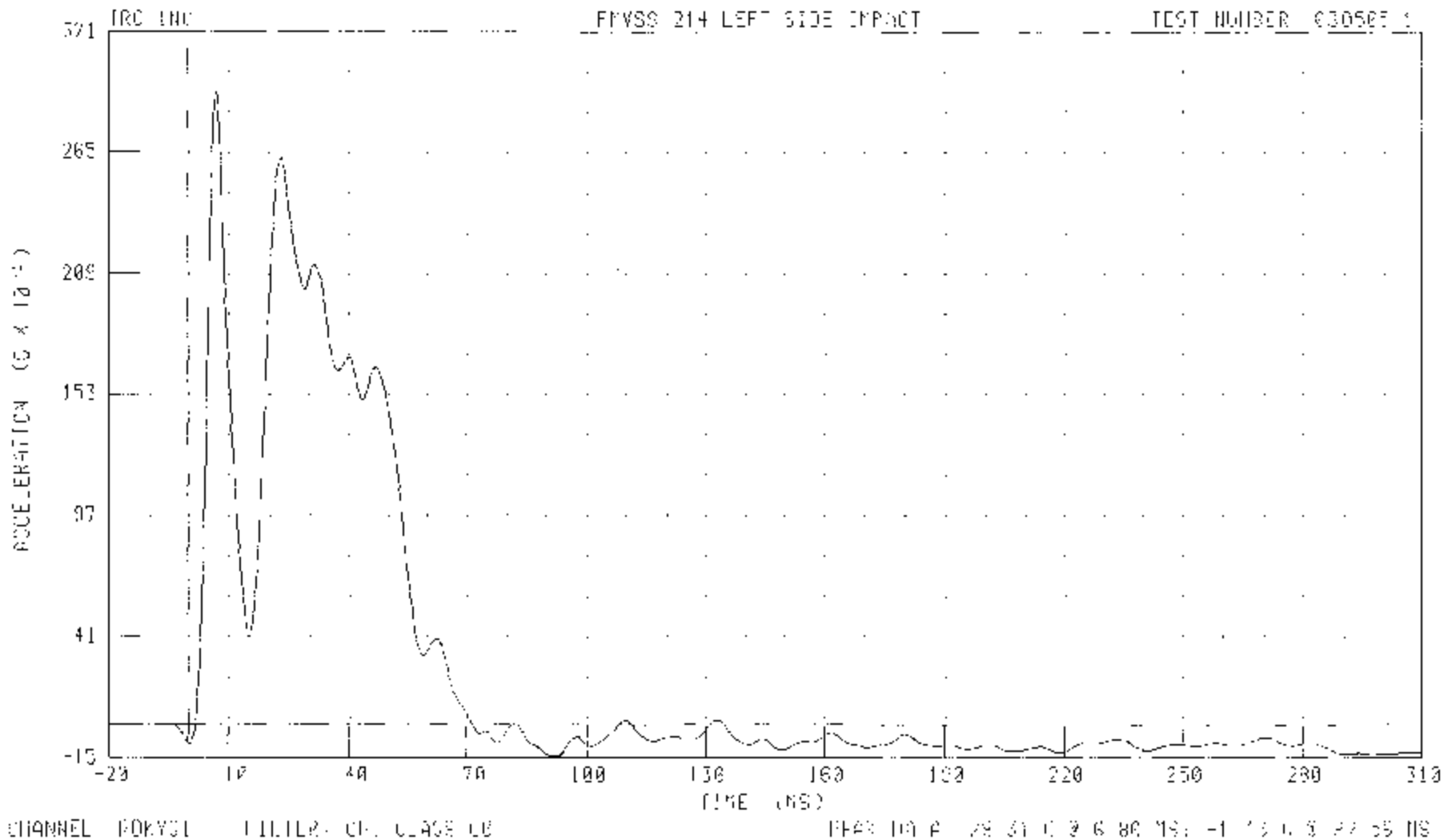

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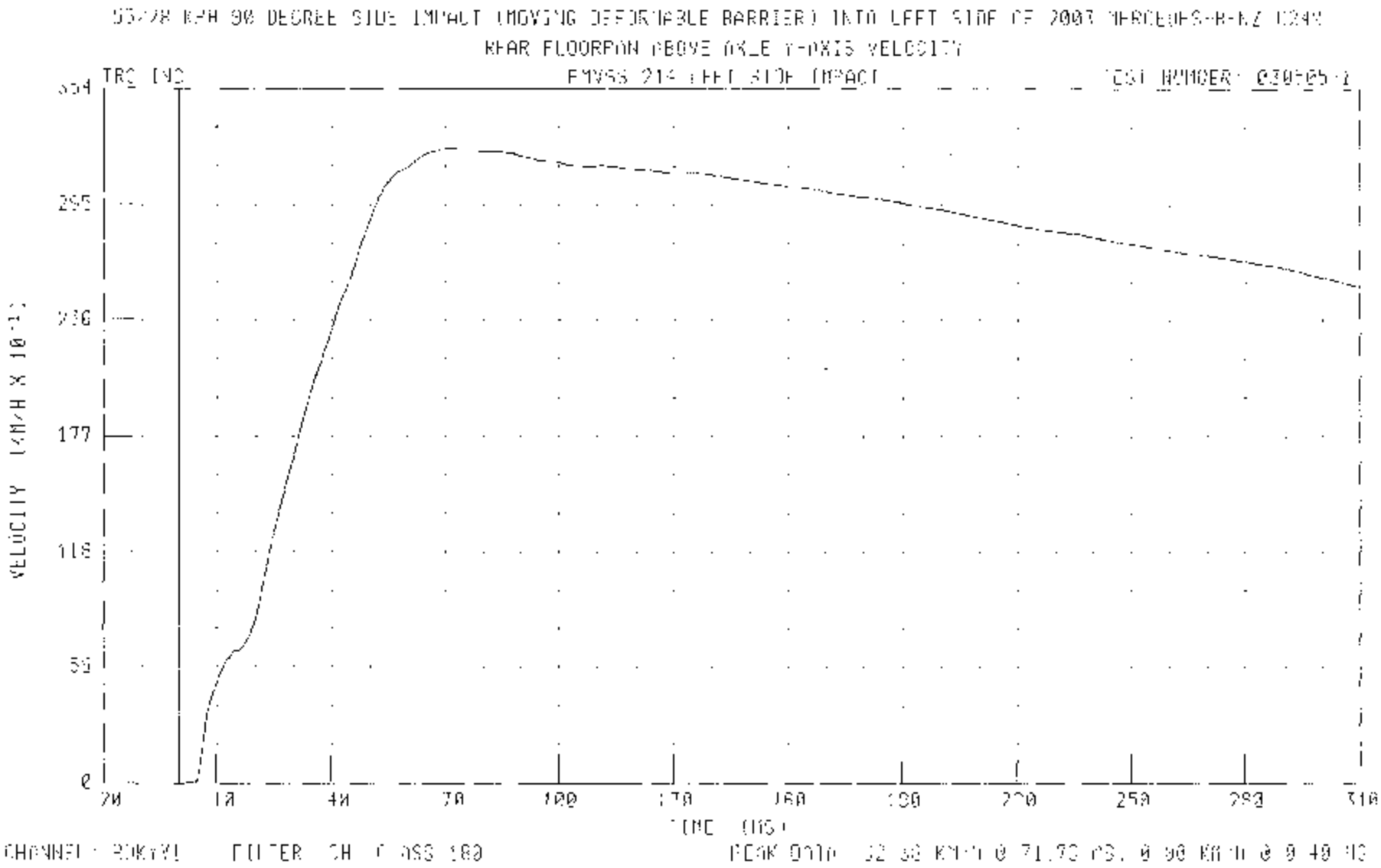
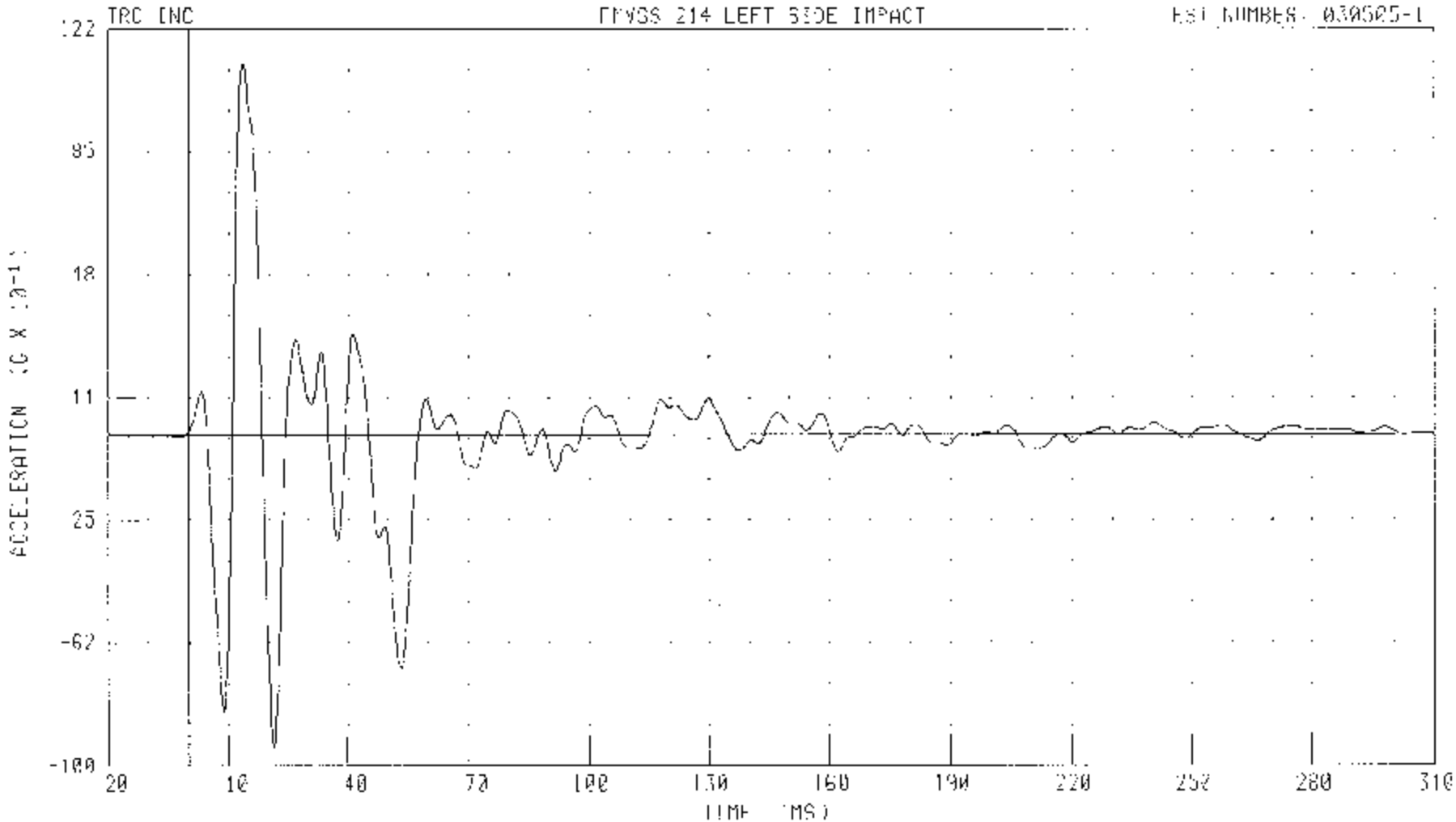
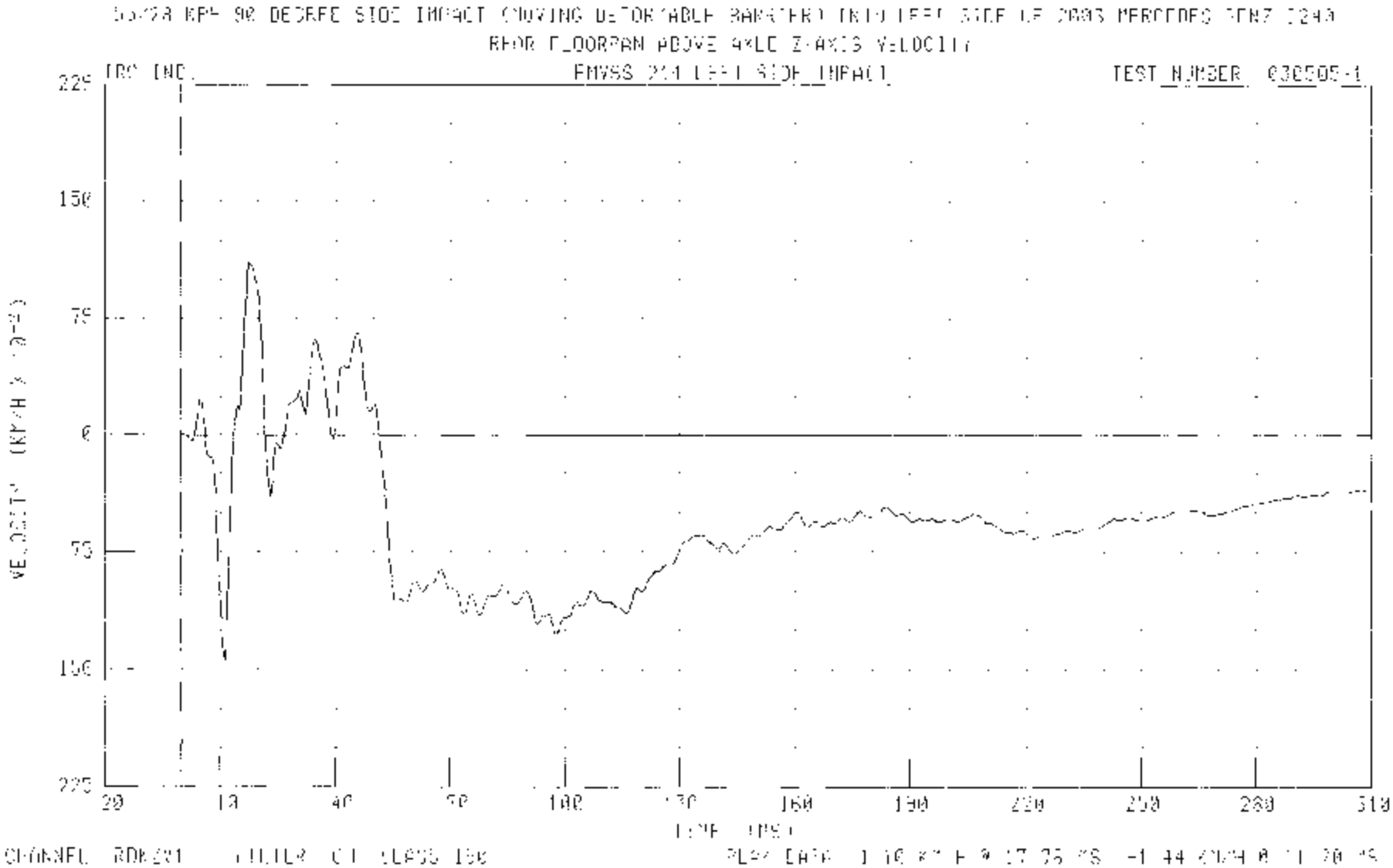

55.28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-B-NZ C240
REAR FLOORPAN ABOVE AXLE Y-AXIS VELOCITY
TRG [NC
FMVSS 214 (FEL SIDE IMPACT
TEST NUMBER: 030505-1
354
295
236
177
118
59
0
VELOCITY (KM/H X 10**1)
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
TIME (MS)
CHANNEL: REARVEL
FILTER: CFC CLASS 180
PEAK DATA: 32.38 KM/H @ 71.70 MS, 0.00 KM/H @ 0.40 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF [illegible] MERCEDES-BENZ C240

REAR FLOORPAN ABOVE AXLE Z AXIS ACCELERATION



030505-1



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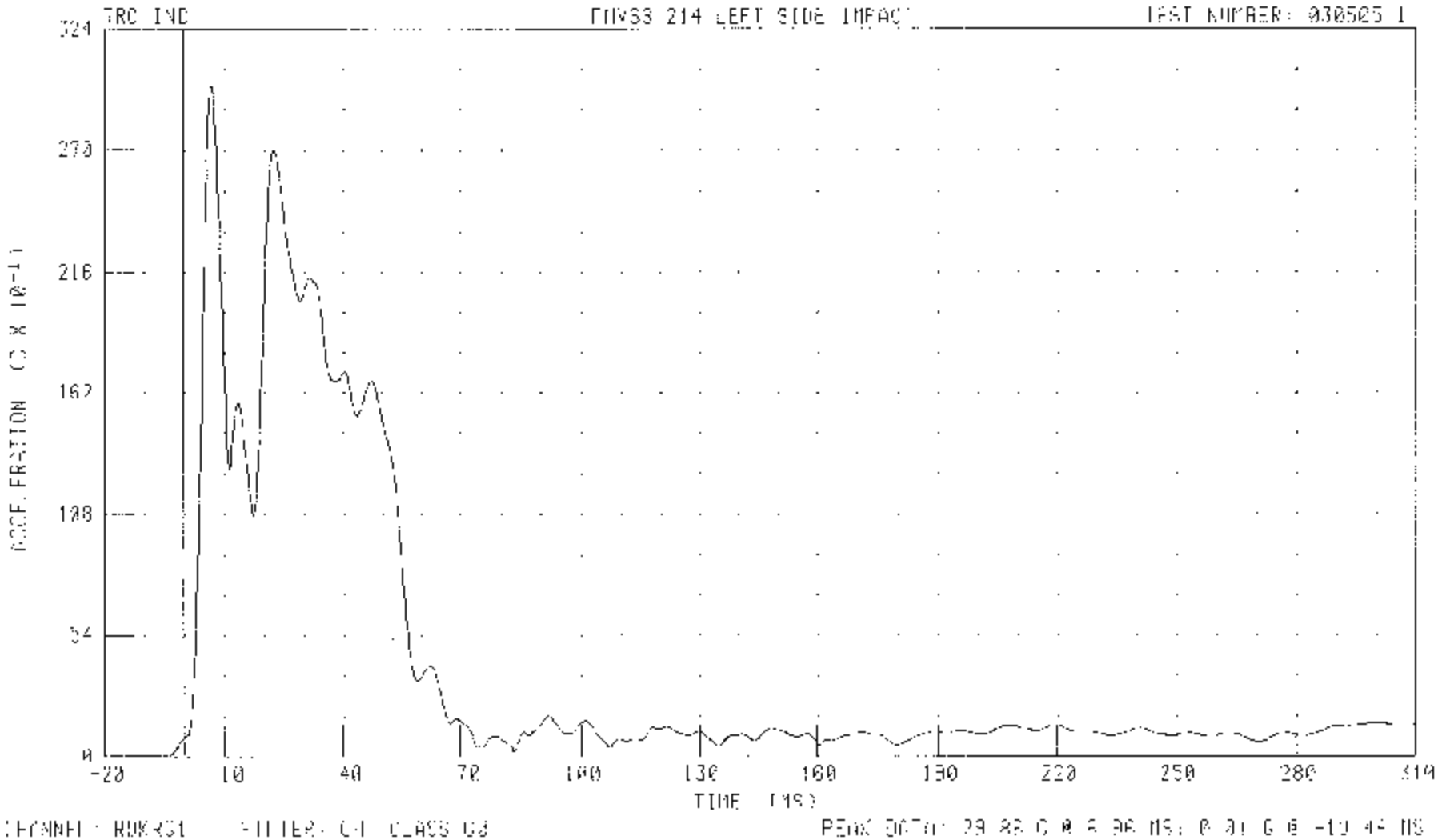
030505-1

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2002 MERCEDES-BENZ C240

REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION



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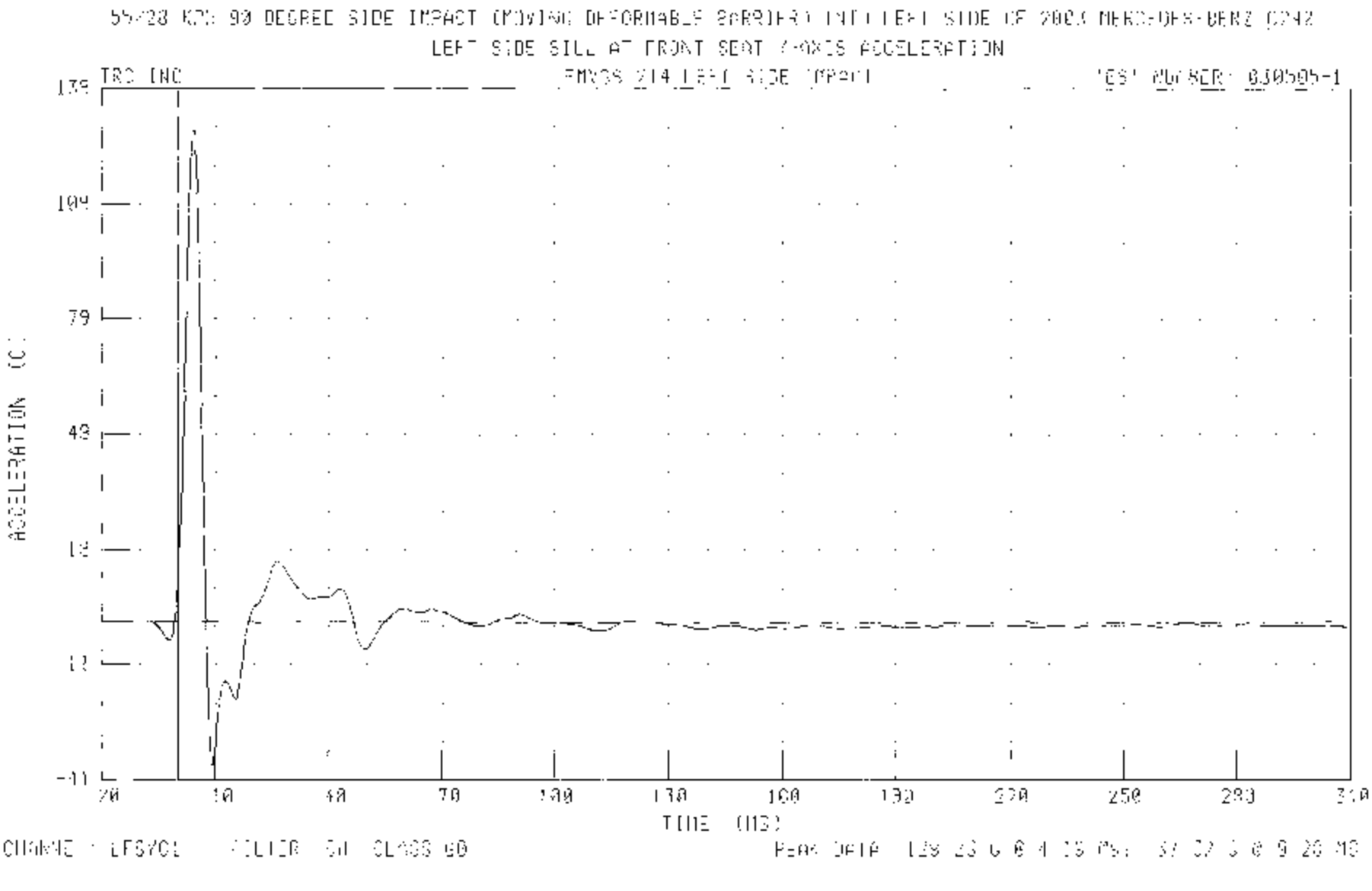
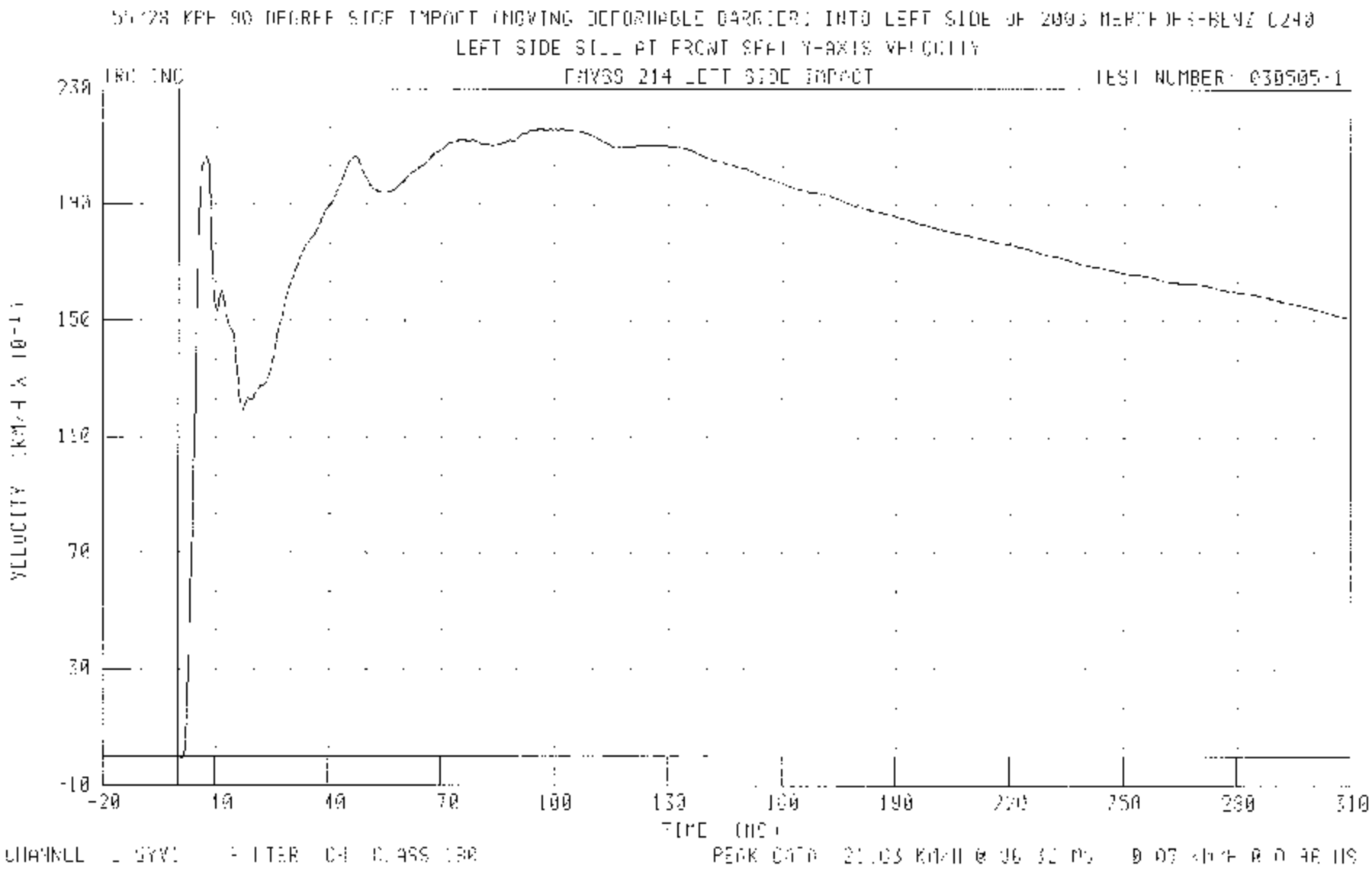
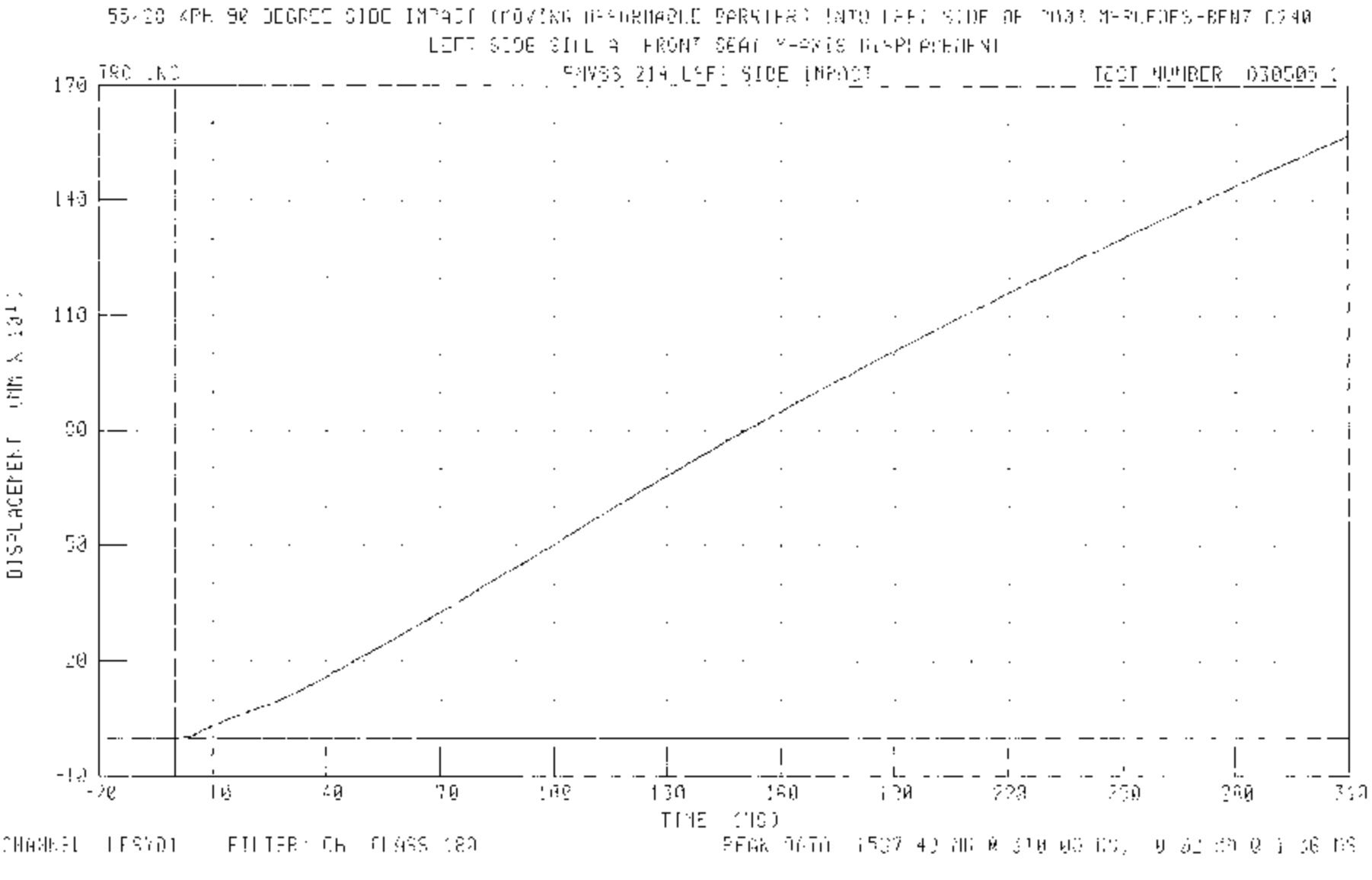
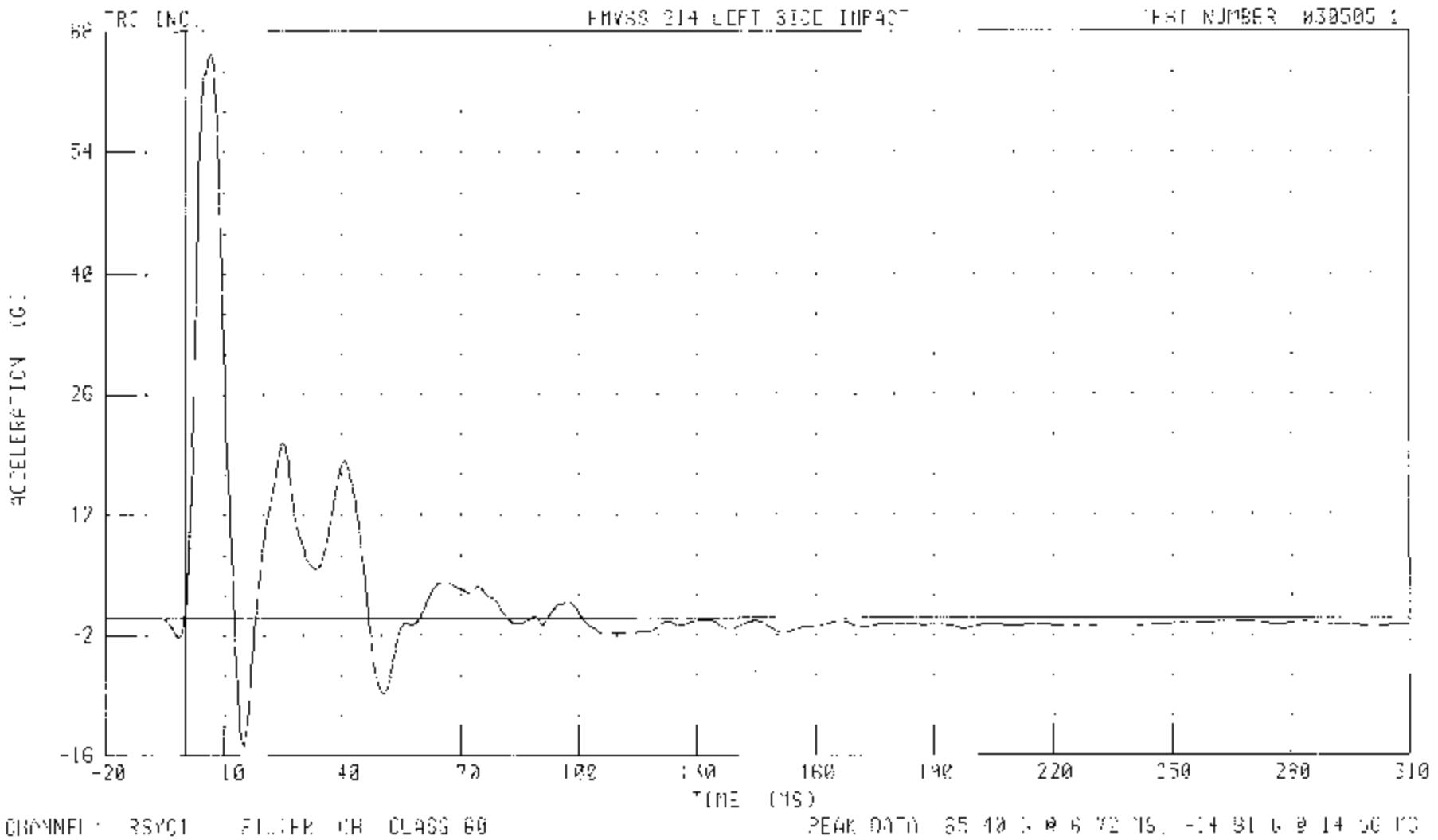
030505-1

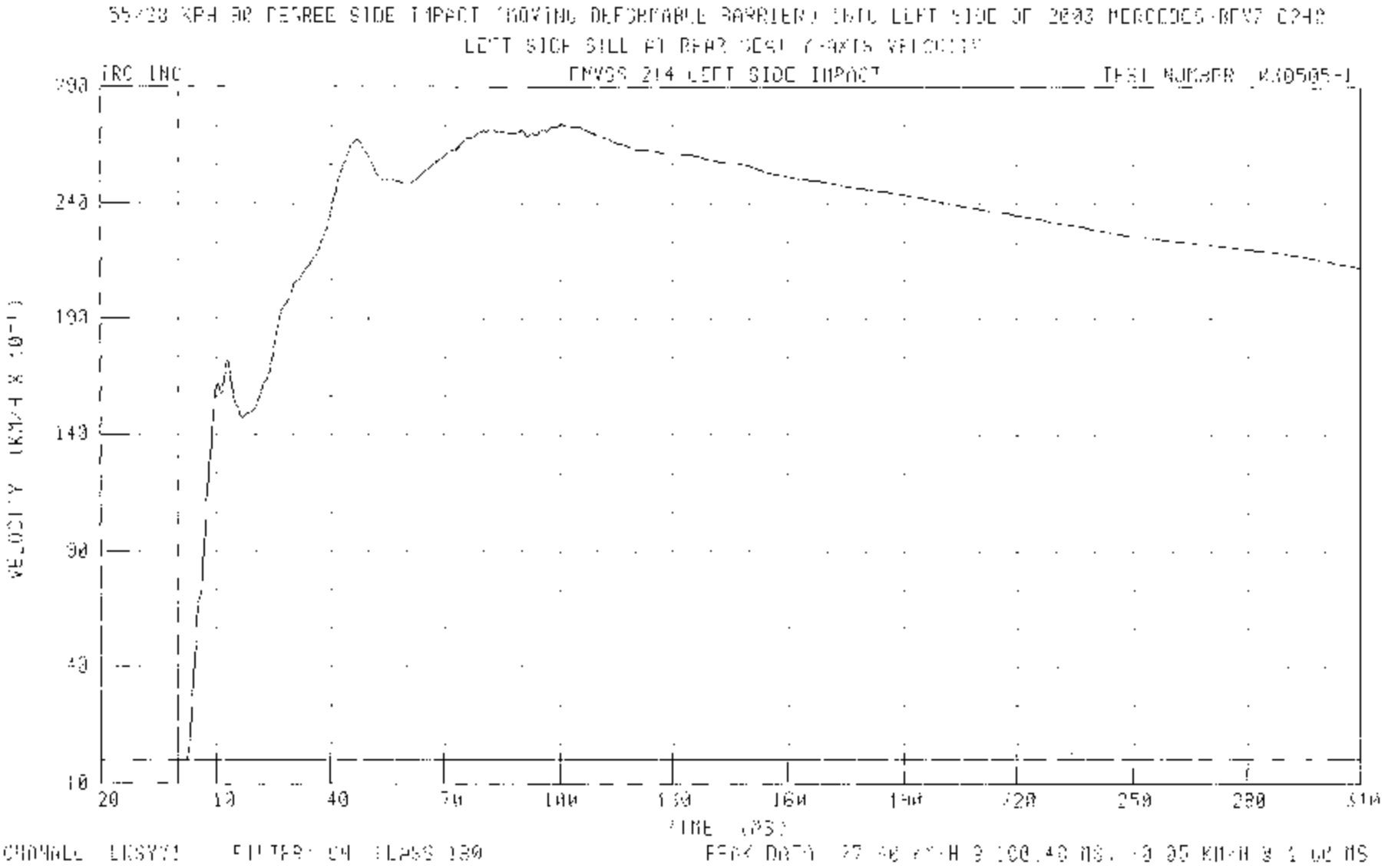

55/28 KM: 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2000 MERCEDES-BENZ C242
LEFT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION
TRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
ACCELERATION (G)
TIME (MS)
CHANNEL : LFSYCL
FILTER CLASS CFC60
PEAK DATA

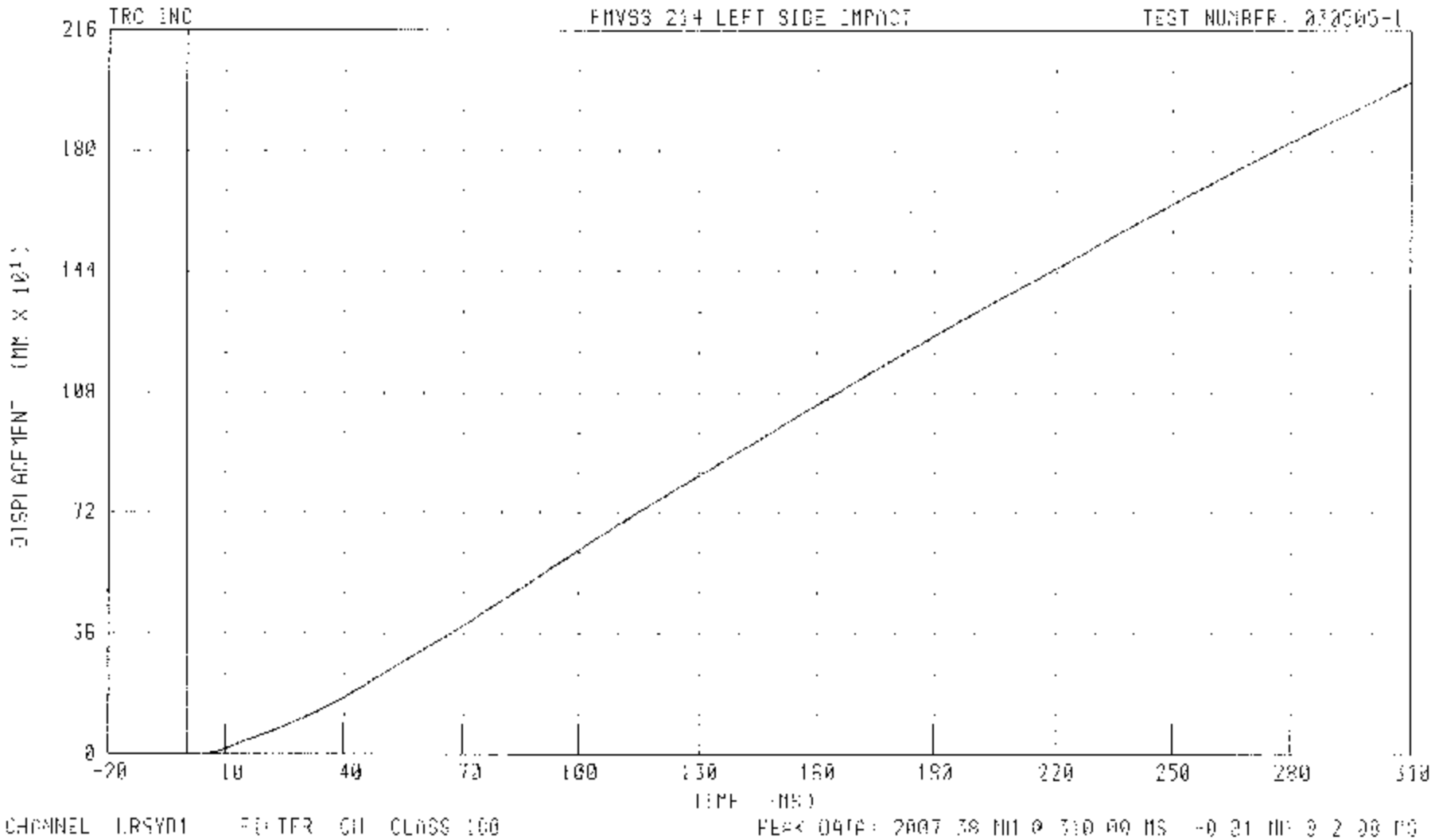
030505-1


56.28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
LEFT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY
INC INC
DAVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
230
190
150
110
70
30
-10
VELOCITY (KM/H X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LSYV FILTER CH: CLASS 180
PEAK DATA: 21.03 KM/H @ 96.32 MS 0.07 KM/H @ 0.48 MS


55.00 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 M-BLEDES-BENZ C240
LEFT SIDE SILL @ FRONT SEAT Y-AXIS DISPLACEMENT
TRC JAC
SAWSS 214_LSF: SIDE IMPACT
TEST NUMBER 030505-1
170
140
110
80
50
20
-10
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL ID: SY01 FILTER: CFC CLASS 180
PEAK DATA: 1507.43 MM @ 310.00 MS, 0.02 MM @ 1.36 MS


55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2002 MERCEDES-BENZ C240
LEFT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION
TRC INC.
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER M30505.1
ACCELERATION (G)
60
54
40
26
12
-2
-16
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RSYC1
FILTER: CFC CLASS 60
PEAK DATA: 55.40 @ 6.72 MS, -14.81 @ 14.56 MS


55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
LEFT SIDE SILL AT REAR SEAT X-AXIS VELOCITY
IRC INC
TEST NUMBER MA0505-1
NHTSA 214 LEFT SIDE IMPACT
250
200
150
100
50
0
20
40
60
80
100
120
140
160
180
200
220
240
TIME (MS)
CHANNEL: LSSYX1
FILTER: CFC CLASS 180
PEAK DATA: 27.40 KM/H @ 100.40 MS, -0.05 KM/H @ 1.00 MS


55/20 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
LEFT SIDE SILL AT REAR SEAT Y-AXIS DISPLACEMENT
TRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
216
180
144
108
72
36
0
DISPLACEMENT (MM X 10**1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LRSYD1
FILTER: CFC CLASS 180
PEAK DATA: 2007 38 MAY 0 310.00 MS -0.01 MM 0 2.00 DG

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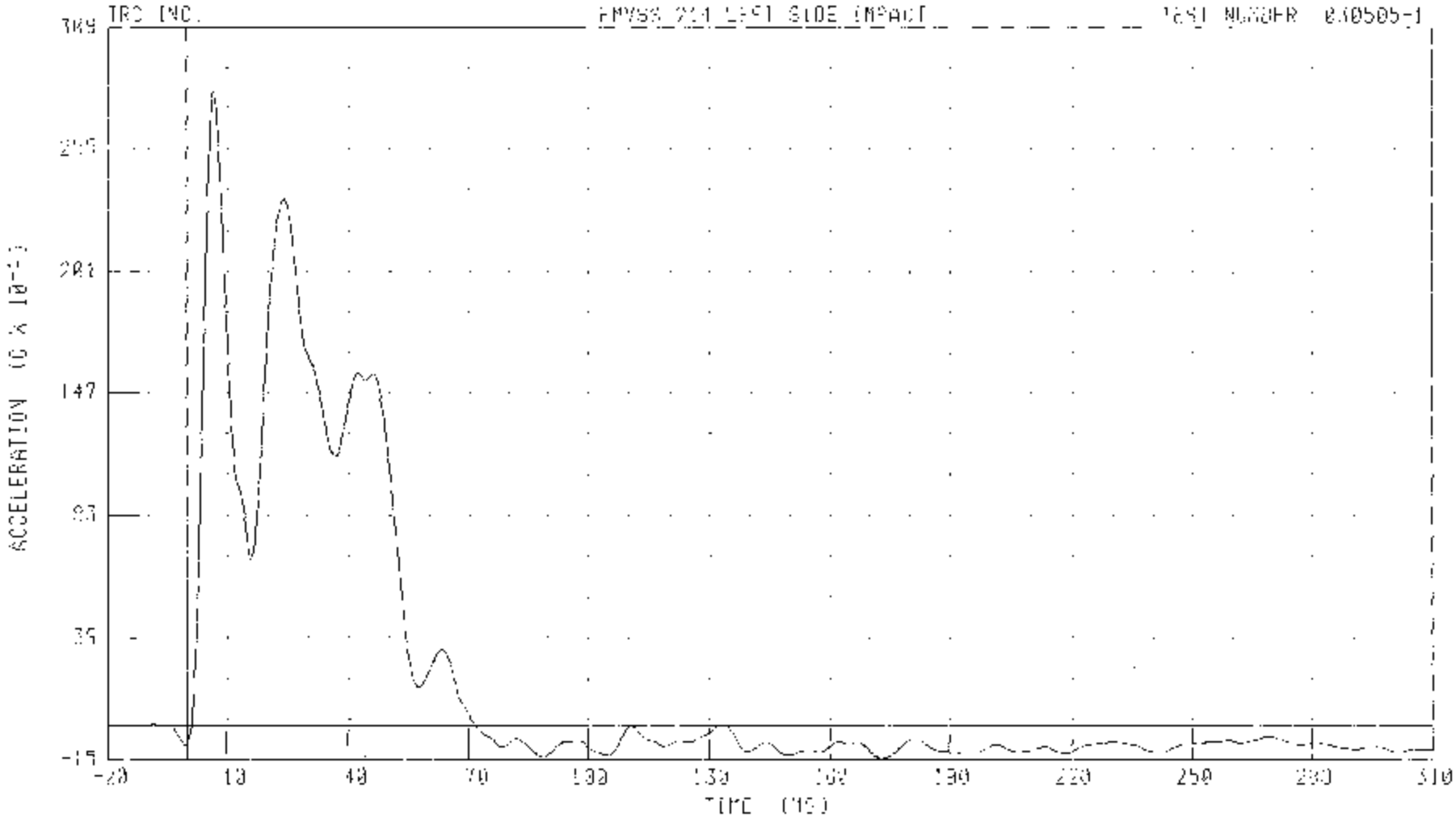
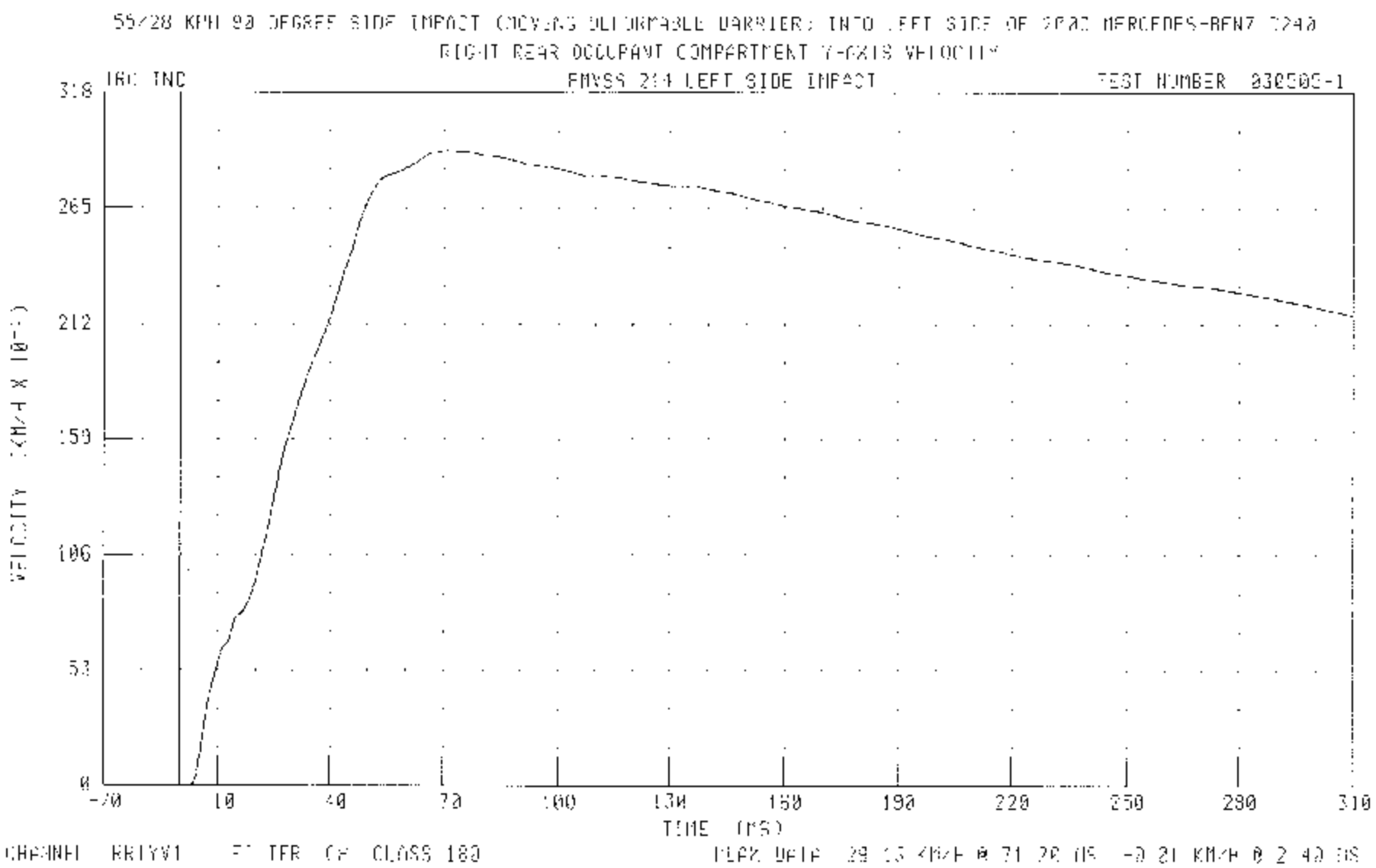
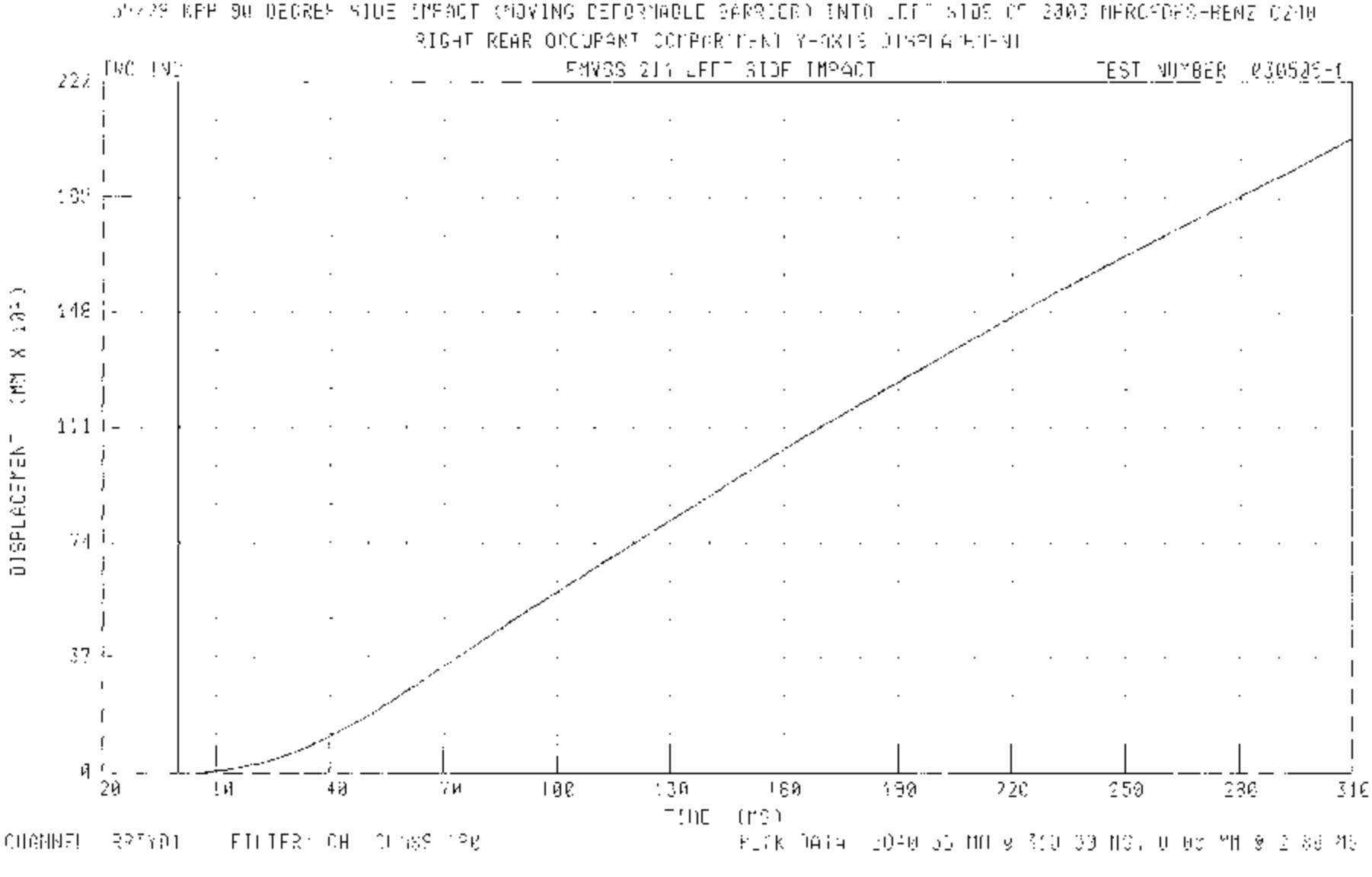
55 28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS ACCELERATION

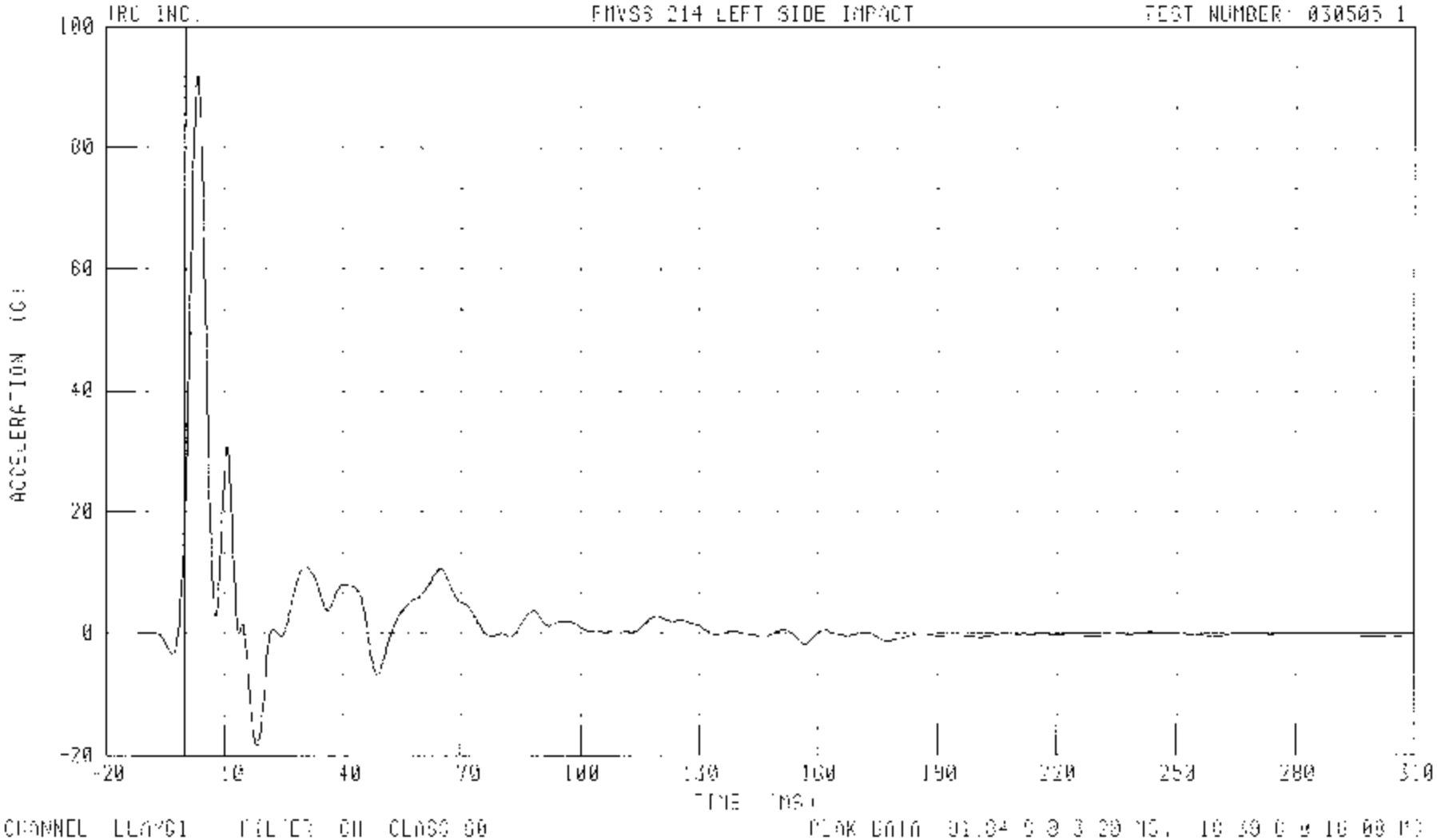



55/28 KPH 90 DEGREE SIDE IMPACT COVERS DEFORMABLE BARRIER; INTO LEFT SIDE OF 2000 MERCEDES-BENZ 2240
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS VELOCITY
IRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505-1
318
265
212
159
106
53
0
VELOCITY (KM/H X 10**-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL REQUIRED FILTER CFC CLASS 180
PEAK DATA 29.13 KM/H @ 71.20 MS -0.21 KM/H @ 2.40 MS


RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS DISPLACEMENT
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER
DISPLACEMENT (MM X 10-1)
222
185
148
111
74
37
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
TIME (MS)

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240

LEFT LOWER B-POST Y-AXIS ACCELERATION



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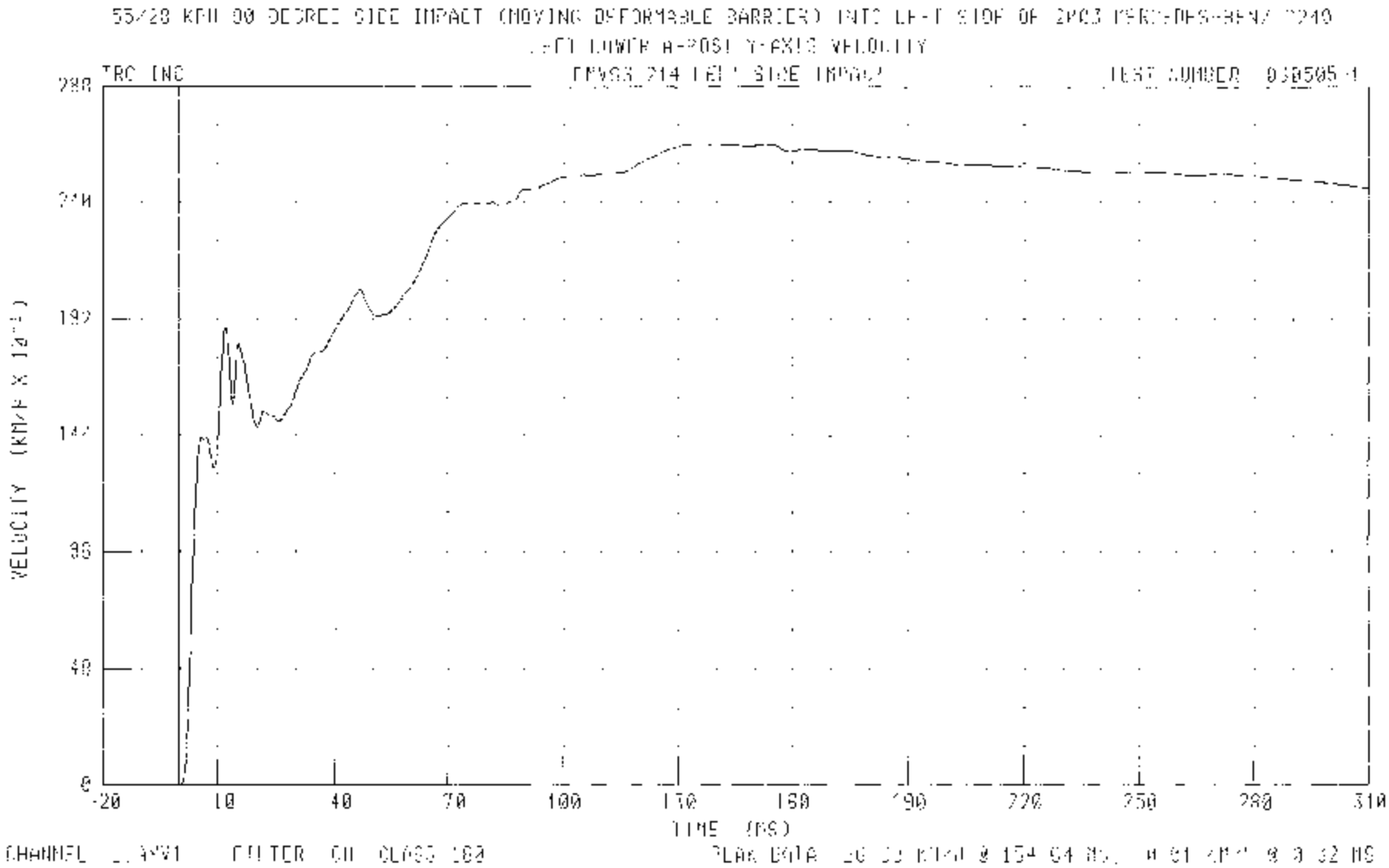
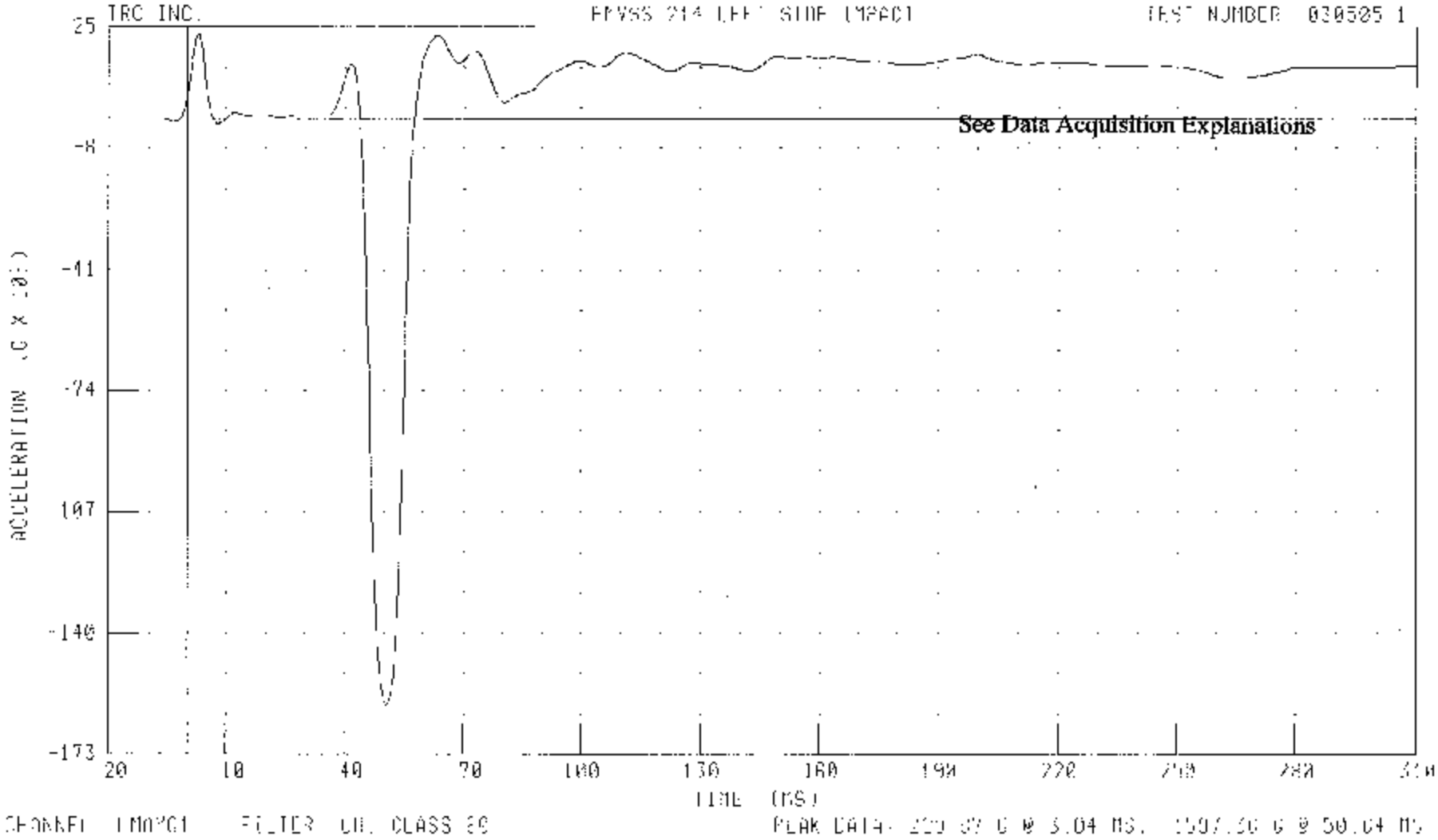
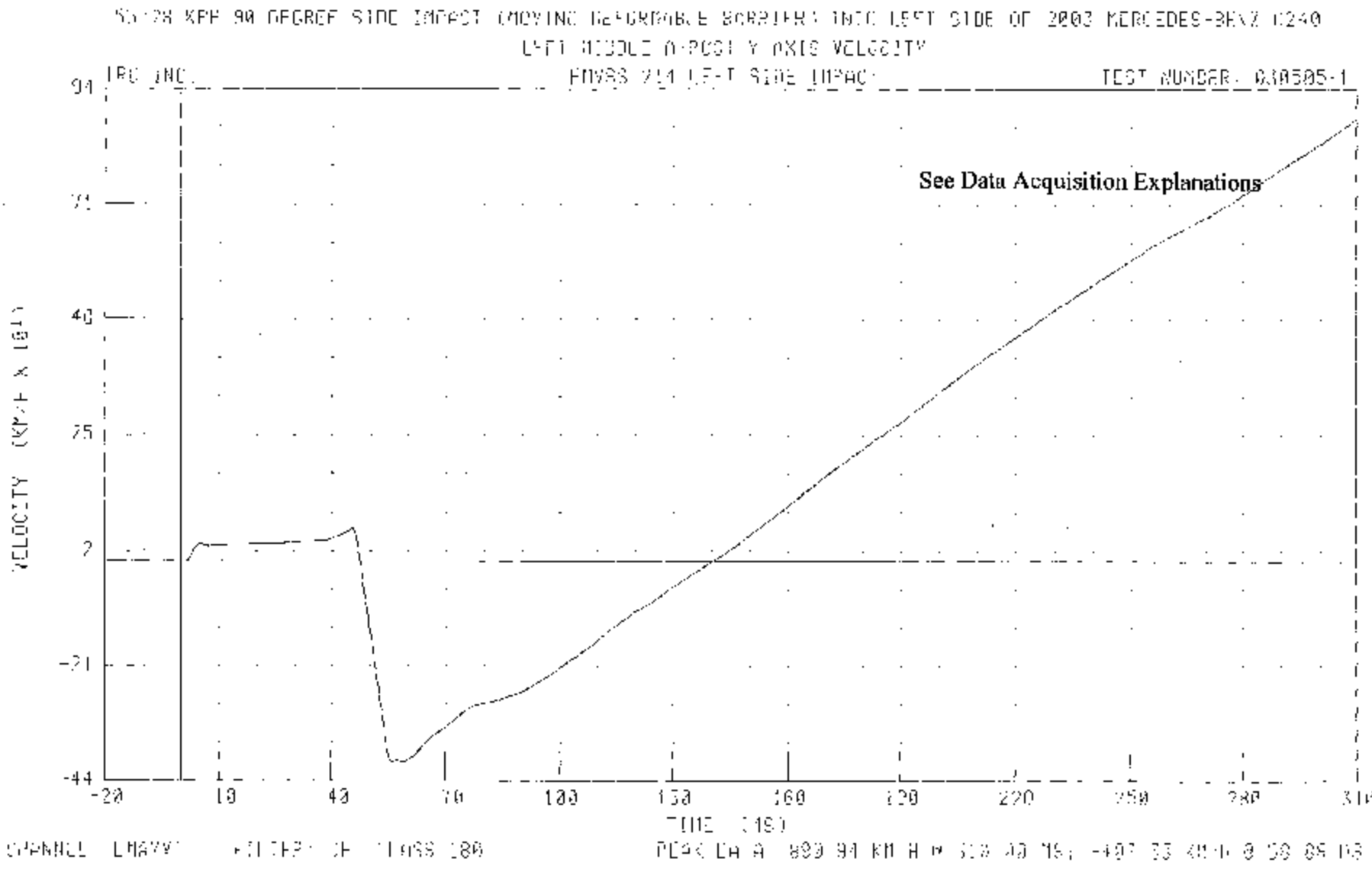

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 PONTIAC GRAND PRIX
LEFT LOWER A-POST Y-AXIS VELOCITY
TRC INC
TEST NUMBER 030505-1
VELOCITY (KM/H X 10**-1)
TIME (MS)
CHANNEL
FILTER
PLAN DATE


55/28 KPH 30 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2001 MERCEDES BENZ C240
LEFT MIDDLE B POST Y AXIS ACCELERATION
TRC INC.
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505 1
See Data Acquisition Explanations
25
-8
-41
-74
-107
-140
-173
ACCELERATION (G X 10E)
20
10
40
70
100
130
160
190
220
250
280
TIME (MS)
CHANNEL IMPACT FILTER CFC CLASS 60
PEAK DATA: 20.37 G @ 5.04 MS, 150.30 G @ 50.04 MS



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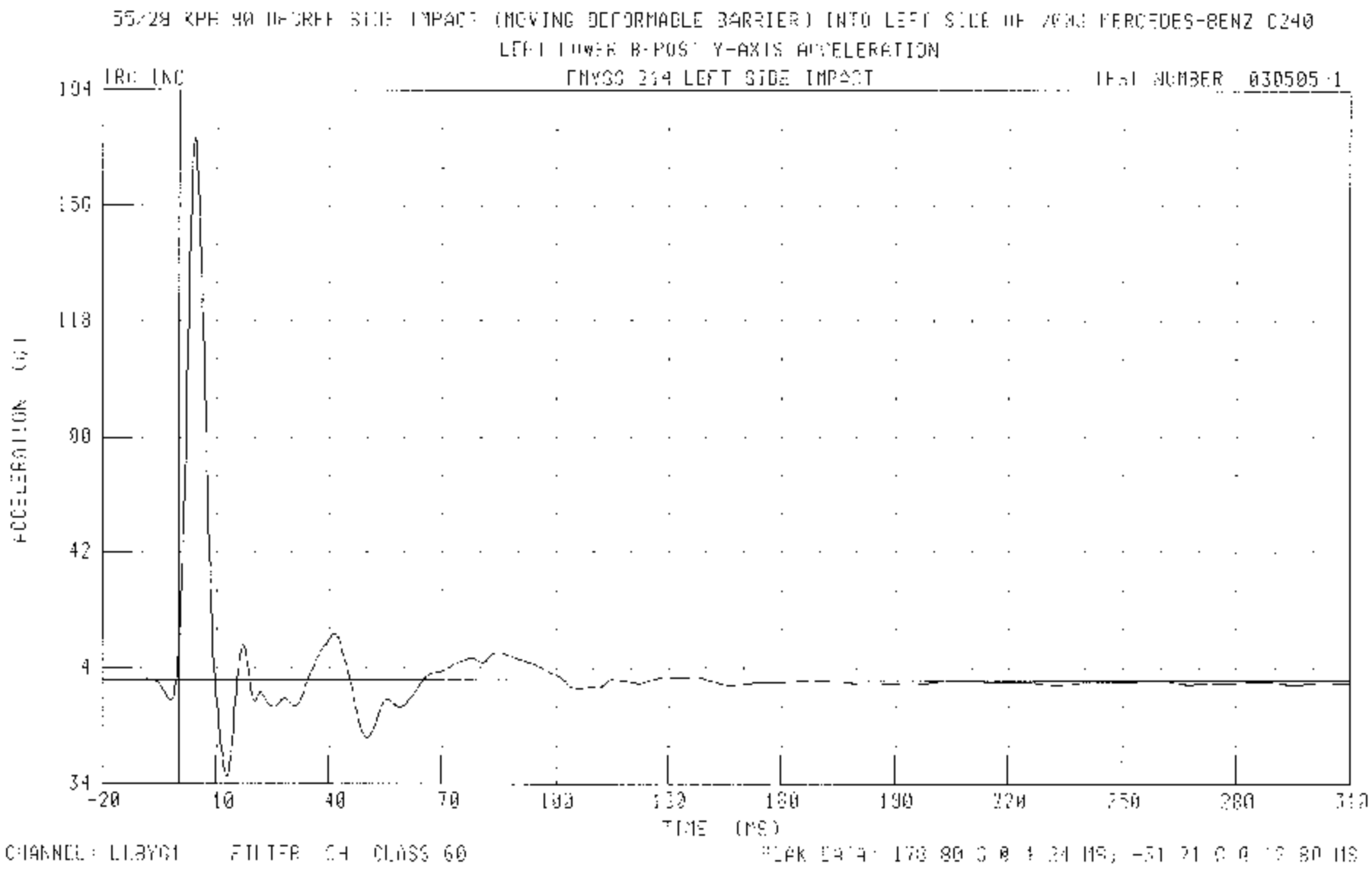
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2001 MERCEDES-BENZ C240
LEFT LOWER B-POST Y-AXIS ACCELERATION
IRC INC
TNYSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505-1
ACCELERATION (G)
104
150
118
90
42
4
34
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LLBYG1 FILTER CH CLASS 60
PEAK DATA: 170.80 G @ 4.24 MS; -51.21 G @ 13.80 MS

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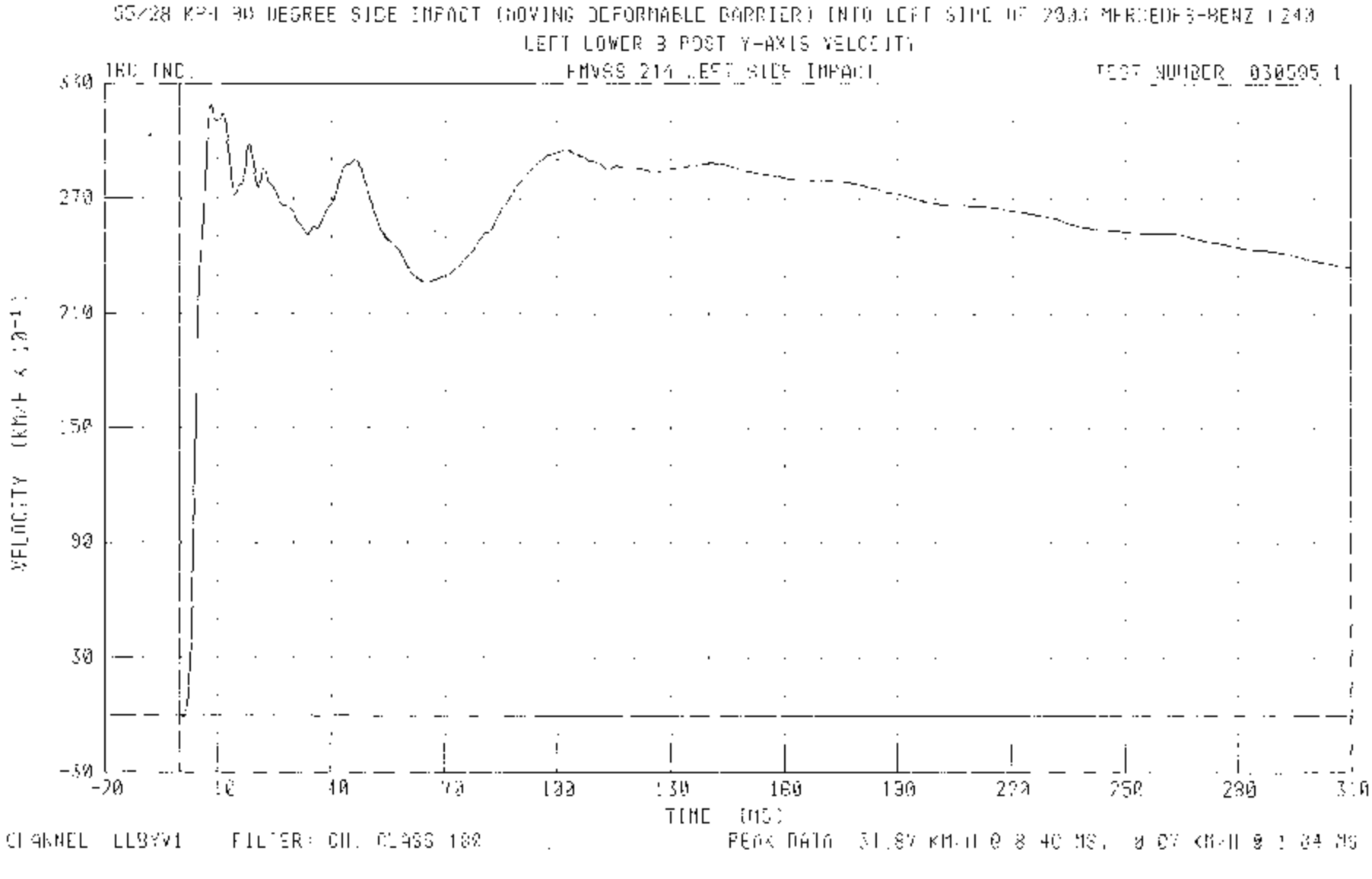
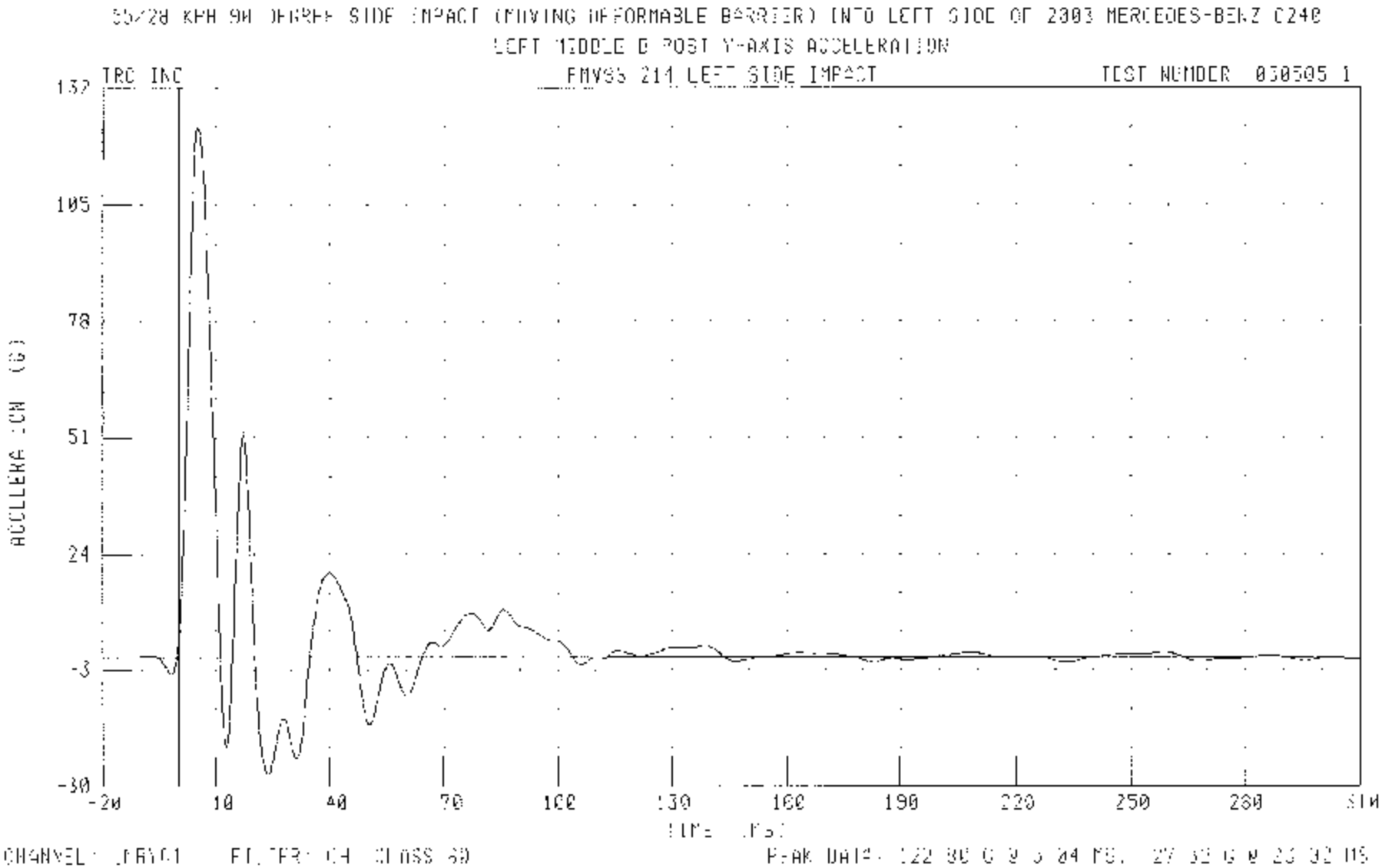

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ E 240
LEFT LOWER B POST Y-AXIS VELOCITY
IRC INC.
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505 1
VELOCITY (KM/H x 10-1)
TIME (MS)
CHANNEL LLB9YV1
FILTER: CH. CLASS 180
PEAK DATA 31.87 KM/H @ 8.40 MS, 0.07 KM/H @ 1.04 MS



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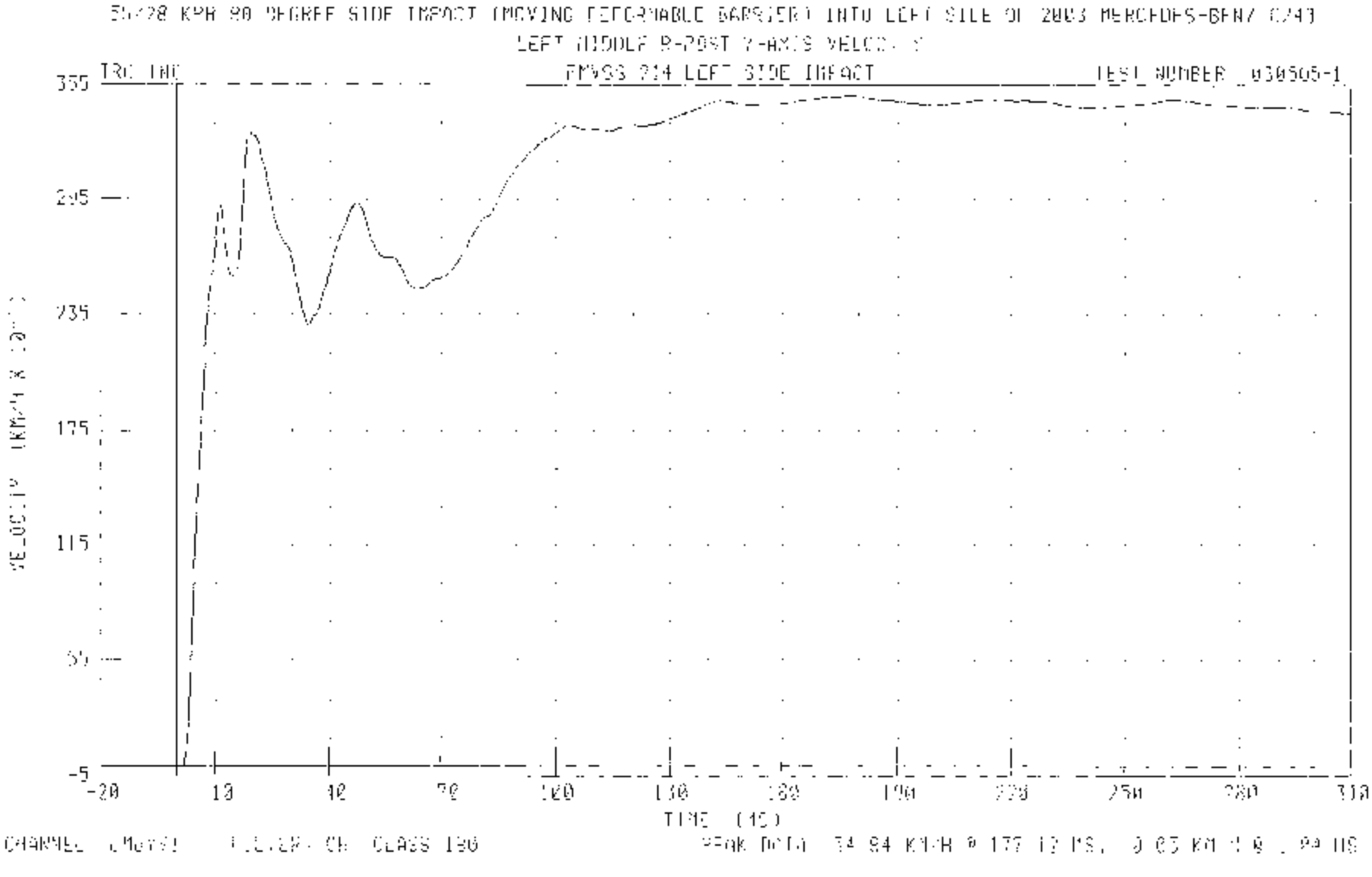
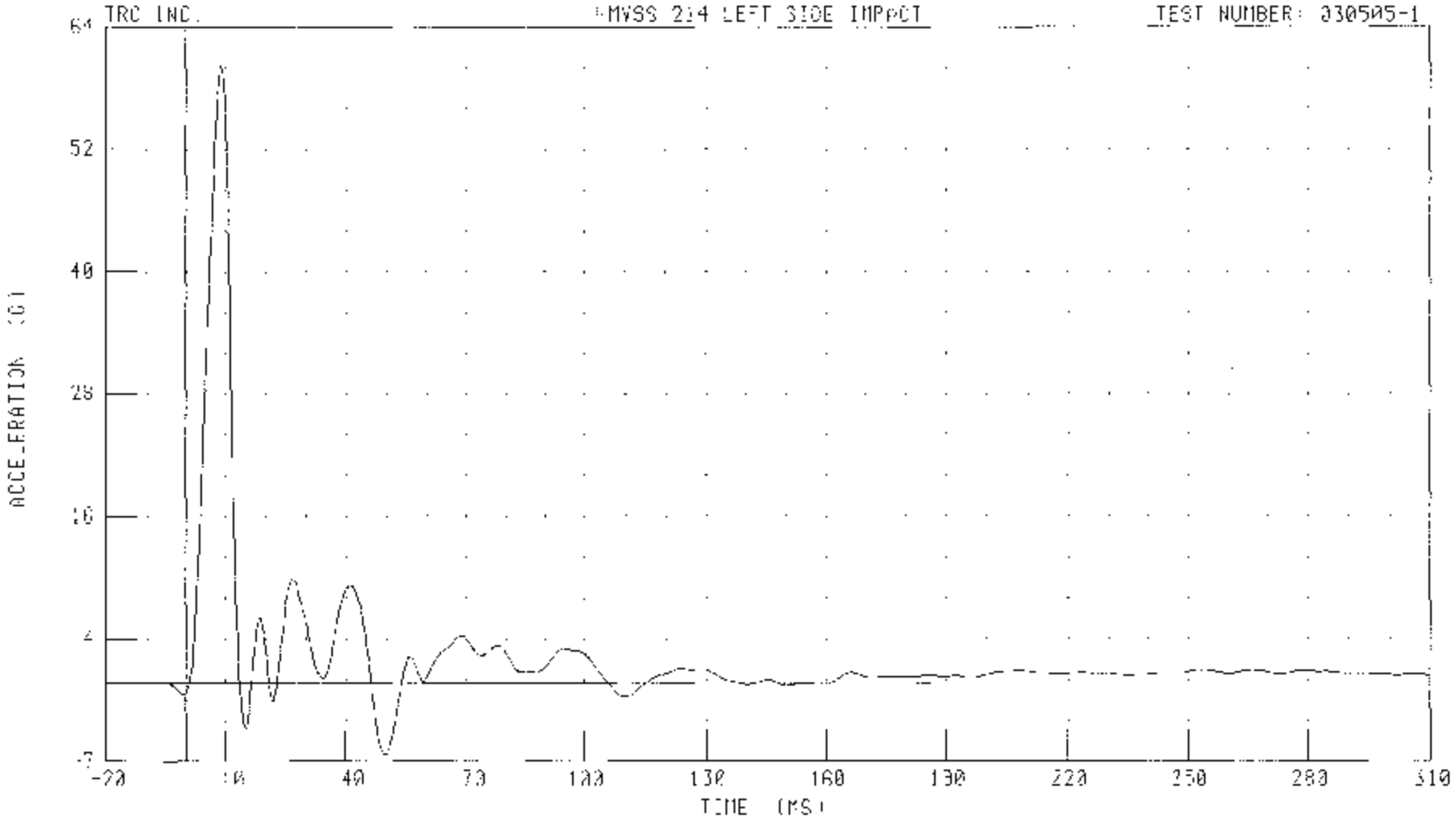

50/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
LEFT MIDDLE B-POST Y-AXIS VELOCITY
TRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505-1
355
295
235
175
115
55
-5
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL (Motion)
FILTER: CFC CLASS 180
PEAK DATA 34.84 KM/H @ 177.12 MS, 0.03 KM @ 0.00 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240

LEFT FRONT SEAT TRACK Y-AXIS ACCELERATION



CHANNEL: LFTY2L FILTER: CH. CLASS 60 PEAK DATA 00 39 G @ 9.84 MS. 7.03 G @ 40.68 MS

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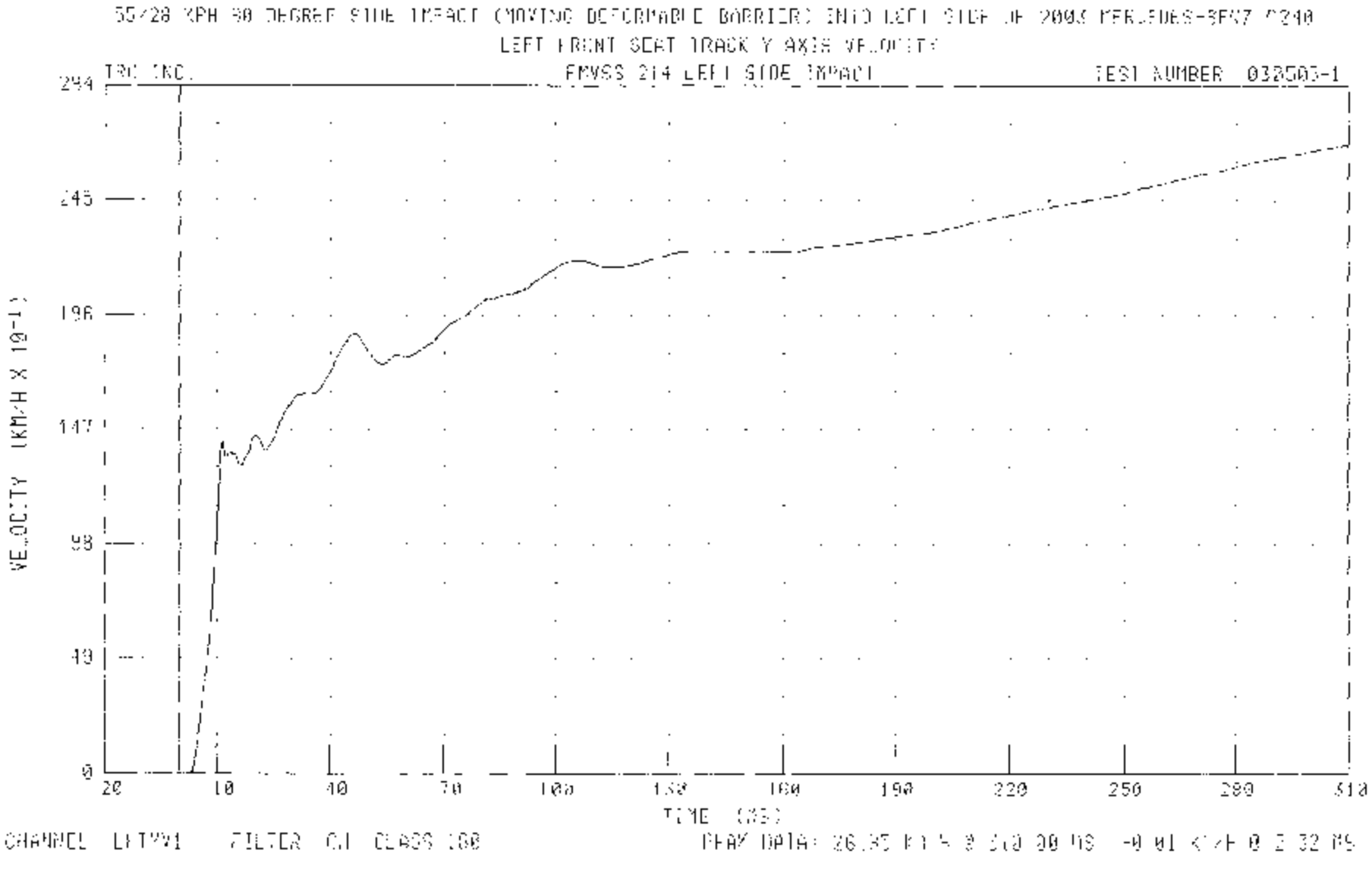
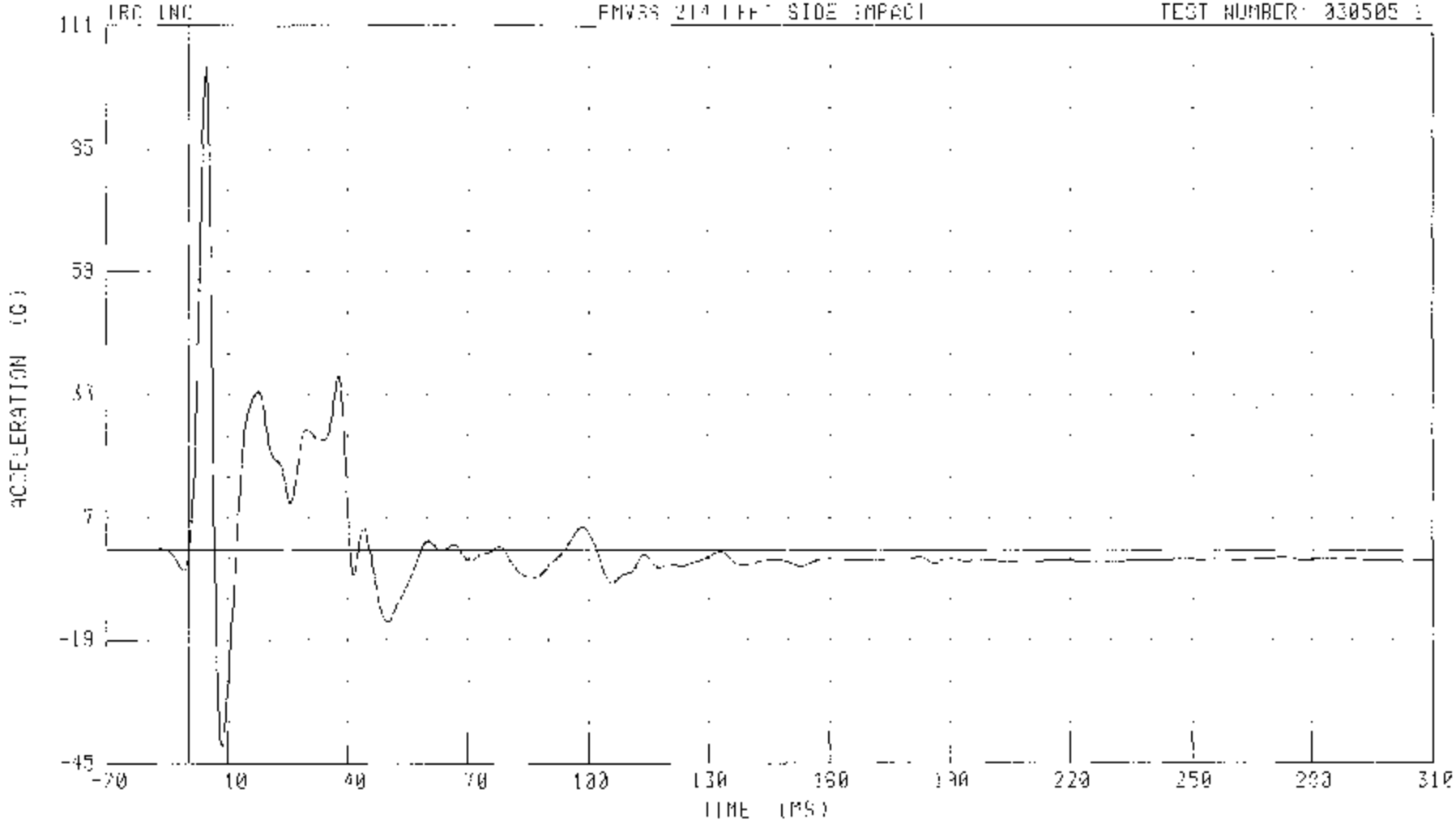

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
LEFT FRONT SEAT TRACK Y AXIS VELOCITY
TRC INC.
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505-1
294
245
196
147
98
49
0
VELOCITY (KM/H X 10-1)
20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL LFTY01 FILTER CLASS 180
PEAK DATA: 26.35 KM/H @ 210.00 MS -0.01 KM/H @ 2.32 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240

LEFT REAR SEAT TRACK Y-AXIS ACCELERATION

IRC INC FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 030505 1



CHANNEL: LRTMCI FILTER CH CLASSED PEAK DATA: [illegible]

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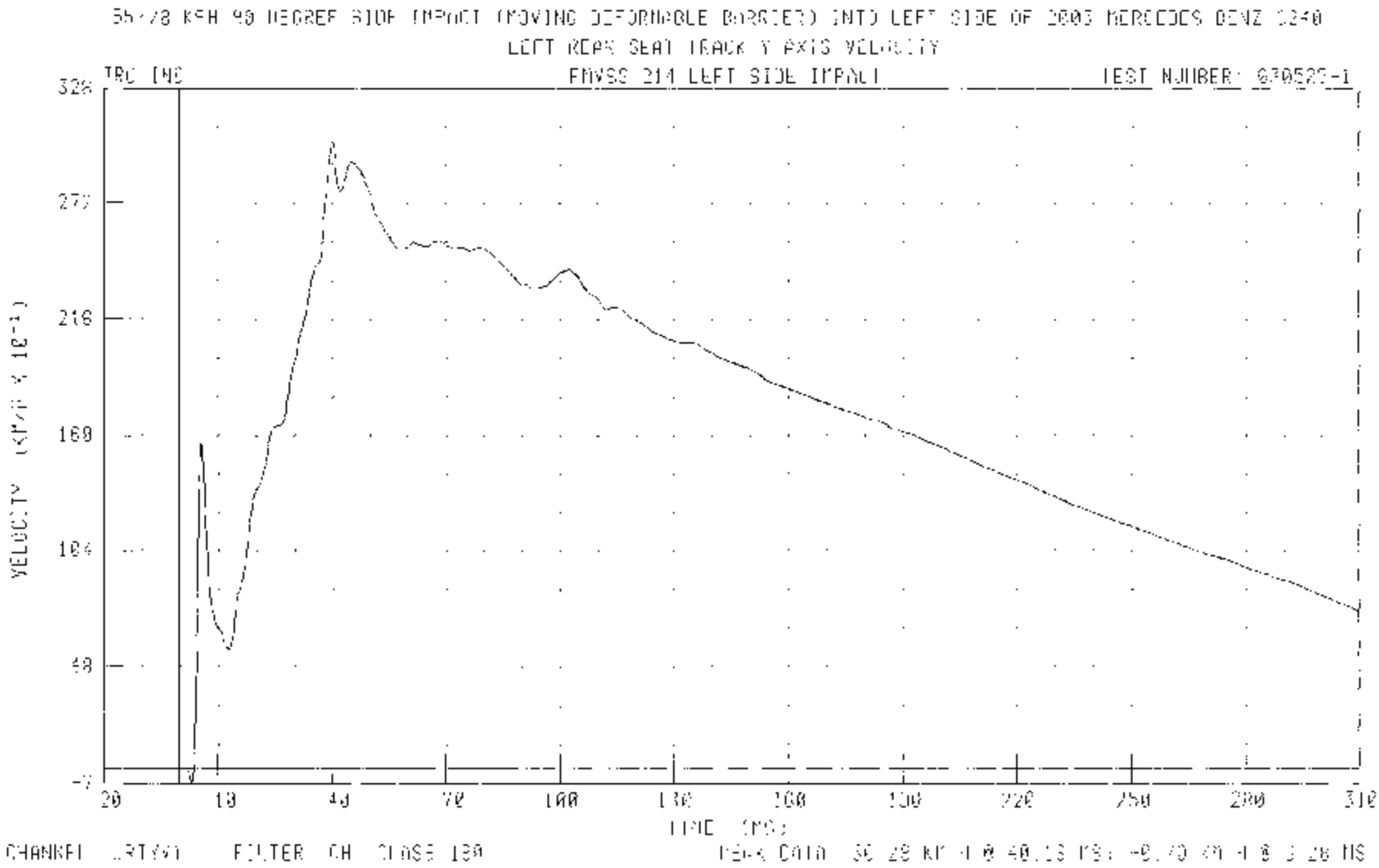
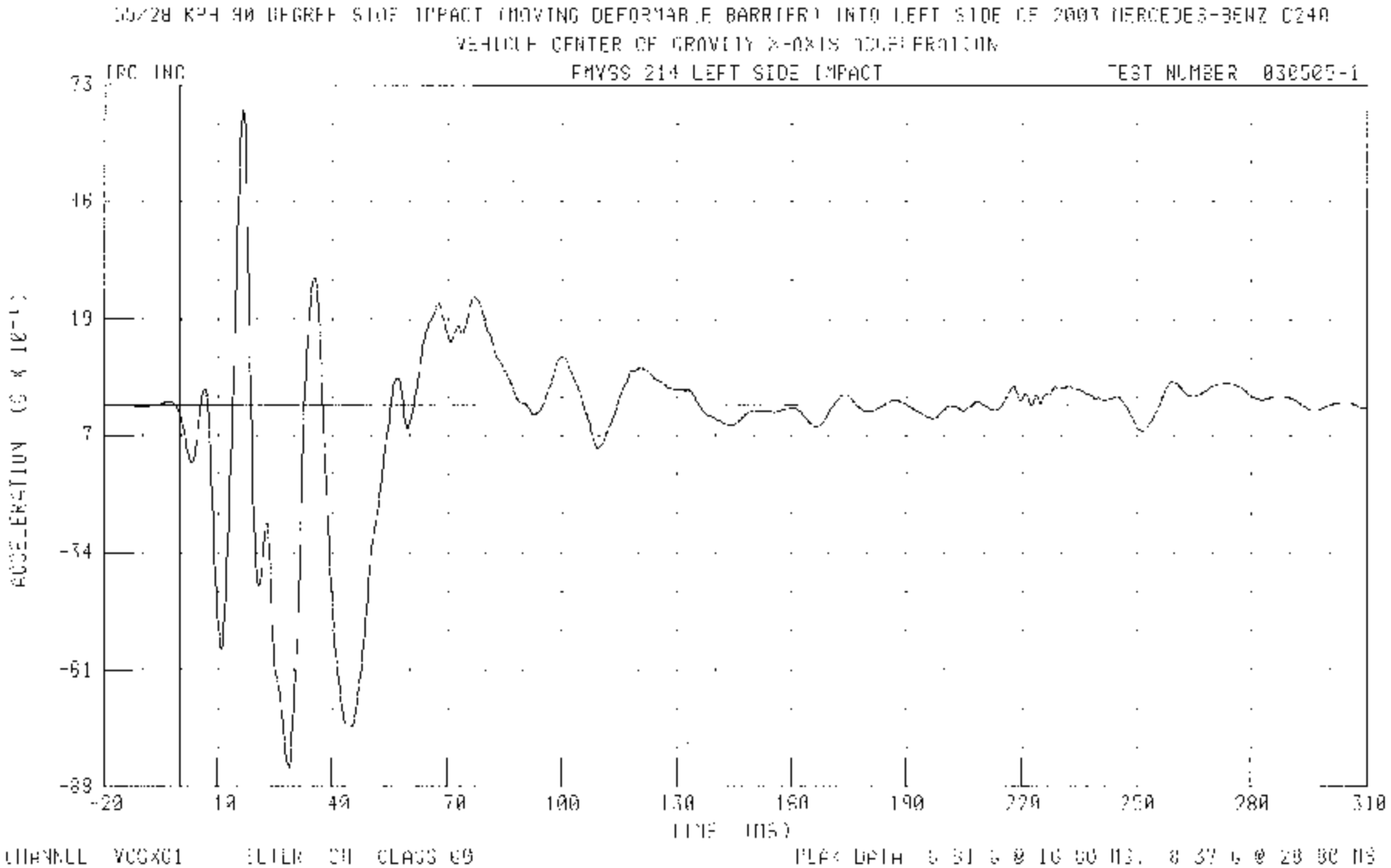

56.78 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES BENZ C240
LEFT REAR SEAT TRACK Y AXIS VELOCITY
TRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
VELOCITY (KPH X 10-1)
TIME (MS)
CHANNEL: LRTYVT
FILTER CH CLASS 180
PEAK DATA 30.28 KPH @ 40.13 MS; -0.70 KPH @ 3.28 MS



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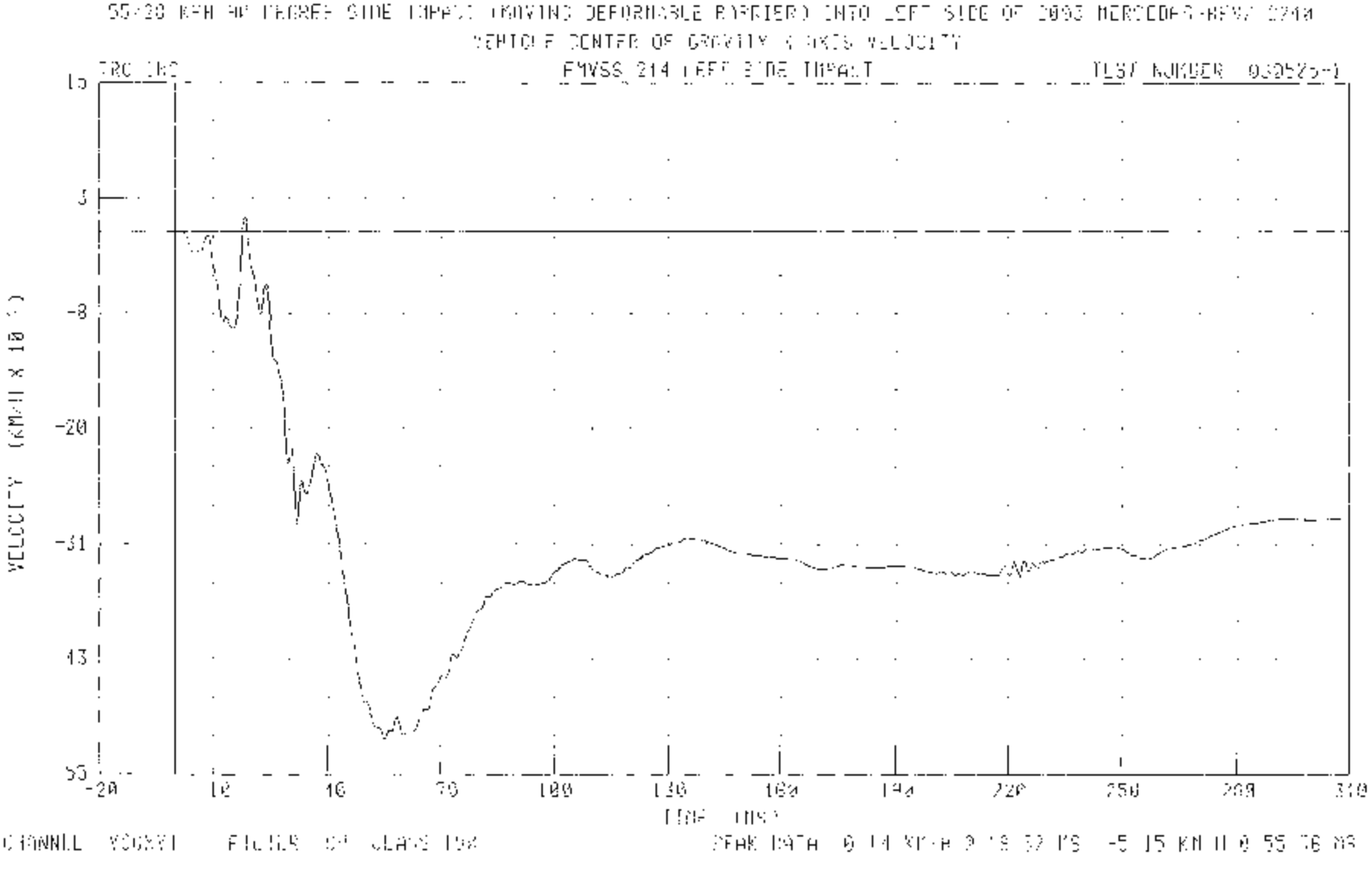

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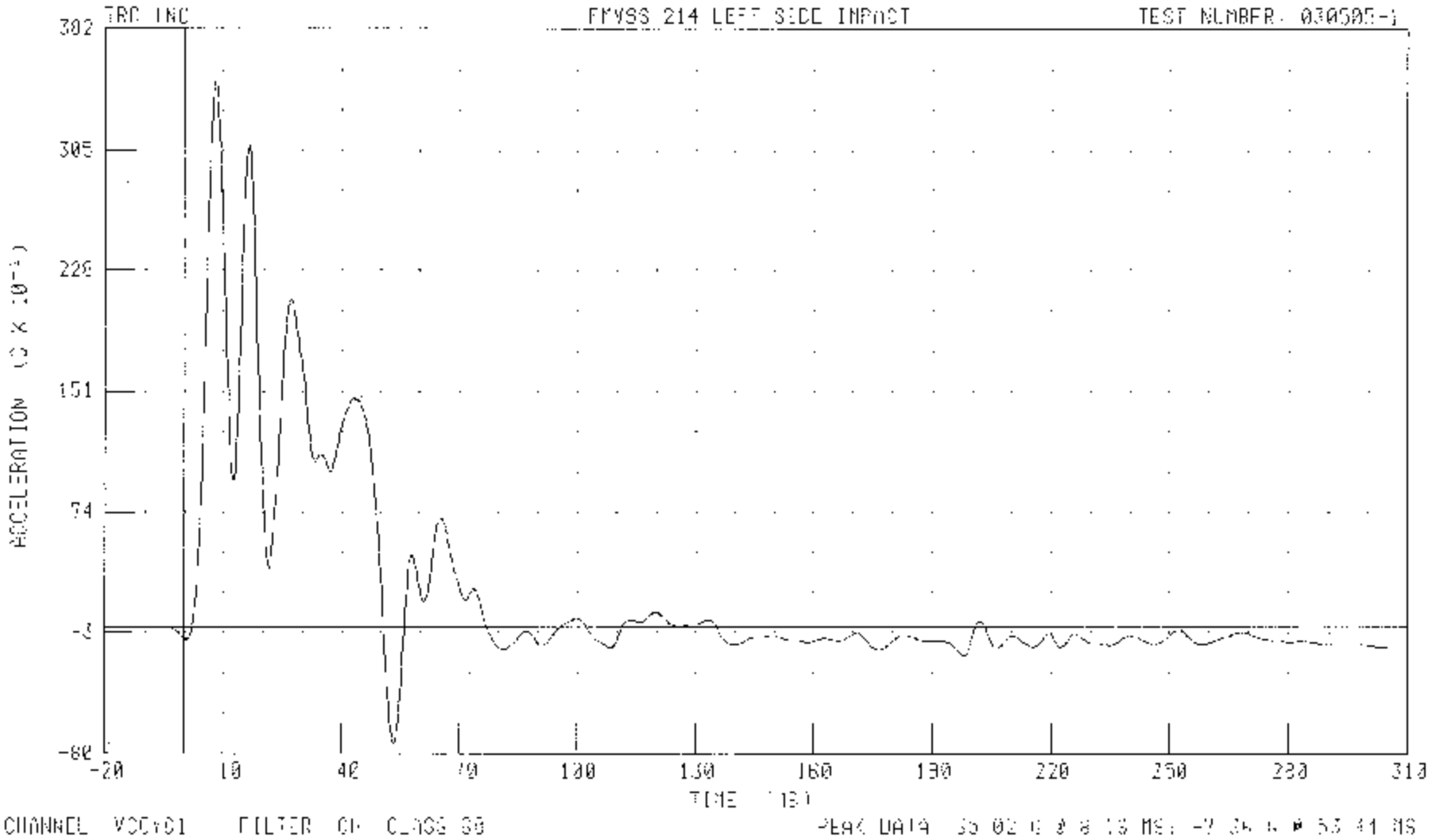
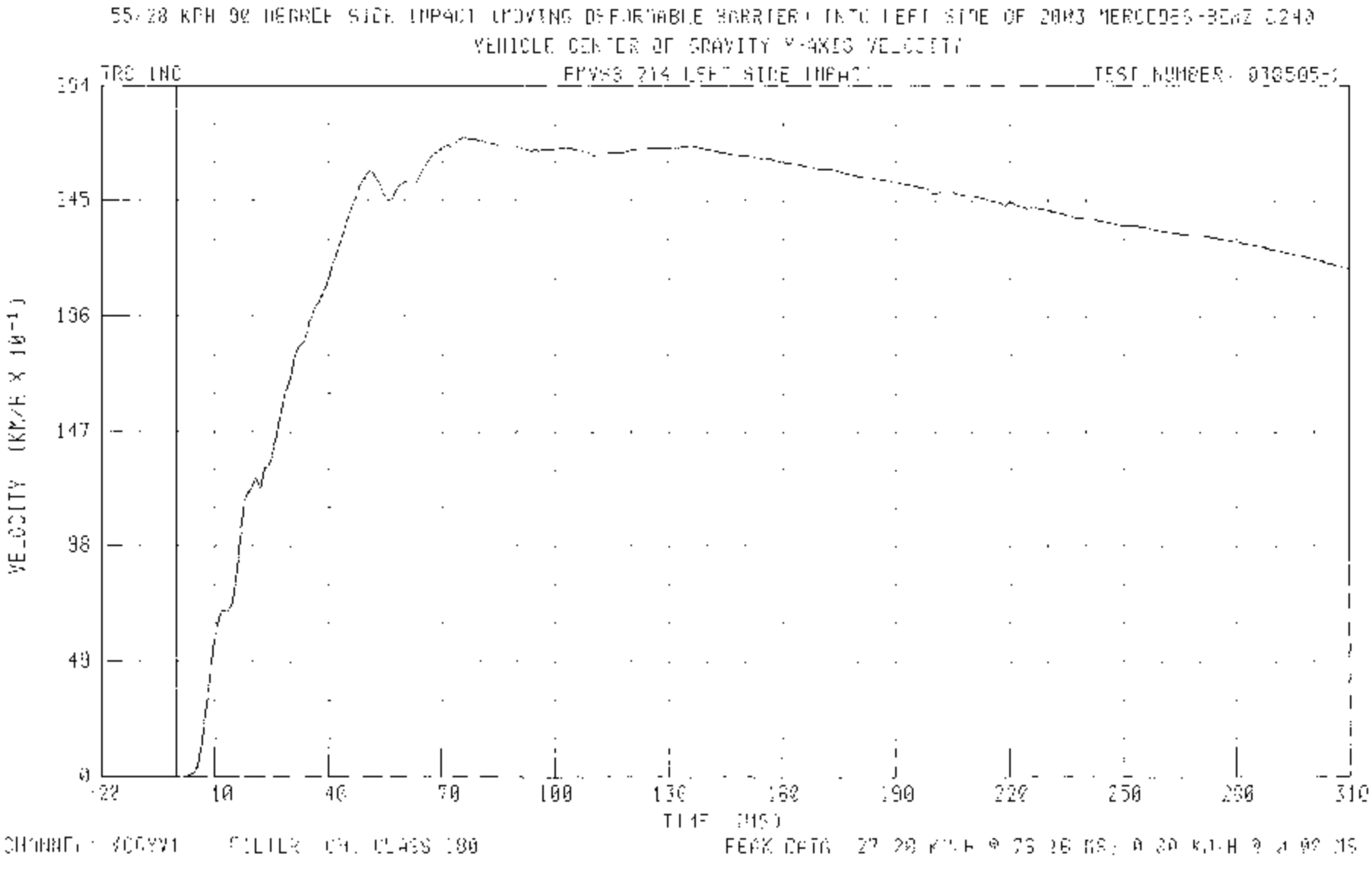
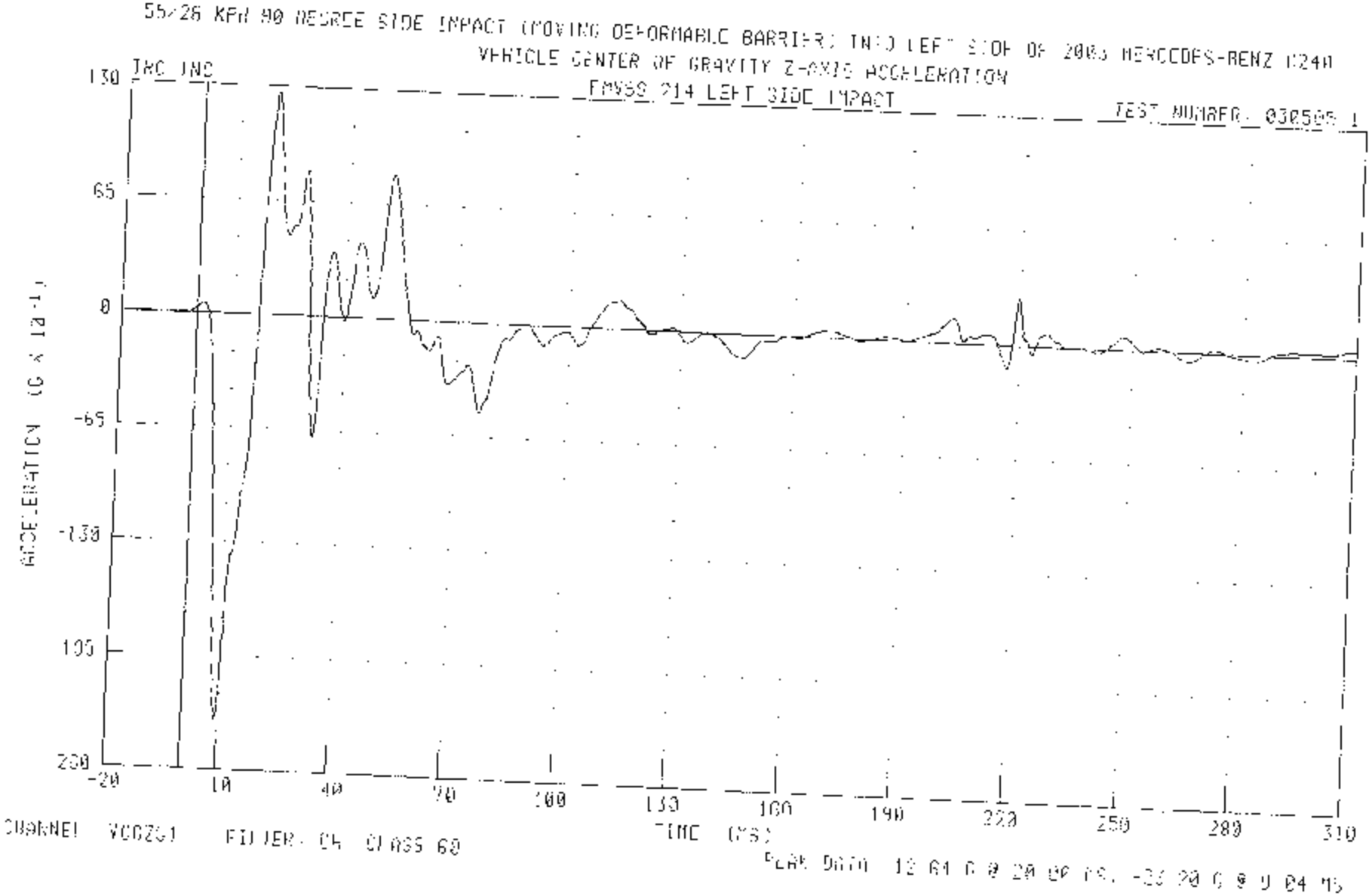
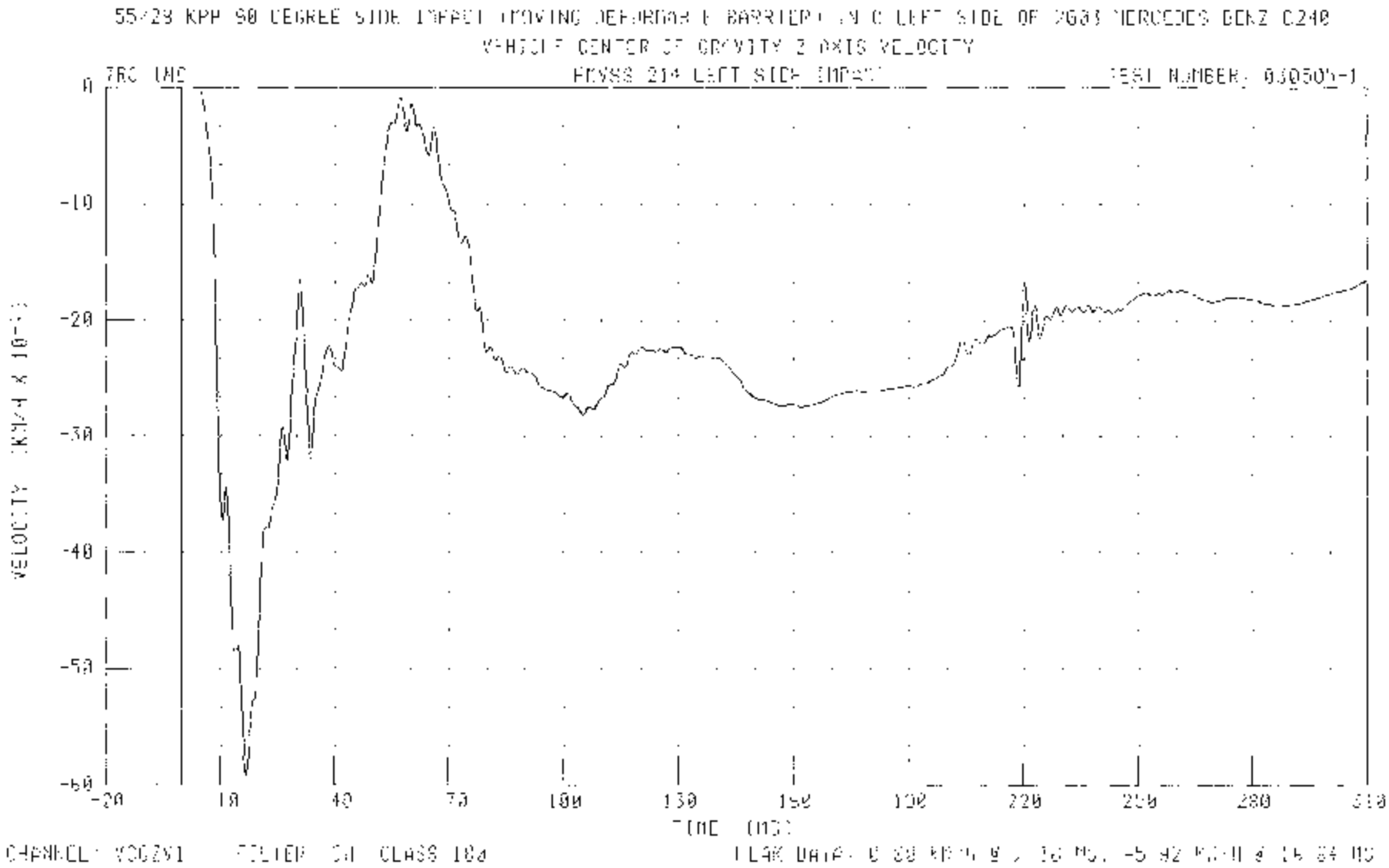
030505-1


55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION
TRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
ACCELERATION (G X 10**-1)
302
305
226
151
74
-3
-80
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL VCGY01 FILTER CFC CLASS 60
PEAK DATA 30.02 G @ 8.15 MS; -7.36 G @ 53.41 MS


55.28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY
TRS INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
VELOCITY (KM/H X 10-1)
294
245
196
147
98
49
0
-22
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: VCGYX1
FILTER: CFC CLASS 180
PEAK DATA: 27.20 KM/H @ 23.26 MS; 0.20 KM/H @ 4.00 MS

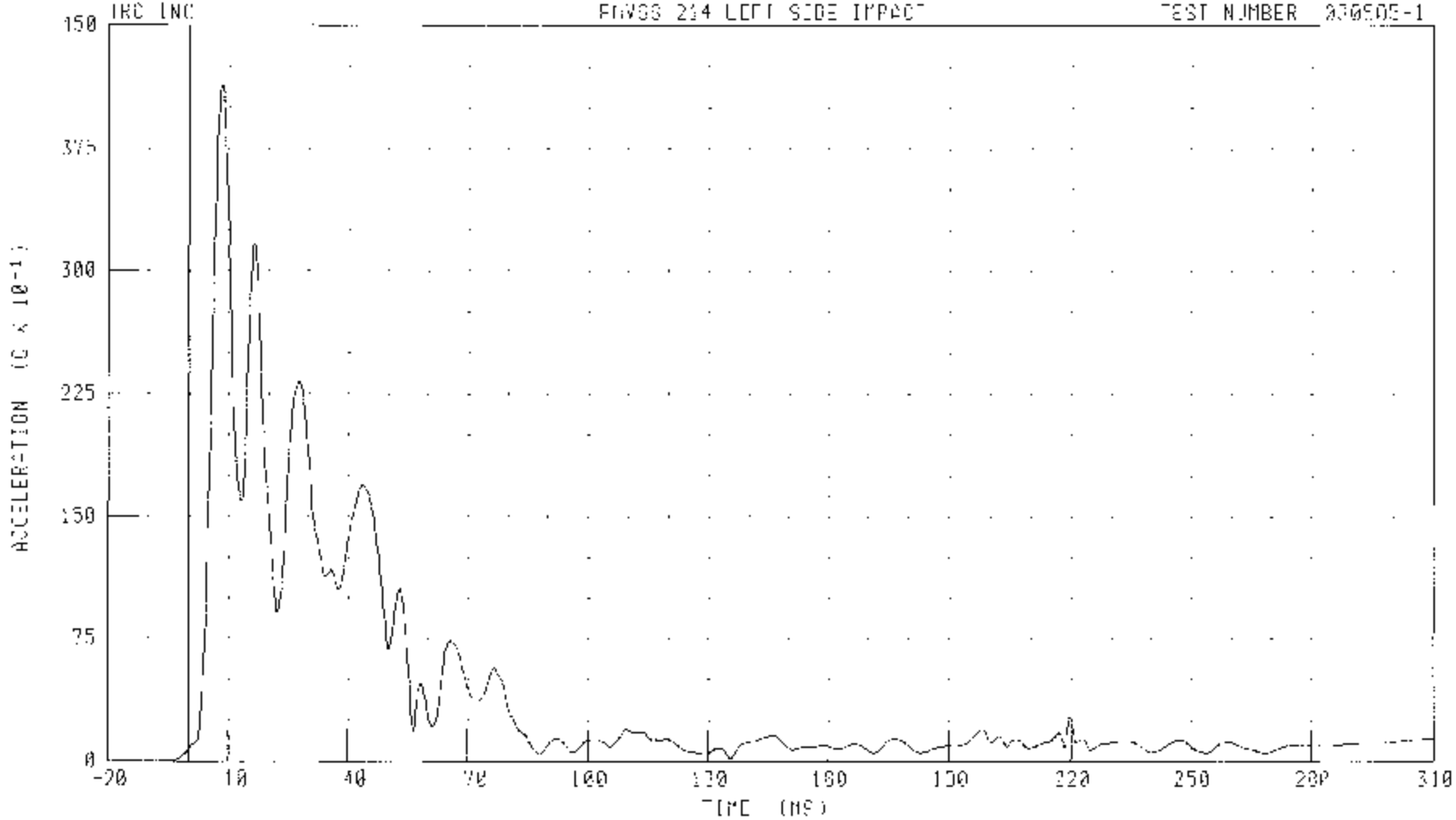

55.26 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
IRC INC
130
65
0
-65
-130
-195
-260
ACCELERATION (G x 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: VC0Z01
FILTER: CFC CLASS 60
PEAK DATA: 12.61 G @ 20.00 MS, -32.20 G @ 9.04 MS


55/23 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) TO C LEFT SIDE OF 2003 MERCEDES BENZ C240
VEHICLE CENTER OF GRAVITY X AXIS VELOCITY
ZRC UNC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
0
-10
-20
-30
-40
-50
-60
VELOCITY (KM/H X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: VCGZX1
FILTER: CFC CLASS 180
FLAK DATE: 6 08 KPH 9 , 16 MS, -5 92 KPH @ 15 84 MS

55/20 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES BENZ C240

VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION

IRC INC FMVSS 214 LEFT SIDE IMPACT TEST NUMBER 030505-1



CHANNEL : VCGRC1 FILTER CH C ASS 60 PEAK DATA: 41.02 G @ 2.48 MS, 0.01 G @ -19.90 MS

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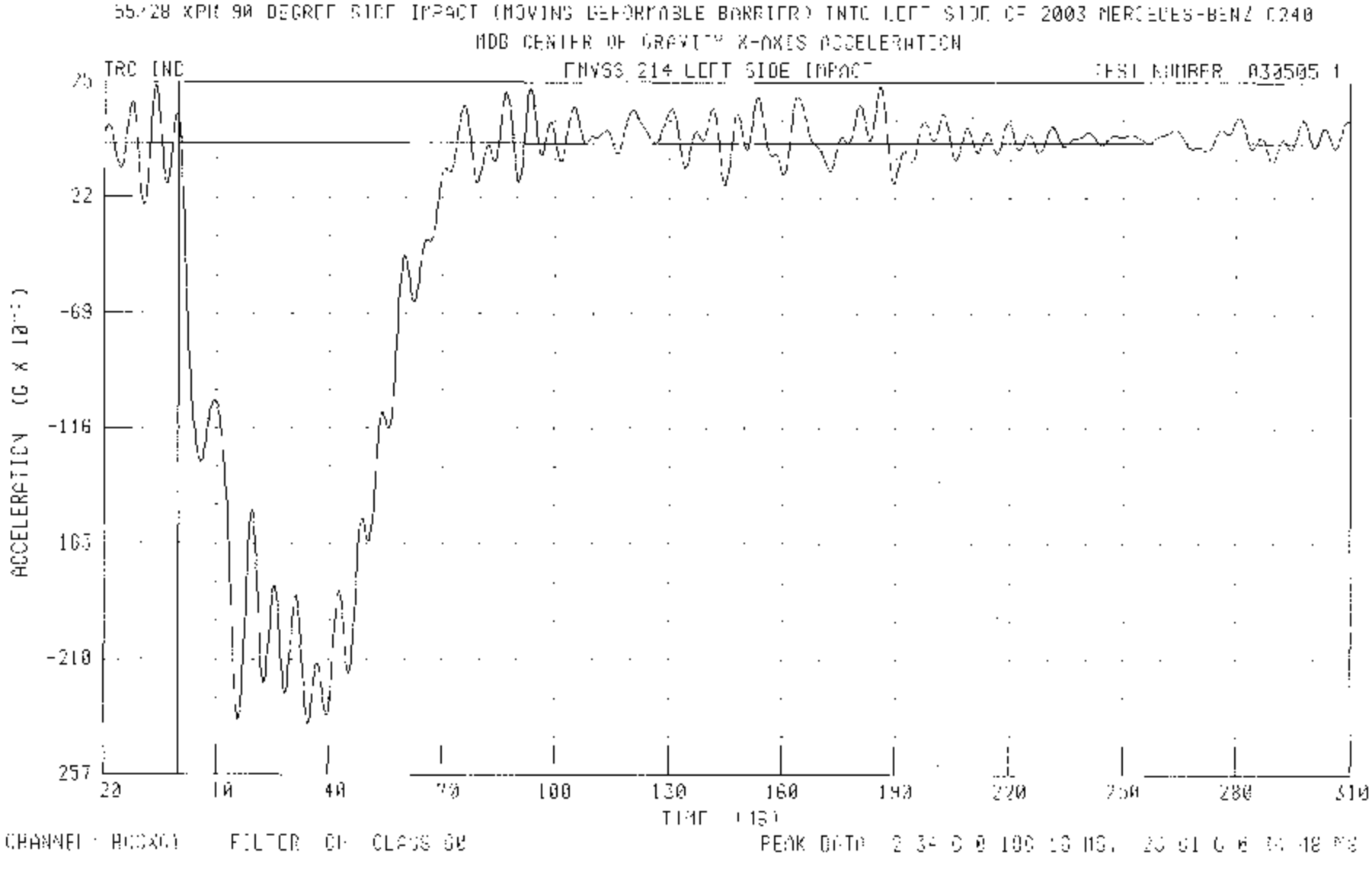
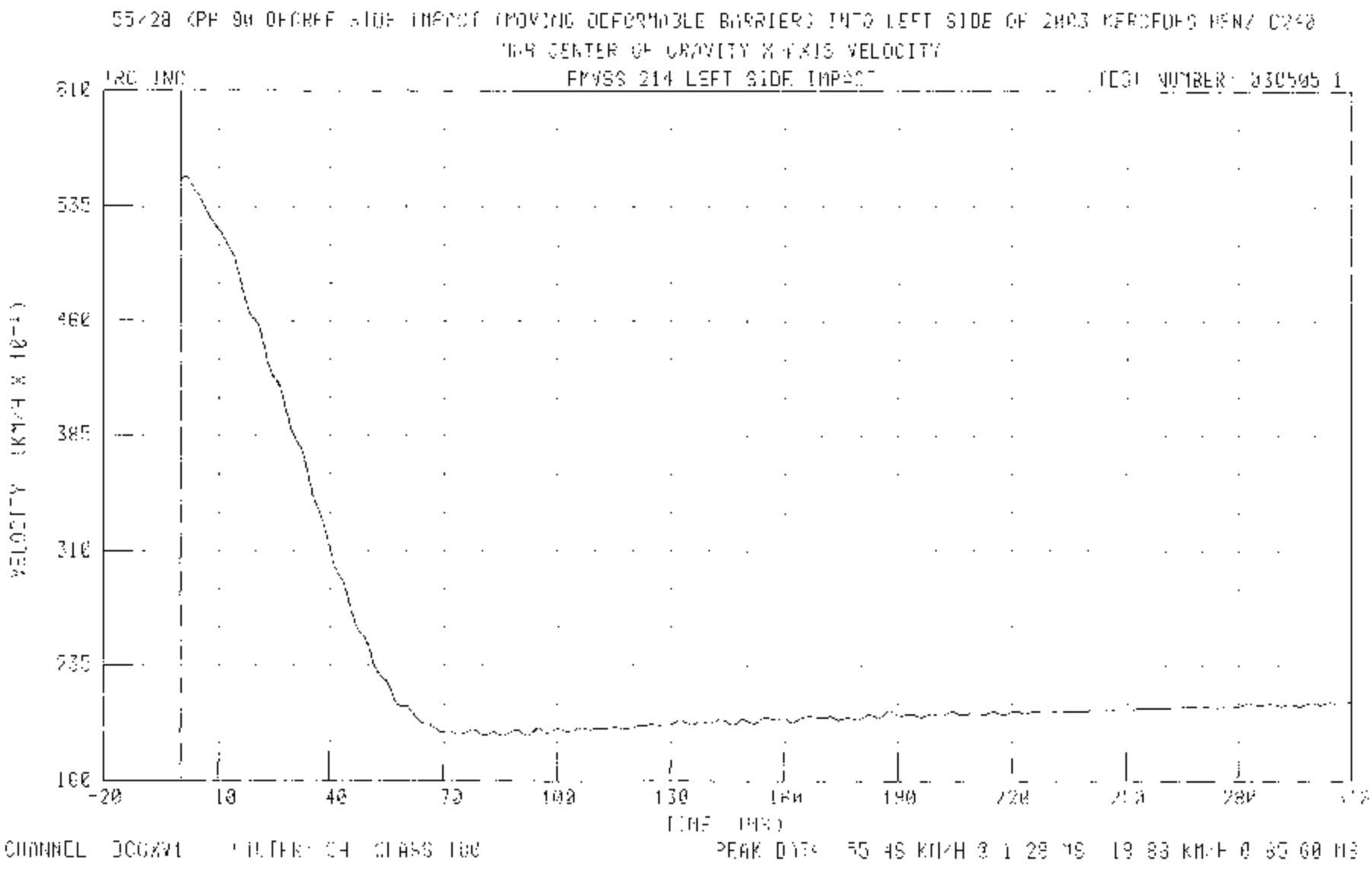
030505-1

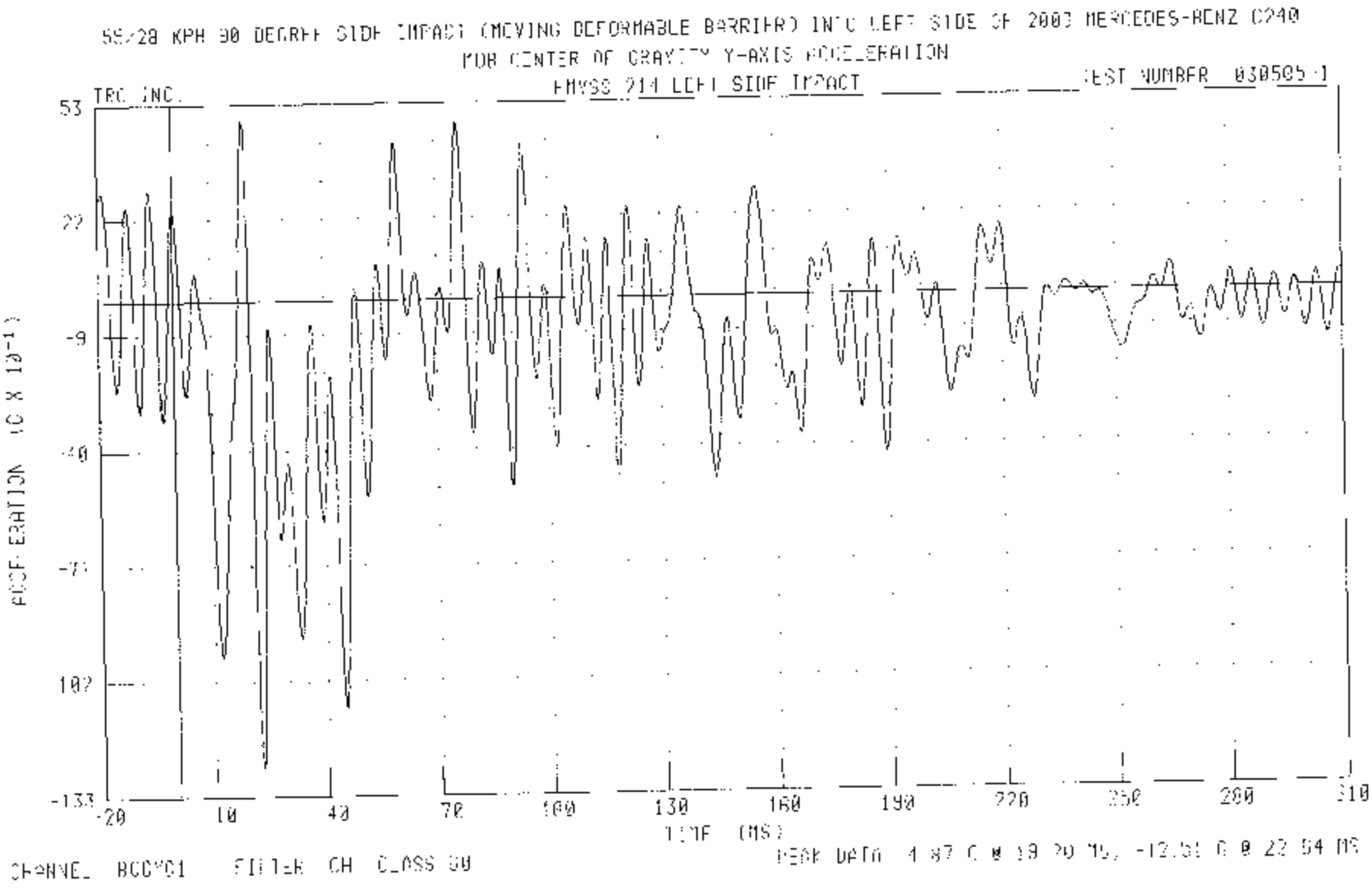
MDB Instrumentation Plots

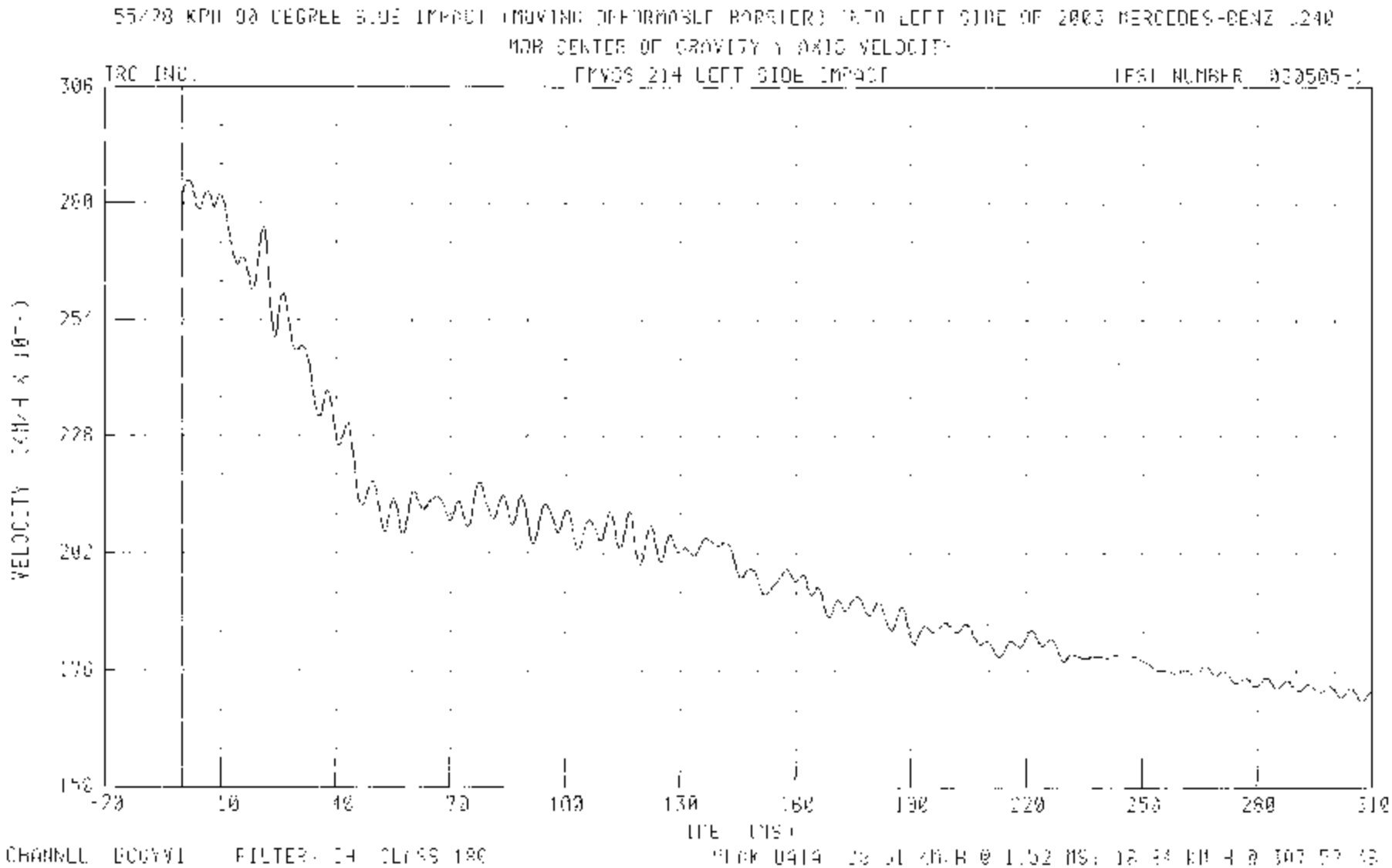
Acceleration Data - Filter Class 60

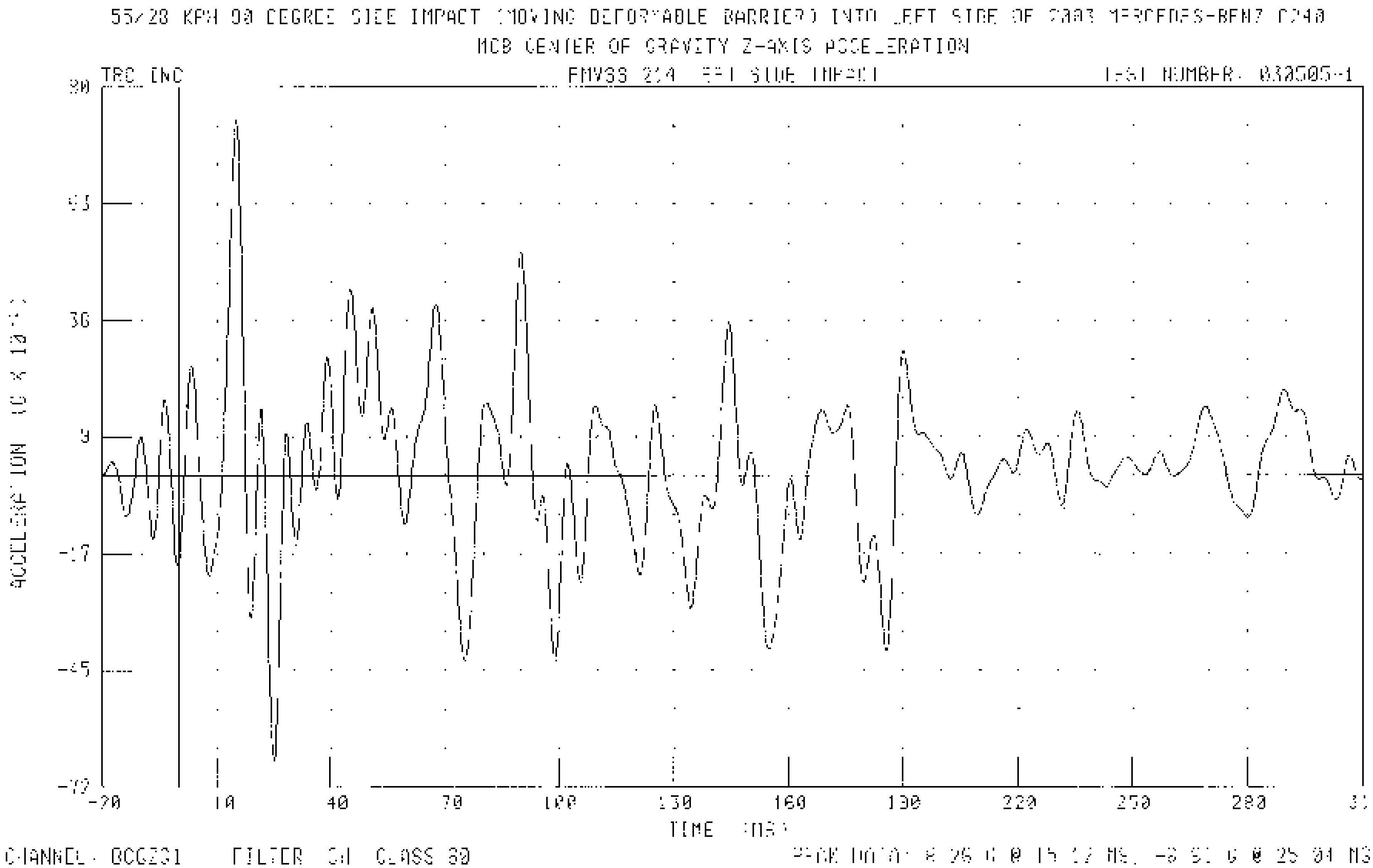
Integration Data - Filter Class 180

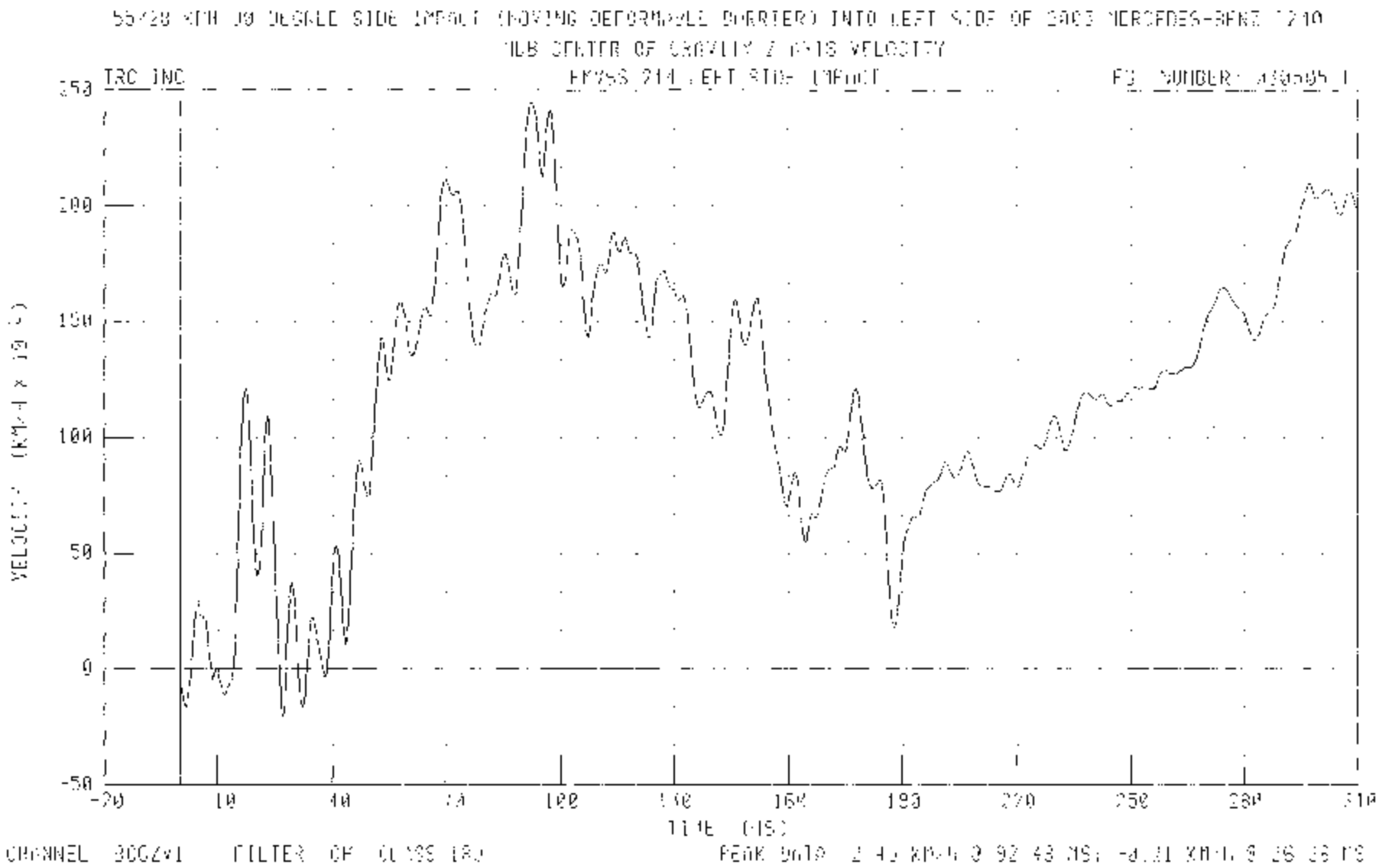

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
MDB CENTER OF GRAVITY X-AXIS ACCELERATION
TRC IND
ENVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505 1
ACCELERATION (G X 10**1)
22
-69
-116
163
-210
257
20
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL : MDCXCG
FILTER CF CLASS 60
PEAK DATA 2 34 0 0 100 10 MS, 20 01 0 6 00 48 MS

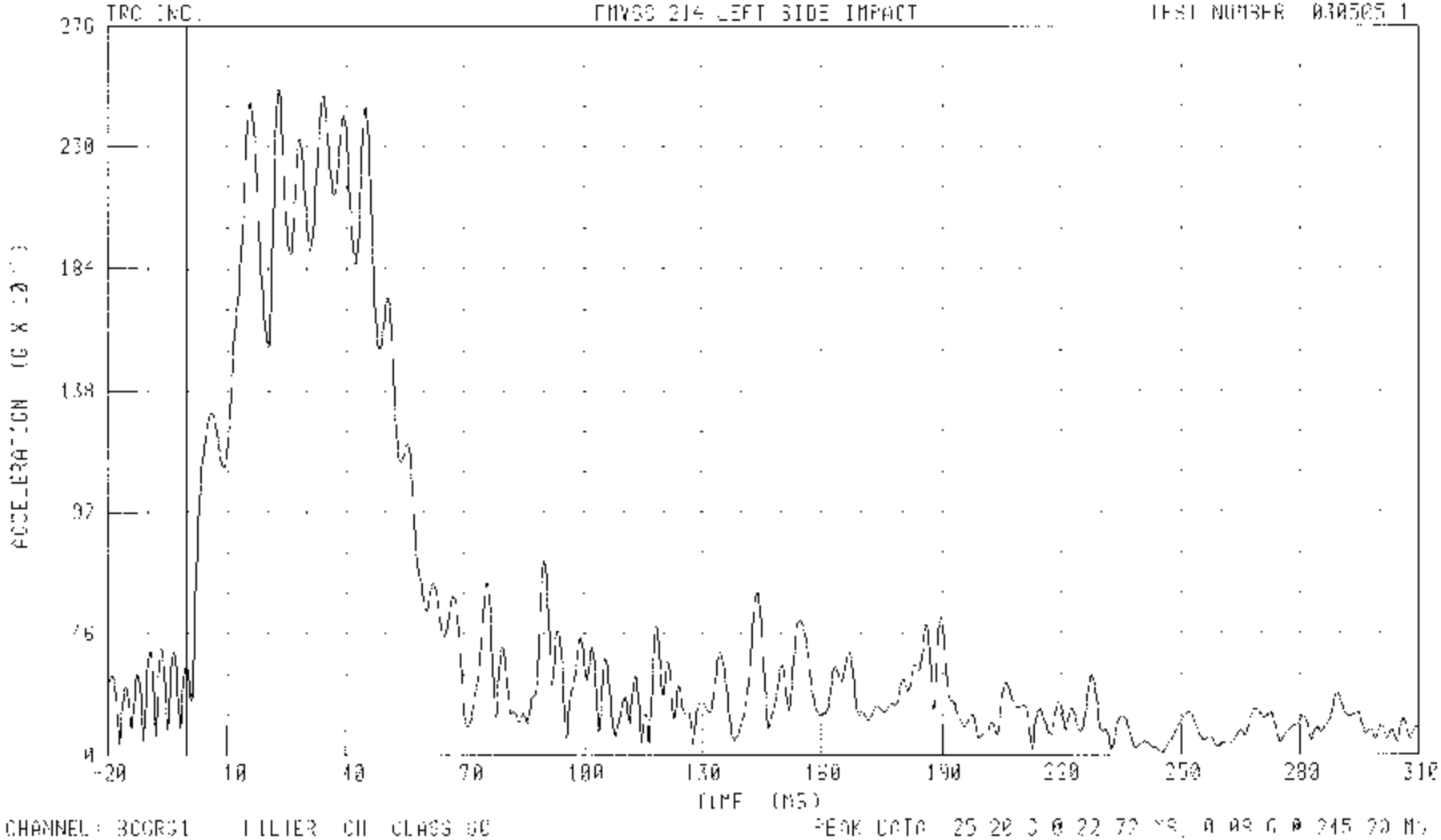

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES BENZ C240
TGA CENTER OF GRAVITY X-AXIS VELOCITY
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
SAE J211
610
535
460
385
310
235
160
-20
10
40
70
100
130
160
190
220
250
280
TIME (MS)
CHANNEL: DCGXV1
PEAK DATA: 50.45 KM/H @ 1.29 MS 19.83 KM/H @ 60.00 MS

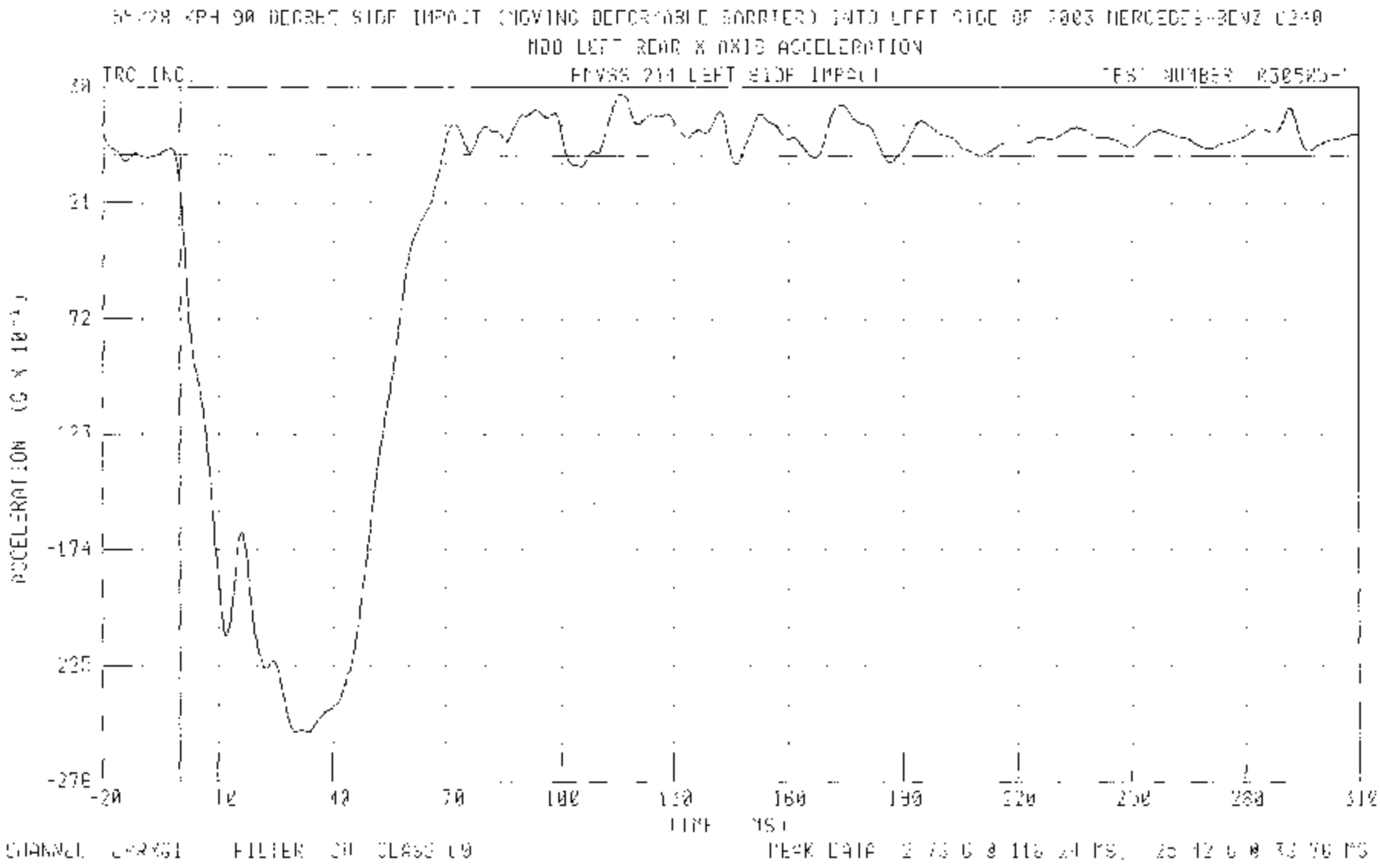

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
FOR CENTER OF GRAVITY Y-AXIS ACCELERATION
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505-1
TRG INC.
53
22
-9
-40
-71
102
-133
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
ACCELERATION (G X 10-1)
CHANNEL R0DYC1 FILTER CH CLASS 60
PEAK DATA 1 87 C @ 19 20 MS, -12.31 G @ 22 54 MS

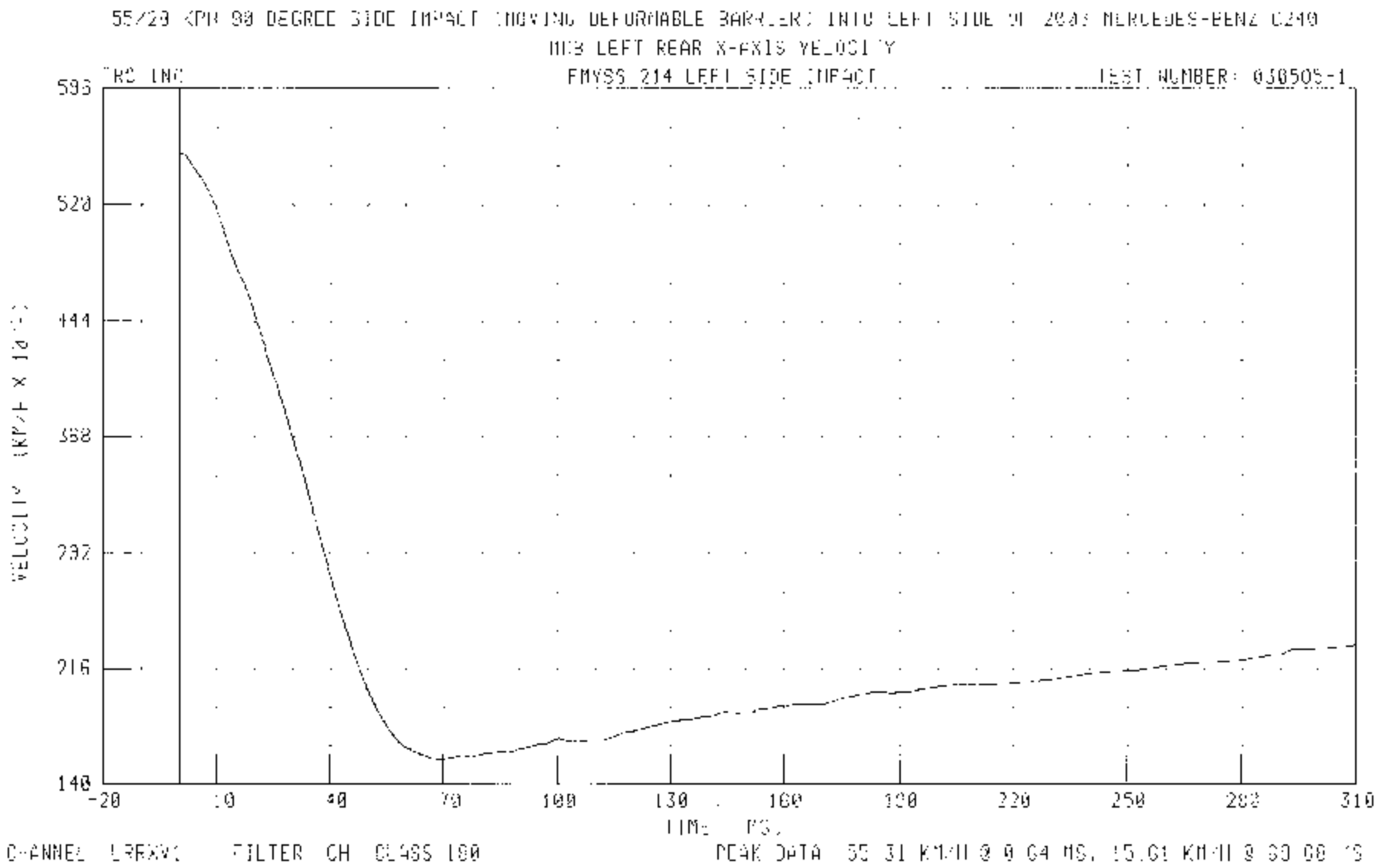

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
MDB CENTER OF GRAVITY X AXIS VELOCITY
TRC INC.
TMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505-1
306
200
254
228
202
176
150
-20
10
40
70
100
130
160
190
220
250
280
310
VELOCITY (KM/H X 10E-1)
TIME (MS)
CHANNEL DCGYVI FILTER: CFC CLASS 180
PEAK DATA 28.31 KM/H @ 1.52 MS; 18.84 KM/H @ 307.52 MS

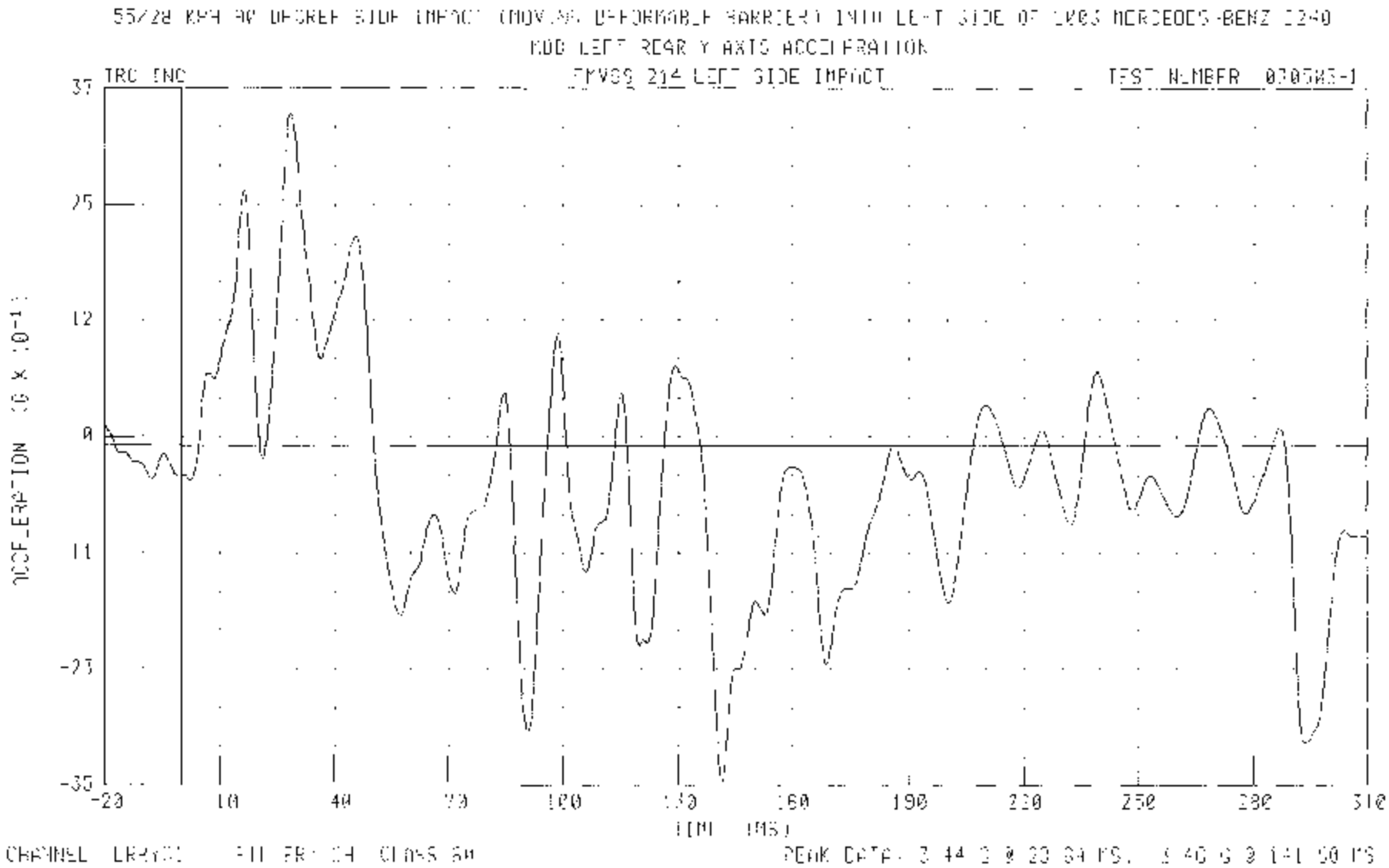

MCB CENTER OF GRAVITY Z-AXIS ACCELERATION
TRC INC
FMVSS 214
TEST NUMBER: 030505-1
80
9
-17
-45
-20
10
40
70
100
130
160
190
220
250
280
310
TIME
CHANNEL: BCGZ31
FILTER
CLASS 60


55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ E320
VEHICLE CENTER OF GRAVITY Z AXIS VELOCITY
TRC INC
EMPSS 214 LEFT SIDE IMPACT
FILE NUMBER: 030505-1
VELOCITY (KM-H x 10.0)
250
200
150
100
50
0
-50
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL 3002V1
FILTER CFC 60 180
PEAK DATA 2.45 KM-H @ 92.48 MS; -0.31 KM-H @ 26.36 MS


55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
MDB CENTER OF GRAVITY RESULTANT ACCELERATION
TRC INC.
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505_1
ACCELERATION (G X 10^1)
230
184
138
92
46
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BOORG1
FILTER CH CLASS 60
PEAK DATA


56.28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
MDB LEFT REAR X AXIS ACCELERATION
TRC INC.
ENVSS 214 LEFT SIDE IMPACT
TEST NUMBER R305MD-1
ACCELERATION (G X 10**1)
TIME (MS)
CHANNEL CFRXGI FILTER CFC CLASS 60
PEAK DATA

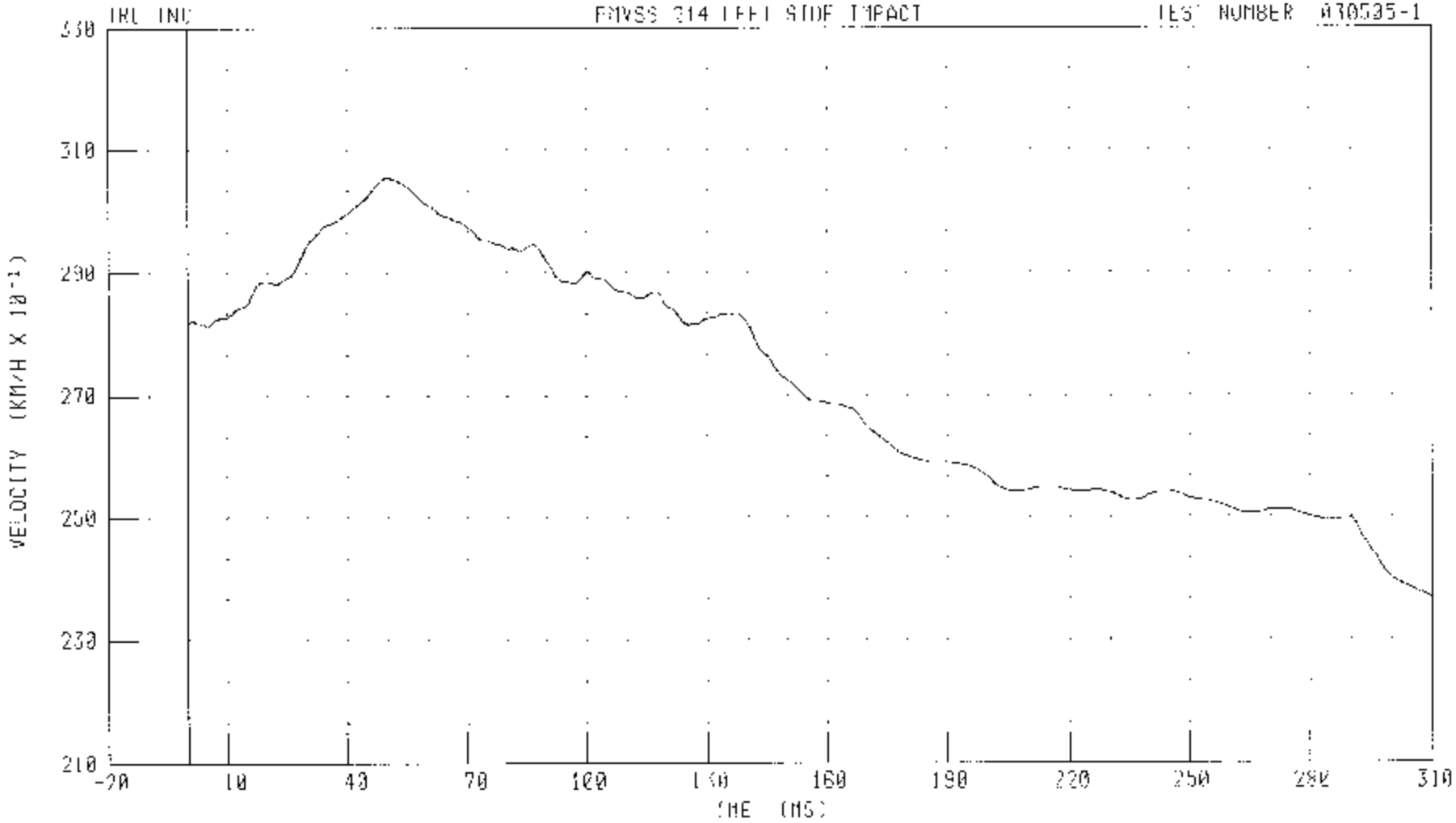

55/20 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
MDB LEFT REAR X-AXIS VELOCITY
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
596
520
444
368
292
216
140
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LREXV
FILTER CH CLASS 180
PEAK DATA 55.31 KM/H @ 0.04 MS, 15.01 KM/H @ 80.00 MS


55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) WITH LEFT SIDE OF 1993 MERCEDES-BENZ 1240
MDB LEFT REAR Y AXIS ACCELERATION
TRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030503-1
37
25
12
0
-11
-23
-35
ACCELERATION (G x 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL LR4YDI
FILTER CLASS 60
PEAK DATA: 3.44 @ 0.00 04 MS, -5.40 G @ 141.00 MS

55/28 KPH 30 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2WDS MERCEDES-BENZ E240

MDB LEFT REAR X-AXIS VELOCITY

IRL INC FMVSS 214 LEFT SIDE IMPACT TEST NUMBER A30505-1



CHANNEL: LRBYY1 FILTER CH CLASS 180 PEAK DATA 30.54 KM/H @ 49.84 MS, 23.66 KM/H @ 310.00 MS

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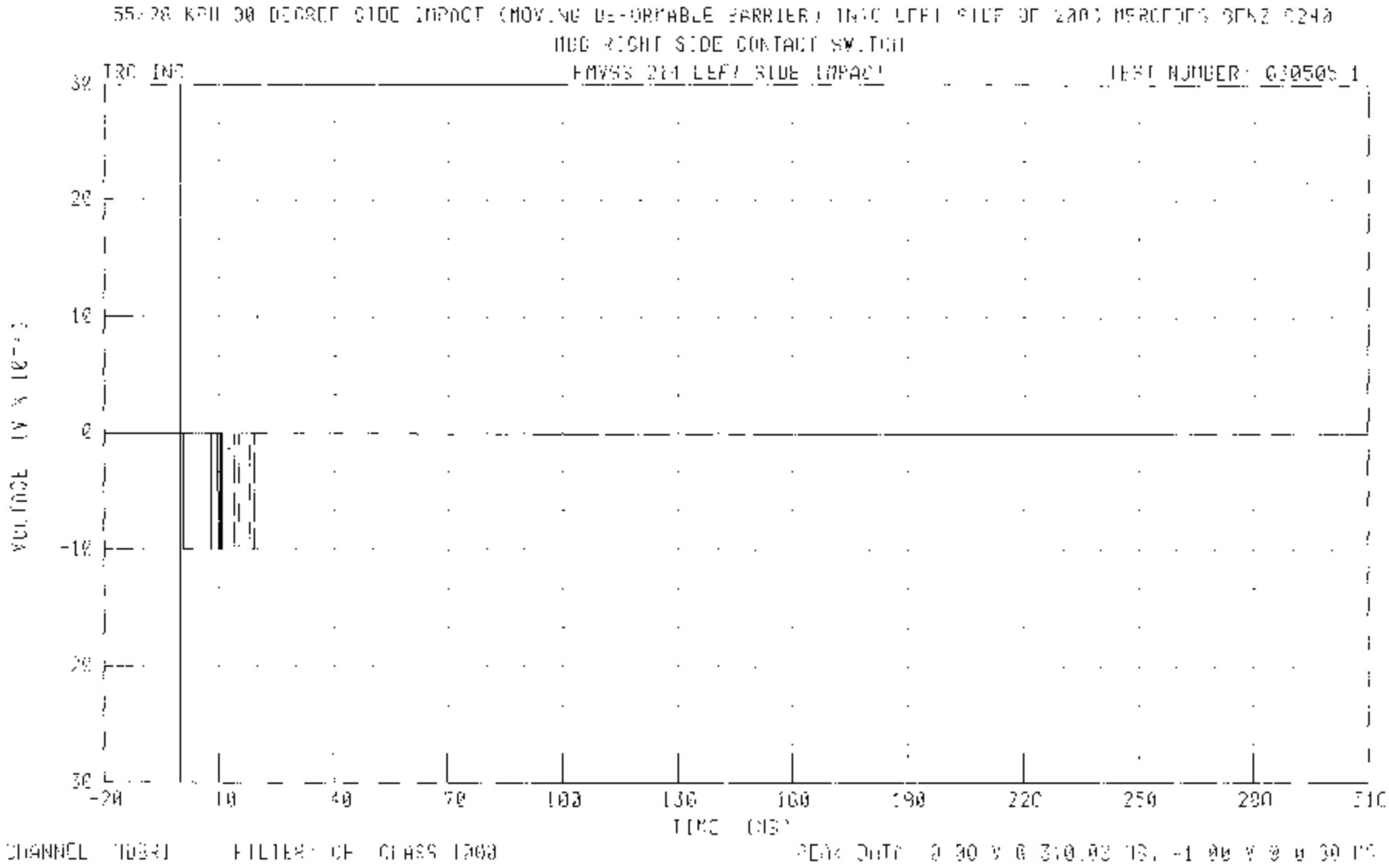
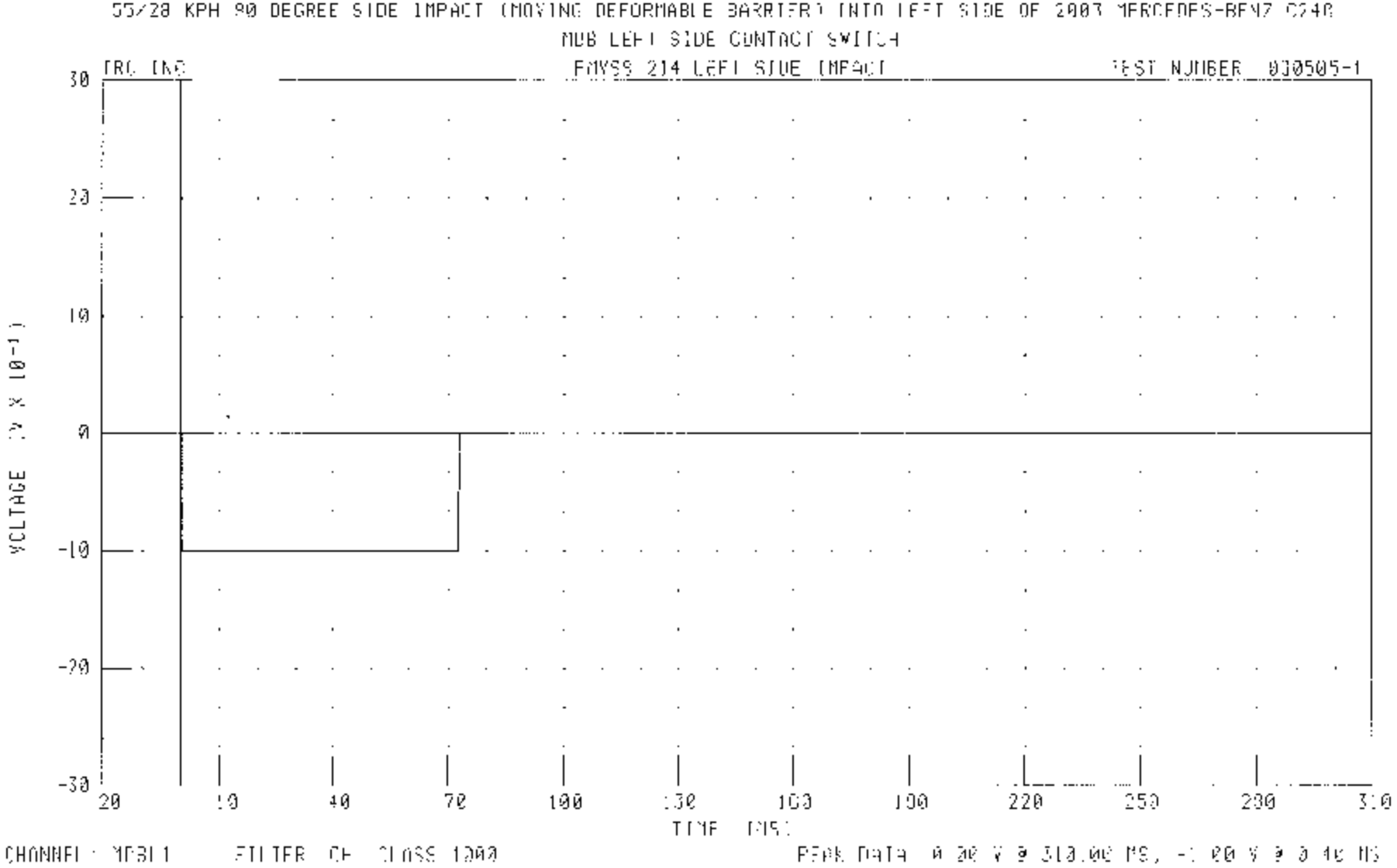
030505-1



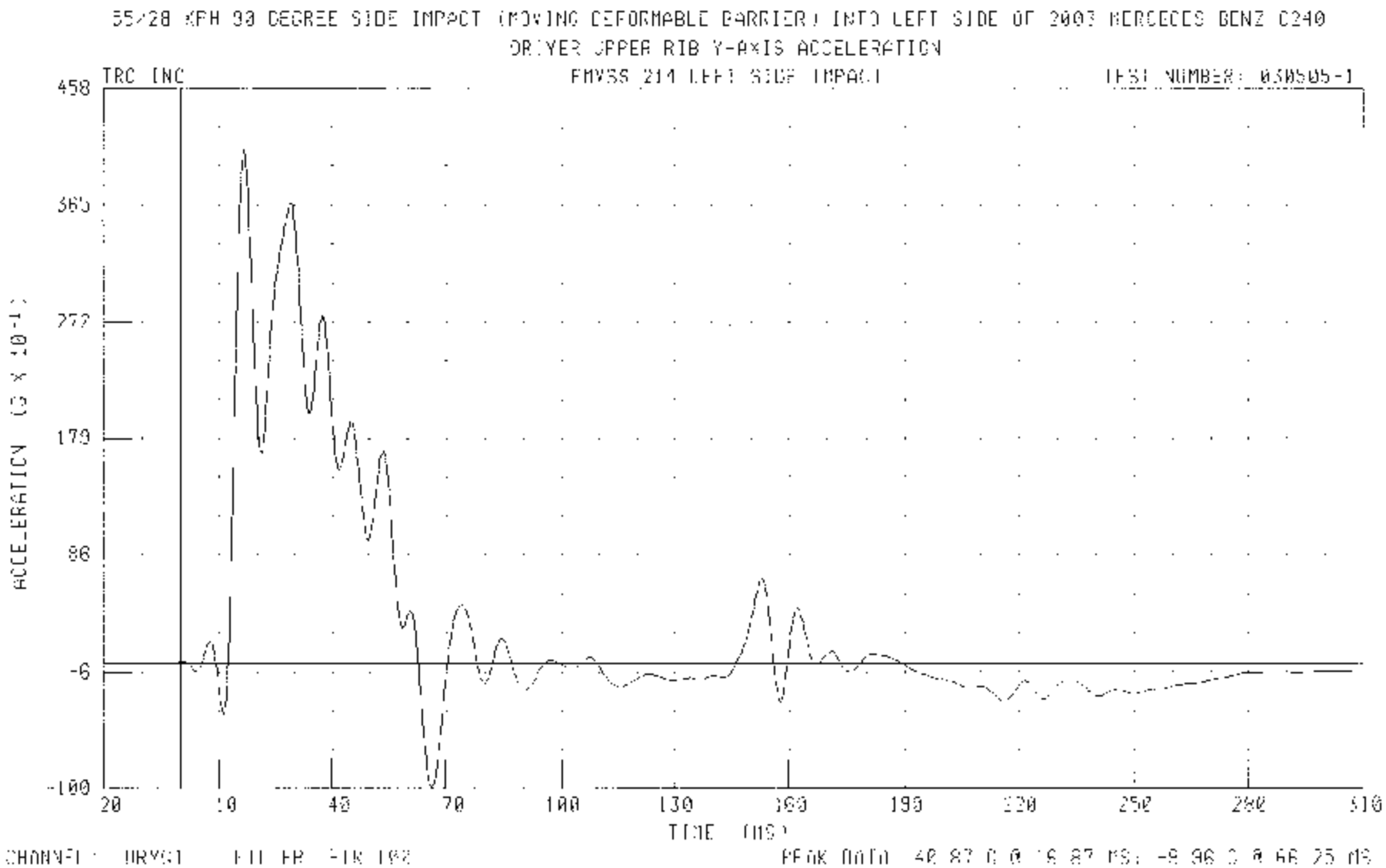
B-151

030505-1

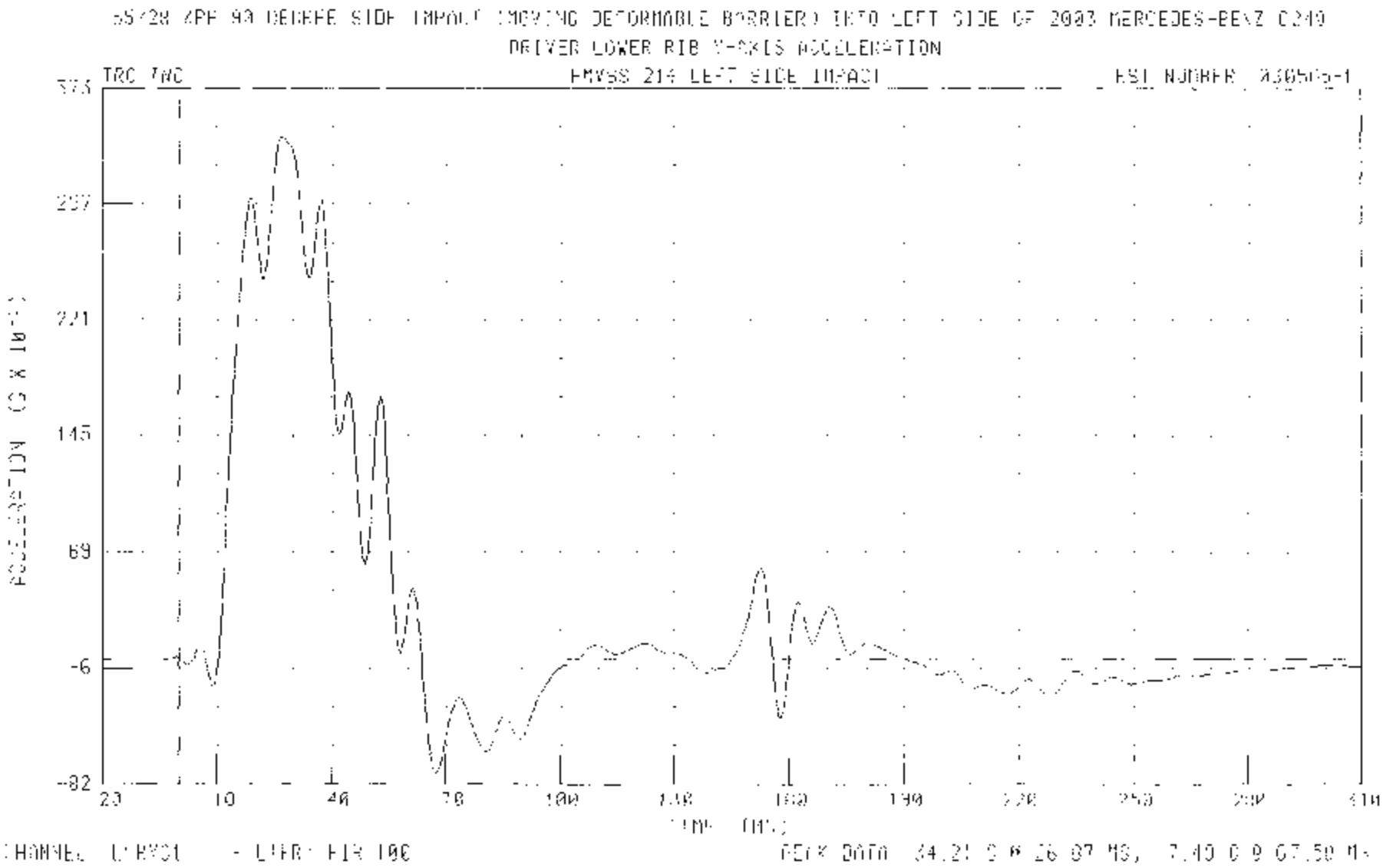

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
MDB LEFT SIDE CONTACT SWITCH
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505-1
TRG INC
30
20
10
0
-10
-20
-30
VOLTAGE (V X 10-1)
20
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL : MDB1
FILTER CF : CLASS 1000
PEAK DATA 0.20 V @ 310.00 MS, -1.00 V @ 0.40 MS

Driver and Passenger Dummy Instrumentation Plots

Acceleration Data - FIR Filtered

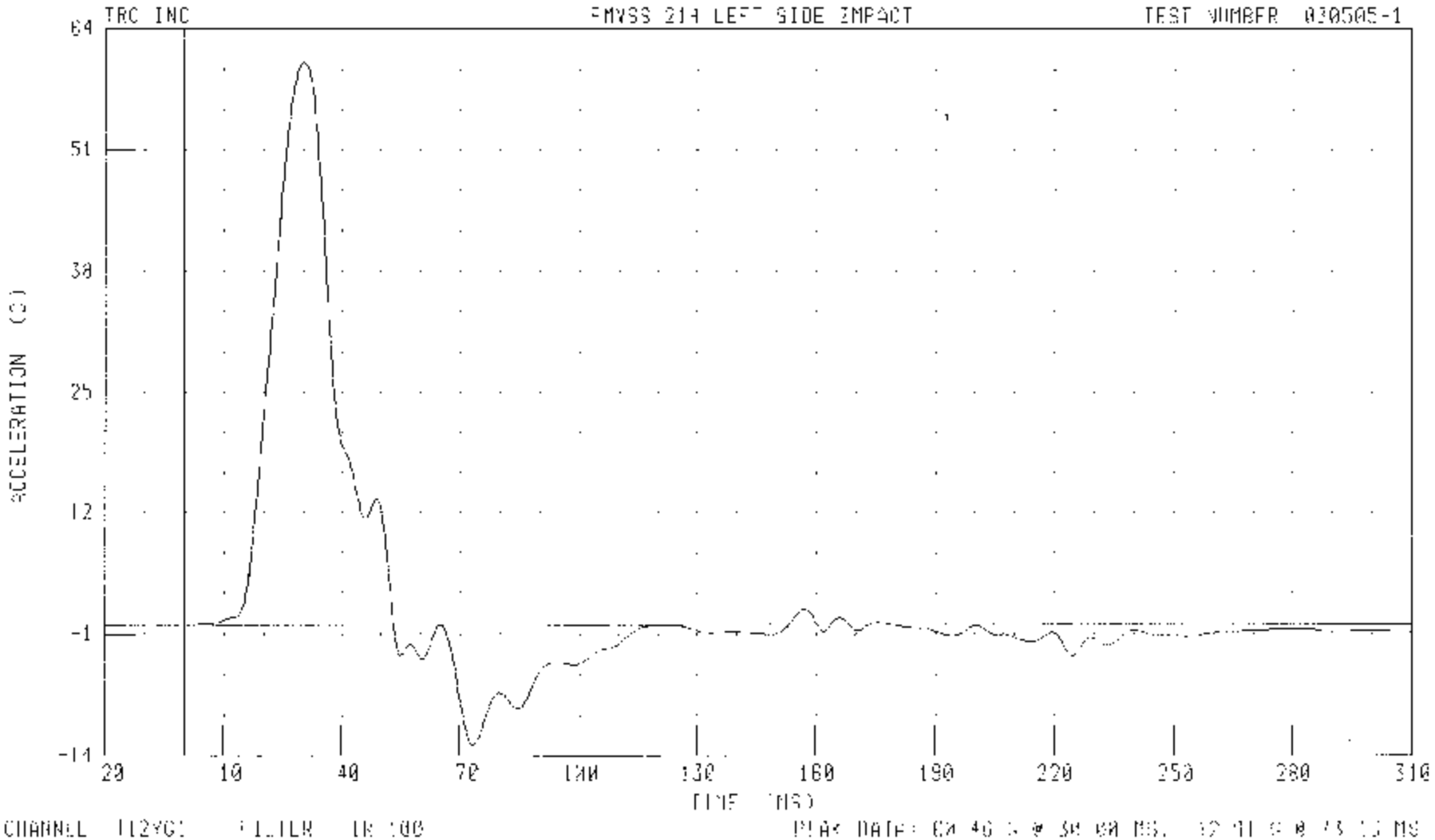

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES BENZ C240
DRIVER UPPER RIB Y-AXIS ACCELERATION
TRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
458
365
272
179
86
-6
-100
ACCELERATION (G X 10-1)
20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: DRVSI FIL FR FIR 180
PEAK DATA 40.87 G @ 19.87 MS; -9.96 G @ 66.25 MS

030505-1


65/20 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
DRIVER LOWER RIB Y-AXIS ACCELERATION
TRC /WC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER
ACCELERATION (G X 10**1)
TIME (MS)
CHANNEL
FILTER
PEAK DATA

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES BENZ S240

DRIVER LOWER SPINE Y-AXIS ACCELERATION



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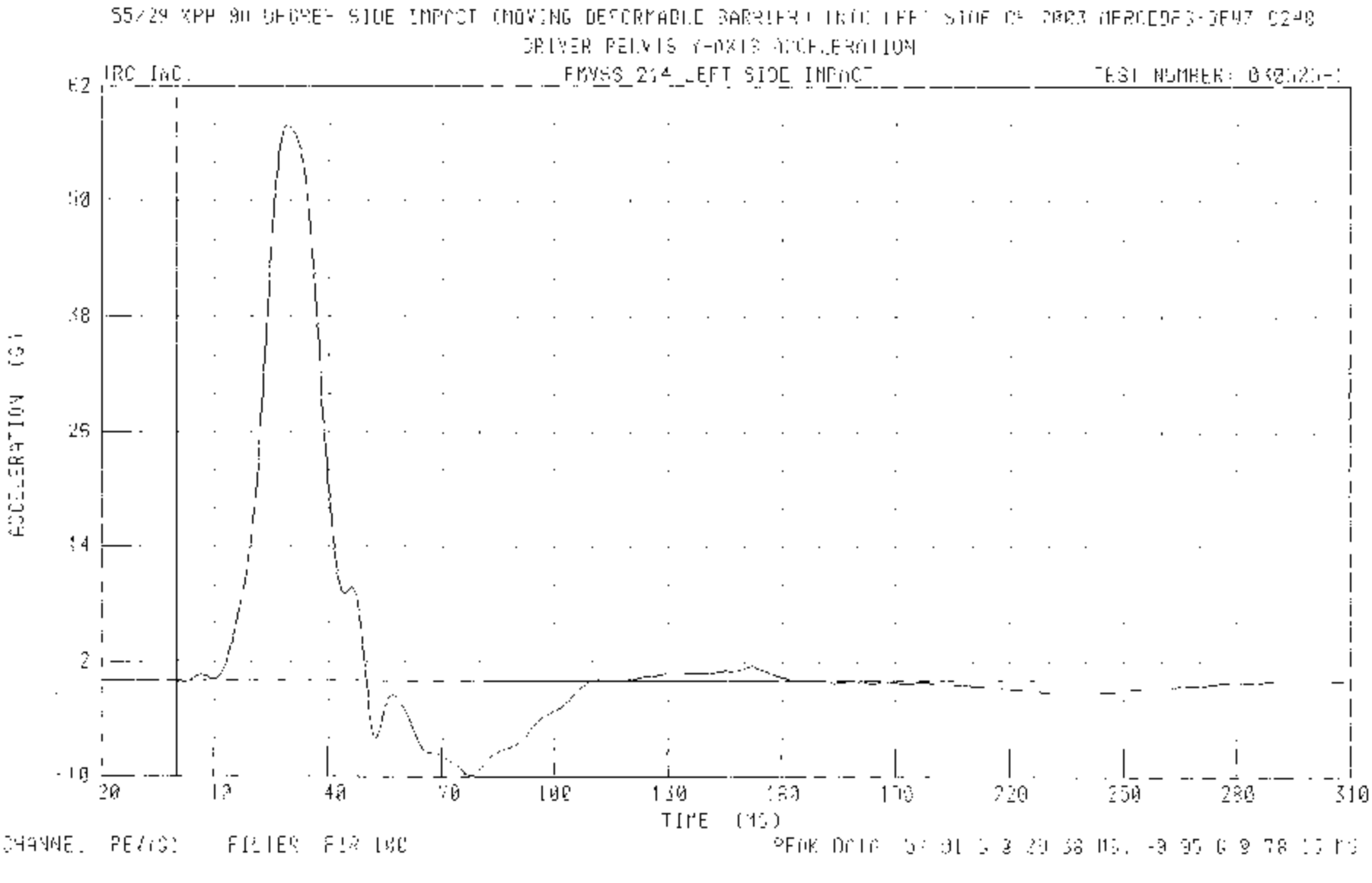
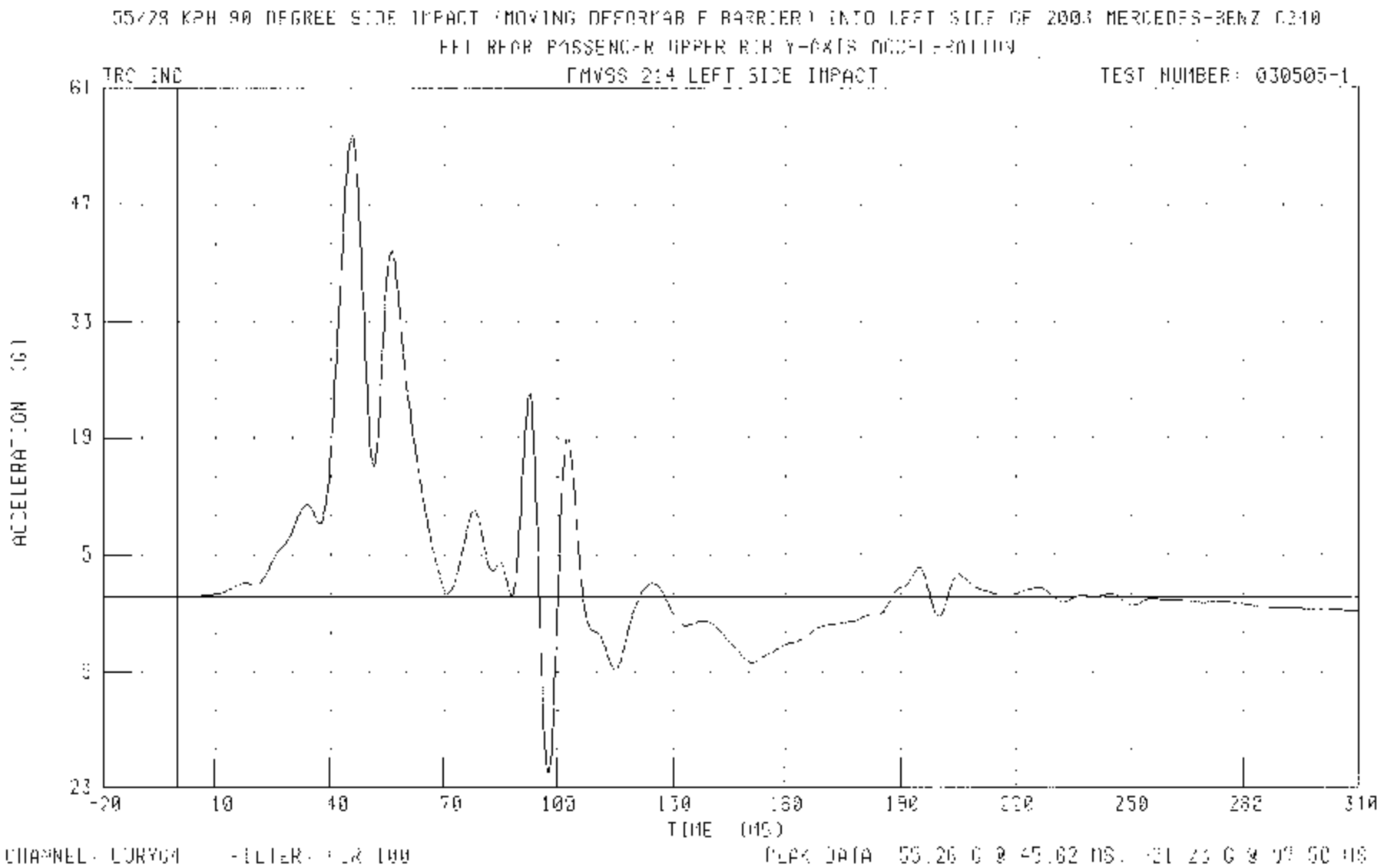
030505-1


55/29 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
DRIVER PELVIS Y-AXIS ACCELERATION
IRC, INC.
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
ACCELERATION (G)
62
50
38
26
14
2
-10
20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL PELVIS
FILTER FIR IRC
PEAK DATA



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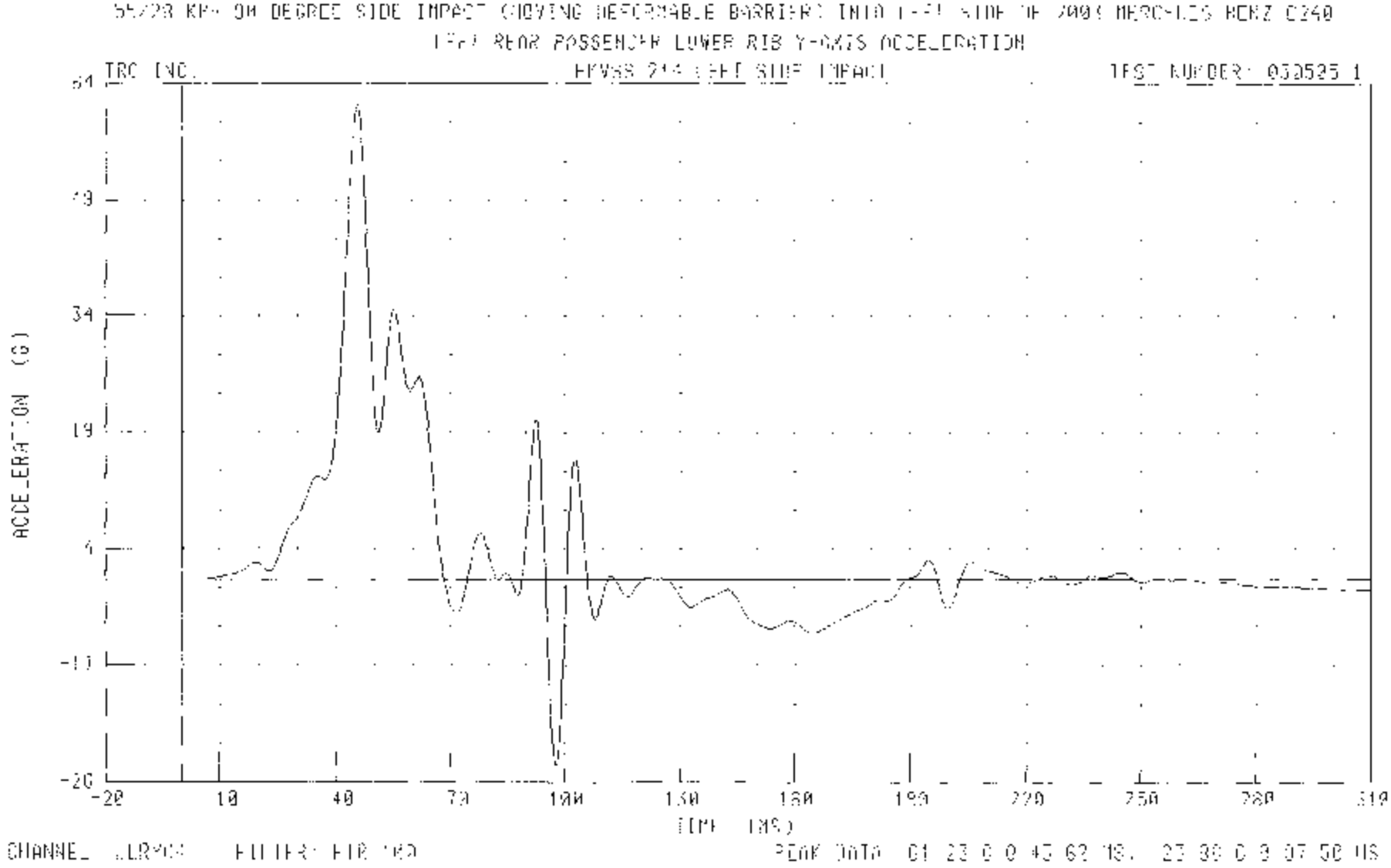
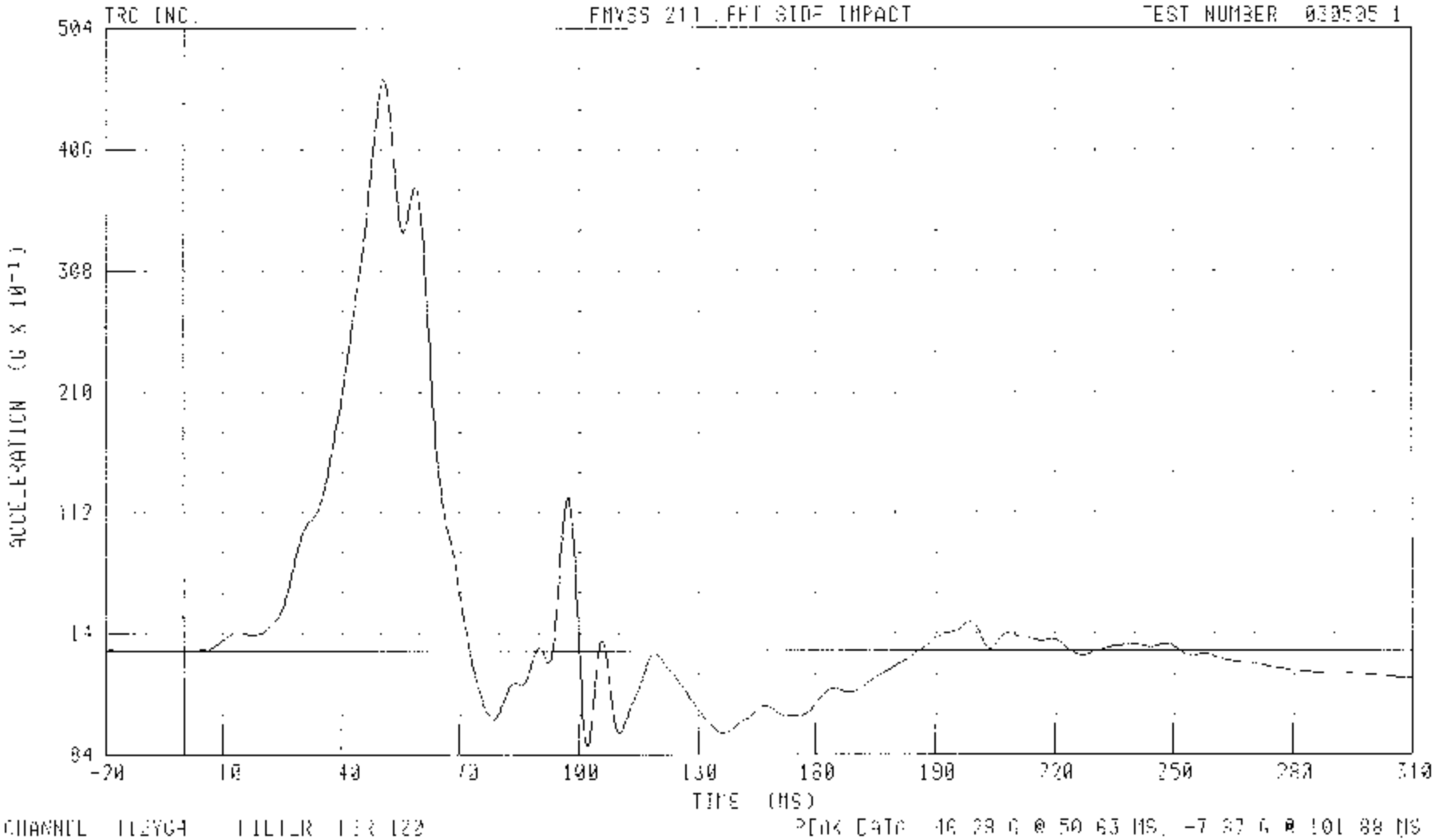
030505-1

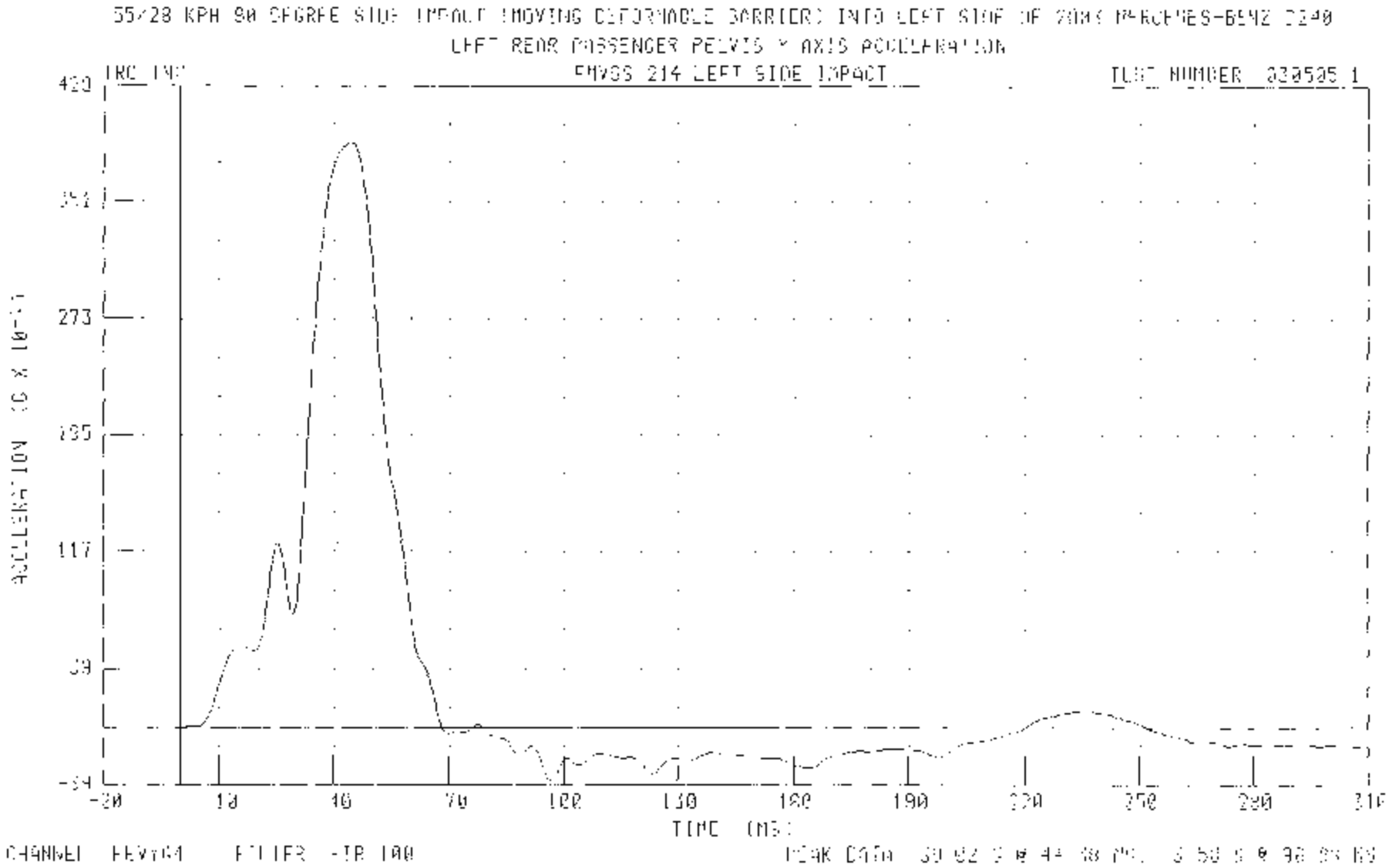

55/23 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2001 MERCEDES BENZ C240
LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION
TRC INC.
FMVSS 214 SIDE IMPACT
TEST NUMBER: 030505-1
ACCELERATION (G)
64
49
34
19
4
-11
-26
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL CLASS: FILTER: FIR 180
PEAK DATA: 01 23 0 0 43 62 MS, 23 30 0 0 07 50 MS

55/28 KPH 90 DEGREE S.U.V. IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES BENZ C240

LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION

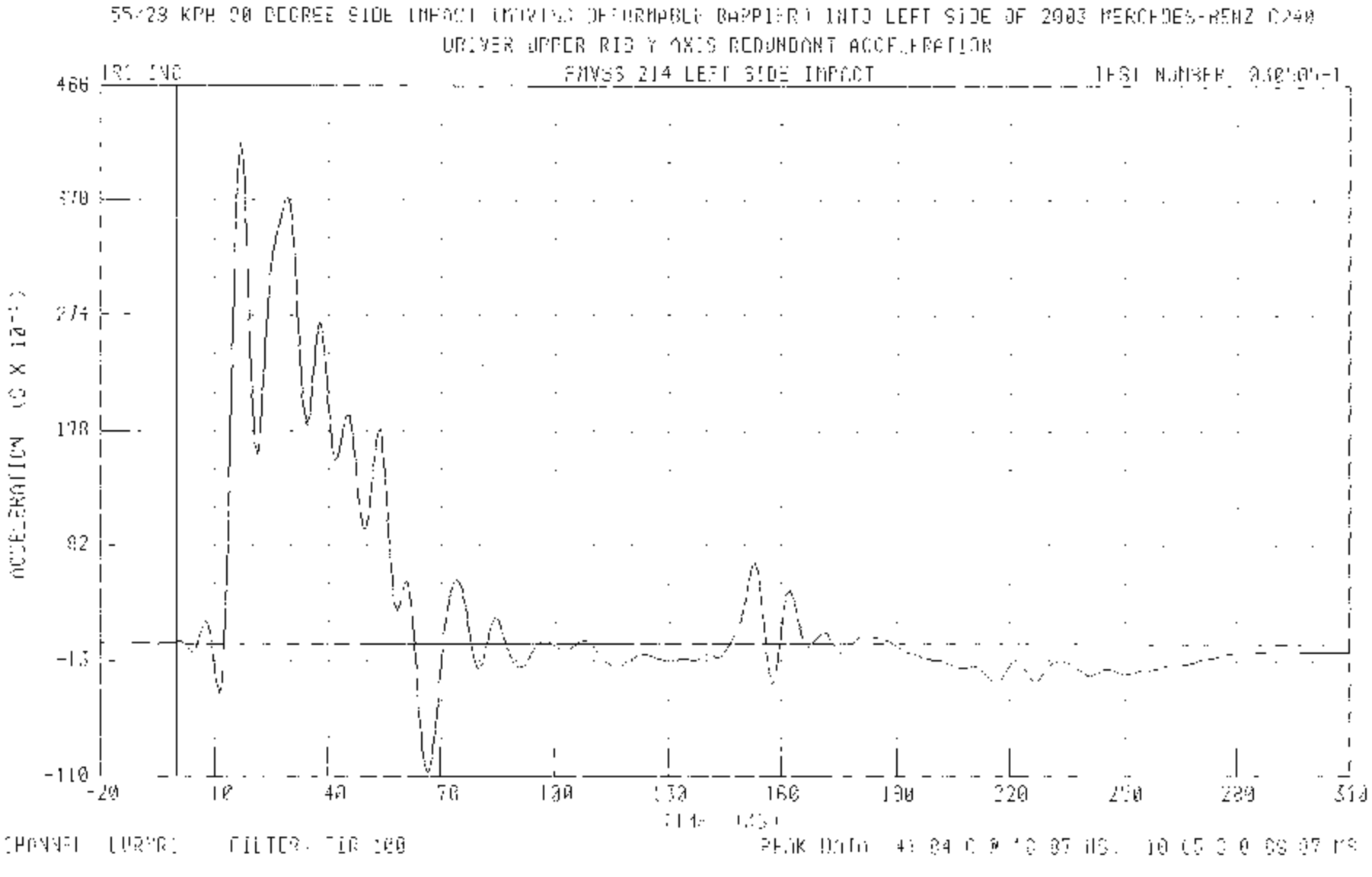


030505-1

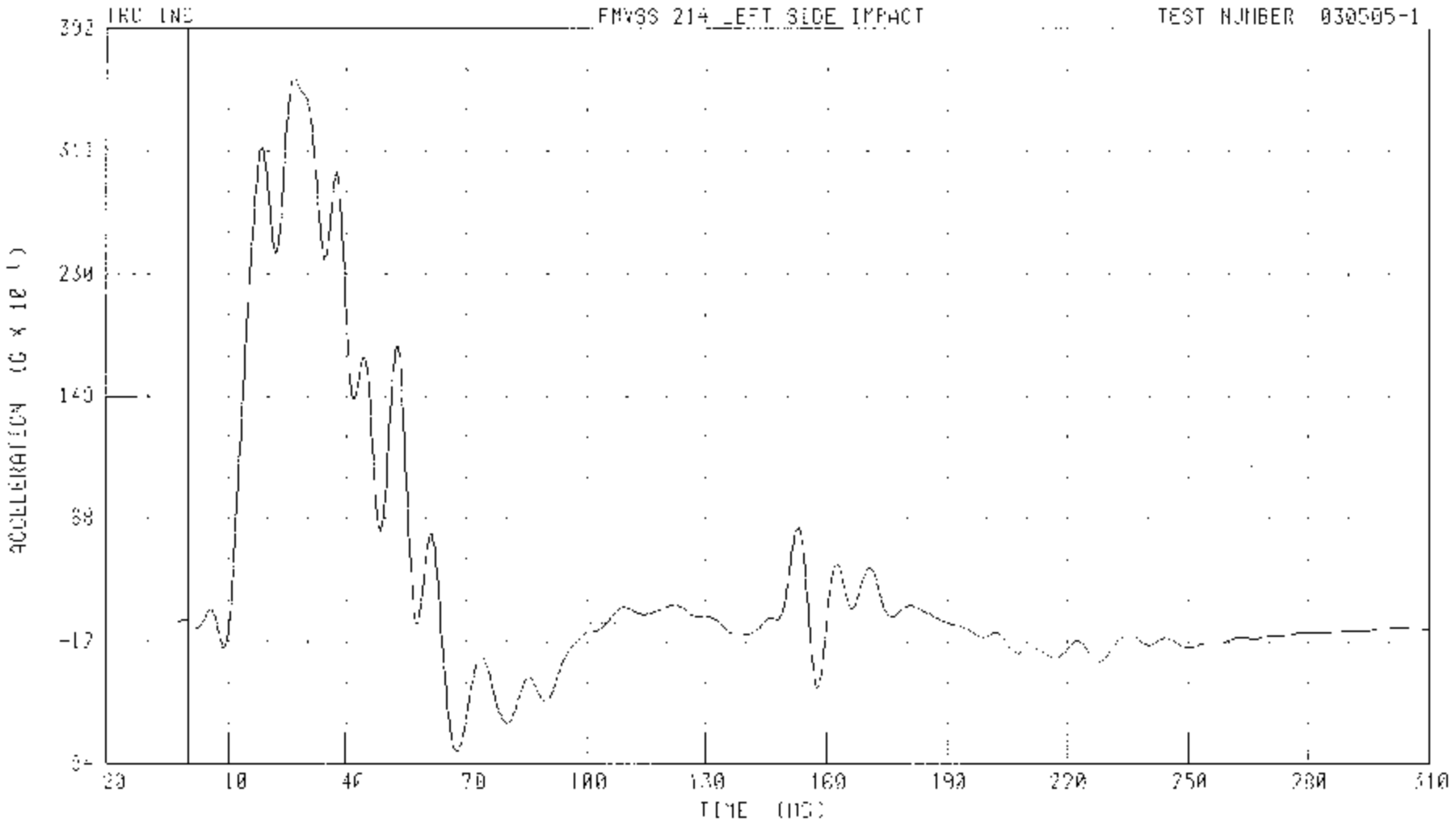

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
LEFT REAR PASSENGER PELVIS Y AXIS ACCELERATION
EMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505.1
ACCELERATION (G X 10-1)
TIME (MS)
CHANNEL FREQ=64 FILTER -IR 180

Driver and Passenger Dummy Instrumentation Plots

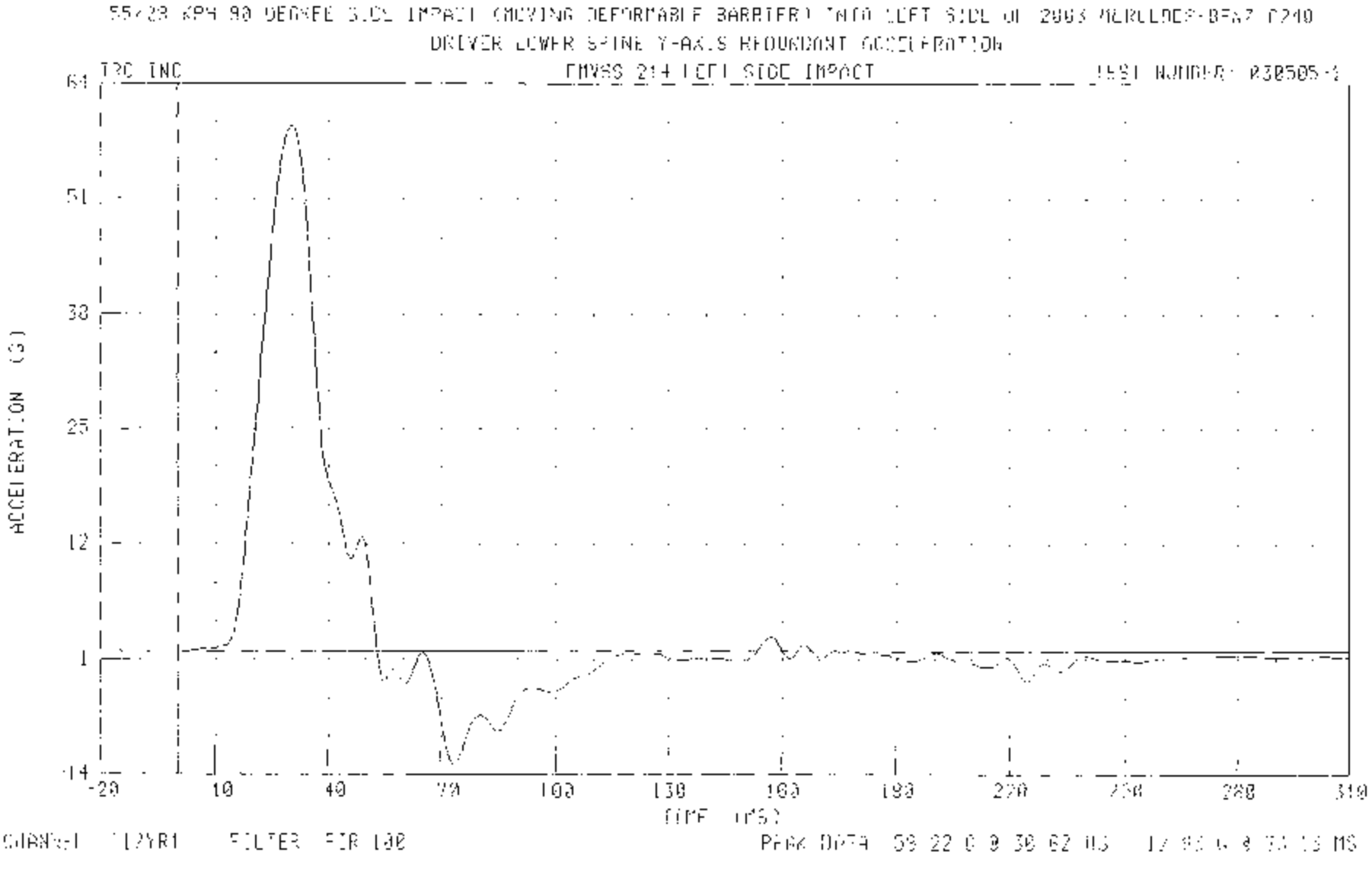
Acceleration Data - FIR Filtered - Redundant

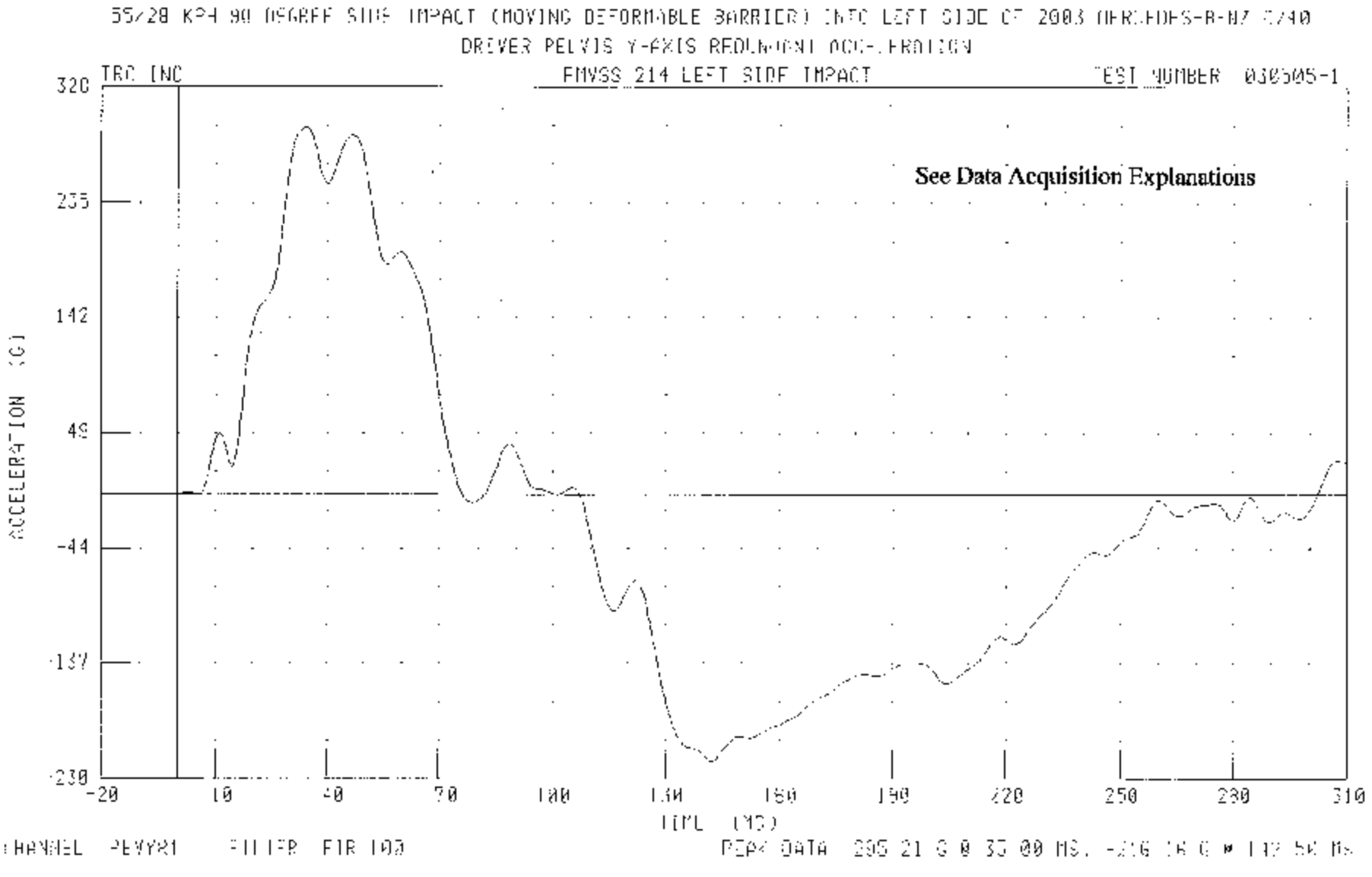

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING) DEFORMABLE BARRIER INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
DRIVER UPPER RIB Y AXIS REDUNDANT ACCELERATION
IRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER 030505-1
466
370
274
178
82
-13
-110
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL NUMBER:
FILTER: SAE 180
PEAK DATA 41.84 G @ 10.07 MS. 10 MS 0 0 08.07 MS

55/28 KPH 30 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) WITH LEFT SIDE OF 2003 MERCEDES-BENZ C240
DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION



030505-1


55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION
TRC INC
FMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
ACCELERATION (G)
64
51
38
25
12
1
-14
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CURVE: 1 12YR1 FILTER: FIR 180
PEAK DATA: 59.22 @ 0.30.62 MS
030505-1
B-165



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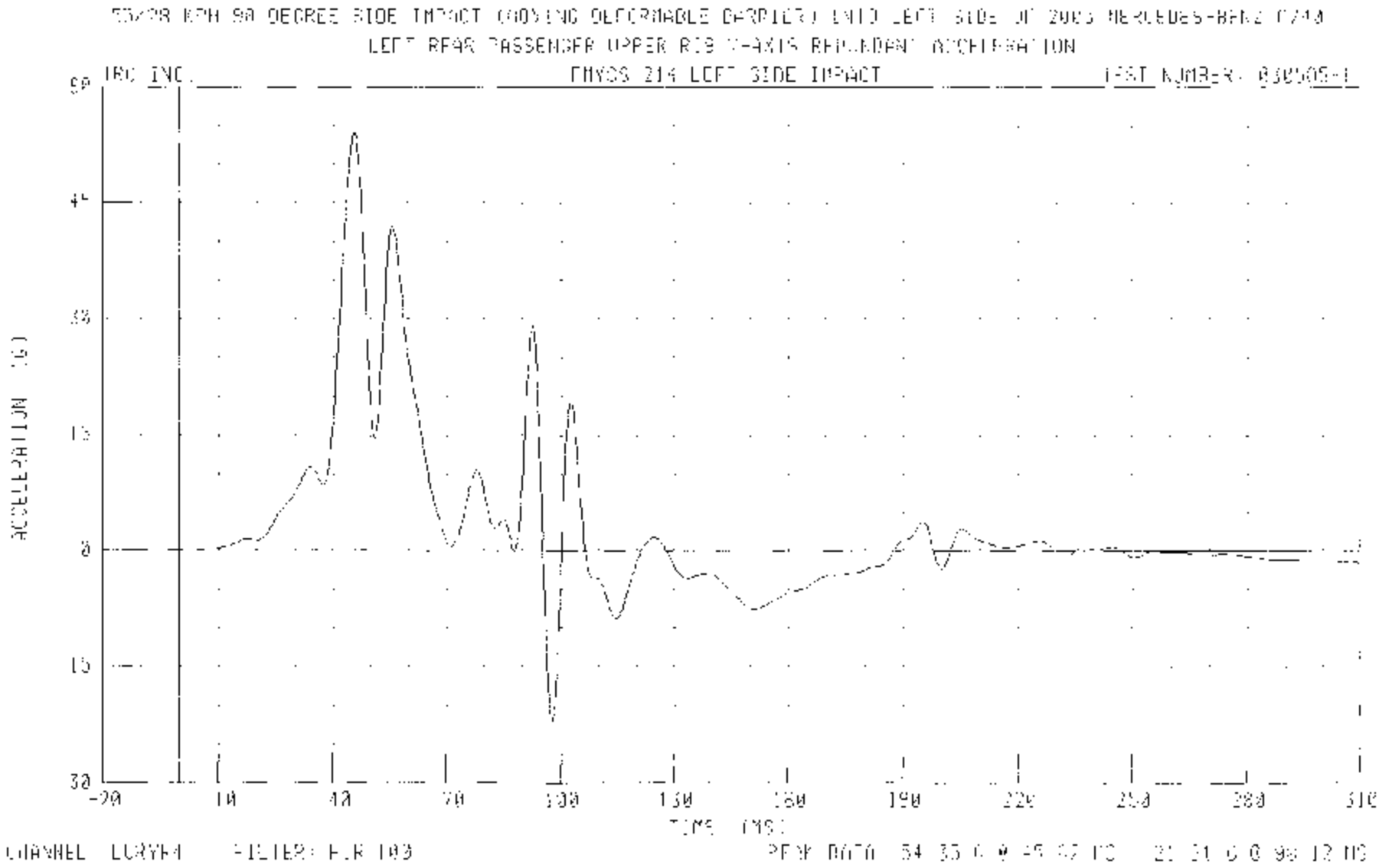
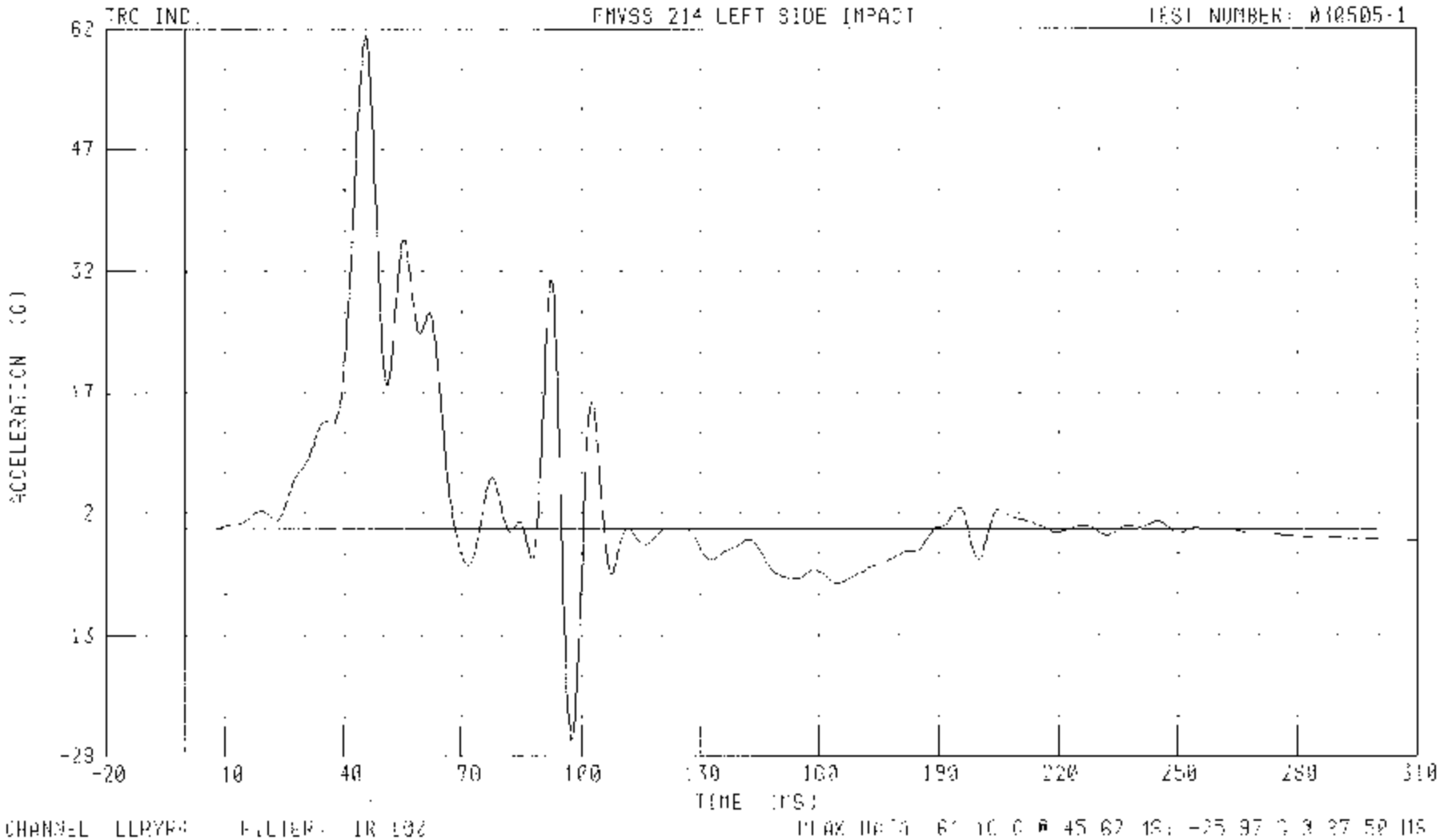
030505-1


50/30 KPH 90 DEGREE SIDE IMPACT MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION
IRC INC.
TMVSS 214 LEFT SIDE IMPACT
TEST NUMBER: 030505-1
ACCELERATION (G)
TIME (MS)
CHANNEL LURYRH
FILTER: FLR 180
PEAK DATA 54.35 G @ 49.62 MS
21.21 G @ 90.12 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES BENZ C240

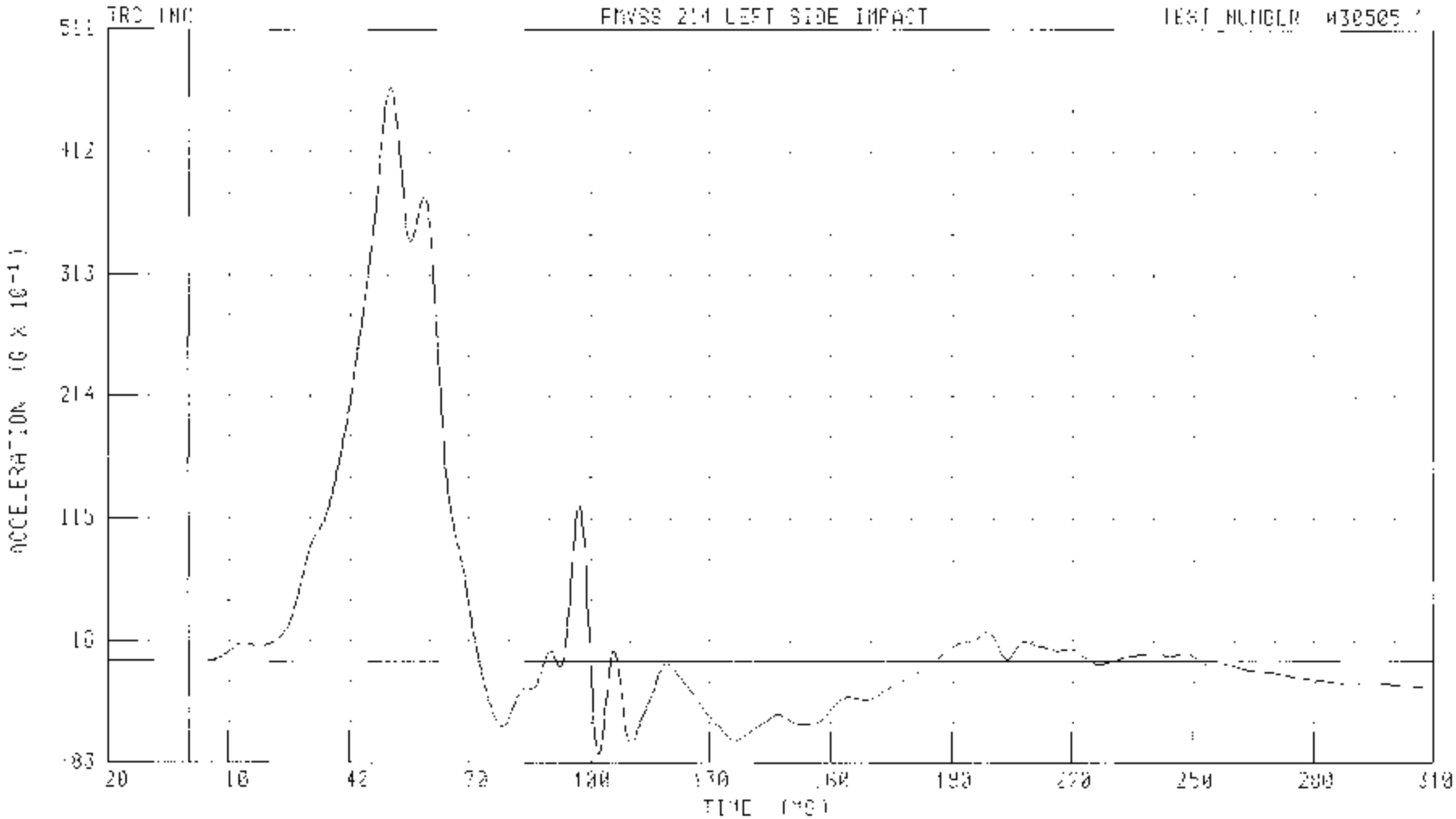
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION



030505-1

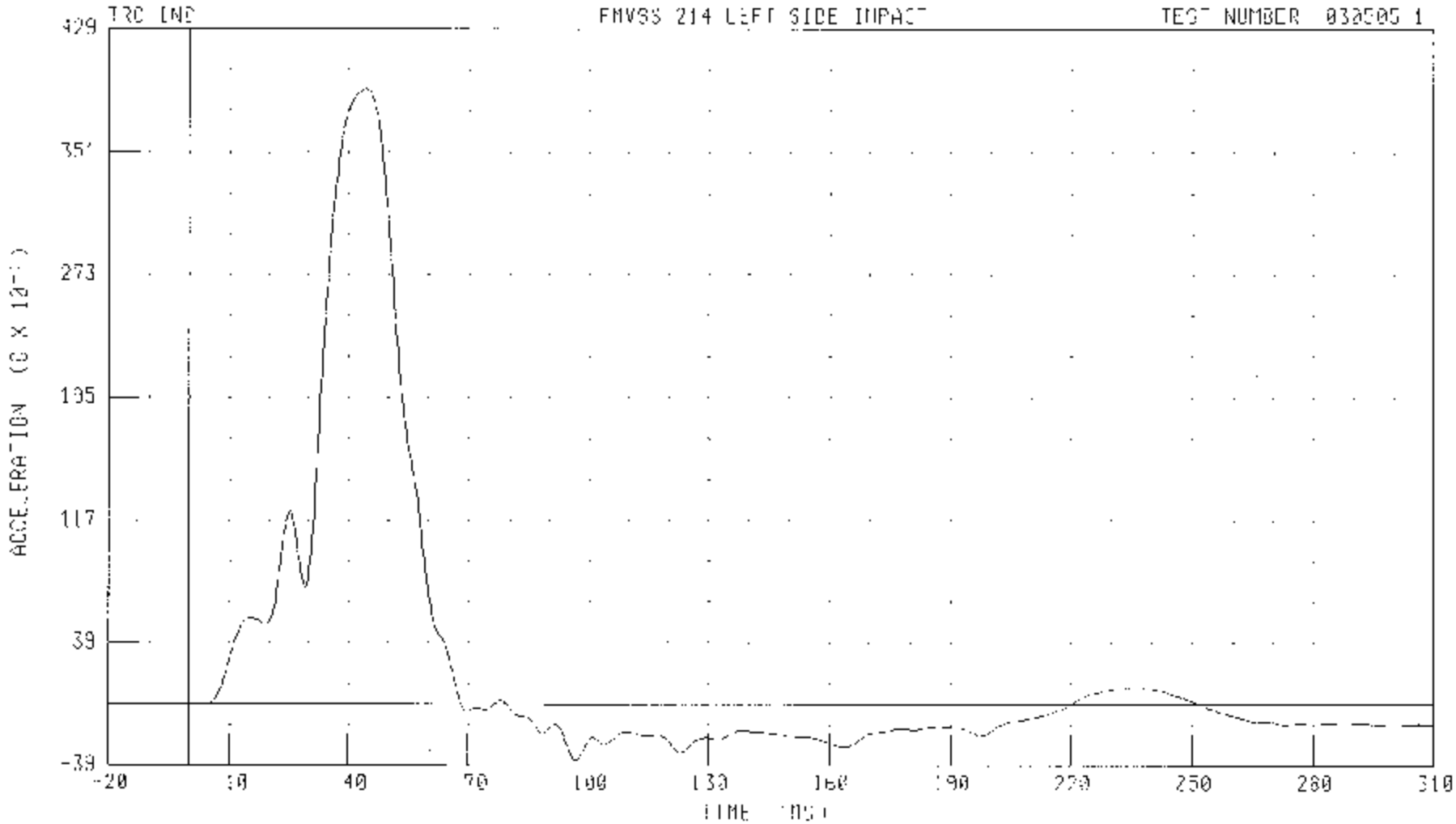
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES-BENZ C240

LEFT REAR PASSENGER LOWER SPINE Y AXIS RESULTANT ACCELERATION



55/26 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2003 MERCEDES BENZ C240

LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION



030505-1

Appendix C

SID Configuration and Performance Verification Data

Summary

SID Pre-Test and Post-Test Calibration

Configured For Left Side Impact

Date: April 28 - May 5, 2003 TRC Inc. Test Number: 066C08/09 & 028C06/07

Laboratory Technician: Jack Willeke and Chris Roberts

Test Parameter	Specification	SID 066		SID 028	
		Pre-Test	Post-Test	Pre-Test	Post-Test
SH - Seated Height (mm)	889-909	902	901	895	896
RH - Rib Height (mm)	502-520	507	505	504	506
HP - Hip Pivot Height (mm)	99 ref	99.1	99.1	99.1	99.1
RD - Rib from Back Line (mm)	229-241	238	239	230	231
KH - Knee Pivot from Back Line (mm)	511-526	521	520	512	511
KV - Knee Pivot to Floor (mm)	490-505	497	498	498	499
HW - Hip Width (mm)	356-391	387	388	372	373
Thorax Impacts					
Temperature (°C)	18.9-25.5	21.7	21.1	21.7	21.7
Relative Humidity (%)	10-70	26	29	43	47
Probe Speed (m/s)	4.27-4.33	4.23	4.29	4.29	4.31
Upper Rib (g's)	37-46	41.0	42.4	40.0	40.4
Lower Rib (g's)	37-46	40.2	44.7	42.6	39.4
Lower Spine (g's)	15-22	19.2	21.2	17.5	16.4
Pelvis Impacts					
Temperature (°C)	18.9-25.5	21.7	21.1	21.7	21.7
Relative Humidity (%)	10-70	26	26	43	47
Probe Speed (m/s)	4.27-4.33	4.28	4.28	4.29	4.28
Pelvis (g's)	40-60	53.7	50.0	47.6	43.8

Calibration Test Results

Pre-Test

SID: 066

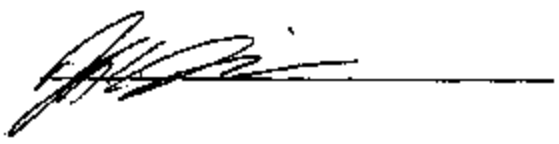
Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber passed all test requirements.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

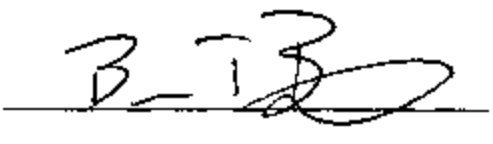
Transportation Research Center Inc.
572F SID Dummy
External Dimensions
Serial No. 066 Calibration No. 08

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	902 mm	Yes
Rib Height	RH	501.7 - 520.7 mm	507 mm	Yes
Hip Pivot Height	HP	99.1 REF mm	99.1 mm	
Rib From Backline	RD	228.6 - 241.3 mm	238 mm	Yes
Knee Pivot From Backline	KH	510.5 - 525.8 mm	521 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5 mm	497 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	387 mm	Yes
Top Rib Width From C\L	RW-1	165.1 - 180.3 mm	170 mm	Yes
Bottom Rib Width From C\L	RW-2	165.1 - 180.3 mm	169 mm	Yes
Difference Between Top & Bottom Rib Width from C\L		<= 2.5 mm	1.0 mm	Yes

Technician



Approved



TRC

TRANSPORTATION RESEARCH CENTER INC.

LATERAL HEAD DROP TEST

SID/HIII DUMMY 28-APR-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO. HDL06608 572M SID/HIII SN066 HEAD CAL08

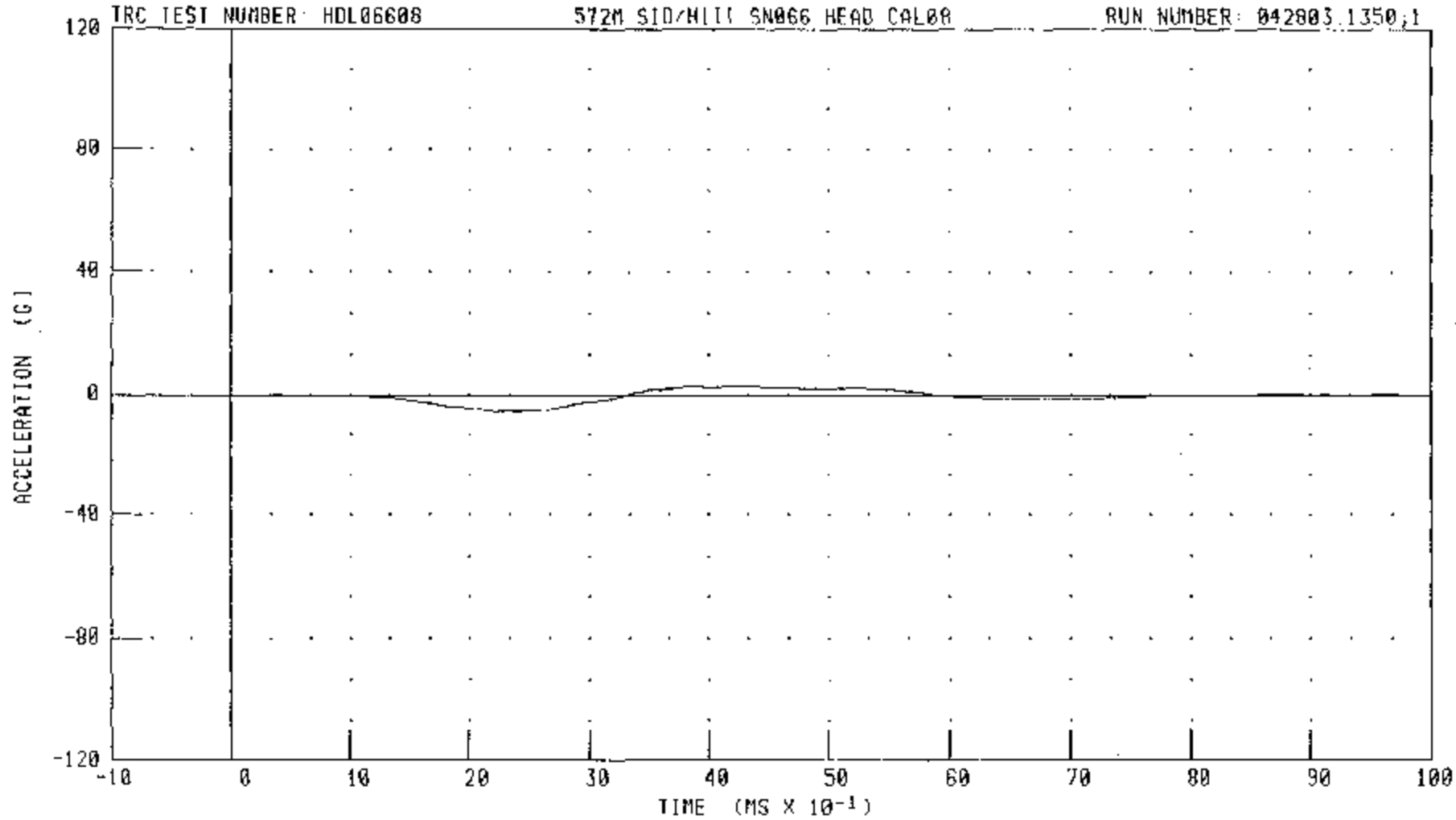
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.6 deg. C	21.67 deg. C
RELATIVE HUMIDITY	10 - 70 %	34.00 %
PEAK RESULTANT ACCELERATION	120 - 150 G	128.48 G
PEAK LONGITUDINAL ACCELERATION	15 G MAX	-5.71 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN  RUN NUMBER: 042803.1349;1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

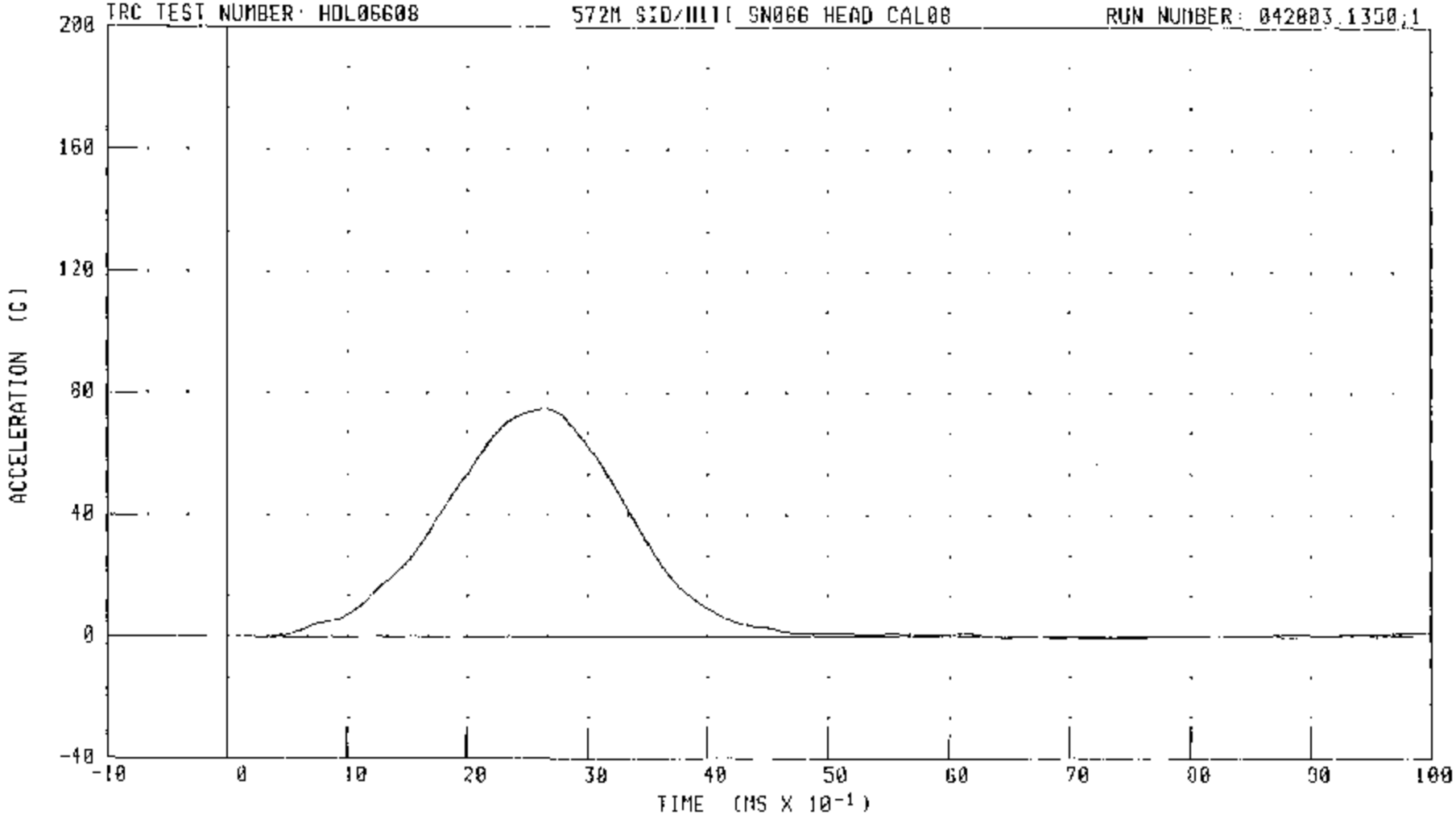
HEAD ACCELERATION X AXIS



CHANNEL: HEDXC FILTER: CH. CLASS 1000 PEAK DATA: 2.92 G @ 4.24 MS; -5.71 G @ 7.32 MS

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION Y AXIS

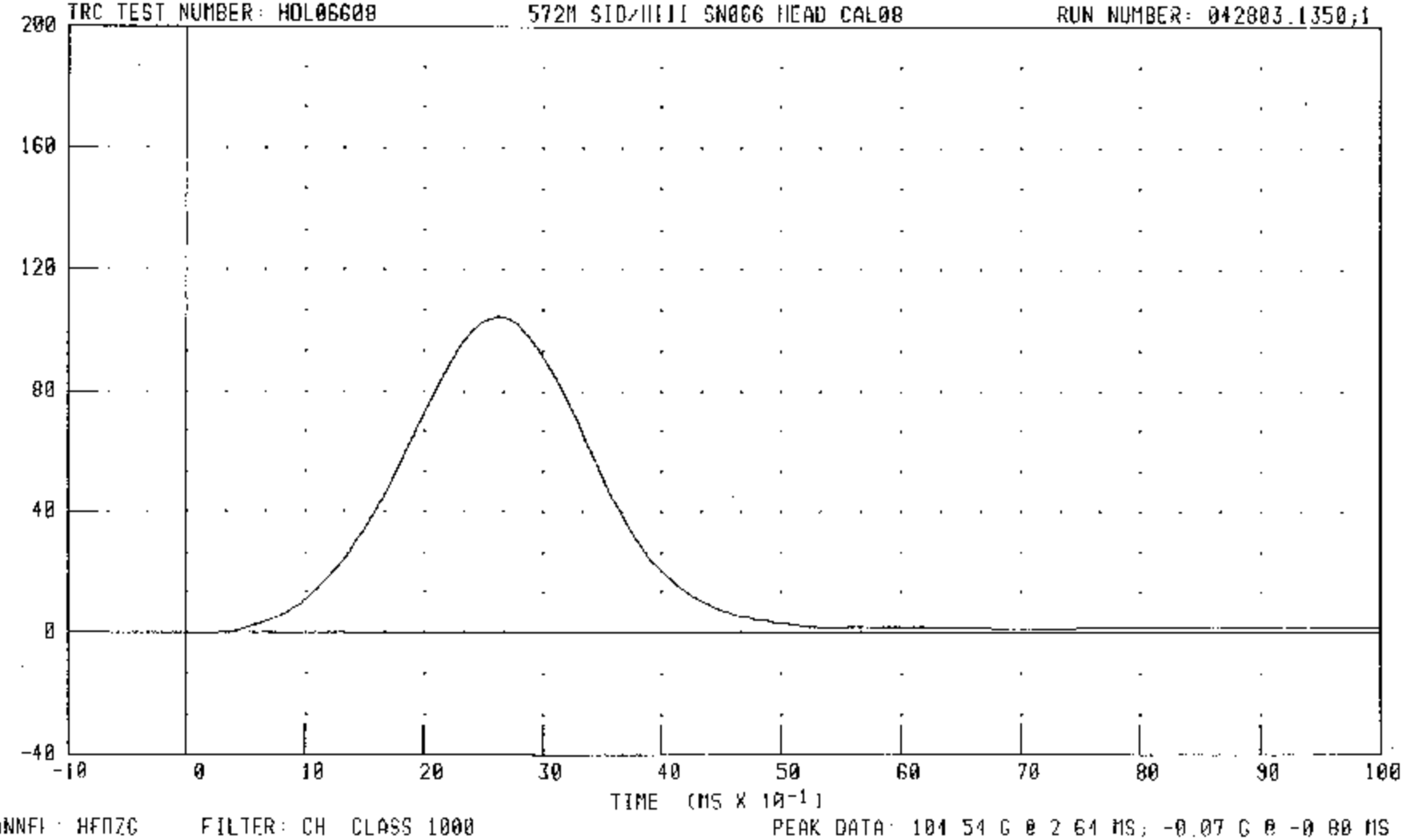


CHANNEL: HEDYG FILTER: CH. CLASS 1000 PEAK DATA: 74.53 G @ 2.64 MS; -0.55 G @ 7.44 MS

030505-1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION Z AXIS



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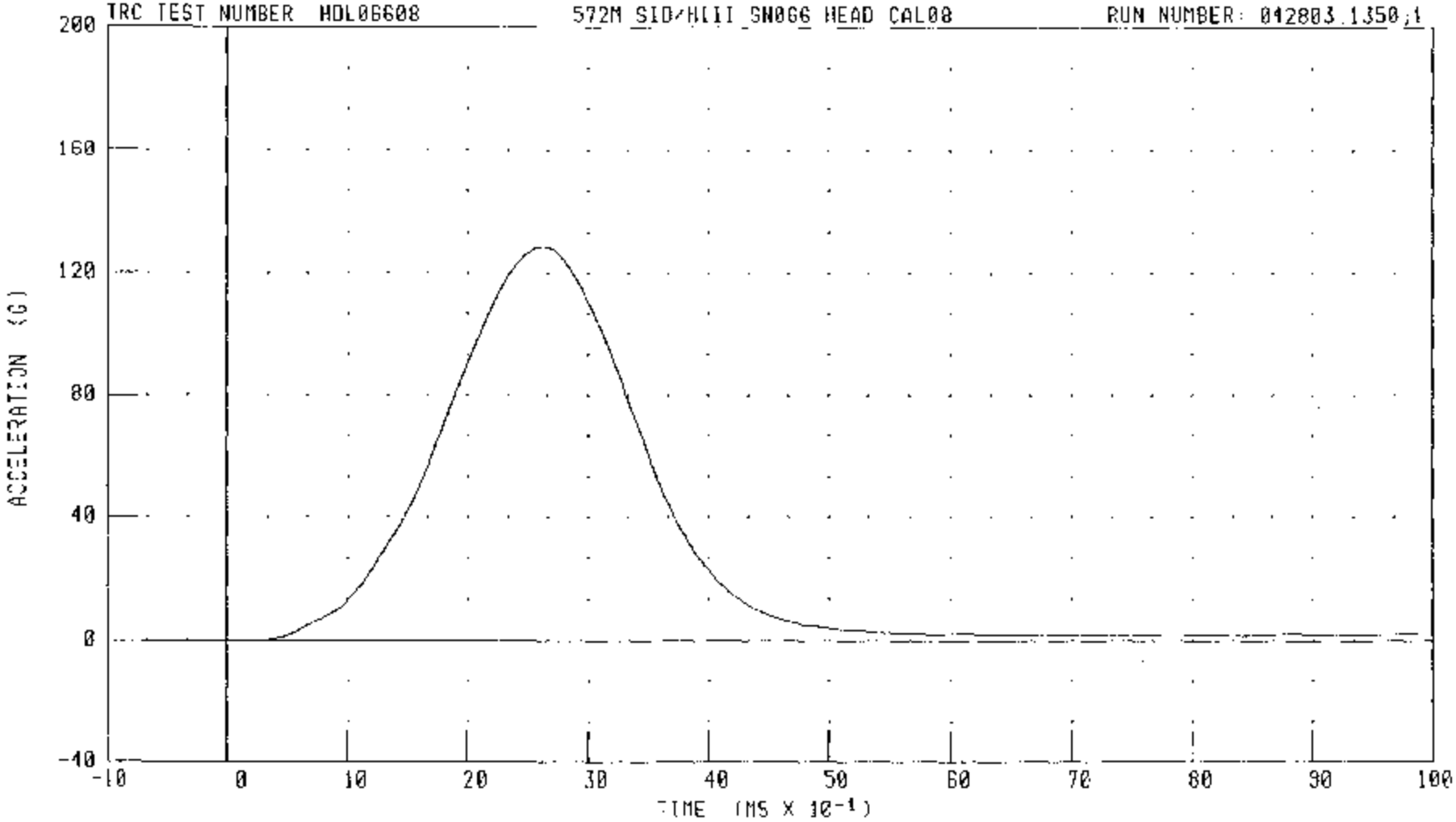
572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD RESULTANT ACCELERATION



CHANNEL: HEDRC FILTER: CH CLASS 1000 PEAK DATA: 128.48 G @ 2.64 MS; 0.02 G @ -0.32 MS

TRANSPORTATION RESEARCH CENTER INC.

LATERAL NECK TEST

SID/HIII DUMMY 29-APR-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO. NFL06608 572M H3/SID SN066 NECK CAL08

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 deg. C	21.67 deg. C
RELATIVE HUMIDITY		10 - 70 %	34.00 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
INTEGRATED VELOCITY	10 MS	1.96 - 2.55 M/S	2.45 M/S
	20 MS	4.12 - 5.10 M/S	4.87 M/S
	30 MS	5.73 - 7.01 M/S	6.80 M/S
	40 - 70 MS	6.27 - 7.64 M/S	7.04- 7.13 M/S
MAXIMUM MIDSAGGITAL PLANE ROTATION		66- 82 deg.	71.78 deg.
ROTATION ANGLE DECAY TIME FROM PEAK TO ZERO		58 - 67 MS	61.52 MS
MAXIMUM MOMENT ABOUT OCCIPITAL CONDYLE		73 - 88 NM	78.43 NM
POSITIVE MOMENT DECAY TIME FROM PEAK TO ZERO		49 - 64 MS	57.52 MS
TIME OF MAXIMUM ROTATION AFTER MAXIMUM MOMENT		2 - 16 MS	9.20 MS

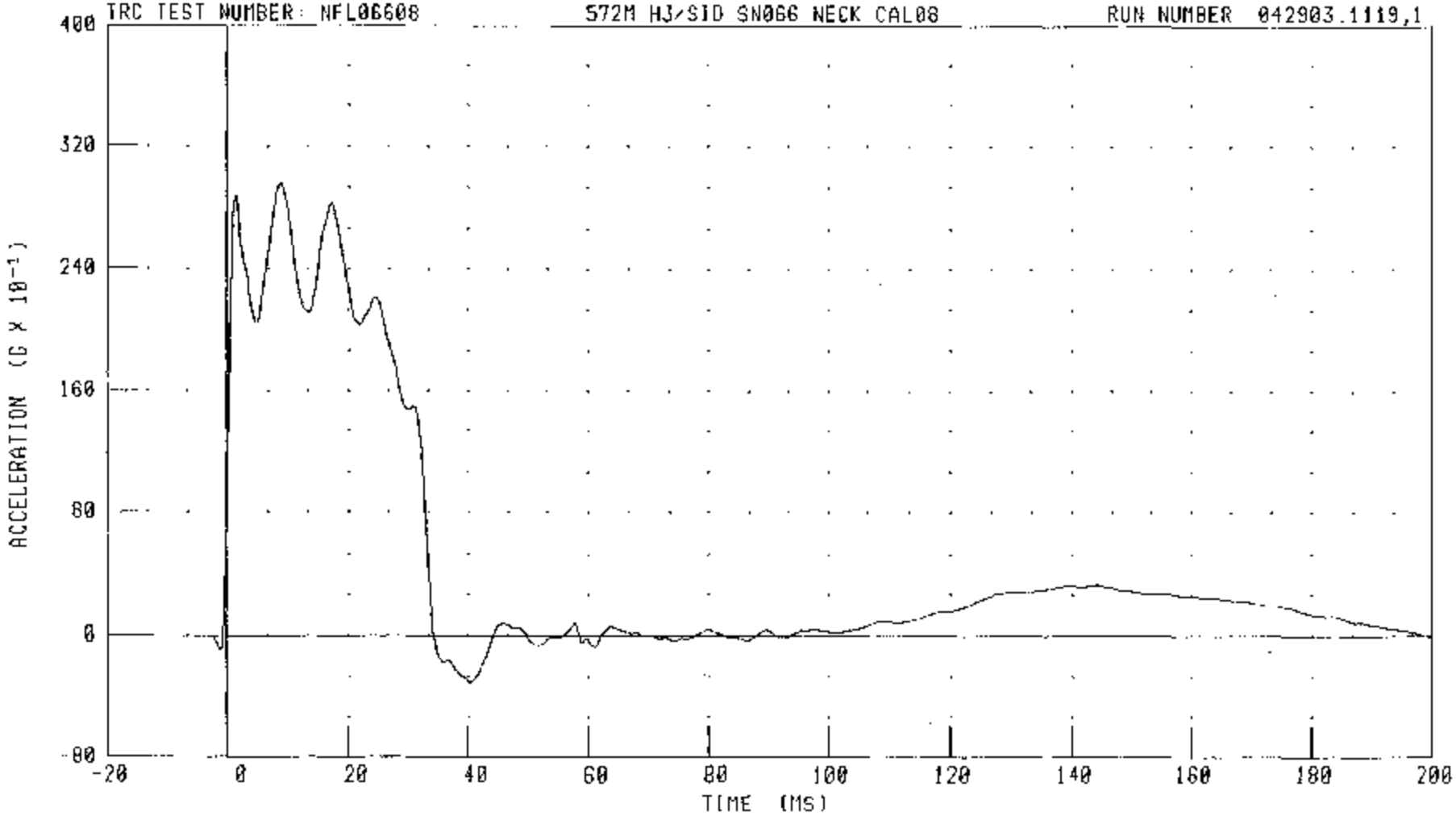
TEST MEETS SPECIFICATIONS —

TECHNICIAN _____ RUN NUMBER: 042903.1118;1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

PENDULUM DECELERATION

TRC TEST NUMBER: NFL06608 572M H3/SID SN066 NECK CAL08 RUN NUMBER 042903.1119,1



CHANNEL: PENXC FILTER CH CLASS 180 PEAK DATA: 29.60 G @ 8.80 MS; -3.08 G @ 40.40 MS

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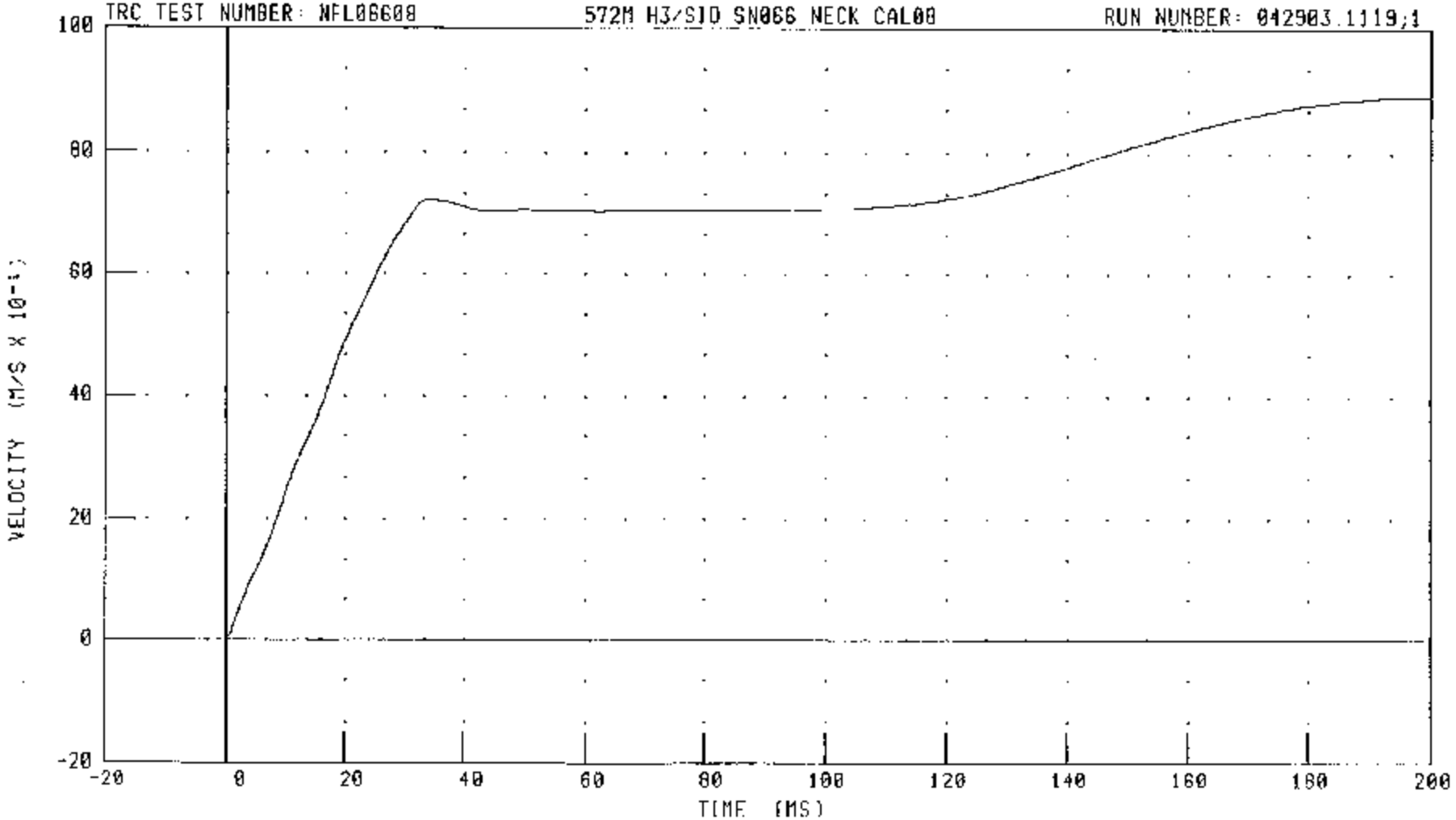
030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

INTEGRATED PENDULUM VELOCITY

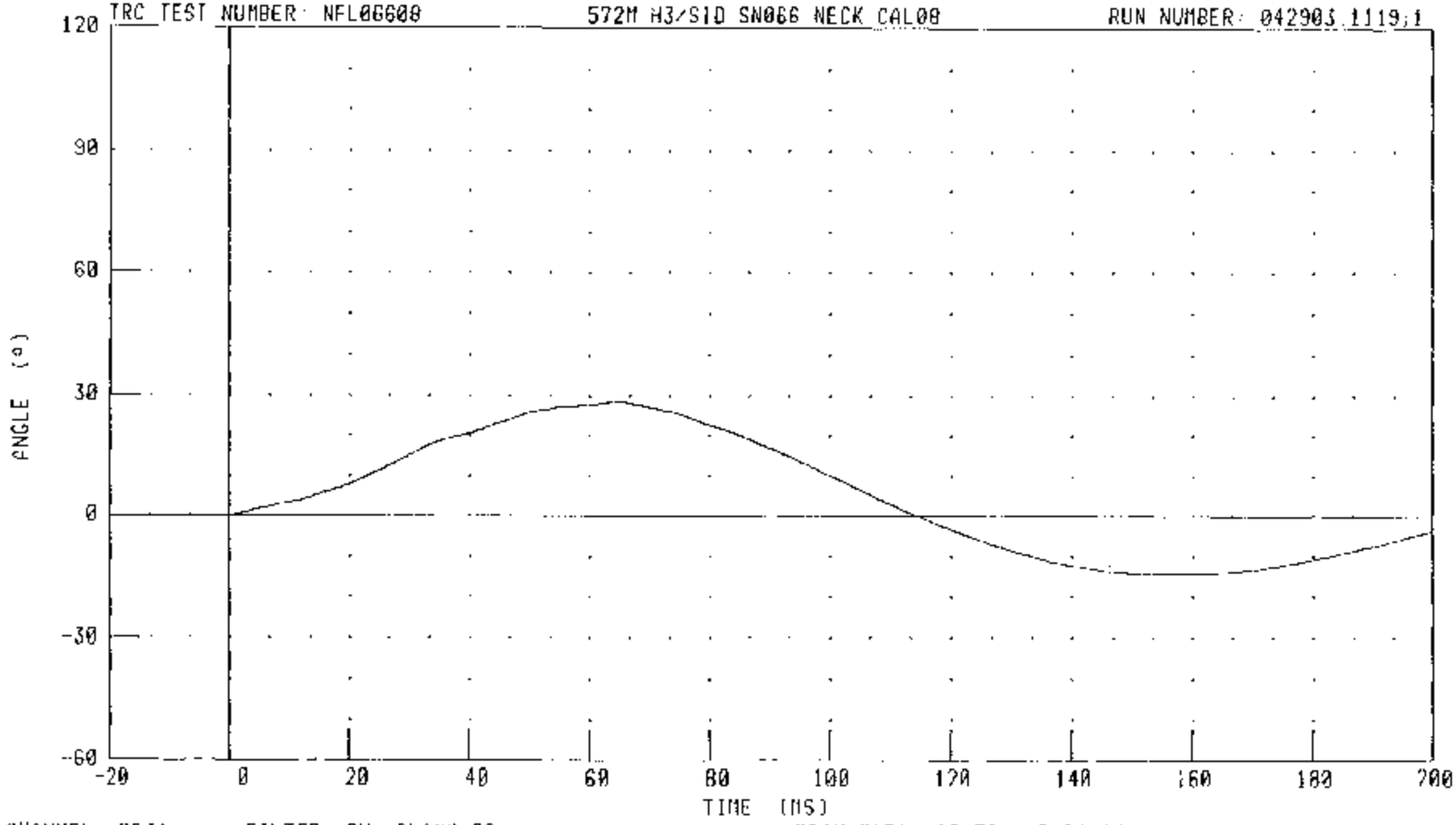
TRC TEST NUMBER: NFL06608 572M H3/SID SN066 NECK CAL00 RUN NUMBER: 042903.1119;1



CHANNEL: PENXVI FILTER: CH. CLASS 180 PEAK DATA: 8.90 M/S @ 108.72 MS; -0.01 M/S @ -0.72 MS

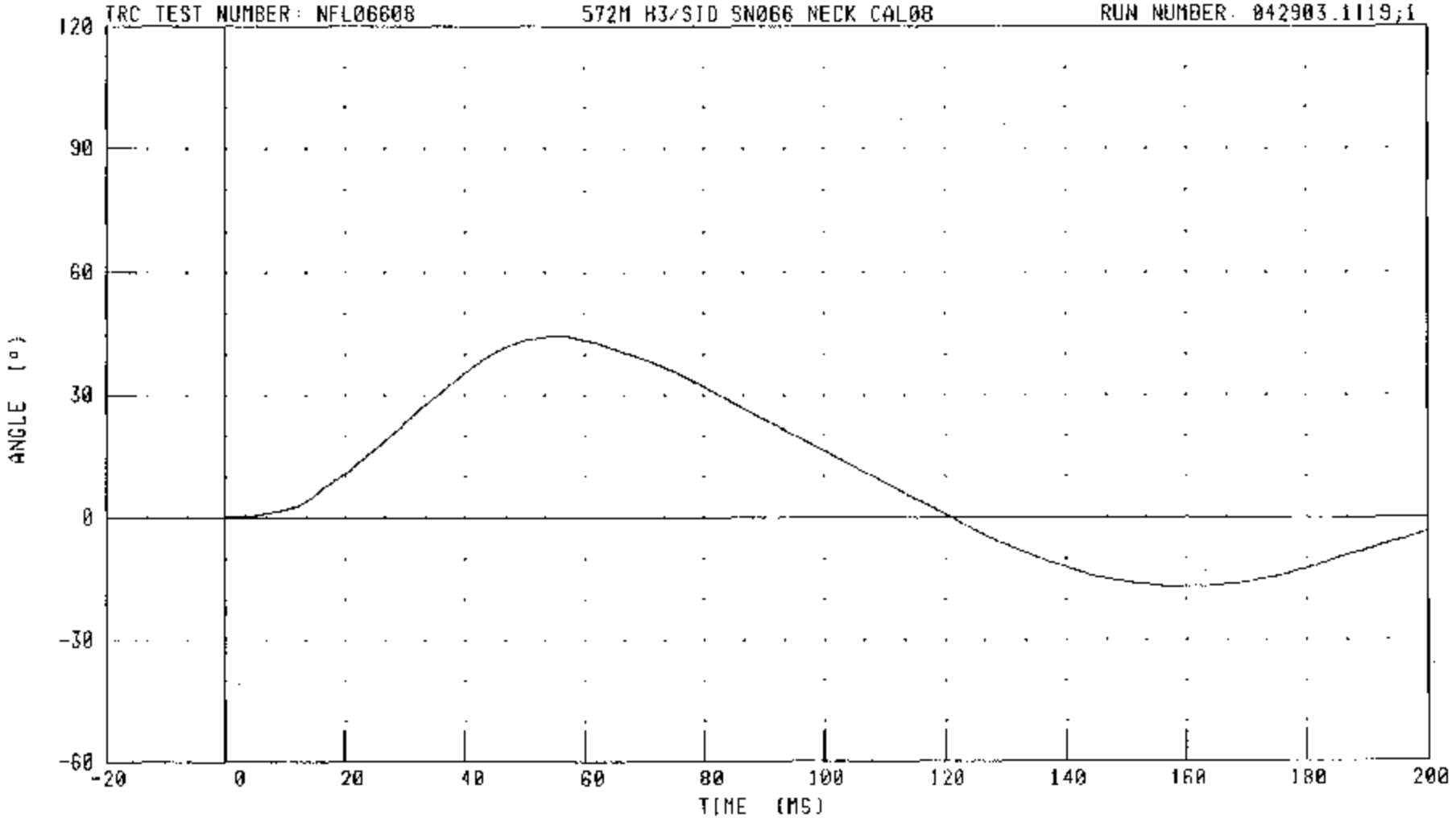
030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
ROTATION ABOUT BASE OF NECK



030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
ROTATION ABOUT OCCIPITAL CONDYLE

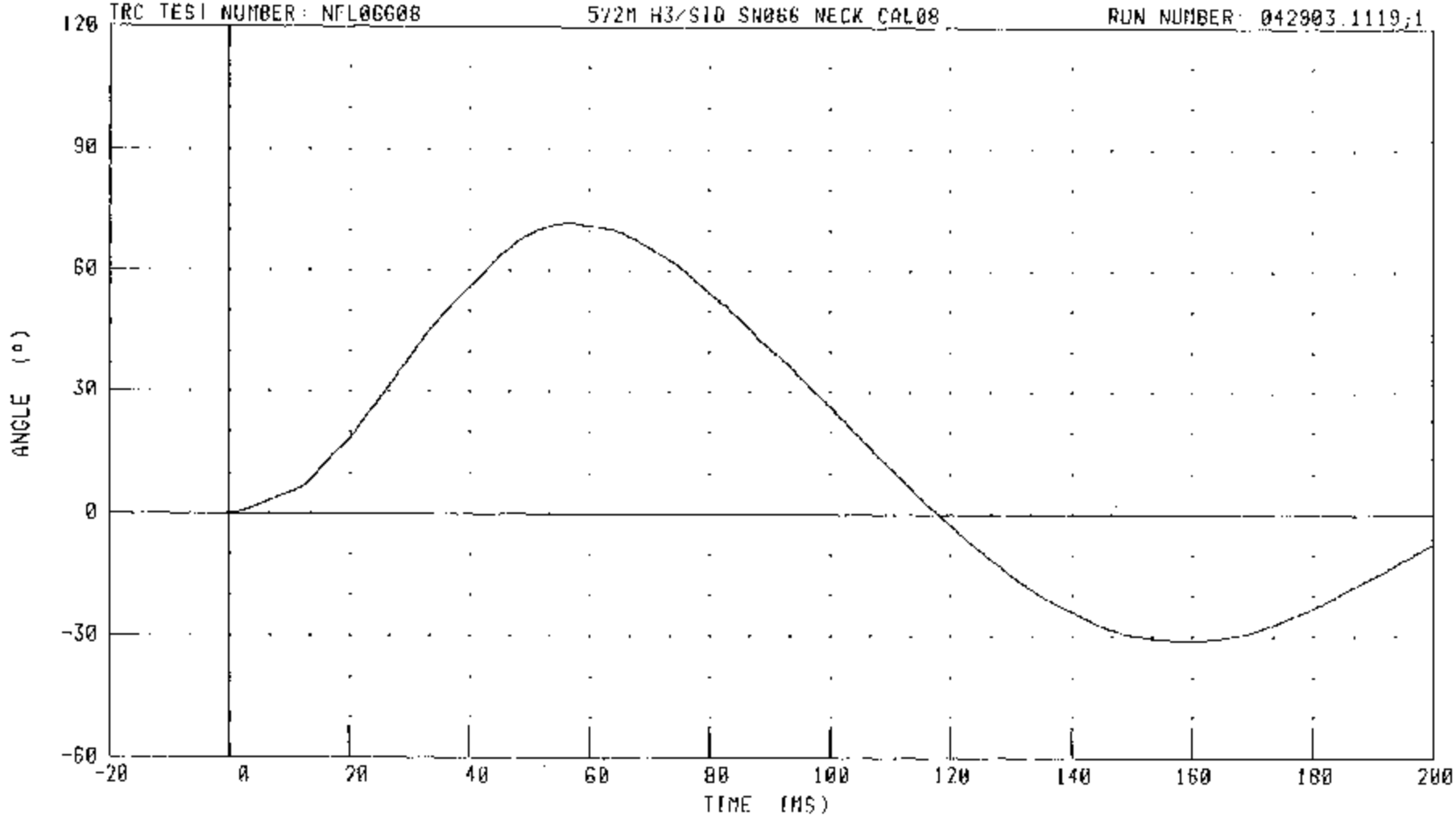


CHANNEL: THETA FILTER: CH. CLASS 60 PEAK DATA: 44.47 ° @ 55.84 MS; -16.93 ° @ 159.92 MS

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

TOTAL ROTATION



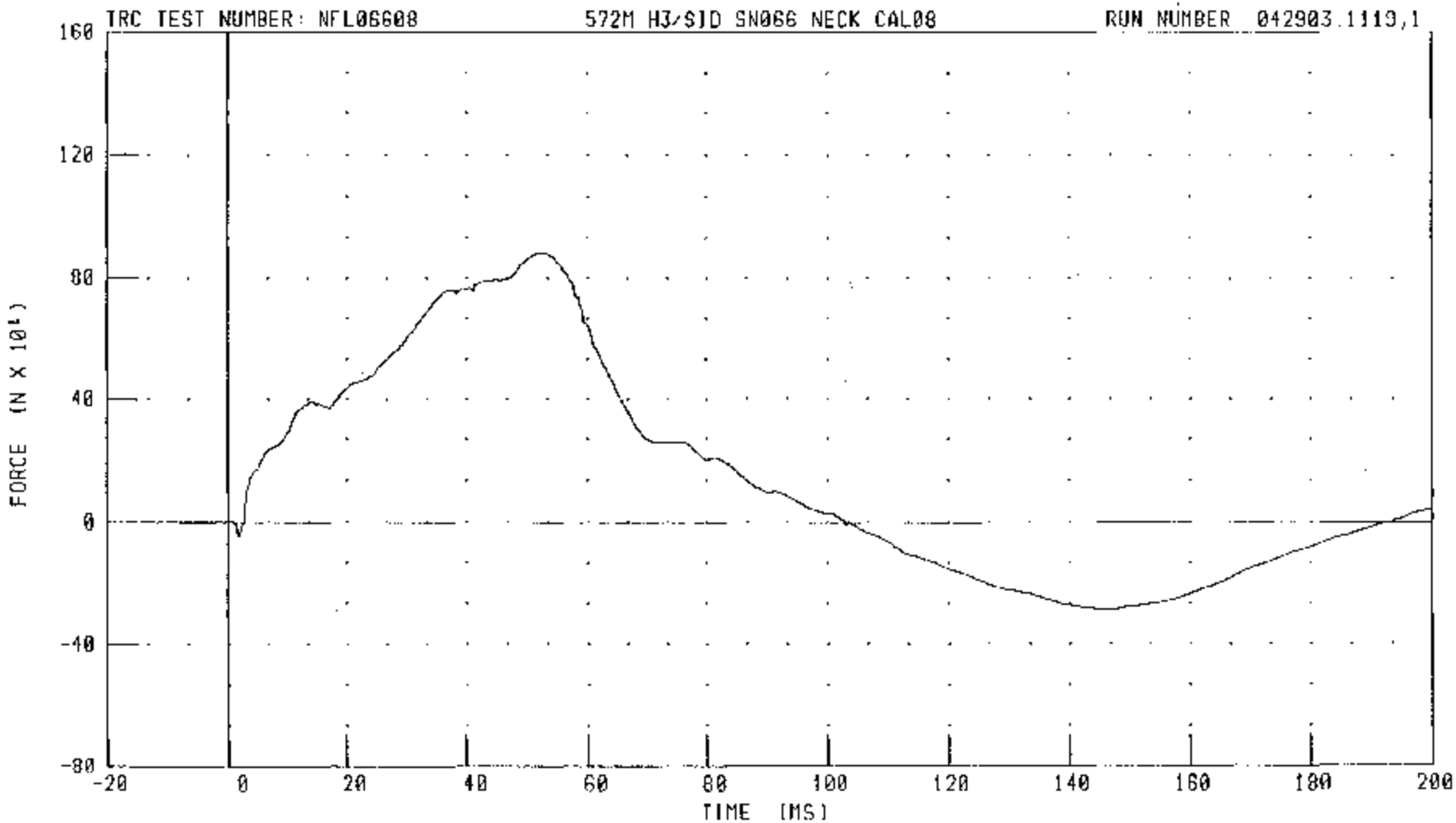
CHANNEL TOTAN FILTER: CFC CLASS 60

PEAK DATA: 71.78 ° @ 56.64 MS, -31.07 ° @ 159.68 MS

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

NECK FORCE Y AXIS

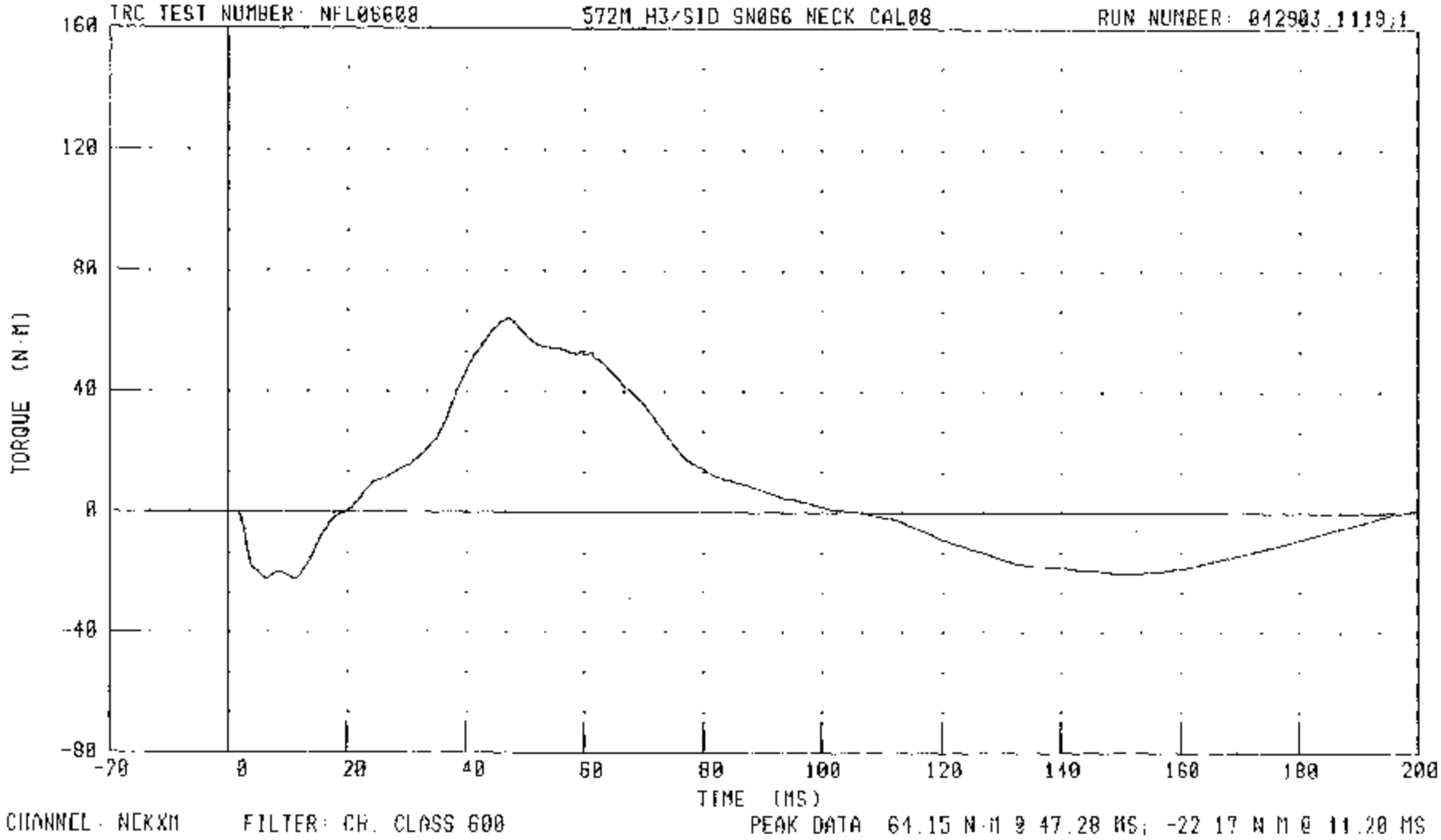


CHANNEL: NEKYF FILTER: CH. CLASS 1000 PEAK DATA: 882.36 N @ 52.24 MS; -288.64 N @ 146.16 MS

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

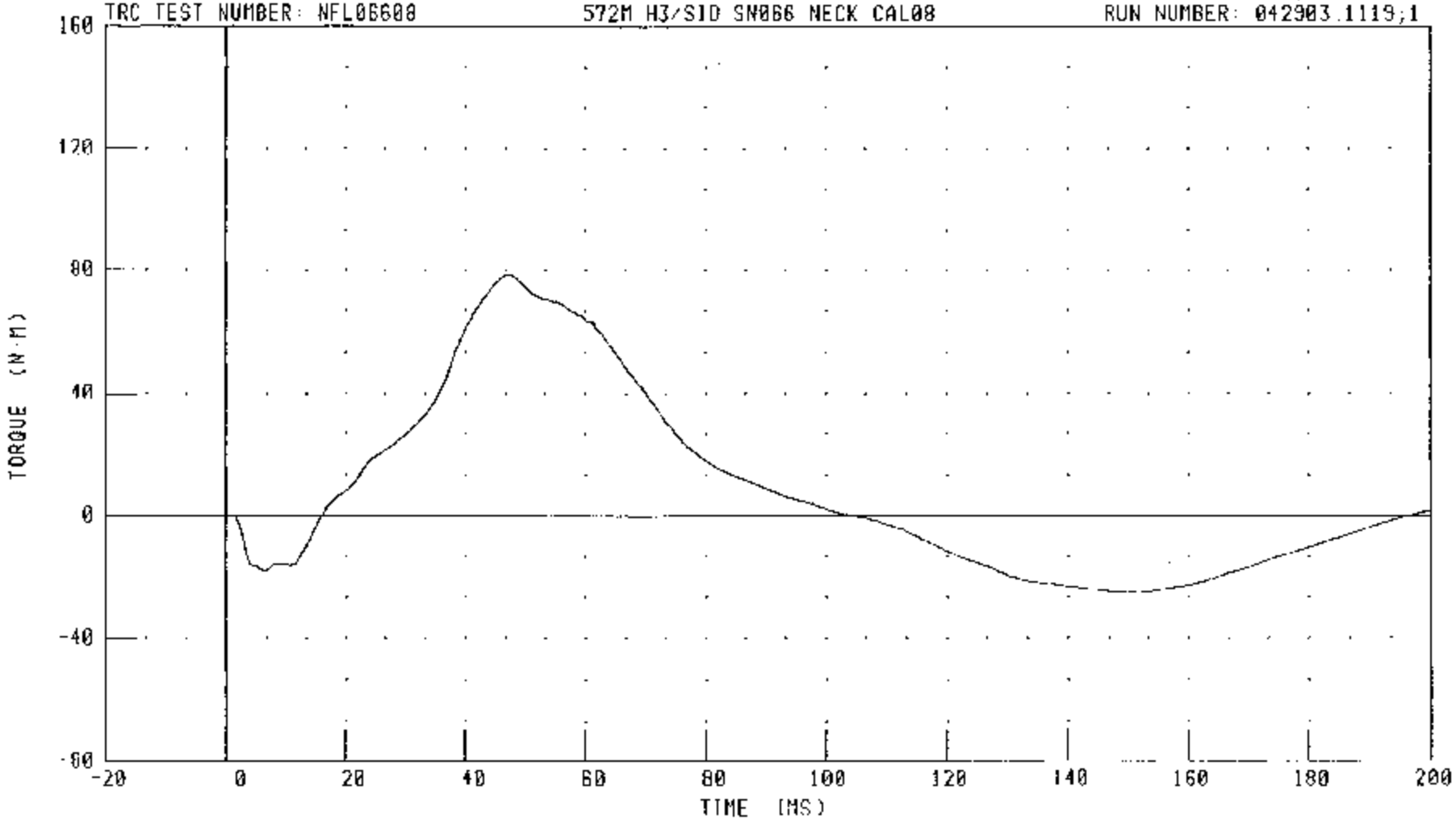
NECK MOMENT X AXIS



572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: NFL06600 572M H3/SID SN066 NECK CAL08 RUN NUMBER: 042903.1119;1



CHANNEL: NEKOM FILTER CH. CLASS 600 PEAK DATA: 79.43 N-M @ 47.44 MS; -25.1: N M @ 150 00 MS

030505-1

TRANSPORTATION RESEARCH CENTER INC.

LATERAL THORAX IMPACT TEST

SIDE IMPACT DUMMY 28-APR-03

LEFT SIDE CONFIGURATION

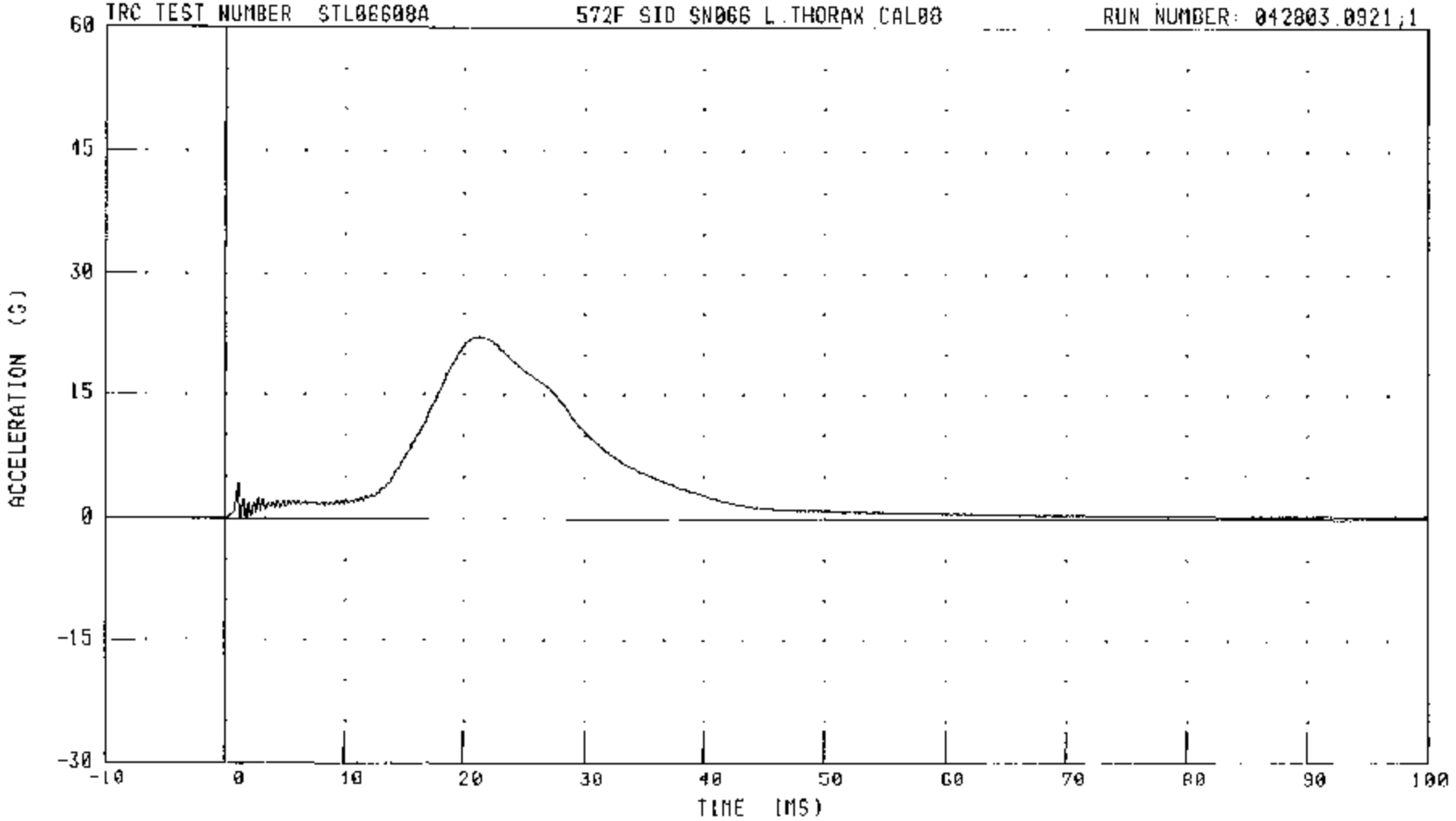
TRC INC. TEST NO: STL06608A 572F SID SN066 L.THORAX CAL08

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	26.0 %
PENDULUM VELOCITY	4.21 - 4.33 M/S	4.23 M/S
PEAK ACCELERATION: UPPER RIB BAR	37 - 46 G	41.0 G
PEAK ACCELERATION: LOWER RIB BAR	37 - 46 G	40.2 G
PEAK ACCELERATION: LOWER THORACIC SPINE	15 - 22 G	19.2 G

TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 042803.0921;1

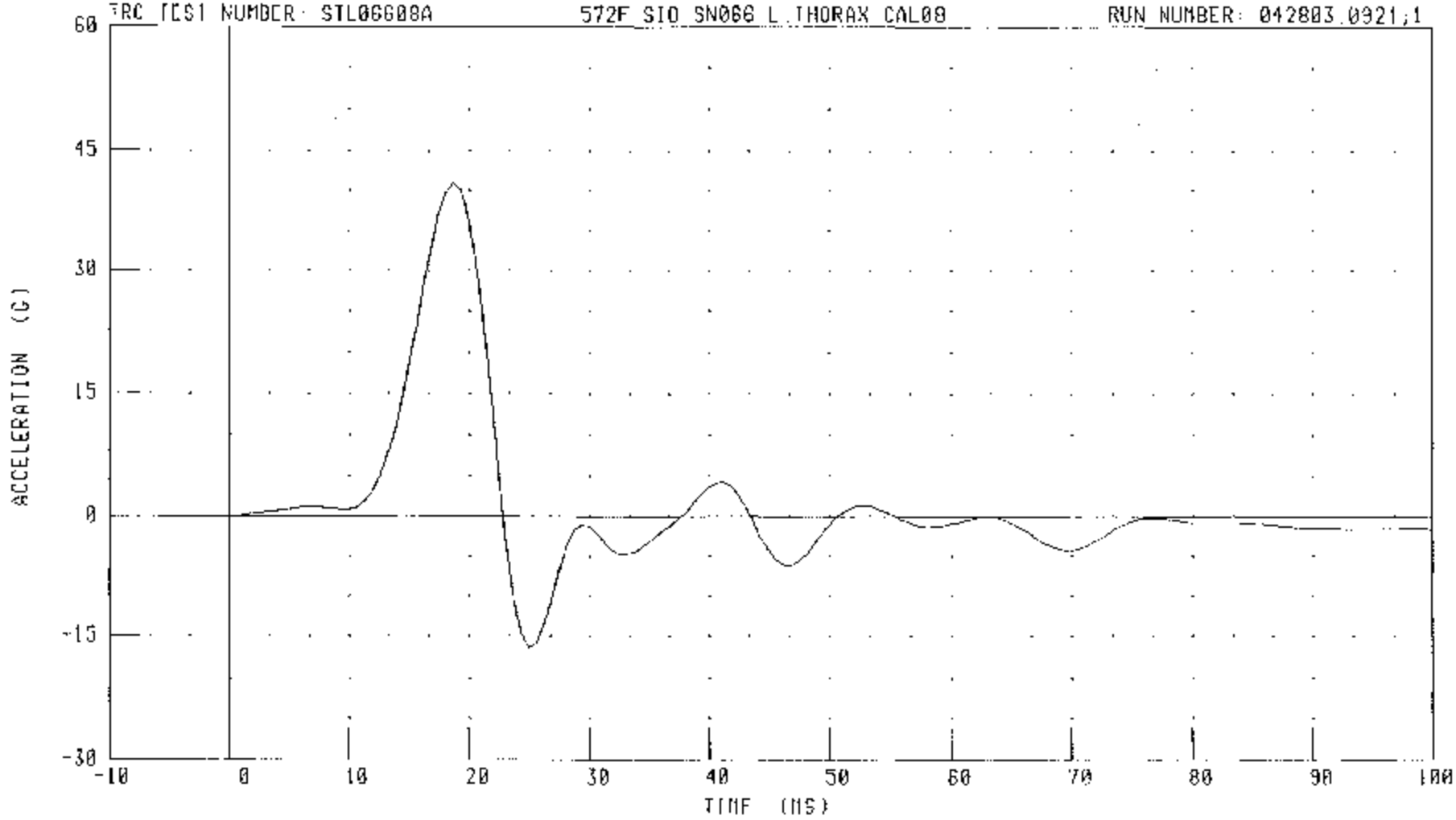
PART 572-F S I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)
PENDULUM DECELERATION



030505-1

PART 572-F S I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

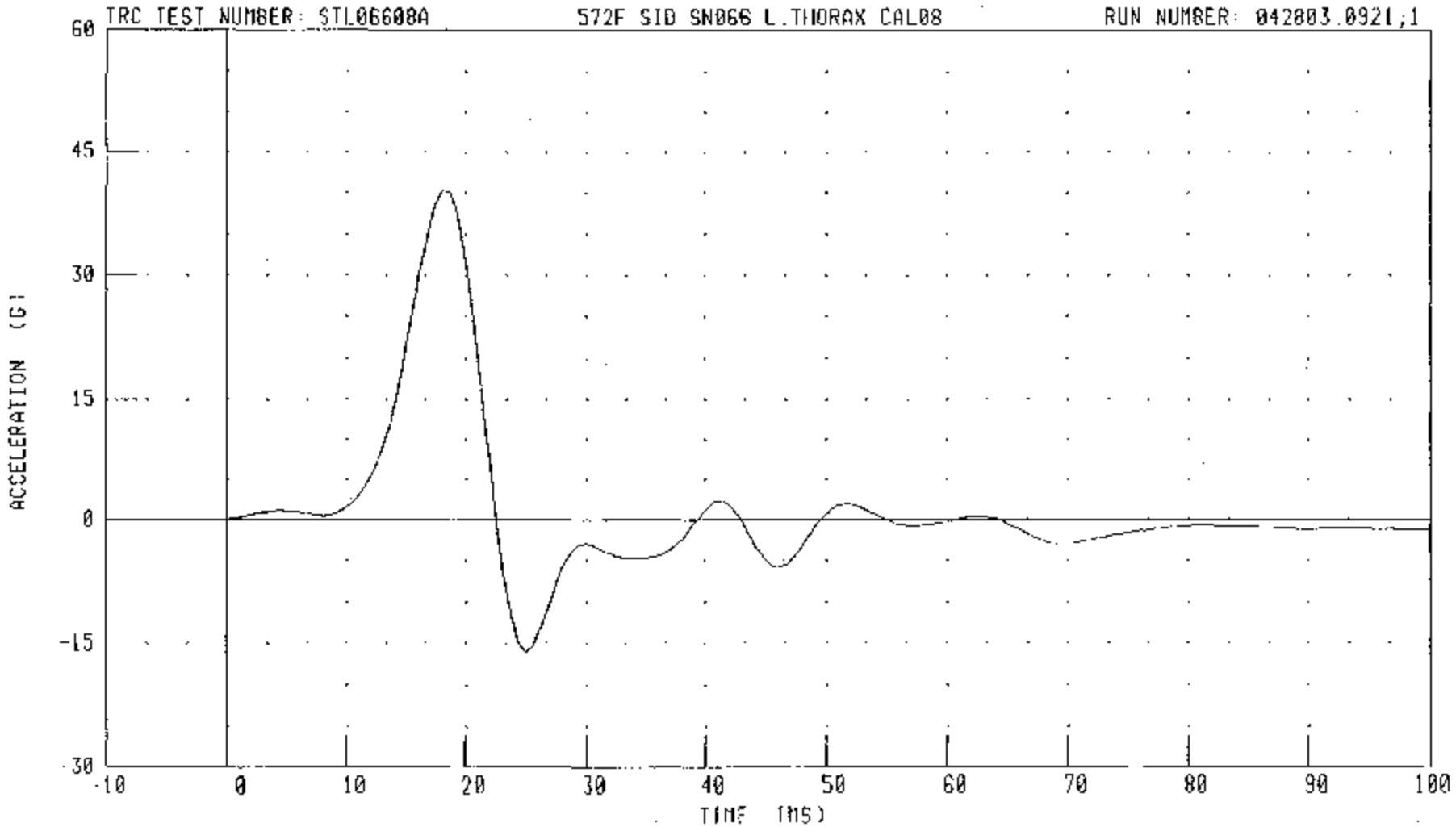
LEFT UPPER RIB ACCELERATION Y AXIS



030505-1

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT LOWER RIB ACCELERATION Y AXIS



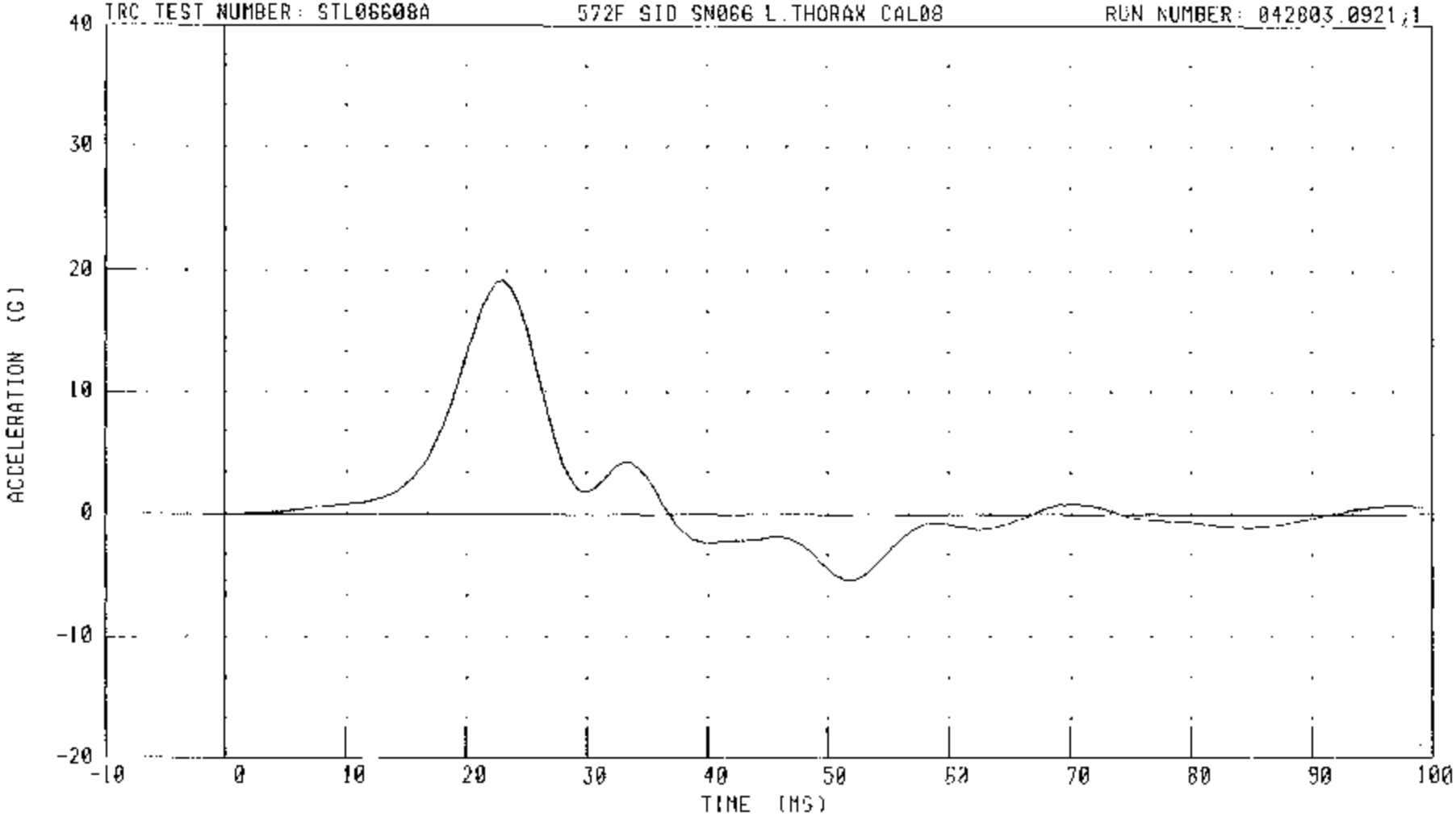
CHANNEL: LLRYG FILTER: FIR 100 PEAK DATA: 40 25 G @ 10.13 MS; -16 05 G @ 25.00 MS

030505-1

PART 572-F S.I.D. THORAX CALIBRATION (LEFT SIDE IMPACT)

LOWER SPINE ACCELERATION Y AXIS

TRC TEST NUMBER: STL06608A 572F SID SN066 L.THORAX CAL08 RUN NUMBER: 042803.0921;1



CHANNEL T:2YG FILTER: FIR 100 PEAK DATA: 19.18 G @ 23.13 MS; -5.45 G @ 51.88 MS

030505-1

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY 29-APR-03

TRC INC. 572F SN066 DAMPER TEST CAL08

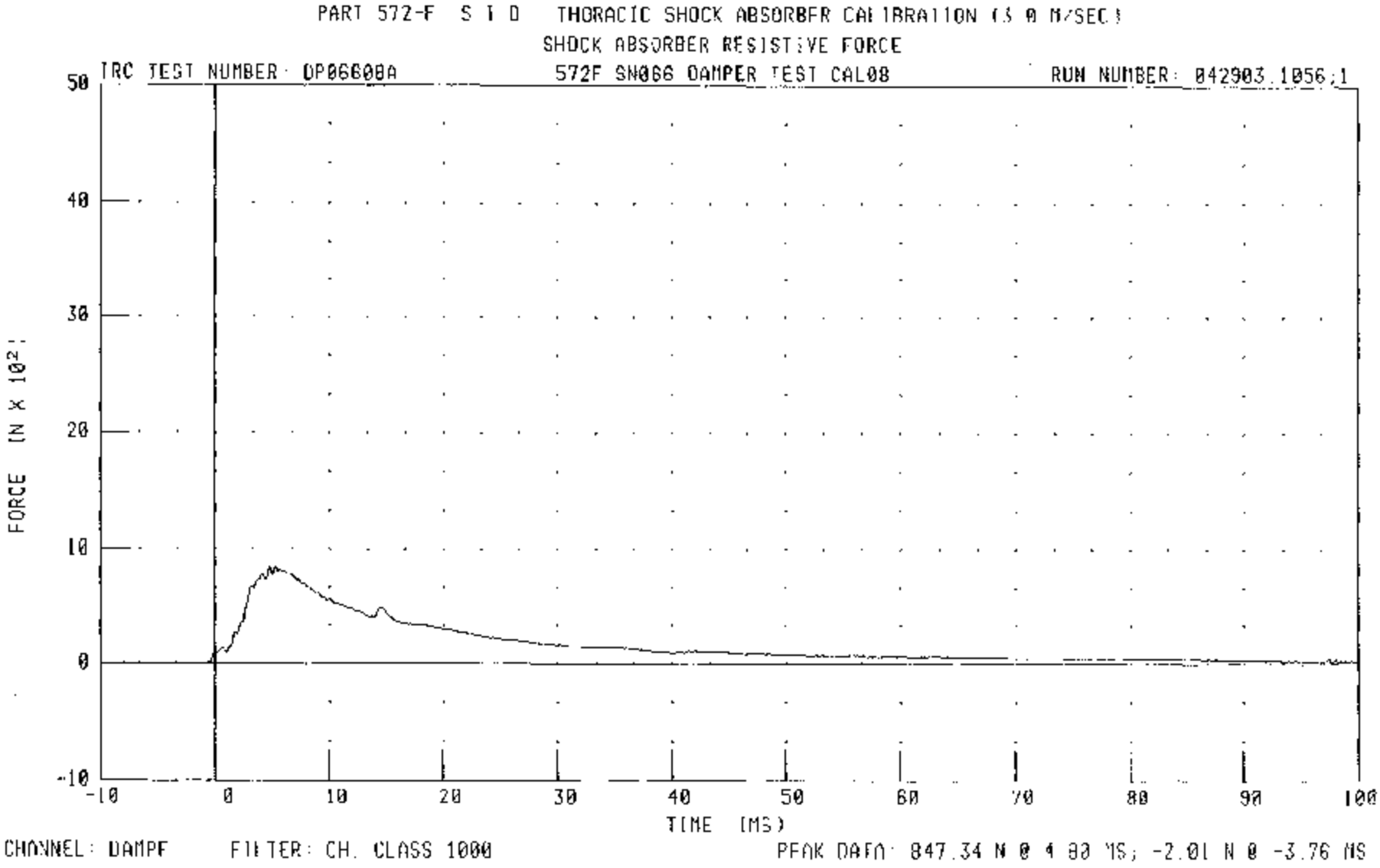
TEST NUMBERS: DP06608A,DP06608B,DP06608C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	34.0 %
VELOCITY	FORCE	683 - 944 N	847 N
2.76 M/S	DISPLACEMENT	29.8 - 34.6 MM	30.4 MM
VELOCITY	FORCE	1733 - 2100 N	1989 N
4.26 M/S	DISPLACEMENT	31.6 - 37.2 MM	34.1 MM
VELOCITY	FORCE	3743 - 4448 N	4118 N
6.10 M/S	DISPLACEMENT	33.3 - 39.5 MM	39.0 MM

DAMPER SETTING = 5.0

TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 042903.1056;1

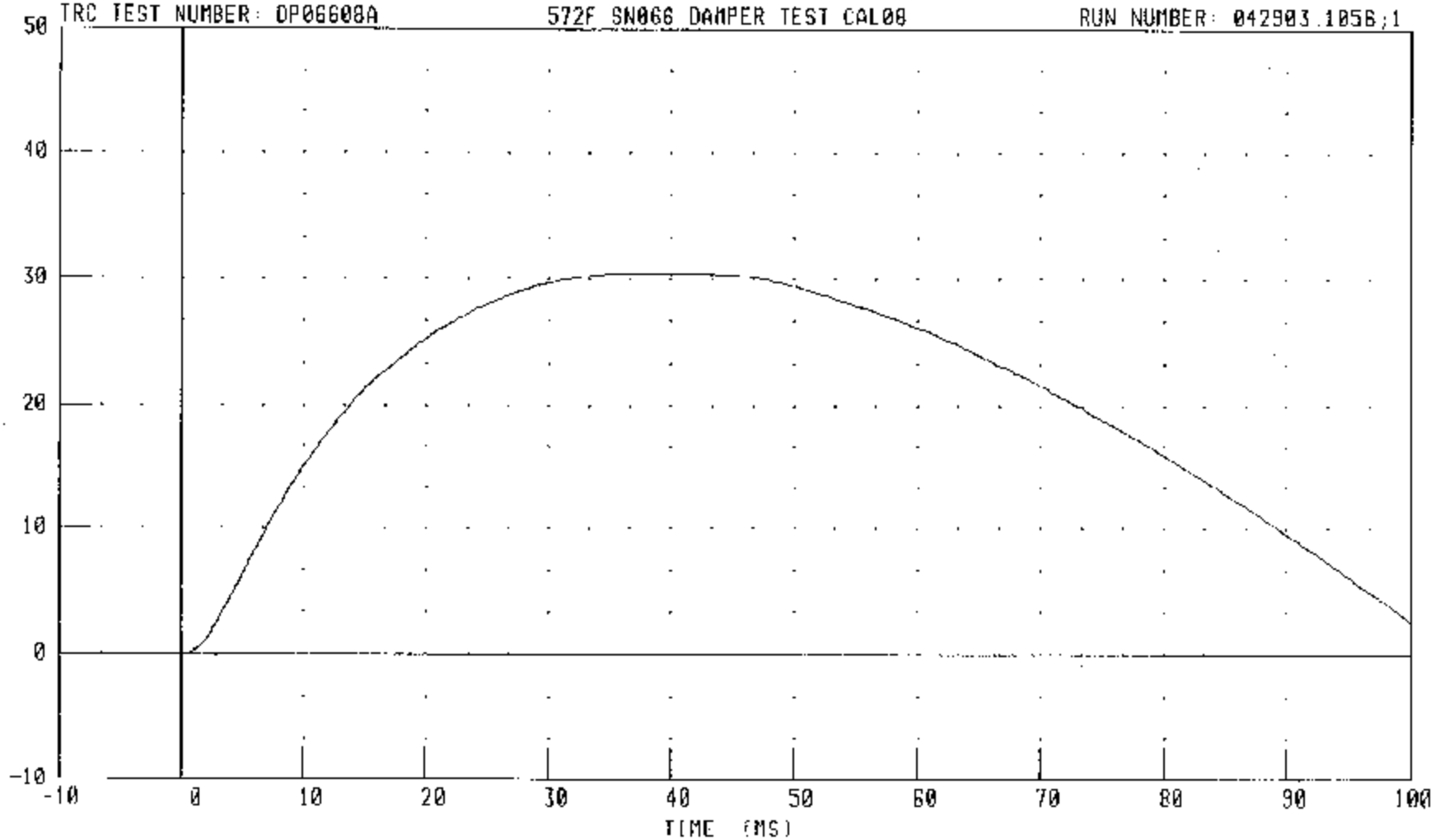

PART 572-F S T D THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)
SHOCK ABSORBER RESISTIVE FORCE
TRC TEST NUMBER: DP06608A
572F SN066 DAMPER TEST CAL08
RUN NUMBER: 042903.1056;1
FORCE (N X 10²)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: DAMPF
FILTER: CH. CLASS 1000
PEAK DATA: 847.34 N @ 4.80 MS; -2.01 N @ -3.76 MS

030505-1

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: OP06608A 572F SN066 DAMPER TEST CAL08 RUN NUMBER: 042903.1056;1



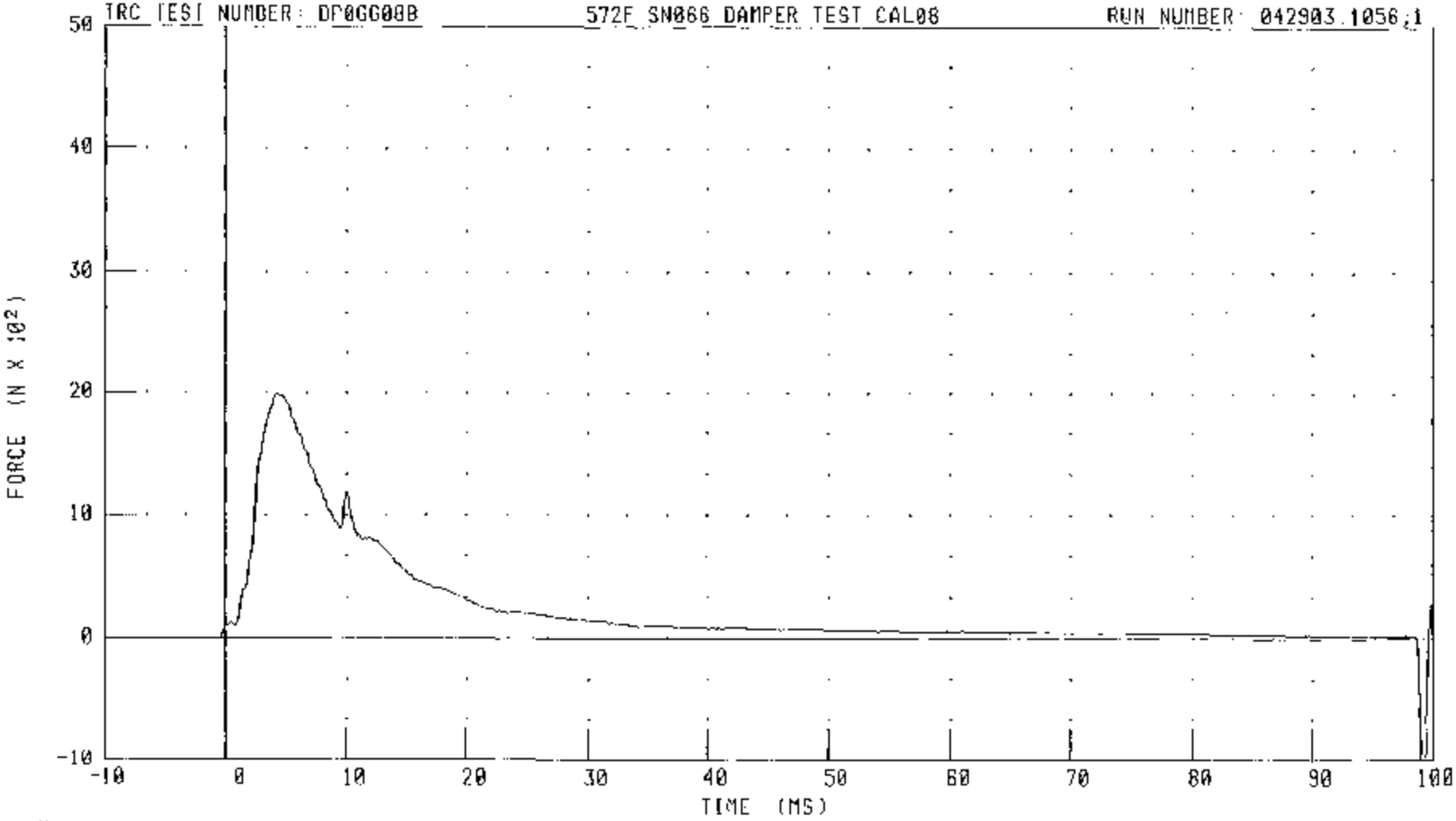
CHANNEL: CSTVD FILTER: CH. CLASS 1000 PEAK DATA: 30.39 MM @ 36.72 MS; 0.00 MM @ 9.60 MS

C-26

030505-1

PART 572-F S I D THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE



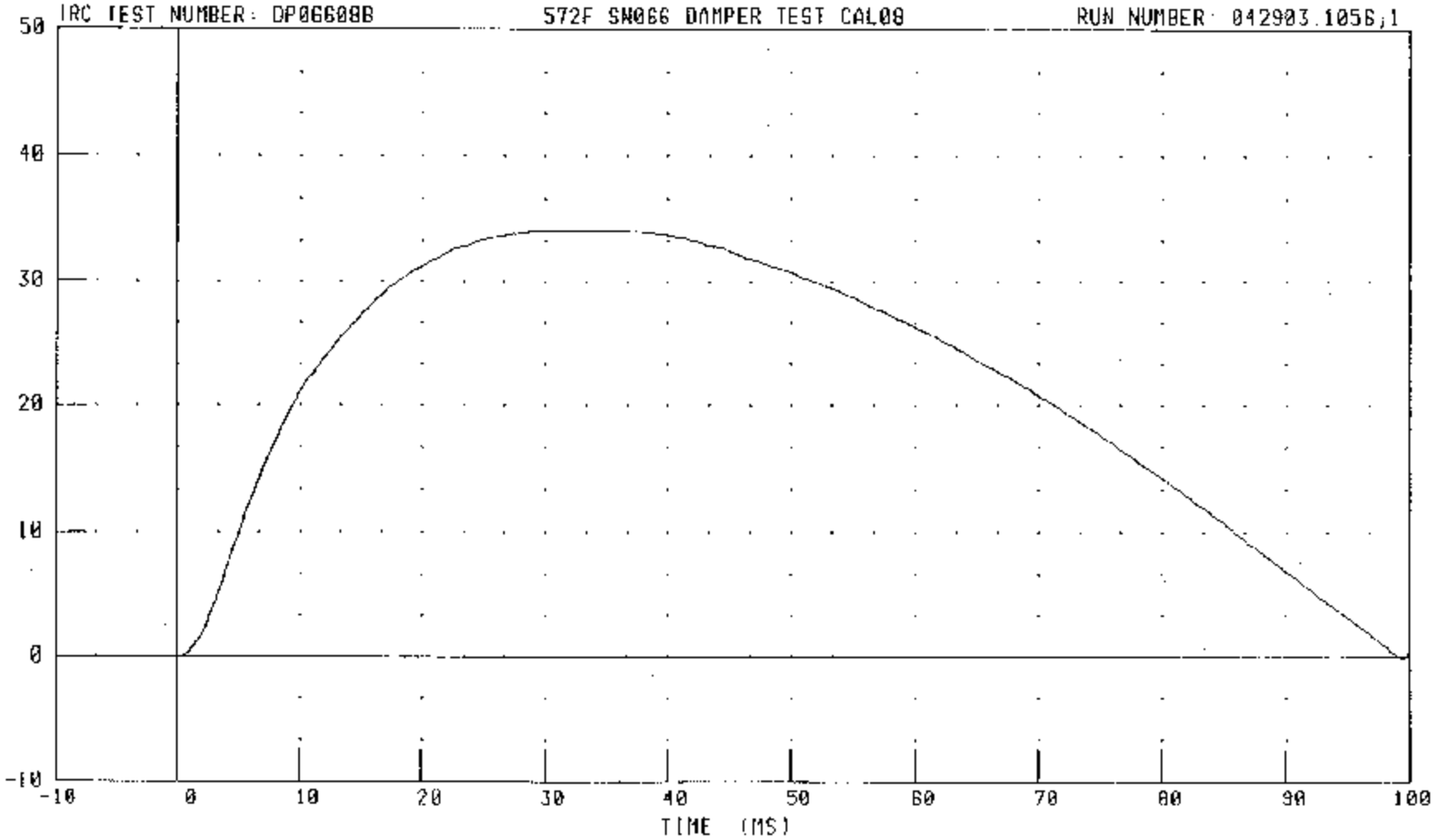
CHANNEL DAMPF FILTER: CH. CLASS 1000 PEAK DATA: 1988.96 N @ 4.37 MS; -2160.34 N @ 99.12 MS

C-27

030505-1

PART 572-F S I D. THORACIC SHOCK ABSORBER CALIBRATION (4 3 M/SEC)

SHOCK ABSORBER DISPLACEMENT



030505-1

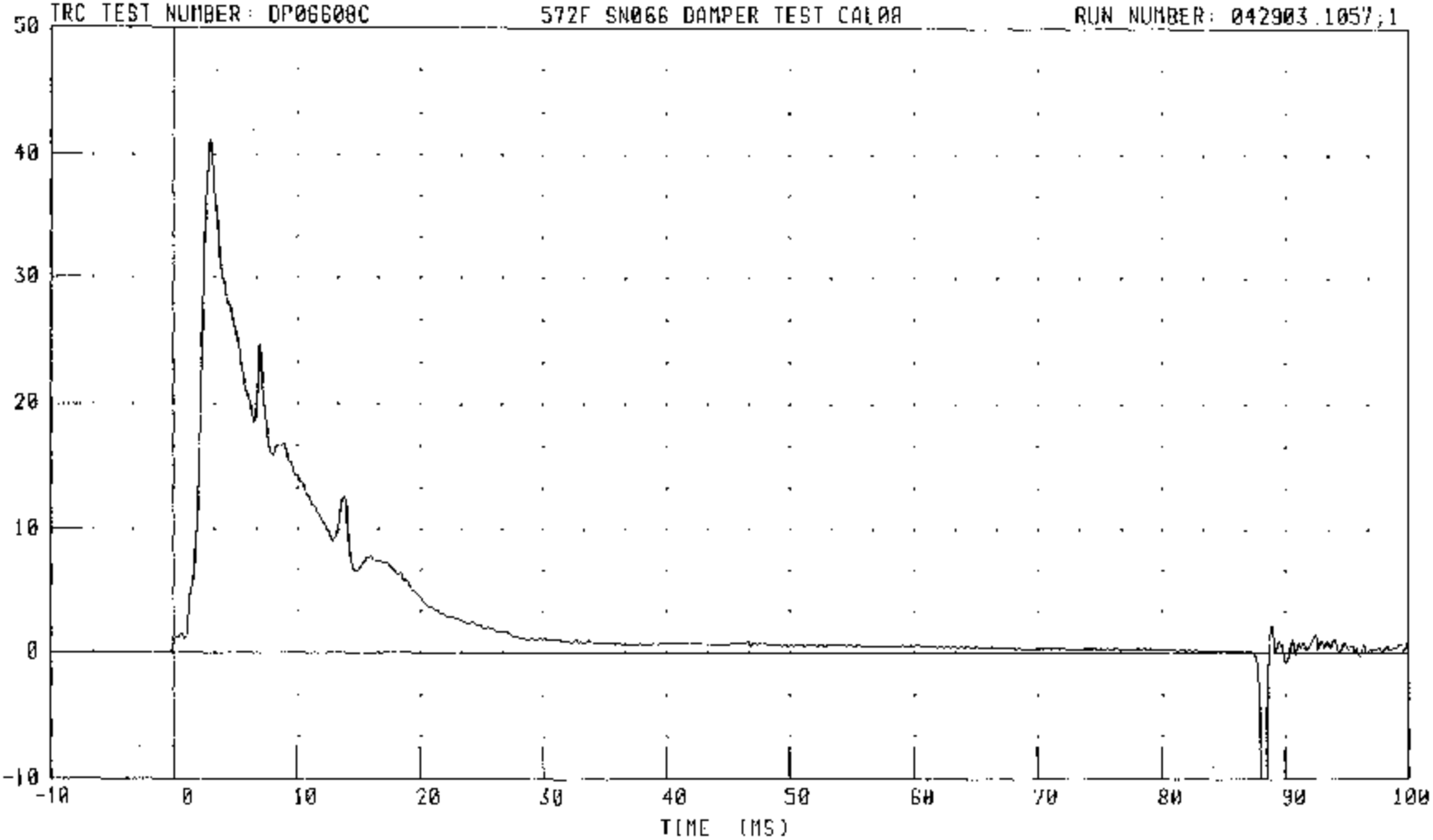
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP06608C

572F SN066 DAMPER TEST CAL08

RUN NUMBER: 042903.1057;1



CHANNEL: DAMPF FILTER: CH. CLASS 1000

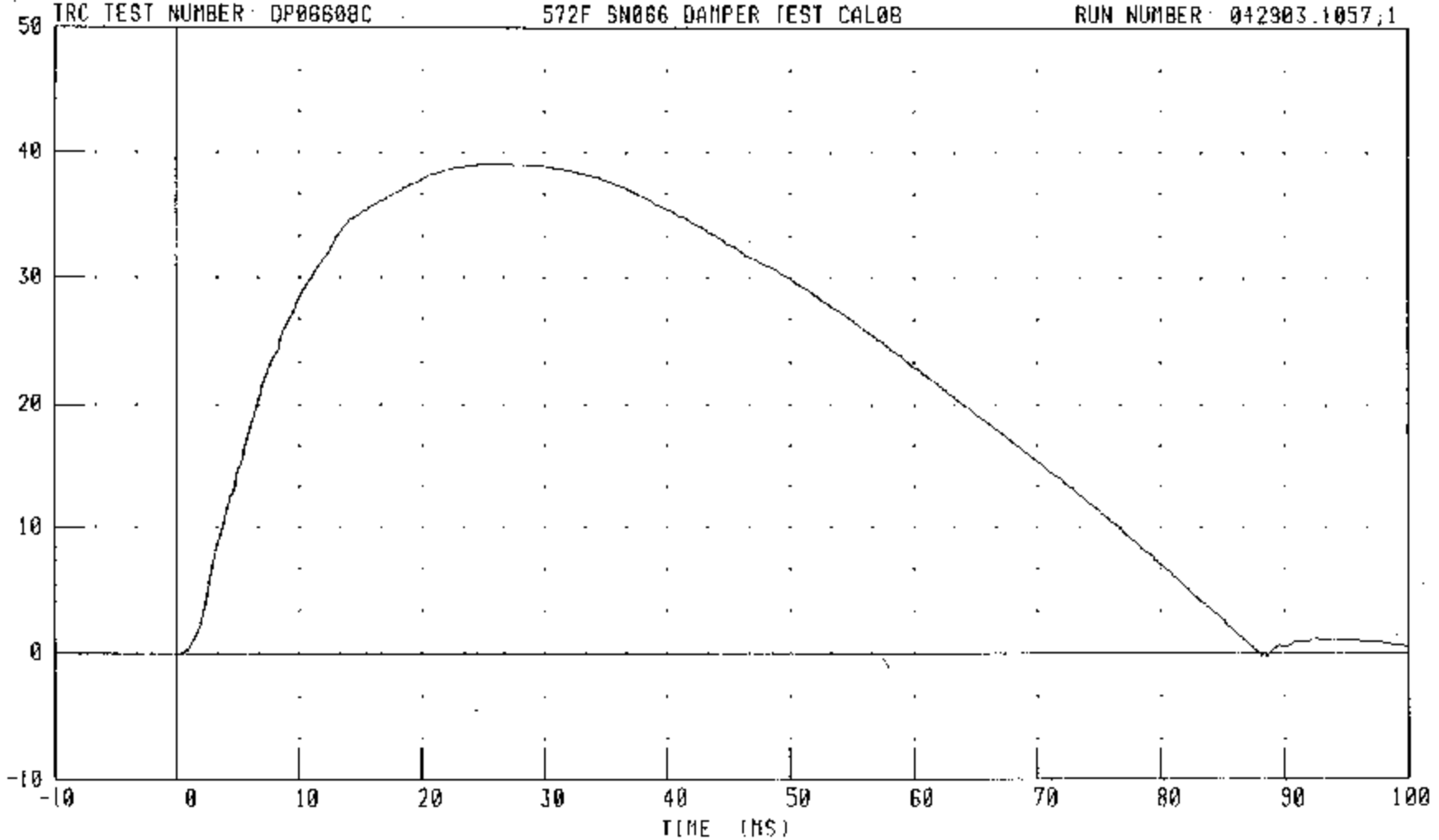
PEAK DATA: 4117.77 N @ 3.04 MS, 2267.79 N @ 88.24 MS

030505-1

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP06608C 572F SN066 DAMPER TEST CAL08 RUN NUMBER: 042303.1057;1



CHANNEL: CSTYD FILTER: CH. CLASS 1000 PEAK DATA: 39.02 MM @ 28.32 MS; -0.27 MM @ 80.40 MS

030505-1

Transportation Research Center Inc.

572B Abdomen Compression Test

HIII SID Serial No. 066 Calibration No. 08 - 1

Test Date 04/29/2003

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	35 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.2 - 8.0 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

Approved

04.29.2003 11:27:03 2

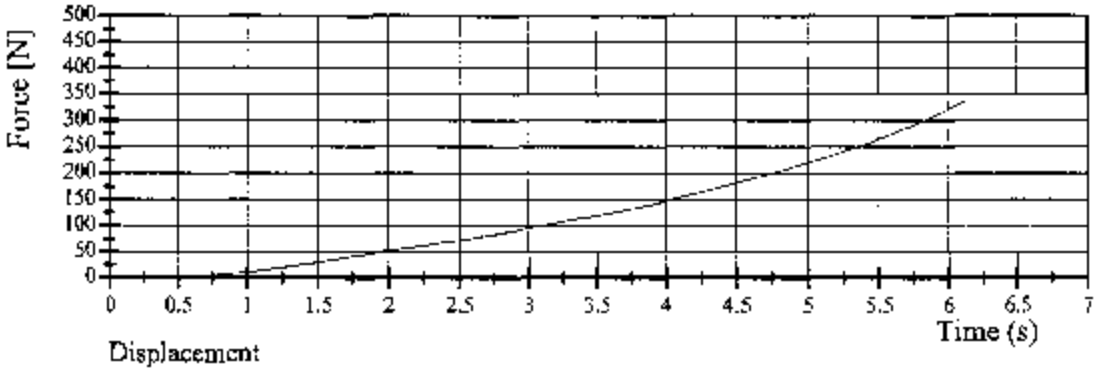
Transportation Research Center Inc.

572B Abdomen Compression Test

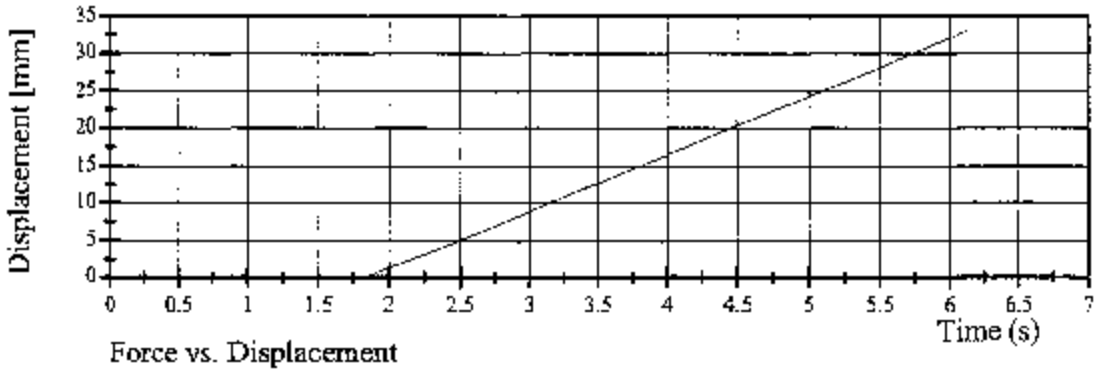
HIII SID Serial No. 066 Calibration No. 08 - 1

Test Date 04/29/2003

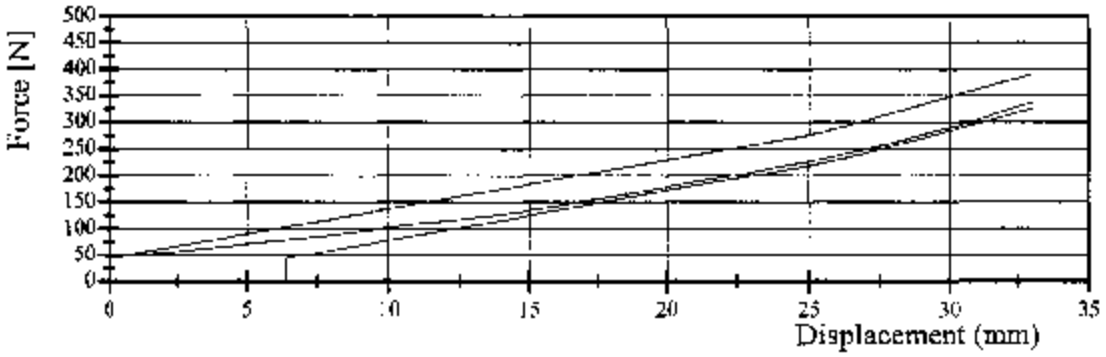
Force



Displacement



Force vs. Displacement



04.29.2003 11:27:03 2

TRANSPORTATION RESEARCH CENTER INC.

LUMBAR FLEXION TEST

SID PART 572B

CAL DATE: 29-Apr-03

TRC, INC. **TEST NO: 066C08TF1** **572B SN 066 TORSO FLEX CAL 08**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.7 °C
RELATIVE HUMIDITY	10 – 70 %	37 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	106.8 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	160.1 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	222.4 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	5 °

TEST MEETS SPECIFICATIONS

TECHNICIAN 

TRANSPORTATION RESEARCH CENTER INC.

LATERAL PELVIS IMPACT TEST

SIDE IMPACT DUMMY 28-APR-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: SPL06608 572F SN066 LEFT PELVIS CAL08

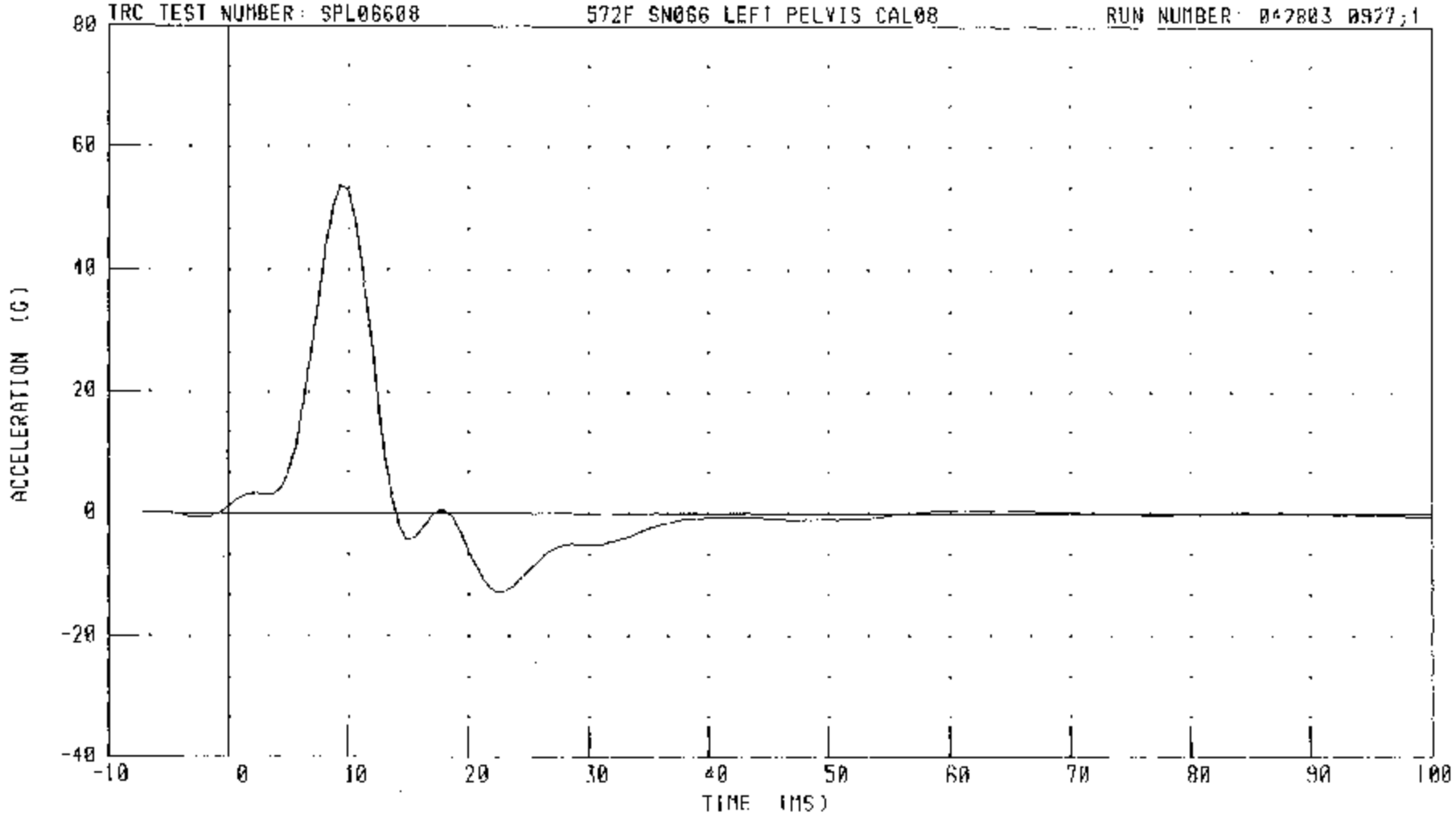
TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	26.0 %
PENDULUM VELOCITY	4.21 - 4.33 M/S	4.28 M/S
PEAK PELVIC ACCELERATION	40 - 60 G	53.7 G
TIME ABOVE 20 G LEVEL	3 - 7 MS	6.0 MS
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 042803.0927;1

PART 572-F S.I.D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)

PELVIS ACCELERATION Y AXIS

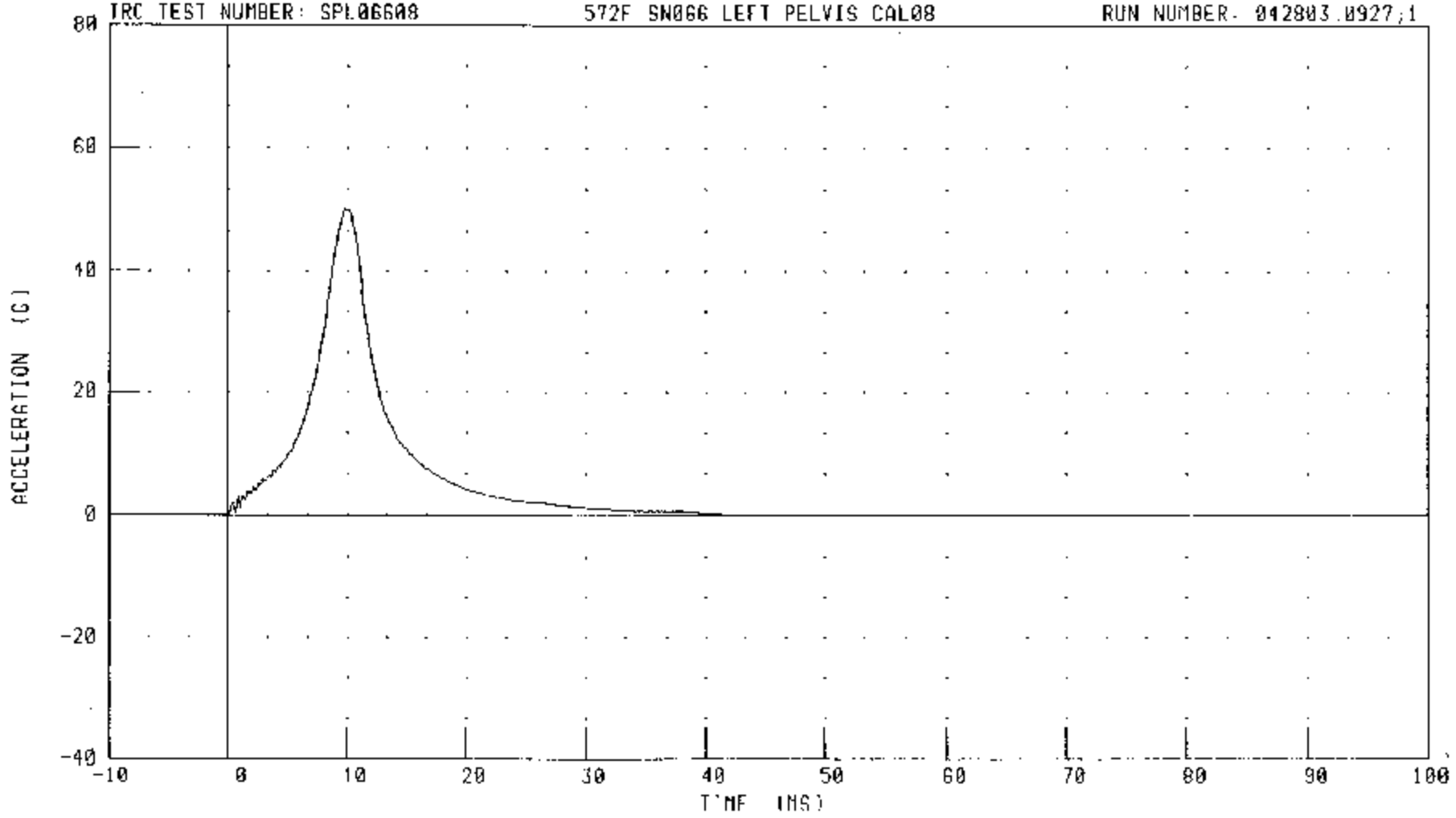


CHANNEL: PEVYC FILTER: FIR 100

PEAK DATA: 53.67 G @ 9.37 MS; -12.99 G @ 22.50 MS

030505-1

PART 572-F S.I.G. PELVIS CALIBRATION - (LEFT SIDE IMPACT)
PENDULUM DECELERATION



030505-1

Calibration Test Results

Pre-Test

SID: 028

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber passed all test requirements.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

Transportation Research Center Inc.
572F SID Dummy
External Dimensions
Serial No. 028 Calibration No. 06

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	895 mm	Yes
Rib Height	RH	501.7 - 520.7 mm	504 mm	Yes
Hip Pivot Height	HP	99.1 REF mm	99.1 mm	
Rib From Backline	RD	228.6 - 241.3 mm	230 mm	Yes
Knee Pivot From Backline	KH	510.5 - 525.8 mm	512 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5 mm	498 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	372 mm	Yes
Top Rib Width From C\L	RW-1	165.1 - 180.3 mm	169 mm	Yes
Bottom Rib Width From C\L	RW-2	165.1 - 180.3 mm	168 mm	Yes
Difference Between Top & Bottom Rib Width from C\L		<= 2.5 mm	1.0 mm	Yes

Technician

Approved

TRC

TRANSPORTATION RESEARCH CENTER INC.

LATERAL HEAD DROP TEST

HYBRIDIII SID DUMMY 01-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO. HDL02806 572N SID/HIII SN028 HEAD CAL06

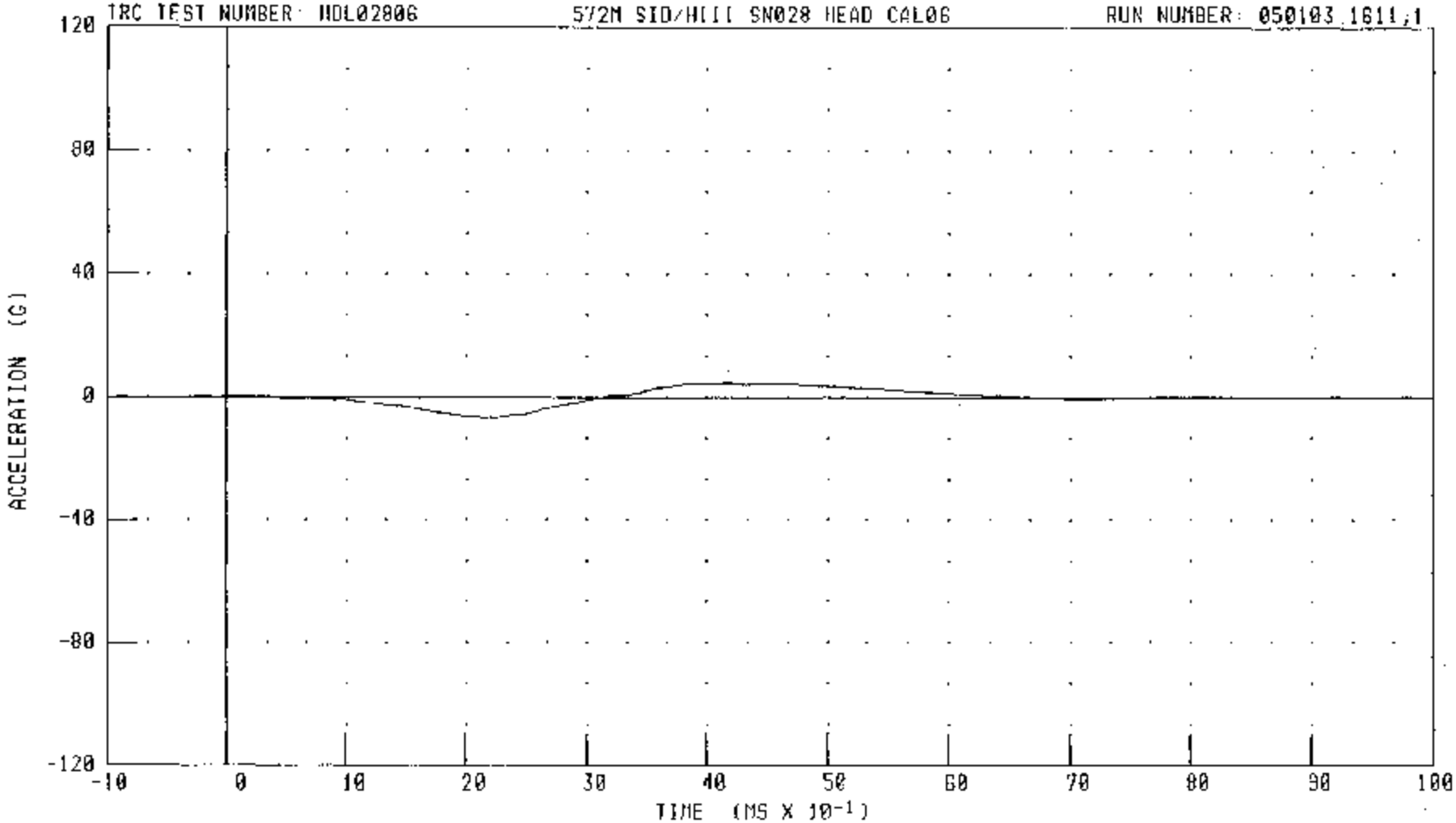
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.6 deg. C	21.67 deg. C
RELATIVE HUMIDITY	10 - 70 %	43.00 %
PEAK RESULTANT ACCELERATION	120 - 150 G	135.13 G
PEAK LONGITUDINAL ACCELERATION	15 G MAX	-6.54 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 050903.1449;1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION X AXIS

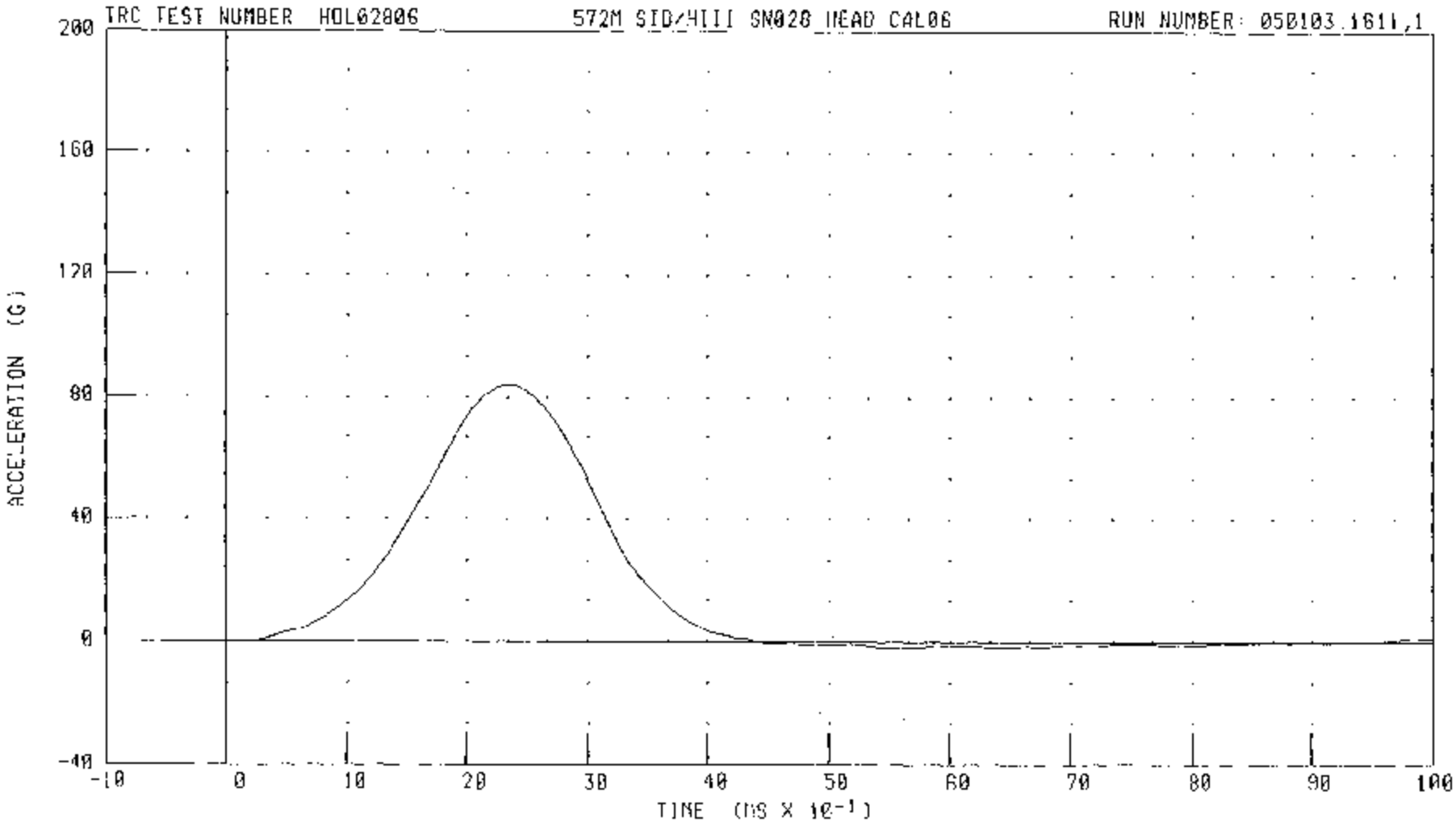


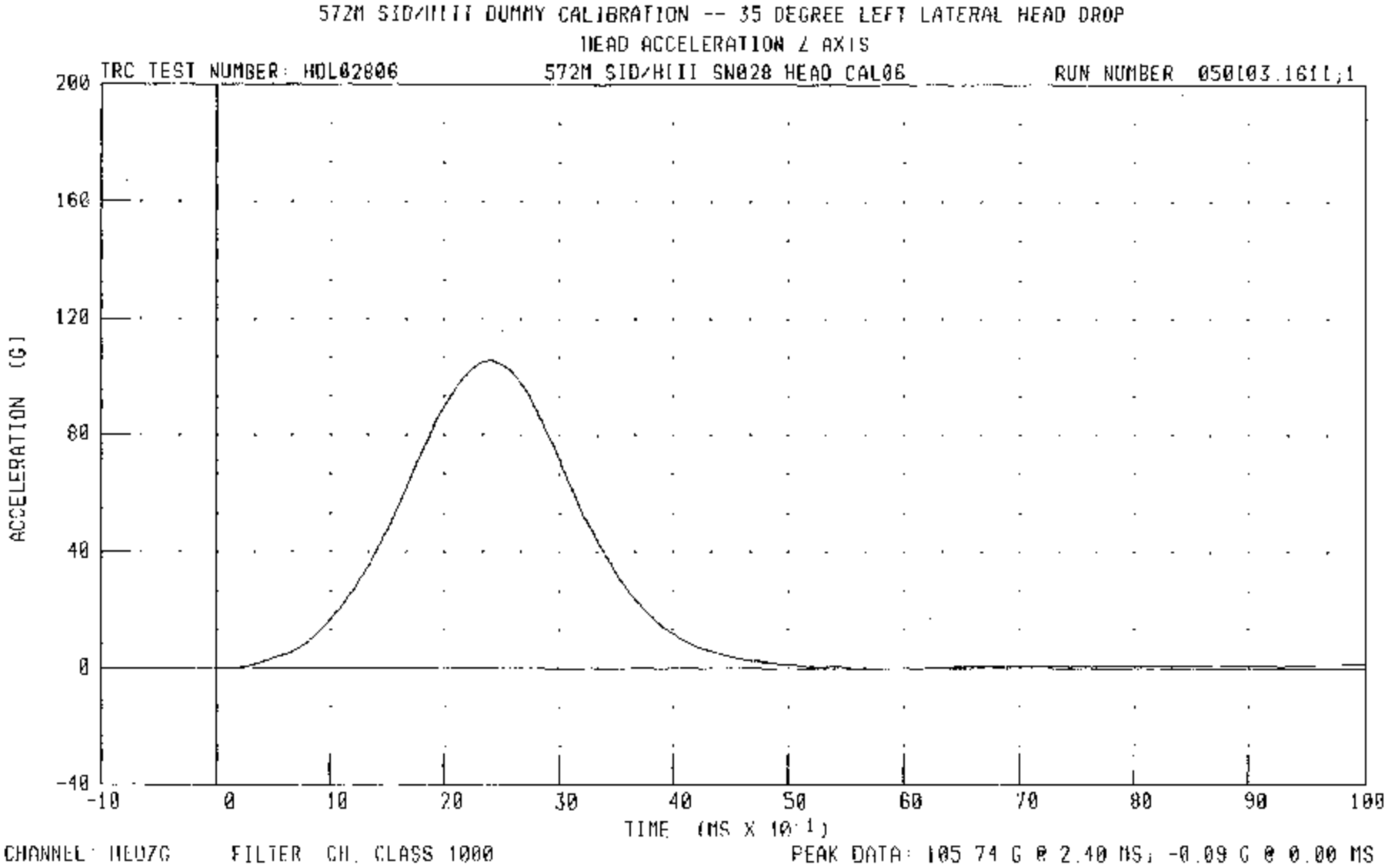
CHANNEL: HEDXG FILTER: CH. CLASS 1000 PEAK DATA: 4.61 G @ 4.56 MS; -6.54 G @ 2.16 MS

030505-1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION Y AXIS

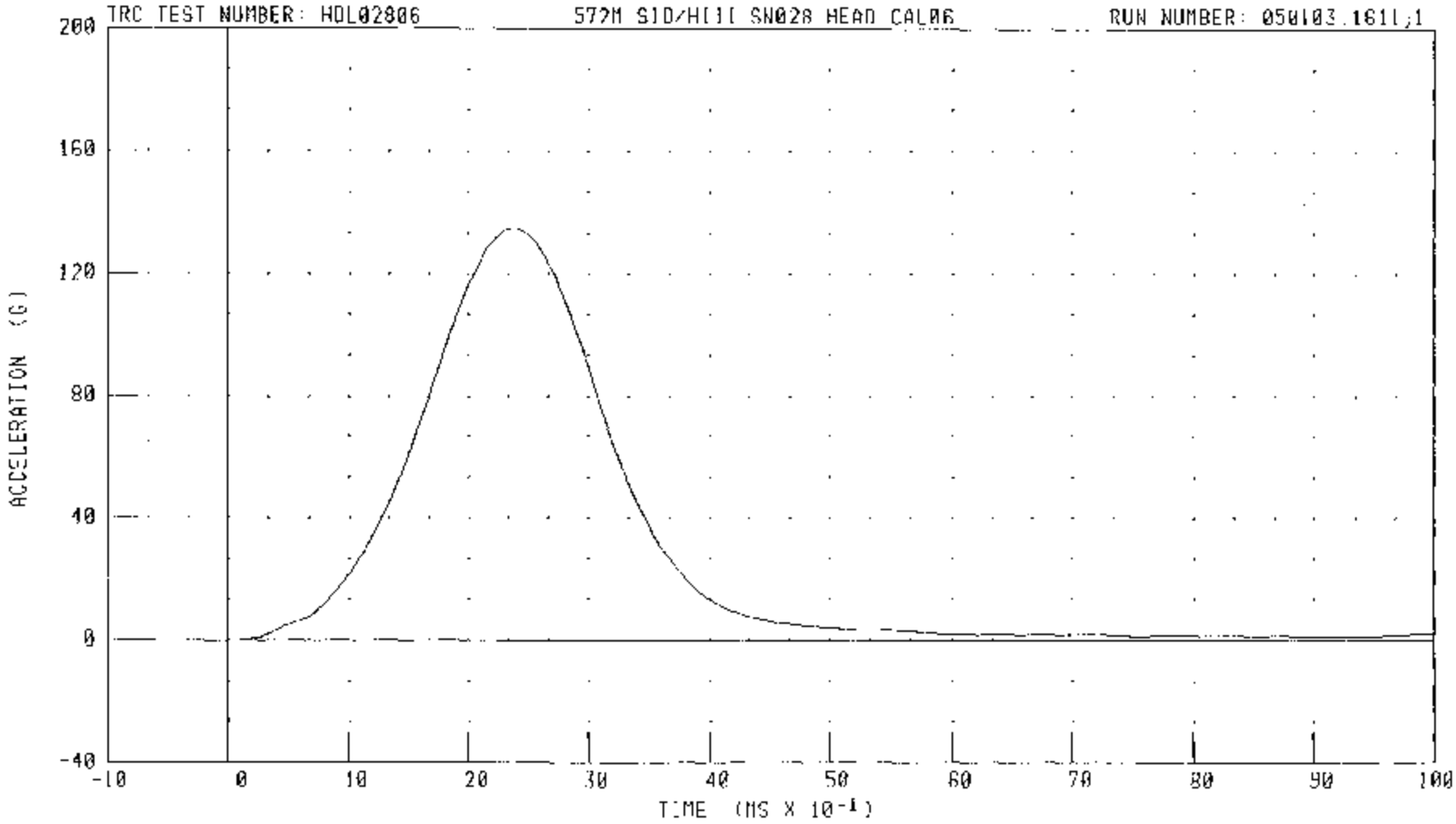



572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP
HEAD ACCELERATION Z AXIS
TRC TEST NUMBER: HDL02806
572M SID/HIII SN028 HEAD CAL06
RUN NUMBER 050103.1611;1
ACCELERATION (G)
200
160
120
80
40
0
-40
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS X 10⁻¹)
CHANNEL: HEDZG
FILTER CH. CLASS 1000
PEAK DATA: 105.74 G @ 2.40 MS; -0.09 G @ 0.00 MS

030505-1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD RESULTANT ACCELERATION



TRANSPORTATION RESEARCH CENTER INC.

LATERAL NECK TEST

HYBRIDIII SID DUMMY 01-MAY-03

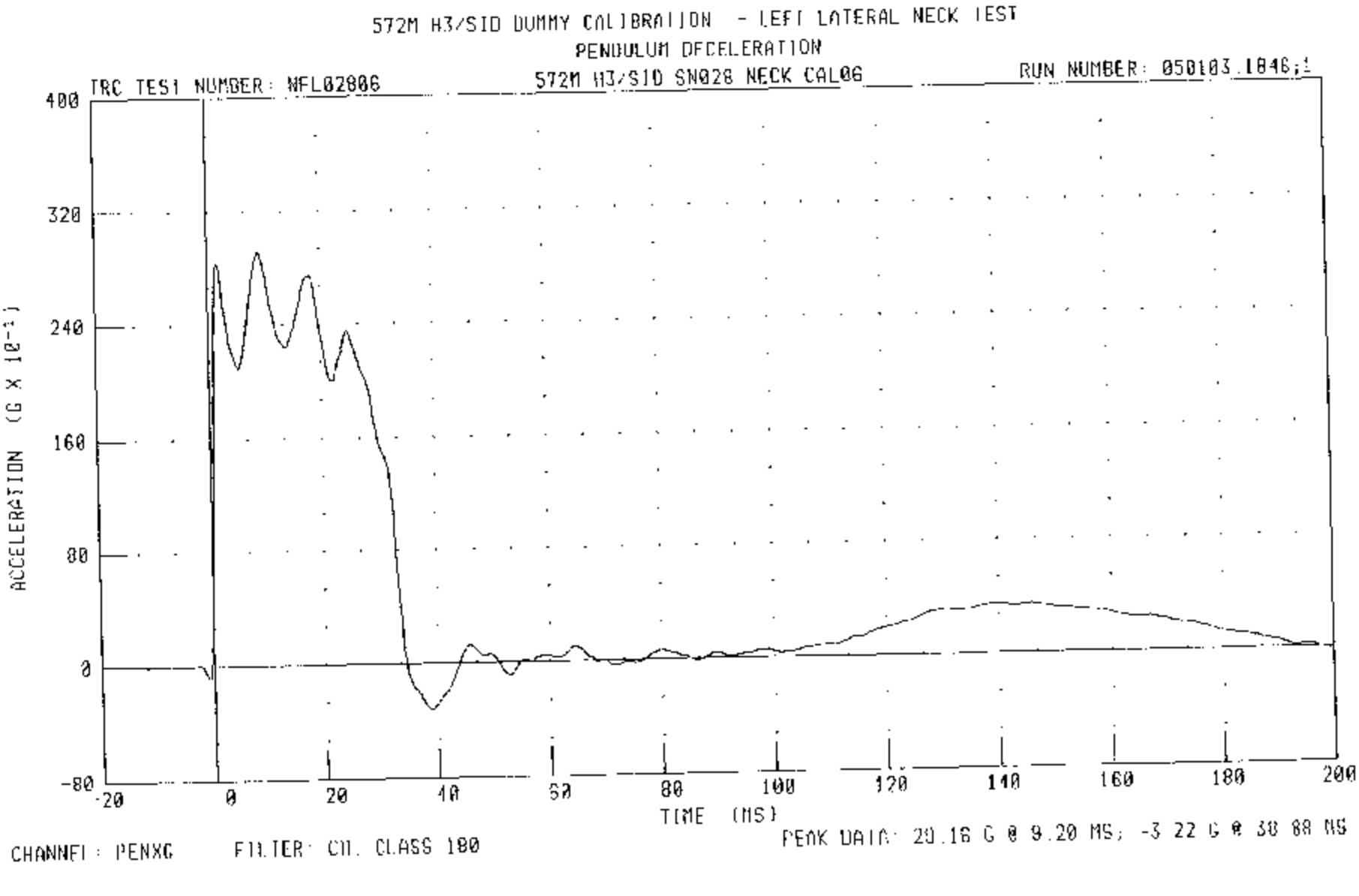
LEFT SIDE CONFIGURATION

TRC INC. TEST NO. NFL02806 572M H3/SID SN028 NECK CAL06

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 deg. C	21.67 deg. C
RELATIVE HUMIDITY		10 - 70 %	43.00 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
INTEGRATED VELOCITY	10 MS	1.96 - 2.55 M/S	2.35 M/S
	20 MS	4.12 - 5.10 M/S	4.80 M/S
	30 MS	5.73 - 7.01 M/S	6.85 M/S
	40 - 70 MS	6.27 - 7.64 M/S	7.11- 7.19 M/S
MAXIMUM MIDSAGGITAL PLANE ROTATION		66 - 82 deg.	71.81 deg.
ROTATION ANGLE DECAY TIME FROM PEAK TO ZERO		58 - 67 MS	58.88 MS
MAXIMUM MOMENT ABOUT OCCIPITAL CONDYLE		73 - 88 NM	79.19 NM
POSITIVE MOMENT DECAY TIME FROM PEAK TO ZERO		49 - 64 MS	56.32 MS
TIME OF MAXIMUM ROTATION AFTER MAXIMUM MOMENT		2 - 16 MS	8.88 MS

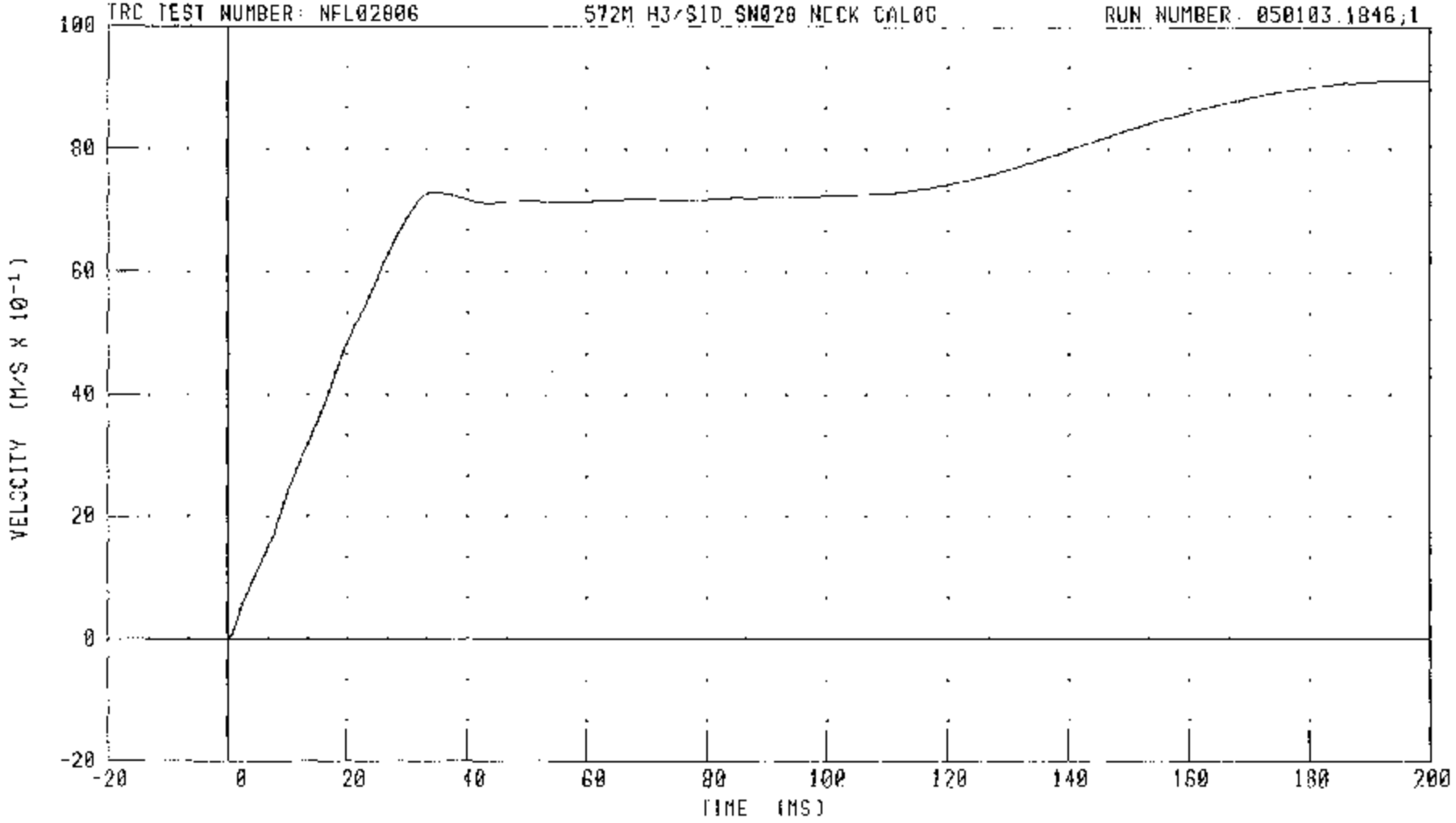
TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 050903.1452;1


572M H3/SID DUMMY CALIBRATION - LEFT LATERAL NECK TEST
PENDULUM DECELERATION
TRC TEST NUMBER: NFL02806
572M H3/SID SN028 NECK CAL06
RUN NUMBER: 050103.1846;1
ACCELERATION (G X 10⁻¹)
400
320
240
160
80
0
-80
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: PENXG
FILTER: CFC CLASS 180
PEAK DATA: 29.16 G @ 9.20 MS; -3.22 G @ 30.88 MS

572M H3/S1D DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

INTEGRATED PENDULUM VELOCITY

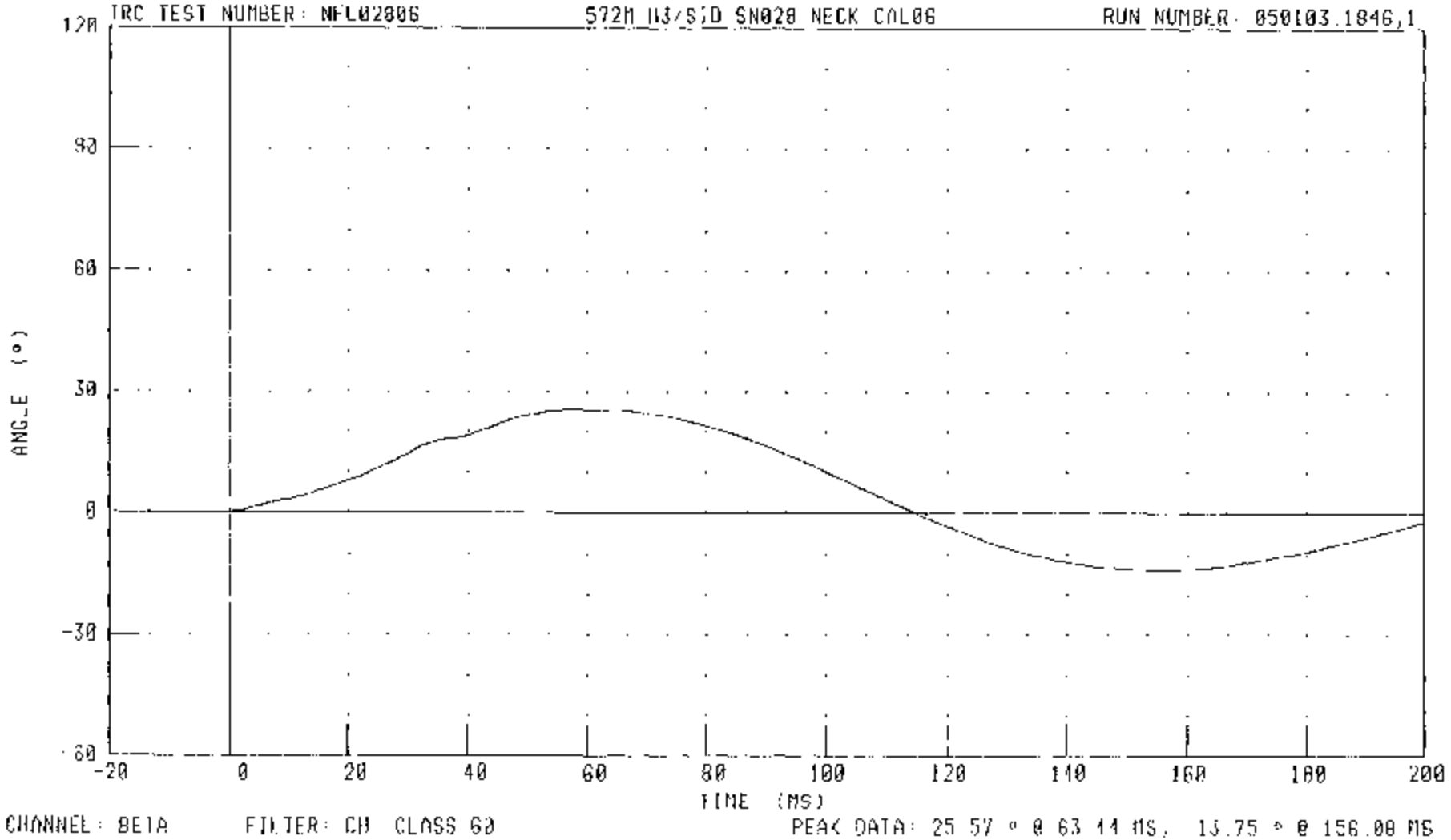


CHANNEL: PENXVI FILTER: CH CLASS 180 PEAK DATA: 9.15 M/S @ 197.92 MS; -0.01 M/S @ -0.48 MS

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

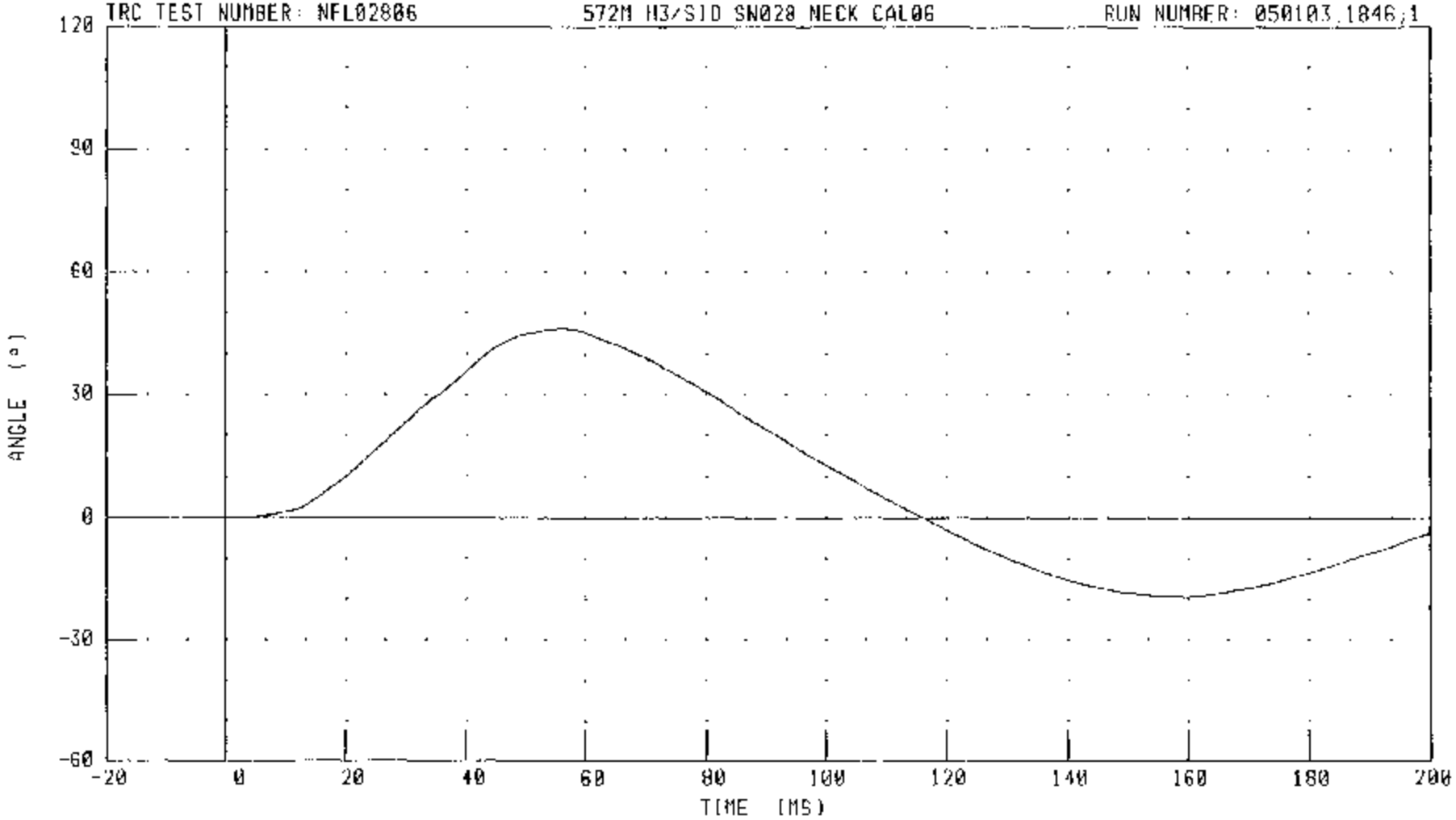
ROTATION ABOUT BASE OF NECK



572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

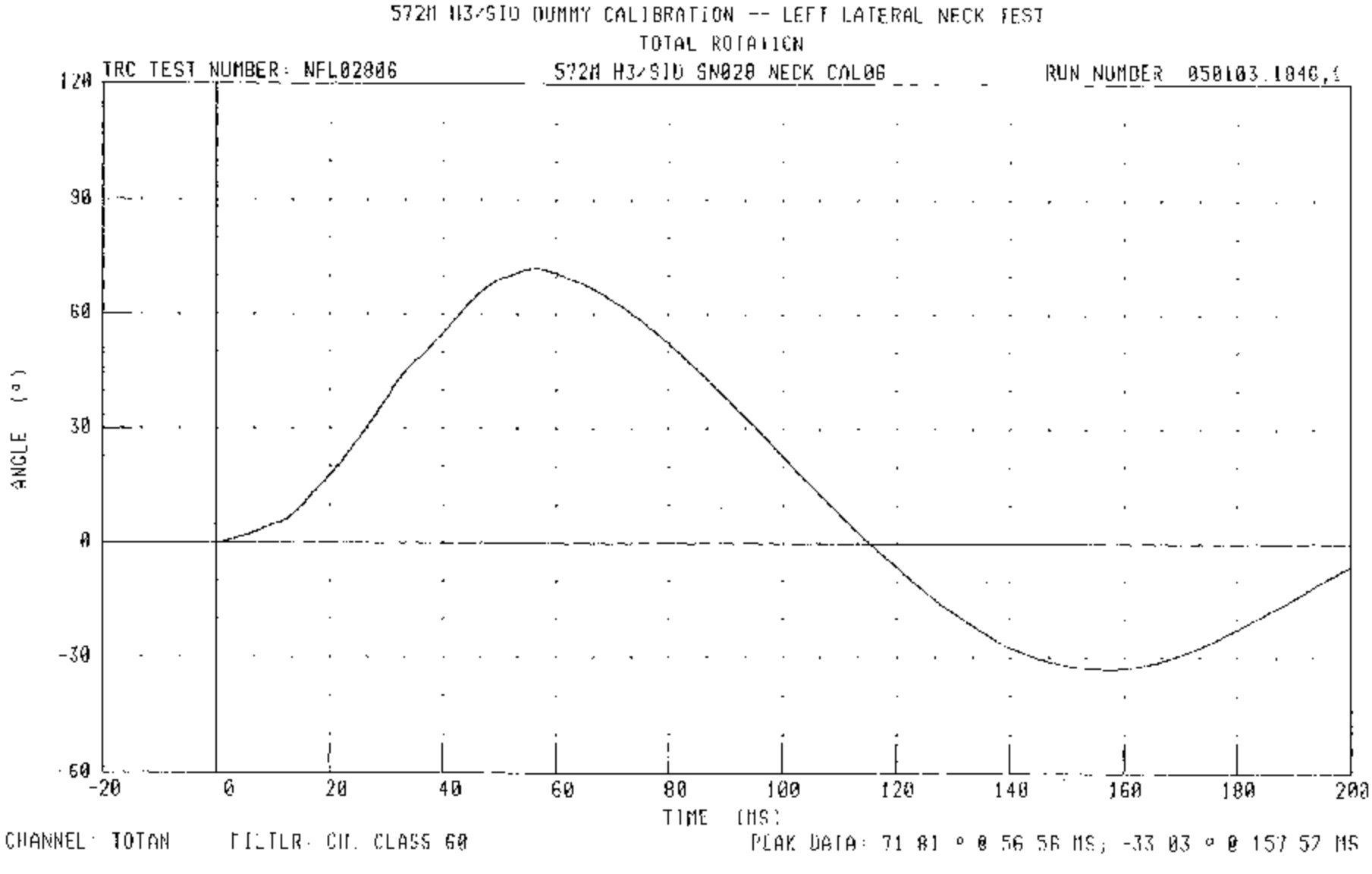
ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: NFL02806 572M H3/SID SN028 NECK CAL06 RUN NUMBER: 050103.1846.1



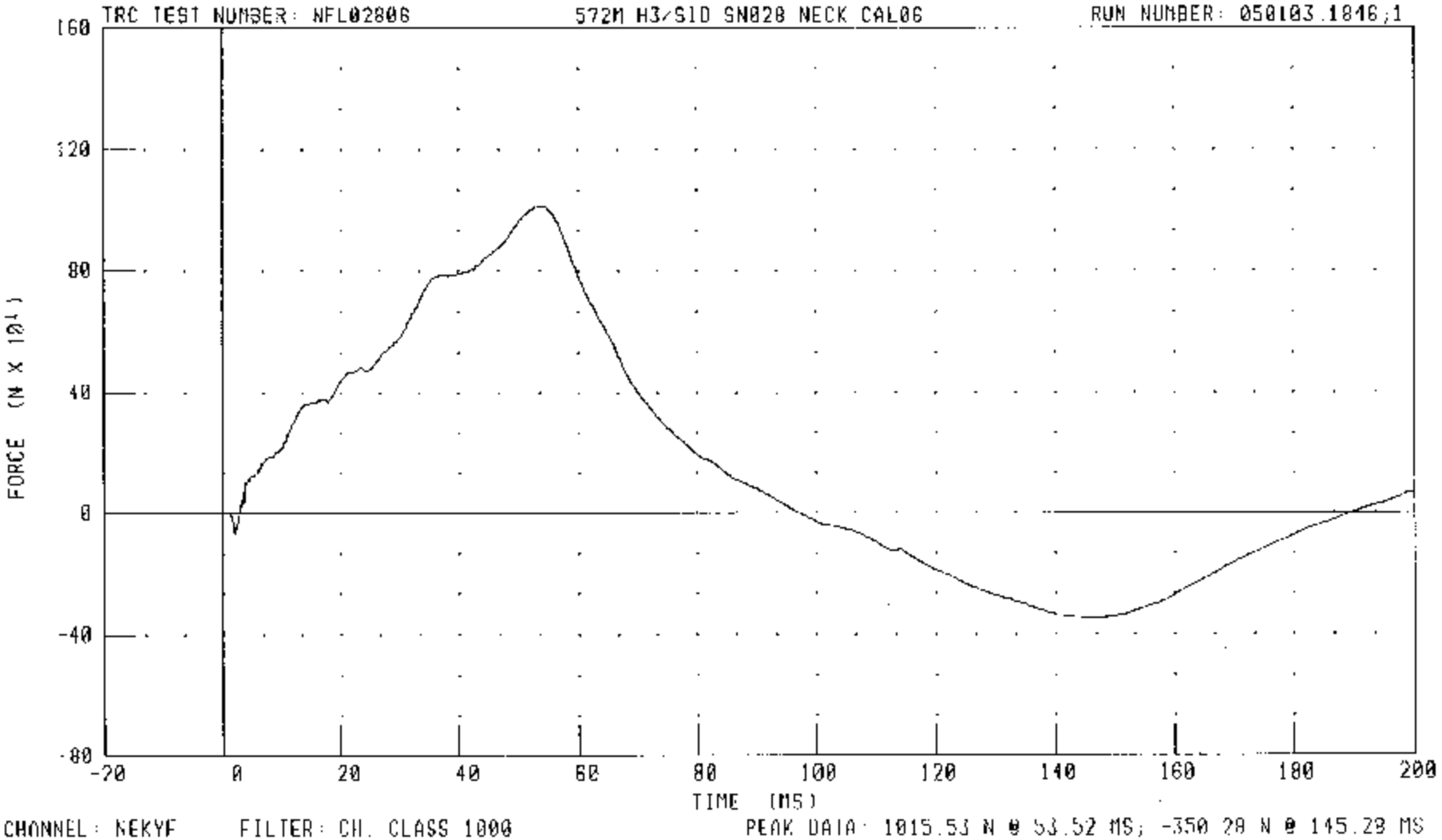
CHANNEL: THETA FILTER: CH. CLASS 60 PEAK DATA: 46.31 ° @ 56.32 MS, 19.31 ° @ 158.64 MS

030505-1

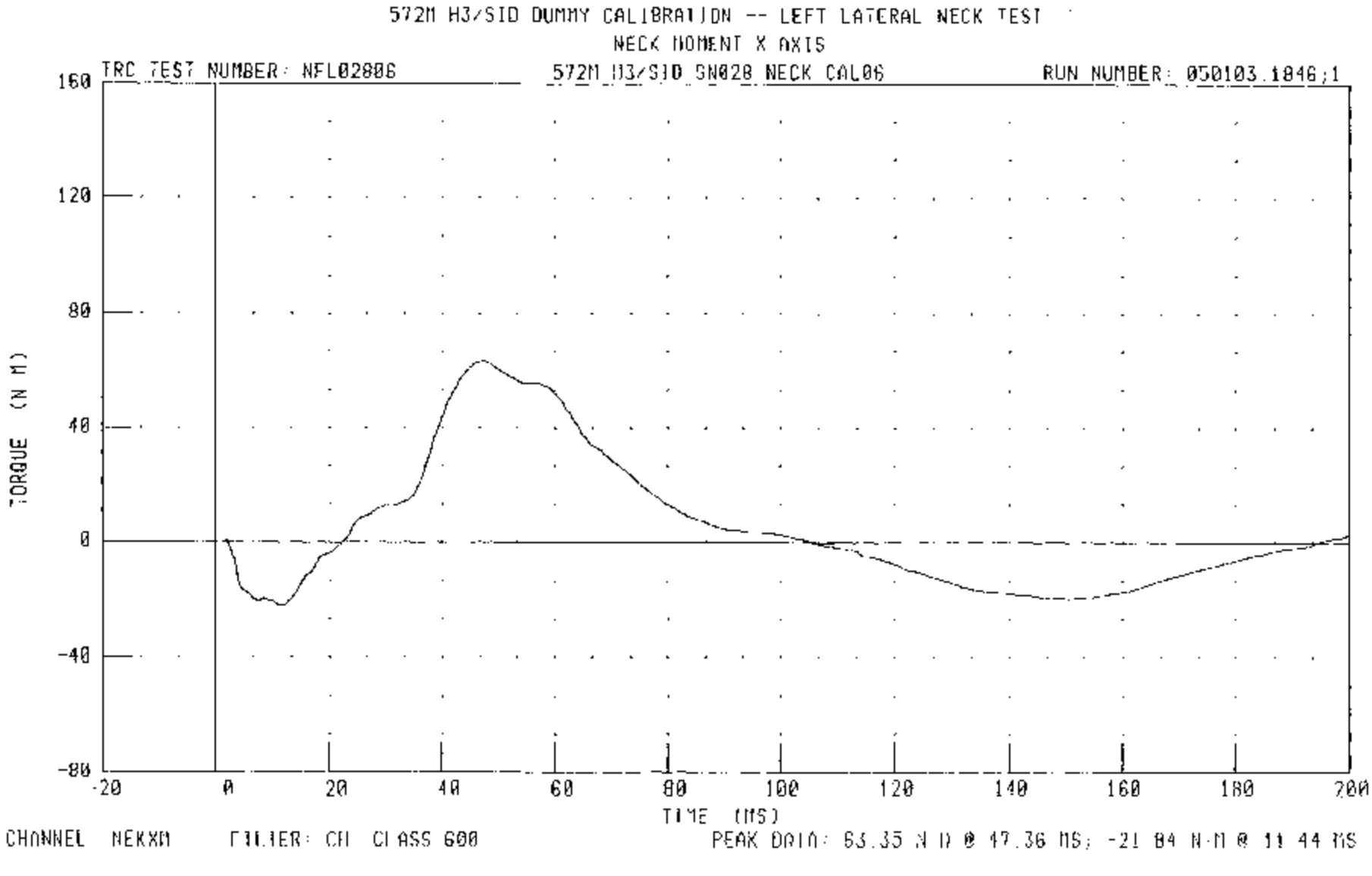

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
TOTAL ROTATION
TRC TEST NUMBER: NFL02006
572M H3/SID SN020 NECK CAL06
RUN NUMBER 050103.1046.1
120
90
60
30
0
-30
-60
ANGLE (°)
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: TOTAN
FILTER: CH. CLASS 60
PEAK DATA: 71.81 ° @ 56.56 MS; -33.03 ° @ 157.57 MS

572M H3/S1D DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

NECK FORCE Y AXIS



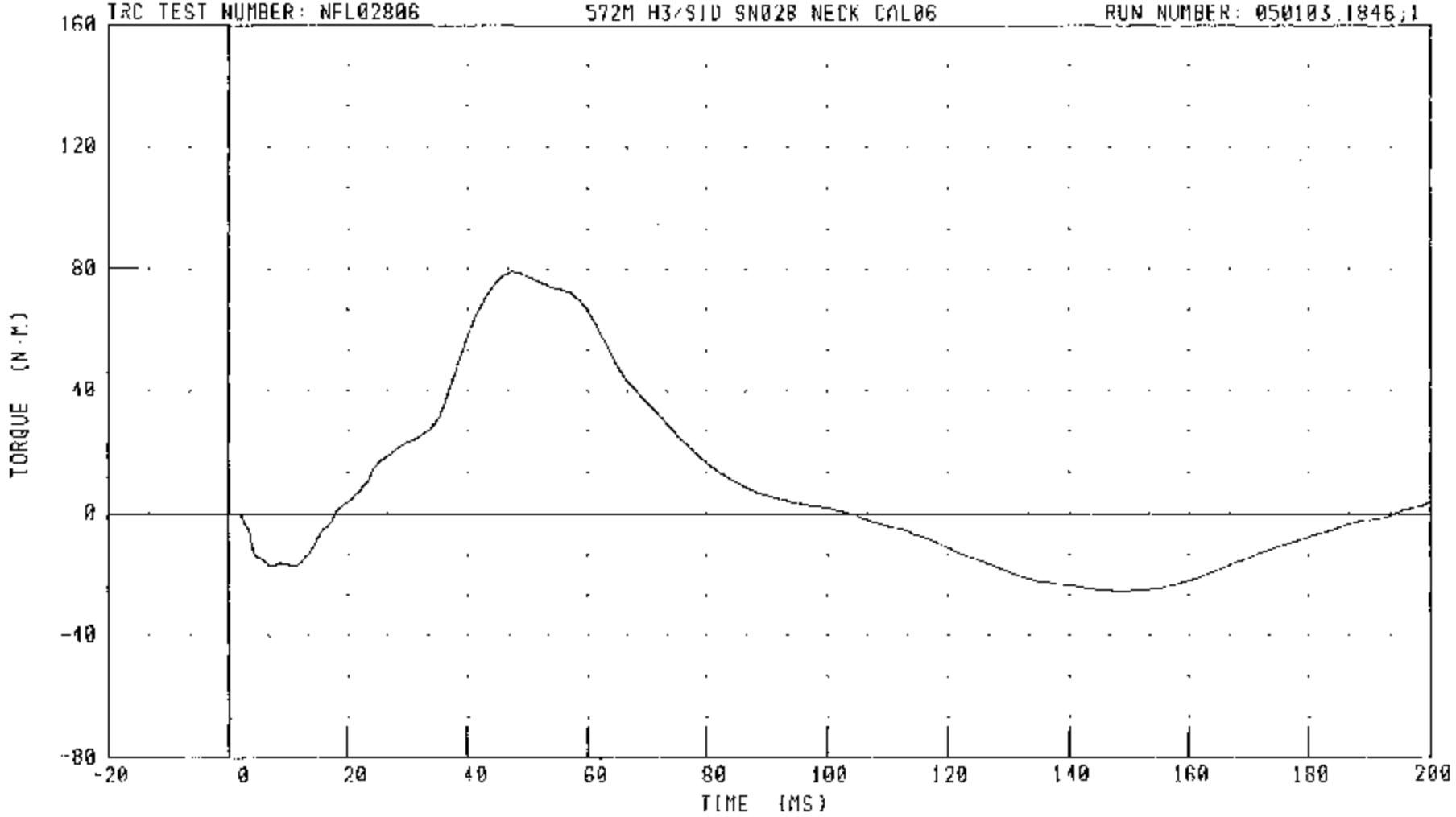
030505-1


572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
NECK MOMENT X AXIS
TRC TEST NUMBER: NFL02806
572M H3/SID SN028 NECK CAL06
RUN NUMBER: 050103.1846;1
160
120
80
40
0
-40
-80
TORQUE (N M)
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL NEKXM
FILTER: CFC CLASS 600
PEAK DATA: 63.35 N M @ 17.36 MS; -21.84 N-M @ 11.44 MS

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: NFL02806 572M H3/SID SN028 NECK CAL06 RUN NUMBER: 050103.1846.1



CHANNEL: NEKOM FILTER: CH CLASS 600 PEAK DATA 79.19 N-M @ 47.68 MS, -25.44 N-M @ 149.52 MS

030505-1

TRANSPORTATION RESEARCH CENTER INC.

LATERAL THORAX IMPACT TEST

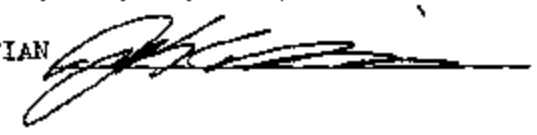
SIDE IMPACT DUMMY 01-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: STL02806 572F SID SN028 L.THORAX CAL06

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	43.0 %
PENDULUM VELOCITY	4.21 - 4.33 M/S	4.29 M/S
PEAK ACCELERATION: UPPER RIB BAR	37 - 46 G	40.0 G
PEAK ACCELERATION: LOWER RIB BAR	37 - 46 G	42.6 G
PEAK ACCELERATION: LOWER THORACIC SPINE	15 - 22 G	17.5 G

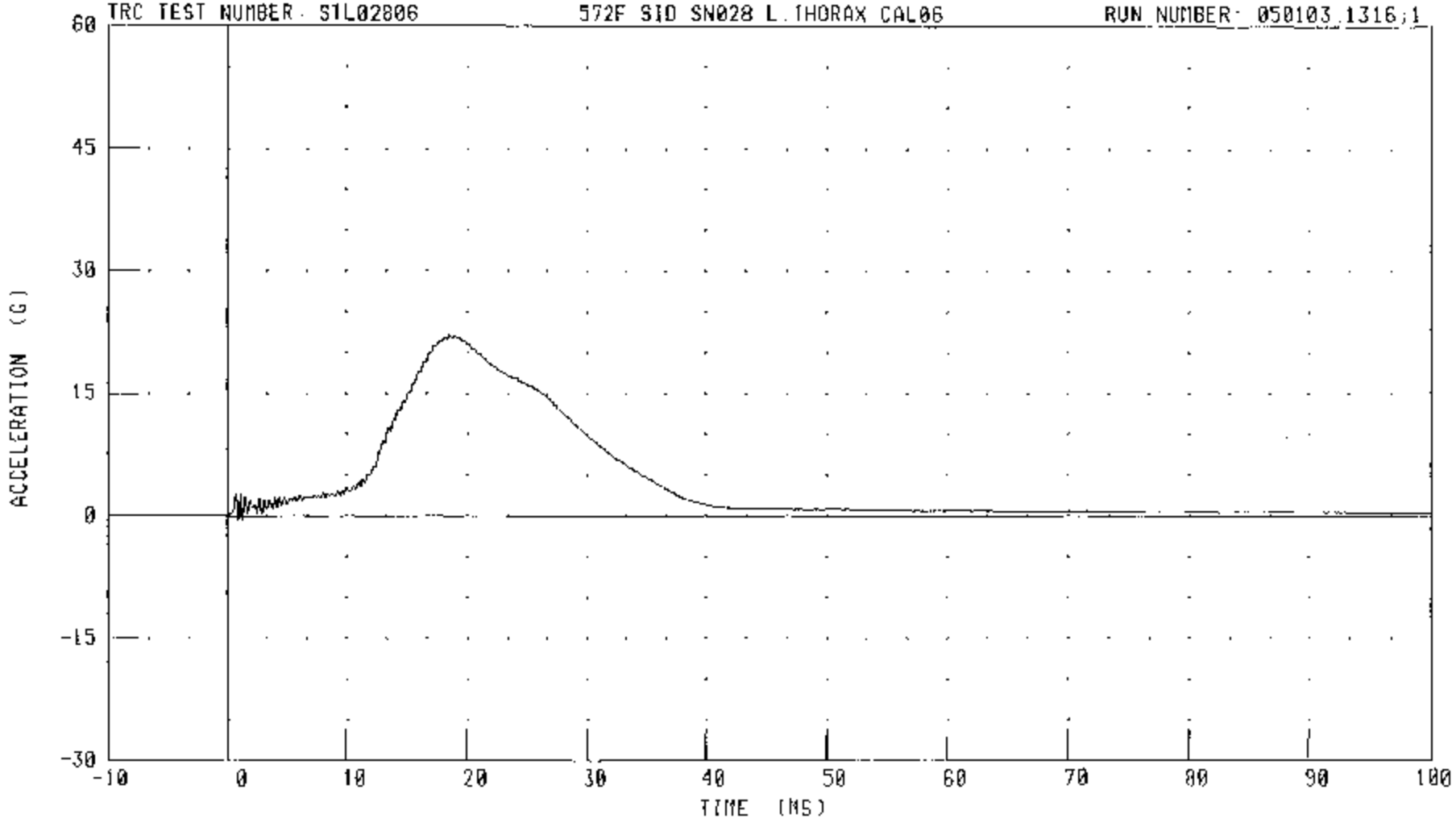
TEST MEETS SPECIFICATIONS

TECHNICIAN  RUN NUMBER: 050903.1441;1

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

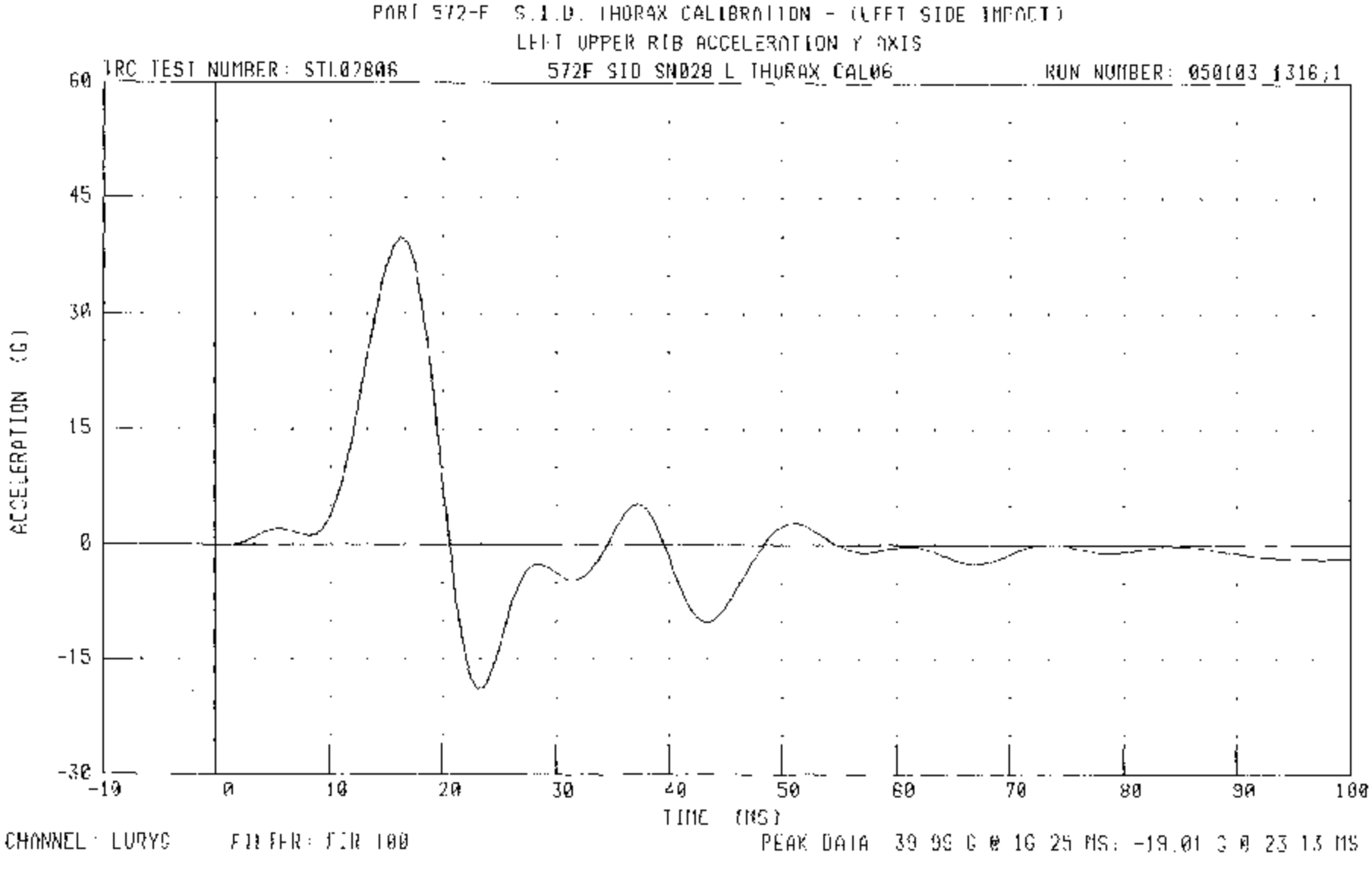
PENDULUM DECELERATION

TRC TEST NUMBER: S1L02806 572F SID SN028 L.THORAX CAL06 RUN NUMBER: 050103.1316;1



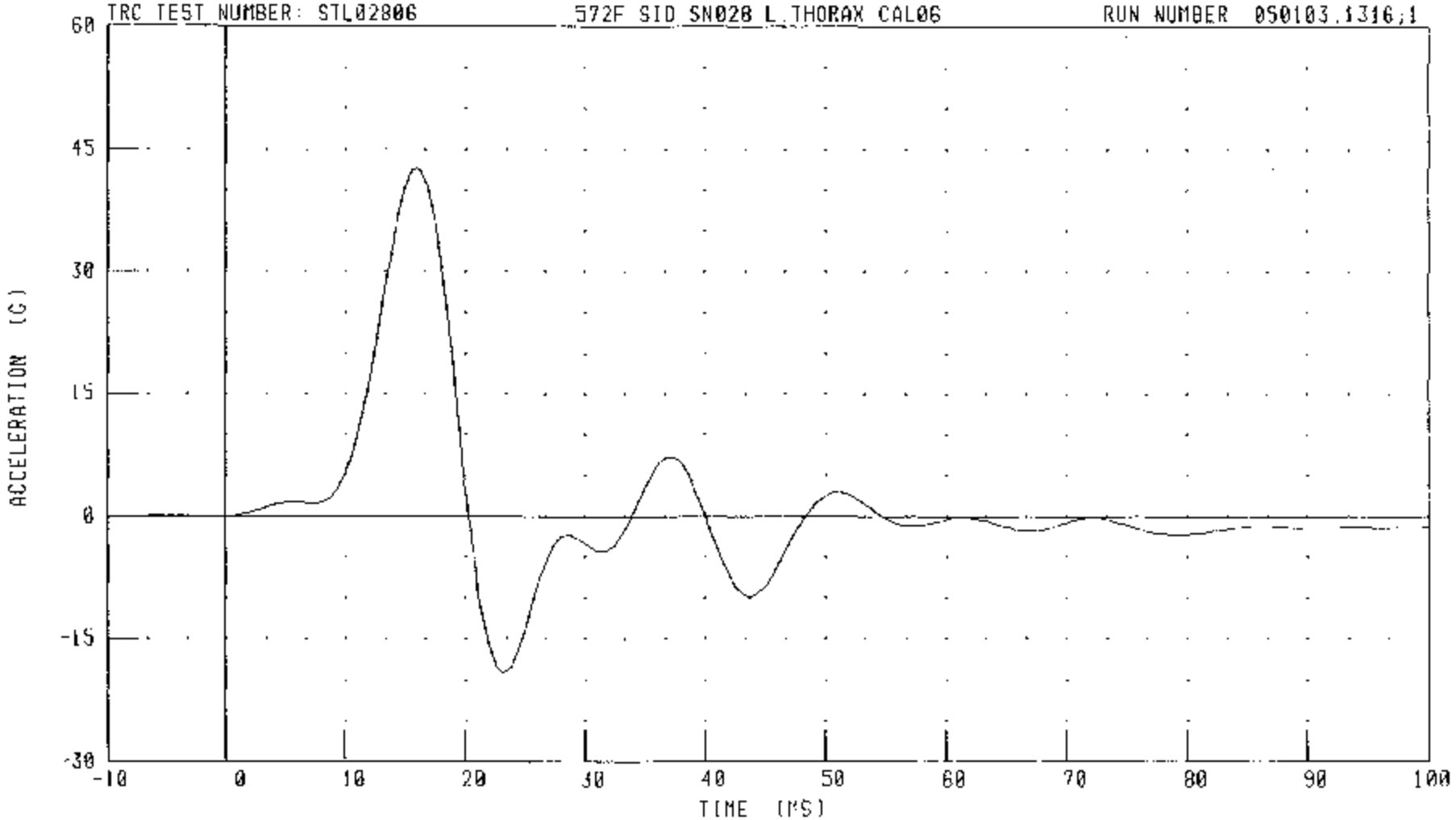
CHANNEL: PENXG FILTER: CFC CLASS 1000 PEAK DATA 22.15 G @ 18.56 MS; -0.79 G @ 0.88 MS

030505-1


PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)
LEFT UPPER RIB ACCELERATION Y AXIS
IRC TEST NUMBER: STI02806
572F SID SN028 L THORAX CAL06
RUN NUMBER: 050103_1316;1
ACCELERATION (G)
60
45
30
15
0
-15
-30
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: LURYC
FILTER: FIR 100
PEAK DATA 39.95 G @ 16.25 MS; -19.01 G @ 23.13 MS

PART 572-F S I D THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT LOWER RIB ACCELERATION Y AXIS



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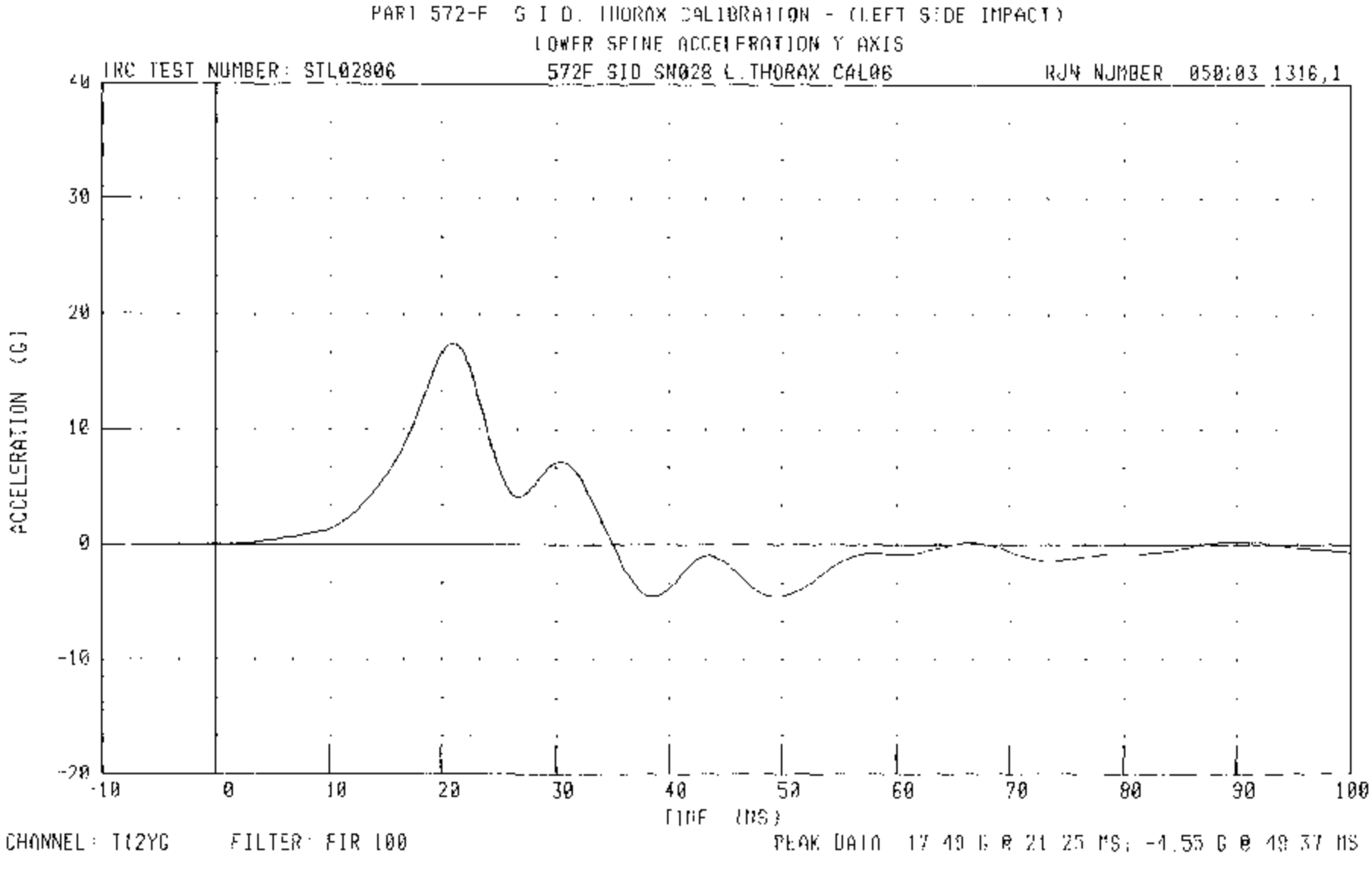

PART 572-F S I D. THORAX CALIBRATION - (LEFT SIDE IMPACT)
LOWER SPINE ACCELERATION Y AXIS
IRC TEST NUMBER: STL02806
572F SID SN028 L.THORAX CAL06
RUN NUMBER 050:03 1316,1
ACCELERATION (G)
40
30
20
10
0
-10
-20
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: T12YC
FILTER: FIR 100
PEAK DATA 17.49 G @ 21.25 MS; -4.55 G @ 49.37 MS

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY 01-MAY-03

TRC INC. 572F SN028 DAMPER TEST CAL06

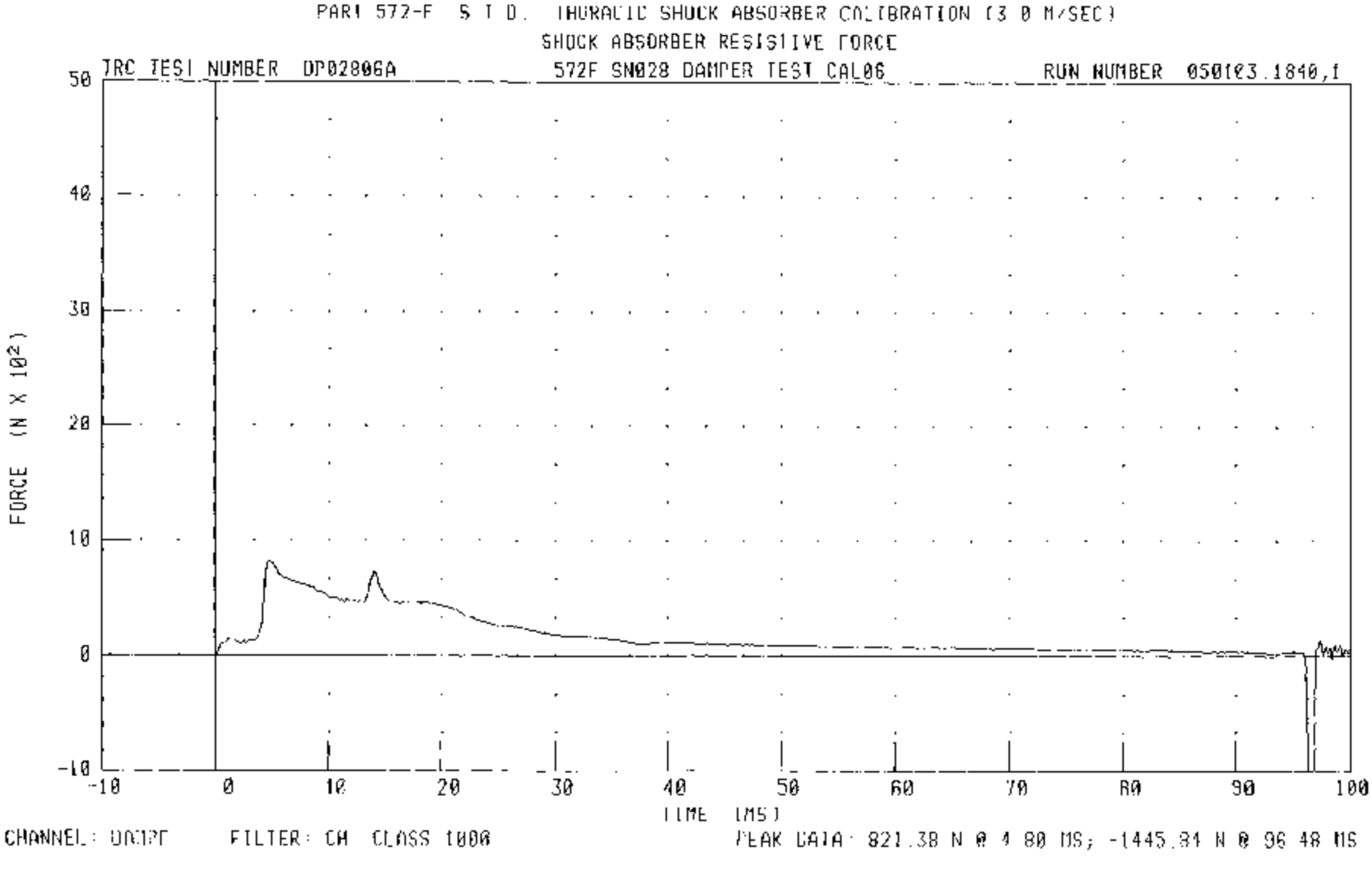
TEST NUMBERS: DP02806A,DP02806B,DP02806C

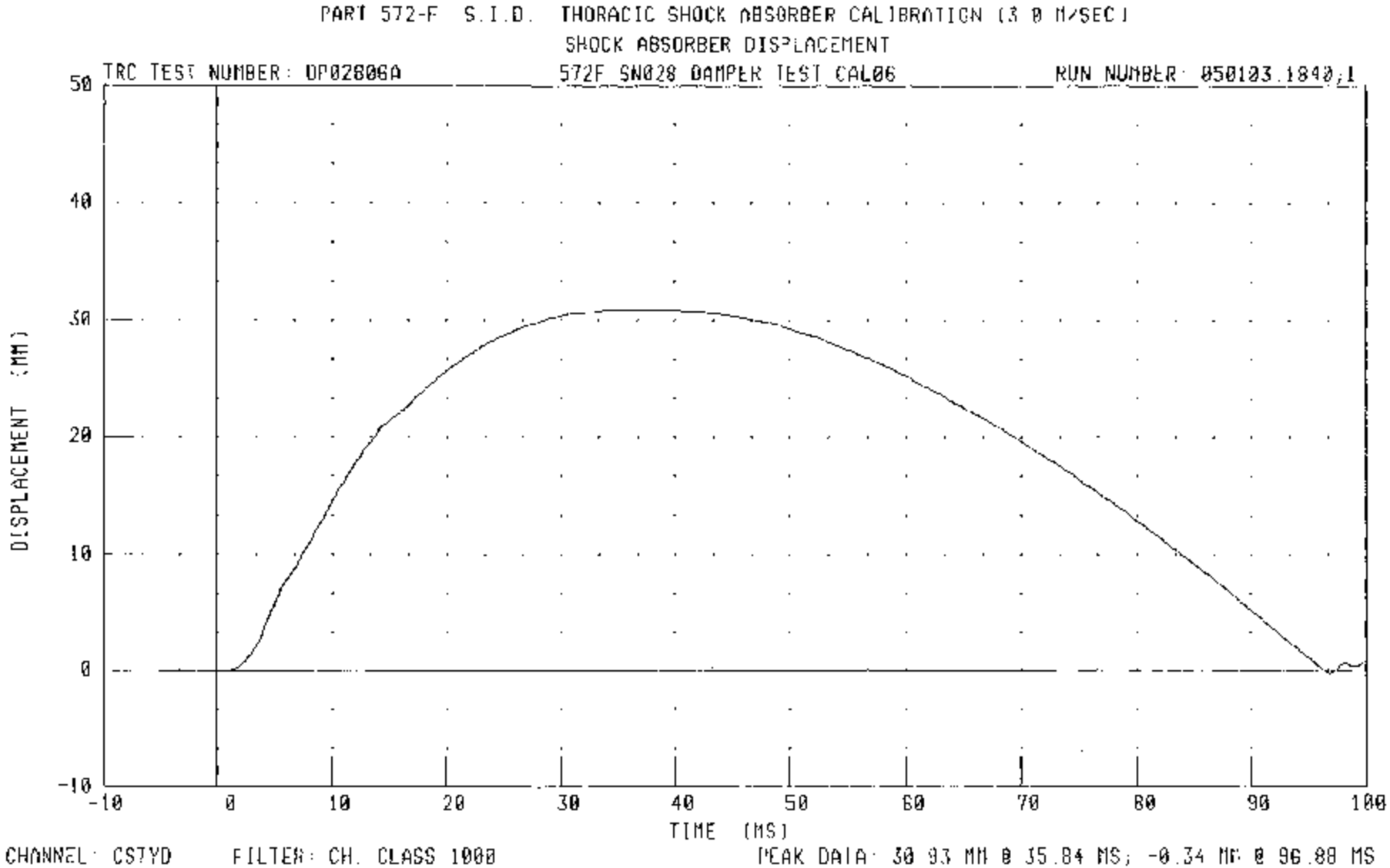
TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY		10 - 70 %	43.0 %
VELOCITY	FORCE	667 - 925 N	821 N
2.71 M/S	DISPLACEMENT	29.7 - 34.5 MM	30.9 MM
VELOCITY	FORCE	1733 - 2100 N	1844 N
4.26 M/S	DISPLACEMENT	31.6 - 37.2 MM	34.4 MM
VELOCITY	FORCE	3703 - 4402 N	3778 N
6.07 M/S	DISPLACEMENT	33.3 - 39.5 MM	36.6 MM

DAMPER SETTING = 5.5

TEST MEETS SPECIFICATIONS

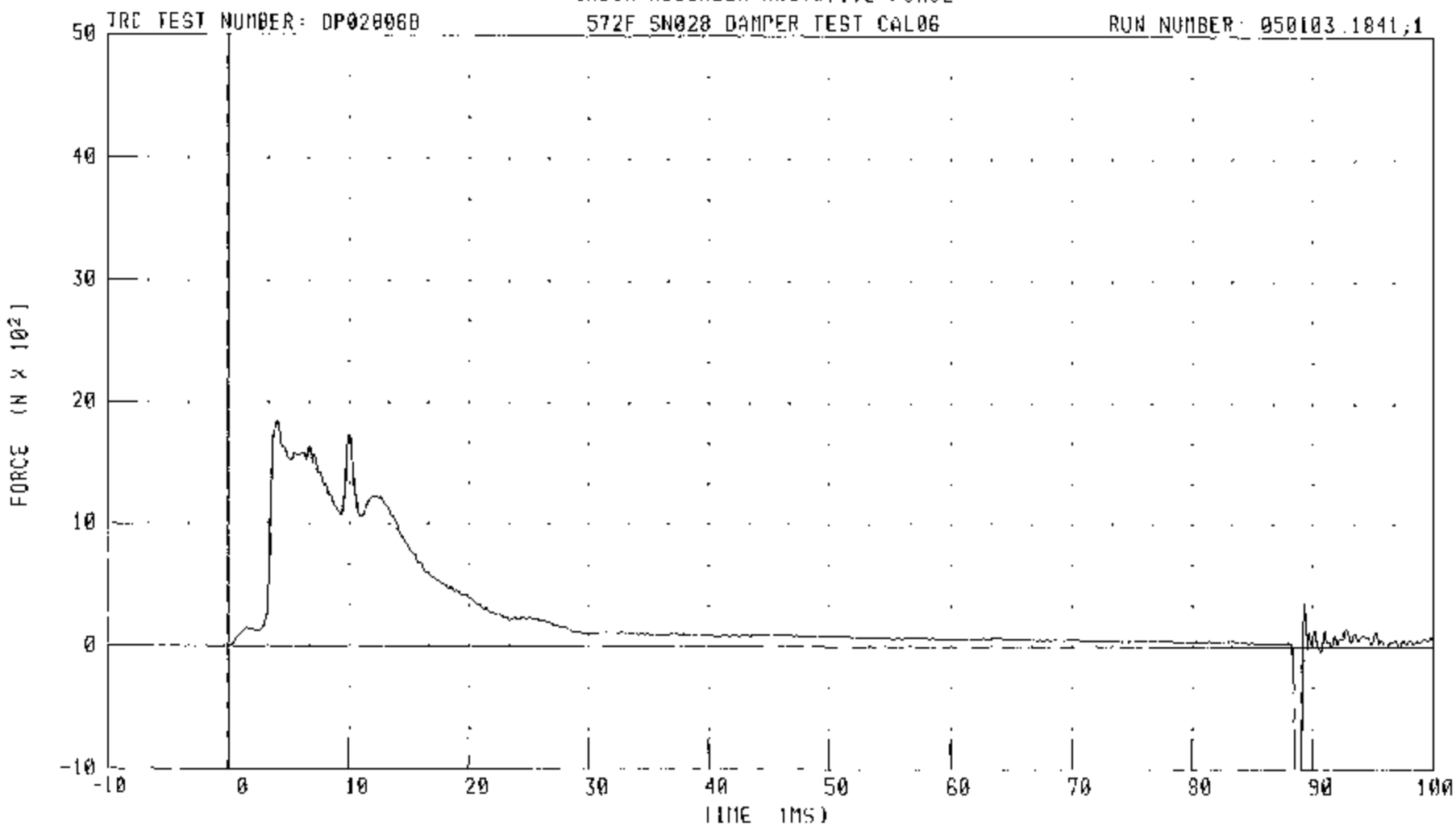
TECHNICIAN _____ RUN NUMBER: 050903.1436;1


PART 572-F S T D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)
SHOCK ABSORBER RESISTIVE FORCE
TRC TEST NUMBER DP02806A
572F SN028 DAMPER TEST CAL06
RUN NUMBER 050103.1840,1
FORCE (N X 10²)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: DACPT
FILTER: CH CLASS 1000
PEAK DATA: 821.38 N @ 4.80 MS; -1445.31 N @ 96.48 MS

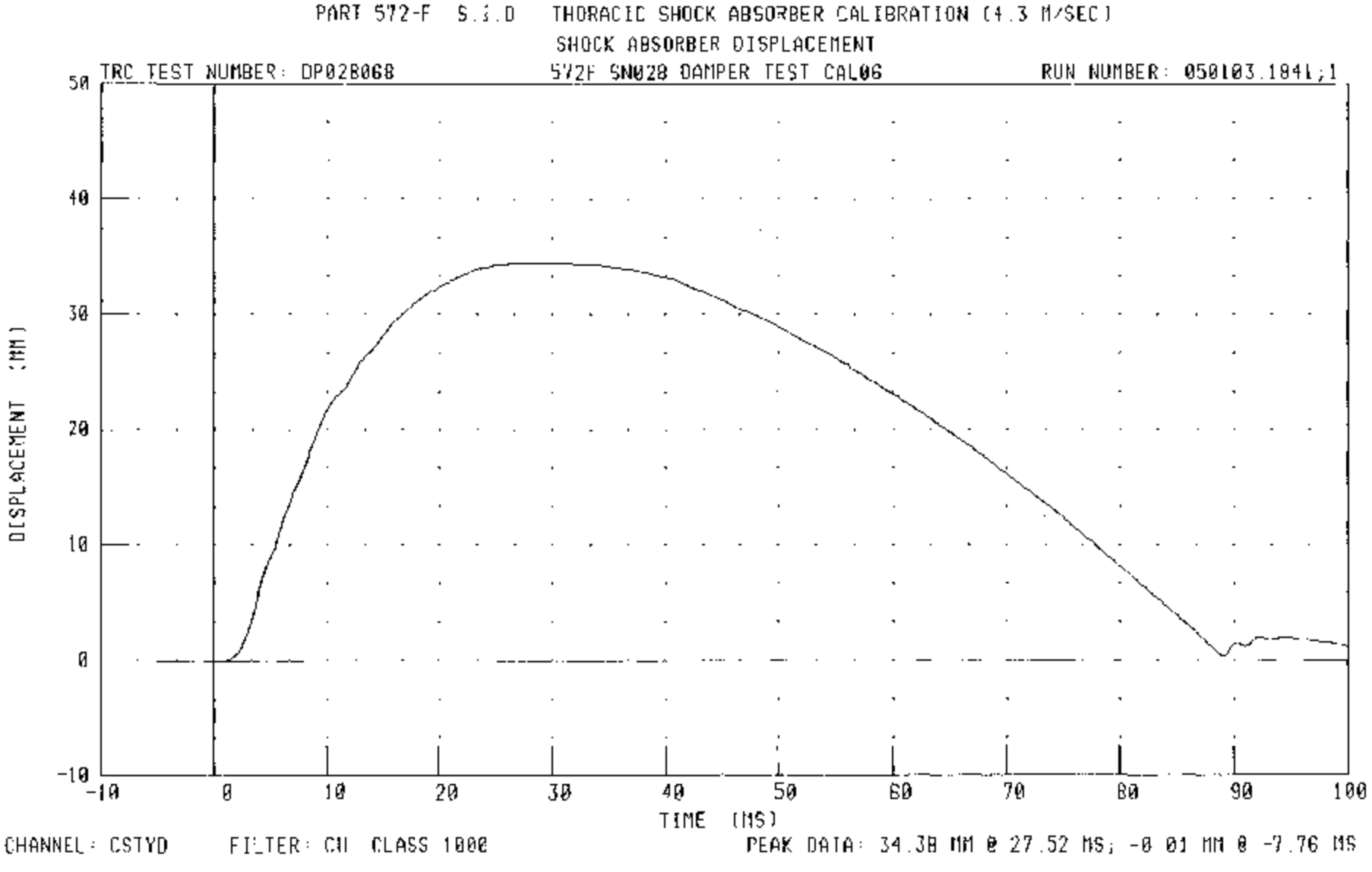

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)
SHOCK ABSORBER DISPLACEMENT
TRC TEST NUMBER: DP02806A
572F SN028 DAMPER TEST CAL06
RUN NUMBER: 050103.1840;1
DISPLACEMENT (MM)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: CSTYD
FILTER: CH. CLASS 1000
PEAK DATA: 30.93 MM @ 35.84 MS; -0.34 MM @ 96.88 MS

PART 572-F S.I.U. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE



CHANNEL: DAMPF FILTER: CH. CLASS 1000 PEAK DATA: 1843.85 N @ 4.16 MS; -2135.87 N @ 80.80 MS


PART 572-F S.I.D THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)
SHOCK ABSORBER DISPLACEMENT
TRC TEST NUMBER: DP02B068
572F SN028 DAMPER TEST CAL06
RUN NUMBER: 050103.1841;1
DISPLACEMENT (MM)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: CSTYD
FILTER: CH CLASS 1000
PEAK DATA: 34.38 MM @ 27.52 MS; -0 01 MM @ -7.76 MS

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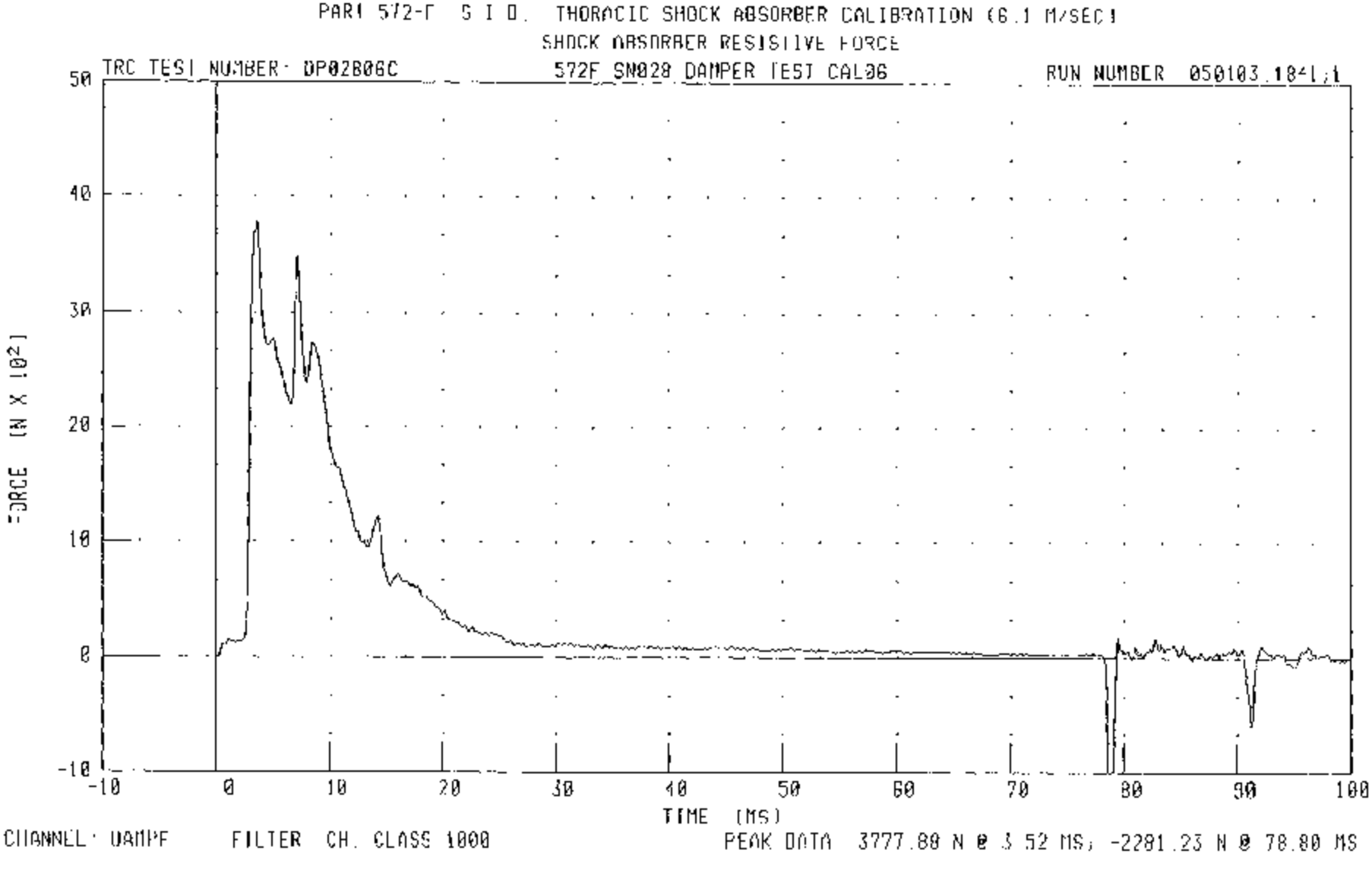
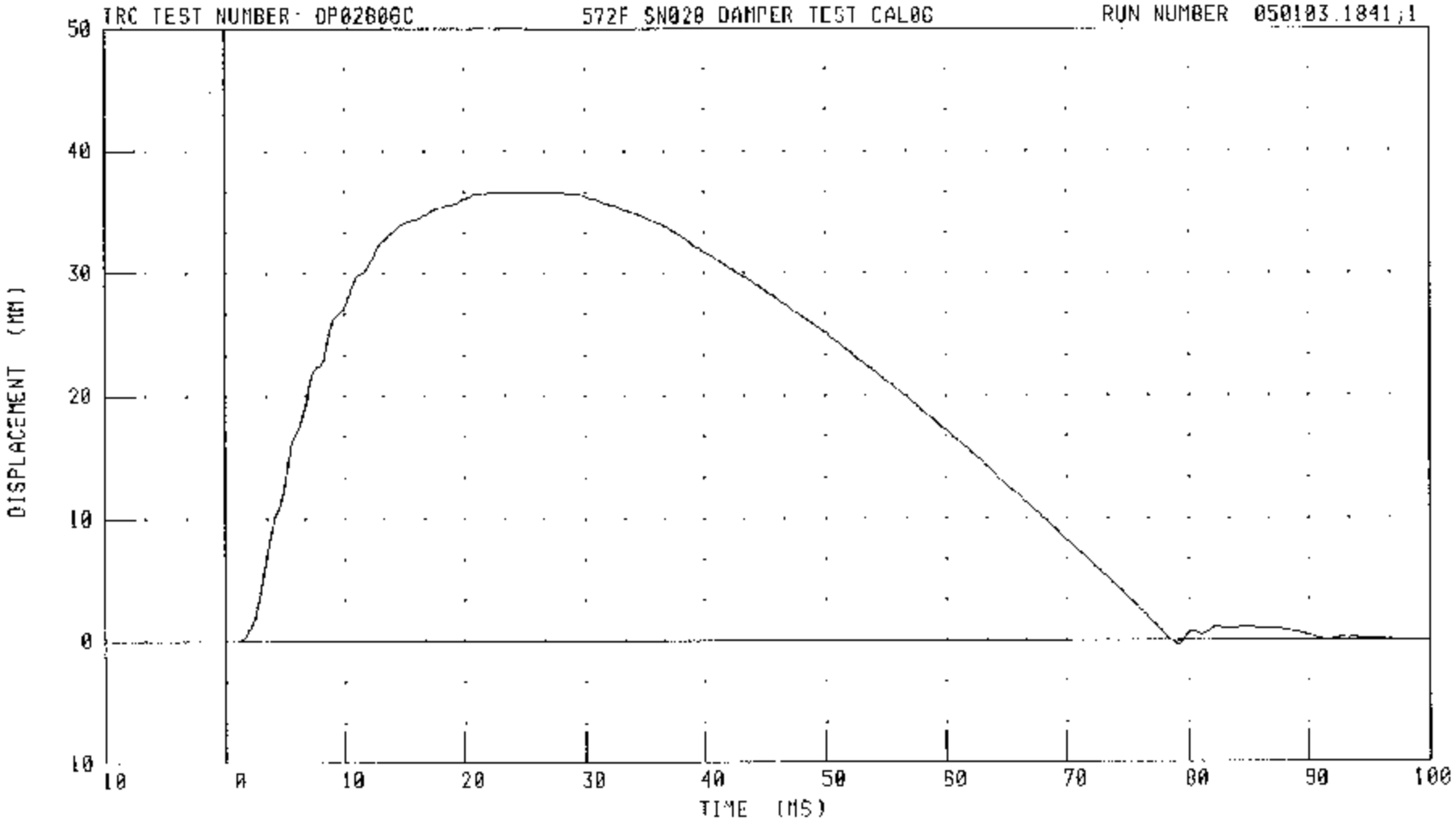

PART 572-F S I D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)
SHOCK ABSORBER RESISTIVE FORCE
TRC TEST NUMBER: DP02B06C
572F SN028 DAMPER TEST CAL06
RUN NUMBER 050103.1841;1
FORCE (N X 10²)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: DAMPF
FILTER CH. CLASS 1000
PEAK DATA 3777.80 N @ 3.52 MS; -2281.23 N @ 78.80 MS

C-63

030505-1

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER DISPLACEMENT



CHANNEL: CSTYD FILTER: CH. CLASS 1000

PEAK DATA: 36.64 MM @ 24.08 MS; -0.35 MM @ 79.12 MS

030505-1

TRANSPORTATION RESEARCH CENTER INC.

LUMBAR FLEXION TEST

SID PART 572B

CAL DATE: 01-May-03

TRC, INC. TEST NO: 028C06LF1 572B SN 028 TORSO FLEX CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.7 °C
RELATIVE HUMIDITY	10 – 70 %	43 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	129.0 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	191.3 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	218.0 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	8 "

TEST MEETS SPECIFICATIONS

TECHNICIAN

Transportation Research Center Inc.

572B Abdomen Compression Test

HIII SID Serial No. 028 Calibration No. 06 - 1

Test Date 05/01/2003

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	43 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.3 - 8.1 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

Approved

05.02.2003 11:02:52 5

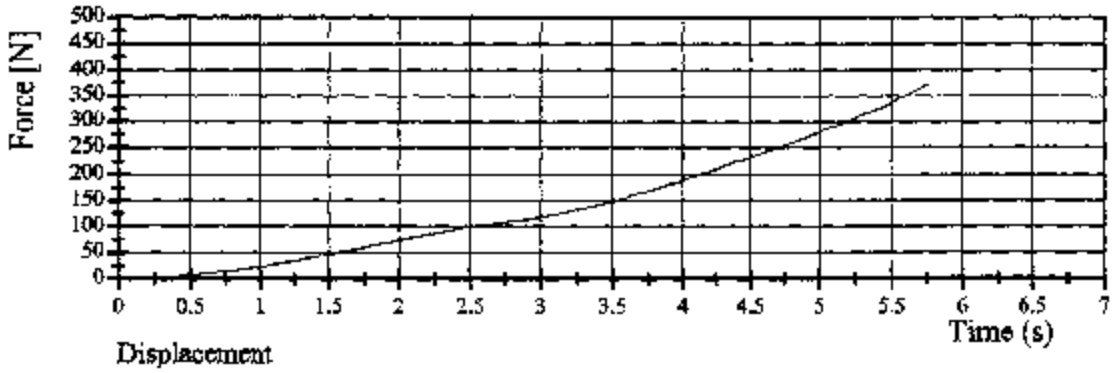
Transportation Research Center Inc.

572B Abdomen Compression Test

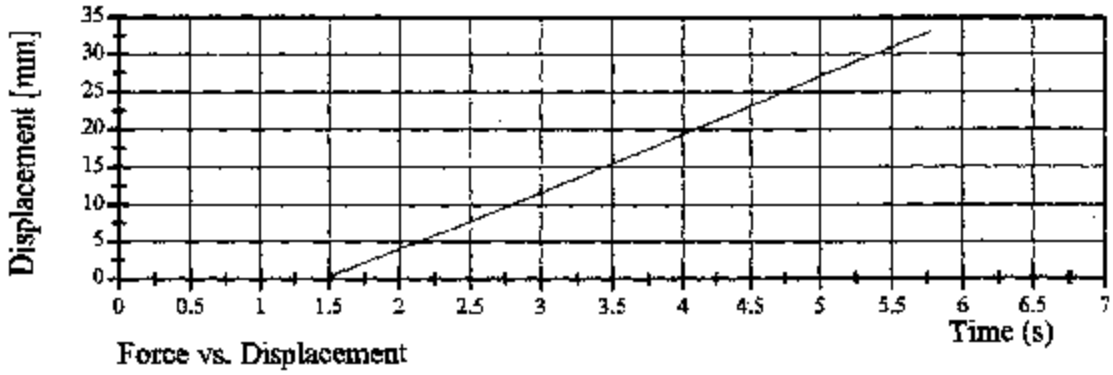
HIII SID Serial No. 028 Calibration No. 06 - 1

Test Date 05/01/2003

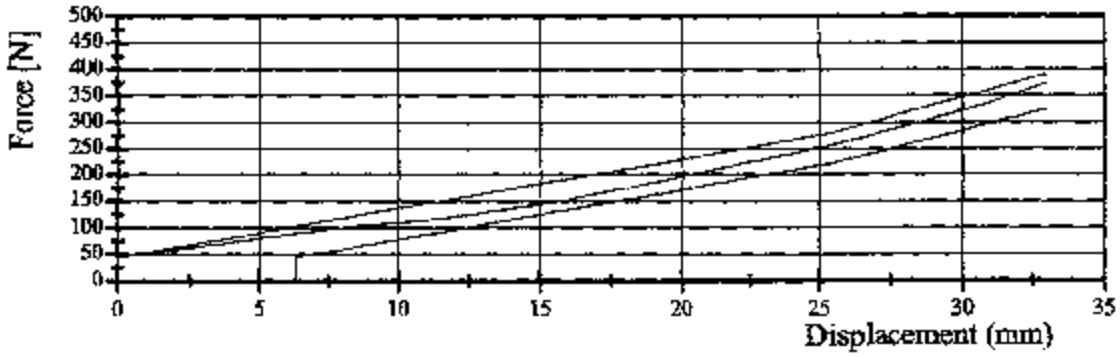
Force



Displacement



Force vs. Displacement



05.02.2003 11:02:38 5

TRANSPORTATION RESEARCH CENTER INC.

LATERAL PELVIS IMPACT TEST

SIDE IMPACT DUMMY 01-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: SPL02806 572F SN028 LEFT PELVIS CAL06

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	43.0 %
PENDULUM VELOCITY	4.21 - 4.33 M/S	4.29 M/S
PEAK PELVIC ACCELERATION	40 - 60 G	47.6 G
TIME ABOVE 20 G LEVEL	3 - 7 MS	6.3 MS
IS ACCELERATION CURVE UNIMODAL?	YES	YES

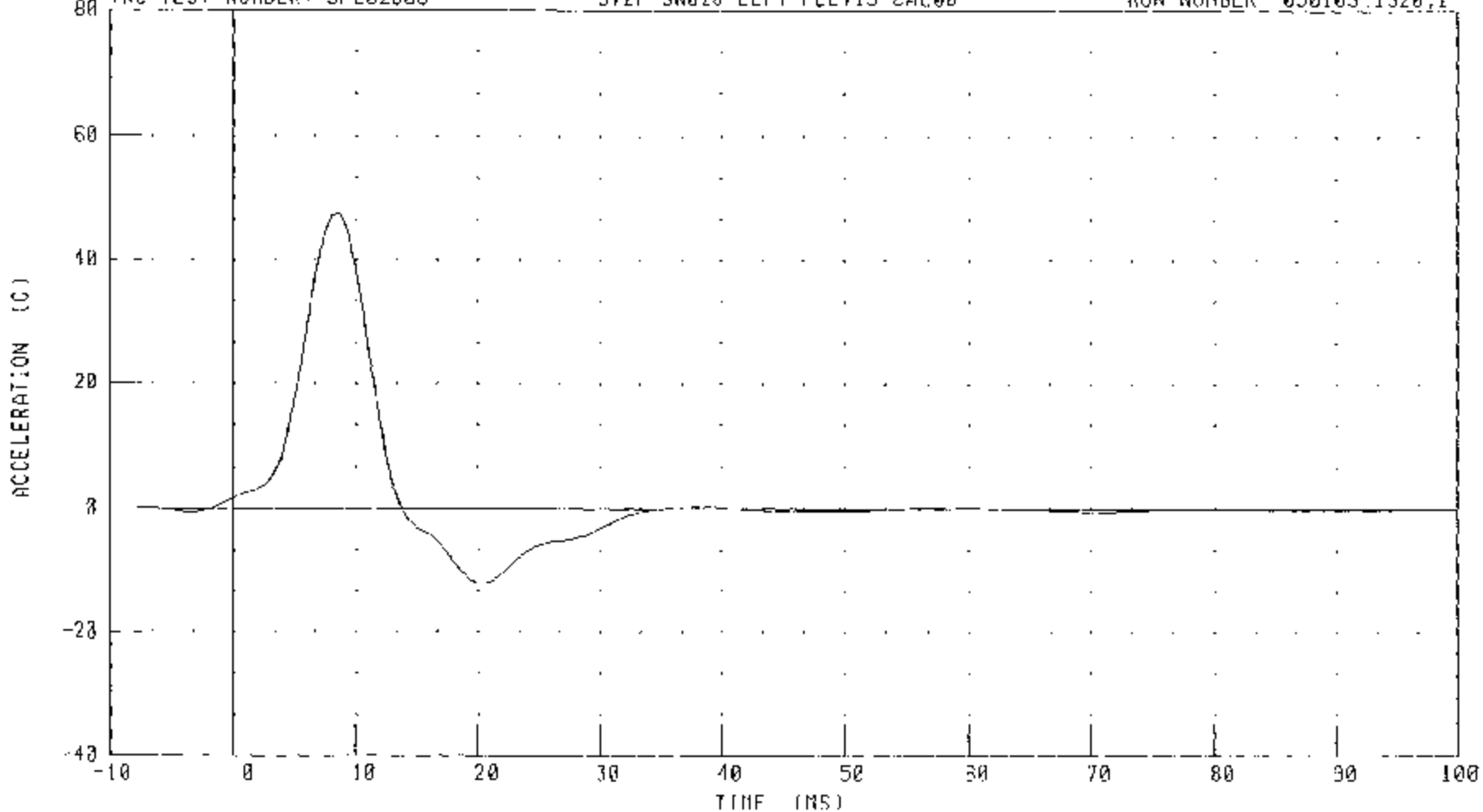
TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 050903.1439;1

PART 572-F S / O PELVIS CALIBRATION - (LEFT SIDE IMPACT)

PELVIS ACCELERATION Y AXIS

IRC TEST NUMBER: SPL02806 572F SN020 LEFT PELVIS CAL06 RUN NUMBER 050103_1320;1



CHANNEL PEVYG FILTER FIR 180 PEAK DATA 47.55 G @ 8.75 MS; -12.07 G @ 20.00 MS

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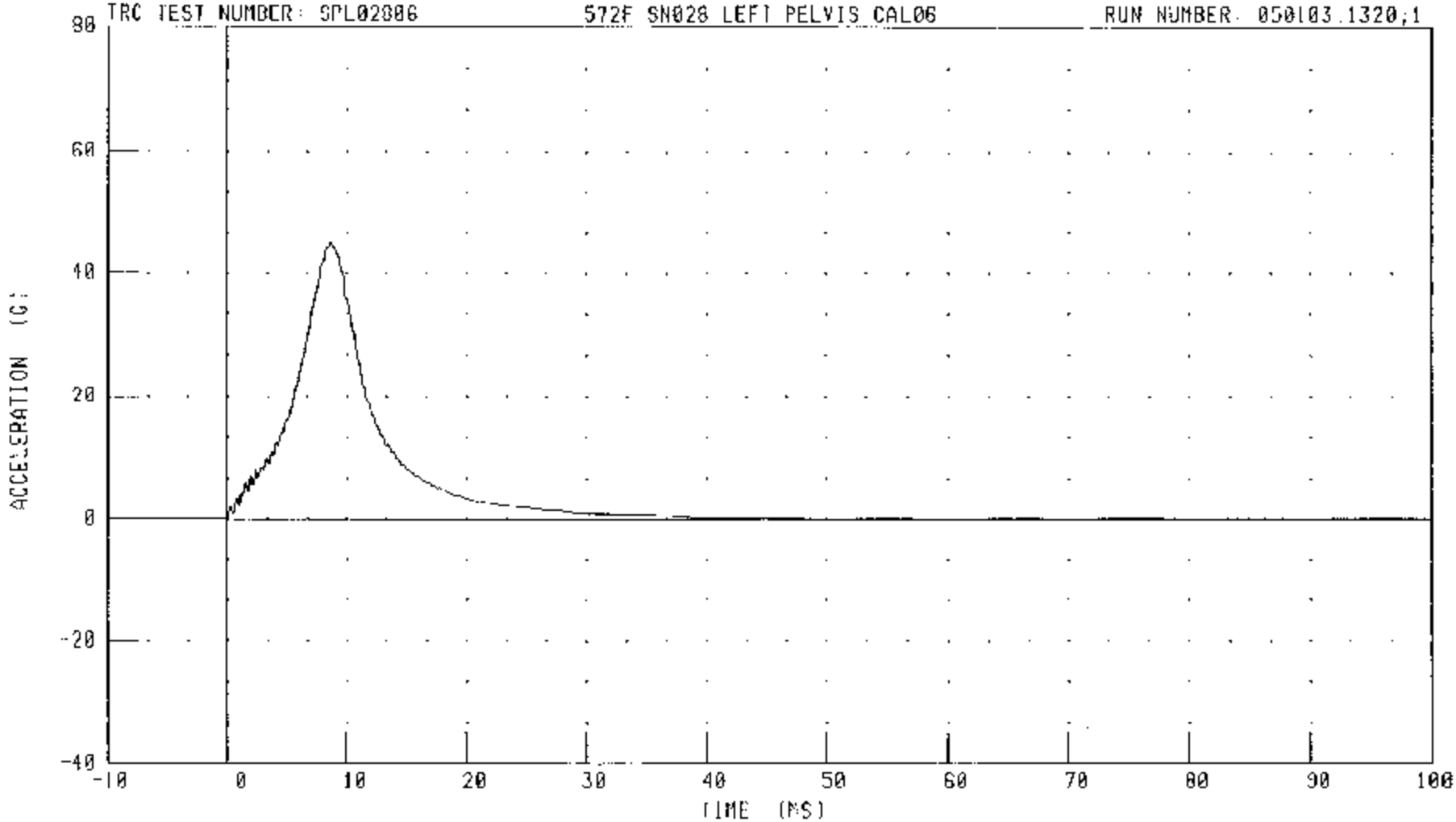
030505-1

PART 572-F S.I.D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)

PENDULUM DECELERATION



030505-1

Calibration Test Results

Post-Test

SID: 066

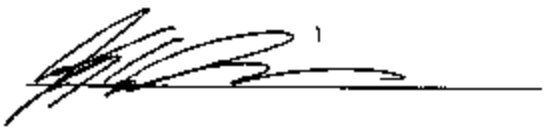
Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber was not tested at this time.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

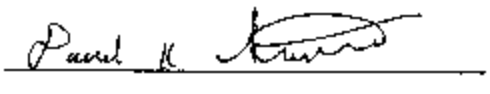
Transportation Research Center Inc.
572F SID Dummy
External Dimensions
Serial No. 066 Calibration No. 09

Test Parameter	Dimension	Specification			Results		Pass
Seated Height	SH	889.0	- 909.3	mm	901	mm	Yes
Rib Height	RH	501.7	- 520.7	mm	505	mm	Yes
Hip Pivot Height	HP	99.1 REF		mm	99.1	mm	
Rib From Backline	RD	228.6	- 241.3	mm	239	mm	Yes
Knee Pivot From Backline	KH	510.5	- 525.8	mm	520	mm	Yes
Knee Pivot From Floor	KV	490.2	- 505.5	mm	498	mm	Yes
Hip Width	HW	355.6	- 391.2	mm	388	mm	Yes
Top Rib Width From C\L	RW-1	165.1	- 180.3	mm	169	mm	Yes
Bottom Rib Width From C\L	RW-2	165.1	- 180.3	mm	170	mm	Yes
Difference Between Top & Bottom Rib Width from C\L			<= 2.5	mm	1.0	mm	Yes

Technician



Approved



TRC

TRANSPORTATION RESEARCH CENTER INC.

LATERAL HEAD DROP TEST

SID/HIII DUMMY 15-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO. HDL06609 572M SID/HIII SN066 HEAD CAL09

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.6 deg. C	21.67 deg. C
RELATIVE HUMIDITY	10 - 70 %	48.00 %
PEAK RESULTANT ACCELERATION	120 - 150 G	131.58 G
PEAK LONGITUDINAL ACCELERATION	15 G MAX	-11.81 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

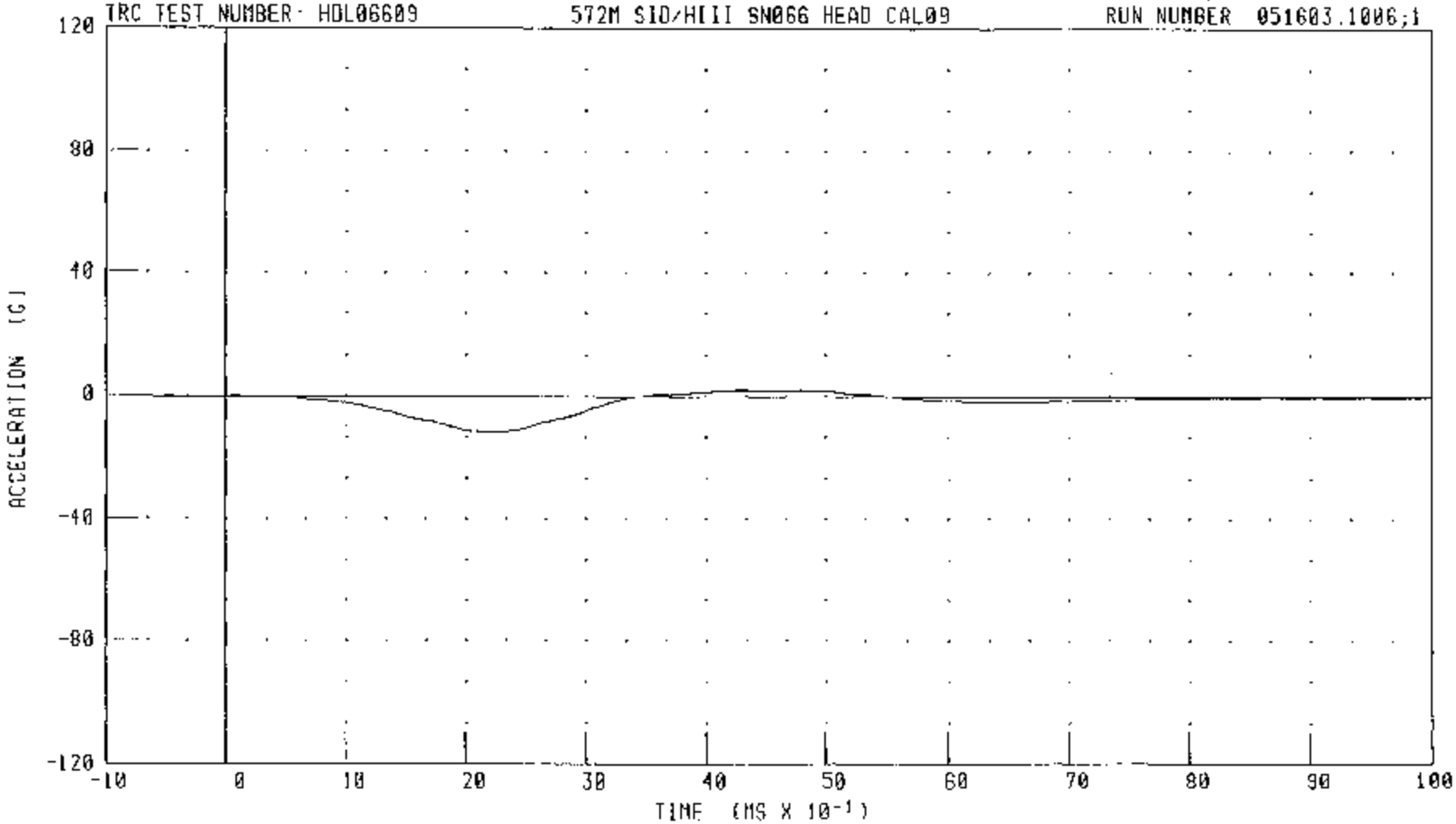
TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 051603.1003;1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION X AXIS

TRC TEST NUMBER: HDL06609 572M SID/HIII SN066 HEAD CAL09 RUN NUMBER 051603.1006;1

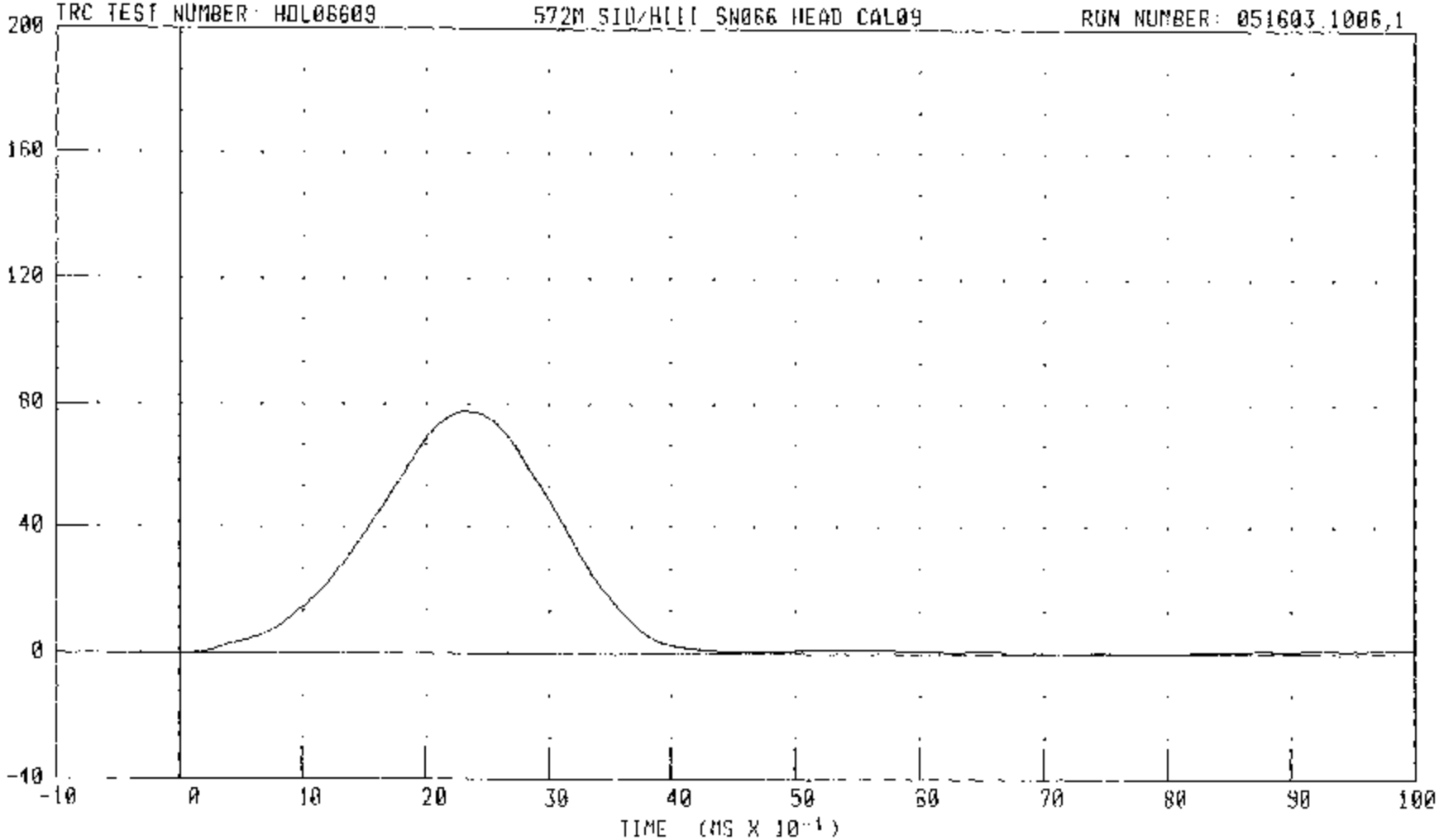


CHANNEL: HEDXG FILTER: CH. CLASS 1000 PEAK DATA: 7.02 G @ 4.32 MS; -11.81 G @ 2.21 MS

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER: HDL06609 572M SID/HIII SN066 HEAD CAL09 RUN NUMBER: 051603.1006,1

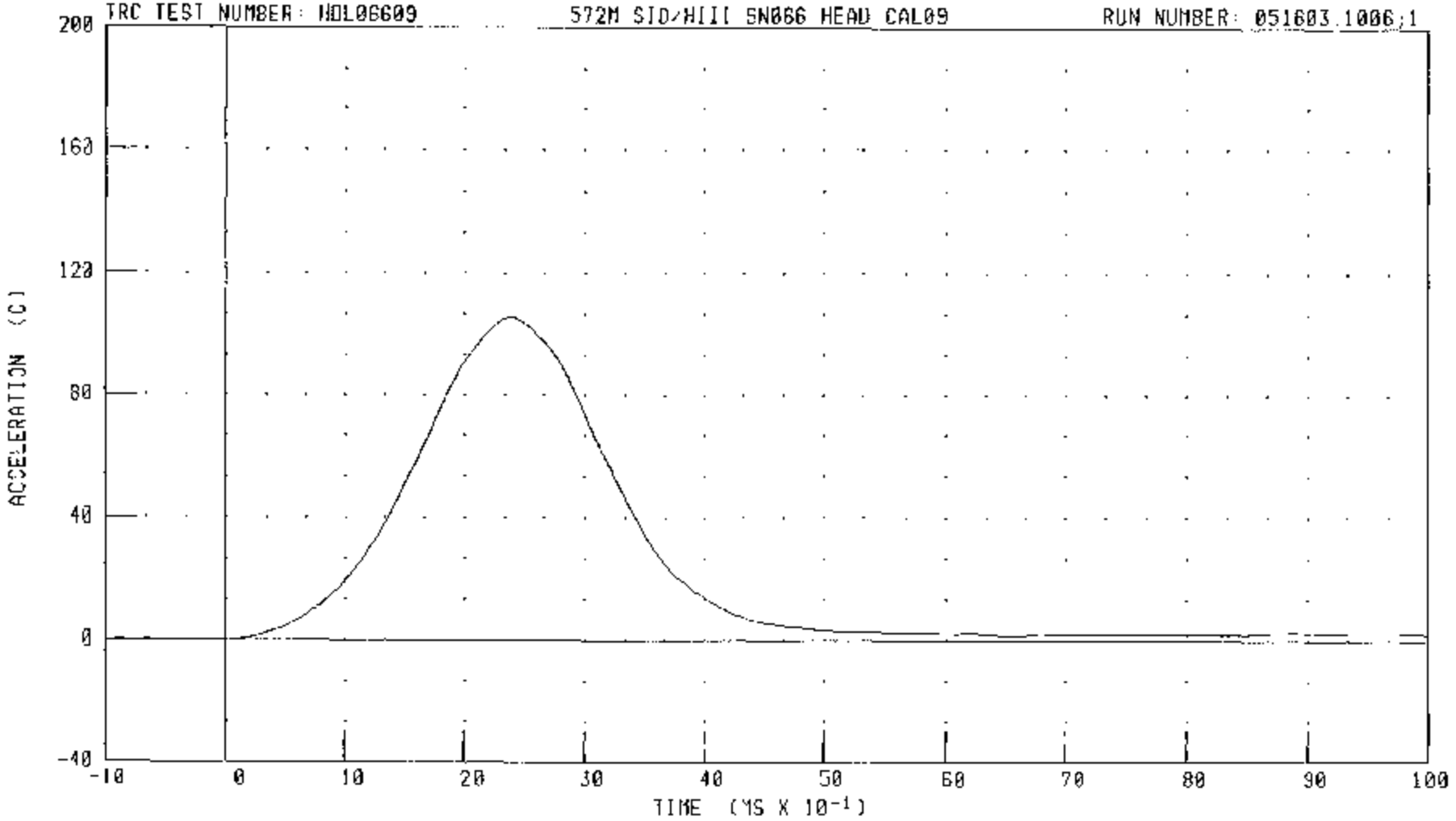


CHANNEL: HEDYG FILTER CH CLASS 1000 PEAK DATA: 77.70 G @ 2.32 MS; -0.24 G @ 7.76 MS

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION Z AXIS

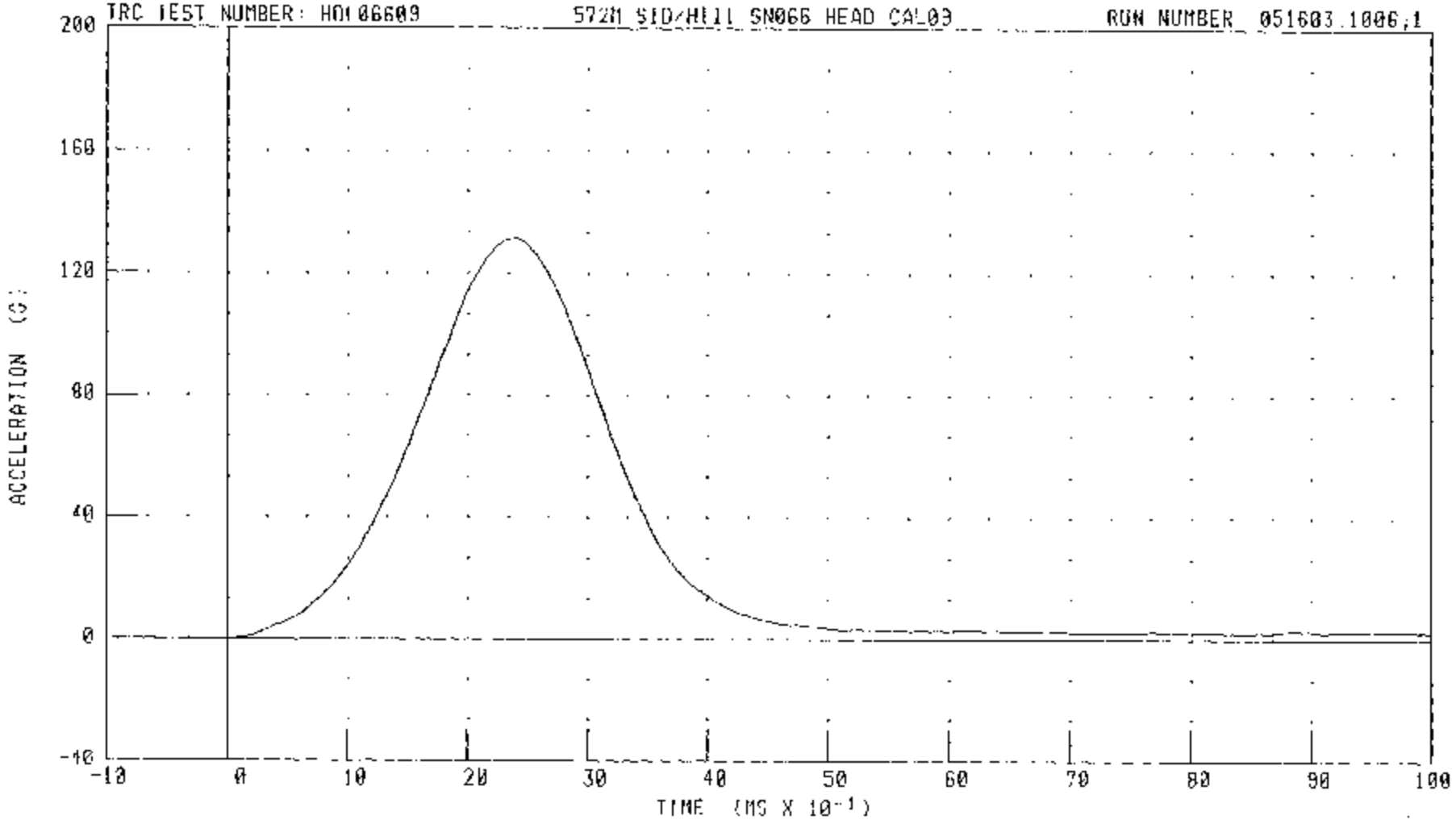
TRC TEST NUMBER: NDL06609 572M SID/HIII SN066 HEAD CAL09 RUN NUMBER: 051603.1006;1



CHANNEL: HEDZG FILTER: CH CLASS 1000 PEAK DATA: 105.86 G @ 2.40 MS; -0.10 G @ -0.32 MS

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD RESULTANT ACCELERATION



CHANNEL: HEDRC FILTER CN CLASS 1000

PEAK DATA: 131.58 G @ 2.10 MS; 0.03 G @ -0.96 MS

030505-1

TRANSPORTATION RESEARCH CENTER INC.

LATERAL NECK TEST

SID/HIII DUMMY 15-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO. NFL06609 572M SID/HIII SN066 NECK CAL09

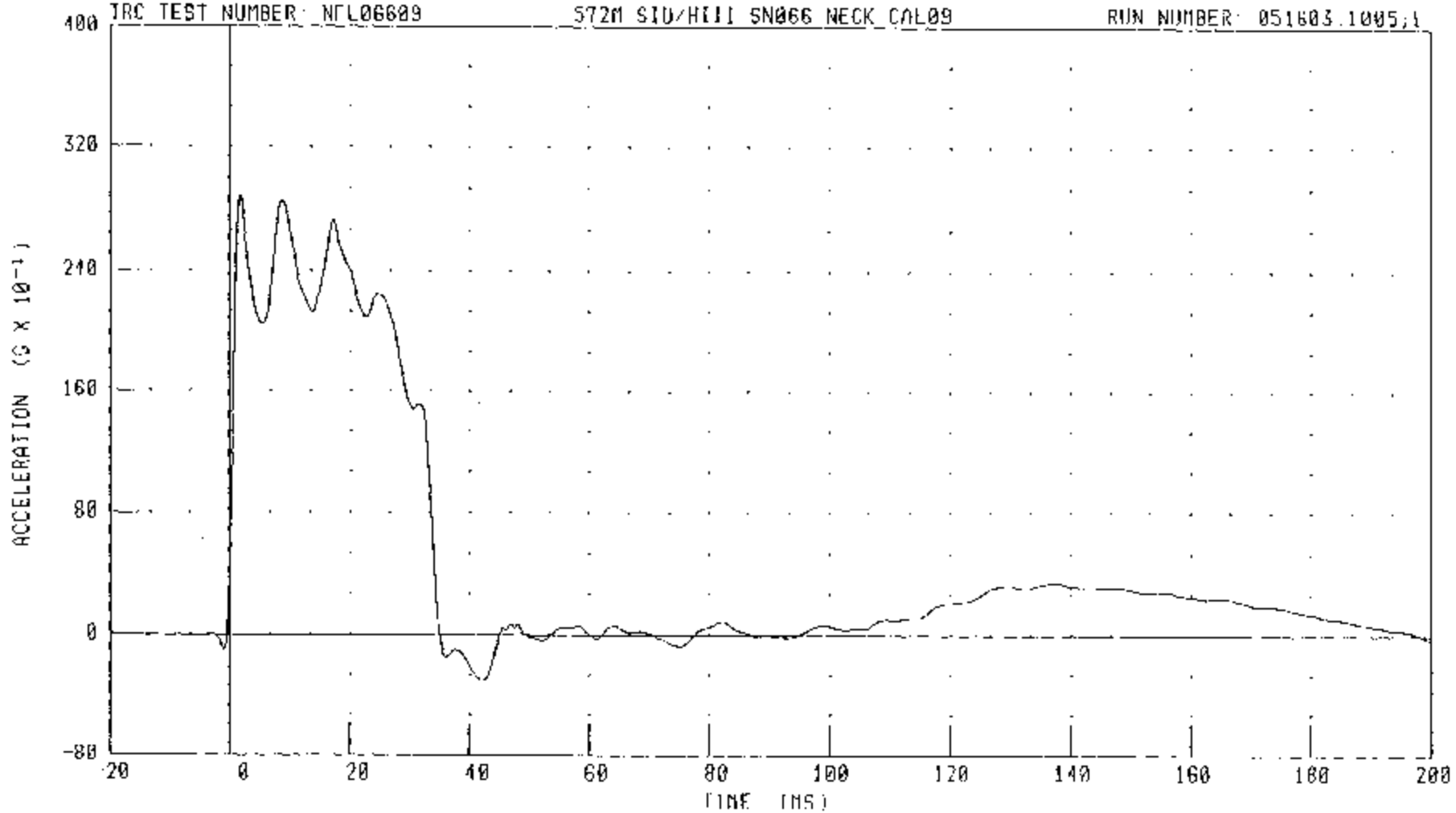
TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 deg. C	21.67 deg. C
RELATIVE HUMIDITY		10 - 70 %	47.00 %
IMPACT VELOCITY		6.89 - 7.13 M/S	6.99 M/S
INTEGRATED VELOCITY	10 MS	1.96 - 2.55 M/S	2.32 M/S
	20 MS	4.12 - 5.10 M/S	4.69 M/S
	30 MS	5.73 - 7.01 M/S	6.72 M/S
	40 - 70 MS	6.27 - 7.64 M/S	7.10- 7.21 M/S
MAXIMUM MIDSAGGITAL PLANE ROTATION		66 - 82 deg.	70.26 deg.
ROTATION ANGLE DECAY TIME FROM PEAK TO ZERO		58 - 67 MS	59.20 MS
MAXIMUM MOMENT ABOUT OCCIPITAL CONDYLE		73 - 88 NM	83.58 NM
POSITIVE MOMENT DECAY TIME FROM PEAK TO ZERO		49 - 64 MS	53.76 MS
TIME OF MAXIMUM ROTATION AFTER MAXIMUM MOMENT		2 - 16 MS	7.68 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 051603.1004;1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

PENDULUM DECELERATION



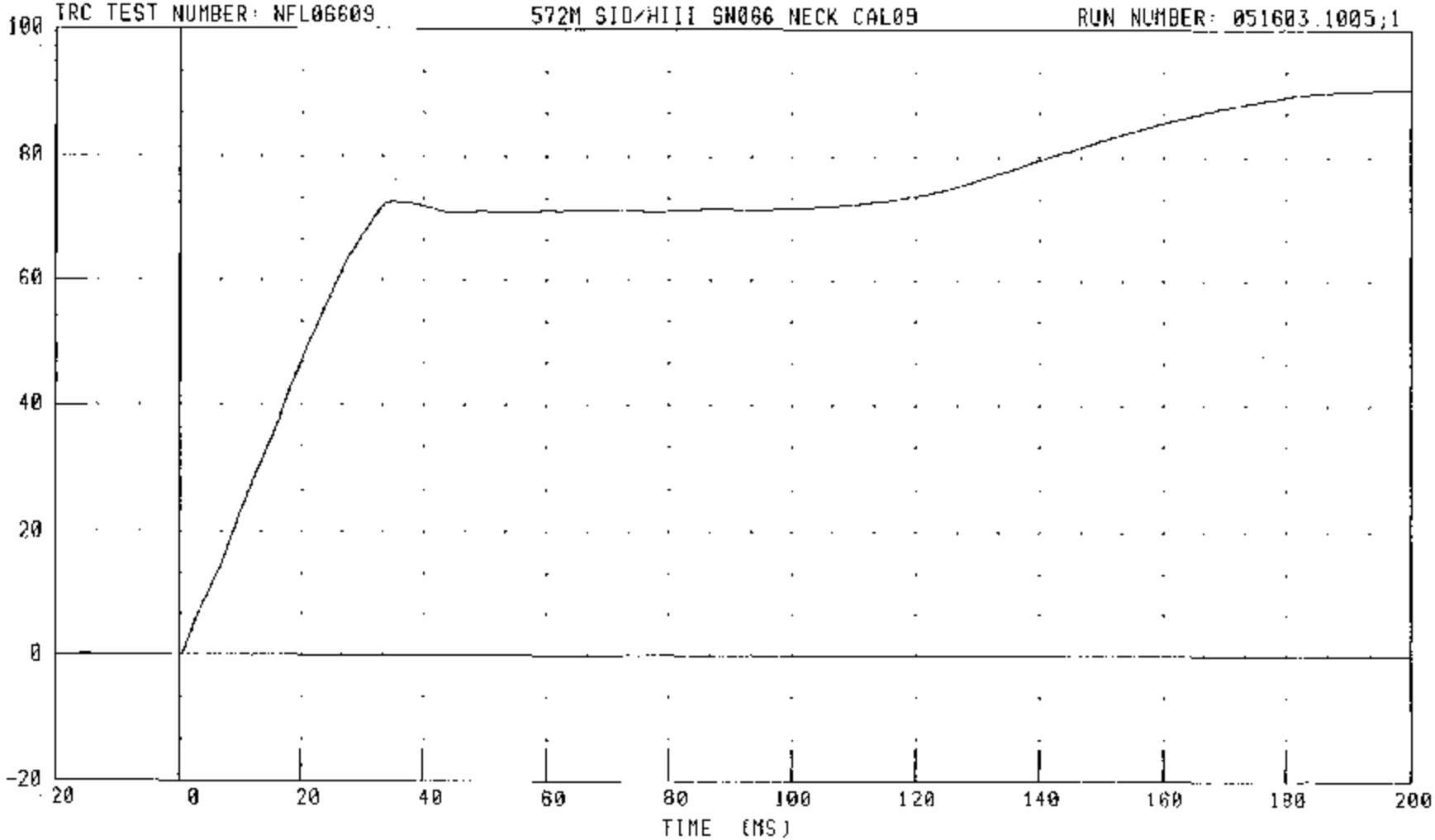
CHANNEL: PENXG FILTER: CH CLASS 180 PEAK DATA 28.83 G @ 1.76 MS; -3.04 G @ 42.00 MS

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

INTEGRATED PENDULUM VELOCITY

TRC TEST NUMBER: NFL06609 572M SID/HIII SN066 NECK CAL09 RUN NUMBER: 051603.1005;1



CHANNEL: PENXVI FILTER: CH CLASS 180

PEAK DATA: 9.06 M/S @ 198.00 MS; 0.01 M/S @ -0.40 MS

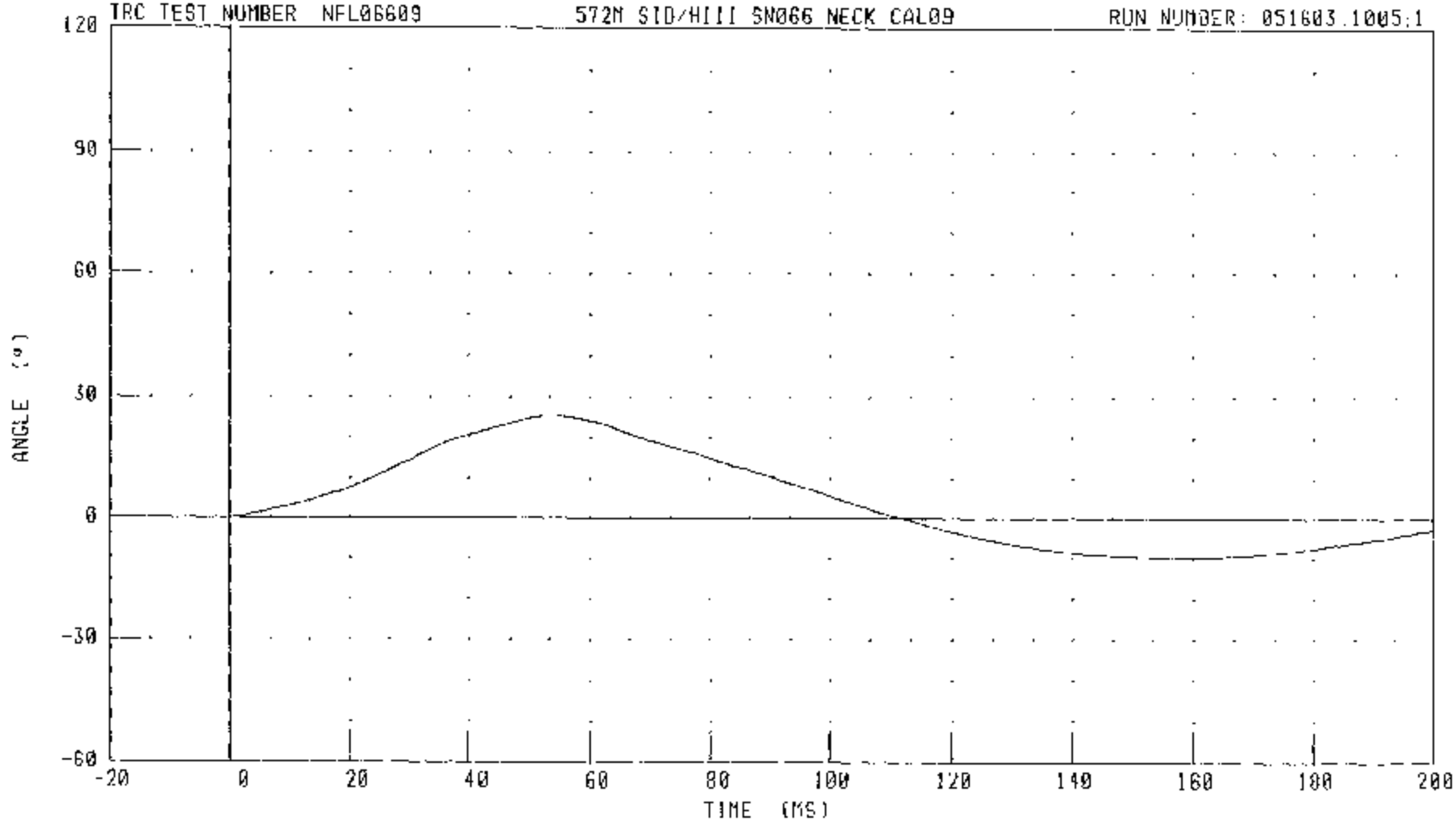
C-80

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER NFL06609 572M SID/HIII SN066 NECK CAL09 RUN NUMBER: 051603.1005:1



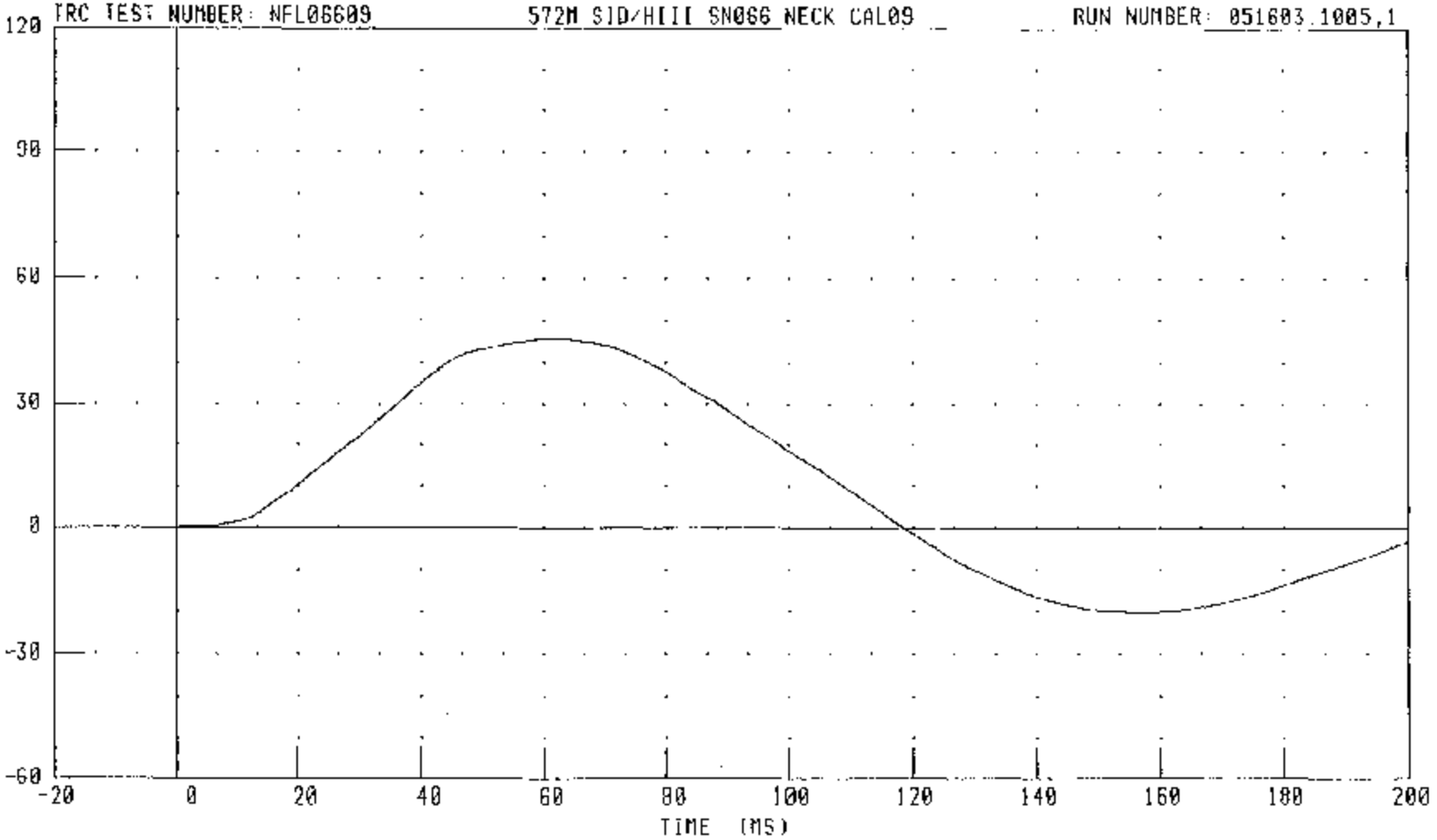
CHANNEL: BETA FILTER: CH CLASS 60 PEAK DATA 25.35 ° @ 53.84 MS; -9.74 ° @ 159.12 MS

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

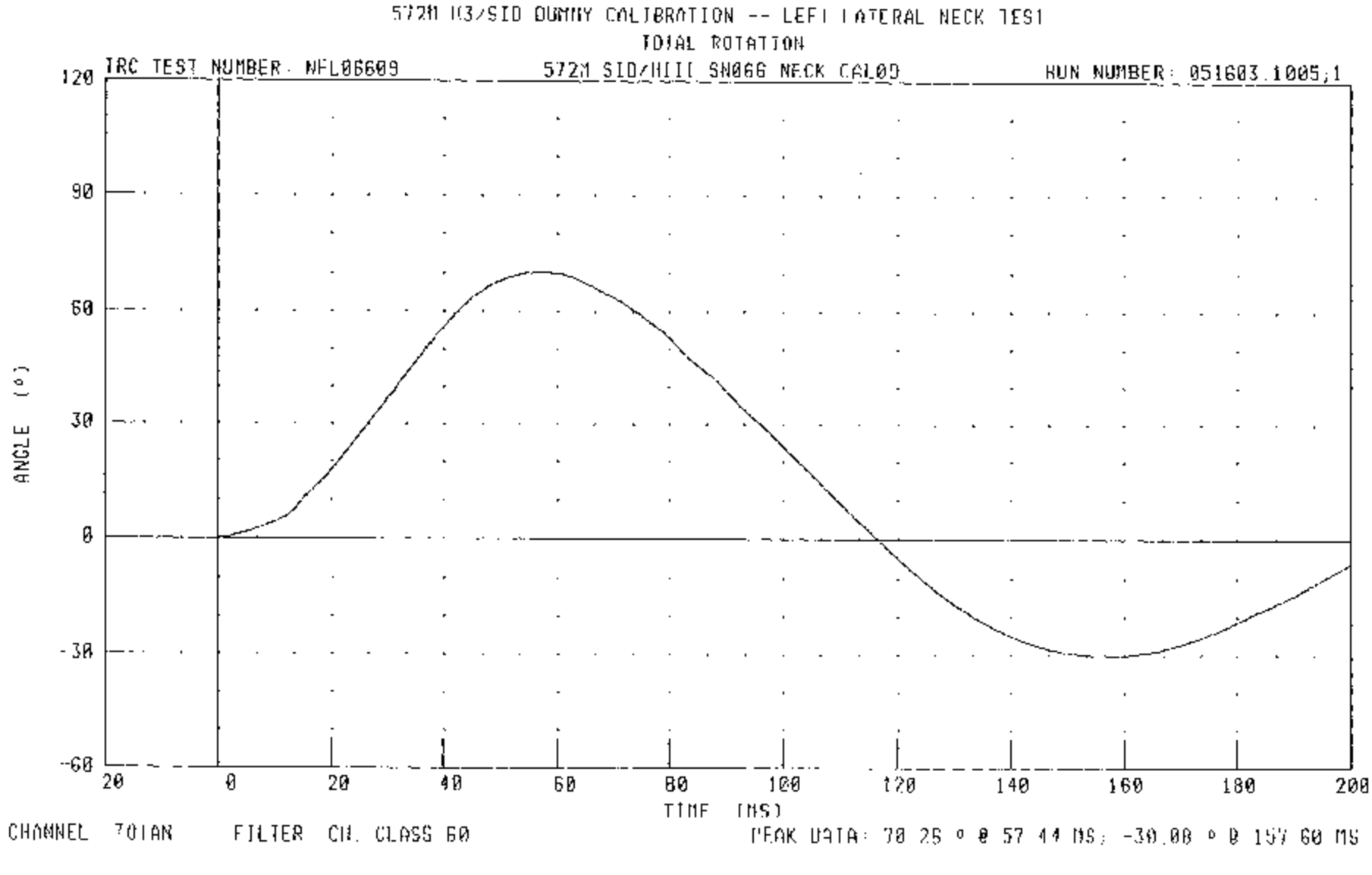
ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: NFL06609 572M SID/HIII SN066 NECK CAL09 RUN NUMBER: 051603.1005,1



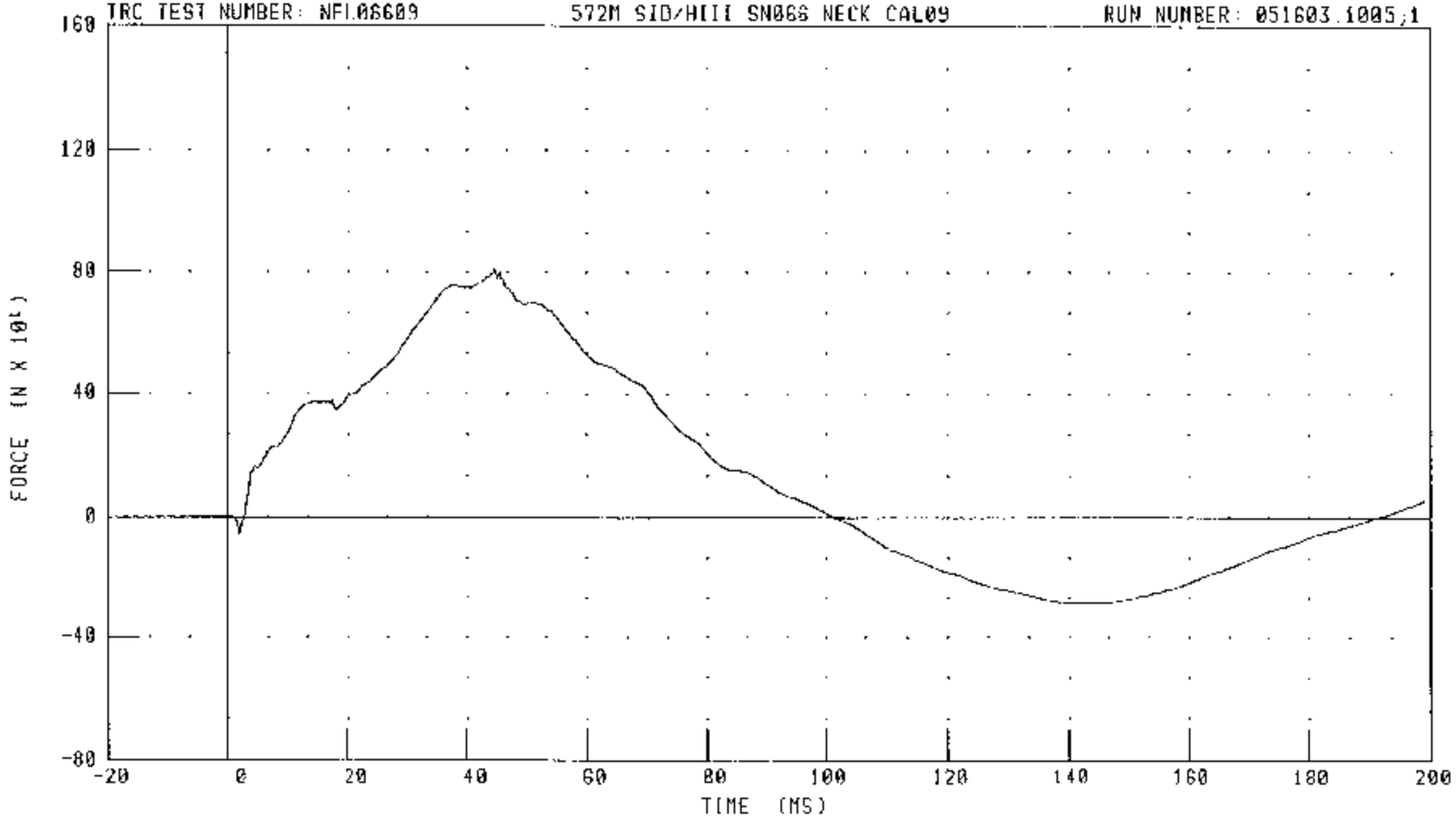
CHANNEL: THETA FILTER: CFC CLASS 60 PEAK DATA: 45.68 ° @ 61.52 MS; -20.35 ° @ 157.28 MS

030505-1


572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
TORSAL ROTATION
IRC TEST NUMBER: NFL06609
572M SID/HIII SN066 NECK CAL00
RUN NUMBER: 051603.1005;1
120
90
60
30
0
-30
-60
ANGLE (°)
20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL ID: TORSAN
FILTER CH. CLASS 60
PEAK DATA: 78.25 ° @ 57.44 MS; -30.00 ° @ 157.60 MS

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

NECK FORCE Y AXIS

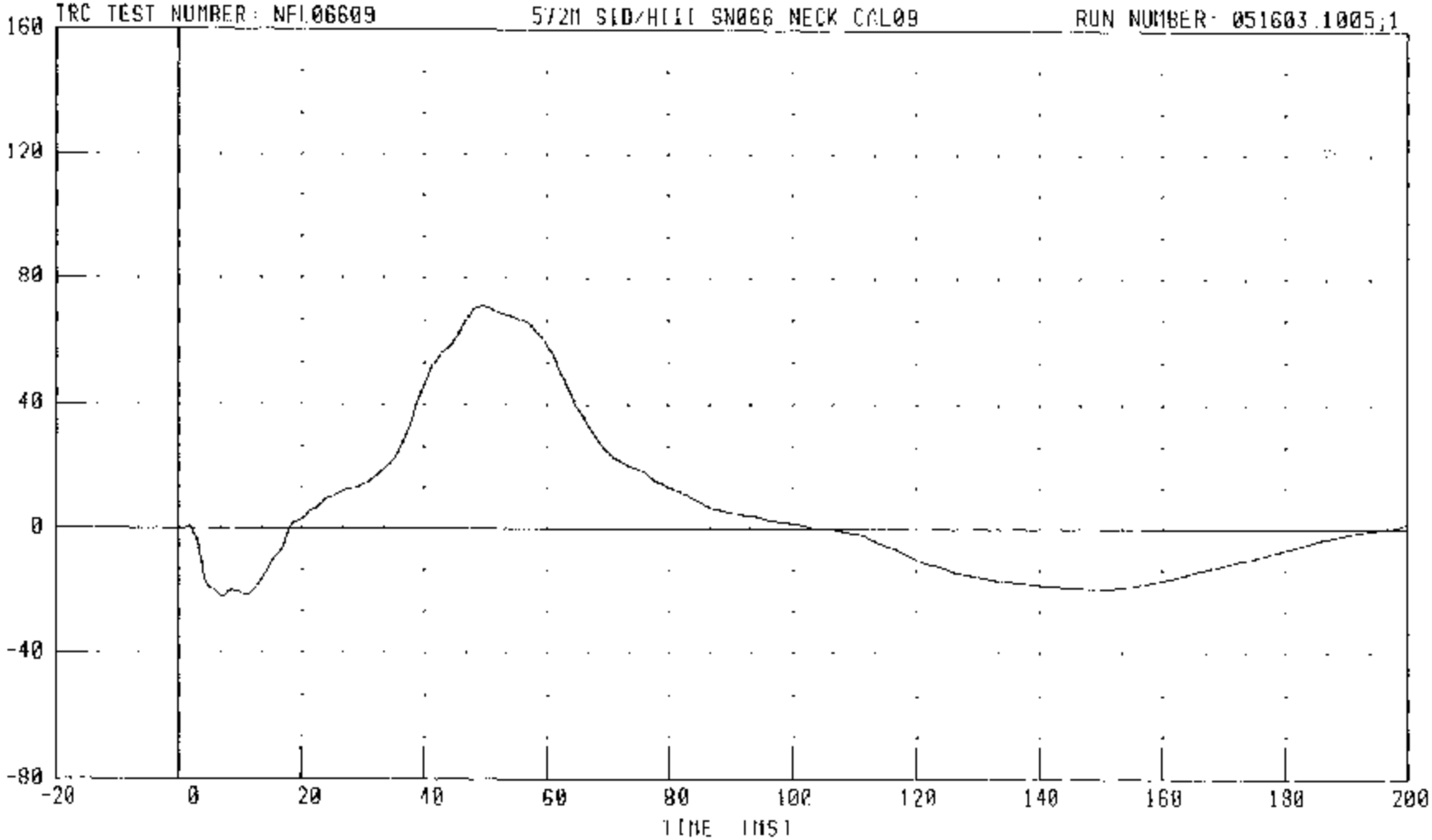


030505-1

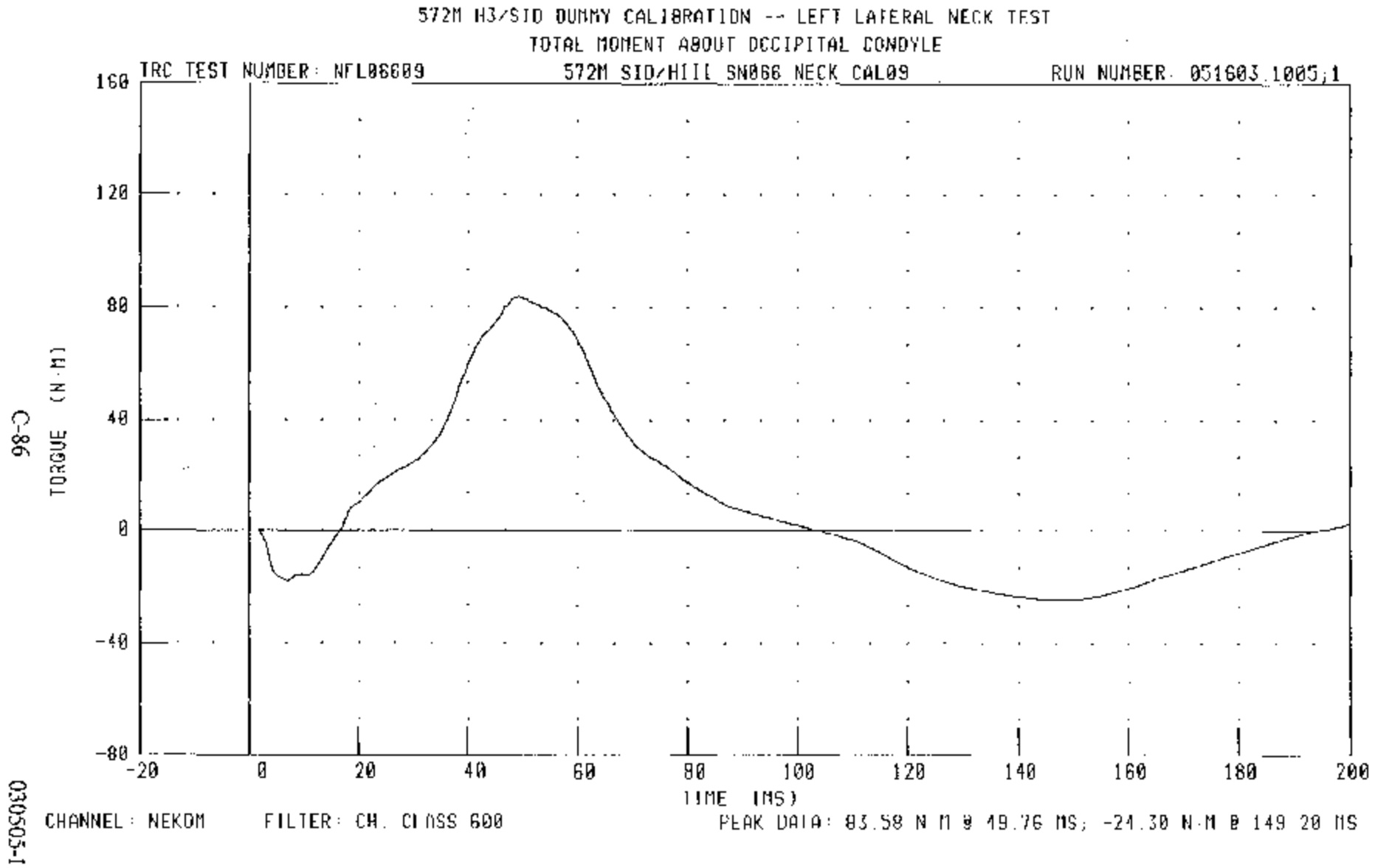
572M H3/STD DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

NECK MOMENT X AXIS

TRC TEST NUMBER: NFL06609 572M SID/HIII SN066 NECK CAL09 RUN NUMBER: 051603.1005;1



CHANNEL: NFKXM FILTER: CH. CLASS 600 PEAK DATA: 71.31 N M @ 49.68 MS, -22 00 N-M @ 7.12 MS


572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE
TRC TEST NUMBER: NFL06609
572M SID/HIII SN066 NECK CAL09
RUN NUMBER: 051603.1005;1
160
120
80
40
0
-40
-80
TORQUE (N-M)
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: NEKOM
FILTER: CH. CLASS 600
PEAK DATA: 83.58 N-M @ 49.76 MS; -24.30 N-M @ 149.20 MS

030505-1

TRANSPORTATION RESEARCH CENTER INC.

LATERAL THORAX IMPACT TEST

SIDE IMPACT DUMMY 14-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: STL06609 572F SID SN066 L.THORAX CAL09

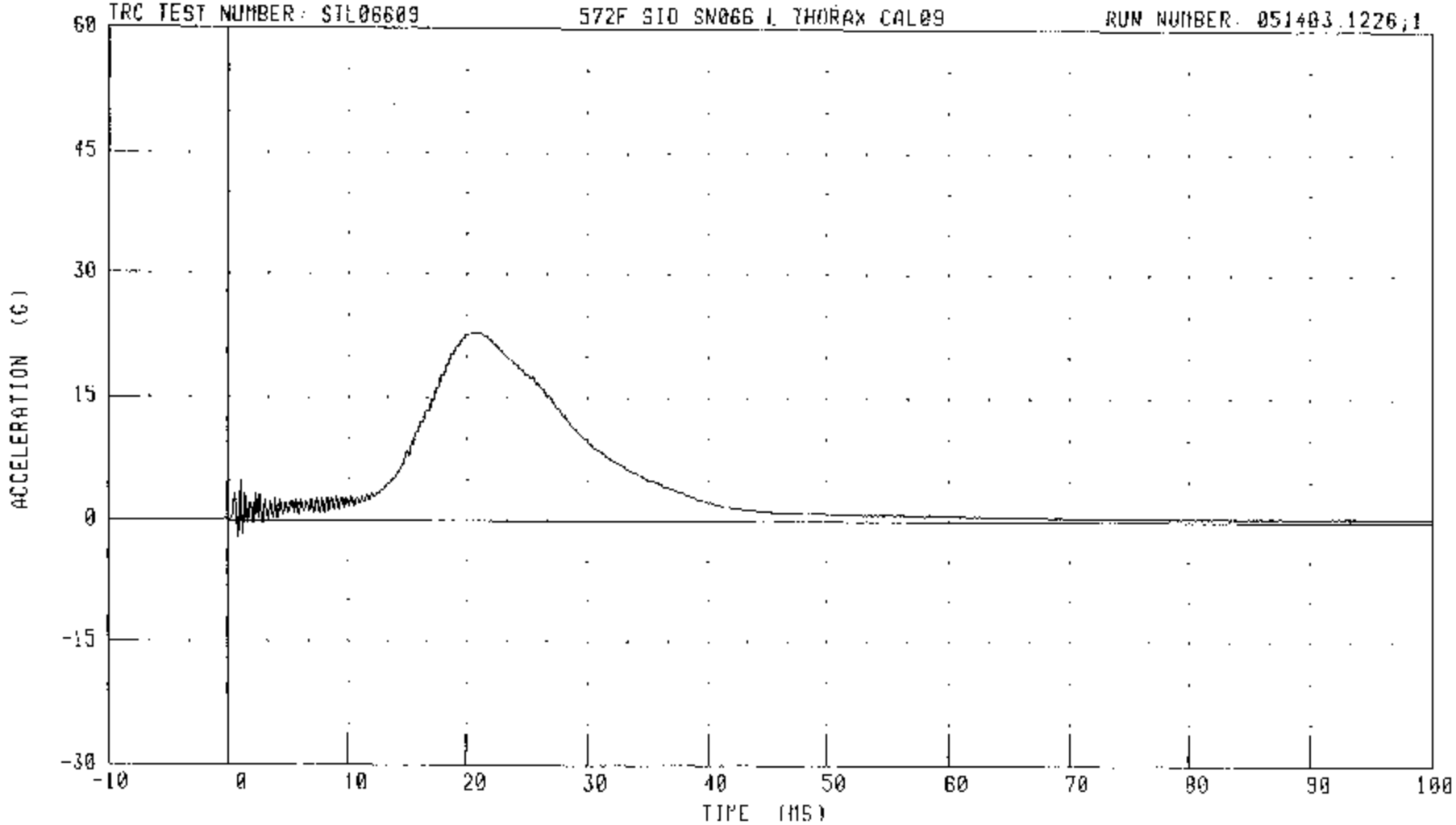
TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	29.0 %
PENDULUM VELOCITY	4.21 - 4.33 M/S	4.29 M/S
PEAK ACCELERATION: UPPER RIB BAR	37 - 46 G	42.4 G
PEAK ACCELERATION: LOWER RIB BAR	37 - 46 G	44.7 G
PEAK ACCELERATION: LOWER THORACIC SPINE	15 - 22 G	21.6 G

TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 051403.1226;1

PART 572-F S I D THORAX CALIBRATION - (LEFT SIDE IMPACT)

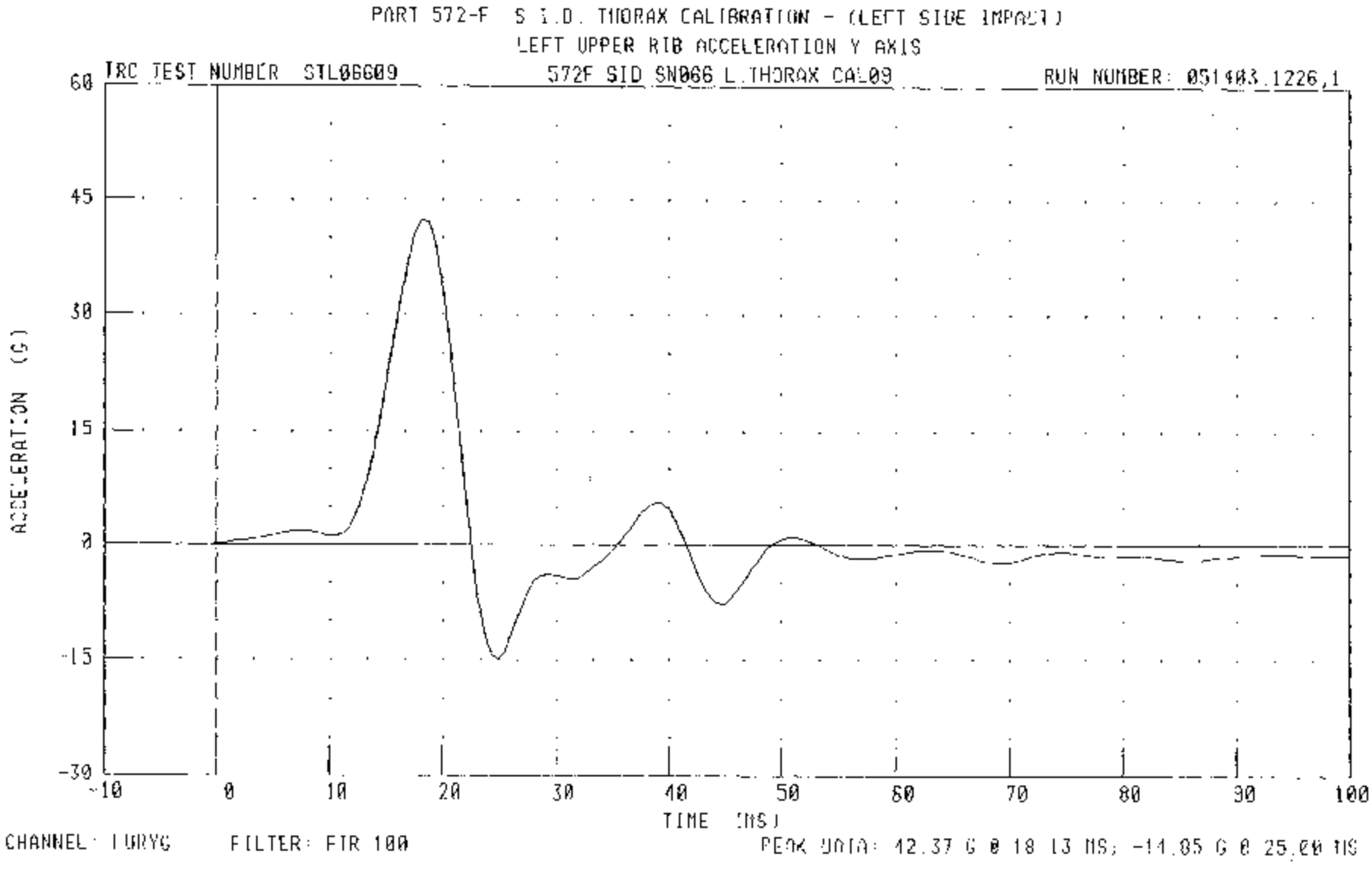
PENDULUM DECELERATION



CHANNEL: PENXG FILTER: CH. CLASS 1000 PEAK DATA: 23.00 G @ 20.88 MS; -2.85 G @ 0.80 MS

C-88

030505-1

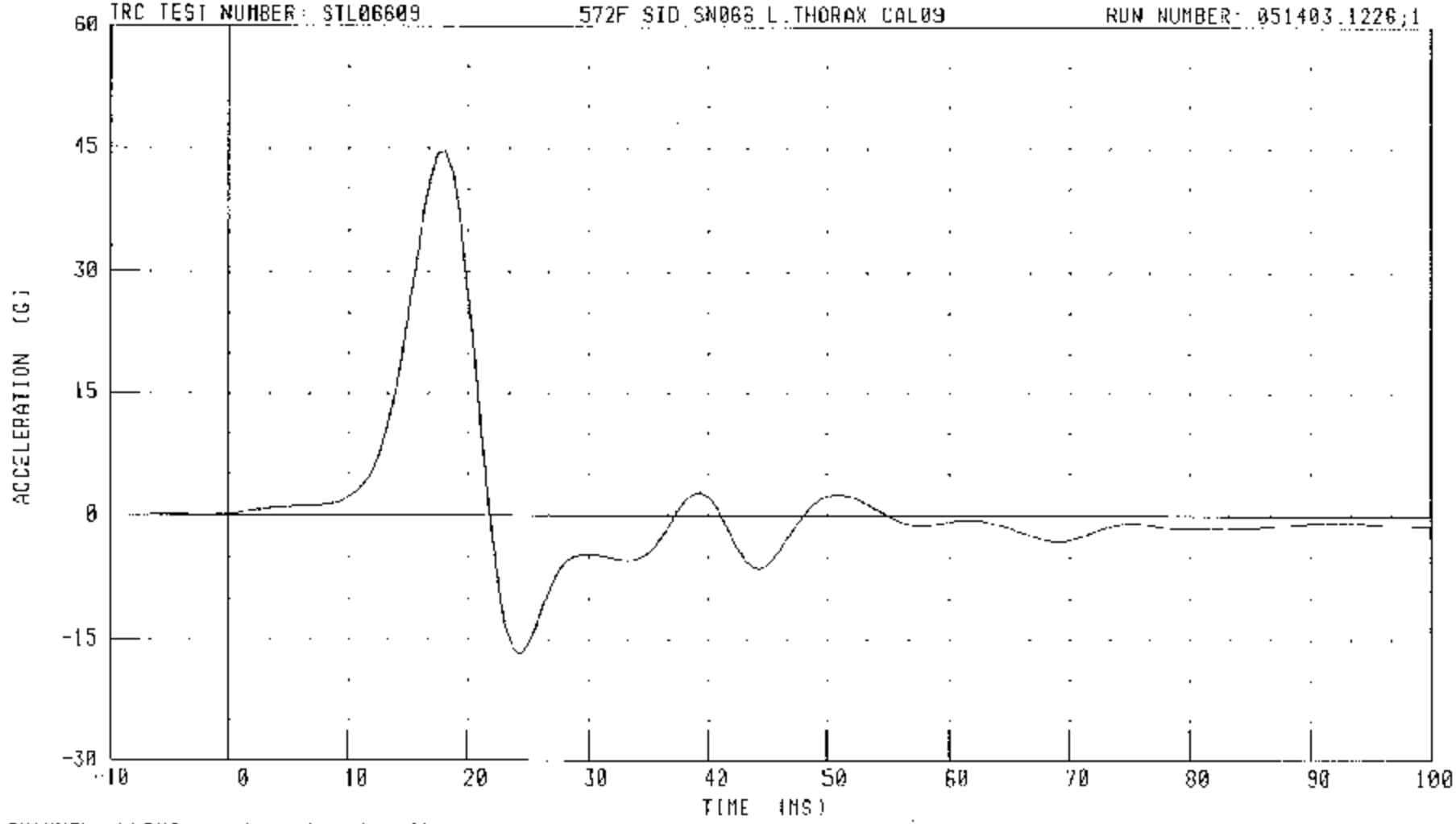

PART 572-F S I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)
LEFT UPPER RIB ACCELERATION Y AXIS
TRC TEST NUMBER STL0660Ø
572F SID SN066 L.THORAX CAL09
RUN NUMBER: 051403.1226,1
ACCELERATION (G)
60
45
30
15
0
-15
-30
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: TURYG
FILTER: FIR 100
PEAK DATA: 12.37 G @ 18.13 MS; -14.05 G @ 25.00 MS

68-C

030505-1

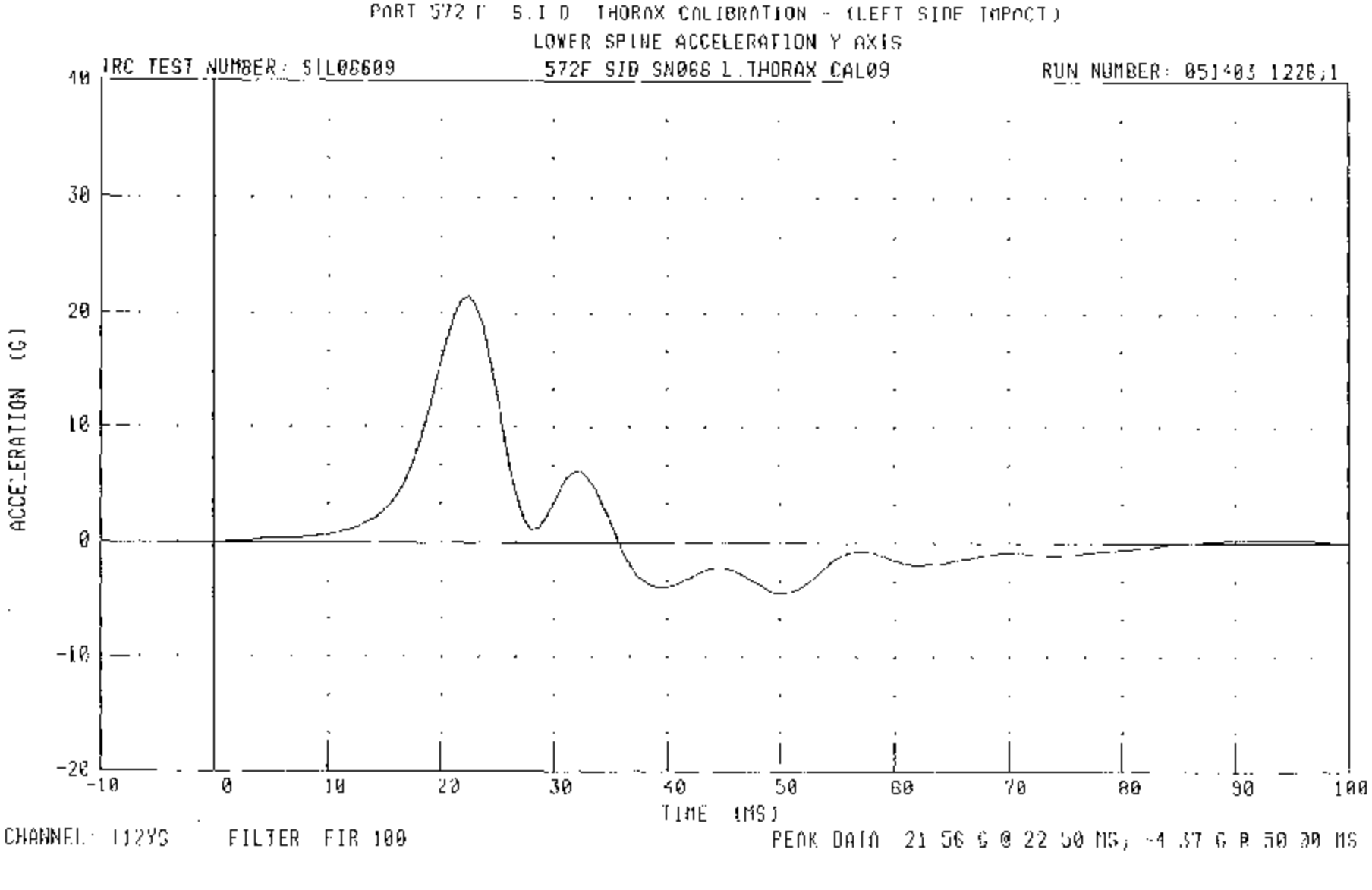
PART 572-F S I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT LOWER RIB ACCELERATION Y AXIS



C-90

030505-1


PART 572 F S.I.D THORAX CALIBRATION - (LEFT SIDE IMPACT)
LOWER SPINE ACCELERATION Y AXIS
IRC TEST NUMBER: SIL08609
572F SID SN068 L.THORAX CAL09
RUN NUMBER: 051403 1226;1
ACCELERATION (G)
TIME (MS)
CHANNEL: 112YS
FILTER FIR 100
PEAK DATA 21.56 G @ 22.50 MS; -4.37 G @ 50.00 MS

TRANSPORTATION RESEARCH CENTER INC.

LUMBAR FLEXION TEST

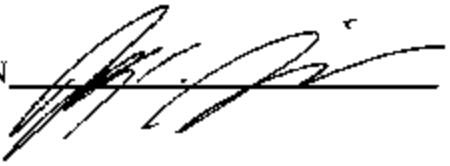
SID PART 572B

CAL DATE: 15-May-03

TRC, INC. **TEST NO: 066C09TF1** **572B SN 066 TORSO FLEX CAL 09**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.7 °C
RELATIVE HUMIDITY	10 – 70 %	26 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	115.7 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	164.6 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	226.9 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	5 °

TEST MEETS SPECIFICATIONS

TECHNICIAN 

Transportation Research Center Inc.

572B Abdomen Compression Test

HIII SID Serial No. 066 Calibration No. 09 - 1

Test Date 05/14/2003

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	27 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.3 - 8.0 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

Approved

05.14.2003 15:10:24 I3

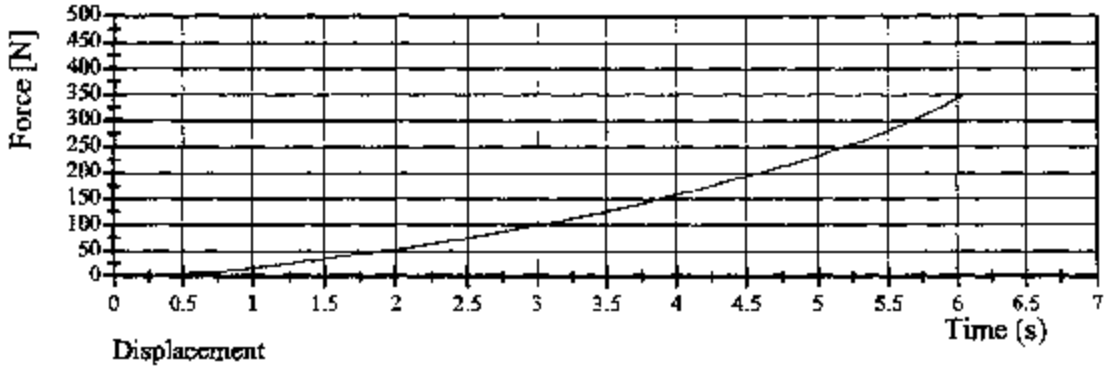
Transportation Research Center Inc.

572B Abdomen Compression Test

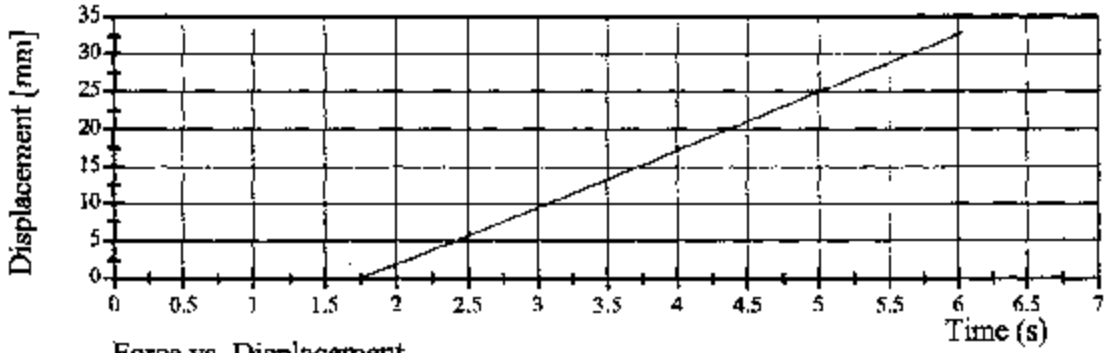
HIII SID Serial No. 066 Calibration No. 09 - 1

Test Date 05/14/2003

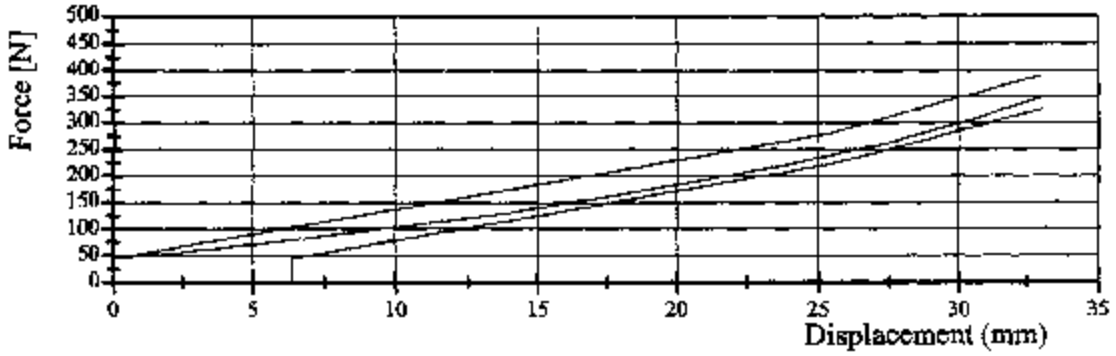
Force



Displacement



Force vs. Displacement



05.14.2003 15:10:16 13

TRC

TRANSPORTATION RESEARCH CENTER INC.

LATERAL PELVIS IMPACT TEST

SIDE IMPACT DUMMY 14-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: SPL06609 572F SN066 LEFT PELVIS CAL09

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	26.0 %
PENDULUM VELOCITY	4.21 - 4.33 M/S	4.28 M/S
PEAK PELVIC ACCELERATION	40 - 60 G	50.0 G
TIME ABOVE 20 G LEVEL	3 - 7 MS	6.2 MS
IS ACCELERATION CURVE UNIMODAL?	YES	YES

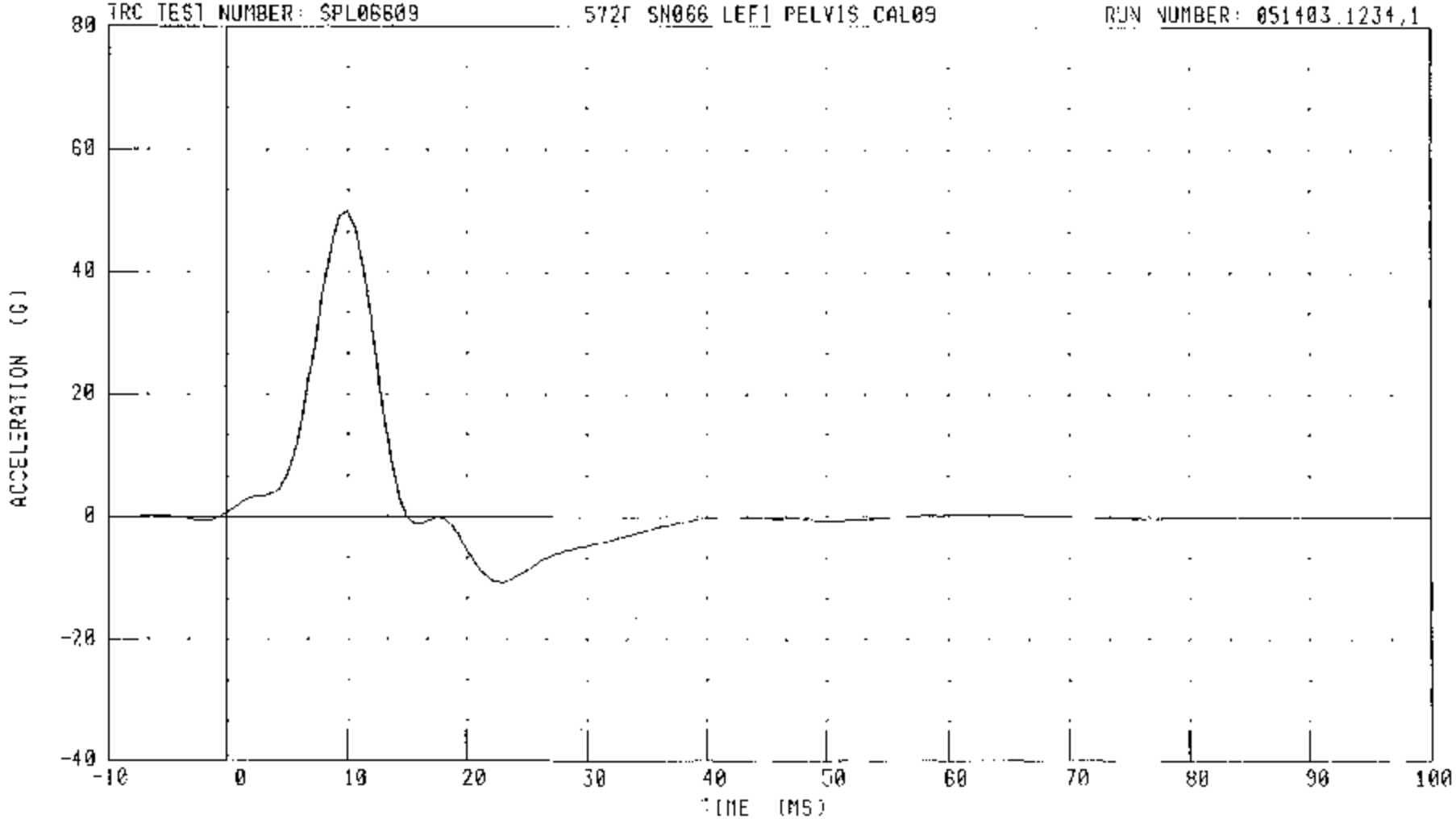
TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 051403.1234;1

PART 572-F S I D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)

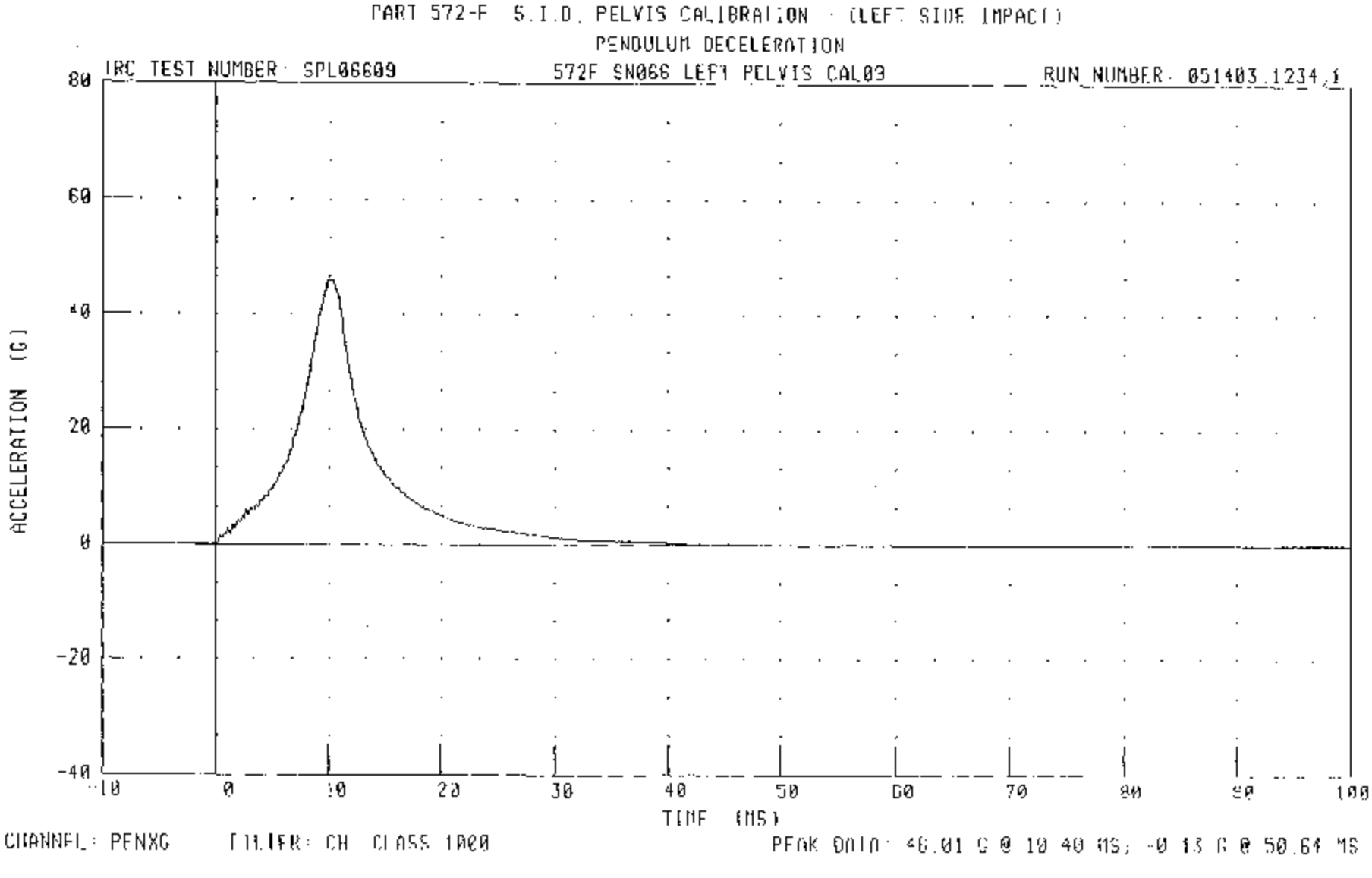
PELVIS ACCELERATION Y AXIS

TRC TEST NUMBER: SPL06609 572F SN066 LEF1 PELVIS CAL09 RUN NUMBER: 051403.1234,1



CHANNEL: PEVYG FILTER: FIR 100 PEAK DATA: 50.04 G @ 10.00 MS; -10.67 G @ 23.13 MS

030505-1


PART 572-F S.I.D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)
PENDULUM DECELERATION
IRC TEST NUMBER: SPL06609
572F SN066 LEFT PELVIS CAL09
RUN NUMBER: 051403.1234.1
ACCELERATION (G)
80
60
40
20
0
-20
-40
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: PENXG
FILTER: CH CLASS 1000
PEAK MIN: 46.01 G @ 10.40 MS; -0.13 G @ 50.64 MS

Calibration Test Results

Post-Test

SID: 028

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber was not tested at this time.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

Transportation Research Center Inc.
572F SID Dummy
External Dimensions
Serial No. 028 Calibration No. 07

Test Parameter	Dimension	Specification			Results	Pass
Seated Height	SH	889.0 - 909.3	mm		896 mm	Yes
Rib Height	RH	501.7 - 520.7	mm		506 mm	Yes
Hip Pivot Height	HP	99.1 REF	mm		99.1 mm	
Rib From Backline	RD	228.6 - 241.3	mm		231 mm	Yes
Knee Pivot From Backline	KH	510.5 - 525.8	mm		511 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5	mm		499 mm	Yes
Hip Width	HW	355.6 - 391.2	mm		373 mm	Yes
Top Rib Width From C\L	RW-1	165.1 - 180.3	mm		170 mm	Yes
Bottom Rib Width From C\L	RW-2	165.1 - 180.3	mm		170 mm	Yes
Difference Between Top & Bottom Rib Width from C\L		<= 2.5	mm		0.0 mm	Yes

Technician

Approved

TRANSPORTATION RESEARCH CENTER INC.

LATERAL HEAD DROP TEST

SID/HIII DUMMY 13-JAN-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO. HDL02807 572M SID/HIII SN028 HEAD CAL07

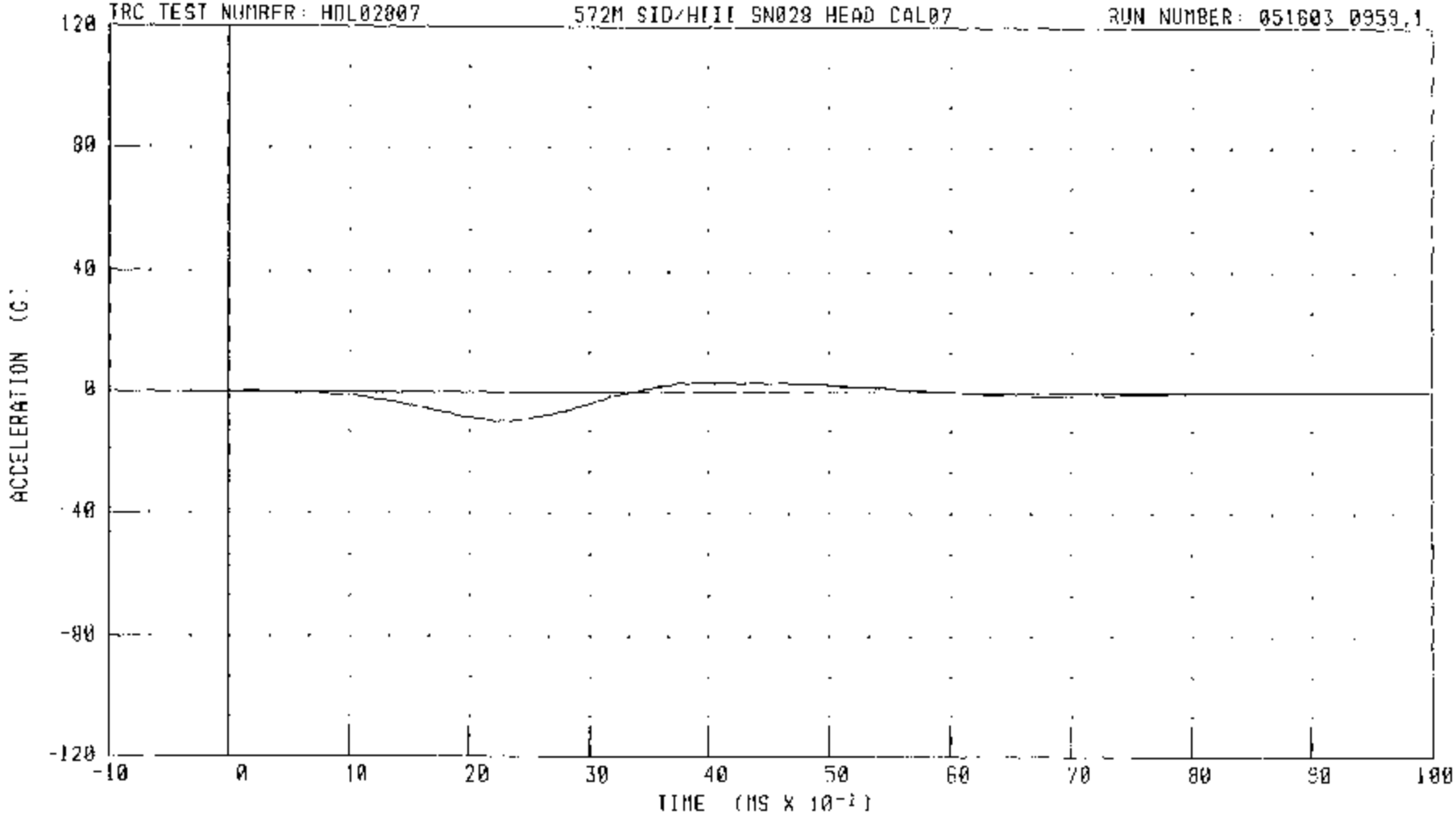
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.6 deg. C	21.67 deg. C
RELATIVE HUMIDITY	10 - 70 %	48.00 %
PEAK RESULTANT ACCELERATION	120 - 150 G	138.29 G
PEAK LONGITUDINAL ACCELERATION	15 G MAX	-9.95 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 051603.0958;1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION X AXIS

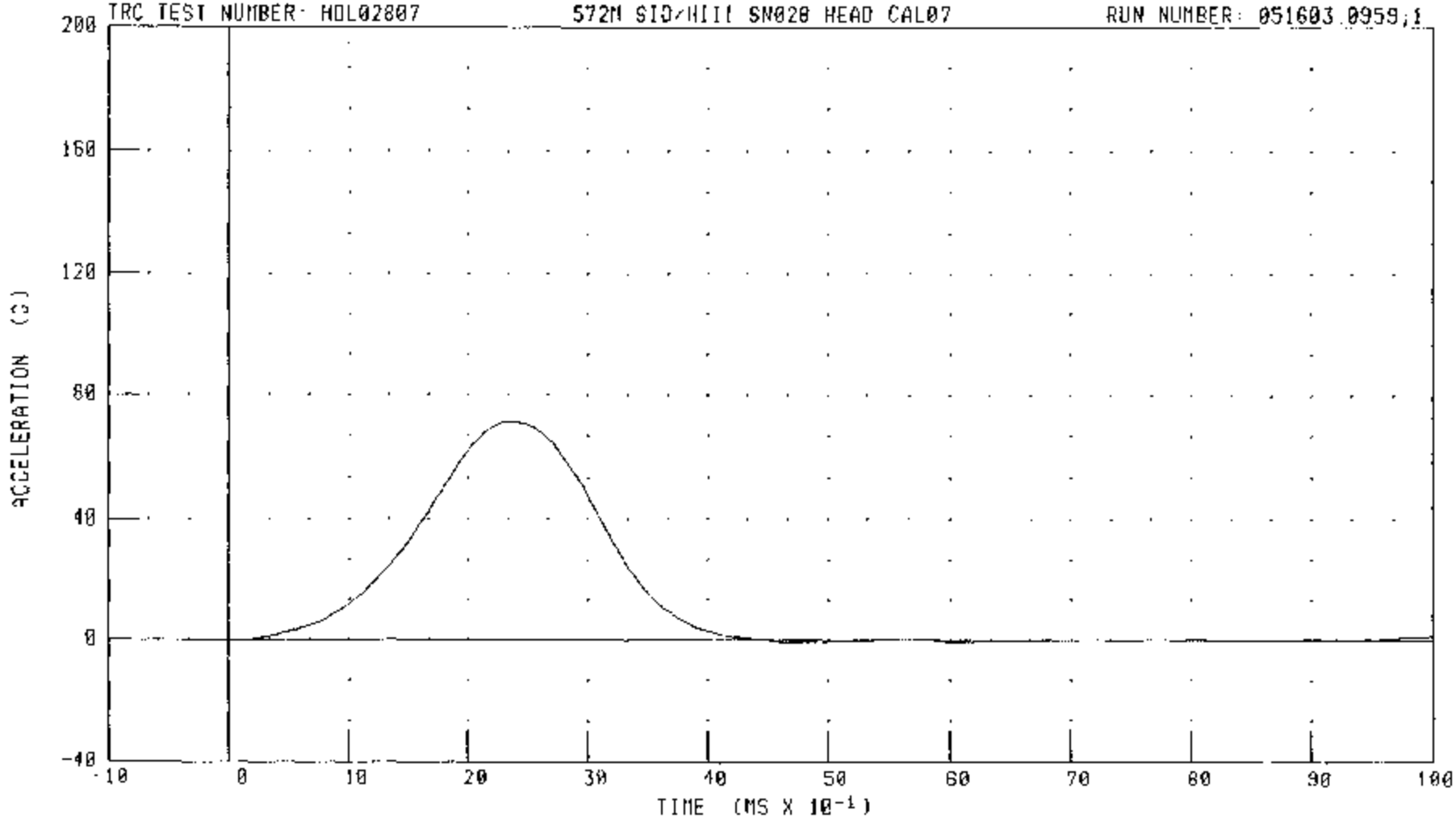


CHANNEL: HEDXG FILTER: CH. CLASS 1000 PEAK DATA: 3.16 G @ 3.92 MS; -9.95 G @ 2.32 MS

030505-1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION Y AXIS



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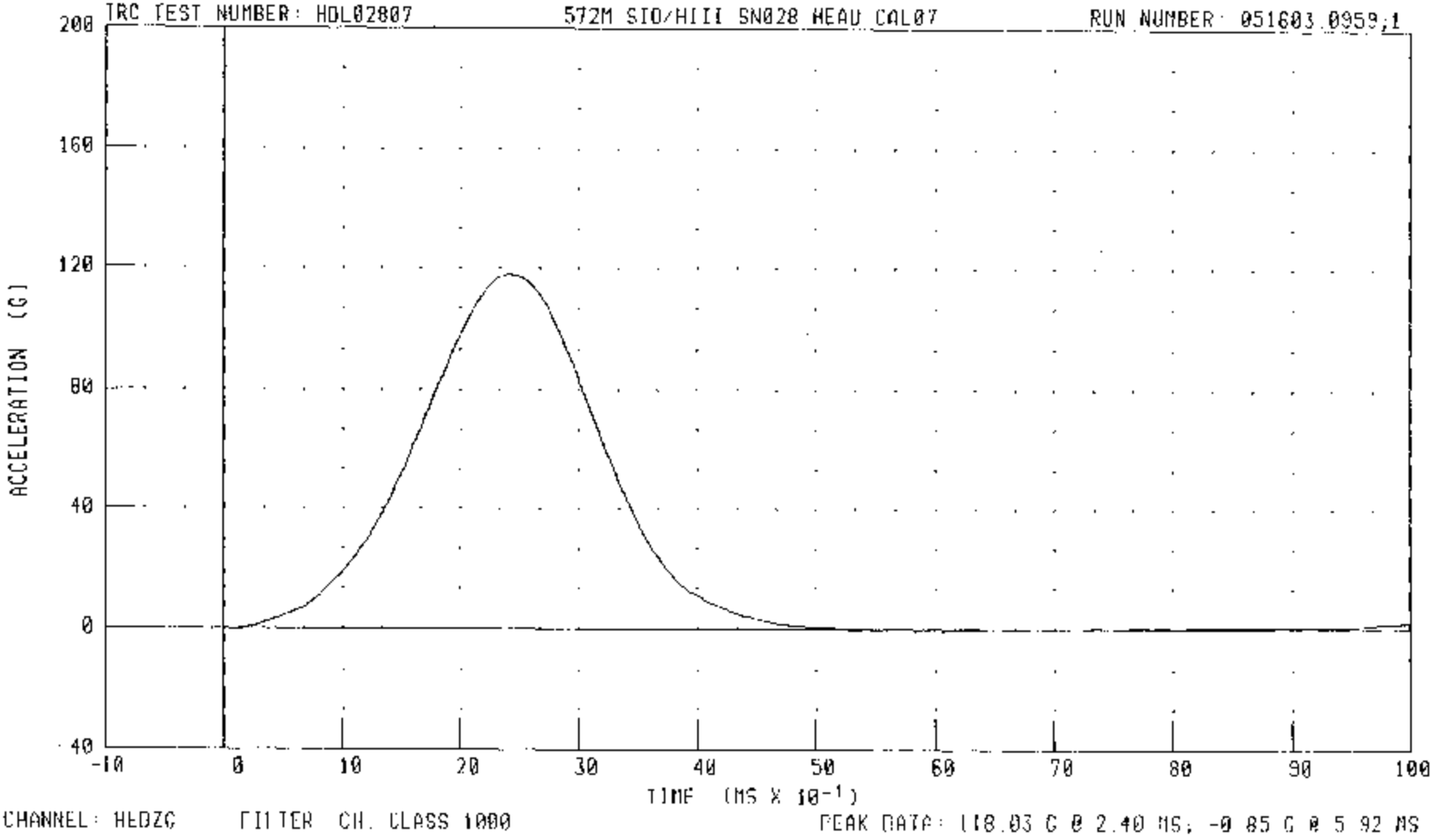
030505-1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

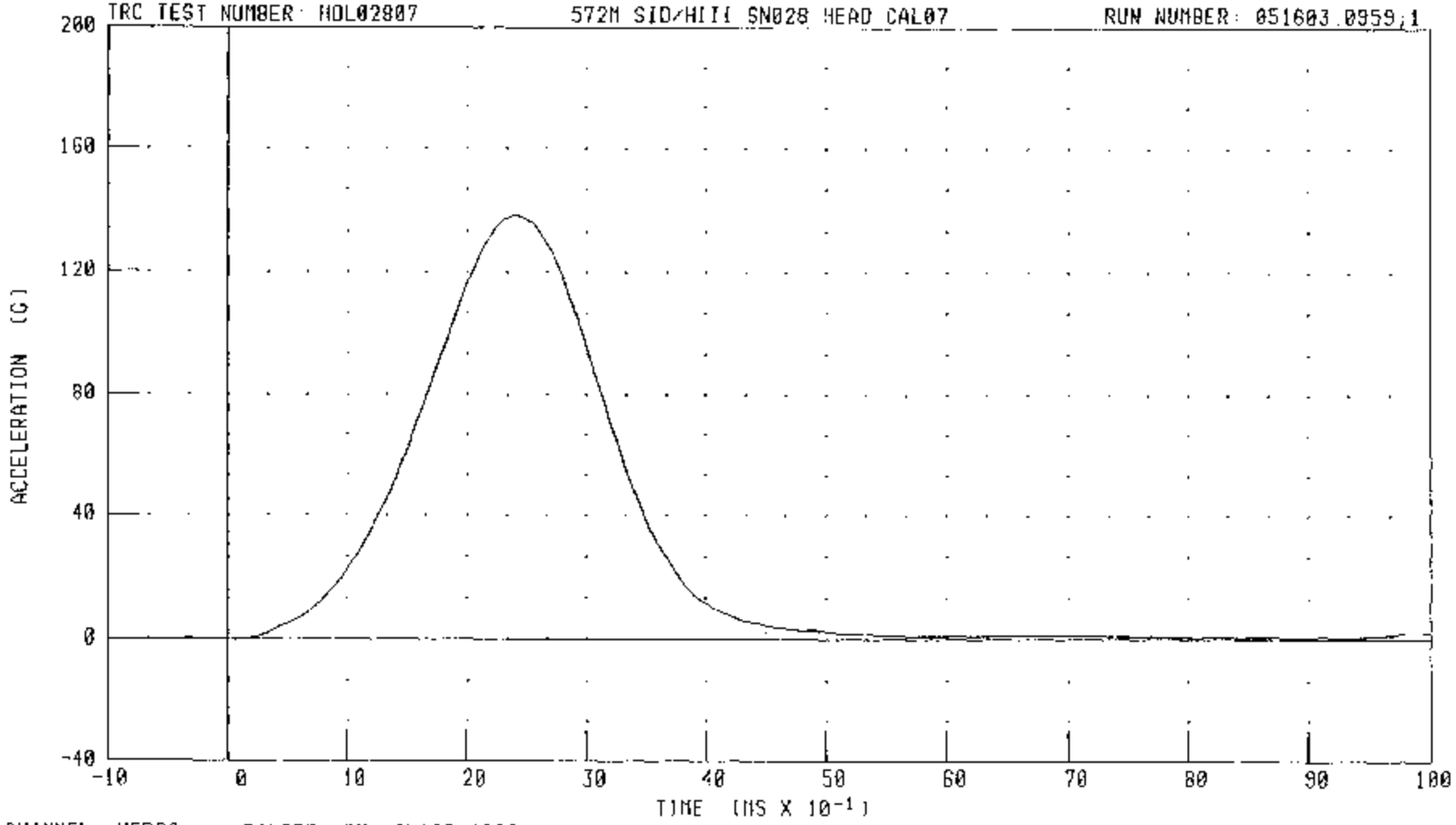
HEAD ACCELERATION Z AXIS



030505-1

572M SID/HIII DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD RESULTANT ACCELERATION



C-104

030505-1

TRANSPORTATION RESEARCH CENTER INC.

LATERAL NECK TEST

SID/HIII DUMMY 15-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO. NFL02807 572N SID/HIII SN028 NECK CAL07

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 deg. C	21.67 deg. C
RELATIVE HUMIDITY		10 - 70 %	48.00 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
INTEGRATED VELOCITY	10 MS	1.96 - 2.55 M/S	2.28 M/S
	20 MS	4.12 - 5.10 M/S	4.61 M/S
	30 MS	5.73 - 7.01 M/S	6.58 M/S
	40 - 70 MS	6.27 - 7.64 M/S	7.13- 7.24 M/S
MAXIMUM MIDSAGGITAL PLANE ROTATION		66 - 82 deg.	73.90 deg.
ROTATION ANGLE DECAY TIME FROM PEAK TO ZERO		58 - 67 MS	60.24 MS
MAXIMUM MOMENT ABOUT OCCIPITAL CONDYLE		73 - 88 NM	80.52 NM
POSITIVE MOMENT DECAY TIME FROM PEAK TO ZERO		49 - 64 MS	53.60 MS
TIME OF MAXIMUM ROTATION AFTER MAXIMUM MOMENT		2 - 16 MS	8.16 MS

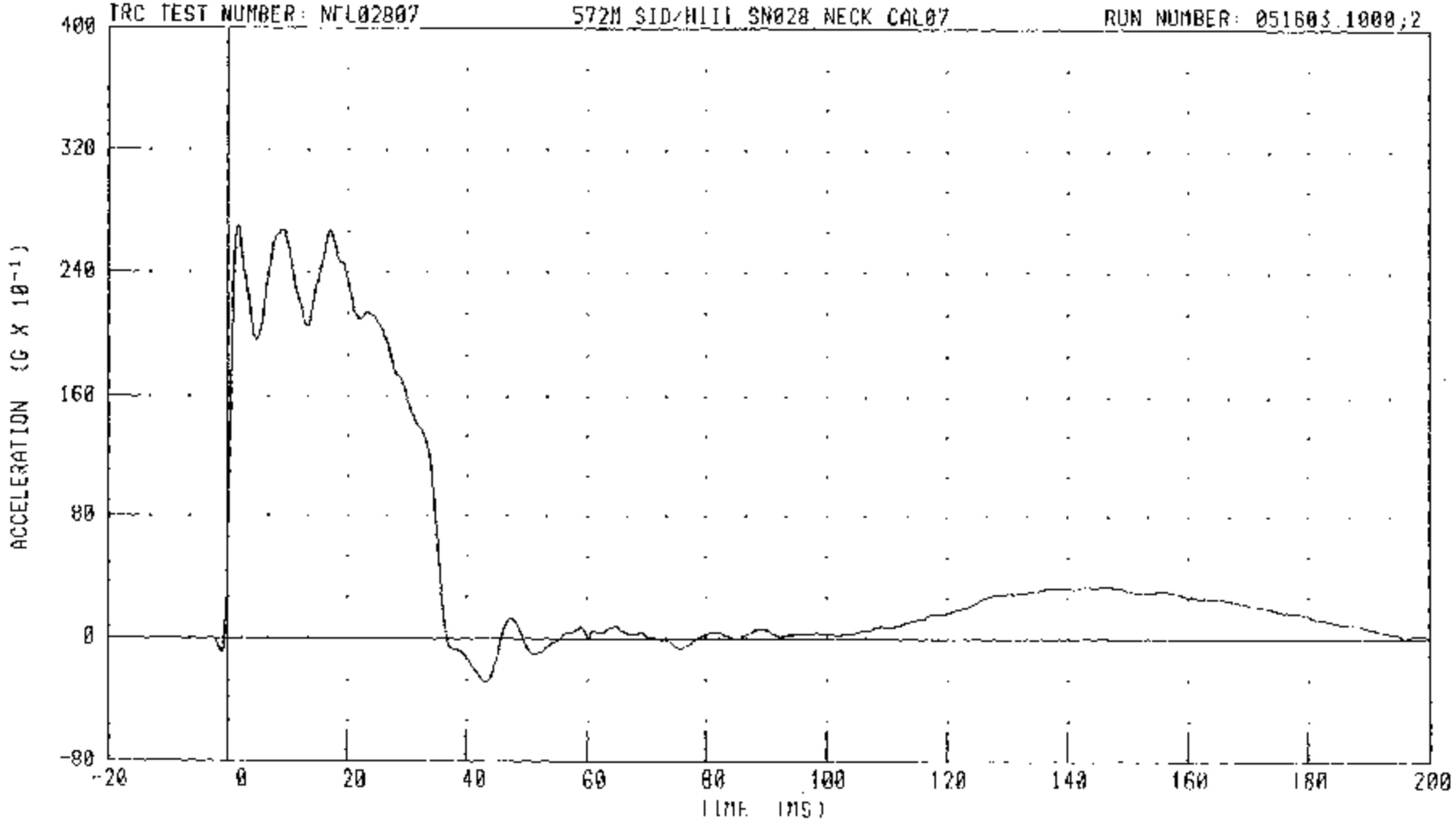
TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 051603.0958;1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

PENDULUM DECELERATION

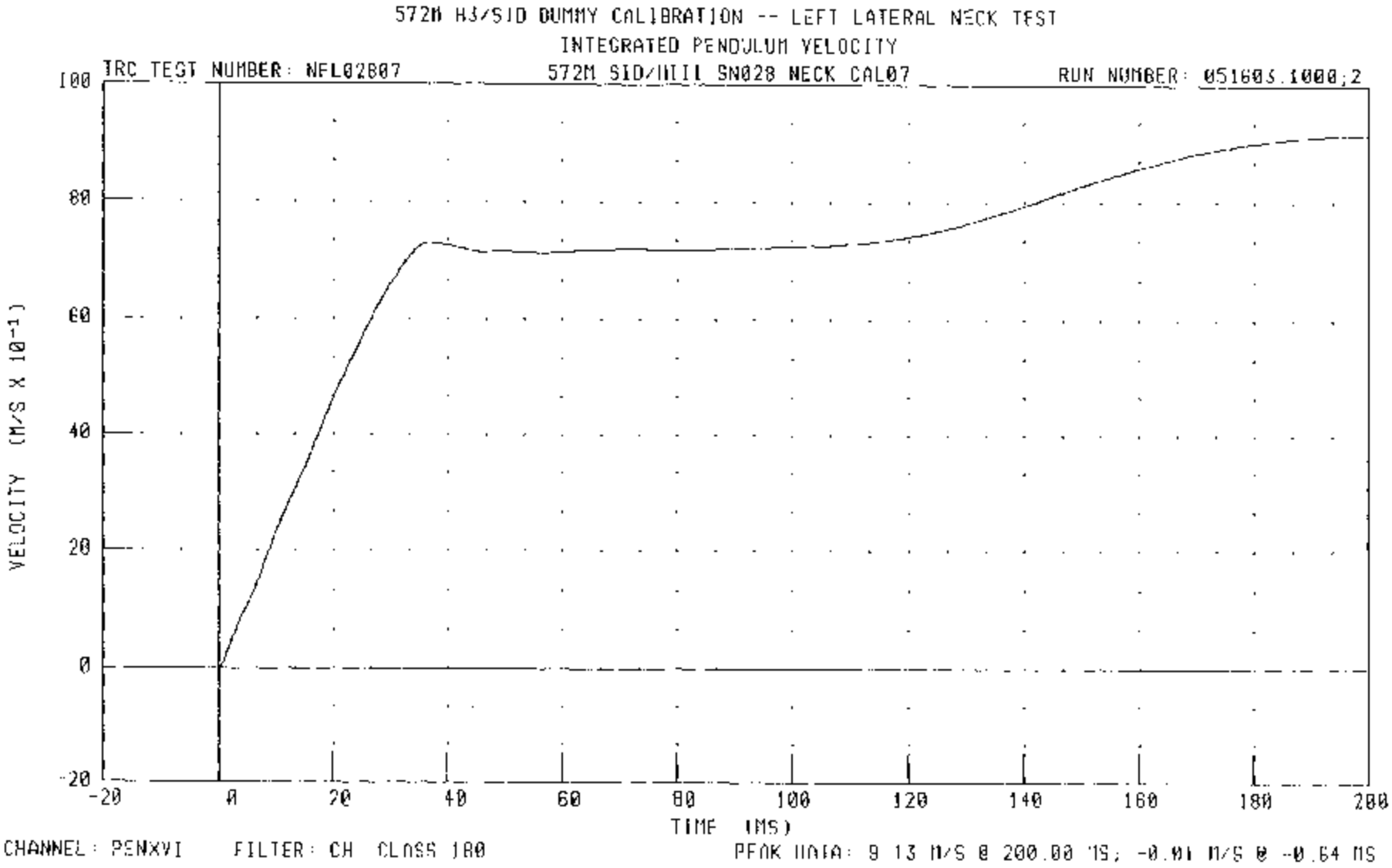
TRC TEST NUMBER: NFL02807 572M SID/HIII SN028 NECK CAL07 RUN NUMBER: 051603.1000;2



CHANNEL: PENXG FILTER: CH. CLASS 180 PEAK DATA: 27.03 G @ 1.60 MS, -2.82 G @ 43.20 MS

C-106

030505-1

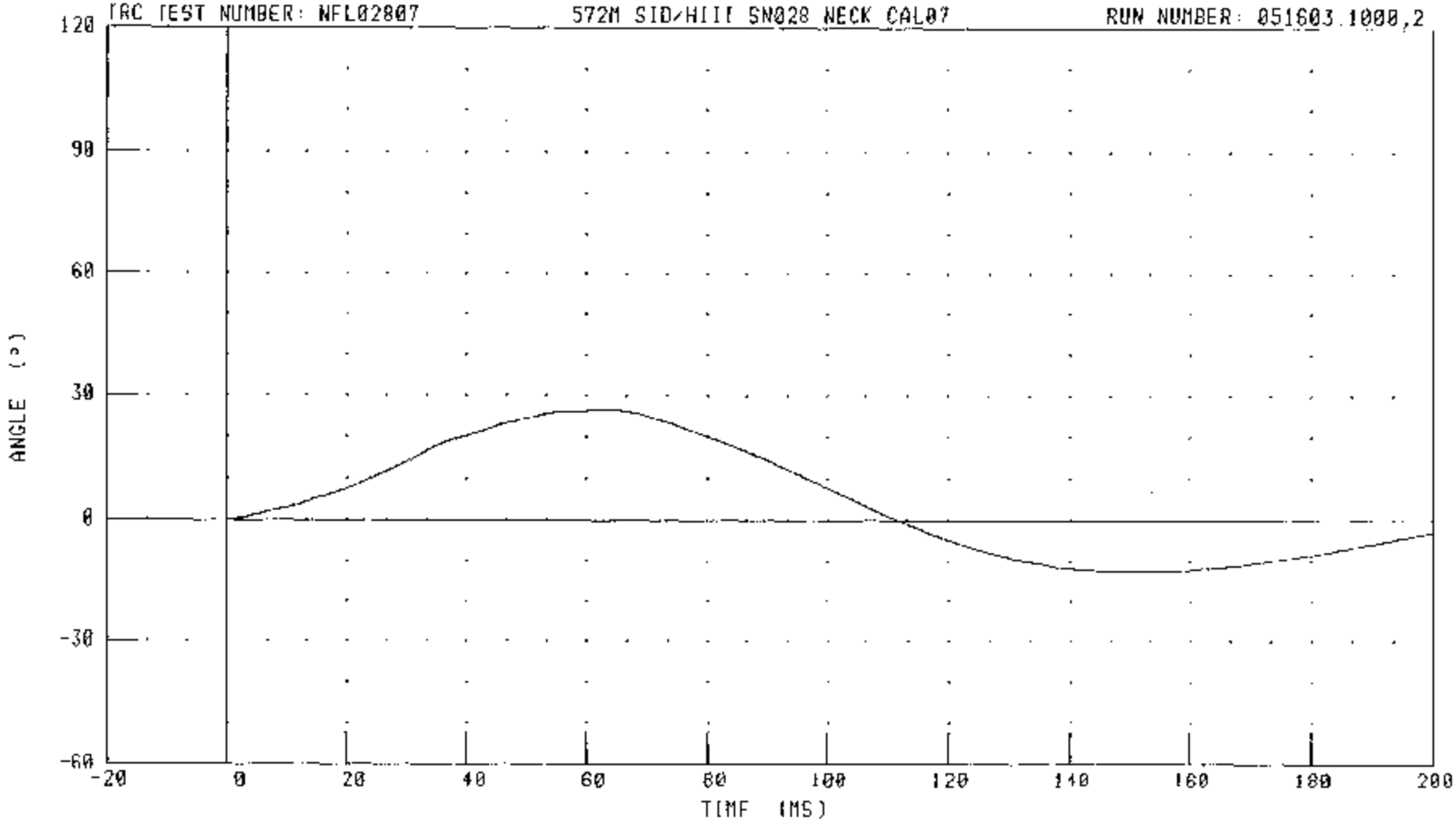

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
INTEGRATED PENDULUM VELOCITY
IRC TEST NUMBER: NFL02807
572M SID/HIII SN028 NECK CAL07
RUN NUMBER: 051603.1000;2
VELOCITY (M/S X 10⁻¹)
100
80
60
40
20
0
-20
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: PENXVI
FILTER: CH CLASS 180
PEAK DATA: 9.13 M/S @ 200.00 MS; -0.01 M/S @ -0.64 MS

030505-1

572M 113/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

ROTATION ABOUT BASE OF NECK

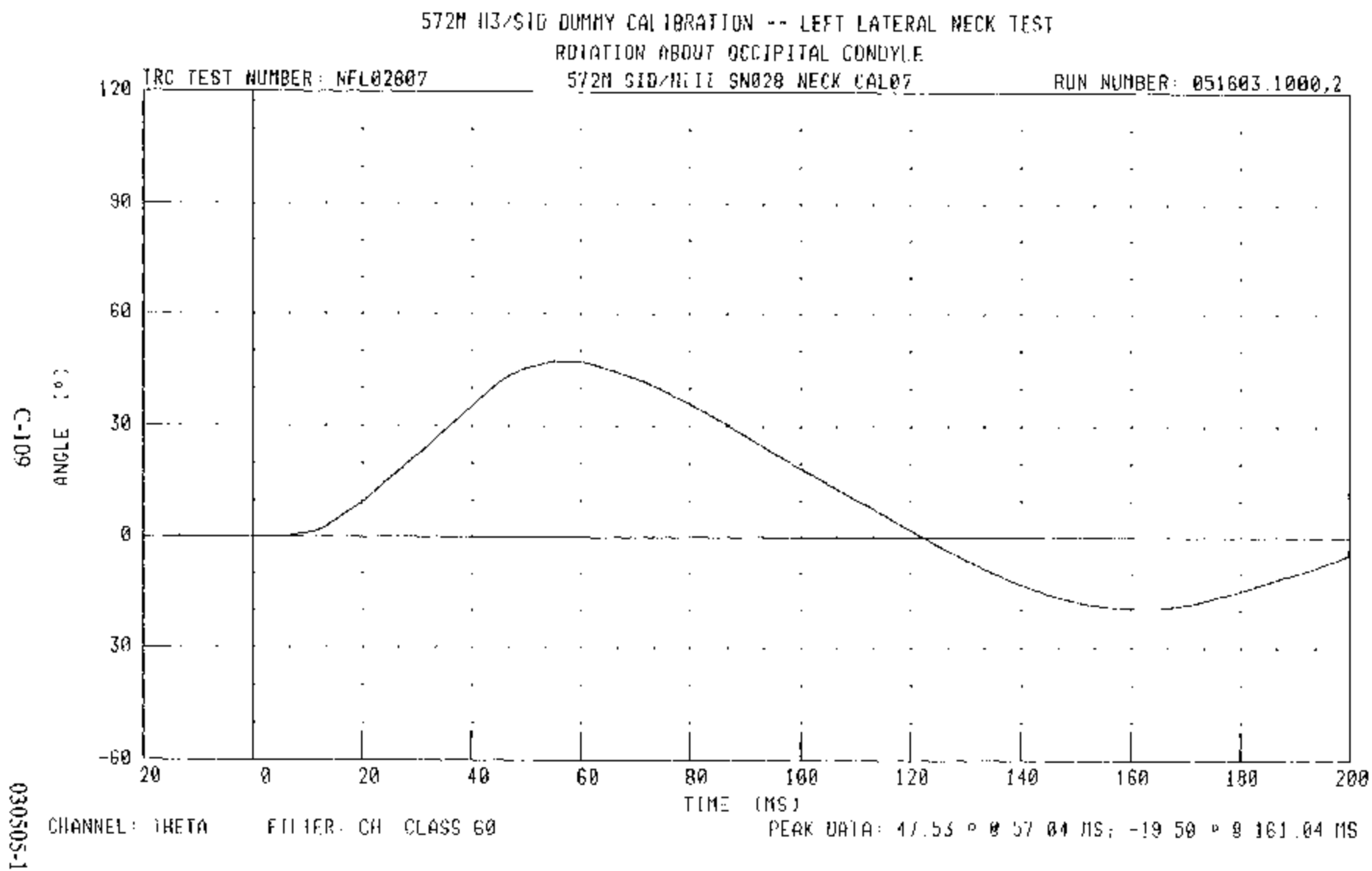
TRC TEST NUMBER: NFL02807 572M SID/HIII SN028 NECK CAL07 RUN NUMBER: 051603.1000,2



CHANNEL: BETA FILTER: CH CLASS 60 PEAK DATA: 26.60 ° @ 63.92 MS; -12.64 ° @ 149.36 MS

C-108

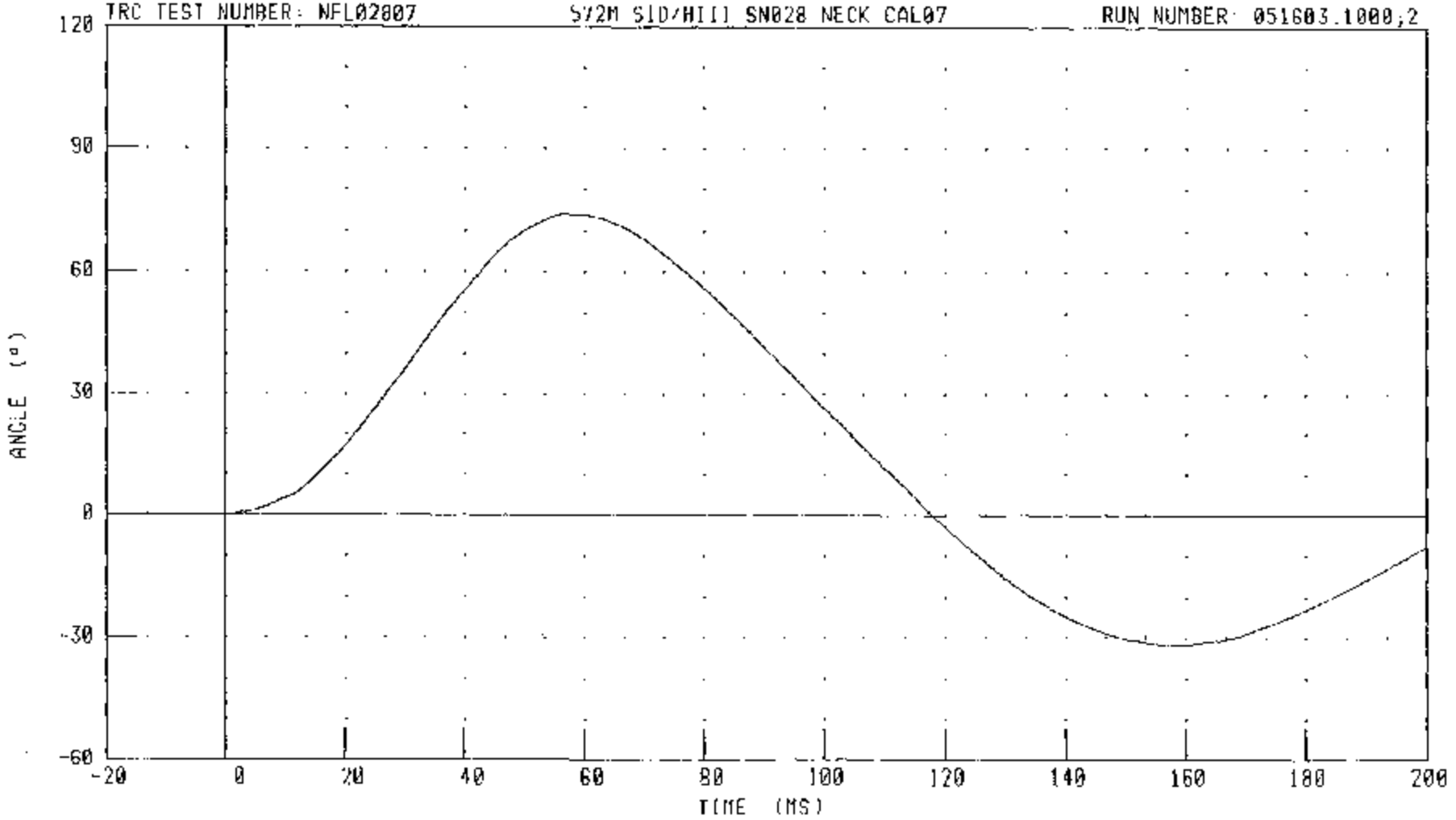
030505-1


572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
ROTATION ABOUT OCCIPITAL CONDYLE
TRC TEST NUMBER: NFL02607
572M SID/HIII SN028 NECK CAL07
RUN NUMBER: 051603.1000,2
ANGLE (°)
120
90
60
30
0
30
-60
20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: THETA
FILTER: CH CLASS 60
PEAK DATA: 47.55 @ 57.04 MS; -19.50 @ 161.04 MS

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

TOTAL ROTATION

TRC TEST NUMBER: NFL02007 572M SID/HIII SN028 NECK CAL07 RUN NUMBER: 051603.1000;2

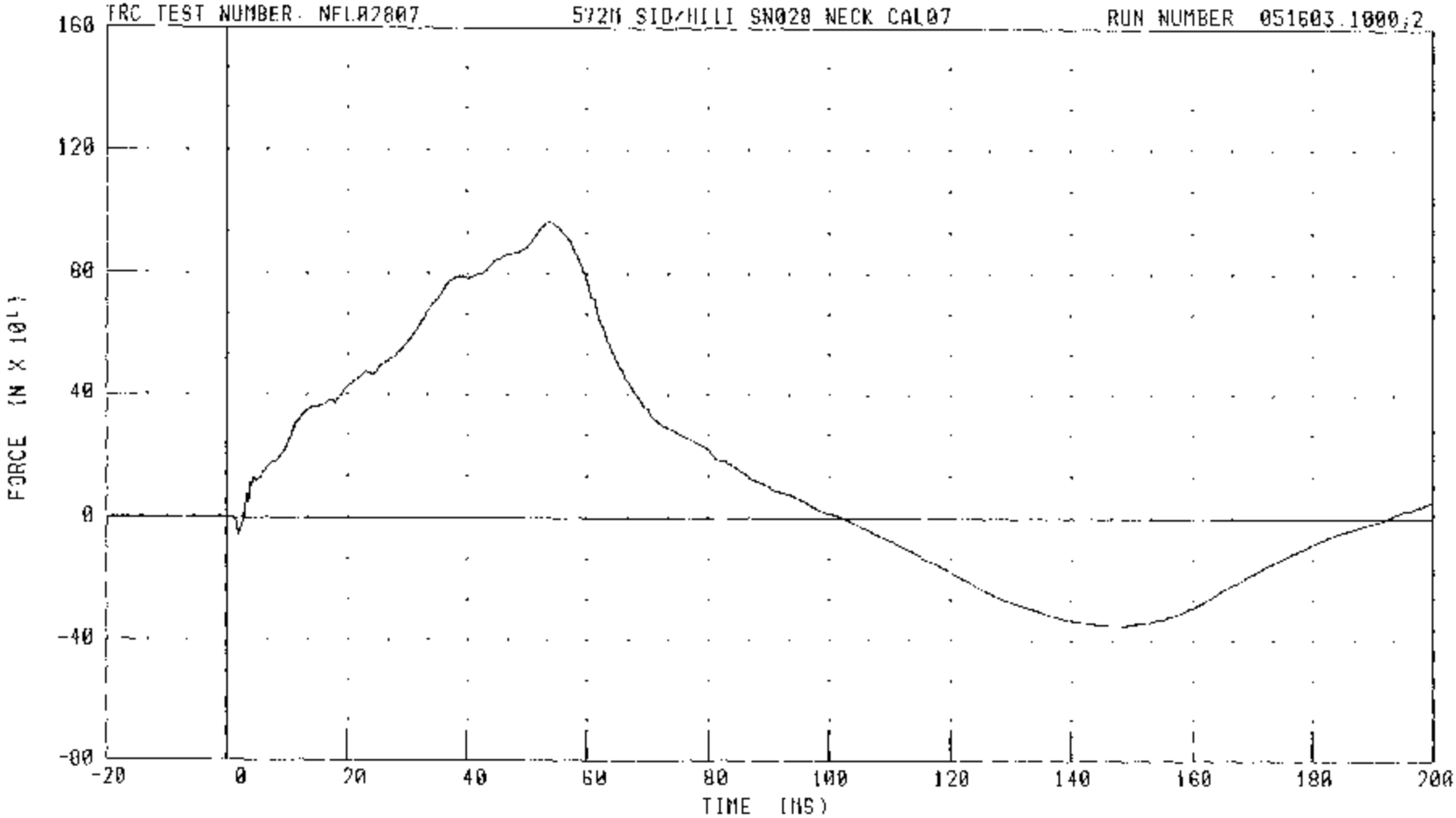


CHANNEL: TOTAN FILTER CH. CLASS 60 PEAK DATA: 73.90 ° @ 57.68 MS; -31.83 ° @ 157.92 MS

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

NECK FORCE Y AXIS



CHANNEL: NEKYF FILTER: CH. CLASS 1000 PEAK DATA: 966.60 N @ 53.63 MS; 349.90 N @ 147.44 MS

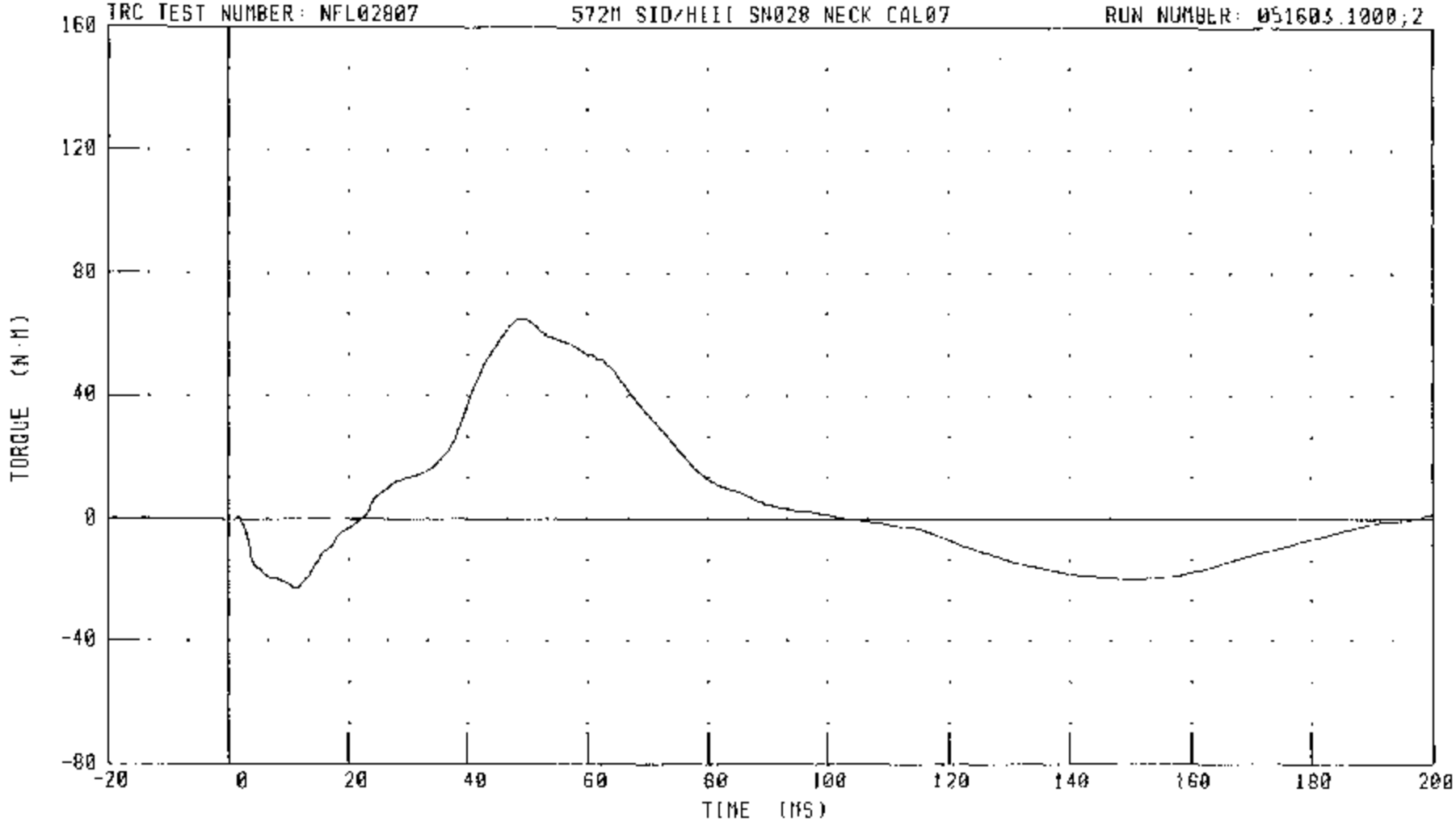
C-111

030505-1

572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

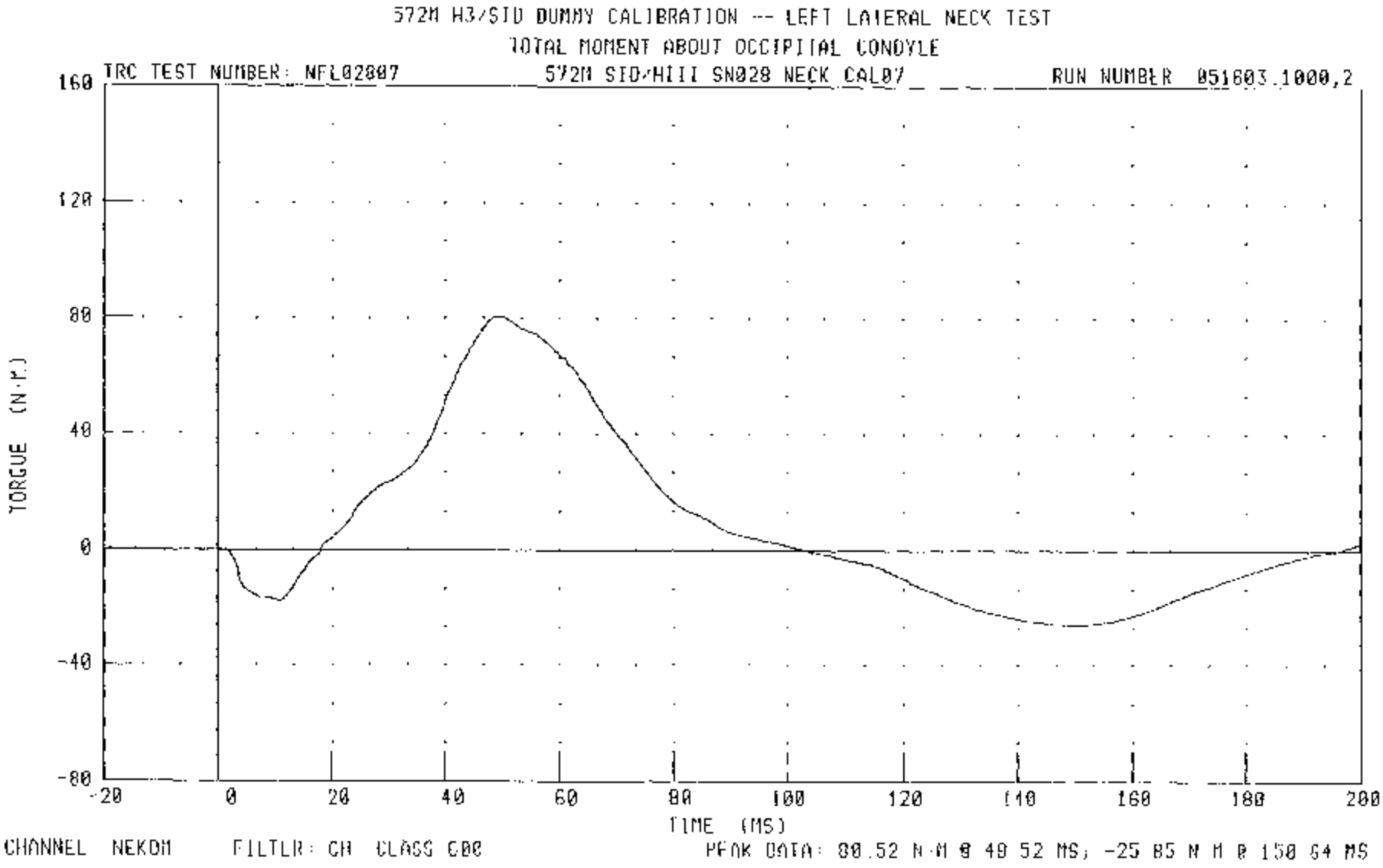
NECK MOMENT X AXIS

TRC TEST NUMBER: NFL02807 572M SID/HEII SN028 NECK CAL07 RUN NUMBER: 051603.1000;2



CHANNEL: NEKXM FILTER CH CLASS 600 PEAK DATA: 64.91 N-M @ 49.36 MS; -22.72 N-M @ 11.36 MS

030505-1


572M H3/SID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE
TRC TEST NUMBER: NFL02007
572M SID/HIII SN028 NECK CAL07
RUN NUMBER 051603.1000,2
TORQUE (N-M)
160
120
80
40
0
-40
-80
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL NEKOM
FILTER: CH CLASS 600
PEAK DATA: 80.52 N-M @ 49.52 MS; -25.85 N-M @ 150.64 MS

TRANSPORTATION RESEARCH CENTER INC.

LATERAL THORAX IMPACT TEST

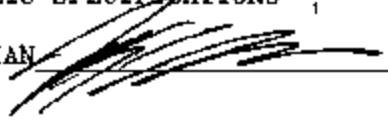
SIDE IMPACT DUMMY 15-MAY-03

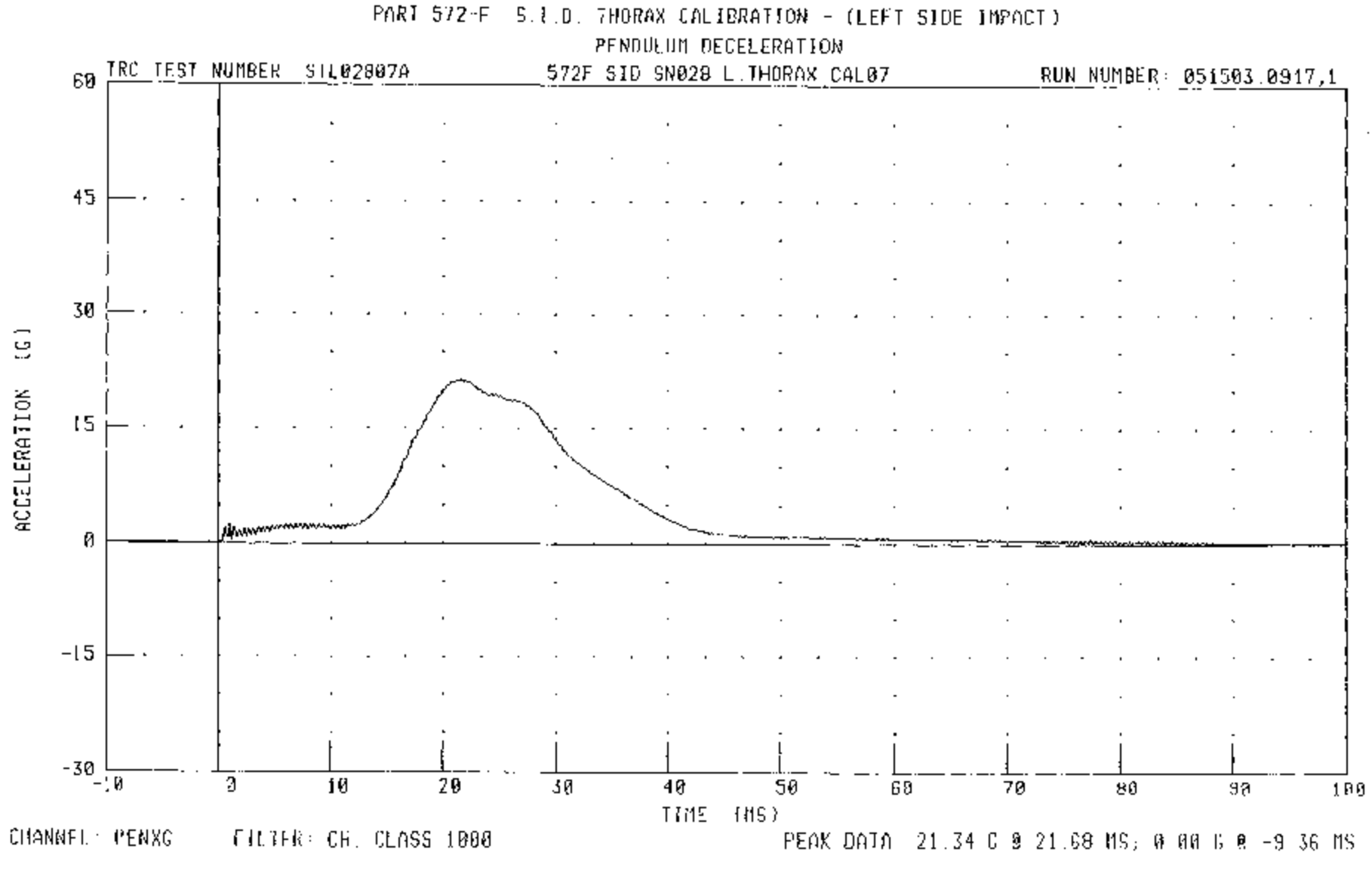
LEFT SIDE CONFIGURATION

TRC INC. TEST NO: STL02807A 572F SID SN028 L.THORAX CAL07

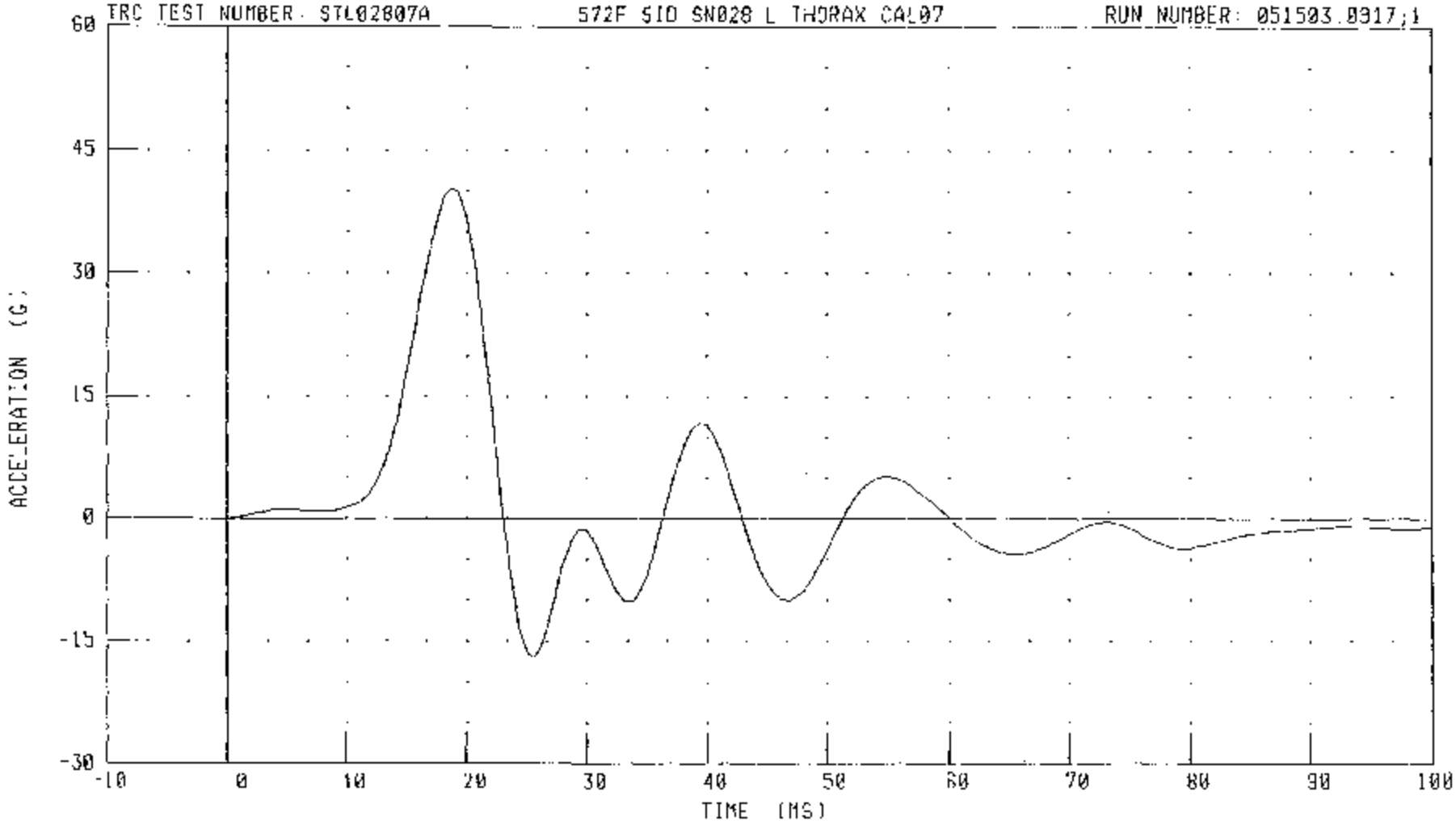
TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	47.0 %
PENDULUM VELOCITY	4.21 - 4.33 M/S	4.31 M/S
PEAK ACCELERATION: UPPER RIB BAR	37 - 46 G	40.4 G
PEAK ACCELERATION: LOWER RIB BAR	37 - 46 G	39.4 G
PEAK ACCELERATION: LOWER THORACIC SPINE	15 - 22 G	16.4 G

TEST MEETS SPECIFICATIONS

TECHNICIAN  RUN NUMBER: 051503.0916;1


PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)
PENDULUM DECELERATION
TRC TEST NUMBER SIL02807A
572F SID SN028 L.THORAX CAL07
RUN NUMBER: 051503.0917,1
ACCELERATION (G)
60
45
30
15
0
-15
-30
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: PENXG
FILTER: CH. CLASS 1000
PEAK DATA 21.34 G @ 21.68 MS; 0.00 G @ -9.36 MS

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)
LEFT UPPER RIB ACCELERATION Y AXIS

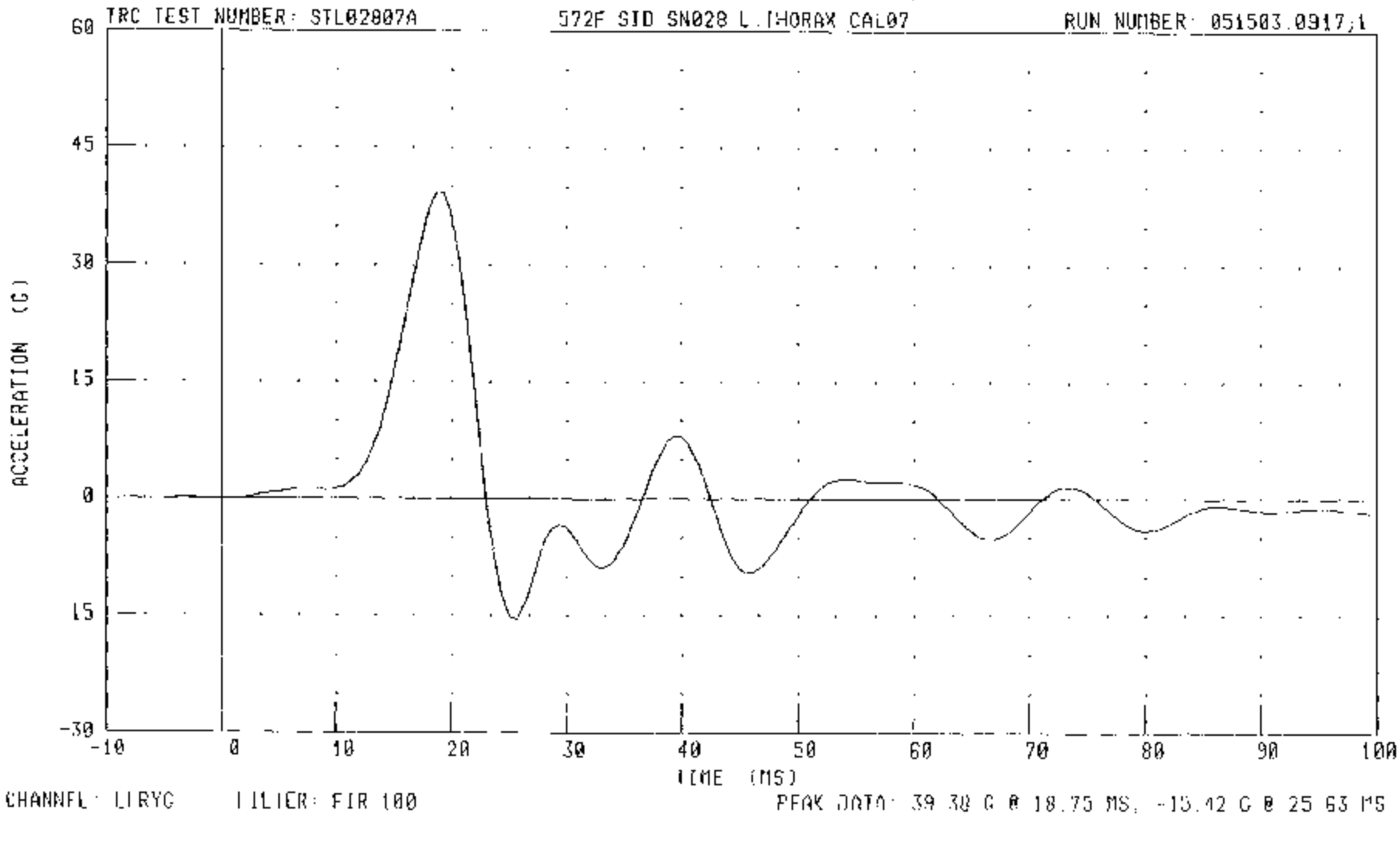


CHANNEL LURYG FILTER: FIR 100 PEAK DATA: 40 40 G @ 10.75 MS; 17 11 G @ 25 63 MS

030505-1

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT LOWER RIB ACCELERATION Y AXIS

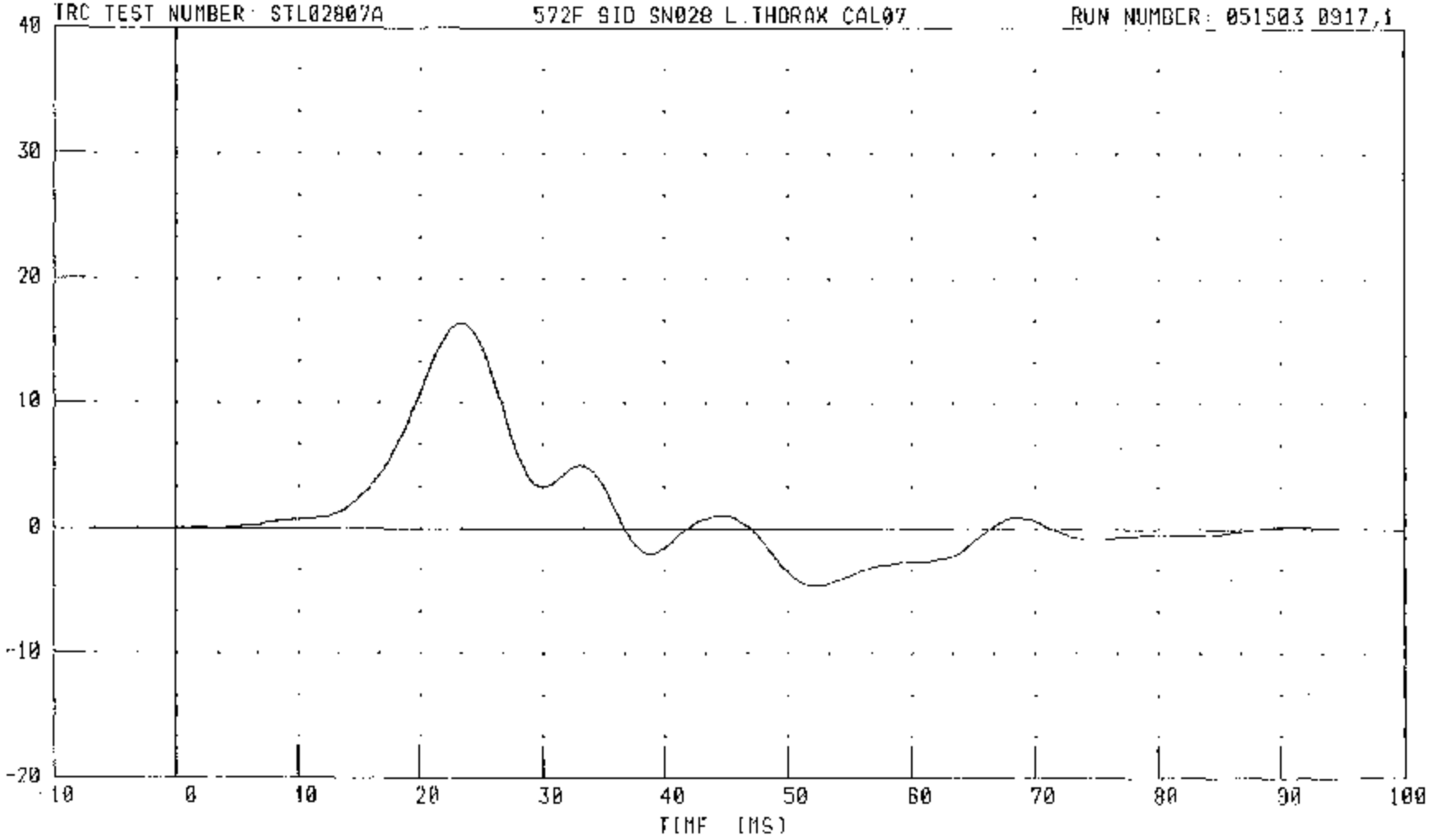


030505-1

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LOWER SPINE ACCELERATION Y AXIS

TRC TEST NUMBER: STL02807A 572F SID SN028 L.THORAX CAL07 RUN NUMBER: 051503 0917,1



CHANNEL: 112YG FILTER: FIR 100 PEAK DATA: 16.44 G @ 23.13 MS; -4.59 G @ 52.50 MS

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030505-1

TRANSPORTATION RESEARCH CENTER INC.

LUMBAR FLEXION TEST

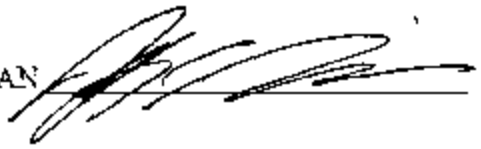
SID PART 572B

CAL DATE: 15-May-03

TRC, INC. **TEST NO: 028C07LF1** **572B SN 028 TORSO FLEX CAL 07**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.7 °C
RELATIVE HUMIDITY	10 – 70 %	46 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	137.9 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	186.8 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	222.4 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	6 °

TEST MEETS SPECIFICATIONS

TECHNICIAN 

Transportation Research Center Inc.

572B Abdomen Compression Test

HIII SID Serial No. 028 Calibration No. 07 - 1

Test Date 05/15/2003

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	48 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.4 - 8.0 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

Approved

05.15.2003 15:20:01 60

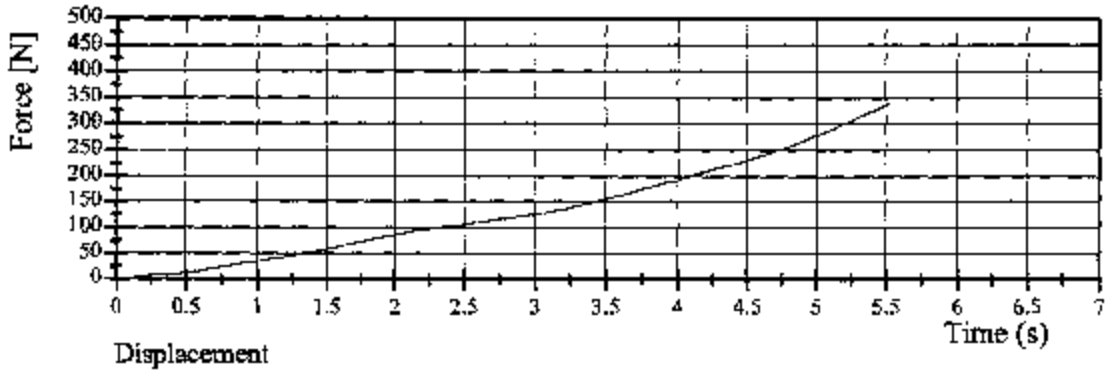
Transportation Research Center Inc.

572B Abdomen Compression Test

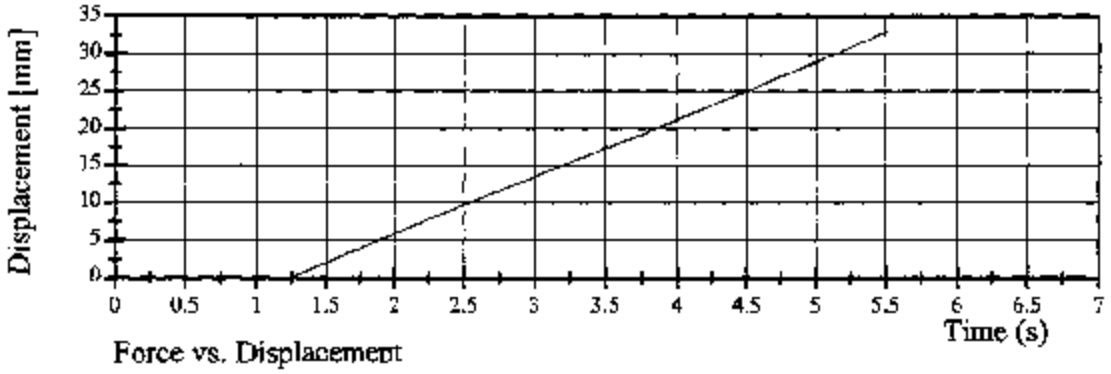
HIII SID Serial No. 028 Calibration No. 07 - 1

Test Date 05/15/2003

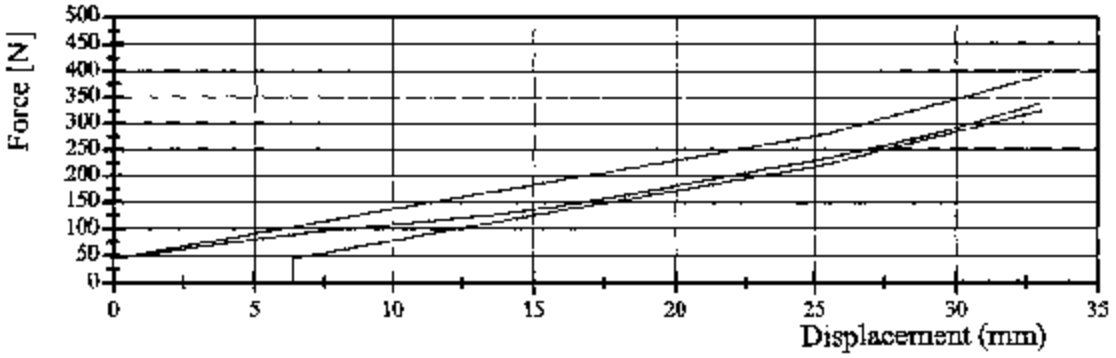
Force



Displacement



Force vs. Displacement



05.15.2003 15:19:56 60

TRANSPORTATION RESEARCH CENTER INC.

LATERAL PELVIS IMPACT TEST

SIDE IMPACT DUMMY 15-MAY-03

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: SPL02807 572F SN028 LEFT PELVIS CAL07

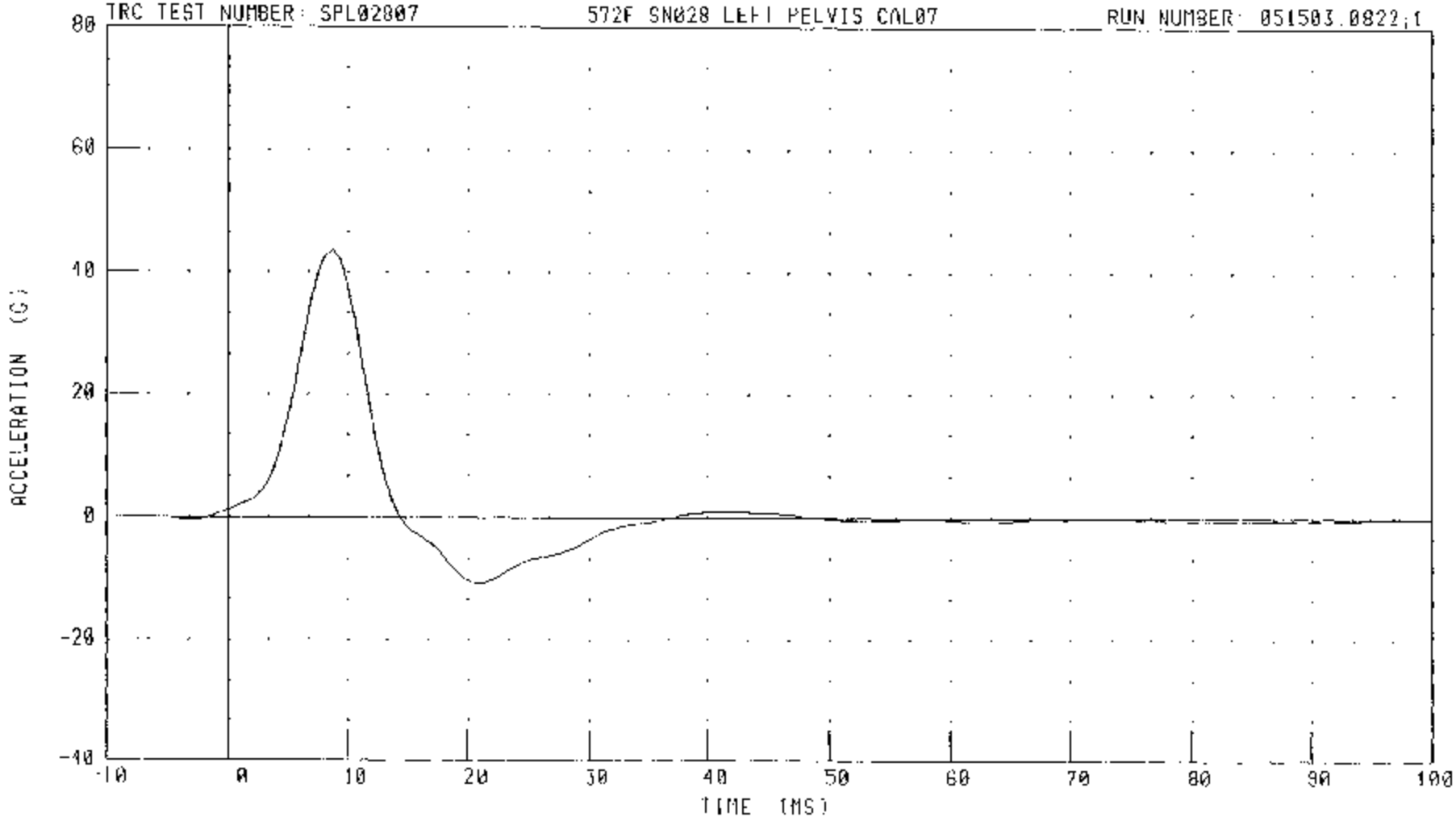
TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	47.0 %
PENDULUM VELOCITY	4.21 - 4.33 M/S	4.28 M/S
PEAK PELVIC ACCELERATION	40 - 60 G	43.8 G
TIME ABOVE 20 G LEVEL	3 - 7 MS	6.3 MS
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 051503.0822;1

PART 572-F S.I.D. PELVIS CALIBRATION (LEFT SIDE IMPACT)

PELVIS ACCELERATION Y AXIS

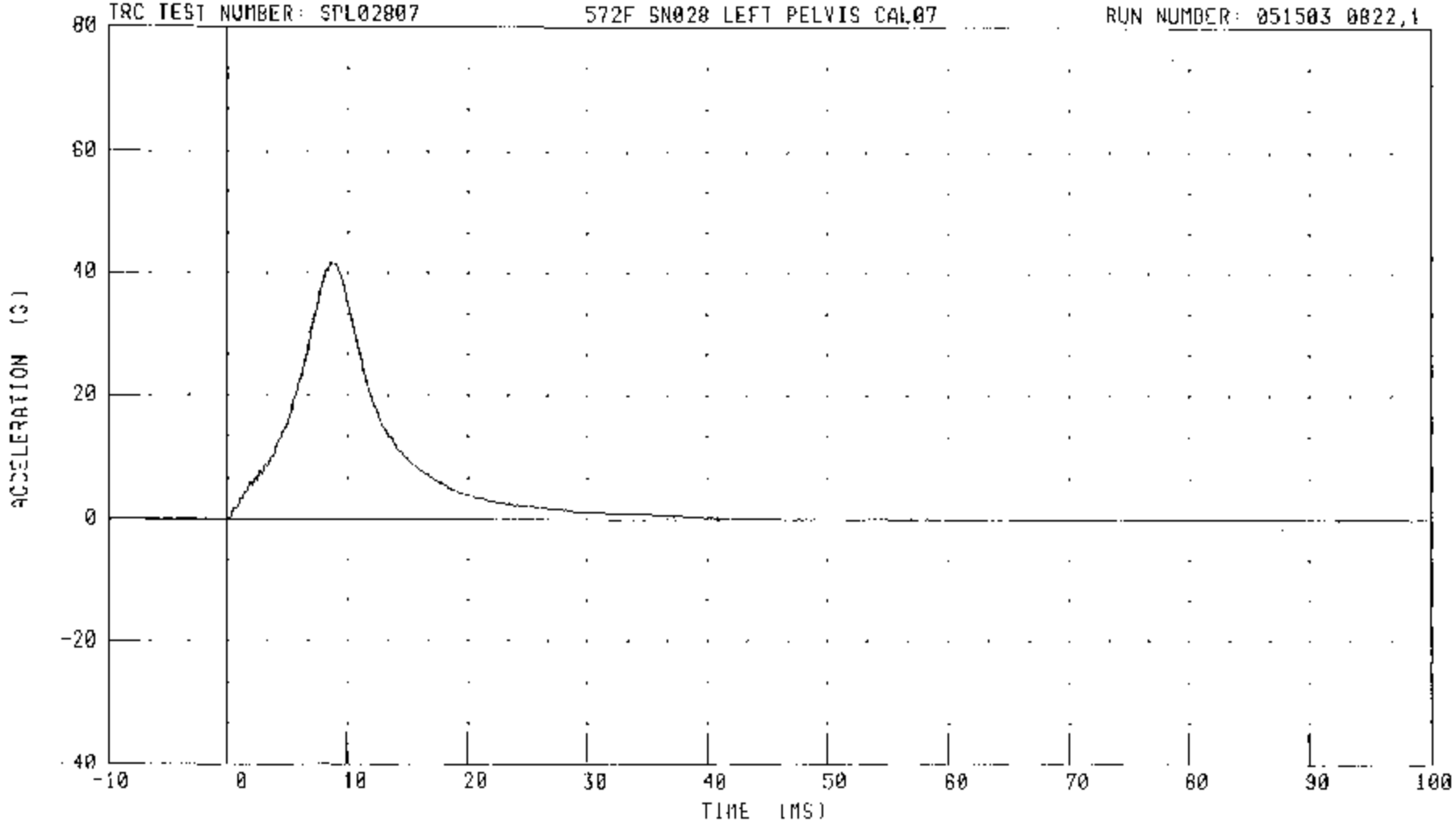


CHANNEL: PFVYC FILTER: FIR 180 PEAK DATA: 43.78 G @ 8.75 MS; -10.71 G @ 20.62 MS

030505-1

PART 572-F S.I.D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)

PENDULUM DECELERATION



C-124

030503-1

Type: HIII SID S/N: 066 Mfr: Denton Test Date: 05/05/03

Proj./Seg. No.: 20020455-1160 Test Eng.: G. Watters

ITEM	PRE-USE	
HEAD:		
Head Ballast Condition	X	
Accel. Mount Bolts and Cables	X	
Skull Cap Bolts	X	
Head Skin Condition	X	
Accel. Cable Exit (left or right)	(Left) N/A	(Right) N/A
NECK:		
Rubber Condition and Separation From End Caps	X	
THORAX: Left Side Configuration		
Stacked Shoulder Foams and Bolts	X	
* Rib Cage Spring and Support Assembly	X	
* Rib Cage Bolts	X	
* Damper Rear Attachment Ring, Pivot Pins, and Bracket	X	
* Location and Adjustment of Chest Pot Bracket and Collars	X	
* Chest Pot Rod End Nuts and Eyebolt	X	
Arm Foam Orientation	X	
Thorax/Lumbar Spine Bolts	X	
PELVIS:		
Tightness and Alignment of H-Point Tool Insert	X	
* Hips Range of Motion and 1-2g Adjustment (before calibration only)	X	
Upper Femur Bolt Adjustment and Position	X	
Check Spine Kits (Yellow tape = Kits/No tape = No kits)	(With) X	(Without)
LEGS AND FEET:		
Femur Load Cell Bolts (40 ft/lbs)	X	
Breakaway Femur Bolts (5-6 ft/lbs)	X	
Knee Joint Function and Range of Motion	X	
Leg Skin Condition and Position	X	
Ankle Range of Motion	X	
Foot Condition	X	
OTHER:		
Cleanliness	X	
Target Position	X	
Clothes	X	
Shoes	X	
Knee & Ankle One G Joint Adjustments	X	

Inspection Completed By: J. Clarridge Date: 05/02/03

Type: Hill SID S/N: 028 Mfr: Vector Test Date: 05/05/03

Proj./Seg. No.: 20020455-1160 Test Eng.: G. Watters

ITEM	PRE-USE	
HEAD:		
Head Ballast Condition	X	
Accel. Mount Bolts and Cables	X	
Skull Cap Bolts	X	
Head Skin Condition	X	
Accel. Cable Exit (left or right)	(Left) N/A	(Right) N/A
NECK:		
Rubber Condition and Separation From End Caps	X	
THORAX: Left Side Configuration		
Stacked Shoulder Foams and Bolts	X	
* Rib Cage Spring and Support Assembly	X	
* Rib Cage Bolts	X	
* Damper Rear Attachment Ring, Pivot Pins, and Bracket	X	
* Location and Adjustment of Chest Pot Bracket and Collars	X	
* Chest Pot Rod End Nuts and Eyebolt	X	
Arm Foam Orientation	X	
Thorax/Lumbar Spine Bolts	X	
PELVIS:		
Tightness and Alignment of H-Point Tool Insert	X	
* Hips Range of Motion and 1-2g Adjustment (before calibration only)	X	
Upper Femur Bolt Adjustment and Position	X	
Check Spine Kits (Yellow tape = Kits/No tape = No kits)	(With) X	(Without)
LEGS AND FEET:		
Femur Load Cell Bolts (40 ft/lbs)	X	
Breakaway Femur Bolts (5-6 ft/lbs)	X	
Knee Joint Function and Range of Motion	X	
Leg Skin Condition and Position	X	
Ankle Range of Motion	X	
Foot Condition	X	
OTHER:		
Cleanliness	X	
Target Position	X	
Clothes	X	
Shoes	X	
Knee & Ankle One G Joint Adjustments	X	

Inspection Completed By: J. Clarridge Date: 05/02/03

Transportation Research Center Inc. SID Post-Use Inspection

Type: HIII SID S/N: 066 Mfr: Denton Test Date: 05/05/03

Proj./Seg. No.: 20020455-1160 Test Eng.: G. Watters

ITEM	POST-USE
HEAD:	
Head Skin Condition	X
Head Ballast Condition	X
NECK:	
Rubber Condition and Separation From End Caps	X
THORAX: Left Side Configuration	
Jacket Condition	X
Arm Foam Condition	X
Damper and Chest Pot Movement and Condition	X
Rib Cage Spring and Support Assembly Condition	X
Rib Wrap Condition	X
Abdomen condition	X
Thorax/Lumbar Spine Bolts	X
Lumbar Spine Condition and Separation From End Caps	X
PELVIS:	
Illiac Crest bone	X
Flesh Condition	X
Hip Range of Motion	X
LEGS AND FEET:	
Knee Skins and Castings Condition	X
Leg Skin Condition	X
Foot Condition	X
Knee Joint Range of Motion	X
Ankle Range of Motion	X

NOTES: No damage to report.

Inspection Completed By: J. Clatridge Date: 05/12/03

Type: HIII SID S/N: 028 Mfr: Vector Test Date: 05/05/03

Proj./Seg. No.: 20020455-1160 Test Eng.: G. Watters

ITEM	POST-USE
HEAD:	
Head Skin Condition	X
Head Ballast Condition	X
NECK:	
Rubber Condition and Separation From End Caps	X
THORAX: Left Side Configuration	
Jacket Condition	X
Arm Foam Condition	X
Damper and Chest Pot Movement and Condition	X
Rib Cage Spring and Support Assembly Condition	X
Rib Wrap Condition	X
Abdomen condition	X
Thorax/Lumbar Spine Bolts	X
Lumbar Spine Condition and Separation From End Caps	X
PELVIS:	
Illiac Crest bone	X
Flesh Condition	X
Hip Range of Motion	X
LEGS AND FEET:	
Knee Skins and Castings Condition	X
Leg Skin Condition	X
Foot Condition	X
Knee Joint Range of Motion	X
Ankle Range of Motion	X

NOTES: No damage to report.

Inspection Completed By: J. Clarridge Date: 05/12/03

Appendix D

Test Equipment List and Calibration Information

Sign Convention
SAE J211 MAR95

Accelerometers:	+X: Forward	
	+Y: Rightward	
	+Z: Downward	
Potentiometers:	+Chest longitudinal deflection:	Outward
	+Chest lateral deflection:	Rightward
	+Seat belt displacement:	Outward
	+Seat belt extension:	Elongation
	+Knee slider displacement:	Distance between femur and tibia increased (in relation to a seated dummy)
Rotation potentiometers:		
	+About the X-axis:	Left foot-eversion
		Right foot-inversion
	+About the Y-axis:	Left/right foot-dorsiflexion
	+About the Z-axis:	Left foot-internal
		Right foot-external
Load cells:	+Femur force:	Tension
	+Seat belt force:	Tension
	+Barrier force:	Tension
Neck load cells:	+X force:	Head pushed rearward
	+Y force:	Head pushed leftward
	+Z force:	Head pulled upward (tension on neck)
	+X moment:	Left ear rotating toward left shoulder
	+Y moment:	Chin rotating toward chest
	+Z moment:	Chin rotating toward left shoulder
Tibia load cells:	+X force:	Ankle forward, knee rearward
	+Y force:	Ankle rightward, knee leftward
	+Z force:	Tension
	+X moment:	Bottom of tibia moving leftward
	+Y moment:	Bottom of tibia moving rearward

Lumbar load cells:	+X force:	Chest rearward, pelvis forward
	+Y force:	Chest leftward, pelvis rightward
	+Z force:	Chest upward, pelvis downward
	+X moment:	Left shoulder toward left hip
	+Y moment:	Sternum toward front of legs
	+Z moment:	Right shoulder forward, left shoulder rearward

Frequency Response Classes
SAE J211 MAR95

Typical Test Measurements	Channel Class
Vehicle Structural Accelerations for use in:	
Total vehicle comparison	60
Collision simulation input	60
Component analysis	600
Integration for velocity or displacement	180
Barrier Face Forces	60
Belt Restraint System Loads	60
Anthropomorphic Test Device	
Head accelerations (linear and angular)	1000
Neck	
Forces	1000
Moments	600
Thorax	
Spine accelerations	180
Rib accelerations	1000
Sternum accelerations	1000
Deflections	600
Lumbar	
Forces	1000
Moments	1000
Pelvis	
Accelerations	1000
Forces	1000
Moments	1000
Femur/Knee/Tibia/Ankle	
Forces	600
Moments	600
Displacements	180
Sled Accelerations	60
Steering Column Loads	600
Head form Accelerations	1000

The direction column on the following sheets describes the transducer output as mounted and wired in the test location. The polarity column indicates whether a polarity change occurred during data acquisition to conform to J211 MAR95. See Report Sign Convention sheet for description of data output as presented in the report: occasionally channels have been adjusted in post-acquisition processing to conform to J211 MAR95.

Channel Report

5/16/2003 1:10:37 PM

Name of Test 030505-1 **System** MINIDAU **Name of DAU** DAUA

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	J26980	HEDXG1	Head Accel X	Rwd	790.56265	g	-	3/11/2003	OK	066mlr	Endevco	7264-2000TZ
0002	J27048	HEDYG1	Head Accel Y	Lft	800.20005	g	-	3/11/2003	OK	066mlr	Endevco	7264-2000TZ
0003	J26896	HEDZG1	Head Accel Z	Up	788.48078	g	-	3/11/2003	OK	066mlr	Endevco	7264-2000TZ
0004	P22890	HEDXR1	Head Accel X Red	Rwd	796.35419	g	-	3/11/2003	OK	066mlr	Endevco	7264C-2K-2-180
0005	P16213	HEDYR1	Head Accel Y Red	Lt	805.41135	g	-	3/11/2003	OK	066mlr	Endevco	7264C-2K-2-180
0006	P18941	HEDZR1	Head Accel Z Red	Up	808.42530	g	-	3/11/2003	OK	066mlr	Endevco	7264C-2K-2-180
0007	1716A-1220-FX	NEKXF1	Neck Force X	Hd	8898.1070	N	-	3/10/2003	OK	066mlr	Denton	1716A
0008	1716A-1220-FY	NEKYF1	Neck Force Y	Hd	8909.1398	N	+	3/10/2003	OK	066mlr	Denton	1716A
0009	1716A-1220-FZ	NEKZF1	Neck Force Z	Hd	13367.953	N	+	3/10/2003	OK	066mlr	Denton	1716A
0010	1716A-1220-MX	NEKXM1	Neck Moment X	Rt Ear	283.36569	N·m	-	3/10/2003	OK	066mlr	Denton	1716A
0011	1716A-1220-MY	NEKYM1	Neck Moment Y	Chn	283.17739	N·m	+	3/10/2003	OK	066mlr	Denton	1716A
0012	1716A-1220-MZ	NEKZM1	Neck Moment Z	Chn	282.90480	N·m	+	3/10/2003	OK	066mlr	Denton	1716A
0013	P24511	LURYG1	Left Upper Rib Y	Rgt	799.87501	g	+	11/21/2002	OK	066mlr	Endevco	7264C-2K-2-180
0014	P21652	LURYR1	Left Upper Rib Red Y	Rgt	803.23805	g	+	11/21/2002	OK	066mlr	Endevco	7264C-2K-2-180
0015	P25829	LLRYG1	Left Lower Rib Y	Rgt	798.32849	g	+	3/20/2003	OK	066mlr	Endevco	7264C-2K-2-180
0016	P24627	LLRYR1	Left Lower Rib Red Y	Rgt	801.56555	g	+	11/21/2002	OK	066mlr	Endevco	7264C-2K-2-180
0017	P21635	T12YG1	Lower Spine Y	Lft	401.99742	g	-	11/21/2002	OK	066mlr	Endevco	7264C-2K-2-180
0018	P24564	T12YR1	Lower Spine Red Y	Lft	401.56862	g	-	11/21/2002	OK	066mlr	Endevco	7264C-2K-2-180
0019	P24393	PEVYG1	Pelvis Accel Y	Lft	401.26964	g	-	11/21/2002	OK	066mlr	Endevco	7264C-2K-2-180
0020	P25824	PEVYR1	Pelvis Accel Red Y	Lft	397.34277	g	-	3/20/2003	OK	066mlr	Endevco	7264C-2K-2-180
0021	P25307	HEDXG4	Head Accel X	Rwd	809.10240	g	-	1/22/2003	OK	028mlr	Endevco	7264C-2K-2-180
0022	P25326	HEDYG4	Head Accel Y	Lft	808.84676	g	-	1/22/2003	OK	028mlr	Endevco	7264C-2K-2-180
0023	P25298	HEDZG4	Head Accel Z	Up	807.64741	g	-	1/22/2003	OK	028mlr	Endevco	7264C-2K-2-180
0024	P25318	HEDXR4	Head Accel X Red	Rwd	810.61397	g	-	1/22/2003	OK	028mlr	Endevco	7264C-2K-2-180
0025	P25301	HEDYR4	Head Accel Y Red	Lt	802.80983	g	-	1/22/2003	OK	028mlr	Endevco	7264C-2K-2-180
0026	P25305	HEDZR4	Head Accel Z Red	Up	807.23993	g	-	1/21/2003	OK	028mlr	Endevco	7264C-2K-2-180
0027	1716A-1535-FX	NEKXF4	Neck Force X	Hd	8891.7626	N	-	3/21/2003	OK	028mlr	Denton	1716A
0028	1716A-1535-FY	NEKYF4	Neck Force Y	Hd	8889.1703	N	+	3/21/2003	OK	028mlr	Denton	1716A
0029	1716A-1535-FZ	NEKZF4	Neck Force Z	Hd	13358.833	N	+	3/21/2003	OK	028mlr	Denton	1716A
0030	1716A-1535-MX	NEKXM4	Neck Moment X	Rt Ear	282.62505	N·m	-	3/21/2003	OK	028mlr	Denton	1716A
0031	1716A-1535-MY	NEKYM4	Neck Moment Y	Chn	283.29670	N·m	+	3/21/2003	OK	028mlr	Denton	1716A
0032	1716A-1535-MZ	NEKZM4	Neck Moment Z	Chn	282.83189	N·m	+	3/21/2003	OK	028mlr	Denton	1716A

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Channel Report

5/16/2003 1:10:37 PM

Name of Test 030505-1 **System** MINIDAU **Name of DAU** DAUB

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	P25231	LURYG4	Left Upper Rib Y	Rgt	806.24842	g	+	12/13/2002	OK	028nlr	Endevco	7264C-2K-2-180
0002	J27507	LURYR4	Left Upper Rib Red Y	Rgt	808.38701	g	+	3/18/2003	OK	028nlr	Endevco	7264-2KM5T
0003	P25075	LLRYG4	Left Lower Rib Y	Rgt	801.25195	g	+	12/19/2002	OK	028nlr	Endevco	7264C-2K-2-180
0004	P25076	LLRYR4	Left Lower Rib Red Y	Rgt	797.43326	g	+	12/19/2002	OK	028nlr	Endevco	7264C-2K-2-180
0005	P25261	T12YG4	Lower Spine Y	Lft	401.56862	g	-	11/21/2002	OK	028nlr	Endevco	7264C-2K-2-180
0006	P25374	T12YR4	Lower Spine Red Y	Lft	396.97923	g	-	12/19/2002	OK	028nlr	Endevco	7264C-2K-2-180
0007	P25063	PEVYG4	Pelvis Accel Y	Lft	400.40353	g	-	12/19/2002	OK	028nlr	Endevco	7264C-2K-2-180
0008	P25074	PEVYR4	Pelvis Accel Red Y	Lft	397.60196	g	-	12/19/2002	OK	028nlr	Endevco	7264C-2K-2-180
0009	03C03C14-F02	RFSZG1	RGT SIDE SILL FRNT ST Z	UP	402.83241	g	+	3/31/2003	OK	-1	Entran	EGE-73B6Q-200
0010	03C03C14-F18	RFSYG1	RGT SIDE SILL FRNT ST Y	LT	1007.2791	g	-	3/27/2003	OK	-1	Entran	EGE-73B6Q-200
0011	03C03C14-F20	RFSXG1	RGT SIDE SILL FRNT ST X	FWD	397.79348	g	-	3/27/2003	OK	-1	Entran	EGE-73B6Q-200
0012	03D03C27-N14	RRSXG1	RGT SIDE SILL RR ST X	FWD	401.60012	g	+	4/3/2003	---	-1	Entran	EGE-73B6Q-200
0013	03D03C27-N11	RRSYG1	RGT SIDE SILL RR ST Y	LT	989.37198	g	-	4/3/2003	OK	-1	Entran	EGE-73B6Q-200
0014	03D03C27-N10	RRSZG1	RGT SIDE SILL RR ST Z	UP	400.87691	g	-	4/3/2003	OK	-1	Entran	EGE-73B6Q-200
0015	03C03C14-N20	RDKXG1	RR FLRPAN ABV AXLE X	FWD	1011.0584	g	+	3/28/2003	OK	-1	Entran	EGE-73B6Q-200
0016	03D03C27-N05	RDKYG1	RR FLRPAN ABV AXLE Y	LT	989.37198	g	-	4/3/2003	OK	-1	Entran	EGE-73B6Q-200
0017	03C03C14-N13	RDKZG1	RR FLRPAN ABV AXLE Z	UP	979.15471	g	-	3/24/2003	OK	-1	Entran	EGE-73B6Q-200
0018	03D03C28-N13	LRSYG1	LFT SIDE SILL RR ST Y	RT	1006.2893	g	+	4/3/2003	OK	-1	Entran	EGE-73B6Q-200
0020	03D03C27-N09	LFSYG1	LFT SIDE SILL FRNT ST Y	RT	1013.8613	g	+	5/15/2003	OK	-1	Entran	EGE-73B6Q-200
0021	03D03C28-N25	RRTYG1	RGT RR OCP COMP Y	LT	1458.6894	g	-	5/16/2003	OK	-1	Entran	EGE-73B6Q-200
0022	03C03C14-N02	LLBYG1	LFT LOWER B-POST Y	RT	1544.4947	g	+	5/12/2003	OK	-1	Entran	EGE-73B6Q-200
0023	03C03C14-N18	LUBYG1	LFT MID B-POST Y	RT	1538.4615	g	+	3/21/2003	OK	-1	Entran	EGE-73B6Q-200
0024	03D03C27-N28	LLAYG1	LFT LOWER A-POST Y	LT	1513.4496	g	-	5/15/2003	OK	-1	Entran	EGE-73B6Q-200
0025	03D03C28-N08	LUAYG1	LFT MID A-POST Y	LT	1495.3271	g	-	5/9/2003	OK	-1	Entran	EGE-73B6Q-200
0026	03D03C27-N17	LFTYG1	LFT FRNT ST TRK Y	RT	1545.8937	g	+	4/3/2003	OK	-1	Entran	EGE-73B6Q-200
0027	03D03C27-N01	LRTYG1	LFT RR ST TR Y	LT	1458.6894	g	-	5/15/2003	OK	-1	Entran	EGE-73B6Q-200
0028	03D03C28-N05	VCGXG1	VEH C/G X	FWD	994.56099	g	+	5/15/2003	OK	-1	Entran	EGE-73B6Q-200
0029	03D03C28-N11	VCGYG1	VEH C/G Y	RT	996.88473	g	+	4/4/2003	OK	-1	Entran	EGE-73B6Q-200
0030	03D03C28-N04	VCGZG1	VEH C/G Z	UP	984.61538	g	-	4/4/2003	OK	-1	Entran	EGE-73B6Q-200

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030505-1

Channel Report

5/16/2003 1:10:37 PM

Name of Test 030505-1 **System** MINIDAU **Name of DAU** DAUC

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	03C03C14-F23	BCGXG1	MDB CG X	FWD	604.27239	g	+	3/27/2003	OK	-1	Entran	EGE-73B6Q-200
0002	03C03C14-N27	BCGYG1	MDB CG Y	RT	600.37523	g	+	3/24/2003	OK	-1	Entran	EGE-73B6Q-200
0003	P23459	BCGZG1	MDB CG Z	UP	596.45852	g	-	3/3/2003	OK	-1	Endevco	7264C-2K-2-180
0004	P23362	LRRXG1	MDB L RR X	RR	606.49135	g	-	3/3/2003	OK	-1	Endevco	7264C-2K-2-180
0005	P23460	LRRYG1	MDB L RR Y	RT	605.37268	g	+	3/3/2003	OK	-1	Endevco	7264C-2K-2-180
0006	EVENT	EVENT	EVENT		5.12	V	+	10/15/2002	OK	-1	TRC	Event

Digital and System Channel Report

2003-05-05 07:47:09

Name of Test 030505-1 **System** MINIDAU **Name of DAU** DAUA **descriptio**

enable	Channel	Short Name	Type	Data File	Module Type
Yes	0501	DIGA	dig0	DATA0501	KM3710 Controller

bit position	bit	short	long	descriptio
MSB = bit 15	1	SHLET1	D SHOULER CONTACT SWT	A
bit 14	1	PEVET1	D PELVIS CONTACT SWT	B
bit 13	1	SHLET4	P SHOULDER CONTACT SWT	C
bit 12	1	PEVET4	P PELVIS CONTACT SWT	D
bit 11	0			
bit 10	0			
bit 09	0			
bit 08	0			
bit 07	0			
bit 06	0			
bit 05	0			
bit 04	0			
bit 03	0			
bit 02	0			
bit 01	0			
LSB = bit 00	0			

Digital and System Channel Report

2003-05-05 07:47:10

Name of Test 030505-1 **System** MINIDAU **Name of DAU** DAUC **descriptio**

enable	Channel	Short Name	Type	Data File	Module Type
Yes	0501	DIGC	dig0	DATC0501	KM3710 Controller

bit position	bit	short	long	descriptio
MSB = bit 15	1	MDBR1	MDB R CONTACT SWT	1
bit 14	1	MDBL1	MDB L CONTACT SWT	2
bit 13	0			
bit 12	0			
bit 11	0			
bit 10	0			
bit 09	0			
bit 08	0			
bit 07	0			
bit 06	0			
bit 05	0			
bit 04	0			
bit 03	0			
bit 02	0			
bit 01	0			
LSB = bit 00	0			

Dummy 028nlr **Type** SID/H3 **Descriptio** NHTSA - 028n SID-LEFT IMP. CONFIG. w/RED ACCELS CAL DUE 6-19-03(DKS

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264C-2K-2-18	P25307	Endevco	0.01808	g	2000	1/22/2003	Rwd	1
HEDYG	Head Accel Y	7264C-2K-2-18	P25326	Endevco	0.0211	g	2000	1/22/2003	Lft	1
HEDZG	Head Accel Z	7264C-2K-2-18	P25298	Endevco	0.02186	g	2000	1/22/2003	Up	1
HEDXR	Head Accel X Red	7264C-2K-2-18	P25318	Endevco	0.01914	g	2000	1/22/2003	Rwd	1
HEDYR	Head Accel Y Red	7264C-2K-2-18	P25301	Endevco	0.01993	g	2000	1/22/2003	Lt	1
HEDZR	Head Accel Z Red	7264C-2K-2-18	P25305	Endevco	0.02046	g	2000	1/21/2003	Up	1
NEKXF	Neck Force X	1716A	1716A-1535-FX	Denton	0.000185746	N	8896.4	3/21/2003	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716A	1716A-1535-FY	Denton	0.000181126	N	8896.4	3/21/2003	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716A	1716A-1535-FZ	Denton	0.000093708	N	13344.6	3/21/2003	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716A	1716A-1535-MX	Denton	0.00580637	N-	282.5	3/21/2003	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716A	1716A-1535-MY	Denton	0.005701238	N-	282.5	3/21/2003	Chn to Strnm	0
NEKZM	Neck Moment Z	1716A	1716A-1535-MZ	Denton	0.008154336	N-	282.5	3/21/2003	Chn to Lt Shld	0
LURYG	Left Upper Rib Y	7264C-2K-2-18	P25231	Endevco	0.01764	g	2000	12/13/2002	Rgt	0
LURYR	Left Upper Rib Red Y	7264-2KM5T	J27507	Endevco	0.02639	g	2000	3/18/2003	Rgt	0
LLRYG	Left Lower Rib Y	7264C-2K-2-18	P25075	Endevco	0.01775	g	2000	12/19/2002	Rgt	0
LLRYR	Left Lower Rib Red Y	7264C-2K-2-18	P25076	Endevco	0.01566	g	2000	12/19/2002	Rgt	0
T12YG	Lower Spine Y	7264C-2K-2-18	P25261	Endevco	0.017	g	2000	11/21/2002	Lft	1
T12YR	Lower Spine Red Y	7264C-2K-2-18	P25374	Endevco	0.02186	g	2000	12/19/2002	Lft	1
PEVYG	Pelvis Accel Y	7264C-2K-2-18	P25063	Endevco	0.01801	g	2000	12/19/2002	Lft	1
PEVYR	Pelvis Accel Red Y	7264C-2K-2-18	P25074	Endevco	0.01764	g	2000	12/19/2002	Lft	1

Dummy 066nlr **Type** SID **Descriptio** NHTSA - 066n SID-LEFT IMP.W/ RED ACCELS CAL DUE 5-21-03(DKS 4-25-03)3211

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264-2000TZ	J26980	Endevco	0.03084	g	2000	3/11/2003	Rwd	1
HEDYG	Head Accel Y	7264-2000TZ	J27048	Endevco	0.02666	g	2000	3/11/2003	Lft	1
HEDZG	Head Accel Z	7264-2000TZ	J26896	Endevco	0.02405	g	2000	3/11/2003	Up	1
HEDXR	Head Accel X Red	7264C-2K-2-18	P22890	Endevco	0.02217	g	2000	3/11/2003	Rwd	1
HEDYR	Head Accel Y Red	7264C-2K-2-18	P16213	Endevco	0.0163	g	2000	3/11/2003	Lt	1
HEDZR	Head Accel Z Red	7264C-2K-2-18	P18941	Endevco	0.02043	g	2000	3/11/2003	Up	1
NEKXF	Neck Force X	1716A	1716A-1220-FX	Denton	0.000194393	N	8896.4	3/10/2003	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716A	1716A-1220-FY	Denton	0.000189043	N	8896.4	3/10/2003	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716A	1716A-1220-FZ	Denton	0.000098459	N	13344.6	3/10/2003	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716A	1716A-1220-MX	Denton	0.006002832	N-m	282.5	3/10/2003	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716A	1716A-1220-MY	Denton	0.005908673	N-m	282.5	3/10/2003	Chn to Strnm	0
NEKZM	Neck Moment Z	1716A	1716A-1220-MZ	Denton	0.008456991	N-m	282.5	3/10/2003	Chn to Lt Shld	0
LURYG	Left Upper Rib Y	7264C-2K-2-18	P24511	Endevco	0.0173	g	2000	11/21/2002	Rgt	0
LURYR	Left Upper Rib Red Y	7264C-2K-2-18	P21652	Endevco	0.02198	g	2000	11/21/2002	Rgt	0
LLRYG	Left Lower Rib Y	7264C-2K-2-18	P25829	Endevco	0.03054	g	2000	3/20/2003	Rgt	0
LLRYR	Left Lower Rib Red Y	7264C-2K-2-18	P24627	Endevco	0.01825	g	2000	11/21/2002	Rgt	0
T12YG	Lower Spine Y	7264C-2K-2-18	P21635	Endevco	0.01873	g	2000	11/21/2002	Lft	1
T12YR	Lower Spine Red Y	7264C-2K-2-18	P24564	Endevco	0.01875	g	2000	11/21/2002	Lft	1
PEVYG	Pelvis Accel Y	7264C-2K-2-18	P24393	Endevco	0.01963	g	2000	11/21/2002	Lft	1
PEVYR	Pelvis Accel Red Y	7264C-2K-2-18	P25824	Endevco	0.03068	g	2000	3/20/2003	Lft	1

Side Impact Protection Compliance Test/030505-1
Humidity (%)
90
80
70
60
50
40
30
20
10
Temperature (C)
30
25
20
15
10
Time of Sample
12:42:40 05/02/03
16:42:40 05/02/03
20:42:40 05/02/03
0:42:40 05/03/03
4:42:40 05/03/03
8:42:40 05/03/03
12:42:40 05/03/03
16:42:40 05/03/03
20:42:40 05/03/03
0:42:40 05/04/03
4:42:40 05/04/03
8:42:40 05/04/03
12:42:40 05/04/03
16:42:40 05/04/03
20:42:40 05/04/03
0:42:40 05/05/03
4:42:40 05/05/03
8:42:40 05/05/03

PLASCORE

SIDE IMPACTOR BARRIER CERTIFICATION

Date: April 1, 2003

To: Transportation Research
Ship & Rec Bldg 50
10820 St. Route 347
East Liberty, OH 43319-0367

PURCHASE ORDER INFORMATION

Customer P.O. Number:	22964
Work Order Number:	16444
Quantity:	01 piece

CORE INFORMATION

Core Type:	PCGA-1/4-5.2-P-3003-T
Measured Cell Size:	0.250 inches
Measured Density:	5.2 pcf
Unit Number:	013C0203

This is to certify that the aluminum honeycomb core supplied, under the unit number provided, meets the crush requirements of 232 – 250 psi as per DWG# DSL-1285.

QA Plascore Accept 001

Quality Control Representative
Karl D. Zwaanstra

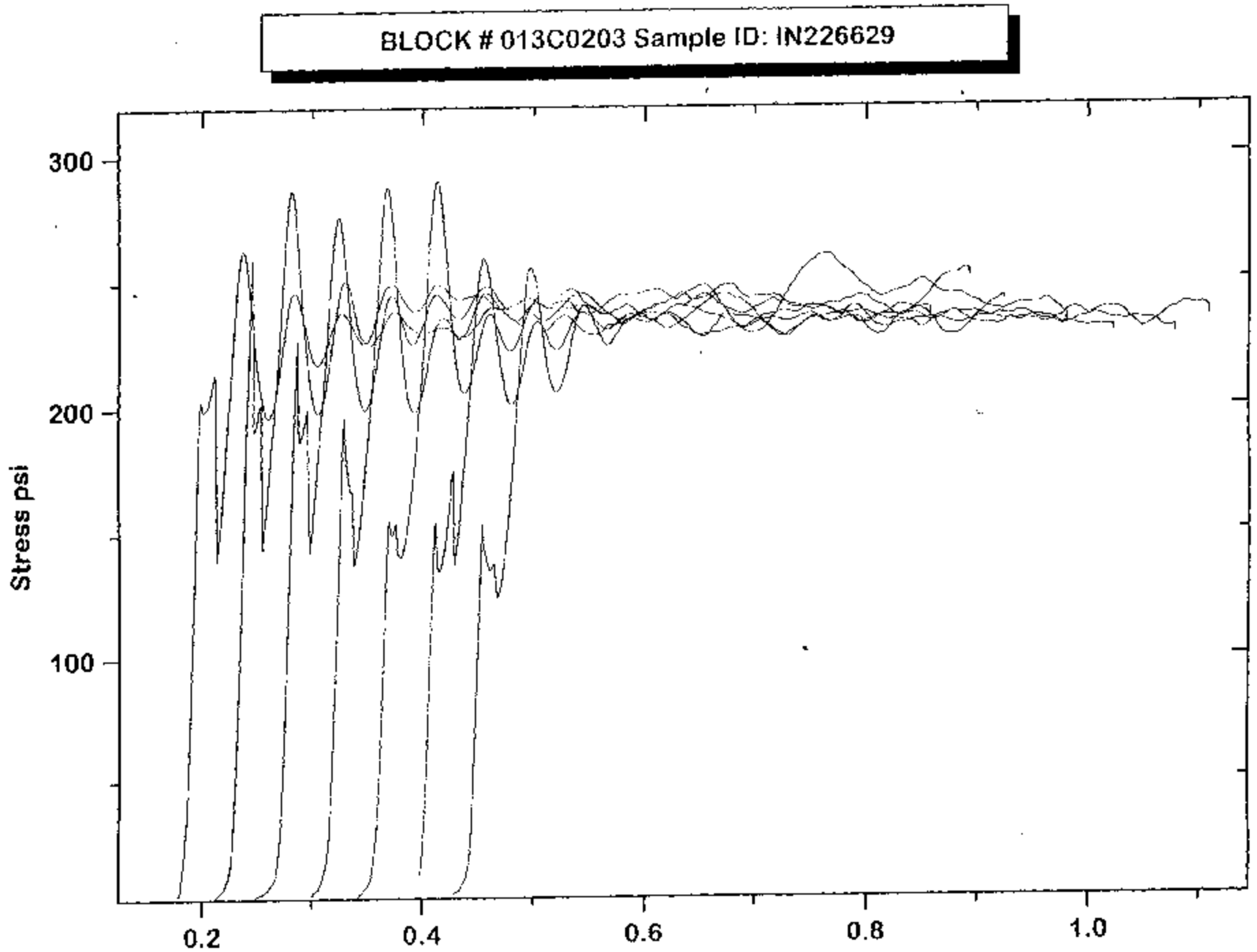
PLASCORE, INC. • 615 N. FAIRVIEW ST. • ZEELAND, MI 49464-0170 • PHONE: (616) 772-1220 • FAX: (616) 772 1289
WEBSITE: www.plascore.com • EMAIL: info@plascore.com

PLASCORE

Crush Data
232 - 250 psi per DWG # DSL-1285

Block Number: **013C0203**

Specimen Number	Zone 1	Zone 2	Zone 3
1	233.48	233.35	237.86
2	242.12	244.14	240.86
3	240.11	239.69	235.51
4	239.95	247.24	244.81
5	236.72	235.46	235.51
6	233.23	233.94	234.72
7	235.06	233.80	236.57


BLOCK # 013C0203 Sample ID: IN226629
Stress psi
300
200
100
0.2
0.4
0.6
0.8
1.0

PLASCORE

SIDE IMPACTOR BARRIER CERTIFICATION

Date: April 1, 2003

To: Transportation Research
Ship & Rec Bldg 50
10820 St. Route 347
East Liberty, OH 43319-0367

PURCHASE ORDER INFORMATION

Customer P.O. Number:	22964
Work Order Number:	16444
Quantity:	01 piece

CORE INFORMATION

Core Type:	PAMG-3/8-1.6-001-P-5052-T
Measured Cell Size:	0.375 inches
Measured Density:	1.6 pcf

Unit Number: 015A0303

This is to certify that the aluminum honeycomb core supplied, under the unit number provided, meets the crush requirements of 45 psi +/- 2.5 psi as per DWG# DSL-1285.

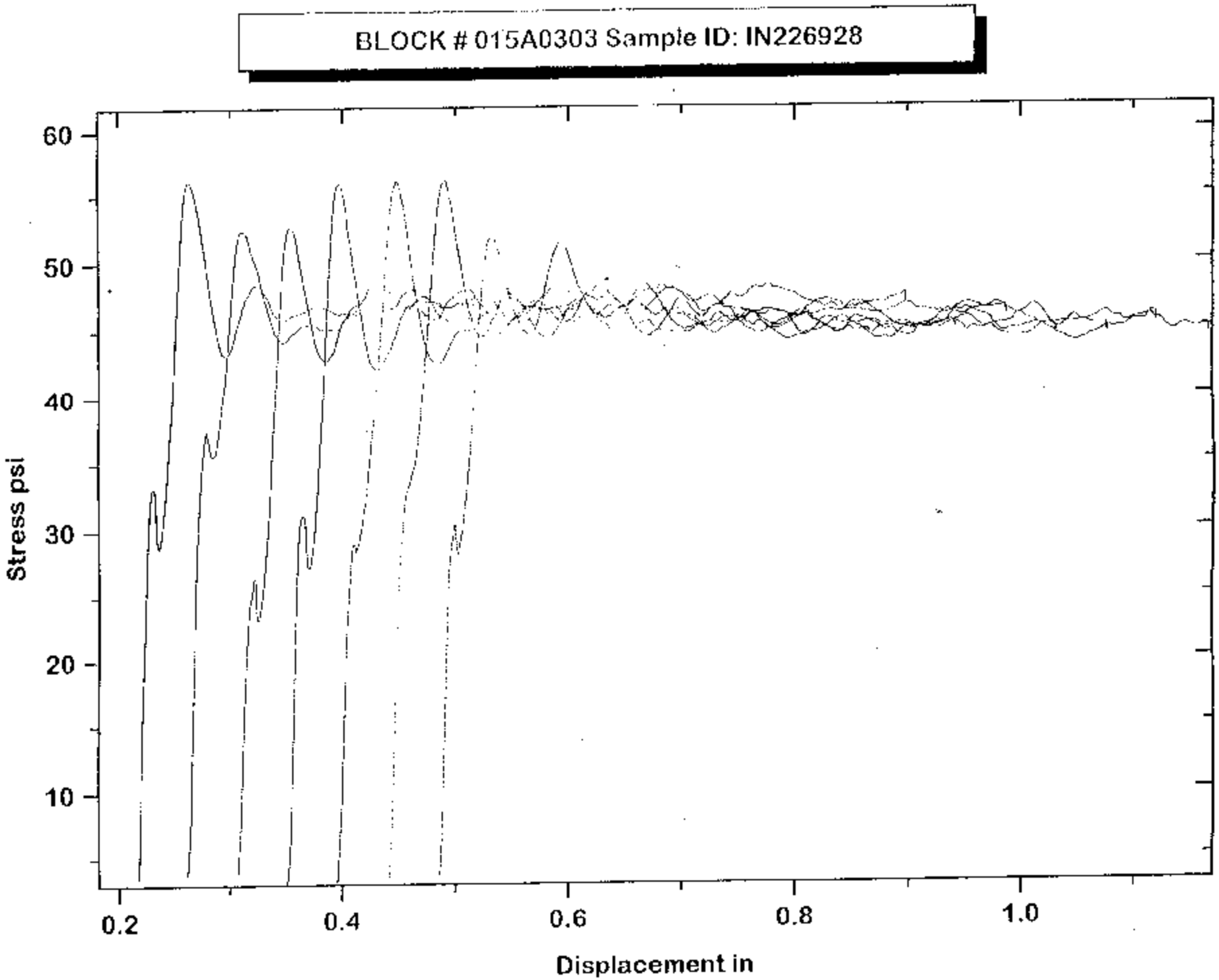
Quality Control Representative
Karl D. Zwaanstra

PLASCORE

Crush Data
45 psi +/- 2.5 psi per DWG # DSL-1285

Block Number: **015A0303**

Specimen Number	Zone 1	Zone 2	Zone 3
1	46.99	46.55	46.05
2	47.24	46.50	46.21
3	46.66	46.47	45.26
4	46.48	47.18	46.39
5	45.34	45.13	45.25
6	46.00	45.52	45.07
7	45.42	45.16	45.49


BLOCK # 015A0303 Sample ID: IN226928
Stress psi
60
50
40
30
20
10
0.2
0.4
0.6
0.8
1.0
Displacement in