

Report No. 204-MS-82-01-TR-AC

ADD-ON ACCELERATION MEASUREMENTS
PASSENGER CARS
FMVSS 204

DOT 517
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December 1982

FINAL REPORT

Prepared Under Contract No. DTNH22-82-C-07481

For

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
Office of Vehicle Safety Compliance
400 Seventh Street, S.W.
Washington, D.C. 20590

By

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23-32

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Prepared by L. Carlson

Approved by 

Date 1/4/83

Report Accepted by:

Contract Technical Manager
Office of Vehicle Safety Compliance

Date

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7. AUTHOR (S) Lloyd E. Carlson, P.E.		8. PERFORMING ORGANIZATION REPORT NO. P2152-01AC	
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16. ABSTRACT Two channels of acceleration measurements were recorded on each of 15 vehicles subject to FMVSS 204 testing. The accelerometers were located on the front and rear floor pan areas of the vehicles.			
17. KEY WORDS FMVSS 204 Acceleration Measurement		18. DISTRIBUTION STATEMENT <u>Copies of this report are available from--</u> Technical Reference Division Nat'l Hwy Traffic Safety Admin. Room 5108, Nassif Building 400 7th St. SW, Wash. D.C. 20590	
19. SECURITY CLASSIF. (of this report)	20. SECURITY CLASSIF. (of this page)	21.	22.

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TEST DATA REPORT
FMVSS 204
ADD-ON ACCELEROMETER MEASUREMENTS

SECTION 1
INTRODUCTION

A series of 15 FMVSS 204 tests was conducted for NHTSA. As an add-on to these tests, two channels of acceleration data were measured for each test. The vehicles tested are listed in Section 2. All tests were conducted in 1982.

Two channels of data were successfully recorded for each test. All data were of good quality except the data for the Nissan Sentra vehicle, NHTSA No. 820547. The data for this test exhibited large zero offsets that occurred sometime following impact. Corrections were made to achieve meaningful acceleration values. However, the first and second integrals (velocity and displacement) yield questionable values. All other test data required minor (less than 10% amplitude) zero offset corrections to achieve correct velocity and displacement response.

The data for all 15 tests are presented in Section 2. For each vehicle, the vehicle and test descriptive data and the time history data (6 channels, 2 acceleration, 2 velocity and 2 displacement) are presented. The descriptive and time history data were also written to tape in accordance with the NHTSA specified format. The 15 separate data tapes are included as part of this data report.

SECTION 2

TEST DATA

Acceleration measurements were made at two locations during FMVSS
204 tests of the vehicles listed below:

<u>Vehicle</u>	<u>NHTSA Number</u>	<u>Test Reference Number</u>
Oldsmobile Cutlass Supreme	820121	N06012
Chevrolet Citation	820122	N01022
Chevrolet Camaro	820120	N01032
Chevrolet Chevette	820124	N01042
Honda Accord	820546	N23052
Nissan Sentra	820547	N15062
Buick Century	820123	N04072
Plymouth Reliant K	820312	N05082
Toyota Corolla	820545	N16092
Ford Escort	820214	N02102
Ford E-100 Econoline Van	820624	N02112
Chevrolet G-10 Van	820623	N01122
Chevrolet S-10 Pickup	820625	N01132
Ford Ranger Pickup	830604	N02142
Toyota Pickup	820627	N16152

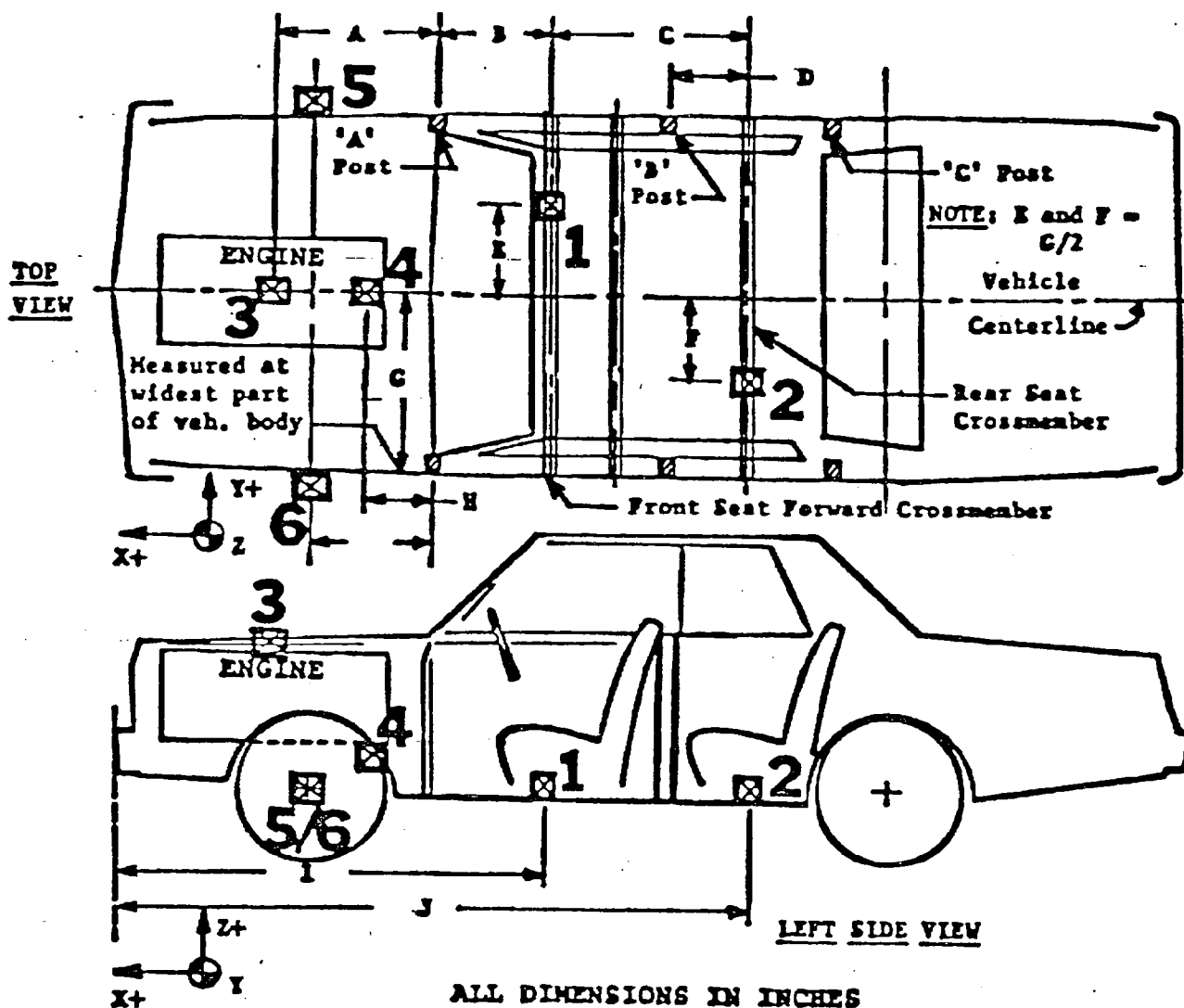
2.1 TEST DATA FOR OLDSMOBILE CUTLASS SUPREME

NHTSA No.	-	820121
Test Reference No.	-	N06012
Test Date	-	09/18/82

OLDSMOBILE CUTLASS SUPREME
VEHICLE AND TEST DESCRIPTIVE DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	09/18/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 01
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.4
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	89
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	6
23. VEHICLE MODEL	5
24. VEHICLE YEAR	82
25. ENGINE TYPE	V6-IL
26. ENGINE DISPLACEMENT	3.8 LITER
27. TRANSMISSION TYPE	AR
28. BODY TYPE	2S
29. TEST WEIGHT	3271
30. WHEELBASE (IN.)	108.1
31. VEHICLE LENGTH (IN.)	201.3
32. VEHICLE WIDTH (IN.)	71.0
33. C.G. DIST. BEHIND FRONT AXLE	47.0
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.4
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	71.0
47. POINT NO. 1	22.0
48. POINT NO. 2	21.9
49. POINT NO. 3	21.8
50. POINT NO. 4	21.7
51. POINT NO. 5	21.6
52. POINT NO. 6	21.5
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	22.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0

59. WEIGHT OF CARRIER IF MOVING	0
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.4
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.4
123. QUALITY	GOOD ,ZERO OFFSET

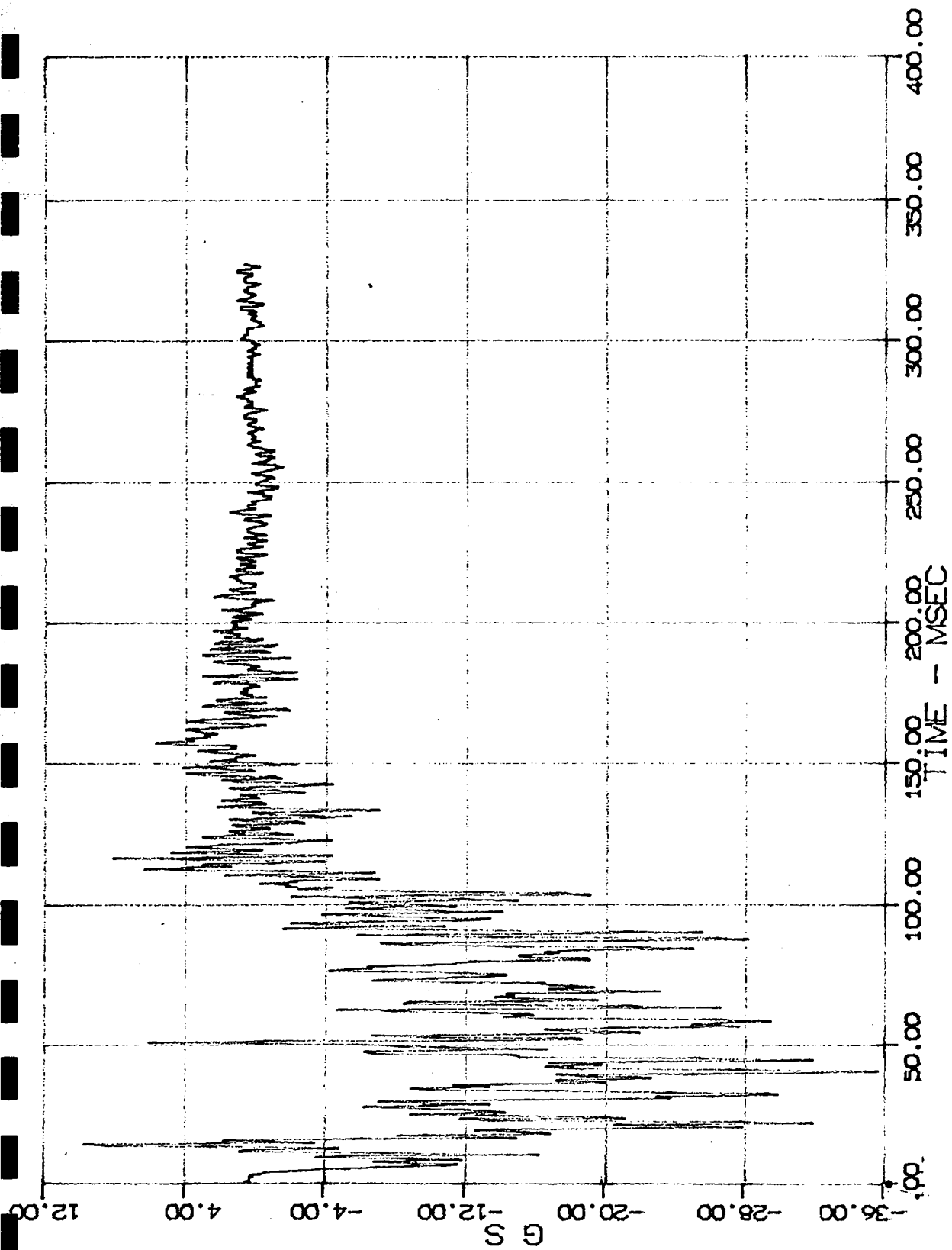


ALL DIMENSIONS IN INCHES

DIMENSION	LENGTH (in.)
E - C/2	13 5/8 in.
F - G/2	8 3/8 in.
G	29 3/4 in.
I	94 3/16 in.
J	124 1/16 in.

ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						mssec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-					
2	Below Rear Seat Area	●			+	-					

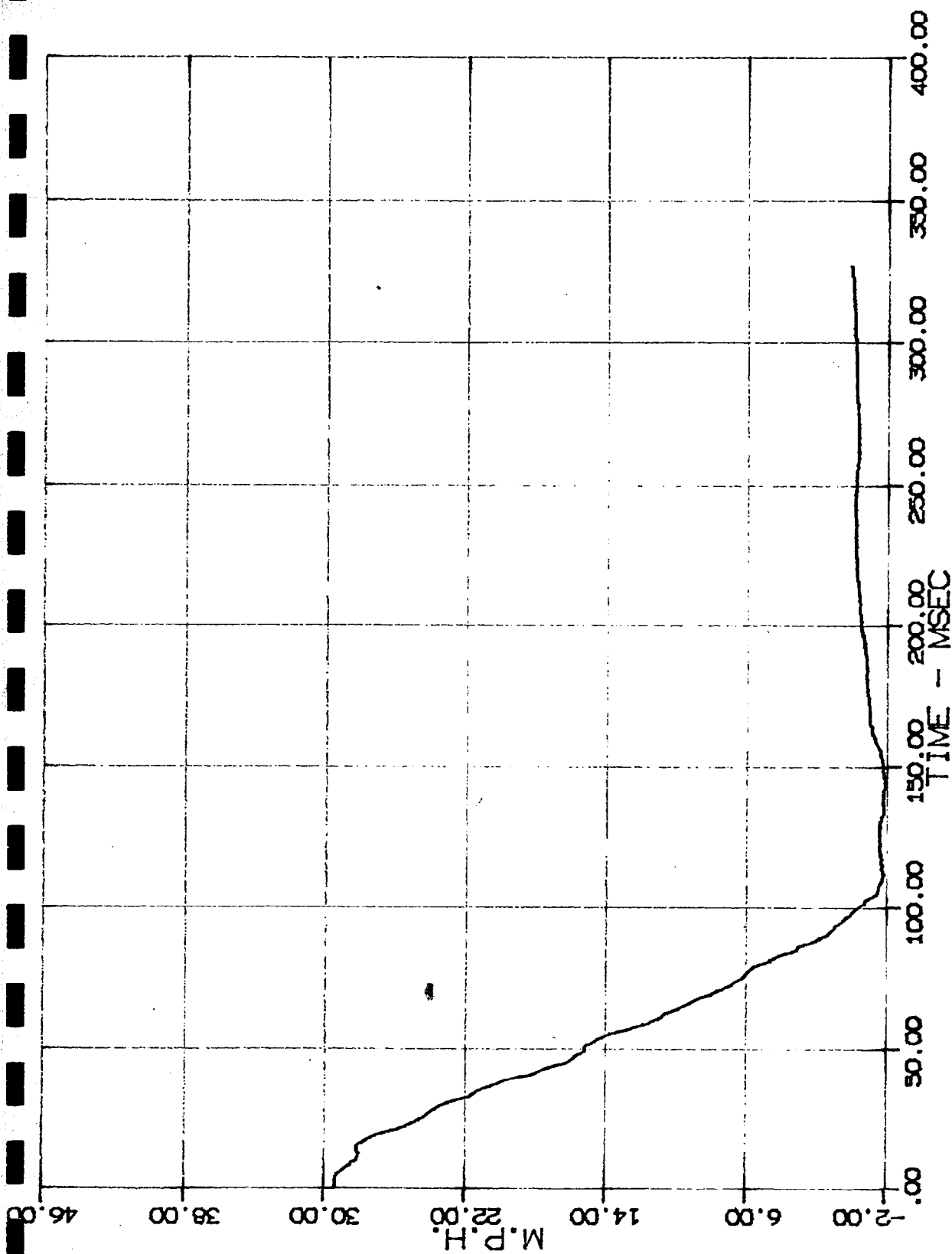
OLDSMOBILE CUTLASS SUPREME
VEHICLE ACCELEROMETER LOCATIONS



Q3 AC 01 N RFF X

MSE NO6012 1982 OLDSMOBILE OUTLASS

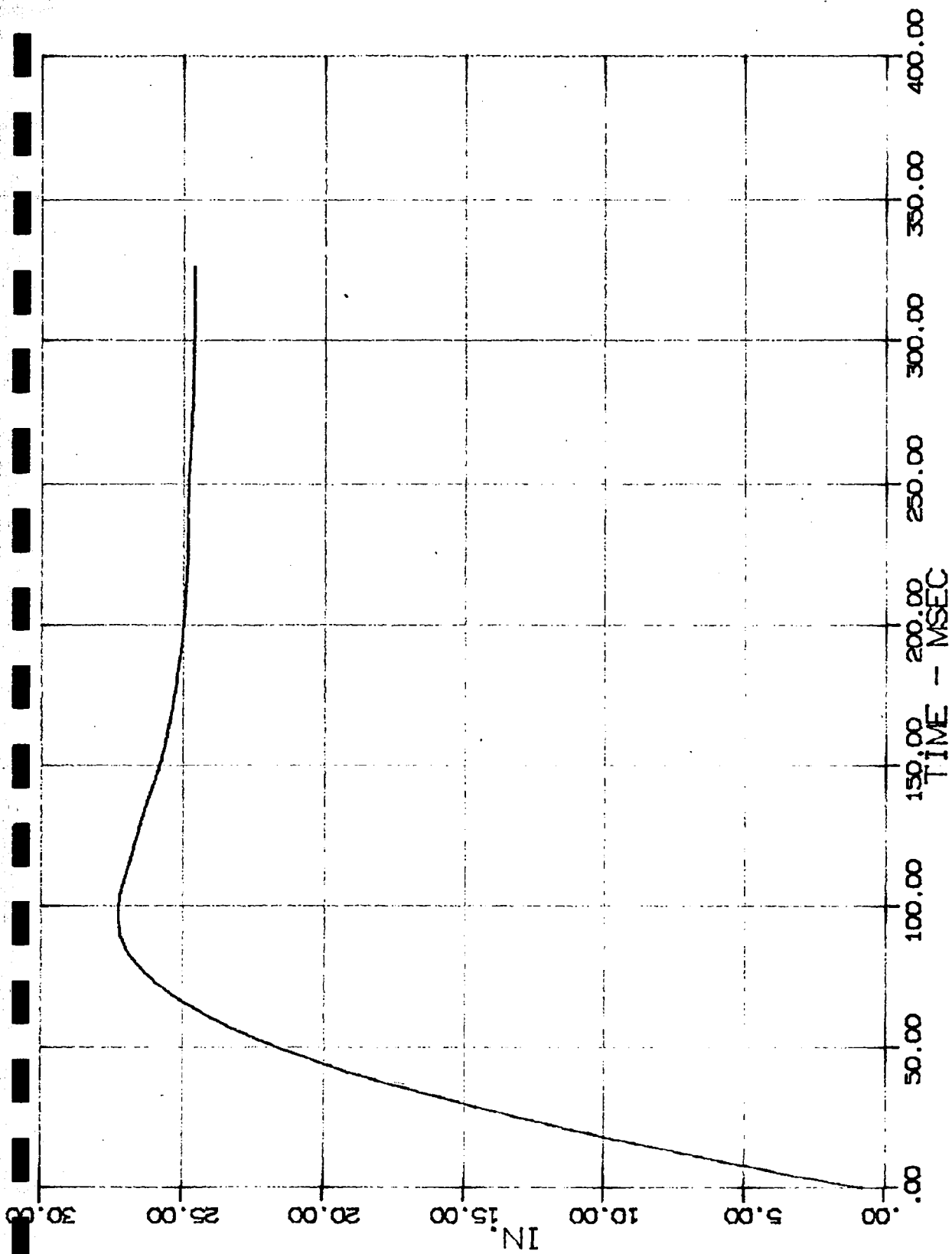
09/18/82



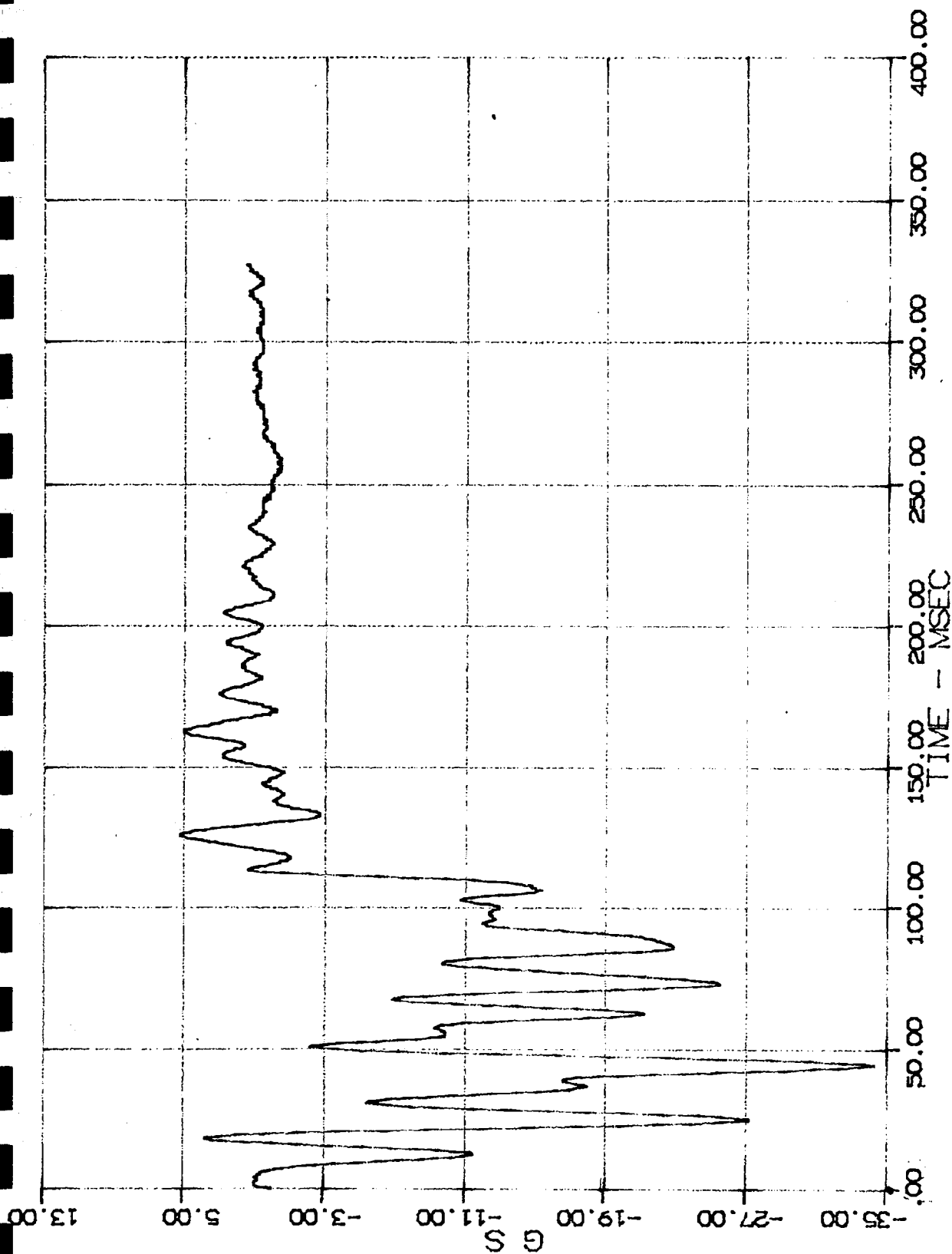
03 AC 01 N RFF X IN1

MSE NO6012 1982 OLDSMOBILE OUTLASS

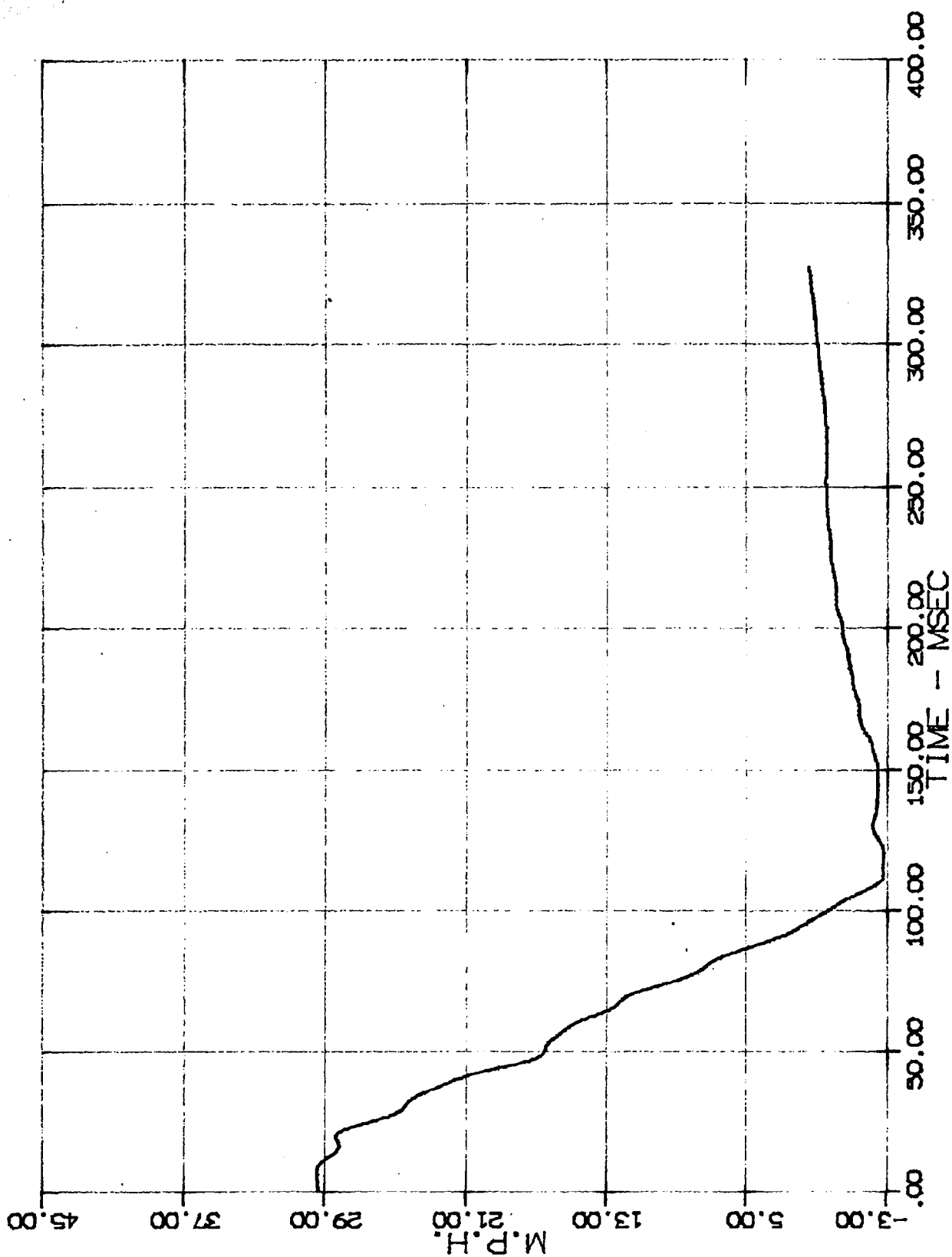
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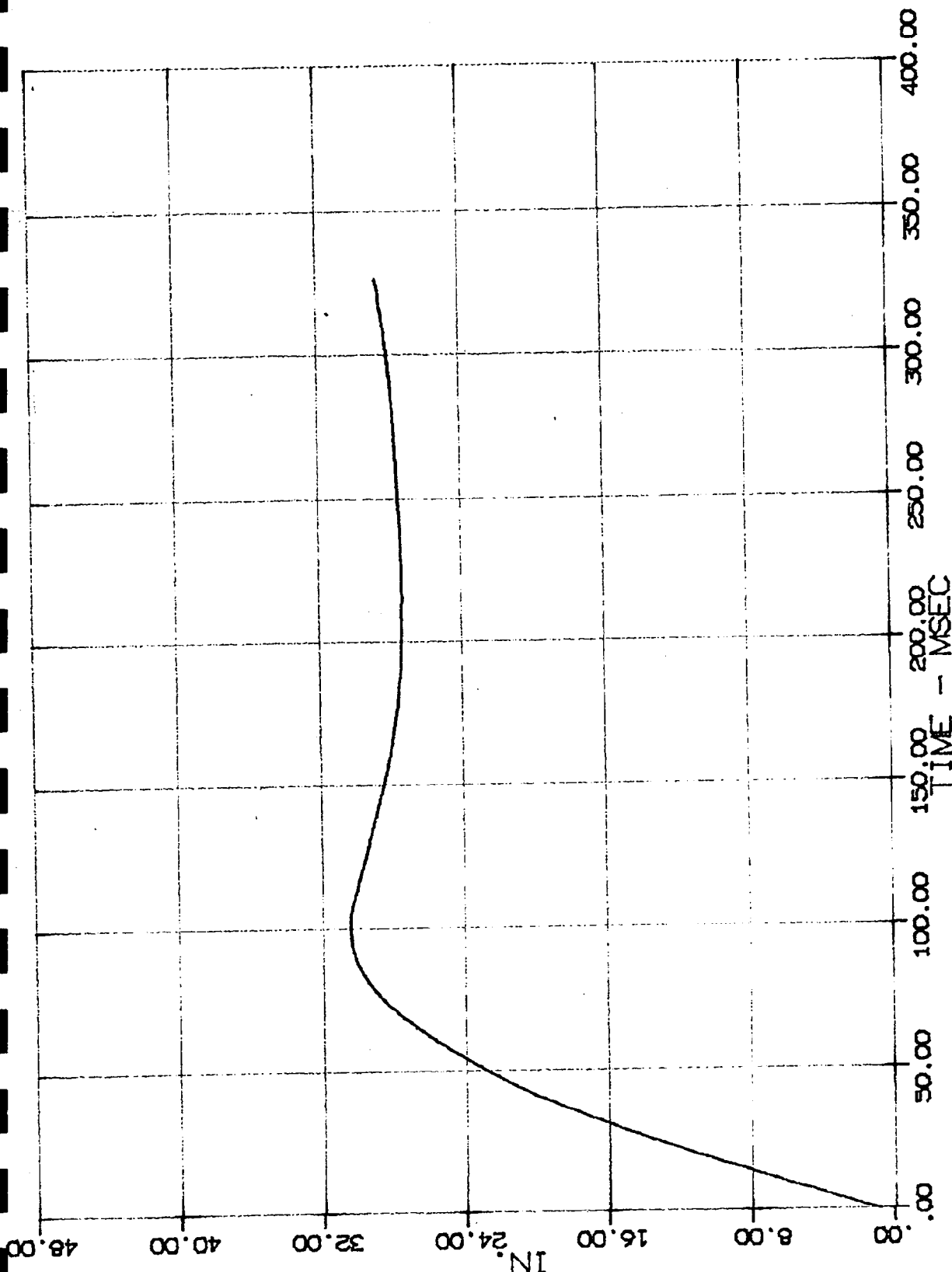
03 AC 01 N RFF X IN2
 MSE NO6012 1982 OLDSMOBILE CUTLASS
 09/18/82



04 AC 01 N LRF X
 MSE NO6012 1982 OLDSMOBILE CUTLASS 09/18/82



04 AC 01 N LRF X IN1
MSE NO6012 1982 OLDSMOBILE CUTLASS 09/18/82



04 AC 01 N LRF X 1N2
MSE NO6012 1982 OLDSMOBILE OUTLASS

09/18/82

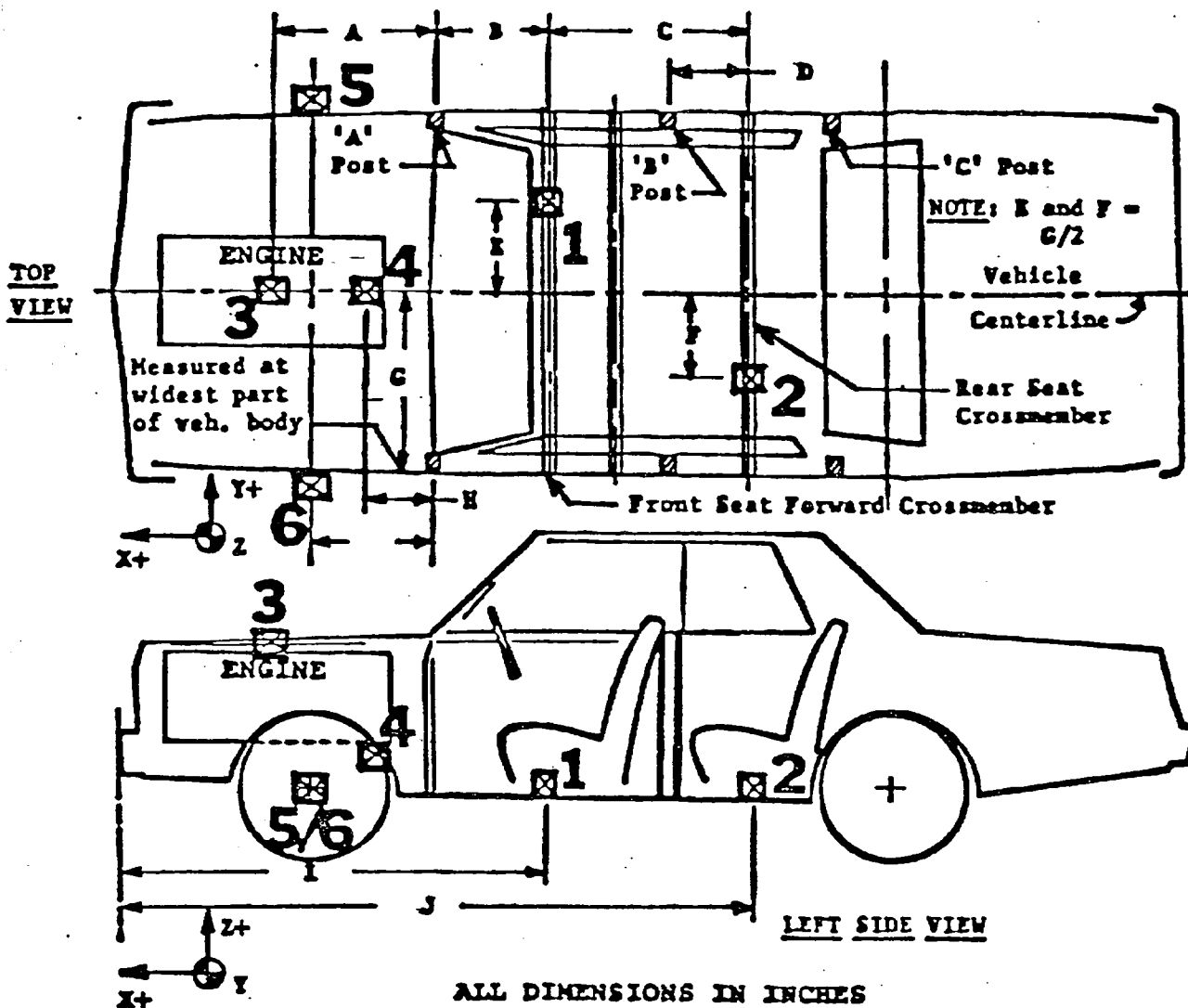
2.2 TEST DATA FOR CHEVROLET CITATION

NHTSA No.	-	820122
Test Reference No.	-	N01022
Test Date	-	09/22/82

CHEVROLET CITATION
VEHICLE AND TEST DESCRIPTIVE DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	09/22/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 02
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.4
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	94
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	1
23. VEHICLE MODEL	23
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-TVF
26. ENGINE DISPLACEMENT	2.5 LITER
27. TRANSMISSION TYPE	AF
28. BODY TYPE	3D
29. TEST WEIGHT	2548
30. WHEELBASE (IN.)	104.9
31. VEHICLE LENGTH (IN.)	178.5
32. VEHICLE WIDTH (IN.)	71.0
33. C.G. DIST. BEHIND FRONT AXLE	37.8
34. STEERING COL. TO DASH	N
35. STEERING COL. COLLAPSE MECH.	
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.4
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	71.0
47. POINT NO. 1	20.5
48. POINT NO. 2	20.4
49. POINT NO. 3	20.3
50. POINT NO. 4	20.2
51. POINT NO. 5	20.1
52. POINT NO. 6	20.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	20.5
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

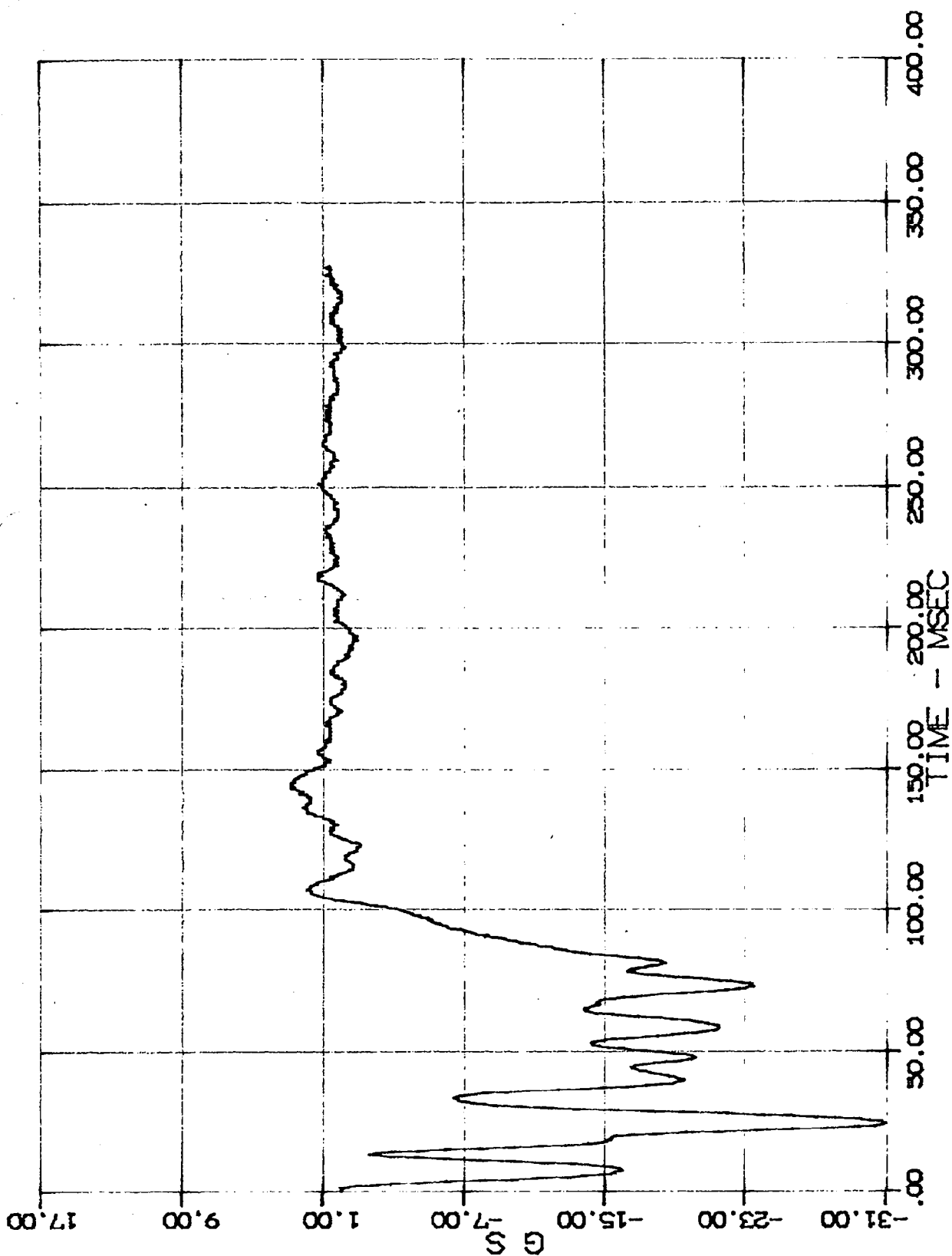
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRT0	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.4
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRT0	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.4
123. QUALITY	GOOD,ZERO OFFSET



DIMENSION	LENGTH (in.)
$E = G/2$	16.25 in.
$F = G/2$	15.12 in.
G	35.50 in.
I	73.12 in.
J	97.25 in.

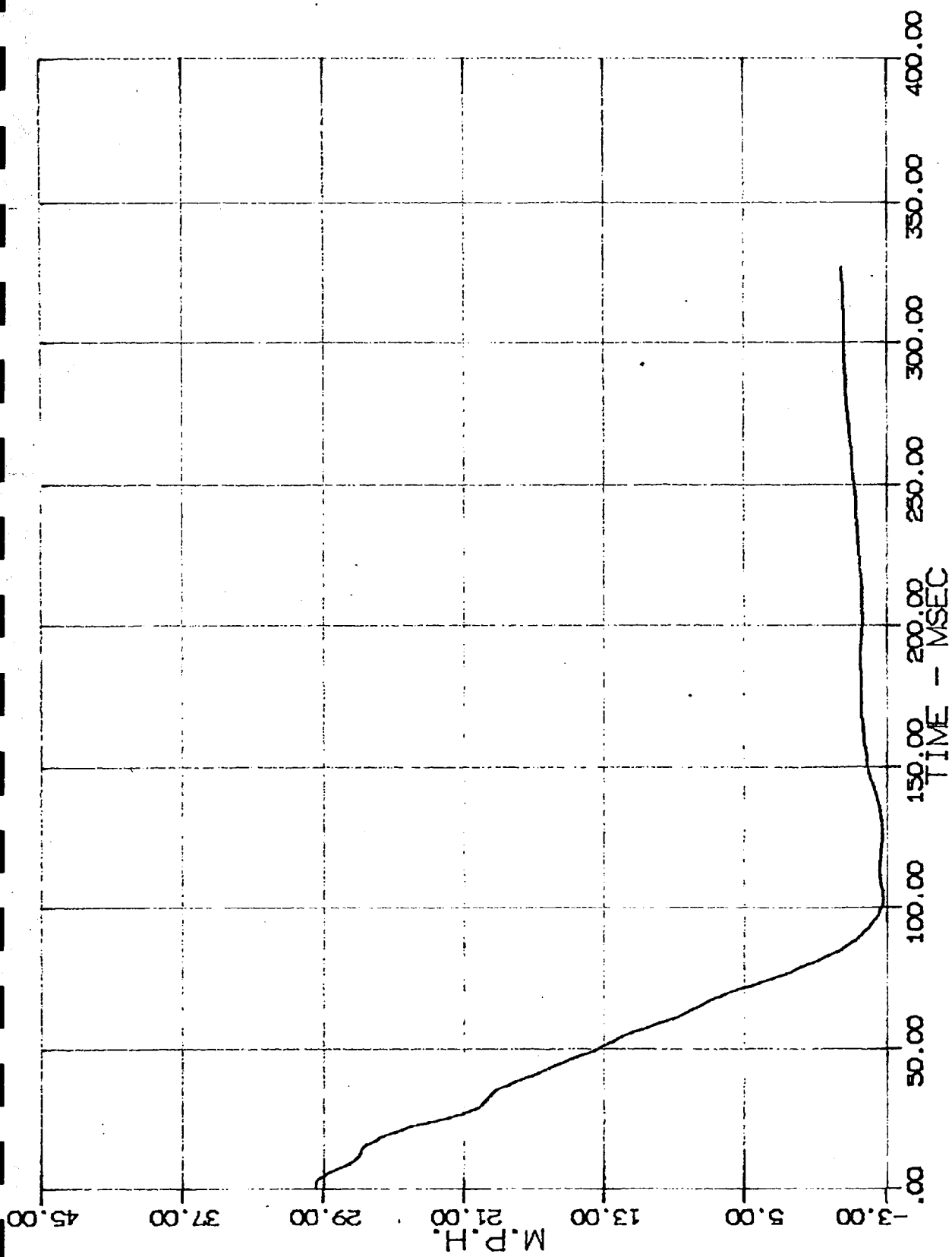
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	⊗			+	-					
2	Below Rear Seat Area	⊗			+	-					

CHEVROLET CITATION
VEHICLE ACCELEROMETER LOCATIONS



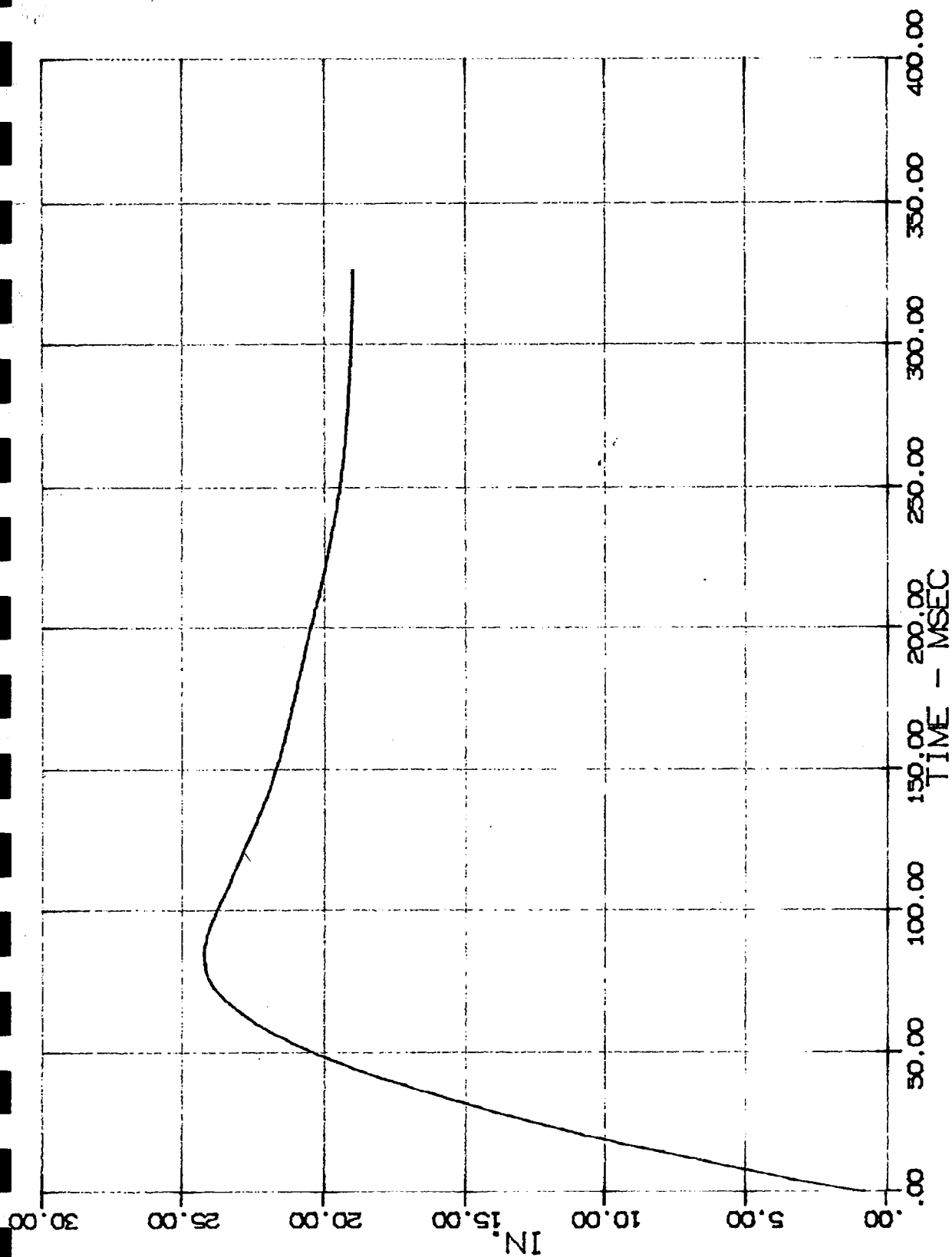
03 AC 01 N RFF X
MSE NO1022 1982 CHEVROLET CITATION

09/22/82



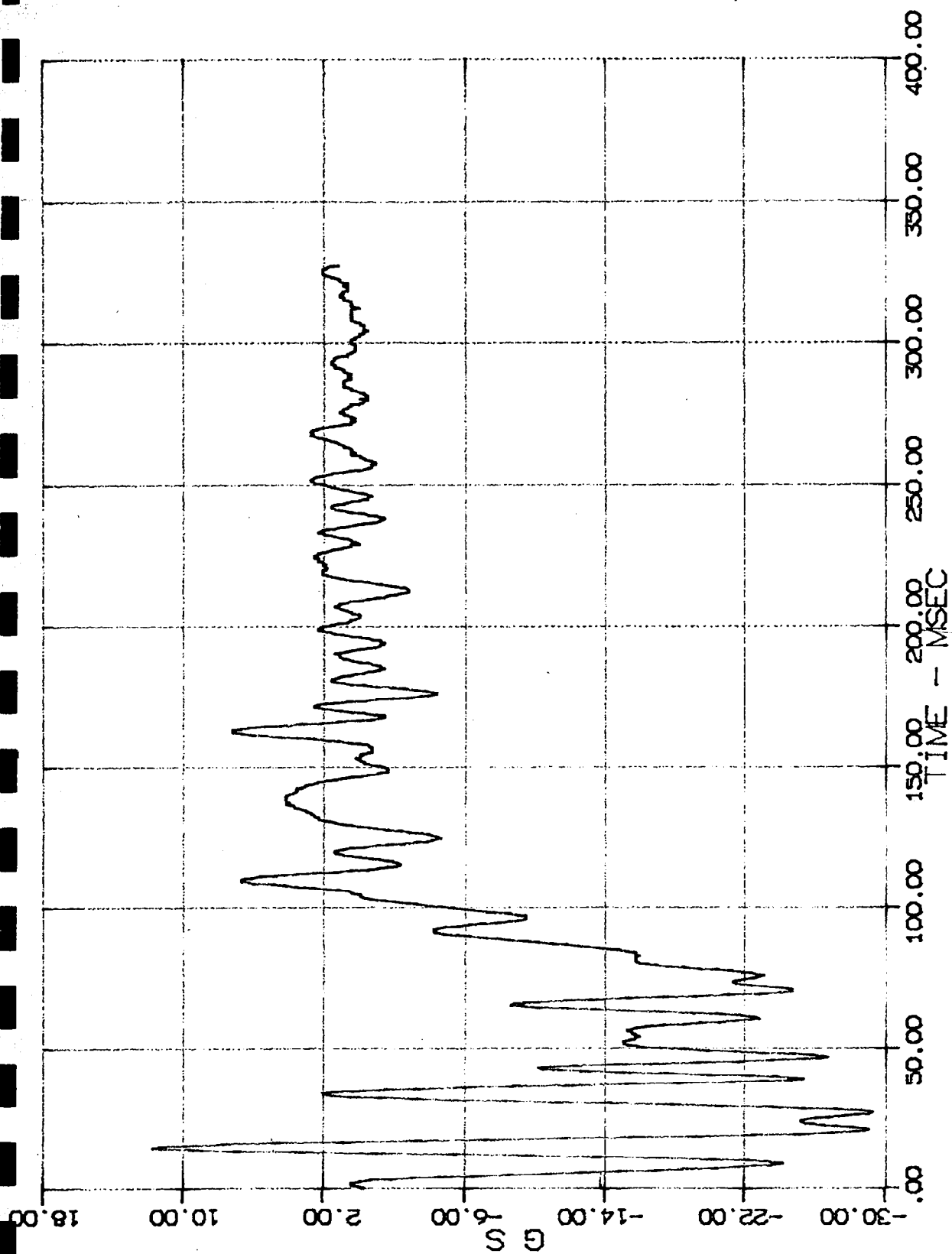
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MSE NO1022 1982 CHEVROLET CITATION

09/22/82

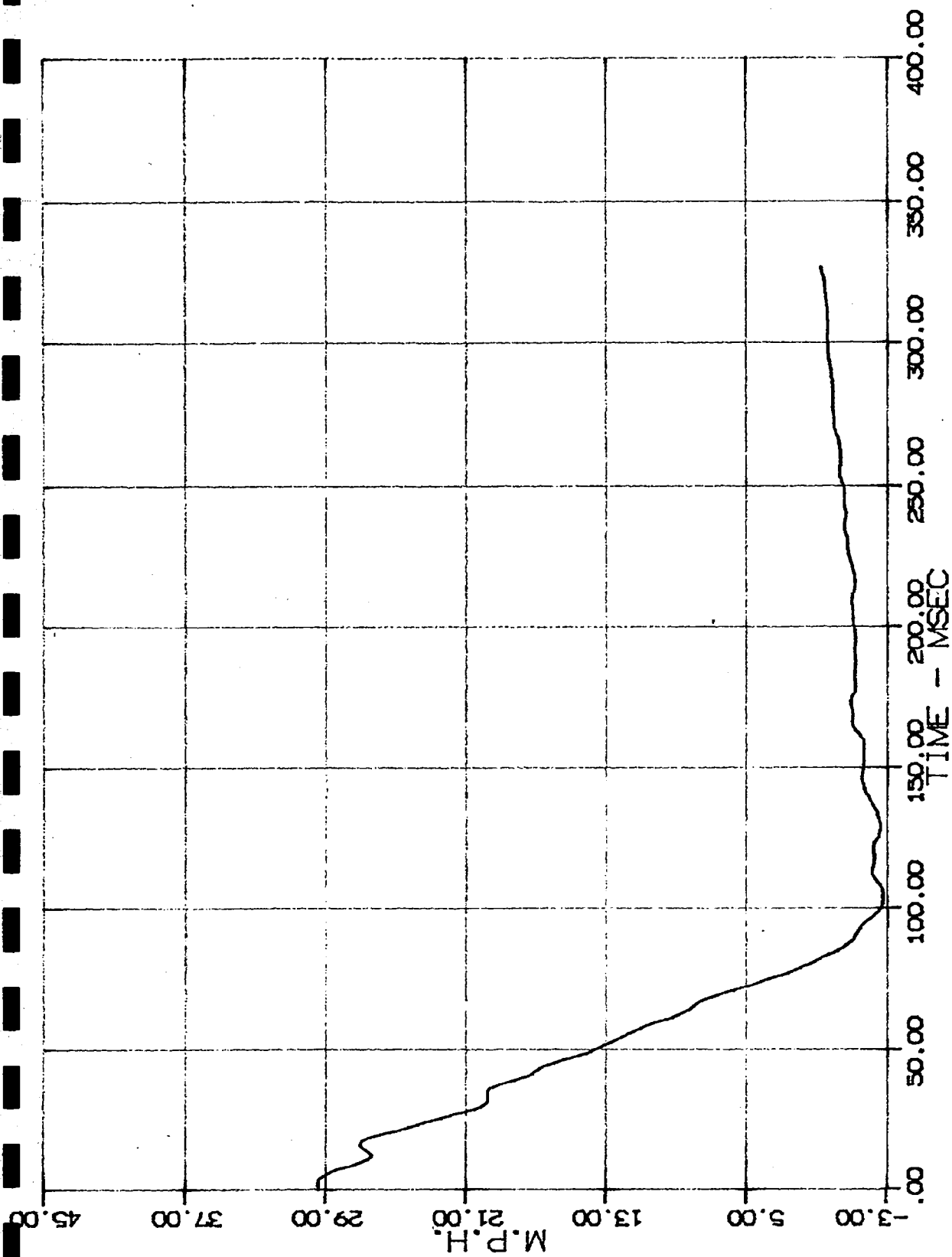


03 AC 01 N RFF X IN2
MSE NO1022 1982 CHEVROLET CITATION

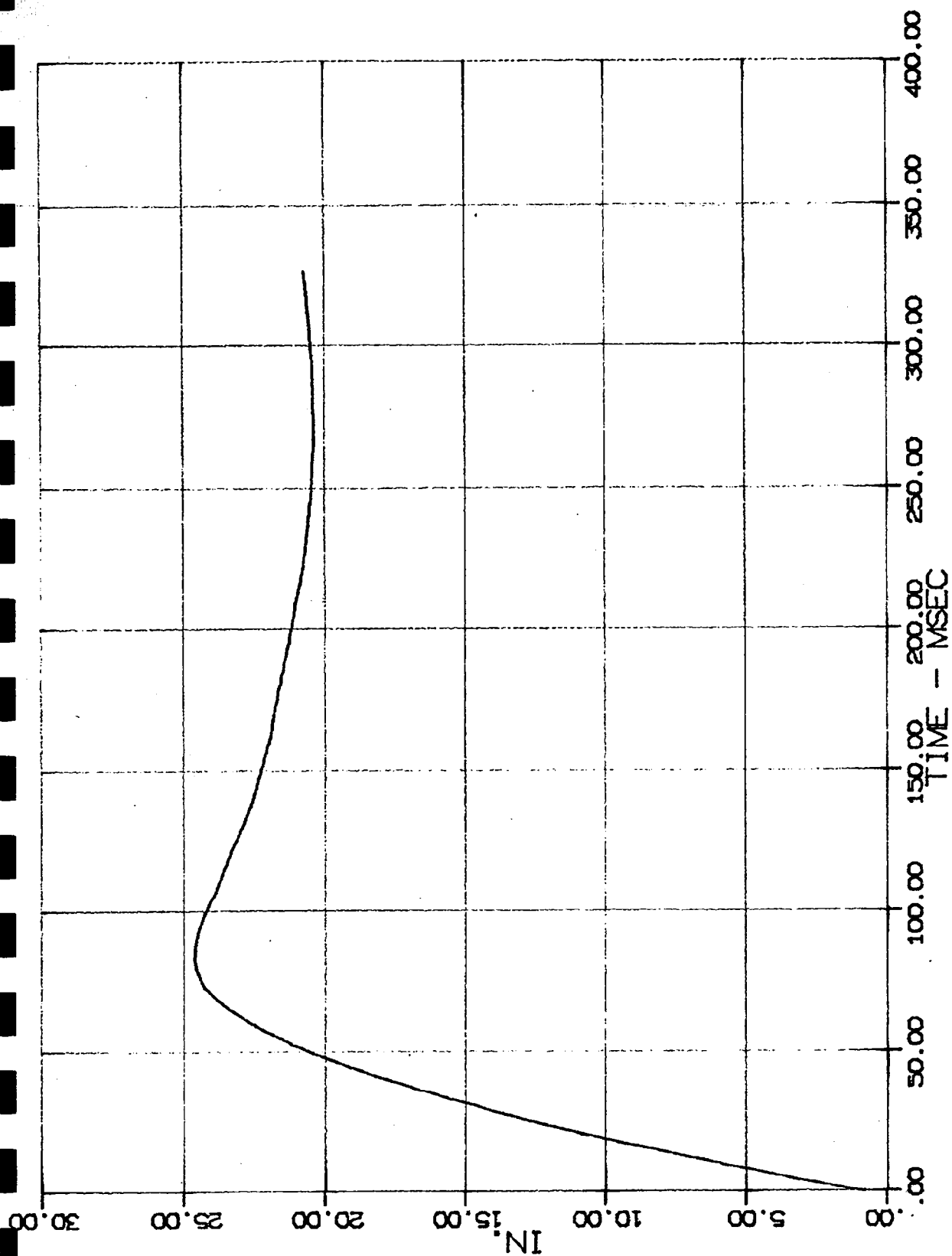
09/22/82



Q4 PC 01 N LRF X
MSE NO1022 1982 CHEVROLET CITATION 09/22/82



04 AC 01 N LRF X IN1
MSE NO1022 1982 CHEVROLET CITATION
09/22/82



04 AC 01 N LRF X IN2
MSE NO1022 1982 CHEVROLET CITATION

09/22/82

2.3 TEST DATA FOR CHEVROLET CAMARO

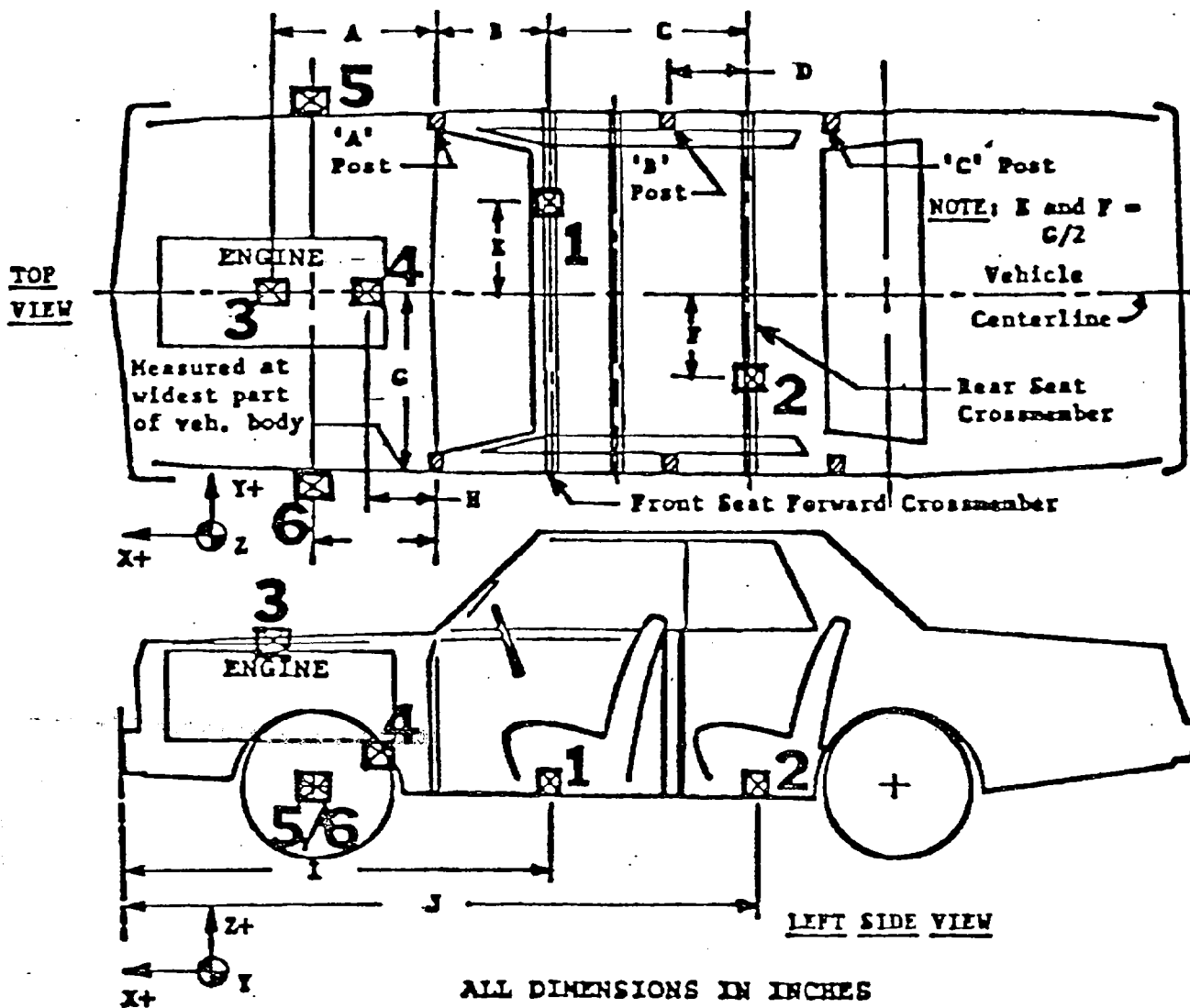
NHTSA No.	-	820120
Test Reference No.	-	N01032
Test Date	-	10/01/82

CHEVROLET CAMARO

VEHICLE AND TEST DESCRIPTIVE DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	10/01/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 03
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.3
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	80
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	1
23. VEHICLE MODEL	8
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-ILF
26. ENGINE DISPLACEMENT	151 CI
27. TRANSMISSION TYPE	AR
28. BODY TYPE	3D
29. TEST WEIGHT	2895
30. WHEELBASE (IN.)	101.0
31. VEHICLE LENGTH (IN.)	189.0
32. VEHICLE WIDTH (IN.)	74.3
33. C.G. DIST. BEHIND FRONT AXLE	45.9
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.3
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	74.3
47. POINT NO. 1	18.5
48. POINT NO. 2	18.4
49. POINT NO. 3	18.3
50. POINT NO. 4	18.2
51. POINT NO. 5	18.1
52. POINT NO. 6	18.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	18.5
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

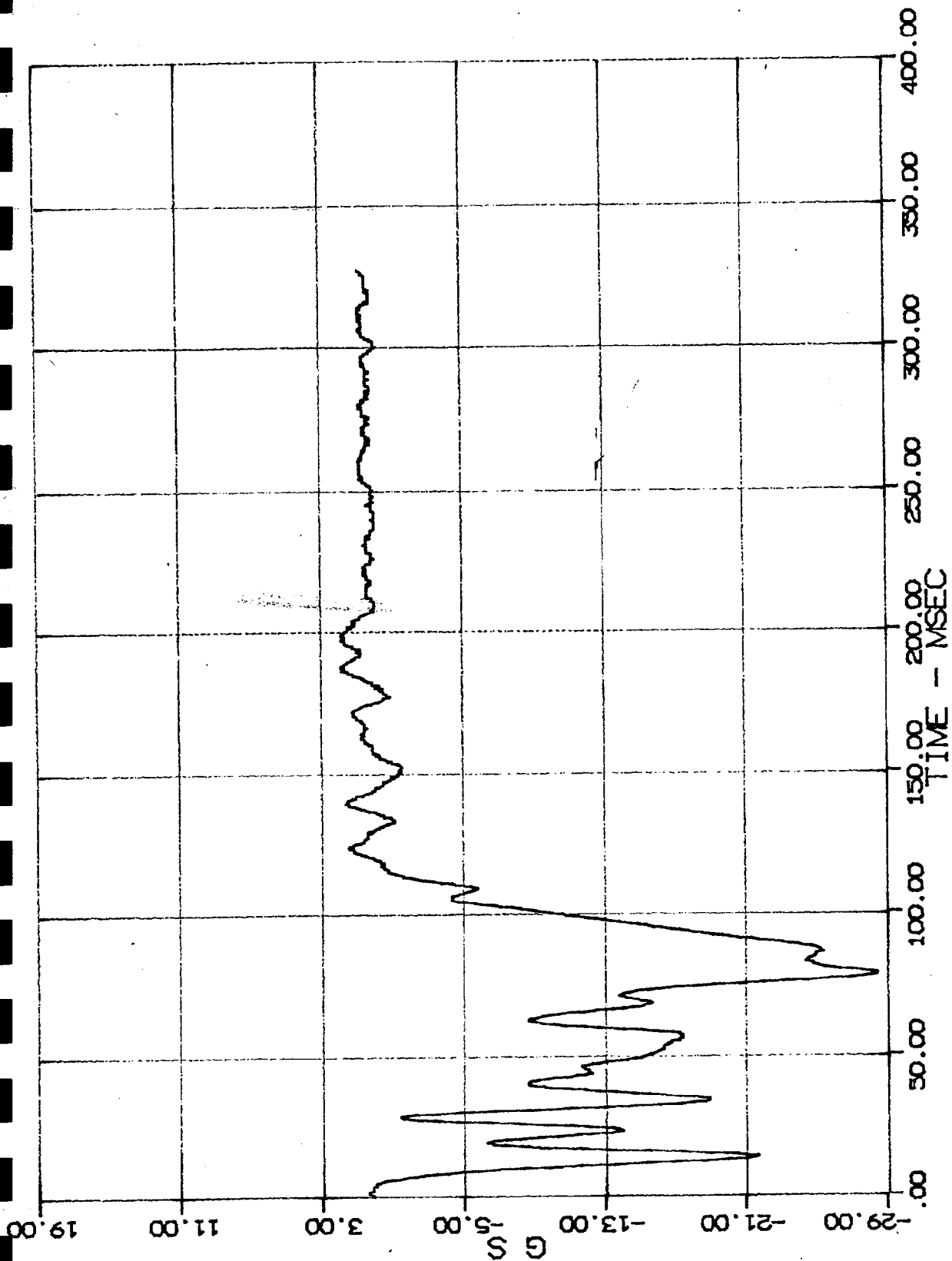
60. RIGID OR FLEETING CARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.3
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.3
123. QUALITY	GOOD ,ZERO OFFSET



DIMENSION	LENGTH (in.)
E -G/2	29 7/8 in.
F -G/2	22 3/8 in.
G	37 1/8 in.
I	87 in.
J	99 7/8 in.

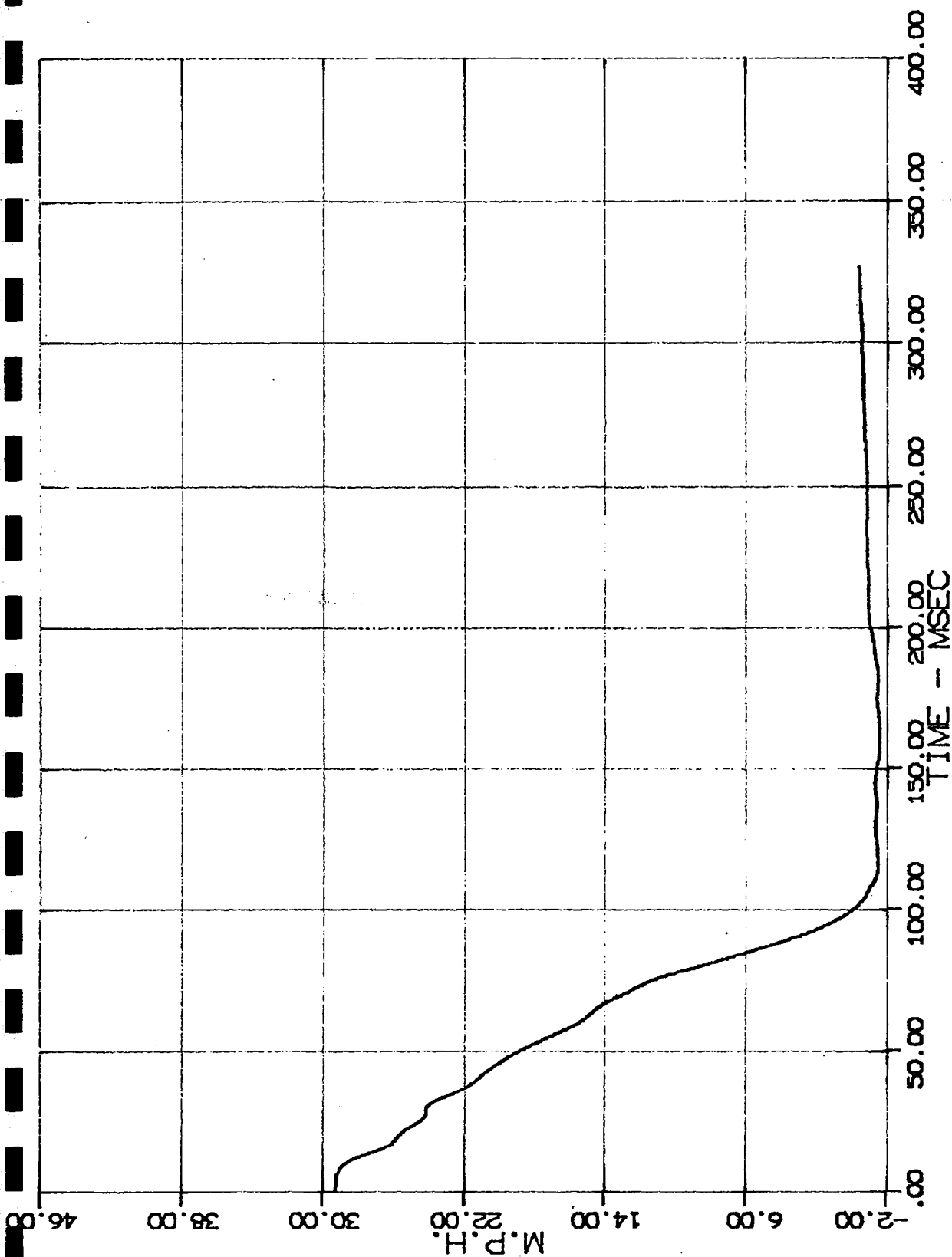
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	+			+	-					
2	Below Rear Seat Area	+			+	-					

CHEVROLET CAMARO
VEHICLE ACCELEROMETER LOCATIONS

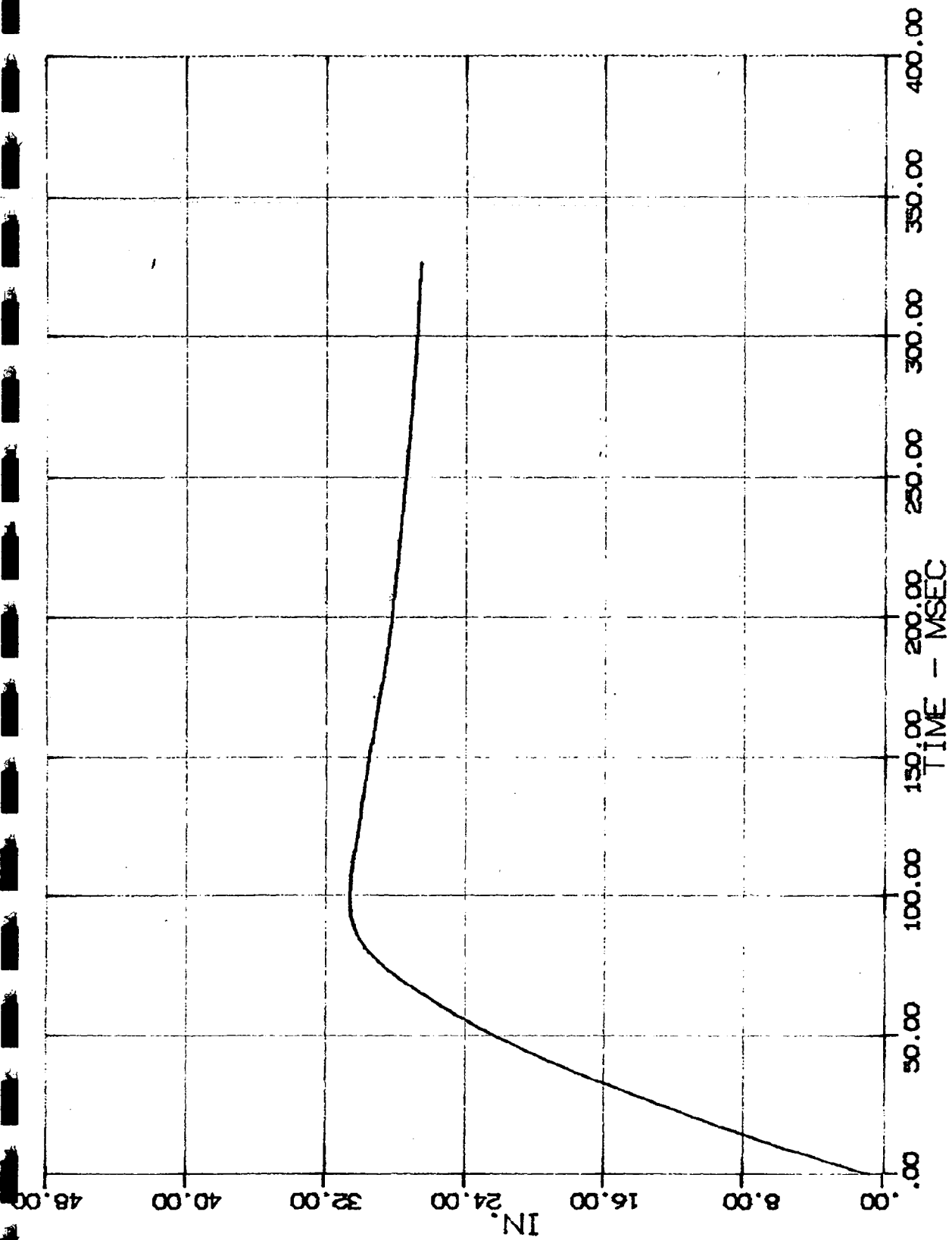


03 AC 01 N RFF X
MSE NO1032 1982 CHEVROLET CAMARO

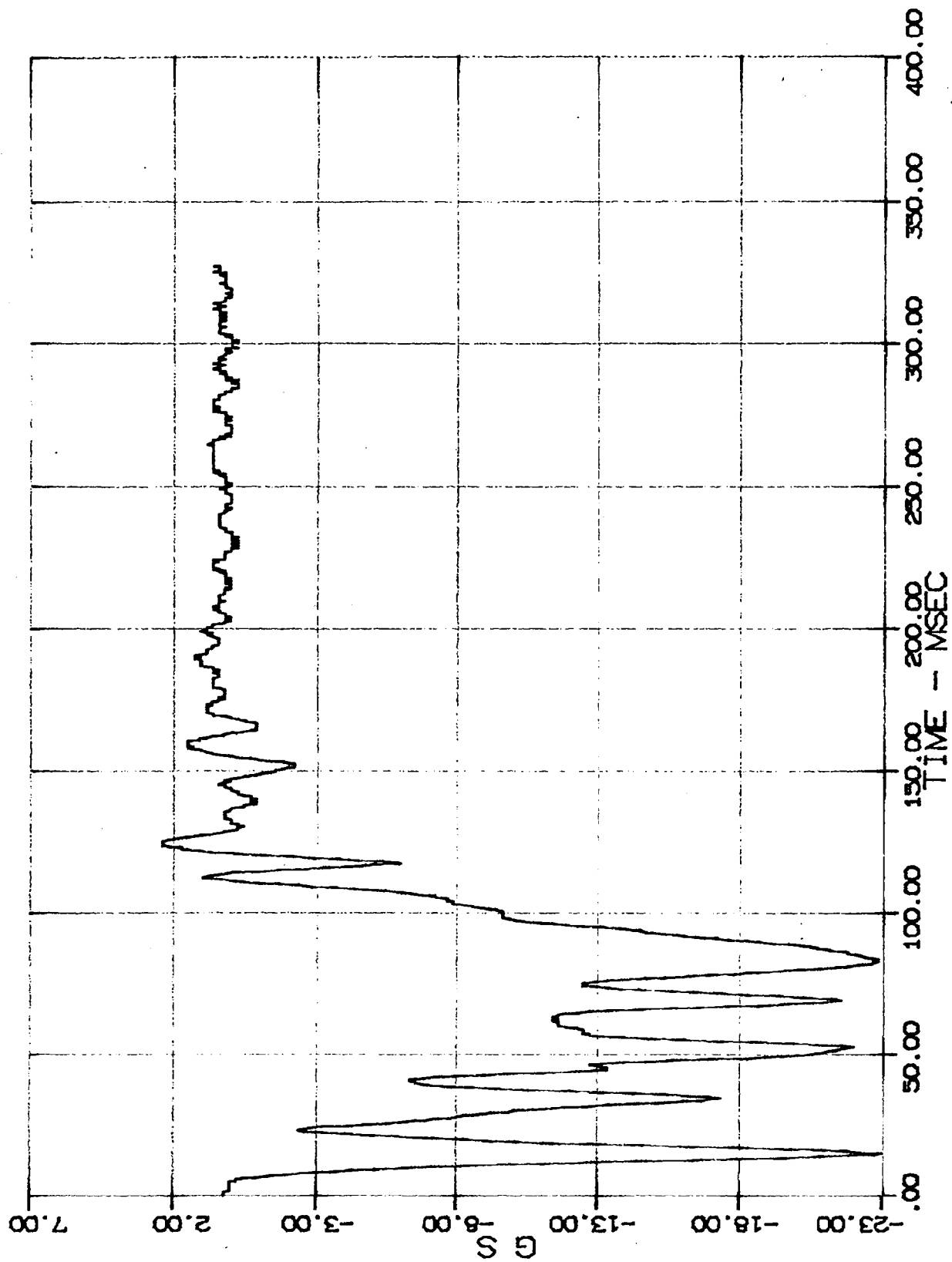
10/01/82



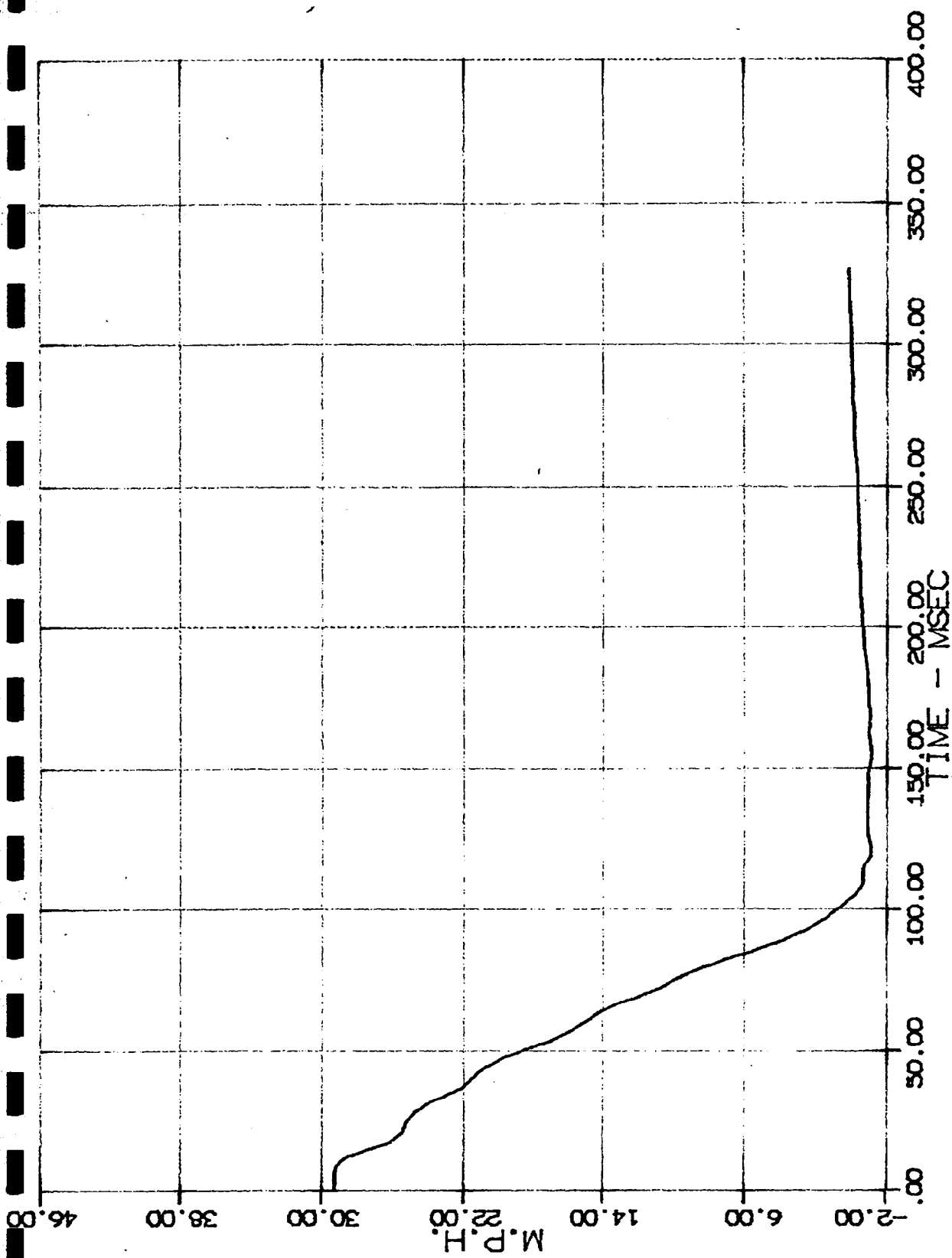
03 PC 01 N RFF X
MSE NO1032 1982 CHEVROLET CAMARO
10/01/82



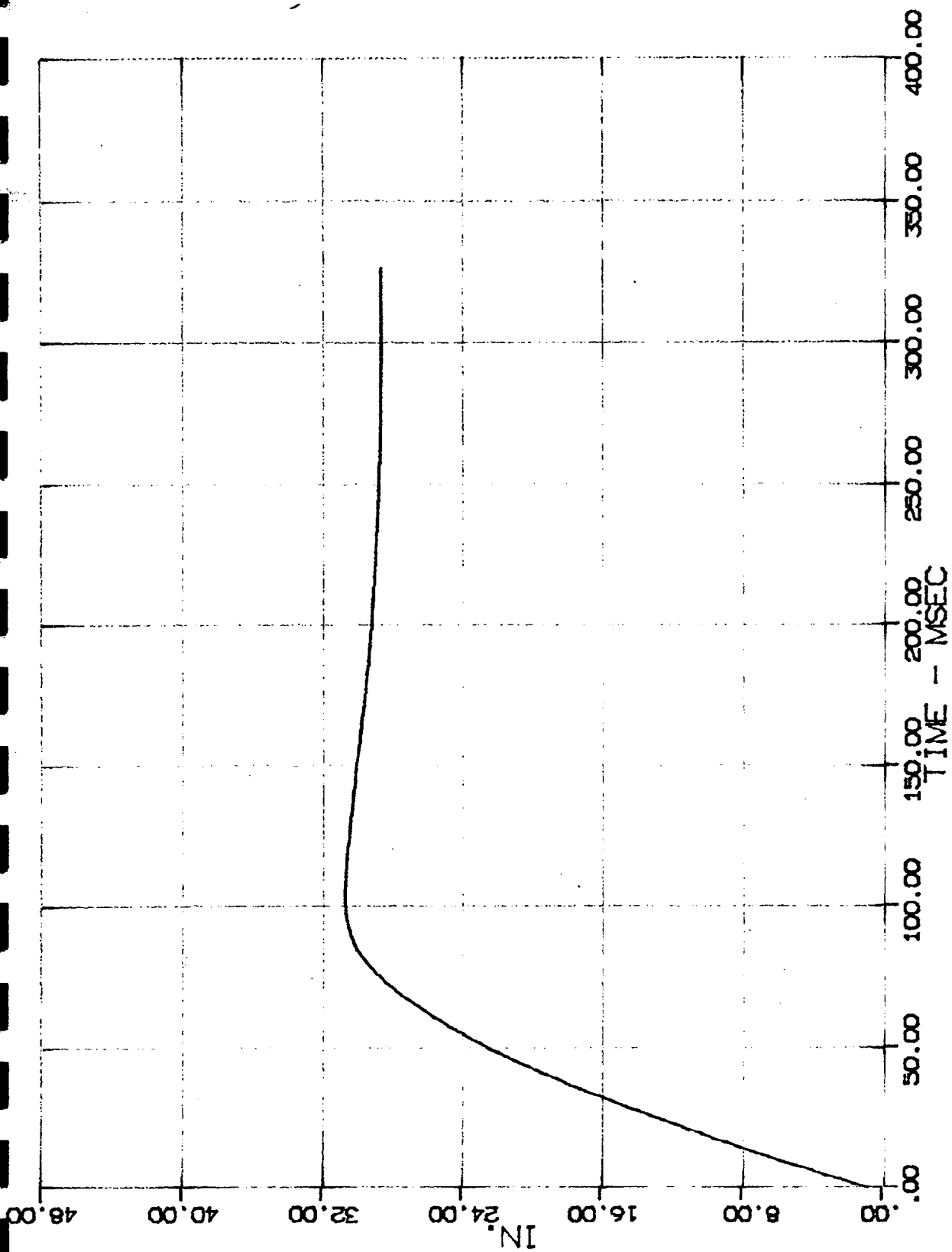
03 AC 01 N RFF X IN2
MSE NO1032 1982 CHEVROLET CAMARO
10/01/82



04 AC 01 N LRF X
MSE NO1032 1982 CHEVROLET CAMARO 10/01/82



04 AC 01 N LRF X IN1
MSE NO1032 1982 CHEVROLET CAMARO 10/01/82



04 PC 01 N LRF X IN2

MSE NO1032 1982 CHEVROLET CAMARO

10/01/82

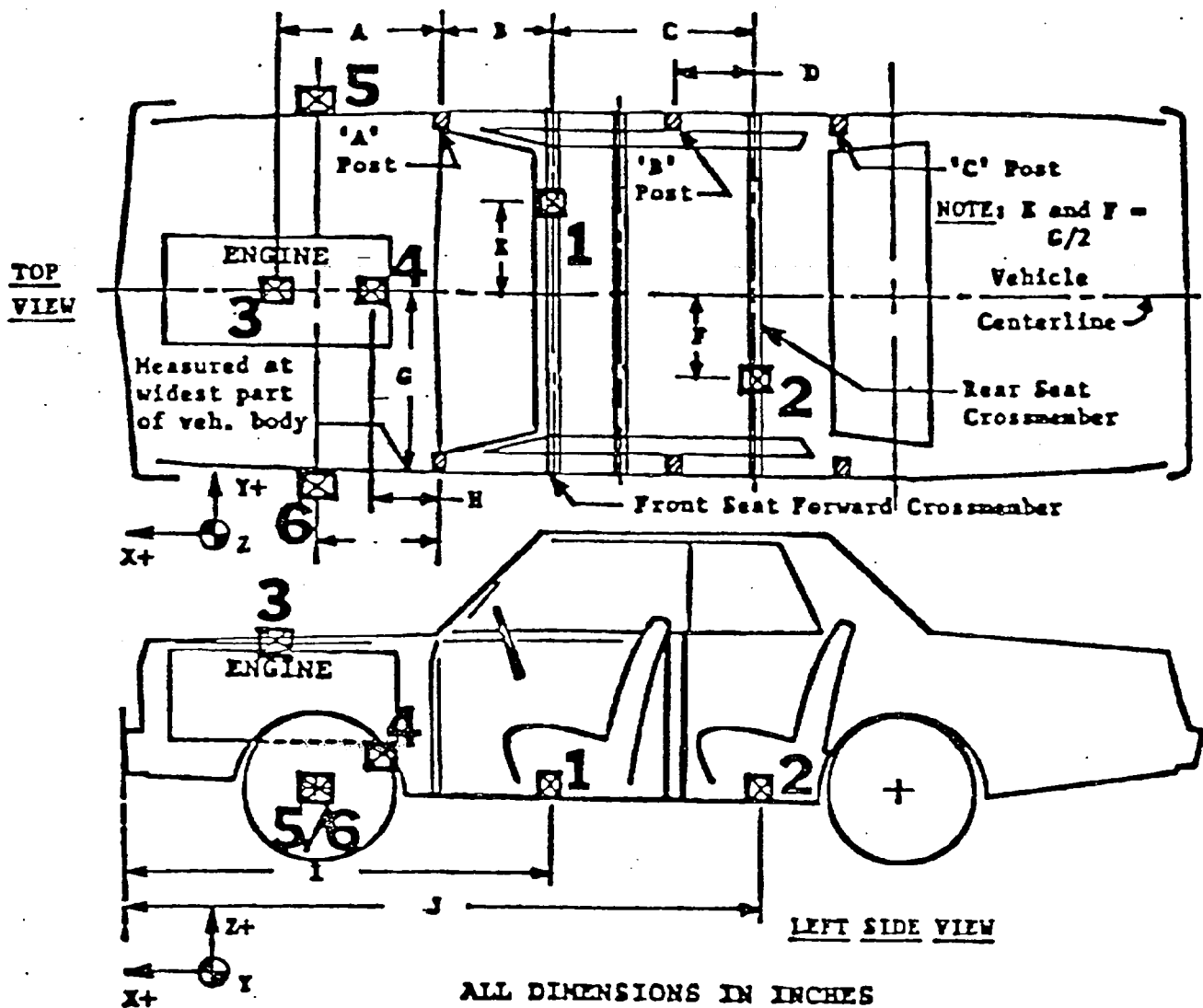
2.4 TEST DATA FOR CHEVROLET CHEVETTE

NHTSA No.	-	820124
Test Reference No.	-	N01042
Test Date	-	10/05/82

CHEVROLET CHEVETTE
VEHICLE AND TEST DESCRIPTIVE DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	10/05/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 04
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.2
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	74
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	1
23. VEHICLE MODEL	13
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-1LF
26. ENGINE DISPLACEMENT	1.6 LITER
27. TRANSMISSION TYPE	AF
28. BODY TYPE	4D
29. TEST WEIGHT	2222
30. WHEELBASE (IN.)	99.3
31. VEHICLE LENGTH (IN.)	165.5
32. VEHICLE WIDTH (IN.)	62.0
33. C.G. DIST. BEHIND FRONT AXLE	45.0
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.2
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	62.0
47. POINT NO. 1	18.0
48. POINT NO. 2	18.1
49. POINT NO. 3	18.2
50. POINT NO. 4	18.3
51. POINT NO. 5	18.4
52. POINT NO. 6	18.5
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	18.5
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.2
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.2
123. QUALITY	GOOD,ZERO OFFSET

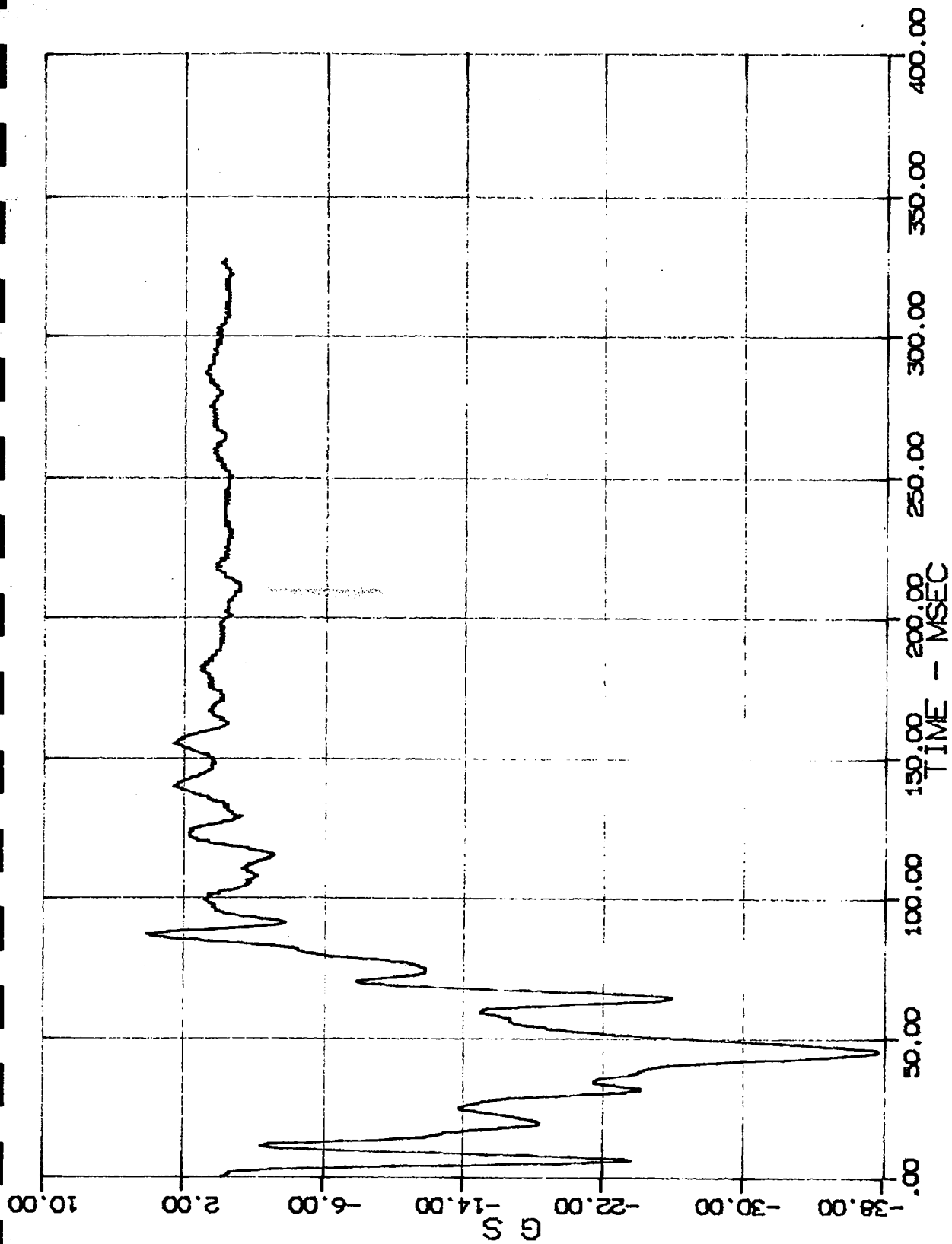


ALL DIMENSIONS IN INCHES

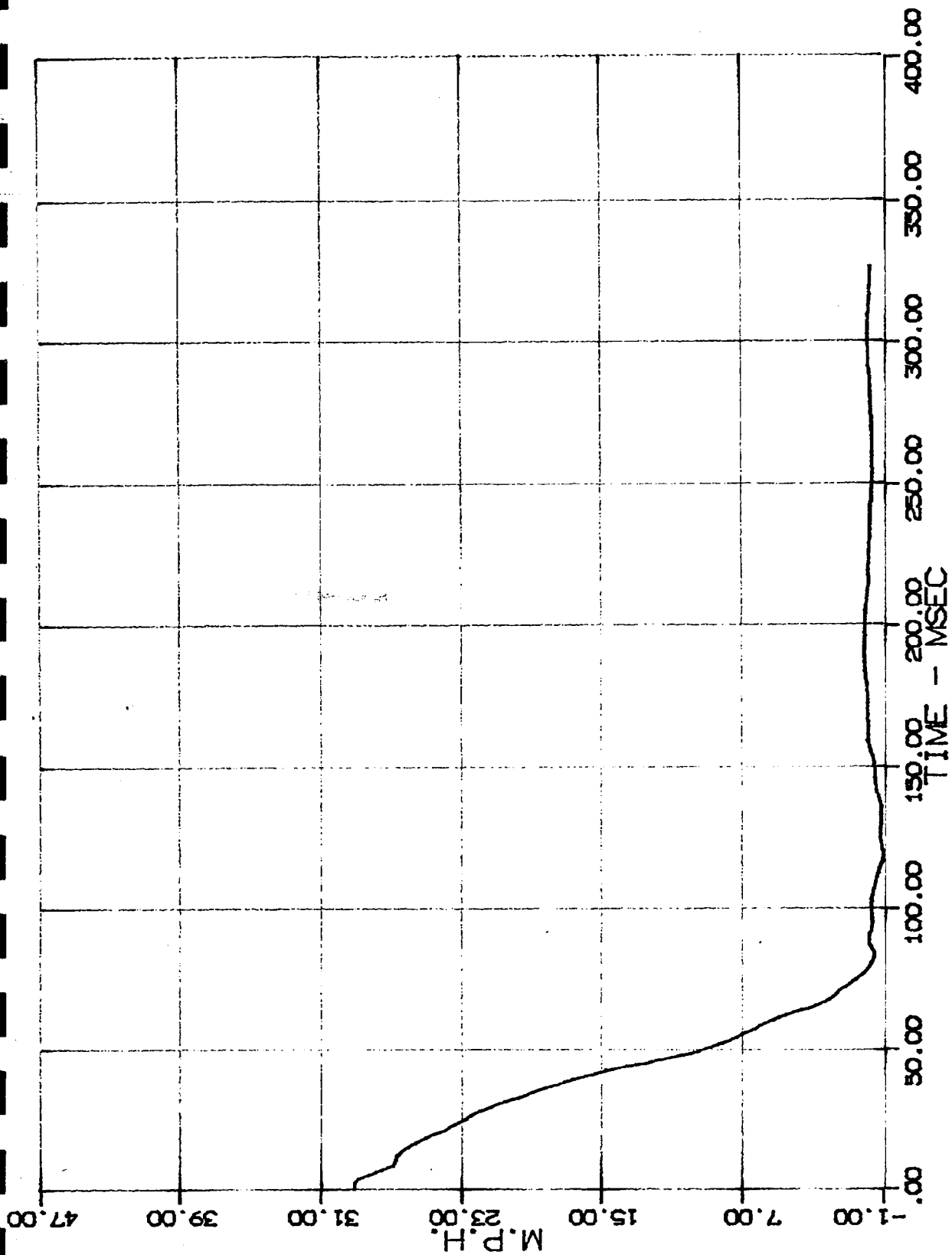
DIMENSION	LENGTH (in.)
$E = C/2$	22.25 in.
$F = C/2$	17.5 in.
C	31.0 in.
I	73.0 in.
J	93.25 in.

ACCEL. NO.	LOCATION	DIRECT.			PEAK G @ msec.					
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-
1	Below Front Seat Area	⊗			+	-	⊗	⊗		
2	Below Rear Seat Area	⊗			+	-	⊗	⊗		

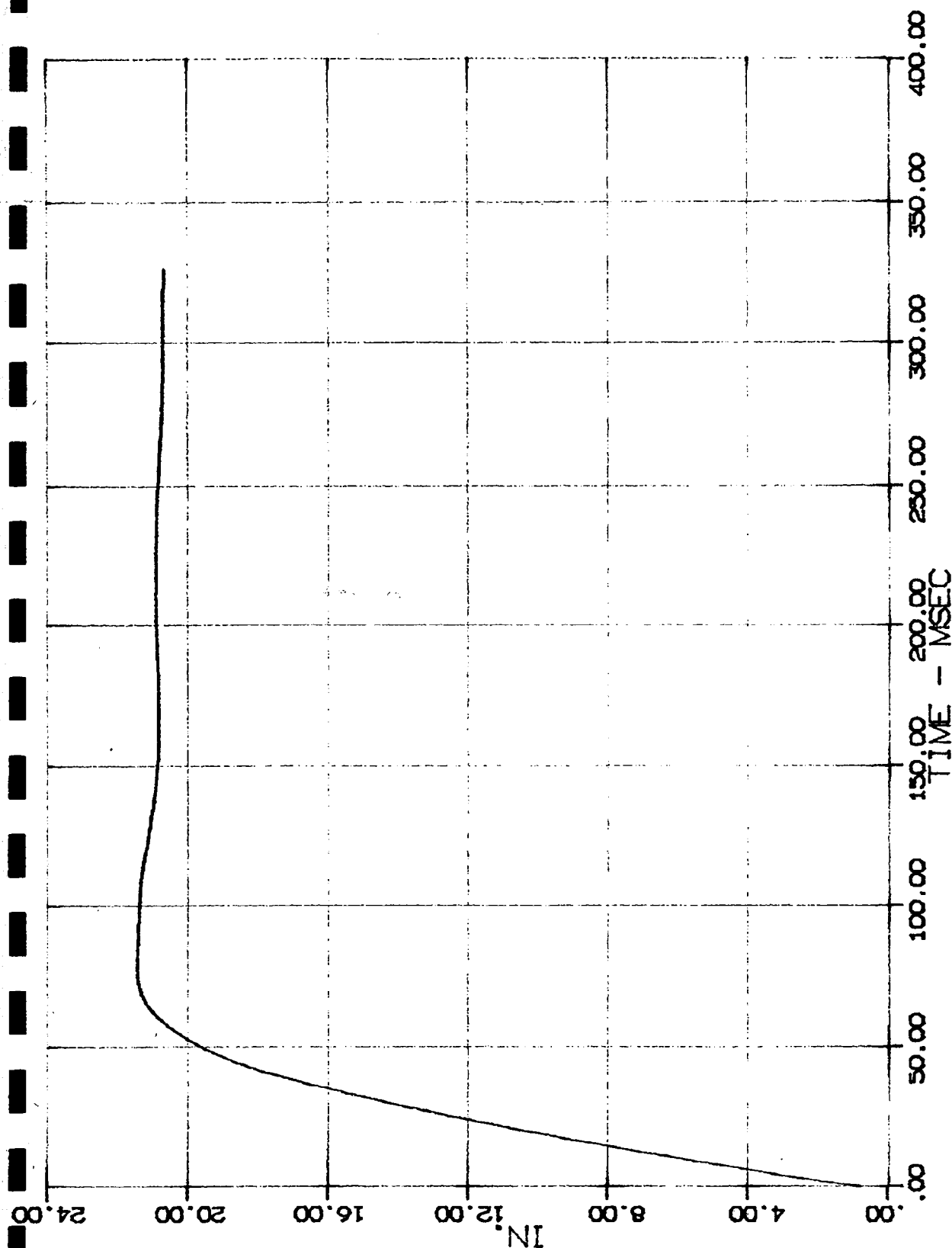
CHEVROLET CHEVETTE
VEHICLE ACCELEROMETER LOCATIONS



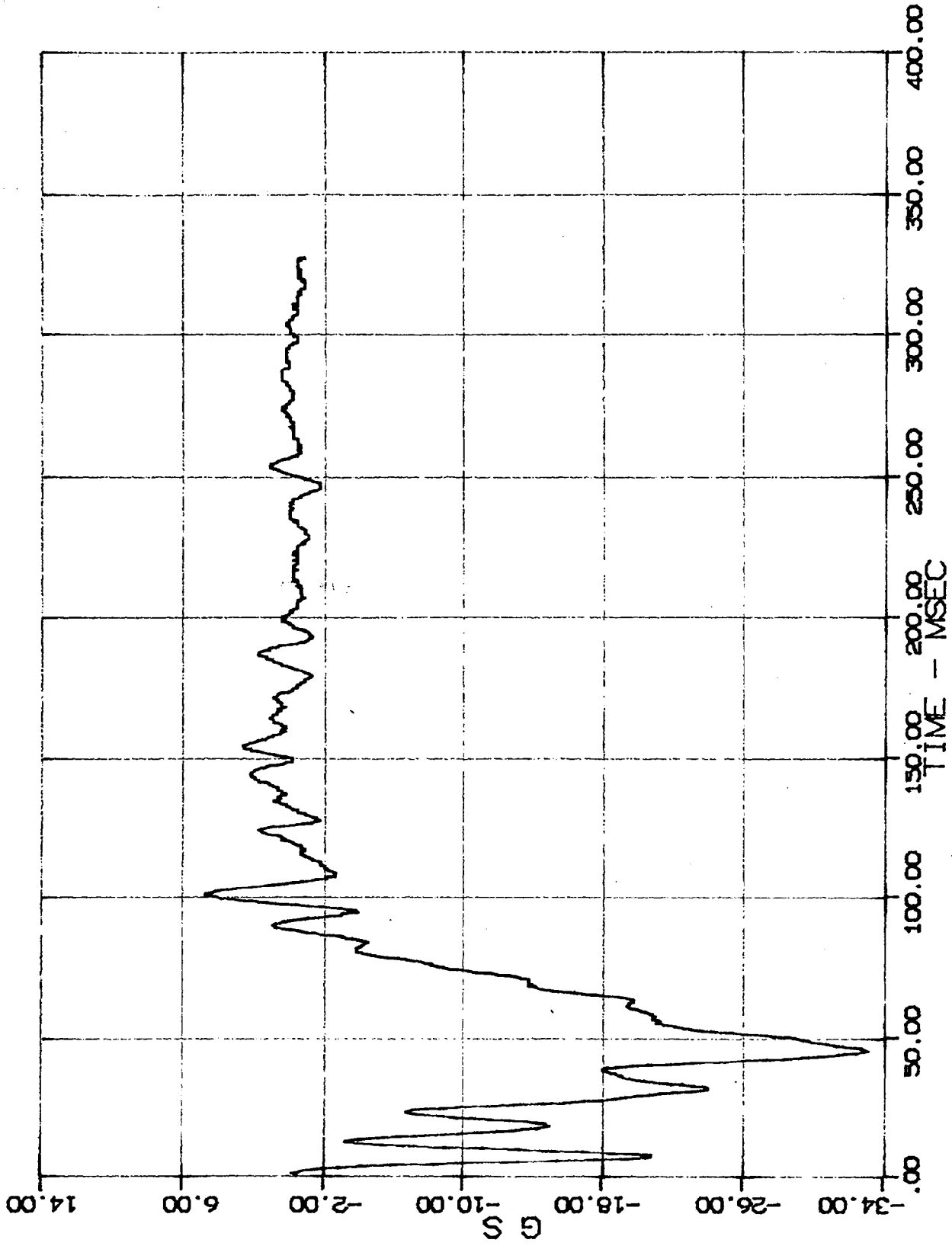
03 PC 01 N RFF X
MSE ND1042 1982 CHEVROLET CHEVETTE 10/20/82



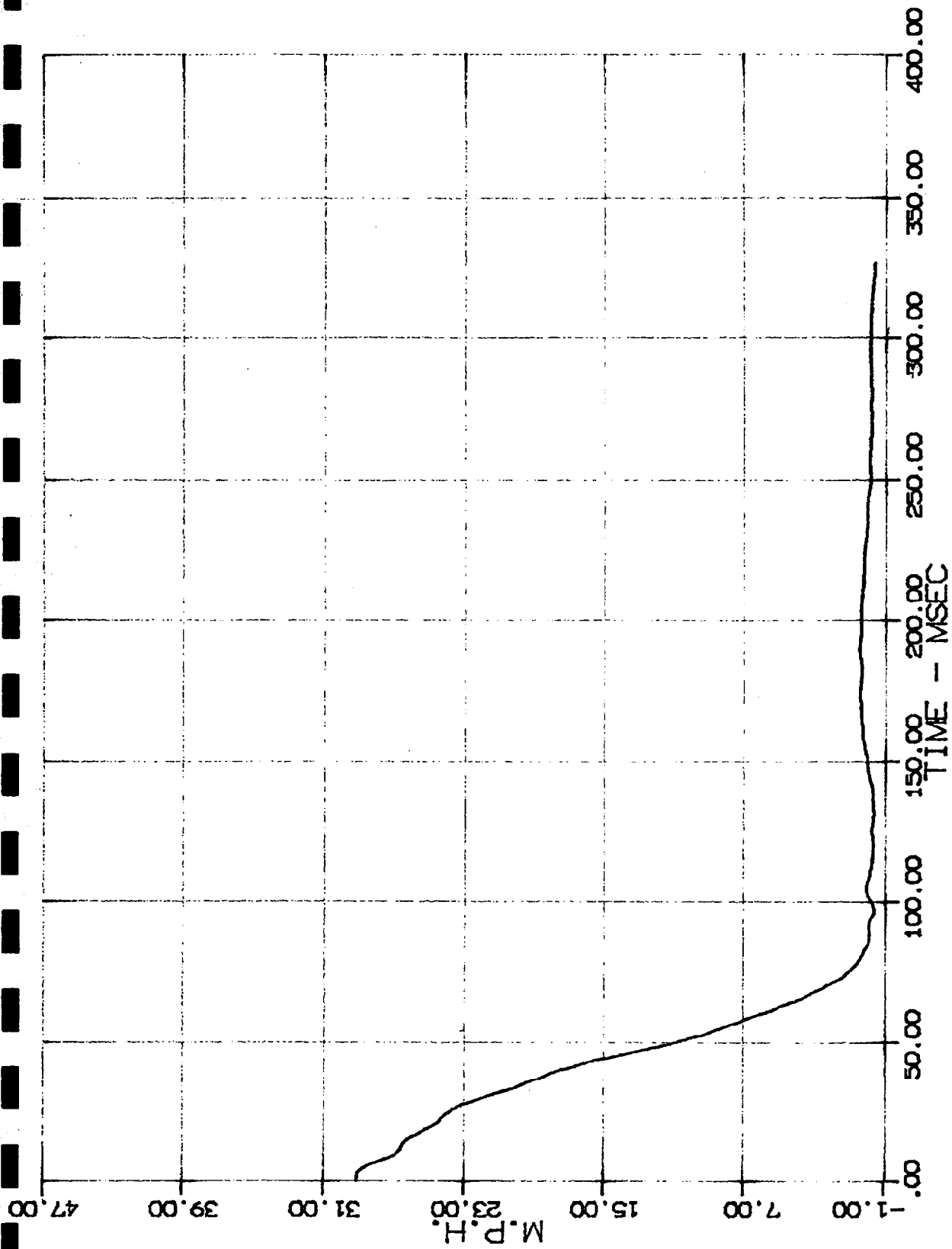
03 AC 01 N RFFX IN1
MSE NO1042 1982 CHEVROLET CHEVETTE
10/20/82



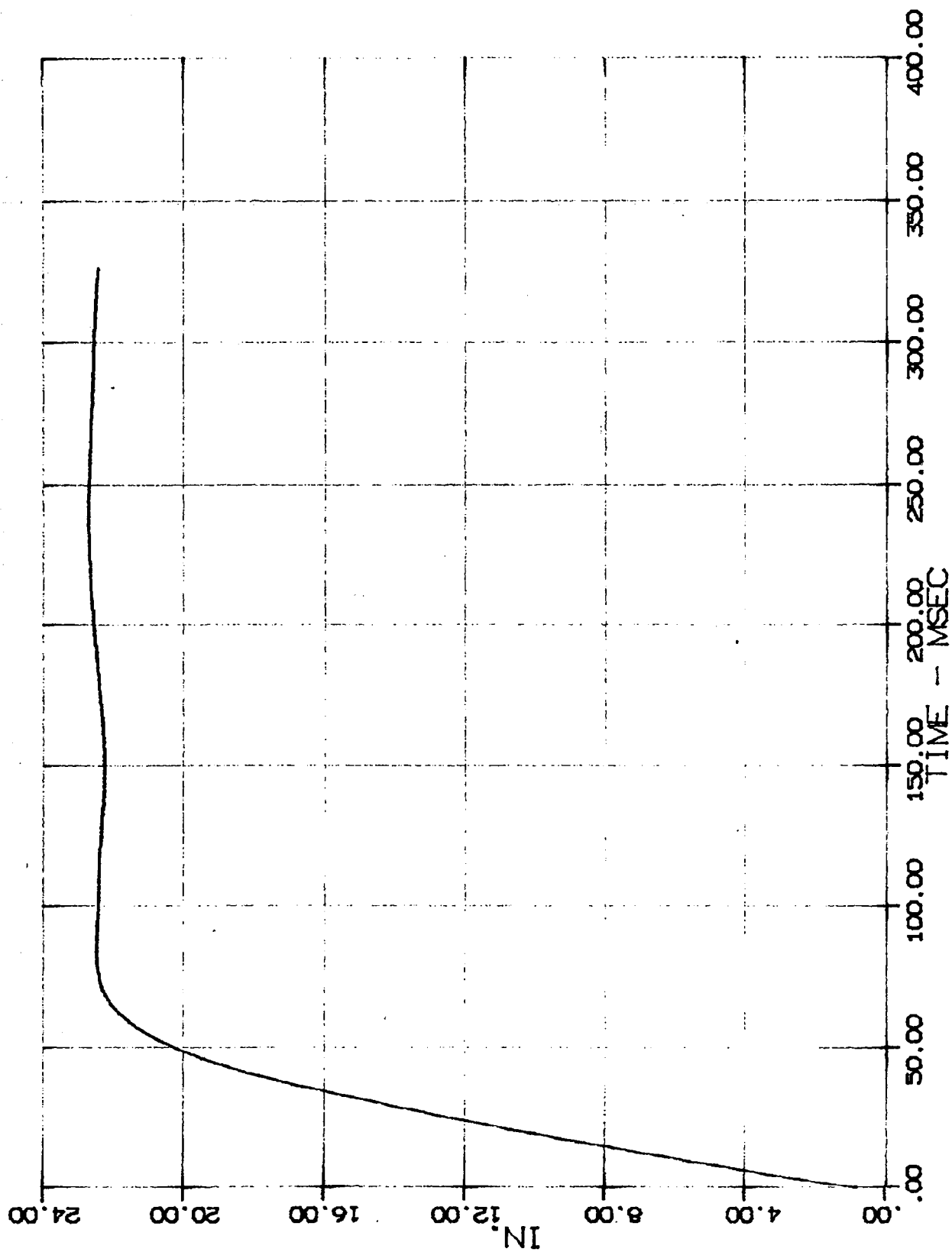
03 AC 01 N RFF X IN2
MSE NO1042 1982 CHEVROLET CHEVETTE
10/20/82



04 PC 01 N LRF X
MSE NO1042 1982 CHEVROLET CHEVETTE
10/20/82



04 PC 01 N LRF X IN1
MSE NO1042 1982 CHEVROLET CHEVETTE 10/20/82



04 AC 01 N LRF X IN2
MSE NO1042 1982 CHEVROLET CHEVETTE
10/20/82

2.5 TEST DATA FOR HONDA ACCORD

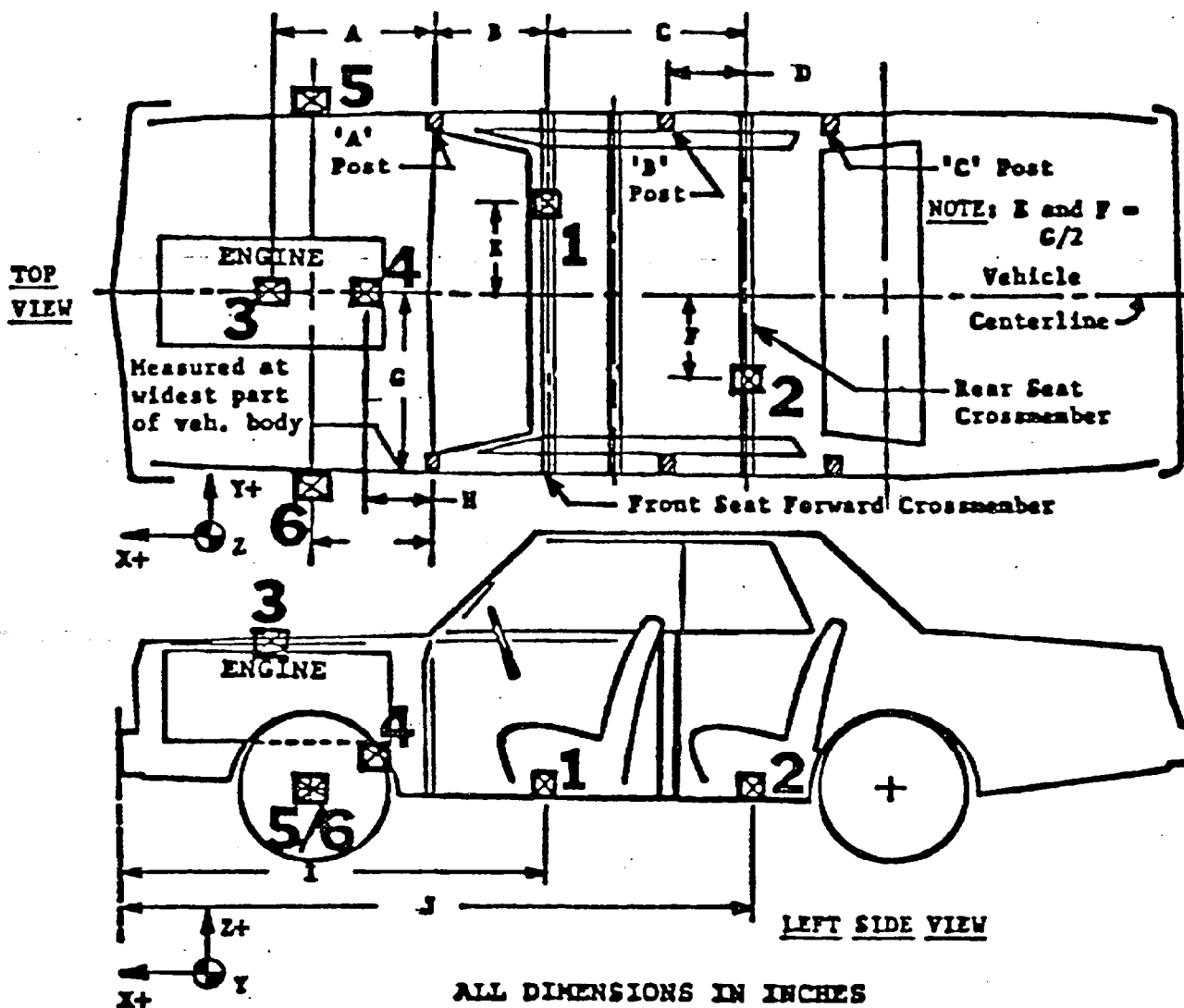
NHTSA No.	-	820546
Test Reference No.	-	N23052
Test Date	-	10/20/82

HONDA ACCORD

VEHICLE AND TEST DESCRIPTIVE DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	10/20/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 05
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.4
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	86
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	23
23. VEHICLE MODEL	2
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-TVF
26. ENGINE DISPLACEMENT	107 CI
27. TRANSMISSION TYPE	AF
28. BODY TYPE	3D
29. TEST WEIGHT	2080
30. WHEELBASE (IN.)	96.5
31. VEHICLE LENGTH (IN.)	165.0
32. VEHICLE WIDTH (IN.)	64.5
33. C.G. DIST. BEHIND FRONT AXLE	38.1
34. STEERING COL. TO DASH	N
35. STEERING COL. COLLAPSE MECH.	QTH
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.4
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	64.5
47. POINT NO. 1	20.0
48. POINT NO. 2	20.0
49. POINT NO. 3	20.0
50. POINT NO. 4	20.0
51. POINT NO. 5	20.0
52. POINT NO. 6	20.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	20.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

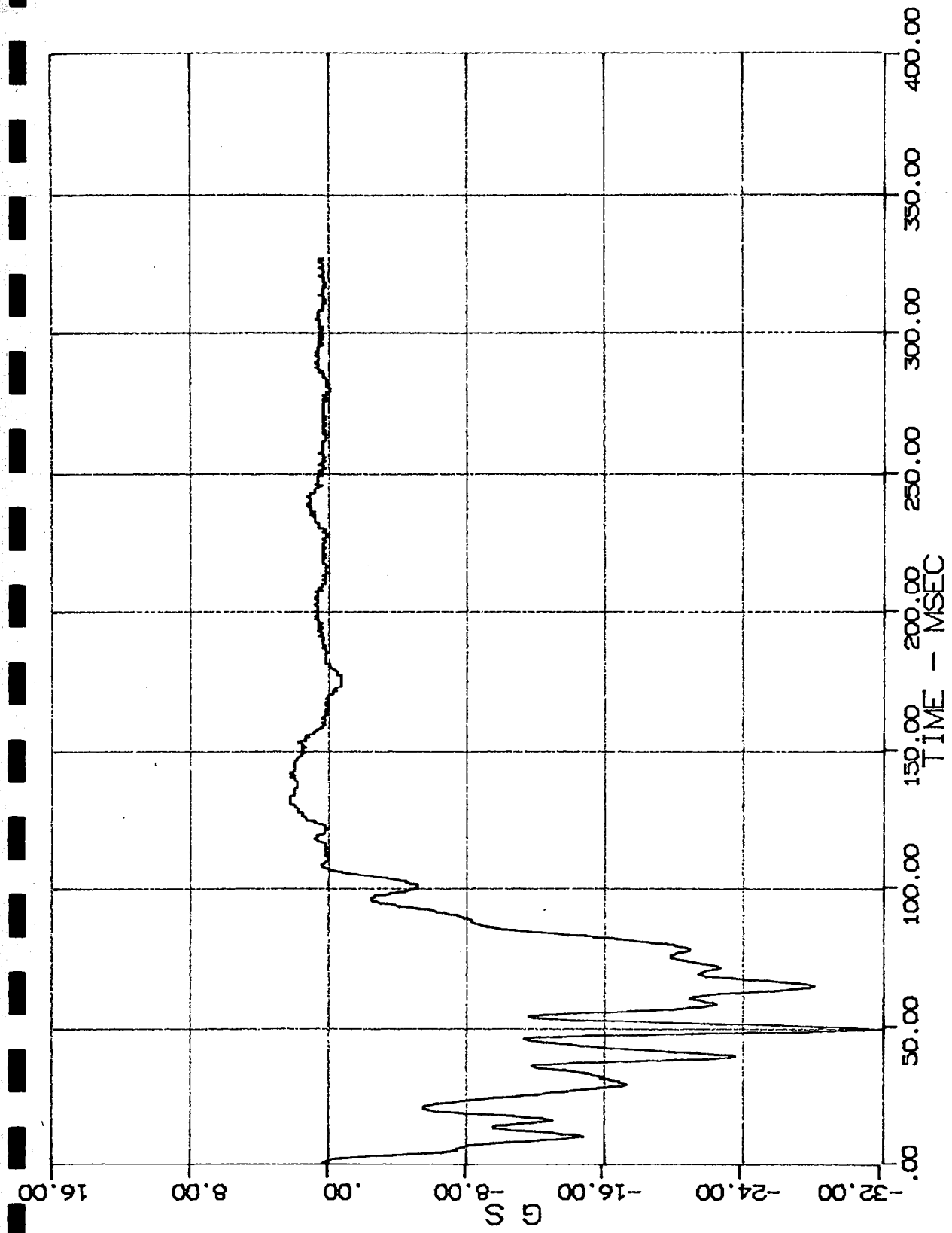
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.4
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.4
123. QUALITY	GOOD,ZERO OFFSET



DIMENSION	LENGTH (in.)
$E = C/2$	18.0 in.
$F = C/2$	14.2 in.
G	32.2 in.
I	80.2 in.
J	97.0 in.

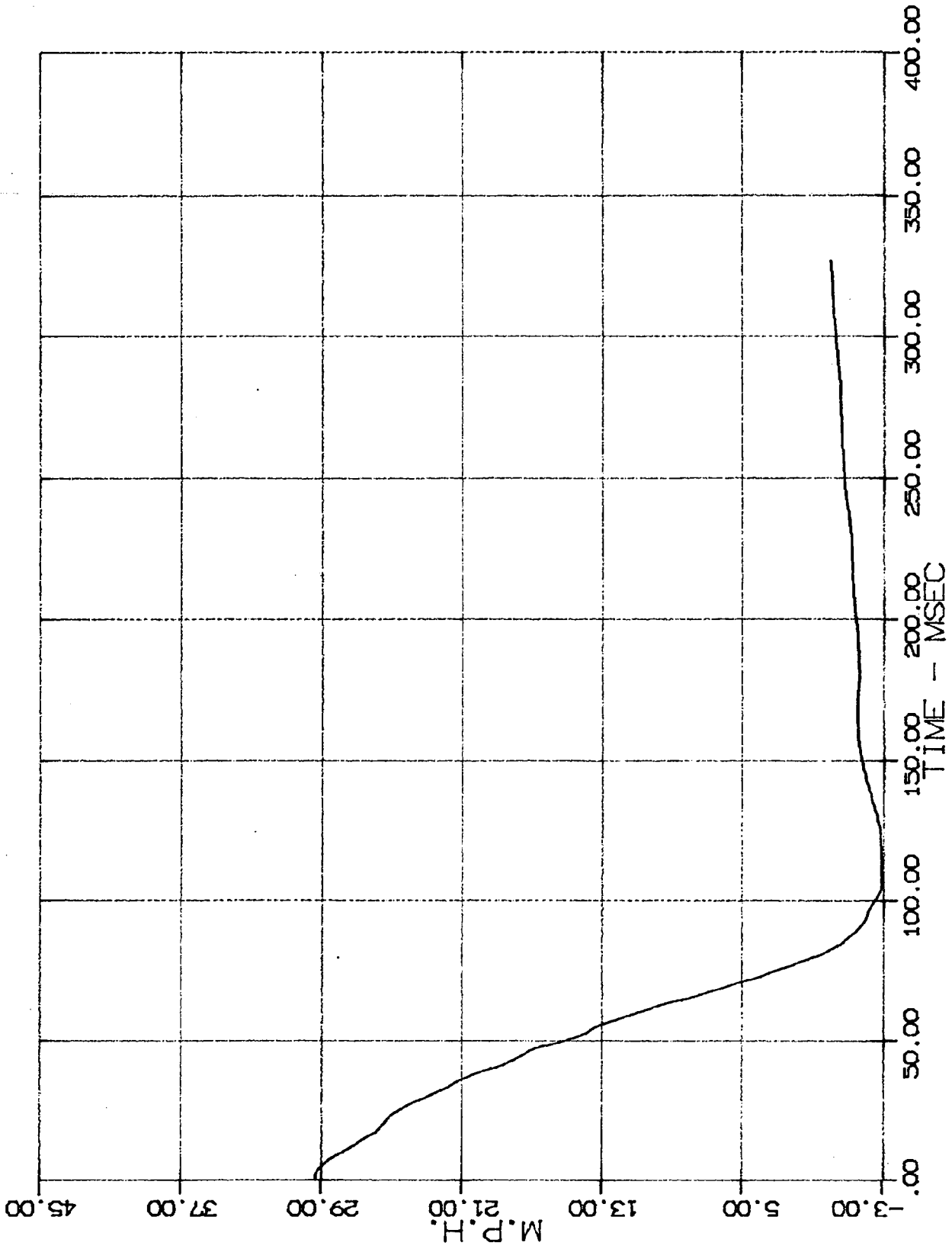
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-	+	-			
2	Below Rear Seat Area	●			+	-	+	-			

HONDA ACCORD
VEHICLE ACCELEROMETER LOCATIONS



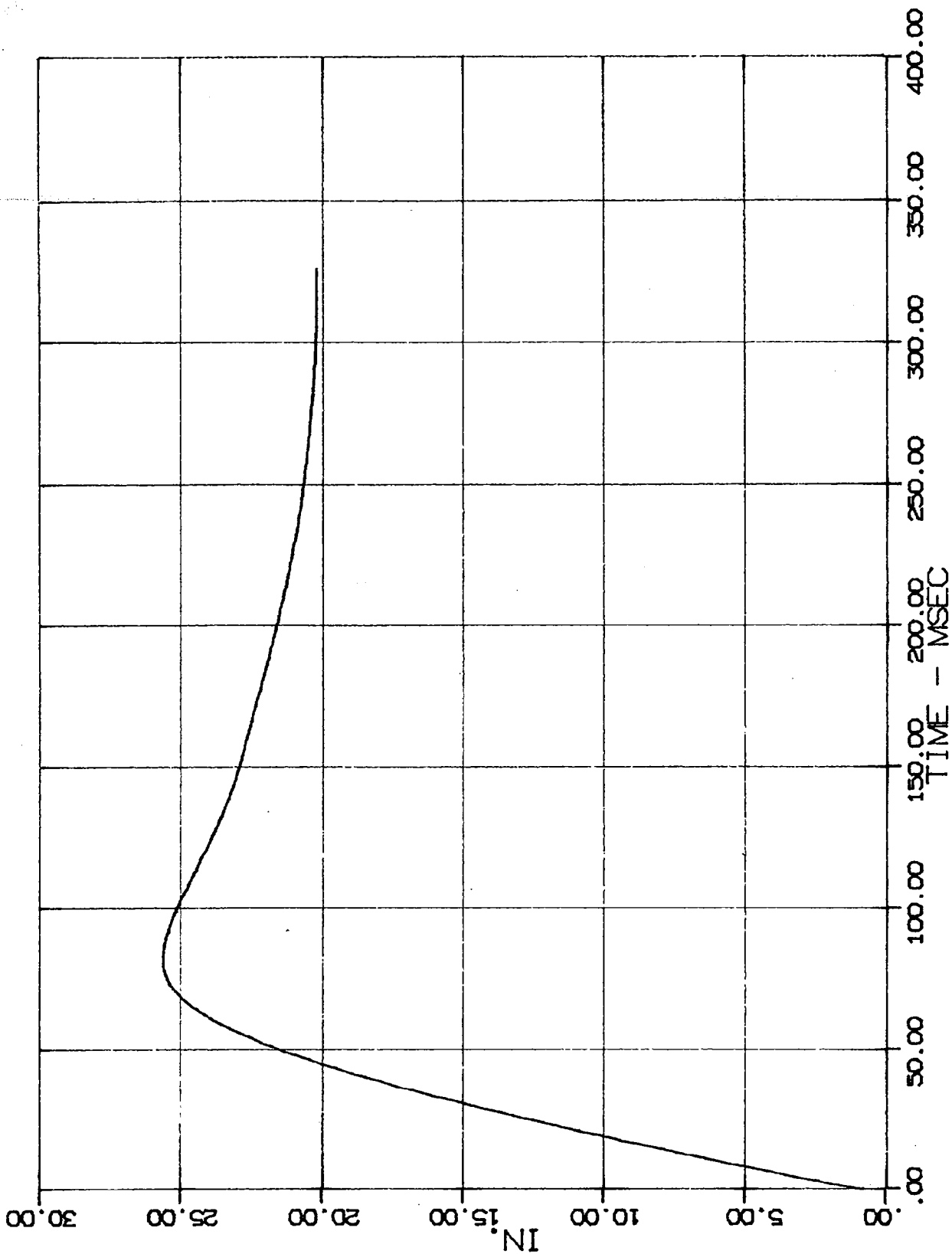
03 AC 01 N RFF X
MSE N23052 1982 HONDA ACCORD

10/20/82



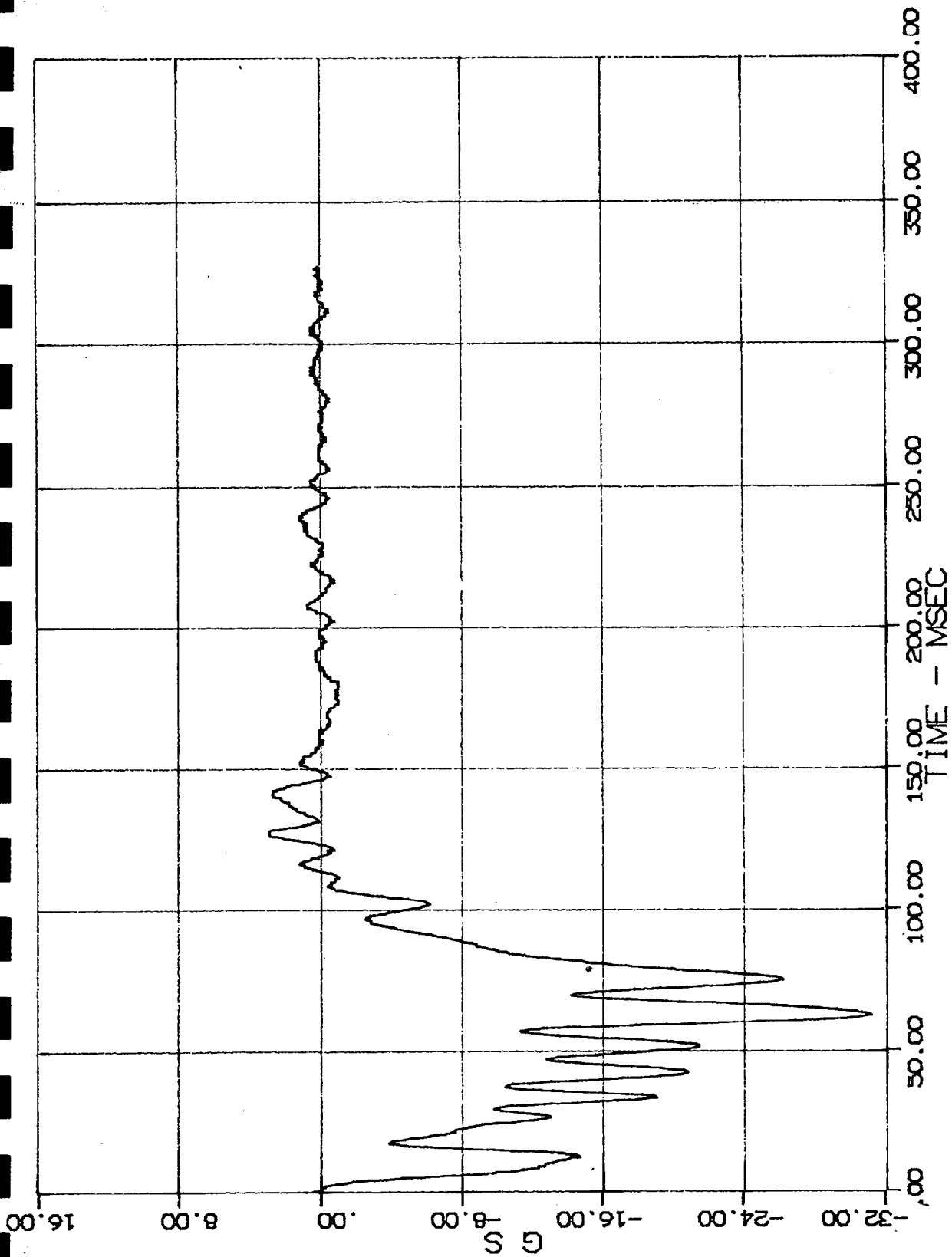
03 FC 01 N RFF X IN1
MSE N23052 1982 HONDA ACCORD

10/20/82



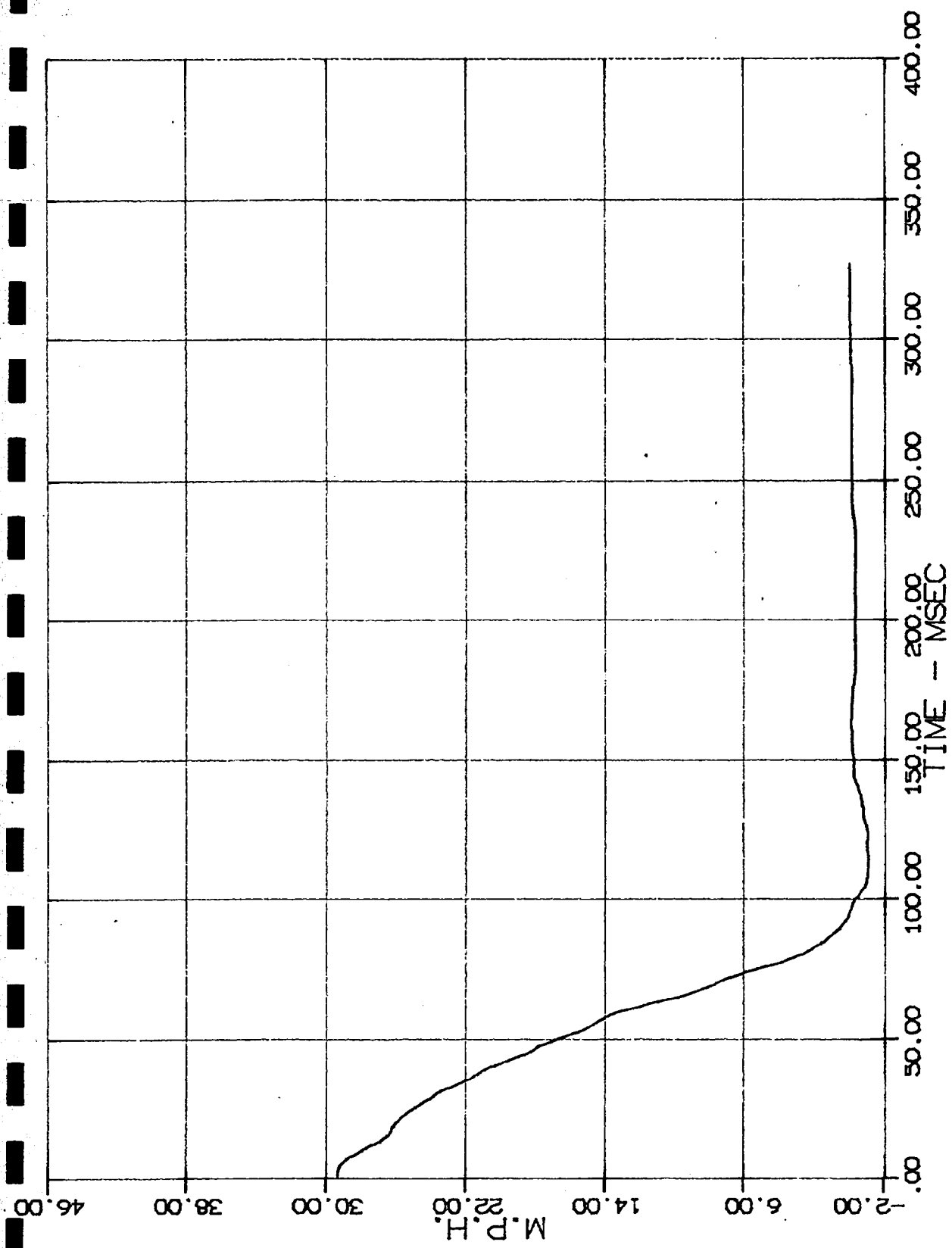
03 AC 01 N RFF X IN2
MSE N23052 1982 HONDA ACCORD

10/20/82



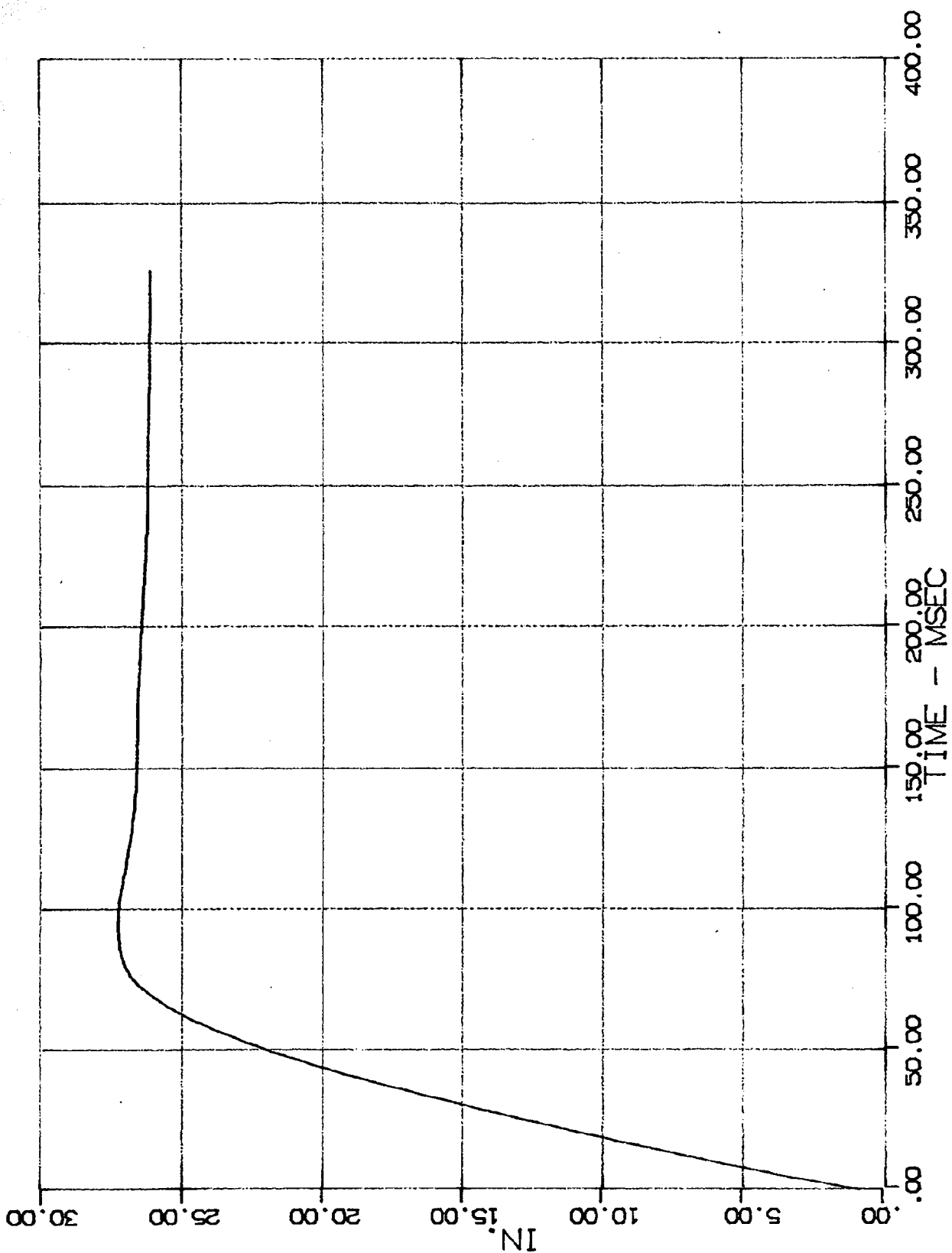
04 AC 01 N LRF X
MSE N23052 1982 HONDA ACCORD

10/20/82



04 AC 01 N LRF X IN1
 MSE N23052 1982 HONDA ACCORD

10/20/82



04 AC 01 N LRF X IN2
MSE N23052 1982 HONDA ACCORD

10/20/82

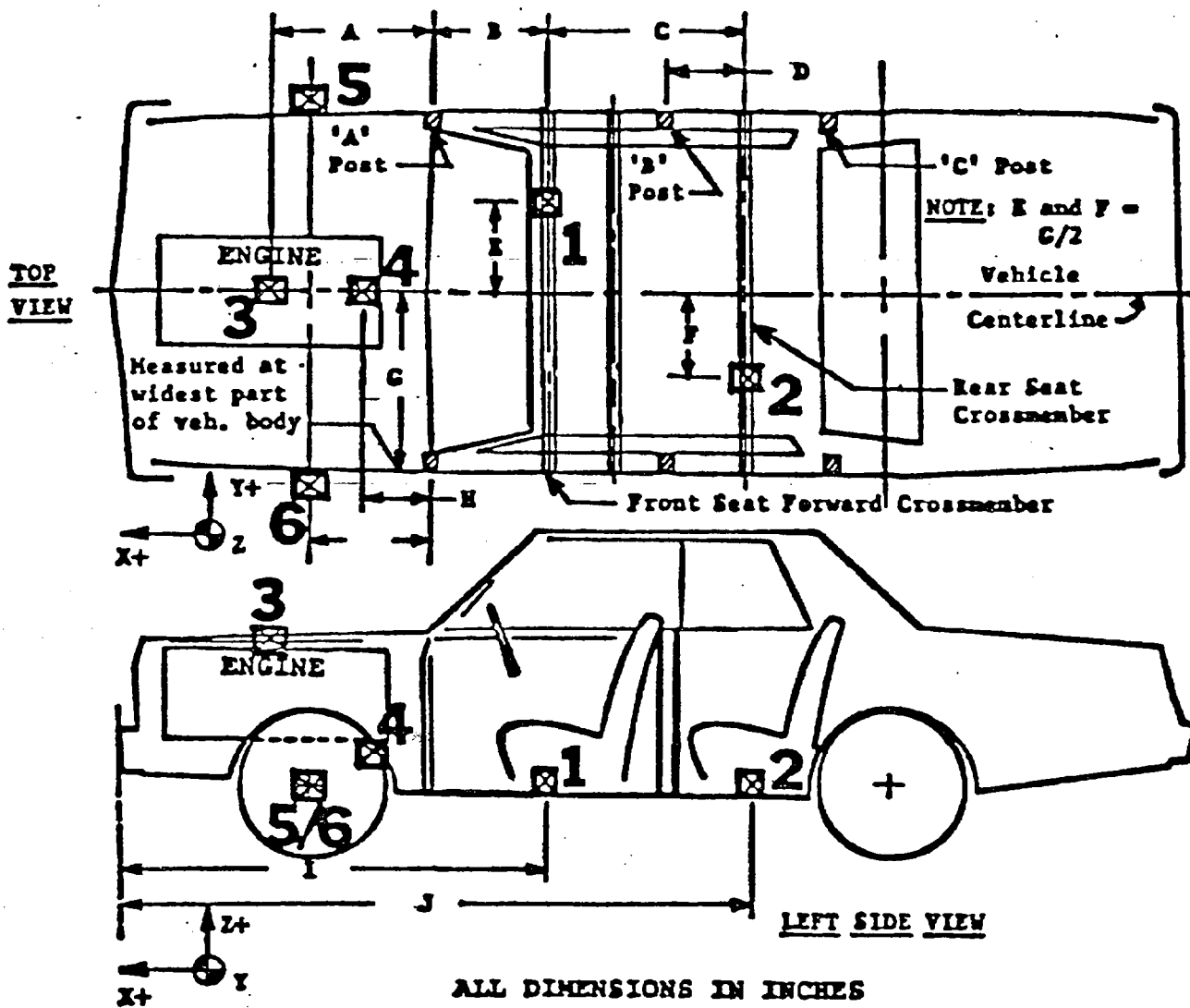
2.6 TEST DATA FOR NISSAN SENTRA

NHTSA No.	-	820547
Test Reference No.	-	N15062
Test Date	-	10/22/82

NISSAN SENTRA
VEHICLE AND TEST DESCRIPTIVE DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	10/22/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 06
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.4
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	74
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	15
23. VEHICLE MODEL	99
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-TVF
26. ENGINE DISPLACEMENT	91 CI
27. TRANSMISSION TYPE	AF
28. BODY TYPE	4D
29. TEST WEIGHT	1957
30. WHEELBASE (IN.)	94.5
31. VEHICLE LENGTH (IN.)	166.9
32. VEHICLE WIDTH (IN.)	63.8
33. C.G. DIST. BEHIND FRONT AXLE	36.6
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	OTH
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.4
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	63.8
47. POINT NO. 1	15.0
48. POINT NO. 2	15.4
49. POINT NO. 3	16.2
50. POINT NO. 4	16.4
51. POINT NO. 5	16.6
52. POINT NO. 6	17.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	17.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

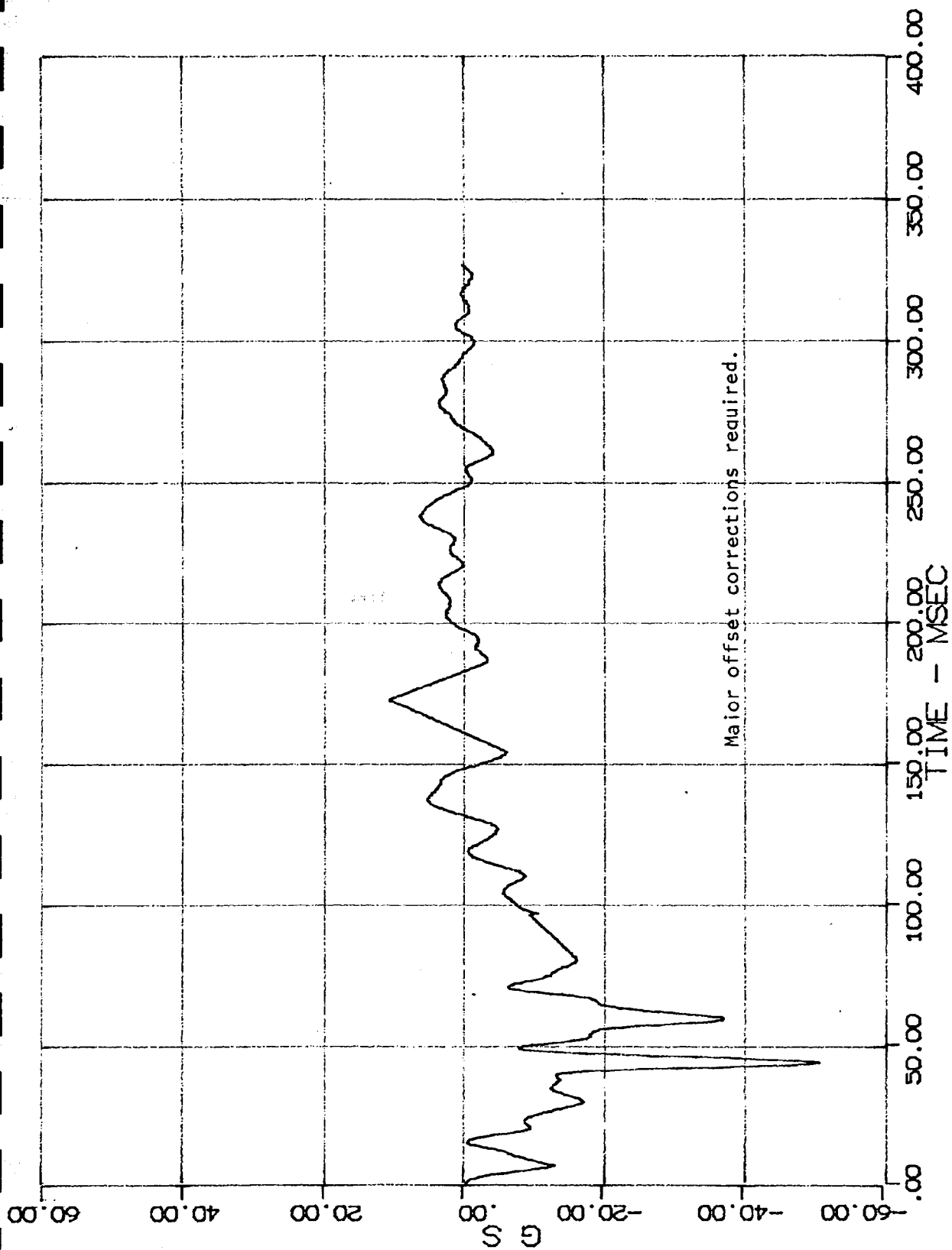
60. RIGID OR FLEETING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.4
108. QUALITY	?DATA,LARGE OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.4
123. QUALITY	?DATA,LARGE OFFSET



DIMENSION	LENGTH (in.)
E - C/2	17.2 in.
F - C/2	19.9 in.
G	31.9 in.
I	77.0 in.
J	106.0 in.

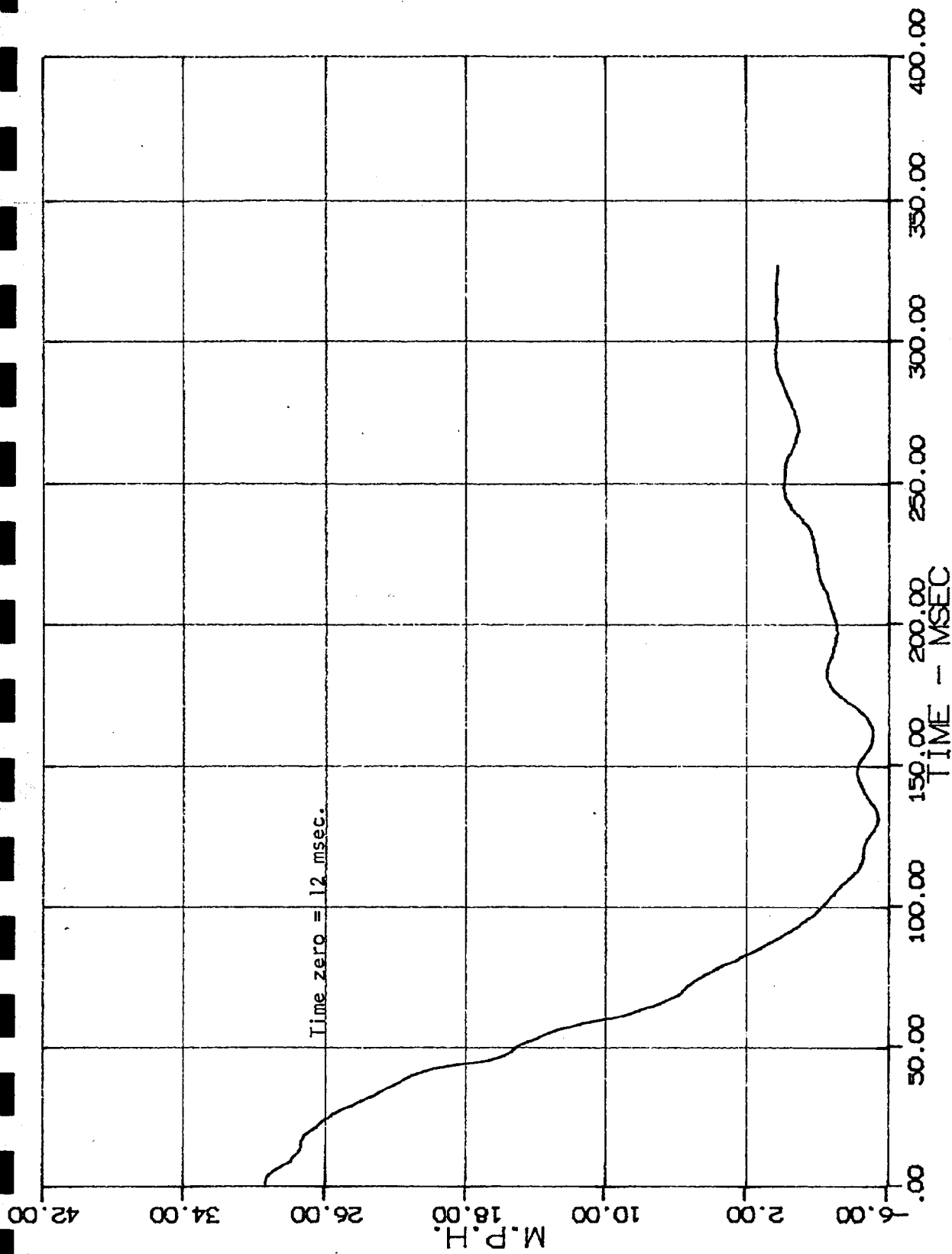
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-	0	0			
2	Below Rear Seat Area	●			+	-	0	0			

NISSAN SENTRA
VEHICLE ACCELEROMETER LOCATIONS



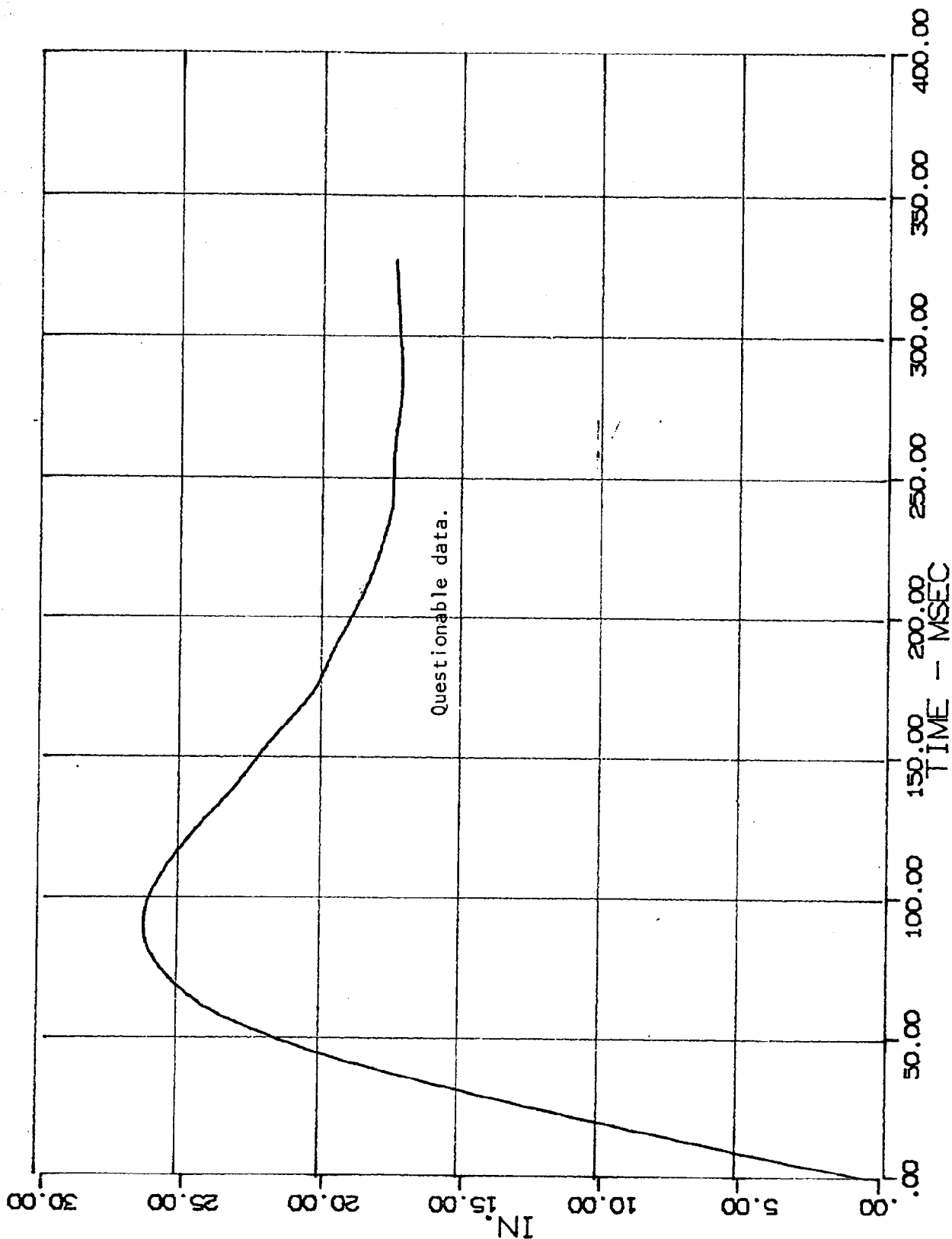
03 AC 01 N RFF X
MSE N15062 1982 NISSAN SENTRA

10/22/82



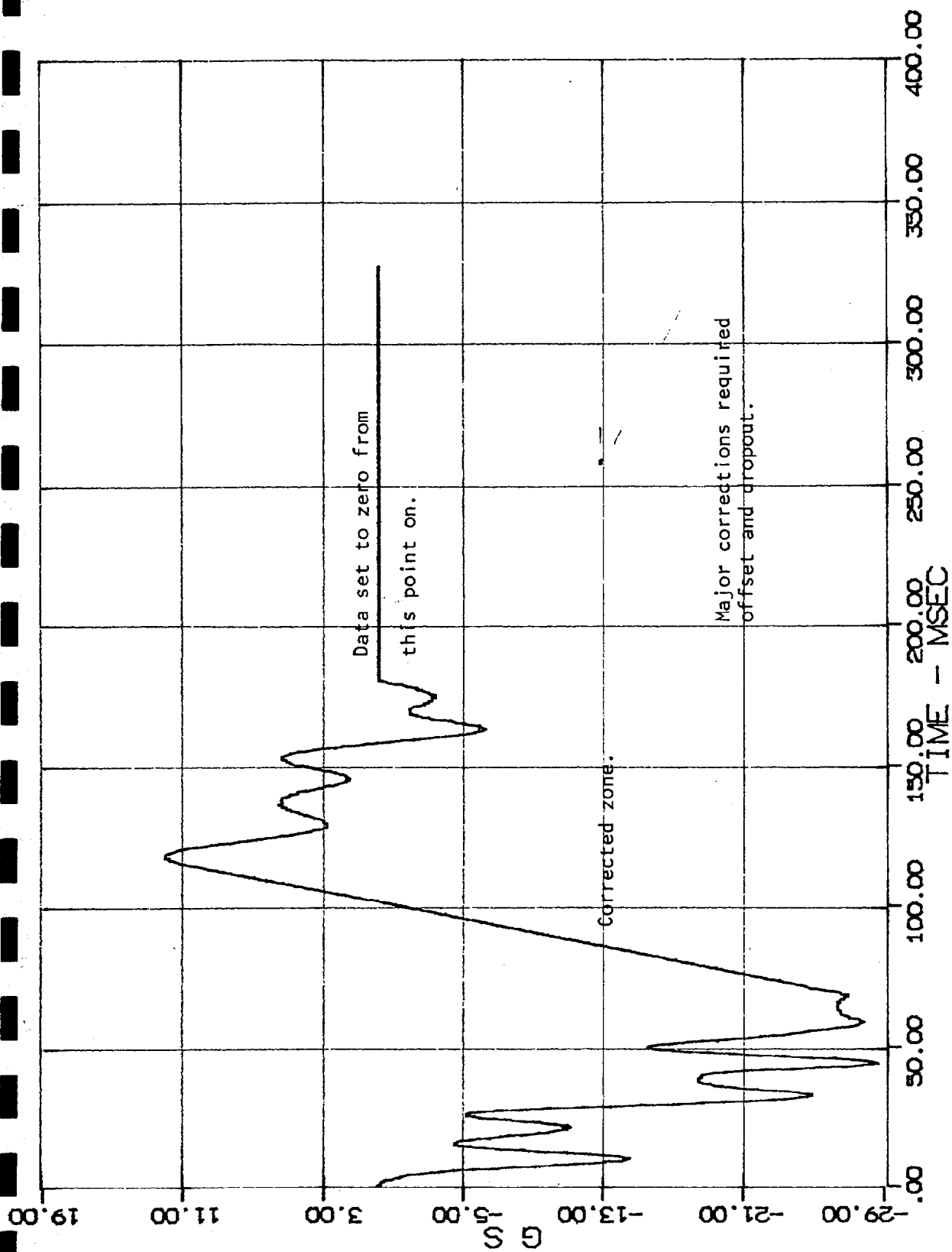
03 AC 01 N RFF X IN1
MSE N15062 1982 NISSAN SENTRA

10/22/82



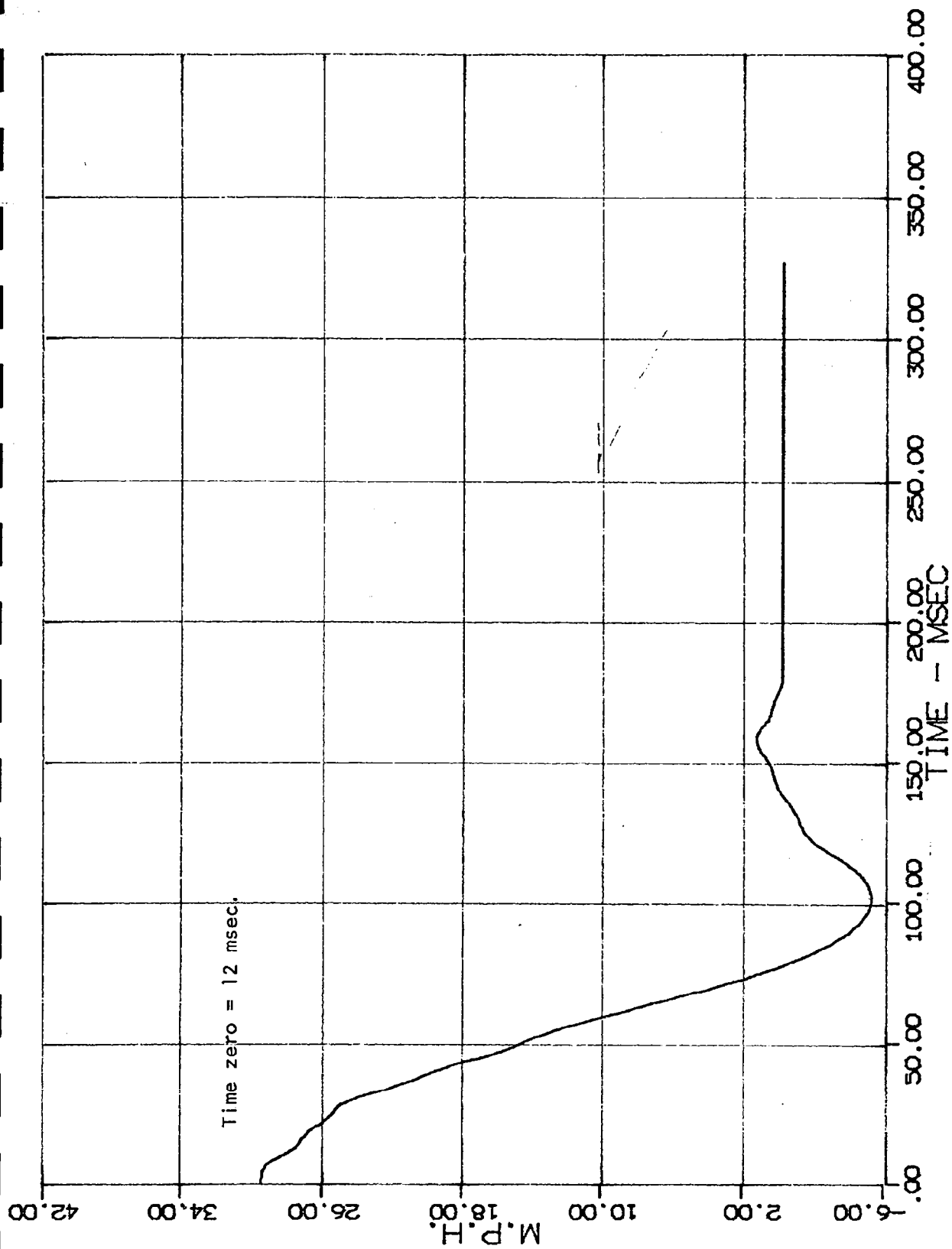
03 AC N RFF X IN2
 MSE N15062 1982 NISSAN SENTRA

10/22/82



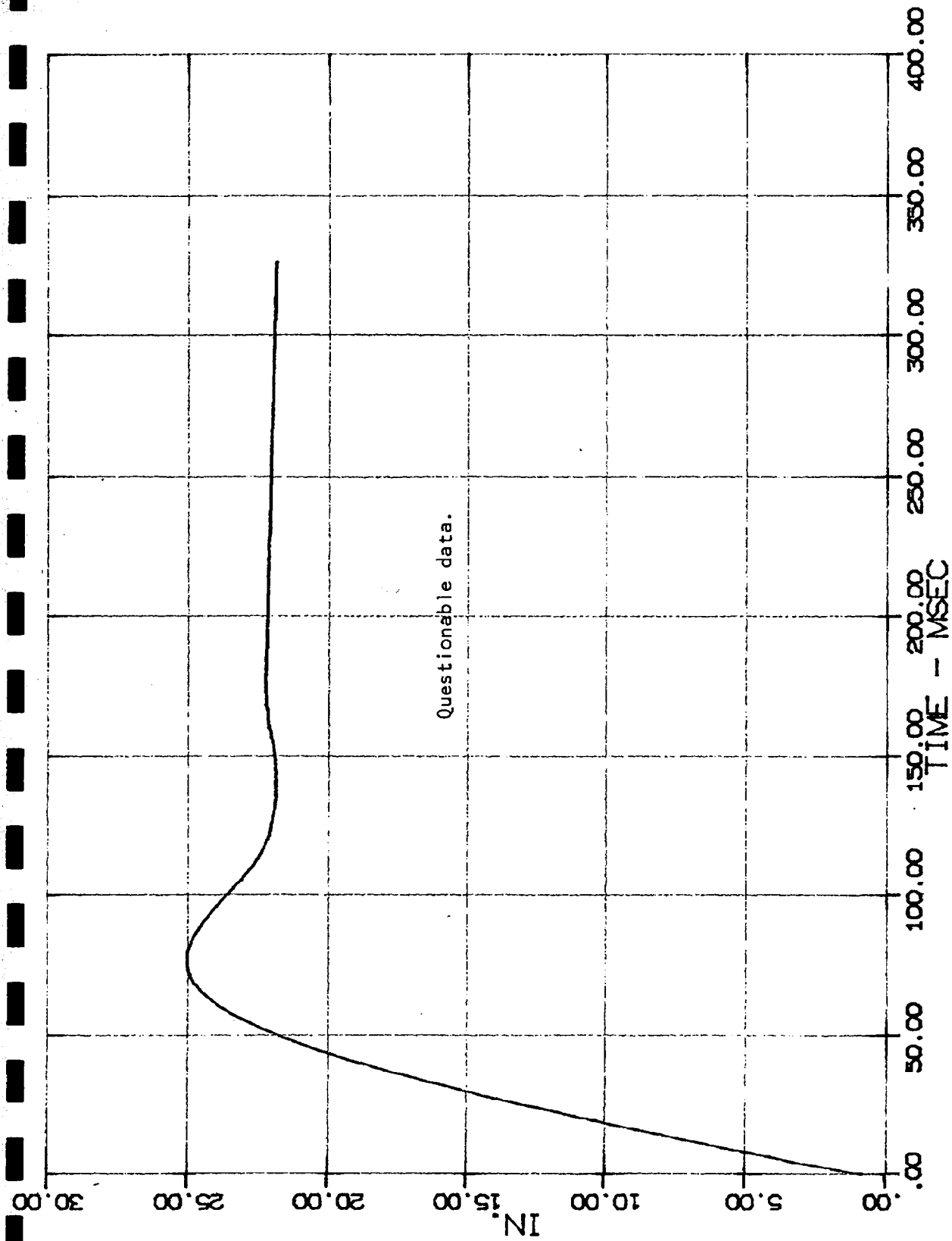
04 AC N LRF X
MSE N15062 1982 NISSAN SENTRA

10/22/82



04 AC N LRF X IN1
MSE N15062 1982 NISSAN SENTRA

10/22/82



04 AC N LRF X IN2
MSE N15062 1982 NISSAN SENTRA

10/22/82

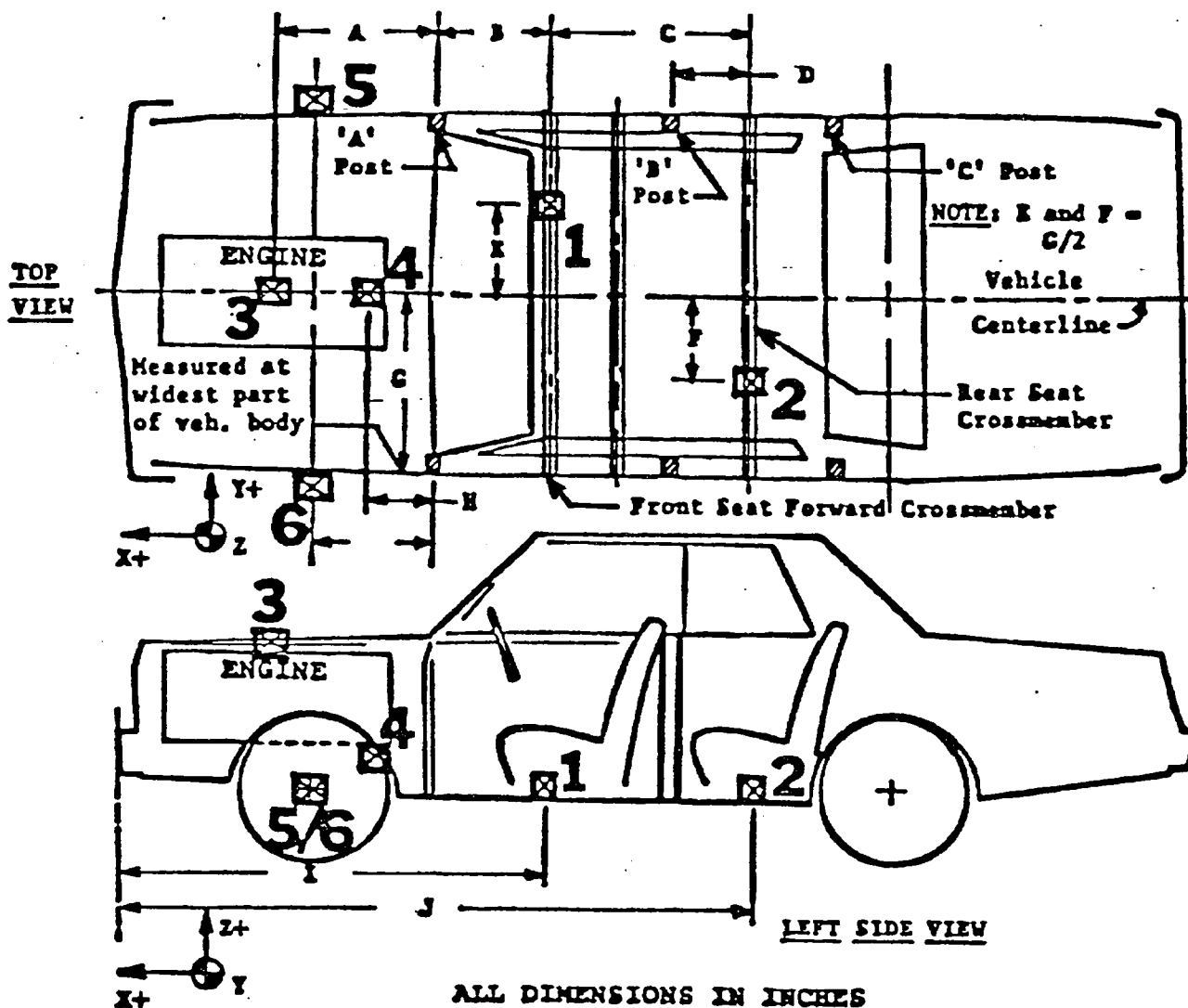
2.7 TEST DATA FOR BUICK CENTURY

NHTSA No.	-	820123
Test Reference No.	-	N04072
Test Date	-	10/27/82

BUICK CENTURY
VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	10/27/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 07
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	VSB
10. CLOSING SPEED	29.5
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	74
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	4
23. VEHICLE MODEL	6
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-TVF
26. ENGINE DISPLACEMENT	2.5 LITER
27. TRANSMISSION TYPE	AF
28. BODY TYPE	4D
29. TEST WEIGHT	2799
30. WHEELBASE (IN.)	104.9
31. VEHICLE LENGTH (IN.)	189.0
32. VEHICLE WIDTH (IN.)	69.0
33. C.G. DIST. BEHIND FRONT AXLE	38.2
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	OTH
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.5
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEM3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	69.0
47. POINT NO. 1	17.0
48. POINT NO. 2	17.2
49. POINT NO. 3	17.4
50. POINT NO. 4	17.6
51. POINT NO. 5	17.8
52. POINT NO. 6	18.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	18.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0

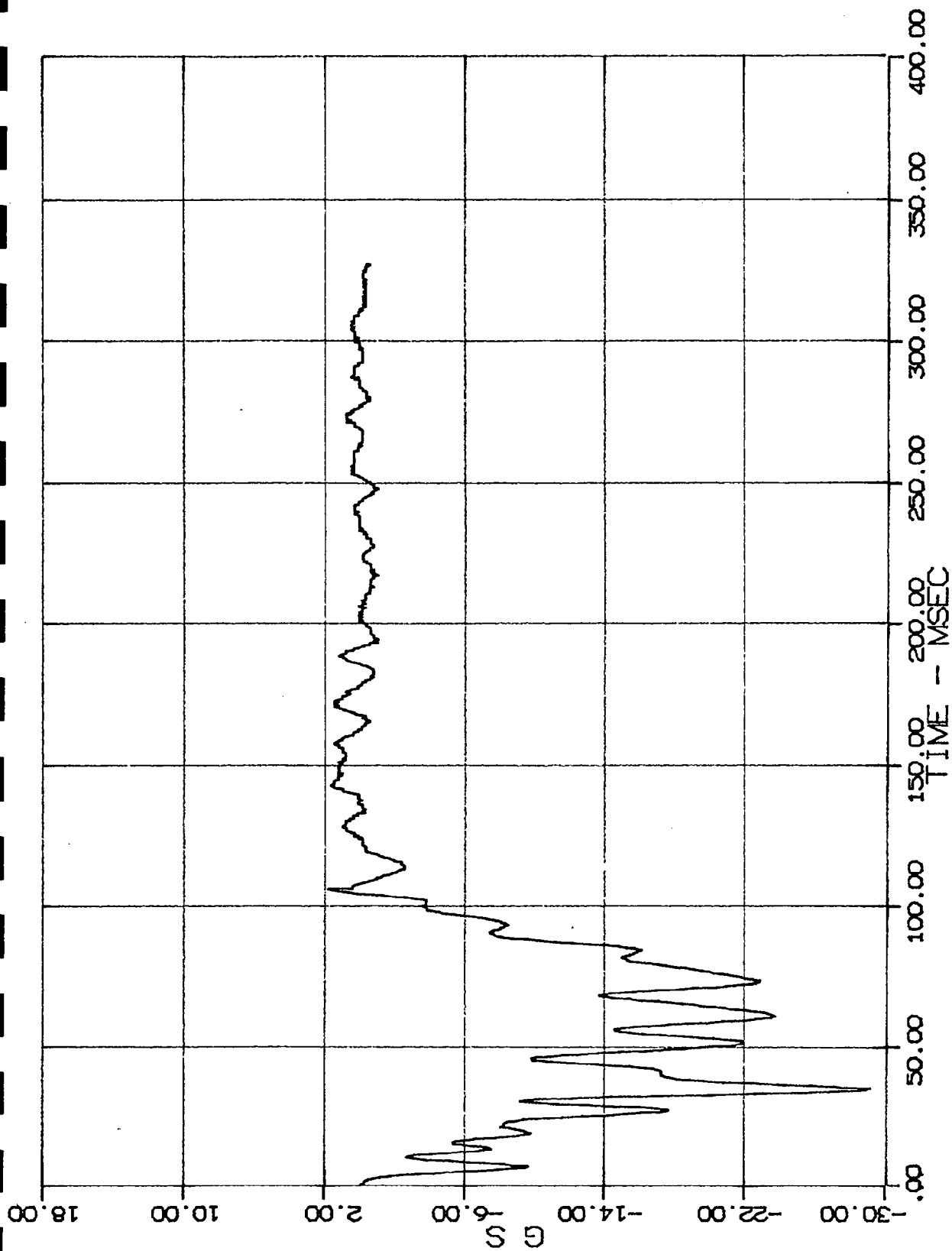
59. WEIGHT OF BARRIER IF MOVING	0
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRT0	0.0
102. NO. OF POINTS	2027
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.5
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRT0	0.0
117. NO. OF POINTS	2492
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.5
123. QUALITY	GOOD.ZERO OFFSET



DIMENSION	LENGTH (in.)
$E = G/2$	13.3 in.
$F = G/2$	11.8 in.
G	34.8 in.
I	88.0 in.
J	104.0 in.

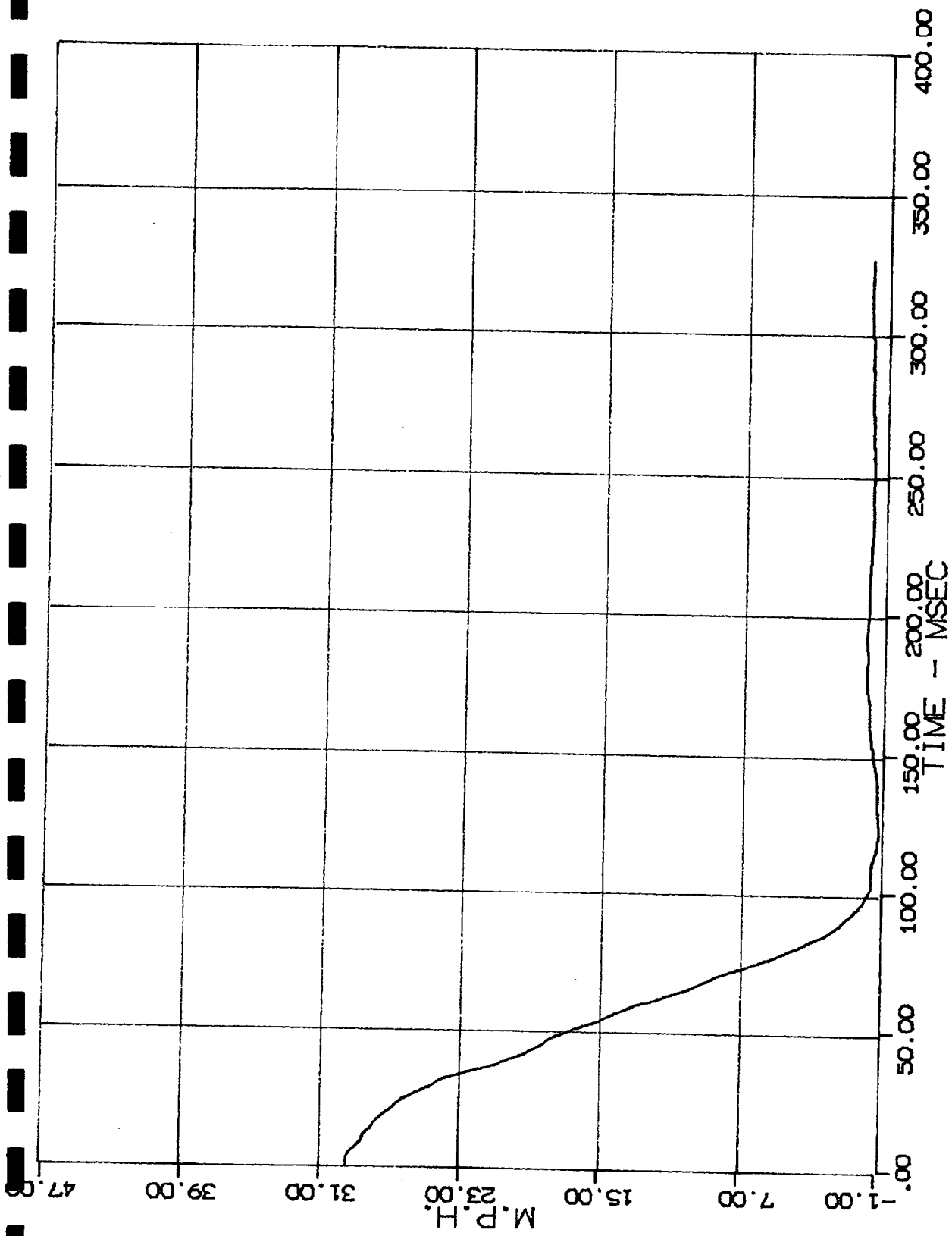
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-					
2	Below Rear Seat Area	●			+	-					

BUICK CENTURY
VEHICLE ACCELEROMETER LOCATIONS



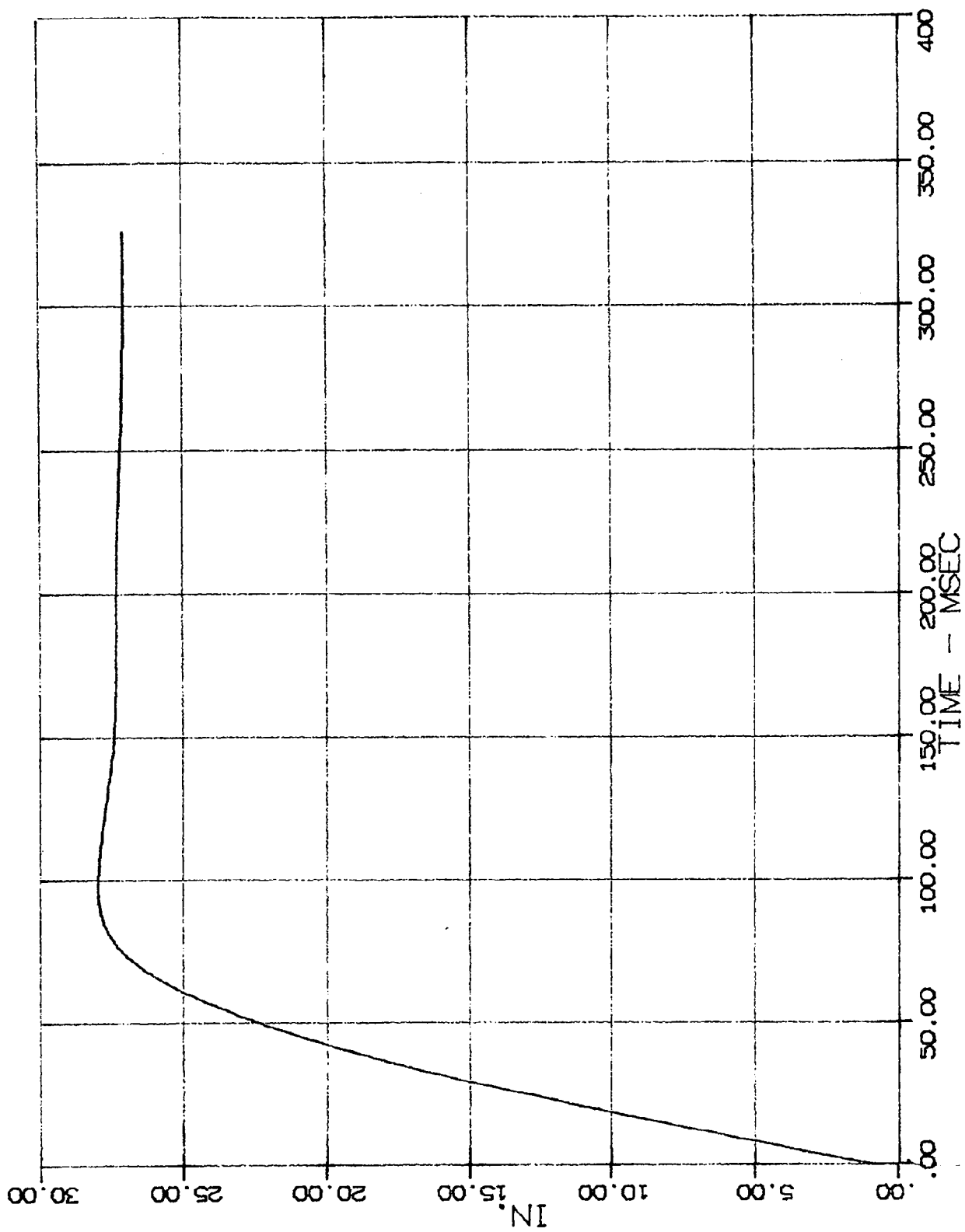
03 AC 01 N RFF X
MSE NO4072 1982 BUICK CENTURY

10/27/82

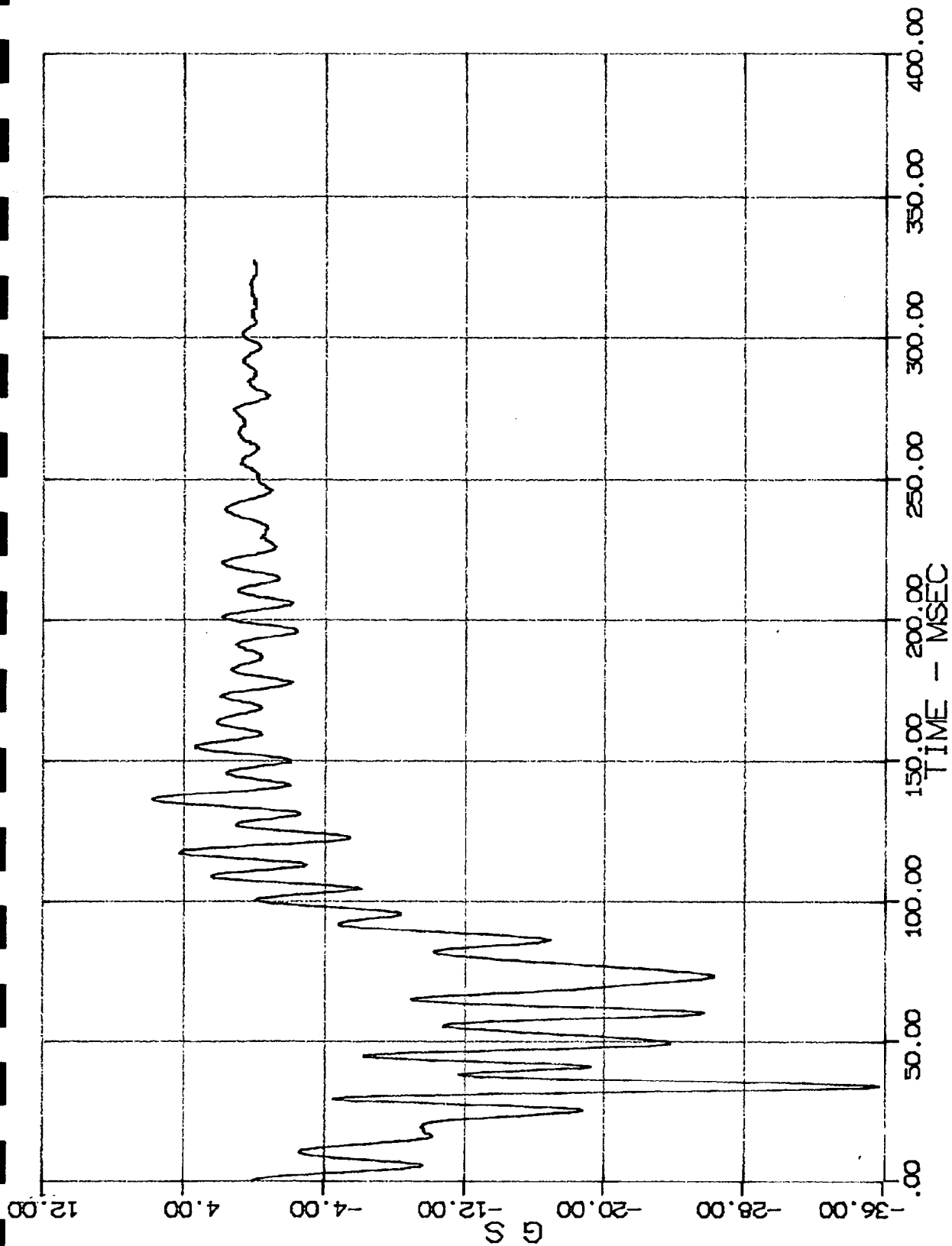


03 AC 01 N RFF X IN1
MSE NO4072 1982 BUICK CENTURY

10/27/82

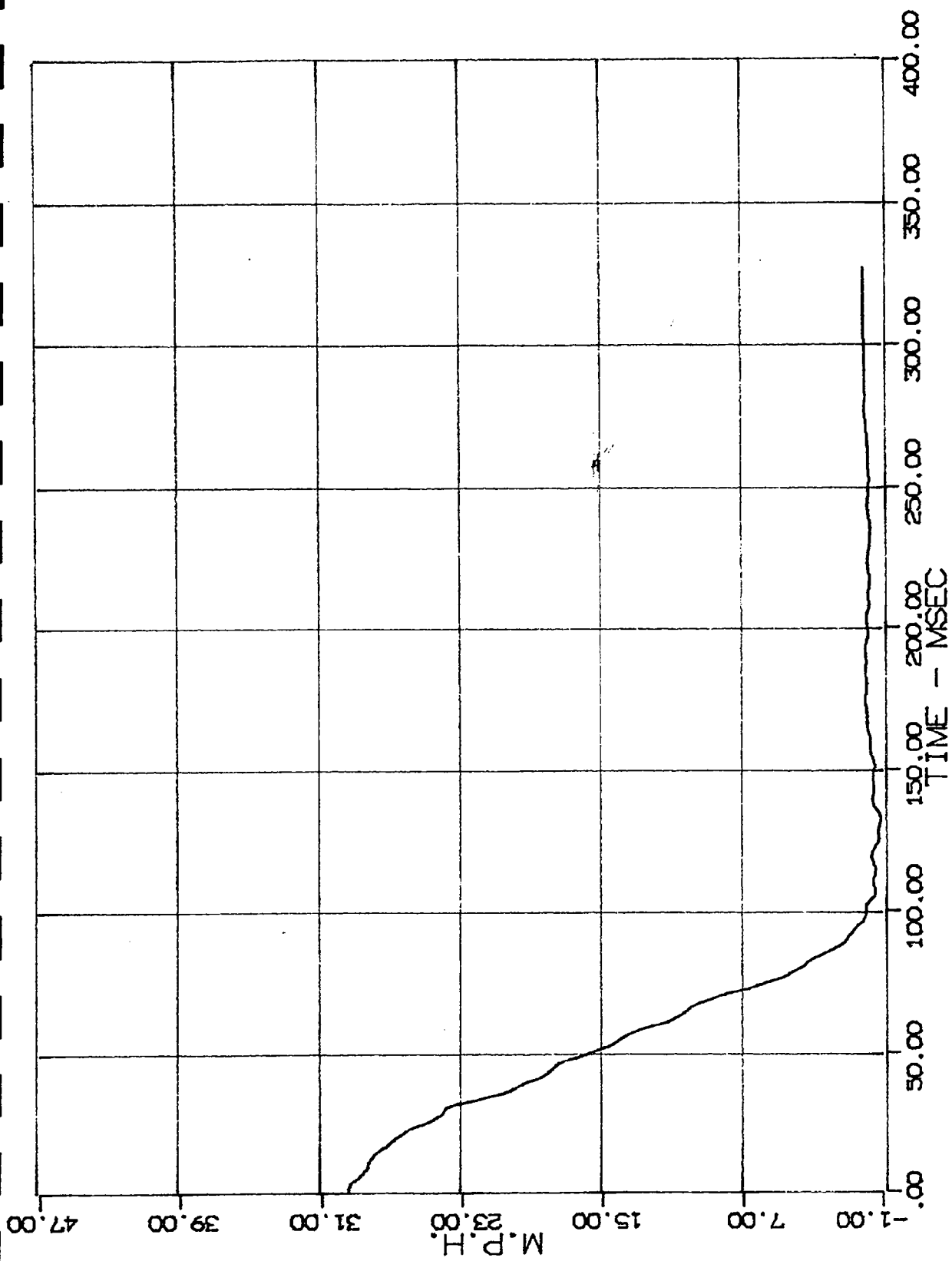


03 AC 01 N RFF X IN2
MSE NO4072 1982 BUICK CENTURY
10/27/82

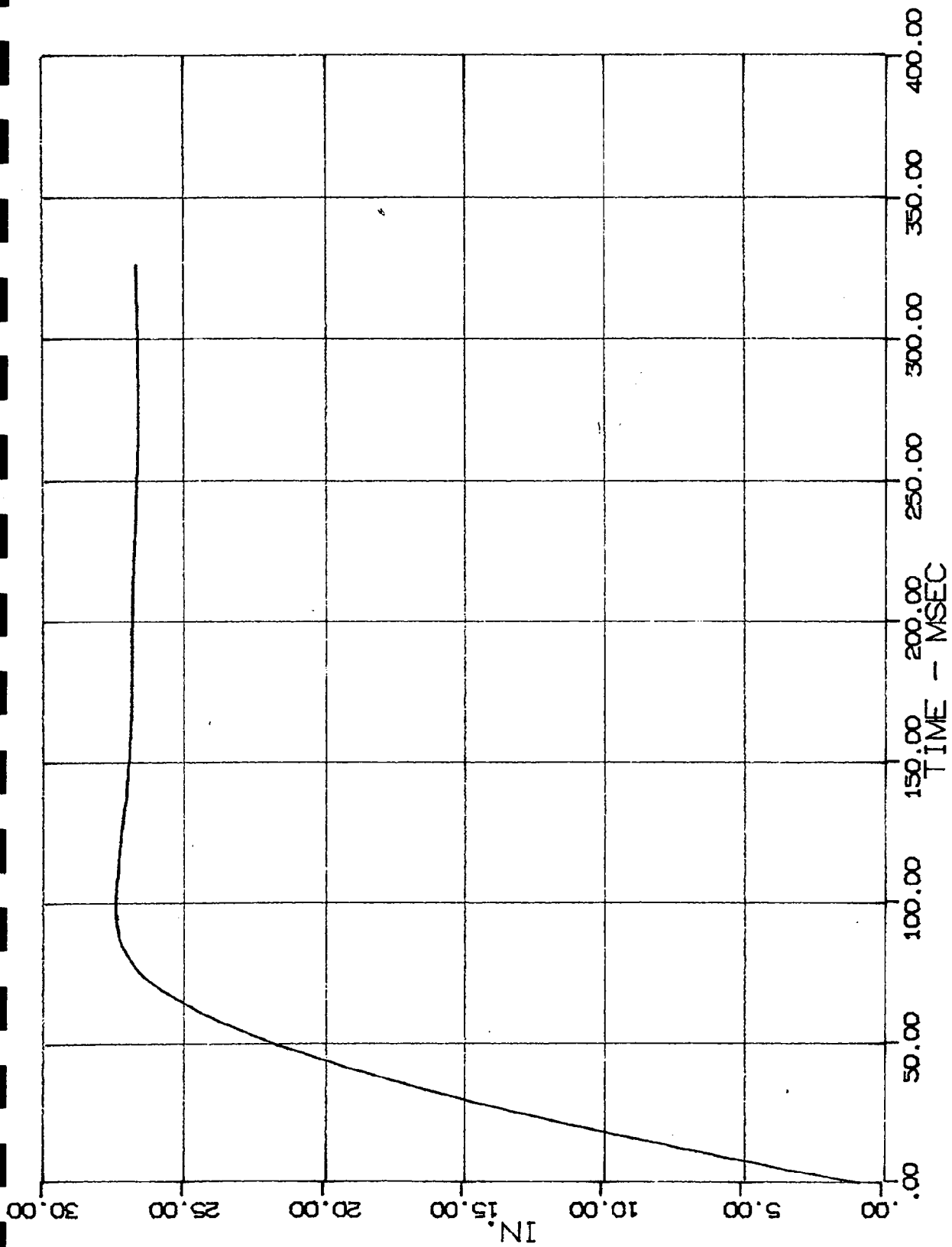


O4 AC 01 N LRF X
MSE NO4072 1982 BUICK CENTURY

10/27/82



04 FC 01 N LRF X IN1
MSE NO4072 1982 BUICK CENTURY
10/27/82



04 PC 01 N LRF X IN2
MSE NO4072 1982 BUICK CENTURY
10/27/82

2.8 TEST DATA FOR PLYMOUTH RELIANT K

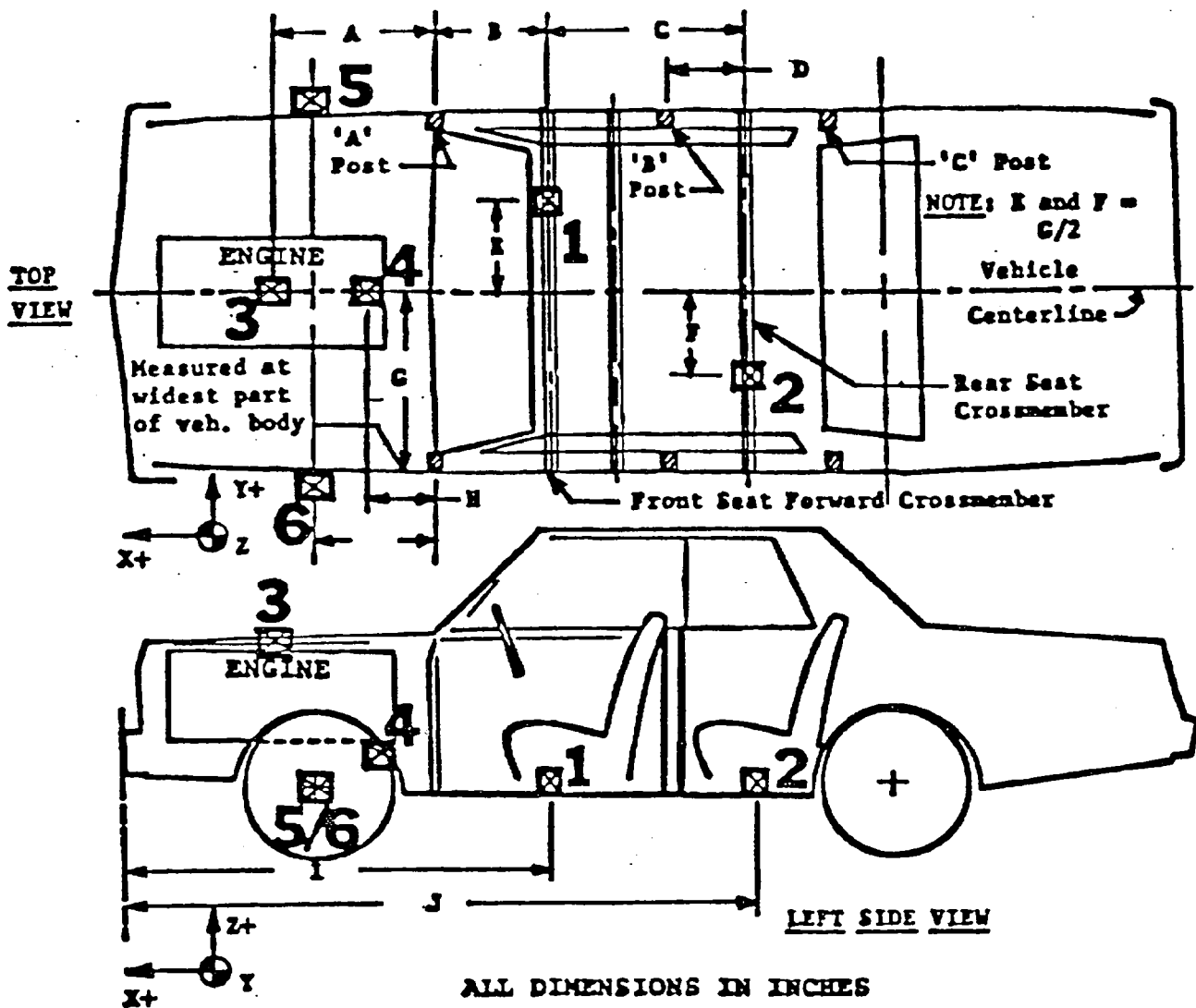
NHTSA No.	-	820312
Test Reference No.	-	N05082
Test Date	-	10/29/82

PLYMOUTH RELIANT K

VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	10/29/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D001105
5. TEST REFERENCE NO.	TEST 08
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.5
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	76
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	5
23. VEHICLE MODEL	18
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-TVF
26. ENGINE DISPLACEMENT	2.2 LITER
27. TRANSMISSION TYPE	AF
28. BODY TYPE	2S
29. TEST WEIGHT	2380
30. WHEELBASE (IN.)	100.1
31. VEHICLE LENGTH (IN.)	174.5
32. VEHICLE WIDTH (IN.)	67.0
33. C.G. DIST. BEHIND FRONT AXLE	37.0
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	OTH
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.5
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	67.0
47. POINT NO. 1	18.0
48. POINT NO. 2	17.8
49. POINT NO. 3	17.6
50. POINT NO. 4	17.4
51. POINT NO. 5	17.2
52. POINT NO. 6	17.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	18.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0

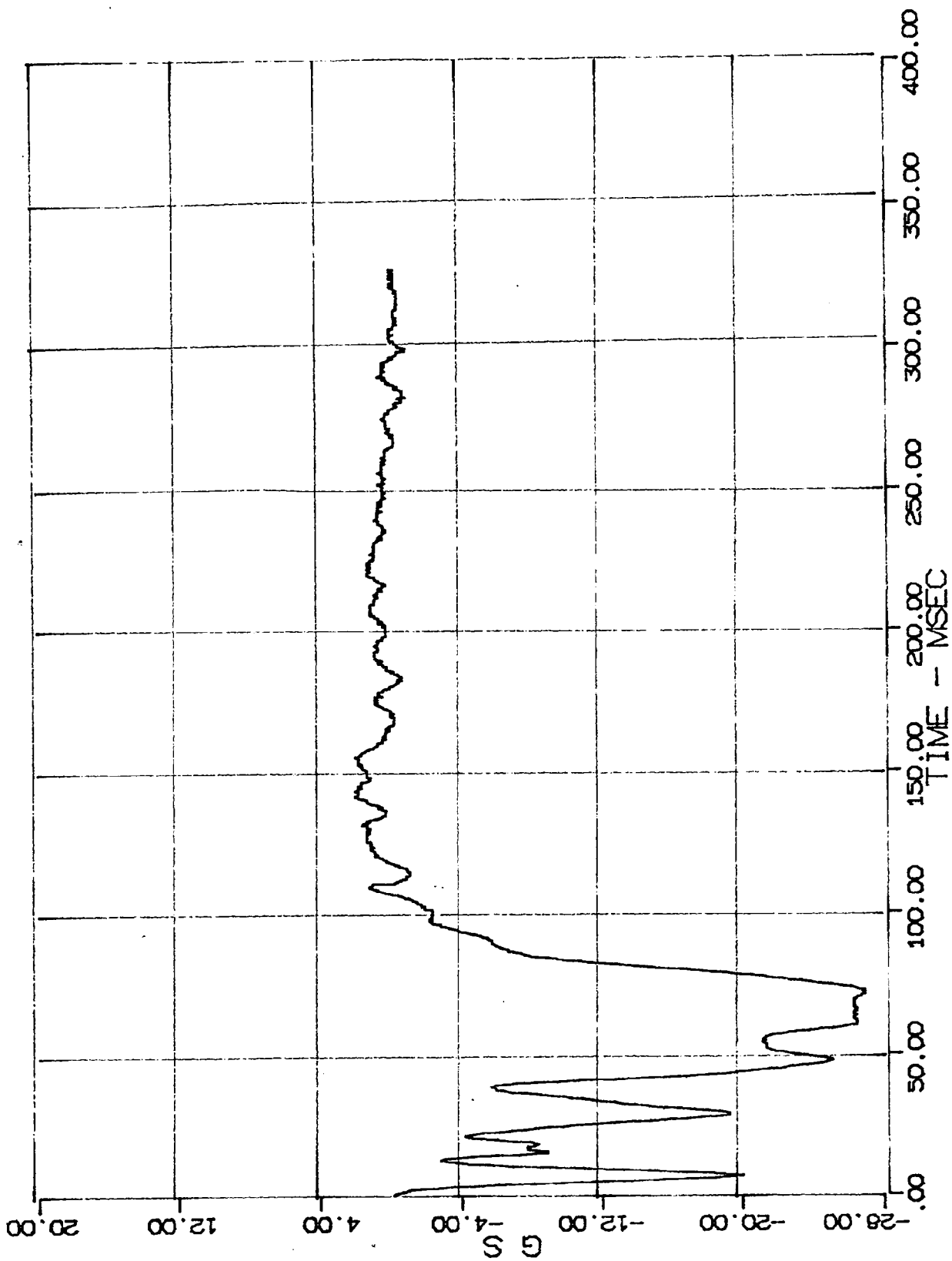
59. WEIGHT OF BARRIER IF MOVING	0
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.5
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.5
123. QUALITY	GOOD.ZERO OFFSET



DIMENSION	LENGTH (in.)
$E = G/2$	20.5 in.
$F = G/2$	19.0 in.
G	33.5 in.
I	82.0 in.
J	99.0 in.

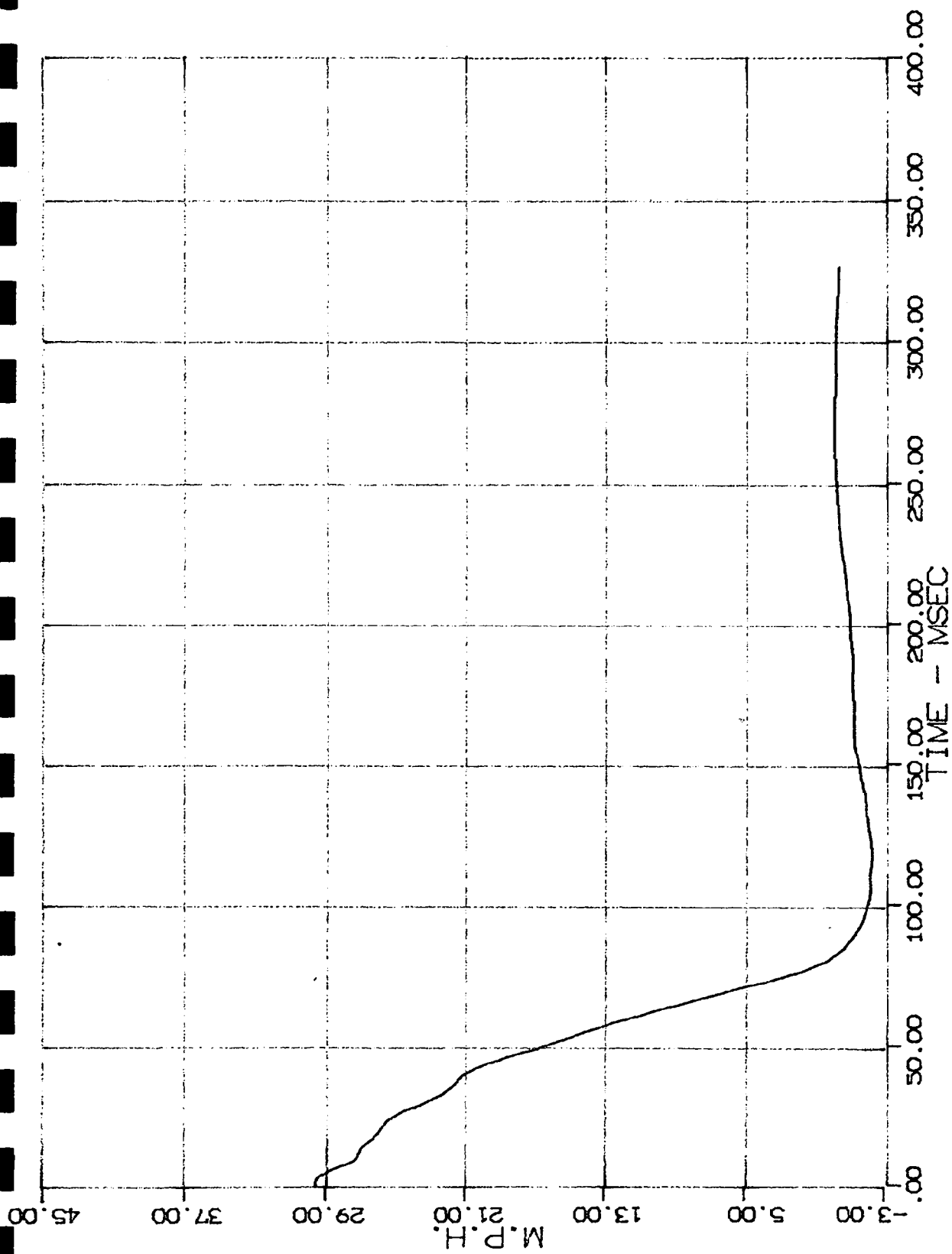
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-					
2	Below Rear Seat Area	●			+	-					

PLYMOUTH RELIANT K
VEHICLE ACCELEROMETER LOCATIONS



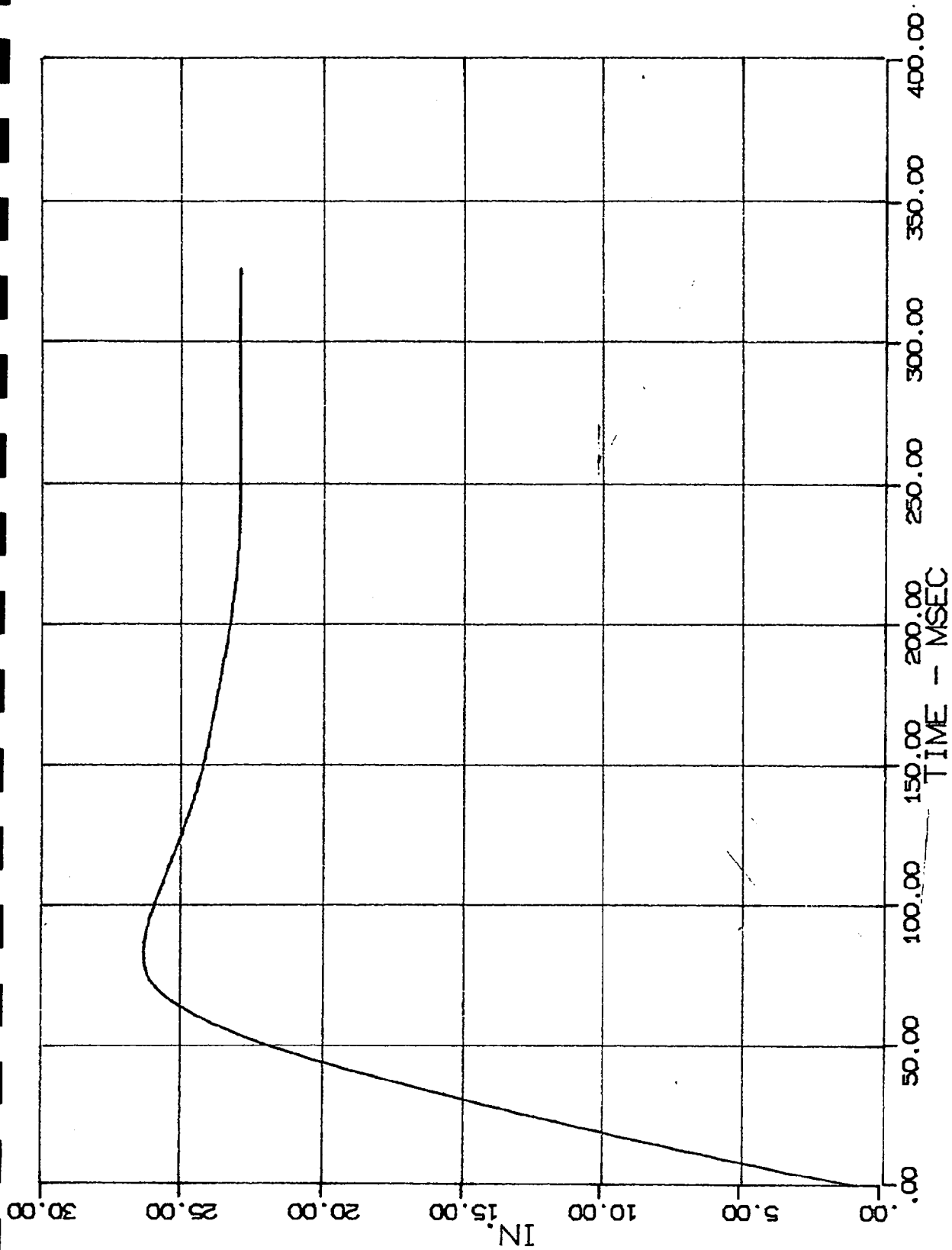
03 AC N RFF X
MSE ND5082 1982 PLYMOUTH RELIANT

10/29/82

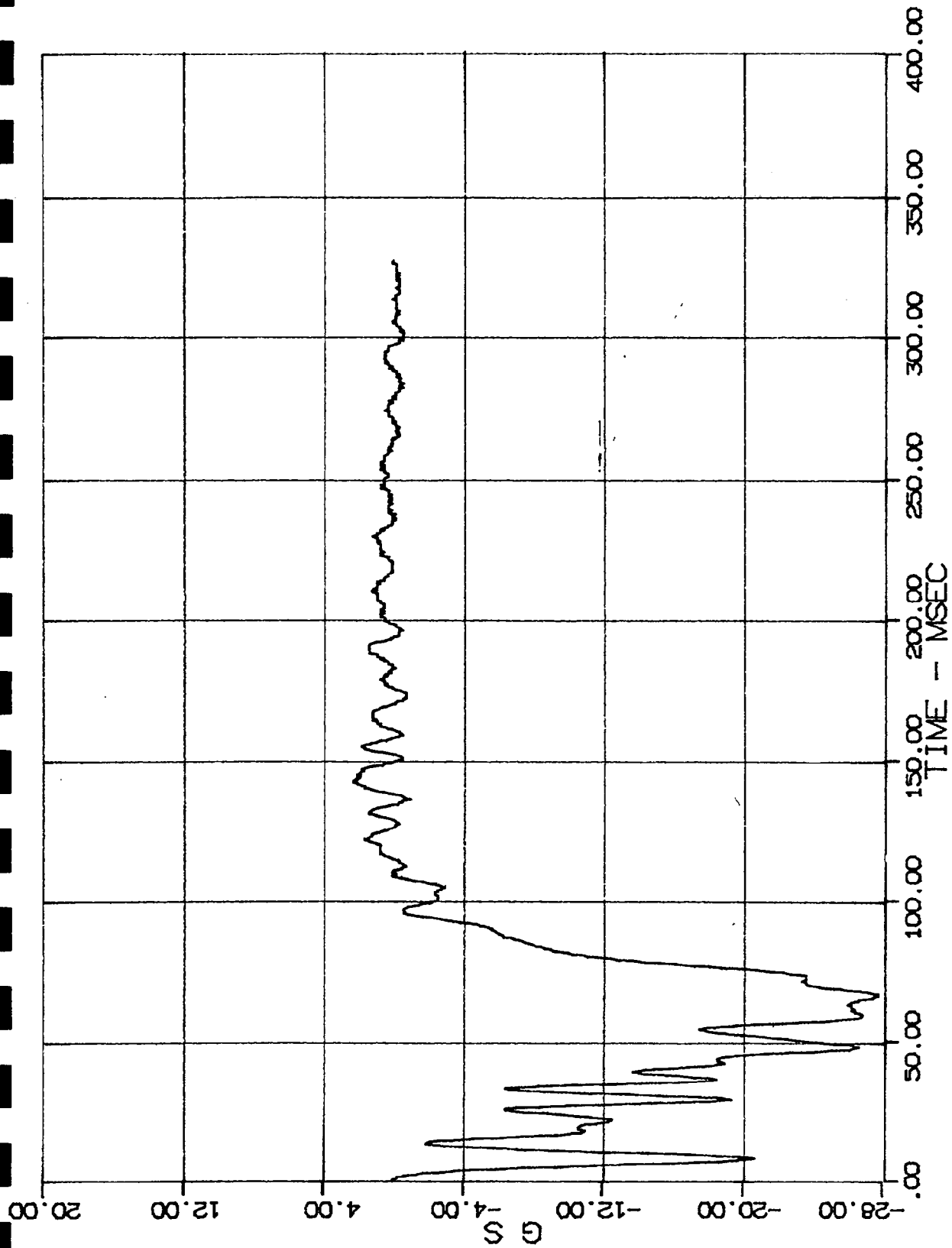


03 AC N RFF X IN1
MSE NO5082 1982 PLYMOUTH RELIANT

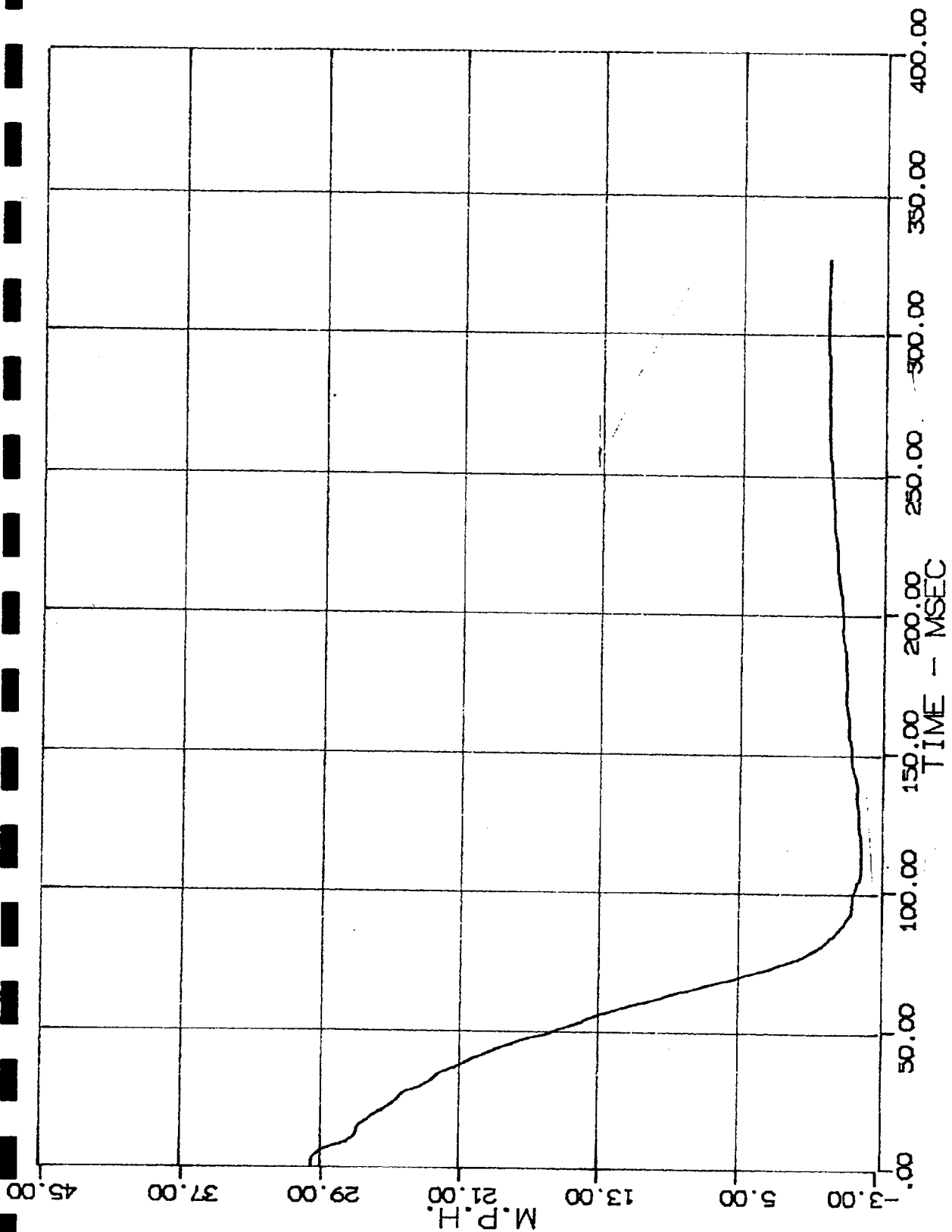
10/29/82



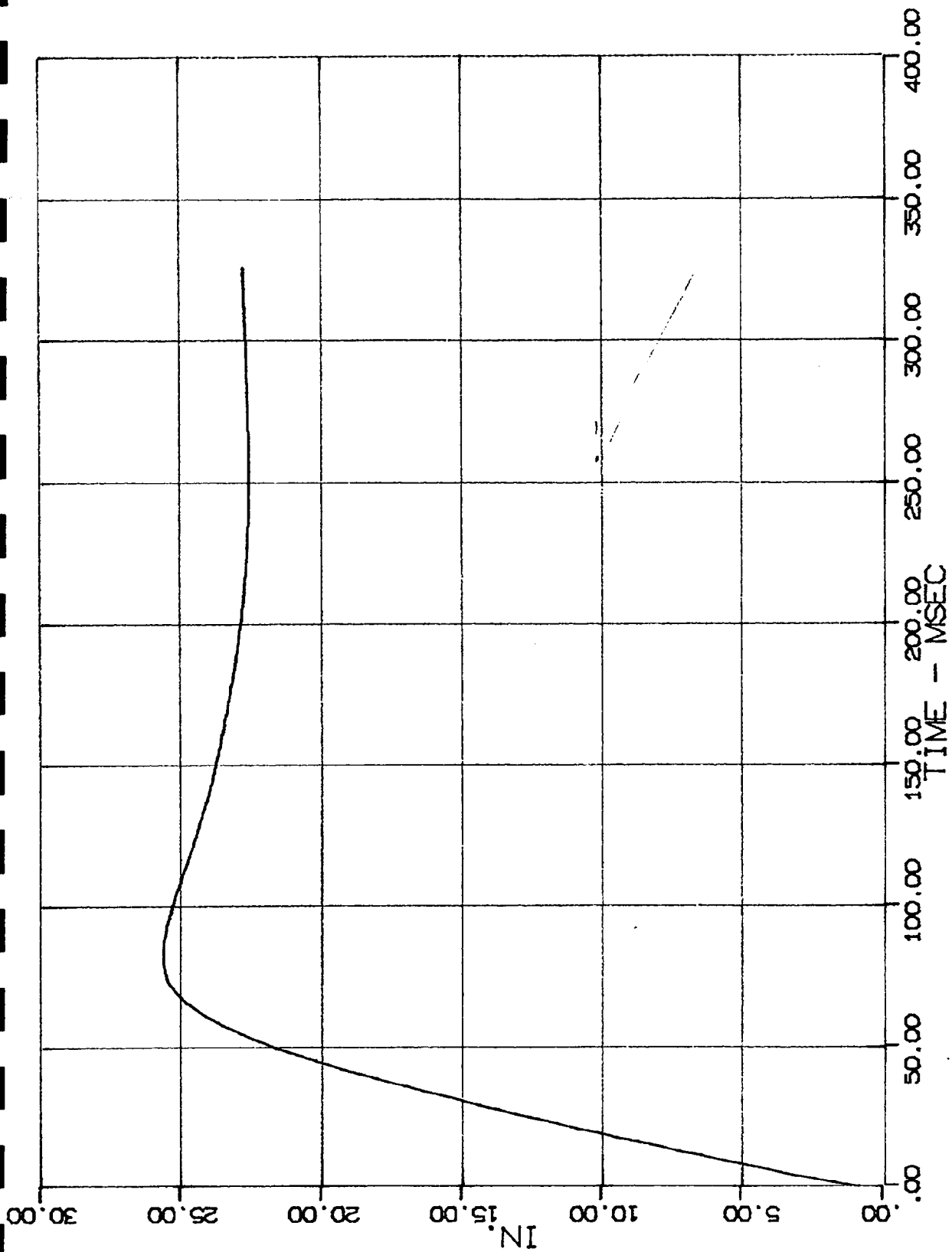
03 AC N RFF X IN2
MSE NO5082 1982 PLYMOUTH RELIANT 10/29/82



04 PC N LRF X
MSE NO5082 1982 PLYMOUTH RELIANT
10/29/82



04 AC N LRF X IN1
MSE NO5082 1982 PLYMOUTH RELIANT
10/29/82



04 AC N LRF X IN2
MSE NO5082 1982 PLYMOUTH RELIANT
10/29/82

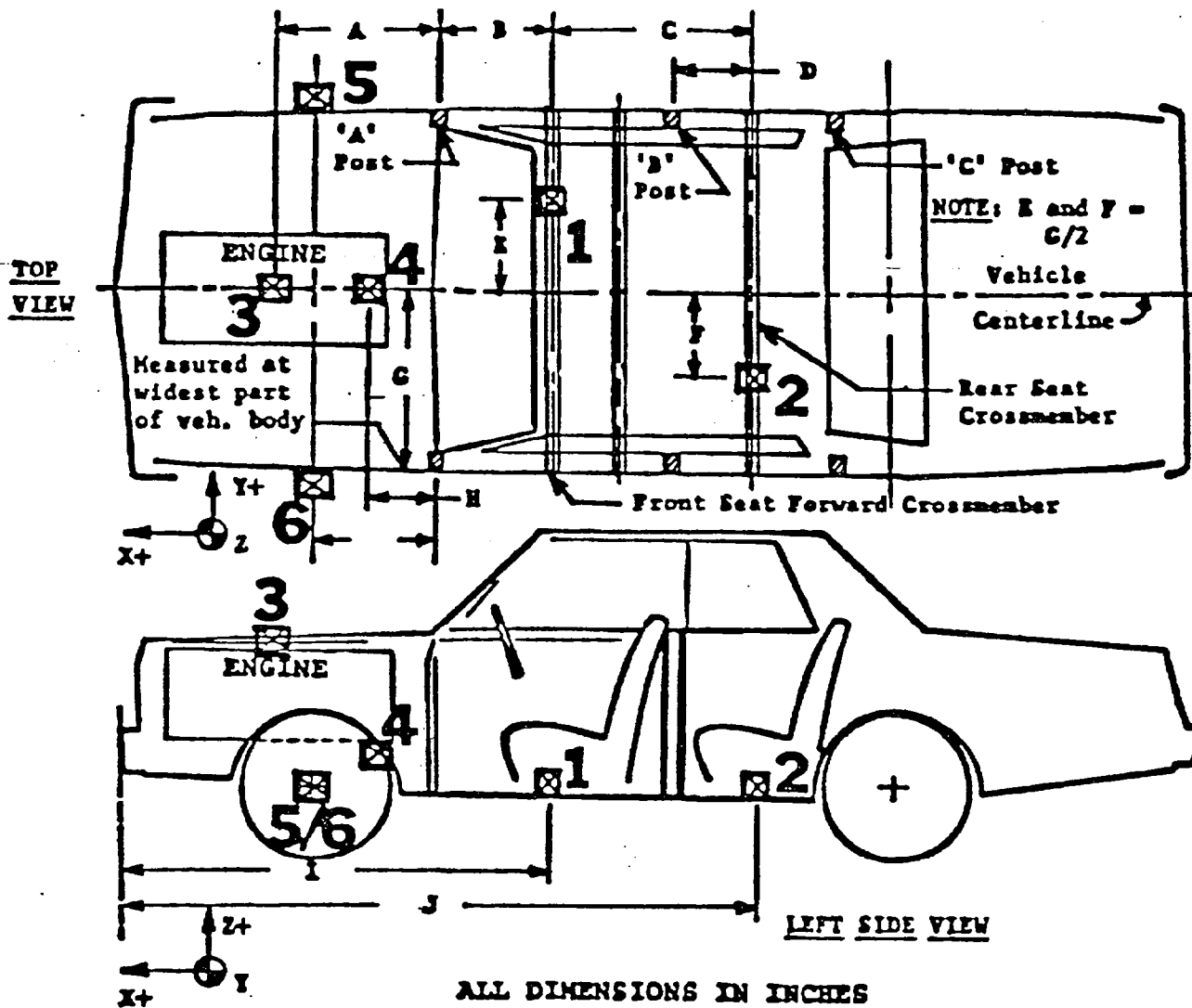
2.9 TEST DATA FOR TOYOTA COROLLA

NHTSA No.	-	820545
Test Reference No.	-	N16092
Test Date	-	11/03/82

TOYOTA COROLLA
VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	11/03/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 09
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.4
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	76
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	16
23. VEHICLE MODEL	2
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-11F
26. ENGINE DISPLACEMENT	1770 CC
27. TRANSMISSION TYPE	AR
28. BODY TYPE	4D
29. TEST WEIGHT	2232
30. WHEELBASE (IN.)	94.5
31. VEHICLE LENGTH (IN.)	166.3
32. VEHICLE WIDTH (IN.)	63.4
33. C.G. DIST. BEHIND FRONT AXLE	42.8
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.4
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	63.4
47. POINT NO. 1	18.0
48. POINT NO. 2	17.8
49. POINT NO. 3	17.6
50. POINT NO. 4	17.4
51. POINT NO. 5	17.2
52. POINT NO. 6	17.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	18.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

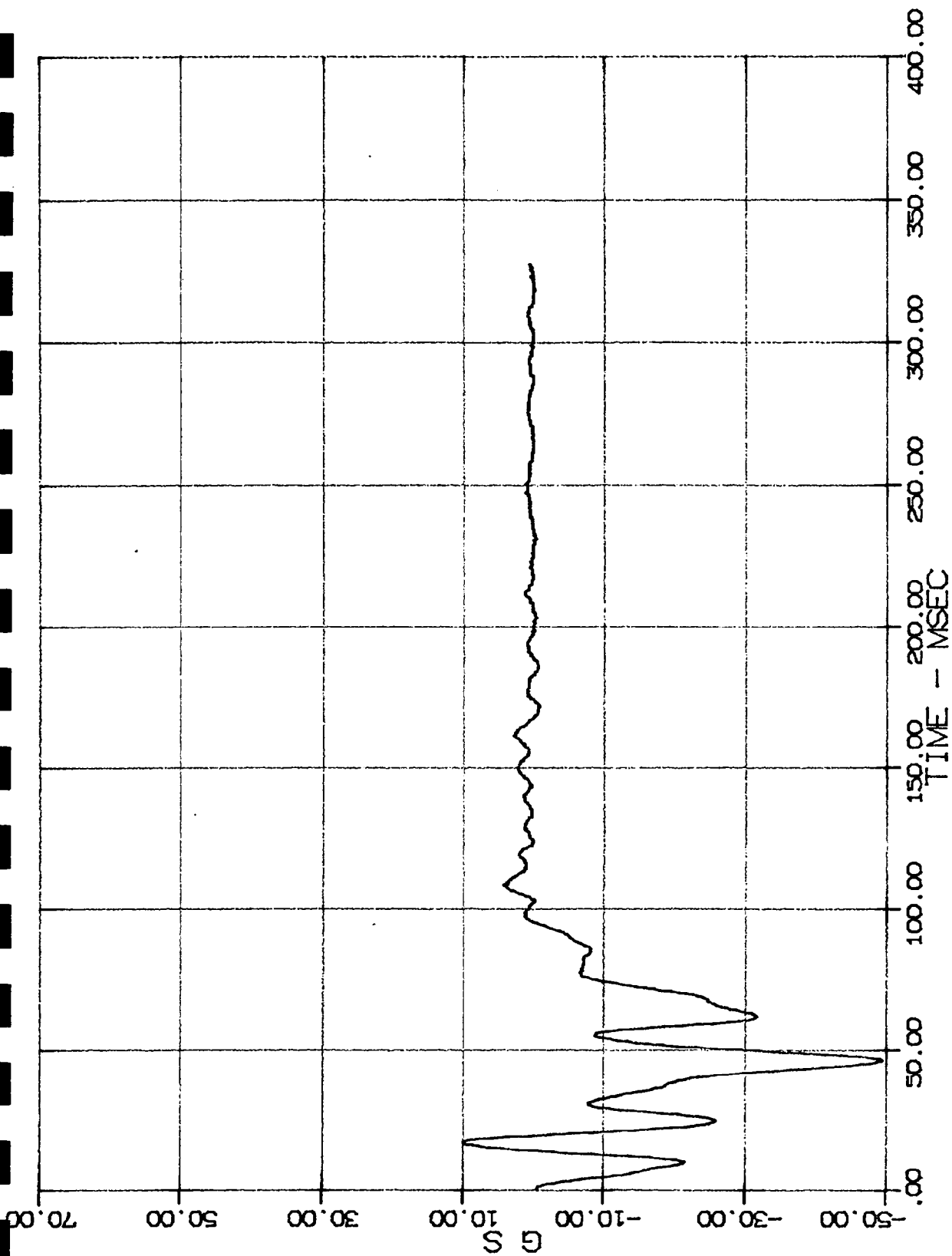
60. RIGID OR YIELDING BARRIER..	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
00. PREFIL	100
101. DMPRT0	0.0
02. NO. OF POINTS	2860
03. TOPT	360
104. DELTA T	200
105. UNITS	G's
06. AXIS	X
107. INITIAL VELOCITY	29.4
108. QUALITY	GOOD ,ZERO OFFSET
09. CHANNEL NUMBER	2
10. SENSOR TYPE	AC
111. SENSOR LOCATION	01
12. OCCUPANT	N
13. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
16. DMPRT0	0.0
117. NO. OF POINTS	2860
118. TOPT	360
19. DELTA T	200
20. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.4
23. QUALITY	GOOD,ZERO OFFSET



DIMENSION	LENGTH (in.)
E = G/2	16.8 in.
F = G/2	19.6 in.
G	31.7 in.
I	75.0 in.
J	111.0 in.

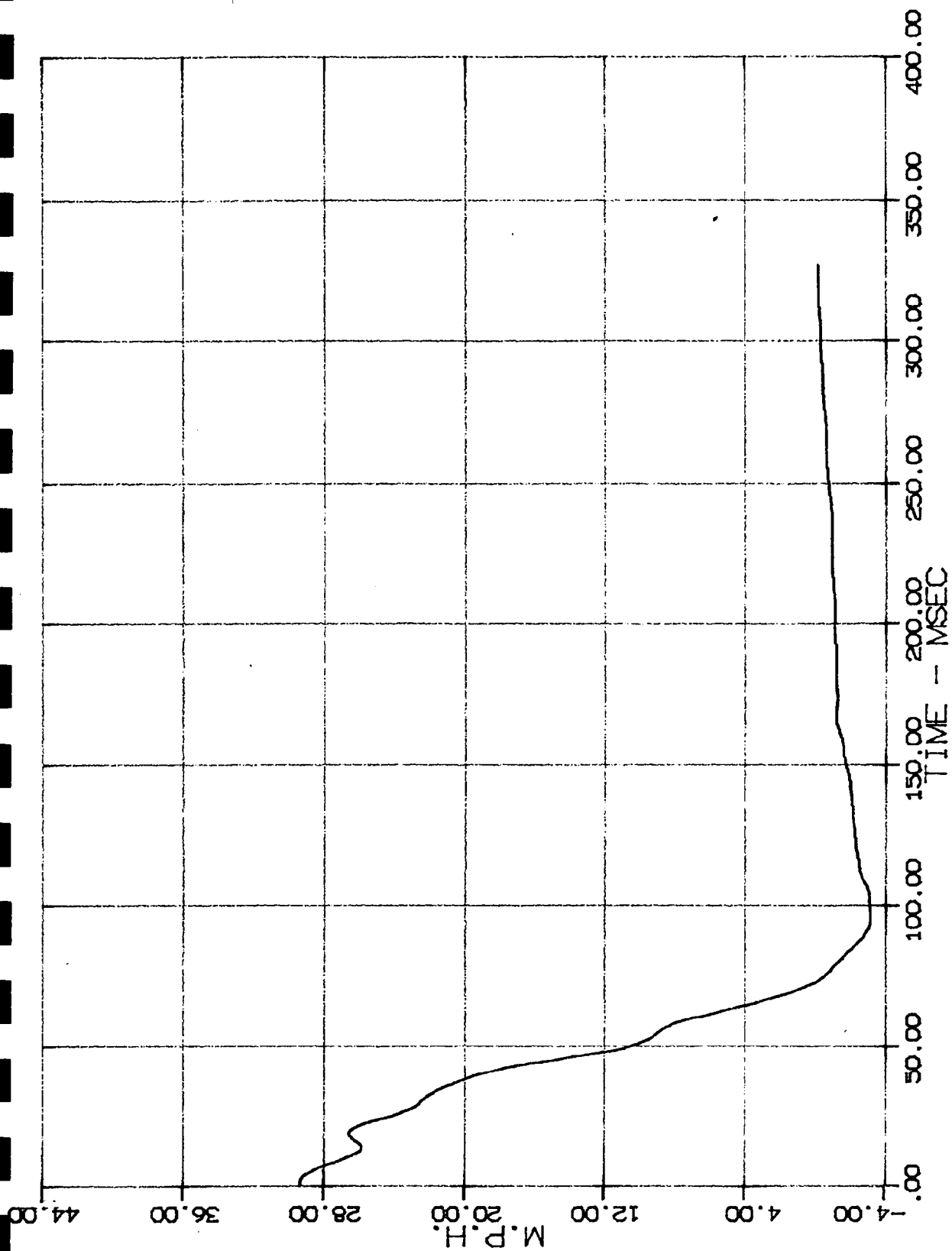
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-					
2	Below Rear Seat Area	●			+	-					

TOYOTA COROLLA
VEHICLE ACCELEROMETER LOCATIONS

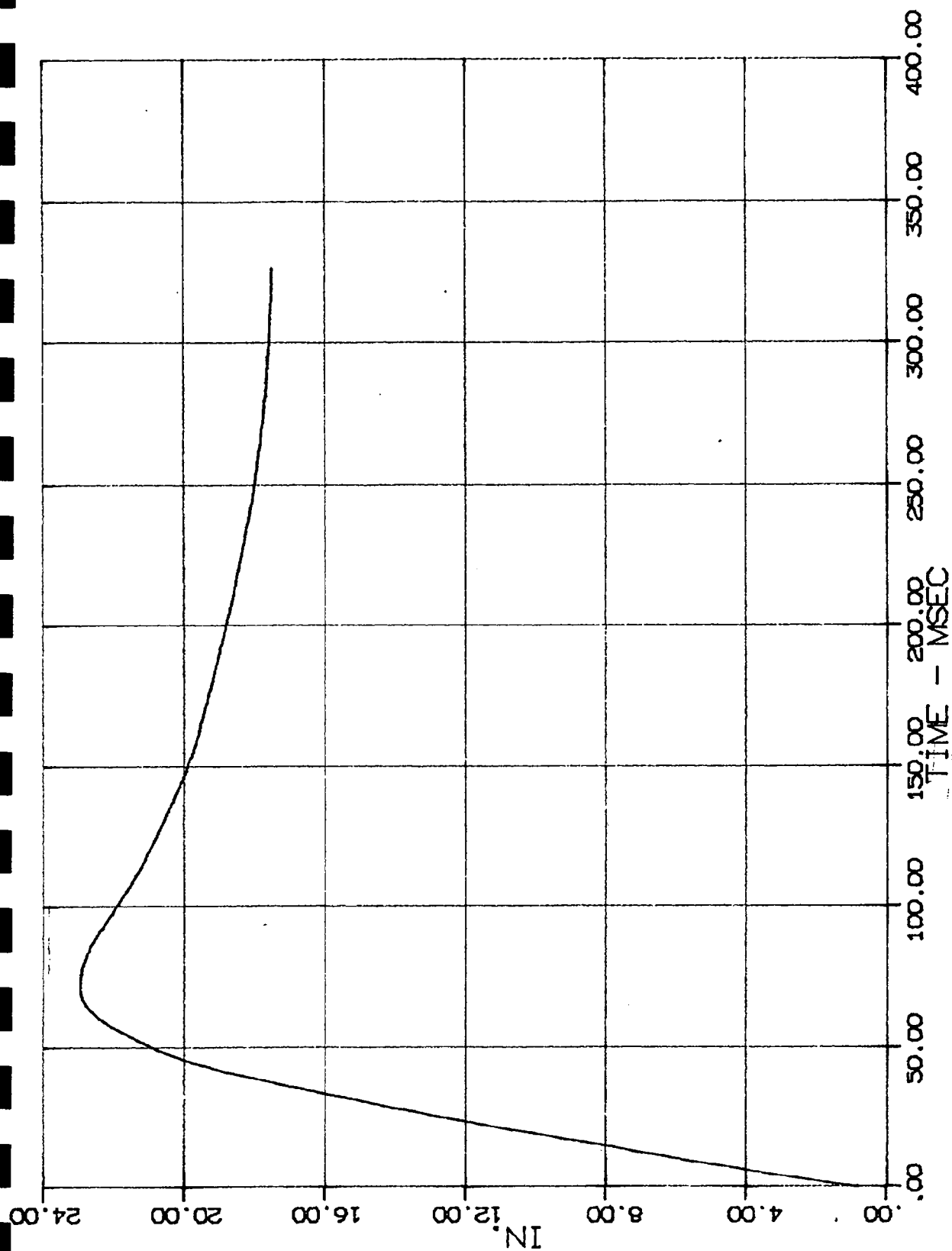


03 AC 01 N RFF X
MSE N16092 1982 TOYOTA COROLLA

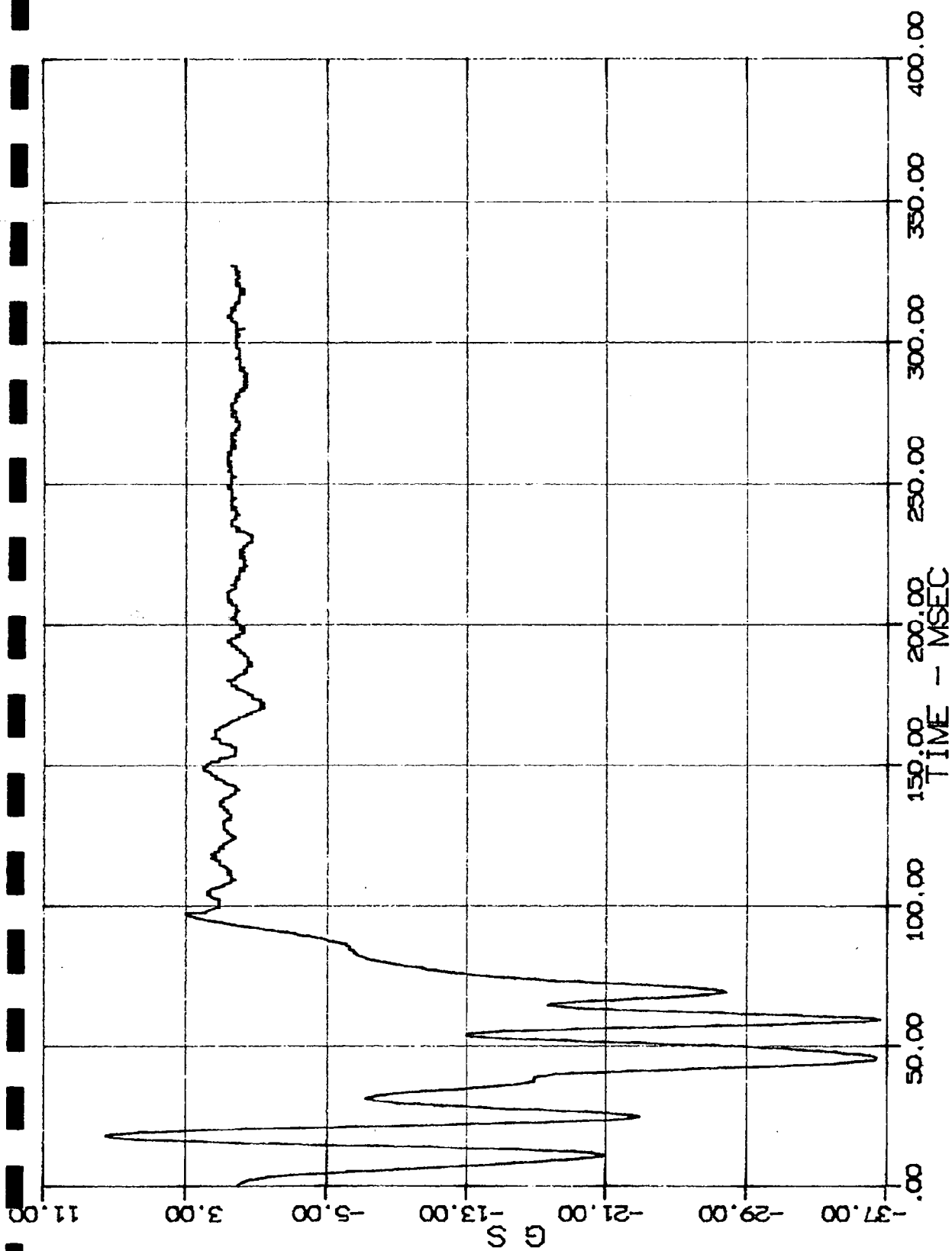
11/03/82



Q3 AC 01 N RFF X IN1
MSE N16092 1982 TOYOTA COROLLA
11/03/82



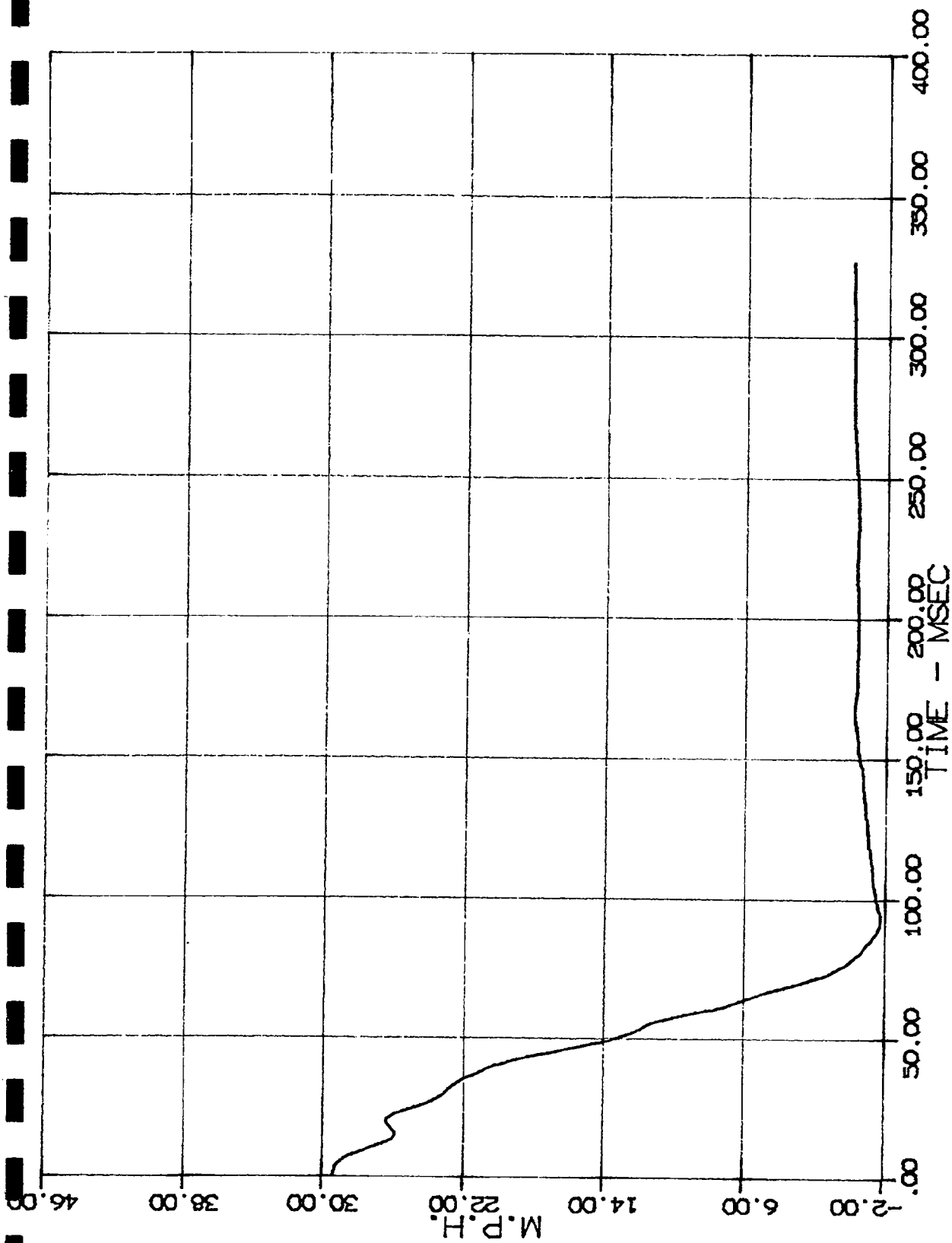
03 AC 01 N RFF X IN2
MSE N16092 1982 TOYOTA COROLLA
11/03/82



96

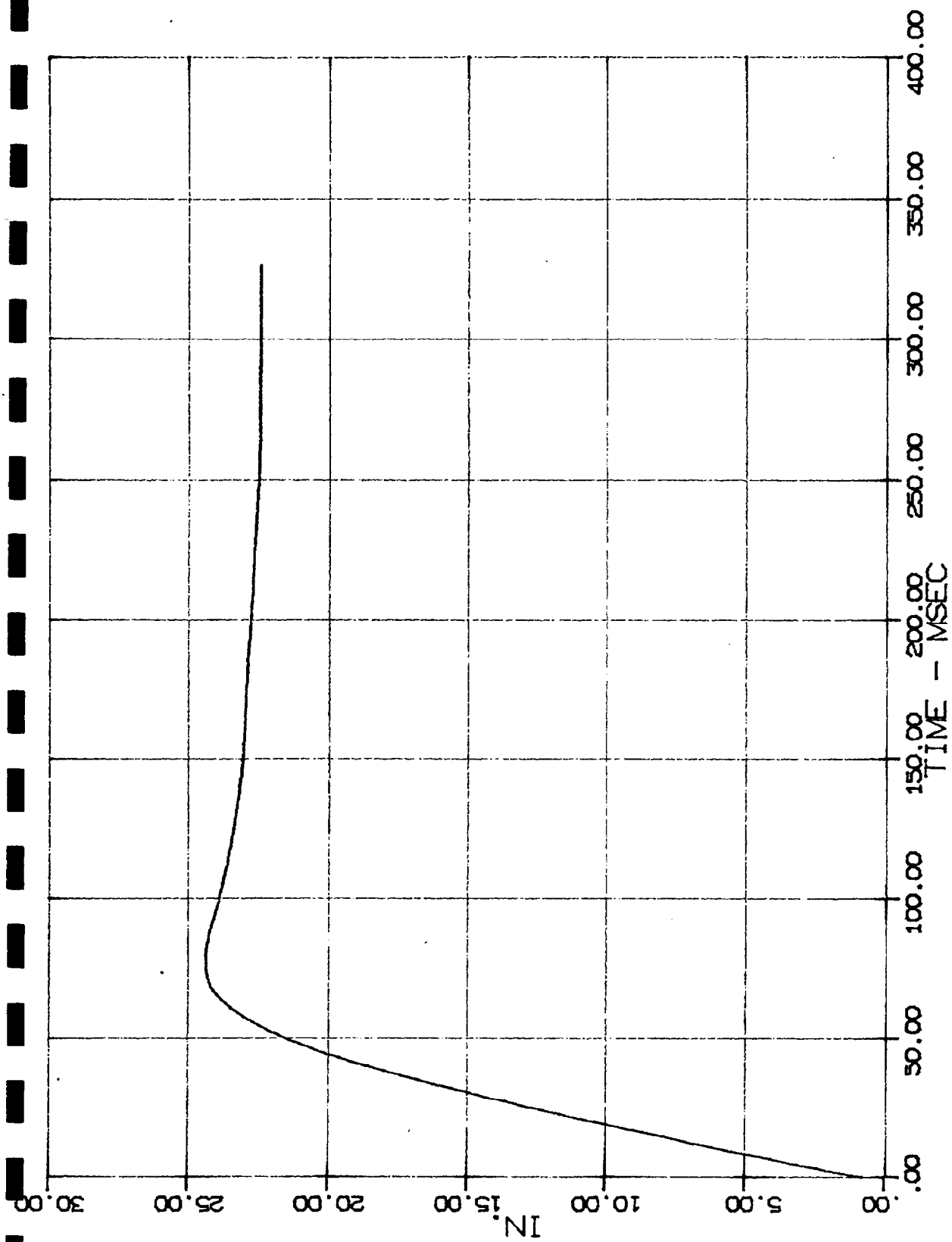
04 AC 01 N LRF X
MSE N16092 1982 TOYOTA COROLLA

11/03/82



04 FC 01 N LRF X IN1
MSE N16092 1982 TOYOTA COROLLA

11/03/82



04 PC 01 N LRF X IN2
NSE N16092 1982 TOYOTA COROLLA
11/03/82

2.10 TEST DATA FOR FORD ESCORT

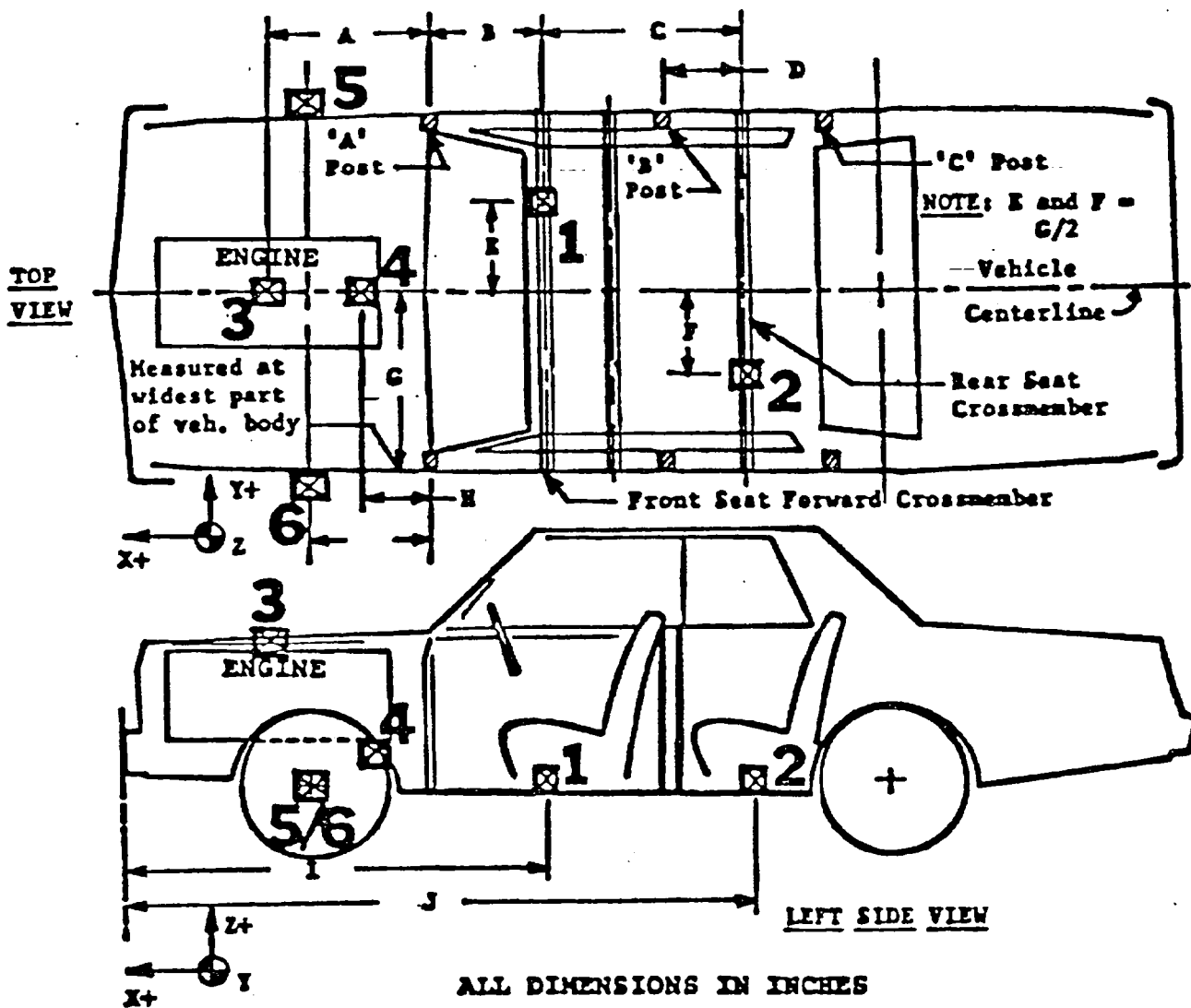
NHTSA No.	-	820214
Test Reference No.	-	N02102
Test Date	-	11/05/82

FORD ESCORT

VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	11/05/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 10
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	VSB
10. CLOSING SPEED	29.2
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	82
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	2
23. VEHICLE MODEL	27
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-TVF
26. ENGINE DISPLACEMENT	1.6 LITER
27. TRANSMISSION TYPE	MF
28. BODY TYPE	3D
29. TEST WEIGHT	2034
30. WHEELBASE (IN.)	94.0
31. VEHICLE LENGTH (IN.)	163.5
32. VEHICLE WIDTH (IN.)	63.5
33. C.G. DIST. BEHIND FRONT AXLE	35.9
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	OTH
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.2
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	63.5
47. POINT NO. 1	15.0
48. POINT NO. 2	15.0
49. POINT NO. 3	15.0
50. POINT NO. 4	15.0
51. POINT NO. 5	15.0
52. POINT NO. 6	15.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	15.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

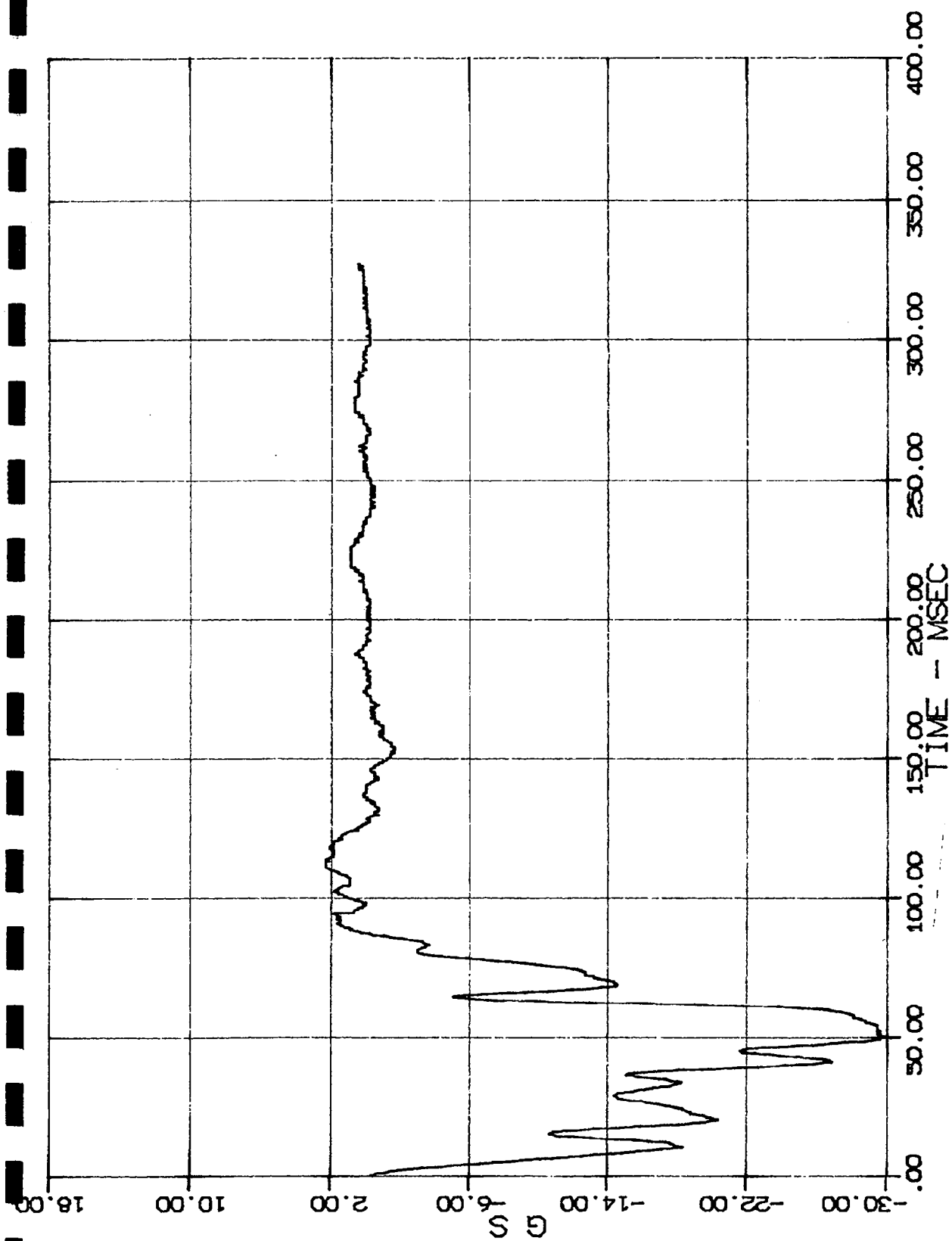
59. WEIGHT OF BARRIER IF MOVING	0
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRT0	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.2
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRT0	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.2
123. QUALITY	GOOD,ZERO OFFSET



DIMENSION	LENGTH (in.)
E - G/2	20.0 in.
F - G/2	16.25 in.
G	31.75 in.
I	70.0 in.
J	89.0 in.

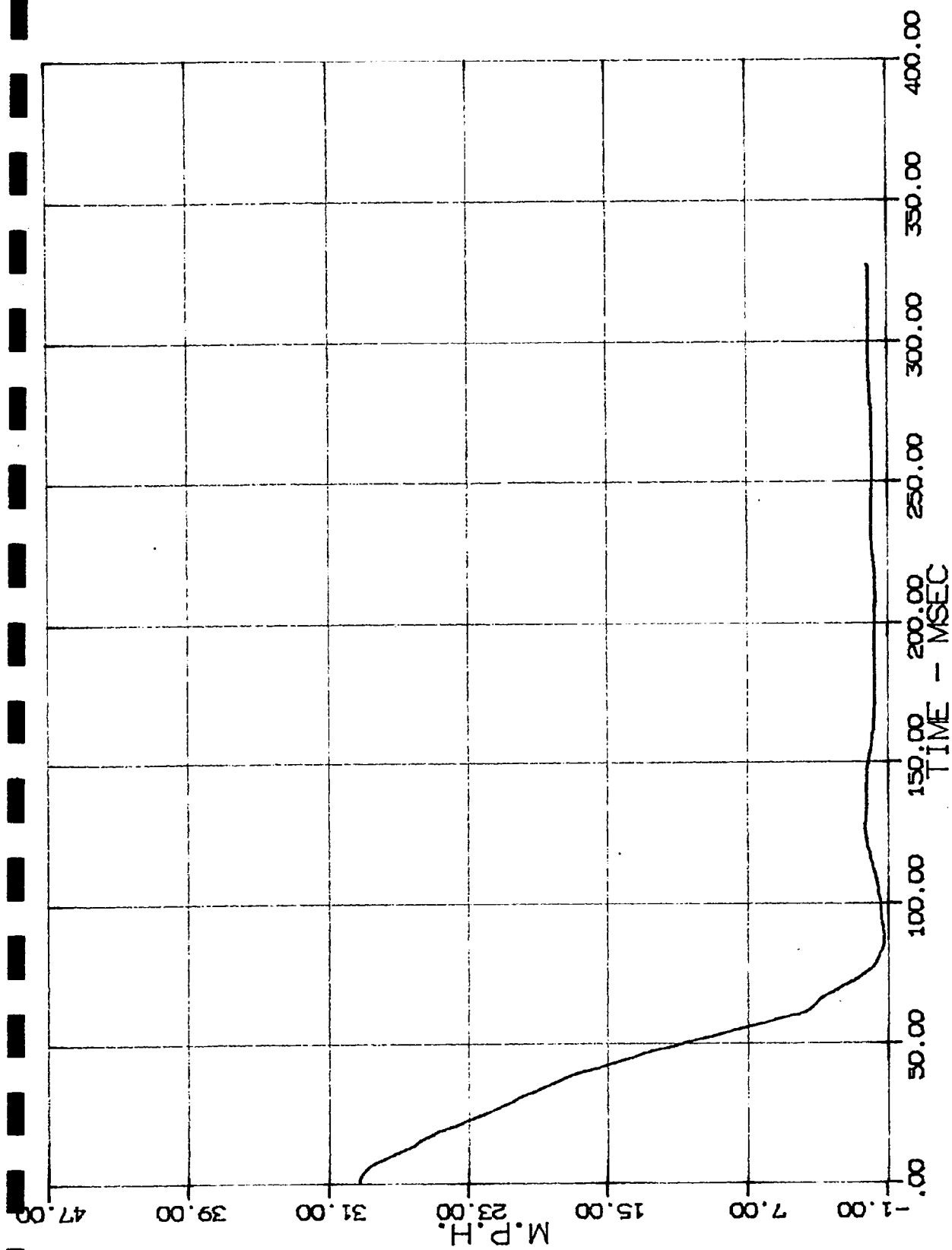
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	⊗			+	-					
2	Below Rear Seat Area	⊗			+	-					

FORD ESCORT
VEHICLE ACCELEROMETER LOCATIONS



03 AC 01 N RFF X
MSE ND2102 1982 FORD ESCORT

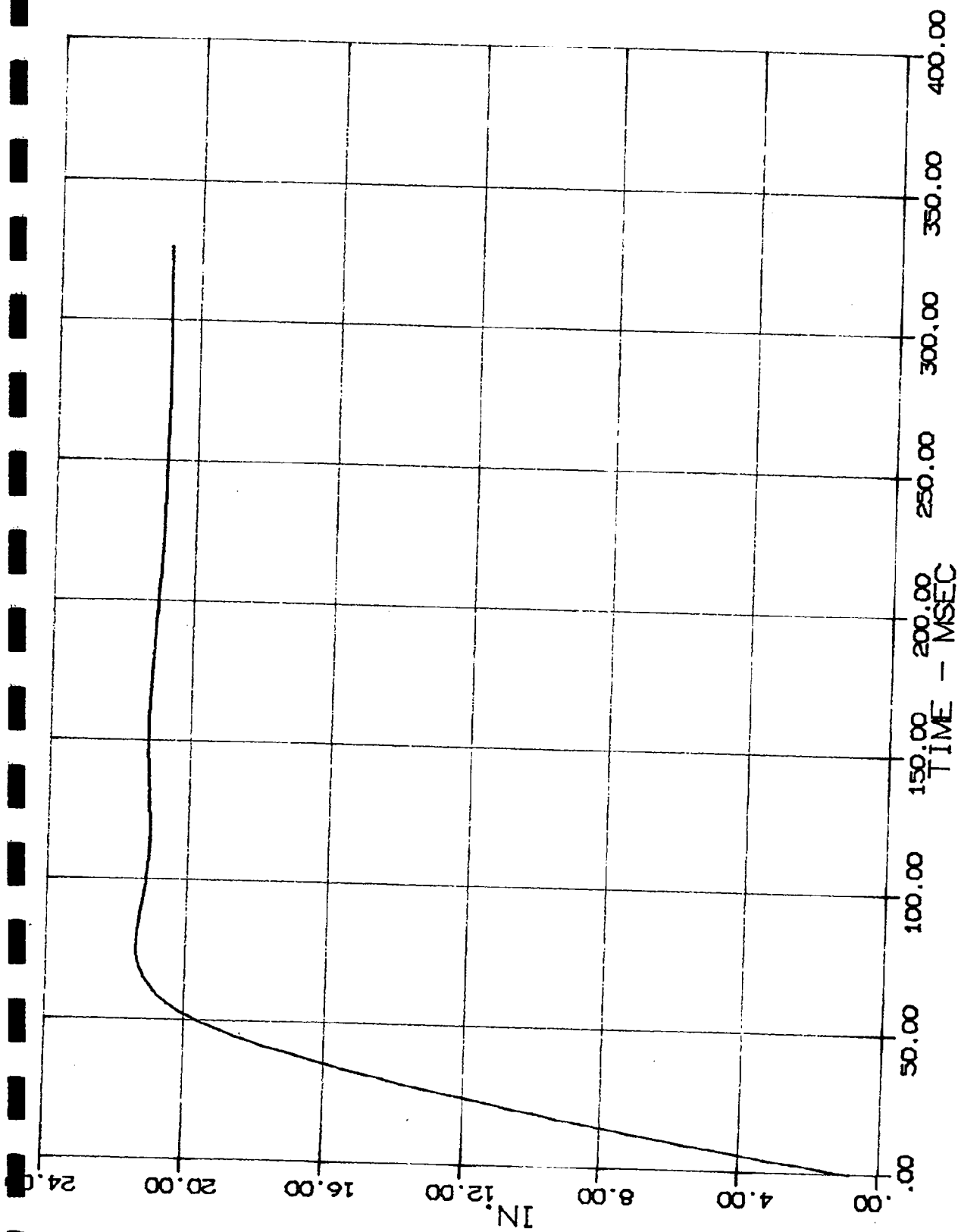
11/05/82



86

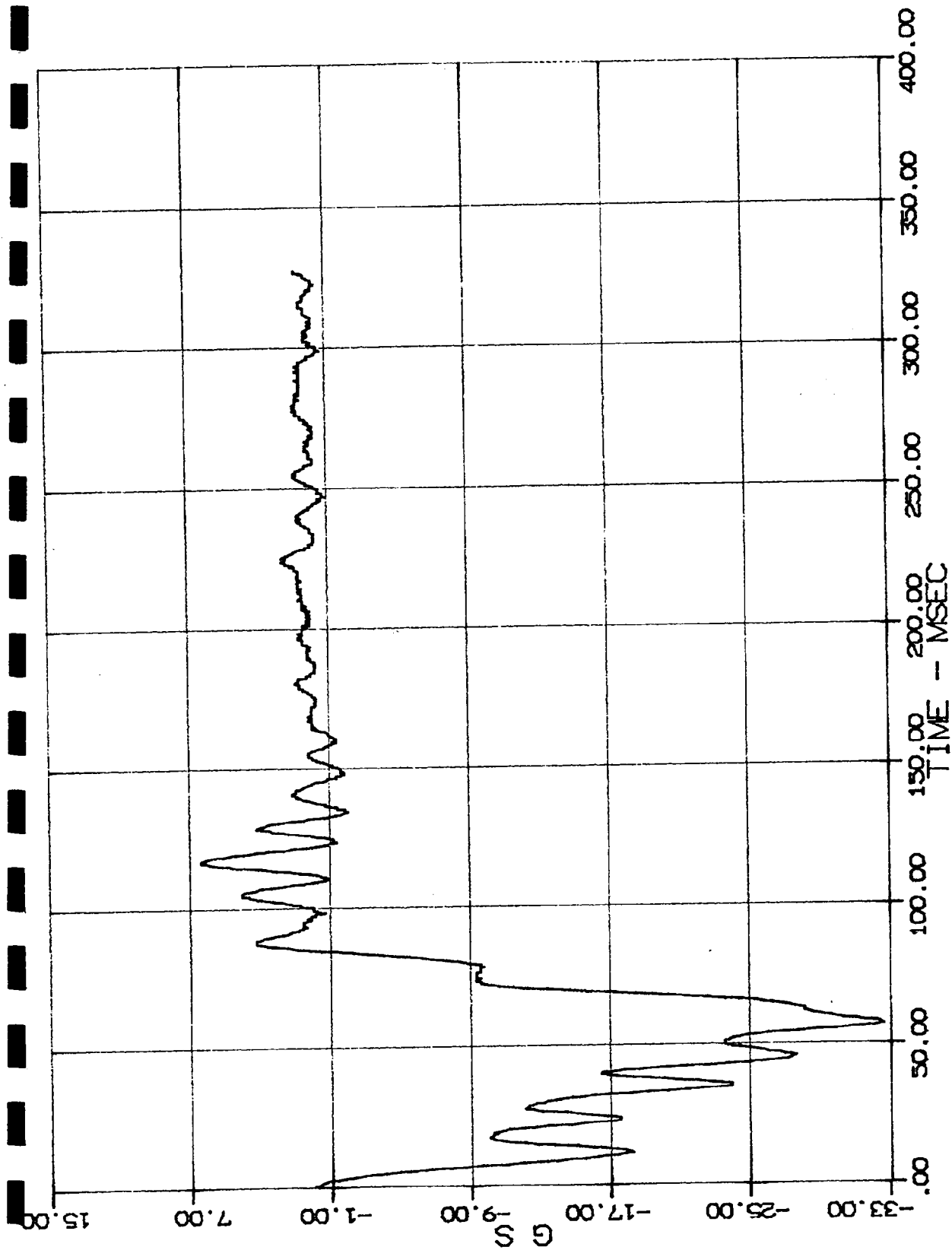
03 AC 01 N RFF X IN1
MSE NO2102 1982 FORD ESCORT

11/05/82



03 AC 01 N RFF X IN2
MSE NO2102 1982 FORD ESCORT

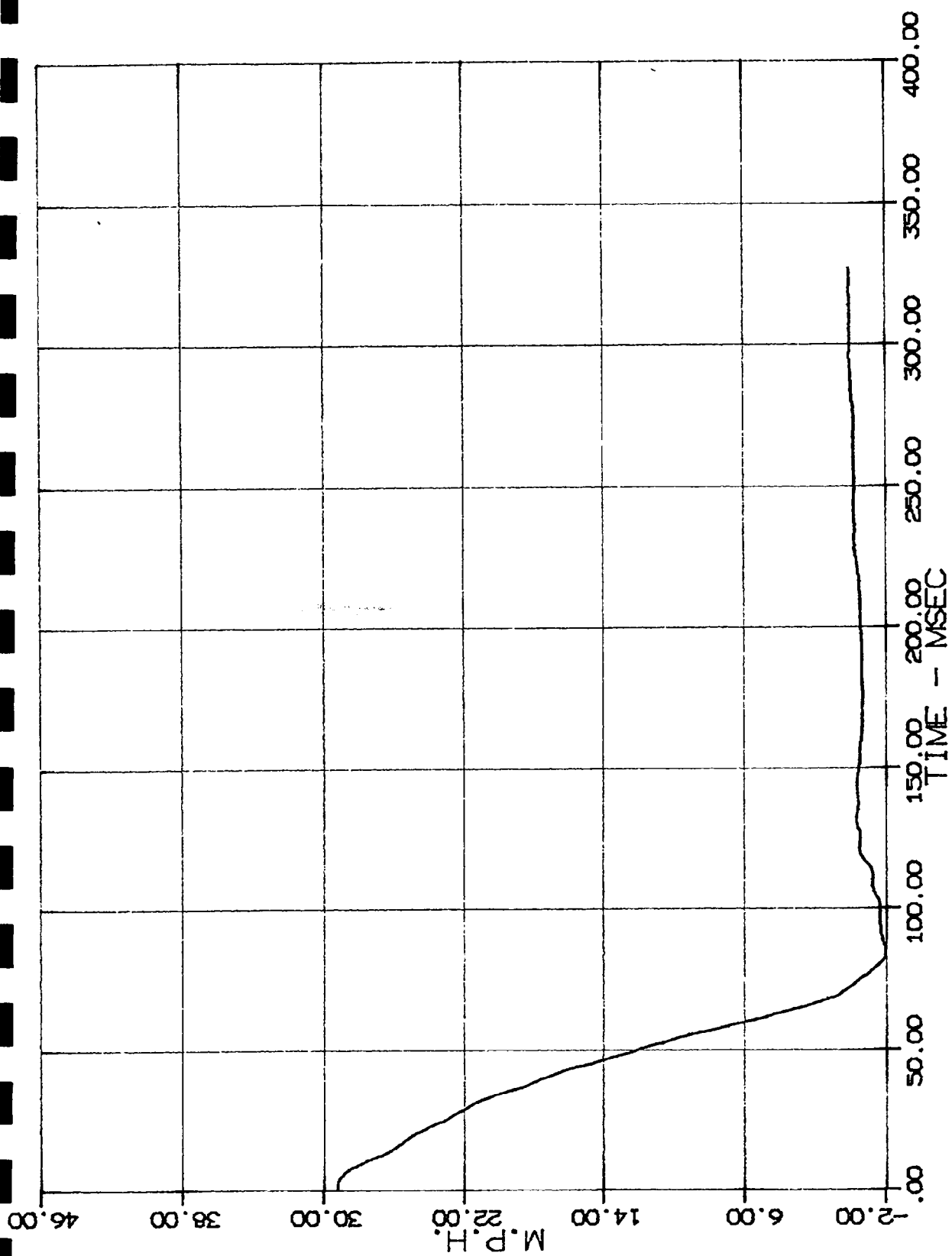
11/05/82



100

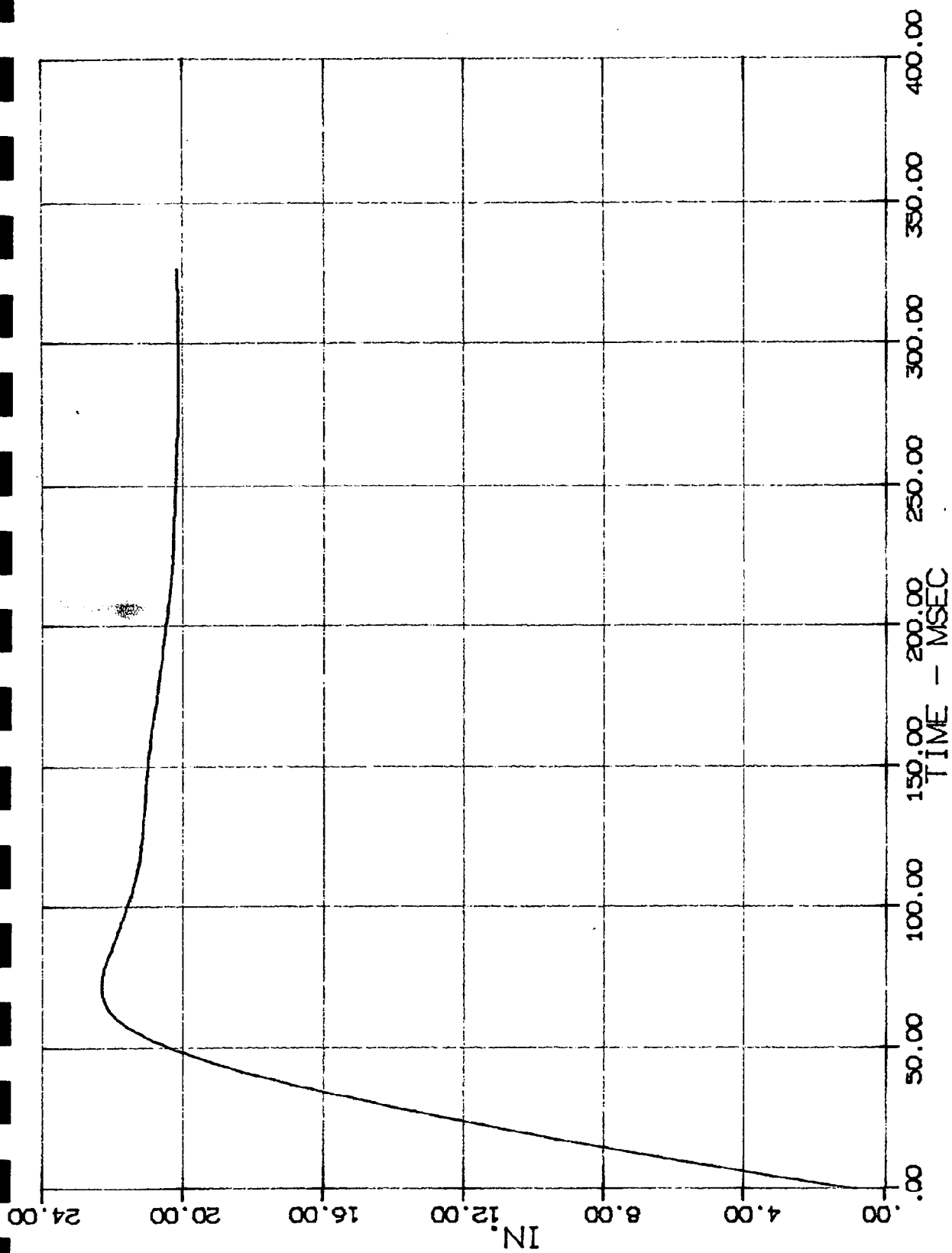
04 AC 01 N LRF X
MSE ND2102 1982 FORD ESCORT

11/05/82



04 AC 01 N LRF X IN1
MSE NO2102 1982 FORD ESCORT

11/05/82



04 AC 01 N LRF X IN2
MSE NO2102 1982 FORD ESCORT

11/05/82

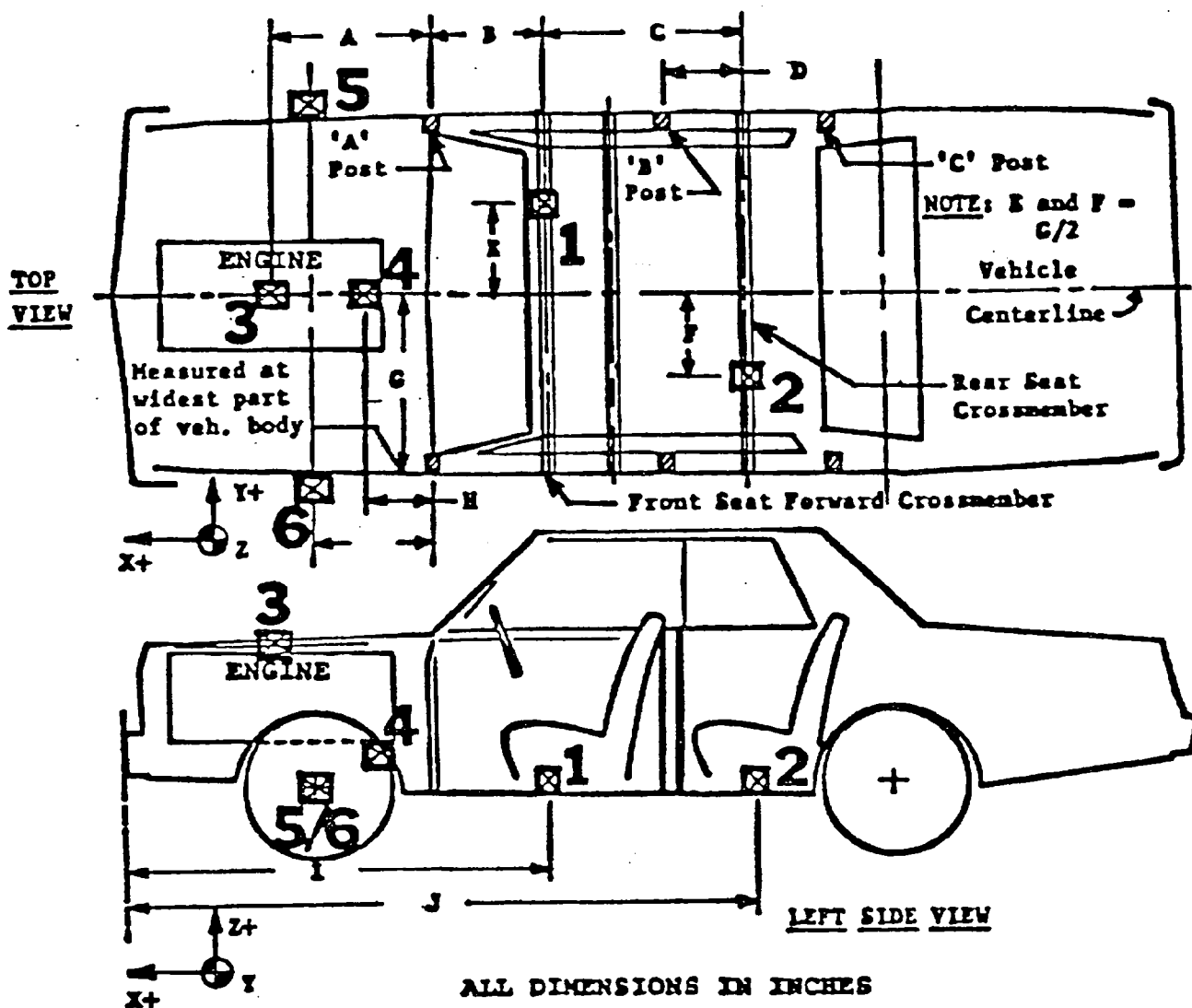
2.11 TEST DATA FOR FORD E-100 ECONOLINE VAN

NHTSA No.	-	820624
Test Reference No.	-	N02112
Test Date	-	11/11/82

FORD E-100 ECONOLINE VAN
VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	11/11/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 11
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.5
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	62
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	2
23. VEHICLE MODEL	23
24. VEHICLE YEAR	82
25. ENGINE TYPE	6-ILF
26. ENGINE DISPLACEMENT	300 CI
27. TRANSMISSION TYPE	MR
28. BODY TYPE	VN
29. TEST WEIGHT	3841
30. WHEELBASE (IN.)	124.0
31. VEHICLE LENGTH (IN.)	186.0
32. VEHICLE WIDTH (IN.)	75.0
33. C.G. DIST. BEHIND FRONT AXLE	52.5
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.5
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW5
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	75.0
47. POINT NO. 1	13.0
48. POINT NO. 2	12.8
49. POINT NO. 3	12.6
50. POINT NO. 4	12.4
51. POINT NO. 5	12.2
52. POINT NO. 6	12.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	13.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

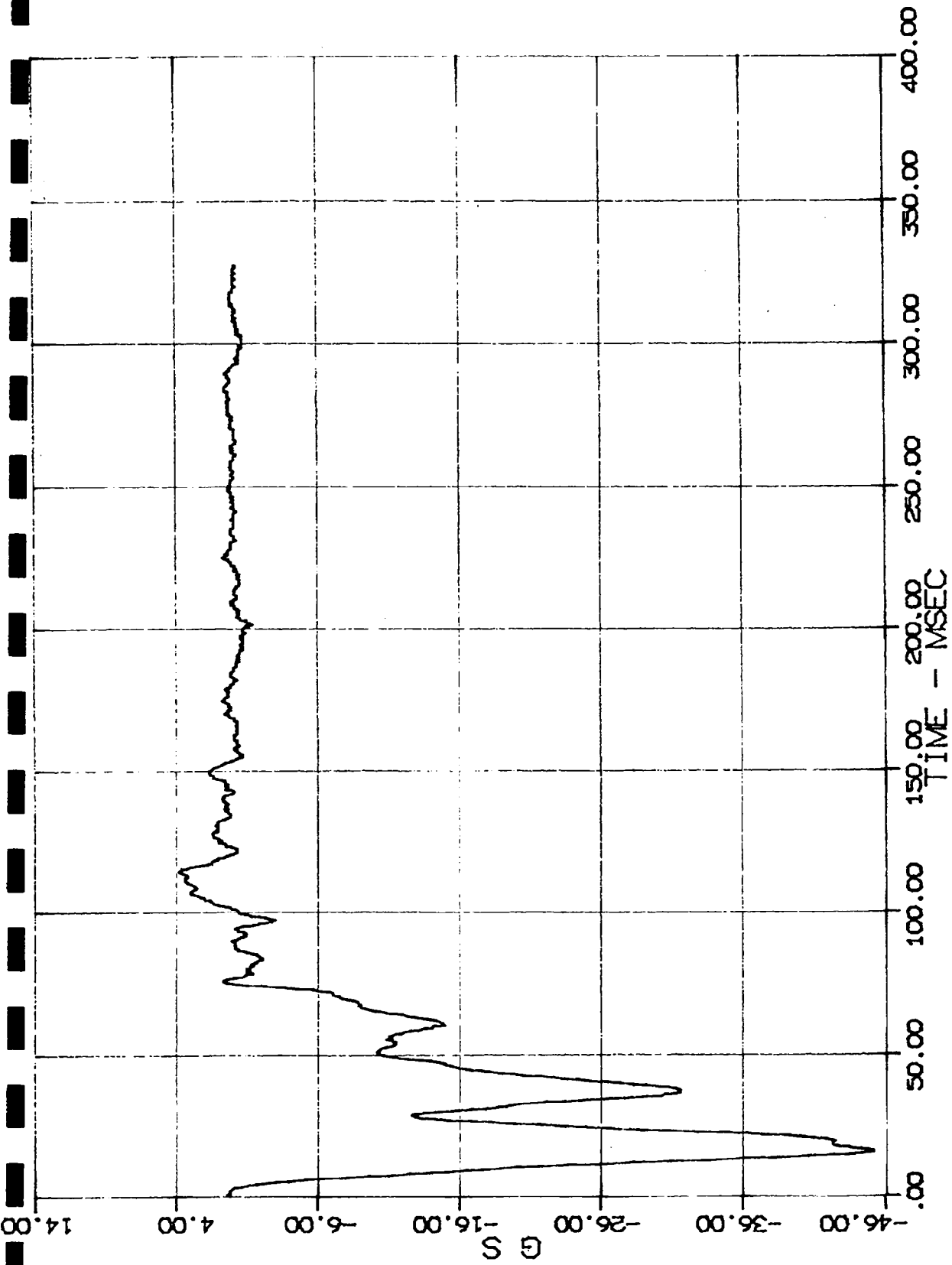
59. HEIGHT OF BARRIER IF REVIVE	
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRT0	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.5
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRT0	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.5
123. QUALITY	GOOD,ZERO OFFSET



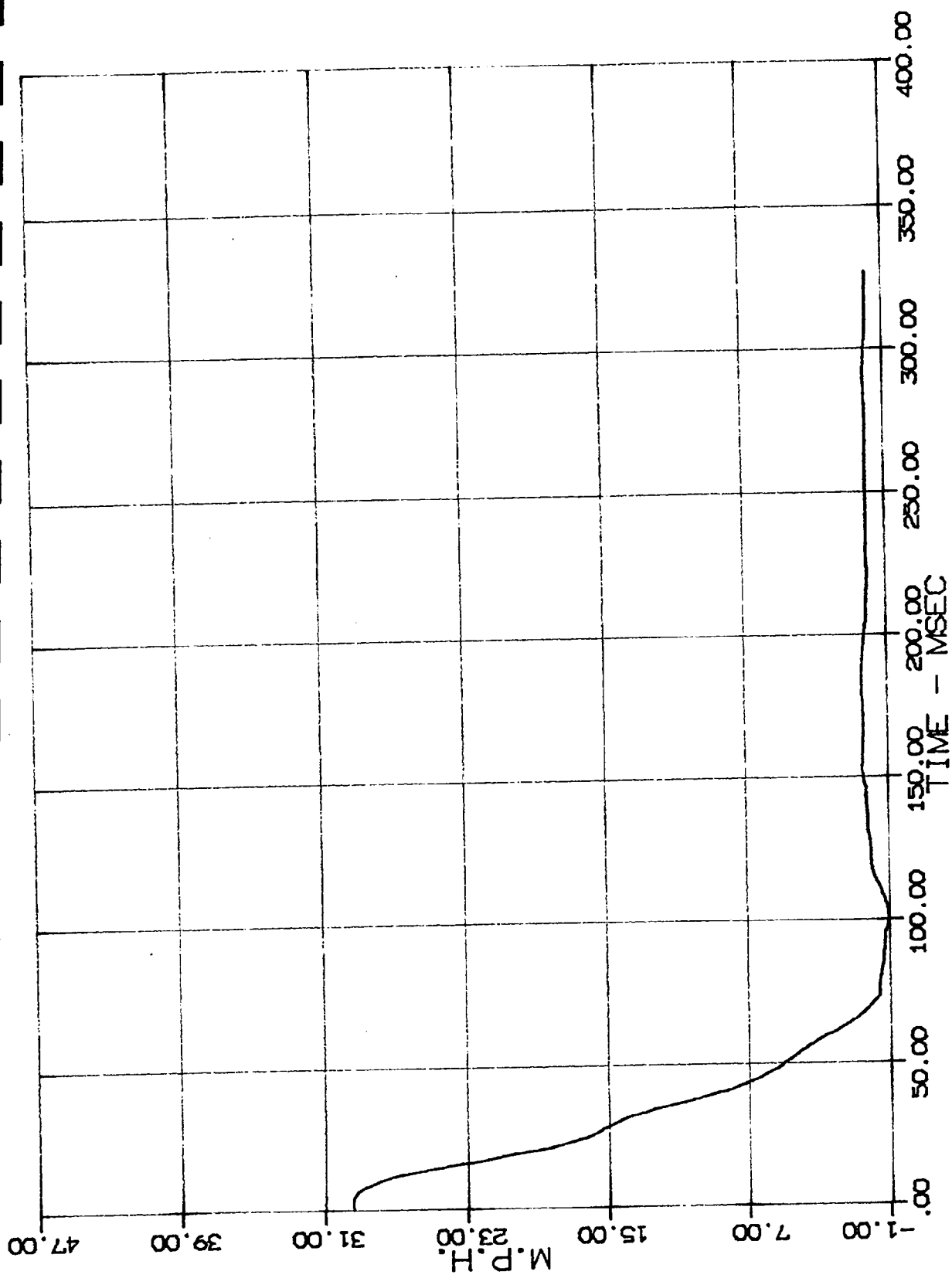
DIMENSION	LENGTH (in.)
$X = G/2$	24.2 in.
$Y = G/2$	29.4 in.
G	37.5 in.
I	86.0 in.
J	104.5 in.

ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-					
2	Below Rear Seat Area	●			+	-					

FORD E-100 ECONOLINE VAN
VEHICLE ACCELEROMETER LOCATIONS

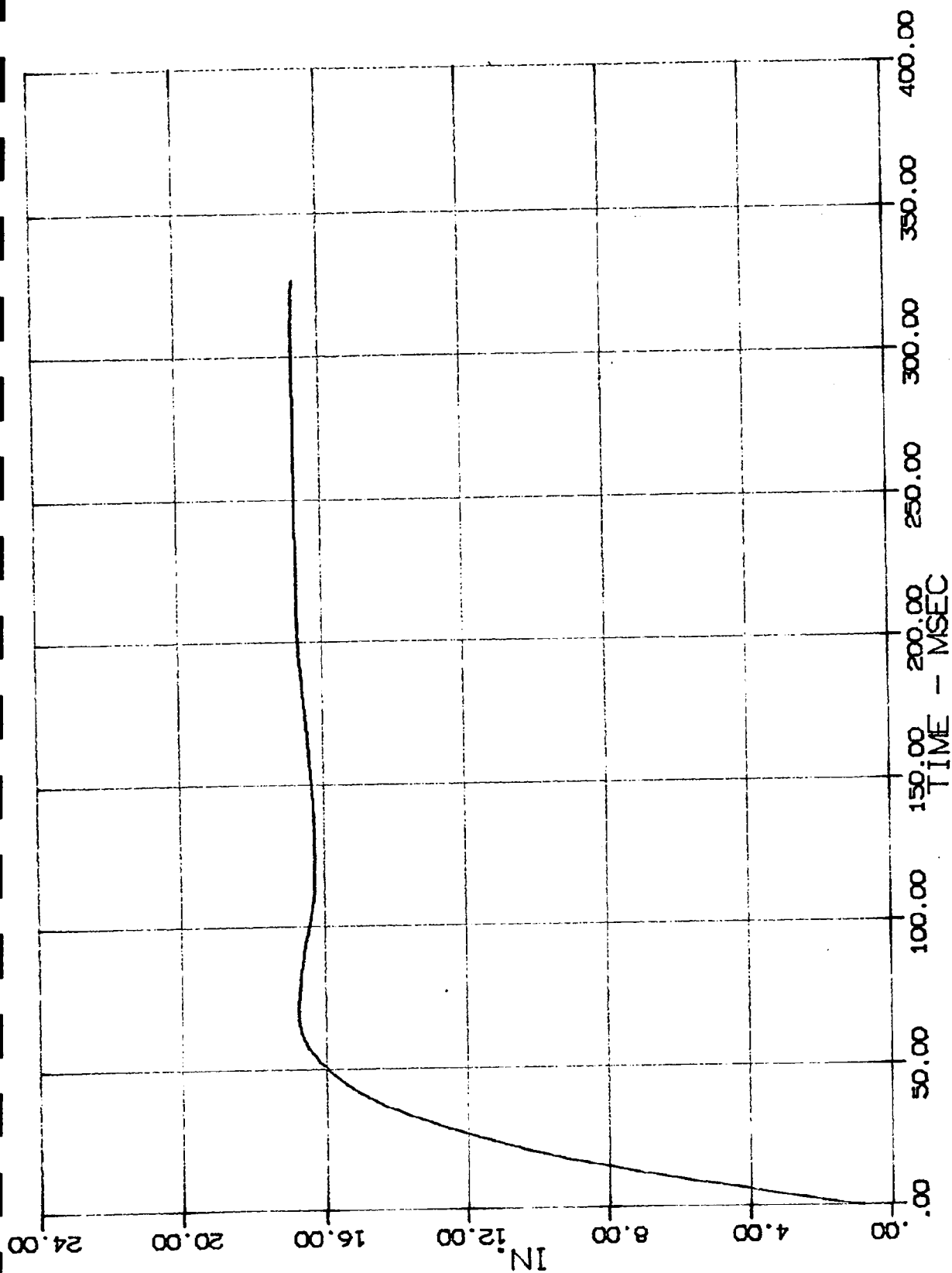


03 PC 01 N RFF X
MSE ND2112 1982 FORD E-100 ECONOLINE VAN 11/11/82

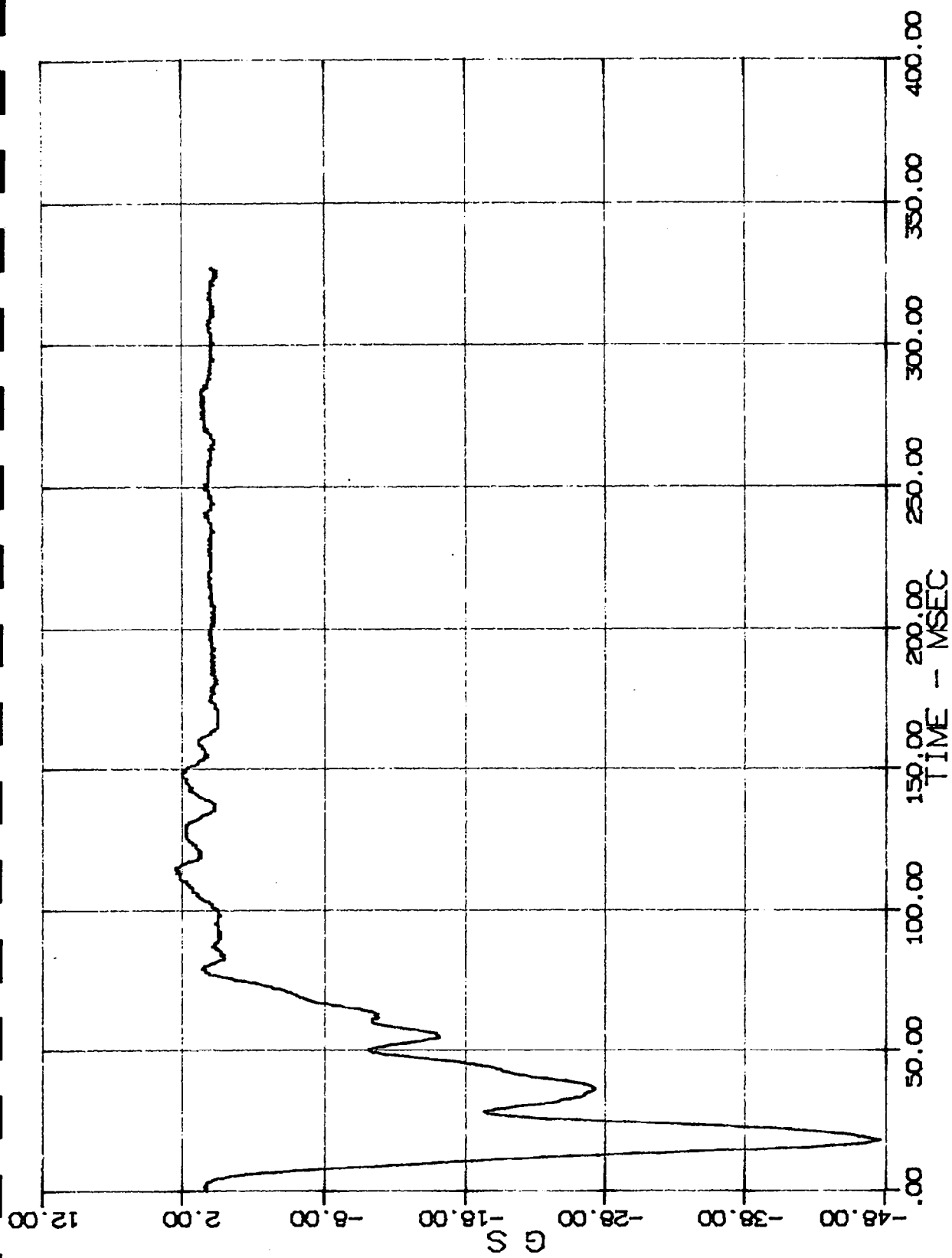


801

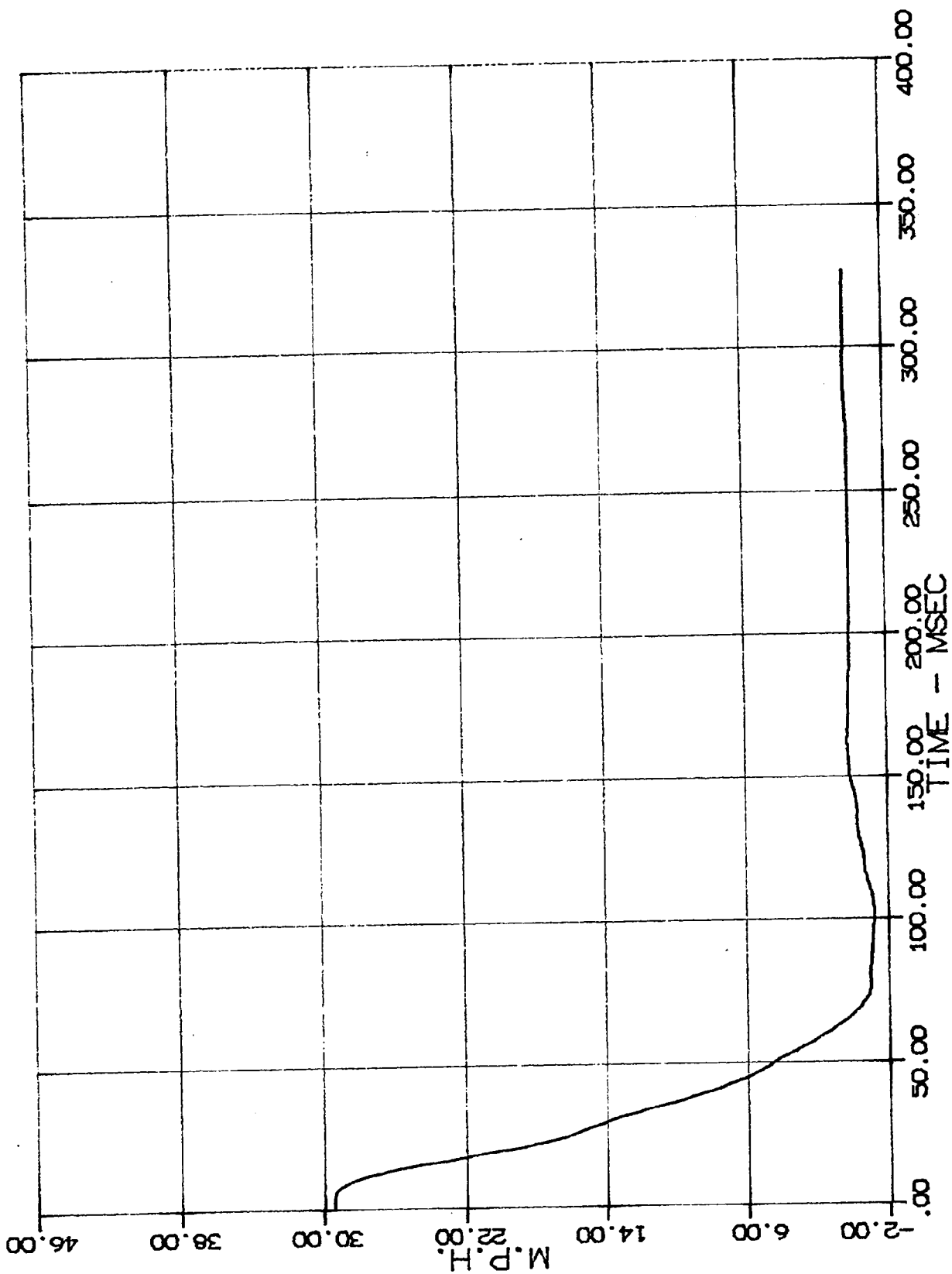
03 AC 01 N RFF X IN1
 MSE NO2112 1982 FORD E-100 ECONOLINE VAN 11/11/82



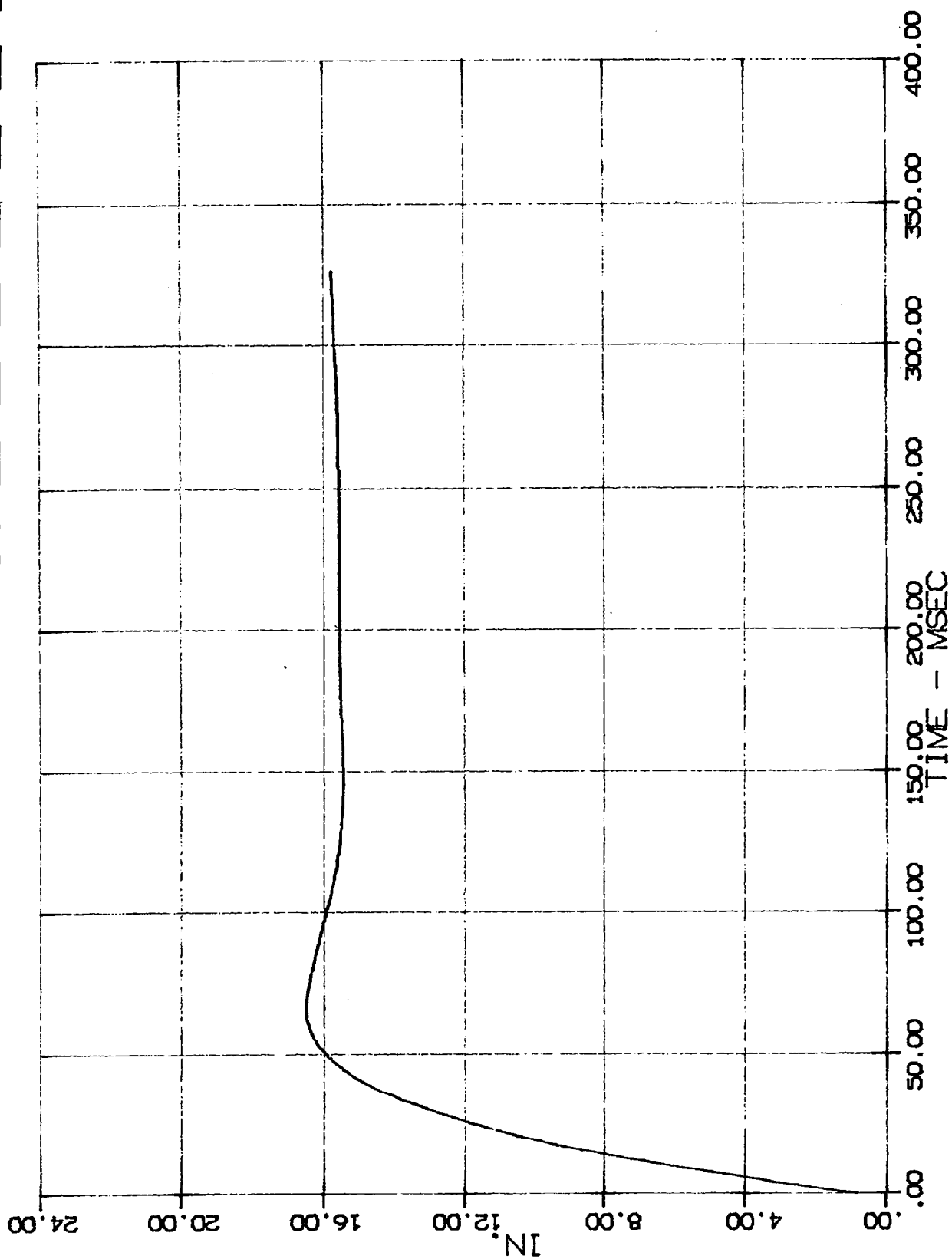
03 AC 01 N RFF X IN2
 MSE NO2112 1982 FORD E-100 ECONOLINE VAN 11/11/82



04 AC 01 N LRF X
MSE NO2112 1982 FORD E-100 ECONOLINE VAN 11/11/82



04 PC 01 N LRF X IN1
MSE NO2112 1982 FORD E-100 ECONOLINE VAN 11/11/82



04 PC 01 N LRF X IN2
MSE NO2112 1982 FORD E-100 ECONOLINE VAN 11/11/82

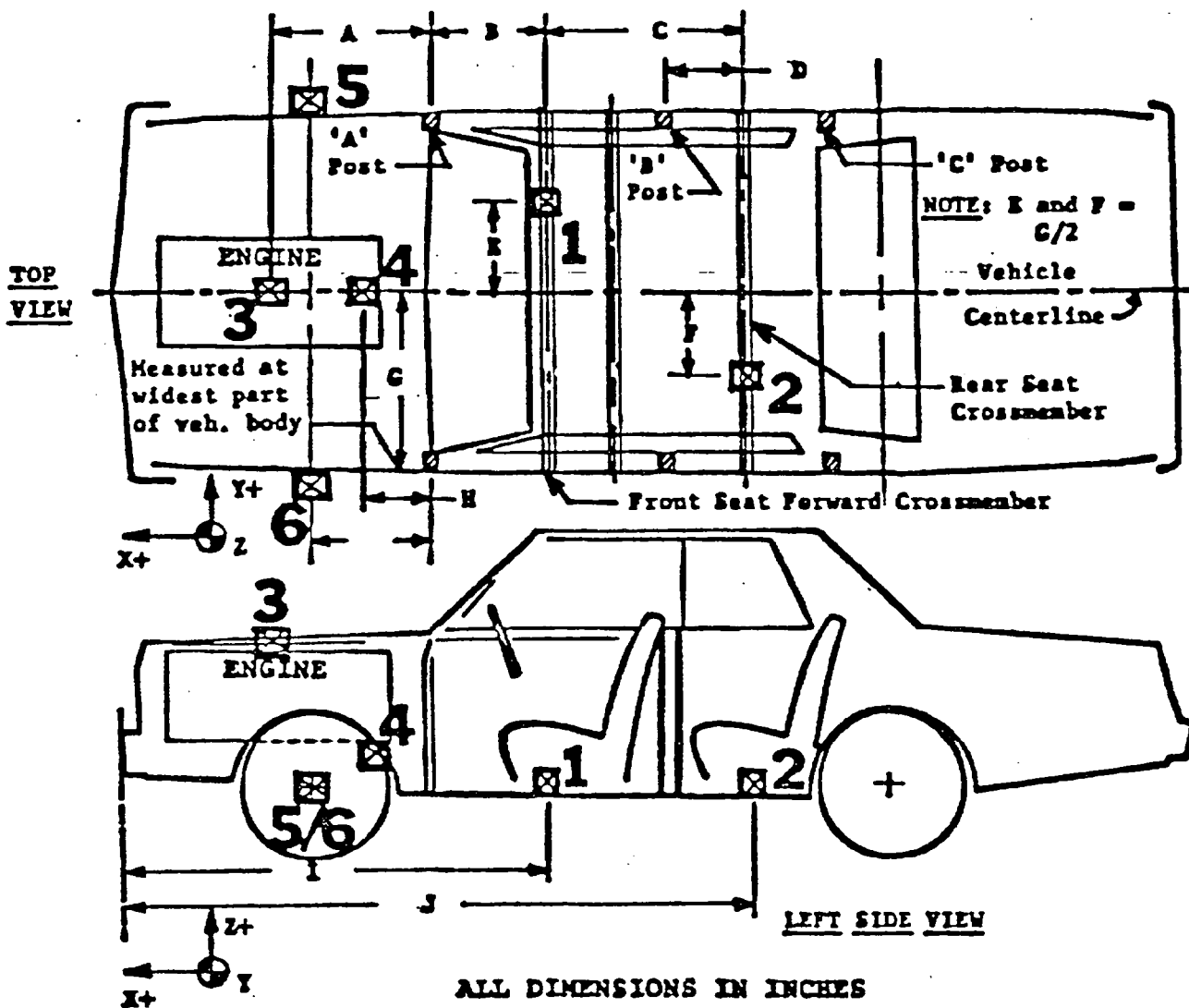
2.12 TEST DATA FOR CHEVROLET G-10 VAN

NHTSA No.	-	820623
Test Reference No.	-	N01122
Test Date	-	11/16/82

CHEVROLET G-10 VAN
VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	11/16/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 12
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.4
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	72
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	1
23. VEHICLE MODEL	27
24. VEHICLE YEAR	82
25. ENGINE TYPE	6ILF
26. ENGINE DISPLACEMENT	4.1 LITER
27. TRANSMISSION TYPE	MR
28. BODY TYPE	VN
29. TEST WEIGHT	3674
30. WHEELBASE (IN.)	110.5
31. VEHICLE LENGTH (IN.)	185.0
32. VEHICLE WIDTH (IN.)	80.0
33. C.G. DIST. BEHIND FRONT AXLE	47.0
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.4
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW5
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	80.0
47. POINT NO. 1	10.0
48. POINT NO. 2	10.4
49. POINT NO. 3	10.8
50. POINT NO. 4	11.2
51. POINT NO. 5	11.6
52. POINT NO. 6	12.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	12.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

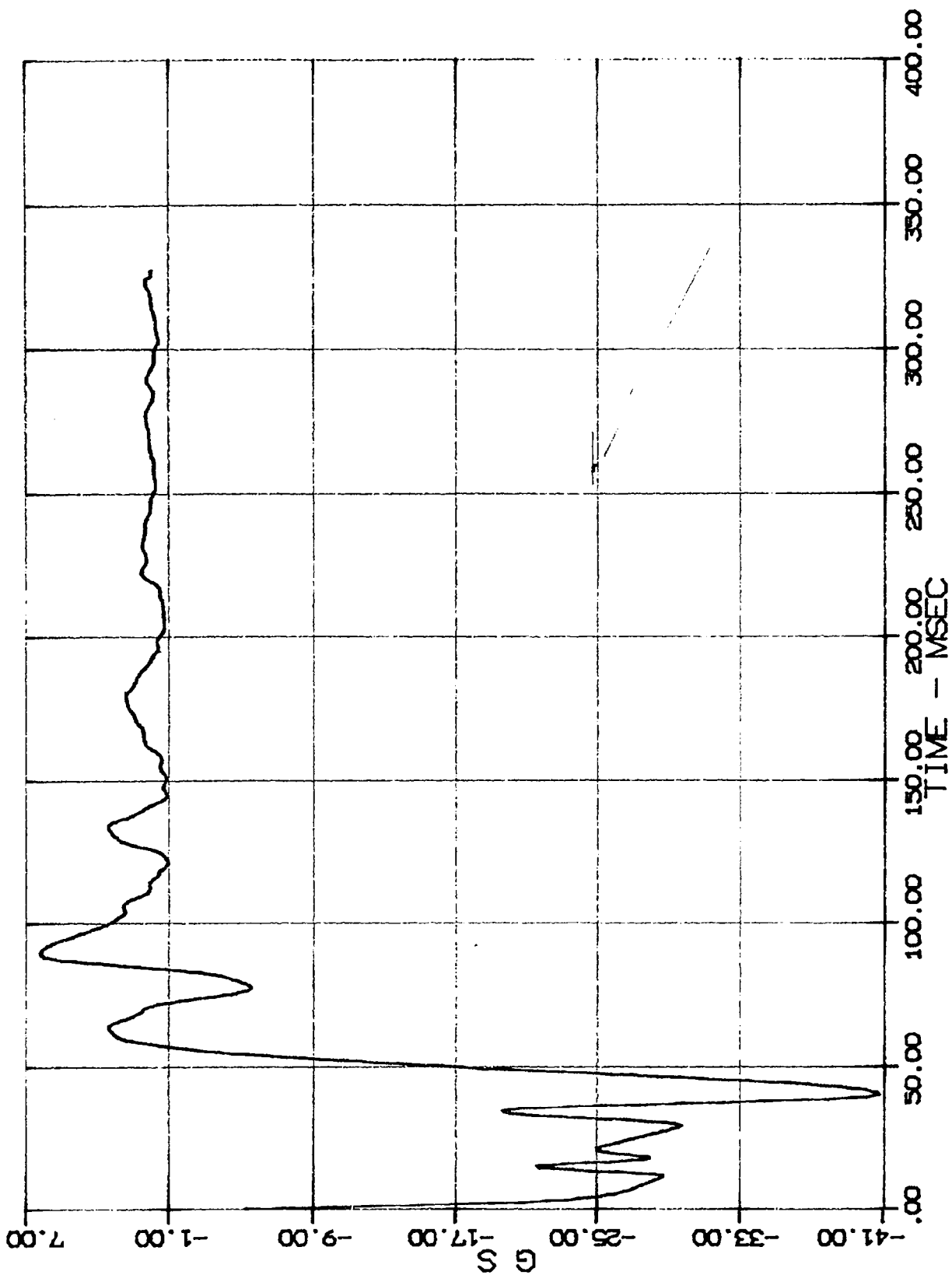
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2645
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.4
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2645
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.4
123. QUALITY	GOOD,ZERO OFFSET



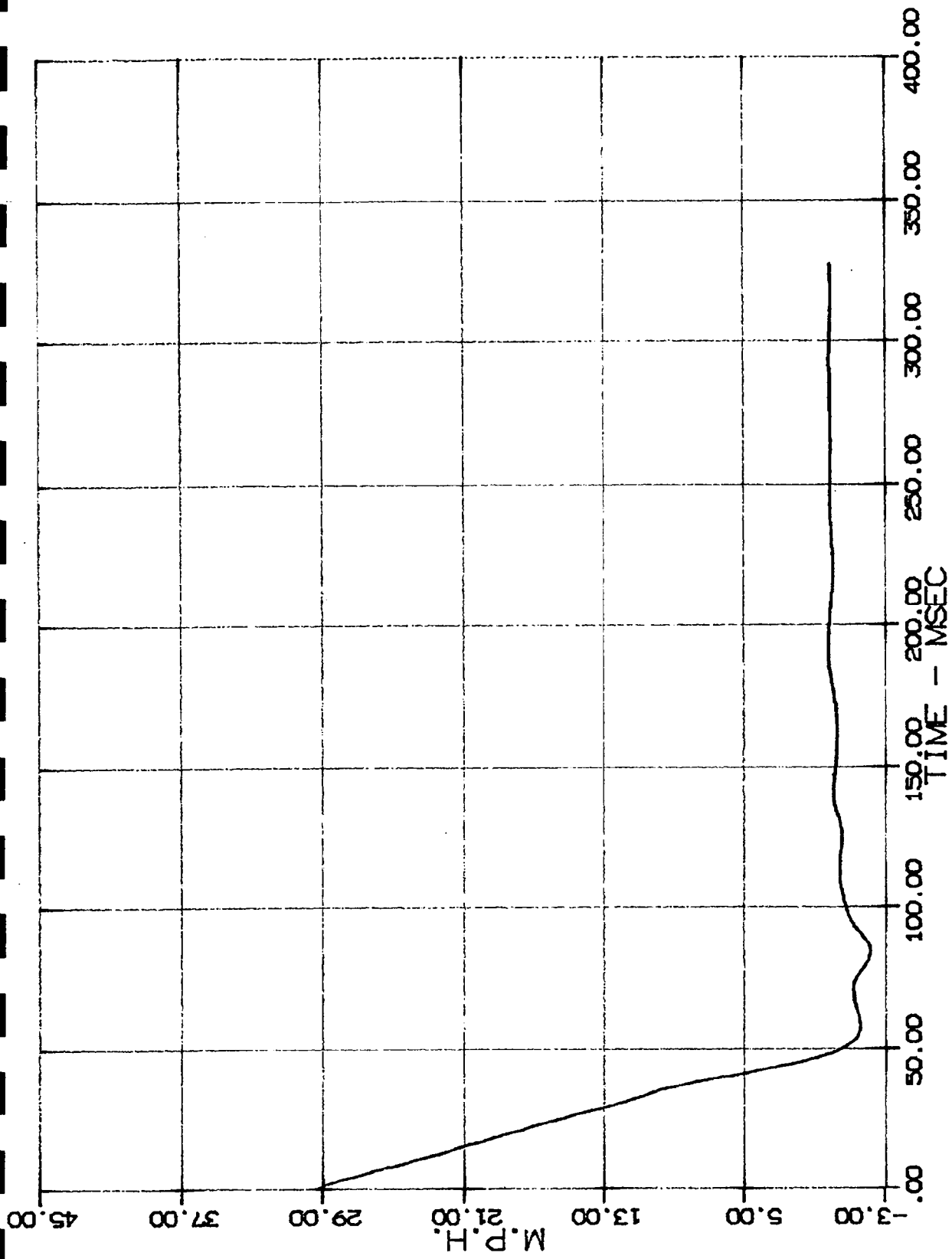
DIMENSION	LENGTH (in.)
E - G/2	26.3 in.
F - G/2	25.0 in.
G	40.0 in.
I	63.5 in.
J	89.5 in.

ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-					
2	Below Rear Seat Area	●			+	-					

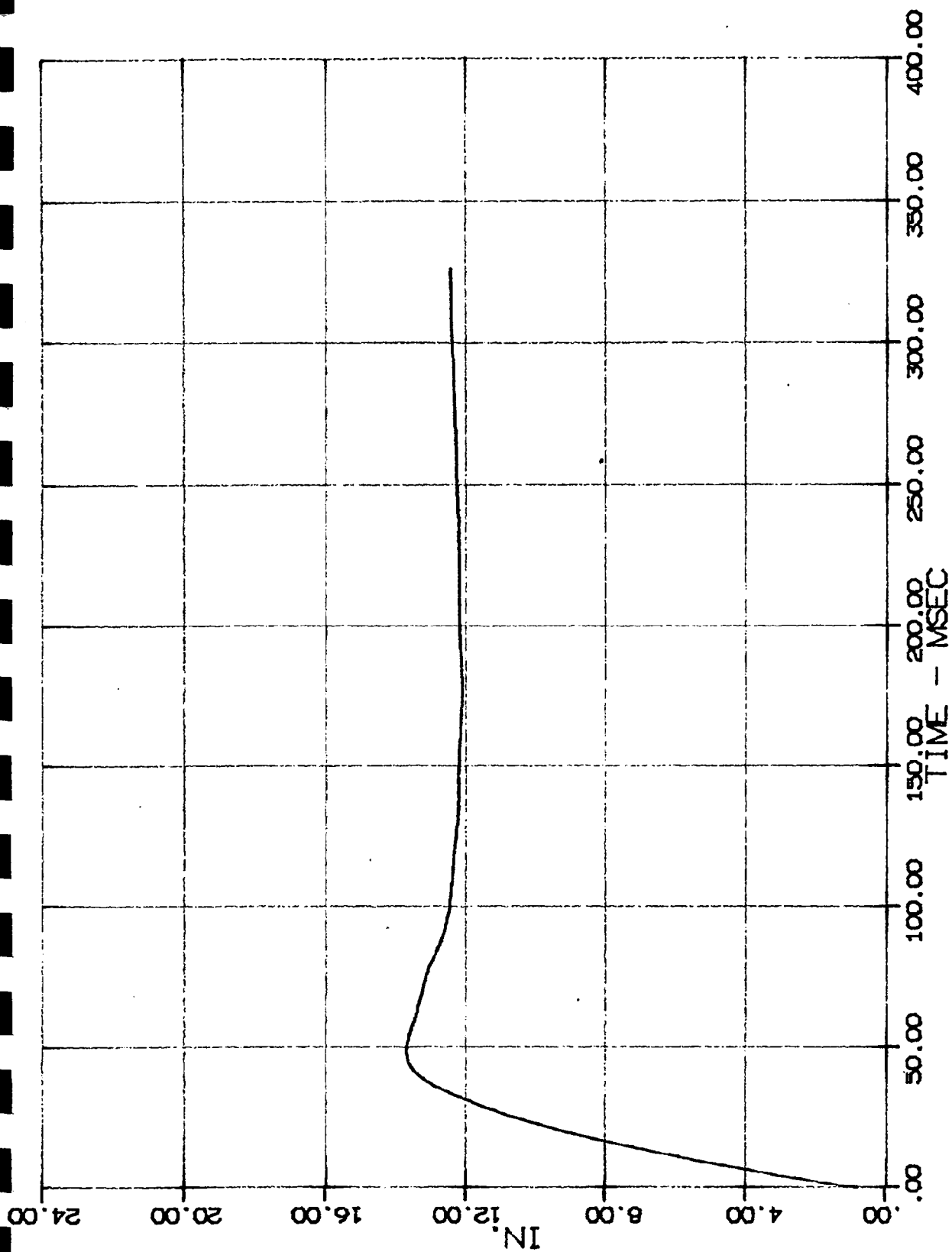
CHEVROLET G-10 VAN
VEHICLE ACCELEROMETER LOCATIONS



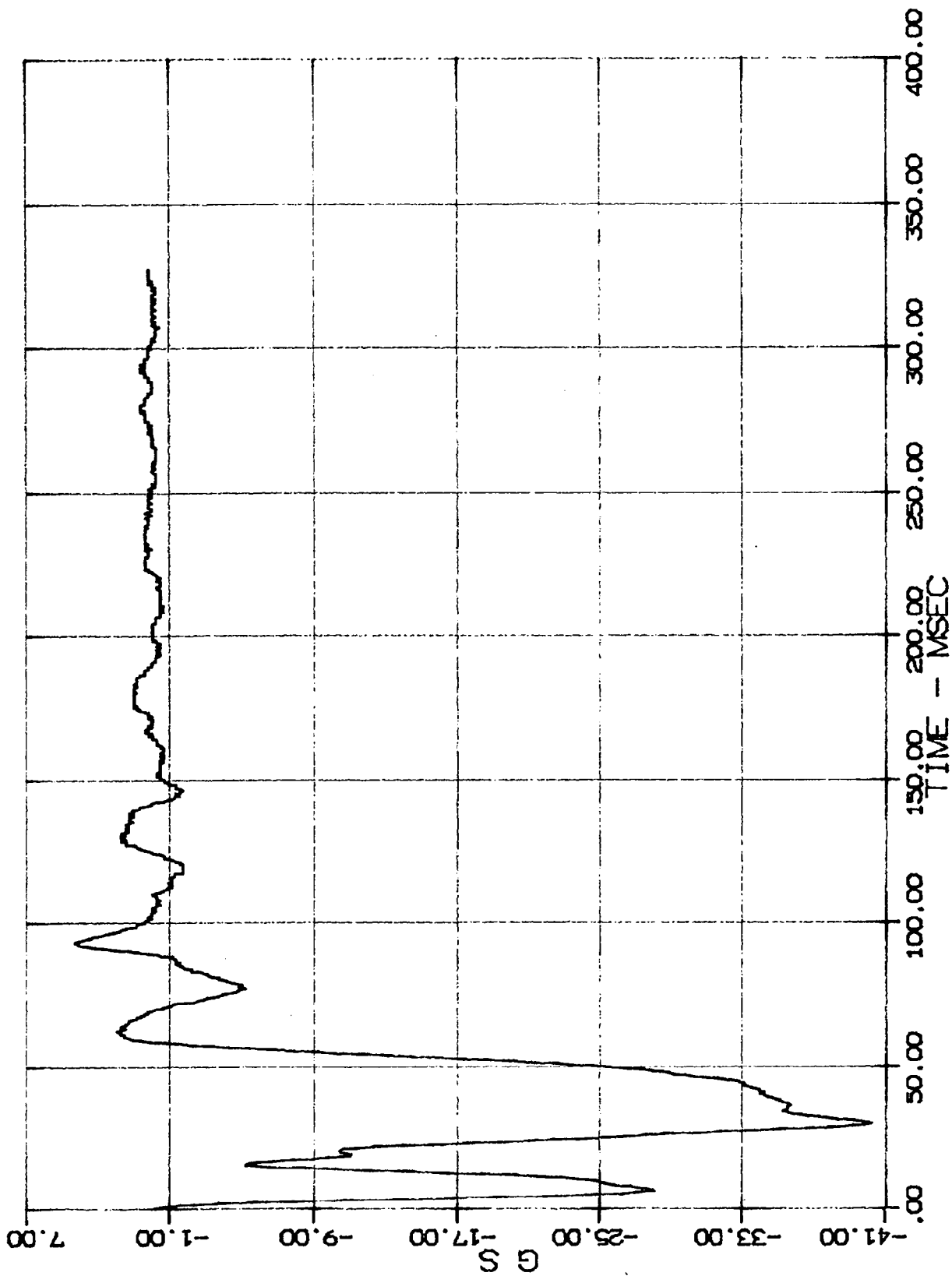
03 AC N RFF X
MSE ND1122 1982 CHEV. G-10 VAN
11/16/82



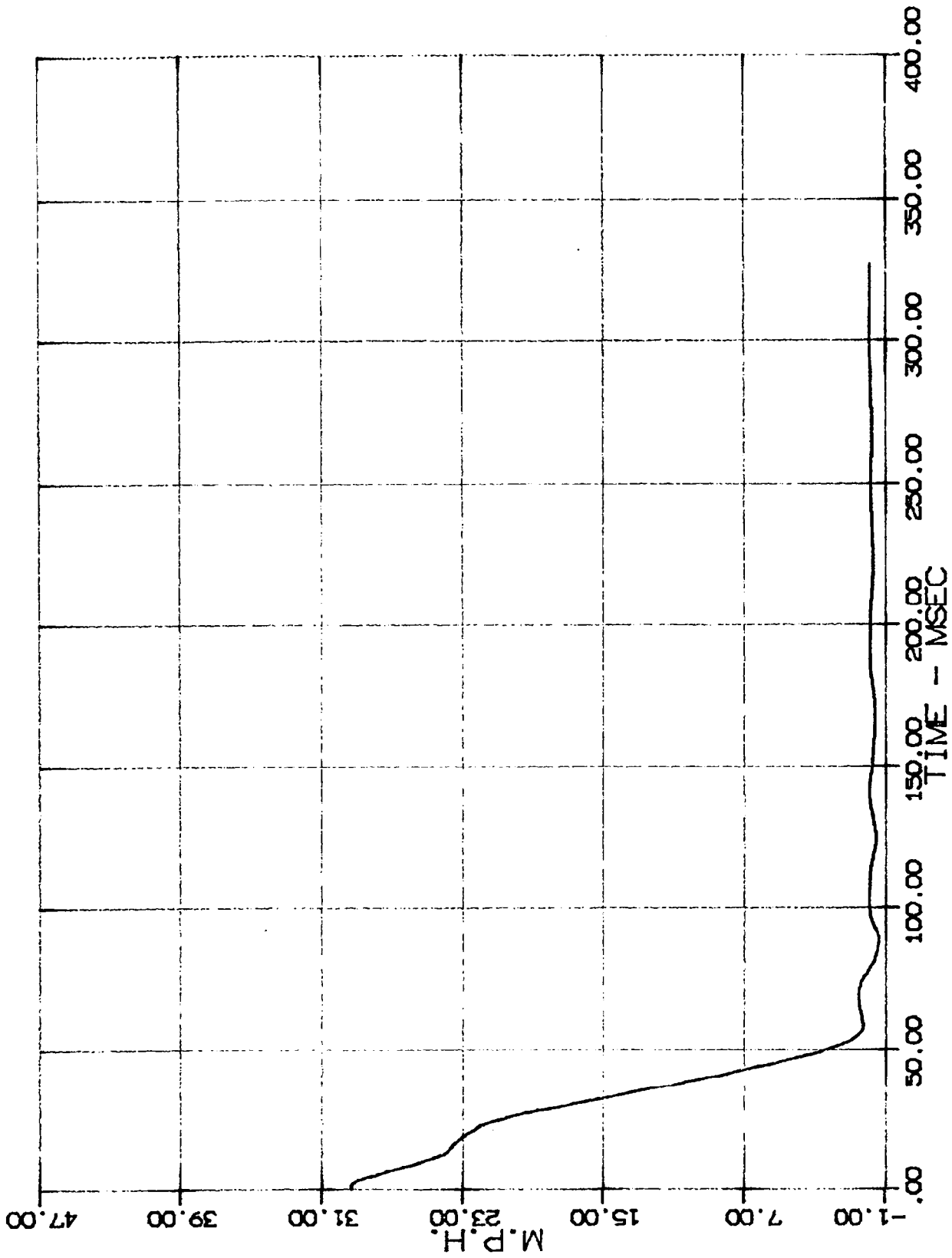
03 PC N RFF X IN1
MSE NO1122 1982 CHEV. G-10 VAN
11/16/82



03 AC N RFF X IN2
MSE ND1122 1982 CHEV. G-10 VAN
11/16/82

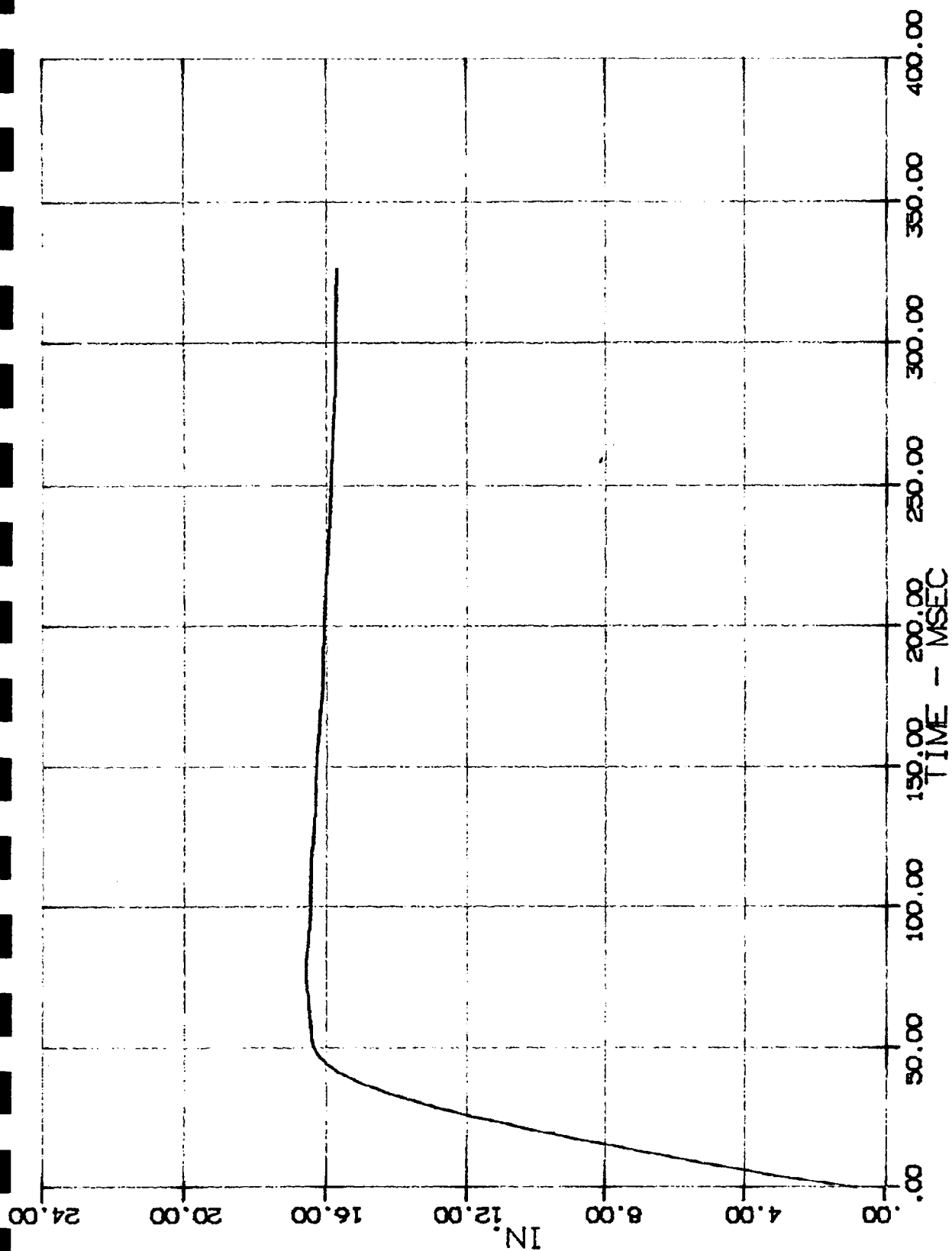


04 PC N LRF X
MSE NO1122 1982 CHEV. G-10 VRN
11/16/82



04 PC N LRF X 1N1
MSE NO1122 1982 CHEV. G-10 VFN

11/16/82



04 PC N LRF X IN2
MSE NO1122 1982 CHEV. G-10 VAN
11/16/82

2.13 TEST DATA FOR CHEVROLET S-10 PICKUP

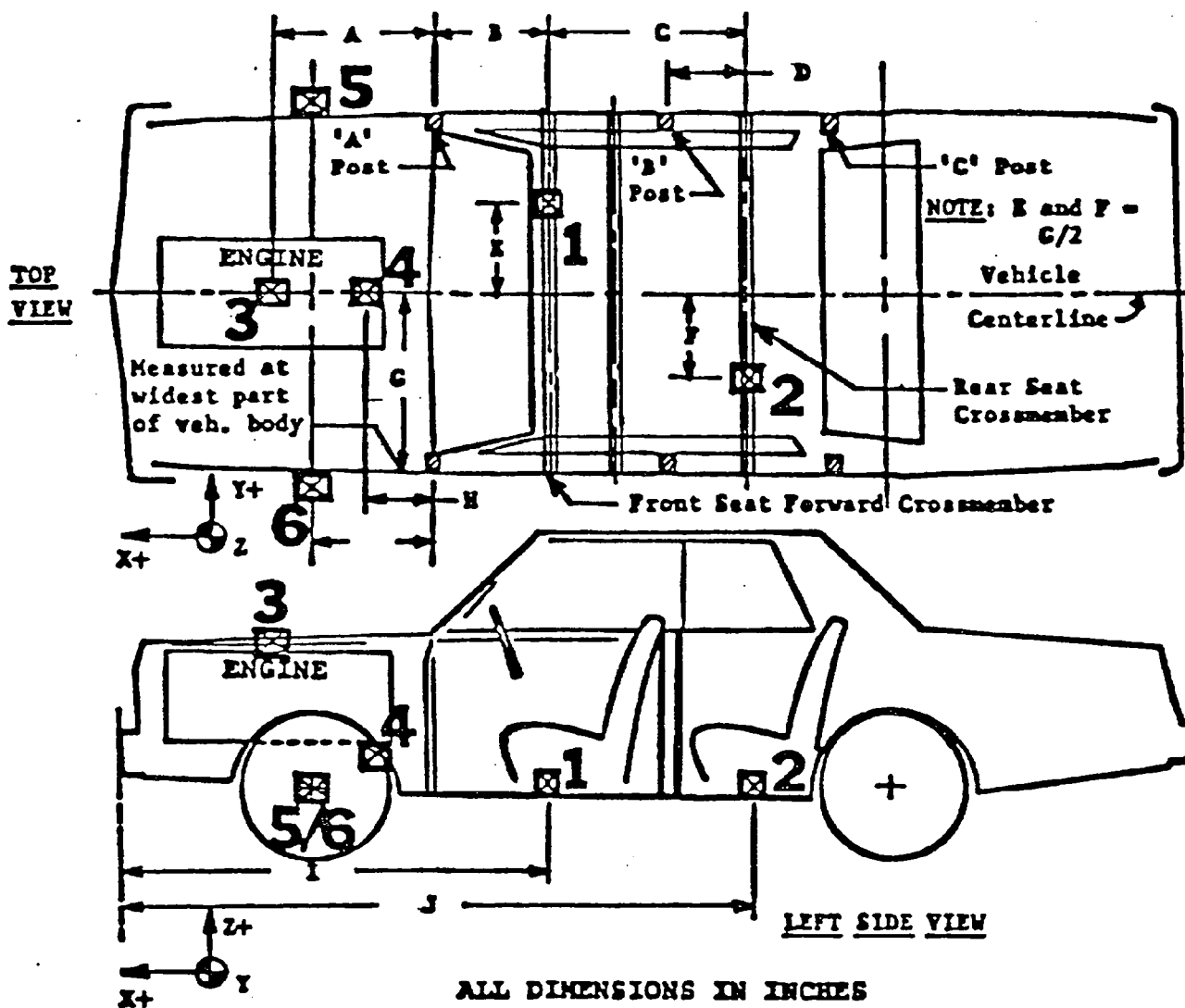
NHTSA No.	-	820625
Test Reference No.	-	N01132
Test Date	-	12/07/82

CHEVROLET S-10 PICKUP

VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	12/07/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 12
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	VSB
	29.3
10. CLOSING SPEED	
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	56
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	1
23. VEHICLE MODEL	22
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-ILF
26. ENGINE DISPLACEMENT	1.9 LITER
27. TRANSMISSION TYPE	MR
28. BODY TYPE	PU
29. TEST WEIGHT	2553
30. WHEELBASE (IN.)	108.5
31. VEHICLE LENGTH (IN.)	183.3
32. VEHICLE WIDTH (IN.)	64.8
33. C.G. DIST. BEHIND FRONT AXLE	45.9
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.3
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	64.8
47. POINT NO. 1	16.0
48. POINT NO. 2	16.2
49. POINT NO. 3	16.4
50. POINT NO. 4	16.6
51. POINT NO. 5	16.8
52. POINT NO. 6	17.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	17.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0
59. WEIGHT OF BARRIER IF MOVING	0

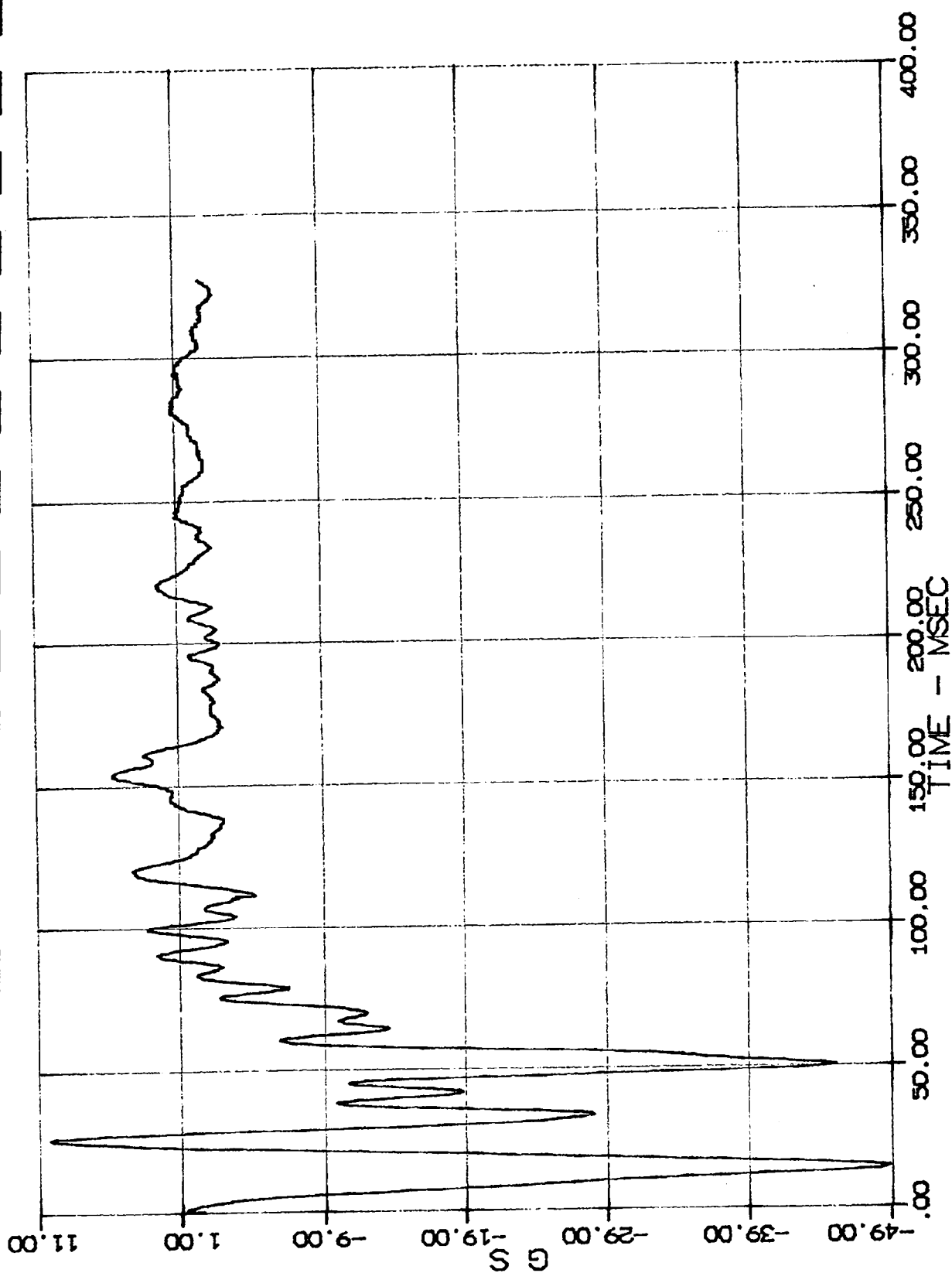
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2639
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.3
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2639
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.3
123. QUALITY	GOOD,ZERO OFFSET



DIMENSION	LENGTH (in.)
$E = G/2$	20.12 in.
$F = G/2$	21.0 in.
G	32.38 in.
I	75.25 in.
J	89.50 in.

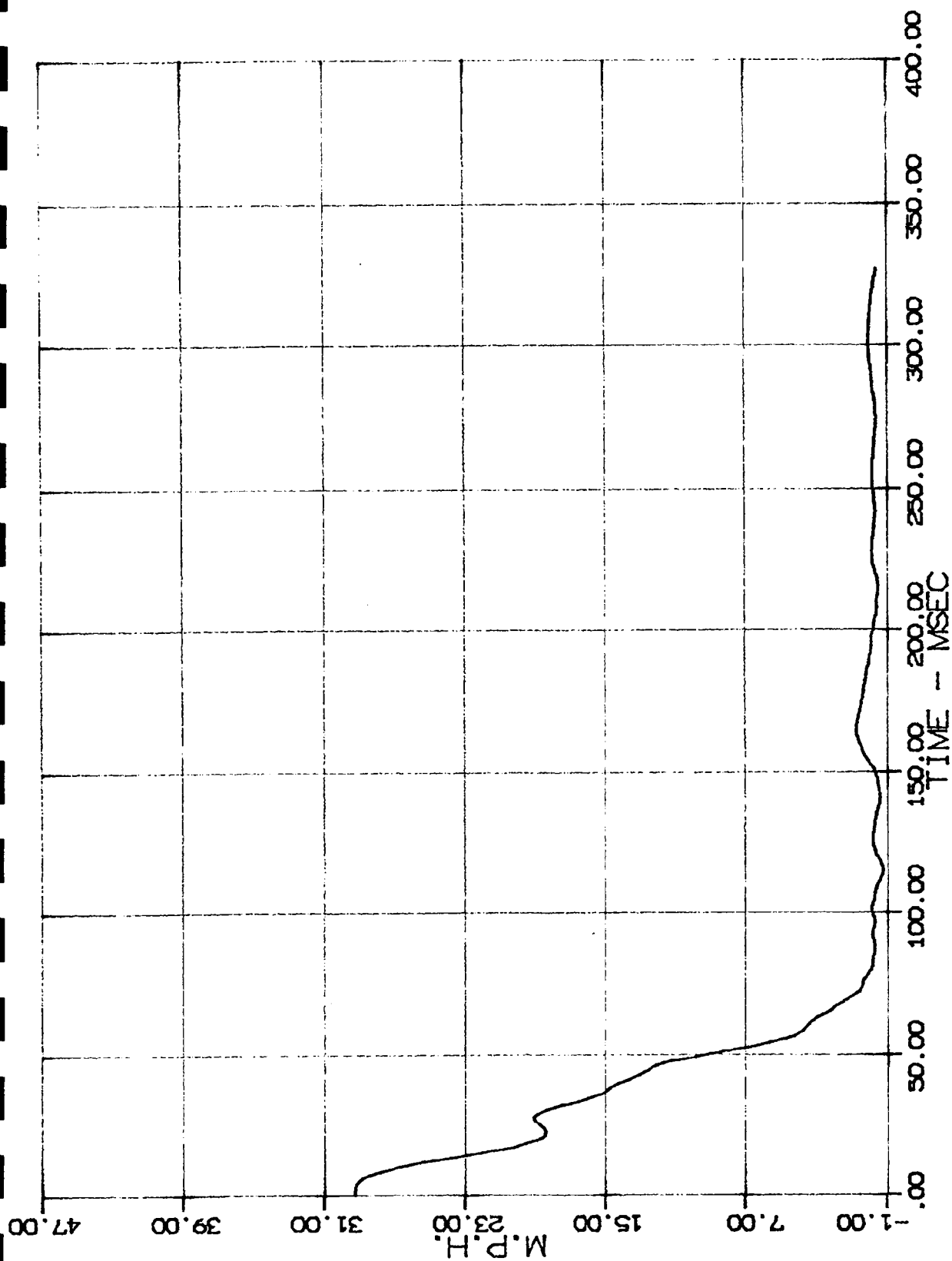
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @					msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-
1	Below Front Seat Area	●			+	-				
2	Below Front Seat Area	●			+	-				

CHEVROLET S-10 PICKUP
VEHICLE ACCELEROMETER LOCATIONS

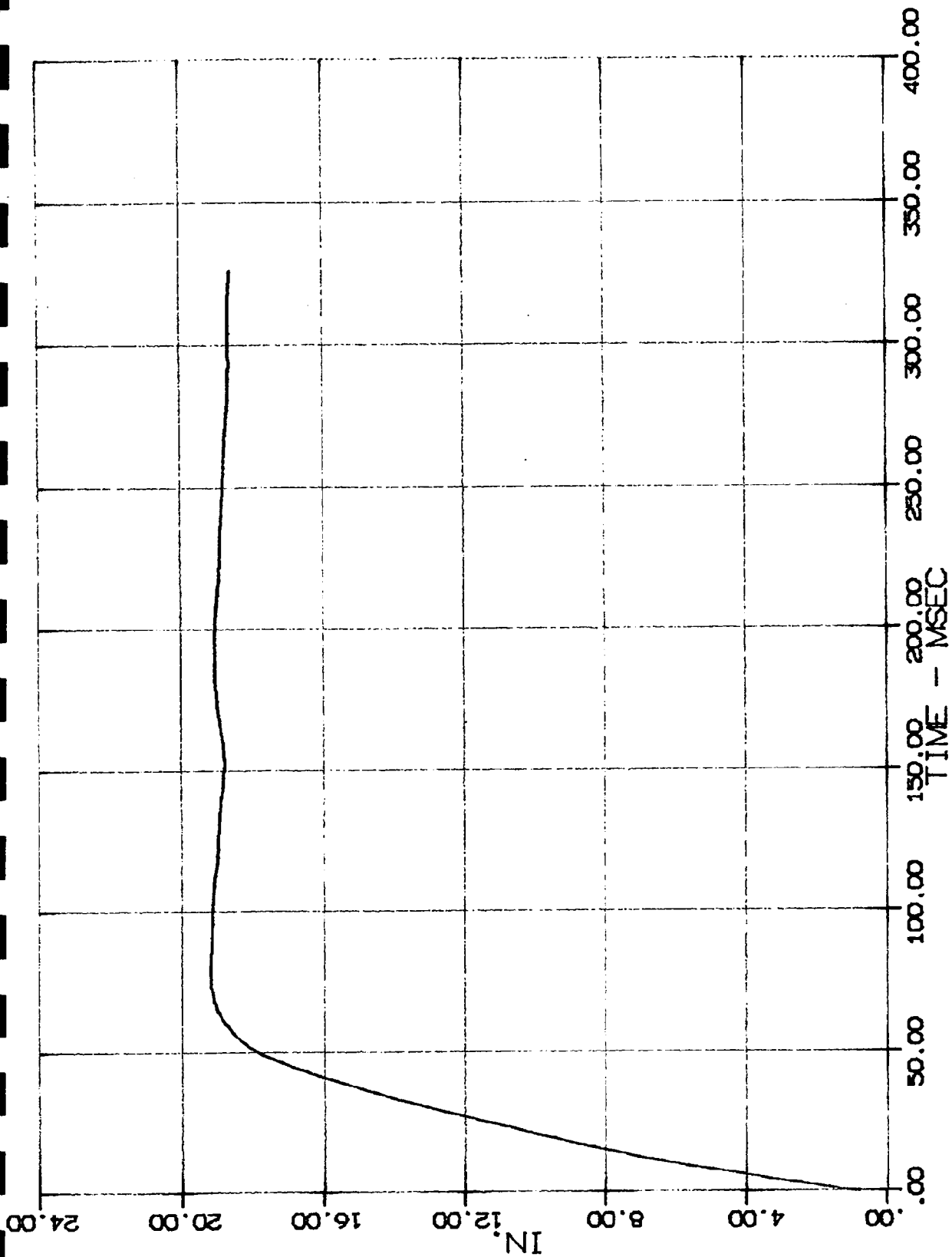


12/07/82

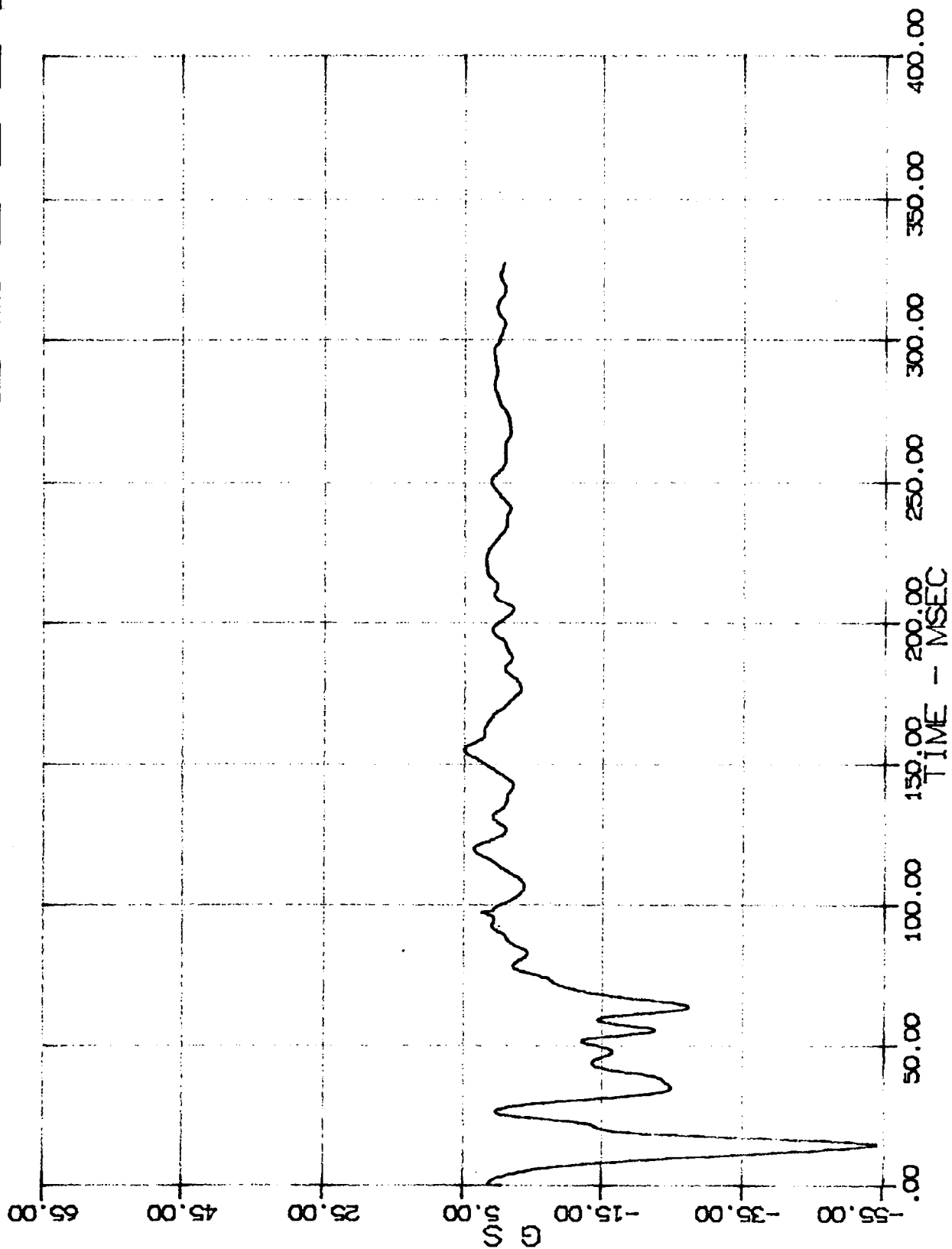
03 FC 01 N RFF X
NSE NO1132 1982 CHEVROLET S-10 PICKUP



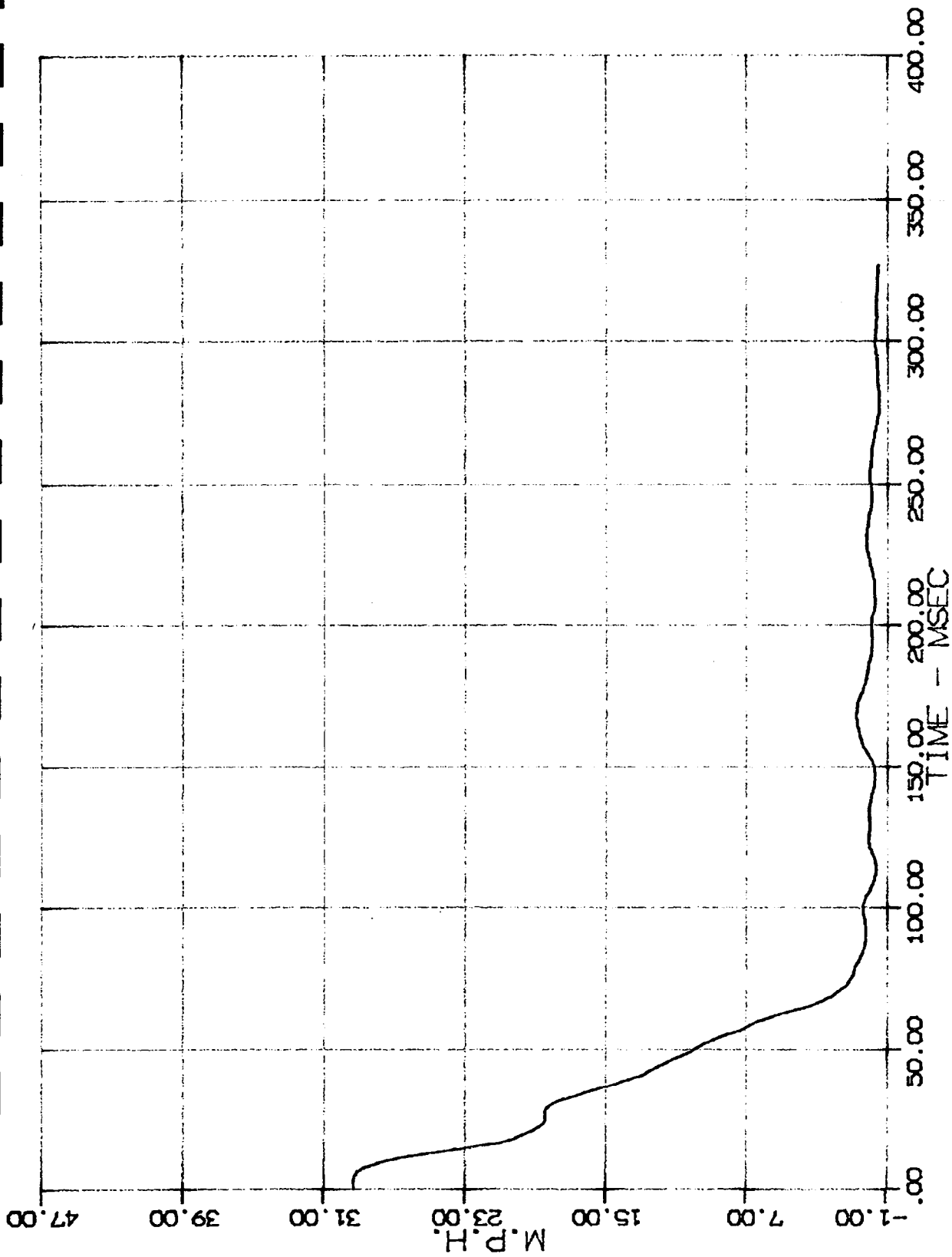
03 AC 01 N RFF X IN1
MSE NO1132 1982 CHEVROLET S-10 PICKUP 12/07/82



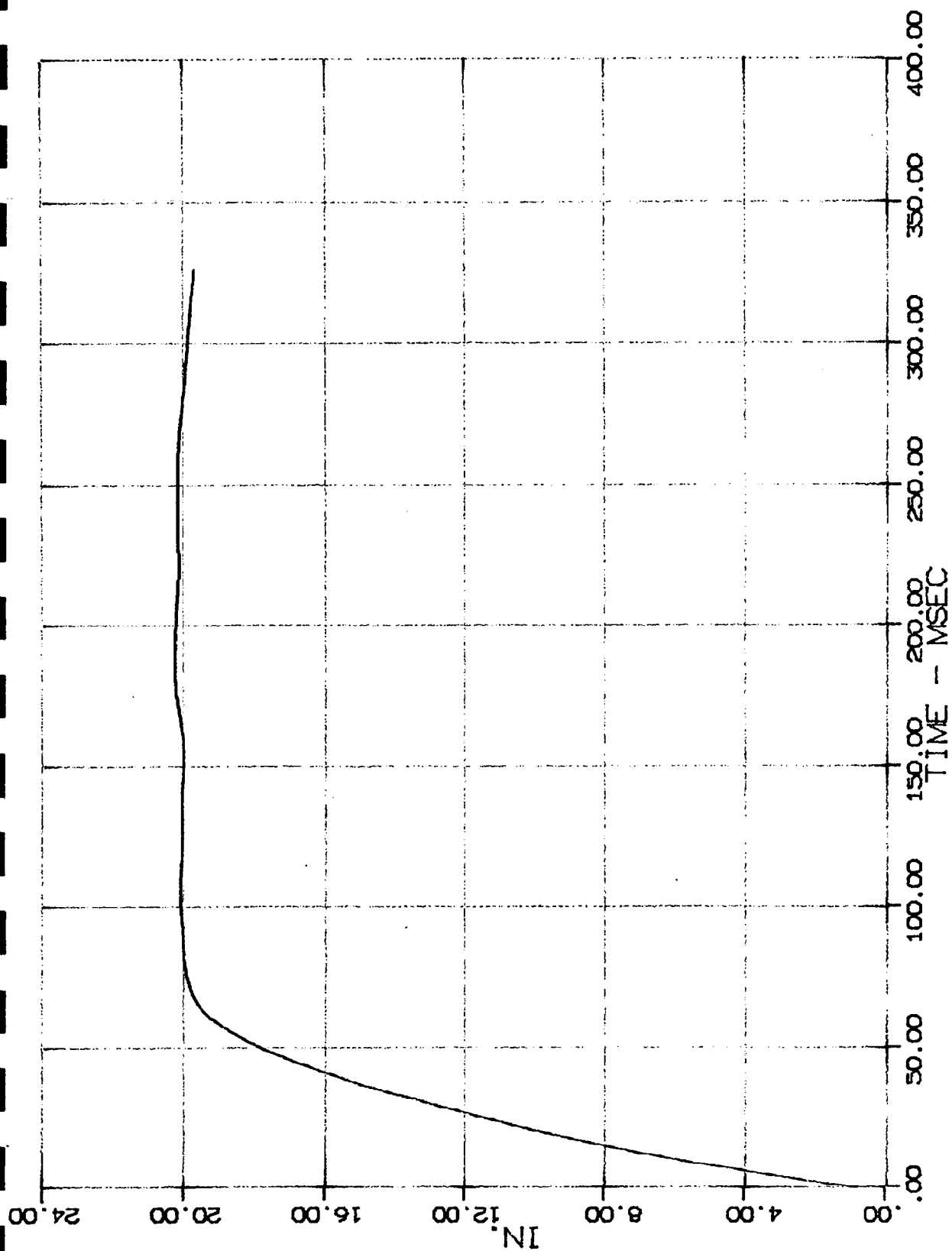
03 AC 01 N RFF X IN2
MSE NO1132 1982 CHEVROLET S-10 PICKUP
12/07/82



04 PC 01 N LRF X
MSE NO1132 1982 CHEVROLET S-10 PICKUP
12/07/82



04 PC 01 N LRF X IN1
 MSE NO1132 1982 CHEVROLET S-10 PICKUP
 12/07/82



04 AC 01 N LRF X IN2
MSE NO1132 1982 CHEVROLET S-10 PICKUP

12/07/82

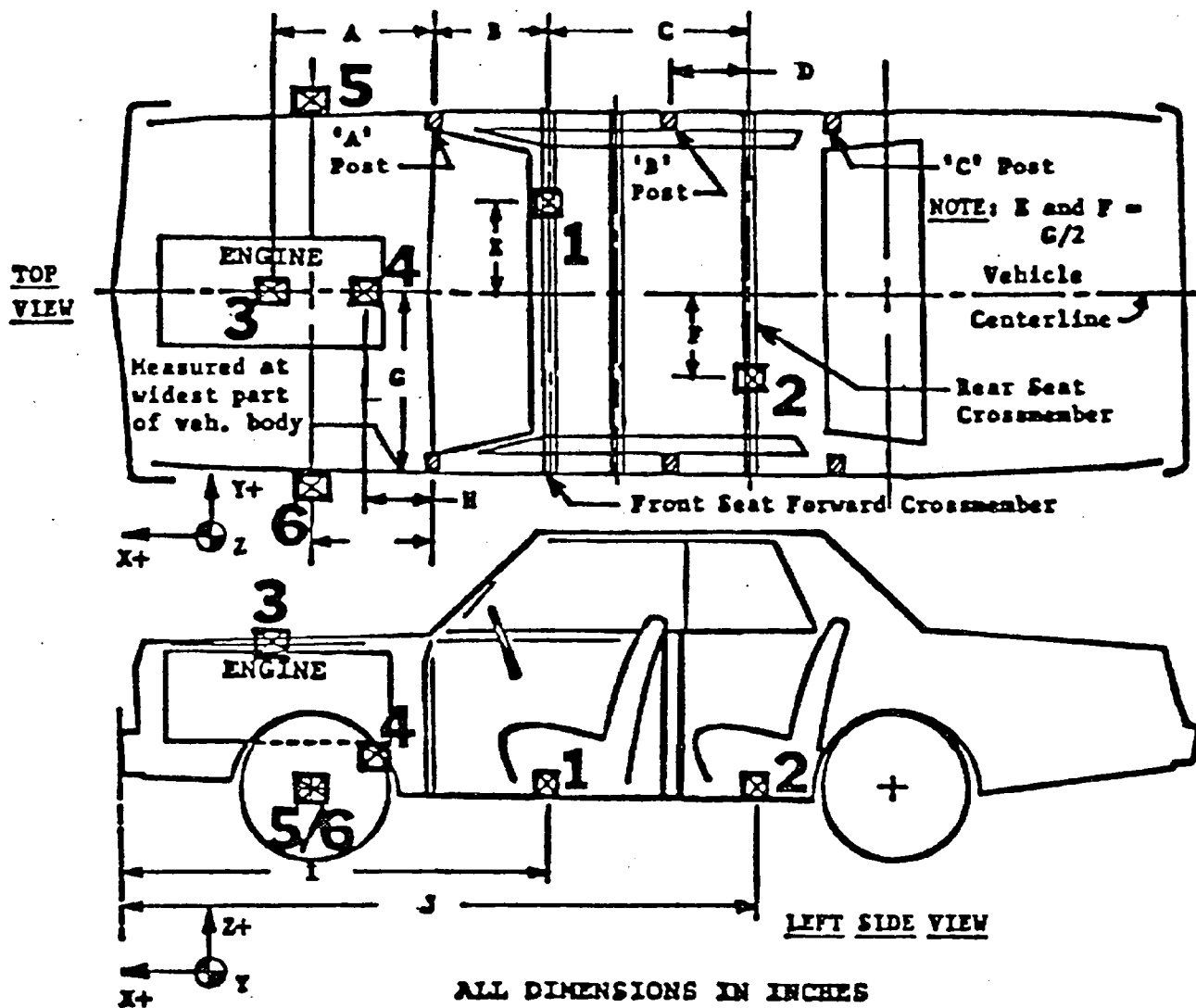
2.14 TEST DATA FOR FORD RANGER PICKUP

NHTSA No.	-	830604
Test Reference No.	-	N02142
Test Date	-	12/10/82

FORD RANGER PICKUP
VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	12/10/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 14
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.3
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	62
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	2
23. VEHICLE MODEL	22
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-ILF
26. ENGINE DISPLACEMENT	2.3 LITER
27. TRANSMISSION TYPE	MF
28. BODY TYPE	PU
29. TEST WEIGHT	2493
30. WHEELBASE (IN.)	108.0
31. VEHICLE LENGTH (IN.)	175.2
32. VEHICLE WIDTH (IN.)	65.0
33. C.G. DIST. BEHIND FRONT AXLE	42.2
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.3
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	65.0
47. POINT NO. 1	12.0
48. POINT NO. 2	12.2
49. POINT NO. 3	12.4
50. POINT NO. 4	12.6
51. POINT NO. 5	12.8
52. POINT NO. 6	13.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	13.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	-

59. HEIGHT OF BARRIER IF MOVING	0
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRT0	0.0
102. NO. OF POINTS	2654
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.3
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRT0	0.0
117. NO. OF POINTS	2654
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.3
123. QUALITY	GOOD,ZERO OFFSET

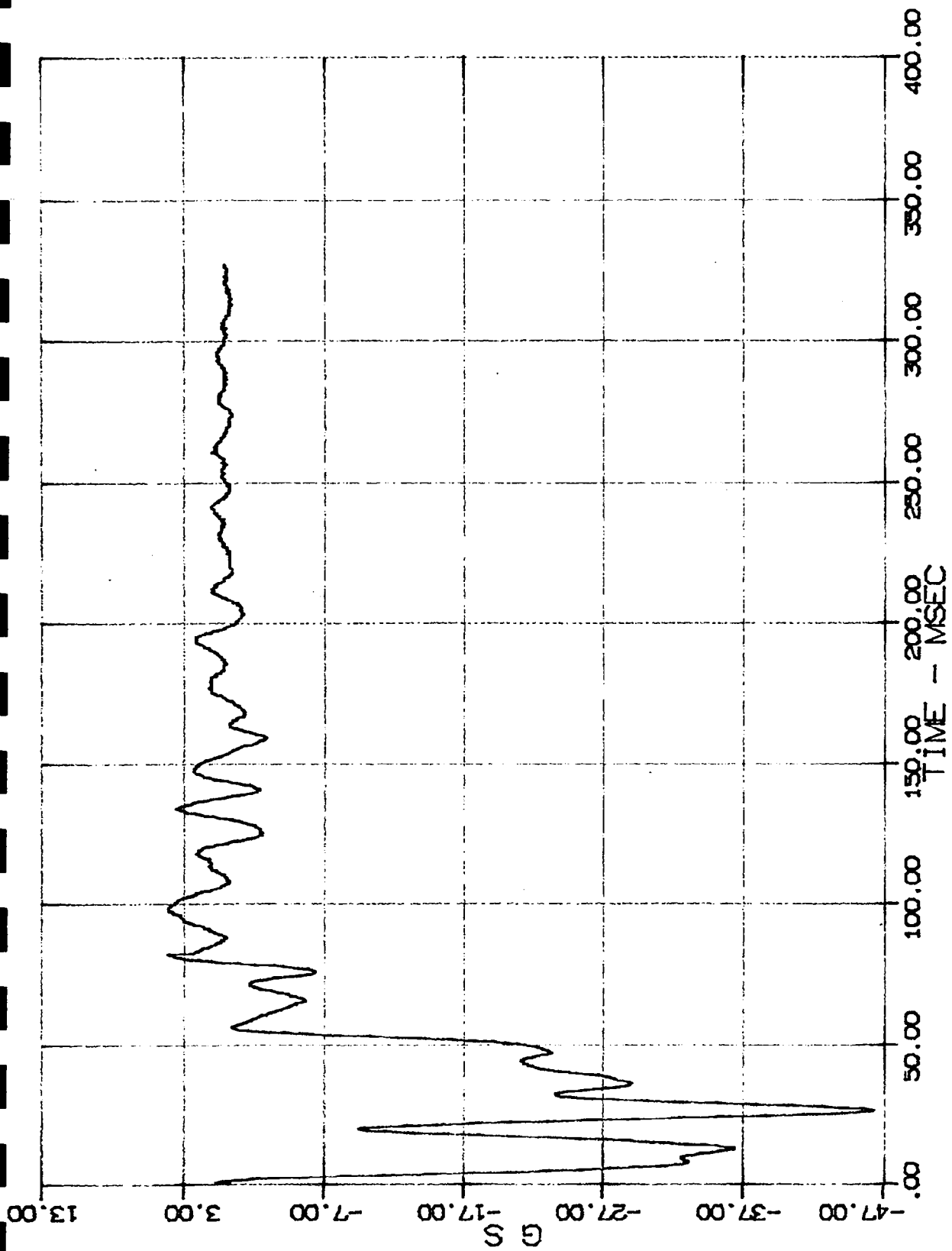


ALL DIMENSIONS IN INCHES

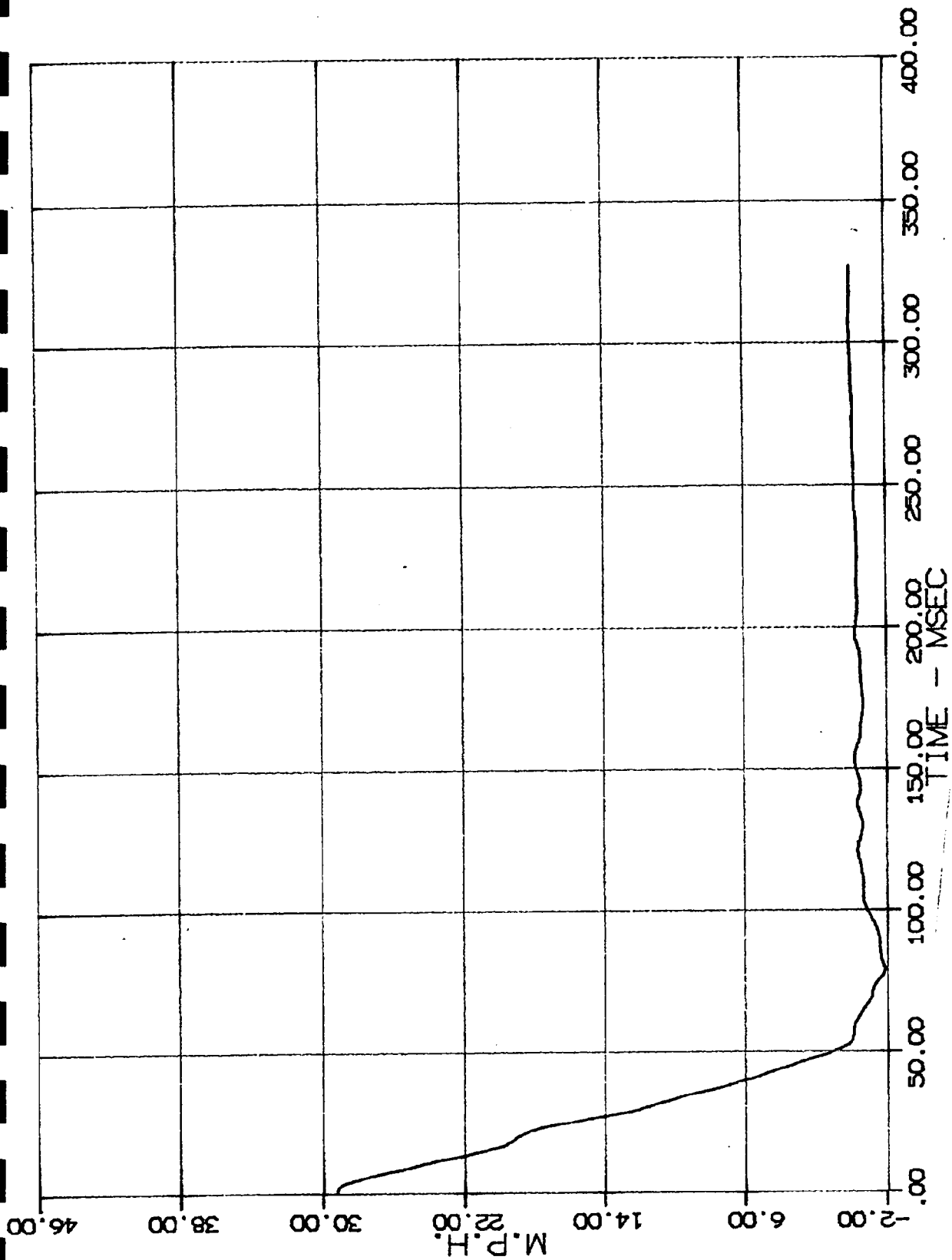
DIMENSION	LENGTH (in.)
E - G/2	18.75 in.
F - G/2	19.25 in.
G	32.5 in.
I	74.5 in.
J	85.5 in.

ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-	+	-			
2	Below Front Seat Area	●			+	-	+	-			

FORD RANGER PICKUP
VEHICLE ACCELEROMETER LOCATIONS

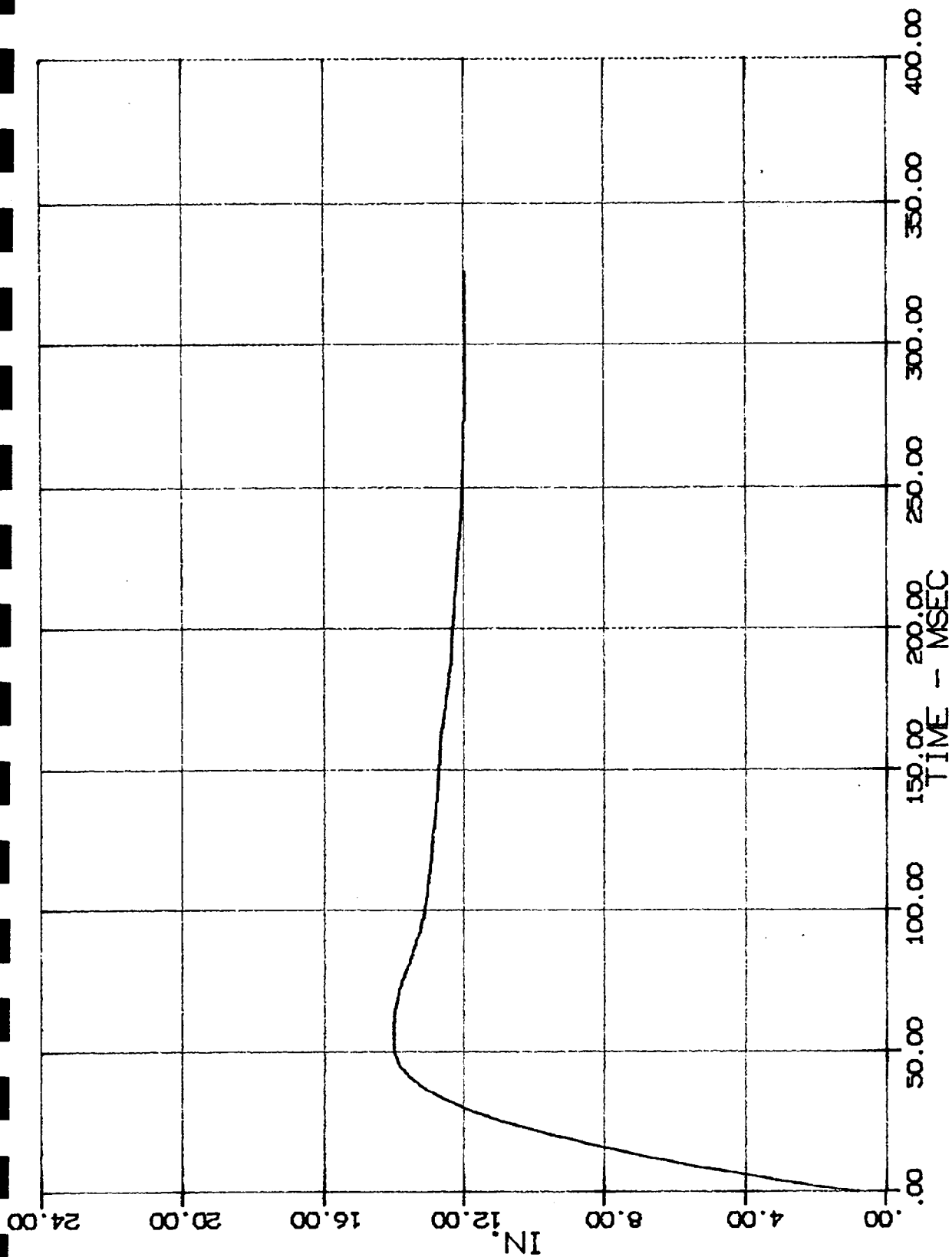


03 AC 01 N RFF X
MSE NO2142 1982 FORD RANGER PICKUP 12/10/82

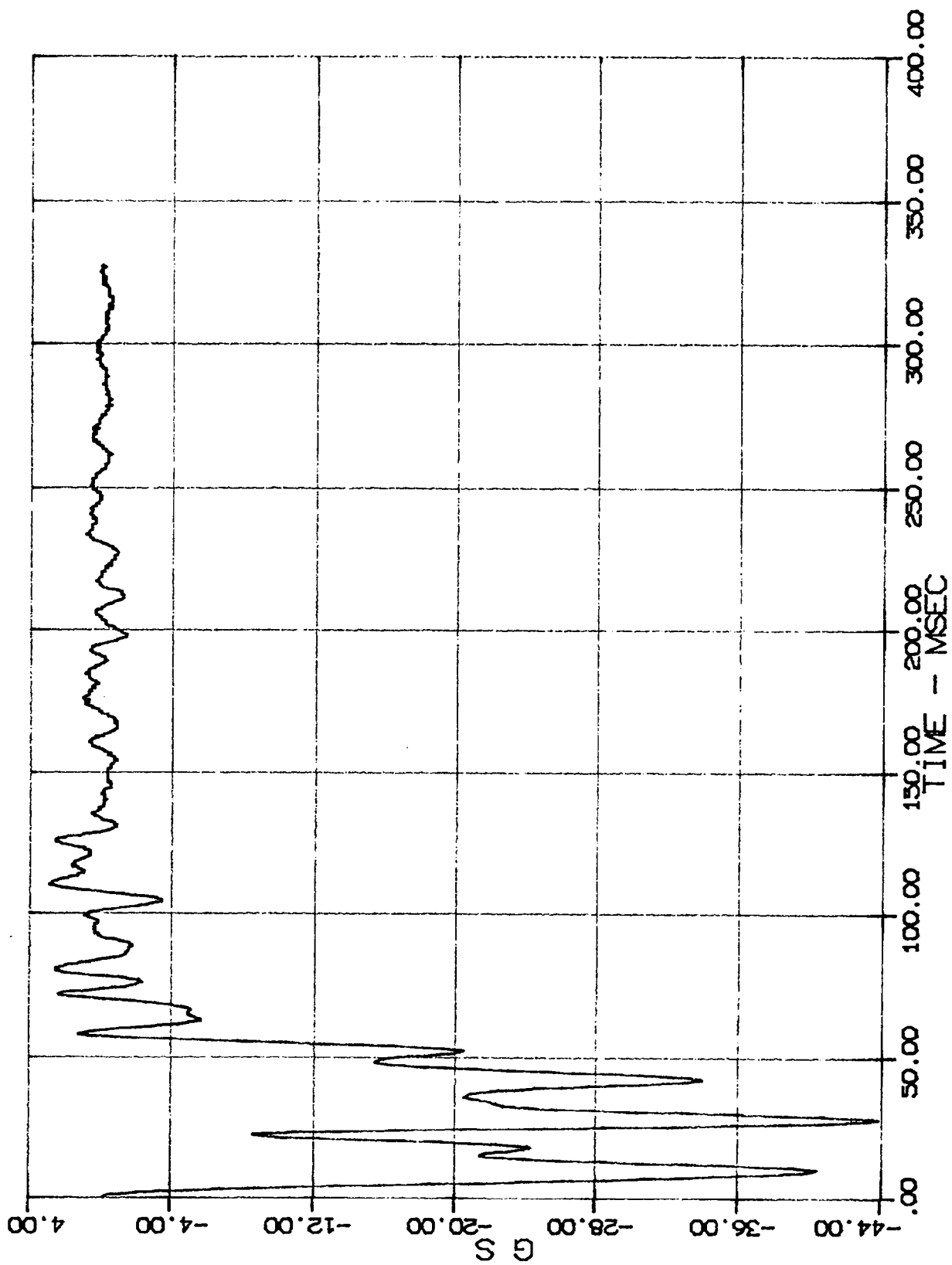


03 AC 01 N RFF X IN1
MSE NO2142 1982 FORD RANGER PICKUP

12/10/82

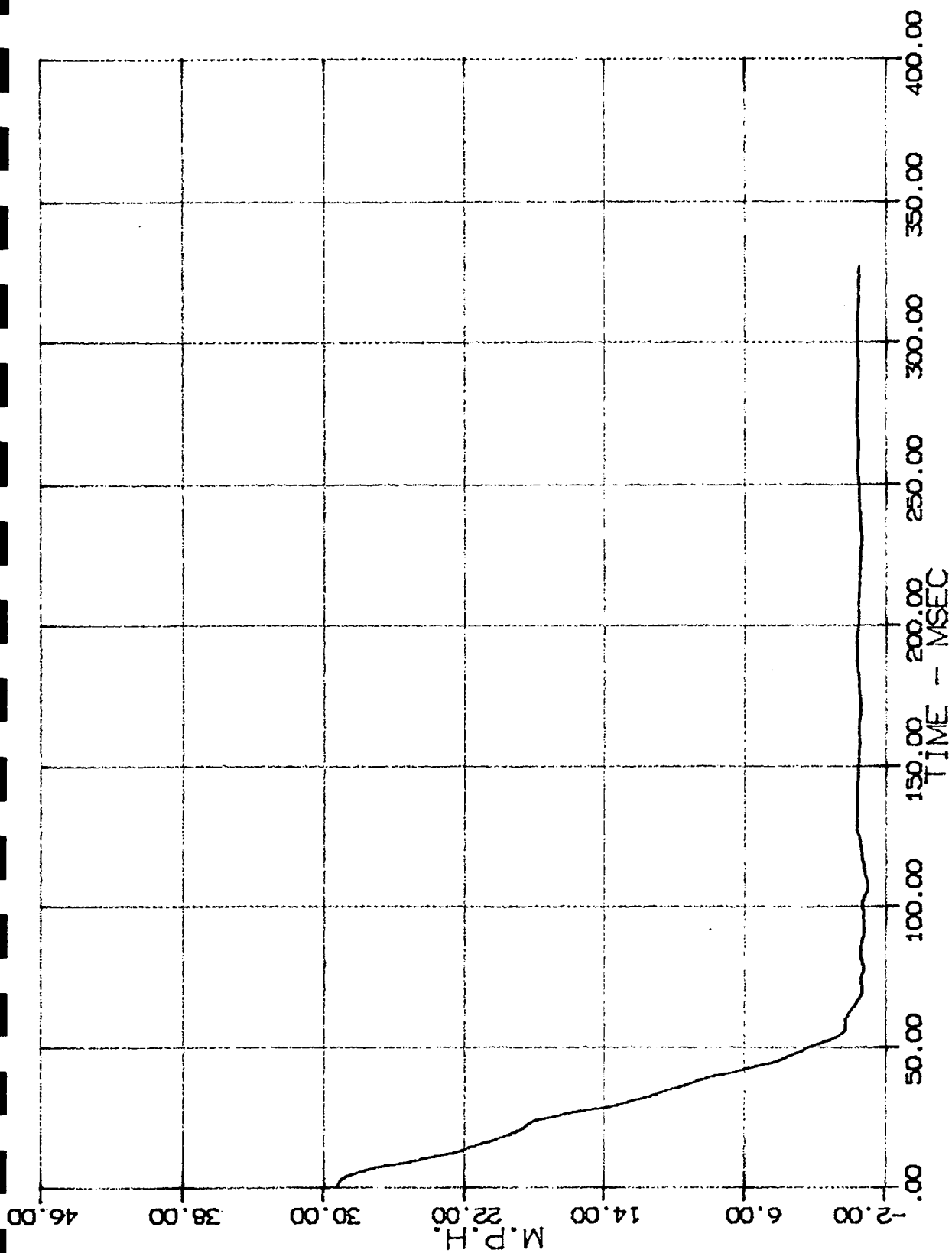


03 PC 01 N RFF X 1N2
MSE ND2142 1982 FORD RANGER PICKUP
12/10/82

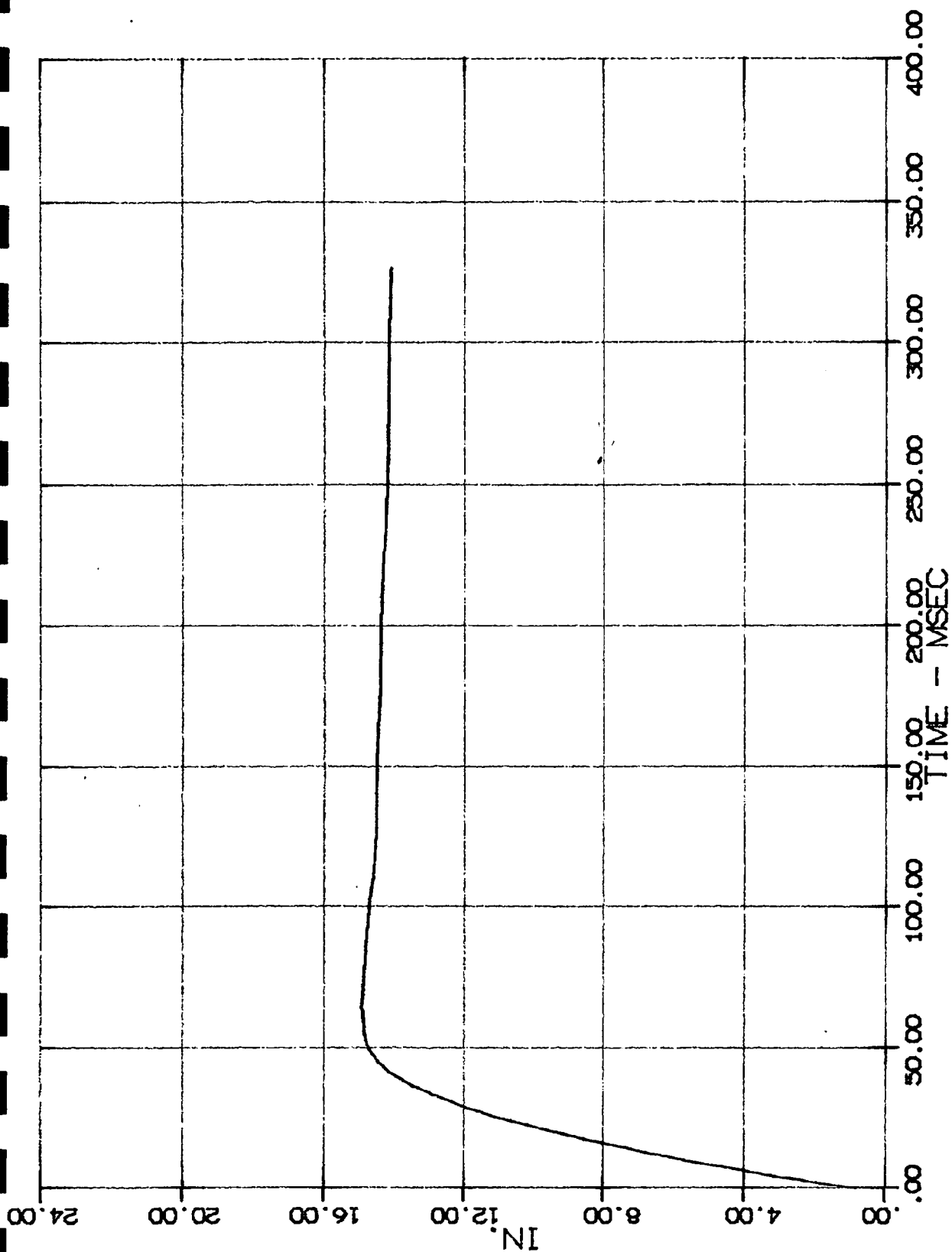


04 FC 01 N LRF X
MSE NO2142 1982 FORD RANGER PICKUP

12/10/82



04 PC 01 N LRF X IN1
MSE NO2142 1982 FORD RANGER PICKUP
12/10/82



04 AC 01 N LRF X IN2
MSE ND2142 1982 FORD RANGER PICKUP

12/10/82

2.15 TEST DATA FOR TOYOTA PICKUP

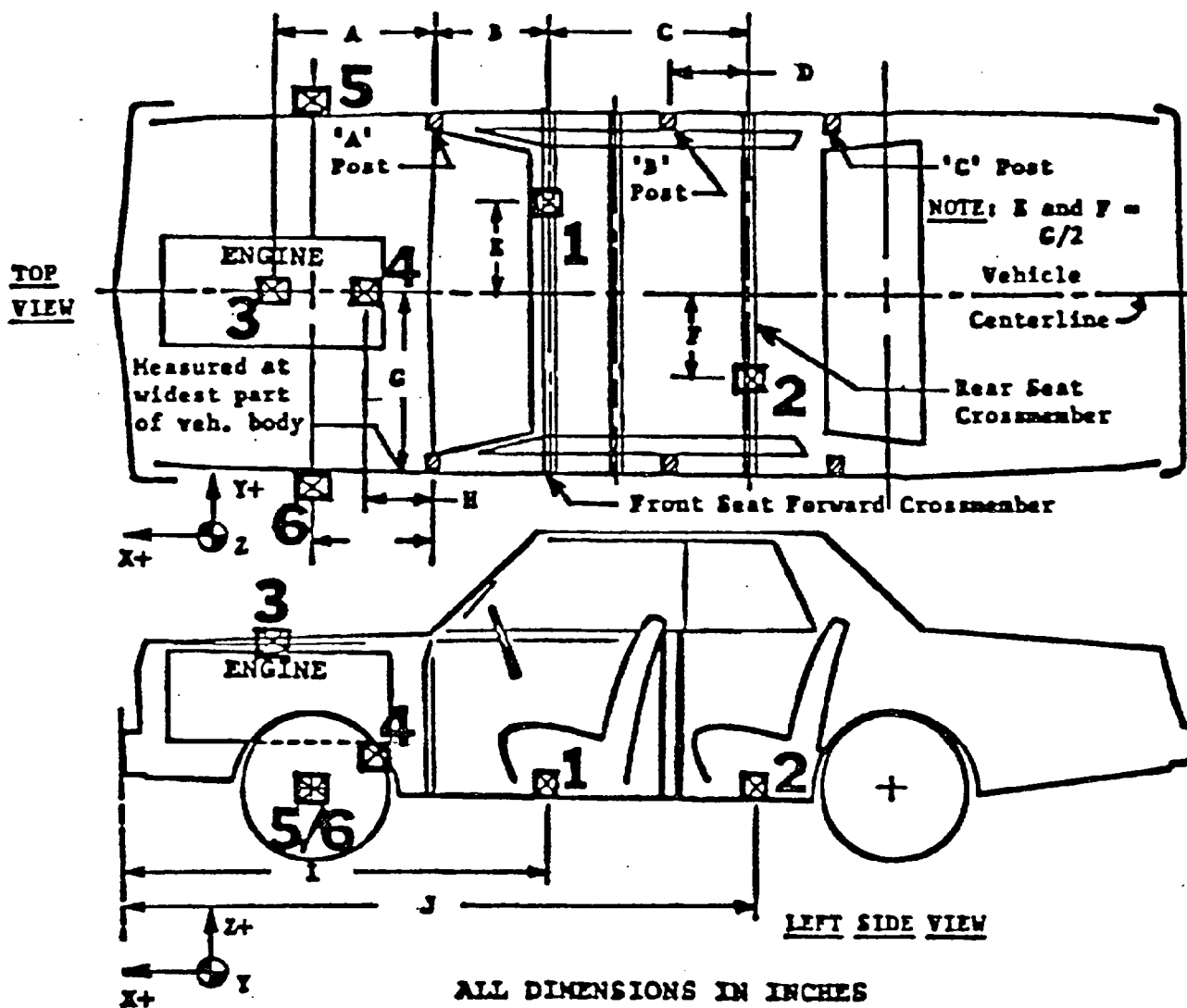
NHTSA No.	-	820627
Test Reference No.	-	N16152
Test Date	-	12/15/82

TOYOTA PICKUP

VEHICLE AND DESCRIPTIVE TEST DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	12/15/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 15
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	USB
10. CLOSING SPEED	29.1
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	62
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	16
23. VEHICLE MODEL	9
24. VEHICLE YEAR	82
25. ENGINE TYPE	4-ILF
26. ENGINE DISPLACEMENT	144.4 CU IN
27. TRANSMISSION TYPE	MF
28. BODY TYPE	PU
29. TEST WEIGHT	2404
30. WHEELBASE (IN.)	102.2
31. VEHICLE LENGTH (IN.)	171.5
32. VEHICLE WIDTH (IN.)	63.3
33. C.G. DIST. BEHIND FRONT AXLE	41.4
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.1
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	63.3
47. POINT NO. 1	13.0
48. POINT NO. 2	13.2
49. POINT NO. 3	13.4
50. POINT NO. 4	13.6
51. POINT NO. 5	13.8
52. POINT NO. 6	14.0
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	14.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0
58. ABSOLUTE SPEED OF BARRIER	0.0

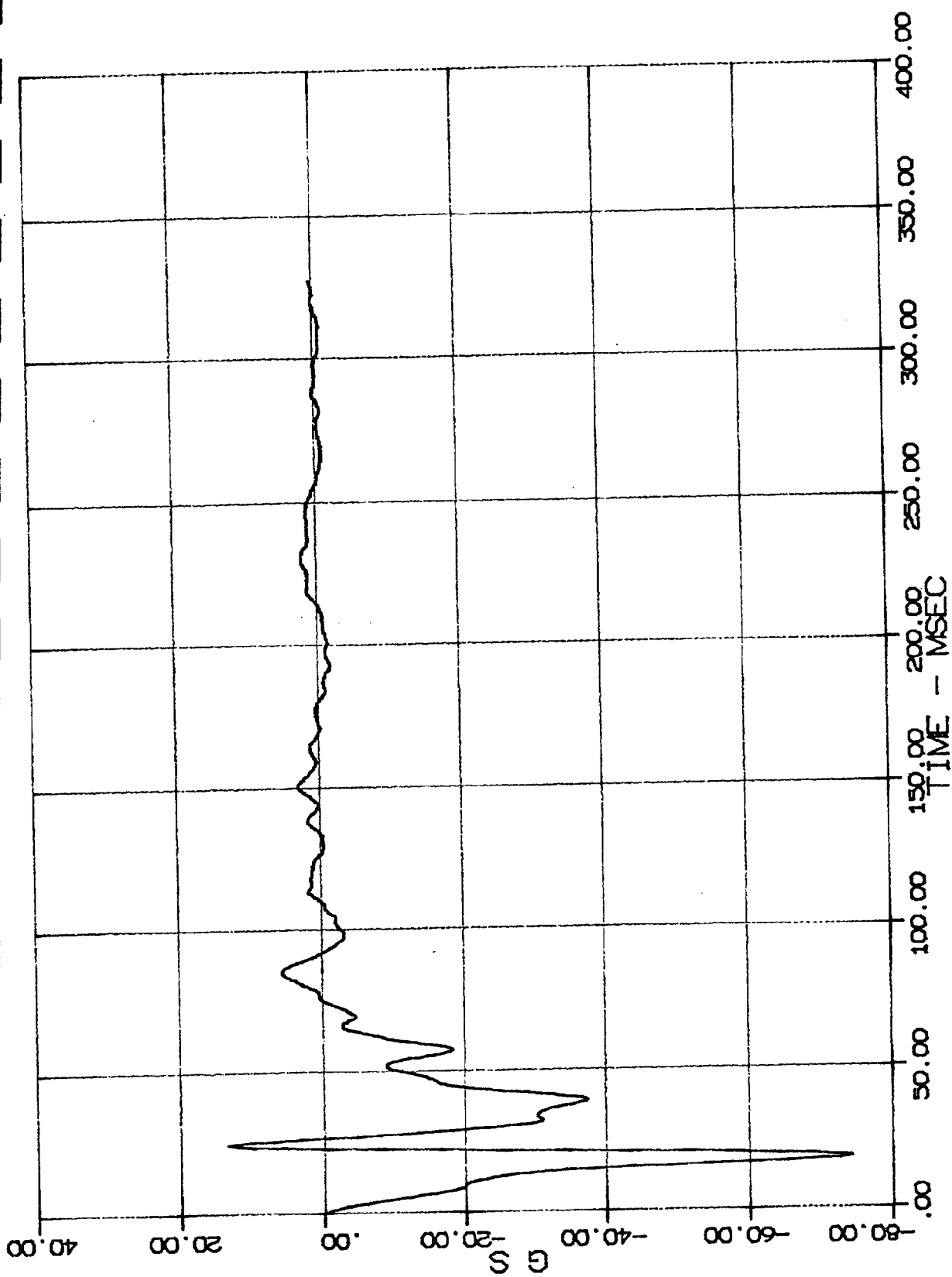
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRTO	0.0
102. NO. OF POINTS	2842
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.1
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRTO	0.0
117. NO. OF POINTS	2842
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.1
123. QUALITY	GOOD ,ZERO OFFSET



DIMENSION	LENGTH (in.)
$E = G/2$	19.3 in.
$F = G/2$	23.4 in.
G	31.7 in.
I	64.0 in.
J	77.0 in.

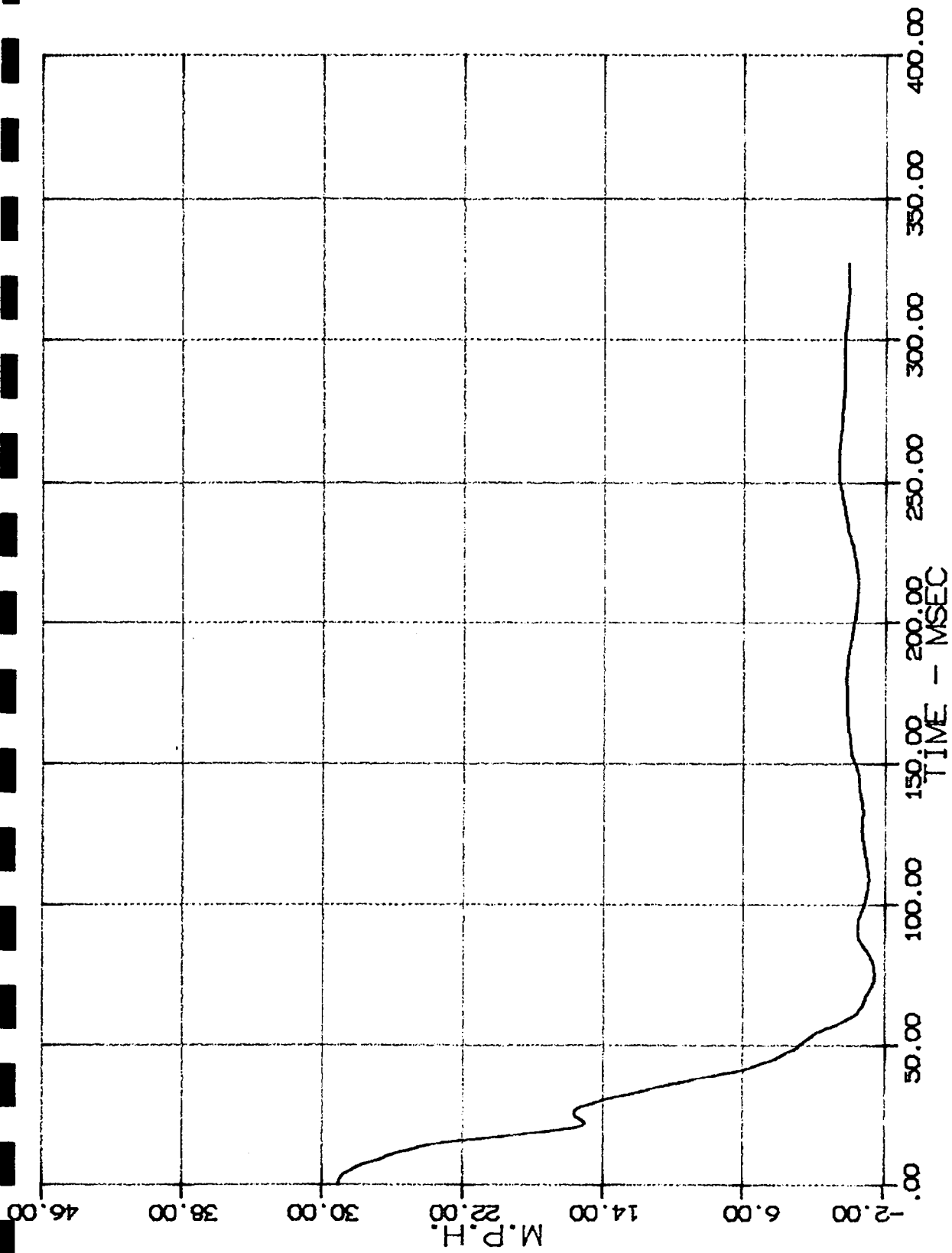
ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	+			+	-					
2	Below Front Seat Area	+			+	-					

TOYOTA PICKUP
VEHICLE ACCELEROMETER LOCATIONS



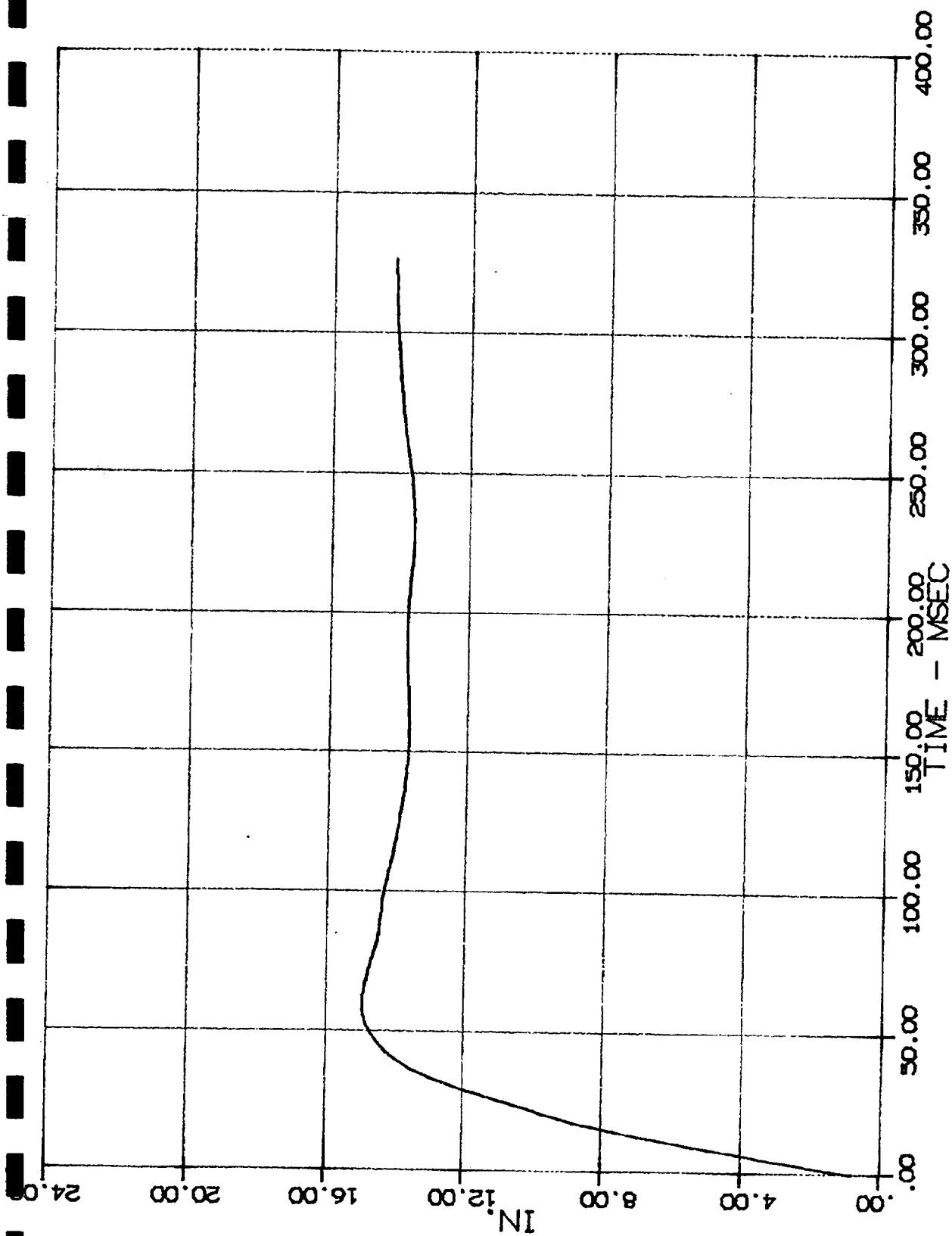
03 AC 01 N RFF X
MSE N16152 1982 TOYOTA PICKUP

12/15/82



03 AC 01 N RFF X IN1
MSE N16152 1982 TOYOTA PICKUP

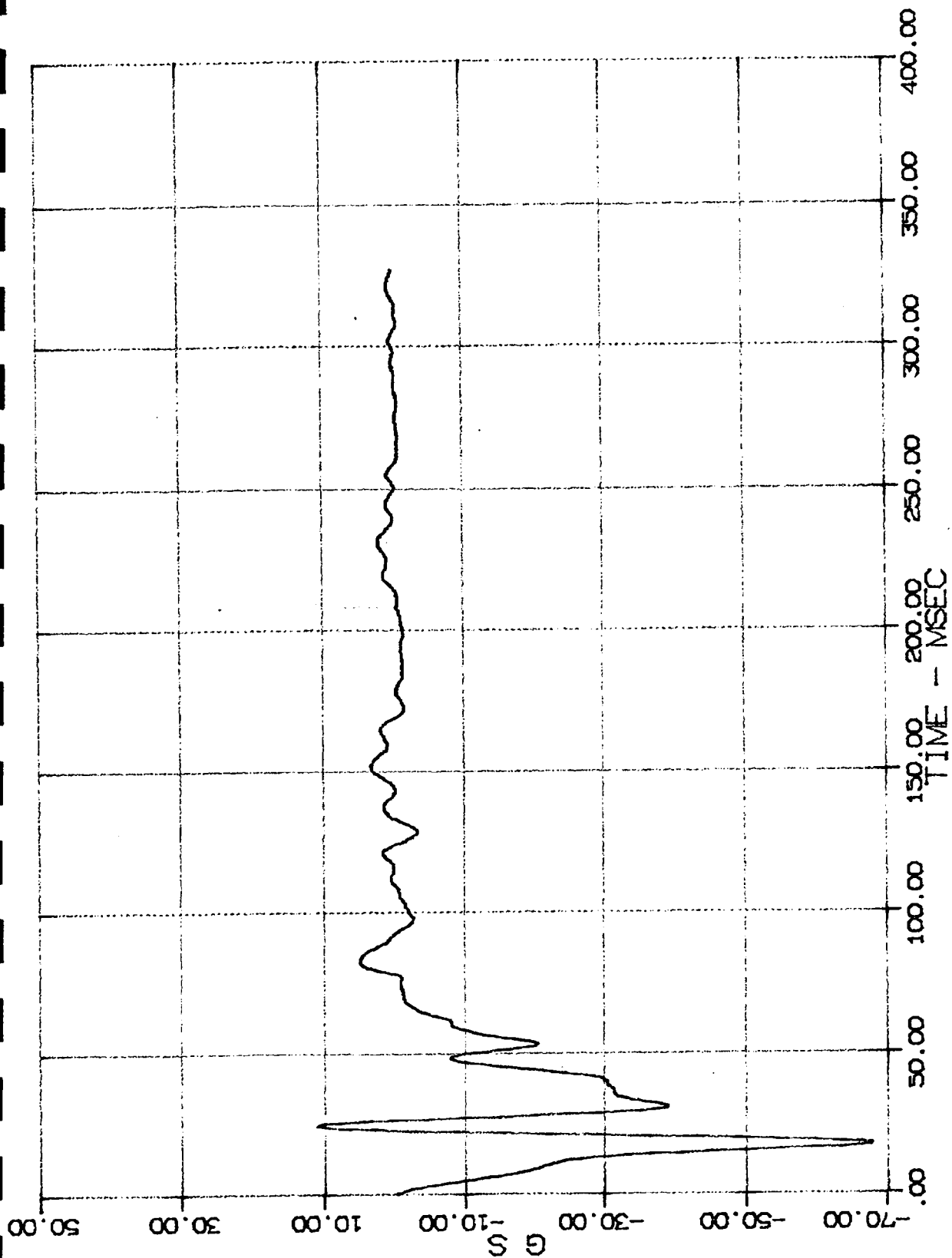
12/15/82



641

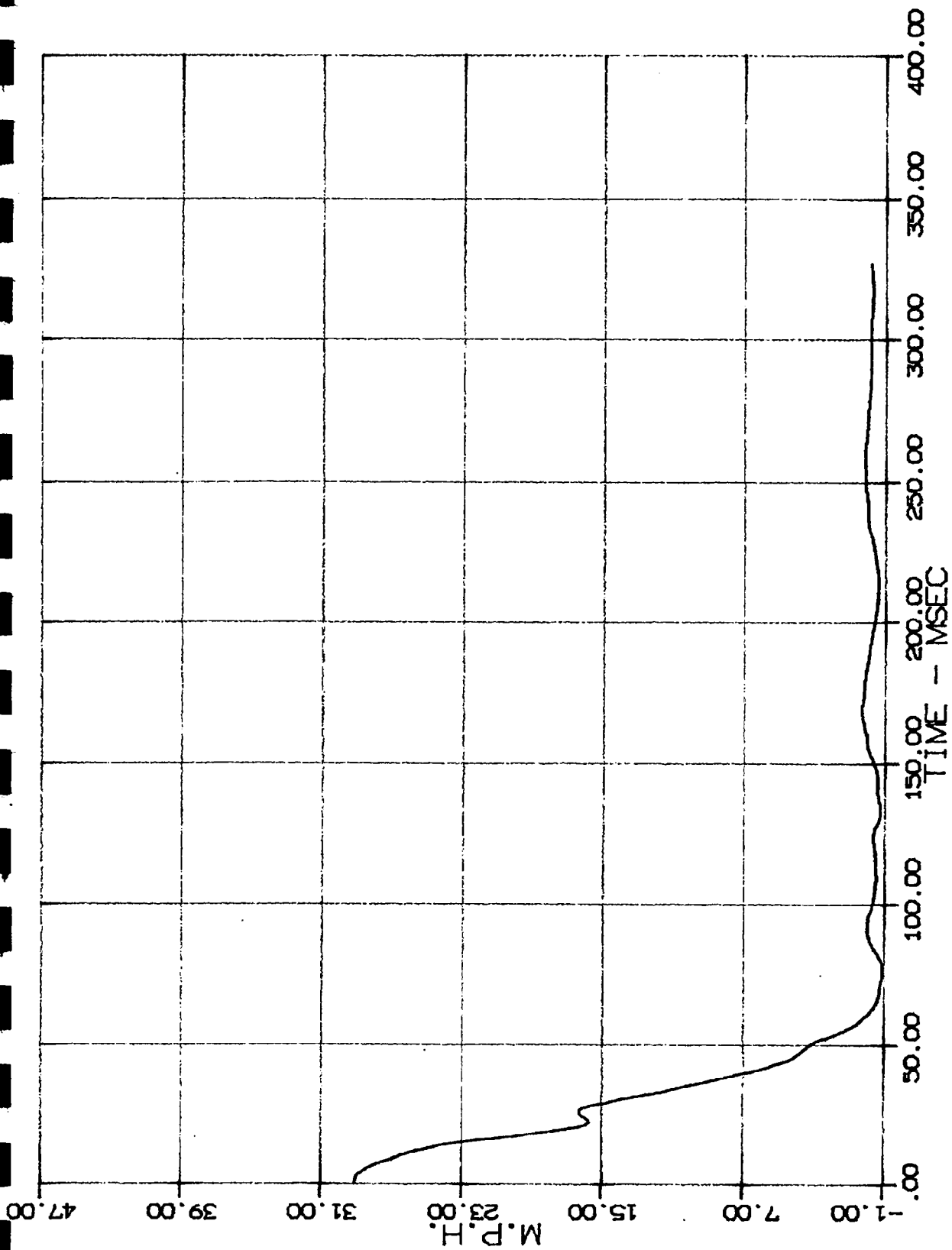
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MSE N16152 1982 TOYOTA PICKUP

12/15/82



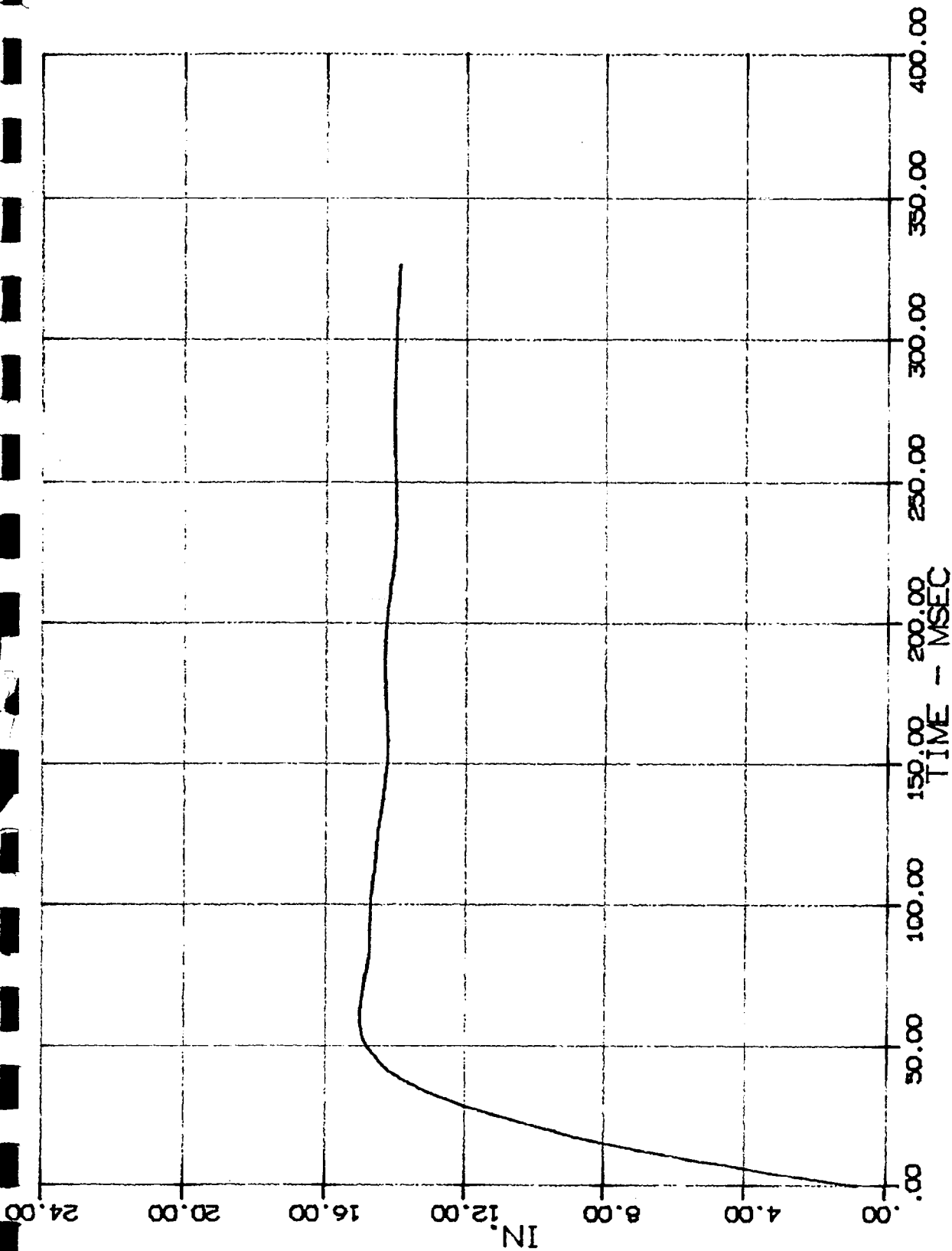
04 AC 01 N LRF X
MSE N16152 1982 TOYOTA PICKUP

12/15/82



04 AC 01 N LRF X IN1
MSE N16152 1982 TOYOTA PICKUP

12/15/82



04 AC 01 N LRF X IN2
MSE N16152 1982 TOYOTA PICKUP

12/15/82

DOT 517

COPY

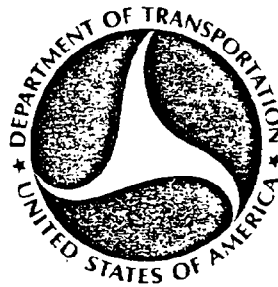
P2152-01AC

Report No. 204-MS-82-01-TR- AC

DOT 517

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SOG 15
TEST

ADD-ON ACCELERATION MEASUREMENTS
PASSENGER CARS
FMVSS 204



December 1982

FINAL REPORT

Prepared Under Contract No. DTNH22-82-C-07481

For

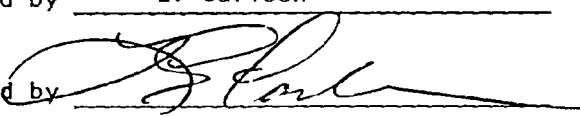
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
Office of Vehicle Safety Compliance
400 Seventh Street, S.W.
Washington, D.C. 20590

By

MOBILITY SYSTEMS AND EQUIPMENT COMPANY
6151 West Century Boulevard, Suite 912
Los Angeles, California 90045

Prepared for the Department of Transportation,
National Highway Traffic Safety Administration under
Contract No. DTNH22-82-D-01105. This document is
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Prepared by L. Carlson

Approved by 

Date 1/4/83

Report Accepted by:

Contract Technical Manager
Office of Vehicle Safety Compliance

Date

1. REPORT NO. 204-MS-82-01-TR-AC		2. GOVERNMENT ACCESSION NO.	
		3. RECIPIENT'S CATALOG NO.	
4. TITLE AND SUBTITLE Add-On Acceleration Measurements Passenger Cars - FMVSS 204		5. REPORT DATE December 1982	
		6. PERFORMING ORGANIZATION CODE	
7. AUTHOR (S) Lloyd E. Carlson, P.E.		8. PERFORMING ORGANIZATION REPORT NO. P2152-01AC	
9. PERFORMING ORGANIZATION NAME AND ADDRESS MOBILITY SYSTEMS AND EQUIPMENT COMPANY 6151 West Century Boulevard, Suite 912 Los Angeles, California 90045		10. WORK UNIT NO.	
		11. CONTRACT AND GRANT NO. DTNH22-82-C-07481	
12. SPONSORING AGENCY NAME AND ADDRESS U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION Office of Vehicle Safety Compliance 400 Seventh Street, S.W. Washington, D.C. 20590		13. TYPE OF REPORT AND PERIOD COVERED FINAL	
		14. SPONSORING AGENCY CODE	
15. SUPPLEMENTARY NOTES			
16. ABSTRACT Two channels of acceleration measurements were recorded on each of 15 vehicles subject to FMVSS 204 testing. The accelerometers were located on the front and rear floor pan areas of the vehicles.			
17. KEY WORDS FMVSS 204 Acceleration Measurement		18. DISTRIBUTION STATEMENT Copies of this report are available from-- Technical Reference Division Nat'l Hwy Traffic Safety Admin. Room 5108, Nassif Building 400 7th St. SW, Wash. D.C. 20590	
19. SECURITY CLASSIF. (of this report)	20. SECURITY CLASSIF. (of this page)	21.	22.

TEST DATA REPORT
FMVSS 204
ADD-ON ACCELEROMETER MEASUREMENTS

SECTION 1
INTRODUCTION

A series of 15 FMVSS 204 tests was conducted for NHTSA. As an add-on to these tests, two channels of acceleration data were measured for each test. The vehicles tested are listed in Section 2. All tests were conducted in 1982.

Two channels of data were successfully recorded for each test. All data were of good quality except the data for the Nissan Sentra vehicle, NHTSA No. 820547. The data for this test exhibited large zero offsets that occurred sometime following impact. Corrections were made to achieve meaningful acceleration values. However, the first and second integrals (velocity and displacement) yield questionable values. All other test data required minor (less than 10% amplitude) zero offset corrections to achieve correct velocity and displacement response.

The data for all 15 tests are presented in Section 2. For each vehicle, the vehicle and test descriptive data and the time history data (6 channels, 2 acceleration, 2 velocity and 2 displacement) are presented. The descriptive and time history data were also written to tape in accordance with the NHTSA specified format. The 15 separate data tapes are included as part of this data report.

DOT0517

2.1 TEST DATA FOR OLDSMOBILE CUTLASS SUPREME

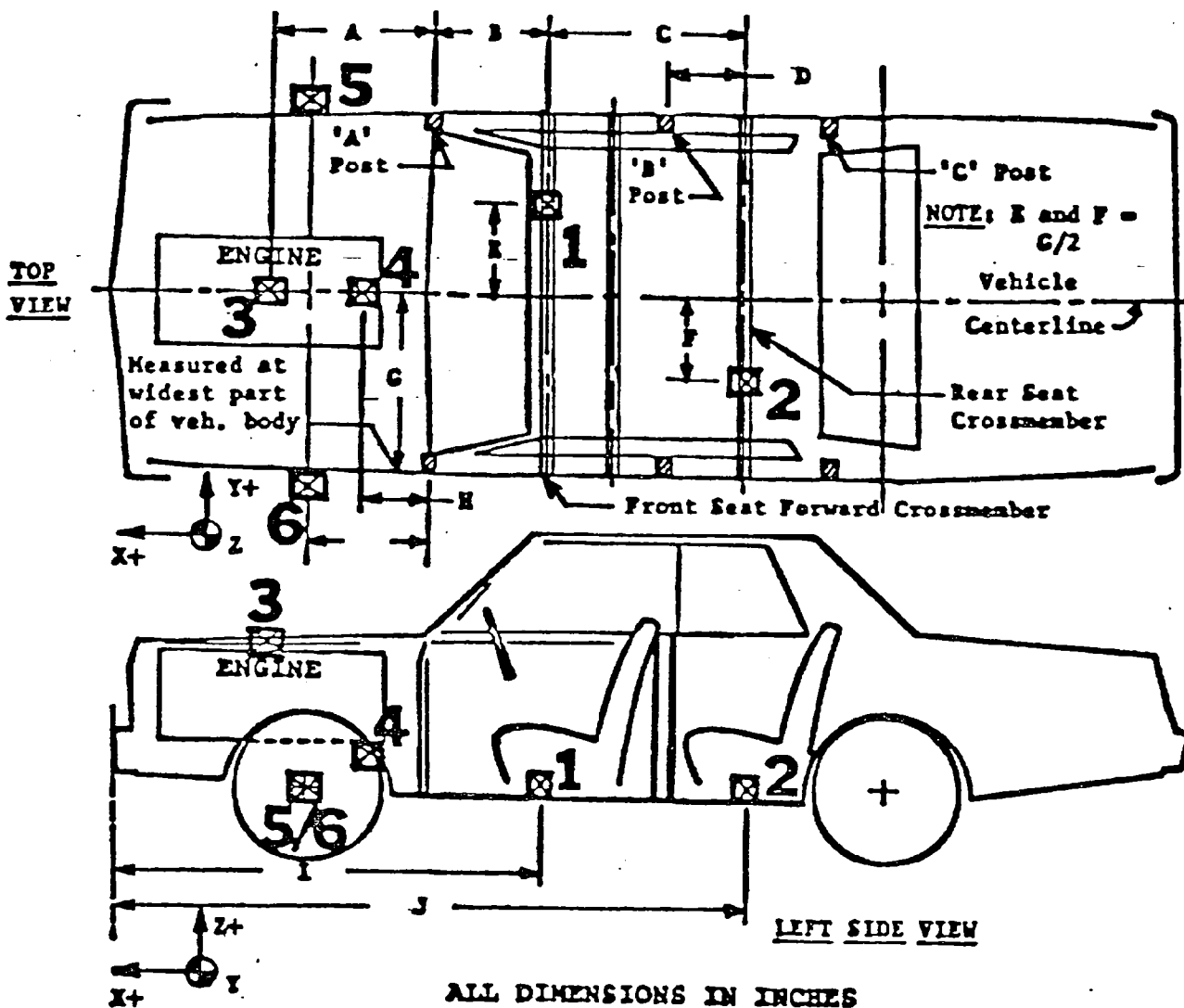
NHTSA No.	-	820121
Test Reference No.	-	N06012
Test Date	-	09/18/82

TEST#517

OLDSMOBILE CUTLASS SUPREME
VEHICLE AND TEST DESCRIPTIVE DATA

1. TEST TITLE	FMVSS204
2. TEST DATE (MM/DD/YY)	09/18/82
3. TEST PERFORMER	MSE
4. CONTRACT NUMBER	DTNH2282D01105
5. TEST REFERENCE NO.	TEST 01
6. TEST OBJECTIVES	DETERMINE COMPL. TO FMVSS204
7. (CONT)	AND MEASURE 2 ACCEL. CH. ON VEHICLE
8. TEST TYPE	COM
9. TEST CONFIGURATION	VSB
10. CLOSING SPEED	29.4
11. IMPACT ANGLE	0
12. OFFSET DISTANCE	999.9
13. SIDE IMPACT POINT (INCHES)	999.9
14. TEST TRACK SURFACE	ASH
15. TEST TRACK CONDITION	DRY
16. AMBIENT TEMPERATURE (F)	89
17. RECORDER TYPE	FMT
18. DATA LINK	UMB
19. TEST ANOMALIES	ENG
20. DESCRIPTION OF OTHER ANOMALY	
21. VEHICLE I.D. NUMBER	1
22. VEHICLE MAKE	6
23. VEHICLE MODEL	5
24. VEHICLE YEAR	82
25. ENGINE TYPE	V6-IL
26. ENGINE DISPLACEMENT	3.8 LITER
27. TRANSMISSION TYPE	AR
28. BODY TYPE	25
29. TEST WEIGHT	3271
30. WHEELBASE (IN.)	108.1
31. VEHICLE LENGTH (IN.)	201.3
32. VEHICLE WIDTH (IN.)	71.0
33. C.G. DIST. BEHIND FRONT AXLE	47.0
34. STEERING COL. TO DASH	S
35. STEERING COL. COLLAPSE MECH.	CYL
36. VEHICLE MODIFICATION INDIC.	P
37. GEN. DESCR. OF MODIFICATIONS	
38. (CONT)	
39. VEHICLE ABSOLUTE SPEED	29.4
40. TRAVEL ANGLE	0
41. DIRECTION OF IMPACT FORCE	0
42. DAMAGE INDEX	12FDEW3
43. BUMPER ENGAGEMENT	9
44. SILL ENGAGEMENT	9
45. PILLAR ENGAGEMENT	9
46. LENGTH OF CONTACT DAMAGE	71.0
47. POINT NO. 1	22.0
48. POINT NO. 2	21.9
49. POINT NO. 3	21.8
50. POINT NO. 4	21.7
51. POINT NO. 5	21.6
52. POINT NO. 6	21.5
53. DIST. DAMAGE CENTER TO C.G.	0.0
54. MAXIMUM CRUSH DISTANCE	22.0
55. TYPE OF BARRIER	FFB
56. DIAMETER OF POLE BARRIER	0.0
57. ANGLE OF BARRIER	0

59. HEIGHT OF BARRIER IF ROLLING	0
60. RIGID OR YIELDING BARRIER	R
61. ROLLOVER TYPE TEST	9
62. SPEED OF ROLLOVER CART	0.0
63. ANGLE OF ROLLOVER CART	0
64. ORIENTATION ON ROLLOVER CART	0
65. ADDITIONAL DESCRIPTION	
66. (CONTINUED)	
67. VEHICLE OCCUPANT	0
68. SEATING POSITION	0
69. SEAT POSITION (FORE-AFT)	
70. OCCUPANT TYPE	
71. OCCUPANT AGE	0
72. OCCUPANT HEIGHT	0
73. OCCUPANT WEIGHT	0
74. OCCUPANT SIZE PERCENTILE	0
75. OCCUPANT SEX	
76. OCCUPANT SIMULATED AGE	0
77. MANUFACTURER AND SERIAL NO.	
78. (CONTINUED)	
79. HEAD TO WINDSHIELD HEADER	0.0
80. HEAD TO WINDSHIELD	0.0
81. HEAD TO SIDE HEADER	0.0
82. HEAD TO SIDE WINDOW	0.0
83. CHEST TO DASH	0.0
84. CHEST TO STEERING WHEEL	0.0
85. ARM TO DOOR	0.0
86. HIP TO DOOR	0.0
87. KNEES TO DASH	0.0
88. RESTRAINT SYSTEM TYPE	
89. KNEE RESTRAINT DESCRIPTION	
90. AIR BAG/BELT DEPLOYMENT	
91. HEAD CONTACT REGION	
92. CHEST OR ABDOMEN CONTACT REGION	
93. LEF CONTACT REGION	
94. CHANNEL NUMBER	1
95. SENSOR TYPE	AC
96. SENSOR LOCATION	01
97. OCCUPANT	N
98. SENSOR ATTACHED	RFF
99. NATURAL FREQUENCY	6000
100. PREFIL	100
101. DMPRT0	0.0
102. NO. OF POINTS	2860
103. TOPT	360
104. DELTA T	200
105. UNITS	G's
106. AXIS	X
107. INITIAL VELOCITY	29.4
108. QUALITY	GOOD ,ZERO OFFSET
109. CHANNEL NUMBER	2
110. SENSOR TYPE	AC
111. SENSOR LOCATION	01
112. OCCUPANT	N
113. SENSOR ATTACHED	LRF
114. NATURAL FREQUENCY	6000
115. PREFIL	100
116. DMPRT0	0.0
117. NO. OF POINTS	2860
118. TOPT	360
119. DELTA T	200
120. UNITS	G's
121. AXIS	X
122. INITIAL VELOCITY	29.4
123. QUALITY	GOOD,ZERO OFFSET

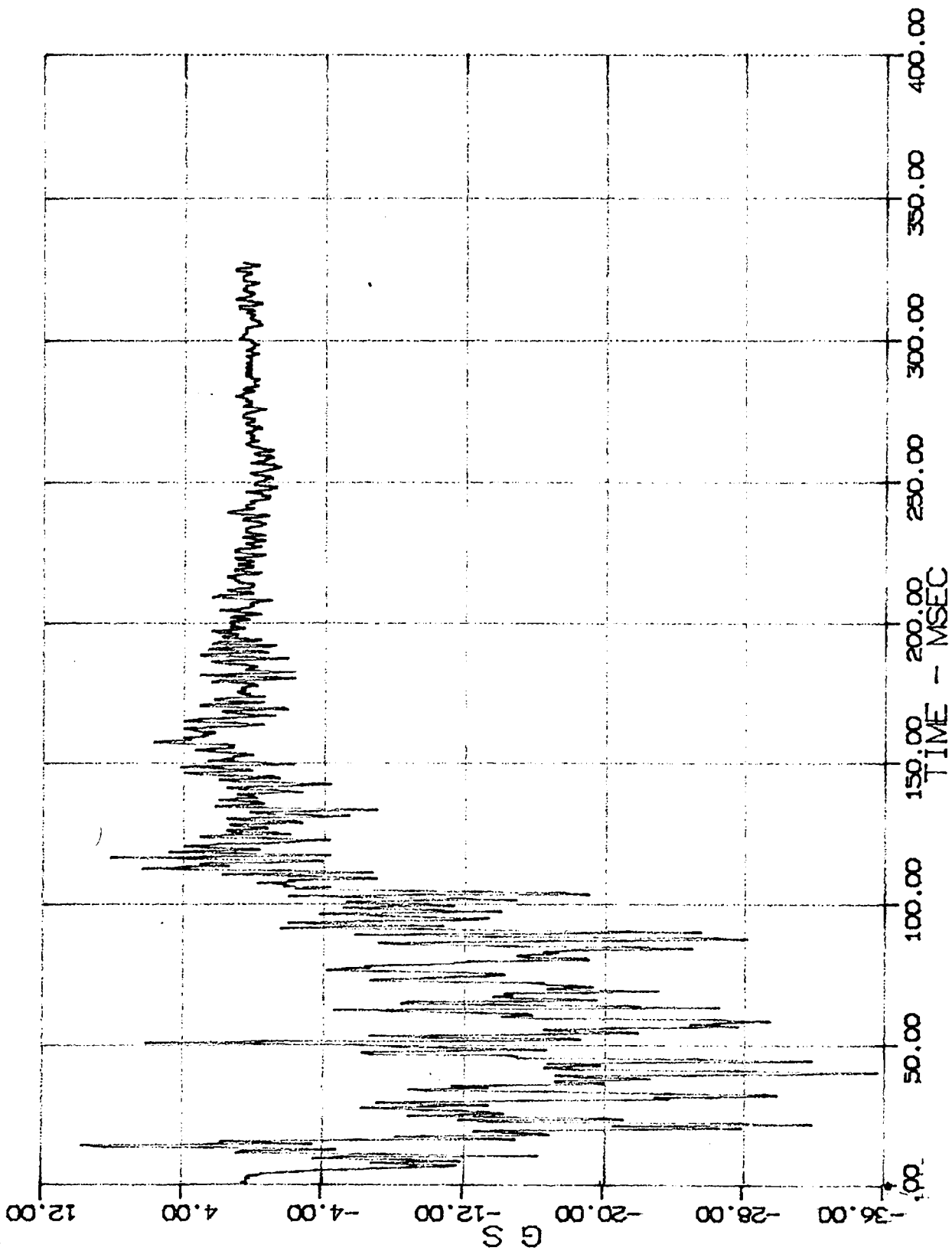


ALL DIMENSIONS IN INCHES

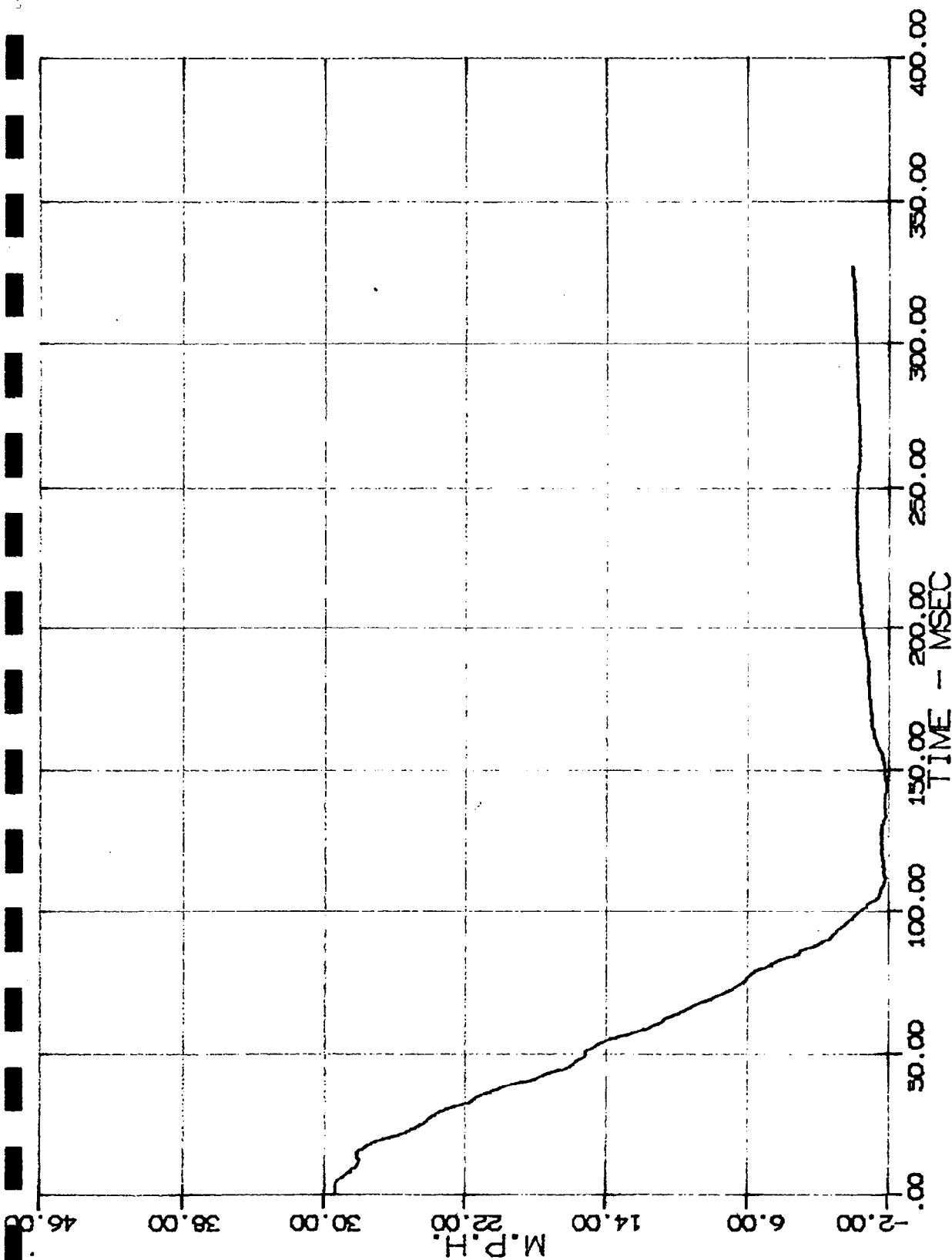
DIMENSION	LENGTH (in.)
$E = C/2$	13 5/8 in.
$F = C/2$	8 3/8 in.
G	29 3/4 in.
I	94 3/16 in.
J	124 1/16 in.

ACCEL. NO.	LOCATION	DIRECT.			PEAK G @						msec.
		X	Y	Z	X+	X-	Y+	Y-	Z+	Z-	
1	Below Front Seat Area	●			+	-					
2	Below Rear Seat Area	●			+	-					

OLDSMOBILE CUTLASS SUPREME
VEHICLE ACCELEROMETER LOCATIONS



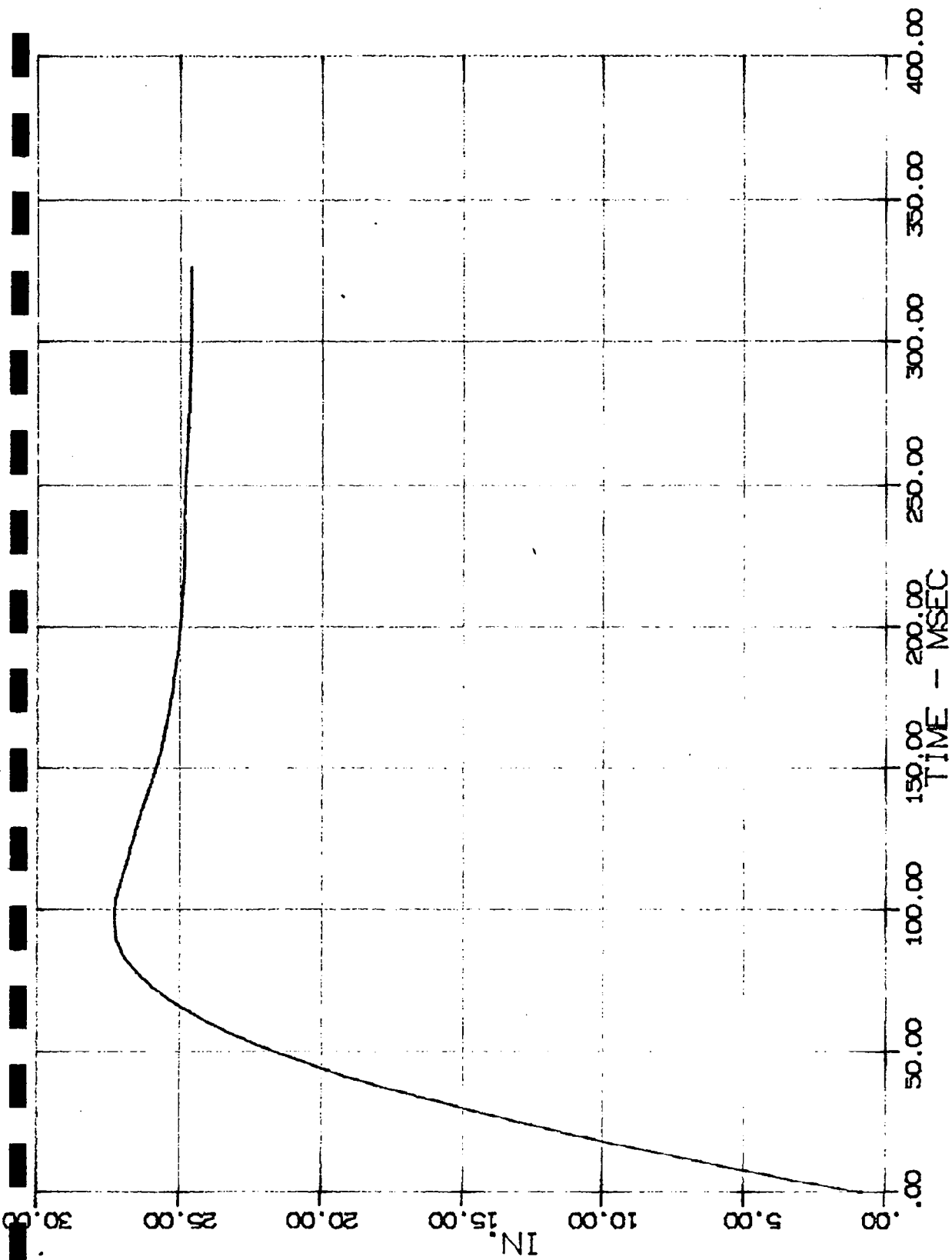
Q3 AC 01 N RFF X
MSE NO6012 1982 OLDSMOBILE OUTLASS 09/18/82



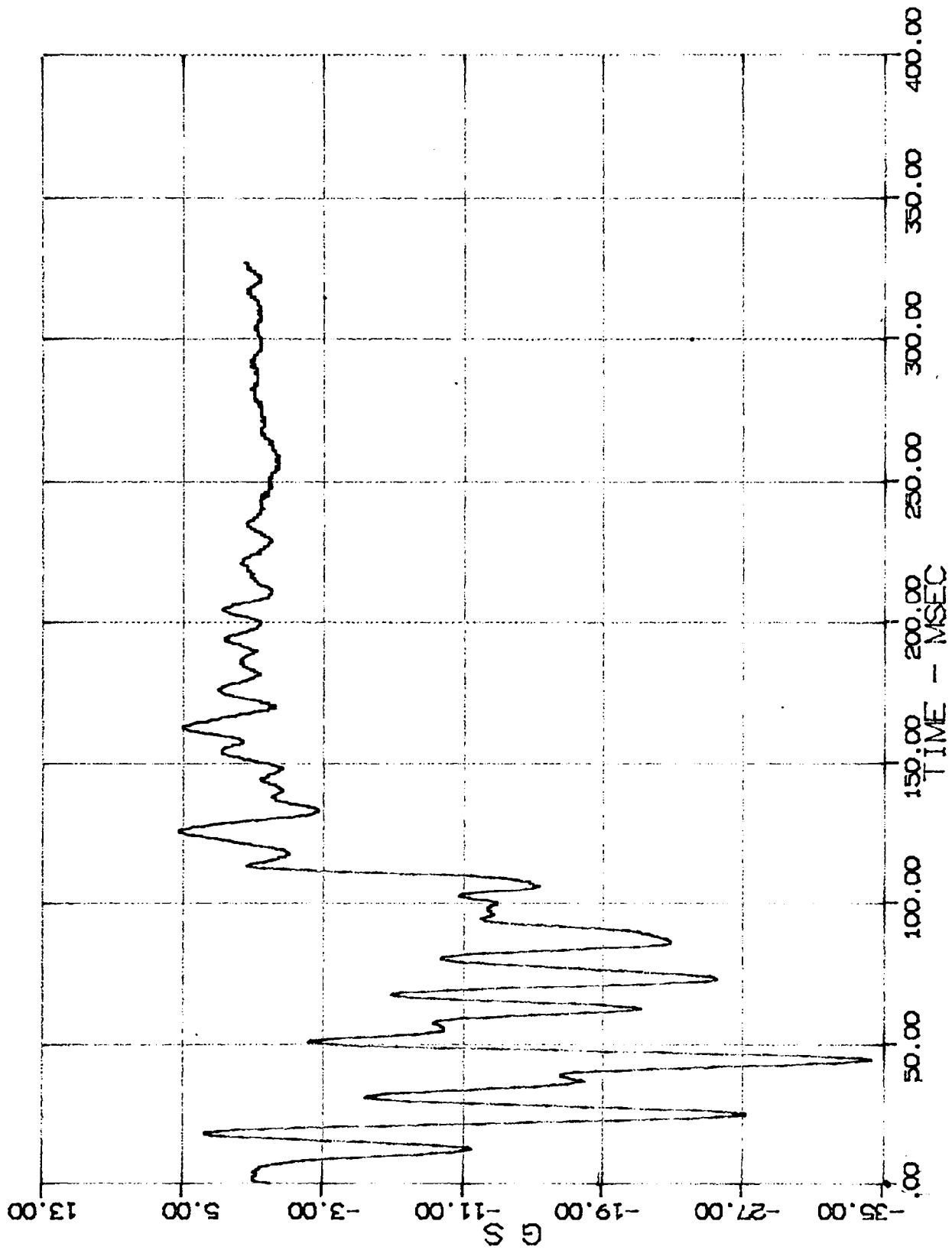
03 AC 01 N RFF X IN1

MSE NO6012 1982 OLDSMOBILE CUTLASS

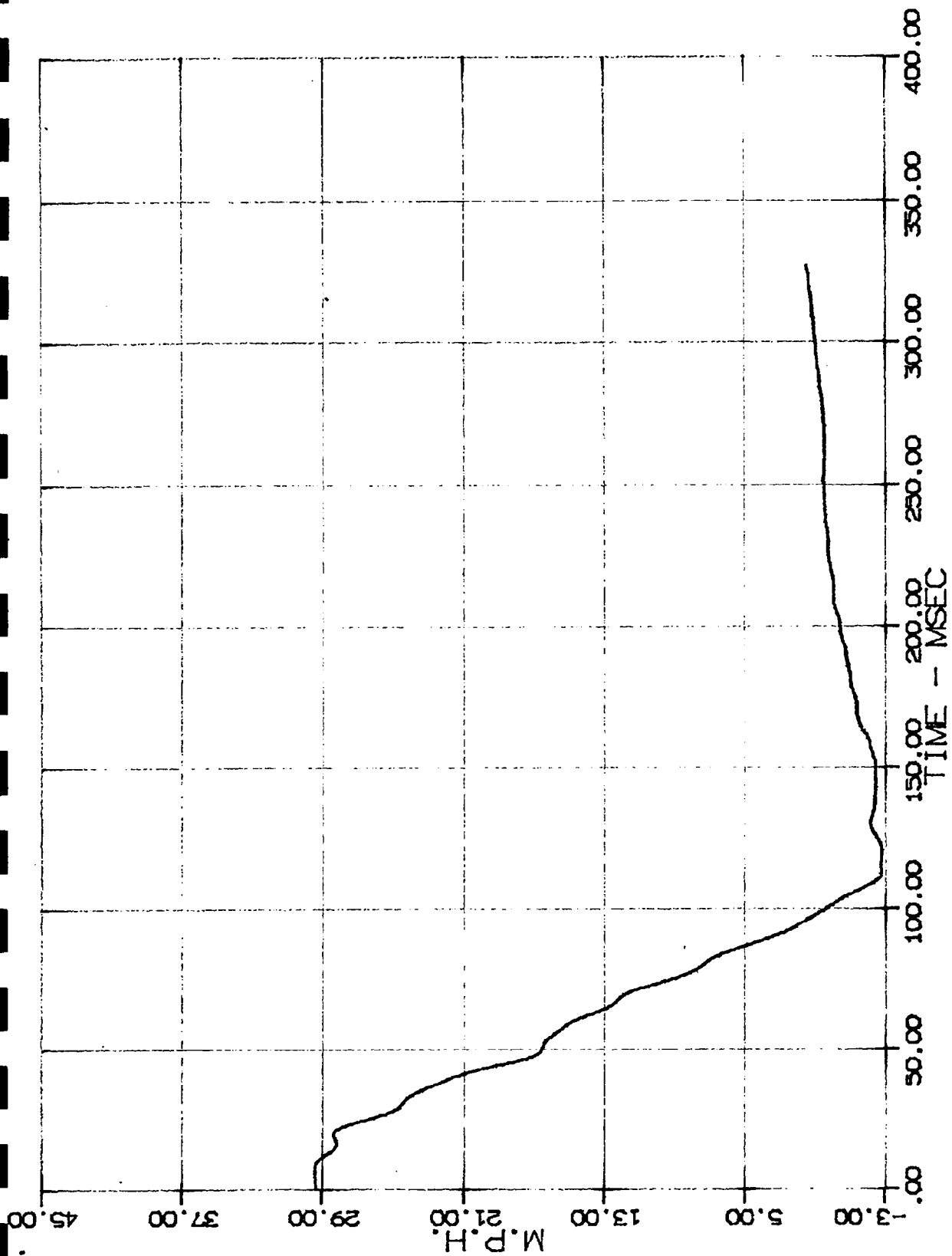
09/18/82



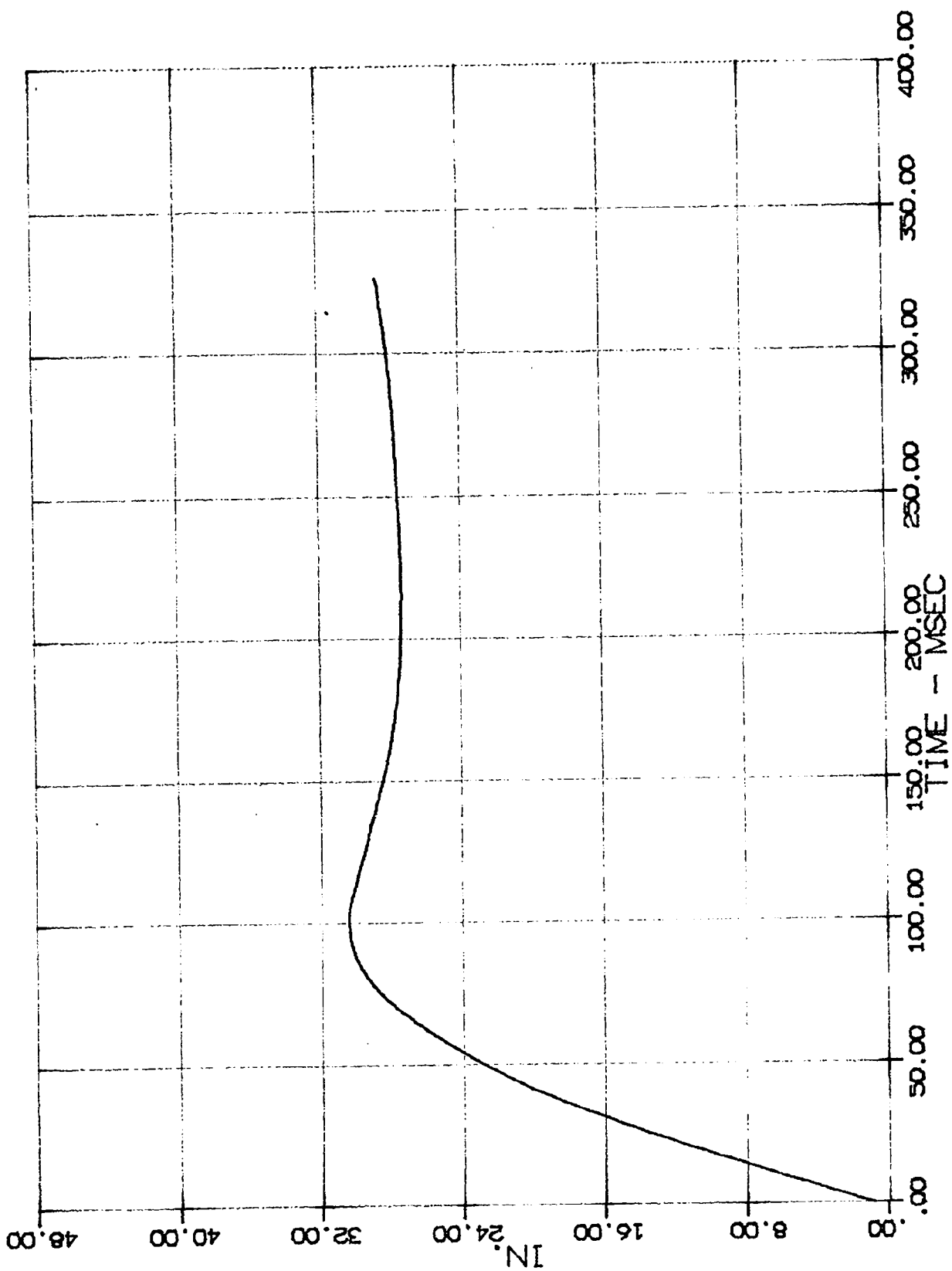
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MSE NO6012 1982 OLDSMOBILE OUTLASS 09/18/82



04 AC 01 N LRF X
MSE NO6012 1982 OLDSMOBILE CUTLASS 09/18/82



04 FC 01 N LRF X IN1
MSE ND6012 1982 OLDSMOBILE CUTLASS 09/18/82



04 FC 01 N LRF X IN2
MSE NO6012 1982 OLDSMOBILE OUTLASS 09/18/82