

V 2935

TTD #1 TESTING

**52.8 KPH INSTRUMENTED BARRIER (MDB)
TO STATIONARY VEHICLE IMPACT TEST**

**MDB IMPACT ANGLE: 90°
MDB WHEEL CRAB ANGLE: 27°**

CONTRACT NO. DTRS-57-95-C-00010

**MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105**



Test Date: March 12, 1998

Report Date: November 6, 1998

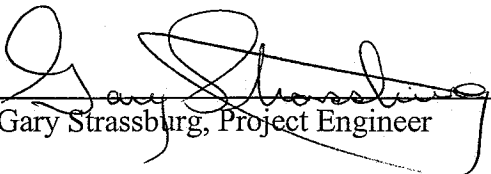
FINAL REPORT

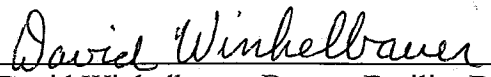
Prepared For:

**U.S. DEPARTMENT OF TRANSPORTATION
VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER
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CAMBRIDGE, MA 02142**

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FINAL REPORT ACCEPTED BY (OVSC):

Accepted By: _____

Acceptance Date: _____

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SECTION 1

PURPOSE AND TEST PROCEDURE

The purpose of this report is to document the results of a dynamic impact test performed with an FMVSS 214 moving barrier with an instrumented face on a 1996 Ford Taurus. This side impact test was conducted in accordance with the Vehicle Safety Compliance's FMVSS 214 test procedure (TP-214D-04, dated September 1, 1998). This testing was part of a series of full scale tests as outlined in contract DTRS-57-95-C-00010, TTD #1. The objective of this testing was to determine the feasibility of using an instrumented barrier face to determine local forces induced on an impacted vehicle during a side impact event. Due to the volume of data generated with this test, Appendix A (data and still photographs) is presented as an entirely separate document in a three-ring binder.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

The modified FMVSS 214 D moving barrier with a Plascor FMVSS 214 D deformable barrier face was crabbed 27° to the left. It was towed at 52.8 kph into a stationary 1996 Ford Taurus situated with its left side parallel to the face of the moving barrier. That is with its left side counterclockwise 27° from perpendicular to the MDBs direction of travel. The test was conducted March 12, 1998 at the MGA Research Corporation Proving Grounds and Crash Test Center in Burlington, Wisconsin. Two Side Impact Dummies (SIDs) were placed in the left front and left rear designated seating positions according to instructions specified in the OVSC Side Impact Laboratory Test Procedure which is dated September 1, 1995. The side impact event was documented by nine high speed cameras. Camera locations and other pertinent camera information can be found in this report. Pre-and post-test photographs of the test vehicle, the MDB and the side impact dummies (SIDs) are included in Appendix A.

The SIDs were instrumented with the following accelerometers:

1. Left Upper Rib (LUR) uniaxial accelerometer (Y-direction)
2. Left Lower Rib (LLR) uniaxial accelerometer (Y-direction)
3. Lower Thoracic Spine (T₁₂) uniaxial accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial accelerometer (Y-direction)

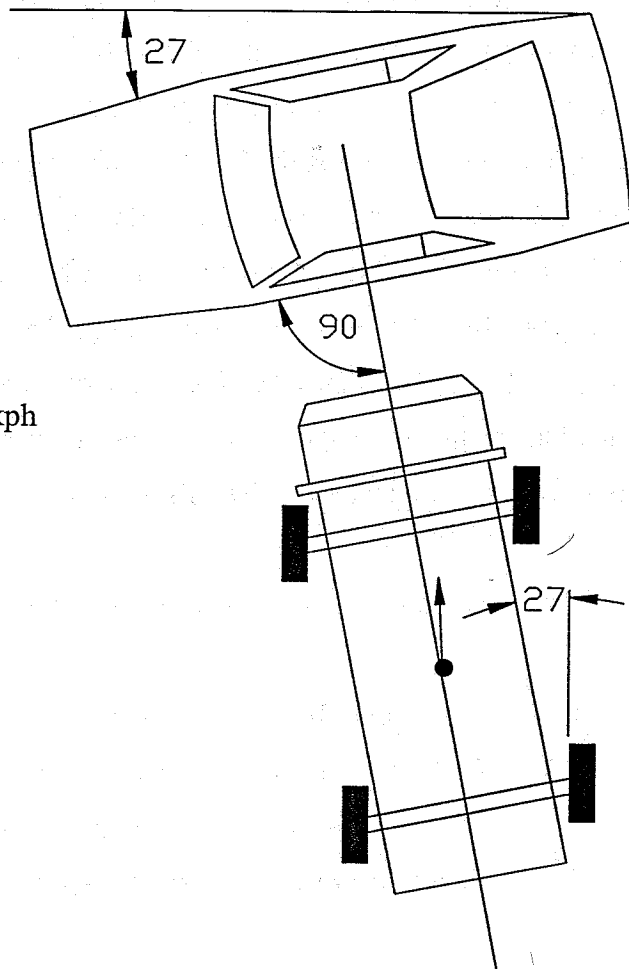
The impacted vehicle was instrumented with 21 accelerometers mounted in the locations specified by the FMVSS 214 test procedure. 182 channels of data were recorded from the MDB during the impact event, 44 deformable barrier face displacements, forces from 44 triaxial barrier face load cells (X, Y, and Z axis), 5 moving barrier accelerations and barrier contact.

The parameters for this dynamic test into a stationary barrier were as follows:

MDB Impact Angle: 90°

MDB Wheel Crab Angle: 27°

MDB Towing Velocity: 52.8 kph



The following table summarizes the results of the FMVSS 214 Left Side Impact test:

Injury Criteria	Front SID	Rear SID
TTI (g)	*	66.2
Pelvis (g)	71.7	65.7

* No valid data collected for upper rib

TEST NOTES

No data is available for the following accelerometers due to a computer malfunction:

Right Side Sill at Front Seat X, Y, Z and Resultant

Right Side Sill at Rear Seat X, Y, Z and Resultant

Rear Floorpan Axle X, Y, Z and Resultant

Left Side Sill at Front Seat Y

Left Side Sill at Rear Seat Y

Left Lower A-Post Y

Left Mid A-Post Y

Left Lower B-Post Y

Left Front Seat Track Y

SECTION 3

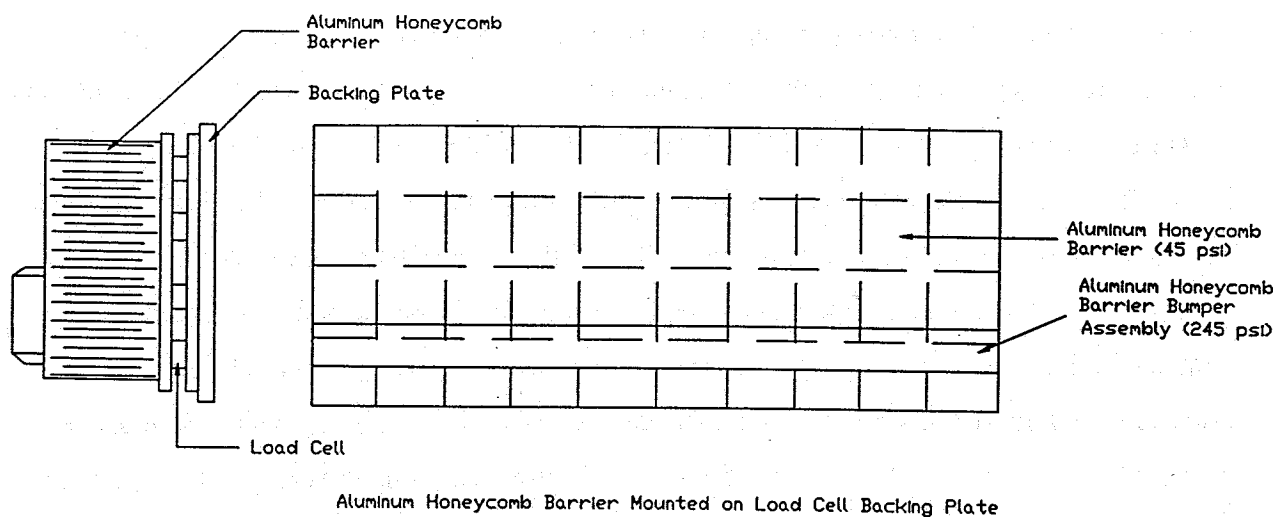
MOVING DEFORMABLE BARRIER INFORMATION

The instrumented moving deformable barrier (MDB) is an extension of the FMVSS 214 Dynamic Barrier used for crash testing. The barrier has been modified to include an array of 44 triaxial load cells located behind the aluminum honeycomb deformable front face. The load cells measure the forces in the X, Y, and Z directions that are acting on the rear of the deformable barrier face. The barrier also includes 44 string potentiometers to measure the displacements of the front face of the honey comb structure. The validity of the data from the stringpots is questionable. The strings are attached to rods that run through the deformable barrier and are attached to the front face. During the impact, the rods are often caught in the hexcel when it crushes. In addition, the stringpots are only rated for 100 g's. The initial deformable barrier crush can exceed that rate by a factor of over 10. A report detailing the design of the moving deformable barrier has been previously submitted for this project.

Previous to this test, the MDB was modified to meet the center of gravity requirements specified by FMVSS 214D. For completeness, the properties of the MDB, as well as the FMVSS 214D requirements are listed in the following table:

Moving Deformable Barrier		
Specification	FMVSS 214D Requirements	MDB
CGx (mm)	1098 - 1148	1102
CGy (mm)	-32.8 - 17.4	-1.8
CGz (mm)	475 - 525	515
Ix (kgm ²)	482.6 - 533.4	537.6
Iy (kgm ²)	2149.9 - 2376.2	3159.1
Iz (kgm ²)	2443.4 - 2700.6	3518.4
Total Weight (kg)	1356.5 - 1365.5	1358.9

LOAD CELL AND DISPLACEMENT MEASUREMENT DESIGNATION AND CONFIGURATION



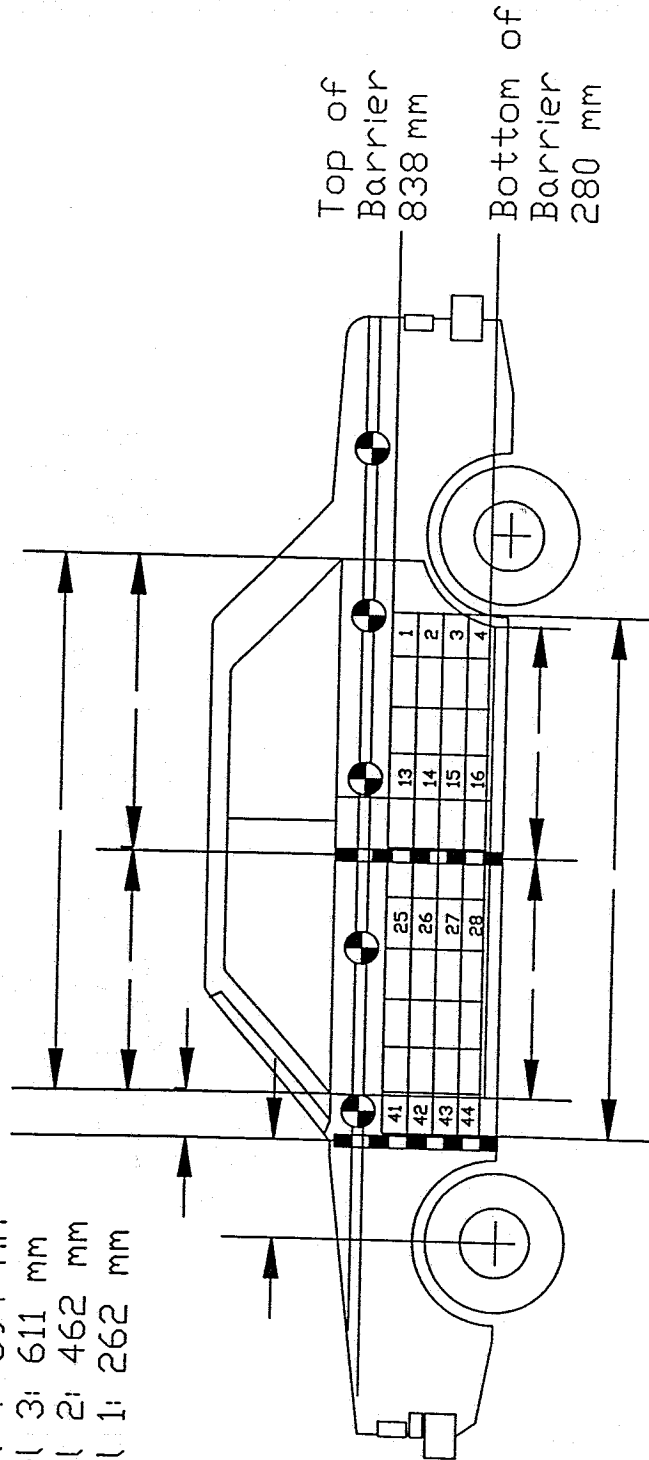
Load Cell and Displacement Measurement Designation

1	5	9	13	17	21	25	29	33	37	41
2	6	10	14	18	22	26	30	34	38	42
3	7	11	15	19	23	27	31	35	39	43
4	8	12	16	20	24	28	32	36	40	44

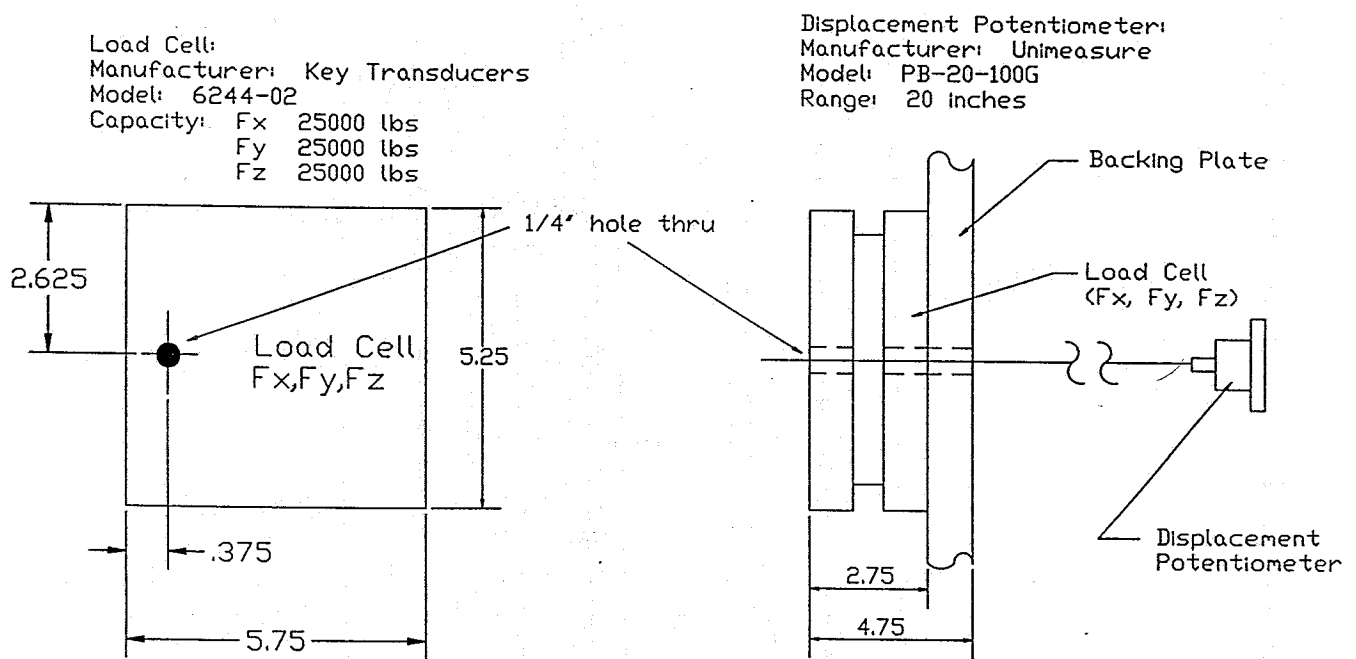
As viewed from front of barrier face

LOAD CELL AND DISPLACEMENT MEASUREMENT DESIGNATION AND CONFIGURATION

- Level 5: 1338 mm
- Level 4: 894 mm
- Level 3: 611 mm
- Level 2: 462 mm
- Level 1: 262 mm

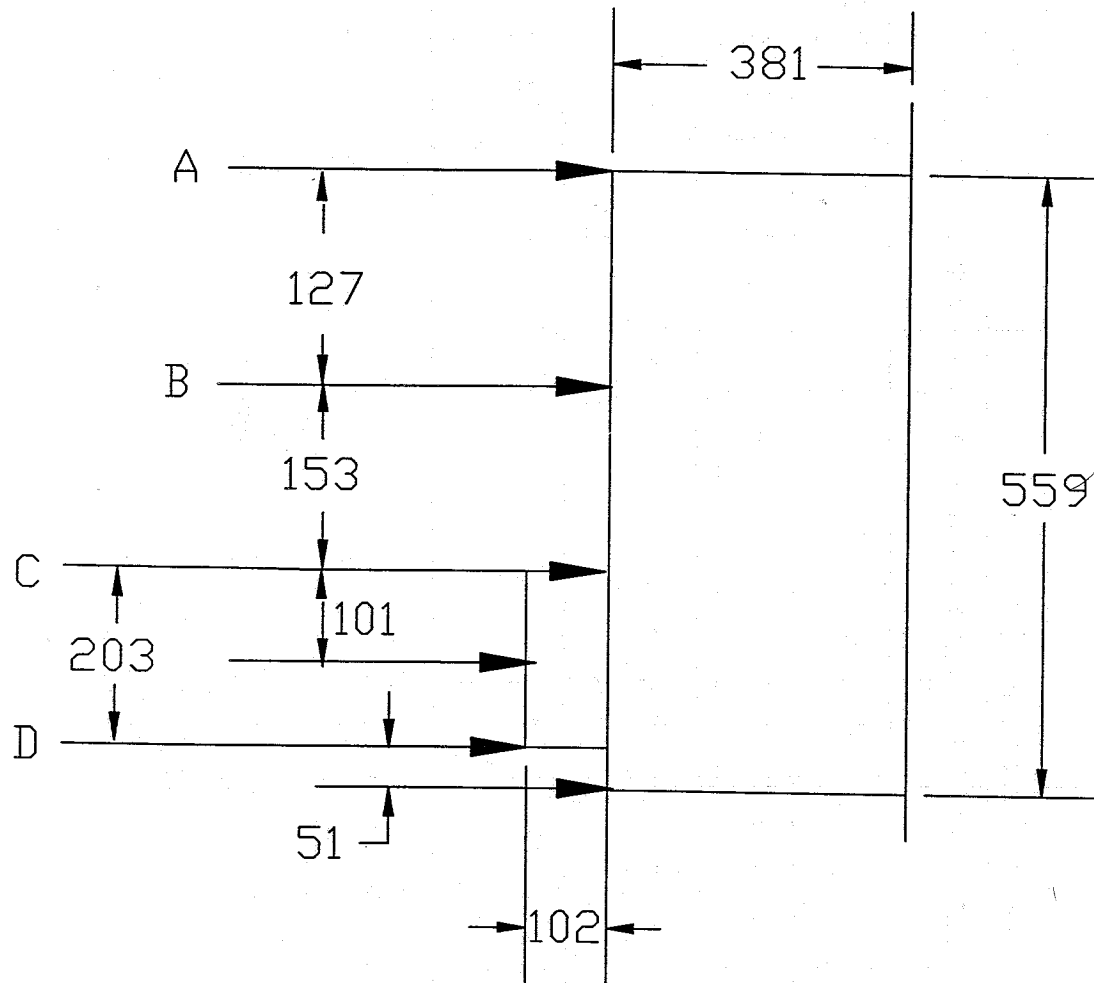


LOAD CELL AND DISPLACEMENT MEASUREMENT DESIGNATION AND CONFIGURATION



Typical Load Cell

POST-TEST STATIC DEFORMATION (MM)



POST-TEST STATIC DEFORMATION (MM)

		Distance Right of Center (mm)											Distance Left of Center (mm)							
Location	Height at CL*	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800		
Top Stack Level 4	813 mm	59	12	3	1	0	0	0	1	4	5	7	10	14	23	51	77	109		
Mid Level Level 3	686 mm	27	1	0	0	1	1	1	2	3	1	1	0	1	1	2	15	43		
Top Bumper Level 2	533 mm	70	37	6	0	-5	-2	-2	-1	1	5	9	12	16	22	29	41	54		
Mid Bumper Level 1	432 mm	117	77	45	27	14	7	4	3	7	13	17	22	27	35	49	64	82		

See previous page for Barrier Face Graphic

BARRIER FACE LOAD CELL MAXIMUM VALUES

Load Cell	Negative Maximum (N)						Positive Maximum (N)					
	X	Time (msec.)	Y	Time (msec.)	Z	Time (msec.)	X	Time (msec.)	Y	Time (msec.)	Z	Time (msec.)
LC #1	570	112	295	61	2948	20	919	53	160	36	2478	81
LC #2	5010	47	854	80	*	*	261	103	1642	55	*	*
LC #3	12070	40	1130	85	2359	41	2333	7	2639	62	642	12
LC #4	4641	65	495	83	1656	51	132	132	1788	64	680	8
LC #5	1040	20	285	60	174	23	281	187	148	-20	222	183
LC #6	5498	22	485	72	1438	22	538	-20	853	26	239	65
LC #7	8500	40	971	114	1230	41	473	1	2463	37	1487	69
LC #8	12735	79	1610	24	2323	51	2263	-20	4568	60	686	8
LC #9	965	131	*	*	3666	23	674	11	*	*	1915	60
LC #10	2509	22	1979	79	897	110	142	-19	882	15	1010	12
LC #11	6682	43	1074	77	1860	77	267	-11	2140	28	2392	64
LC #12	6894	62	3578	77	1208	32	309	-10	2710	63	1035	12
LC #13	2592	31	1170	109	1037	109	1801	35	1089	67	935	20
LC #14	1188	110	887	109	968	114	2185	12	1911	60	859	12
LC #15	1013	72	546	93	816	109	255	-11	465	21	831	12
LC #16	2431	31	799	109	917	92	853	14	2489	61	962	21
LC #17	2454	23	1119	114	1155	109	974	6	1088	21	788	17

BARRIER FACE LOAD CELL MAXIMUM VALUES

Load Cell	Negative Maximum (N)						Positive Maximum (N)					
	X	Time (msec.)	Y	Time (msec.)	Z	Time (msec.)	X	Time (msec.)	Y	Time (msec.)	Z	Time (msec.)
LC #18	1056	88	1306	88	911	110	1456	56	2116	61	928	21
LC #19	6051	32	1189	110	1046	112	116	-11	1328	36	1122	62
LC #20	80721	40	2361	77	1257	86	481	1	2462	62	1173	68
LC #21	582	84	736	111	942	110	1373	7	823	12	1599	38
LC #22	3001	32	918	112	873	32	1538	7	1129	37	843	68
LC #23	8525	40	1378	89	1144	32	499	-20	1642	61	1116	62
LC #24	5484	40	1528	78	855	95	198	-20	2226	58	1453	12
LC #25	1415	31	773	109	678	108	396	-20	707	15	1154	13
LC #26	3788	41	1012	27	840	114	830	20	747	52	757	13
LC #27	10972	32	3508	48	2076	32	160	3	2138	83	1257	64
LC #28	7320	40	2816	52	1120	93	179	1	2223	15	1471	66
LC #29	4841	50	1476	41	768	76	852	114	581	12	1144	67
LC #30	7047	40	1946	77	806	111	596	10	2418	60	850	14
LC #31	*	*	*	*	*	*	*	*	*	*	*	*
LC #32	5601	7	1371	76	1016	108	143	-2	1943	37	1213	12
LC #33	3359	57	1420	77	727	64	640	11	680	12	451	94
LC #34	7363	41	1282	75	696	114	621	7	2671	56	823	37

BARRIER FACE LOAD CELL MAXIMUM VALUES

Load Cell	Negative Maximum (N)						Positive Maximum (N)					
	X	Time (msec.)	Y	Time (msec.)	Z	Time (msec.)	X	Time (msec.)	Y	Time (msec.)	Z	Time (msec.)
LC #35	8146	12	303	72	863	25	175	198	2273	52	1290	69
LC #36	6391	6	319	16	1275	26	197	-2	2348	52	983	69
LC #37	6145	50	4384	92	1302	65	120	186	1028	76	560	43
LC #38	7736	34	905	17	46	8	132	148	1092	64	778	43
LC #39	8233	23	276	4	1570	23	213	-2	1064	60	1275	65
LC #40	6160	41	325	3	879	26	232	187	1615	62	1122	6
LC #41	4801	40	209	18	89	21	407	187	527	58	1051	46
LC #42	6002	32	1808	32	744	22	188	107	794	69	1491	55
LC #43	6483	5	1480	41	717	24	380	149	666	70	1121	68
LC #44	6338	41	459	40	648	26	358	199	1065	56	978	10

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

GENERAL VEHICLE TEST PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Vehicle NHTSA No.: RT0216 VIN: 1FALP52UXTA100911

Vehicle Body Color: Iris Frost Build Date: 7-95

Engine Data: 6 Cylinders; CID; 3.0 Liter; cc

Placement Longitudinal; X Lateral

Transmission: 3 speed; Manual; X Automatic; X Overdrive

Final Drive: Rear Wheel Drive; X Frt. Wheel Drive; Four Wheel Drive

Odometer Reading 510 miles

Options: X A/C; X Pwr. Steering; X Pwr. Brakes; X Pwr. Windows;

 X Cruise Control; X Tilt Wheel; X Power Door Locks;

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 33 Psi FRONT

33 Psi REAR

Recommended Tire Size: P205/65R15

Tires on Test Vehicle: P205/65R15 Manufacturer: General

Vehicle Capacity Data:

Number of Occupants: 3 Front; 3 Rear; 3rd Seat 6 Total

Type of Front Seats: Bucket; Bench; X Split Bench

Type of Front Seat Back: Fixed; X Adjustable with X Lever Power

Vehicle Maximum Capacity Loading = 499.0 kg (A)

No. of Occupants x 68.04 kg. = 408.2 kg (B)

Cargo Capacity (A-B) = 90.8 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS: (Curb Weight)

Right Front = 478.5 kg

Right Rear = 270.3 kg

Left Front = 480.4 kg

Left Rear = 274.4 kg

TOTAL FRONT = 958.9 kg

TOTAL REAR = 544.7 kg

% of Total Weight = 63.8 %;

% of Total Weight = 36.2 %

TOTAL WEIGHT = 1503.6 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

WEIGHT OF TEST VEHICLE WITH 2 DUMMIES AND CARGO: (FULLY LOADED)

Right Front	= <u>480.8</u> kg	Right Rear	= <u>347.9</u> kg
Left Front	= <u>529.4</u> kg	Left Rear	= <u>396.0</u> kg
TOTAL FRONT	= <u>1010.2</u> kg	TOTAL REAR	= <u>743.9</u> kg
% of Total Weight	= <u>57.6</u> %	% of Total Weight	= <u>42.4</u> %
TOTAL TEST WEIGHT	= <u>1754.1</u> kg		

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	= <u>1503.6</u> kg
Cargo Carrying Capacity of Test Vehicle	= <u>90.8</u> kg
Weight of 2 Side Impact Dummies (2 x <u>80.7</u> kg.)	= <u>161.4</u> kg
TEST VEHICLE TARGET WEIGHT	= <u>1755.8</u> kg

TEST WEIGHT:

Right Front	= <u>492.2</u> kg	Right Rear	= <u>358.8</u> kg
Left Front	= <u>534.3</u> kg	Left Rear	= <u>365.6</u> kg
TOTAL FRONT	= <u>1026.5</u> kg	TOTAL REAR	= <u>724.4</u> kg
% of Total Weight	= <u>58.6</u> %	% of Total Weight	= <u>41.4</u> %
TOTAL VEHICLE WEIGHT	= <u>1750.9</u> kg		
Wheelbase	= <u>2760</u> mm		
Longitudinal C.G. from Center of Front Axle	= <u>1142</u> mm		
Impact Angle with Respect to Impactor	= <u>90°</u> degrees		

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 710 mm Left Front 705 mm Right Rear 690 mm Left Rear 687 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 708 mm Left Front 692 mm Right Rear 653 mm Left Rear 638 mm

TEST ATTITUDE:

Right Front 699 mm Left Front 697 mm Right Rear 657 mm Left Rear 639 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

FRONT SEAT CUSHION PLACEMENT:

Total Length of Adjustment Travel: 224 mm

Test Position: 7th position rearward from full forward

FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 27.2°

REAR POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: Not adjustable

Seat Back Adjustment Position: Not adjustable

ADJUSTABLE STEERING COLUMN POSITION: Mid position

WINDOW POSITIONS: Left Front Closed Left Rear Closed

Right Front Open Right Rear Open

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel system usable capacity = 61 liters

Test Volume: 56.1 liters 92% of capacity

LOCATIONS OF IMPACT POINT ON TEST VEHICLE SIDE TO BE IMPACTED:

Wheelbase: = 2760 mm

Impact Point is 440 mm rearward of front axle centerline

(impact point is the left edge of deformable barrier)

TEST VEHICLE SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

Overall Length = 4950 mm; Overall Width = 1840 mm

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (262 mm above ground) = 193 mm
2. LEVEL 2 (462 mm above ground) = 356 mm
3. LEVEL 3 (611 mm above ground) = 326 mm
4. LEVEL 4 (894 mm above ground) = 233 mm
5. LEVEL 5 (1338 mm above ground) = 41 mm

Maximum Post-Test Intrusion = 356 mm

OCCUPANTS:

	<u>Left Front Passenger</u>	<u>Left Rear Passenger</u>
Type of Dummy	<u>SID</u>	<u>SID</u>
Restraints Used	<u>type II belt</u> <u>with frontal airbag</u>	<u>type II belt</u>

INSTRUMENTATION:

Number of Vehicle Data Channels: = 19

Number of Cameras: Onboard Vehicle = 4

Offboard Vehicle = 4

Deformable Barrier = 2

TOTAL = 10

POST-TEST OBSERVATIONS

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head	<u>to lower rear window frame & shoulder</u>	<u>to C-Post</u>
Arm	<u>to upper door panel</u>	<u>to door panel</u>
Pelvis	<u>to armrest</u>	<u>to armrest</u>
Left Knee	<u>to door panel</u>	<u>to door panel</u>
Right Knee	<u>to left knee</u>	<u>to left knee</u>

DOOR OPENING ON IMPACT:

	<u>LEFT SIDE</u>	<u>RIGHT SIDE</u>
Front	<u>No</u>	<u>No</u>
Rear	<u>No</u>	<u>No</u>

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 20 mm rearward

Vertical: 6 mm high

ARM REST LOCATIONS:

Front: 220 mm from bottom of window

Rear: 195 mm from bottom of window

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 45 mm Front Seat Cushion: 75 mm

Left Rear Seat Back: 60 mm Rear Seat Cushion: 98 mm

GLAZING DAMAGE:

Front and rear left side windows

PILLAR PERFORMANCE:

No separation

SILL SEPARATION:

None

FRONTAL AIRBAGS:

Driver Deployed: No Passenger Deployed: No

OTHER NOTABLE IMPACT EFFECTS:

SIDE IMPACT DUMMY (SID) INSTRUMENTATION DATA

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

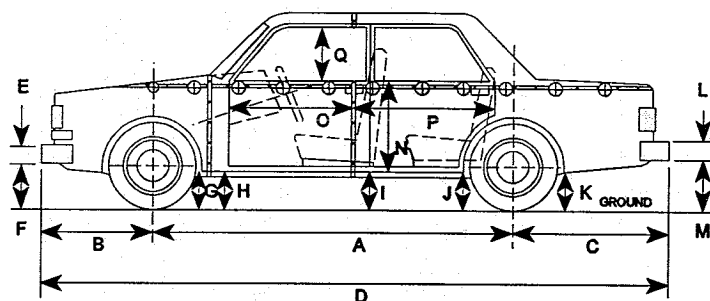
Test Date: March 12, 1998

	Front SID ID #271				Rear SID ID #272			
	Pos. Direct.		Neg. Direct		Pos. Direct.		Neg. Direct	
	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
RIB ACCELERATIONS								
Left Upper Rib (LUR) Y	*	*	*	*	56.8	47	-5.8	126
Left Lower Rib (LLR) Y	50.6	45	-11.9	105	68.9	47	-15.6	77
SPINE ACCELERATIONS								
Lower Lateral Y	56.9	42	-26.3	79	63.4	52	-13.0	83
PELVIS ACCELERATIONS								
Lateral Y	71.7	32	-17.7	64	65.7	48	-10.3	104

REFERENCE: Positive Direction- Longitudinal (X) = forward
 Lateral (Y) = to right
 Vertical (Z) = down

* No valid data collected

VEHICLE PRE AND POST-TEST MEASUREMENTS



LEFT SIDE VIEW

D = Length at Centerline
 R = Right Side Length
 S = Left Side Length
 T = Width at B Post
 J1 = To Pinch Weld
 E & L = Bumper Thickness
 J2 = To Sill

ALL MEASUREMENTS IN (mm)

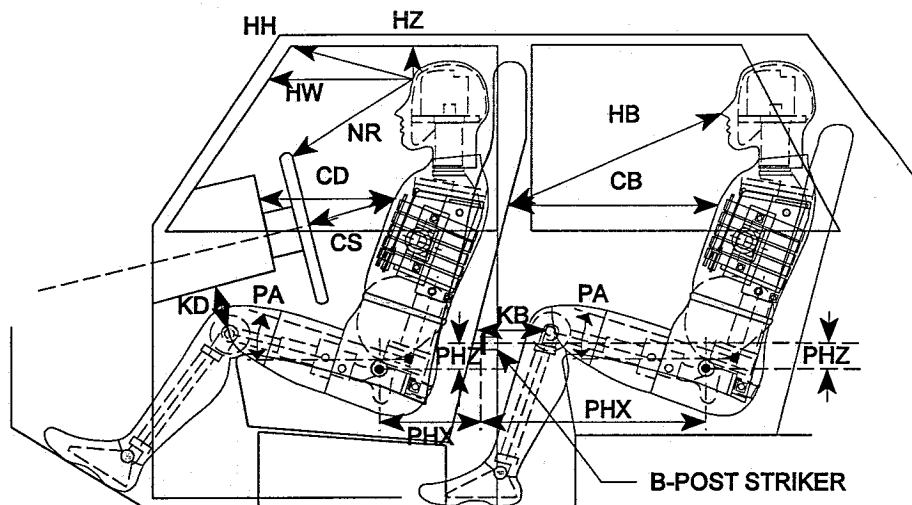
	PRE-TEST	POST-TEST	Δ CHANGE
A	2760	2727	33
B	1010	1055	-45
C	1180	1170	10
D	4950	4952	-2
E	190	190	0
F	394	412	-18
G	180	178	2
H	184	181	3
I	162	145	17
J1/J2	150/160	144/144	6/16
K	231	232	-1
L	268	268	0
M	318	327	-9
N	730	658	72
O	808	679	129
P	1199	1132	67
Q	452	417	35
R	4590	NR	NR
S	4590	4510	80
T	1840	1540	300

NR = Not Recorded

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998



NOTE: All dimensions are in mm with tolerance of ± 3 mm

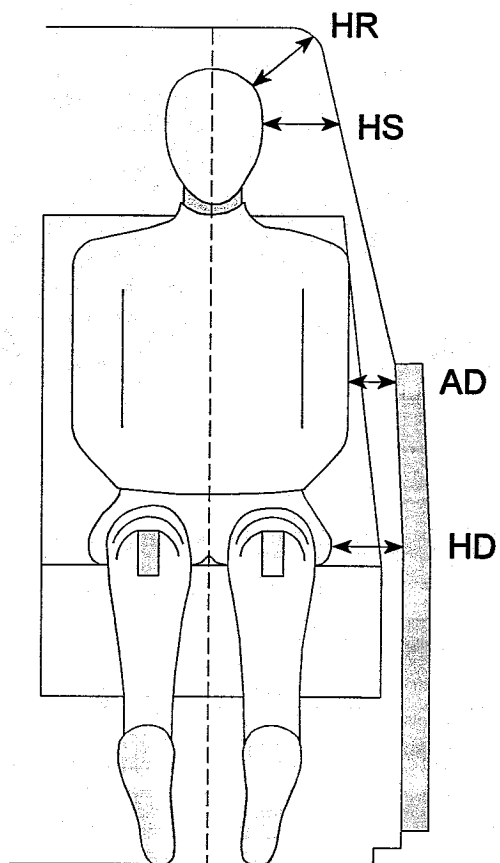
	FRONT PASSENGER ID #271		REAR PASSENGER SID ID #272
HH	326	HZ	125
HW	603	NB	696
HZ	165	CB	606
NR	400	KBL (KBA)	296 (0°)
CD	518	KBR (KBA)	318 (0°)
CS	307	PA°	24.7°
KDL (KDA°)	170 (0°)	PHX	258
KDR (KDA°)	179 (0°)	PHZ	319
PA°	23.8°		
PHX	207		
PHZ	117		

NOTE: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as reference point.

SIDE IMPACT DUMMY (SID) LATERAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998



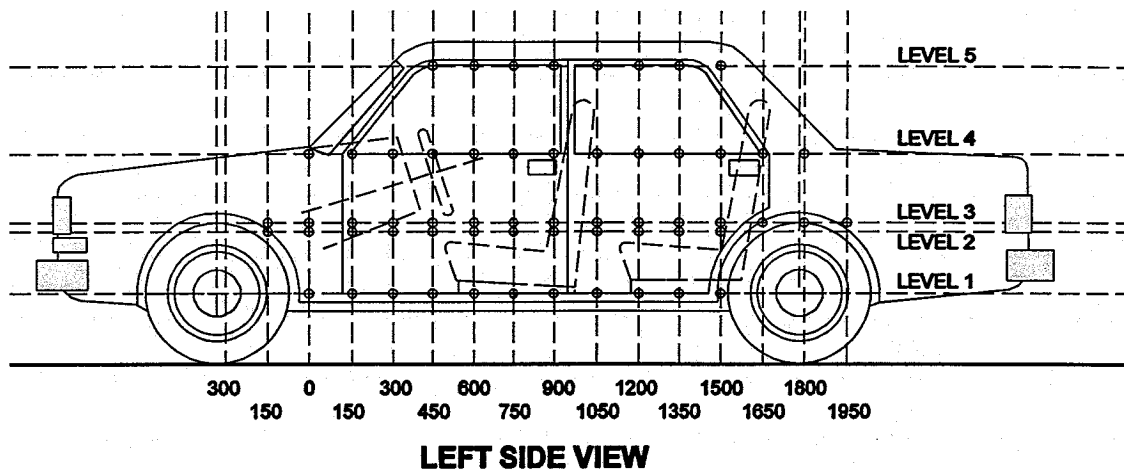
NOTE: All dimensions are in mm

	FRONT PASSENGER ID #271	REAR PASSENGER ID #272
HR	204	200
HS	332	254
AD	63	63
HD	153	153

VEHICLE SIDE MEASUREMENTS

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998



NOTE: All measurements are in millimeters (mm)

LEVEL 5 - WINDOW TOP
LEVEL 4 - WINDOW SILL
LEVEL 3 - MID-DOOR
LEVEL 2 - OCCUPANT H-POINT
LEVEL 1 - AXLE CENTERLINE HEIGHT OR SILL TOP HEIGHT

MEASUREMENTS ARE TAKEN WHEN THE VEHICLE IS IN THE "AS TESTED"
CONFIGURATION

MEASUREMENTS ALONG THE VERTICAL 750 mm. LINE SHOWN ABOVE

Level 1 @ Axle Centerline Height

(or Sill Top Height) = 262 mm

Level 2 @ Occupant H-Point = 462 mm

Level 3 @ Mid Door = 611 mm

Level 4 @ Window Sill = 894 mm

Level 5 @ Window Top = 1338 mm

VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 1 - Axle Centerline		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)	620	667	47
150	622	727	105
300	622	760	138
450	622	778	156
600	621	776	155
750	622	768	146
900	617	758	141
1050	618	755	137
1200	617	810	193
1350	618	768	150
1500	618	718	100
1650	619	647	28
1800			
1950			
2100			
2250			
2400			

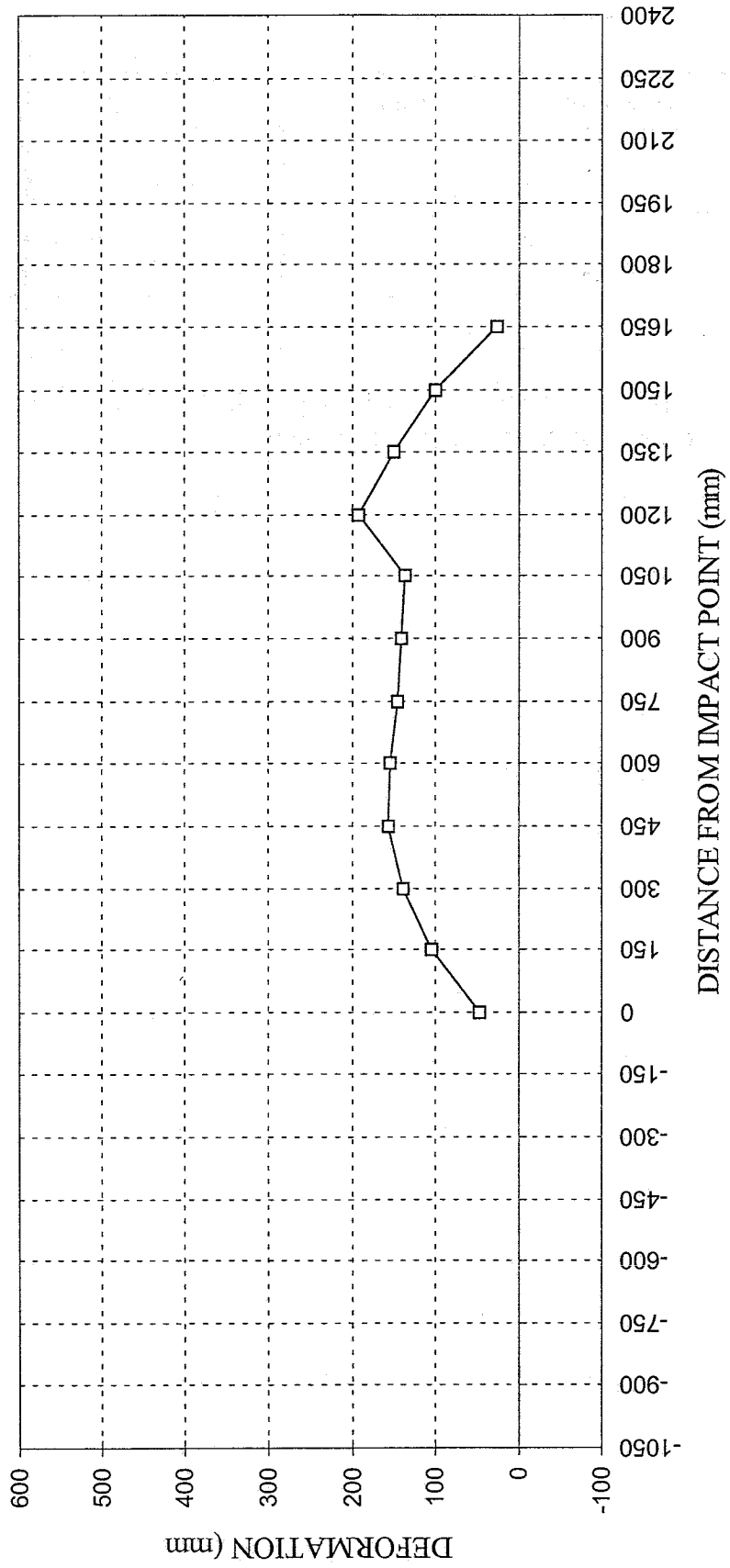
Reference plane is parallel to test vehicle longitudinal centerline.
 Given dimensions = Reference plane to car body

VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 1 - Axle Centerline		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
2550			
2700			
2850			
3000			

Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



LEVEL 1 - AXLE CENTERLINE

VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 2 - Occupant H Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)	557	640	83
150	552	760	208
300	546	861	315
450	542	874	332
600	539	881	342
750	537	886	349
900	534	890	356
1050	534	879	345
1200	532	888	356
1350	531	861	330
1500	531	828	297
1650	534	778	244
1800	537	664	127
1950			
2100			
2250			
2400			

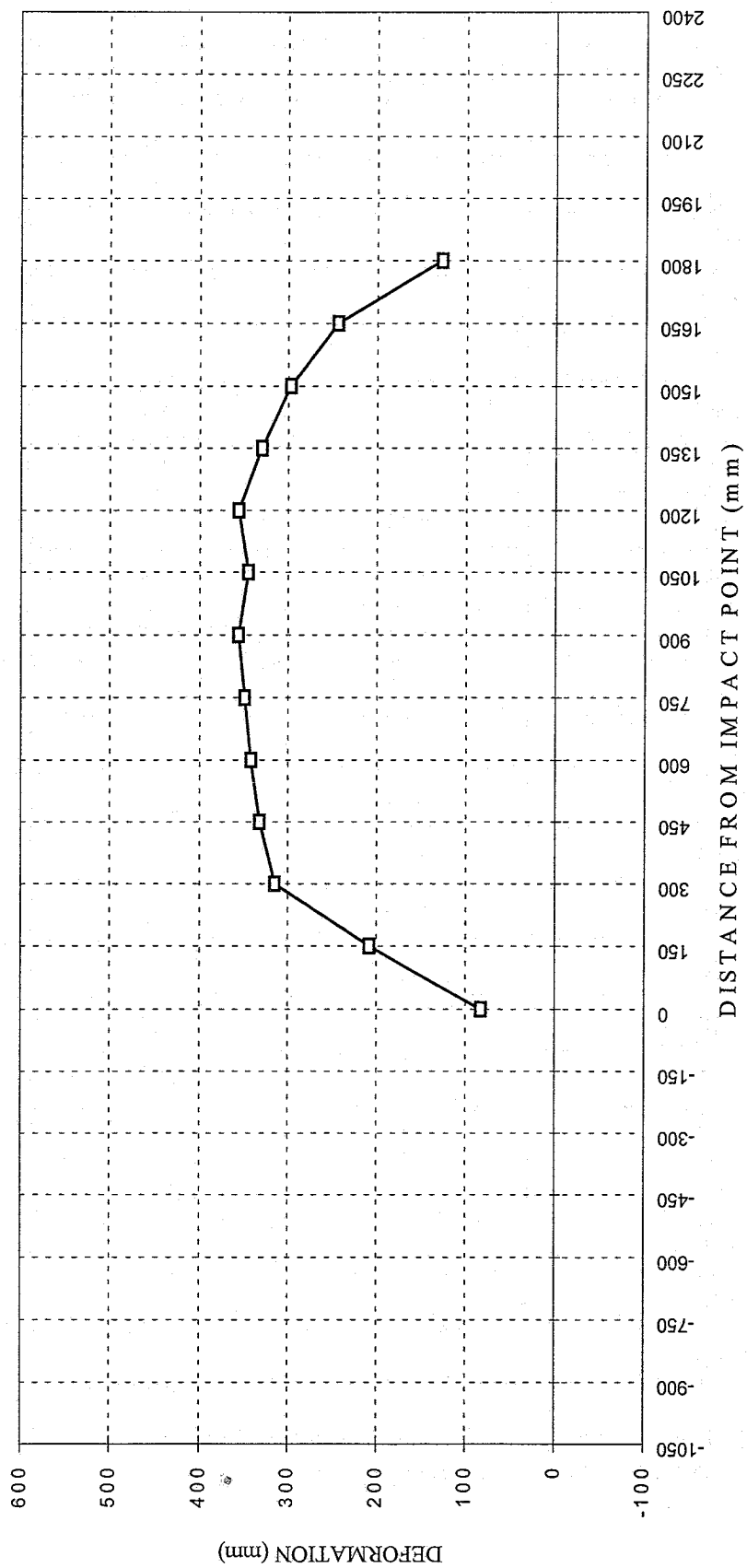
Reference plane is parallel to test vehicle longitudinal centerline.
 Given dimensions = Reference plane to car body

VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 2 - Occupant H Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
2550			
2700			
2850			
3000			

Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



LEVEL 2 - OCCUPANT H-POINT

VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 3 - Mid Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050	654	662	8
-900	610	627	17
-750	585	607	22
-600			
-450			
-300			
-150	560	602	42
0 (impact point)	556	606	50
150	554	732	178
300	551	845	294
450	550	872	322
600	548	847	299
750	547	835	288
900	544	824	280
1050	542	817	275
1200	540	866	326
1350	538	847	309
1500	537	836	299
1650	537	810	273
1800	537	738	201
1950	532	614	82
2100			
2250			
2400			

Reference plane is parallel to test vehicle longitudinal centerline.
 Given dimensions = Reference plane to car body

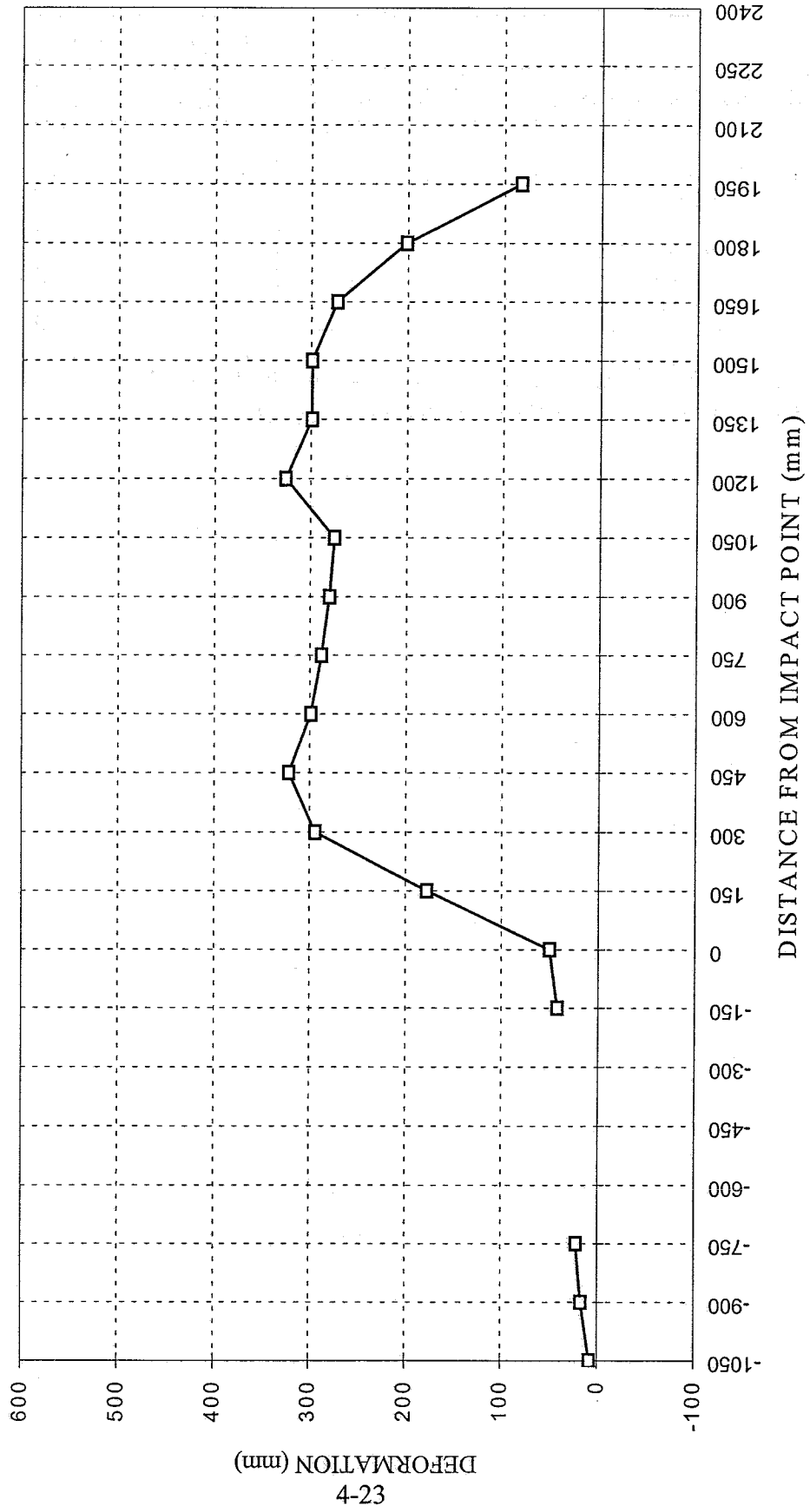
VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 3 - Mid Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
2550			
2700			
2850			
3000			

Reference plane is parallel to test vehicle longitudinal centerline.

Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



LEVEL 3 - MID DOOR

VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050	714	719	5
-900	688	698	10
-750	670	684	14
-600	650	669	19
-450	637	658	21
-300	624	648	24
-150	615	643	28
0 (impact point)	609	637	28
150	604	695	91
300	603	722	119
450	594	754	160
600	588	796	208
750	588	805	217
900	584	805	221
1050	584	809	225
1200	583	816	233
1350	583	797	214
1500	580	778	198
1650	580	767	187
1800	583	755	172
1950	587	683	96
2100	588	612	24
2250	598	642	44
2400	609	638	29

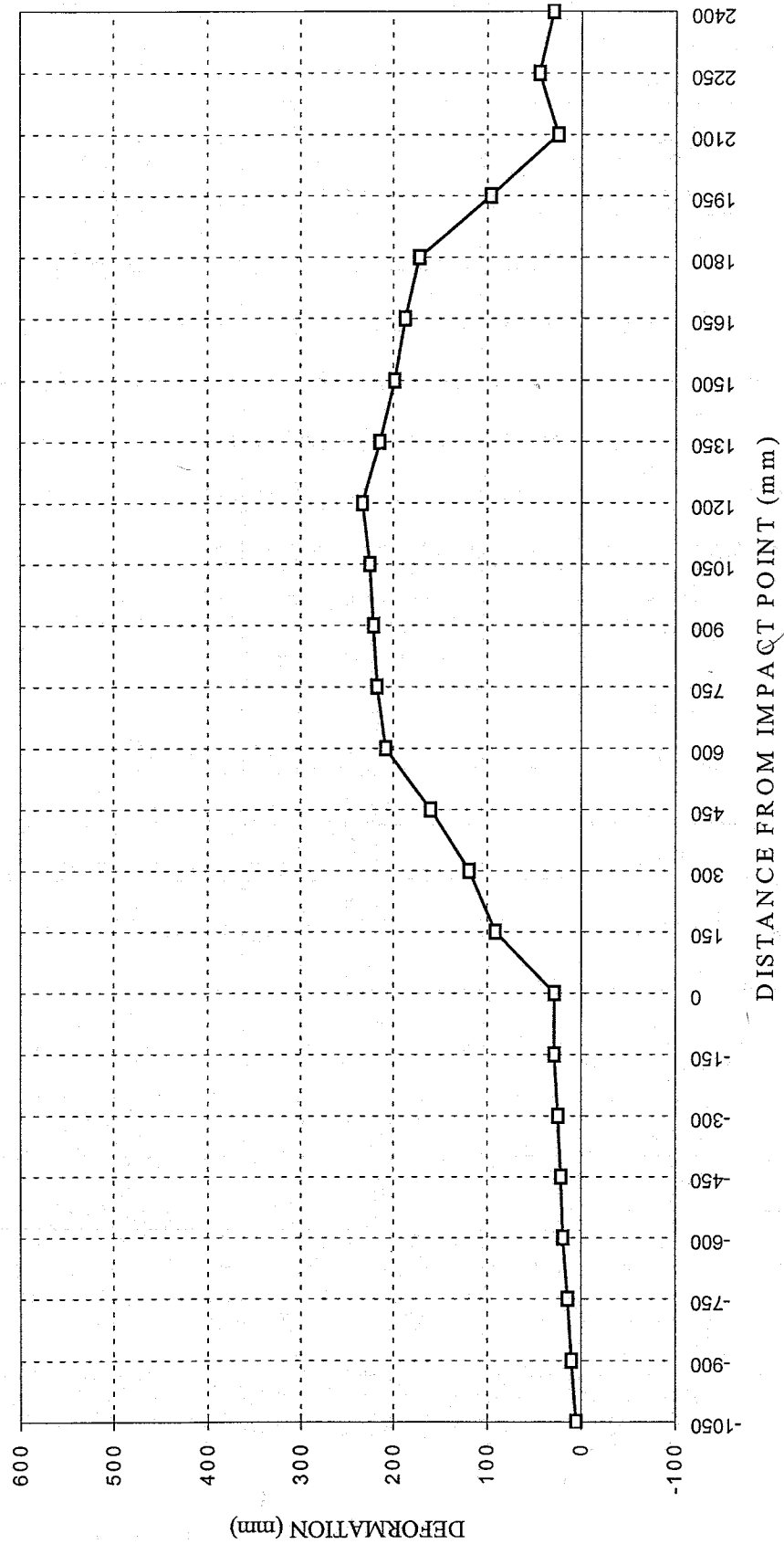
Reference plane is parallel to test vehicle longitudinal centerline.
 Given dimensions = Reference plane to car body

VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
2550	627	647	20
2700	644	660	16
2850	671	680	9
3000	705	710	5

Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



LEVEL 4 - WINDOW SILL

VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 5 - Window Top		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750	877	908	31
900	872	907	35
1050	870	910	40
1200	868	909	41
1350	864	900	36
1500	860	895	35
1650	864	893	29
1800	865	890	25
1950	878	900	22
2100			
2250			
2400			

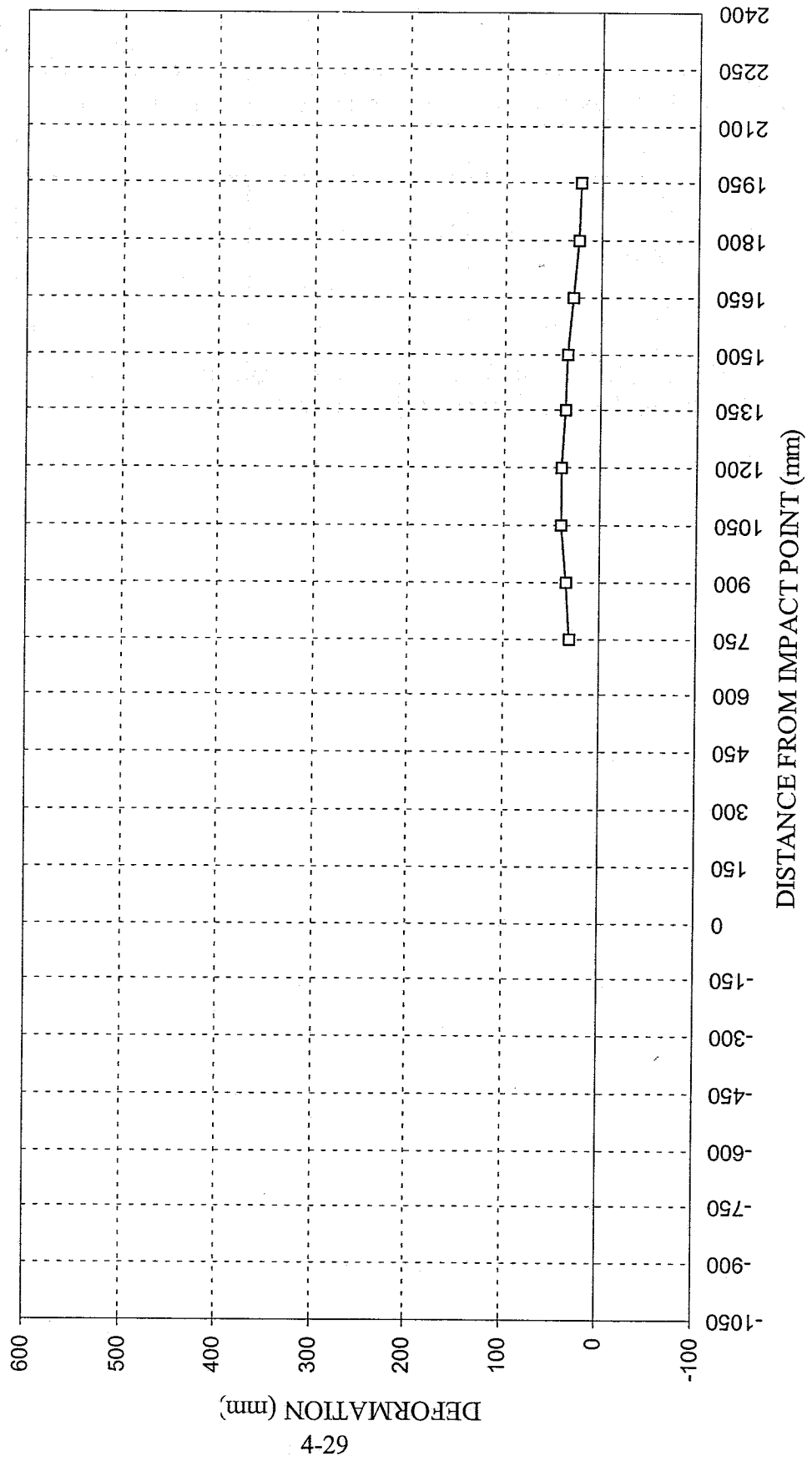
Reference plane is parallel to test vehicle longitudinal centerline.
 Given dimensions = Reference plane to car body

VEHICLE EXTERIOR CRUSH PROFILES (Cont'd)

	Level 5 - Window Top		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
2550			
2700			
2850			
3000			

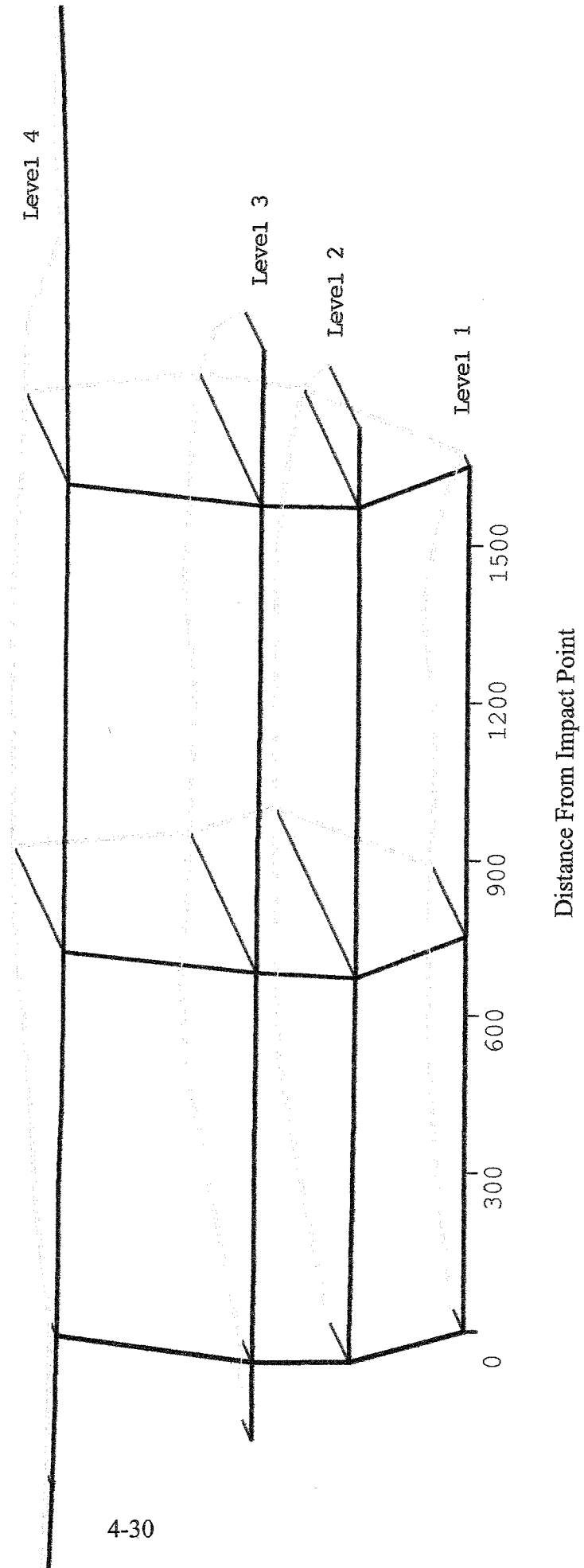
Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



LEVEL 5 - WINDOW TOP

PRE AND POST-TEST VEHICLE SIDE PROFILE, LEVELS 1-4

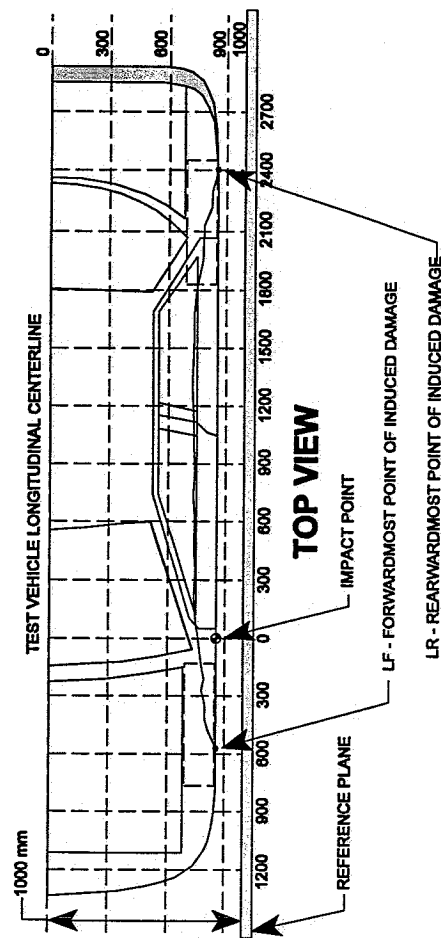


Blue - Pre-Test
Yellow - Post-Test

VEHICLE DAMAGE PROFILE DISTANCES

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998



MEASUREMENT CONVENTIONS:

Forward of the impact point (towards front of vehicle) is considered negative (-).

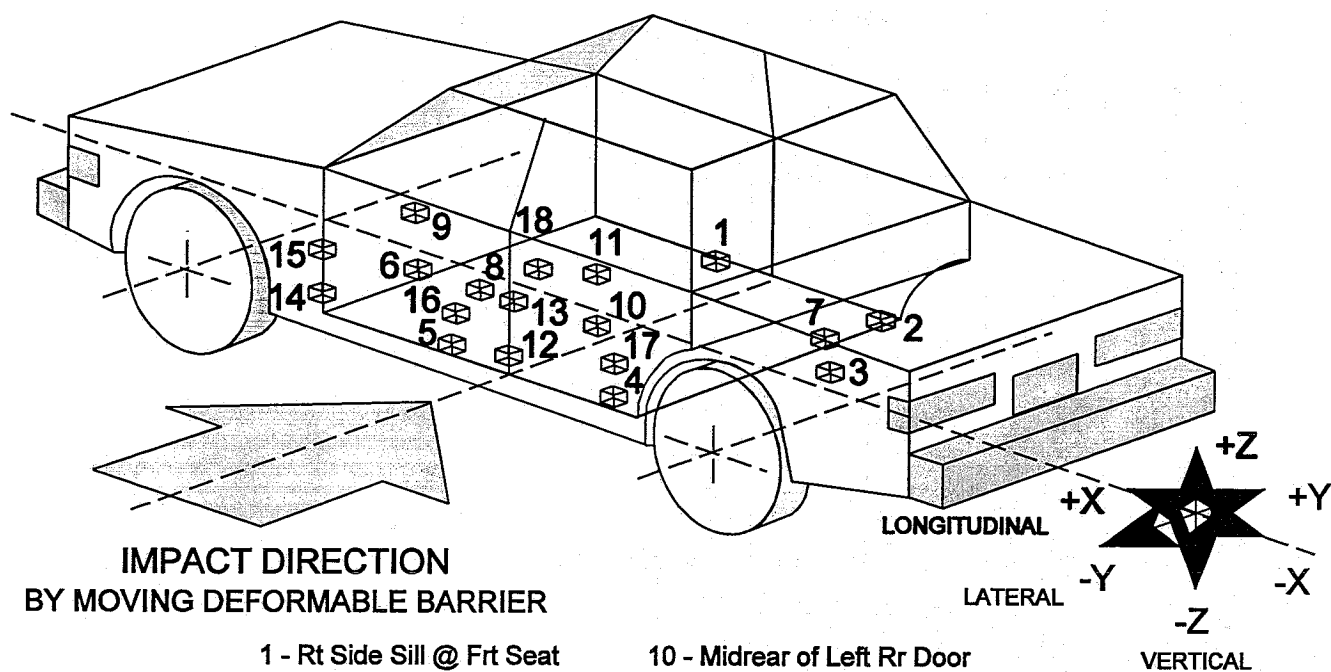
Rearward of the impact point (toward rear of vehicle) is considered positive (+).

DPD MEASUREMENTS	POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1. (LF = <u>-1050</u> mm)	719	714	5
2. <u>-210</u> mm	643	623	20
3. <u>590</u> mm	881	538	343
4. <u>1455</u> mm	862	531	331
5. <u>2325</u> mm	636	602	34
6. (LR = <u>3150</u> mm)	753	758	-5

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998



- 1 - Rt Side Sill @ Frt Seat
- 2 - Rt Side Sill @ Rr Seat
- 3 - Rr Floorpan Above Axle
- 4 - Left Side Sill @ Rr Seat
- 5 - Left Side Sill @ Frt Seat
- 6 - Left Frt Door on Centerline
- 7 - Rt Rr Occ Compartment
- 8 - Midrear of Left Frt Door
- 9 - Left Frt Door Up C/Line

- 10 - Midrear of Left Rr Door
- 11 - Left Rr Door Up C/Line
- 12 - Left Lwr B-Post
- 13 - Left Middle B-Post
- 14 - Left Lwr A-Post
- 15 - Left Middle A-Post
- 16 - Frt Seat Track
- 17 - Rr Seat Track
- 18 - Vehicle C.G.

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY (Cont'd)

Vehicle NHTSA No.: CX5301 Test Date: December 9, 1998

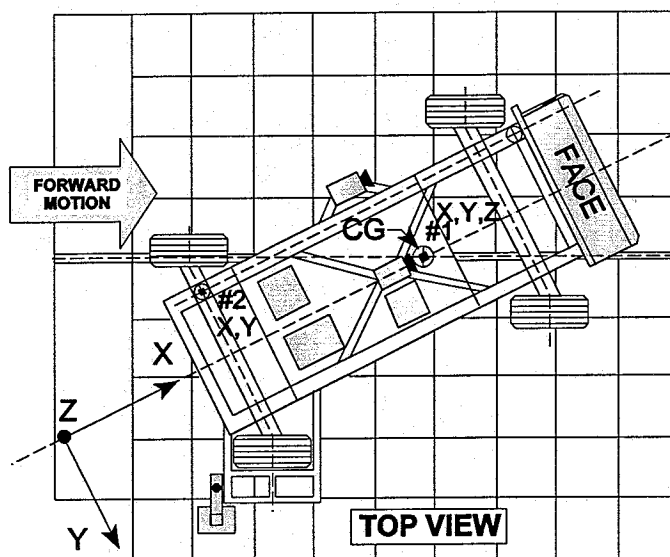
Accel. No.	Description	Coordinates (mm)*			Maximum	Time	Minimum	Time
		X	Y	Z				
1	Vehicle CG X	2750	106	300	4.5	28	-8.5	39
2	Vehicle CG Y	2750	106	300	19.5	6	-1.8	116
3	Vehicle CG Z	2750	106	300	8.8	36	-9.5	41
4	Vehicle Resultant	2750	106	300	19.7	6	---	---
5	Right Rear Occupant Compartment	1980	469	200	18.8	7	-3.9	116

*Reference: X - Rear Bumper (+ Forward)
Y - Vehicle Centerline (+ To right)
Z - Ground Level (+ Up)

MOVING DEFORMABLE BARRIER (MDB)
ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998



Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity							
	Longitudinal (X)	2340	0	320	*	*	-13.7	41
	Lateral (Y)	---	---	---	4.8	64	-3.6	84
	Vertical (Z)	---	---	---	10.3	61	-5.9	50
	Resultant (R)	---	---	---	16.3	45	---	---
2	Rear Frame Member	800	580	600				
	Longitudinal (X)	---	---	---	1.4	109	-16.1	39
	Lateral (Y)	---	---	---	3.6	5	-1.3	102

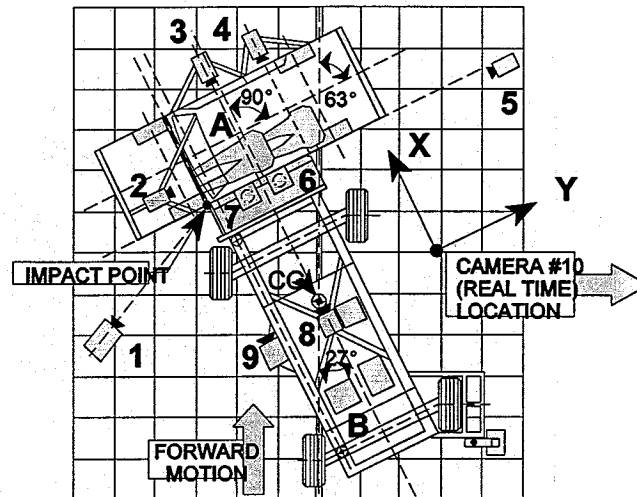
Reference: X - Front Axle (+ Forward)
Y - Vehicle Centerline (+ To right)
Z - Ground Level (+ Up)

* Not valid after 125 msec.

HIGH SPEED CAMERA LOCATIONS AND DATA

Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998



Camera No.	View	Coordinates (mm)*			Lens (mm)	Film Speed (fps)
		X	Y	Z		
	Real Time				10	24
1	Left Impact	-550	-1340	1680		976
2	Onboard Hood				13	995
3	Onboard Front Occupant				8	964
4	Onboard Rear Occupant				8	1130
5	Right Impact	-860	10240	1710	25	946
6	Top Overall	70	1220	5000	8	1053
7	Top Impact	-440	145	5000	13	971
8	Cart Overall	-6705	1215	2980	35	1020
9	Cart Impact	-2190	-2530	1520	50	NR

* Reference: (from impact point)

+X = Forward

+Y = To Right

+Z = Upward from floor level

FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

TEST REQUIREMENTS:

Drain the test vehicle's fuel system and operate the engine until the fuel system is dry. Add Stoddard solvent, which has been dyed purple, until 92-94% of the stated usable capacity is reached. Operate the engine to assure the Stoddard solvent is present throughout the entire fuel system.

TEST VEHICLE IMPACT TYPE: X Left Side Impact MDB 32.76 mph (52.7 kph)

FUEL SPILLAGE MEASUREMENT:

POST IMPACT TEST	TEST RESULTS	MAXIMUM ALLOWABLE
1. From impact until vehicle motion ceases	0	1 oz
2. For 5 minute period after vehicle motion ceases	0	5 oz
3. For next 25 minutes	0	1 oz./1 min

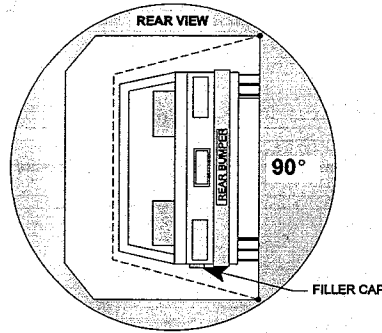
FUEL SPILLAGE LOCATION(S): None

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 45 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 45 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

0° TO 90° ROTATION (FILLER CAP DOWN)	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

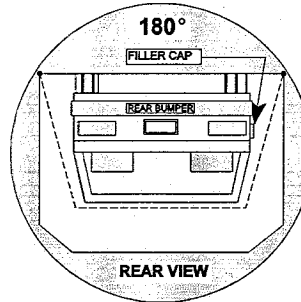
FUEL SPILLAGE LOCATIONS(S): None

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1998/Ford/Taurus/4 Door

Test Date: March 12, 1998

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 22 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 22 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

90° TO 180° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

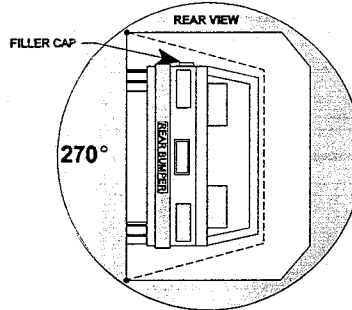
FUEL SPILLAGE LOCATIONS(S): None

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 24 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 24 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

180° TO 270° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

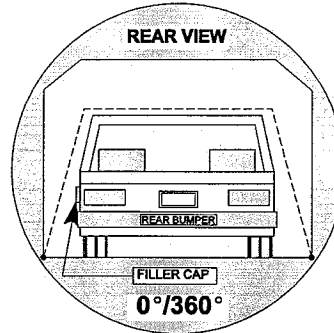
FUEL SPILLAGE LOCATIONS(S): None

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Ford/Taurus/4 Door

Test Date: March 12, 1998

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 49 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 49 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

270° TO 360° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

FUEL SPILLAGE LOCATIONS(S): None

APPENDIX A
STILL PHOTOGRAPHS

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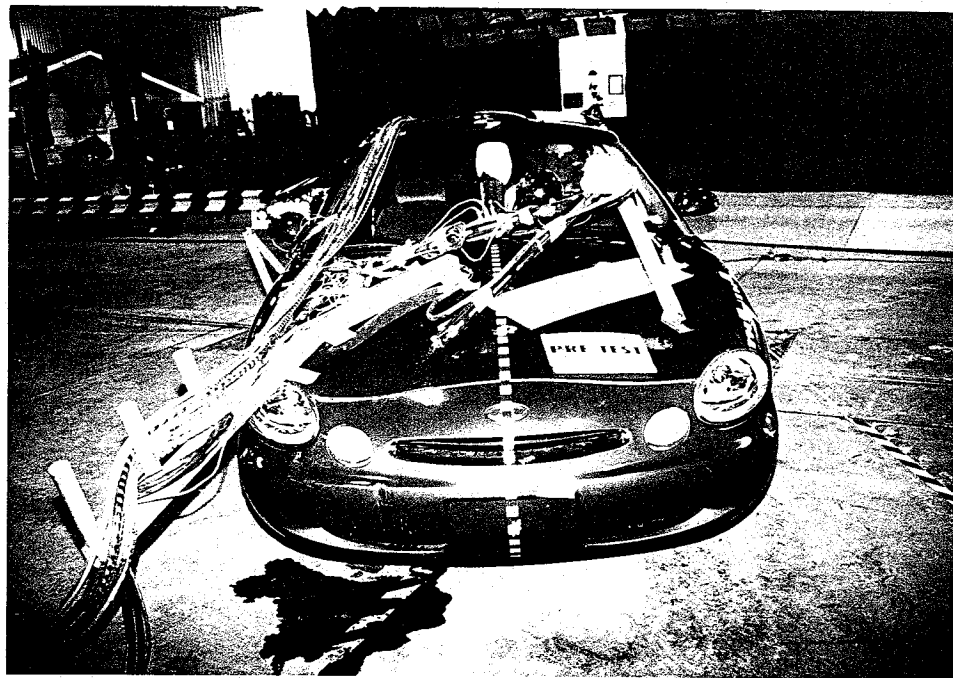


Photo No. A-1 - Pre-Test Front View of Test Vehicle

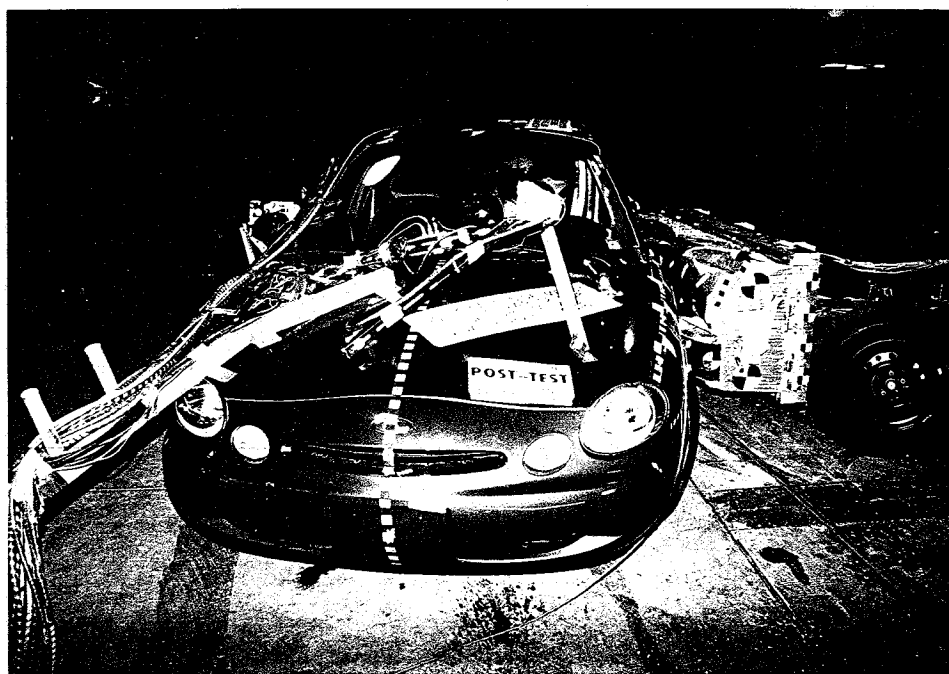


Photo No. A-2 - Post-Test Front View of Test Vehicle

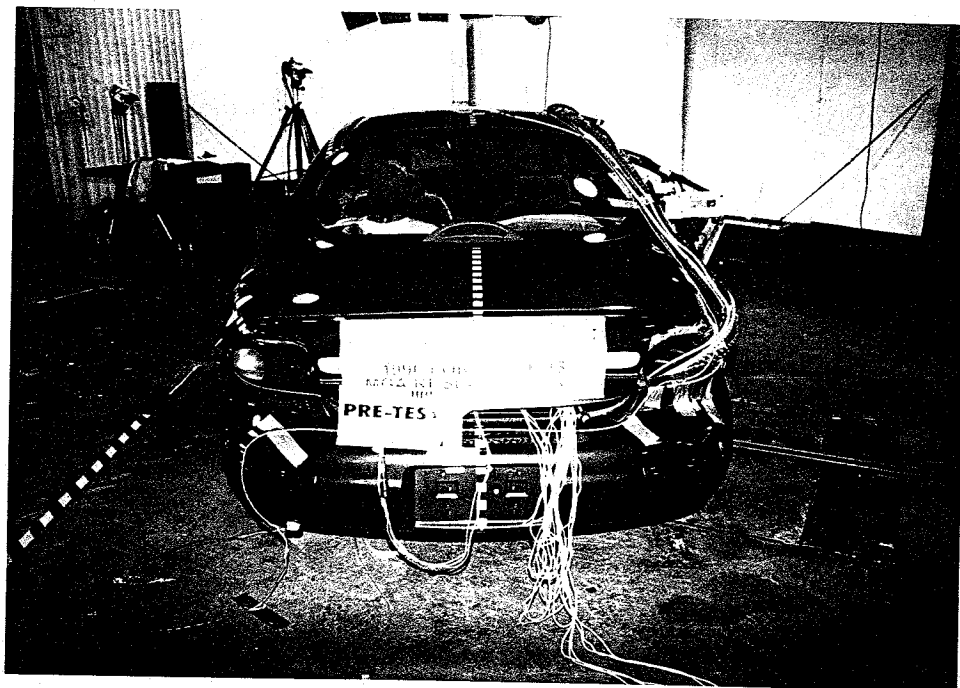


Photo No. A-3 - Pre-Test Rear View of Test Vehicle

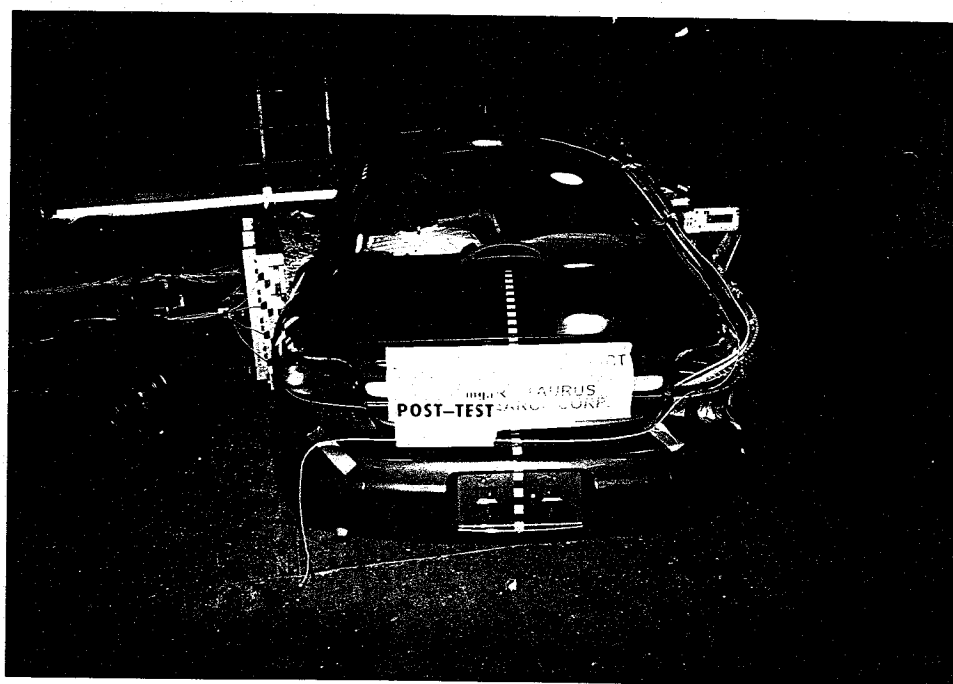


Photo No. A-4 - Post-Test Rear View of Test Vehicle

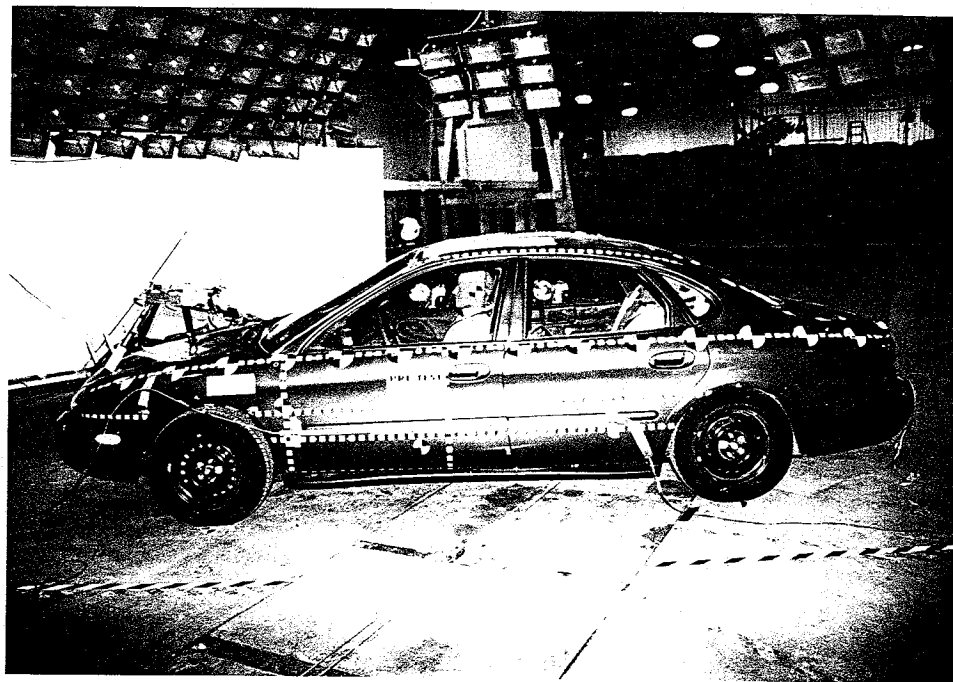


Photo No. A-5 - Pre-Test Left Side View of Test Vehicle



Photo No. A-6 - Post-Test Left Side View of Test Vehicle

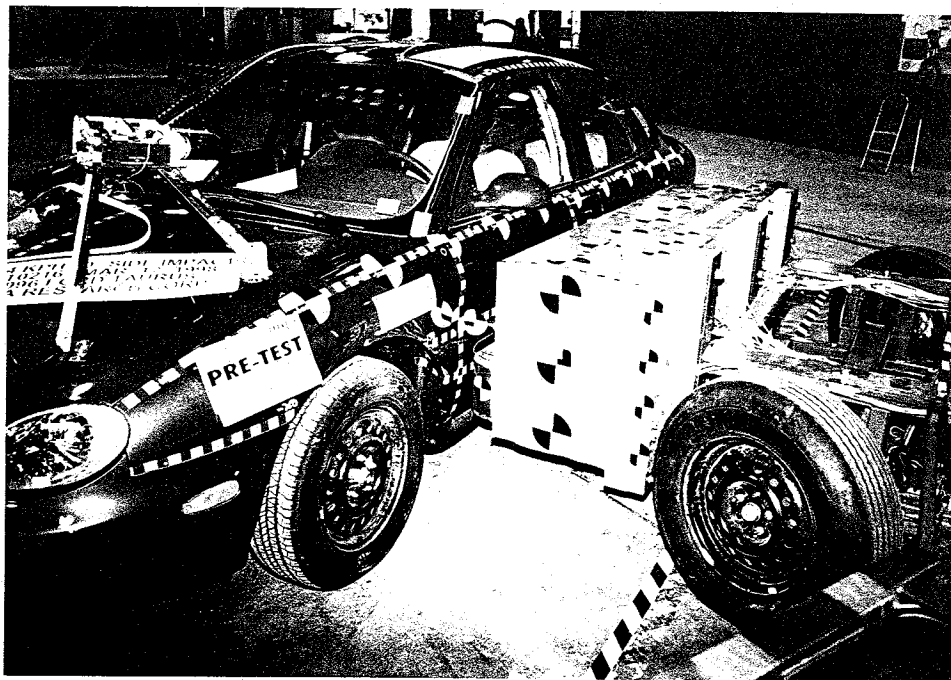


Photo No. A-7 - Pre-Test MDB Positioned Against Vehicle (left side)



Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (right side)

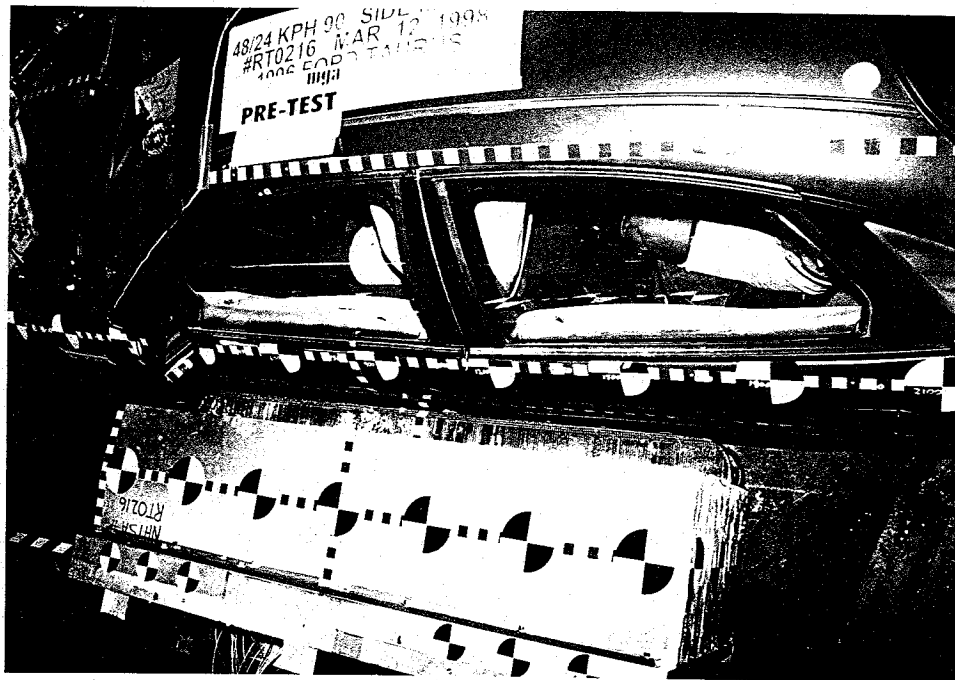


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View

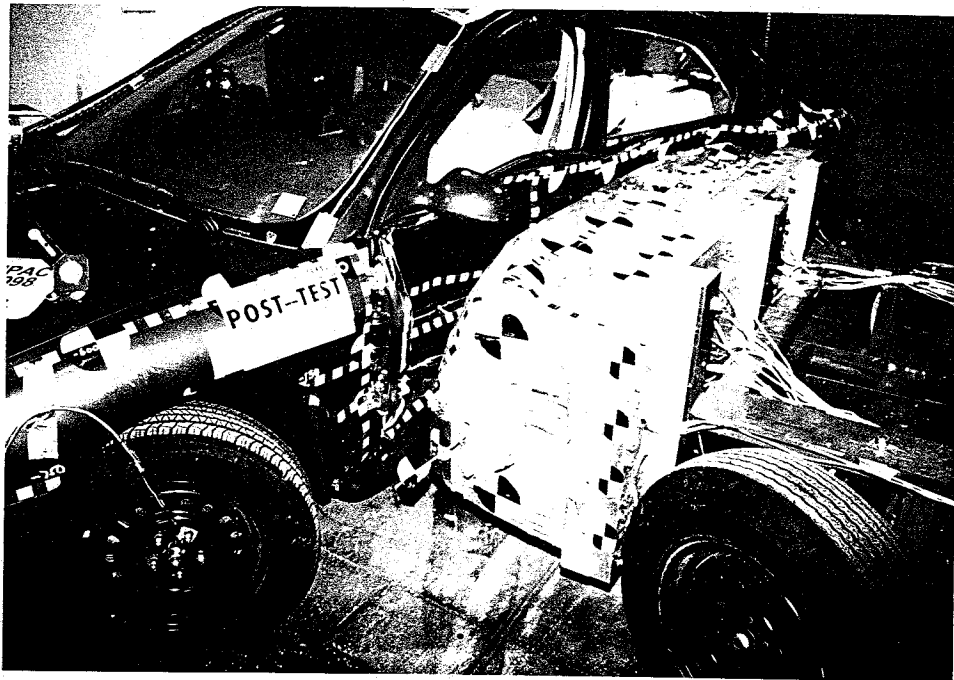


Photo No. A-10 - Post-Test MDB Positioned Against Vehicle (left side) /

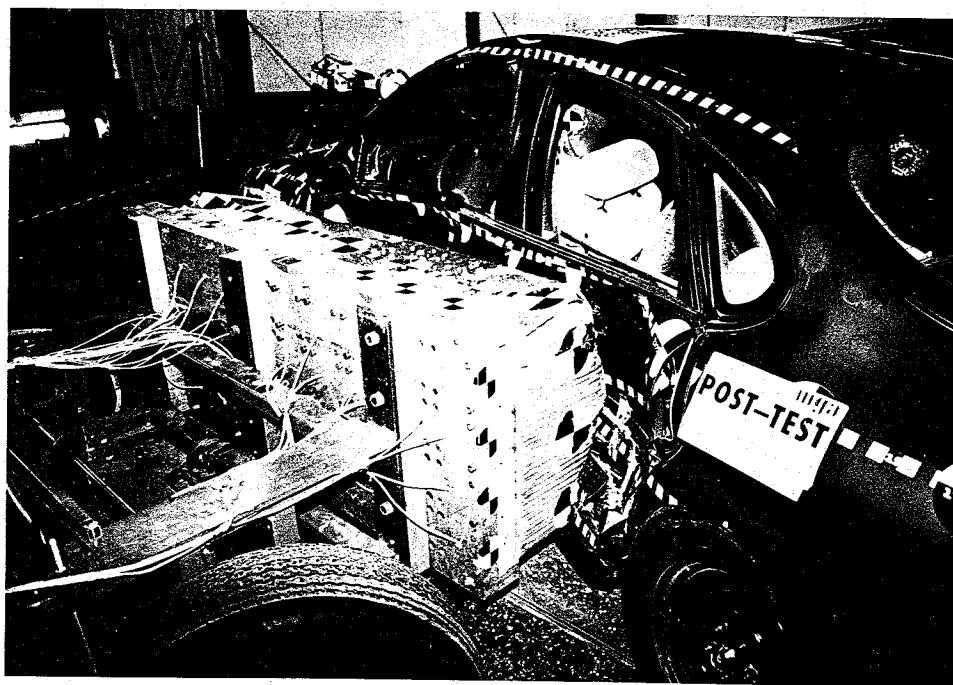


Photo No. A-11 - Post-Test MDB Positioned Against Vehicle (right side)

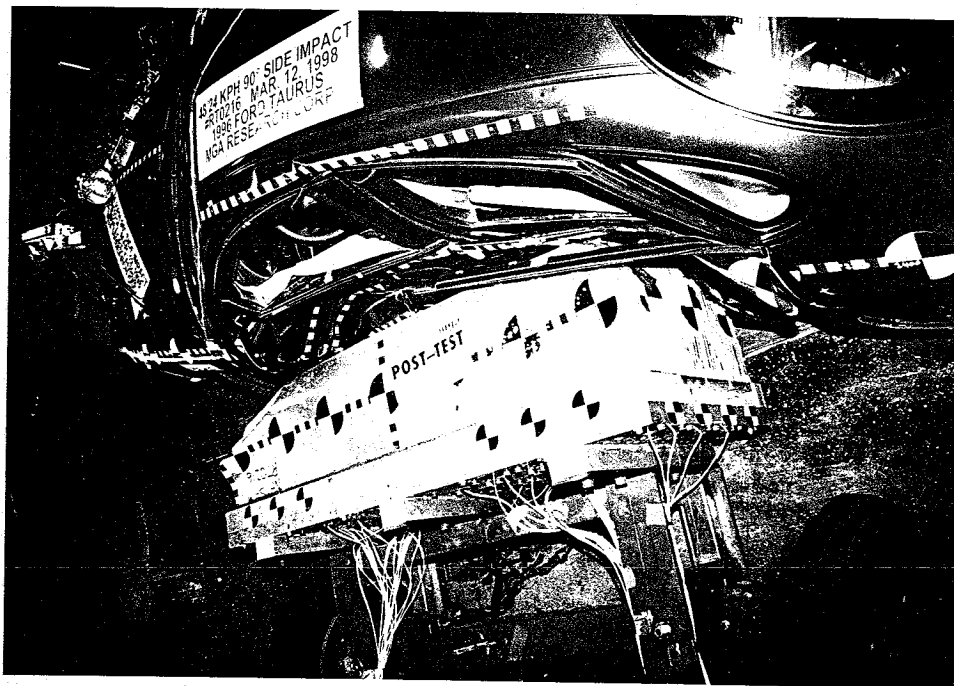


Photo No. A-12 - Post-Test MDB Positioned Against Vehicle Overhead View

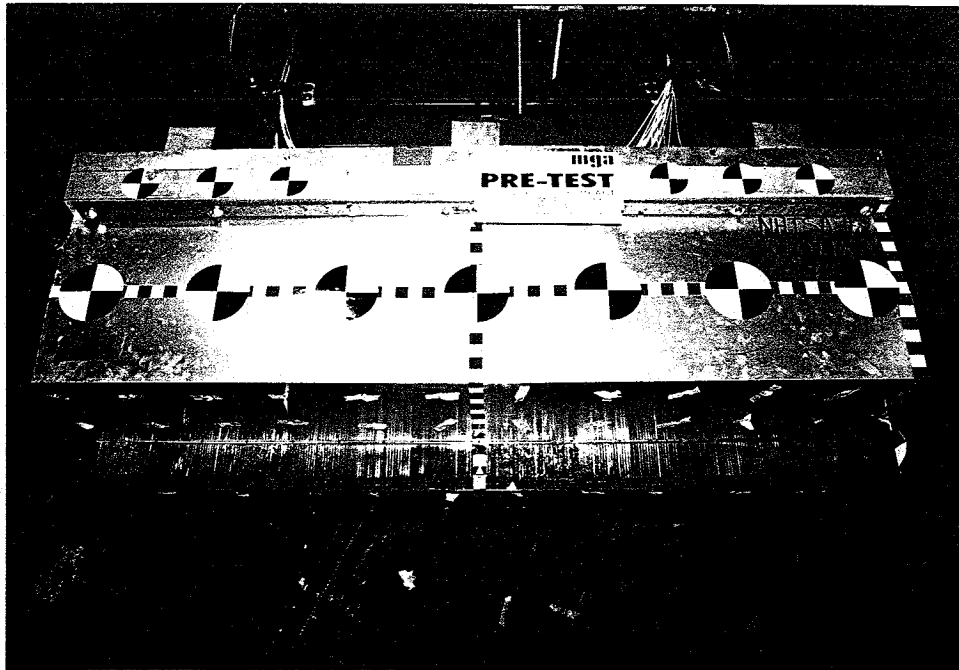


Photo No. A-13 - Pre-Test MDB Top View

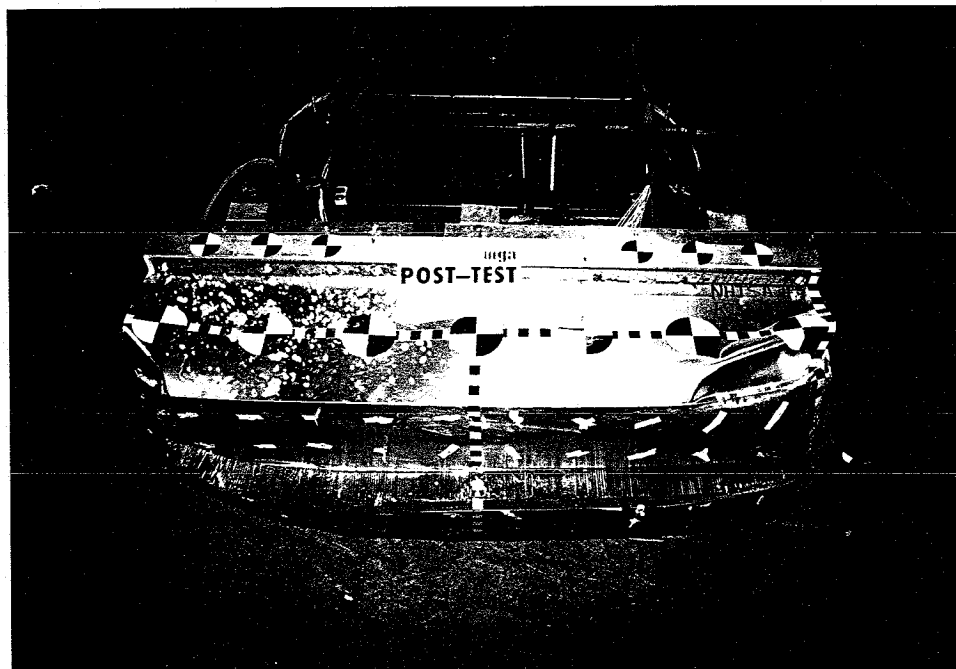


Photo No. A-14 - Post-Test MDB Top View

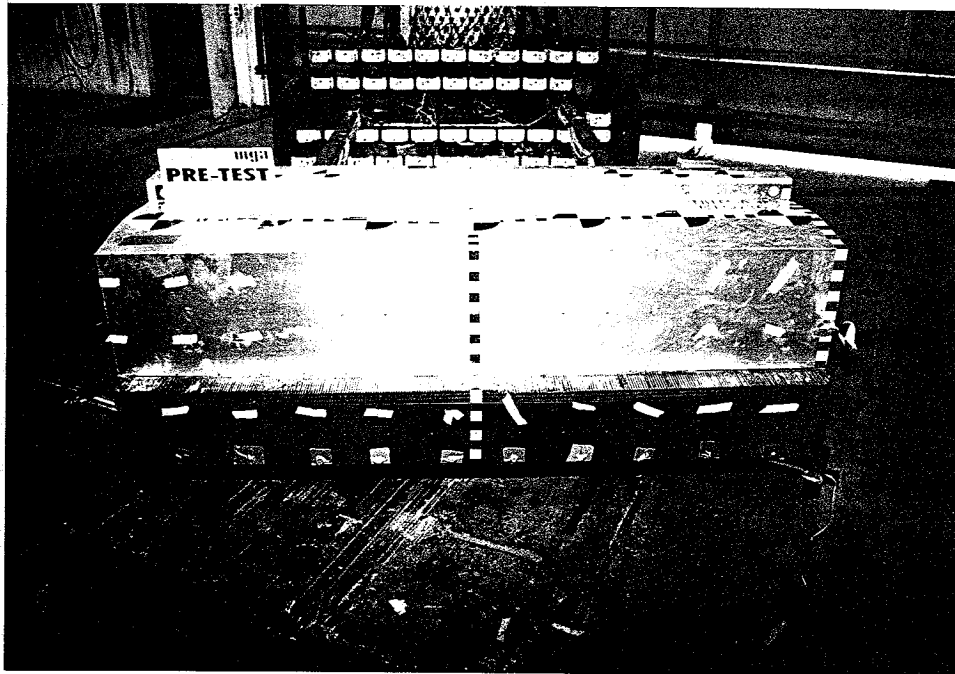


Photo No. A-15 - Pre-Test MDB Front View

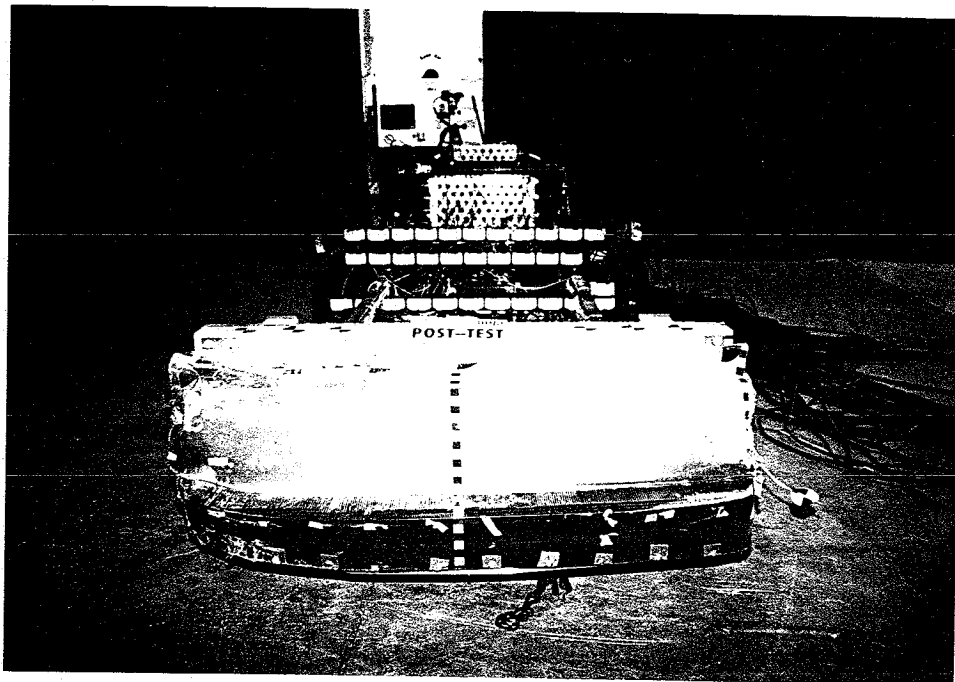


Photo No. A-16 - Post-Test MDB Front View

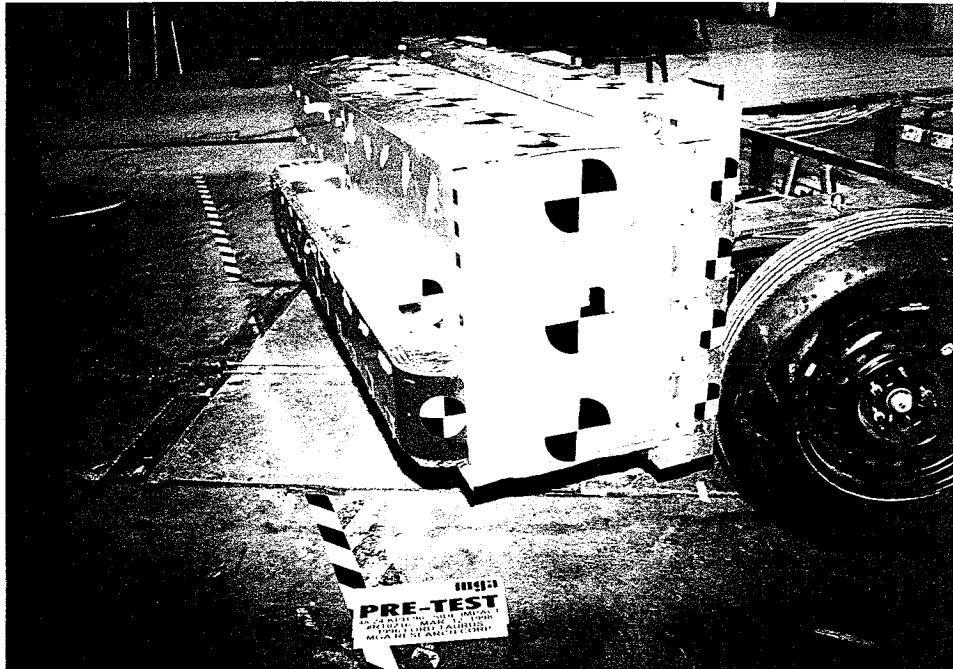


Photo No. A-17 - Pre-Test MDB Left Side View

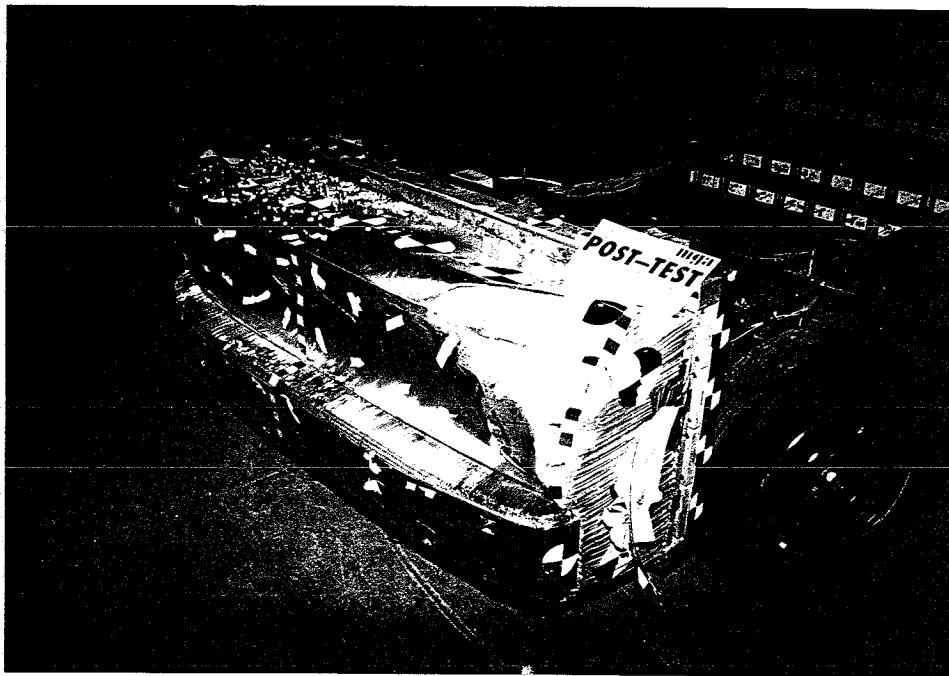


Photo No. A-18 - Post-Test MDB Left Side View

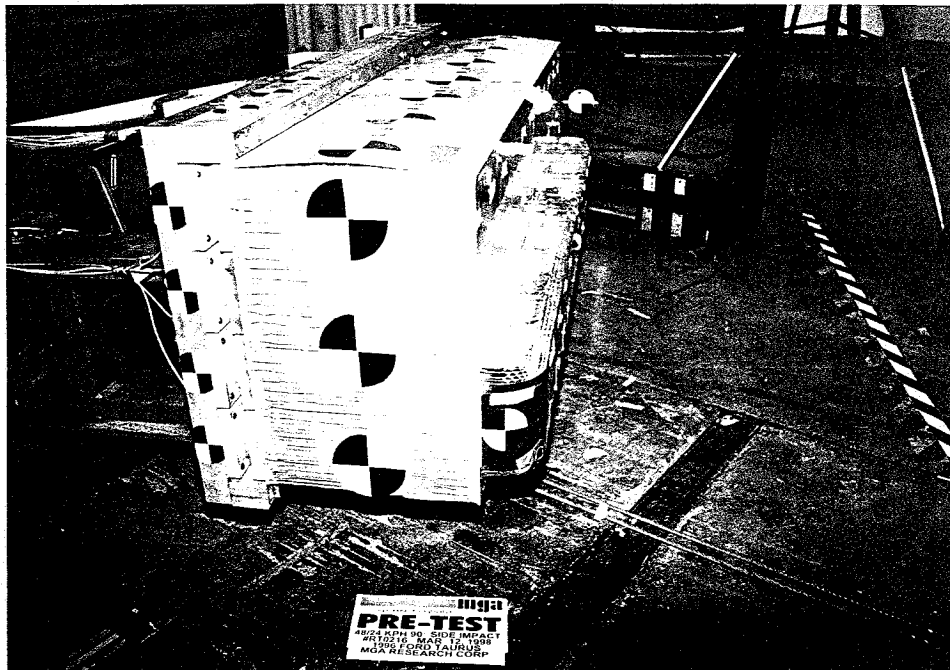


Photo No. A-19 - Pre-Test MDB Right Side View

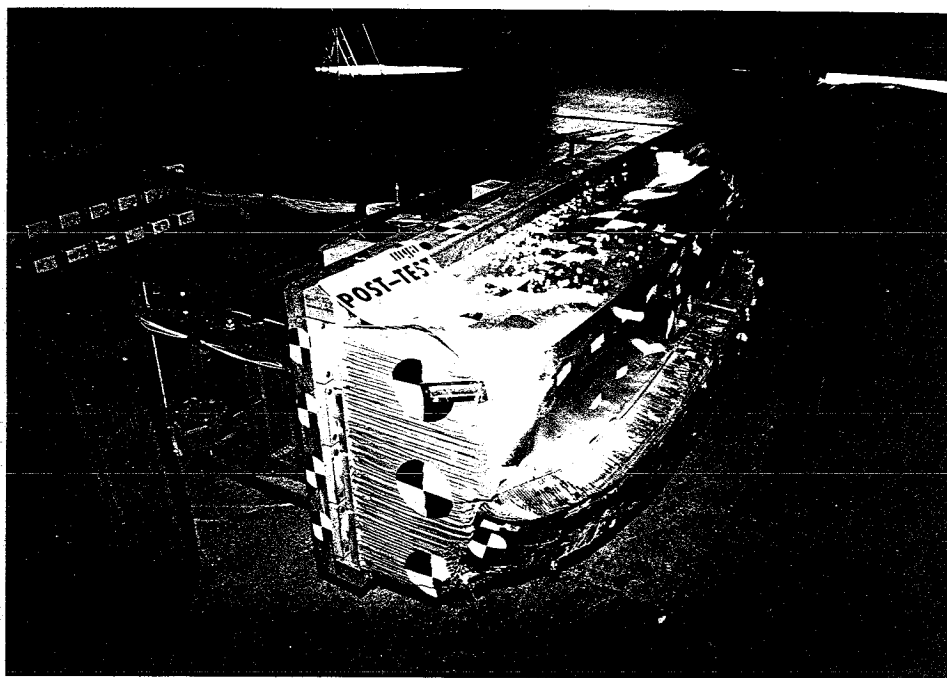


Photo No. A-20 - Post-Test MDB Right Side View



Photo No. A-21 - Pre-Test Driver Dummy Right Side View



Photo No. A-22 - Post-Test Driver Dummy Right Side View

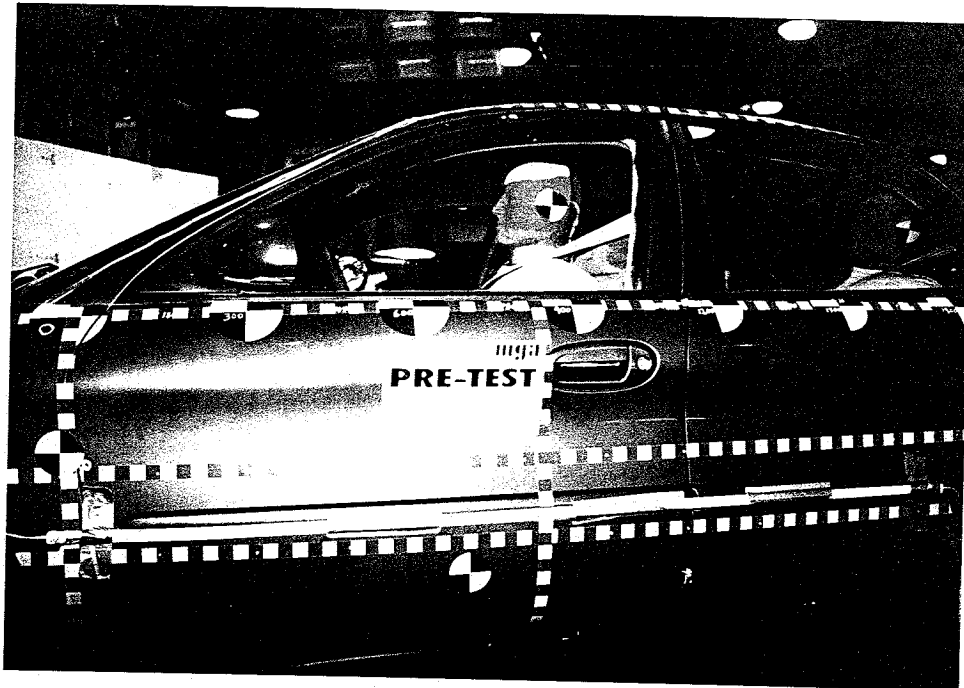


Photo No. A-23 - Pre-Test Driver Dummy Left Side View

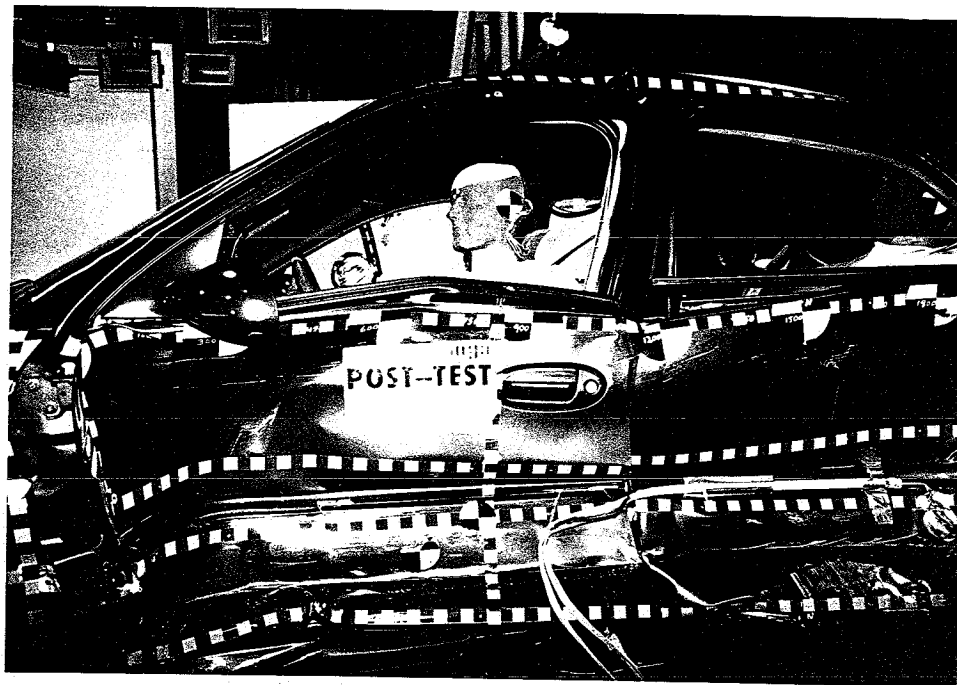


Photo No. A-24 - Post-Test Driver Dummy Left Side View

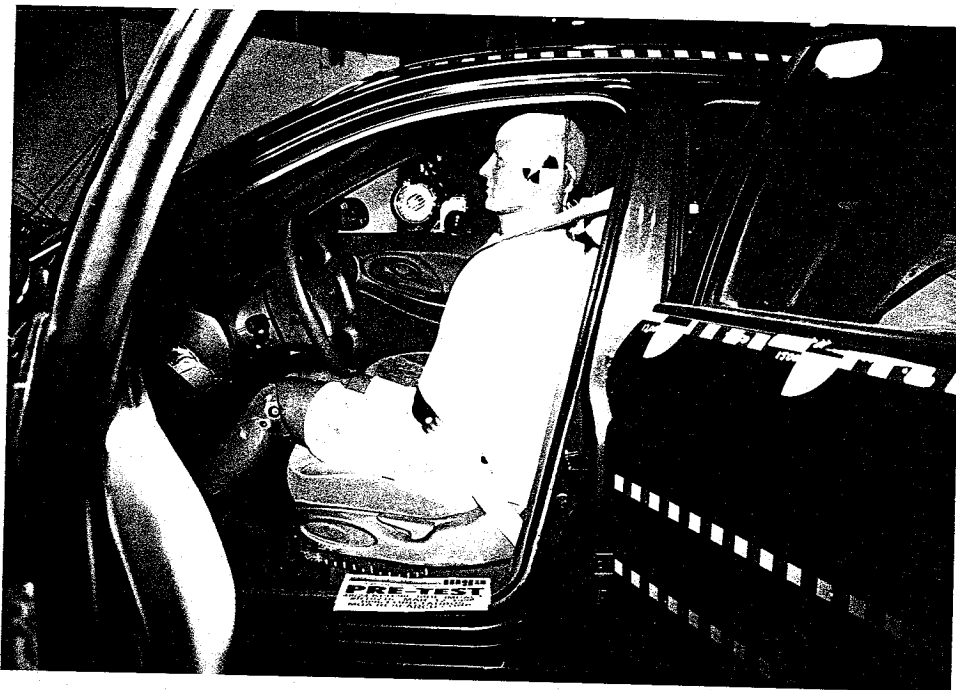


Photo No. A-25 - Pre-Test Driver Dummy Left Side View (Door Open)



Photo No. A-26 - Pre-Test Driver Shoulder and Door Top View

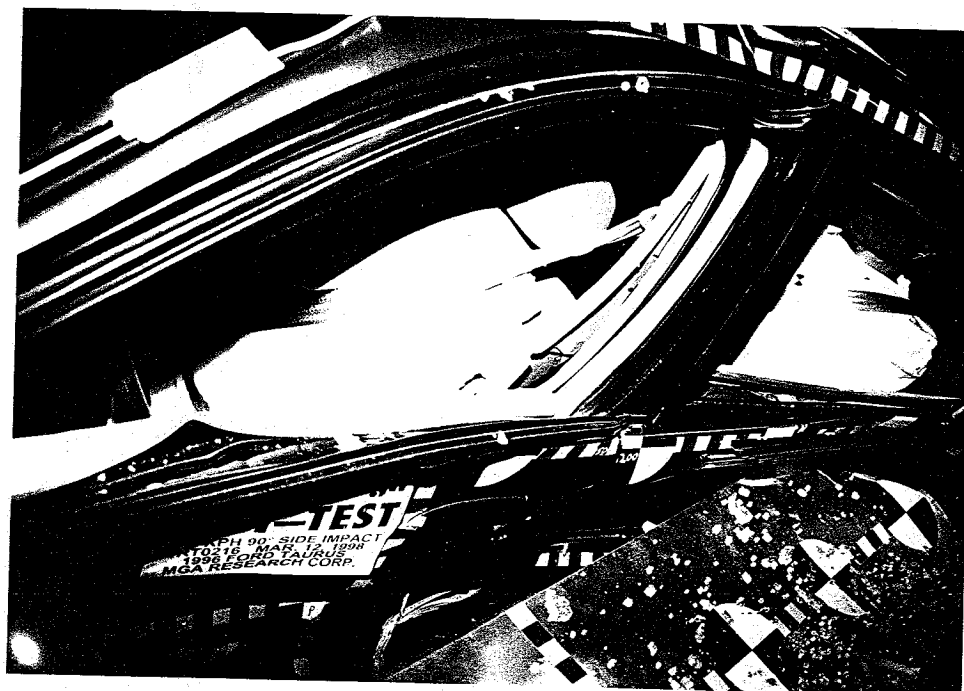


Photo No. A-27 - Post-Test Driver Shoulder and Door Top View

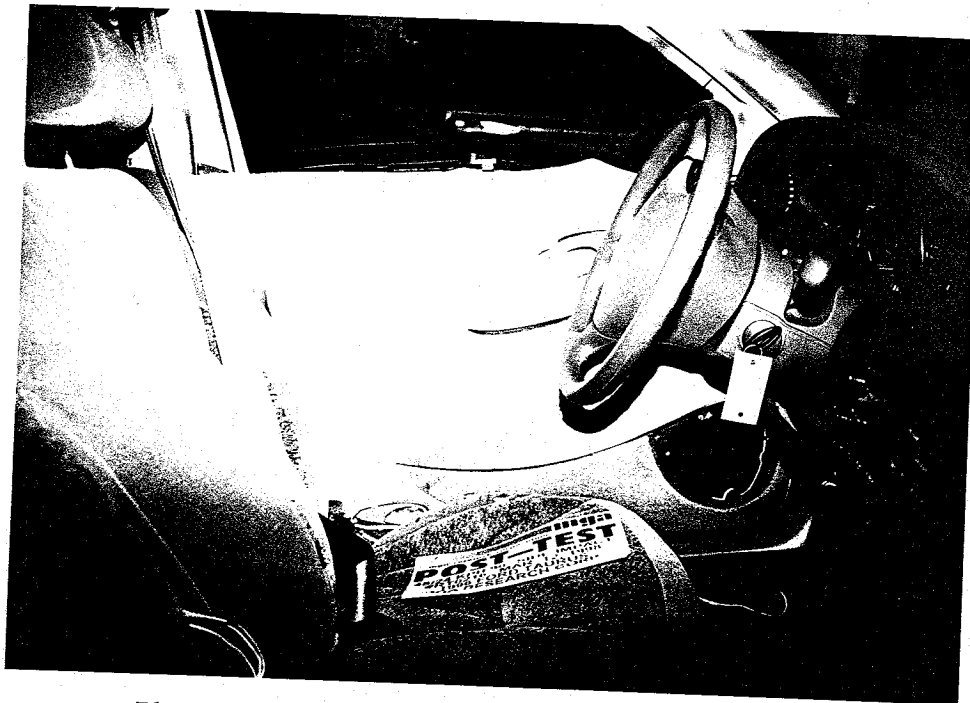


Photo No. A-28 - Post-Test Driver Dummy Contact

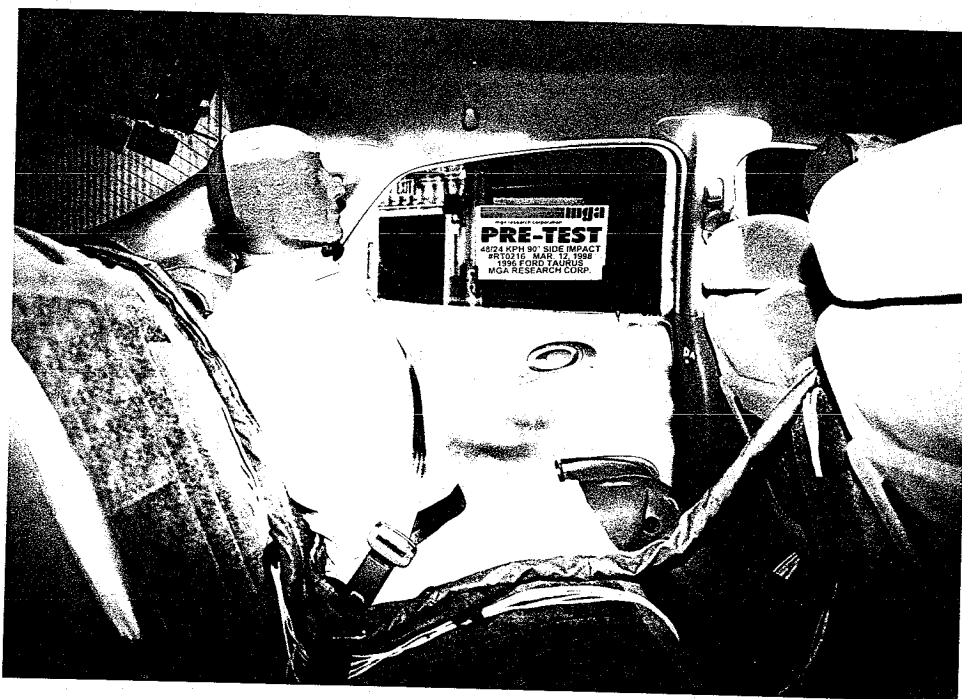


Photo No. A-29 - Pre-Test Rear Passenger Dummy Right Side View



Photo No. A-30 - Post-Test Rear Passenger Dummy Right Side View

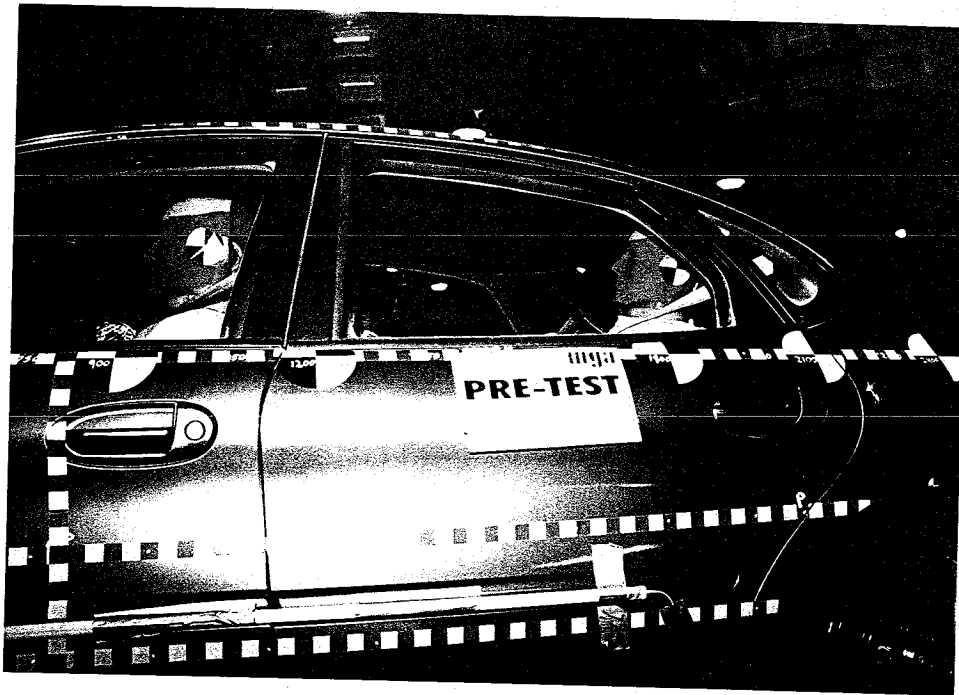


Photo No. A-31 - Pre-Test Rear Passenger Dummy Left Side View

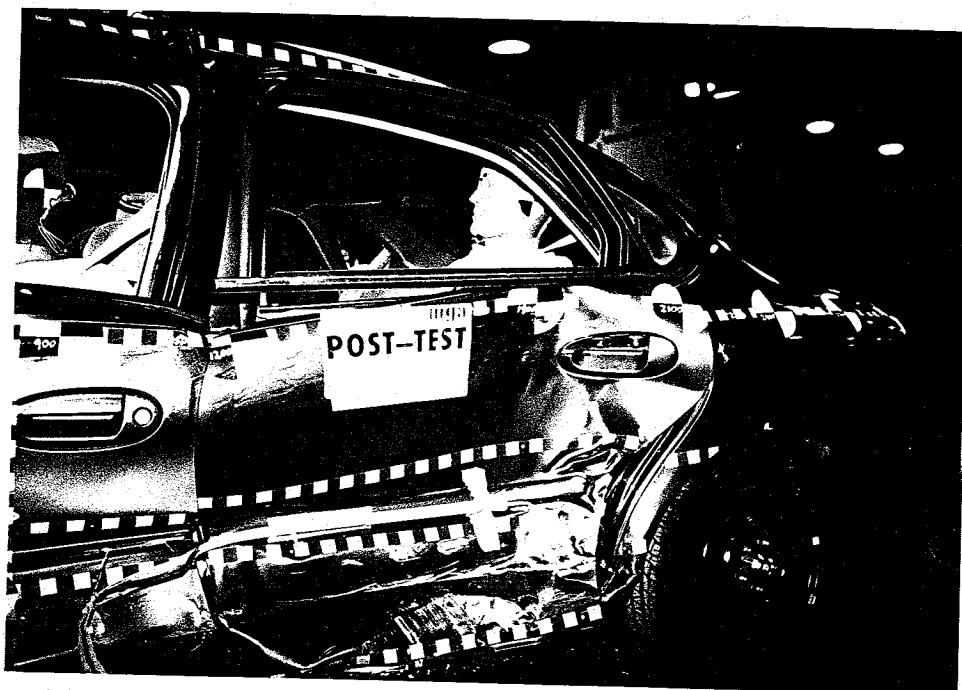


Photo No. A-32 - Post-Test Rear Passenger Dummy Left Side View

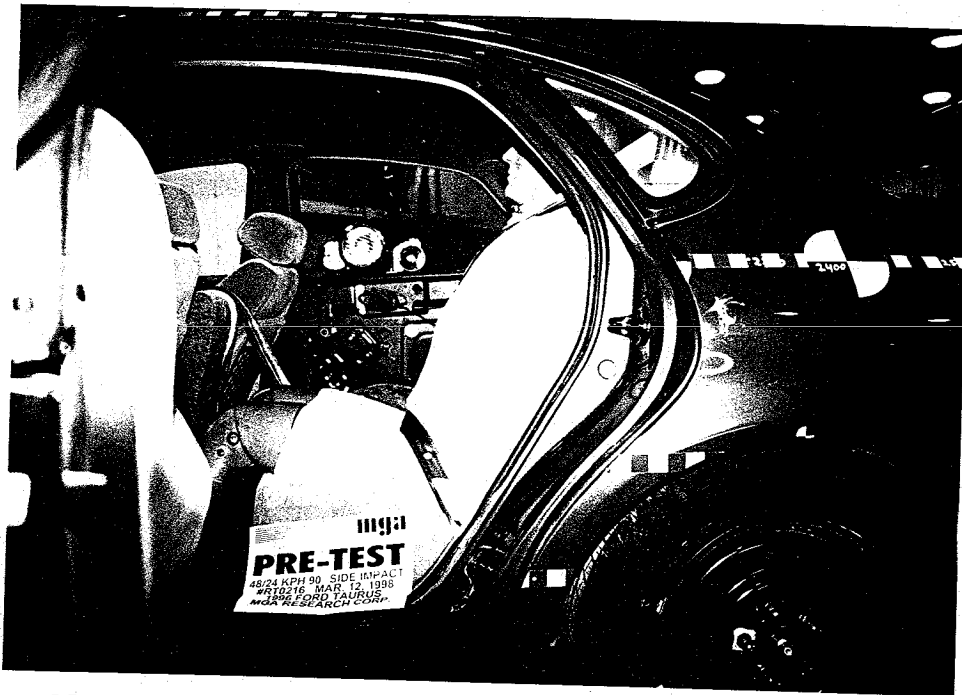


Photo No. A-33 - Pre-Test Rear Passenger Dummy Left Side View (Door Open)

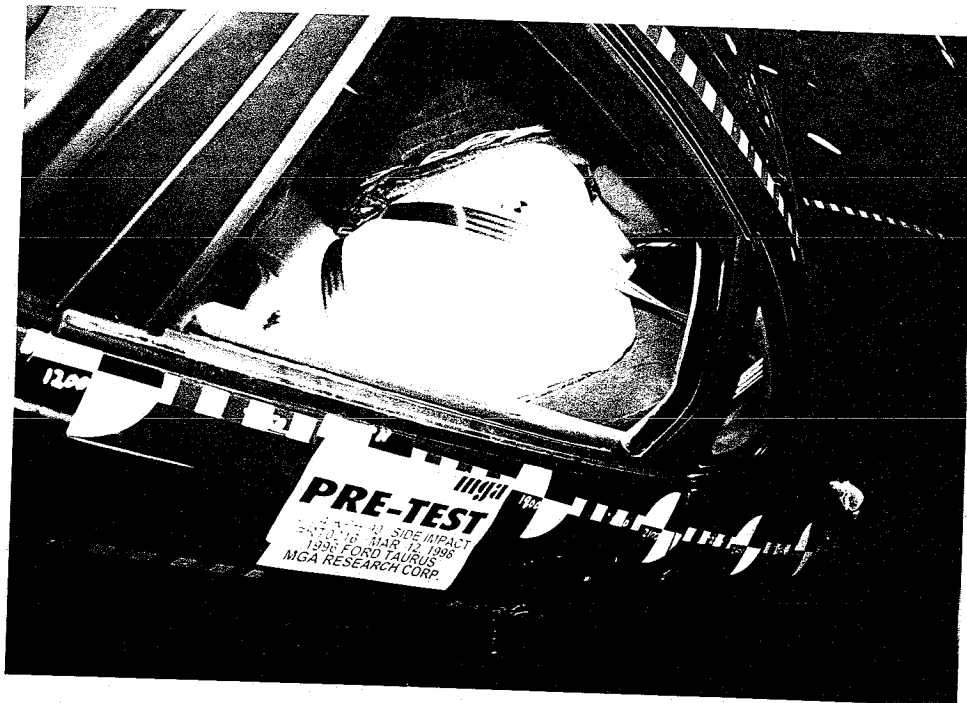


Photo No. A-34 - Pre-Test Rear Passenger Dummy Shoulder View



Photo No. A-35 - Post-Test Rear Passenger Dummy Shoulder View



Photo No. A-36 - Post-Test Rear Passenger Dummy Contact



Photo No. A-37 - Post-Test Rear Passenger Dummy Head Contact



Photo No. A-38 - Pre-Test Right Front Impact Point on Vehicle

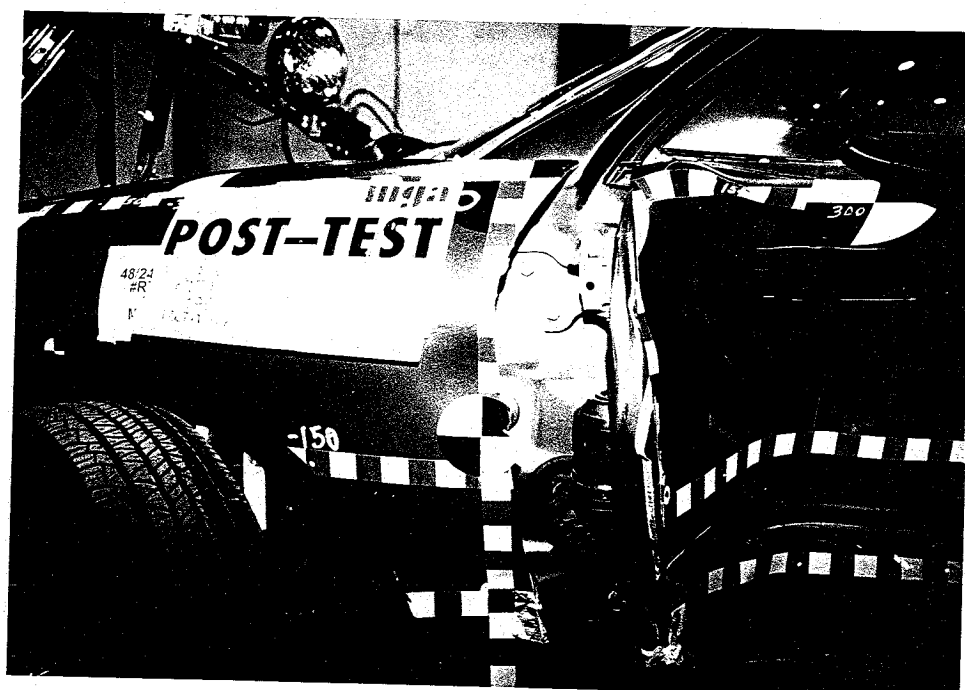


Photo No. A-39 - Post-Test Right Front Impact Point on Vehicle

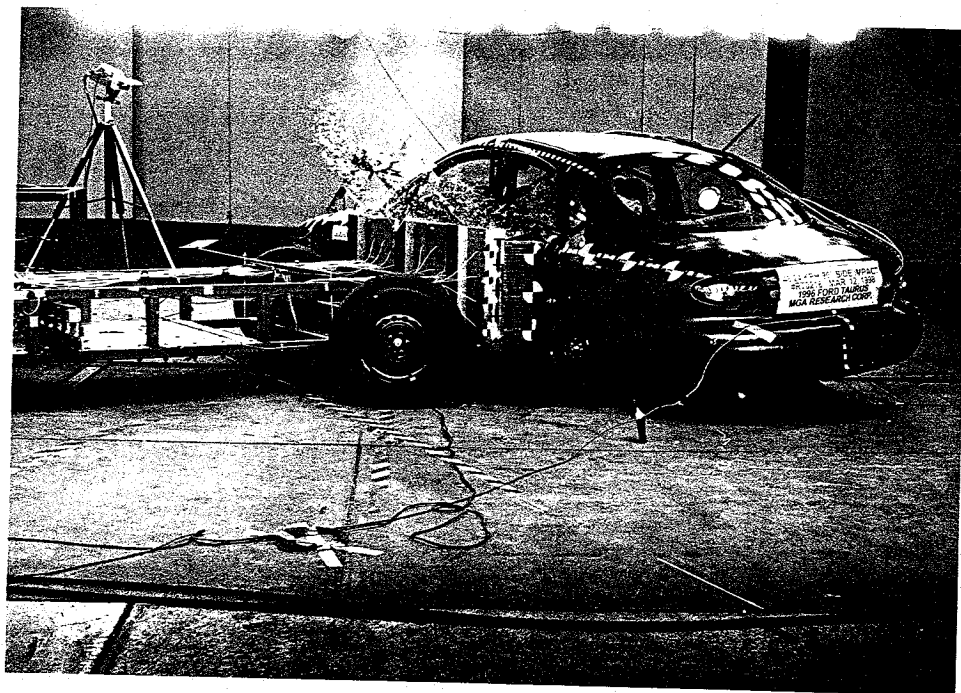


Photo No. A-40 - Impact

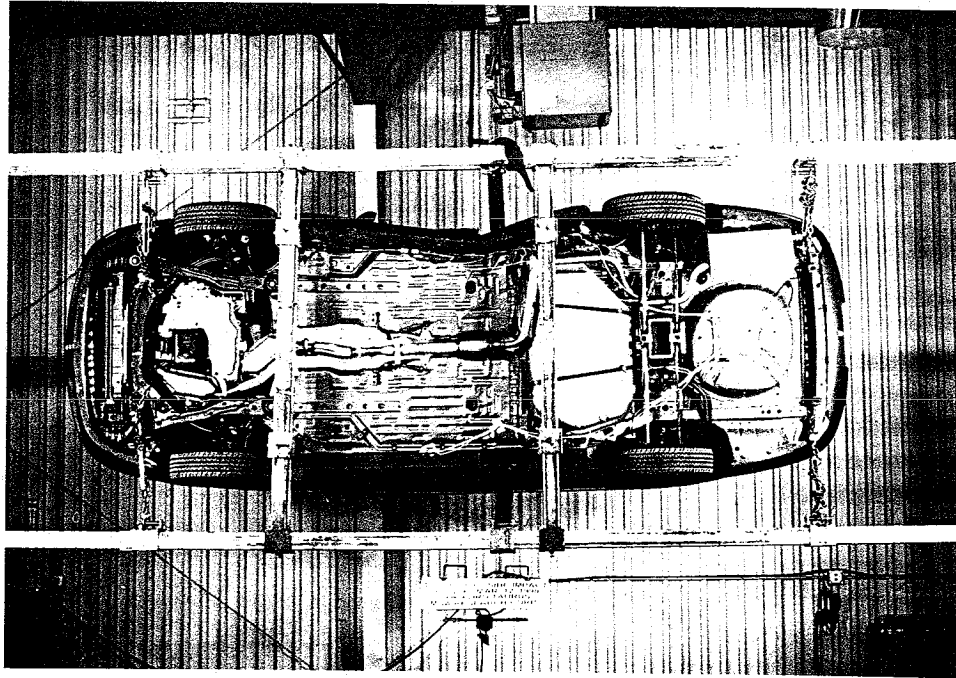


Photo No. A-43 - Rollover 90°

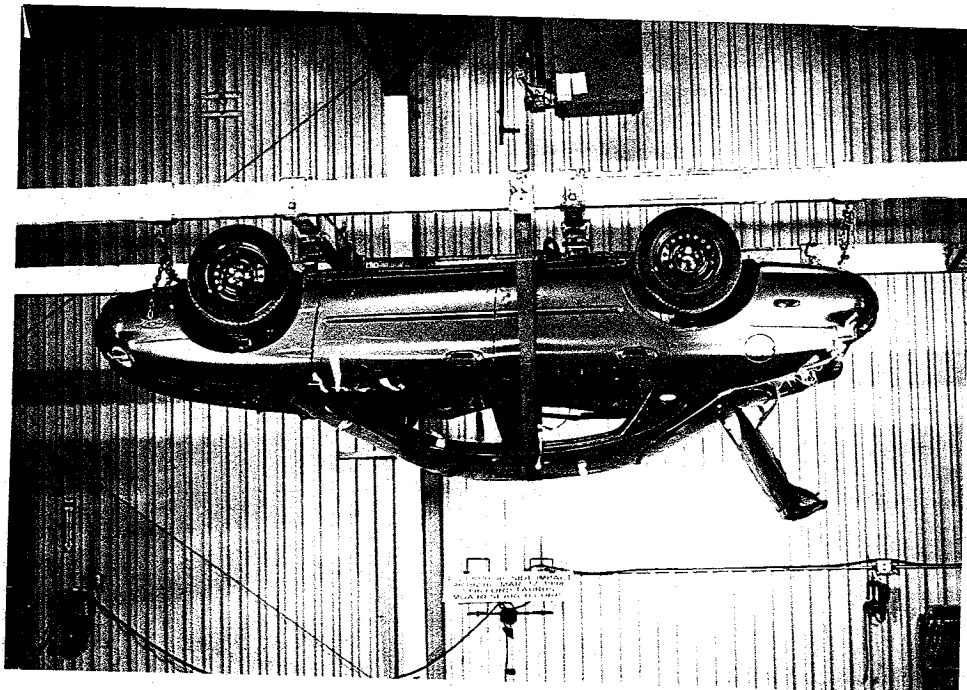


Photo No. A-44 - Rollover 180°

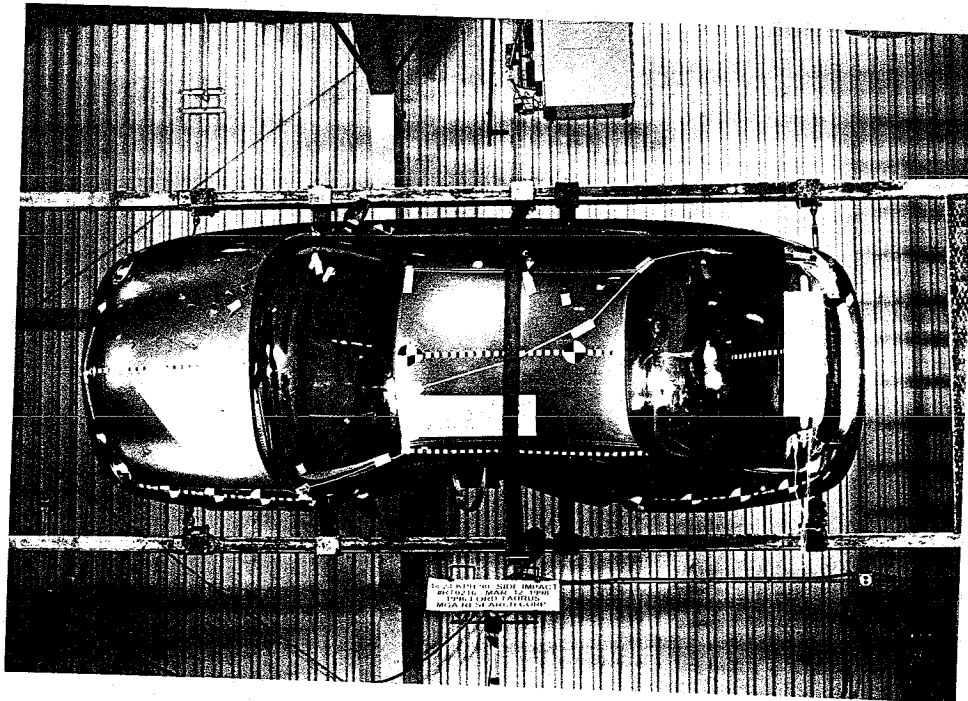


Photo No. A-45 - Rollover 270°

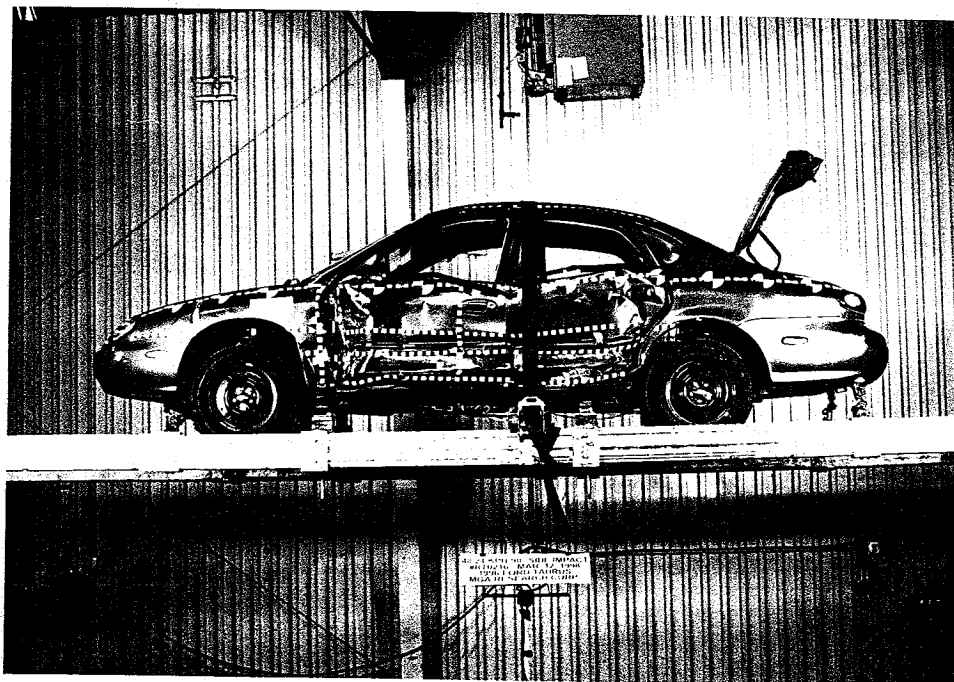


Photo No. A-46 - Rollover 360°

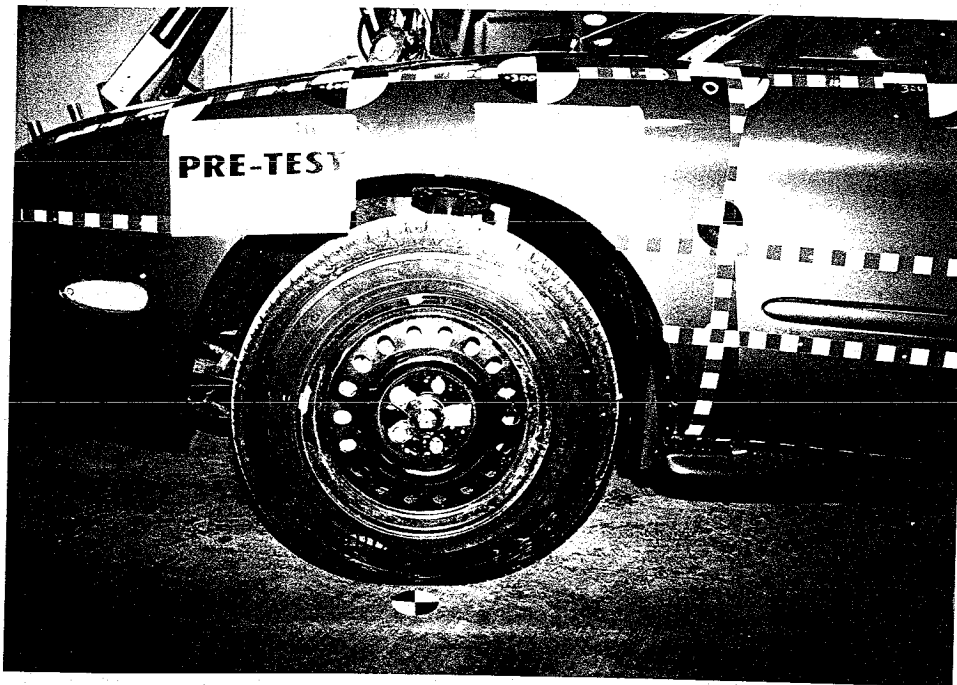


Photo No. A-47 - Left Front Attitude Point



Photo No. A-48 - Right Front Attitude Point



Photo No. A-49 - Left Rear Attitude Point



Photo No. A-50 - Right Rear Attitude Point

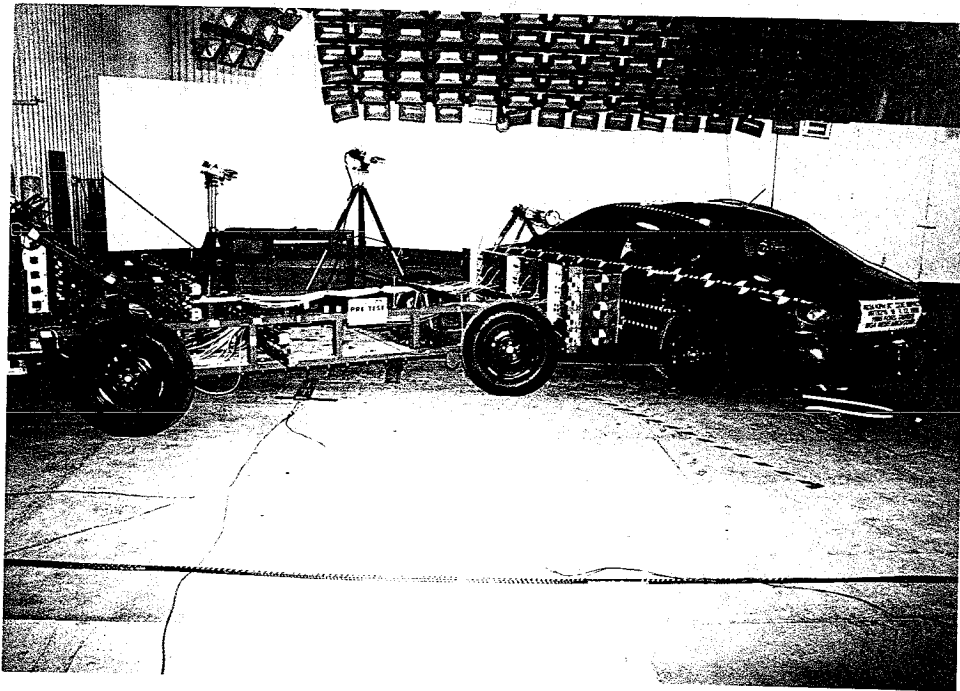


Photo No. A-51 - MDB Against Vehicle

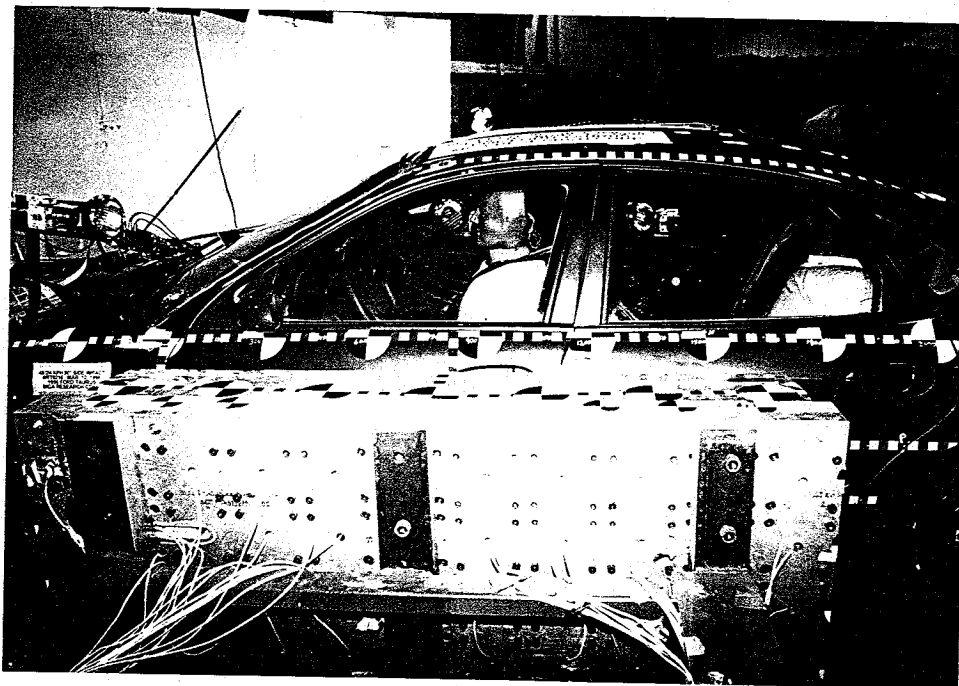


Photo No. A-52 - Rear View of MDB Load Cell Face Against Vehicle

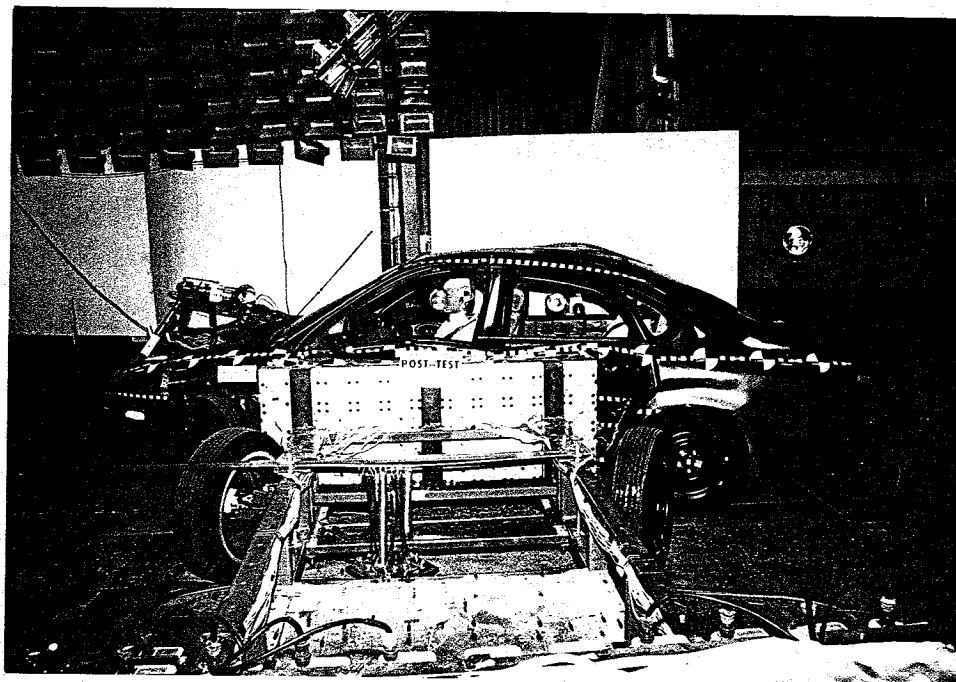


Photo No. A-53 - Rear View of MDB Load Cell Face Against Vehicle

APPENDIX B
TEST DATA

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* No valid data collected

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* No valid data collected

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* No valid data collected

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* No valid data collected

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* No valid data collected

Occupant Data: (Cont'd)

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* No valid data collected

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

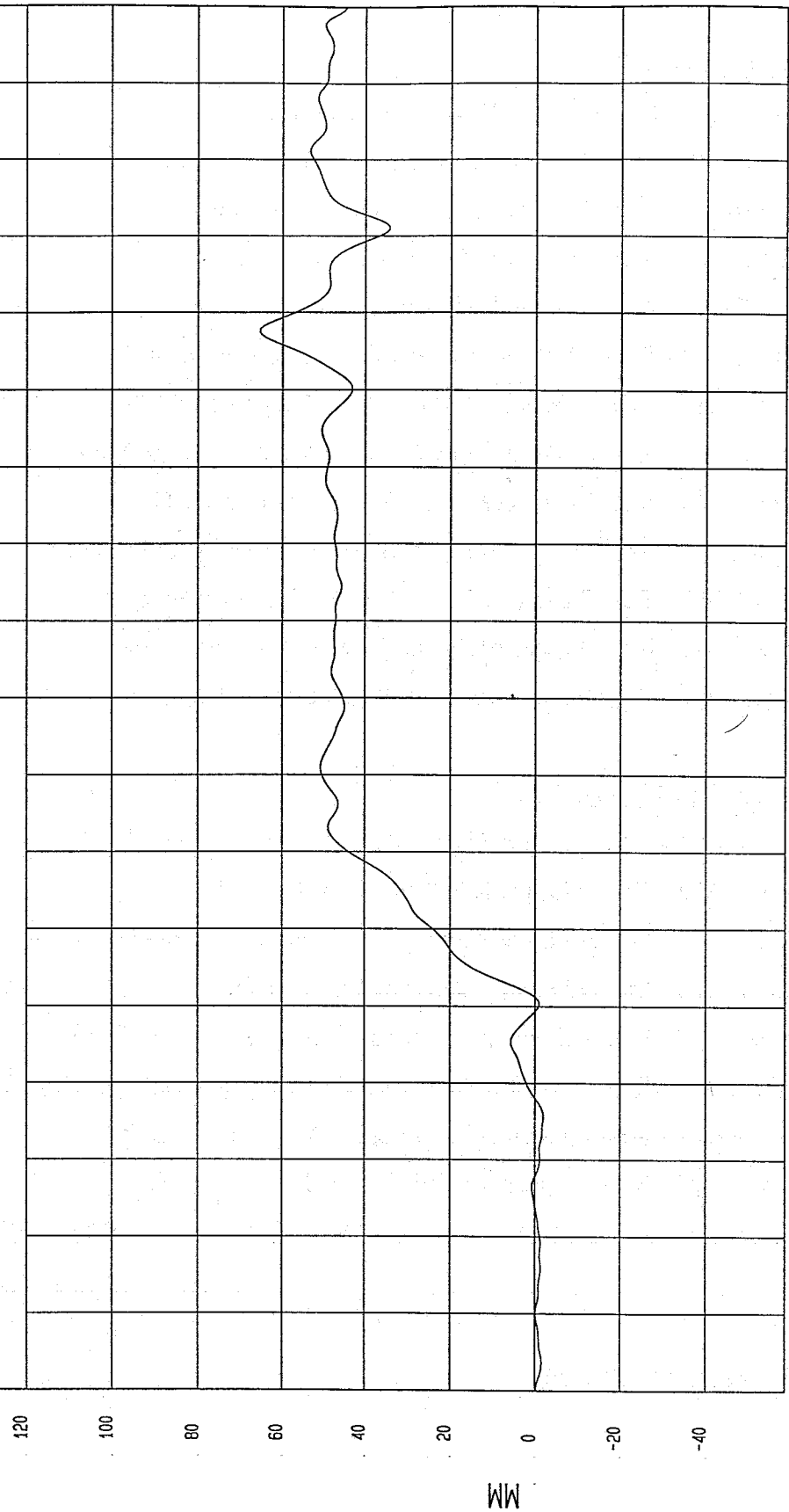
COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -1.92 MM at 16 msec

Maximum = 65.23 MM at 118 msec

STRING POT 1

1 C980160F.D01 Filterclass (60)



TIME (seconds)

MM

NGA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

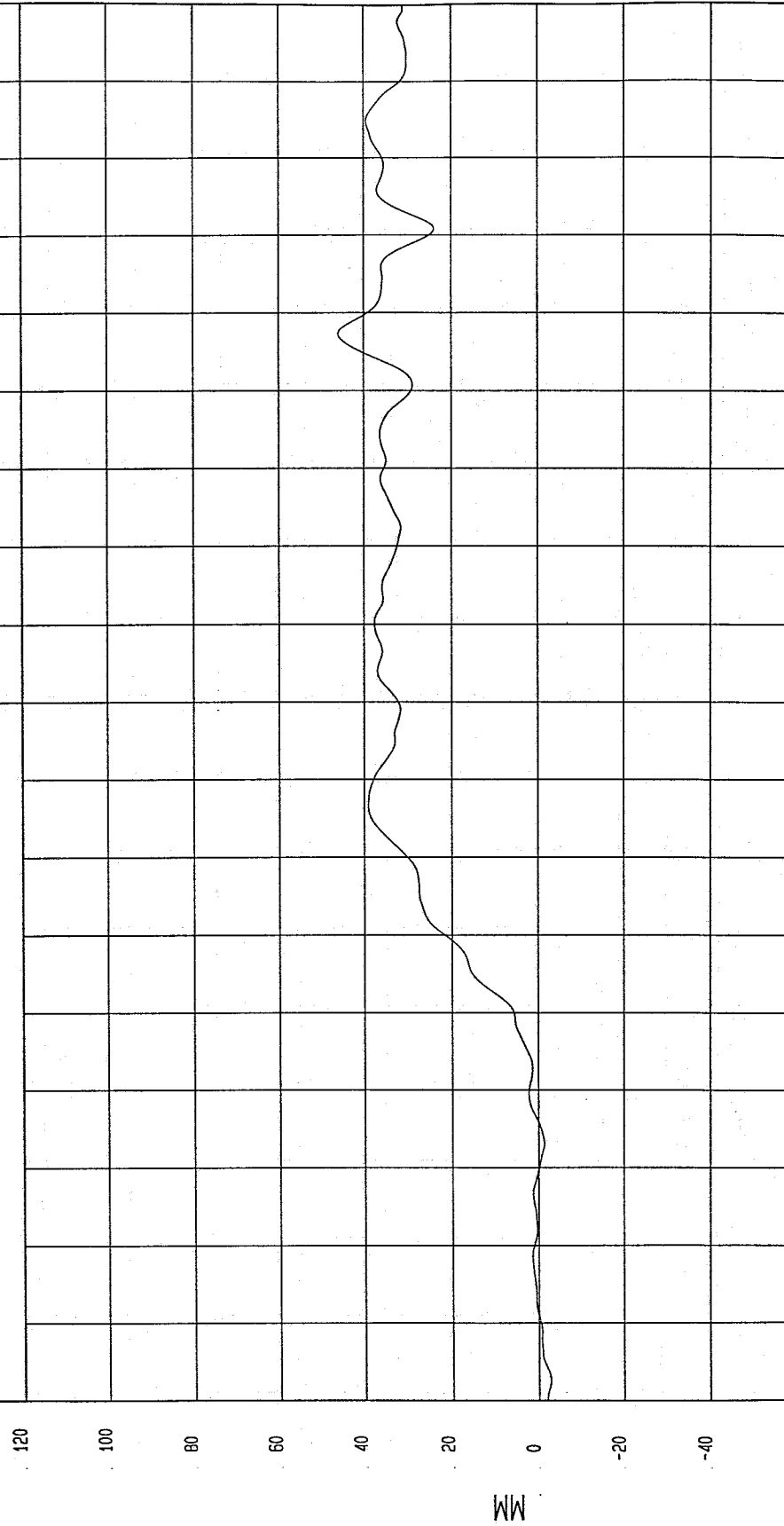
COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -2.7 MM at -17 msec

Maximum = 46.02 MM at 117 msec

STRING POT 2

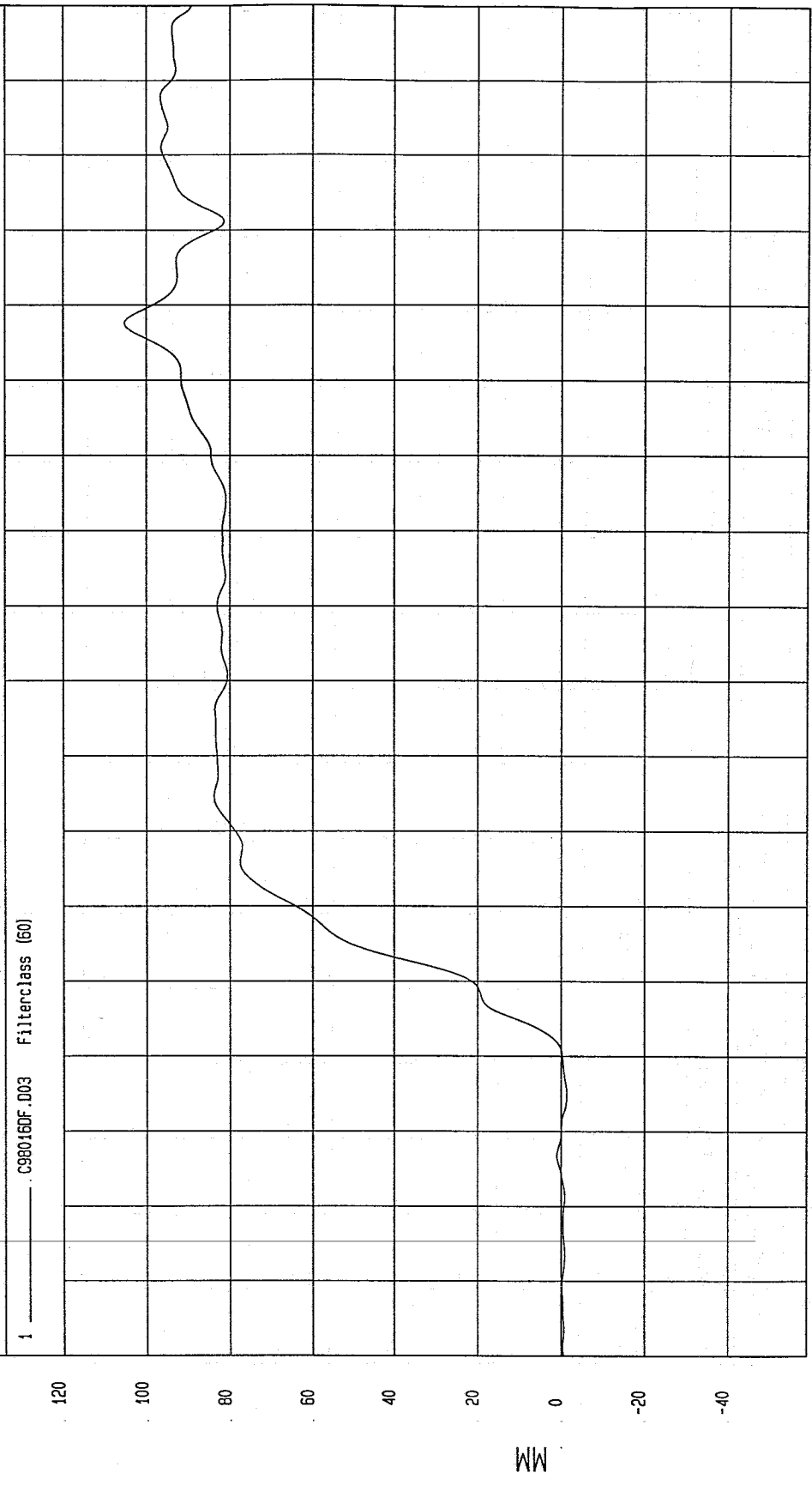
1 _____ C980160F.D02 Filterclass (60)



NGA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST	TEST DATE: 03-12-1998
COMPONENT: 1996 FORD TAURUS (RT0206)	Speed: 32.78 MPH 52.8 KPH
Minimum = -1.34 MM at 15 msec	Maximum = 105.3 MM at 118 msec

STRING POT 3



TIME (seconds)

NGA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

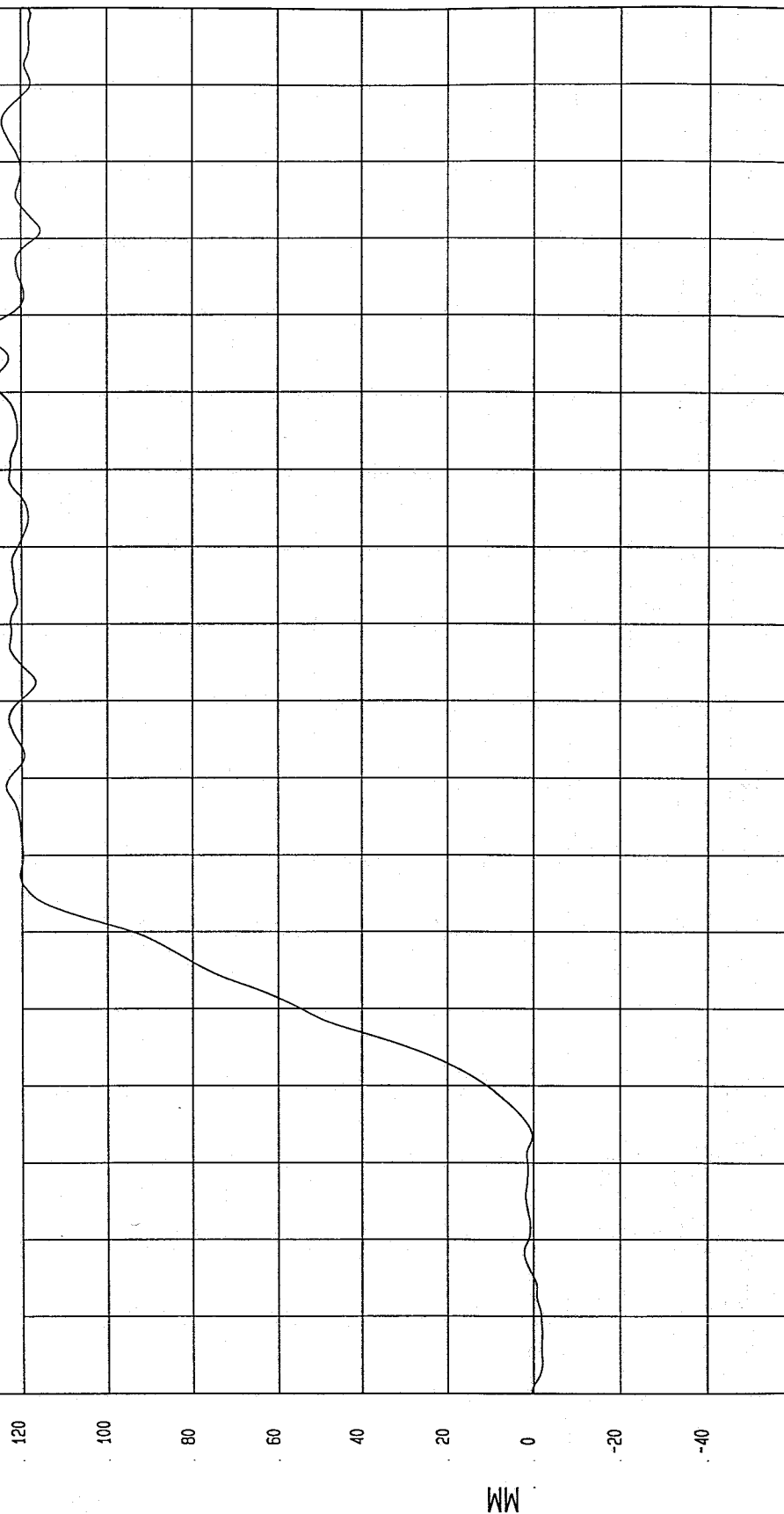
Speed: 32.78 MPH 52.8 KPH

Minimum = -2.04 MM at -16 msec

Maximum = 128.44 MM at 118 msec

STRING POT 4

1 _____ C980100F.004 FilterClass (60)



NSA Research
11-10-1998 13:24

TIME (seconds)

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

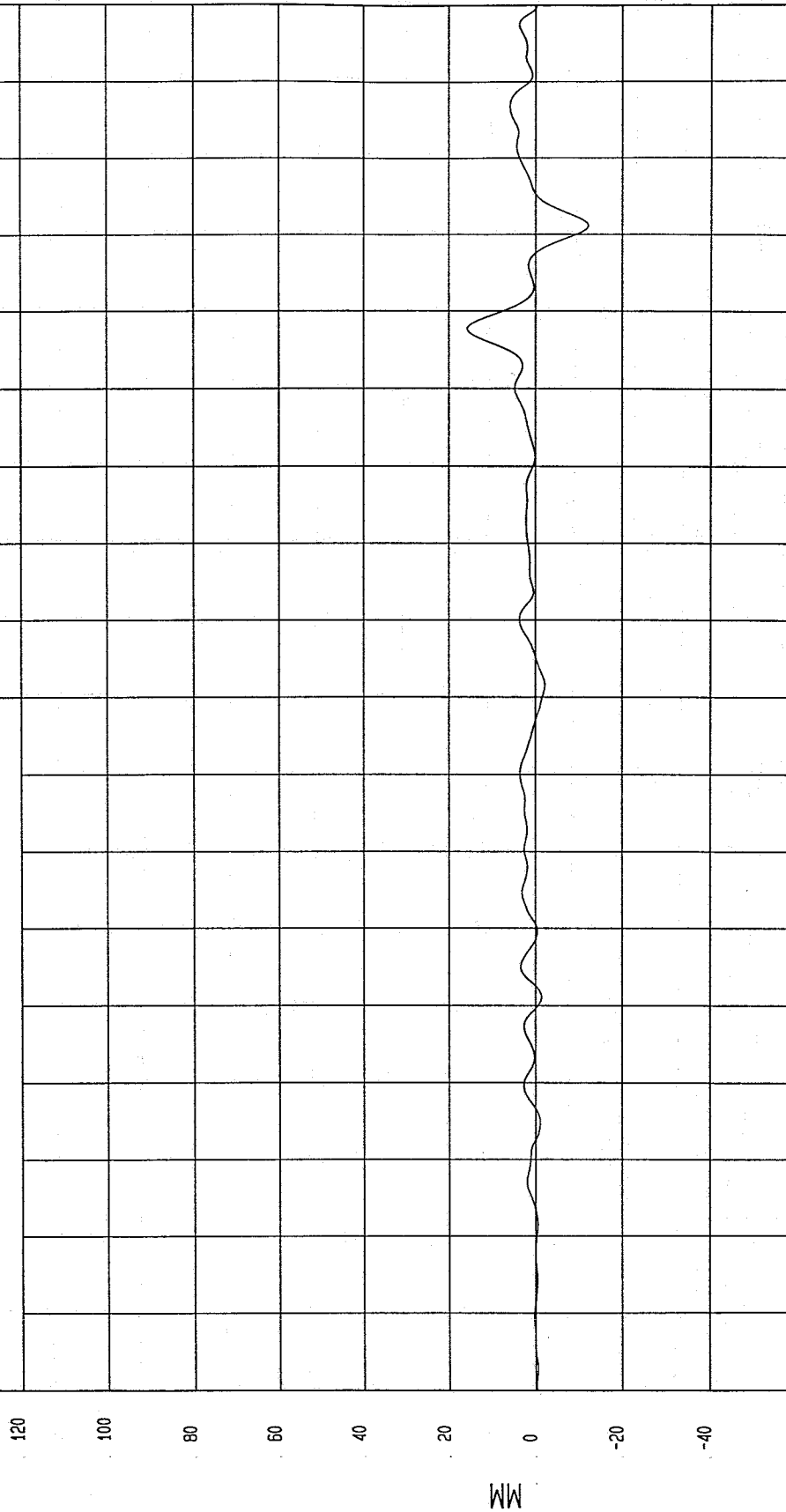
COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -12.22 MM at 131 msec

Maximum = 15.65 MM at 118 msec

STRING POT 5

1 C980160F.D05 Filterclass (60)



NCA Research
11-10-1998 13:24

TIME (seconds)

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

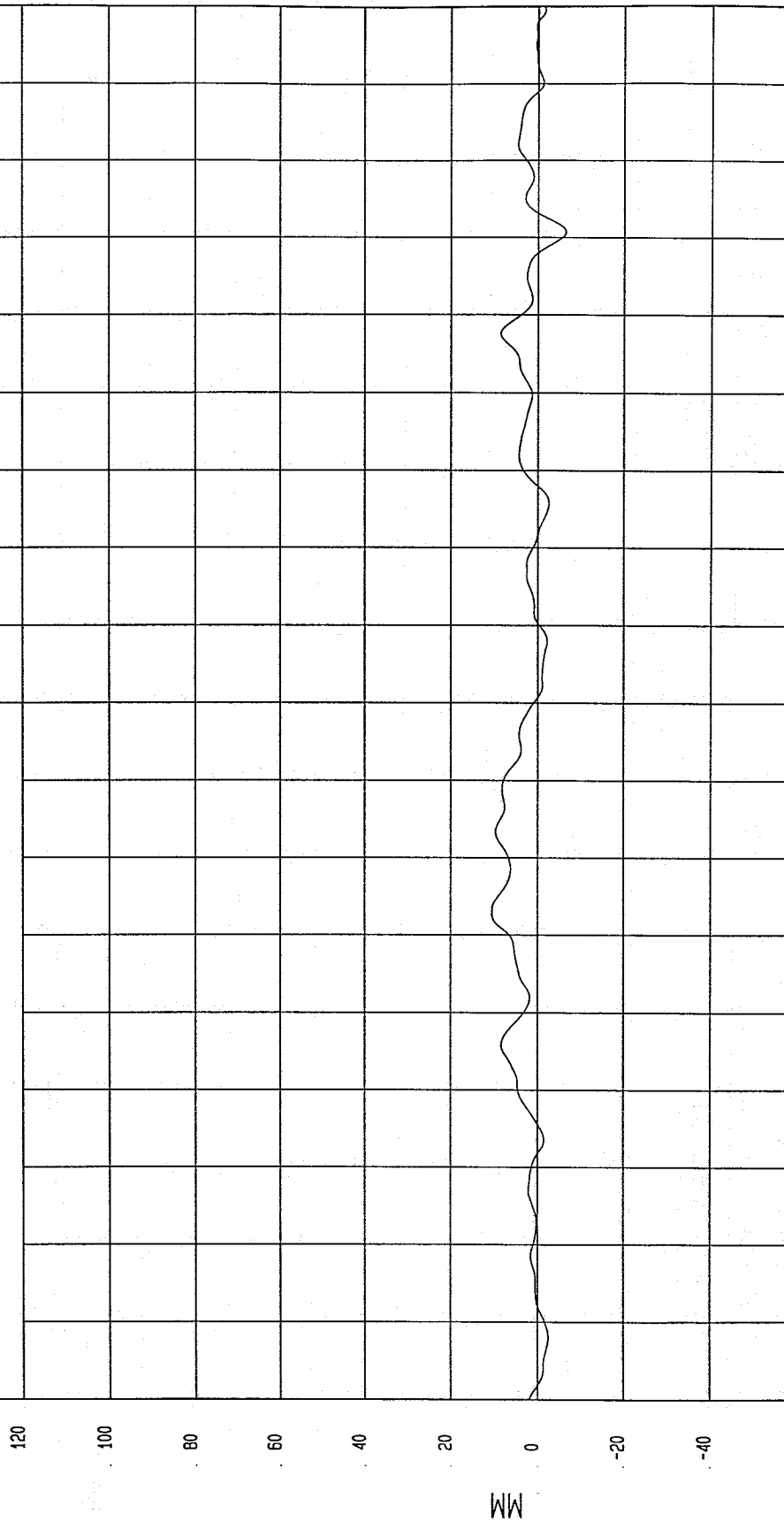
Speed: 32.78 MPH 52.8 KPH

Minimum = -6.45 MM at 131 msec

Maximum = 10.4 MM at 43 msec

STRING POT 6

1 _____ C98016DF.D06 Filterclass (60)



MCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

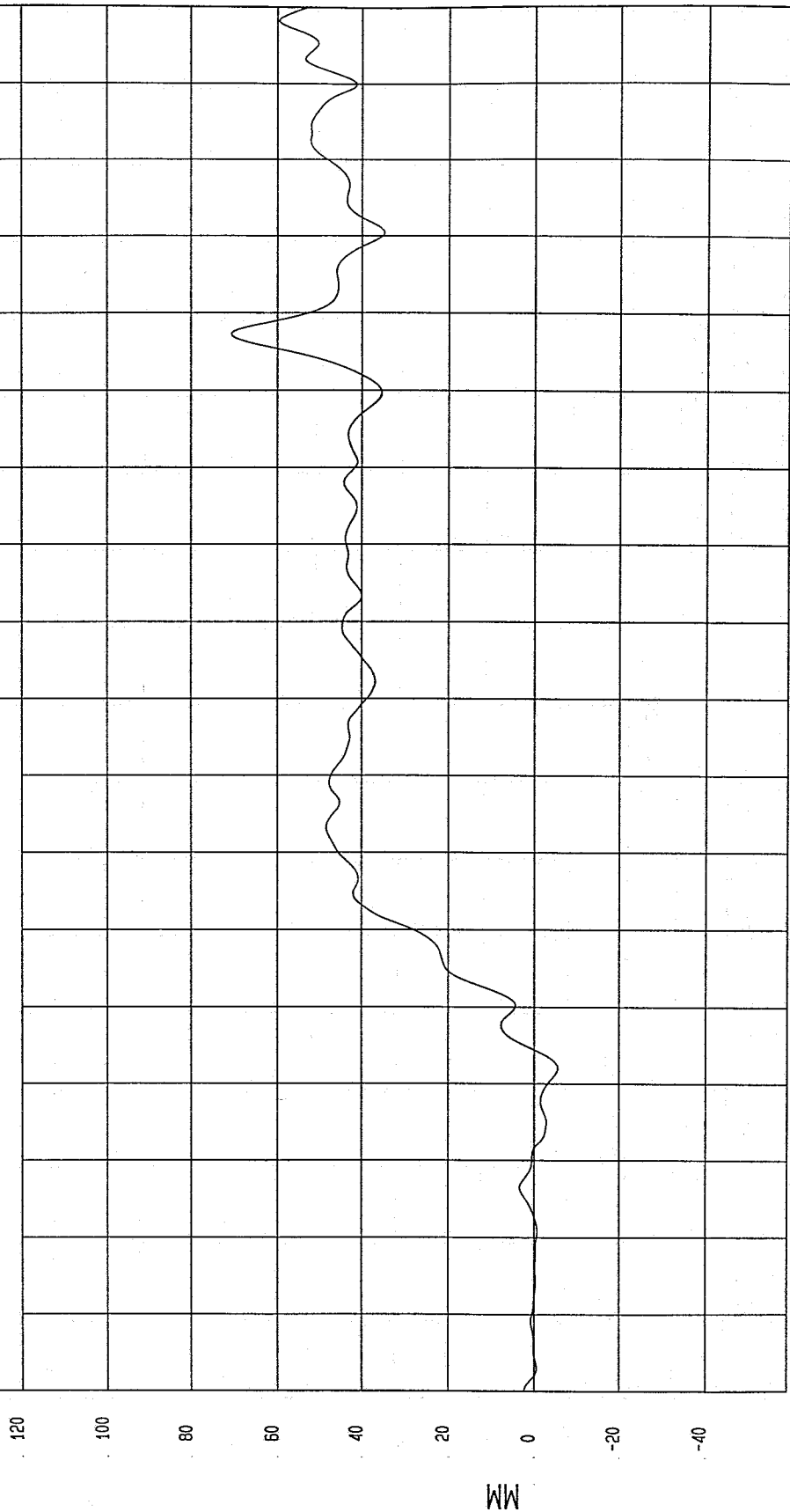
Speed: 32.78 MPH 52.8 KPH

Minimum = -5.5 MM at 22 msec

Maximum = 70.57 MM at 117 msec

STRING POT 7

1 _____ C980160F.D07 Filterclass (60)



TIME (seconds)

MCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

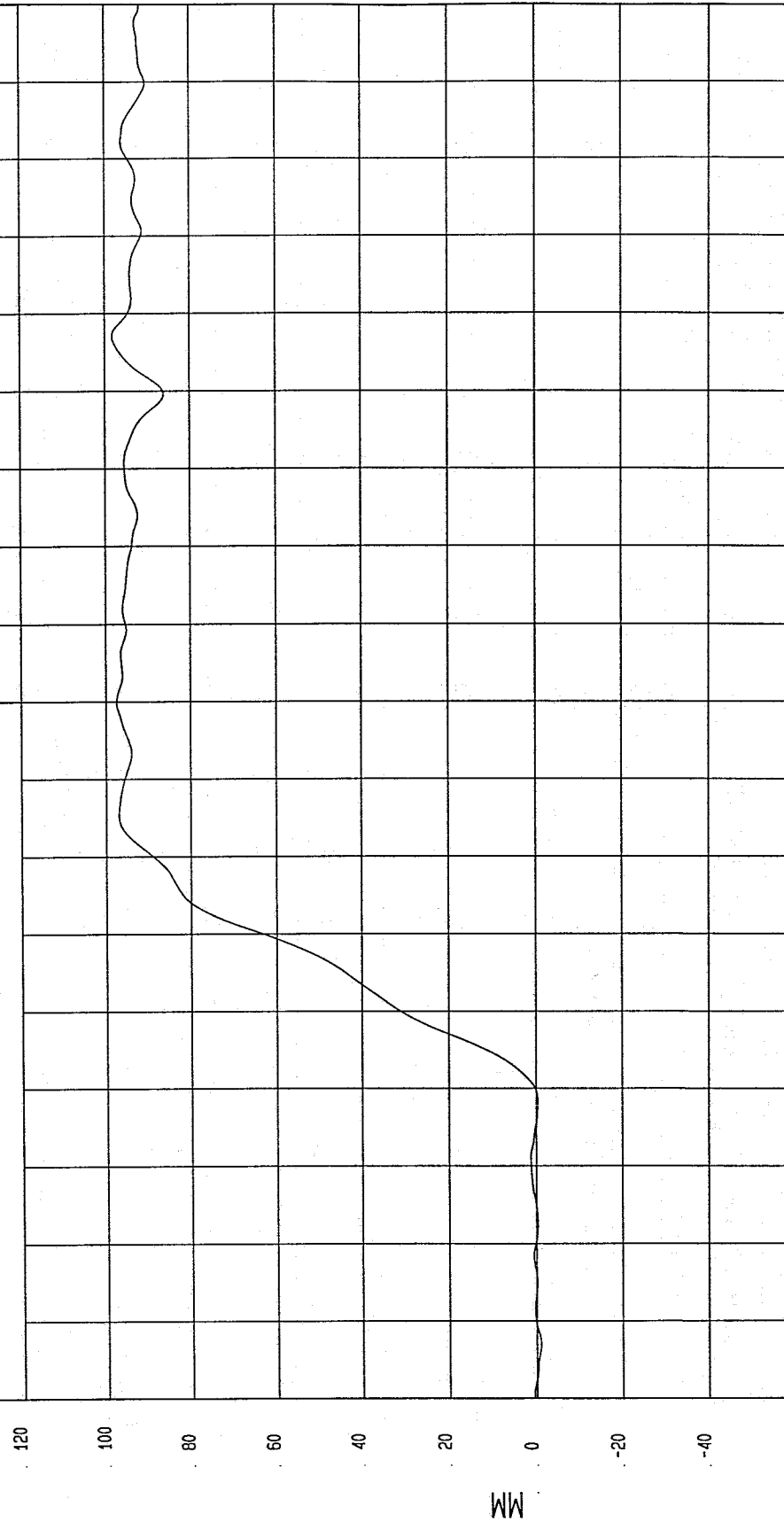
COMPONENT: 1996 FORD TAURUS (RT0206)

Maximum = 98.28 MM at 117 msec

Minimum = -.99 MM at -13 msec

STRING POT 8

1 _____ C980160F.D08 Filterclass (60)



NGA Research
11-10-1998 13:24

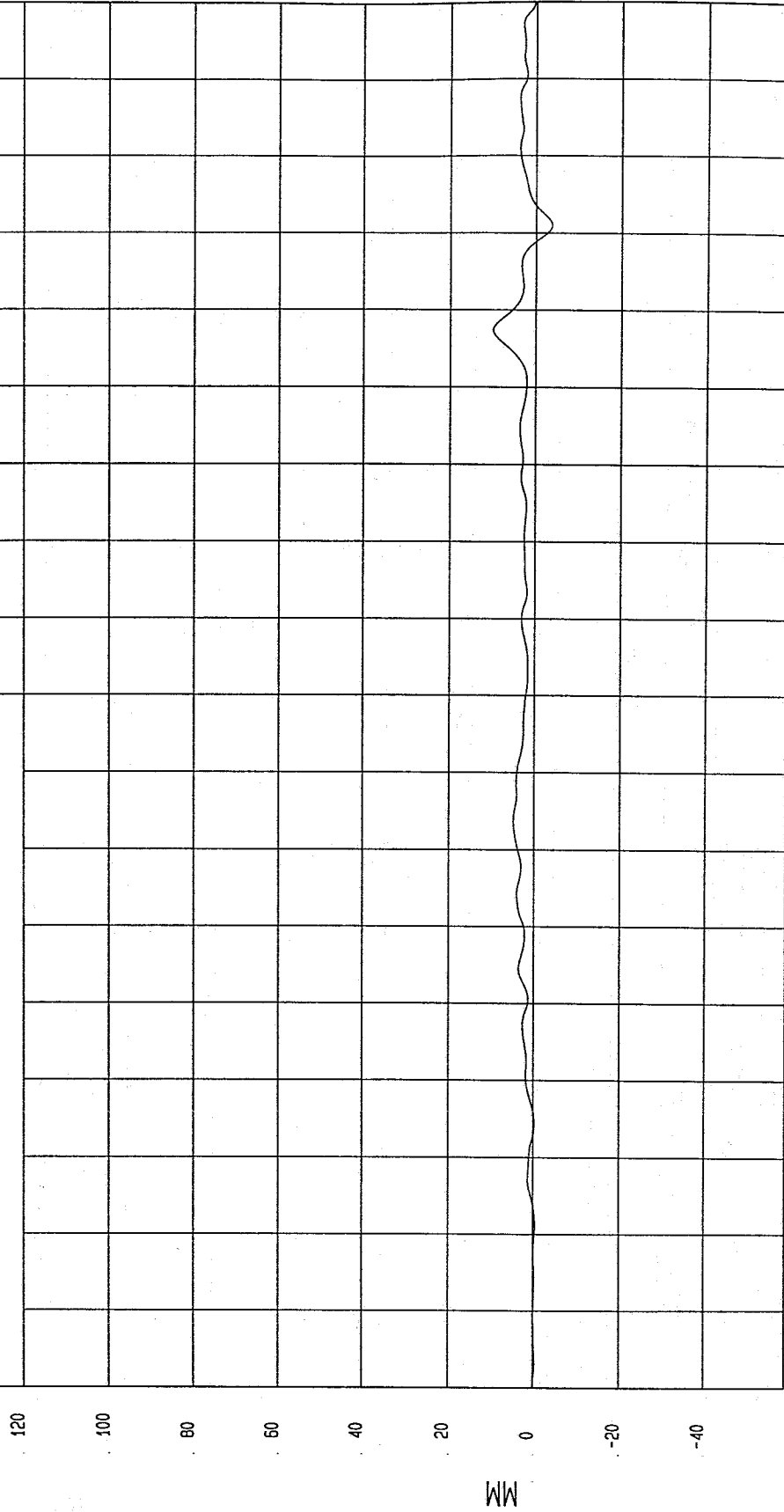
TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

Minimum = -3.72 MM at 131 msec Maximum = 9.87 MM at 117 msec

STRING POT 9

1 C98016DF.D09 Filterclass (60)



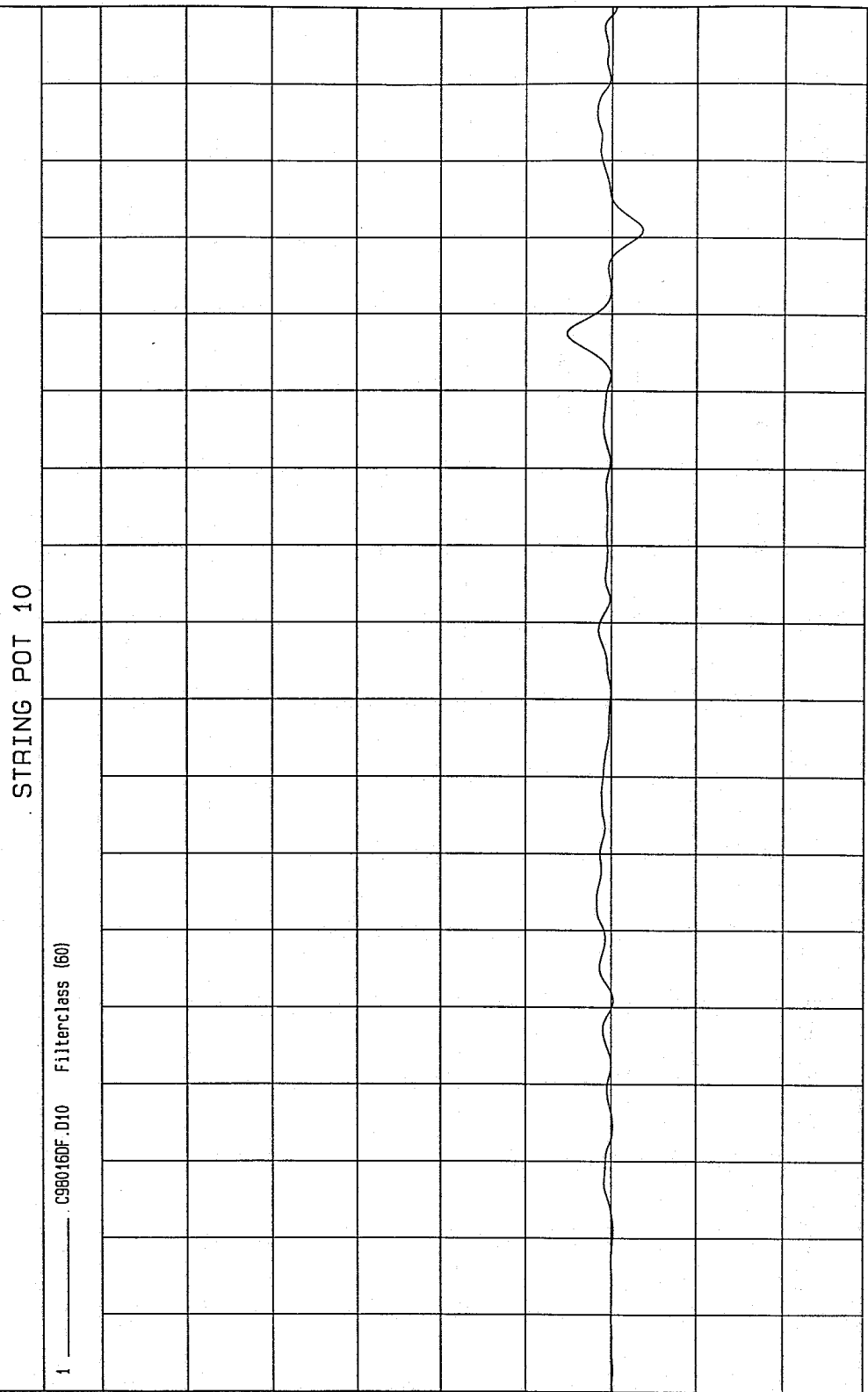
TIME (seconds)

MCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

Minimum = -7.31 MM at 131 msec Maximum = 10.33 MM at 117 msec



TIME (seconds)

0.15 0.14 0.13 0.12 0.11 0.1 0.09 0.08 0.07 0.06 0.05 0.04 0.03 0.02 0.01 0 -0.01 -0.02

MM

120 100 80 60 40 20 0 -20 -40

NCA Research
11-10-1998 13:24

TEST DATE: 03-12-1998

TEST: TTD#1 FMVSS 214 TYPE TEST

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

Maximum = 460.85 MM at 118 msec

Minimum = -.99 MM at 3 msec

STRING POT 11

1 C980160F.D11 FilterClass (60)

120

100

80

60

40

20

0

-20

-40

MM

String Broke

15

14

13

12

11

10

09

08

07

06

05

04

03

02

01

0

-01

-02

TIME (seconds)

NCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

Maximum = 54.11 MM at 55 msec

Minimum = -2.53 MM at -13 msec

STRING POT 12

1 C98016DF.D12 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

.01

.02

.03

.04

.05

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.11

.12

.13

.14

.15

TIME (seconds)

MCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -4.71 MM at 131 msec

Maximum = 12.1 MM at 118 msec

STRING POT 13

1 _____ C98016DF.D13 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

.01

.02

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.14

.15

TIME (seconds)

NGA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

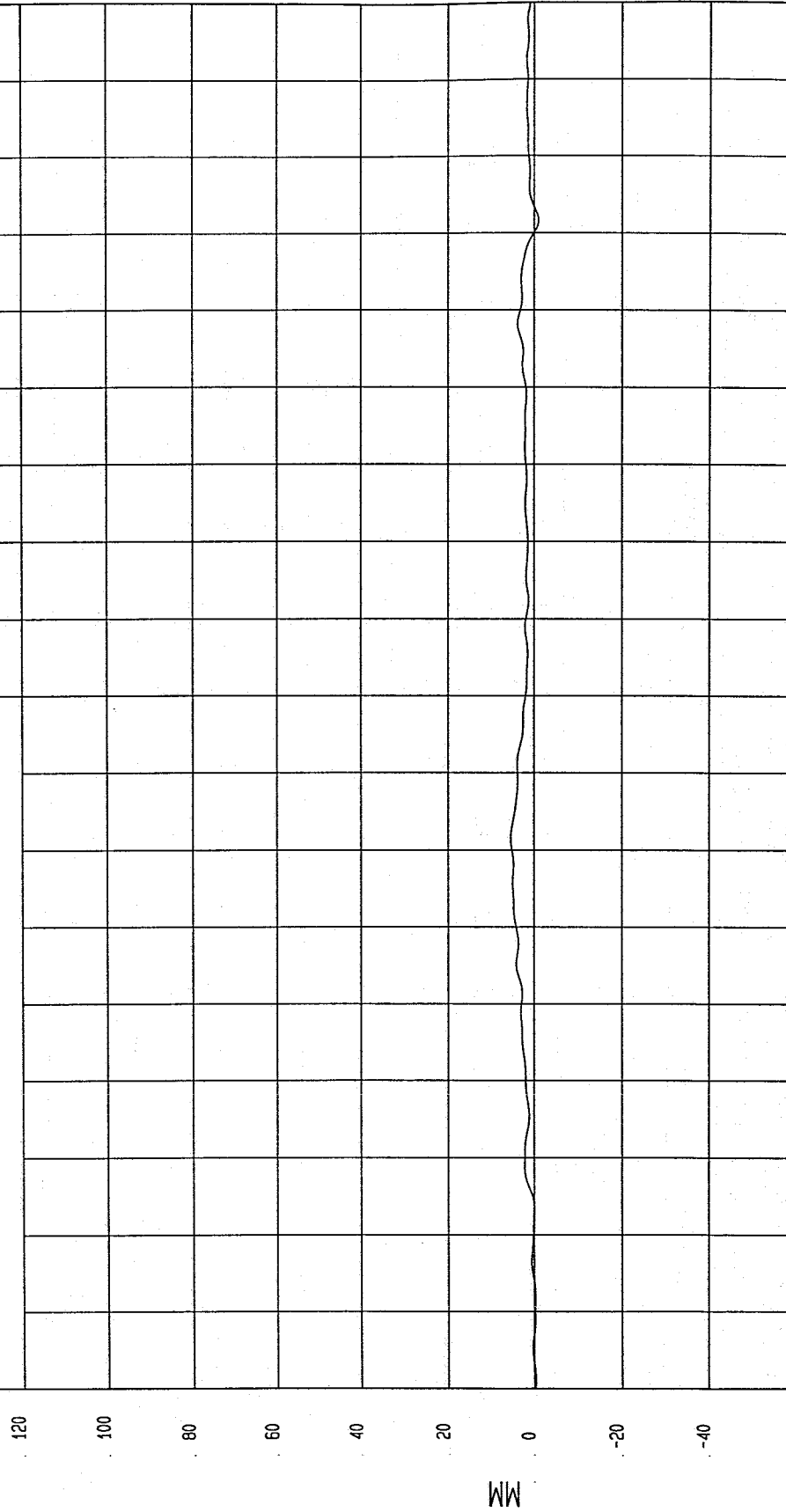
COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -1 MM at 132 msec

Maximum = 5.35 MM at 52 msec

STRING POT 14

1 _____ C980160F.D14 Filterclass (60)



MCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

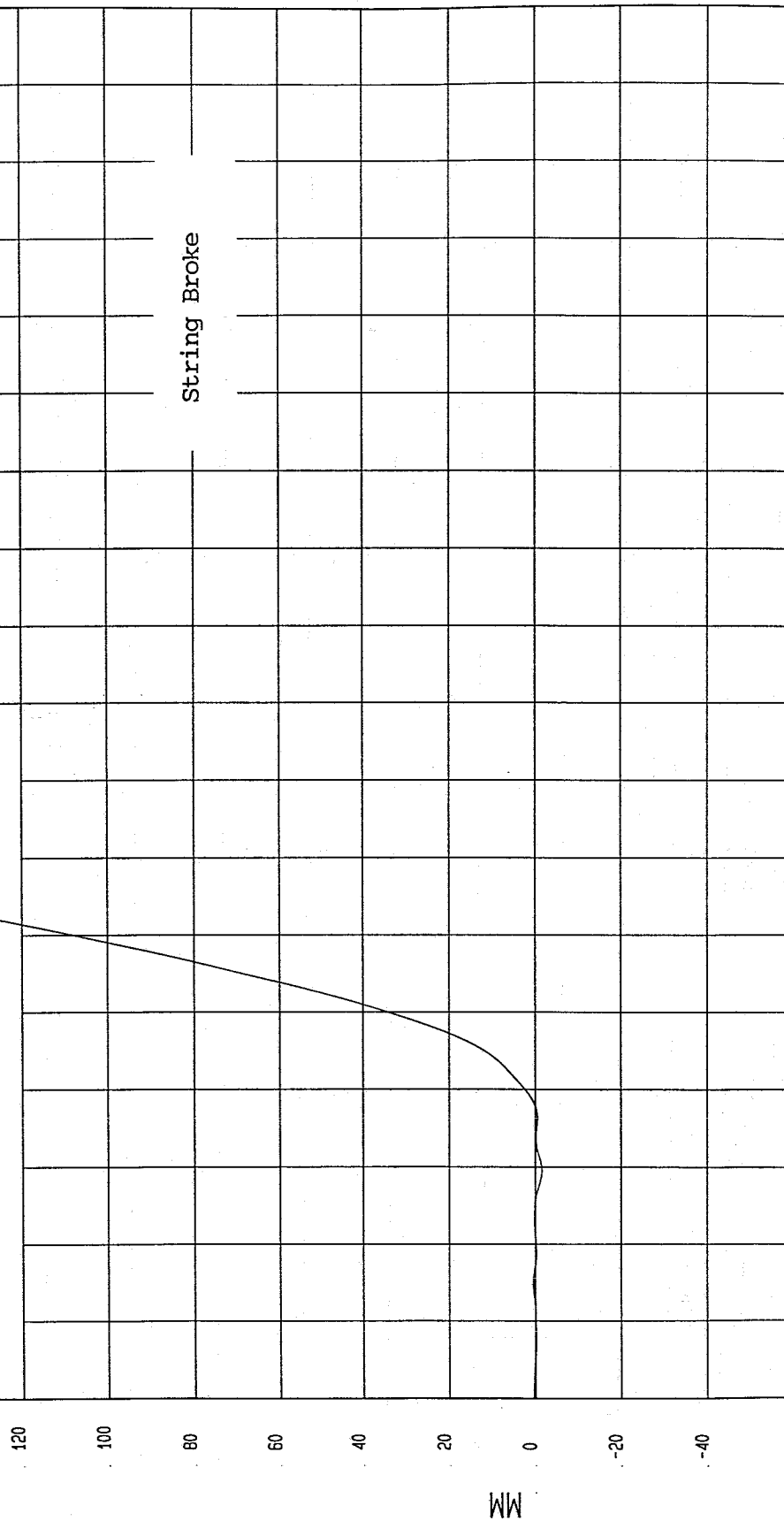
Speed: 32.78 MPH 52.8 KPH

Minimum = -1.51 MM at 10 msec

Maximum = 425.07 MM at 118 msec

STRING POT 15

1 — C980160F.D15 Filterclass (60)



MGA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

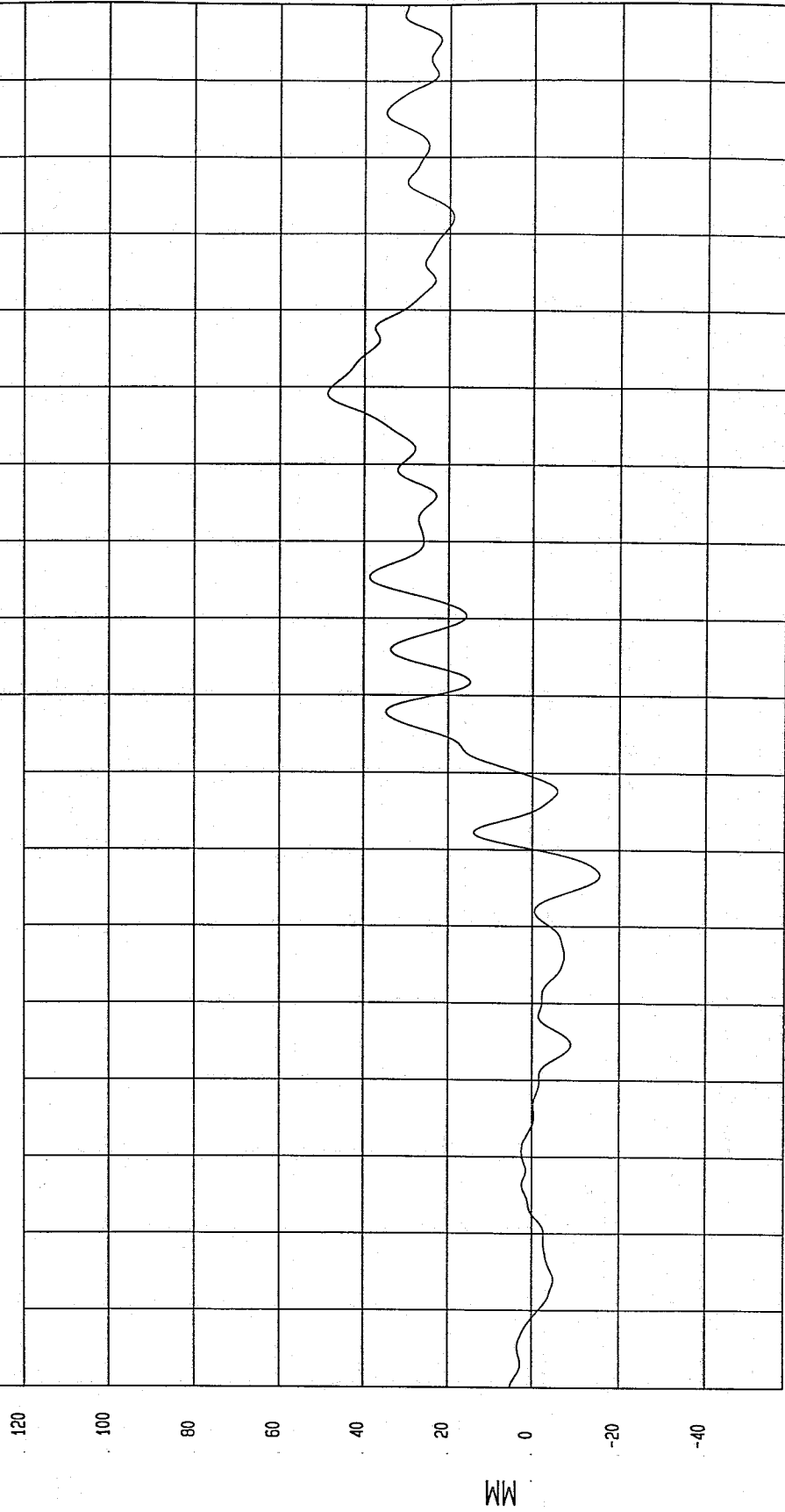
Speed: 32.78 MPH 52.8 KPH

Minimum = -15.38 MM at 47 msec

Maximum = 48.64 MM at 109 msec

STRING POT 16

1 _____ C980160F.D16 Filterclass (60)

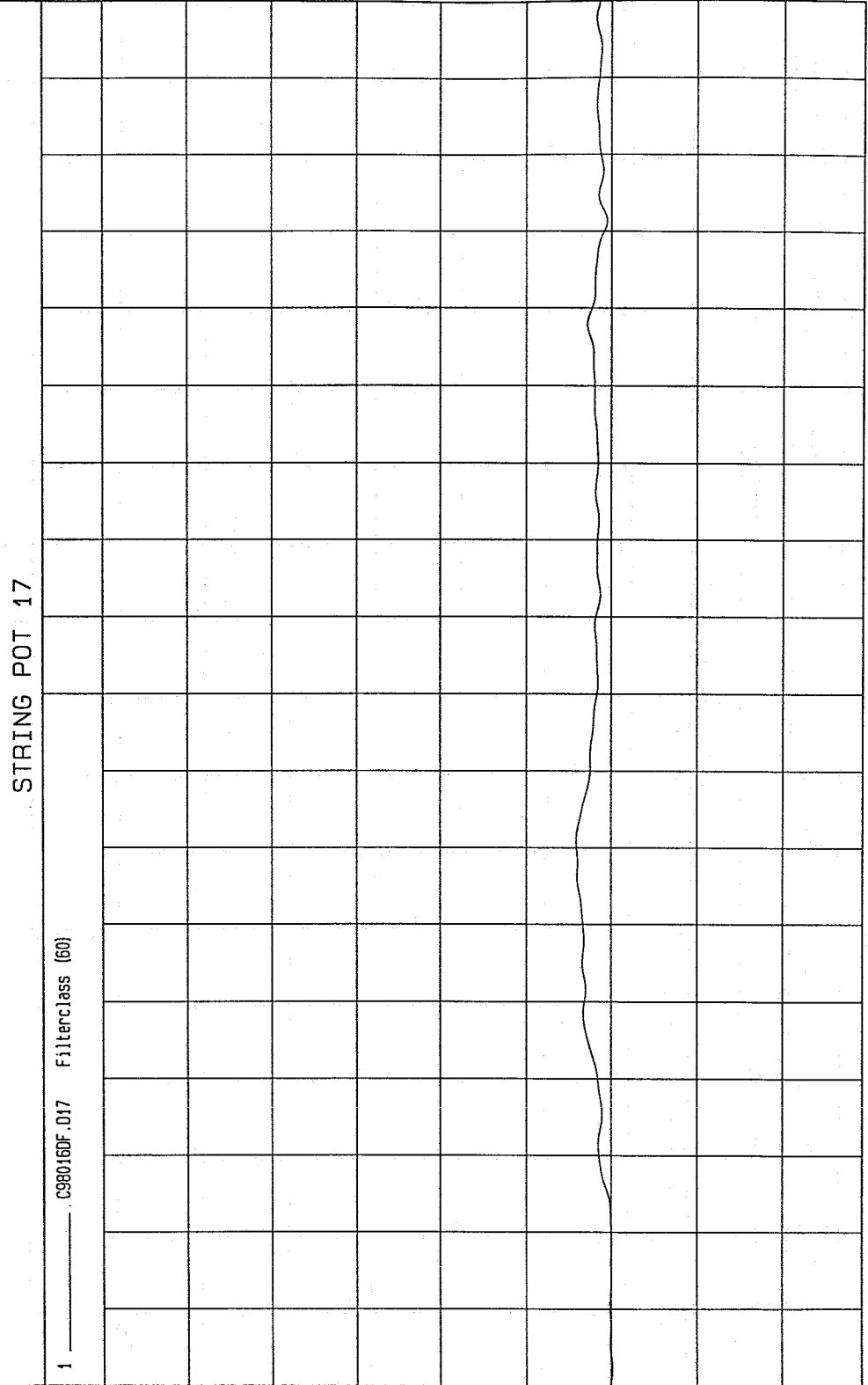


MCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

Minimum = -11.58 MM at 188 msec Maximum = 8.17 MM at 51 msec



TIME (seconds)

MSA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

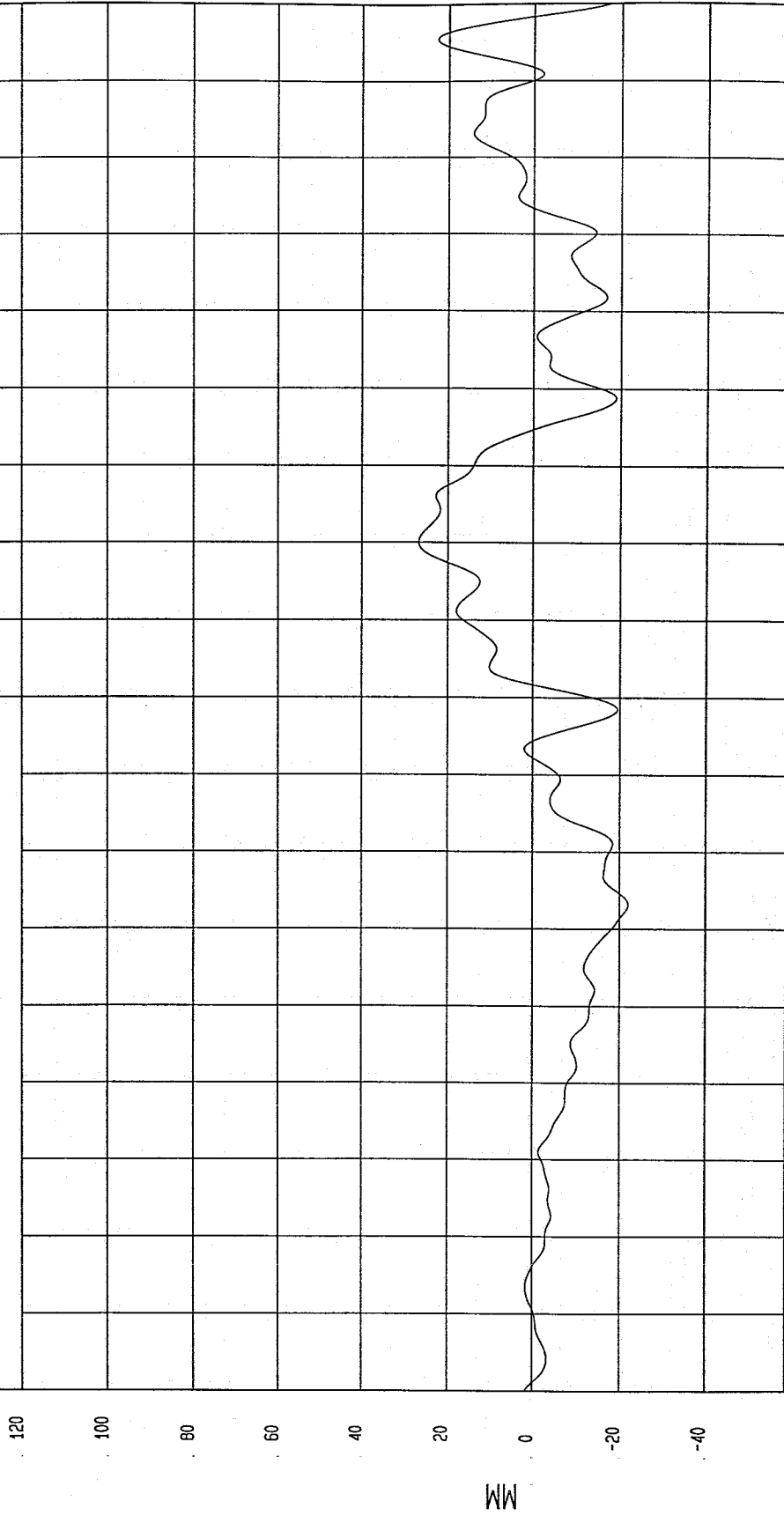
COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -22.07 MM at 43 msec

Maximum = 26.74 MM at 90 msec

STRING POT 18

1 C98016DF.D18 Filterclass (60)



NCA Research
11-10-1998 13:24

TIME (seconds)

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -.62 MM at -7 msec

Maximum = 438.5 MM at 118 msec

STRING POT 19

1 _____ C980160F.019 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

String Broke

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (seconds)

MCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -3.31 MM at -11 msec

Maximum = 400.7 MM at 80 msec

STRING POT 20

1 _____ C980160F.D20 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

String Broke

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (seconds)

NCA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -.31 MM at -17 msec

Maximum = 19.2 MM at 51 msec

STRING POT 21

1 _____ C98016DF.D21 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

01

02

03

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06

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1

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12

13

14

15

TIME (seconds)

MEA Research
11-10-1998 13:24

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

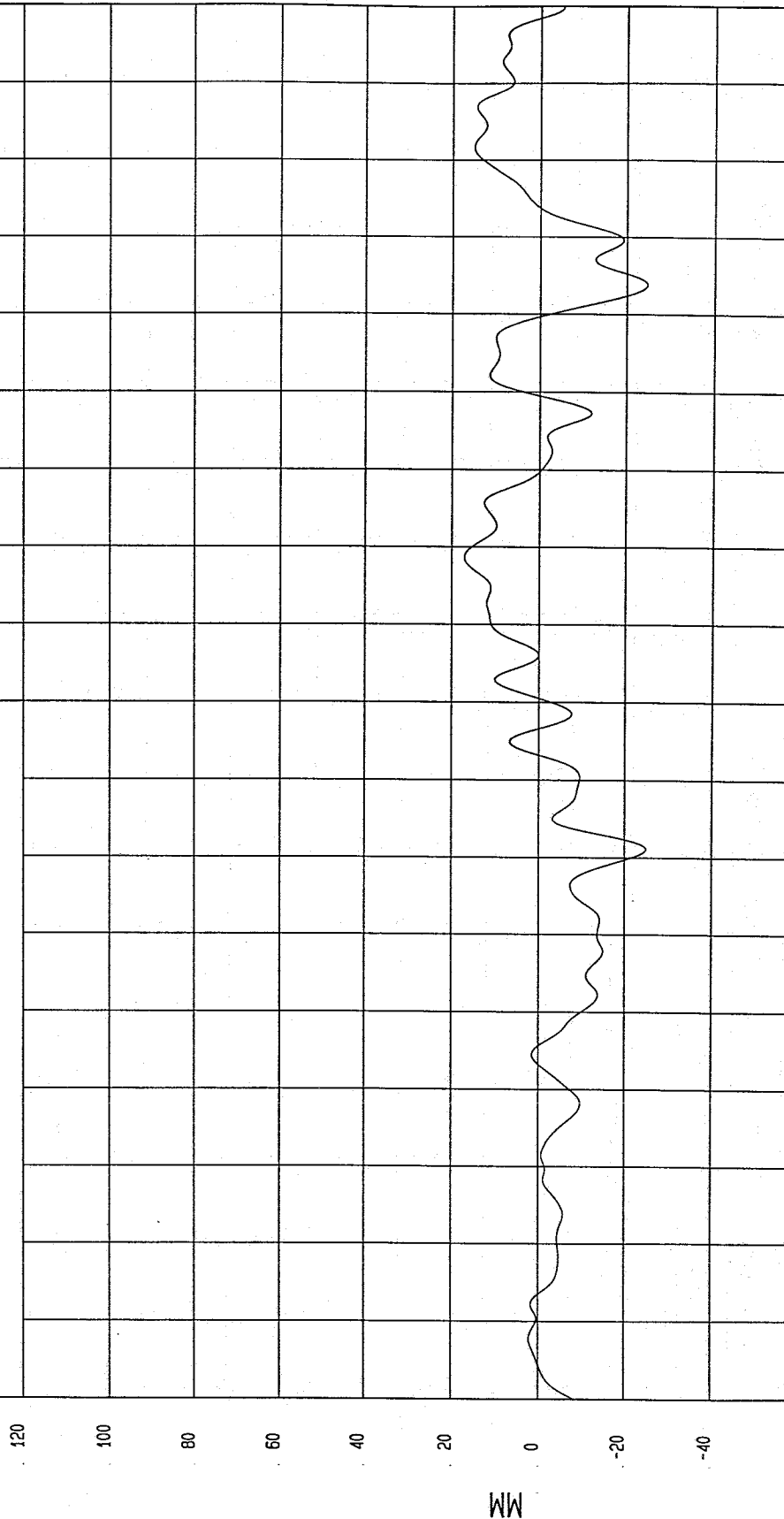
COMPONENT: 1996 FORD TAURUS (RT0206)

Maximum = 17.03 MM at 89 msec

Minimum = -24.95 MM at 51 msec

STRING POT 22

1 _____ C98016DF.D22 Filterclass (50)



MSA Research
11-10-1998 13:24

TIME (seconds)

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

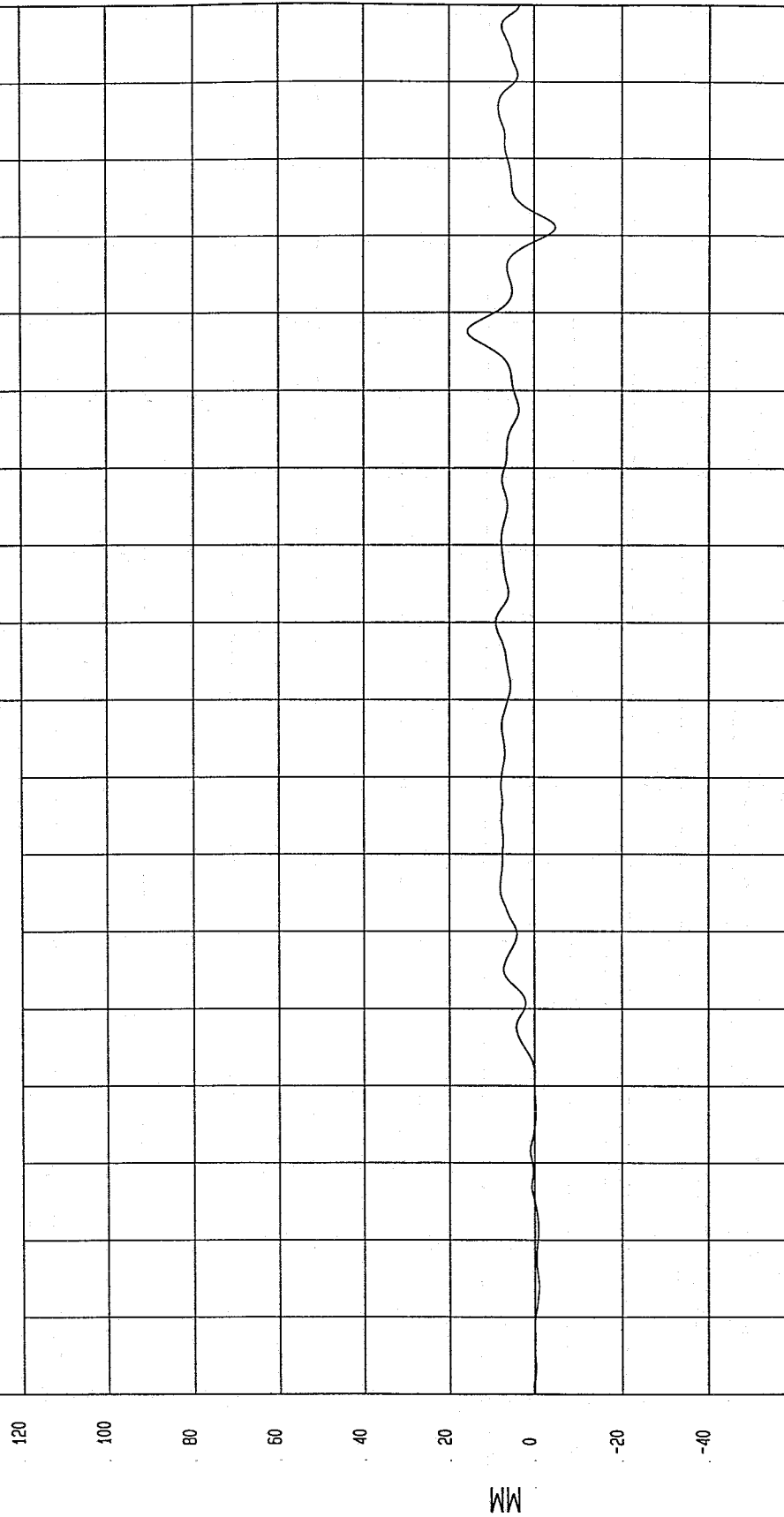
COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -4.85 MM at 131 msec

Maximum = 15.71 MM at 118 msec

STRING POT 23

1 _____ C98016DF.D23 Filterclass (60)



TIME (seconds)

NGA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -.69 MM at -7 msec

Maximum = 396.23 MM at 118 msec

STRING POT 24

1' _____ C980160F.D24 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

String Broke

MGA Research
11-10-1998 13:25

TIME (seconds)

15

14

13

12

11

10

09

08

07

06

05

04

03

02

01

0

-01

-02

TEST: ITD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

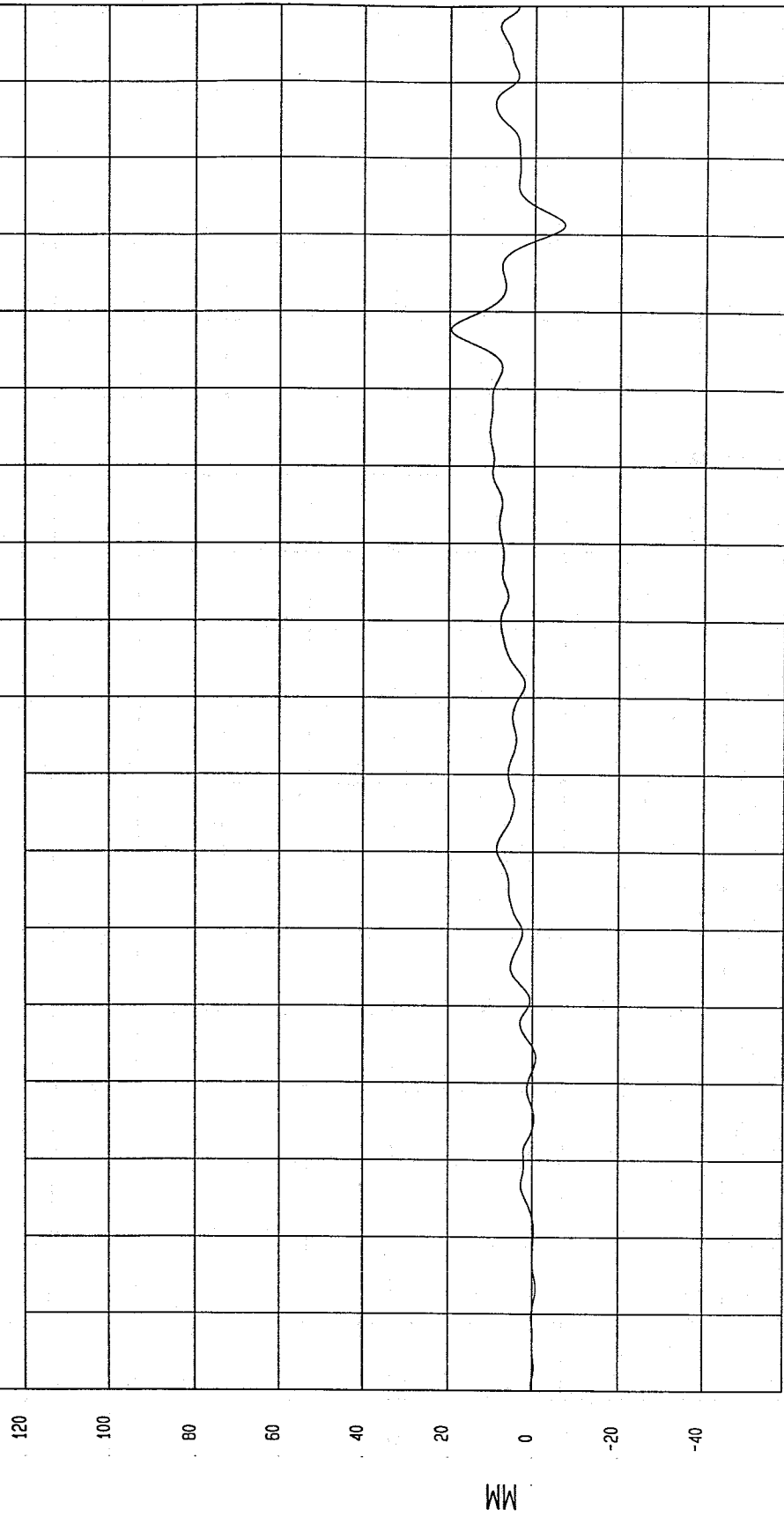
Speed: 32.78 MPH 52.8 KPH

Minimum = -6.91 MW at 131 msec

Maximum = 19.68 MW at 118 msec

STRING POT 25

1 _____ C980160F.025 Filterclass (60)



MSA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -56.6 MM at 45 msec

Maximum = 41.66 MM at 82 msec

STRING POT 26

1 C980160F.D26 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

-.02

-.01

0

.01

.02

.03

.04

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.11

.12

.13

.14

.15

TIME (seconds)

MGA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -1.08 MM at -5 msec

Maximum = 26.96 MM at 118 msec

STRING POT 27

1 C980160F.D27 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

-0.02

-0.01

0

.01

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.03

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.15

TIME (seconds)

MCA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

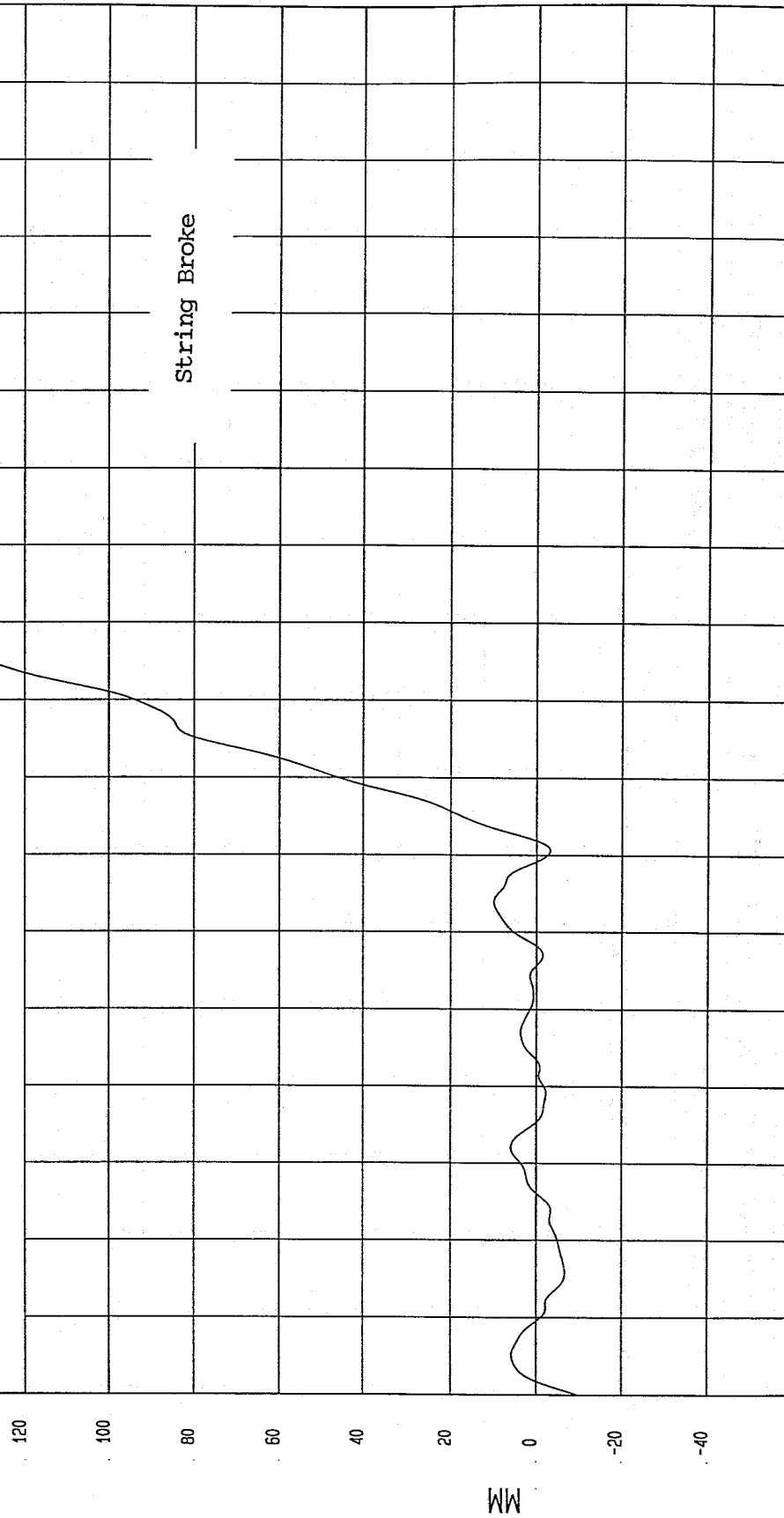
Speed: 32.78 MPH 52.8 KPH

Minimum = -9.83 MM at -20 msec

Maximum = 360.26 MM at 113 msec

STRING POT 28

1 _____ C980160F.D28 Filterclass (60)



TIME (seconds)

15
14
13
12
11
1
09
08
07
06
05
04
03
02
01
0
-01
-02

MM

120
100
80
60
40
20
0
-20
-40

String Broke

NCA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

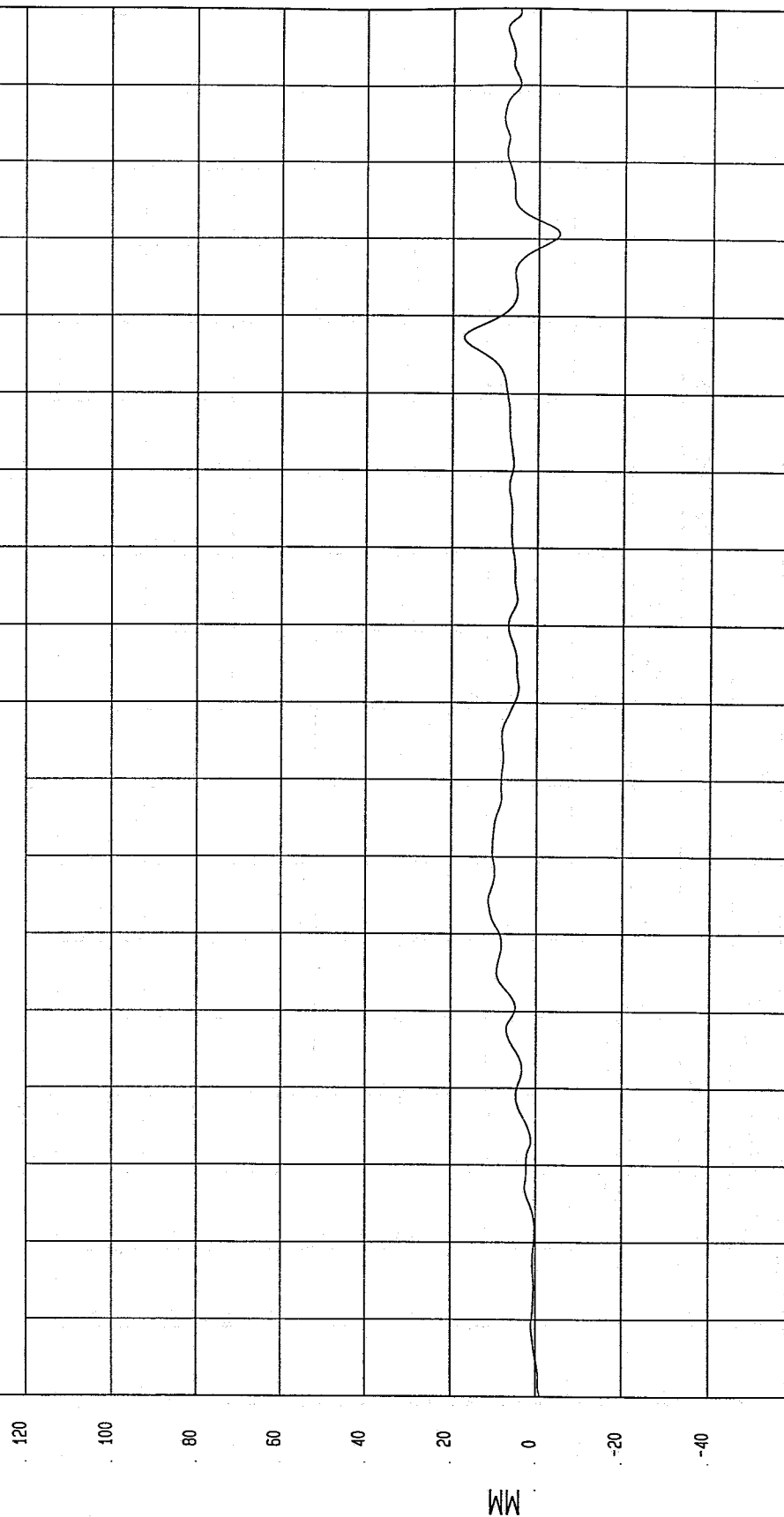
Speed: 32.78 MPH 52.8 KPH

Minimum = -4.77 MM at 131 msec

Maximum = 17.3 MM at 117 msec

STRING POT 29

1 _____ C980160F.029 Filterclass (60)



NSA Research
11-10-1998 13:25

TIME (seconds)

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

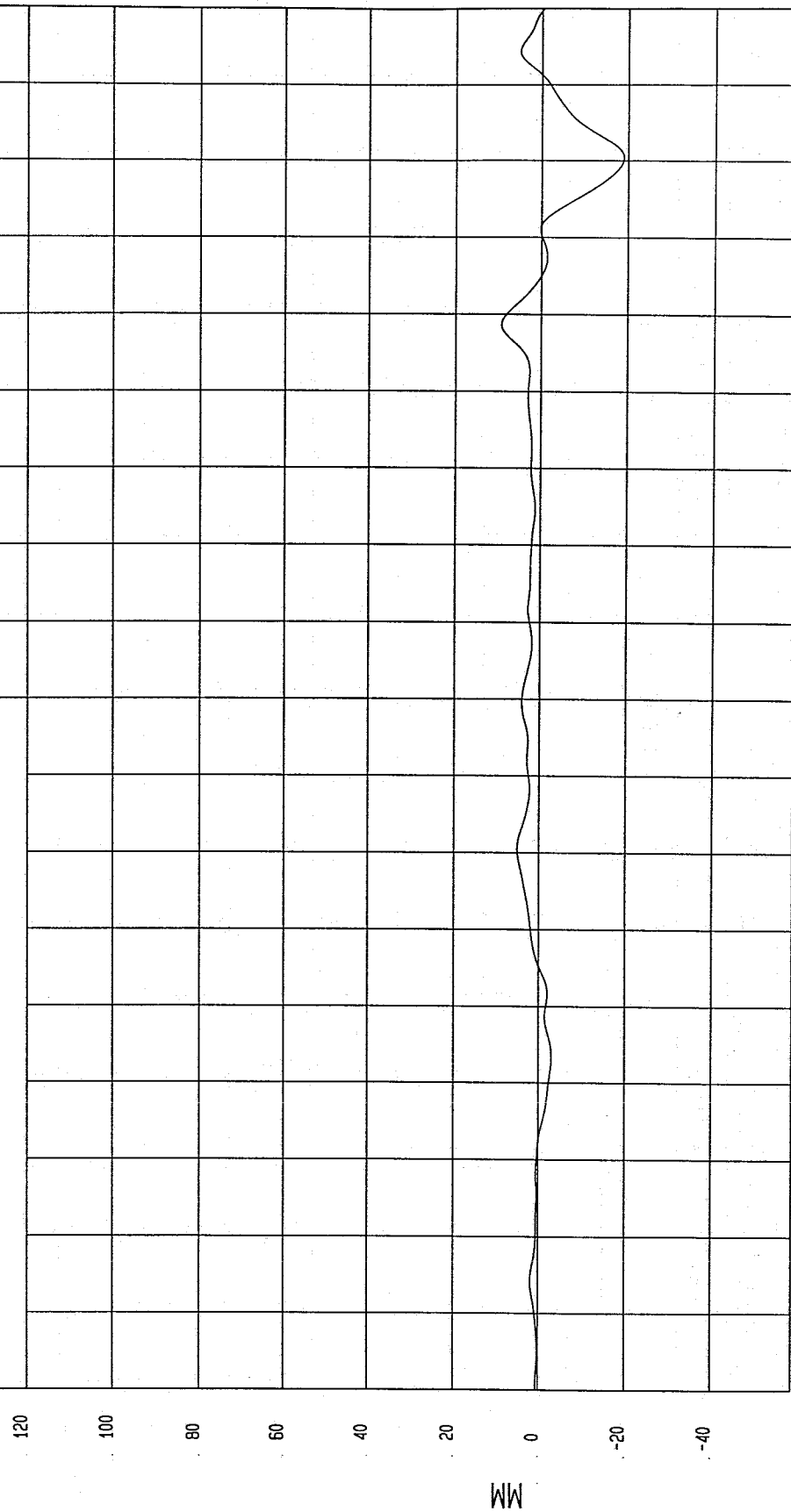
Speed: 32.78 MPH 52.8 KPH

Minimum = -26.14 MM at 199 msec

Maximum = 9.17 MM at 119 msec

STRING POT 30

1 _____ C98016DF.D30 Filterclass (60)



MGA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -.87 MM at -20 msec

Maximum = 459.43 MM at 117 msec

STRING POT 31

1 C980160F.D31 Filterclass (60)

120

100

80

60

40

20

MM

0

-20

-40

String Broke

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (seconds)

MSA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

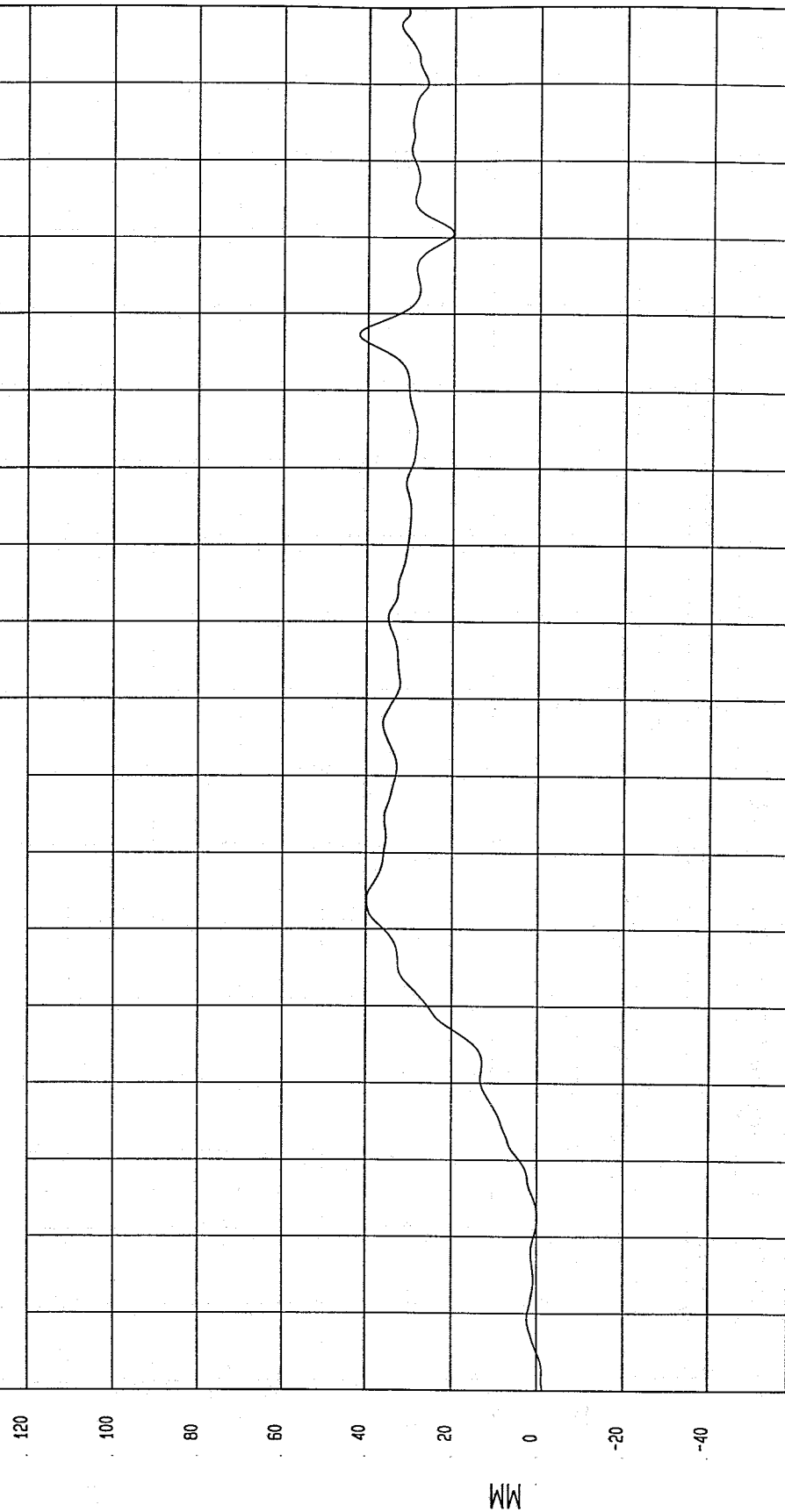
Speed: 32.78 MPH 52.8 KPH

Minimum = -1.35 MM at -20 msec

Maximum = 41.95 MM at 117 msec

STRING POT 32

1 C980160F.D32 Filterclass (60)



MGA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -4.89 MM at 131 msec

Maximum = 18.05 MM at 117 msec

STRING POT 33

1 _____ C980160F.D33 Filterclass (60)

120

100

80

60

40

20

MM

0

-20

-40

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (seconds)

MCA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -5.88 NM at 131 msec

Maximum = 10.97 NM at 54 msec

STRING POT 34

1 _____ C980160F.D34 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

NM

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (seconds)

NGA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

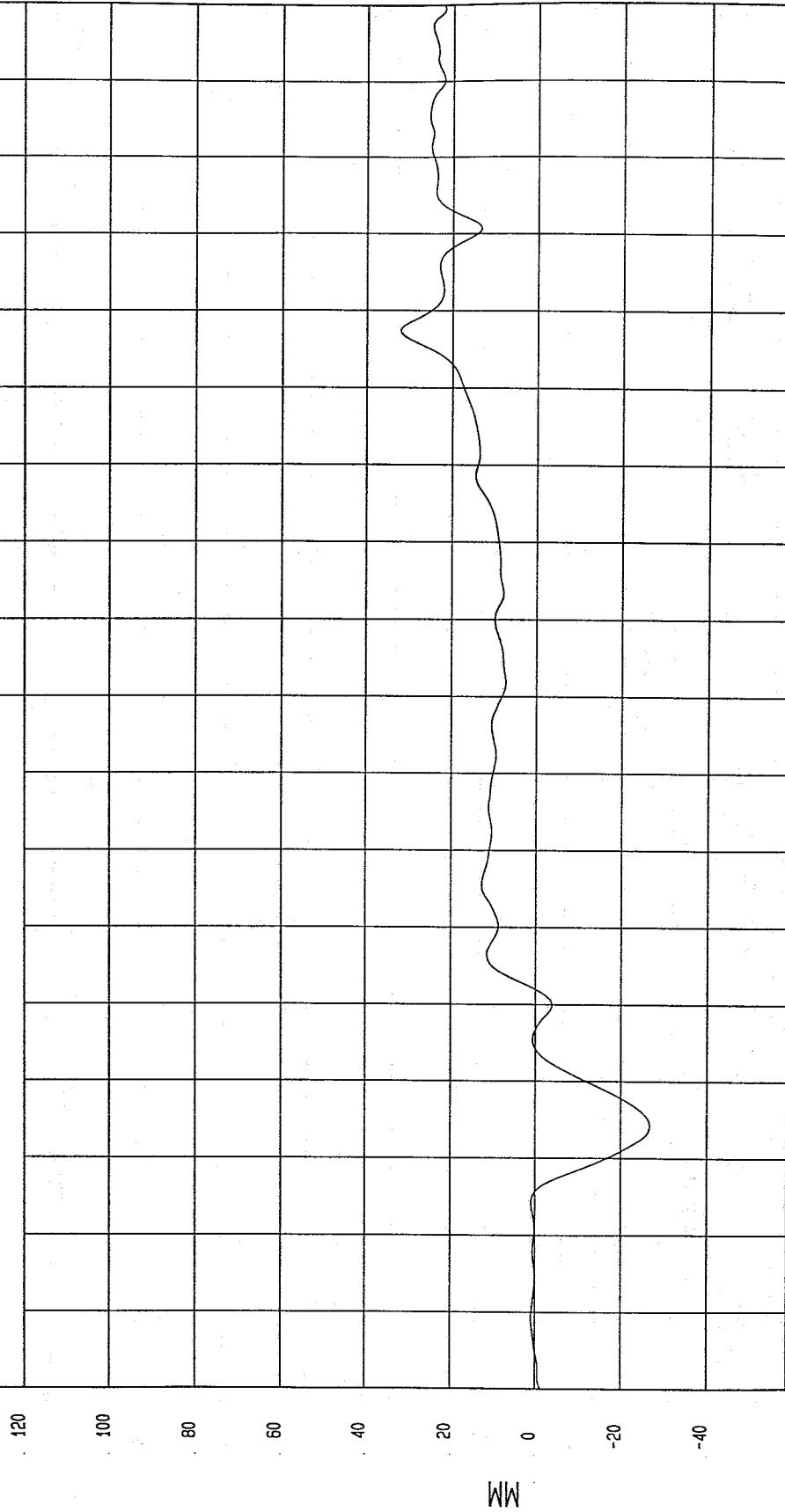
Speed: 32.78 MPH 52.8 KPH

Minimum = -26.92 MM at 14 msec

Maximum = 32.19 MM at 117 msec

STRING POT 35

1 C980160F.D35 Filterclass (60)



NSA Research
11-10-1998 13:25

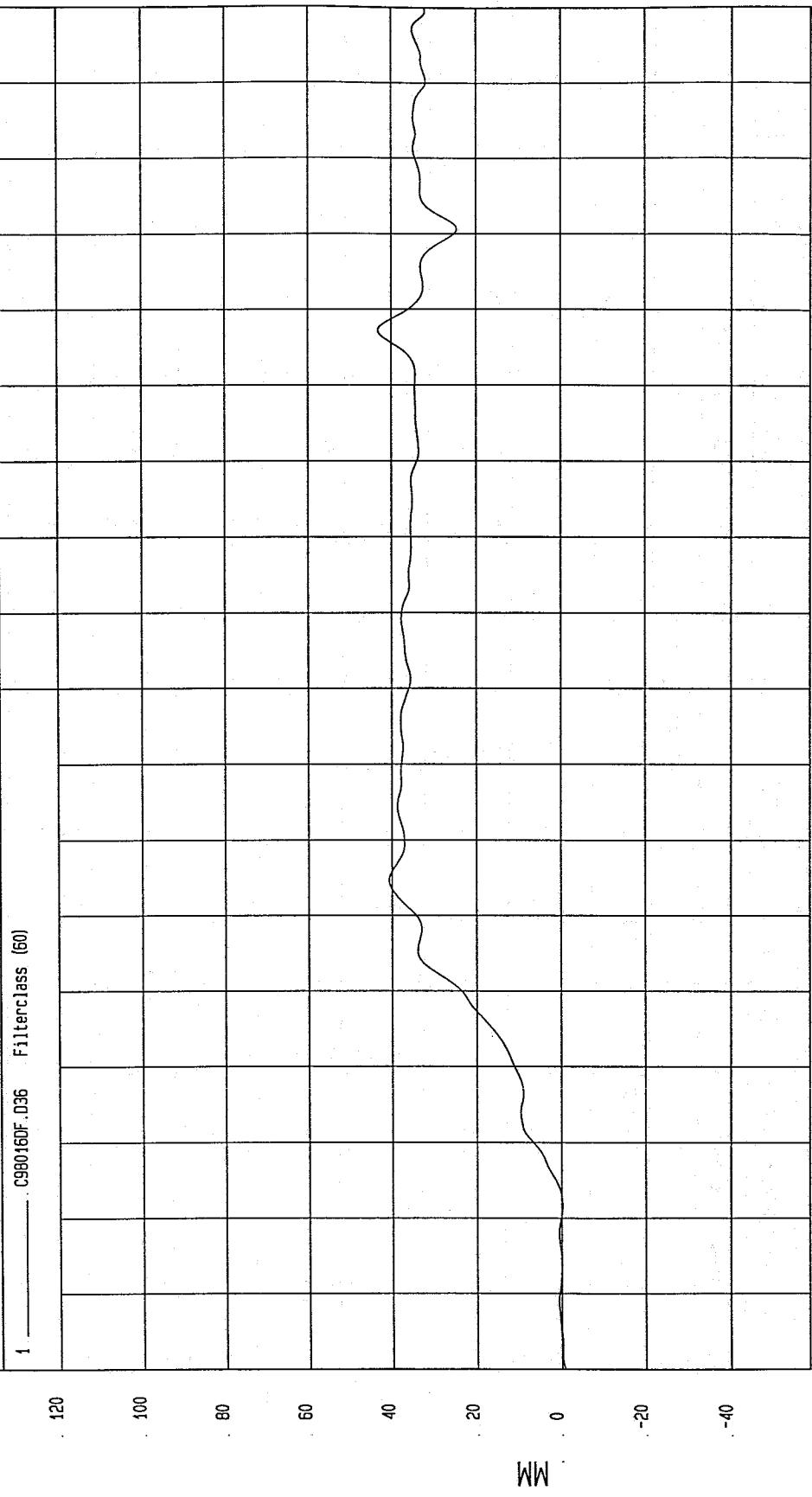
TIME (seconds)

TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

Minimum = -.81 MM at -20 msec Maximum = 43.14 MM at 117 msec

STRING POT 36



TIME (seconds)

MGA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -1.62 MM at 0 msec

Maximum = 32.17 MM at 28 msec

STRING POT 37

1 _____ C980160F.D37 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (seconds)

NGA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

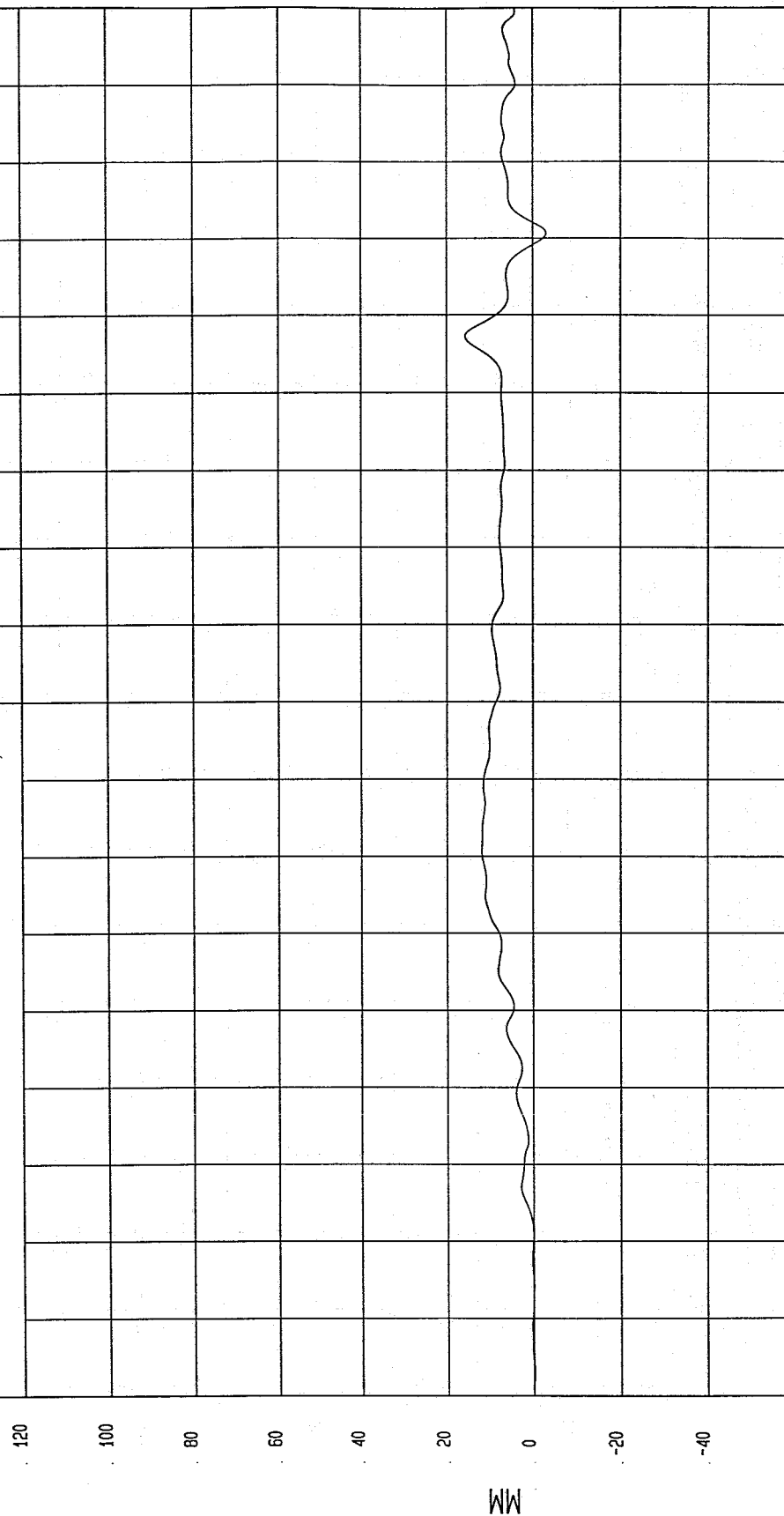
COMPONENT: 1996 FORD TAURUS (RT0206)

Minimum = -3.02 MM at 131 msec

Maximum = 15.63 MM at 117 msec

STRING POT 38

1 _____ C980160F.038 Filterclass (60)



TIME (seconds)

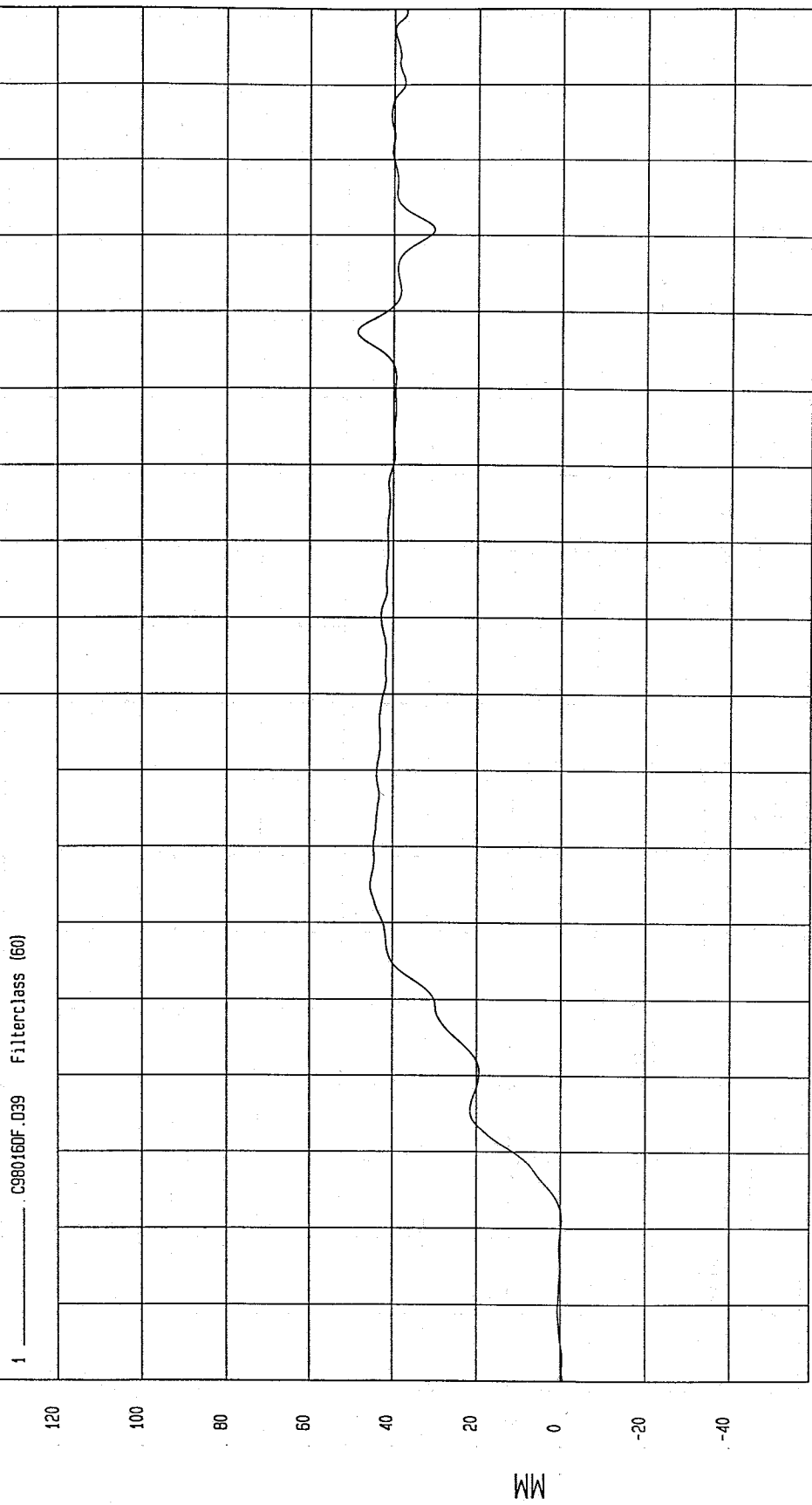
MCA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

Minimum = -.6 MM at -20 msec Maximum = 48.64 MM at 117 msec

STRING POT 39



TIME (seconds)

MCA Research
11-10-1998 13:25

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -.92 MM at -20 msec

Maximum = 63.26 MM at 117 msec

STRING POT 40

1 C980160F.D40 Filterclass (60)

120

100

80

60

40

20

0

-20

-40

MM

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (seconds)

MGA Research
11-10-1998 13:26

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

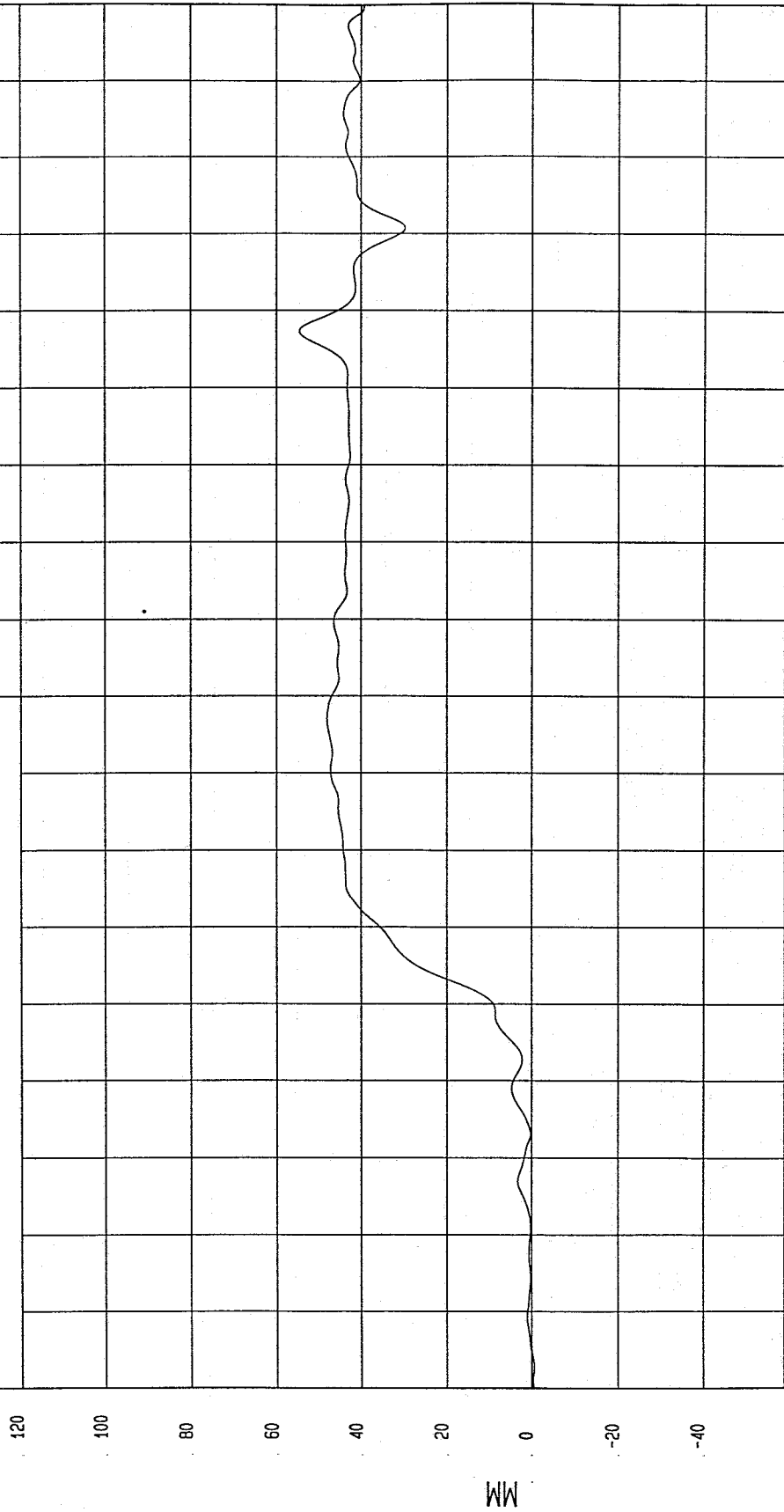
Speed: 32.78 MPH 52.8 KPH

Minimum = -.6 MM at -.17 msec

Maximum = 54.58 MM at 117 msec

STRING POT 41

1 C980160F.D41 Filterclass (60)



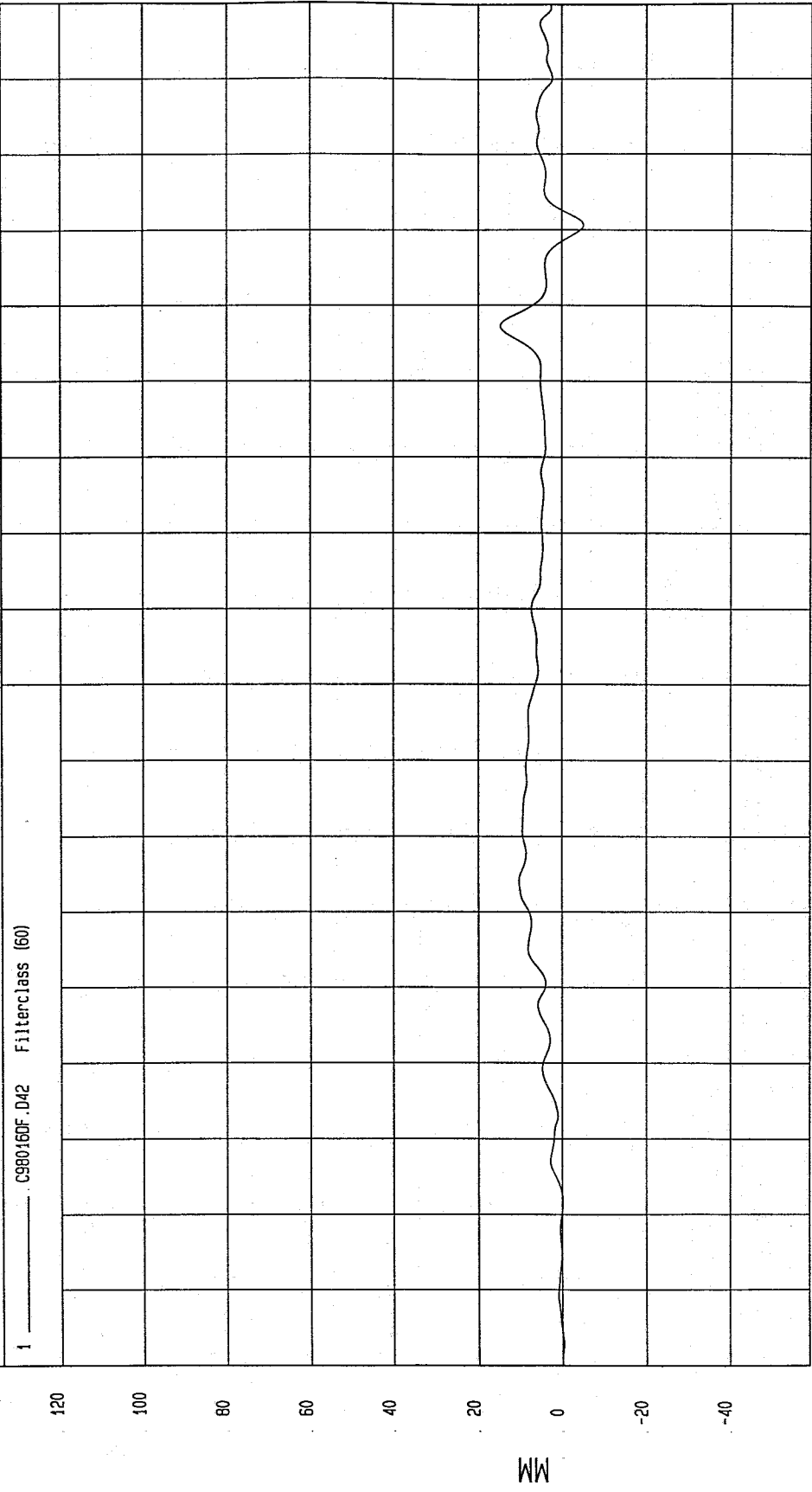
MCA Research
11-10-1998 13:26

TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

Minimum = -5.13 MM at 131 msec Maximum = 14.73 MM at 117 msec

STRING POT 42



TIME (seconds)

MCA Research
11-10-1998 13:26

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

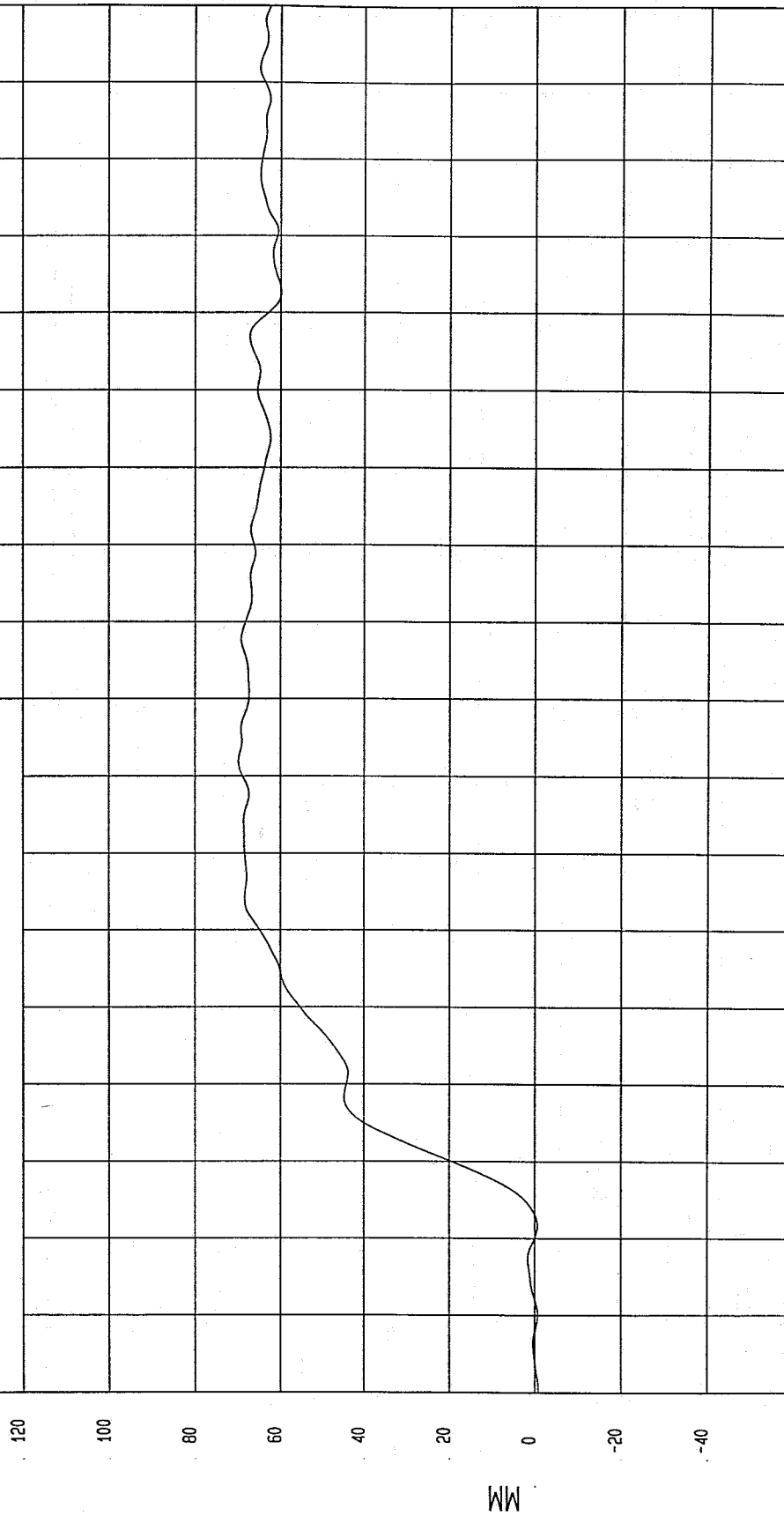
Speed: 32.78 MPH 52.8 KPH

Minimum = -.79 MM at -20 msec

Maximum = 69.73 MM at 62 msec

STRING POT 43

1 C980160F.D43 Filterclass (60)



TIME (seconds)

15
14
13
12
11
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-0.1
-0.2

MM

120
100
80
60
40
20
0
-20
-40

MGA Research
11-10-1998 13:26

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

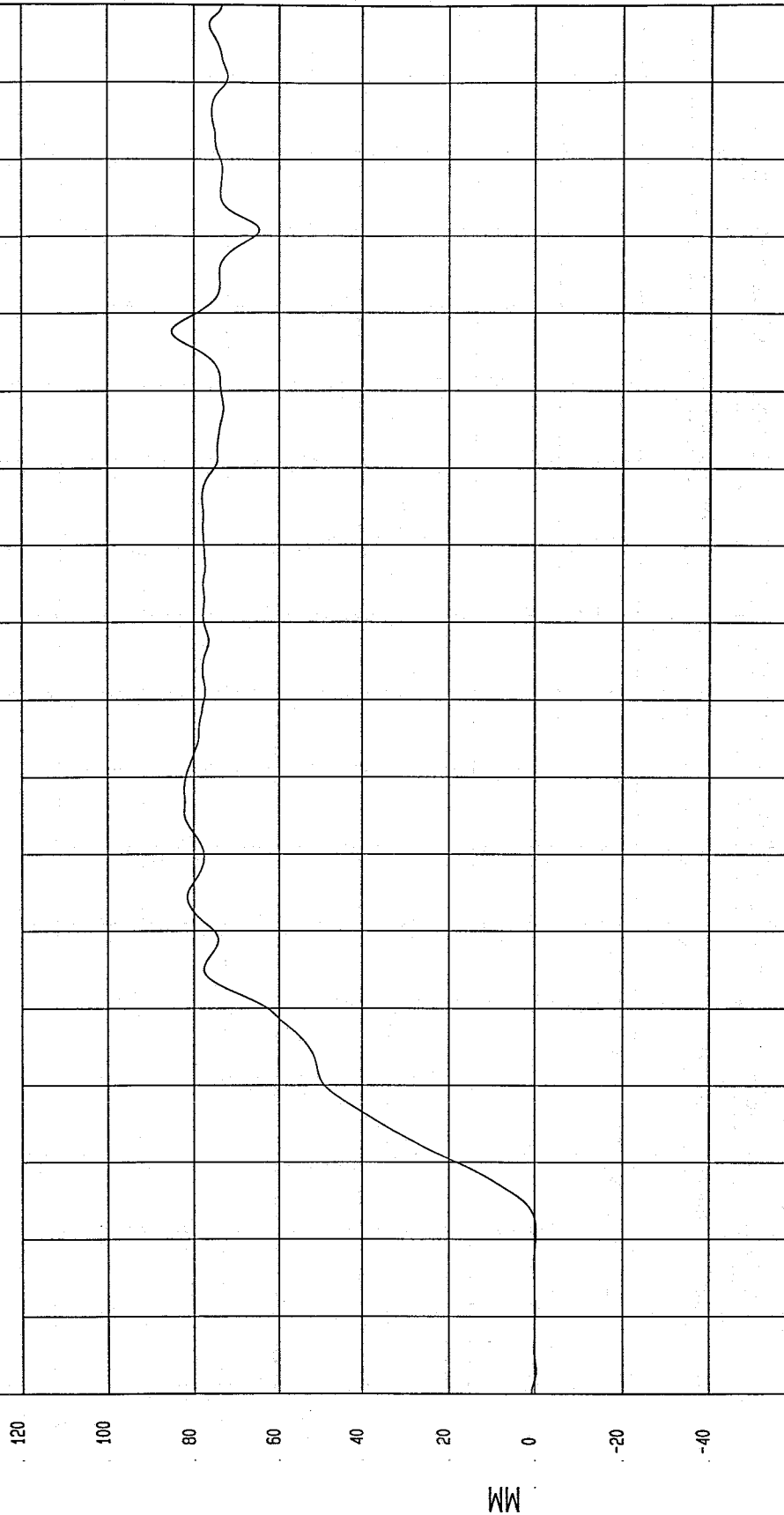
Speed: 32.78 MPH 52.8 KPH

Minimum = -.35 MM at -17 msec

Maximum = 85.37 MM at 118 msec

STRING POT 44

1 _____ CS80160F.D44 Filterclass (60)



TIME (seconds)

MGA Research
11-10-1998 13:26

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 1139.68 N at 192 msec

Minimum = -576.77 N at 111 msec

LC #1 FX

1 _____ 898016FF.F04 Filterclass (60)

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-02

-01

0

01

02

03

04

05

06

07

08

09

1

11

12

13

14

15

TIME (SECONDS)

NCA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

SPEED: 32.8 MPH 52.8 KPH

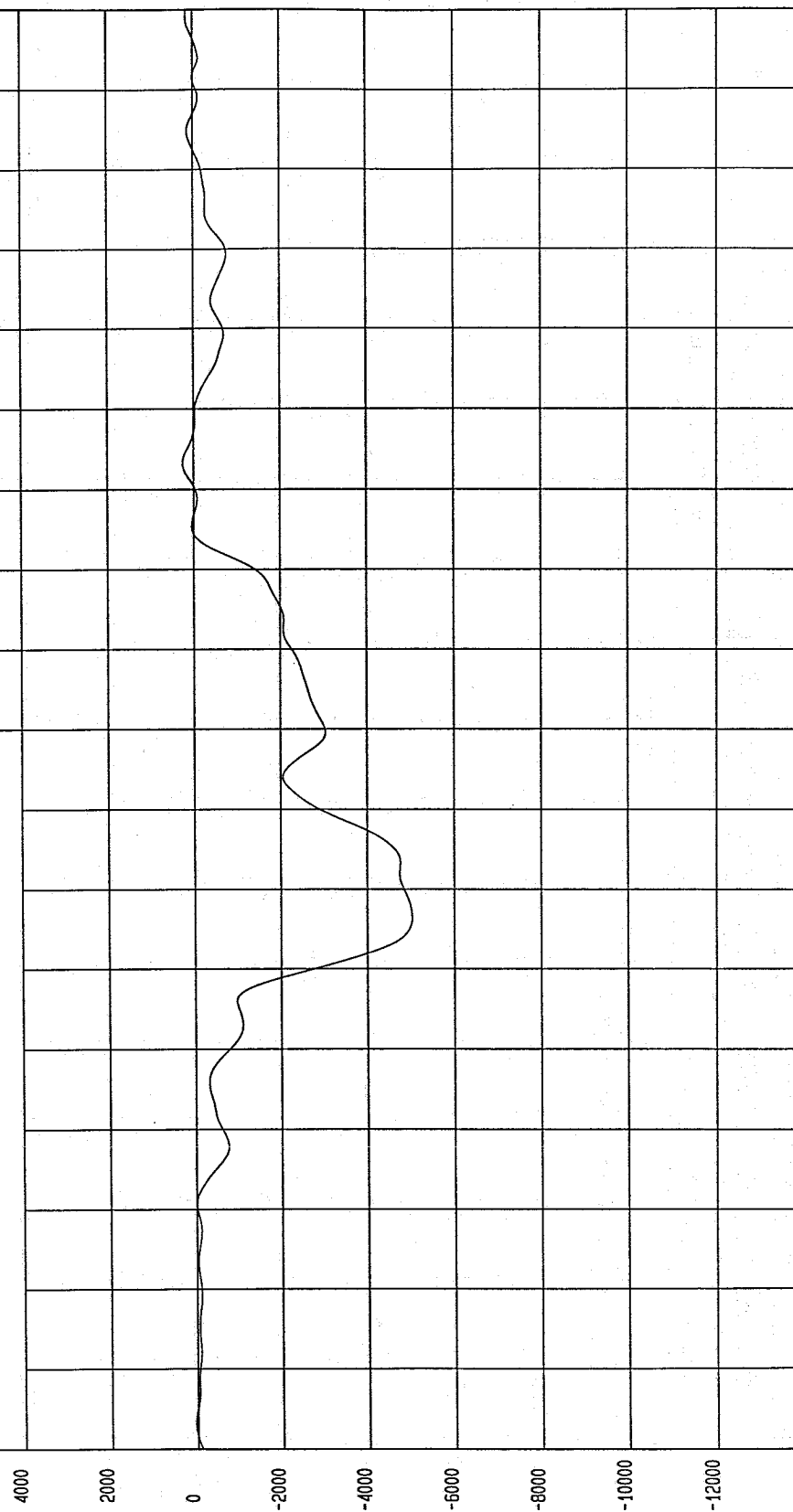
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 436.88 N at 188 msec

Minimum = -5009.69 N at 46 msec

LC #2 FX

1 B98016FF.F07 Filterclass (50)



TIME (SECONDS)

MGA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

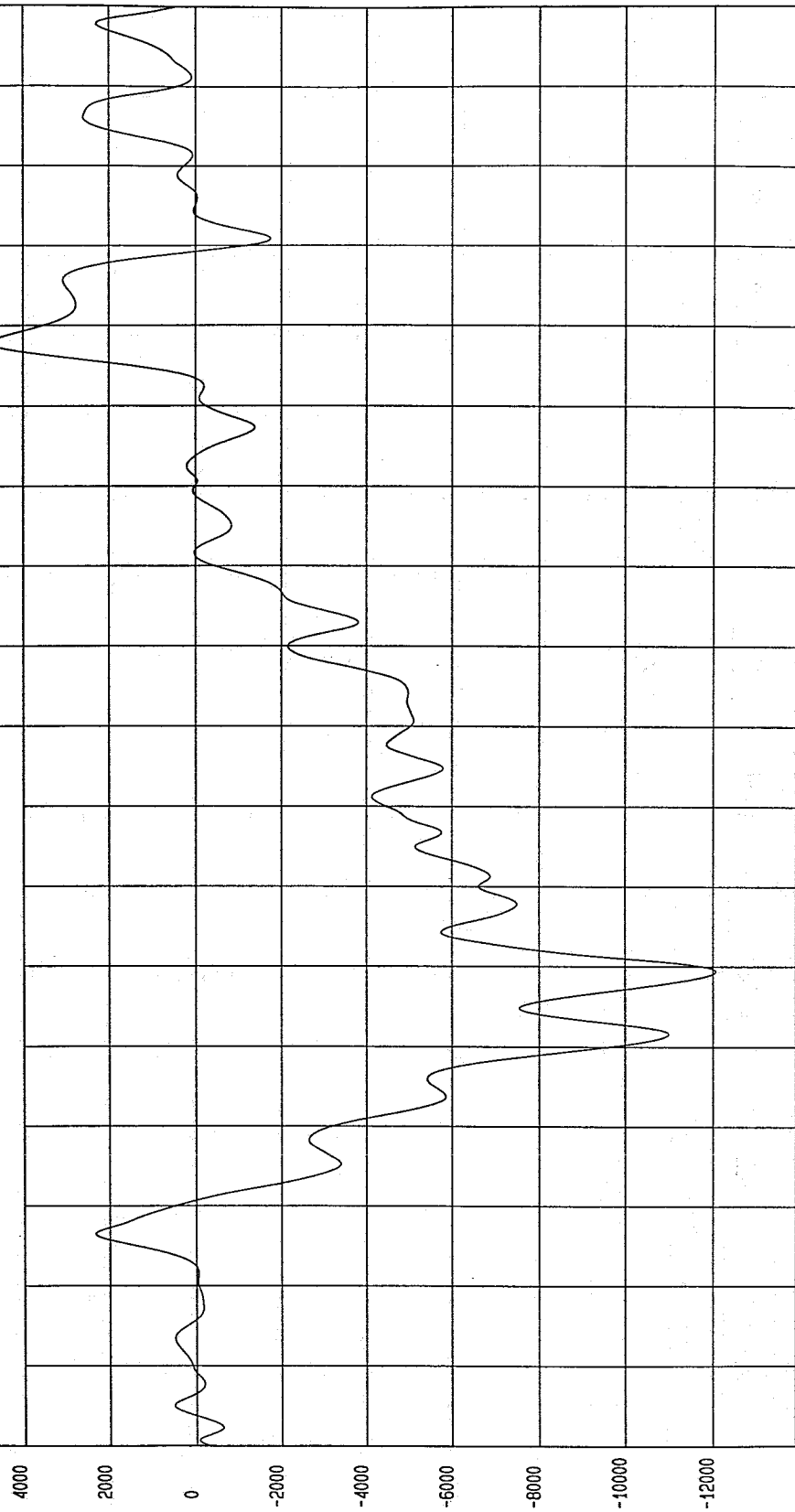
Speed: 32.8 MPH 52.8 KPH

Minimum = -12070.93 N at 39 msec

Maximum = 4746.39 N at 118 msec

LC #3 FX

1 _____ 898016FF.F10 Filterclass (60)



NSA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

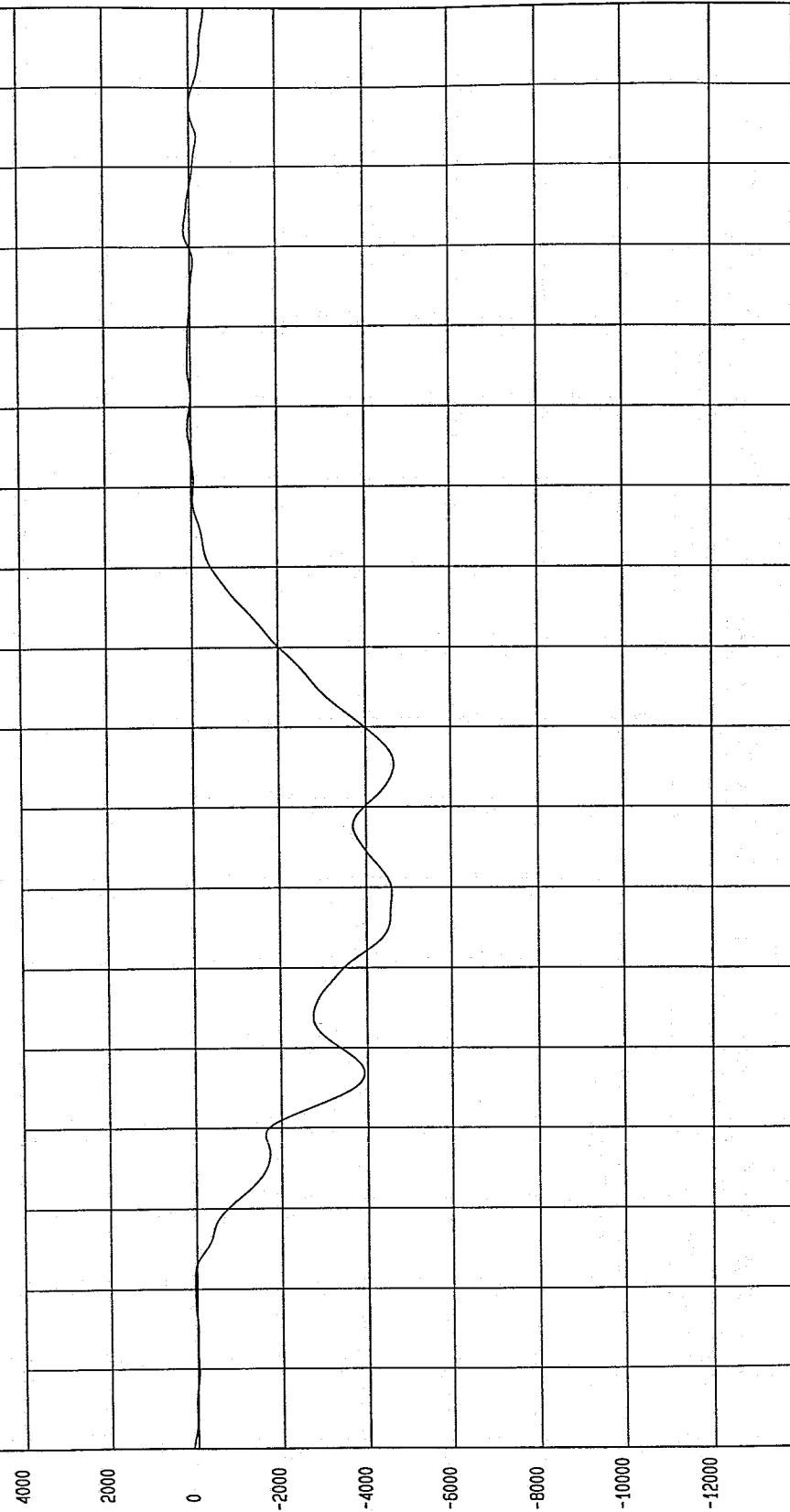
Speed: 34.8 MPH 56 KPH

Minimum = -4640.94 N at 65 msec

Maximum = 131.98 N at 132 msec

LC #4 FX

1 _____ H98016FF.F49 Filterclass (60)



TIME (SECONDS)

MGA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

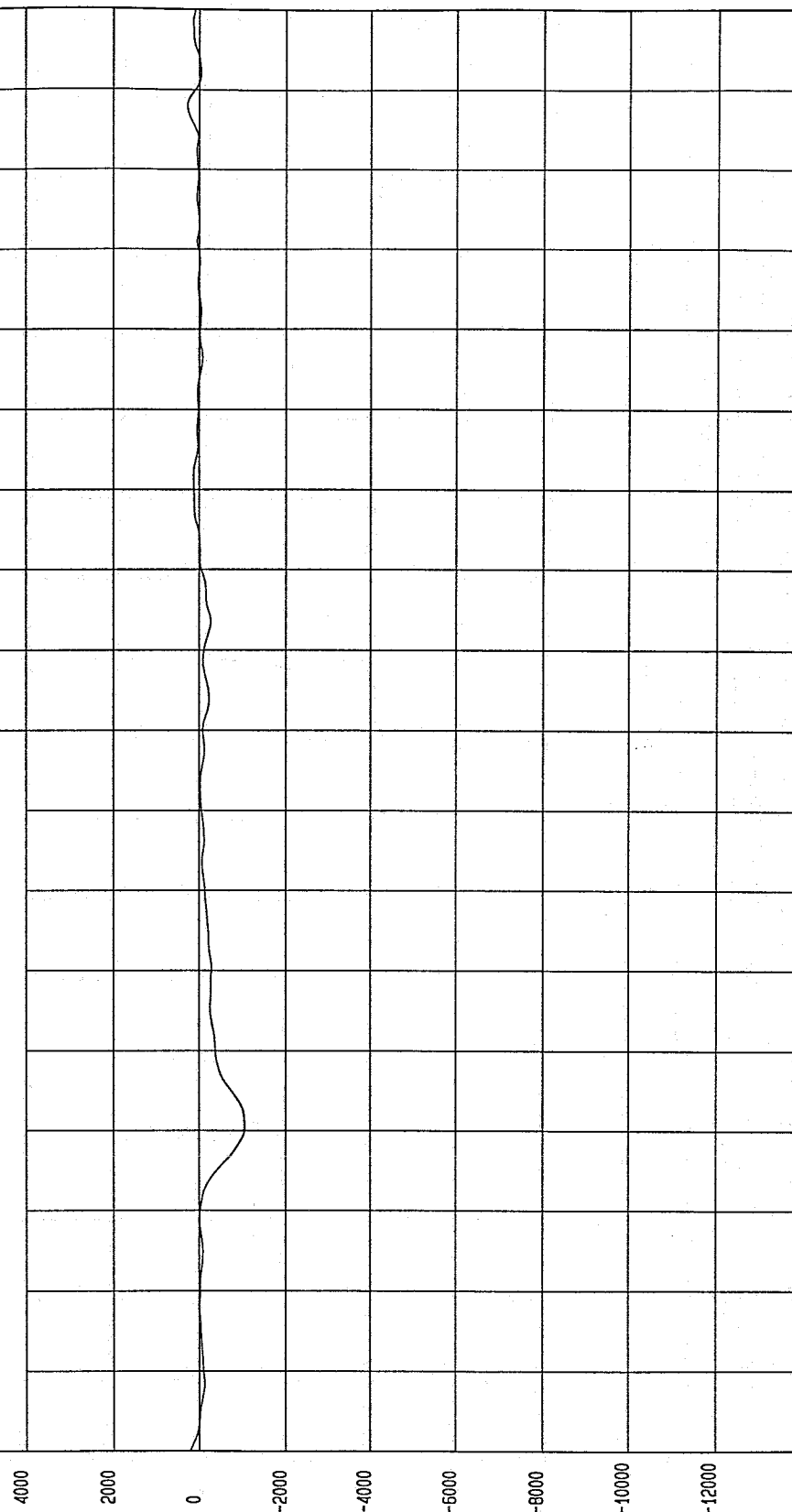
Speed: 34.8 MPH 56 KPH

Minimum = -1039.79 N at 20 msec

Maximum = 281.07 N at 187 msec

LC #5 FX

1 _____ H98016FF.F03 Filterclass (60)



TIME (SECONDS)

NCA Research
11-08-1998 11:21

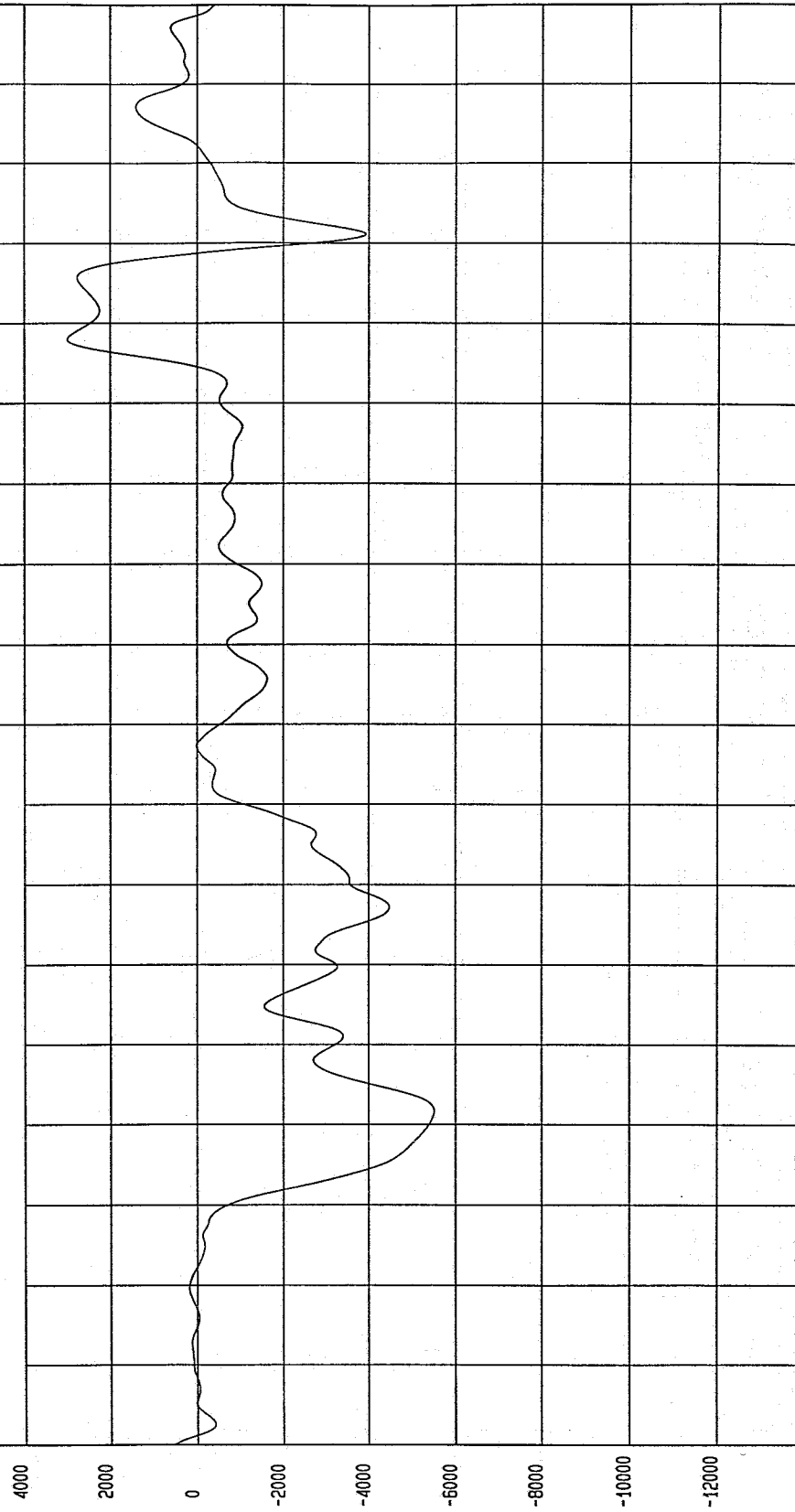
TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -5498.27 N at 22 msec Maximum = 2995.66 N at 118 msec

LC #6 FX

1 ——— B98016FF.F20 Filterclass (60)



TIME (SECONDS)

NCA Research
11-06-1998 09:38

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

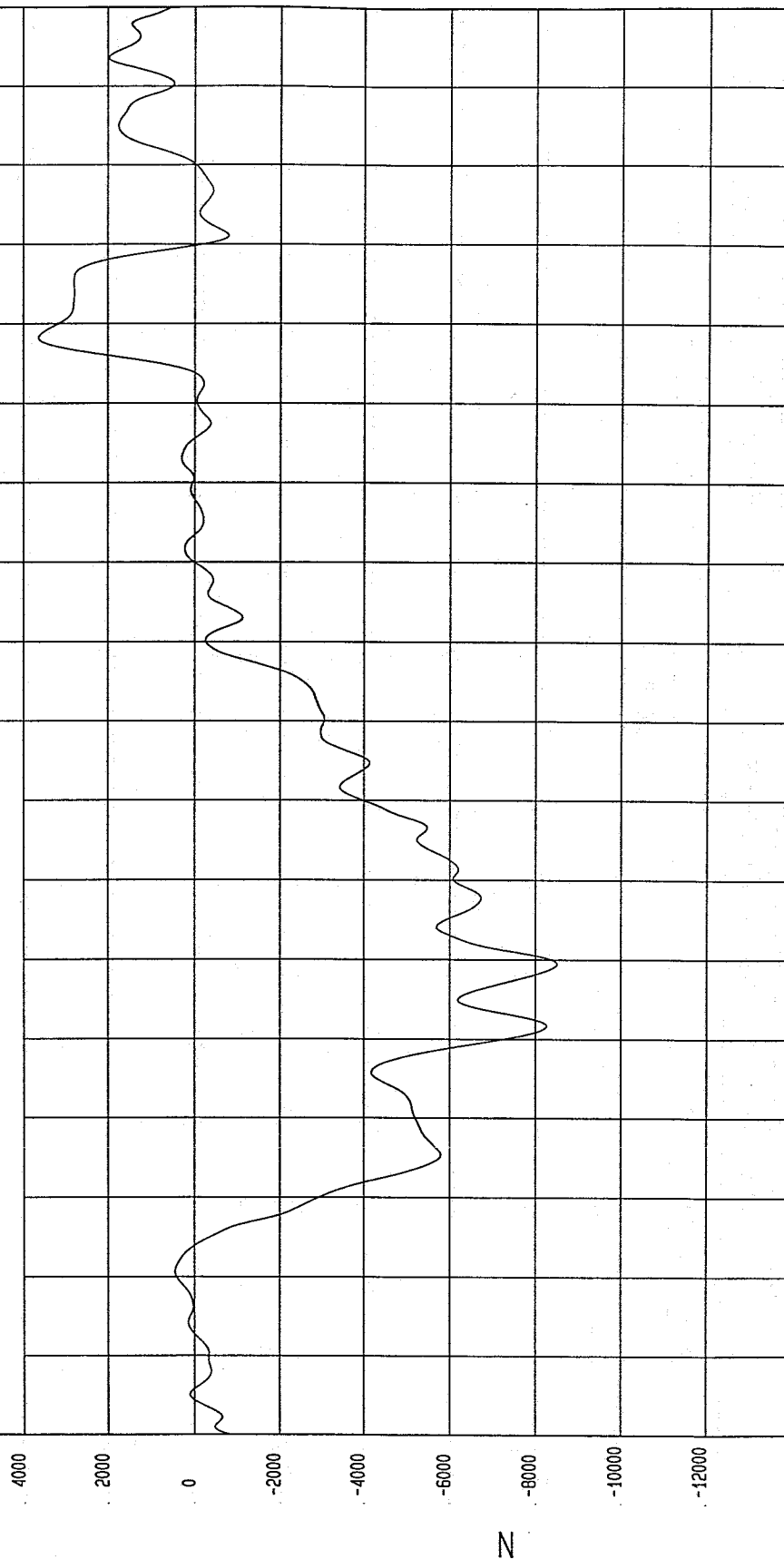
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -8500.36 N at 40 msec

Maximum = 3651.3 N at 118 msec

LC #7 FX

1 _____ B98016FF.F24 Filterclass (60)



NGA Research
11-05-1998 17.01

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

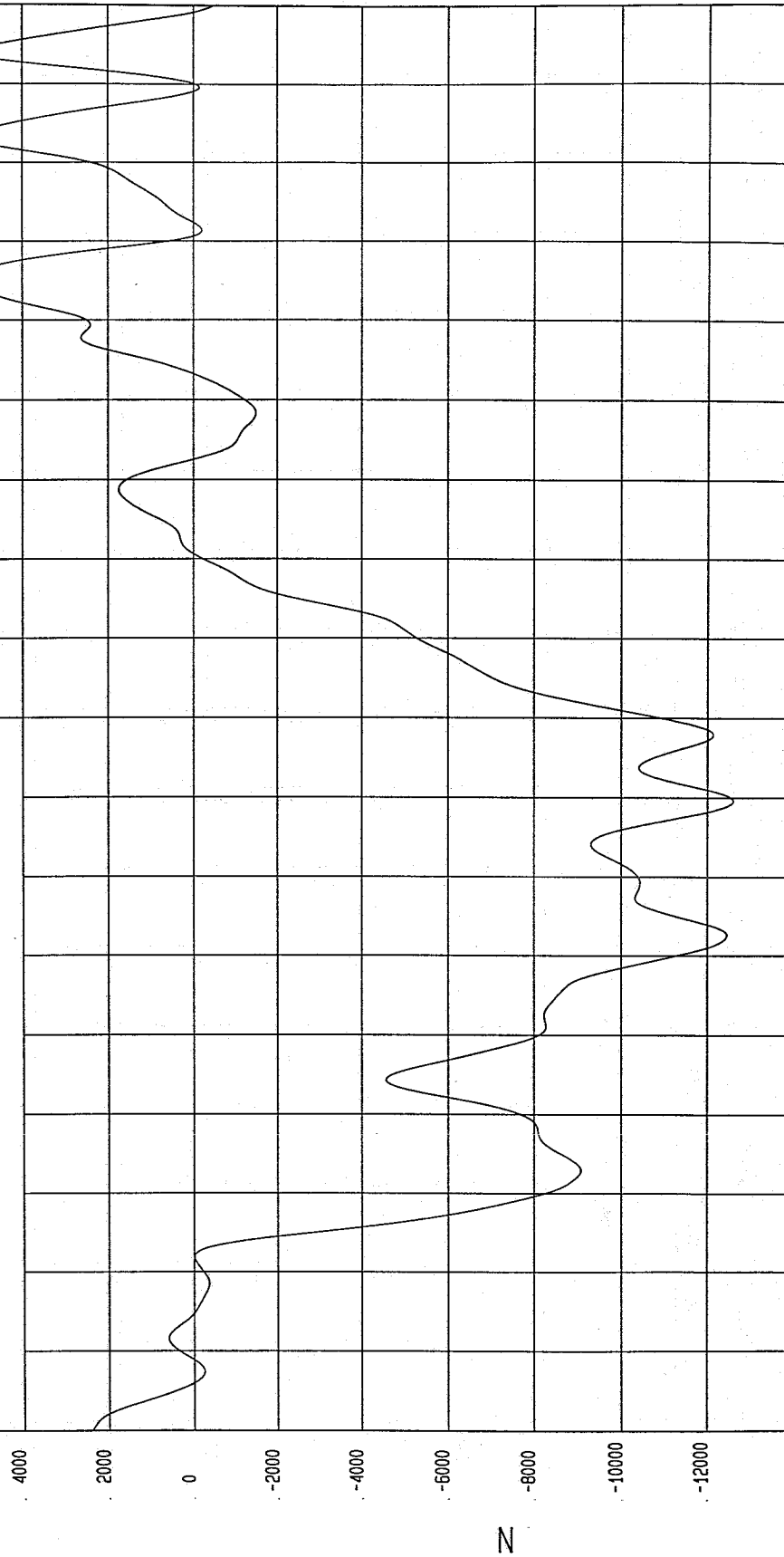
Speed: 32.8 MPH 52.8 KPH

Minimum = -12606.23 N at 60 msec

Maximum = 5091.75 N at 143 msec

LC #8 FX

1 B98016FF.F27 Filterclass (60)



MCA Research
11-09-1998 12:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

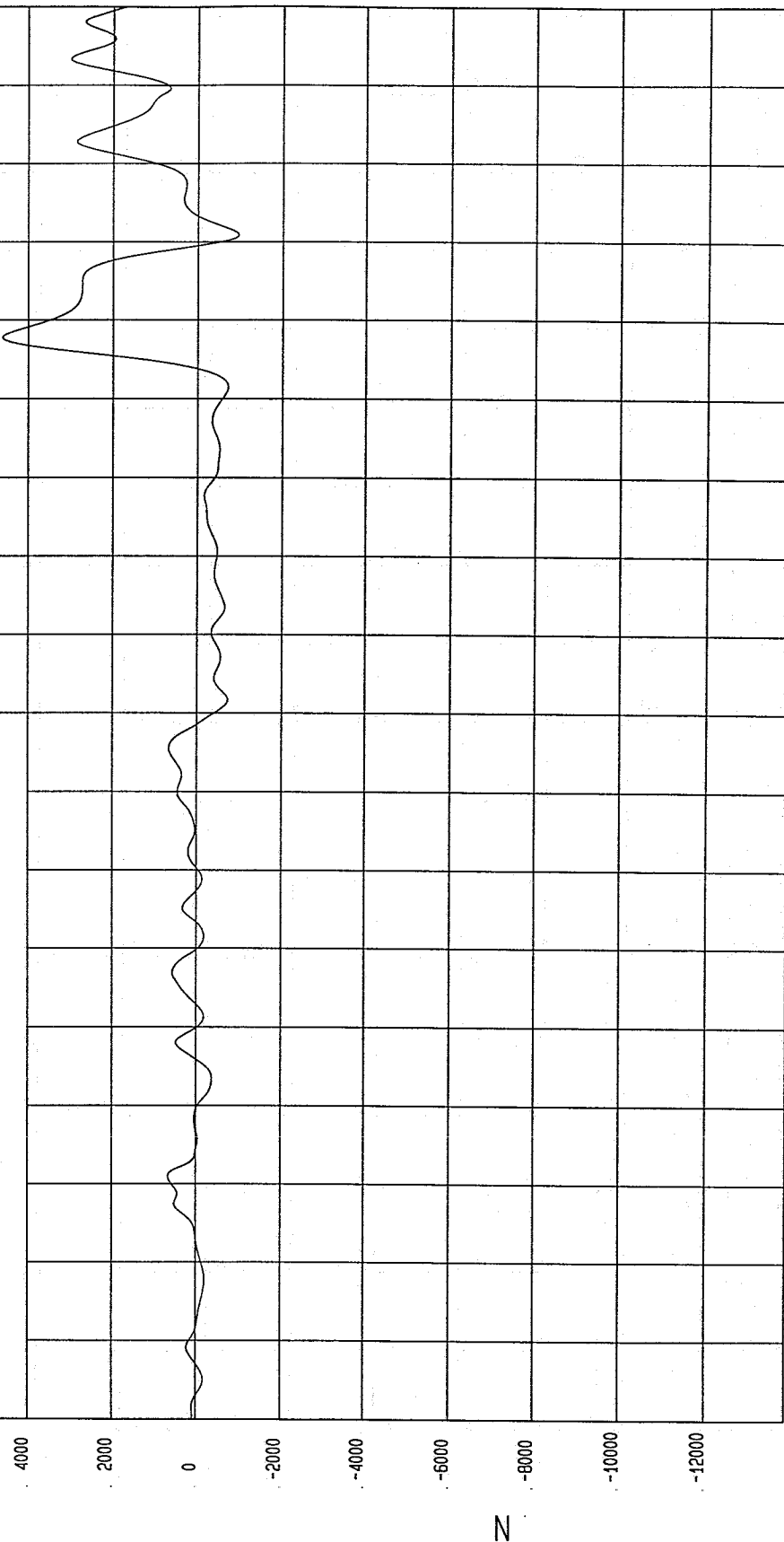
Speed: 32.8 MPH 52.8 KPH

Minimum = -965.45 N at 131 msec

Maximum = 5968.41 N at 166 msec

LC #9 FX

1 _____ B98016FF.F30 Filterclass (60)



TIME (SECONDS)

MCA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

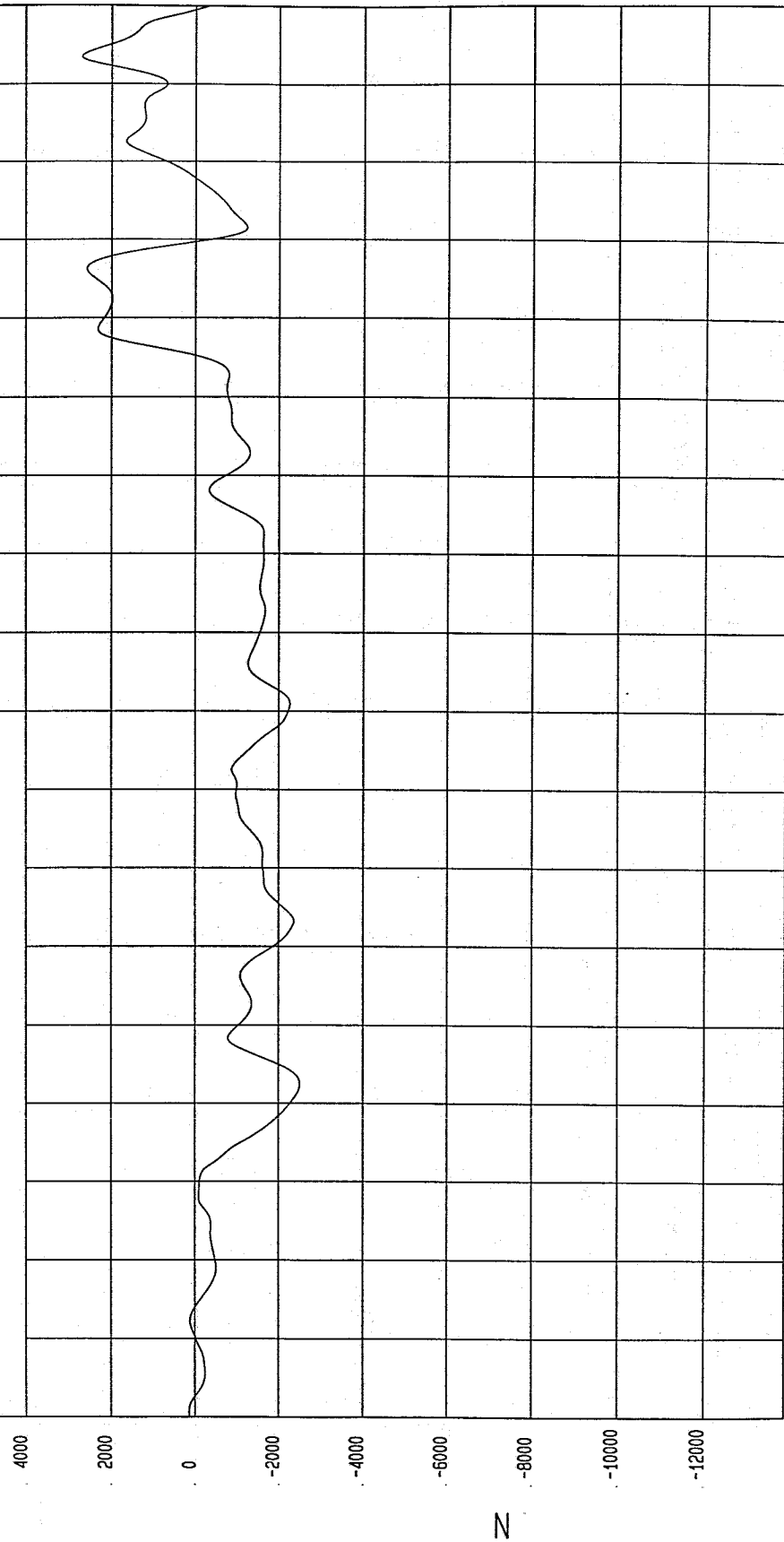
Speed: 32.8 MPH 52.8 KPH

Minimum = -2508.6 N at 22 msec

Maximum = 2676.5 N at 154 msec

LC #10 FX

1 _____ 898016FF.F34 Filterclass (60)



MGA Research
11-05-1998 17:01

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

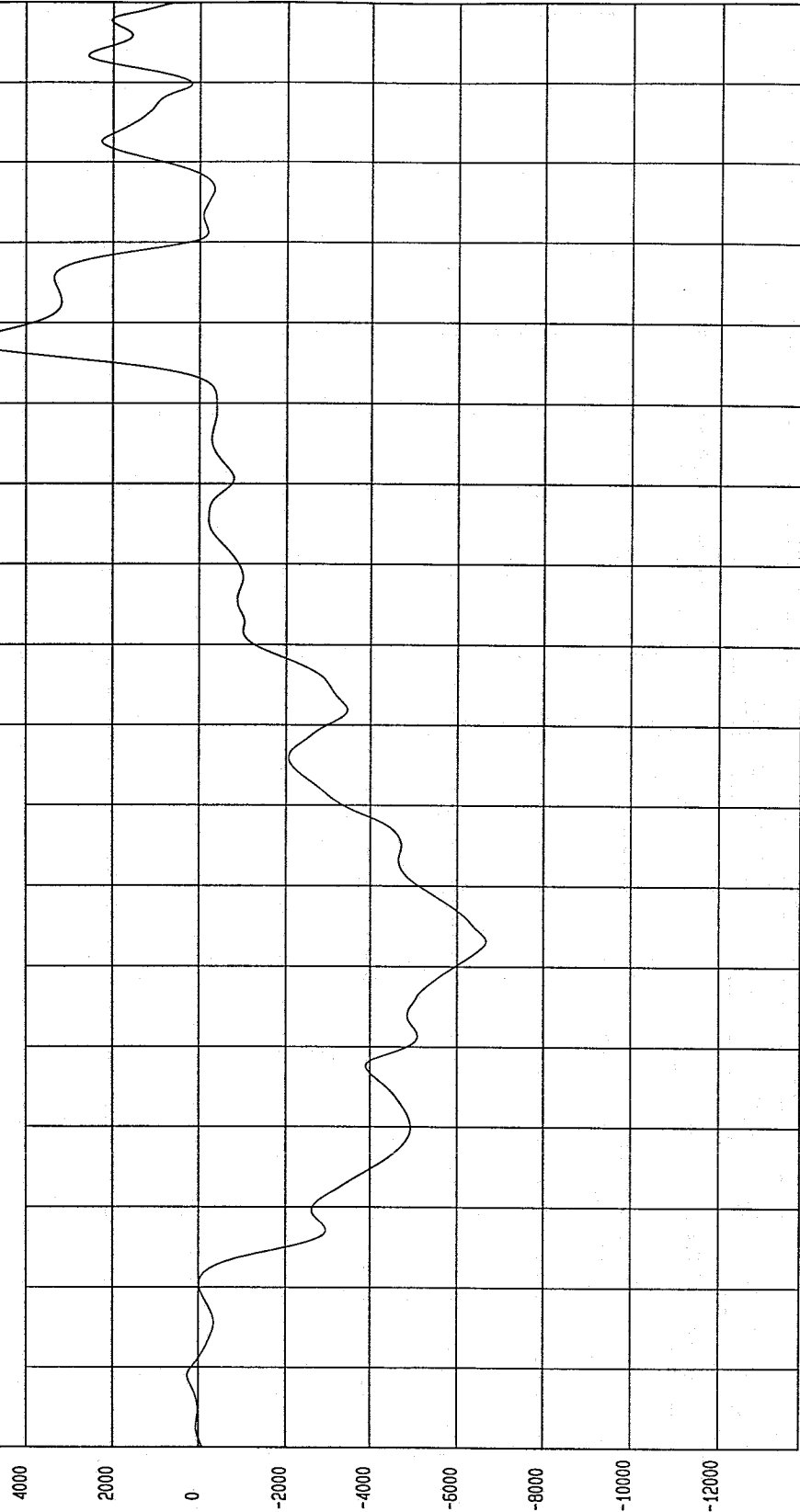
Speed: 32.8 MPH 52.8 KPH

Minimum = -6681.73 N at 43 msec

Maximum = 5351.81 N at 118 msec

LC #11 FX

1 _____ 898016FF.F37 Filterclass (60)



MCA Research
11-05-1998 17:01

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

SPEED: 32.8 MPH 52.8 KPH

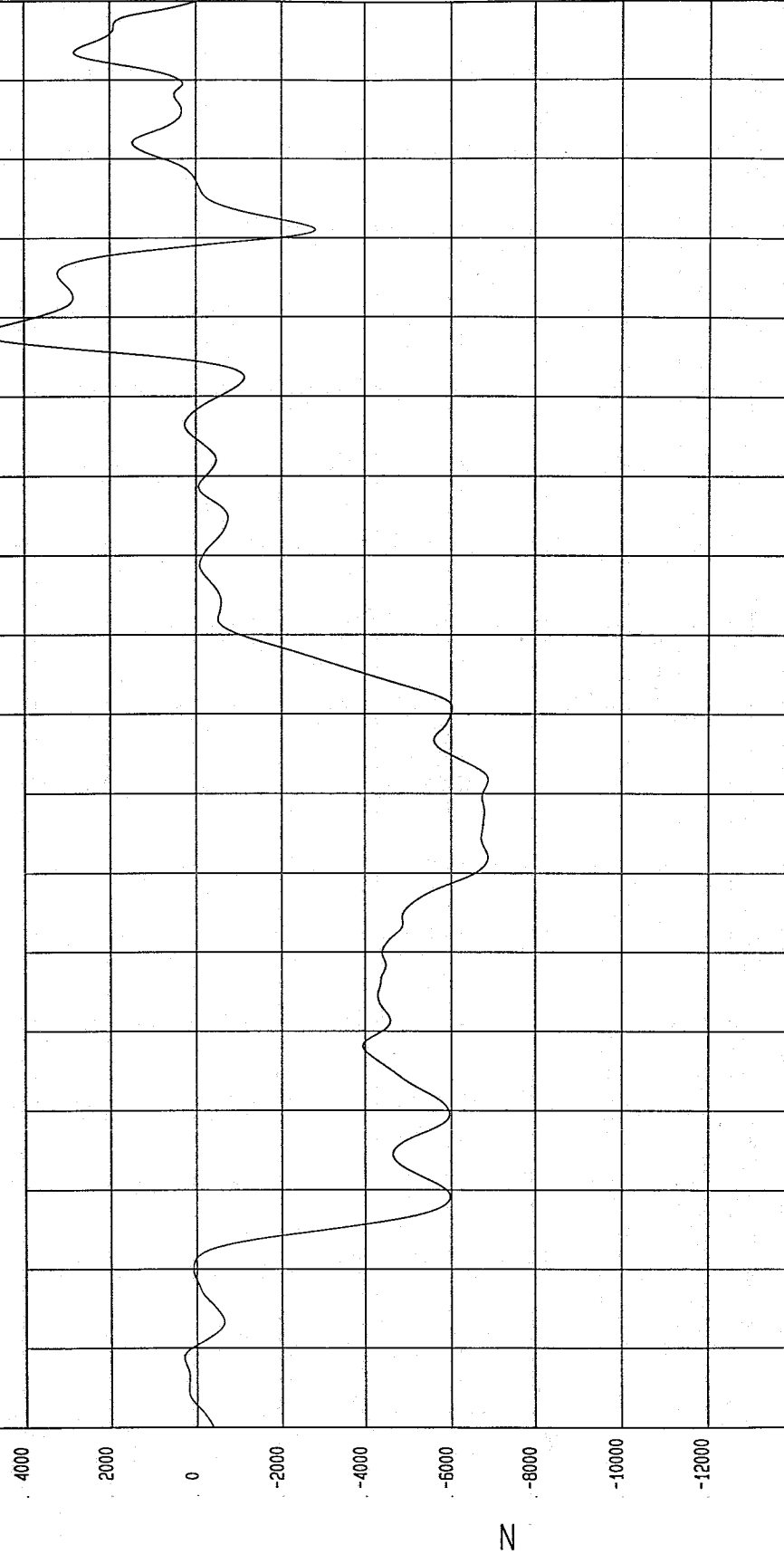
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 4989.48 N at 118 msec

Minimum = -6893.67 N at 62 msec

LC #12 FX

1 _____ B98016FF.F40 Filterclass (60)



MGA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

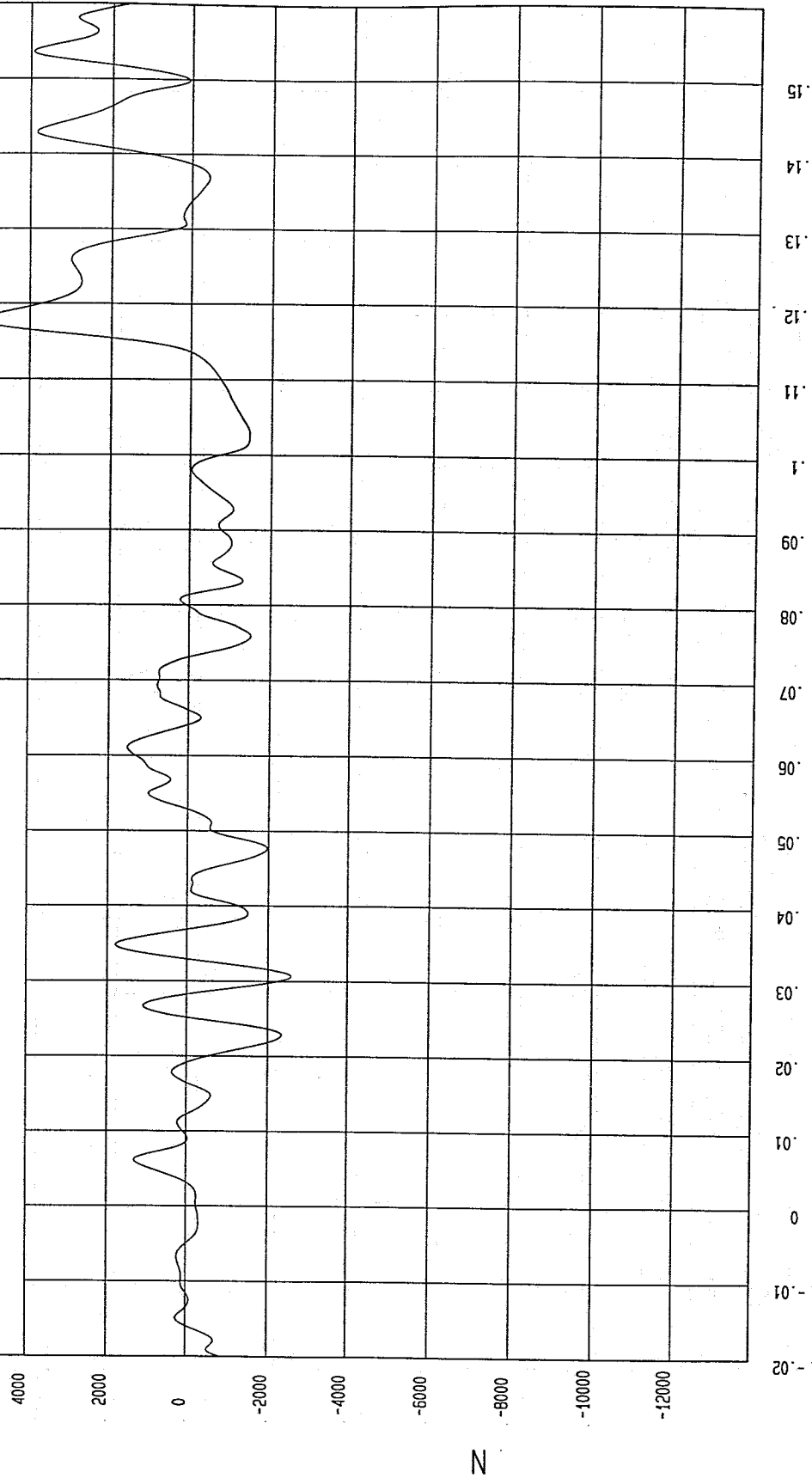
Speed: 32.8 MPH 52.8 KPH

Minimum = -2592.11 N at 31 msec

Maximum = 5235.75 N at 118 msec

LC #13 FX

1 ——— B98016FF.F44 Filterclass (60)



NCA Research
11-05-1996 17:01

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

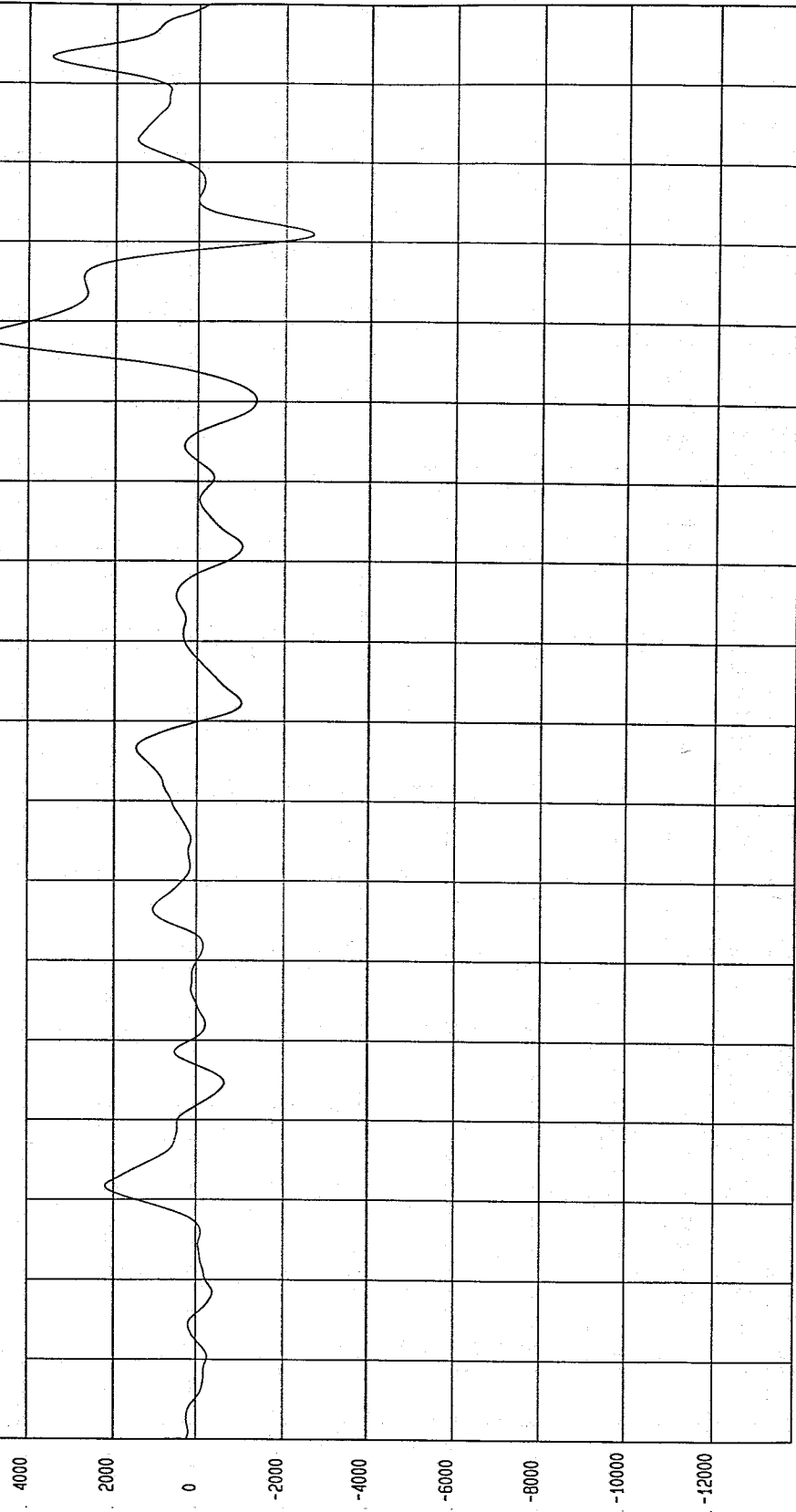
Speed: 32.8 MPH 52.8 KPH

Minimum = -2689.07 N at 131 msec

Maximum = 5105.21 N at 118 msec

LC #14 FX

1 _____ B98016FF.F47 Filterclass (60)



NGA Research
11-03-1998 17:01

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

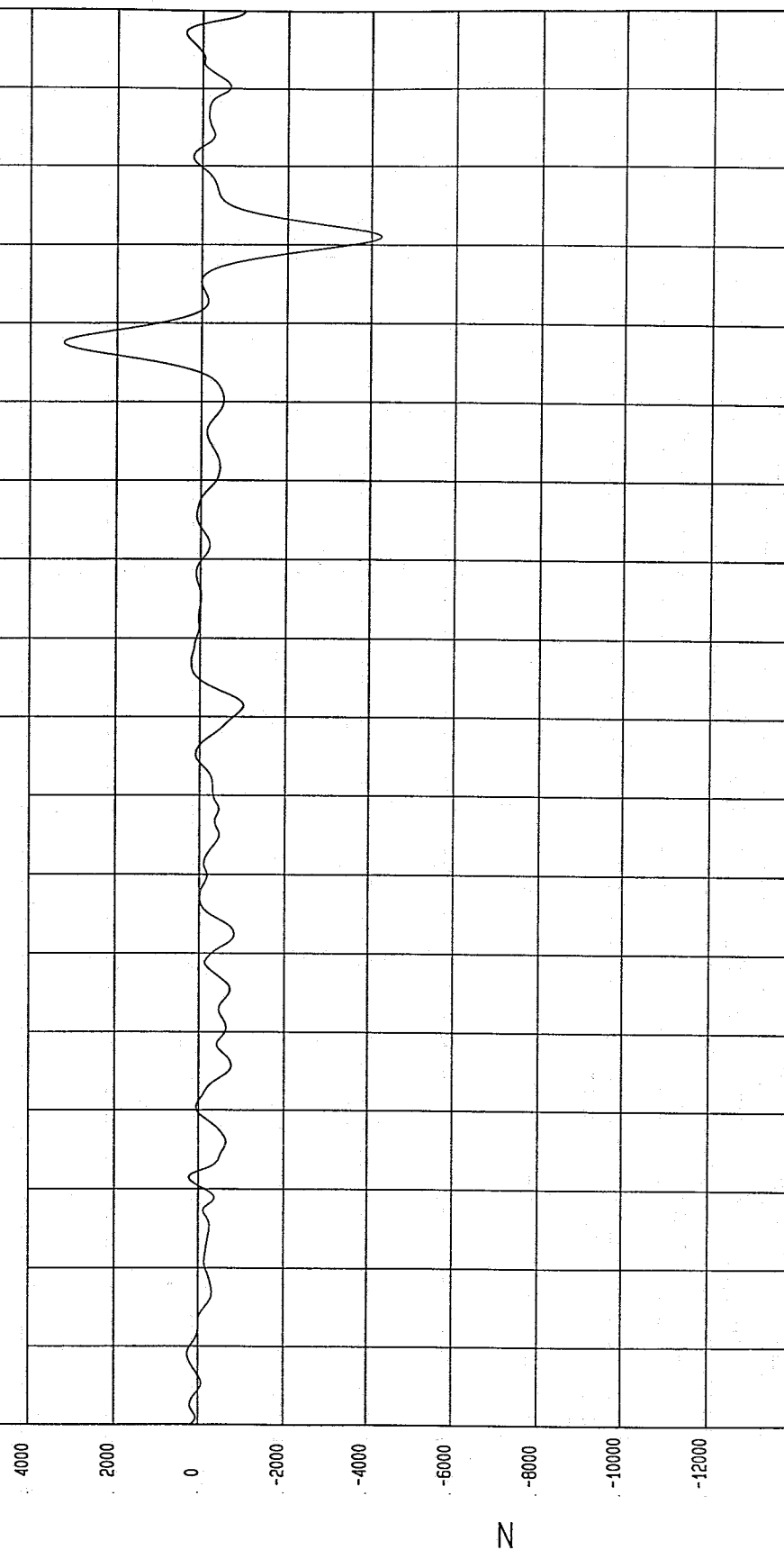
Speed: 32.8 MPH 52.8 KPH

Minimum = -4215.83 N at 131 msec

Maximum = 3213.16 N at 118 msec

LC #15 FX

1 ——— B98016FF.F50 Filterclass (60)



TIME (SECONDS)

0.15
0.14
0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02

MGA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

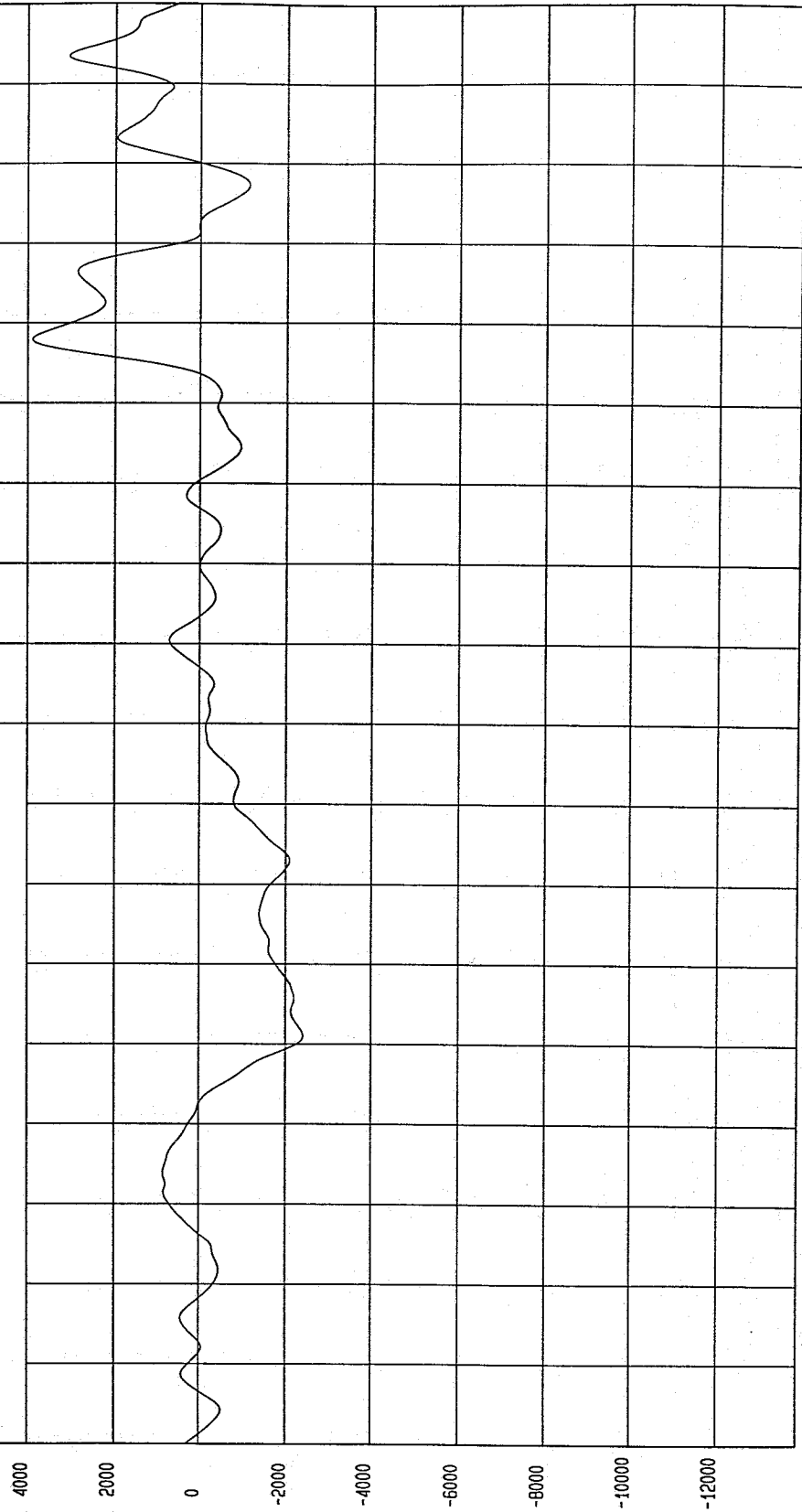
Speed: 32.8 MPH 52.8 KPH

Minimum = -2430.89 N at 31 msec

Maximum = 3890.53 N at 118 msec

LC #16 FX

1 _____ B98016FF.F53 Filterclass (60)



TIME (SECONDS)

MCA Research
11-05-1998 17.01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

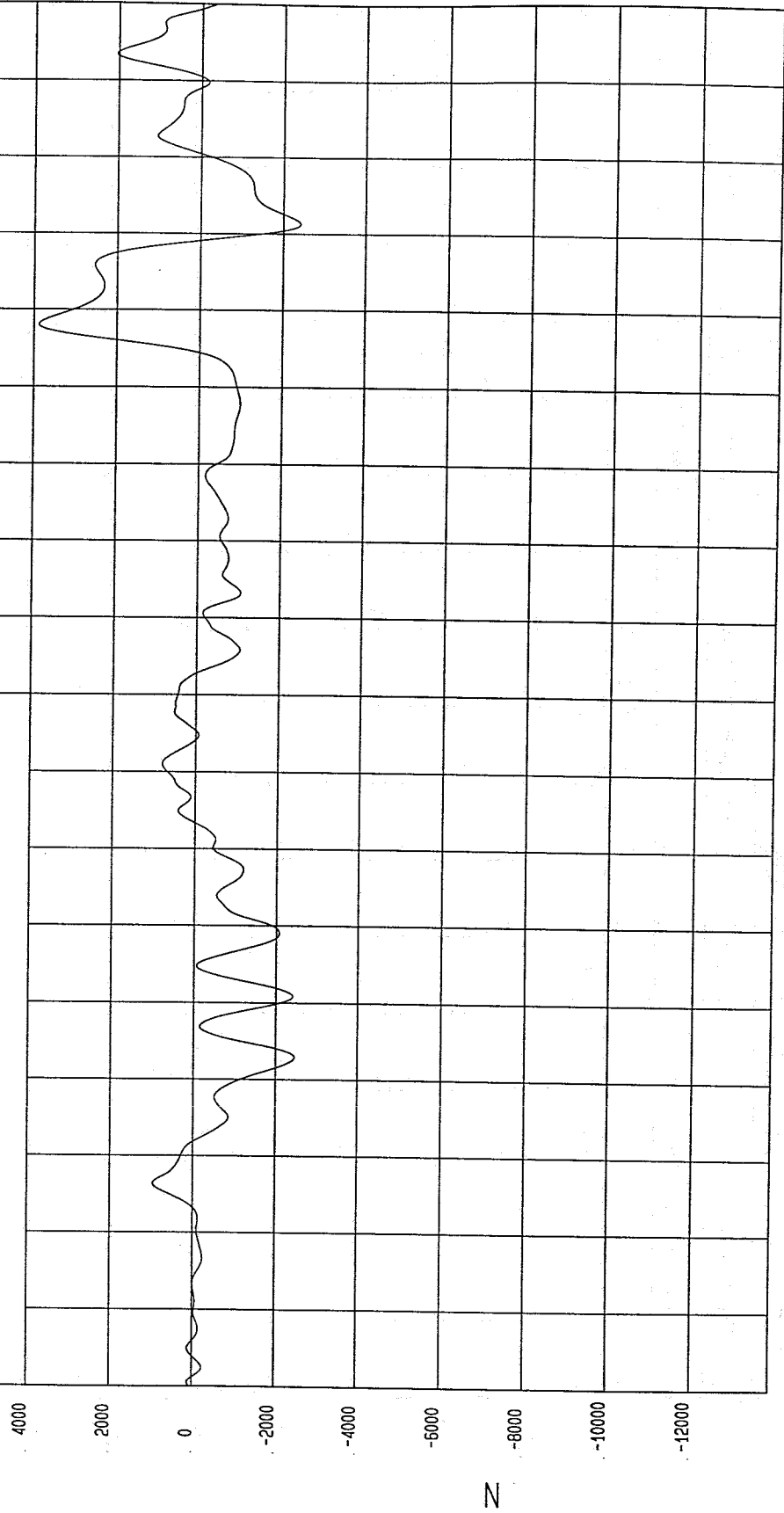
Speed: 32.8 MPH 52.8 KPH

Minimum = -2454.21 N at 23 msec

Maximum = 3883.42 N at 118 msec

LC #17 FX

1 _____ B98016FF.F56 Filterclass (50)



MGA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

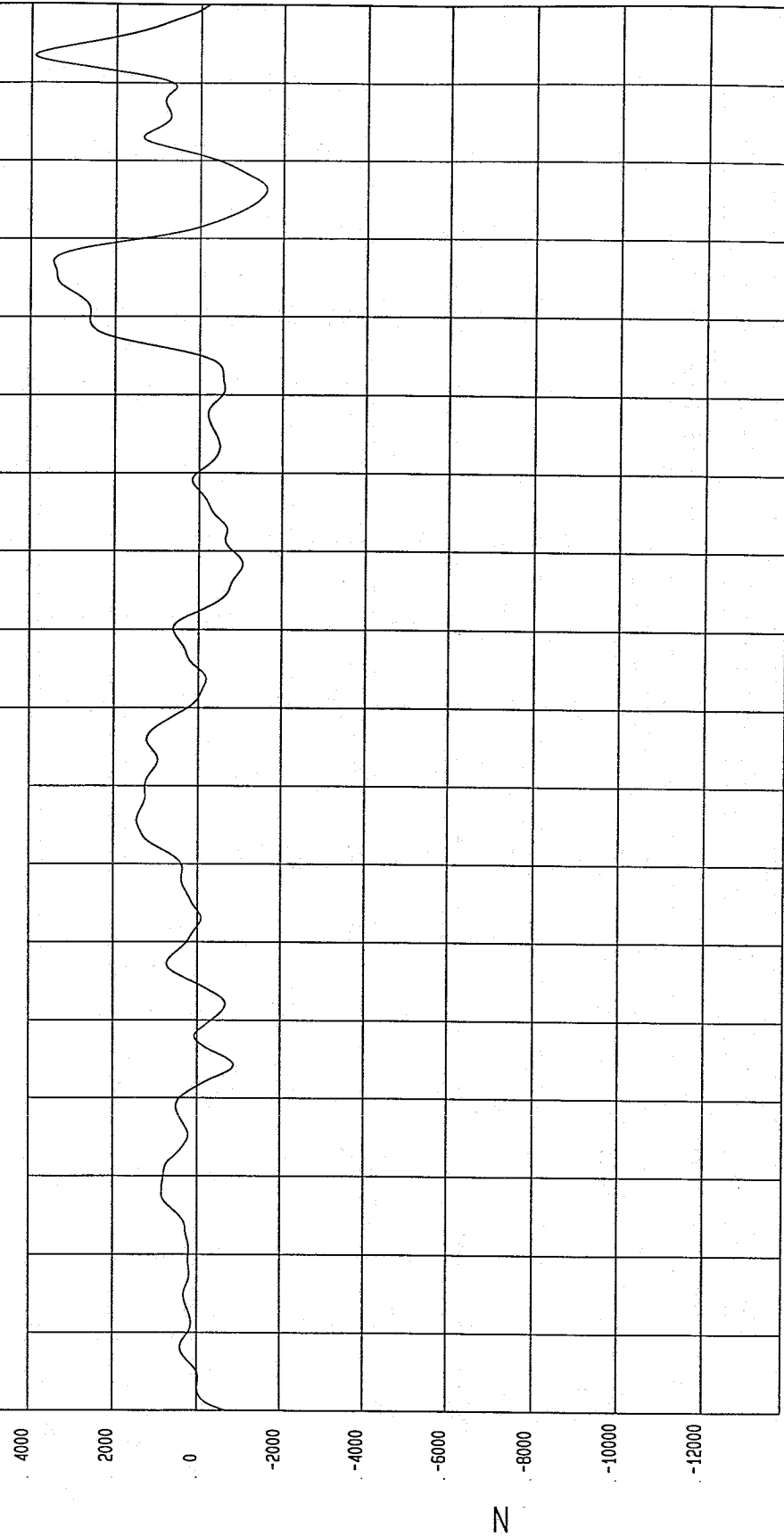
Speed: 32.8 MPH 52.8 KPH

Minimum = -1593.88 N at 136 msec

Maximum = 3908.28 N at 153 msec

LC #18 FX

1 _____ B98016FF.F60 Filterclass (60)



MCA Research
11-05-1998 17.01

TIME (SECONDS)

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

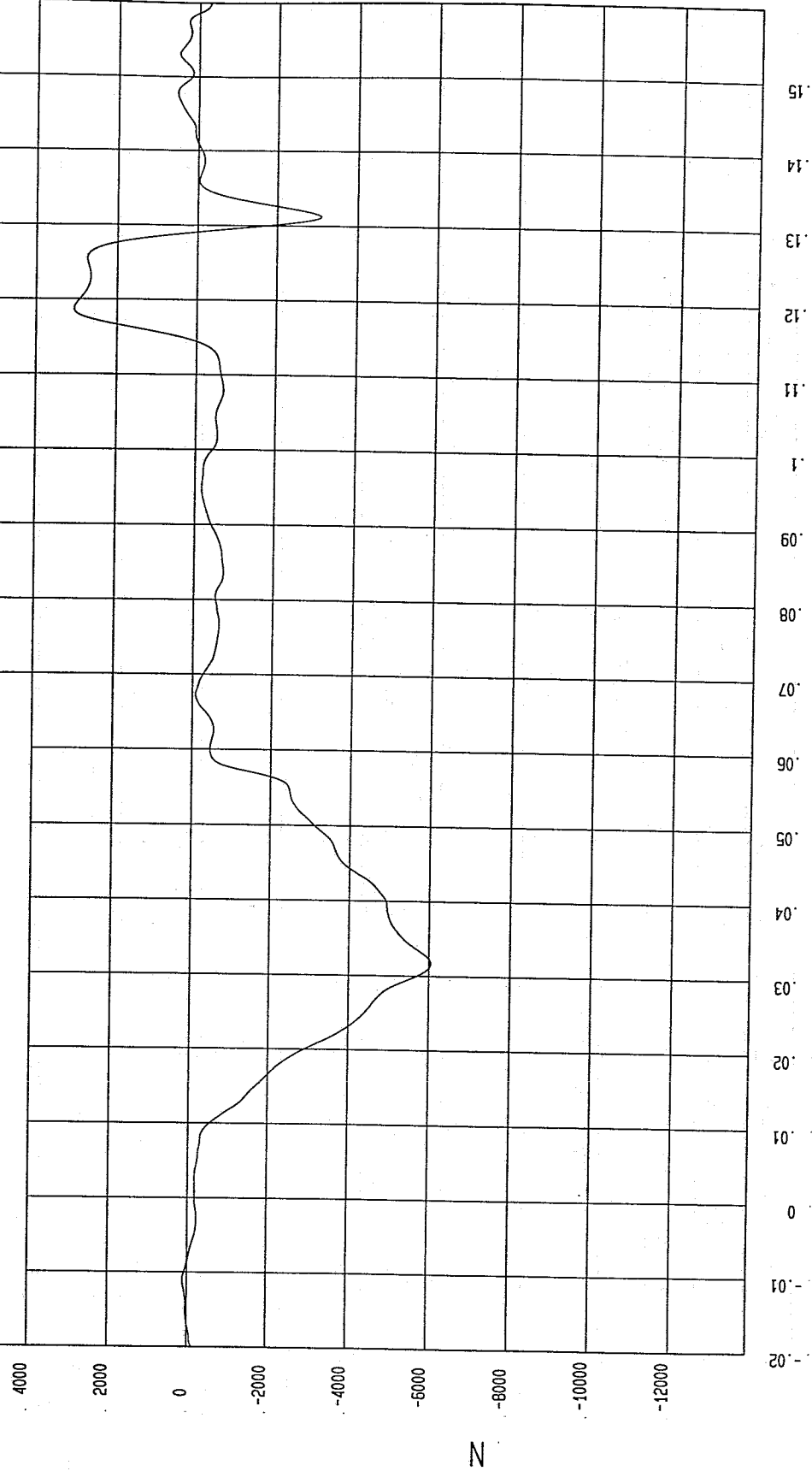
Speed: 32.8 MPH 52.8 KPH

Minimum = -6051.12 N at 32 msec

Maximum = 3069.82 N at 119 msec

LC #19 FX

1 ——— .B98016FF.F63 Filterclass (60)



MCA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

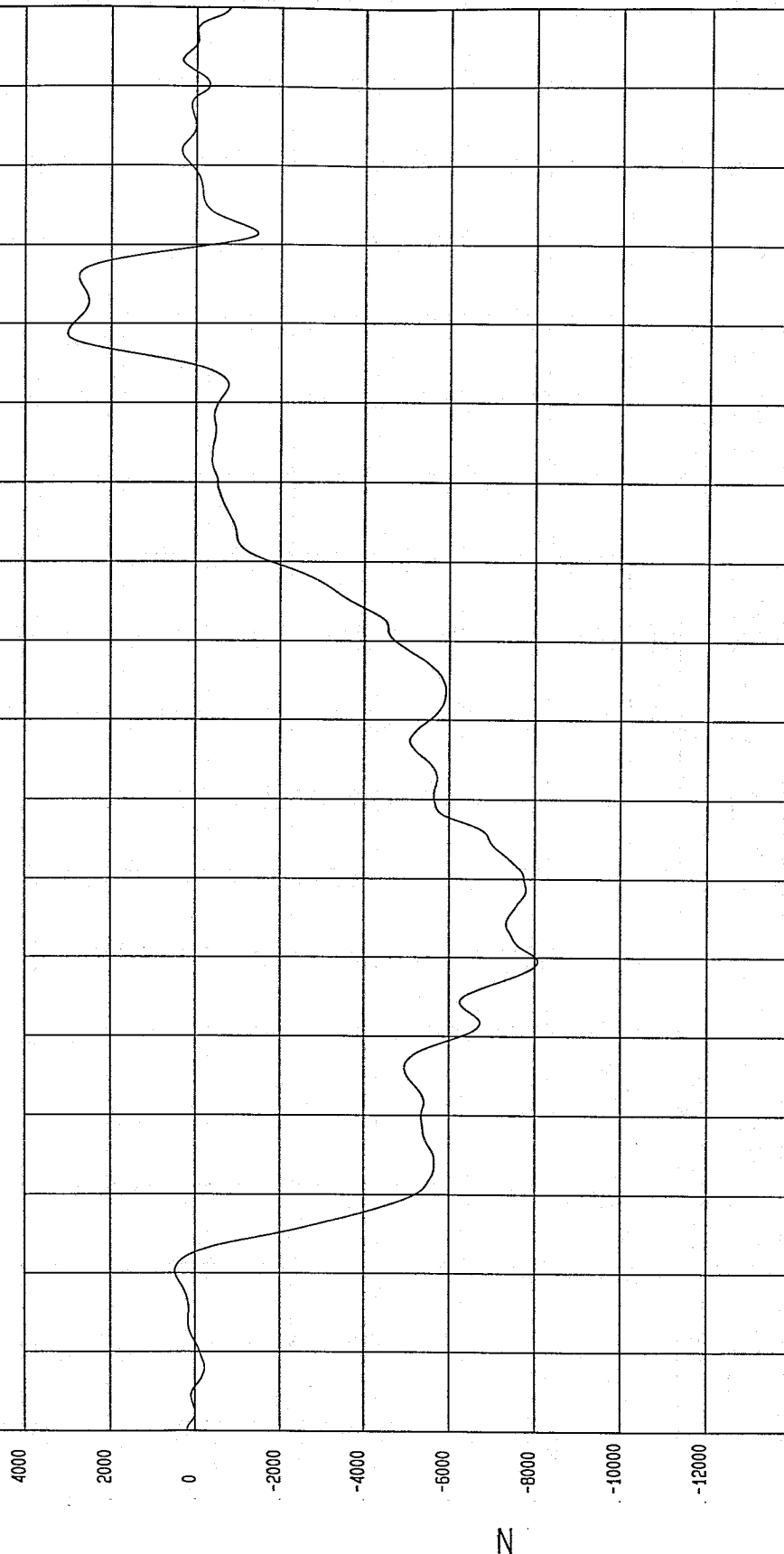
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 3007.21 N at 119 msec

Minimum = -8072.33 N at 40 msec

LC #20 FX

1 _____ B98016FF.F66 Filterclass (60)



TIME (SECONDS)

NCA Research
11-05-1998 17.01

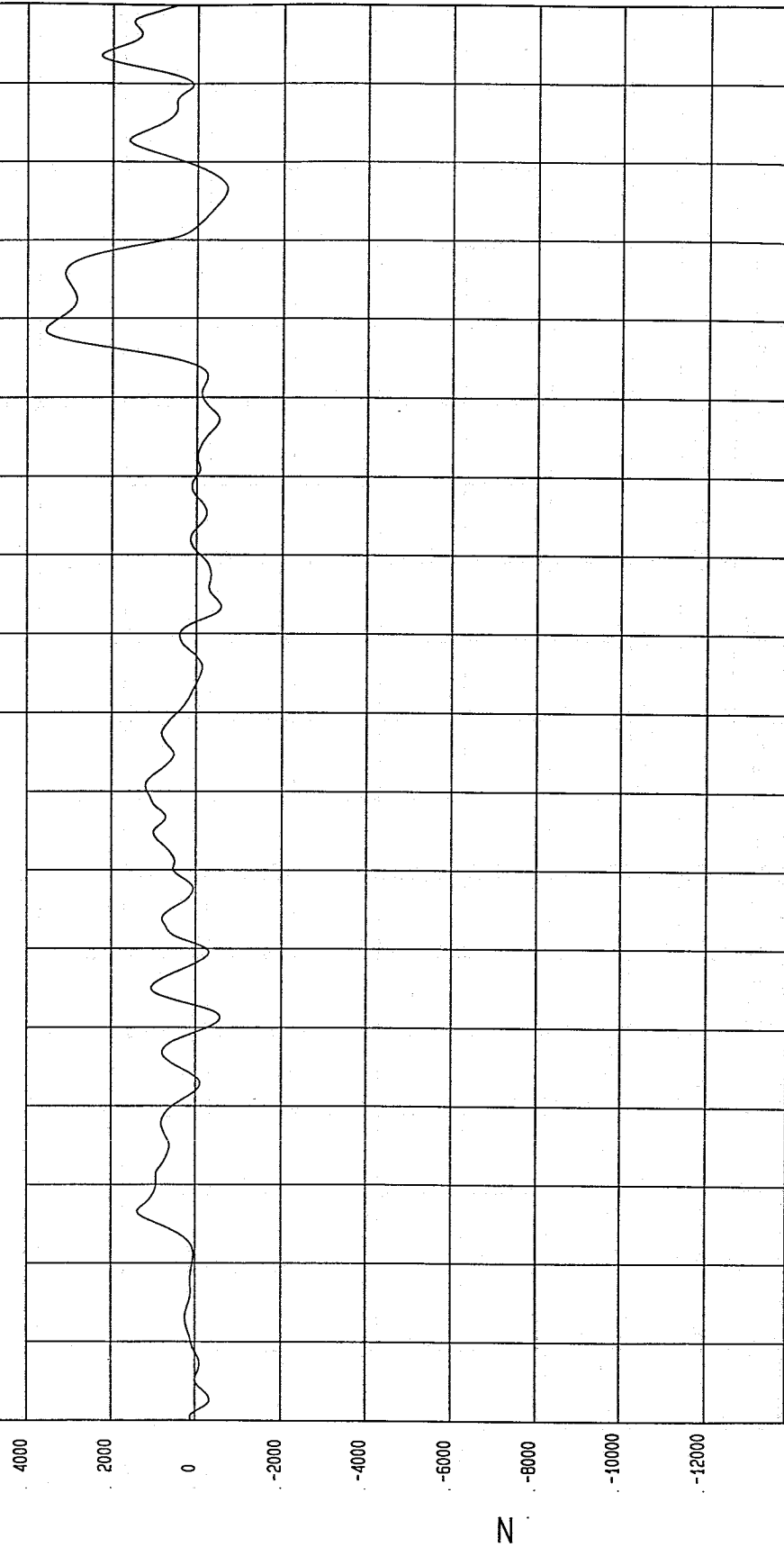
TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -696.39 N at 137 msec Maximum = 3564.95 N at 118 msec

LC #21 FX

1 ——— 898016FF.F69 Filterclass (60)



NSA Research
11-05-1998 17:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

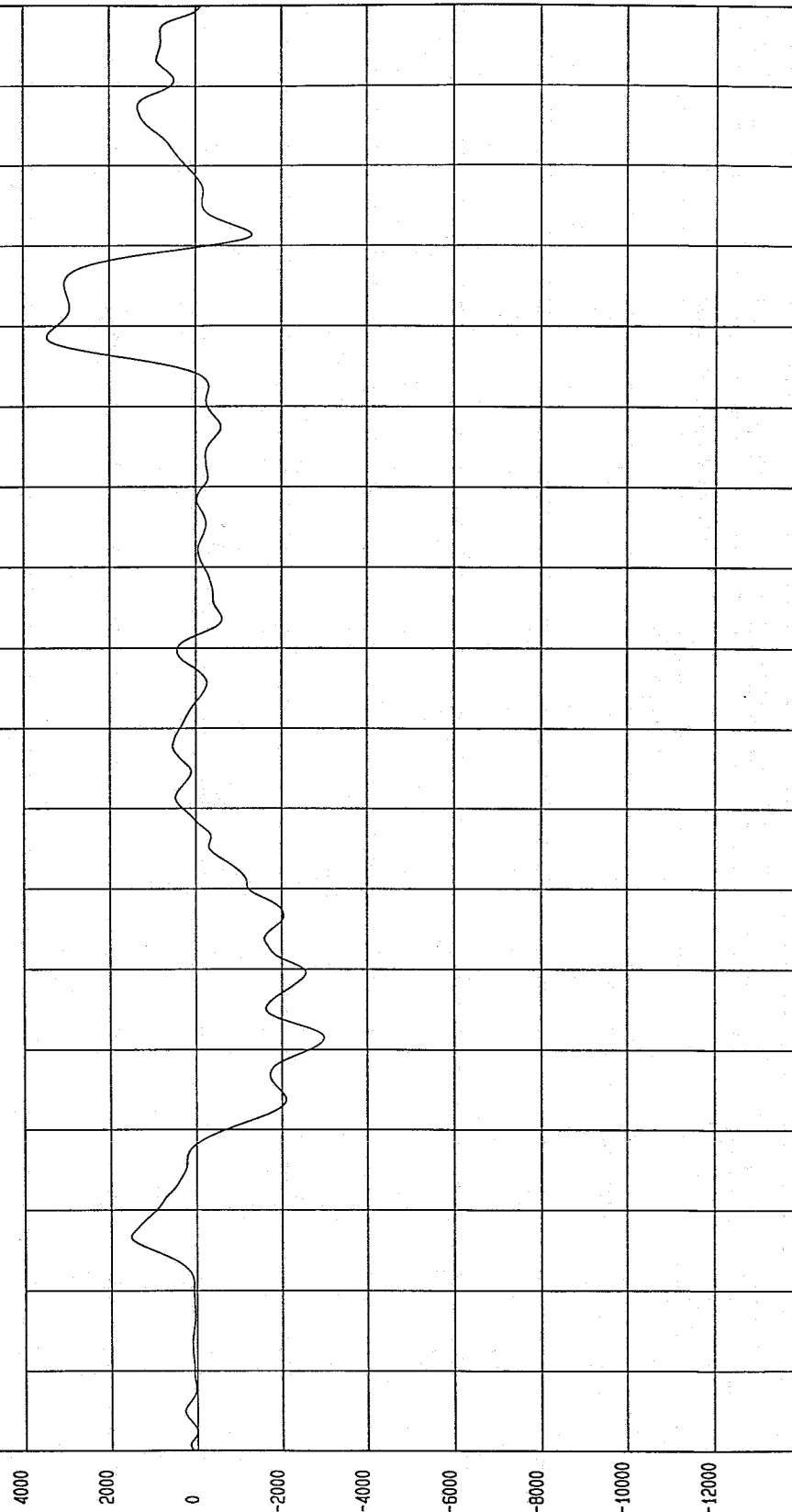
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 3458.34 N at 119 msec

Minimum = -3000.95 N at 32 msec

LC #22 FX

1 B98016FF.F72 Filterclass (60)



MCA Research
11-05-1998 17.02

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

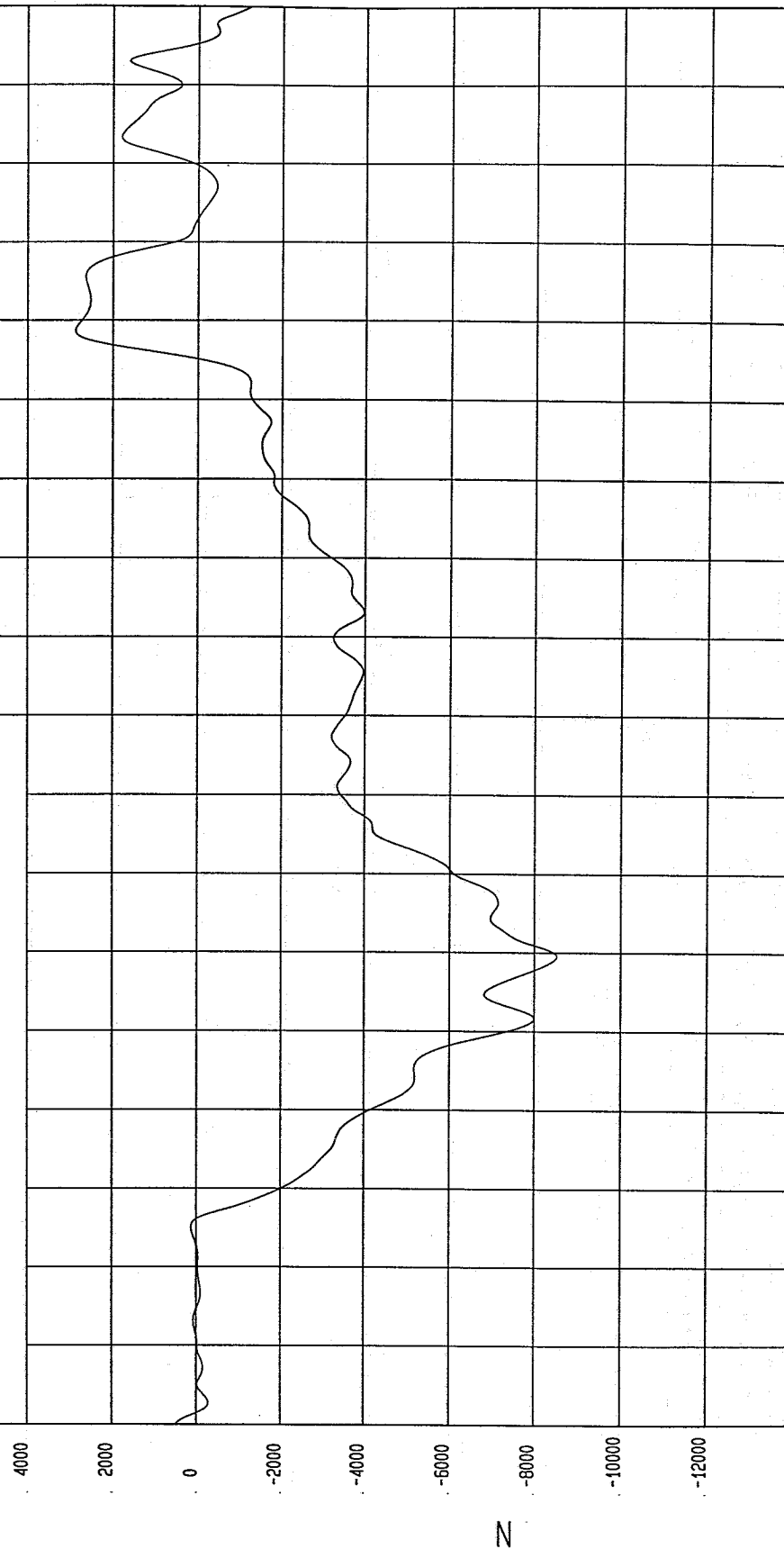
Speed: 32.8 MPH 52.8 KPH

Minimum = -8524.92 N at 40 msec

Maximum = 2872.58 N at 119 msec

LC #23 FX

1 _____ B98016FF.F76 Filterclass (50)



MSA Research
11-05-1998 17:02

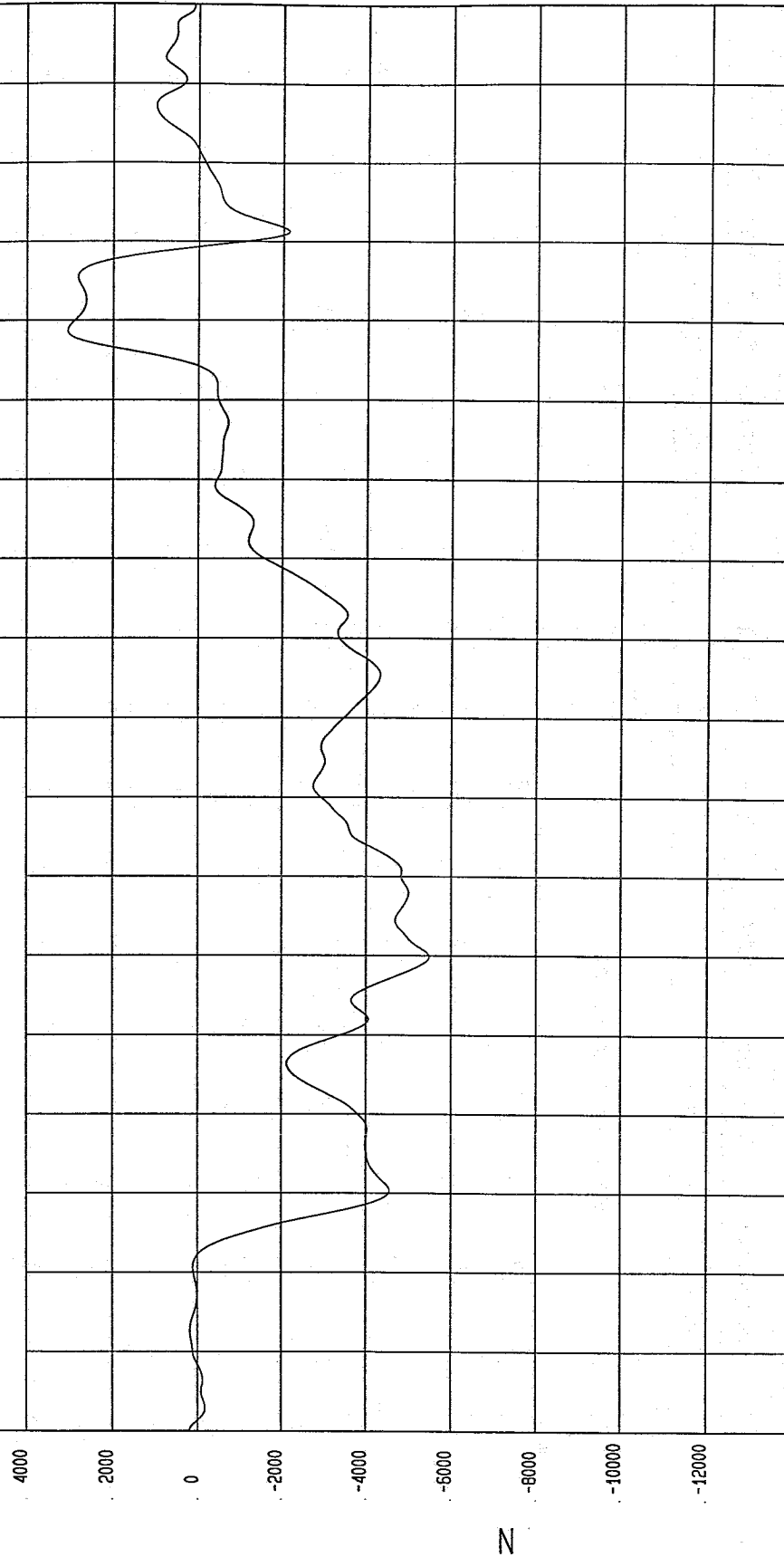
TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -5484 N at 40 msec Maximum = 3051.37 N at 119 msec

LC #24 FX

1 B98016FF.F79 Filterclass (60)



MCA Research
11-05-1998 17:02

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

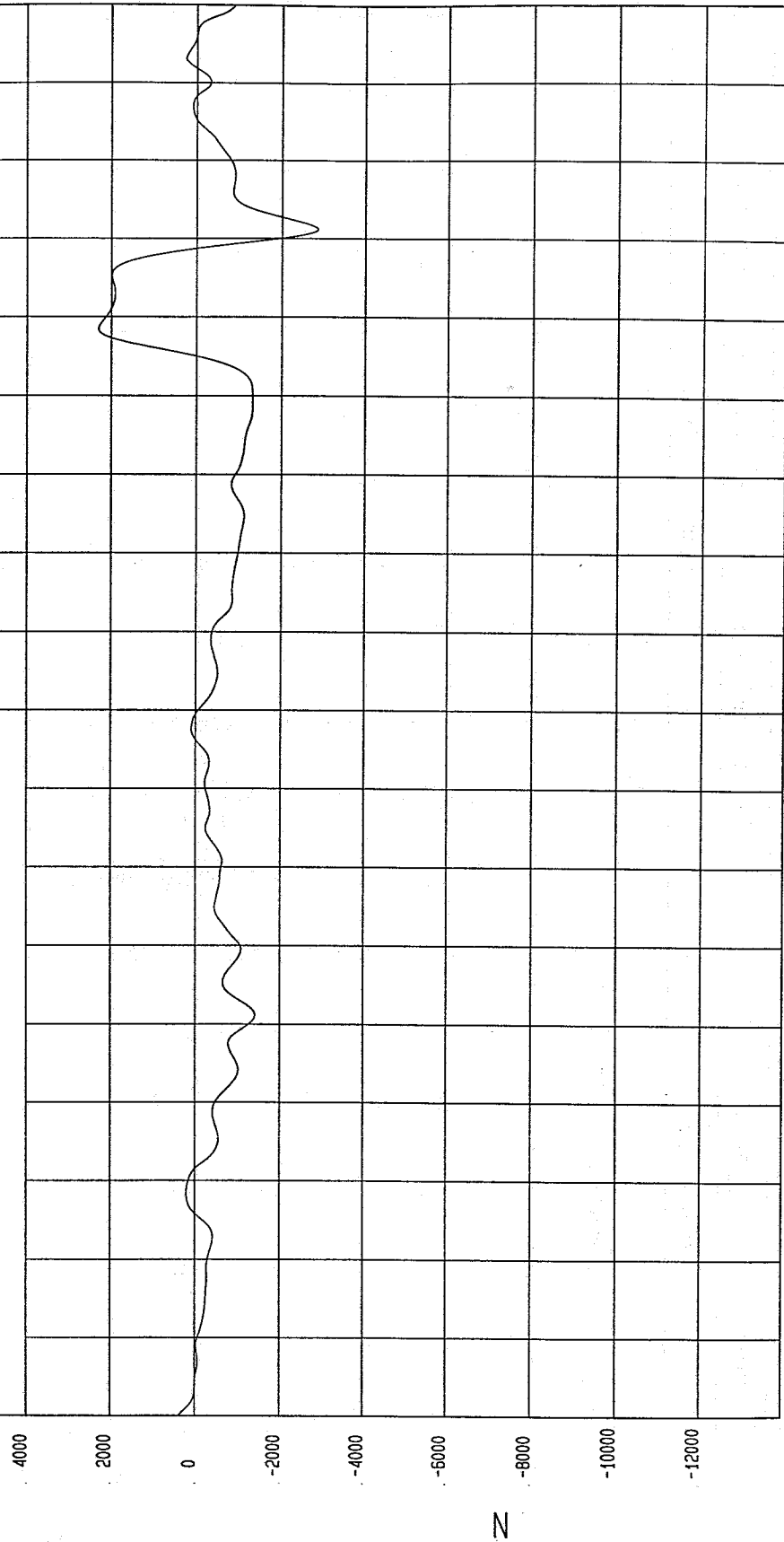
Speed: 32.8 MPH 52.8 KPH

Minimum = -2865.52 N at 131 msec

Maximum = 2290.24 N at 118 msec

LC #25 FX

1 _____ B98016FF.F82 Filterclass (60)



NGA Research
11-05-1998 17:02

TIME (SECONDS)

TEST DATE: 03-12-1998

TEST: FMVSS 214 SIDE IMPACT TEST

Speed: 32.8 MPH 52.8 KPH

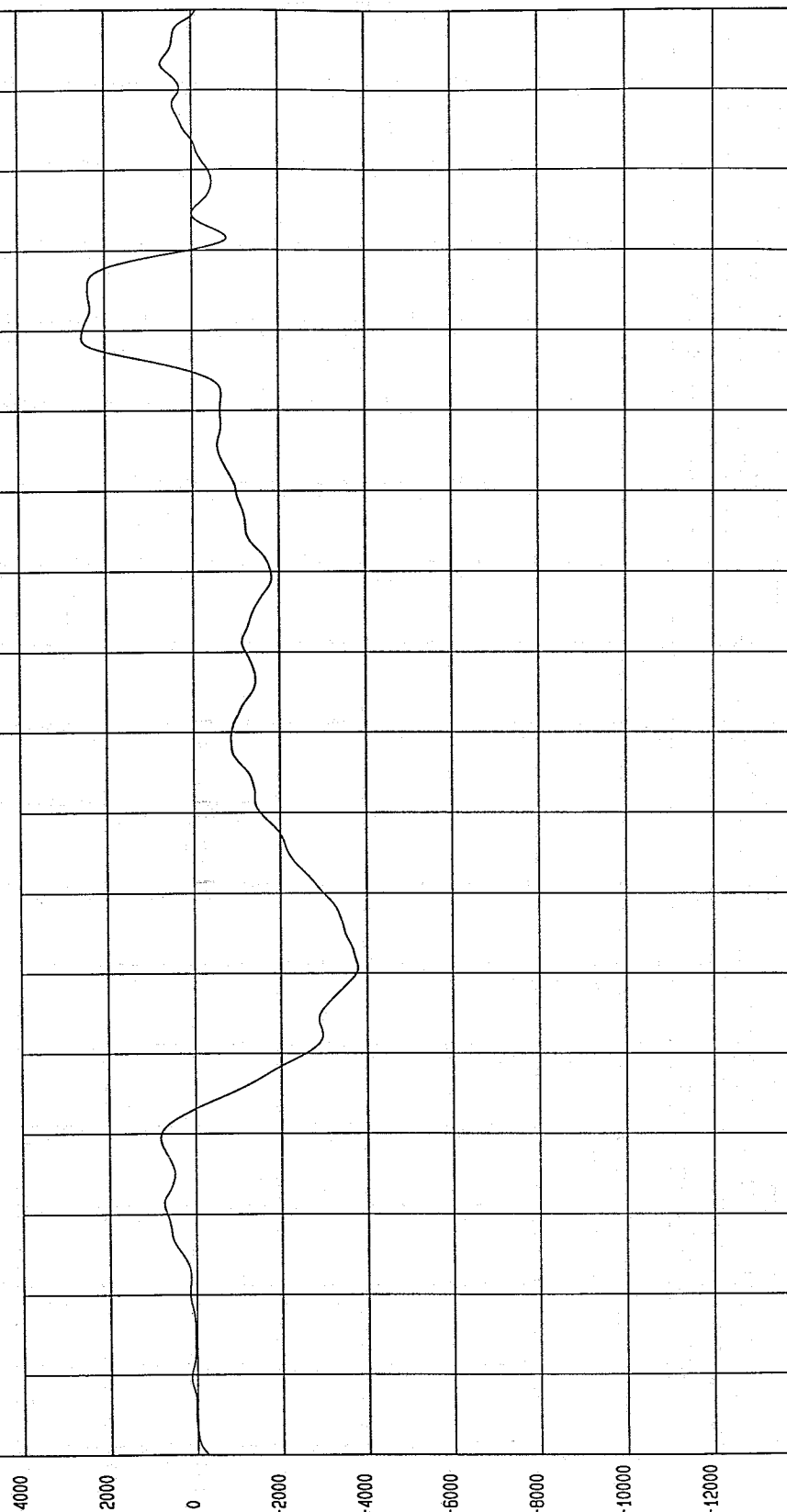
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 2532.45 N at 119 msec

Minimum = -3787.56 N at 41 msec

LC #26 FX

1 _____ B98016FF.F86 Filterclass (60)



WCA Research
11-05-1998 17:02

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

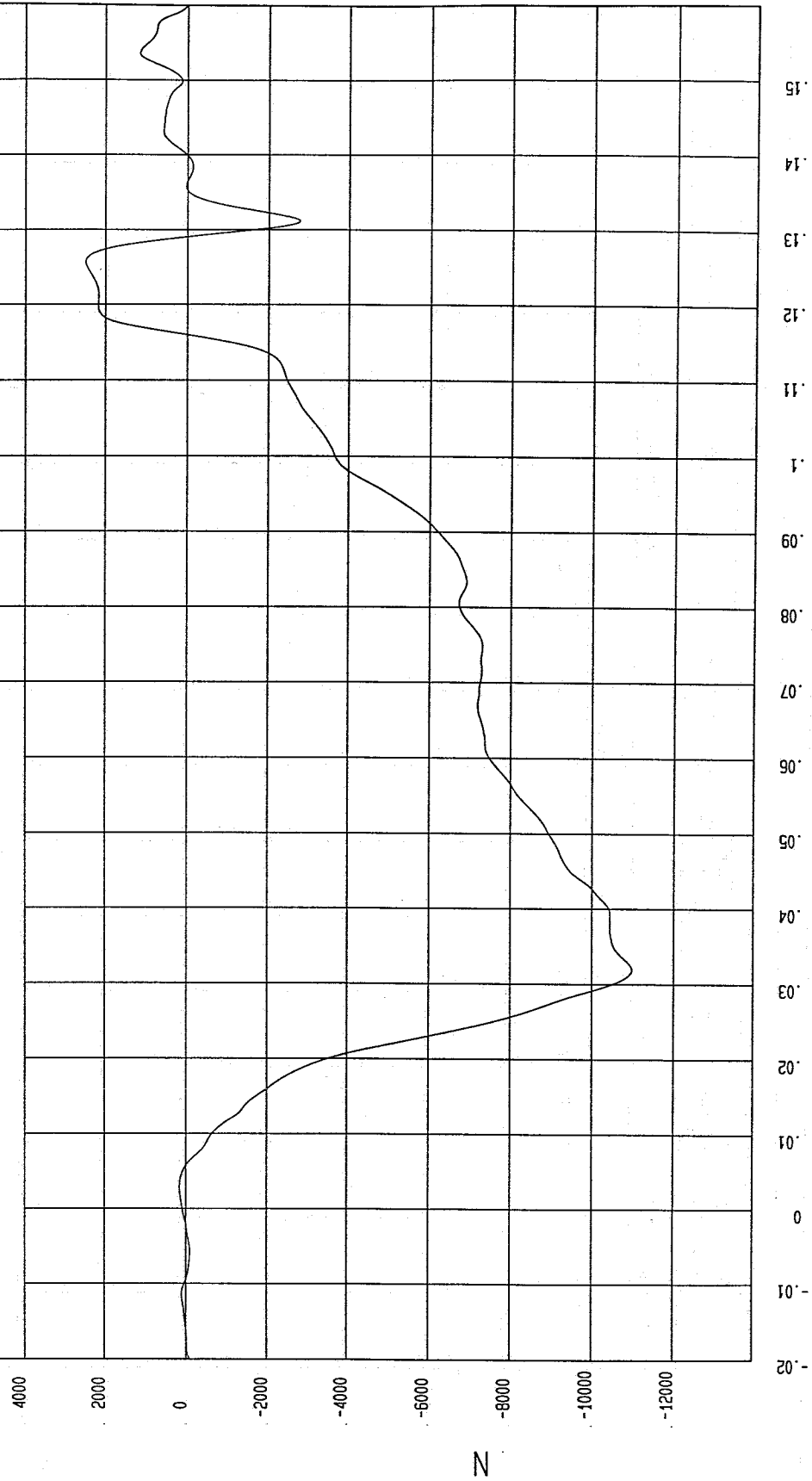
Speed: 32.8 MPH 52.8 KPH

Minimum = -10972.45 N at 32 msec

Maximum = 2490.88 N at 126 msec

LC #27 FX

1 898016FF.F89 Filterclass (60)



MSA Research
11-05-1998 17:02

TIME (SECONDS)

TEST DATE: 03-12-1998

TEST: FMVSS 214 SIDE IMPACT TEST

Speed: 32.8 MPH 52.8 KPH

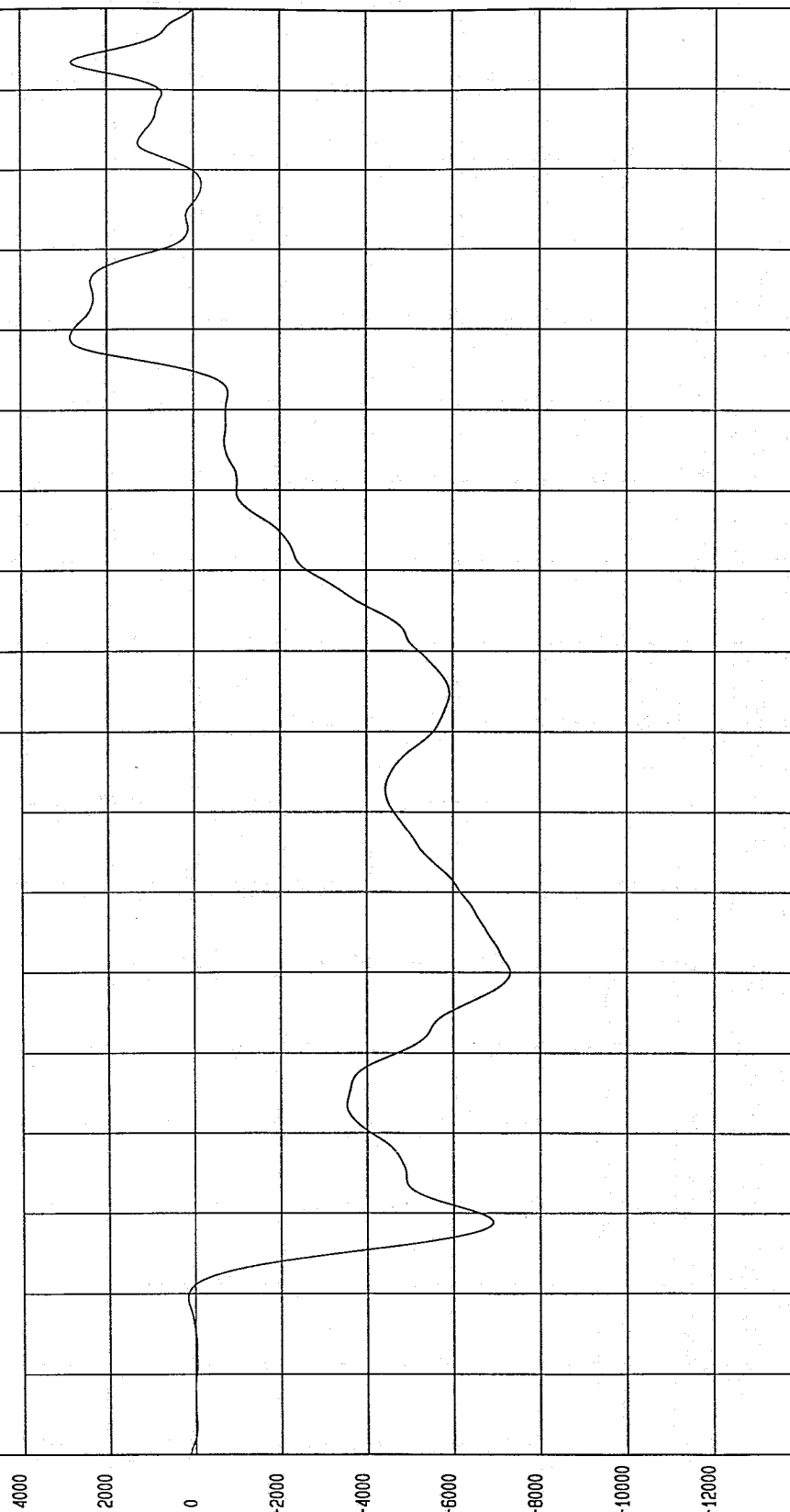
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 2844.07 N at 119 msec

Minimum = -7319.86 N at 40 msec

LC #28 FX

1 898016FF.F92 Filterclass (60)



MSA Research
11-05-1998 17:02

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

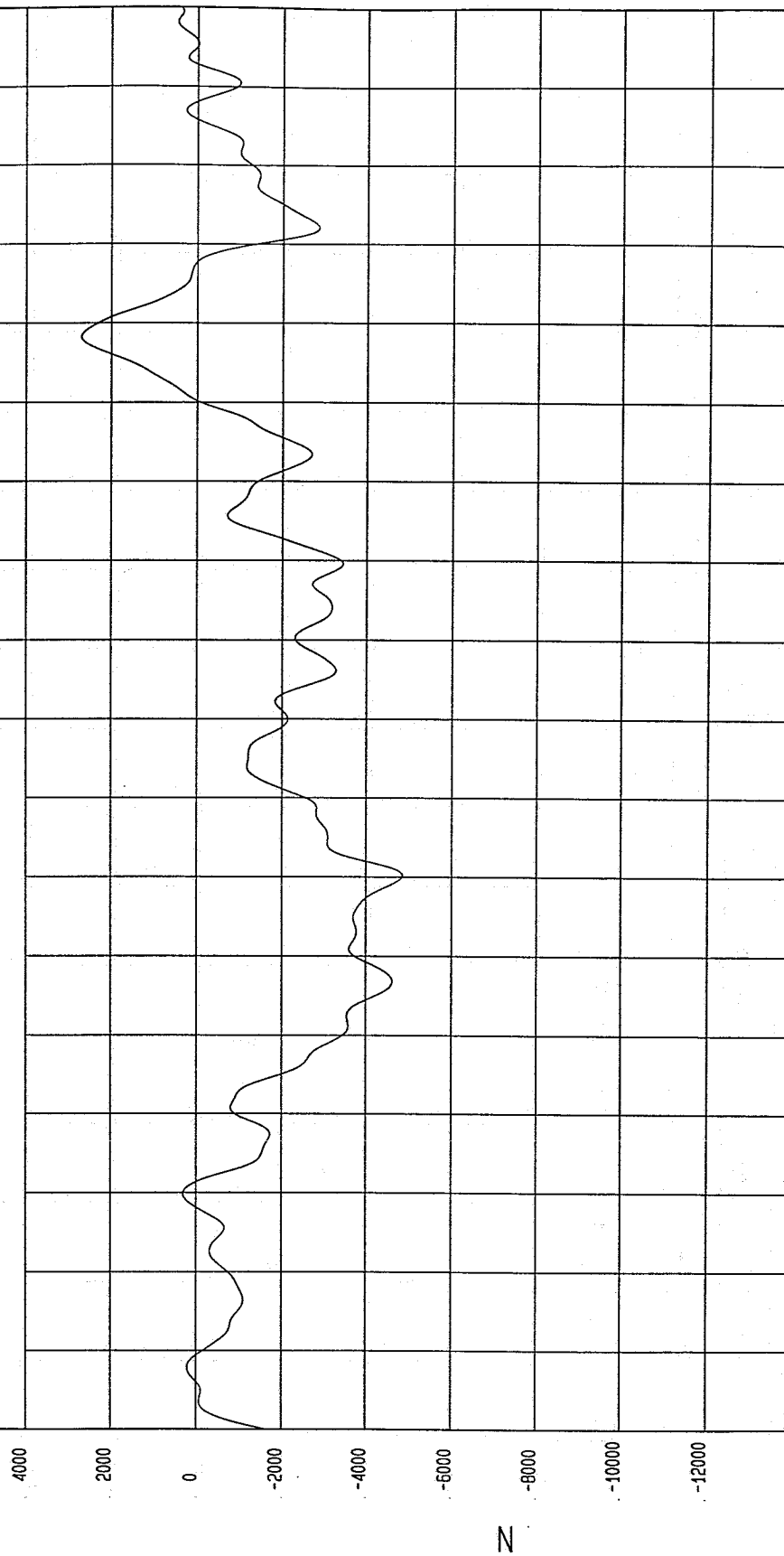
Speed: 32.8 MPH 52.8 KPH

Minimum = -4841.11 N at 50 msec

Maximum = 2688.15 N at 118 msec

LC #29 FX

1 _____ 898016FF.F96 Filterclass (60)



NCA Research
11-05-1998 17.02

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

SPEED: 32.8 MPH 52.8 KPH

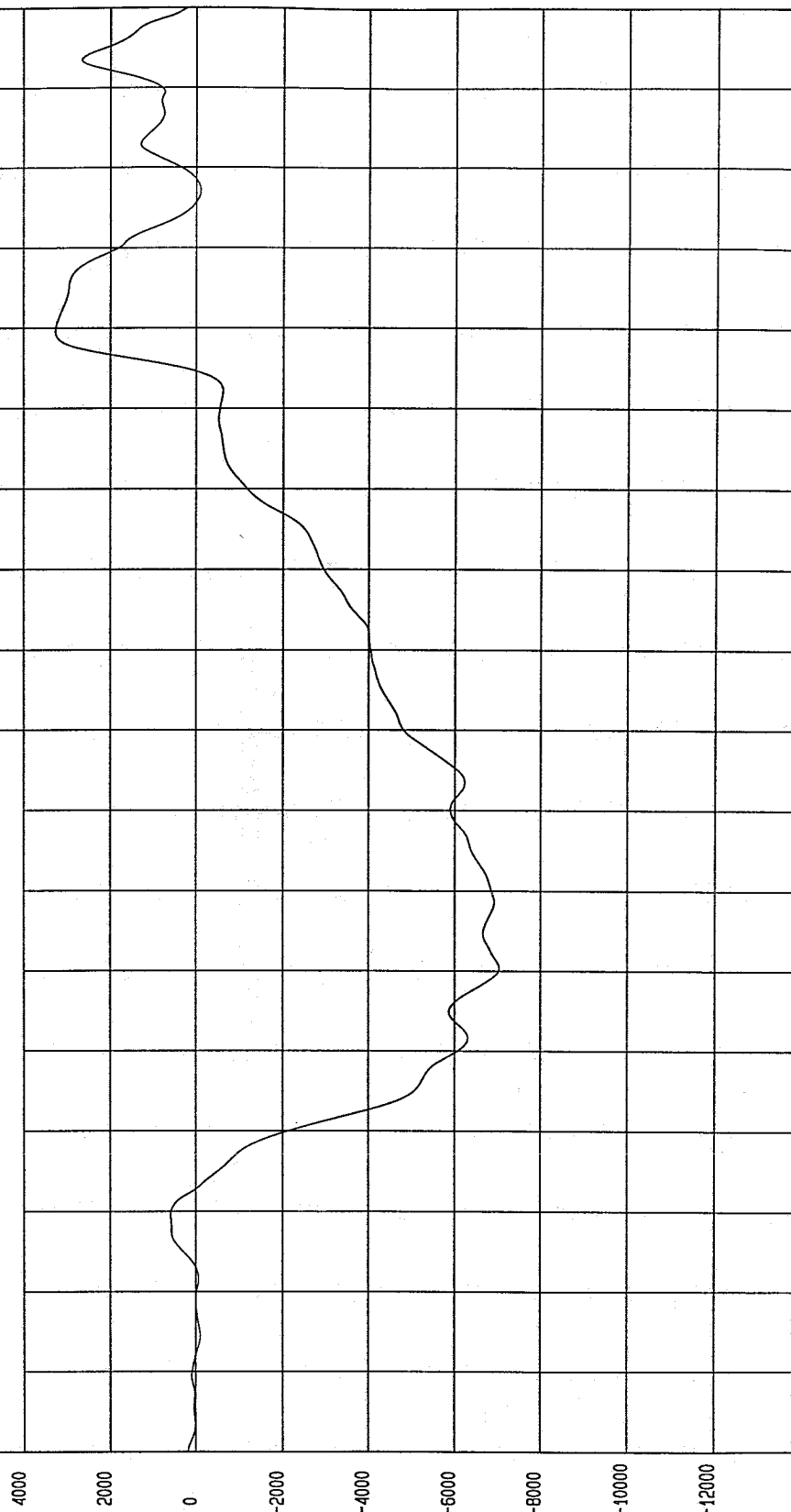
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 3255.92 N at 120 msec

Minimum = -7047.12 N at 40 msec

LC #30 FX

1 _____ B98016FF.F99 Filterclass (60)



MOA Research
11-05-1998 17:02

TIME (SECONDS)

N

LC #31 FX

NO VALID DATA COLLECTED

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

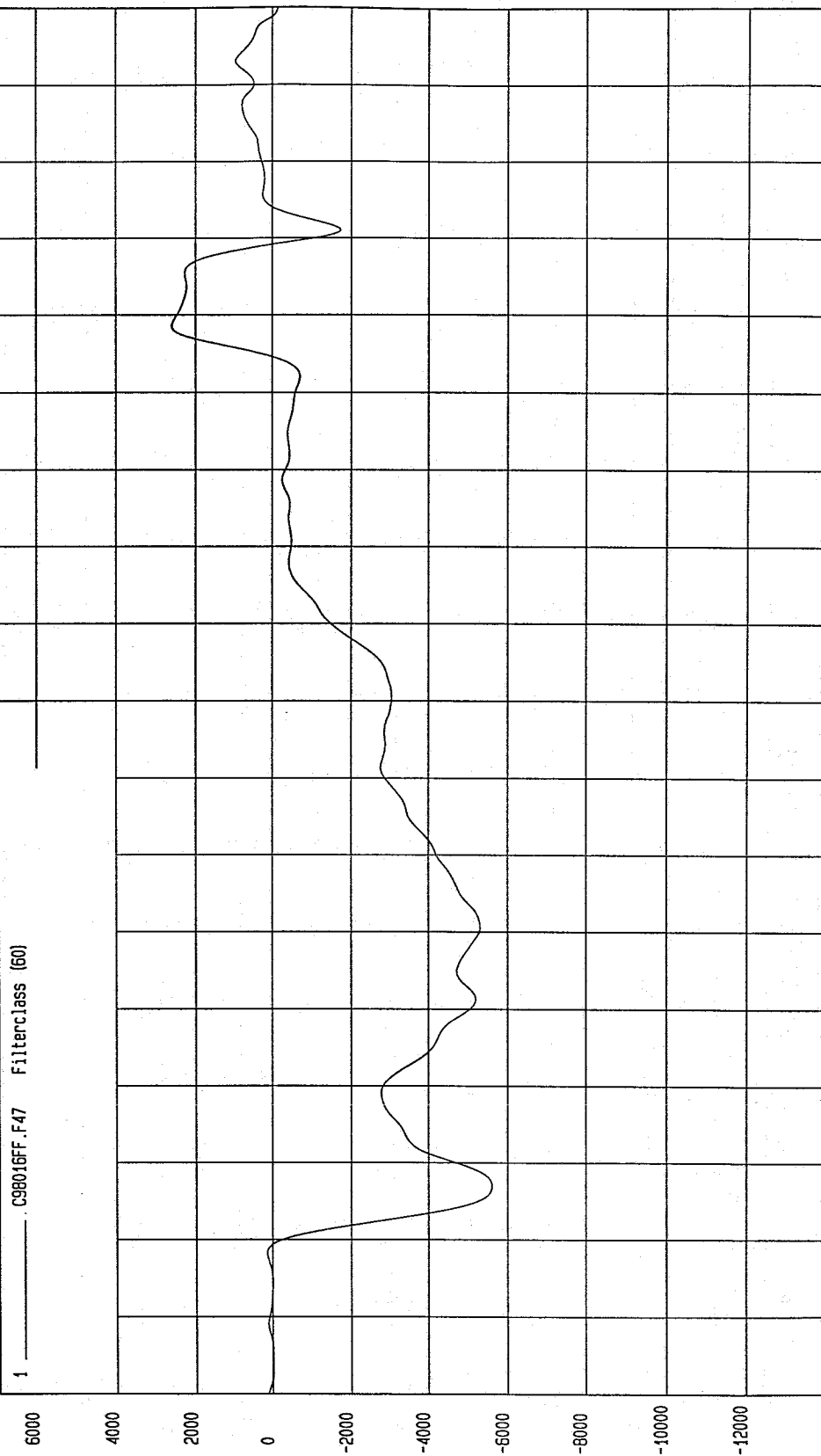
Speed: 32.78 MPH 52.8 KPH

Minimum = -5600.73 N at 7 msec

Maximum = 2581.35 N at 119 msec

LC #32 FX

1 C98016FF.F47 Filterclass (60)



MCA Research
11-08-1998 11:35

TIME (seconds)

N

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

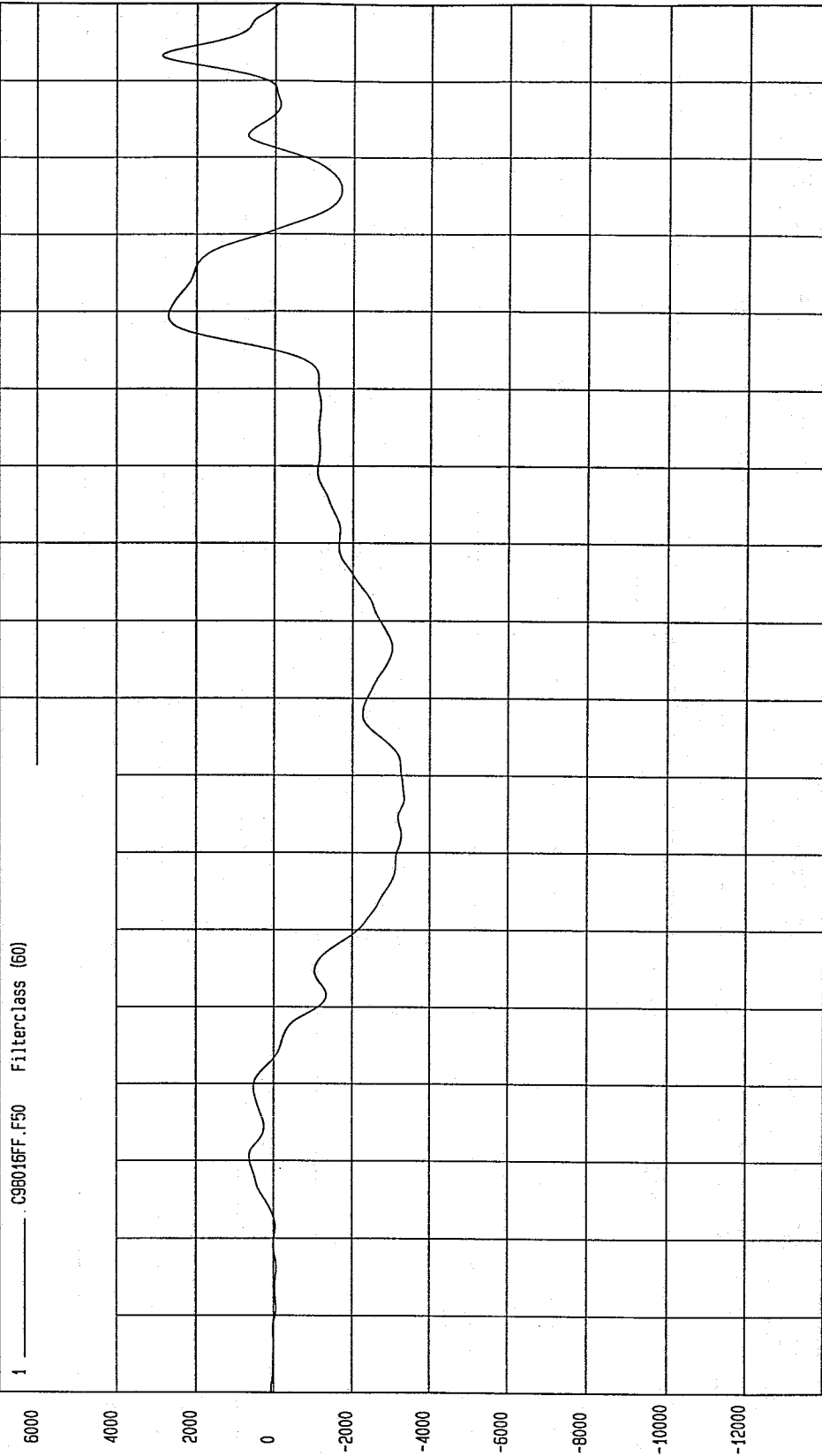
Speed: 32.78 MPH 52.8 KPH

Minimum = -3358.93 N at 57 msec

Maximum = 2844.82 N at 153 msec

LC #33 FX

1 C98016FF.F50 Filterclass (60)



TIME (seconds)

MGA Research
11-08-1998 11:35

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

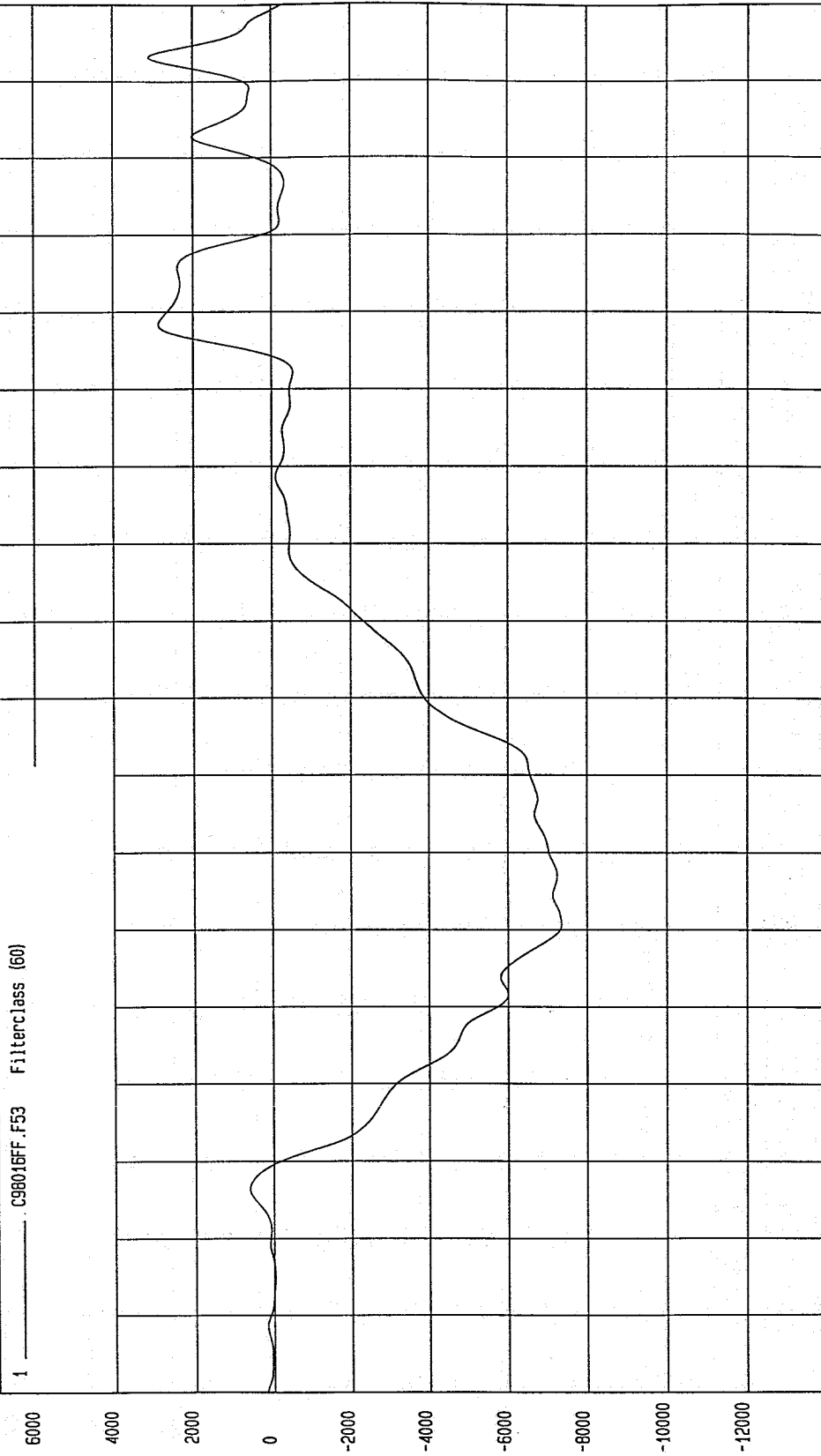
Speed: 32.78 MPH 52.8 KPH

Minimum = -7362.73 N at 41 msec

Maximum = 3094.94 N at 153 msec

LC #34 FX

1 C98016FF.F53 Filterclass (60)



MCA Research
11-06-1998 11:35

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

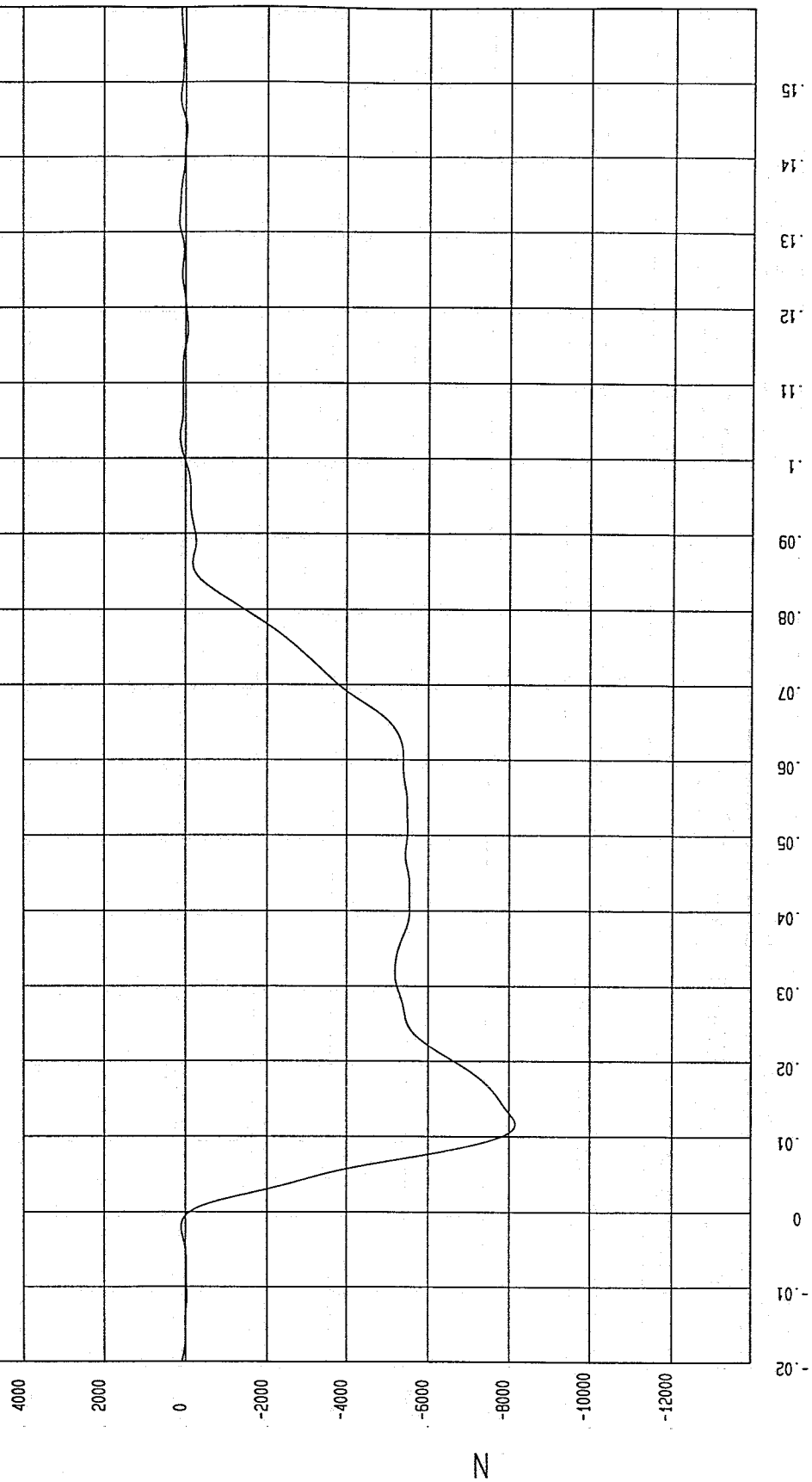
Speed: 34.8 MPH 56 KPH

Minimum = -8146.35 N at 12 msec

Maximum = 175.33 N at 198 msec

LC #35 FX

1 _____ H98016FF.F11 Filterclass (60)



MGA Research
11-08-1998 11:21

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

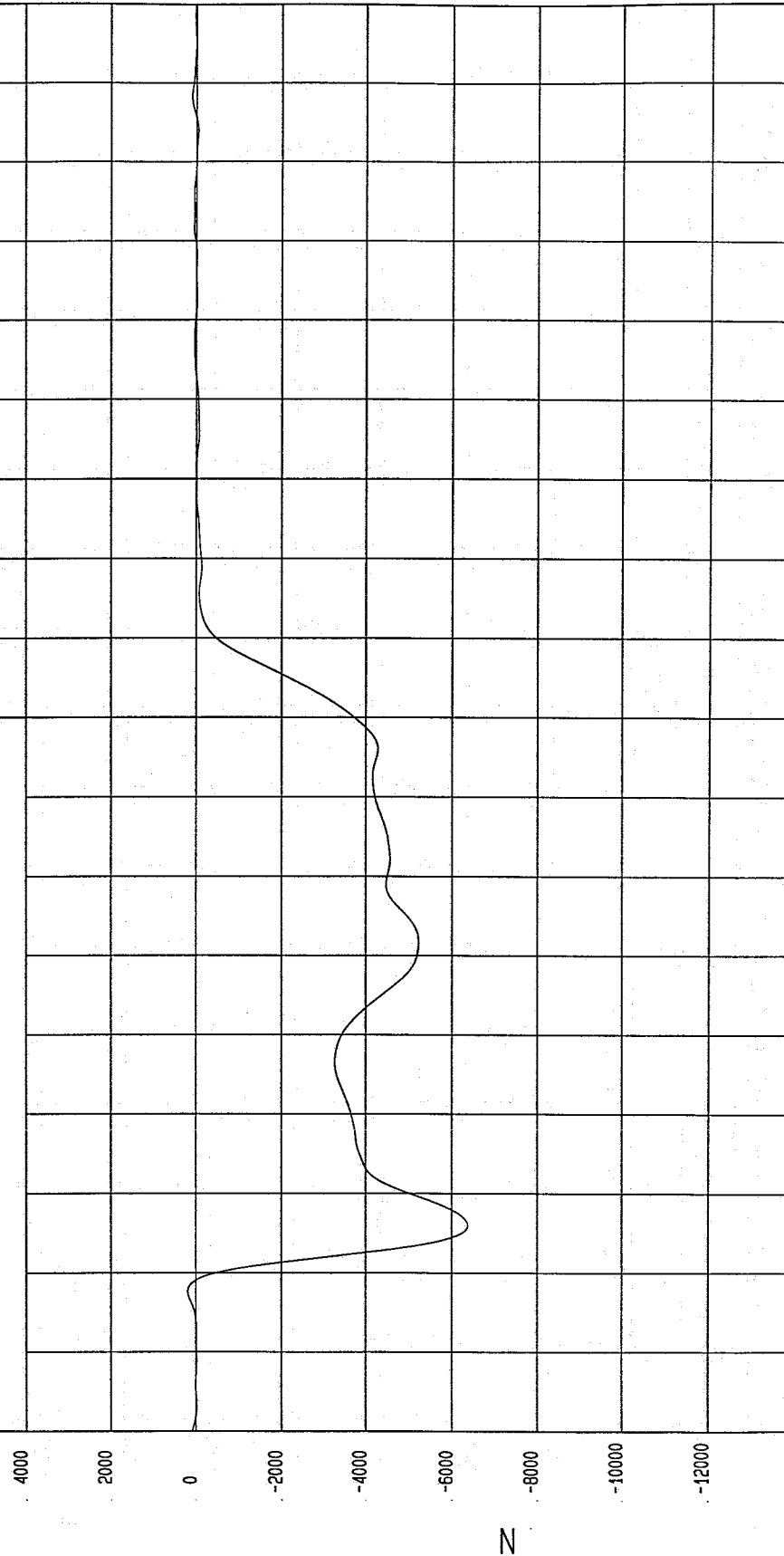
Speed: 34.8 MPH 56 KPH

Minimum = -6390.98 N at 6 msec

Maximum = 196.79 N at -2 msec

LC #36 FX

1 _____ H98016FF.F14 Filterclass (60)



MGA Research
11-08-1998 11:21

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

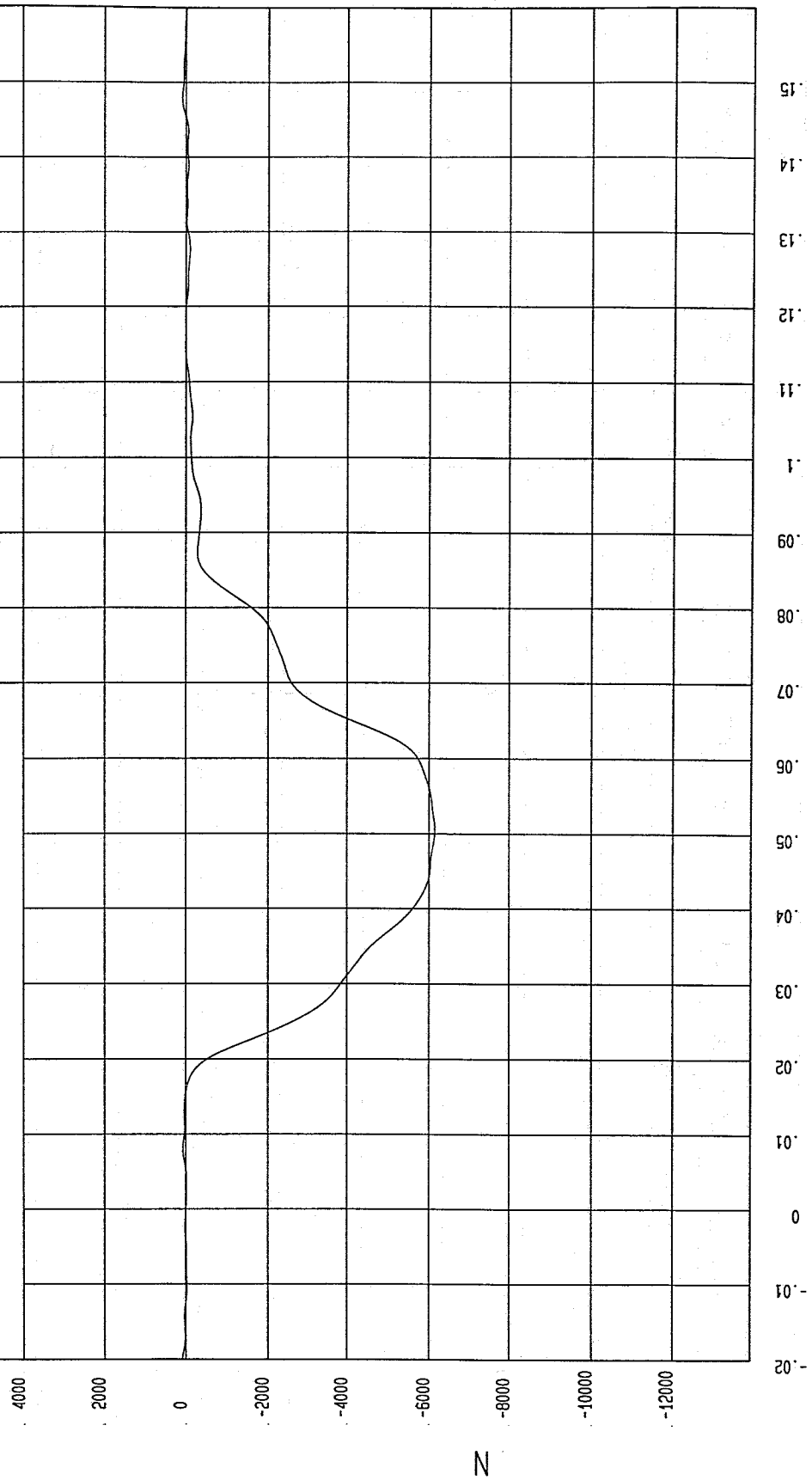
Speed: 34.8 MPH 56 KPH

Minimum = -6144.7 N at 50 msec

Maximum = 120.03 N at 186 msec

LC #37 FX

1 H98016FF.F17 Filterclass (60)



MGA Research
11-08-1998 11:21

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

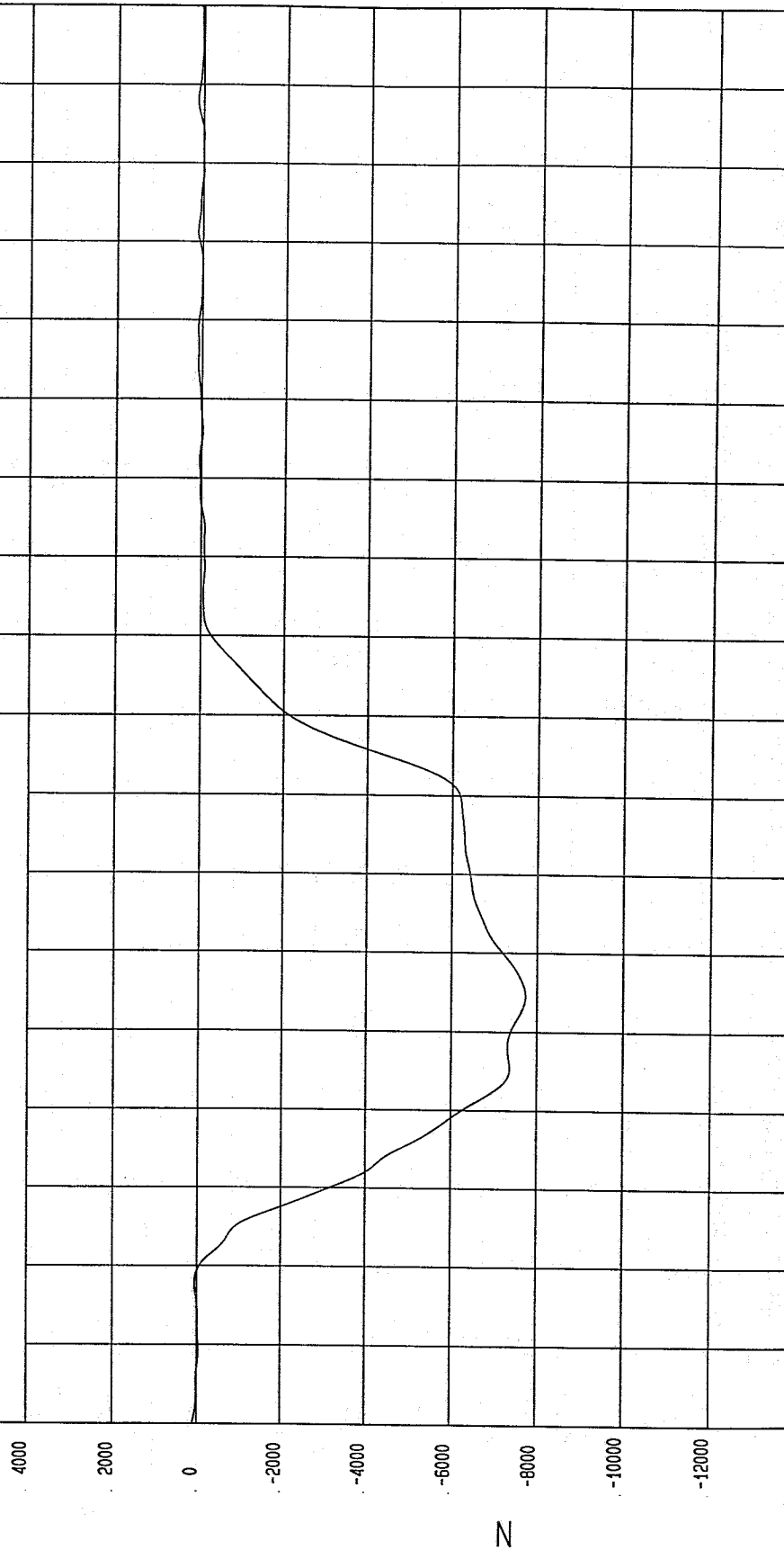
Speed: 34.8 MPH 56 KPH

Minimum = -7735.74 N at 34 msec

Maximum = 131.89 N at 148 msec

LC #38 FX

1 _____ H98016FF.F21 Filterclass (60)



MGA Research
11-06-1998 11:21

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

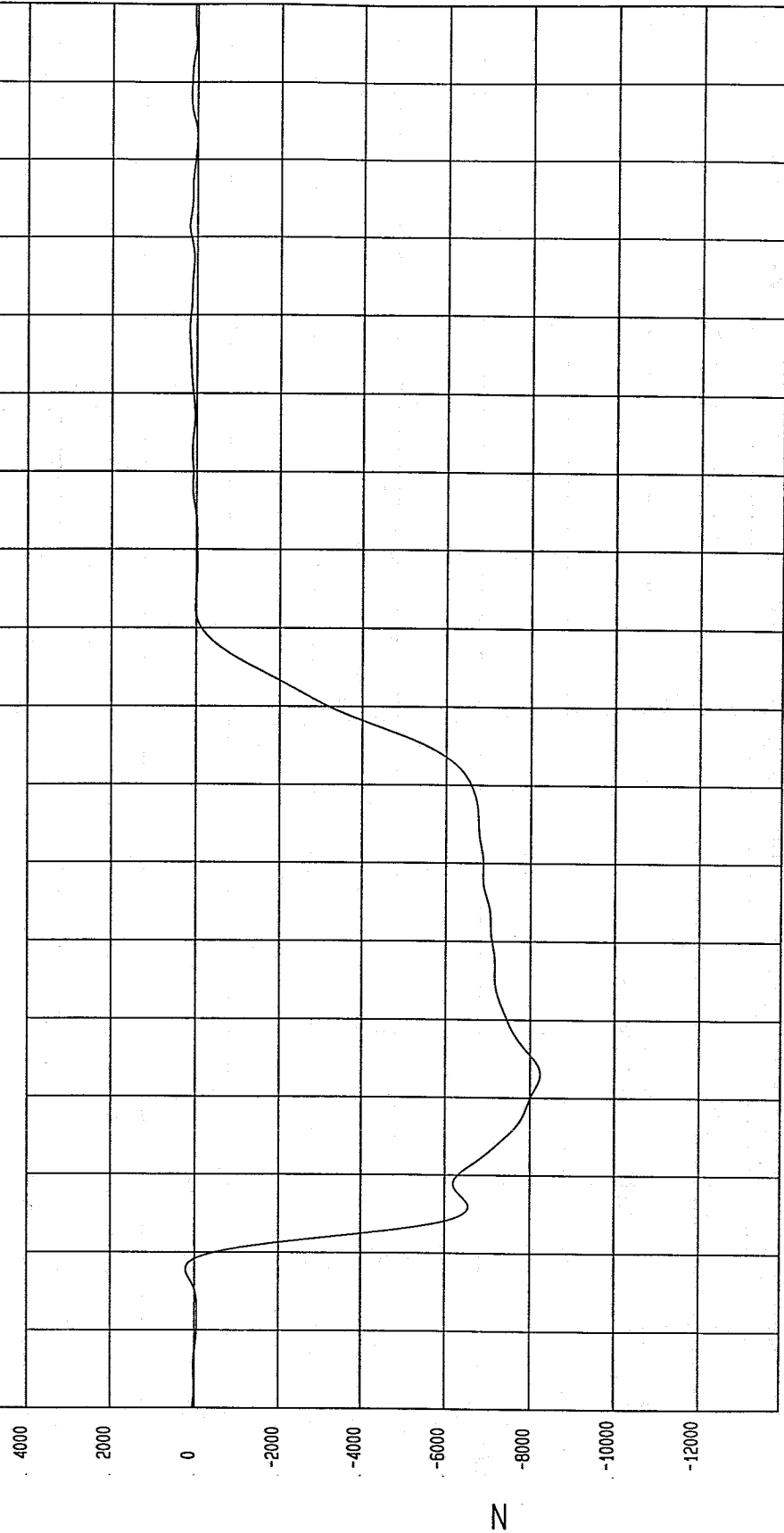
Speed: 34.8 MPH 56 KPH

Minimum = -8233.11 N at 23 msec

Maximum = 212.51 N at -2 msec

LC #39 FX

1 ——— H99016FF.F24 Filterclass (60)



MGA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

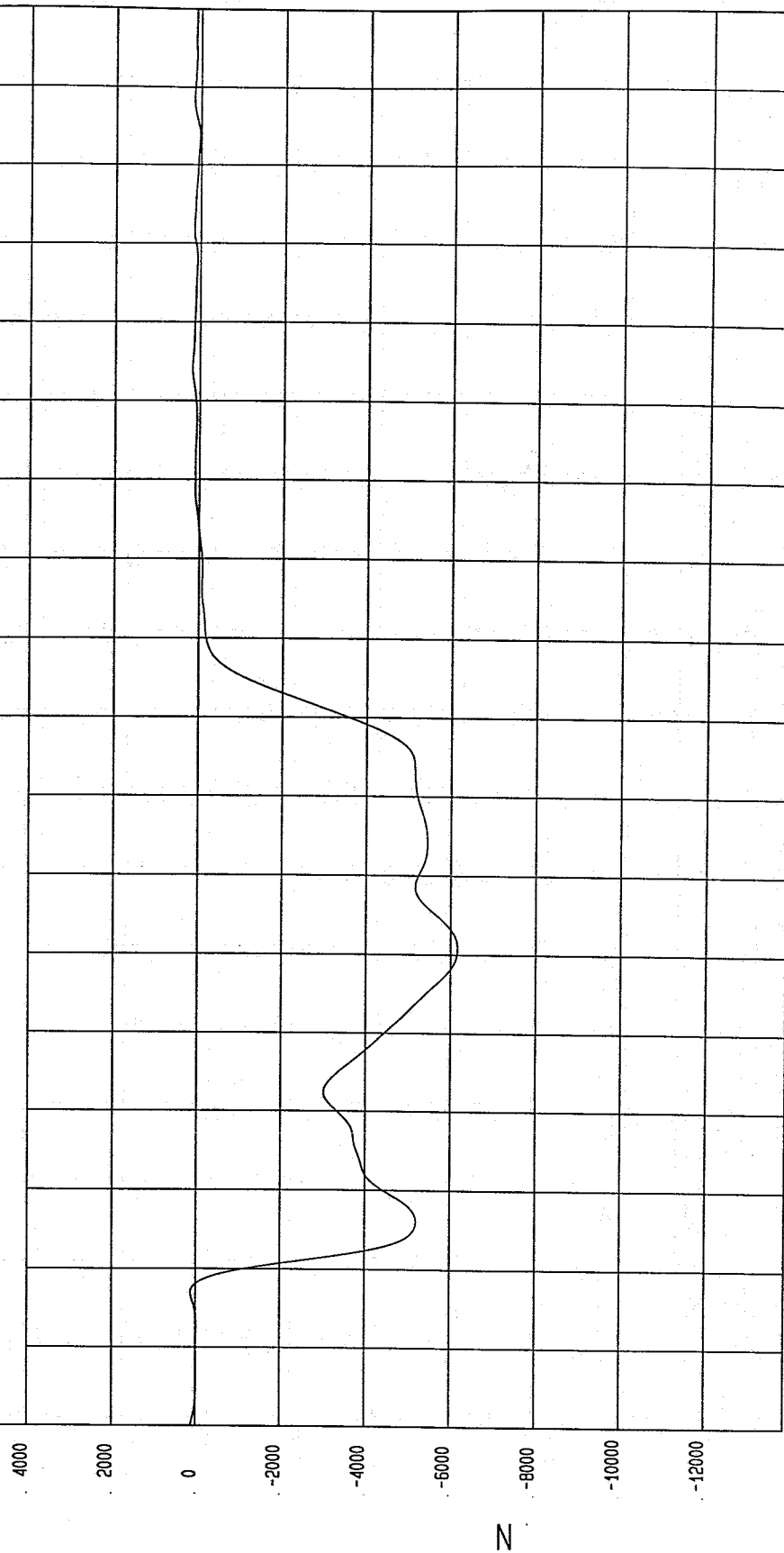
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 231.69 N at 187 msec

Minimum = -6160.23 N at 41 msec

LC #40 FX

1 _____ H98016FF.F27 Filterclass (60)



MGA Research
11-06-1998 11:22

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

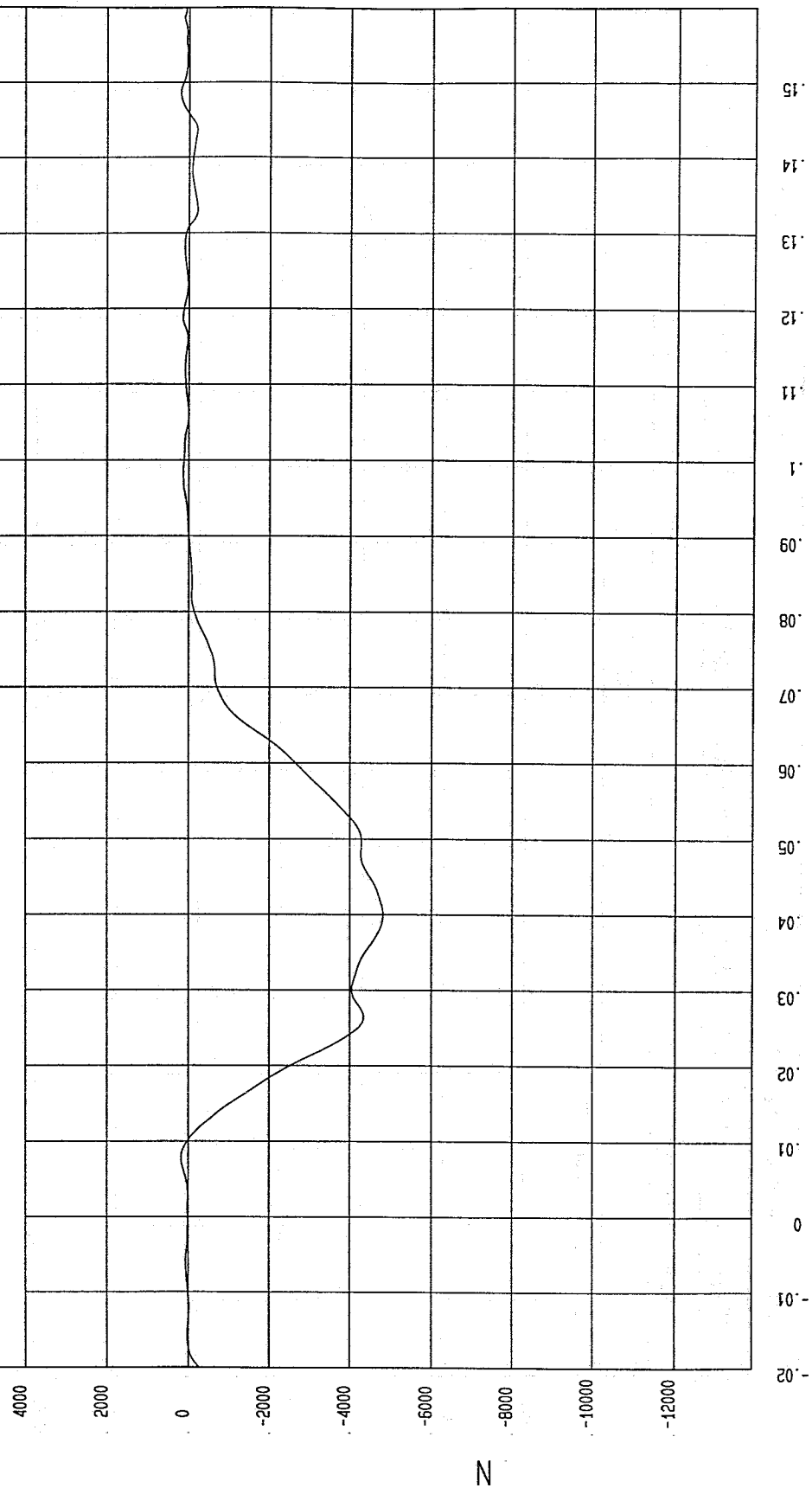
Speed: 34.8 MPH 56 KPH

Minimum = -4801.29 N at 40 msec

Maximum = 407.02 N at 187 msec

LC #41 FX

1 _____ H98016FF.F31 Filterclass (60)



MGA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

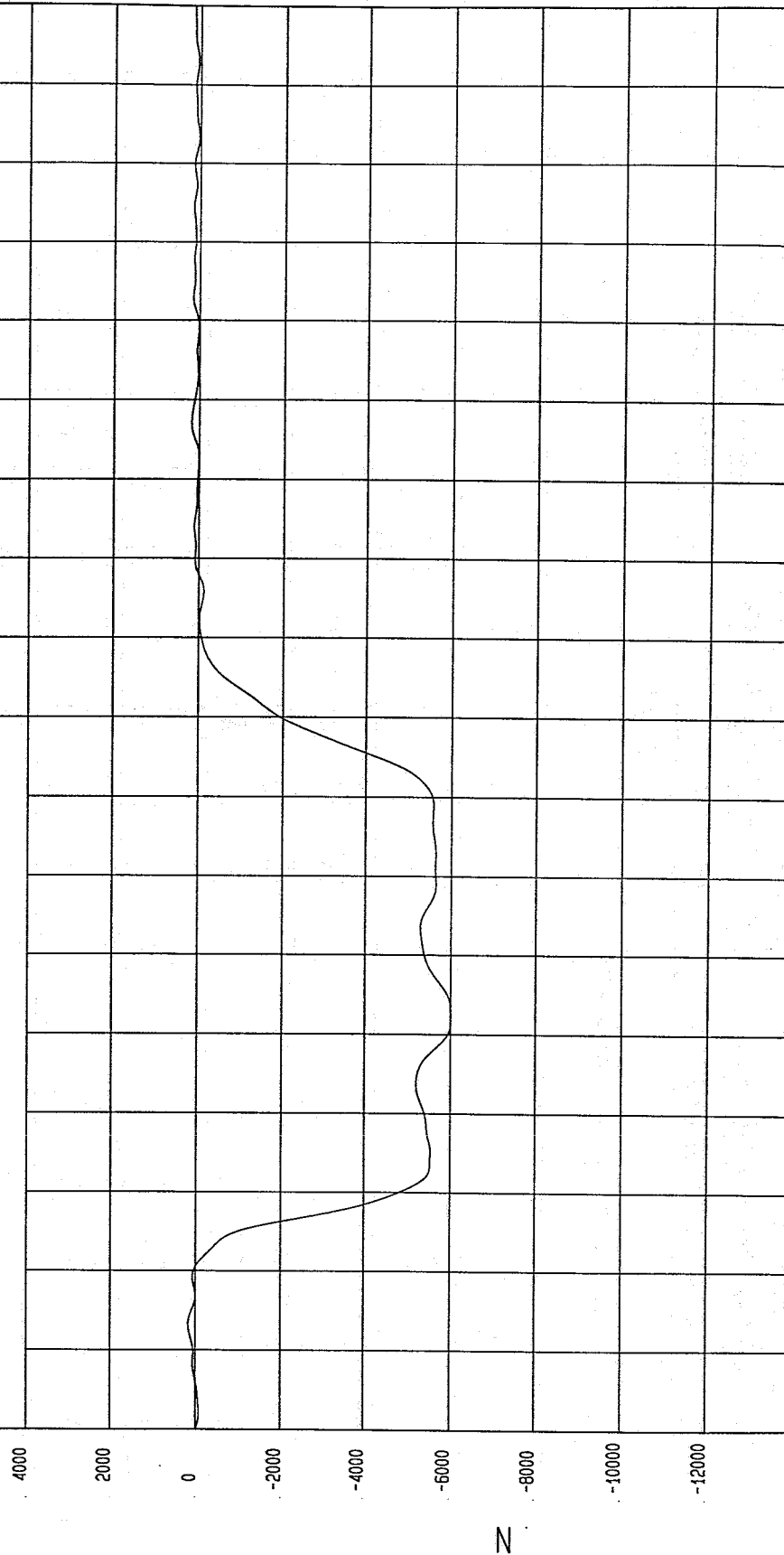
Speed: 34.8 MPH 56 KPH

Minimum = -6001.72 N at 32 msec

Maximum = 187.87 N at 107 msec

LC #42 FX

1 H98016FF.F34 Filterclass (60)



MGA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

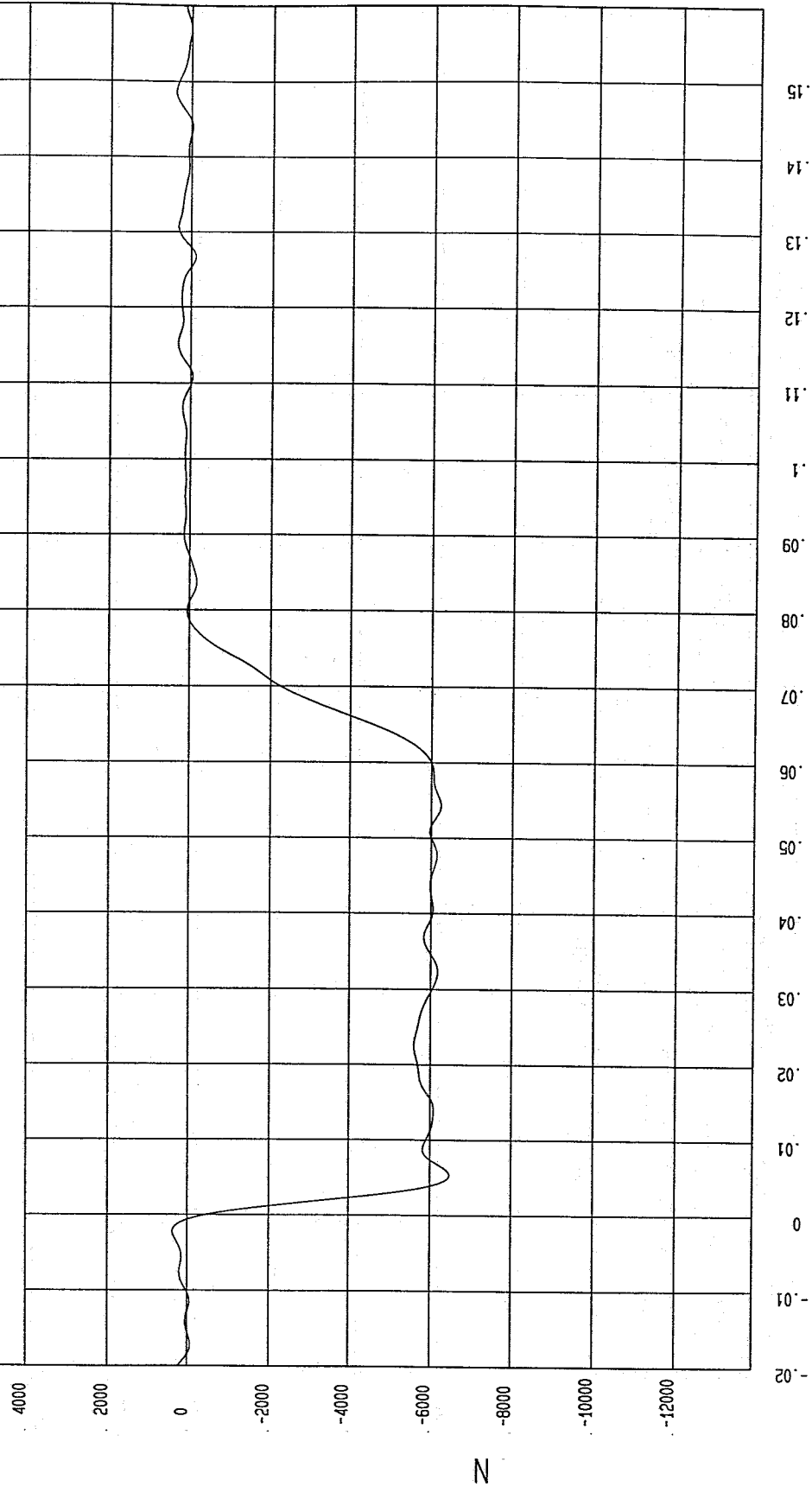
Speed: 34.8 MPH 56 KPH

Minimum = -6482.91 N at 5 msec

Maximum = 379.71 N at 149 msec

LC #43 FX

1 H98016FF.F37 Filterclass (60)



MCA Research
11-06-1998 11:22

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

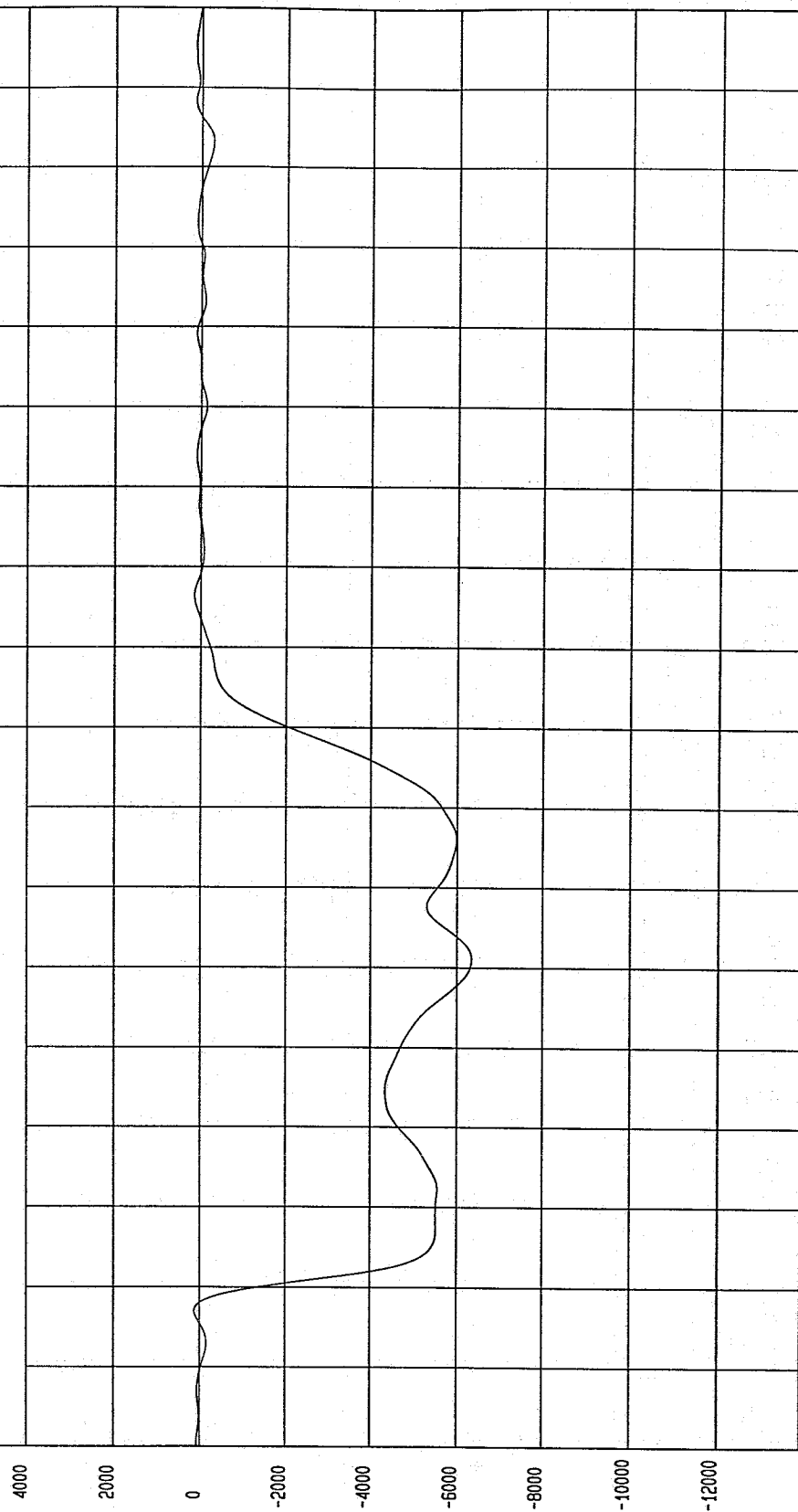
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 357.59 N at 199 msec

Minimum = -6338.49 N at 41 msec

LC #44 FX

1 H98016FF.F41 Filterclass (60)



MCA Research
11-08-1998 11:22

TIME (SECONDS)

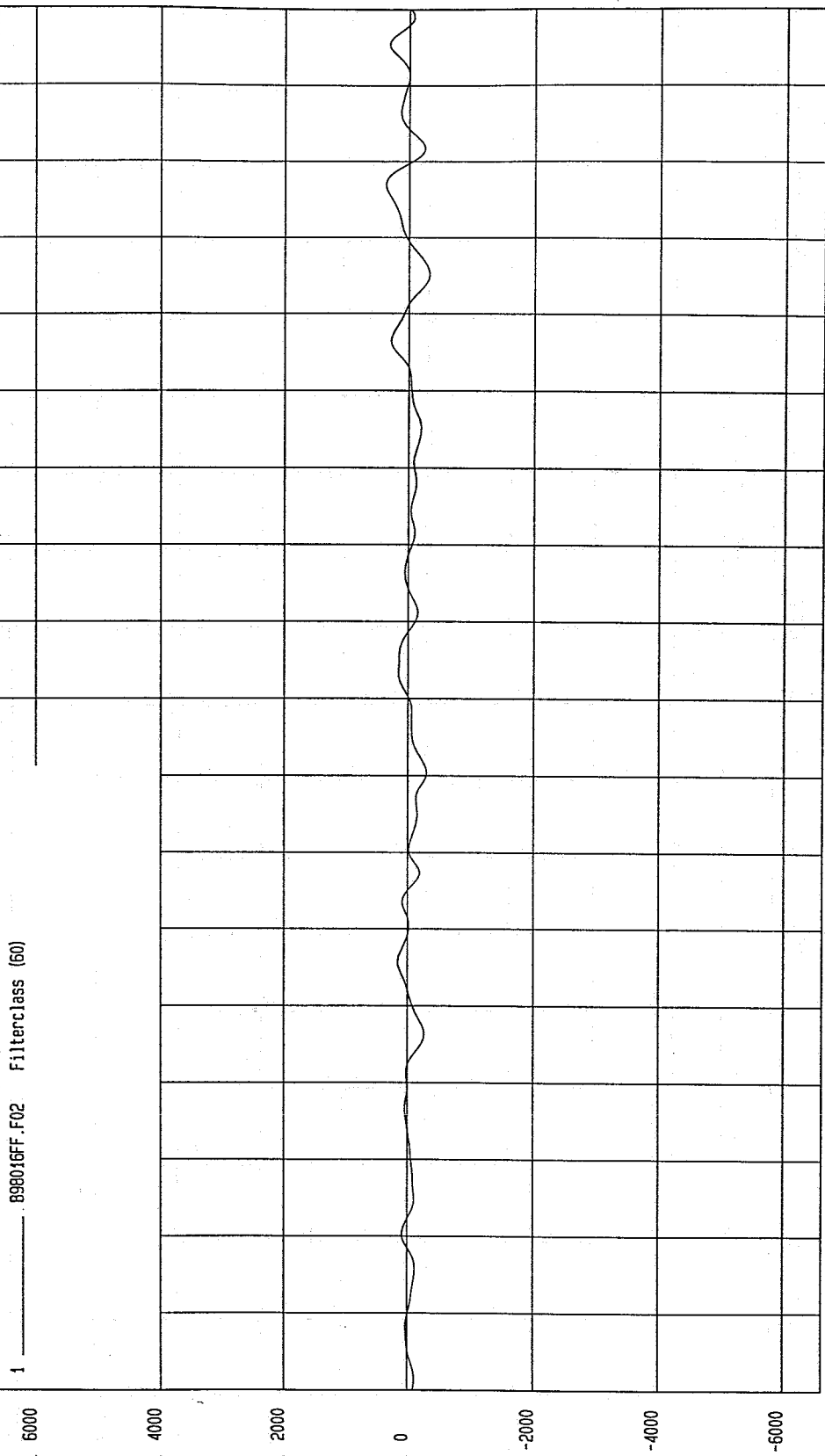
N

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -546.17 N at 191 msec Maximum = 664.96 N at 186 msec

LC #1 FY



TIME (SECONDS)

0.15
0.14
0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02

MGA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -853.67 N at 80 msec

Maximum = 1642.1 N at 54 msec

LC #2 FY

1 _____ B98016FF.F05 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

- .02

- .01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (SECONDS)

MGA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

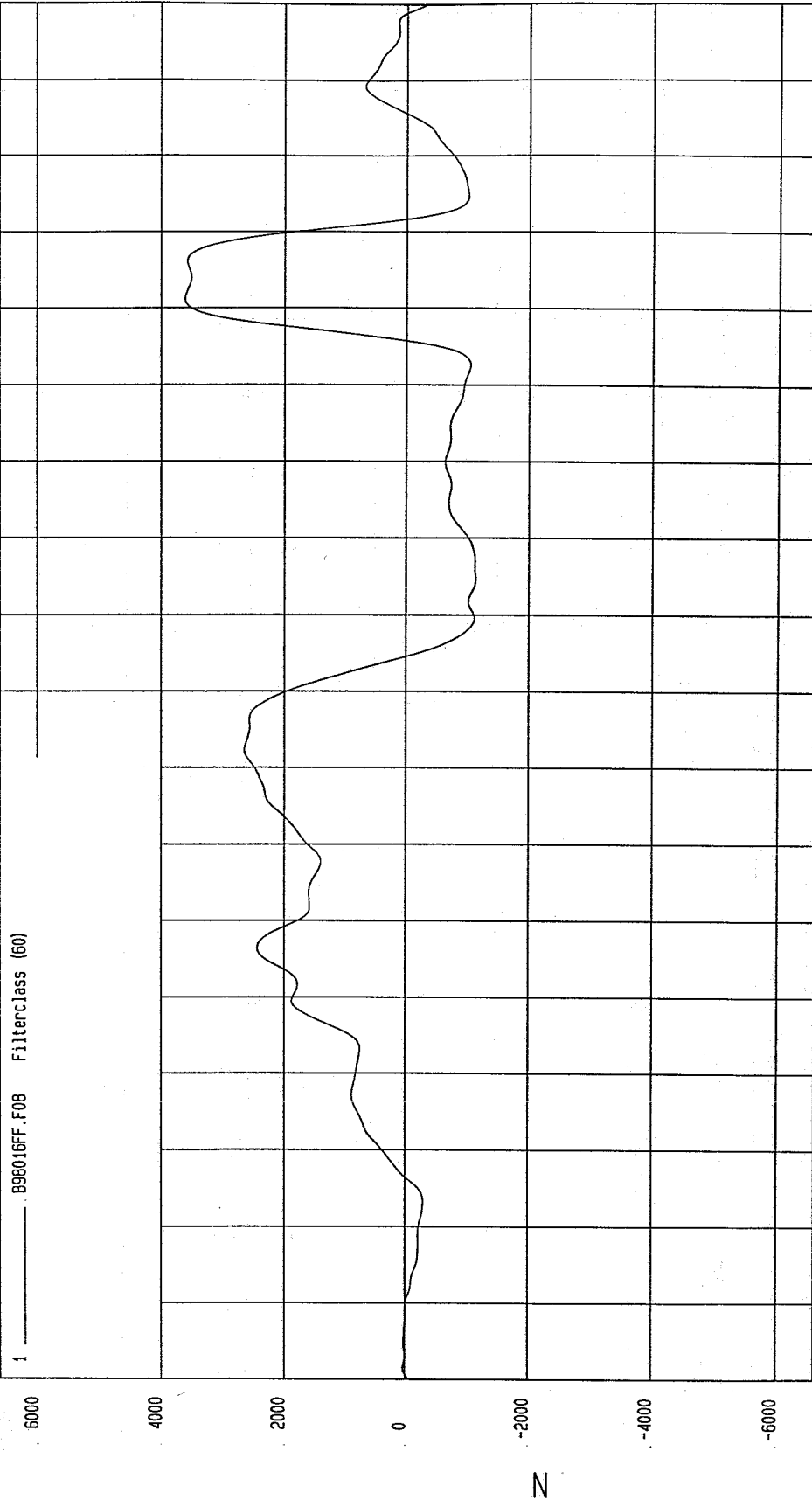
Speed: 32.8 MPH 52.8 KPH

Minimum = -1129.96 N at 85 msec

Maximum = 3614.34 N at 121 msec

LC #3 FY

1 _____ B98016FF.F08 Filterclass (60)



TIME (SECONDS)

MCA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

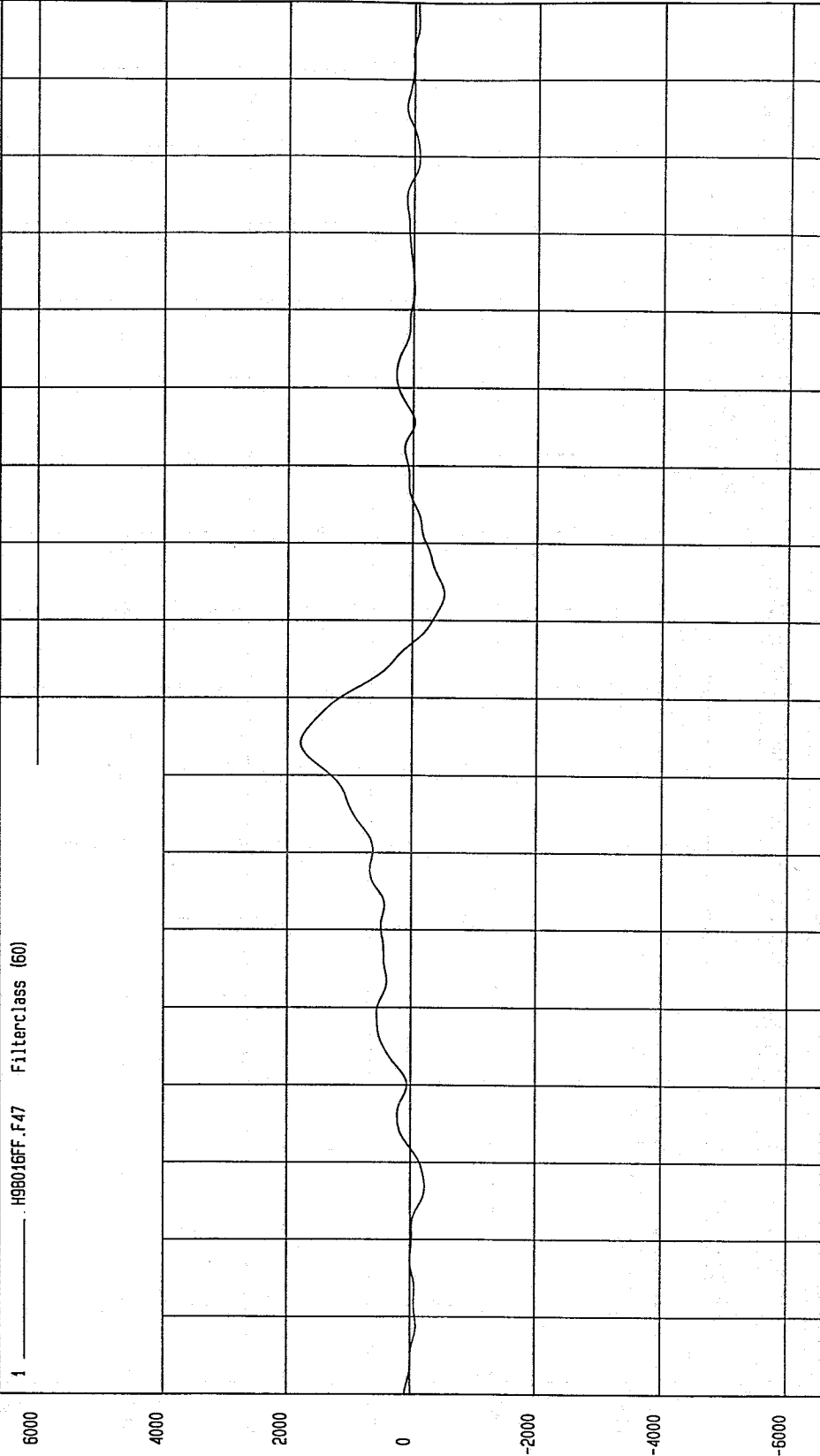
Speed: 34.8 MPH 56 KPH

Minimum = -495.13 N at 83 msec

Maximum = 1787.89 N at 64 msec

LC #4 FY

1 _____ H98016FF.F47 Filterclass (60)



MSA Research
11-08-1998 11:23

TIME (SECONDS)

6000
4000
2000
0
-2000
-4000
-6000

N

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

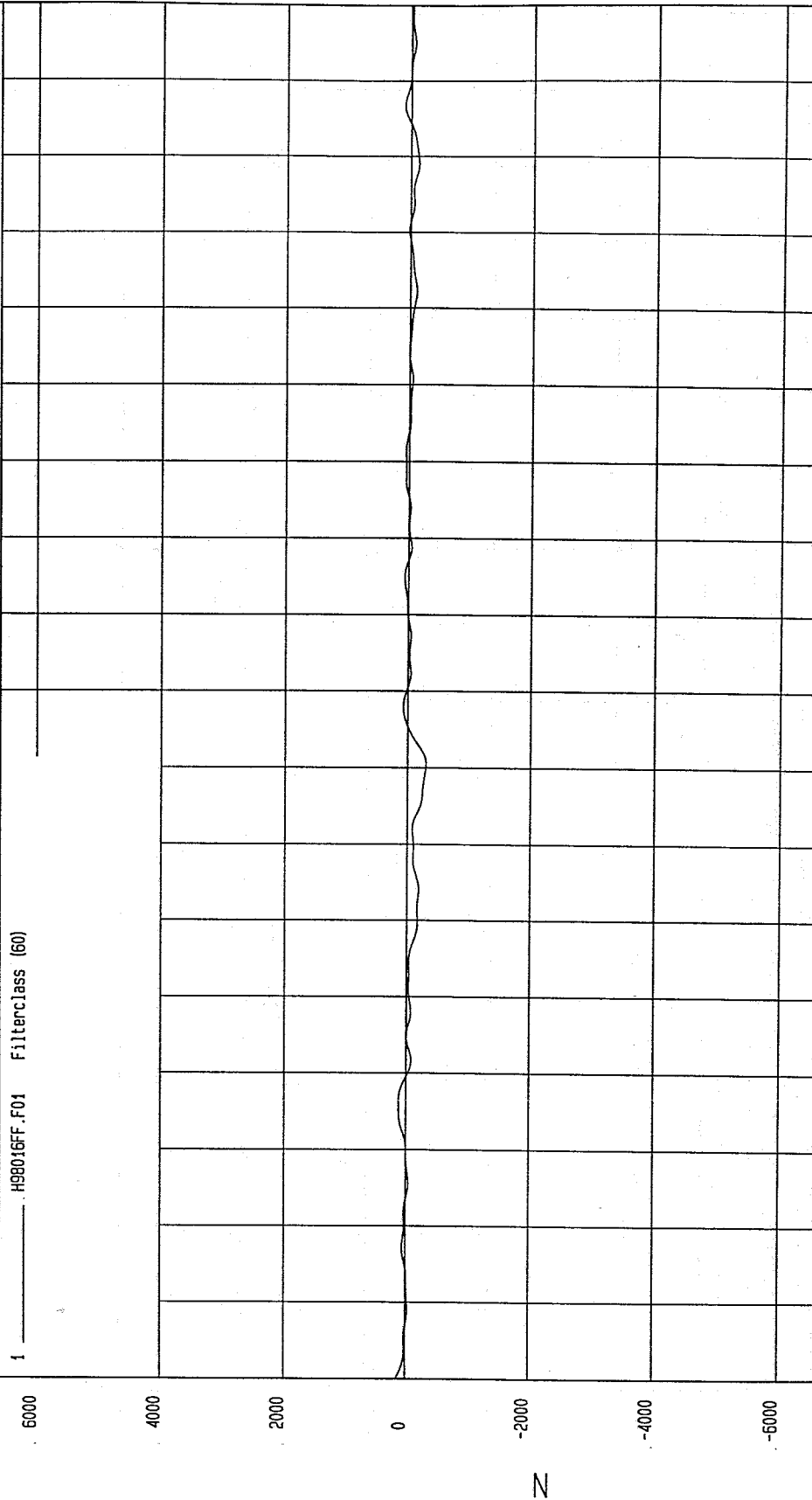
Speed: 34.8 MPH 56 KPH

Minimum = -284.63 N at 60 msec

Maximum = 147.88 N at -20 msec

LC #5 FY

1 _____ H98016FF.F01 Filterclass (60)



NCA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 853.47 N at 26 msec

Minimum = -484.9 N at 72 msec

LC #6 FY

1 _____ H98016FF.F04 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

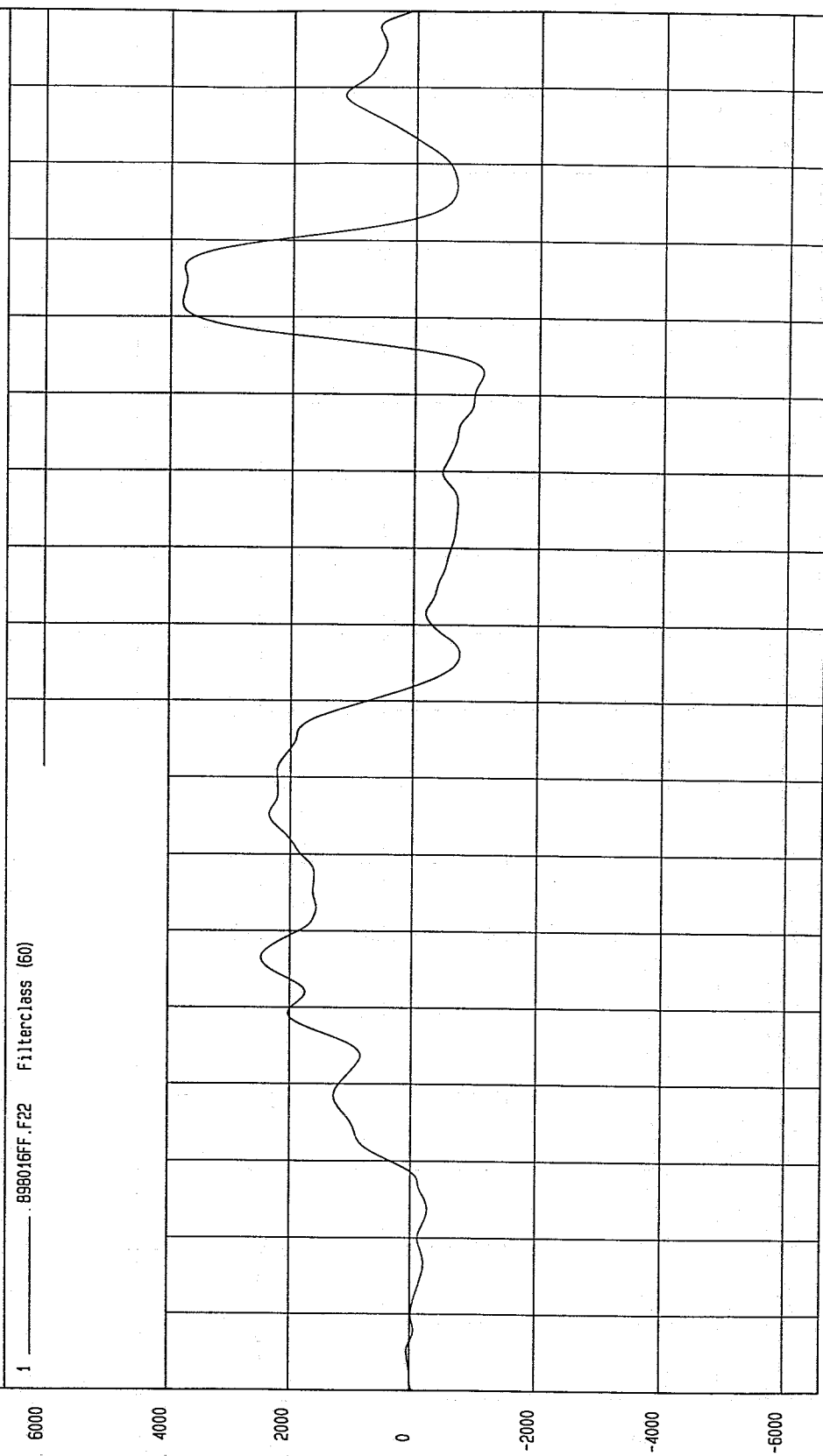
MGA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -1092.01 N at 113 msec Maximum = 3805.5 N at 122 msec

LC #7 FY



TIME (SECONDS)

0.15
0.14
0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02

WCA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

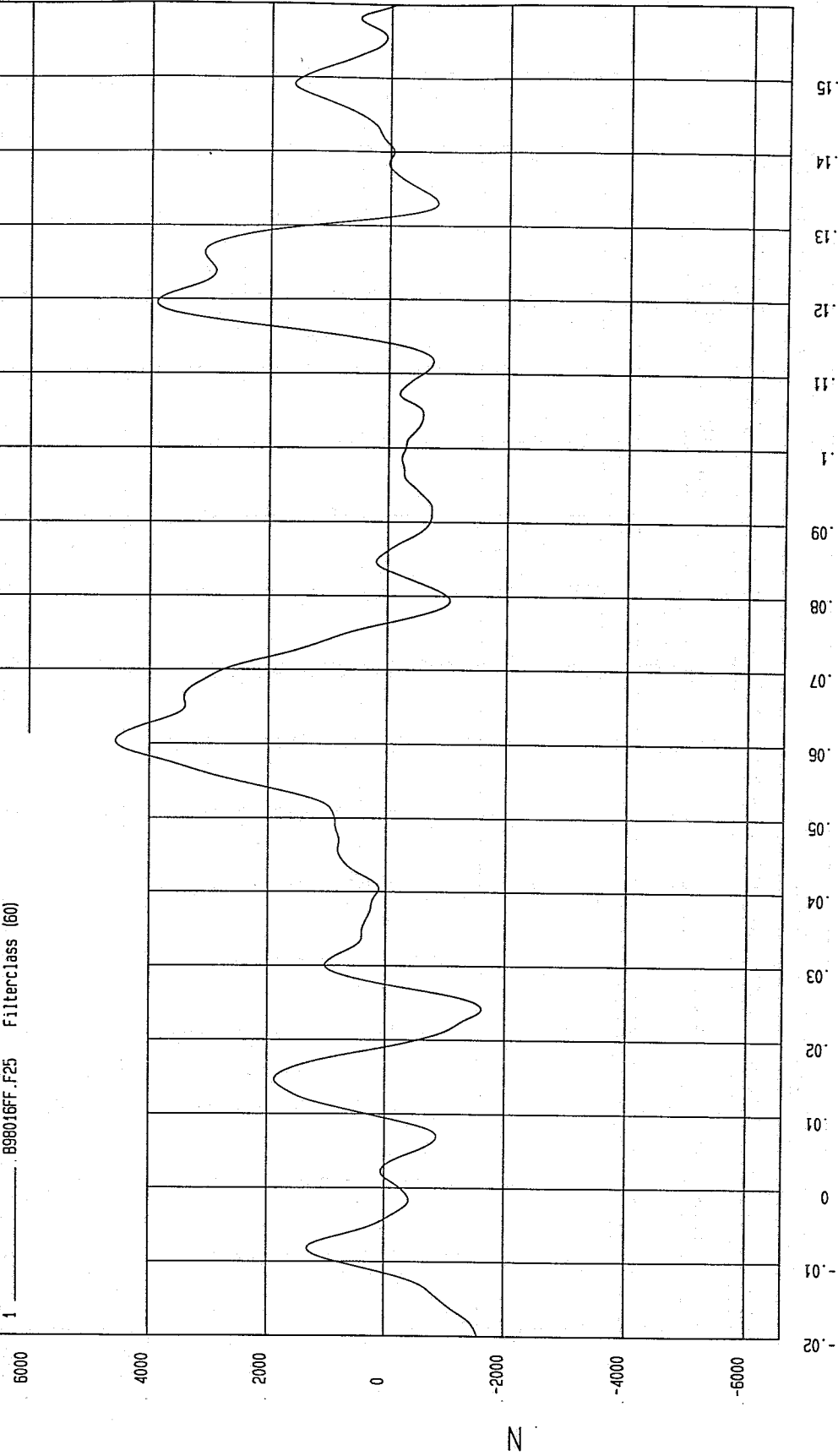
Speed: 32.8 MPH 52.8 KPH

Minimum = -1610.09 N at 24 msec

Maximum = 4566.7 N at 60 msec

LC #8 FY

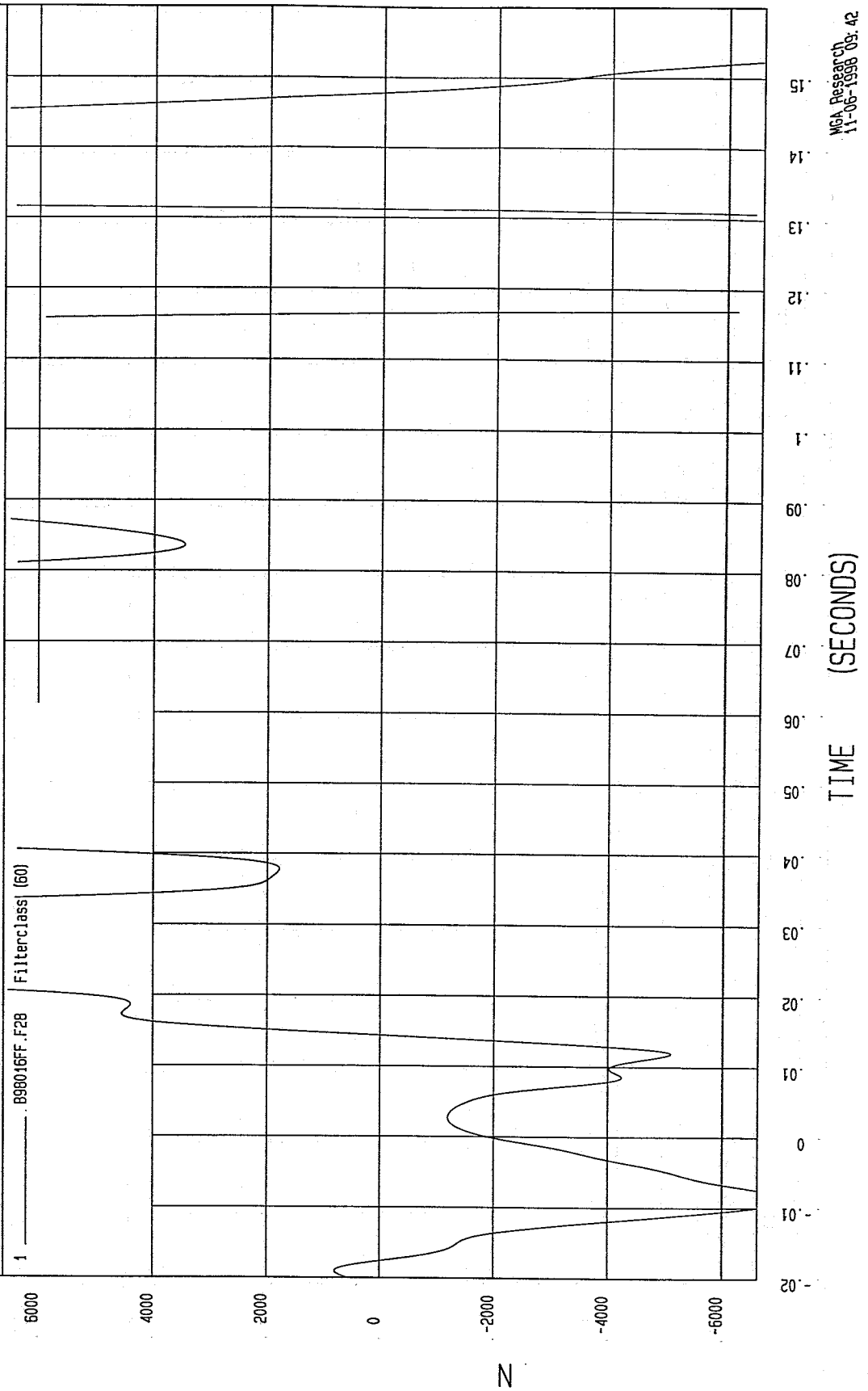
1 B98016FF.F25 Filterclass (60)



MCA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST	TEST DATE: 03-12-1998
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB	Speed: 32.8 MPH 52.8 KPH
Minimum = -46810.54 N at 126 msec	Maximum = 26210.49 N at 75 msec

LC #9 FY



NCA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

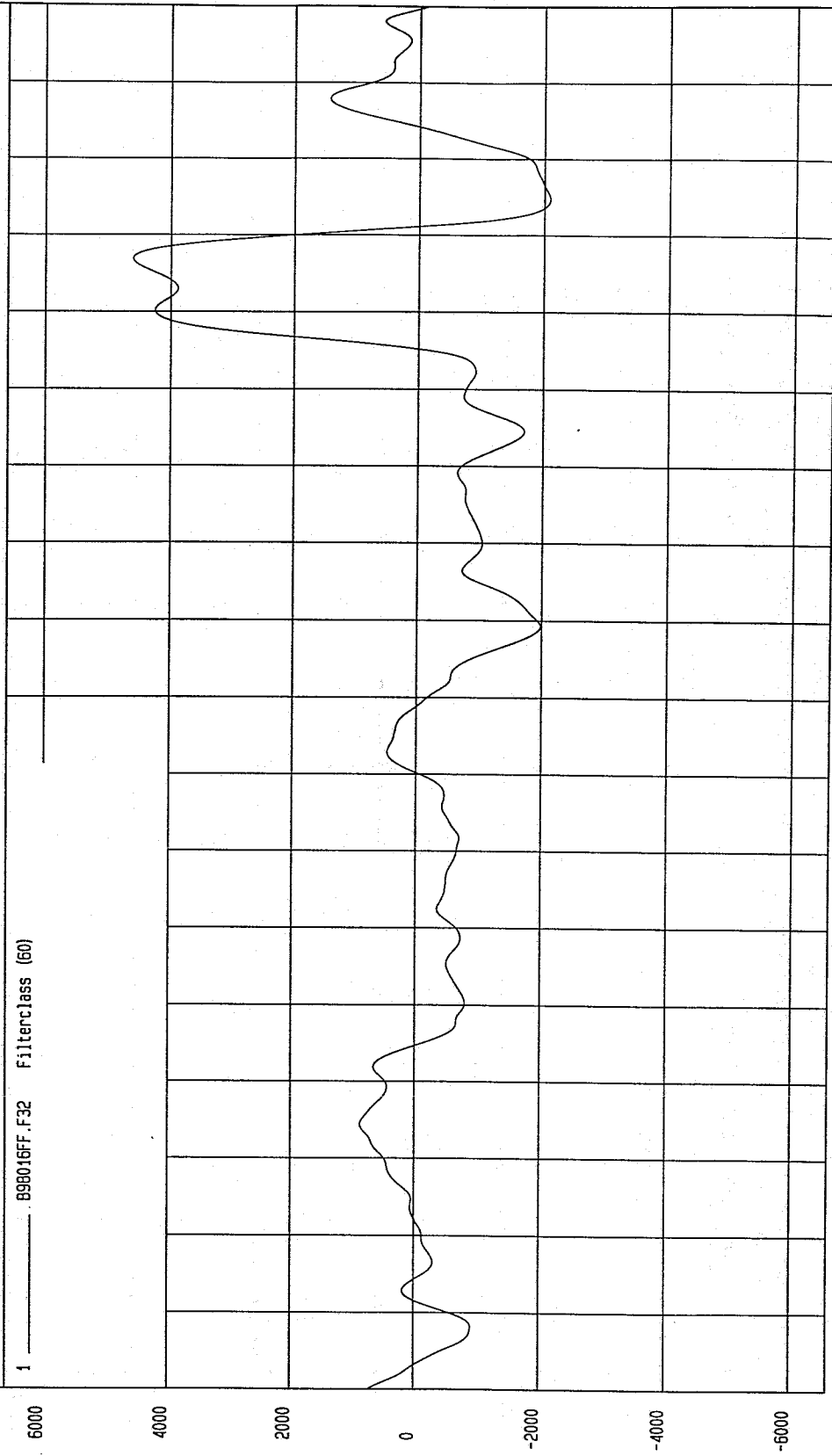
Speed: 32.8 MPH 52.8 KPH

Minimum = -2092.47 N at 135 msec

Maximum = 4595.45 N at 127 msec

LC #10 FY

1 _____ B98016FF.F32 Filterclass (50)



WCA Research
11-06-1998 09.42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 5290.52 N at 121 msec

Minimum = -1745.45 N at 136 msec

LC #11 FY

1 ——— B98016FF.F35 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

TIME (SECONDS)

0.02 0.01 0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.1 0.11 0.12 0.13 0.14 0.15

MGA Research
11-06-1998 03: 42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 4079.78 N at 127 msec

Minimum = -3578.24 N at 77 msec

LC #12 FY

1 898016FF.F38 Filterclass (50)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MCA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -1181.73 N at 109 msec

Maximum = 4169.93 N at 120 msec

LC #13 FY

1 _____ B98016FF.F42 Filterclass (60)

5000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

NCA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

SPEED: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 4591.49 N at 120 msec

Minimum = -1040.62 N at 134 msec

LC #14 FY

1 _____ B98016FF.F45 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

NGA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

SPEED: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 465.07 N at 21 msec

Minimum = -546.05 N at 93 msec

LC #15 FY

1 _____ B98016FF.F48 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MCA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

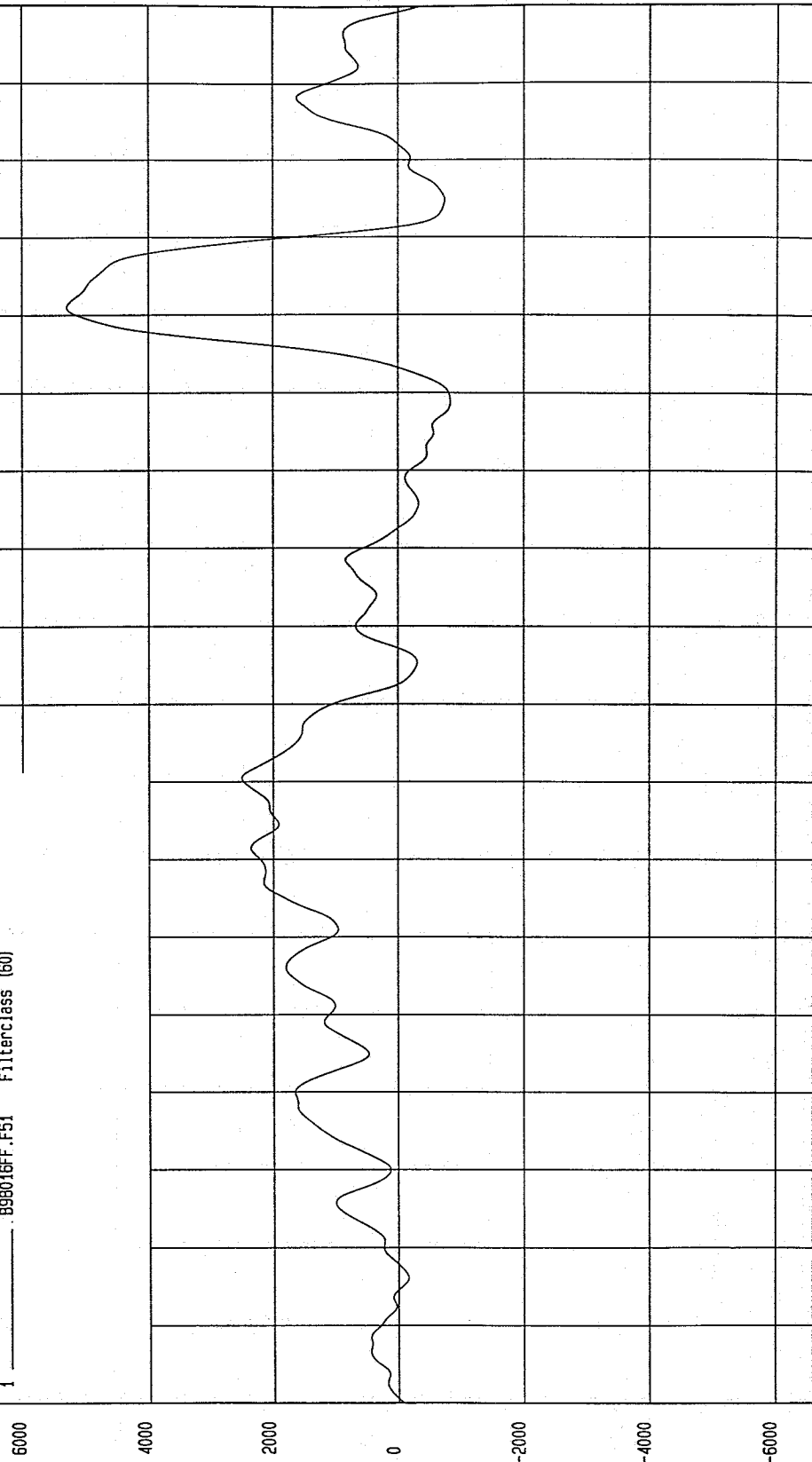
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 5282.88 N at 121 msec

Minimum = -823.53 N at 109 msec

LC #16 FY

1 _____ .B98016FF.F51 Filterclass (60)



MCA Research
11-06-1996 09.42

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 4498.25 N at 126 msec

Minimum = -1207.38 N at 113 msec

LC #17 FY

1 898016FF.F54 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (SECONDS)

MSA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

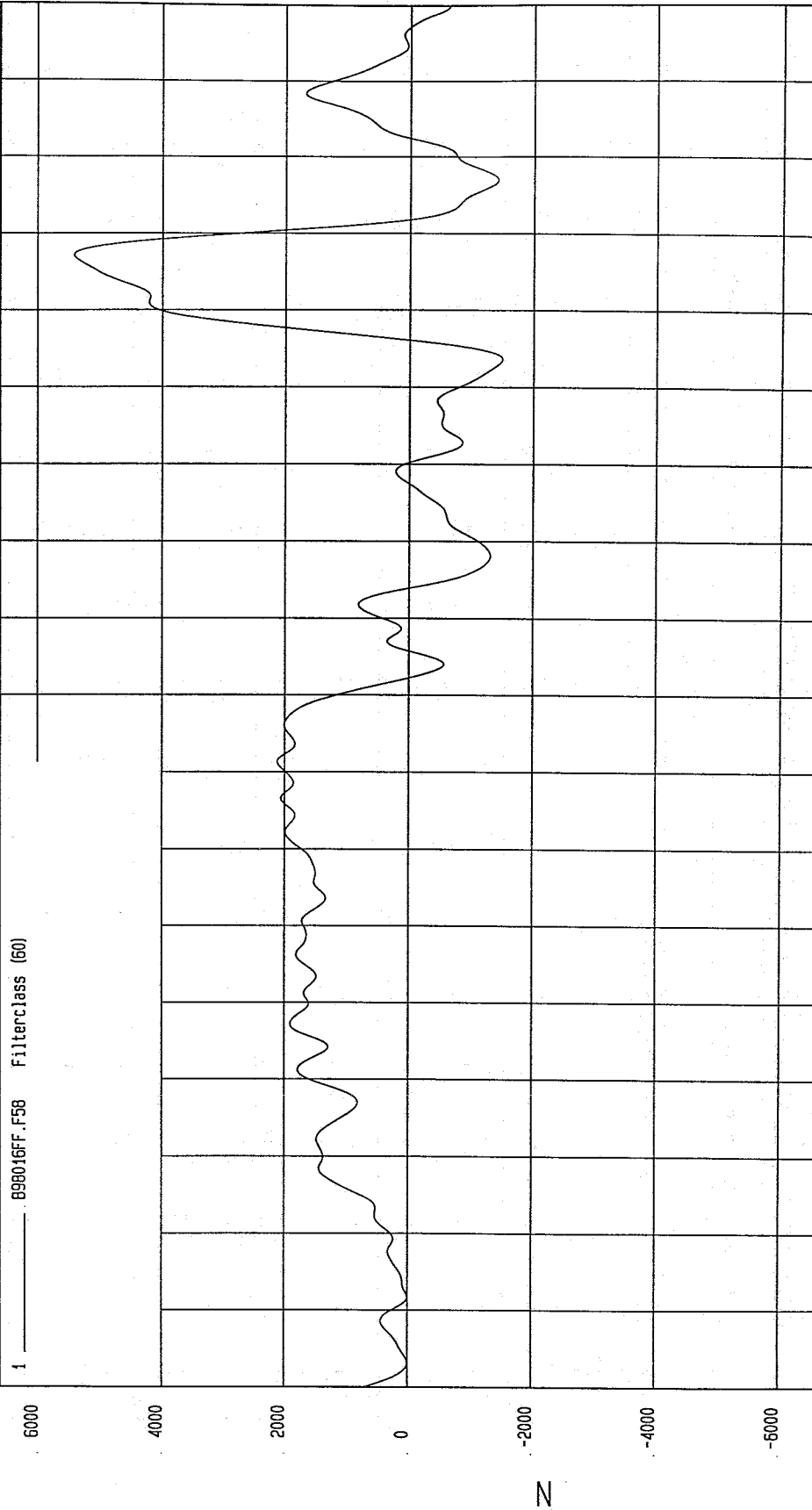
Speed: 32.8 MPH 52.8 KPH

Minimum = -1696.82 N at 198 msec

Maximum = 5429.56 N at 127 msec

LC #18 FY

1 ——— B98016FF.F56 Filterclass (60)



TIME (SECONDS)

NGA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

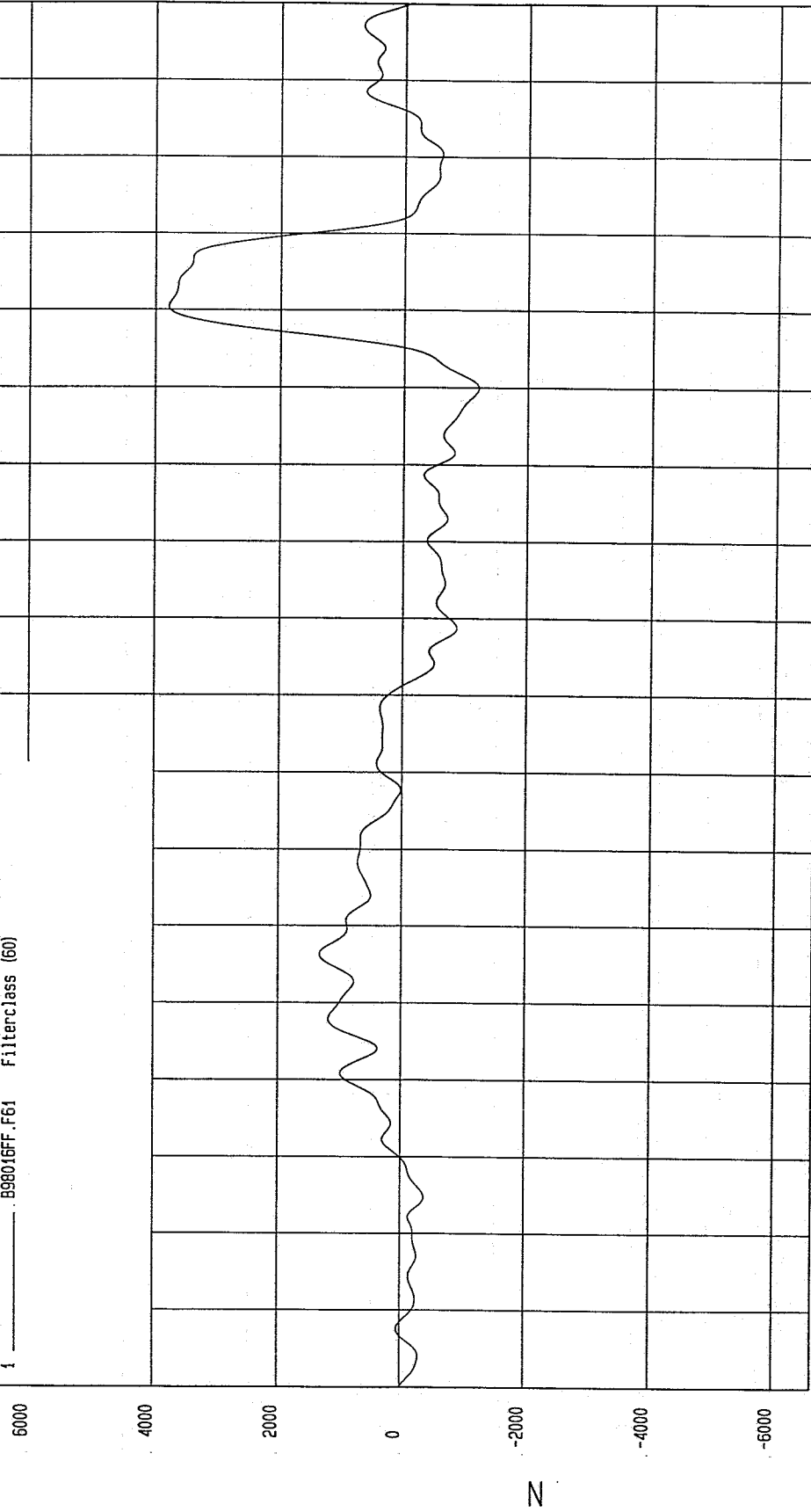
Speed: 32.8 MPH 52.8 KPH

Minimum = -1217.57 N at 110 msec

Maximum = 3787.14 N at 120 msec

LC #19 FY

1 ——— .B98016FF.F61 Filterclass (60)



MCA Research
11-06-1998 09:42

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -2360.66 N at 77 msec

Maximum = 4023.31 N at 121 msec

LC #20 FY

1 _____ B98016FF.F64 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MGA Research
11-06-1998 09: 42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

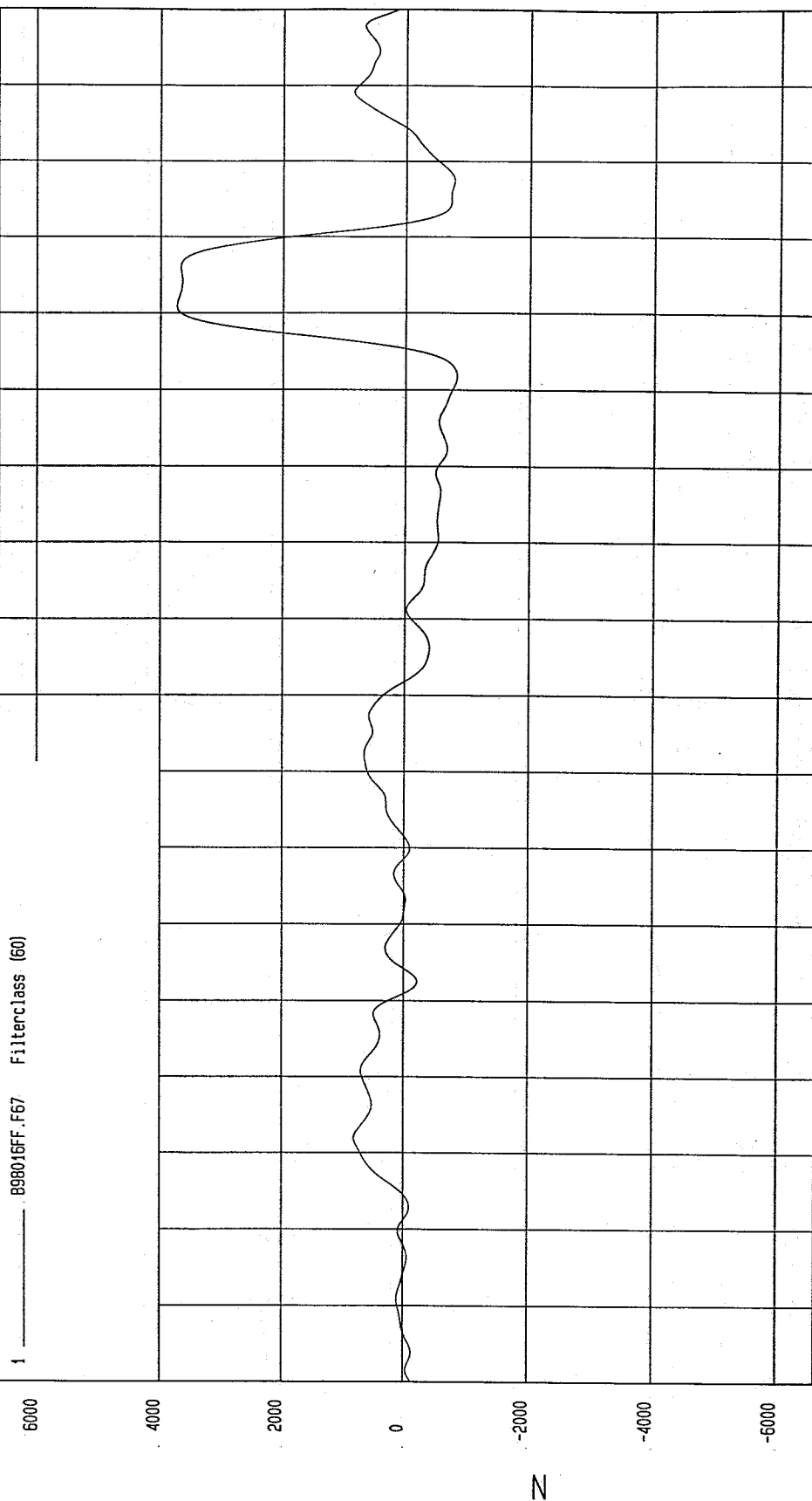
Speed: 32.8 MPH 52.8 KPH

Minimum = -828.7 N at 112 msec

Maximum = 3727.33 N at 121 msec

LC #21 FY

1 _____ 898016FF.F67 Filterclass (60)



MCA Research
11-06-1998 09:42

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

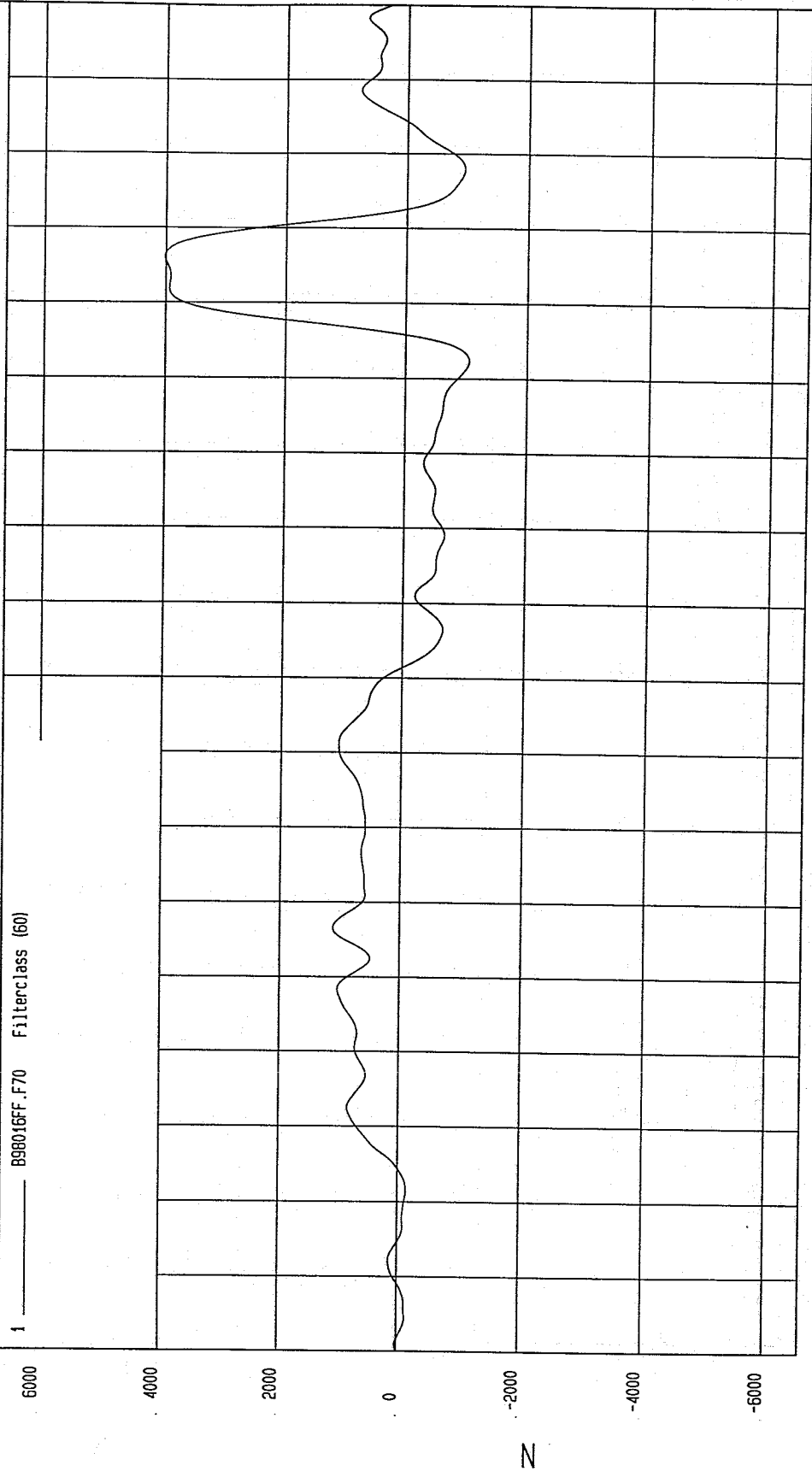
Speed: 32.8 MPH 52.8 KPH

Minimum = -1033.97 N at 112 msec

Maximum = 4011.3 N at 126 msec

LC #22 FY

1 ——— B98016FF.F70 Filterclass (60)



MGA Research
11-06-1998 09:42

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

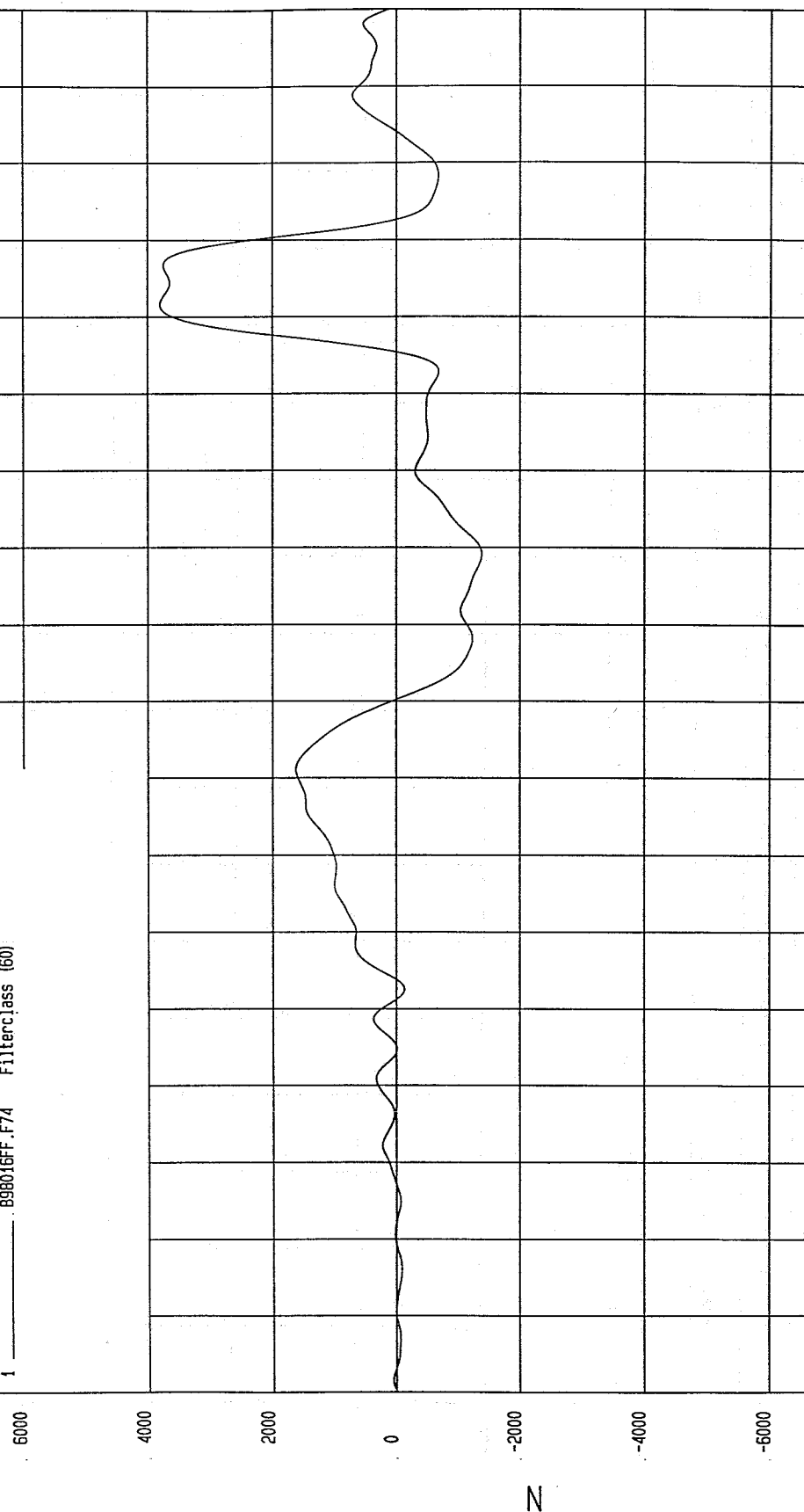
Speed: 32.8 MPH 52.8 KPH

Minimum = -1377.52 N at 89 msec

Maximum = 3801.9 N at 122 msec

LC #23 FY

1 _____ B98016FF.F74 Filterclass (60)



WCA Research
11-06-1998 09:42

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

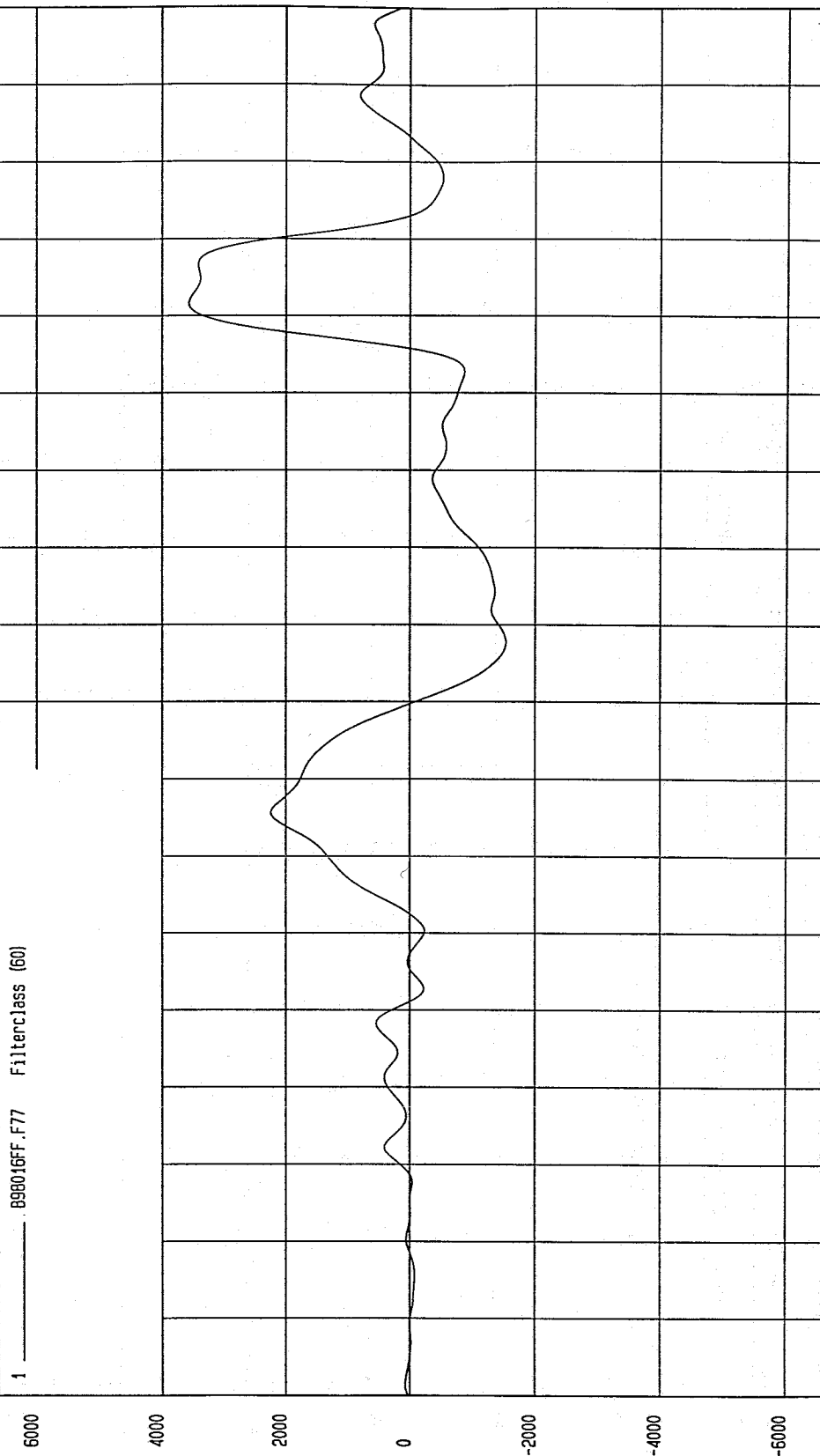
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 3582.21 N at 122 msec

Minimum = -1528.32 N at 78 msec

LC #24 FY

1 _____ 898016FF.F77 Filterclass (60)



MCA Research
11-06-1998 09:42

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

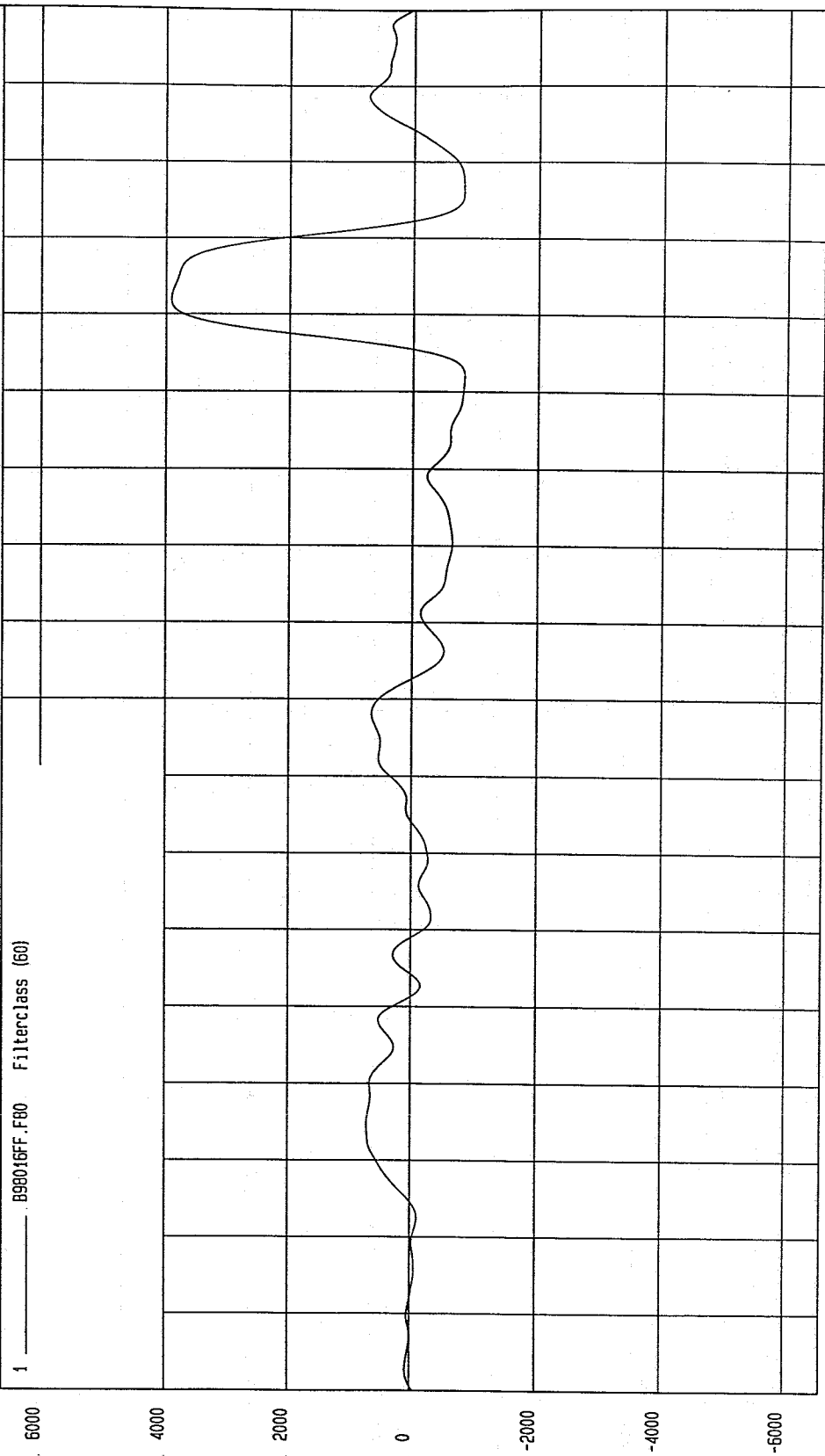
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -818.04 N at 112 msec Maximum = 3914.7 N at 122 msec

LC #25 FY

1 _____ B98016FF.F80 Filterclass (60)



MSA Research
11-06-1998 09:42

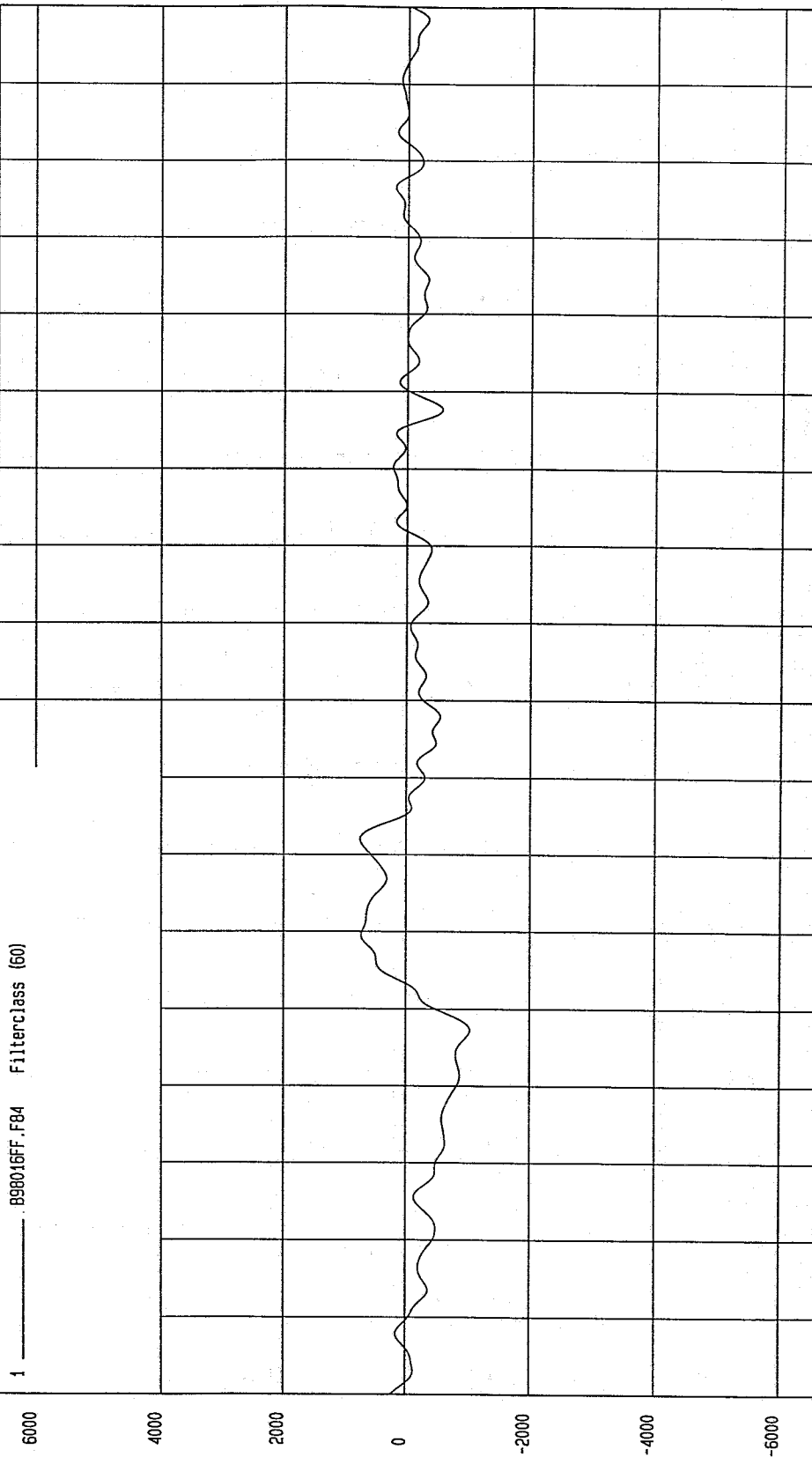
TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -1012.01 N at 27 msec Maximum = 747.22 N at 52 msec

LC #26 FY

1 _____ B98016FF.F84 Filterclass (60)



MGA Research
11-06-1998 09:42

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

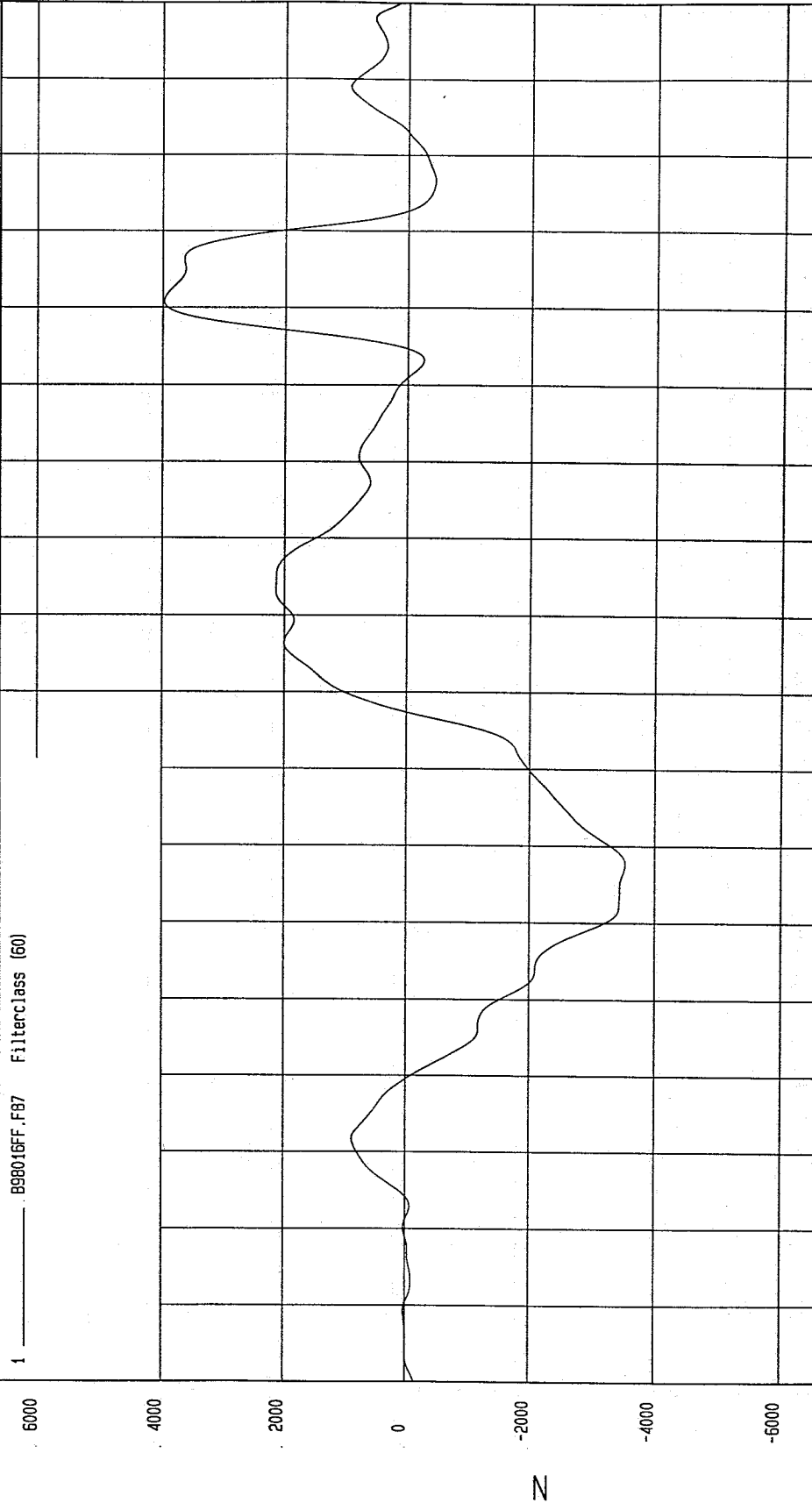
Speed: 32.8 MPH 52.8 KPH

Minimum = -3508.16 N at 48 msec

Maximum = 3974.34 N at 121 msec

LC #27 FY

1 ——— B98016FF.F87 Filterclass (50)



NGA Research
11-06-1998 09:42

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

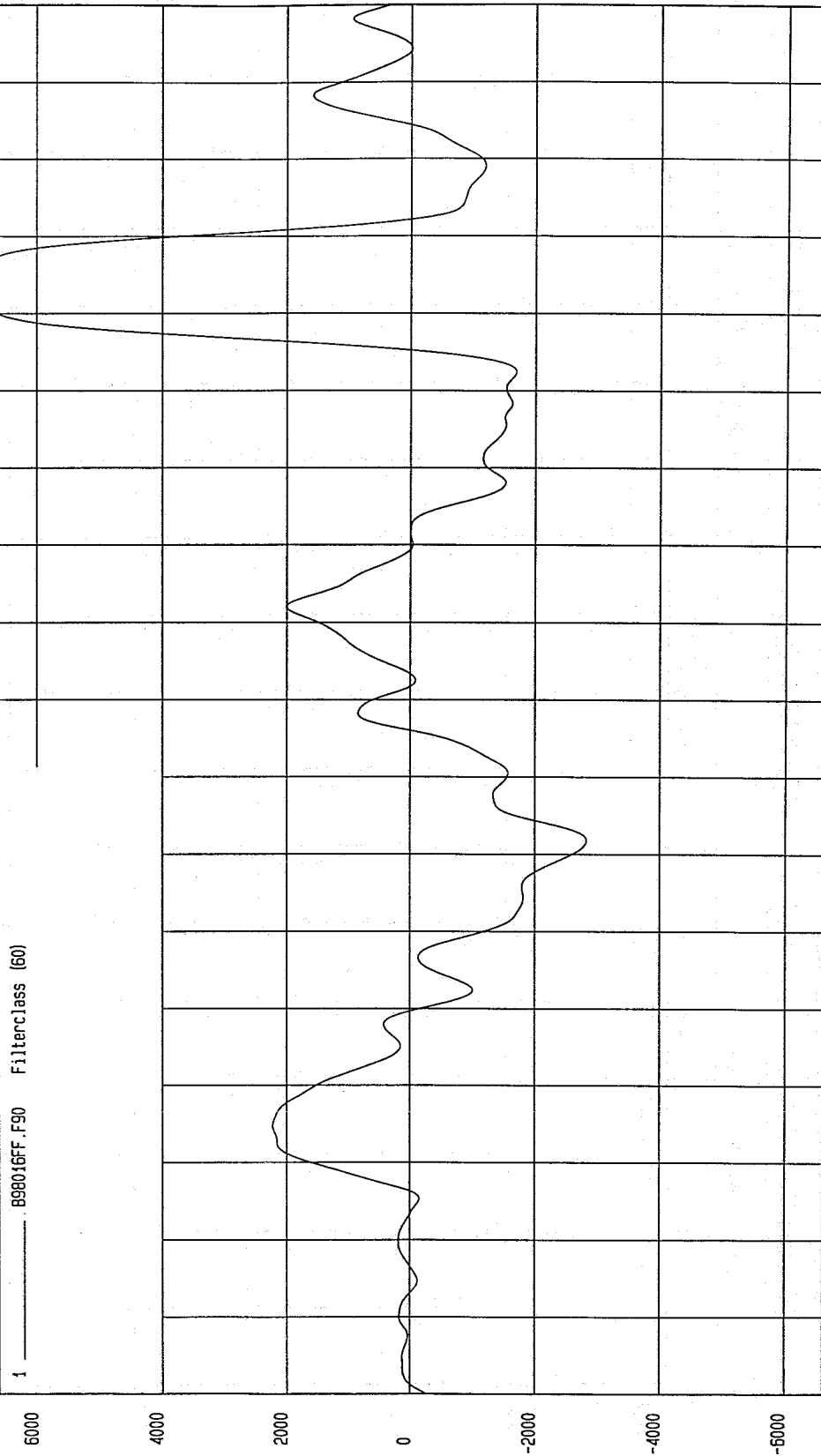
Speed: 32.8 MPH 52.8 KPH

Minimum = -2815.66 N at 52 msec

Maximum = 6788.27 N at 121 msec

LC #28 FY

1 _____ 898016FF.F50 Filterclass (60)



MCA Research
11-06-1998 09.42

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

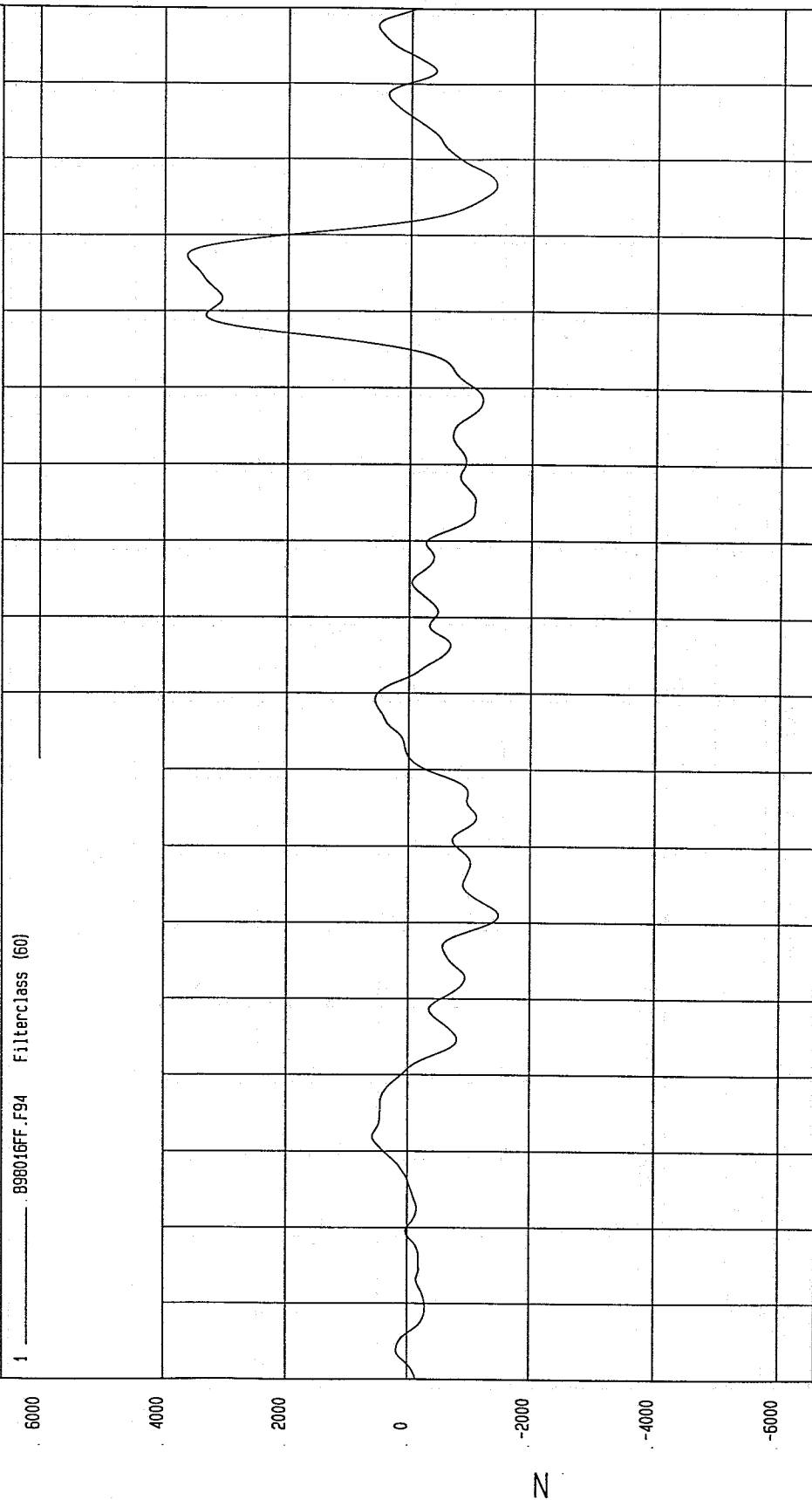
Speed: 32.8 MPH 52.8 KPH

Minimum = -1476.26 N at 41 msec

Maximum = 3643.91 N at 127 msec

LC #29 FY

1 ——— 898016FF.F94 Filterclass (60)



MGA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

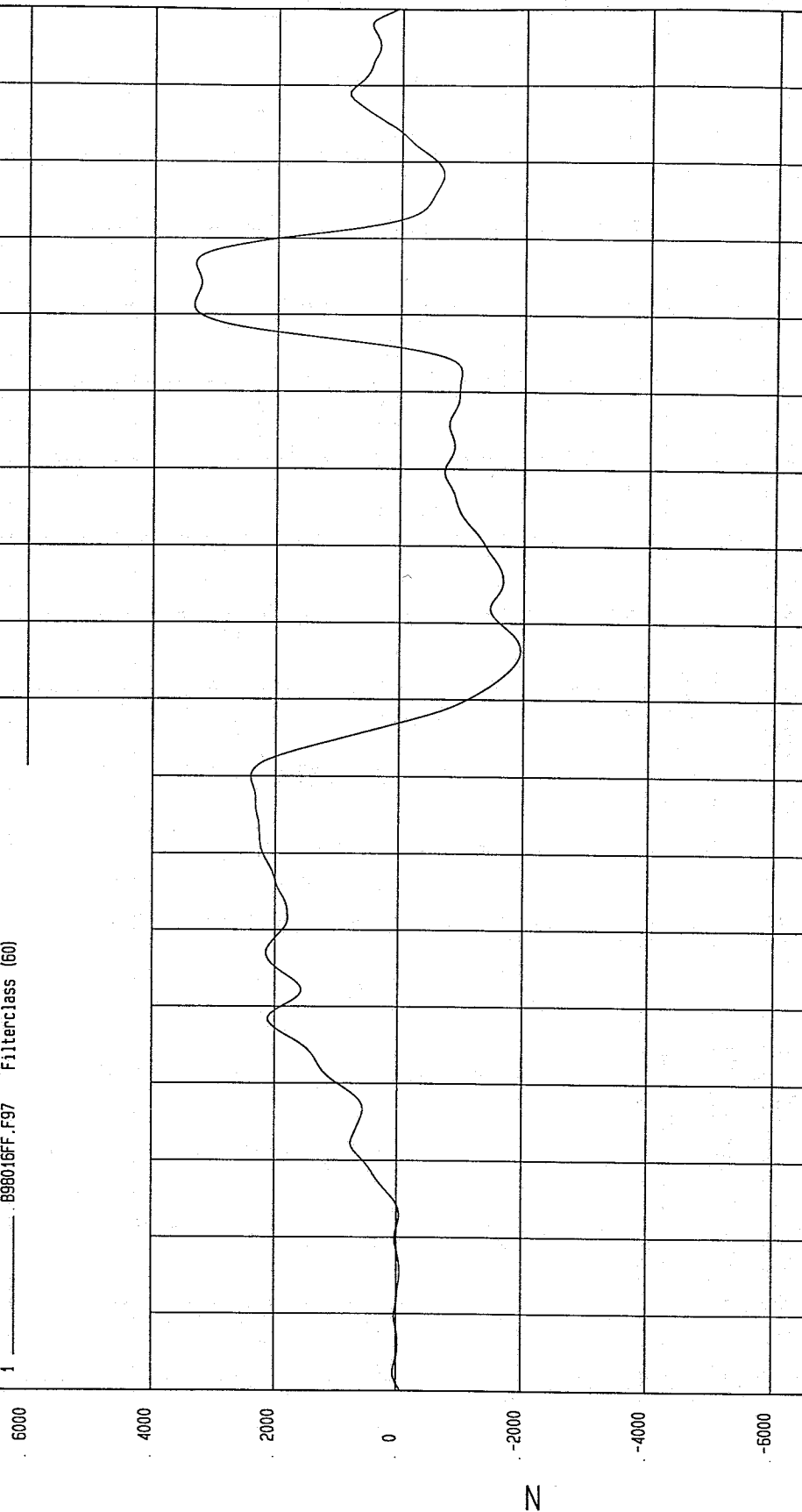
Speed: 32.8 MPH 52.8 KPH

Minimum = -1945.97 N at 76 msec

Maximum = 3363.64 N at 121 msec

LC #30 FY

1 _____ B98016FF.F97 Filterclass (60)



TIME (SECONDS)

NCA Research
11-06-1998 09:42

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

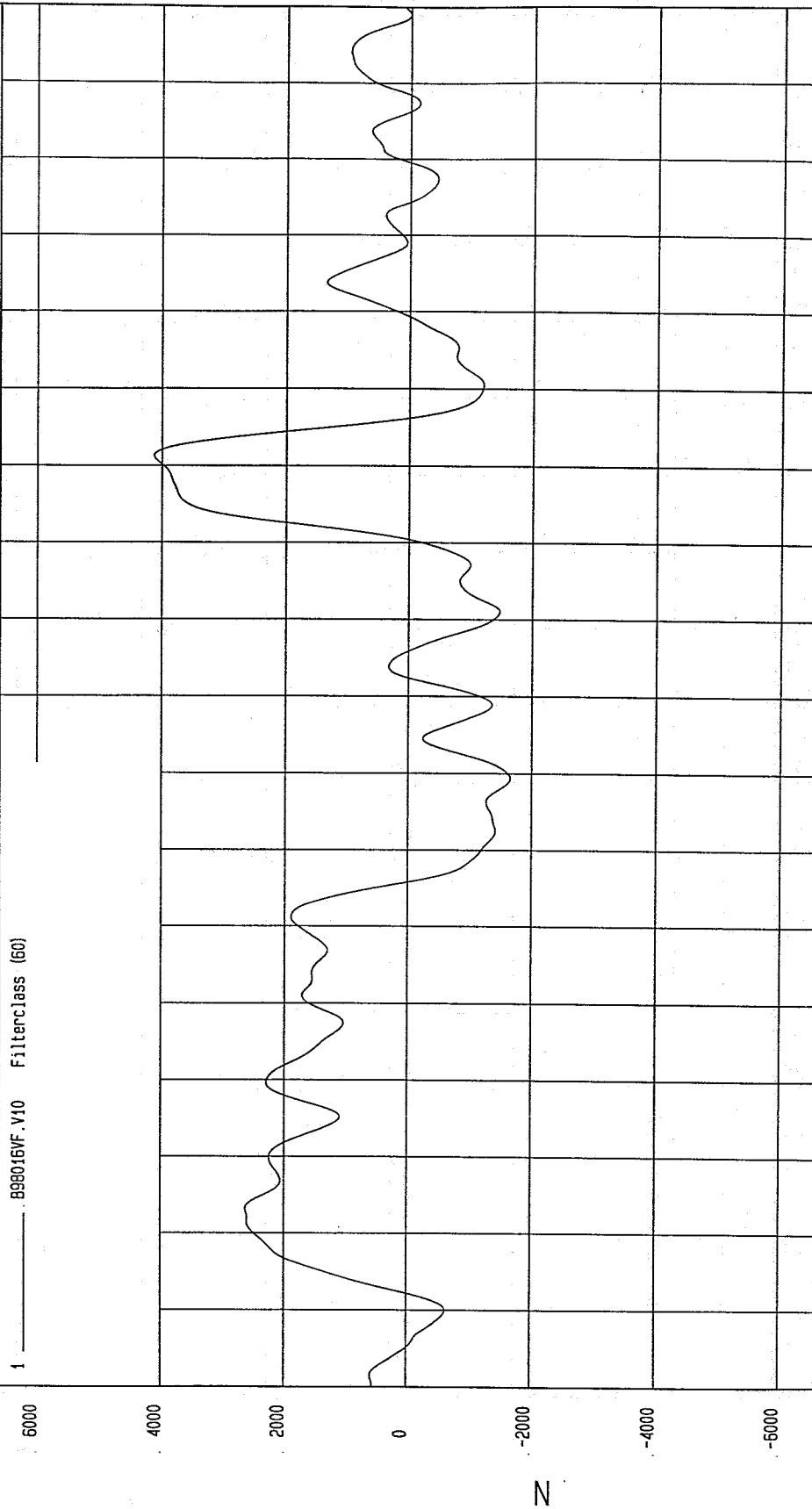
Speed: 32.8 MPH 52.8 KPH

Minimum = -1656.76 N at 59 msec

Maximum = 4123.91 N at 101 msec

LC #31 FY

1 ——— .B98016VF.V10 Filterclass (60)



MGA Research
11-06-1998 09:43

TIME (SECONDS)

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

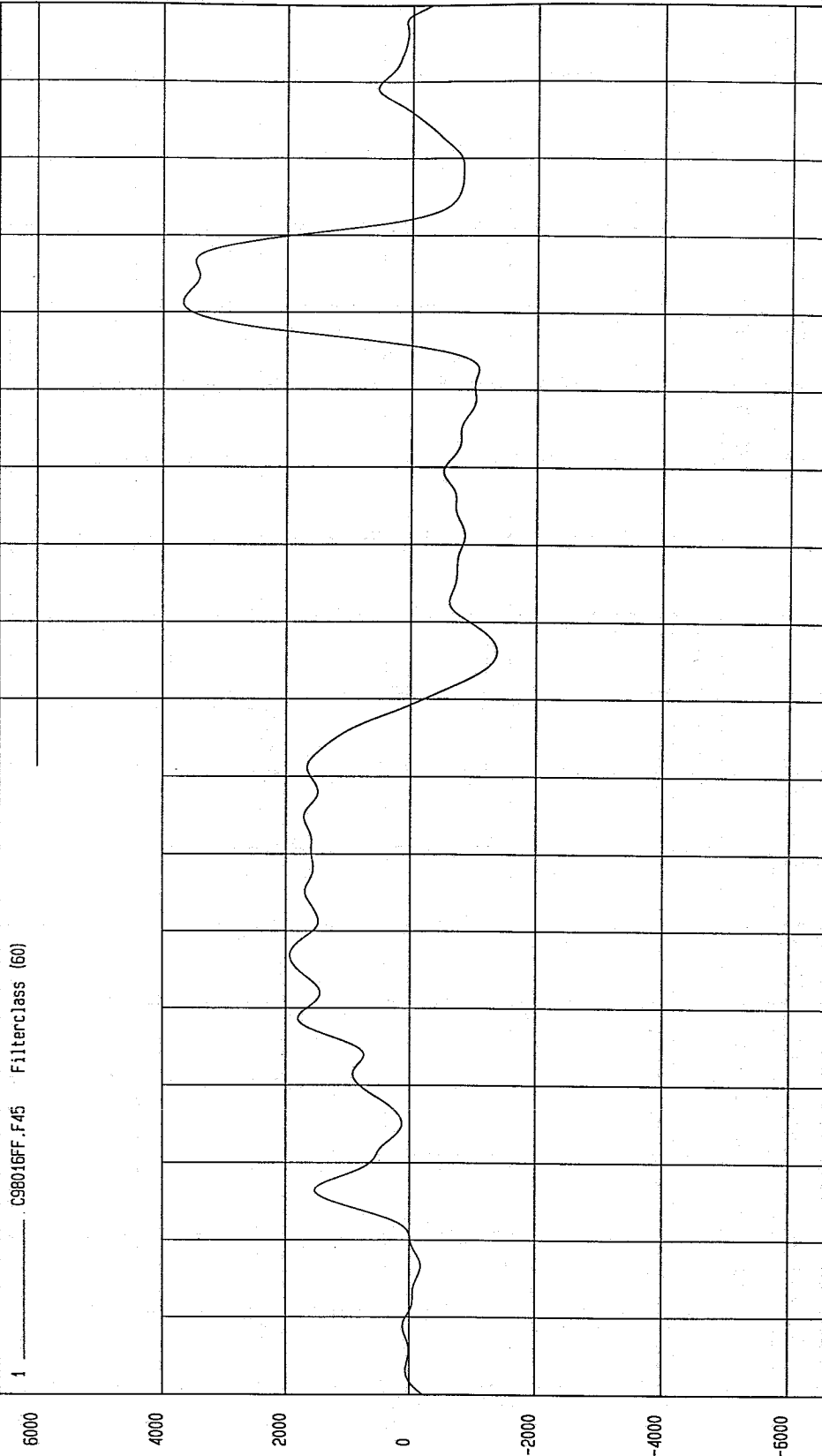
Speed: 32.78 MPH 52.8 KPH

Minimum = -1370.58 N at 76 msec

Maximum = 3680.88 N at 121 msec

LC #32 FY

1 C98016FF.F45 Filterclass (60)



TIME (seconds)

NCA Research
11-08-1998 11:35

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

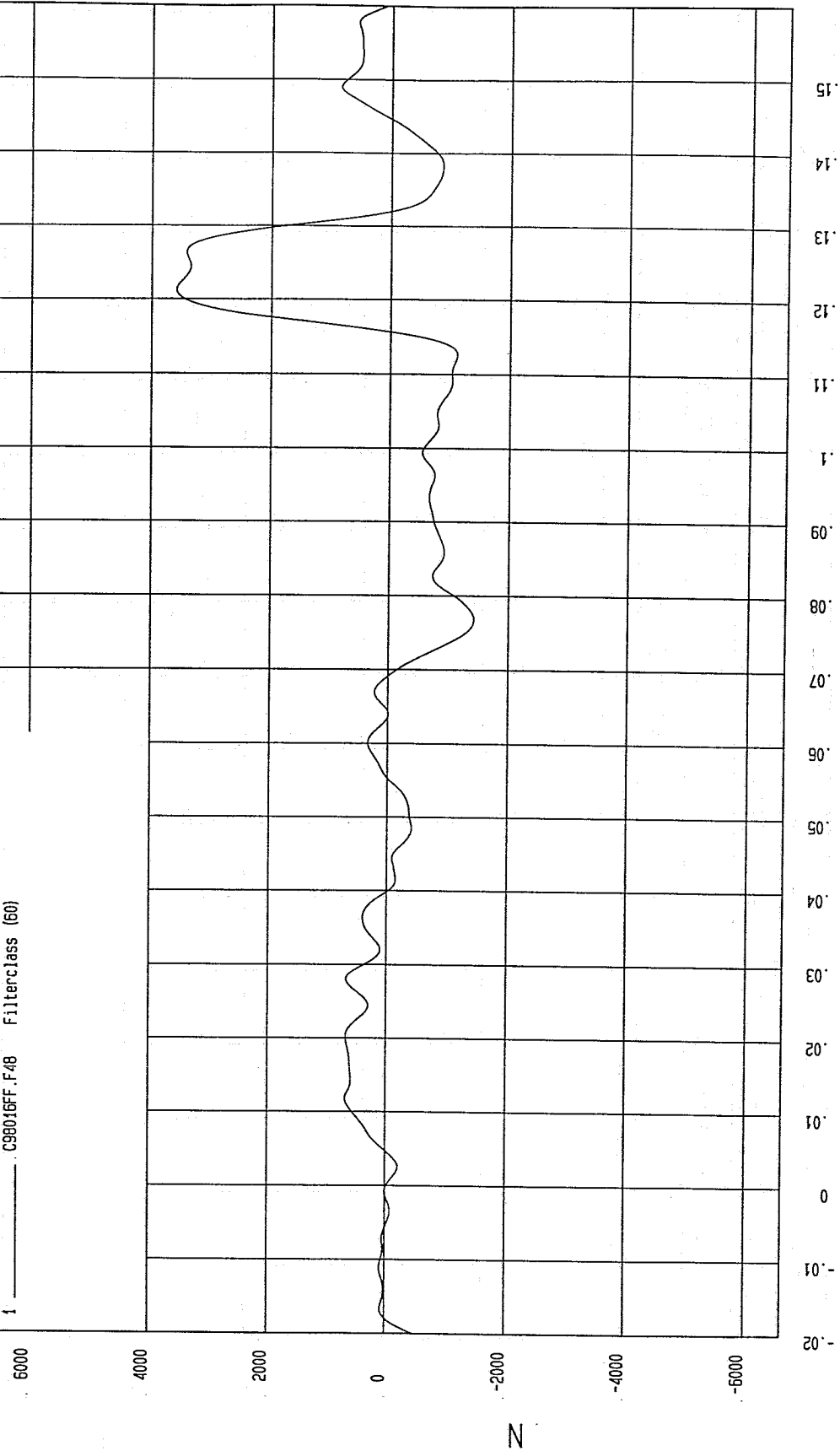
Speed: 32.78 MPH 52.8 KPH

Minimum = -1419.78 N at 77 msec

Maximum = 3593.87 N at 121 msec

LC #33 FY

1 C98016FF.F48 Filterclass (60)



NCA Research
11-08-1998 11:36

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -1281.63 N at 75 msec

Maximum = 3146.75 N at 121 msec

LC #34 FY

1 _____ C98016FF.F51 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (seconds)

MGA Research
11-08-1998 11:36

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

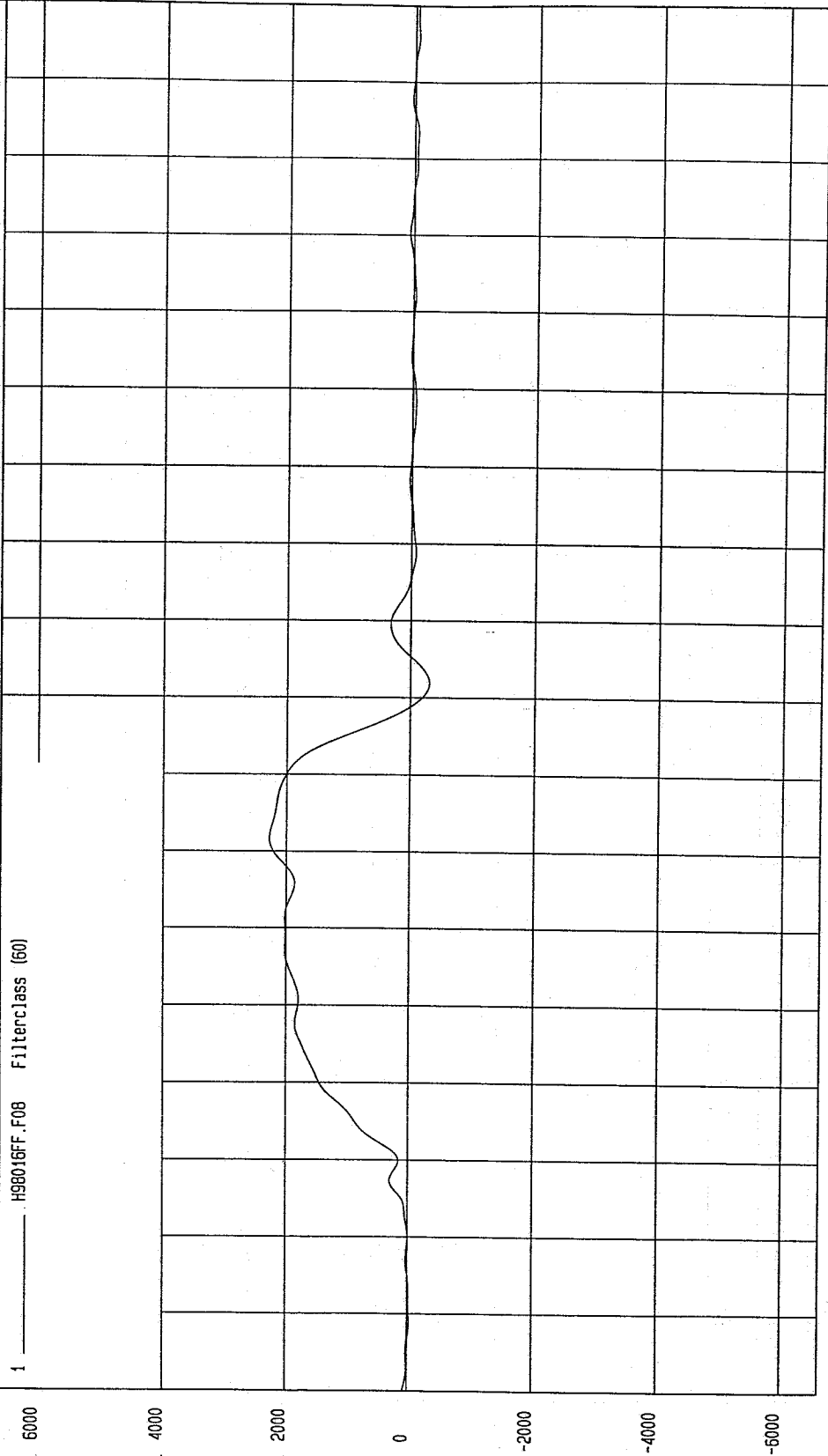
Speed: 34.8 MPH 56 KPH

Minimum = -302.74 N at 72 msec

Maximum = 2273.42 N at 52 msec

LC #35 FY

1 — H98016FF.F08 Filterclass (60)



NGA Research
11-08-1998 11:22

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -318.97 N at 16 msec

Maximum = 2347.59 N at 52 msec

LC #36 FY

1 H98010FF.F12 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (SECONDS)

MCA Research
11-06-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

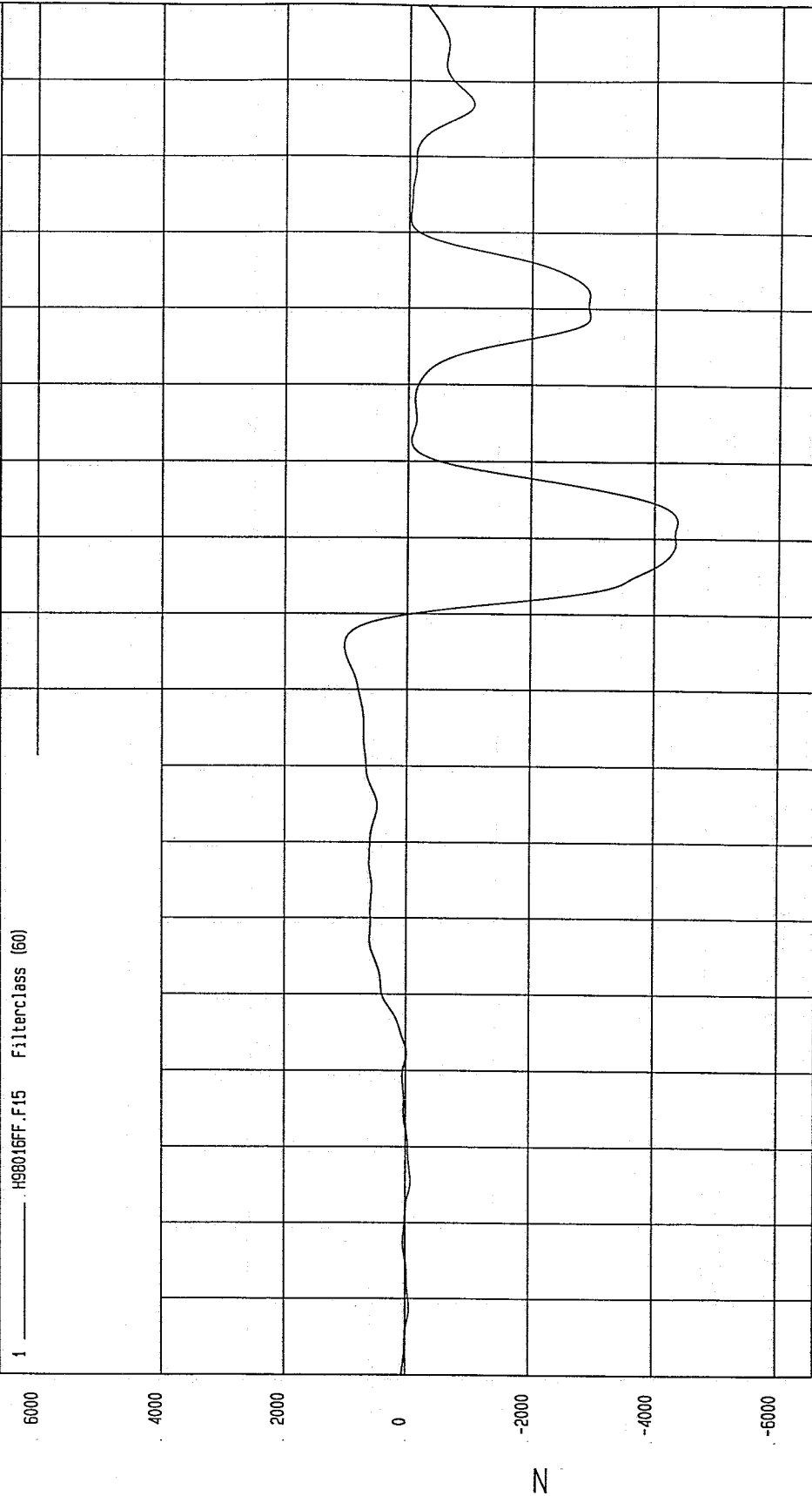
Speed: 34.8 MPH 56 KPH

Minimum = -4383.79 N at 92 msec

Maximum = 1028.44 N at 76 msec

LC #37 FY

1 H98016FF.F15 Filterclass (60)



WCA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 34.8 MPH 56 KPH

Minimum = -905.2 N at 17 msec Maximum = 1092.23 N at 64 msec

LC #38 FY

1 _____ H98016FF.F18 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

TIME (SECONDS)

0.02 0.01 0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.1 0.11 0.12 0.13 0.14 0.15

MGA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

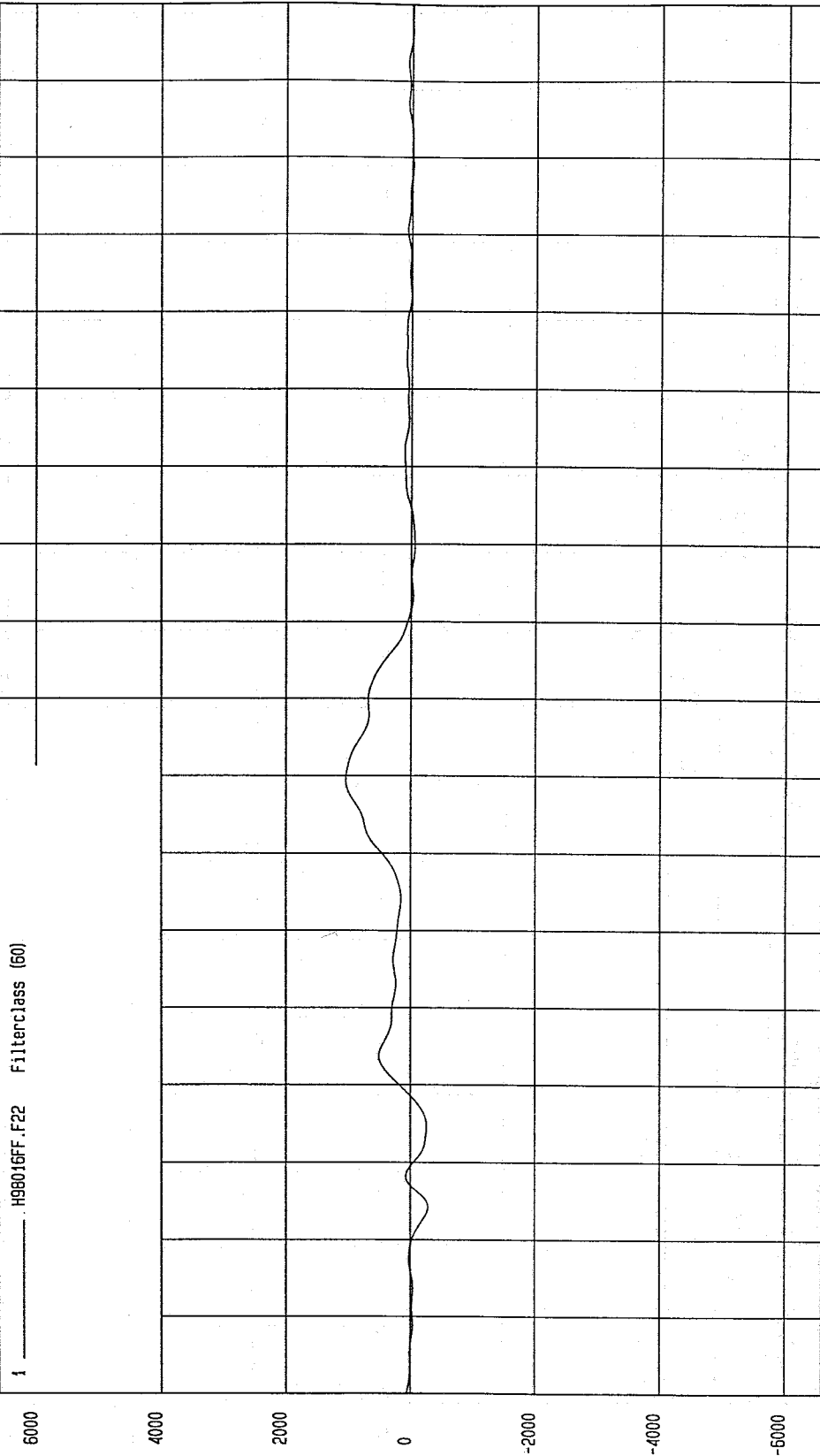
Speed: 34.8 MPH 56 KPH

Minimum = -275.8 N at 4 msec

Maximum = 1063.78 N at 60 msec

LC #39 FY

1 H98016FF.F22 Filterclass (50)



MCA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -324.59 N at 3 msec

Maximum = 1615.27 N at 62 msec

LC #40 FY

1 ——— .H98016FF.F25 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

NSA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -209.13 N at 18 msec

Maximum = 526.94 N at 58 msec

LC #41 FY

1 ——— H98016FF.F28 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MGA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 793.55 N at 69 msec

Minimum = -1808.03 N at 32 msec

LC #42 FY

1 _____ H98016FF.F32 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

TIME (SECONDS)

MCA Research
11-08-1998 11:23

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

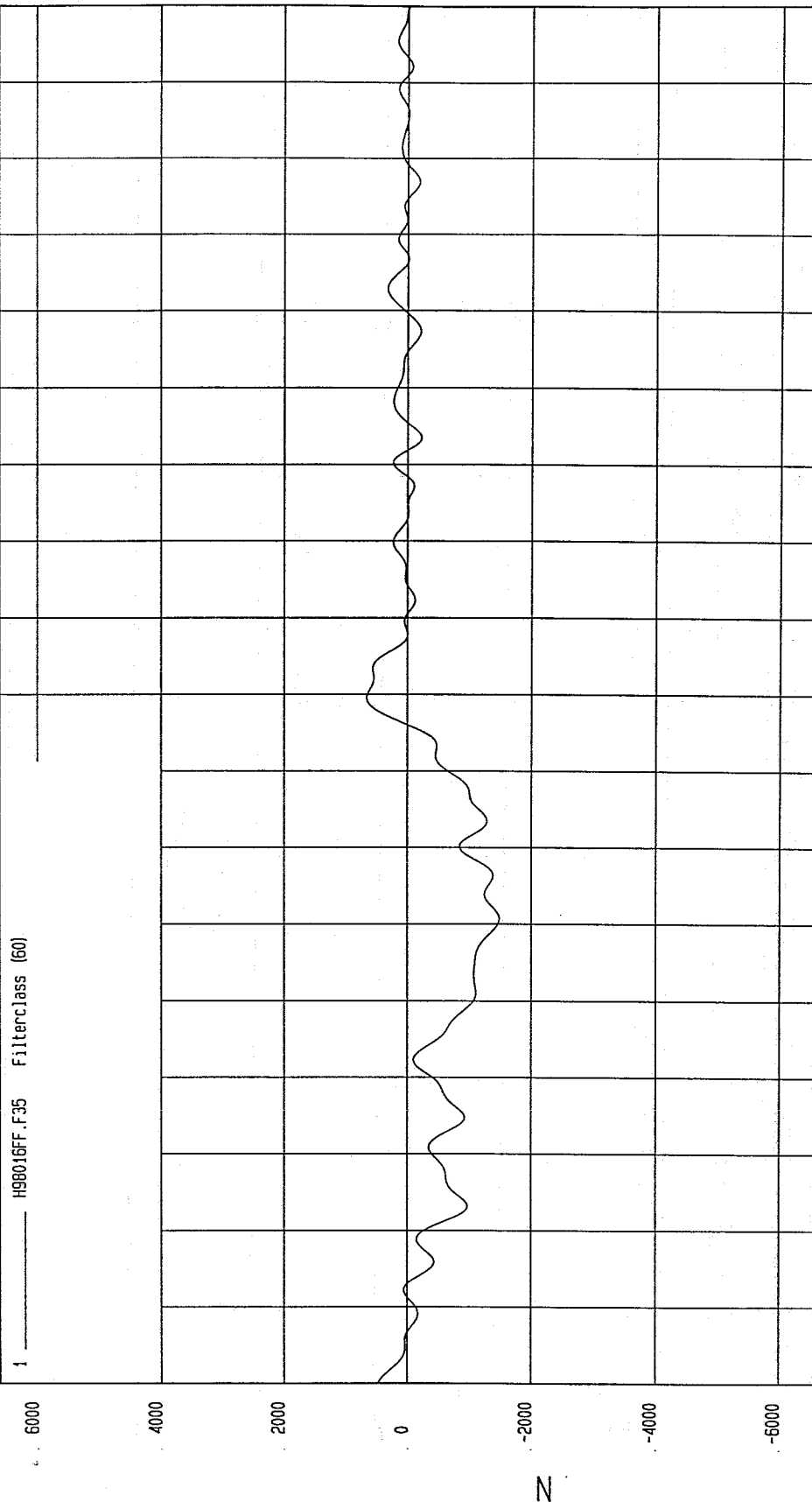
Speed: 34.8 MPH 56 KPH

Minimum = -1480.11 N at 41 msec

Maximum = 666.05 N at 70 msec

LC #43 FY

1 H98016FF.F35 Filterclass (60)



TIME (SECONDS)

MGA Research
11-08-1998 11:23

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -459.42 N at 40 msec

Maximum = 1065.1 N at 56 msec

LC #44 FY

1 _____ H98016FF.F38 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

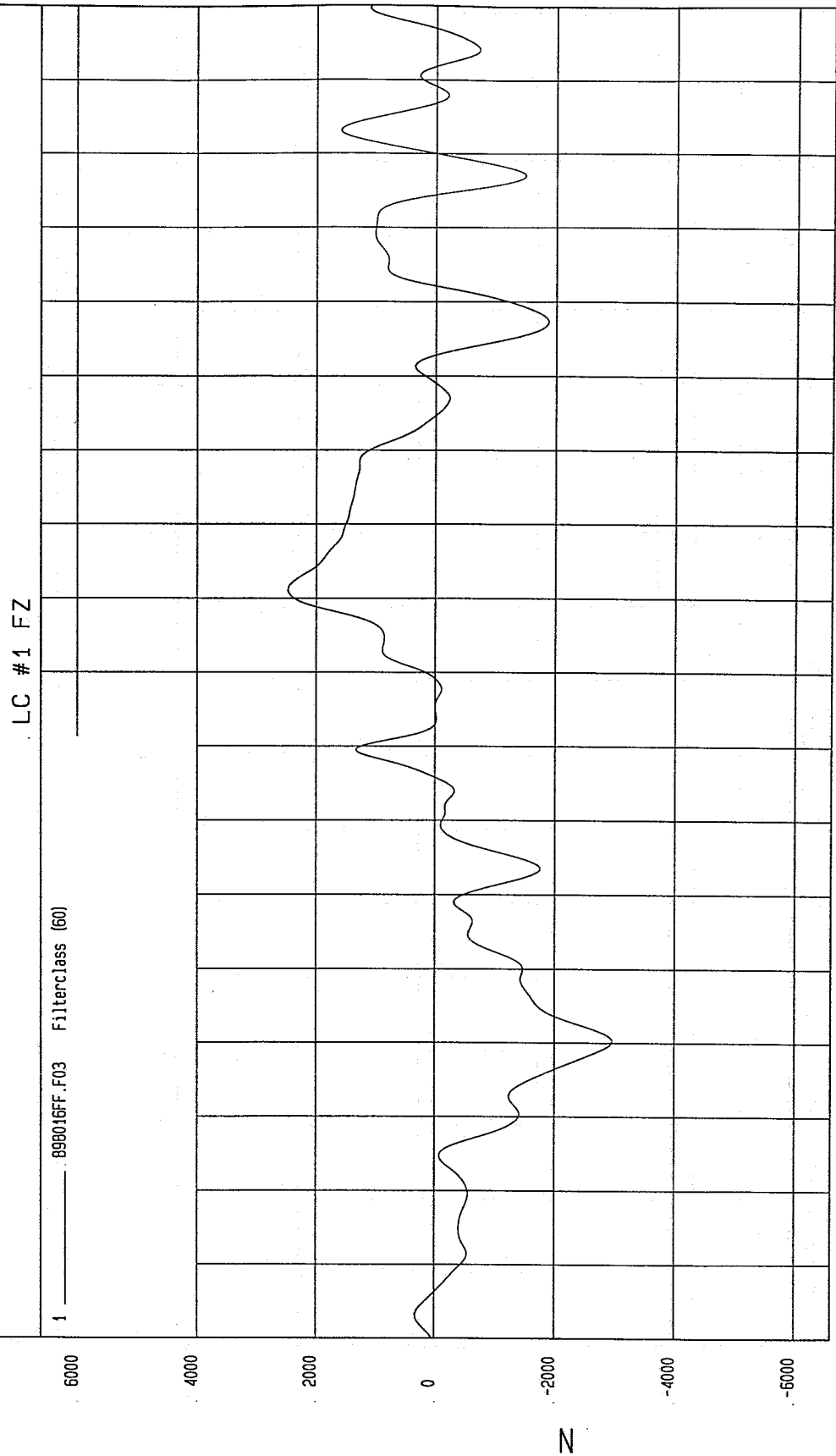
0.14

0.15

TIME (SECONDS)

NGA Research
11-08-1998 11:23

TEST: FMVSS 214 SIDE IMPACT TEST	TEST DATE: 03-12-1998
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB	Speed: 32.8 MPH 52.8 KPH
Minimum = -2958.35 N at 20 msec	
Maximum = 2772.45 N at 191 msec	



TIME (SECONDS)

NGA Research
11-06-1998 09: 43

LC #2 FZ

NO VALID DATA COLLECTED

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

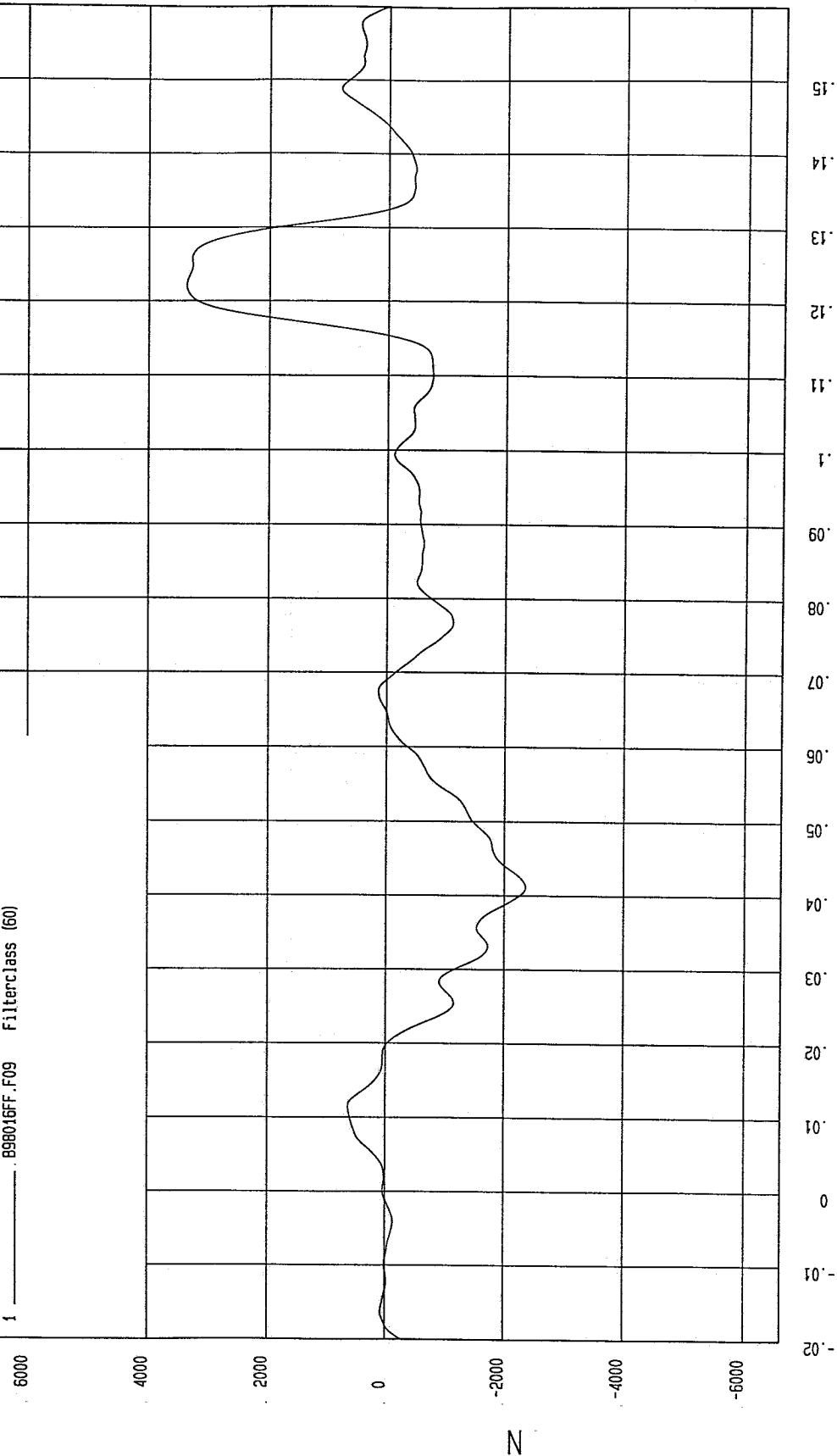
Speed: 32.8 MPH 52.8 KPH

Minimum = -2358.62 N at 41 msec

Maximum = 3376.4 N at 122 msec

LC #3 FZ

1 B98016FF.F09 Filterclass (60)



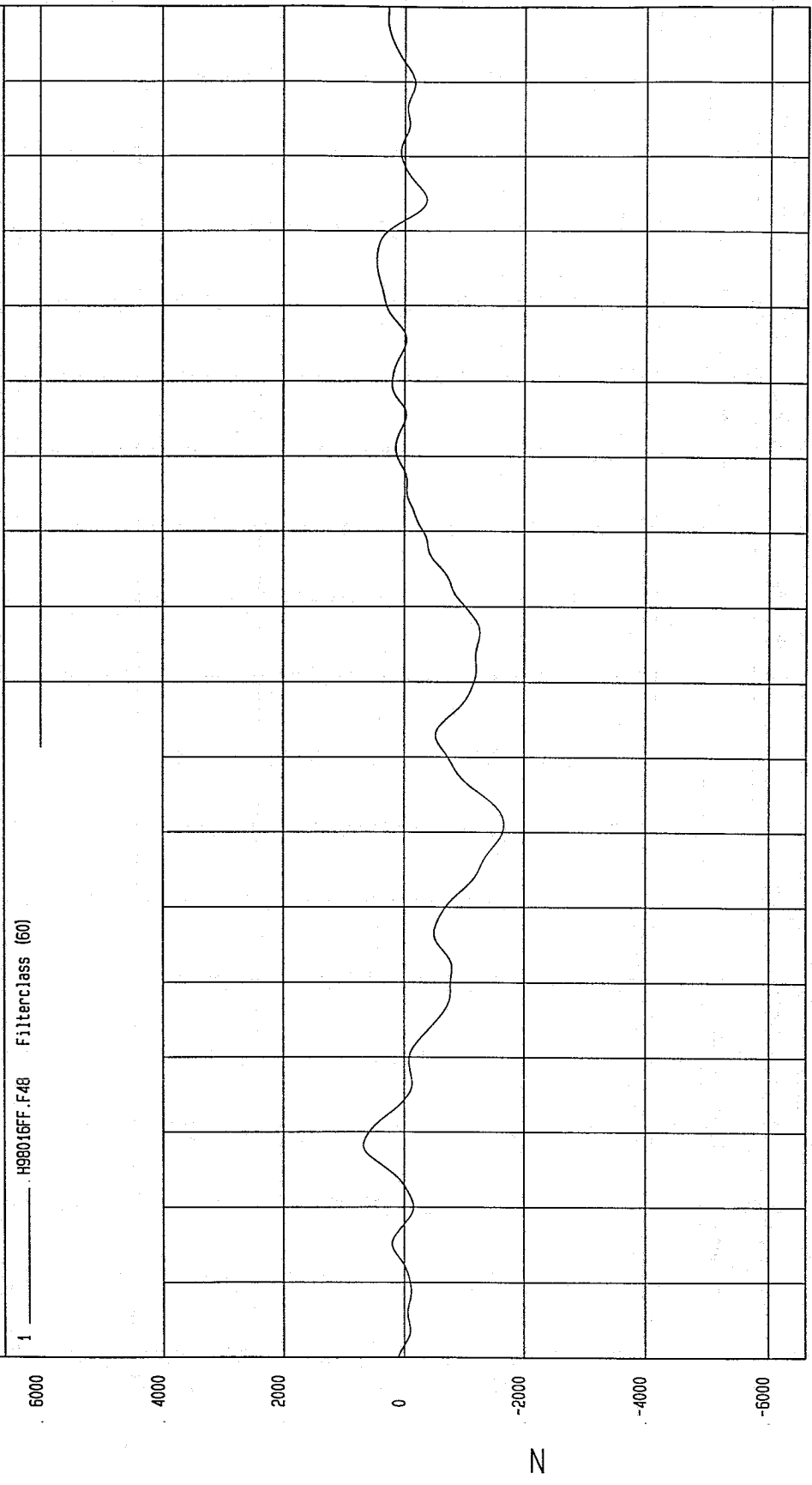
NCA Research
11-06-1998 09.43

TEST: FMVSS 214 SIDE IMPACT TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 34.8 MPH 56 KPH

Minimum = -1655.75 N at 51 msec Maximum = 680.39 N at 8 msec

LC #4 FZ



TIME (SECONDS)

MOA Research
11-08-1998 11:23

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

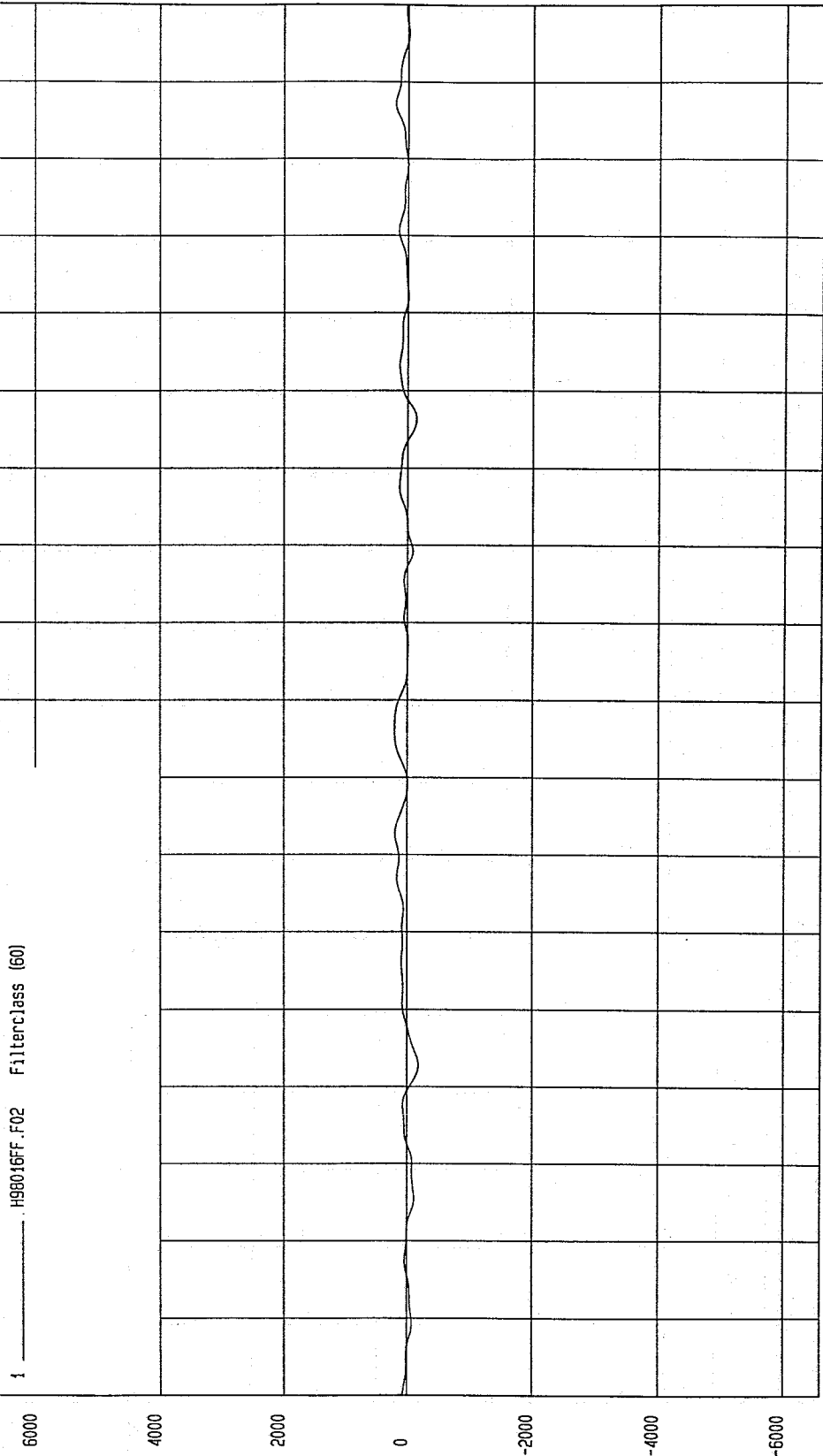
Speed: 34.8 MPH 56 KPH

Minimum = -174.16 N at 23 msec

Maximum = 222.32 N at 183 msec

LC #5 FZ

1 _____ H98016FF.F02 Filterclass (60)



TIME (SECONDS)

MCA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 239.13 N at 65 msec

Minimum = -1437.74 N at 22 msec

LC #6 FZ

1 H98016FF.F05 Filterclass (60)

1

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MGA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

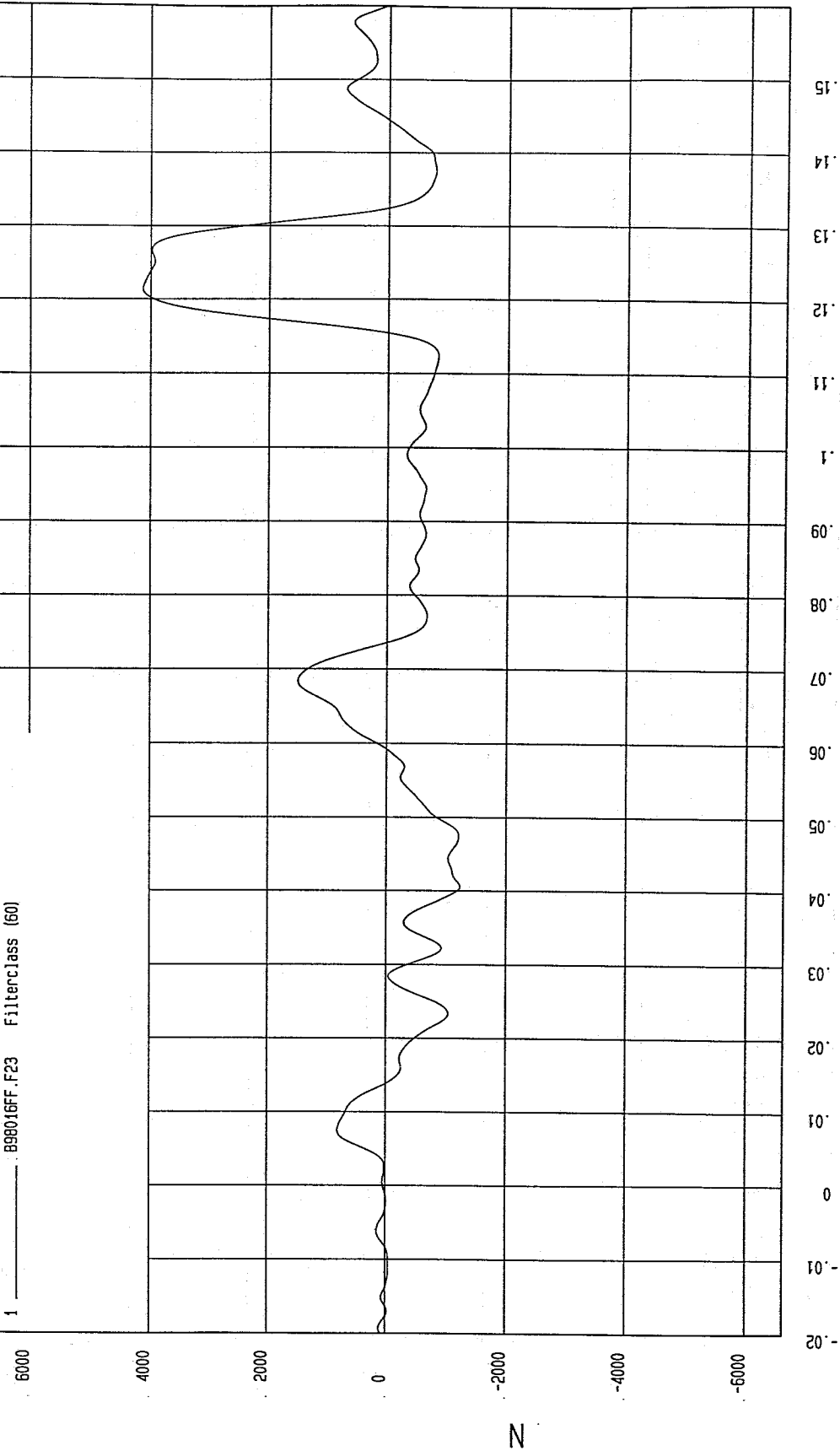
Speed: 32.8 MPH 52.8 KPH

Minimum = -1230.21 N at 41 msec

Maximum = 4131.11 N at 121 msec

LC #7 FZ

1 ——— B98016FF.F23 Filterclass (60)



MSA Research
11-06-1998 09:43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

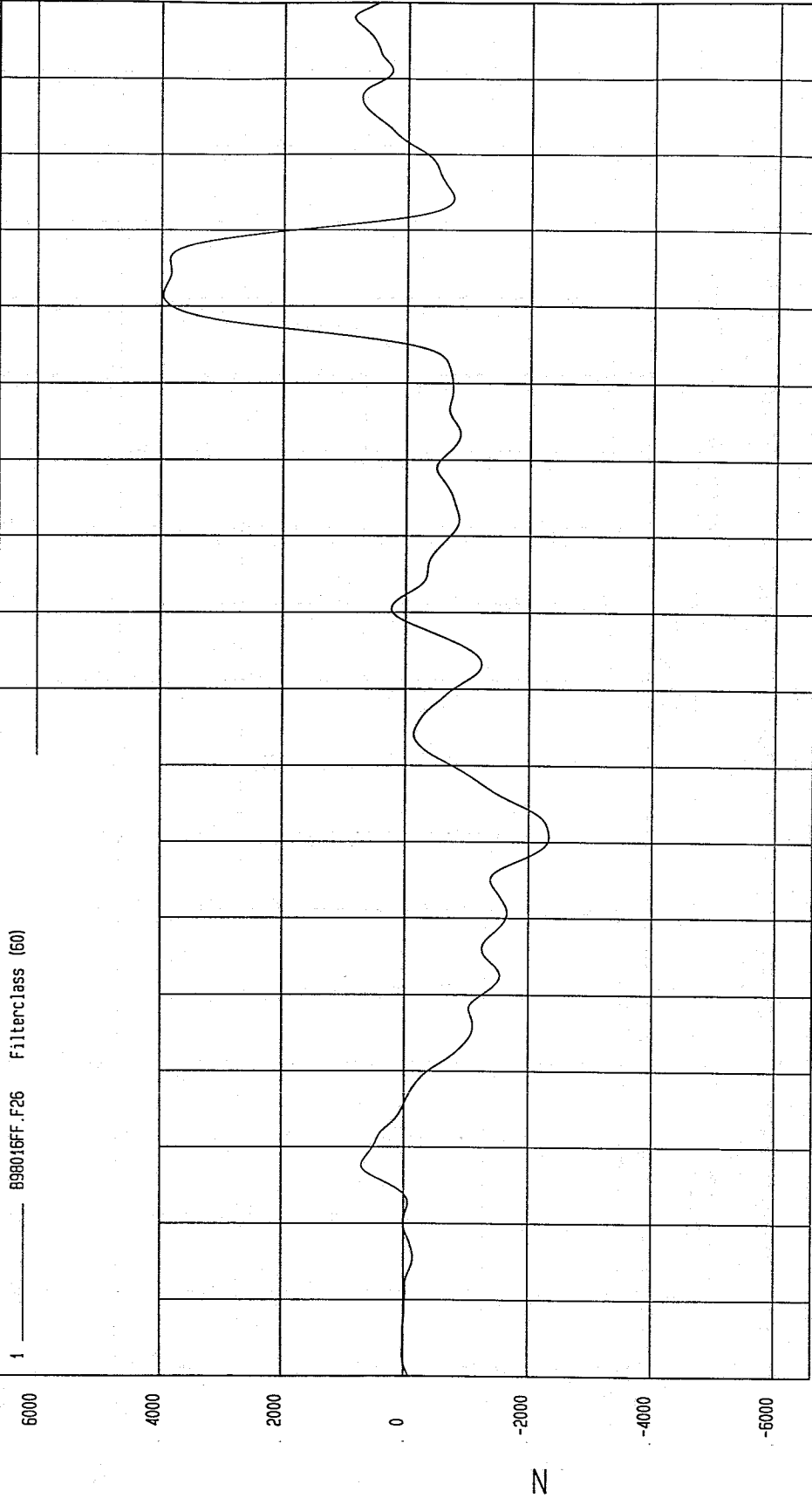
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Minimum = -2323.34 N at 51 msec

Maximum = 3971.36 N at 122 msec

LC #8 FZ

1 ——— B98016FF.F26 Filterclass (60)



MGA Research
11-06-1998 09:43

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

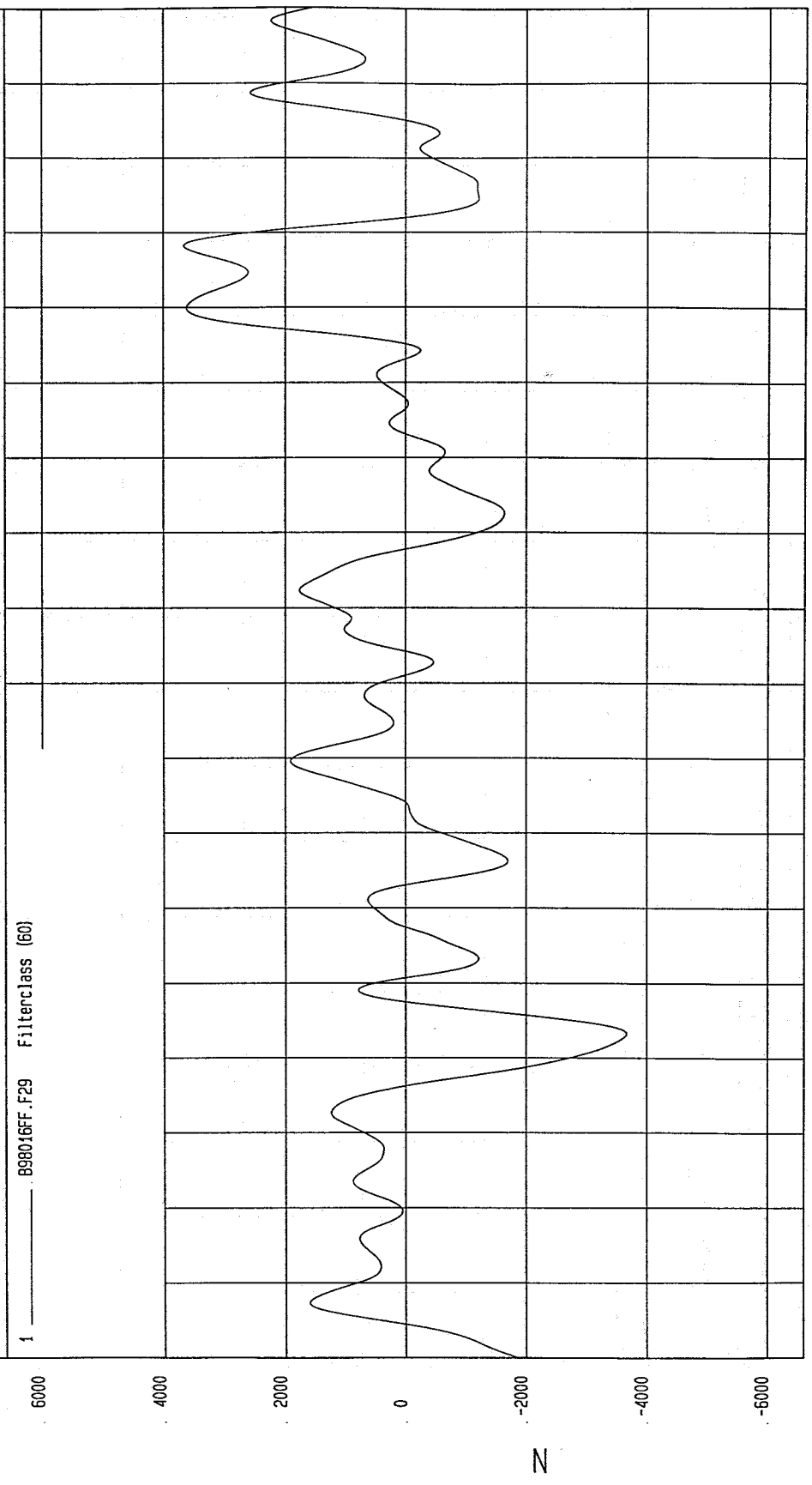
Speed: 32.8 MPH 52.8 KPH

Minimum = -3666.31 N at 23 msec

Maximum = 3670.13 N at 128 msec

LC #9 FZ

1 _____ B98016FF.F29 Filterclass (60)



TIME (SECONDS)

MGA Research
11-06-1998 09: 43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -1019.55 N at 112 msec

Maximum = 4039.93 N at 120 msec

LC #10 FZ

1 _____ 898016FF.F33 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MGA Research
11-06-1998 09:43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -1860.13 N at 77 msec

Maximum = 4575.21 N at 127 msec

LC #111 FZ

1 _____ 898016FF.F36 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-02

-01

0

01

02

03

04

05

06

07

08

09

1

11

12

13

14

15

TIME (SECONDS)

MCA Research
11-06-1998 09:43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

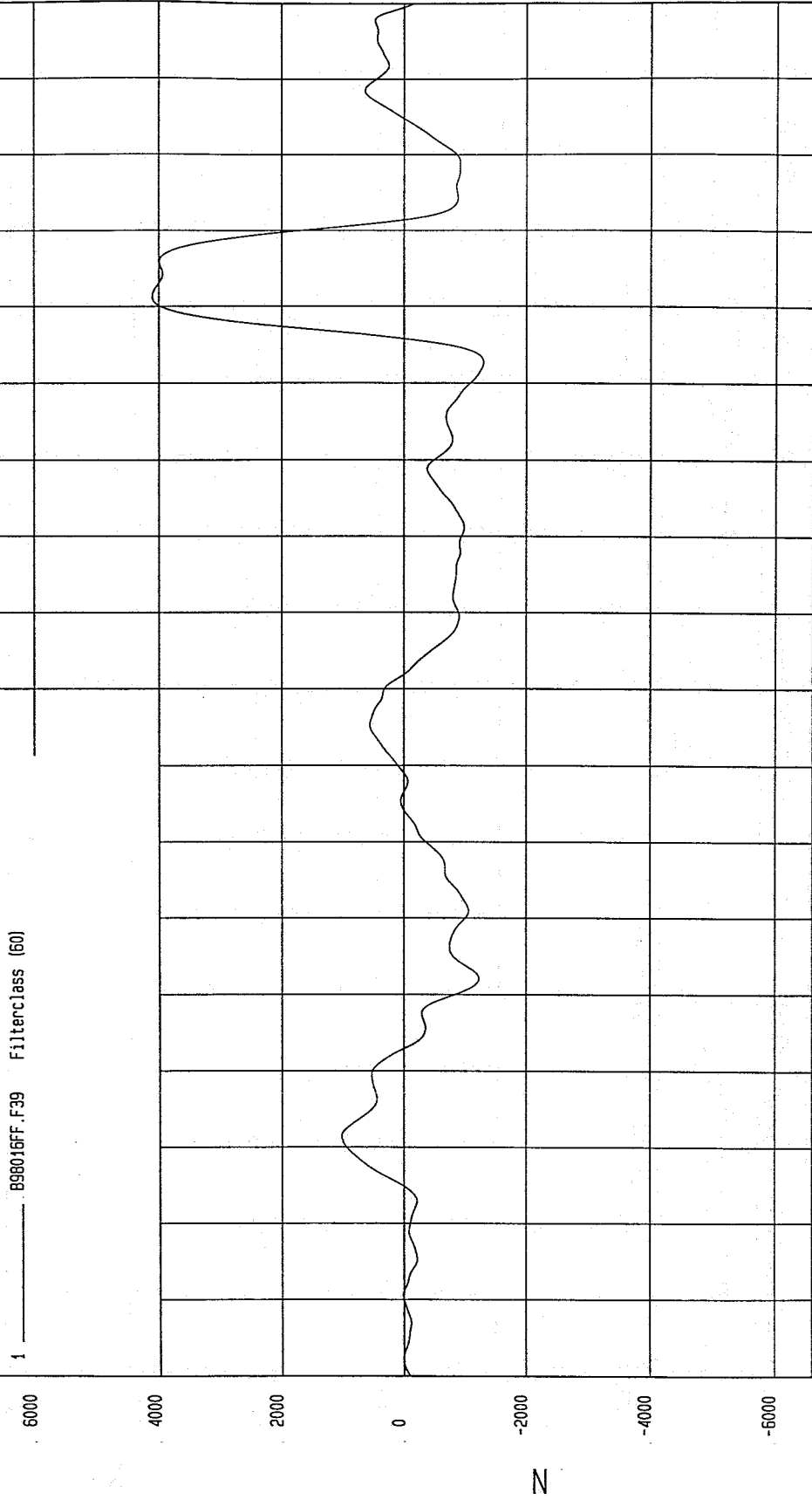
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MOB

Minimum = -1284.05 N at 113 msec

Maximum = 4104.45 N at 121 msec

LC #12 FZ

1 _____ B98016FF.F39 Filterclass (60)



TIME (SECONDS)

MCA Research
11-06-1998 09:43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

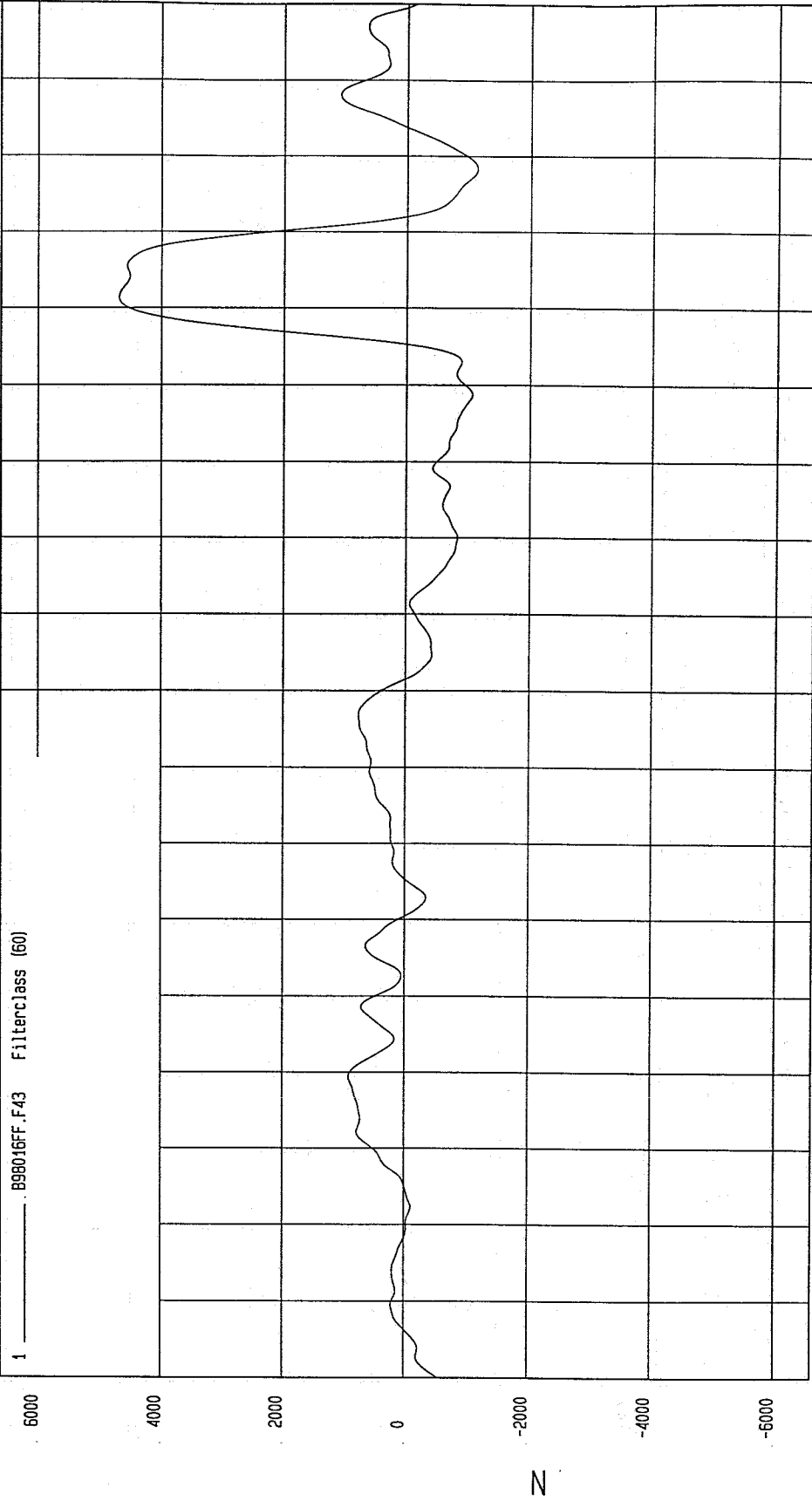
Speed: 32.8 MPH 52.8 KPH

Minimum = -1106.94 N at 138 msec

Maximum = 4689.5 N at 121 msec

LC #13 FZ

1 _____ B98016FF.F43 Filterclass (60)



TIME (SECONDS)

MCA Research
11-06-1998 09:43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

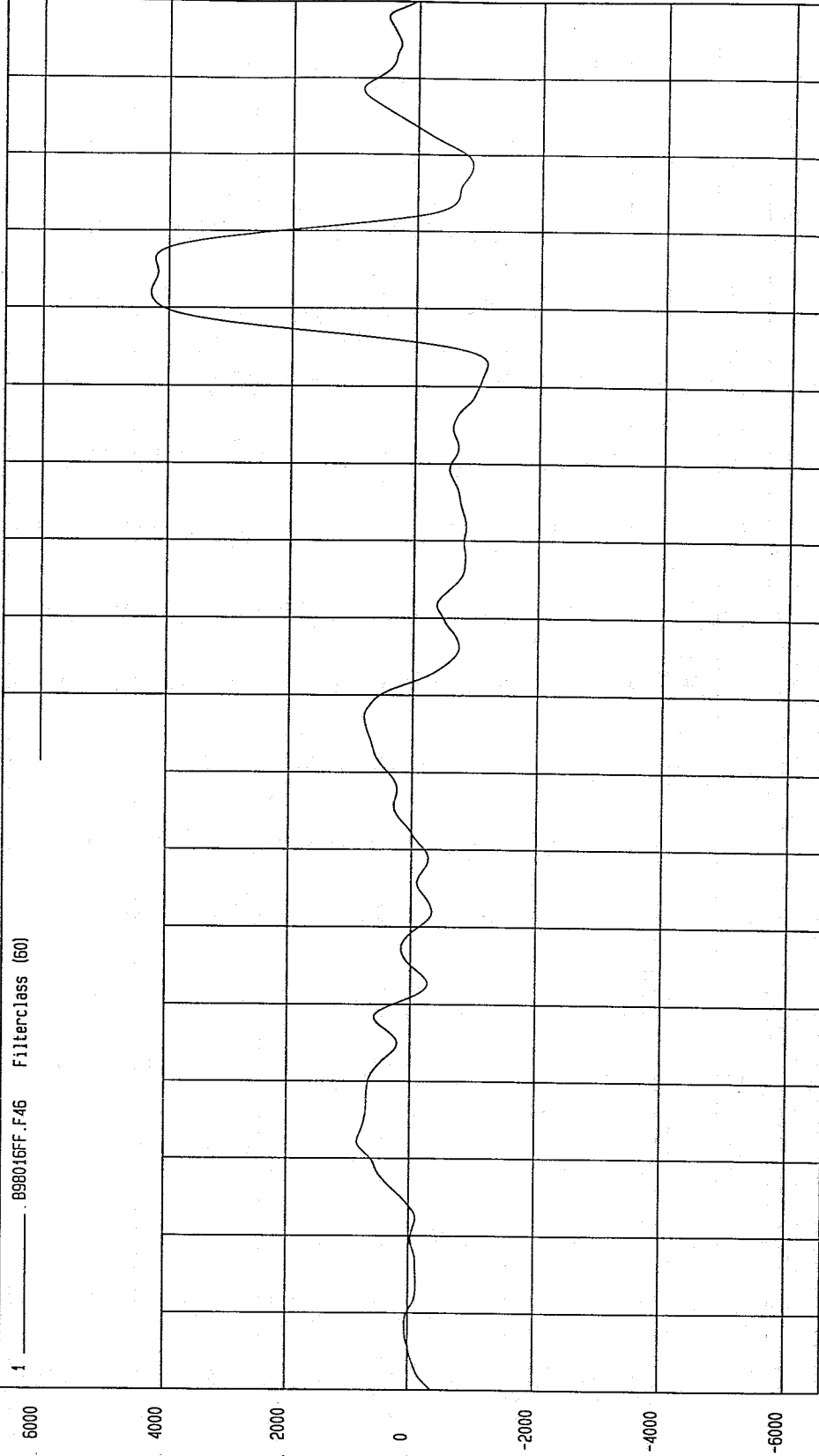
Speed: 32.8 MPH 52.8 KPH

Minimum = -1134.26 N at 113 msec

Maximum = 4279.66 N at 122 msec

LC #14 FZ

1 ——— B98016FF.F46 Filterclass (60)



MCA Research
11-06-1998 09:43

TIME (SECONDS)

N

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

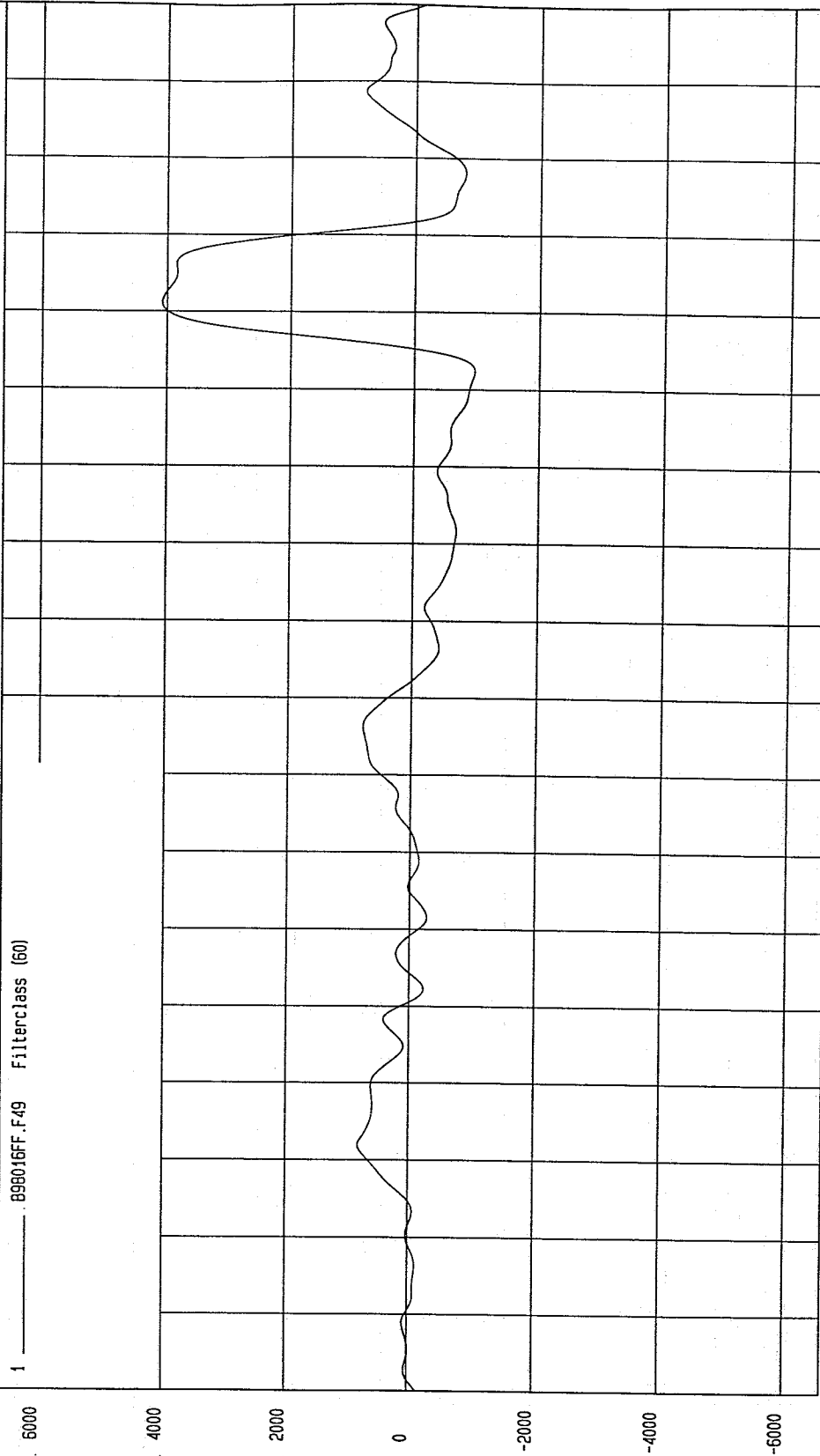
Speed: 32.8 MPH 52.8 KPH

Minimum = -938.37 N at 112 msec

Maximum = 4071.61 N at 121 msec

LC #15 FZ

1 _____ 898016FF.F49 Filterclass (60)



WCA Research
11-06-1998 09:43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

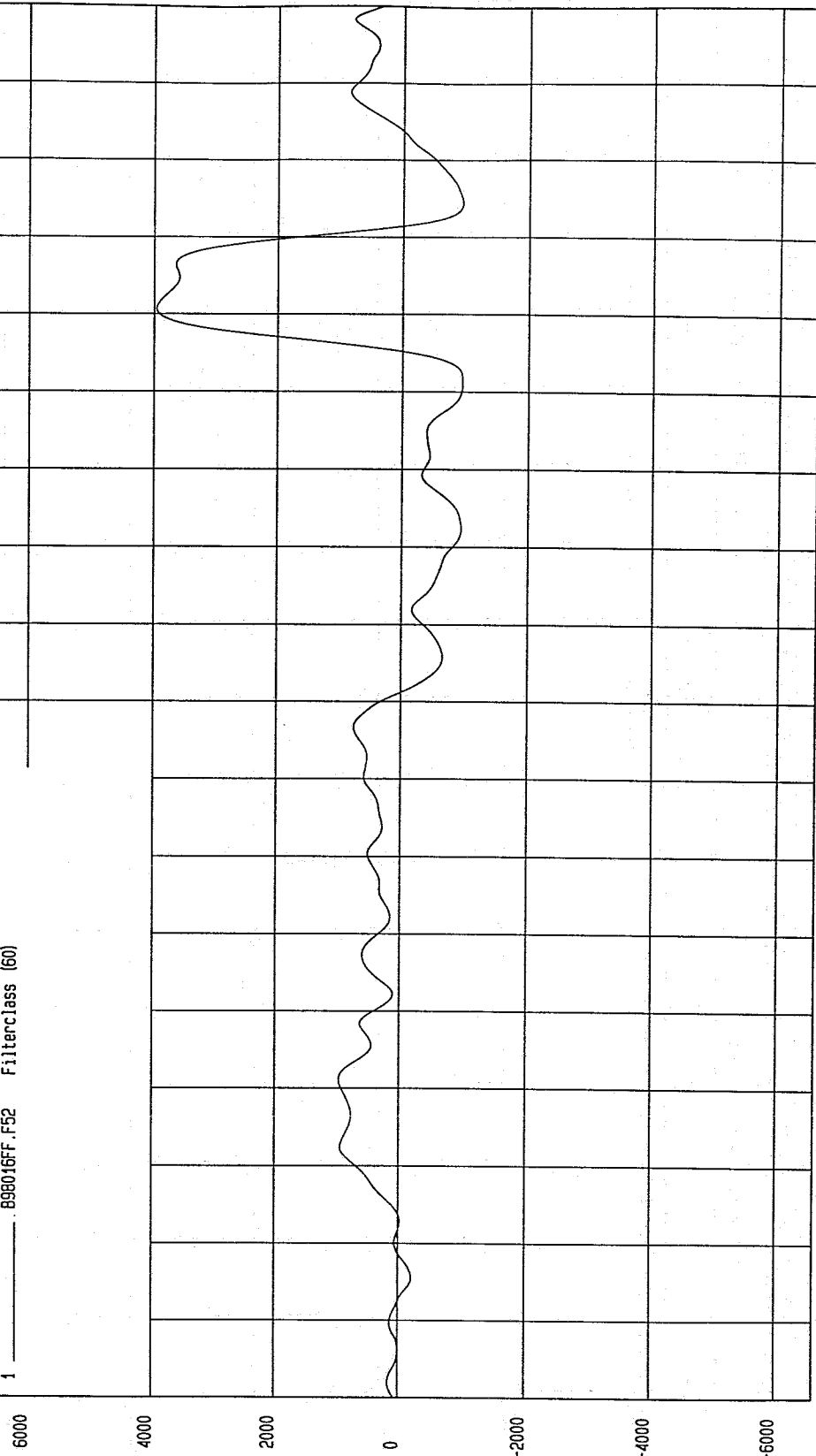
Speed: 32.8 MPH 52.8 KPH

Minimum = -929.48 N at 111 msec

Maximum = 3957.24 N at 121 msec

LC #16 FZ

1 _____ .B98016FF.F52 Filterclass (60)



MCA Research
11-06-1998 09:43

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

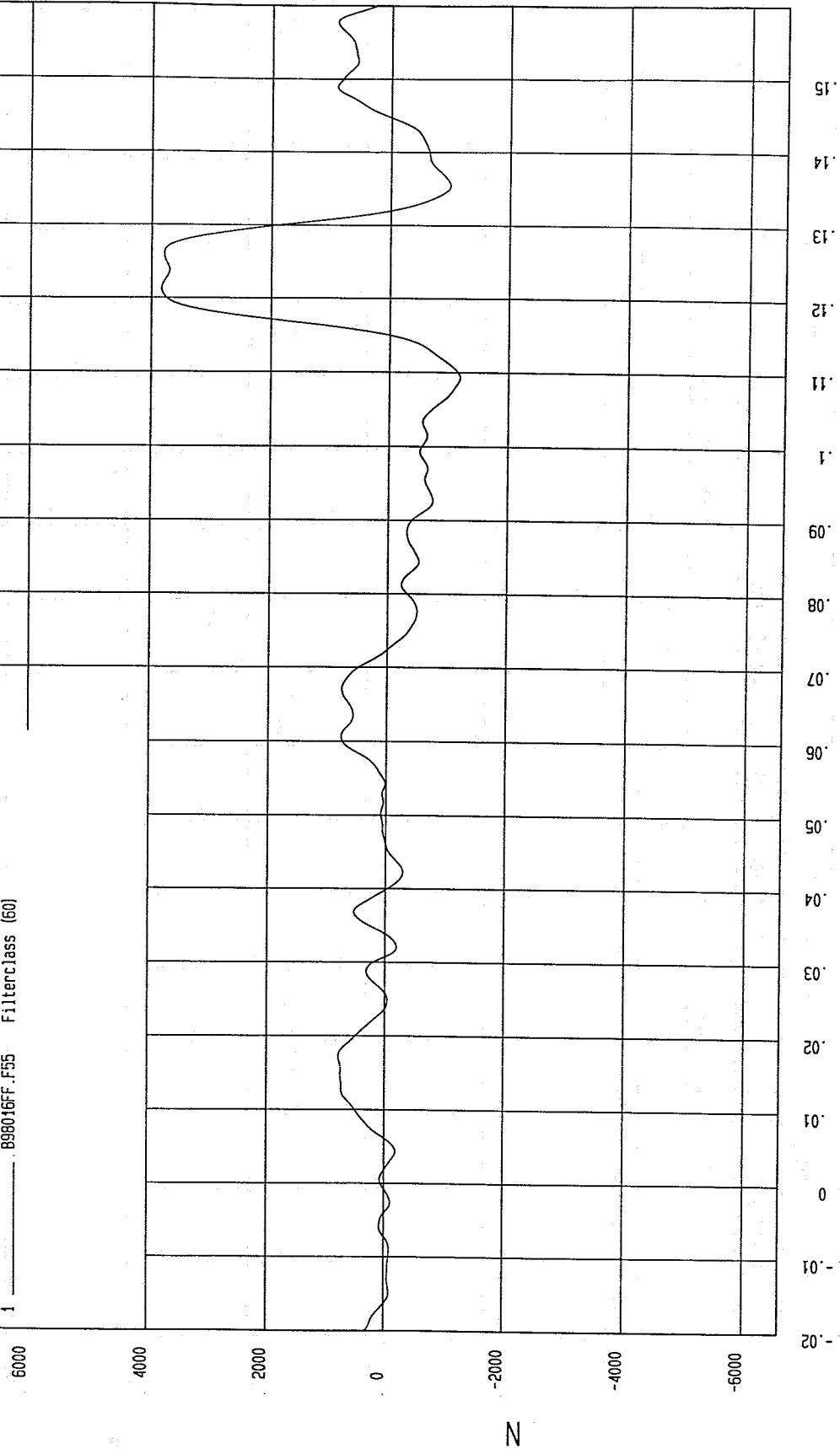
Speed: 32.8 MPH 52.8 KPH

Minimum = -1175.79 N at 109 msec

Maximum = 3833.36 N at 121 msec

LC #17 FZ

1 _____ B98016FF.F55 Filterclass (60)



MCA Research
11-06-1998 09.43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

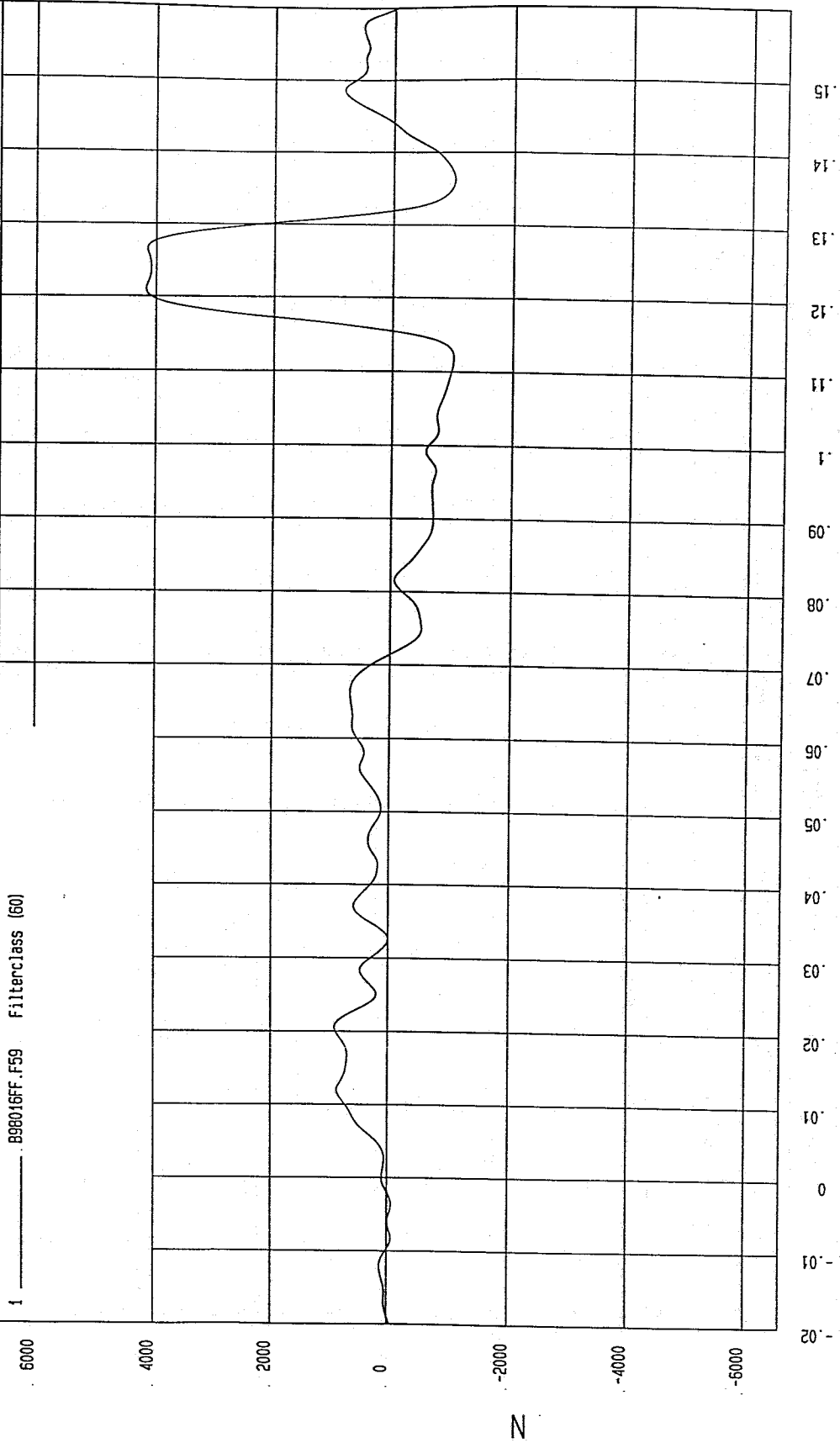
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -996.04 N at 136 msec

Maximum = 4163.23 N at 121 msec

LC #18 FZ



MCA Research
11-06-1998 09:43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

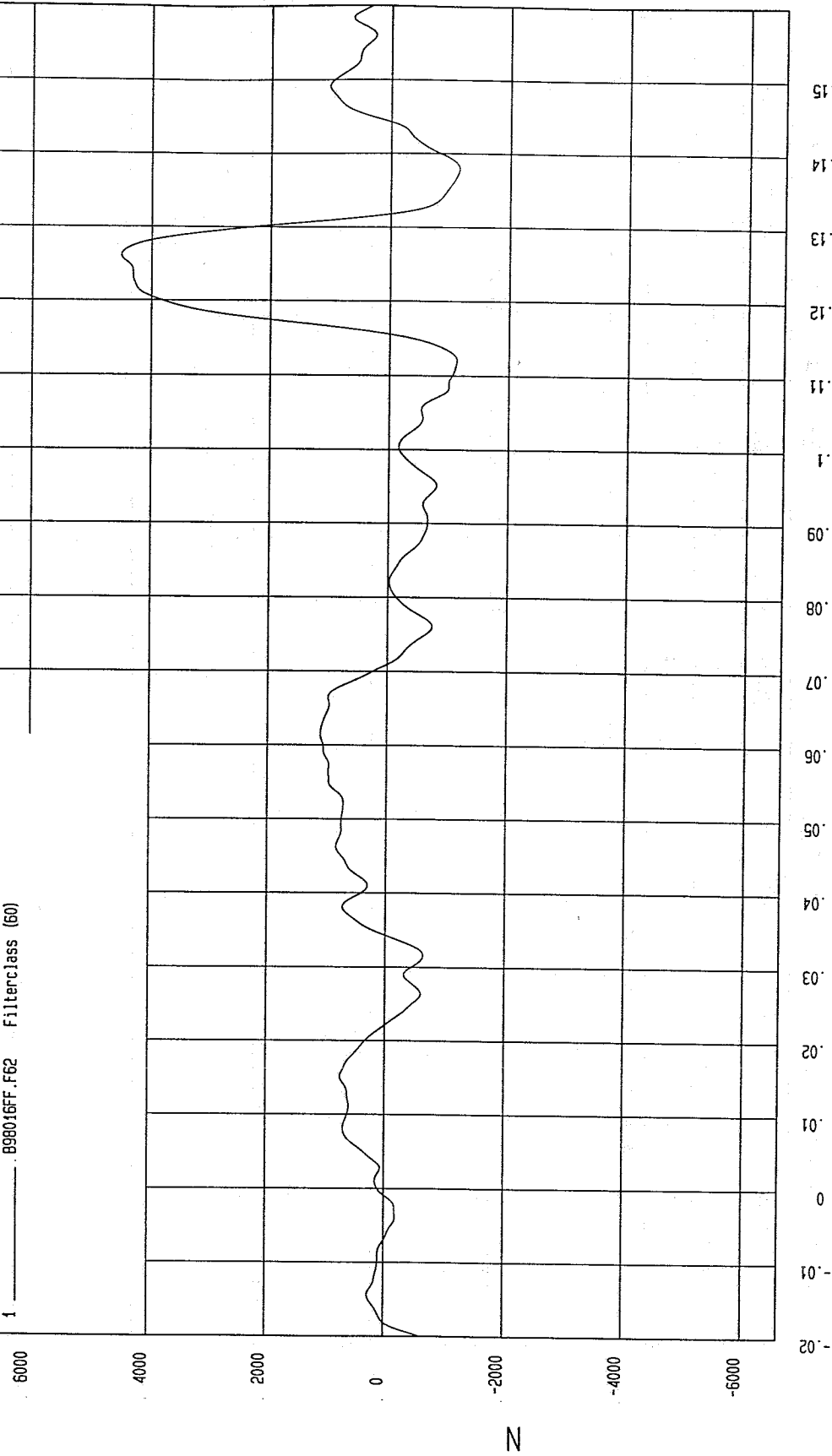
Speed: 32.8 MPH 52.8 KPH

Minimum = -1148.81 N at 138 msec

Maximum = 4507.35 N at 126 msec

LC #19 FZ

1 _____ B98016FF.F62 Filterclass (60)



NGA Research
11-06-1998 09:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

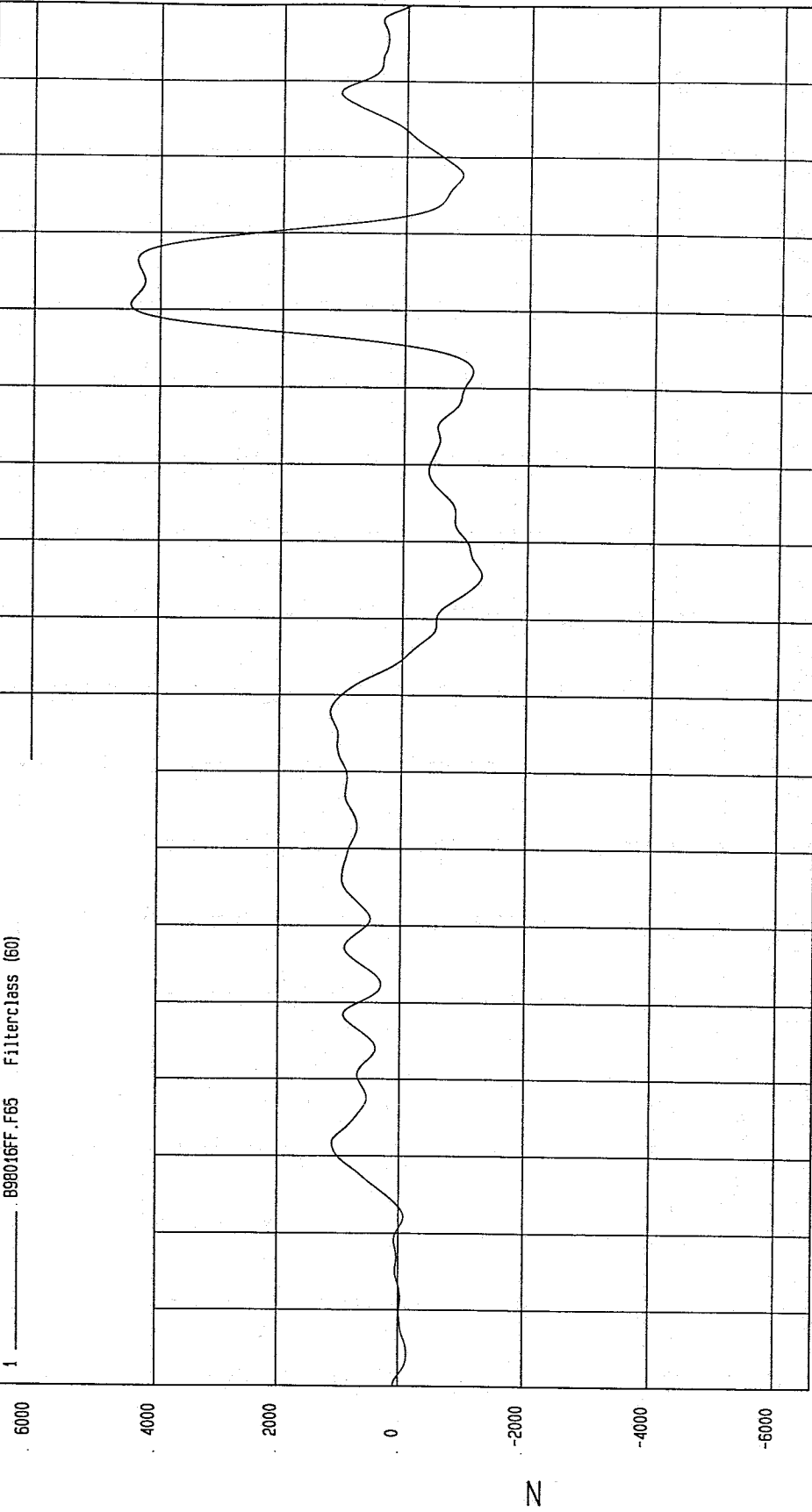
Speed: 32.8 MPH 52.8 KPH

Minimum = -1257.38 N at 86 msec

Maximum = 4471.73 N at 121 msec

LC #20 FZ

1 ----- B98016FF.FB5 Filterclass (60)



MCA Research
11-06-1998 09:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

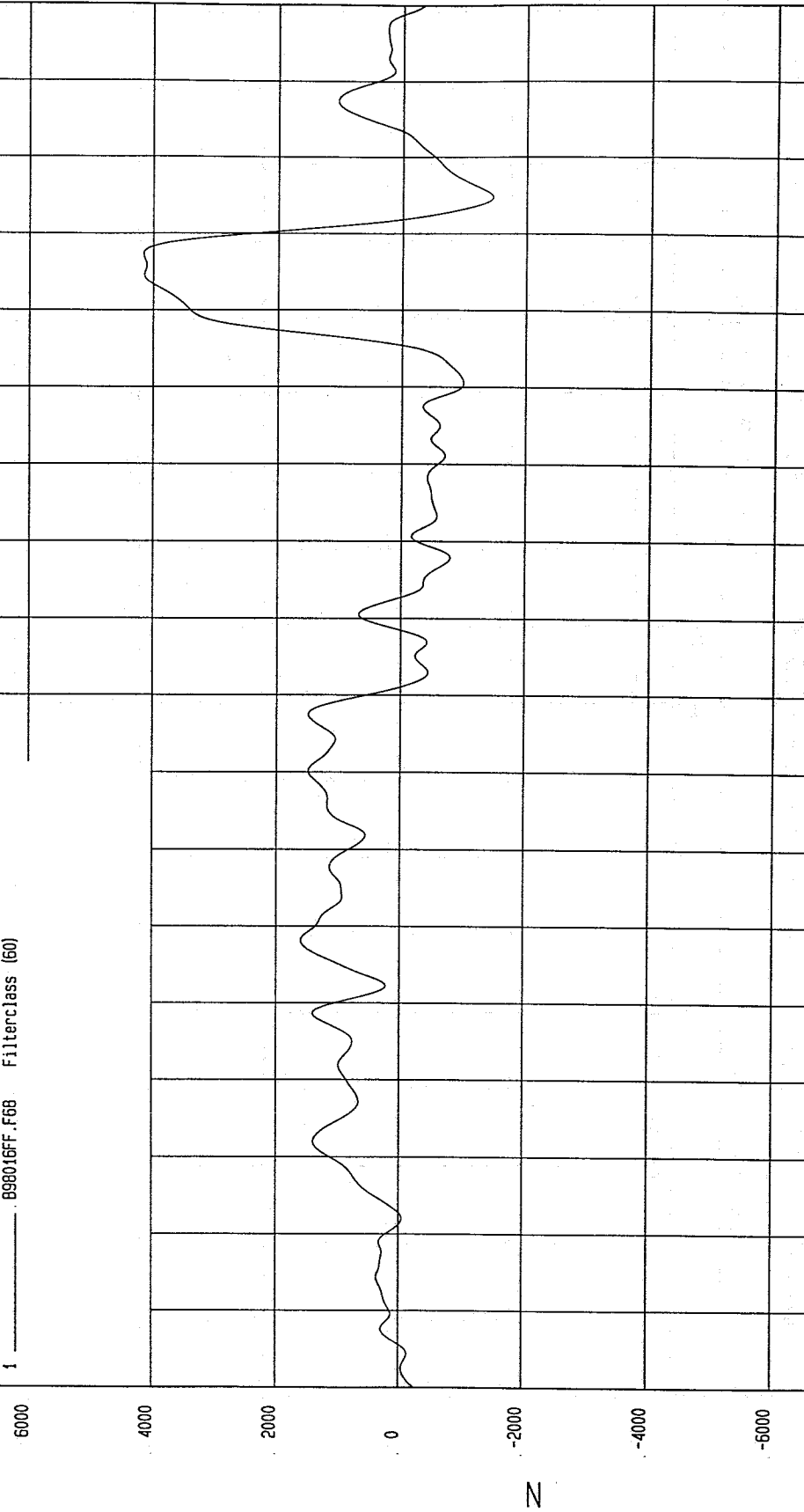
Speed: 32.8 MPH 52.8 KPH

Minimum = -1460.73 N at 135 msec

Maximum = 4157.96 N at 127 msec

LC #21 FZ

1 _____ B98016FF.F68 Filterclass (60)



NGA Research
11-06-1998 09: 44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

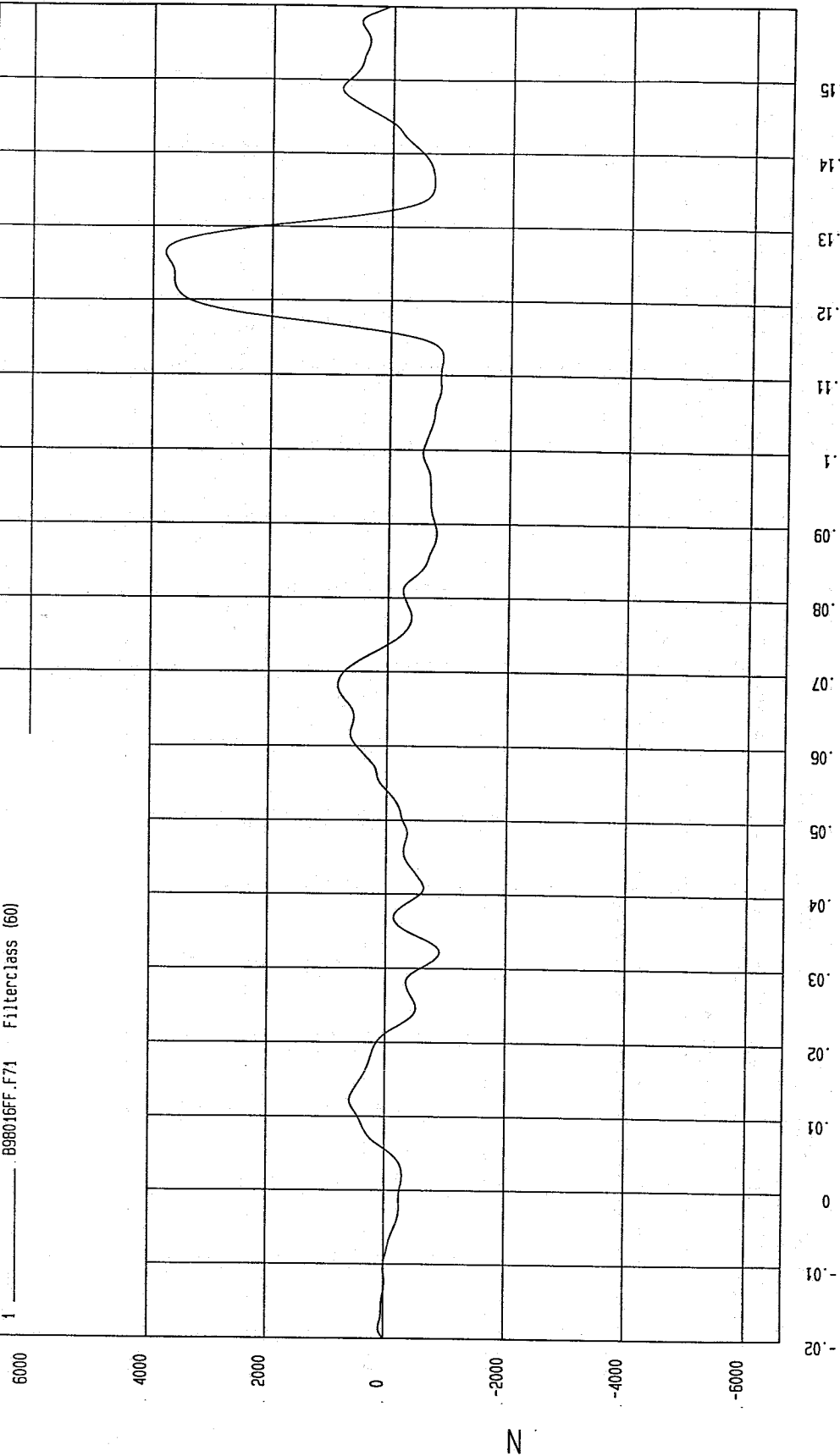
Speed: 32.8 MPH 52.8 KPH

Minimum = -873.05 N at 32 msec

Maximum = 3795.55 N at 126 msec

LC #22 FZ

1 B98016FF.F71 Filterclass (60)



NCA Research
11-06-1998 09:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

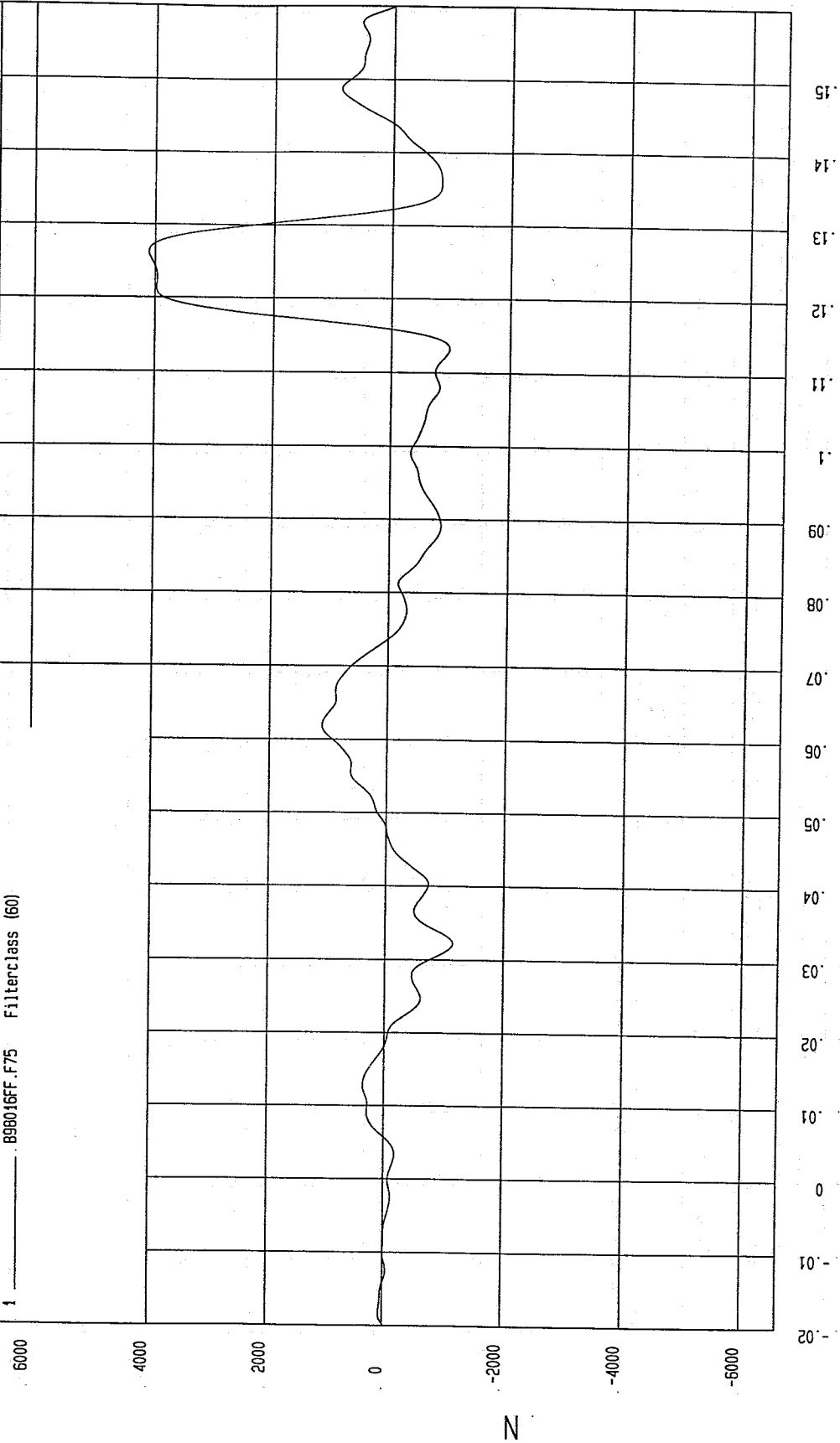
Speed: 32.8 MPH 52.8 KPH

Minimum = -1143.98 N at 32 msec

Maximum = 4101.11 N at 126 msec

LC #23 FZ

1 ——— B98016FF.F75 Filterclass (60)



MCA Research
11-06-1998 09:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

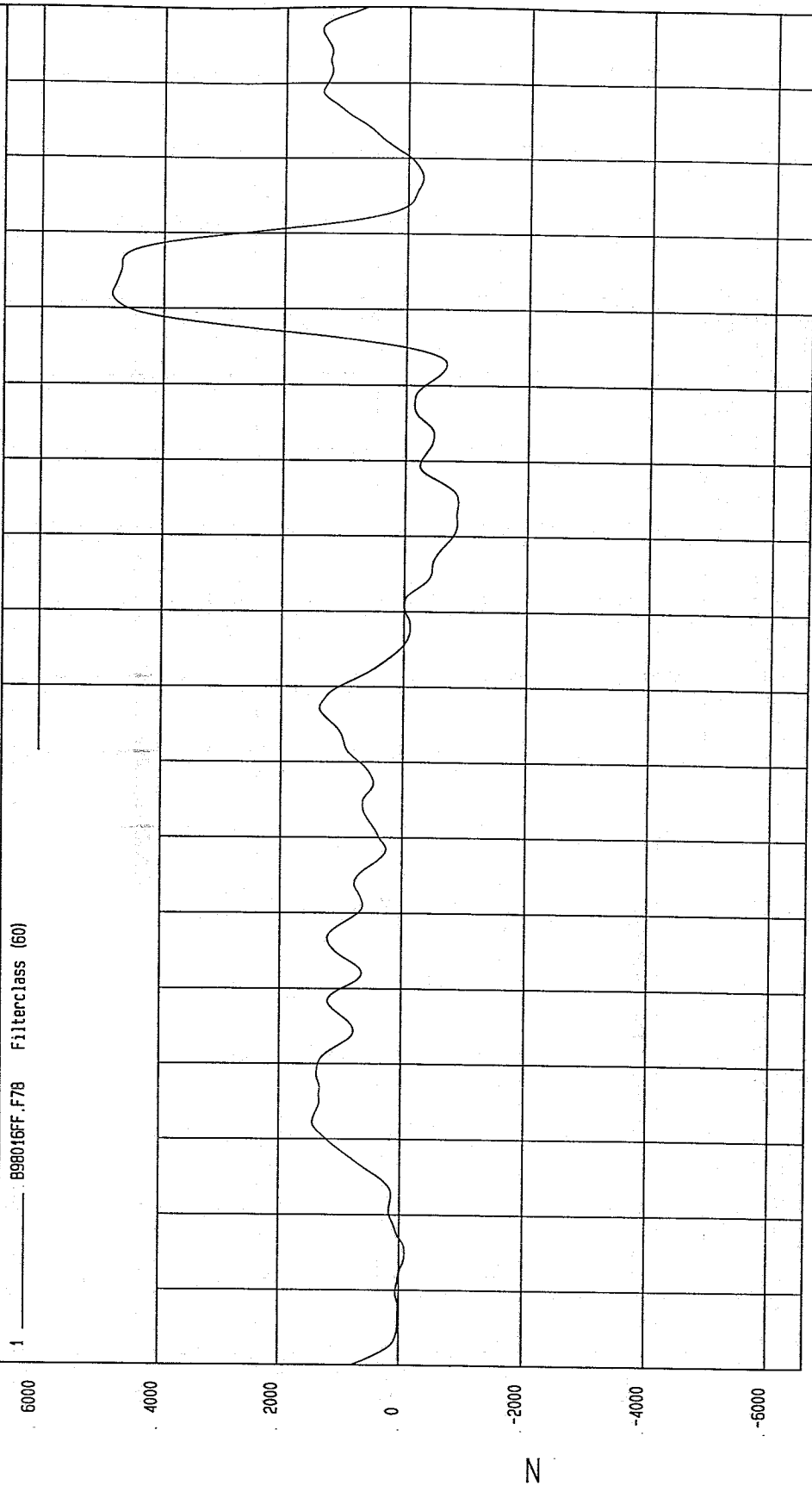
Speed: 32.8 MPH 52.8 KPH

Minimum = -854.61 N at 95 msec

Maximum = 4860.68 N at 122 msec

LC #24 FZ

1 _____ B98016FF.F78 Filterclass (60)



MGA Research
11-06-1998 09: 44

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

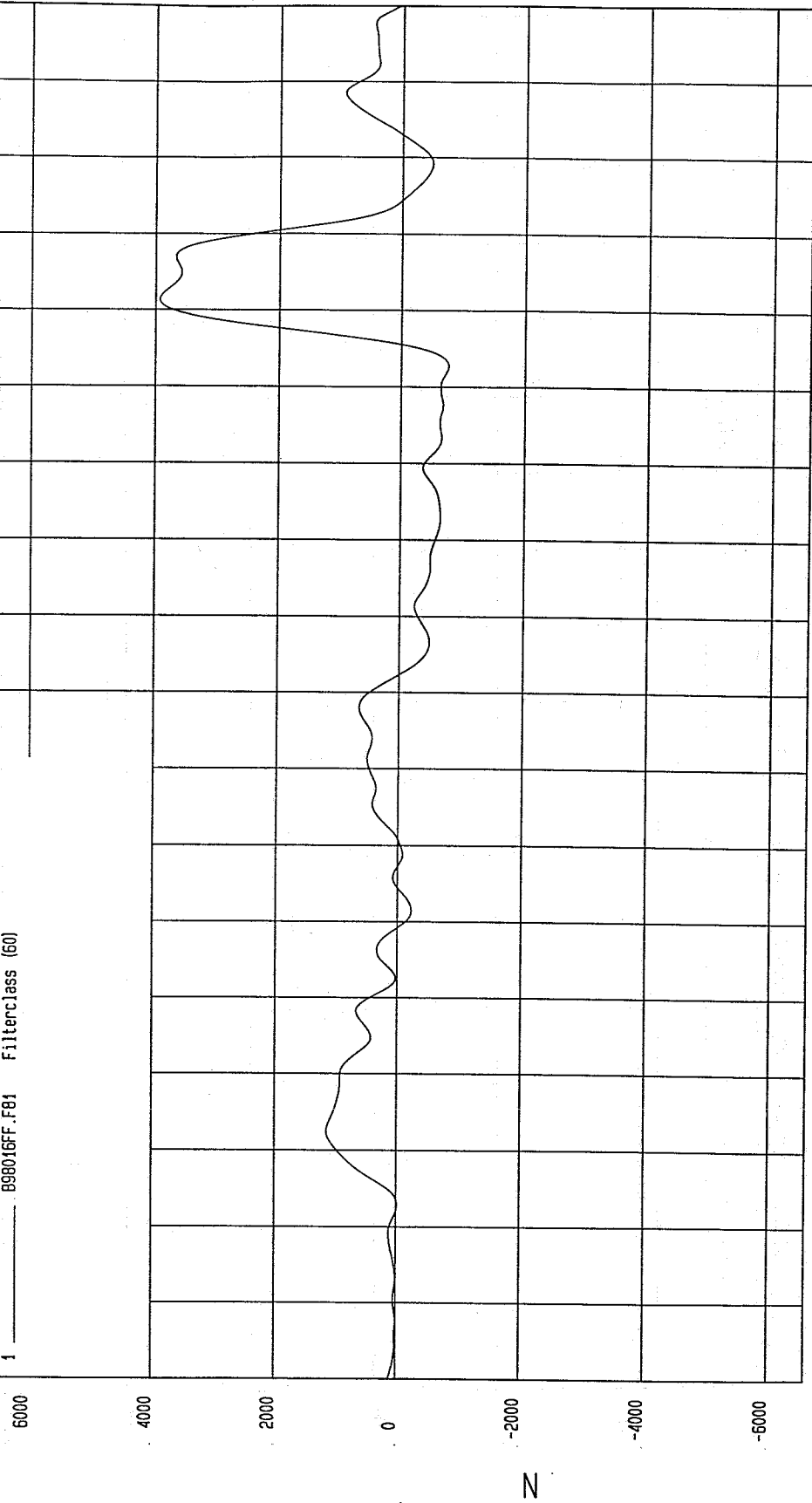
Speed: 32.8 MPH 52.8 KPH

Minimum = -757.03 N at 113 msec

Maximum = 3928.94 N at 121 msec

LC #25 FZ

1 _____ B98016FF.F81 Filterclass (60)



MGA Research
11-06-1998 08:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -854.51 N at 95 msec

Maximum = 4860.68 N at 122 msec

LC #24 FZ

1 _____ B98016FF.F78 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

NGA Research
11-06-1998 09: 44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -977.93 N at 113 msec

Maximum = 3685.74 N at 122 msec

LC #26 FZ

1 _____ B98016FF.F85 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MCA Research
11-06-1998 09:44

TEST: FMVSS 214 SIDE IMPACT TEST

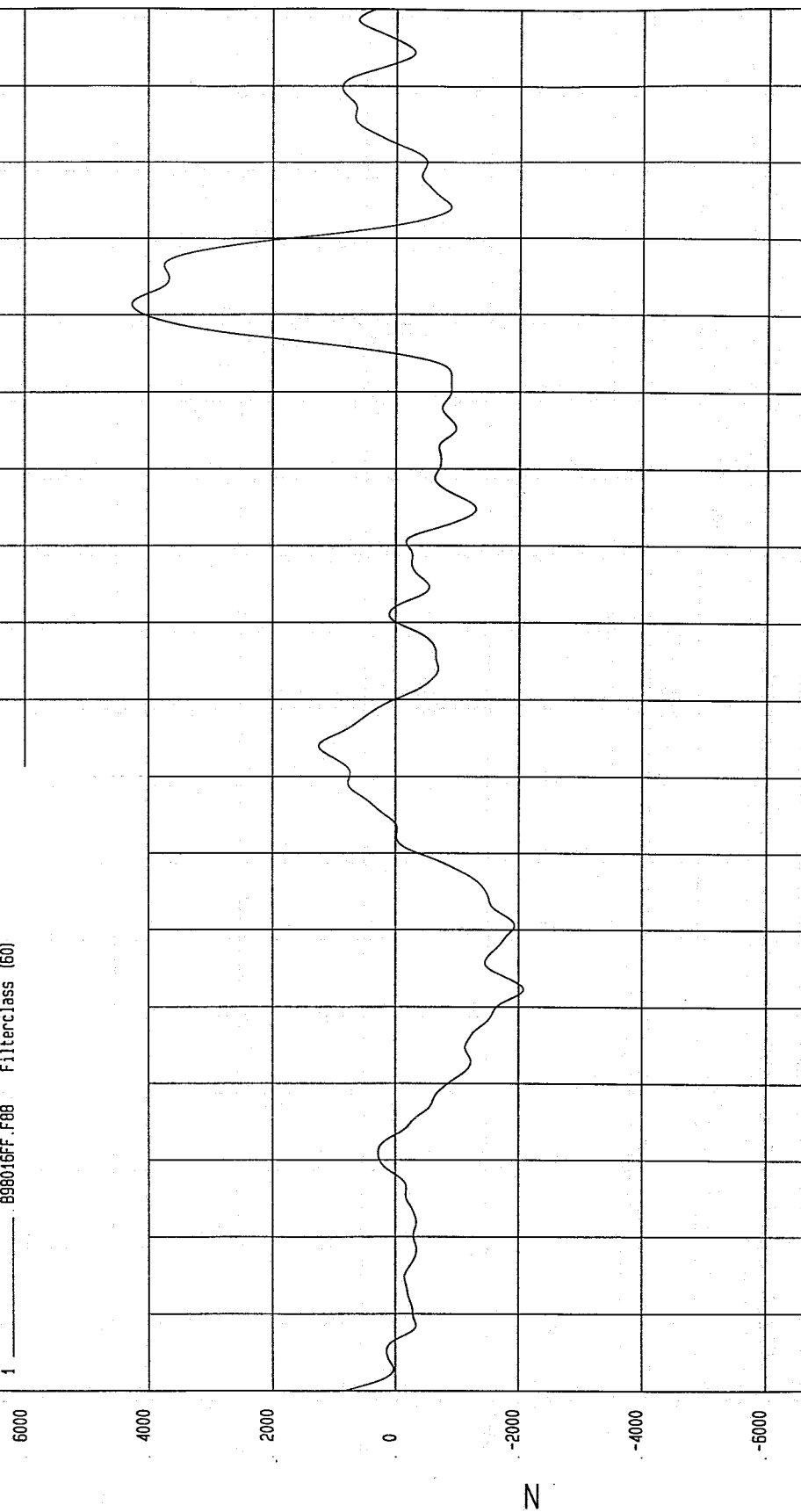
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -2076.2 N at 32 msec Maximum = 4257.91 N at 121 msec

LC #27 FZ

1 _____ B98016FF.F08 Filterclass (60)



TIME (SECONDS)

MCA Research
11-06-1998 09:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -1119.51 N at 92 msec

Maximum = 3561.86 N at 121 msec

LC #28 FZ

1 ——— B9801GFF.F91 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (SECONDS)

NCA Research
11-06-1998 09:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

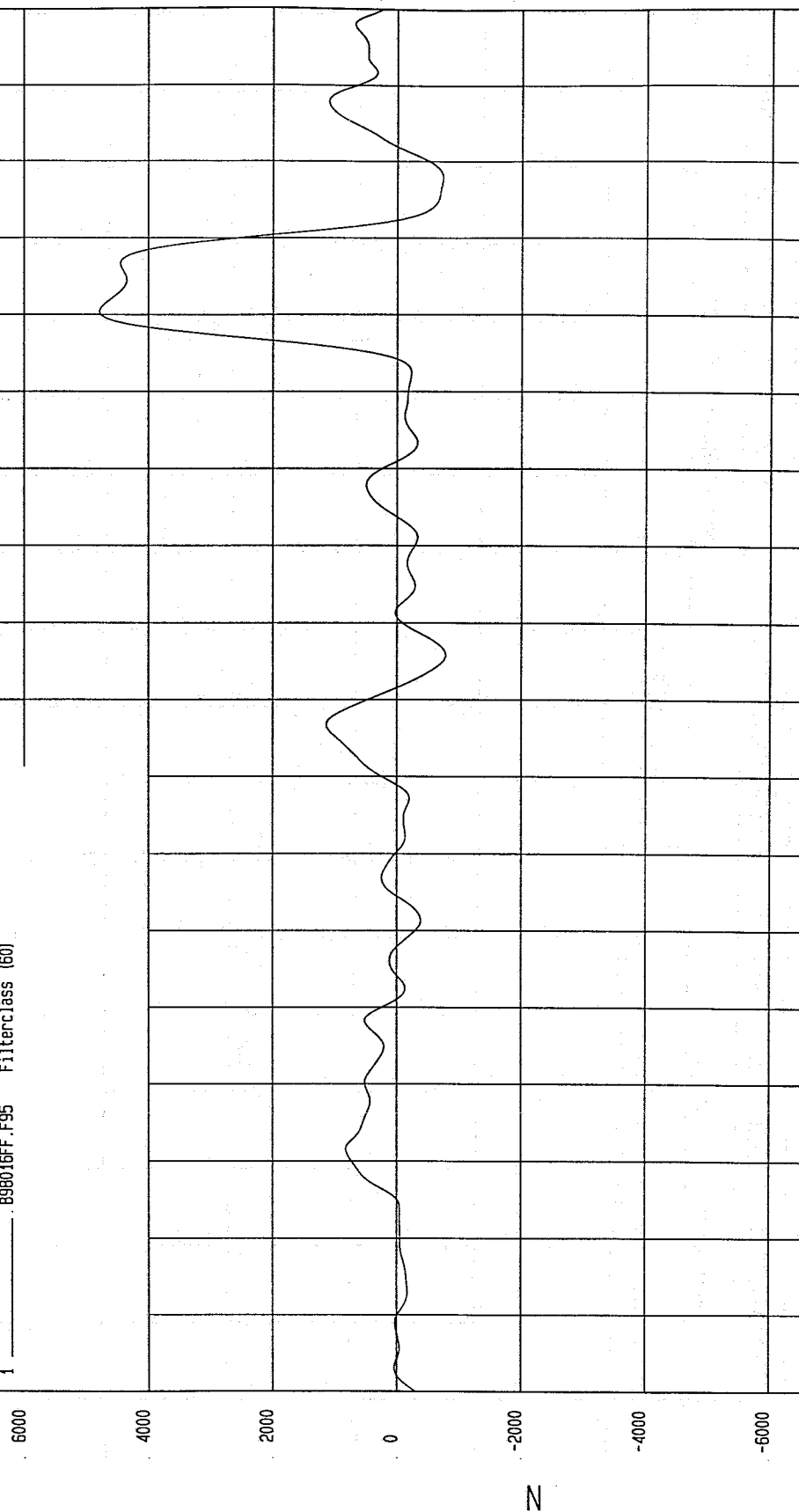
Speed: 32.8 MPH 52.8 KPH

Minimum = -767.8 N at 76 msec

Maximum = 4788.61 N at 120 msec

LC #29 FZ

1 _____ .B98016FF.F95 Filterclass (60)



TIME (SECONDS)

NCA Research
11-06-1998 09:44

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

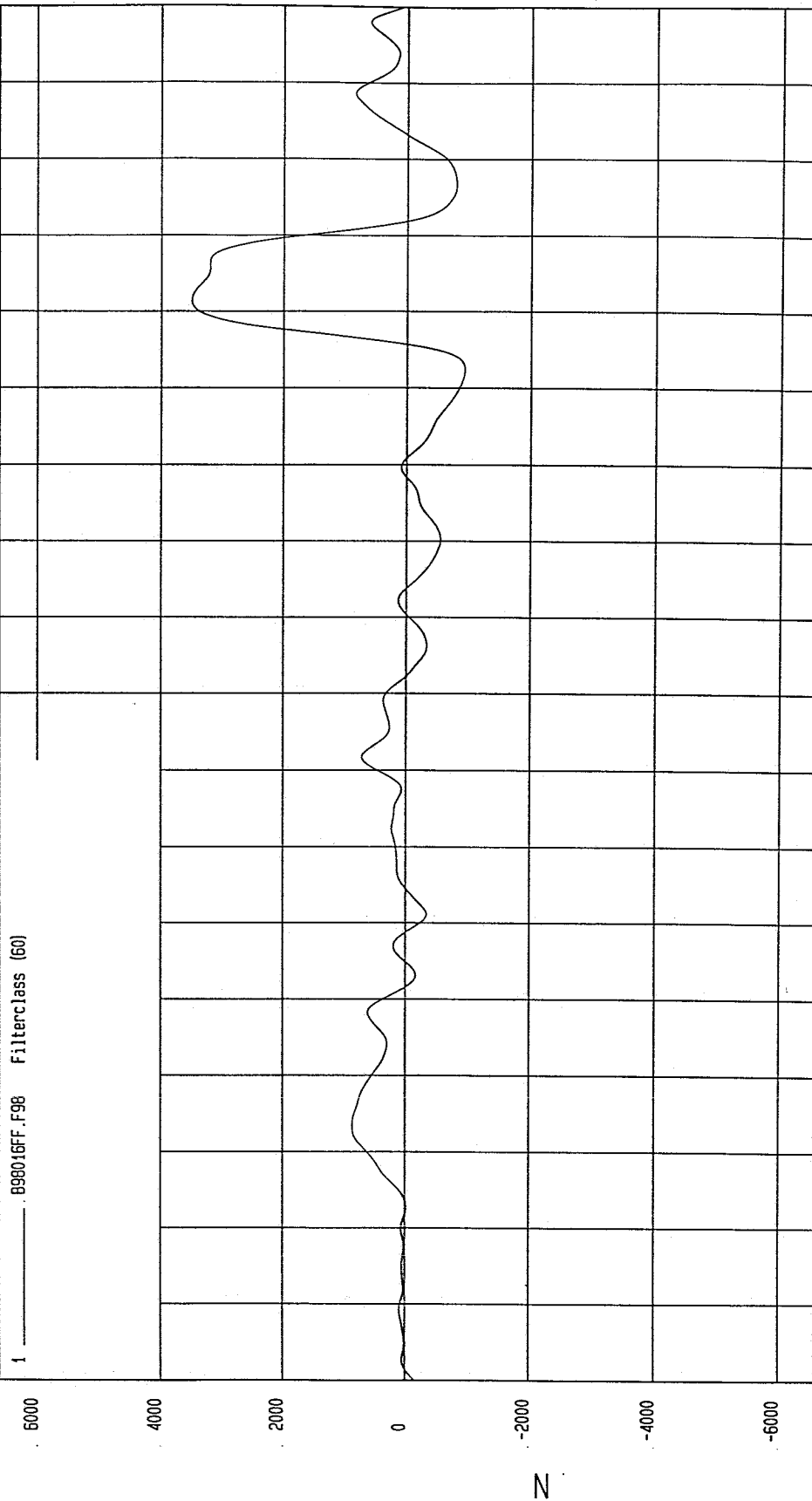
Speed: 32.8 MPH 52.8 KPH

Minimum = -917.77 N at 112 msec

Maximum = 3522.37 N at 121 msec

LC #30 FZ

1 898016FF.F98 Filterclass (60)



WGA Research
11-06-1998 09:44

TIME (SECONDS)

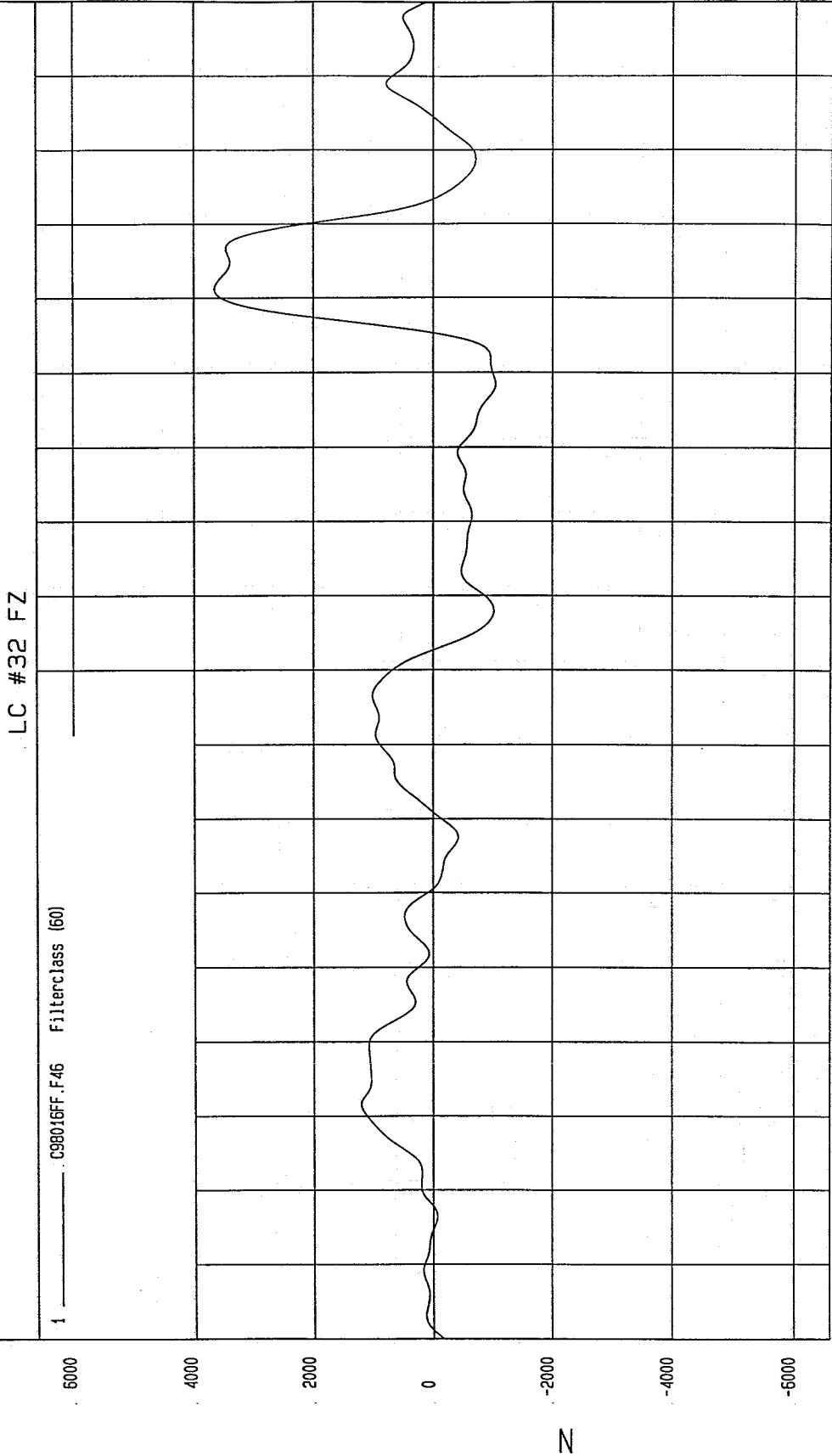
LC #31 FZ

NO VALID DATA COLLECTED

TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

Minimum = -1023.15 N at 108 msec Maximum = 3668.47 N at 121 msec



TIME (seconds)

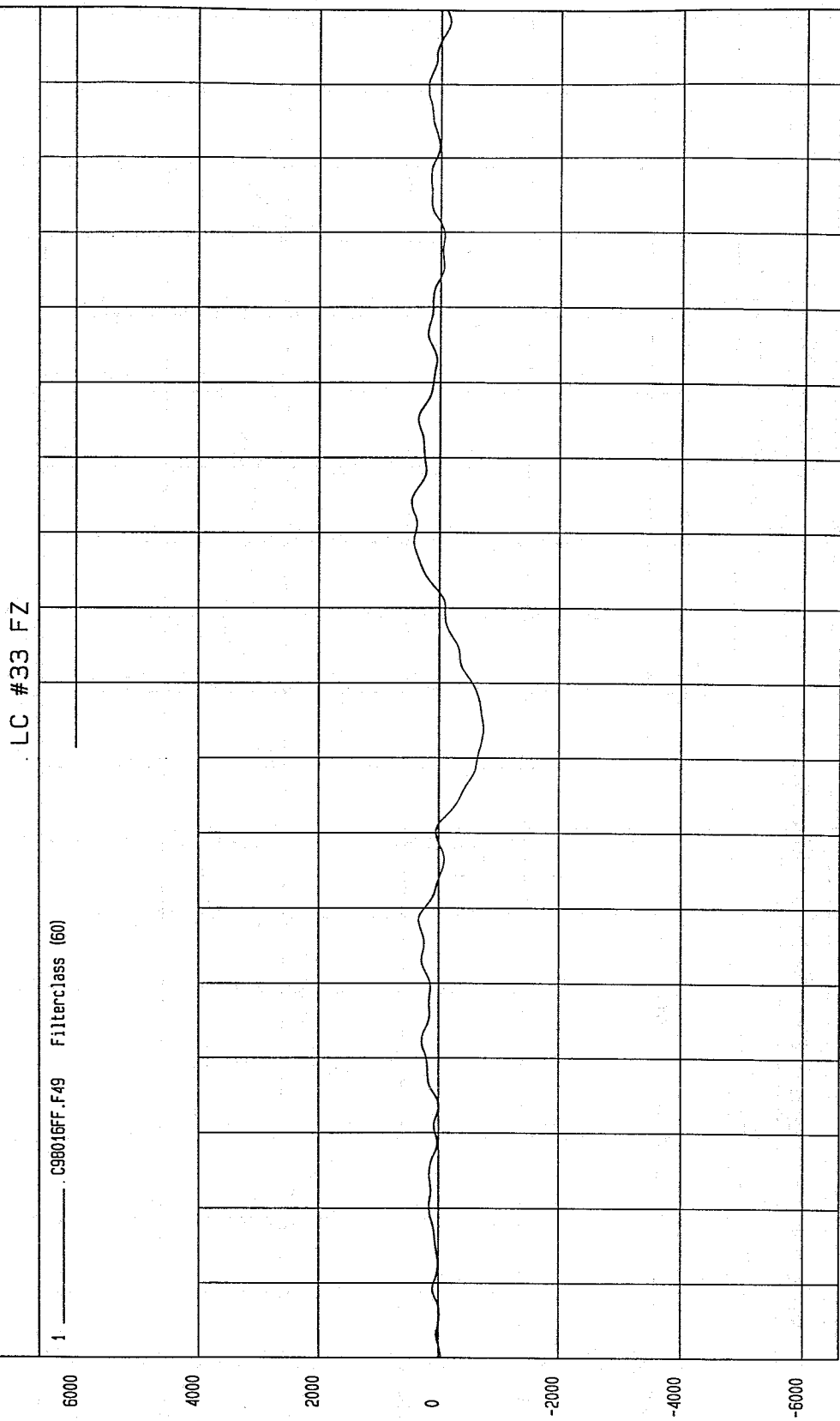
0.15 0.14 0.13 0.12 0.11 0.1 0.09 0.08 0.07 0.06 0.05 0.04 0.03 0.02 0.01 0 -0.01 -0.02

MCA Research
11-08-1998 11:36

TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

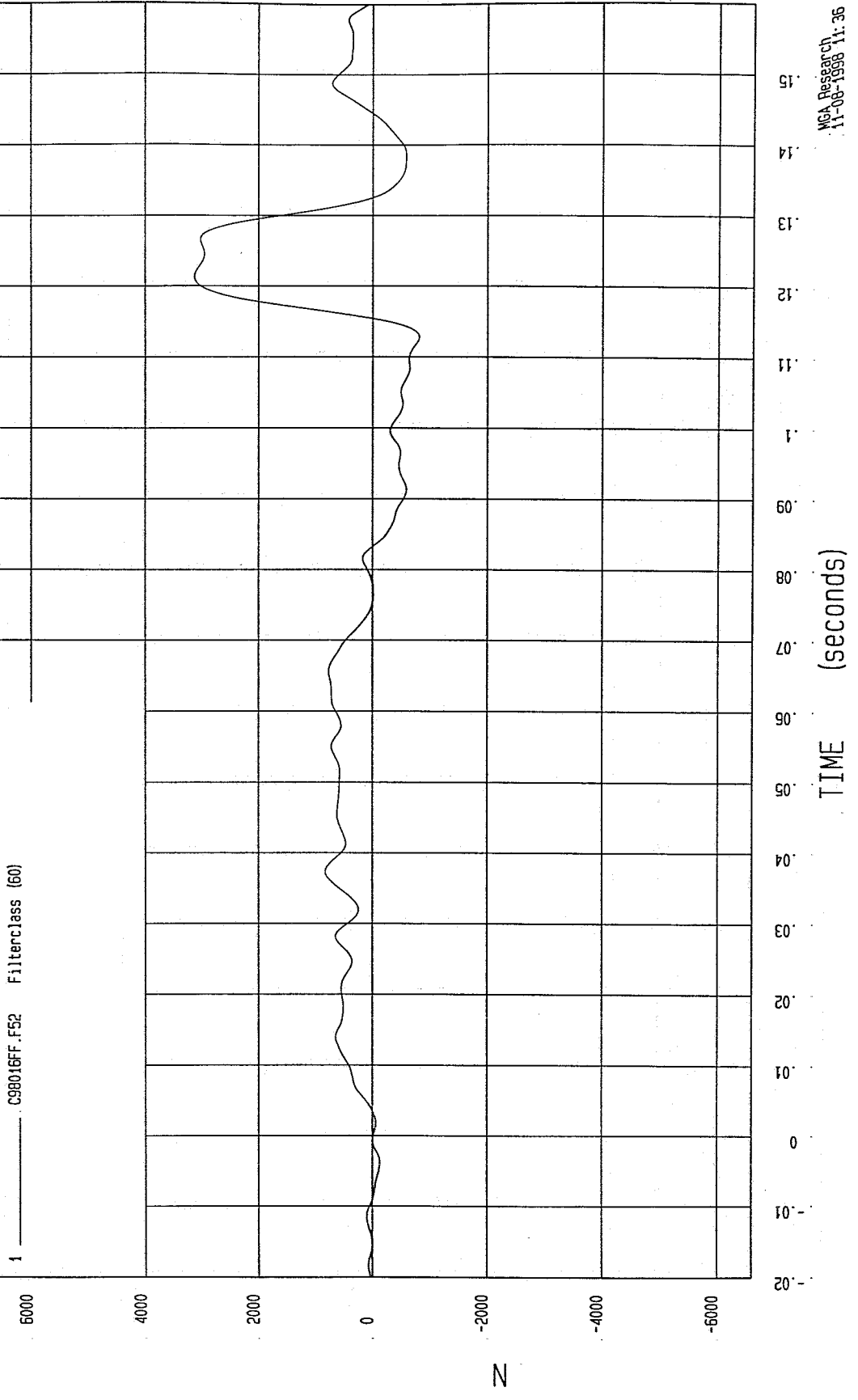
Minimum = -727.31 N at 64 msec Maximum = 450.57 N at 94 msec



TIME (seconds)

NGA Research
11-08-1998 11:36

TEST: TTD#1 FMVSS 214 TYPE TEST		TEST DATE: 03-12-1998	
COMPONENT: 1996 FORD TAURUS (RT0206)		Speed: 32.78 MPH 52.8 KPH	
Minimum = -784.36 N at 113 msec		Maximum = 3140.1 N at 121 msec	
LC #34 FZ			
1 _____ C98016FF.F52 Filterclass (60)			



MGA Research
11-06-1998 11:35

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -862.7 N at 25 msec

Maximum = 1290.47 N at 69 msec

LC #35 FZ

1 _____ H98016FF.F09 Filterclass (50)

6000
4000
2000
0
-2000
-4000
-6000

N

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (SECONDS)

MCA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

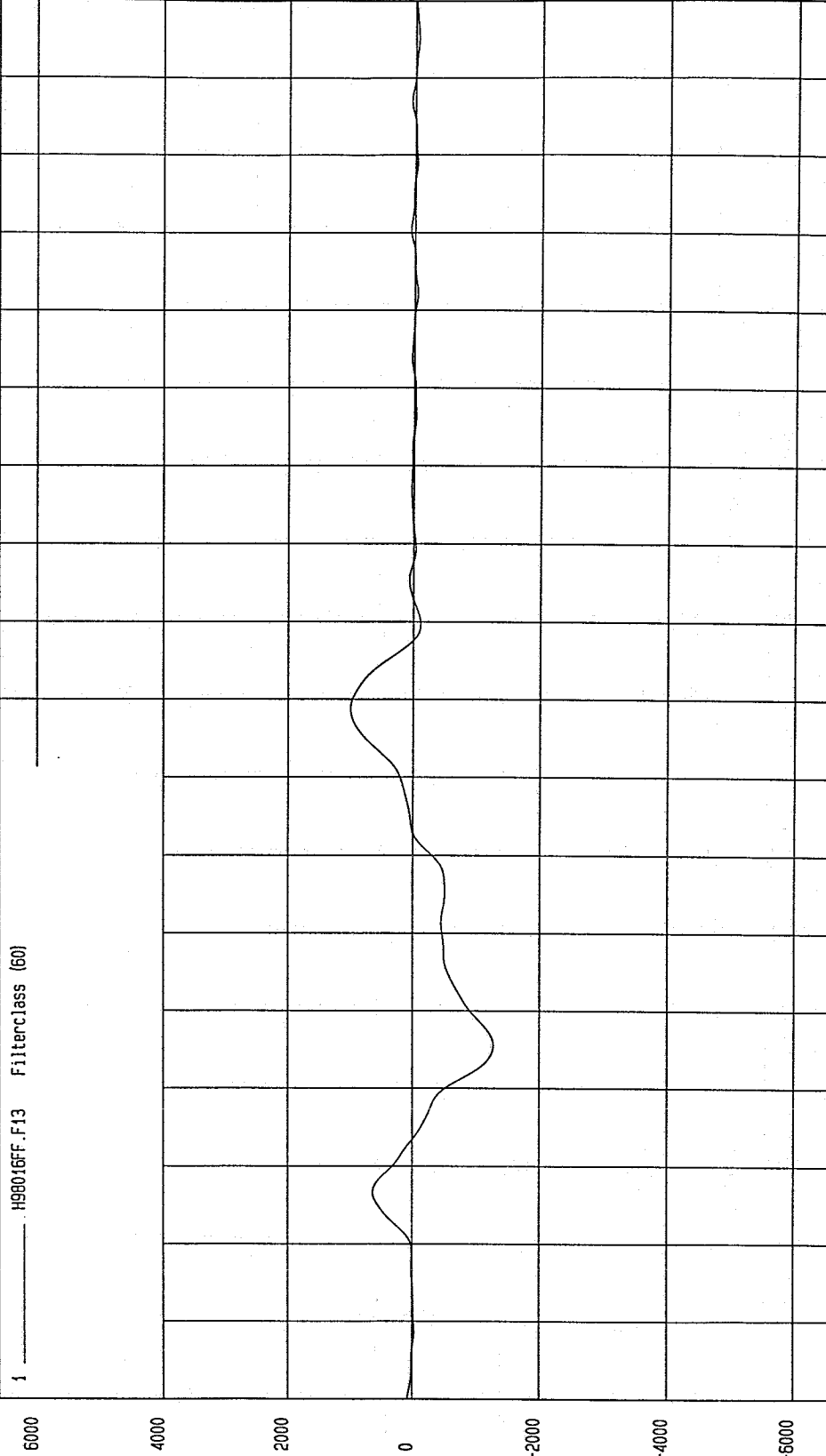
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 982.65 N at 69 msec

Minimum = -1275.37 N at 26 msec

LC #36 FZ

1 H98016FF.F13 Filterclass (60)



MGA Research
11-08-1998 11:22

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -1302.18 N at 65 msec

Maximum = 560.02 N at 43 msec

LC #37 FZ

1 _____ H98016FF.F16 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MCA Research
11-06-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

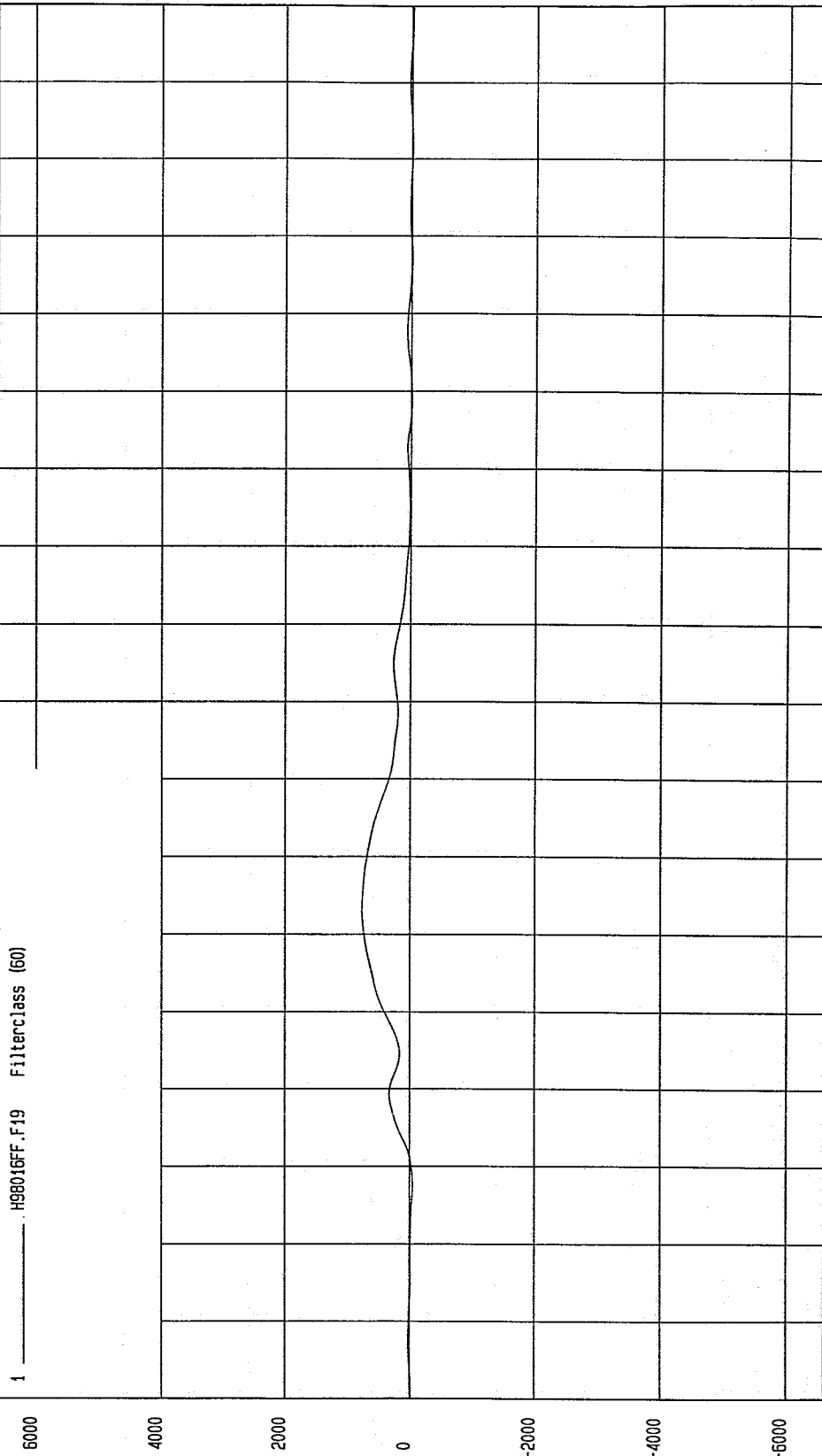
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Minimum = -45.78 N at 8 msec

Maximum = 777.66 N at 43 msec

LC #38 FZ

1 _____ H98016FF.F19 Filterclass (60)



MCA Research
11-08-1998 11:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -1559.76 N at 23 msec

Maximum = 1274.98 N at 65 msec

LC #39 FZ

1 _____ .H98016FF.F23 Filterclass (60)

6000

4000

2000

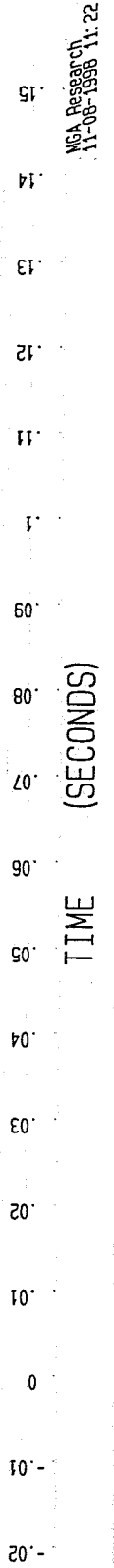
0

-2000

-4000

-6000

N



TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 1122.4 N at 6 msec

Minimum = -878.56 N at 26 msec

LC #40 FZ

1 _____ H98016FF.F26 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME (SECONDS)

MGA Research
11-08-1998 11: 22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -89.22 N at 21 msec

Maximum = 1050.91 N at 46 msec

LC #41 FZ

1 _____ H98016FF.F29 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (SECONDS)

NGA Research
11-06-1998 11:23

TEST: FMVSS 214 SIDE IMPACT TEST DATE: 03-12-1998
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 34.8 MPH 56 KPH
Minimum = -743.94 N at 22 msec Maximum = 1491.44 N at 55 msec

LC #42 FZ

1 _____ H98016FF.F33 Filterclass (60)

6000

4000

2000

0

-2000

-4000

-6000

N

TIME (SECONDS) MCA Research
11-08-1998 11:23

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

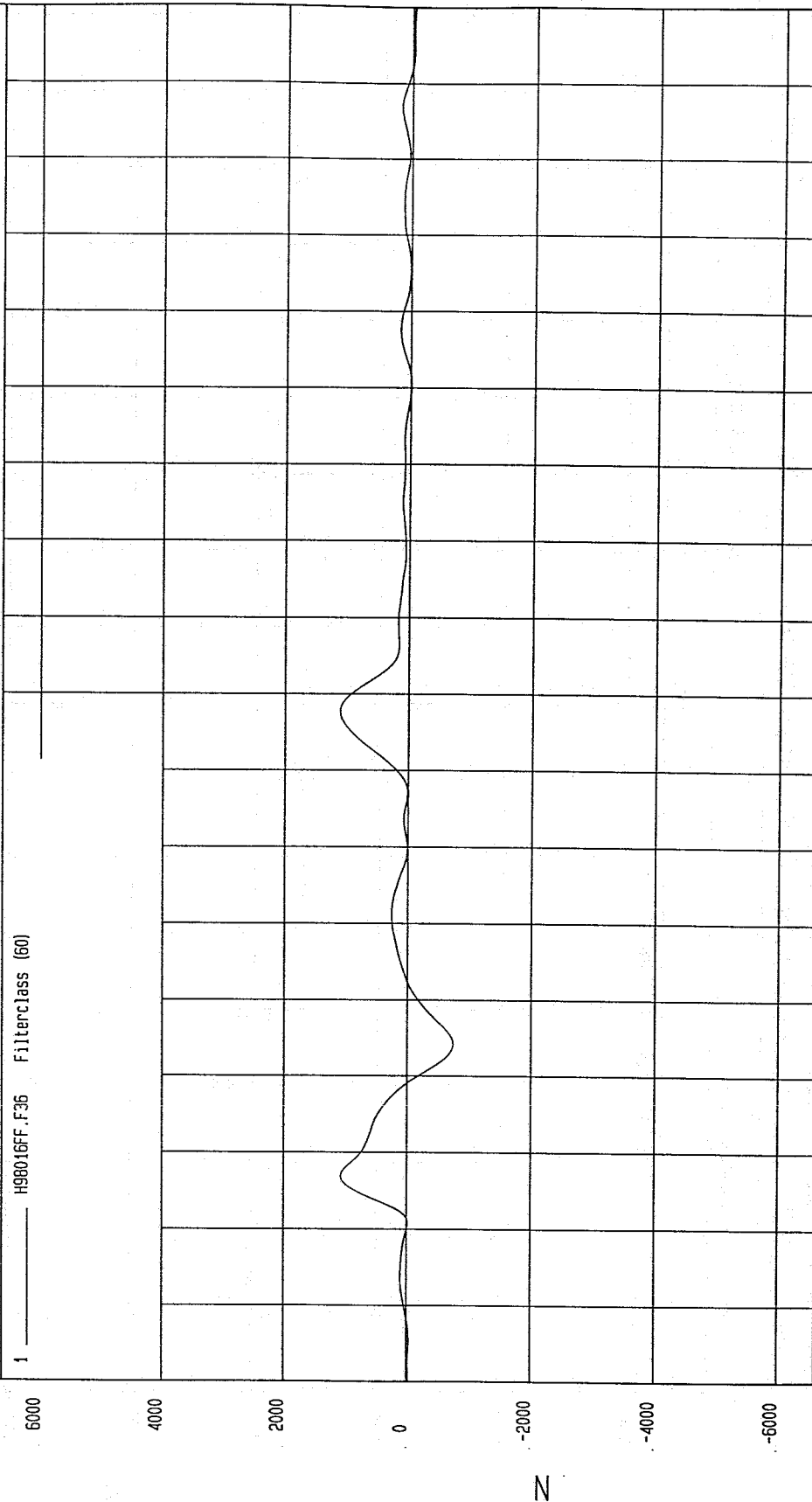
Speed: 34.8 MPH 56 KPH

Minimum = -717.39 N at 24 msec

Maximum = 1120.74 N at 68 msec

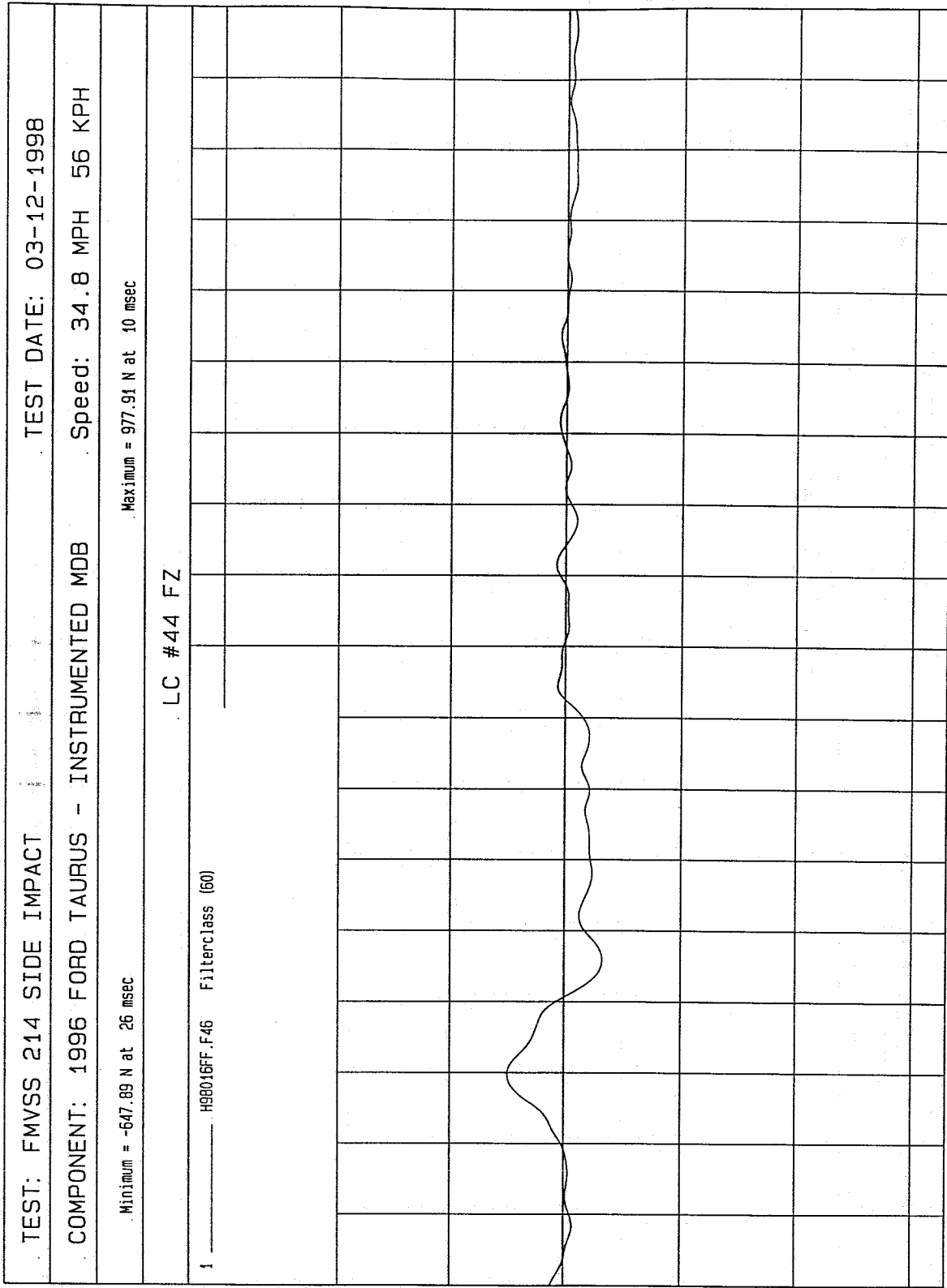
LC #43 FZ

1 — H98016FF.F36 Filterclass (60)



MCA Research
11-08-1996 11:23

TIME (SECONDS)



TIME (SECONDS)

MCA Research
11-08-1998 11:23

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

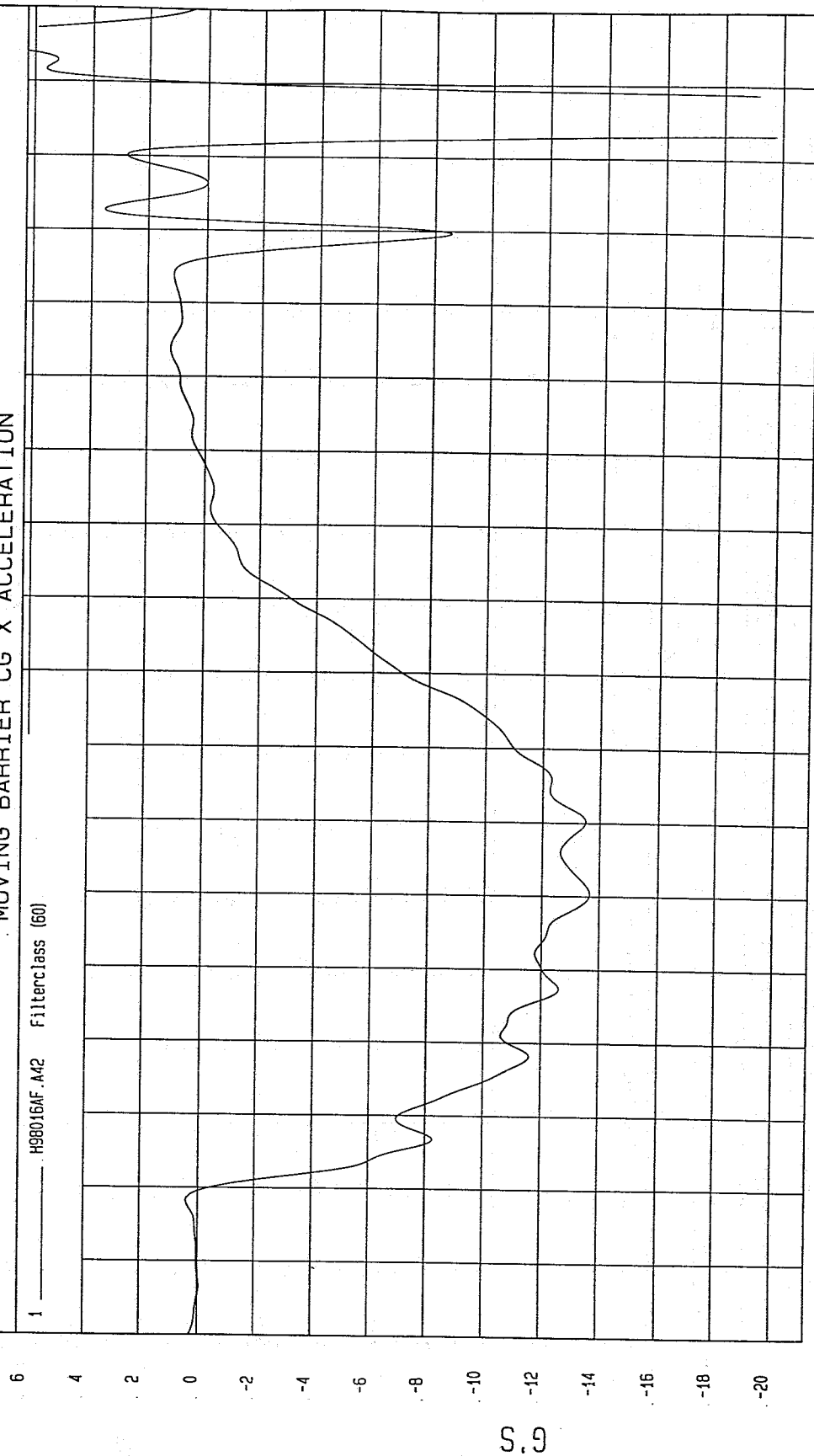
Speed: 34.8 MPH 56 KPH

Minimum = -91.21 G'S at 184 msec

Maximum = 9.76 G'S at 156 msec

MOVING BARRIER CG X ACCELERATION

1 H98016AF.A42 Filterclass (60)



TIME (SECONDS)

MGA Research
11-11-1998 13:59

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Minimum = -9.45 KPH at 188 msec

Maximum = 47.08 KPH at 1 msec

MOVING BARRIER CG X VELOCITY

1 ——— H98016A1.V42 Filterclass (180)

50

40

30

20

10

KPH

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

0.14

0.15

TIME Seconds

MCA Research
11-11-1998 13:59

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

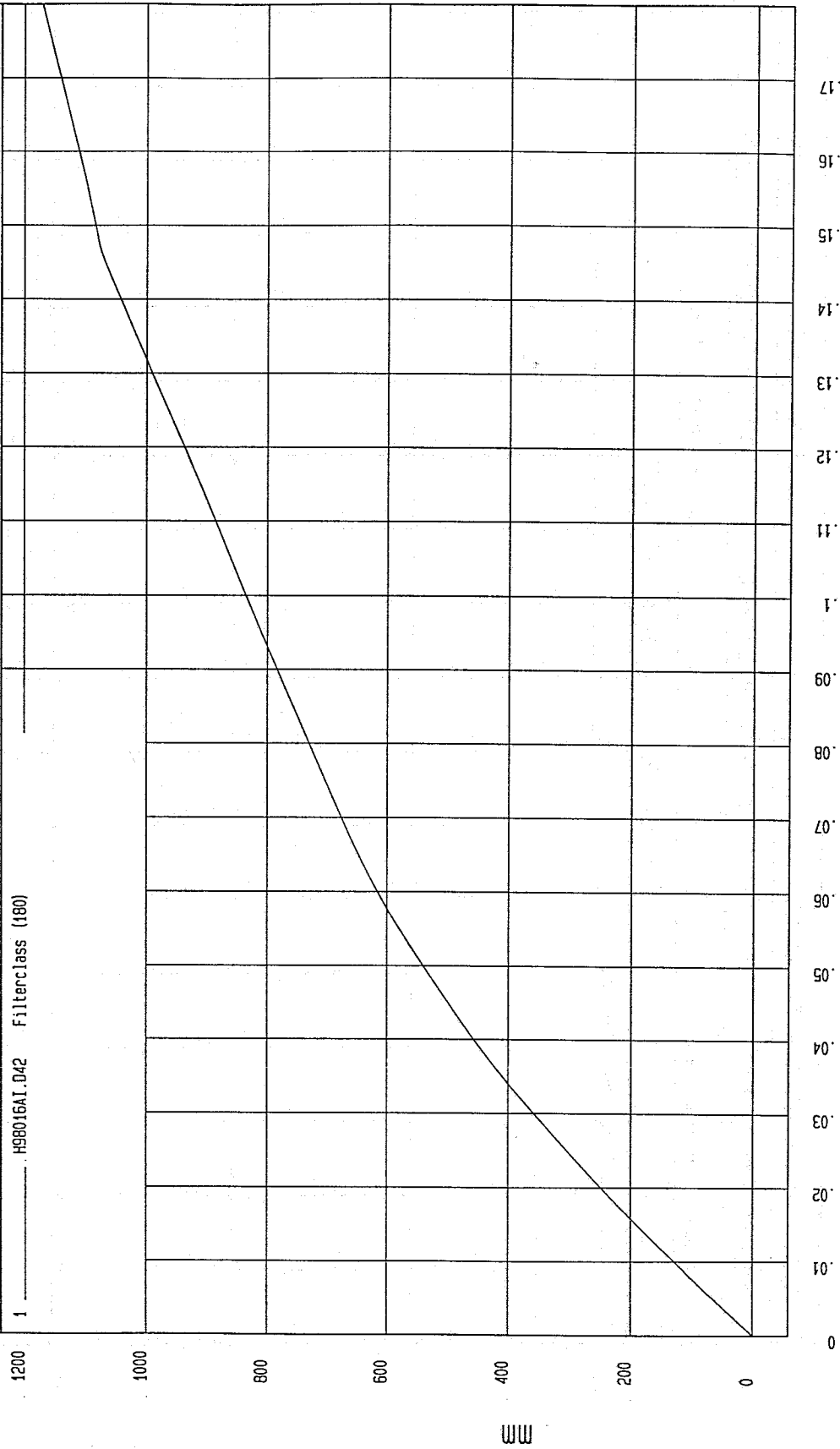
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = 0 mm at 0 msec

Maximum = 1177.97 mm at 184 msec

MOVING BARRIER CG X DISPLACEMENT



MGA Research
11-11-1998 13:55

TIME Seconds

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

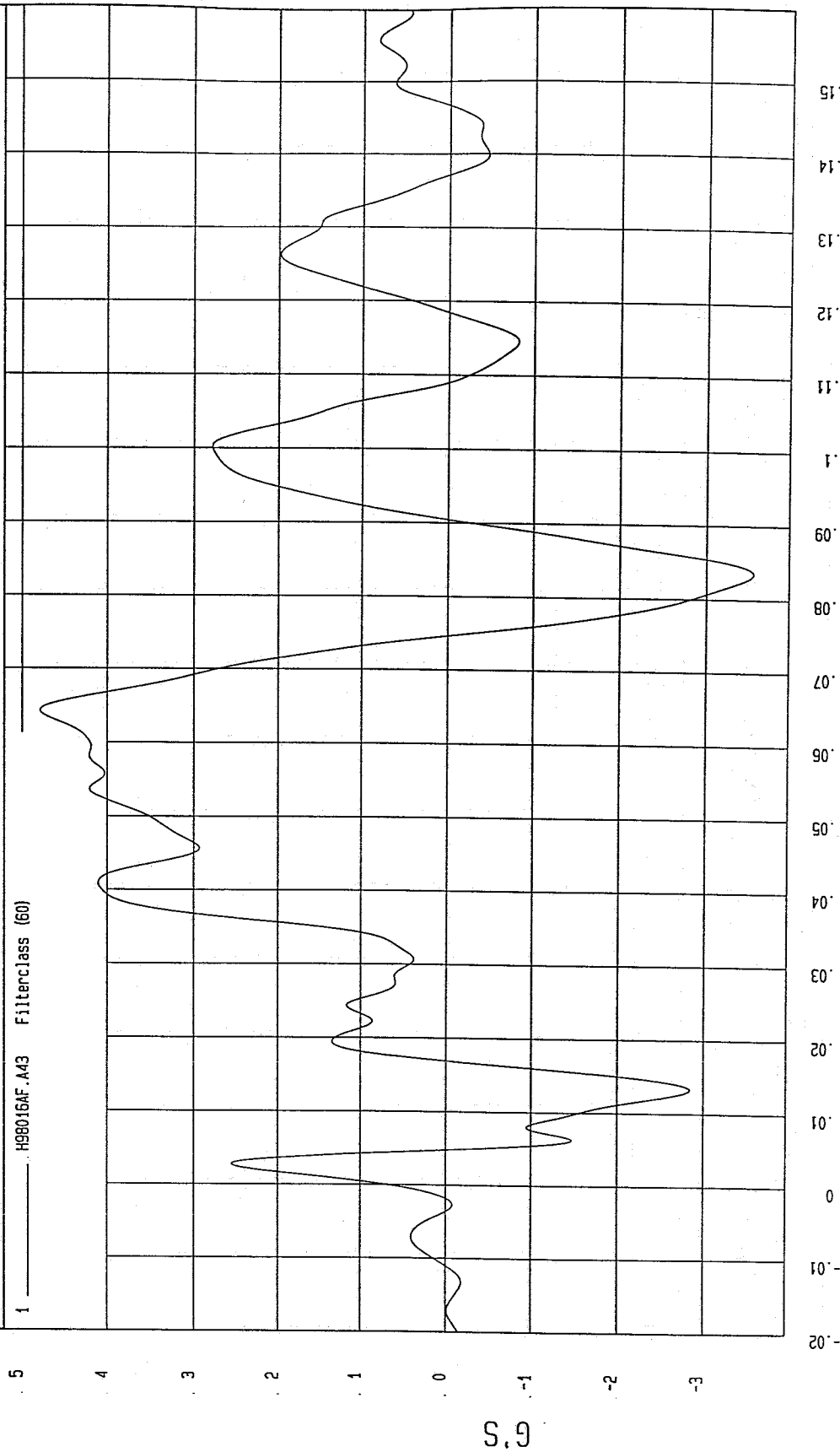
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -3.55 G'S at 84 msec

Maximum = 4.79 G'S at 64 msec

MOVING BARRIER CG Y ACCELERATION



TIME (SECONDS)

MGA Research
11-11-1998 13:55

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

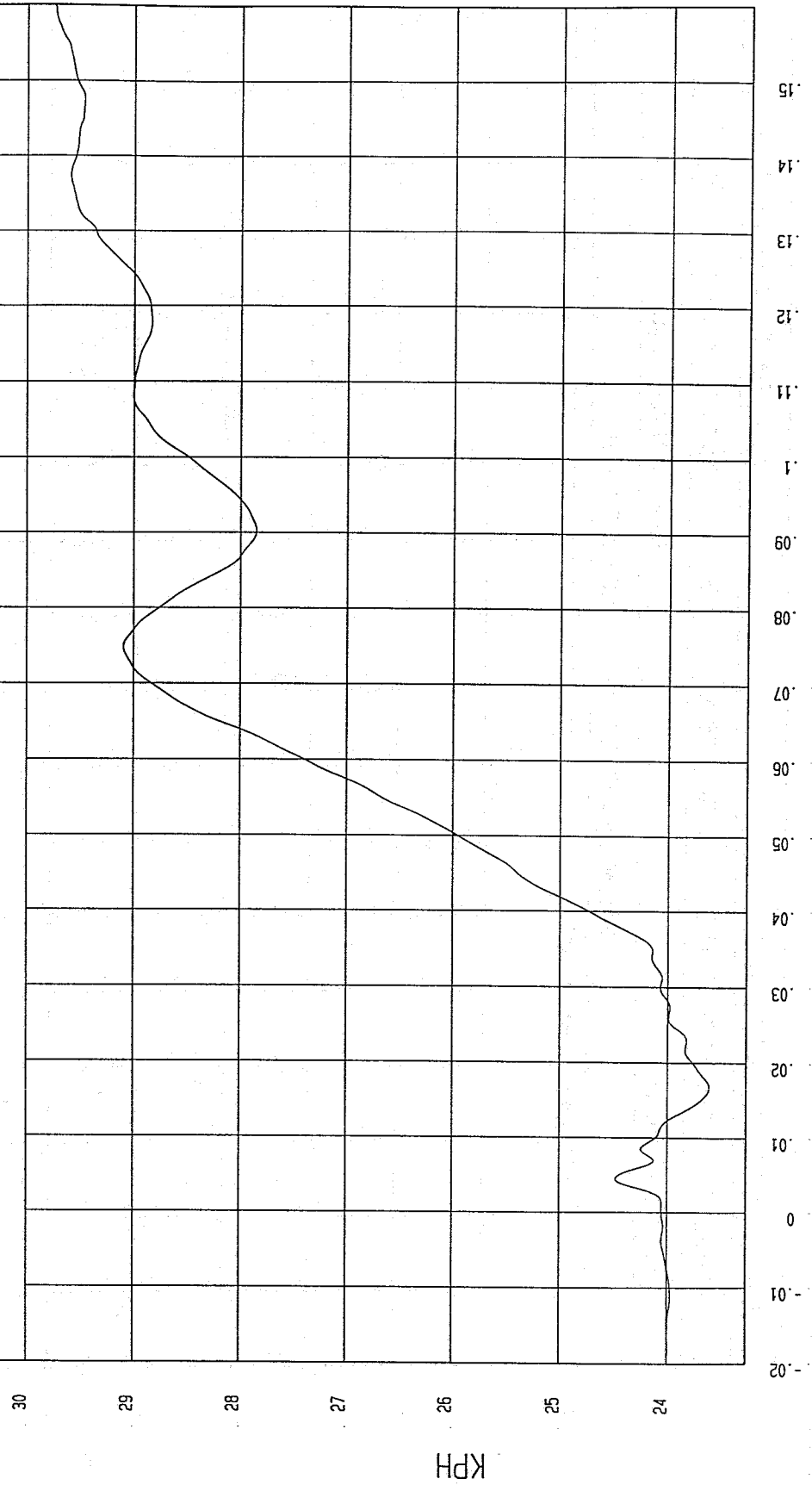
Speed: 34.8 MPH 56 KPH

Minimum = 23.61 KPH at 17 msec

Maximum = 30.41 KPH at 199 msec

MOVING BARRIER CG Y VELOCITY

1 H98016AI.V43 Filterclass (180)



MCA Research
11-11-1998 13:55

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

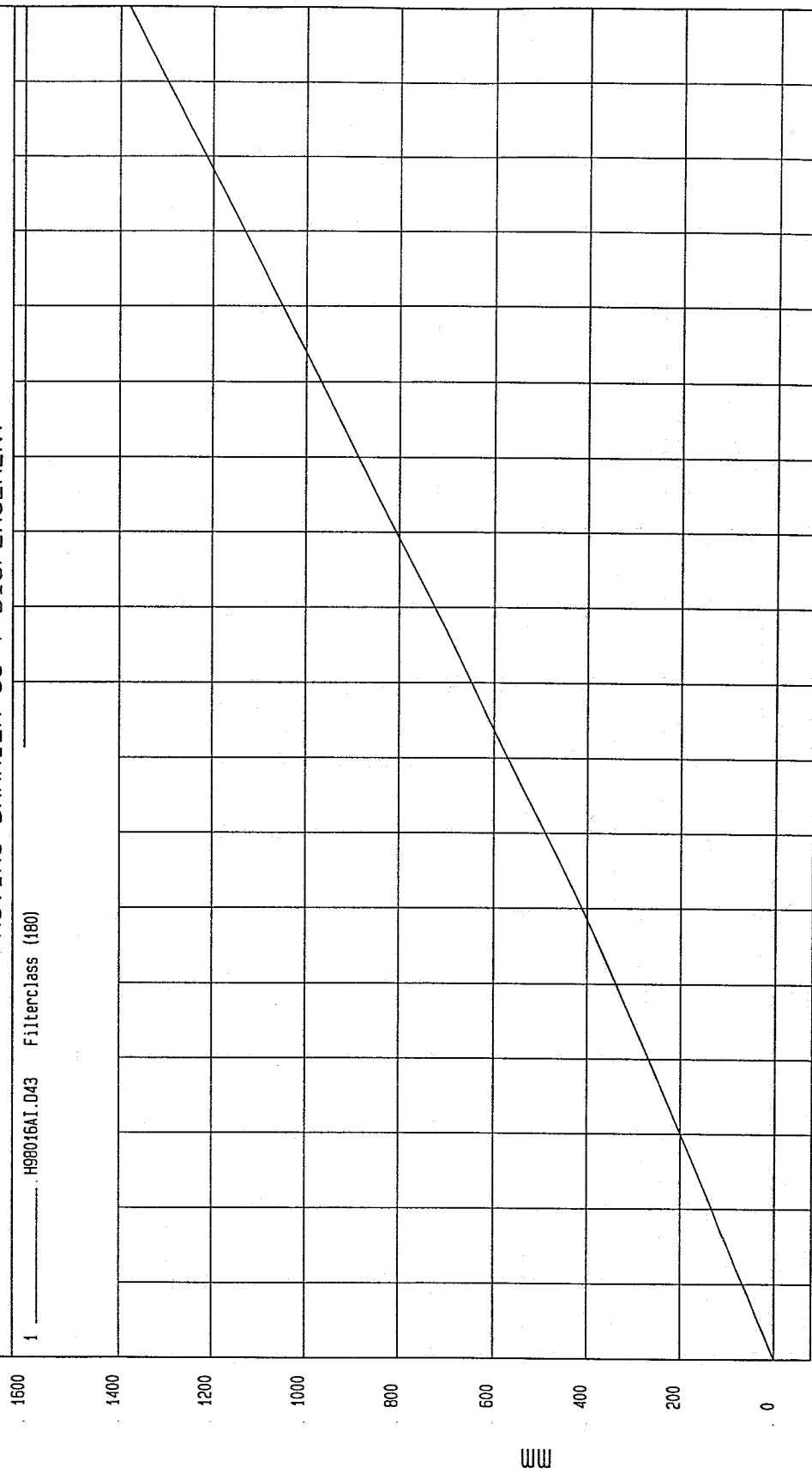
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 1547.55 mm at 200 msec

Minimum = 0 mm at 0 msec

MOVING BARRIER CG Y DISPLACEMENT

1 H98016A1.043 Filterclass (180)



NGA Research
11-11-1998 13:55

TIME Seconds

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

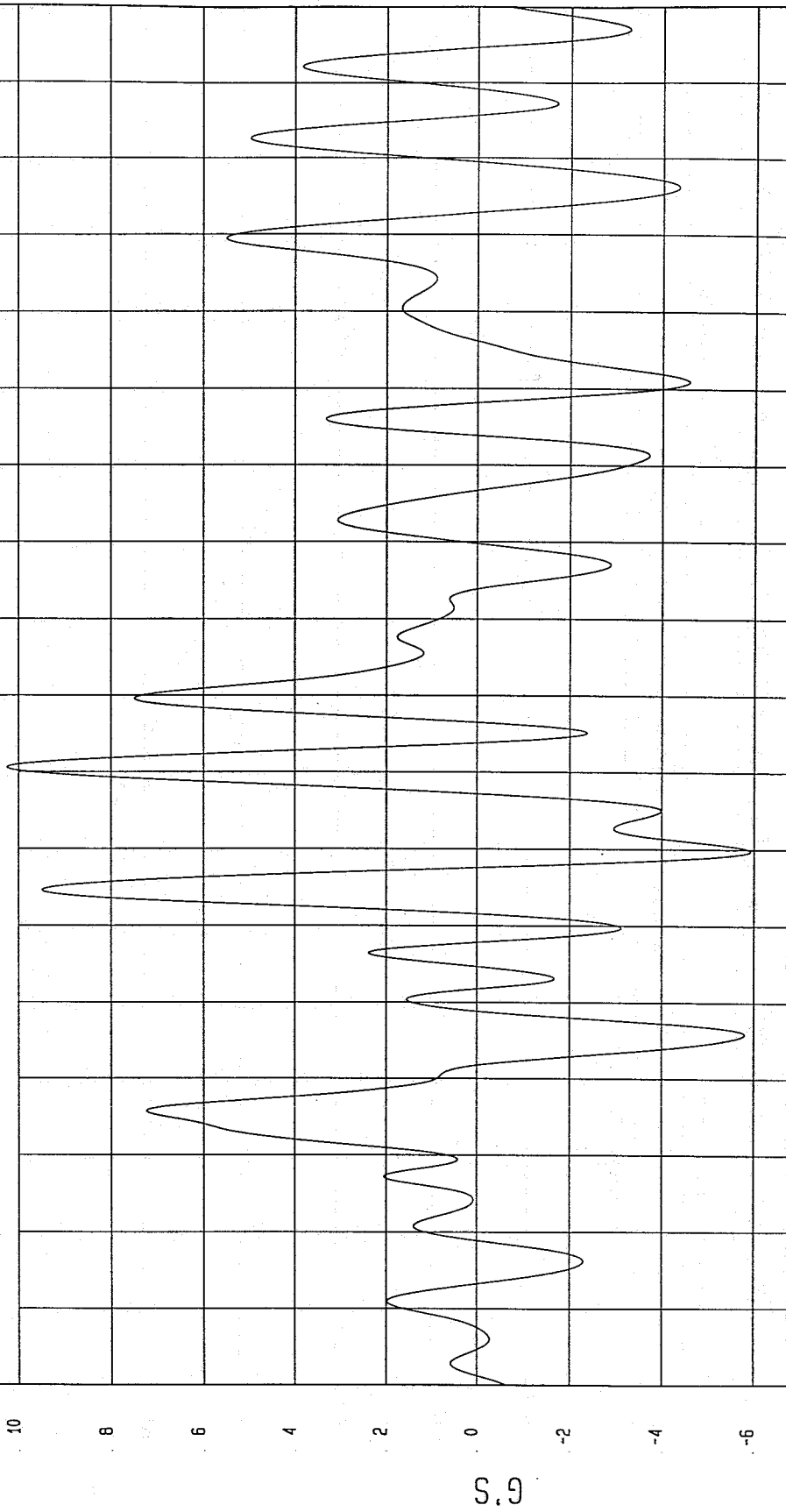
Speed: 34.8 MPH 56 KPH

Minimum = -5.93 G'S at 50 msec

Maximum = 10.25 G'S at 61 msec

MOVING BARRIER CG Z ACCELERATION

1 H98016AF.A44 Filterclass (60)



NCA Research
11-11-1998 13.56

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

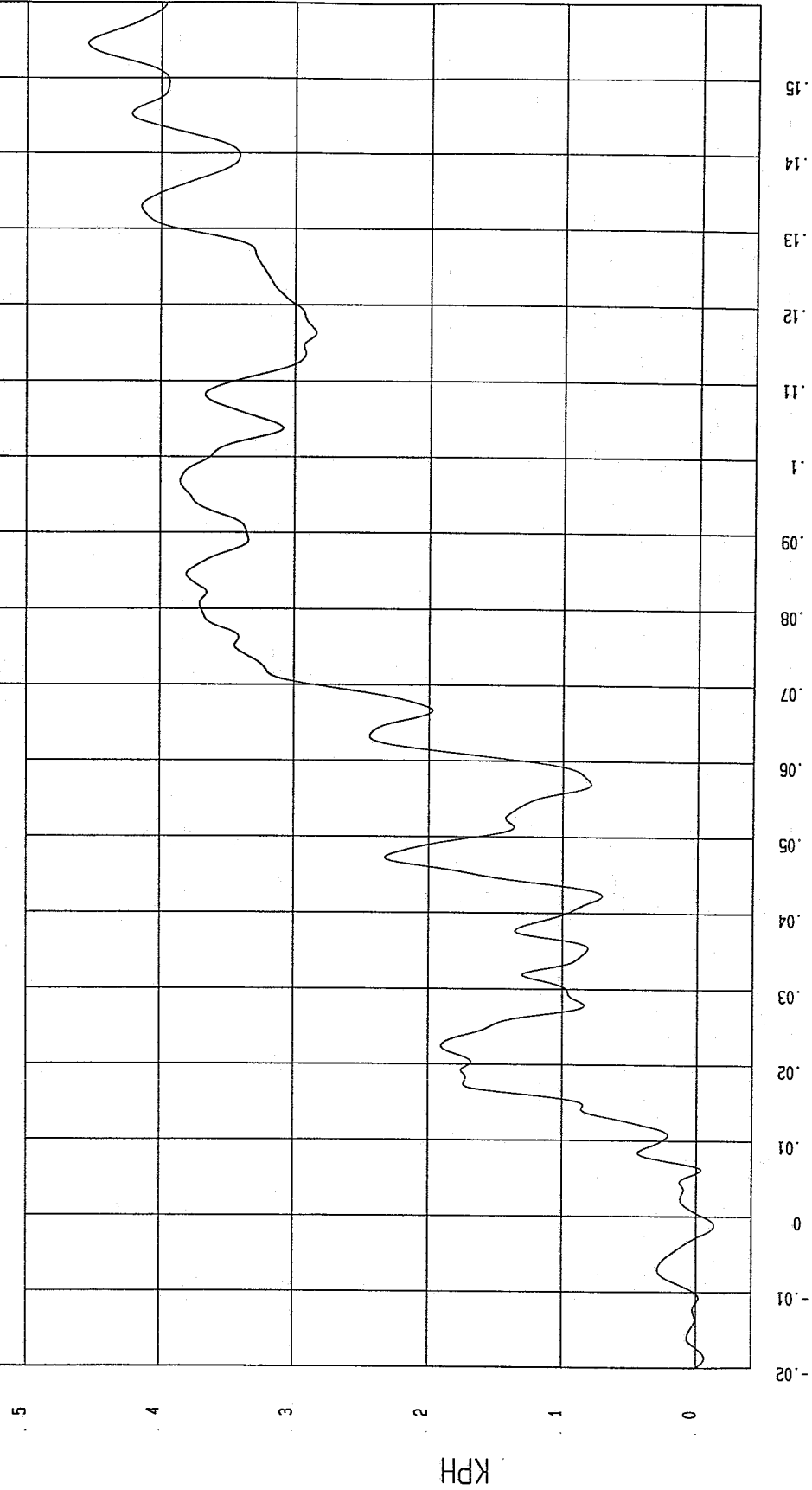
Speed: 34.8 MPH 56 KPH

Minimum = -.13 KPH at -.1 msec

Maximum = 5.33 KPH at 200 msec

MOVING BARRIER CG Z VELOCITY

1 _____ H98016A1.V44 Filterclass (100)



MSA Research
11-11-1998 13:56

TIME Seconds

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

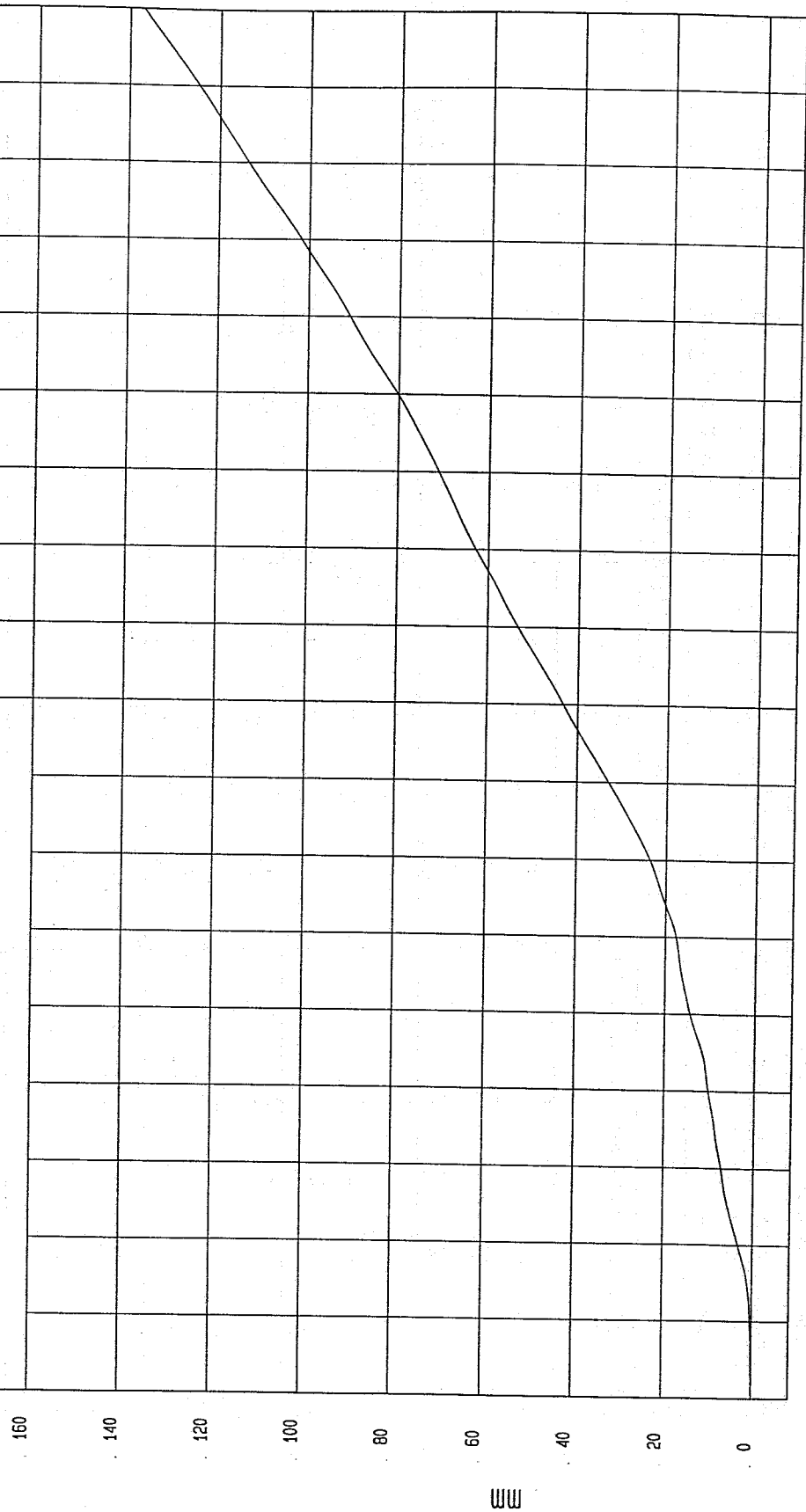
Speed: 34.8 MPH 56 KPH

Minimum = -4.27E-03 mm at 0 msec

Maximum = 164.4 mm at 200 msec

MOVING BARRIER CG Z DISPLACEMENT

1 ——— H98016A1.044 Filterclass (f80)



MSA Research
11-11-1998 13:56

TIME Seconds

TEST: FMVSS 214 SIDE IMPACT

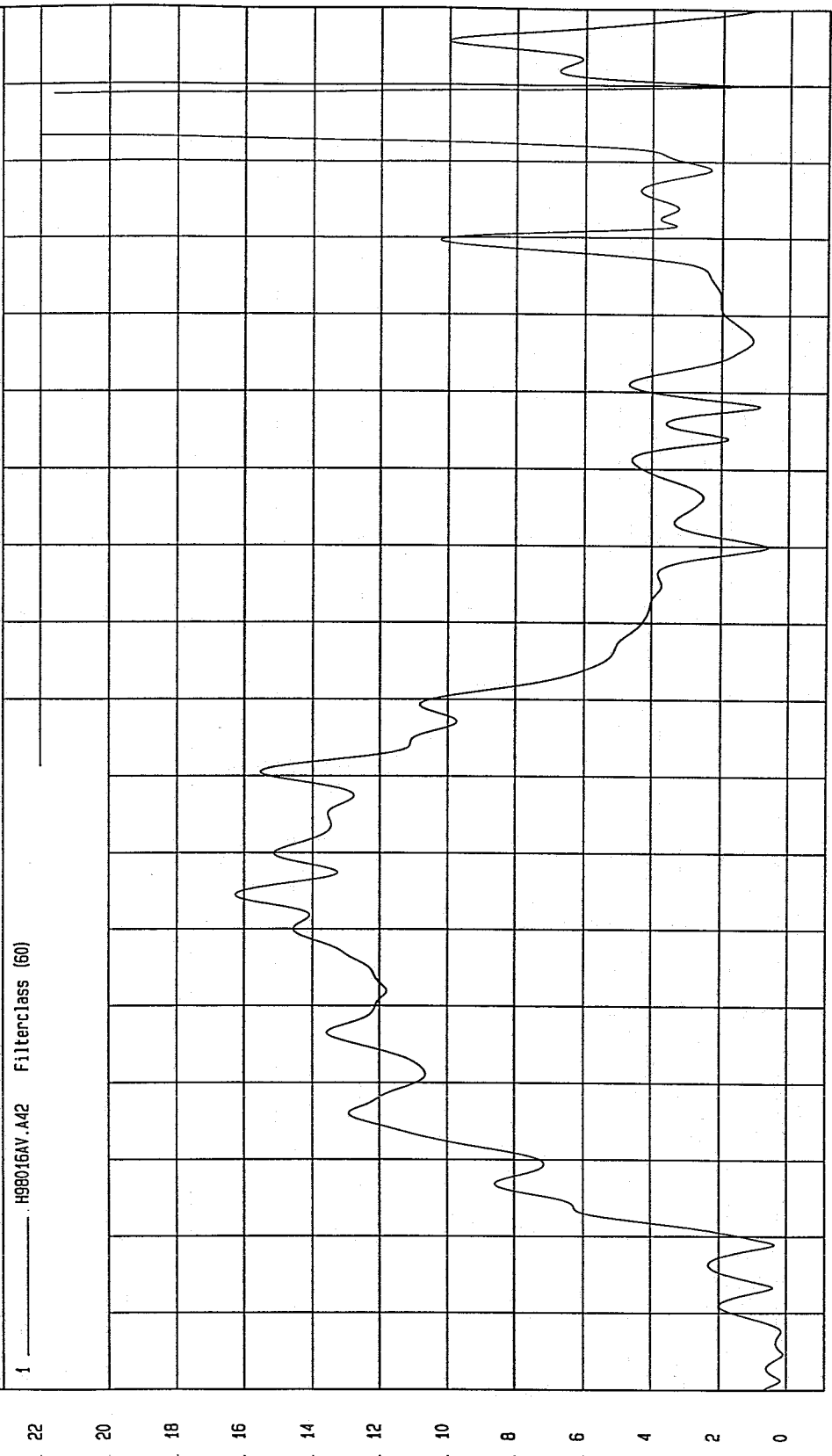
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 34.8 MPH 56 KPH

Minimum = 9.84E-02 G'S at -15 msec

Maximum = 91.22 G'S at 184 msec

MDB CG RESULTANT ACCELERATION



TIME (SECONDS)

MGA Research
12-18-1998 16:05

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

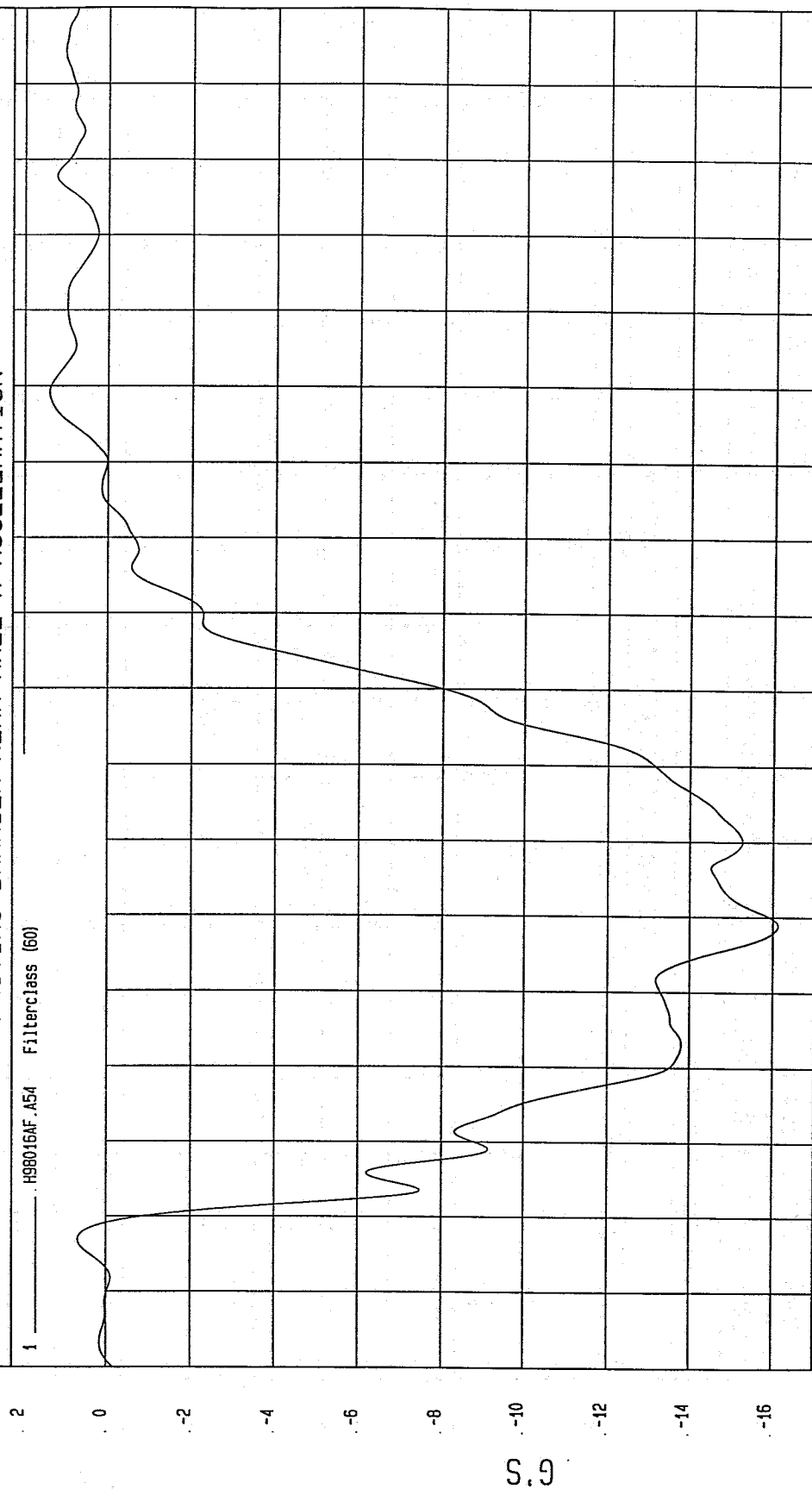
COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -16.12 G'S at 39 msec

Maximum = 1.41 G'S at 109 msec

MOVING BARRIER REAR AXLE X ACCELERATION



NCA Research
11-11-1998 13:56

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

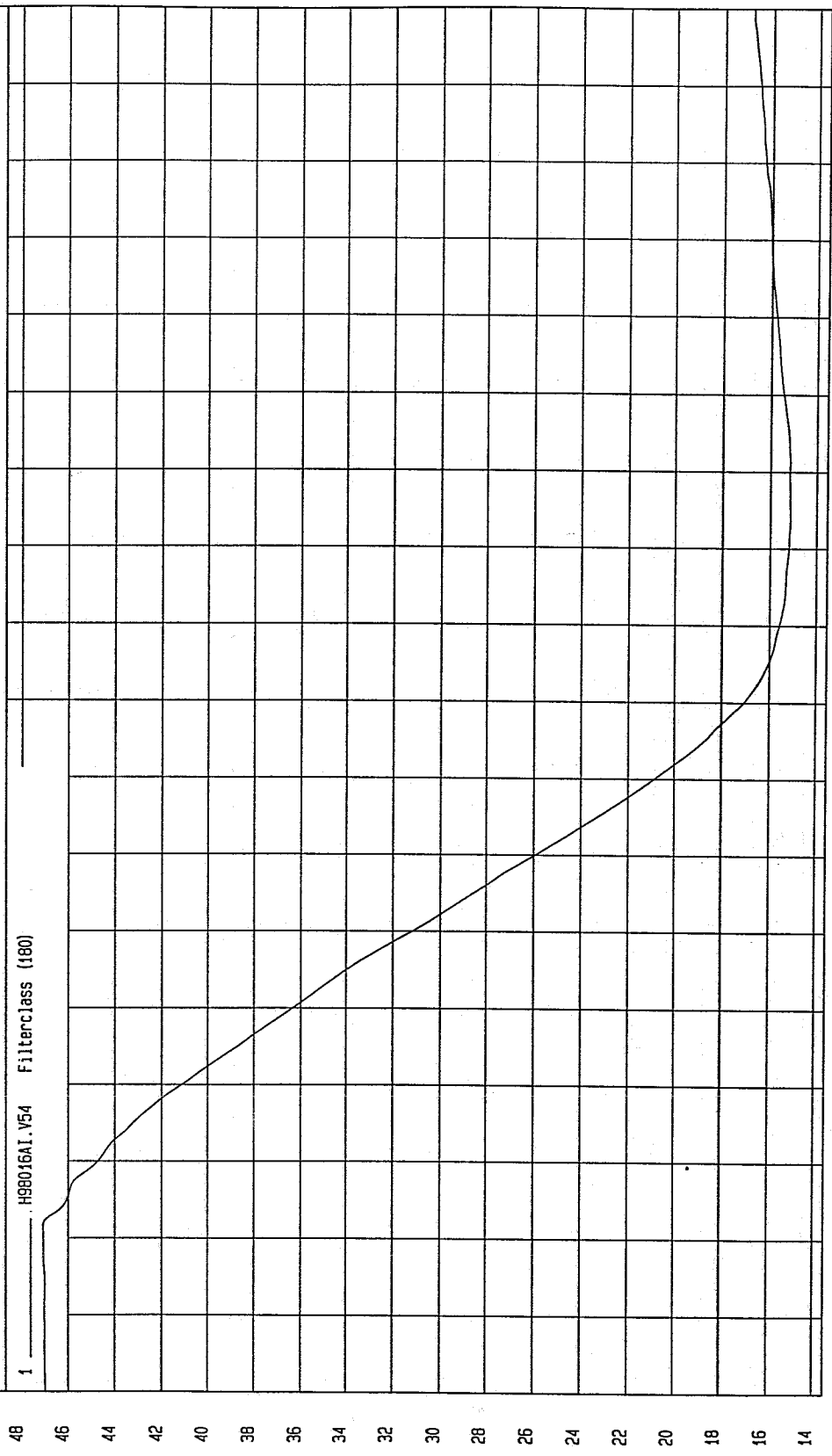
COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = 15.14 KPH at 94 msec

Maximum = 47.09 KPH at 2 msec

MOVING BARRIER REAR AXLE X VELOCITY



NGA Research
11-11-1998 13:56

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

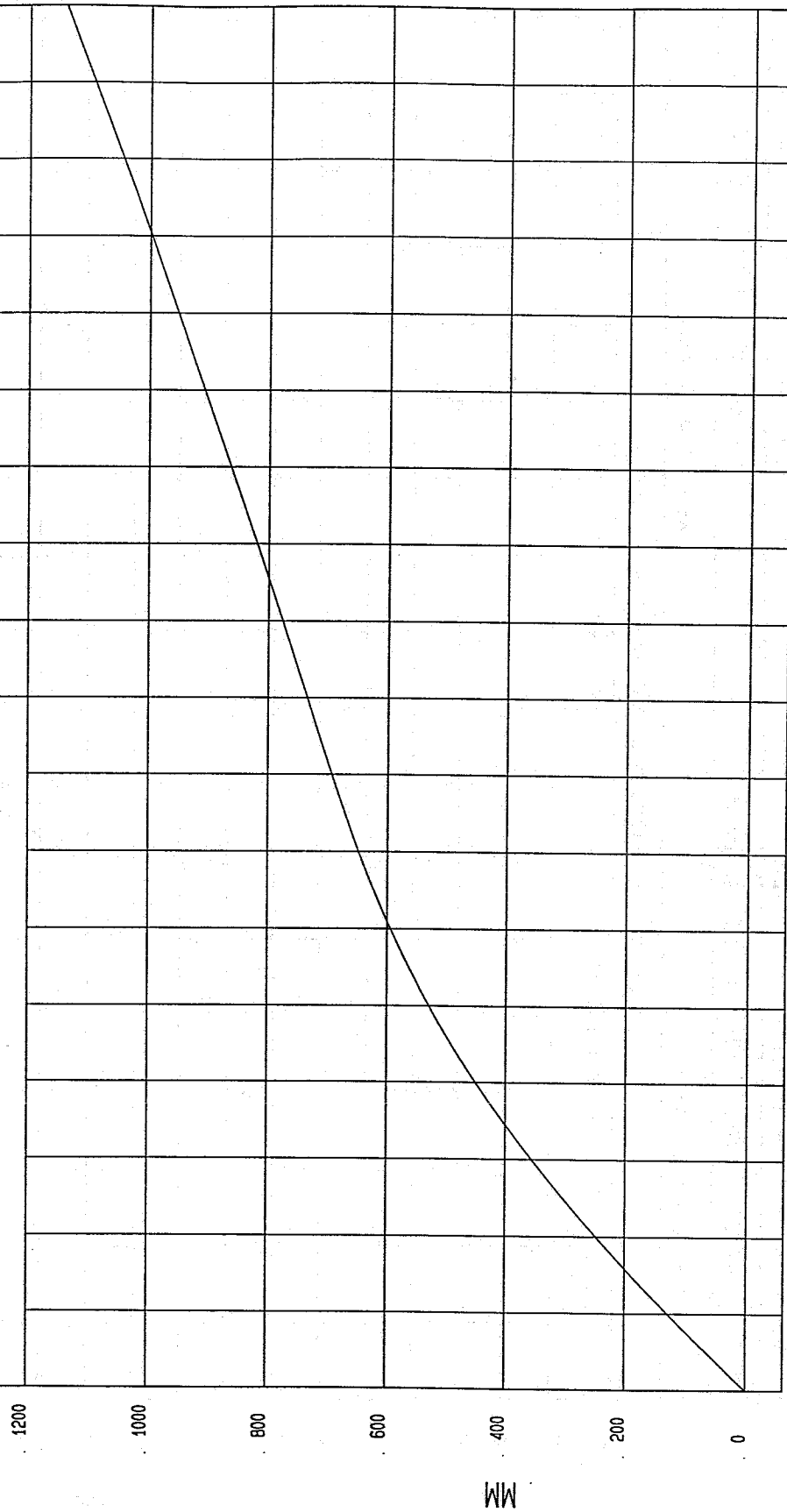
Speed: 32.78 MPH 52.8 KPH

Minimum = 0 MM at 0 msec

Maximum = 1236.27 MM at 200 msec

MOVING BARRIER REAR AXLE X DISPLACEMENT

1 _____ H98016A1.054 Filterclass (180)



MGA Research
11-11-1998 13:56

TIME Seconds

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

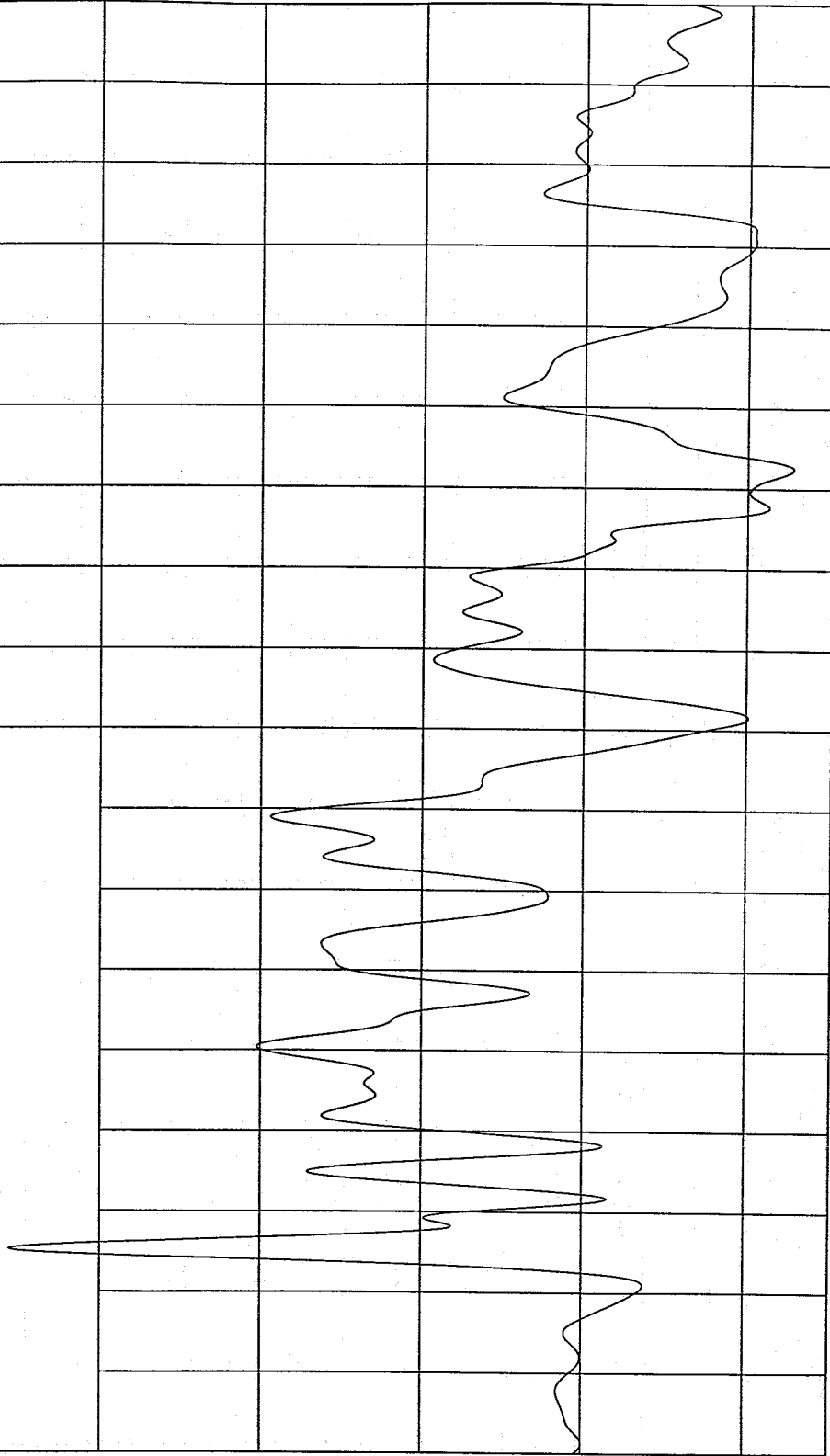
SPEED: 32.78 MPH 52.8 KPH

Minimum = -1.28 G'S at 102 msec

Maximum = 3.57 G'S at 5 msec

MOVING BARRIER REAR AXLE Y ACCELERATION

1 _____ H98016AF.A55 Filterclass (50)



NGA Research
11-11-1998 13:56

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

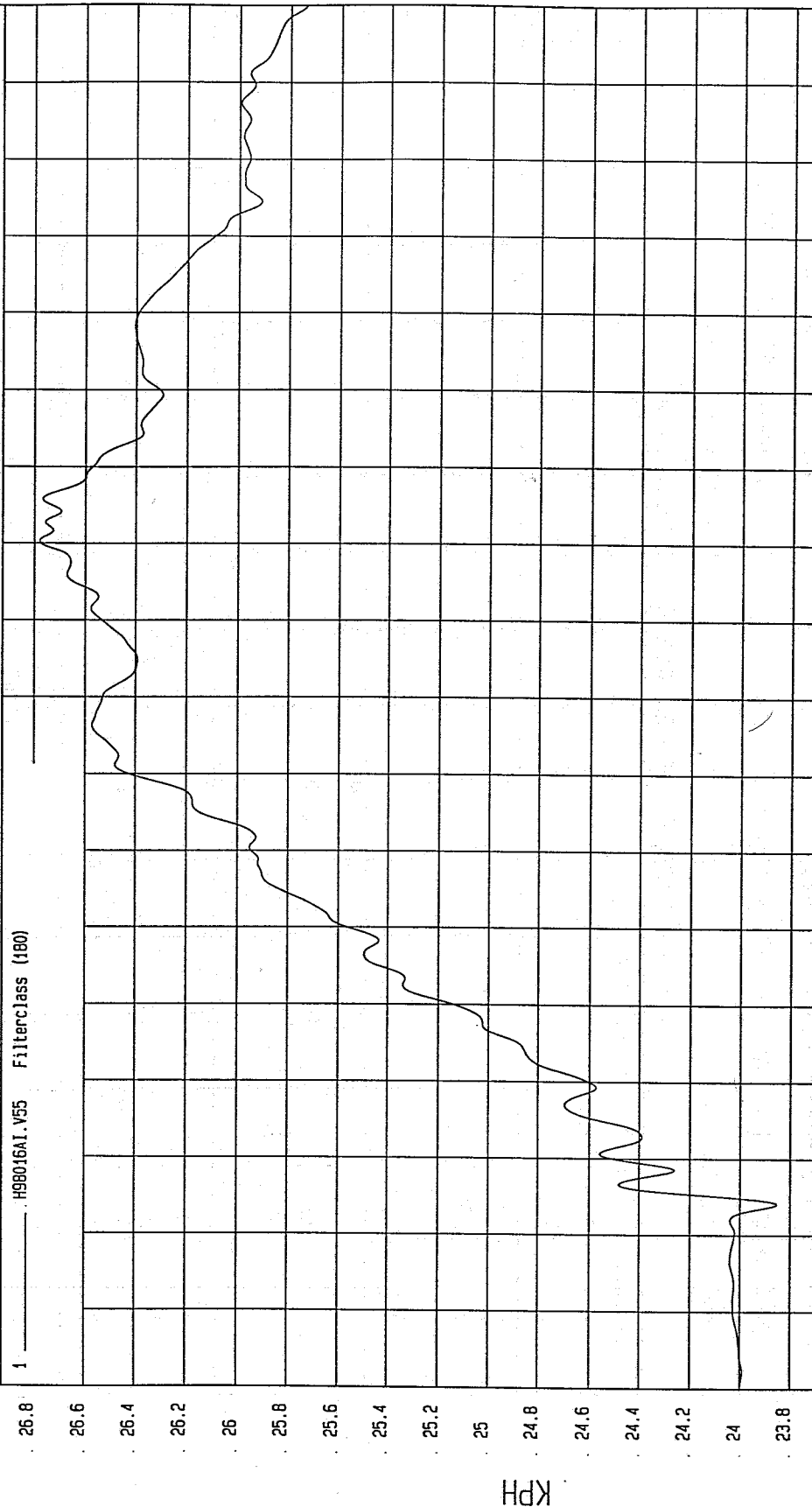
Speed: 32.78 MPH 52.8 KPH

Minimum = 23.85 KPH at 4 msec

Maximum = 26.78 KPH at 90 msec

MOVING BARRIER REAR AXLE Y VELOCITY

1 _____ H98016A1.V55 Filterclass (180)



TIME Seconds

NGA Research
11-11-1998 13:56

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

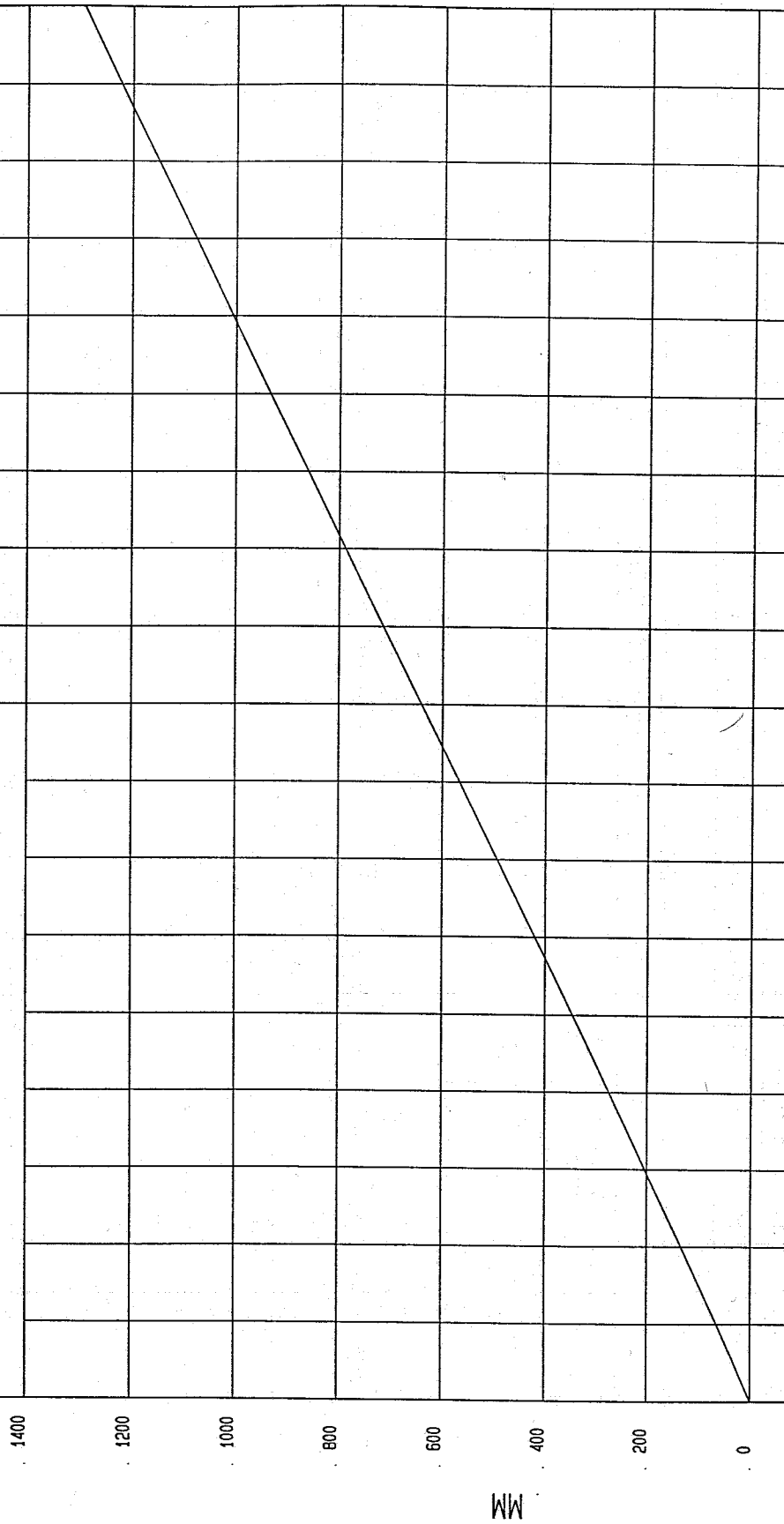
Speed: 32.78 MPH 52.8 KPH

Minimum = 0 MM at 0 msec

Maximum = 1433.6 MM at 200 msec

MOVING BARRIER REAR AXLE Y DISPLACEMENT

1 _____ H98016A1.D55 Filterclass (180)



MOA Research
11-11-1998 13:56

TIME Seconds

TEST: FMVSS 214 SIDE IMPACT TEST

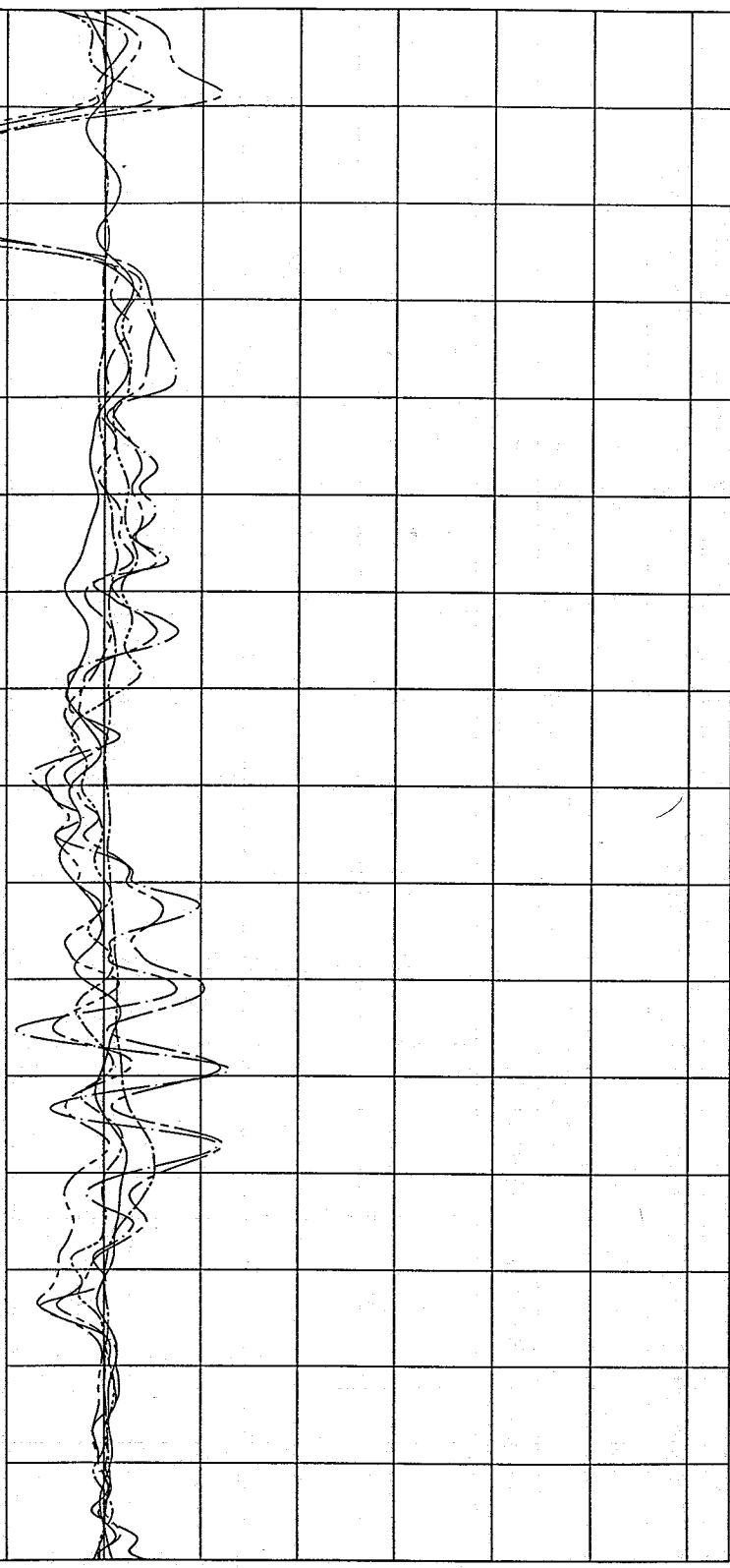
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

X AXIS FORCES - ROW #1 (COLUMNS 1-6)

- 1 _____ B98016FF.F04 LC #1 FX
- 2 _____ H98016FF.F03 LC #5 FX
- 3 _____ B98016FF.F30 LC #9 FX
- 4 _____ B98016FF.F44 LC #13 FX
- 5 _____ B98016FF.F56 LC #17 FX
- 6 _____ B98016FF.F69 LC #21 FX

4000
2000
0
-2000
-4000
-6000
-8000
-10000
-12000



TIME (SECONDS)

0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02

NCA Research
11-19-1998 13:08

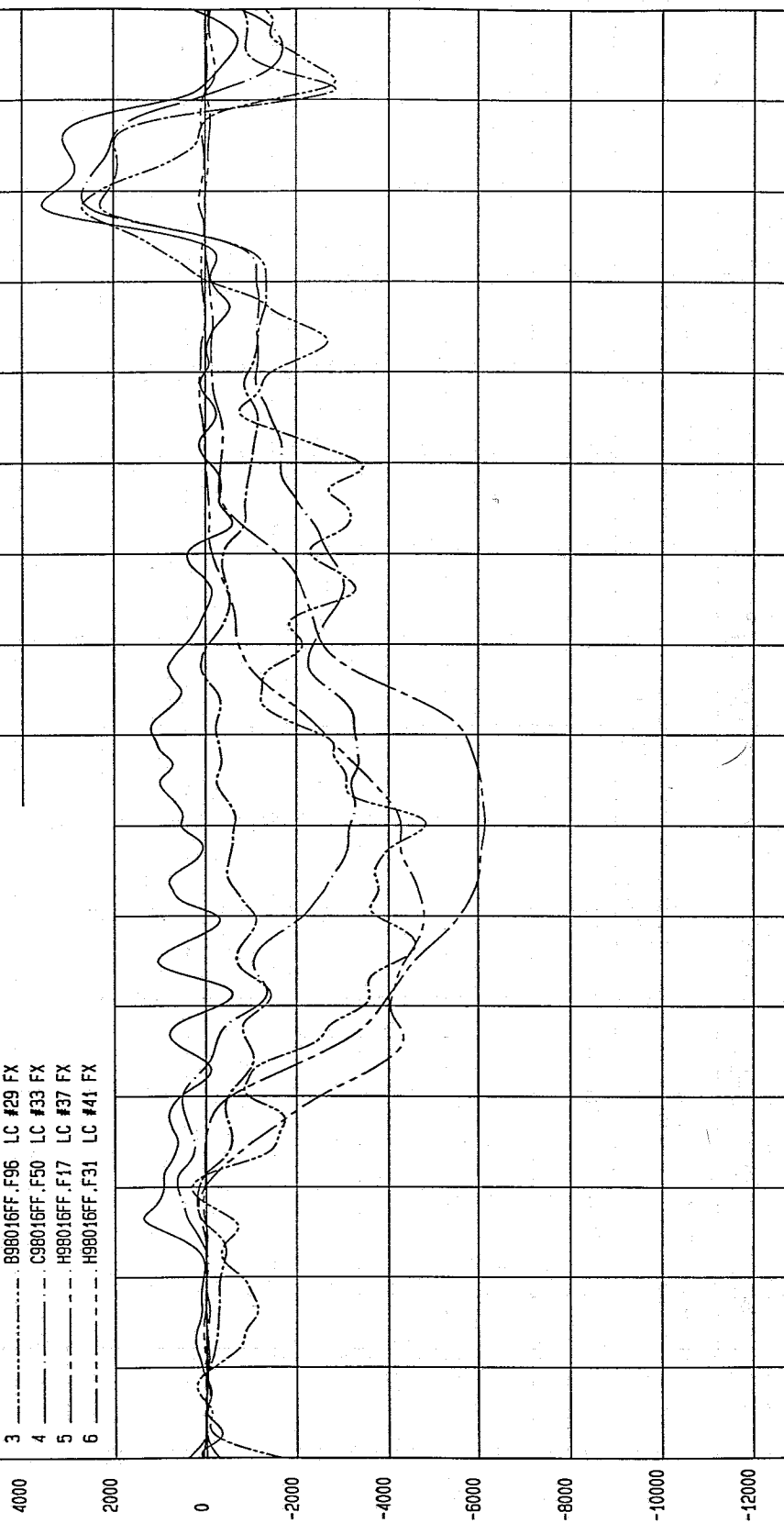
TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 34.8 MPH 56 KPH

X AXIS FORCES - ROW #1 (COLUMNS 7-11)

1 --- B98016FF.F69 LC #21 FX
2 --- B98016FF.F82 LC #25 FX
3 --- B98016FF.F96 LC #29 FX
4 --- C98016FF.F50 LC #33 FX
5 --- H98016FF.F17 LC #37 FX
6 --- H98016FF.F31 LC #41 FX



TIME (SECONDS)

0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02

MCA Research
11-19-1998 13:00

TEST: FMVSS 214 SIDE IMPACT

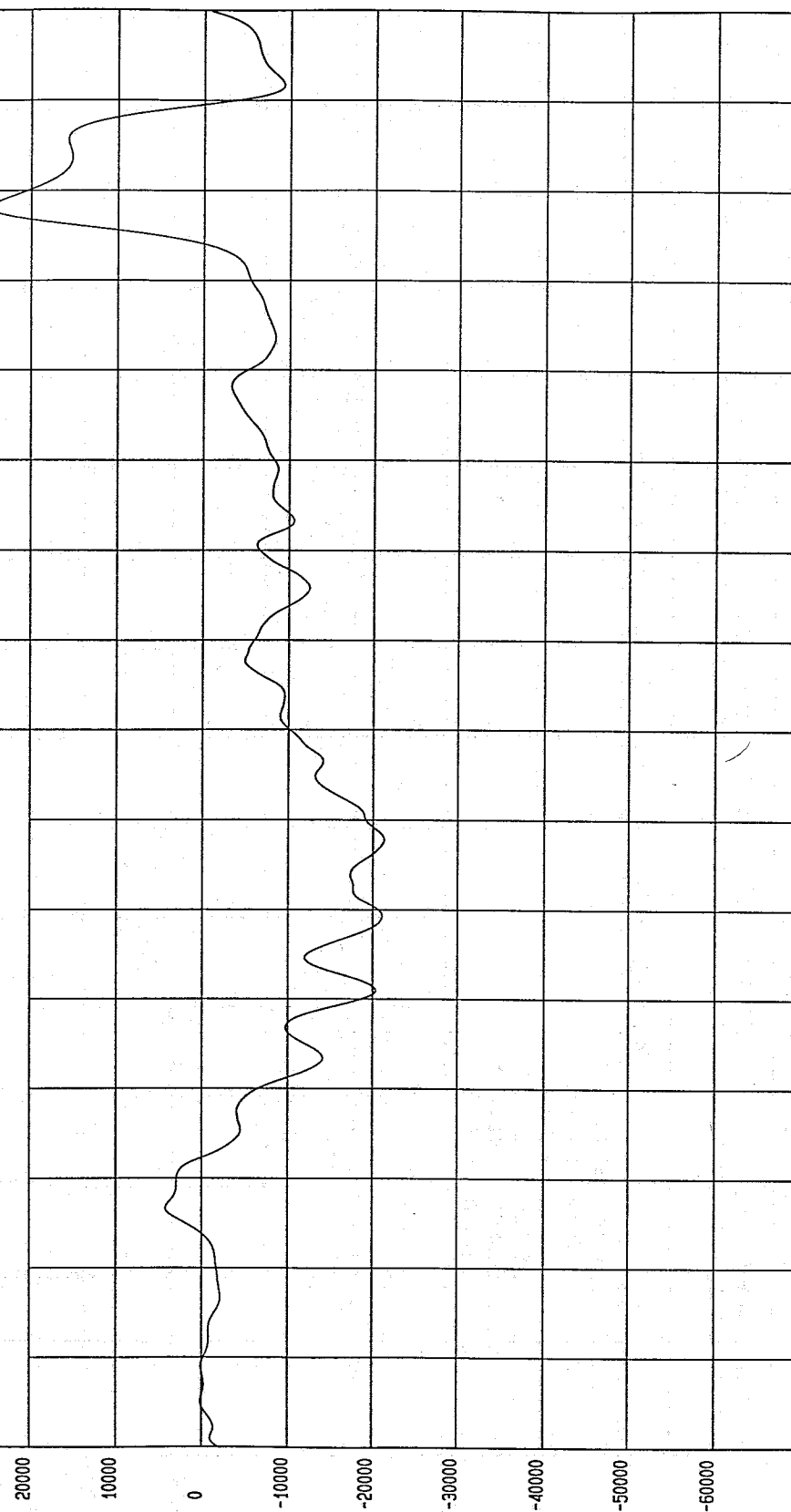
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 34.8 MPH 56 KPH

Minimum = -21255.03 N at 48 msec Maximum = 24755.54 N at 118 msec

SUMMED X AXIS FORCES - ROW #1

1 _____ .B98016FR.X01 Filterclass (50)



NSA Research
11-05-1998 16:33

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Y AXIS FORCES - ROW #1 (COLUMNS 1-6)

- 1 _____ B98016FF.F02 LC #1 FY
- 2 _____ H98016FF.F01 LC #5 FY
- 3 _____ B98016FF.F42 LC #13 FY
- 4 _____ B98016FF.F54 LC #17 FY
- 5 _____ B98016FF.F67 LC #21 FY

6000

4000

2000

0

-2000

-4000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

TIME (SECONDS)

MGA Research
11-19-1998 13:33

TEST: FMVSS 214 SIDE IMPACT

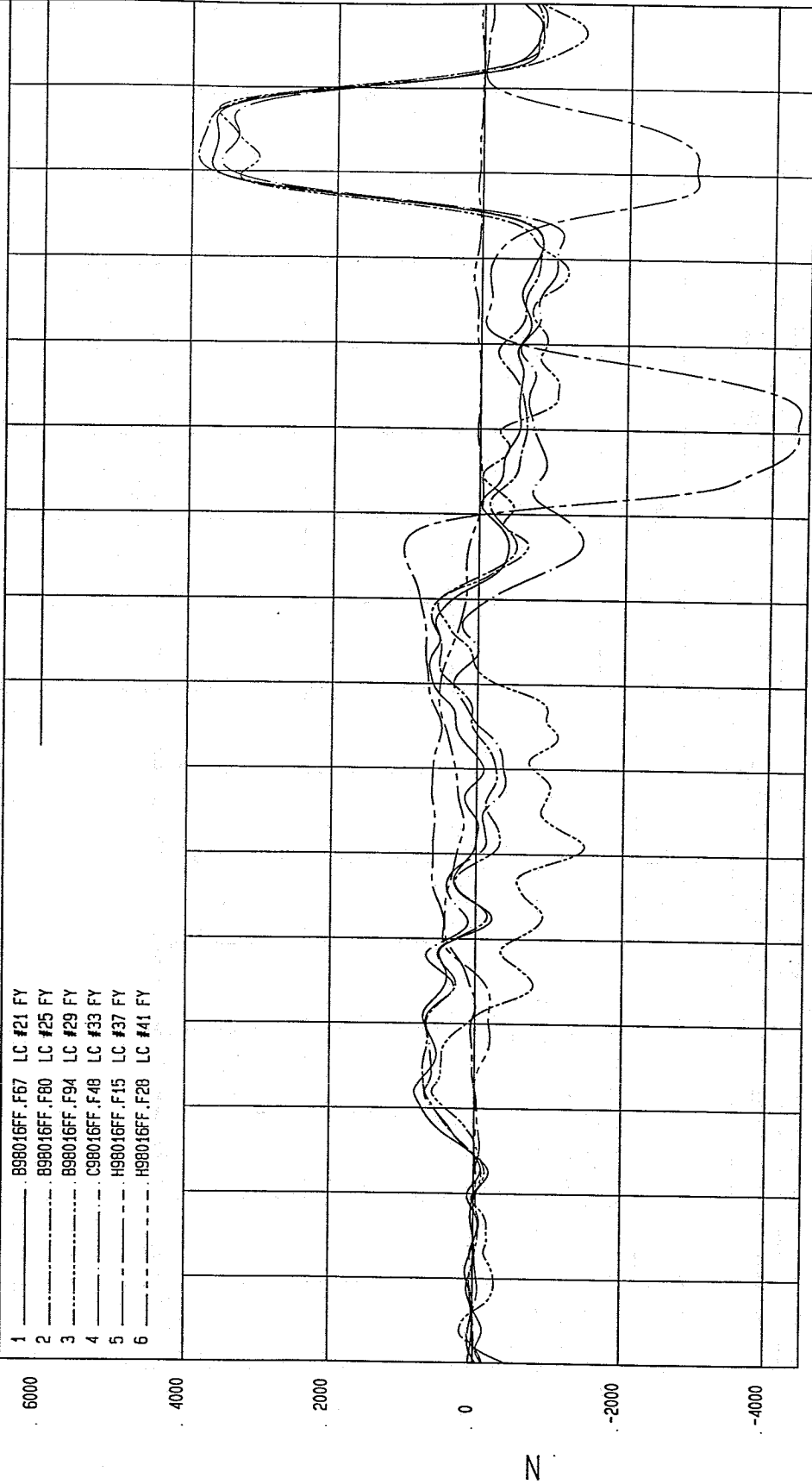
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Y AXIS FORCES - ROW #1 (COLUMNS 7-11)

1 ——— B98016FF.F67 LC #21 FY
2 ——— B98016FF.F80 LC #25 FY
3 ——— B98016FF.F94 LC #29 FY
4 ——— C98016FF.F48 LC #33 FY
5 ——— H98016FF.F15 LC #37 FY
6 ——— H98016FF.F28 LC #41 FY



MCA Research
11-19-1998 13:34

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

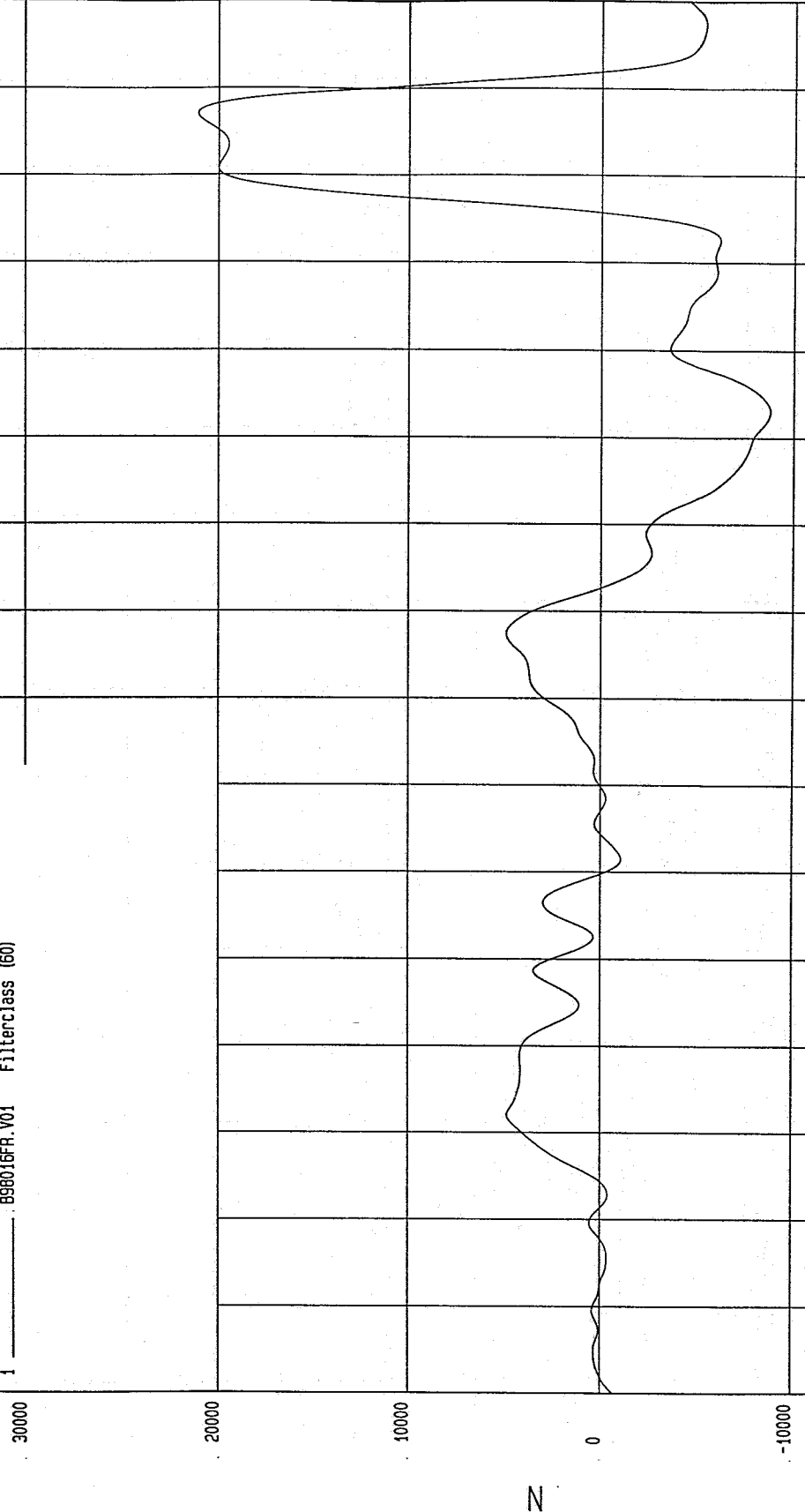
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Minimum = -8804.18 N at 93 msec

Maximum = 21082.03 N at 127 msec

SUMMED Y AXIS FORCES - ROW #1

1 B98016FR.V01 Filterclass (60)



MSA Research
11-14-1998 11:01

TEST: FMVSS 214 SIDE IMPACT TEST

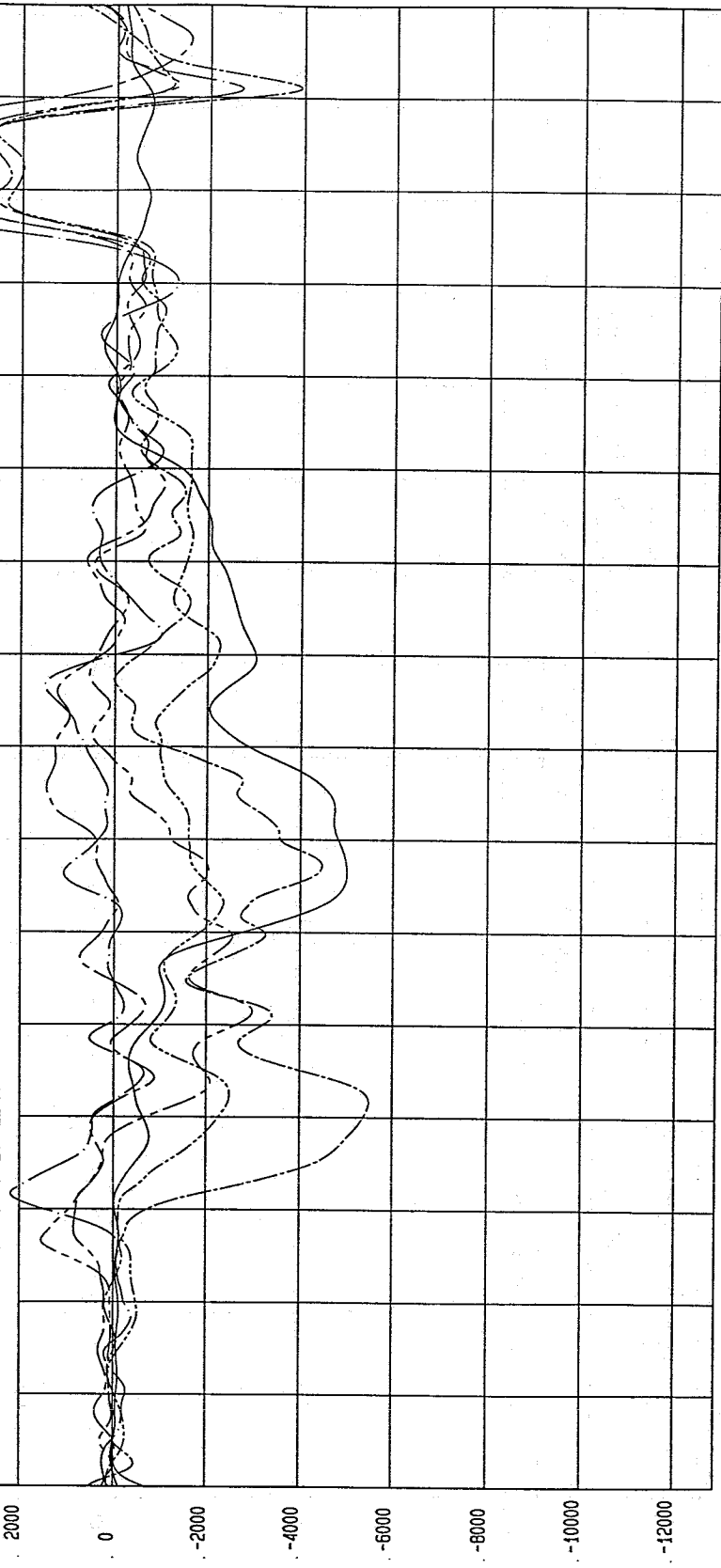
TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

X AXIS FORCES - ROW #2 (COLUMNS 1-6)

- 1 _____ .B98016FF.F07 LC #2 FX
- 2 _____ .B98016FF.F20 LC #6 FX
- 3 _____ .B98016FF.F34 LC #10 FX
- 4 _____ .B98016FF.F47 LC #14 FX
- 5 _____ .B98016FF.F60 LC #18 FX
- 6 _____ .B98016FF.F72 LC #22 FX



TIME (SECONDS)

0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02

MCA Research
11-19-1998 13:08

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

X AXIS FORCES - ROW #2 (COLUMNS 7-11)

- 1 B98016FF.F72 LC #22 FX
- 2 B98016FF.F86 LC #26 FX
- 3 B98016FF.F99 LC #30 FX
- 4 C98016FF.F53 LC #34 FX
- 5 H98016FF.F21 LC #38 FX
- 6 H98016FF.F34 LC #42 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-02

-01

0

01

02

03

04

05

06

07

08

09

10

11

12

13

TIME (SECONDS)

MCA Research
11-19-1998 13:08

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

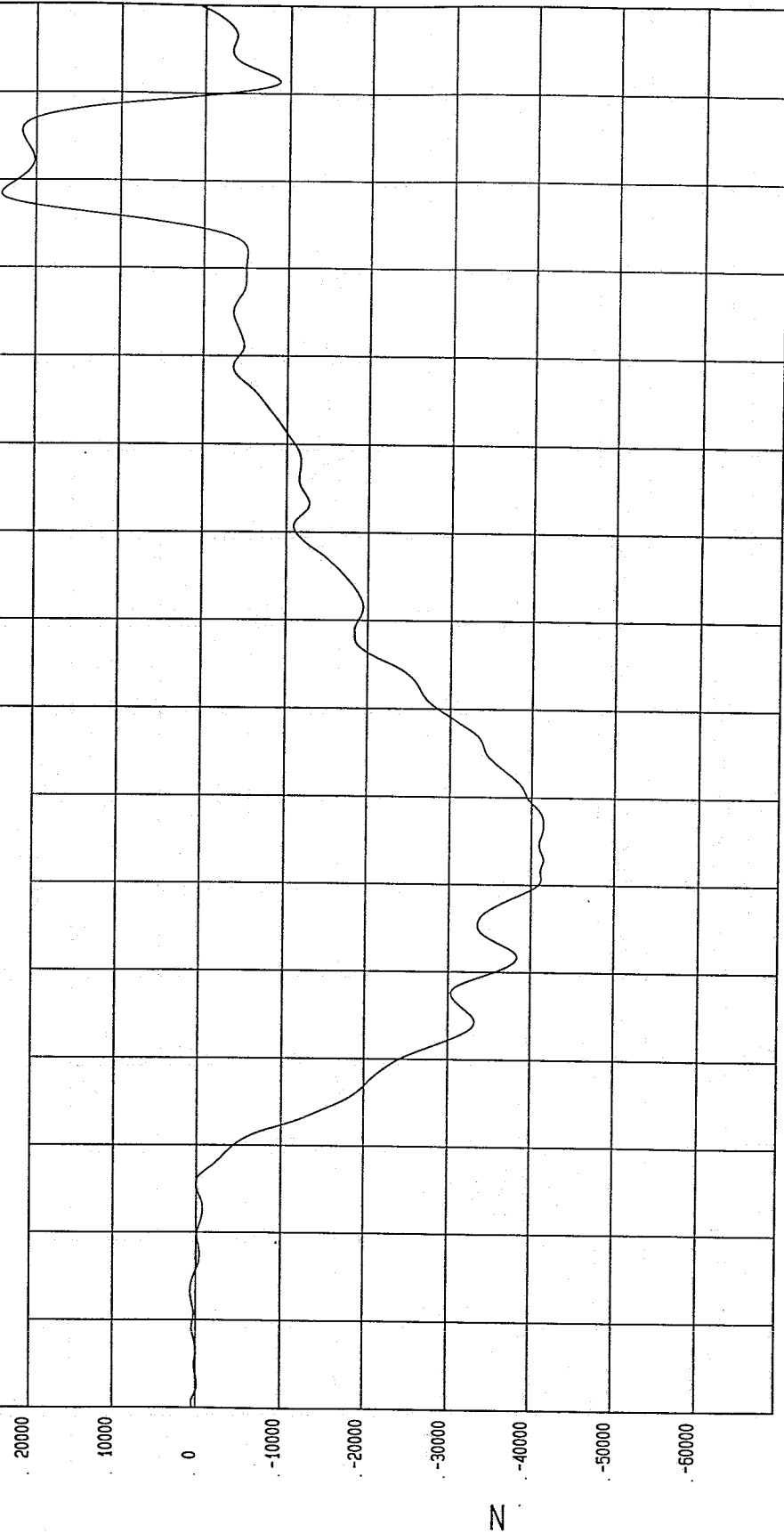
Speed: 34.8 MPH 56 KPH

Minimum = -41433.84 N at 43 msec

Maximum = 24103.08 N at 118 msec

SUMMED X AXIS FORCES - ROW #2

1 _____ B95016FR.X02 Filterclass (60)



MCA Research
11-06-1998 09:36

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Y AXIS FORCES - ROW #2 (COLUMNS 1-6)

1 _____ B98016FF.F05 LC #2 FY
2 _____ H98016FF.F04 LC #6 FY
3 _____ B98016FF.F32 LC #10 FY
4 _____ B98016FF.F45 LC #14 FY
5 _____ B98016FF.F58 LC #18 FY
6 _____ B98016FF.F70 LC #22 FY

5000

4000

2000

0

-2000

-4000

N

-0.20

-0.10

0

0.10

0.20

0.30

0.40

0.50

0.60

0.70

0.80

0.90

1

1.1

1.2

1.3

TIME (SECONDS)

MGA Research
11-19-1998 13:34

TEST: FMVSS 214 SIDE IMPACT

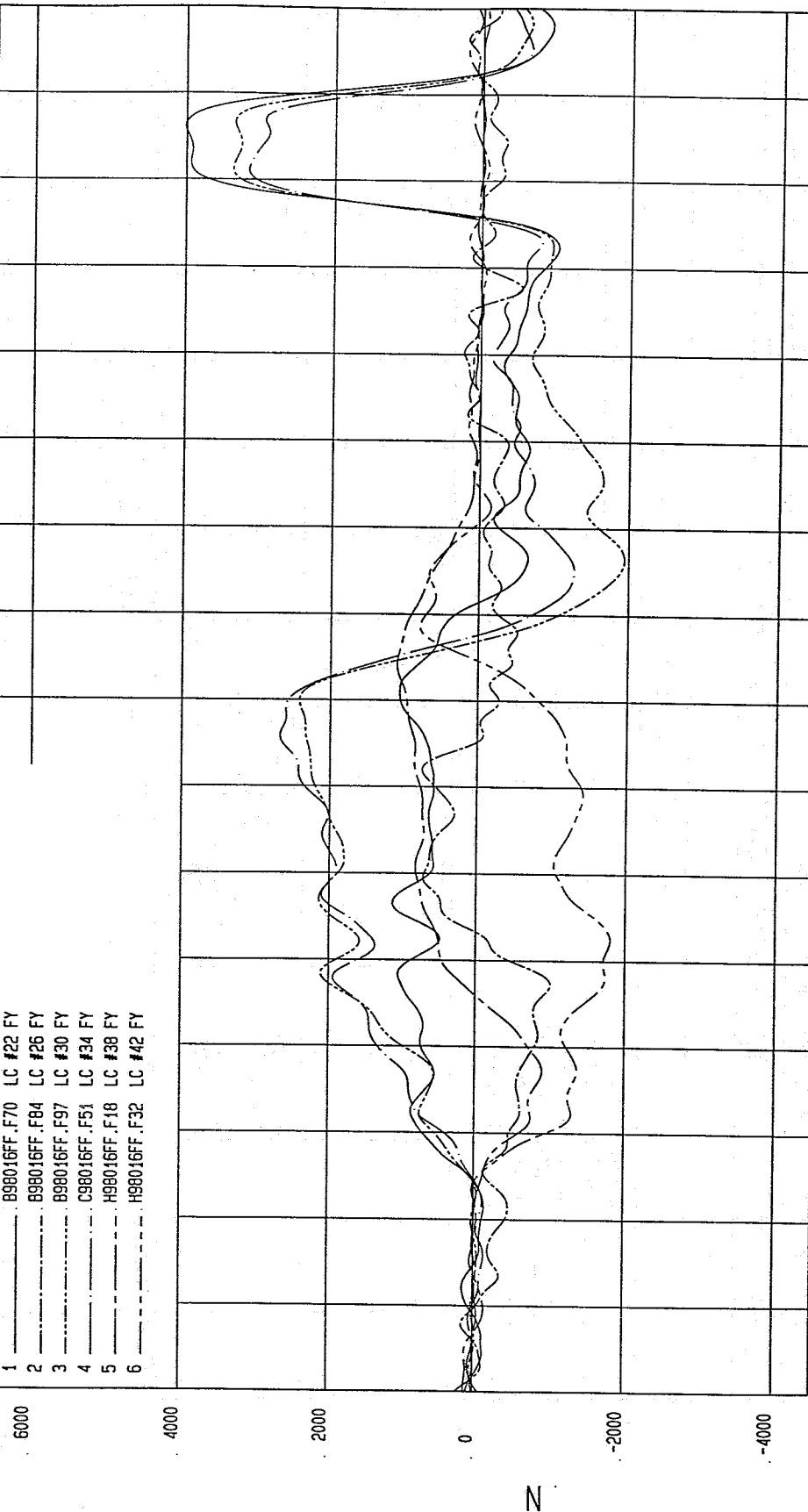
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Y AXIS FORCES - ROW #2 (COLUMNS 7-11)

1 _____ B98016FF.F70 LC #22 FY
2 _____ B98016FF.F84 LC #26 FY
3 _____ B98016FF.F97 LC #30 FY
4 _____ C98016FF.F51 LC #34 FY
5 _____ H98016FF.F18 LC #38 FY
6 _____ H98016FF.F32 LC #42 FY



MGA Research
11-19-1998 13:34

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

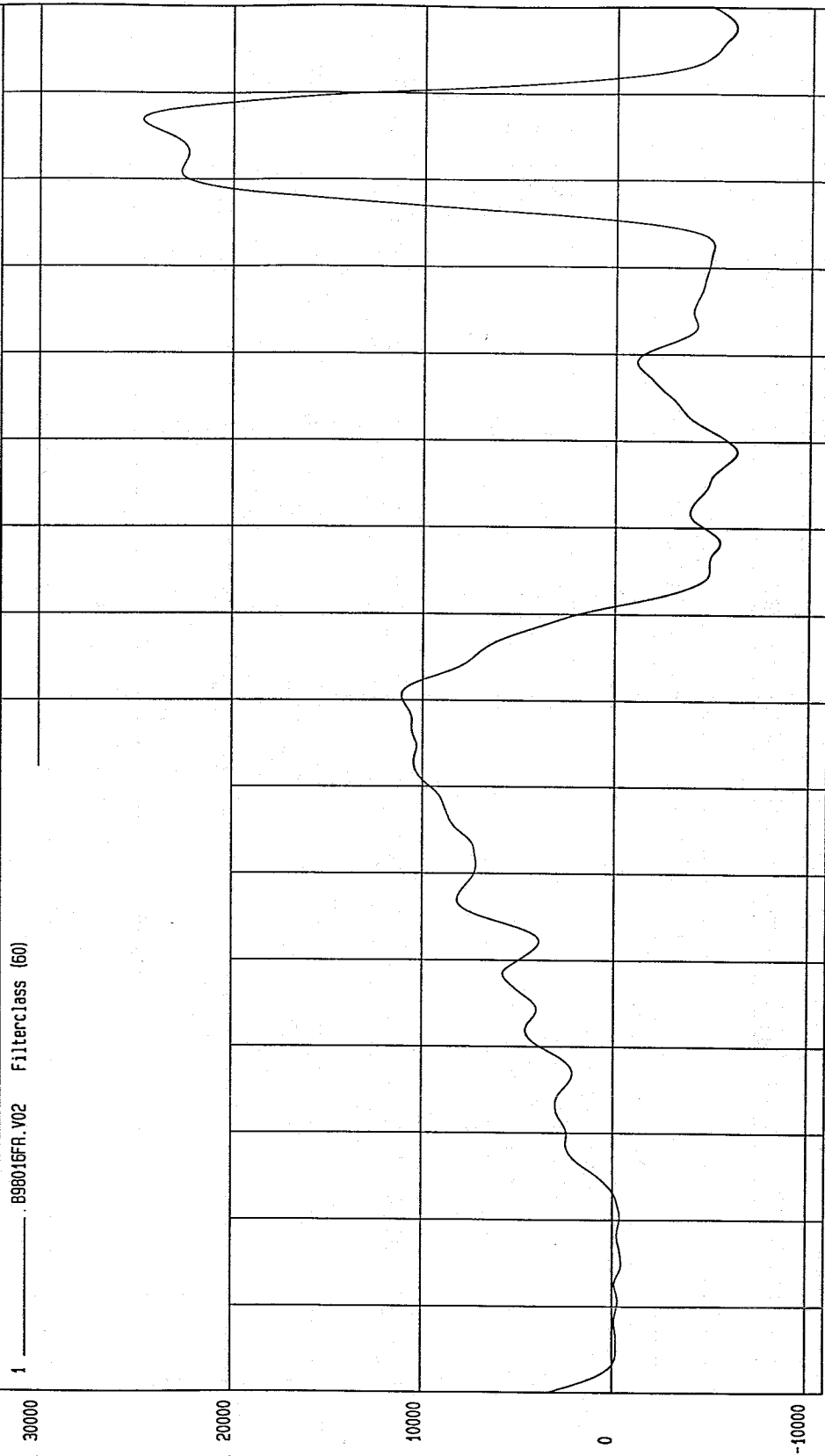
Speed: 34.8 MPH 56 KPH

Minimum = -6231.23 N at 89 msec

Maximum = 24659.48 N at 127 msec

SUMMED Y AXIS FORCES - ROW #2

1 B98016FR.V02 Filterclass (60)



MCA Research
11-14-1998 11:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

X AXIS FORCES - ROW #3 (COLUMNS 1-6)

- 1 B98016FF.F10 LC #3 FX
- 2 B98016FF.F24 LC #7 FX
- 3 B98016FF.F37 LC #11 FX
- 4 B98016FF.F50 LC #15 FX
- 5 B98016FF.F63 LC #19 FX
- 6 B98016FF.F76 LC #23 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

TIME (SECONDS)

MCA Research
11-19-1998 13:08

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

X AXIS FORCES - ROW #3 (COLUMNS 7-11)

- 1 ——— B98016FF.F76 LC #23 FX
- 2 ——— B98016FF.F89 LC #27 FX
- 3 ——— H98016FF.F11 LC #35 FX
- 4 ——— H98016FF.F24 LC #39 FX
- 5 ——— H98016FF.F37 LC #43 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-02

-01

0

01

02

03

04

05

06

07

08

09

1

11

12

13

TIME (SECONDS)

MCA Research
11-19-1998 13.09

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

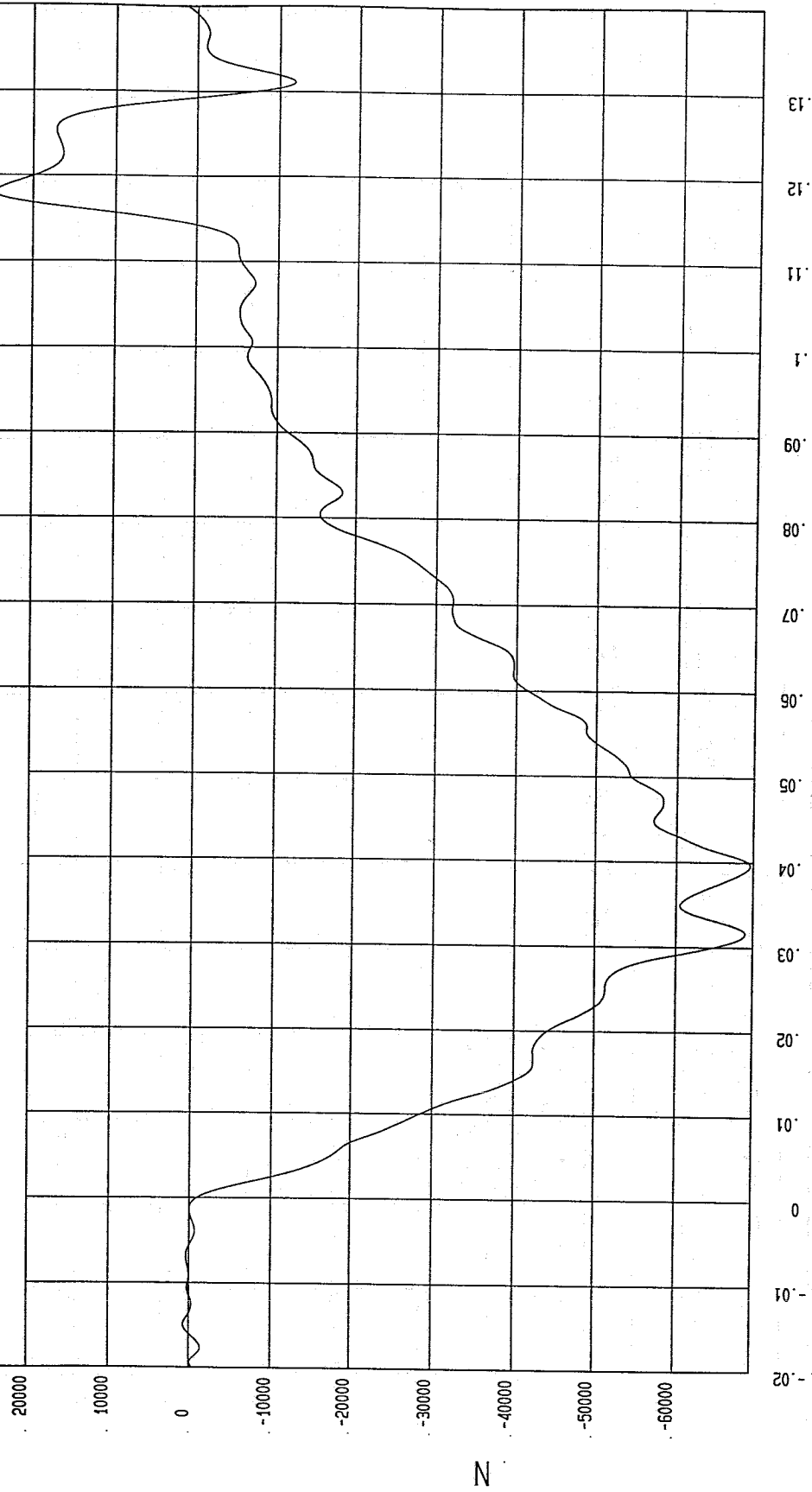
Speed: 34.8 MPH 56 KPH

Minimum = -69143.42 N at 40 msec

Maximum = 24688.84 N at 118 msec

SUMMED X AXIS FORCES - ROW #3

1 B98016FR.X03 Filterclass (60)



NCA Research
11-05-1998 16:33

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Y AXIS FORCES - ROW #3 (COLUMNS 1-6)

- 1 _____ B98016FF.F08 LC #3 FY
- 2 _____ B98016FF.F22 LC #7 FY
- 3 _____ B98016FF.F35 LC #11 FY
- 4 _____ B98016FF.F48 LC #15 FY
- 5 _____ B98016FF.F61 LC #19 FY
- 6 _____ B98016FF.F74 LC #23 FY

6000

4000

2000

0

-2000

-4000

N

-02

-01

0

01

02

03

04

05

06

07

08

09

10

11

12

13

TIME (SECONDS)

MCA Research
11-19-1998 13:34

TEST: FMVSS 214 SIDE IMPACT

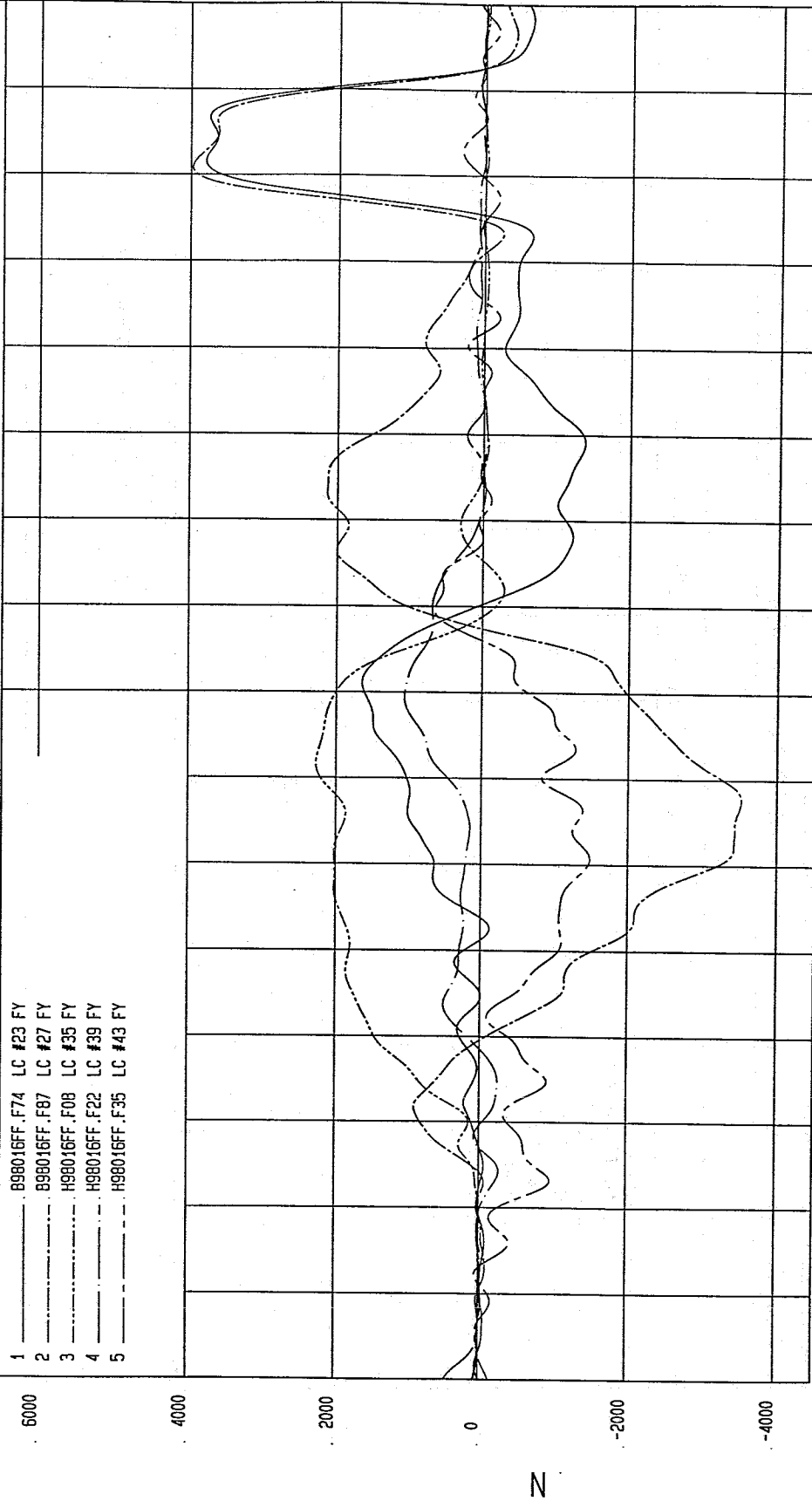
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Y AXIS FORCES - ROW #3 (COLUMNS 7-11)

- 1 ——— B98016FF.F74 LC #23 FY
- 2 ——— B98016FF.F87 LC #27 FY
- 3 ——— H98016FF.F08 LC #35 FY
- 4 ——— H98016FF.F22 LC #39 FY
- 5 ——— H98016FF.F35 LC #43 FY



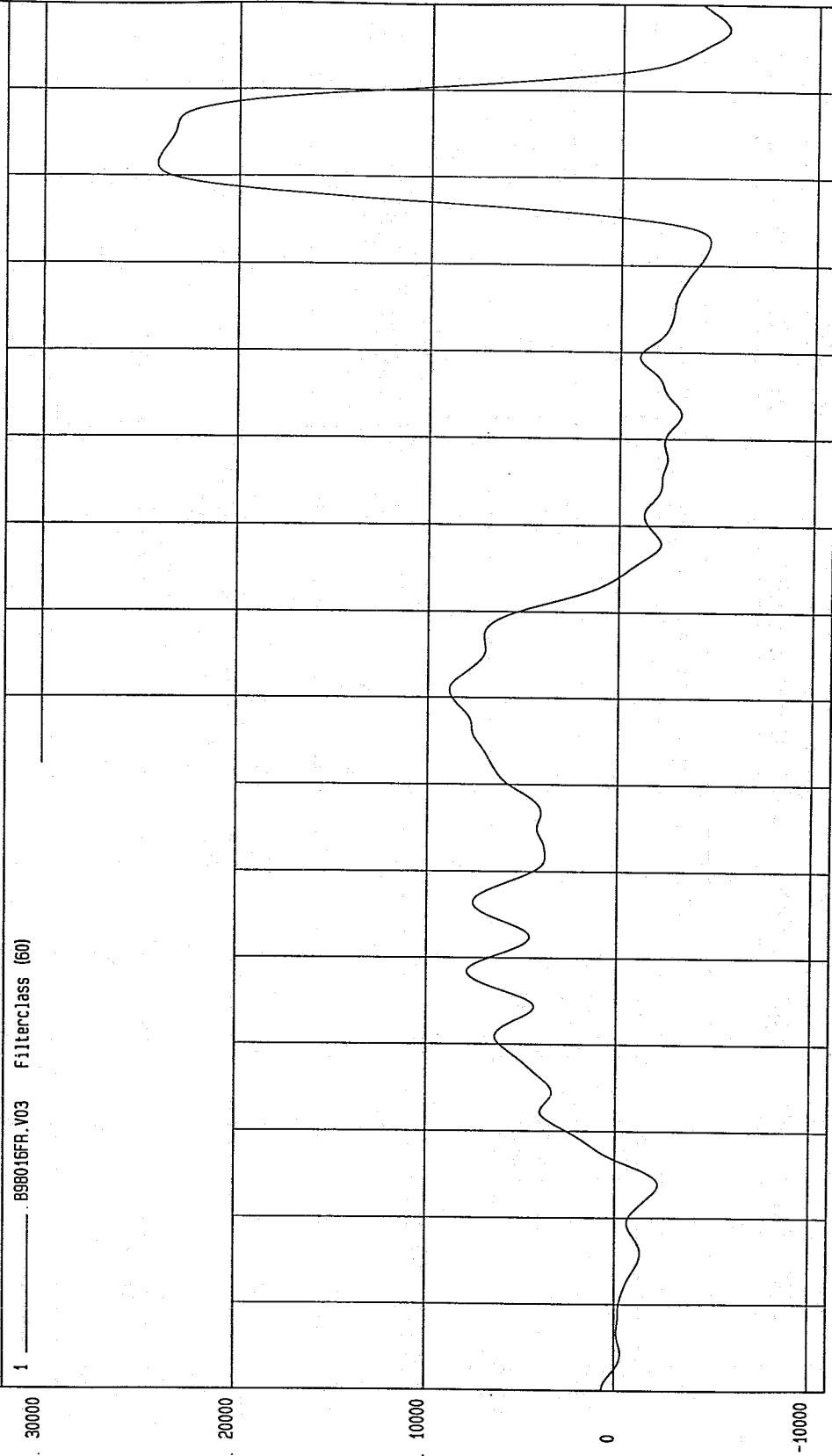
NSA Research
11-19-1998 13:34

TEST: FMVSS 214 SIDE IMPACT TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 34.8 MPH 56 KPH

Minimum = -5424.87 N at 137 msec Maximum = 24177.77 N at 121 msec

SUMMED Y AXIS FORCES - ROW #3



TIME (SECONDS)

NSA Research
11-14-1998 11:01

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

X AXIS FORCES - ROW #4 (COLUMNS 1-6)

1 ——— H98016FF.F49 LC #4 FX
2 ——— B98016FF.F27 LC #8 FX
3 ——— B98016FF.F40 LC #12 FX
4 ——— B98016FF.F53 LC #16 FX
5 ——— B98016FF.F66 LC #20 FX
6 ——— B98016FF.F79 LC #24 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

TIME (SECONDS)

MCA Research
11-19-1998 13:15

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

Speed: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

X AXIS FORCES - ROW #4 (COLUMNS 7-11)

- 1 --- B98016FF.F79 LC #24 FX
- 2 --- B98016FF.F92 LC #28 FX
- 3 --- C98016FF.F47 LC #32 FX
- 4 --- H98016FF.F14 LC #36 FX
- 5 --- H98016FF.F27 LC #40 FX
- 6 --- H98016FF.F41 LC #44 FX

4000

2000

0

-2000

-4000

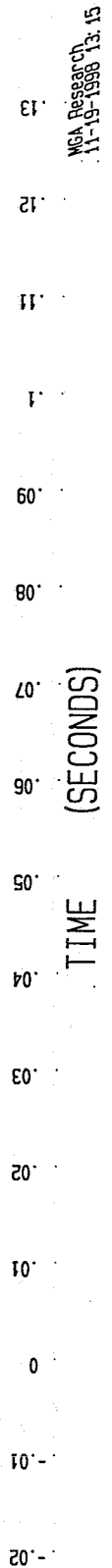
-6000

-8000

-10000

-12000

N



TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

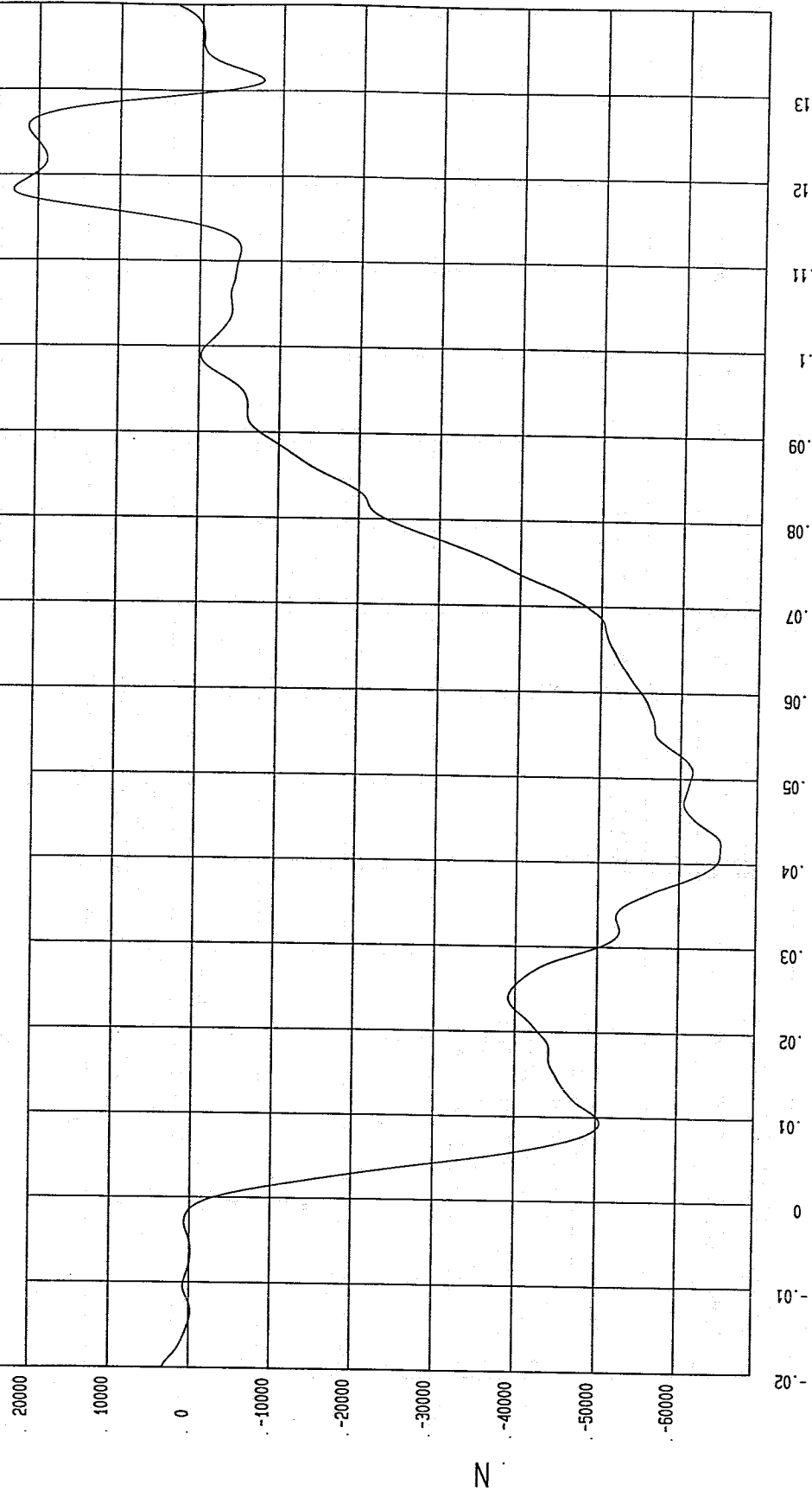
Speed: 34.8 MPH 56 KPH

Minimum = -65090.55 N at 42 msec

Maximum = 22970.9 N at 118 msec

SUMMED X AXIS FORCES - ROW #4

1 ——— B98016FR.X04 Filterclass (60)



MGA Research
11-09-1998 12:48

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Y AXIS FORCES - ROW #4 (COLUMNS 1-6)

- 1 _____ H98016FF.F47 LC #4 FY
- 2 _____ B98016FF.F25 LC #8 FY
- 3 _____ B98016FF.F38 LC #12 FY
- 4 _____ B98016FF.F51 LC #16 FY
- 5 _____ B98016FF.F64 LC #20 FY
- 6 _____ B98016FF.F77 LC #24 FY

6000

4000

2000

0

-2000

-4000

N

-02

-01

0

01

02

03

04

05

06

07

08

09

10

11

12

13

TIME (SECONDS)

NCA Research
11-19-1998 13:34

TEST: FMVSS 214 SIDE IMPACT

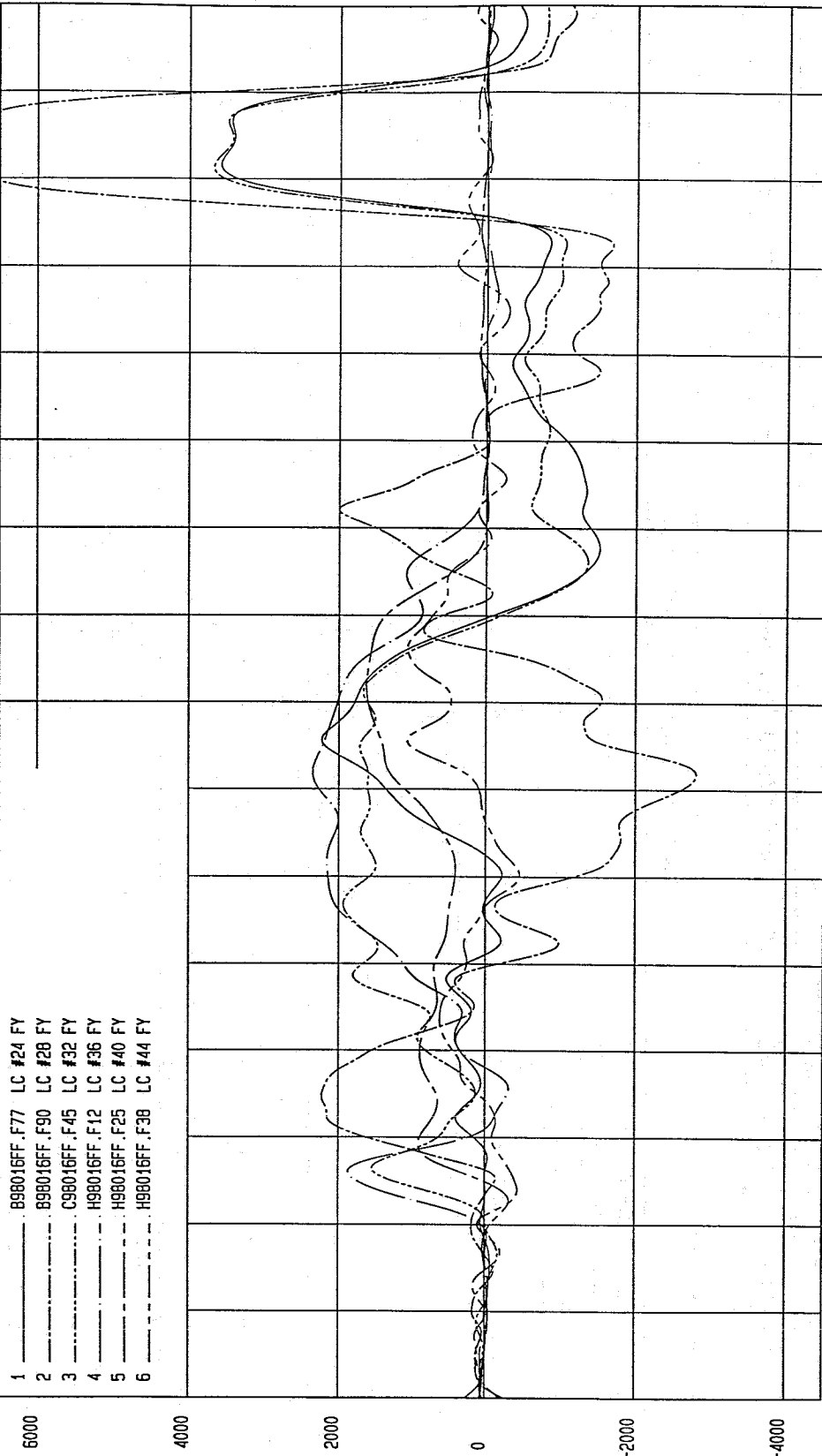
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Y AXIS FORCES - ROW #4 (COLUMNS 7-11)

1 _____ B98016FF.F77 LC #24 FY
2 _____ B98016FF.F90 LC #28 FY
3 _____ C98016FF.F45 LC #32 FY
4 _____ H98016FF.F12 LC #36 FY
5 _____ H98016FF.F25 LC #40 FY
6 _____ H98016FF.F38 LC #44 FY



TIME (SECONDS)

NGA Research
11-19-1998 13:34

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

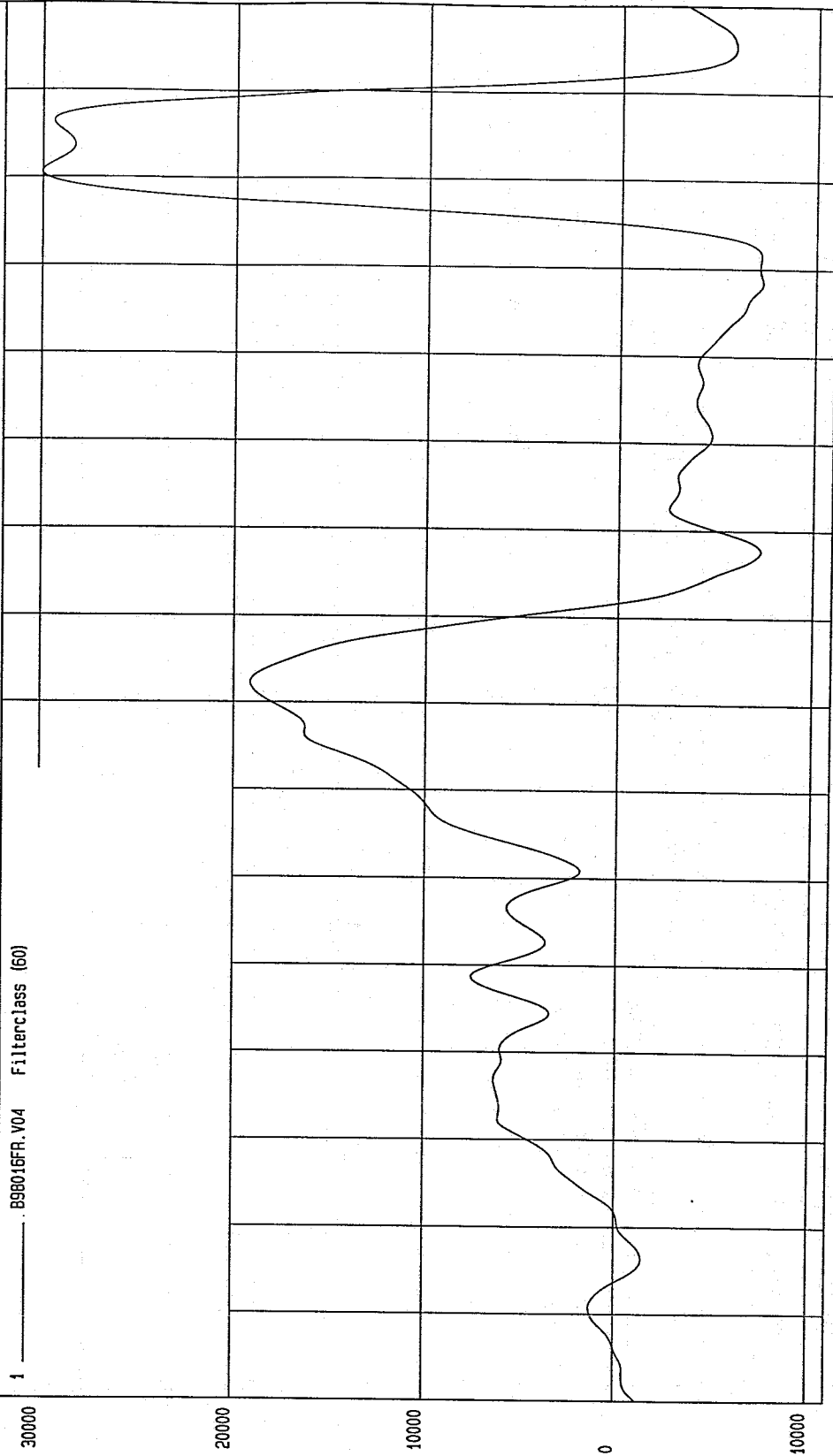
Speed: 34.8 MPH 56 KPH

Minimum = -7261.81 N at 78 msec

Maximum = 30021.93 N at 121 msec

SUMMED Y AXIS FORCES - ROW #4

1 _____ .B98016FR.V04 Filterclass (60)



MGA Research
11-14-1998 11:00

TEST: TTD#1 FMVSS 214 TYPE TEST

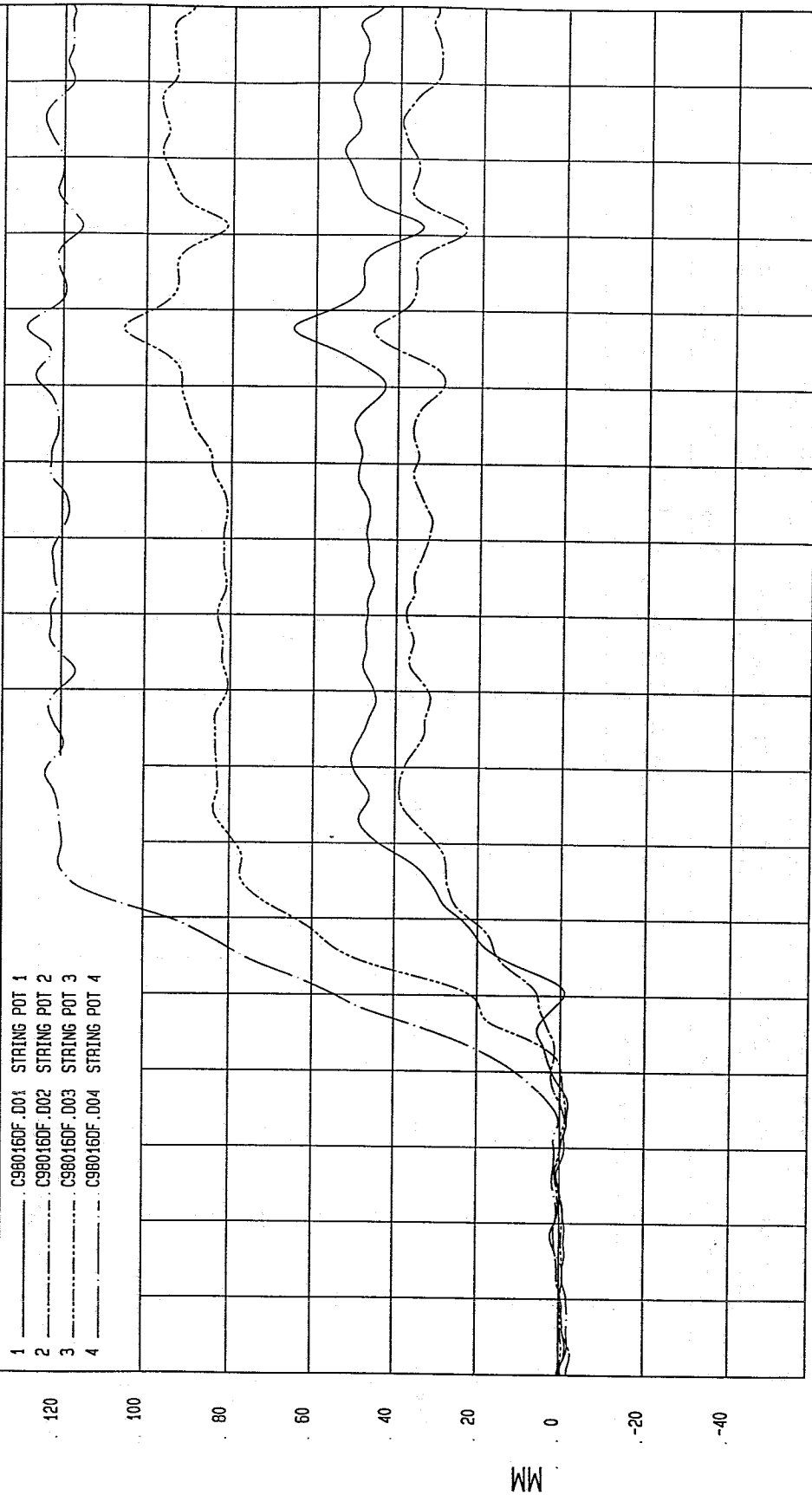
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

STRINGPOT DISPLACEMENT - COLUMN #1

- 1 ——— C980160F.D01 STRING POT 1
- 2 ——— C980160F.D02 STRING POT 2
- 3 ——— C980160F.D03 STRING POT 3
- 4 ——— C980160F.D04 STRING POT 4



MCA Research
11-10-1998 13:37

TEST: FMVSS 214 SIDE IMPACT

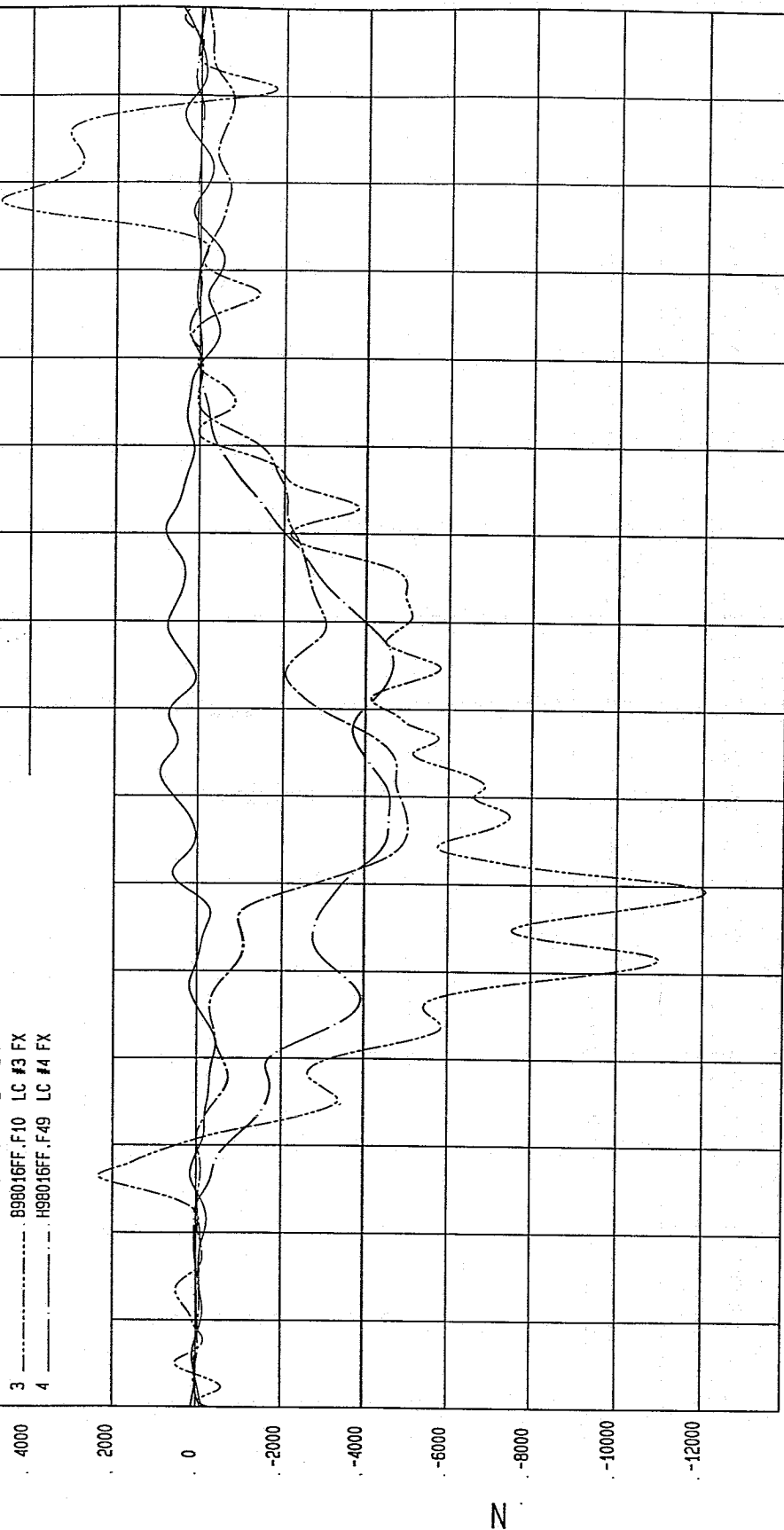
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

X AXIS FORCES - COLUMN #1

- 1 ——— B98016FF.F04 LC #1 FX
- 2 ——— B98016FF.F07 LC #2 FX
- 3 ——— B98016FF.F10 LC #3 FX
- 4 ——— B98016FF.F49 LC #4 FX



MGA Research
11-19-1998 11:38

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

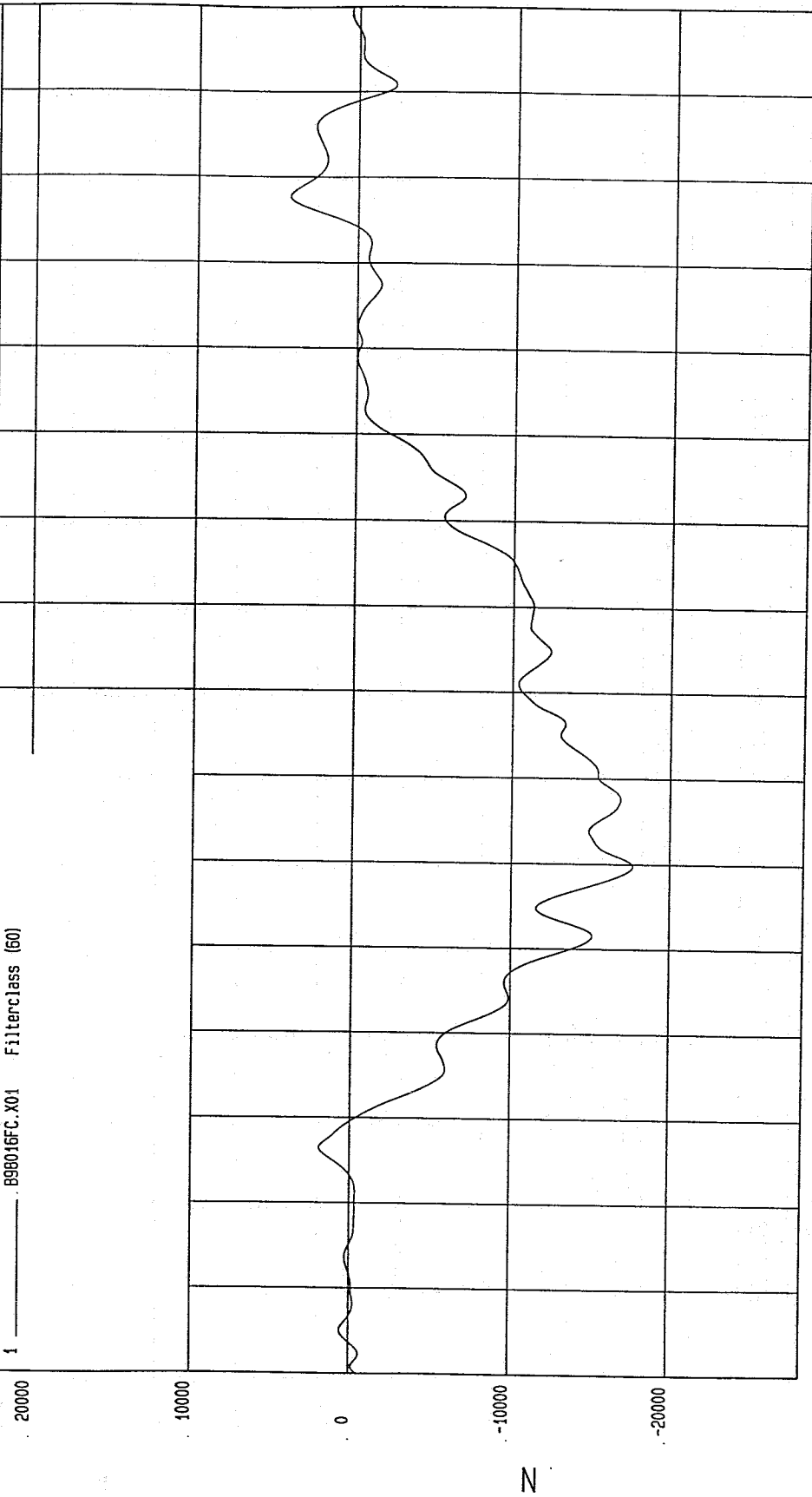
Speed: 34.8 MPH 56 KPH

Minimum = -17633.24 N at 40 msec

Maximum = 4252.85 N at 118 msec

SUMMED X AXIS FORCES - COLUMN #1

1 B98016FC.X01 Filterclass (60)



MGA Research
11-05-1998 15:25

TEST: FMVSS 214 SIDE IMPACT

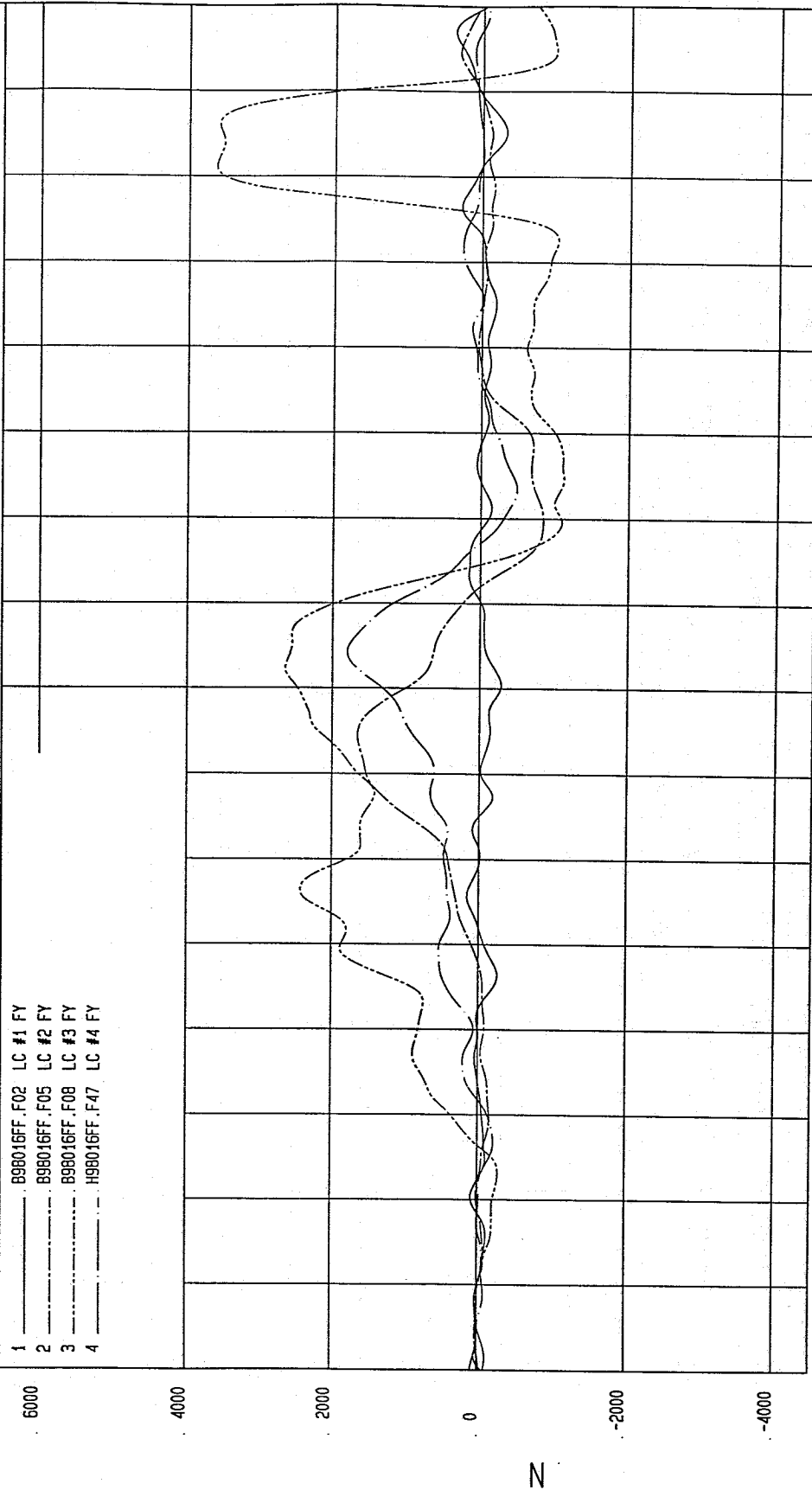
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Y AXIS FORCES - COLUMN #1

1 ——— B98016FF.F02 LC #1 FY
2 ——— B98016FF.F05 LC #2 FY
3 ——— B98016FF.F08 LC #3 FY
4 ——— H98016FF.F47 LC #4 FY



NGA Research
11-19-1998 12:03

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

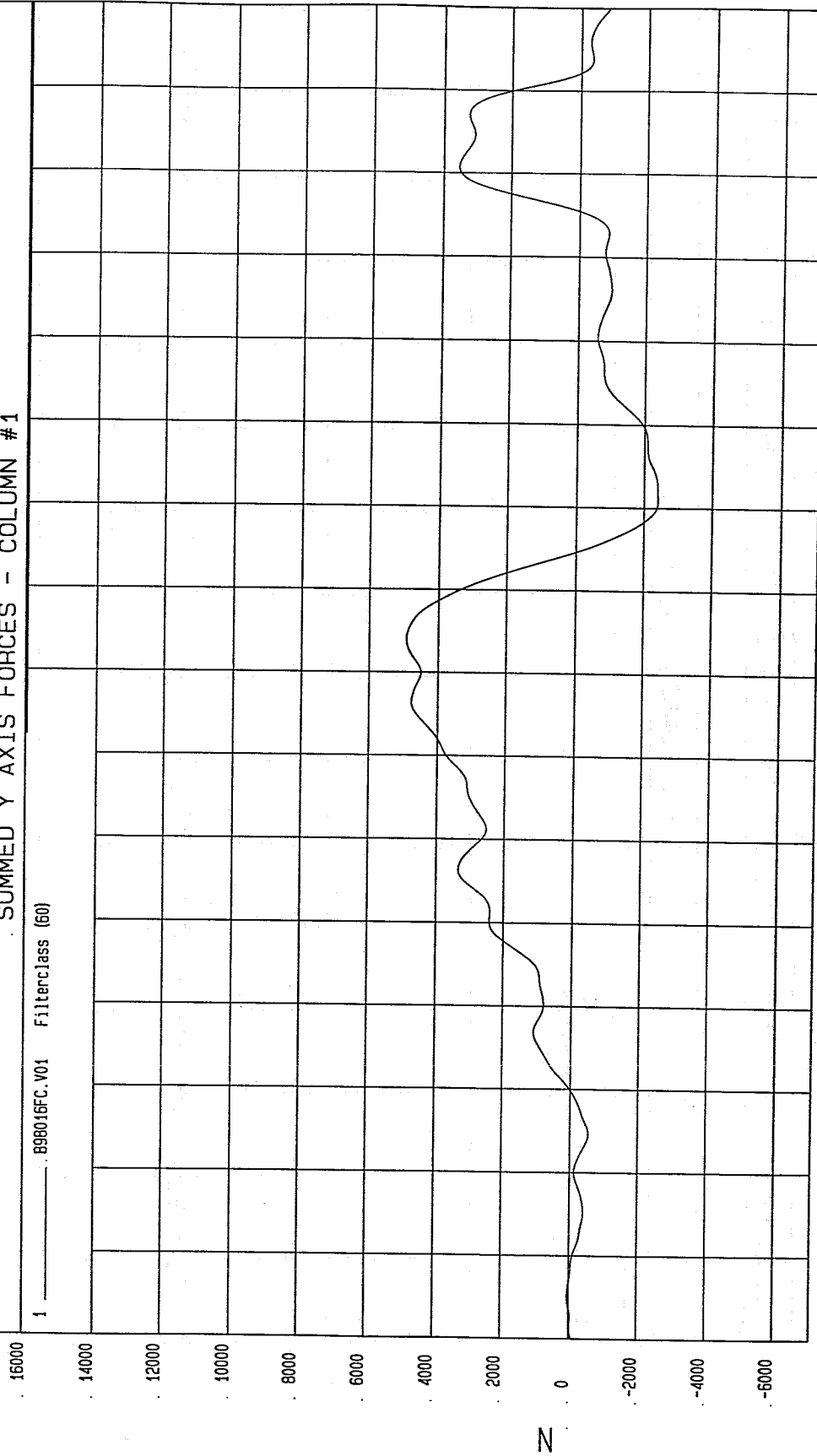
Speed: 34.8 MPH 56 KPH

Minimum = -2405.27 N at 81 msec

Maximum = 4908.36 N at 64 msec

SUMMED Y AXIS FORCES - COLUMN #1

1 _____ .898016FC.V01 Filterclass (60)



MCA Research
11-11-1998 14: 41

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

STRINGPOT DISPLACEMENT - COLUMN #2

- 1 _____ C980160F .005 STRING POT 5
- 2 _____ C980160F .006 STRING POT 6
- 3 _____ C980160F .007 STRING POT 7
- 4 _____ C980160F .008 STRING POT 8

120

100

80

60

40

20

0

-20

-40

MM

-0.02

-0.01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (seconds)

MCA Research
11-10-1998 13:38

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

X AXIS FORCES - COLUMN #2

- 1 H98016FF.F03 LC #5 FX
- 2 B98016FF.F20 LC #6 FX
- 3 B98016FF.F24 LC #7 FX
- 4 B98016FF.F27 LC #8 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

TIME (SECONDS)

MGA Research
11-19-1998 11:29

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

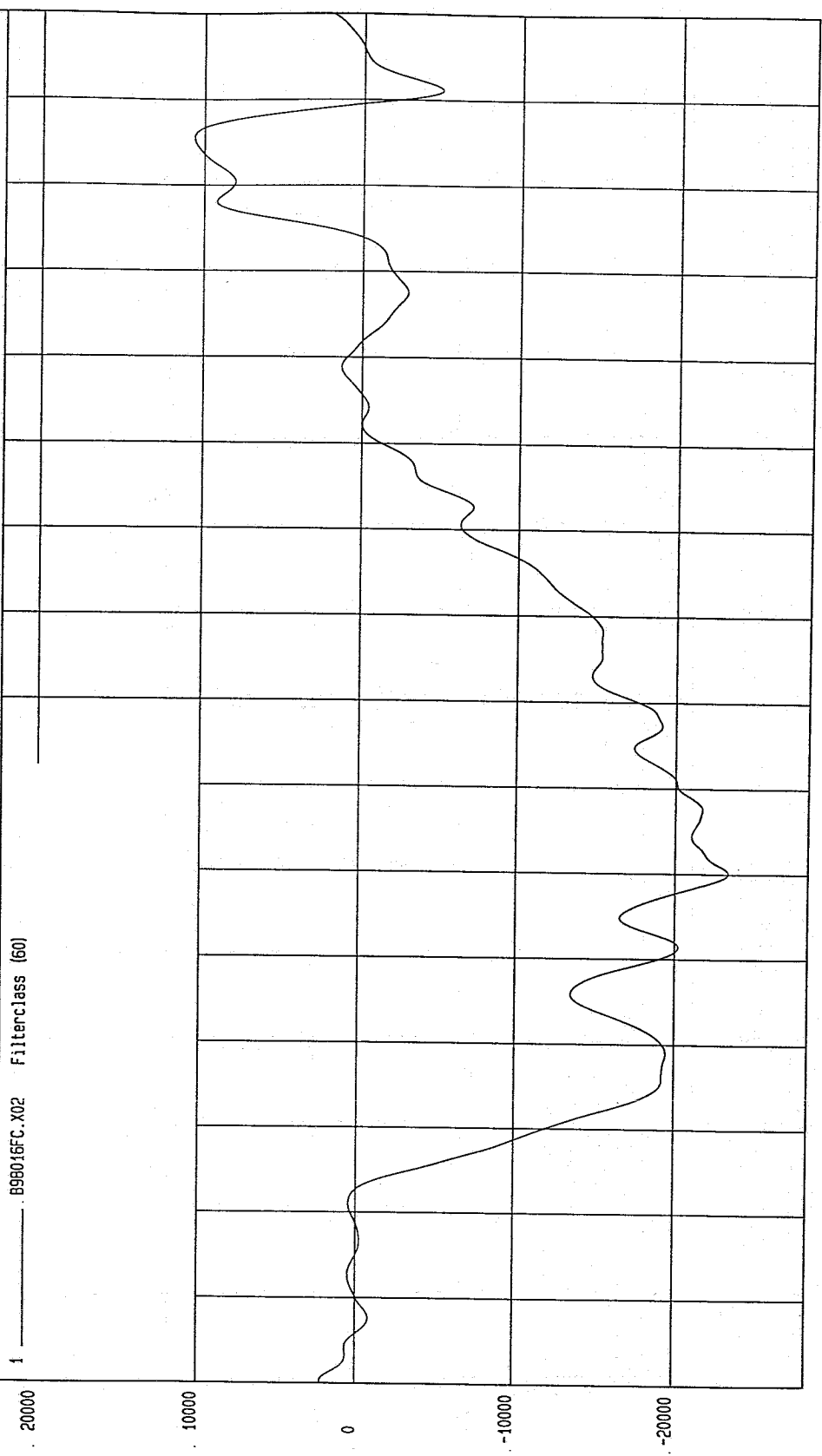
Speed: 32.8 MPH 52.8 KPH

Minimum = -23226.9 N at 40 msec

Maximum = 10641.71 N at 126 msec

SUMMED X AXIS FORCES - COLUMN #2

1 _____ B98016FC.X02 Filterclass (60)



MGA Research
11-09-1998 12:48

TEST: FMVSS 214 SIDE IMPACT TEST

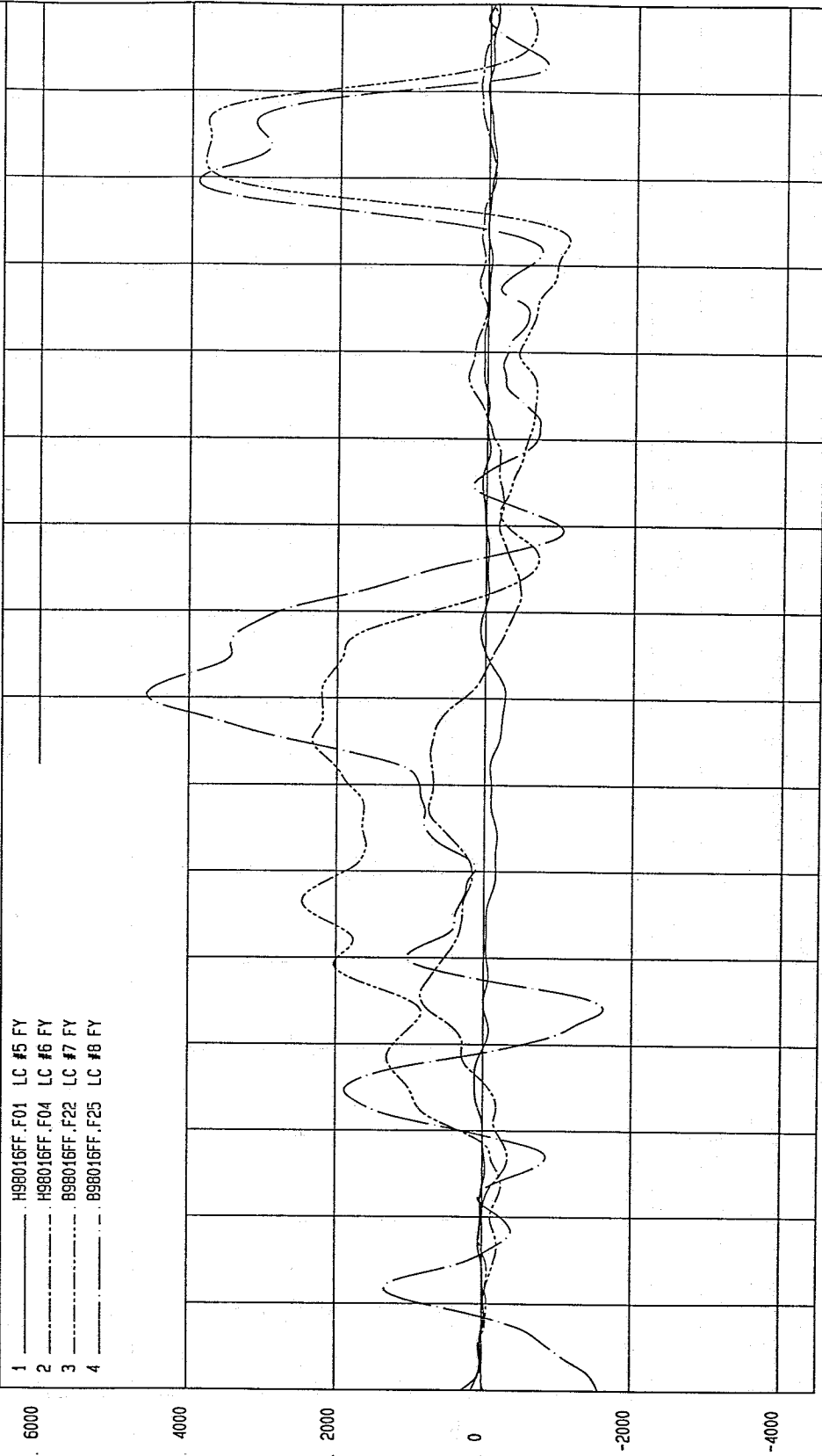
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Y AXIS FORCES - COLUMN #2

- 1 _____ H98016FF.F01 LC #5 FY
- 2 _____ H98016FF.F04 LC #6 FY
- 3 _____ B98016FF.F22 LC #7 FY
- 4 _____ B98016FF.F25 LC #8 FY



TIME (SECONDS)

NCA Research
11-19-1998 12:06

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

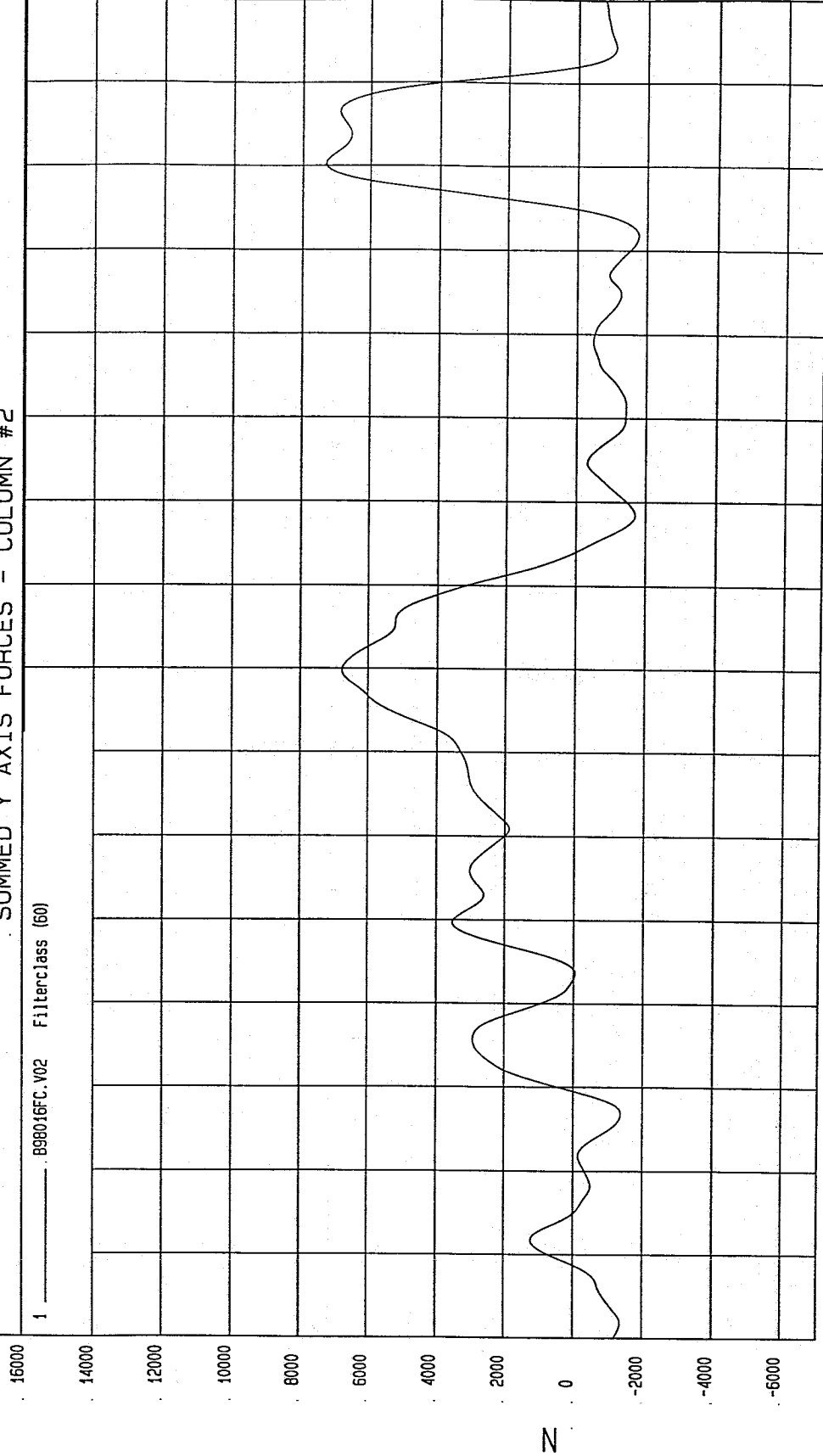
Speed: 32.8 MPH 52.8 KPH

Minimum = -1738.47 N at 112 msec

Maximum = 7331.21 N at 120 msec

SUMMED Y AXIS FORCES - COLUMN #2

1 _____ B98016FC.V02 Filterclass (60)



MGA Research
11-11-1998 14: 41

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

STRINGPOT DISPLACEMENT - COLUMN #3

- 1 C98016DF.D09 STRING POT 9
- 2 C98016DF.D10 STRING POT 10
- 3 C98016DF.D12 STRING POT 12

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (seconds)

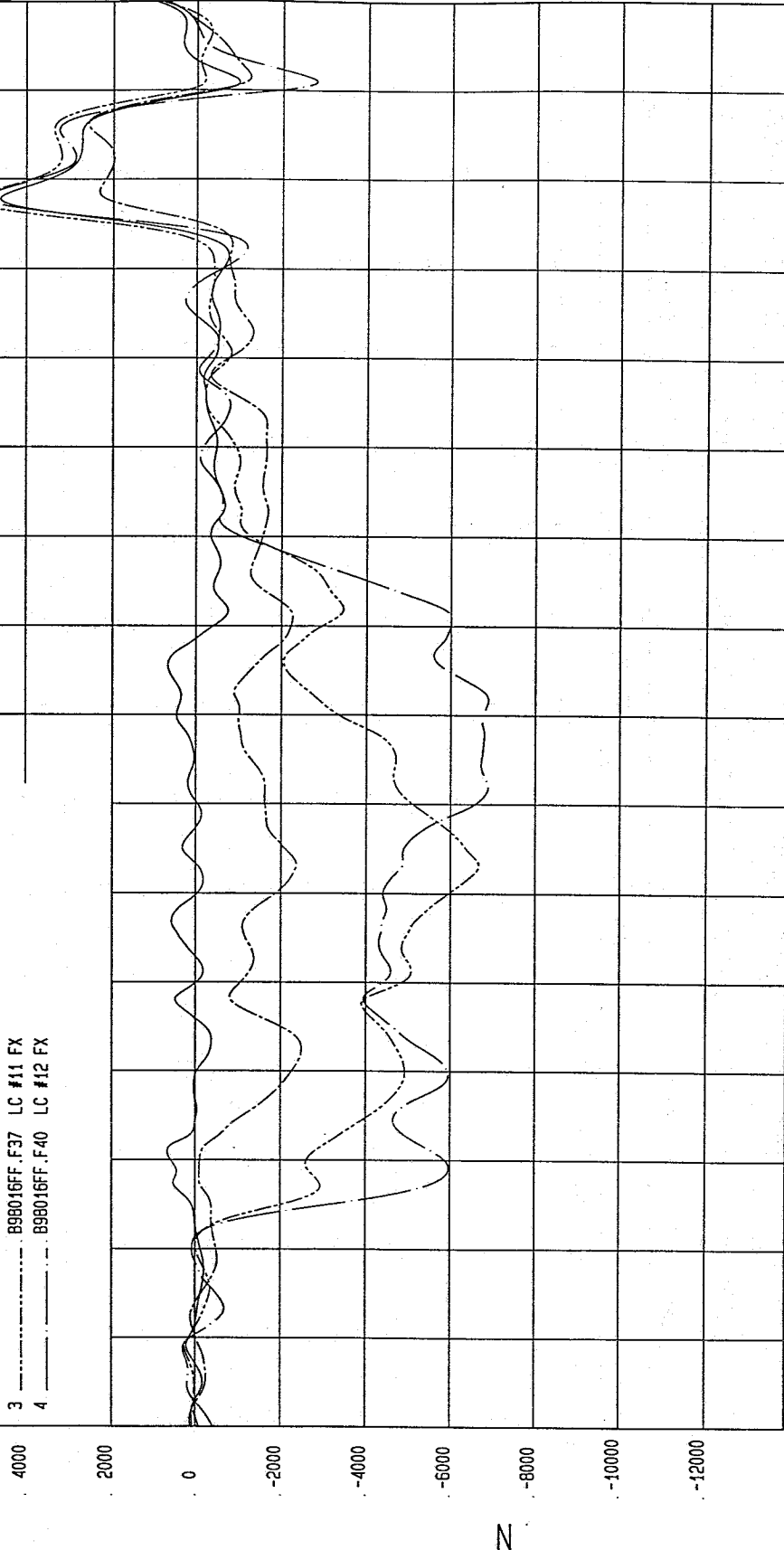
MCA Research
11-10-1998 13:38

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

X AXIS FORCES - COLUMN #3

- 1 B98016FF.F30 LC #9 FX
- 2 B98016FF.F34 LC #10 FX
- 3 B98016FF.F37 LC #11 FX
- 4 B98016FF.F40 LC #12 FX



MGA Research
11-19-1998 10:53

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

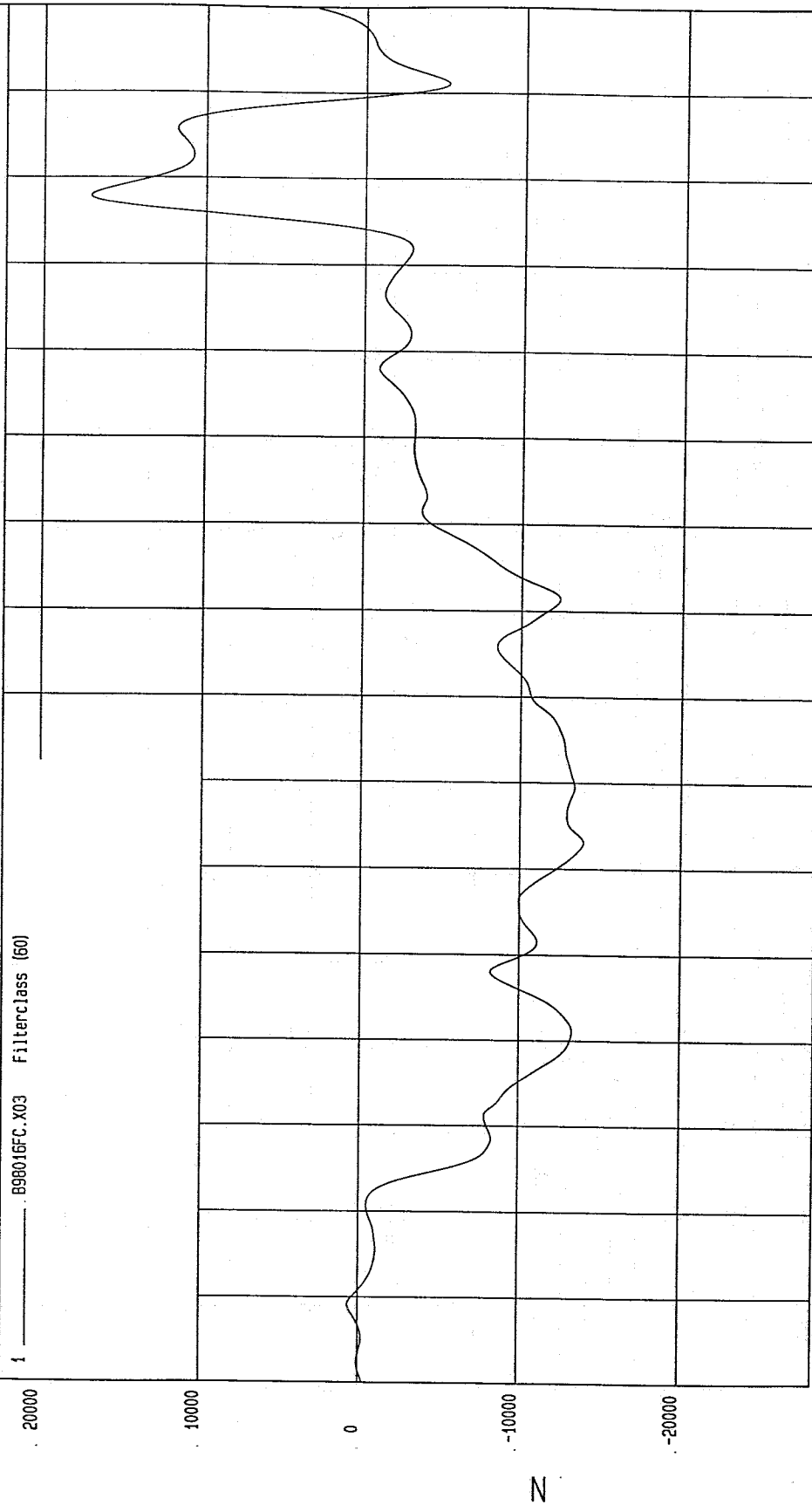
Speed: 32.8 MPH 52.8 KPH

Minimum = -13939.14 N at 43 msec

Maximum = 17112.08 N at 118 msec

SUMMED X AXIS FORCES - COLUMN #3

1 _____ 898016FC.X03 Filterclass (60)

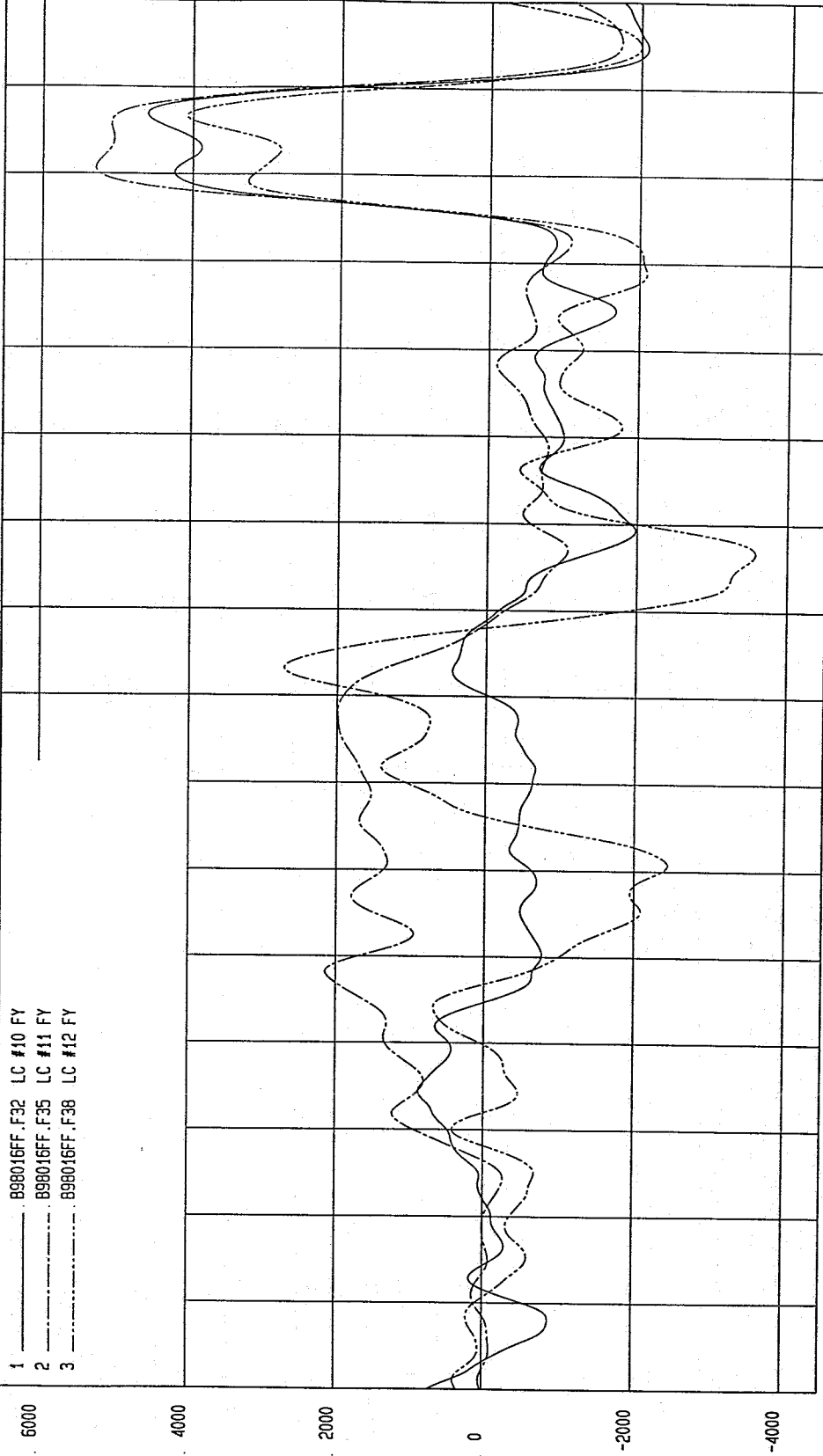


MCA Research
11-05-1998 15:25

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Y AXIS FORCES - COLUMN #3

- 1 ——— B98016FF.F32 LC #10 FY
- 2 - - - - B98016FF.F35 LC #11 FY
- 3 - - - - B98016FF.F36 LC #12 FY



TIME (SECONDS)

0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02

N

6000
4000
2000
0
-2000
-4000

NGA Research
11-19-1998 11:59

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

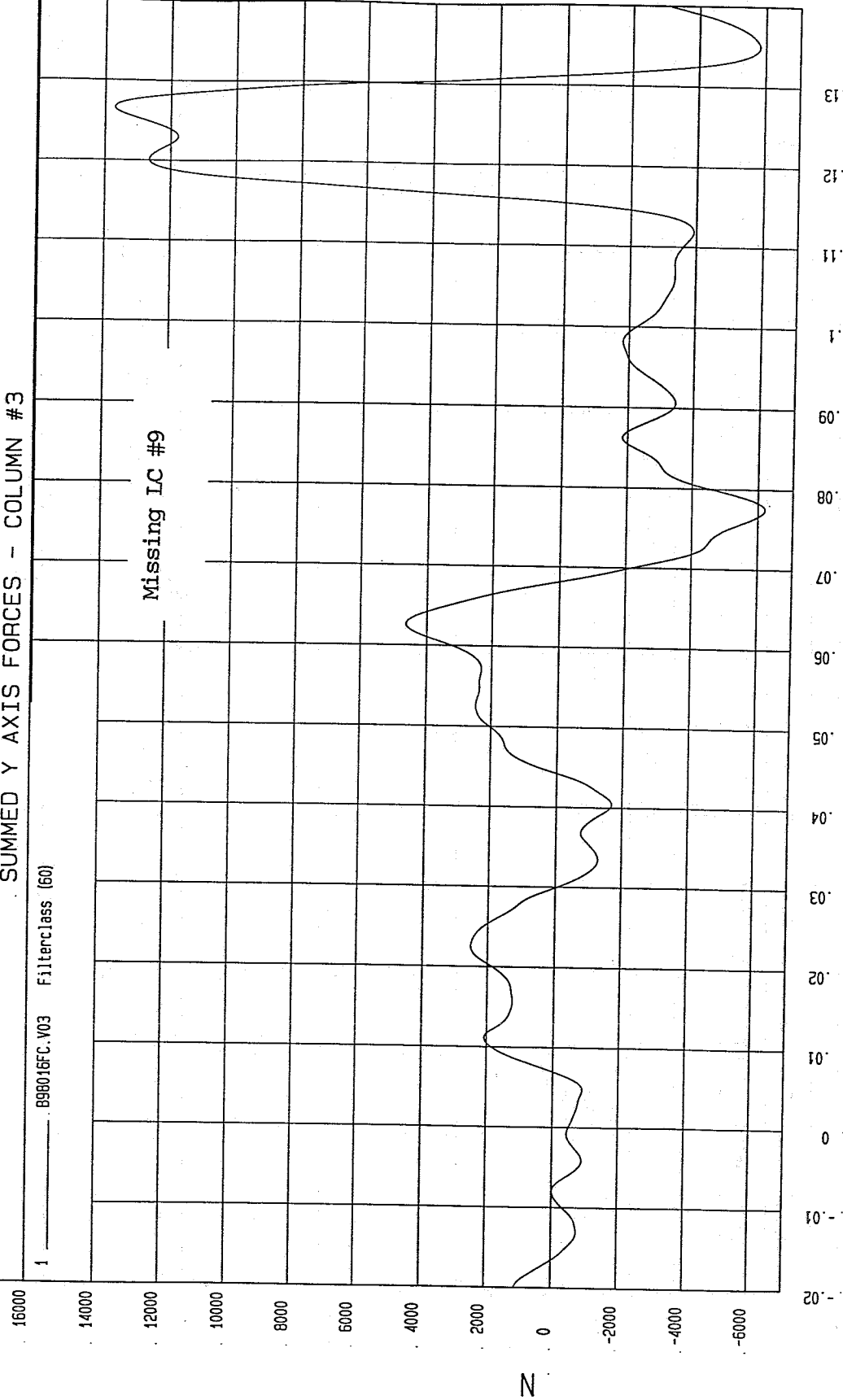
Minimum = -6206.04 N at 78 msec

Maximum = 13698.52 N at 127 msec

SUMMED Y AXIS FORCES - COLUMN #3

1 _____ B98016FC.V03 Filterclass (50)

Missing LC #9



MGA Research
11-11-1998 14:57

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

STRINGPOT DISPLACEMENT - COLUMN #4

- 1 _____ C980160F .013 STRING POT 13
- 2 _____ C980160F .014 STRING POT 14
- 3 _____ C980160F .016 STRING POT 16

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

01

02

03

04

05

06

07

08

09

10

11

12

13

14

15

TIME (seconds)

MGA Research
11-10-1998 13:38

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

SPEED: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

X AXIS FORCES - COLUMN #4

- 1 _____ .B98016FF.F44 LC #13 FX
- 2 _____ .B98016FF.F47 LC #14 FX
- 3 _____ .B98016FF.F50 LC #15 FX
- 4 _____ .B98016FF.F53 LC #16 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-.02

-.01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

TIME (SECONDS)

MGA Research
11-19-1998 10:54

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

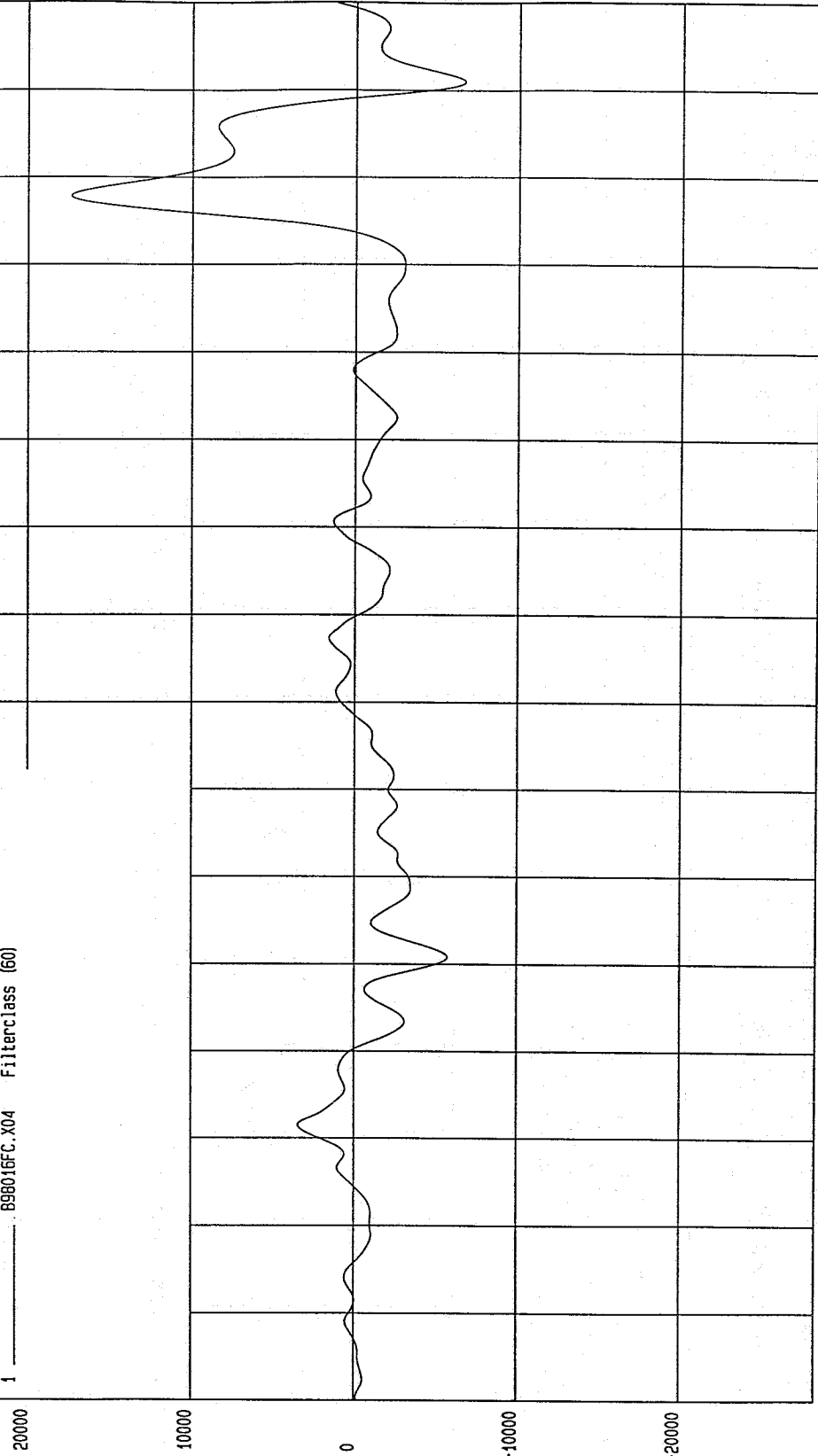
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -6714.35 N at 131 msec

Maximum = 17370.44 N at 118 msec

SUMMED X AXIS FORCES - COLUMN #4

1 _____ 898016FC.X04 Filterclass (60)



MGA Research
11-05-1998 15:25

TEST: FMVSS 214 SIDE IMPACT TEST

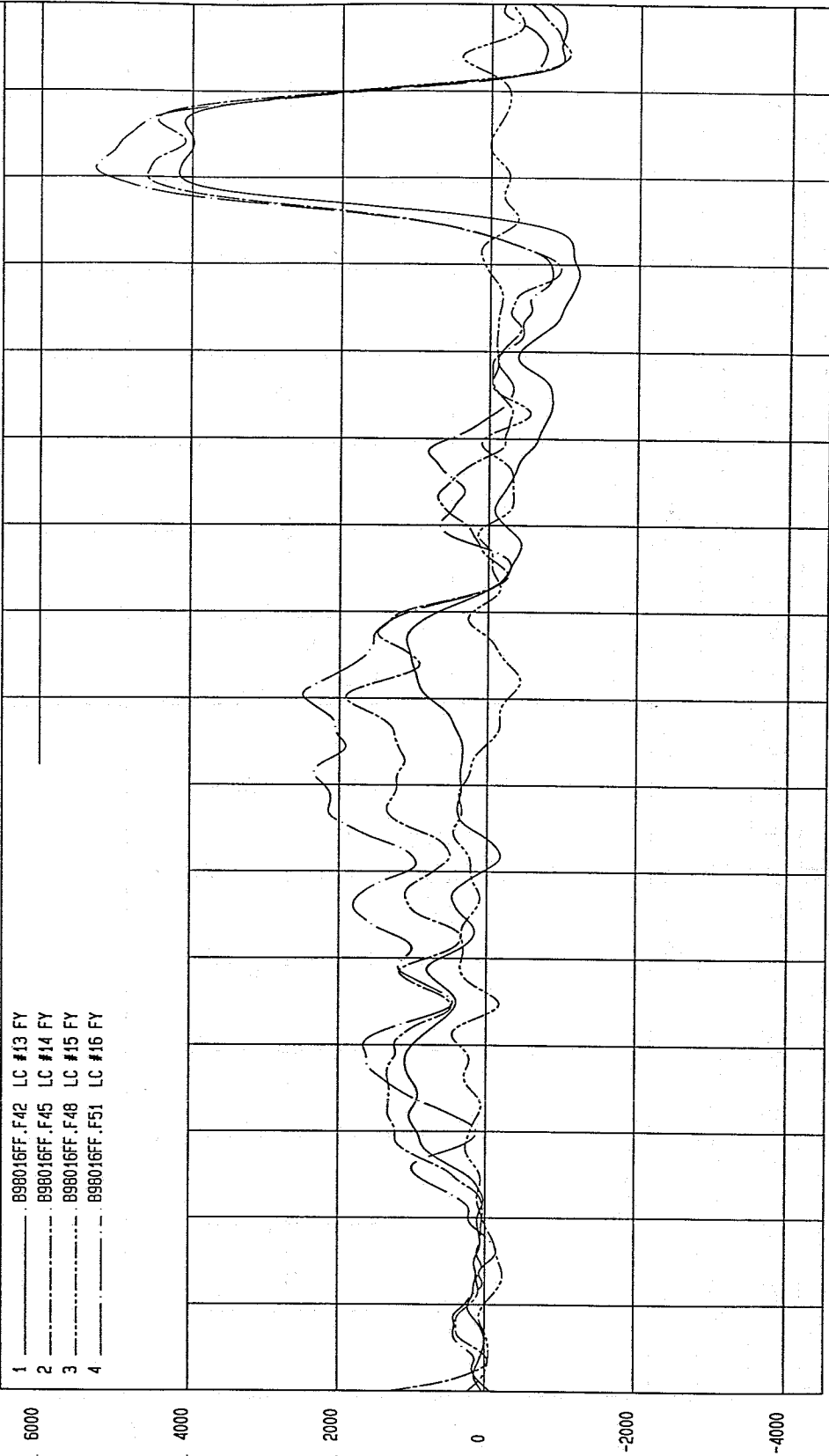
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Y AXIS FORCES - COLUMN #4

1 ——— B98016FF.F42 LC #13 FY
2 ——— B98016FF.F45 LC #14 FY
3 ——— B98016FF.F48 LC #15 FY
4 ——— B98016FF.F51 LC #16 FY



MGA Research
11-19-1998 12:00

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

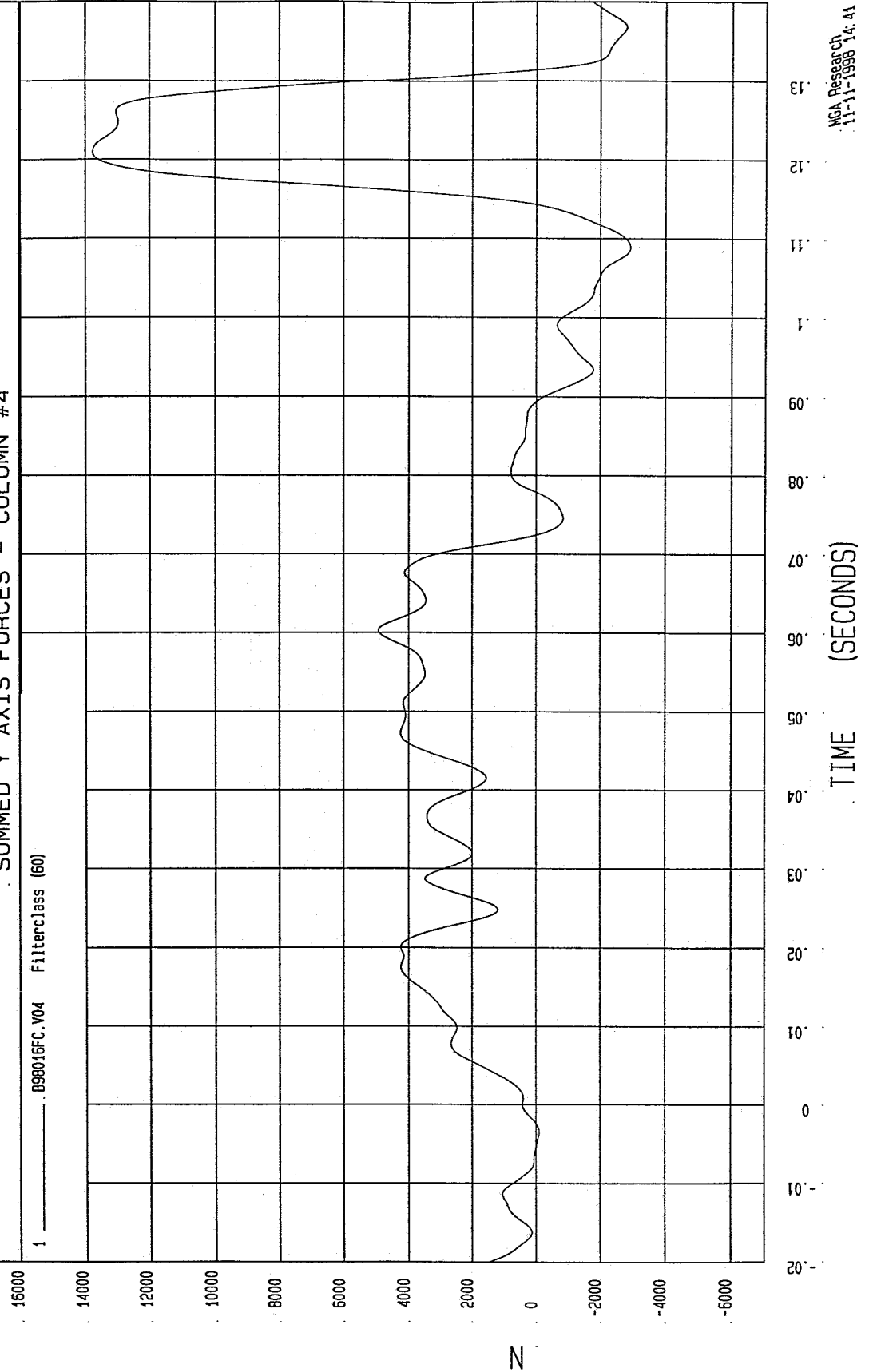
Speed: 32.8 MPH 52.8 KPH

Minimum = -2915.66 N at 109 msec

Maximum = 13777.74 N at 121 msec

SUMMED Y AXIS FORCES - COLUMN #4

1 _____ B98016FC.V04 Filterclass (60)



MCA Research
11-11-1998 14:41

STRINGPOT DISPLACEMENT - COLUMN #5

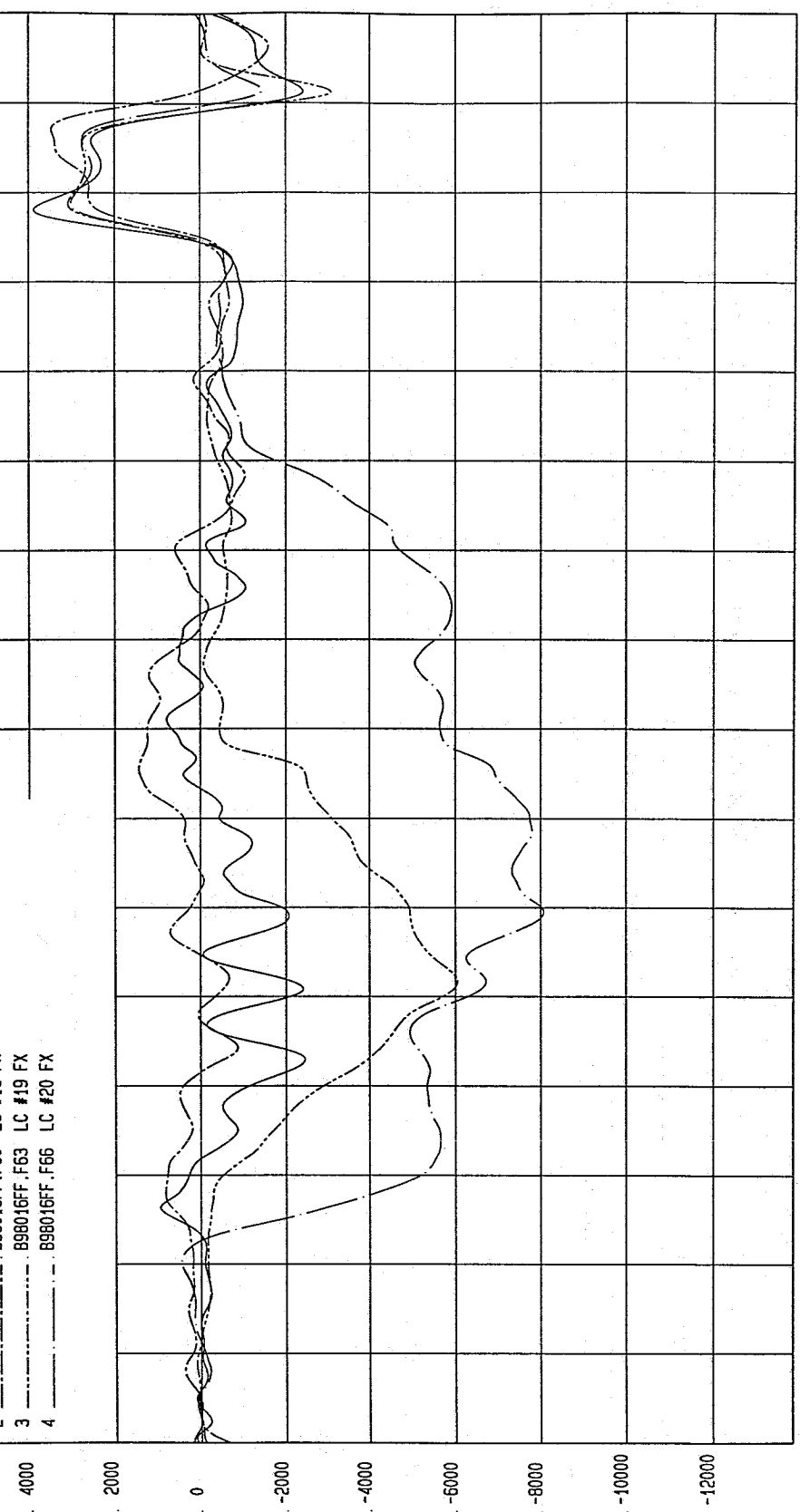
NO VALID DATA COLLECTED

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

X AXIS FORCES - COLUMN #5

- 1 B98016FF.F56 LC #17 FX
- 2 B98016FF.F60 LC #18 FX
- 3 B98016FF.F63 LC #19 FX
- 4 B98016FF.F66 LC #20 FX



TIME (SECONDS)

NGA Research
11-19-1998 10:54

TEST: FMVSS 214 SIDE IMPACT TEST

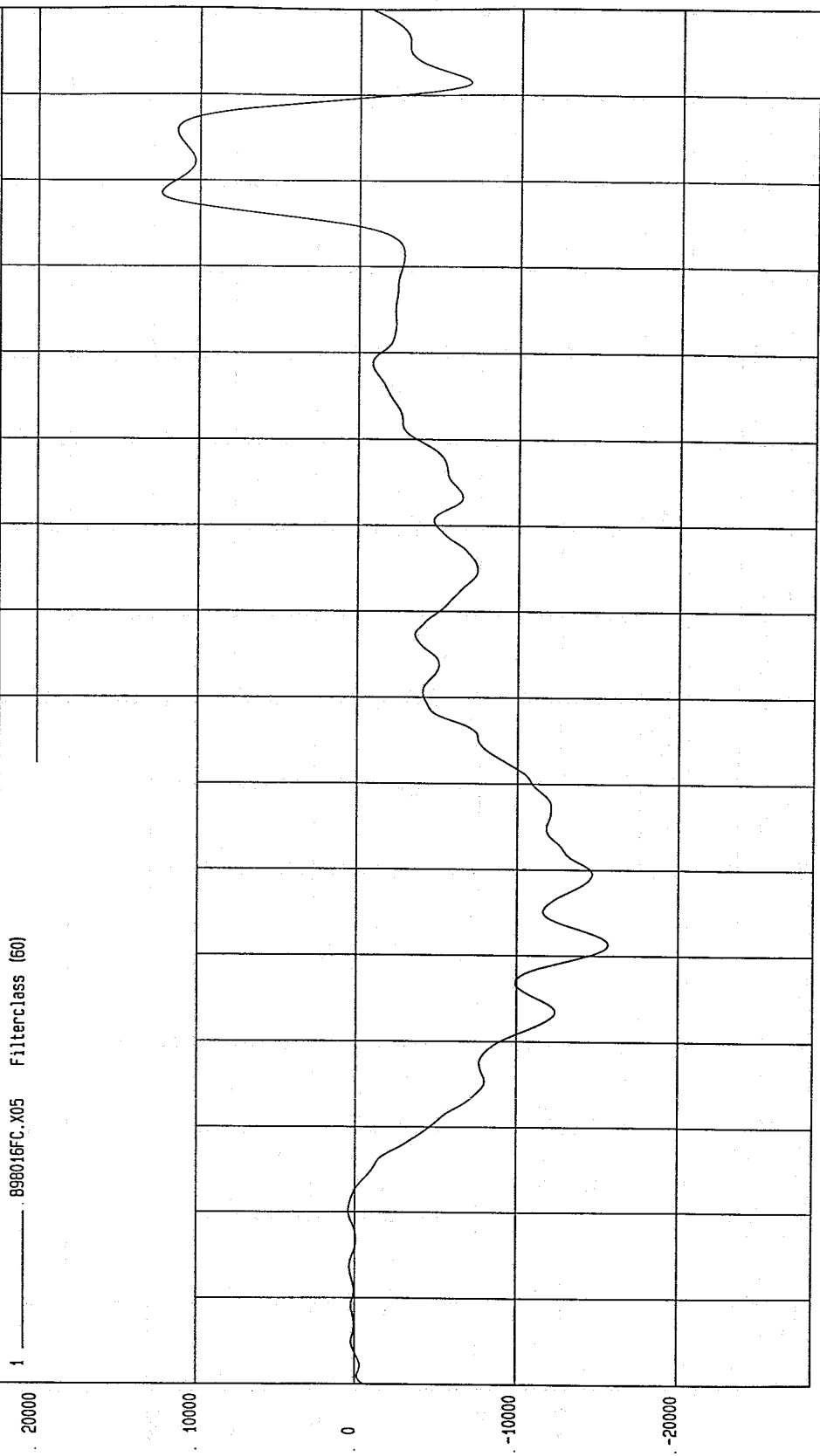
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MOB Speed: 32.8 MPH 52.8 KPH

Minimum = -15675.17 N at 31 msec Maximum = 12345.14 N at 118 msec

SUMMED X AXIS FORCES - COLUMN #5

1 898016FC.X05 Filterclass (60)



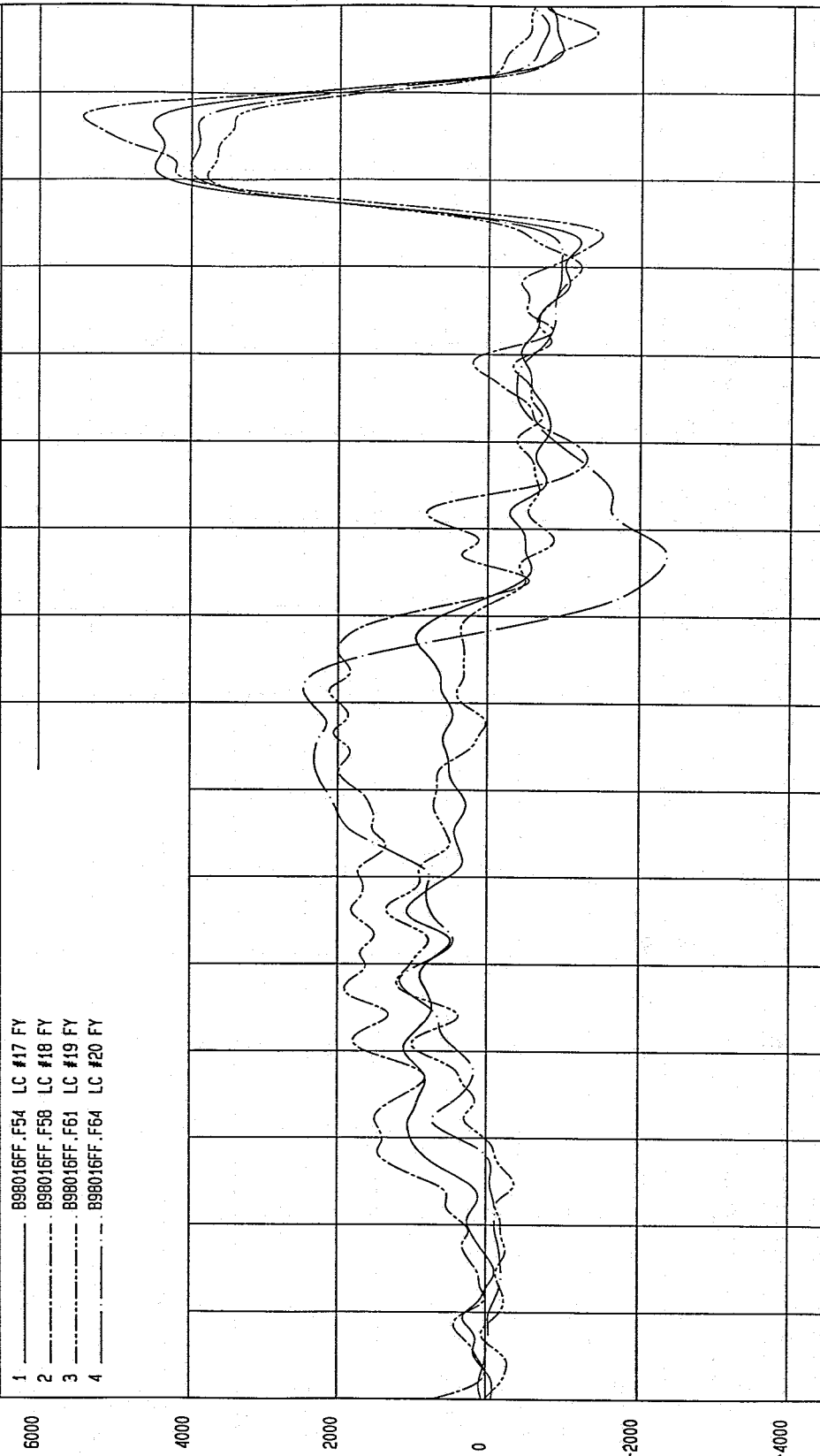
MGA Research
11-05-1998 15: 25

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Y AXIS FORCES - COLUMN #5

- 1 ——— B98016FF.F54 LC #17 FY
- 2 ——— B98016FF.F58 LC #18 FY
- 3 ——— B98016FF.F61 LC #19 FY
- 4 ——— B98016FF.F64 LC #20 FY



TIME (SECONDS)

0.13 0.12 0.11 0.1 0.09 0.08 0.07 0.06 0.05 0.04 0.03 0.02 0 0.01 0.02

NCA Research
11-19-1998 12.00

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

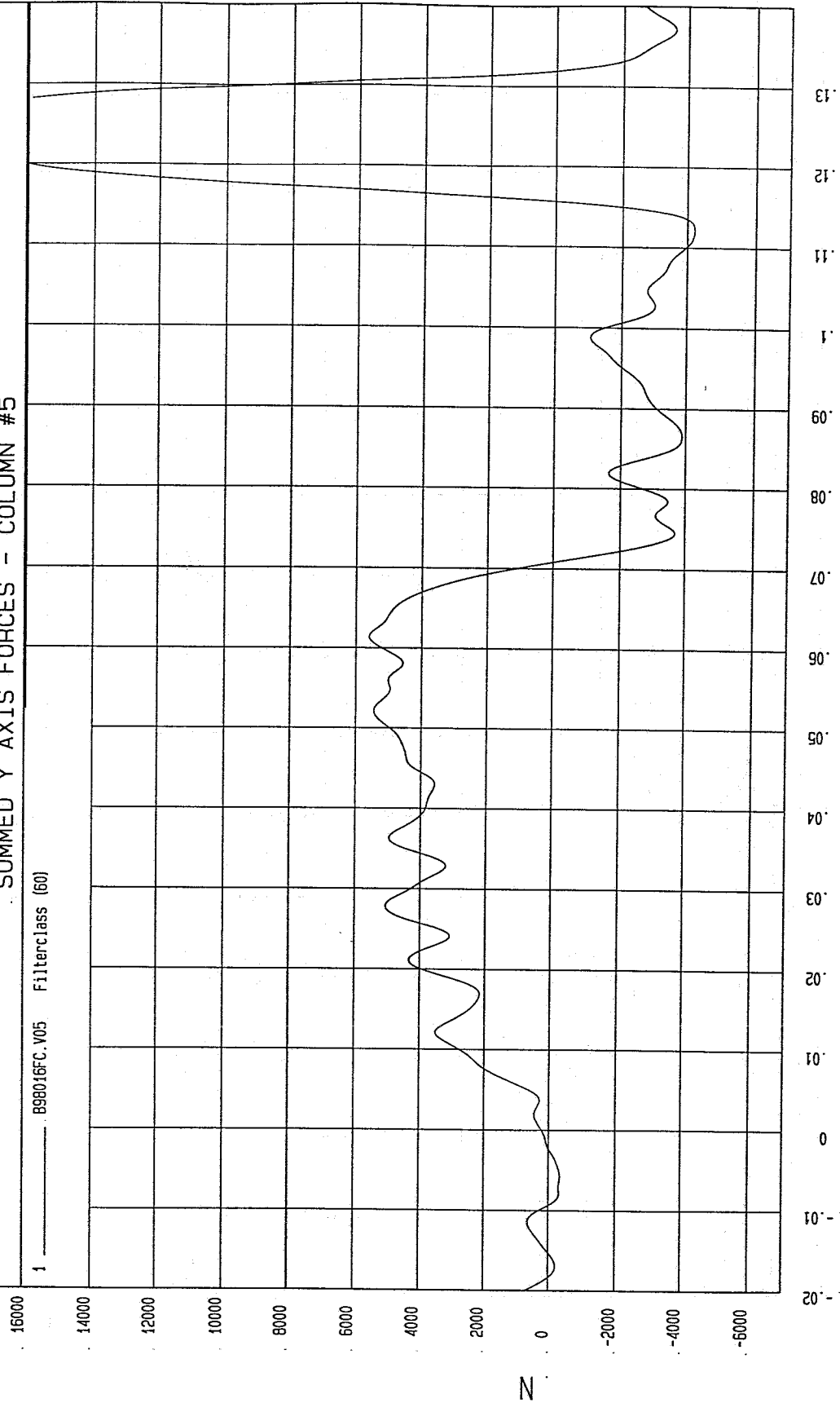
Speed: 32.8 MPH 52.8 KPH

Minimum = -4204.56 N at 112 msec

Maximum = 17175.69 N at 127 msec

SUMMED Y AXIS FORCES - COLUMN #5

1 B98016FC.V05 FilterClass (60)



MGA Research
11-25-1998 12:21

TEST: TTD#1 FMVSS 214 TYPE TEST

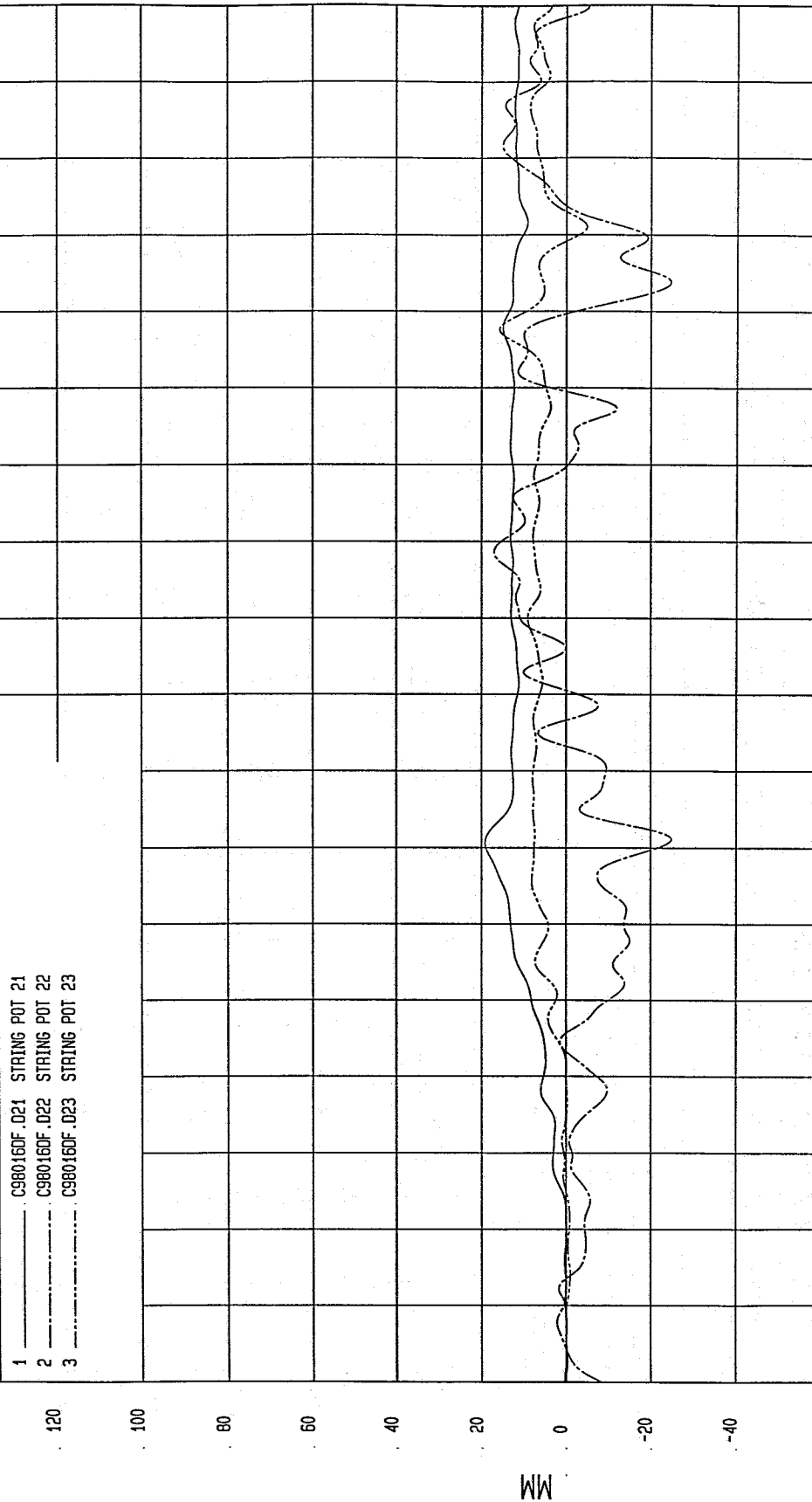
TEST DATE: 03-12-1998

Speed: 32.78 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS (RT0206)

STRINGPOT DISPLACEMENT - COLUMN #6

- 1 _____ C980160F.D21 STRING POT 21
- 2 _____ C980160F.D22 STRING POT 22
- 3 _____ C980160F.D23 STRING POT 23



MGA Research
11-10-1998 13:38

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

X AXIS FORCES - COLUMN #6

- 1 ——— B98016FF.F69 LC #21 FX
- 2 ——— B98016FF.F72 LC #22 FX
- 3 - - - - B98016FF.F76 LC #23 FX
- 4 ——— B98016FF.F79 LC #24 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-02

-01

0

01

02

03

04

05

06

07

08

09

10

11

12

13

TIME (SECONDS)

MCA Research
11-19-1998 10:54

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -16868.59 N at 40 msec

Maximum = 12942.97 N at 119 msec

SUMMED X AXIS FORCES - COLUMN #6

1 _____ B98016FC.X06 Filterclass (60)

20000

10000

0

-10000

-20000

N

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

TIME (SECONDS)

MCA Research
11-05-1998 15:26

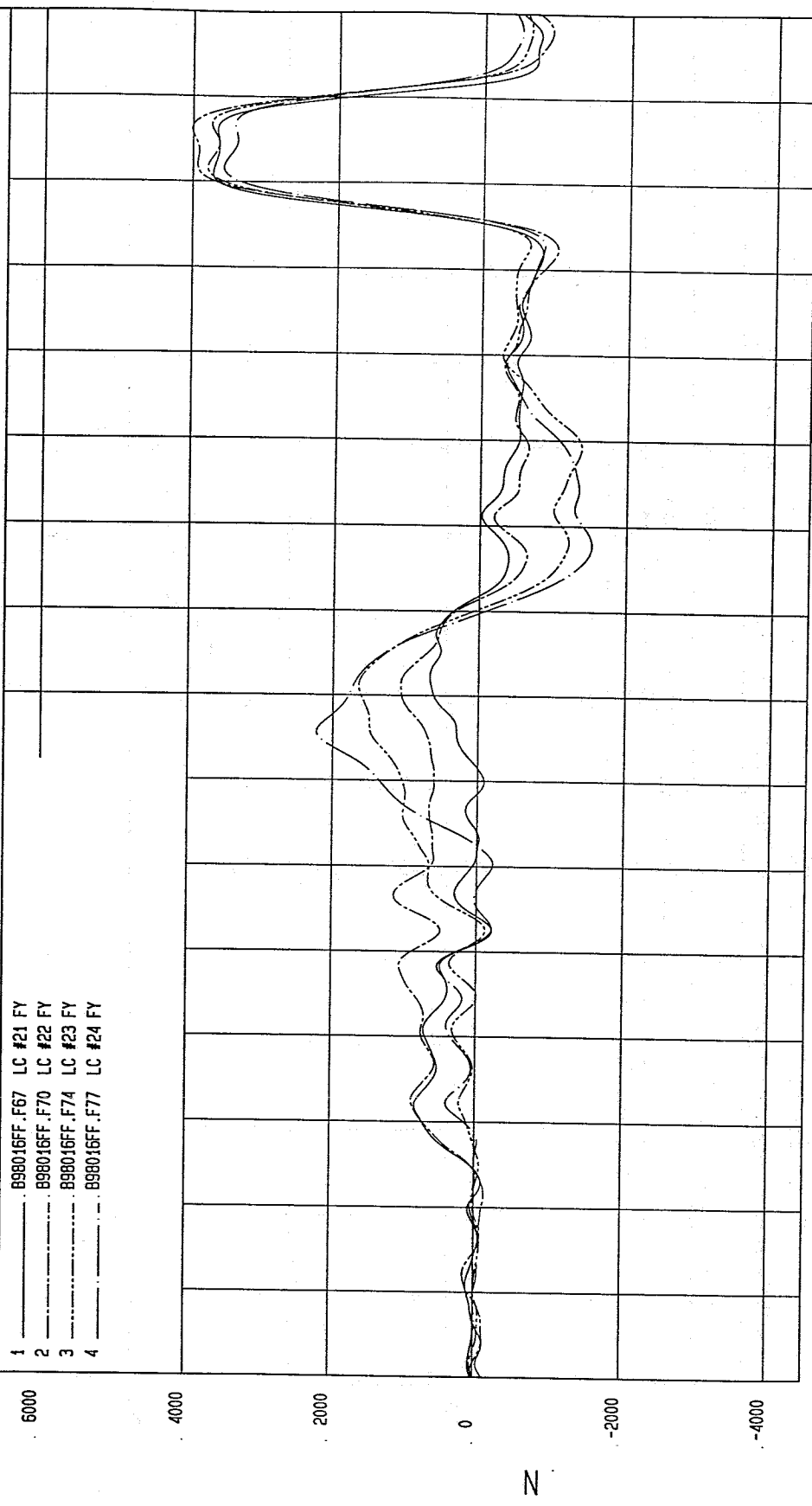
TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

Speed: 32.8 MPH 52.8 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

- Y AXIS FORCES - COLUMN #6
- 1 _____ B98016FF.F67 LC #21 FY
 - 2 _____ B98016FF.F70 LC #22 FY
 - 3 _____ B98016FF.F74 LC #23 FY
 - 4 _____ B98016FF.F77 LC #24 FY



MCA Research
11-19-1998 12:00

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -3726.45 N at 77 msec

Maximum = 15032.37 N at 122 msec

SUMMED Y AXIS FORCES - COLUMN #6

1 _____ B98016FC.V06 Filterclass (60)

16000

14000

12000

10000

8000

6000

4000

2000

0

-2000

-4000

-6000

N

-.02

-.01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

TIME (SECONDS)

MGA Research
11-11-1998 14: 41

TEST: TTD#1 FMVSS 214 TYPE TEST

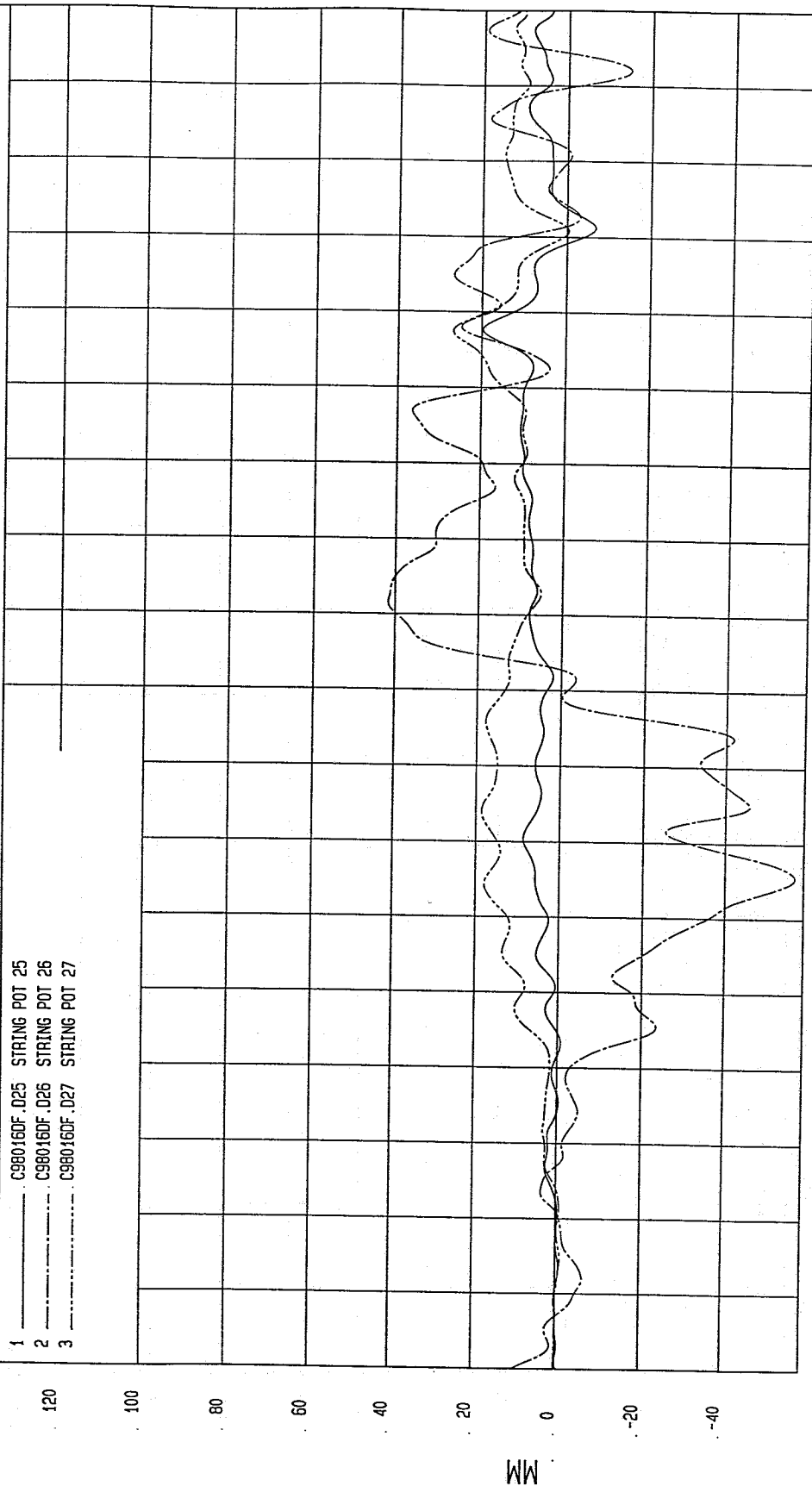
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

STRINGPOT DISPLACEMENT - COLUMN #7

- 1 _____ C980160F.D25 STRING POT 25
- 2 _____ C980160F.D26 STRING POT 26
- 3 _____ C980160F.D27 STRING POT 27



MCA Research
11-10-1998 13:38

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

X AXIS FORCES - COLUMN #7

- 1 ——— B98016FF.F82 LC #25 FX
- 2 ——— B98016FF.F86 LC #26 FX
- 3 - - - - B98016FF.F89 LC #27 FX
- 4 - - - - B98016FF.F92 LC #28 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-20

-10

0

10

20

30

40

50

60

70

80

90

100

110

120

130

TIME (SECONDS)

MCA Research
11-19-1998 10:54

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

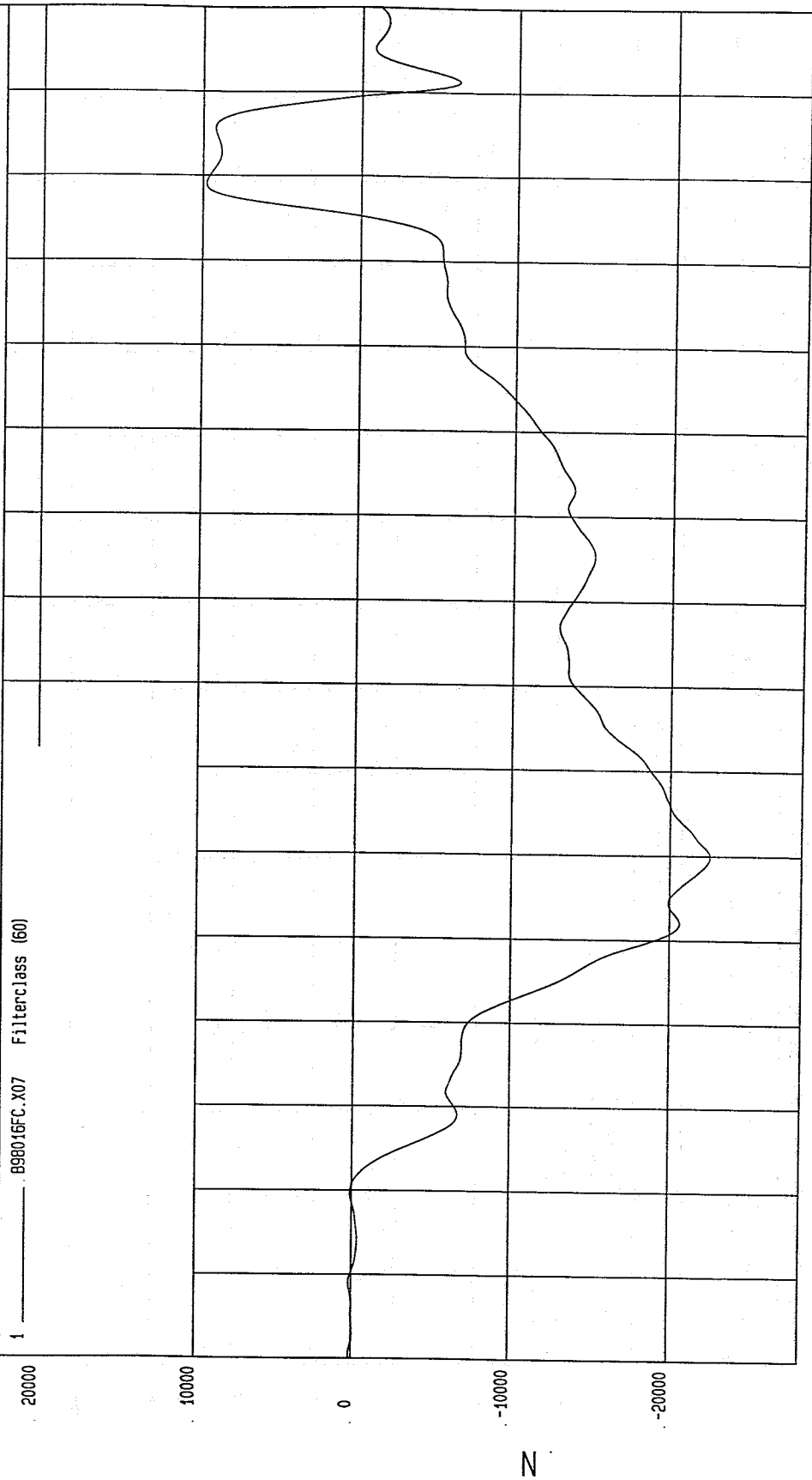
Speed: 32.8 MPH 52.8 KPH

Minimum = -22554.35 N at 40 msec

Maximum = 9778.35 N at 149 msec

SUMMED X AXIS FORCES - COLUMN #7

1 _____ 898016FC.X07 Filterclass (60)



MGA Research
11-05-1998 15:26

TEST: FMVSS 214 SIDE IMPACT TEST

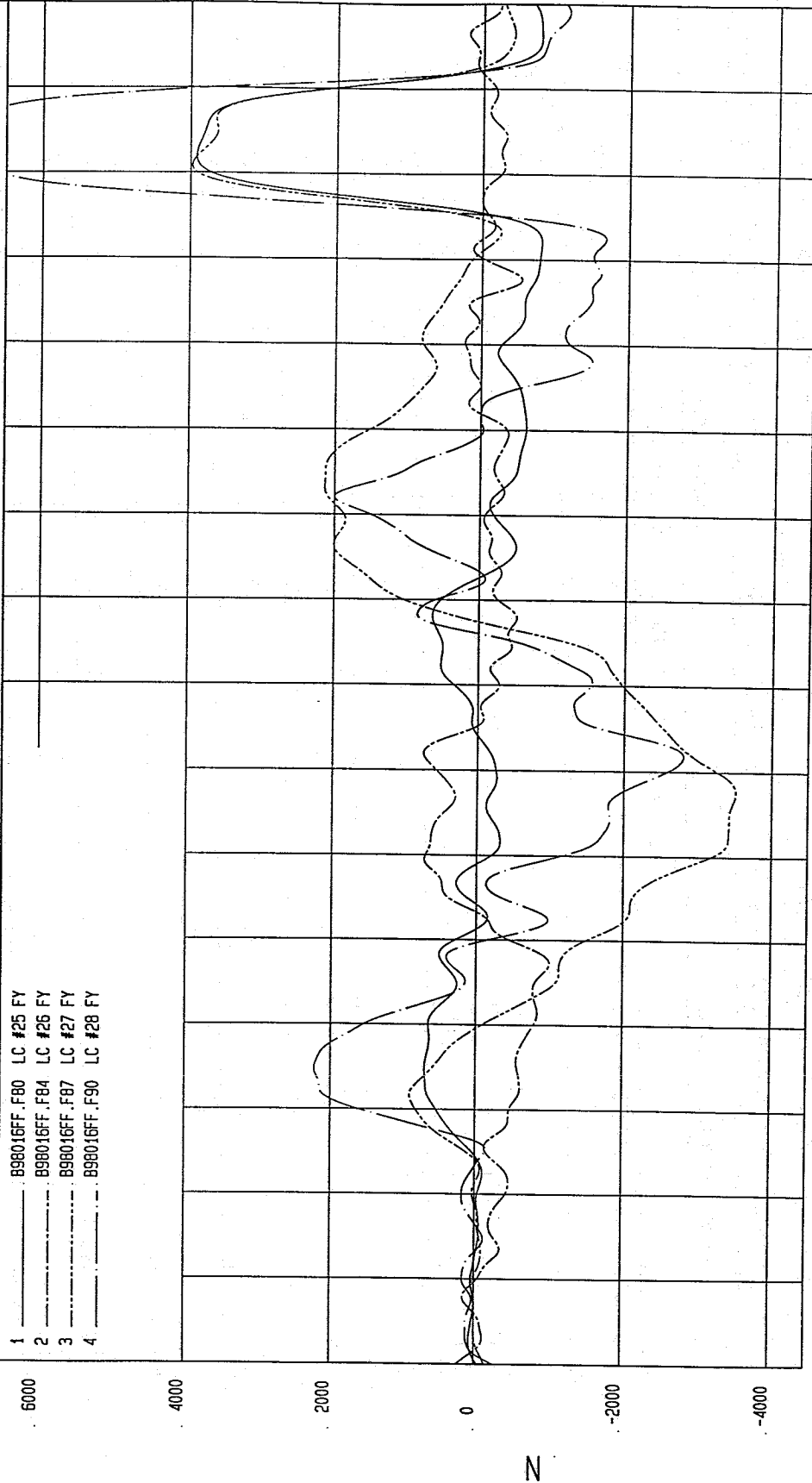
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Y AXIS FORCES - COLUMN #7

- 1 ——— B98016FF.F80 LC #25 FY
- 2 ——— B98016FF.F84 LC #26 FY
- 3 ——— B98016FF.F87 LC #27 FY
- 4 ——— B98016FF.F90 LC #28 FY



MGA Research
11-19-1998 12:00

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -5580.05 N at 49 msec

Maximum = 14361.78 N at 121 msec

SUMMED Y AXIS FORCES - COLUMN #7

1 _____ 898016FC.V07 Filterclass (60)

16000

14000

12000

10000

8000

6000

4000

2000

0

-2000

-4000

-6000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

TIME (SECONDS)

NSA Research
11-11-1998 14: 41

TEST: TTD#1 FMVSS 214 TYPE TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206) Speed: 32.78 MPH 52.8 KPH

STRINGPOT DISPLACEMENT - COLUMN #8

- 1 _____ C980160F .029 STRING POT 29
- 2 _____ C980160F .030 STRING POT 30
- 3 _____ C980160F .032 STRING POT 32

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (seconds)

NCA Research
11-10-1998 13:38

TEST: TTD#1 FMVSS 214 TYPE TEST

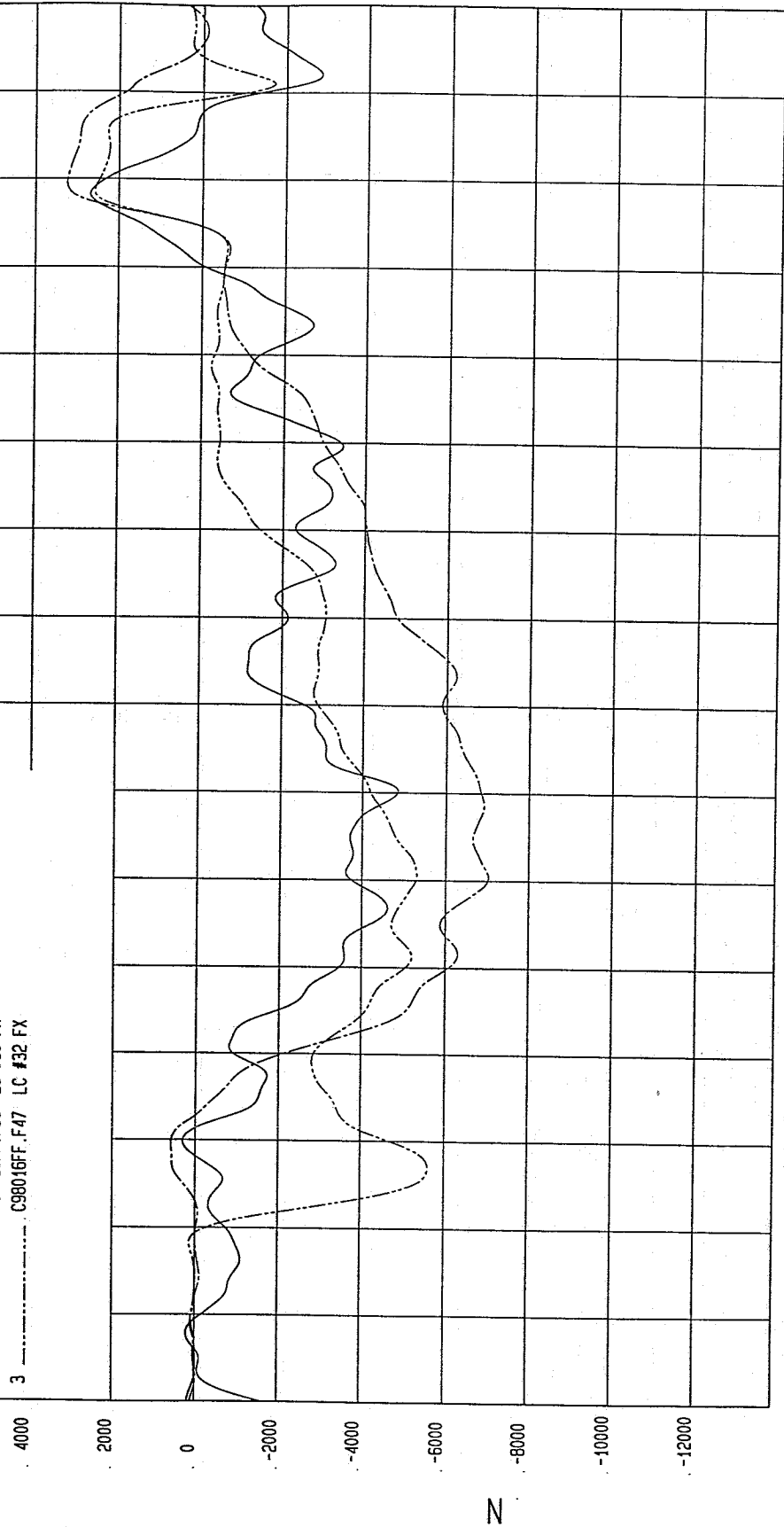
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

X AXIS FORCES - COLUMN #8

- 1 ——— B98016FF.F96 LC #29 FX
- 2 ——— B98016FF.F99 LC #30 FX
- 3 ——— C98016FF.F47 LC #32 FX



MGA Research
11-19-1998 11:34

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

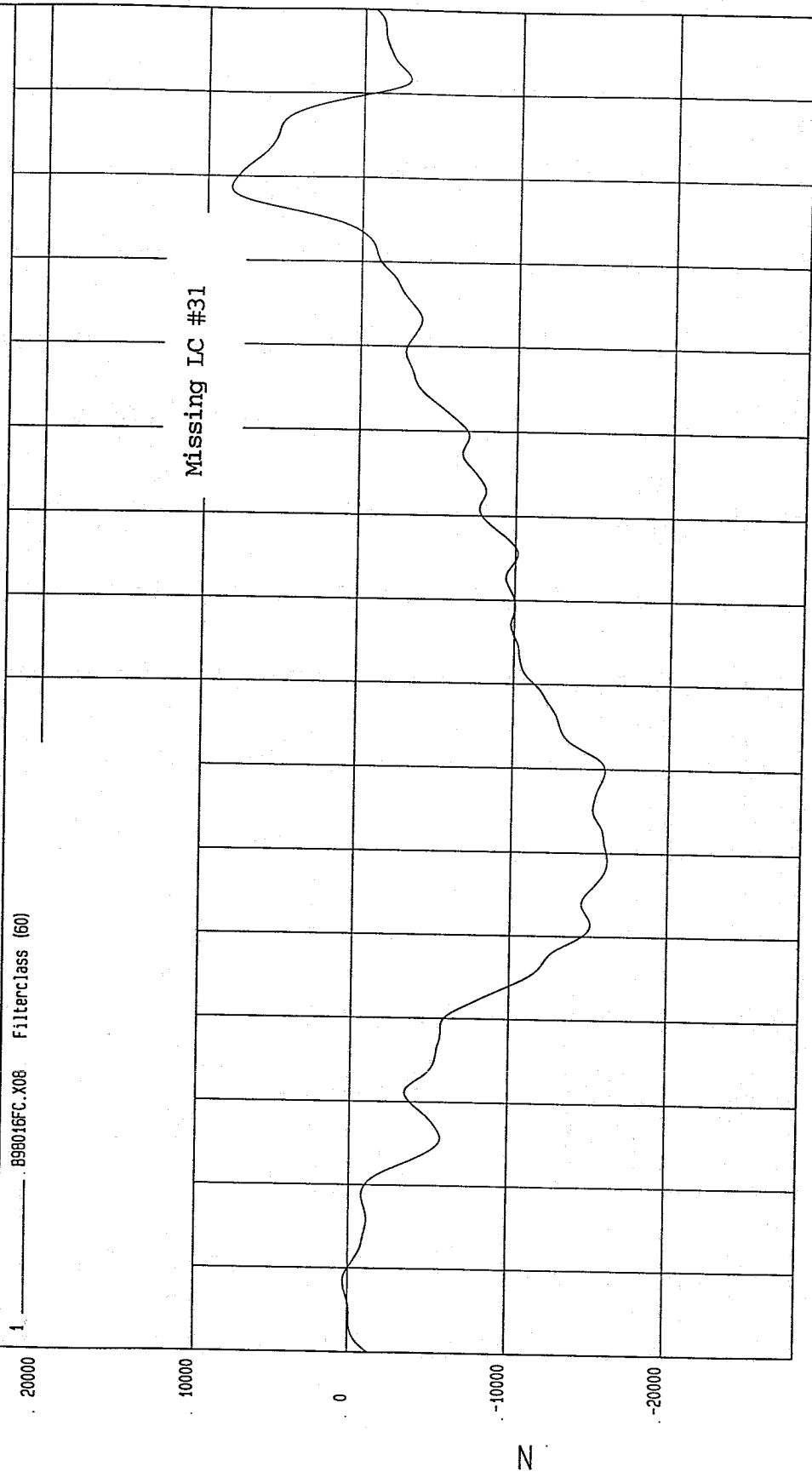
Speed: 32.78 MPH 52.8 KPH

Minimum = -16107.23 N at 39 msec

Maximum = 8431.53 N at 119 msec

SUMMED X AXIS FORCES - COLUMN #8

1. B98016FC.X08 Filterclass (60)



TIME (seconds)

MCA Research
11-05-1998 15:45

TEST: TTD#1 FMVSS 214 TYPE TEST

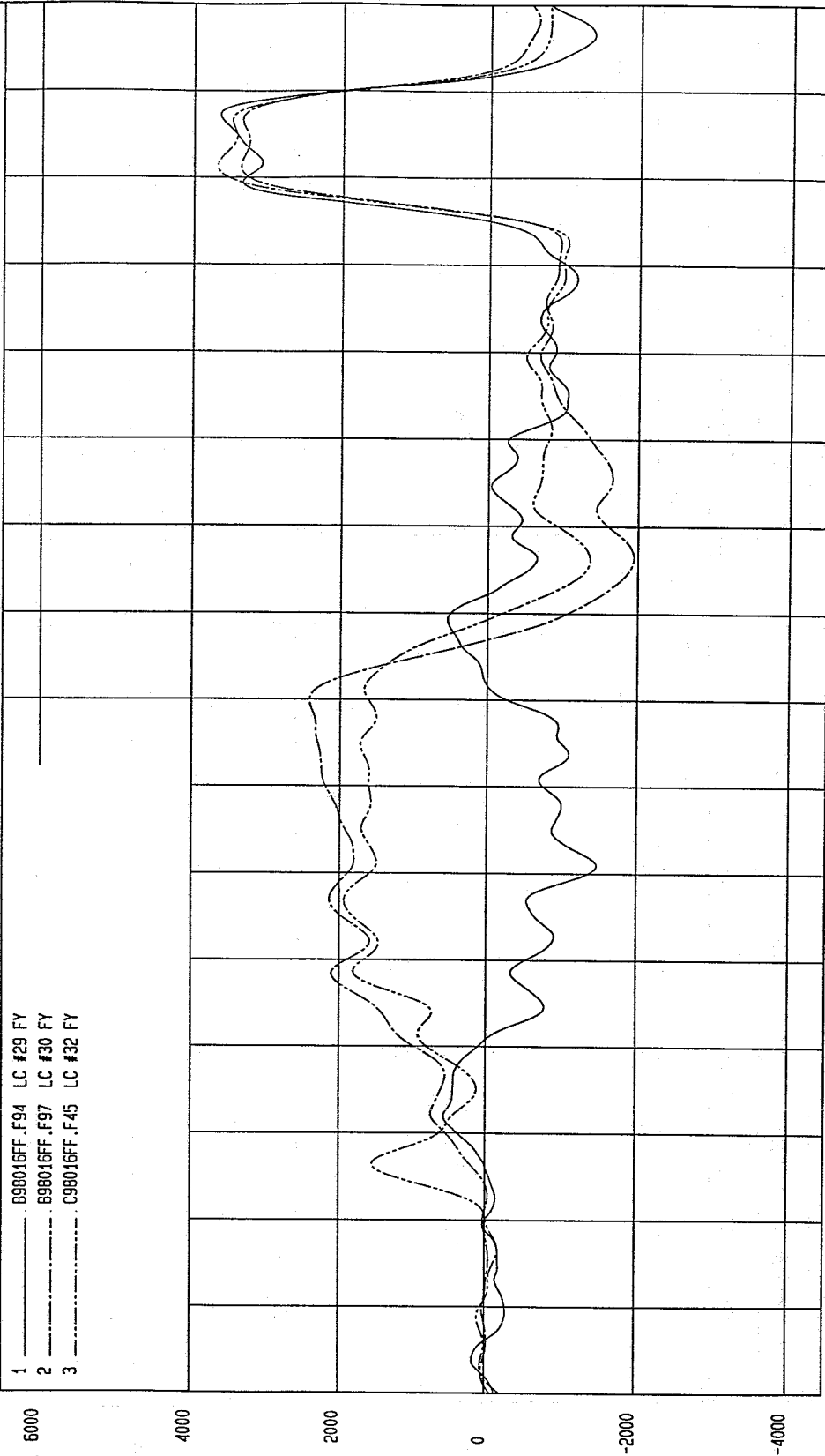
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Y AXIS FORCES - COLUMN #8

- 1 ——— B98016FF.F94 LC #29 FY
2 ——— B98016FF.F97 LC #30 FY
3 ——— C98016FF.F45 LC #32 FY



NCA Research
11-19-1998 12:01

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -3978.81 N at 76 msec

Maximum = 10442.01 N at 127 msec

SUMMED Y AXIS FORCES - COLUMN #8

1 ——— .B98016FC.V08 Filterclass (60)

16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
-4000
-6000

Missing LC #31

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

TIME (seconds)

MCA Research
11-11-1998 14:41

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

STRINGPOT DISPLACEMENT - COLUMN #9

- 1 _____ C980160F.D33 STRING POT 33
- 2 _____ C980160F.D34 STRING POT 34
- 3 _____ C980160F.D35 STRING POT 35
- 4 _____ C980160F.D36 STRING POT 36

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (seconds)

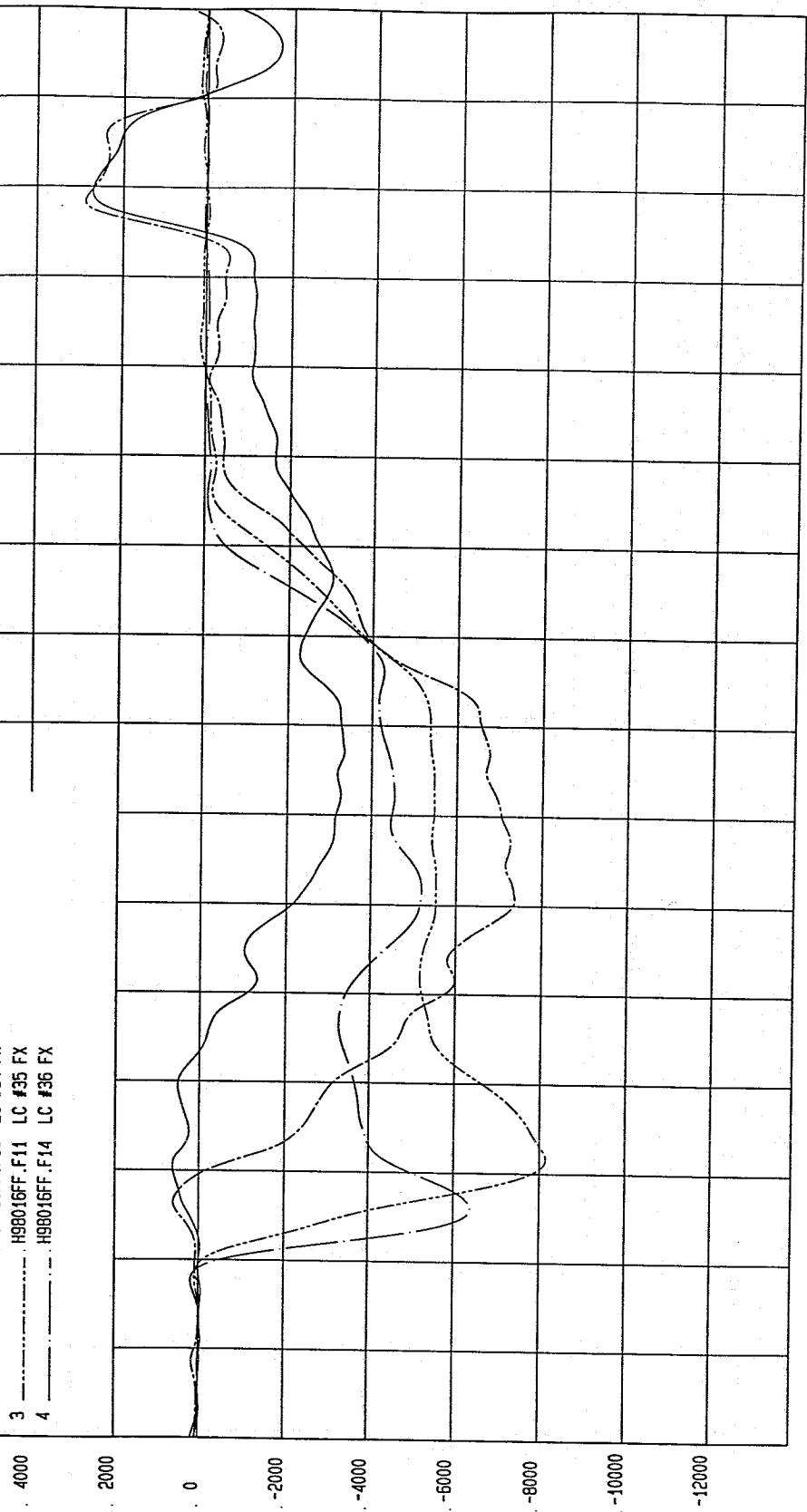
MCA Research
11-10-1998 13:38

TEST: FMVSS 214 SIDE IMPACT TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 34.8 MPH 56 KPH

X AXIS FORCES - COLUMN #9

- 1 C98016FF.F50 LC #33 FX
- 2 C98016FF.F53 LC #34 FX
- 3 H98016FF.F11 LC #35 FX
- 4 H98016FF.F14 LC #36 FX



MCA Research
11-19-1998 11:32

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

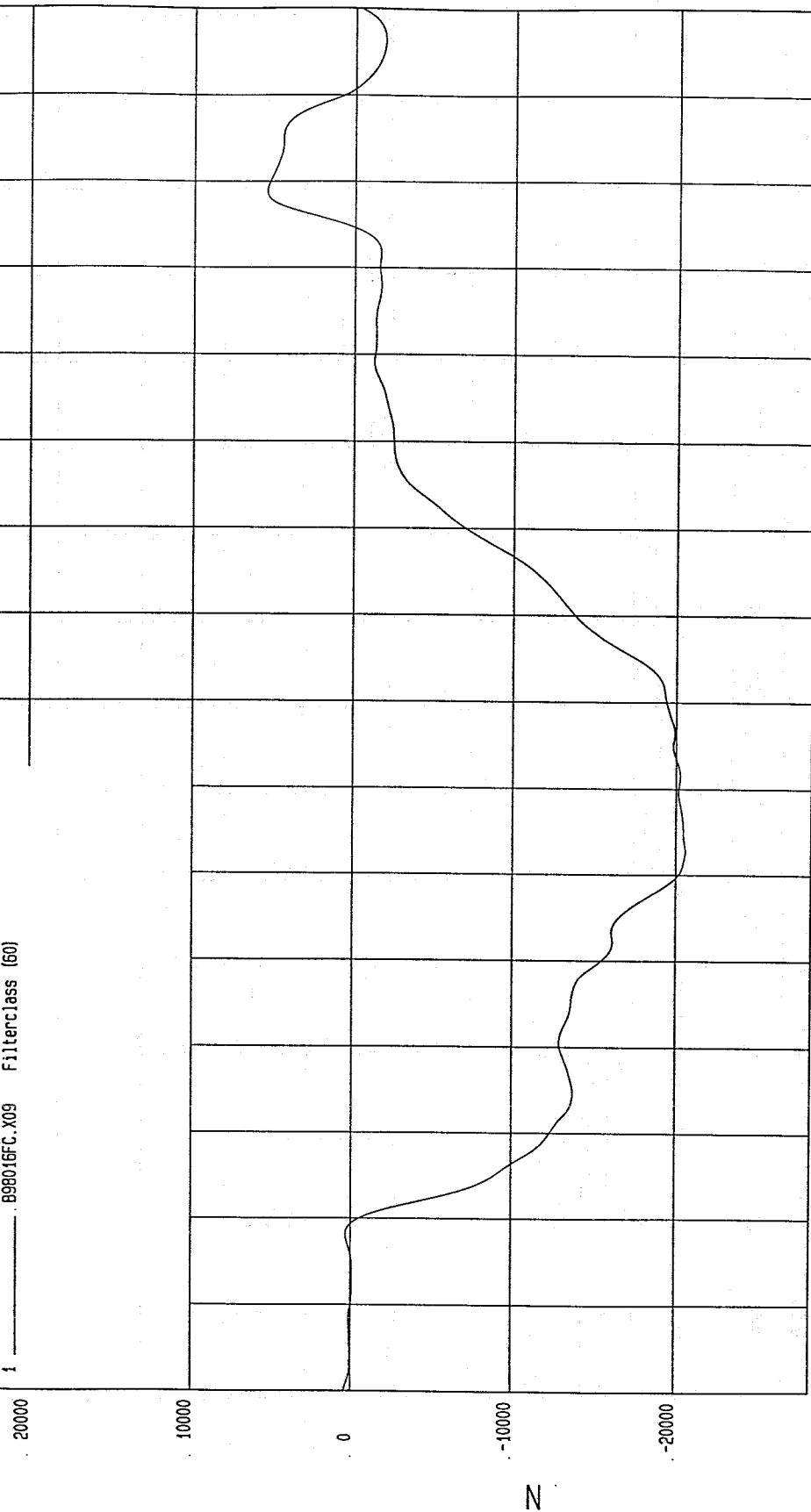
Speed: 34.8 MPH 56 KPH

Minimum = -20575.7 N at 43 msec

Maximum = 6008.67 N at 153 msec

SUMMED X AXIS FORCES - COLUMN #9

1 ——— B98016FC.X09 Filterclass (60)



MCA Research
11-05-1998 15:26

TEST: FMVSS 214 SIDE IMPACT

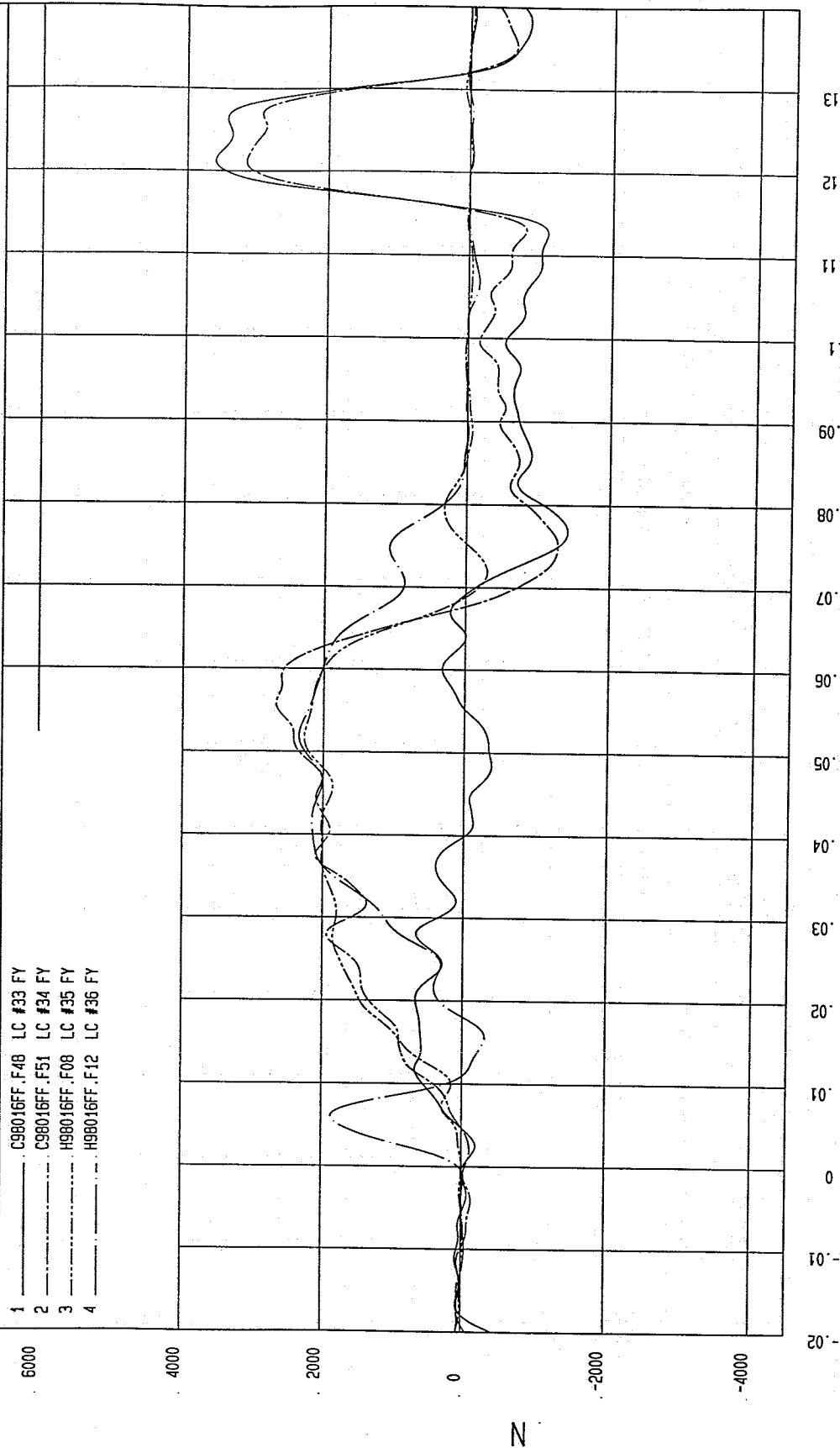
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Y AXIS FORCES - COLUMN #9

- 1 _____ C98016FF.F48 LC #33 FY
- 2 _____ C98016FF.F51 LC #34 FY
- 3 _____ H98016FF.F08 LC #35 FY
- 4 _____ H98016FF.F12 LC #36 FY



MSA Research
11-19-1998 11:58

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

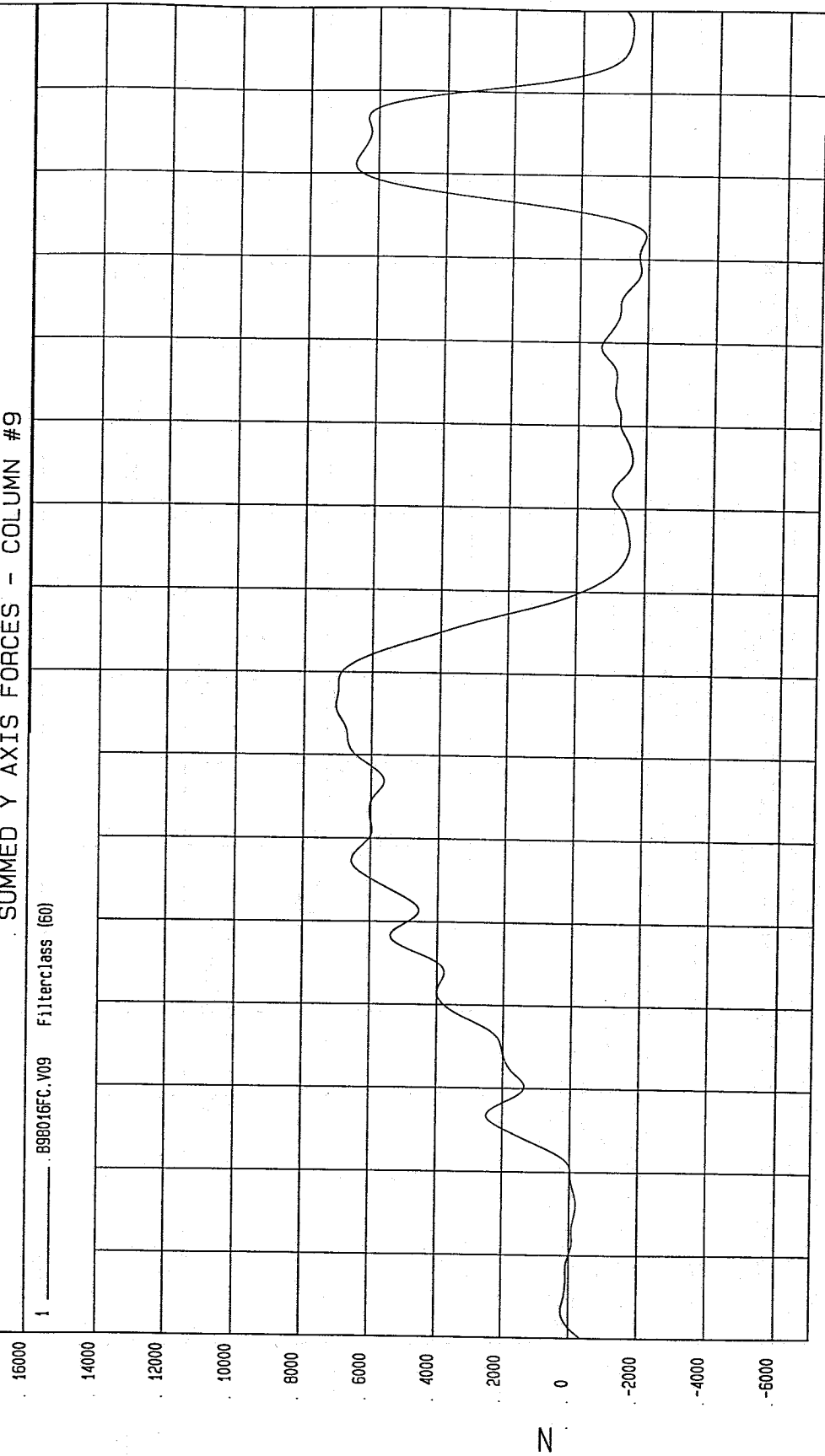
Speed: 34.8 MPH 56 KPH

Minimum = -1915.88 N at 113 msec

Maximum = 7071.65 N at 56 msec

SUMMED Y AXIS FORCES - COLUMN #9

1 _____ .B9B016FC.V09 FilterClass (60)



NGA Research
11-11-1998 14: 41

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

STRINGPOT DISPLACEMENT - COLUMN #10

- 1 _____ C980160F .037 STRING POT 37
- 2 _____ C980160F .038 STRING POT 38
- 3 _____ C980160F .039 STRING POT 39
- 4 _____ C980160F .040 STRING POT 40

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (seconds)

NCA Research
11-10-1998 13:38

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

X AXIS FORCES - COLUMN #10

1	_____	H98016FF.F17	LC #37 FX
2	_____	H98016FF.F21	LC #38 FX
3	_____	H98016FF.F24	LC #39 FX
4	_____	H98016FF.F27	LC #40 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

TIME (SECONDS)

MGA Research
11-19-1998 11:27

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -26048.24 N at 40 msec

Maximum = 585.58 N at 187 msec

SUMMED X AXIS FORCES - COLUMN #10

1 _____ 898016FC.X10 Filterclass (60)

20000

10000

0

-10000

-20000

N

-02

-01

0

01

02

03

04

05

06

07

08

09

10

11

12

13

TIME (SECONDS)

MSA Research
11-05-1998 15:26

TEST: FMVSS 214 SIDE IMPACT

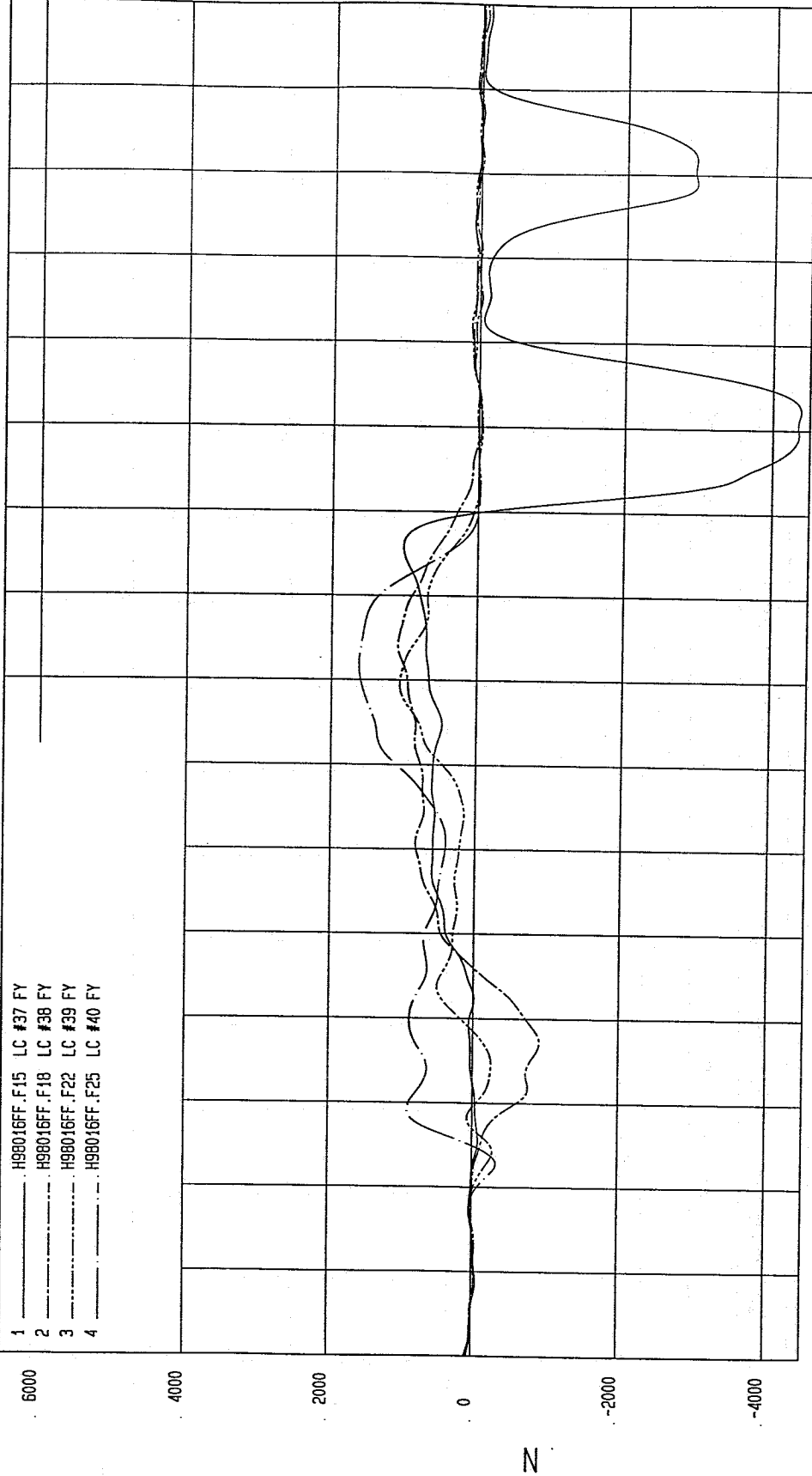
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Y AXIS FORCES - COLUMN #10

- 1 _____ H98016FF.F15 LC #37 FY
- 2 _____ H98016FF.F18 LC #38 FY
- 3 _____ H98016FF.F22 LC #39 FY
- 4 _____ H98016FF.F25 LC #40 FY



MGA Research
11-19-1998 11:58

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

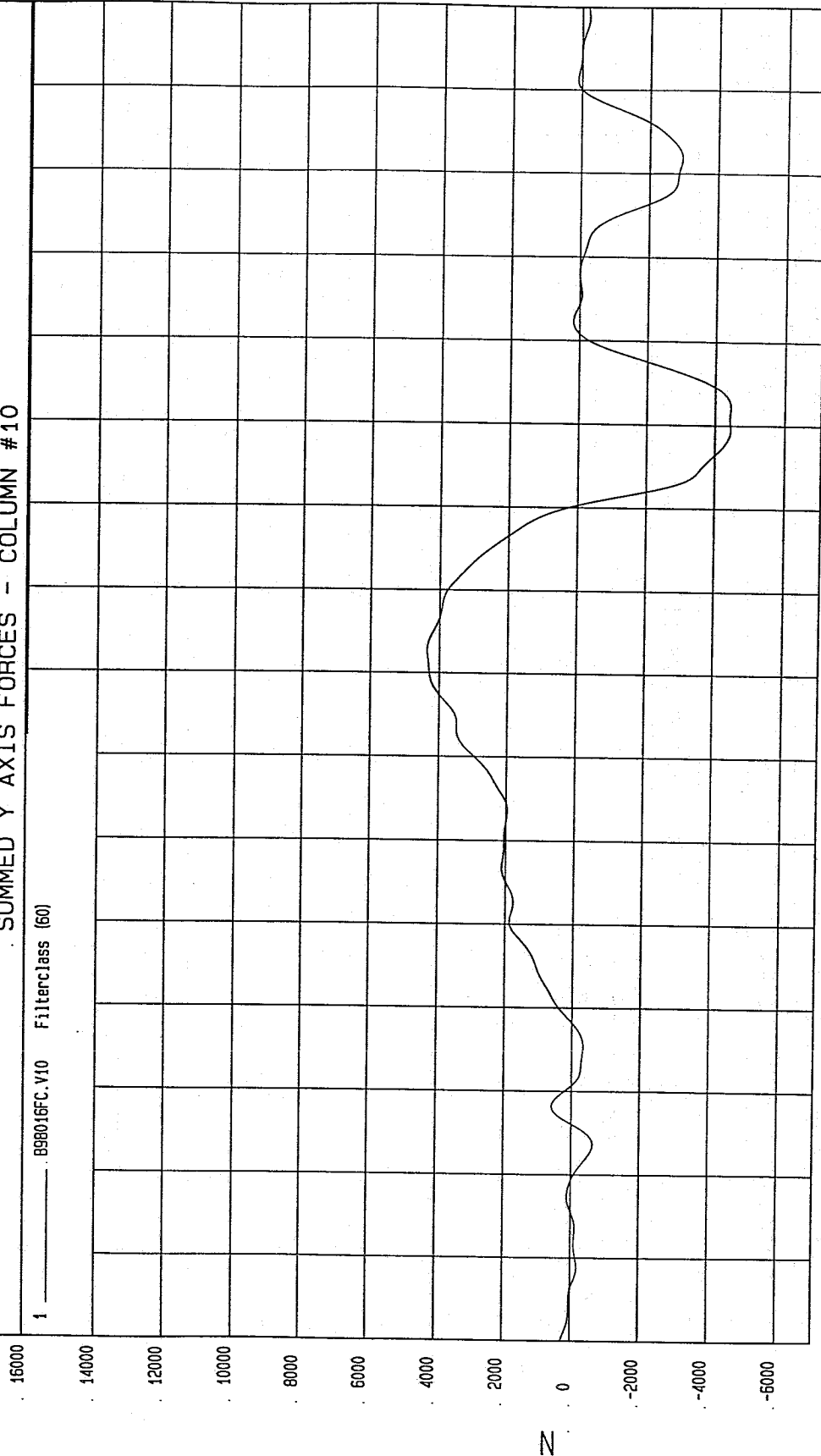
Speed: 34.8 MPH 56 KPH

Minimum = -4435.97 N at 92 msec

Maximum = 4353.15 N at 63 msec

SUMMED Y AXIS FORCES - COLUMN #10

1 _____ B98016FC.V10 FilterClass (60)



MGA Research
11-11-1998 14: 41

TIME (SECONDS)

TEST: TTD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

STRINGPOT DISPLACEMENT - COLUMN #11

- 1 ——— C980160F.D41 STRING POT 41
- 2 ——— C980160F.D42 STRING POT 42
- 3 ——— C980160F.D43 STRING POT 43
- 4 ——— C980160F.D44 STRING POT 44

120

100

80

60

40

20

0

-20

-40

MM

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

.14

.15

TIME (seconds)

MGA Research
11-10-1998 13:36

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

X AXIS FORCES - COLUMN #11

- 1 ——— H98016FF.F31 LC #41 FX
- 2 - - - - H98016FF.F34 LC #42 FX
- 3 - - - - H98016FF.F37 LC #43 FX
- 4 - - - - H98016FF.F41 LC #44 FX

4000

2000

0

-2000

-4000

-6000

-8000

-10000

-12000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

TIME (SECONDS)

NGA Research
11-19-1998 11:27

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -22524.75 N at 40 msec

Maximum = 821.86 N at 187 msec

SUMMED X AXIS FORCES - COLUMN #11

1 ——— B98016FC.X11 Filterclass (60)

20000

10000

0

-10000

-20000

N

-0.02

-0.01

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

TIME (SECONDS)

MGA Research
11-05-1998 16:46

TEST: FMVSS 214 SIDE IMPACT

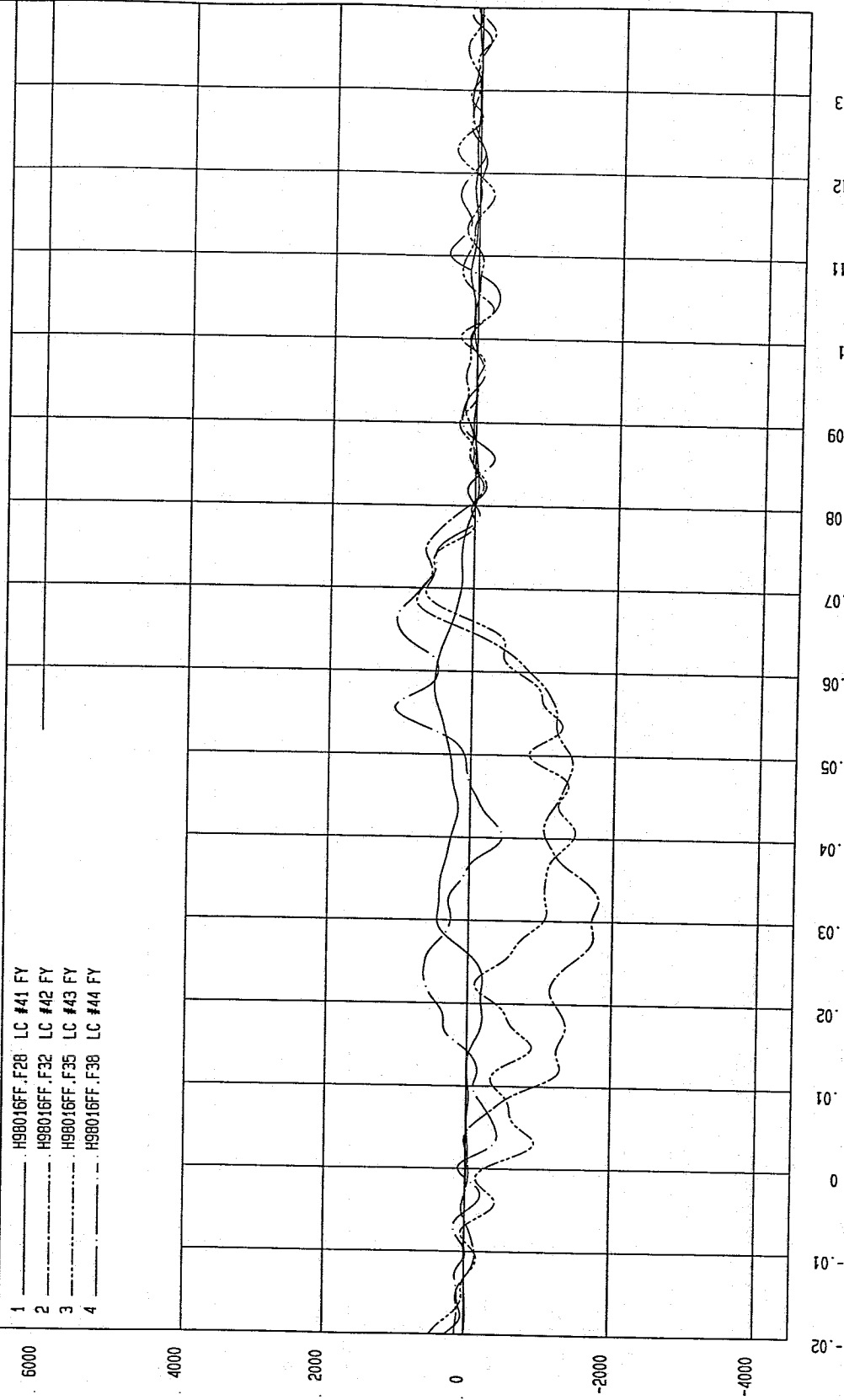
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

X AXIS FORCES - COLUMN #11

- 1 ——— H98016FF.F28 LC #41 FY
- 2 ——— H98016FF.F32 LC #42 FY
- 3 ——— H98016FF.F35 LC #43 FY
- 4 ——— H98016FF.F38 LC #44 FY



NCA Research
11-19-1998 11:58

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -2734.84 N at 40 msec

Maximum = 2474.4 N at 68 msec

SUMMED Y AXIS FORCES - COLUMN #11

1 _____ B98016FC.V11 Filterclass (60)

16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
-4000
-6000

N

-02

-01

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

.13

TIME (SECONDS)

MSA Research
11-11-1998 14: 41

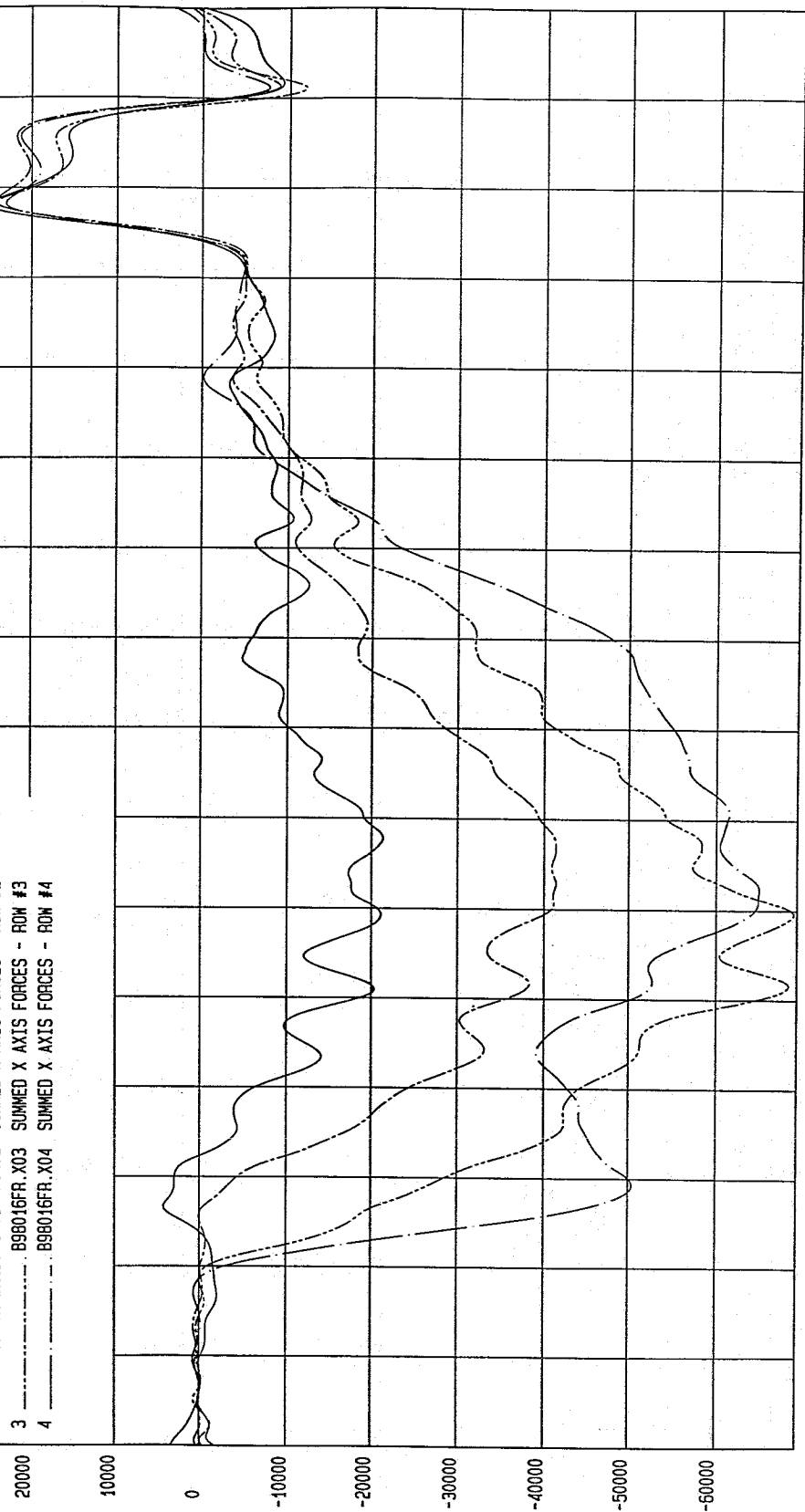
TEST: FMVSS 214 SIDE IMPACT TEST DATE: 03-12-1998

SPEED: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

SUMMED X AXIS FORCES BY ROWS

- 1 ——— B98016FR.X01 SUMMED X AXIS FORCES - ROW #1
- 2 - - - - B98016FR.X02 SUMMED X AXIS FORCES - ROW #2
- 3 - - - - B98016FR.X03 SUMMED X AXIS FORCES - ROW #3
- 4 ——— B98016FR.X04 SUMMED X AXIS FORCES - ROW #4



TEST: FMVSS 214 SIDE IMPACT

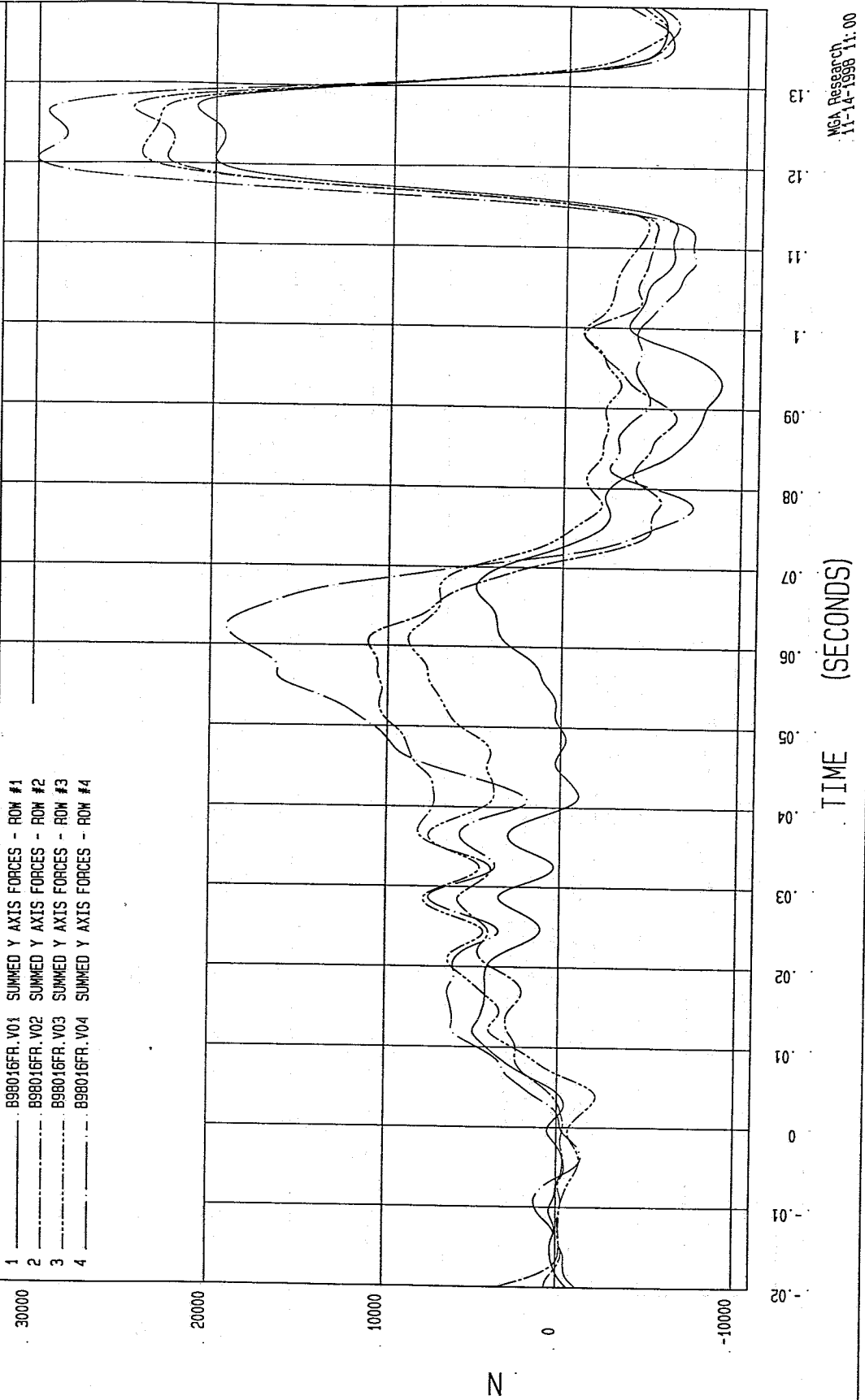
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

SUMMED Y AXIS FORCES BY ROWS

- 1 ——— .B98016FR.V01 SUMMED Y AXIS FORCES - ROW #1
- 2 ——— .B98016FR.V02 SUMMED Y AXIS FORCES - ROW #2
- 3 ——— .B98016FR.V03 SUMMED Y AXIS FORCES - ROW #3
- 4 ——— .B98016FR.V04 SUMMED Y AXIS FORCES - ROW #4



TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

SUMMED X AXIS FORCES BY COLUMNS (1-6)

1	-----	B98016FC.X01	SUMMED X AXIS FORCES - COLUMN #1
2	-----	B98016FC.X02	SUMMED X AXIS FORCES - COLUMN #2
3	-----	B98016FC.X03	SUMMED X AXIS FORCES - COLUMN #3
4	-----	B98016FC.X04	SUMMED X AXIS FORCES - COLUMN #4
5	-----	B98016FC.X05	SUMMED X AXIS FORCES - COLUMN #5
6	-----	B98016FC.X06	SUMMED X AXIS FORCES - COLUMN #6

10000

0

-10000

-20000

N

-0.02

0

0.01

0.02

0.03

0.04

0.05

0.06

0.07

0.08

0.09

0.1

0.11

0.12

0.13

TIME (SECONDS)

MCA Research
11-09-1998 12.48

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

SUMMED X AXIS FORCES BY COLUMNS (6-11)

1	-----	B98016FC.X06	SUMMED X AXIS FORCES - COLUMN #6
2	-----	B98016FC.X07	SUMMED X AXIS FORCES - COLUMN #7
3	-----	B98016FC.X08	SUMMED X AXIS FORCES - COLUMN #8
4	-----	B98016FC.X09	SUMMED X AXIS FORCES - COLUMN #9
5	-----	B98016FC.X10	SUMMED X AXIS FORCES - COLUMN #10
6	-----	B98016FC.X11	SUMMED X AXIS FORCES - COLUMN #11

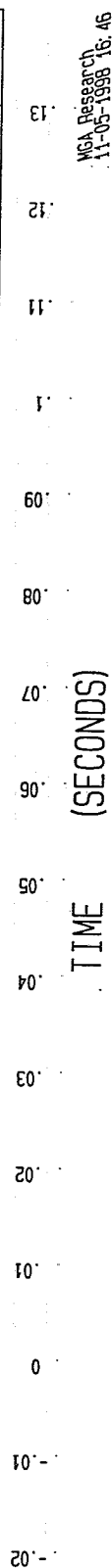
10000

0

-10000

-20000

N



TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

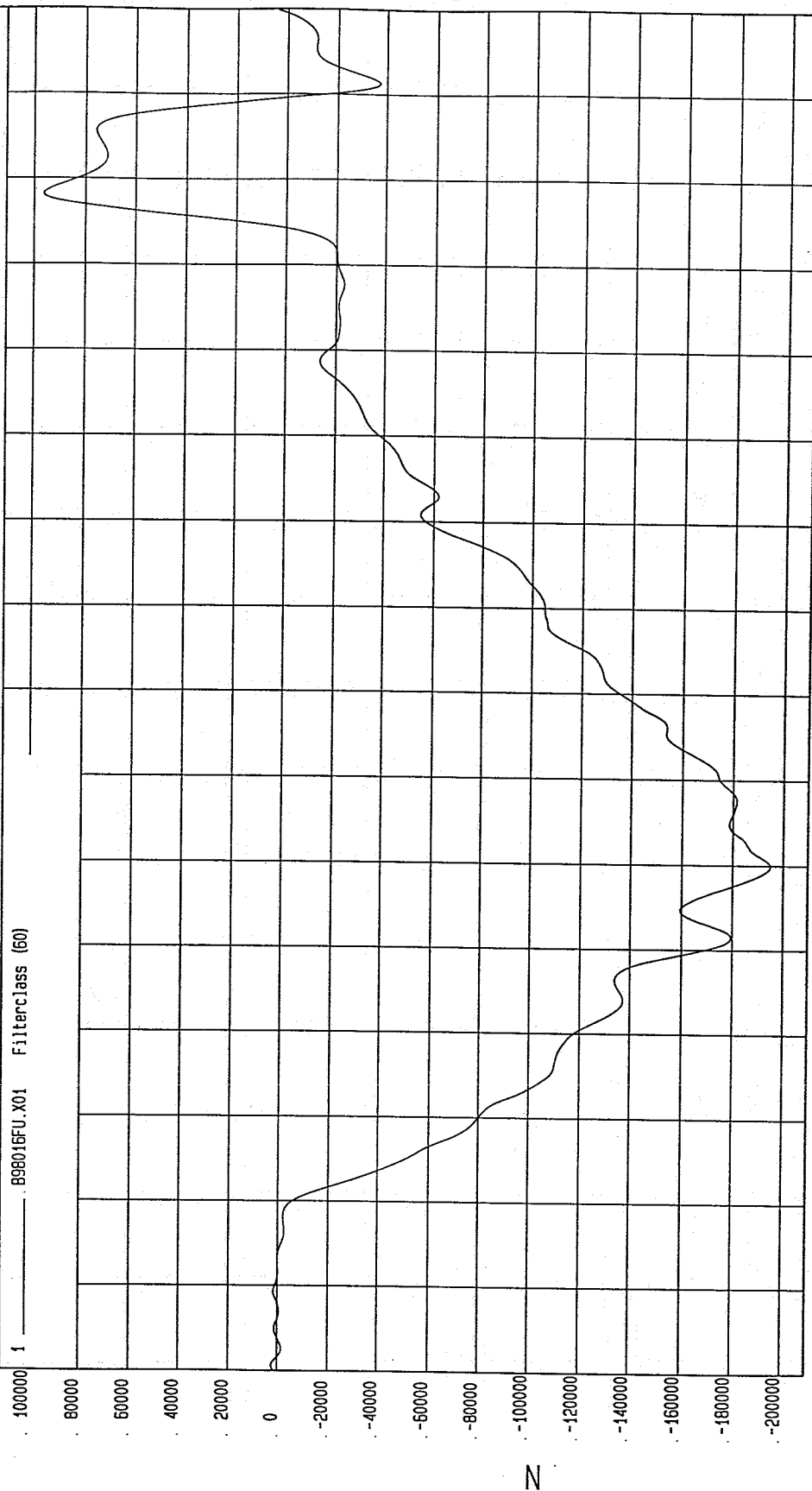
Speed: 34.8 MPH 56 KPH

Minimum = -195027.2 N at 40 msec

Maximum = 96301.99 N at 118 msec

SUMMED X AXIS FORCES

1 ——— .B98016FU.X01 Filterclass (60)



MCA Research
11-14-1998 11:11

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

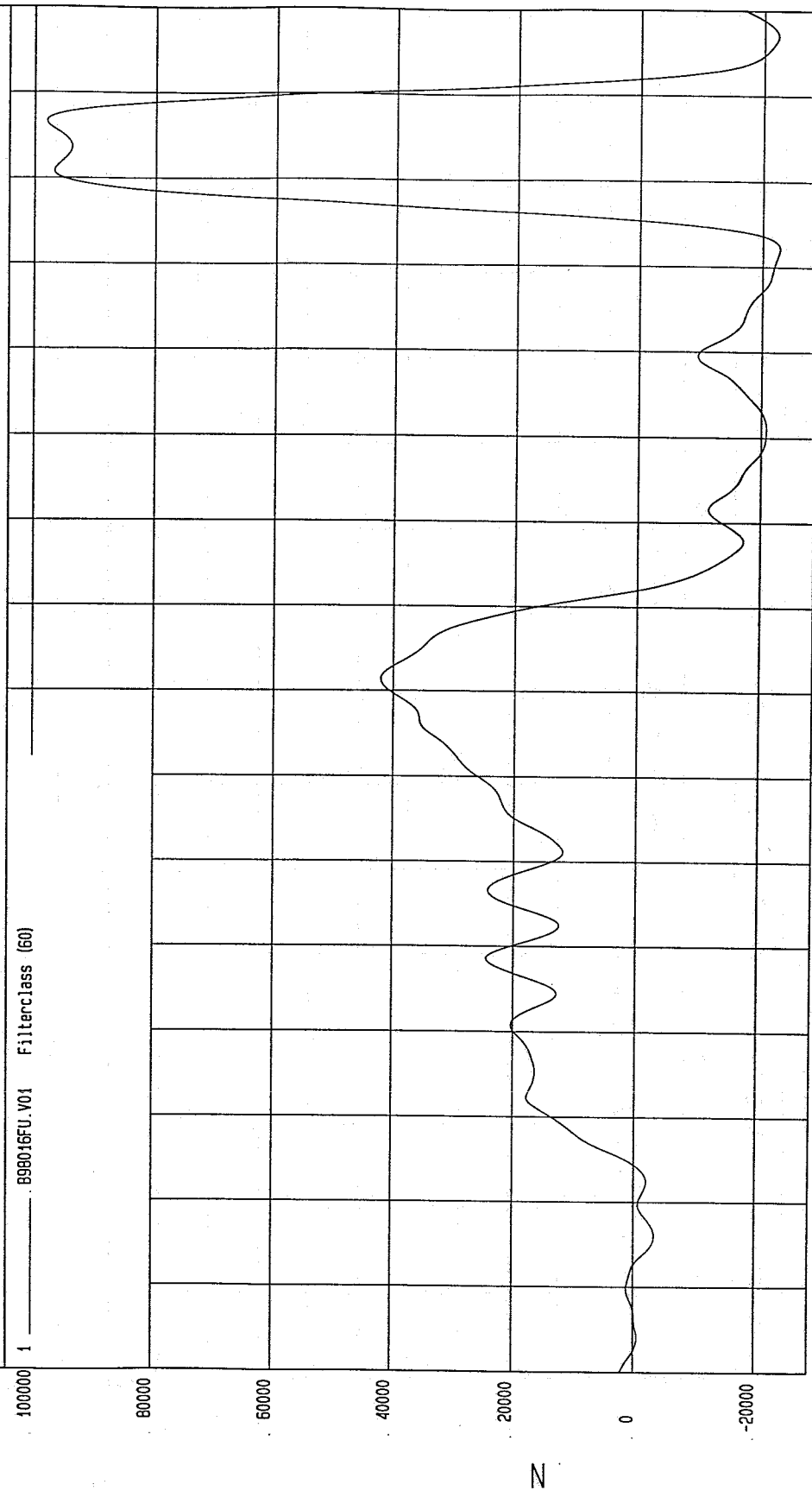
Speed: 34.8 MPH 56 KPH

Minimum = -22781.64 N at 112 msec

Maximum = 98022.52 N at 127 msec

SUMMED Y AXIS FORCES

1 898016FU.V01 Filterclass (60)



MCA Research
11-14-1998 11: 11

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

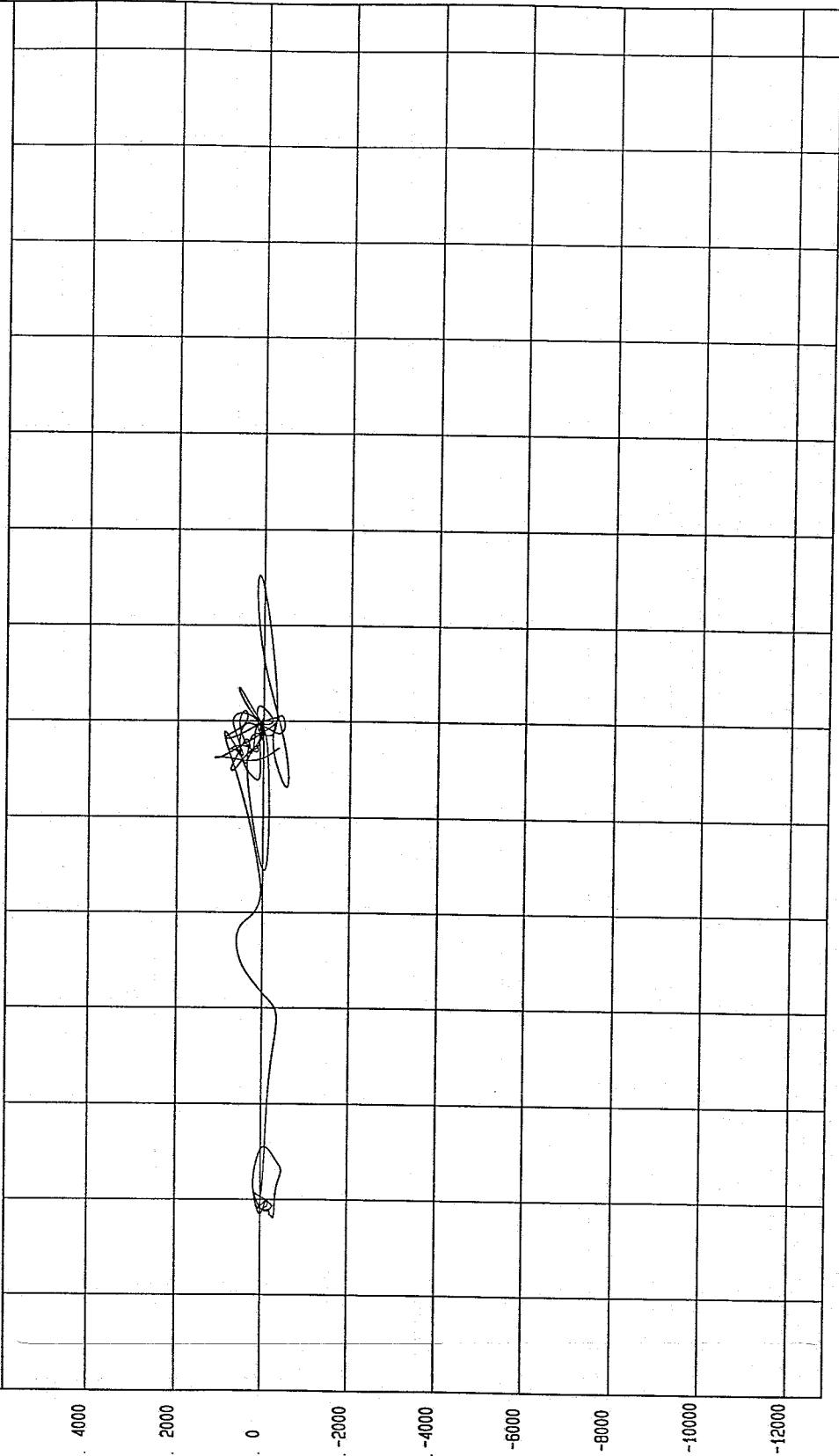
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -576.76 N at 44 MM

Maximum = 1138.67 N at 46 MM

FORCE X LOAD CELL #1 VS STRINGPOT #1



LC #1 FX N

STRING POT 1 MM

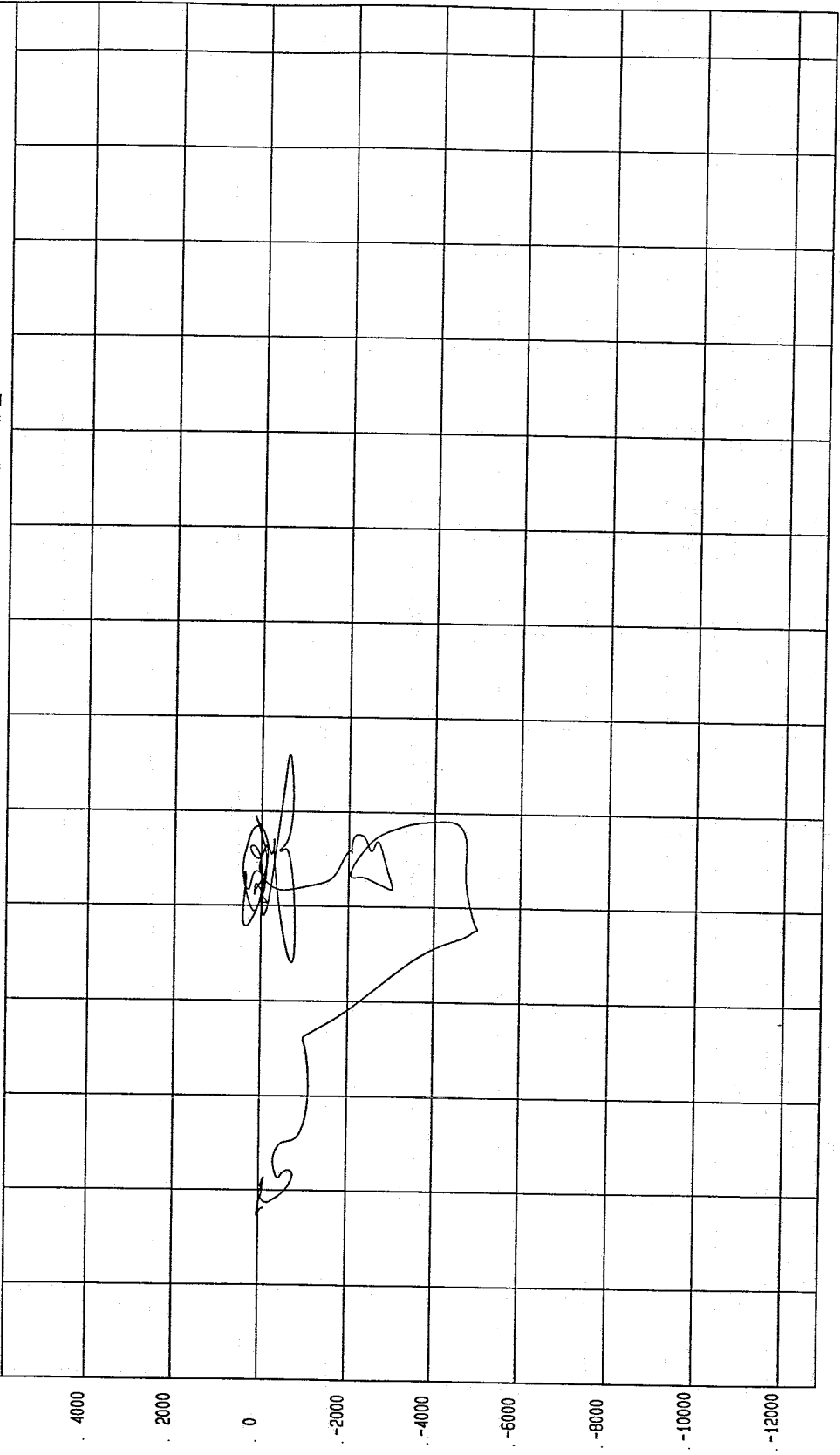
MCA Research
11-10-1998 14: 19

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -5009.68 N at 28 MM Maximum = 436.88 N at 29 MM

FORCE X LOAD CELL #2 VS STRINGPOT #2



STRING POT 2 MM

MSA Research
11-10-1998 14:19

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

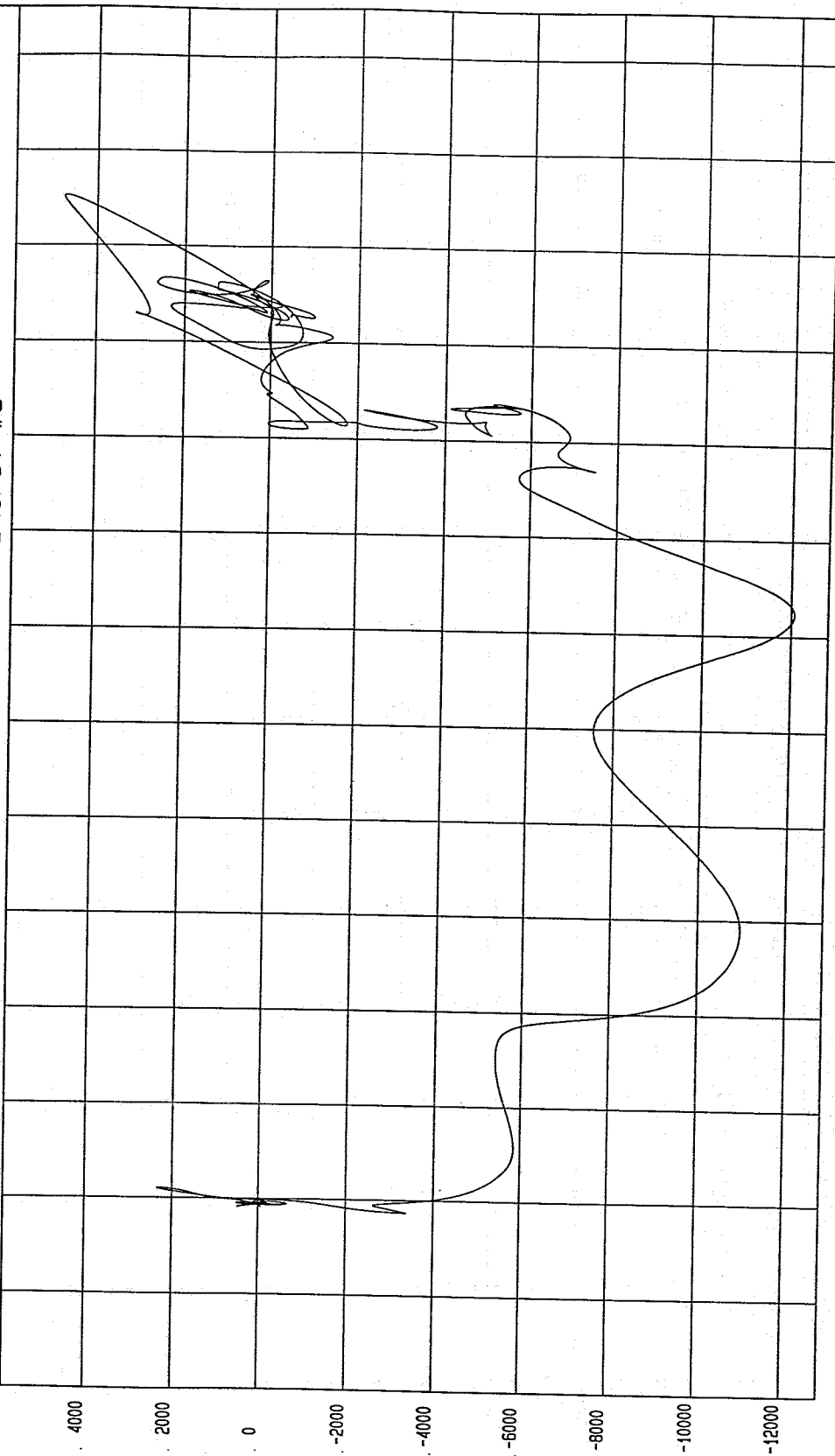
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -12070.93 N at 62 MM

Maximum = 4746.39 N at 105 MM

FORCE X LOAD CELL #3 VS STRINGPOT #3



STRING POT 3 MM

MCA Research
11-10-1998 14:19

LC #3 FX N

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

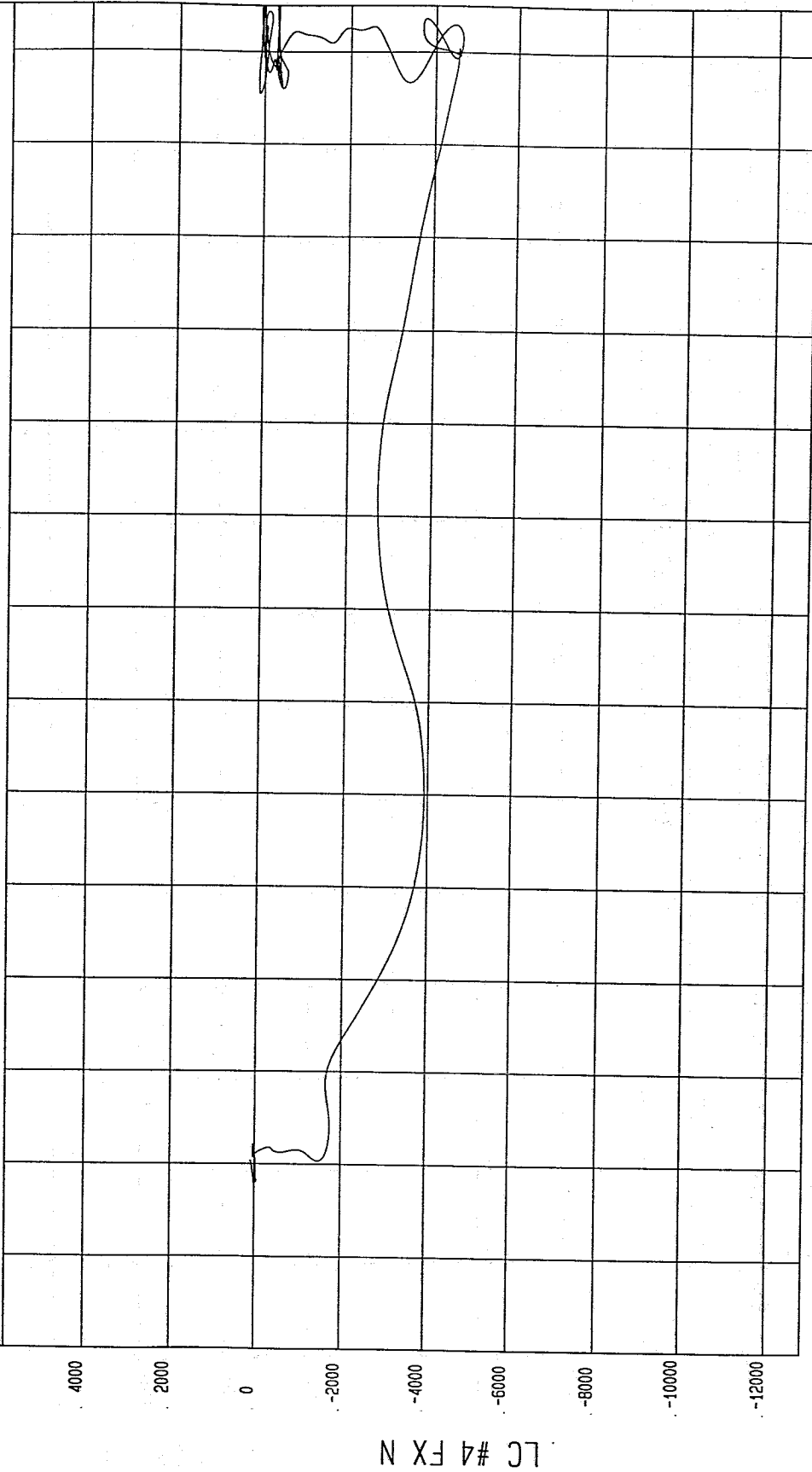
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -4640.94 N at 121 MM

Maximum = 131.97 N at 116 MM

FORCE X LOAD CELL #4 VS STRINGPOT #4



STRING POT 4 MM

MGA Research
11-10-1998 14:19

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

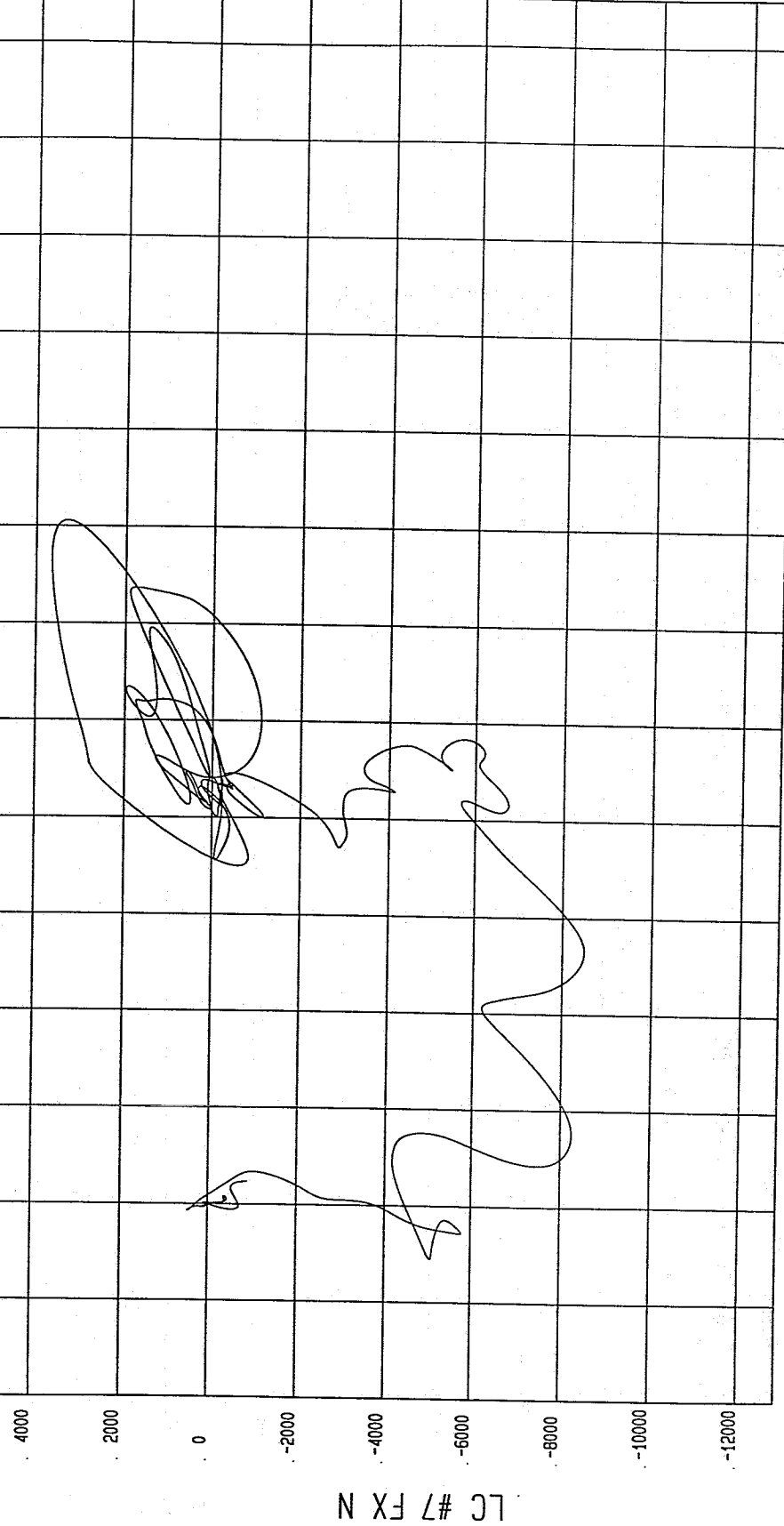
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -8500.36 N at 26 MM

Maximum = 3651.30 N at 68 MM

FORCE X LOAD CELL #7 VS STRINGPOT #7



STRING POT 7 MM

NCA Research
11-10-1998 14.19

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

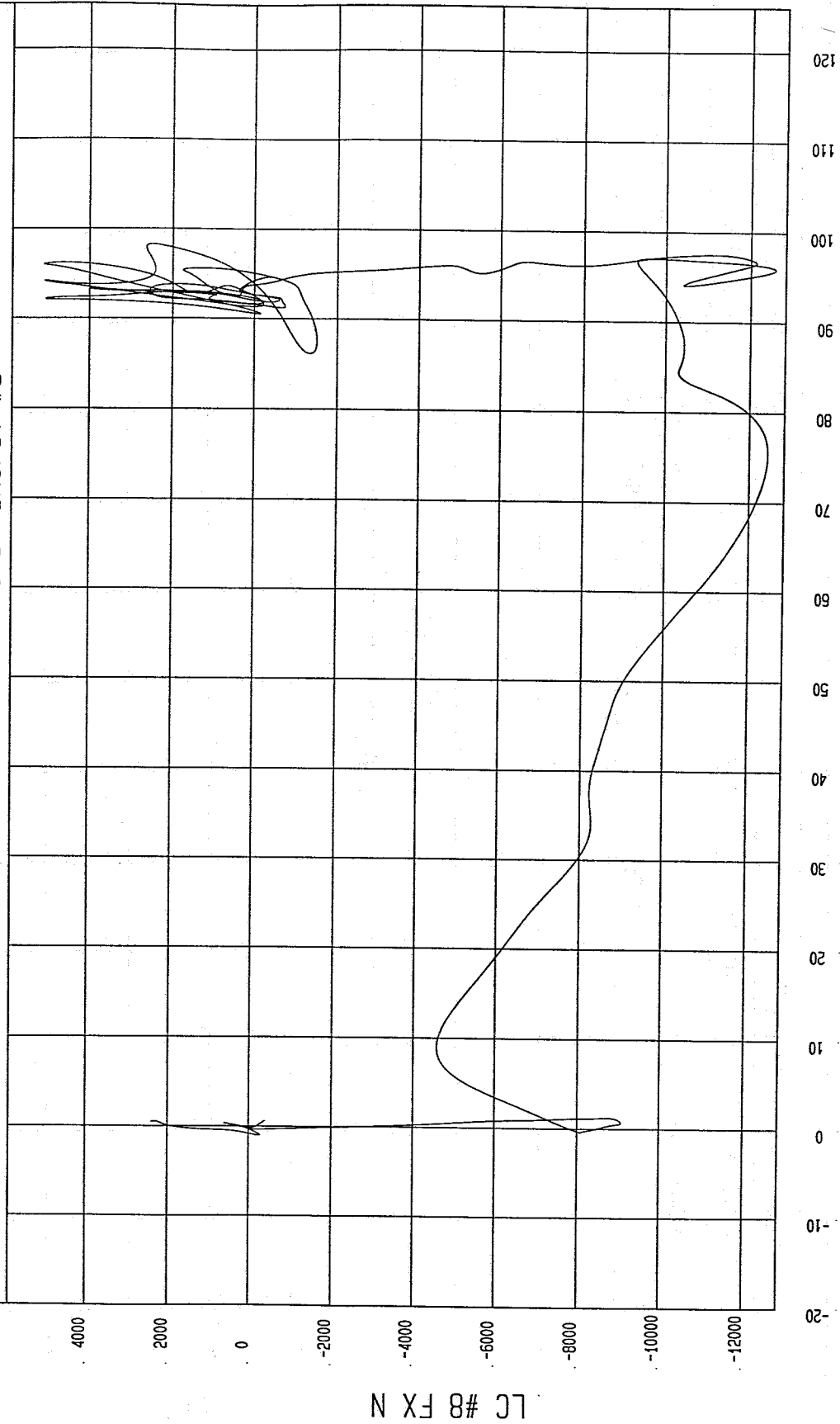
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -12606.23 N at 96 MM

Maximum = 5091.75 N at 96 MM

FORCE X LOAD CELL #8 VS STRINGPOT #8



MGA Research
11-10-1998 14:19

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

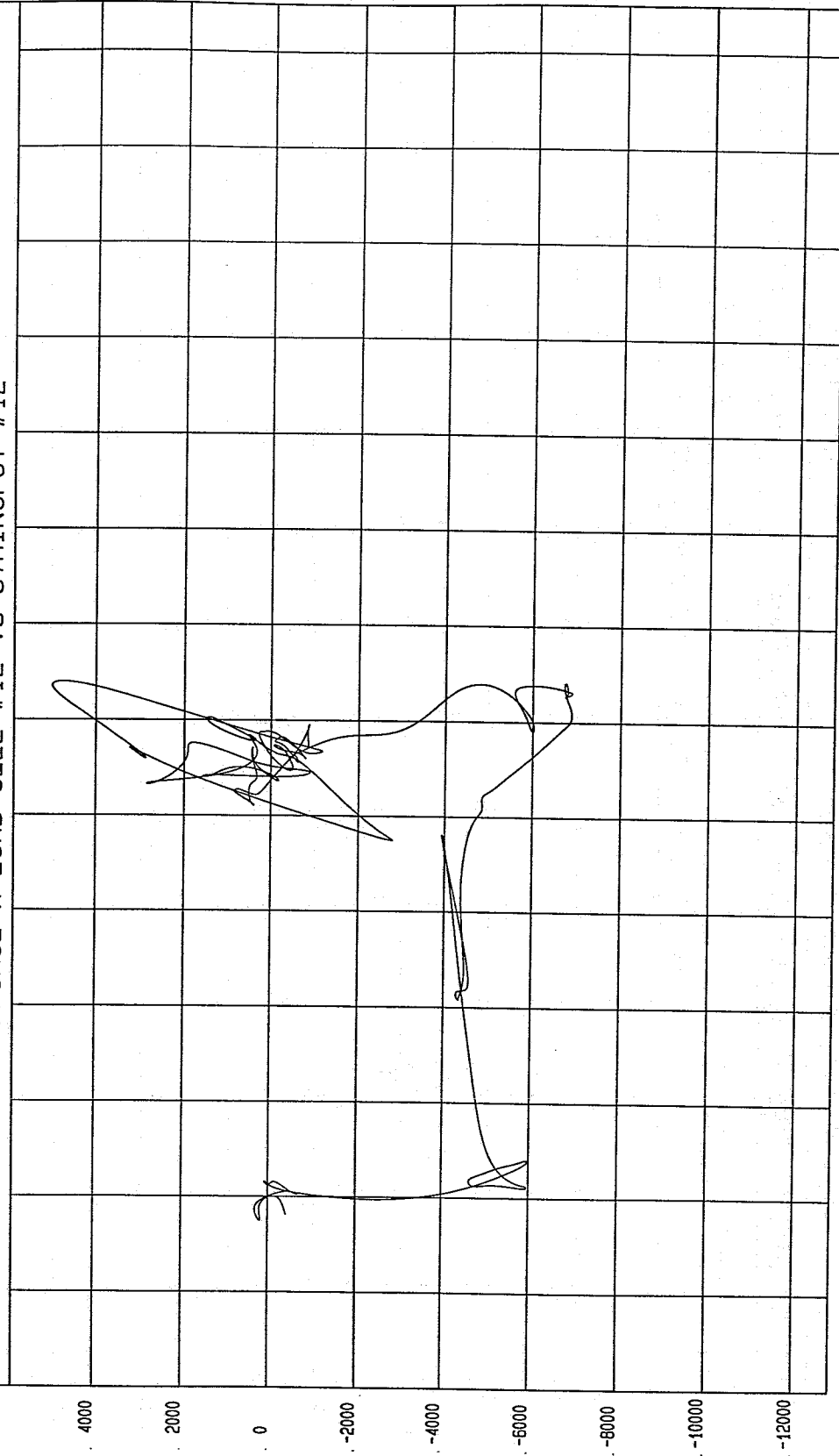
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -6893.67 N at 53 MM

Maximum = 4989.47 N at 54 MM

FORCE X LOAD CELL #12 VS STRINGPOT #12



LC #12 FX N

STRING POT 12 MM

MSA Research
11-10-1998 14:19

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

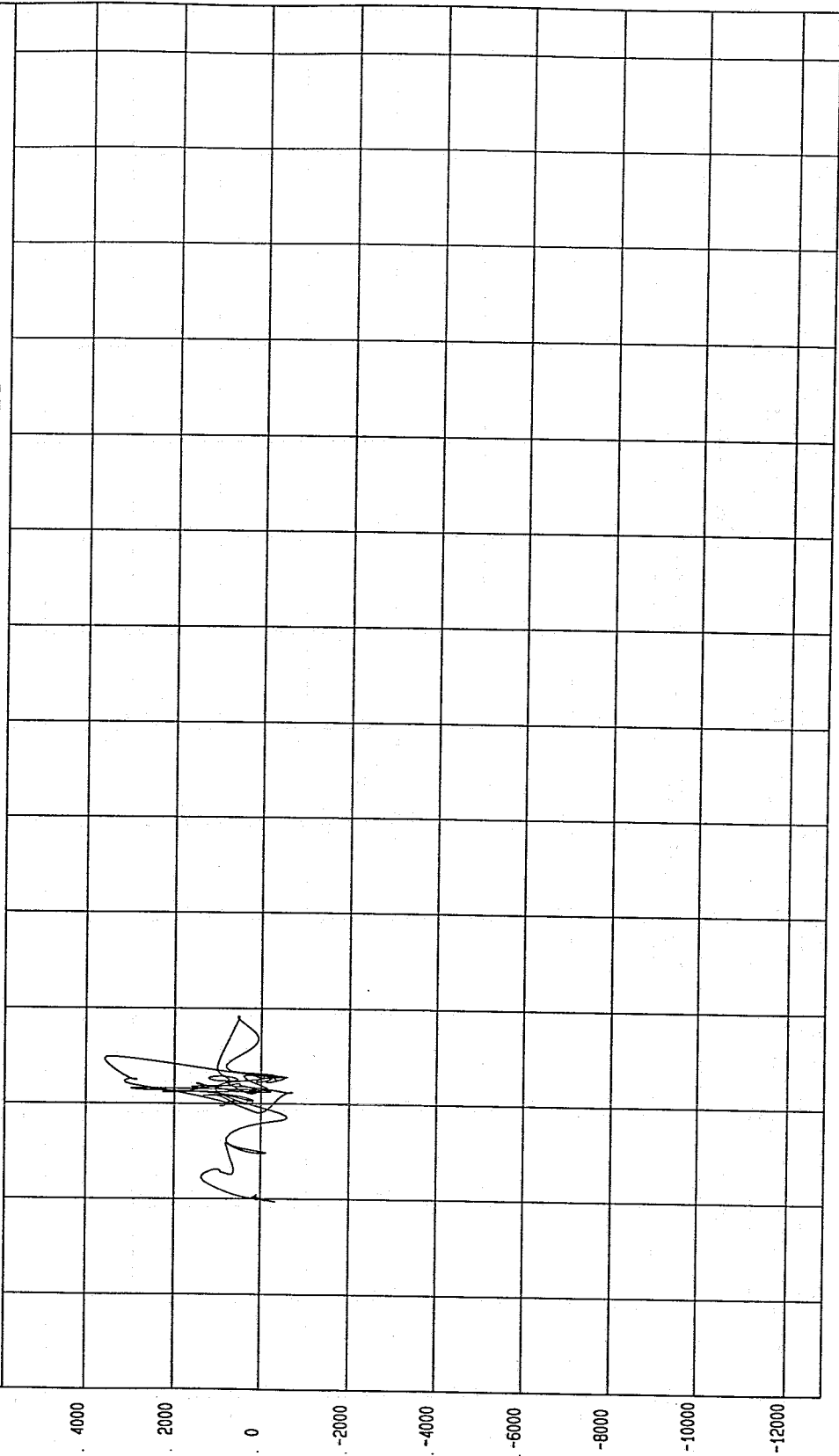
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -696.38 N at 11 MM

Maximum = 3564.95 N at 15 MM

FORCE X LOAD CELL #21 VS STRINGPOT #21



STRING POT 21 MM

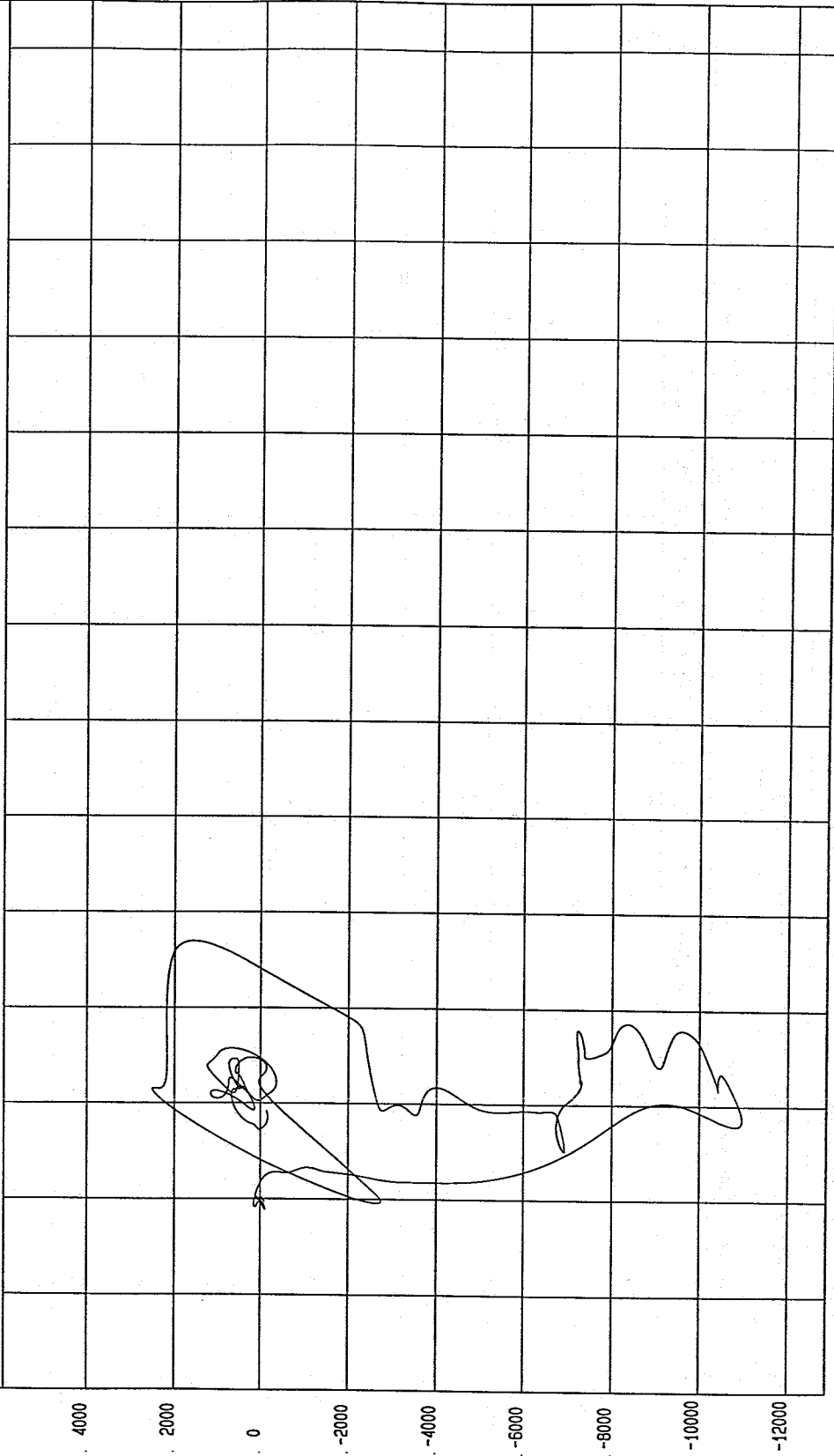
MCA Research
11-10-1998 14:19

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -10972.45 N at 8 MM Maximum = 2490.87 N at 11 MM

FORCE X LOAD CELL #27 VS STRINGPOT #27



MCA Research
11-10-1998 14:19

TEST: ITD#1 FMVSS 214 TYPE TEST

TEST DATE: 03-12-1998

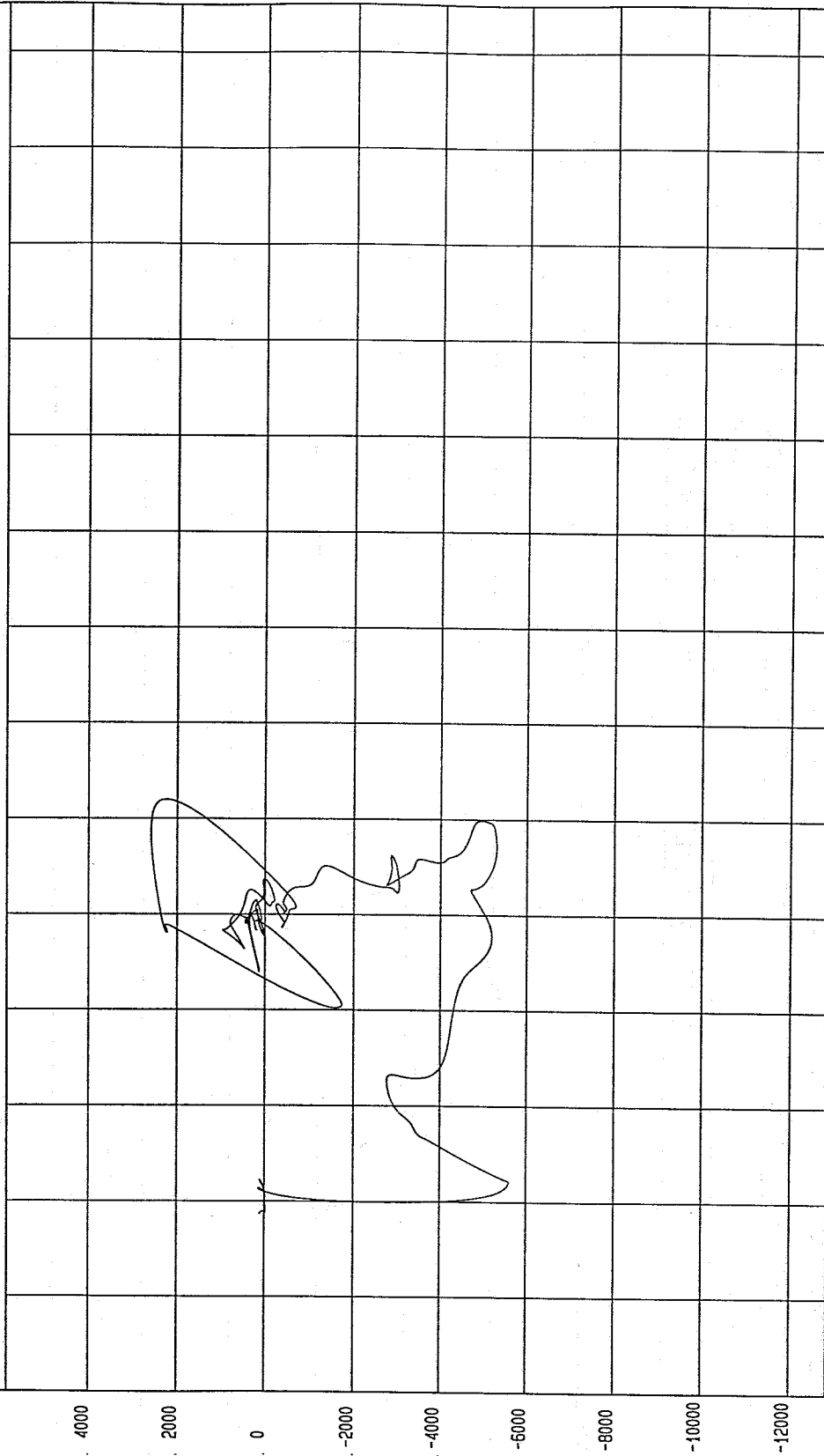
COMPONENT: 1996 FORD TAURUS (RT0206)

Speed: 32.78 MPH 52.8 KPH

Minimum = -5600.73 N at 2 MM

Maximum = 2581.35 N at 39 MM

FORCE X LOAD CELL #32 VS STRINGPOT #32



NCA Research
11-10-1998 14:19

STRING POT 32 MM

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

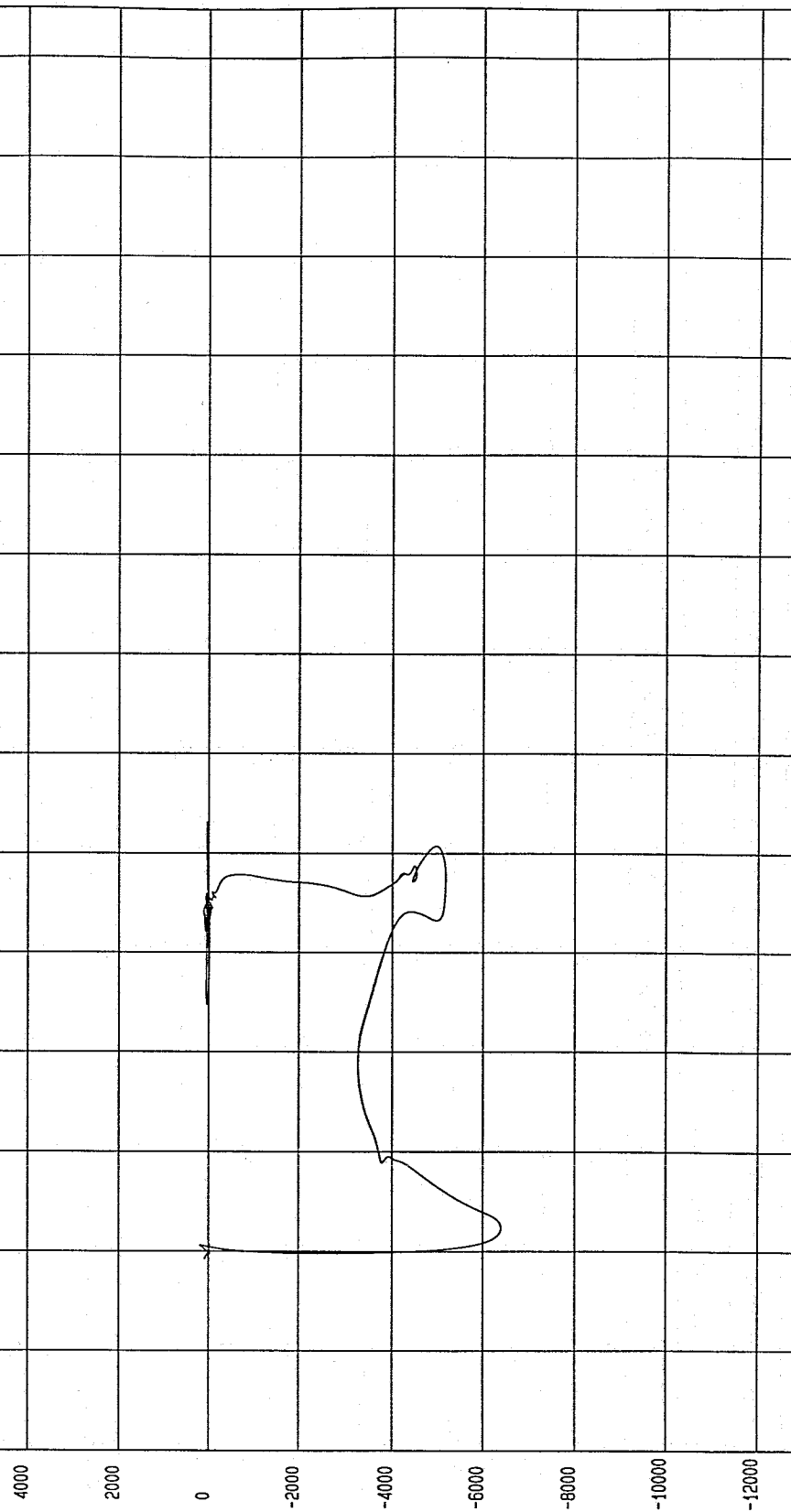
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -6390.97 N at 2 MM

Maximum = 196.78 N at 1 MM

FORCE X LOAD CELL #36 VS STRINGPOT #36



LC #36 FX N

STRING POT 36 MM

MCA Research
11-10-1998 14:19

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

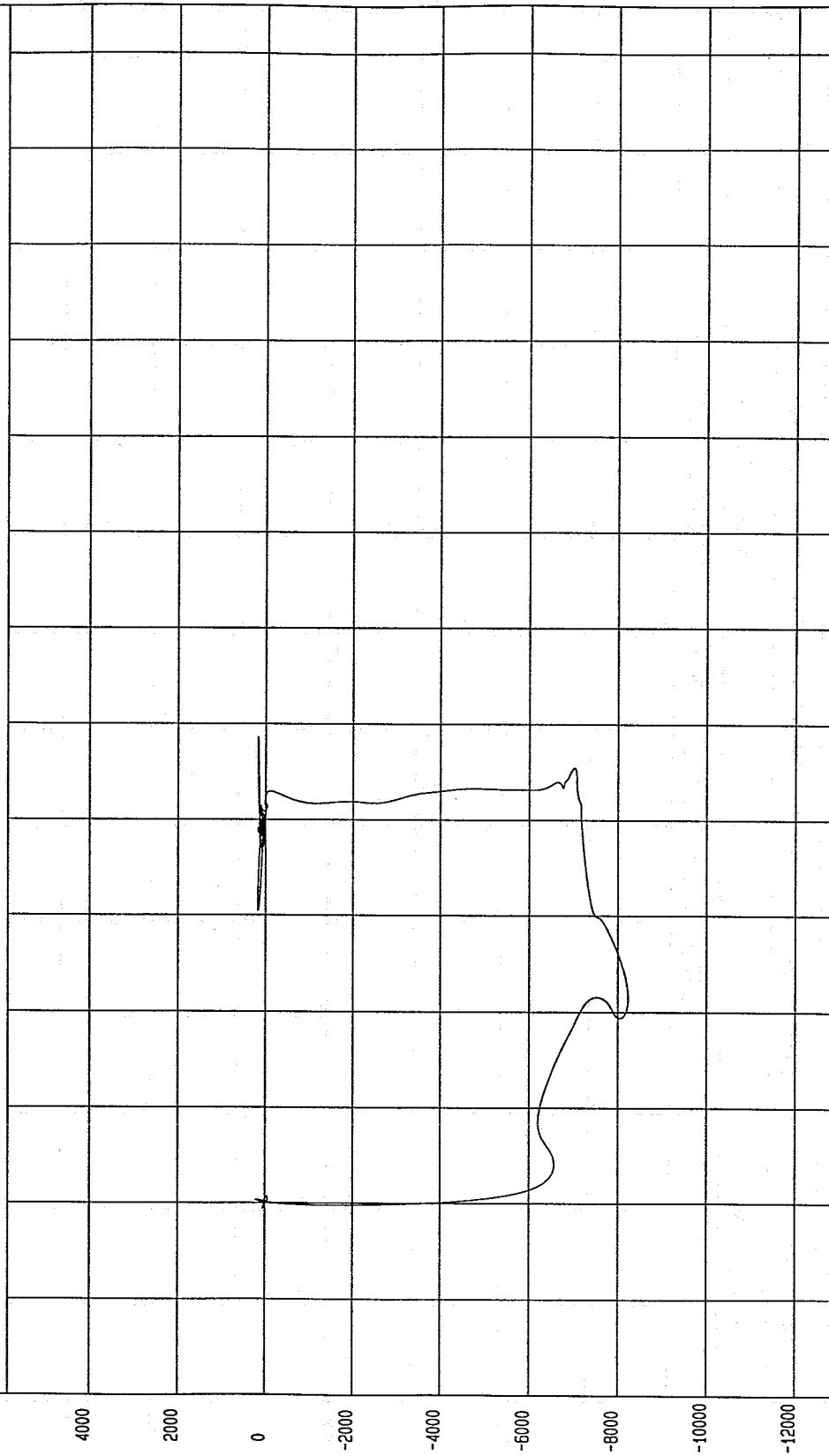
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -8233.10 N at 21 MM

Maximum = 212.51 N at 0 MM

FORCE X LOAD CELL #39 VS STRINGPOT #39



STRING POT 39 MM

MECA Research
11-10-1998 14:19

LC #39 FX N

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

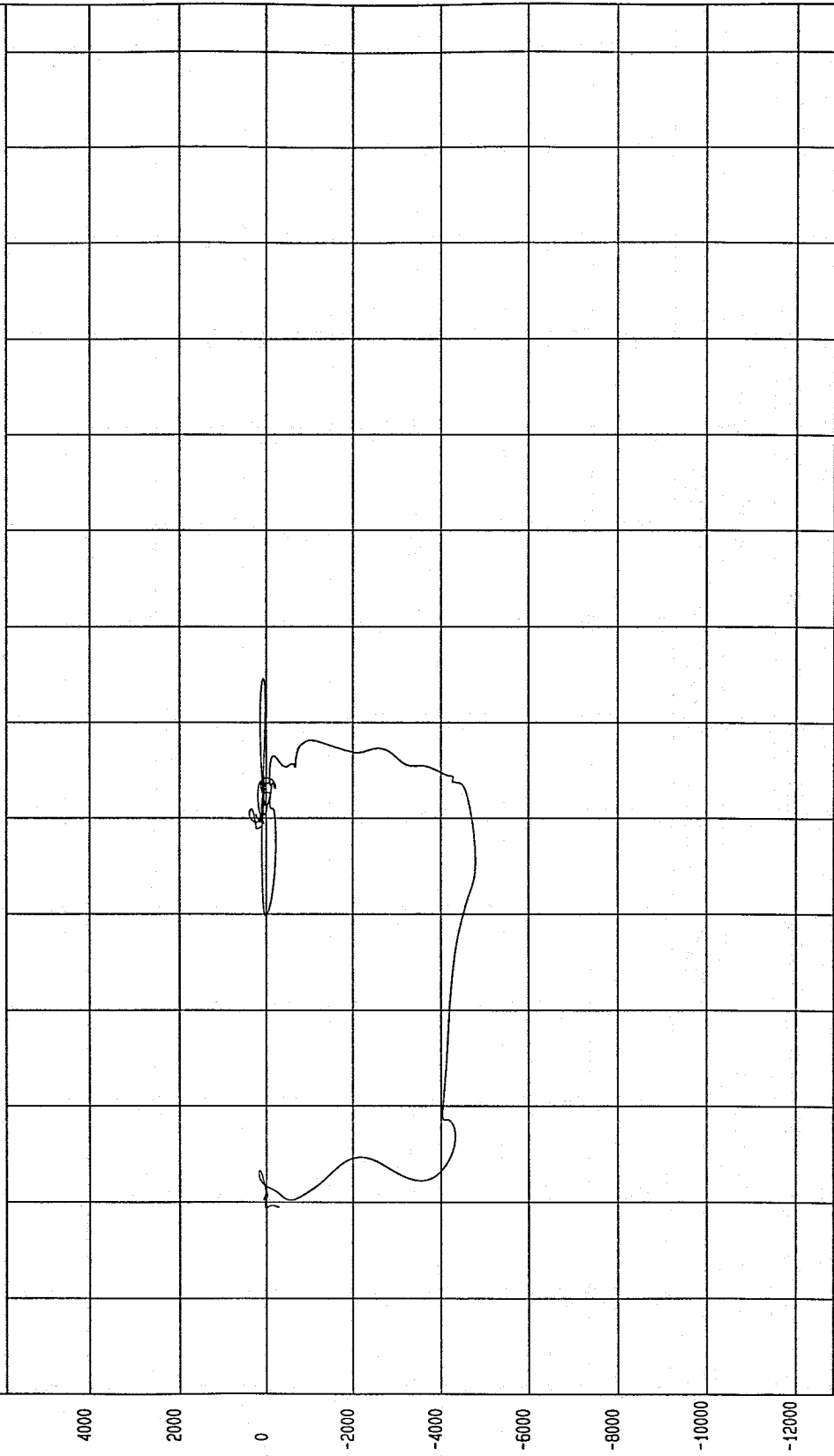
Speed: 34.8 MPH 56 KPH

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Maximum = 407.01 N at 40 MM

Minimum = -4801.29 N at 35 MM

FORCE X LOAD CELL #41 VS STRINGPOT #41



STRING POT 41 MM

NCA Research
11-10-1998 14:19

LC #41 FX N

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

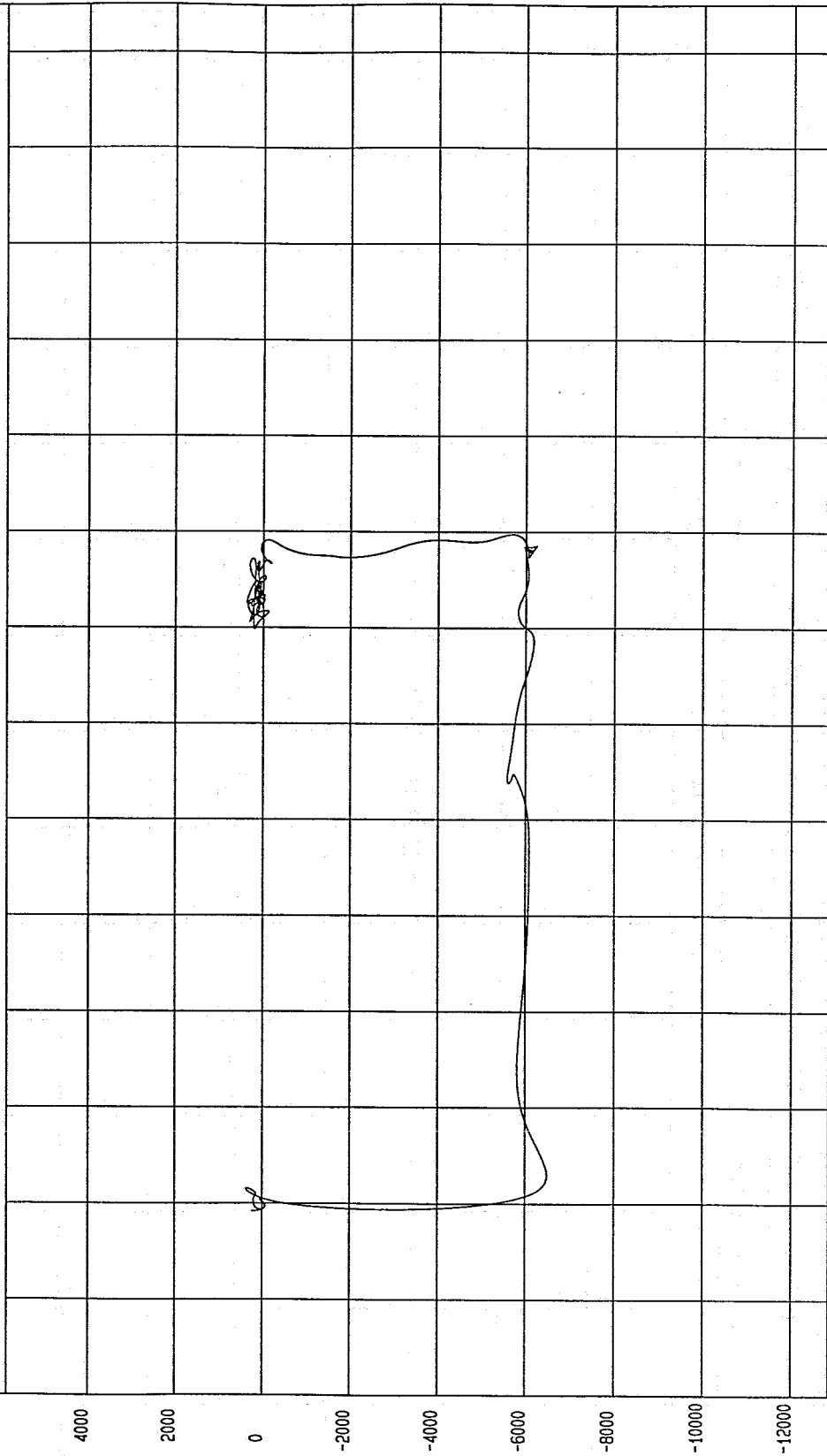
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -6482.91 N at 3 MM

Maximum = 379.70 N at 63 MM

FORCE X LOAD CELL #43 VS STRINGPOT #43



STRING POT 43 MM

MSA Research
11-10-1998 14:19

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

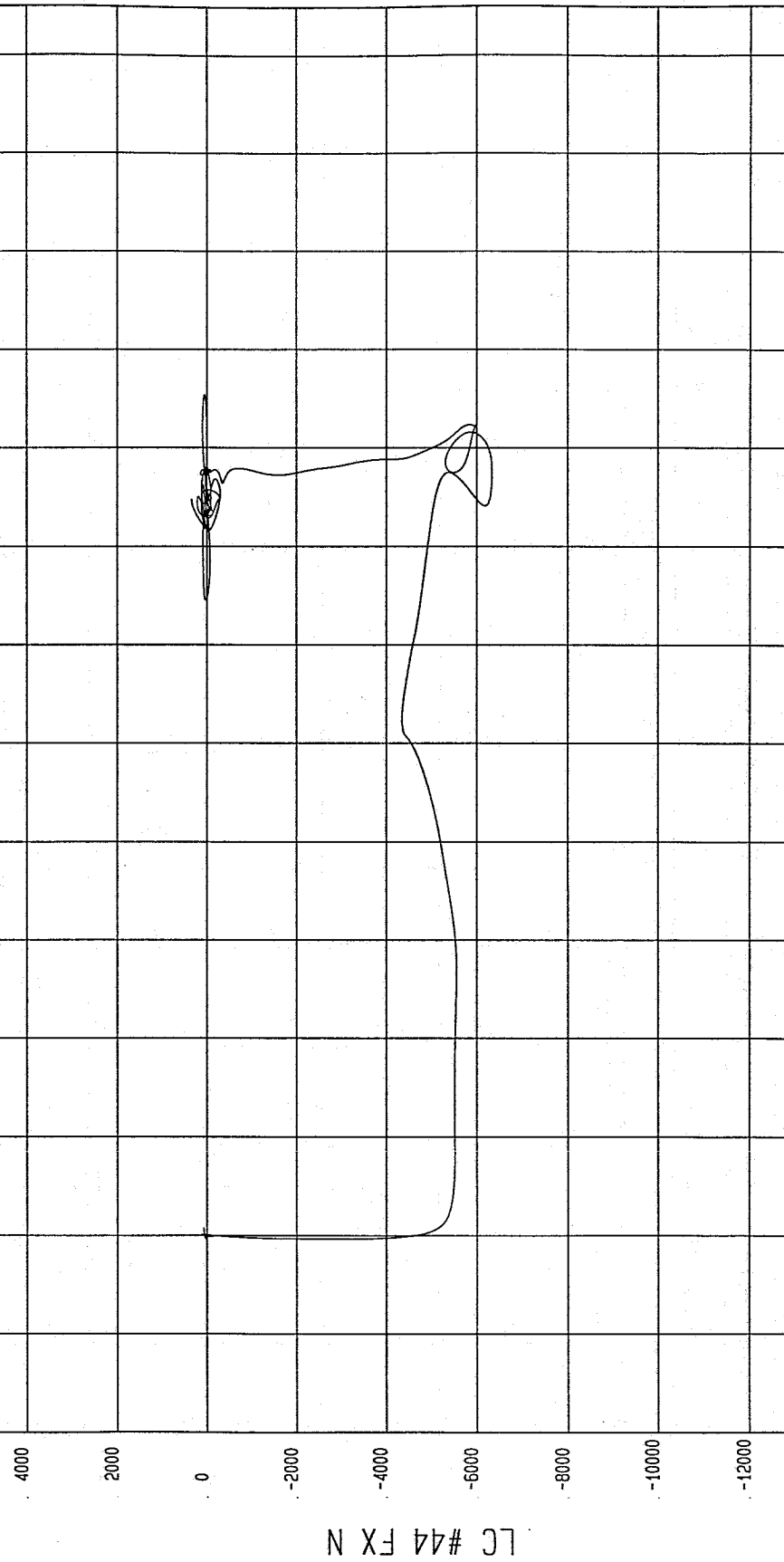
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 34.8 MPH 56 KPH

Minimum = -6338.49 N at 77 MM

Maximum = 357.58 N at 75 MM

FORCE X LOAD CELL #44 VS STRINGPOT #44



STRING POT 44 MM

MECA Research
11-10-1998 14:20

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

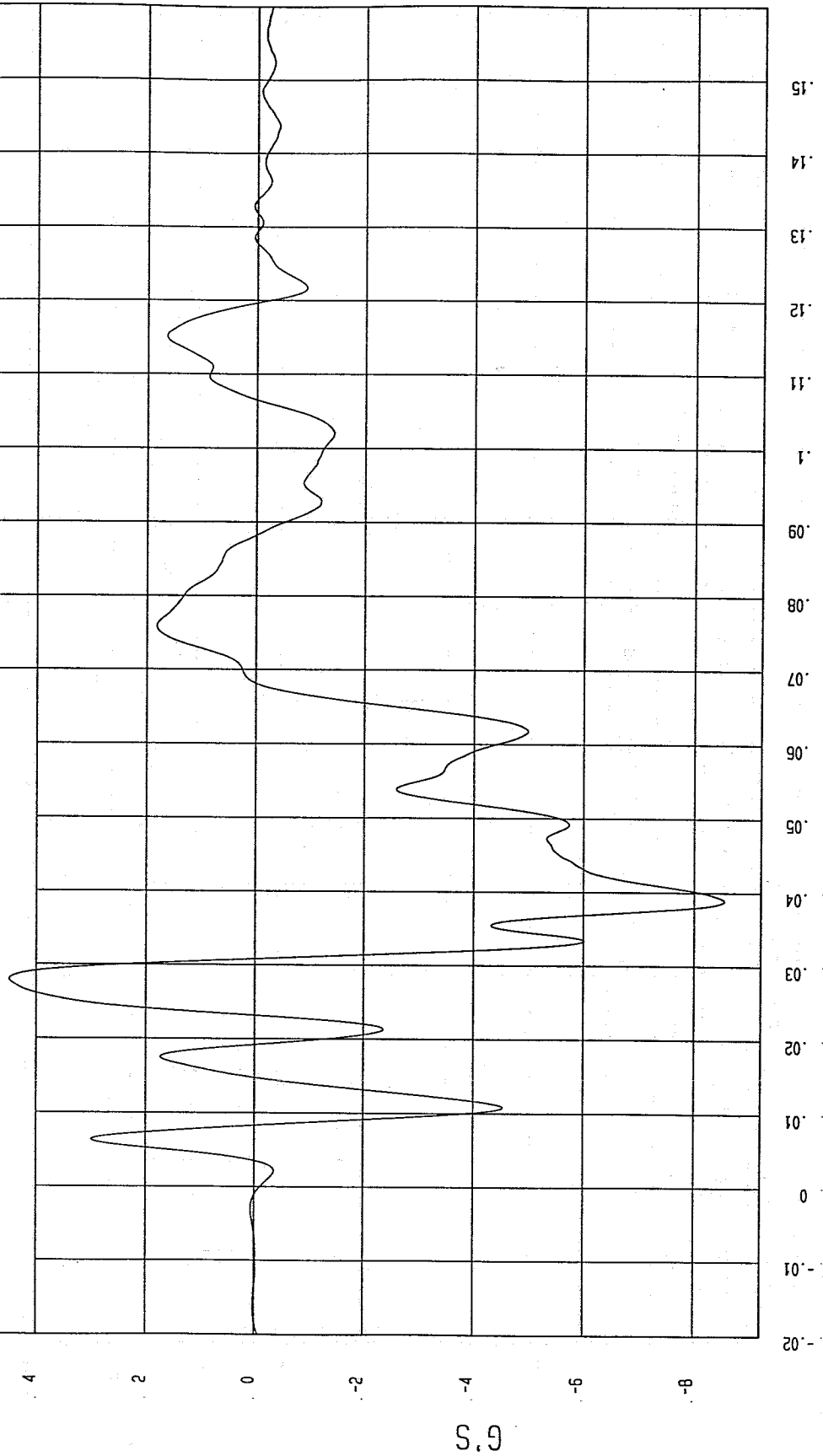
Speed: 32.8 MPH 52.8 KPH

Minimum = -8.54 G'S at 39 msec

Maximum = 4.49 G'S at 28 msec

VEHICLE CG X ACCELERATION

1 ——— H98016AF.A74 Filterclass (60)



NGA Research
11-11-1998 14:21

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

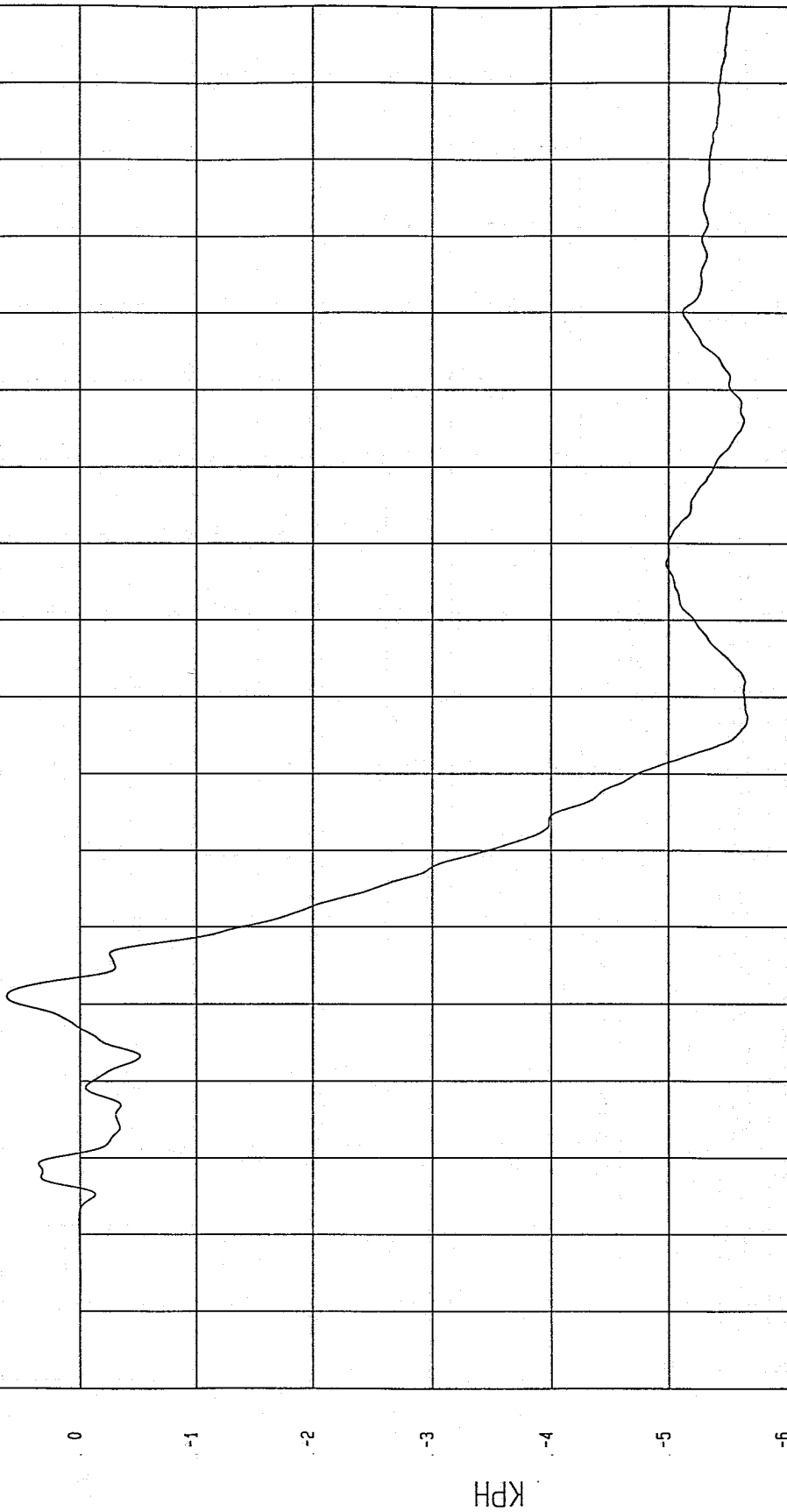
Speed: 32.8 MPH 52.8 KPH

Minimum = -5.69 KPH at 172 msec

Maximum = .62 KPH at 31 msec

VEHICLE CG X VELOCITY

1 _____ H98016A1.V74 Filterclass (180)



MCA Research
11-11-1998 14:21

TIME Seconds

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

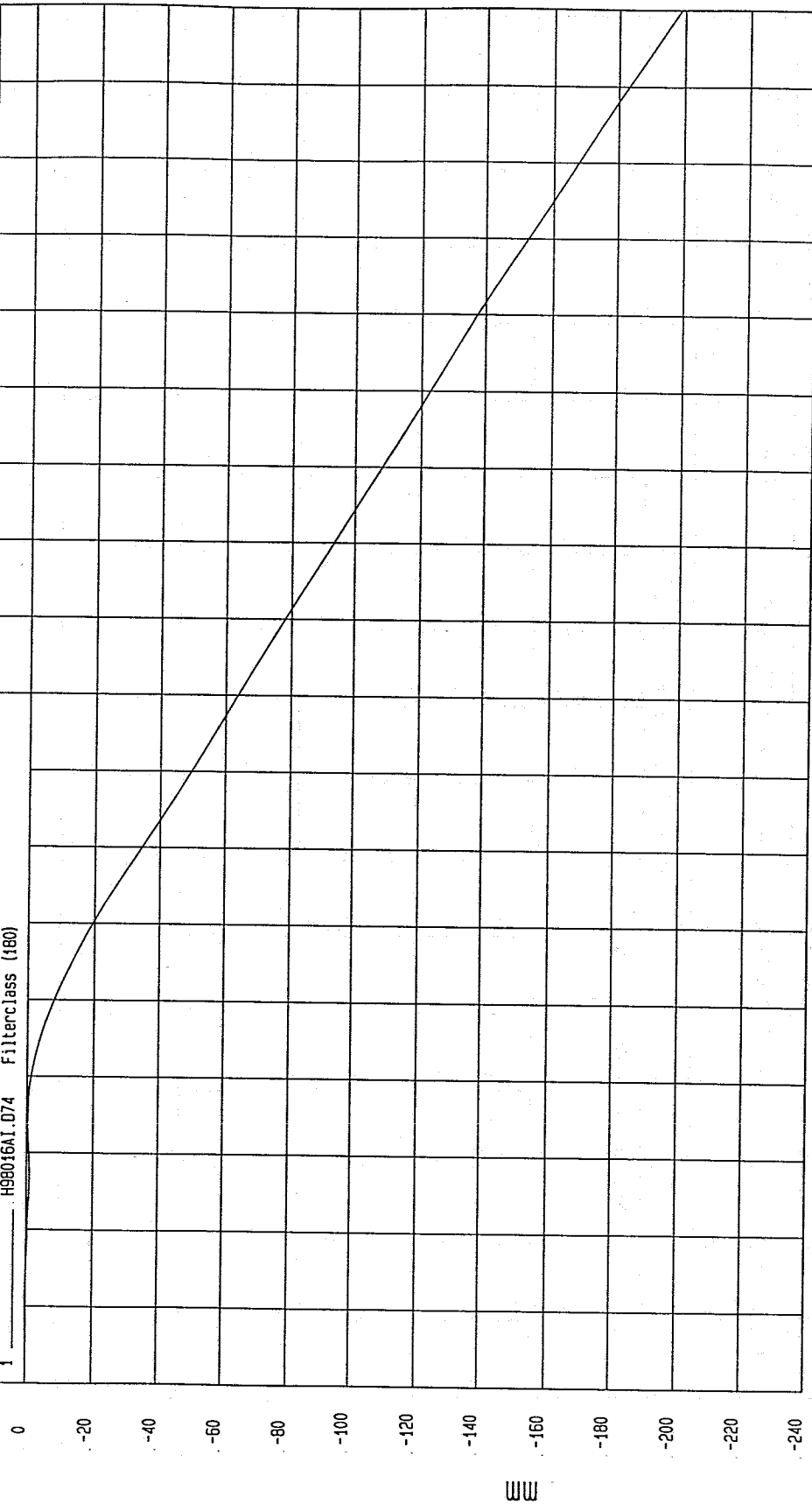
Speed: 32.8 MPH 52.8 KPH

Minimum = -228.66 mm at 200 msec

Maximum = .29 mm at 11 msec

VEHICLE CG X DISPLACEMENT

1 _____ H98016A1.D74 Filterclass (180)



TIME Seconds

MGA Research
11-11-1998 14:21

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

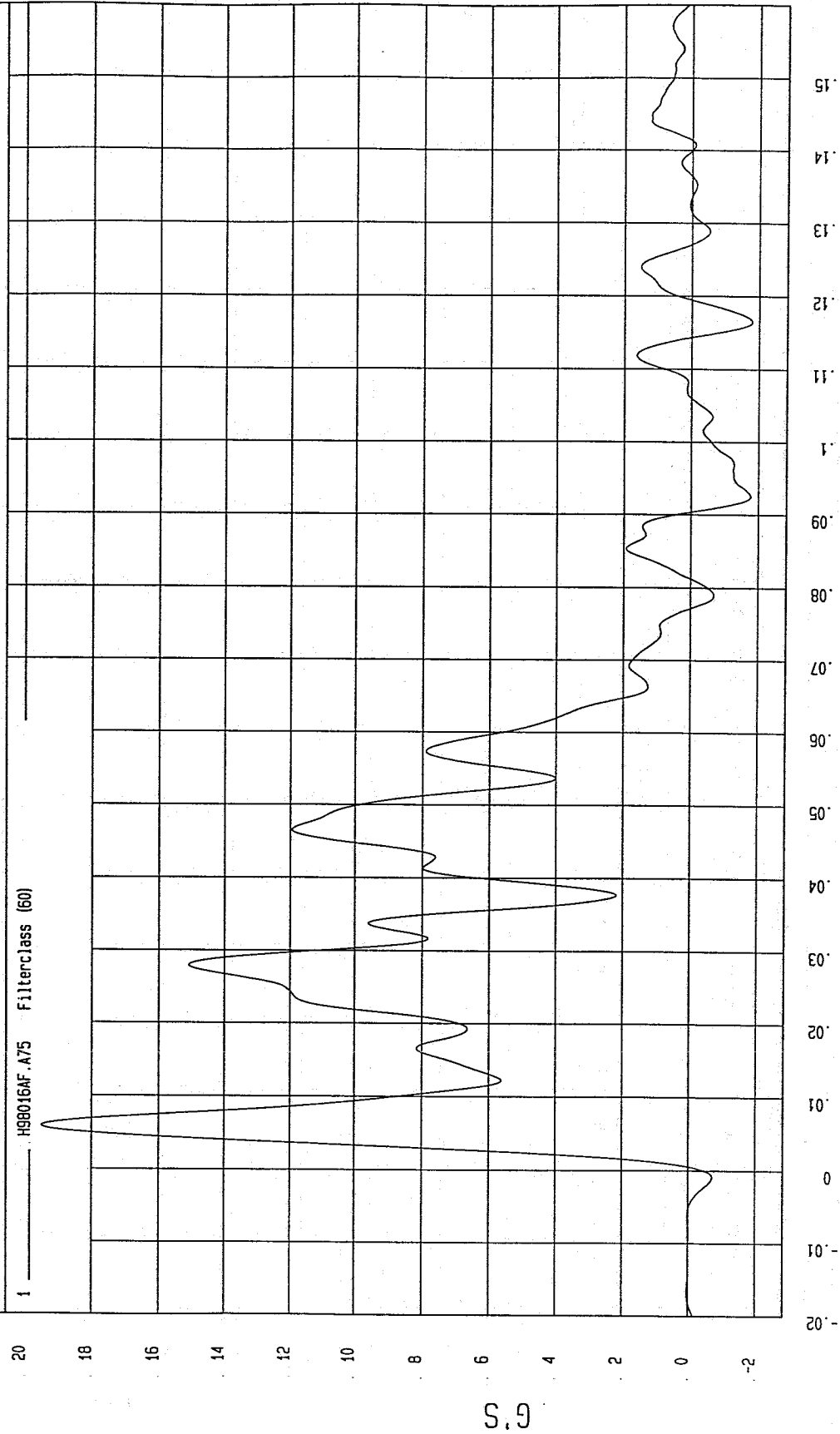
Speed: 32.8 MPH 52.8 KPH

Minimum = -1.78 G'S at 116 msec

Maximum = 19.51 G'S at 6 msec

VEHICLE CG Y ACCELERATION

1 H98016AF.A75 FilterClass (60)



MGA Research
11-11-1998 14:21

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -1.52E-02 KPH at 2 msec

Maximum = 20.16 KPH at 162 msec

VEHICLE CG Y VELOCITY

1 H98016A1.V75 Filterclass (180)



MOA Research
11-11-1998 14:21

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

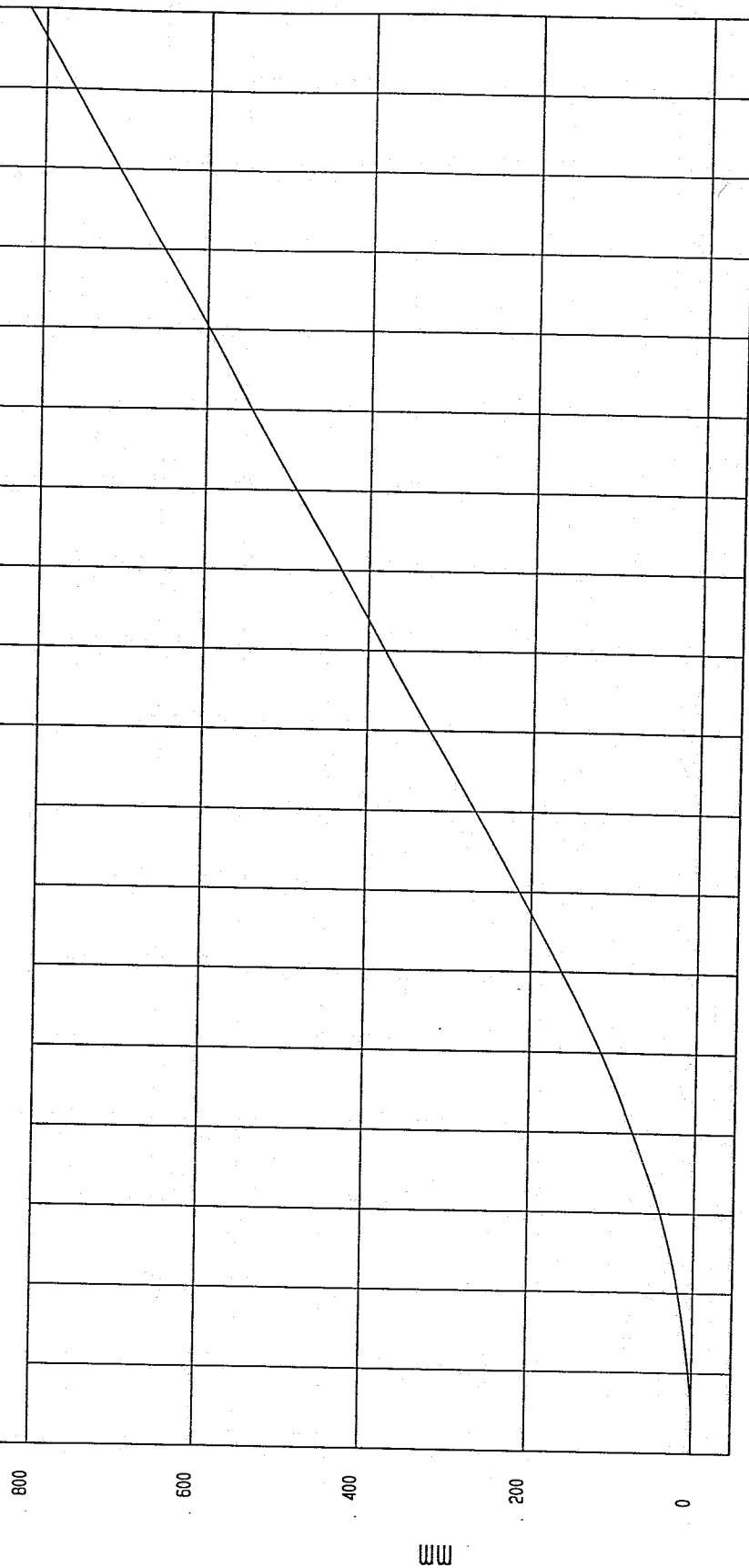
Speed: 32.8 MPH 52.8 KPH

Minimum = -5.88E-03 mm at 3 msec

Maximum = 928.6 mm at 200 msec

VEHICLE CG Y DISPLACEMENT

1 _____ H98016A1.D75 Filterclass (180)



MCA Research
11-11-1998 14:21

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

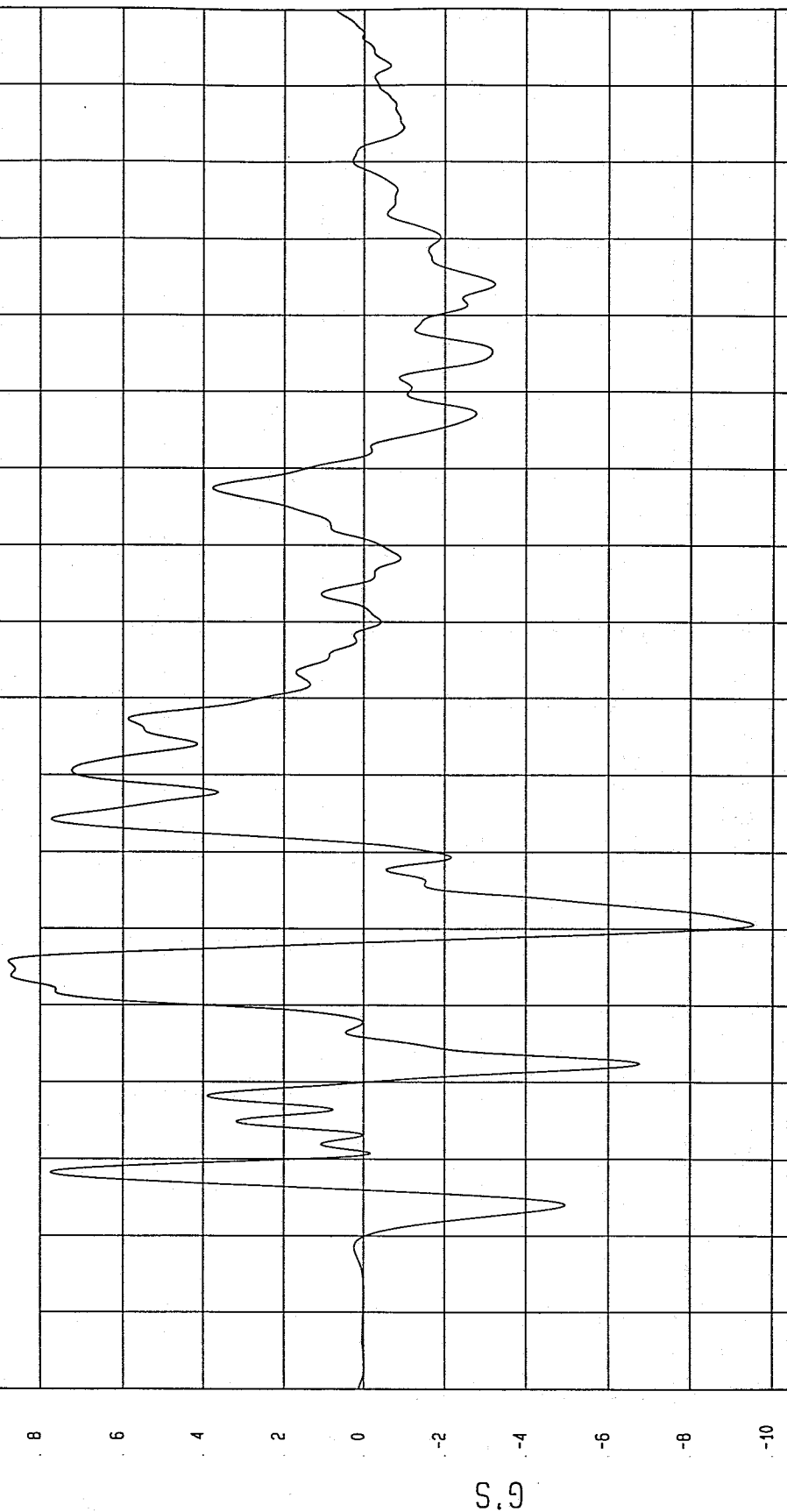
Speed: 32.8 MPH 52.8 KPH

Minimum = -9.53 G'S at 41 msec

Maximum = 8.78 G'S at 36 msec

VEHICLE CG Z ACCELERATION

1 ——— H98016AF.A76 Filterclass (60)



NSA Research
11-11-1998 14.04

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

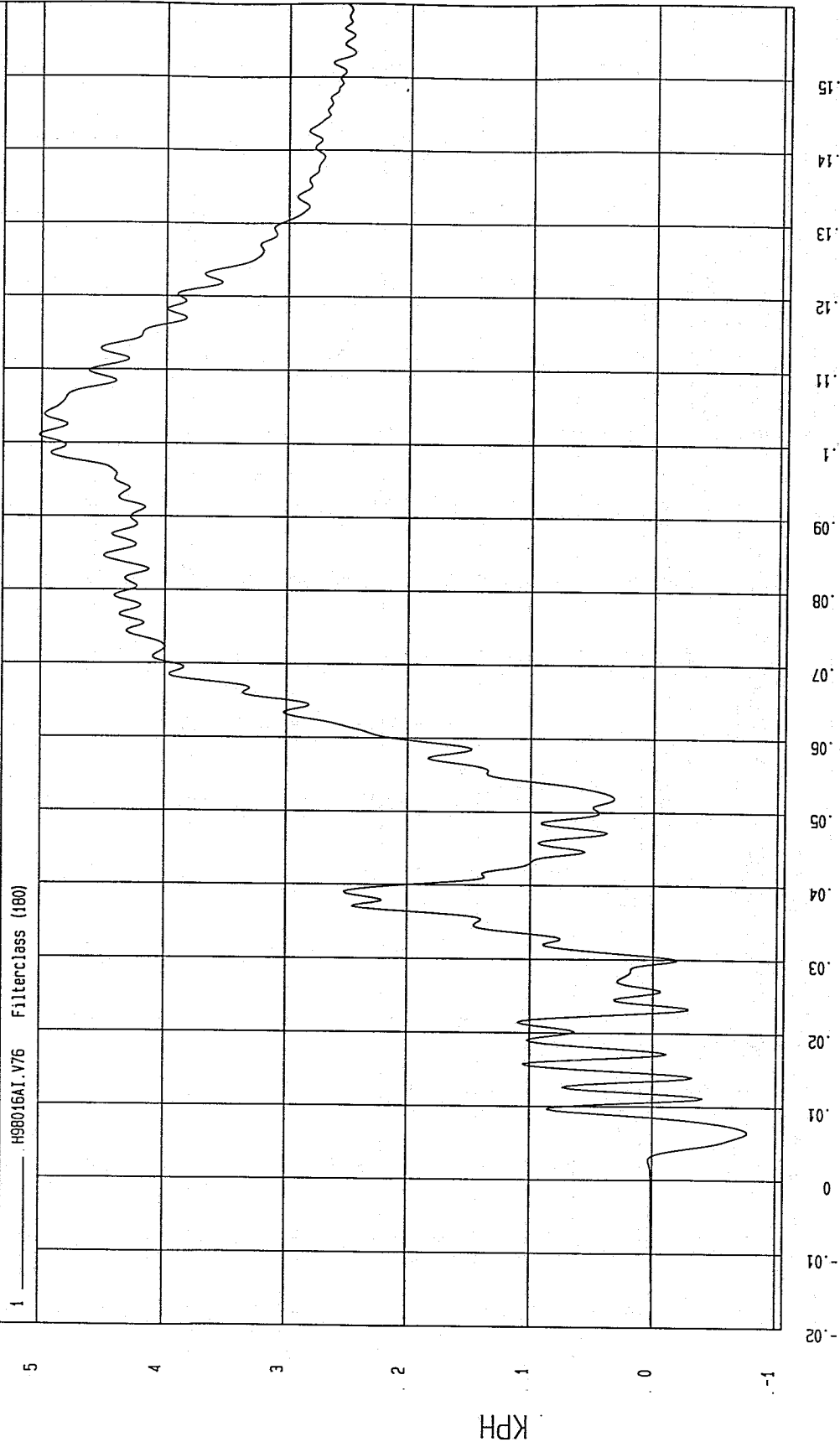
Speed: 32.8 MPH 52.8 KPH

Minimum = -.77 KPH at 6 msec

Maximum = 5.02 KPH at 101 msec

VEHICLE CG Z VELOCITY

1 H98016A1.V76 FilterClass (180)



NGA Research
11-11-1998 14.04

TIME Seconds

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

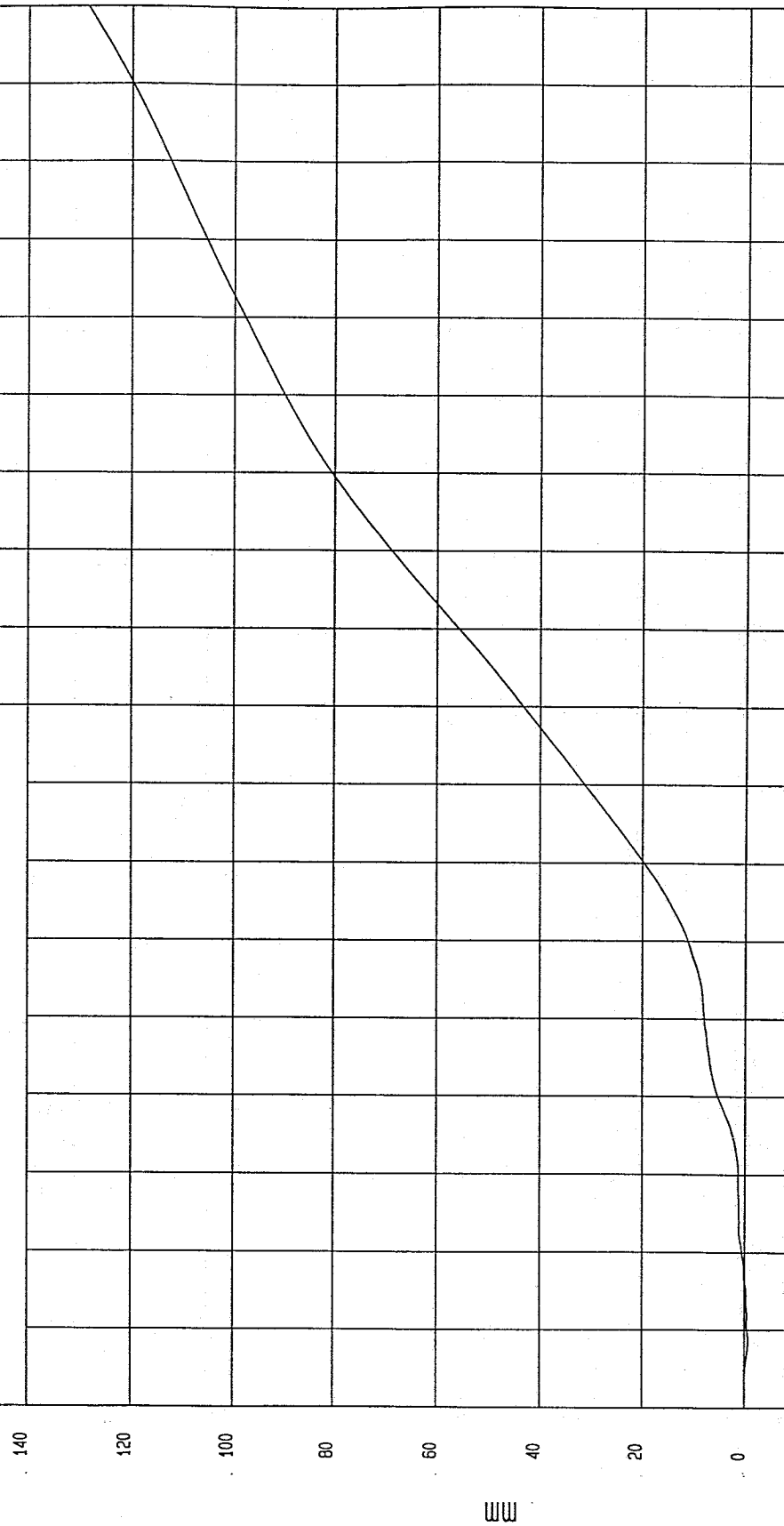
Speed: 32.8 MPH 52.8 KPH

Minimum = -.67 mm at 9 msec

Maximum = 146.32 mm at 200 msec

VEHICLE CG Z DISPLACEMENT

1 _____ H98016A1.D76 Filterclass (180)



TIME Seconds

NCA Research
11-11-1998 14:08

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

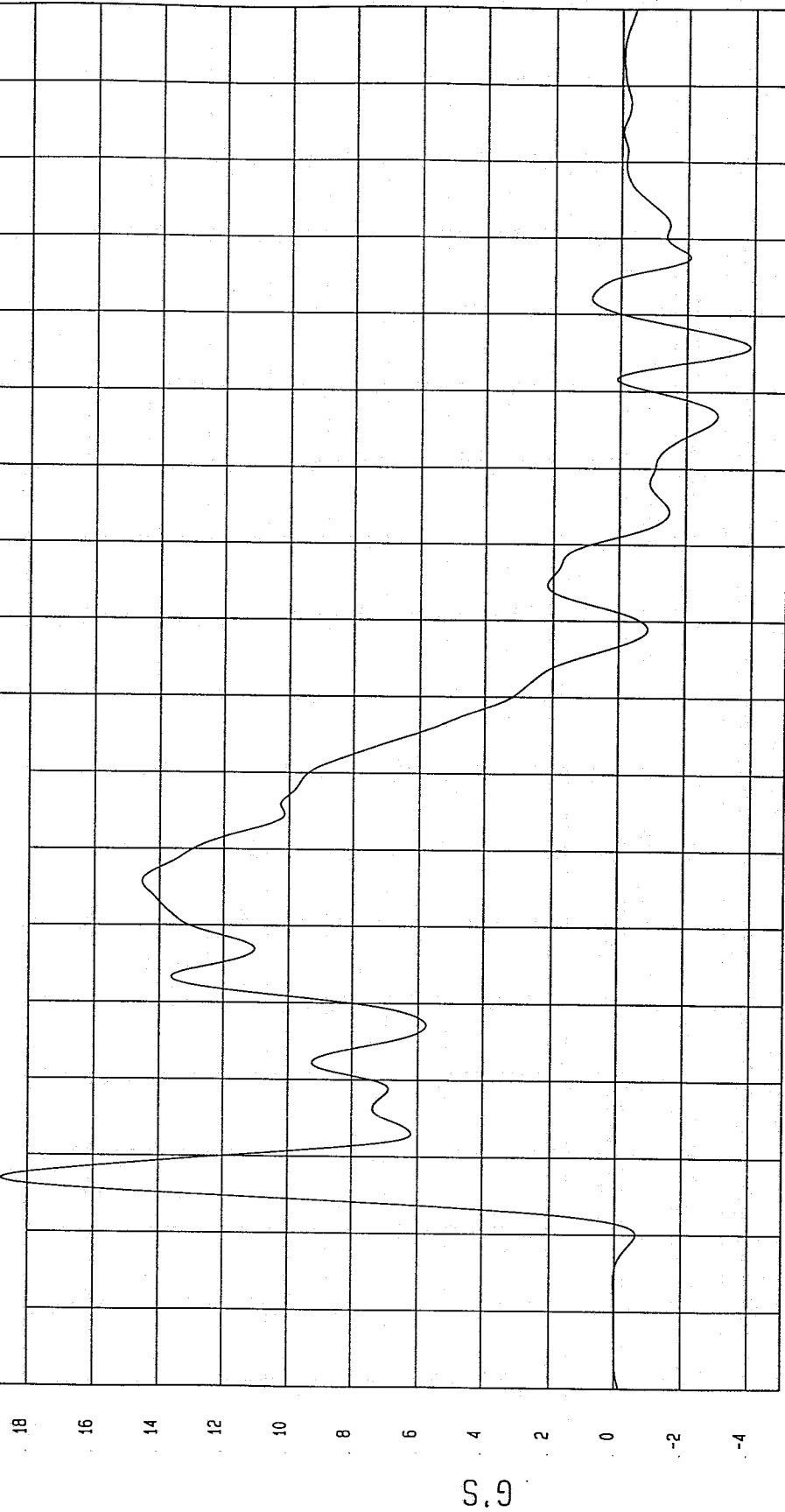
Speed: 32.8 MPH 52.8 KPH

Minimum = -3.89 G'S at 116 msec

Maximum = 18.81 G'S at 7 msec

RIGHT REAR OCCUPANT COMPARTMENT Y ACCELERATION

1 H98016AF.A77 Filterclass (60)



TIME (SECONDS)

NCA Research
11-11-1998 14:22

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

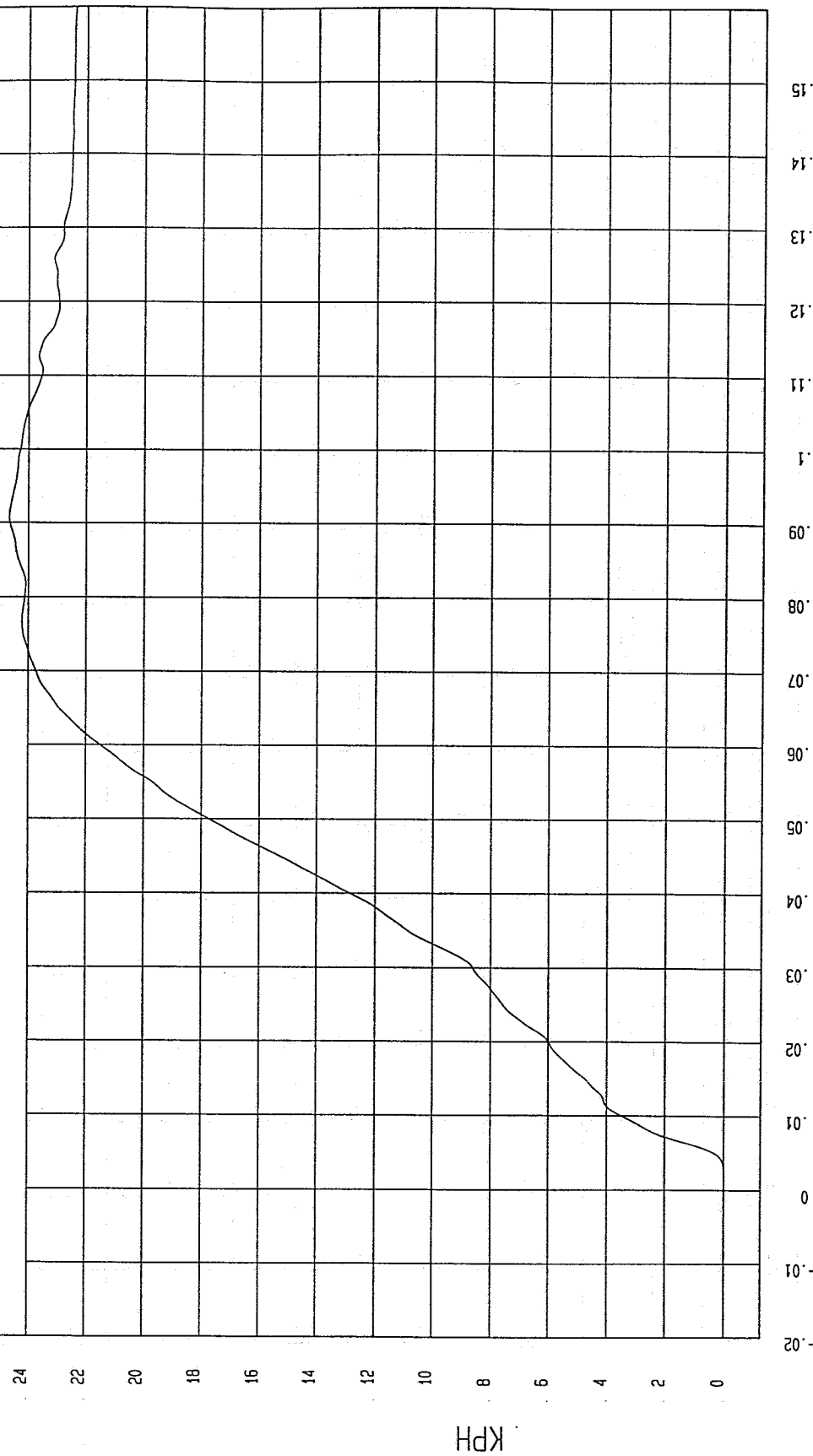
Speed: 32.8 MPH 52.8 KPH

Minimum = -8.14E-03 KPH at 2 msec

Maximum = 24.66 KPH at 91 msec

RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY

1 ——— H98016A1.V77 Filterclass (180)



NCA Research
11-11-1998 14:22

TIME Seconds

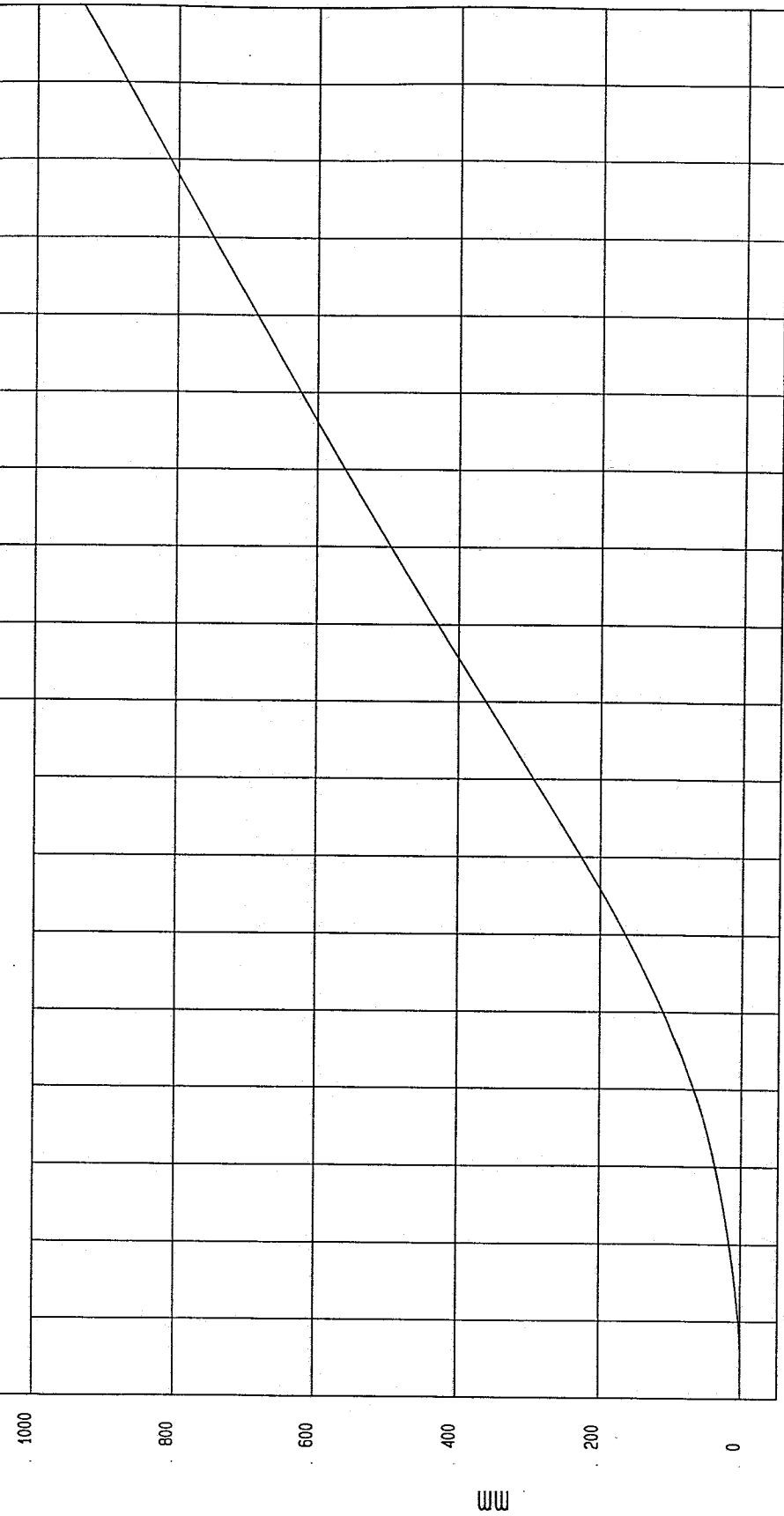
TEST: FMVSS 214 SIDE IMPACT TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -5.16E-03 mm at 3 msec Maximum = 1056.01 mm at 200 msec

RIGHT REAR OCCUPANT COMPARTMENT Y DISPLACEMENT

1 _____ H98016A1.077 Filterclass (180)



TIME Seconds

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

MM

0 200 400 600 800 1000

MGA Research
11-11-1998 14:22

DRIVER UPPER RIB Y ACCELERATION VS. TIME
NO VALID DATA COLLECTED

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

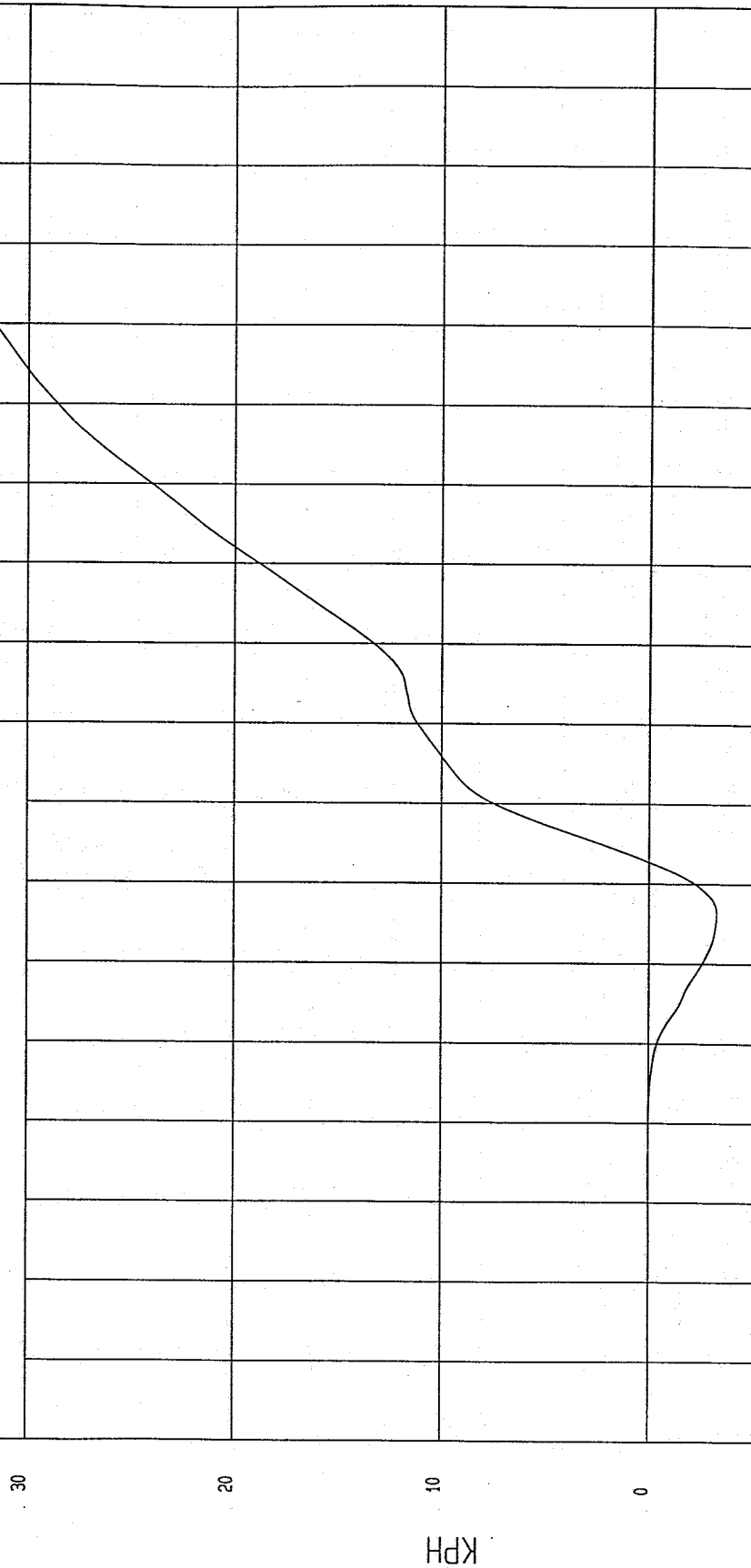
Speed: 32.8 MPH 52.8 KPH

Minimum = -3.15 KPH at 46 msec

Maximum = 33.98 KPH at 143 msec

DRIVER UPPER RIB Y VELOCITY

1 ——— B98016A1.V12 Filterclass (180)



TIME Seconds

NCA Research
11-06-1998 15:38

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

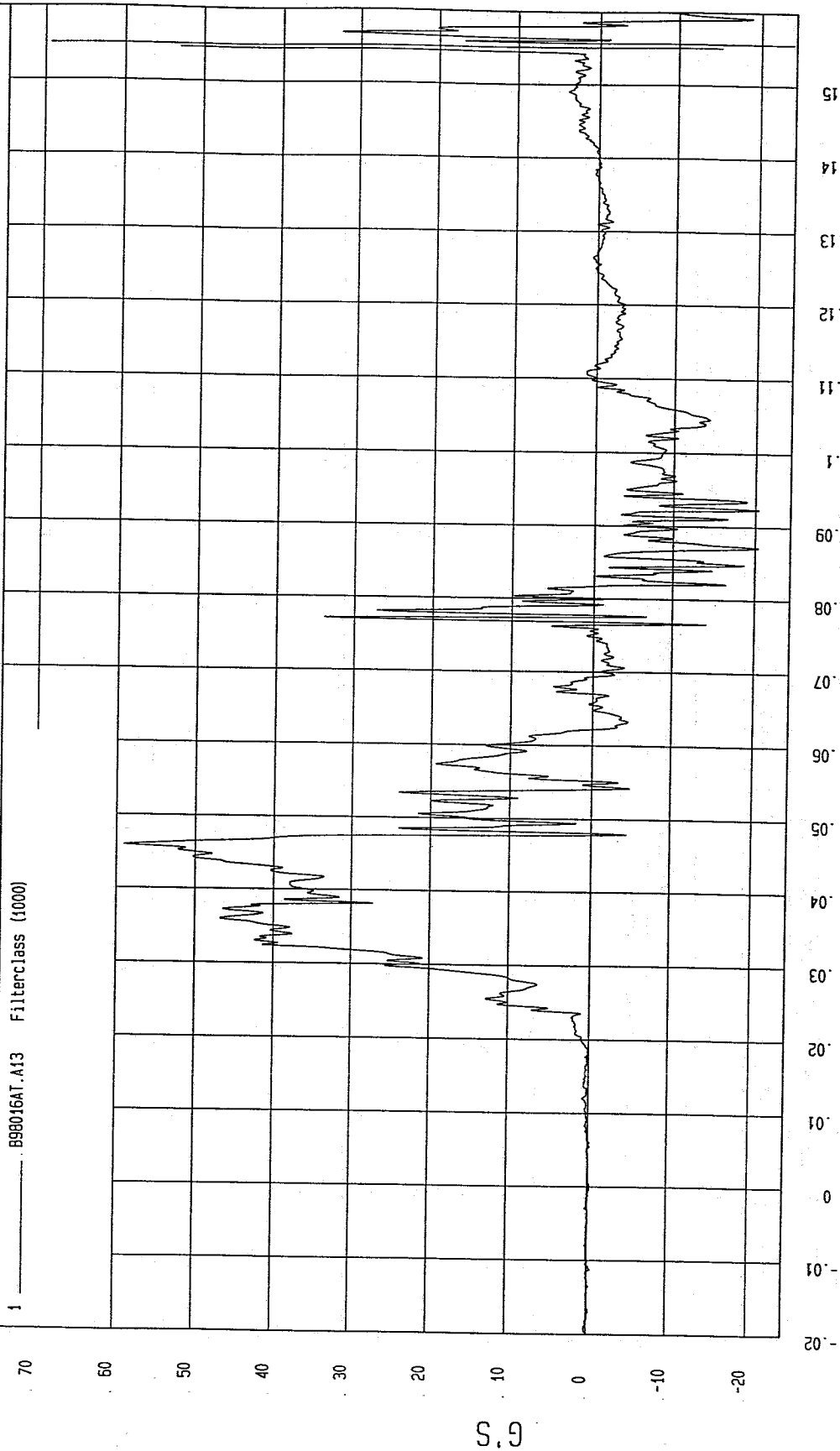
Speed: 32.8 MPH 52.8 KPH

Minimum = -113.61 G'S at 155 msec

Maximum = 139.93 G'S at 155 msec

DRIVER LOWER RIB Y ACCELERATION

1 _____ B98016AT.A13 Filterclass (1000)



MCA Research
11-11-1998 13:40

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

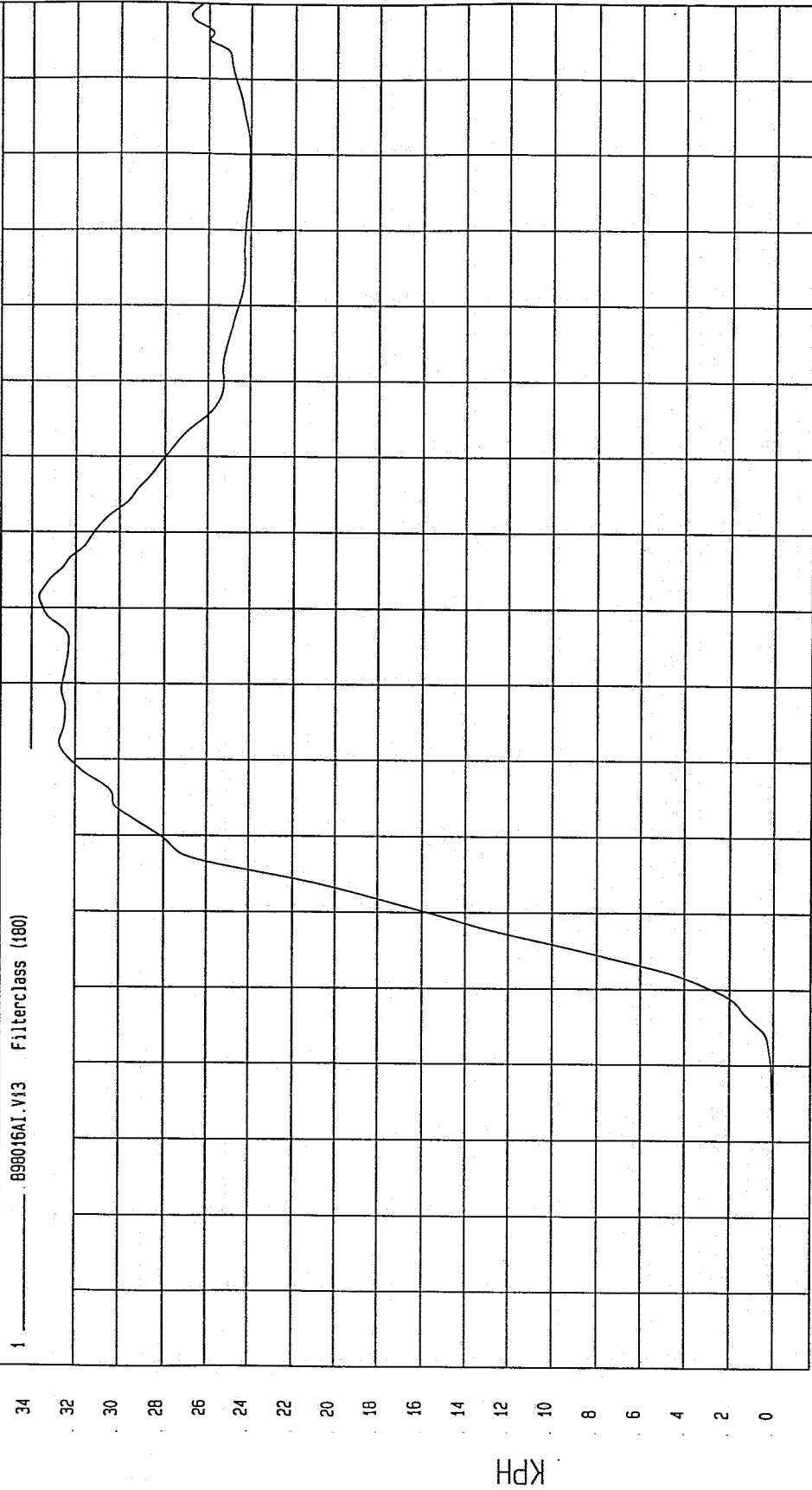
Speed: 32.8 MPH 52.8 KPH

Minimum = -2.29E-02 KPH at 6 msec

Maximum = 33.68 KPH at 82 msec

DRIVER LOWER RIB Y VELOCITY

1 ——— B98016A1.V13 Filterclass (180)



MSA Research
11-08-1998 15:38

TIME Seconds

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

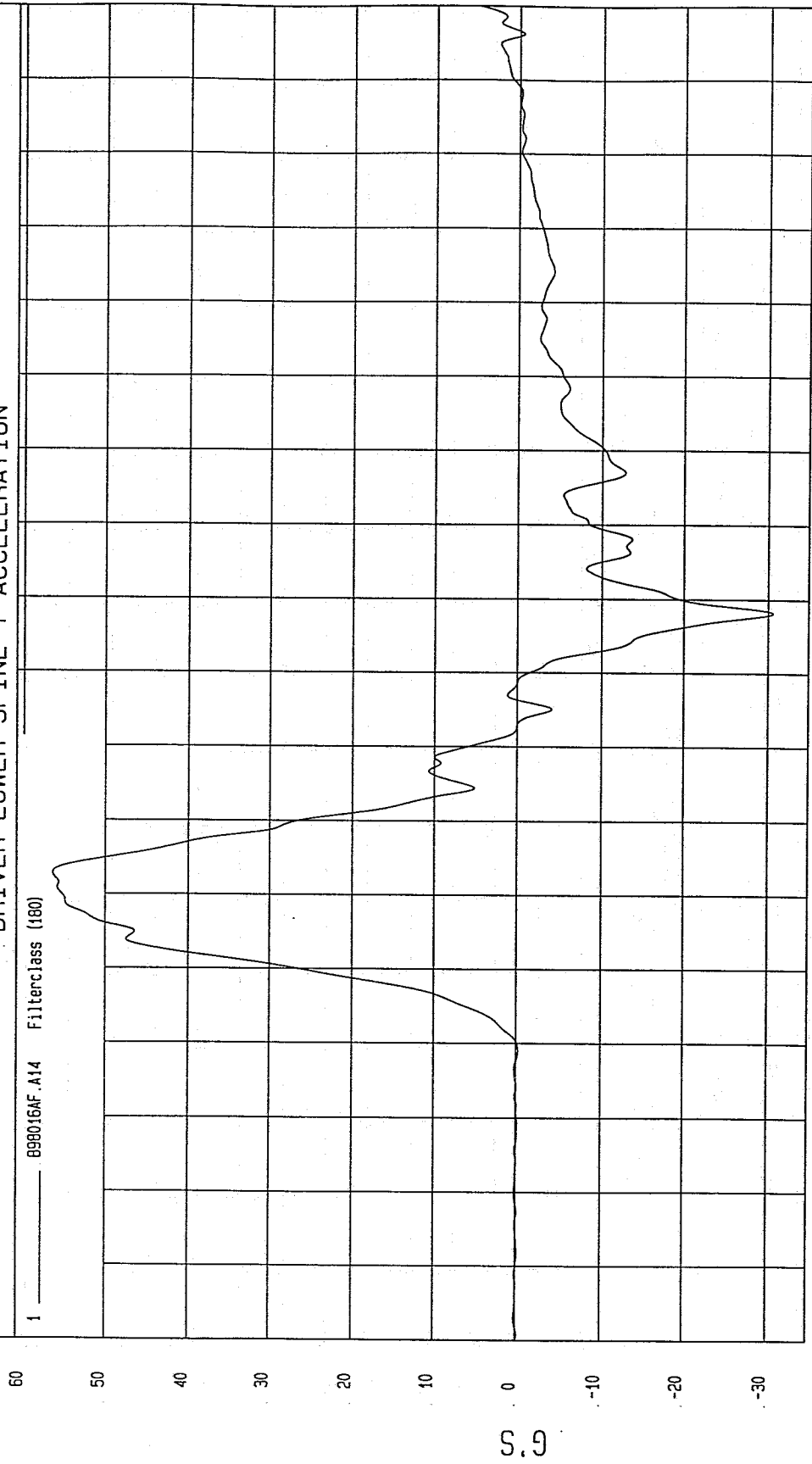
Speed: 32.8 MPH 52.8 KPH

Minimum = -30.6 G'S at 78 msec

Maximum = 56.51 G'S at 43 msec

DRIVER LOWER SPINE Y ACCELERATION

1 — 898016AF.A14 Filterclass (180)



MCA Research
11-11-1998 13:31

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

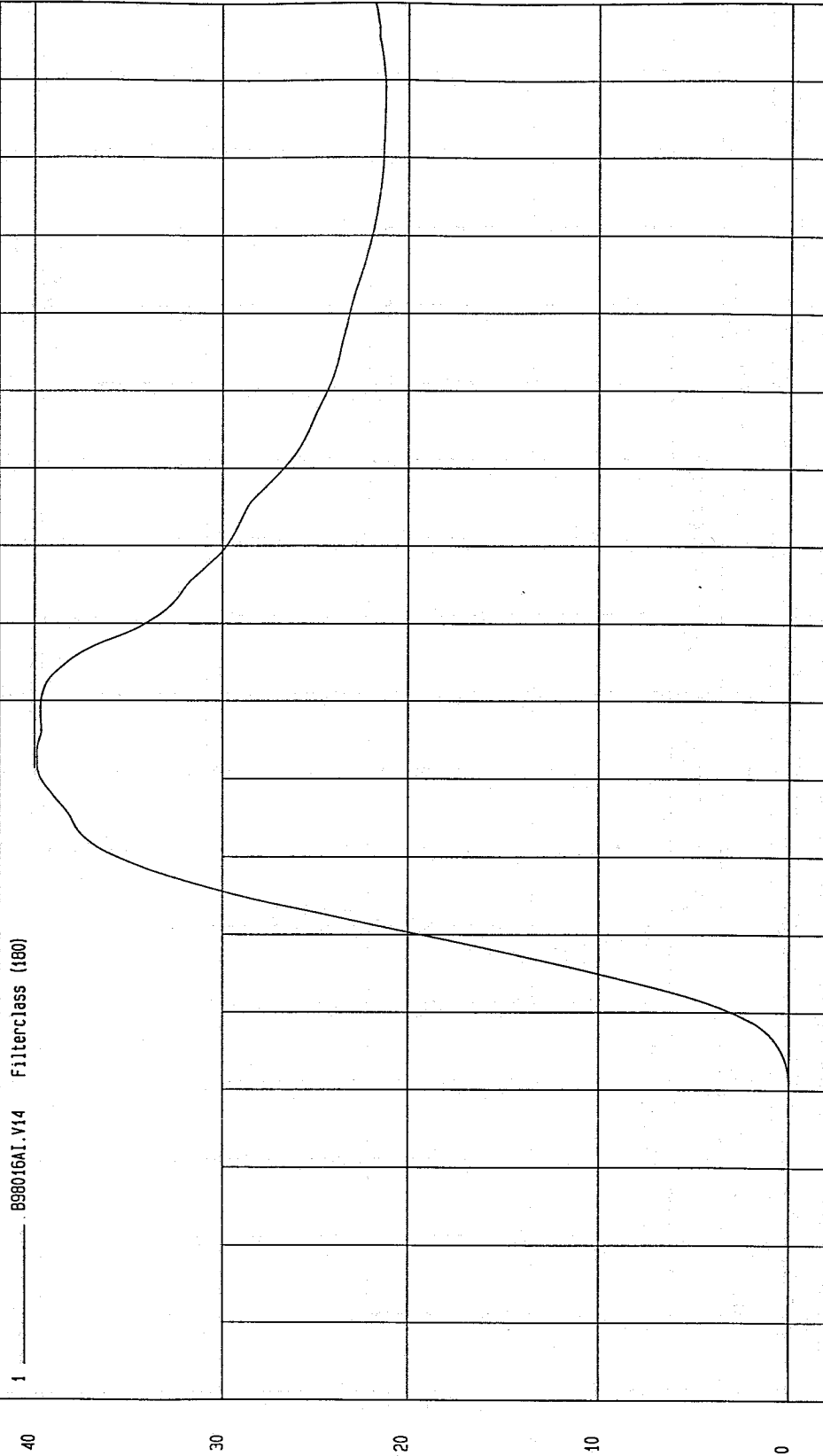
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -.01 KPH at 20 msec

Maximum = 39.87 KPH at 63 msec

DRIVER LOWER SPINE Y VELOCITY

1 B98016A1.V14 Filterclass (100)



TIME Seconds

MGA Research
11-06-1998 15:38

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -19.07 G'S at 61 msec

Maximum = 72.29 G'S at 32 msec

DRIVER PELVIS Y ACCELERATION

1 _____ 898016AT.A15 Filterclass (1000)



MCA Research
11-1-1998 13:36

TEST: FMVSS 214 SIDE IMPACT

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

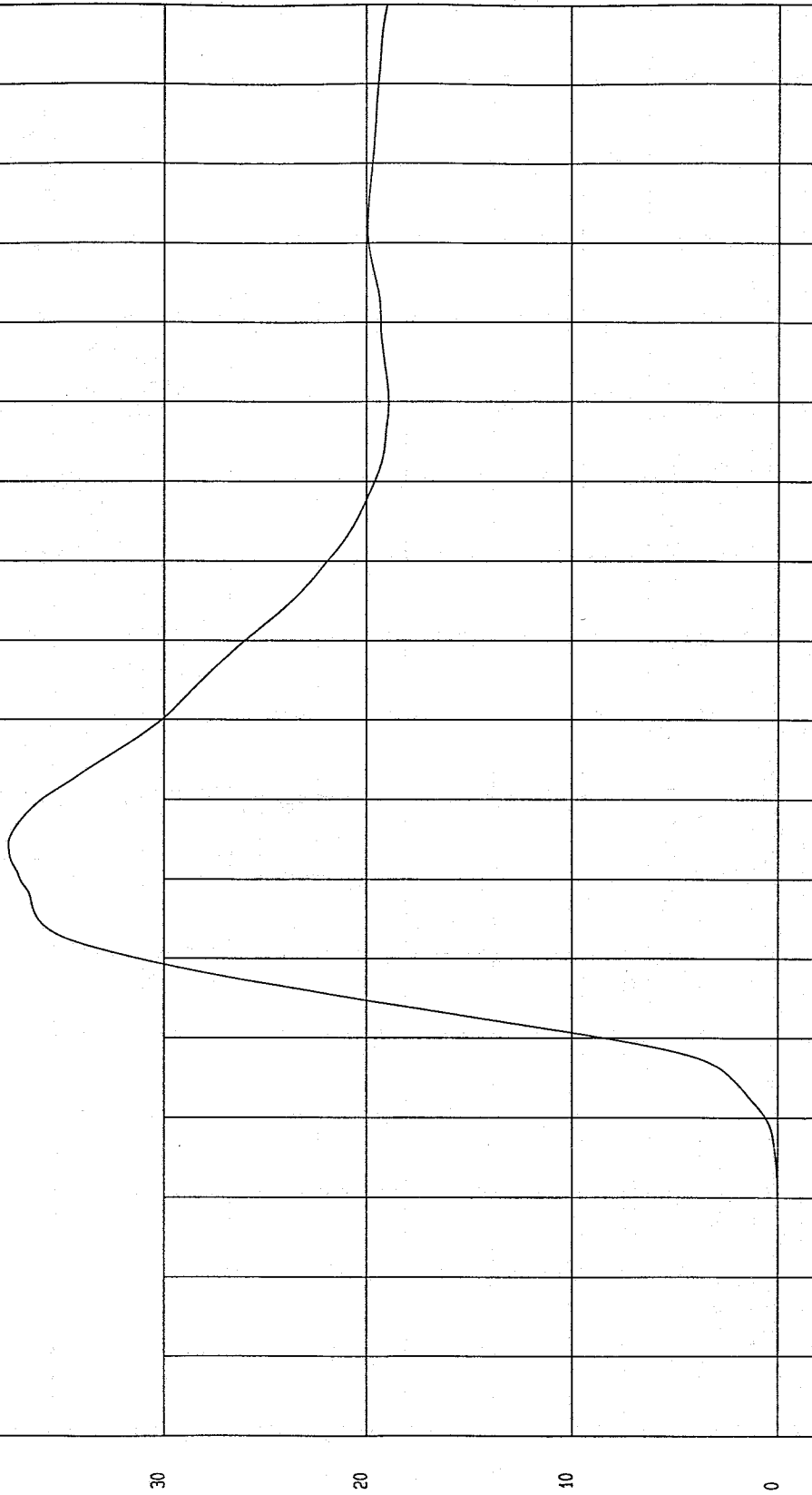
Speed: 32.8 MPH 52.8 KPH

Minimum = -.01 KPH at 3 msec

Maximum = 37.59 KPH at 54 msec

DRIVER PELVIS Y VELOCITY

1 _____ B98016A1.V15 Filterclass (180)



TIME Seconds

MGA Research
11-11-1998 13:43

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

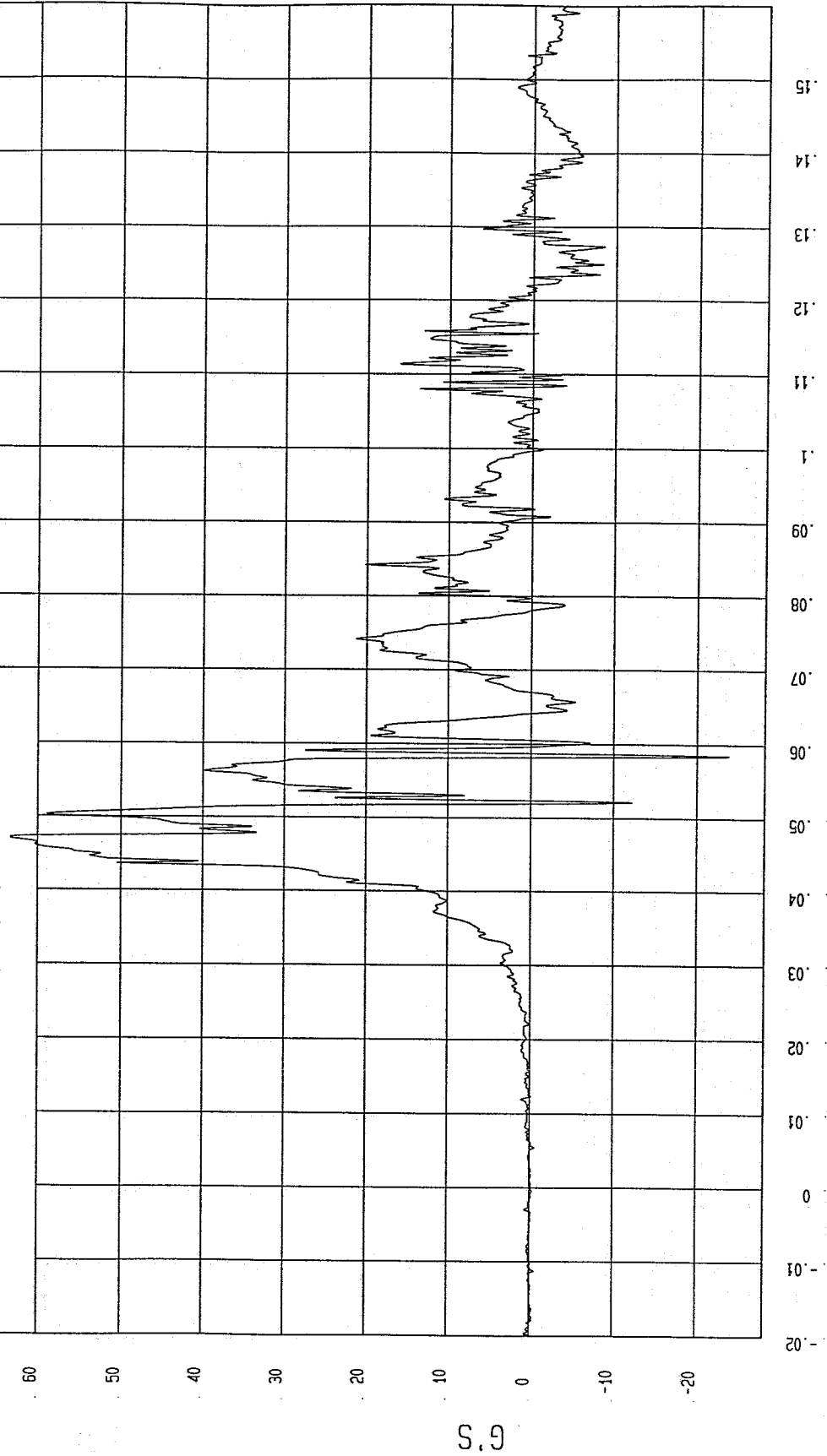
Speed: 32.8 MPH 52.8 KPH

Minimum = -23.8 G'S at 58 msec

Maximum = 63.3 G'S at 47 msec

REAR PASSENGER UPPER RIB Y ACCELERATION

1 B98016AT.A16 Filterclass (1000)



MGA Research
11-11-1998 13:39

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

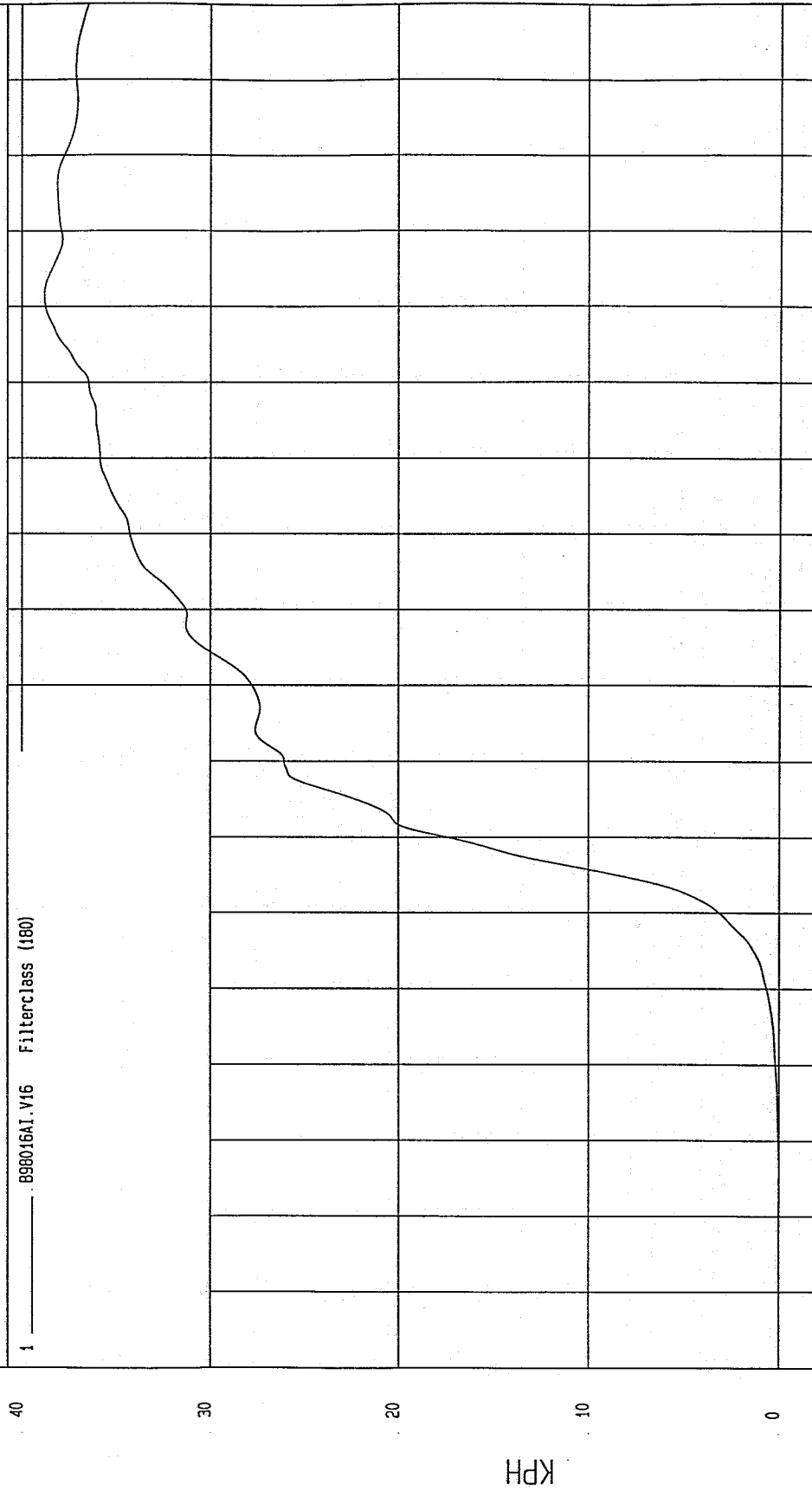
Speed: 32.8 MPH 52.8 KPH

Minimum = -9.67E-03 KPH at -10 msec

Maximum = 38.82 KPH at 122 msec

REAR PASSENGER UPPER RIB Y VELOCITY

1 _____ B98016A1.V16 Filterclass (180)



TIME Seconds

MGA Research
11-08-1998 15:36

TEST: FMVSS 214 SIDE IMPACT TEST

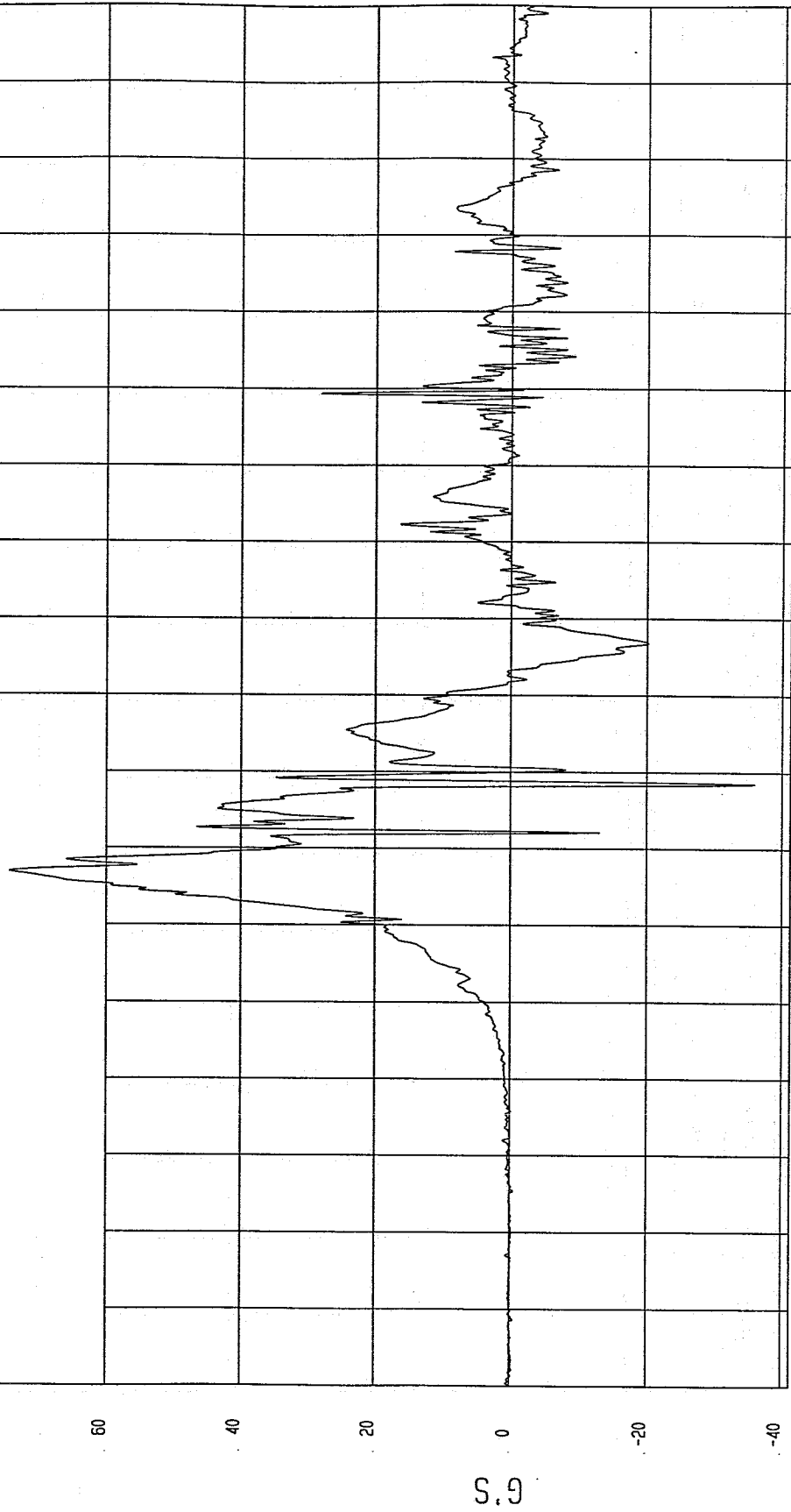
TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -35.78 G'S at 58 msec Maximum = 74.41 G'S at 47 msec

REAR PASSENGER LOWER RIB Y ACCELERATION

1 898016AT.A17 Filterclass (1000)



NGA Research
11-11-1998 13:39

TEST: FMVSS 214 SIDE IMPACT TEST TEST DATE: 03-12-1998

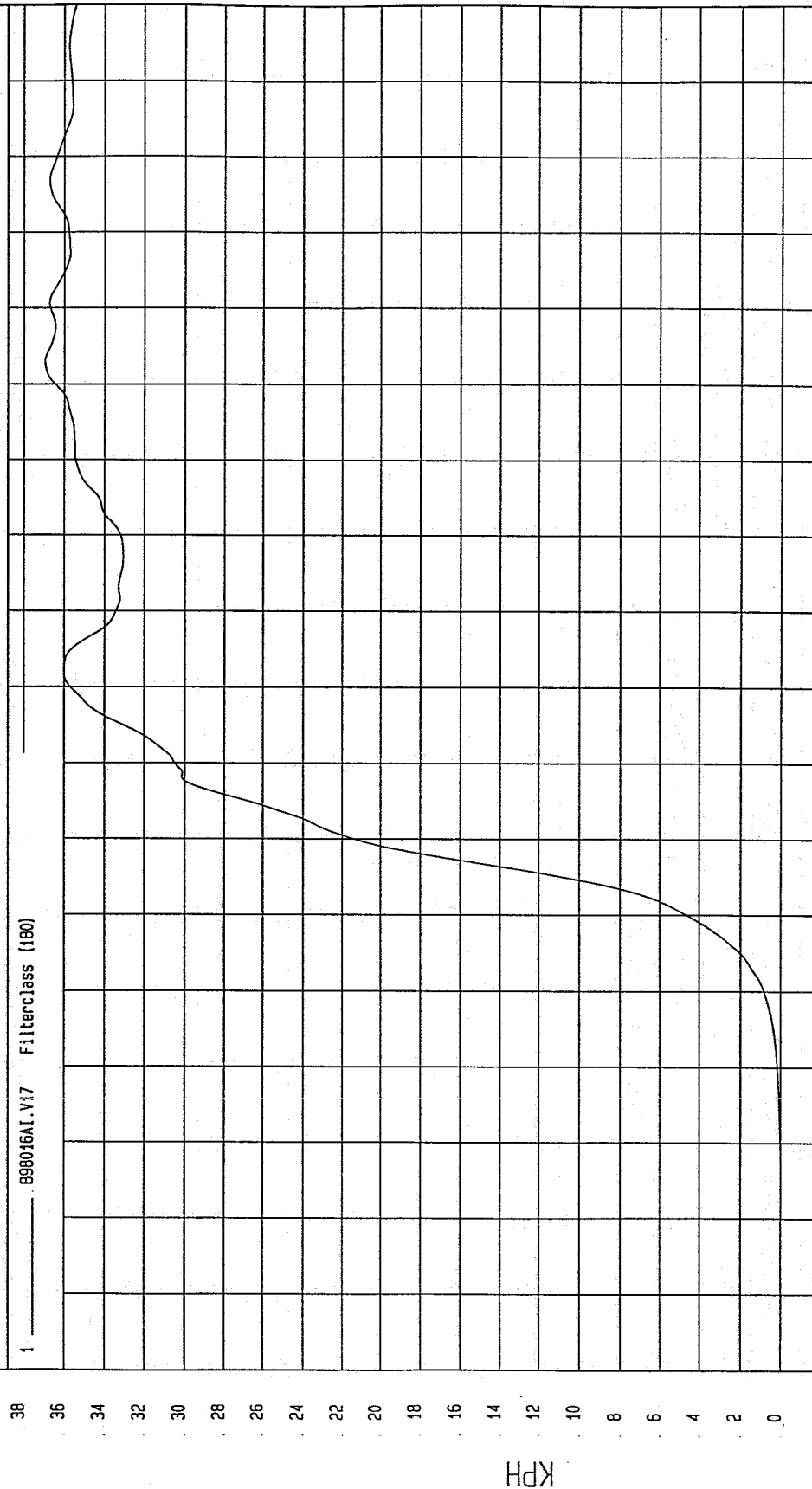
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB Speed: 32.8 MPH 52.8 KPH

Minimum = -1.39E-02 KPH at -10 msec

Maximum = 36.95 KPH at 113 msec

REAR PASSENGER LOWER RIB Y VELOCITY

1 898016A1.V17 Filterclass (180)



TIME Seconds

NGA Research
11-08-1998 15:38

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -14.13 G'S at 82 msec

Maximum = 66.12 G'S at 50 msec

REAR PASSENGER LOWER SPINE Y ACCELERATION

1 _____ B98016AF.A18 FilterClass (480)



NSA Research
11-11-1998 13:32

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

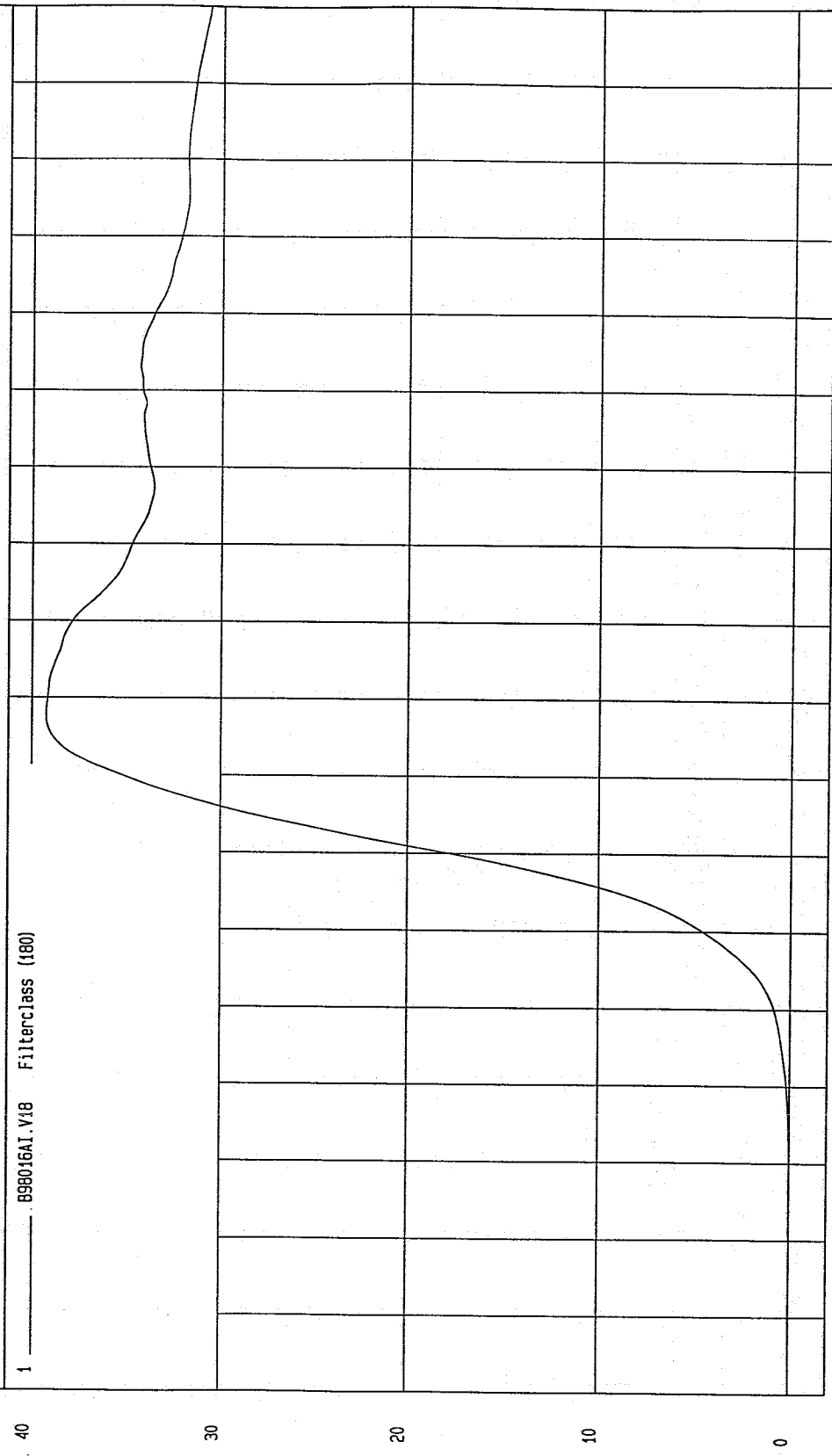
Speed: 32.8 MPH 52.8 KPH

Minimum = -8.09E-03 KPH at -18 msec

Maximum = 39.26 KPH at 68 msec

REAR PASSENGER LOWER SPINE Y VELOCITY

1 898016A1.V18 FilterClass (180)



TIME Seconds

0.15 0.14 0.13 0.12 0.11 0.1 0.09 0.08 0.07 0.06 0.05 0.04 0.03 0.02 0.01 0 -0.01 -0.02

40 30 20 10 0

KPH

NCA Research
11-06-1998 15:38

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

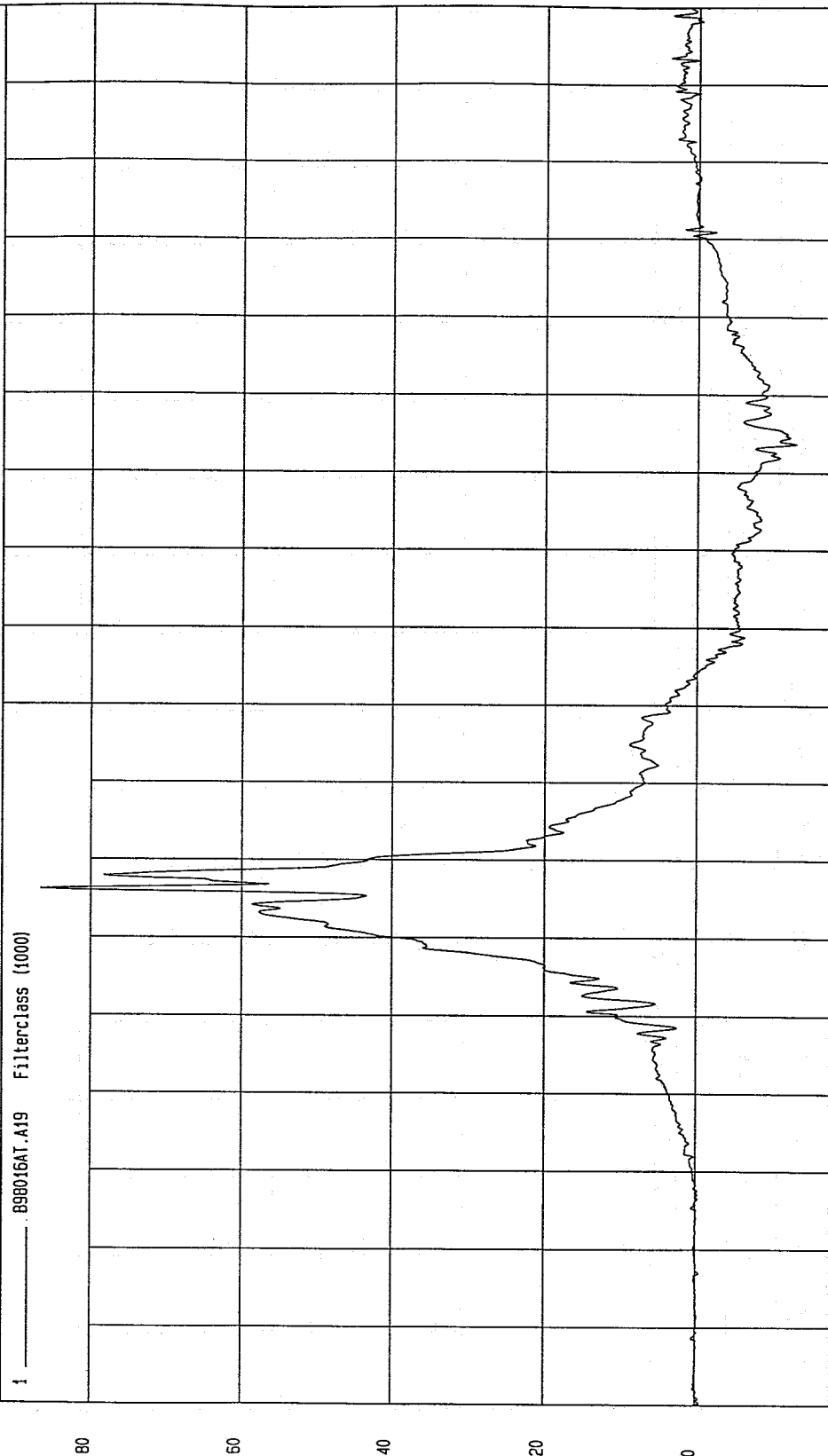
Speed: 32.8 MPH 52.8 KPH

Minimum = -12.59 G'S at 104 msec

Maximum = 86.58 G'S at 46 msec

REAR PASSENGER PELVIS Y ACCELERATION

1 _____ 898016AT.A19 Filterclass (1000)



MGA Research
11-11-1998 13:39

TIME (SECONDS)

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

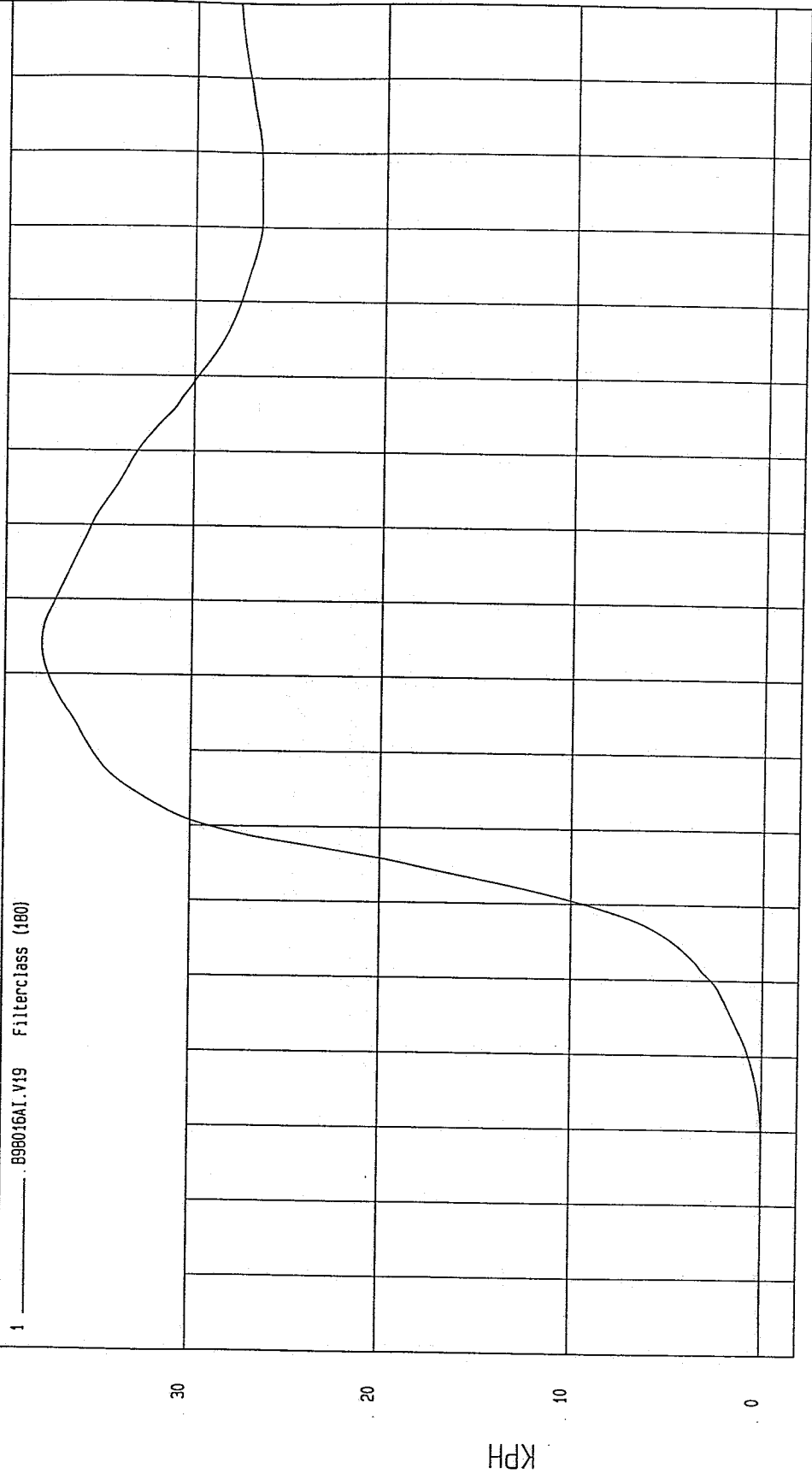
Speed: 32.8 MPH 52.8 KPH

Minimum = -8.64E-03 KPH at -2 msec

Maximum = 37.9 KPH at 74 msec

REAR PASSENGER PELVIS Y VELOCITY

1 _____ .B98016A1.V19 Filterclass (180)



MSA Research
11-08-1998 15:40

TIME Seconds

DRIVER UPPER RIB Y ACCELERATION VS. TIME

NO VALID DATA COLLECTED

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

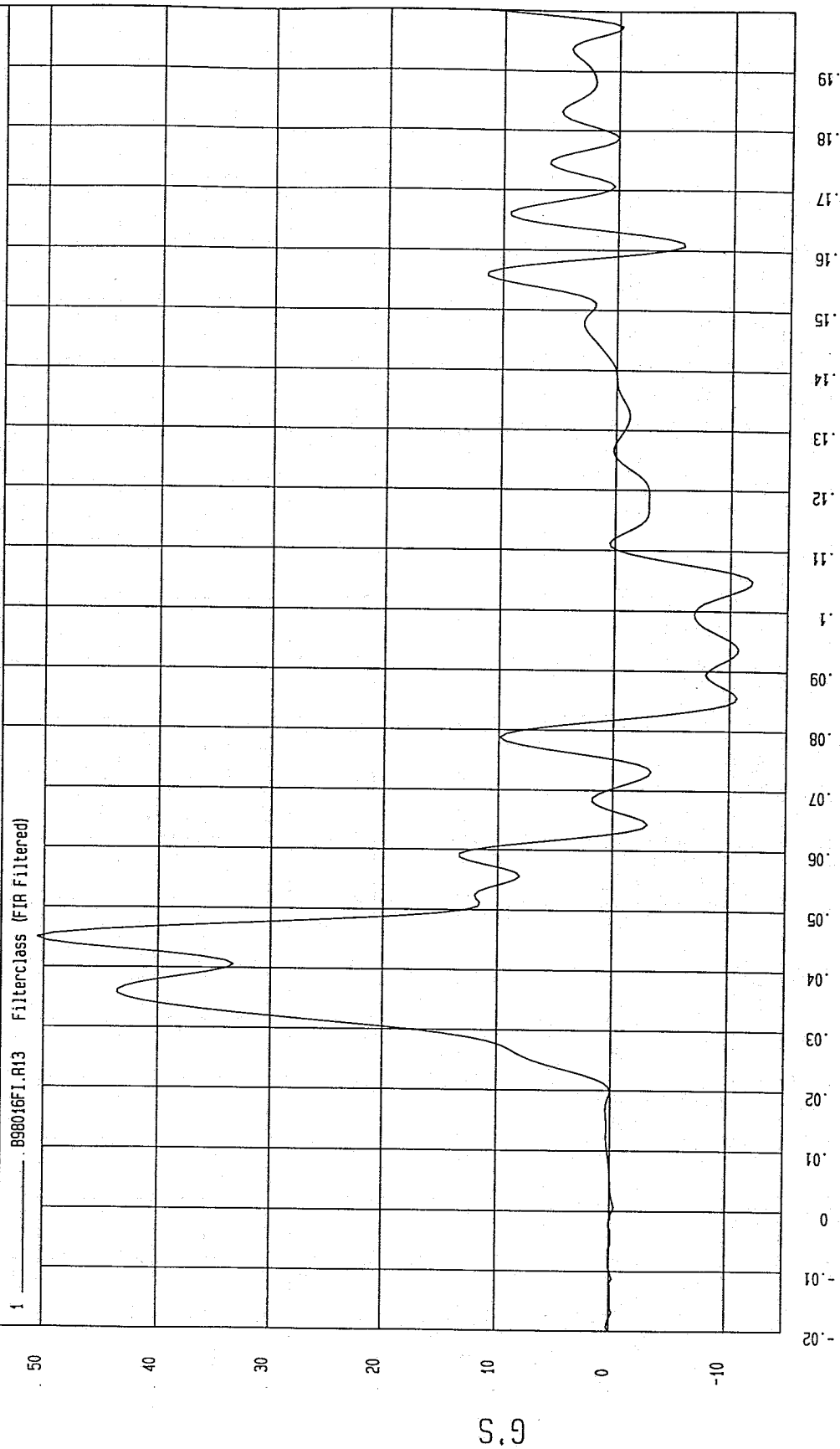
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -11.91 G'S at 105 msec

Maximum = 50.57 G'S at 45 msec

DRIVER LOWER RIB Y ACCELERATION



NGA Research
11-03-1998 12:54

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

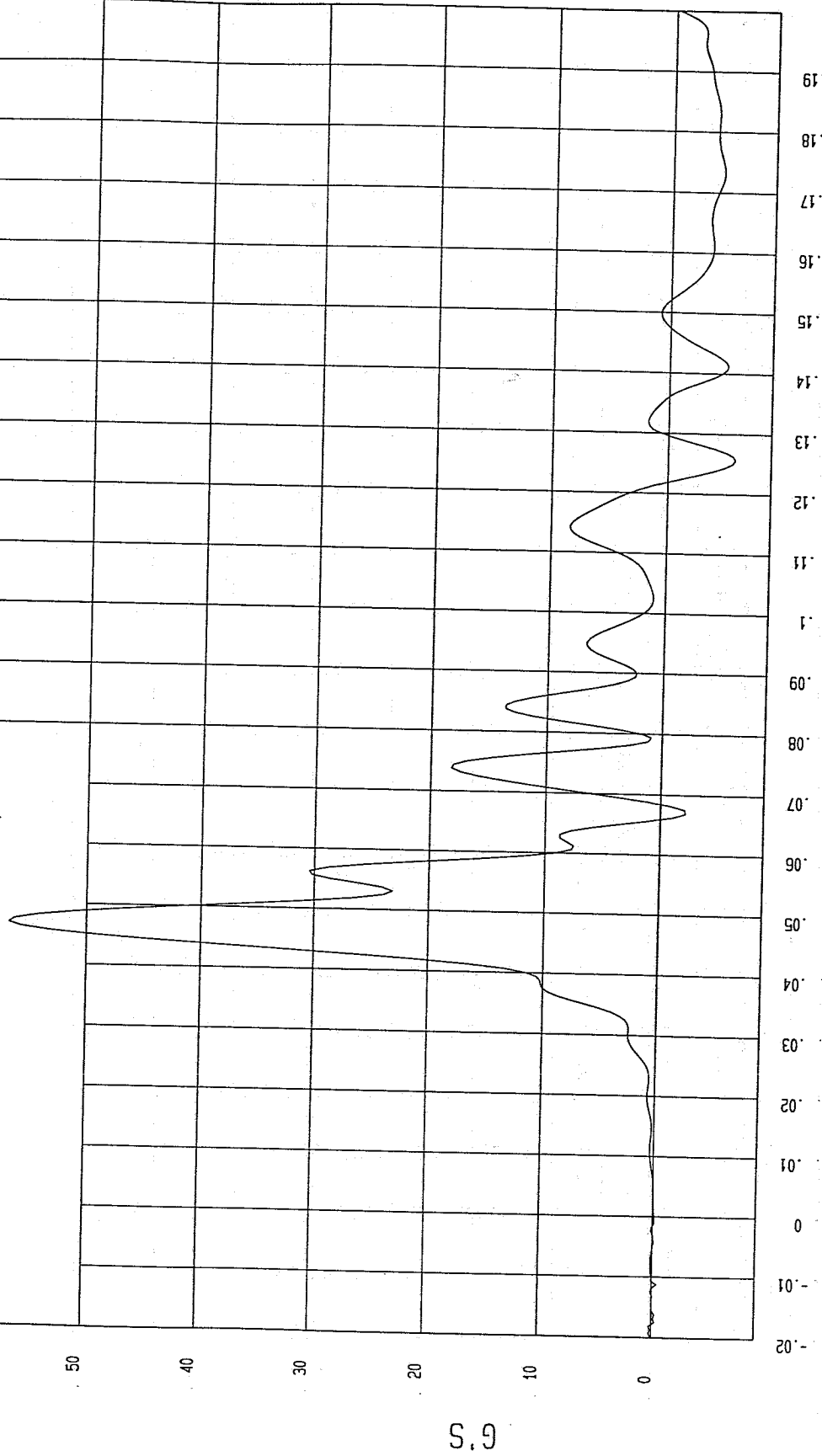
Speed: 32.8 MPH 52.8 KPH

Minimum = -5.77 G'S at 126 msec

Maximum = 56.78 G'S at 47 msec

REAR PASSENGER UPPER RIB Y ACCELERATION

1 ——— B98016F1.R16 Filterclass (FIR Filtered)



MGA Research
11-03-1998 12:54

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

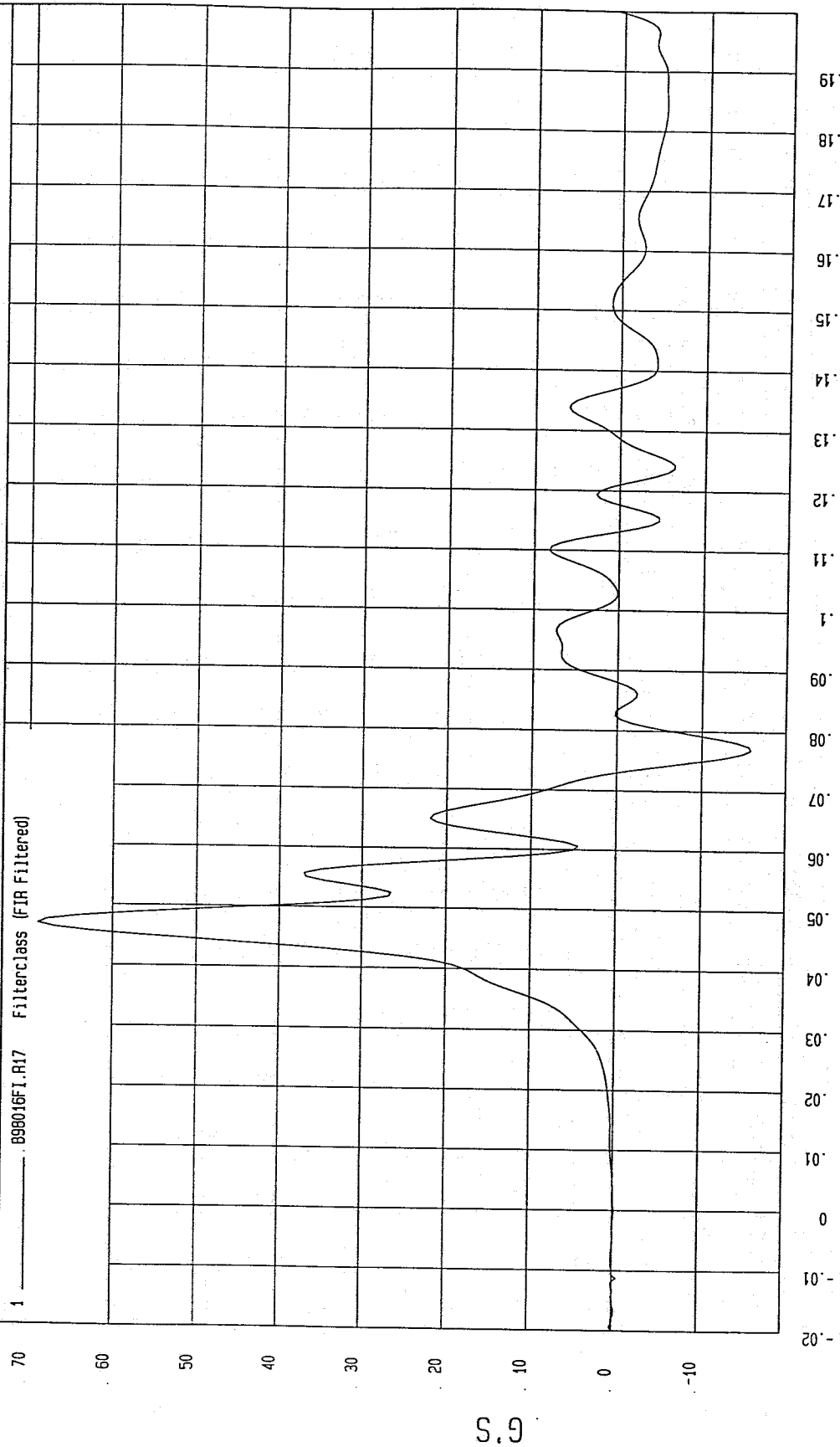
COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

Speed: 32.8 MPH 52.8 KPH

Minimum = -15.63 G'S at 77 msec

Maximum = 68.9 G'S at 47 msec

REAR PASSENGER LOWER RIB Y ACCELERATION



MGA Research
11-03-1998 12:54

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

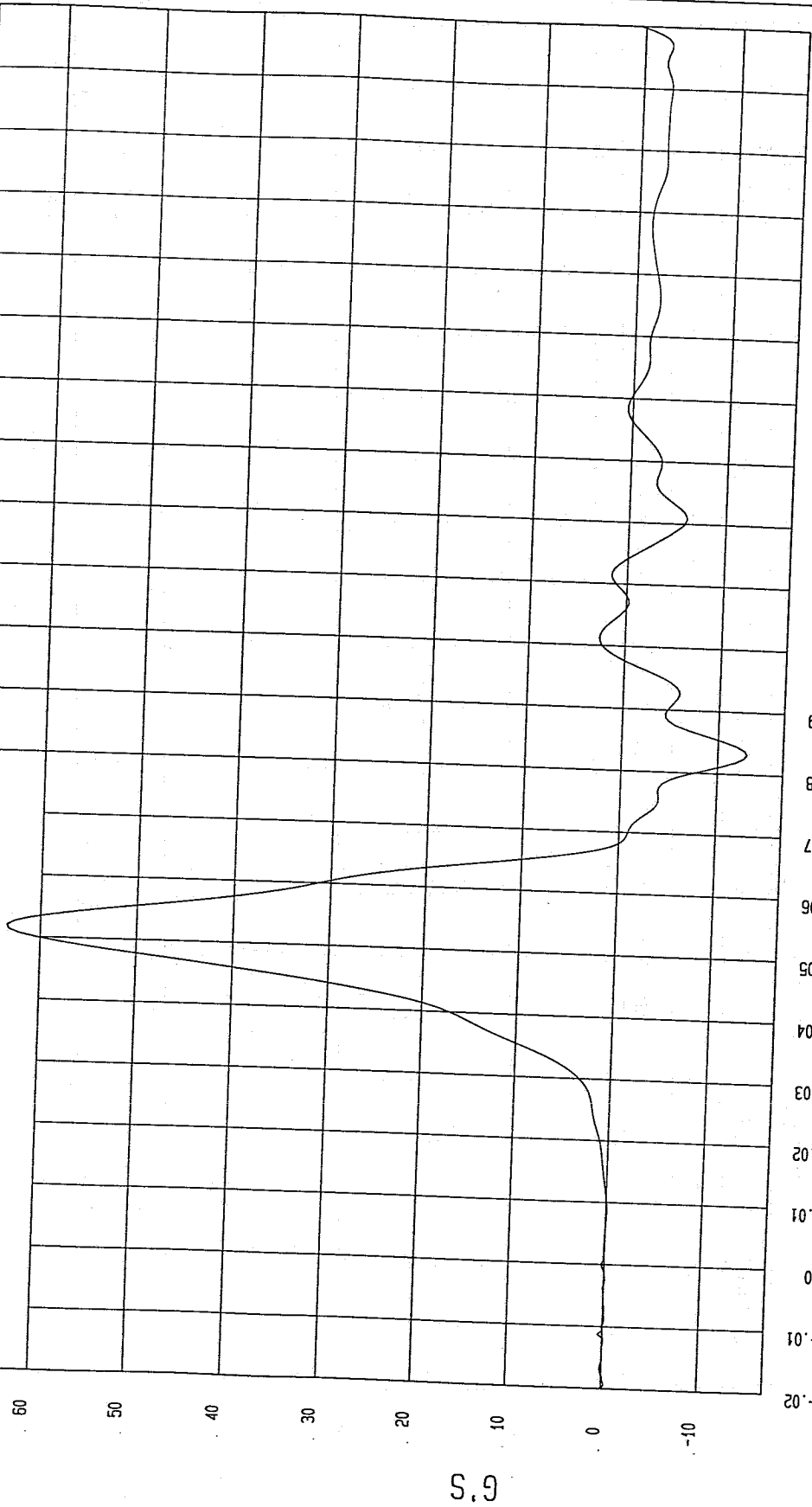
Speed: 32.8 MPH 52.8 KPH

Minimum = -13 G'S at 83 msec

Maximum = 63.44 G'S at 52 msec

REAR PASSENGER LOWER SPINE Y ACCELERATION

1 B98016FI.R18 Filterclass (FIR Filtered)



TIME (SECONDS)

MCA Research
11-03-1998 12:54

TEST: FMVSS 214 SIDE IMPACT TEST

TEST DATE: 03-12-1998

COMPONENT: 1996 FORD TAURUS - INSTRUMENTED MDB

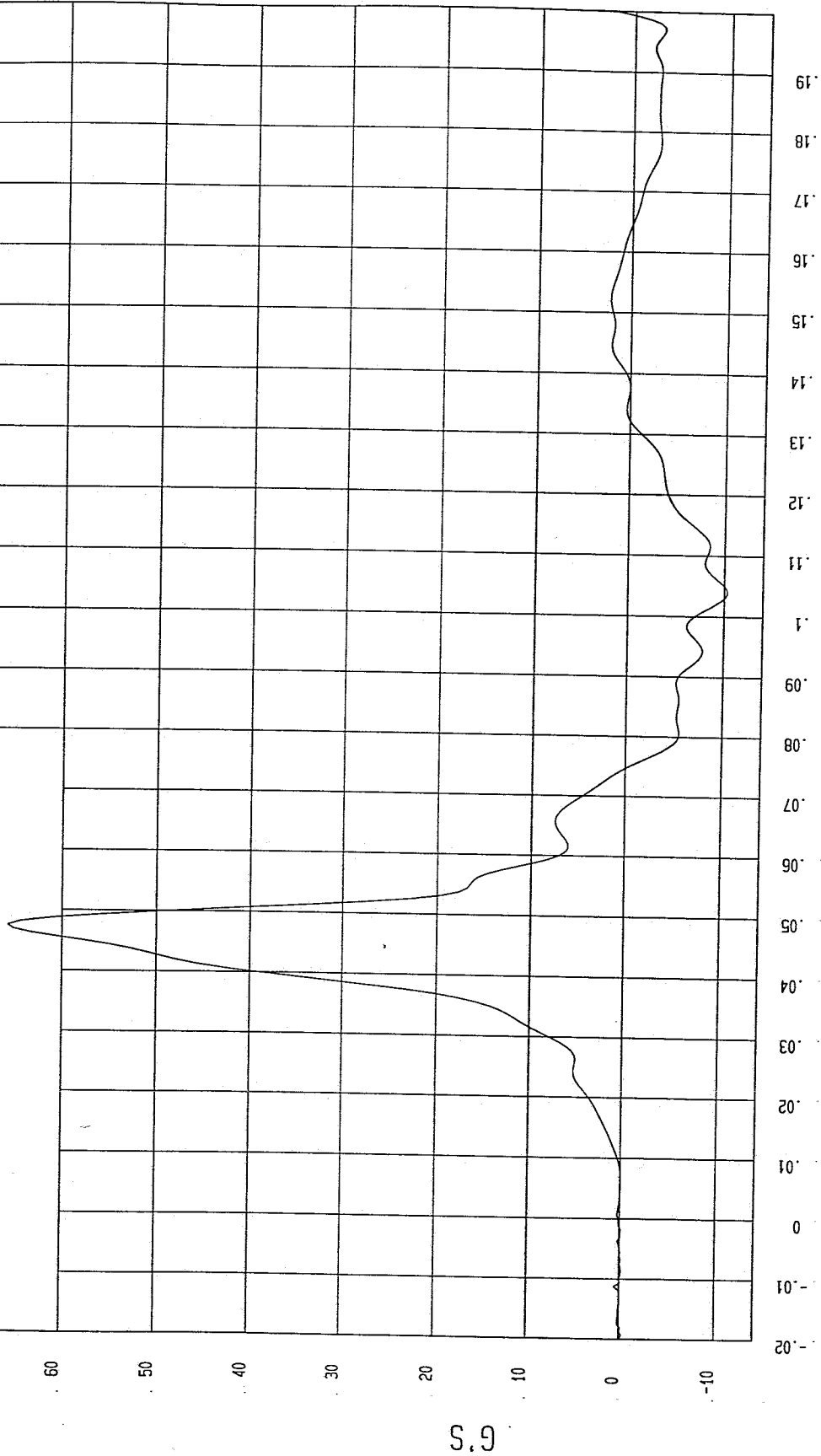
Speed: 32.8 MPH 52.8 KPH

Minimum = -10.33 G'S at 104 msec

Maximum = 65.72 G'S at 48 msec

REAR PASSENGER PELVIS Y ACCELERATION

1 B98016F1.R19 Filterclass (FIR Filtered)



MGA Research
11-03-1998 12:54

APPENDIX C
SID CONFIGURATION AND PERFORMANCE VERIFICATION

PRE-TEST CERTIFICATION DATA

Dummy Serial Number: 271

Calibration Test Results Summary

Dummy Serial Number: 271

Pre-Test Calibration

External Dimensions: The dummy passed all external dimension requirements.

Thorax Impact Test: The thorax passed all impact test requirements.

Pelvic Impact Test: The pelvis passed all impact test requirements.

Abdominal Compression Test: The abdomen passed all compression test requirements.

Lumbar Flexion Test: The lumbar passed all flexion test requirements.

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY SERIAL NO.: 271

DATE OF VERIFICATION: March 5, 1998

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.6
RH - Rib Height	19.75" - 20.50"	20.4
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" - 9.5"	9.4
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.4
SW - Knee Pivot to Floor	19.3" - 19.9"	19.5
HW - Hip Width	14"0 - 15.4"	15.1

MEASUREMENTS BY: Jim H. H.

APPROVED BY: Dave Krabak

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: March 5, 1998

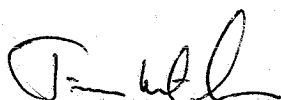
DUMMY SERIAL NUMBER: 271

TEST NUMBER: D98362

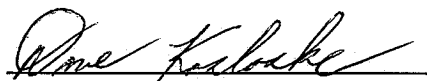
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	14.0 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	45
LOWER RIB	37 - 46 g's	44
LOWER SPINE)	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY



TEST: DUMMY CALIBRATION - THORAX IMPACT

TEST DATE: 03-05-1998 - 09:08

COMPONENT: DUMMY # 271

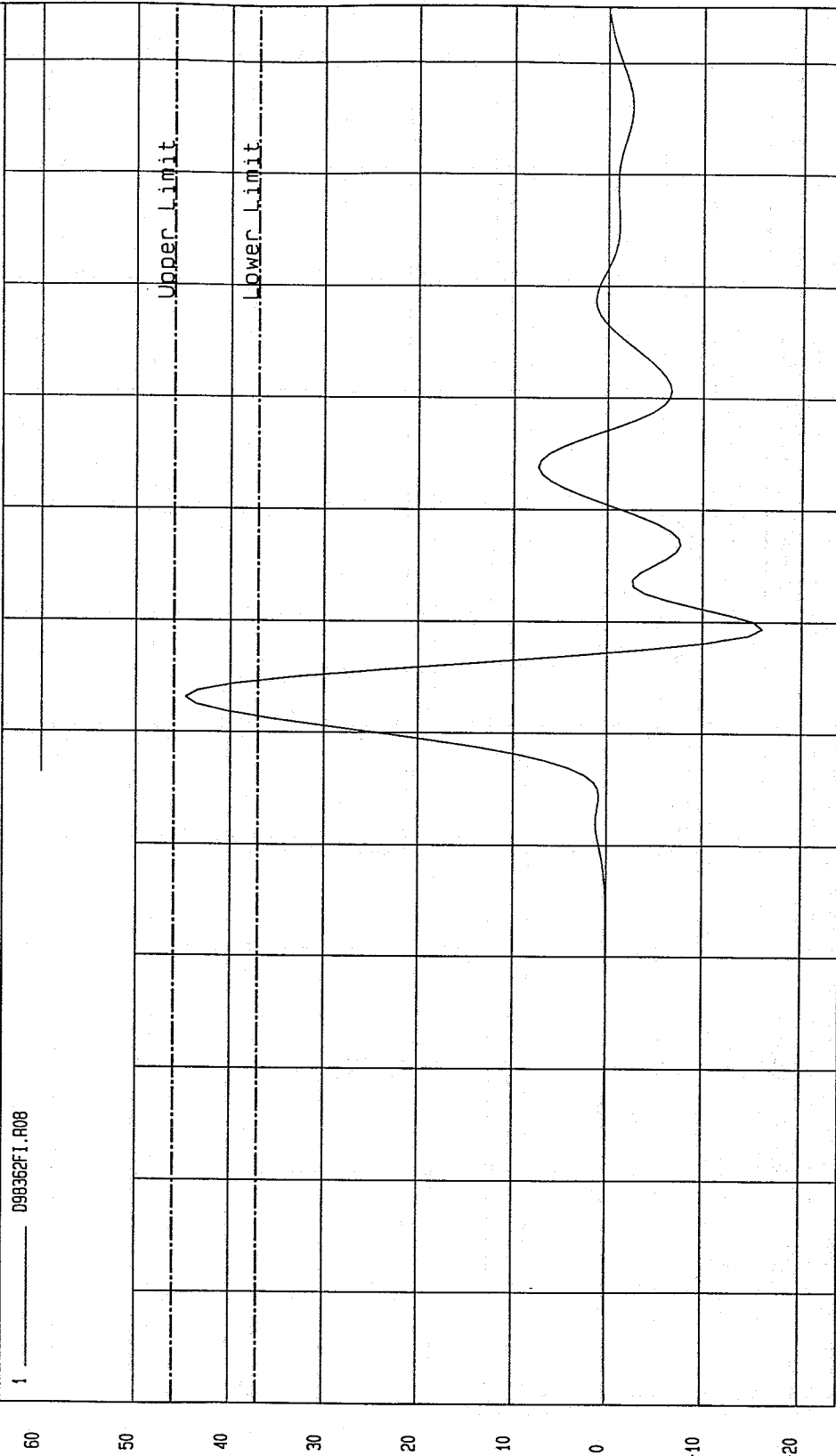
Velocity: 14.006 FT/SEC 4.27 M/SEC

Minimum = -15.97 G'S at 69.3 msec

Maximum = 44.79 G'S at 63.1 msec

UPPER RIB ACCELERATION

1 ——— D98362F1.R08



MGA Research
03-05-1998 09:23

TEST: DUMMY CALIBRATION - THORAX IMPACT

TEST DATE: 03-05-1998 - 09:08

COMPONENT: DUMMY # 271

Velocity: 14.006 FT/SEC 4.27 M/SEC

Minimum = -14.07 G'S at 69.3 msec

Maximum = 43.65 G'S at 63.1 msec

LOWER RIB ACCELERATION

1 ——— D98362FI.R09

60

50

40

30

20

10

0

-10

-20

G.S

Upper Limit

Lower Limit

0

.01

.02

.03

.04

.05

.06

.07

.08

.09

.1

.11

.12

TIME (SECONDS)

NCA Research
03-05-1998 09:23

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 03-05-1998 - 09:18:05

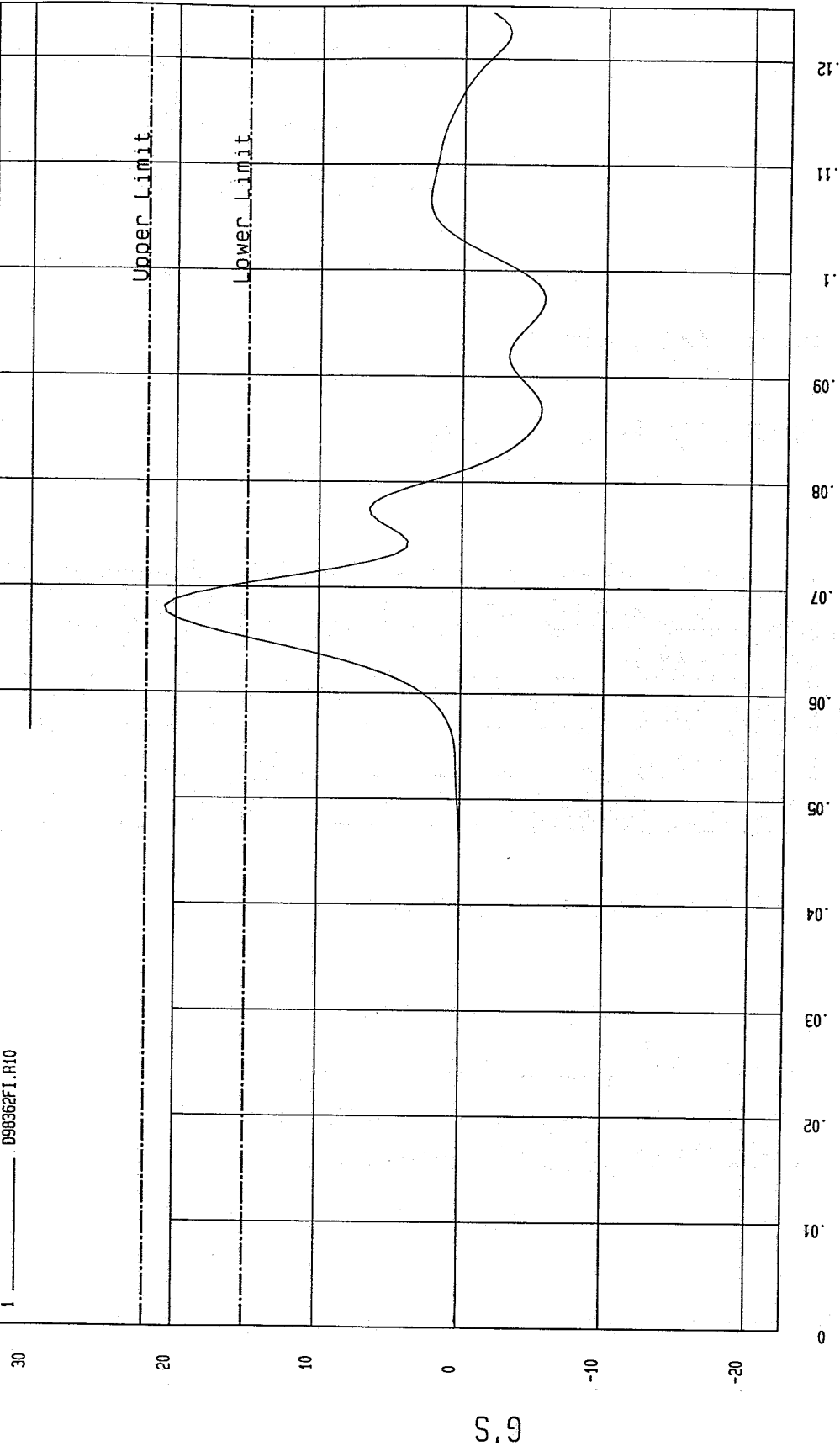
COMPONENT: DUMMY # 271 Velocity: 14.006 FT/SEC 4.27 M/SEC

Minimum = -5.67 G'S at 97.5 msec

Maximum = 20.78 G'S at 68.1 msec

LOWER SPINE ACCELERATION

1 _____ D98362F1.R10



NCA Research
03-05-1998 09:24

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: March 5, 1998

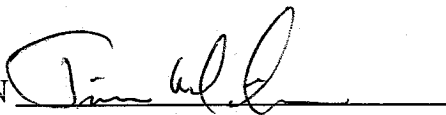
DUMMY SERIAL NUMBER: 271

TEST NUMBER: D98363

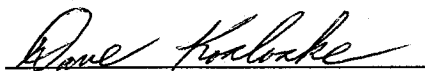
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	14.0 - 14.2 fps	14.0
PELVIS ACCELERATION	40 - 60	52

TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY



TEST: DUMMY CALIBRATION - PELVIS IMPACT TEST DATE: 03-05-1998 - 09:22

COMPONENT: DUMMY # 271 Velocity: 14.013 FT/SEC 4.27 M/SEC

Minimum = -7.51 G'S at 59.3 msec

Maximum = 51.50 G'S at 53.7 msec

PELVIS ACCELERATION

1 ——— D98363FI.R11

80

60

40

20

0

-20

G'S

Upper Limit

Lower Limit

0 .01 .02 .03 .04 .05 .06 .07 .08 .09 .1 .11 .12

TIME (SECONDS)

NSA Research
03-05-1998 09:24

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

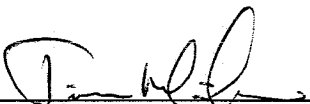
DATE: March 4, 1998

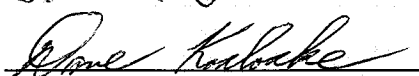
DUMMY SERIAL NUMBER: 271

TEST NUMBER: D98364

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70
RELATIVE HUMIDITY	10 - 70%	21%
FORCE @ 0.5 in.	23.3 - 36.5 lbs	32.6
FORCE @ 0.75 in	36.7 - 49.8 lbs	44.9
FORCE @ 1.0 in	50 - 63 lbs	58
FORCE @ 1.3 in	73 - 88 lbs	78

TEST MEETS SPECIFICATIONS

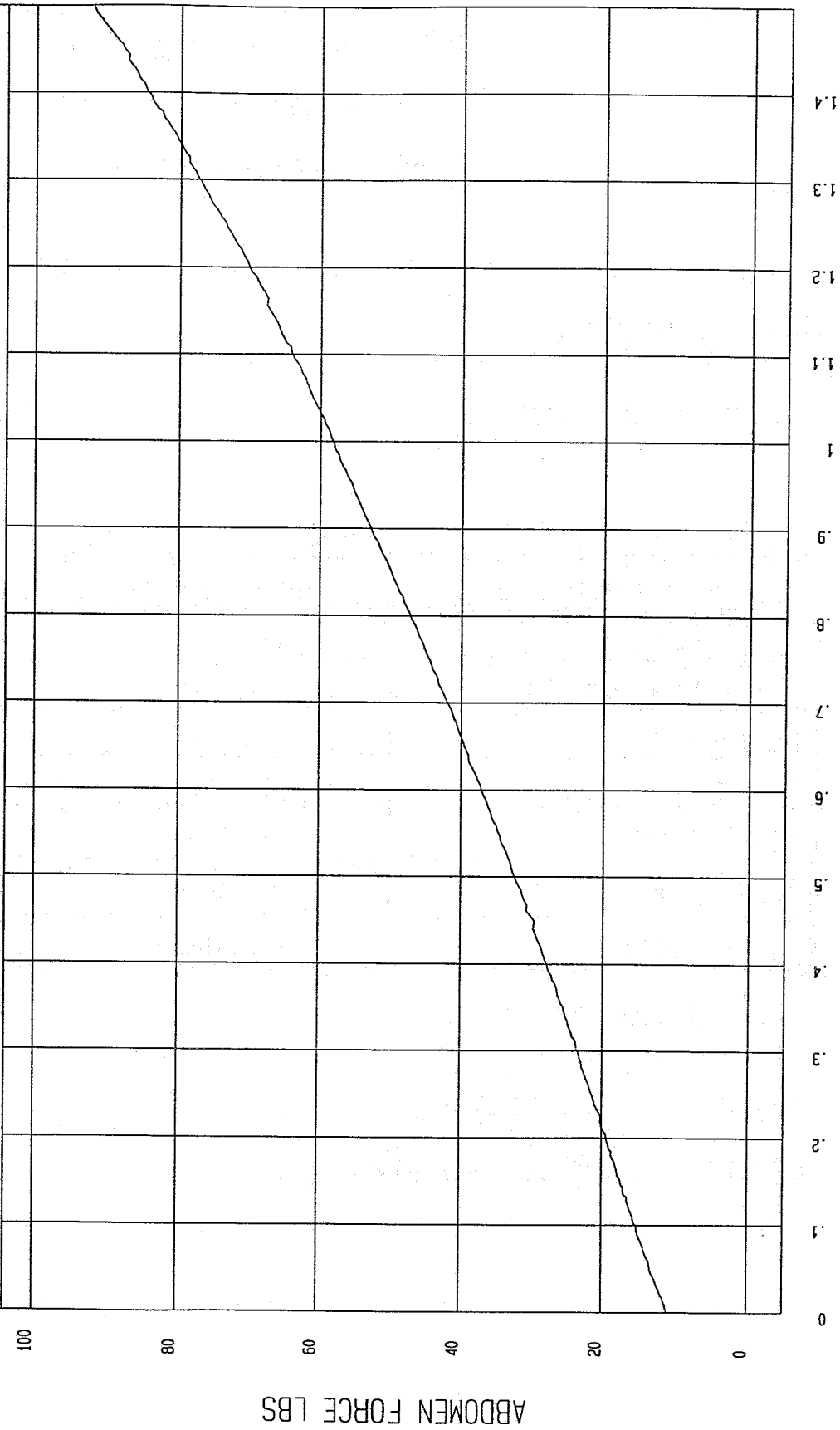
TECHNICIAN 

APPROVED BY 

TEST: DUMMY CALIBRATION - ABDOMEN COMPRESSION TEST DATE: 03-04-1998 - 15:07

COMPONENT: DUMMY # 271

ABDOMEN FORCE as a function of ABDOMEN DISPLACEMENT



NSA Research
03-04-1998 15.10

ABDOMEN DISPLACEMENT INCHES

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

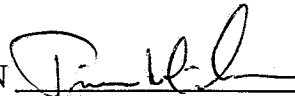
DATE: March 4, 1998

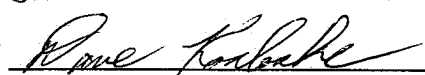
DUMMY SERIAL NUMBER: 271

TEST NUMBER: D98365

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	21%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	26
FORCE @ 30°	34 - 46 lbs	36
FORCE @ 40°	46 - 58 lbs	46
RETURN ANGLE	12° maximum	6°

TEST MEETS SPECIFICATIONS

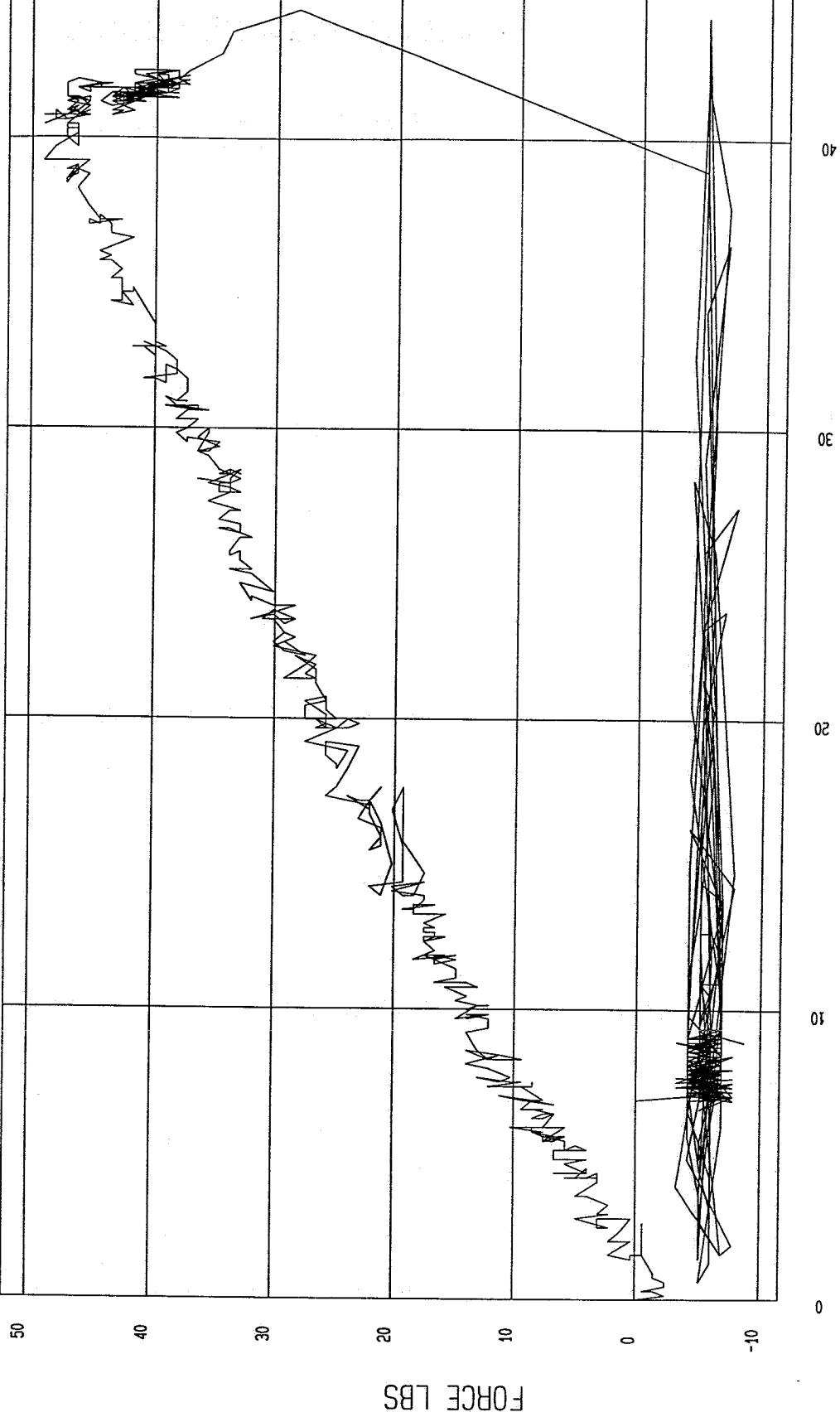
TECHNICIAN 

APPROVED BY 

TEST: DUMMY CALIBRATION - LUMBAR FLEXION TEST DATE: 03-04-1998 - 14:18

COMPONENT: DUMMY # 271

FORCE as a function of TORSO ROTATION



MGA Research
03-04-1998 14:54

PRE-TEST CERTIFICATION DATA

Dummy Serial Number: 272

Calibration Test Results Summary

Dummy Serial Number: 272

Pre-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion Test:	The lumbar passed all flexion test requirements.

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY SERIAL NO.: 272

DATE OF VERIFICATION: March 5, 1998

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.2
RH - Rib Height	19.75" - 20.50"	20.2
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" - 9.5"	9.4
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.7
SW - Knee Pivot to Floor	19.3" - 19.9"	19.6
HW - Hip Width	14.0" - 15.4"	15.0

MEASUREMENTS BY: Tom White

APPROVED BY: Paul Koelke

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

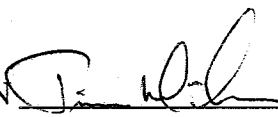
DATE: March 5, 1998

DUMMY SERIAL NUMBER: 272

TEST NUMBER: D98372

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	14.0 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	42
LOWER RIB	37 - 46 g's	44
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 03-05-1998 - 08:31

COMPONENT: DUMMY # 272 Velocity: 14.01 FT/SEC 4.27 M/SEC

Minimum = -14.60 G'S at 68.7 msec Maximum = 41.53 G'S at 61.8 msec

UPPER RIB ACCELERATION

1 _____ 098372FT.R08

60

50

40

30

20

10

0

-10

-20

G'S

Upper Limit

Lower Limit

TIME (SECONDS)

0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.1 0.11 0.12

NSA Research
03-05-1998 08:38

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 03-05-1998 - 08:31

COMPONENT: DUMMY # 272 Velocity: 14.01 FT/SEC 4.27 M/SEC

Minimum = -13.87 G'S at 68.7 msec

Maximum = 43.71 G'S at 62.5 msec

LOWER RIB ACCELERATION

1 ——— 098372FI.R09

60

50

40

30

20

10

0

-10

-20

G'S

Upper Limit

Lower Limit

0 .01 .02 .03 .04 .05 .06 .07 .08 .09 .1 .11 .12

TIME (SECONDS)

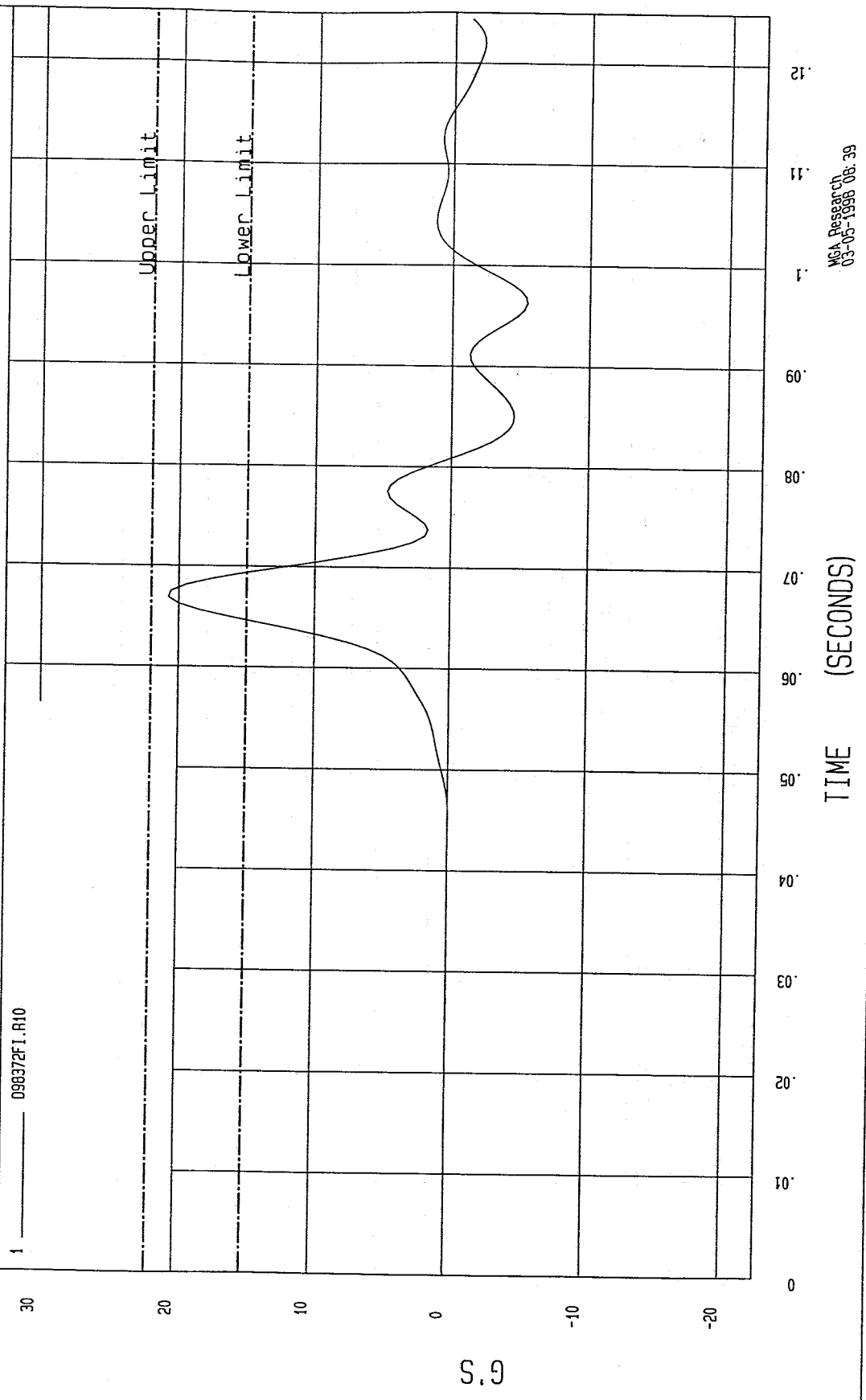
MSA Research
03-05-1998 08:38

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 03-05-1998 - 08:31

COMPONENT: DUMMY # 272 Velocity: 14.01 FT/SEC 4.27 M/SEC

Minimum = -5.47 G'S at 96.2 msec Maximum = 20.75 G'S at 66.8 msec

LOWER SPINE ACCELERATION



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: March 5, 1998

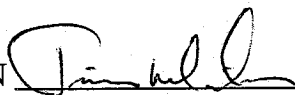
DUMMY SERIAL NUMBER: 272

TEST NUMBER: D98373

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	14.0 - 14.2 fps	14.0
PELVIS ACCELERATION	40 - 60 g's	49

TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY

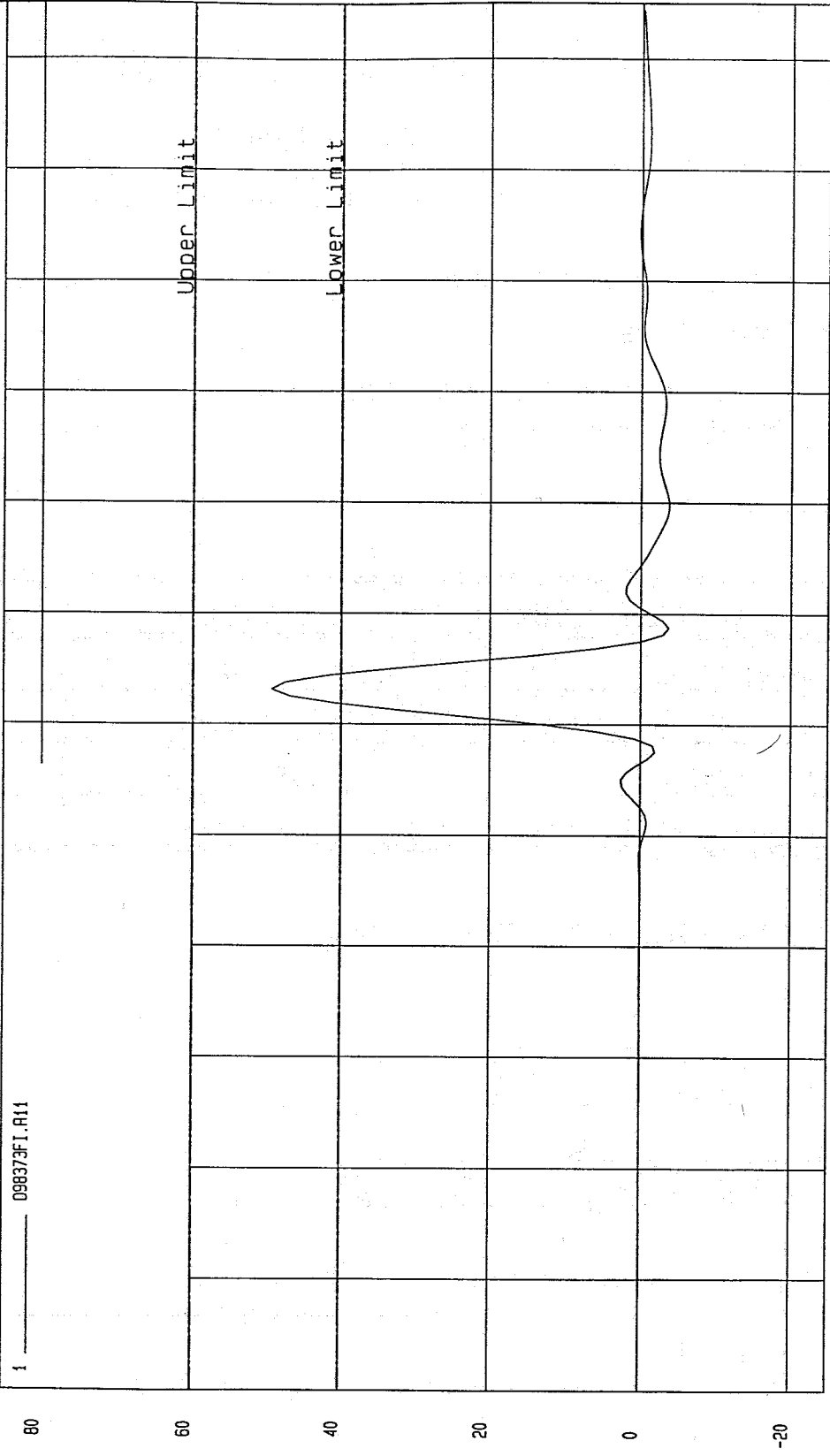


TEST: DUMMY CALIBRATION - PELVIS IMPACT TEST DATE: 03-05-1998 - 08:38:10

COMPONENT: DUMMY # 272 Velocity: 14.042 FT/SEC 4.28 M/SEC

Minimum = -3.73 G'S at 80 msec Maximum = 49.30 G'S at 63.1 msec

PELVIS ACCELERATION



TIME (SECONDS)

NSA Research
03-05-1998 08:39

MGA RESEARCH CORPORATION
ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)
SIDE IMPACT DUMMY (SID)

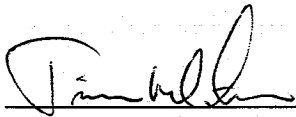
DATE: March 4, 1998

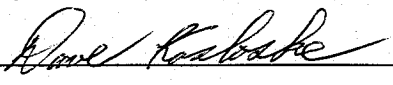
DUMMY SERIAL NUMBER: 272

TEST NUMBER: D98374

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70° ✓
RELATIVE HUMIDITY	10 - 70%	21%
FORCE @ 0.5 in	23.3 - 36.5 lbs	29.8
FORCE @ 0.75 in	36.7 - 49.8 lbs	41.0
FORCE @ 1.0 in	50 - 63 lbs	54
FORCE @ 1.3 in	73 - 88 lbs	74

TEST MEETS SPECIFICATIONS

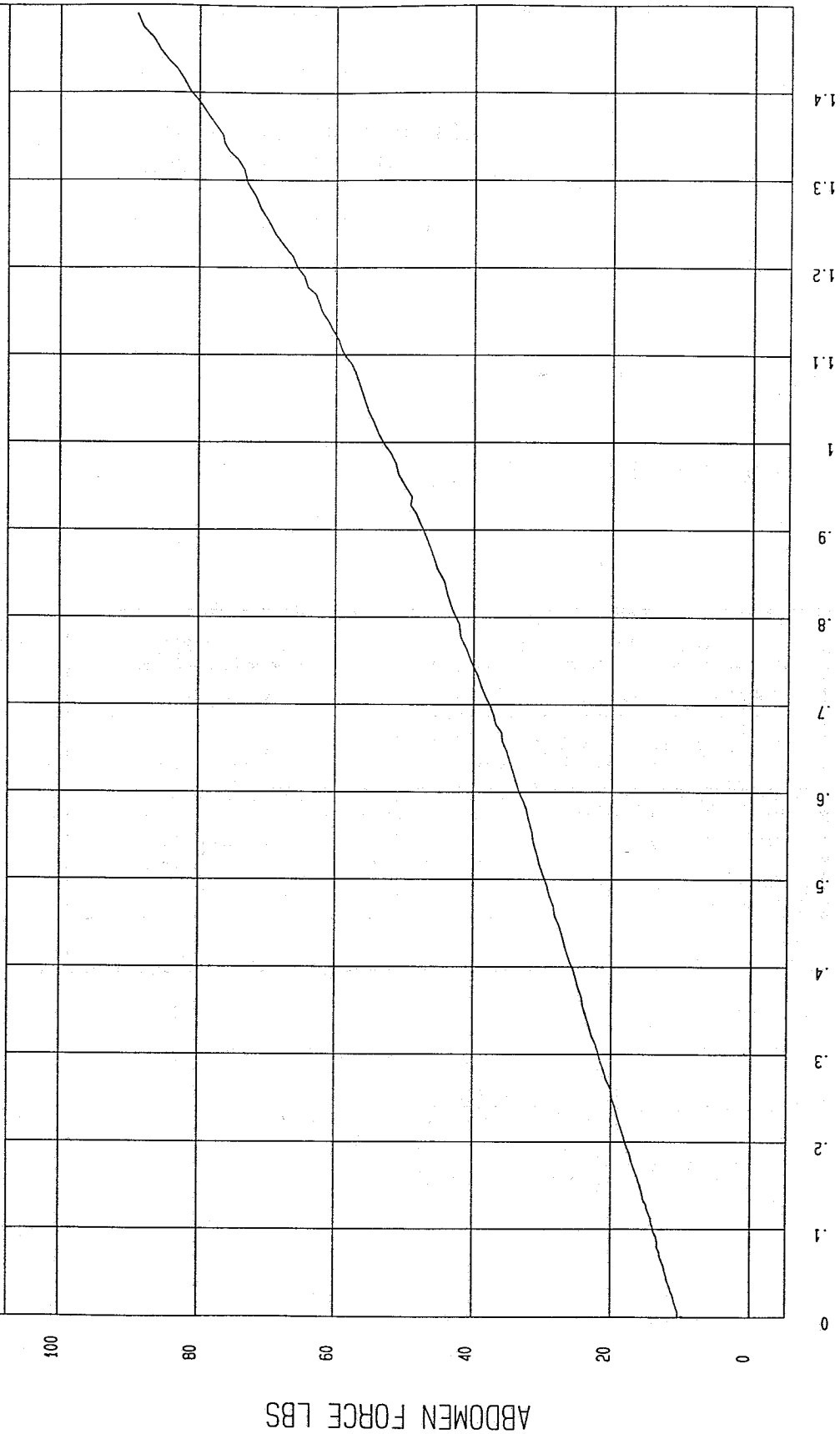
TECHNICIAN 

APPROVED BY 

TEST: DUMMY CALIBRATION - ABDOMEN COMPRESSION TEST DATE: 03-04-1998 - 15:04

COMPONENT: DUMMY # 272

ABDOMEN FORCE as a function of ABDOMEN DISPLACEMENT



NSA Research
03-04-1998 15:11

ABDOMEN DISPLACEMENT INCHES

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: March 4, 1998

DUMMY SERIAL NUMBER: 272

TEST NUMBER: D98375

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	21%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	22
FORCE @ 30°	34 - 46 lbs	41
FORCE @ 40°	45 - 58 lbs	56
RETURN ANGLE	12° maximum	3°

TEST MEETS SPECIFICATIONS

TECHNICIAN Tim W. L.

APPROVED BY Dave Kosloski

DUMMY AND VEHICLE CALIBRATION DATA
INSTRUMENTS FOR DRIVER DUMMY NO. 271

LEFT FRONT PASSENGER			
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AP2A4	Endevco	September 11, 1997
Lower Rib Y	ANBP7	Endevco	February 13, 1998
Lower Spine Y	ANAP1	Endevco	September 11, 1997
Pelvis Y	AHTC3	Endevco	September 11, 1997
Upper Rib Redundant Y	AP2D8	Endevco	September 11, 1997
Lower Rib Redundant Y	AP1C6	Endevco	September 11, 1997
Lower Spine Redundant Y	ANAT6	Endevco	September 11, 1997
Pelvis Redundant Y	AGP53	Endevco	September 11, 1997

INSTRUMENTS FOR LEFT REAR PASSENGER DUMMY NO. 272.

LEFT REAR PASSENGER			
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	ALFJ7	Endevco	September 11, 1997
Lower Rib Y	APYN0	Endevco	September 11, 1997
Lower Spine Y	AP0G2	Endevco	September 11, 1997
Pelvis Y	APY15	Endevco	September 11, 1997
Upper Rib Redundant Y	ALDD6	Endevco	September 11, 1997
Lower Rib Redundant Y	APYN3	Endevco	September 11, 1997
Lower Spine Redundant Y	AP138	Endevco	September 11, 1997
Pelvis Redundant Y	APY16	Endevco	September 11, 1997