721	745	3796	737	3864	733	3939	721
Post-Test 5	3422	1071	3481	1015	3542	964	3645	890	3716	861	3787	829	3882	809

Location	32	33	34	35	36	37	38	39
Pre-Test	4041	633	4115	640	NA	NA	NA	NA
Post-Test 1	4040	635	4111	642	NA	NA	NA	NA
Post-Test 2	4035	635	4112	640	NA	NA	NA	NA
Post-Test 3	4026	696	4099	691	NA	NA	NA	NA
Post-Test 4	4012	712	4087	703	NA	NA	NA	NA
Post-Test 5	3967	791	4029	761	NA	NA	NA	NA

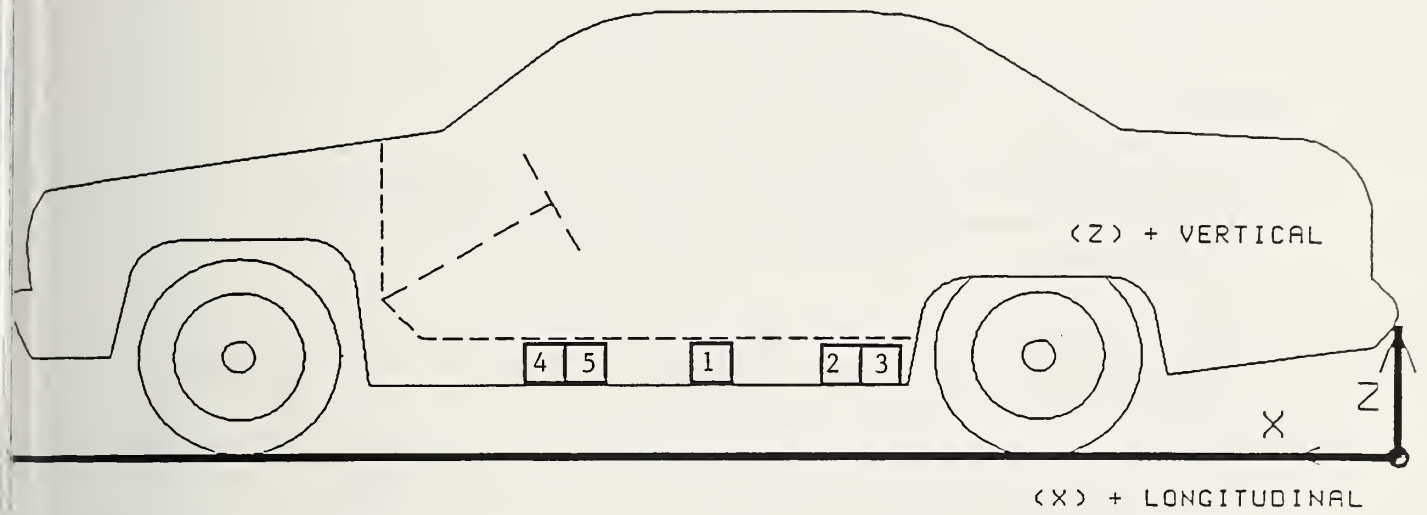
Location	40	41	42	43	44	45	46	47
Pre-Test	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 1	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 2	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 3	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 4	NA	NA	NA	NA	NA	NA	NA	NA
Post-Test 5	NA	NA	NA	NA	NA	NA	NA	NA

All measurements are in millimeters. Column readings are 75 millimeters apart starting on the left side of the vehicle.

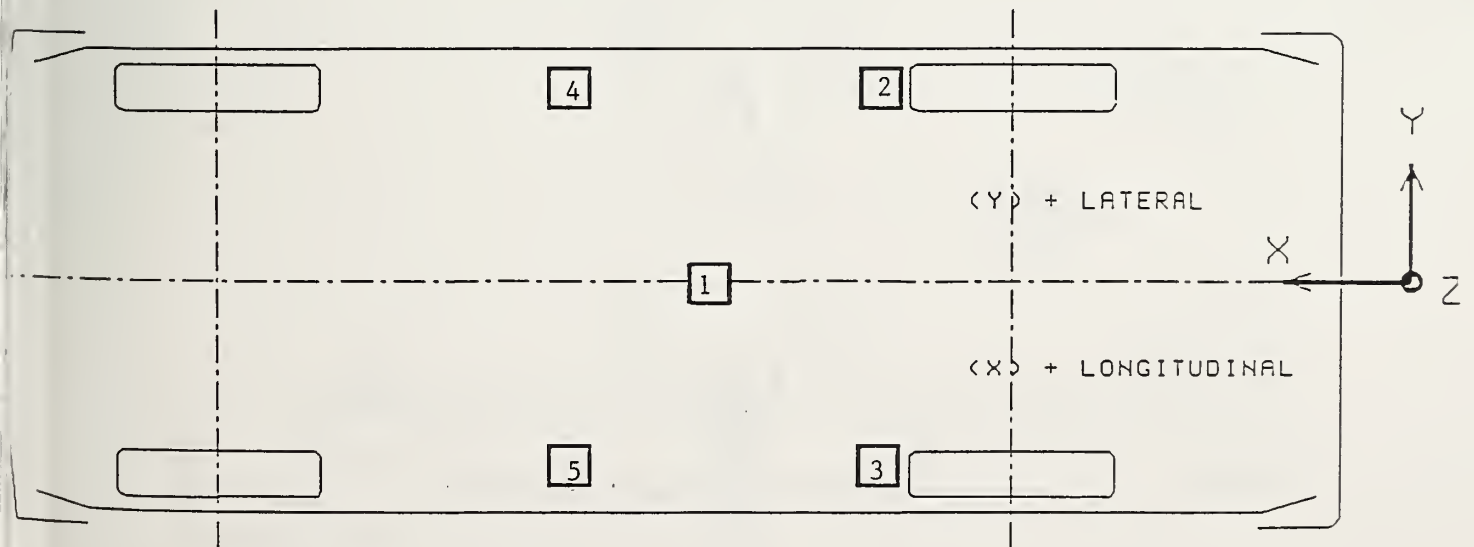
All X-axis measurements taken from a reference plane 225 millimeters from and parallel to the front bumper.

All Y-axis measurements taken from a reference plane 1200 millimeters from and parallel to the vehicle's longitudinal centerline

Figure 1 Vehicle Accelerometer Placement

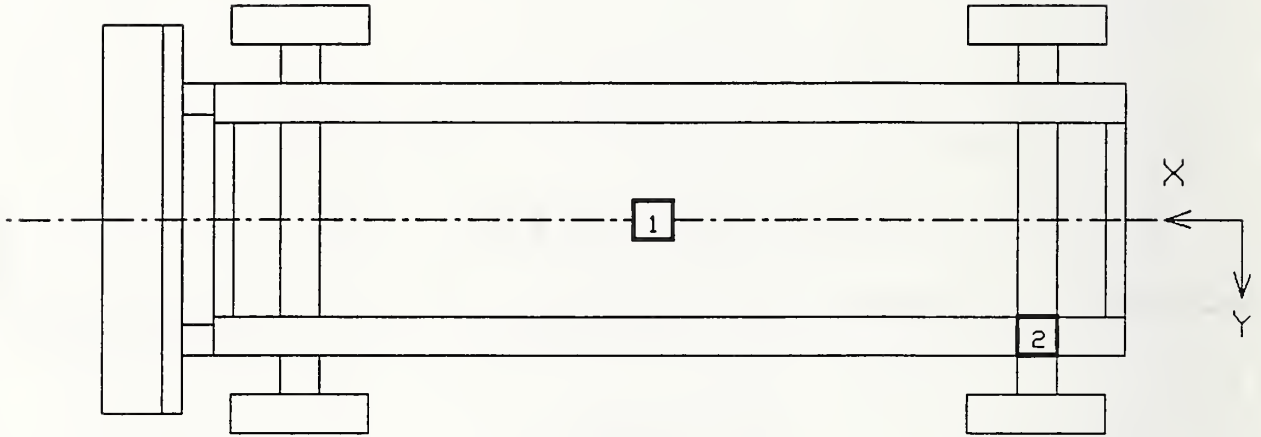


SIDE VIEW

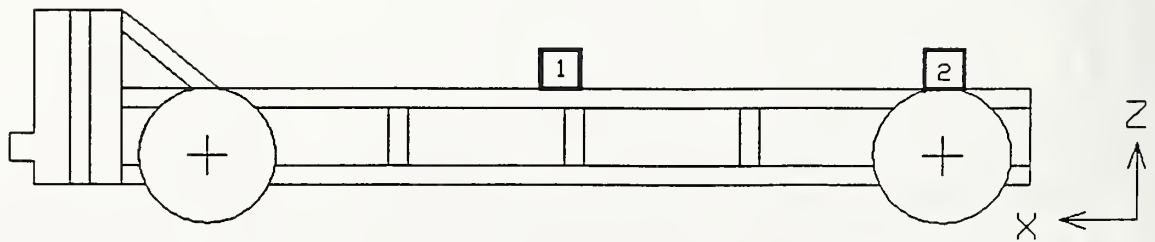


BOTTOM VIEW

Figure 2 Impactor Accelerometer Placement

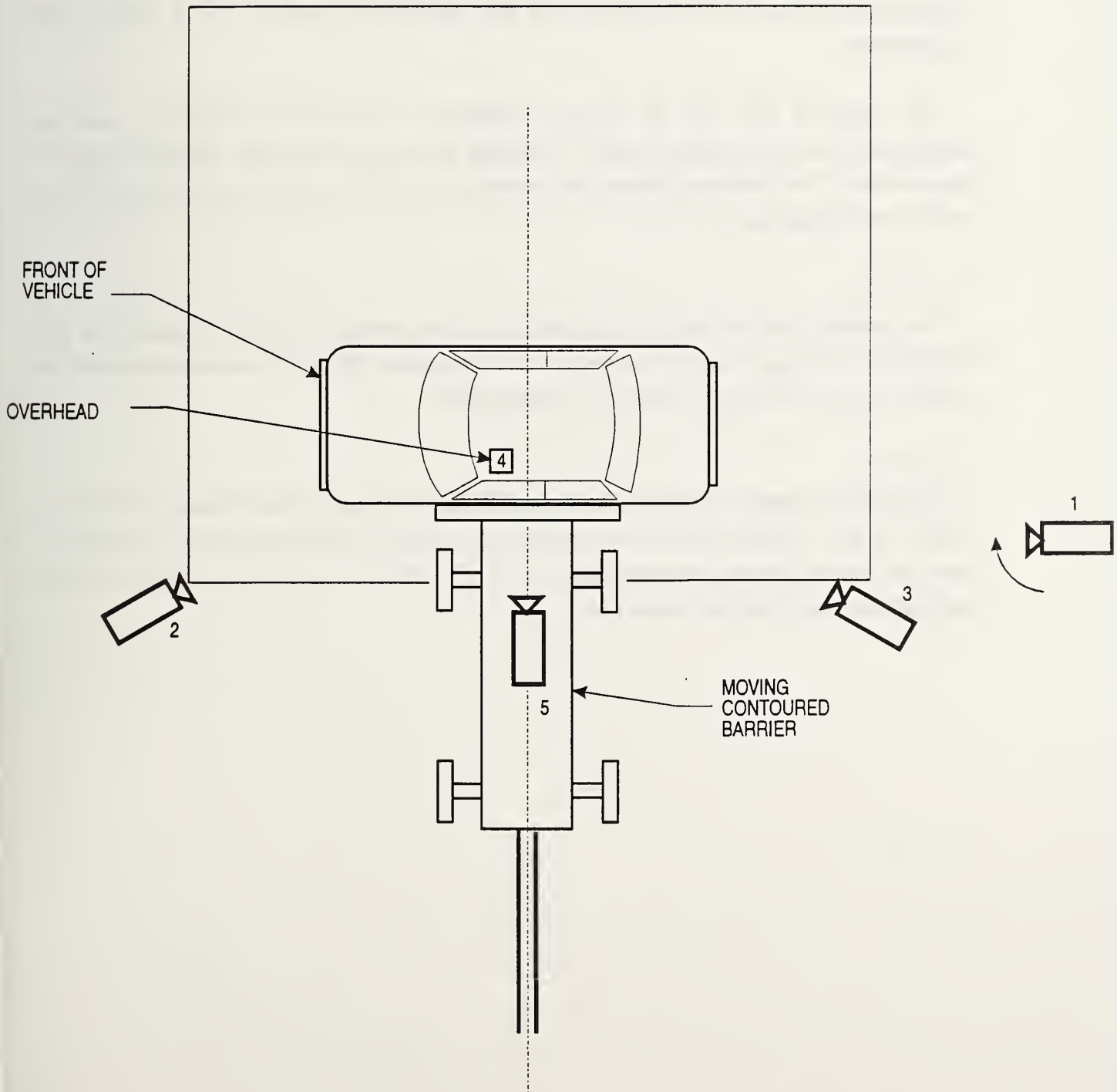


TOP VIEW



SIDE VIEW

Figure 3 Camera Positions



Data Acquisition Explanations

Test 950131-2:

The vehicle's left rear sill Y-axis acceleration data channel, LRSYG1, recorded questionable data because the device's mounting broke loose from the vehicle during the impact event and the device's cable was cut by vehicle crush at approximately 14 milliseconds. This anomaly affected the computations of the vehicle's left rear sill Y-axis velocity and displacement.

The vehicle's left rear sill X-axis acceleration data channel, LRSXG1, recorded questionable data because the device's mounting broke loose from the vehicle during the impact event. This anomaly affected the computations of the vehicle's left rear sill X-axis velocity and displacement.

Test 950206-1:

The vehicle's left rear sill Y-axis acceleration data channel, LRSYG1, exceeded its full scale output between 24 and 27 milliseconds. This anomaly affected the computations of the vehicle's left rear sill Y-axis velocity and displacement.

Test 950206-2:

The vehicle's center of gravity X-, Y-, and Z-axis acceleration data channels, VCGXG1, VCGYG1, and VCGZG1, exceeded their full scale outputs between 24 and 29 milliseconds. These anomalies affected the computations of the vehicle's center of gravity velocities, displacements, and resultant acceleration.

Section 3.0

Test 950131-1 Summary

Table 6 Test Conditions

Test No. 950131-1

Date of test: 01/31/95

Time of test: 11:35

Ambient temperature at impact area: -5° C

Intended impact velocity: 8.0 kph

Actual impact velocity: Primary = 8.4 kph
Secondary = 8.4 kph

Subject Vehicle Data

Length of direct contact damage: 1590 mm

Maximum cumulative crush at
vehicle side sill height: 9 mm

Maximum cumulative crush at
vehicle axle height: 27 mm

Maximum cumulative crush at
vehicle mid-door height: 16 mm

Vehicle Attitudes:

Post-Test: LF: 724; RF: 724; LR: 561; RR: 544

All distance measurements are in millimeters.

Table 7 Vehicle Crush at Vehicle Axle Height

Test No. 950131-1

FL	=	1221
C1	=	10
C2	=	9
C3	=	19
C4	=	18
C5	=	21
C6	=	10

NOTE: FL is the post-test length of the damaged surface.

Measurements C1 - C6 were spaced equally apart over the post-impact length of the damaged surface. This distance is defined as length "FL" on the vehicle crush profile plot.

All measurements are in millimeters.

Figure 4 Vehicle Profile At Side Sill Height
Test 1

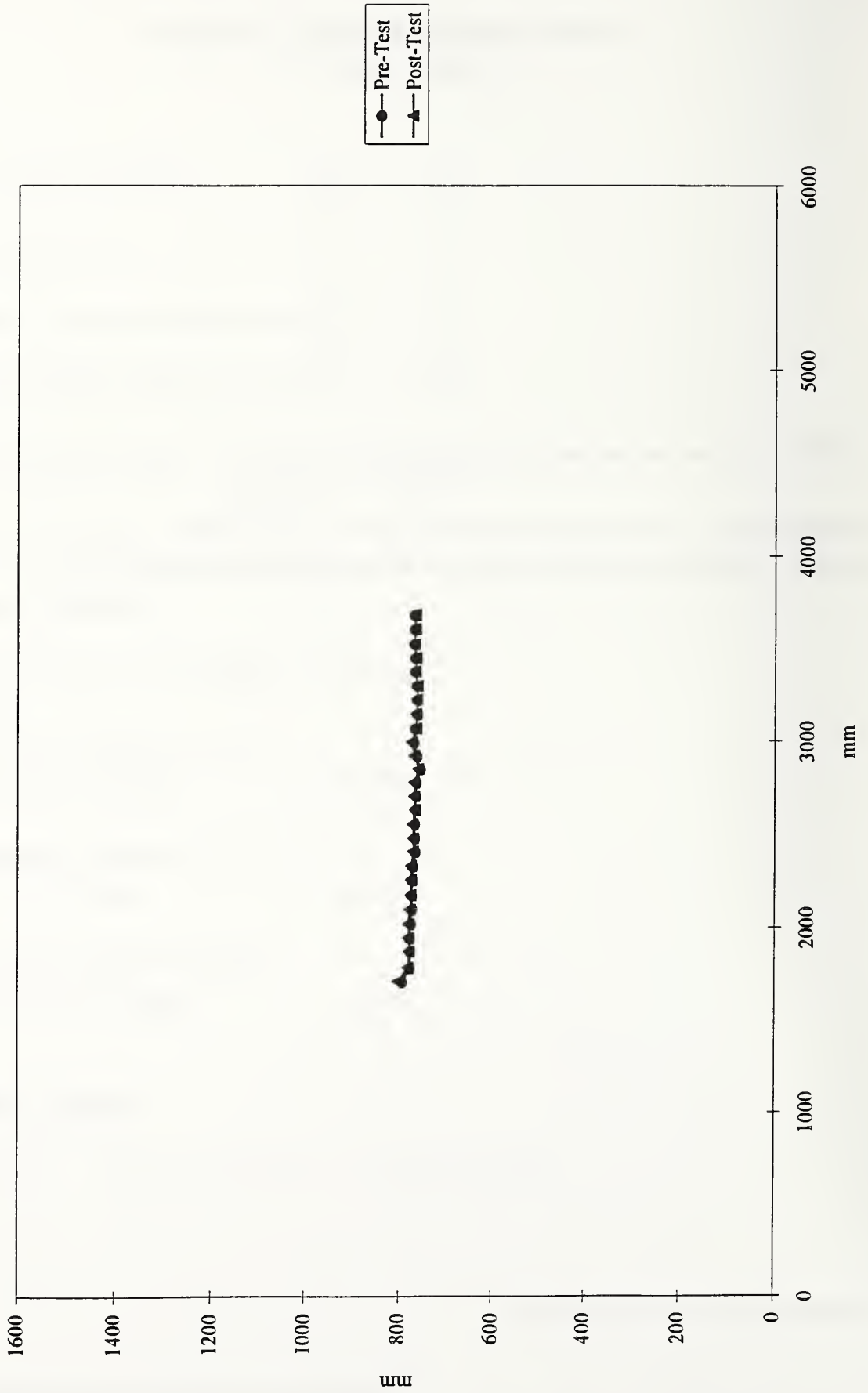
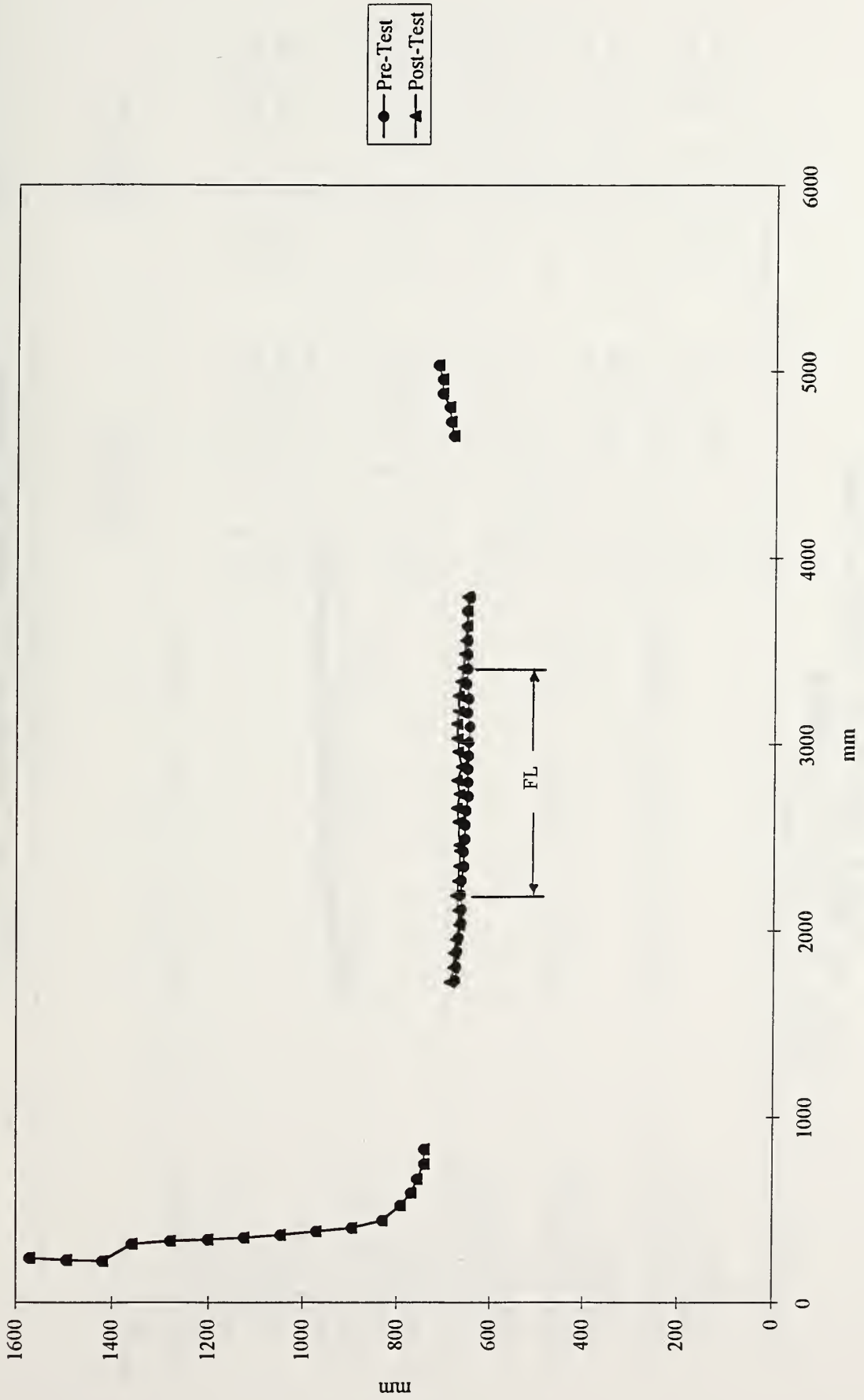


Figure 5 Vehicle Profile At Axle Height
Test 1



**Figure 6 Vehicle Profile At Mid-Door Height
Test 1**

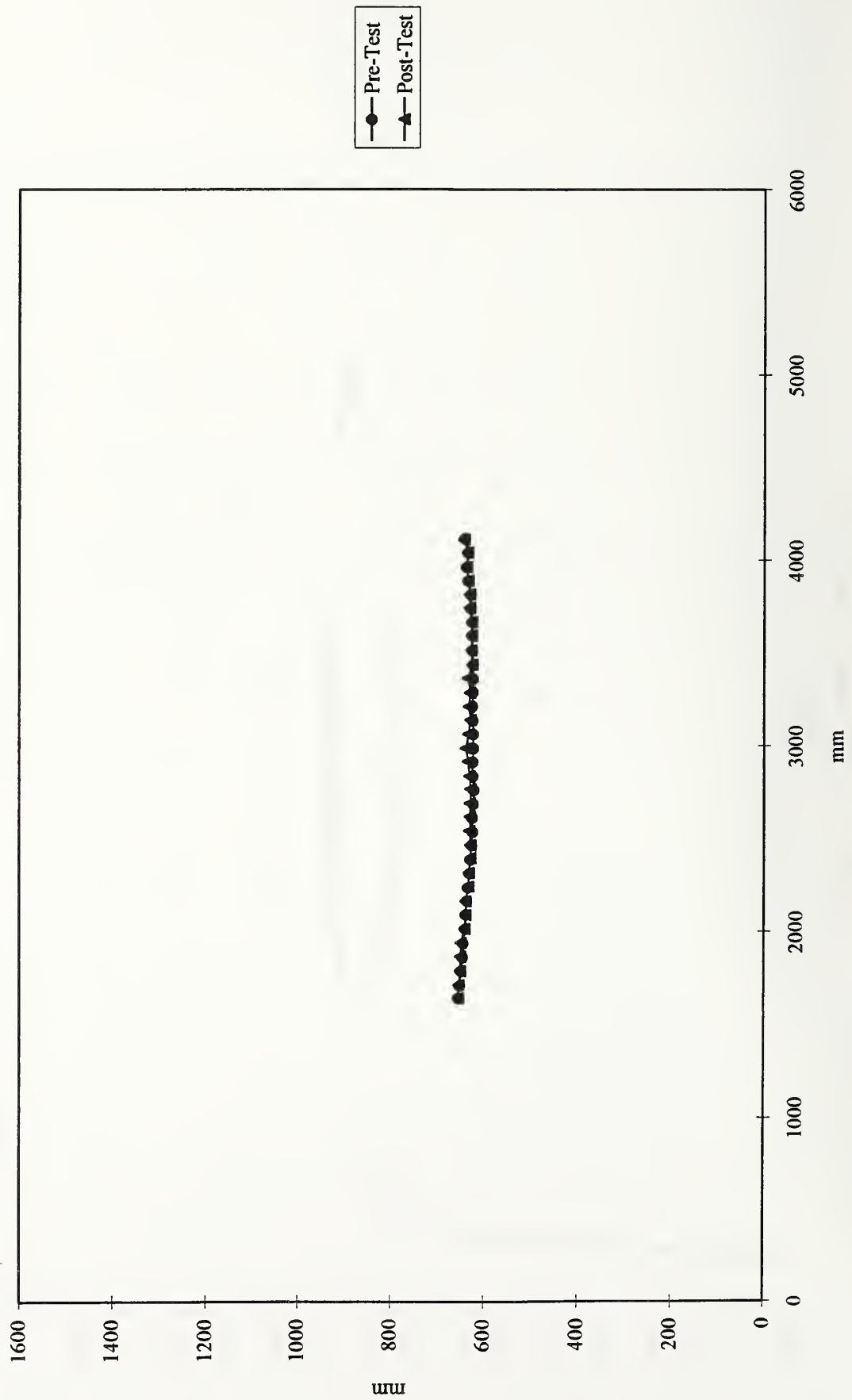


Table 8 Vehicle Accelerometer Locations and Data Summary

Test No. 950131-1

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 VEHICLE CENTER OF GRAVITY	3174 mm	0 mm	450 mm		
LONGITUDINAL				1.6 g @ 34.4 ms	1.7 g @ 11.8 ms
LATERAL				1.8 g @ 146.7 ms	3.5 g @ 19.6 ms
VERTICAL				2.6 g @ 19.8 ms	3.2 g @ 48.4 ms
RESULTANT				4.5 g @ 19.6 ms	
2 LEFT REAR SEAT	2374 mm	662 mm	404 mm		
LONGITUDINAL				1.6 g @ 17.8 ms	1.2 g @ 13.0 ms
LATERAL				4.0 g @ 12.5 ms	5.1 g @ 6.9 ms
3 RIGHT REAR SEAT	2380 mm	-724 mm	404 mm		
LONGITUDINAL				0.8 g @ 37.0 ms	1.1 g @ 23.8 ms
LATERAL				1.6 g @ 120.3 ms	3.7 g @ 39.2 ms
4 LEFT FRONT SILL	940 mm	680 mm	391 mm		
LONGITUDINAL				1.4 g @ 17.9 ms	2.0 g @ 11.8 ms
LATERAL				2.1 g @ 119.5 ms	6.7 g @ 18.6 ms
5 RIGHT FRONT SILL	940 mm	-692 mm	391 mm		
LONGITUDINAL				0.9 g @ 35.7 ms	0.8 g @ 22.9 ms
LATERAL				2.1 g @ 120.7 ms	3.2 g @ 21.0 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

Table 9 Impactor Accelerometer Locations and Data Summary

Test No. 950131-1

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 CENTER OF GRAVITY	1892 mm	0 mm	320 mm		
LONGITUDINAL				0.3 g @ 109.8 ms	4.0 g @ 50.9 ms
LATERAL				0.8 g @ 59.8 ms	0.7 g @ 49.4 ms
VERTICAL				0.5 g @ 217.1 ms	0.8 g @ 51.3 ms
RESULTANT				4.1 g @ 50.9 ms	
1 LEFT REAR SIDE RAIL	381 mm	637 mm	620 mm		
LONGITUDINAL				0.3 g @ 89.5 ms	3.8 g @ 44.6 ms
LATERAL				0.7 g @ 11.8 ms	0.6 g @ 34.9 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

Table 10 Camera Information

Test No. 950131-1

<u>Camera Number</u>	<u>Location</u>	<u>Type</u>	<u>Lens (mm)</u>	<u>Speed (fps)</u>	<u>Purpose of Camera Data</u>
1	Panning	Bolex	16	24	Impact overall
2	Left front	Photosonic	13	490	Impact overall
3	Left rear	Photosonic	25	500	Impact overall
4	Overhead	Photosonic	8.5	500	Impact overall
5	Onboard moving barrier	Photosonic	13	502	Impact overall

Section 4.0

Test 950131-2 Summary

Table 11 Test Conditions

Test No. 950131-2

Date of test: 01/31/95

Time of test: 1342

Ambient temperature at impact area: -2° C

Intended impact velocity: 24.1 kph

Actual impact velocity: Primary = 24.5 kph
Secondary = 24.5 kph

Subject Vehicle Data

Length of direct contact damage: 1590 mm

Maximum cumulative crush at
vehicle side sill height: 68 mm

Maximum cumulative crush at
vehicle axle height: 135 mm

Maximum cumulative crush at
vehicle mid-door height: 68 mm

Vehicle Attitudes:

Post-test: LF: 741; RF: 730; LR: 557; RR: 548

All distance measurements are in millimeters.

Table 12 Vehicle Crush at Vehicle Axle Height

Test No. 950131-2

FL	=	2053
C1	=	100
C2	=	118
C3	=	118
C4	=	112
C5	=	98
C6	=	31

NOTE: FL is the post-test length of the damaged surface.

Measurements C1 - C6 were spaced equally apart over the post-impact length of the damaged surface. This distance is defined as length "FL" on the vehicle crush profile plot.

All measurements are in millimeters.

Figure 7 Vehicle Profile At Side Sill Height
Test 2

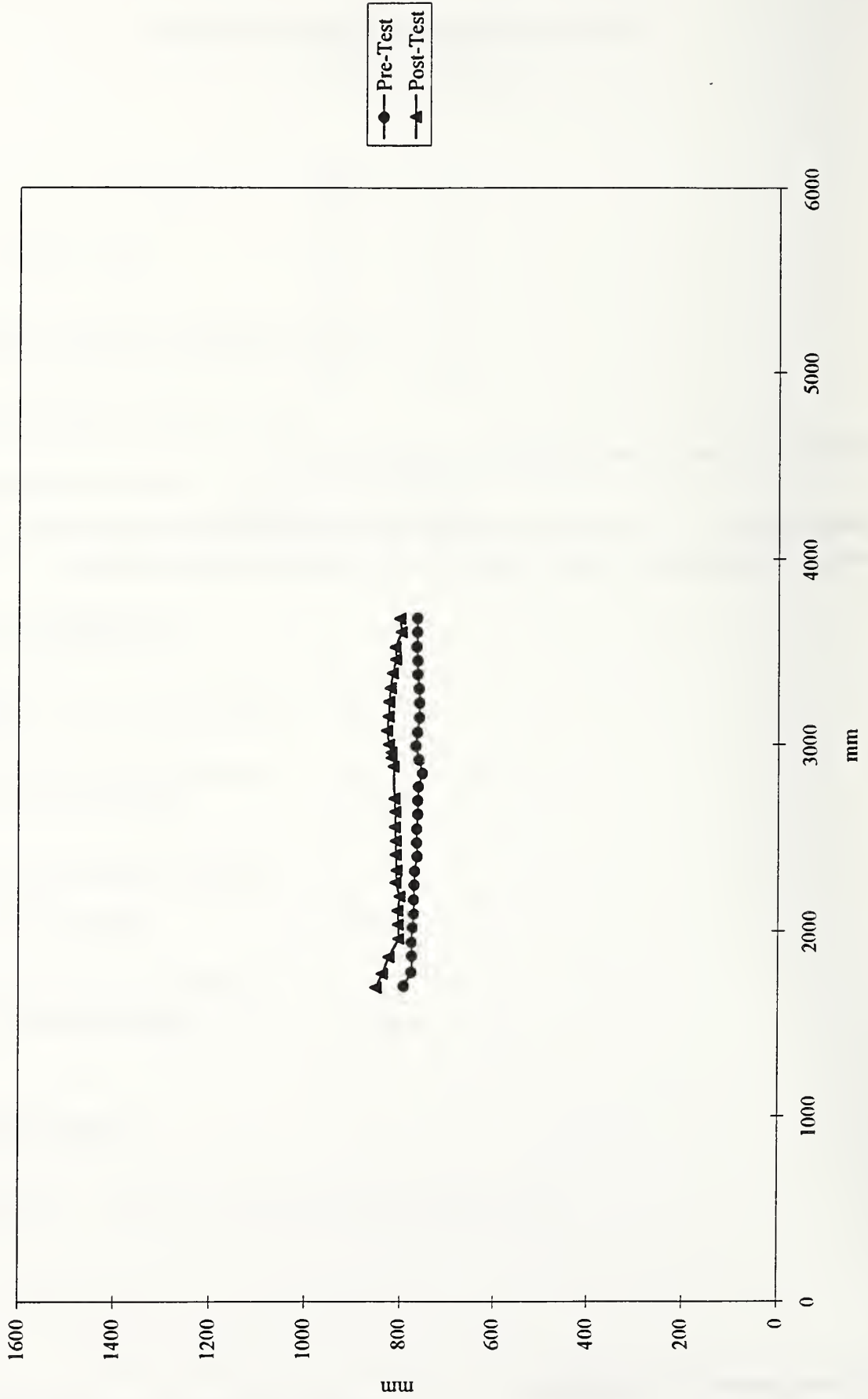
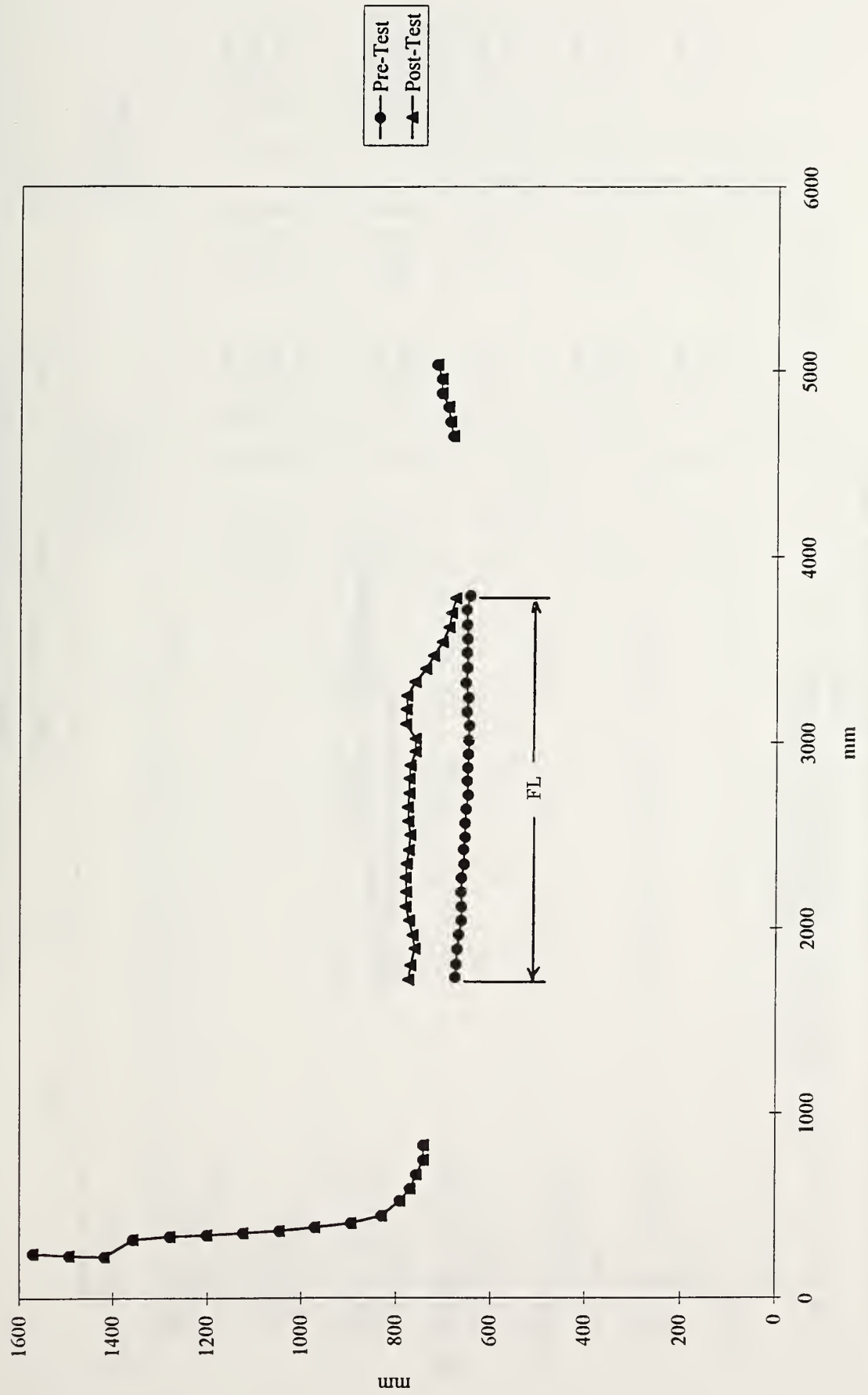


Figure 8 Vehicle Profile At Axle Height
Test 2



**Figure 9 Vehicle Profile At Mid-Door Height
Test 2**

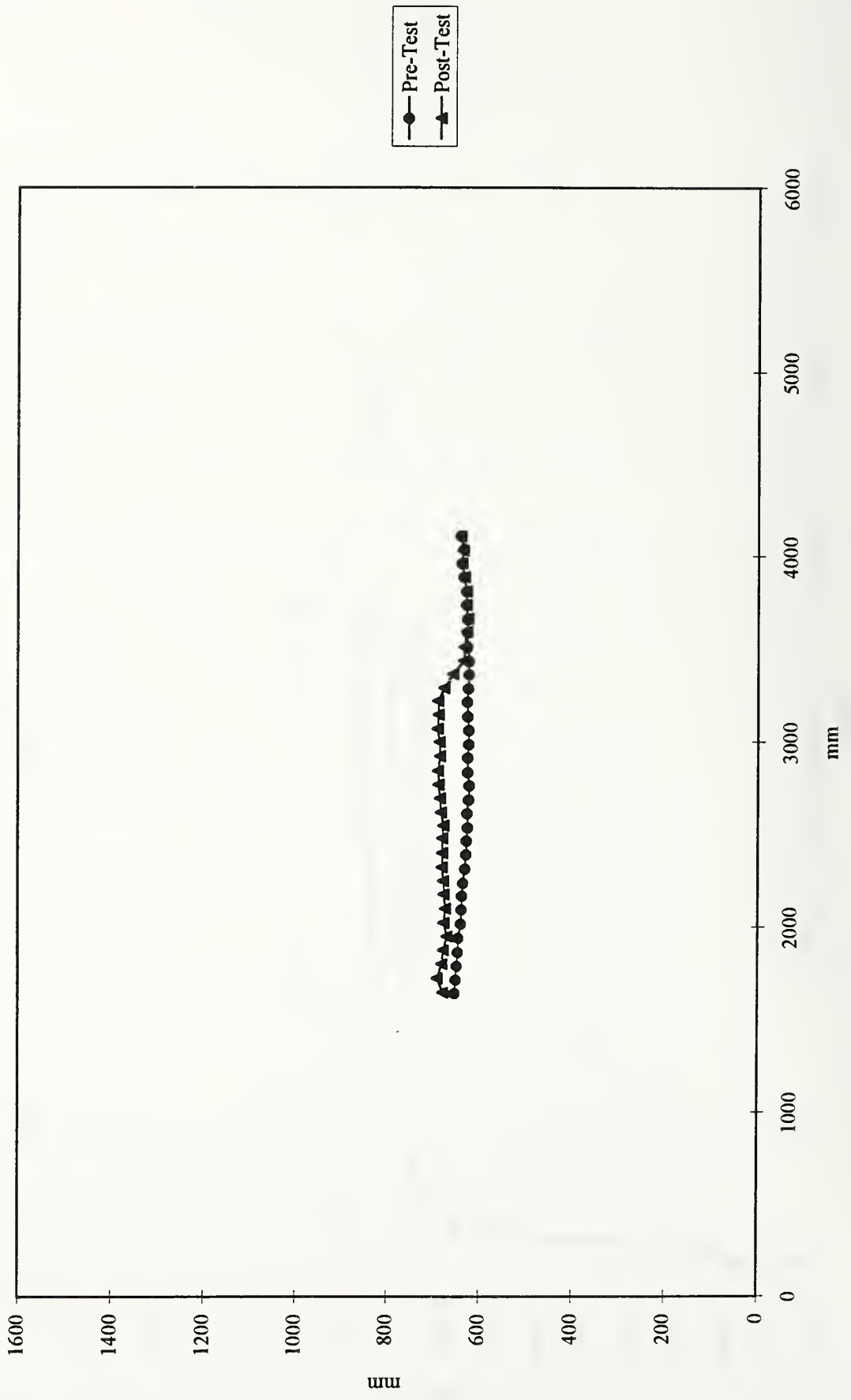


Table 13 Vehicle Accelerometer Locations and Data Summary

Test No. 950131-2

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 VEHICLE CENTER OF GRAVITY	3174 mm	0 mm	450 mm		
LONGITUDINAL				13.7 g @ 32.8 ms	15.9 g @ 21.8 ms
LATERAL				9.6 g @ 30.8 ms	26.1 g @ 23.0 ms
VERTICAL				41.5 g @ 10.4 ms	20.9 g @ 33.8 ms
RESULTANT				45.9 g @ 10.3 ms	
2 LEFT REAR SEAT	2374 mm	662 mm	404 mm		
LONGITUDINAL ¹				67.7 g @ 23.5 ms	3.8 g @ 11.1 ms
LATERAL ¹				17.3 g @ 17.2 ms	1039.4 g @ 25.4 ms
3 RIGHT REAR SEAT	2380 mm	-724 mm	404 mm		
LONGITUDINAL				2.1 g @ 35.8 ms	3.9 g @ 22.6 ms
LATERAL				2.9 g @ 73.3 ms	14.2 g @ 38.6 ms
4 LEFT FRONT SILL	940 mm	680 mm	391 mm		
LONGITUDINAL				4.3 g @ 32.2 ms	4.6 g @ 25.5 ms
LATERAL				14.2 g @ 32.4 ms	59.7 g @ 8.2 ms
5 RIGHT FRONT SILL	940 mm	-692 mm	391 mm		
LONGITUDINAL				3.9 g @ 35.4 ms	3.7 g @ 23.1 ms
LATERAL				5.5 g @ 71.8 ms	15.9 g @ 32.2 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

¹ See DATA ACQUISITION EXPLANATIONS

Table 14 Impactor Accelerometer Locations and Data Summary

Test No. 950131-2

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 CENTER OF GRAVITY	1892 mm	0 mm	320 mm		
LONGITUDINAL				0.6 g @ 105.6 ms	11.3 g @ 28.8 ms
LATERAL				2.8 g @ 59.0 ms	2.7 g @ 33.4 ms
VERTICAL				2.8 g @ 76.6 ms	6.9 g @ 22.3 ms
RESULTANT				11.4 g @ 28.6 ms	
1 LEFT REAR SIDE RAIL	381 mm	637 mm	620 mm		
LONGITUDINAL				0.5 g @ 267.4 ms	11.6 g @ 39.4 ms
LATERAL				2.4 g @ 19.4 ms	2.1 g @ 28.4 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

Table 15 Camera Information

Test No. 950131-2

<u>Camera Number</u>	<u>Location</u>	<u>Type</u>	<u>Lens (mm)</u>	<u>Speed (fps)</u>	<u>Purpose of Camera Data</u>
1	Panning	Bolex	16	24	Impact overall
2	Left front	Photosonic	13	500	Impact overall
3	Left rear	Photosonic	25	490	Impact overall
4	Overhead	Photosonic	8.5	500	Impact overall
5	Onboard moving barrier	Photosonic	13	500	Impact overall

Section 5.0

Test 950131-3 Summary

Table 16 Test Conditions

Test No. 950131-3

Date of test: 01/31/95

Time of test: 1559

Ambient temperature at impact area: -2° C

Intended impact velocity: 32.2 kph

Actual impact velocity: Primary = 32.3 kph
Secondary = 32.3 kph

Subject Vehicle Data

Length of direct contact damage: 1590 mm

Maximum cumulative crush at
vehicle side sill height: 186 mm

Maximum cumulative crush at
vehicle axle height: 271 mm

Maximum cumulative crush at
vehicle mid-door height: 205 mm

Vehicle Attitudes:

Post-test: LF: 720; RF: 718; LR: 561; RR: 547

All distance measurements are in millimeters.

Table 17 Vehicle Crush at Vehicle Axle Height

Test No. 950131-3

FL	=	2051
C1	=	205
C2	=	224
C3	=	239
C4	=	256
C5	=	222
C6	=	118

NOTE: FL is post-test length of damaged surface.

Measurements C1 - C6 were spaced equally apart over the post-impact length of the damaged surface. This distance is defined as length "FL" on the vehicle crush profile plot.

All measurements are in millimeters.

**Figure 10 Vehicle Profile At Side Sill Height
Test 3**

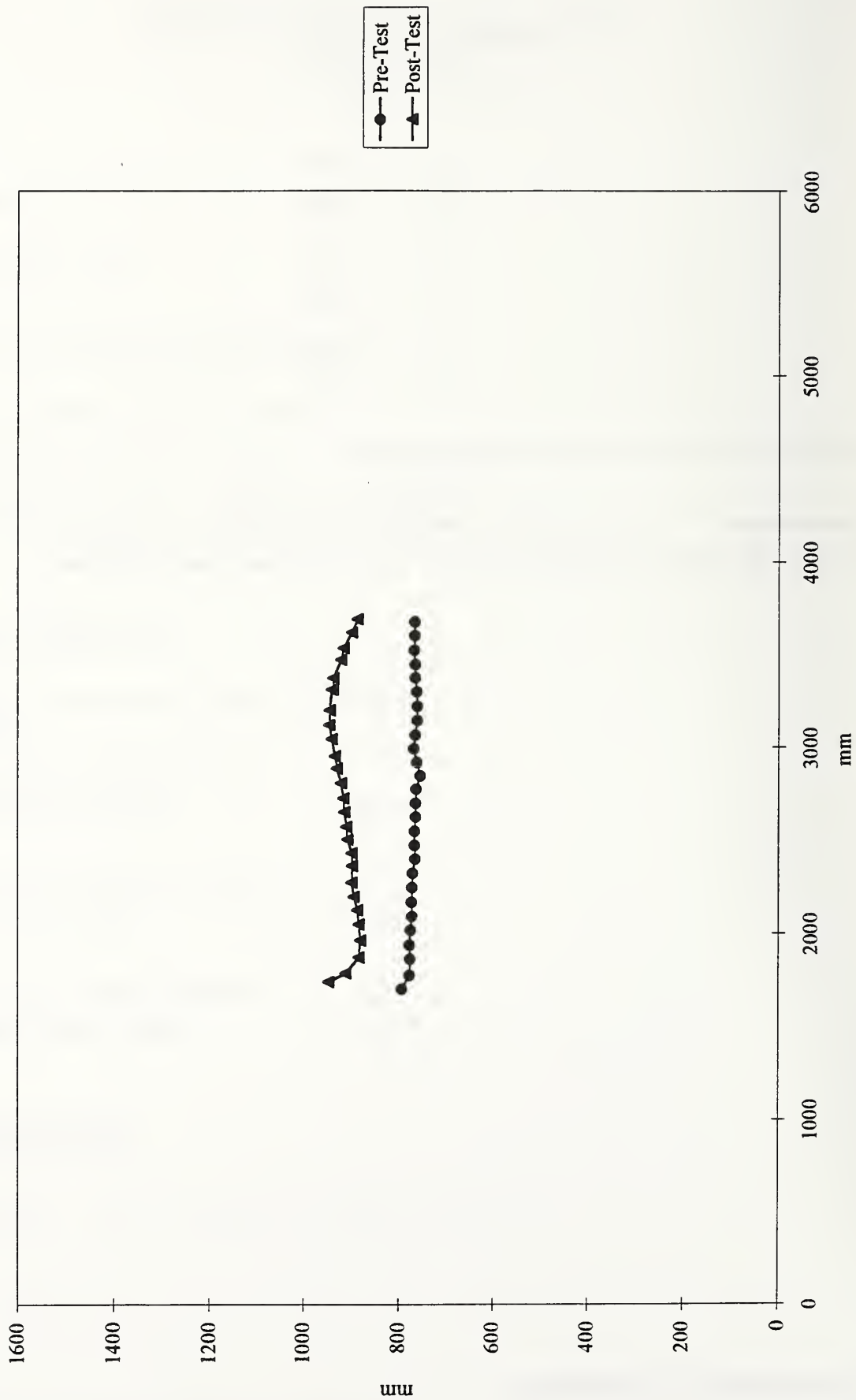


Figure 11 Vehicle Profile At Axle Height
Test 3

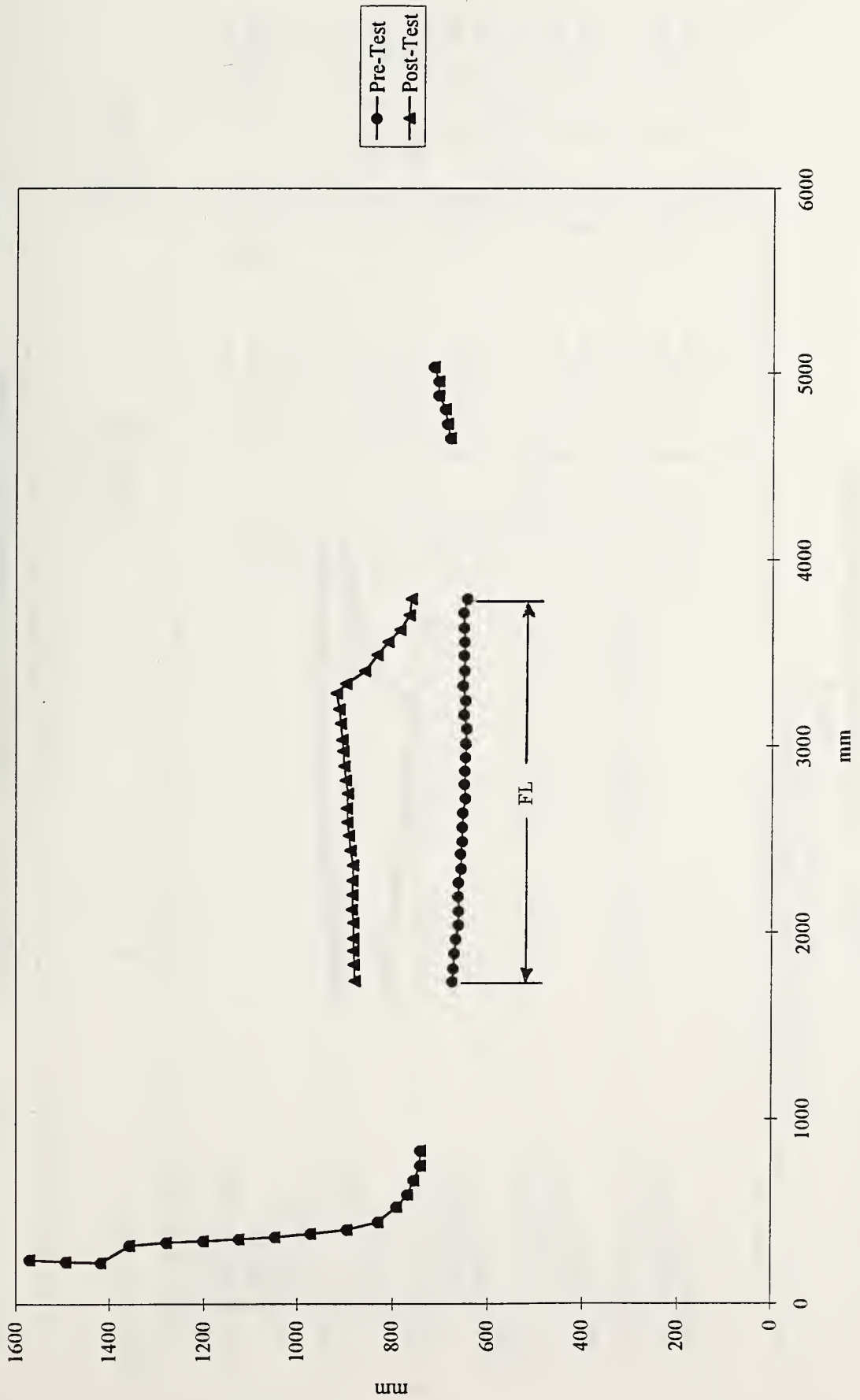


Figure 12 Vehicle Profile At Mid-Door Height
Test 3

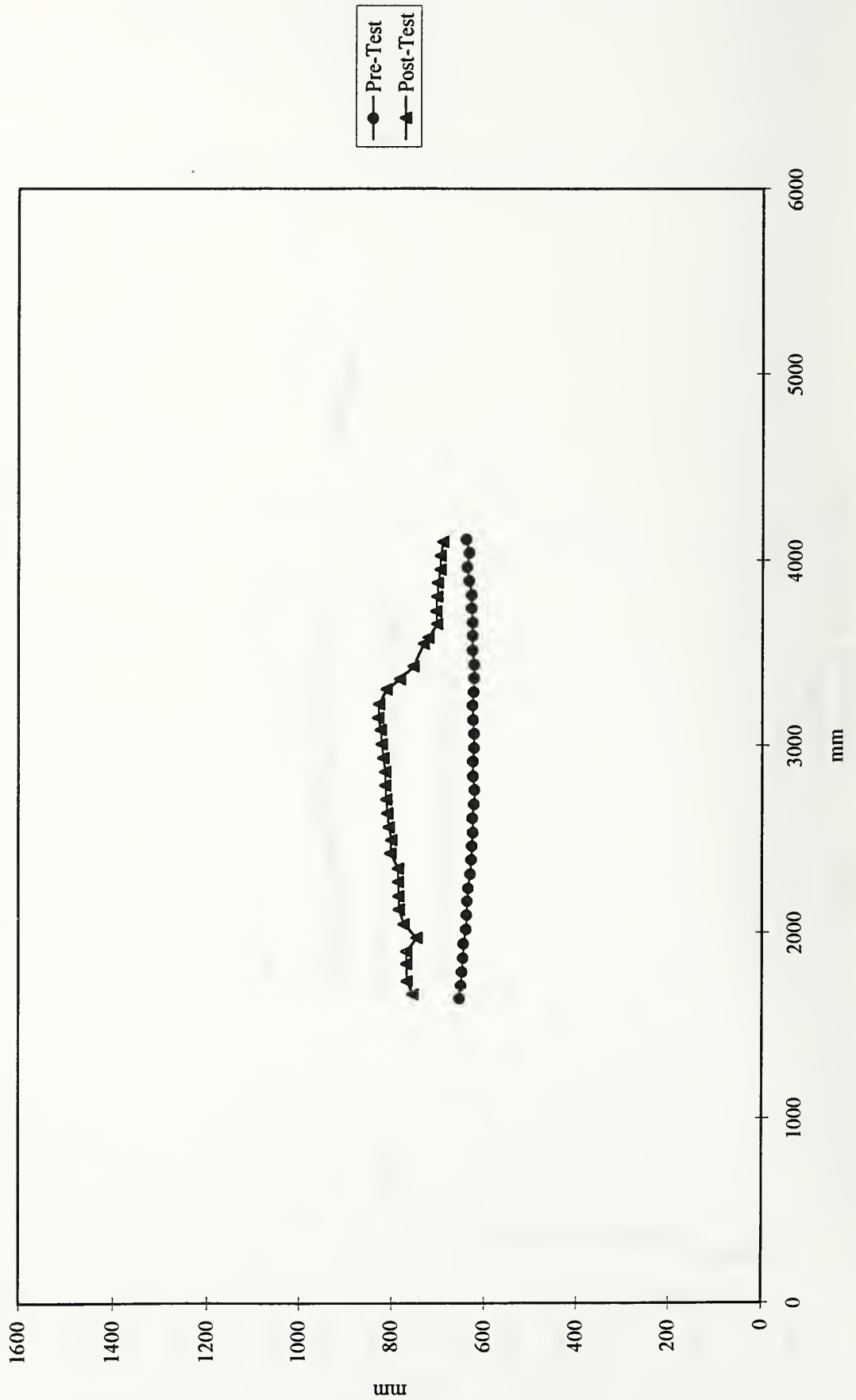


Table 18 Vehicle Accelerometer Locations and Data Summary

Test No. 950131-3

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 VEHICLE CENTER OF GRAVITY	3174 mm	0 mm	450 mm		
LONGITUDINAL				27.2 g @ 23.8 ms	29.5 g @ 17.8 ms
LATERAL				6.6 g @ 50.8 ms	55.3 g @ 18.0 ms
VERTICAL				65.9 g @ 17.9 ms	54.9 g @ 22.6 ms
RESULTANT				90.8 g @ 17.9 ms	
2 LEFT REAR SEAT LATERAL ¹	2374 mm	662 mm	404 mm	14.9 g @ 24.4 ms	122.1 g @ 16.2 ms
3 RIGHT REAR SEAT LONGITUDINAL LATERAL	2380 mm	-724 mm	404 mm	9.4 g @ 21.7 ms 2.8 g @ 133.2 ms	6.9 g @ 17.1 ms 23.9 g @ 28.2 ms
4 LEFT FRONT SILL LONGITUDINAL LATERAL	940 mm	680 mm	391 mm	4.3 g @ 56.8 ms 16.7 g @ 24.9 ms	8.5 g @ 19.5 ms 145.6 g @ 16.0 ms
5 RIGHT FRONT SILL LONGITUDINAL LATERAL	940 mm	-692 mm	391 mm	10.3 g @ 22.2 ms 2.6 g @ 64.7 ms	6.9 g @ 17.0 ms 33.9 g @ 26.5 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

¹ See DATA ACQUISITION EXPLANATIONS

Table 19 Impactor Accelerometer Locations and Data Summary

Test No. 950131-3

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 CENTER OF GRAVITY	1892 mm	0 mm	320 mm		
LONGITUDINAL				0.6 g @ 133.5 ms	15.5 g @ 33.8 ms
LATERAL				4.1 g @ 67.2 ms	6.3 g @ 33.2 ms
VERTICAL				11.1 g @ 39.0 ms	7.7 g @ 22.2 ms
RESULTANT				17.1 g @ 33.8 ms	
1 LEFT REAR SIDE RAIL	381 mm	637 mm	620 mm		
LONGITUDINAL				1.1 g @ 12.6 ms	18.4 g @ 17.8 ms
LATERAL				1.2 g @ 78.1 ms	2.4 g @ 41.1 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

Table 20 Camera Information

Test No. 950131-3

<u>Camera Number</u>	<u>Location</u>	<u>Type</u>	<u>Lens (mm)</u>	<u>Speed (fps)</u>	<u>Purpose of Camera Data</u>
1	Panning	Bolex	16	24	Impact overall
2	Left front	Photosonic	13	500	Impact overall
3	Left rear	Photosonic	25	*	Impact overall
4	Overhead	Photosonic	8.5	498	Impact overall
5	Onboard moving barrier	Photosonic	13	498	Impact overall

*The film snapped due to the cold weather.

Section 6.0

Test 950206-1 Summary

Table 21 Test Conditions

Test No. 950206-1

Date of test: 02/06/95

Time of test: 1124

Ambient temperature at impact area: -14° C

Intended impact velocity: 32.2 kph

Actual impact velocity: Primary = 32.3 kph

Secondary = 32.3 kph

Subject Vehicle Data

Length of direct contact damage: 1590 mm

Maximum cumulative crush at
vehicle side sill height: 278 mm

Maximum cumulative crush at
vehicle axle height: 356 mm

Maximum cumulative crush at
vehicle mid-door height: 286 mm

Vehicle Attitudes:

Post-test: LF: 718; RF: 704; LR: 584; RR: 522

All distance measurements are in millimeters.

Table 22 Vehicle Crush at Vehicle Axle Height

Test No. 950206-1

FL	=	2039
C1	=	298
C2	=	316
C3	=	329
C4	=	345
C5	=	307
C6	=	169

NOTE: FL is post-test length of damaged surface.

Measurements C1 - C6 were spaced equally apart over the post-impact length of the damaged surface. This distance is defined as length "FL" on the vehicle crush profile plot.

All measurements are in millimeters.

Figure 13 Vehicle Profile At Side Sill Height
Test 4

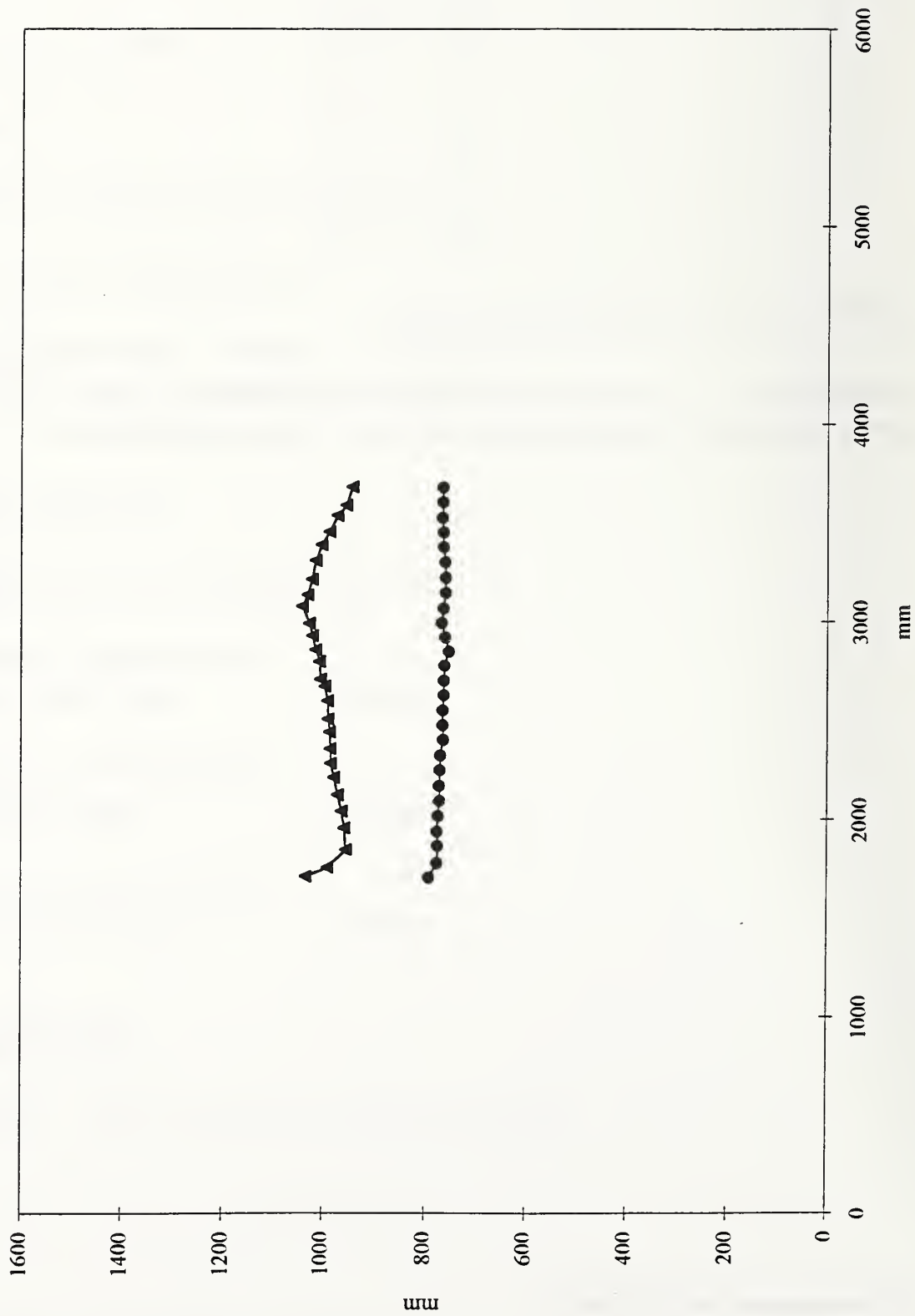


Figure 14 Vehicle Profile At Axle Height
Test 4

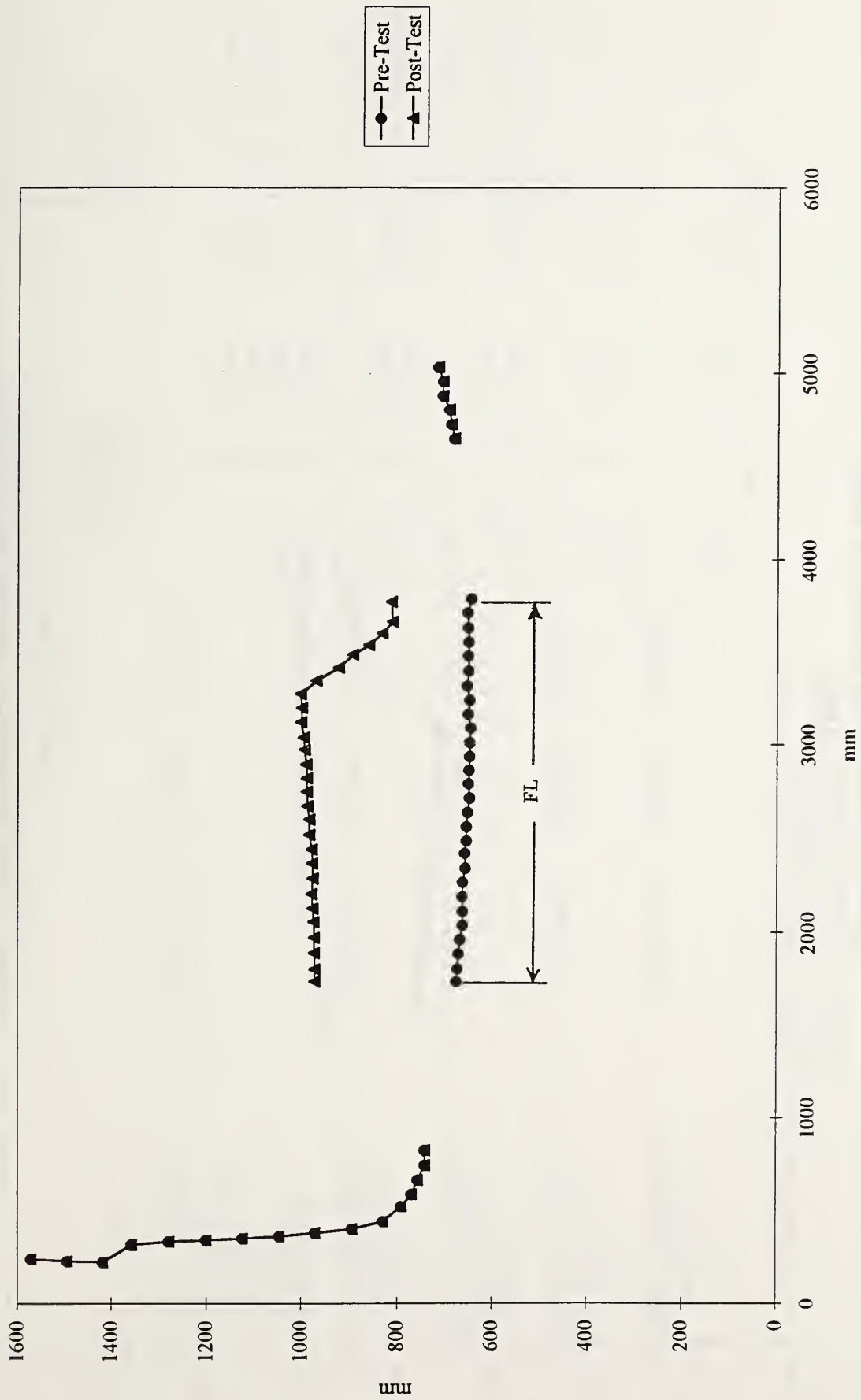


Figure 15 Vehicle Profile At Mid-Door Height
Test 4

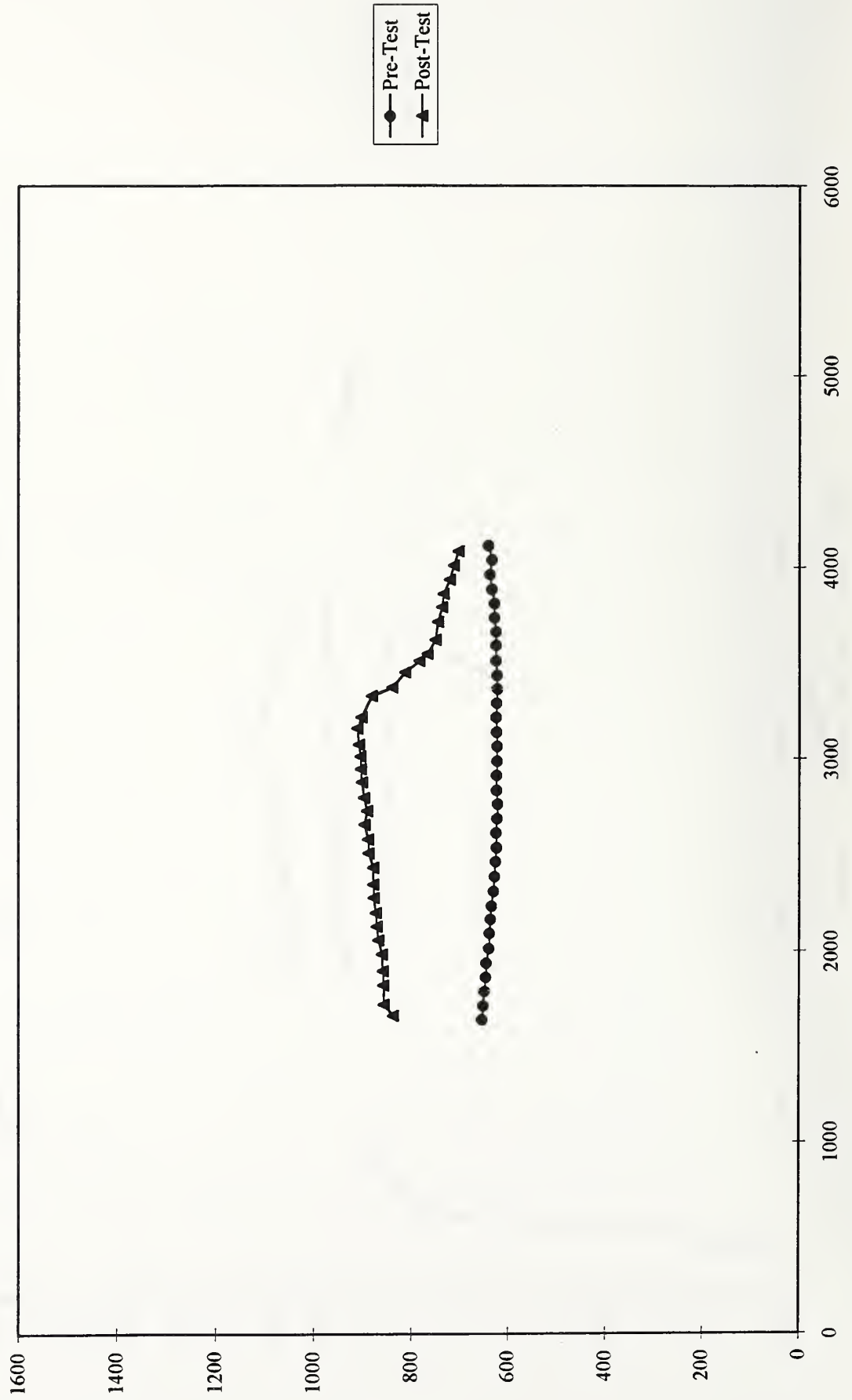


Table 23 Vehicle Accelerometer Locations and Data Summary

Test No. 950206-1

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 VEHICLE CENTER OF GRAVITY	3174 mm	0 mm	450 mm		
LONGITUDINAL				40.3 g @ 21.5 ms	37.0 g @ 14.1 ms
LATERAL				21.7 g @ 24.2 ms	59.9 g @ 14.9 ms
VERTICAL				54.5 g @ 16.4 ms	35.1 g @ 26.2 ms
RESULTANT				78.1 g @ 15.8 ms	
2 LEFT REAR SEAT	2374 mm	662 mm	404 mm		
LONGITUDINAL				20.0 g @ 14.3 ms	6.9 g @ 21.0 ms
LATERAL ¹				13.0 g @ 36.6 ms	145.9 g @ 13.3 ms
3 RIGHT REAR SEAT	2380 mm	-724 mm	404 mm		
LONGITUDINAL				7.4 g @ 18.6 ms	7.5 g @ 13.2 ms
LATERAL				2.8 g @ 127.0 ms	26.0 g @ 25.7 ms
4 LEFT FRONT SILL	940 mm	680 mm	391 mm		
LONGITUDINAL				4.6 g @ 49.3 ms	22.9 g @ 11.3 ms
LATERAL				25.9 g @ 17.7 ms	159.9 g @ 11.5 ms
5 RIGHT FRONT SILL	940 mm	-692 mm	391 mm		
LONGITUDINAL				8.9 g @ 19.1 ms	8.6 g @ 13.0 ms
LATERAL				14.9 g @ 14.2 ms	45.0 g @ 20.1 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

¹ See Data Acquisition Explanations

Table 24 Impactor Accelerometer Locations and Data Summary

Test No. 950206-1

No.	LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1	CENTER OF GRAVITY	1892 mm	0 mm	320 mm		
	LONGITUDINAL				0.4 g @ 6.3 ms	17.3 g @ 19.1 ms
	LATERAL				4.4 g @ 36.6 ms	7.0 g @ 29.1 ms
	VERTICAL				7.8 g @ 25.1 ms	6.4 g @ 31.7 ms
	RESULTANT				17.3 g @ 19.1 ms	
1	LEFT REAR SIDE RAIL	381 mm	637 mm	620 mm		
	LONGITUDINAL				0.5 g @ 134.4 ms	20.4 g @ 15.0 ms
	LATERAL				0.8 g @ 84.2 ms	3.4 g @ 37.8 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

Table 25 Camera Information

Test No. 950206-1

<u>Camera Number</u>	<u>Location</u>	<u>Type</u>	<u>Lens (mm)</u>	<u>Speed (fps)</u>	<u>Purpose of Camera Data</u>
1	Panning	Bolex	16	24	Impact overall
2	Left front	Photosonic	13	500	Impact overall
3	Left rear	Photosonic	25	492	Impact overall
4	Overhead	Photosonic	8.5	502	Impact overall
5	Onboard moving barrier	Photosonic	13	498	Impact overall



Section 7.0

Test 950206-2 Summary

Table 26 Test Conditions

Test No. 950206-2

Date of test: 02/06/95

Time of test: 13:48

Ambient temperature at impact area: -12° C

Intended impact velocity: 56.3 kph

Actual impact velocity: Primary = 56.5 kph
Secondary = 56.5 kph

Subject Vehicle Data

Length of direct contact damage: 1590 mm

Maximum cumulative crush at
vehicle side sill height: 605 mm

Maximum cumulative crush at
vehicle axle height: 670 mm

Maximum cumulative crush at
vehicle mid-door height: 608 mm

Vehicle Attitudes:

Post-test: LF: 724; RF: 724; LR: 561; RR: 544

All distance measurements are in millimeters.

Table 27 Vehicle Crush at Vehicle Axle Height

Test No. 950206-2

FL	=	1937
C1	=	572
C2	=	594
C3	=	620
C4	=	652
C5	=	637
C6	=	324

NOTE: FL is post-test length of damaged surface.

Measurements C1 - C6 were spaced equally apart over the post-impact length of the damaged surface. This distance is defined as length "FL" on the vehicle crush profile plot.

All measurements are in millimeters.

Figure 16 Vehicle Profile At Side Sill Height
Test 5

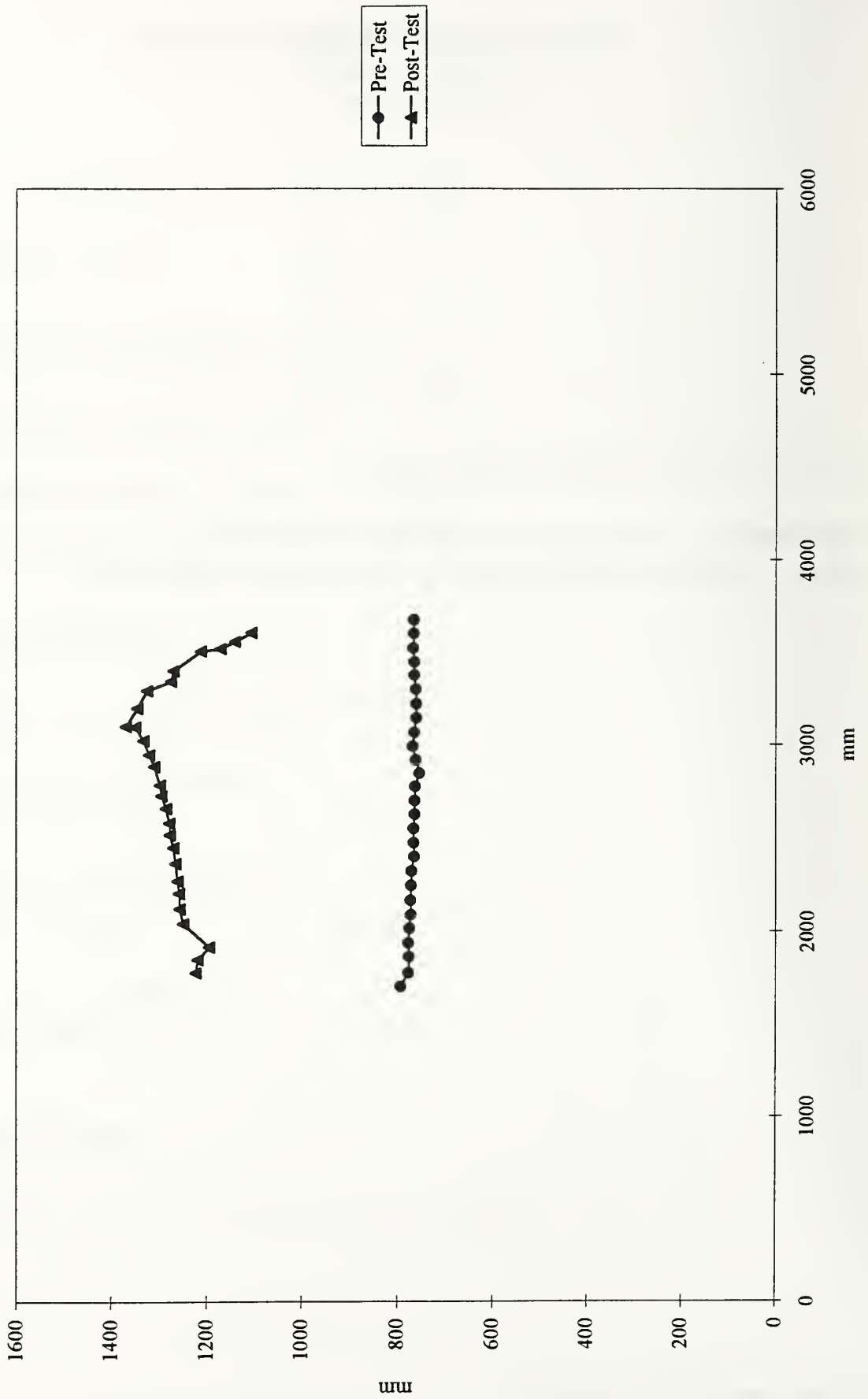


Figure 17 Vehicle Profile At Axle Height
Test 5

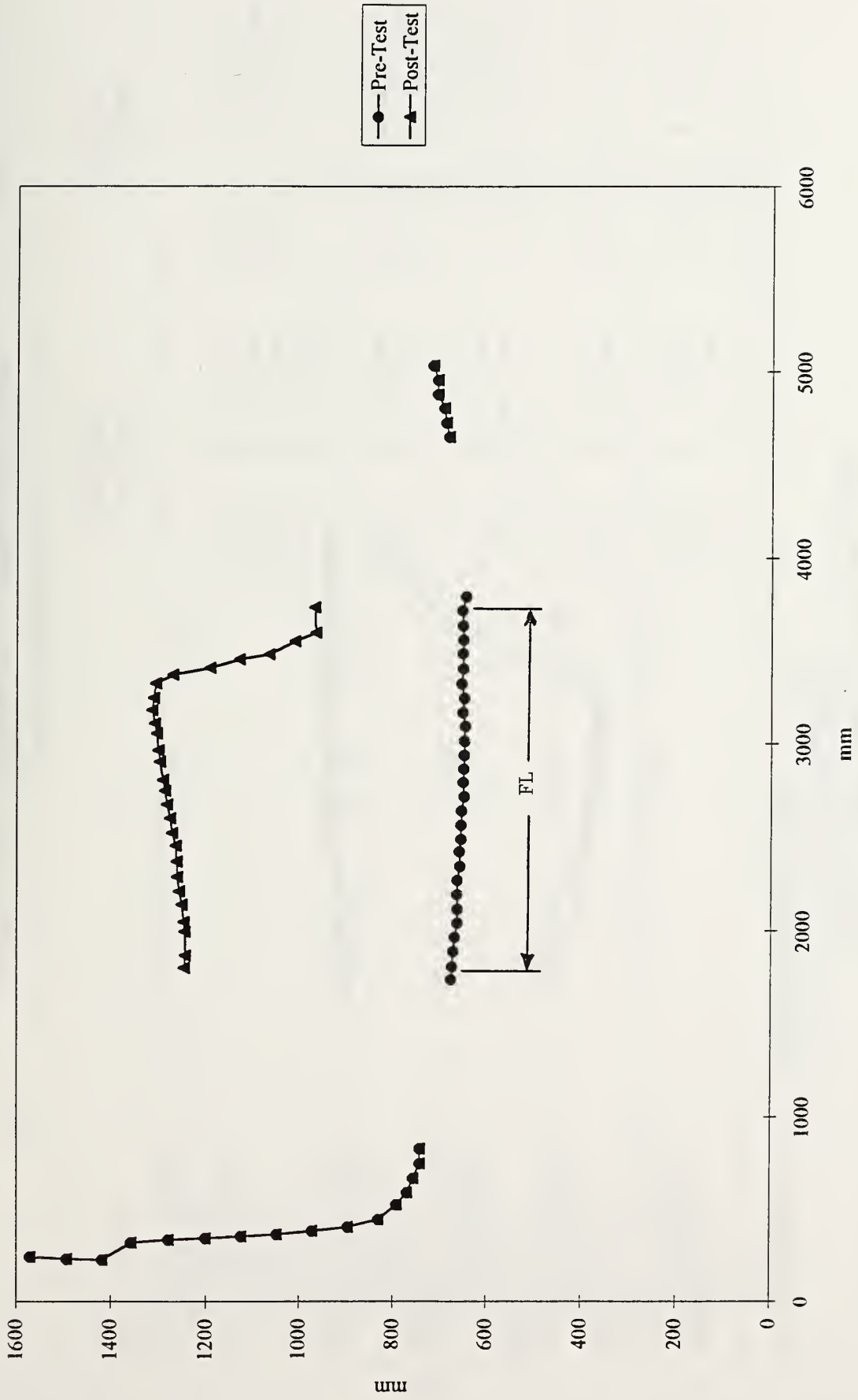


Figure 18 Vehicle Profile At Mid-Door Height
Test 5

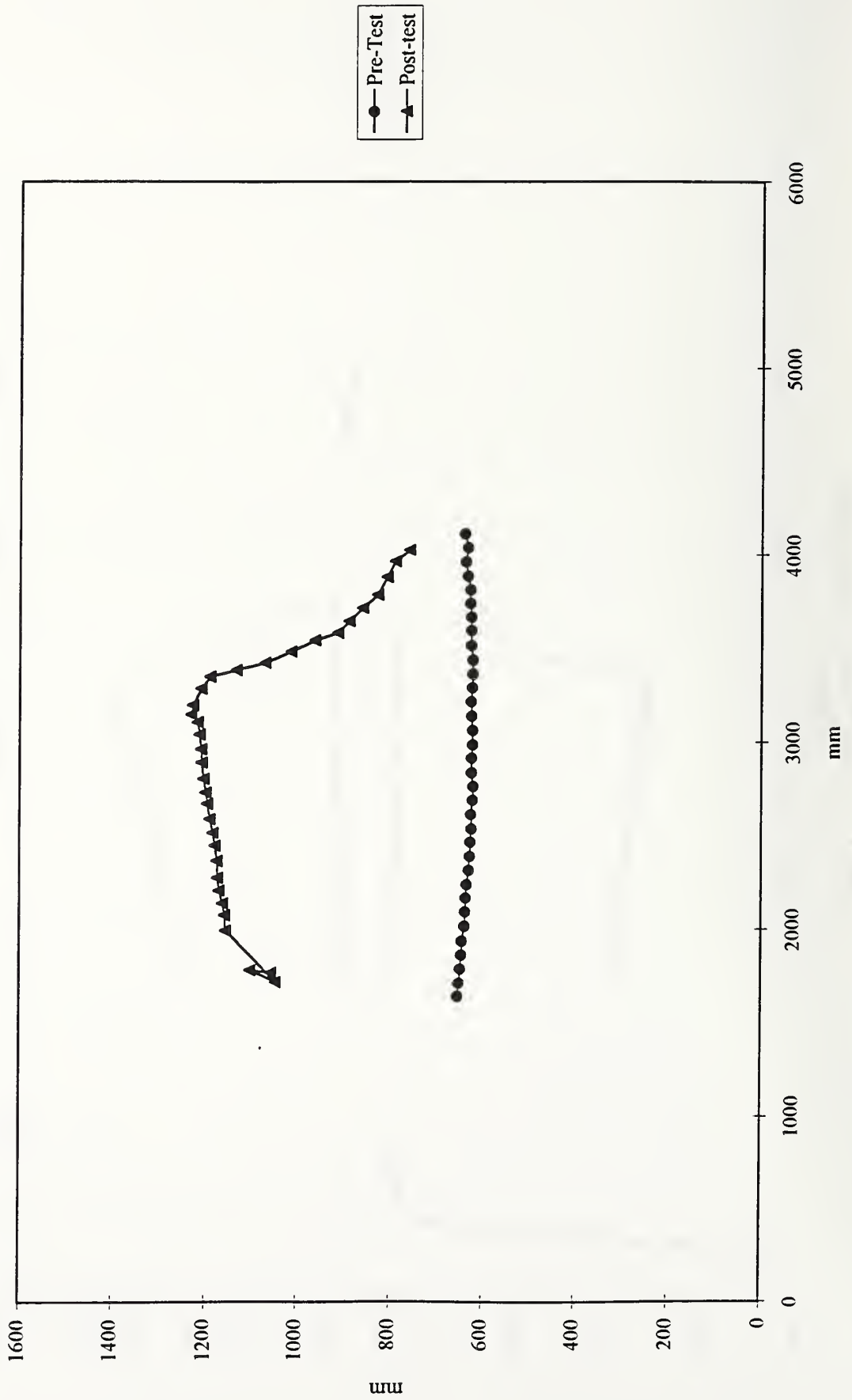


Table 28 Vehicle Accelerometer Locations and Data Summary

Test No. 950206-2

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 VEHICLE CENTER OF GRAVITY	3174 mm	0 mm	450 mm		
LONGITUDINAL ¹				44.9 g @ 17.5 ms	83.0 g @ 34.9 ms
LATERAL ¹				26.6 g @ 21.4 ms	169.0 g @ 35.0 ms
VERTICAL ¹				102.5 g @ 34.5 ms	48.3 g @ 42.2 ms
RESULTANT ¹				211.9 g @ 34.9 ms	
2 LEFT REAR SEAT	2374 mm	662 mm	404 mm		
LONGITUDINAL				48.4 g @ 11.9 ms	22.1 g @ 17.0 ms
LATERAL				50.9 g @ 15.9 ms	303.3 g @ 11.8 ms
3 RIGHT REAR SEAT	2380 mm	-724 mm	404 mm		
LONGITUDINAL				8.1 g @ 16.3 ms	7.2 g @ 45.0 ms
LATERAL				2.5 g @ 248.4 ms	42.8 g @ 17.8 ms
4 LEFT FRONT SILL	940 mm	680 mm	391 mm		
LONGITUDINAL				14.6 g @ 25.4 ms	49.6 g @ 11.0 ms
LATERAL				85.7 g @ 15.7 ms	315.9 g @ 11.4 ms
5 RIGHT FRONT SILL	940 mm	-692 mm	391 mm		
LONGITUDINAL				13.2 g @ 17.0 ms	6.9 g @ 45.2 ms
LATERAL				13.6 g @ 13.0 ms	56.2 g @ 18.2 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

¹ See DATA ACQUISITION EXPLANATIONS

Table 29 Impactor Accelerometer Locations and Data Summary

Test No. 950206-2

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 CENTER OF GRAVITY	1892 mm	0 mm	320 mm		
LONGITUDINAL				1.8 g @ 6.6 ms	42.2 g @ 12.6 ms
LATERAL				7.0 g @ 33.3 ms	9.7 g @ 25.1 ms
VERTICAL				13.6 g @ 22.6 ms	10.3 g @ 38.9 ms
RESULTANT				42.6 g @ 12.7 ms	
1 LEFT REAR SIDE RAIL	381 mm	637 mm	620 mm		
LONGITUDINAL				1.9 g @ 6.5 ms	45.6 g @ 12.2 ms
LATERAL				2.6 g @ 128.3 ms	2.9 g @ 15.4 ms

REFERENCE: X: + FORWARD FROM REAR BUMPER
 Y: + LEFTWARD FROM VEHICLE CENTERLINE
 Z: + UPWARD FROM GROUND LEVEL

Table 30 Camera Information

Test No. 950206-2

<u>Camera Number</u>	<u>Location</u>	<u>Type</u>	<u>Lens (mm)</u>	<u>Speed (fps)</u>	<u>Purpose of Camera Data</u>
1	Panning	Bolex	16	24	Impact overall
2	Left front	Photosonic	13	500	Impact overall
3	Left rear	Photosonic	25	492	Impact overall
4	Overhead	Photosonic	8.5	500	Impact overall
5	Onboard moving barrier	Photosonic	13	500	Impact overall



Appendix A

Photographs

List of Photographs

Test No. 950131-1

- A-1. Pre-Test Front View
- A-2. Post-Test Front View
- A-3. Pre-Test Left Front Three-Quarter View
- A-4. Post-Test Left Front Three-Quarter View
- A-5. Pre-Test Left Side View
- A-6. Post-Test Left Side View
- A-7. Pre-Test Left Rear Three-Quarter View
- A-8. Post-Test Left Rear Three-Quarter View
- A-9. Pre-Test Rear View
- A-10. Post-Test Rear View
- A-11. Pre-Test Right Side View
- A-12. Post-Test Right Side View

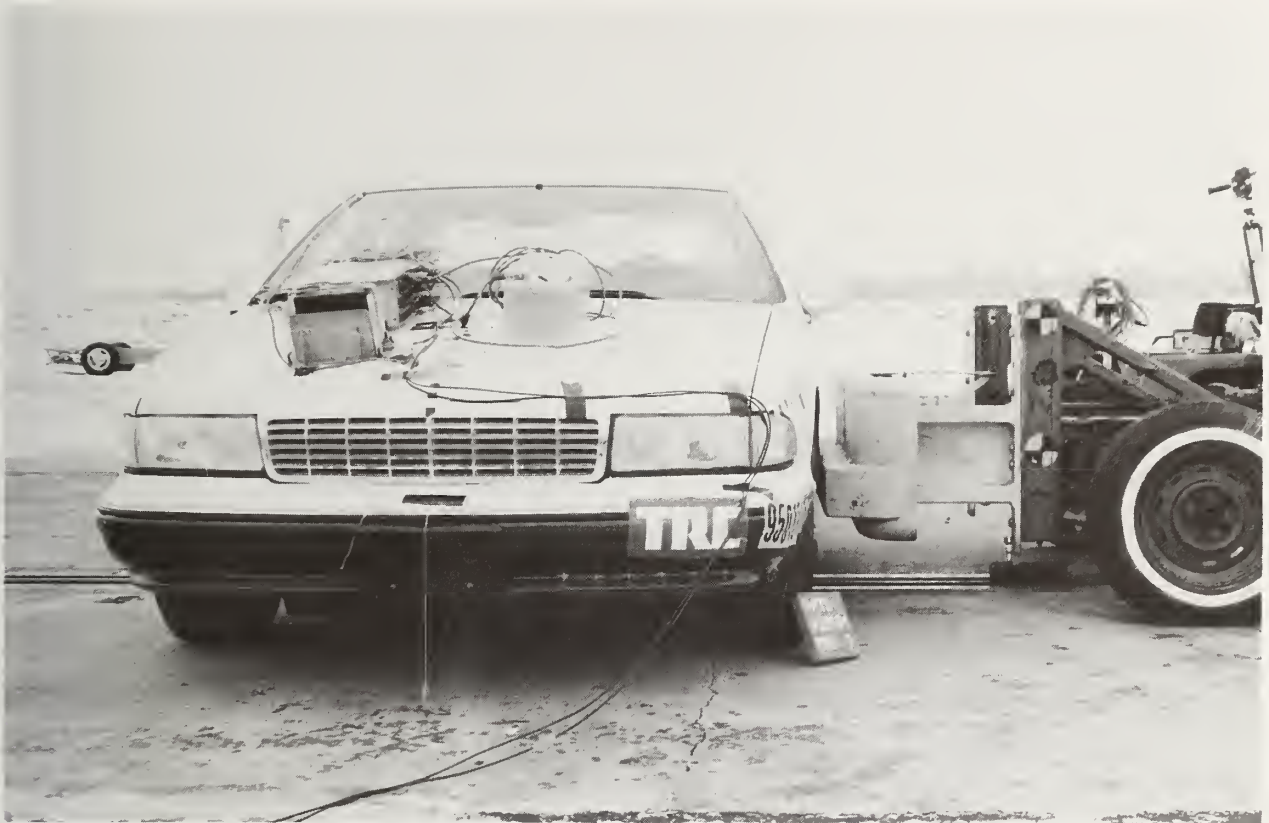


Figure A-1. Pre-Test Front View



Figure A-2. Post-Test Front View



Figure A-3. Pre-Test Left Front Three-Quarter View



Figure A-4. Post-Test Left Front Three-Quarter View



Figure A-5. Pre-Test Left Side View



Figure A-6. Post-Test Left Side View

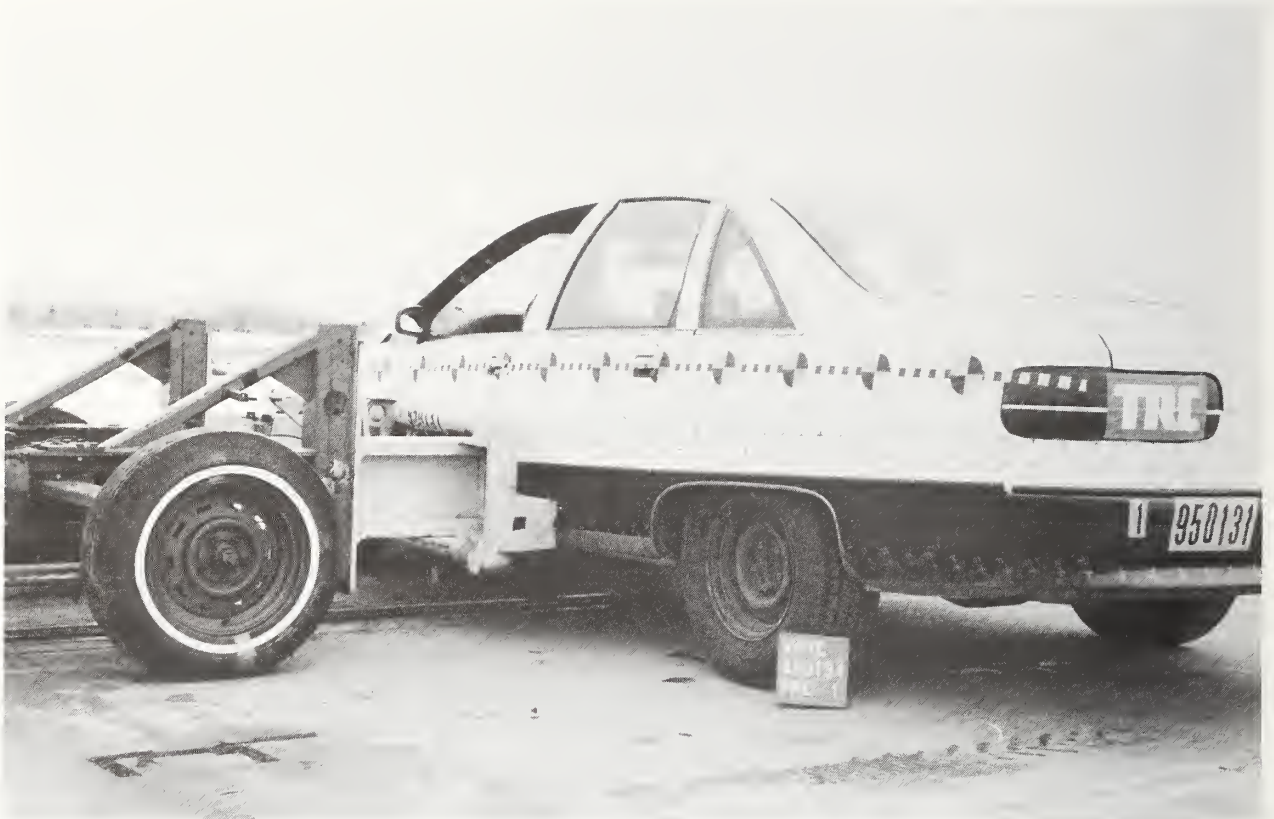


Figure A-7. Pre-Test Left Rear Three-Quarter View

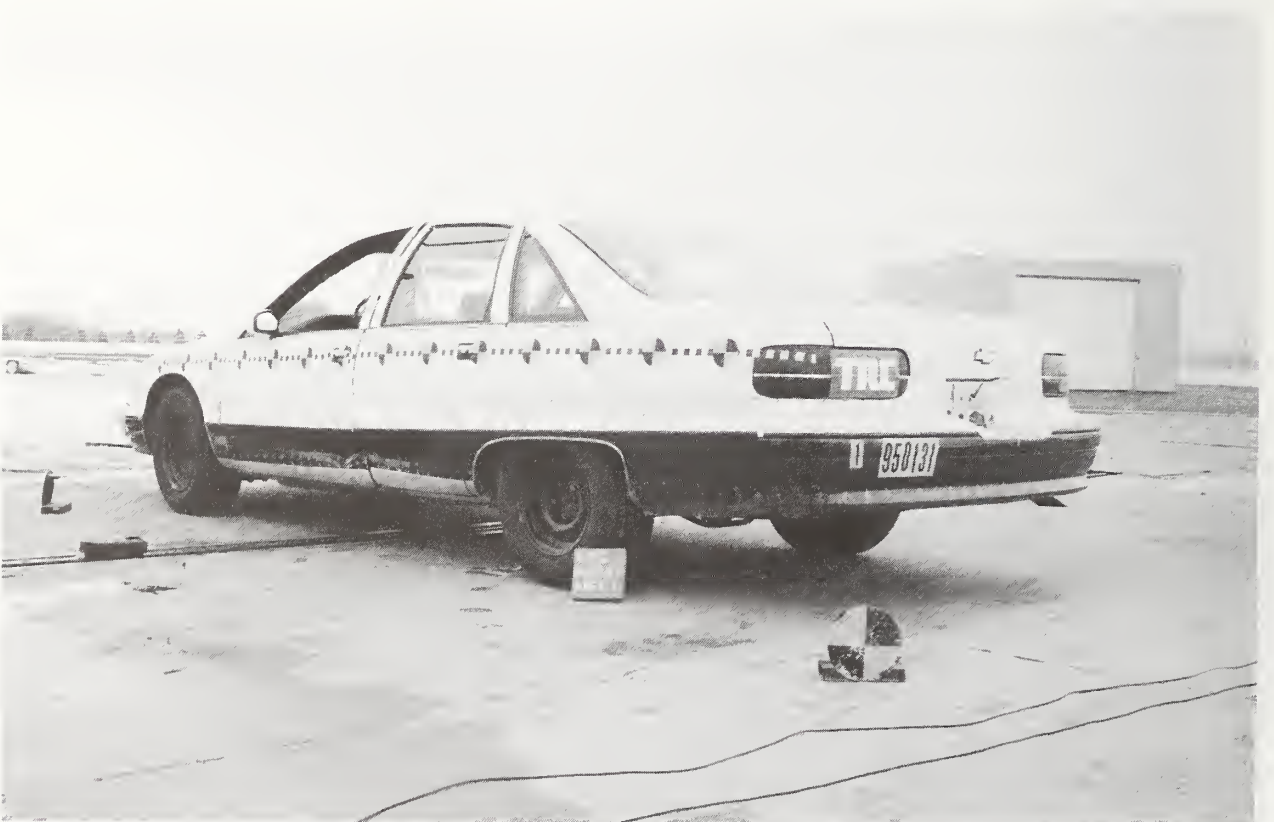


Figure A-8. Post-Test Left Rear Three-Quarter View



Figure A-9. Pre-Test Rear View

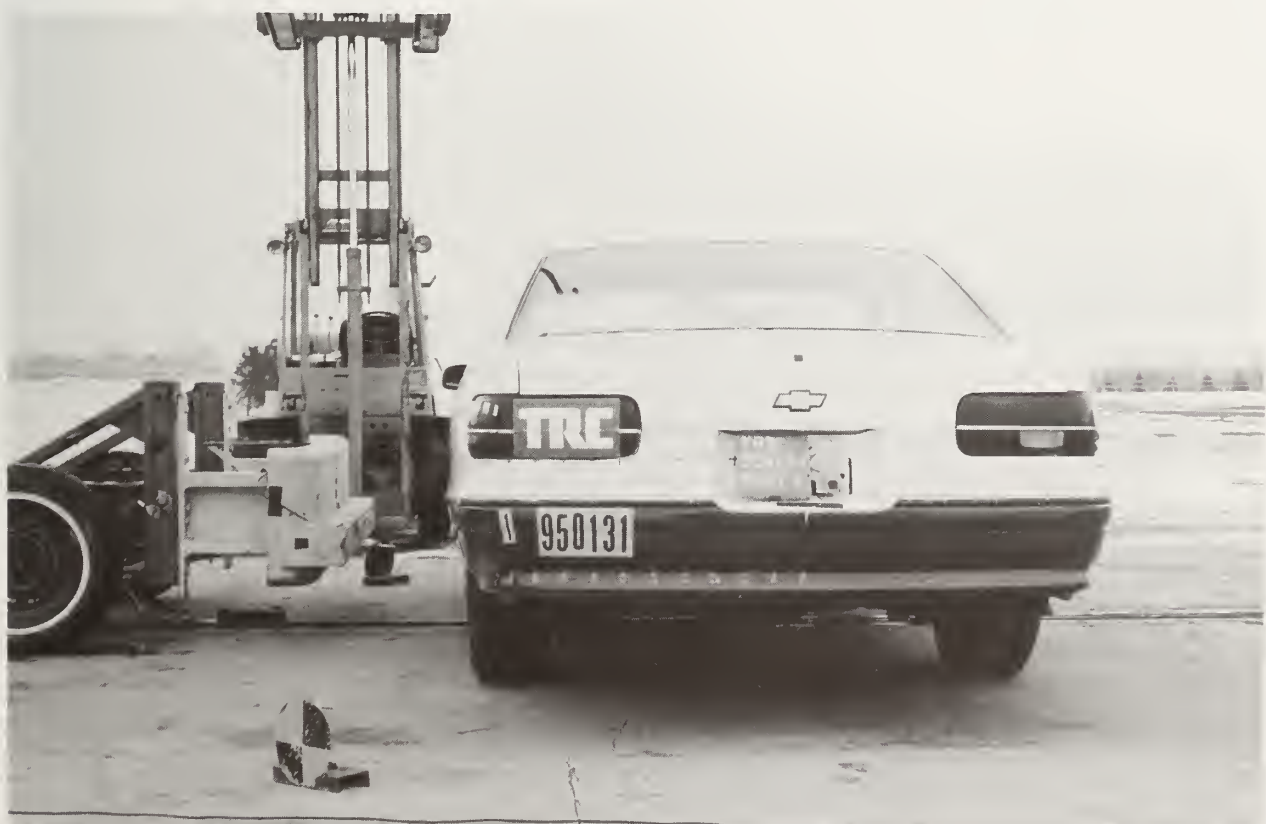


Figure A-10. Post-Test Rear View



Figure A-11. Pre-test Right Side View



Figure A-12. Post-Test Right Side View

List of Photographs

Test No. 950131-2

- A-13. Post-Test Front View
- A-14. Post-Test Left Front Three-Quarter View
- A-15. Post-Test Left Side View
- A-16. Post-Test Left Rear Three-Quarter View
- A-17. Post-Test Rear View
- A-18. Post-Test Right Side View



Figure A-13. Post-Test Front View

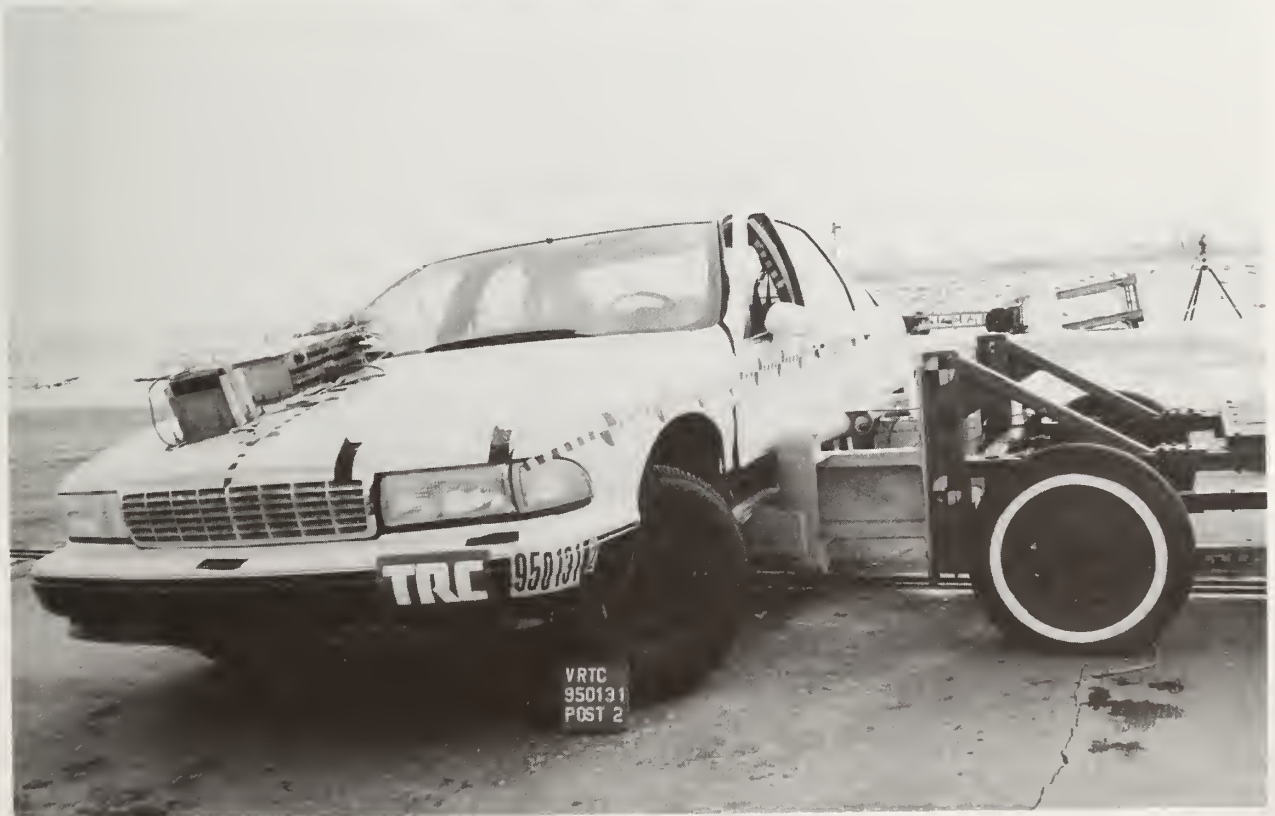


Figure A-14. Post-Test Left Front Three-Quarter View



Figure A-15. Post-Test Left Side View



Figure A-16. Post-Test Left Rear Three-Quarter View



Figure A-17. Post-Test Rear View



Figure A-18. Post-Test Right Side View

List of Photographs

Test No. 950131-3

- A-19. Post-Test Front View
- A-20. Post-Test Left Front Three-Quarter View
- A-21. Post-Test Left Side View
- A-22. Post-Test Left Rear Three-Quarter View
- A-23. Post-Test Rear View
- A-24. Post-Test Right Side View



Figure A-19. Post-Test Front View



Figure A-20. Post-Test Left Front Three-Quarter View



Figure A-21. Post-Test Left Side View



Figure A-22. Post-Test Left Rear Three-Quarter View



Figure A-23. Post-Test Rear View



Figure A-24. Post-Test Right Side View

List of Photographs

Test No. 950206-1

- A-25. Post-Test Front View
- A-26. Post-Test Left Front Three-Quarter View
- A-27. Post-Test Left Side View
- A-28. Post-Test Left Rear Three-Quarter View
- A-29. Post-Test Rear View
- A-30. Post-Test Right Side View

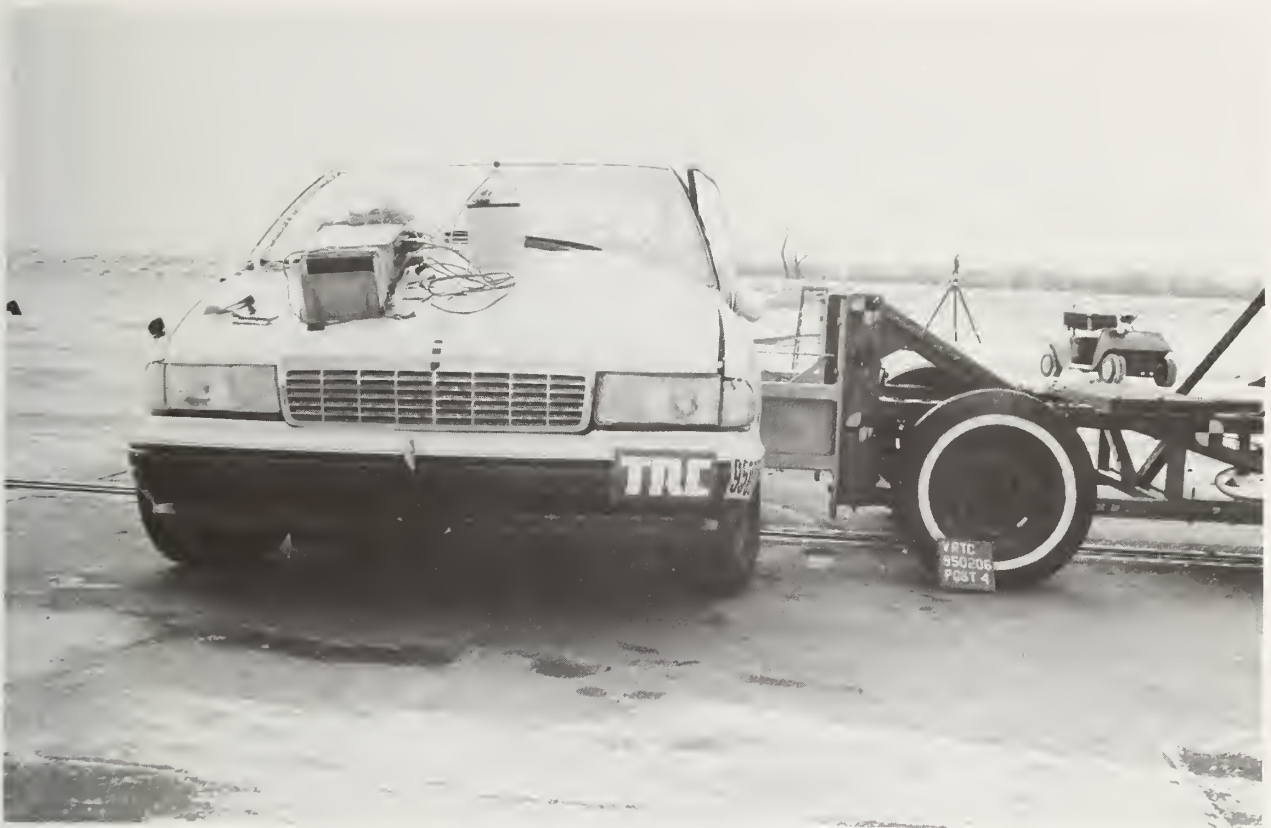


Figure A-25. Post-Test Front View



Figure A-26. Post-Test Left Front Three-Quarter View



Figure A-27. Post-Test Left Side View



Figure A-28. Post-Test Left Rear Three-Quarter View



Figure A-29. Post-Test Rear View



Figure A-30. Post-Test Right Side View

List of Photographs

Test No. 950206-2

- A-31. Post-Test Front View
- A-32. Post-Test Left Front Three-Quarter View
- A-33. Post-Test Left Side View
- A-34. Post-Test Left Rear Three-Quarter View
- A-35. Post-Test Rear View
- A-36. Post-Test Right Side View

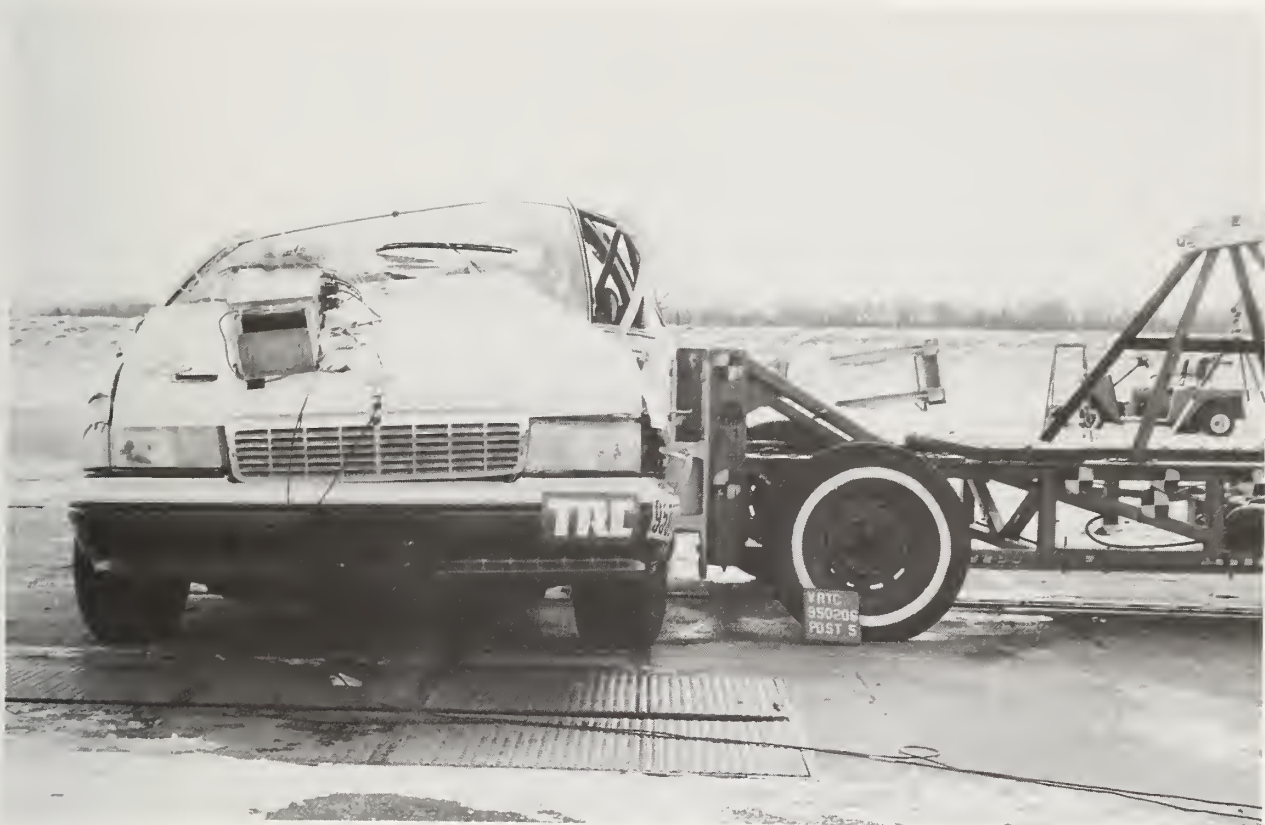


Figure A-31. Post-Test Front View



Figure A-32. Post-Test Left Front Three-Quarter View



Figure A-33. Post-Test Left Side View



Figure A-34. Post-Test Left Rear Three-Quarter View



Figure A-35. Post-Test Rear View



Figure A-36. Post-Test Right Side View

Appendix B

Data Plots

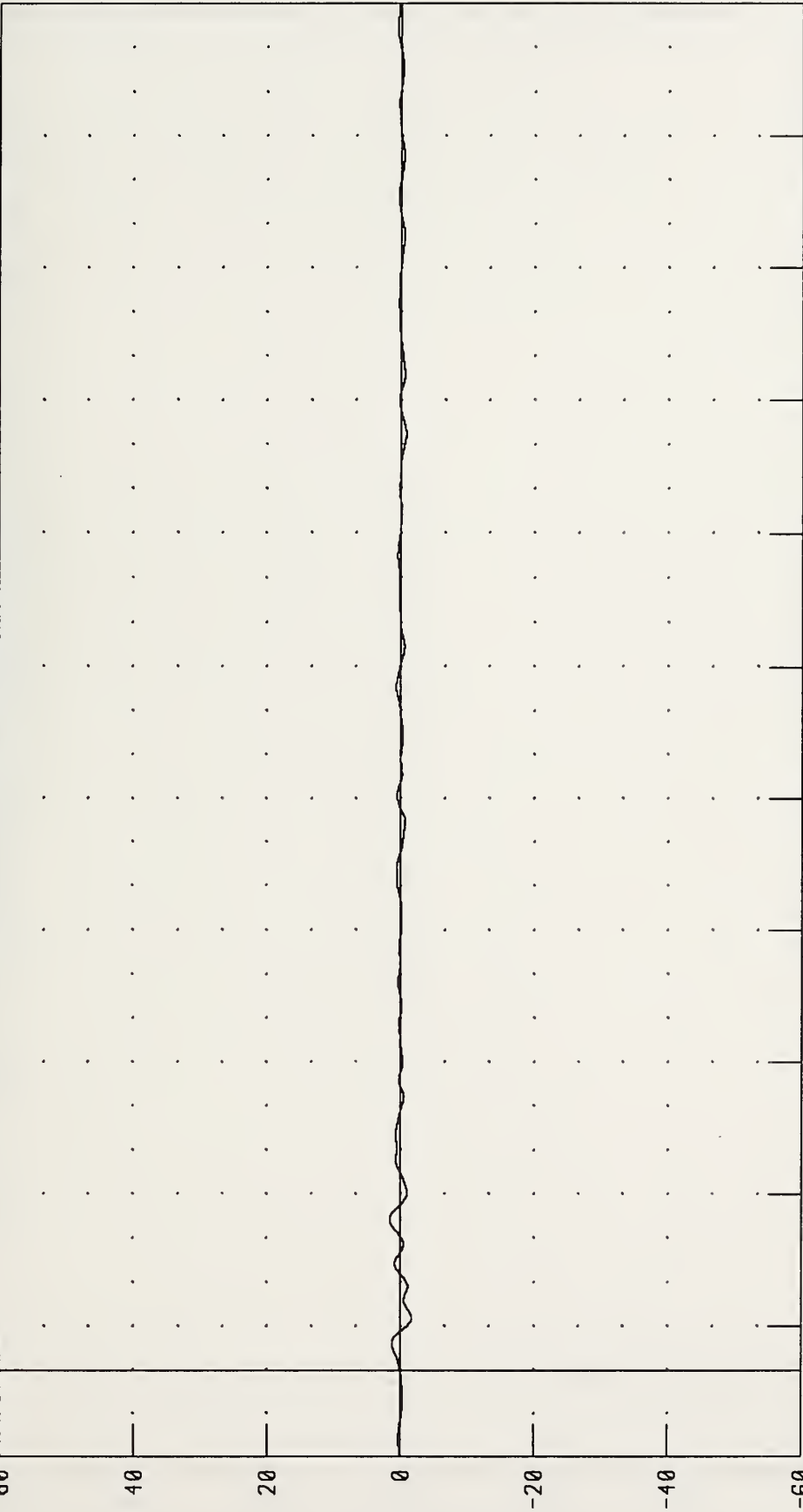
Data Plots

Test No. 950131-1

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

TRC INC.



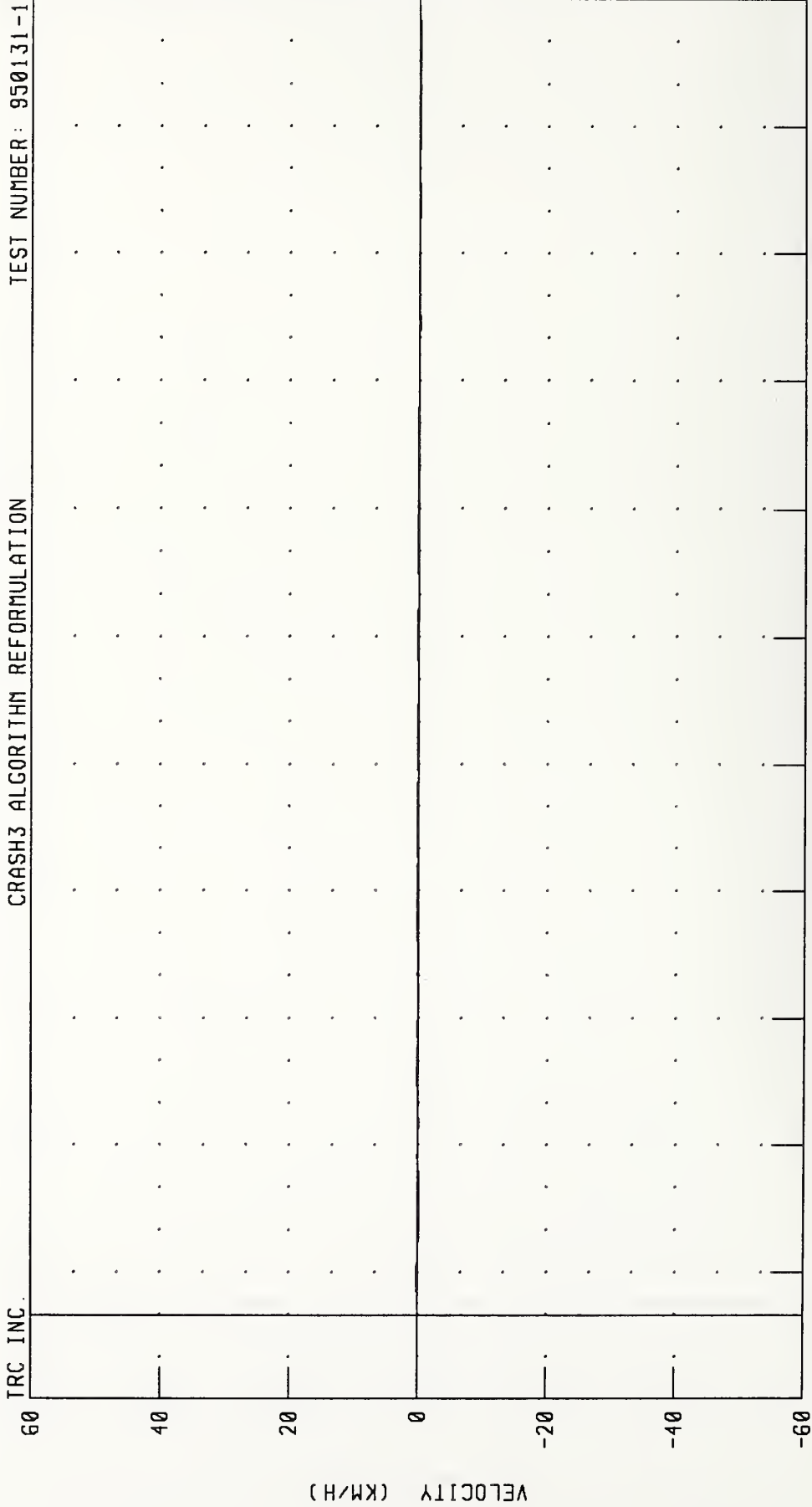
60
40
20
0
-20
-40
-60
-20 10 40 70 100 130 160 190 220 250 280 310
TIME (MS)

CHANNEL: VCGXG FILTER: CH. CLASS 60

PEAK DATA: 1.57 G @ 34.40 MS, -1.73 G @ 11.84 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



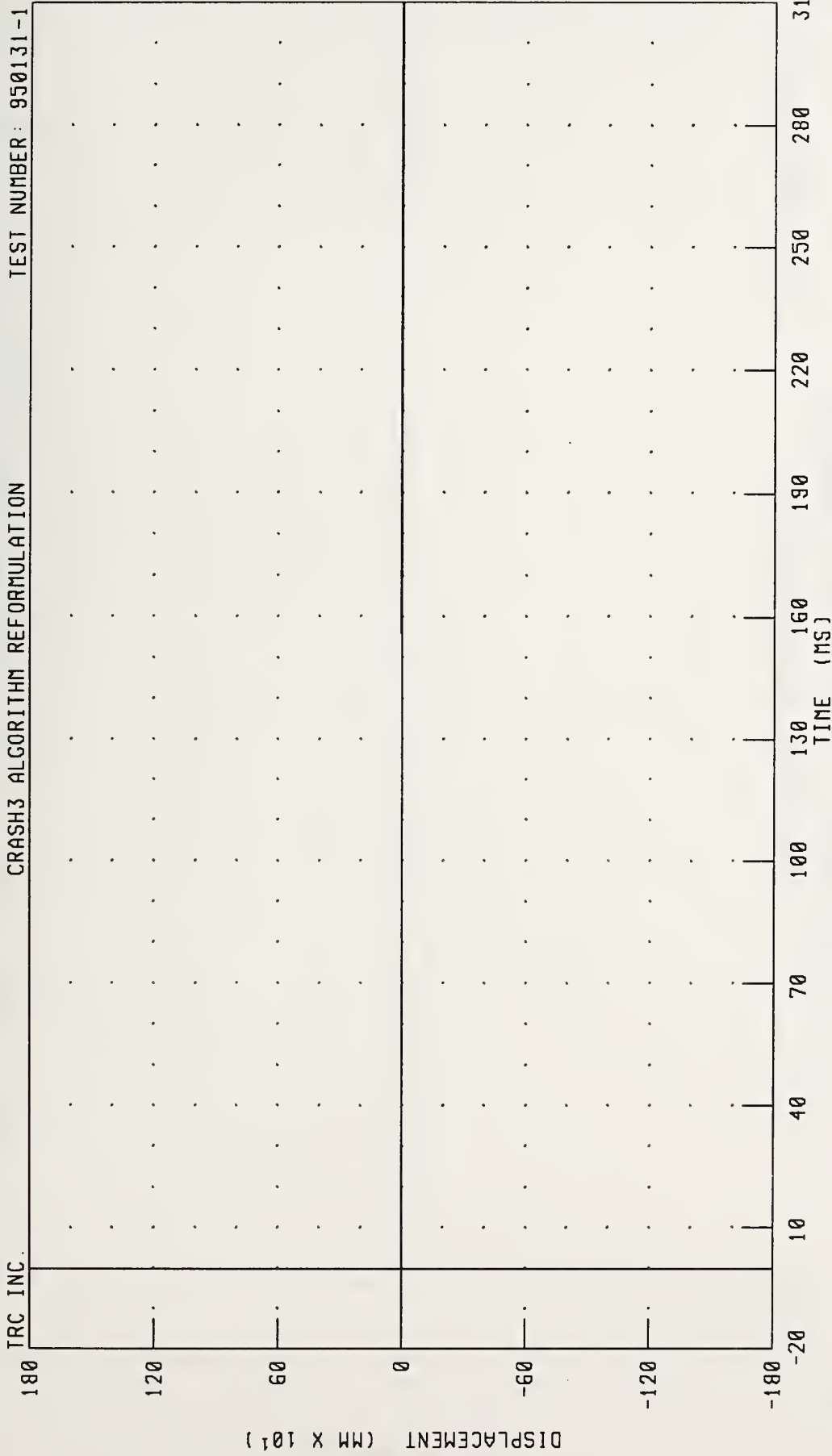
CHANNEL: VCGXV FILTER: CH. CLASS 180

PEAK DATA: 0.25 KM/H @ 117.60 MS; -0.24 KM/H @ 213.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 VEHICLE CENTER OF GRAVITY X-AXIS DISPLACEMENT

TRC INC. TEST NUMBER: 950131-1

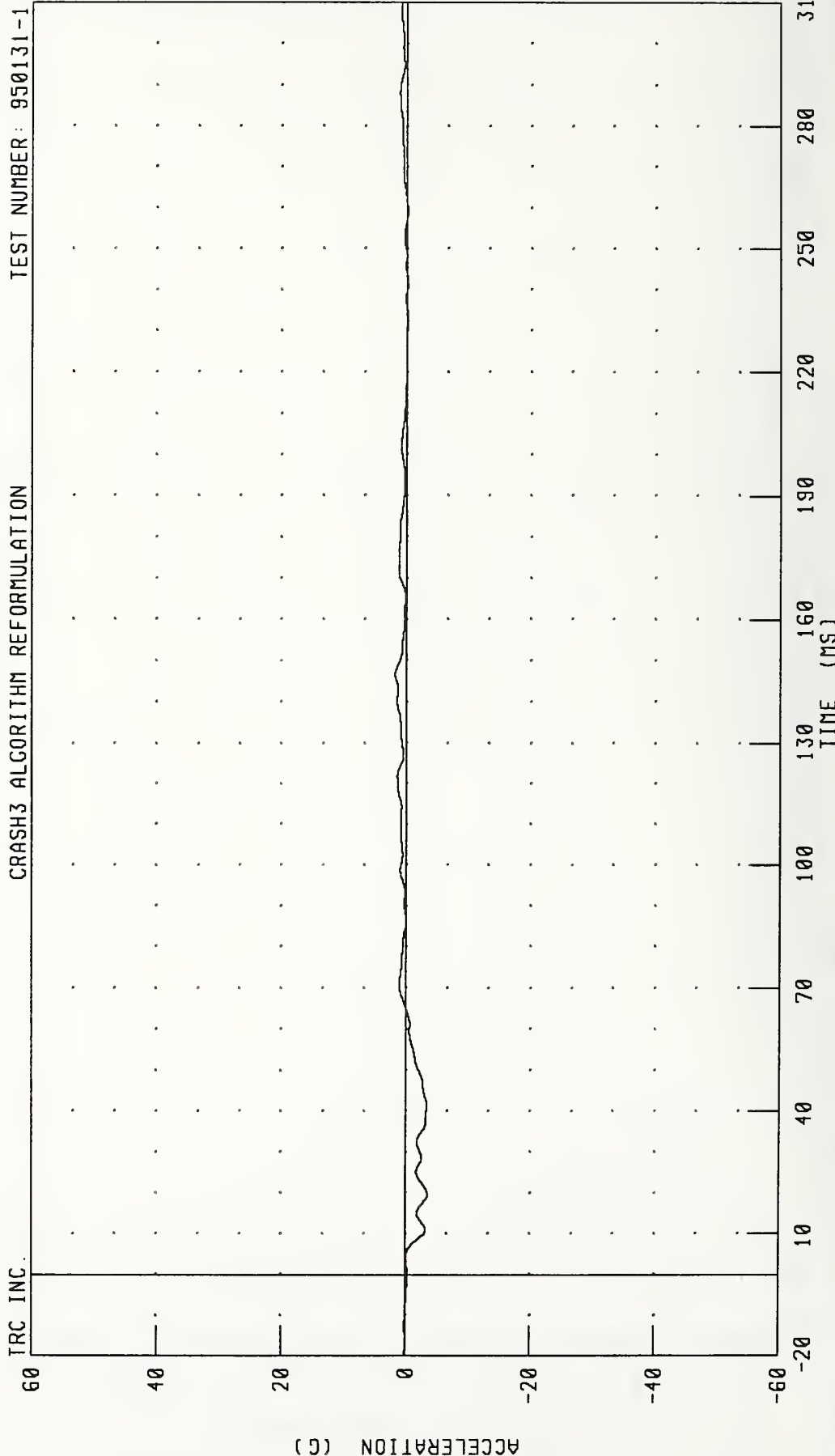
CRASH3 ALGORITHM REFORMULATION



CHANNEL: VCGXD FILTER: CH. CLASS 180 PEAK DATA: 5.93 MM @ 226.24 MS, -0.49 MM @ 49.44 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

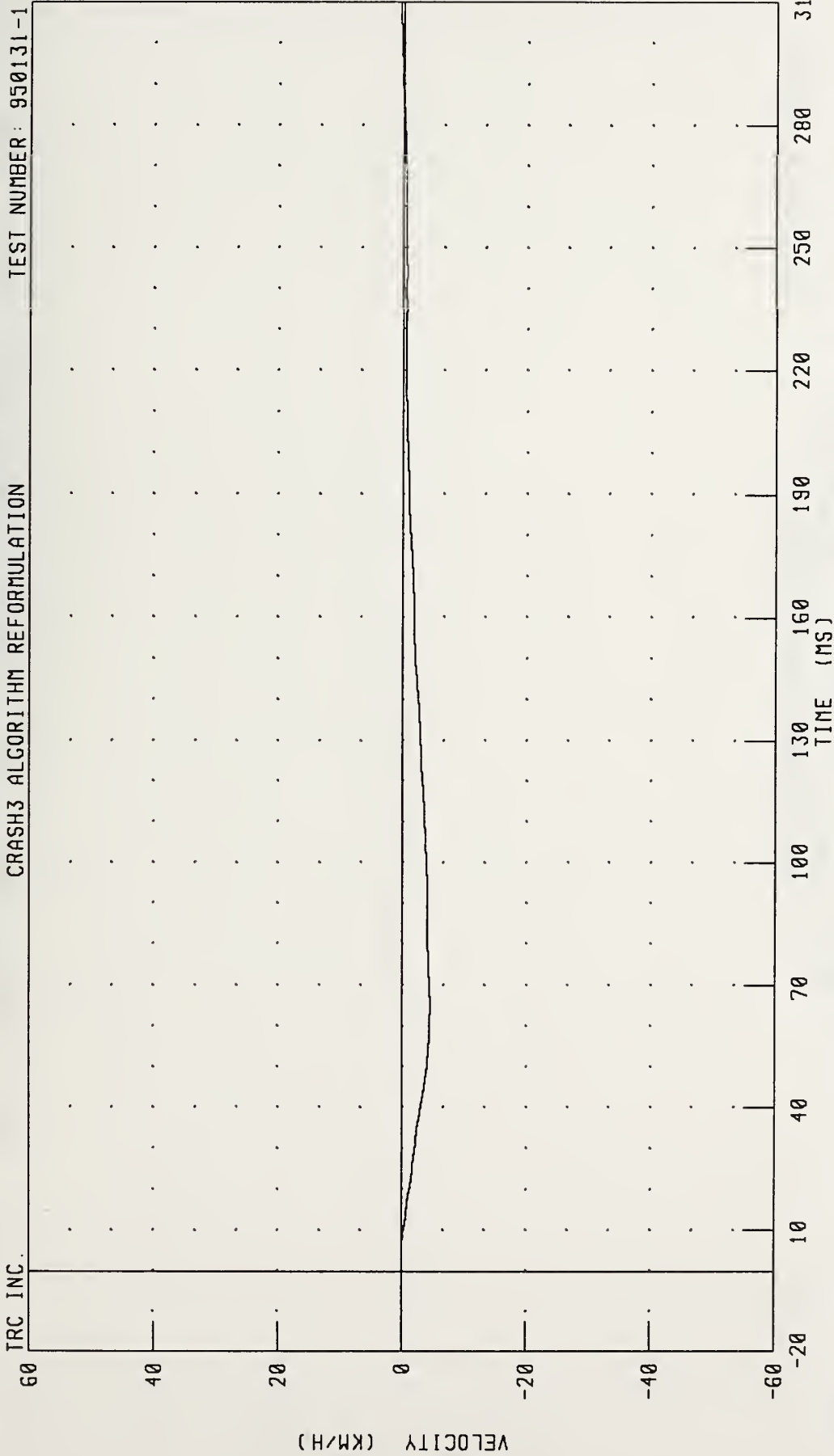


CHANNEL: VCGYG FILTER: CH. CLASS 60

PEAK DATA: 1.81 G @ 146.72 MS; -3.54 G @ 19.60 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

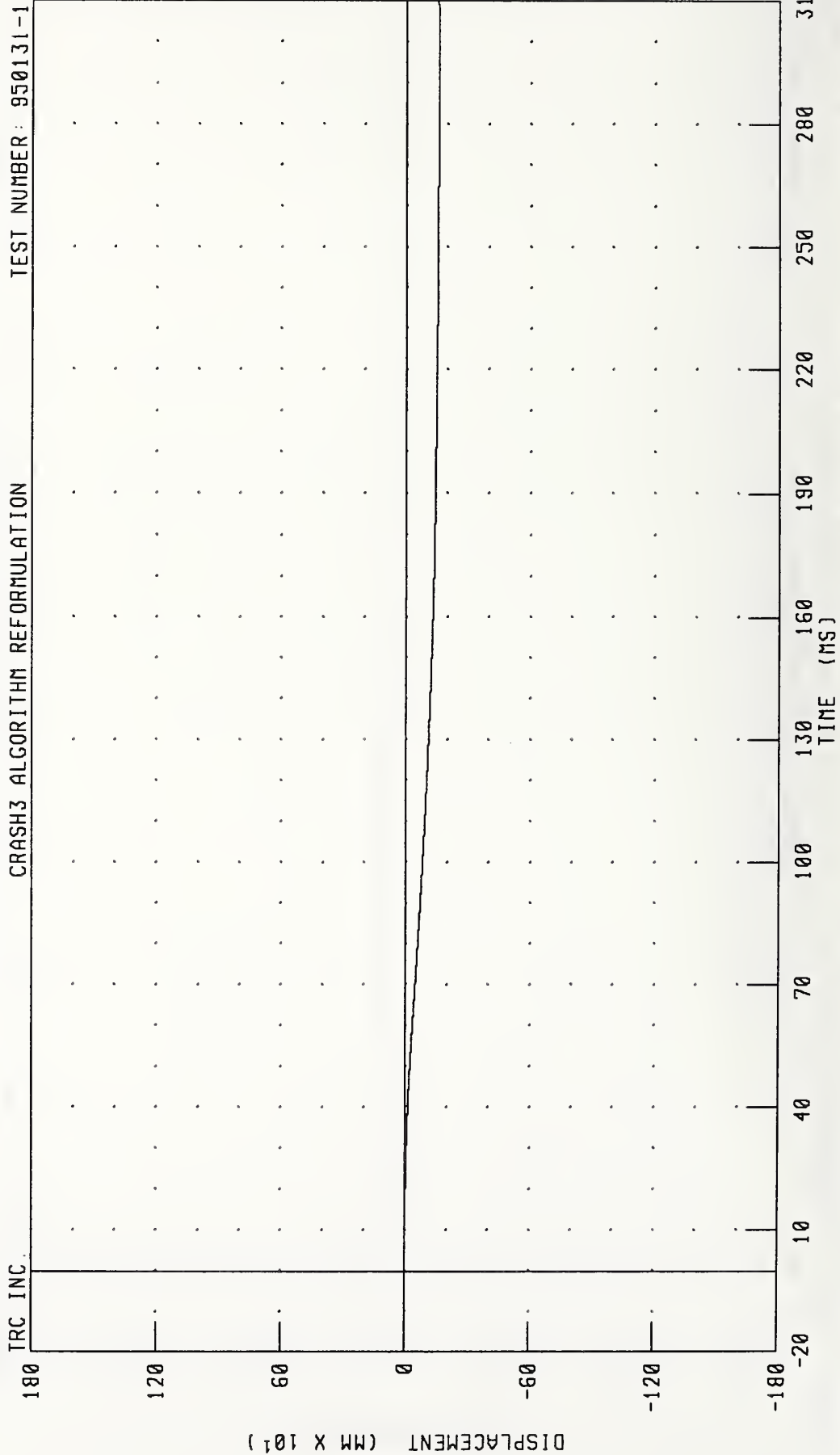


CHANNEL: VCGYV FILTER: CH. CLASS 180

PEAK DATA: 0.59 KM/H @ 310.00 MS; -4.48 KM/H @ 63.92 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

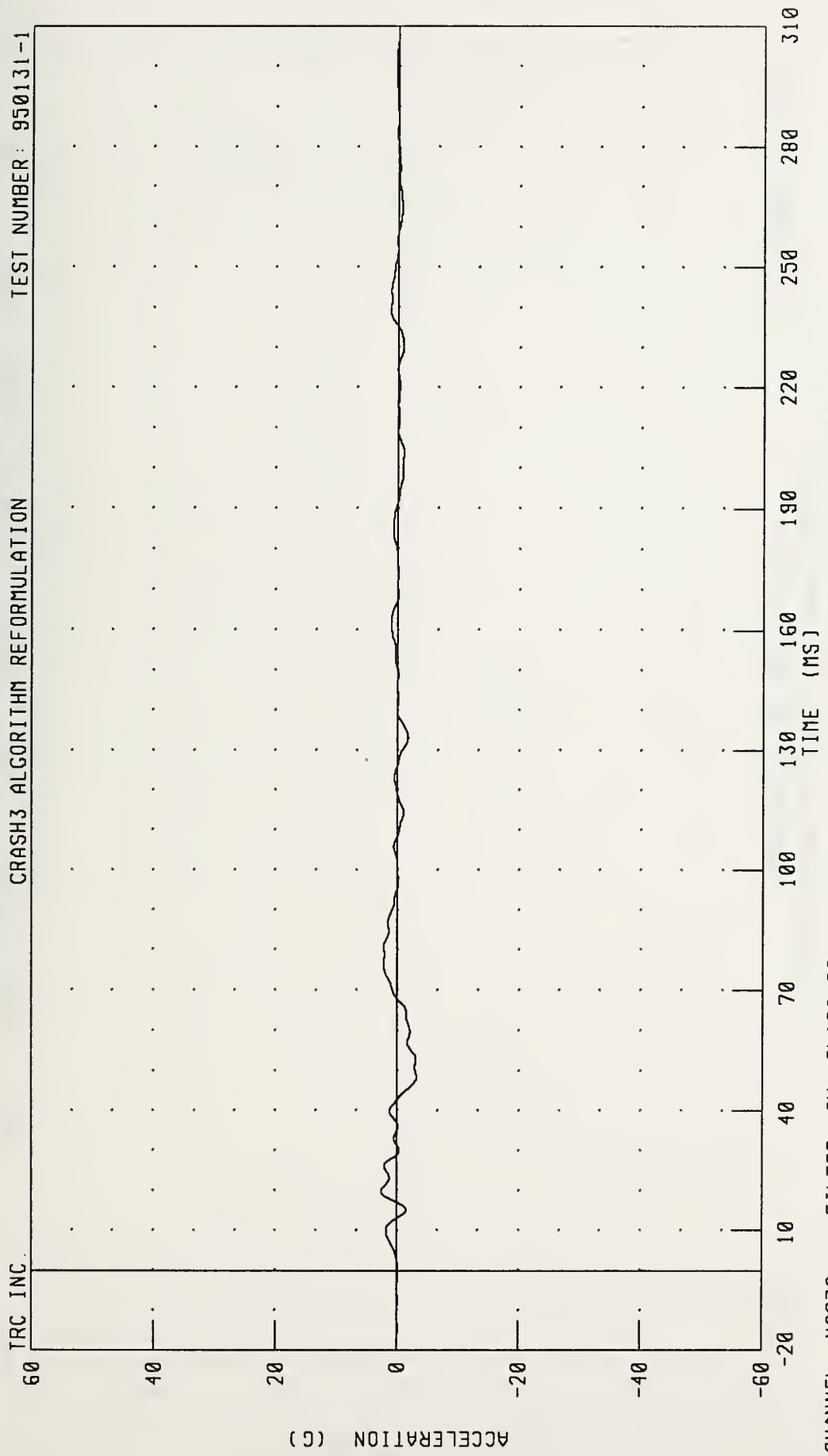


CHANNEL: VCGYD FILTER: CH CLASS 180

PEAK DATA: 0.00 MM @ 0.00 MS; -156.47 MM @ 286.80 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

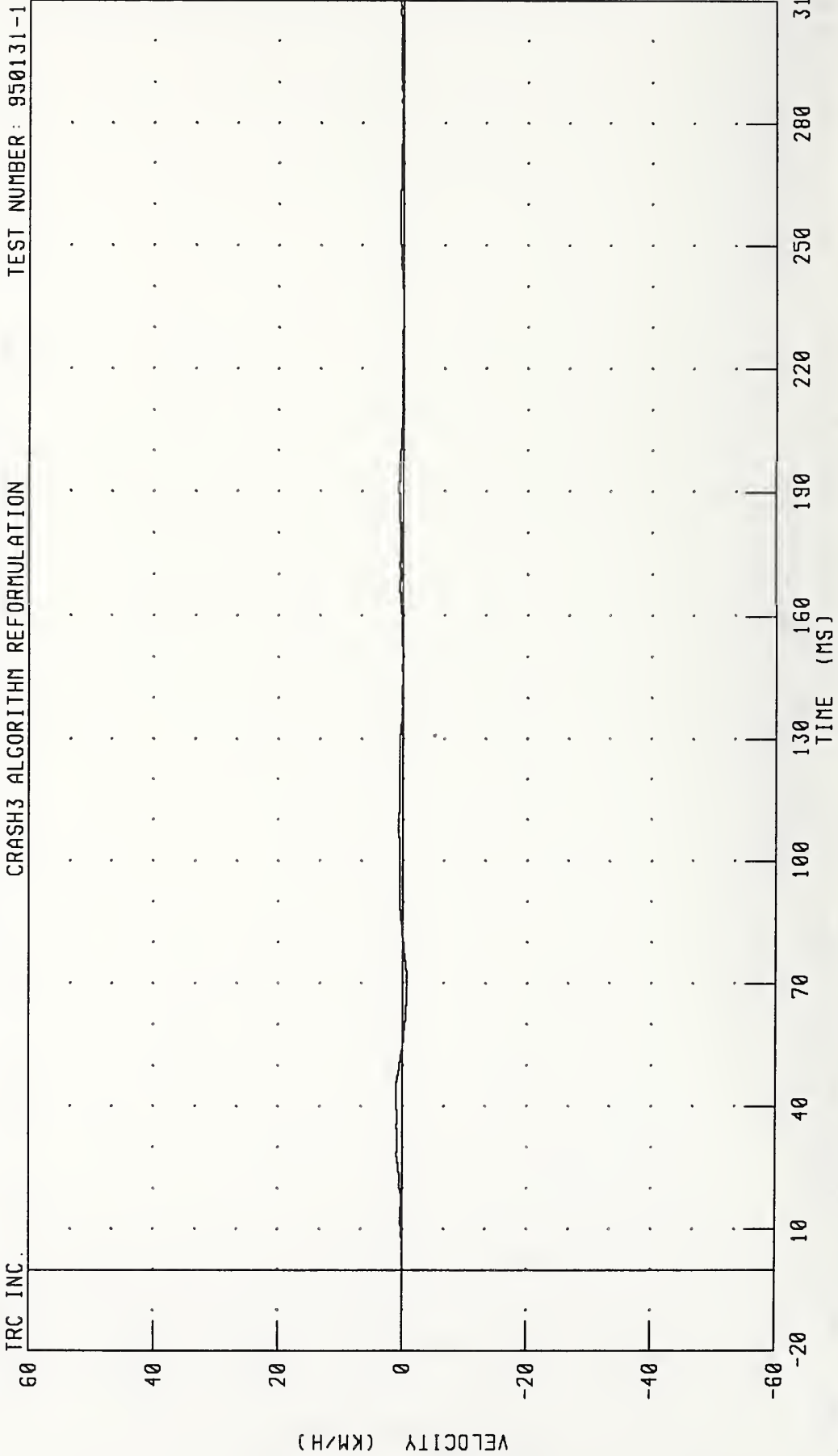
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: VCGZG FILTER: CH. CLASS 60 PEAK DATA: 2.61 G @ 19.76 MS; -3.19 G @ 48.40 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: VCGZY FILTER: CH. CLASS 180

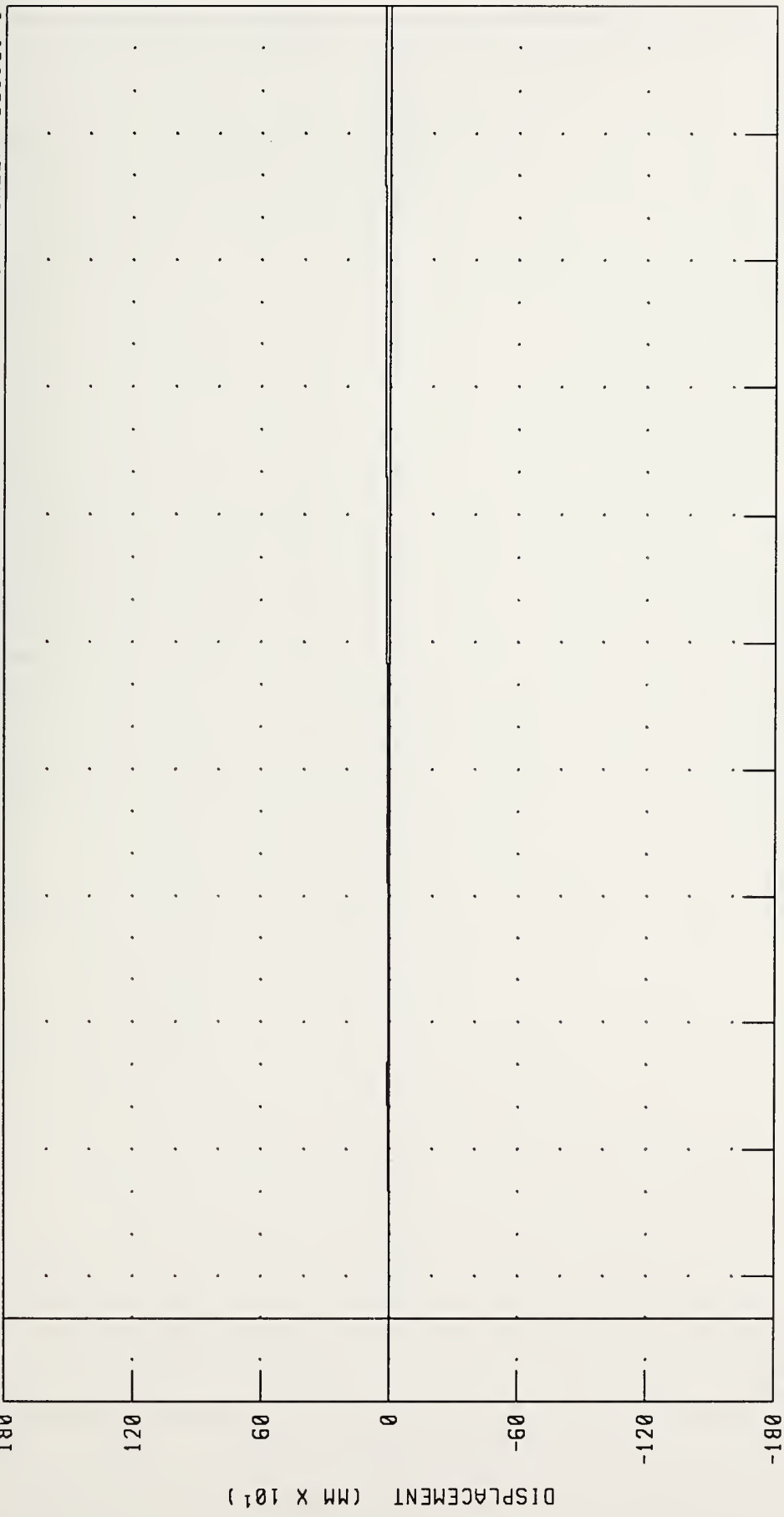
PEAK DATA: 1.07 KM/H @ 41.68 MS; -0.75 KM/H @ 67.28 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 VEHICLE CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



DISPLACEMENT (MM X 10¹)

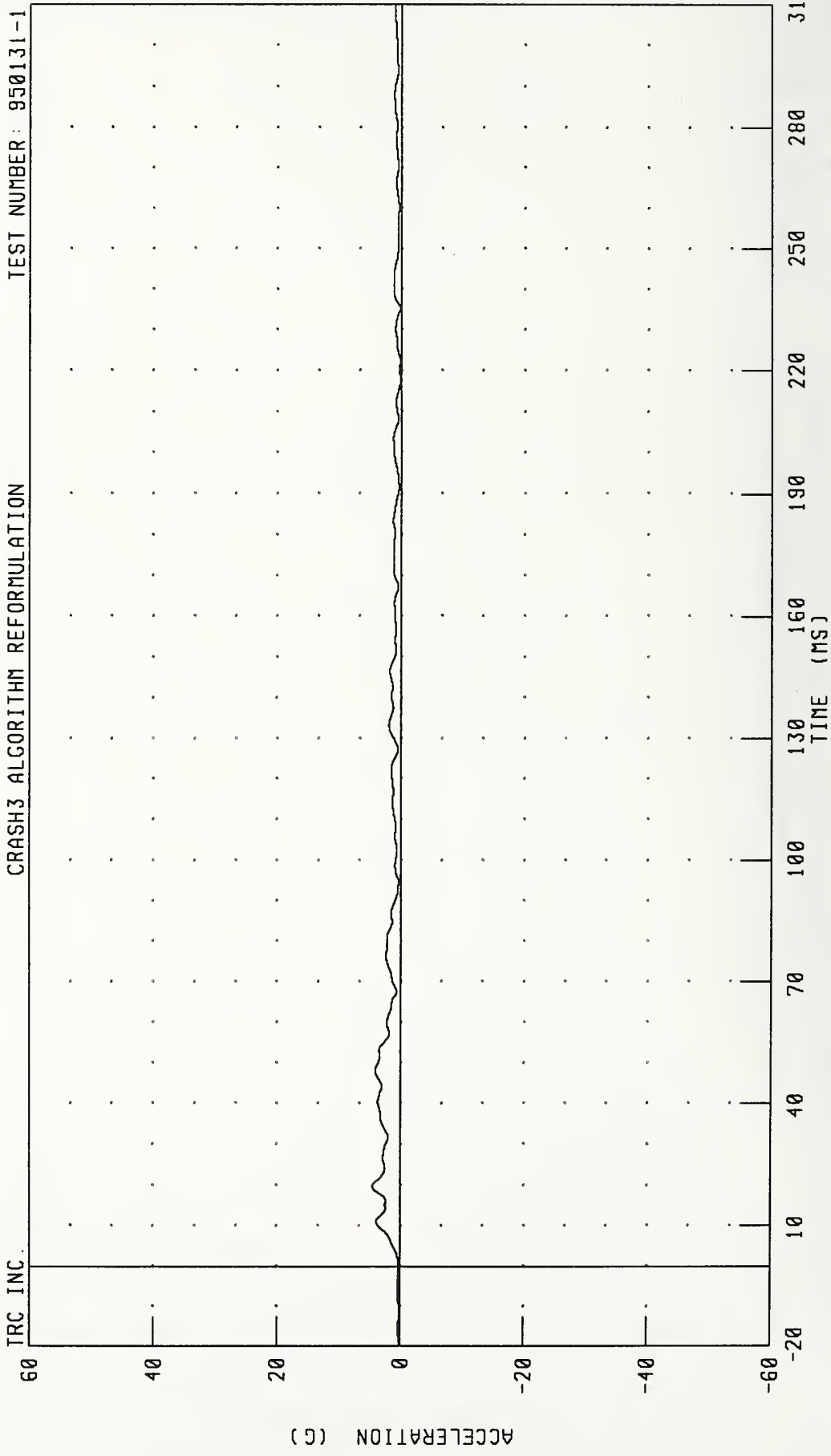
CHANNEL: VCGZD FILTER: CH. CLASS 180

TIME (MS)

PEAK DATA: 26.81 MM @ 310.00 MS; -0.01 MM @ 4.48 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION

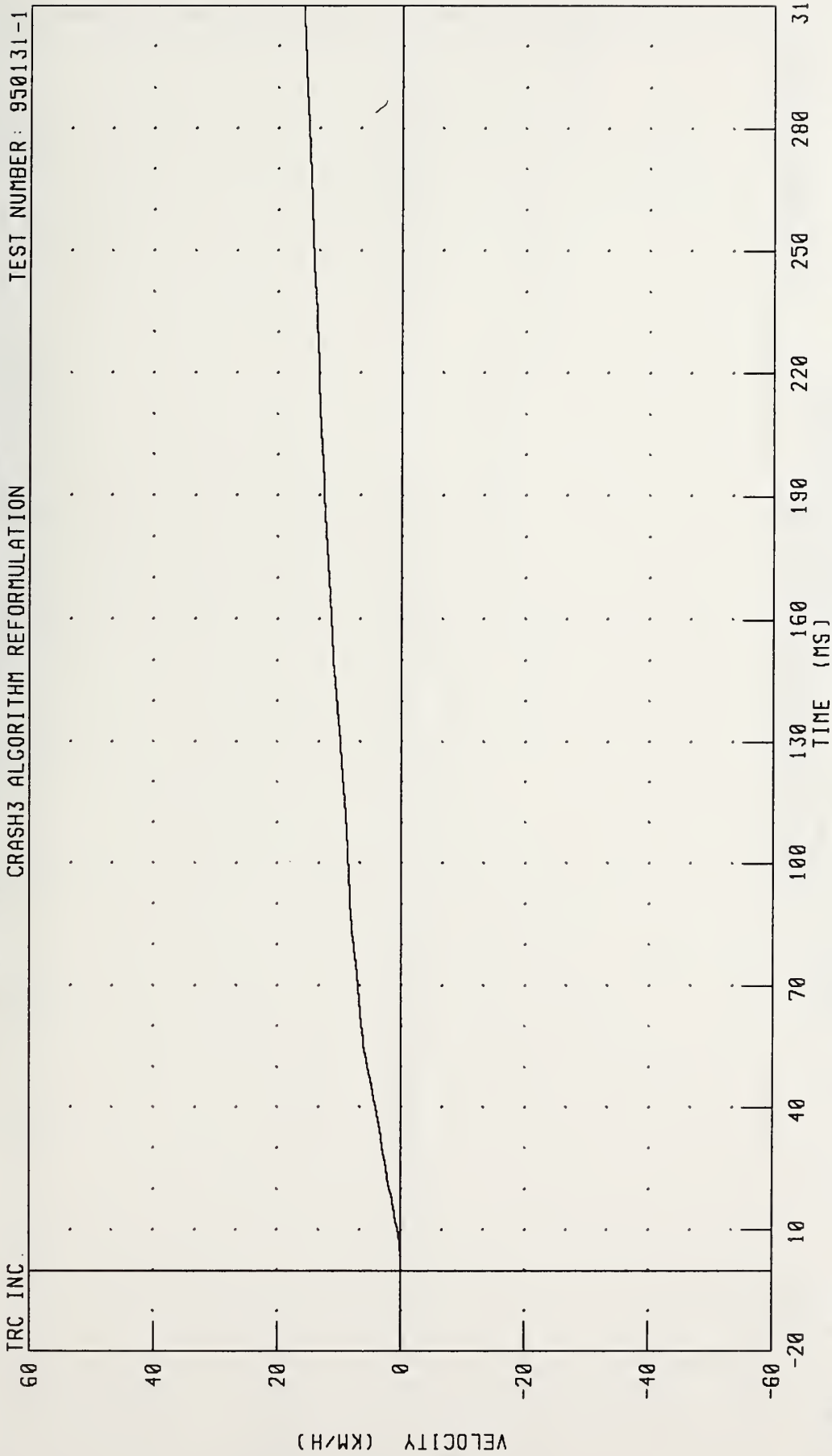
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: VCCRG FILTER: CH CLASS 60 PEAK DATA: 4.52 G @ 19.60 MS; 0.10 G @ 235.28 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT VELOCITY

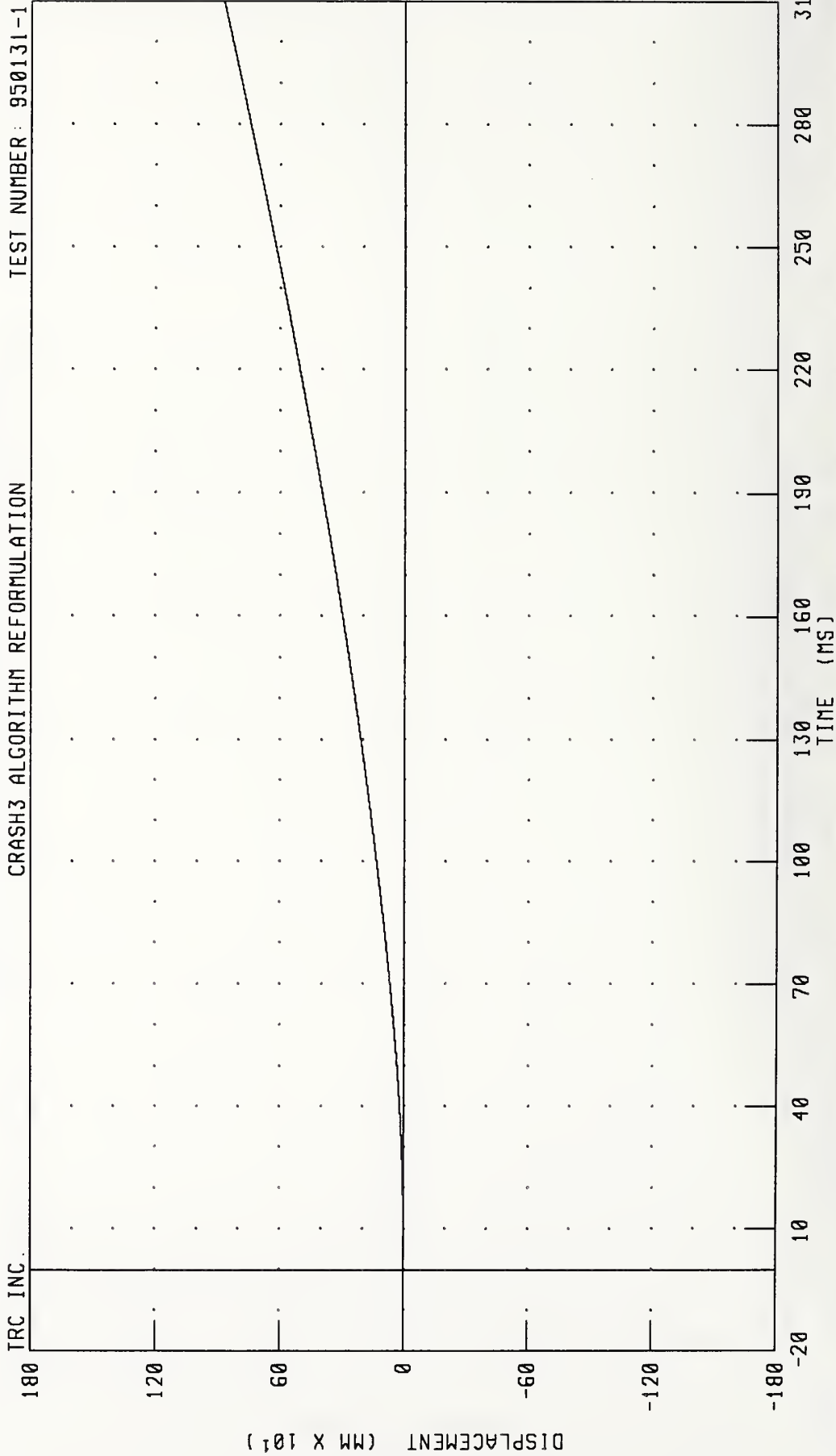
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: VCGRV FILTER: CH. CLASS 180 PEAK DATA: 16.01 KM/H @ 310.00 MS, 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



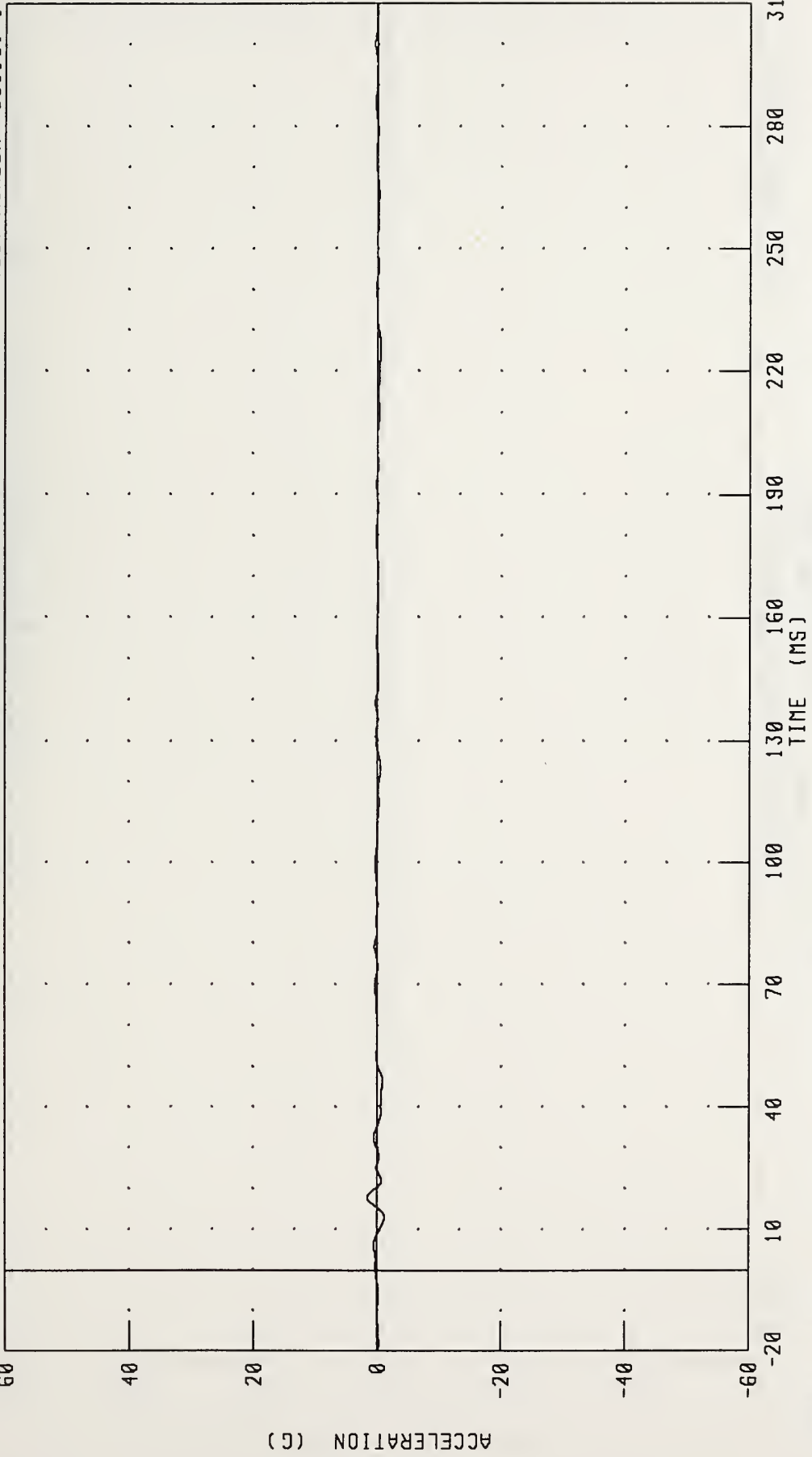
CHANNEL: VCGRD FILTER: CH. CLASS 180

PEAK DATA: 873.98 MM @ 310.00 MS, 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
LEFT REAR SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

TRC INC.



CHANNEL: LRSXG FILTER: CH CLASS 60

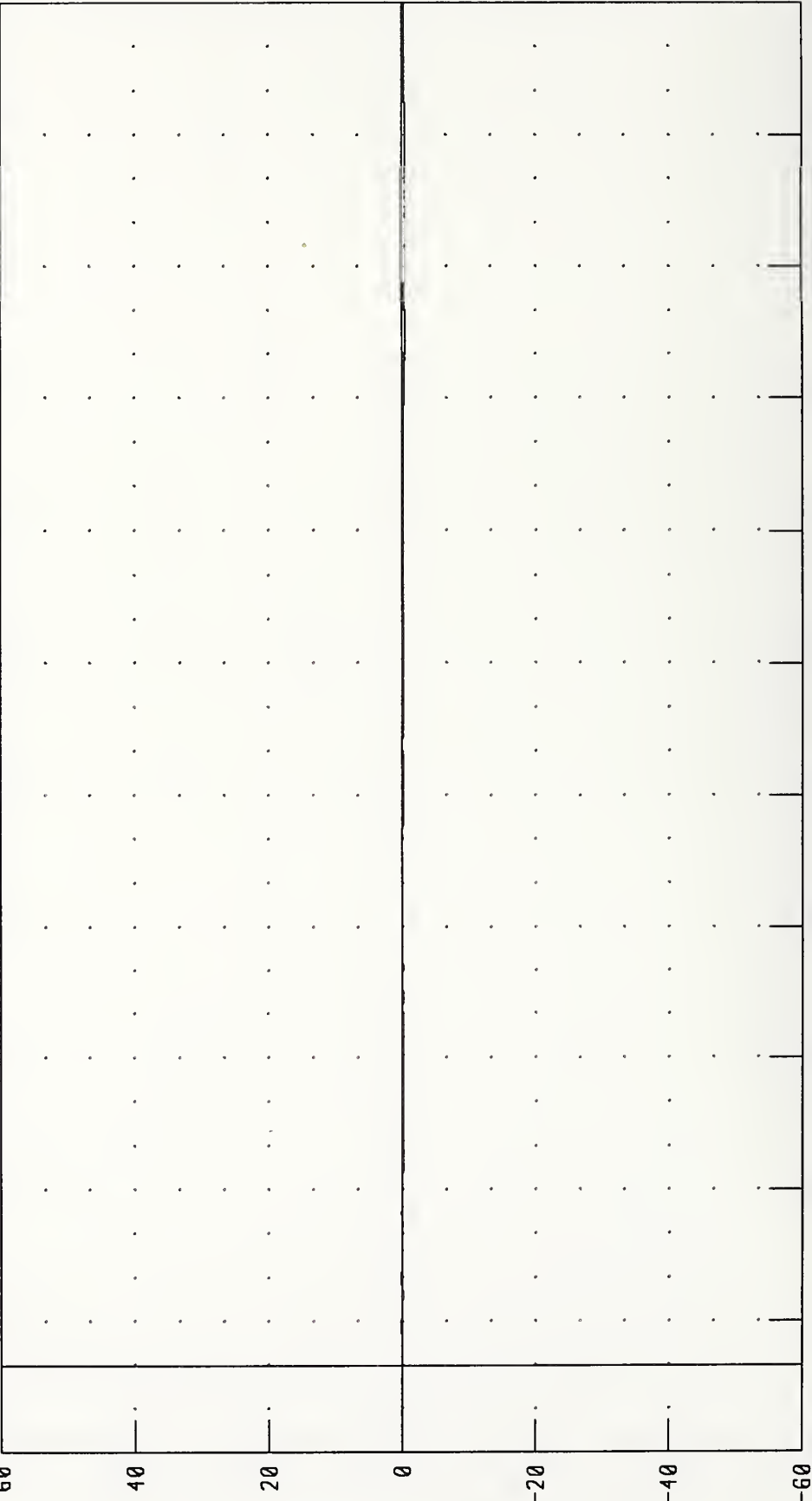
PEAK DATA: 1.62 G @ 17.84 MS; -1.17 G @ 13.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 LEFT REAR SILL X-AXIS VELOCITY

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



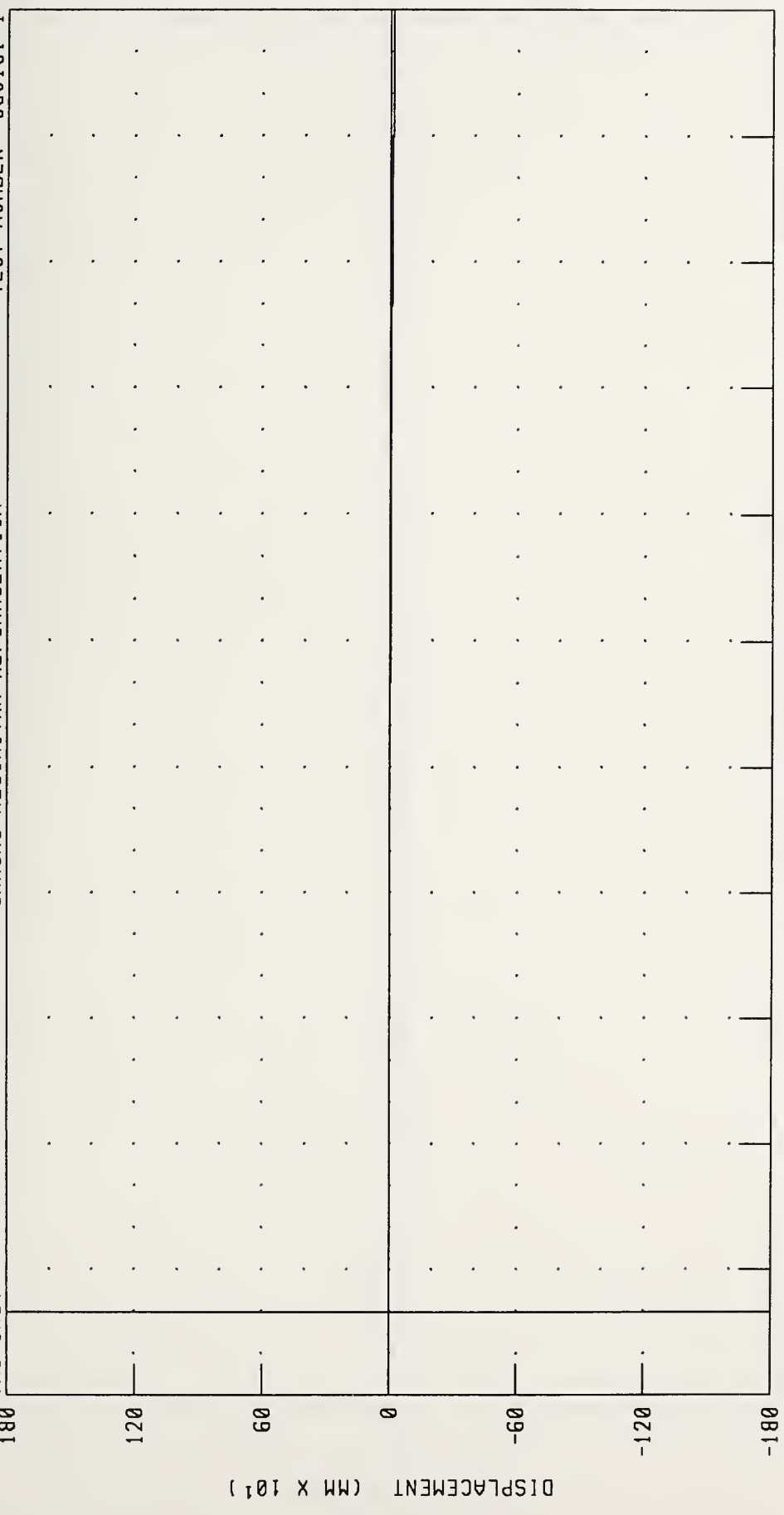
CHANNEL: LRSXY FILTER: CH. CLASS 180

PEAK DATA: 0.16 KM/H @ 19.68 MS; -0.51 KM/H @ 267.84 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 LEFT REAR SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

TRC INC.

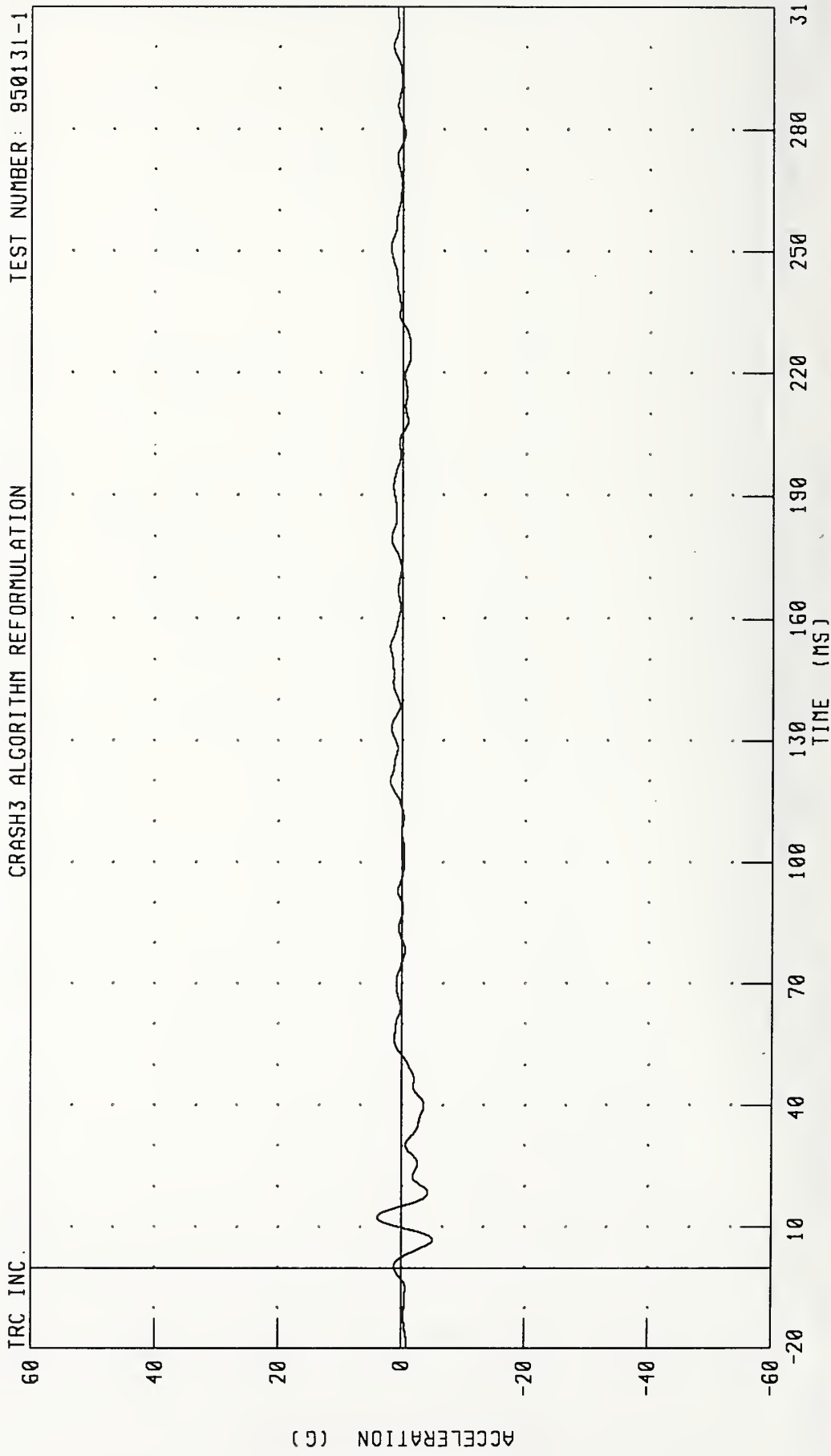


CHANNEL: LRSXD FILTER: CH CLASS 180

PEAK DATA: 0.56 MM @ 41.12 MS; -15.34 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
LEFT REAR SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

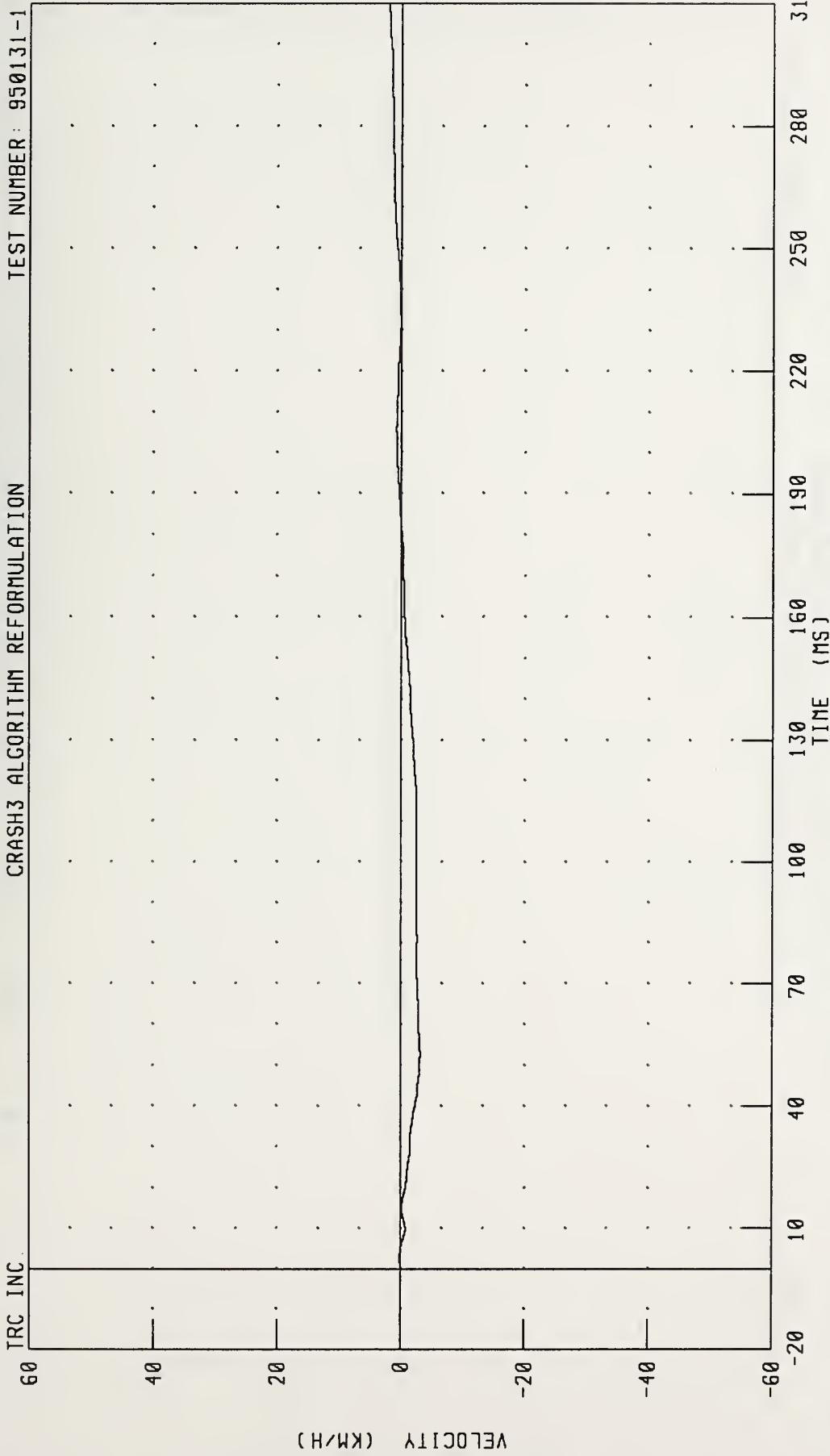


CHANNEL: LRSYG FILTER: CH CLASS 60

PEAK DATA: 3.99 G @ 12.48 MS; -5.10 G @ 6.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
LEFT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: LRSYV FILTER: CH CLASS 180

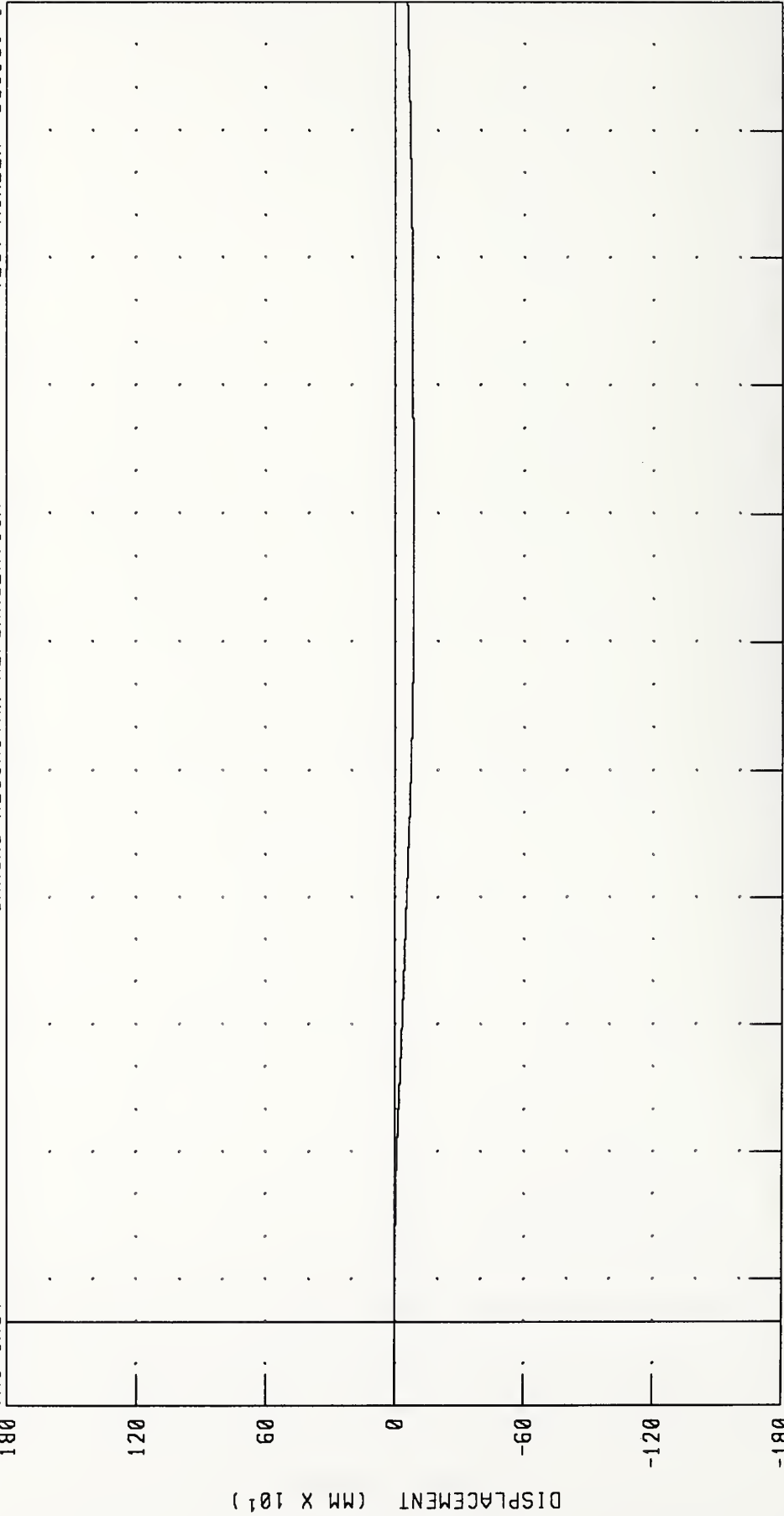
PEAK DATA: 2.01 KM/H @ 310.00 MS; -3.14 KM/H @ 52.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 LEFT REAR SILL Y-AXIS DISPLACEMENT

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

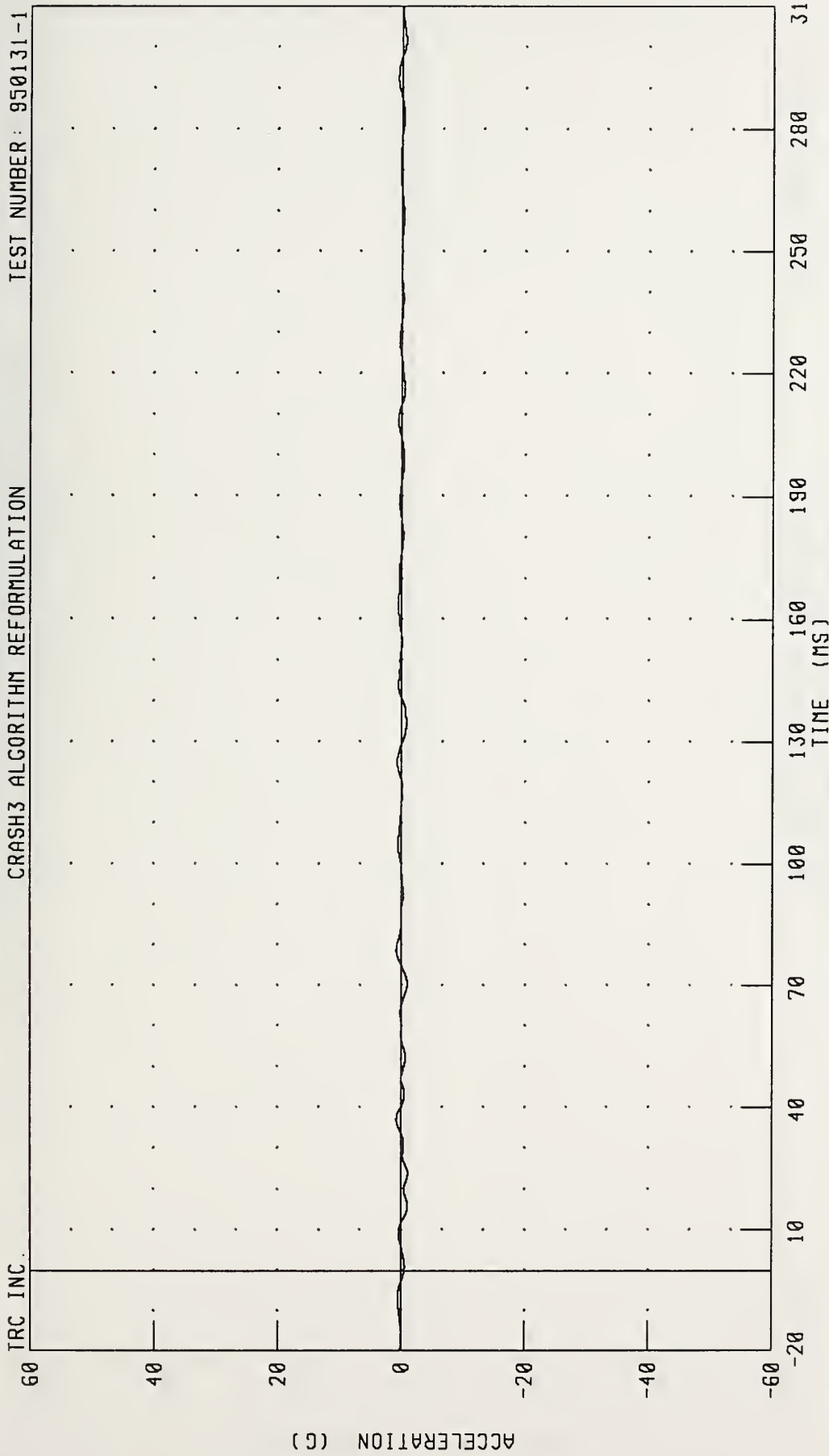


CHANNEL: LRSYD FILTER: CH. CLASS 180

PEAK DATA: 0.10 MM @ 4.96 MS; -87.76 MM @ 181.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT REAR SILL X-AXIS ACCELERATION
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-1

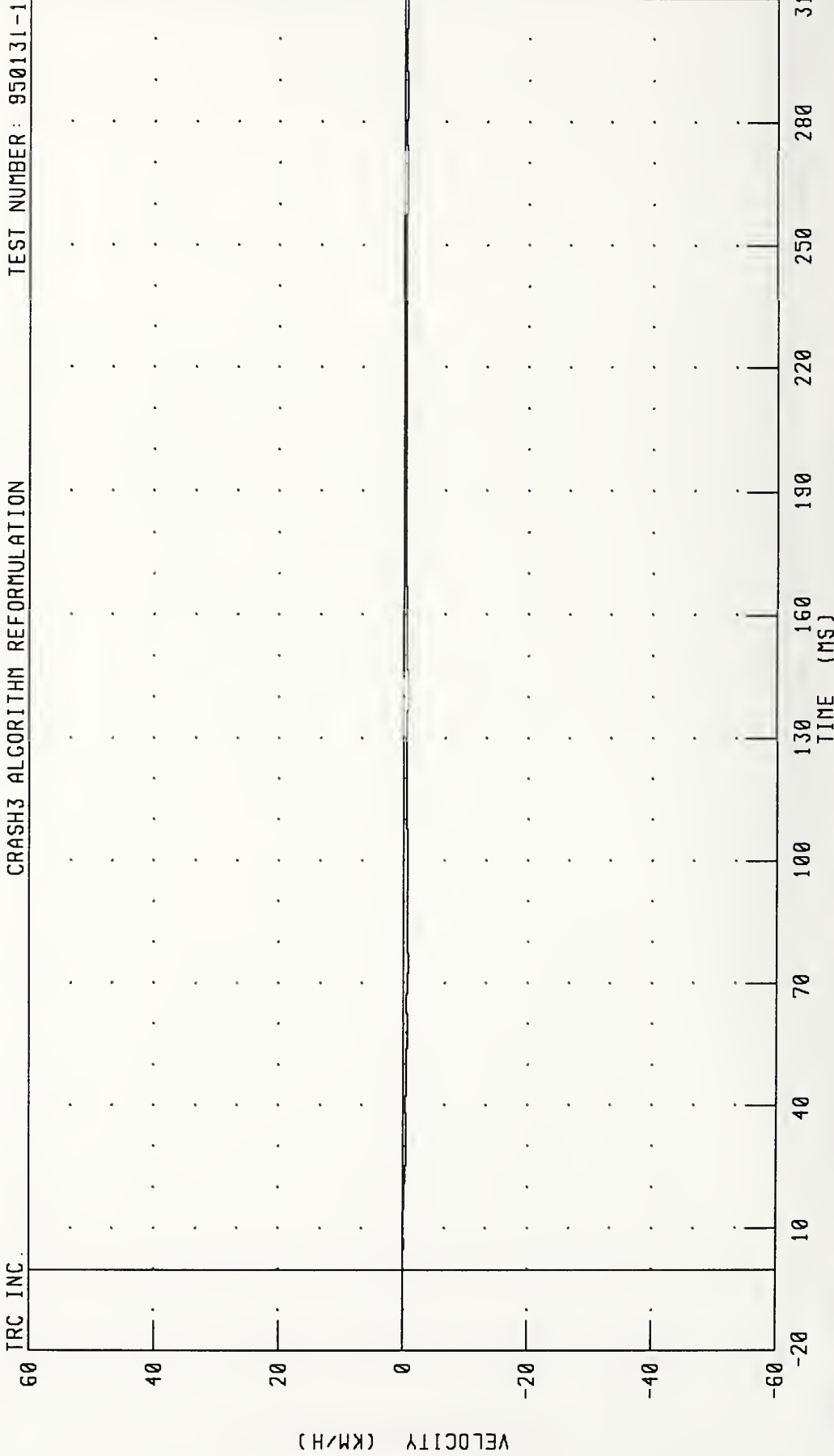


CHANNEL: RRSXG FILTER: CH. CLASS 60

PEAK DATA: 0.78 G @ 36.96 MS, -1.11 G @ 76.96 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT REAR SILL X-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: RRSXV FILTER: CH. CLASS 180

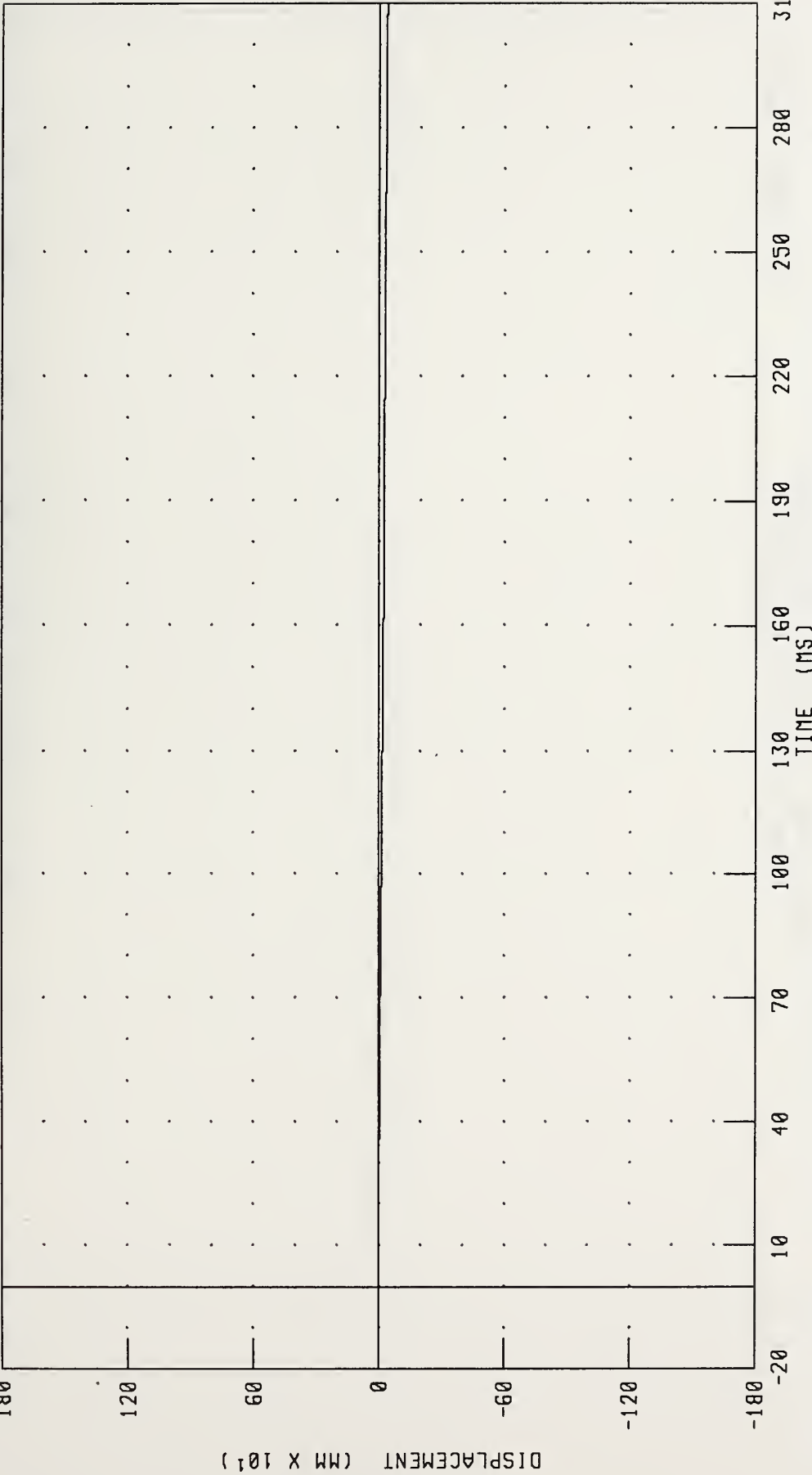
PEAK DATA: 0.00 KM/H @ 0.00 MS; -0.78 KM/H @ 75.28 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT REAR SILL X-AXIS DISPLACEMENT

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

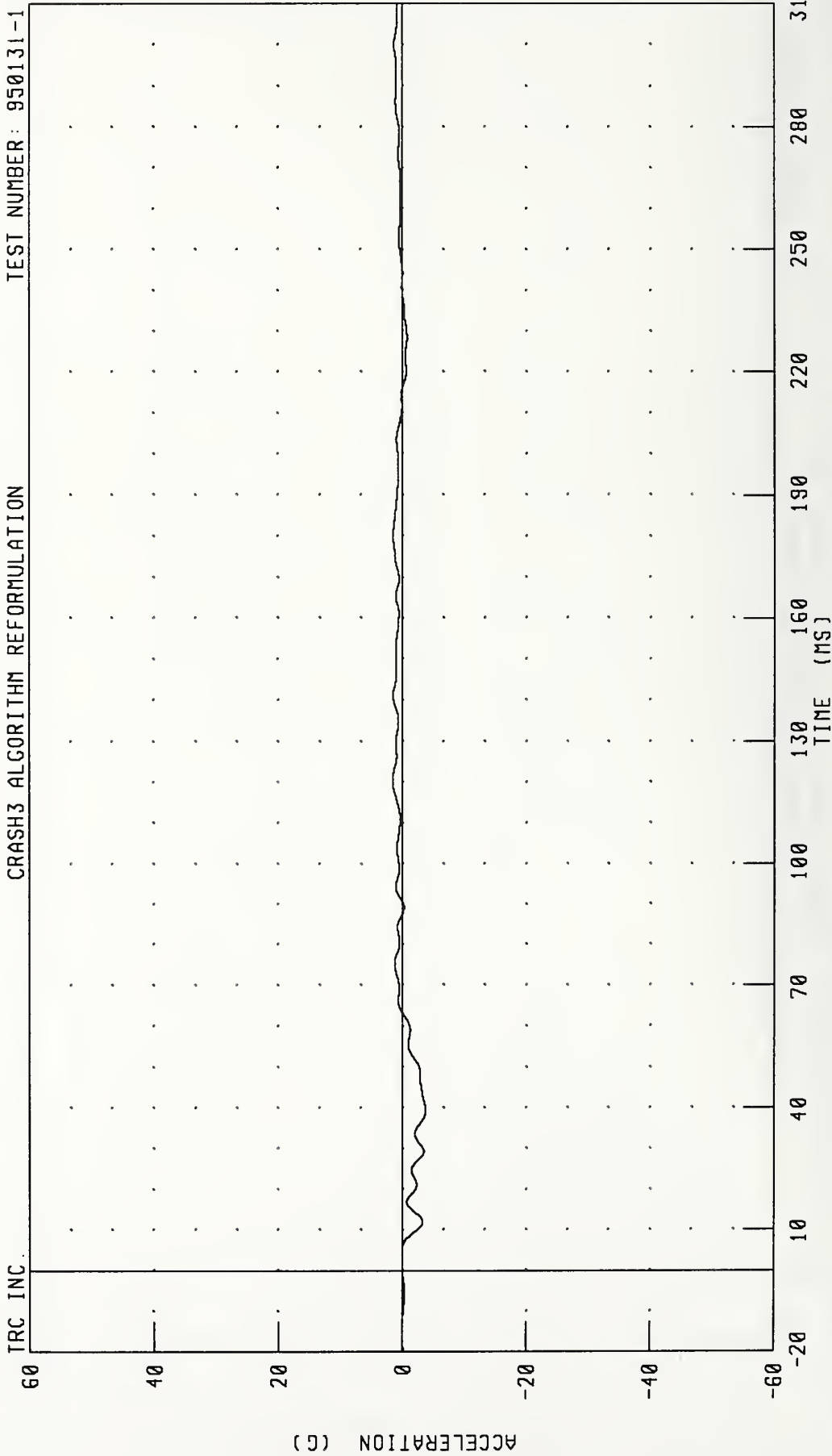


CHANNEL: RRSXD FILTER: CH. CLASS 180

PEAK DATA: 0.00 MM @ 0.00 MS; -38.15 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT REAR SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

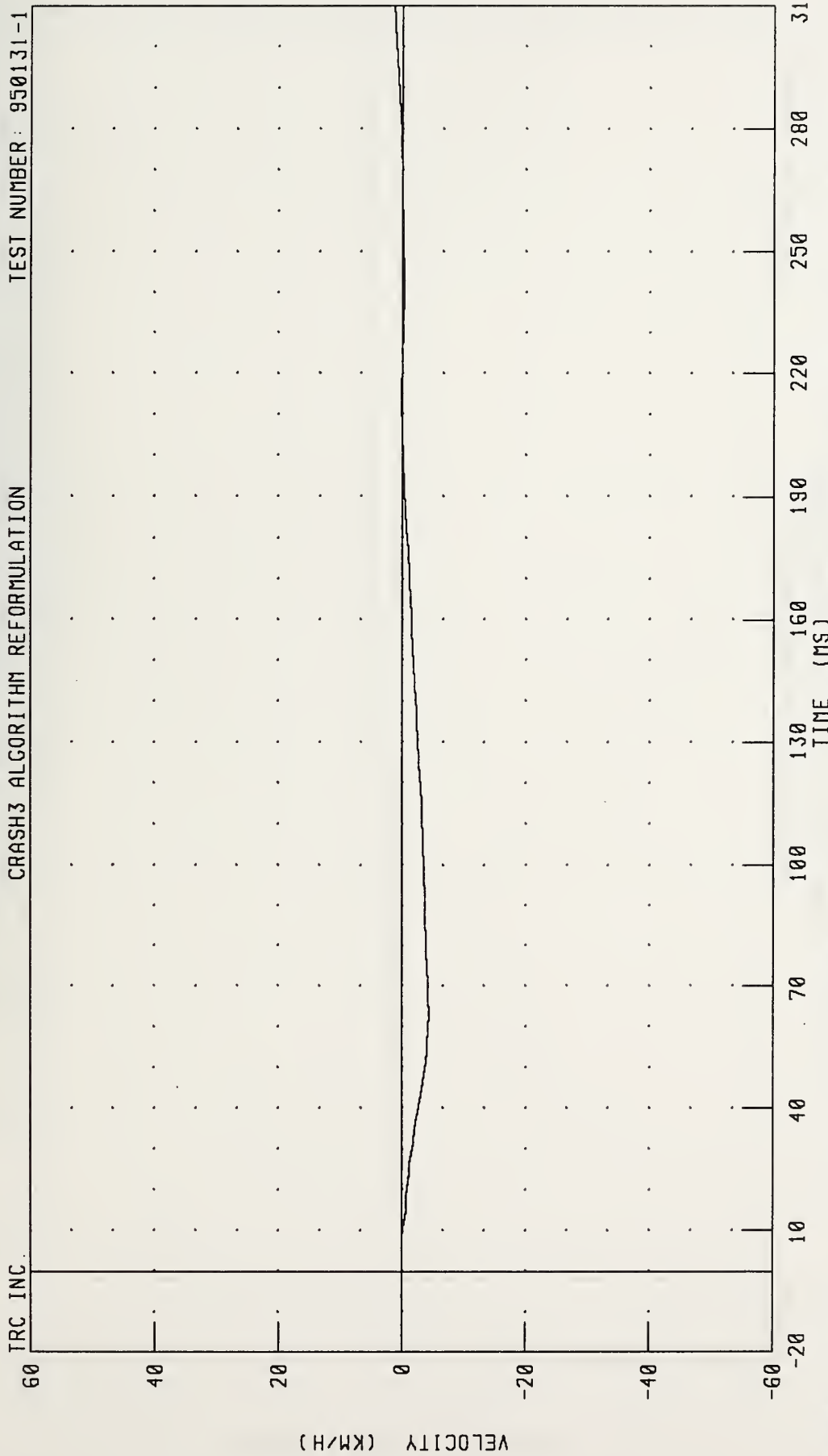


CHANNEL: RRSYG FILTER: CH. CLASS 60

PEAK DATA: 1.61 G @ 120.32 MS; -3.73 G @ 39.20 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



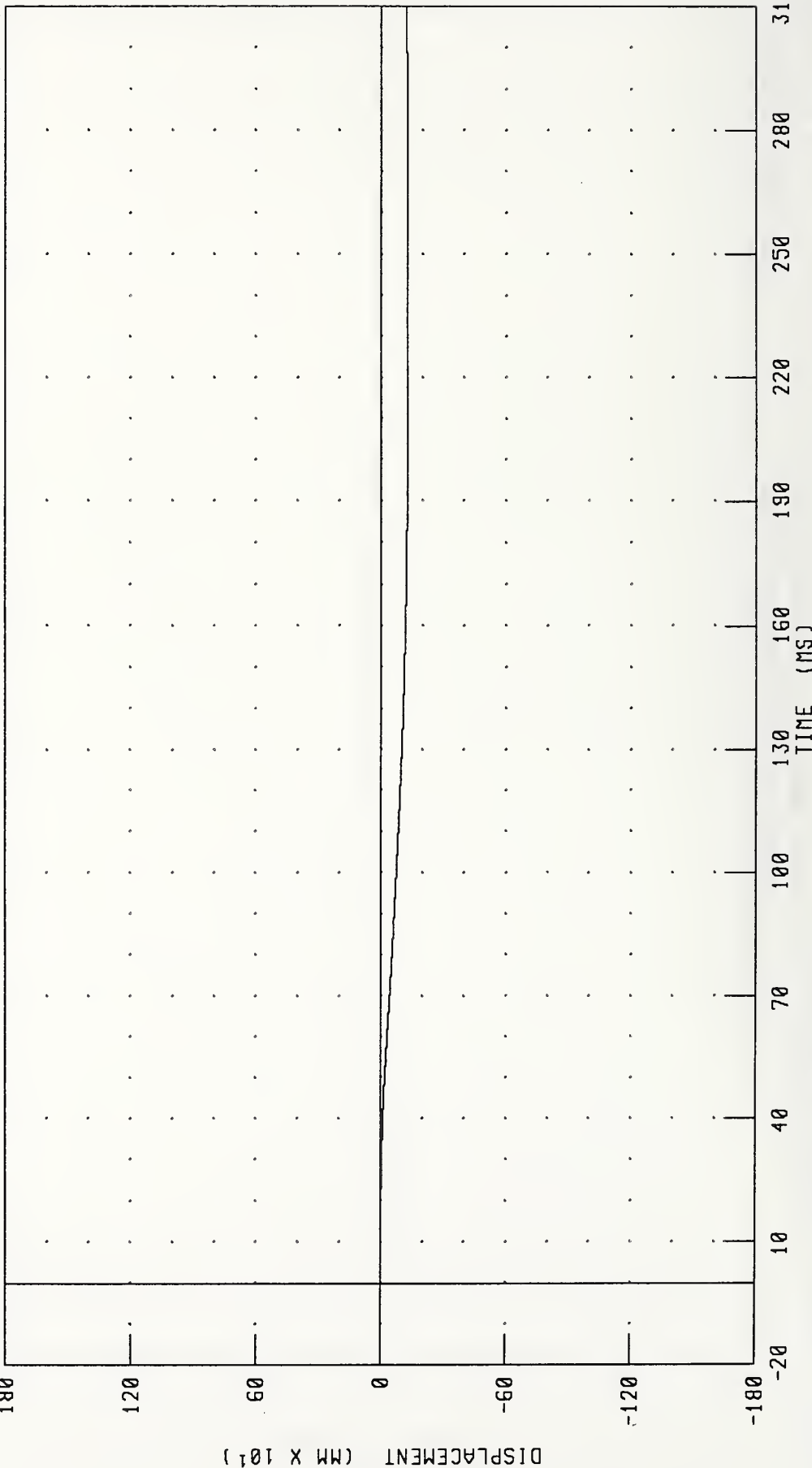
TRC INC. CHANNEL: RRSYV FILTER: CH. CLASS 180
PEAK DATA: 1.33 KM/H @ 310.00 MS, -4.34 KM/H @ 63.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 RIGHT REAR SILL Y-AXIS DISPLACEMENT

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



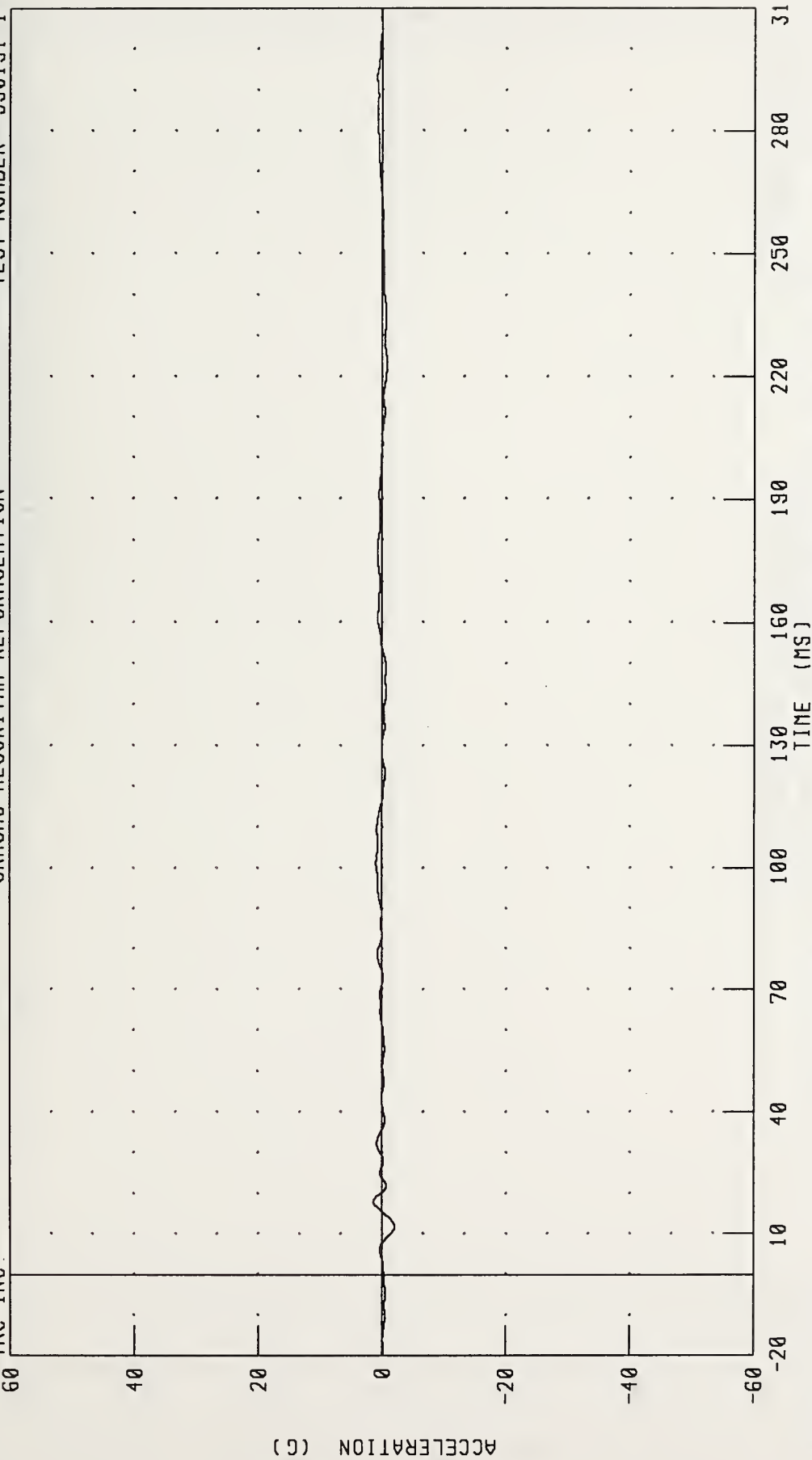
CHANNEL: RRSYD FILTER: CH. CLASS 180

PEAK DATA: 0.01 MM @ 4.24 MS; -127.51 MM @ 266.64 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
LEFT FRONT SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

TRC INC.

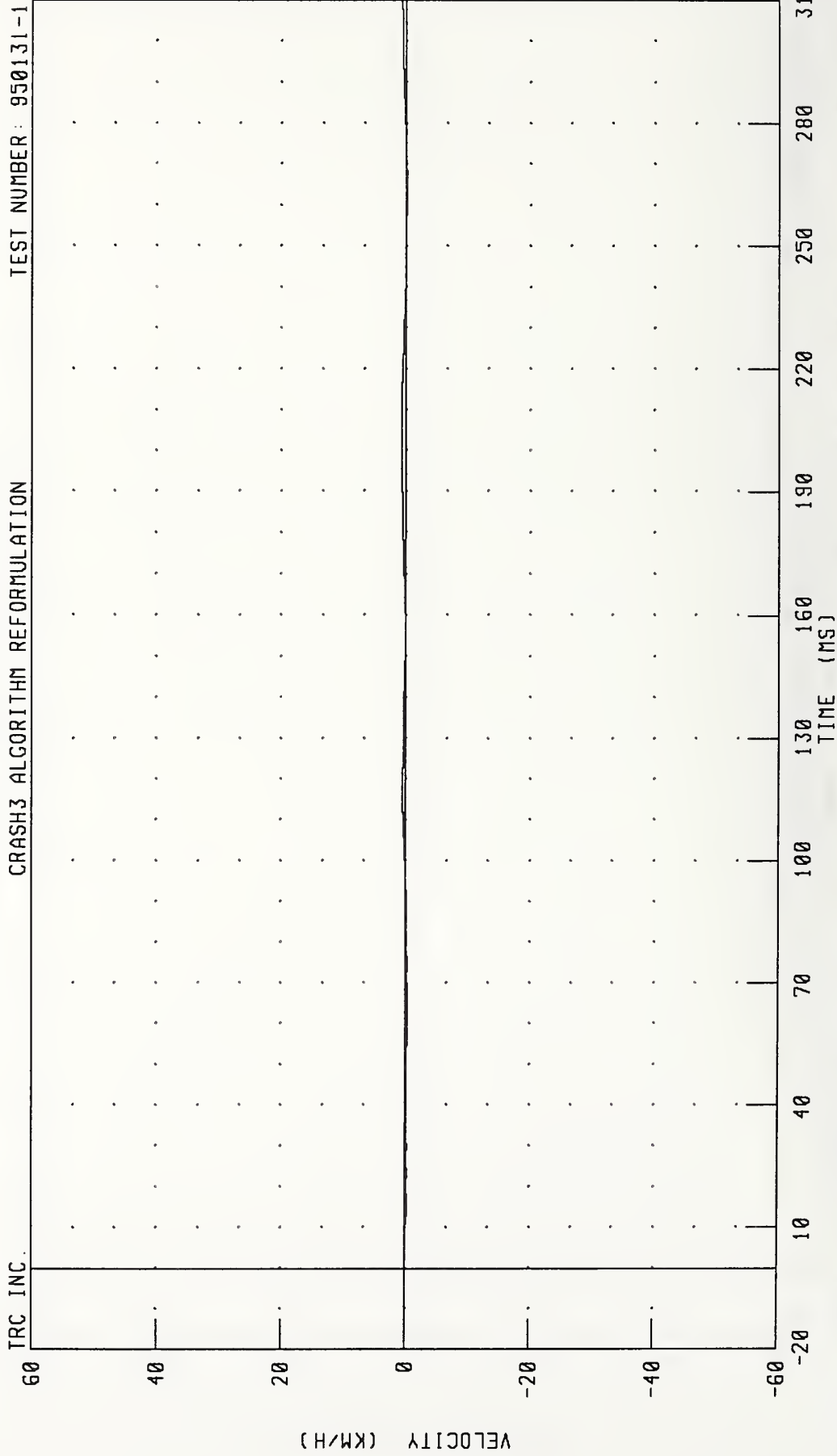


CHANNEL: LFSXG FILTER: CH. CLASS 60

PEAK DATA: 1.36 G @ 17.92 MS; -2.00 G @ 11.76 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 LEFT FRONT SILL X-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



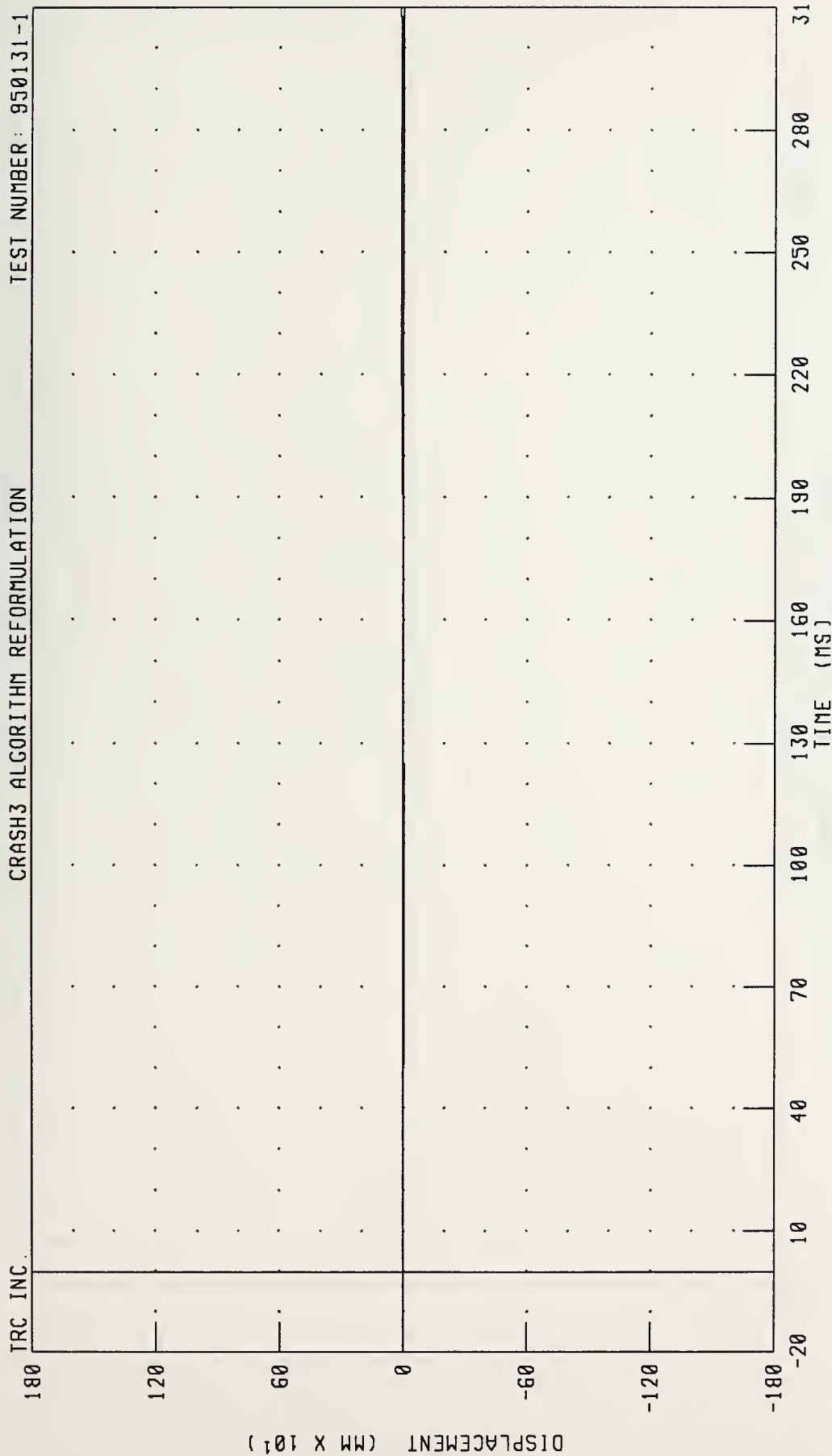
CHANNEL: LFSXV FILTER: CH. CLASS 180

PEAK DATA: 0.73 KM/H @ 202.24 MS; -0.34 KM/H @ 16.32 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 LEFT FRONT SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-1

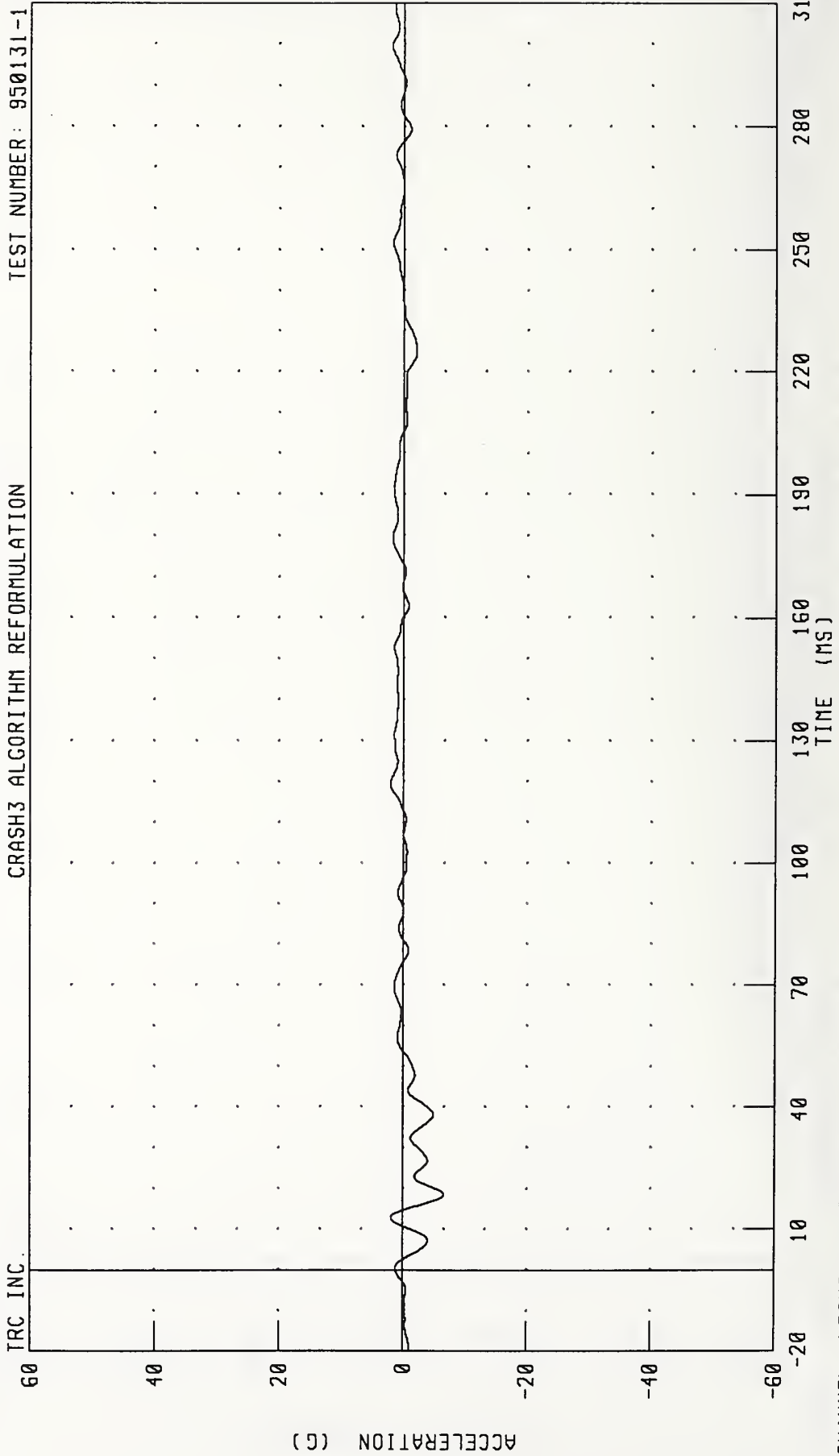


CHANNEL: LFSXD FILTER: CH. CLASS 180

PEAK DATA: 13.33 MM @ 310.00 MS; -4.90 MM @ 96.16 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
LEFT FRONT SILL Y-AXIS ACCELERATION

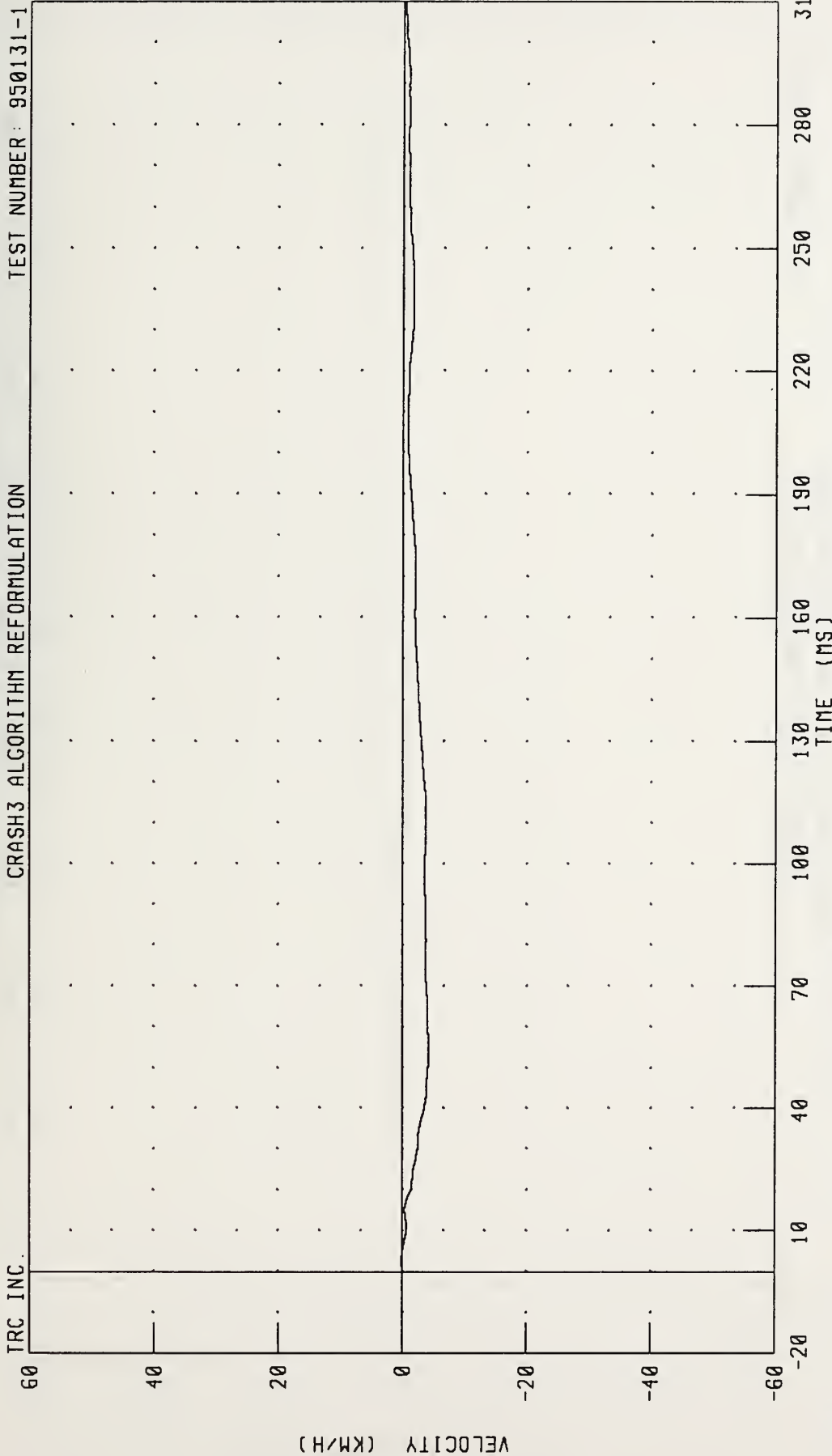
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: LFSYG FILTER: CH CLASS 60 PEAK DATA: 2.07 G @ 119.52 MS; -6.68 G @ 18.56 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
LEFT FRONT SILL Y-AXIS VELOCITY

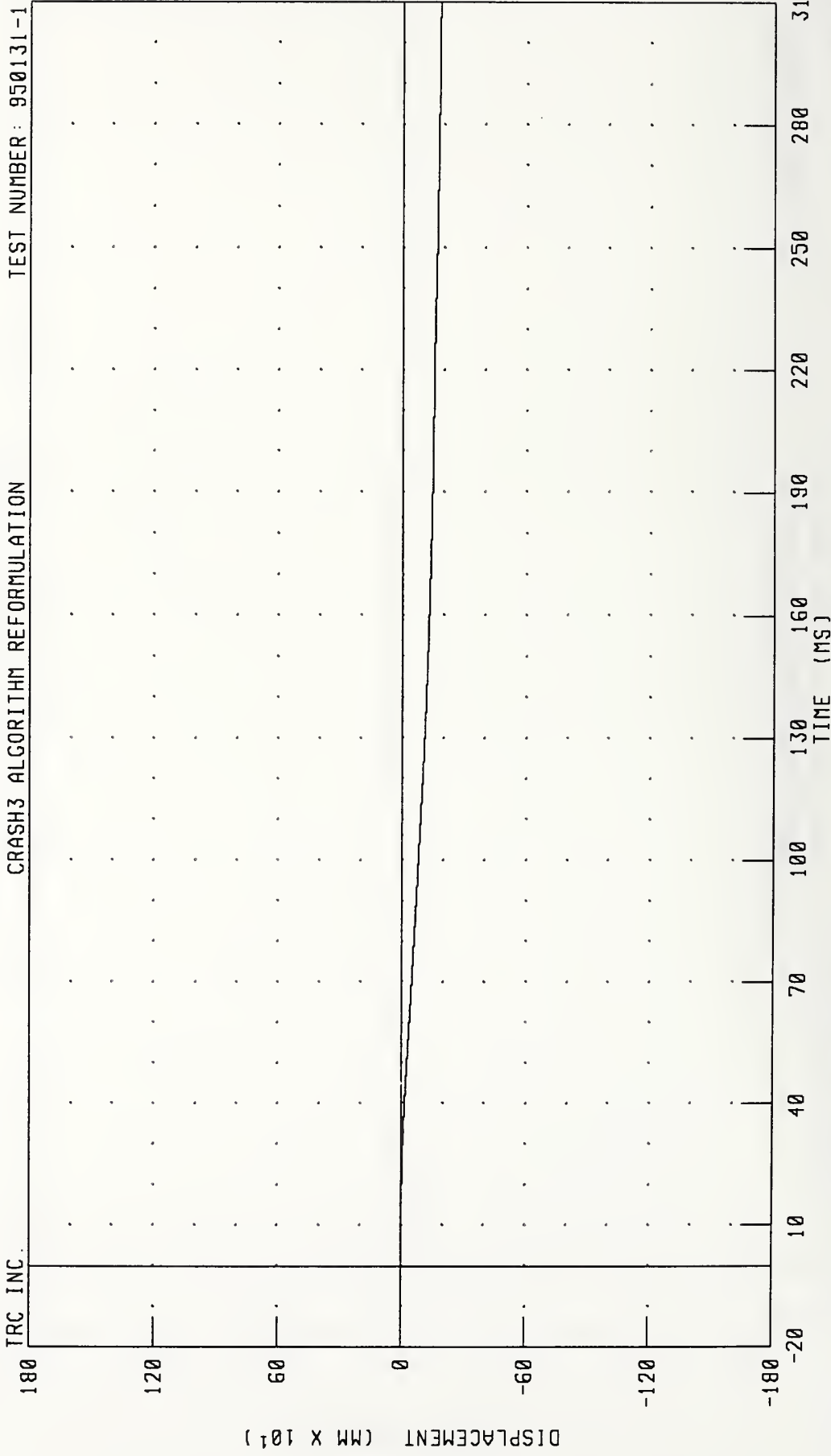
CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: LFSYV FILTER: CH. CLASS 180 PEAK DATA: 0.12 KM/H @ 2.32 MS; -4.28 KM/H @ 53.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
LEFT FRONT SILL Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



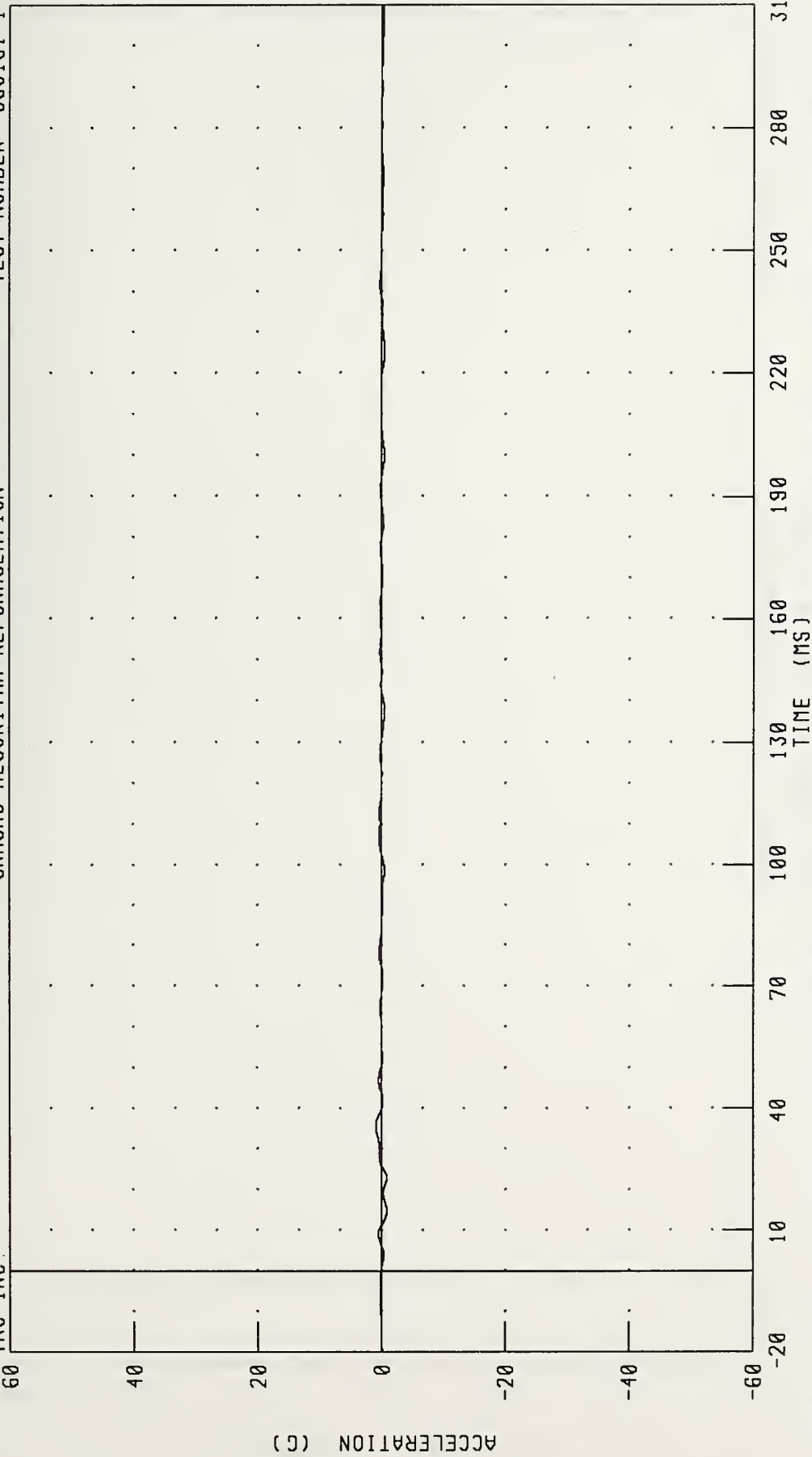
CHANNEL: LFSYD FILTER: CH. CLASS 180

PEAK DATA: 0.10 MM @ 4.88 MS; -180.48 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT FRONT SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

TRC INC.

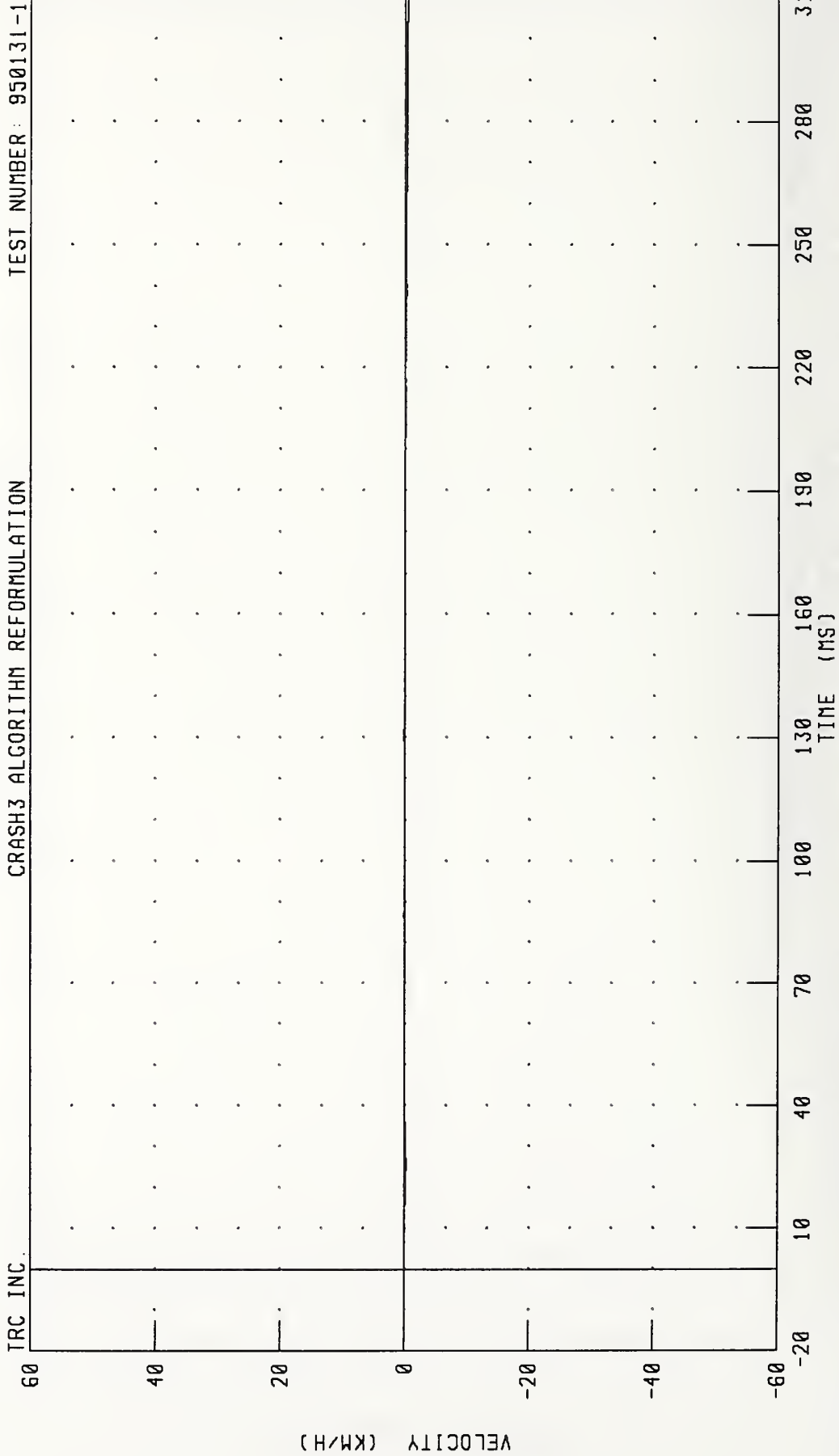


CHANNEL: RFSXG FILTER: CH. CLASS 60

PEAK DATA: 0.93 G @ 35.68 MS, -0.84 G @ 22.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 RIGHT FRONT SILL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: RFSXY FILTER: CH. CLASS 180

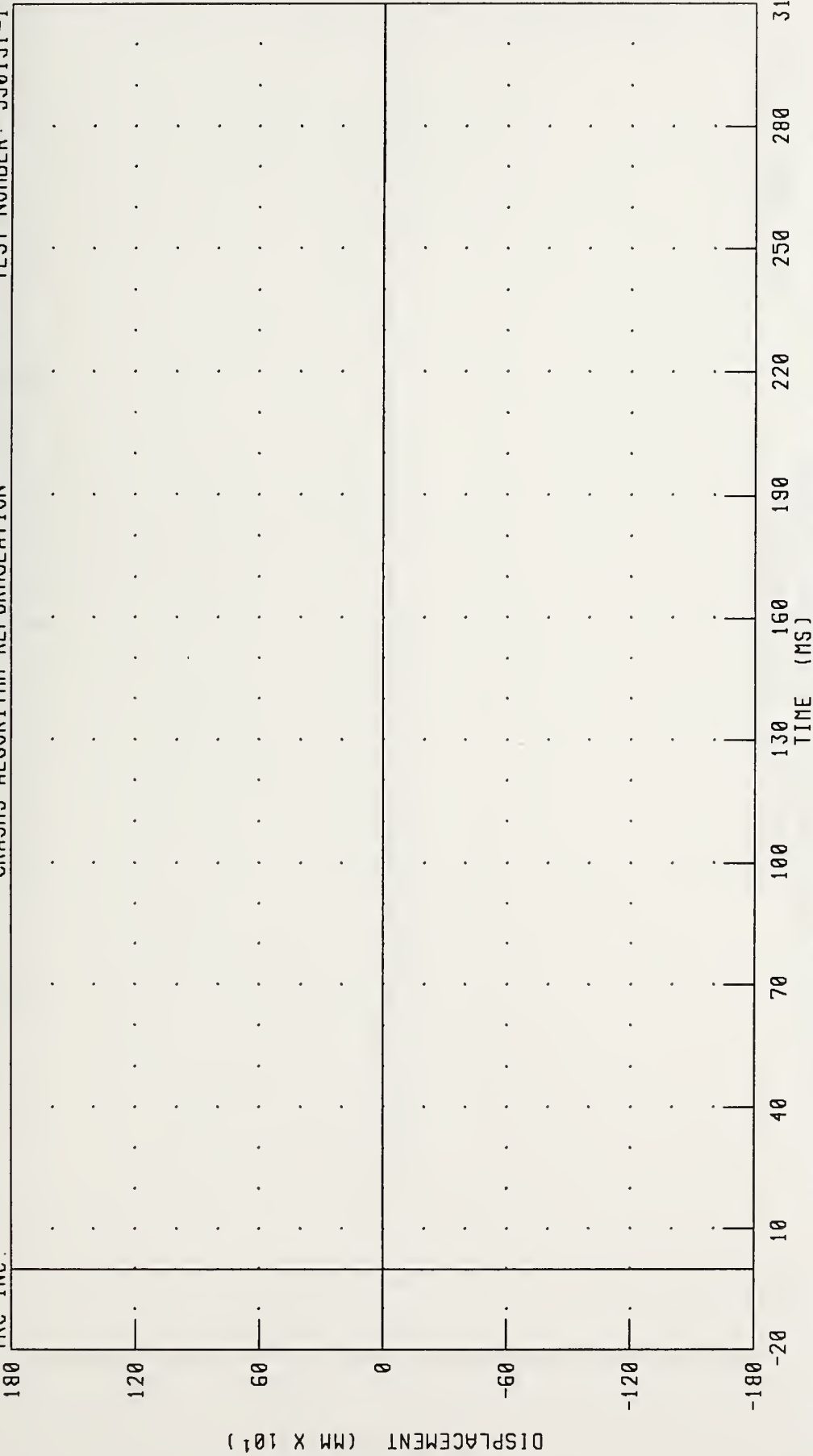
PEAK DATA: 0.11 KM/H @ 130.56 MS, -0.47 KM/H @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT FRONT SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-1

TRC INC.

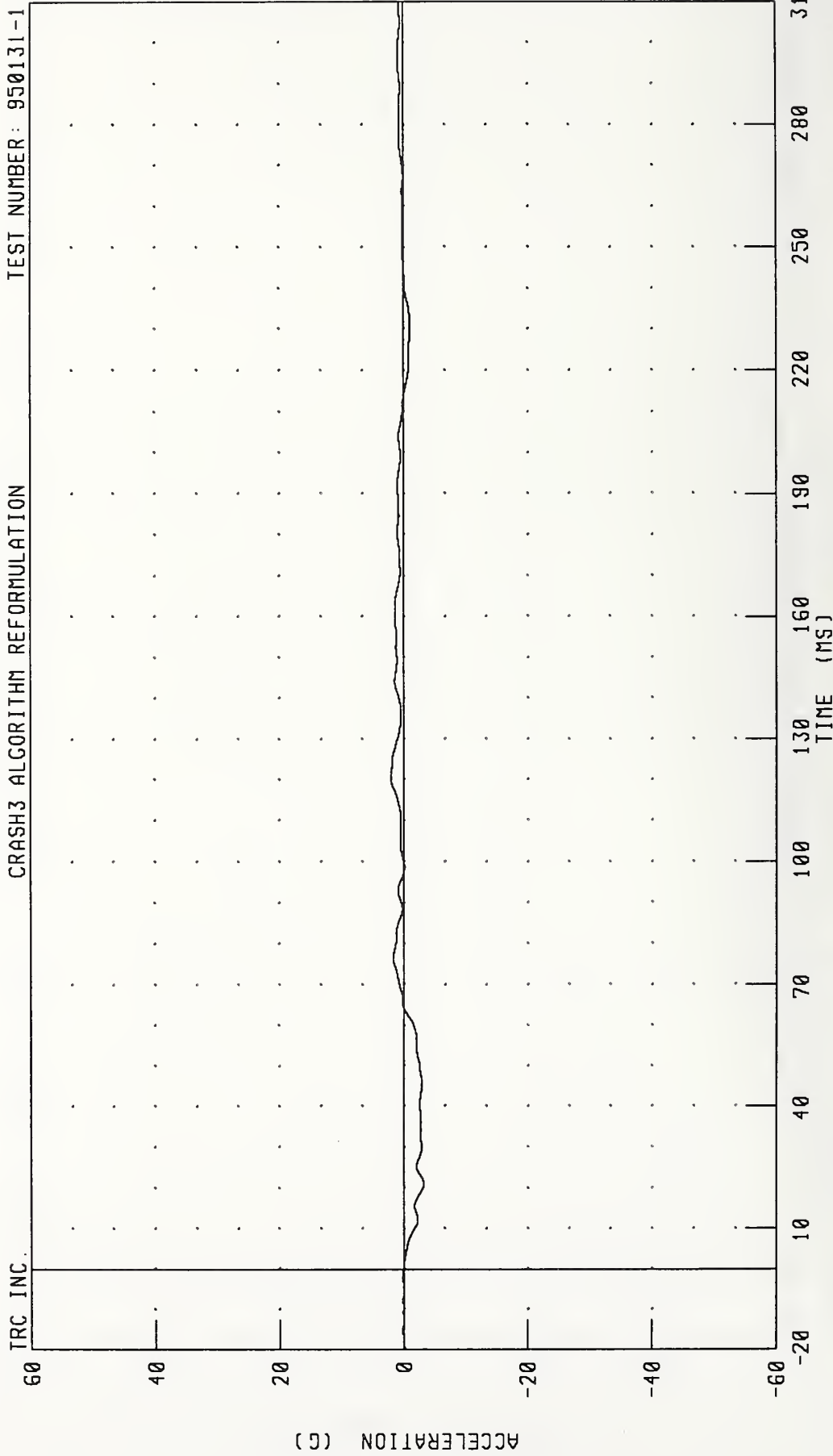


CHANNEL: RFSXD FILTER: CH. CLASS 180

PEAK DATA: 0.63 MM @ 198.24 MS; -6.66 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT FRONT SILL Y-AXIS ACCELERATION

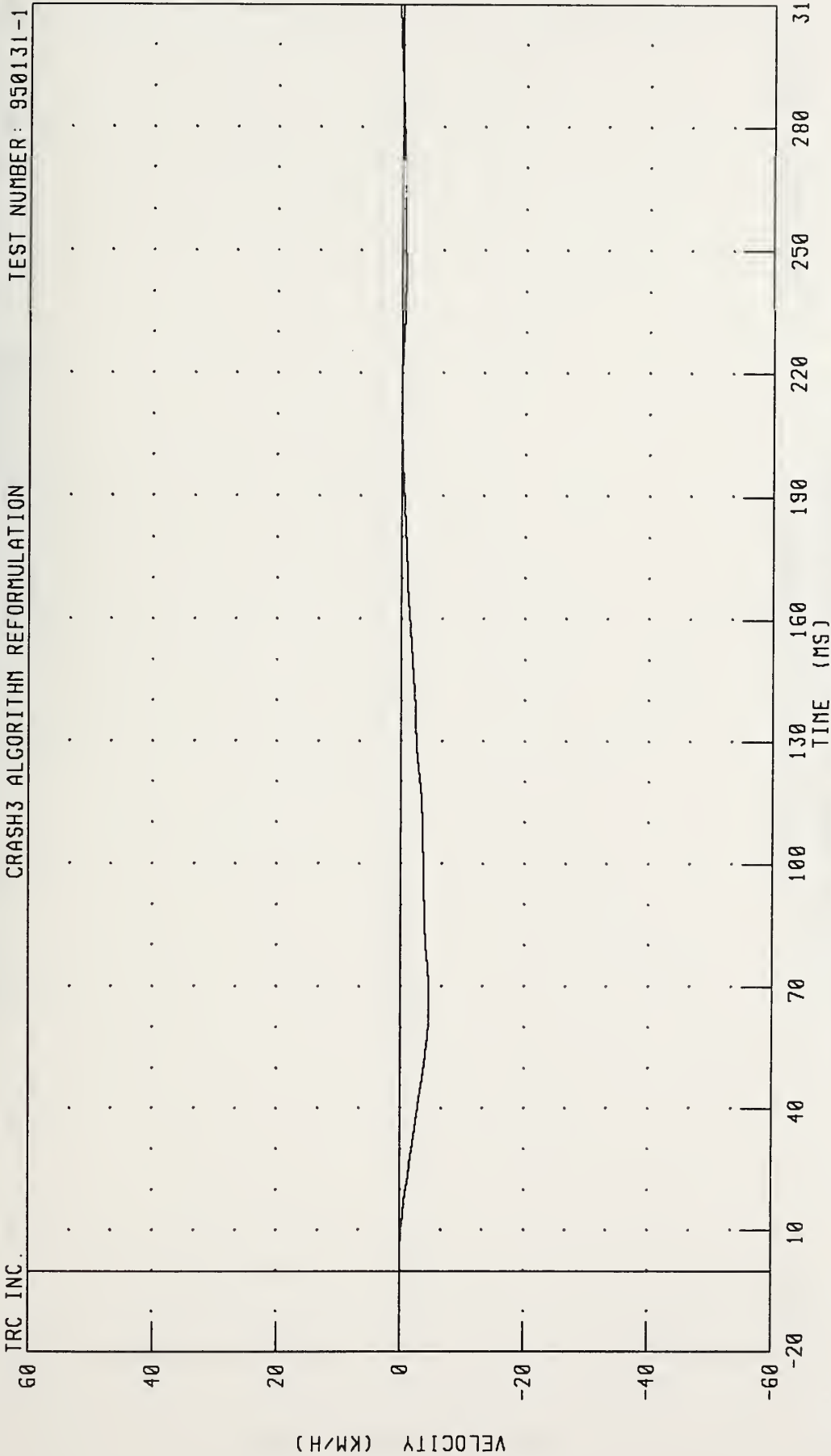
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: RFSYG FILTER: CH. CLASS 60 PEAK DATA: 2.10 G @ 120.72 MS; -3.23 G @ 20.96 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
RIGHT FRONT SILL Y-AXIS VELOCITY
CRASH3 ALGORITHM REFORMULATION

TRC INC. TEST NUMBER: 950131-1



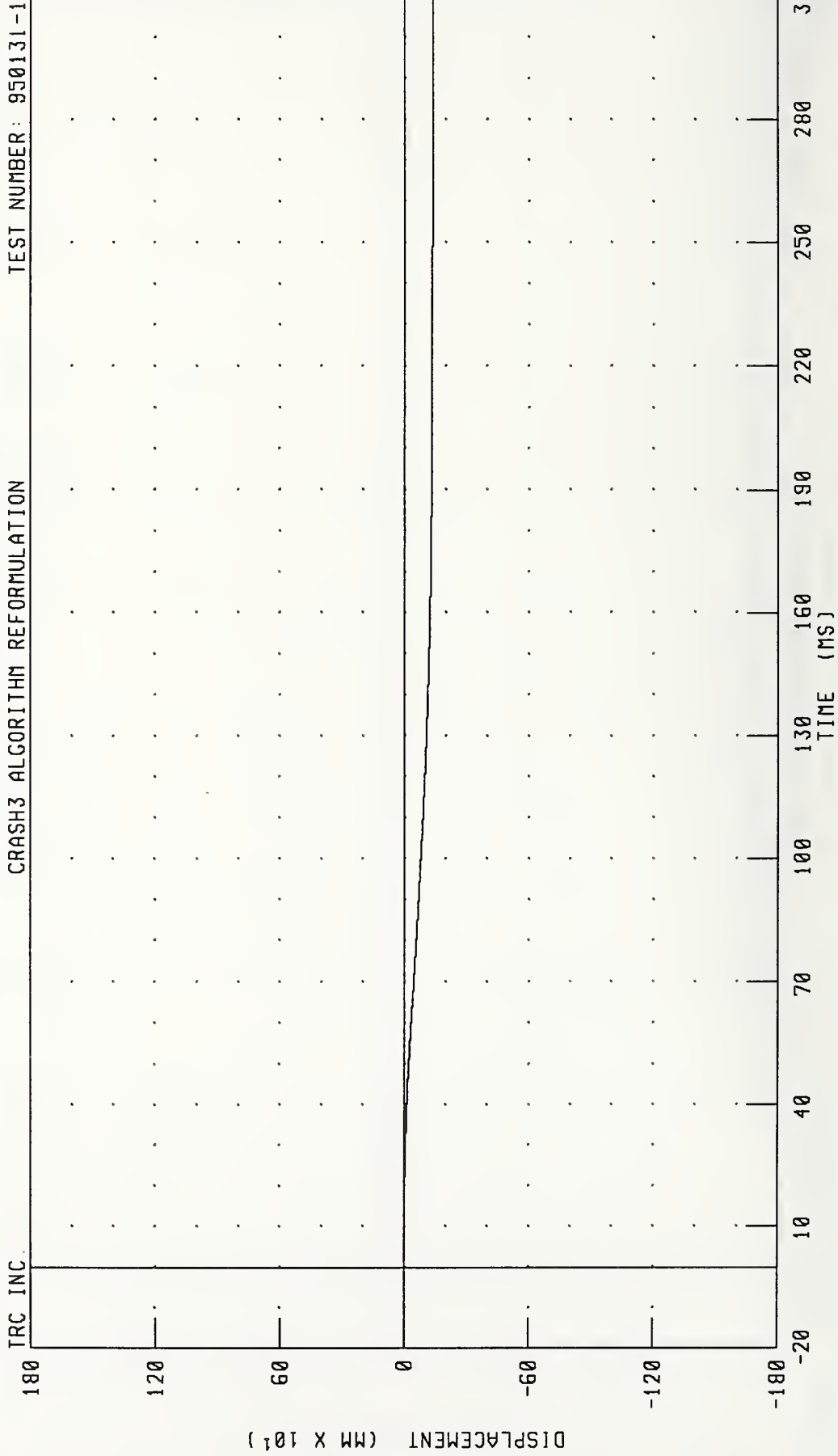
CHANNEL: RFSYV FILTER: CH. CLASS 180

PEAK DATA: 0.52 KM/H @ 310.00 MS; -4.64 KM/H @ 63.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 RIGHT FRONT SILL Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-1



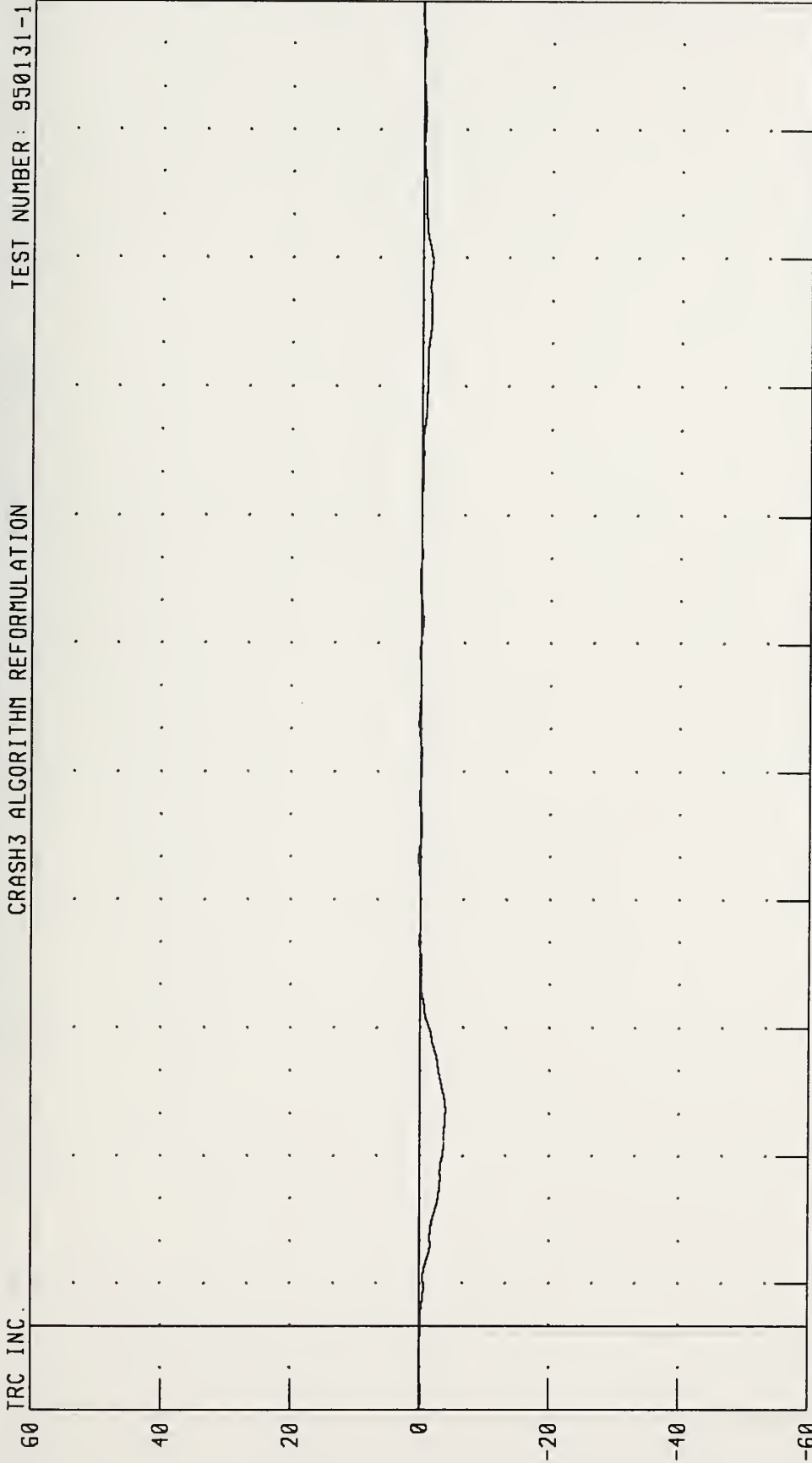
CHANNEL: RFSYD FILTER: CH. CLASS 180

PEAK DATA: 0.00 MM @ 3.28 MS; -138.39 MM @ 289.68 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS ACCELERATION

TRC INC. TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

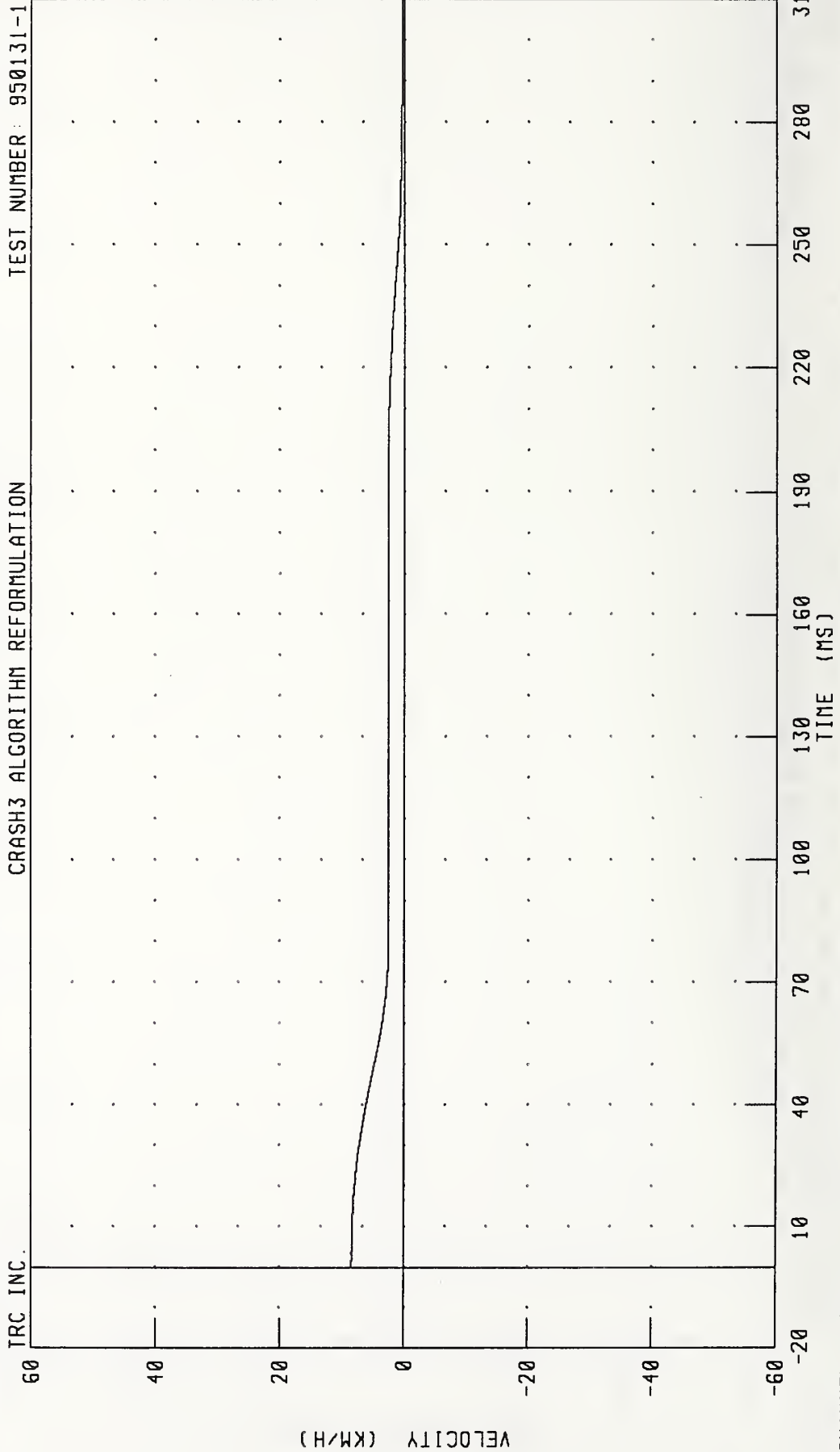


CHANNEL: BCGXG FILTER: CH. CLASS 60 PEAK DATA: 0.29 G @ 109.84 MS; -3.97 G @ 50.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS VELOCITY

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

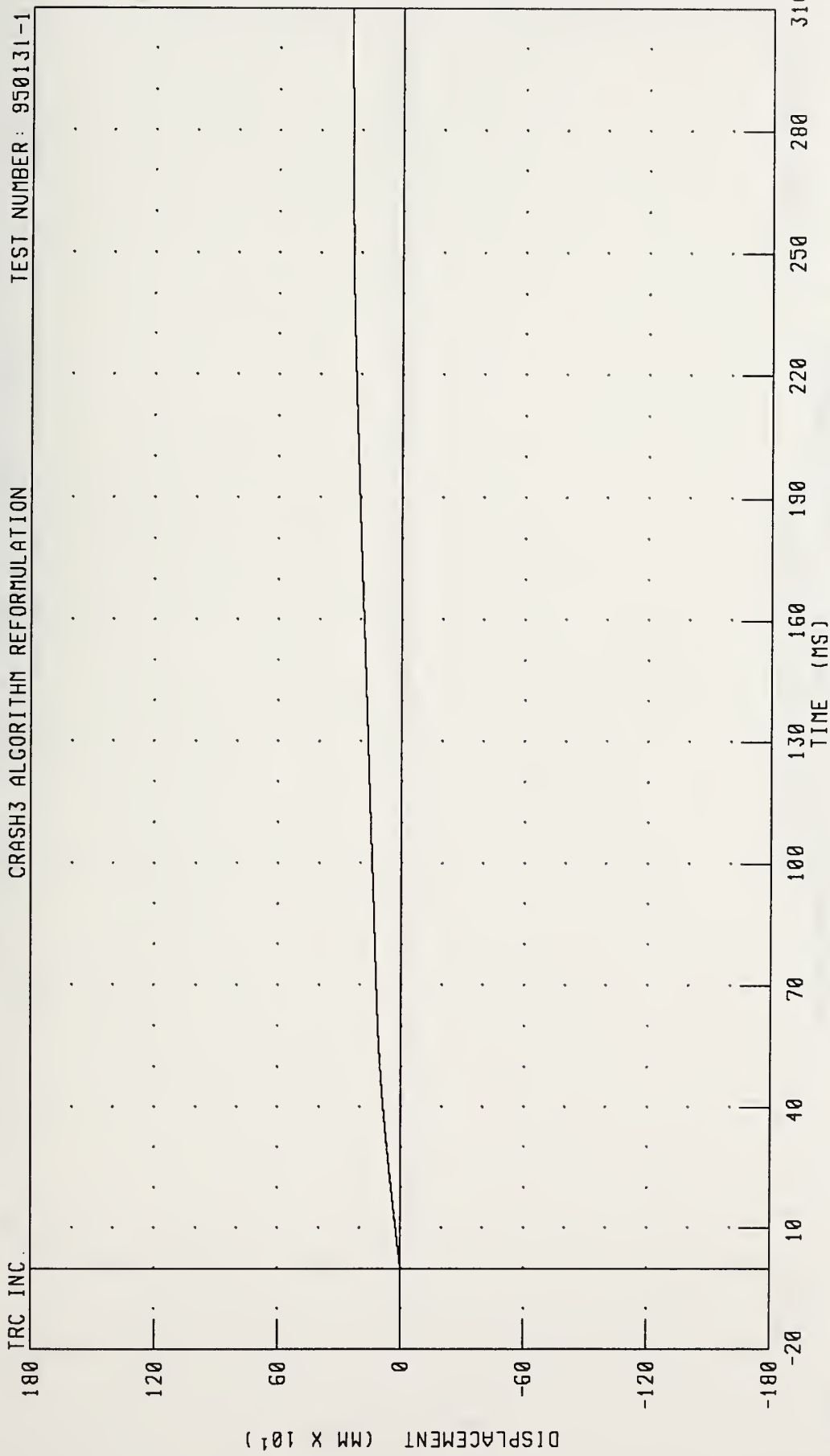


CHANNEL: BCGXV FILTER: CH. CLASS 180

PEAK DATA: 8.40 KM/H @ 0.48 MS, 0.33 KM/H @ 304.48 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS DISPLACEMENT

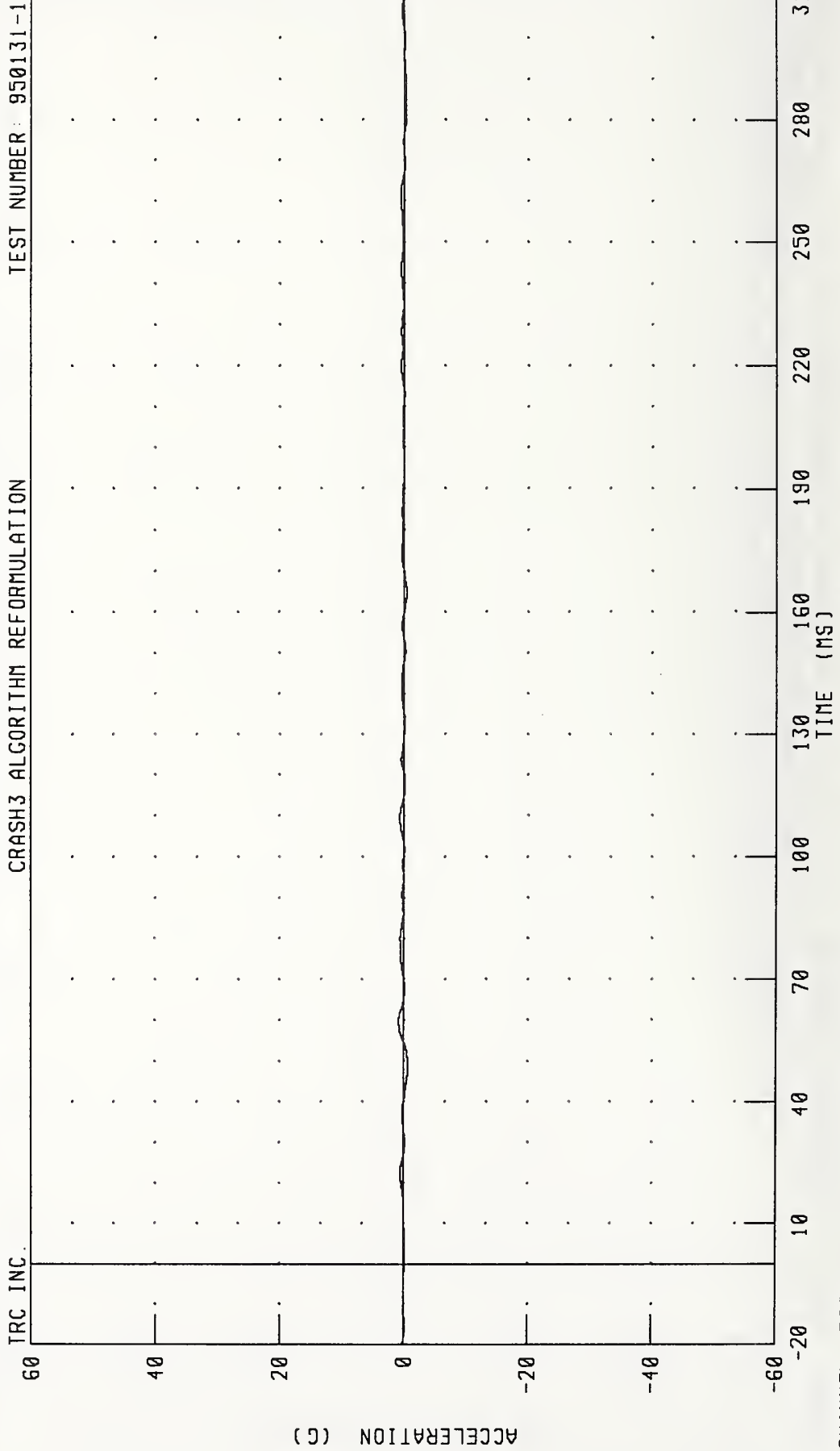
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: BCGXD FILTER: CH. CLASS 180 PEAK DATA: 248.64 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 MOVING BARRIER CENTER OF GRAVITY Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



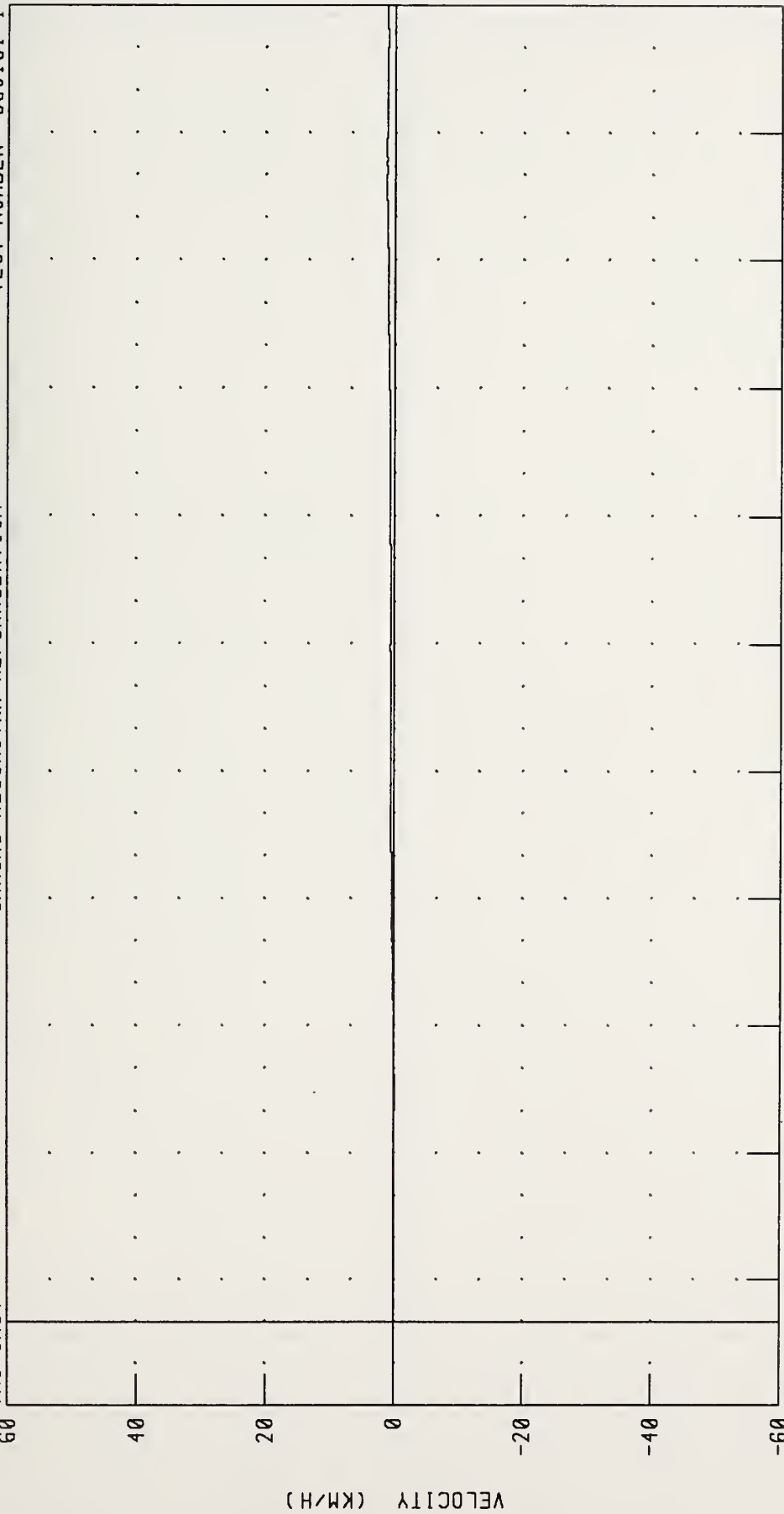
CHANNEL: BCGYG FILTER: CH. CLASS 60 PEAK DATA: 0.81 G @ 59.84 MS; -0.66 G @ 49.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 MOVING BARRIER CENTER OF GRAVITY Y-AXIS VELOCITY

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

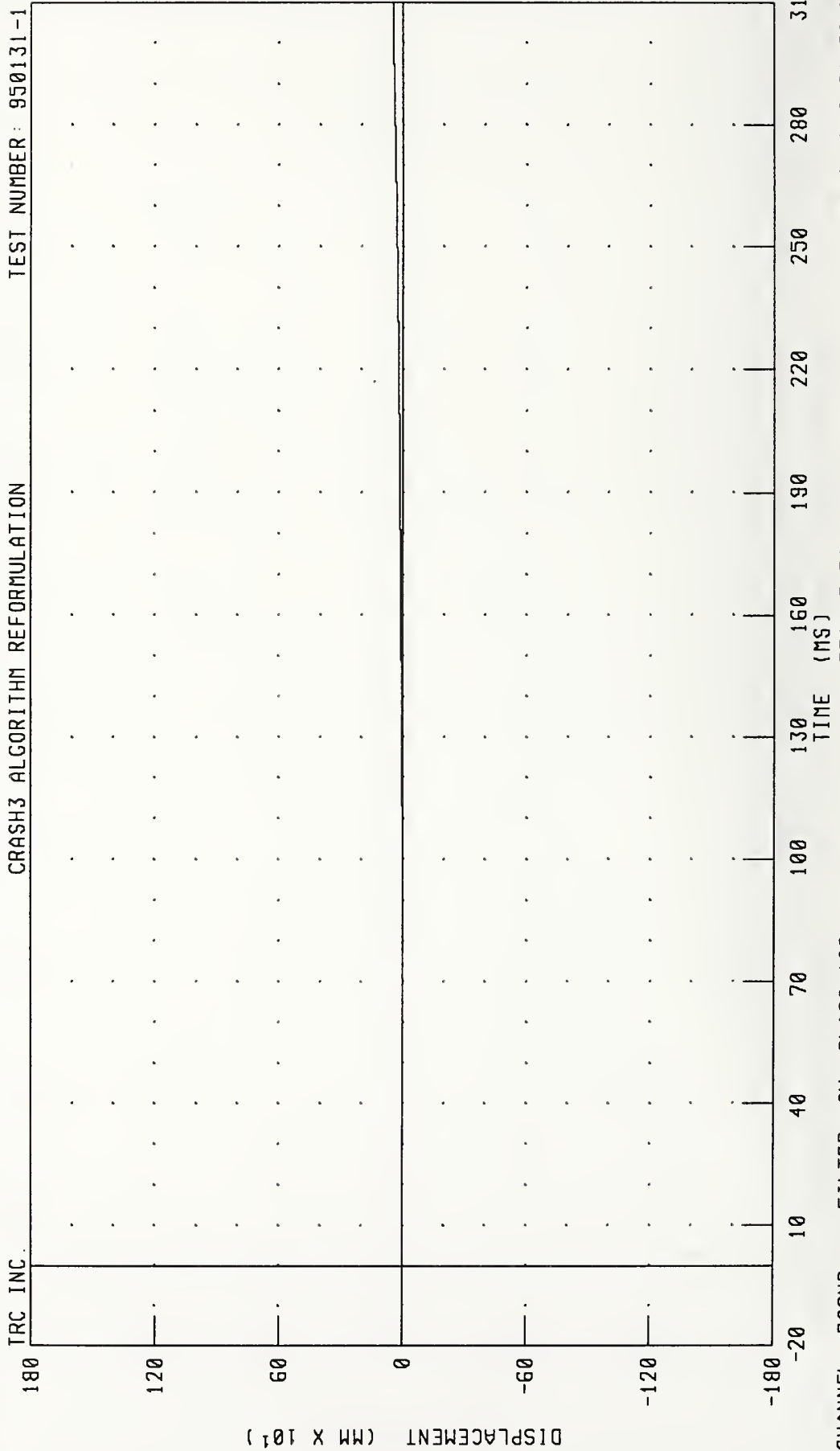
TRC INC.



CHANNEL: BCGYV FILTER: CH. CLASS 180
 PEAK DATA: 1.30 KM/H @ 266.08 MS; -0.15 KM/H @ 55.20 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 MOVING BARRIER CENTER OF GRAVITY Y-AXIS DISPLACEMENT
 CRASH3 ALGORITHM REFORMULATION

TRC INC. TEST NUMBER: 950131-1

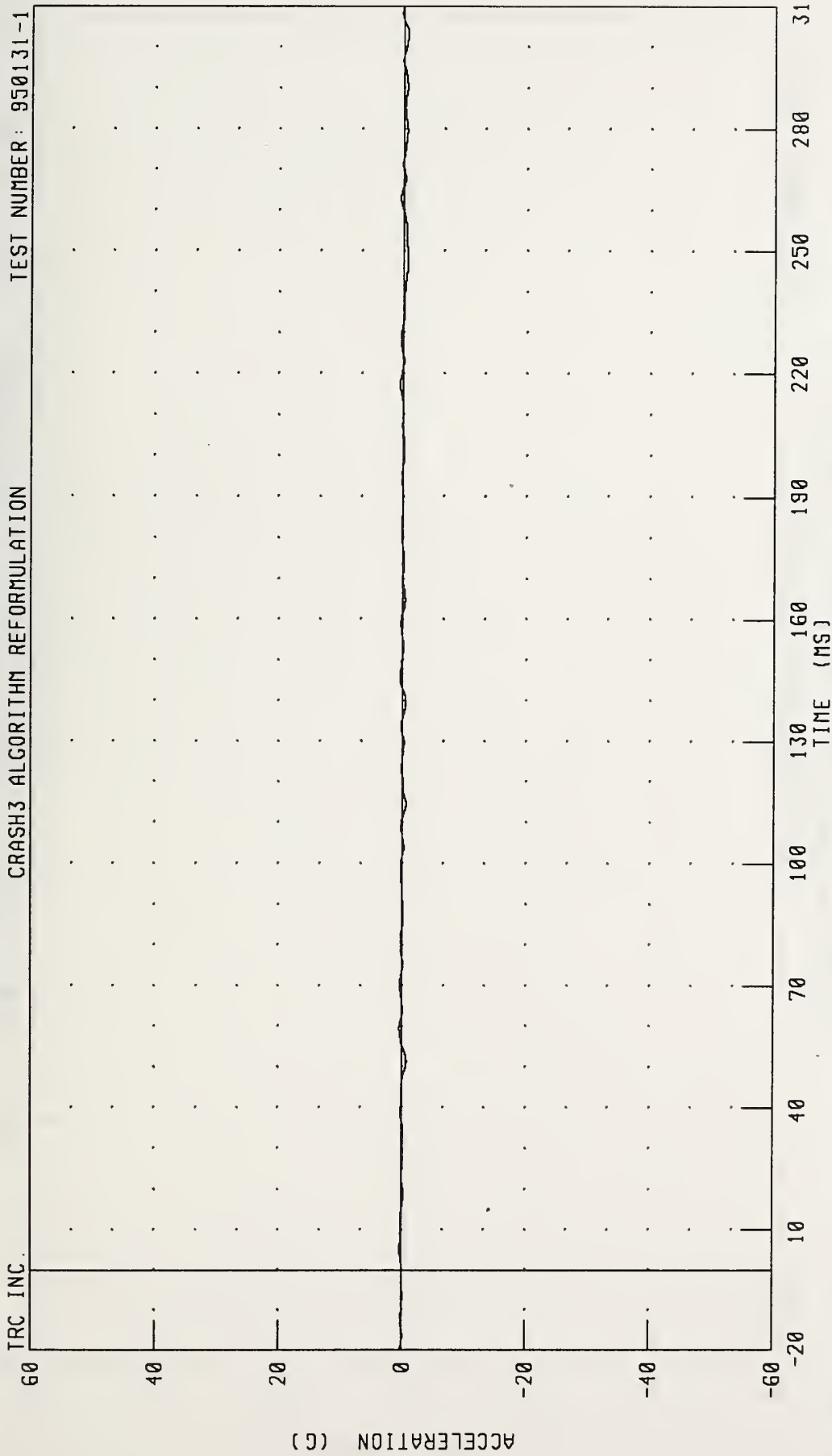


CHANNEL: BCGYD FILTER: CH. CLASS 180

PEAK DATA: 48.18 MM @ 310.00 MS, -0.25 MM @ 21.60 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER CENTER OF GRAVITY Z-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



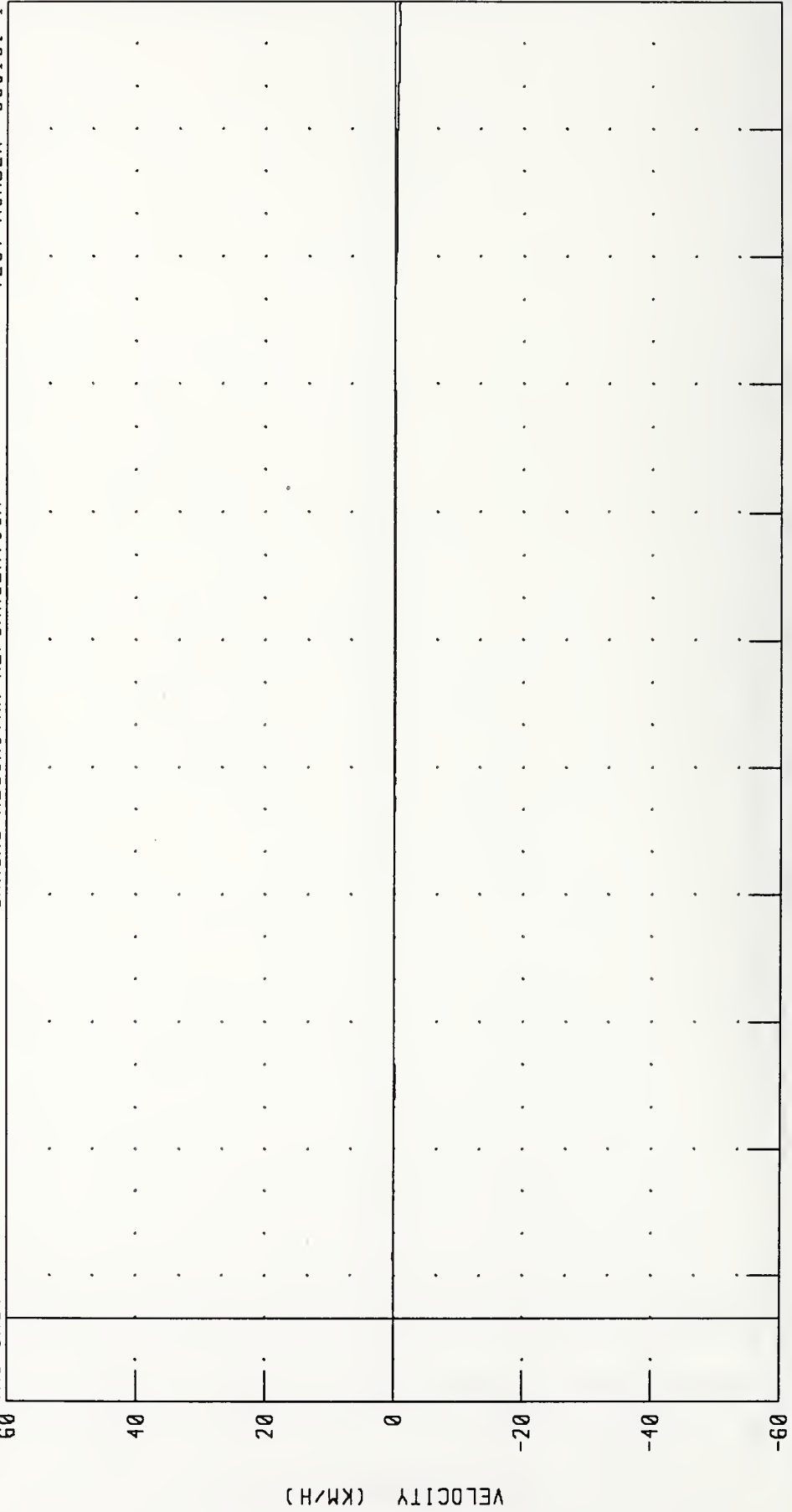
CHANNEL: BCGZG FILTER: CH. CLASS 60 PEAK DATA: 0.50 G @ 217.12 MS; -0.75 G @ 51.28 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 MOVING BARRIER CENTER OF GRAVITY Z-AXIS VELOCITY

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

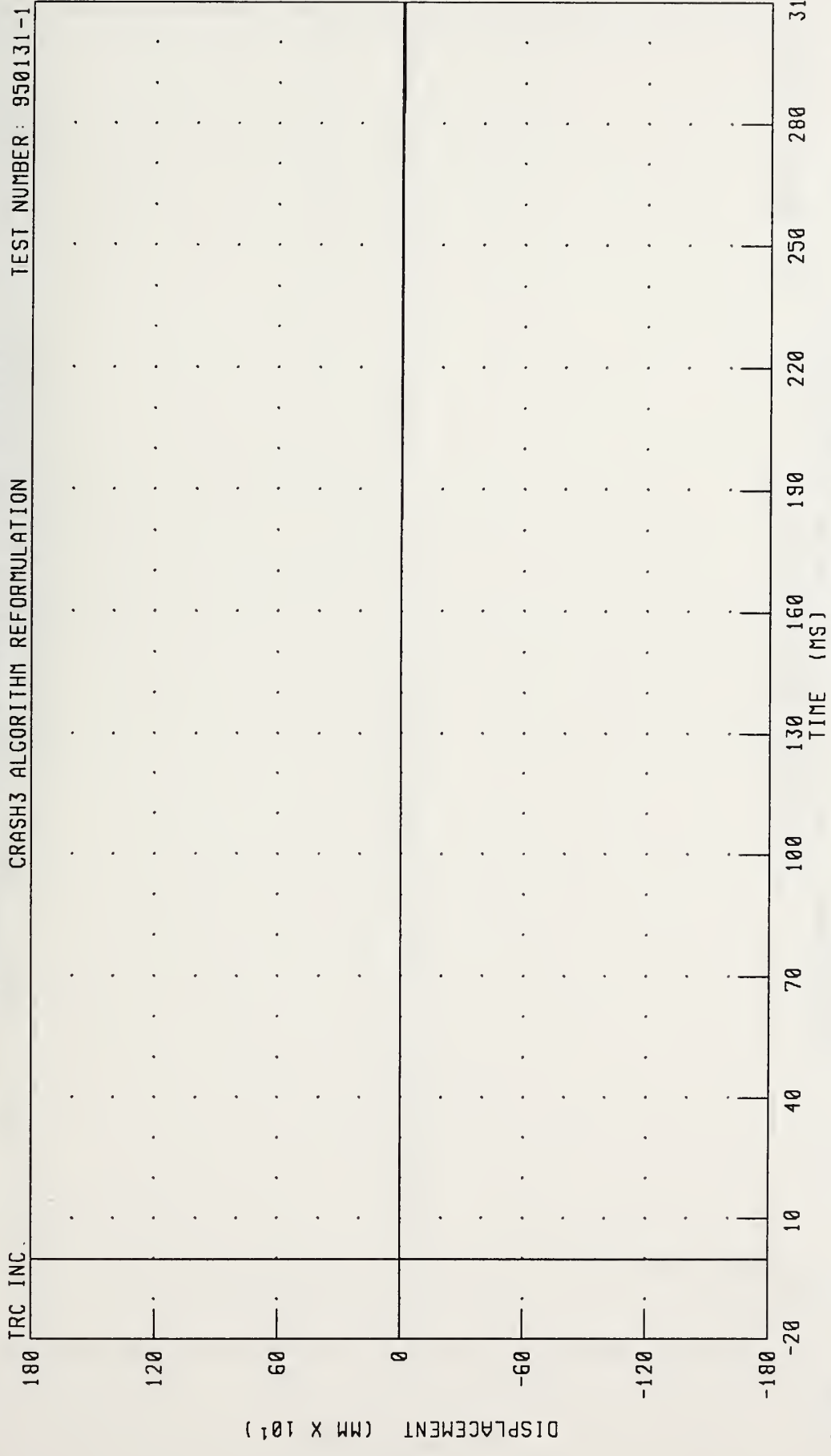


CHANNEL: BCGZV FILTER: CH. CLASS 180

PEAK DATA: 0.10 KM/H @ 14.48 MS, -0.78 KM/H @ 306.16 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 MOVING BARRIER CENTER OF GRAVITY Z-AXIS DISPLACEMENT

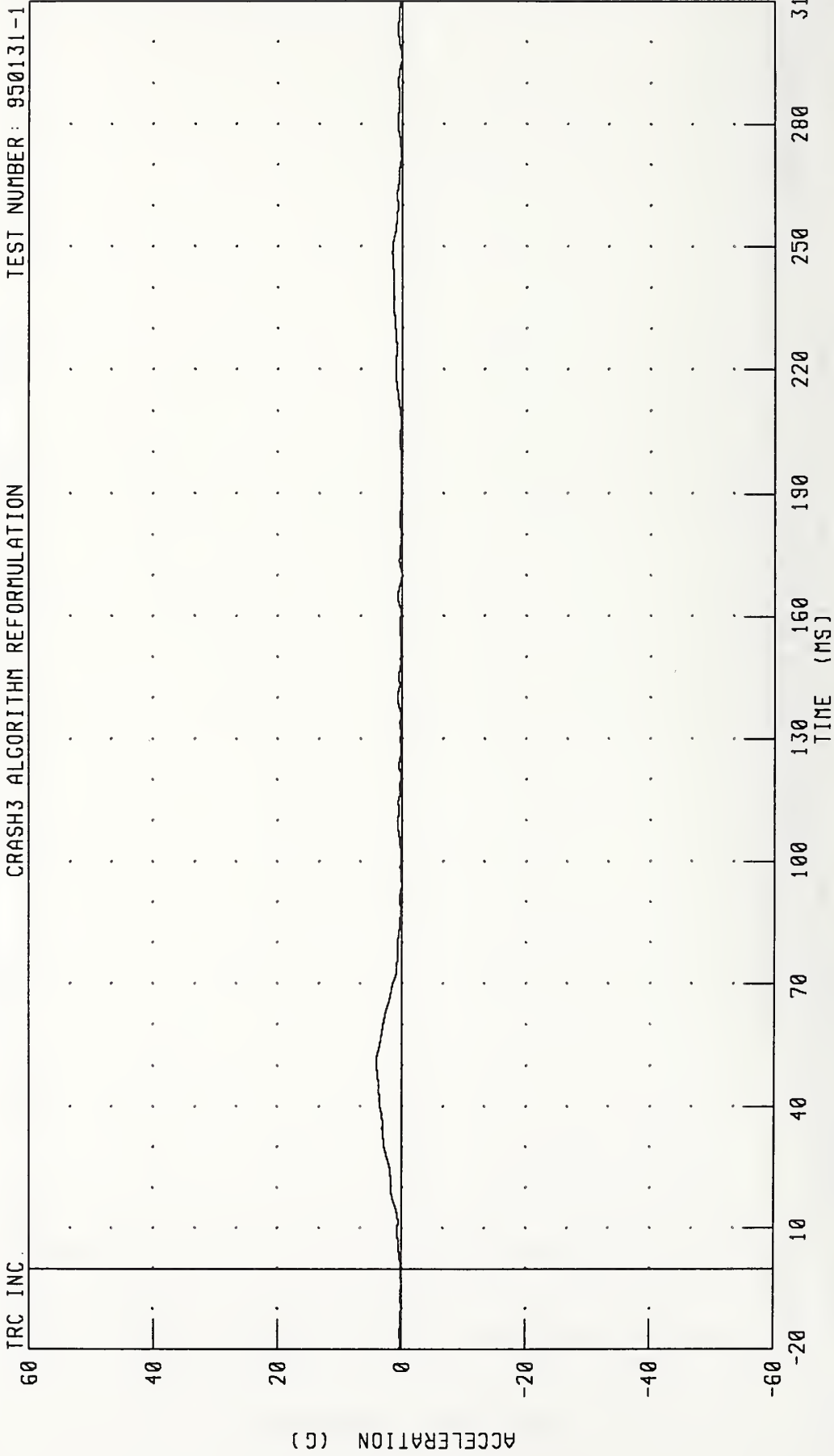
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: BCGZD FILTER: CH. CLASS 180 PEAK DATA: 0.42 MM @ 33.12 MS, -12.06 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

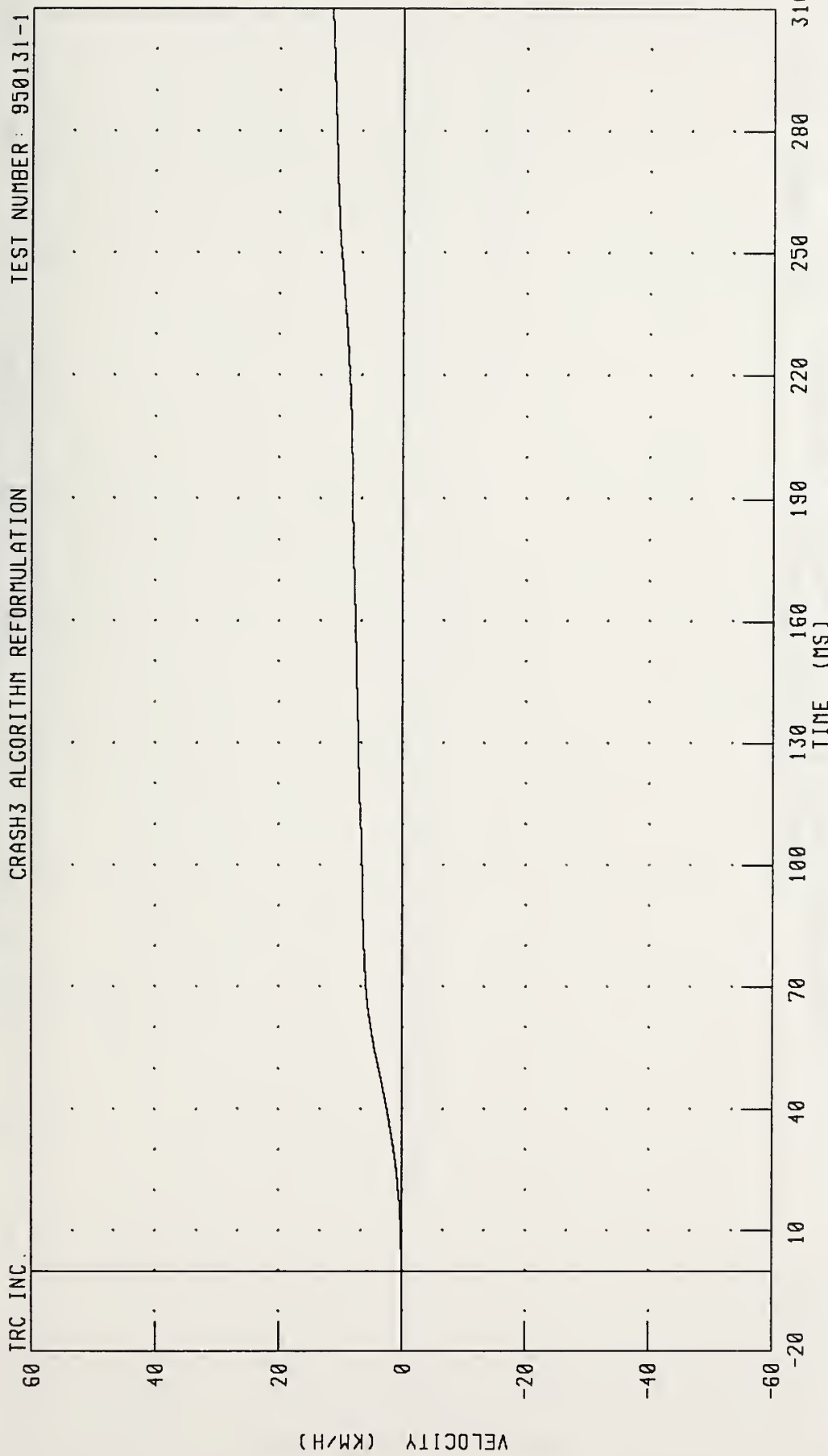


CHANNEL: BCGRG FILTER: CH CLASS 60

PEAK DATA: 4.08 G @ 50.88 MS; 0.02 G @ -3.60 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

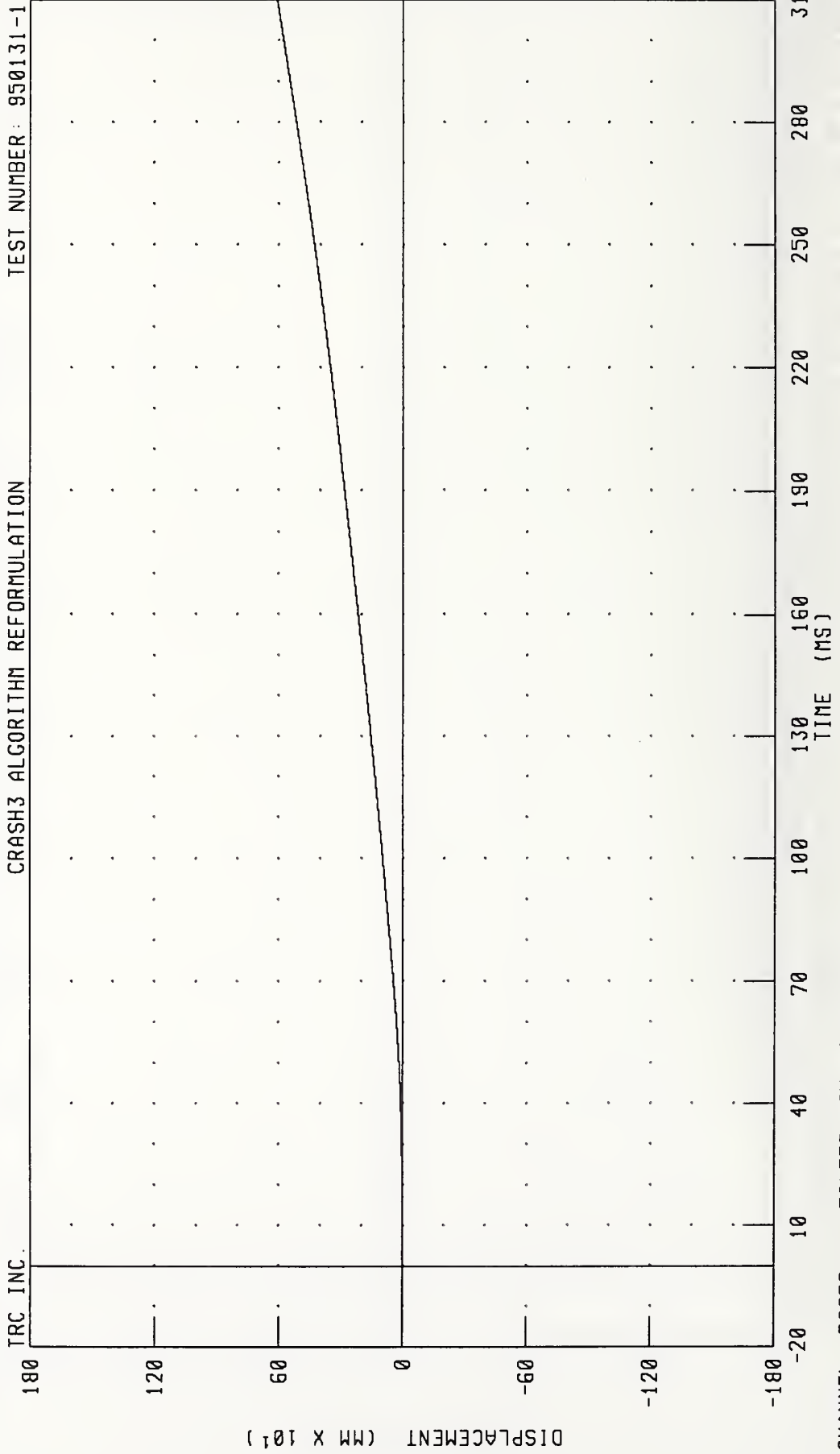


CHANNEL: BCGRV FILTER: CH. CLASS 180

PEAK DATA: 11.50 KM/H @ 310.00 MS; 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 MOVING BARRIER CENTER OF GRAVITY RESULTANT DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



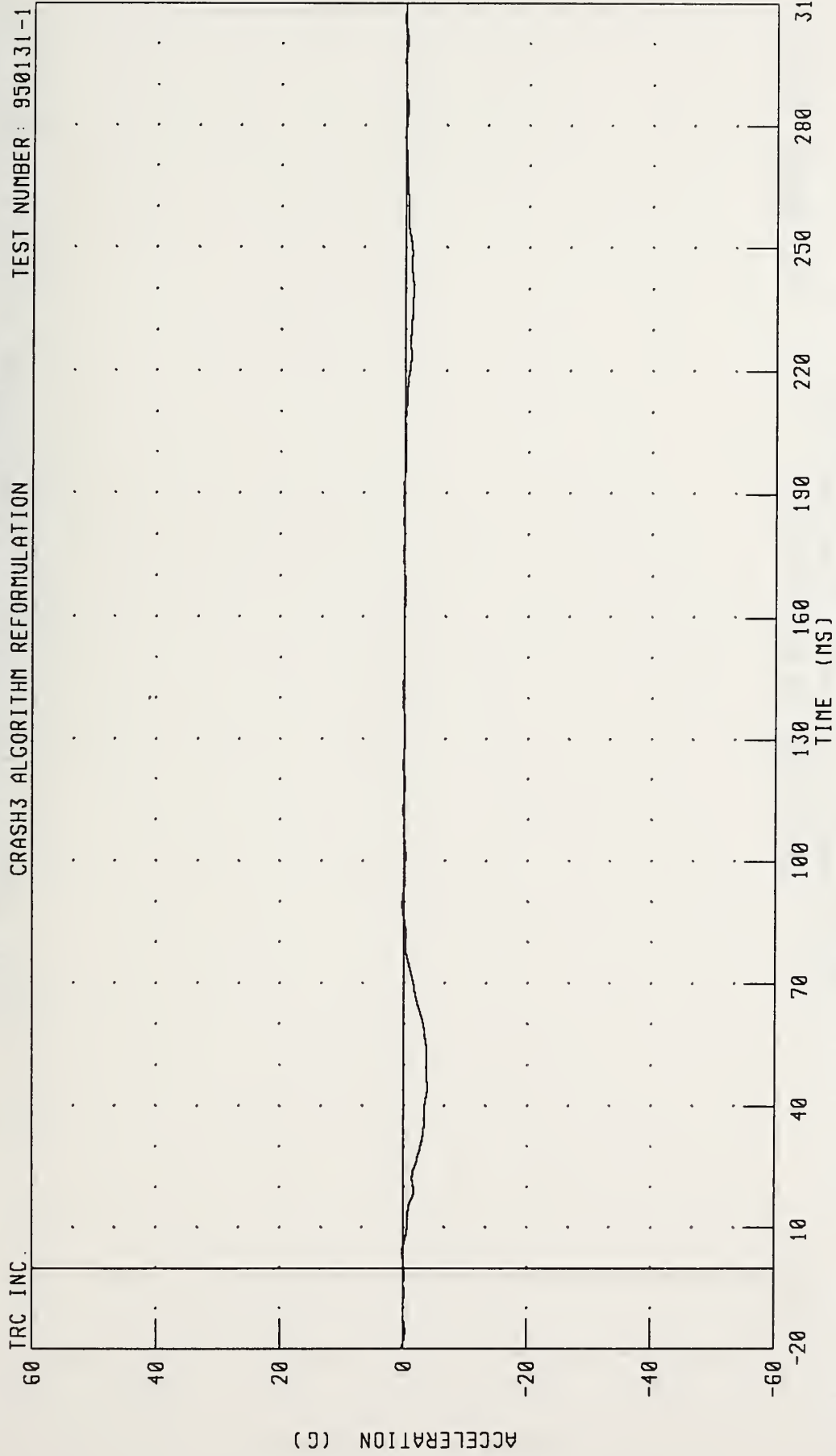
CHANNEL: BCGRD FILTER: CH CLASS 180

PEAK DATA: 609.00 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS ACCELERATION

TRC INC. TEST NUMBER: 950131-1

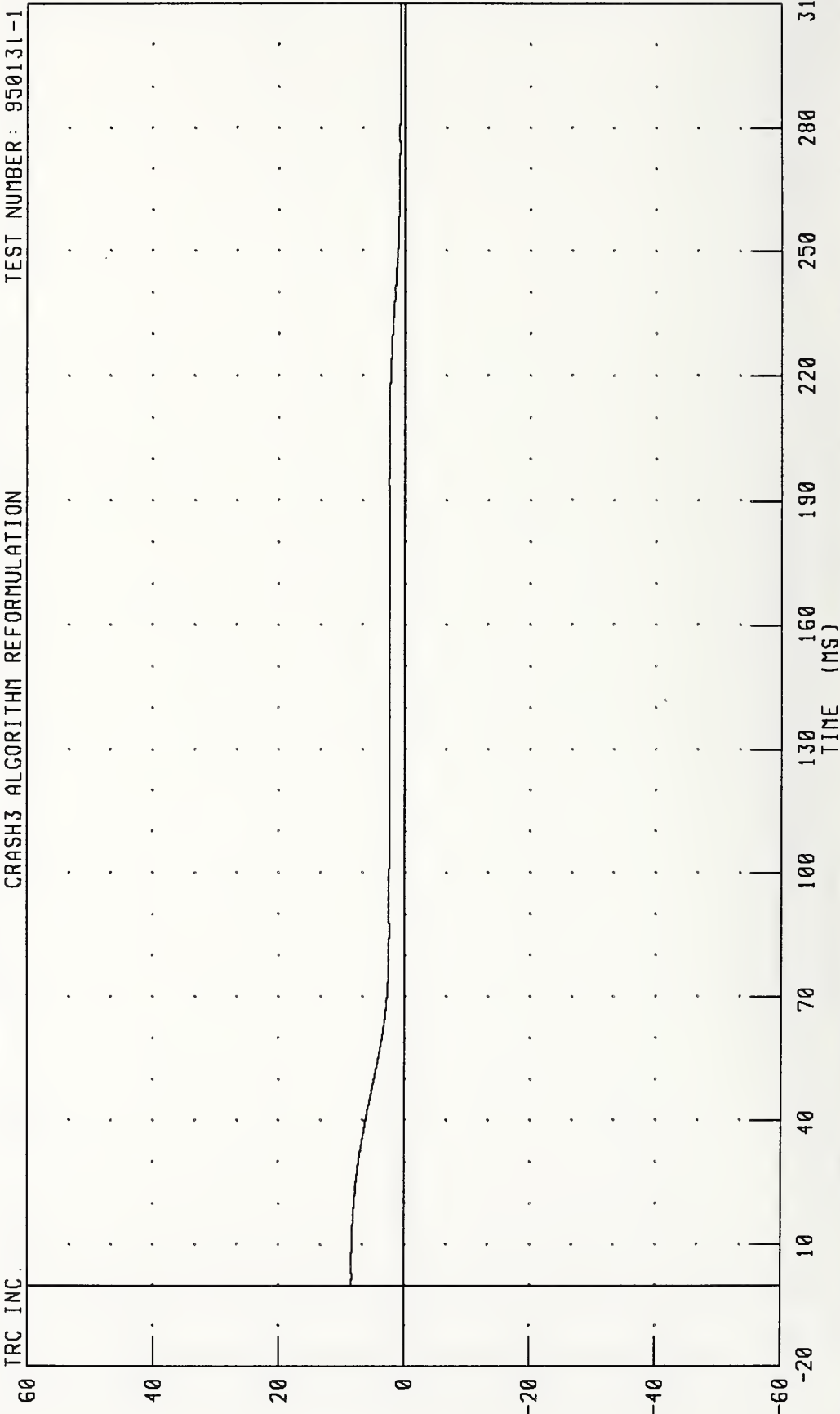
CRASH3 ALGORITHM REFORMULATION



CHANNEL: BSRXG FILTER: CH CLASS 60 PEAK DATA: 0.33 G @ -20.00 MS, -3.84 G @ 44.64 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



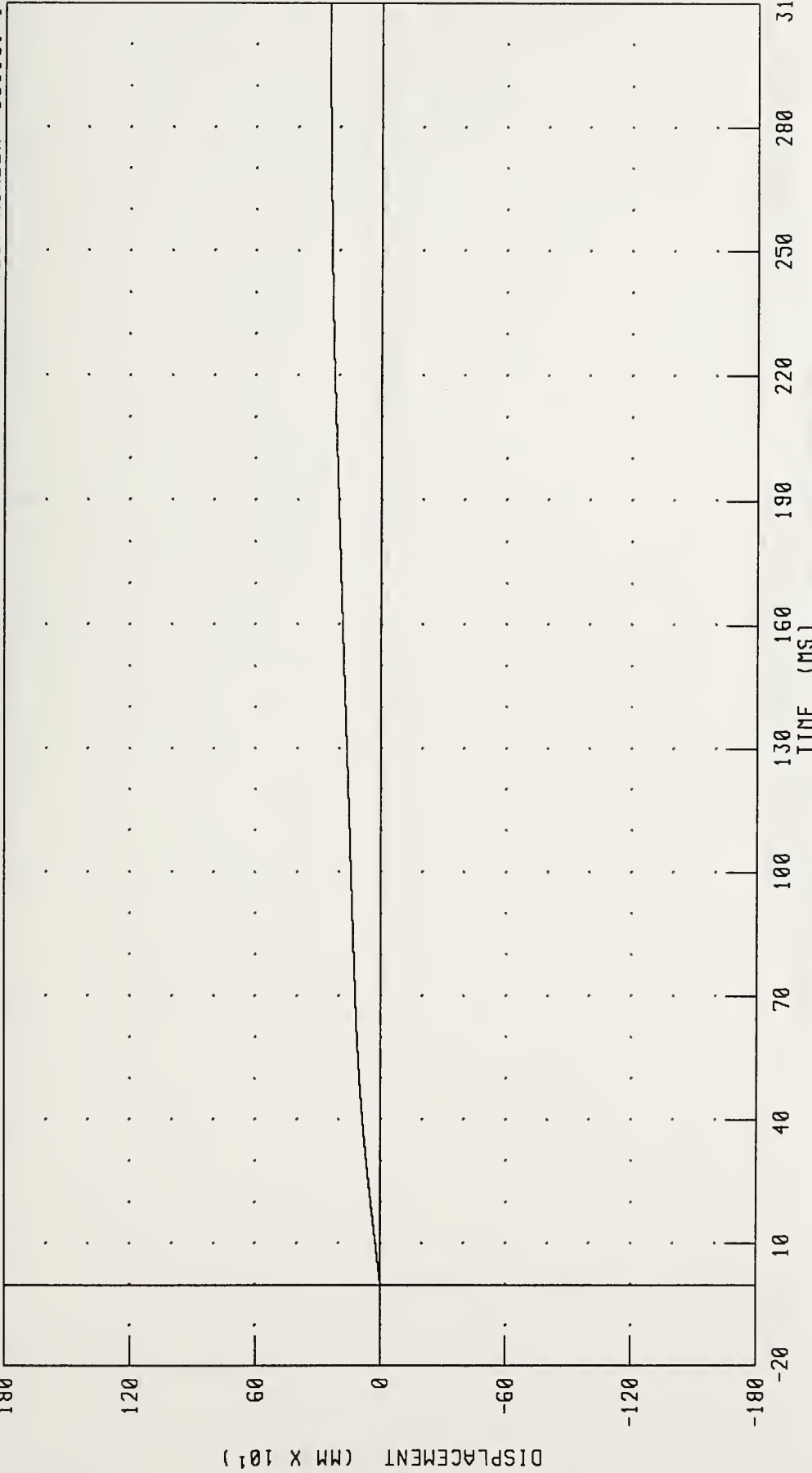
CHANNEL: BSRXY FILTER: CH. CLASS 180 PEAK DATA: 8.41 KM/H @ 5.68 MS; 0.67 KM/H @ 304.40 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS DISPLACEMENT

TEST NUMBER: 950131-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

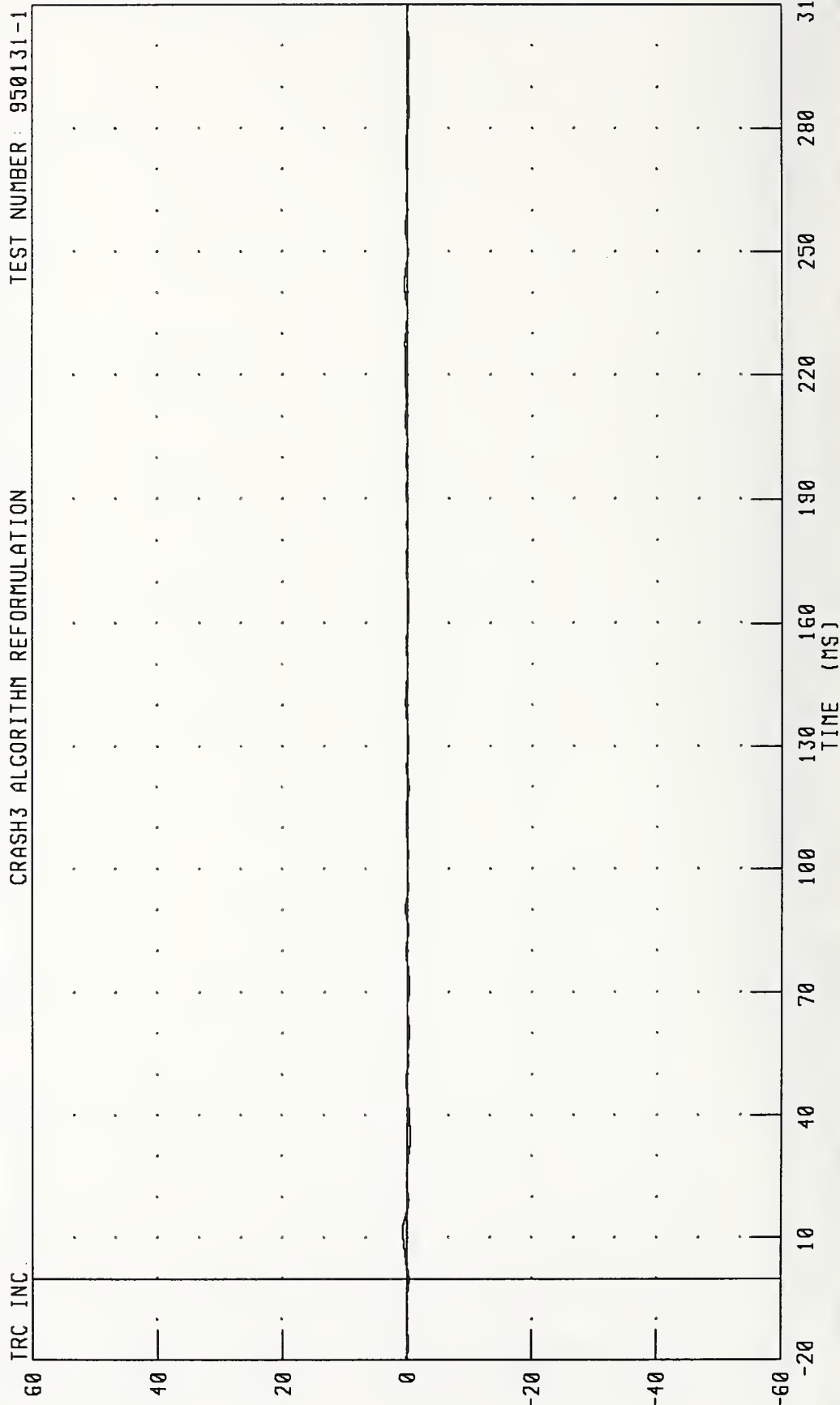


CHANNEL: BSRXD FILTER: CH CLASS 180

PEAK DATA: 251.61 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
MOVING BARRIER LEFT SIDE RAIL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1

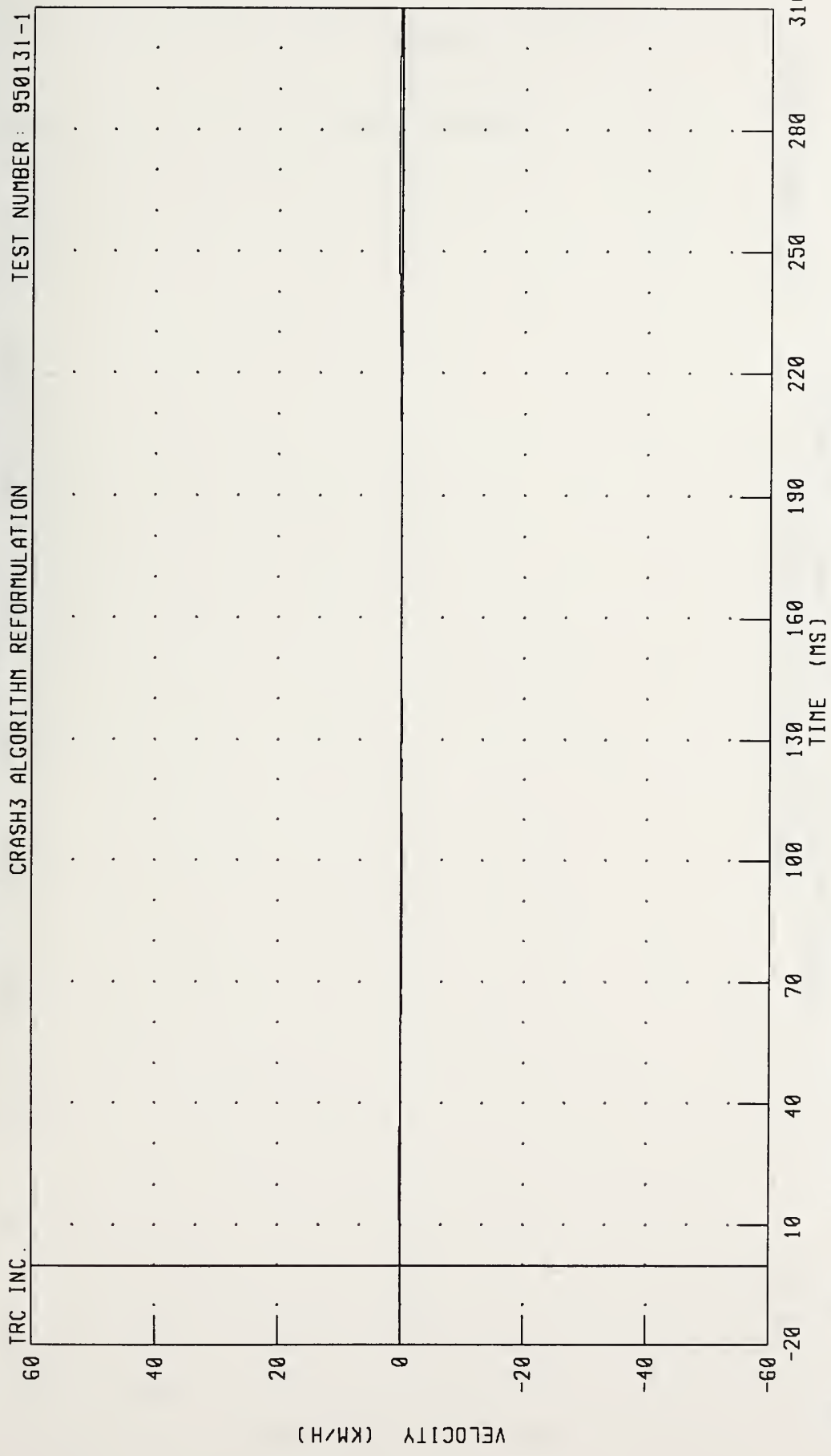


CHANNEL: BSRYG FILTER: CH. CLASS 60

PEAK DATA: 0.73 G @ 11.76 MS; -0.56 G @ 34.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 MOVING BARRIER LEFT SIDE RAIL Y-AXIS VELOCITY

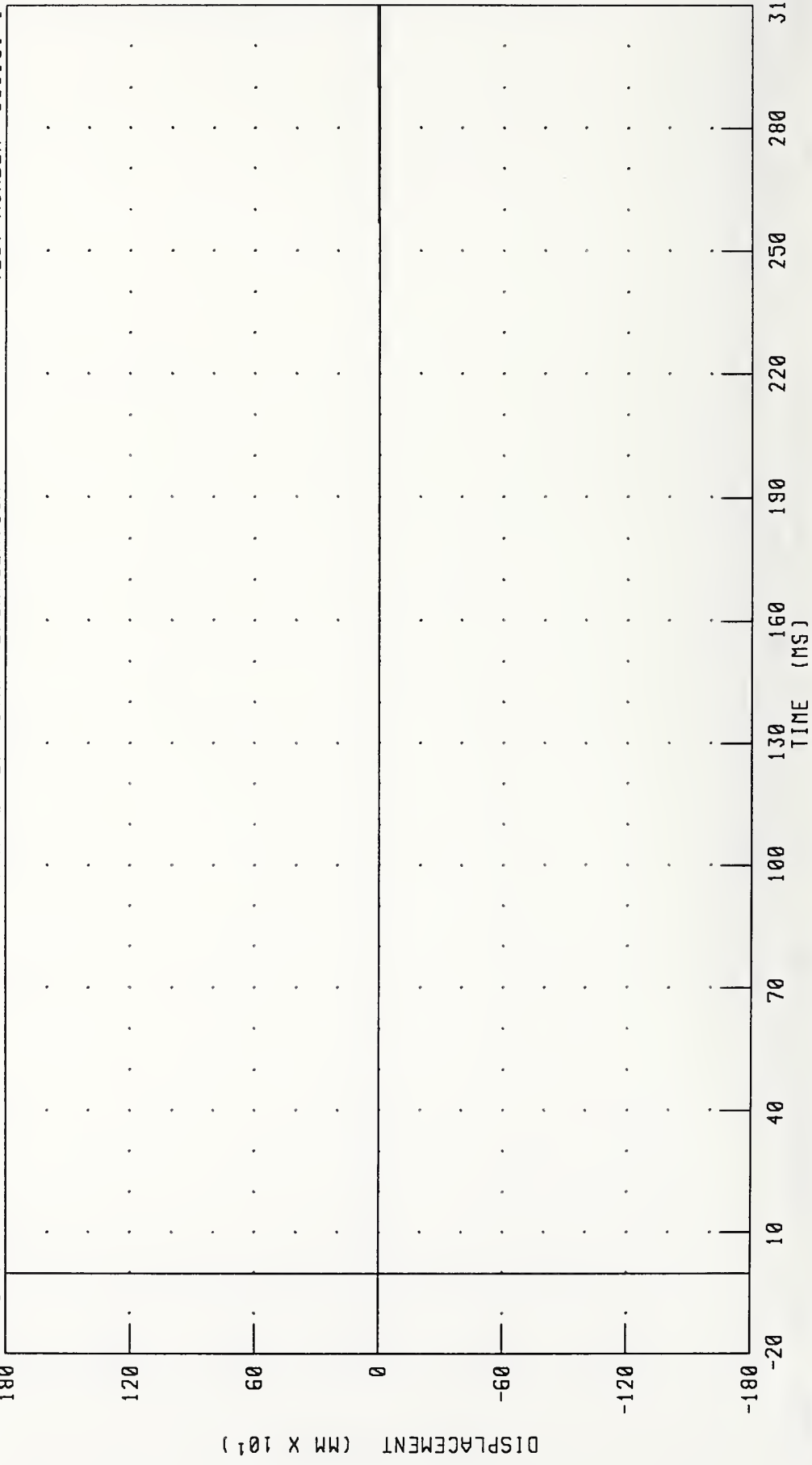
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



CHANNEL: BSRYV FILTER: CH CLASS 180

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 1 OF 5
 MOVING BARRIER LEFT SIDE RAIL Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-1



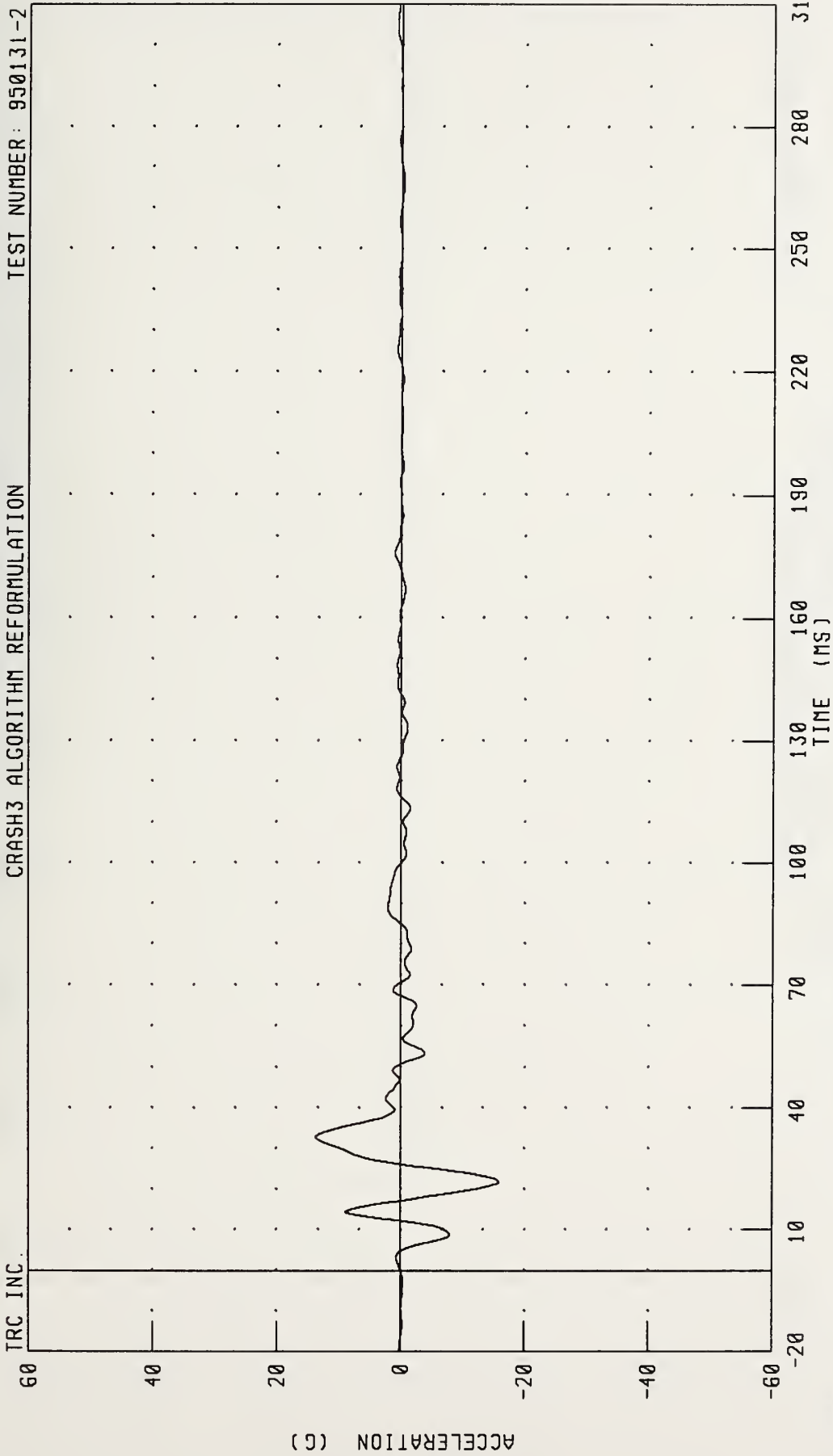
CHANNEL: BSRYD FILTER: CH. CLASS 180 PEAK DATA: 10 20 MM @ 310.00 MS, -1.47 MM @ 183.68 MS

Data Plots

Test No. 950131-2

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

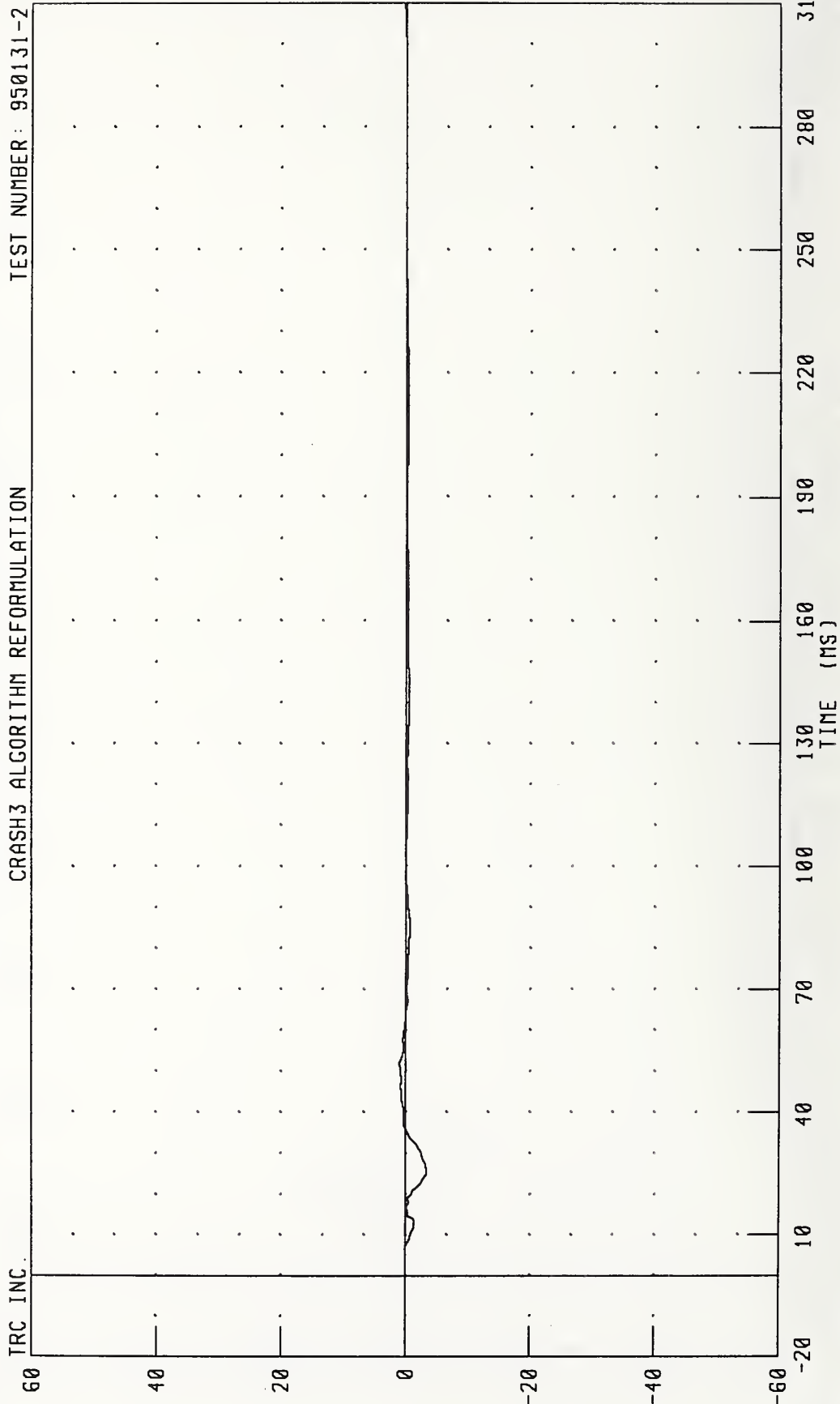


CHANNEL: VCGXG FILTER: CH CLASS 60

PEAK DATA: 13.72 G @ 32.80 MS; -15.91 G @ 21.84 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



CHANNEL: VCGXV FILTER: CH. CLASS 180

PEAK DATA: 1.01 KM/H @ 51.76 MS; -3.41 KM/H @ 25.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 VEHICLE CENTER OF GRAVITY X-AXIS DISPLACEMENT

TRC INC. TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

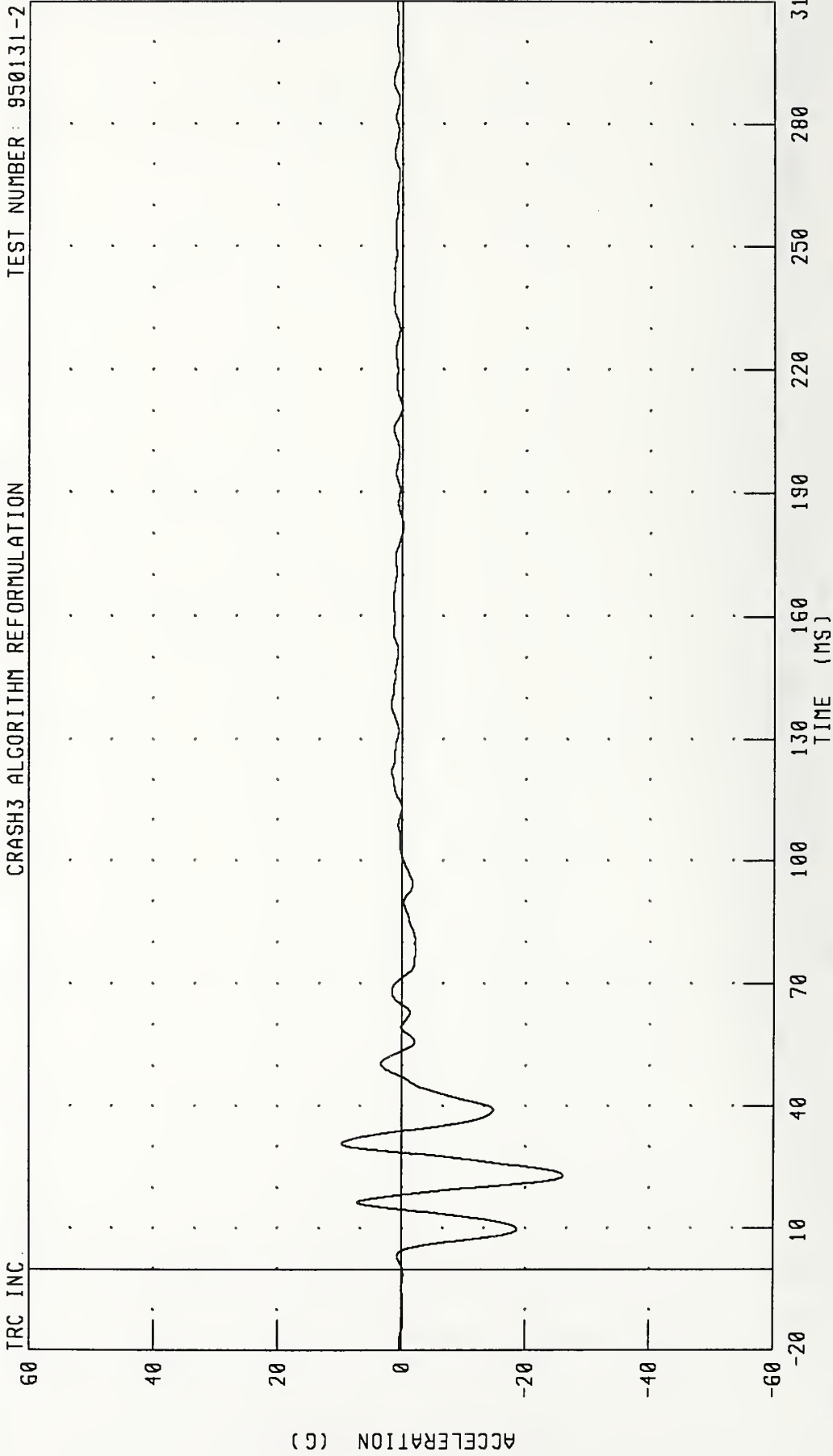
180



CHANNEL: VCGXD FILTER: CH. CLASS 180
 PEAK DATA: 0.06 MM @ 7.28 MS, -21.68 MM @ 277.60 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

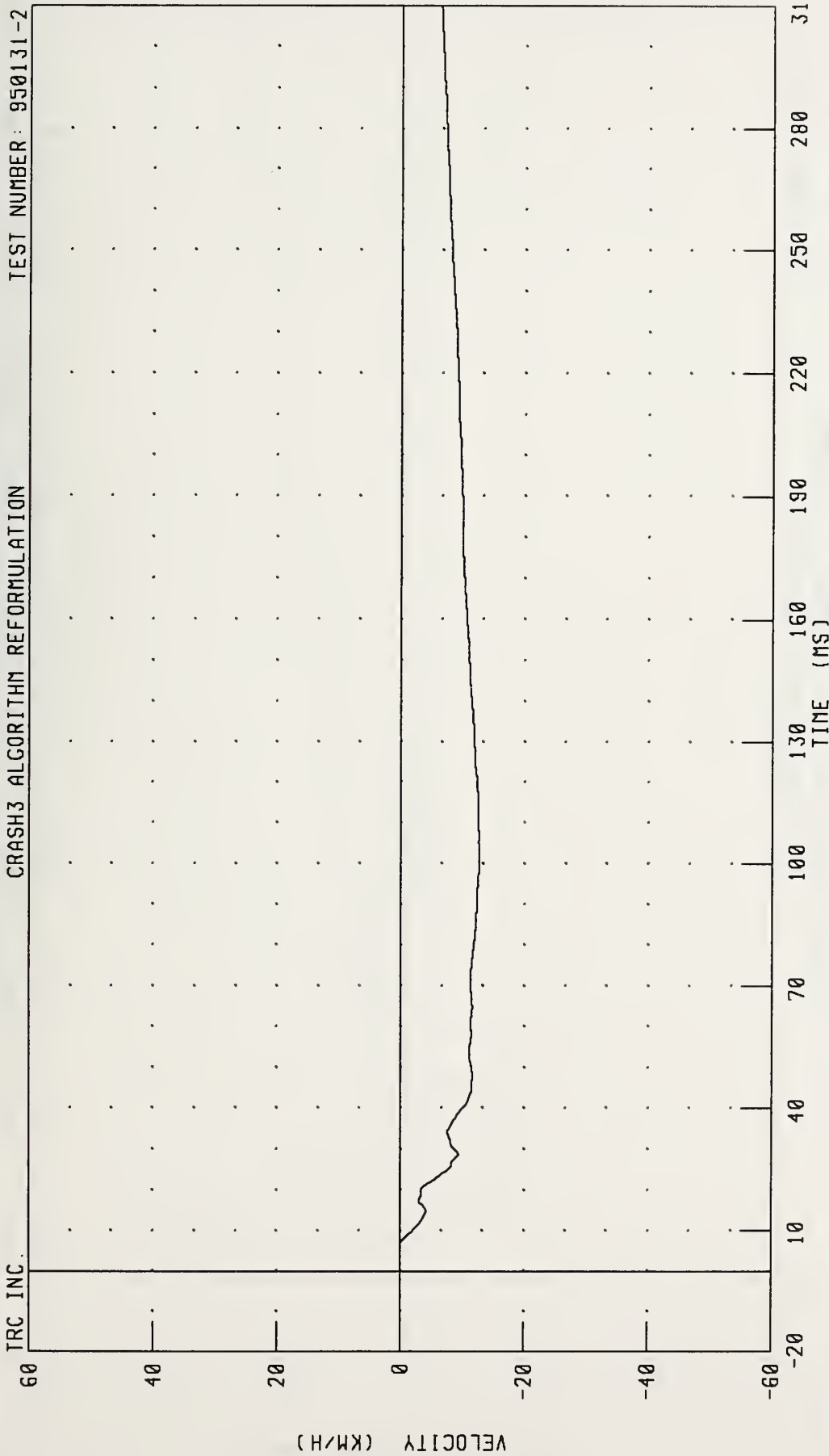


CHANNEL: VCGYG FILTER: CH. CLASS 60

PEAK DATA: 9.63 G @ 30.80 MS; -26.13 G @ 23.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

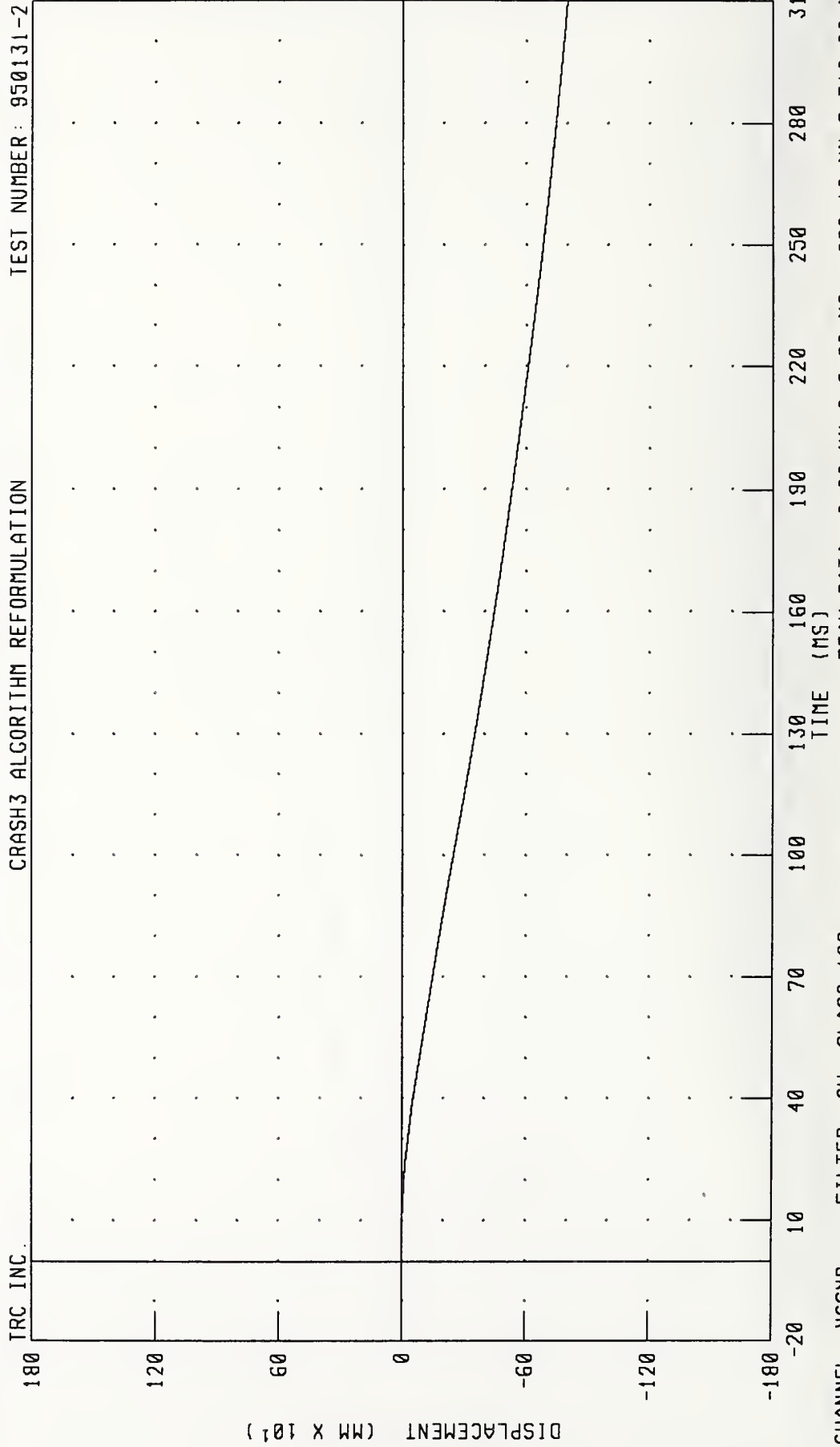


CHANNEL: VCGYV FILTER: CH. CLASS 180

PEAK DATA: 0.07 KM/H @ 6.32 MS; -12.67 KM/H @ 101.28 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



CHANNEL: VCGYD FILTER: CH CLASS 180

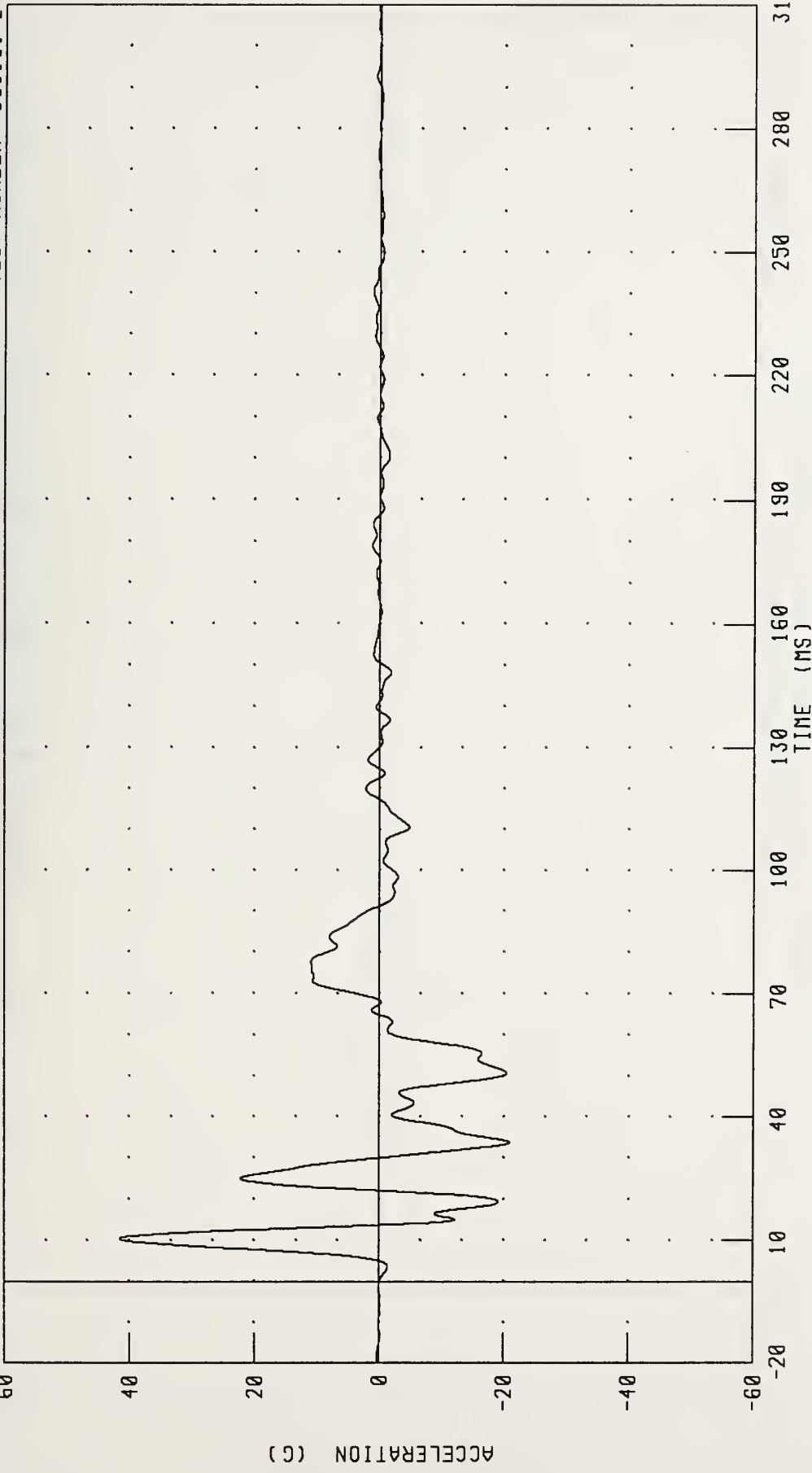
PEAK DATA: 0.00 MM @ 0.00 MS; -802.10 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



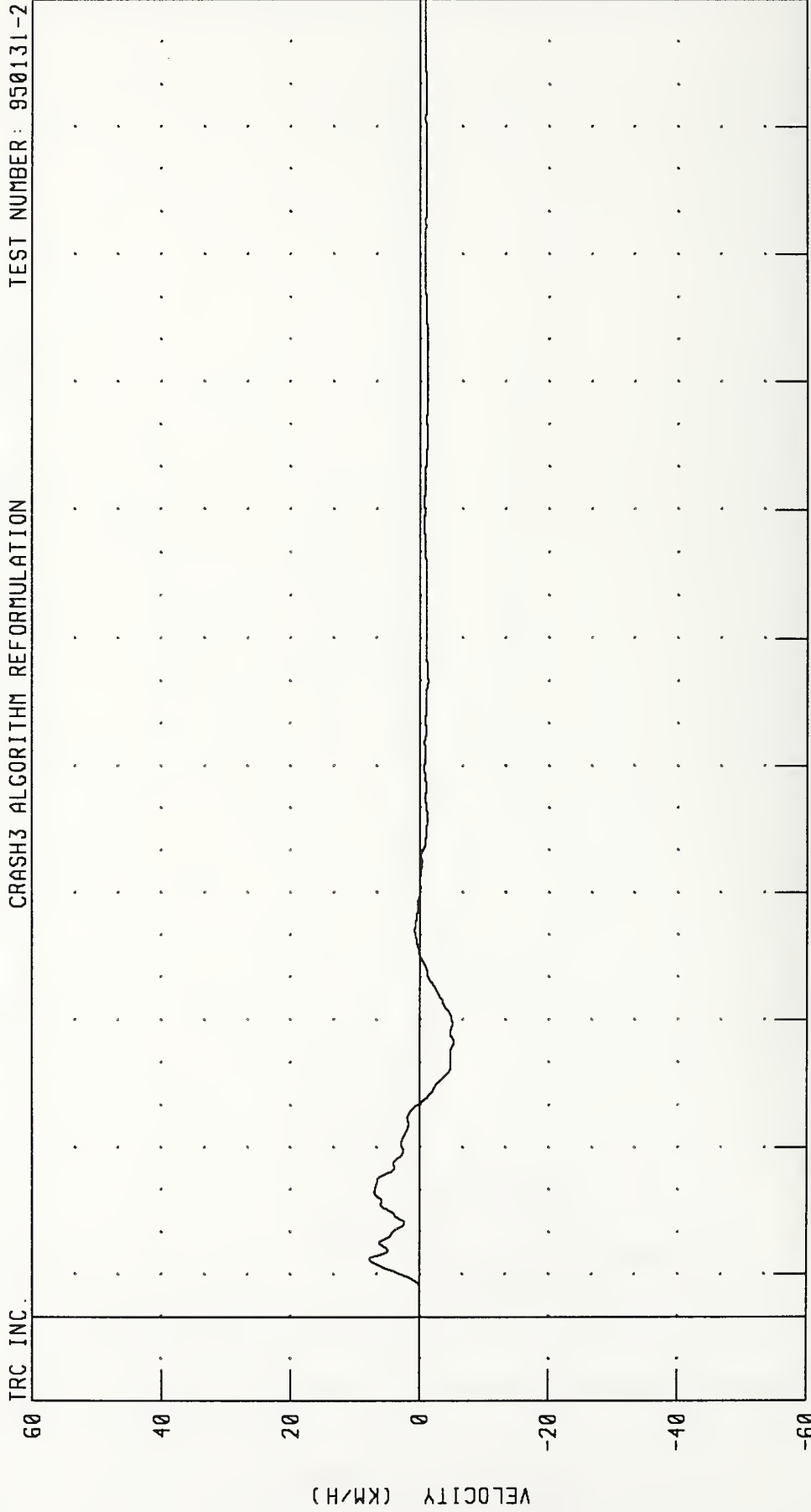
CHANNEL: VCGZG FILTER: CH. CLASS 60

PEAK DATA: 41.55 G @ 10.40 MS, -20.92 G @ 33.76 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY

TRC INC. TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

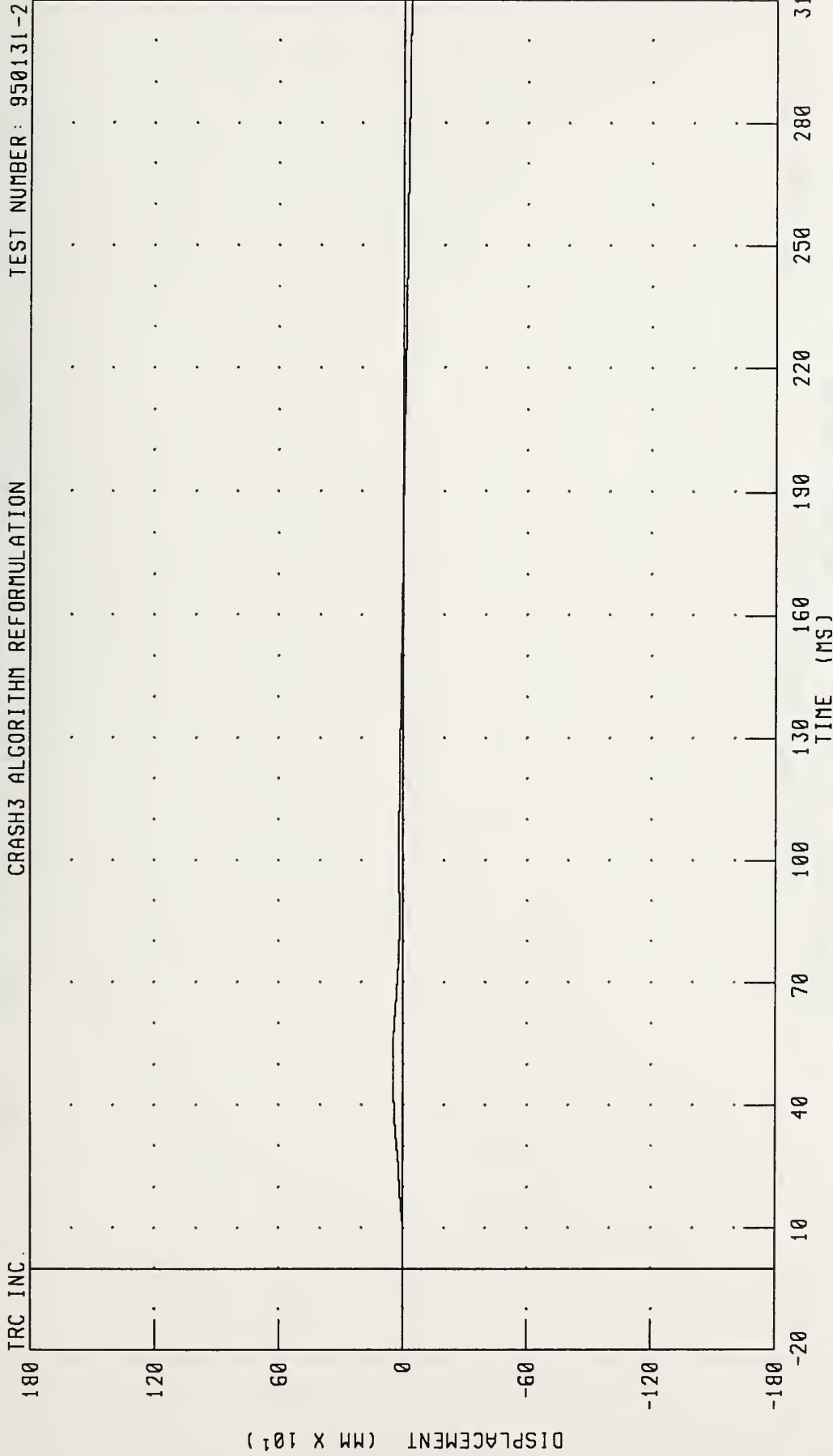


CHANNEL: VCGZY FILTER: CH. CLASS 180

PEAK DATA: 7.86 KM/H @ 13.60 MS; -5.26 KM/H @ 64.80 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



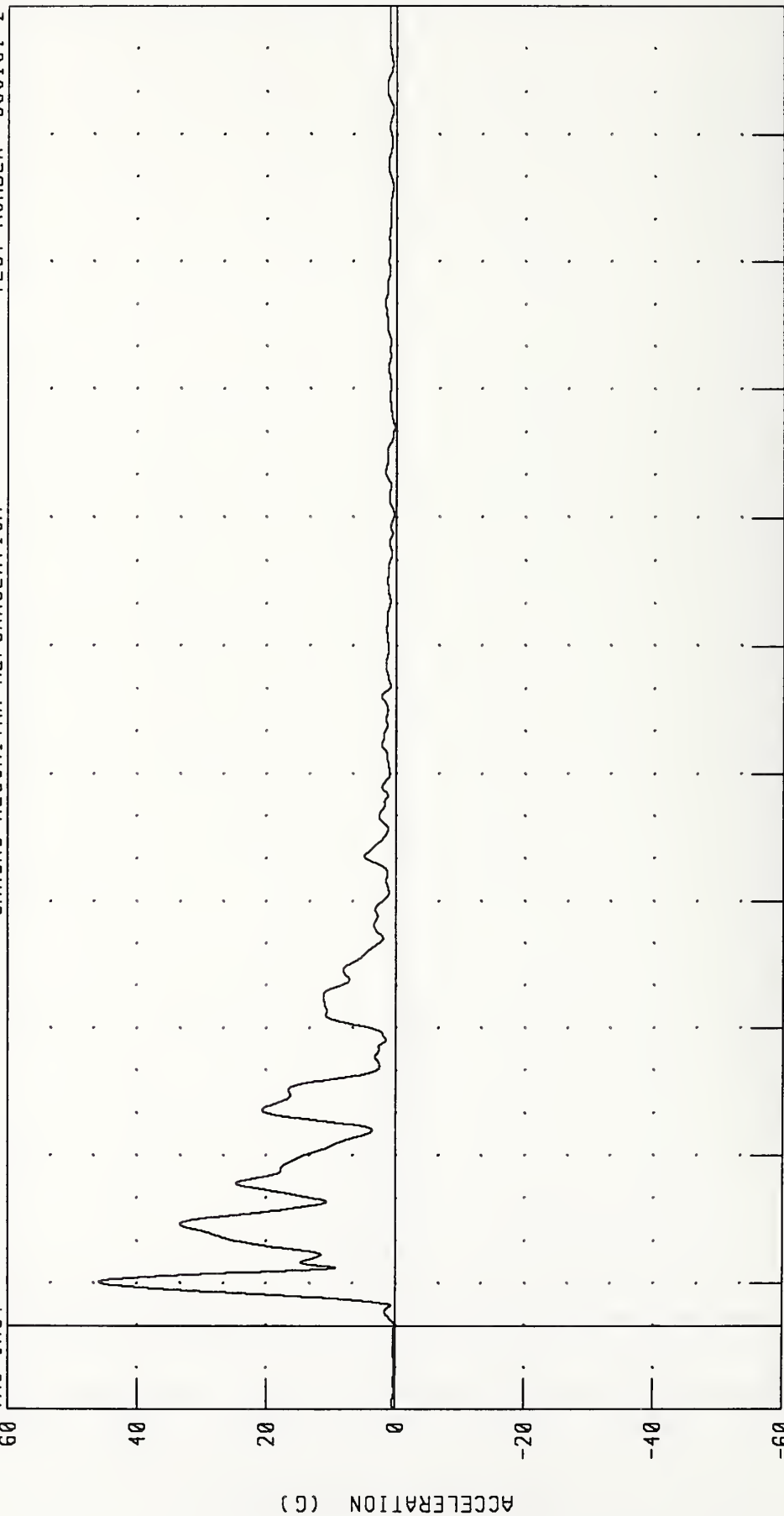
CHANNEL: VCGZD FILTER: CH CLASS 180 PEAK DATA: 48.45 MM @ 50.40 MS, -34.69 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

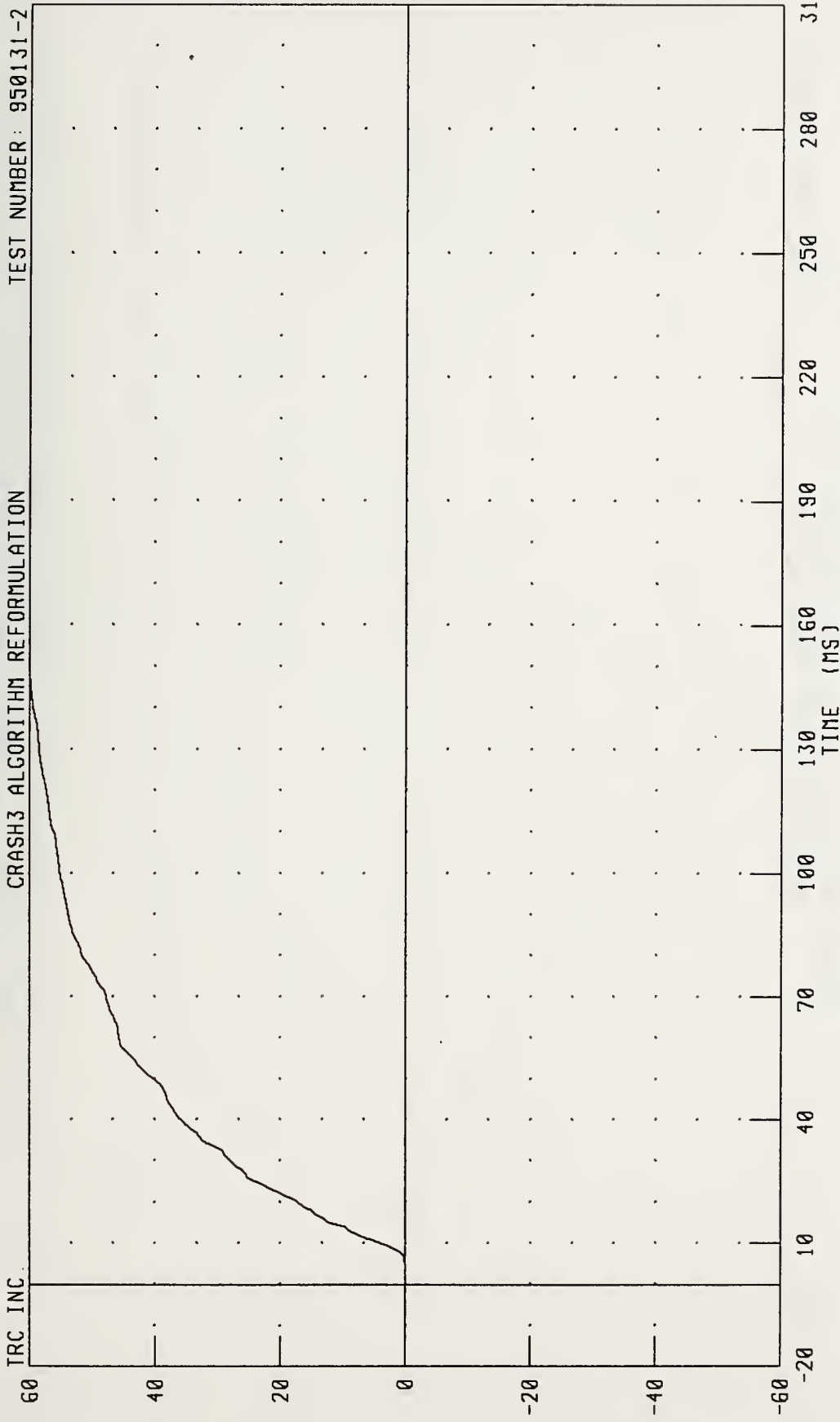


CHANNEL: VCGRG FILTER: CH. CLASS 60

PEAK DATA: 45.88 G @ 10.32 MS; 0.11 G @ 211.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 VEHICLE CENTER OF GRAVITY RESULTANT VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

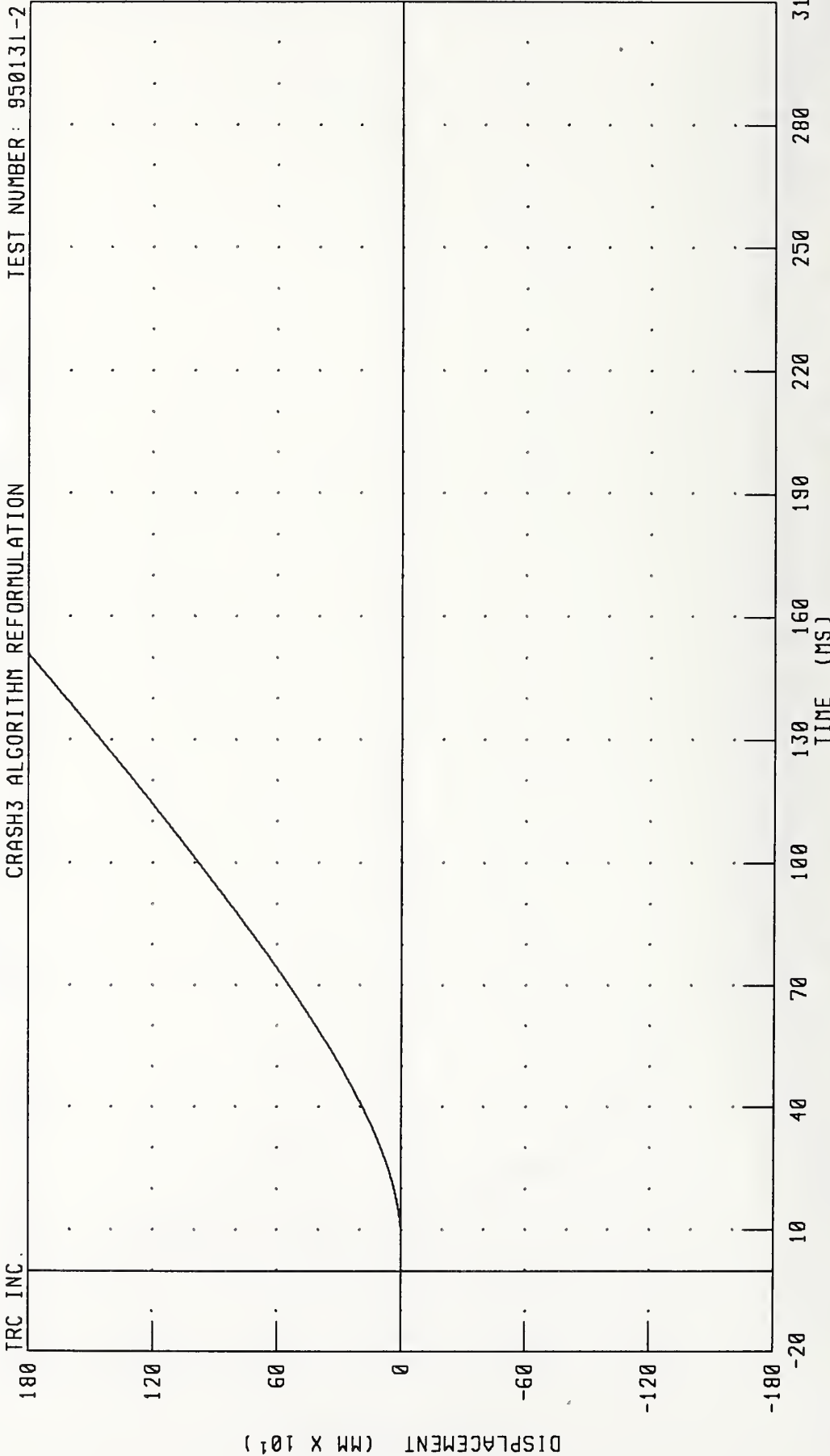


CHANNEL: VCGRV FILTER: CH. CLASS 180

PEAK DATA: 67.81 KM/H @ 310.00 MS, 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 VEHICLE CENTER OF GRAVITY RESULTANT DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

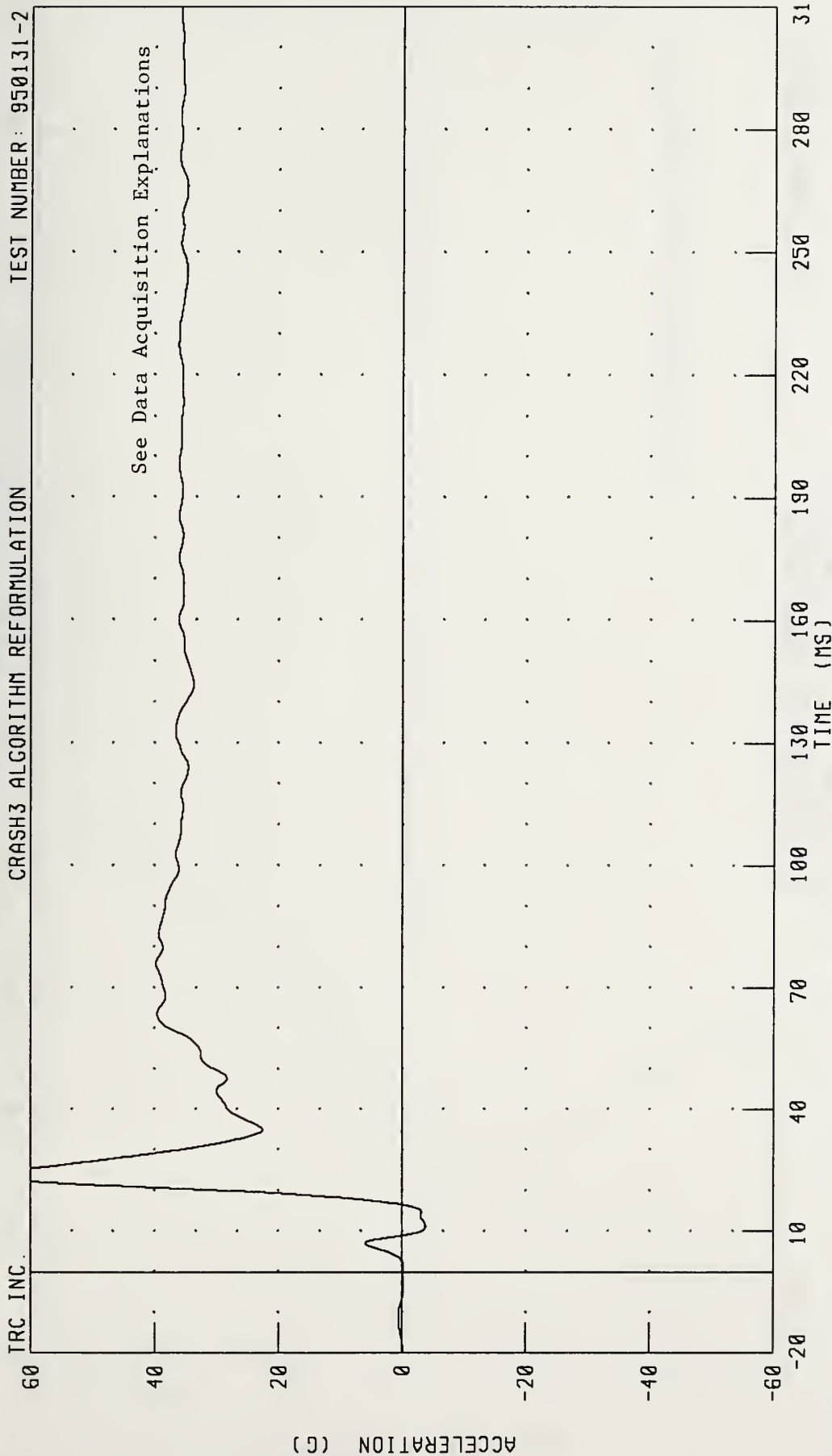


CHANNEL: VCGRD FILTER: CH. CLASS 180

PEAK DATA: 4636.03 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
LEFT REAR SILL X-AXIS ACCELERATION

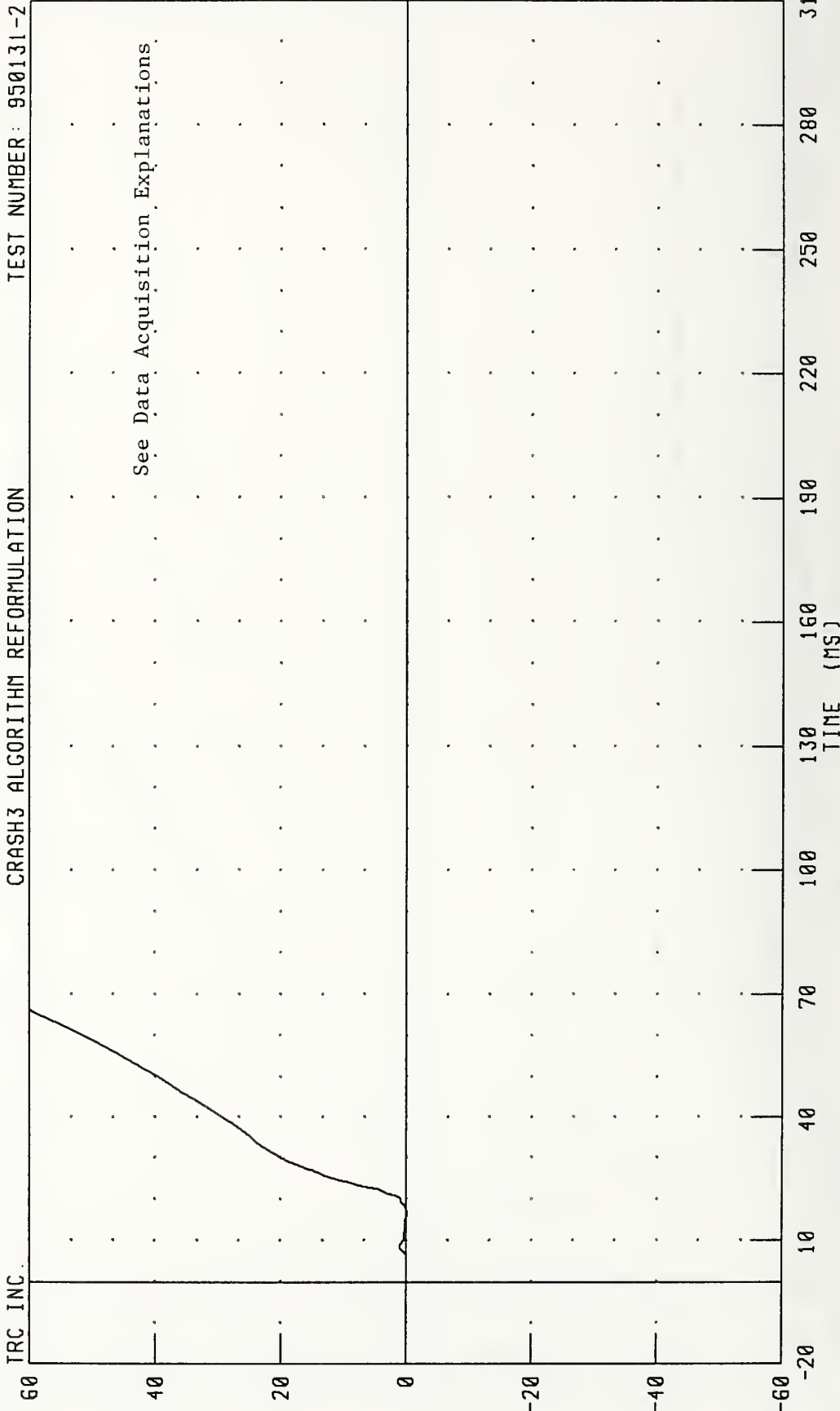
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



CHANNEL: LRSXG FILTER: CH. CLASS 60 PEAK DATA: 67.73 G @ 23.52 MS; -3.82 G @ 11.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 LEFT REAR SILL X-AXIS VELOCITY

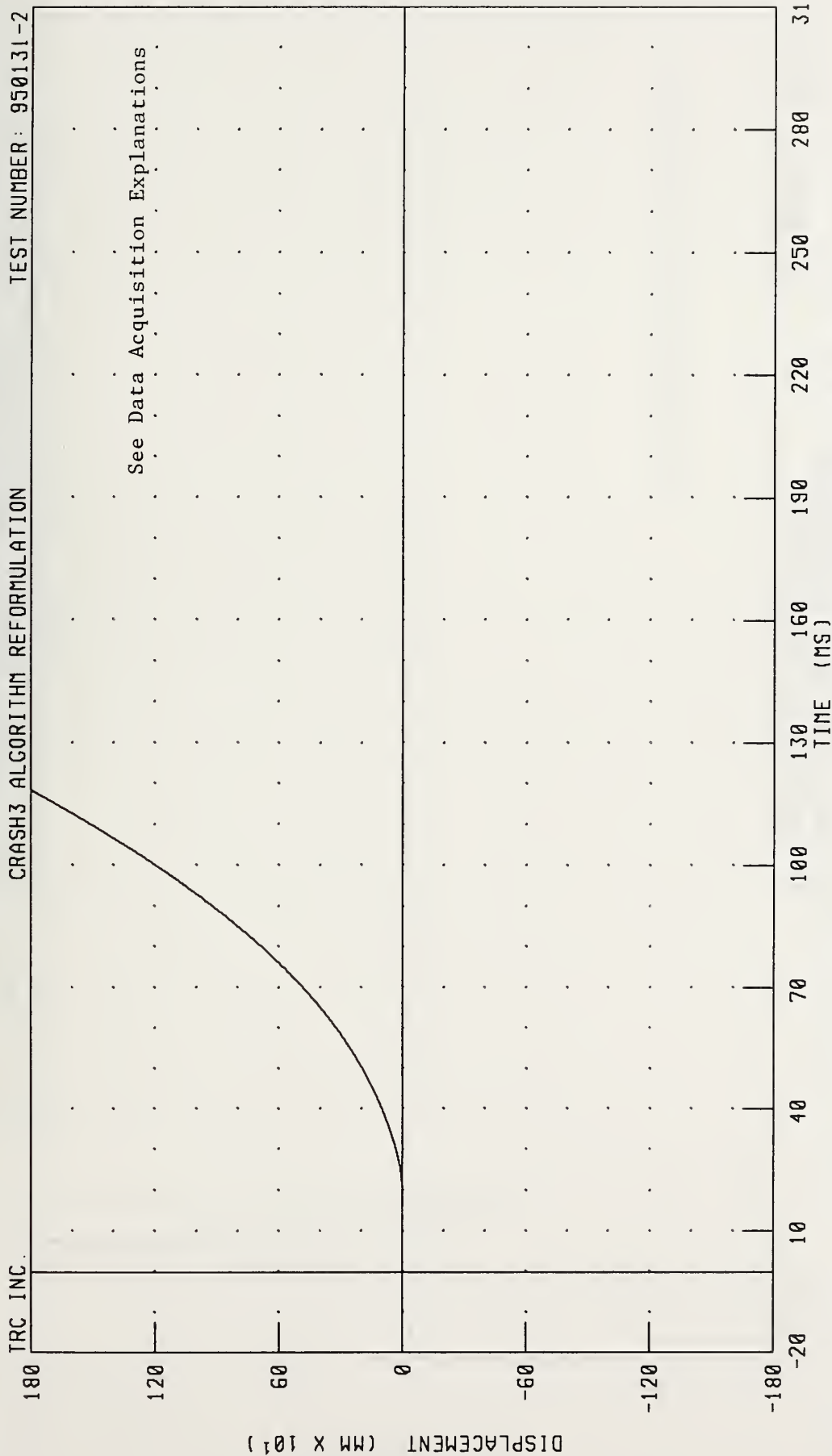
CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



CHANNEL: LRSXY FILTER: CH. CLASS 180 PEAK DATA: 369.64 KM/H @ 310.00 MS; -0.15 KM/H @ 16.48 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
LEFT REAR SILL X-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

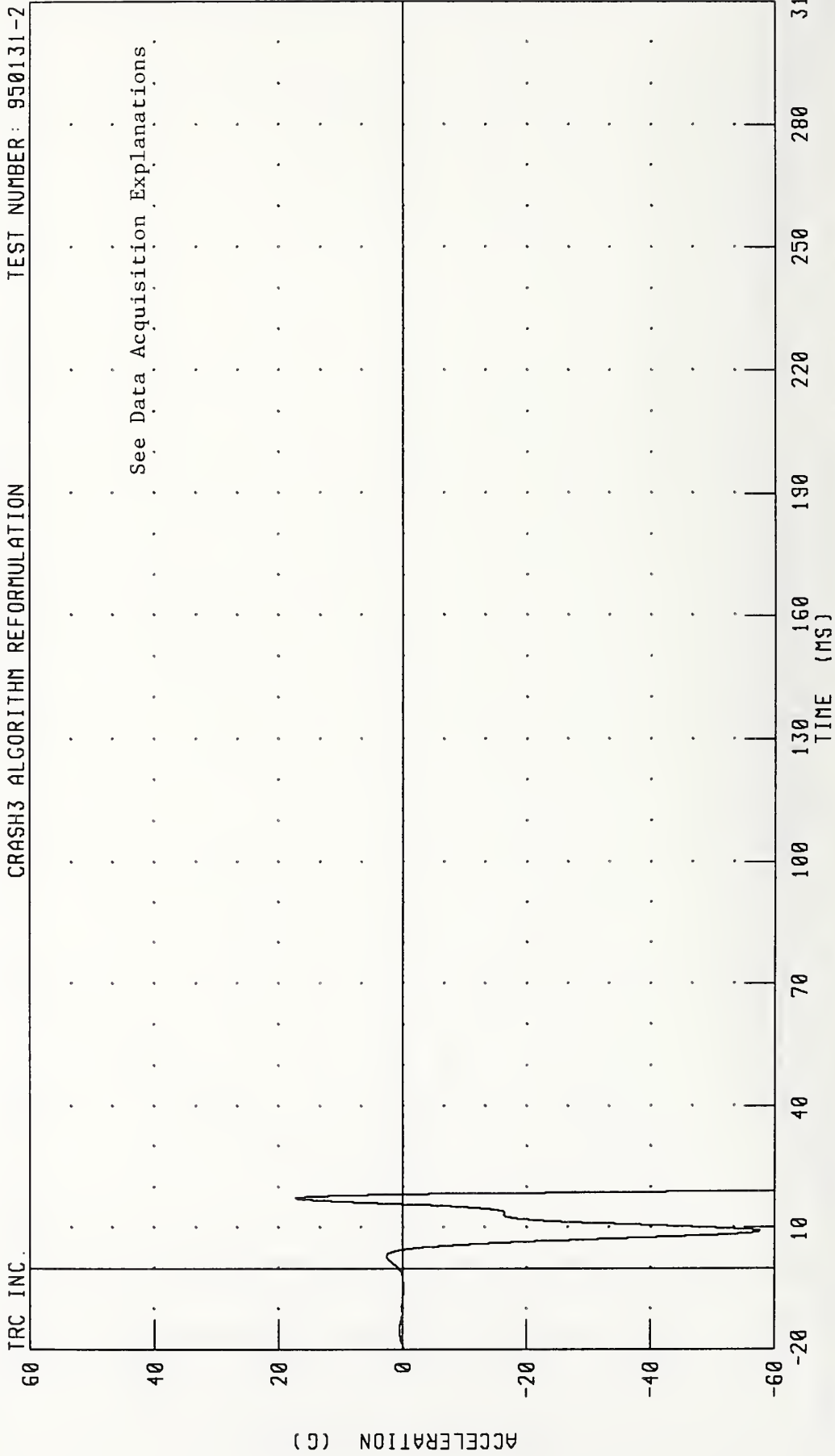


CHANNEL: LRSXD FILTER: CH CLASS 180

PEAK DATA: 15060.49 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 LEFT REAR SILL Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

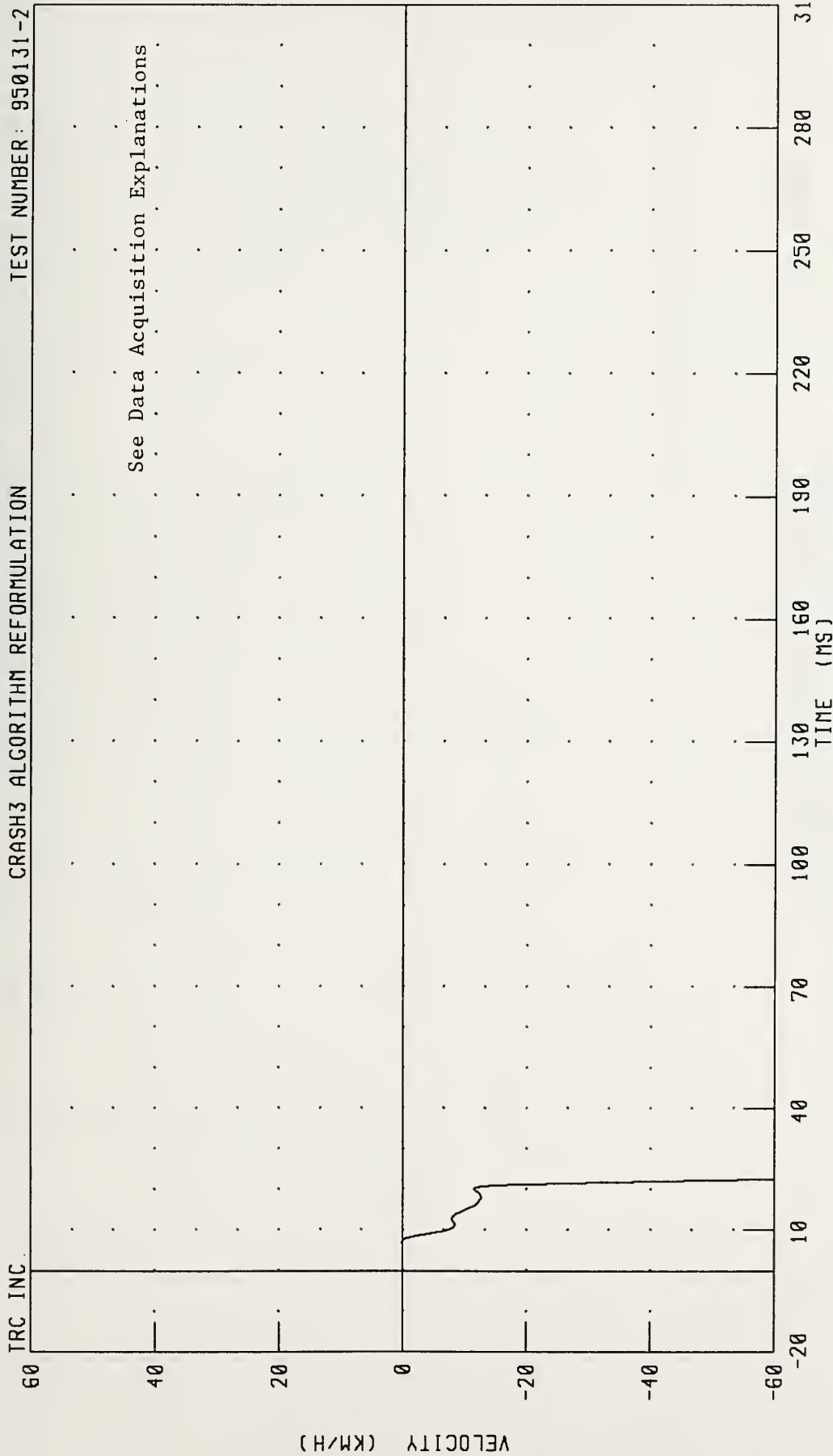


CHANNEL: LRSYG FILTER: CH. CLASS 60

PEAK DATA: 17.33 G @ 17.20 MS; -1039.44 G @ 25.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 LEFT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

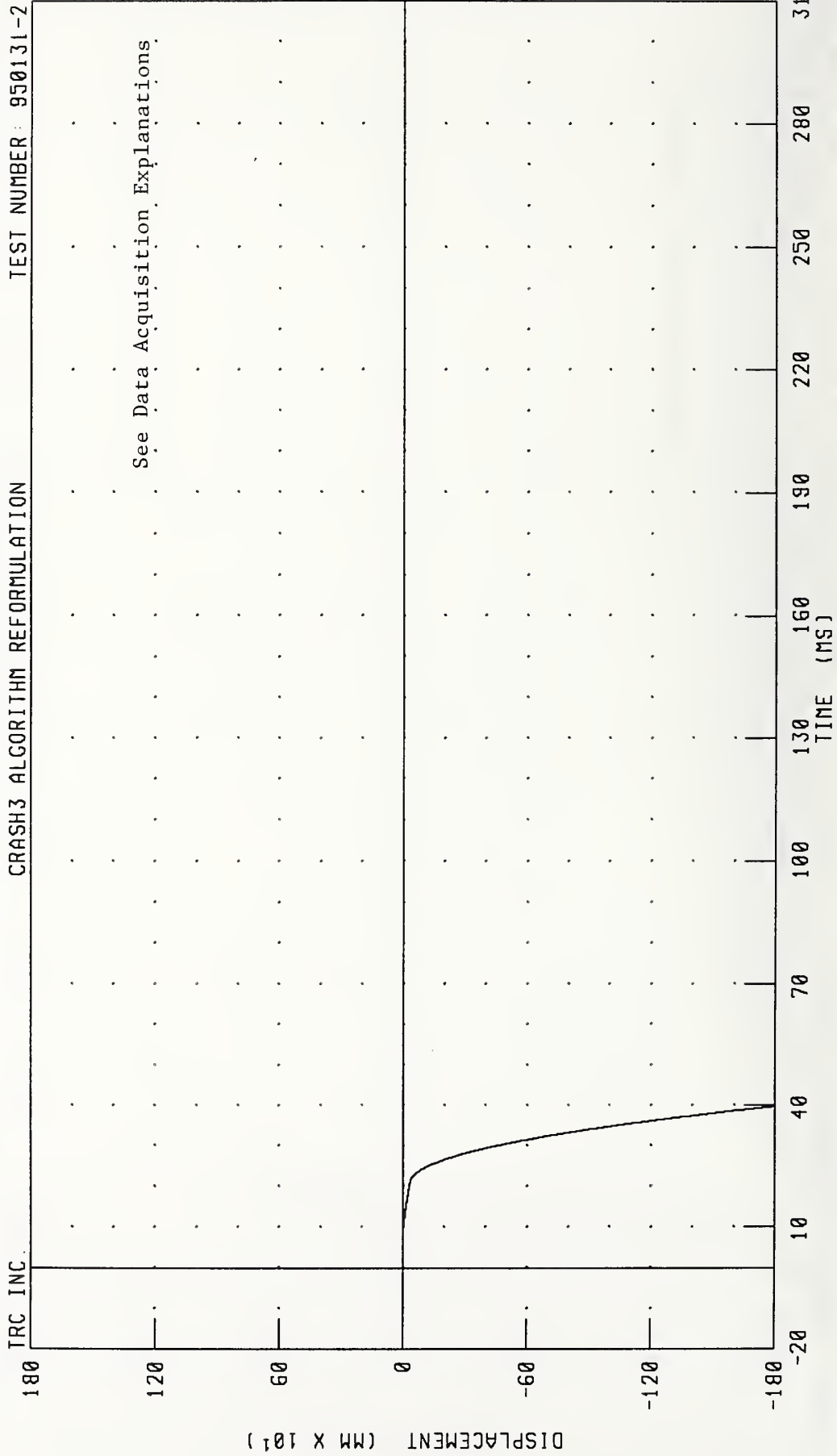


CHANNEL: LRSYV FILTER: CH. CLASS 180

PEAK DATA: 0.10 KM/H @ 6.96 MS; -10271.44 KM/H @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 LEFT REAR SILL Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



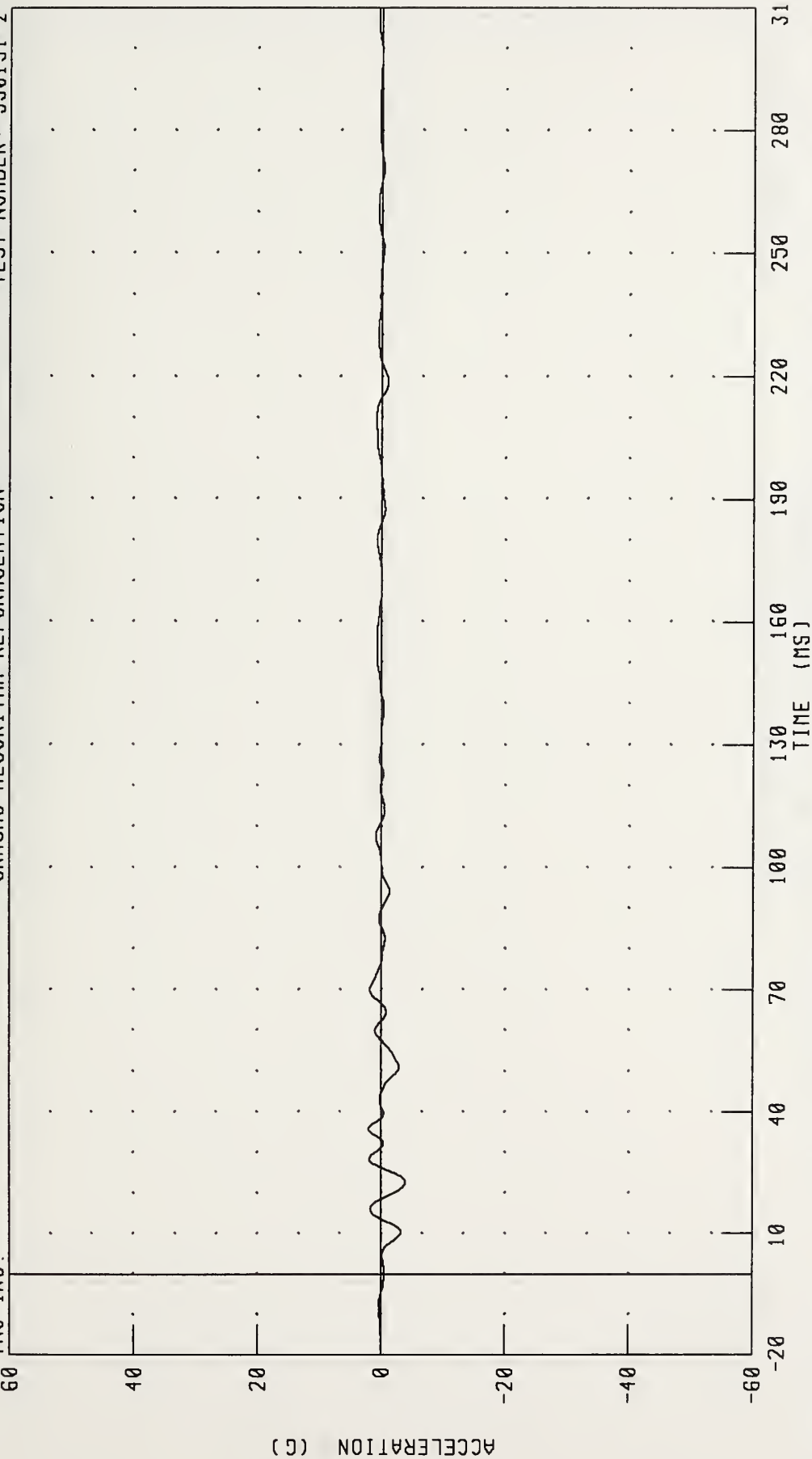
CHANNEL: LRSYD FILTER: CH CLASS 180

PEAK DATA: 0.11 MM @ 7.44 MS; -412643.75 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT REAR SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

TRC INC.

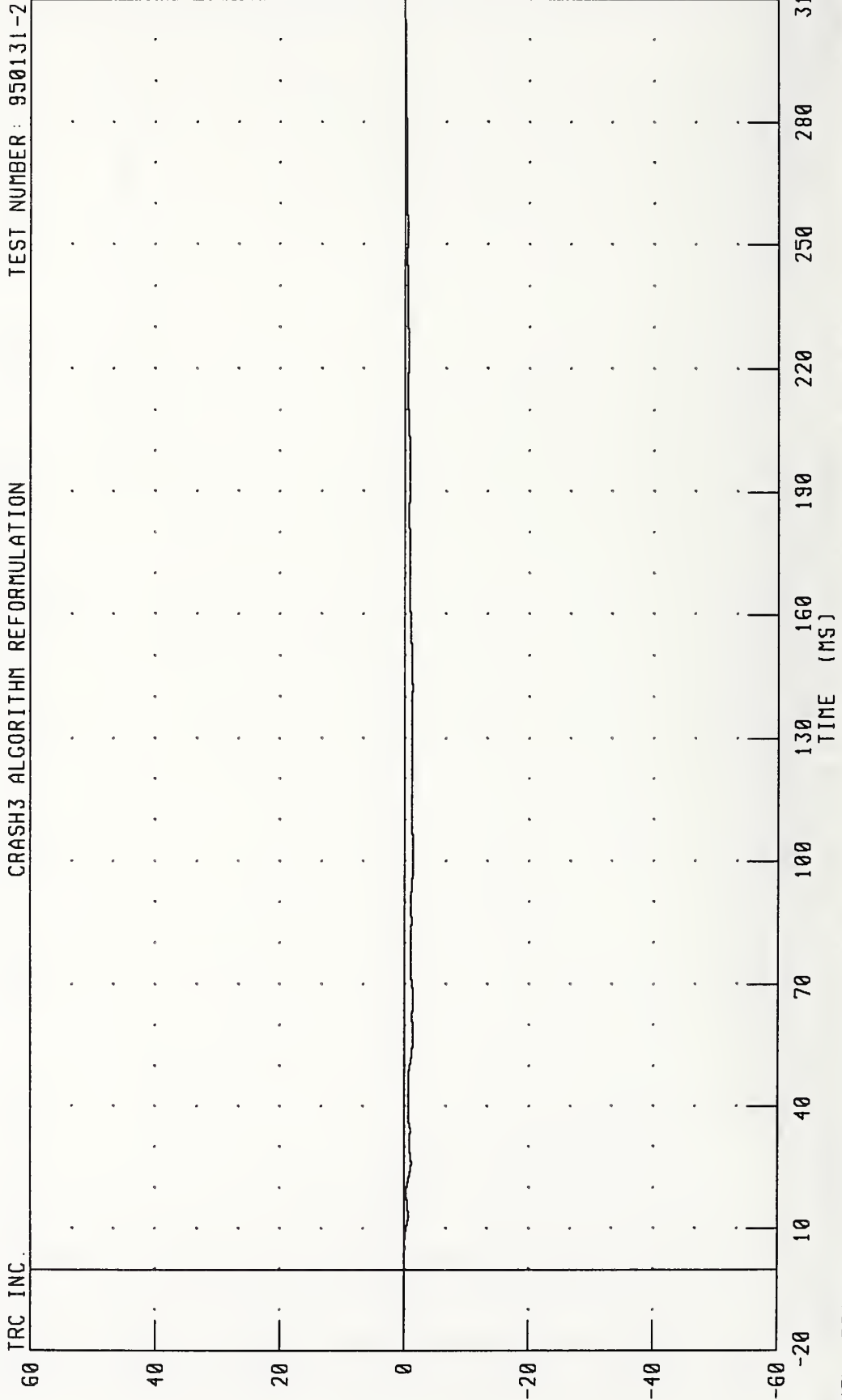


CHANNEL: RRSXG FILTER: CH. CLASS 60

PEAK DATA: 2.06 G @ 35.84 MS; -3.88 G @ 22.64 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT REAR SILL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



CHANNEL: RRSXV FILTER: CH. CLASS 180

PEAK DATA: 0.01 KM/H @ 310.00 MS; -1.38 KM/H @ 58.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT REAR SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

TRC INC.

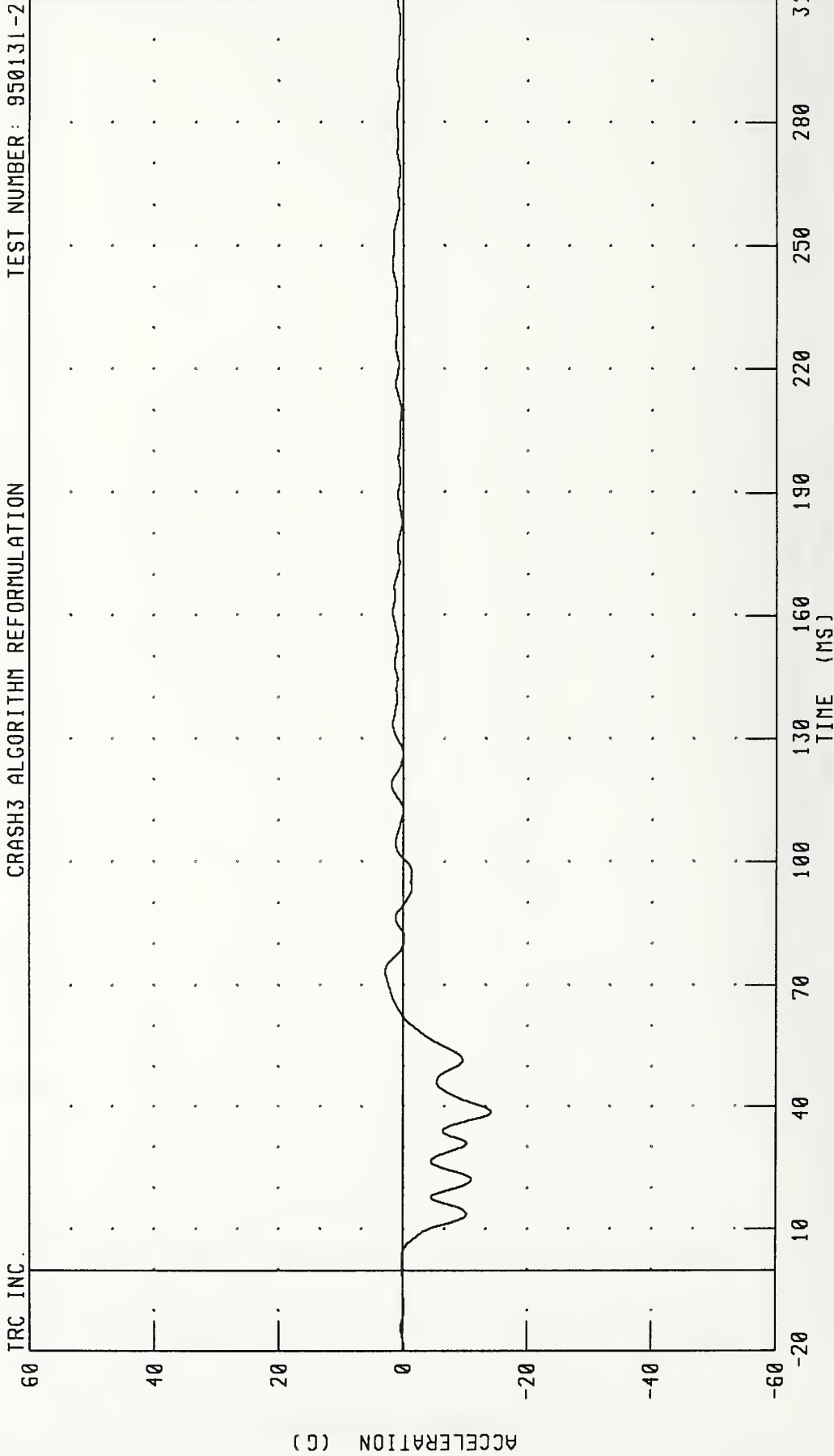


CHANNEL: RRSXD FILTER: CH. CLASS 180

PEAK DATA: 0.00 MM @ 0.00 MS; -64.83 MM @ 309.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT REAR SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

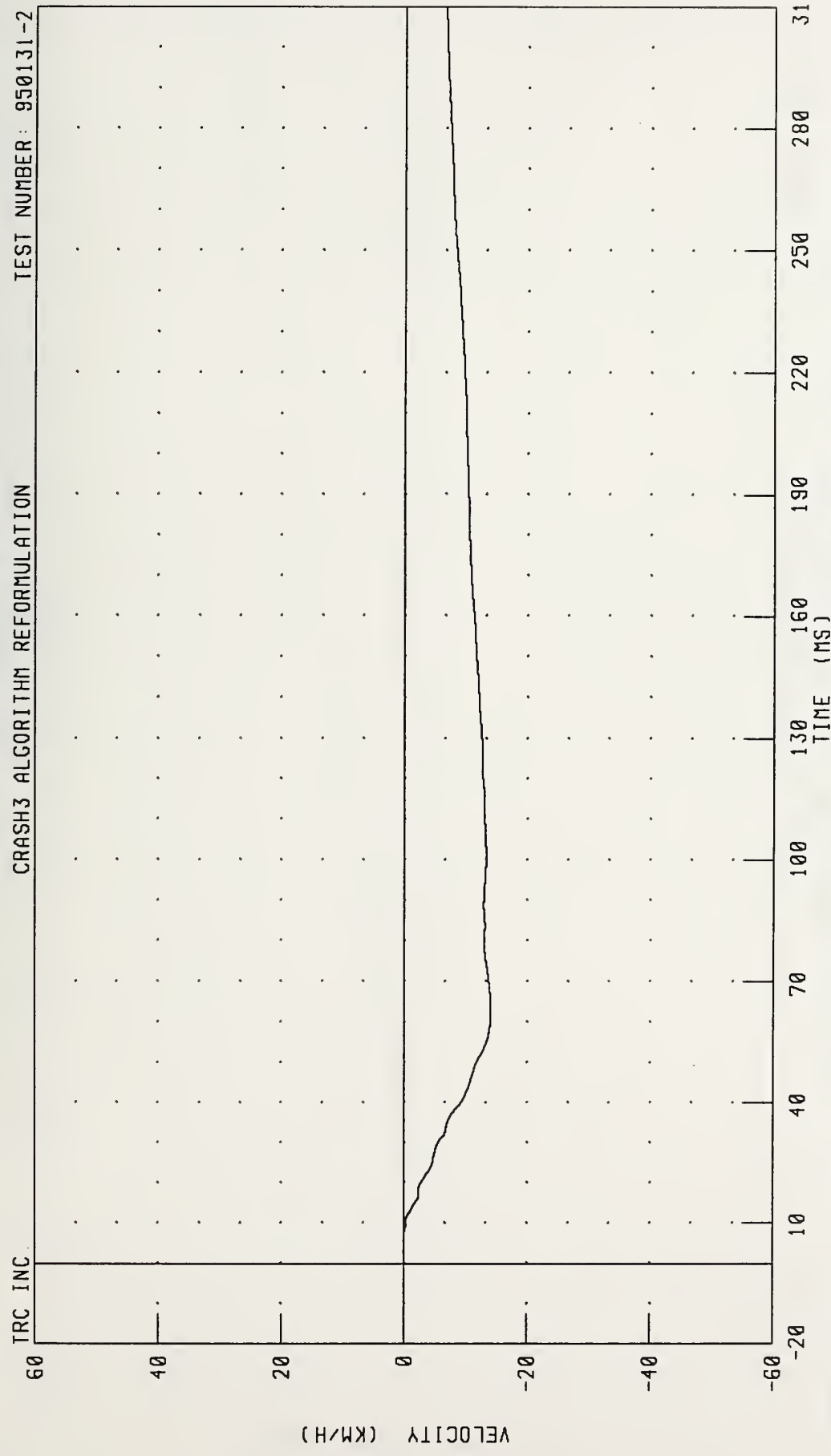


CHANNEL: RRSYG FILTER: CH. CLASS 60

PEAK DATA: 2.88 G @ 73.28 MS; -14.19 G @ 38.64 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



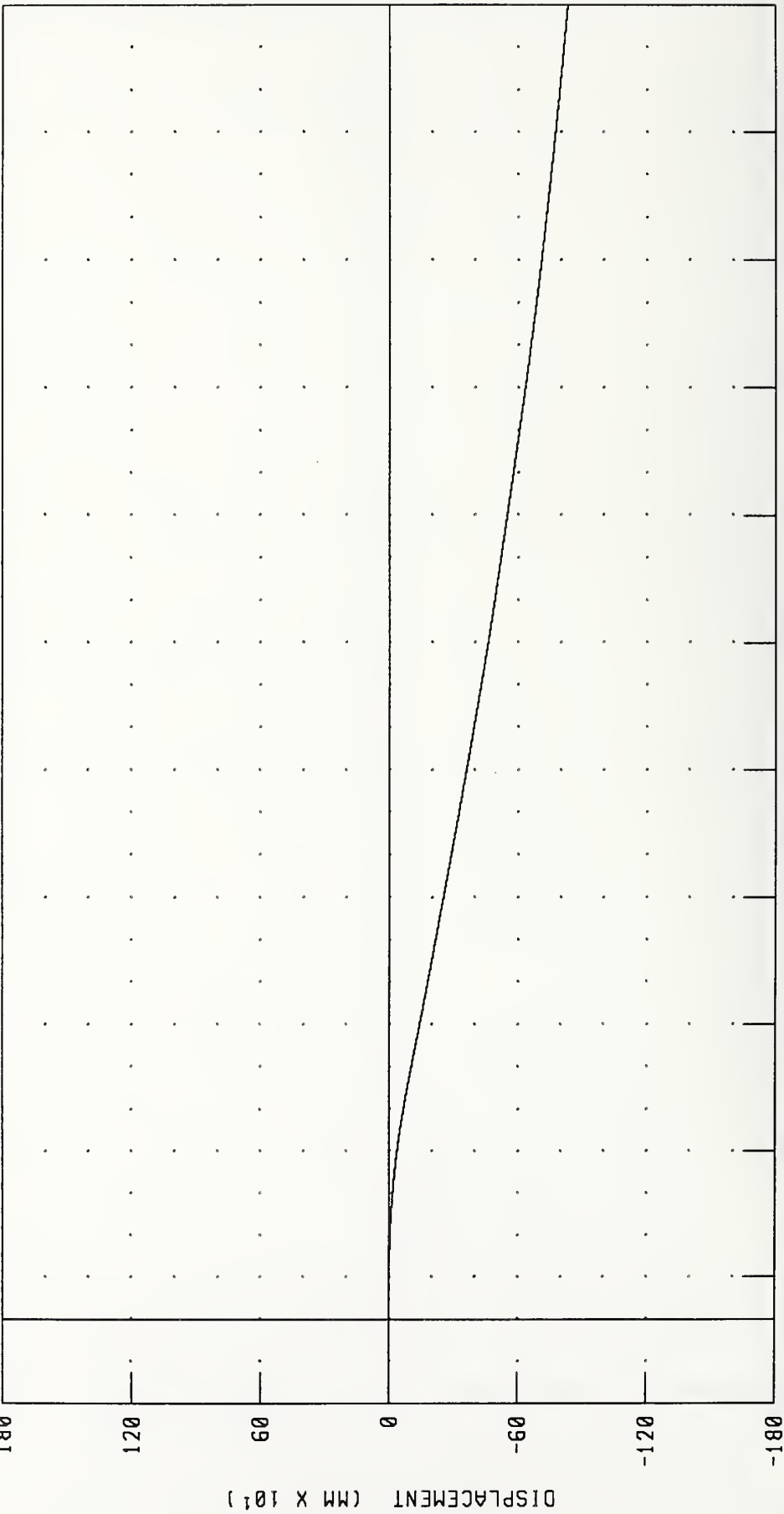
CHANNEL: RRSYV FILTER: CH. CLASS 180 PEAK DATA: 0.02 KM/H @ 4.16 MS; -14.12 KM/H @ 62.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT REAR SILL Y-AXIS DISPLACEMENT

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

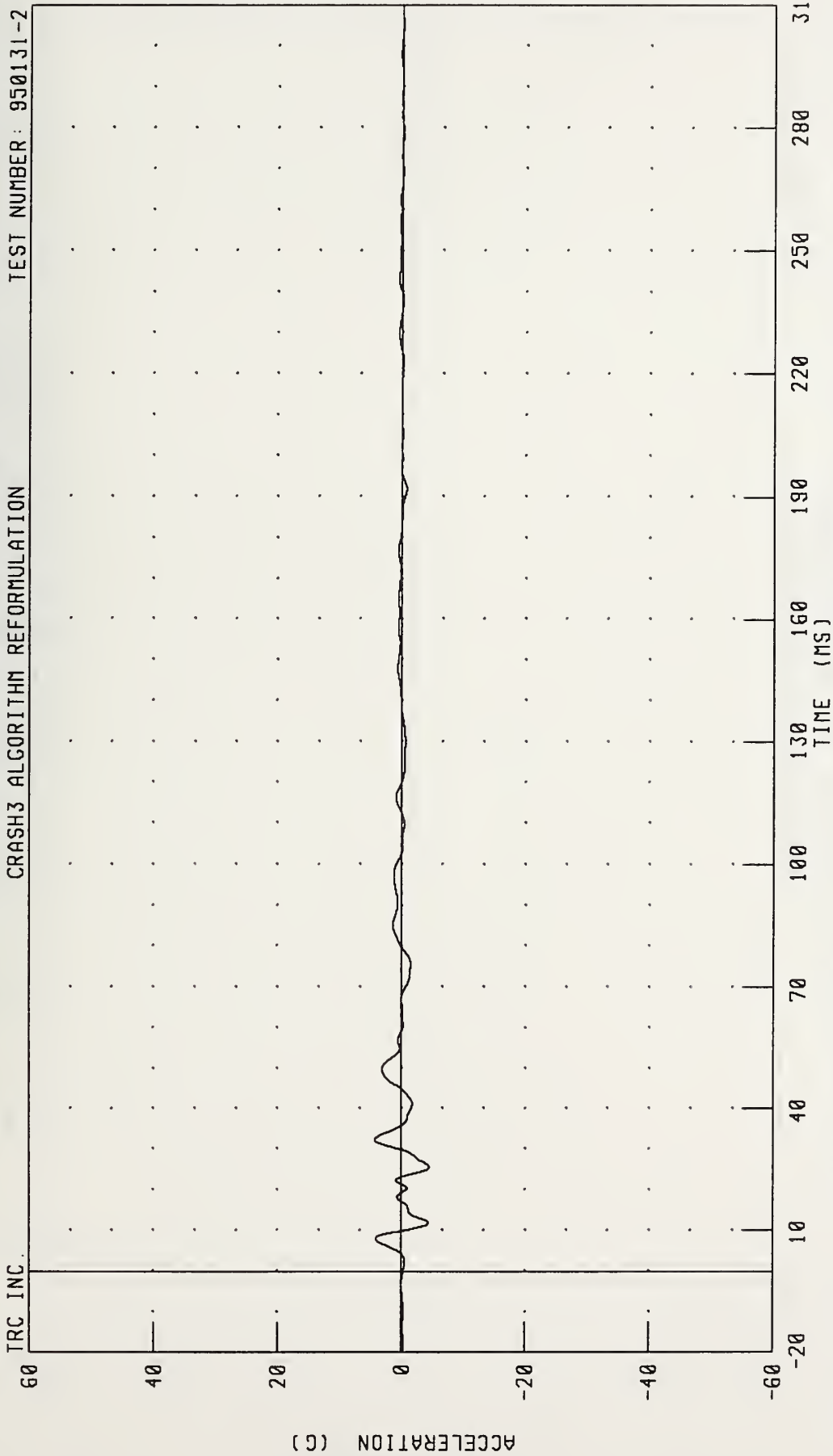


CHANNEL: RRSYD FILTER: CH. CLASS 180

PEAK DATA: 0 03 MM @ 7.36 MS; -831.98 MM @ 310 00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
LEFT FRONT SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

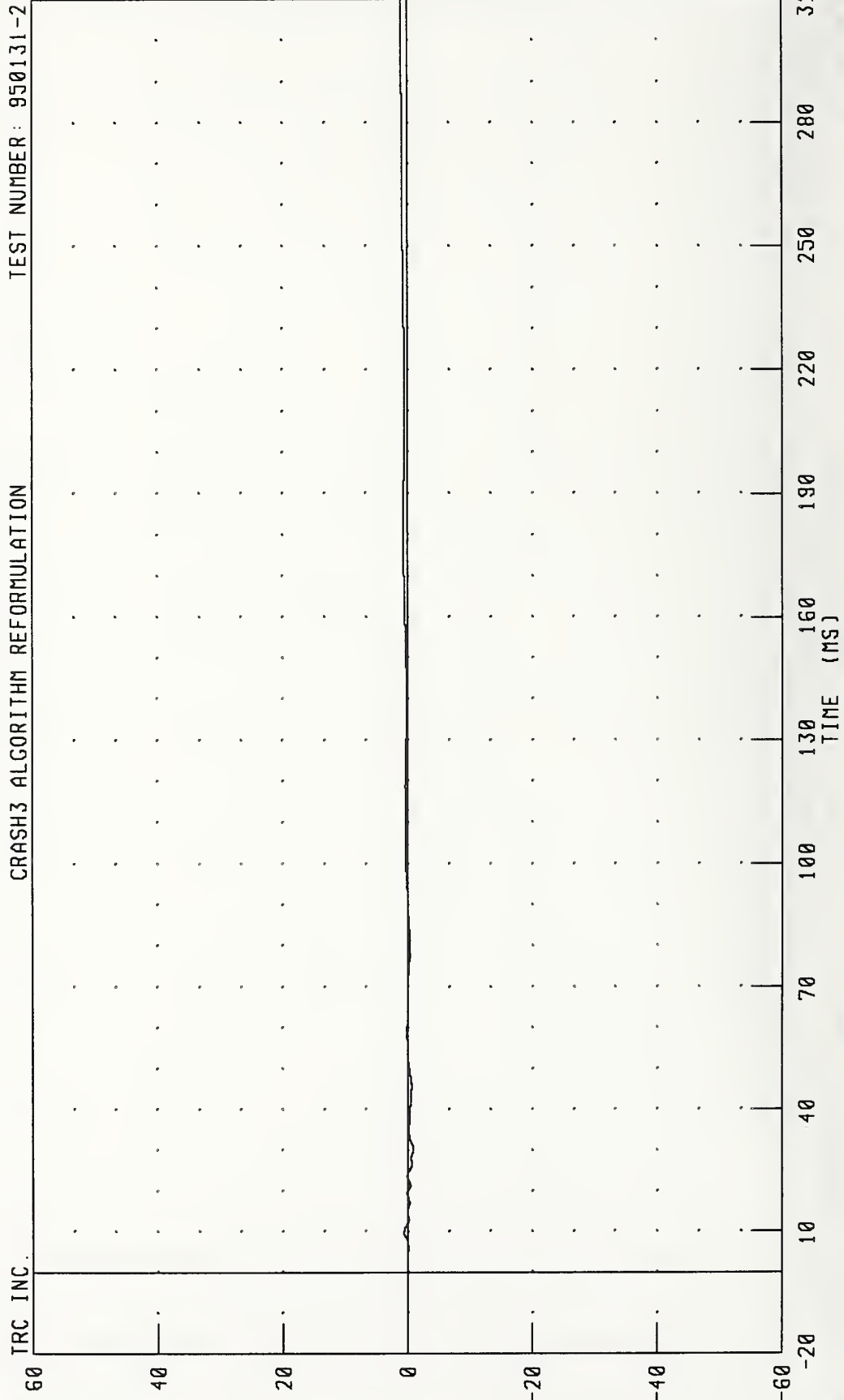


CHANNEL: LFSXG FILTER: CH. CLASS 60

PEAK DATA: 4.32 G @ 32.24 MS; -4.64 G @ 25.52 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
LEFT FRONT SILL X-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

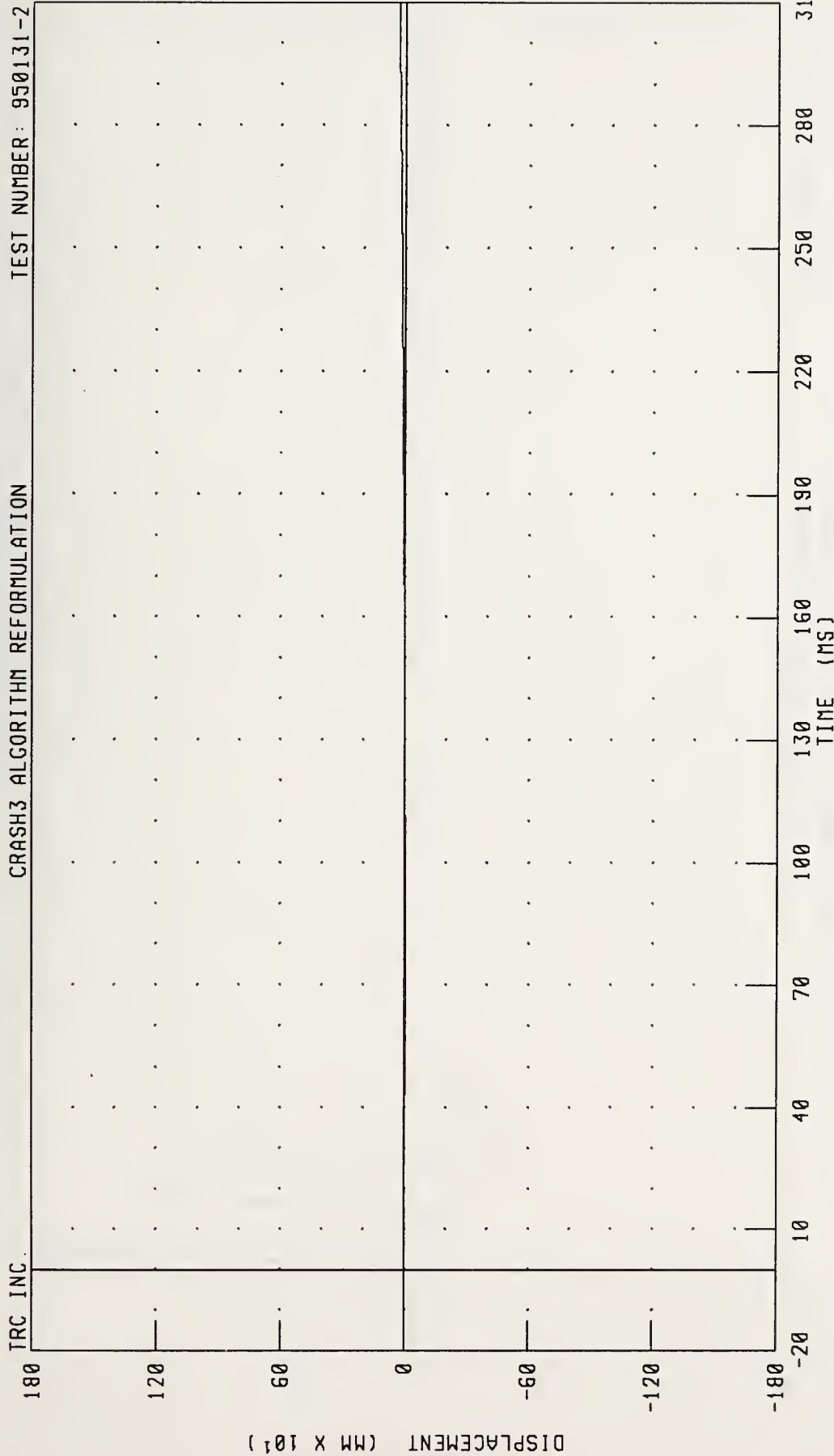


TRC INC. CHANNEL: LFSXY FILTER: CH. CLASS 180

PEAK DATA: 1.01 KM/H @ 303.68 MS; -0.91 KM/H @ 30.40 MS

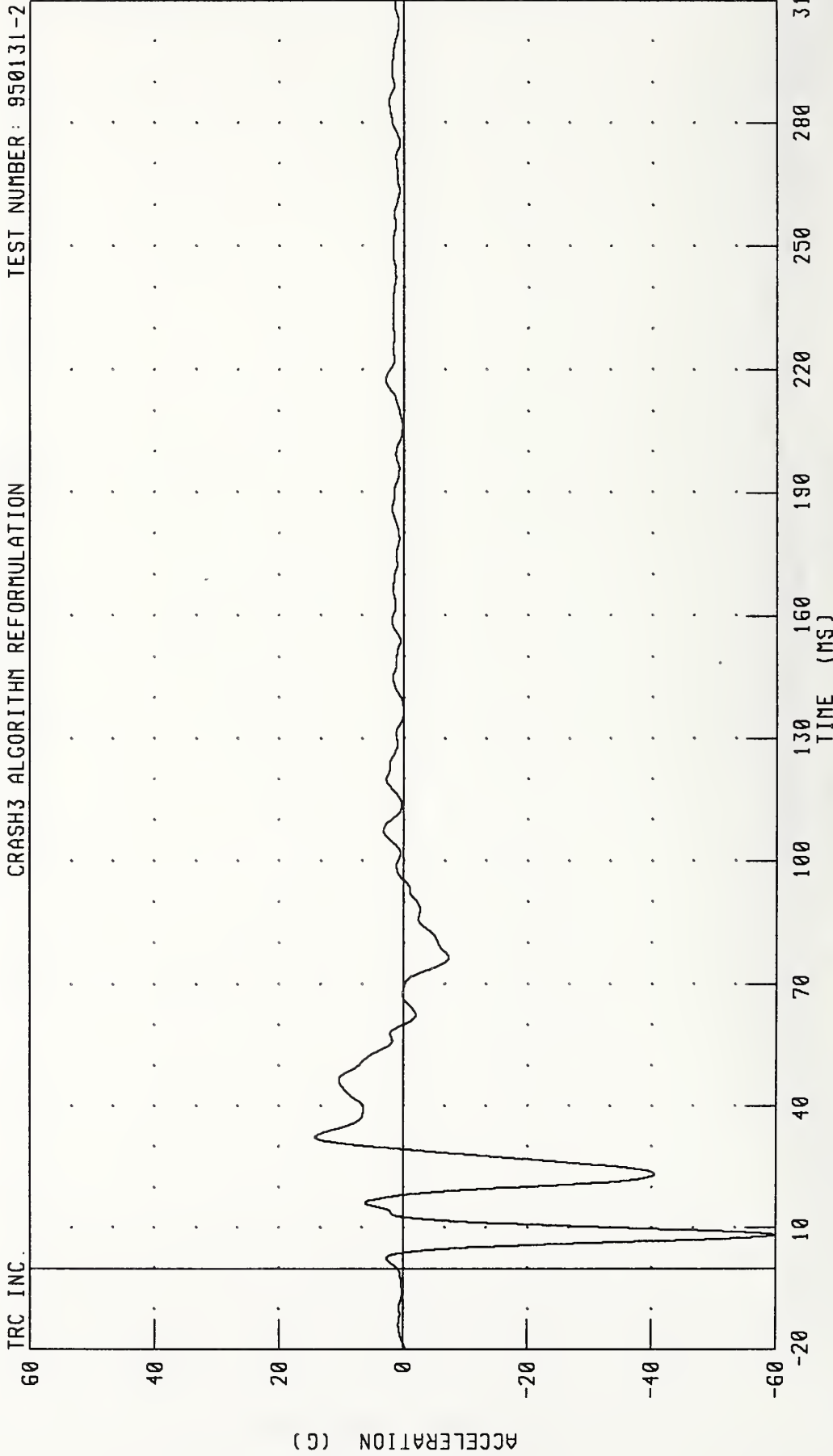
NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 LEFT FRONT SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
LEFT FRONT SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



TRC INC.

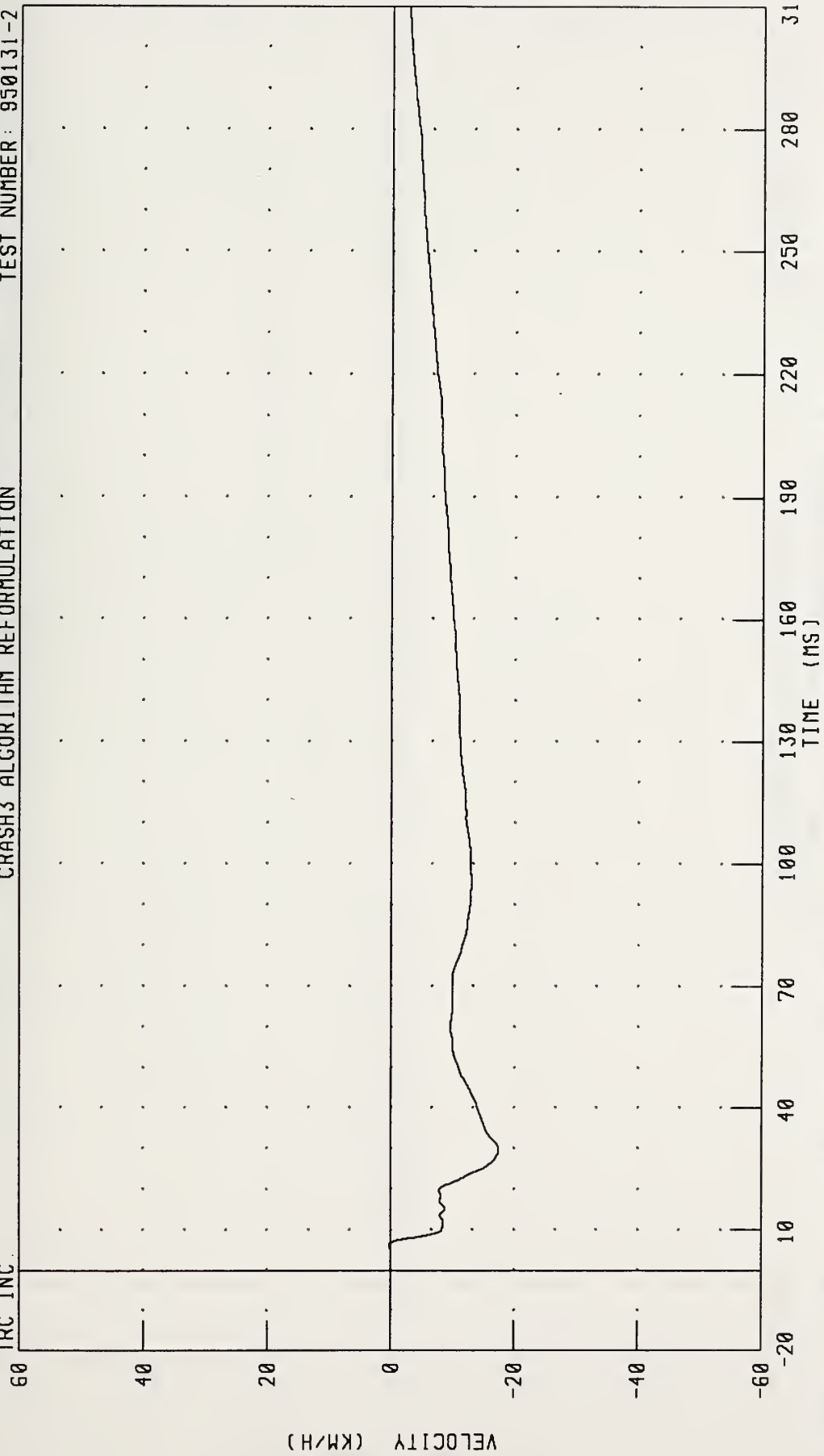
CHANNEL: LFSYG FILTER: CH. CLASS 60

PEAK DATA: 14.20 G @ 32.40 MS; -59.66 G @ 8.16 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
LEFT FRONT SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

TRC INC.

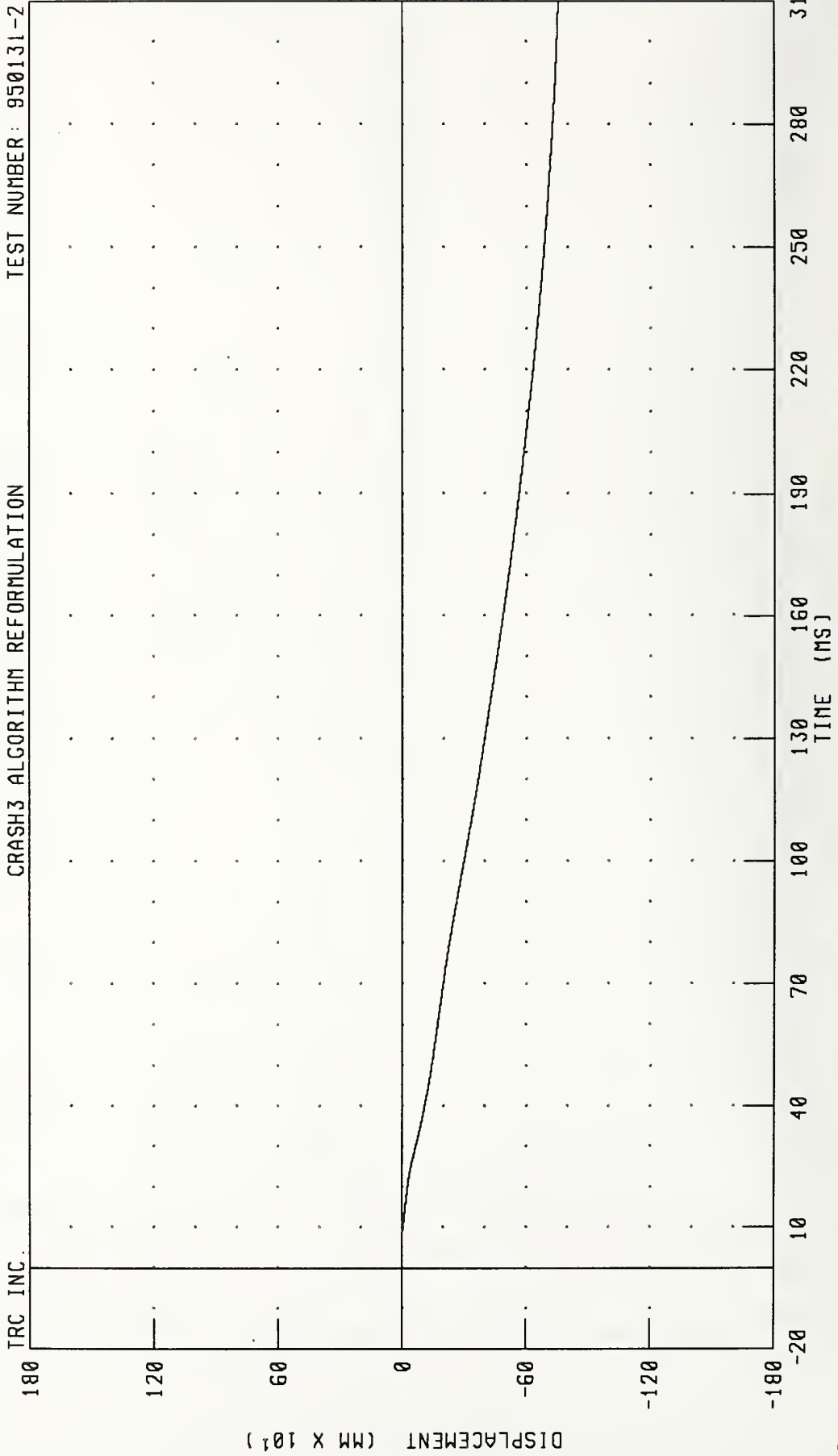


CHANNEL: LFSYV FILTER: CH CLASS 180

PEAK DATA: 0.18 KM/H @ 6.16 MS; -17.50 KM/H @ 29.52 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
LEFT FRONT SILL Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

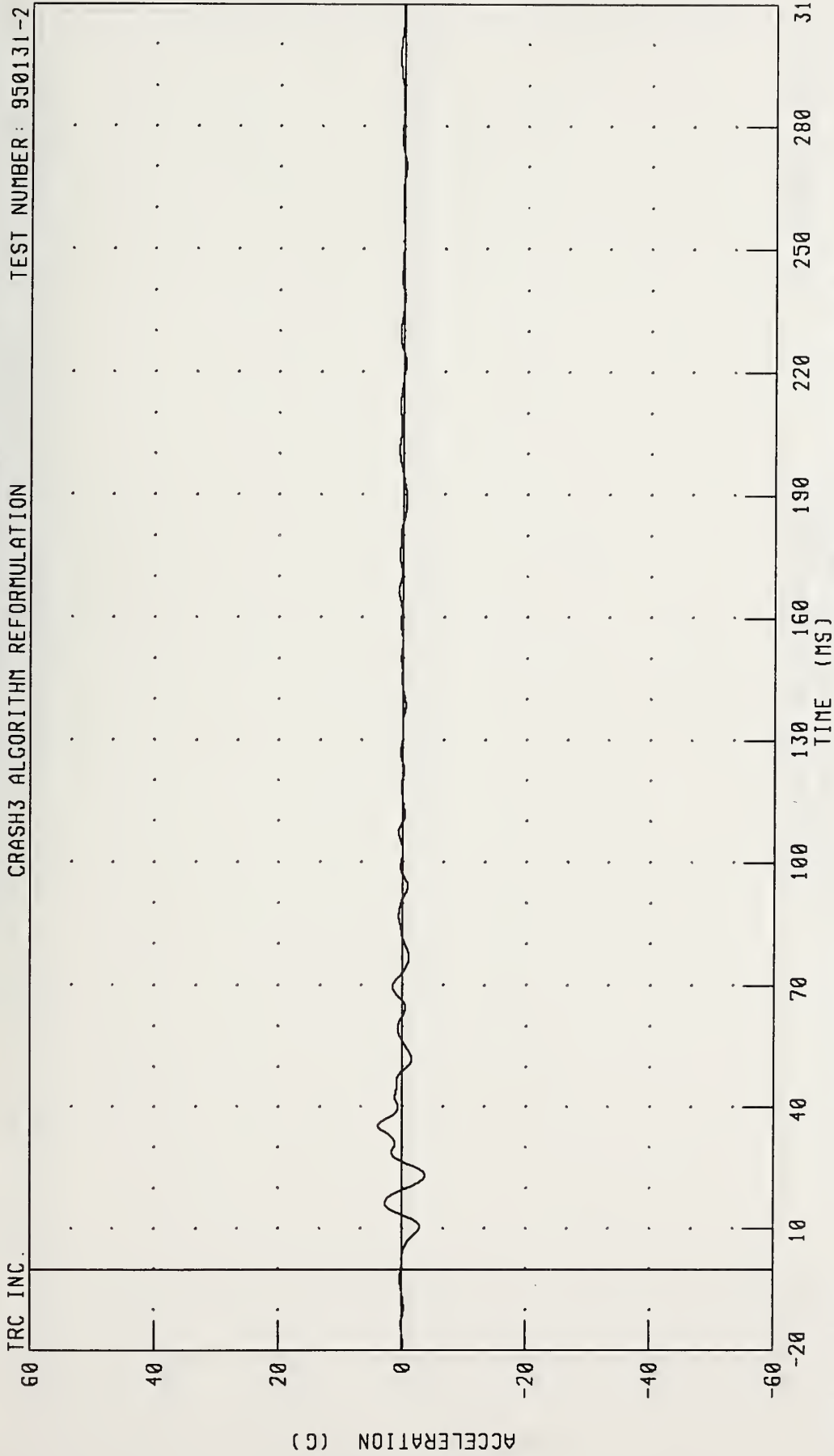


CHANNEL: LFSYD FILTER: CH. CLASS 180

PEAK DATA: 0.06 MM @ 6.72 MS; -756.21 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT FRONT SILL X-AXIS ACCELERATION
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-2



CHANNEL: RFSXG FILTER: CH CLASS 60

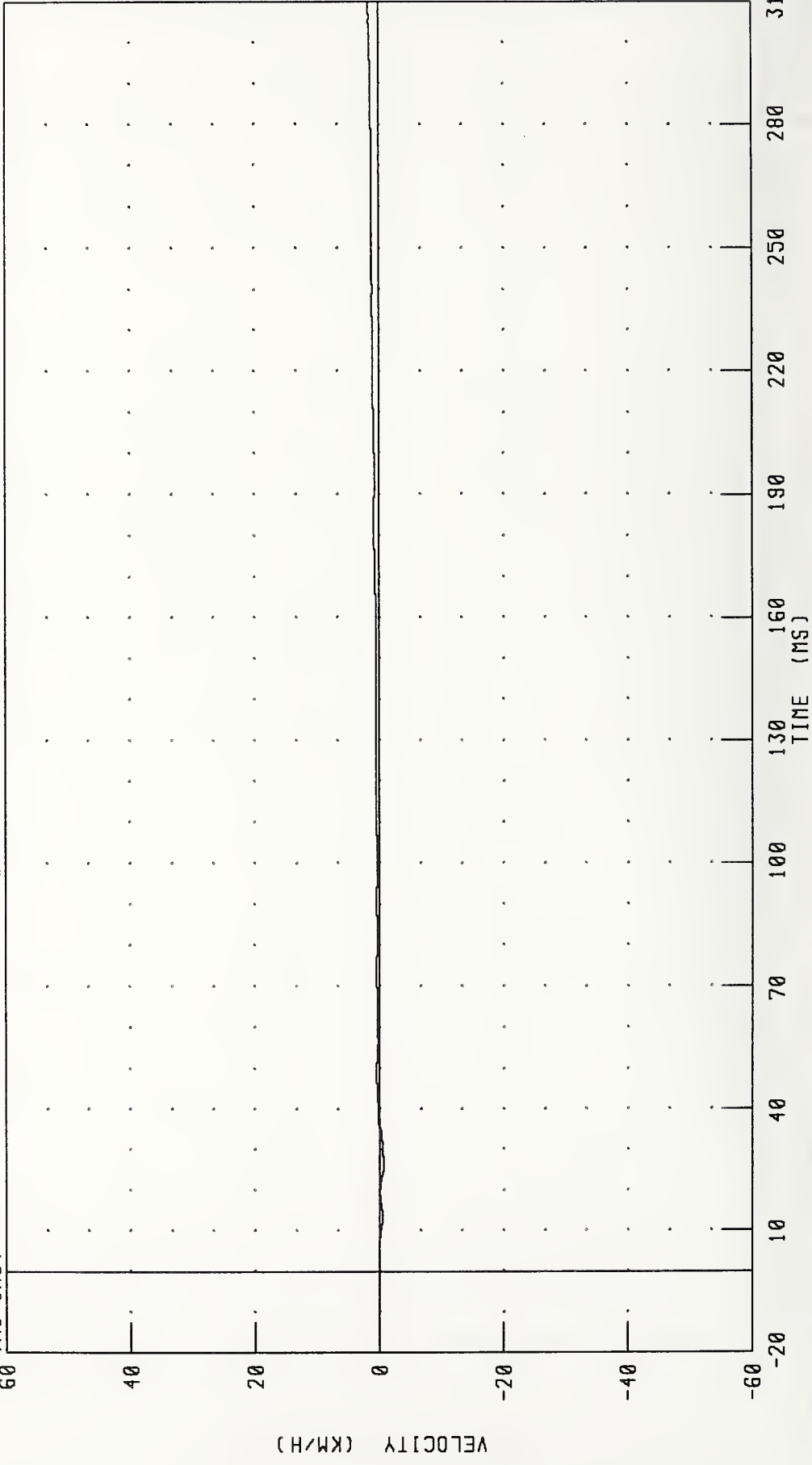
PEAK DATA: 3.90 G @ 35.36 MS; -3.71 G @ 23.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 RIGHT FRONT SILL X-AXIS VELOCITY

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: RFSXY FILTER: CH. CLASS 180

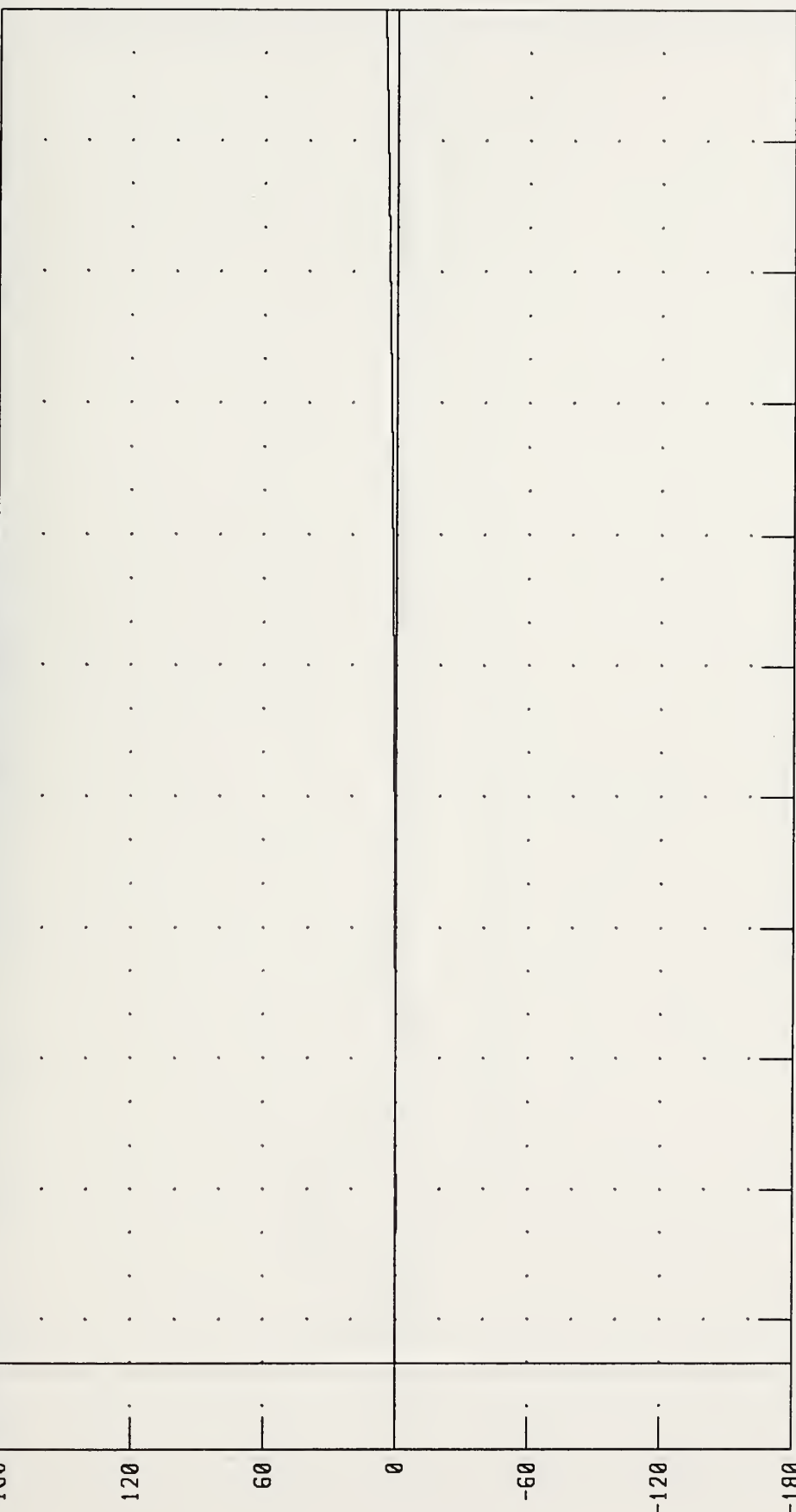
PEAK DATA: 1.64 KM/H @ 310.00 MS; -0.70 KM/H @ 26.08 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 RIGHT FRONT SILL X-AXIS DISPLACEMENT

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

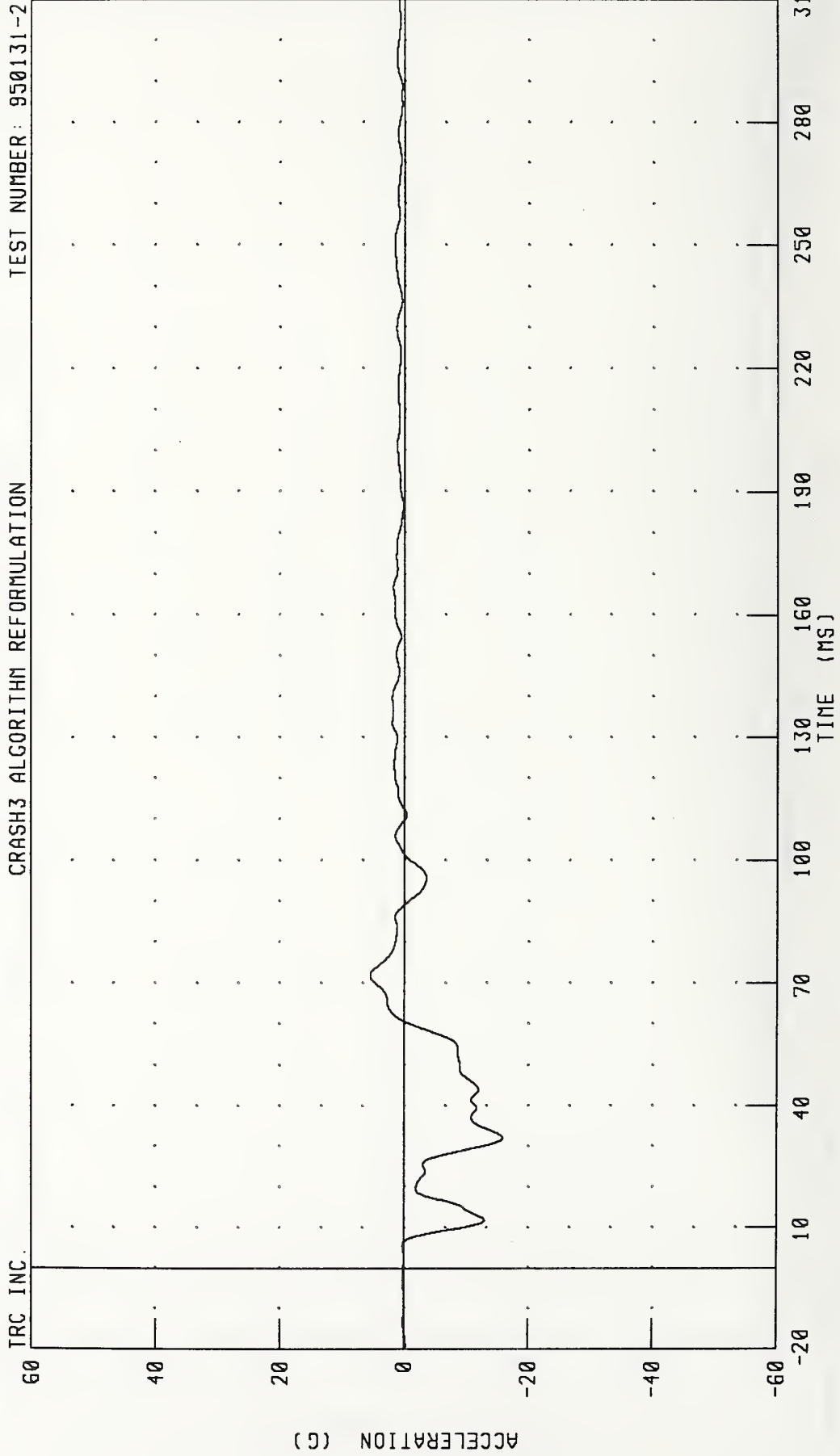


CHANNEL: RFSXD FILTER: CH CLASS 180

PEAK DATA: 56.47 MM @ 310.00 MS; -2.81 MM @ 35.76 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT FRONT SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

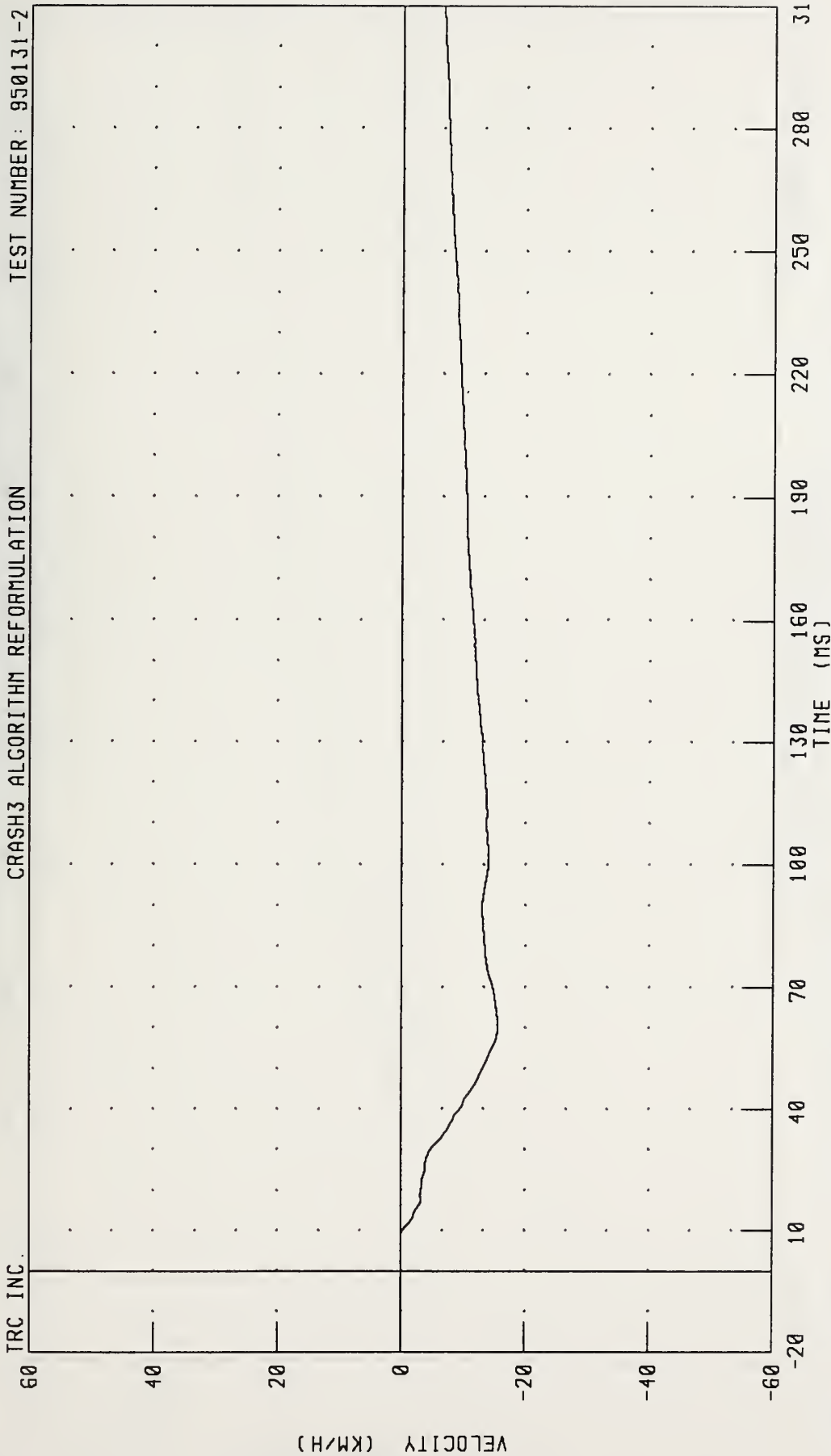


CHANNEL: RFSYG FILTER: CH. CLASS 60

PEAK DATA: 5.51 G @ 71.84 MS; -15.90 G @ 32.16 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
RIGHT FRONT SILL Y-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



CHANNEL: RFSYV FILTER: CH. CLASS 180

PEAK DATA: 0.02 KM/H @ 8.40 MS, -15.62 KM/H @ 60.16 MS

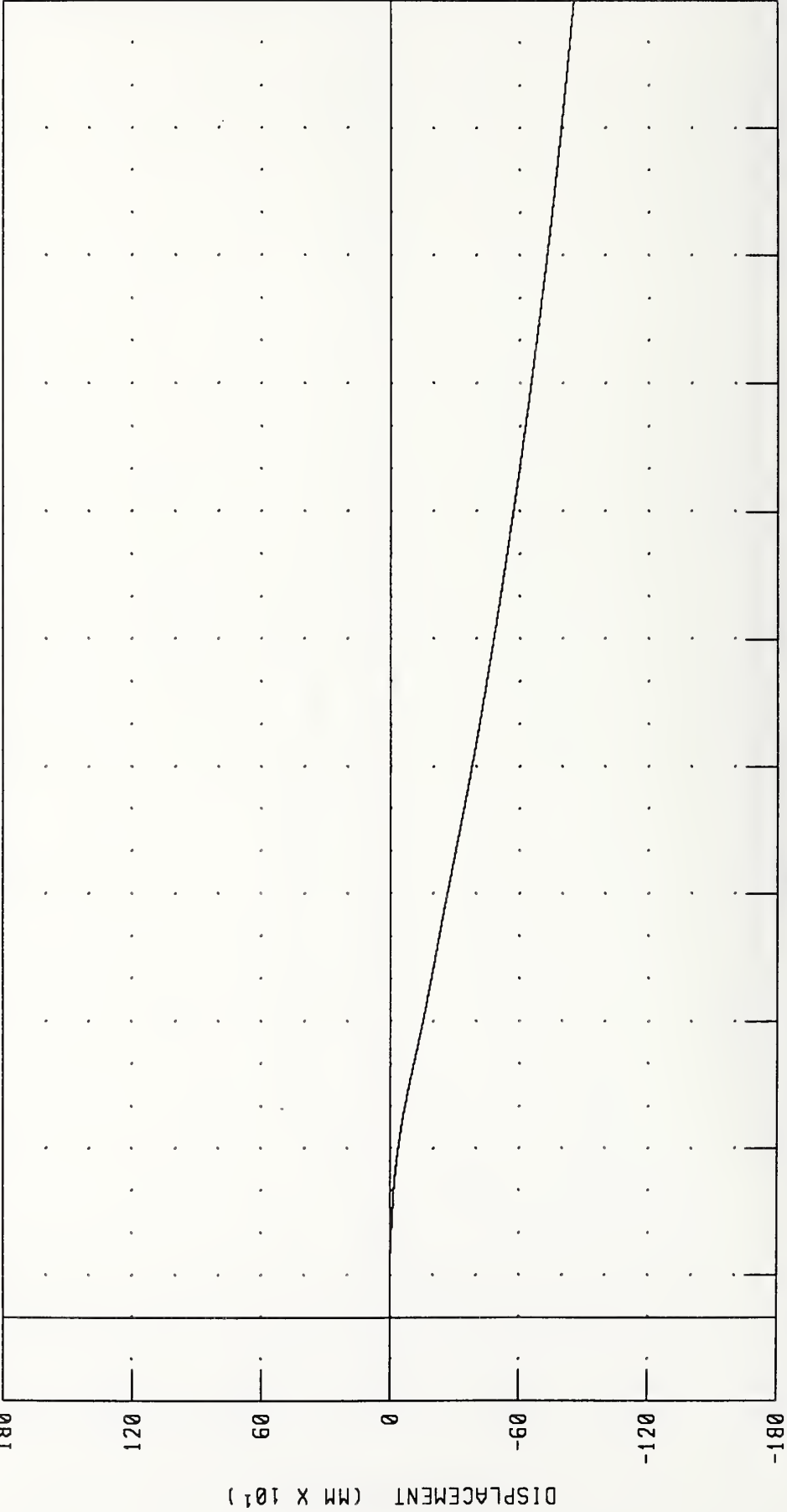
NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5

RIGHT FRONT SILL Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-2

TRC INC.



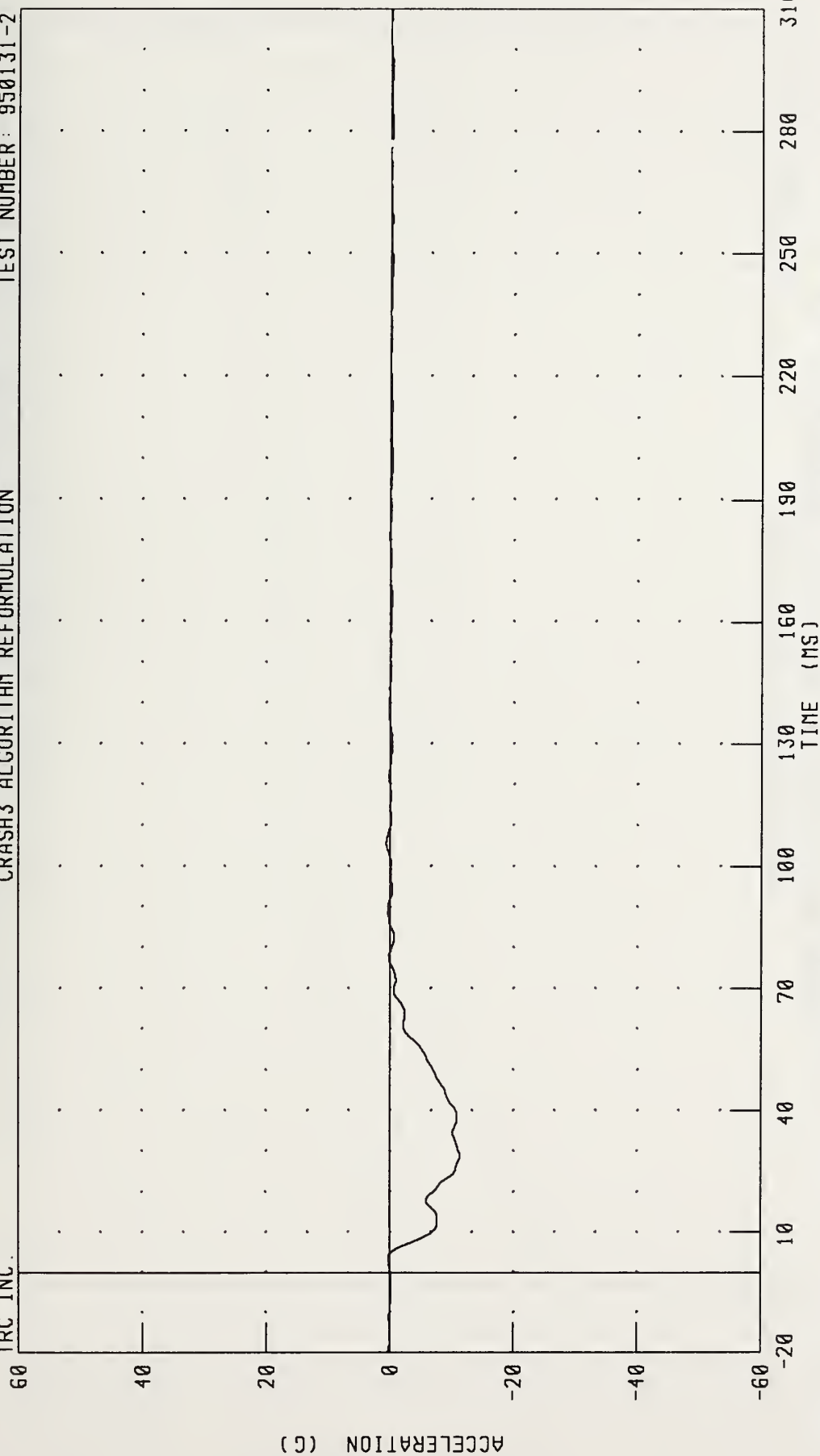
CHANNEL: RFSYD FILTER: CH. CLASS 180

PEAK DATA: 0.01 MM @ 3.44 MS; -852.03 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

TRC INC.

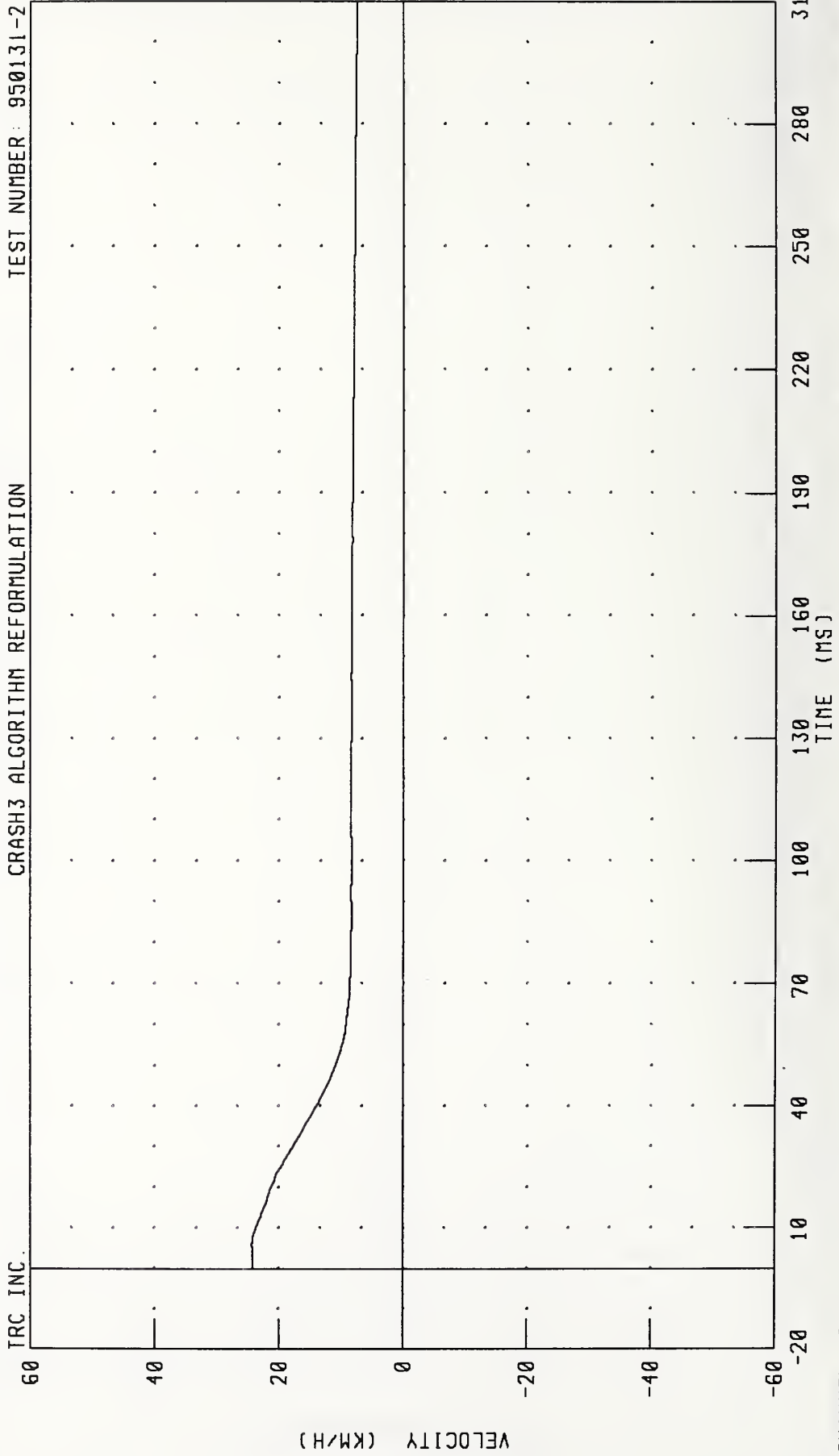


CHANNEL: BCGXG FILTER: CH. CLASS 60

PEAK DATA: 0.61 G @ 105.60 MS; -11.32 G @ 28.80 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

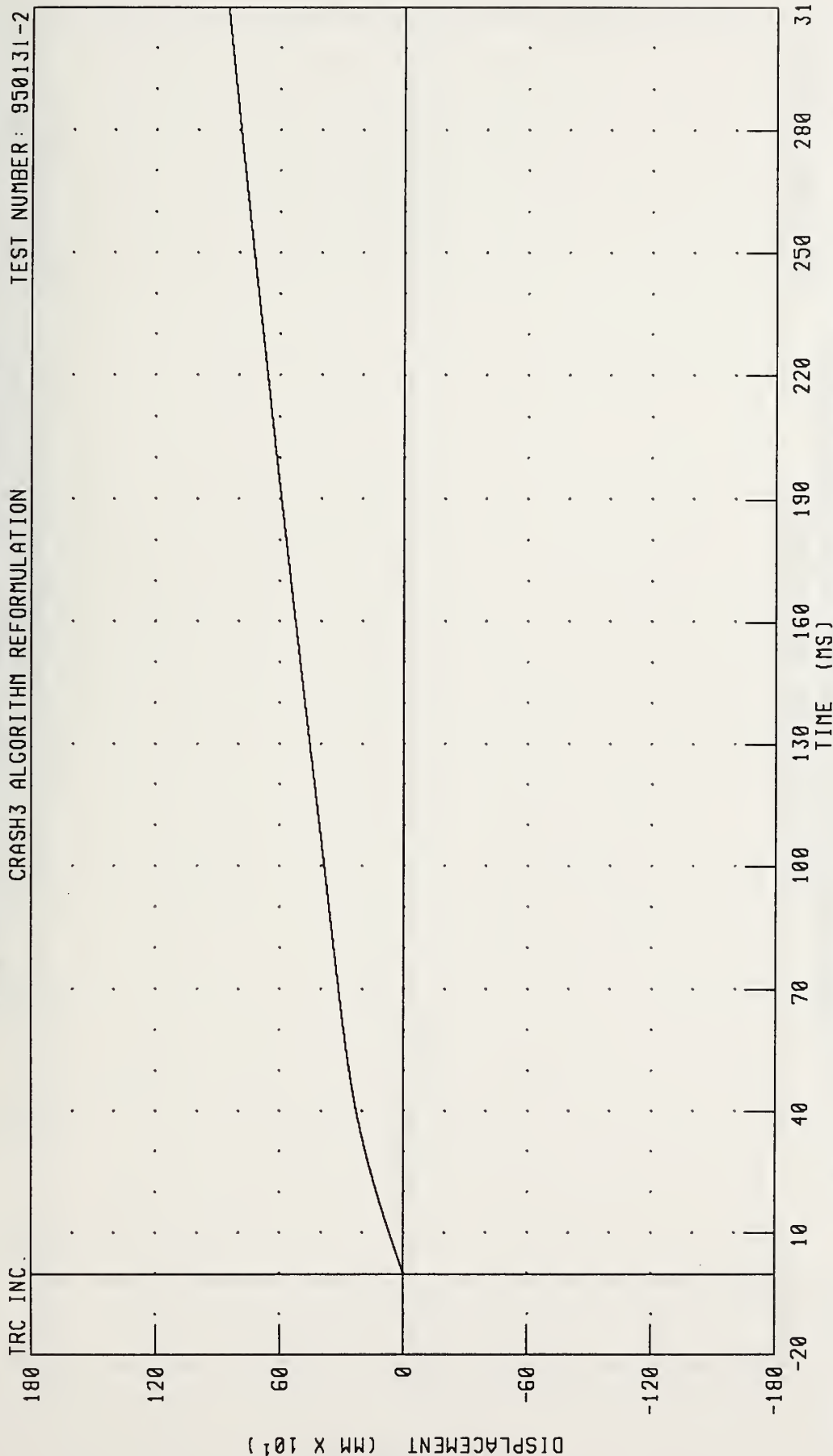


CHANNEL: BCGXV FILTER: CH. CLASS 180

PEAK DATA: 24.31 KM/H @ 5.84 MS; 7.50 KM/H @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 MOVING BARRIER CENTER OF GRAVITY X-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

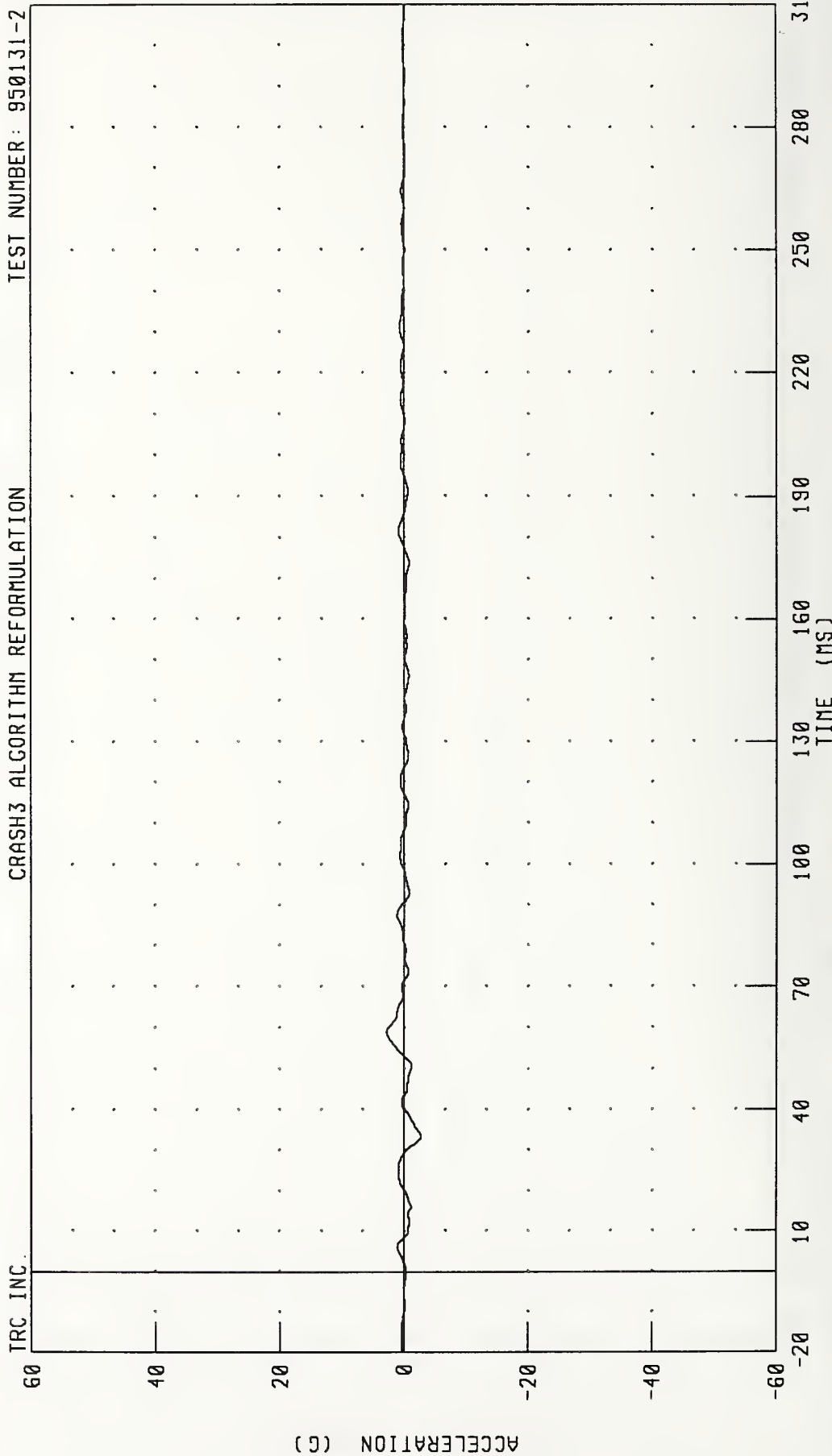


CHANNEL: BCCXD FILTER: CH. CLASS 180

PEAK DATA: 854.99 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER CENTER OF GRAVITY Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

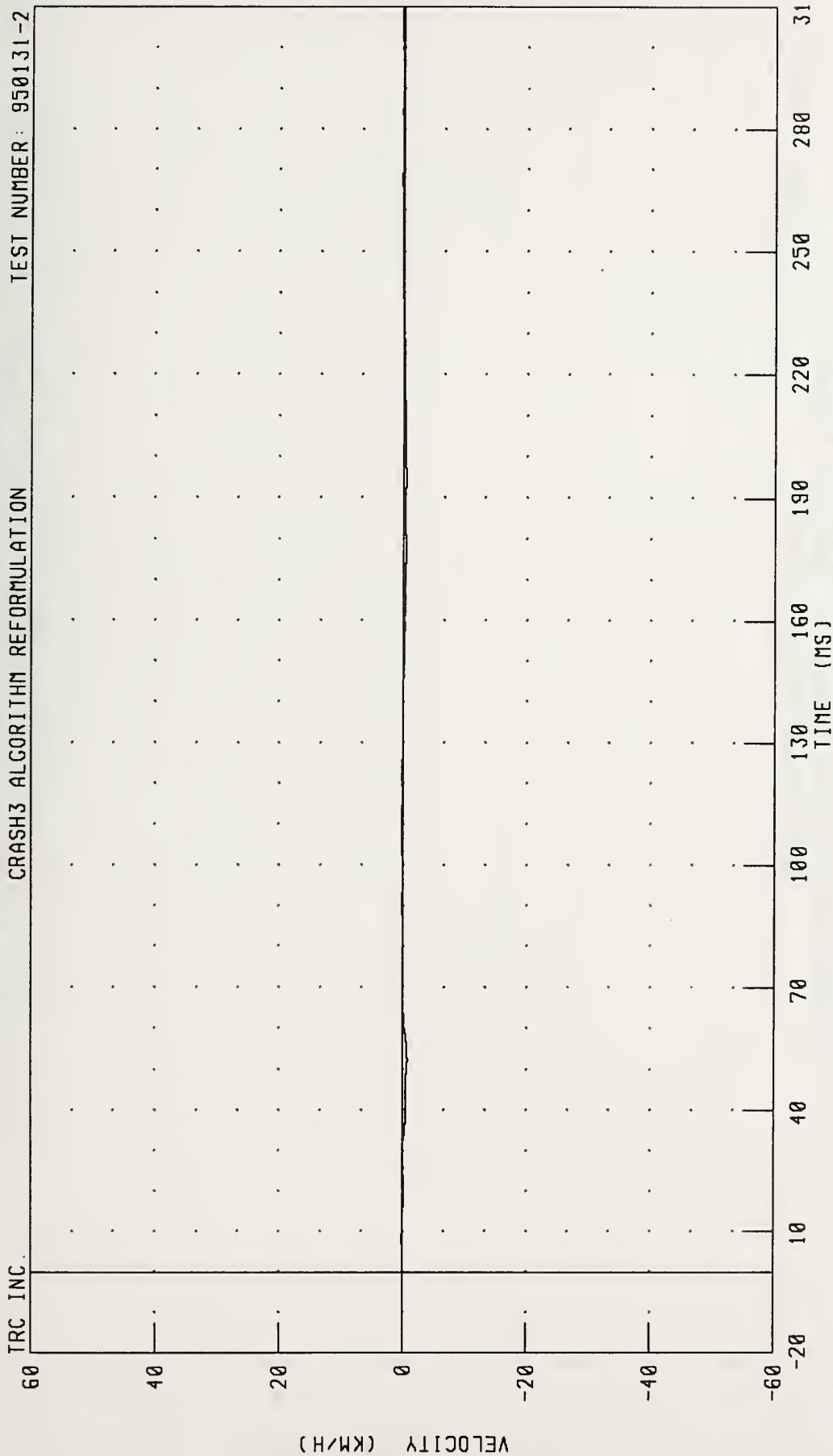


CHANNEL: BCGYG FILTER: CH. CLASS 60

PEAK DATA: 2.82 G @ 58.96 MS; -2.67 G @ 33.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 MOVING BARRIER CENTER OF GRAVITY Y-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



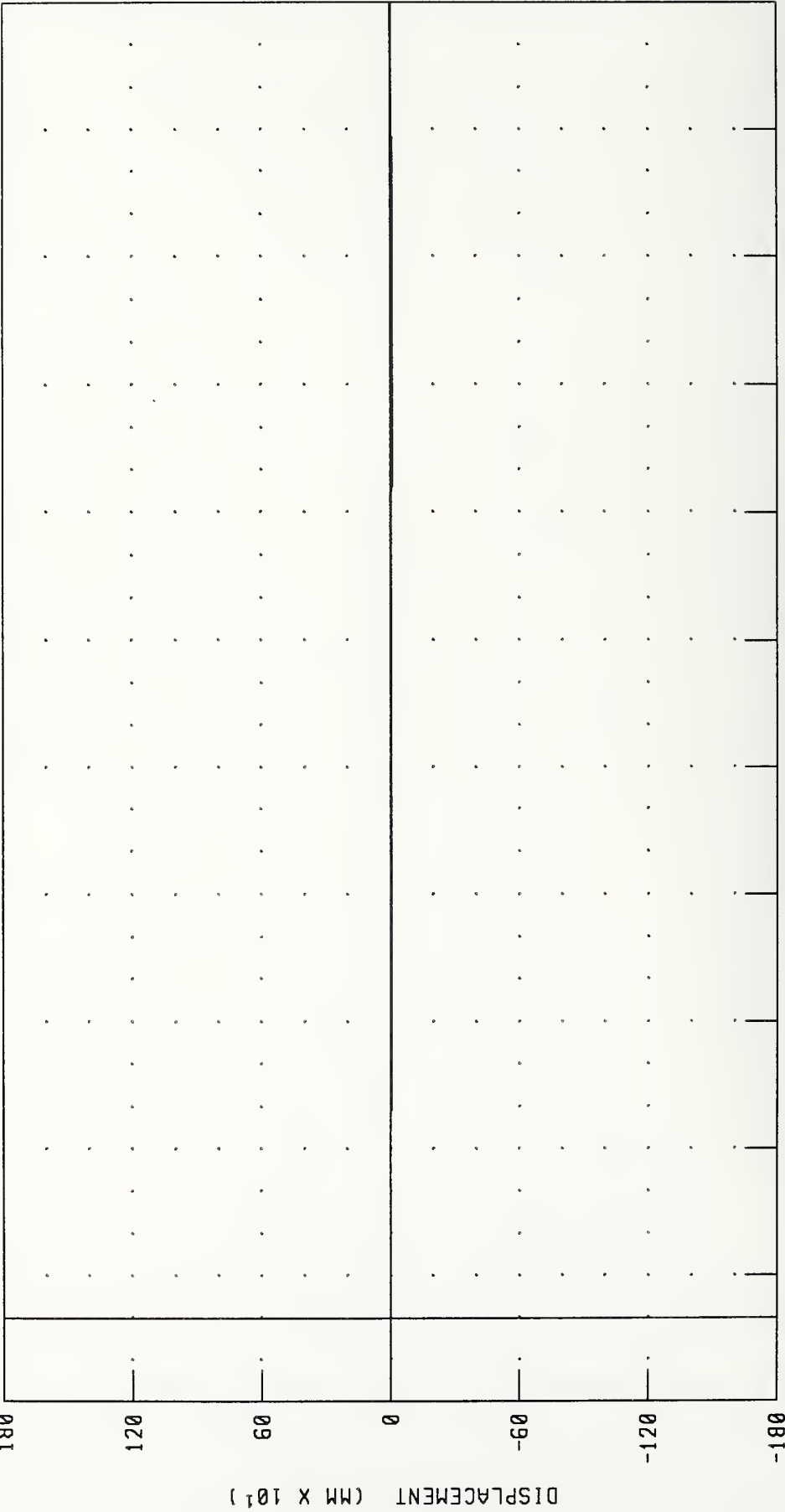
CHANNEL: BCGYV FILTER: CH. CLASS 180

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 MOVING BARRIER CENTER OF GRAVITY Y-AXIS DISPLACEMENT

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BCGYD FILTER: CH. CLASS 180

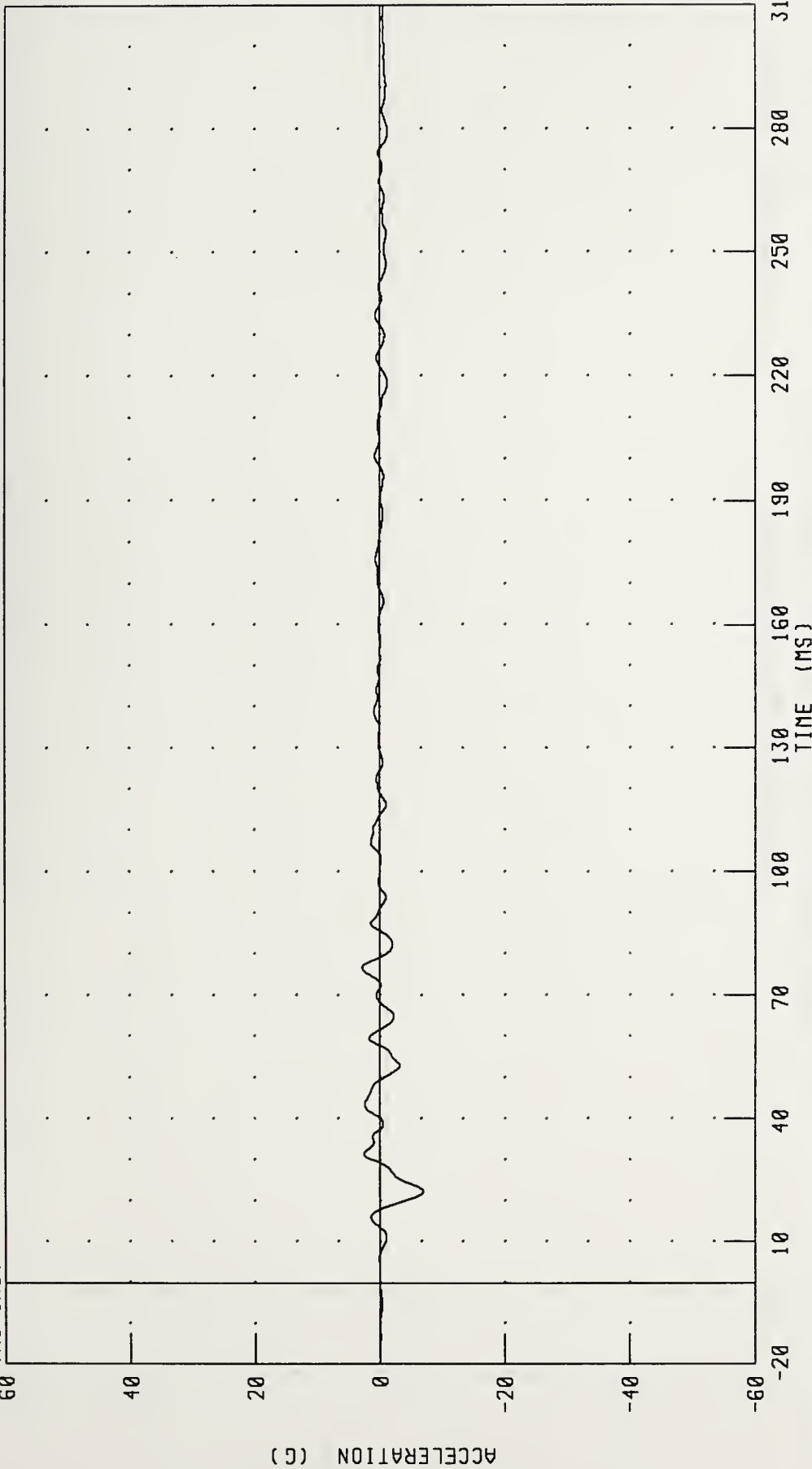
PEAK DATA: 0.15 MM @ 12.80 MS; -9.54 MM @ 231.68 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



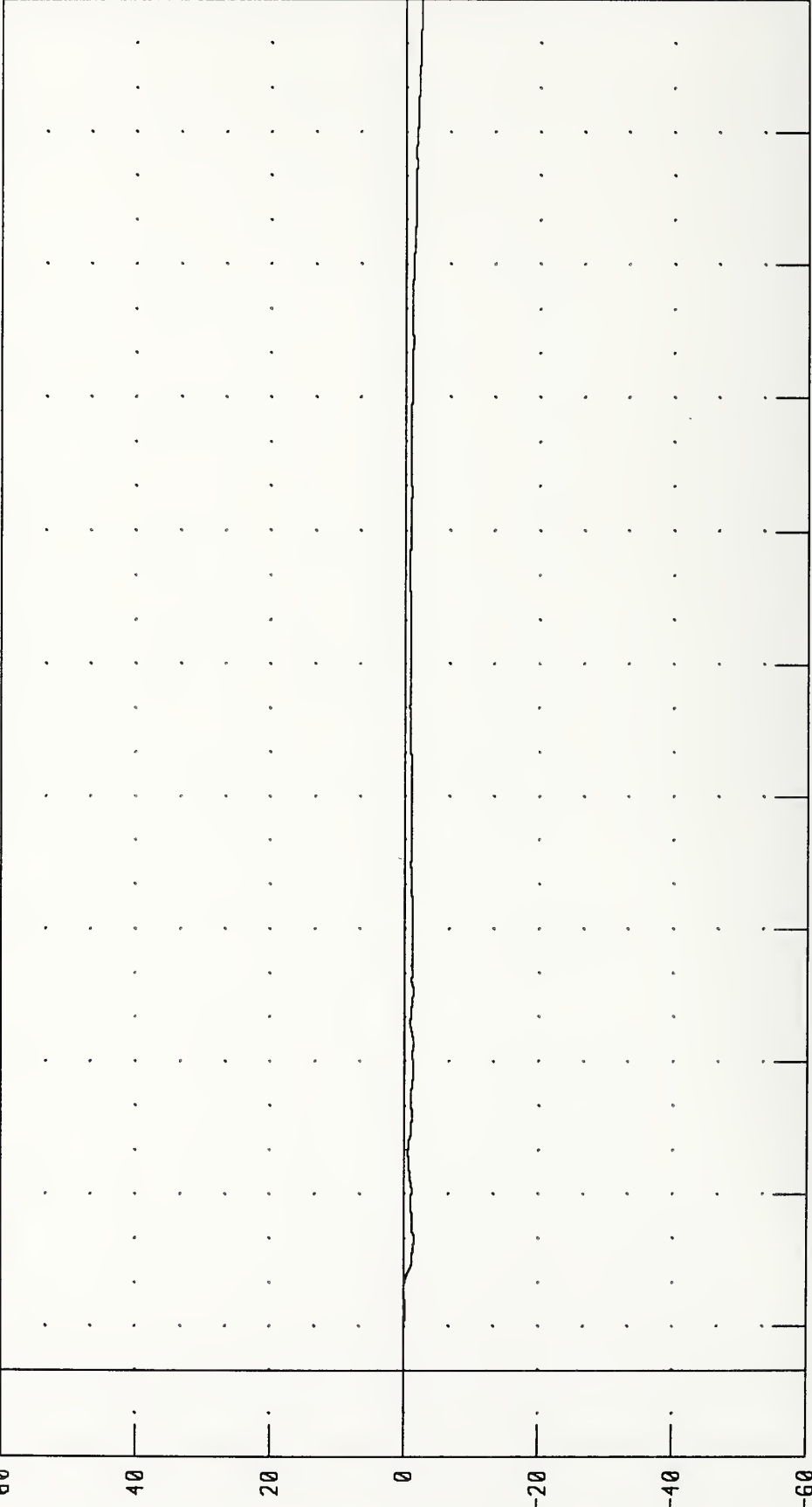
CHANNEL: BCGZG FILTER: CH CLASS 60

PEAK DATA: 2.82 G @ 76.64 MS; -6.92 G @ 22.32 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 MOVING BARRIER CENTER OF GRAVITY Z-AXIS VELOCITY
 CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-2

TRC INC.



CHANNEL: BCGZY FILTER: CH. CLASS 180

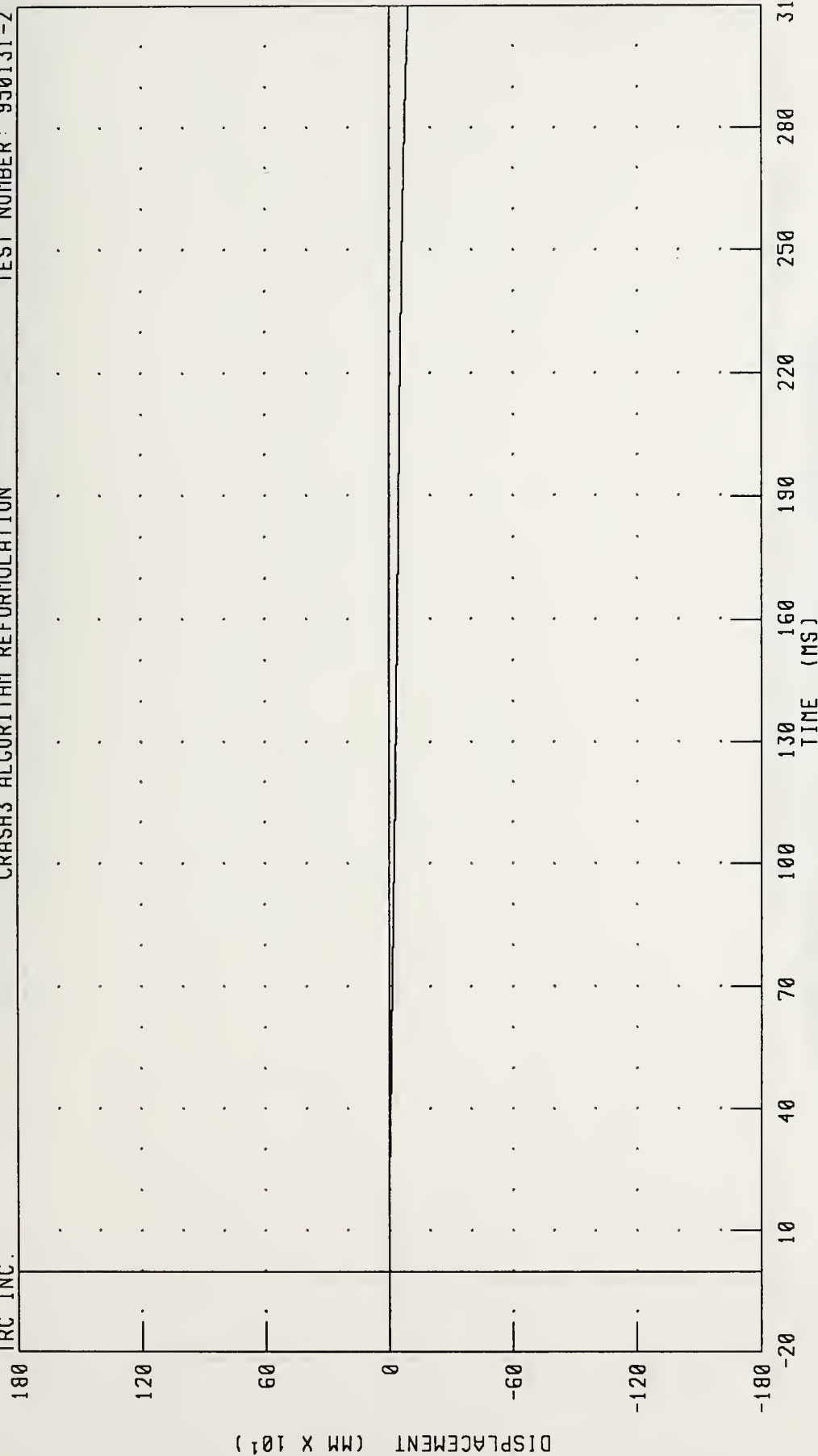
PEAK DATA: 0.01 KM/H @ 17.76 MS; -2.39 KM/H @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 MOVING BARRIER CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BCGZD FILTER: CH. CLASS 180

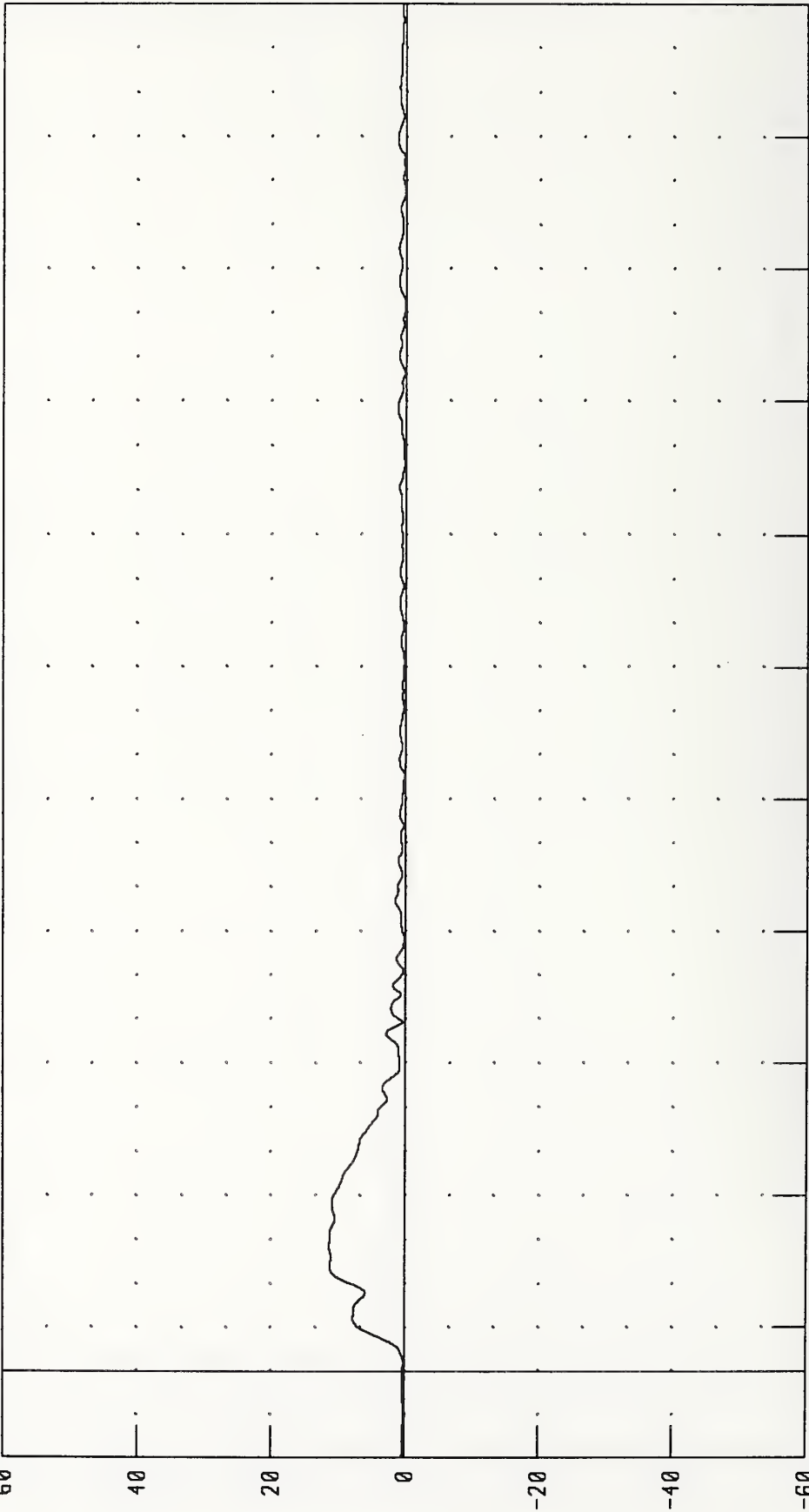
PEAK DATA: 0.00 MM @ 0.00 MS; -92.45 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT ACCELERATION

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



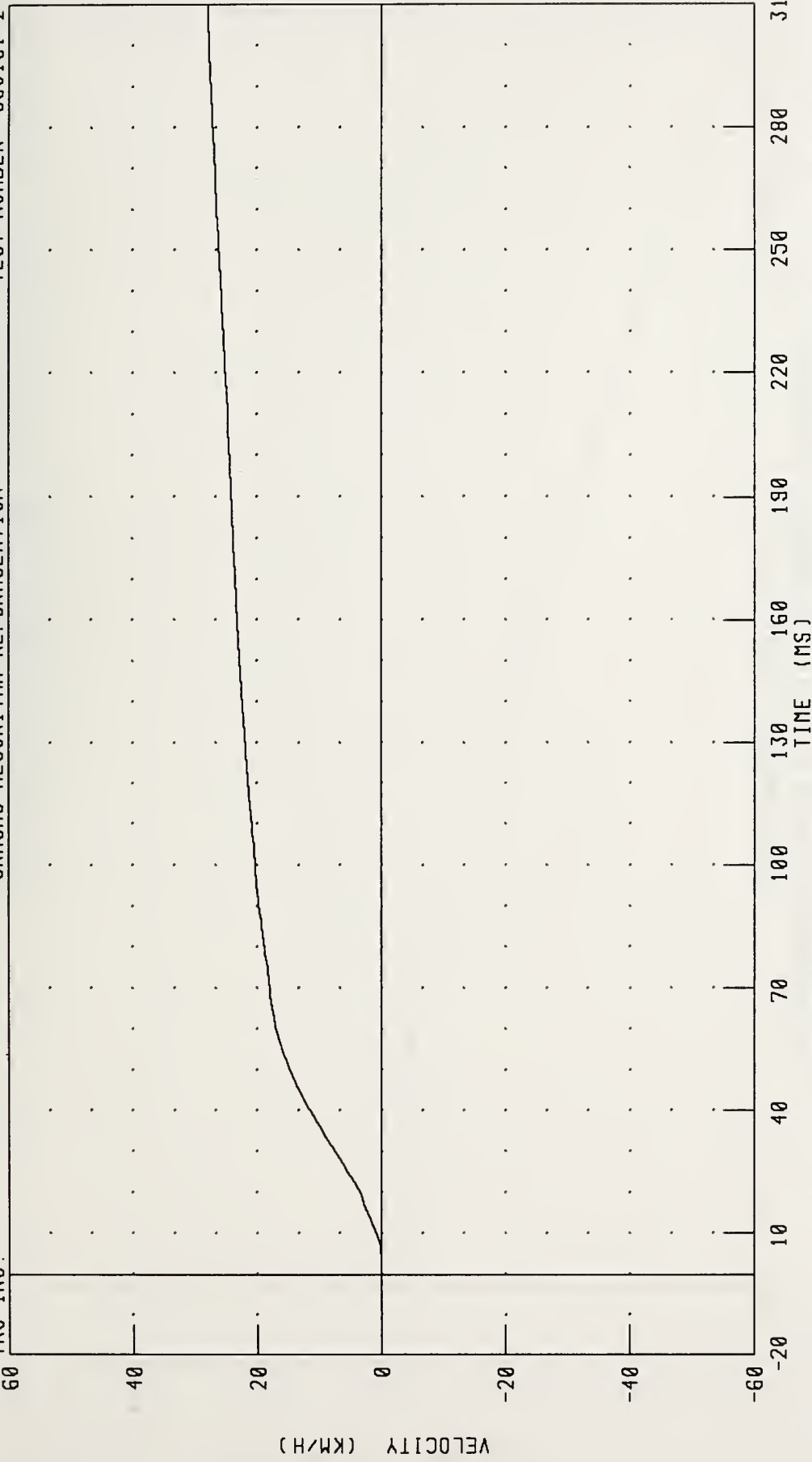
CHANNEL: BCGRG FILTER: CH. CLASS 60

PEAK DATA: 11.36 G @ 28.56 MS; 0.07 G @ 135.44 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

TRC INC.

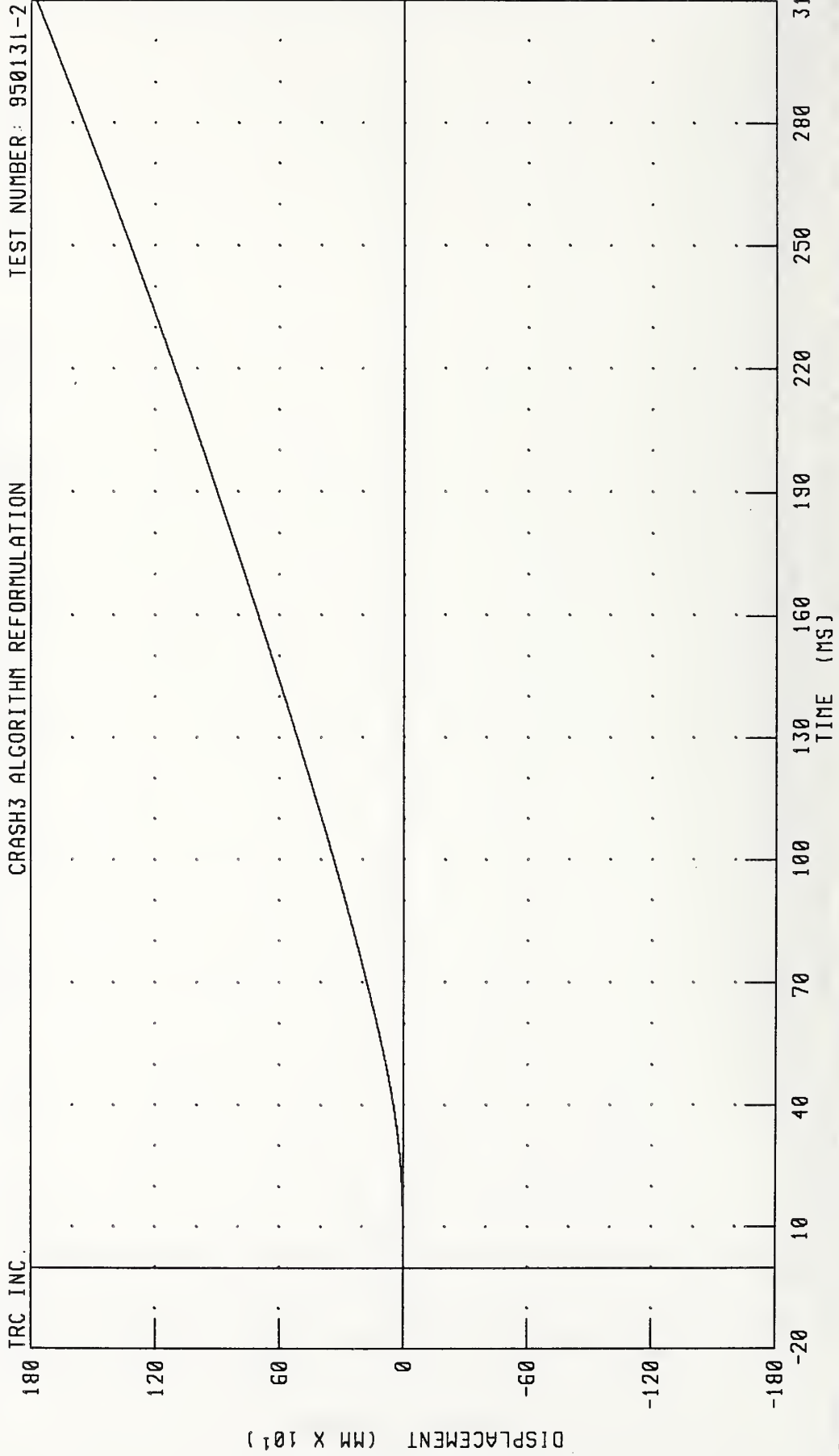


CHANNEL: BCGRV FILTER: CH. CLASS 180

PEAK DATA: 28.02 KM/H @ 310.00 MS; 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



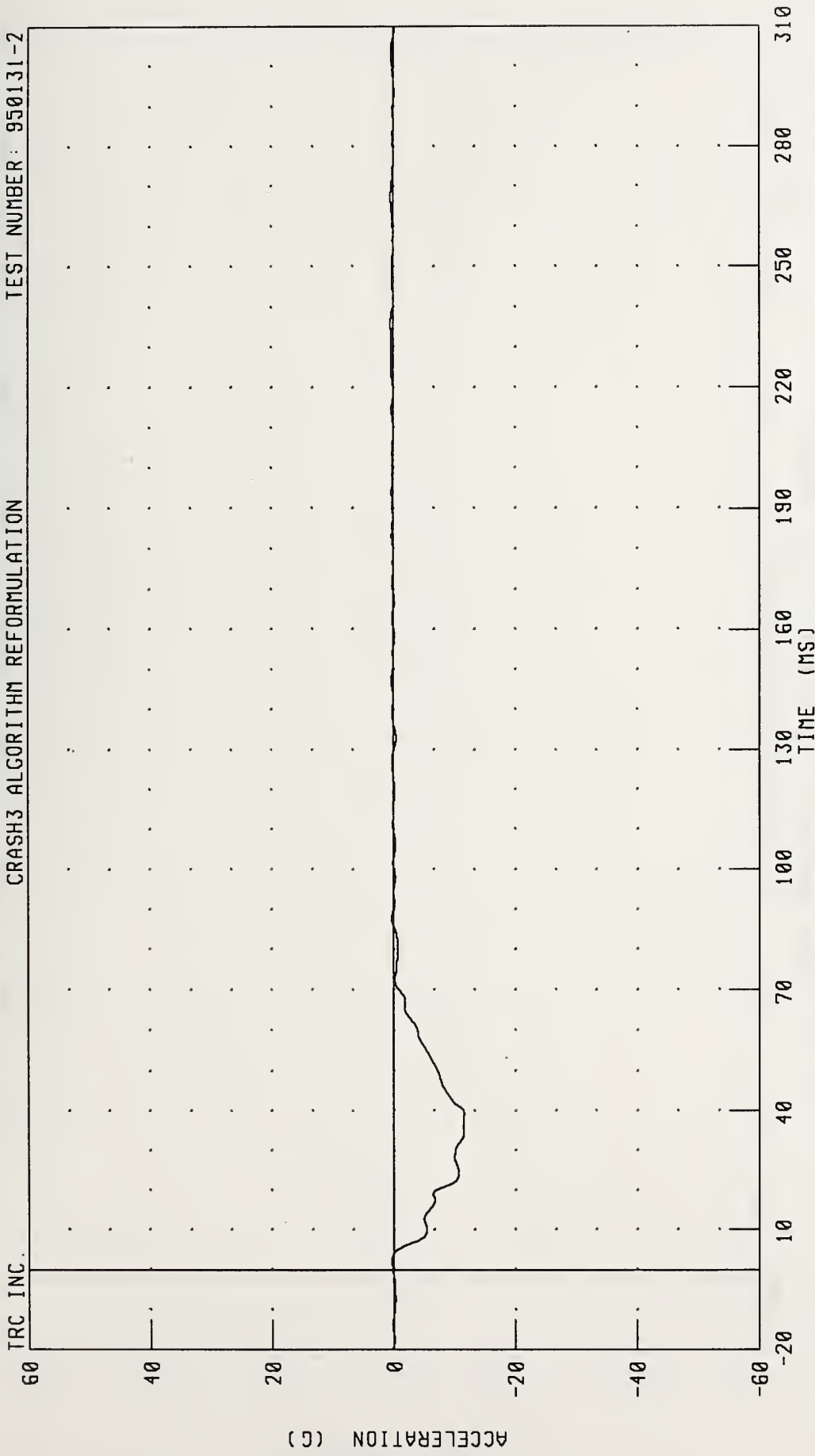
CHANNEL: BCGRD FILTER: CH CLASS 180

PEAK DATA: 1772.64 MM @ 310.00 MS, 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS ACCELERATION

TRC INC. TEST NUMBER: 950131-2

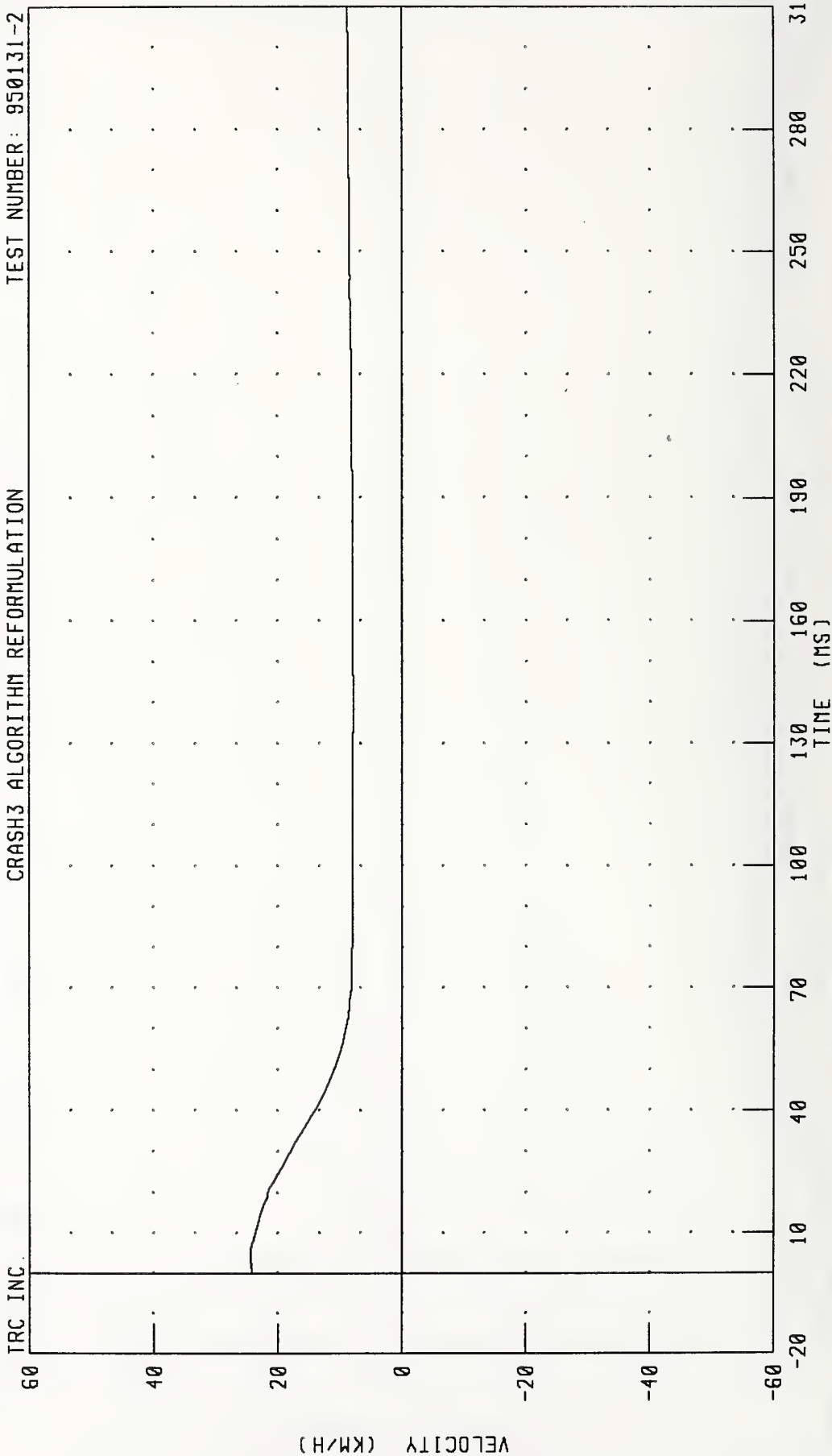
CRASH3 ALGORITHM REFORMULATION



CHANNEL: BSRXG FILTER: CH. CLASS 60 PEAK DATA: 0.47 G @ 267.44 MS, -11.61 G @ 39.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2

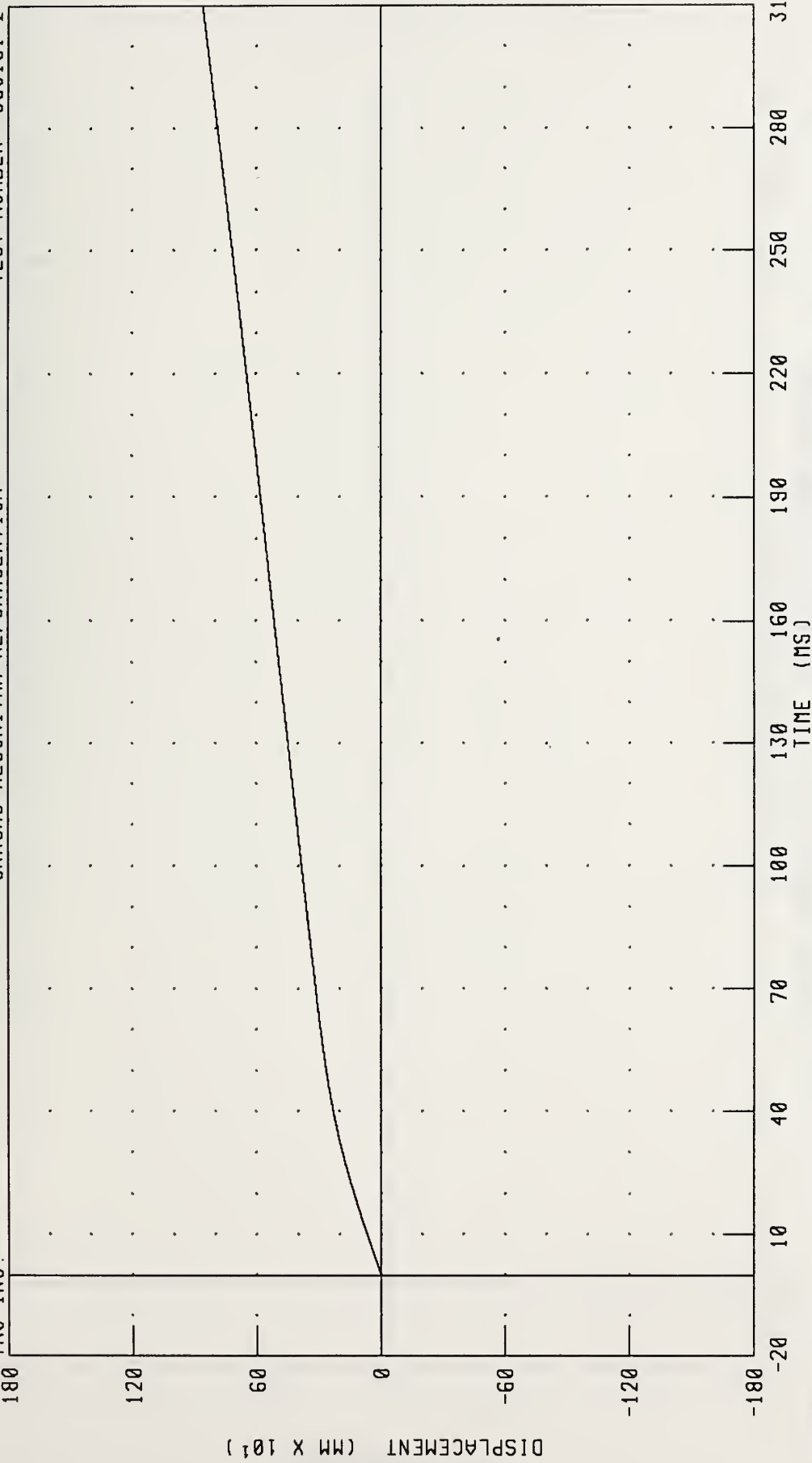


CHANNEL: BSRXY FILTER: CH. CLASS 180

PEAK DATA: 24.32 KM/H @ 6.00 MS; 7.84 KM/H @ 135.76 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS DISPLACEMENT

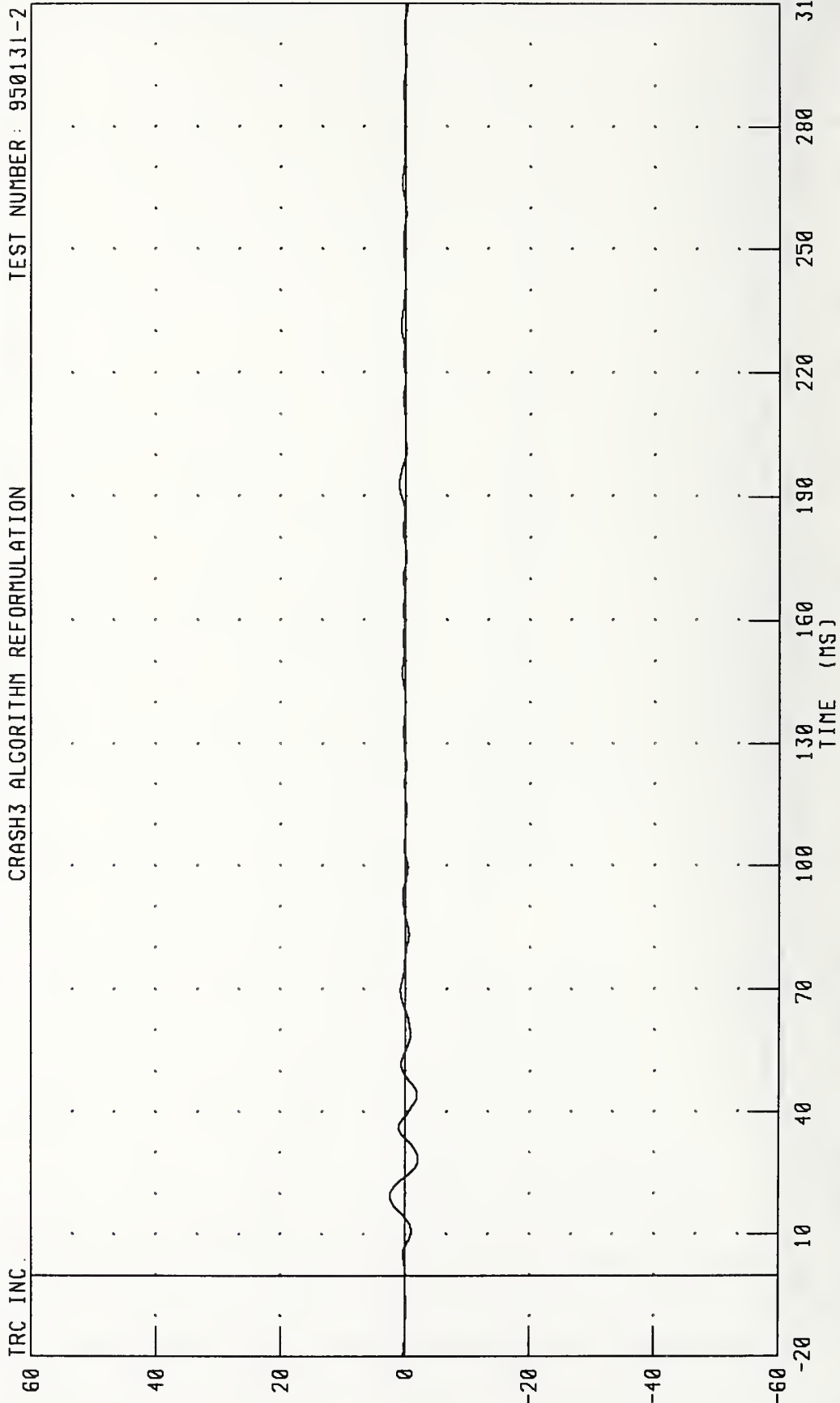
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



CHANNEL: BSRXD FILTER: CH. CLASS 180 PEAK DATA: 860.86 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
MOVING BARRIER LEFT SIDE RAIL Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-2



CHANNEL: BSRYG FILTER: CH. CLASS 60

PEAK DATA: 2.42 G @ 19.44 MS; -2.07 G @ 28.40 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 MOVING BARRIER LEFT SIDE RAIL Y-AXIS VELOCITY

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BSRYV FILTER: CH. CLASS 180

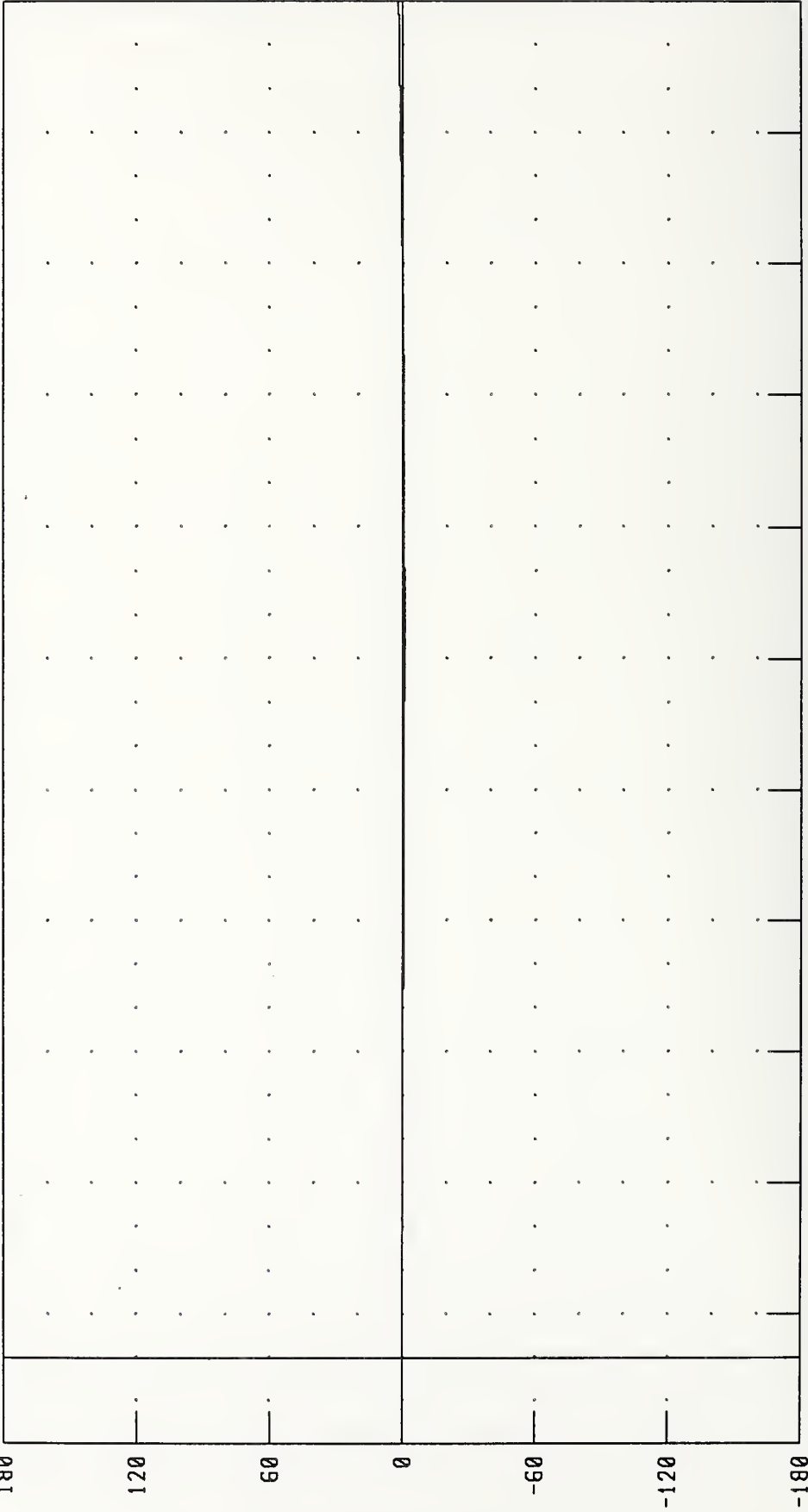
PEAK DATA: 1.20 KM/H @ 306.64 MS; -0.41 KM/H @ 65.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 2 OF 5
 MOVING BARRIER LEFT SIDE RAIL Y-AXIS DISPLACEMENT

TEST NUMBER: 950131-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



DISPLACEMENT (MM X 10¹)

TIME (MS)

CHANNEL: BSRVD FILTER: CH. CLASS 180

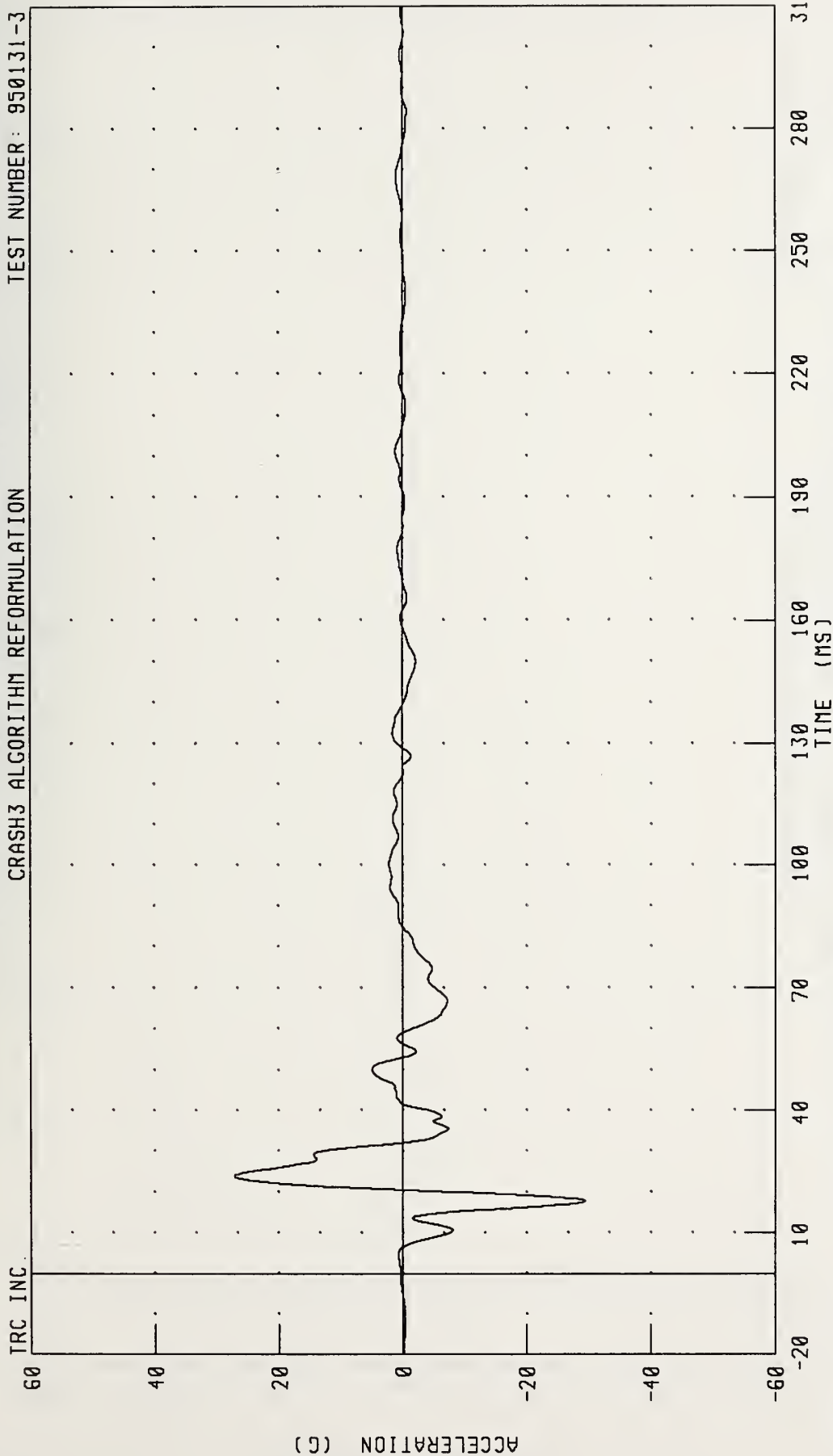
PEAK DATA: 19.17 MM @ 310.00 MS; -7.56 MM @ 164.08 MS

Data Plots

Test No. 950131-3

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



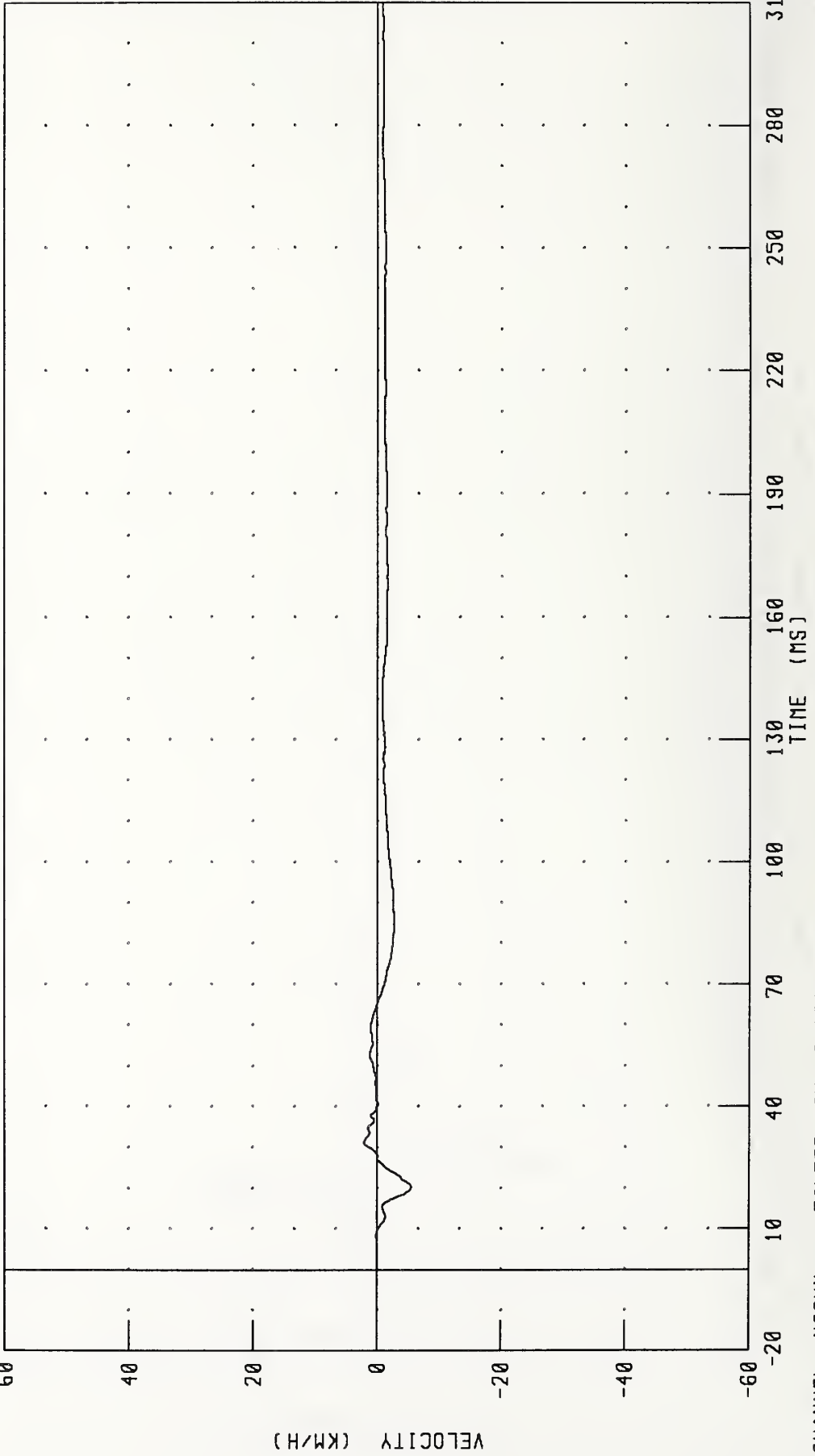
CHANNEL: VCCXG FILTER: CH. CLASS 60 PEAK DATA: 27.17 G @ 23.84 MS; -29.47 G @ 17.76 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: VCGXV FILTER: CH. CLASS 180

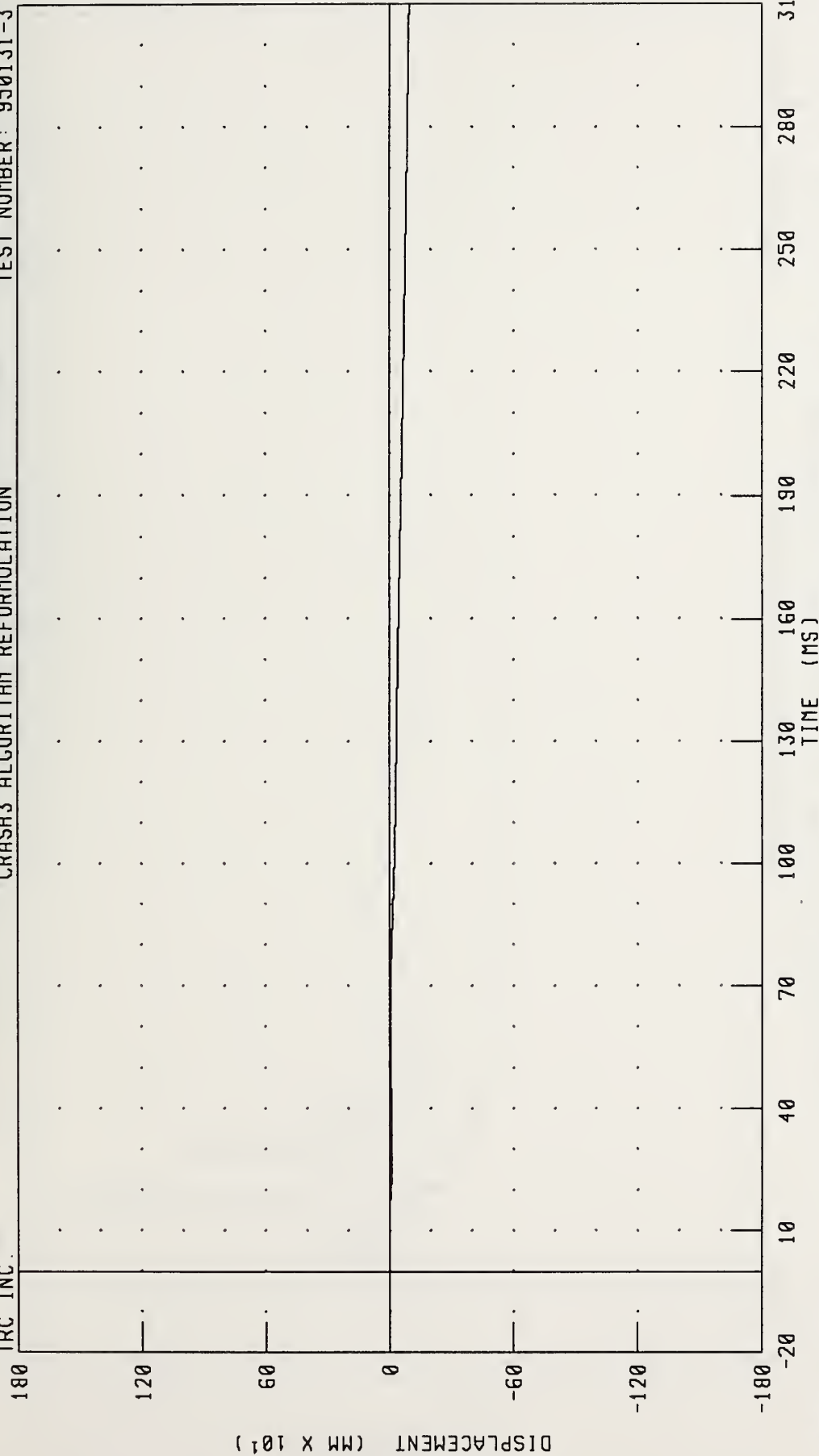
PEAK DATA: 2.13 KM/H @ 31.28 MS; -5.50 KM/H @ 20.32 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 VEHICLE CENTER OF GRAVITY X-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.

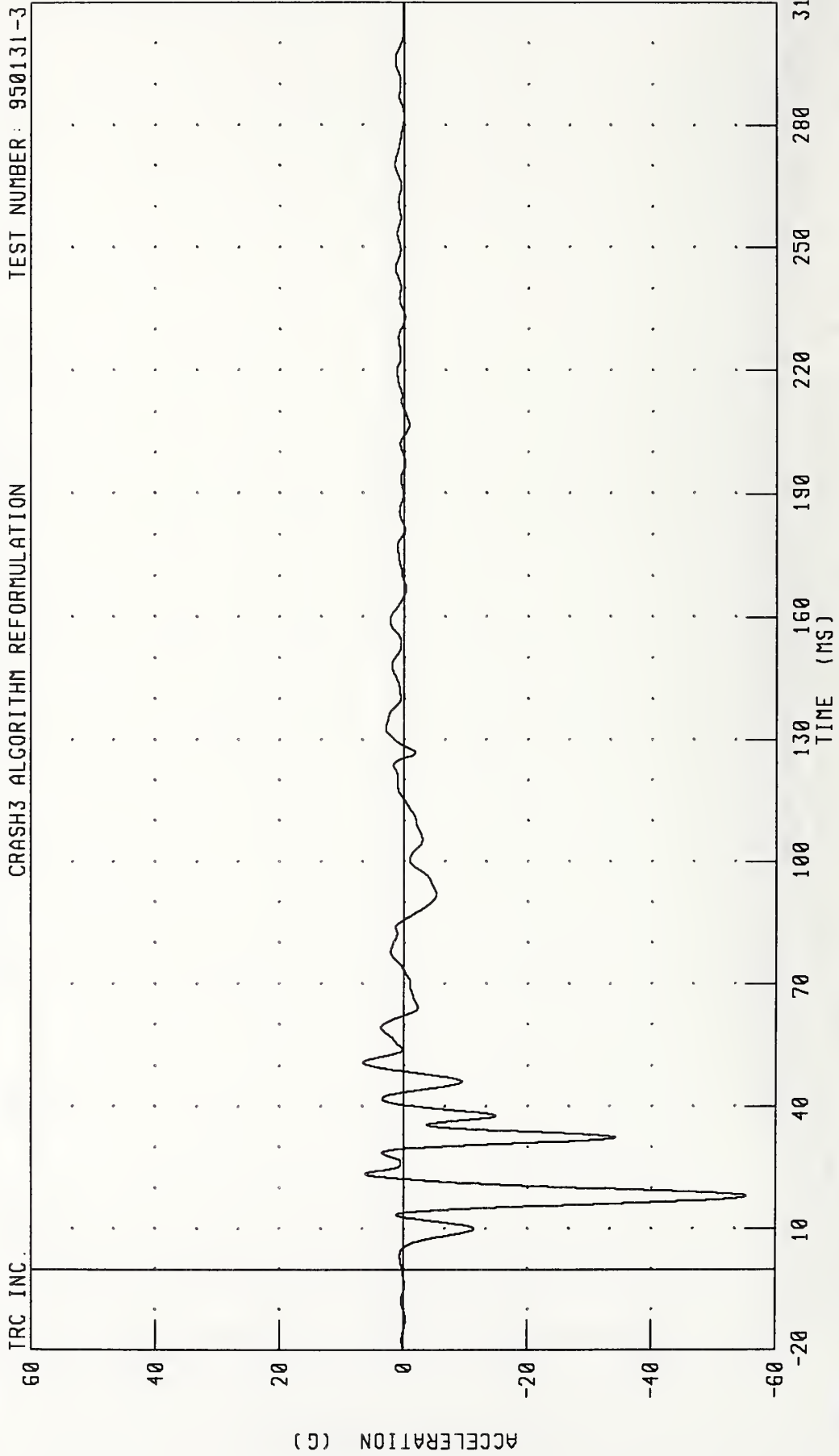


CHANNEL: VCGXD FILTER: CH. CLASS 180

PEAK DATA: 0.15 MM @ 9.44 MS, -94.34 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: VCCYG FILTER: CH. CLASS 60

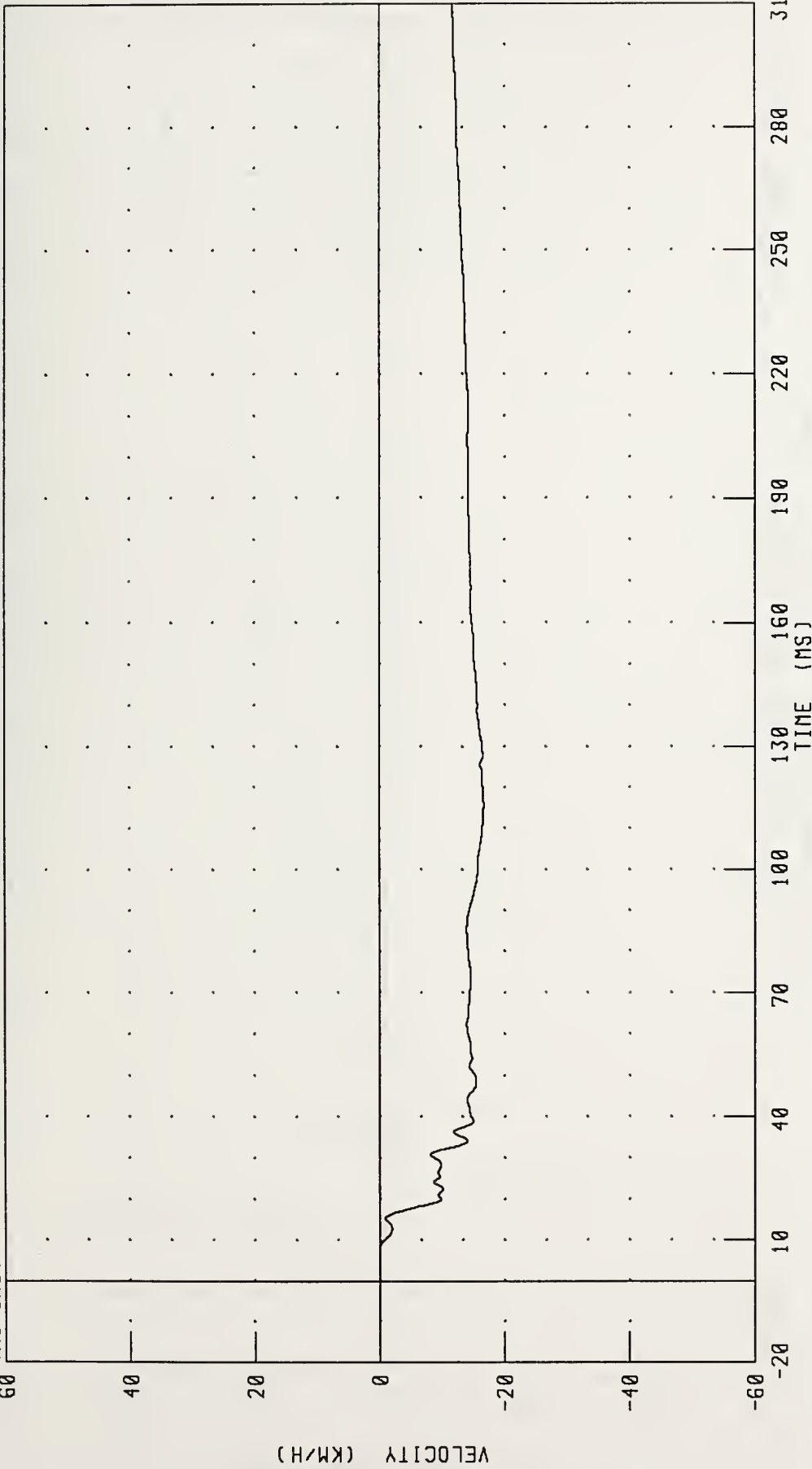
PEAK DATA: 6.55 G @ 50.80 MS; -55.27 G @ 18.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.

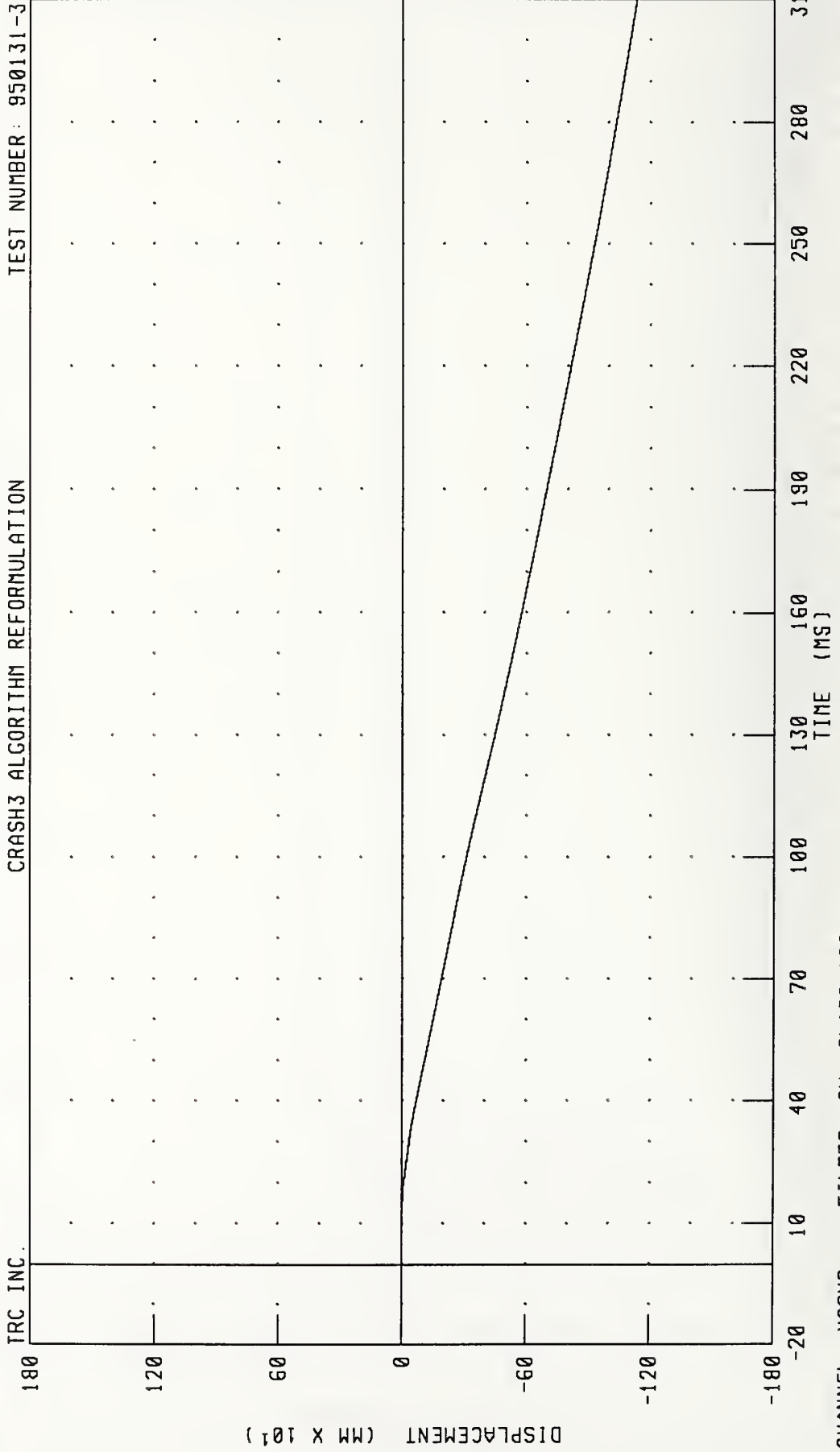


CHANNEL: VCGYV FILTER: CH. CLASS 180

PEAK DATA: 0.05 KM/H @ 4.16 MS; -16.68 KM/H @ 115.68 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: VCGYD FILTER: CH CLASS 180

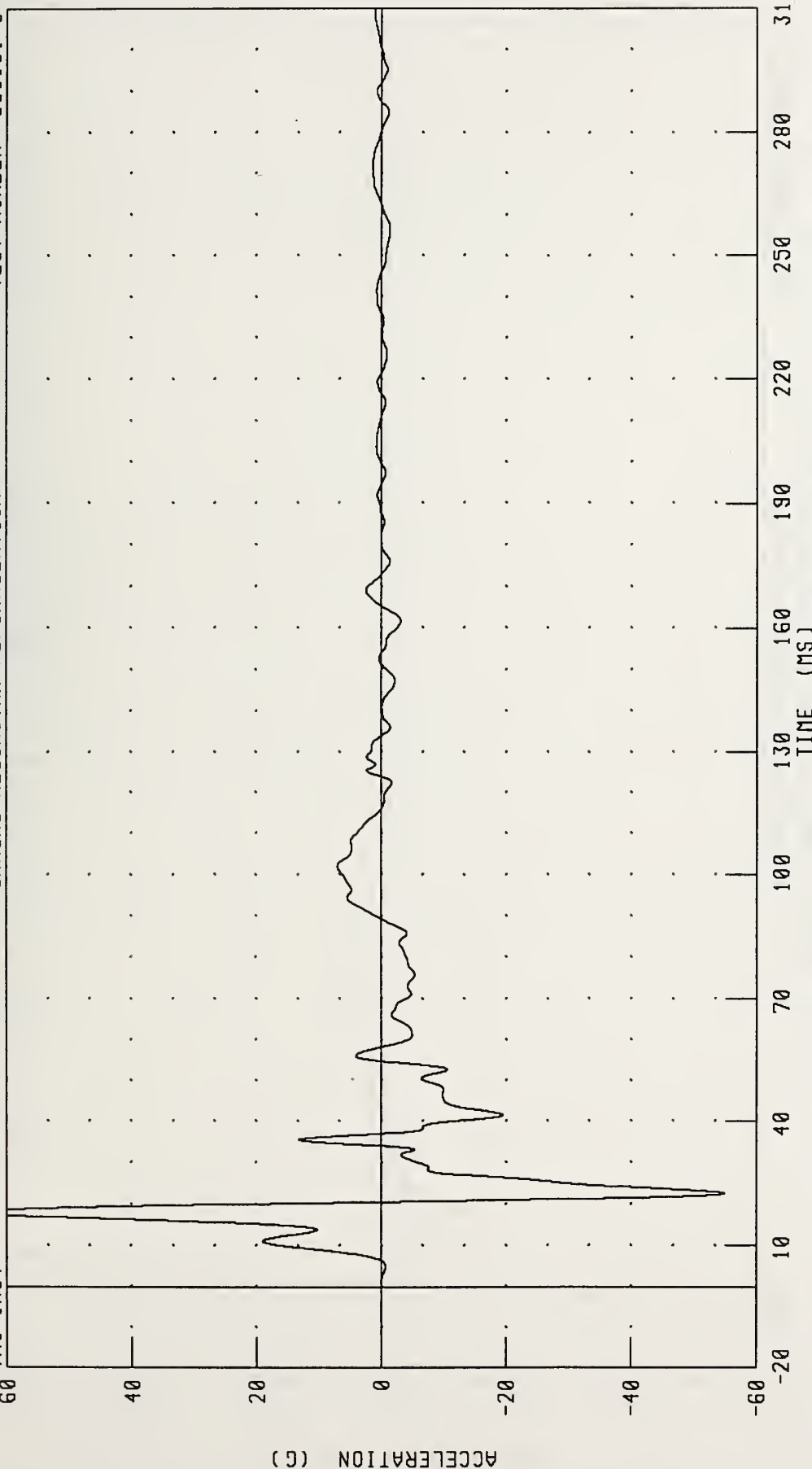
PEAK DATA: 0.07 MM @ 8.48 MS; -1135.43 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



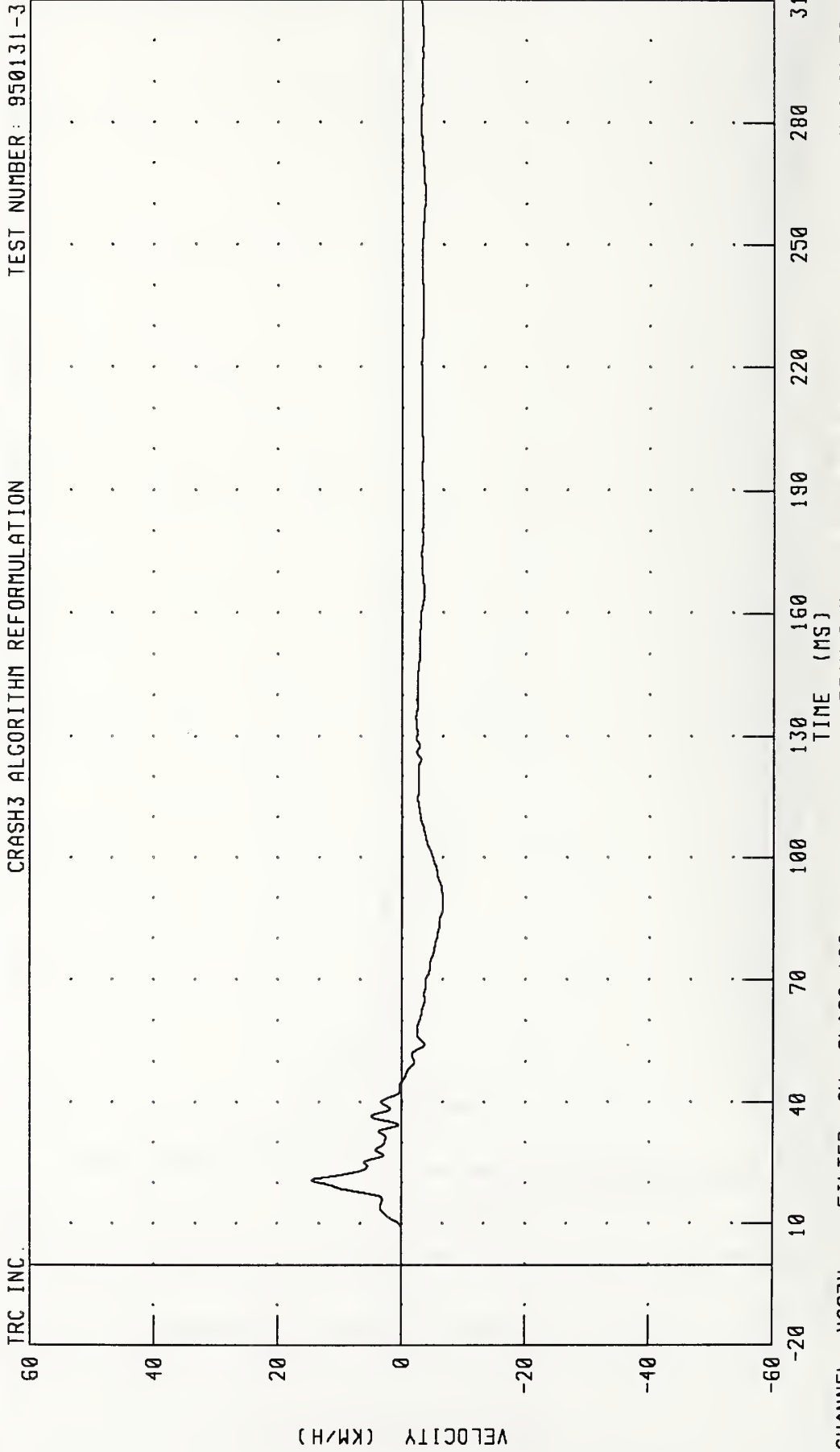
CHANNEL: VCGZG FILTER: CH. CLASS 60

PEAK DATA: 65.89 G @ 17.92 MS; -54.88 G @ 22.56 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY

TRC INC. TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION



CHANNEL: VCGZV FILTER: CH. CLASS 180

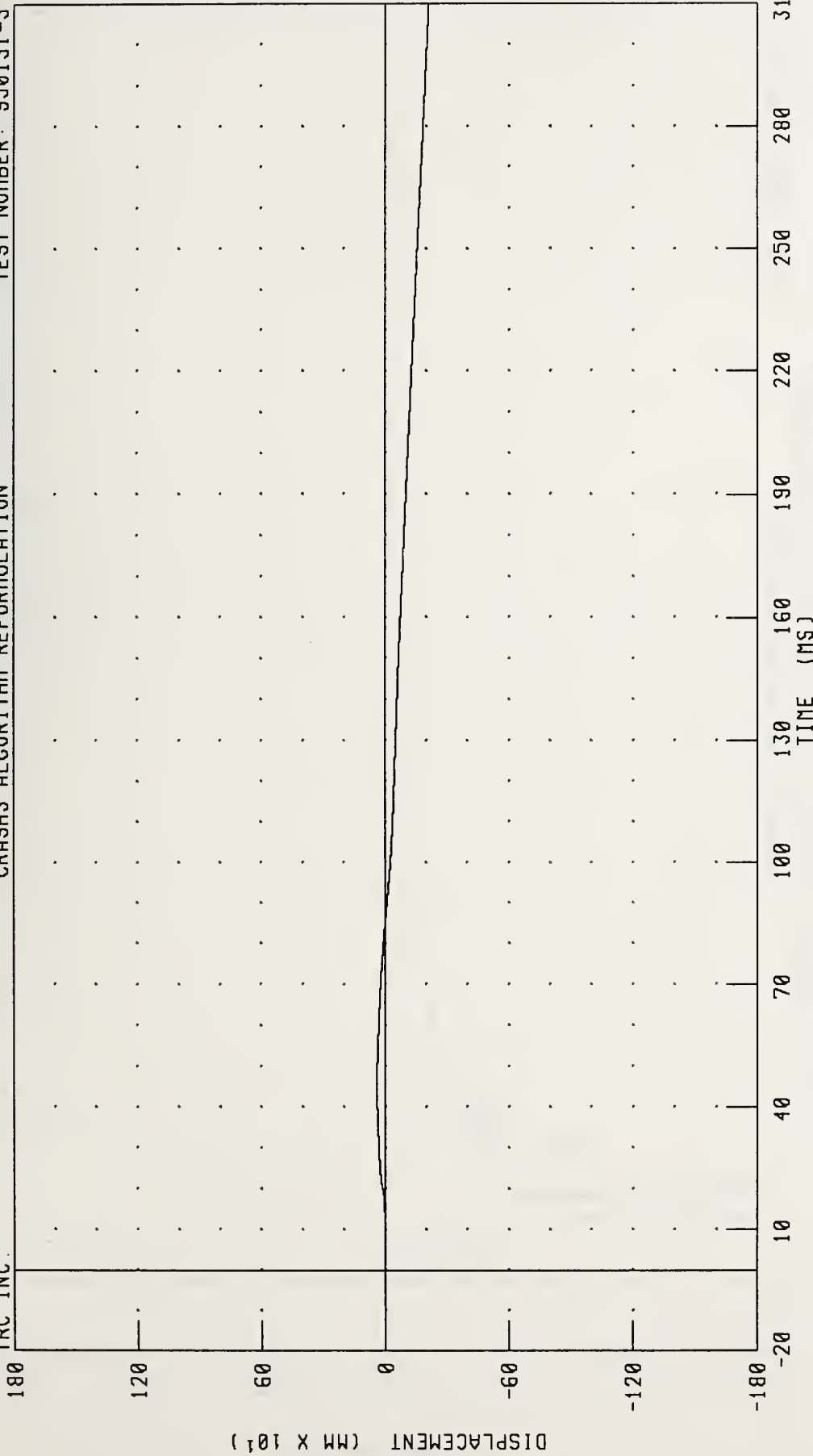
PEAK DATA: 14.50 KM/H @ 20.72 MS; -6.62 KM/H @ 89.52 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.

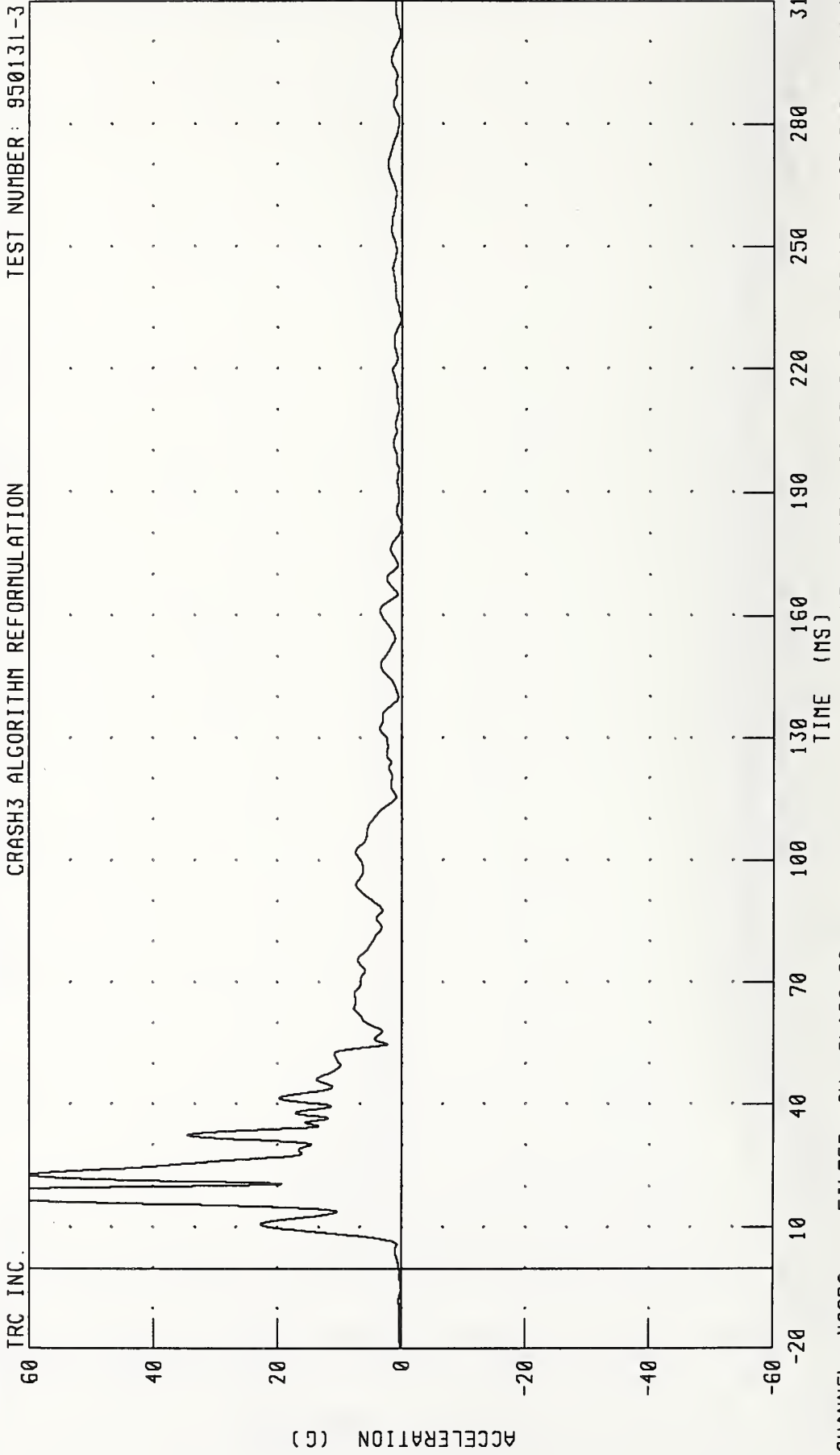


CHANNEL: VCGZD FILTER: CH. CLASS 180

PEAK DATA: 40.33 MM @ 45.04 MS; -210.16 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3

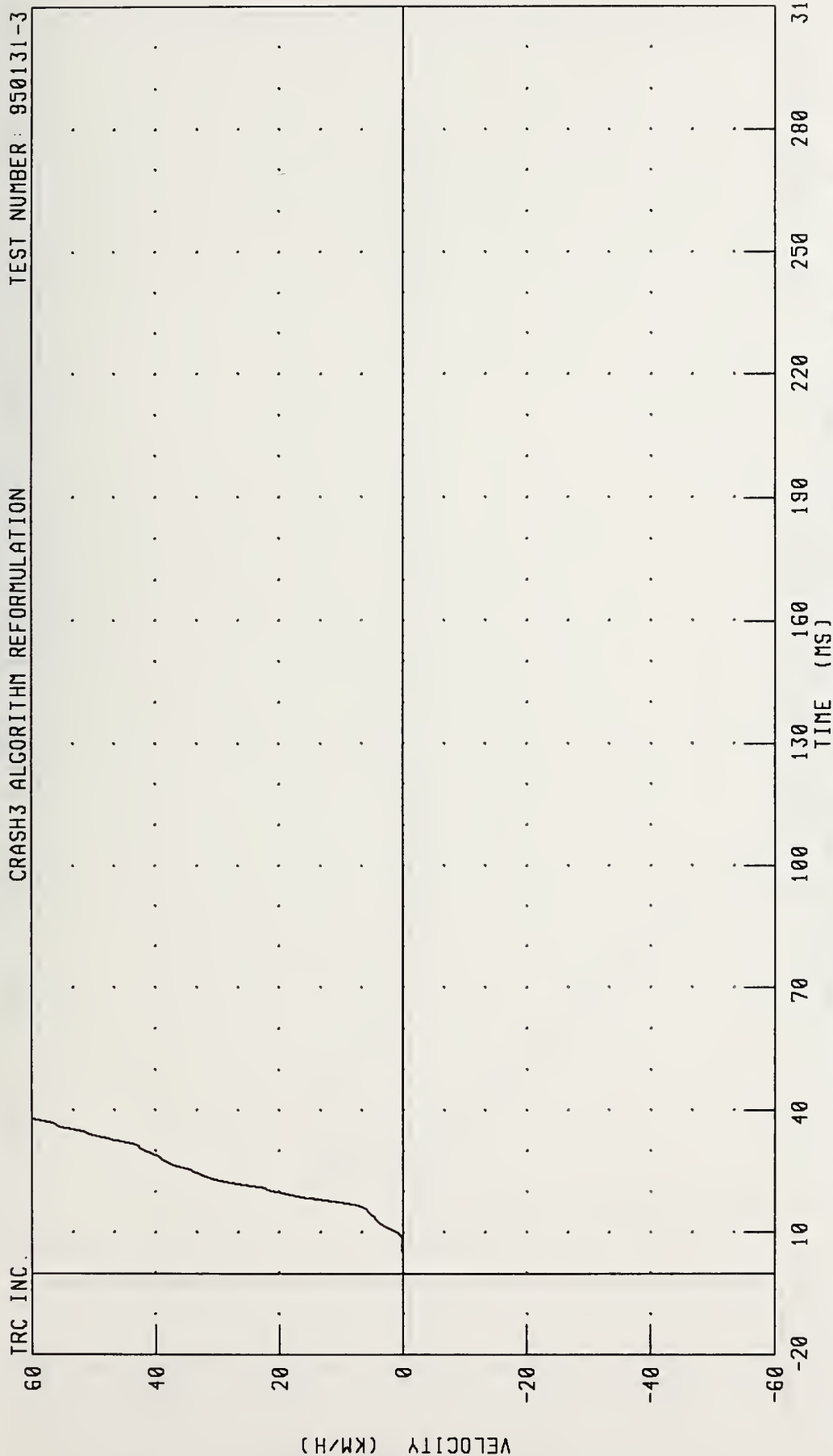


CHANNEL: VCCRG FILTER: CH. CLASS 60

PEAK DATA: 90.83 G @ 17.92 MS; 0.03 G @ -5.44 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3

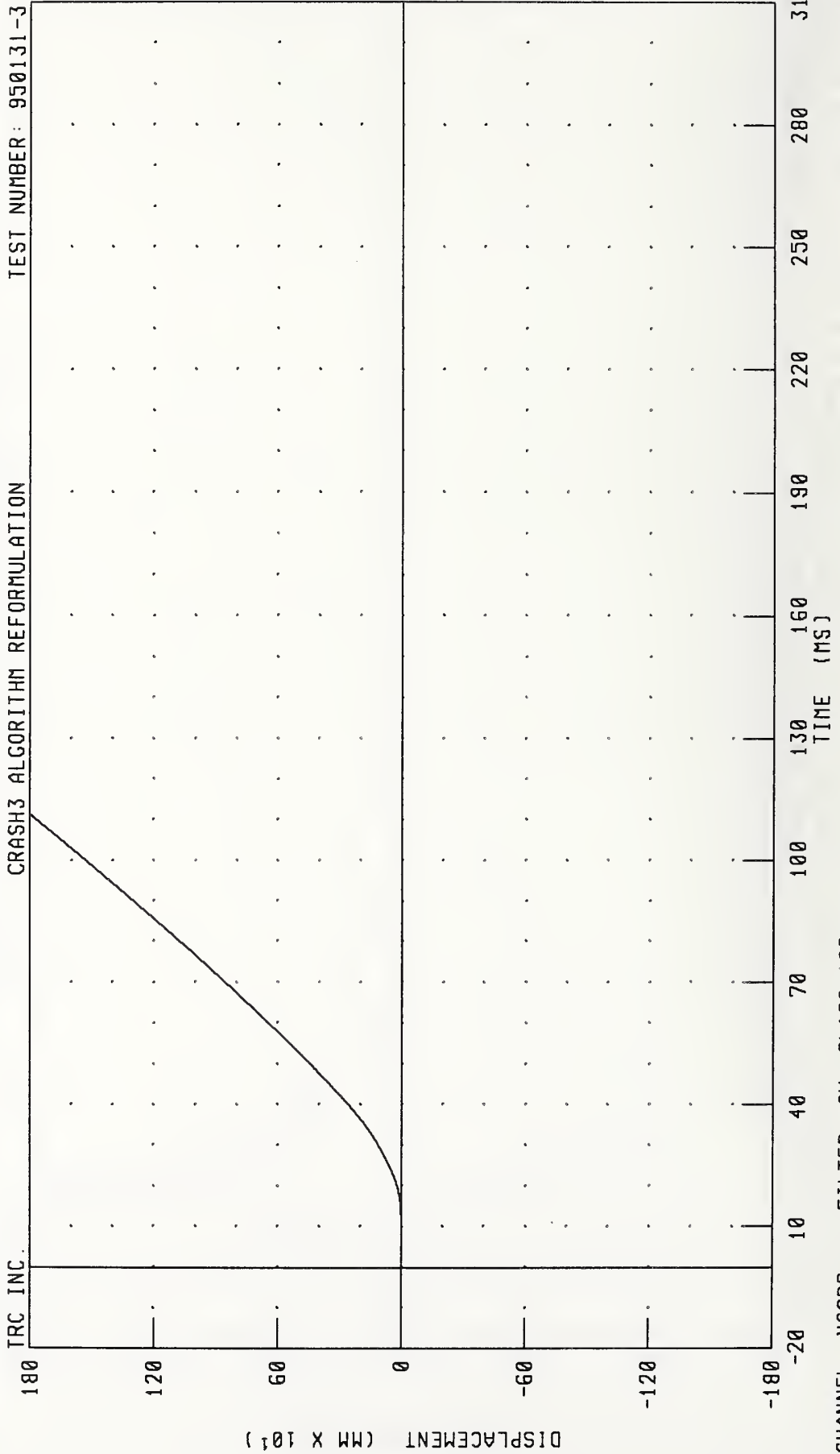


CHANNEL: VCGRV FILTER: CH. CLASS 180

PEAK DATA: 101.02 KM/H @ 310.00 MS; 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: VCGRD FILTER: CH. CLASS 180

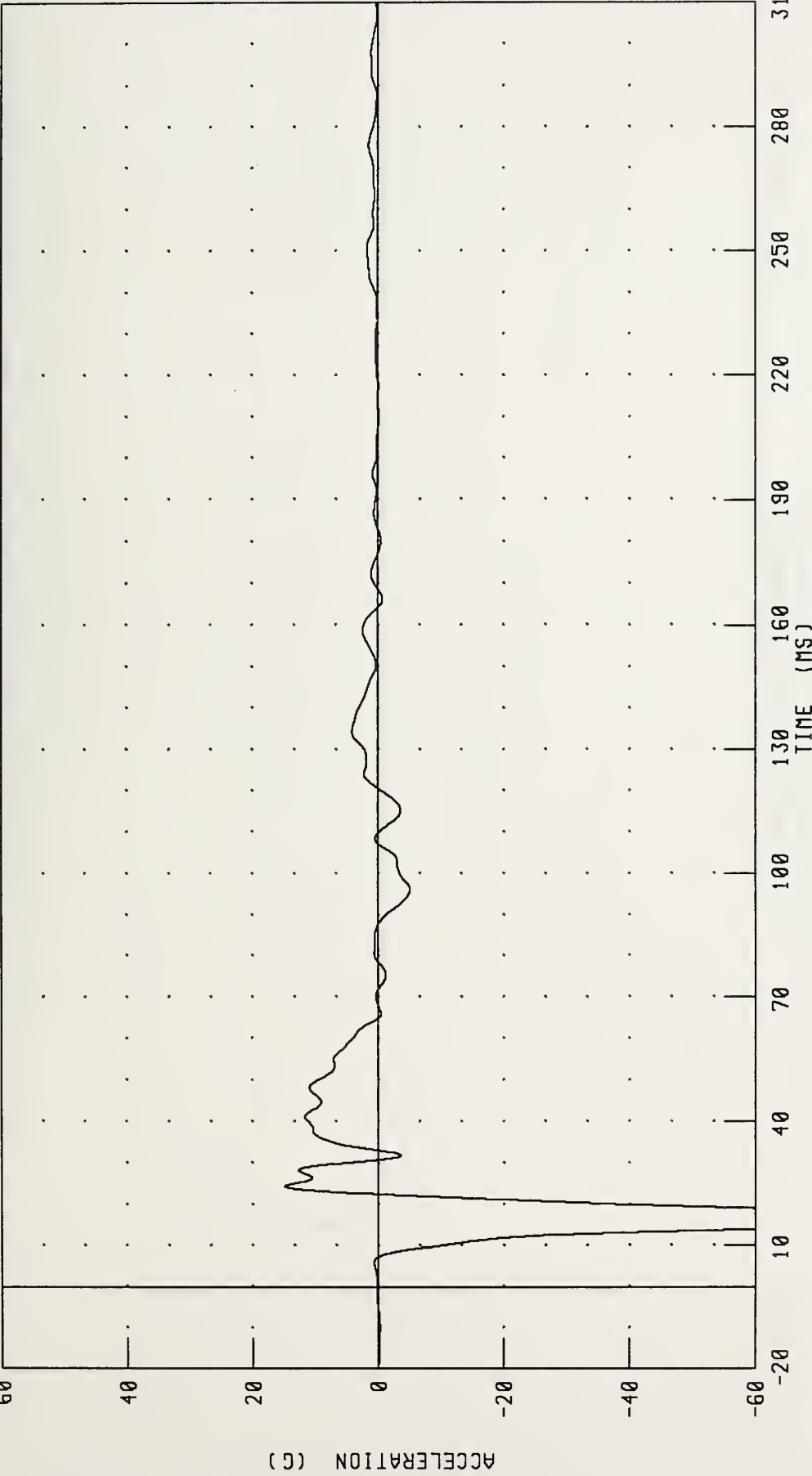
PEAK DATA: 7081.59 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
LEFT REAR SILL Y-AXIS ACCELERATION

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



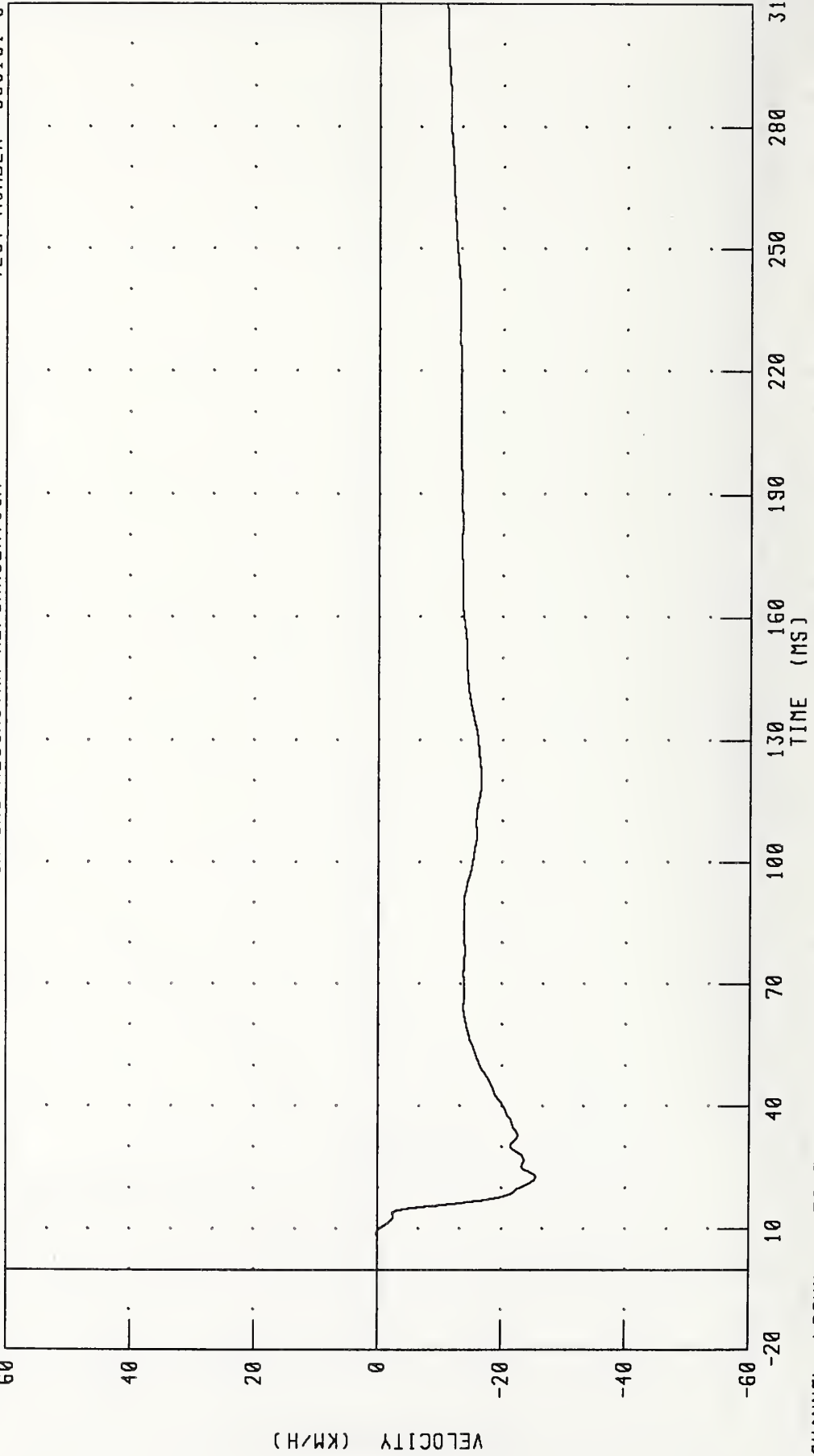
CHANNEL: LRSYG FILTER: CH. CLASS 60

PEAK DATA: 14.87 G @ 24.40 MS; -122.09 G @ 16.24 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
LEFT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3

TRC INC.



CHANNEL: LRSYV FILTER: CH. CLASS 180

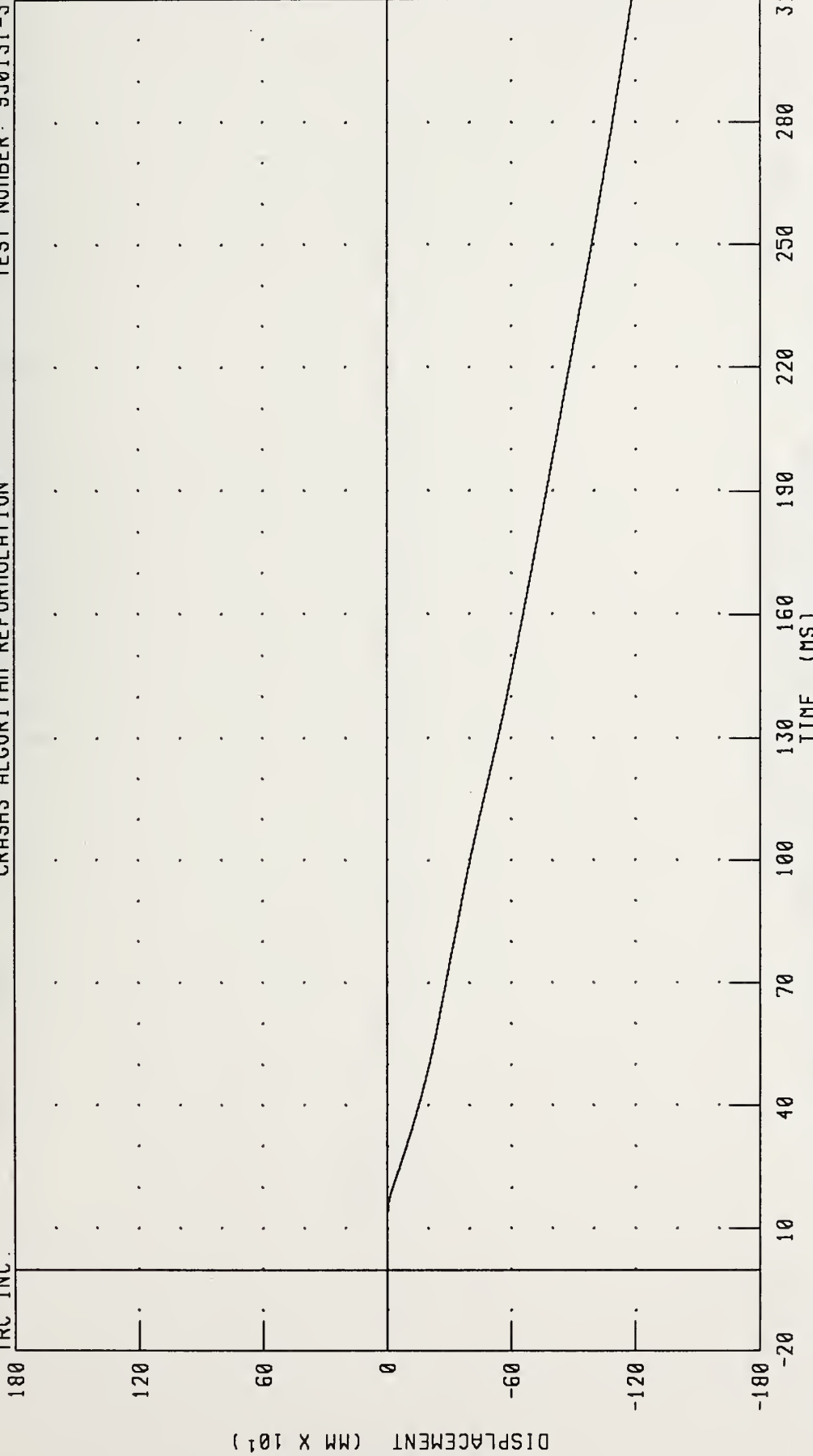
PEAK DATA: 0.13 KM/H @ 8.96 MS; -25.55 KM/H @ 22.64 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
LEFT REAR SILL Y-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.

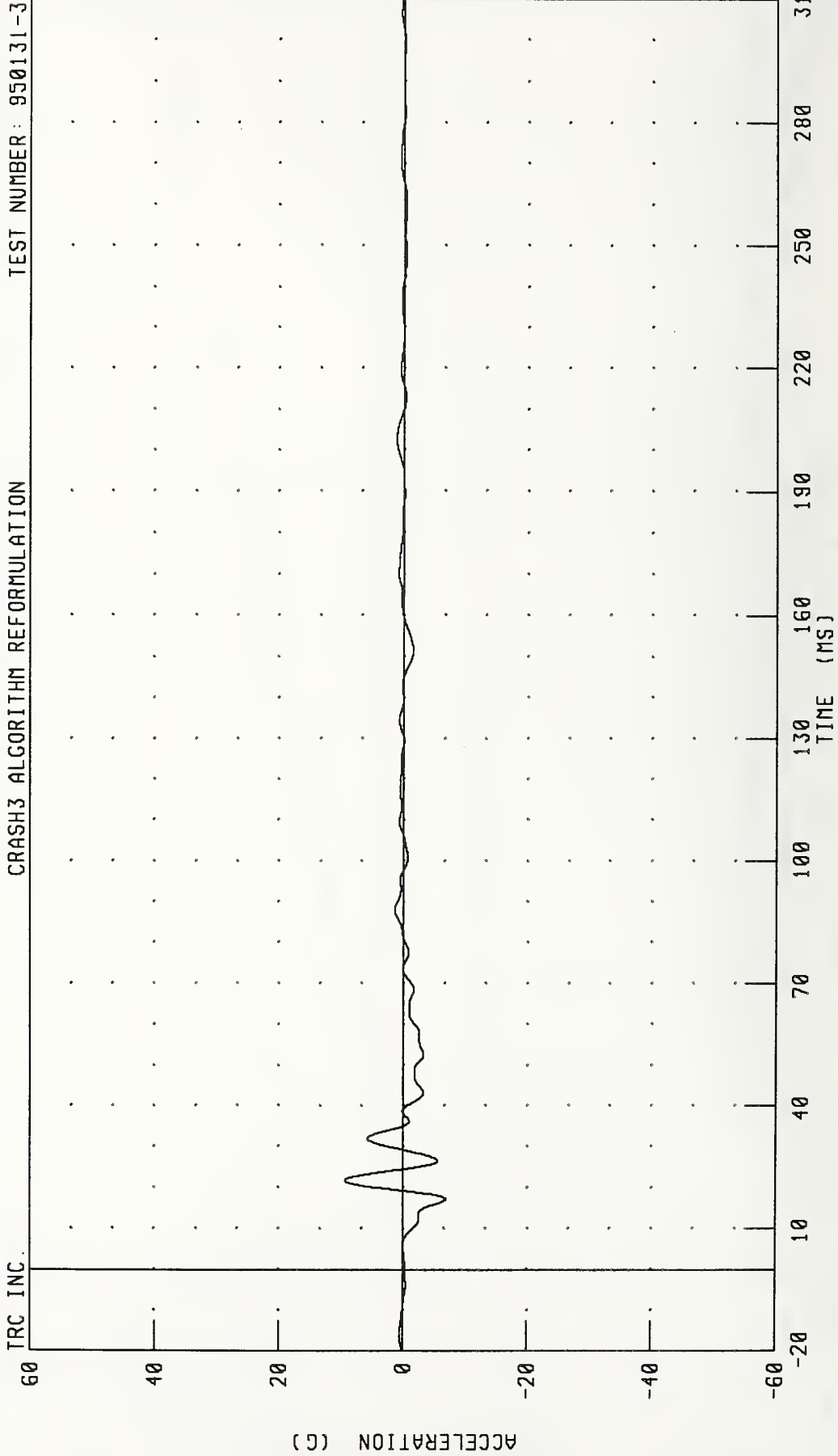


CHANNEL: LRSYD FILTER: CH. CLASS 180

PEAK DATA: 0.08 MM @ 9.60 MS; -1182.45 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
RIGHT REAR SILL X-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: RRSXG FILTER: CH. CLASS 60

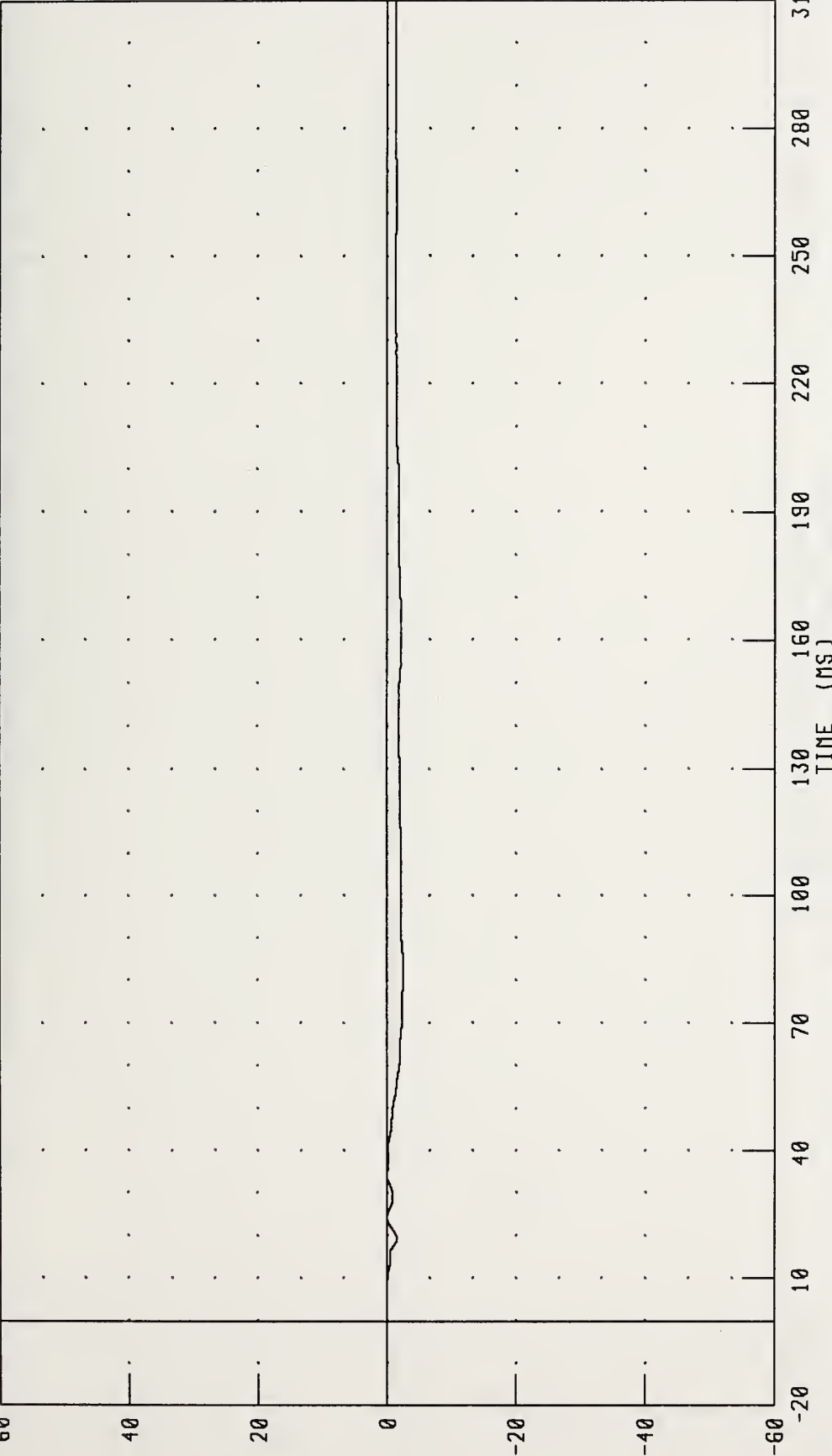
PEAK DATA: 9.37 G @ 21.68 MS; -6.90 G @ 17.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
RIGHT REAR SILL X-AXIS VELOCITY

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



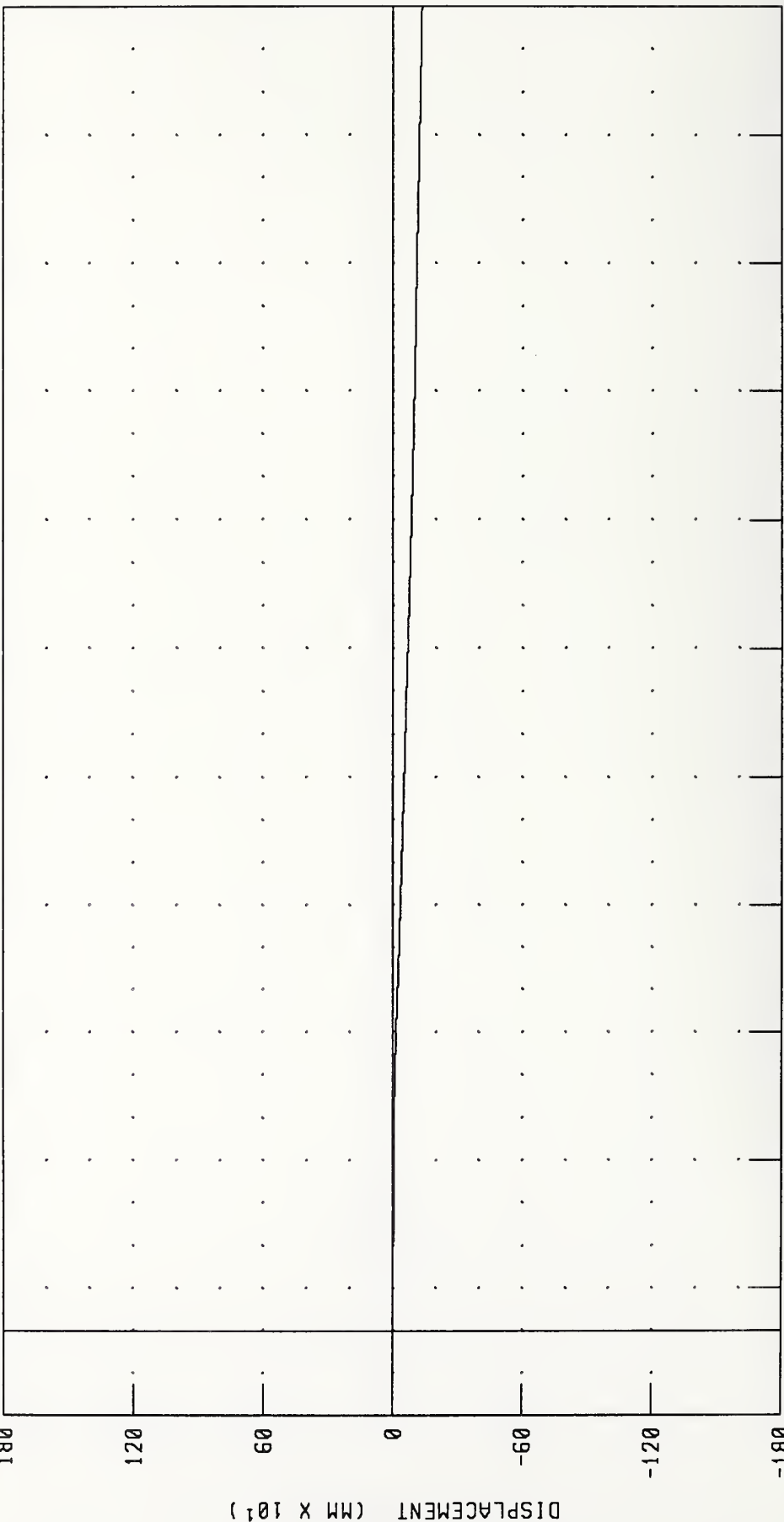
CHANNEL: RRSXV FILTER: CH. CLASS 180

PEAK DATA: 0.06 KM/H @ 34 00 MS; -2.51 KM/H @ 79.52 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 RIGHT REAR SILL X-AXIS DISPLACEMENT
 CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3

TRC INC.



CHANNEL: RRSXD FILTER: CH. CLASS 180

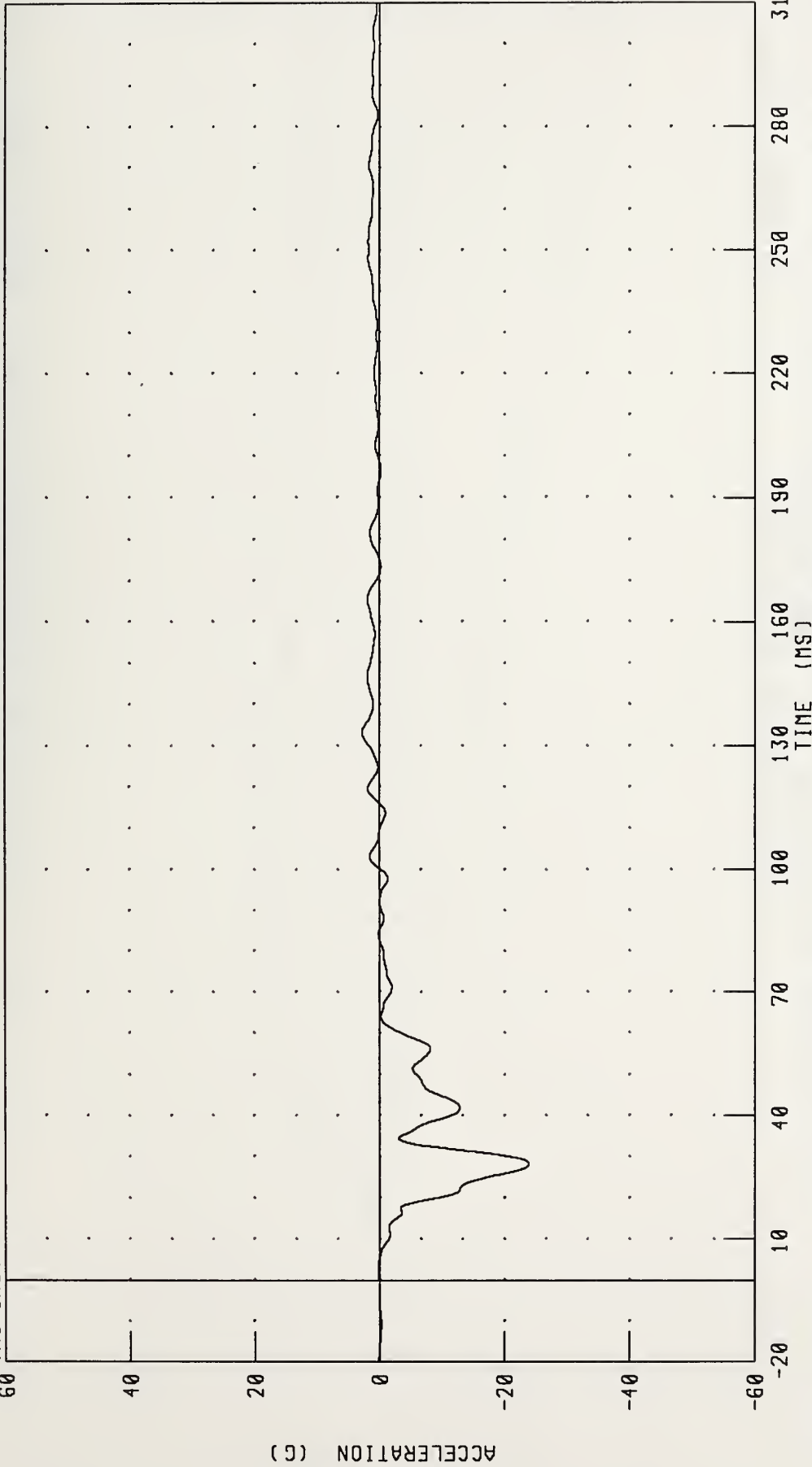
PEAK DATA: 0.00 MM @ 0.00 MS; -134.43 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
RIGHT REAR SILL Y-AXIS ACCELERATION

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

IRC INC.



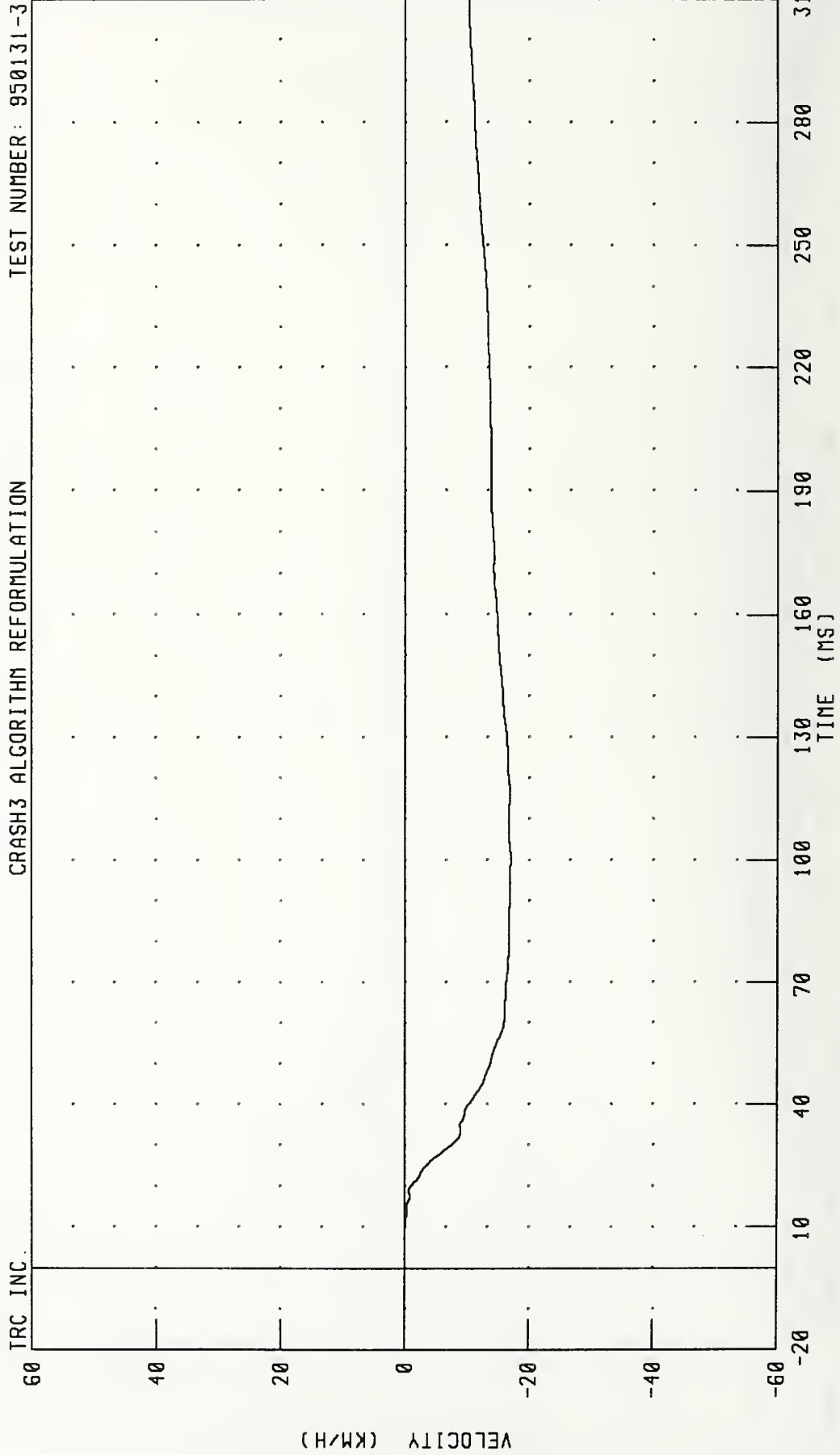
CHANNEL: RRSYG FILTER: CH CLASS 60

PEAK DATA: 2.77 G @ 133.20 MS; -23.89 G @ 28.24 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
RIGHT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3



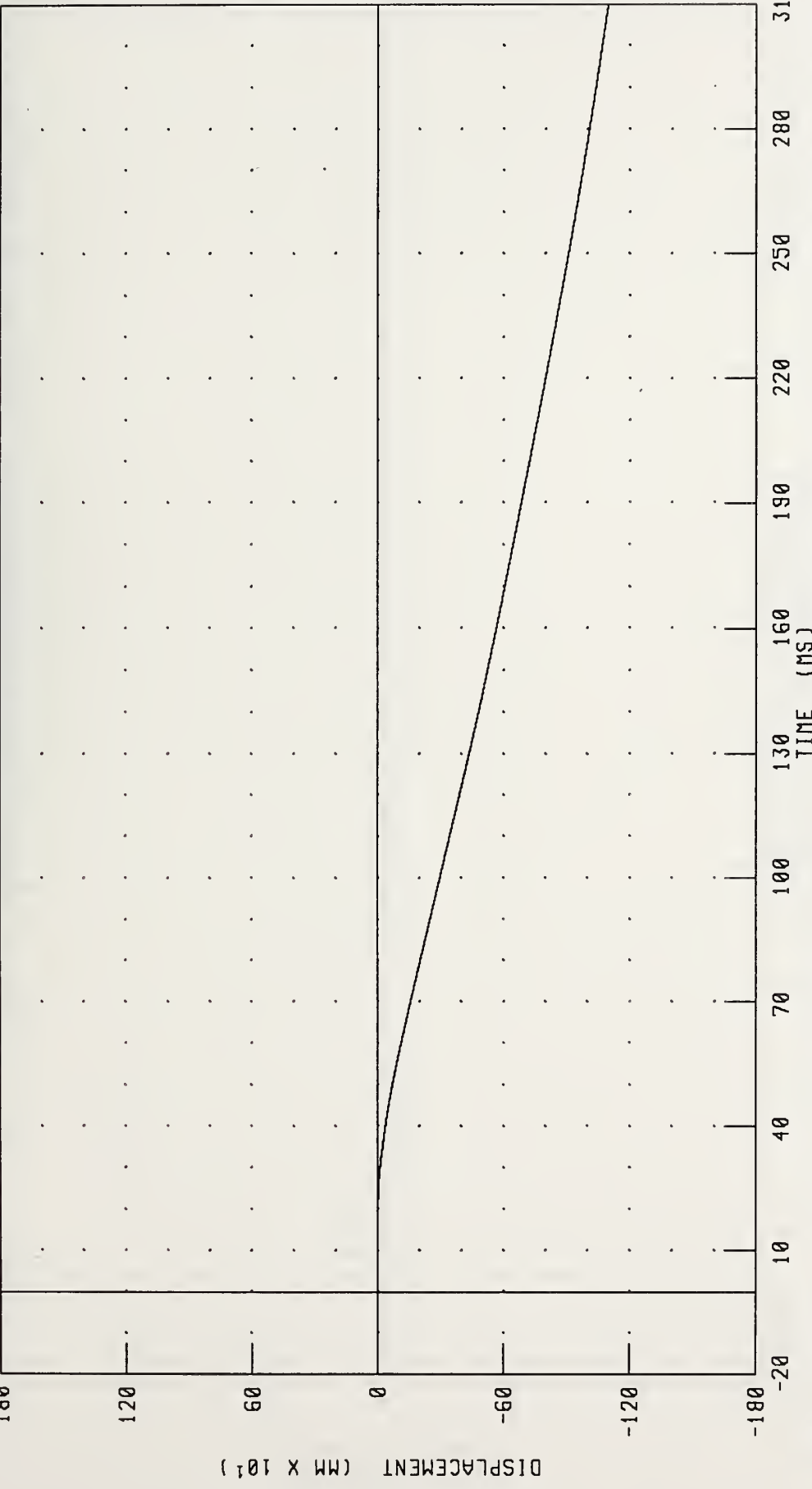
CHANNEL: RRSYV FILTER: CH. CLASS 180

PEAK DATA: 0.03 KM/H @ 4.72 MS; -17.06 KM/H @ 99.92 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
RIGHT REAR SILL Y-AXIS DISPLACEMENT
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3

TRC INC.

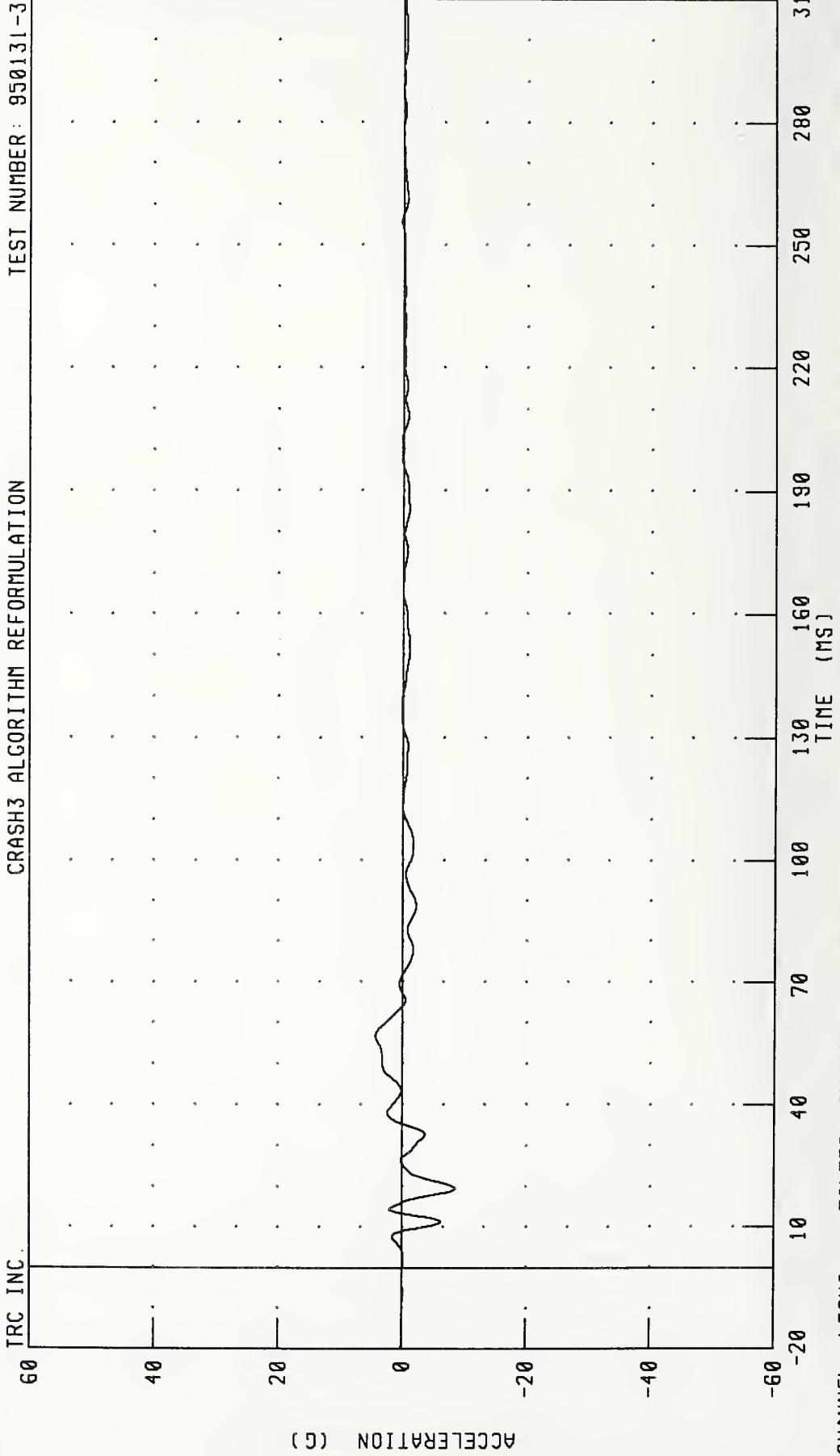


CHANNEL: RRSYD FILTER: CH. CLASS 180

PEAK DATA: 0.04 MM @ 9.44 MS; -1097.03 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
LEFT FRONT SILL X-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



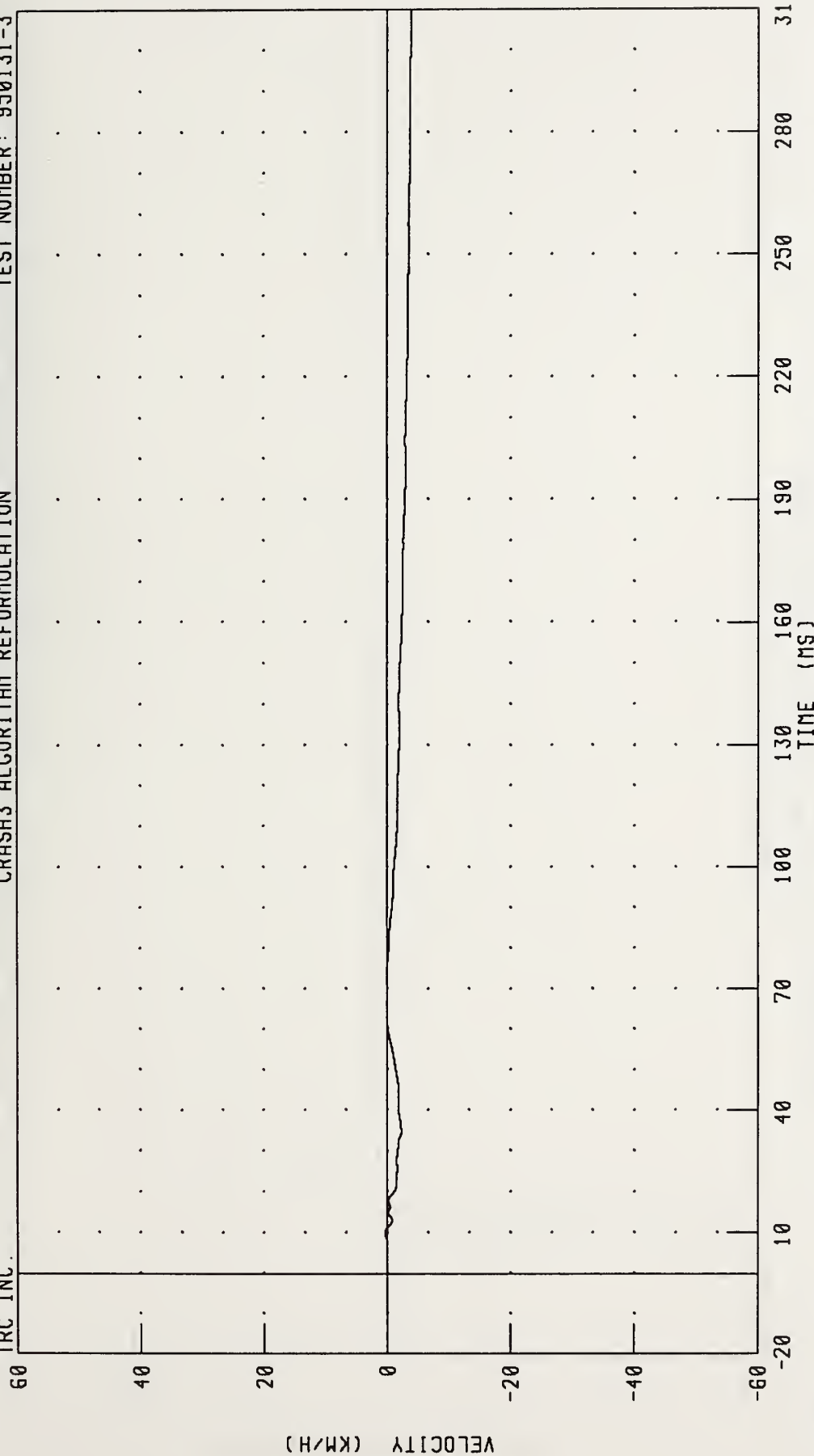
CHANNEL: LFSXG FILTER: CH. CLASS 60 PEAK DATA: 4.34 G @ 56.80 MS; -8.55 G @ 19.52 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
LEFT FRONT SILL X-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3

TRC INC.



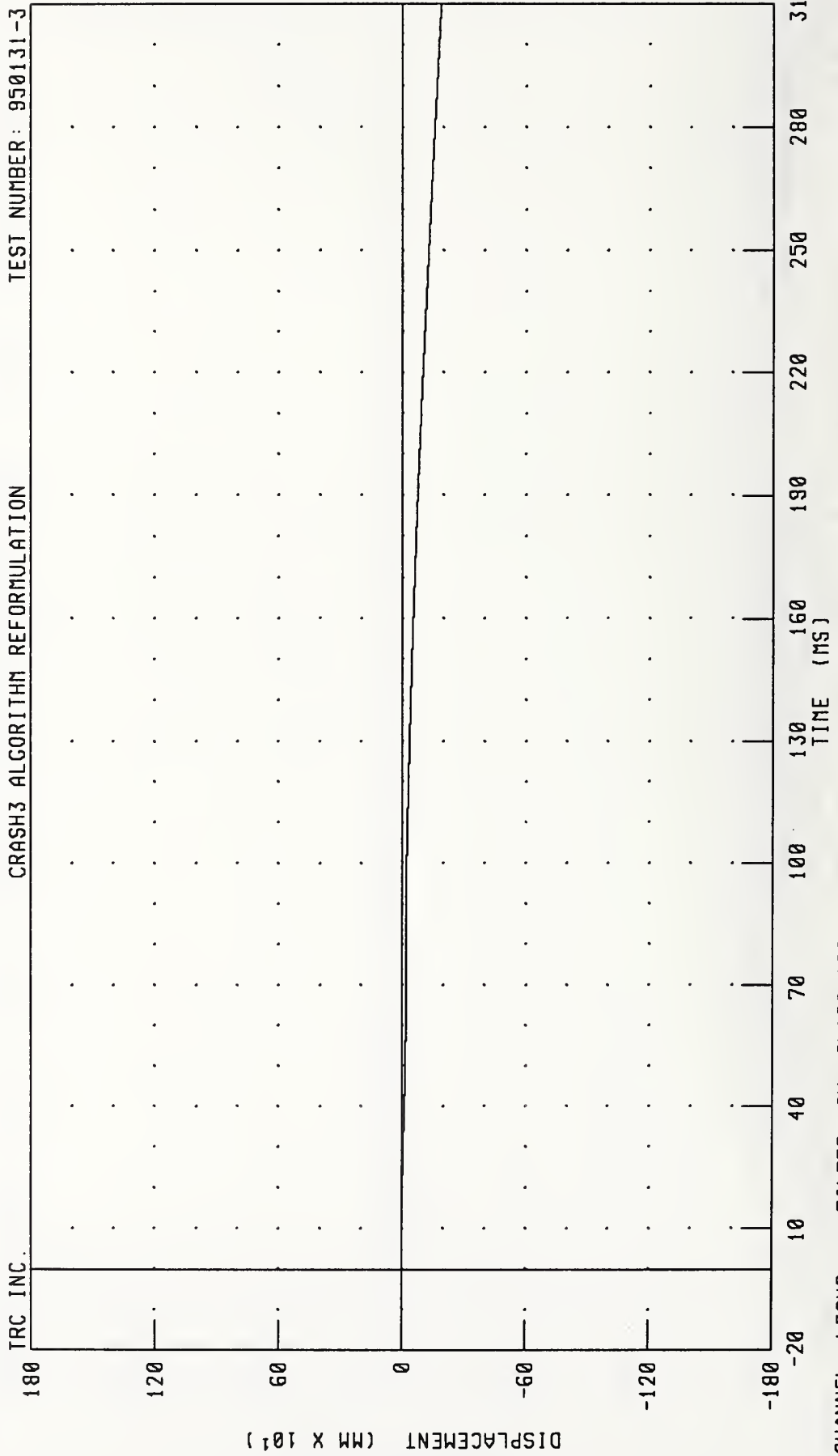
CHANNEL: LFSXV FILTER: CH. CLASS 180

PEAK DATA: 0.41 KM/H @ 9.76 MS; -3.96 KM/H @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 LEFT FRONT SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3



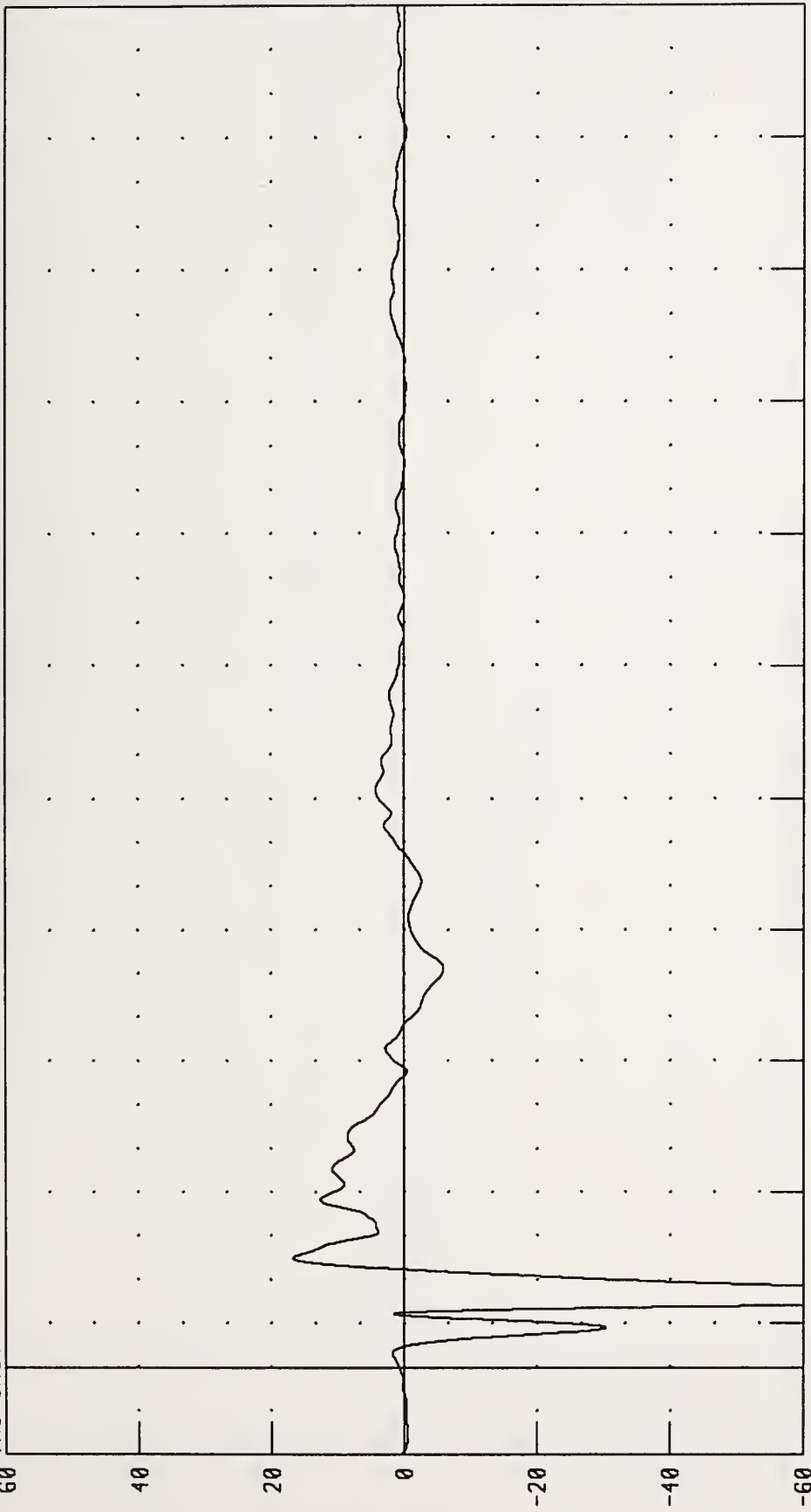
CHANNEL: LFSXD FILTER: CH. CLASS 180

PEAK DATA: 0.17 MM @ 11.04 MS; -189.16 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
LEFT FRONT SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3

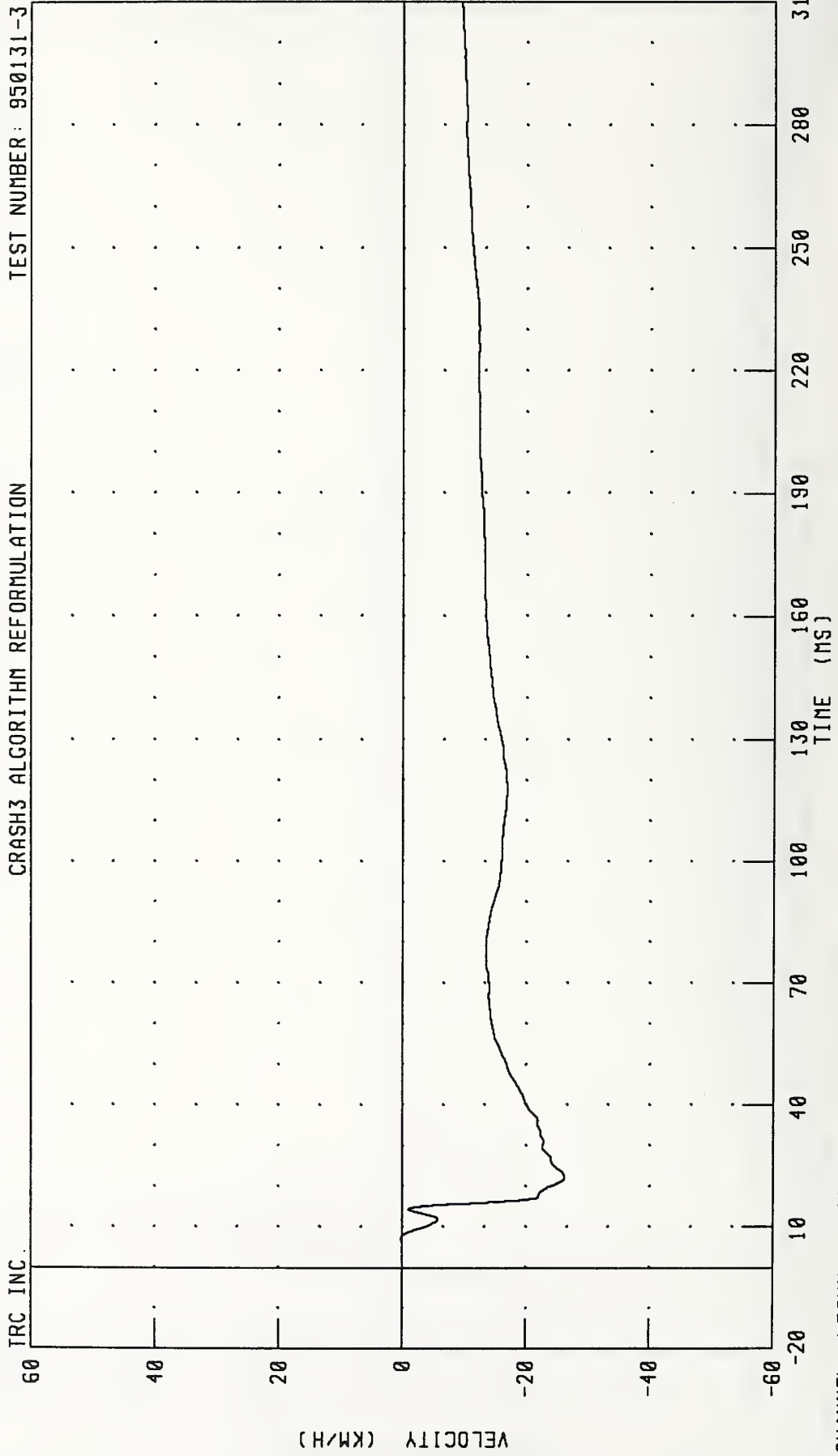
TRC INC.



CHANNEL: LFSYG FILTER: CH CLASS 60 PEAK DATA: 16.70 G @ 24.88 MS; -145.57 G @ 16.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
LEFT FRONT SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3

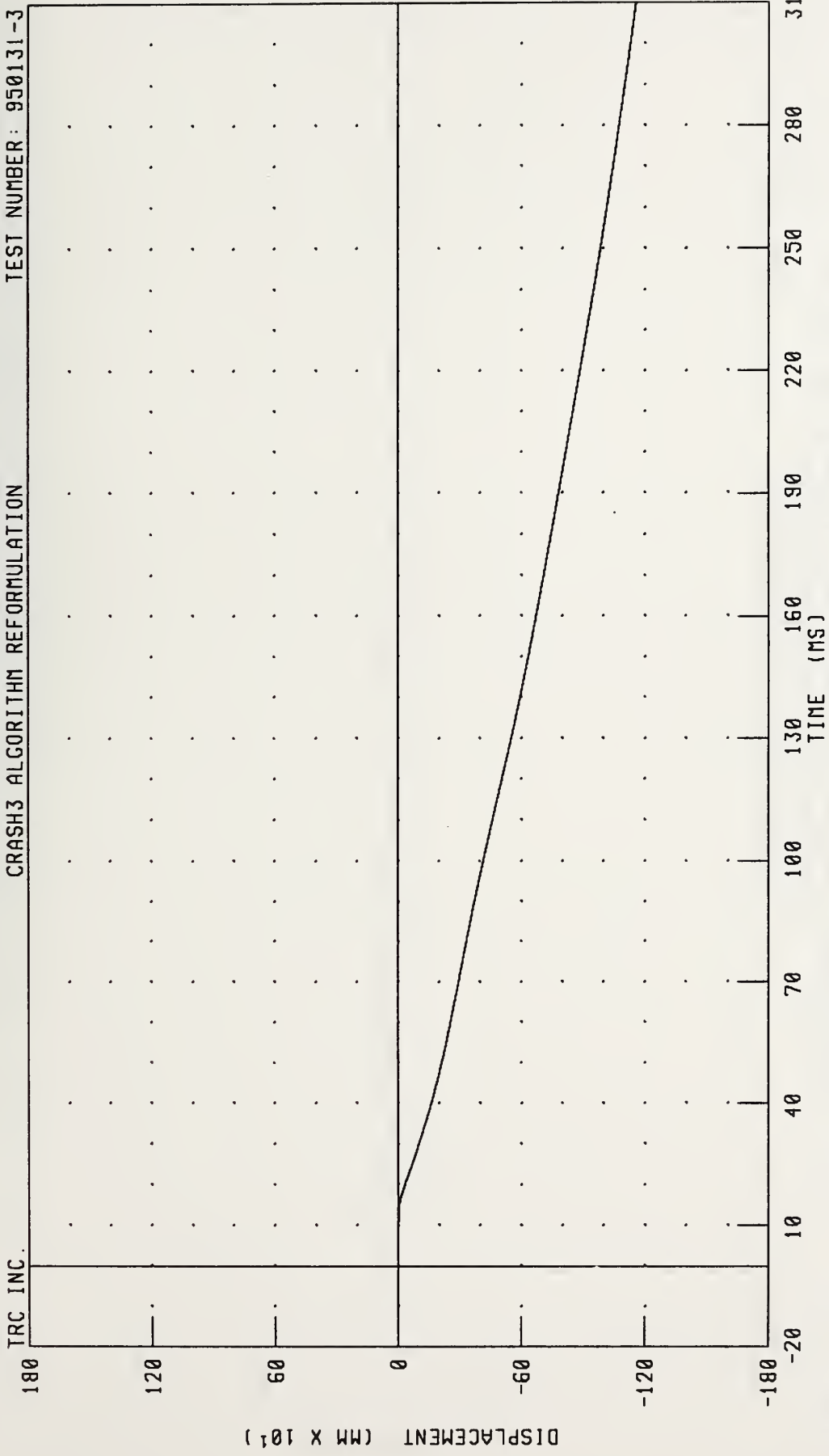


CHANNEL: LFSYV FILTER: CH. CLASS 180

PEAK DATA: 0.14 KM/H @ 7.12 MS; -26.21 KM/H @ 22.16 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
LEFT FRONT SILL Y-AXIS DISPLACEMENT

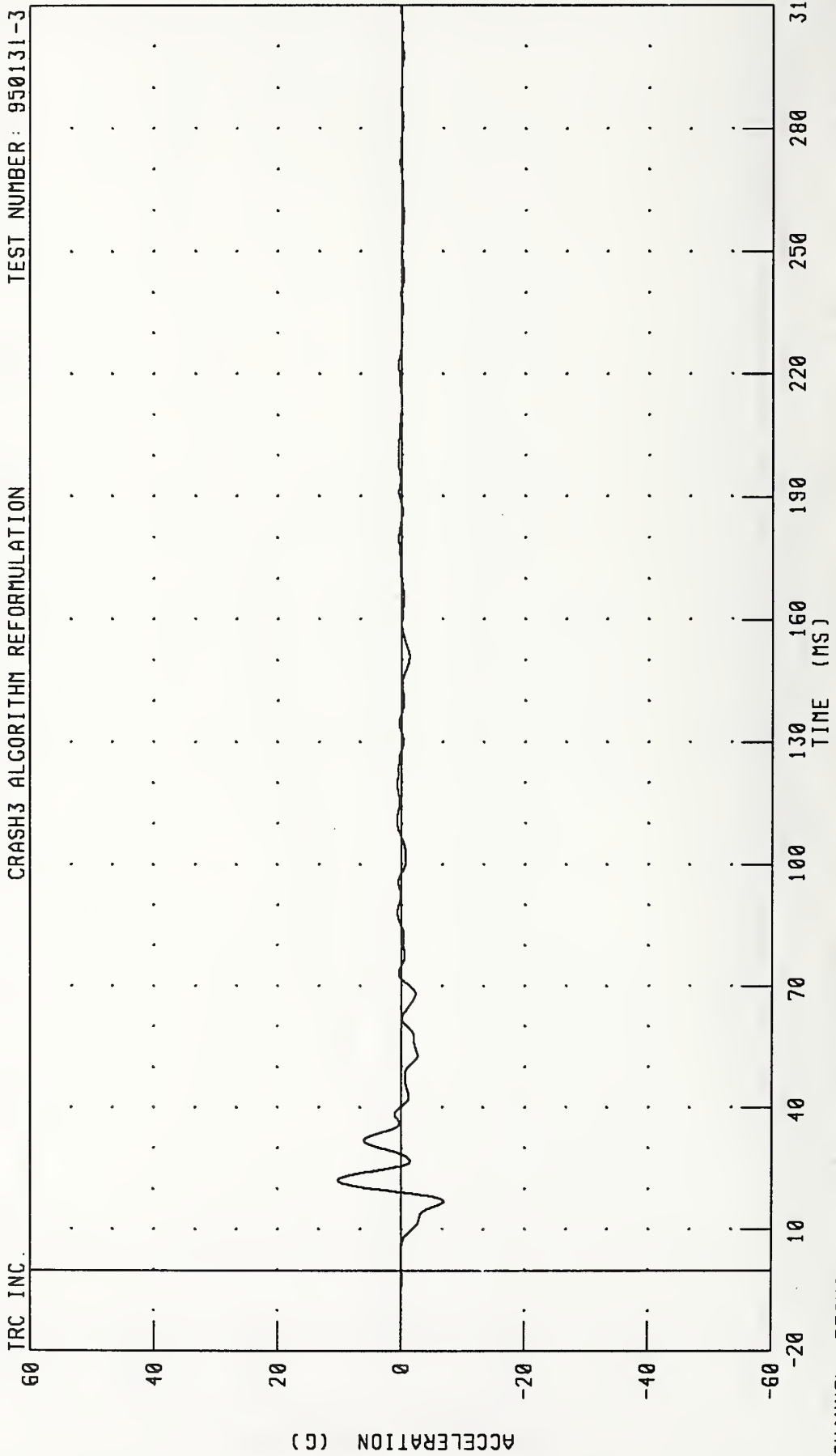
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: LFSYD FILTER: CH. CLASS 180 PEAK DATA: 0.13 MM @ 7.76 MS; -1156.63 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
RIGHT FRONT SILL X-AXIS ACCELERATION
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3



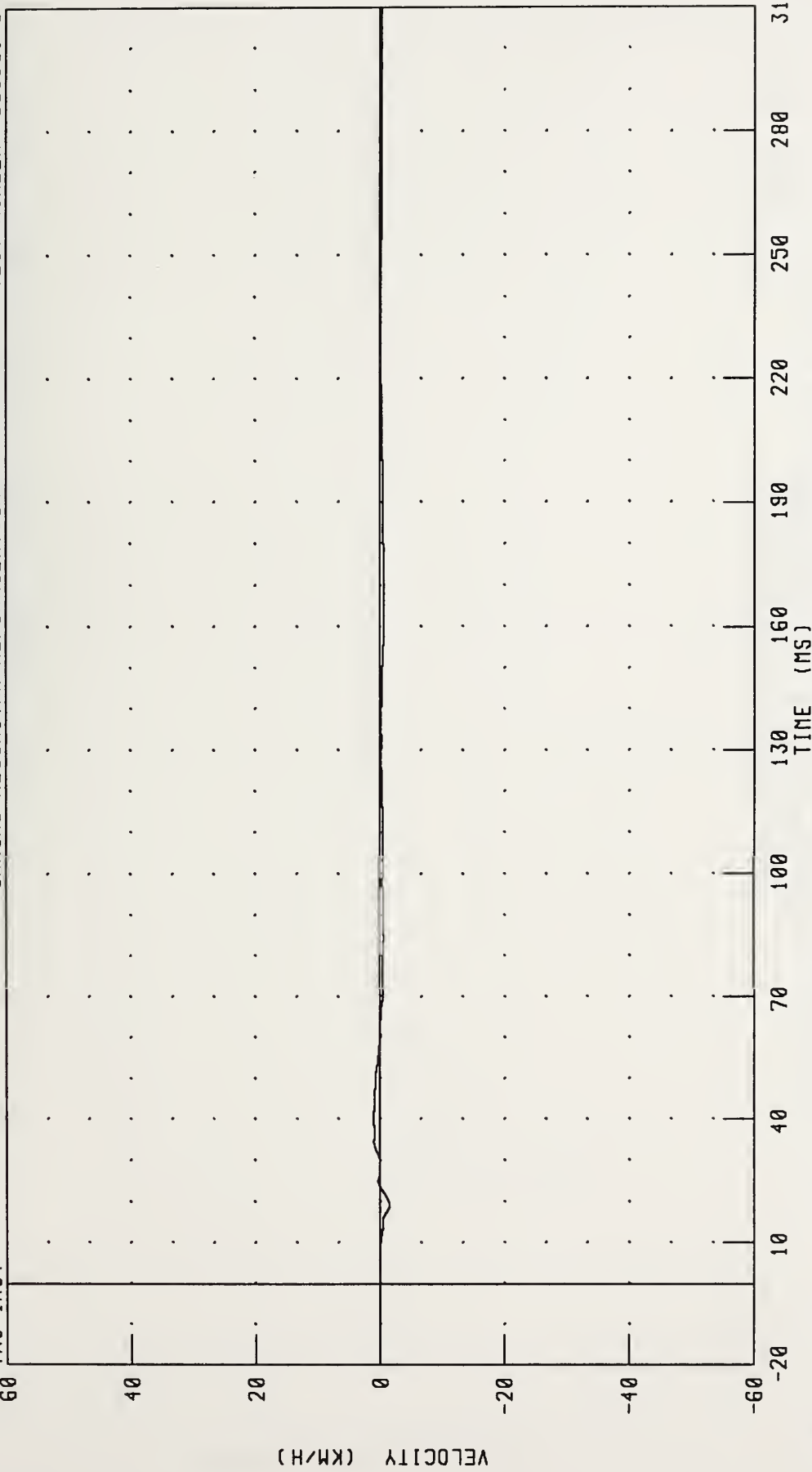
CHANNEL: RFSXG FILTER: CH. CLASS 60

PEAK DATA: 10.26 G @ 22.16 MS; -6.95 G @ 16.96 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 RIGHT FRONT SILL X-AXIS VELOCITY
 CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3

TRC INC.



CHANNEL: RFSXV FILTER: CH. CLASS 180

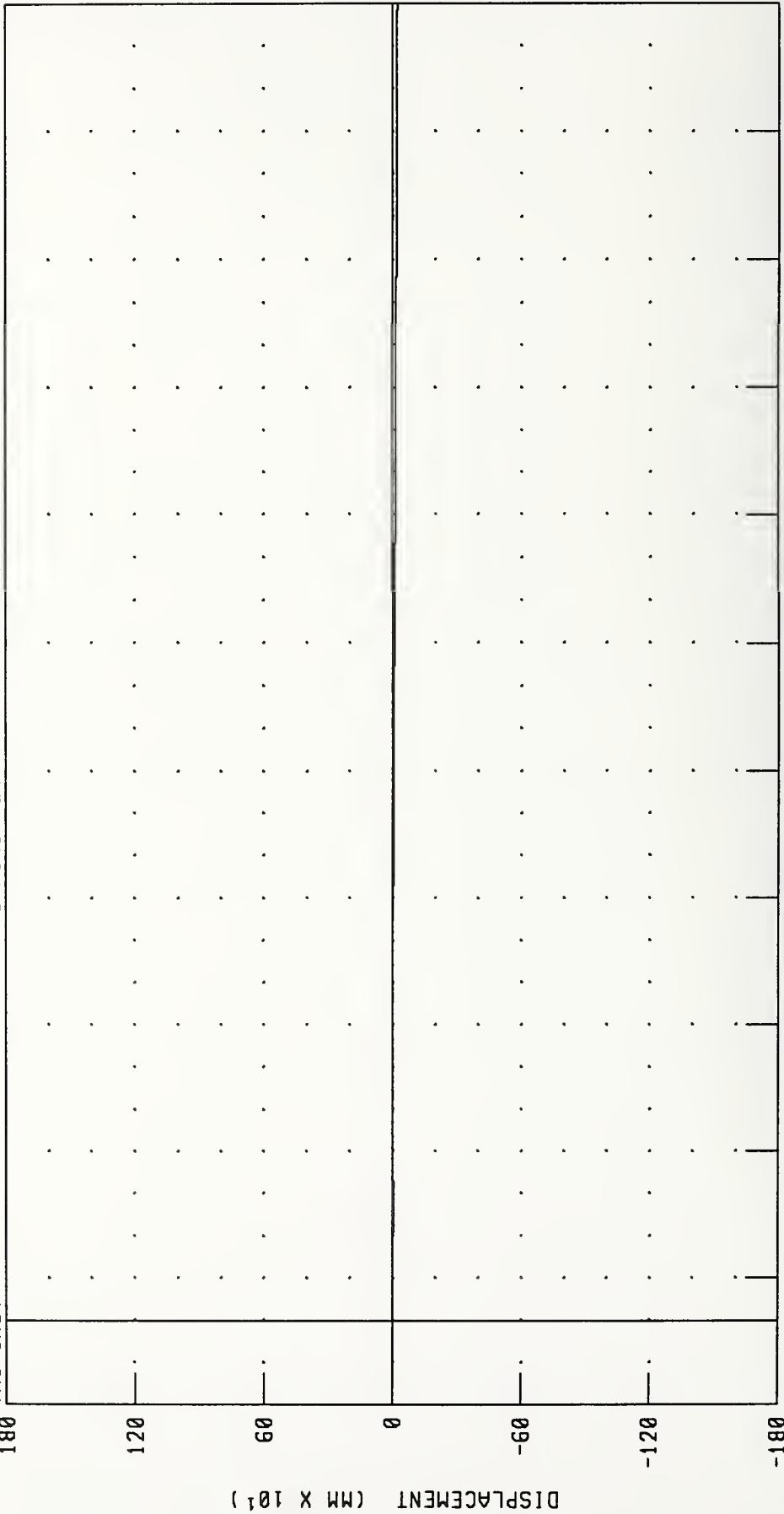
PEAK DATA: 1.05 KM/H @ 40.16 MS; -1.57 KM/H @ 19.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 RIGHT FRONT SILL X-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



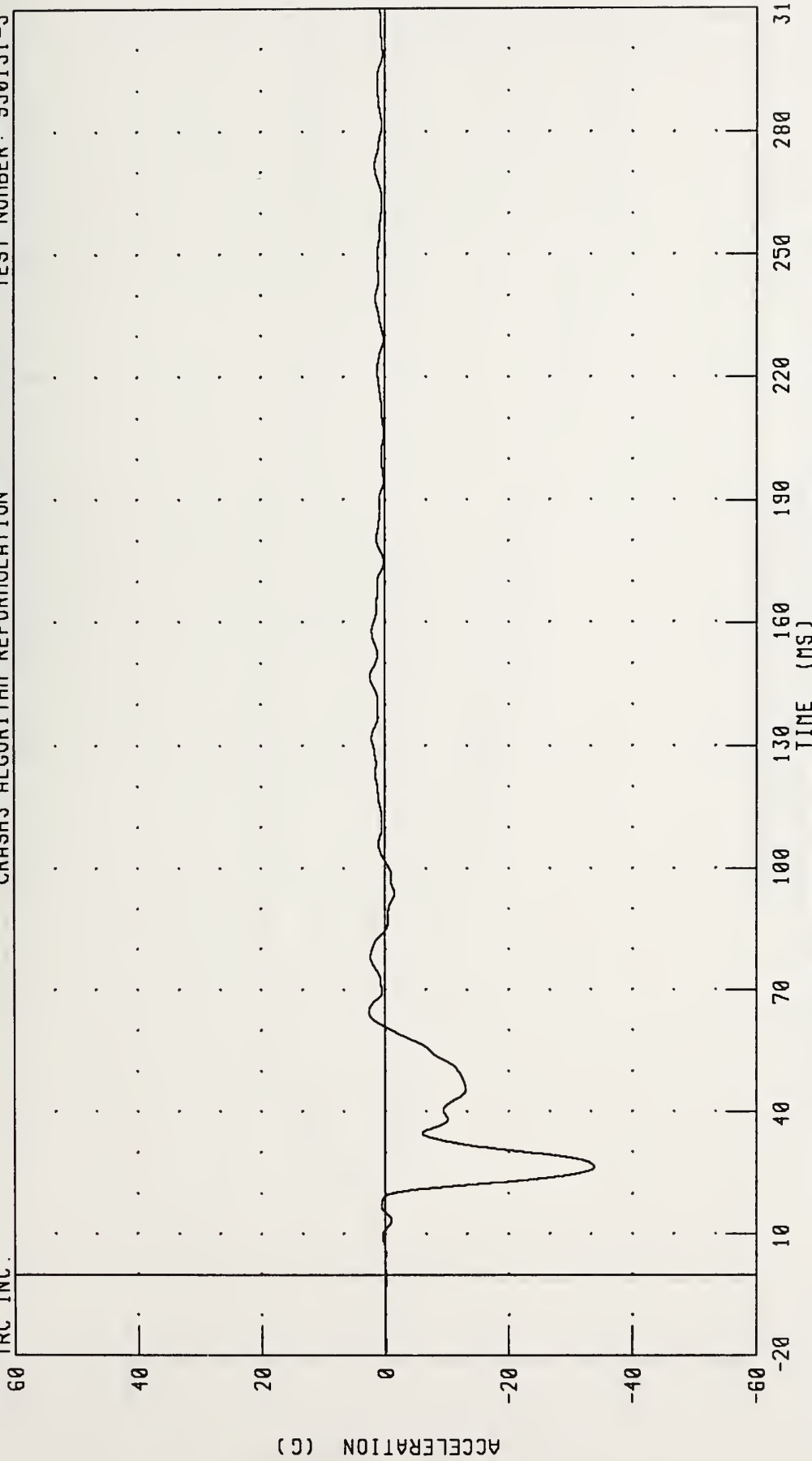
CHANNEL: RFSXD FILTER: CH. CLASS 180

PEAK DATA: 2.70 MM @ 59.04 MS; -22.68 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
RIGHT FRONT SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3

TRC INC.

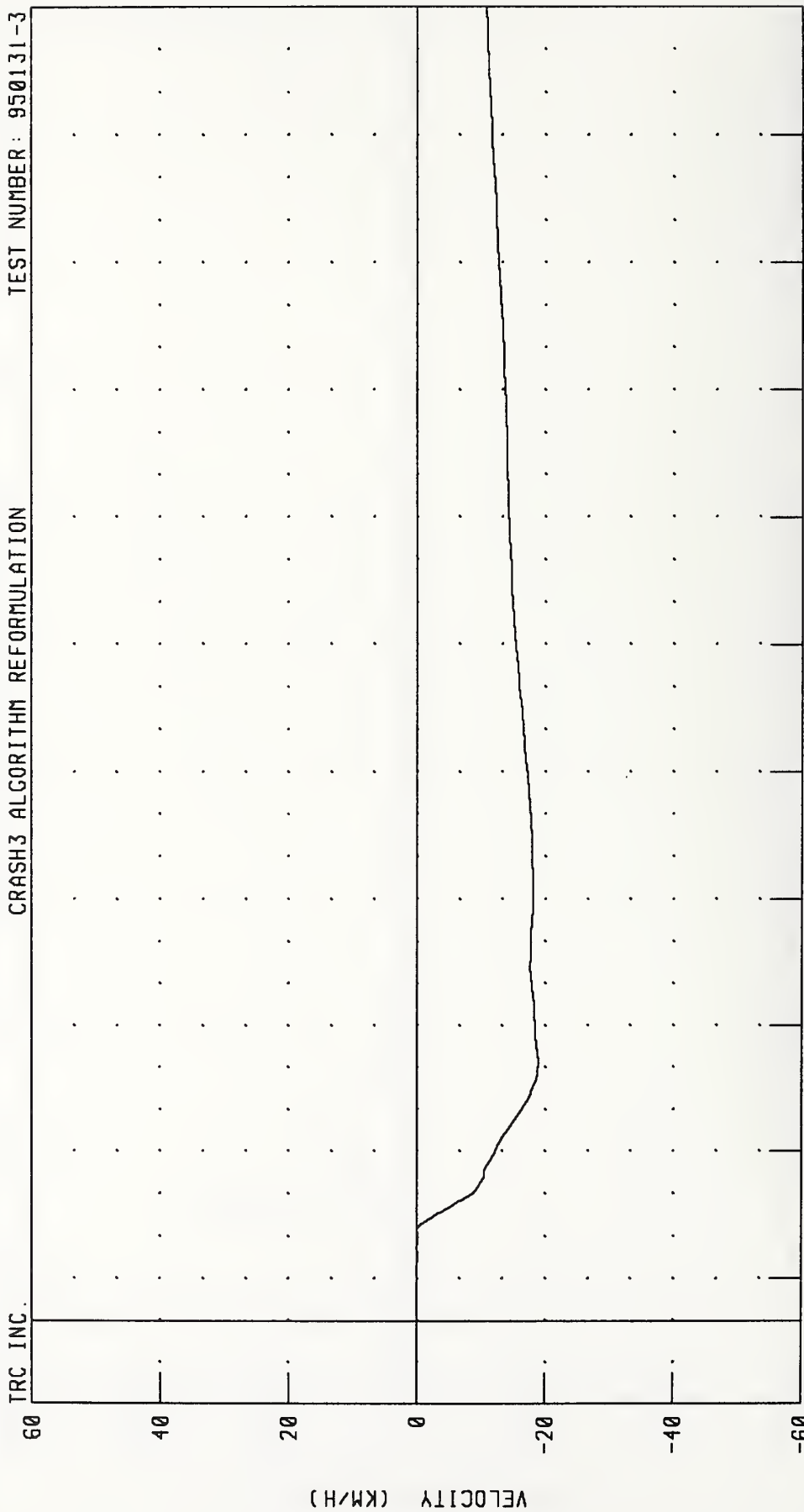


CHANNEL: RFSYG FILTER: CH. CLASS 60

PEAK DATA: 2.59 G @ 64.72 MS; -33.86 G @ 26.48 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 RIGHT FRONT SILL Y-AXIS VELOCITY
 CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3



CHANNEL: RFSYV FILTER: CH. CLASS 180

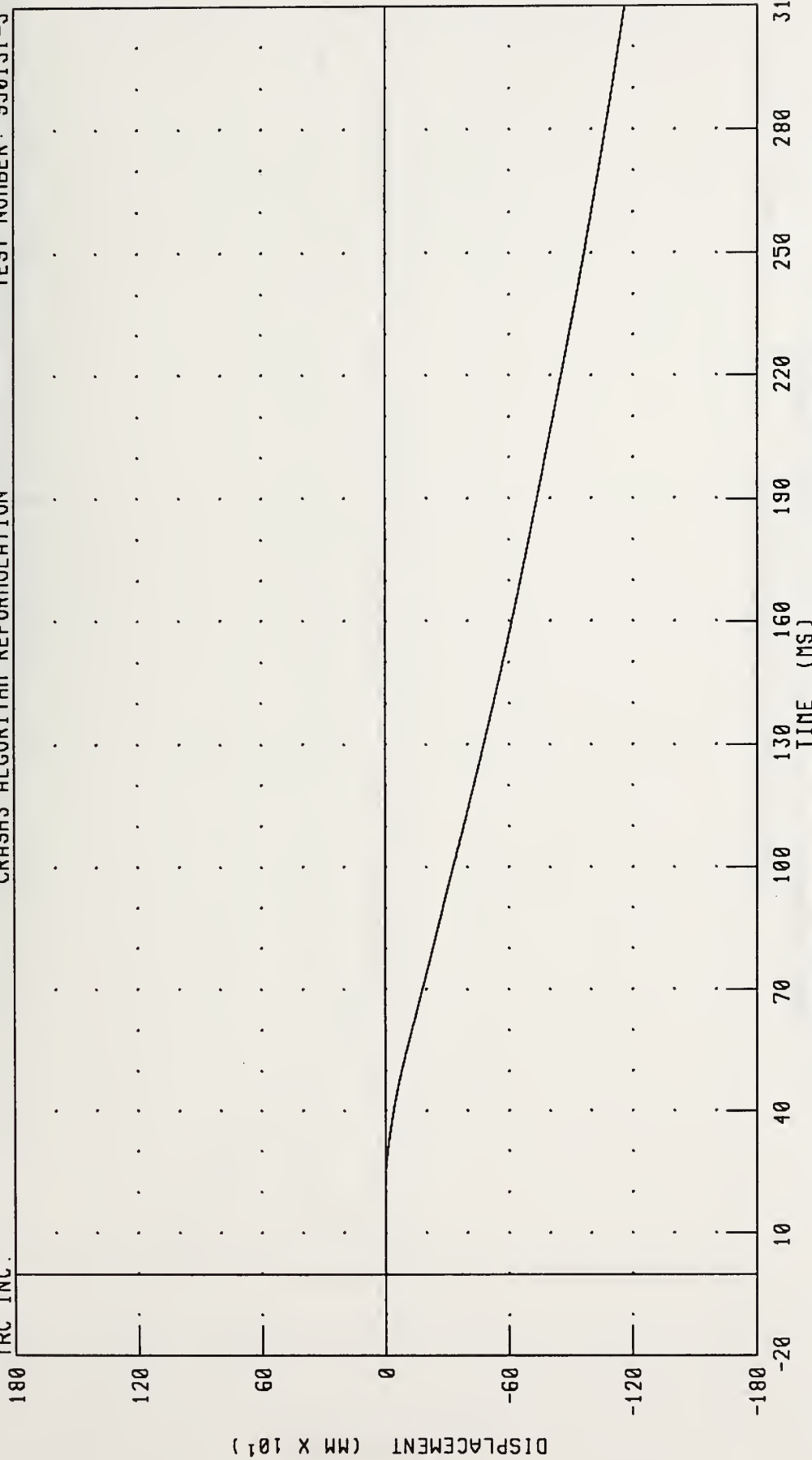
PEAK DATA: 0.06 KM/H @ 11.68 MS; -18.91 KM/H @ 61.20 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
RIGHT FRONT SILL Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3

TRC INC.



CHANNEL: RFSYD FILTER: CH. CLASS 180

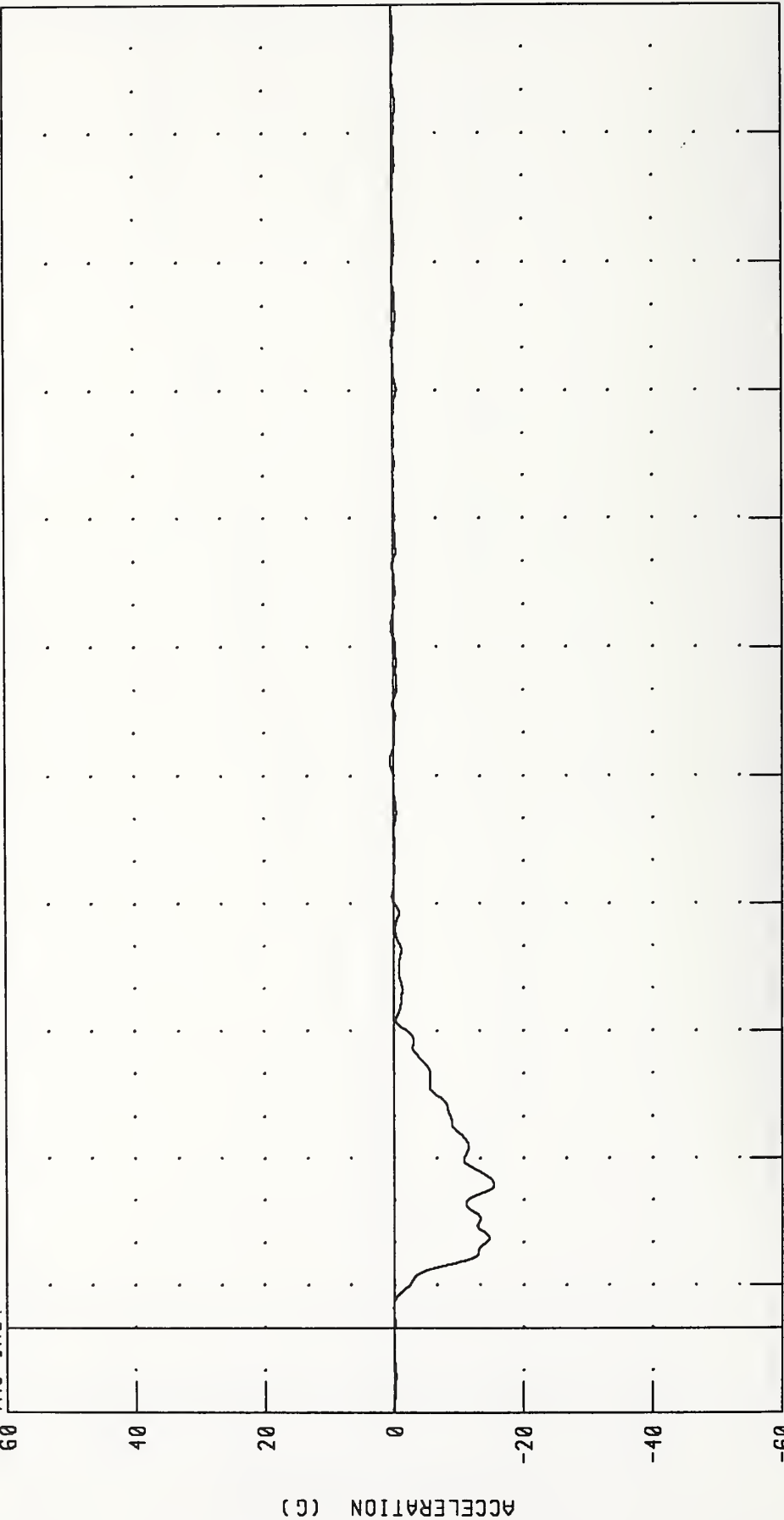
PEAK DATA: 0.02 MM @ 13.04 MS; -1159.48 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS ACCELERATION

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BCGXG FILTER: CH. CLASS 60

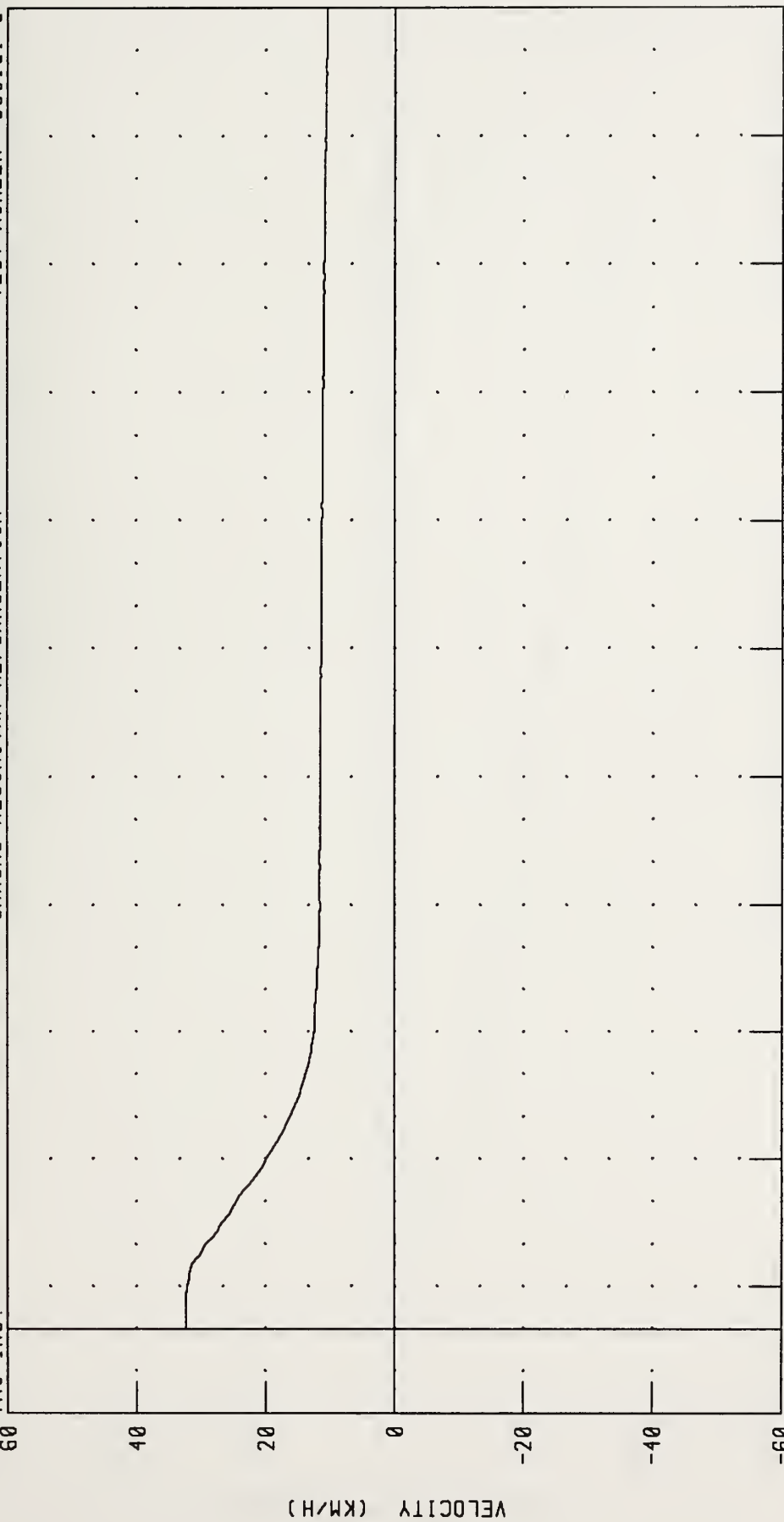
PEAK DATA: 0.60 G @ 133.52 MS; -15.47 G @ 33.76 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 MOVING BARRIER CENTER OF GRAVITY X-AXIS VELOCITY

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



TIME (MS) 130 160 190 220 250 280 310

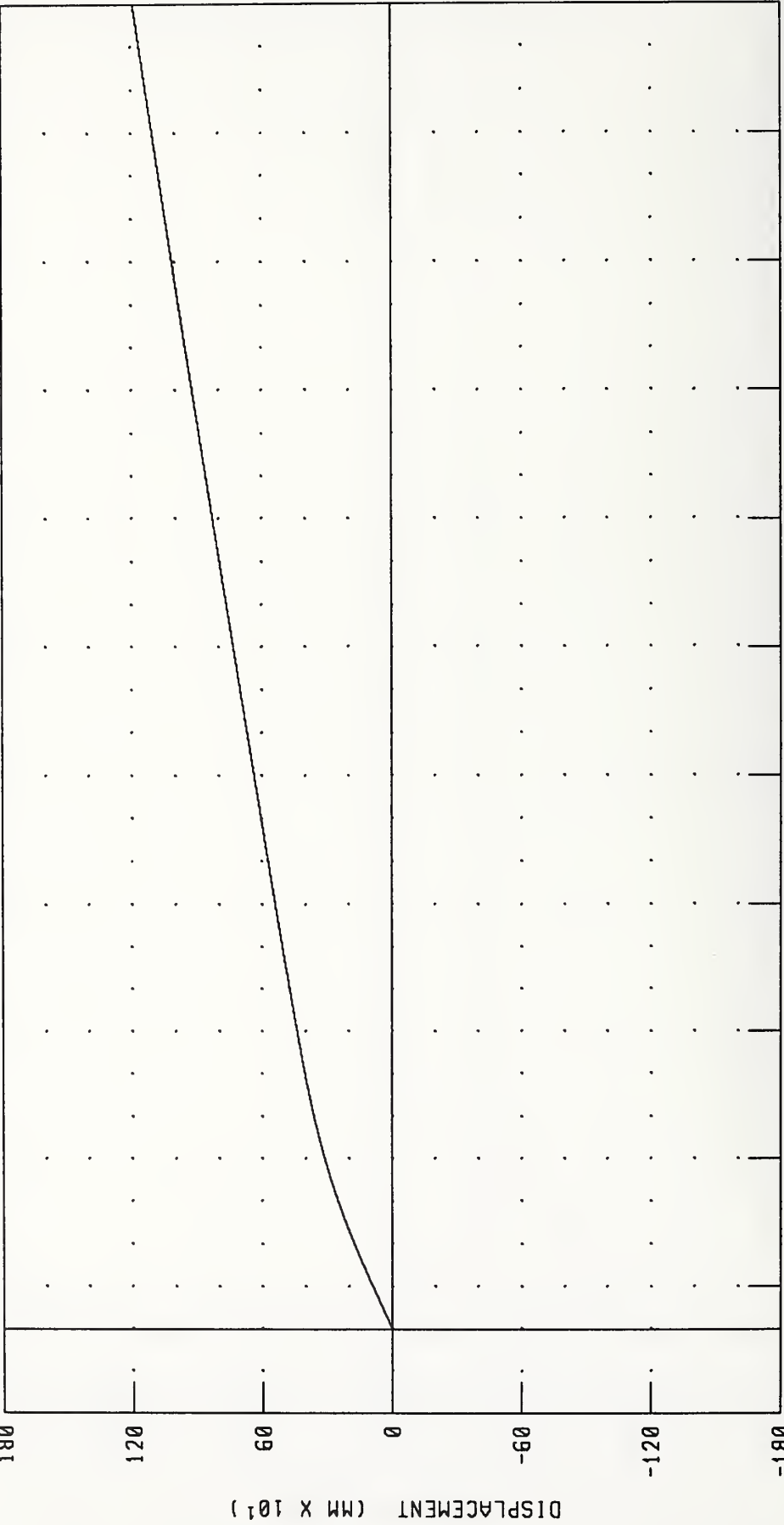
CHANNEL: BCGXY FILTER: CH. CLASS 180 PEAK DATA: 32.30 KM/H @ 0.24 MS; 10.52 KM/H @ 308.08 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BCGXD FILTER: CH. CLASS 180

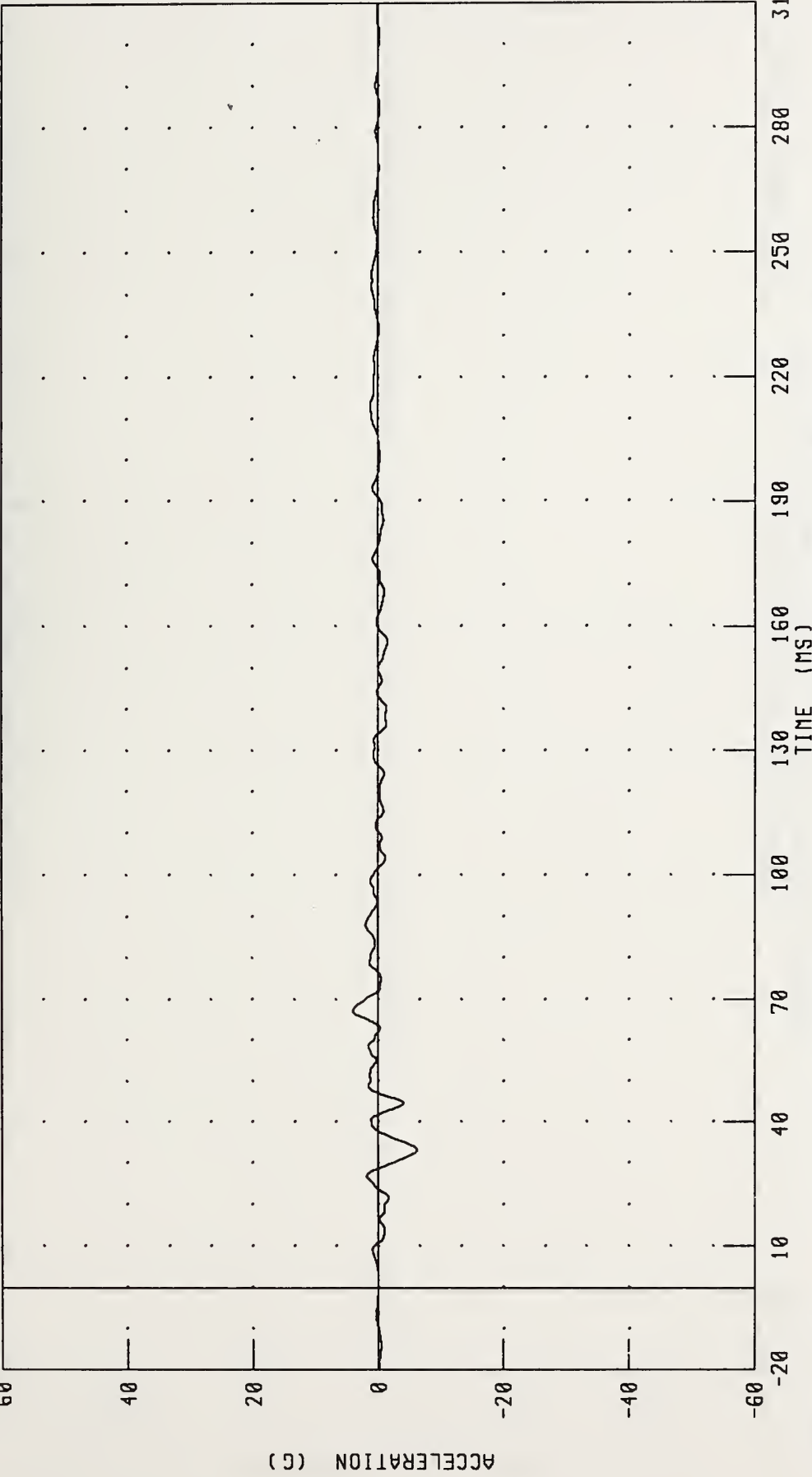
PEAK DATA: 1190.74 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER CENTER OF GRAVITY Y-AXIS ACCELERATION

TRC INC.

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950131-3



CHANNEL: BCGYG FILTER: CH. CLASS 60

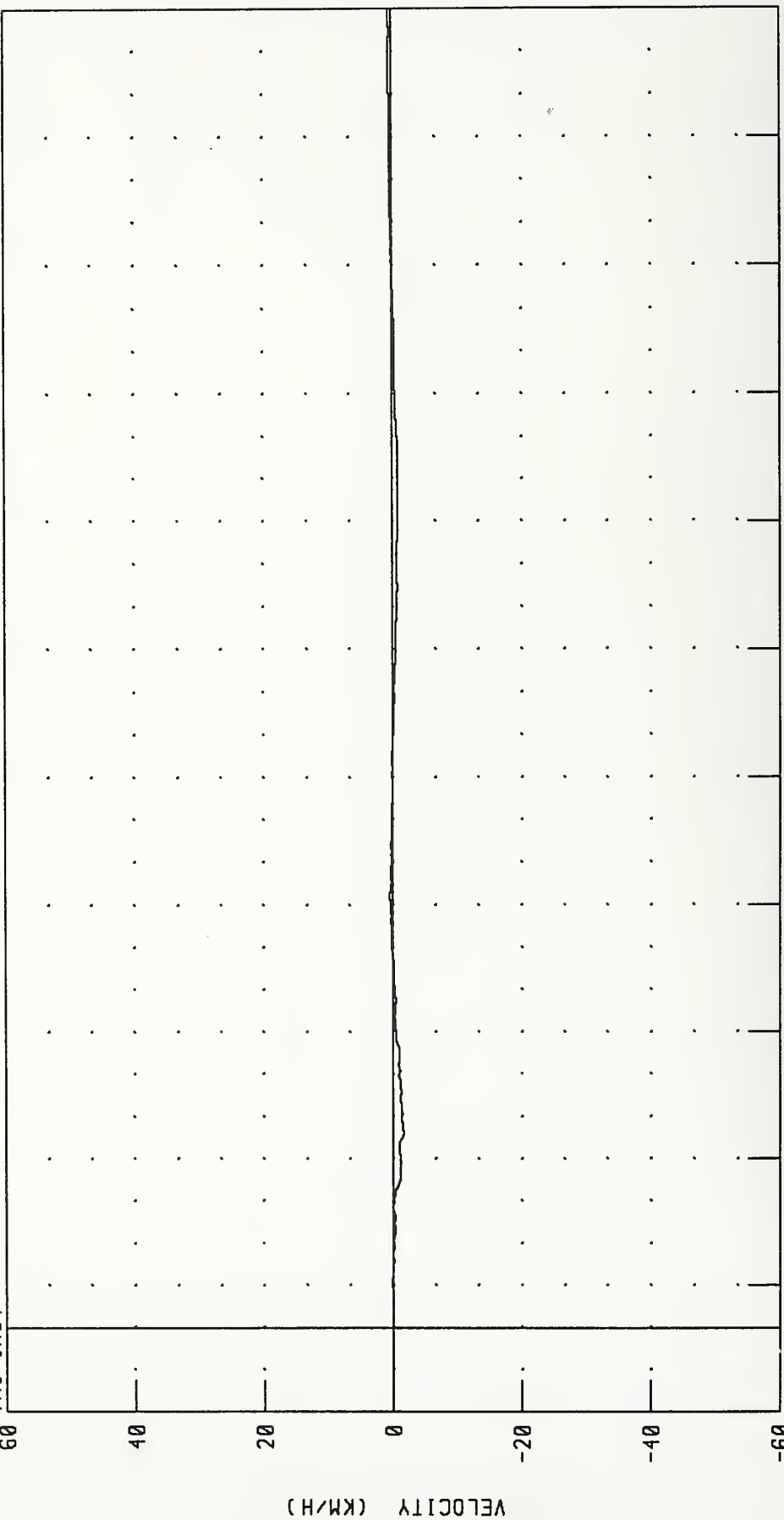
PEAK DATA: 4.07 G @ 67.20 MS; -6.27 G @ 33.20 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 MOVING BARRIER CENTER OF GRAVITY Y-AXIS VELOCITY

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BCGYV FILTER: CH. CLASS 180

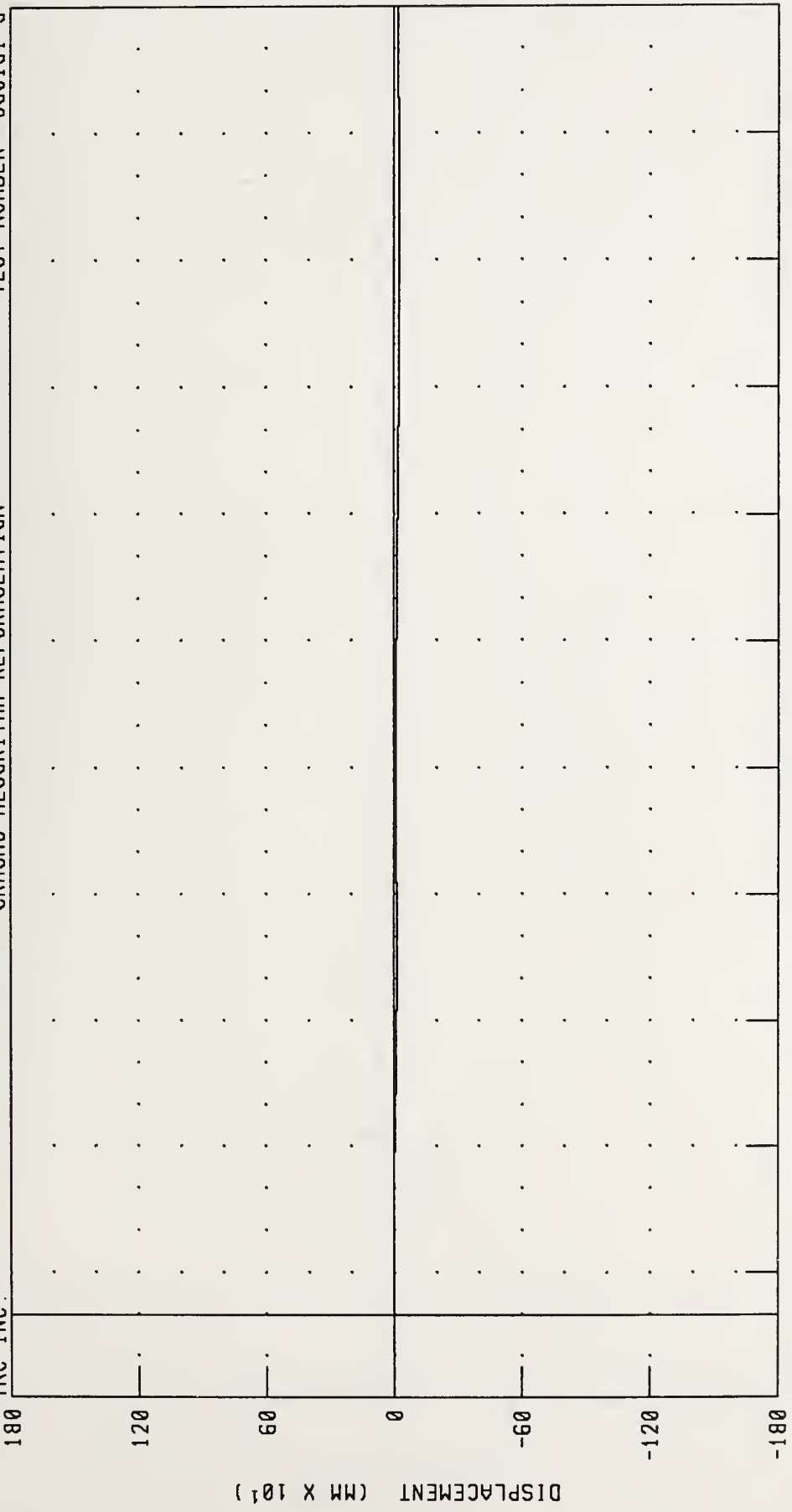
PEAK DATA: 0.47 KM/H @ 297.52 MS; -1.66 KM/H @ 45.92 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 MOVING BARRIER CENTER OF GRAVITY Y-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BCGYD FILTER: CH. CLASS 180

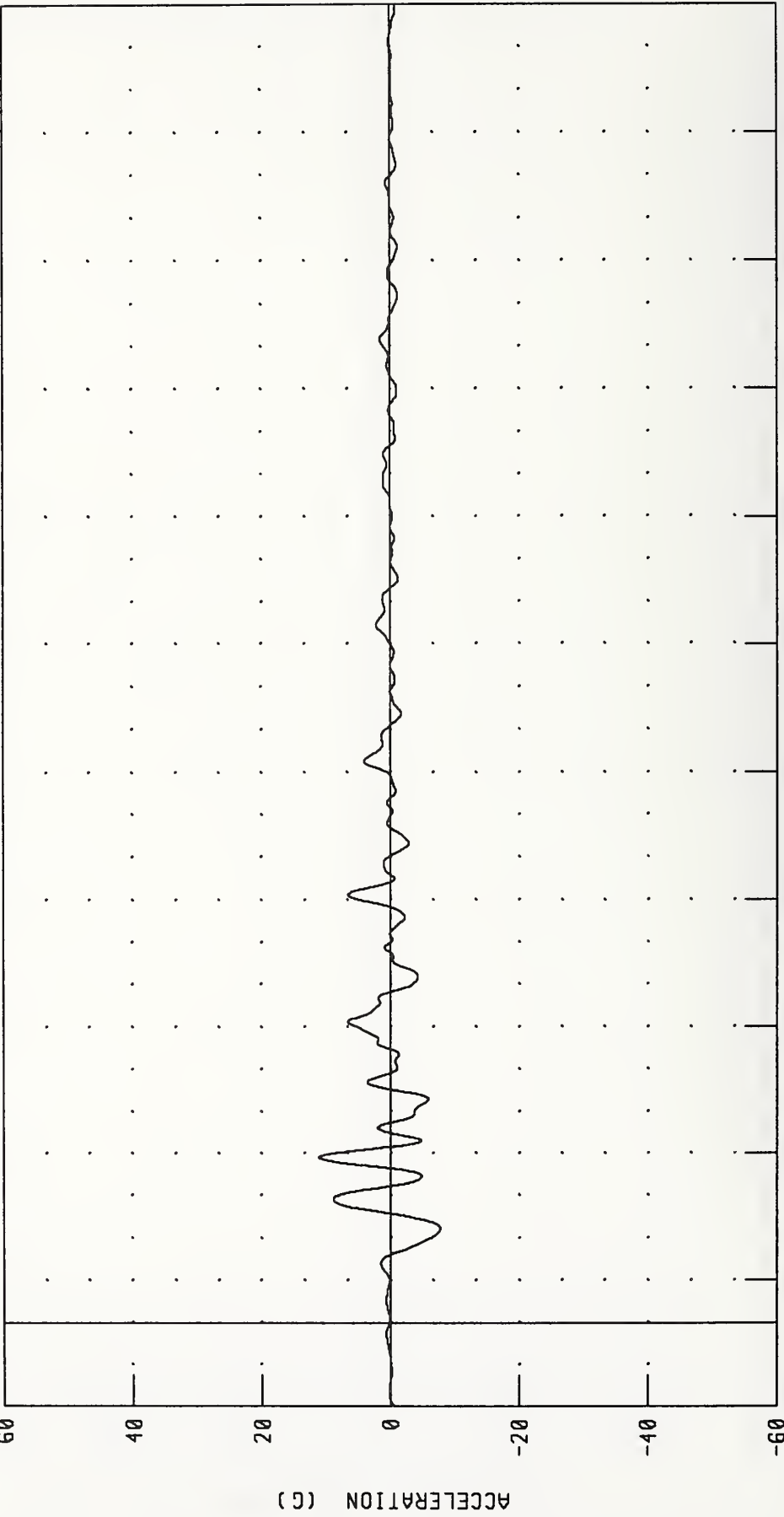
PEAK DATA: 0.18 MM @ 14.48 MS; -25.84 MM @ 245.68 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.

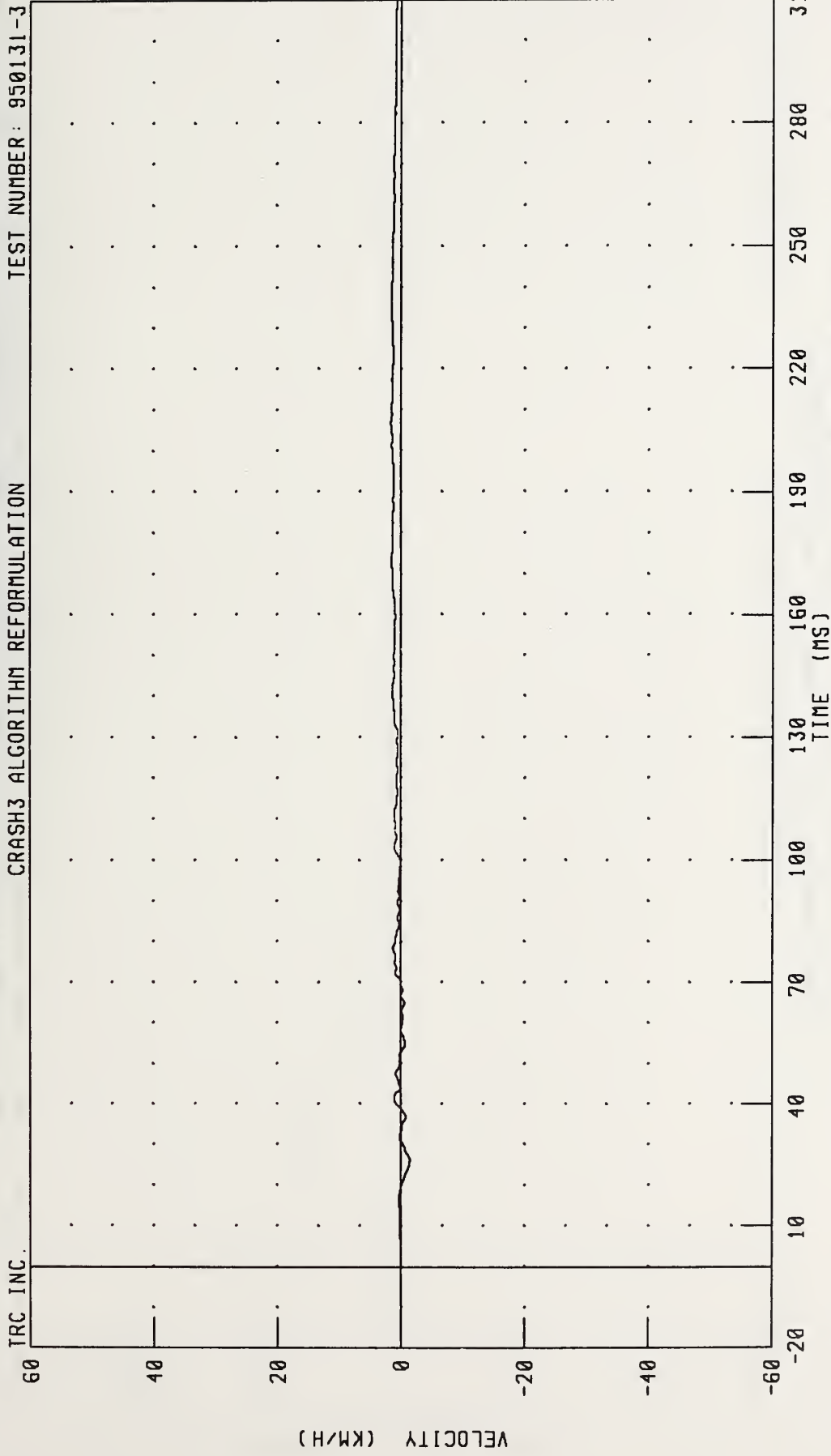


CHANNEL: BCGZG FILTER: CH. CLASS 60

PEAK DATA: 11.12 G @ 39.04 MS; -7.73 G @ 22.24 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER CENTER OF GRAVITY Z-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: BCGZY FILTER: CH. CLASS 180

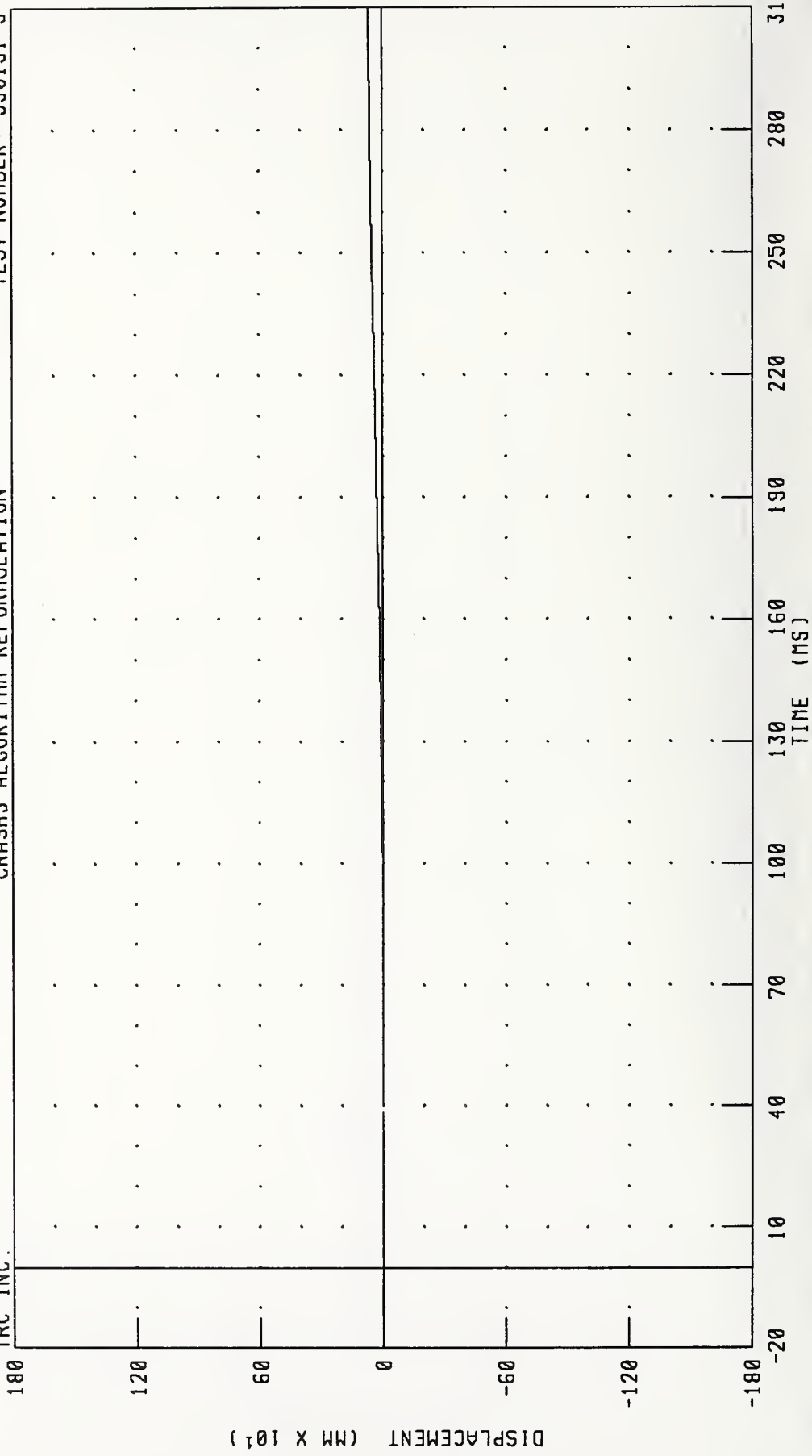
PEAK DATA: 1.64 KM/H @ 206.88 MS; -1.44 KM/H @ 26.16 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 MOVING BARRIER CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.

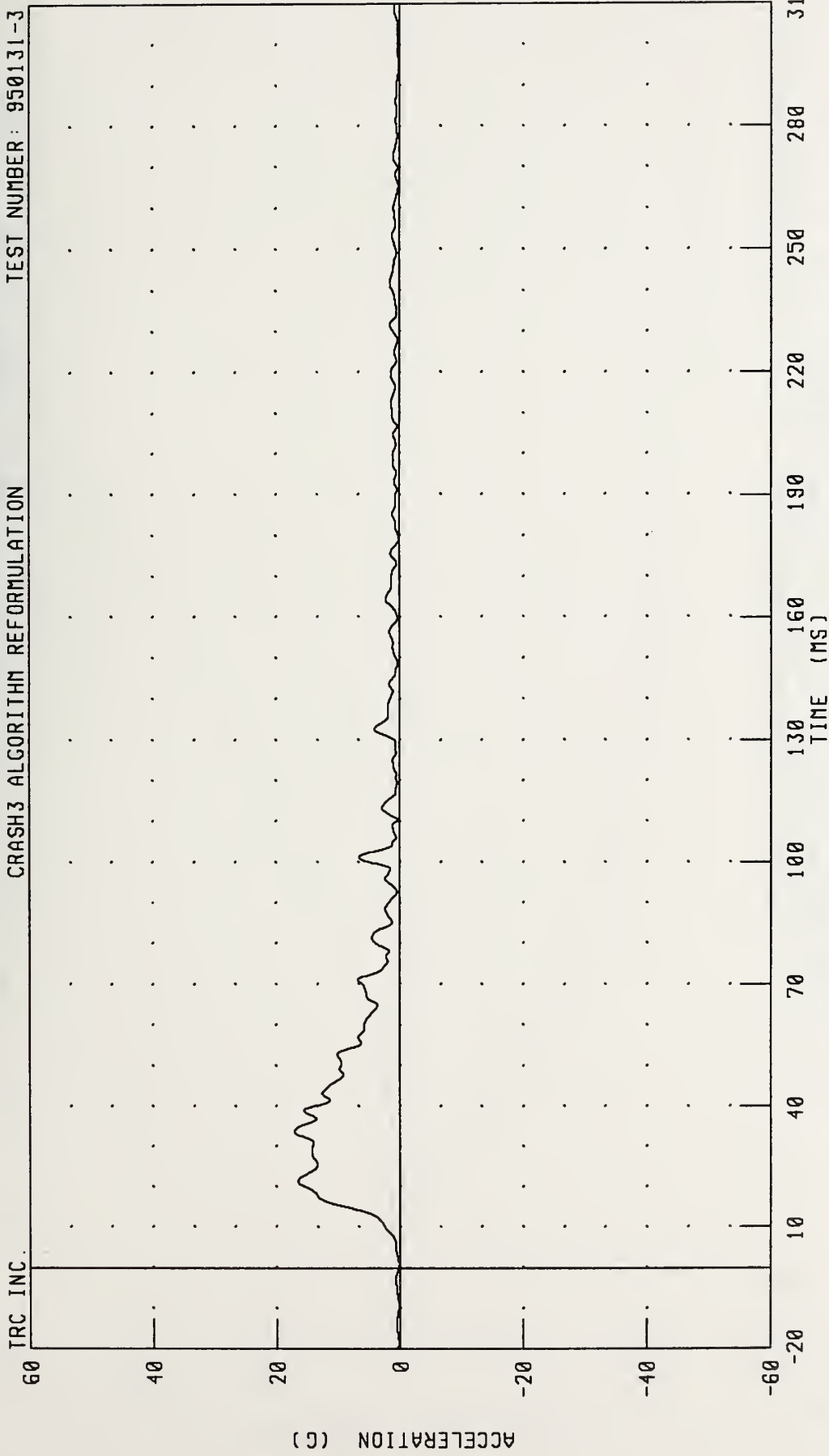


CHANNEL: BCGZD FILTER: CH. CLASS 180

PEAK DATA: 67.87 MM @ 310.00 MS; -2.26 MM @ 38.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: BCGRG FILTER: CH. CLASS 60

PEAK DATA: 17.14 G @ 33.76 MS; 0.09 G @ 110.40 MS

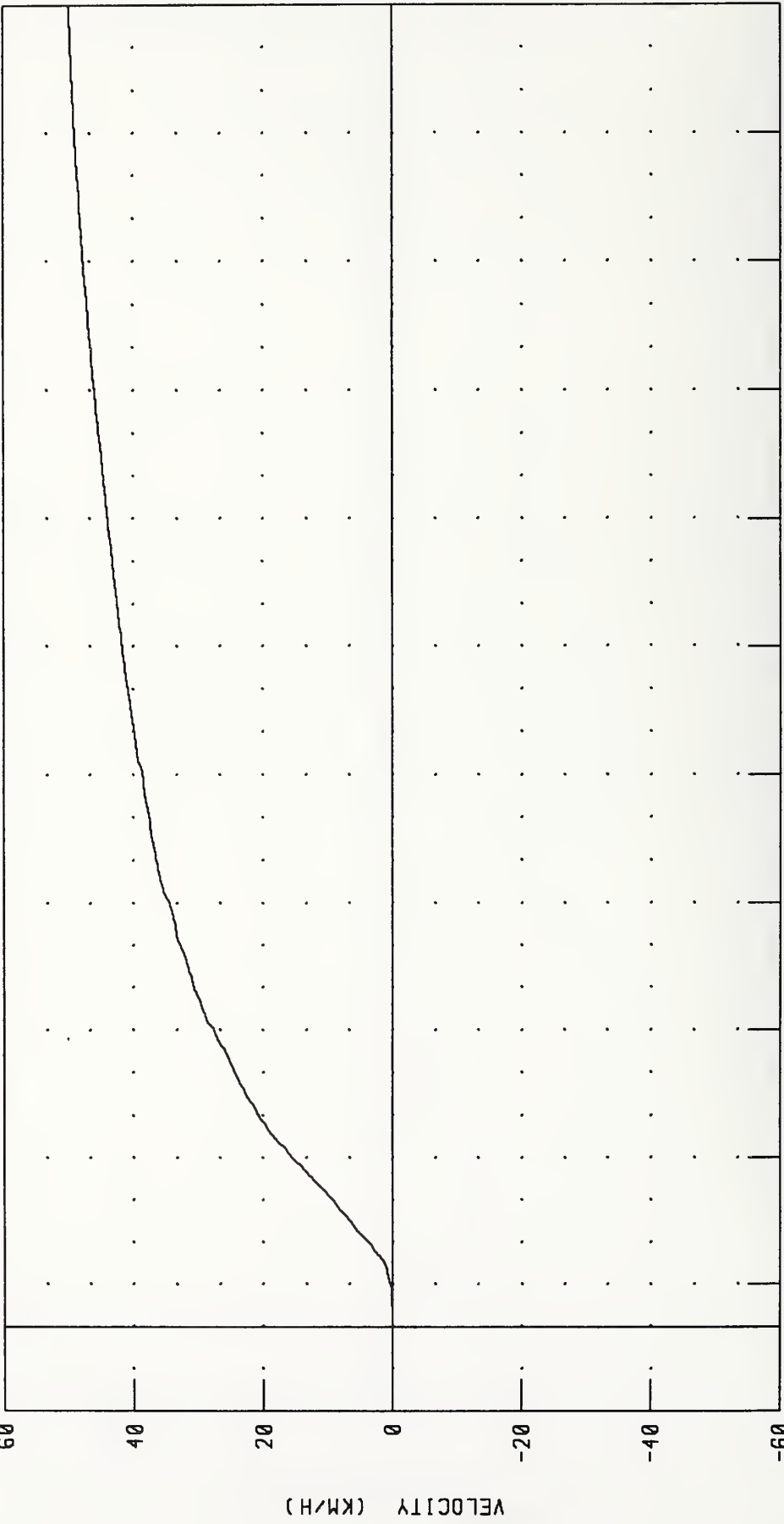
1302m (Pa. 2005)

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT VELOCITY

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BCGRV FILTER: CH. CLASS 180

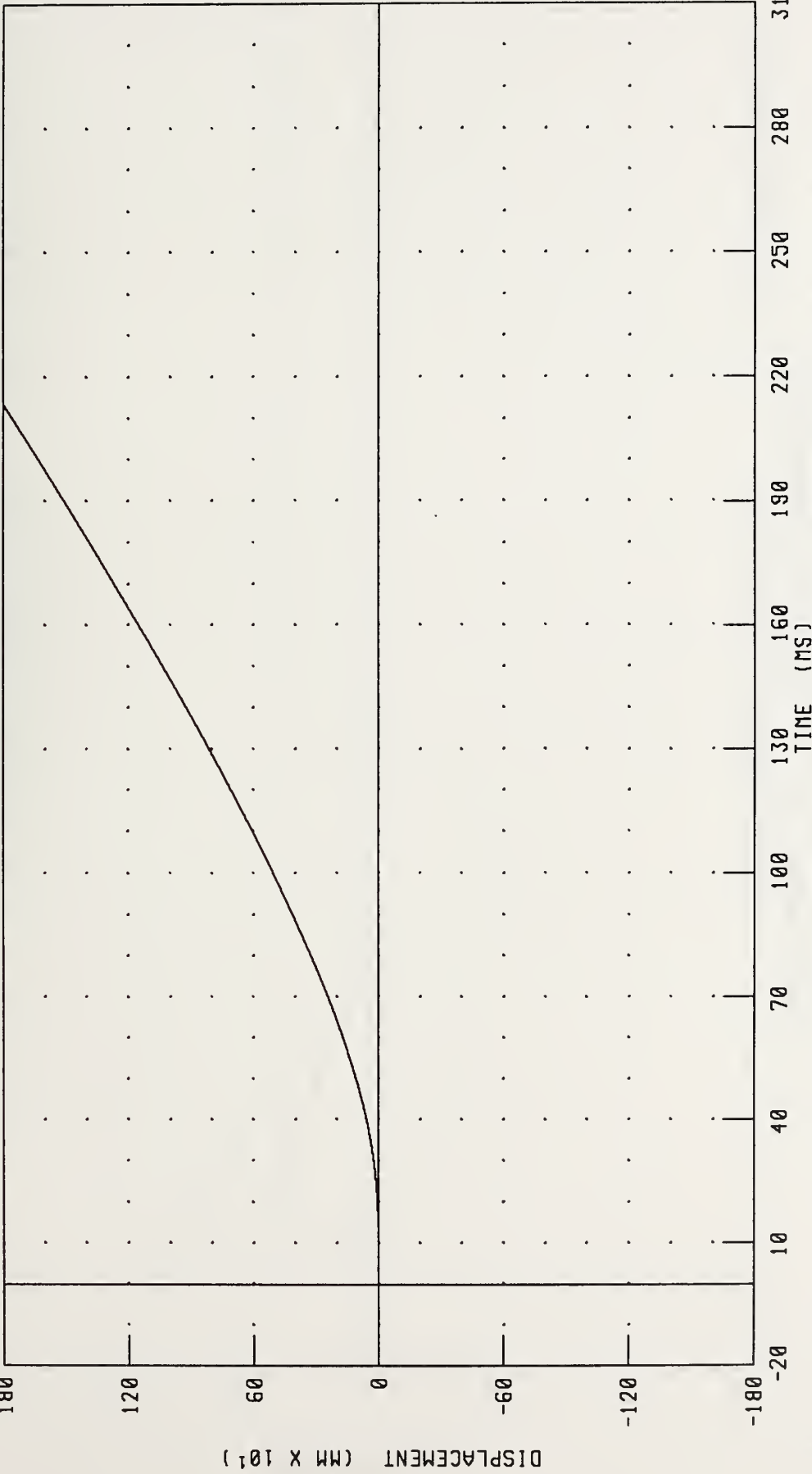
PEAK DATA: 49.89 KM/H @ 310.00 MS; 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

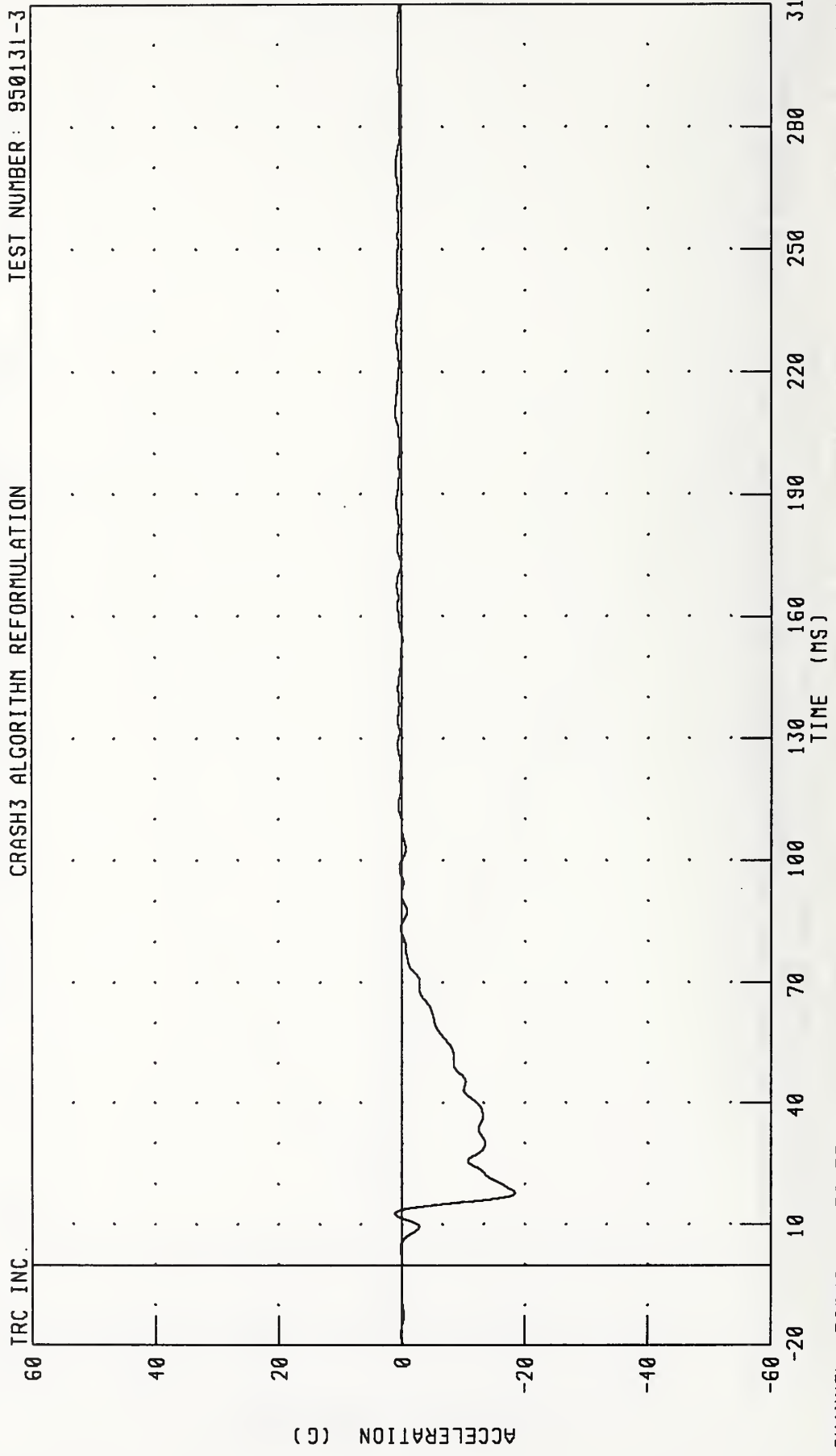
TRC INC.



CHANNEL: BCGRD FILTER: CH. CLASS 180 PEAK DATA: 3085.93 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS ACCELERATION

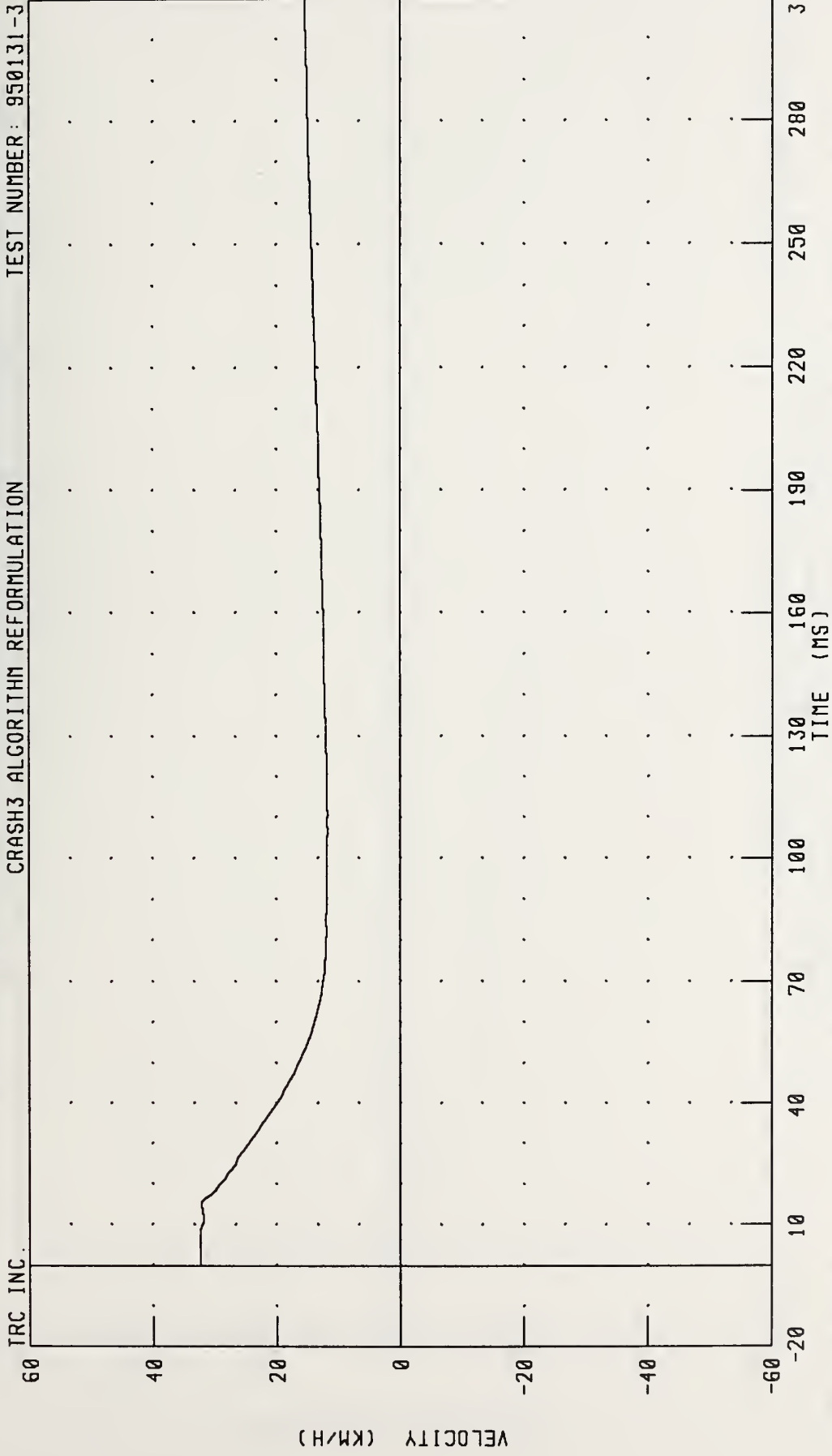
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: BSRXG FILTER: CH. CLASS 60 PEAK DATA: 1.14 G @ 12.64 MS; -18.42 G @ 17.76 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: BSRXY FILTER: CH. CLASS 180

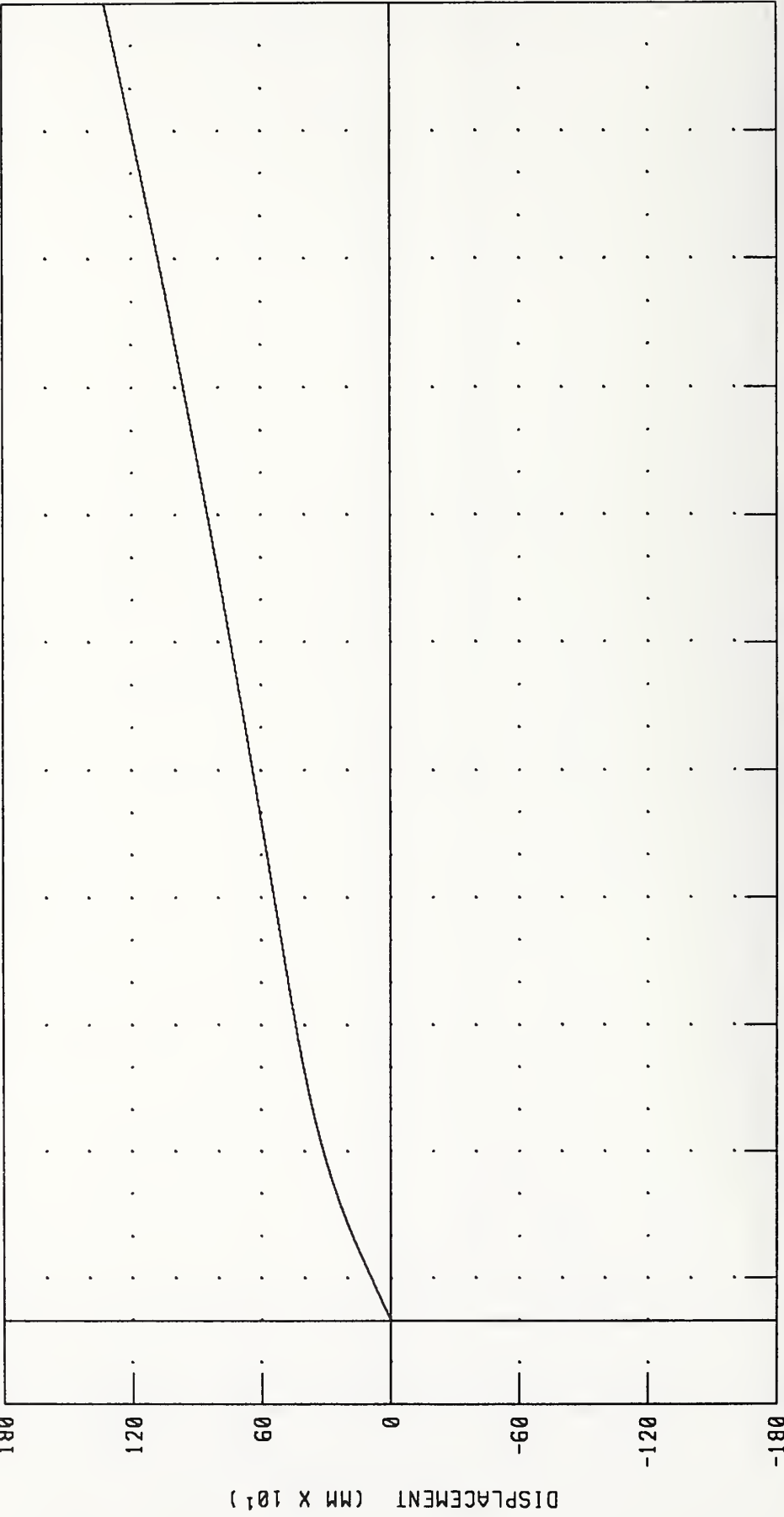
PEAK DATA: 32.32 KM/H @ 8.00 MS; 11.76 KM/H @ 106.48 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 MOVING BARRIER LEFT SIDE RAIL X-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.

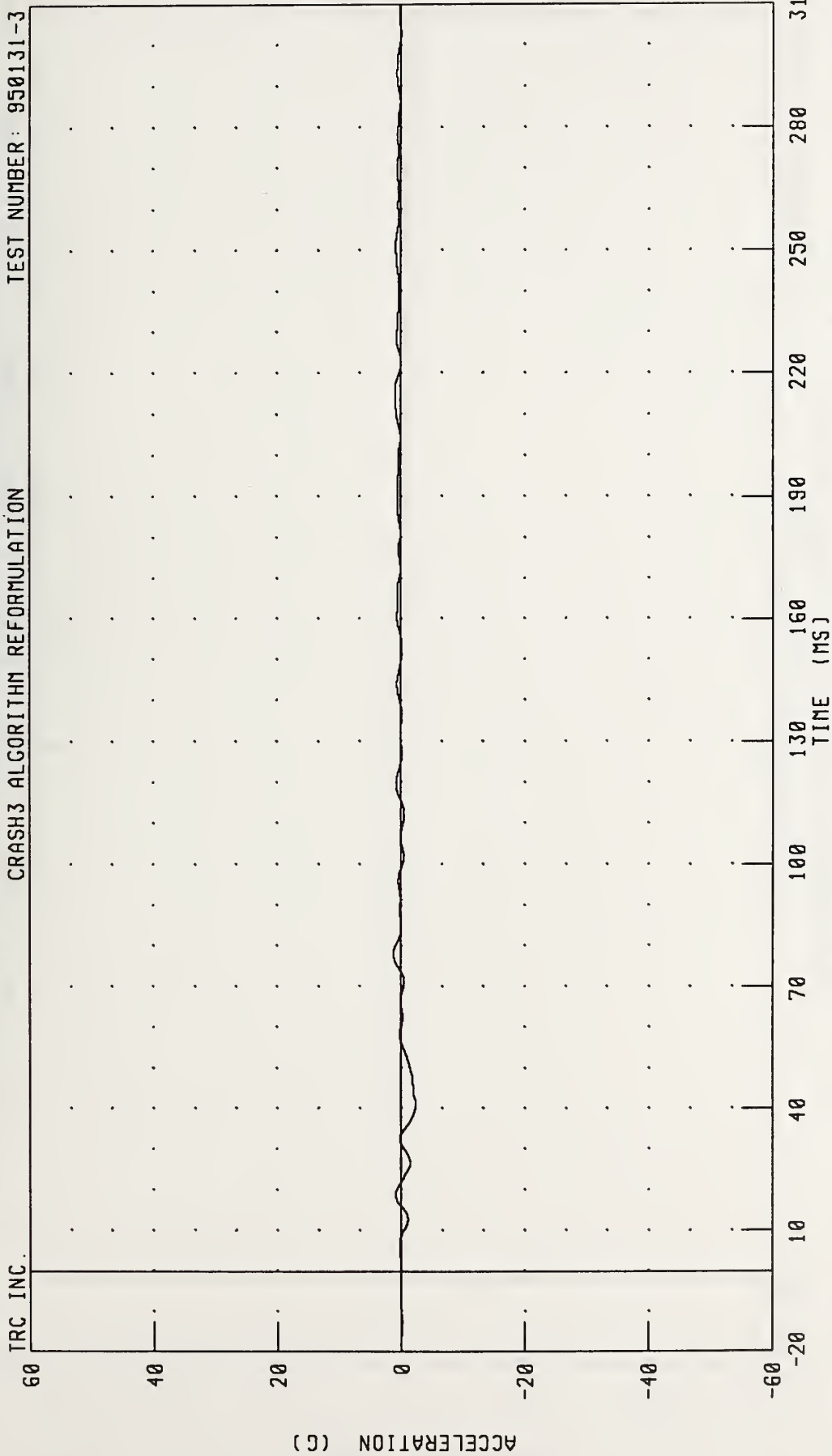


CHANNEL: BSRXD FILTER: CH. CLASS 180

PEAK DATA: 1325.92 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
MOVING BARRIER LEFT SIDE RAIL Y-AXIS ACCELERATION

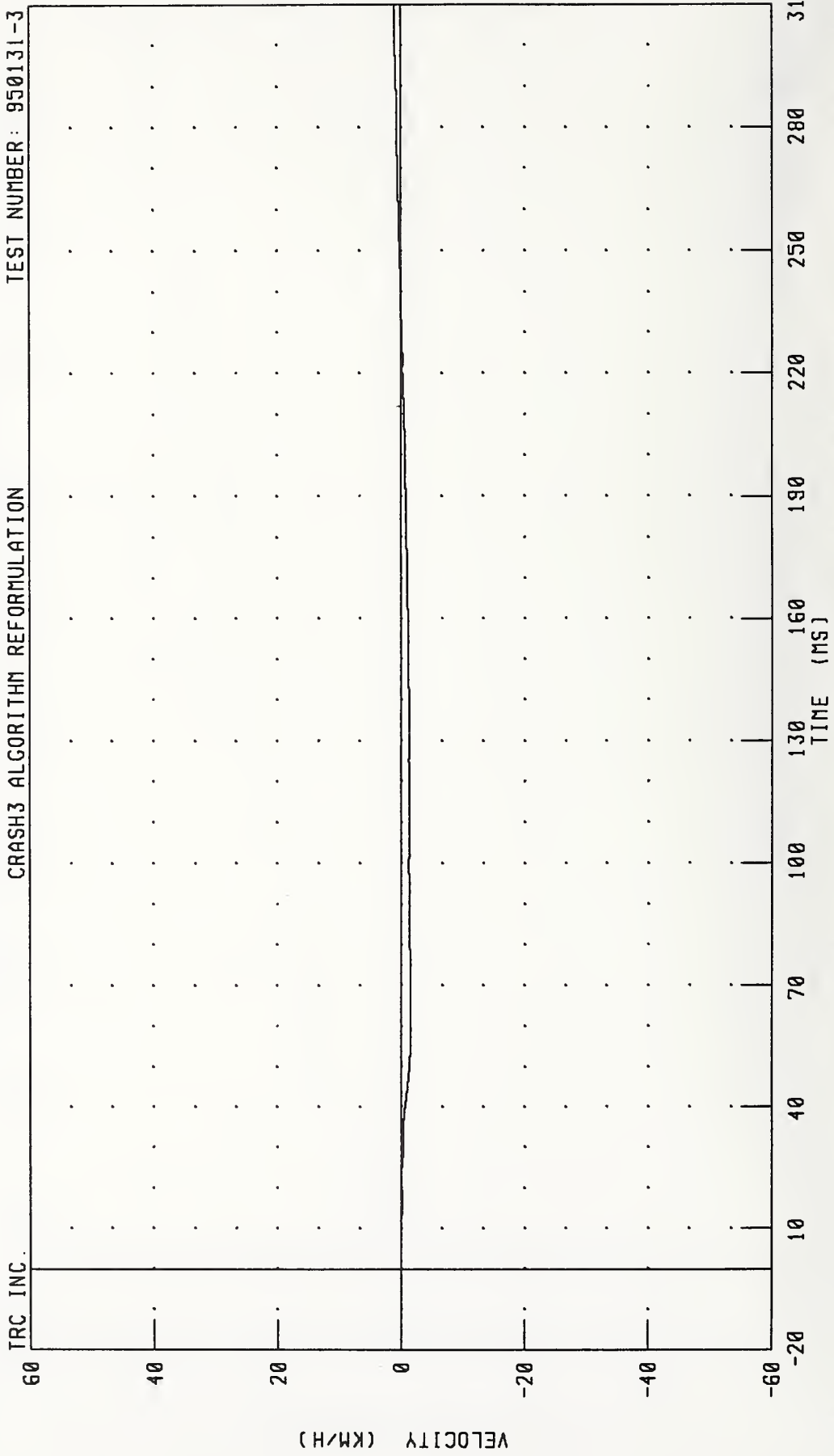
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: BSRYG FILTER: CH. CLASS 60 PEAK DATA: 1.19 G @ 78.08 MS; -2.38 G @ 41.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 MOVING BARRIER LEFT SIDE RAIL Y-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950131-3



CHANNEL: BSRYV FILTER: CH. CLASS 180

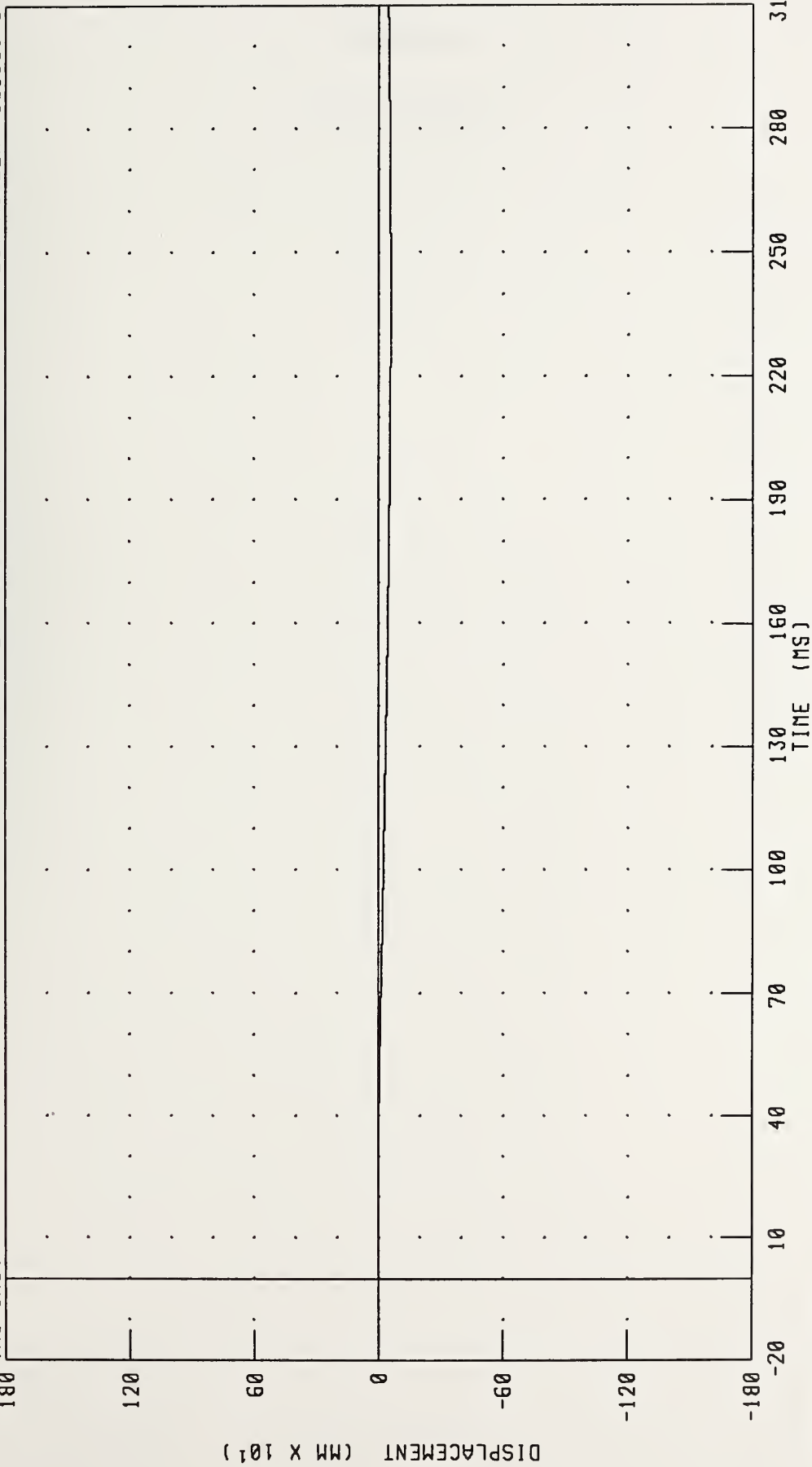
PEAK DATA: 1.00 KM/H @ 310.00 MS; -1.59 KM/H @ 73.84 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 3 OF 5
 MOVING BARRIER LEFT SIDE RAIL Y-AXIS DISPLACEMENT

TEST NUMBER: 950131-3

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BSRYD FILTER: CH. CLASS 180

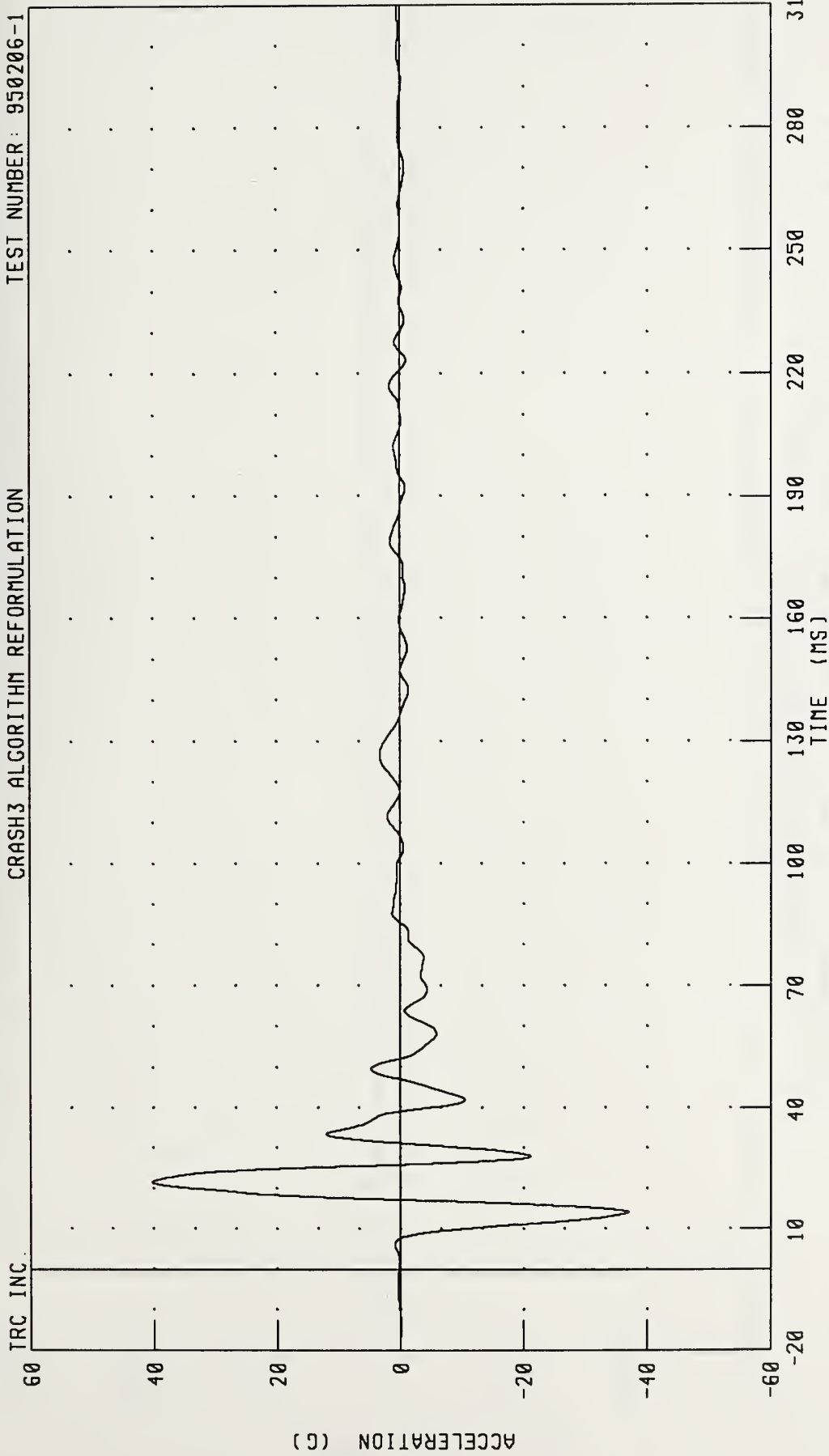
PEAK DATA: 0.04 MM @ 11.28 MS; -58.61 MM @ 238.00 MS

Data Plots

Test No. 950206-1

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



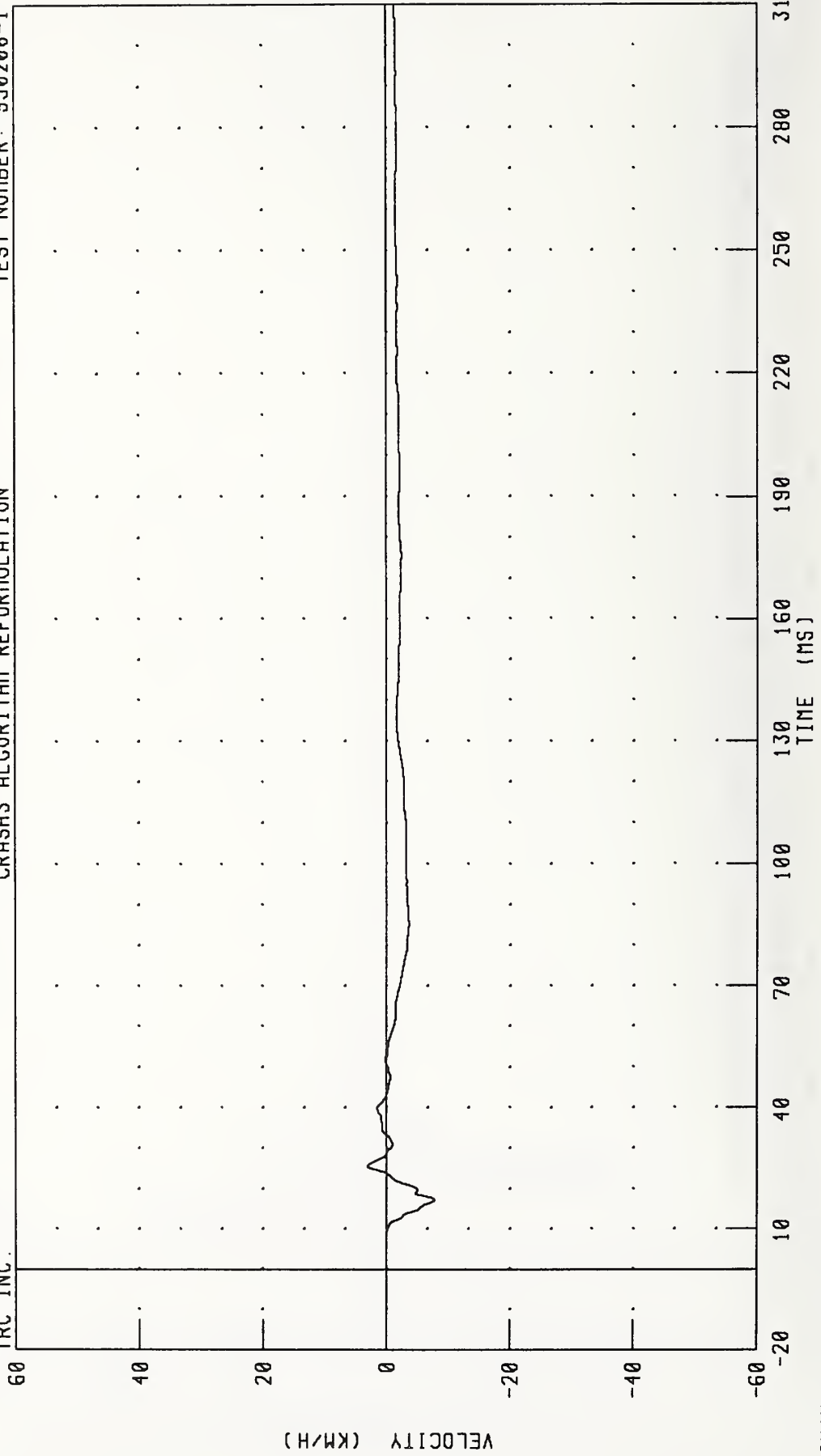
CHANNEL: VCGXG FILTER: CH. CLASS 60 PEAK DATA: 40.31 G @ 21.52 MS; -37.02 G @ 14.08 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: VCCXV FILTER: CH. CLASS 180

PEAK DATA: 3.09 KM/H @ 25.60 MS; -7.85 KM/H @ 17.20 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 VEHICLE CENTER OF GRAVITY X-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

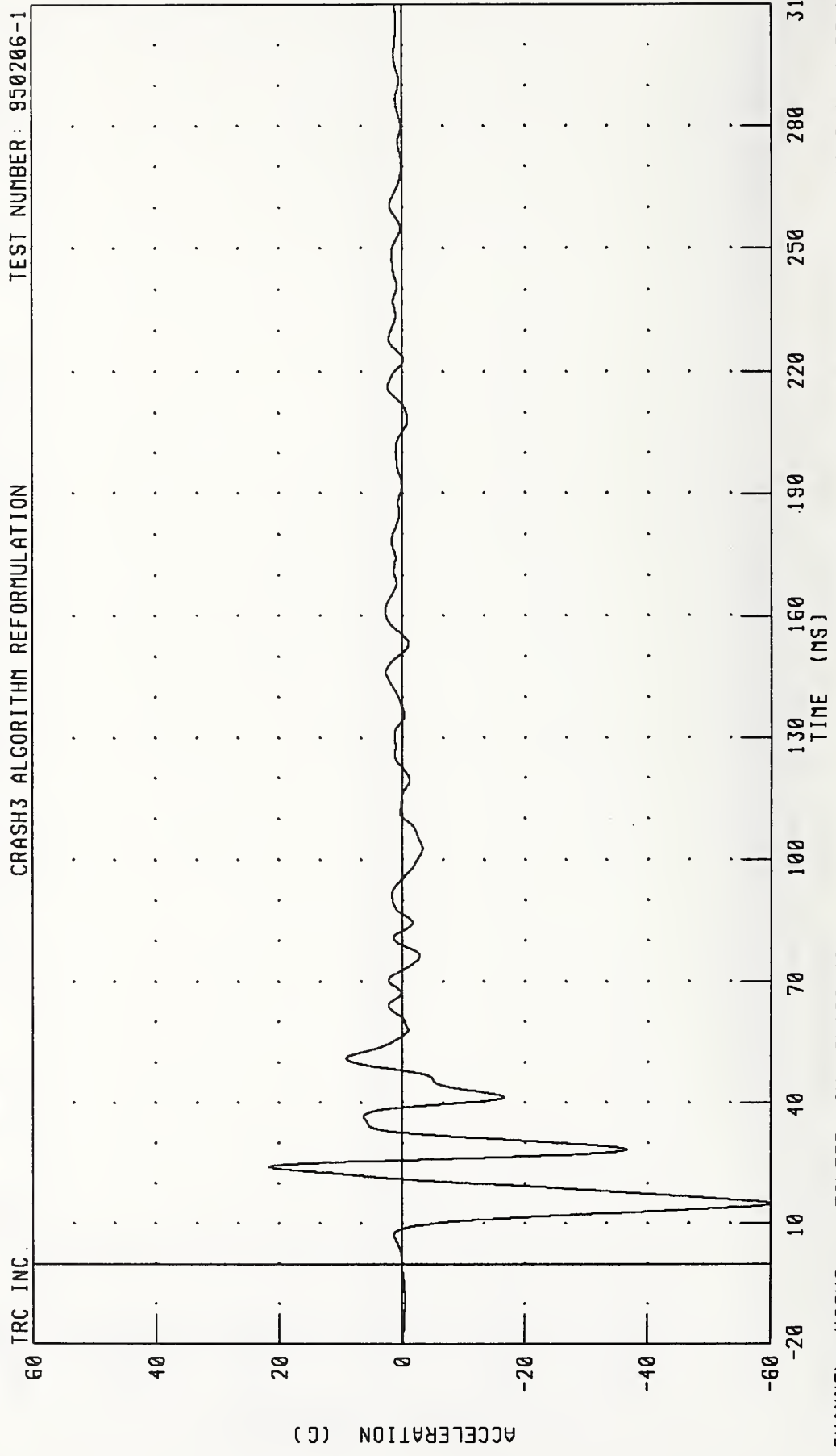


CHANNEL: VCGXD FILTER: CH. CLASS 180 PEAK DATA: 0.04 MM @ 9.20 MS; -158.86 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION

TRC INC. TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION



CHANNEL: VCGYG FILTER: CH. CLASS 60

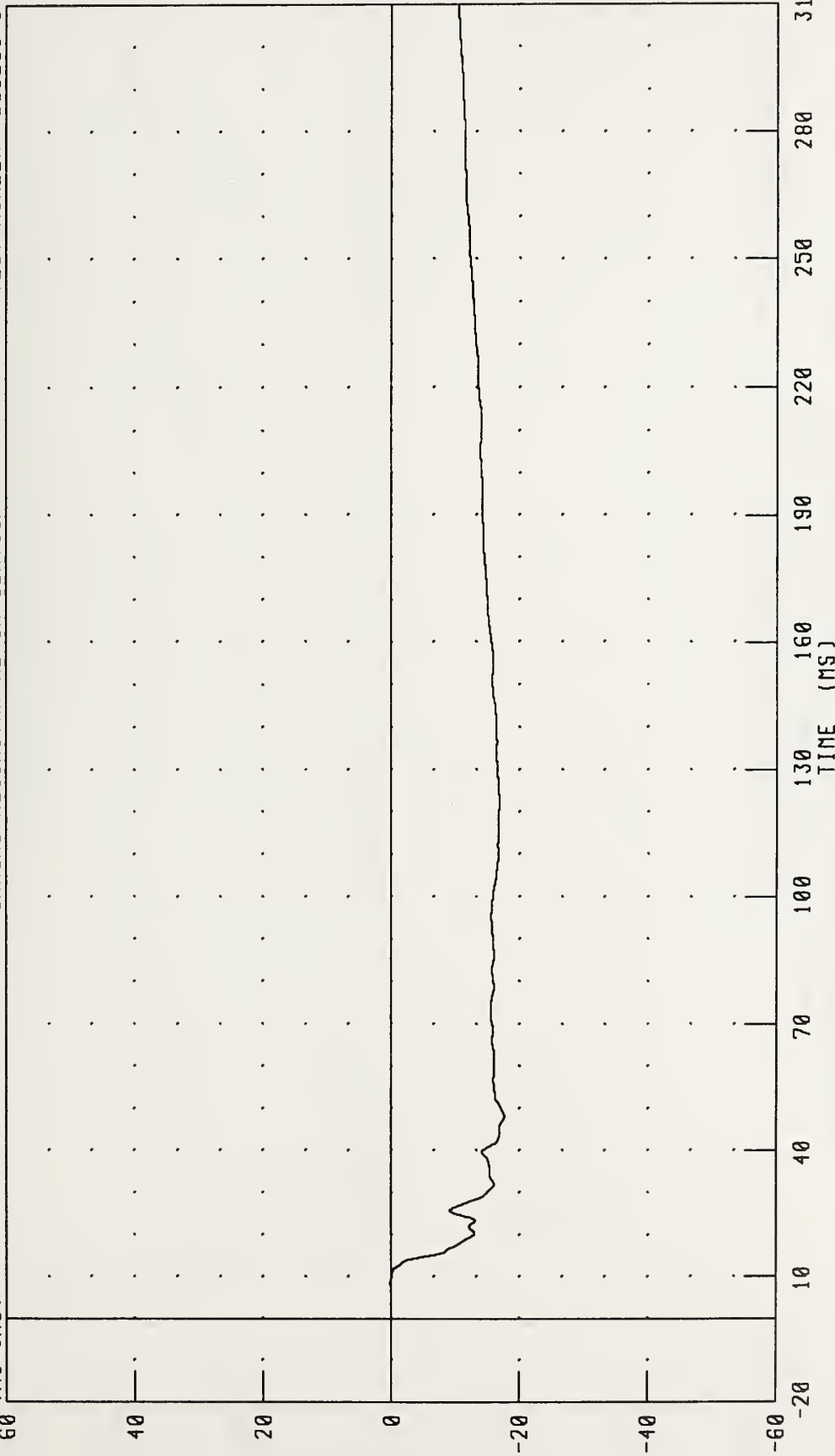
PEAK DATA: 21.67 G @ 24.16 MS; -59.92 G @ 14.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: VCGYV FILTER: CH. CLASS 180

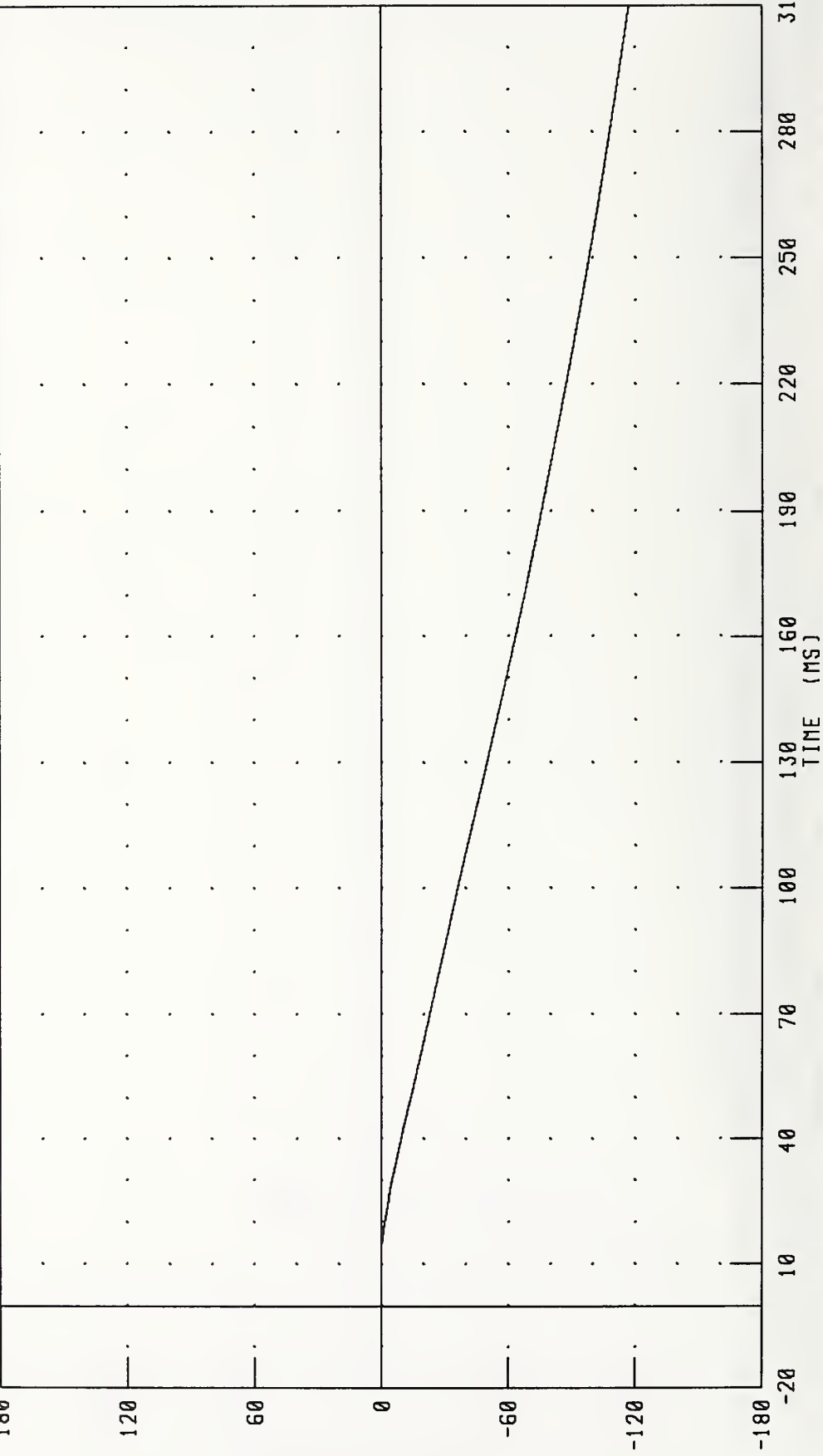
PEAK DATA: 0.10 KM/H @ 8.48 MS; -17.70 KM/H @ 48.08 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 VEHICLE CENTER OF GRAVITY Y-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



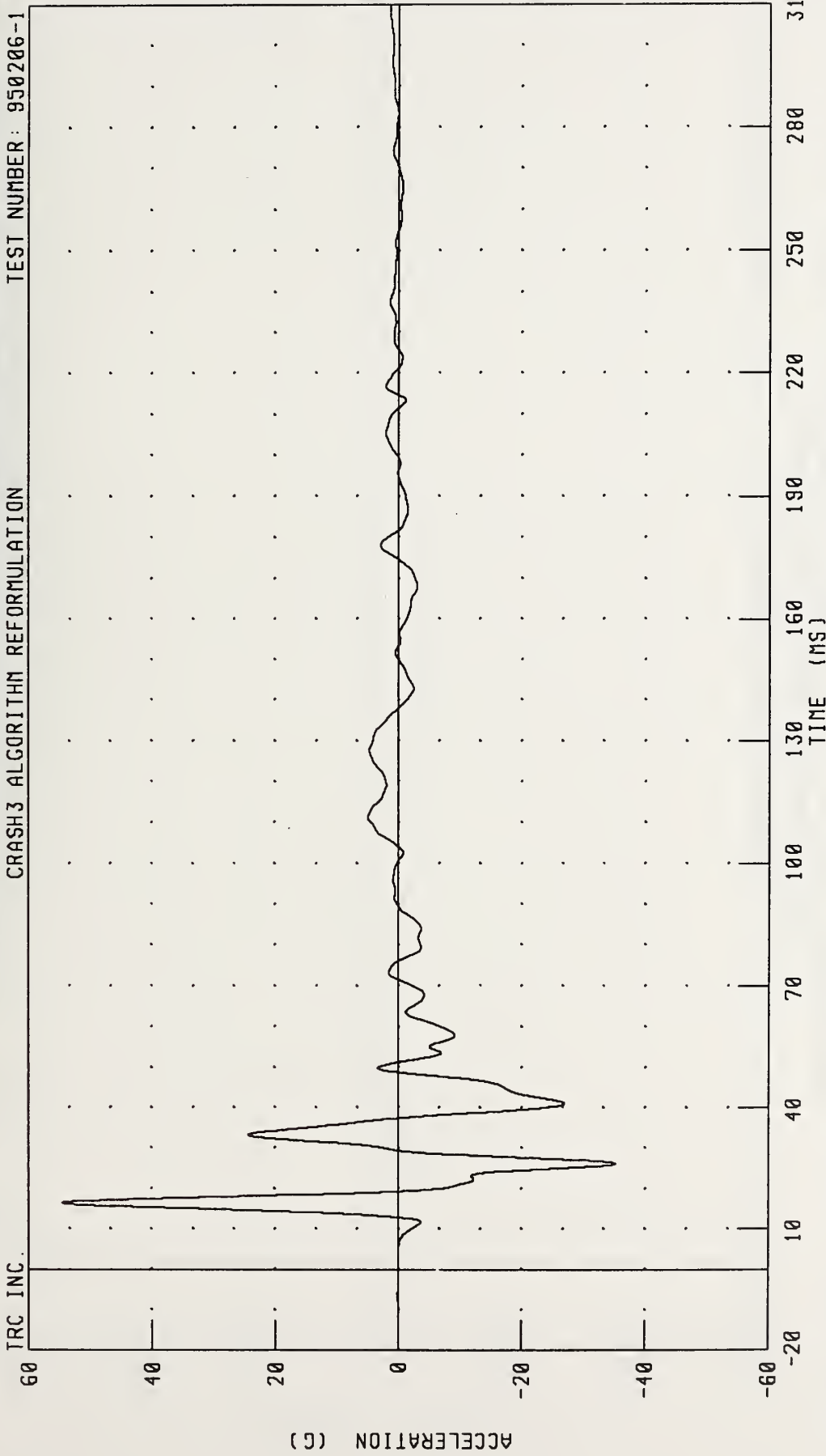
CHANNEL: VCGYD FILTER: CH. CLASS 180

PEAK DATA: 0.10 MM @ 9.52 MS; -1171.80 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION



CHANNEL: VCGZG FILTER: CH. CLASS 60

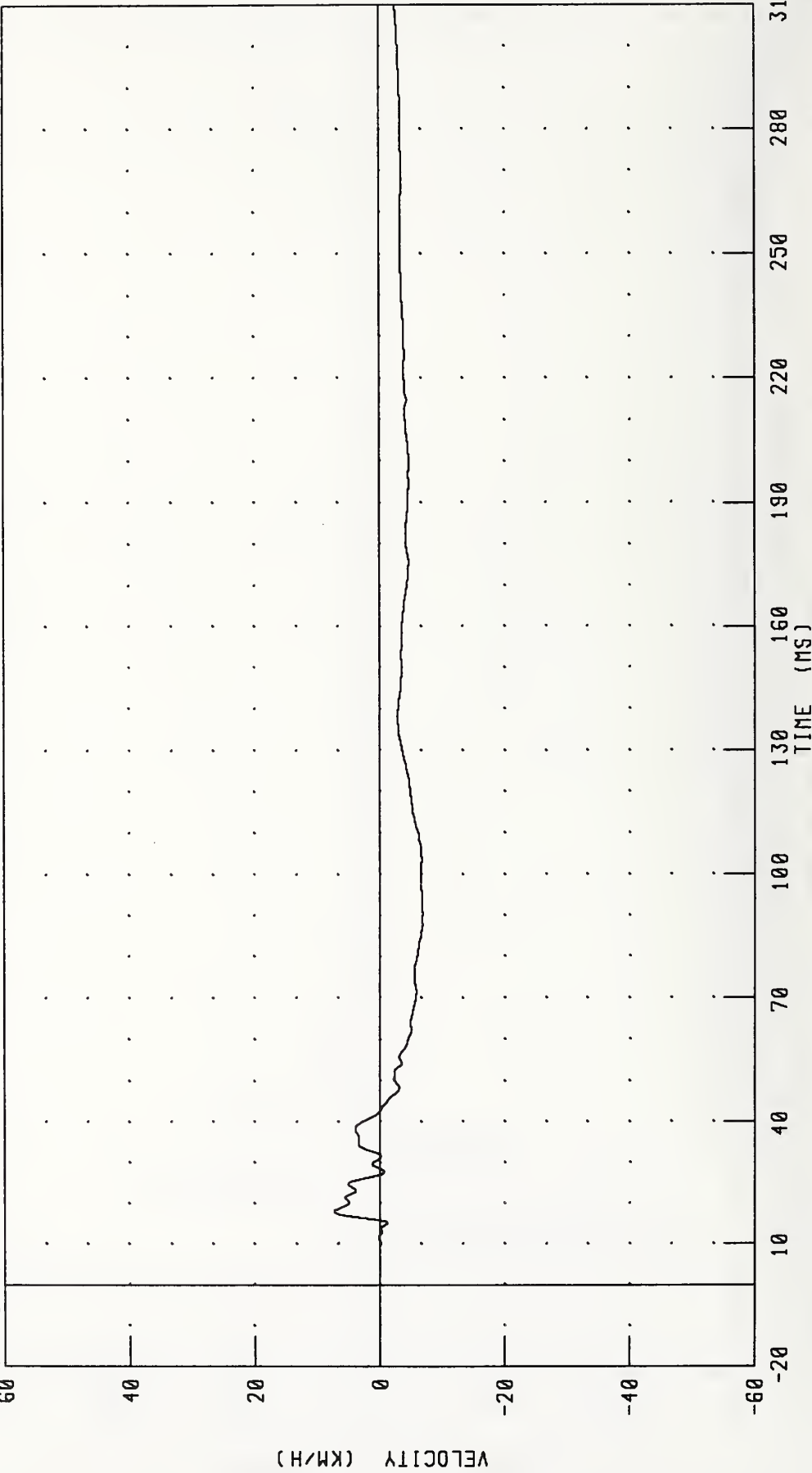
PEAK DATA: 54.54 G @ 16.40 MS; -35.13 G @ 26.16 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: VCGZY FILTER: CH. CLASS 180

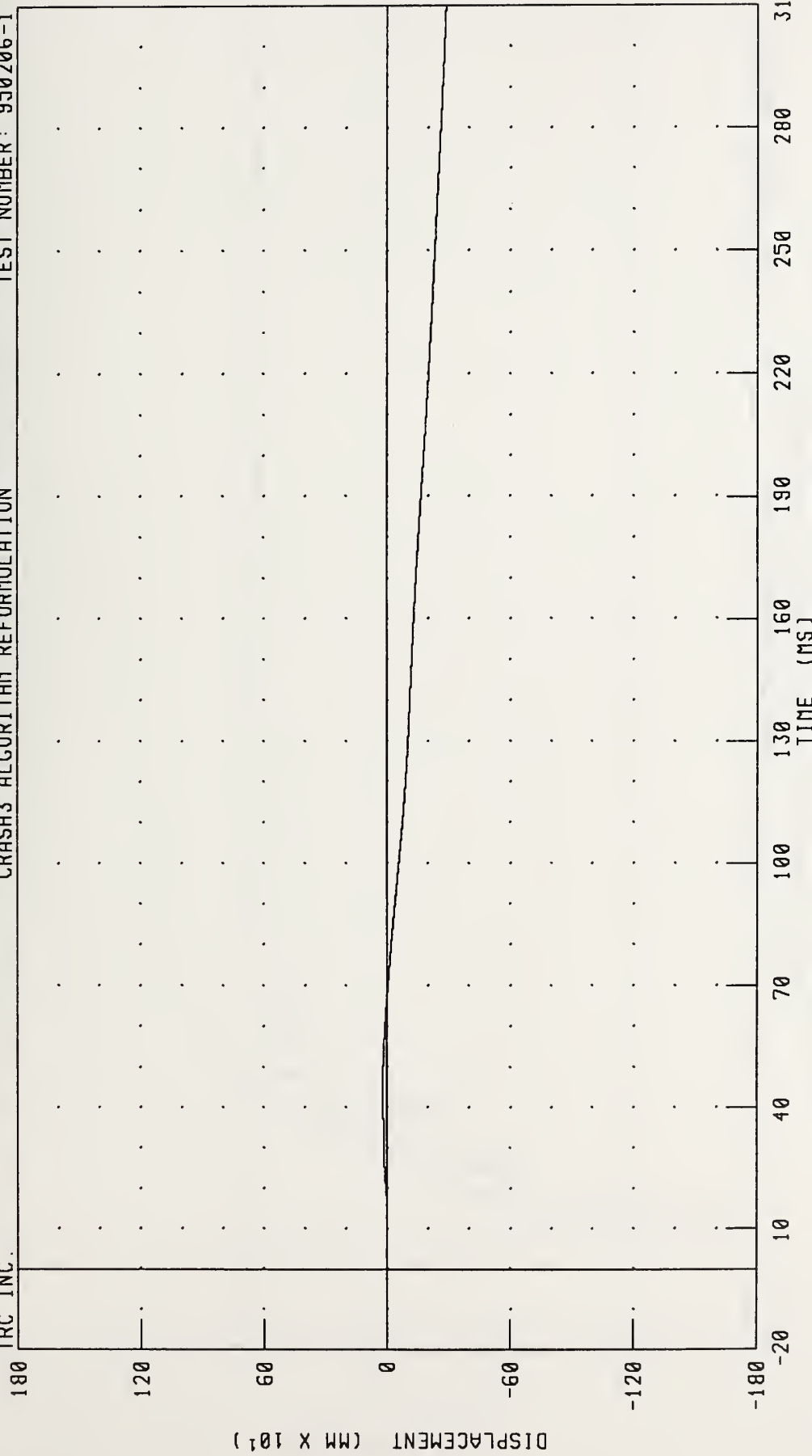
PEAK DATA: 7.35 KM/H @ 17.92 MS; -6.85 KM/H @ 90.48 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: VCGZD FILTER: CH. CLASS 180

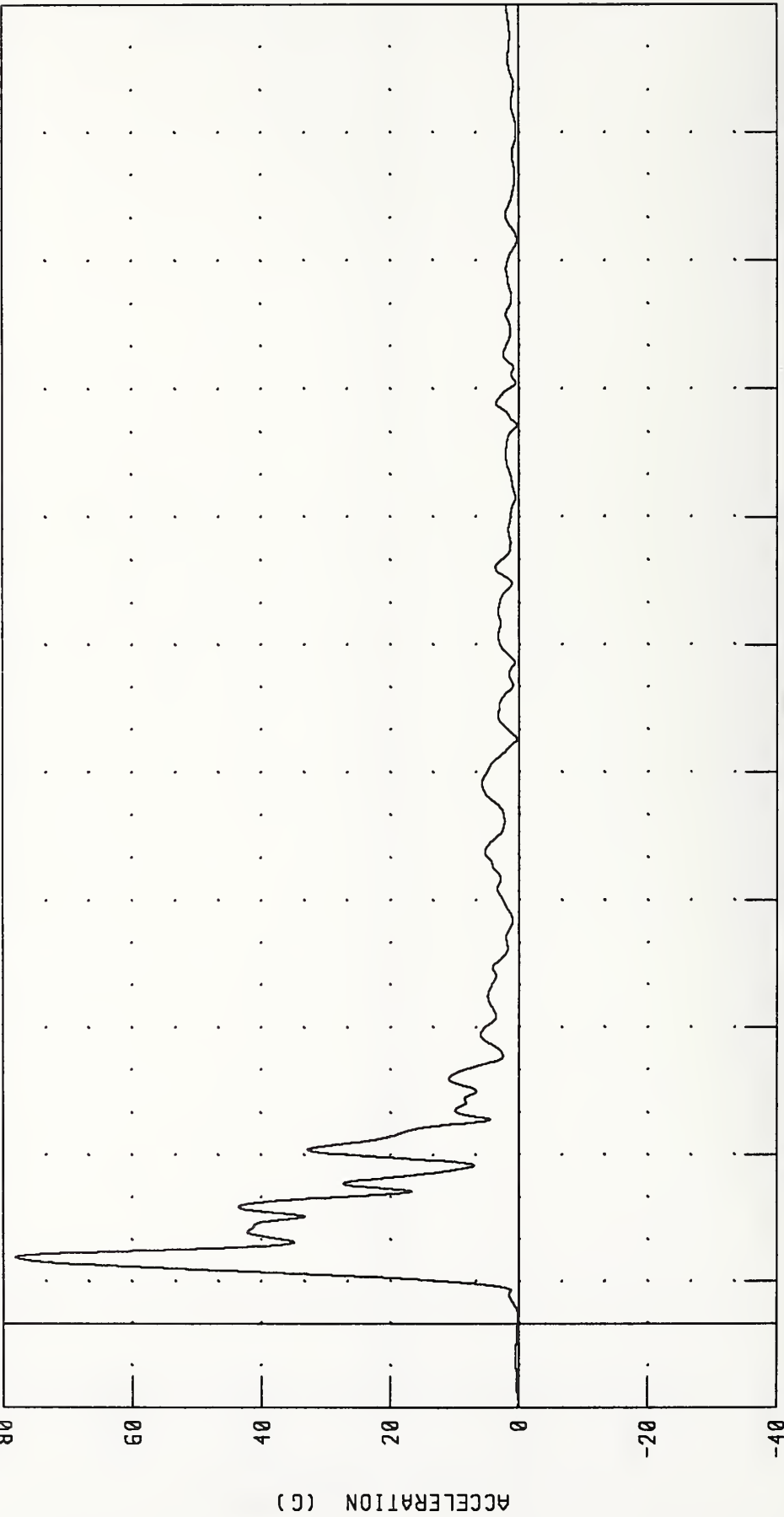
PEAK DATA: 22.08 MM @ 42.64 MS; -287.58 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



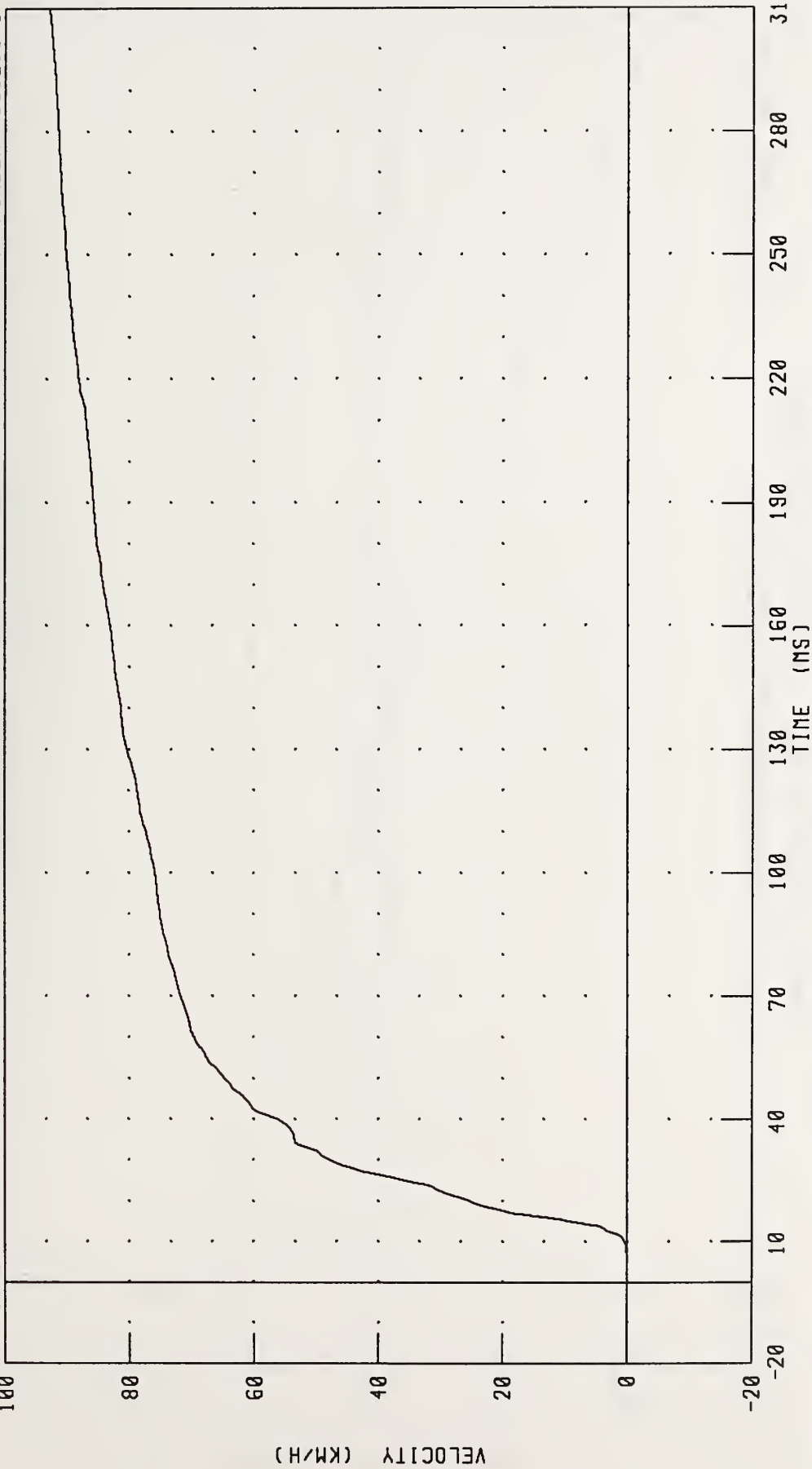
CHANNEL: VCGRG FILTER: CH. CLASS 60 PEAK DATA: 78.12 G @ 15.76 MS; 0.00 G @ -18.72 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT VELOCITY

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: VCGRV FILTER: CH. CLASS 180

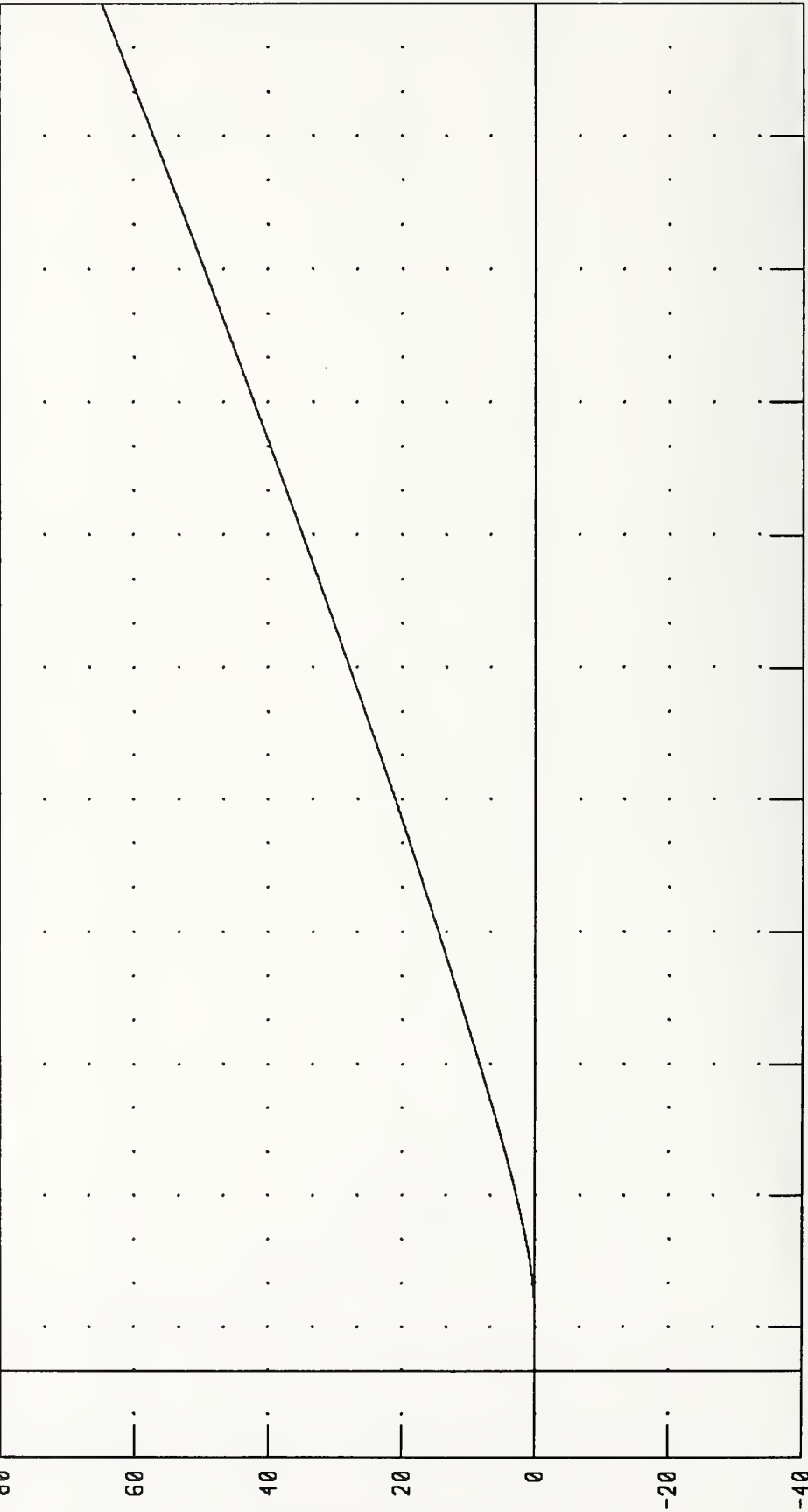
PEAK DATA: 92.83 KM/H @ 310.00 MS; 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

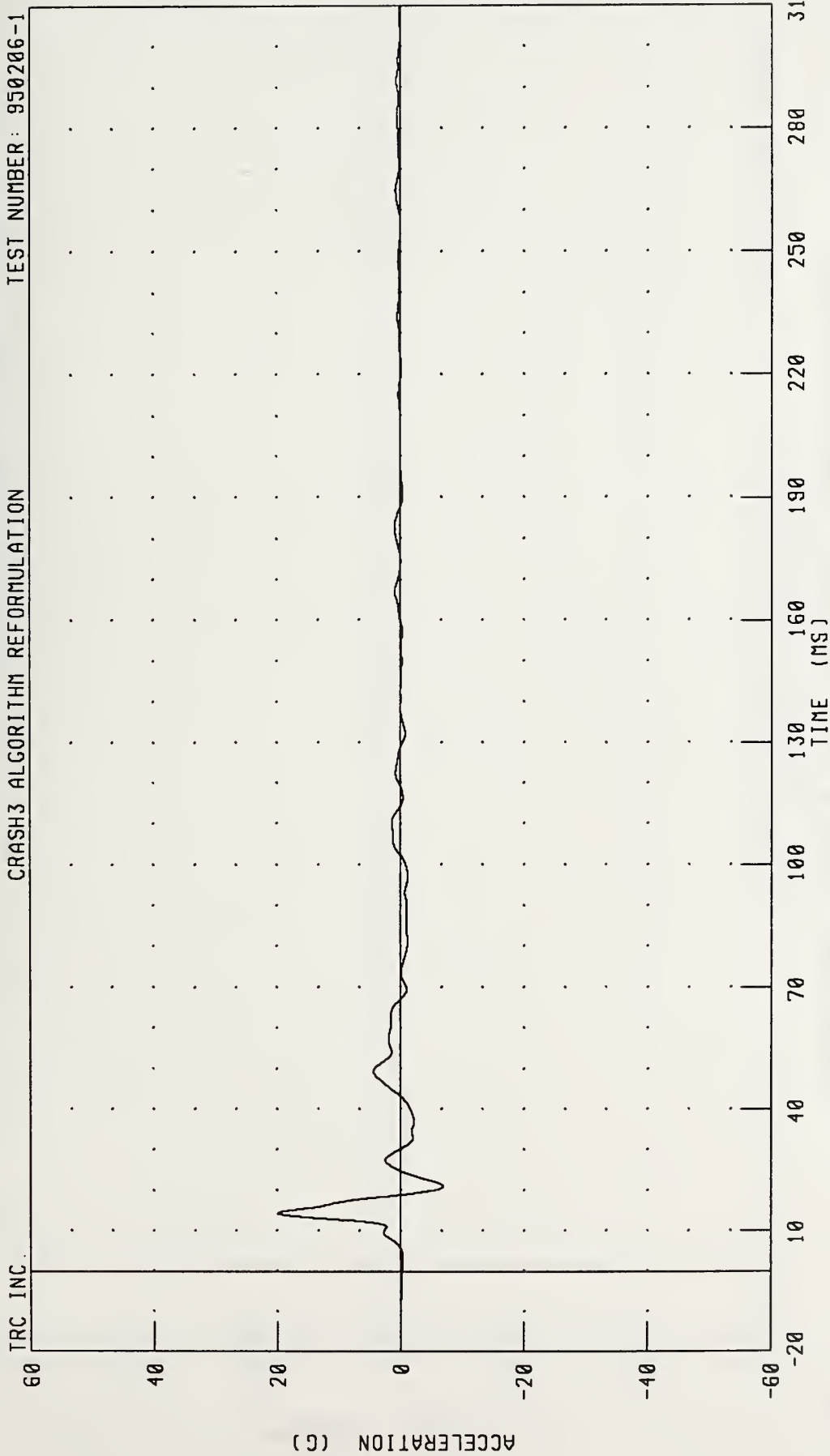


CHANNEL: VCGRD FILTER: CH. CLASS 180

PEAK DATA: 6475.42 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
LEFT REAR SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



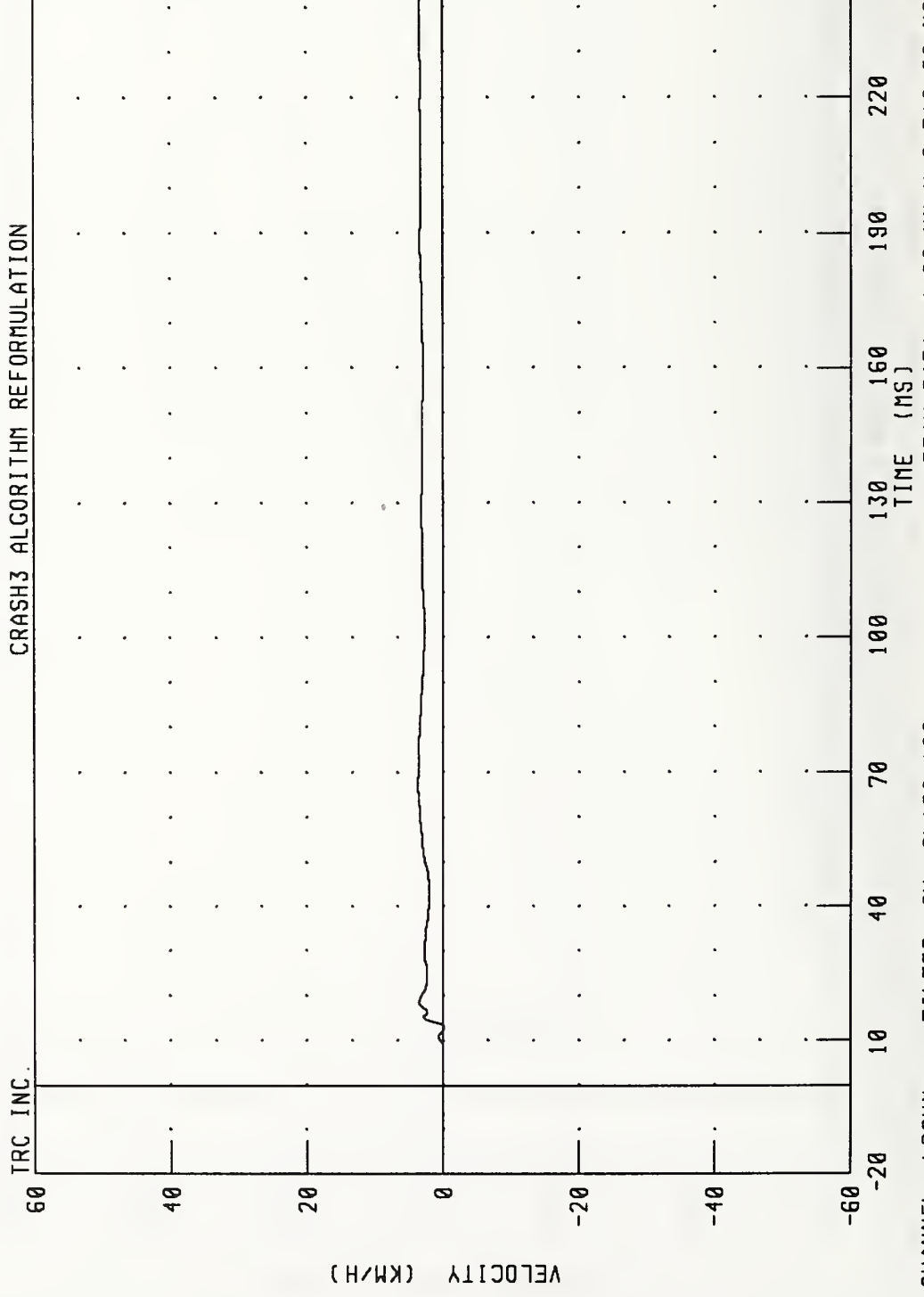
CHANNEL: LRSXG FILTER: CH. CLASS 60

TIME (MS)

PEAK DATA: 20.04 G @ 14.32 MS; -6.95 G @ 21.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 LEFT REAR SILL X-AXIS VELOCITY

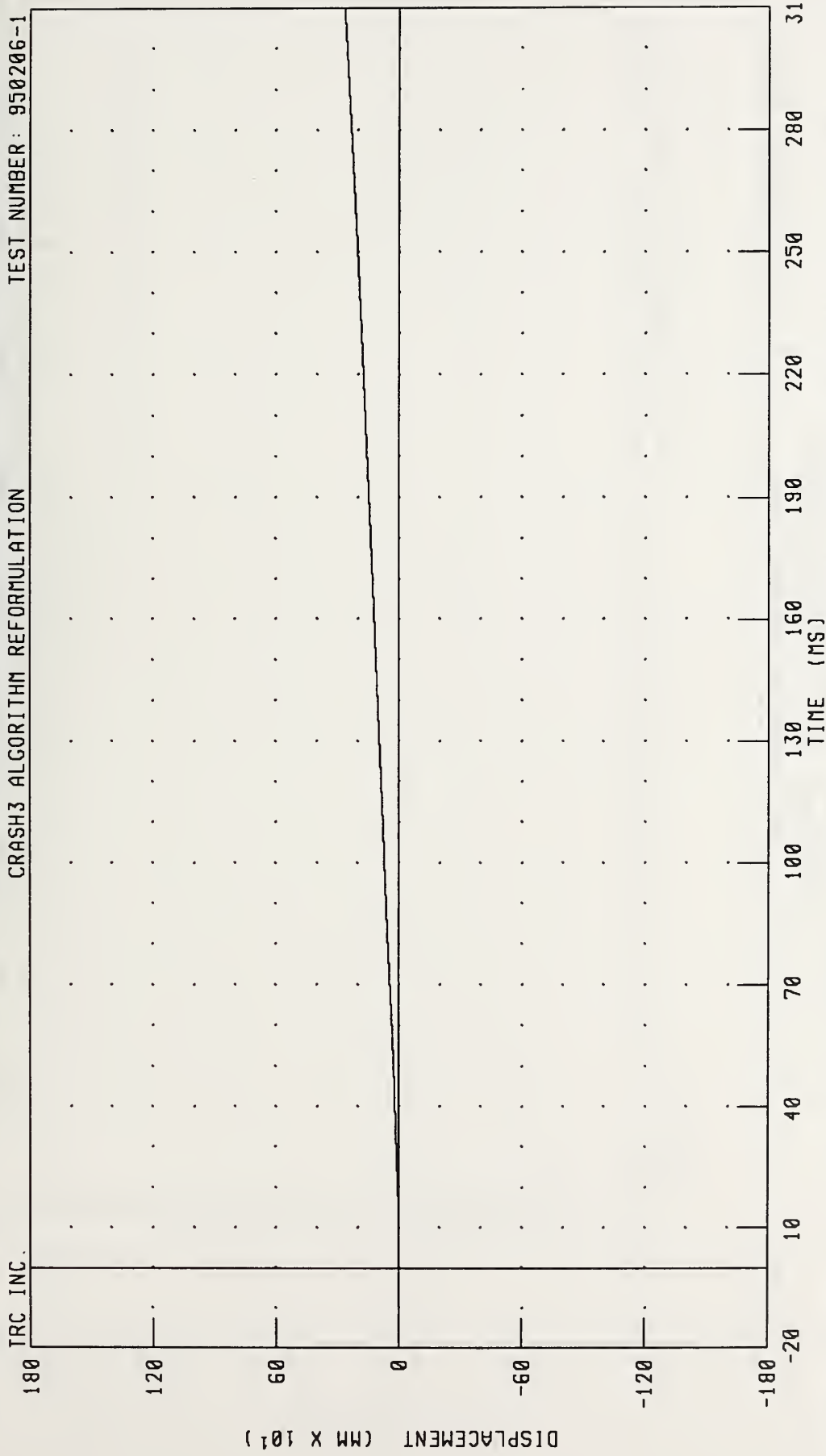
CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



CHANNEL: LRSXV FILTER: CH. CLASS 180 PEAK DATA: 4.20 KM/H @ 310.00 MS; -0.20 KM/H @ 12.96 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 LEFT REAR SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



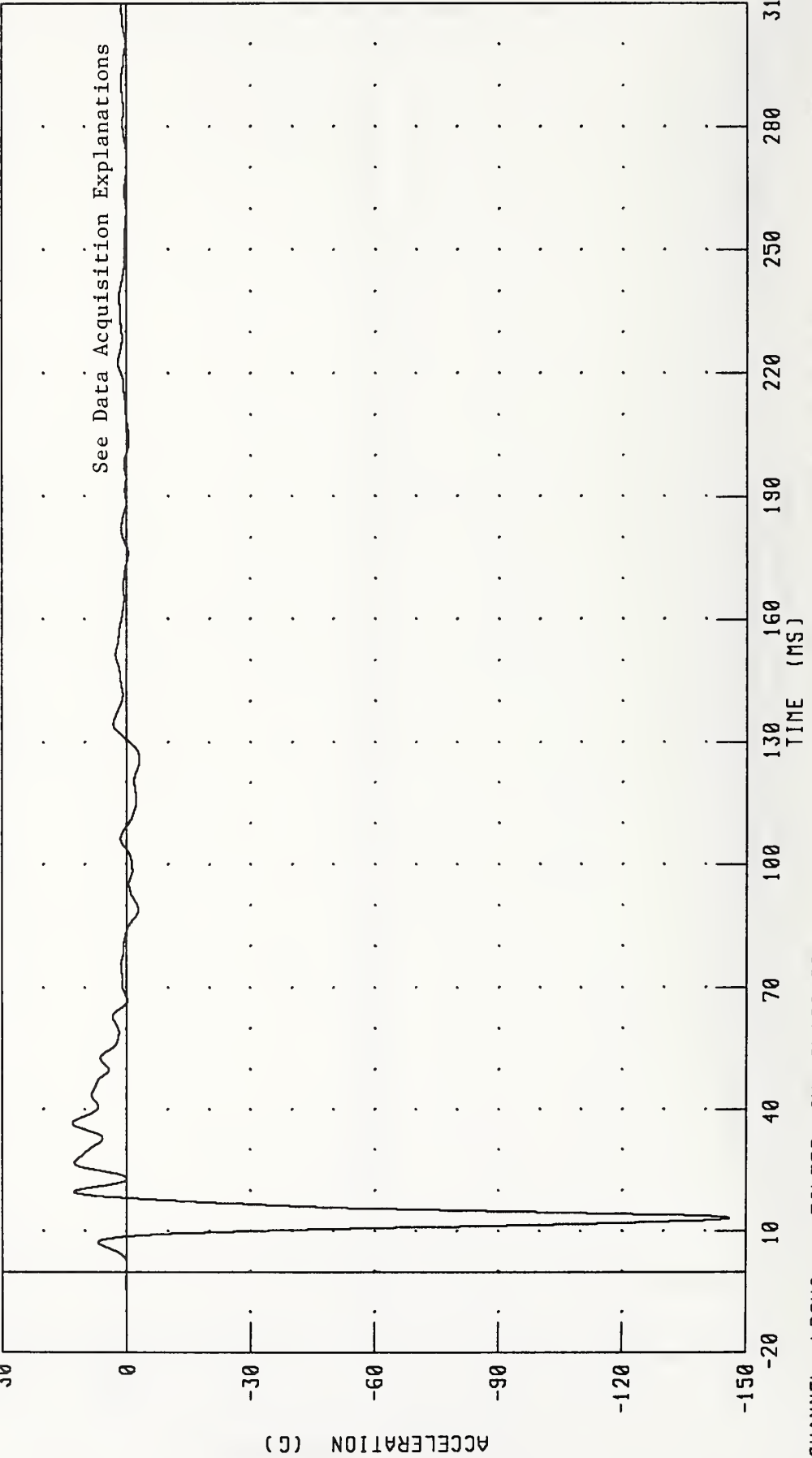
CHANNEL: LRSXD FILTER: CH. CLASS 180 PEAK DATA: 266.27 NM @ 310.00 MS; -0.10 MM @ 8.96 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
LEFT REAR SILL Y-AXIS ACCELERATION

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: LRSYC FILTER: CH CLASS 60

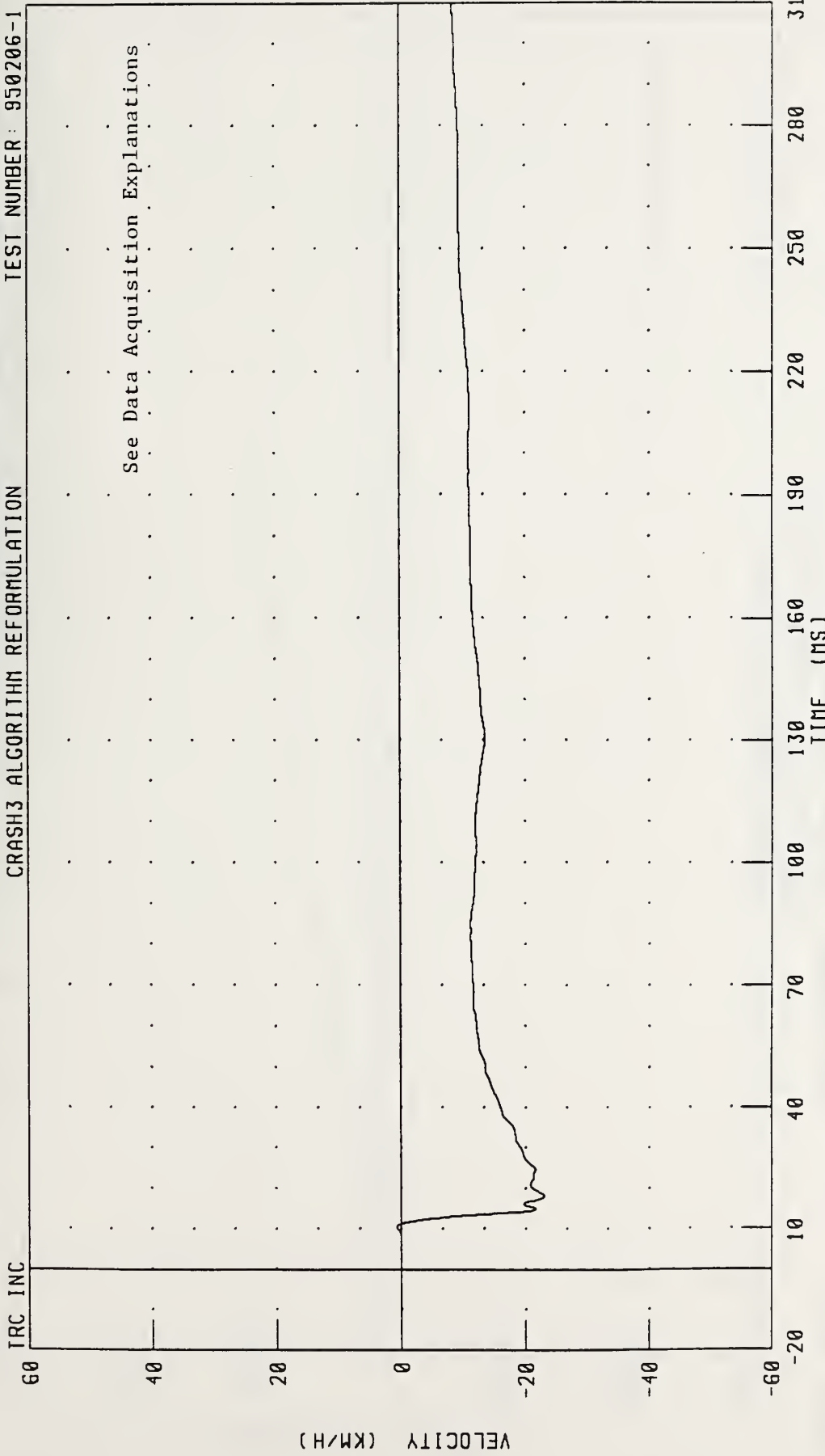
PEAK DATA: 13.03 G @ 36.64 MS; -145.90 G @ 13.28 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5

LEFT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1



See Data Acquisition Explanations

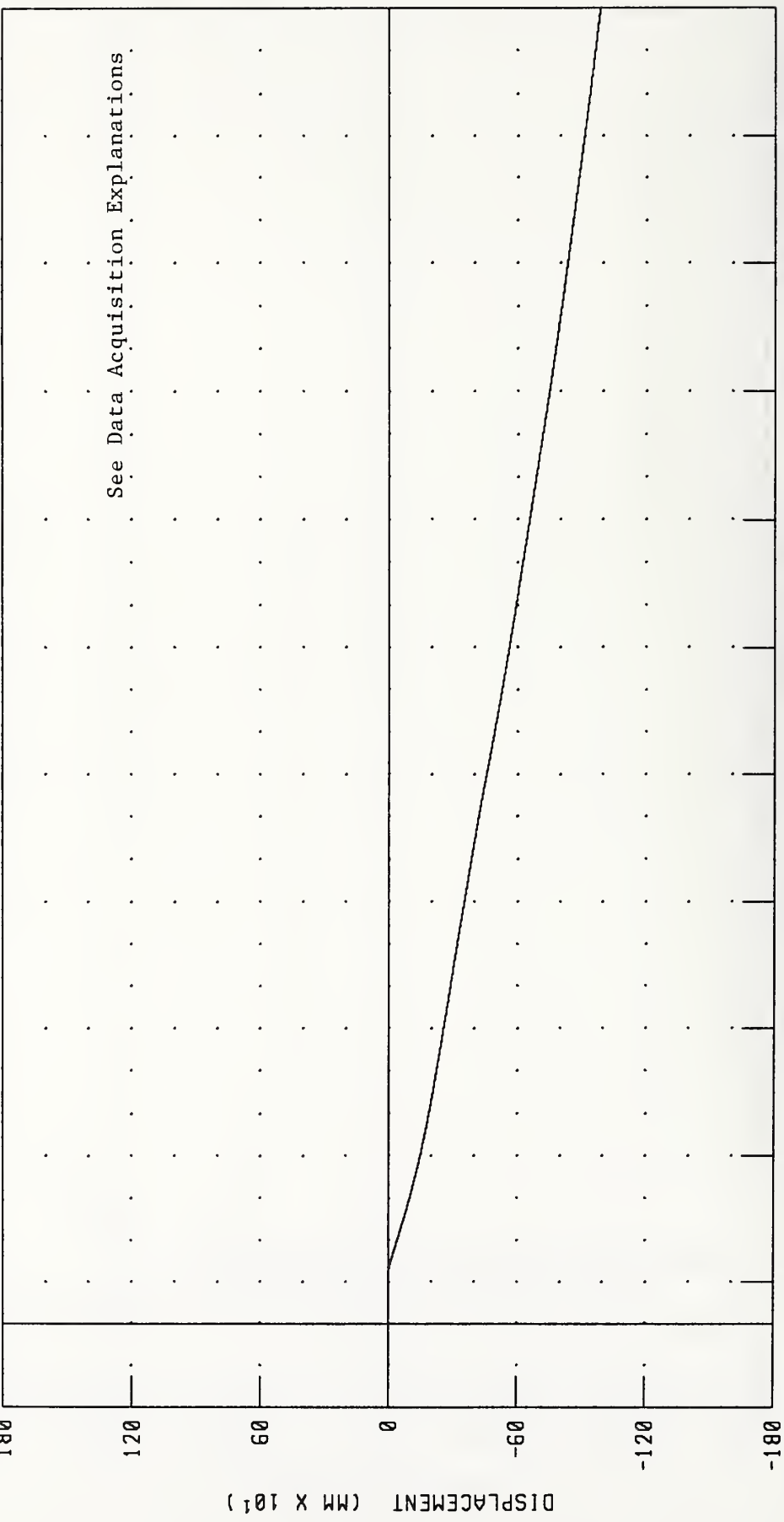
TRC INC
60
40
20
0
-20
-40
-60
-20 10 40 70 100 130 160 190 220 250 280 310
TIME (MS)
CHANNEL: LRSYV FILTER: CH CLASS 180 PEAK DATA: 0.74 KM/H @ 10.48 MS; -22.98 KM/H @ 18.08 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 LEFT REAR SILL Y-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



180
120
60
0
-60
-120
-180

10 40 70 100 130 160 190 220 250 280 310

TIME (MS)

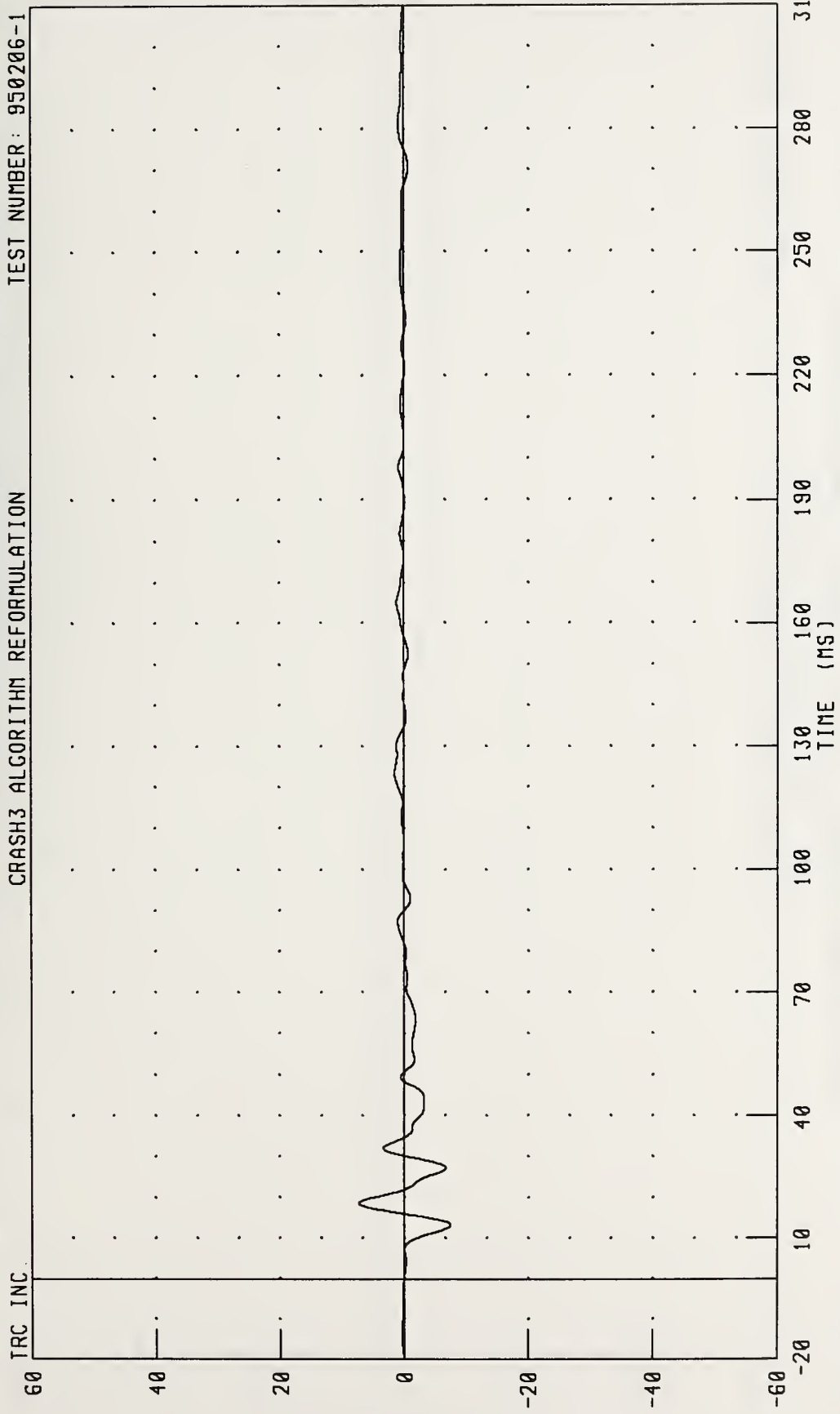
CHANNEL: LRSYD FILTER: CH. CLASS 180 PEAK DATA: 0.31 MM @ 11.20 MS, -986.00 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5

RIGHT REAR SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1

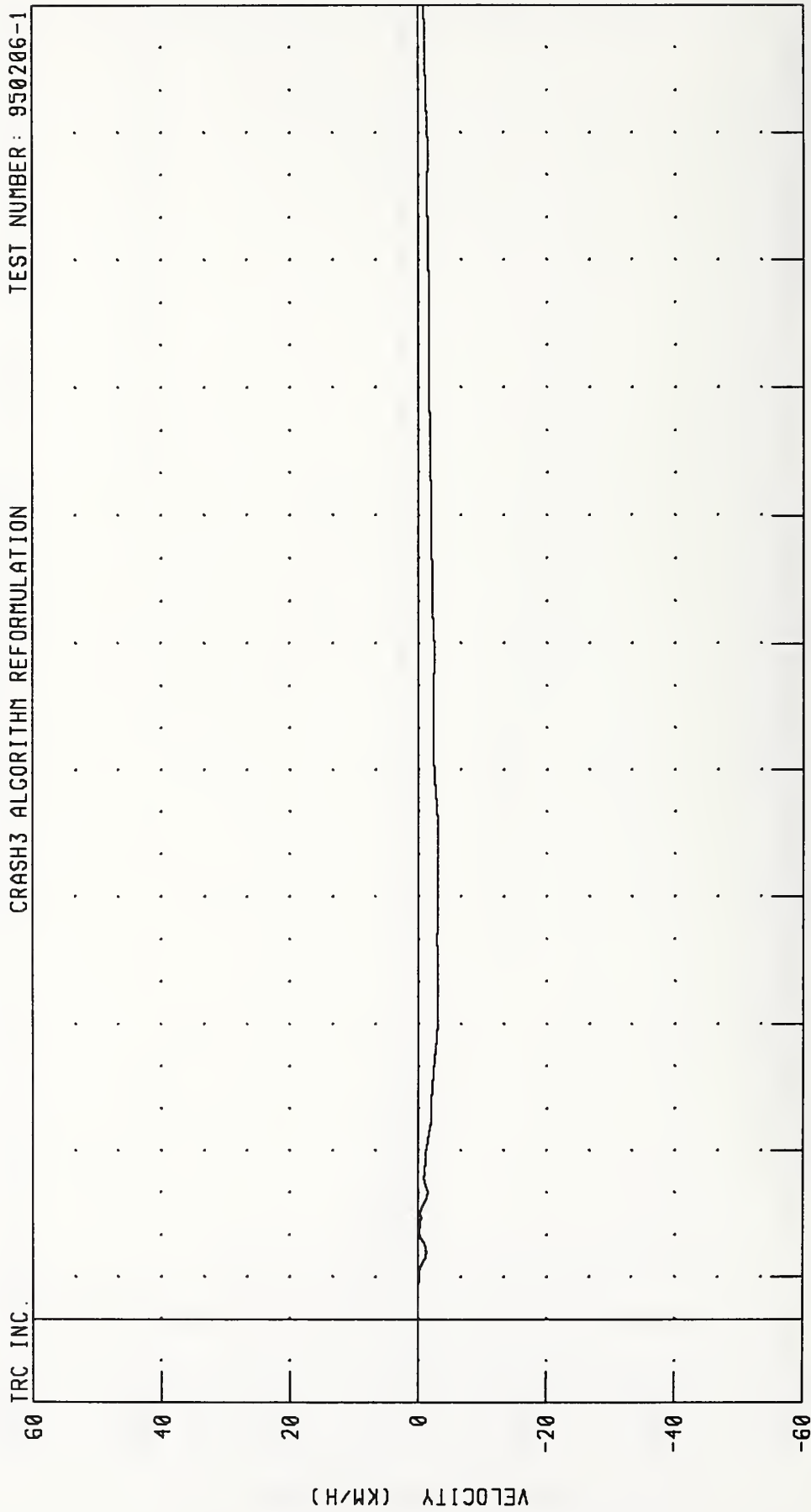


CHANNEL: RRSXG FILTER: CH. CLASS 60

PEAK DATA: 7.35 G @ 18.56 MS; -7.49 G @ 13.20 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
RIGHT REAR SILL X-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1

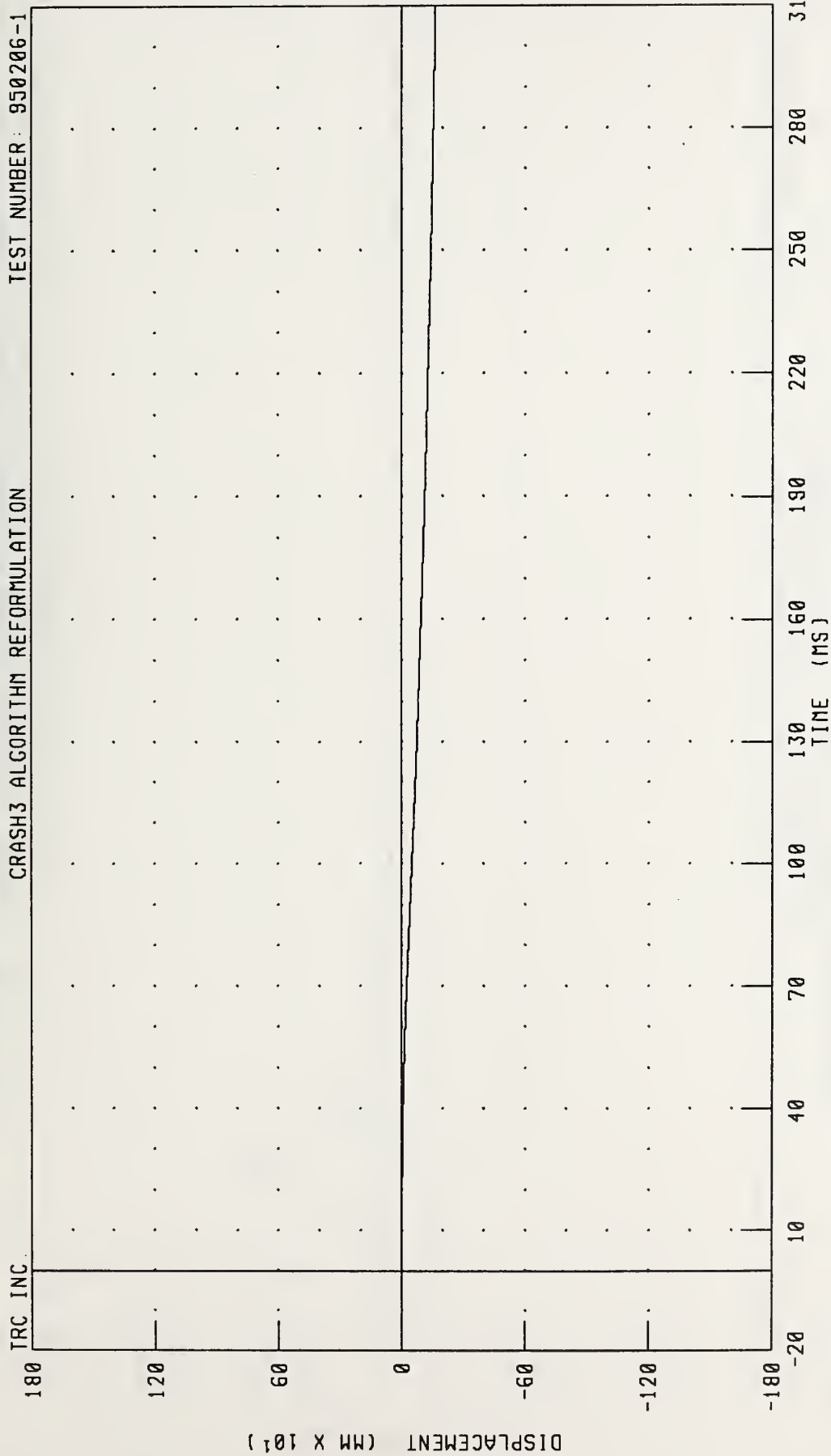


CHANNEL: RRSXV FILTER: CH. CLASS 180

PEAK DATA: 0.00 KM/H @ 0.00 MS; -3.12 KM/H @ 82.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
RIGHT REAR SILL X-AXIS DISPLACEMENT

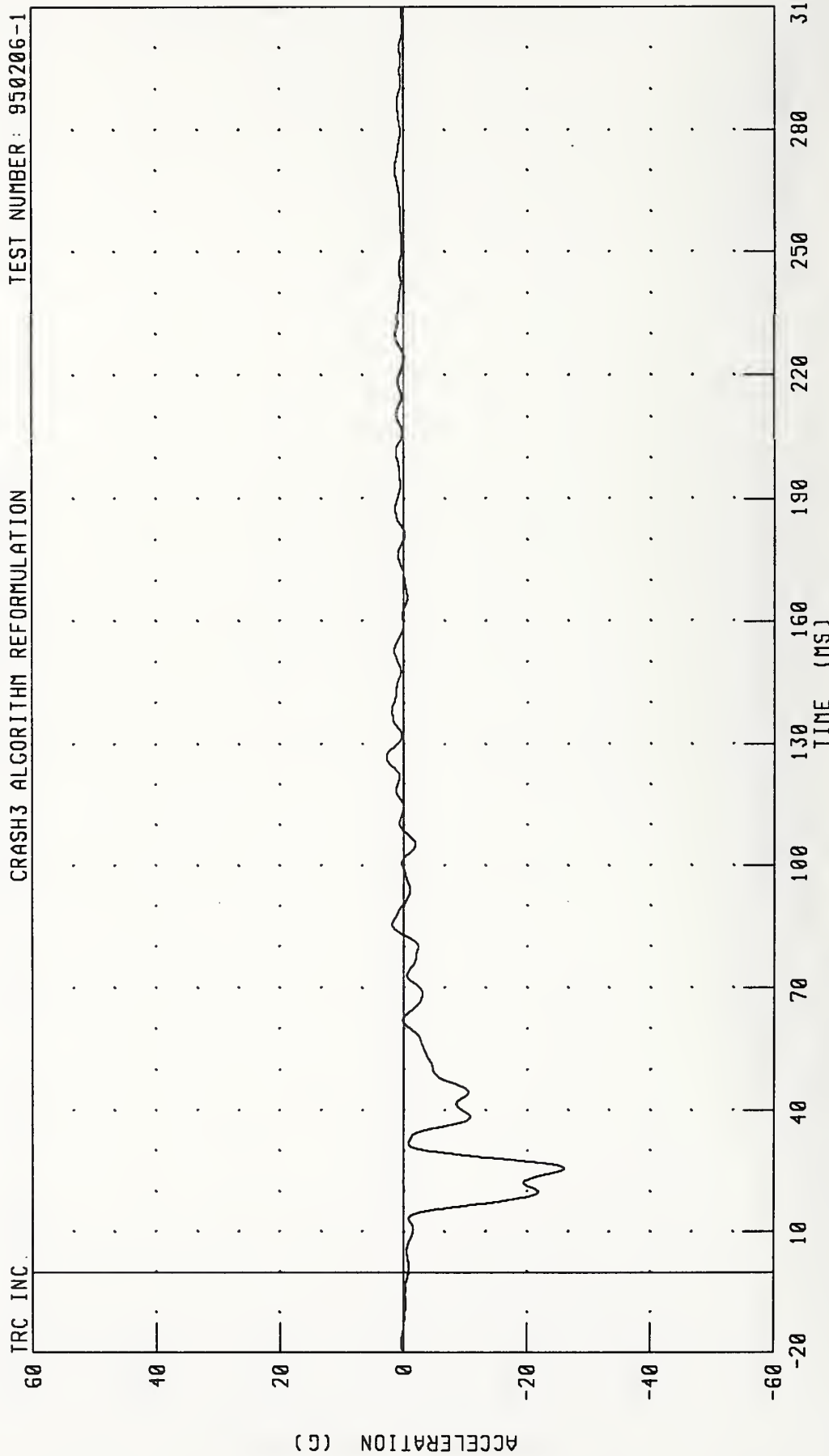
CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



CHANNEL: RRSXD FILTER: CH. CLASS 180 PEAK DATA: 0.00 MM @ 0.00 MS; -163.95 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
RIGHT REAR SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



CHANNEL: RRSYG FILTER: CH. CLASS 60

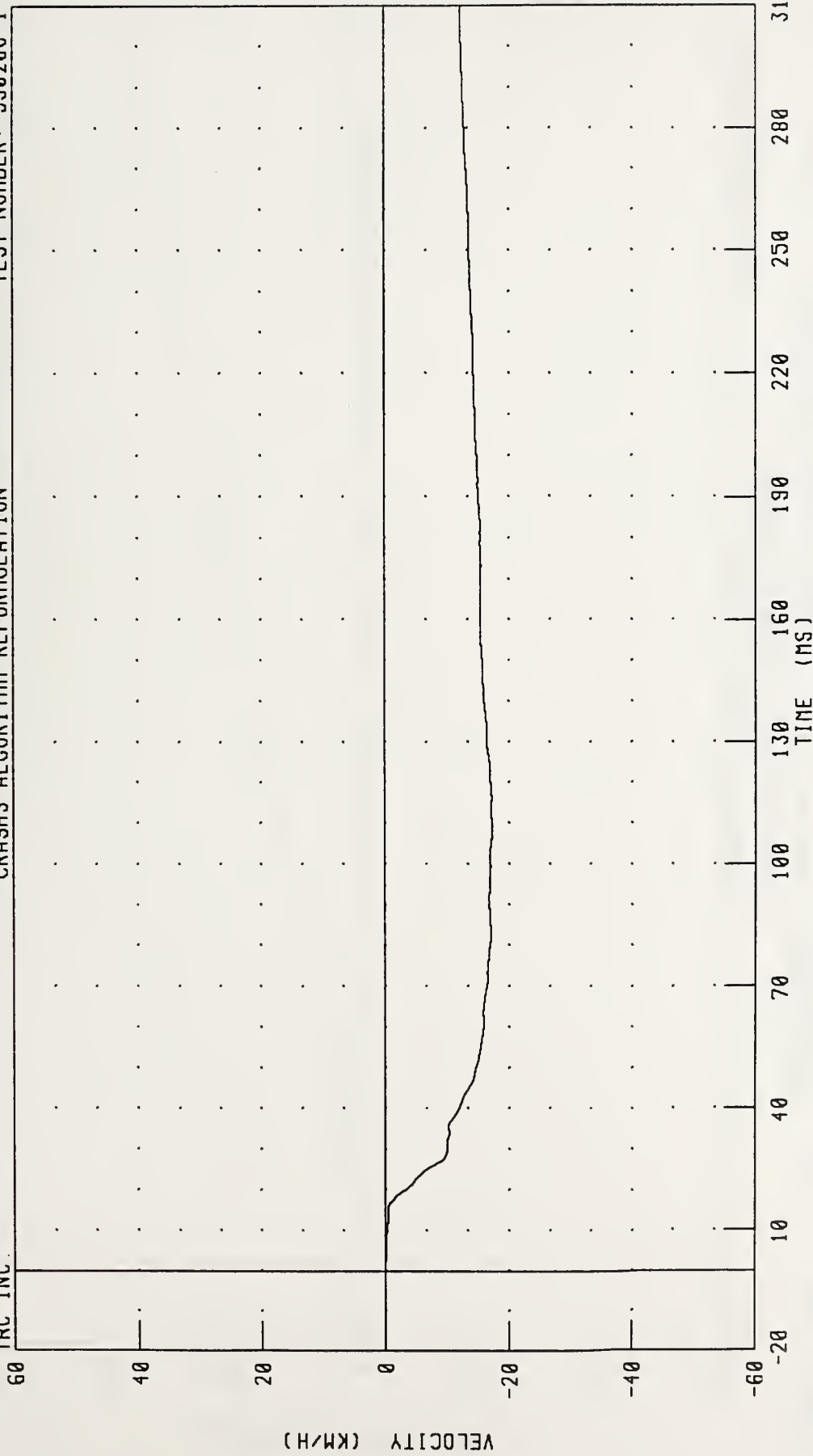
PEAK DATA: 2.79 G @ 126.96 MS; -26.05 G @ 25.68 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
RIGHT REAR SILL Y-AXIS VELOCITY

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

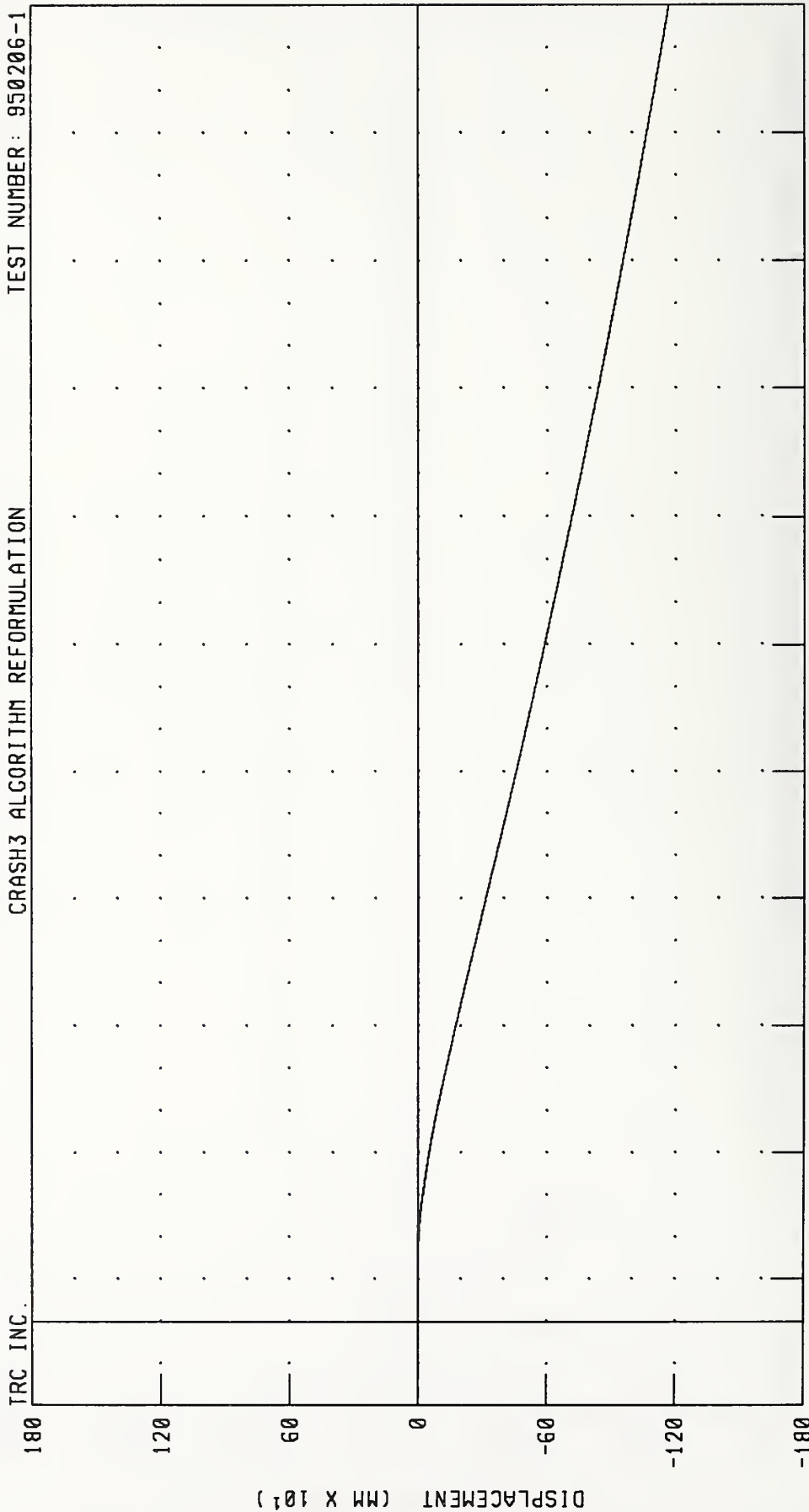


CHANNEL: RRSYV FILTER: CH. CLASS 180 PEAK DATA: 0.00 KM/H @ 0.00 MS, -17.26 KM/H @ 108.48 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
RIGHT REAR SILL Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1



CHANNEL: RRSYD FILTER: CH. CLASS 180

PEAK DATA: 0.00 MM @ 0.00 MS; -1169.59 MM @ 310.00 MS

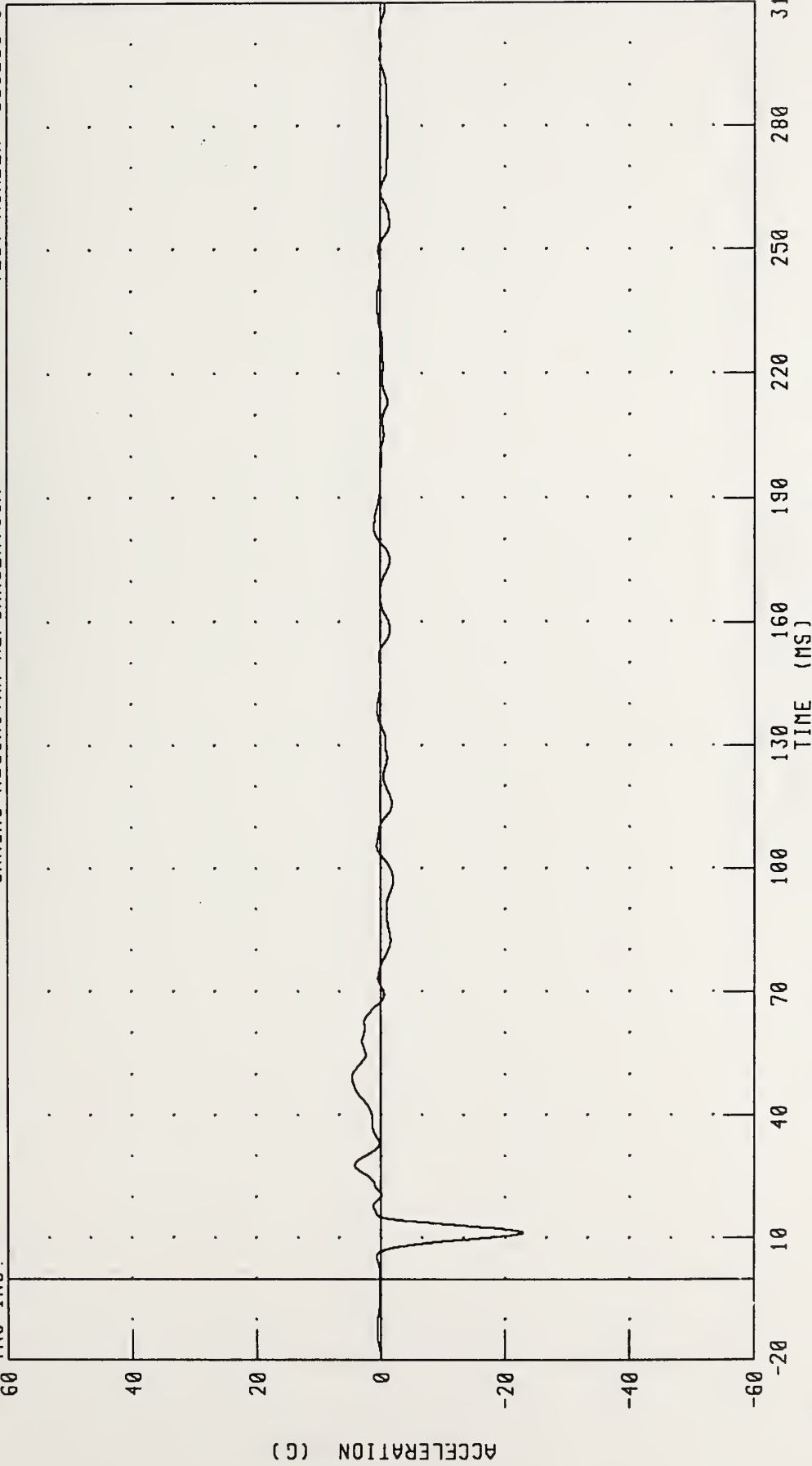
NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5

LEFT FRONT SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1

TRC INC.

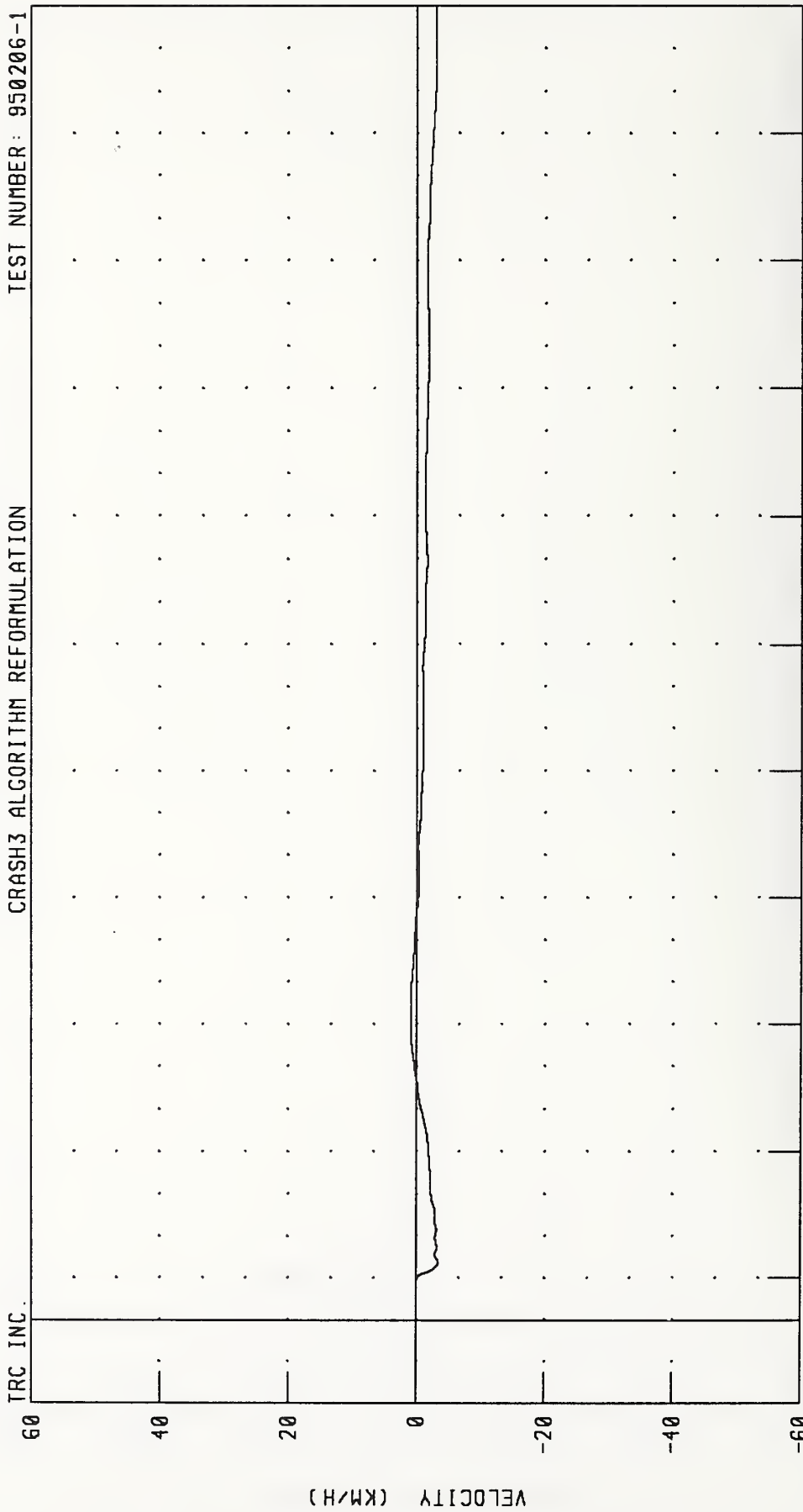


CHANNEL: LFSXG FILTER: CH CLASS 60

PEAK DATA: 4.64 G @ 49.28 MS; -22.88 G @ 11.28 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
LEFT FRONT SILL X-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



CHANNEL: LFSXV FILTER: CH. CLASS 180

PEAK DATA: 0.88 KM/H @ 67.44 MS; -3.42 KM/H @ 13.84 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
LEFT FRONT SILL X-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

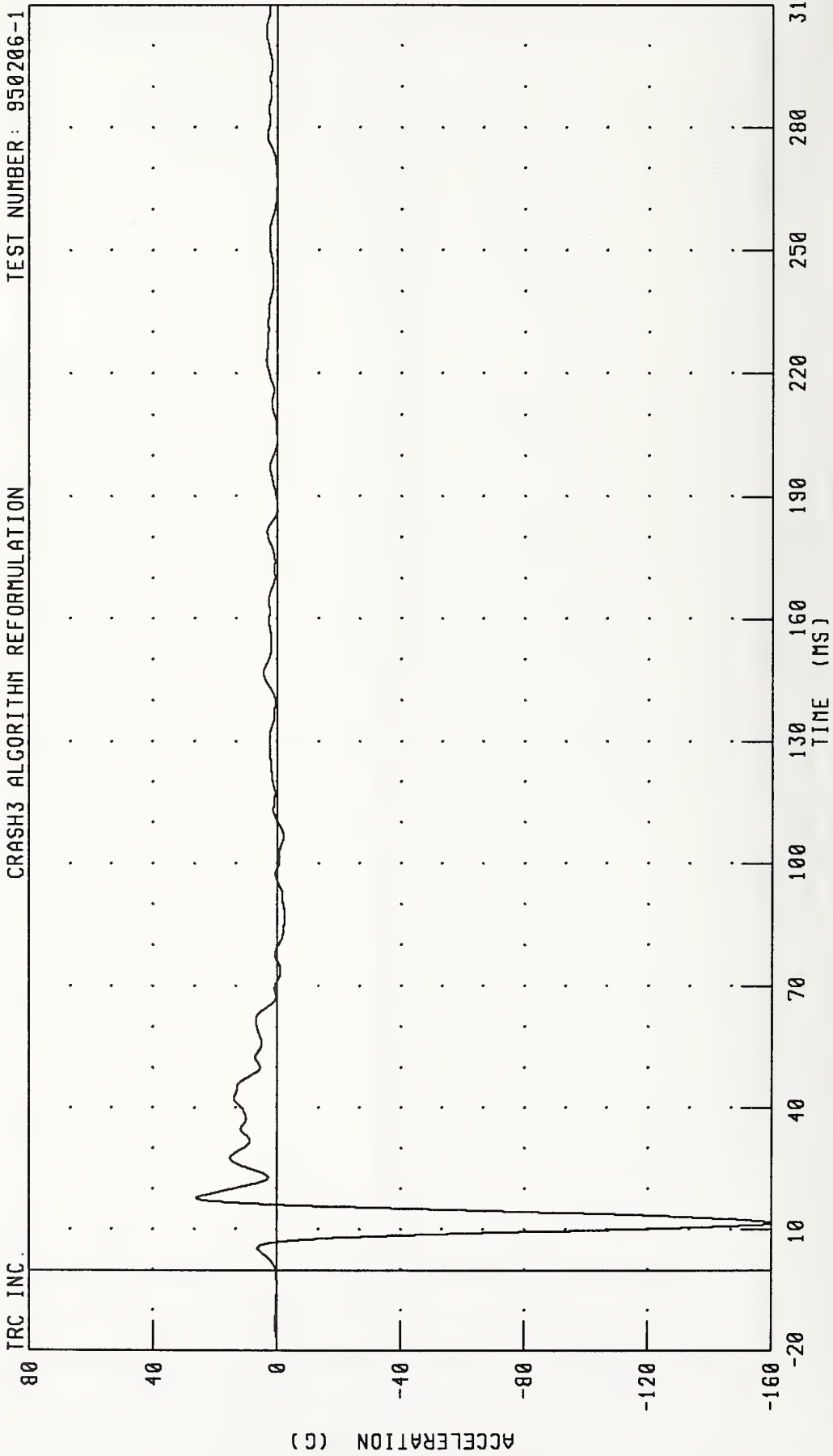


CHANNEL: LFSXD FILTER: CH. CLASS 180

PEAK DATA: 0.01 MM @ 4.64 MS; -112.86 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
LEFT FRONT SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



CHANNEL: LFSYG FILTER: CH. CLASS 60

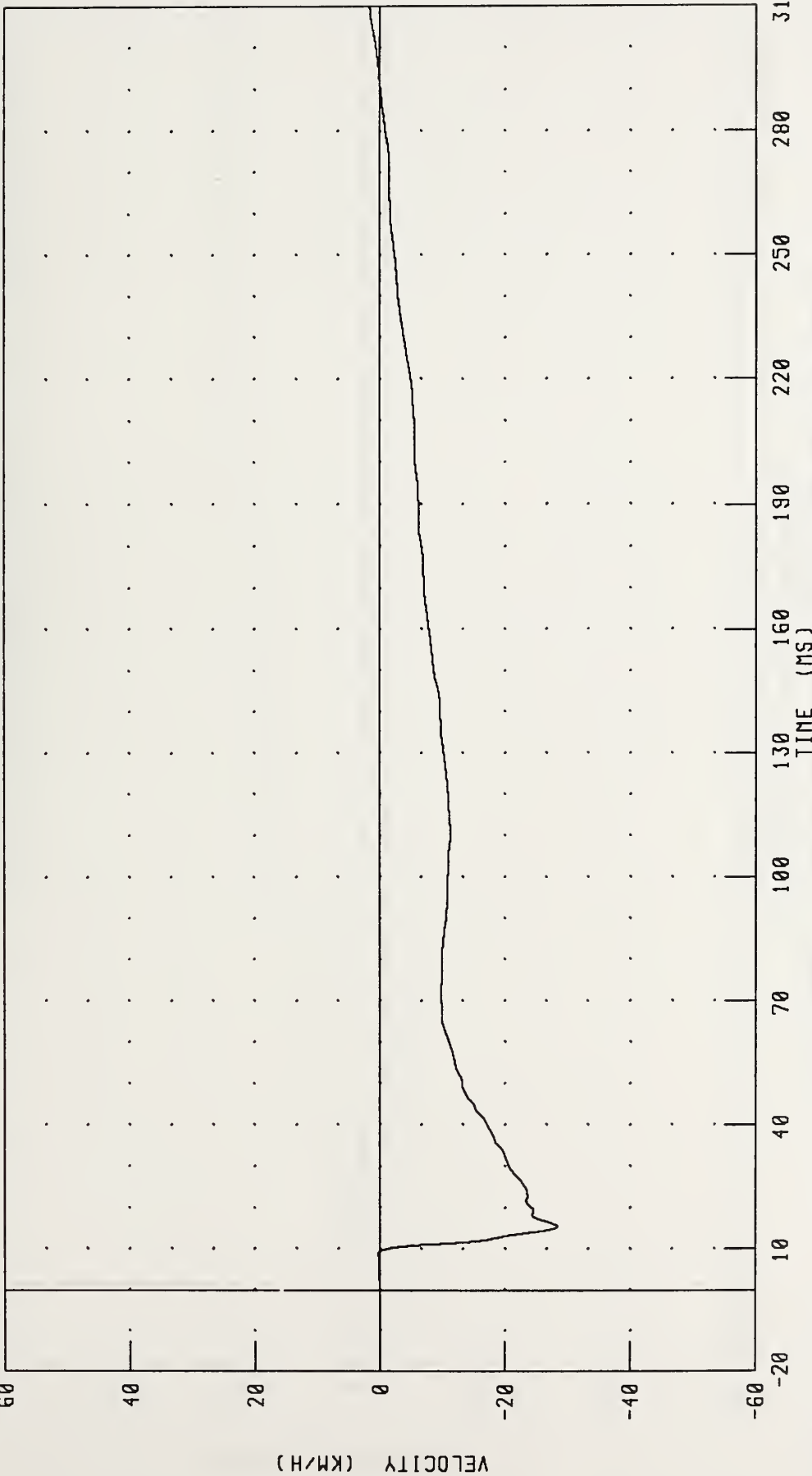
PEAK DATA: 25.94 G @ 17.68 MS; -159.91 G @ 11.52 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
LEFT FRONT SILL Y-AXIS VELOCITY

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

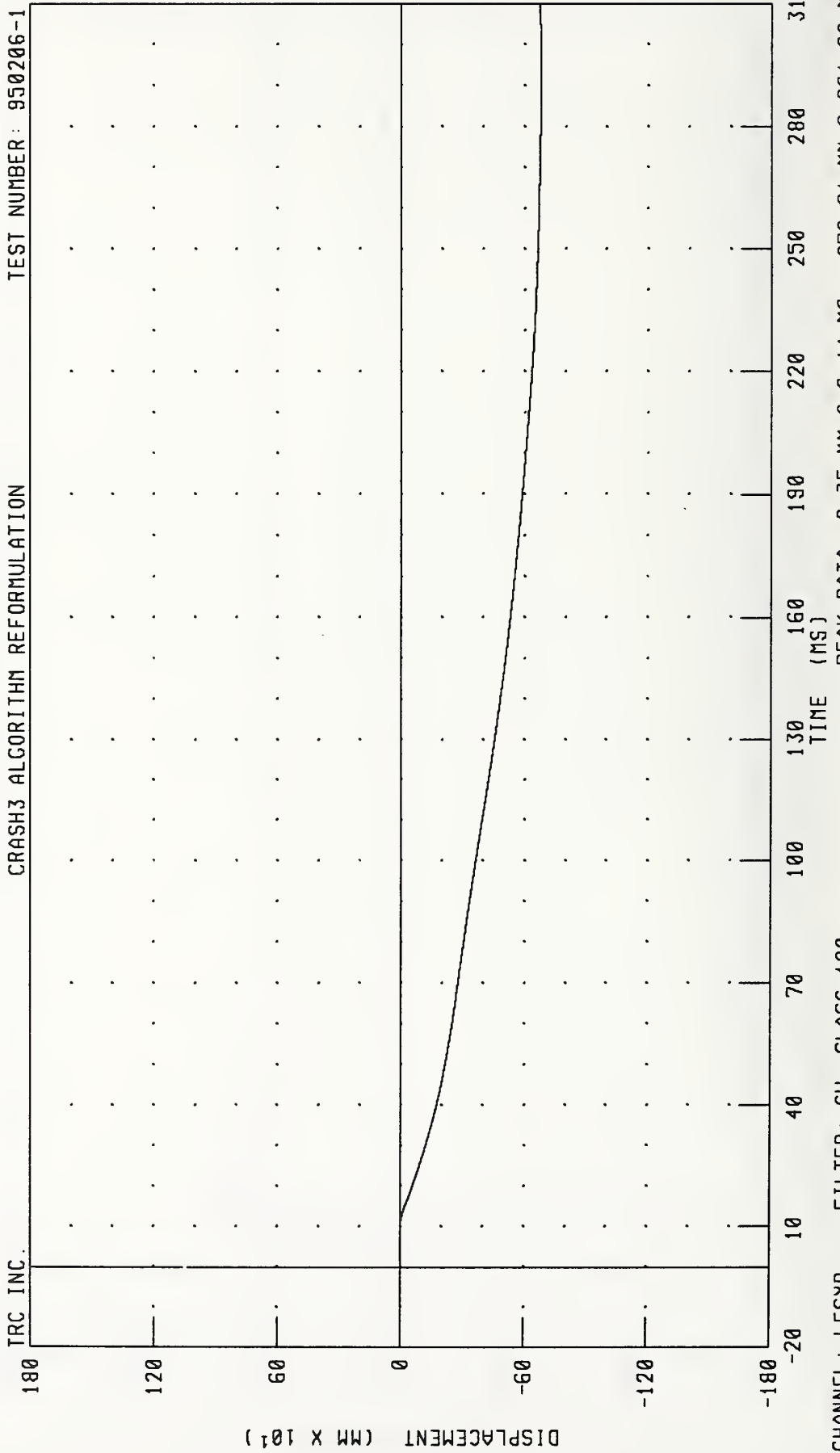
TRC INC.



CHANNEL: LFSYV FILTER: CH. CLASS 180 PEAK DATA: 1.66 KN/H @ 310.00 MS; -28.43 KM/H @ 15.44 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 LEFT FRONT SILL Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



CHANNEL: LFSYD FILTER: CH. CLASS 180

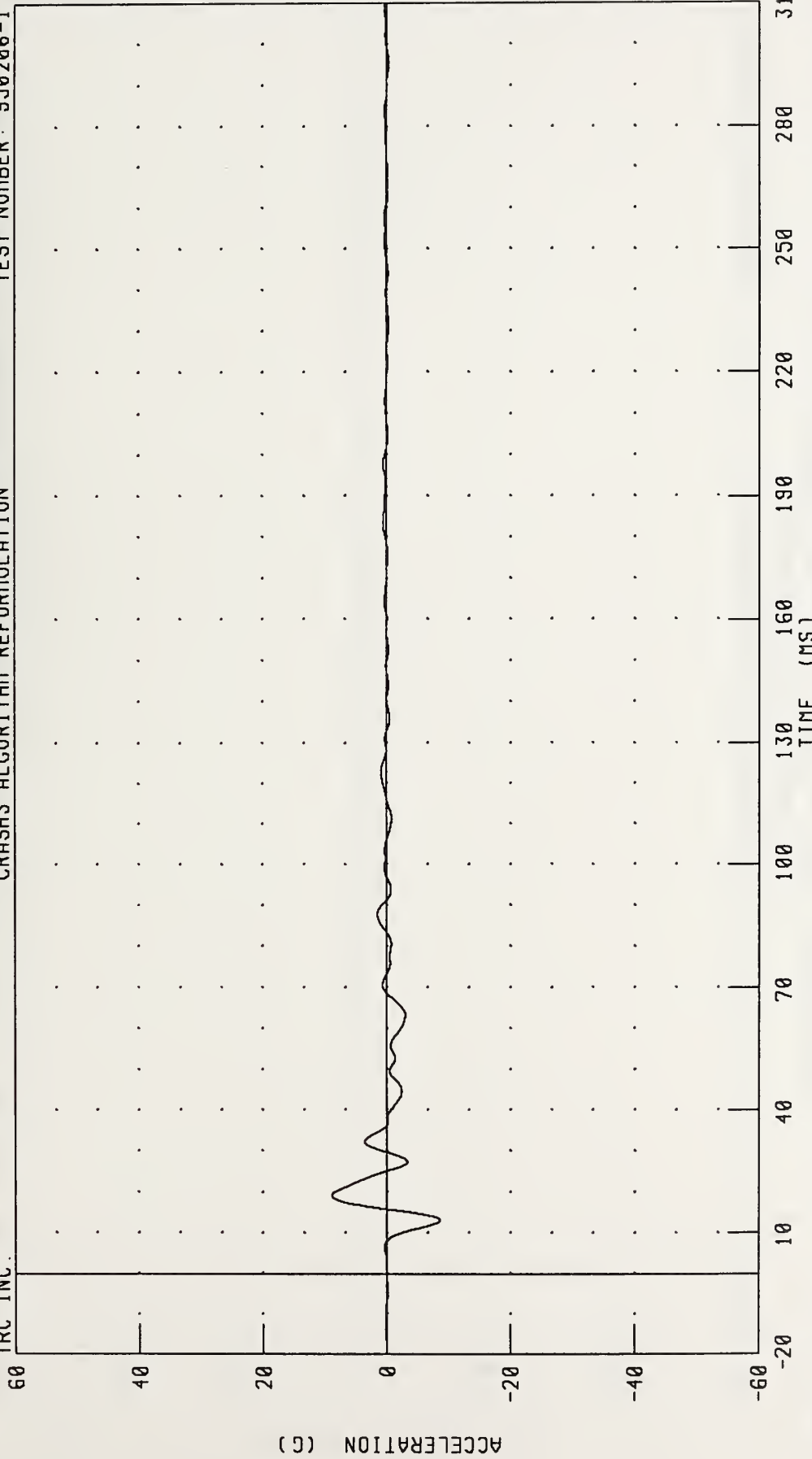
PEAK DATA: 0.35 MM @ 9.44 MS; -679.81 MM @ 291.60 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
RIGHT FRONT SILL X-AXIS ACCELERATION

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

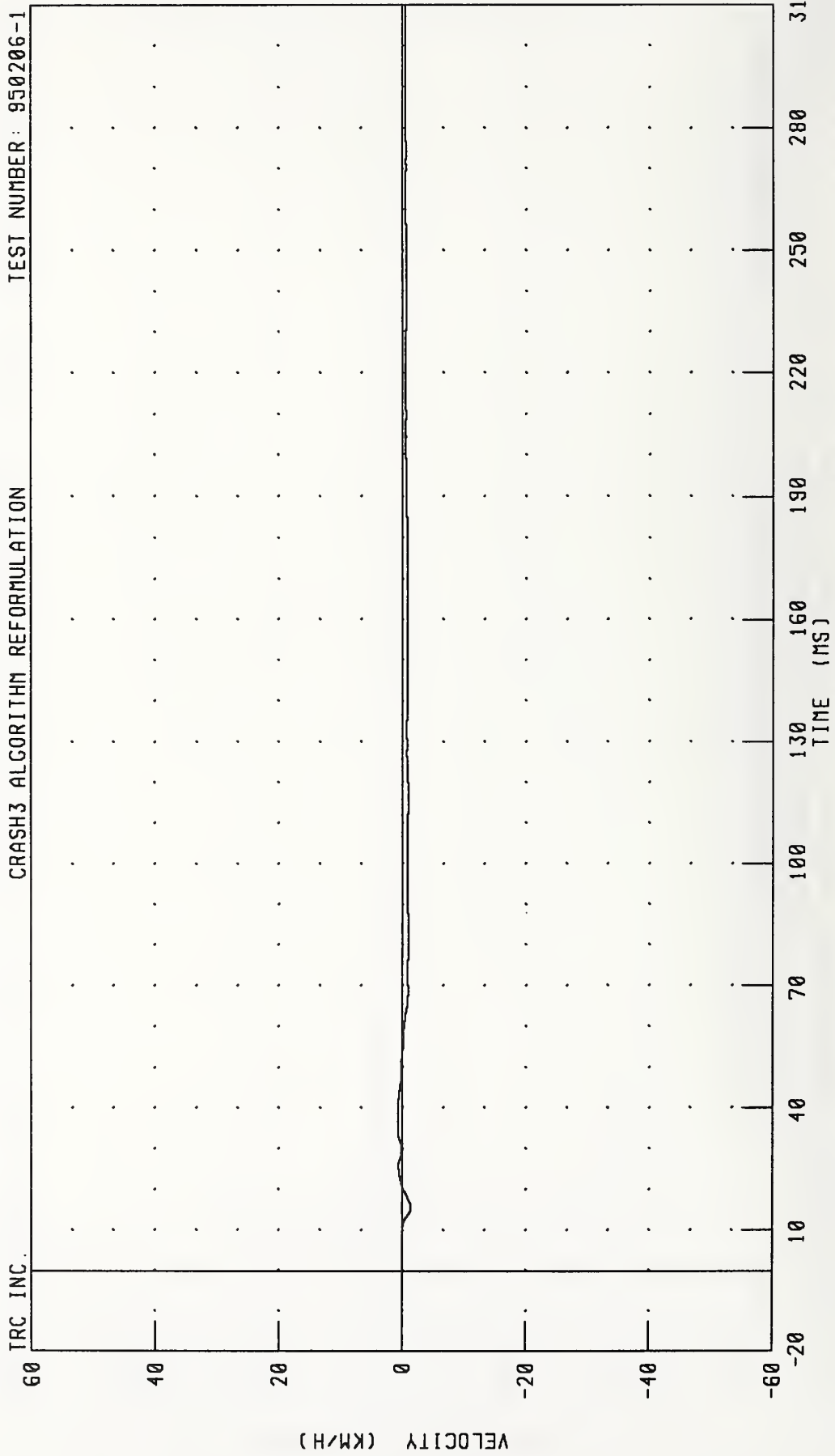


CHANNEL: RFSXG FILTER: CH. CLASS 60

PEAK DATA: 8.89 G @ 19.12 MS; -8.58 G @ 13.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 RIGHT FRONT SILL X-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



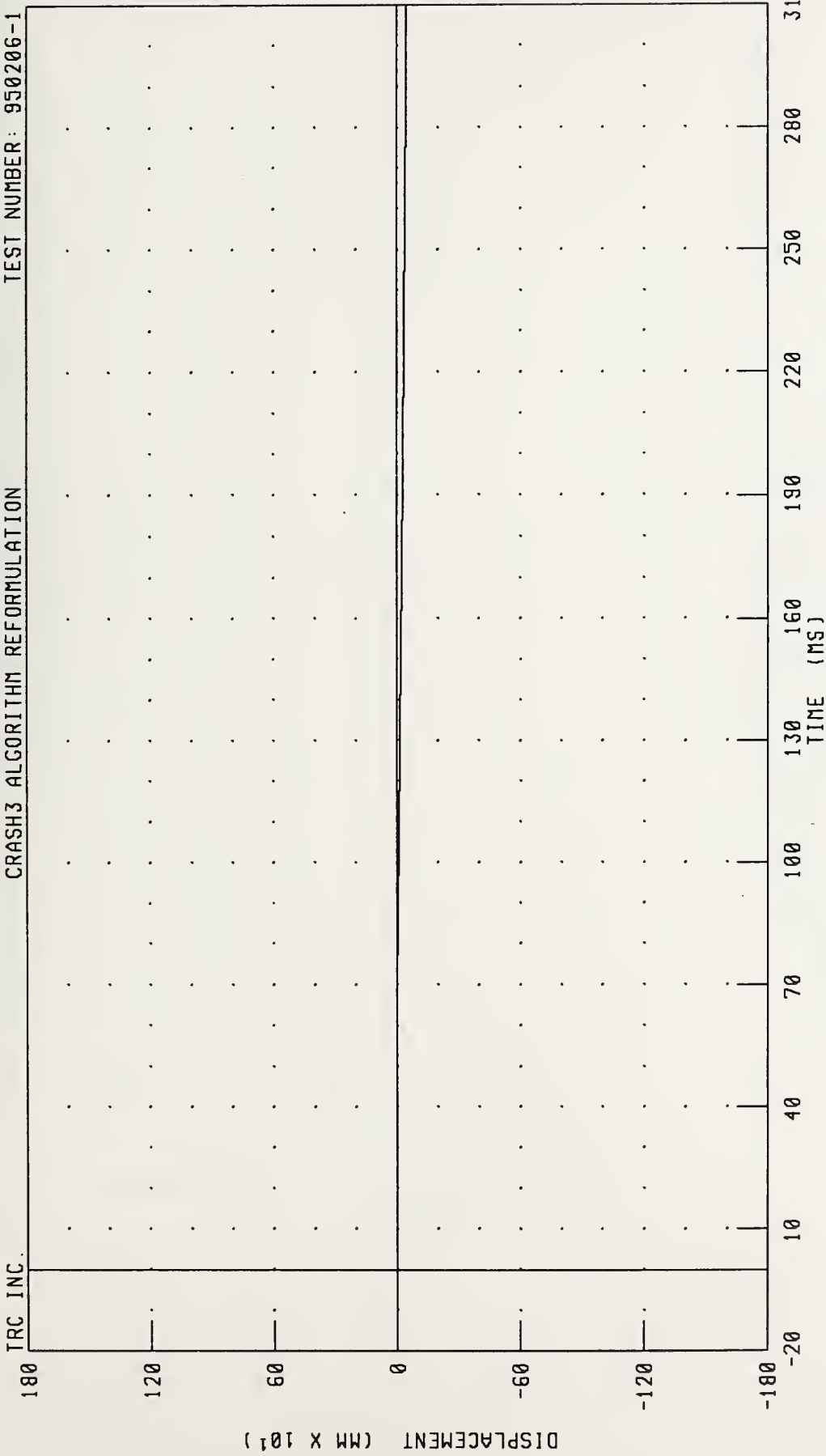
CHANNEL: RFSXV FILTER: CH. CLASS 180 PEAK DATA: 0.75 KM/H @ 35.52 MS; -1.39 KM/H @ 15.52 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5

RIGHT FRONT SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1



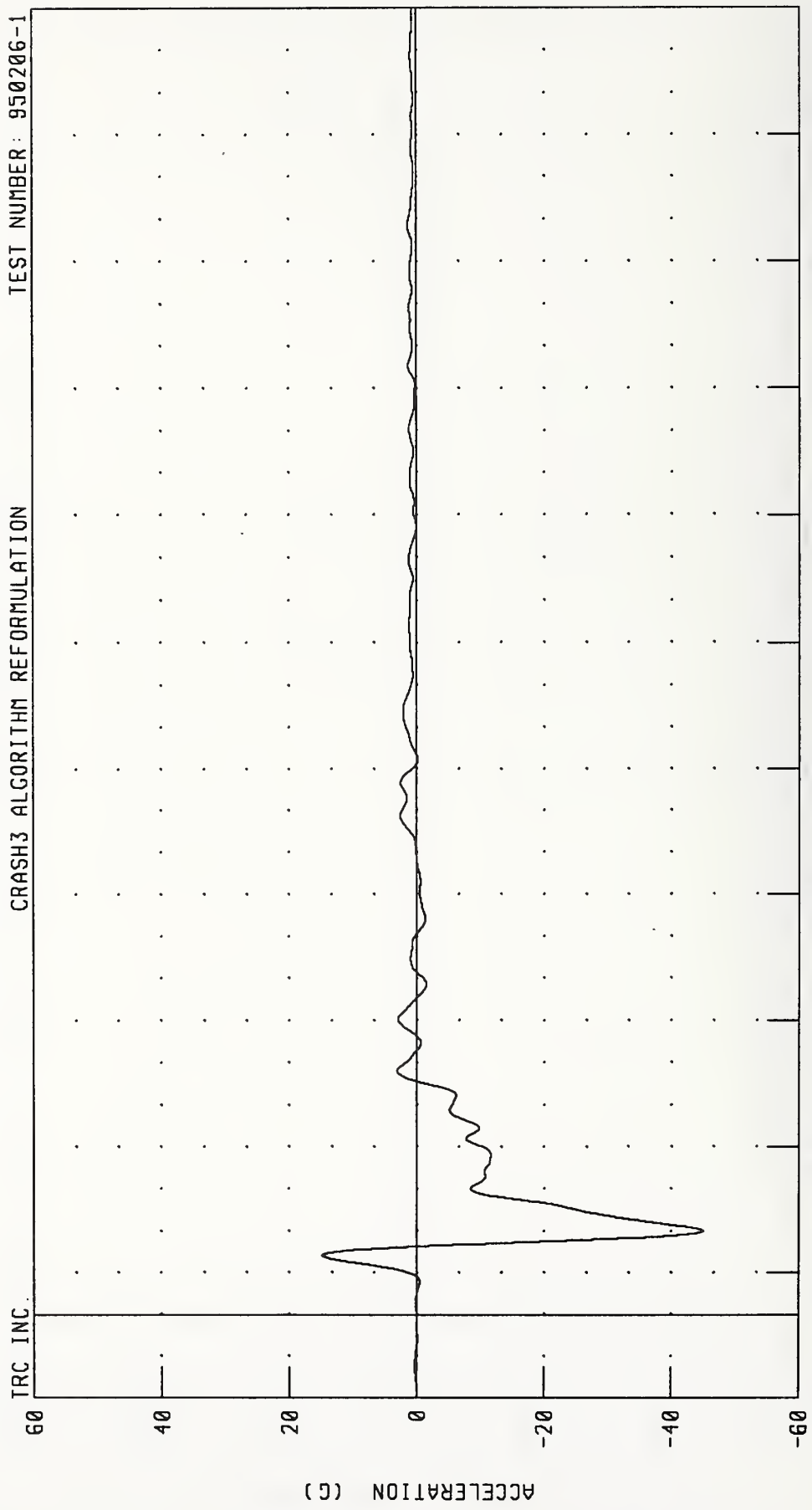
CHANNEL: RFSXD FILTER: CH. CLASS 180

PEAK DATA: 1.66 MM @ 52.96 MS; -47.85 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
RIGHT FRONT SILL Y-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1



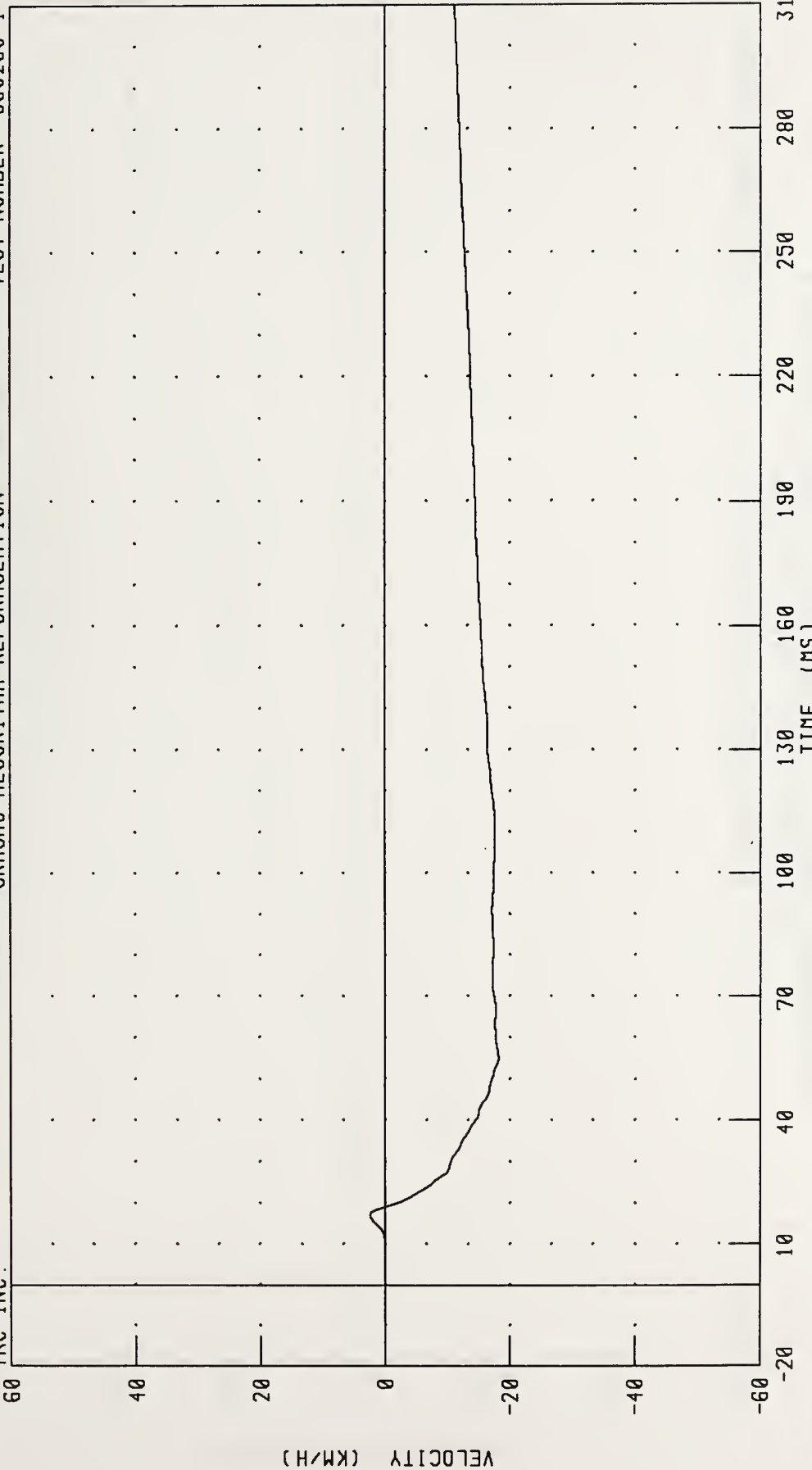
CHANNEL: RFSYG FILTER: CH. CLASS 60

PEAK DATA: 14.86 G @ 14.16 MS; -44.96 G @ 20.08 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
RIGHT FRONT SILL Y-AXIS VELOCITY

TRC INC. TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

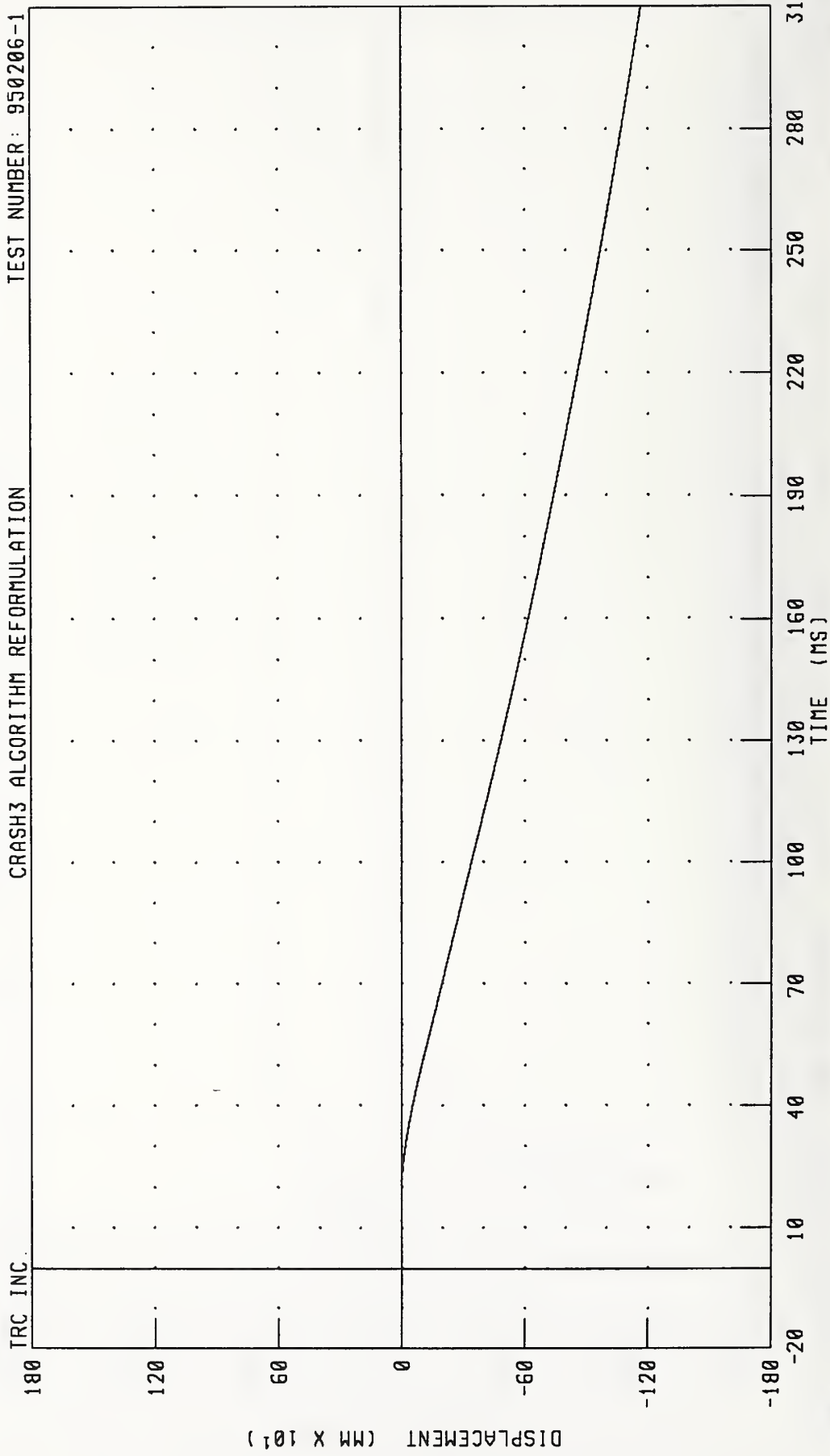


CHANNEL: RFSYV FILTER: CH CLASS 180

PEAK DATA: 2.43 KM/H @ 17.04 MS; -18.22 KM/H @ 55.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 RIGHT FRONT SILL Y-AXIS DISPLACEMENT
 CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1



CHANNEL: RFSYD FILTER: CH. CLASS 180

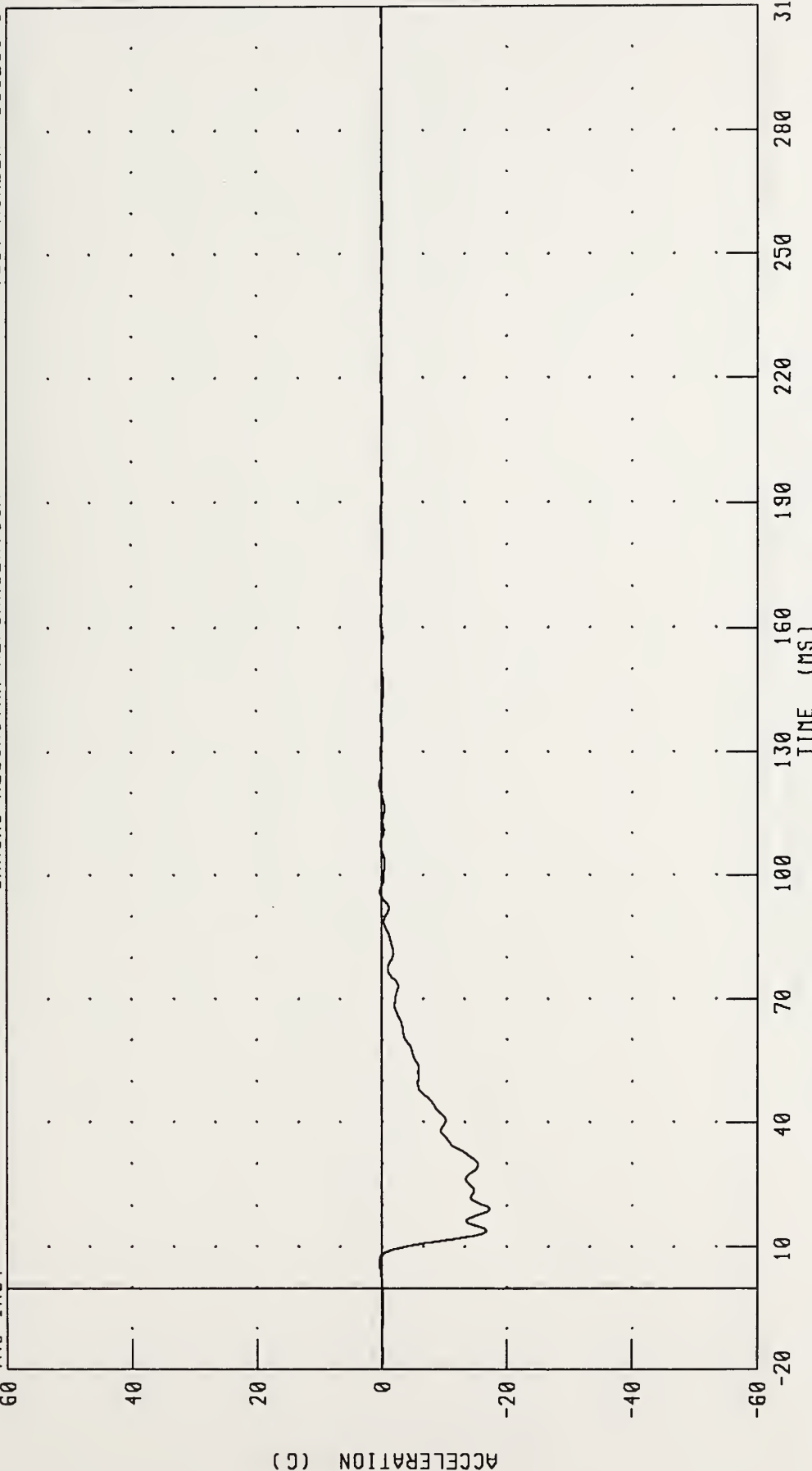
PEAK DATA: 2.75 MM @ 19.04 MS; -1168.35 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS ACCELERATION

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



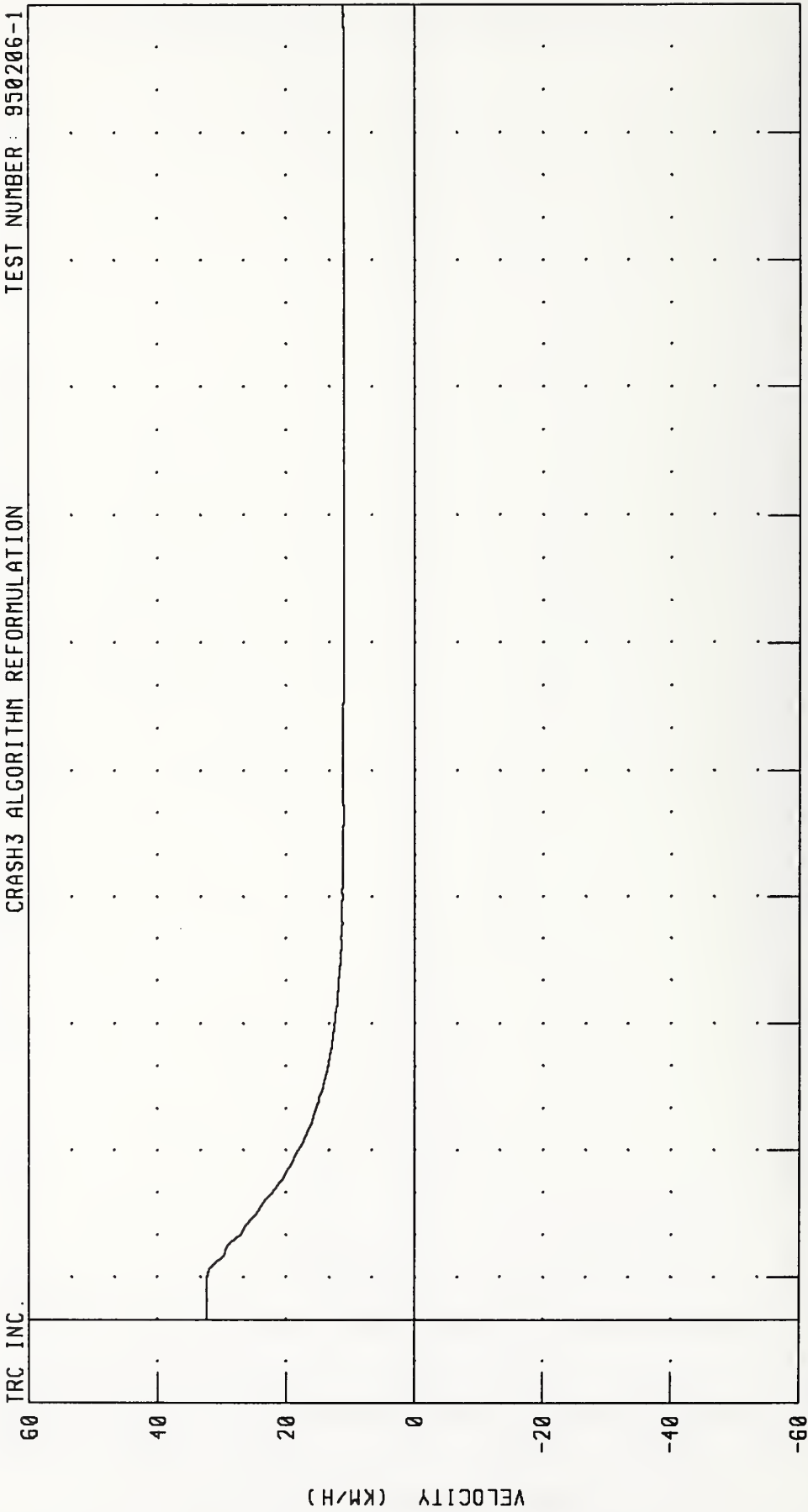
CHANNEL: BCGXG FILTER: CH. CLASS 60

PEAK DATA: 0.39 G @ 6.32 MS; -17.28 G @ 19.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS VELOCITY

TRC INC. TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION



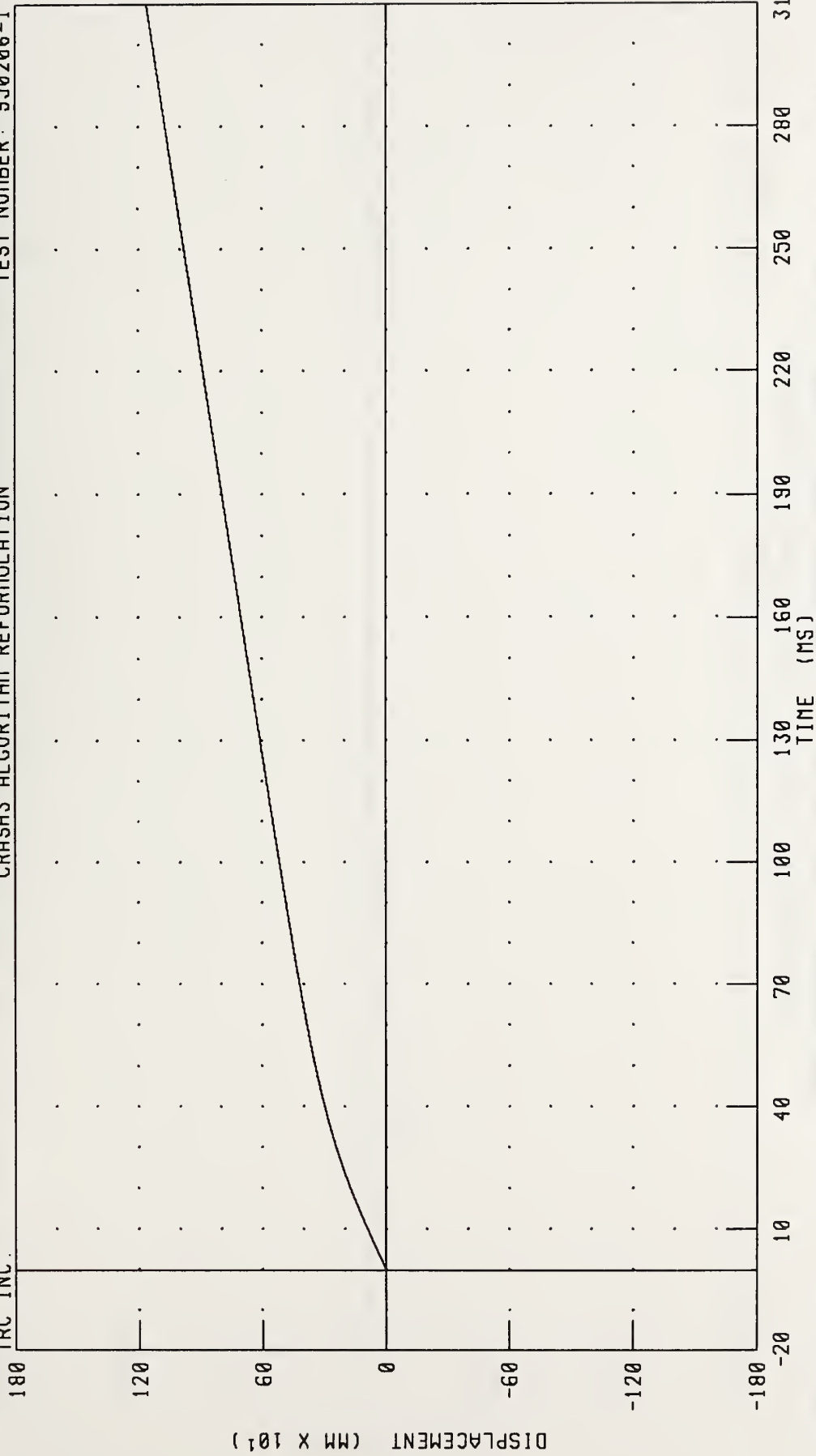
CHANNEL: BCGXV FILTER: CH. CLASS 180
PEAK DATA: 32.33 KM/H @ 6.00 MS; 11.03 KM/H @ 159.92 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY X-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

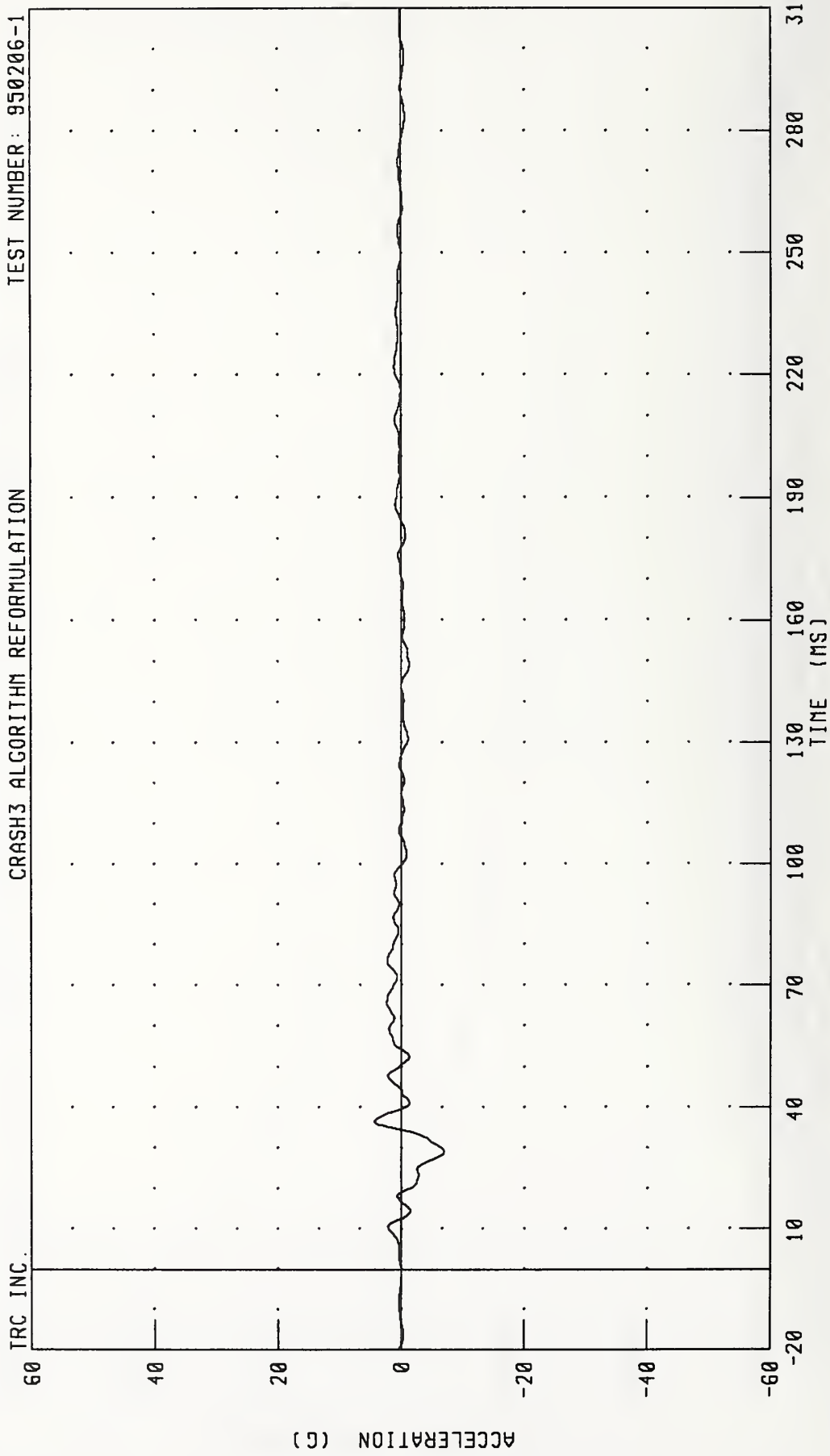
TRC INC.



CHANNEL: BCGXD FILTER: CH. CLASS 180 PEAK DATA: 1163.72 MM @ 310.00 MS, 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY Y-AXIS ACCELERATION
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1



CHANNEL: BCGYG FILTER: CH. CLASS 60

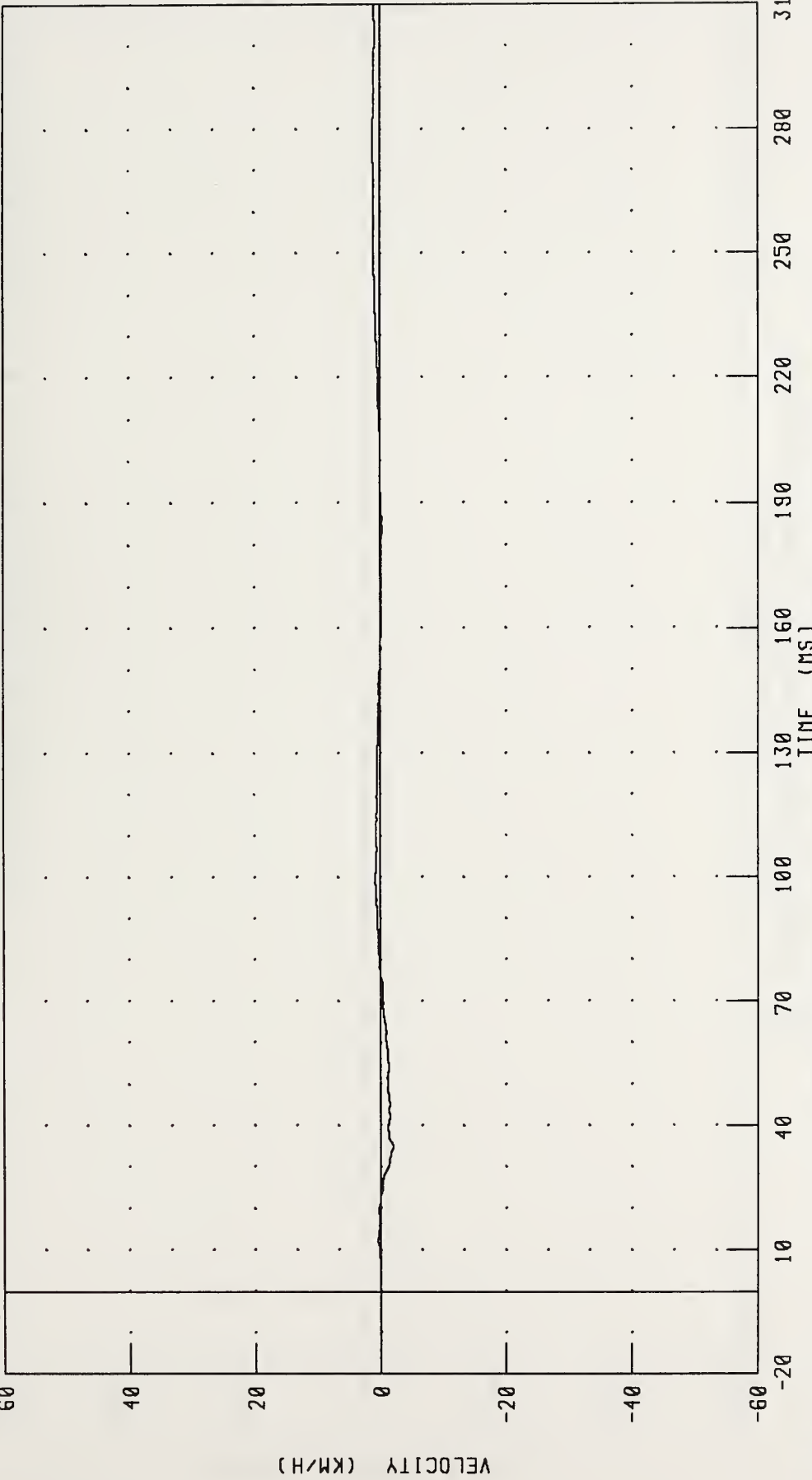
PEAK DATA: 4.39 G @ 36.56 MS; -6.99 G @ 29.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY Y-AXIS VELOCITY

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

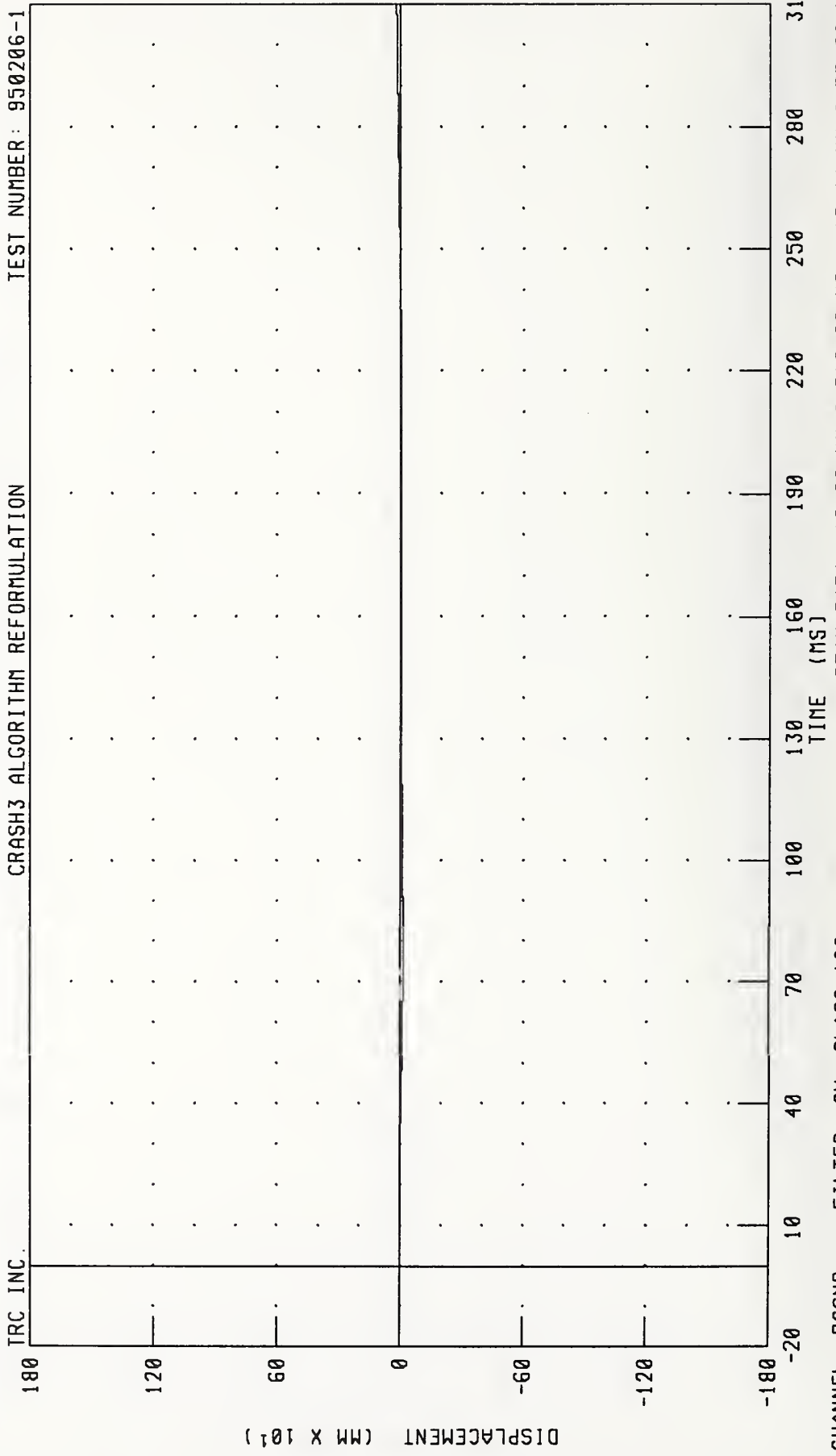


CHANNEL: BCGYV FILTER: CH. CLASS 180

PEAK DATA: 1.18 KM/H @ 278.88 MS; -1.97 KM/H @ 34.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 MOVING BARRIER CENTER OF GRAVITY Y-AXIS DISPLACEMENT
 CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1



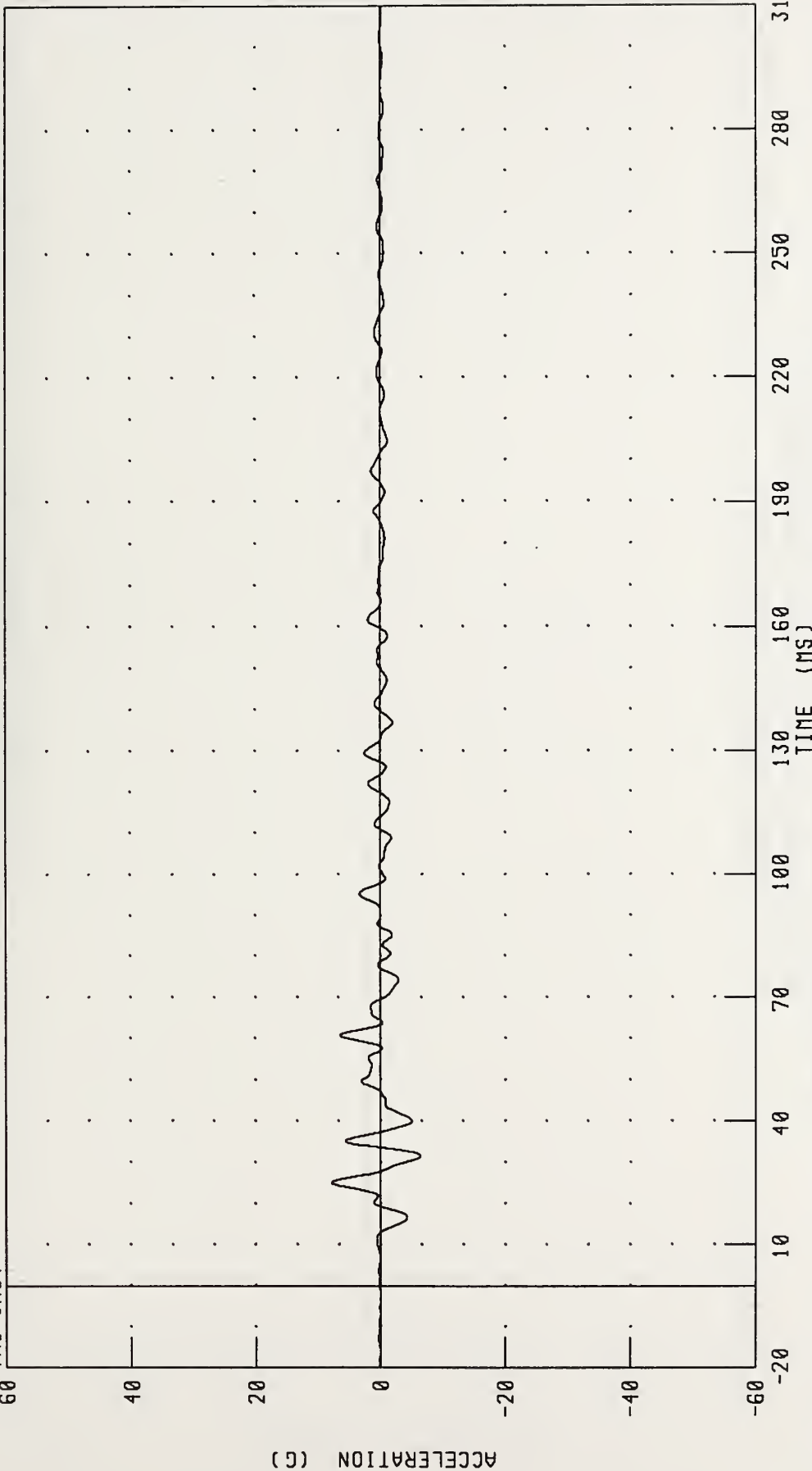
TRC INC. CHANNEL: BCGYD FILTER: CH. CLASS 180
 PEAK DATA: 18.80 MM @ 310.00 MS; -13.44 MM @ 77.28 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

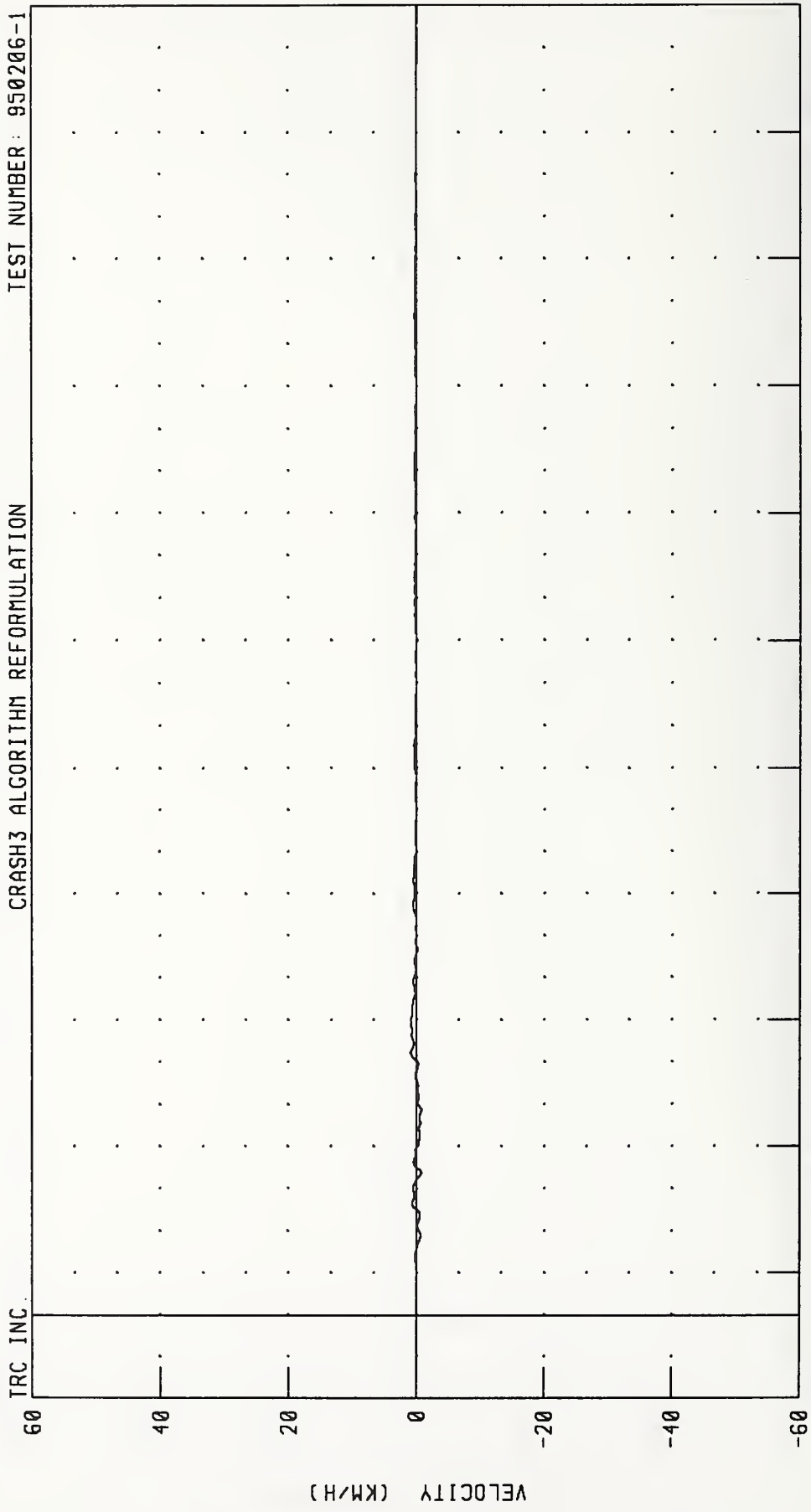


CHANNEL: BCGZG FILTER: CH. CLASS 60

PEAK DATA: 7.84 G @ 25.12 MS; -6.44 G @ 31.68 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 MOVING BARRIER CENTER OF GRAVITY Z-AXIS VELOCITY
 CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1



TRC INC.

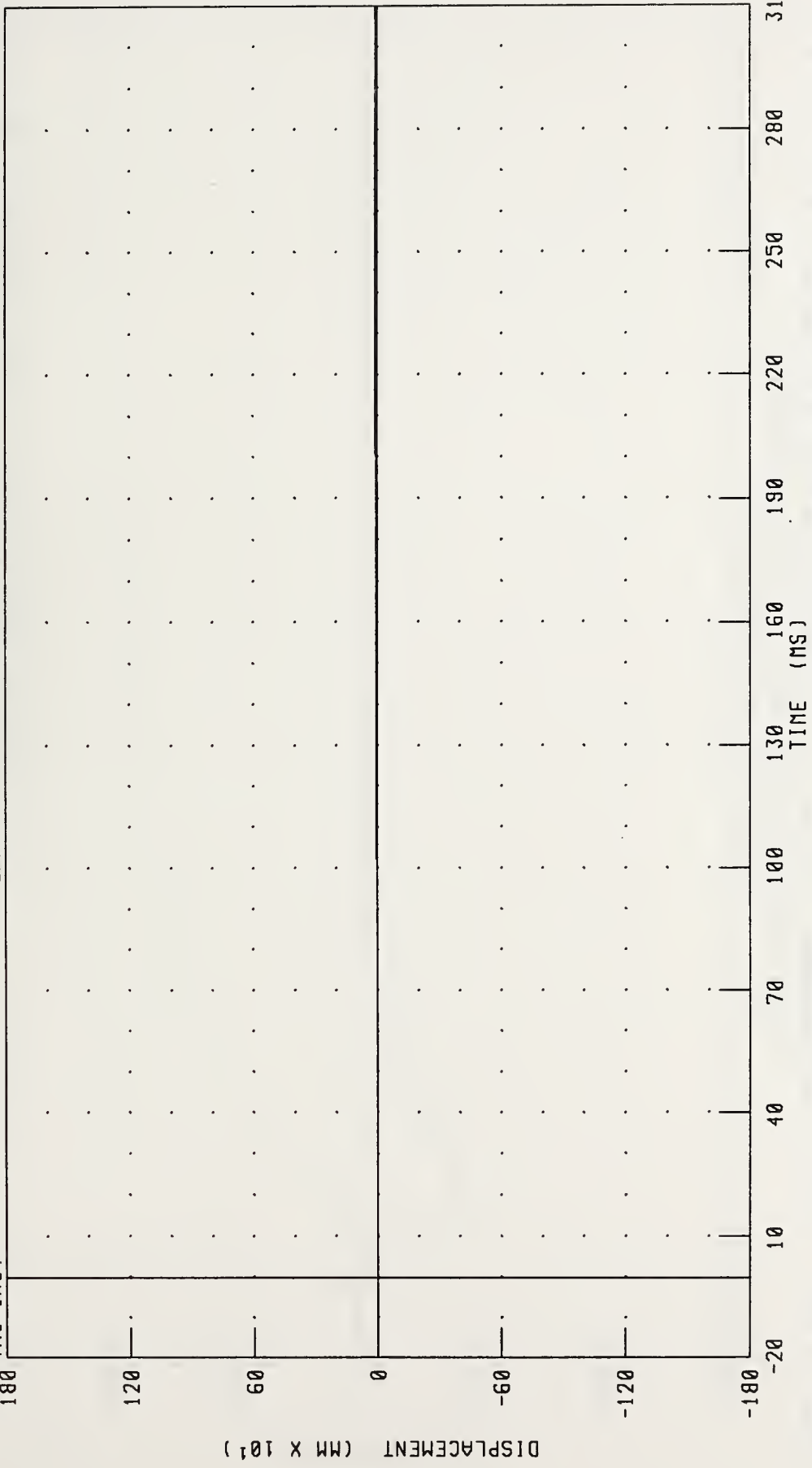
CHANNEL: BCGZV FILTER: CH. CLASS 180 PEAK DATA: 0.95 KM/H @ 62.16 MS; -0.78 KM/H @ 48.56 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 MOVING BARRIER CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



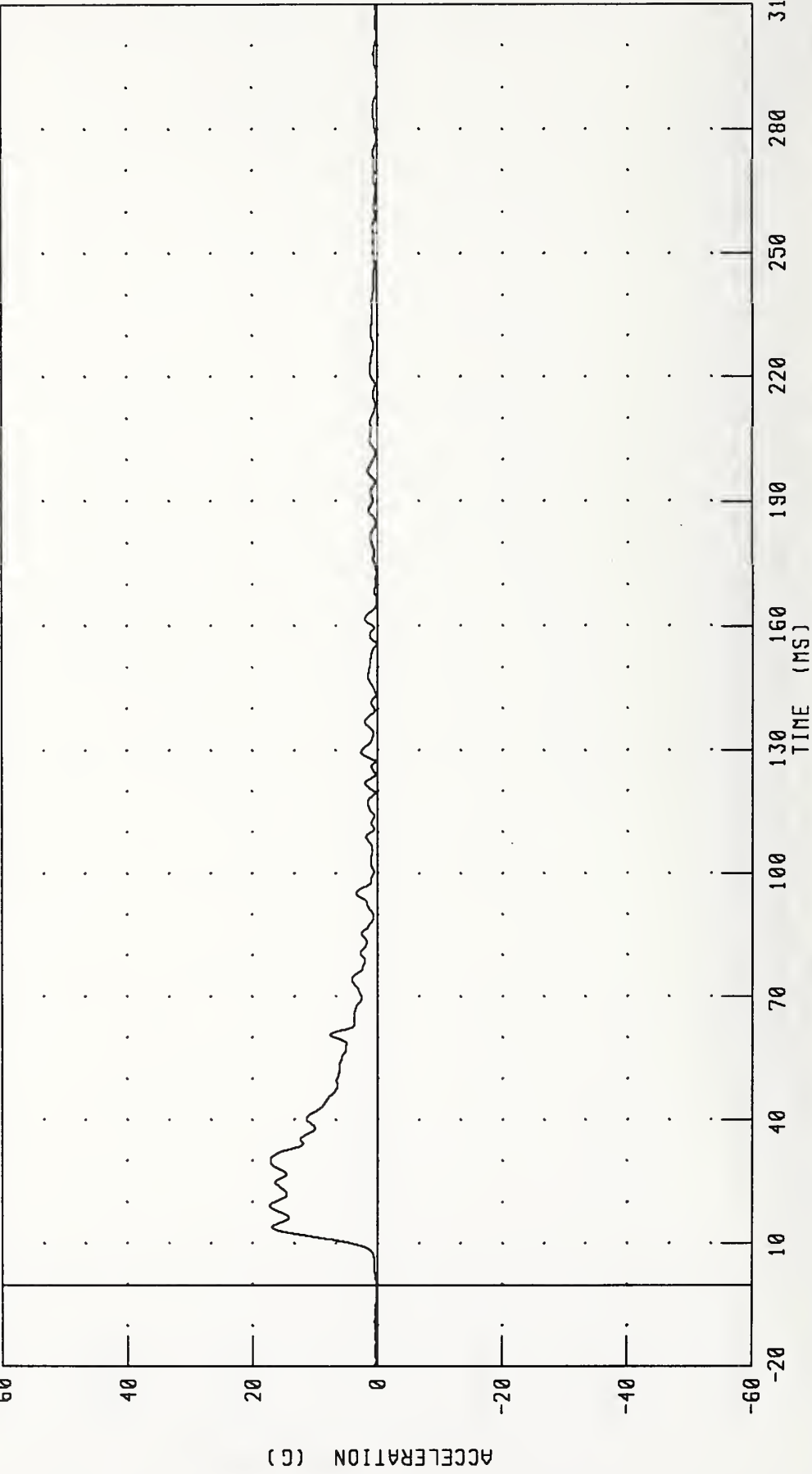
CHANNEL: BCGZD FILTER: CH. CLASS 180

PEAK DATA: 10.81 MM @ 284.16 MS; -1.61 MM @ 60.32 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT ACCELERATION
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-1

TRC INC.



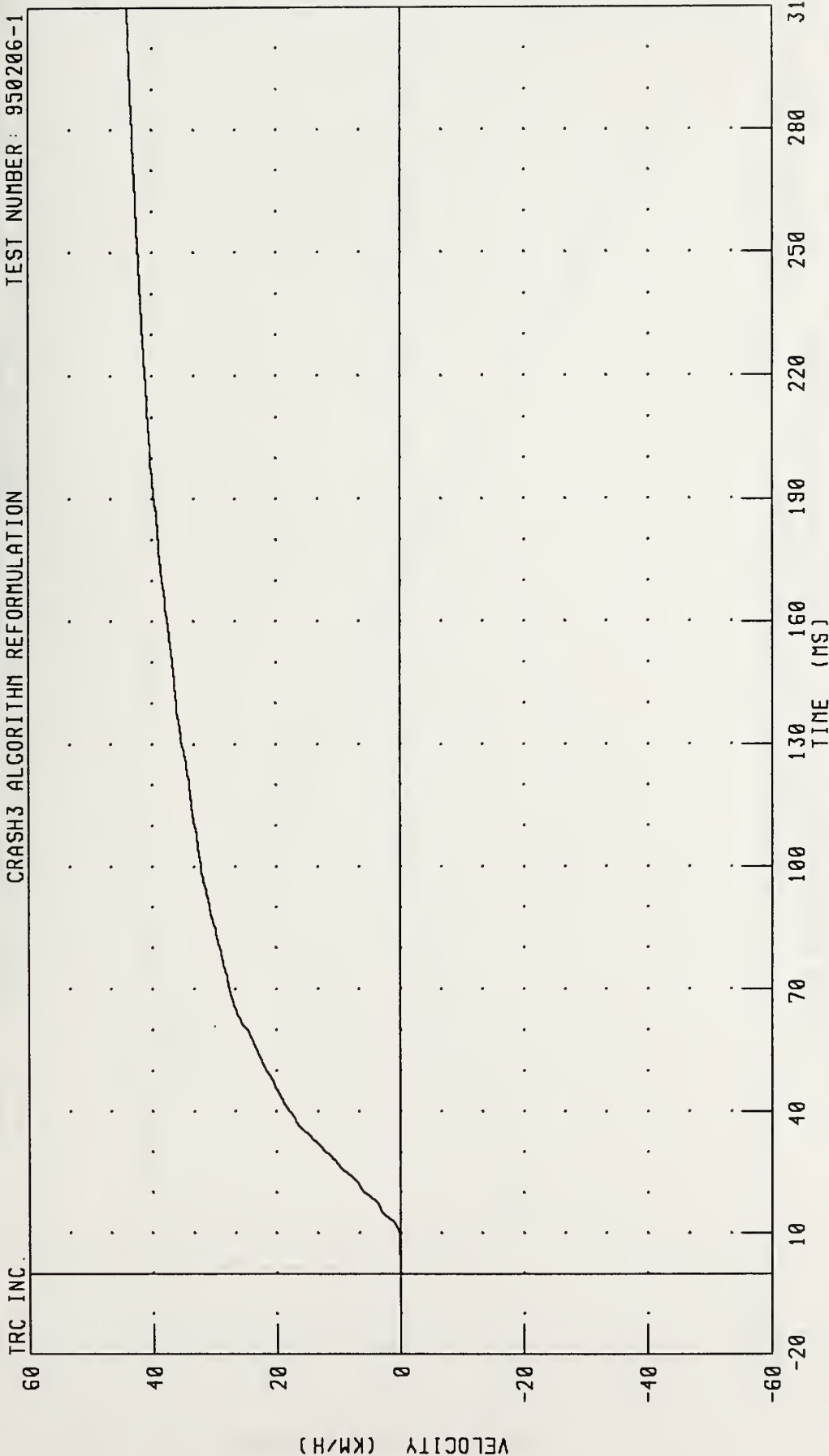
CHANNEL: BCCRG FILTER: CH. CLASS 60

PEAK DATA: 17.29 G @ 19.12 MS, 0.06 G @ 292.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT VELOCITY

TEST NUMBER: 950206-1

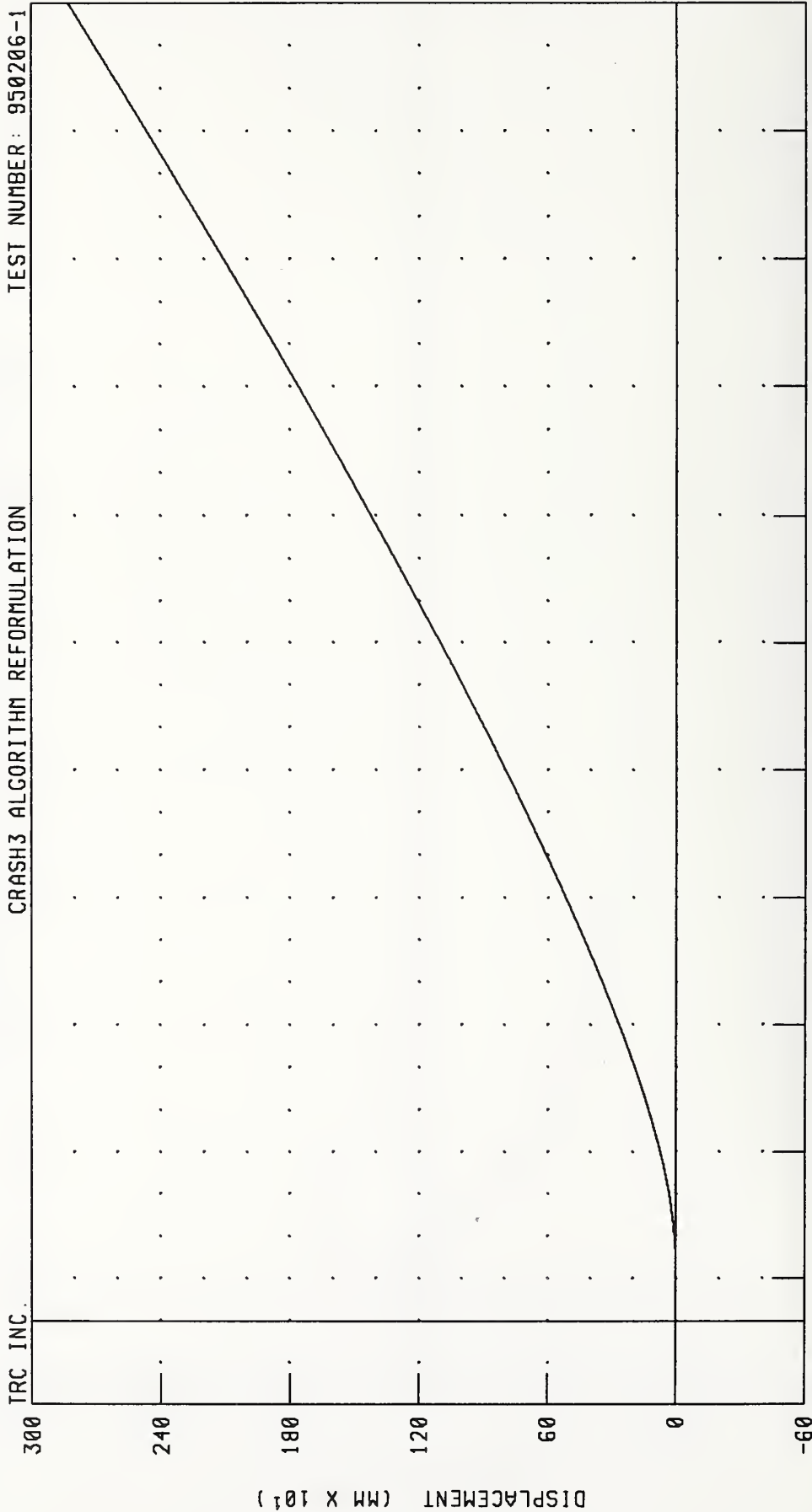
CRASH3 ALGORITHM REFORMULATION



CHANNEL: BCGRV FILTER: CH. CLASS 180 PEAK DATA: 44.05 KM/H @ 310.00 MS; 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



CHANNEL: BCGRD FILTER: CH. CLASS 180

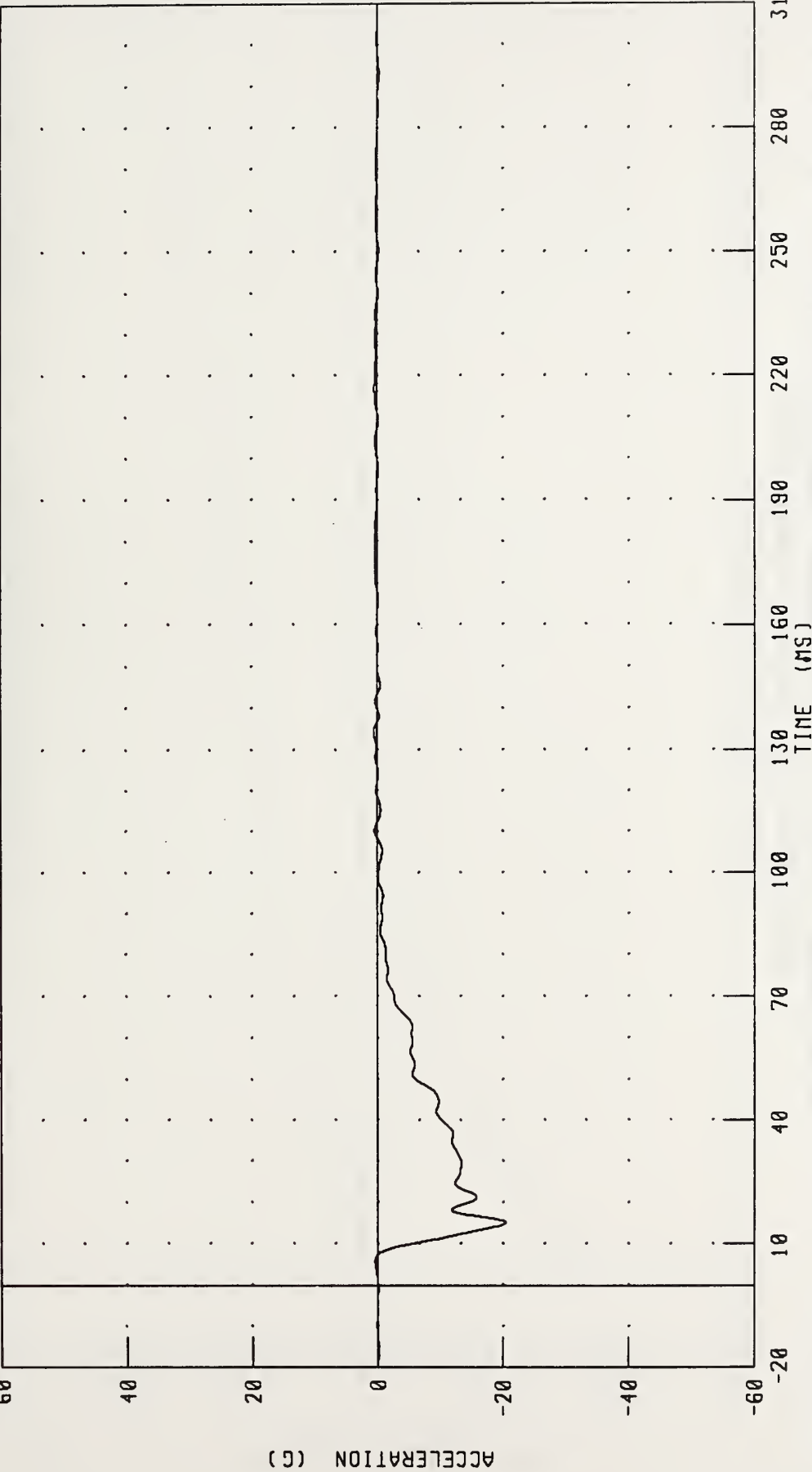
PEAK DATA: 2828.22 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS ACCELERATION

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC

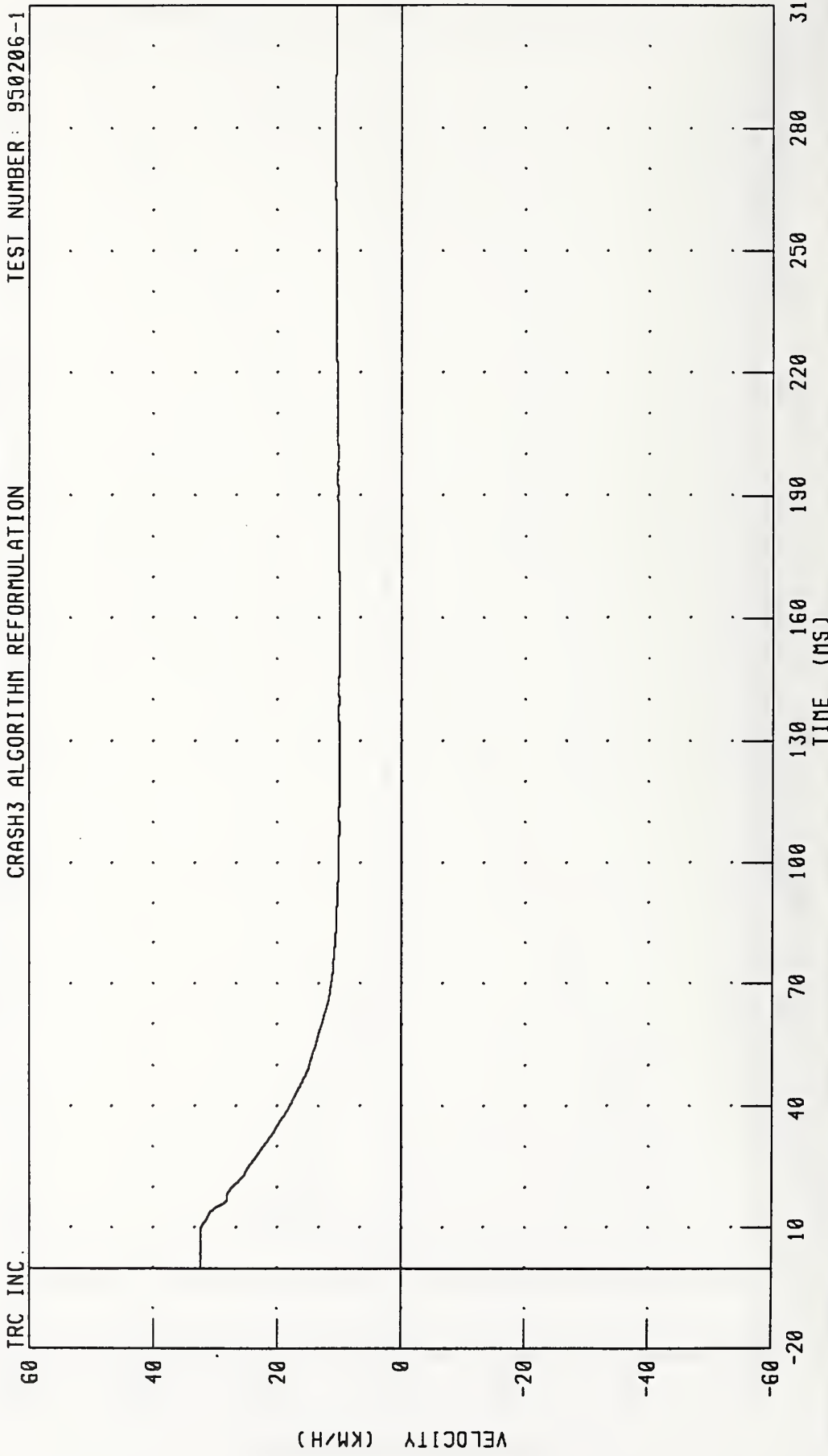


CHANNEL: BSRXG FILTER: CH. CLASS 60

PEAK DATA: 0.54 G @ 134.40 MS; -20.45 G @ 15.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 MOVING BARRIER LEFT SIDE RAIL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



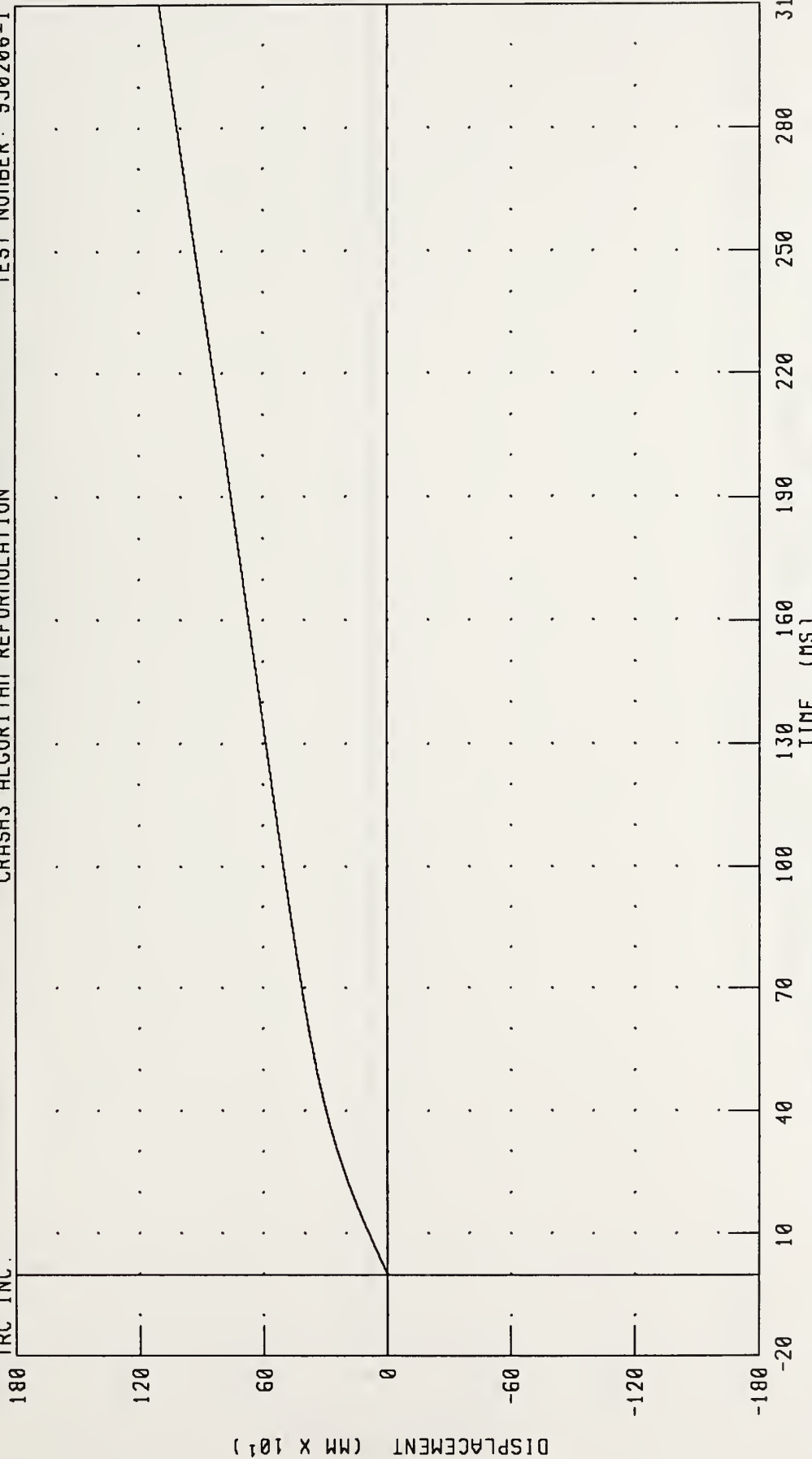
CHANNEL: BSRXV FILTER: CH. CLASS 180 PEAK DATA: 32.33 KM/H @ 9.12 MS; 10.00 KM/H @ 125.68 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 MOVING BARRIER LEFT SIDE RAIL X-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.

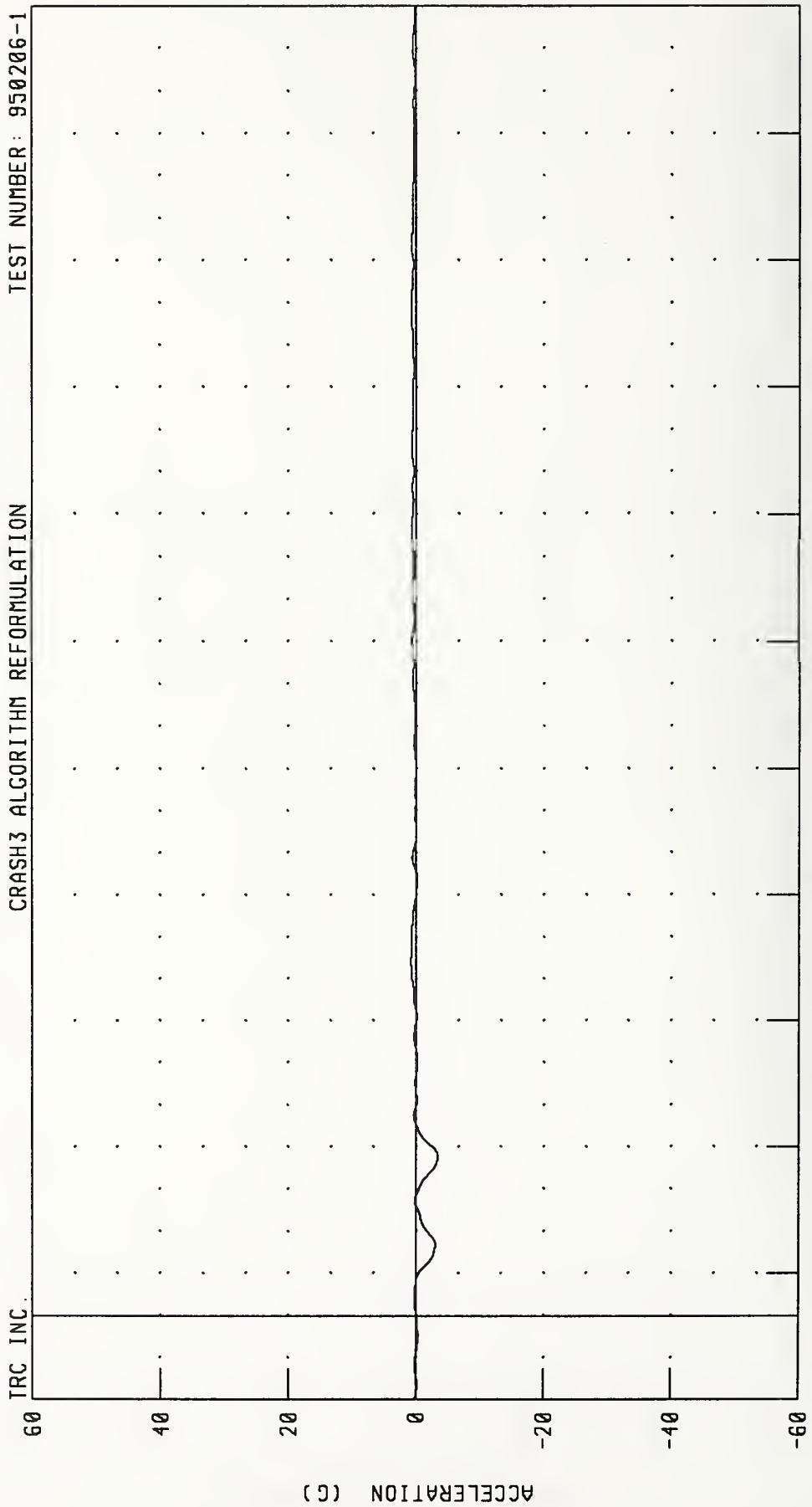


CHANNEL: BSRXD FILTER: CH. CLASS 180

PEAK DATA: 1104.83 MM @ 310.00 MS, 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
MOVING BARRIER LEFT SIDE RAIL Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-1



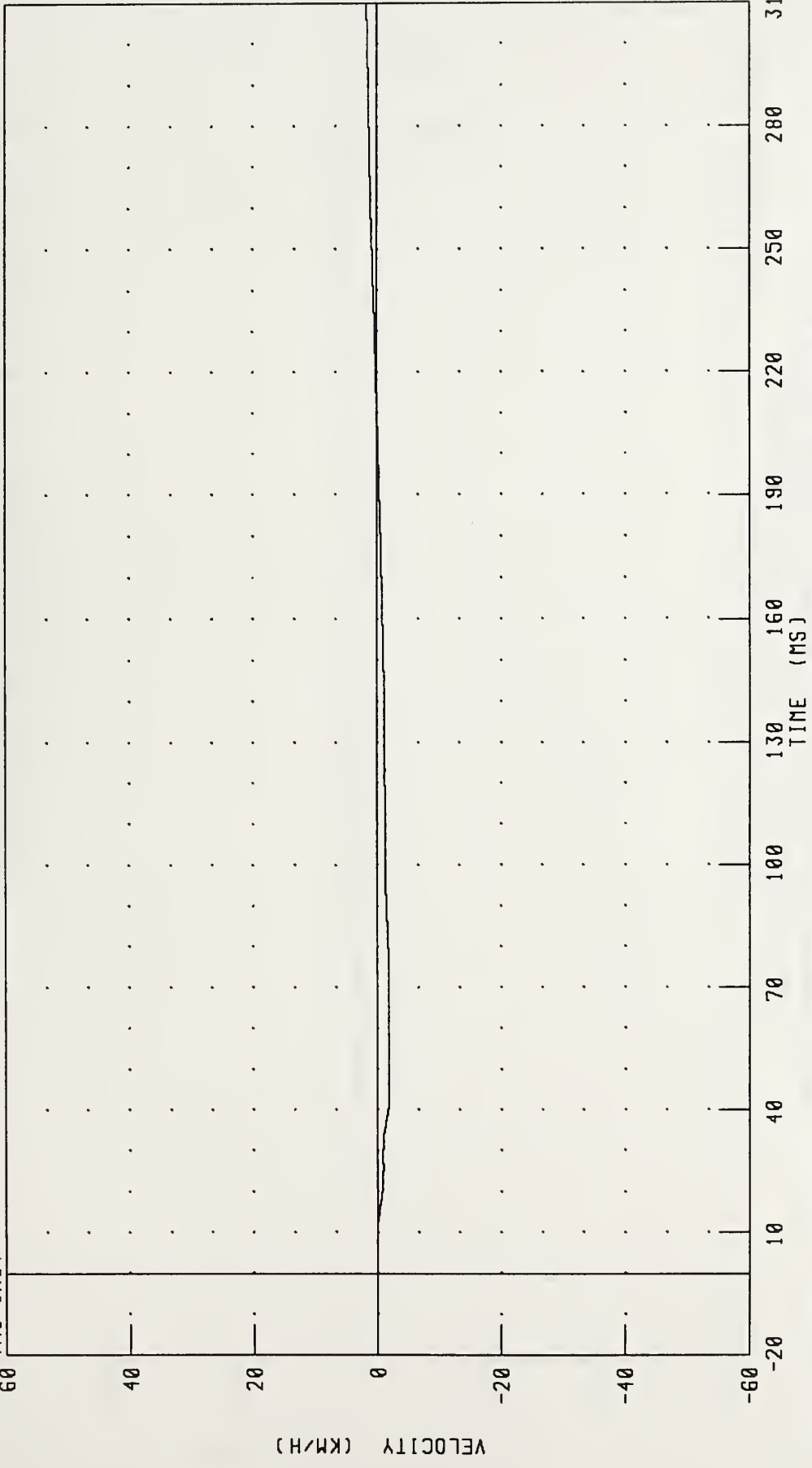
CHANNEL: BSRYG FILTER: CH. CLASS 60 PEAK DATA: 0.81 G @ 84.16 MS; -3.41 G @ 37.76 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 MOVING BARRIER LEFT SIDE RAIL Y-AXIS VELOCITY

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BSRYV FILTER: CH. CLASS 180

PEAK DATA: 1.65 KM/H @ 310.00 MS; -1.93 KM/H @ 45.84 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 4 OF 5
 MOVING BARRIER LEFT SIDE RAIL Y-AXIS DISPLACEMENT

TEST NUMBER: 950206-1

CRASH3 ALGORITHM REFORMULATION

TRC INC

180

120

60

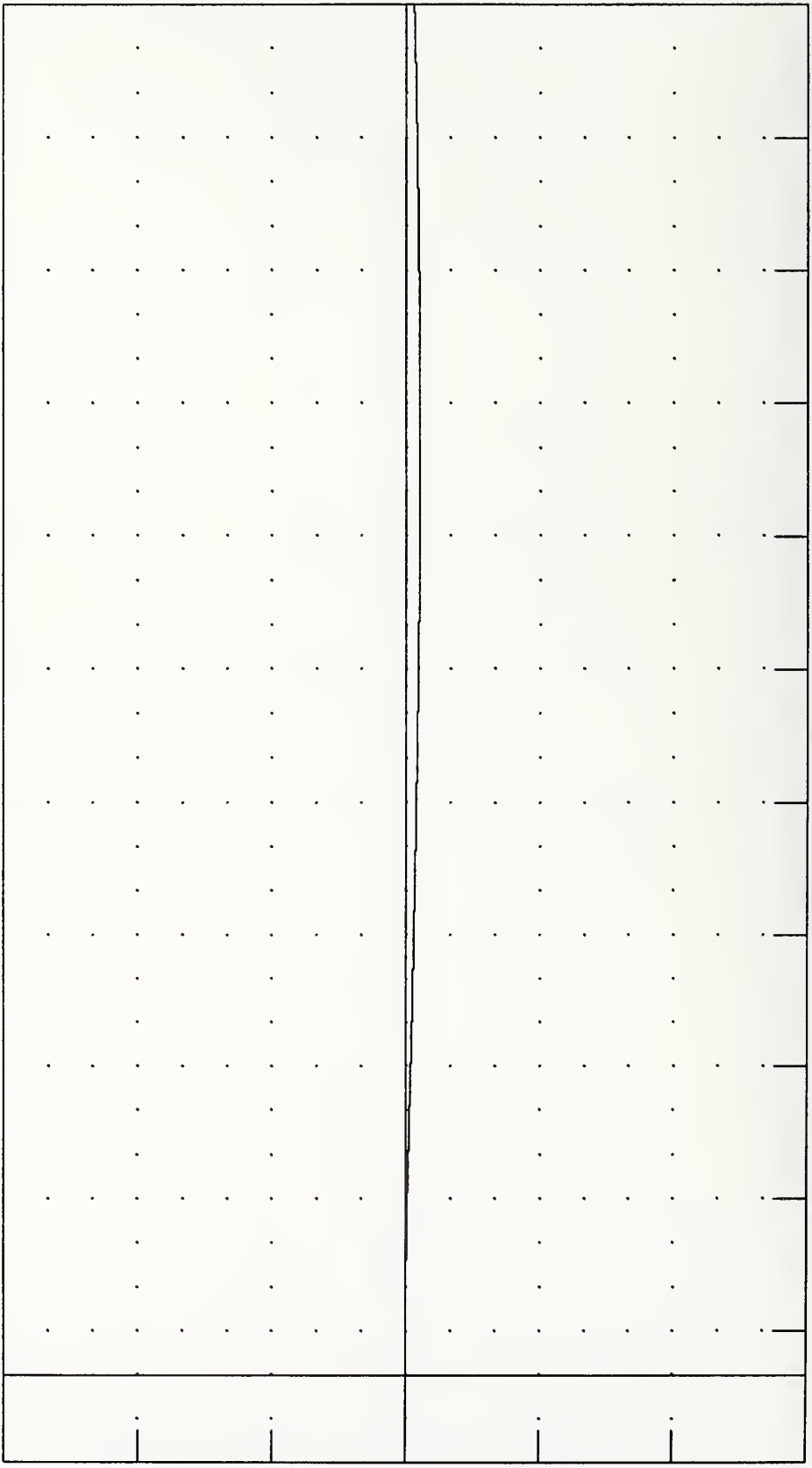
0

-60

-120

-180

DISPLACEMENT (MM X 10¹)



310 280 250 220 190 160 130 100 70 40 10 -20
 TIME (MS)

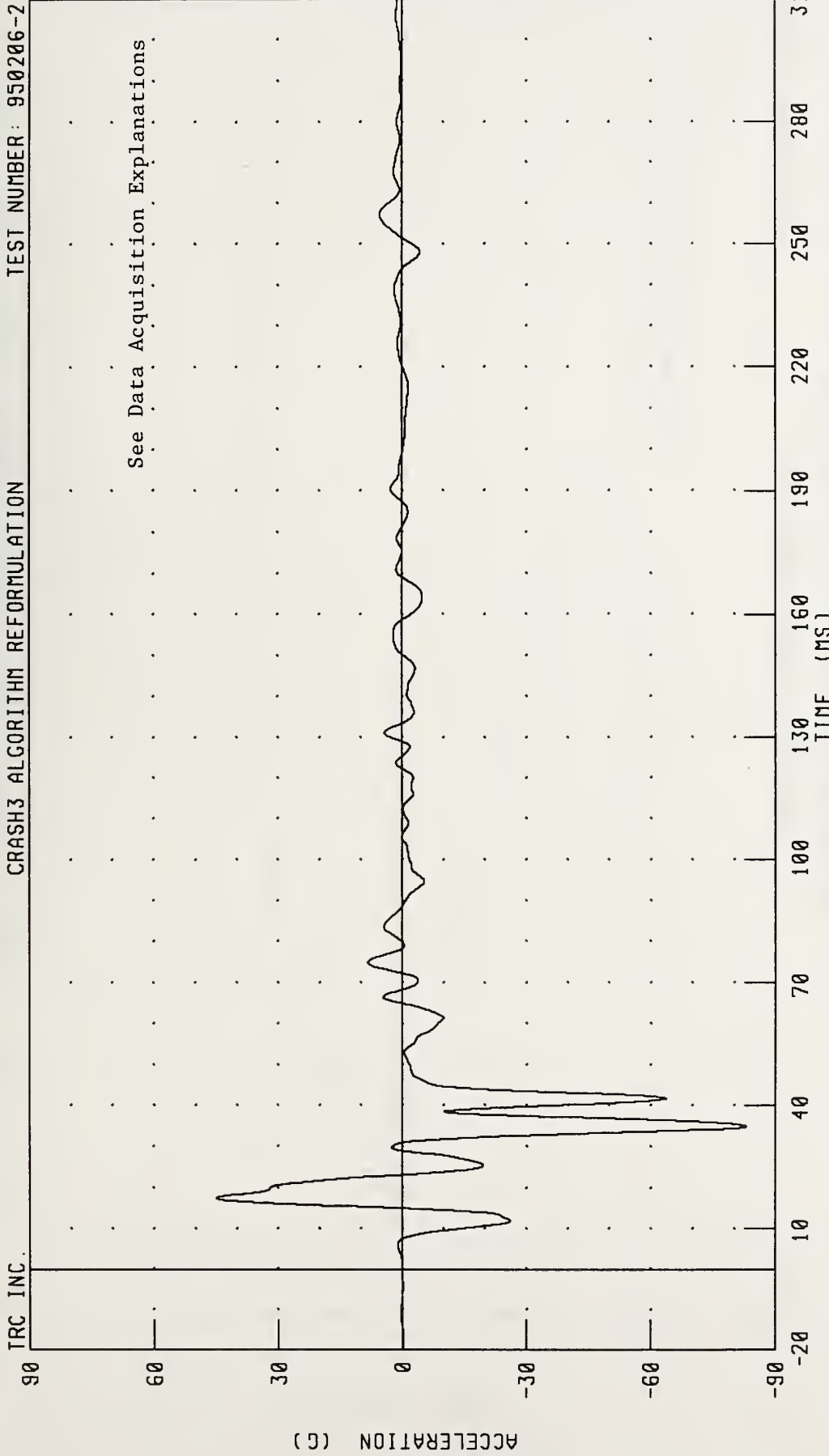
CHANNEL: BSRVD FILTER: CH. CLASS 180 PEAK DATA: 0.06 MM @ 11.68 MS, -62.17 MM @ 209.36 MS

Data Plots

Test No. 950206-2

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: VCGXG FILTER: CH. CLASS 60

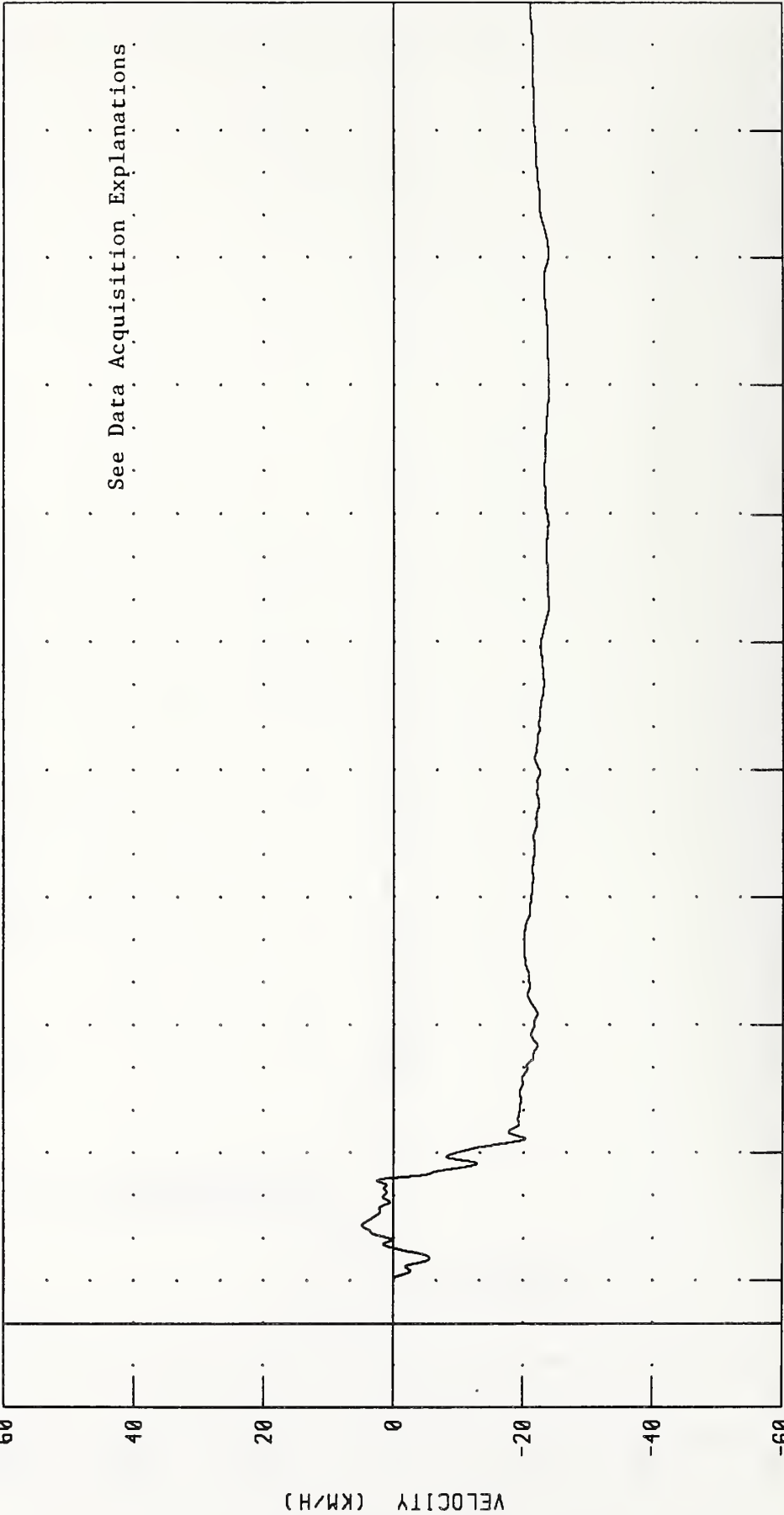
PEAK DATA: 44.86 G @ 17.52 MS; -83.02 G @ 34.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC



See Data Acquisition Explanations

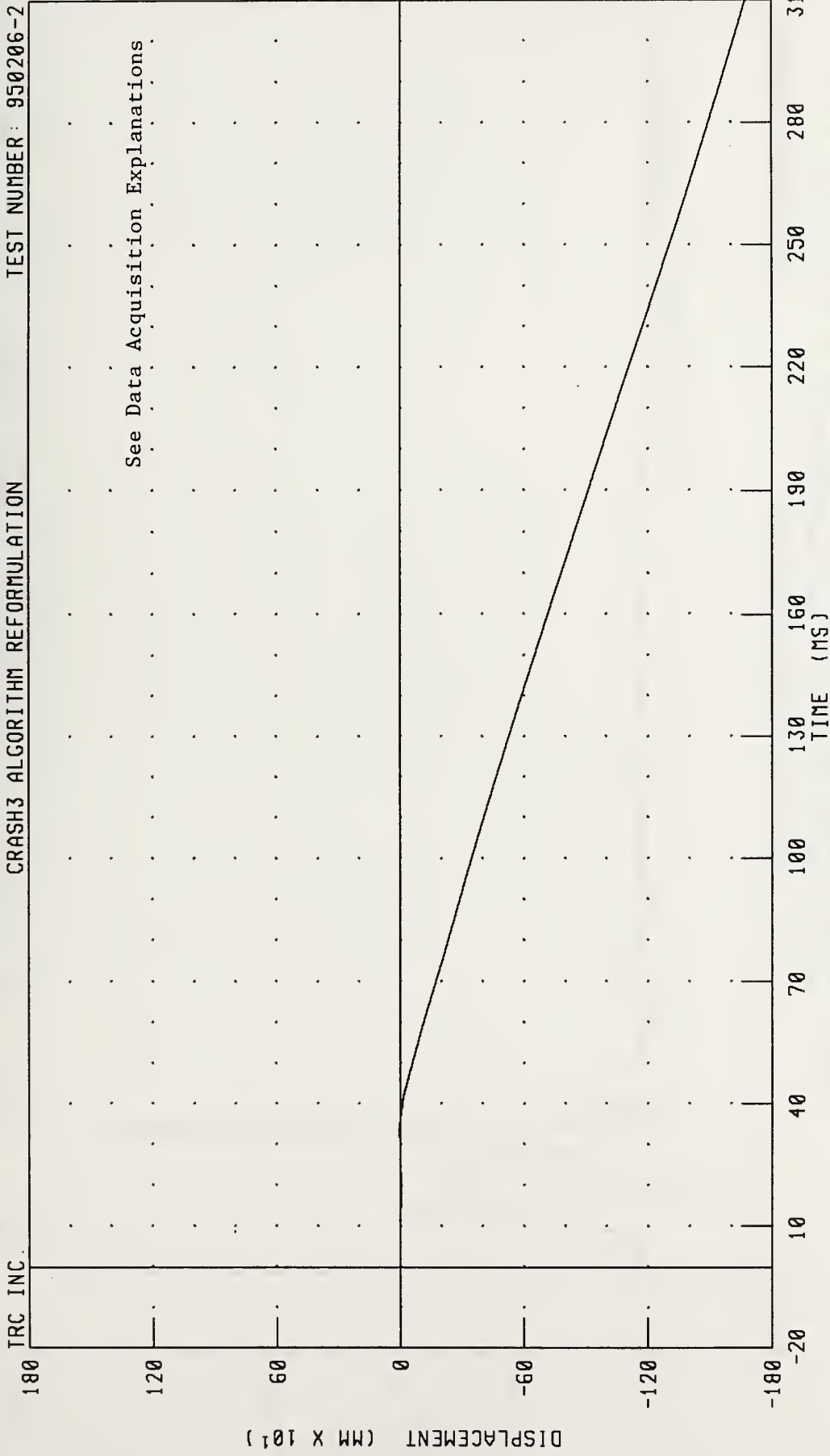
CHANNEL: VCGXV FILTER: CH CLASS 180

PEAK DATA: 4.87 KM/H @ 23.04 MS; -23.92 KM/H @ 219.84 MS

1302M/R.O. 20051

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY X-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



See Data Acquisition Explanations

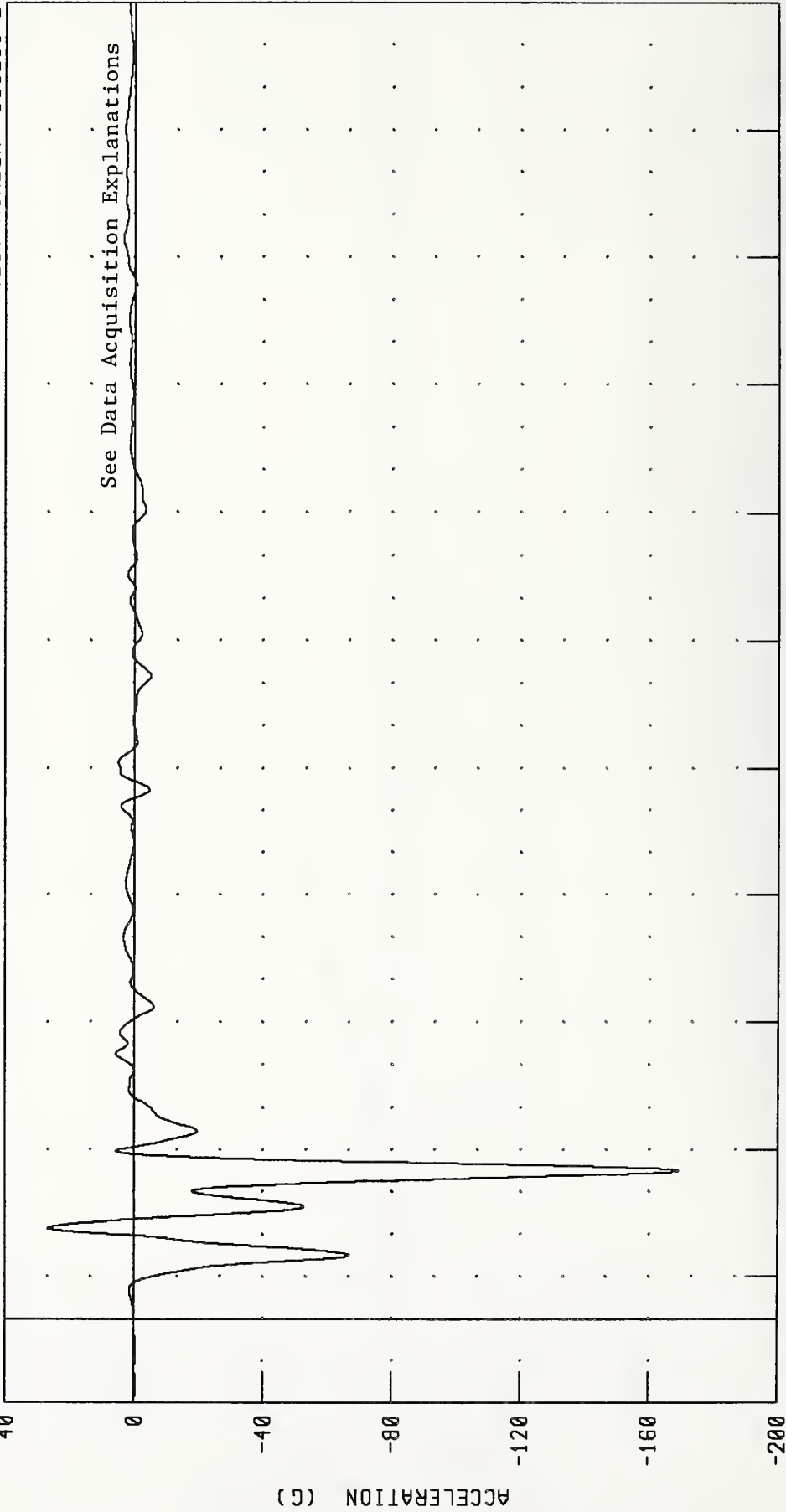
CHANNEL: VCGXD FILTER: CH. CLASS 180 PEAK DATA: 3.93 MM @ 34.24 MS; -1671.56 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION

TRC INC. TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



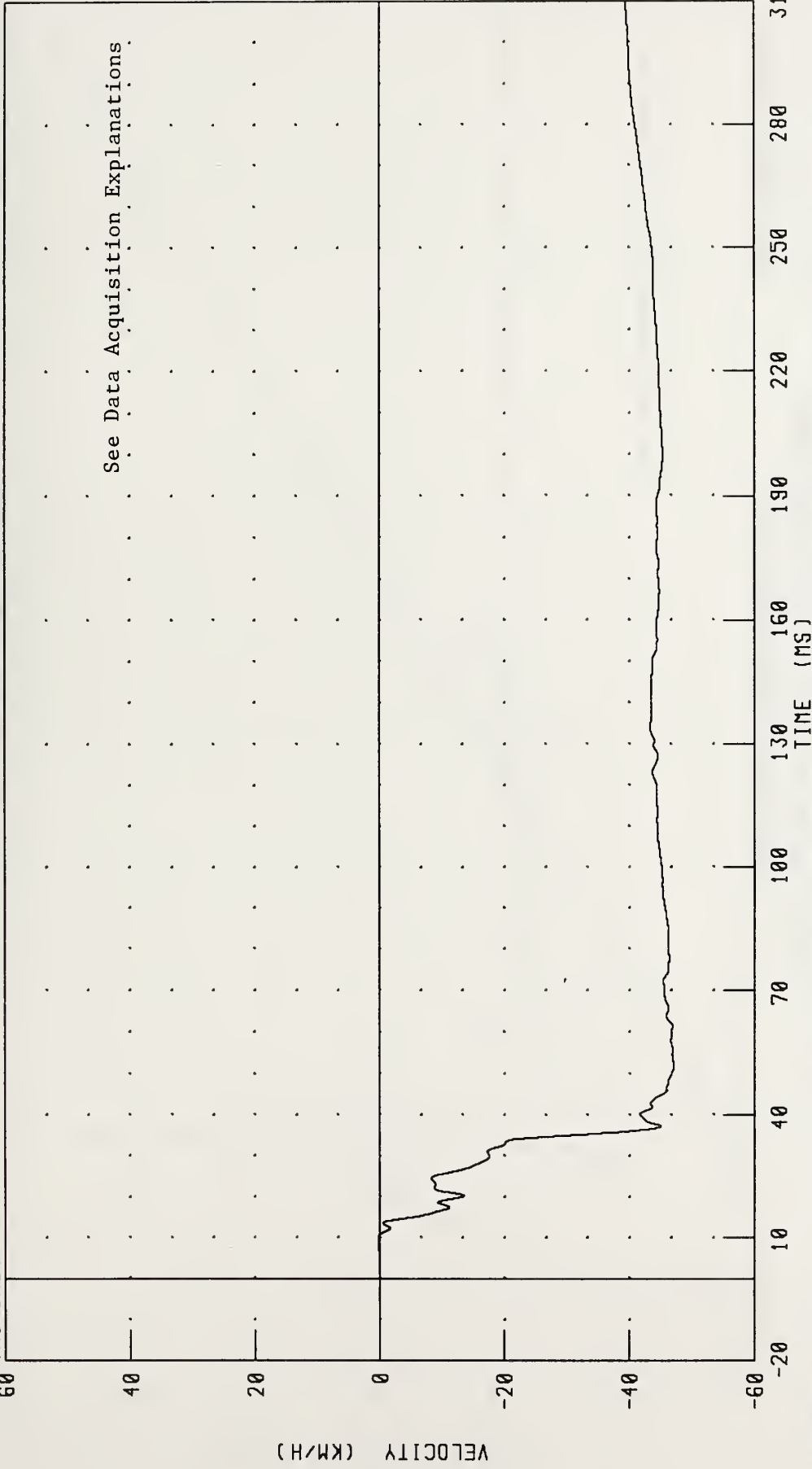
CHANNEL: VCGYG FILTER: CH. CLASS 60 PEAK DATA: 26.64 G @ 21.44 MS; -168.99 G @ 35.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

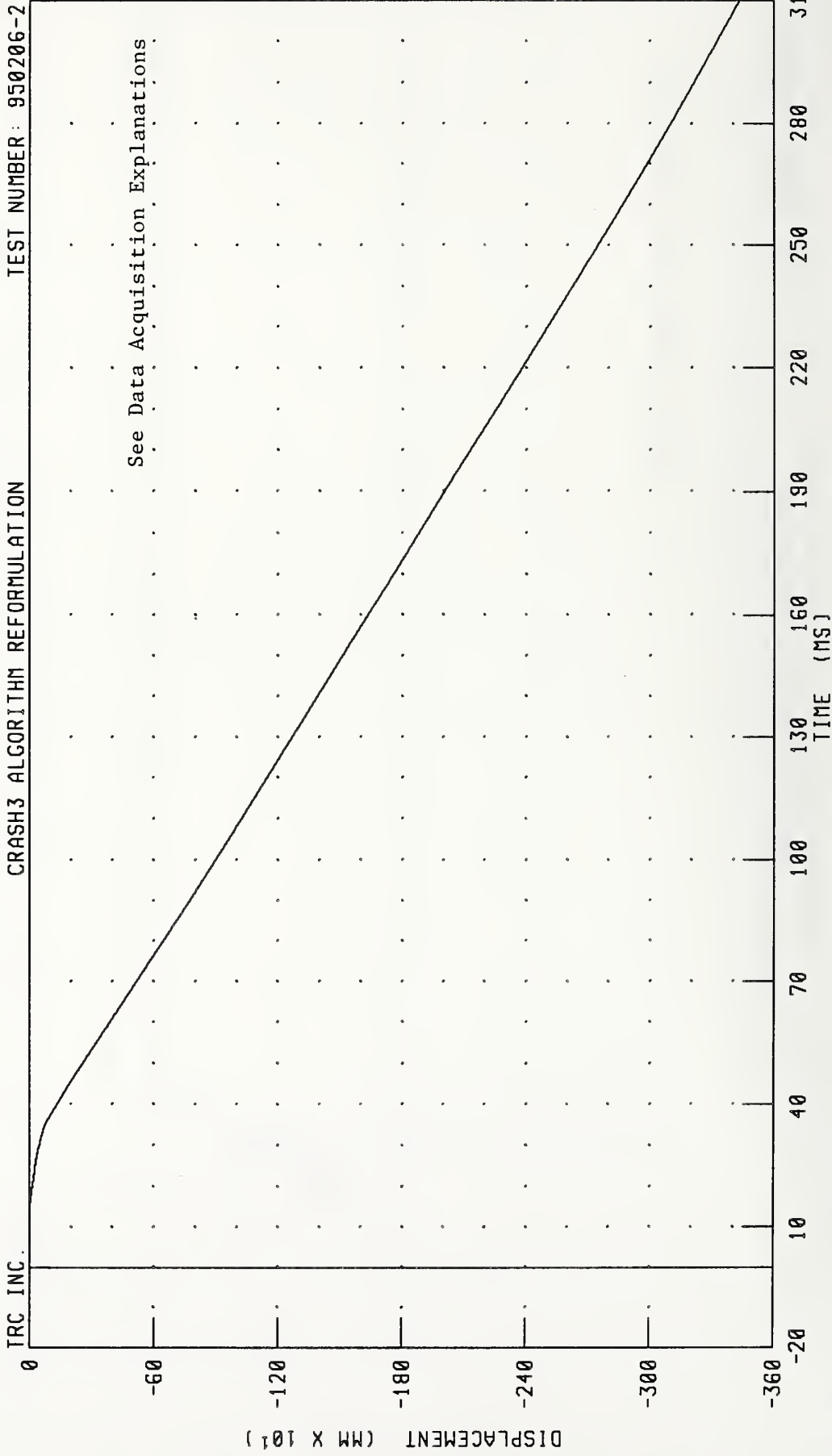


CHANNEL: VCGYV FILTER: CH. CLASS 180

PEAK DATA: 0.20 KM/H @ 9.92 MS, -47.11 KM/H @ 51.84 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: VCGYD FILTER: CH. CLASS 180

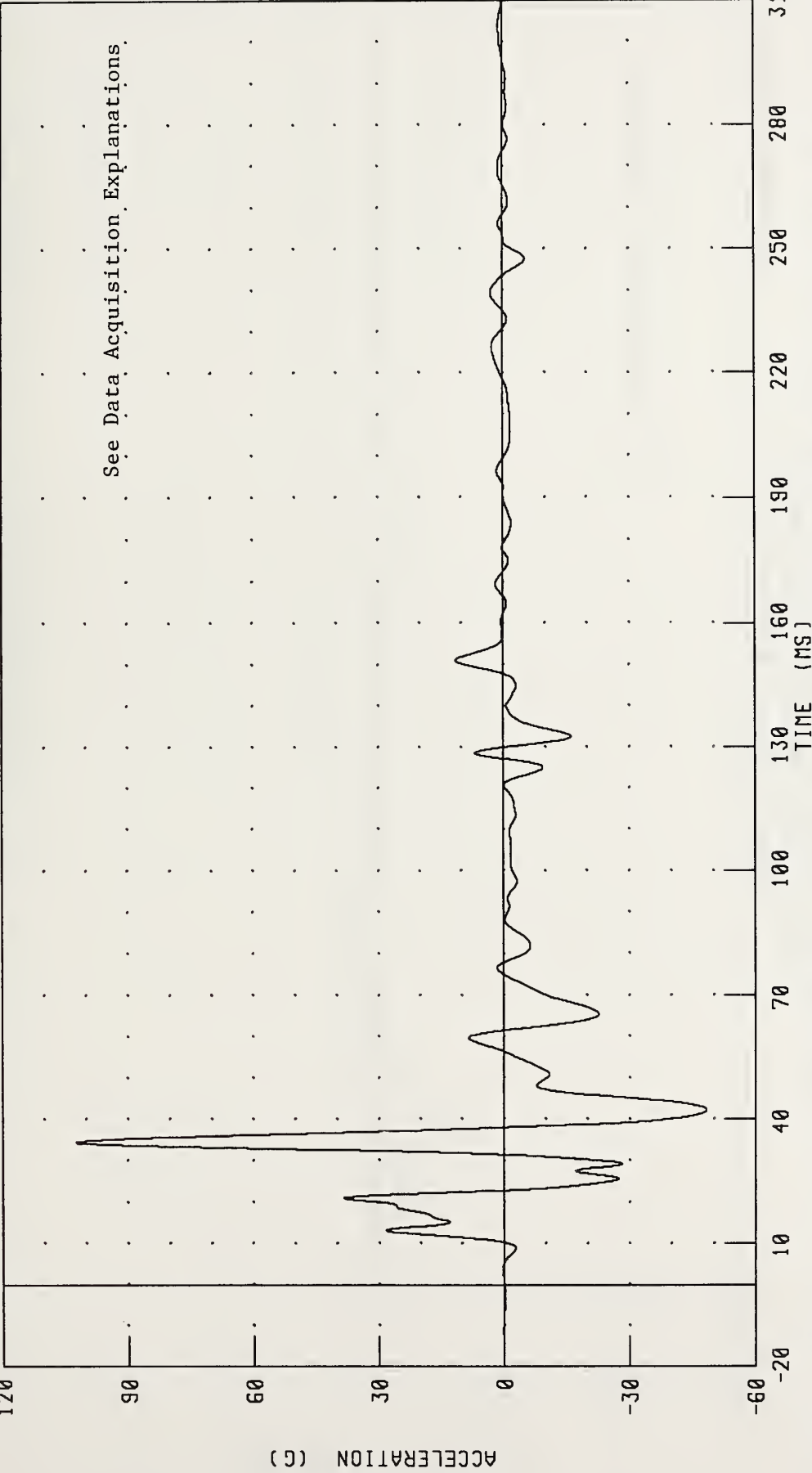
PEAK DATA: 0.21 MM @ 10.72 MS; -3432.92 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC_INC.



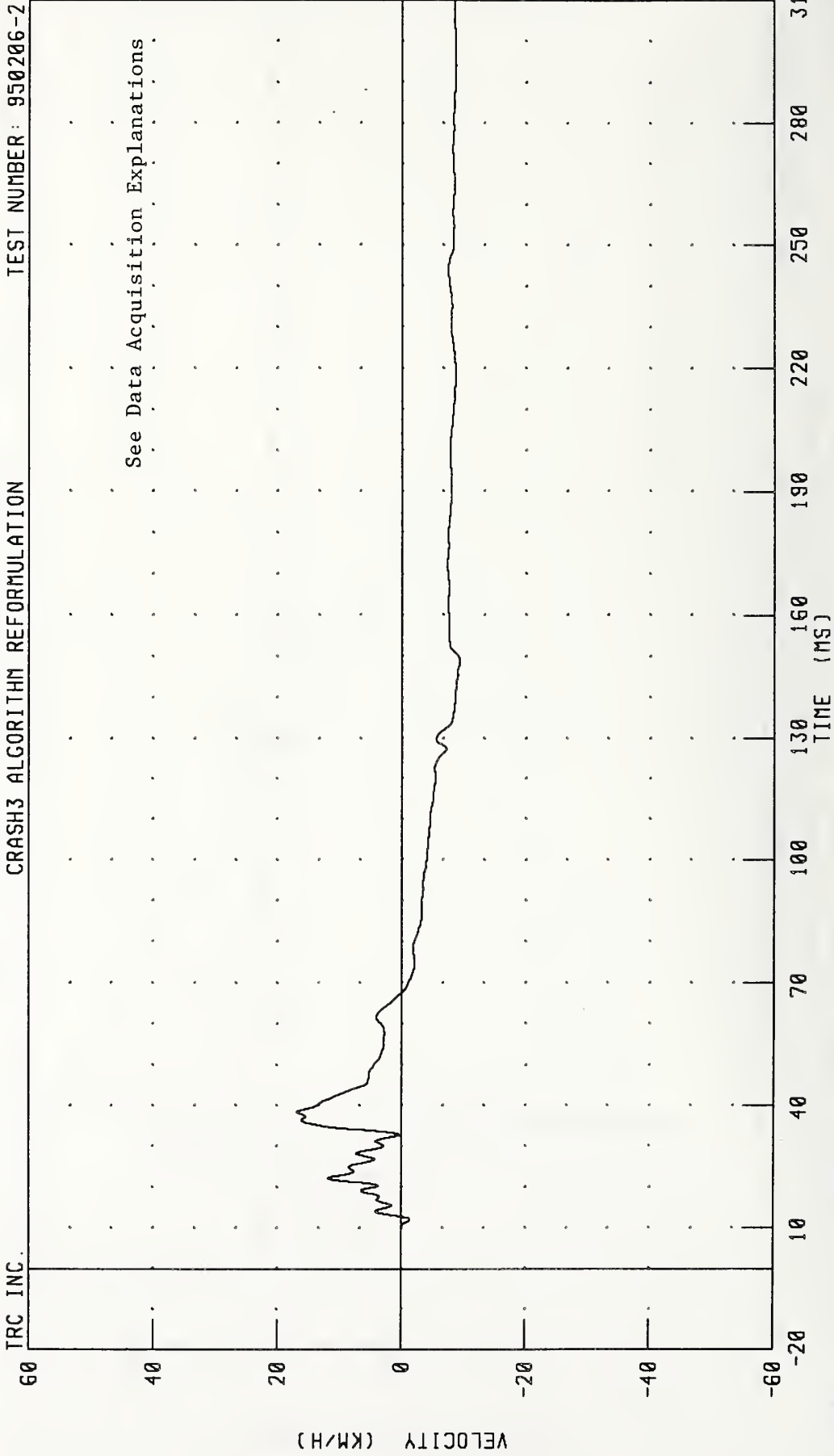
See Data Acquisition Explanations.

CHANNEL: VCGZG FILTER: CH. CLASS 60

PEAK DATA: 102.51 G @ 34.48 MS; -48.26 G @ 42.24 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: VCGZV FILTER: CH. CLASS 180

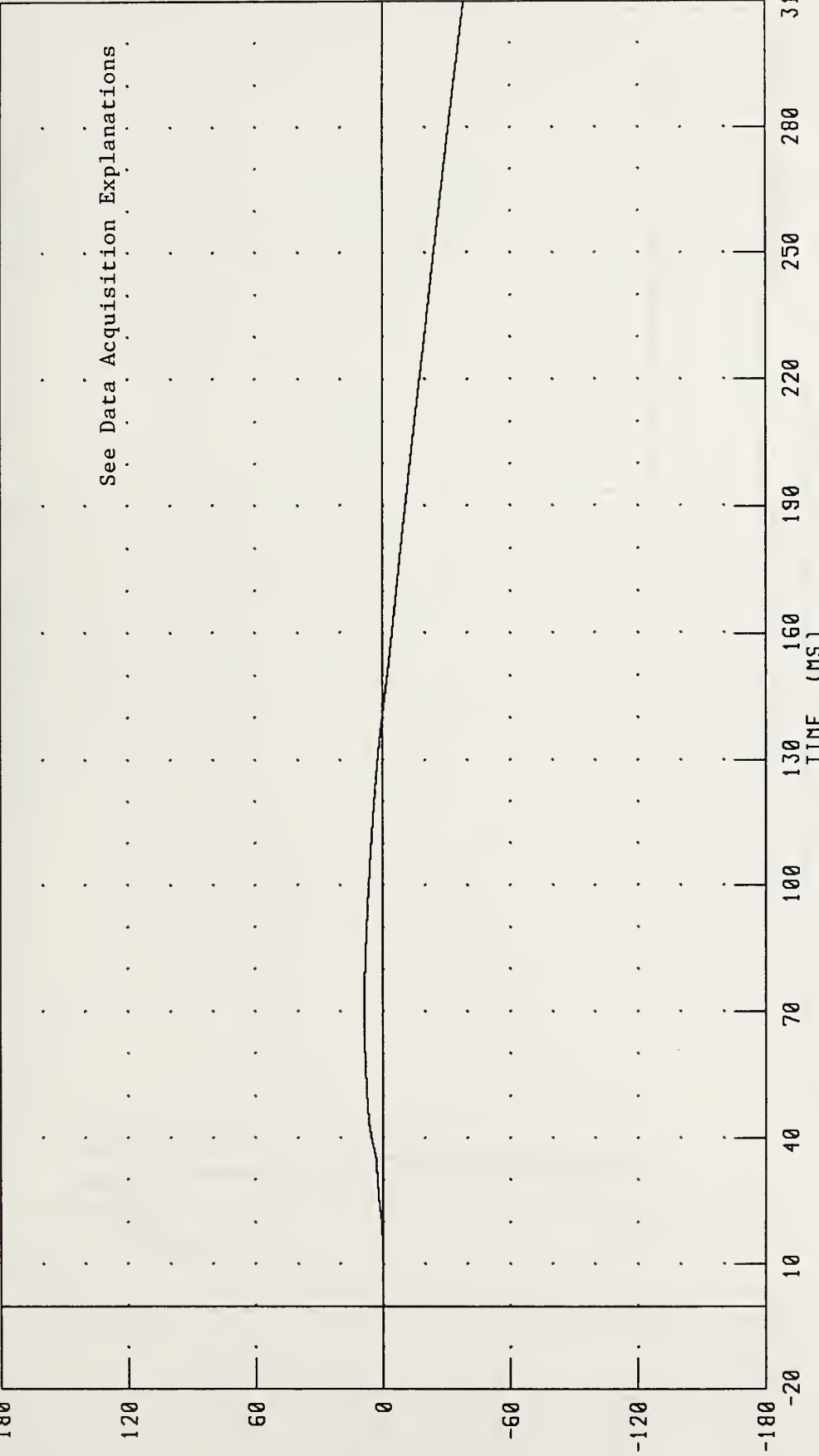
PEAK DATA: 16.86 KM/H @ 38.48 MS; -9.31 KM/H @ 148.72 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



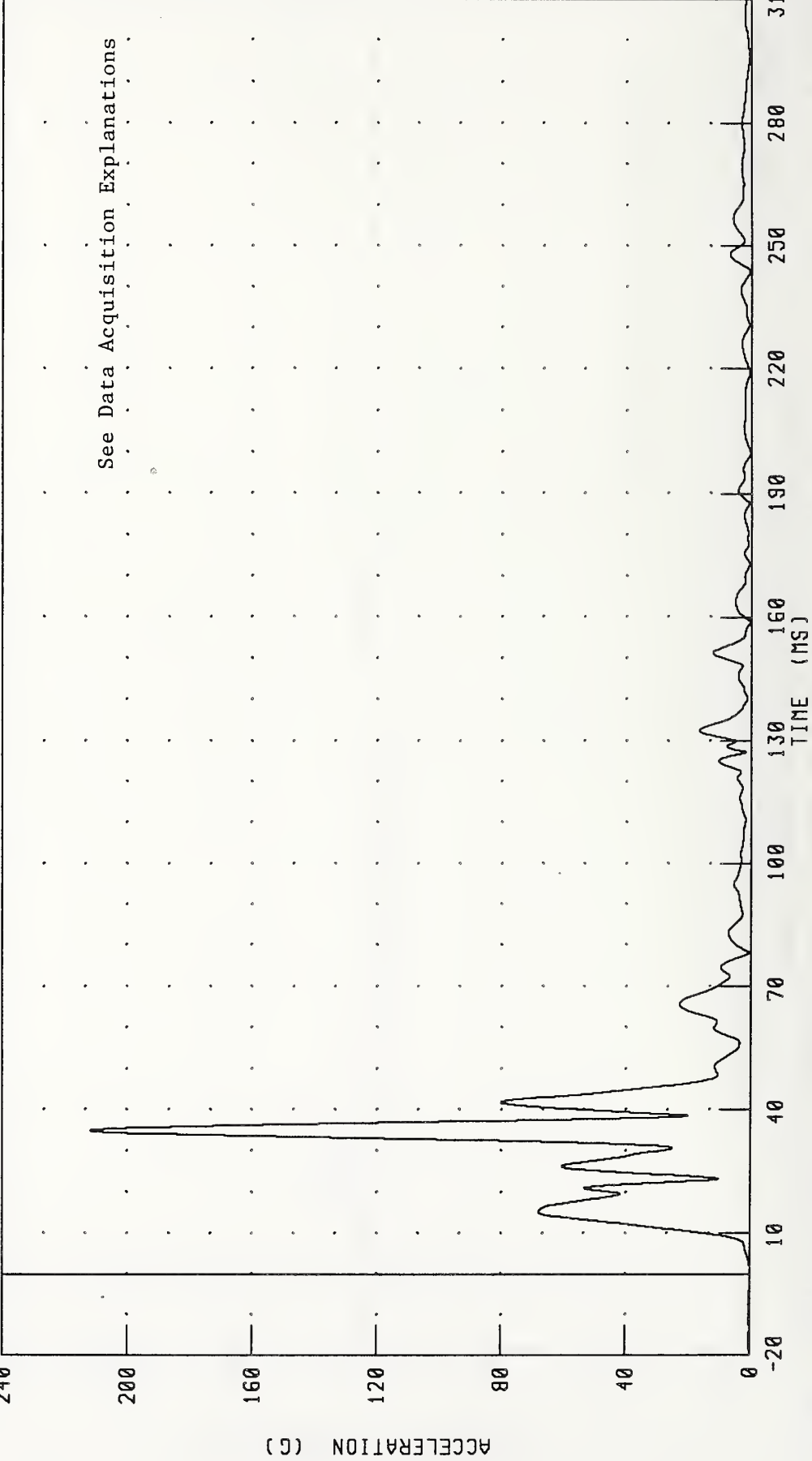
CHANNEL: VCGZD FILTER: CH CLASS 180

PEAK DATA: 89.24 MM @ 67.60 MS; -381.87 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-2

TRC INC.



CHANNEL: VCGRG FILTER: CH. CLASS 60

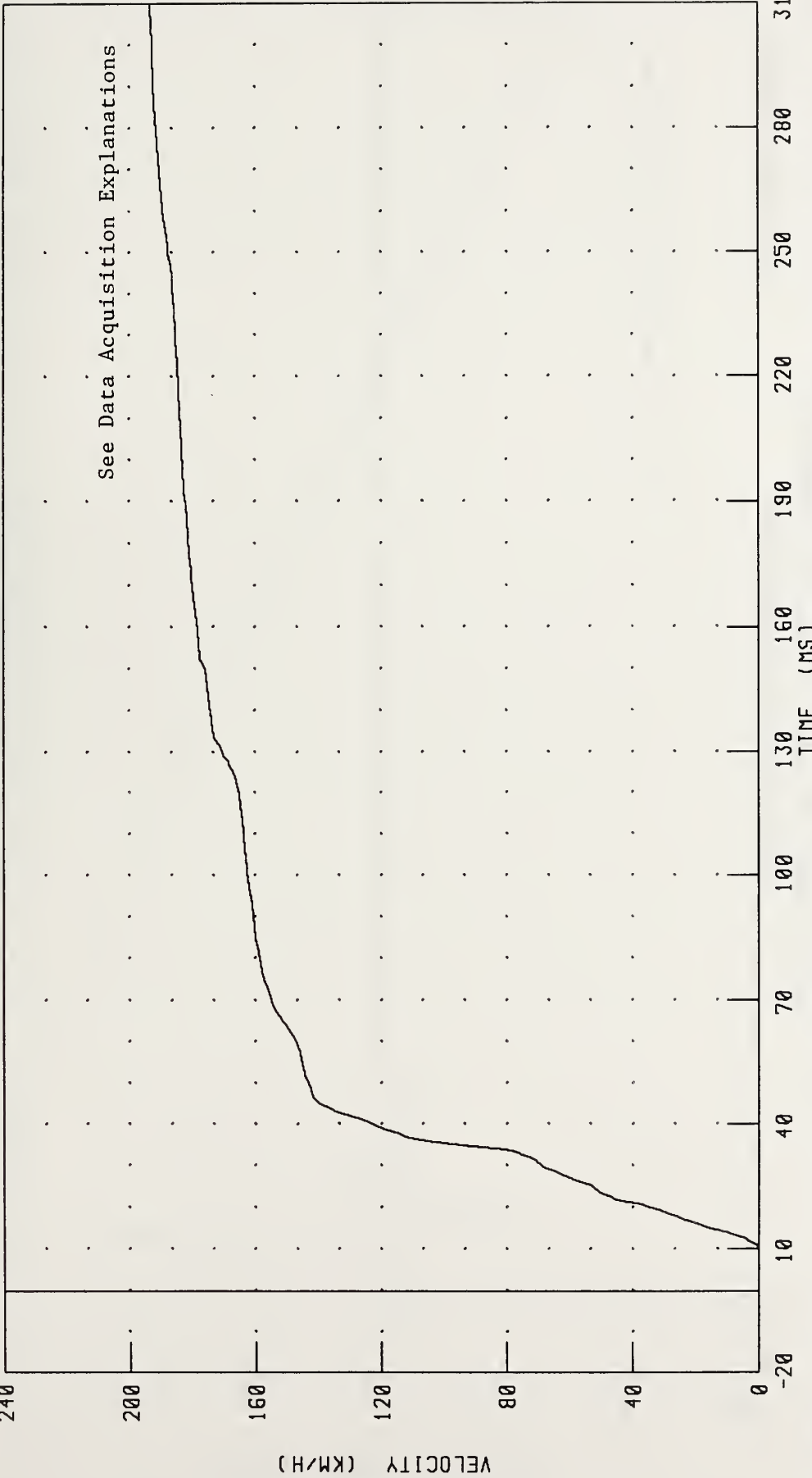
PEAK DATA: 211.92 G @ 34.88 MS; 0.12 G @ 0.24 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
VEHICLE CENTER OF GRAVITY RESULTANT VELOCITY

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

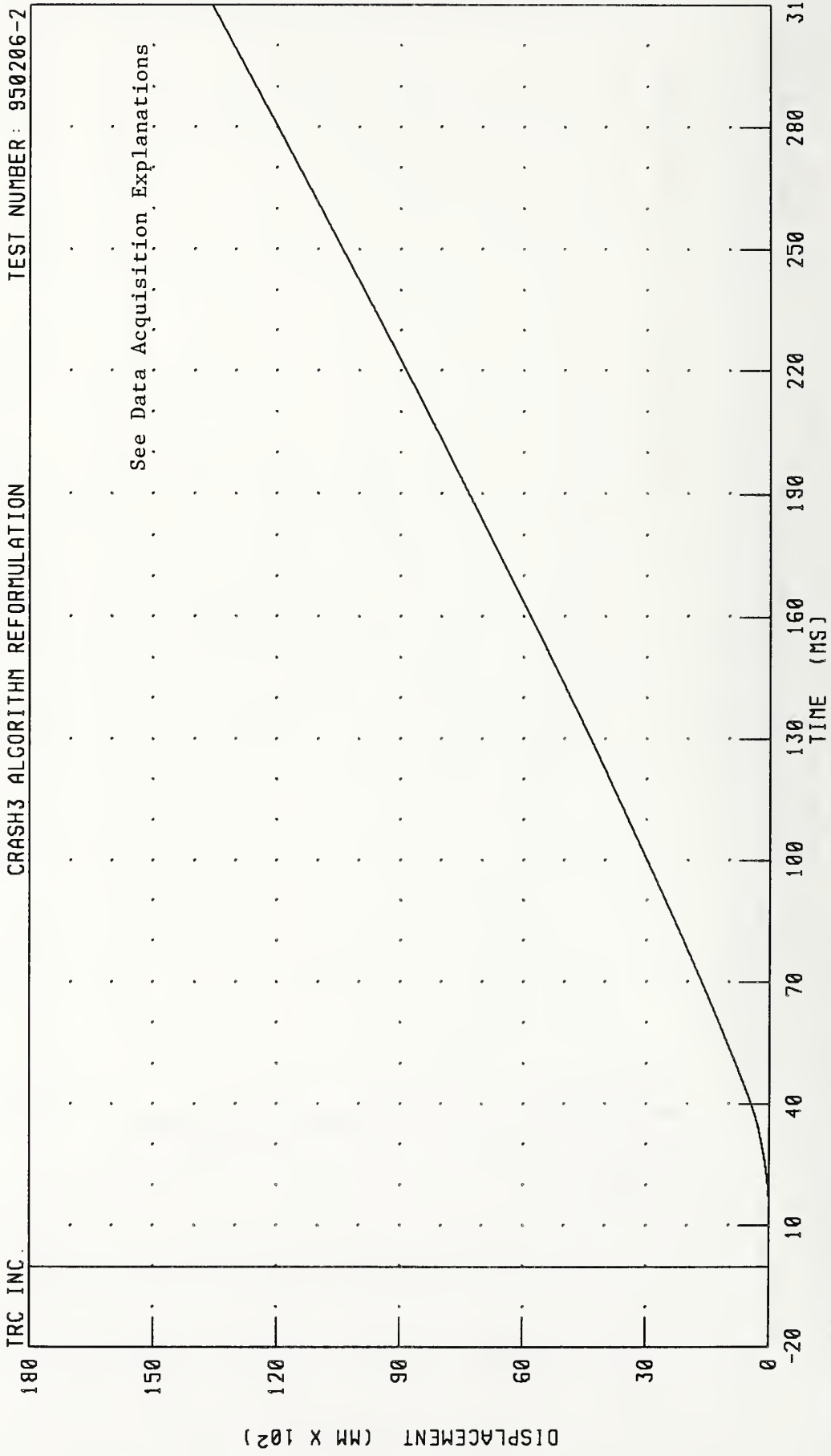


CHANNEL: VCGRV FILTER: CH. CLASS 180

PEAK DATA: 193.55 KM/H @ 310.00 MS; 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 VEHICLE CENTER OF GRAVITY RESULTANT DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2

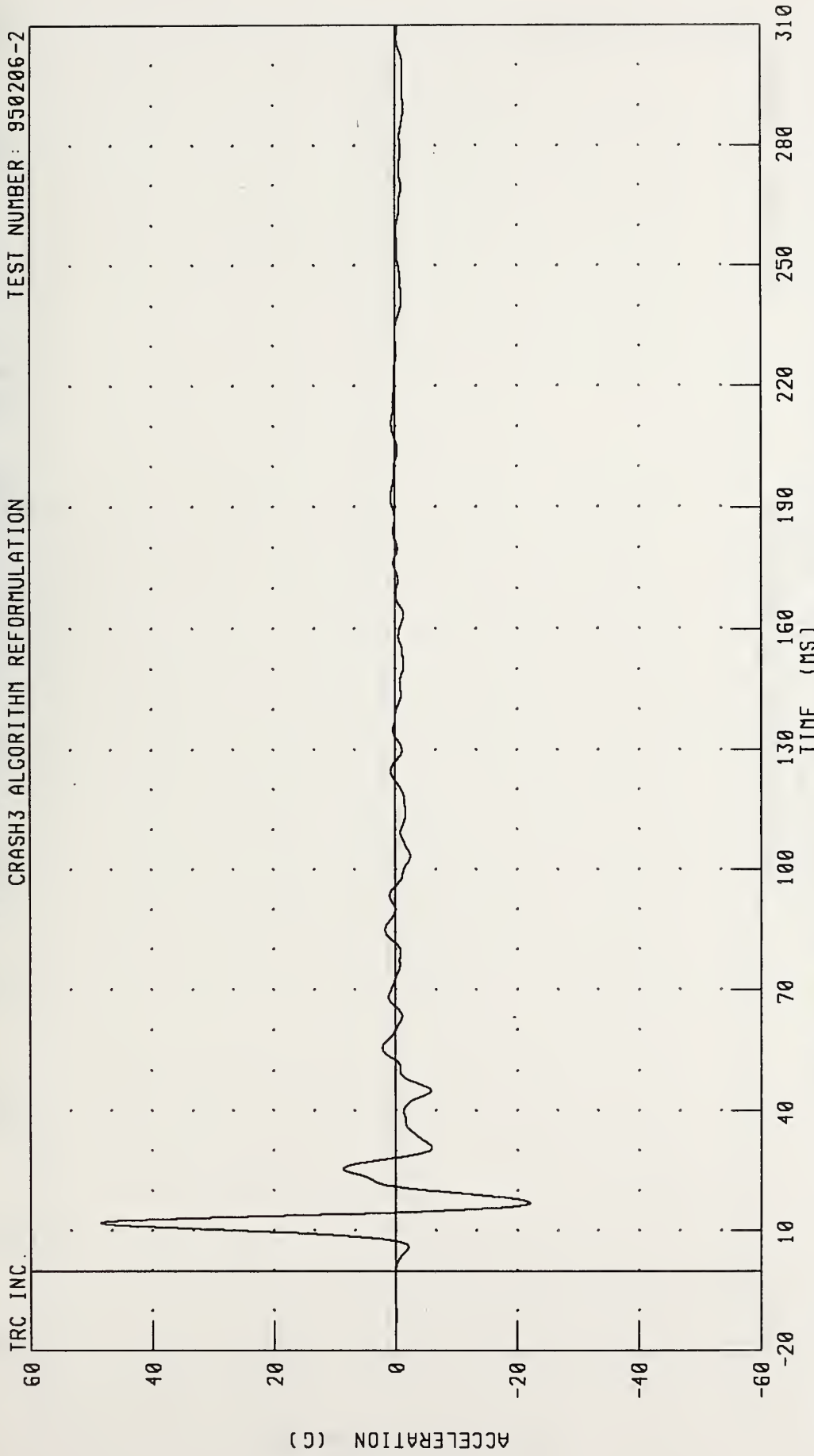


CHANNEL: VCCRD FILTER: CH. CLASS 180

PEAK DATA: 13589.92 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
LEFT REAR SILL X-AXIS ACCELERATION

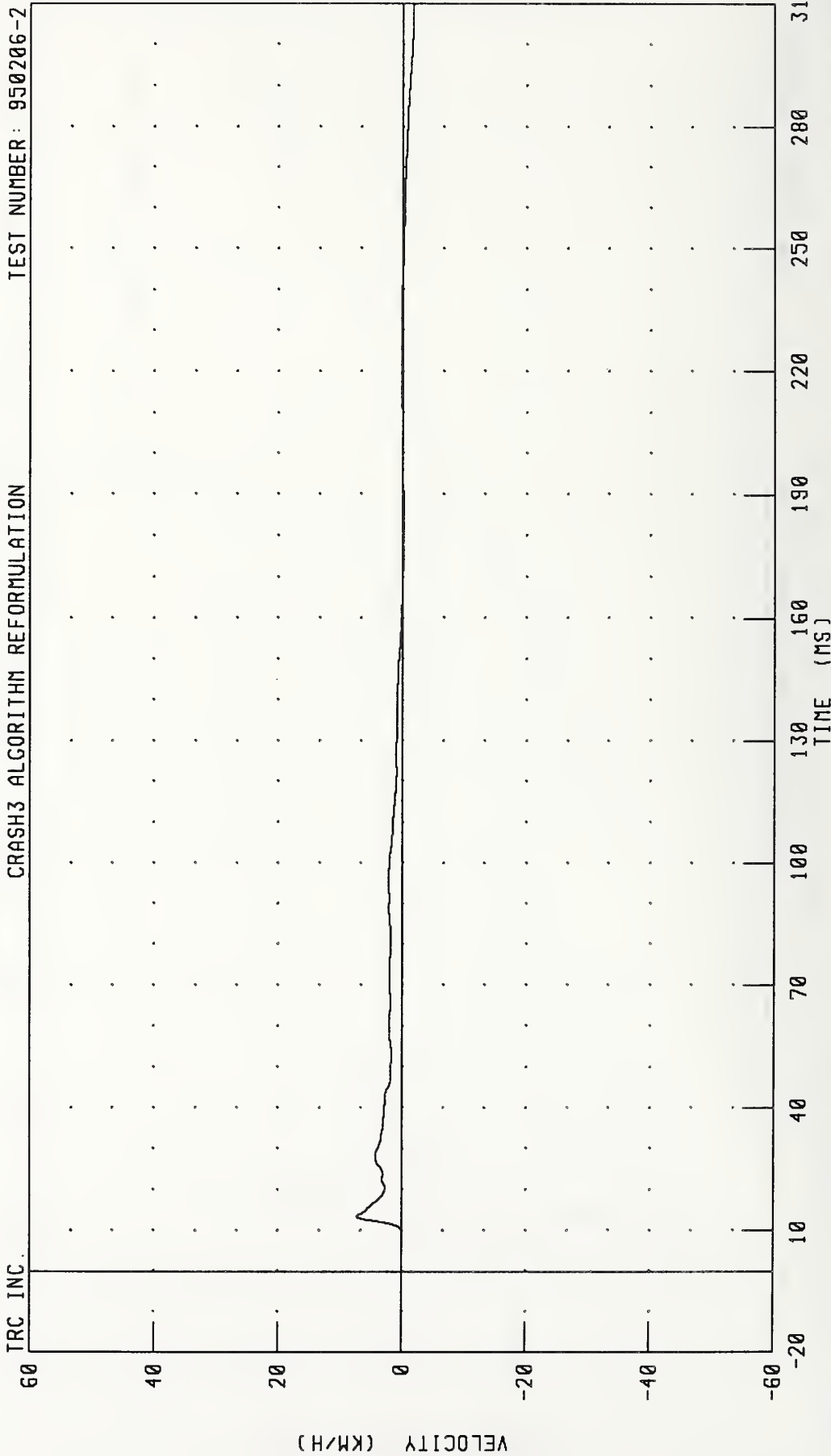
CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



TRC INC. CHANNEL: LRSXG FILTER: CH. CLASS 60 PEAK DATA: 48.39 G @ 11.92 MS, -22.09 G @ 16.96 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
LEFT REAR SILL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: LRSXV FILTER: CH. CLASS 180

PEAK DATA: 7.28 KM/H @ 13.44 MS; -1.78 KM/H @ 310.00 MS

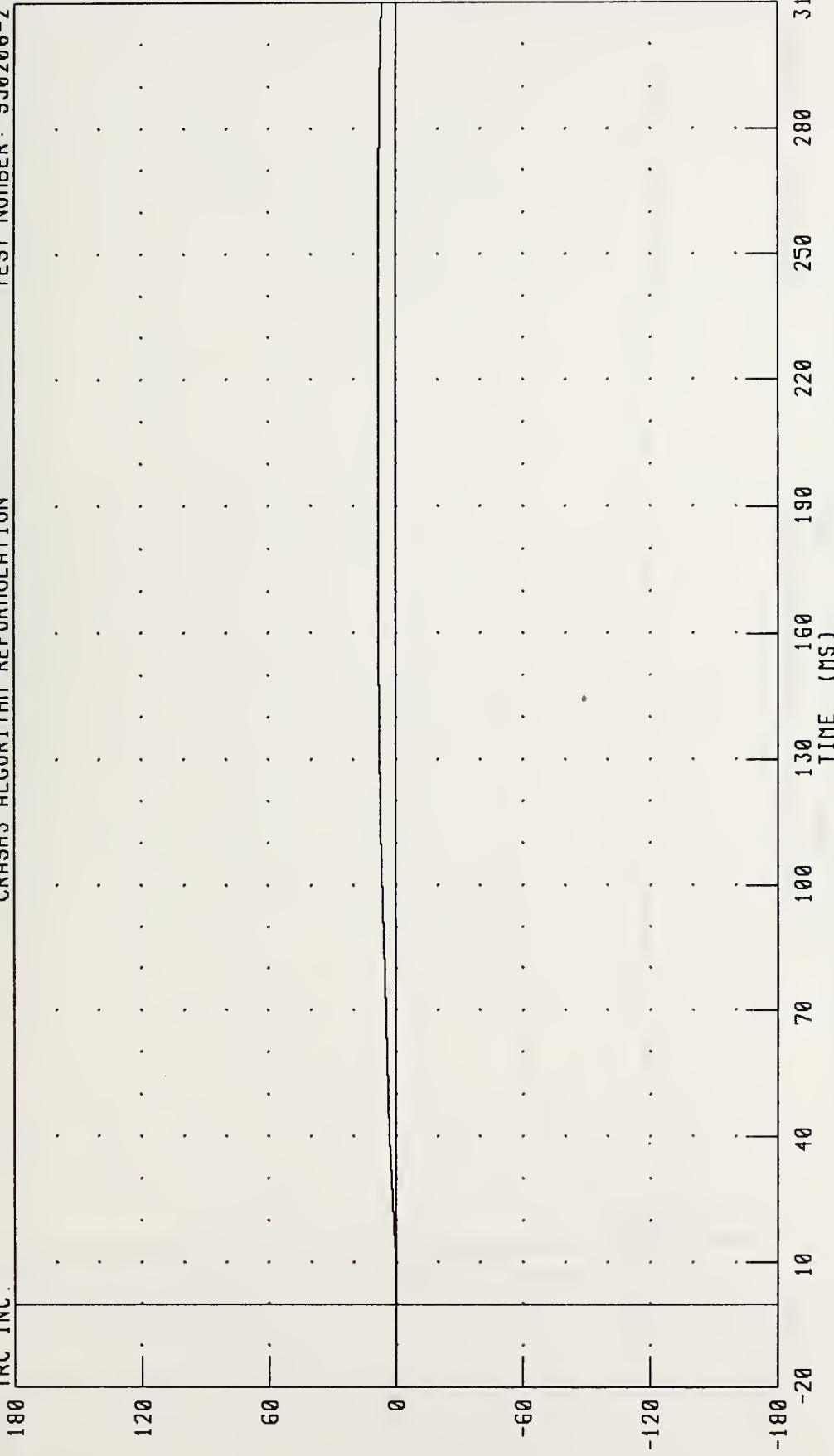
NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5

LEFT REAR SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-2

TRC INC.

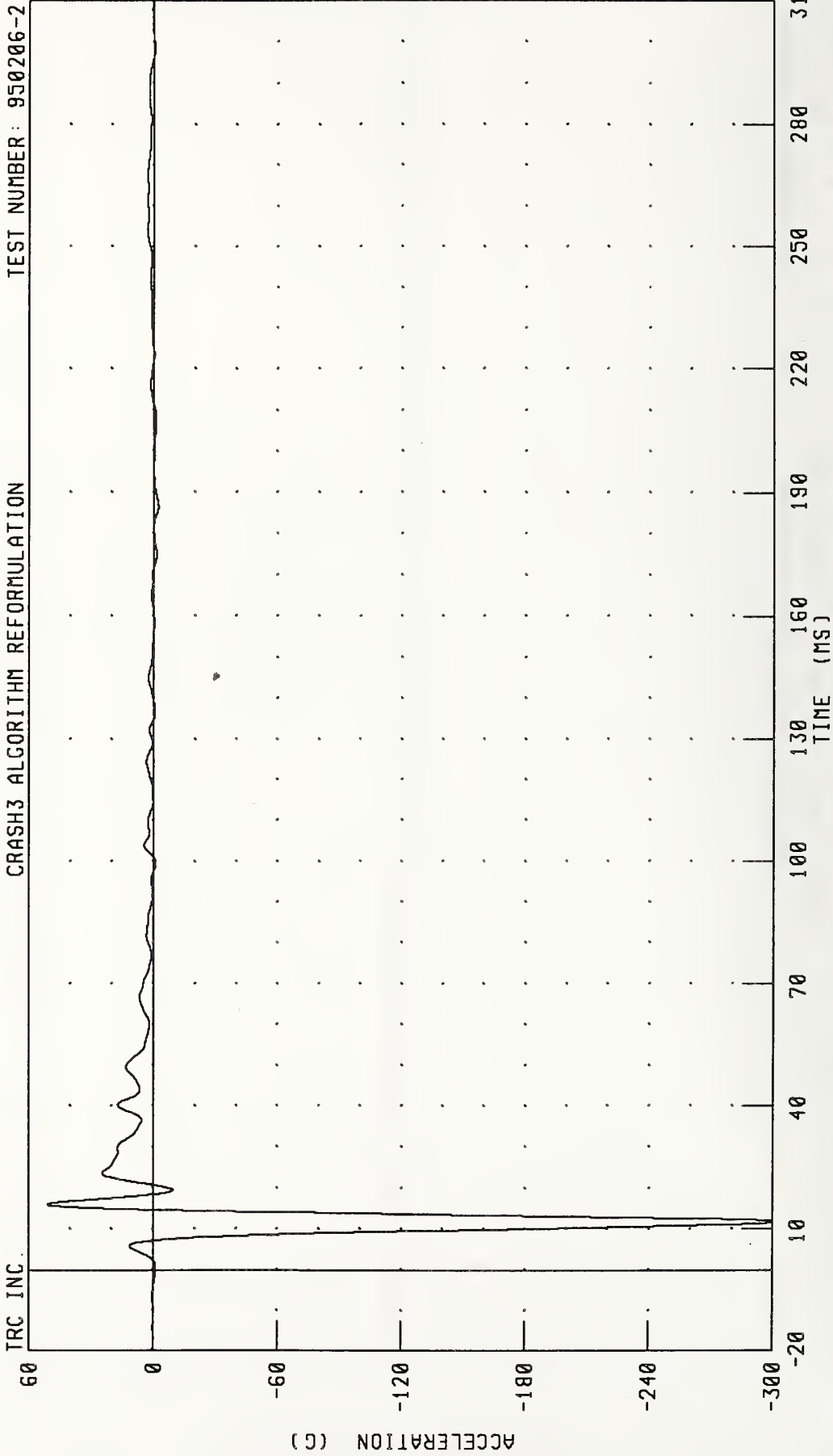


CHANNEL: LRSXD FILTER: CH. CLASS 180

PEAK DATA: 81.83 MM @ 243.52 MS, -0.09 MM @ 10.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
LEFT REAR SILL Y-AXIS ACCELERATION
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-2



CHANNEL: LRSYG FILTER: CH. CLASS 60

PEAK DATA: 50.87 G @ 15.92 MS; -303.29 G @ 11.76 MS

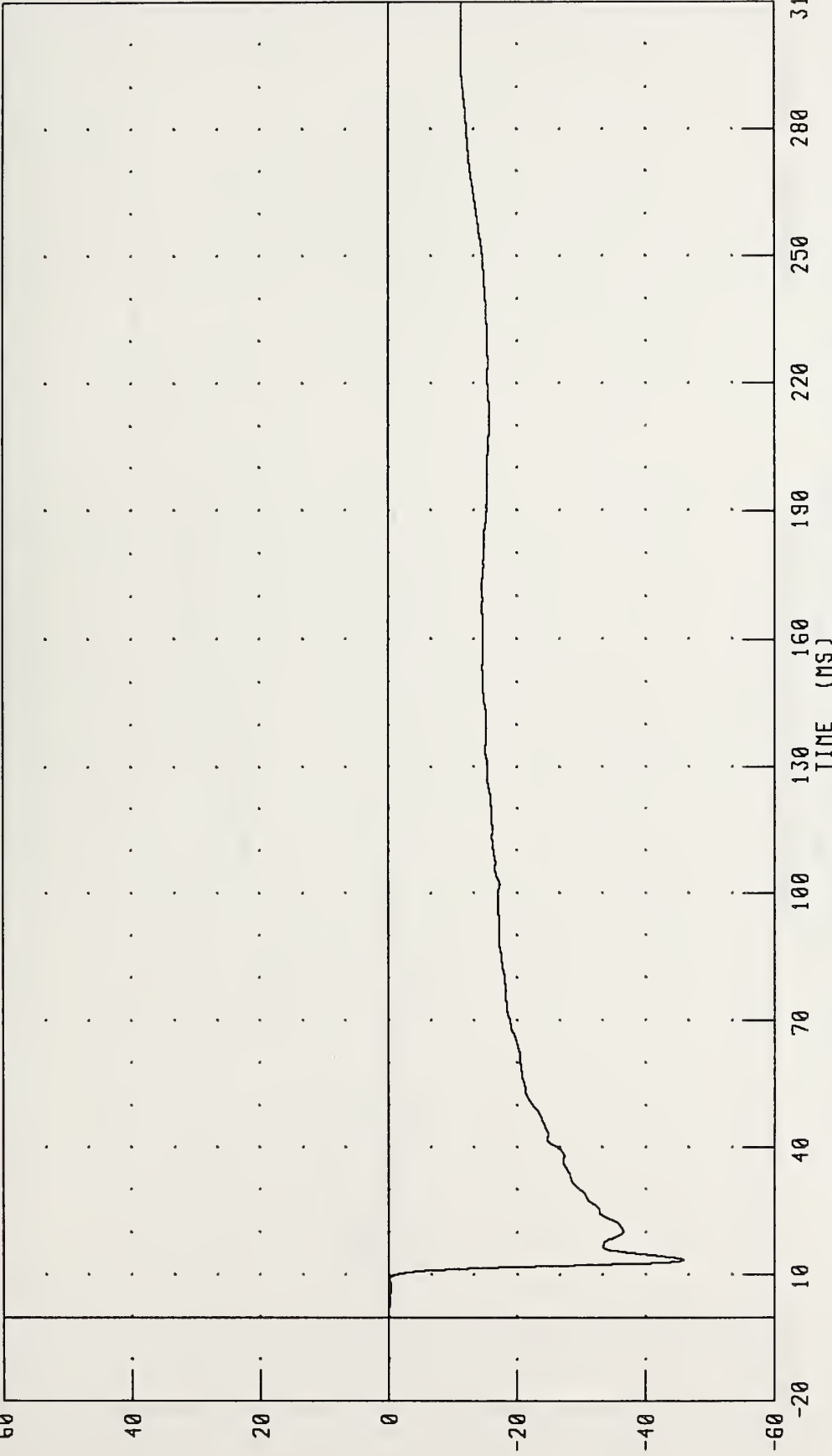
NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5

LEFT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-2

TRC INC.

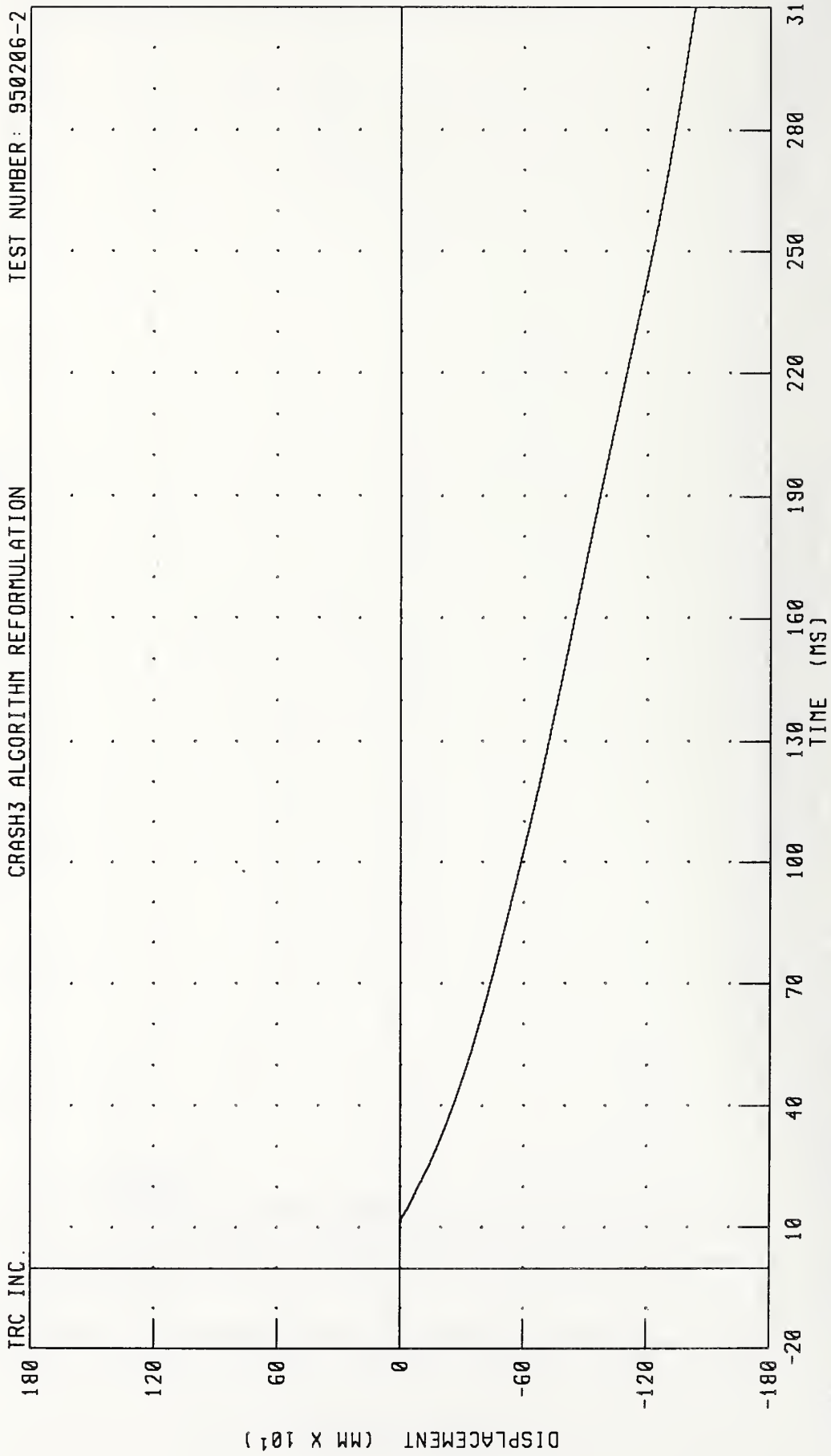


CHANNEL: LRSYV FILTER: CH. CLASS 180

PEAK DATA: 0.00 KM/H @ 0.08 MS; -45.87 KM/H @ 13.44 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 LEFT REAR SILL Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



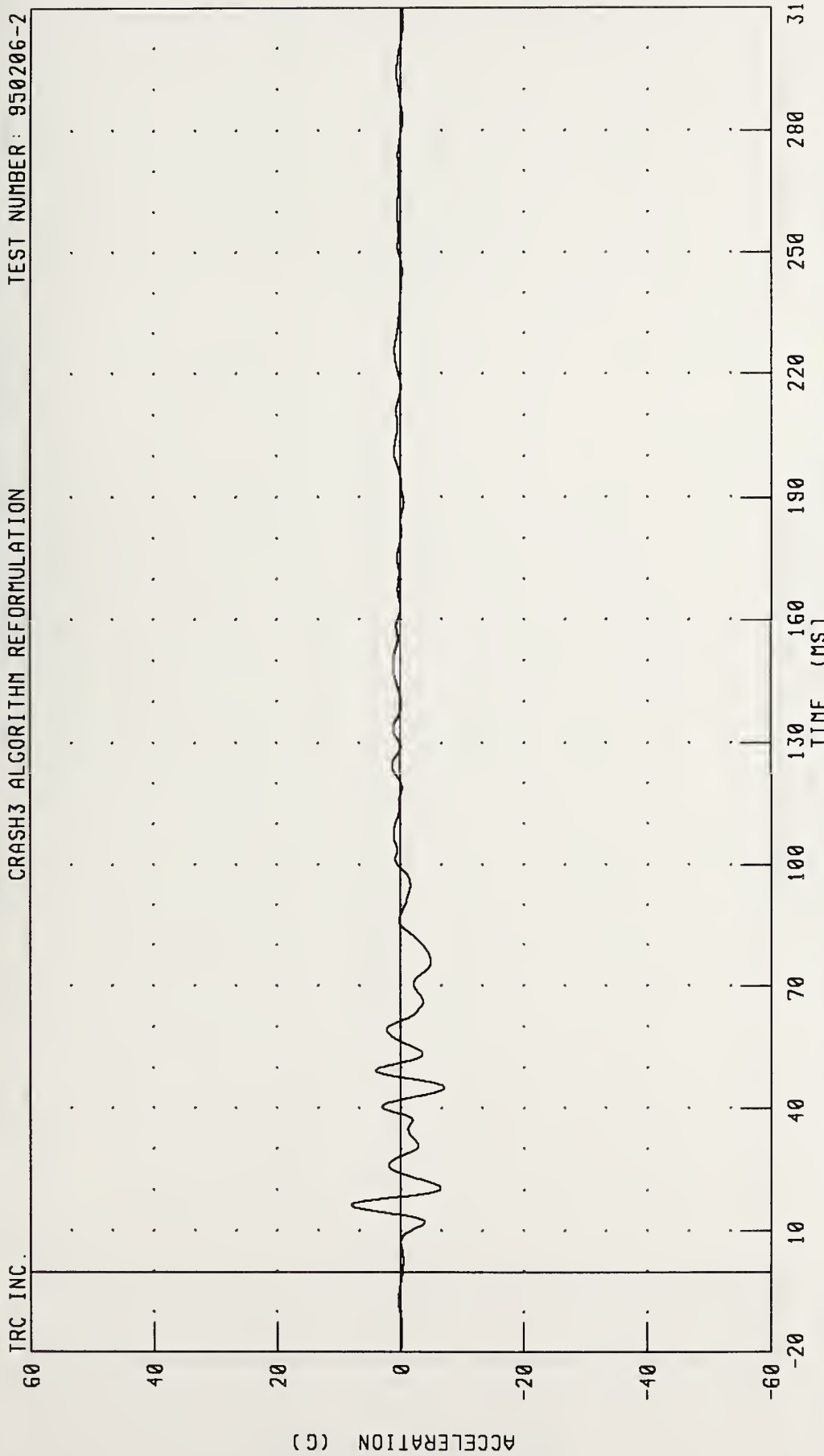
CHANNEL: LRSYD FILTER: CH. CLASS 180

PEAK DATA: 0.00 MM @ 0.08 MS; -1432.58 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT REAR SILL X-AXIS ACCELERATION

TRC INC. TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

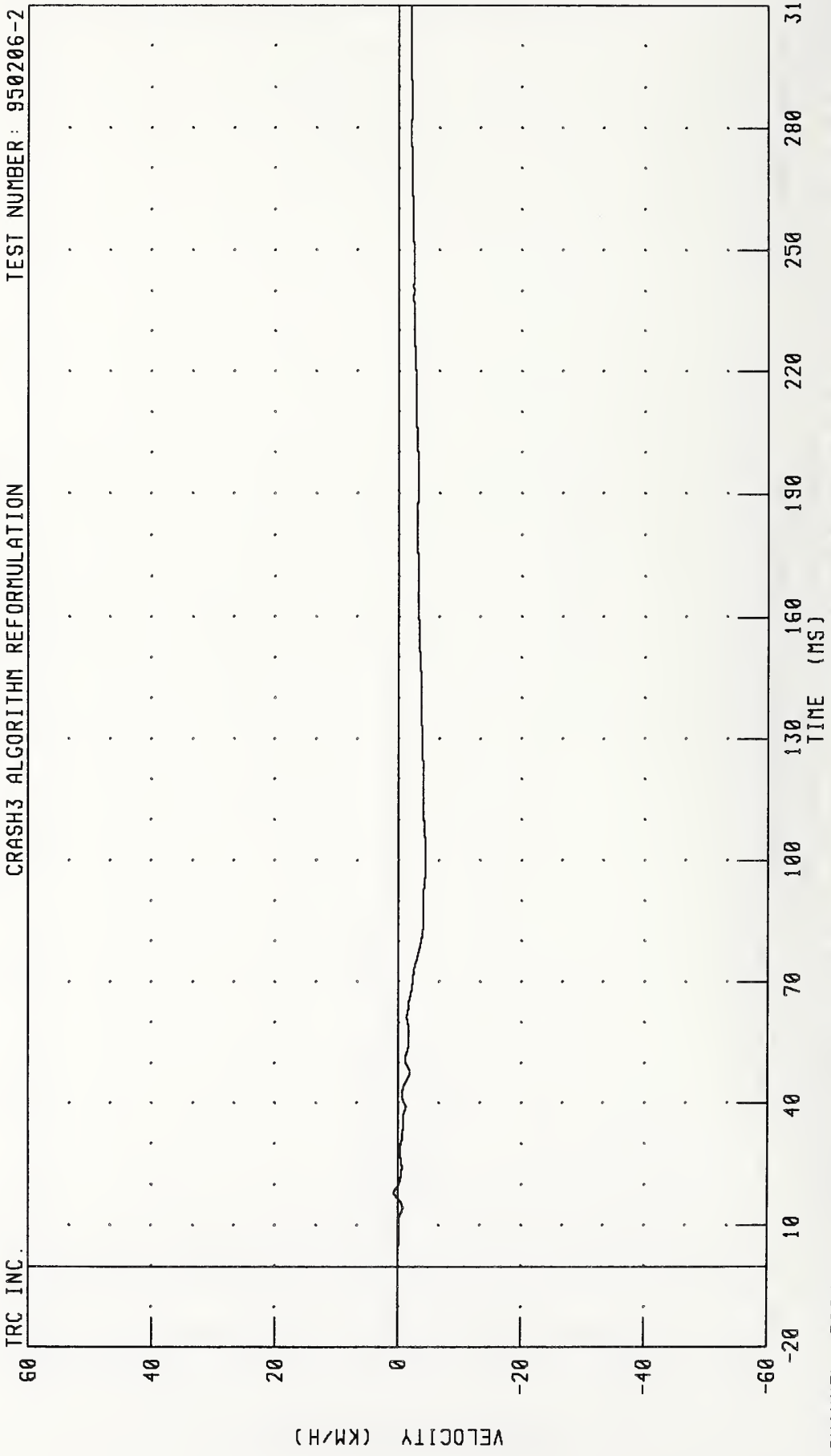


CHANNEL: RRSXG FILTER: CH. CLASS 60

PEAK DATA: 8.05 G @ 16.32 MS; -7.18 G @ 45.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 RIGHT REAR SILL X-AXIS VELOCITY
 CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-2



CHANNEL: RRSXV FILTER: CH. CLASS 180

PEAK DATA: 0.67 KM/H @ 18.16 MS; -4.46 KM/H @ 99.28 MS

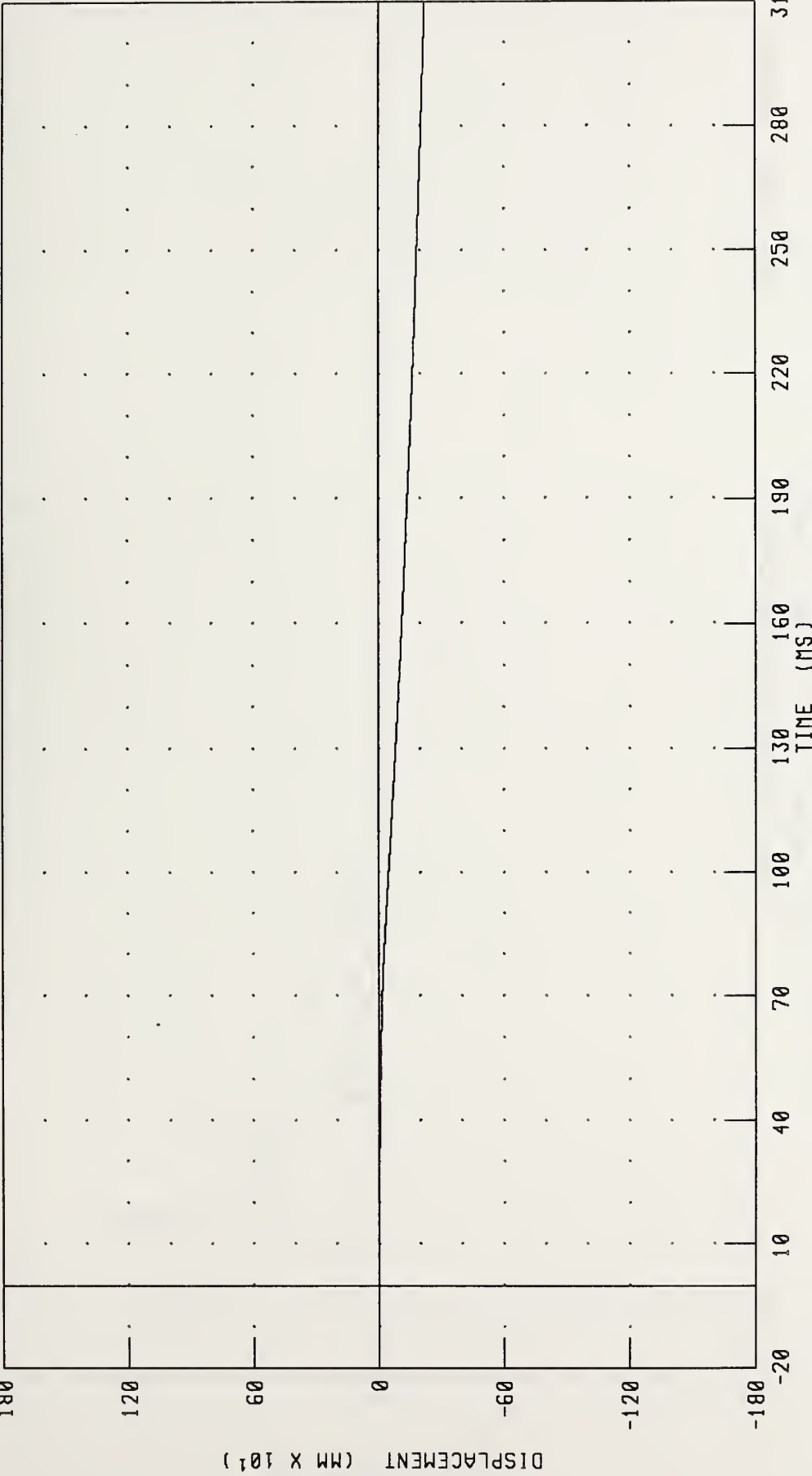
NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5

RIGHT REAR SILL X-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-2

TRC INC.



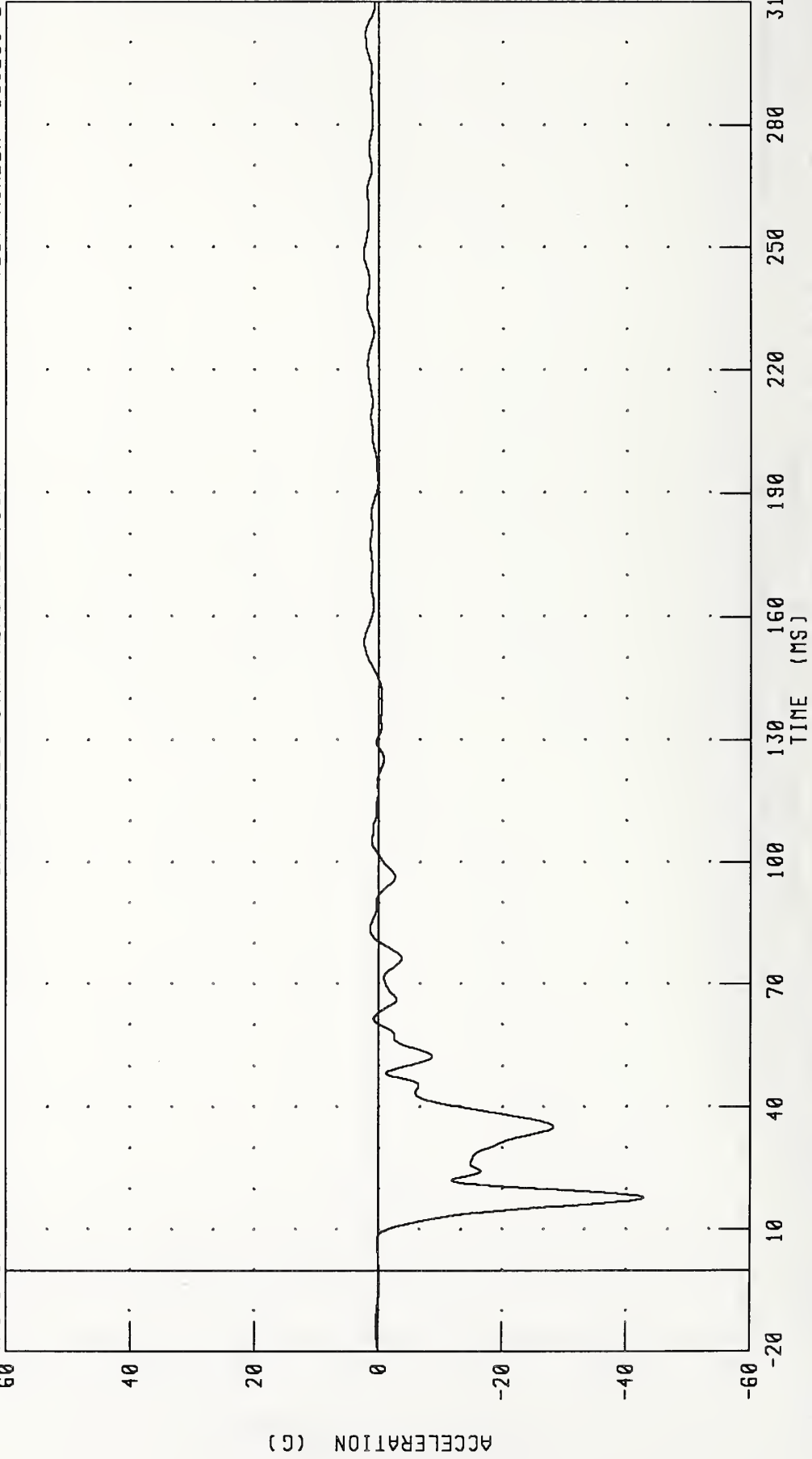
CHANNEL: RRSXD FILTER: CH CLASS 180

PEAK DATA: 0.00 MM @ 0.00 MS; -220.31 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT REAR SILL Y-AXIS ACCELERATION
CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-2

TRC INC.



CHANNEL: RRSYG FILTER: CH. CLASS 60

PEAK DATA: 2.46 G @ 248.40 MS; -42.77 G @ 17.76 MS

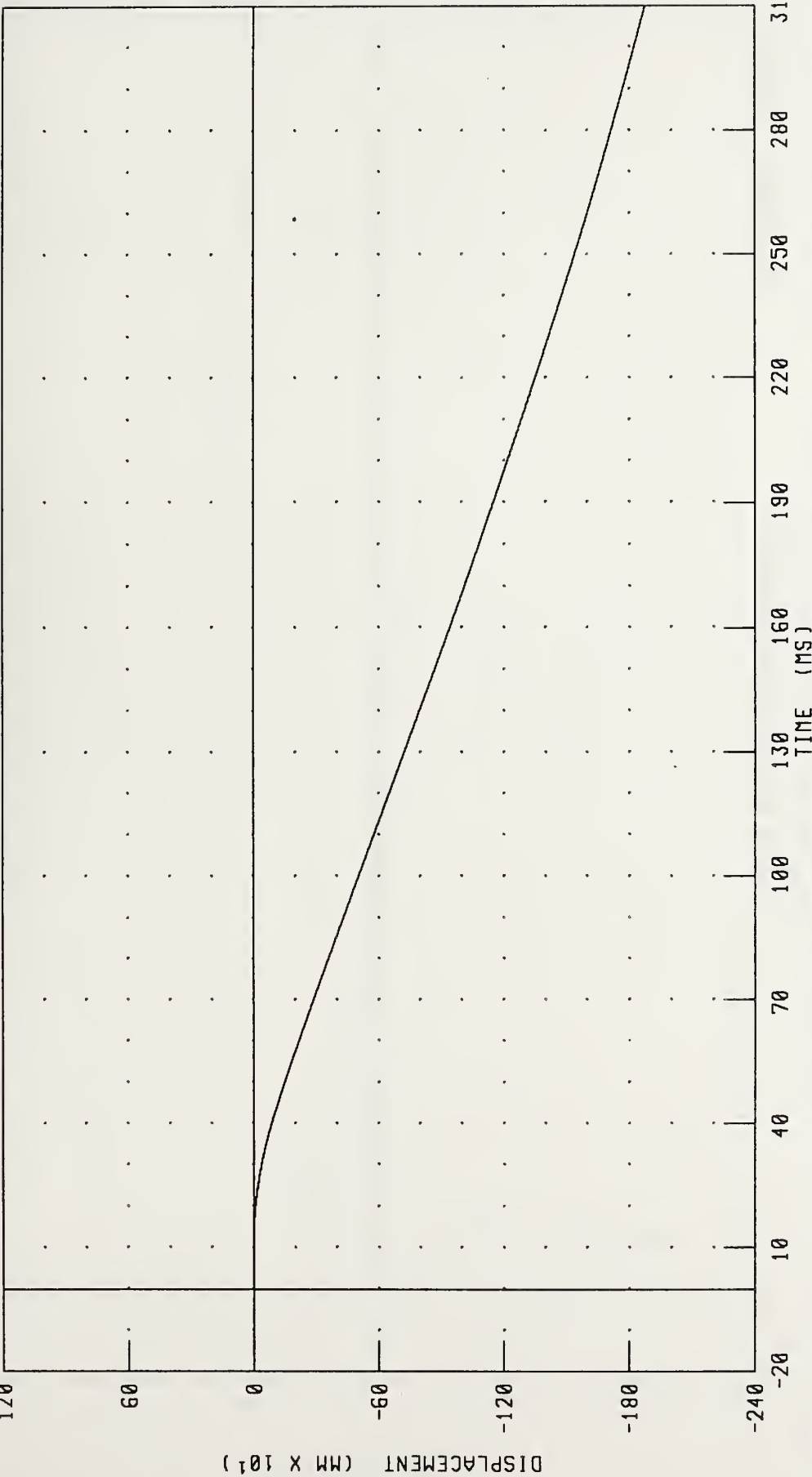
NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5

RIGHT REAR SILL Y-AXIS DISPLACEMENT

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

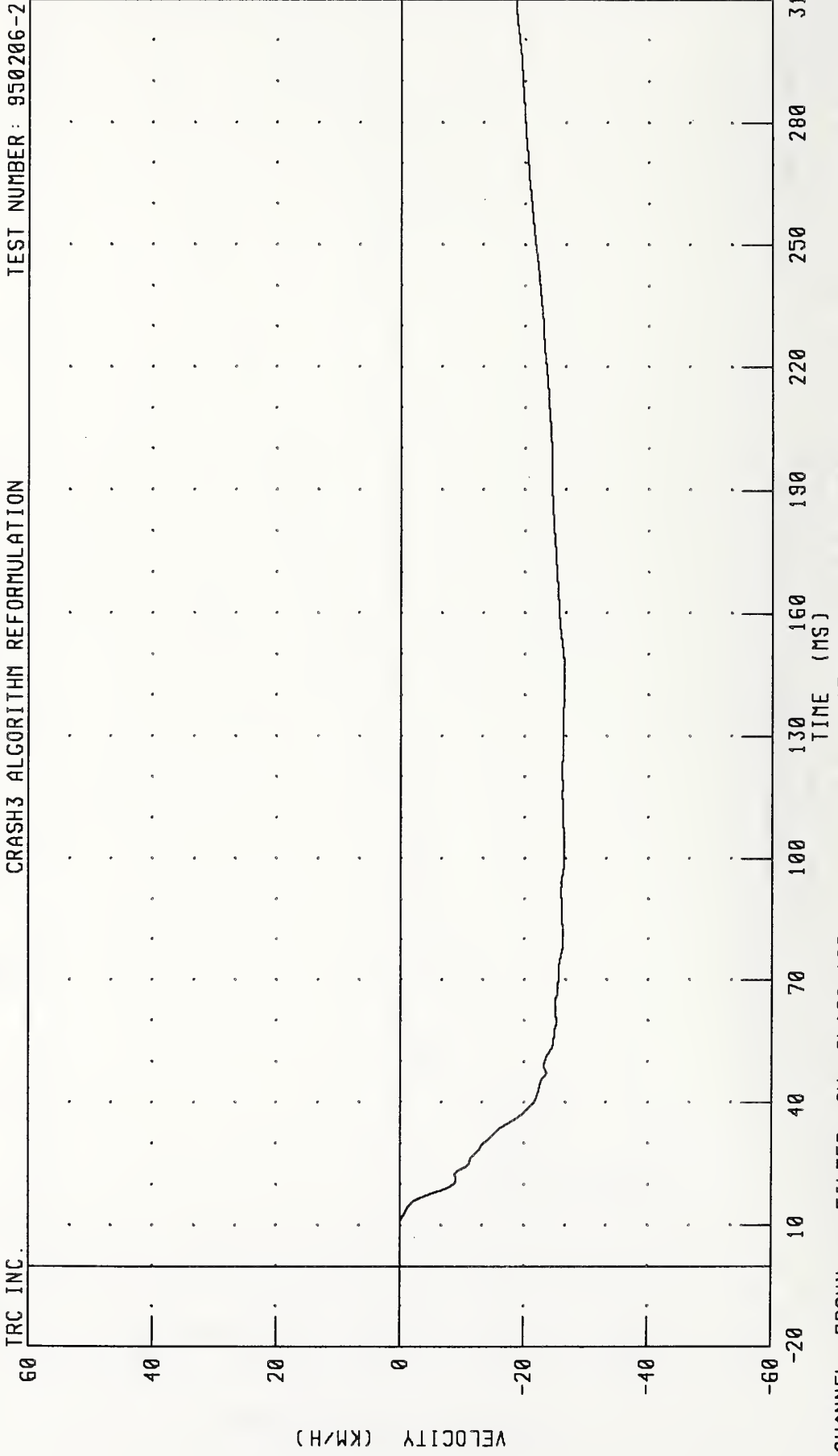


CHANNEL: RRSYD FILTER: CH CLASS 180

PEAK DATA: 0.00 MM @ 0.00 MS; -1874.78 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT REAR SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2

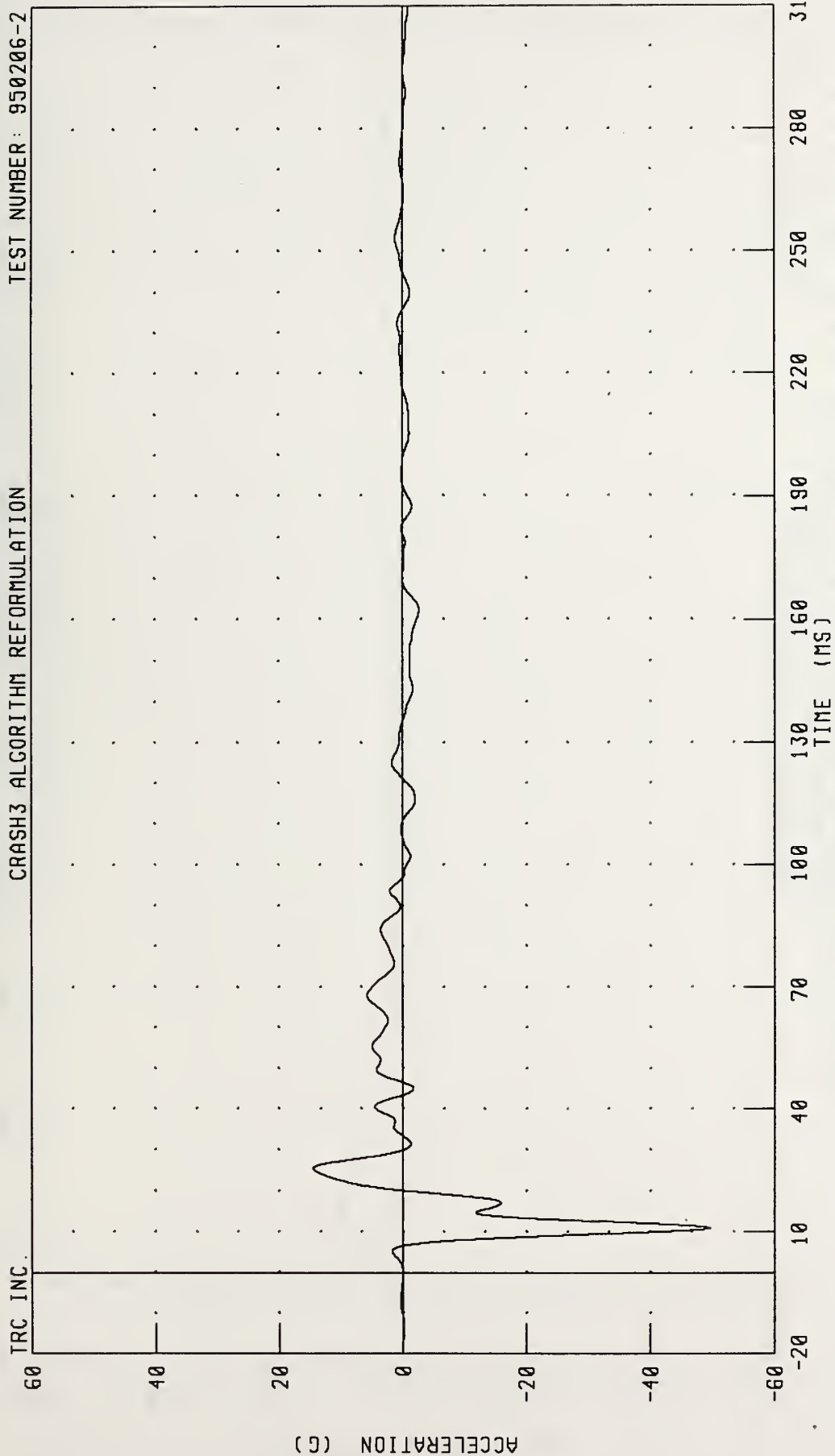


CHANNEL: RRSYV FILTER: CH. CLASS 180

PEAK DATA: 0.01 KM/H @ 6.32 MS; -26.47 KM/H @ 103.04 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
LEFT FRONT SILL X-AXIS ACCELERATION

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2

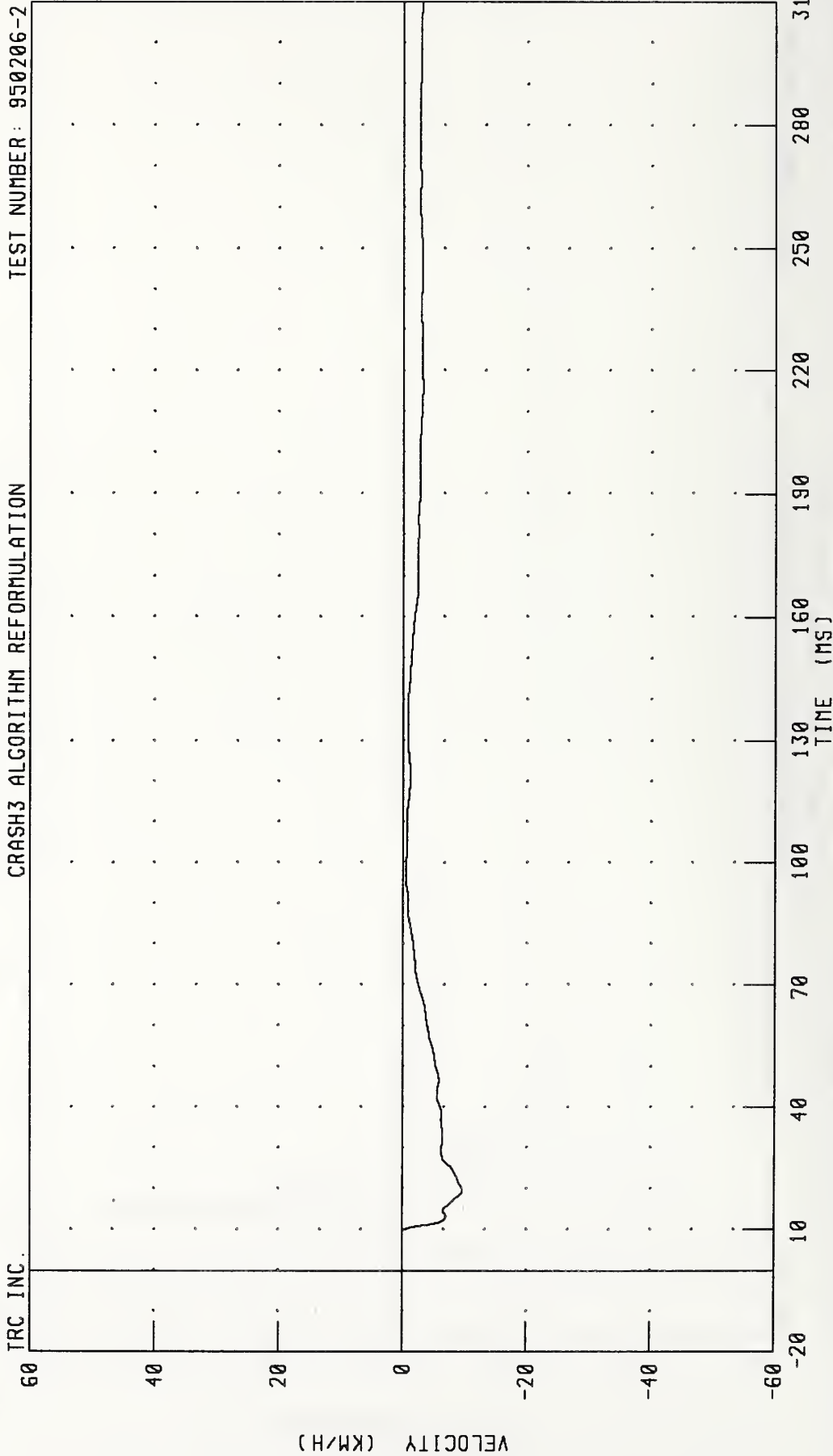


CHANNEL: LFSXC FILTER: CH. CLASS 60

PEAK DATA: 14.59 G @ 25.44 MS, -49.63 G @ 10.96 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
LEFT FRONT SILL X-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: LFSXV FILTER: CH. CLASS 180

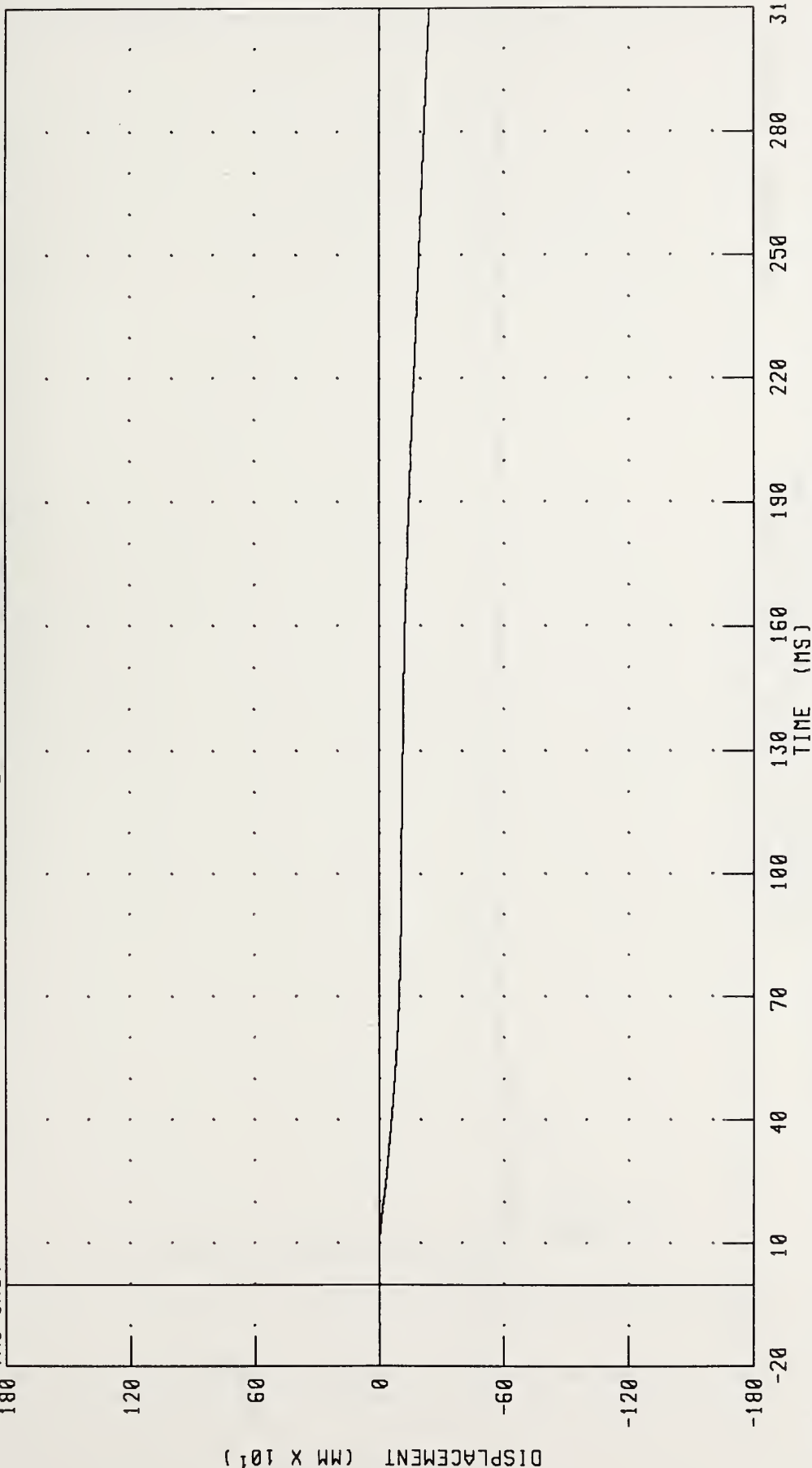
PEAK DATA: 0.08 KM/H @ 9.28 MS; -9.66 KM/H @ 19.52 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 LEFT FRONT SILL X-AXIS DISPLACEMENT

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

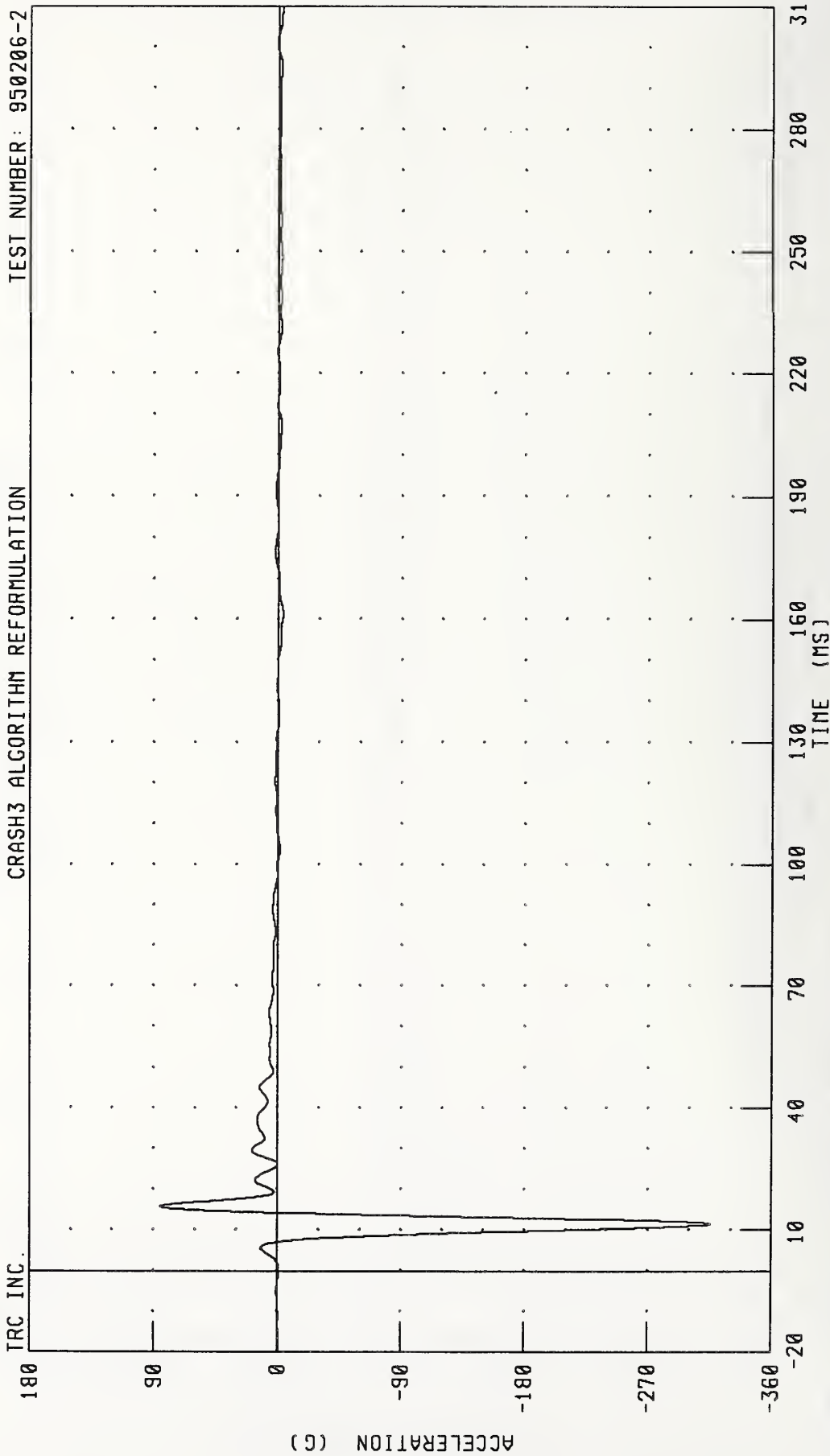


CHANNEL: LFSXD FILTER: CH. CLASS 180

PEAK DATA: 0.01 MM @ 4.16 MS; -239.33 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
LEFT FRONT SILL Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: LFSYG FILTER: CH. CLASS 60

PEAK DATA: 85.68 G @ 15.68 MS; -315.85 G @ 11.36 MS

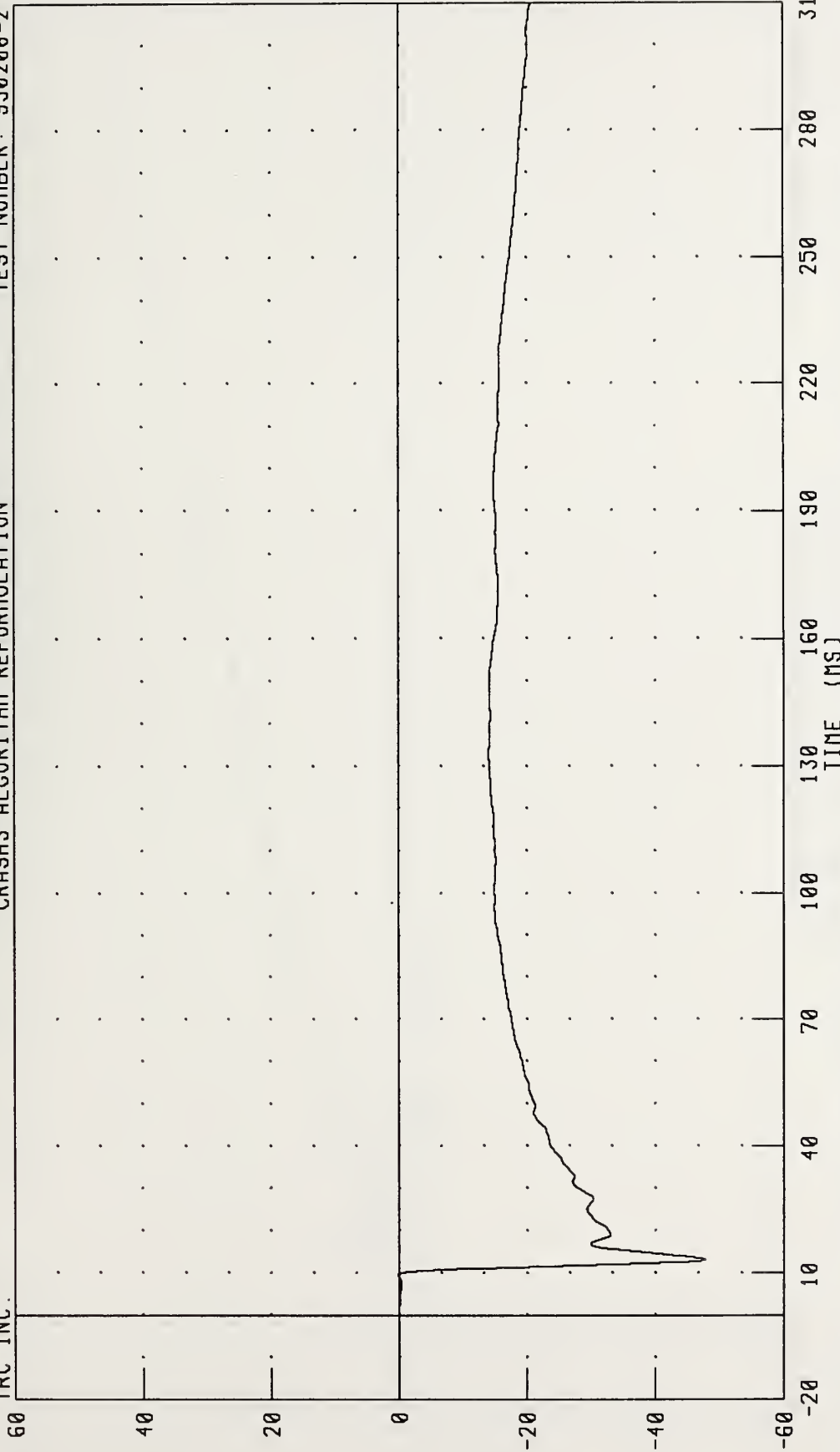
NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5

LEFT FRONT SILL Y-AXIS VELOCITY

CRASH3 ALGORITHM REFORMULATION

TEST NUMBER: 950206-2

TRC INC.



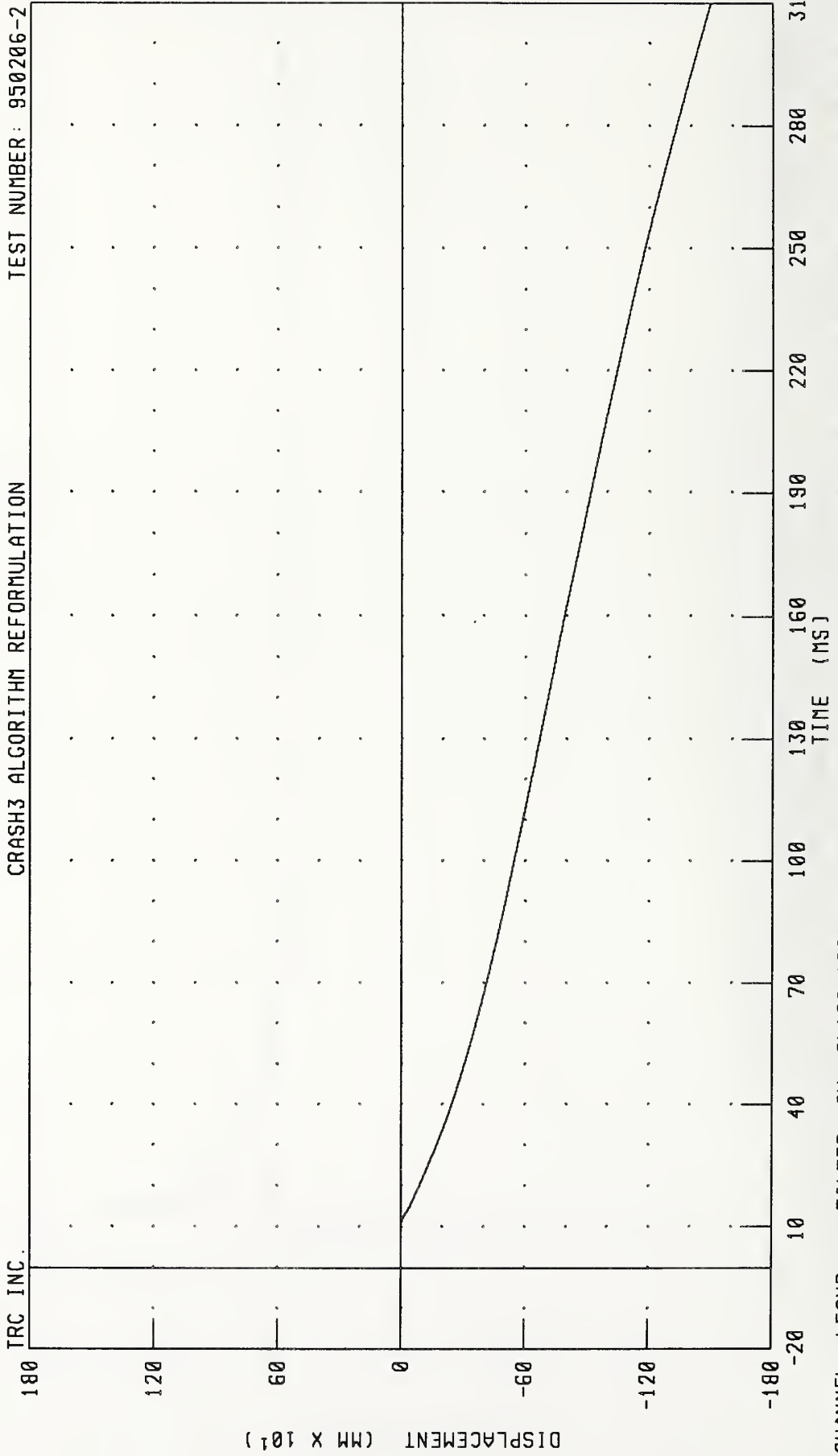
CHANNEL: LFSYV

FILTER: CH. CLASS 180

PEAK DATA: 0.23 KM/H @ 9.52 MS; -47.68 KM/H @ 13.20 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 LEFT FRONT SILL Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2

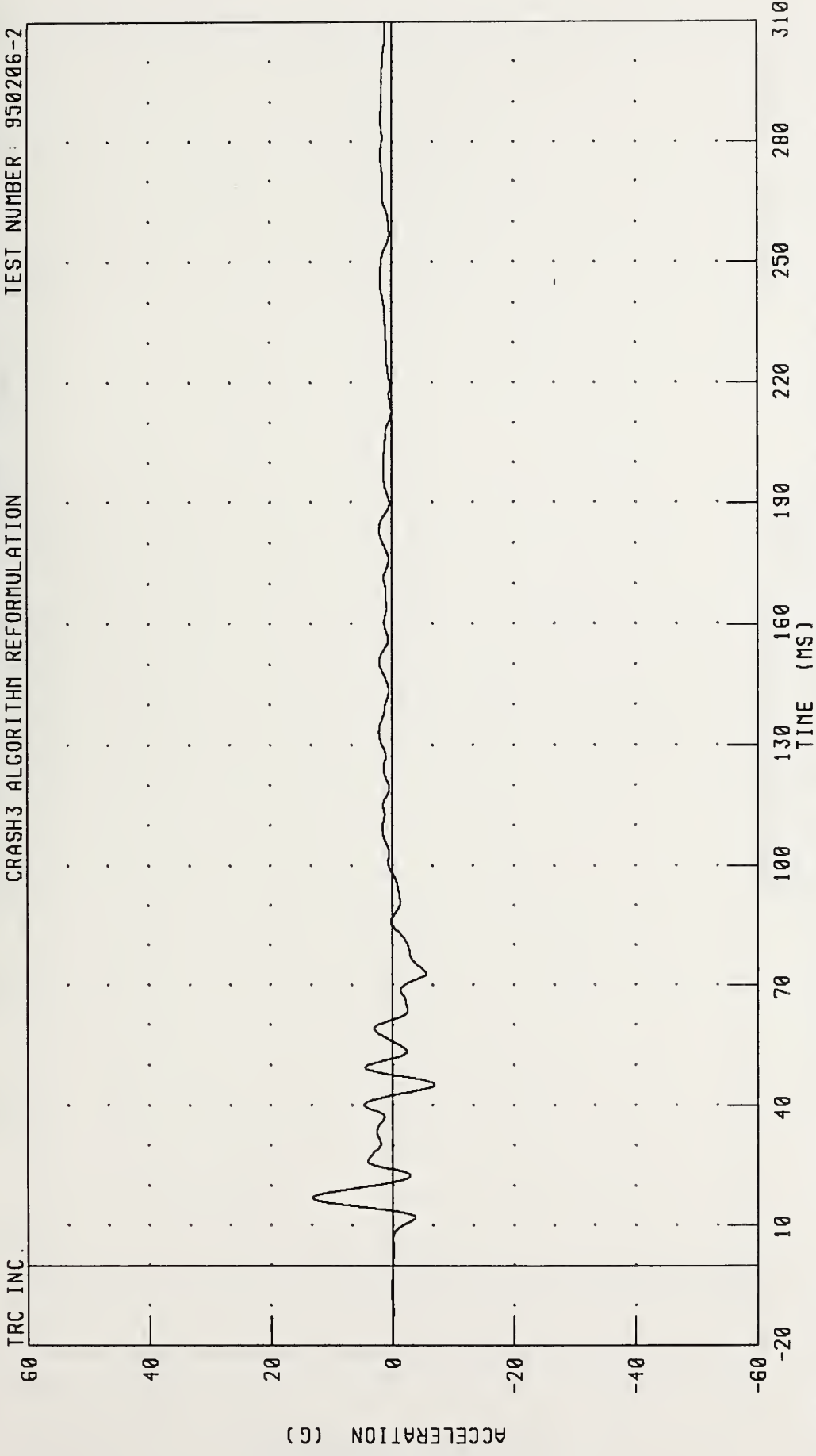


CHANNEL: LFSYD FILTER: CH. CLASS 180

PEAK DATA: 0.00 MM @ 1.28 MS; -1496.77 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT FRONT SILL X-AXIS ACCELERATION

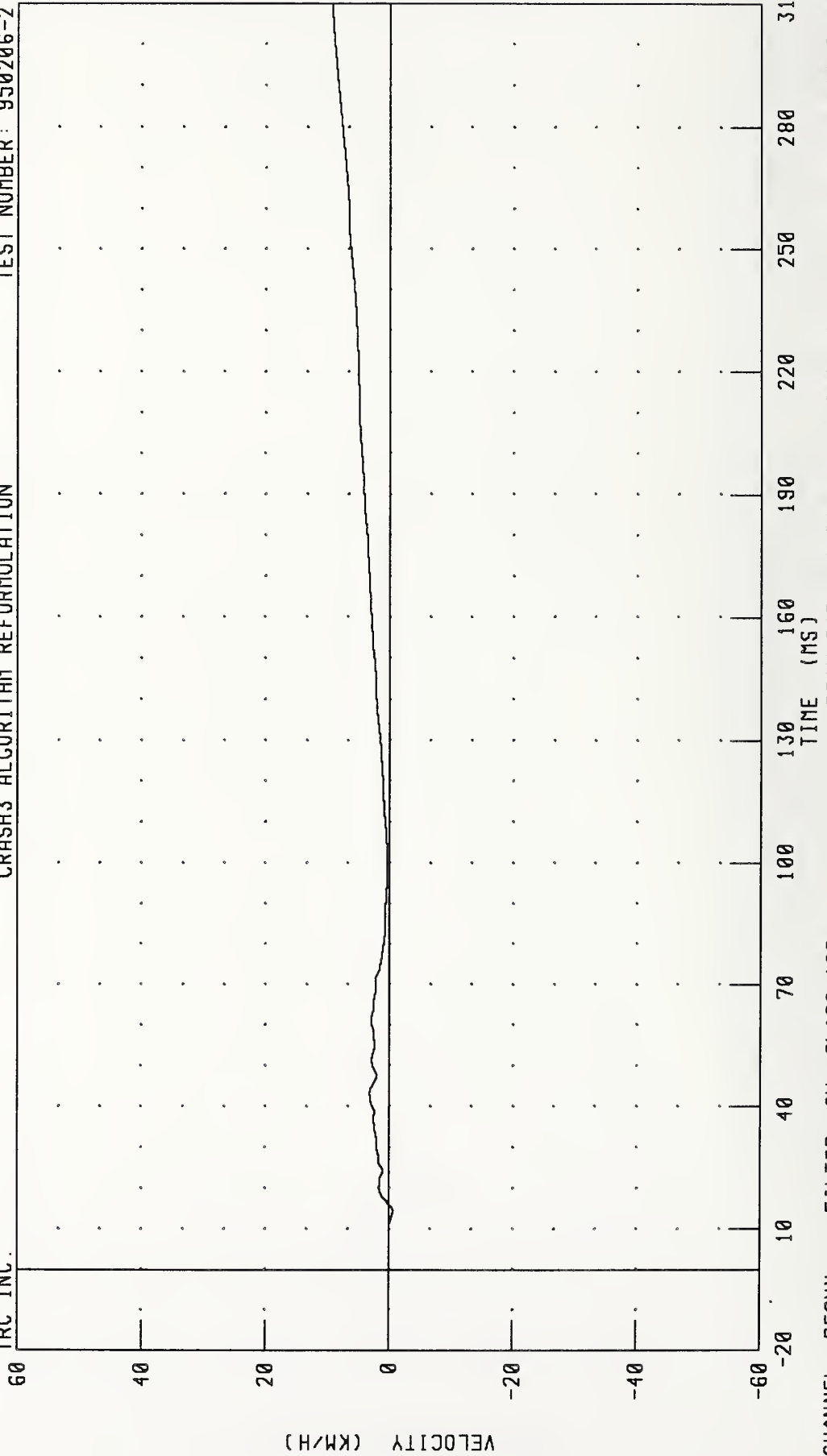
TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: RFSXG FILTER: CH CLASS 60 PEAK DATA: 13.22 G @ 16.96 MS; -6.93 G @ 45.20 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT FRONT SILL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: RFSXV FILTER: CH. CLASS 180

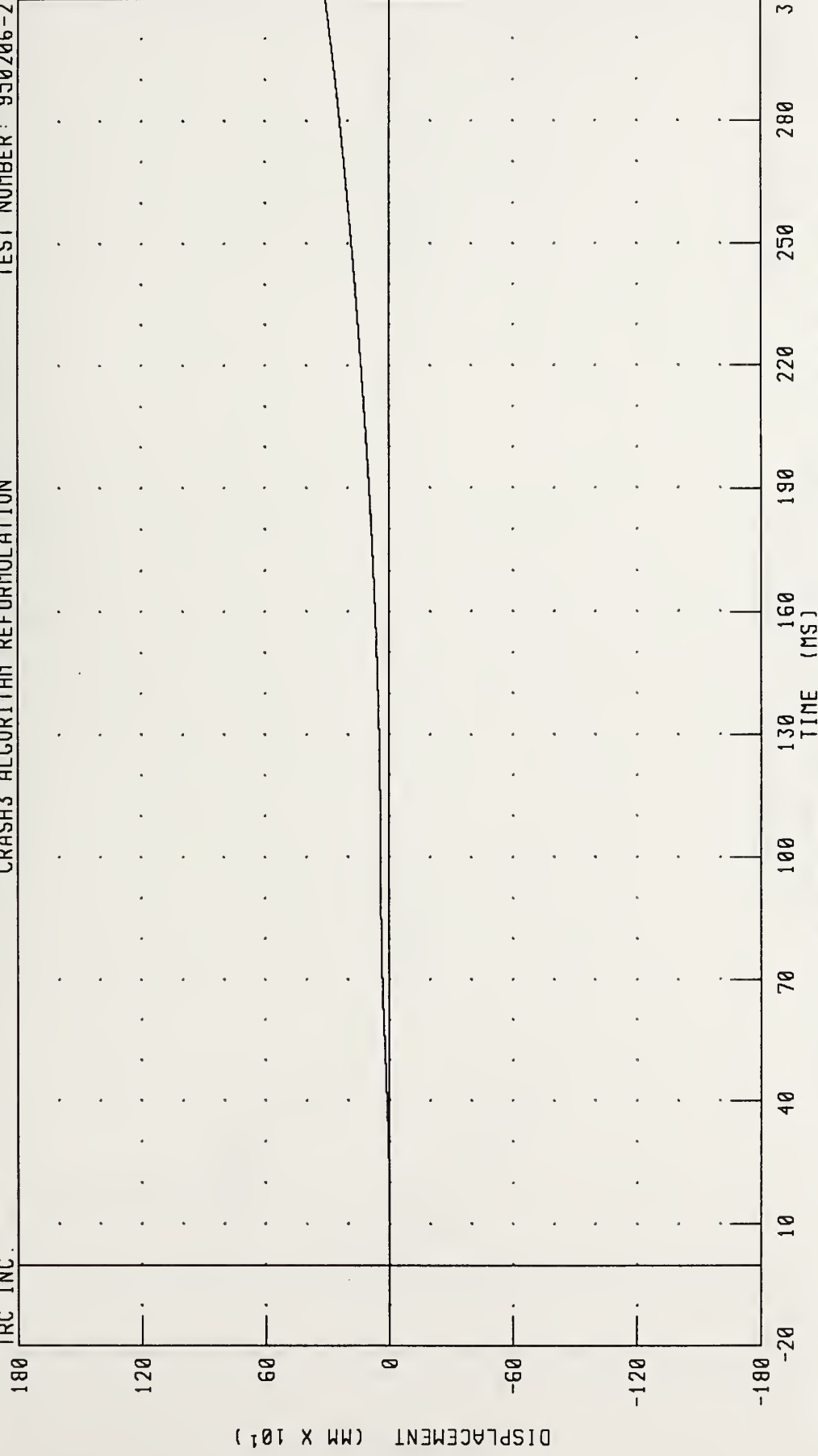
PEAK DATA: 9.39 KM/H @ 310.00 MS; -0.64 KM/H @ 14.24 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT FRONT SILL X-AXIS DISPLACEMENT

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

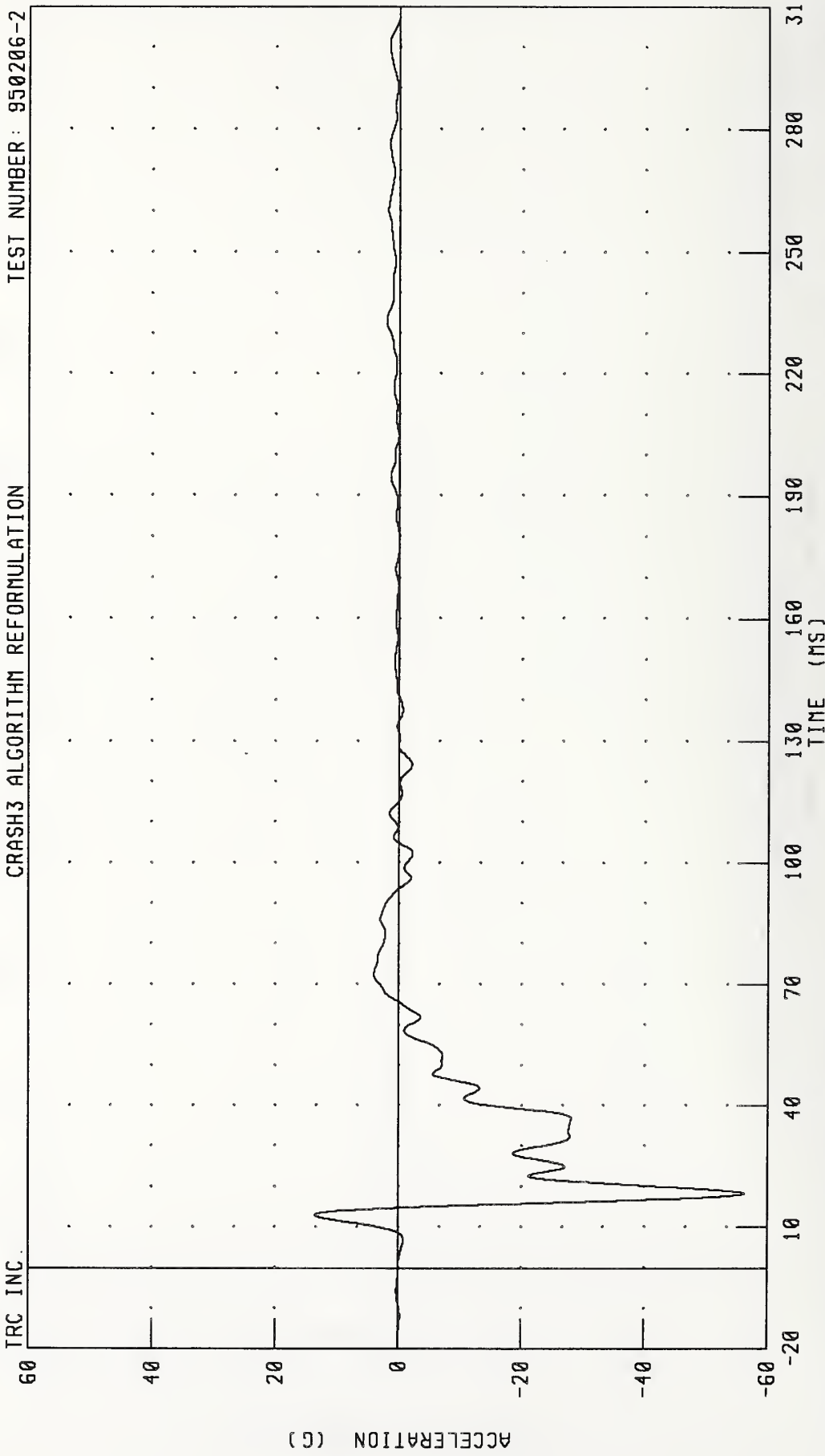


CHANNEL: RFSXD FILTER: CH. CLASS 180

PEAK DATA: 311.07 MM @ 310.00 MS; -0.55 MM @ 16.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT FRONT SILL Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: RFSYG FILTER: CH. CLASS 60

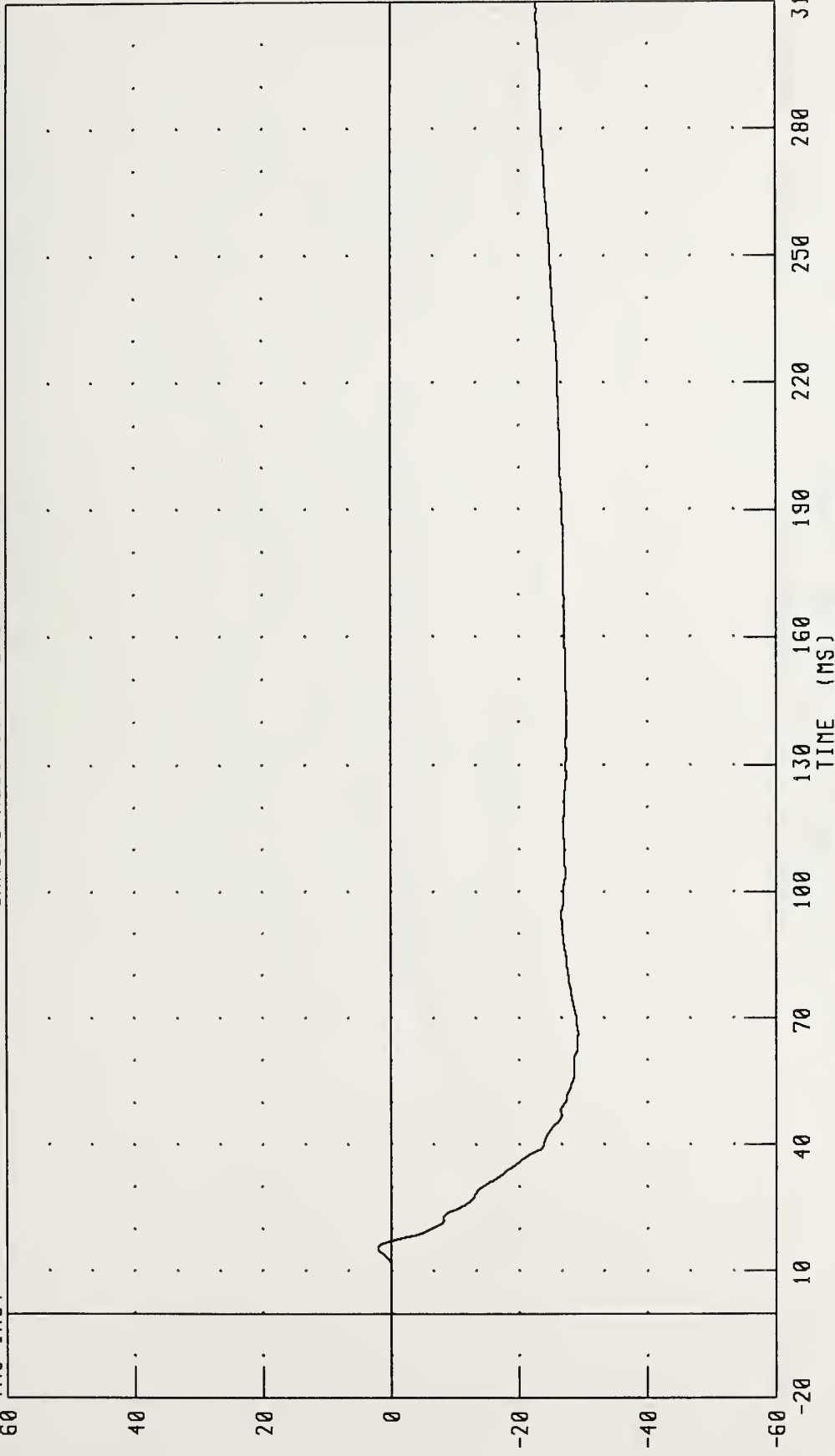
PEAK DATA: 13.58 G @ 12.96 MS; -56.22 G @ 18.24 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT FRONT SILL Y-AXIS VELOCITY

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

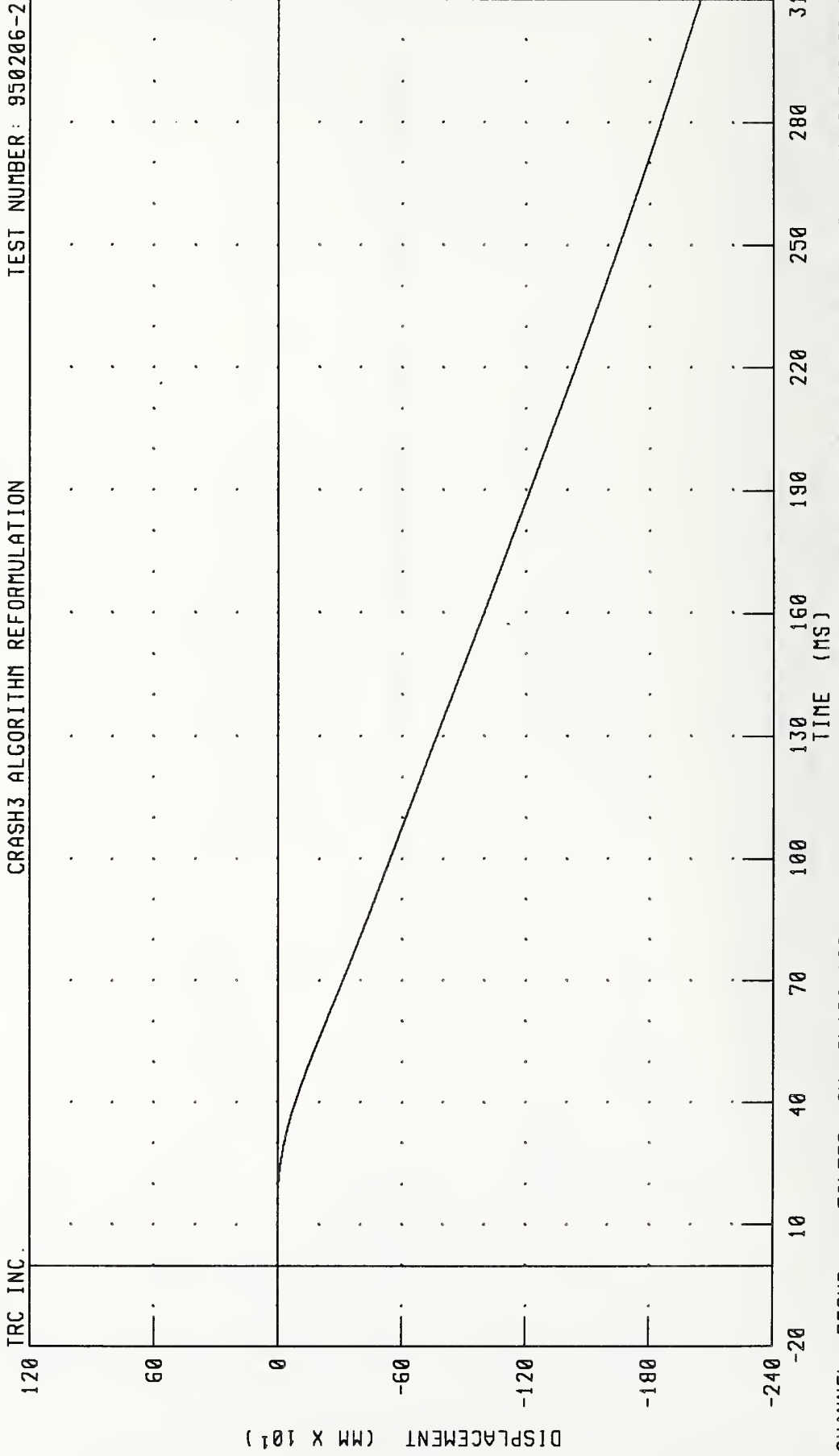


CHANNEL: RFSYV FILTER: CH. CLASS 180

PEAK DATA: 2.11 KM/H @ 15.44 MS, -29.23 KM/H @ 66.48 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
RIGHT FRONT SILL Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: RFSYD FILTER: CH. CLASS 180

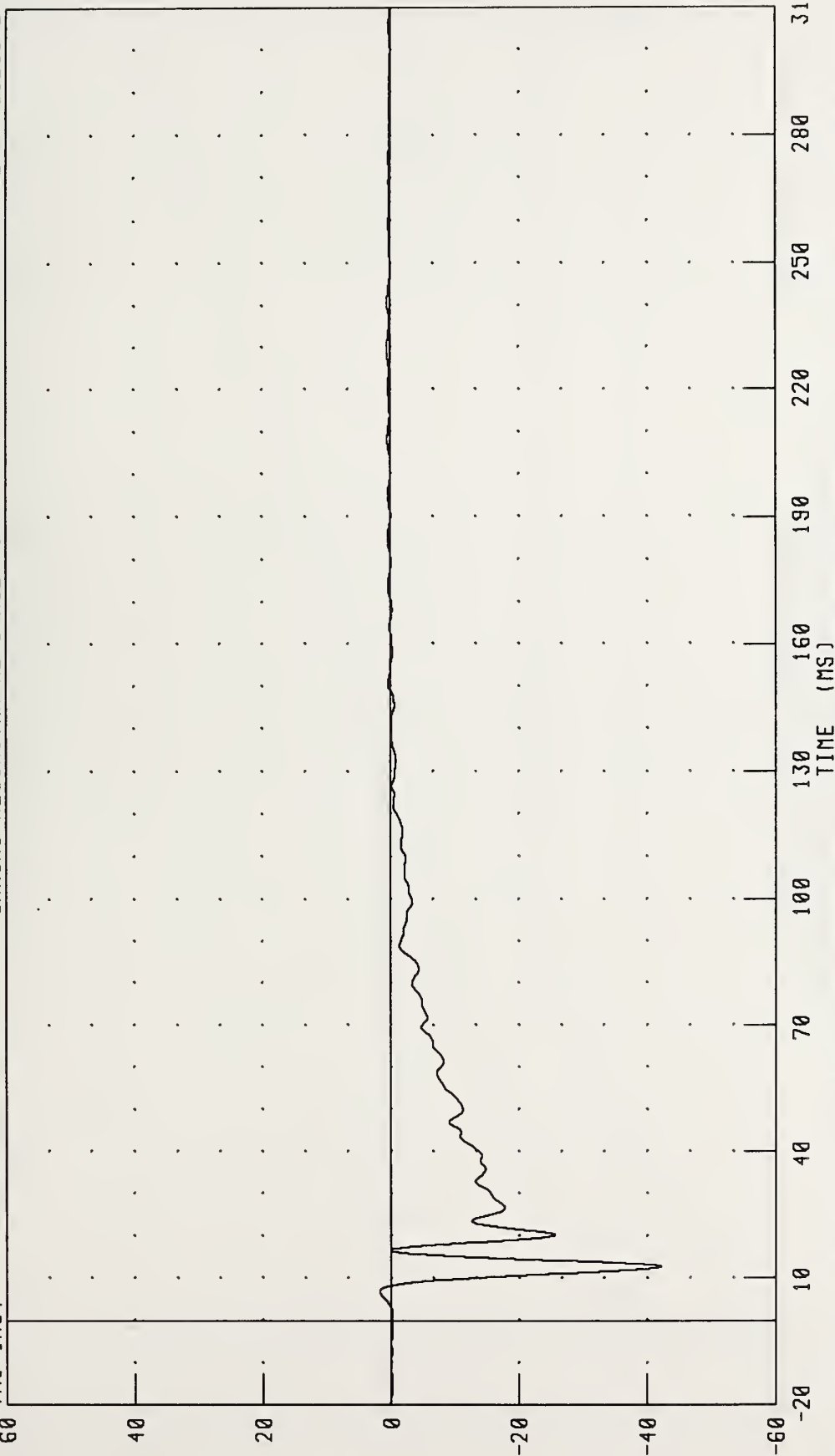
PEAK DATA: 1.61 MM @ 17.20 MS; -2047.11 MM @ 310.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR CENTER OF GRAVITY X-AXIS ACCELERATION

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



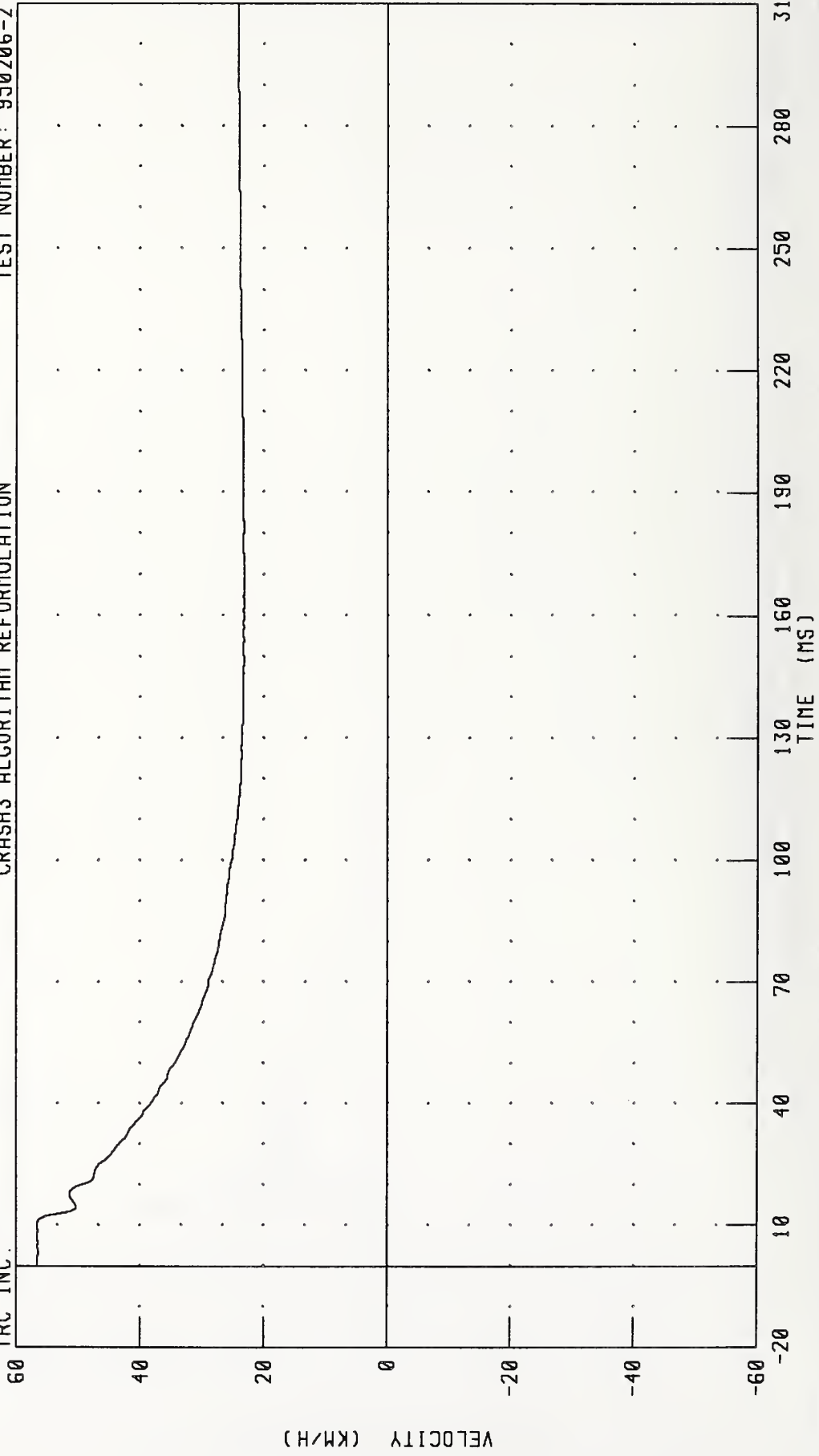
CHANNEL: BCGXG FILTER: CH. CLASS 60

PEAK DATA: 1.77 G @ 6.64 MS; -42.23 G @ 12.64 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR CENTER OF GRAVITY X-AXIS VELOCITY

TRC INC. TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION



CHANNEL: BCGXV FILTER: CH CLASS 180

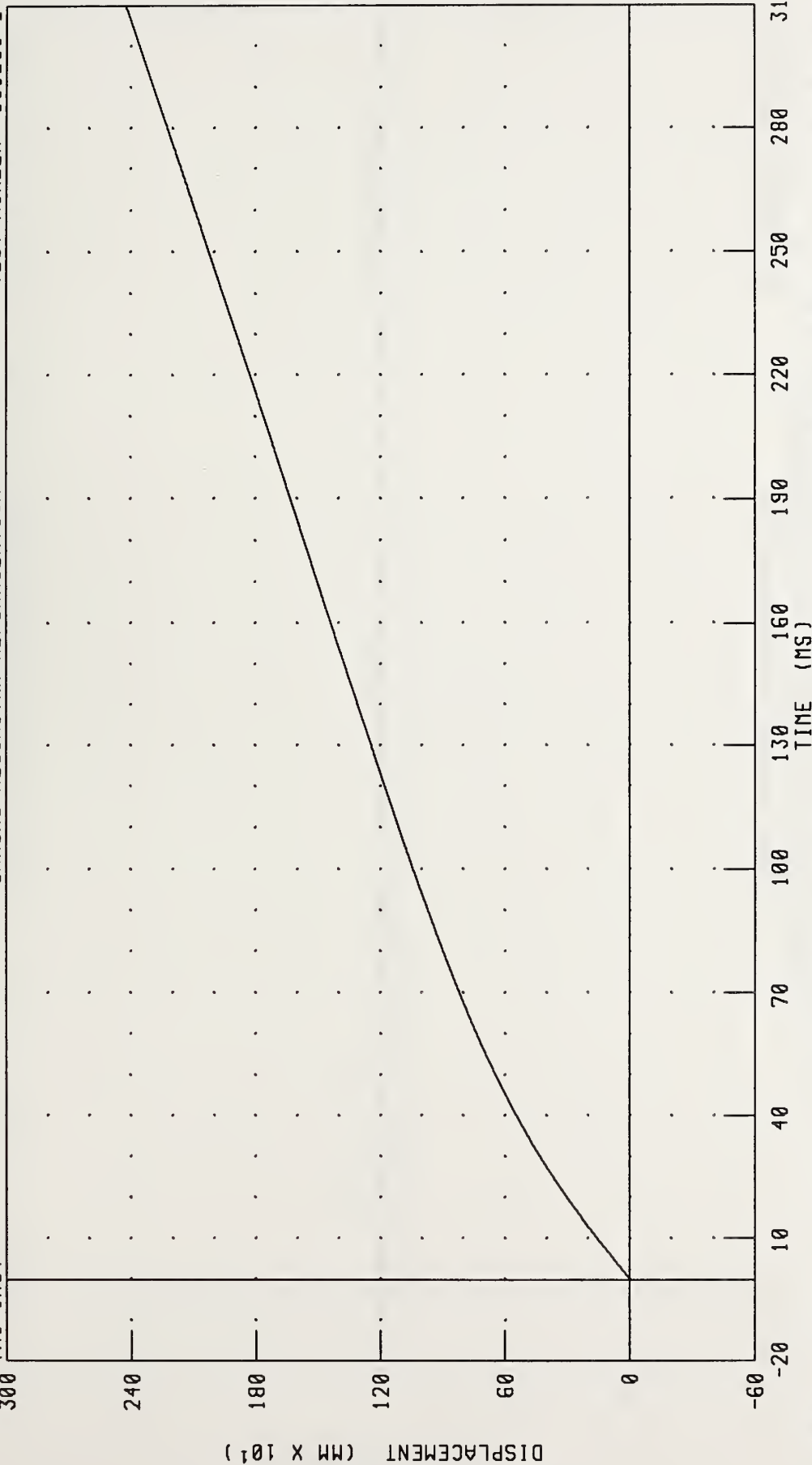
PEAK DATA: 56.51 KM/H @ 10.08 MS, 23.22 KM/H @ 148.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 MOVING BARRIER CENTER OF GRAVITY X-AXIS DISPLACEMENT

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

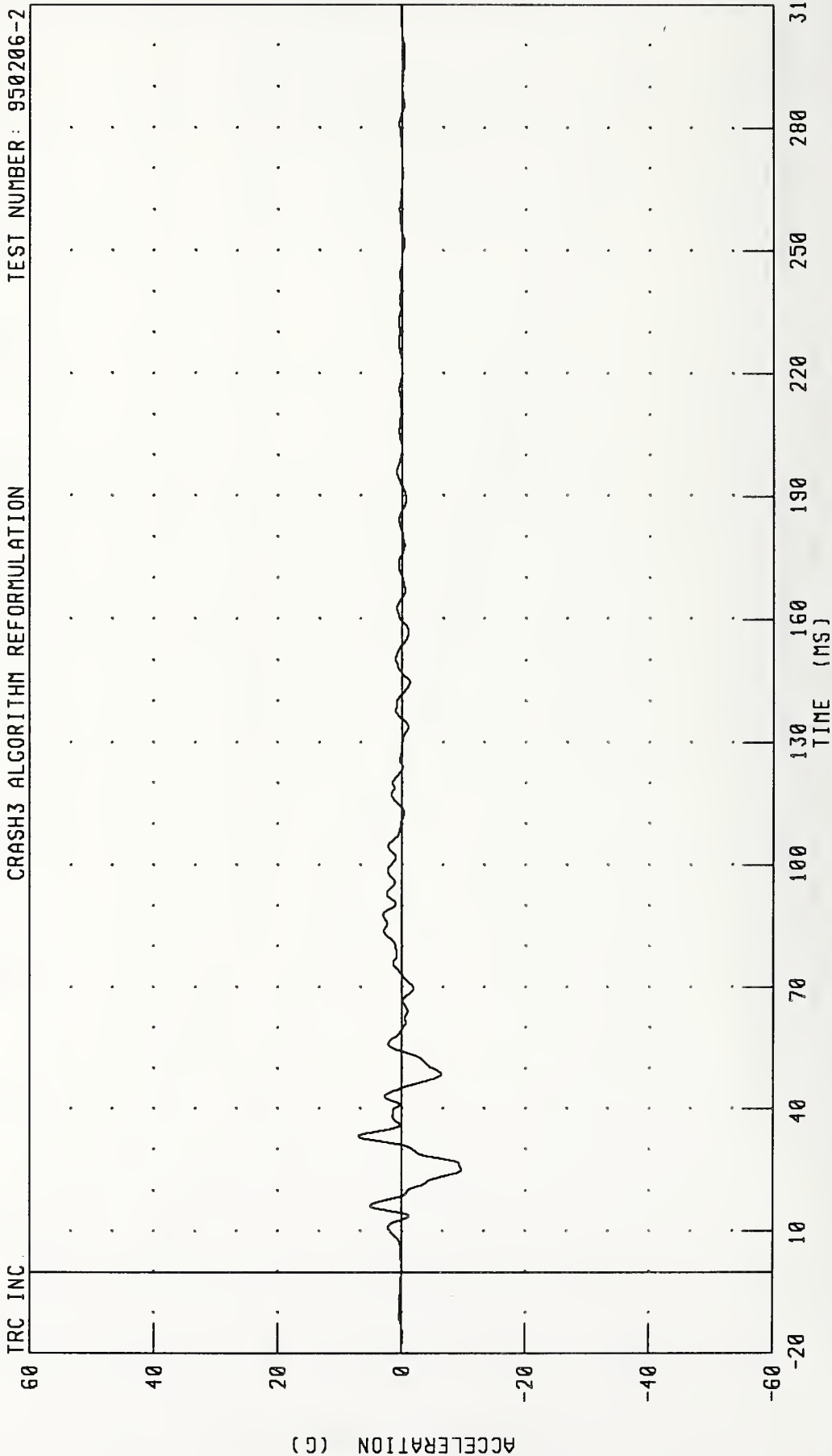


CHANNEL: BCGXD FILTER: CH. CLASS 180

PEAK DATA: 2426.30 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR CENTER OF GRAVITY Y-AXIS ACCELERATION

TRC INC
CRASH3 ALGORITHM REFORMULATION
TEST NUMBER: 950206-2



CHANNEL: BCGYG FILTER: CH CLASS 60

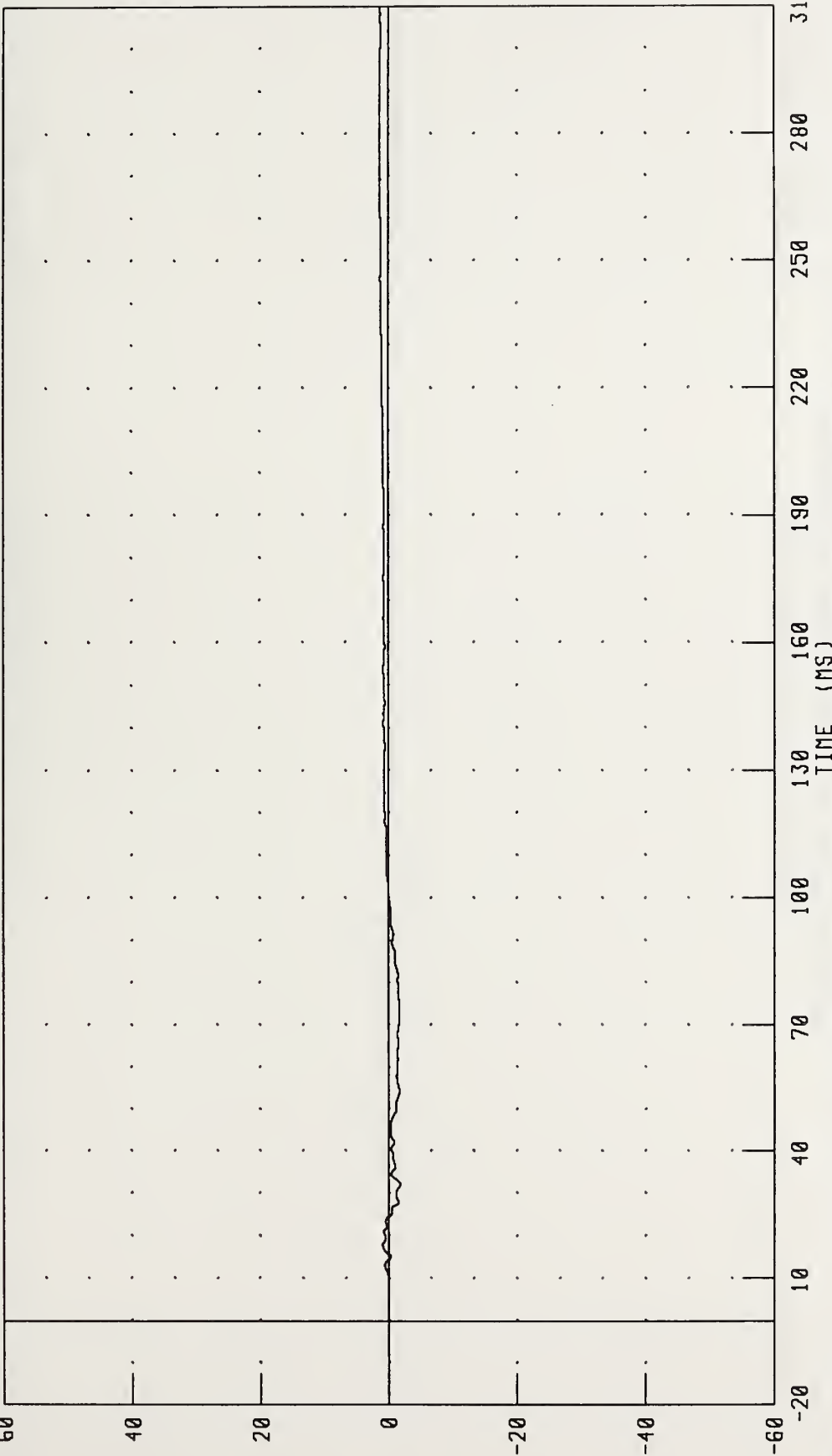
PEAK DATA: 7.02 G @ 33.28 MS; -9.69 G @ 25.12 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR CENTER OF GRAVITY Y-AXIS VELOCITY

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

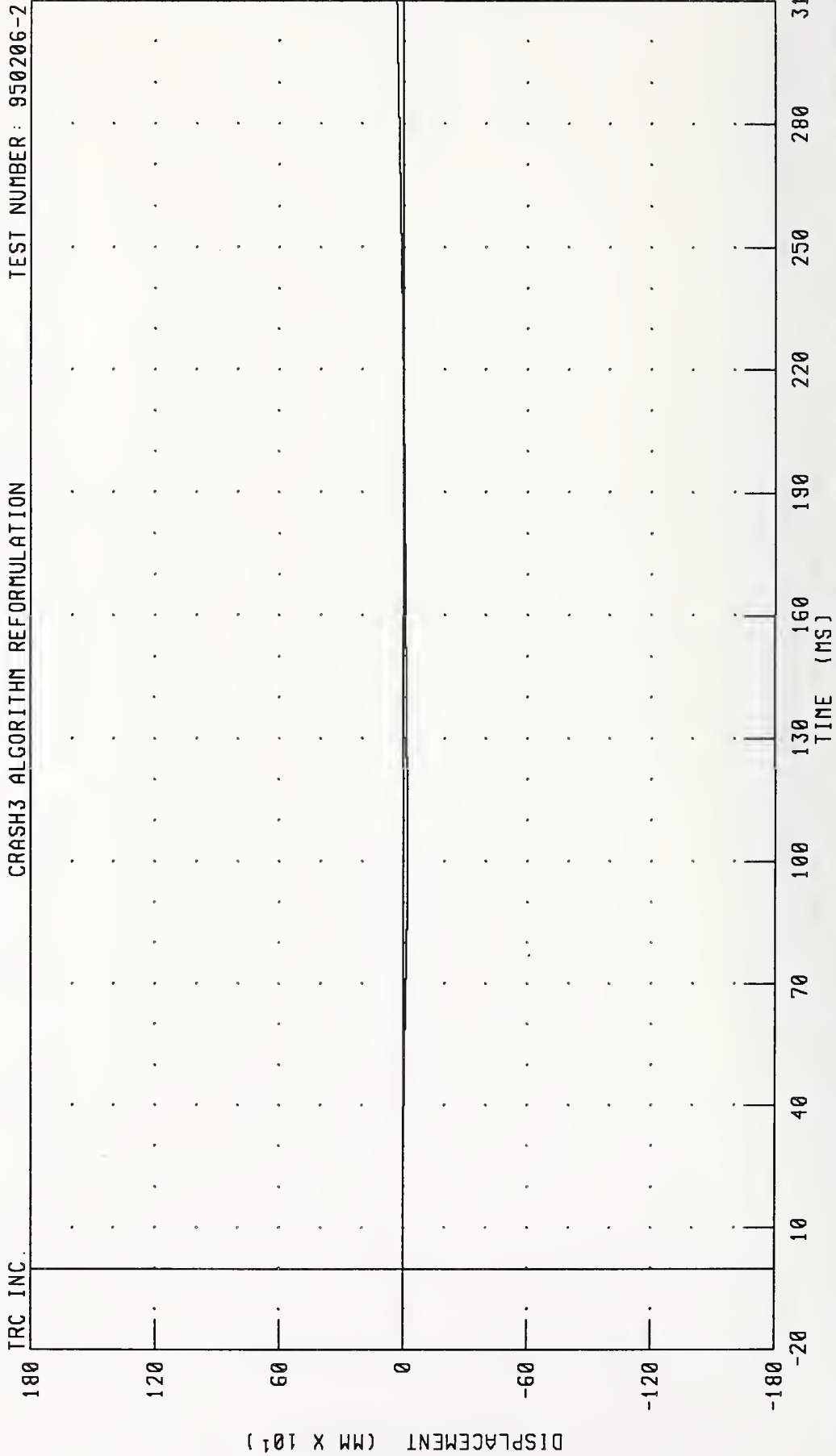


CHANNEL: BCGYV FILTER: CH. CLASS 180

PEAK DATA: 1.42 KM/H @ 284.16 MS; -1.81 KM/H @ 32.08 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 IMPACTOR CENTER OF GRAVITY Y-AXIS DISPLACEMENT

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: BCGYD FILTER: CH. CLASS 180

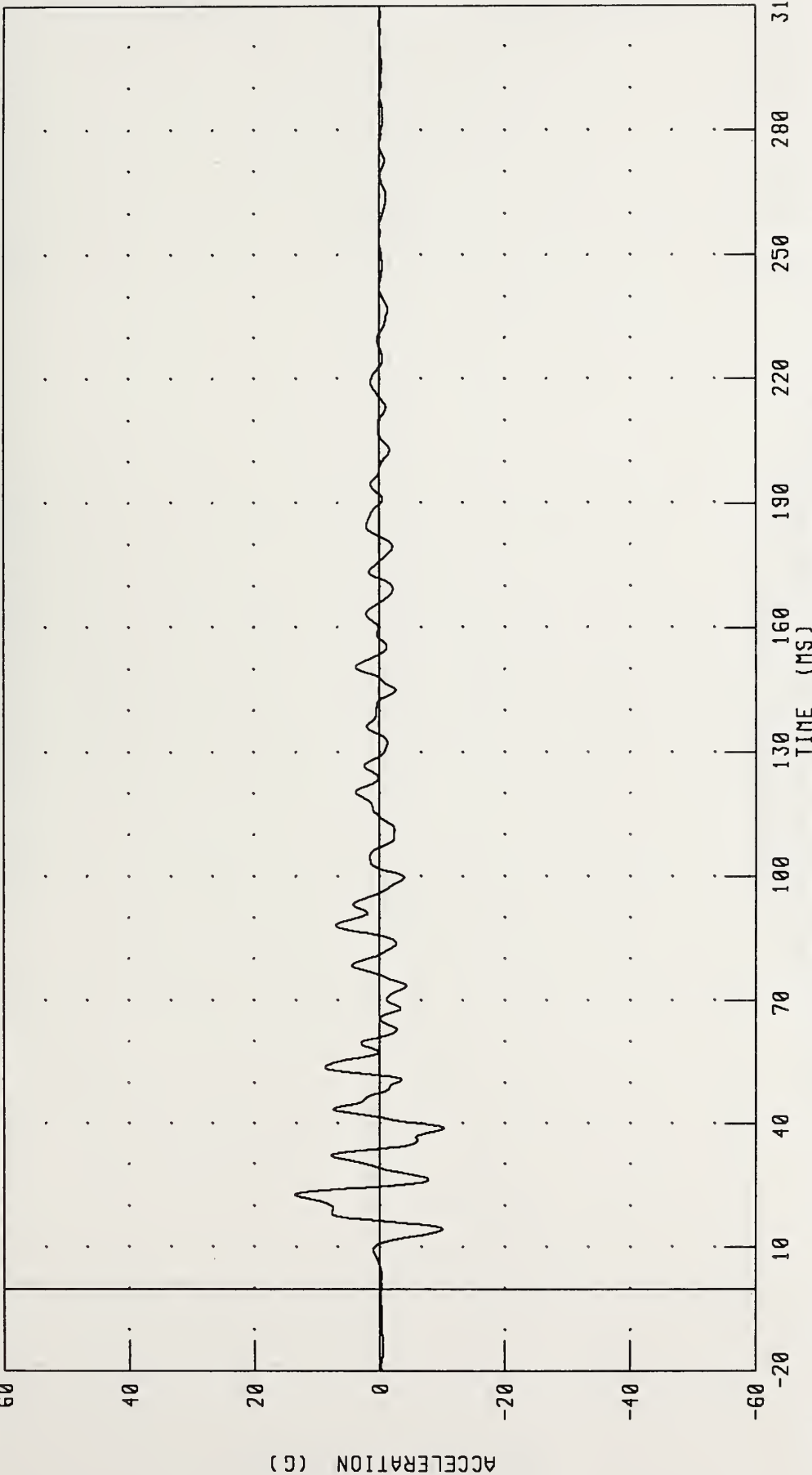
PEAK DATA: 33.64 MM @ 310.00 MS; -20.28 MM @ 100.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



CHANNEL: BCGZG FILTER: CH. CLASS 60

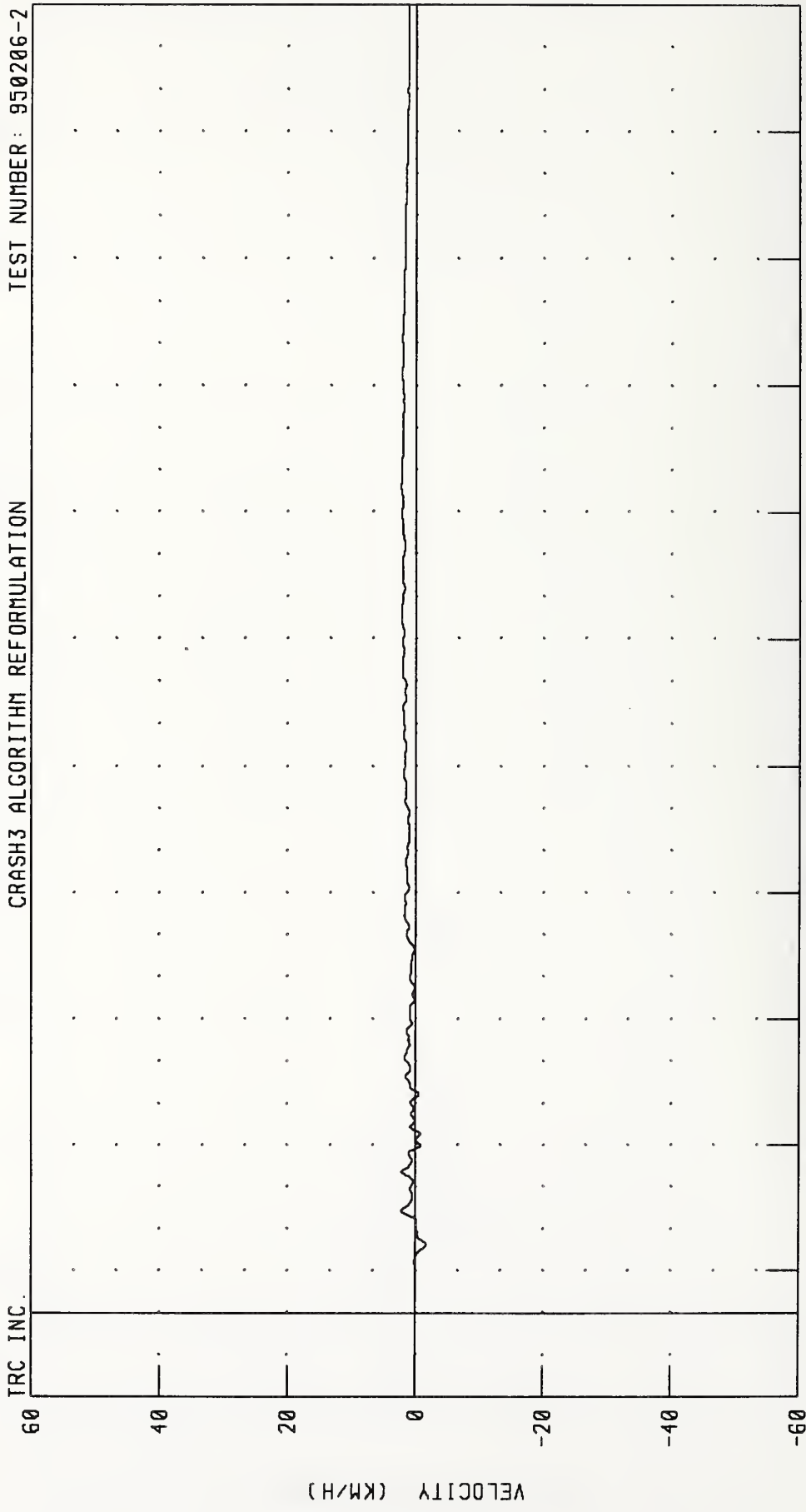
PEAK DATA:

13.59 G @ 22.64 MS; -10.32 G @ 38.88 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR CENTER OF GRAVITY Z-AXIS VELOCITY

TRC INC. TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION



CHANNEL: BCGZY FILTER: CH. CLASS 180

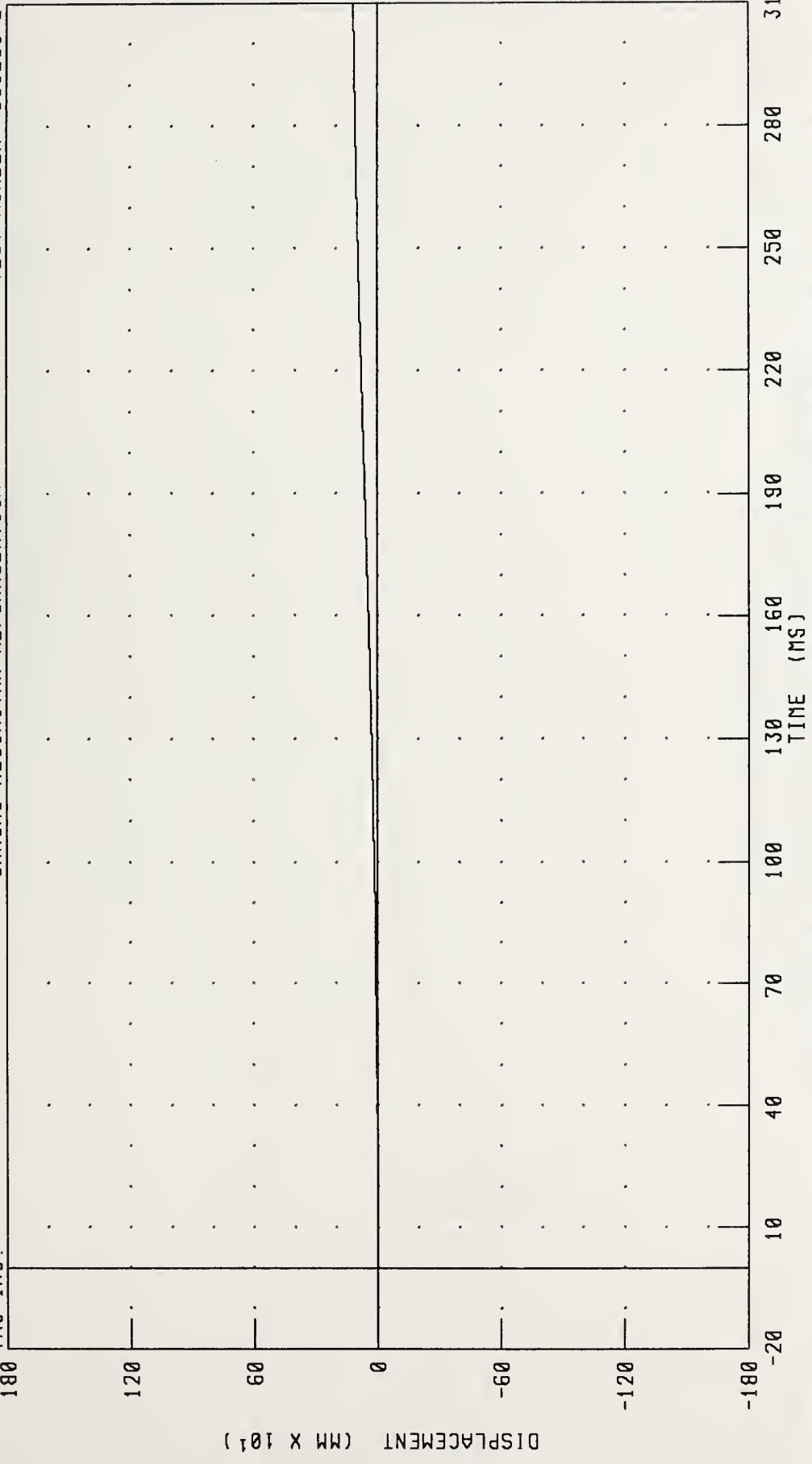
PEAK DATA: 2.33 KM/H @ 196.16 MS; -1.69 KM/H @ 16.16 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 IMPACTOR CENTER OF GRAVITY Z-AXIS DISPLACEMENT

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



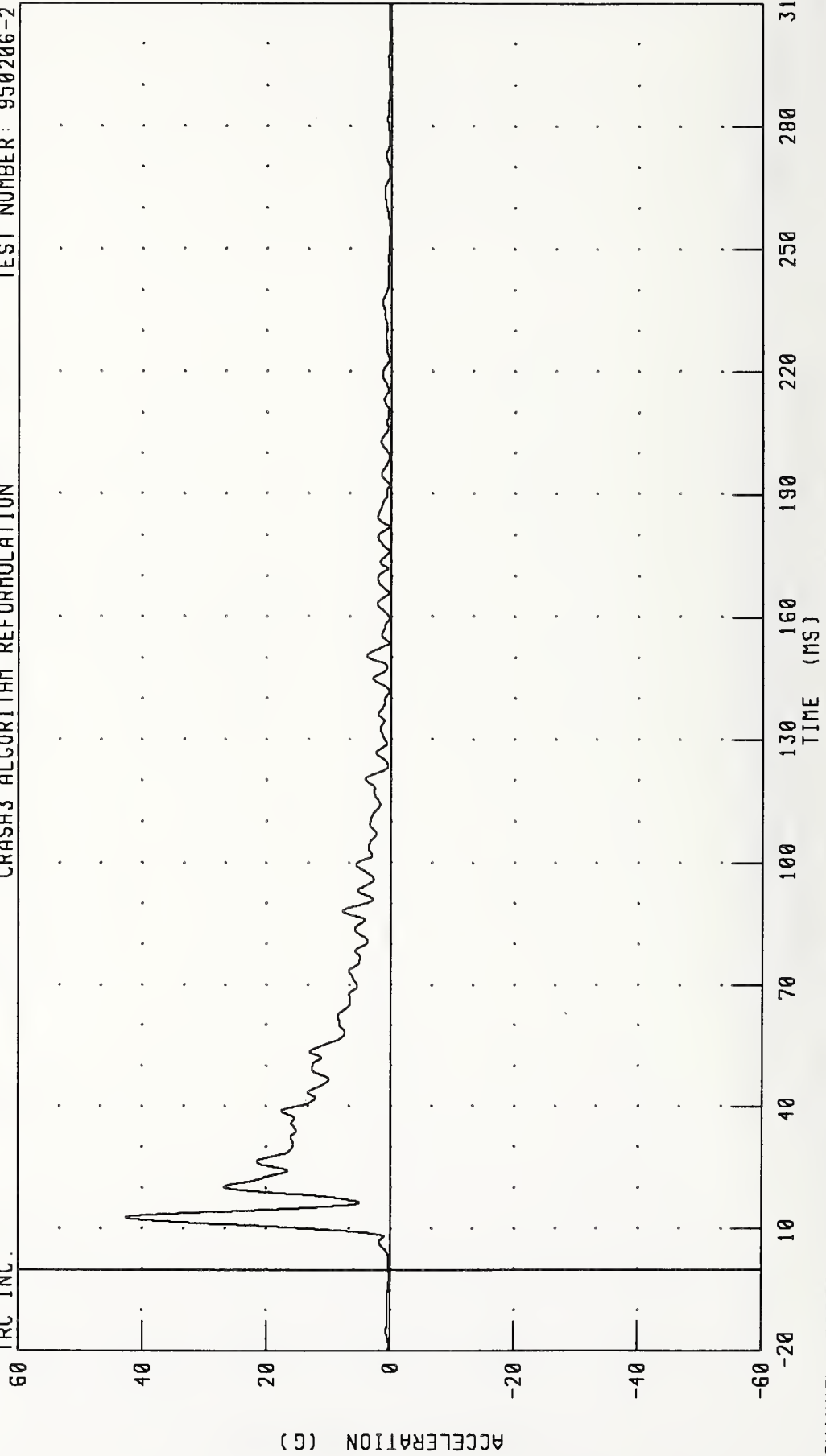
CHANNEL: BCGZD FILTER: CH. CLASS 180

PEAK DATA: 116.77 MM @ 310.00 MS; -1.46 MM @ 22.32 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR CENTER OF GRAVITY RESULTANT ACCELERATION

TRC INC. TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION



CHANNEL: BCGRC FILTER: CH. CLASS 60

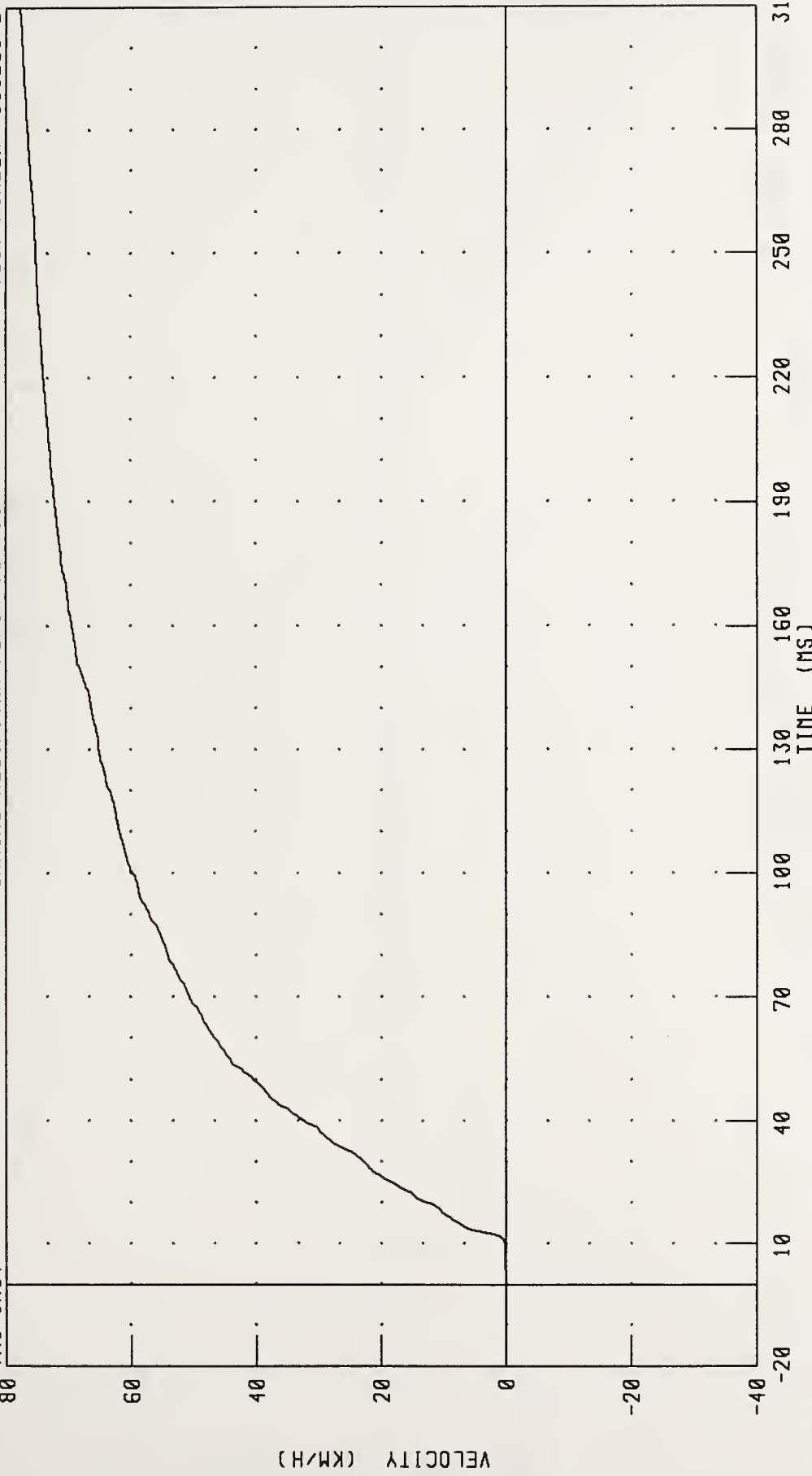
PEAK DATA: 42.61 G @ 12.72 MS; 0.05 G @ 153.60 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT VELOCITY

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.



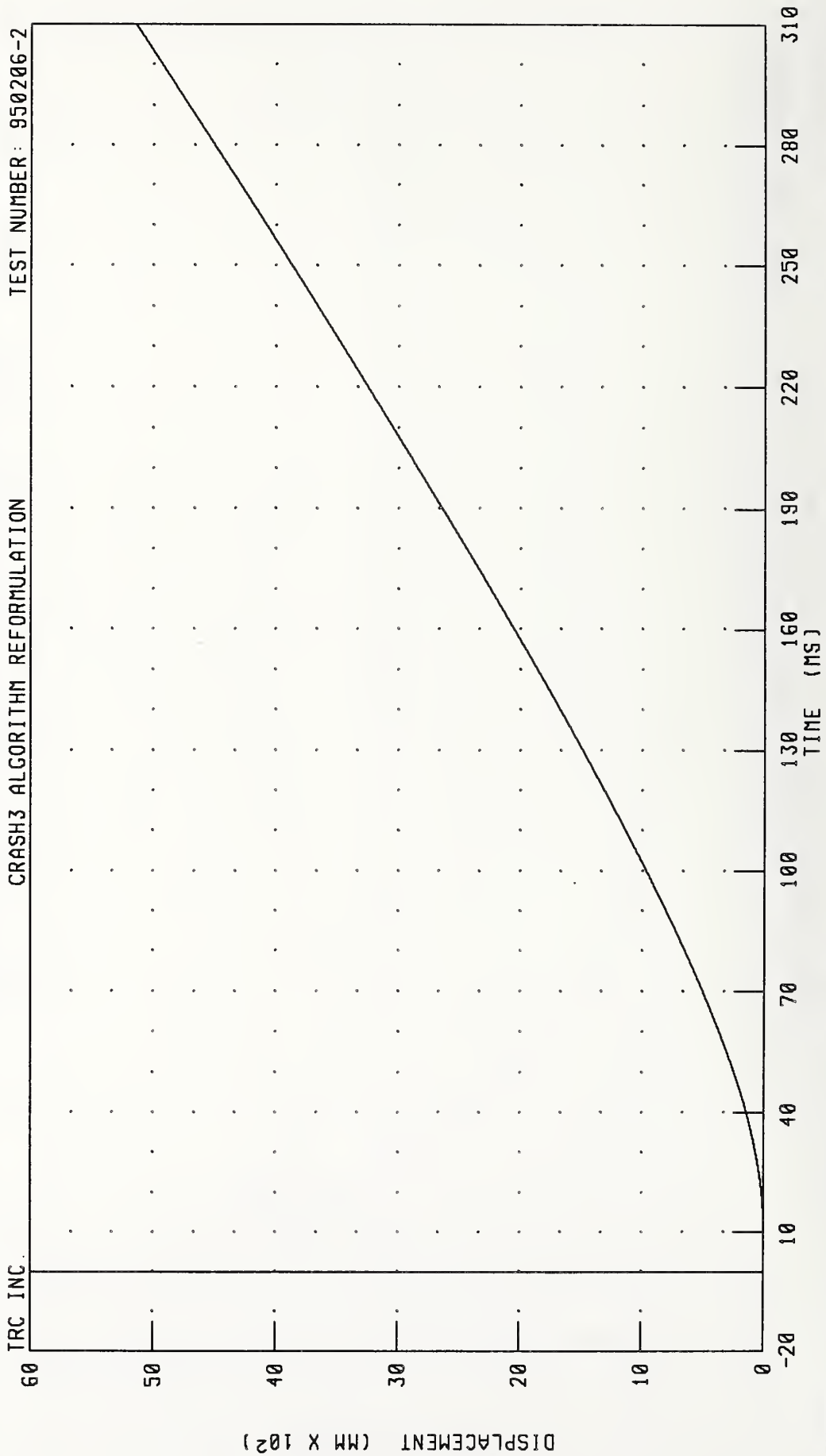
CHANNEL: BCGRV FILTER: CH. CLASS 180

PEAK DATA: 77.77 KM/H @ 310.00 MS; 0.00 KM/H @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
MOVING BARRIER CENTER OF GRAVITY RESULTANT DISPLACEMENT

TRC INC. TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION



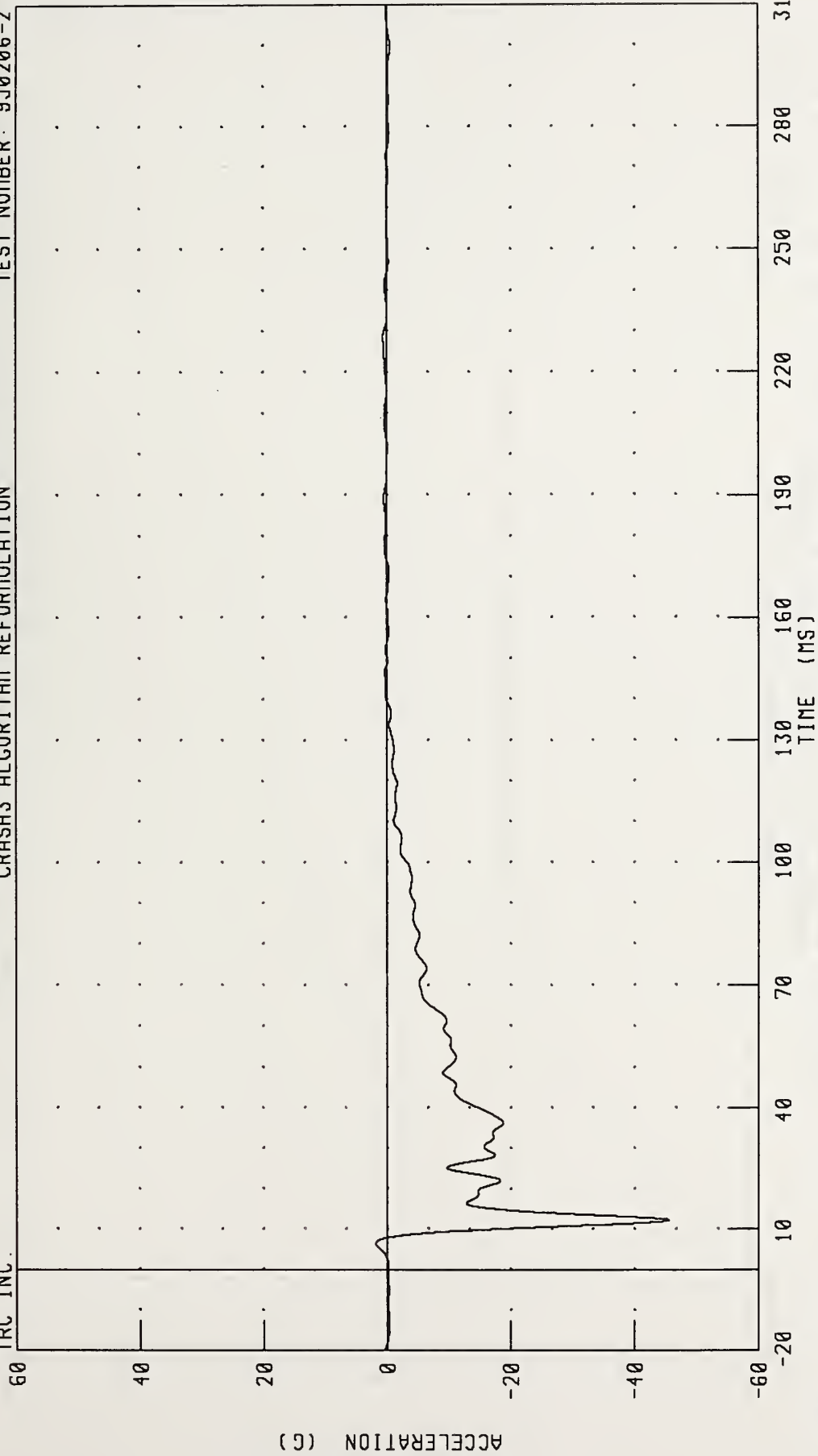
CHANNEL: BCGRD FILTER: CH. CLASS 180 PEAK DATA: 5144.79 MM @ 310.00 MS; 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR LEFT SIDE RAIL X-AXIS ACCELERATION

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

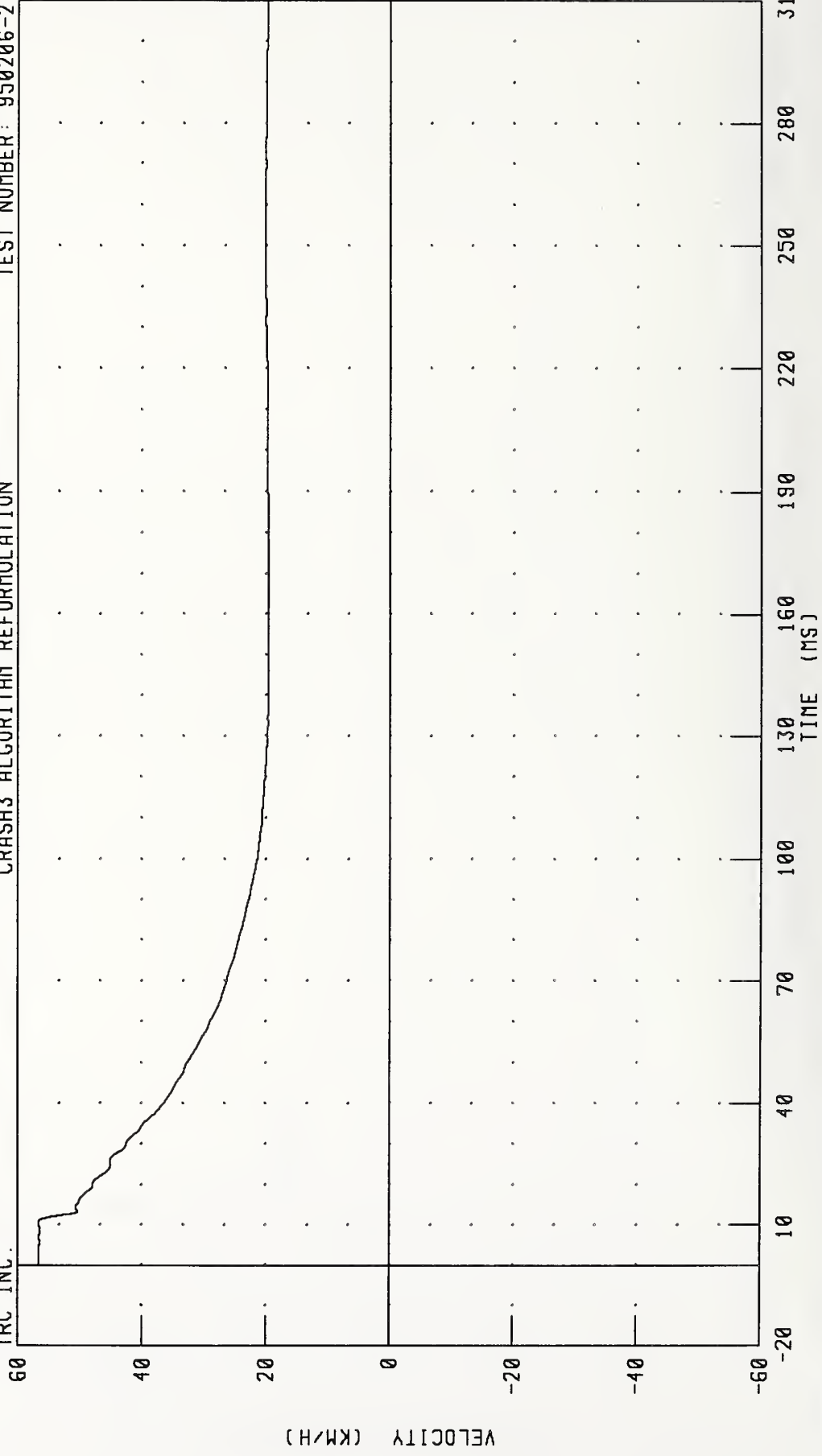


CHANNEL: BSRXG FILTER: CH. CLASS 60

PEAK DATA: 1.87 G @ 6.48 MS; -45.57 G @ 12.24 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR LEFT SIDE RAIL X-AXIS VELOCITY

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: BSRXV FILTER: CH. CLASS 180

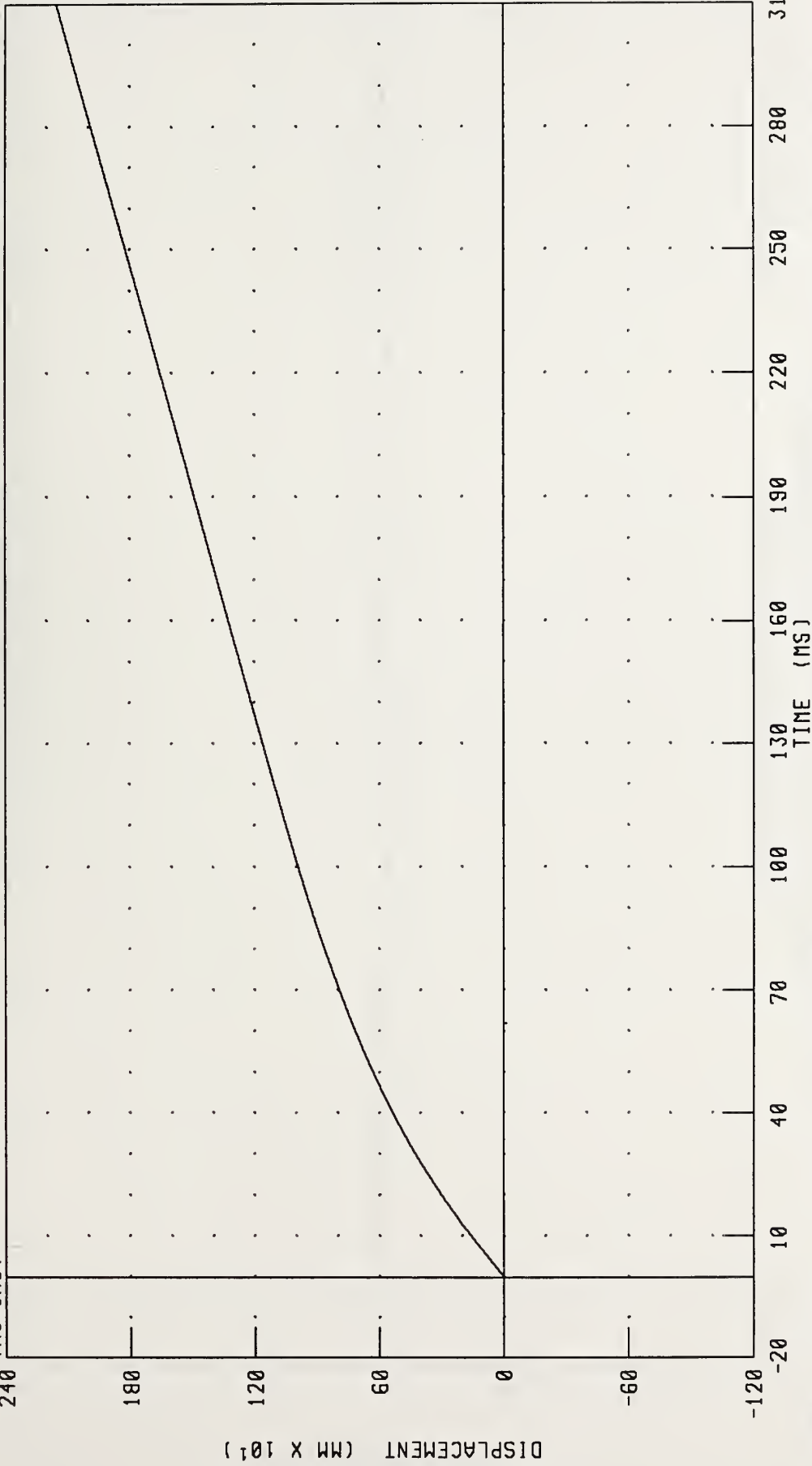
PEAK DATA: 56.58 KM/H @ 10.56 MS; 19.57 KM/H @ 173.84 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
MOVING BARRIER LEFT SIDE RAIL X-AXIS DISPLACEMENT

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

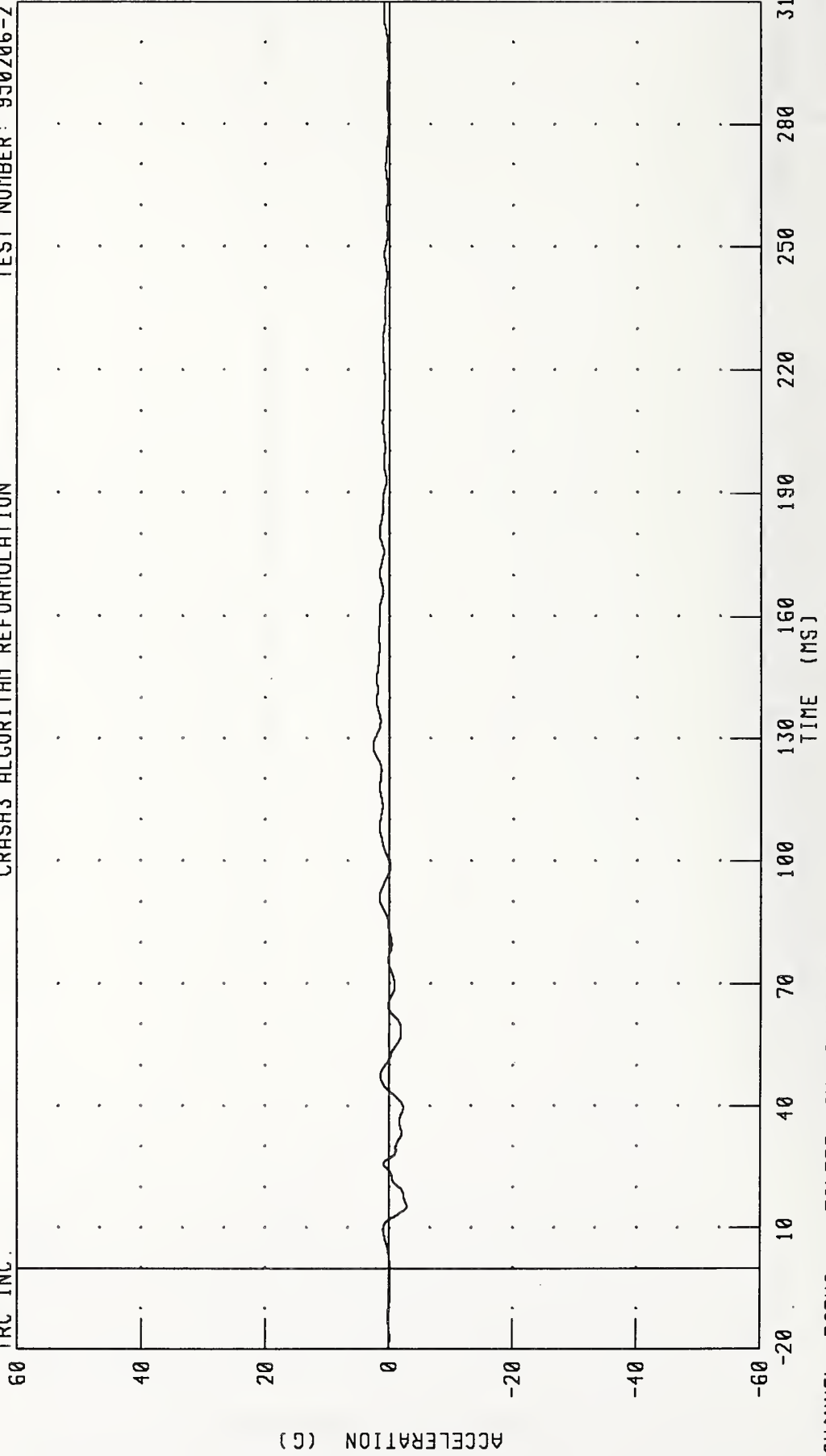


CHANNEL: BSRXD FILTER: CH. CLASS 180

PEAK DATA: 2153.71 MM @ 310.00 MS, 0.00 MM @ 0.00 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
IMPACTOR LEFT SIDE RAIL Y-AXIS ACCELERATION

TRC INC. CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: BSRYG FILTER: CH. CLASS 60

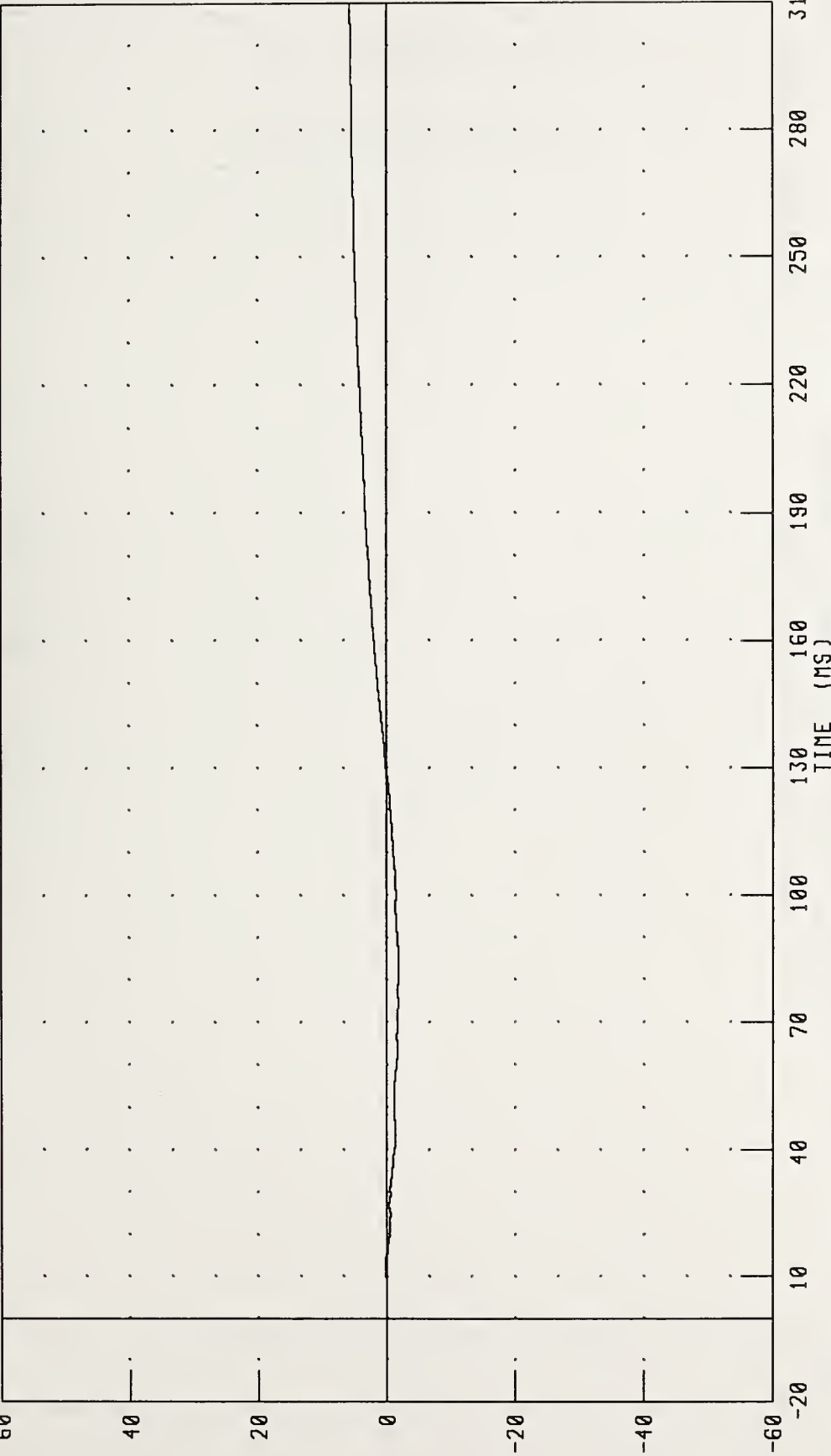
PEAK DATA: 2.59 G @ 128.32 MS; -2.89 G @ 15.36 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 IMPACTOR LEFT SIDE RAIL Y-AXIS VELOCITY

TEST NUMBER: 950206-2

CRASH3 ALGORITHM REFORMULATION

TRC INC.

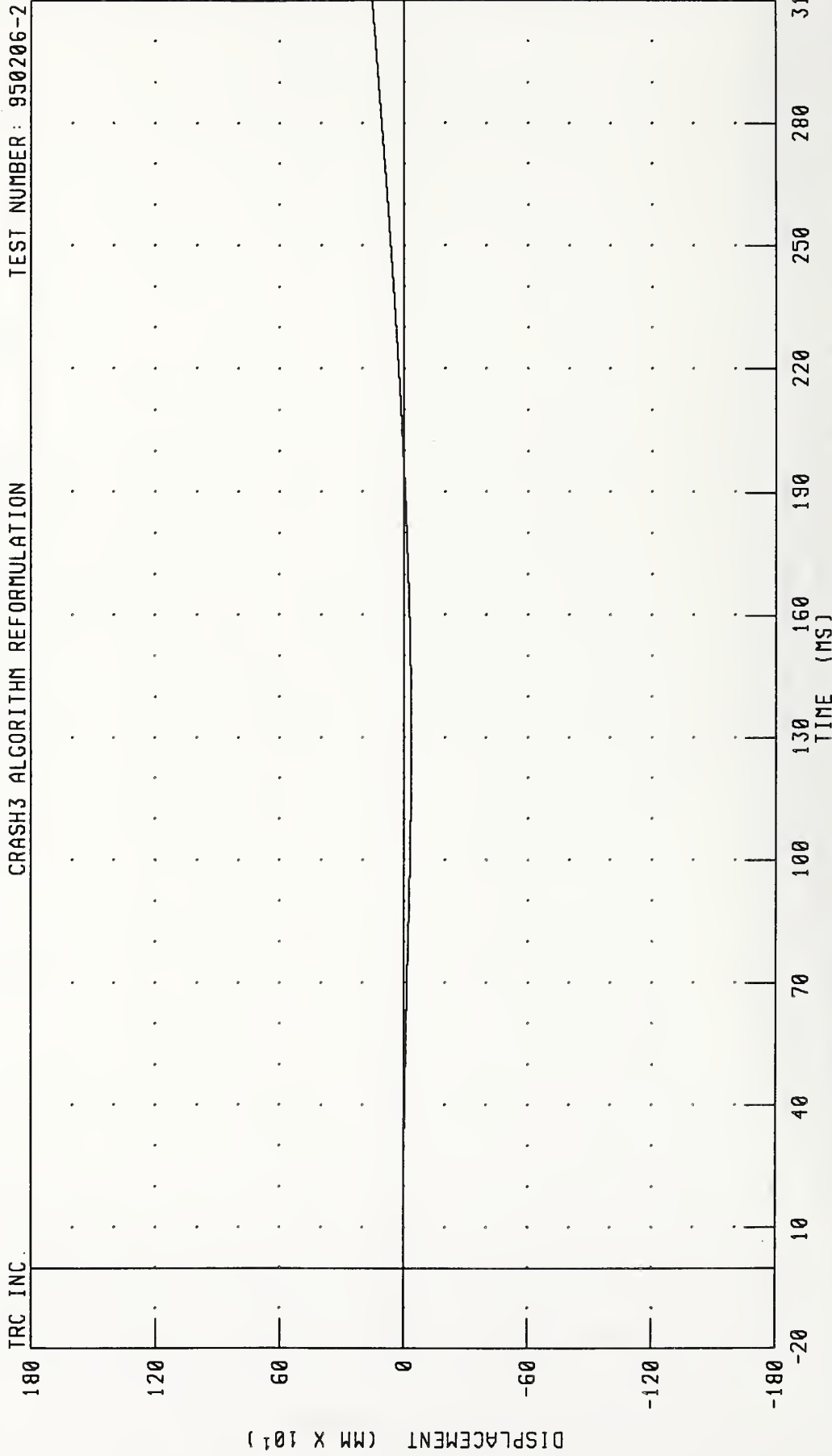


CHANNEL: BSRYV FILTER: CH. CLASS 180

PEAK DATA: 5.86 KM/H @ 310.00 MS; -1.82 KM/H @ 81.60 MS

NON-DEFORMABLE IMPACTOR INTO 1992 CHEVROLET CAPRICE TEST 5 OF 5
 IMPACTOR LEFT SIDE RAIL Y-AXIS DISPLACEMENT

CRASH3 ALGORITHM REFORMULATION TEST NUMBER: 950206-2



CHANNEL: BSRYD FILTER: CH CLASS 180

PEAK DATA: 153.79 MM @ 310.00 MS; -36.03 MM @ 129.04 MS

Appendix C

Miscellaneous Test Information

Vehicle Accelerometer Information

No.	Location	Axis	Manufacturer	Model	Serial Number	Orientation (+ Sensing)
1	Vehicle center of gravity	X	Endevco	7264	BB68	Front
		Y	Endevco	7264	BD41J	Left
		Z	Endevco	7264	BH14J	Up
2	Left rear seat	X	Endevco	7264	BG20J	Rear
		Y	Endevco	7264	BN09J	Right
3	Right rear seat	X	Endevco	7264	BG38J	Front
		Y	Endevco	7264	AJ49	Right
4	Left front sill	X	Endevco	7264	EJ60J	Rear
		Y	Endevco	7264	BF05	Right
5	Right front sill	X	Endevco	7264	BC41J	Rear
		Y	Endevco	7264	BD75J	Right

Impactor Accelerometer Information

No.	Location	Axis	Manufacturer	Model	Serial Number	Orientation (+ Sensing)
1	Center of Gravity	X	Endevco	7264	DA06H	Front
		Y	Endevco	7264	EH78J	Left
		Z	Endevco	7264	BF24J	Up
2	Left Side Rail	X	Endevco	7264	DP87J	Front
		Y	Endevco	7264	BI30J	Left

Sign Convention

All Dummy, Barrier, and Vehicle Channels:

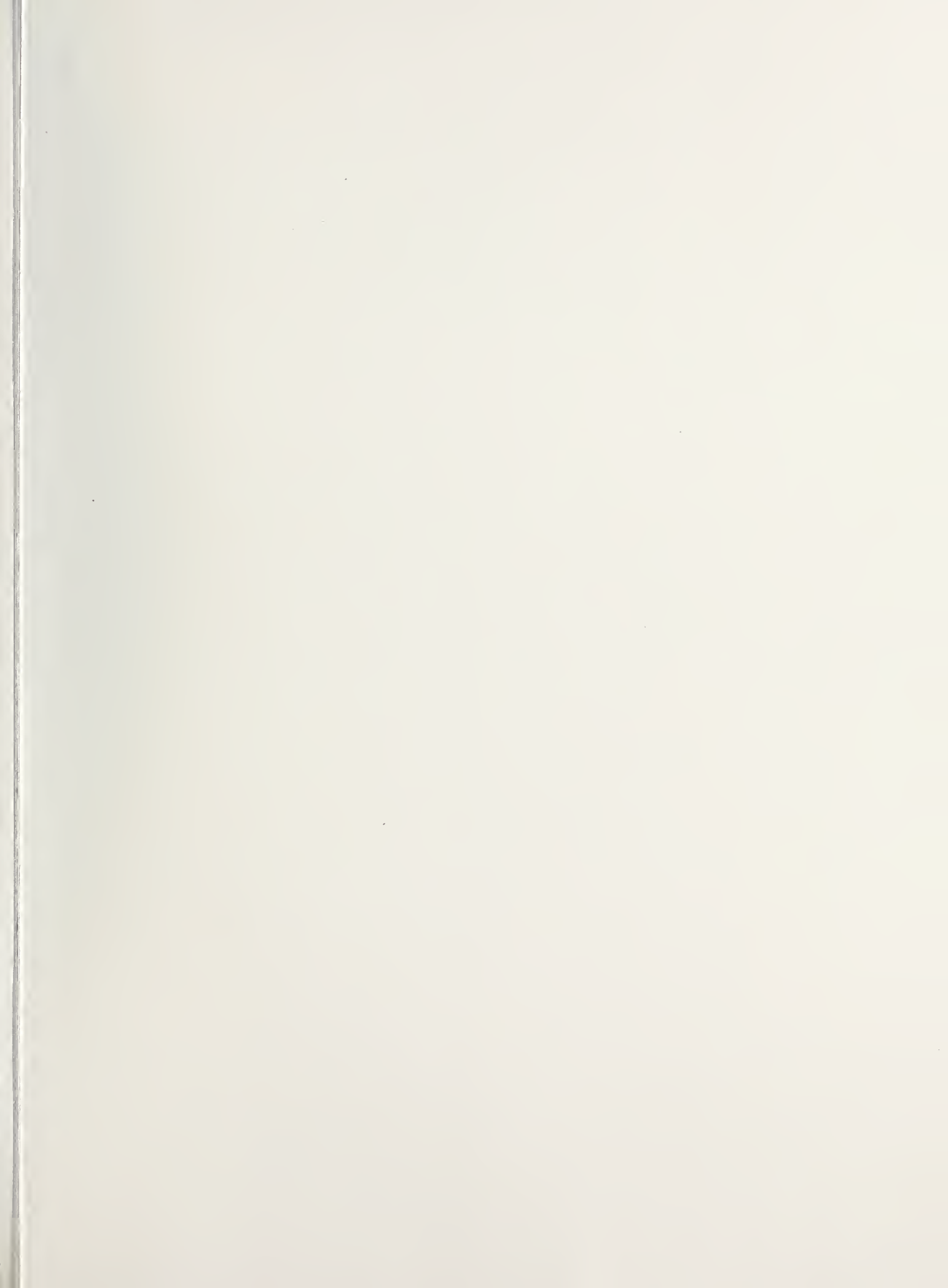
+X: Forward

+Y: Leftward

+Z: Upward

+Force: Tension

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