

LØ8Ø

test report

General Motors Corporation
General Motors Proving Ground
Milford, Michigan 48042

TITLE

NHTSA MOVING BARRIER TO
PARKED VEHICLE - RIGHT SIDE
IMPACT AT 60°

SAFETY RESEARCH & DEVELOPMENT LAB
Current Product Engineering

PASSENGER CAR

REPORT NO. PG 48019 DATE May 15, 1985

TEST NO. C-6115

TEST REPORT

TYPE IMPACT

FRONT @ _____ 30° LEFT _____ 30° RIGHT _____
 VEHICLE TO VEHICLE STRIKING VEHICLE _____ STRUCK VEHICLE X
 VEHICLE TO _____
 OTHER _____

REPORT NO. PG _____
 SRDL TEST NO. C-6115
 TEST DATE 12/19/84

VEHICLE DESCRIPTION

MAKE	YEAR	BODY TYPE	BODY STYLE	DIVISION CAR NUMBER	BUILD STATUS
Oldsmobile	1983	J	3JC77	CC454	*Modified Production
ENGINE	CONFIGURATION	L4	DISPLACEMENT	2.0 L	STYLE
	FUEL	Gasoline			Bucket
	FUEL INDUCTION	Throttle body injection			** SEAT: ADJUSTER TYPE Manual
					TRIM MATERIAL Cloth
Spare Tire	TYPE	Removed prior to test			HEAD RESTRAINT TYPE Adjustable
FUEL TANK	USABLE CAP	NA	L	UNUSABLE CAP	NA
STRG. COL.	TILT OPTION	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	T&T OPTION	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	AC YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> P/S YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> P/B YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
SPECIAL FEATURES:			*Modified right front door, intrusion beam removed, Foam in inner and outer door trim panel, Figure 131-133.		
**Driver seat removed prior to test, Figure 130.					

TEST CONDITIONS

VEHICLE		DUMMIES	
VELOCITY AT IMPACT	55 km/h	MAKE	NO.
TEST MASS	FRONT 818 kg	TYPE	MASS kg
	LESS DUMMIES <input type="checkbox"/>	REAR 477 kg	RESTRAINT
	INCLUDING DUMMIES <input checked="" type="checkbox"/>	TOTAL 1295 kg	LAT. POS. mm RELATIVE TO
ENGINE RUNNING	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	MAKE	GM50S1
FUEL TANK	TEST VOLUME: CONTENTS Tank Empty	NO.	106
	NA % OF USABLE CAPACITY = NA L	TYPE	50th %ile Male
FUEL LINES & CARBURETOR	FILLED YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	MASS	70.3 kg
STEERING COLUMN	TILT POSITION NA	RESTRAINT	Manual lap/shoulder
	TELESCOPE POSITION NA	LAT. POS. 0 mm RELATIVE TO Seat	
SEAT	POSITION MID	MAKE	NO.
HEAD REST	POSITION DOWN	TYPE	MASS kg
VEHICLE ATTITUDE	J = DRIVER SIDE 235 mm / PASSENGER SIDE 233 mm	RESTRAINT	
	K = DRIVER SIDE 218 mm / PASSENGER SIDE 220 mm	LAT. POS. mm RELATIVE TO	
COMMENTS:		TEST CONFIGURATION:	

RECORDED DATA

VEHICLE DATA -- See Page 2		DUMMY DATA	
ROCKER PANEL AVERAGE ACCELERATION	FRAME ACCELERATION	DR	RF
FLOOR PAN AVERAGE ACCELERATION	ENGINE ACCELERATION	HEAD TRIAXIAL ACCELERATION	X
BARRIER FACE LOAD CELLS		CHEST TRIAXIAL ACCELERATION	X
STEERING COLUMN DISPLACEMENT		CHEST DEFLECTION	
RADIATOR TIE BAR ACCELERATION		PELVIC TRIAXIAL ACCELERATION	X
COWL ACCELERATION		FLOOR LOAD	
CRASH SENSORS		OUTBOARD LAP BELT LOAD	
STEERING COLUMN COMPRESSION		SHOULDER BELT LOAD	
VOLTAGES		NECK LOADS	
CURRENTS		SPINE TRIAXIAL ACCEL.	X
TOE PAN DISPLACEMENT		DUMMY CONTACTS	X
"A" PILLAR DISPLACEMENT		RIB LATERAL ACCELERATION	X
		RIB LATERAL DISPLACEMENT	X

PHOTOGRAPHIC COVERAGE

OFFBOARD	DRIVER SIDE	PASSENGER SIDE	X	OVERHEAD	X	HOOD		GLOVE BOX	
	UNDERBODY	X	FUEL TANK	OVERALL	X	DOCUMENTARY	X		
ONBOARD	UNDERDASH	DRIVER		RIGHT FRONT DISCREPANCY	X	STEERING COLUMN		DR FOOT BOARD	X

RECORDED VEHICLE DATA

(STRUCK VEHICLE)

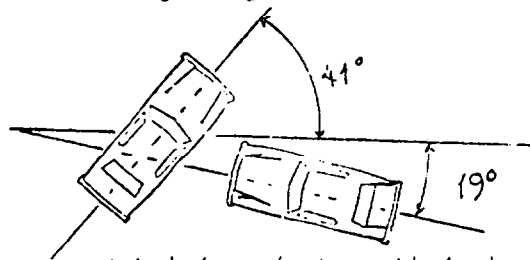
- o Right front door triaxial accelerations at Points A, B, C, and D
- o Driver side door lateral acceleration at Point A'
- o Right side 'B' pillar lateral displacement
- o Driver side floorpan triaxial acceleration
- o Right side trunk triaxial acceleration
- o Vehicle kinematics acceleration

(STRIKING VEHICLE)

- o Front triaxial acceleration
- o Mid triaxial acceleration
- o Vehicle kinematics acceleration

TEST CONFIGURATION

The longitudinal centerline of the striking vehicle is aligned with point "C" on the right front door of the struck vehicle. Point "C" is 303 mm rearward of the fiducial point. The bumper height of the striking vehicle was 394 mm from the bottom edge to ground.

TEST DUMMY MODIFICATION

The dummy's right arm, clavicle, shoulder clavicle, Ensolite chest pad, leather bib and all leather sternum stiffeners were removed prior to test. Padding to the right shoulder clavicle cavity, two rib potentiometers, one lower spine accelerometer and two rib accelerometers were added to the dummy for additional data. The total weight of the dummy was 70.3 kg.

STRIKING VEHICLE DESCRIPTION

NHTSA-developed crushable moving barrier with energy-absorbing face. The absorbing face was made of Hexcel and was developed to represent the crush characteristics of a 1980 GM X-body.

Test Weight: Front 897 kg, Rear 452 kg; Total 1349 kg.

STRUCK VEHICLE
TRANSDUCER LOCATIONS

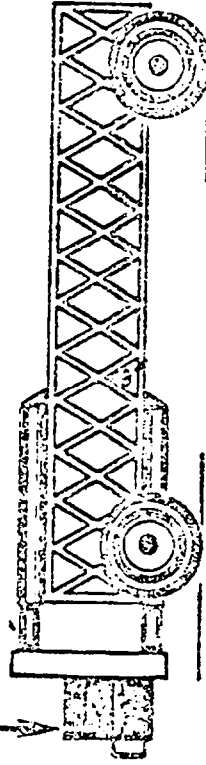
<u>POINT</u>	<u>Location of Point Measured</u>	<u>Coordinates Relative to Nearest Fiducial Point (mm)</u>	<u>Ref. Photo Fig. No.</u>
A	Right side door - inner panel, inner surface.	450 rwd, 504 up	<u>131-133</u>
A'	Driver side door - inner panel, inner surface.	450 rwd, 504 up	<u>Not Used</u>
B	Right side door - inner panel, inner surface.	376 rwd, 349 up	<u>131-133</u>
C	Right side door - inner panel, inner surface.	303 rwd, 194 up	<u>131-133</u>
D	Right side door - inner panel, inner surface.	102 rwd, 169 up	<u>131-133</u>
	Center 'B' pillar - inner panel, right side at beltline.	ND	
	Floor pan inner surface - driver side.	ND	
	Trunk inner surface - passenger side.	ND	

STRUCK VEHICLE DATA

<u>Residual Lateral Displacement</u>	<u>Displacement (mm)</u>
(Door Outer Surface)	
Right side door at occupant shoulder (Point A)	361
Right side door at occupant mid torso (Point B)	466
Right side door at occupant hip (Point C)	478
Right side door at occupant foot (Point D)	344
(Door Inner Surface)	
Right side door at occupant shoulder (Point A)	352
Right side door at occupant mid torso (Point B)	405
Right side door at occupant hip (Point C)	365
Right side door at occupant foot (Point D)	227

NHTSA-DEVELOPED ENERGY ABSORBING MOVING BARRIER CONCEPT

NHTSA-DEVELOPED
ENERGY ABSORBING FACE



WEIGHT - 2974 LBS

TEST RESULTS

(RESTDUAL CRUSH)

LEFT 0 mm

RIGHT 80 mm

CENTER 0 mm

ACCELERATIONS, VELOCITIES & DISPLACEMENTS (STRUCK VEHICLE)FIGURE
NUMBER

RIGHT FRONT DOOR AT POINT A, B, C, D:

1-12 ACCELERATIONS
1-24 1ST INTEGRATION OF ACCELERATION
1-36 2ND INTEGRATION OF ACCELERATION

DRIVER SIDE FLOORPAN:

1-39 ACCELERATIONS
1-42 1ST INTEGRATION OF ACCELERATION
1-45 2ND INTEGRATION OF ACCELERATION

RIGHT SIDE TRUNK:

1-48 ACCELERATIONS
1-51 1ST INTEGRATION OF ACCELERATION
1-54 2ND INTEGRATION OF ACCELERATION

DRIVER SIDE DOOR AT POINT A':

ACCELERATION
1ST INTEGRATION OF ACCELERATION
2ND INTEGRATION OF ACCELERATION

RIGHT SIDE 'B' PILLAR AT THE BELTLINE:

DISPLACEMENT
1ST DIFFERENTIATION OF DISPLACEMENT

VEHICLE INSTRUMENTATION (STRUCK VEHICLE)

NUMBER

RIGHT FRONT DUMMY:

HEAD ACCELERATION
CHEST ACCELERATION
PELVIC ACCELERATION
LOWER SPINE ACCELERATION
-65 RIB ACCELERATION
-67 RIB DISPLACEMENT
CONTACTS

ACCELERATIONS, VELOCITIES & DISPLACEMENTS (STRIKING VEHICLE)

BARRIER FRONT:

.75 ACCELERATIONS
-82 1ST INTEGRATION OF ACCELERATION
-89 2ND INTEGRATION OF ACCELERATION

BARRIER MID:

.96 ACCELERATIONS
-103 1ST INTEGRATION OF ACCELERATION
-110 2ND INTEGRATION OF ACCELERATION

FILM ANALYSIS

STRUCK VEHICLE VELOCITY
STRIKING VEHICLE VELOCITY
STRUCK VEHICLE ANGLE RELATIVE TO GROUND
STRIKING VEHICLE ANGLE RELATIVE TO GROUND
NHTSA BARRIER ANGLE RELATIVE TO STRUCK VEHICLE ANGLE
NHTSA BARRIER RELATIVE TO STRUCK VEHICLE VELOCITY
NHTSA BARRIER RELATIVE TO STRUCK VEHICLE DISPLACEMENT

PHOTOGRAPH INDEX

SURE
NUMBER

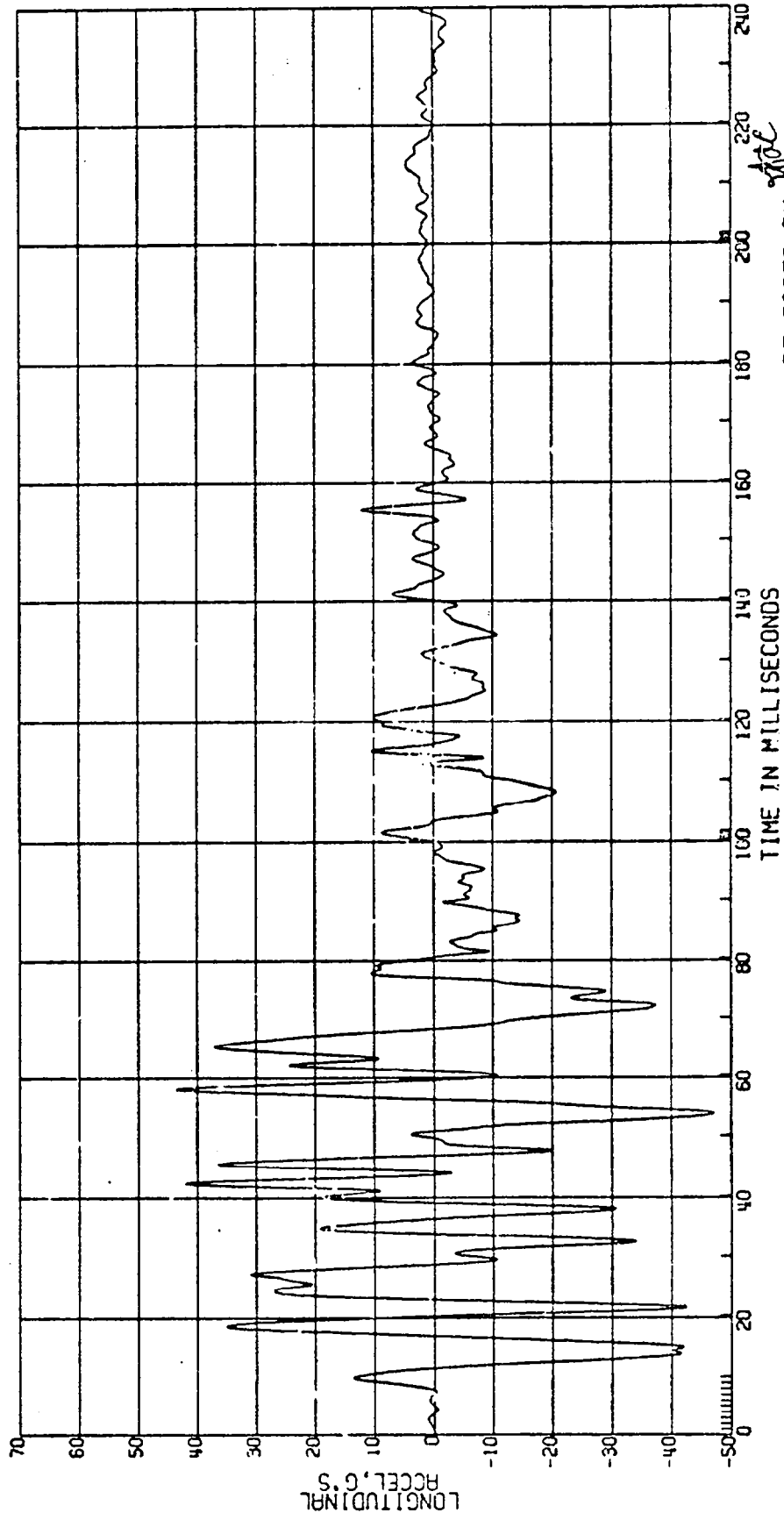
PRE TEST PHOTOGRAPHS:

3-119 OVERALL OF TEST CONFIGURATION
3-125 CLOSEUP OF IMPACT CONFIGURATION
5 OVERALL OF STRUCK VEHICLE - PASSENGER SIDE
7-130 DUMMY AND INTERIOR - STRUCK VEHICLE
1-133 RIGHT SIDE DOOR ACCELEROMETERS AT POINTS A, B, C, & D - STRUCK VEHICLE
4 OVERALL OF IMPACT AREA UNDERBODY - STRUCK VEHICLE
5 CLOSEUP OF INSTRUMENTATION AND CAMERA MOUNTING LOCATION IN TRUNK -
STRUCK VEHICLE
5 CLOSEUP OF IMPACT AREA OF STRIKING VEHICLE - FRONT VIEW

POST TEST PHOTOGRAPHS:

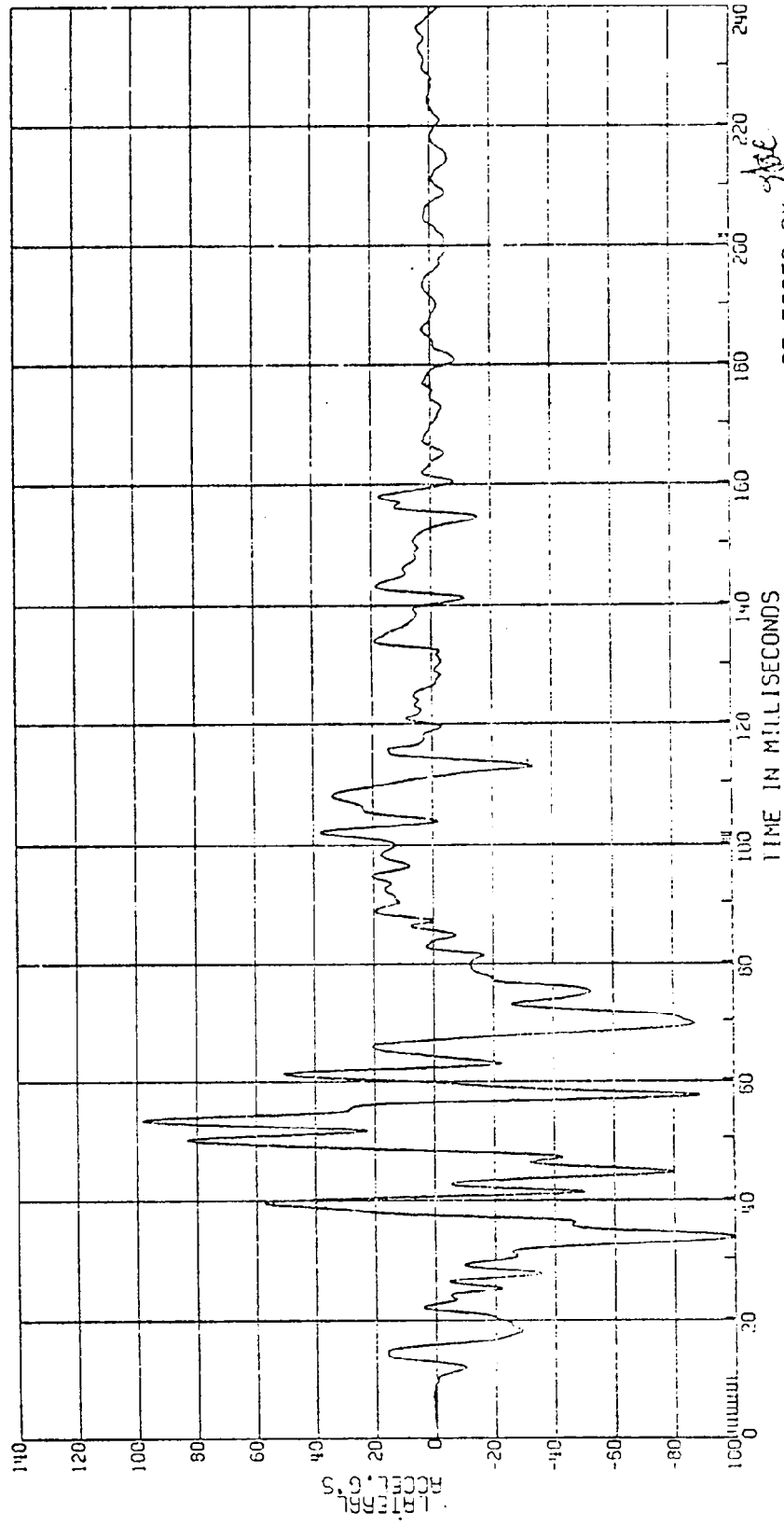
7-138 OVERALL OF STRUCK AND STRIKING VEHICLE
3 OVERALL OF STRUCK VEHICLE - PASSENGER SIDE, OVERHEAD VIEW
3-141 CLOSEUP OF DEFORMATION AT IMPACT AREA - STRUCK VEHICLE
2-143 DUMMY AND INTERIOR - STRUCK VEHICLE
1-145 CLOSEUP OF HEXCEL FACE - STRIKING VEHICLE

3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 60
PASS-SIDE RT.FRT.DOOR - POINT A ACCEL.
TEST DATE: 12-19-84



RELEASED BY: *J. J. Jole*
19 PROCESSED 20 DE 84 13:16

F.B. CC454 (STRUCK VEH) PASS-SIDE RT.FRT.DOOR - POINT A ACCEL. TEST DATE: 12-19-84
A-D DATA SAE CLASS 60



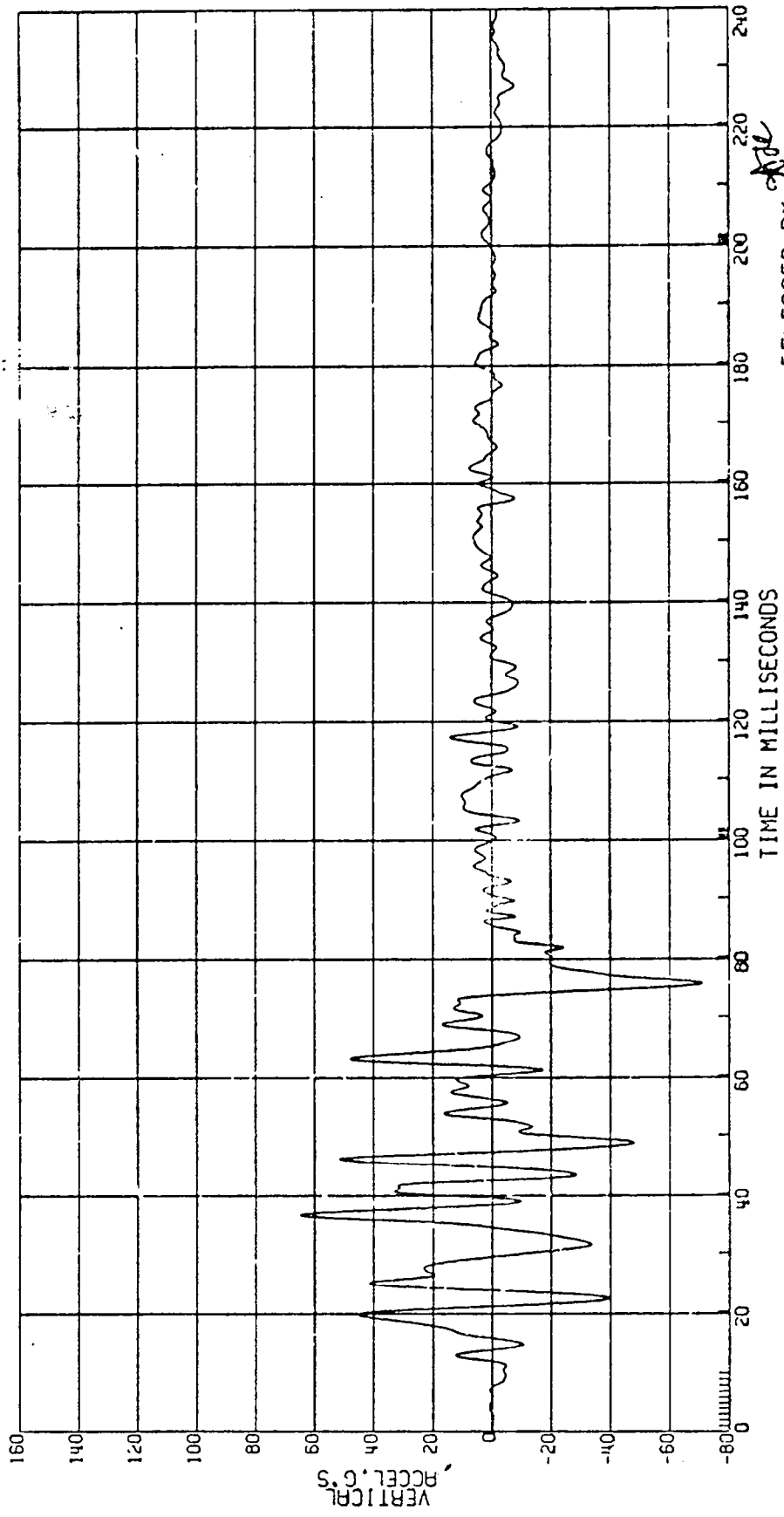
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TEST DATE: 12-19-84

PASS-SIDE RT. FRT. DOOR - POINT A ACCEL.

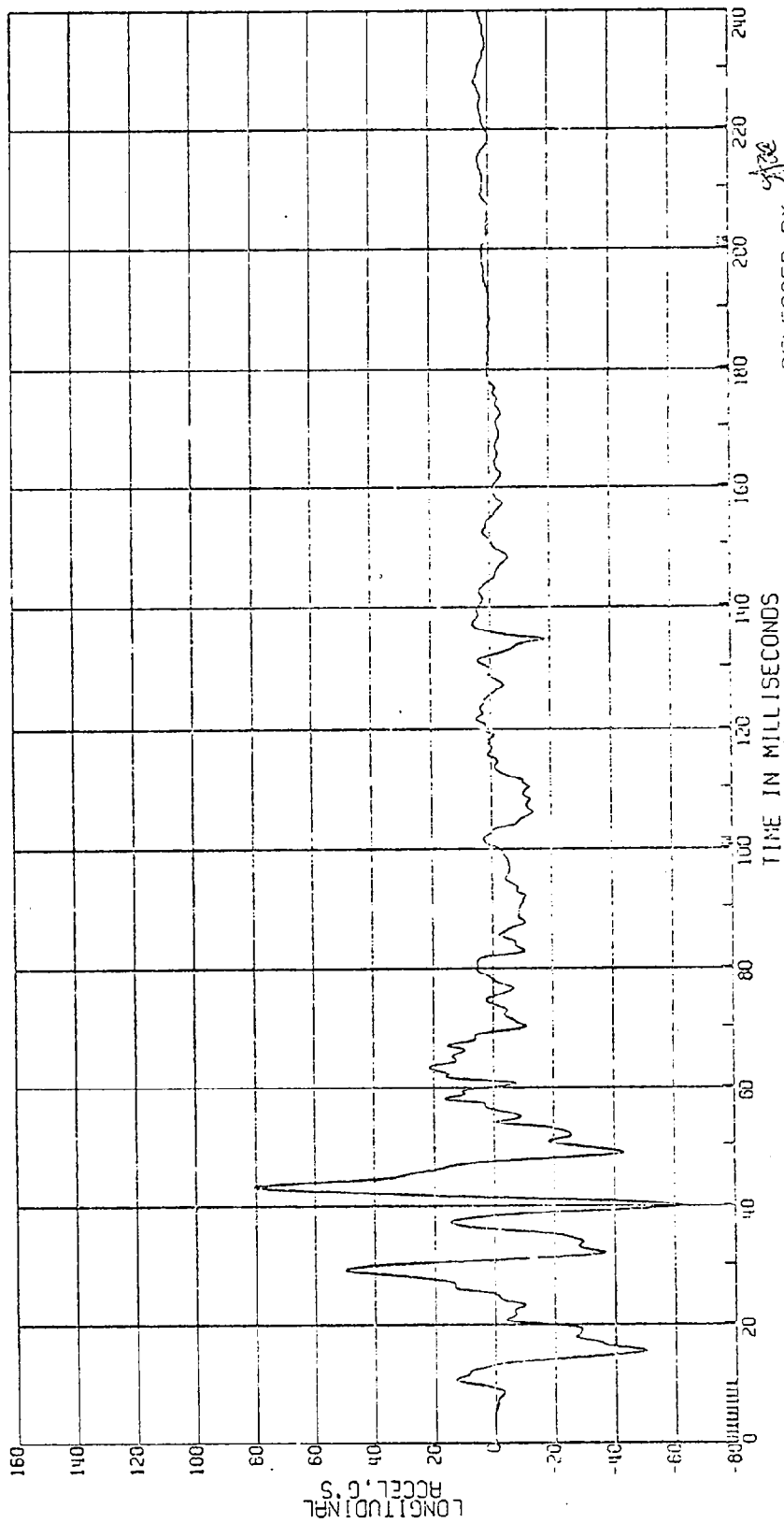
(STRUCK VEH)

A-D DATA SAE CLASS 60



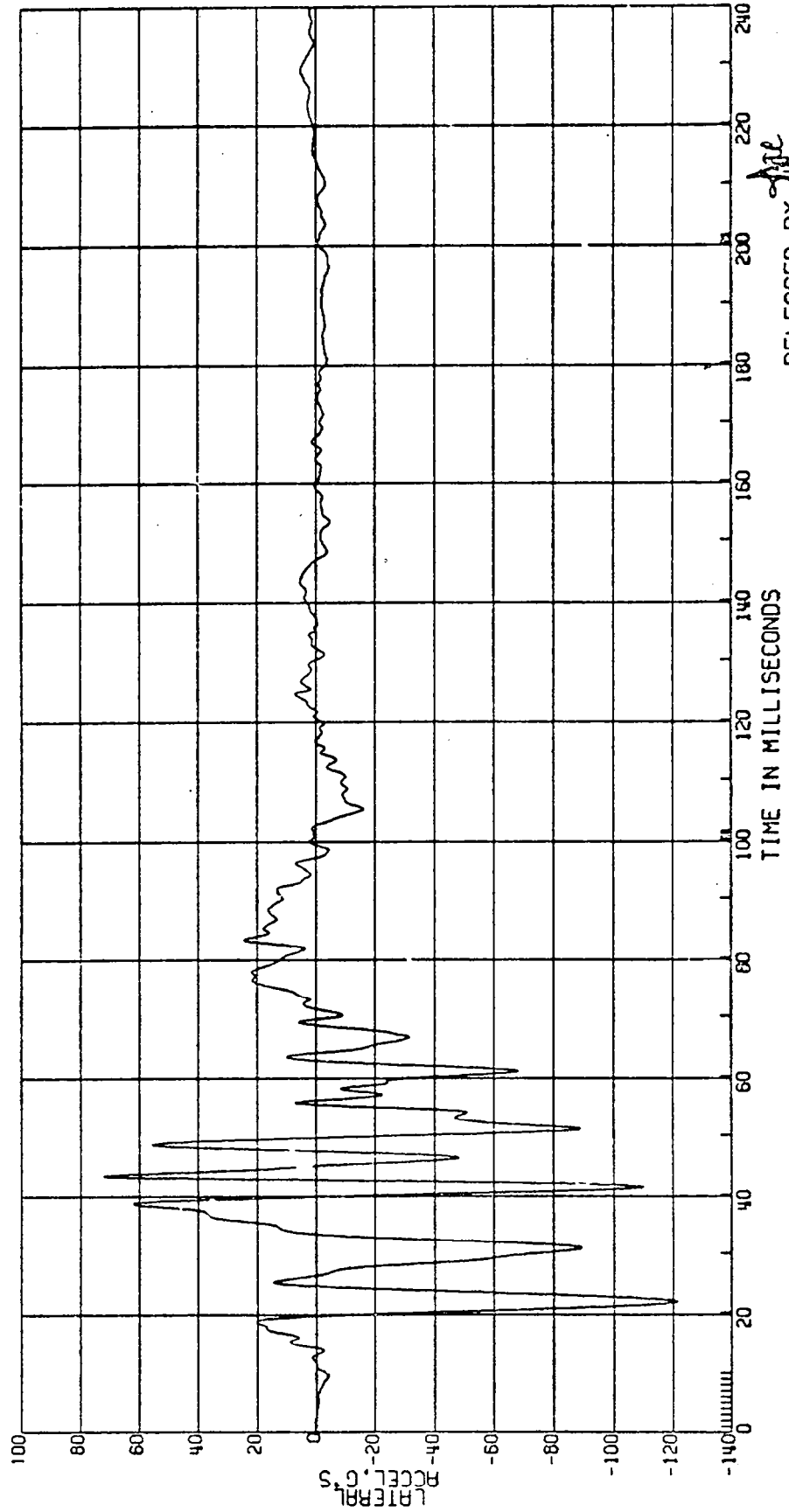
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CG1158 RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.TO MOD.SMALL CAR 55.0KM/H FIGURE-4
3865-848
F.B. CC454 (STRUCK VEH.
A-D DATA SAE CLASS 60 TEST DATE:12-19-84



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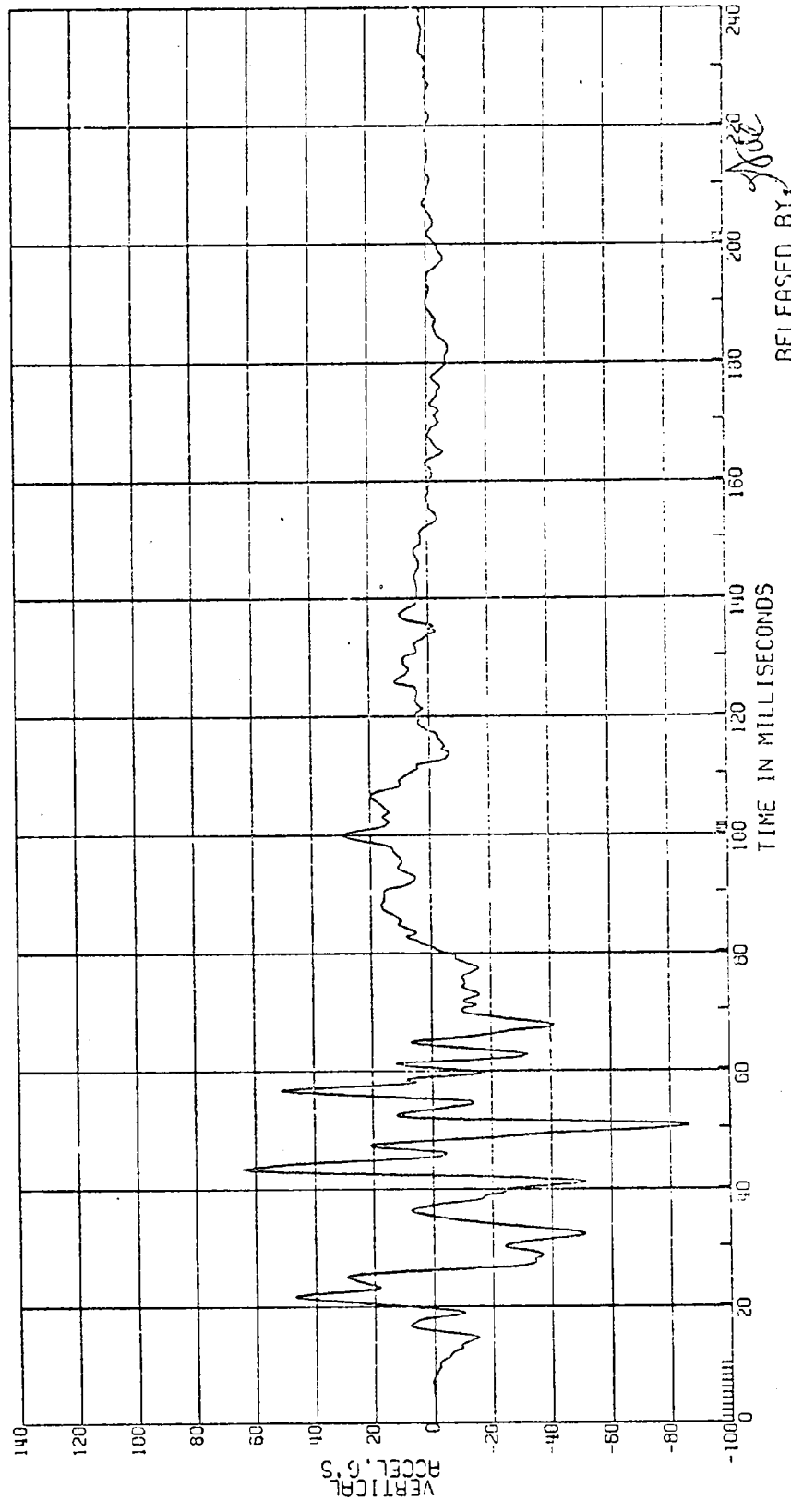
CG115B RIGHT SIDE IMP.60 .DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-5
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 60
PASS-SIDE RT.FRT.DOOR - POINT B ACCEL. TEST DATE:12-19-84



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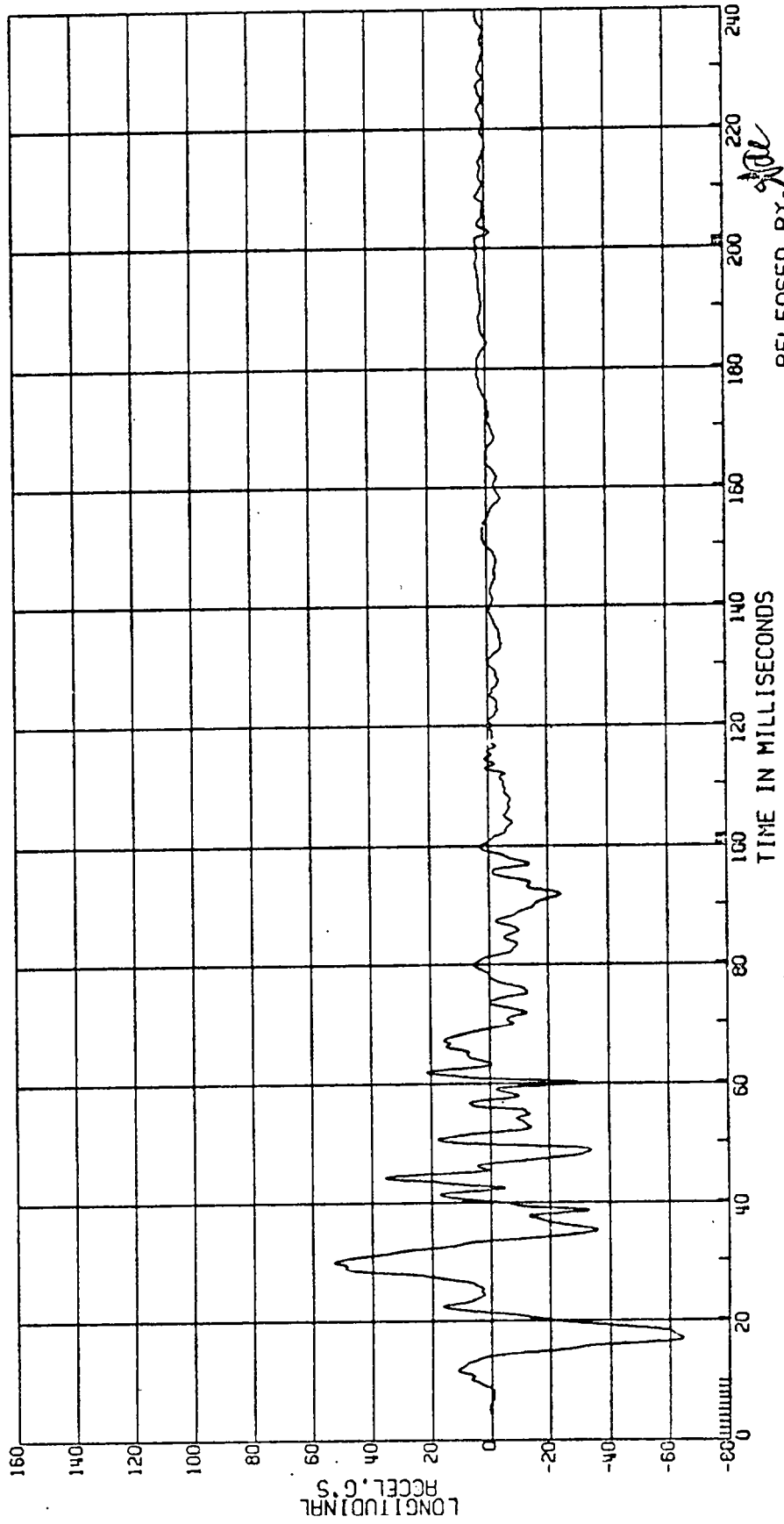
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C61158 RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-6
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 60 TEST DATE: 12-19-84



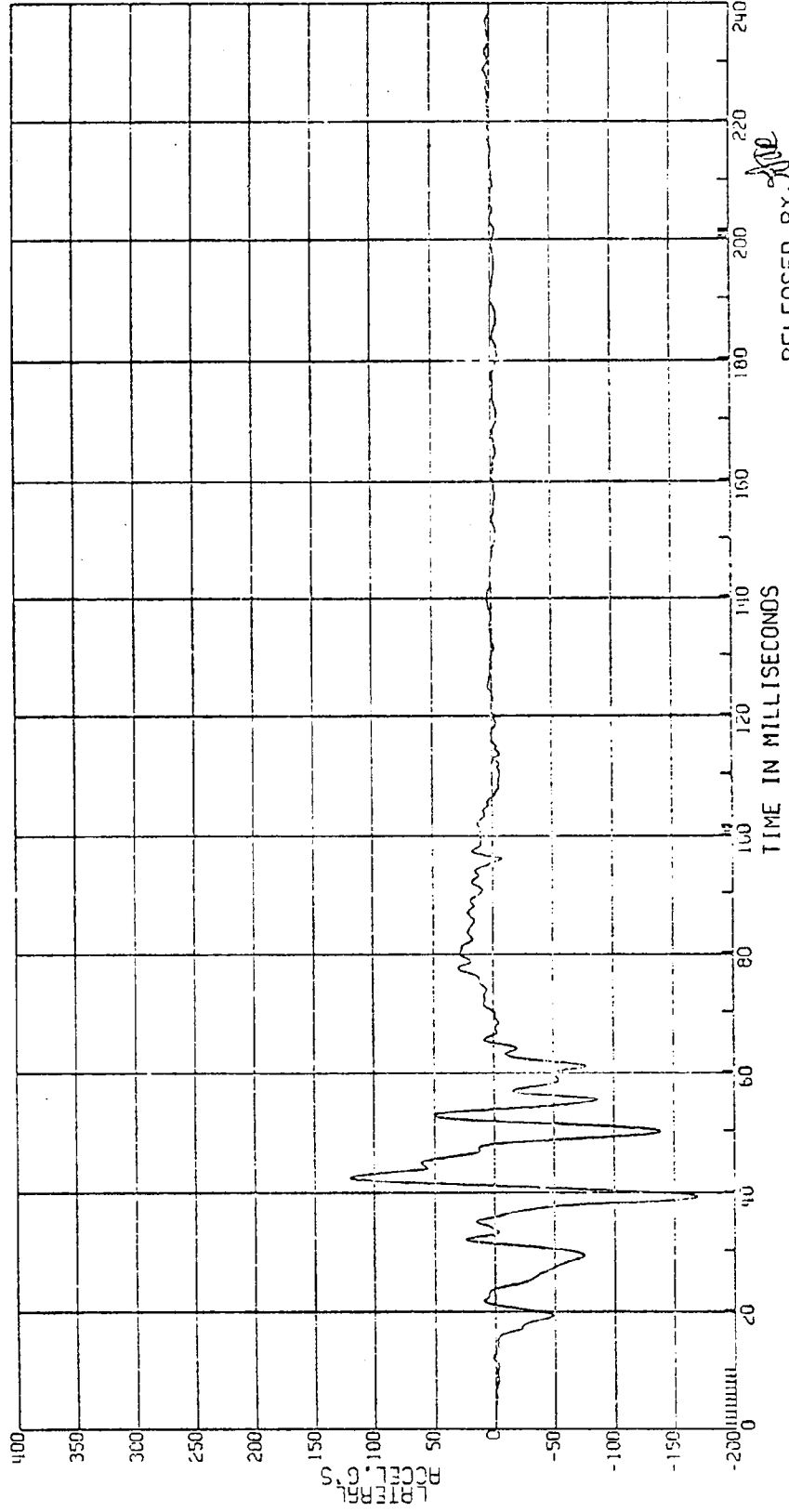
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CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-7
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 60 TEST DATE:12-19-84



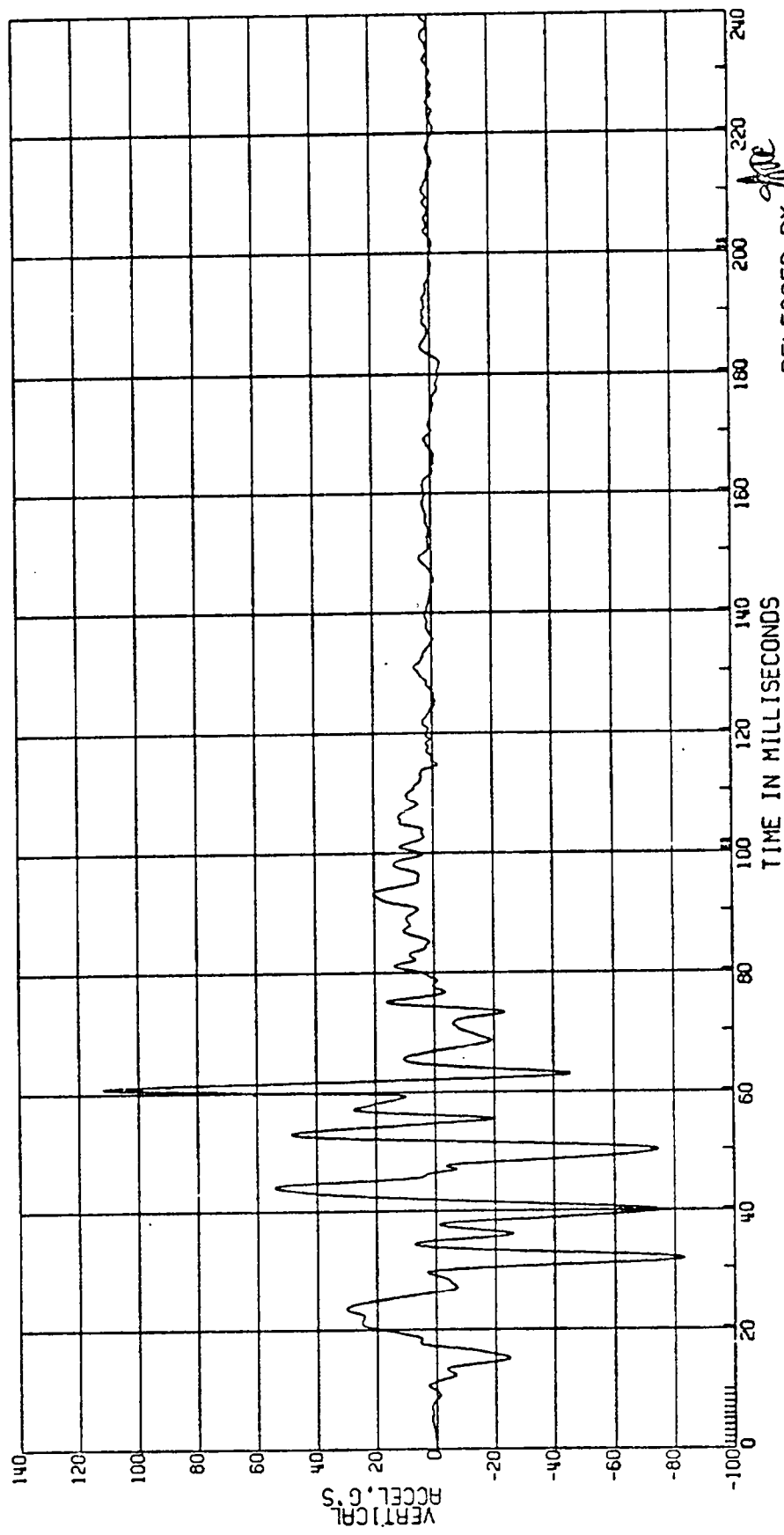
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CG115B RIGHT SIDE IMP.60 DIFF MOVING NHISH BARR.10 MOD.SMALL CAR 55.0KM/H FIGURE - 8
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 60
PASS-SIDE RT.FRT.DOOR - POINT C ACCEL. TEST DATE:12-19-84



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CG1158 RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.TO MOD.SMALL CAR 55.0KM/H FIGURE-9
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 60 PASS-SIDE RT.FRT.DOOR - POINT C ACCEL. TEST DATE:12-19-84



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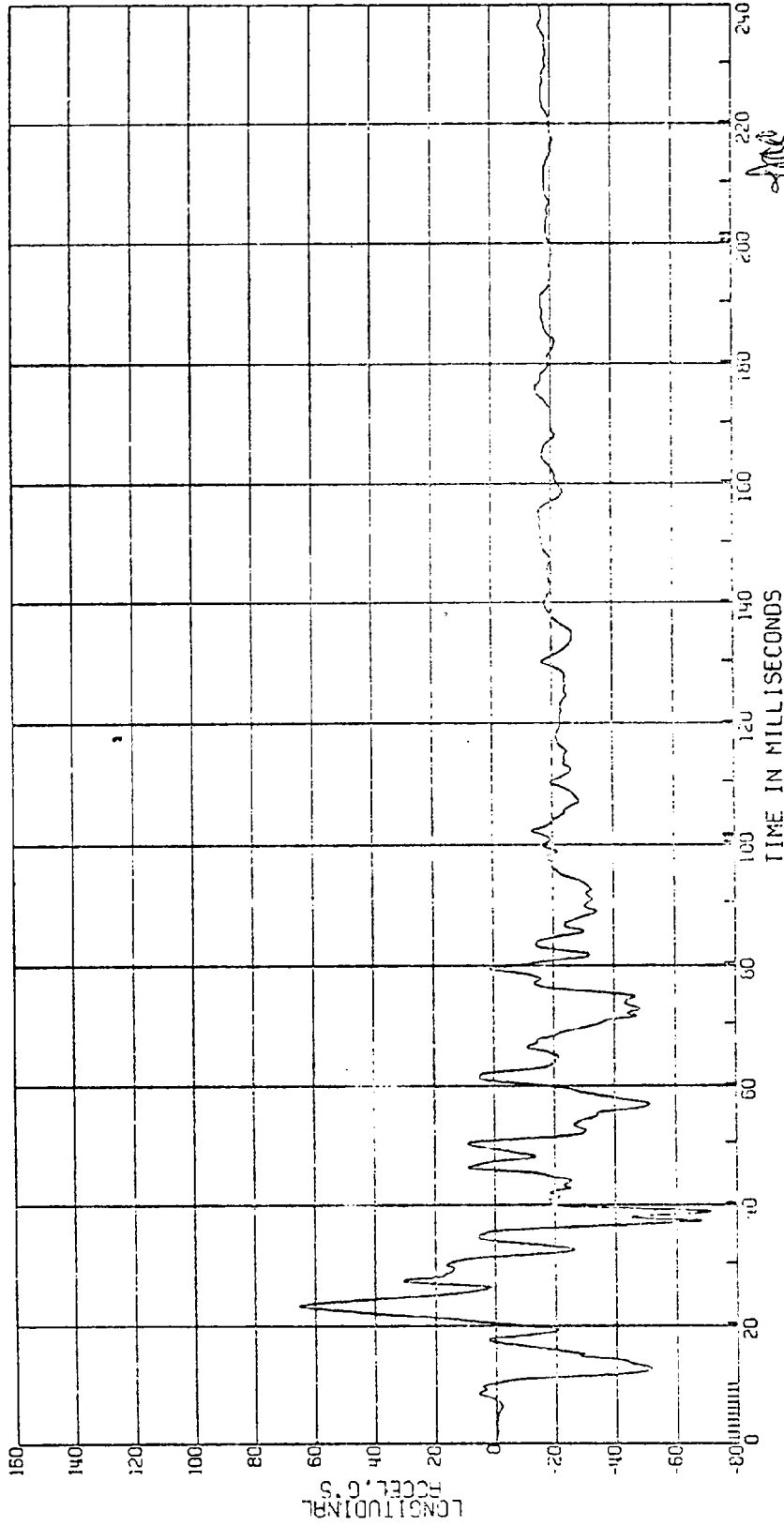
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F.B. CC454 (STRUCK VEH)

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PASS-SIDE RT.FRT.DOOR - POINT D ACCEL.

TEST DATE: 12-19-84



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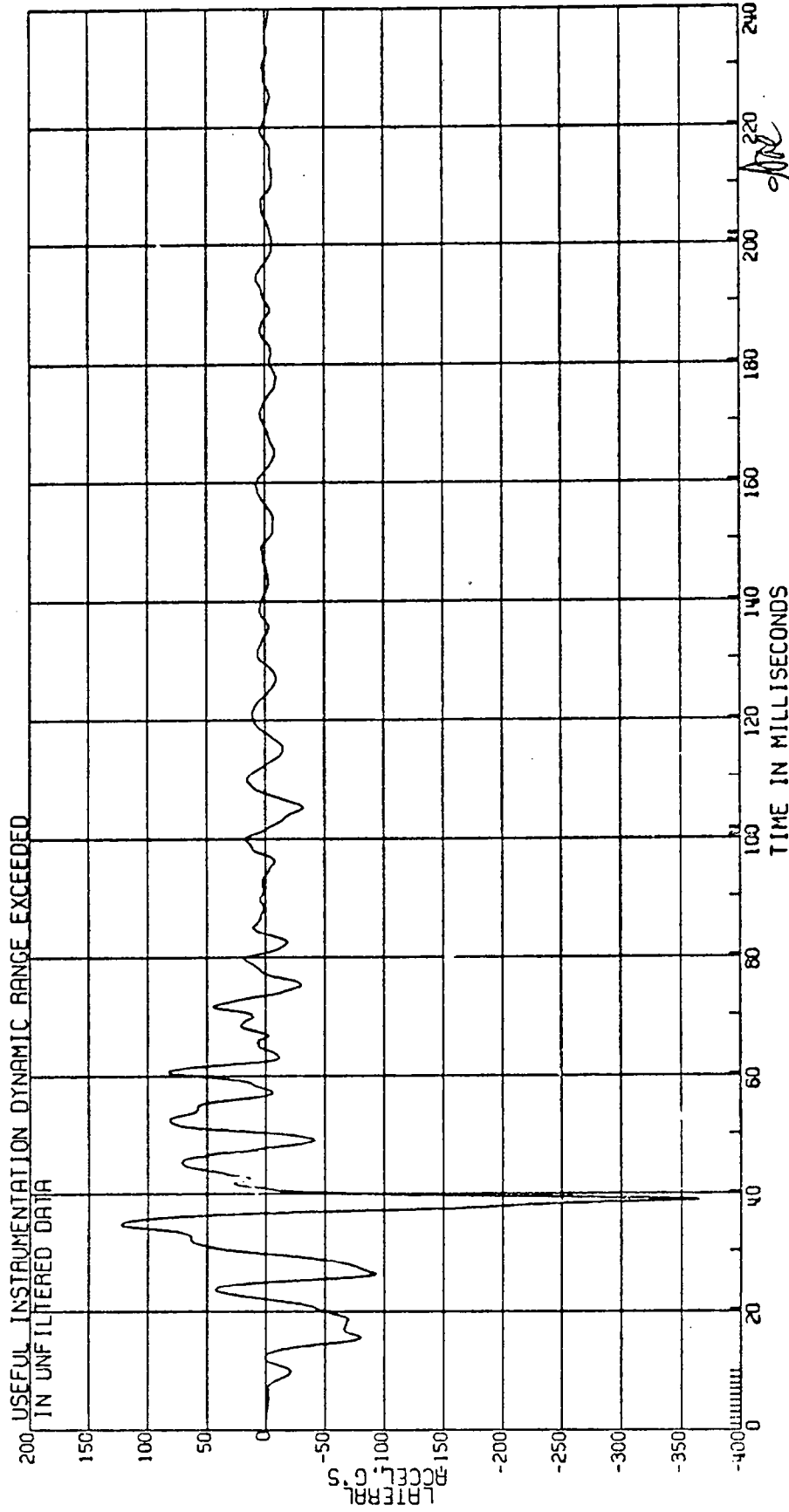
F.B. CC454

(STUCK VEH)

A-O DATA SAE CLASS 60

PASS-SIDE RT.FRT.DOOR - POINT D ACCEL.

TEST DATE: 12-19-84



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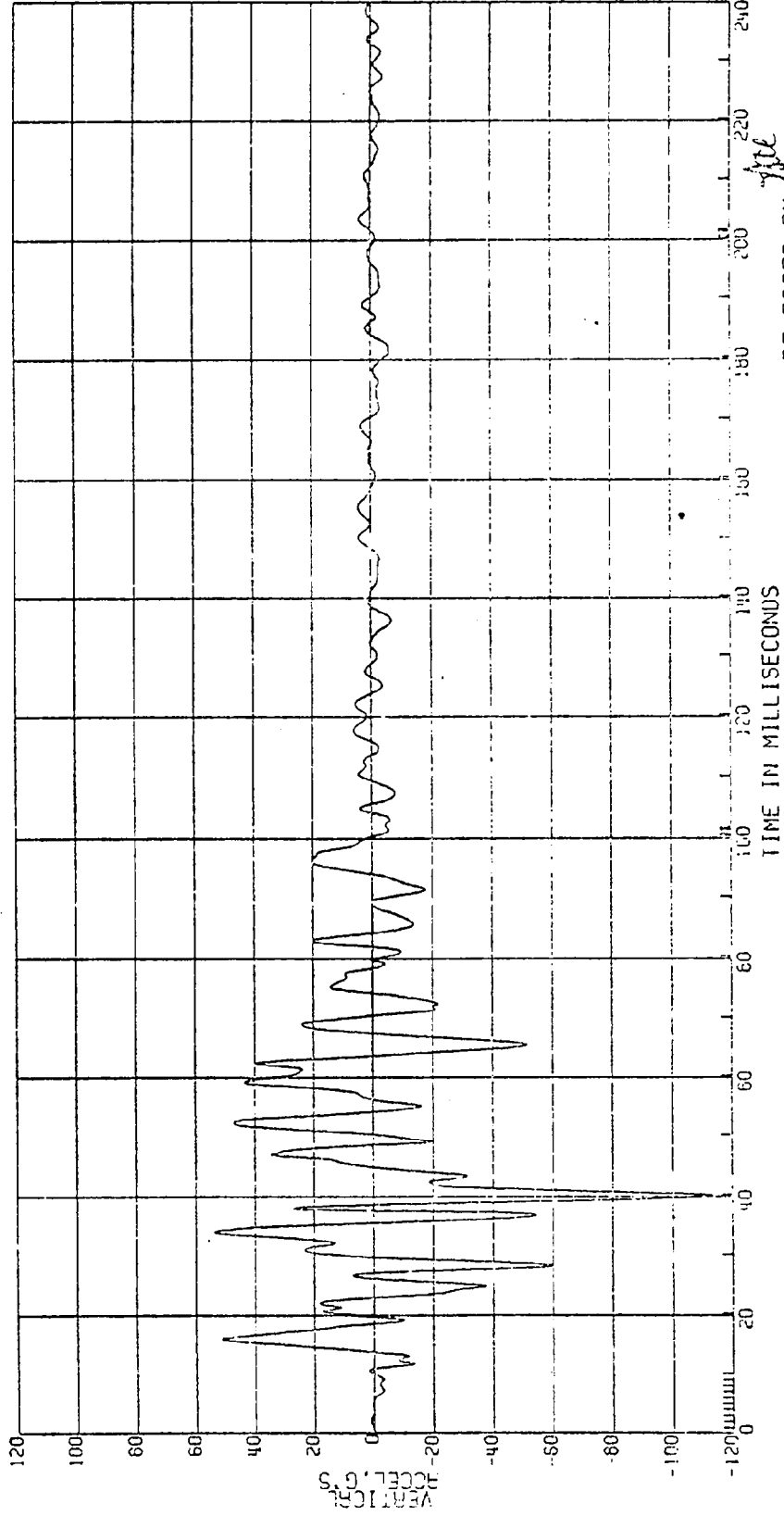
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F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 60

PASS-SIDE RT.FRT.DOOR - POINT D ACCEL.

TEST DATE: 12-19-84



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3865-848

F.B. CC454

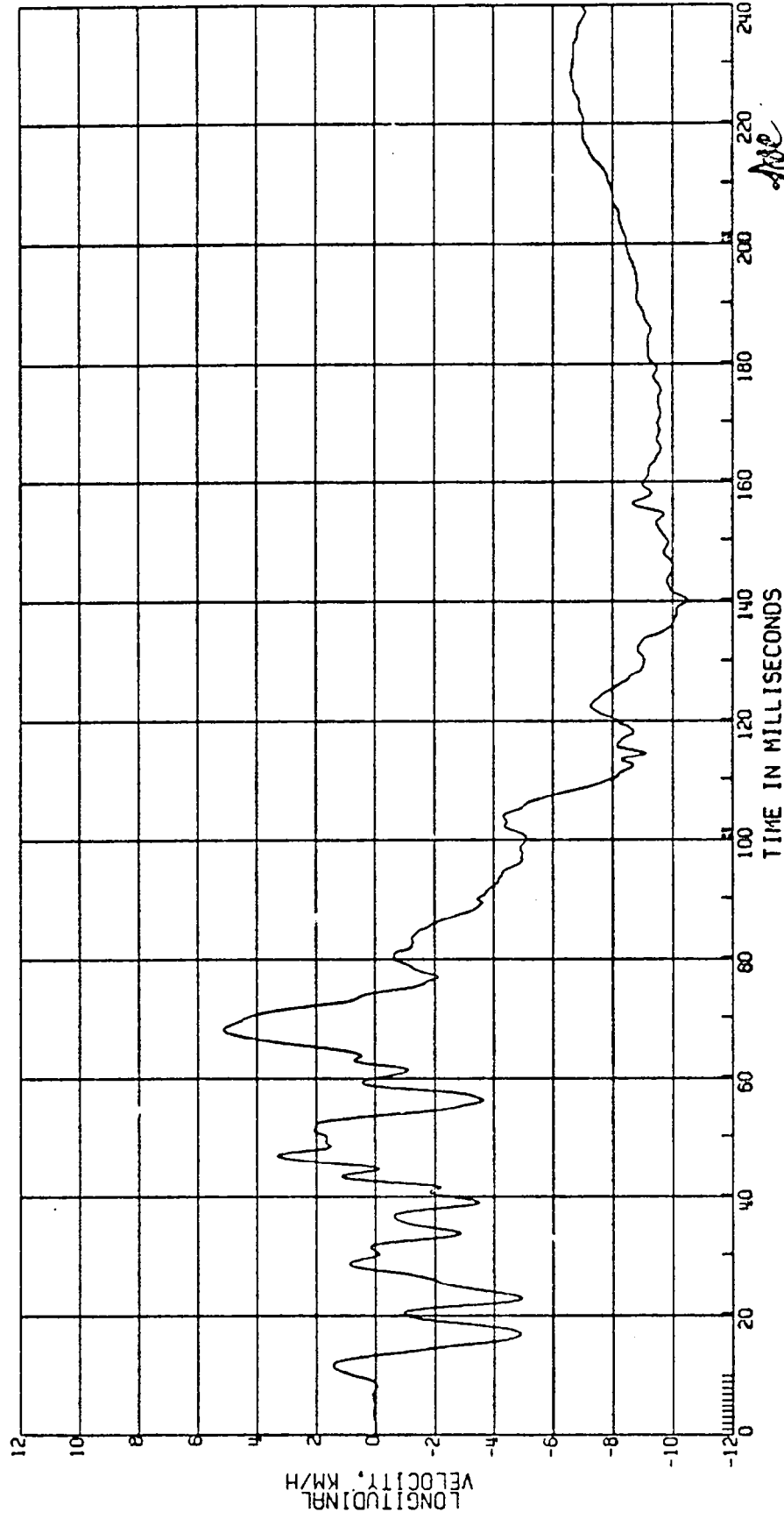
(STRUCK VEH)

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COMPUTED RT.FRT.DOOR-POINT A VELOCITY

TEST DATE:12-19-84

(1ST INTEGRAL PASS-SIDE ACCELERATION)

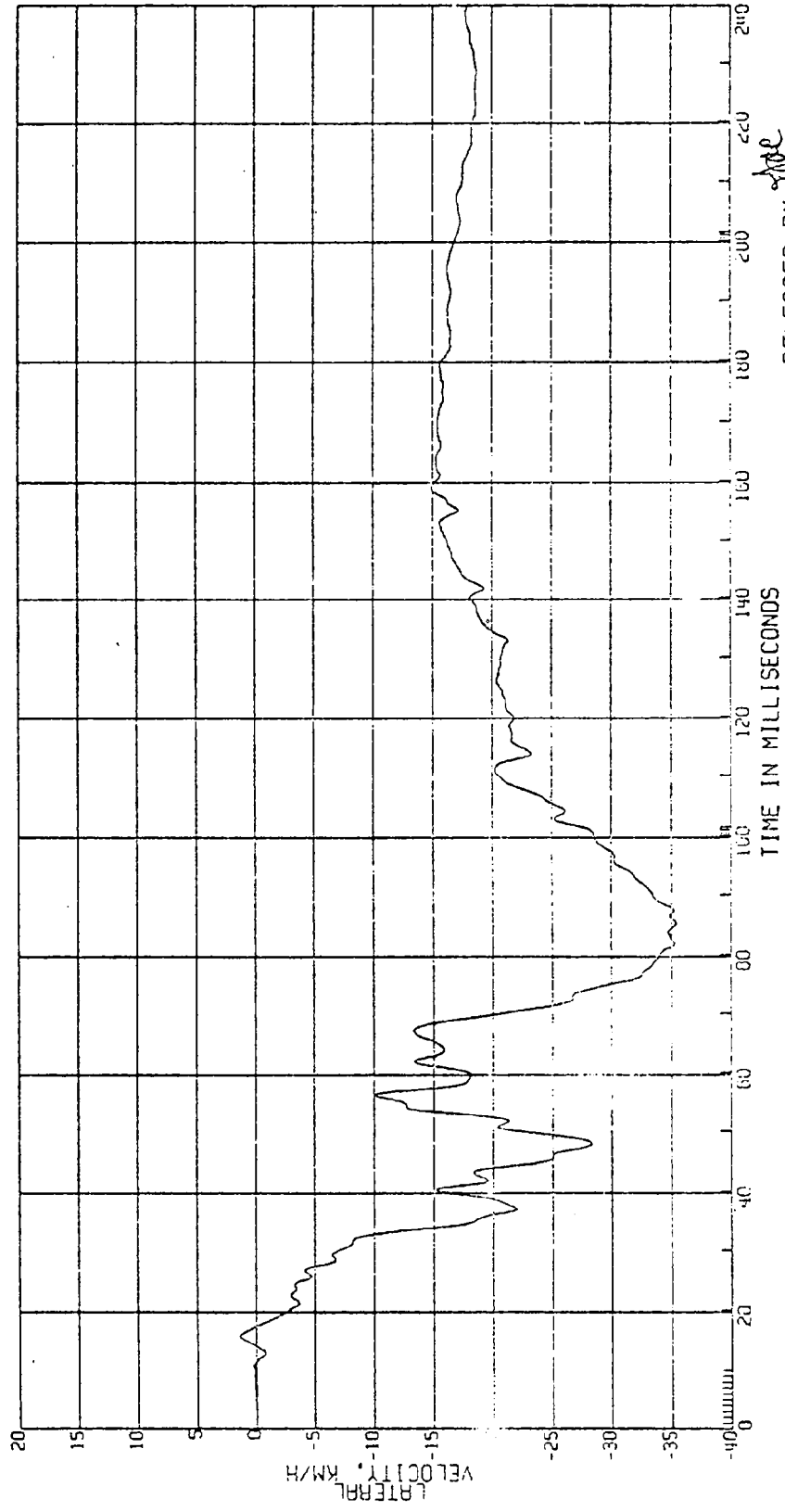


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COMPUTED RT. FRT. DOOR-POINT A VELOCITY
(1ST INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84

F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180



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040-040

F.B. CC454

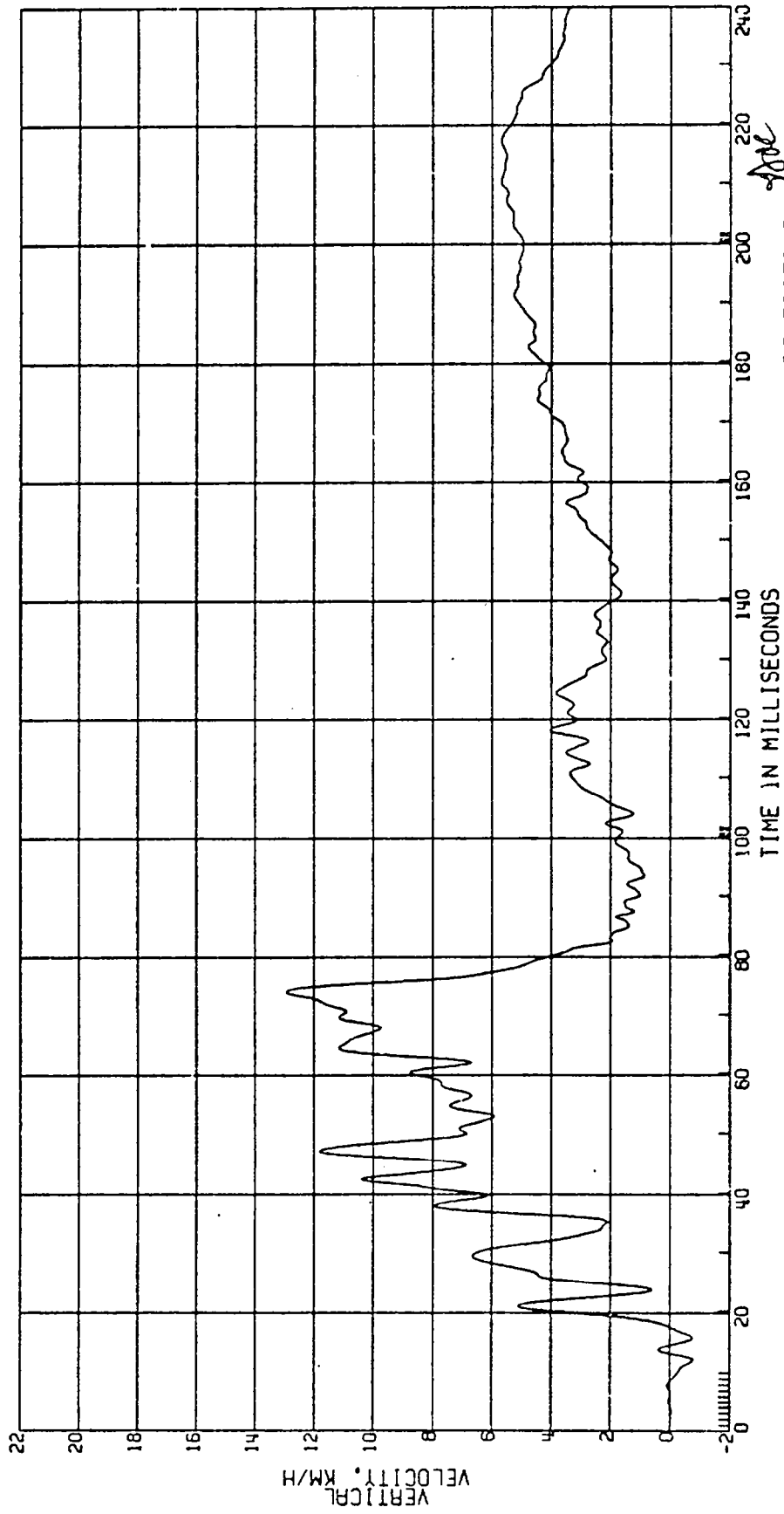
(STRUCK VEH)

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COMPUTED RT. FRT. DOOR-POINT A VELOCITY

TEST DATE: 12-19-84

(1ST INTEGRAL PASS-SIDE ACCELERATION)



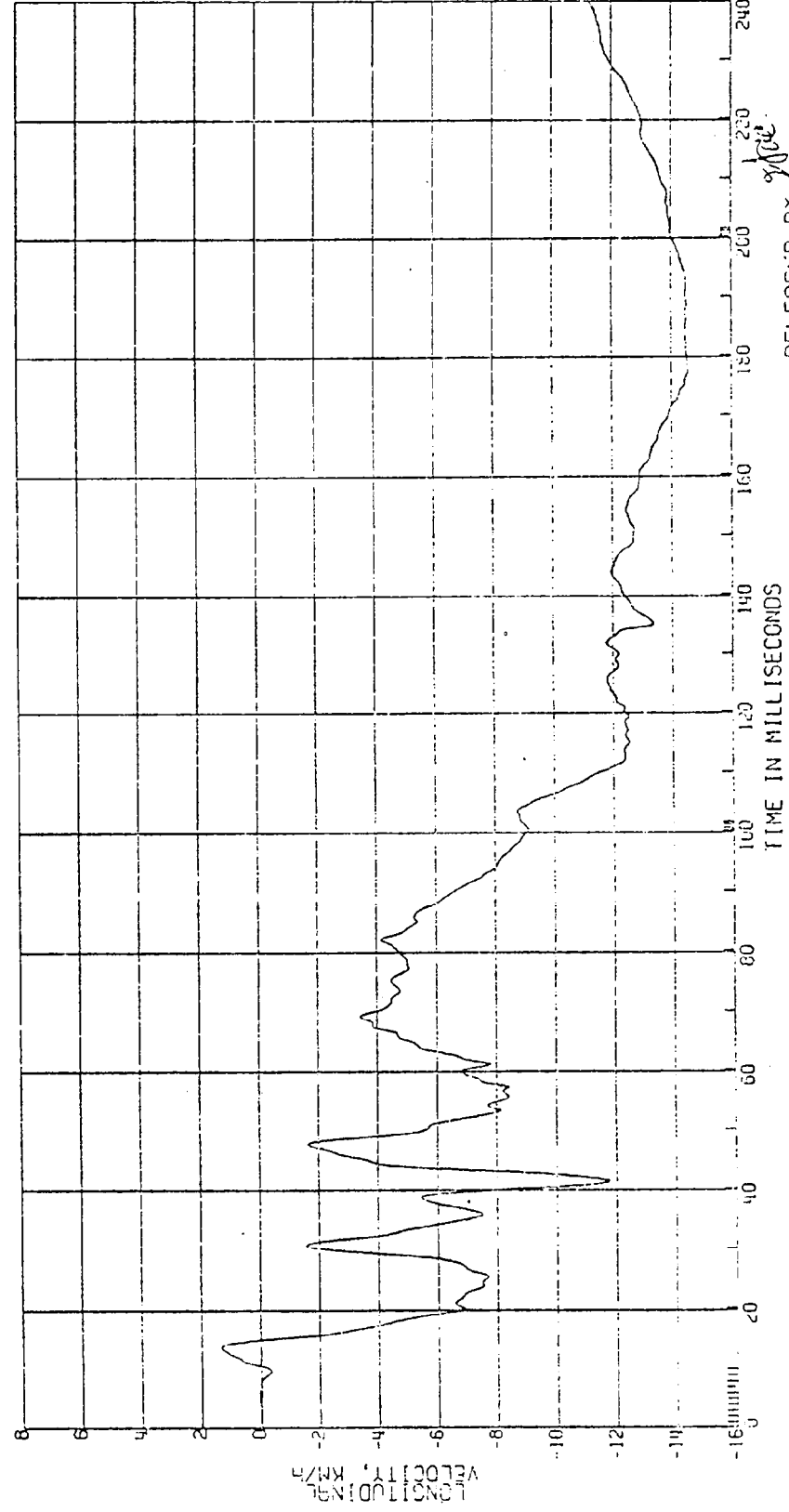
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F. B. CC454 (STRUCK VEH)
A-0 DATA SAE CLASS 180

COMPUTED RT. FRT. DOOR-POINT B VELOCITY
(1ST INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84

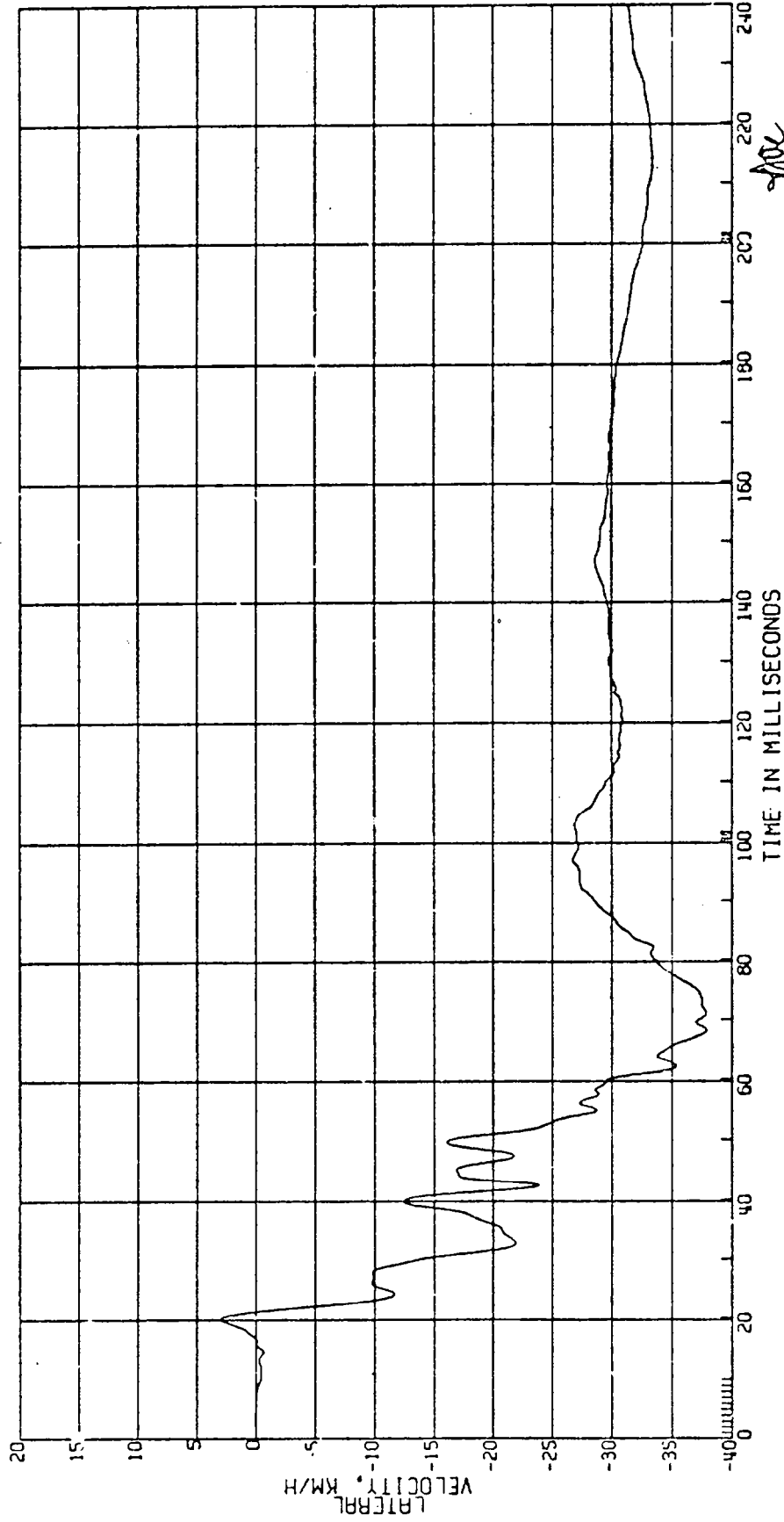


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TEST DATE: 12-19-84

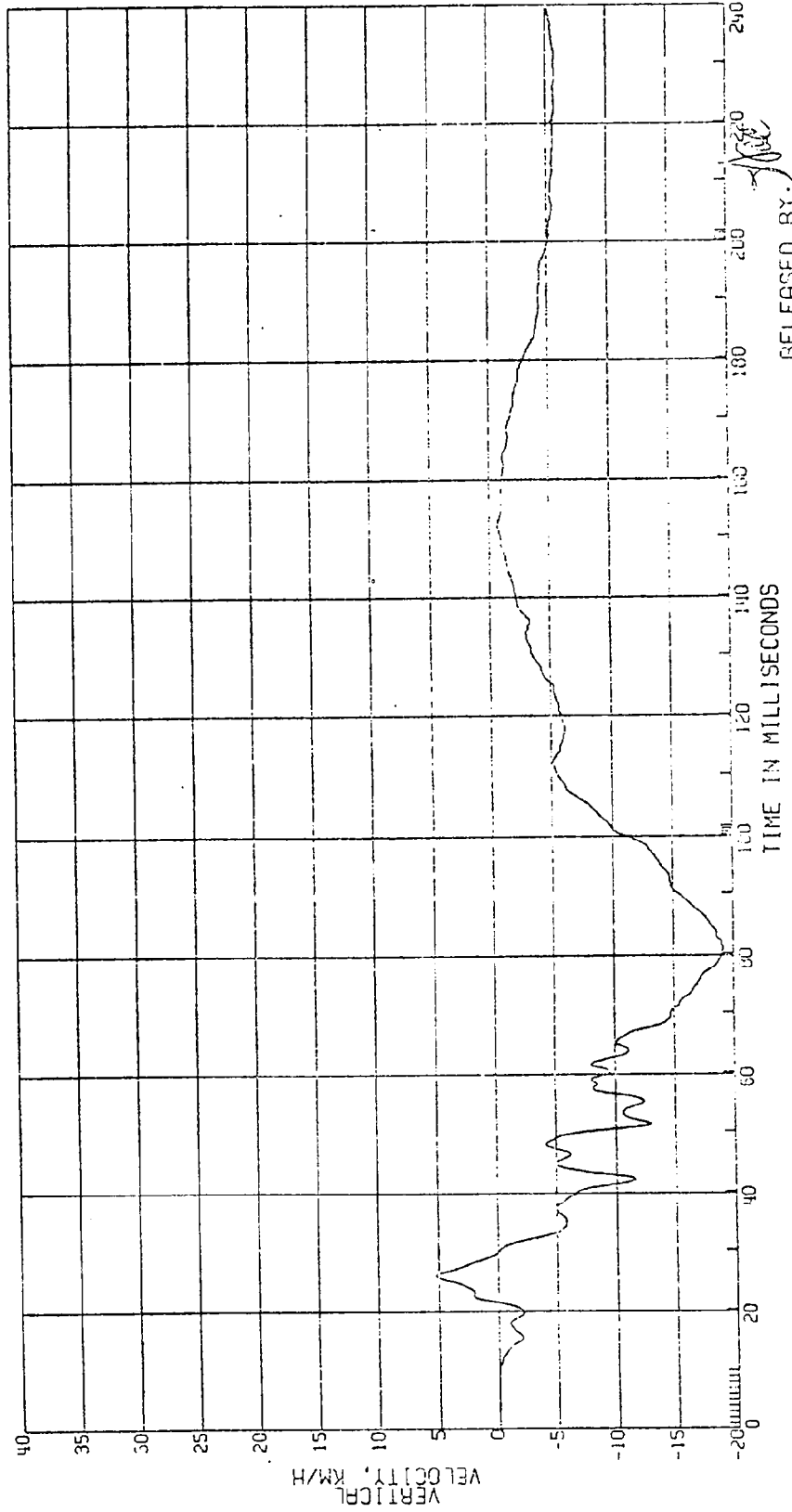
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(1ST INTEGRAL PASS-SIDE ACCELERATION)

F.B. C0454 (STRUCK VEH)
A-D DATA SAE CLASS 180



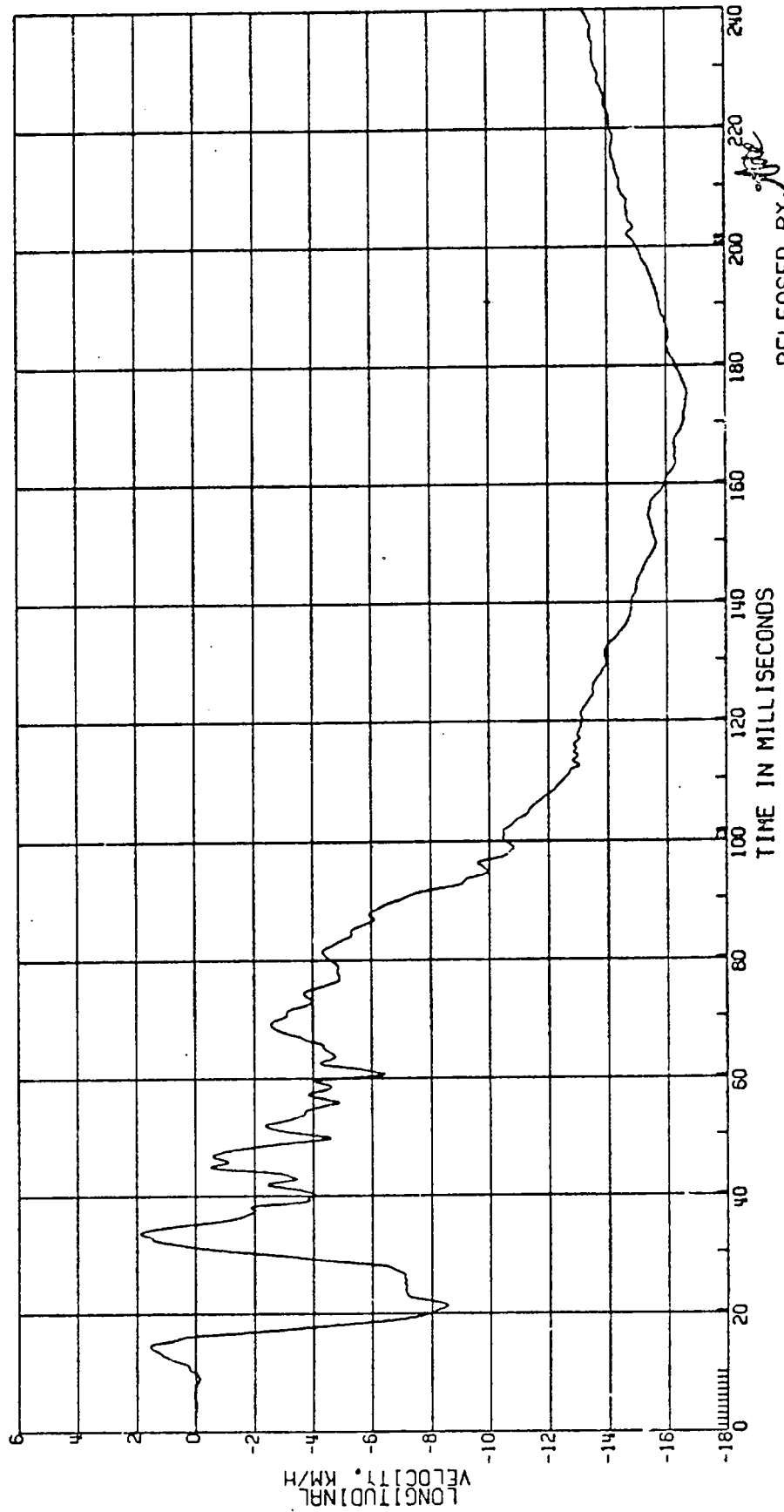
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CG1158 RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.TO MOD.SMALL CAR 55.0KM/H FIGURE-18
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA .SAE CLASS 180
COMPUTED RT.FRT.DOOR-POINT B VELOCITY TEST DATE:12-19-84
(1ST INTEGRAL PASS--SIDE ACCELERATION)



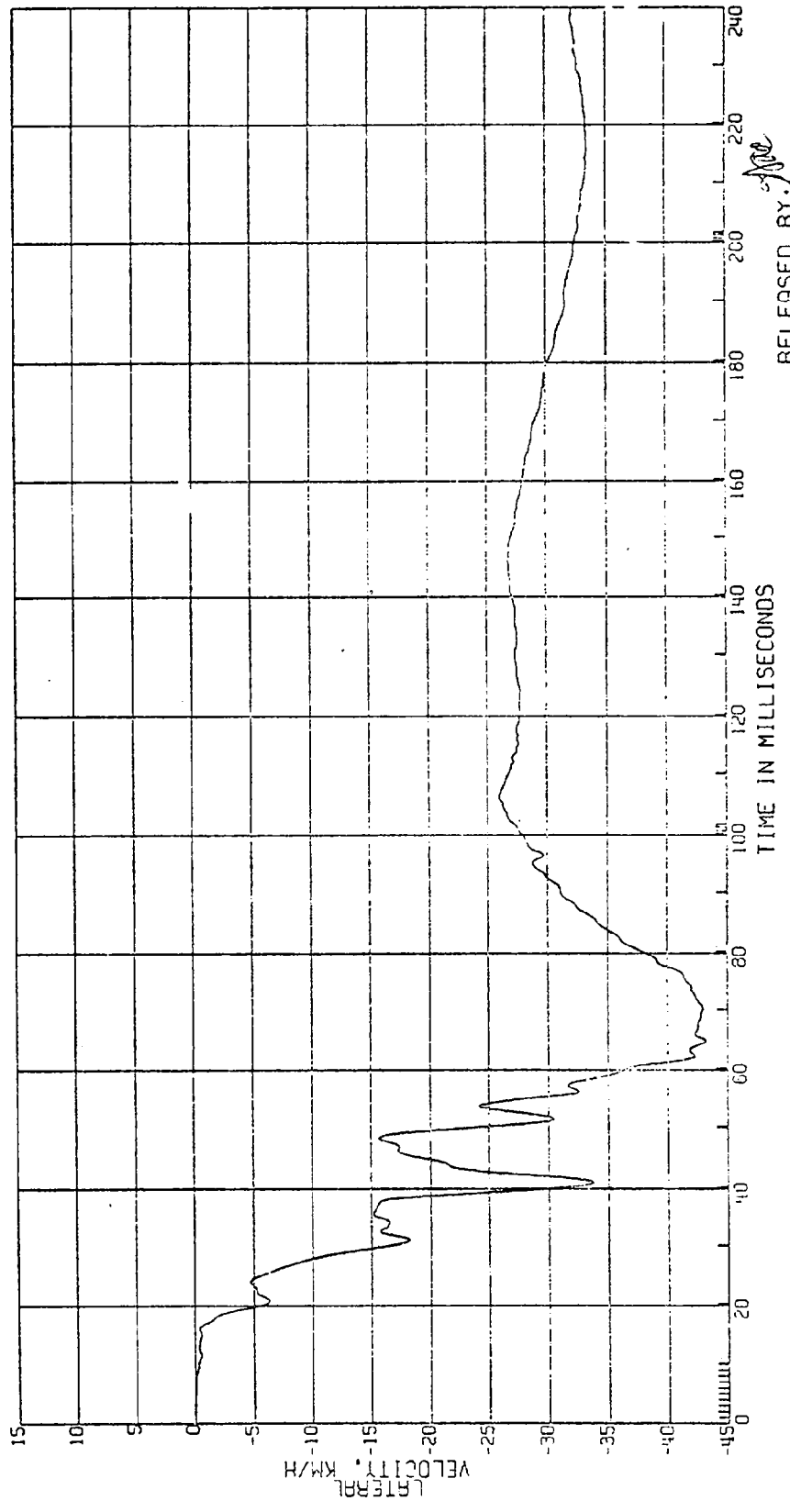
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45 APR 20 20 01 13:21

CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -19
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180 TEST DATE:12-19-84
(1ST INTEGRAL PASS-SIDE ACCELERATION)
COMPUTED RT.FRT.DOOR-POINT C VELOCITY



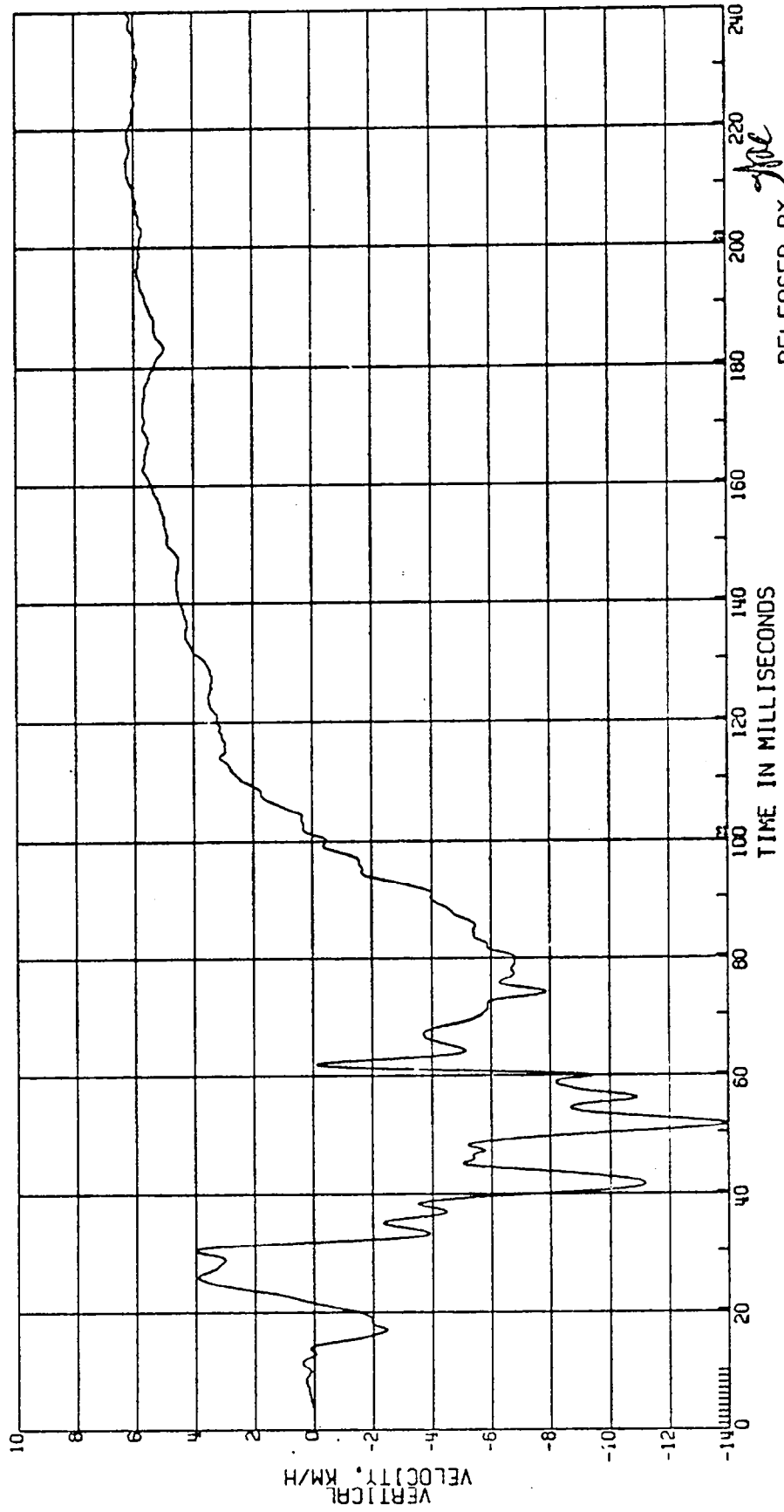
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CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD.SMALL CAR 55.0KM/H FIGURE -20
 3865-848
 F.B. CC454 (STRUCK VEH)
 A-D DATA SAE CLASS 180
 COMPUTED RT.FRT.DOOR-POINT C VELOCITY
 (1ST INTEGRAL PASS-SIDE ACCELERATION)
 TEST DATE:12-19-84



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C6115B RIGHT SIDE IMP.60 DIFF MOVING NHISH BARR.10 MOD.SMALL CAR 55.0KM/H FIGURE - 21
3865-848 (STRUCK VEH)
F.B. CC454
A-D DATA SAE CLASS 180
COMPUTED RT.FRT.DOOR-POINT C VELOCITY
(1ST INTEGRAL PASS-SIDE ACCELERATION)
TEST DATE:12-19-84

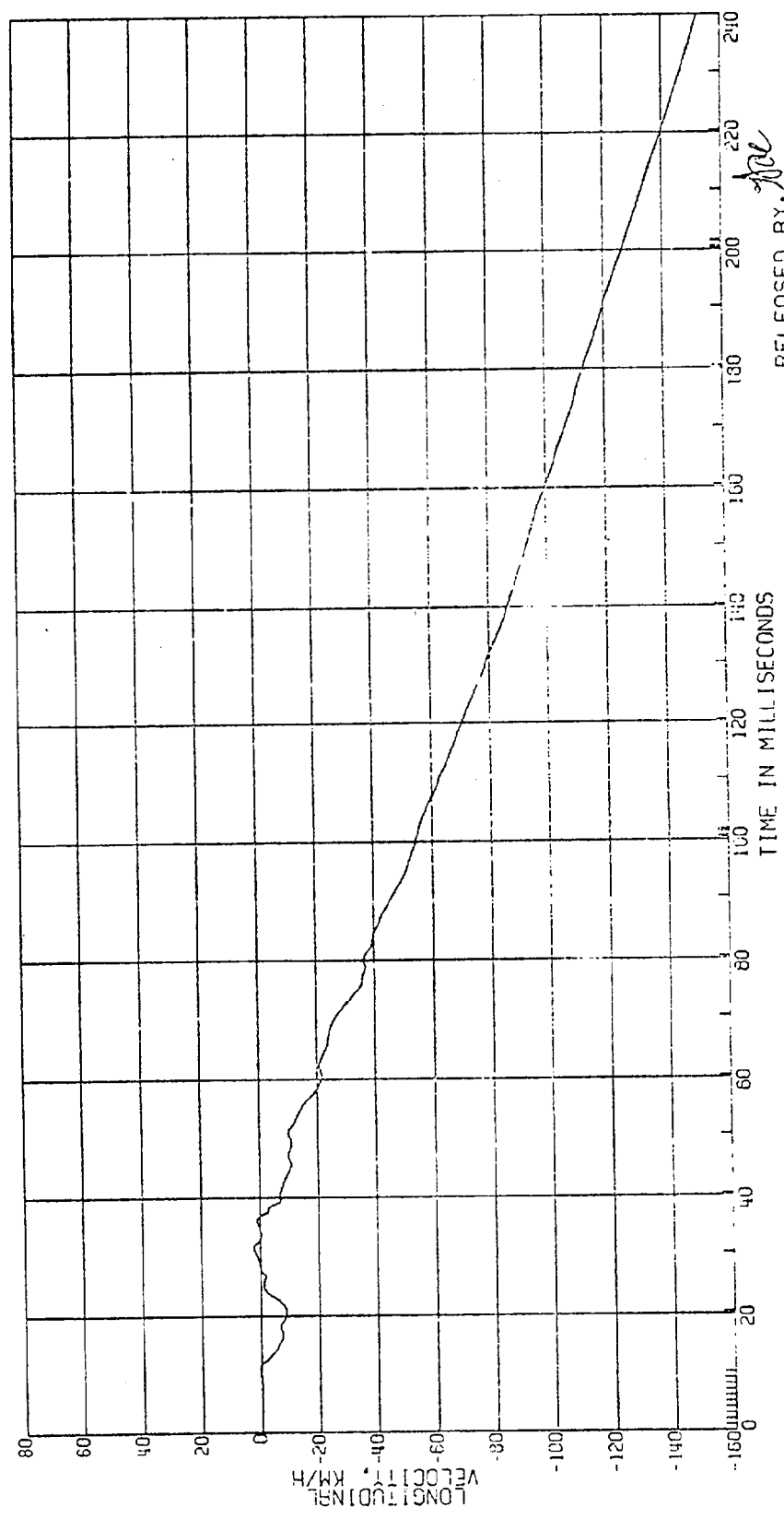


RELEASED BY: *JOE*
44 PROCESSED 20 DE 84 13:25

061158 HIGH SIDE IMP. BU DIFF MOVING INTIACH DATA. 10 MUO. 37HLL UAN 33.0A007/0 F I UURE - 22

3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180
COMPUTED RT. FRT. DOOR-POINT 0 VELOCITY
(1ST INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84

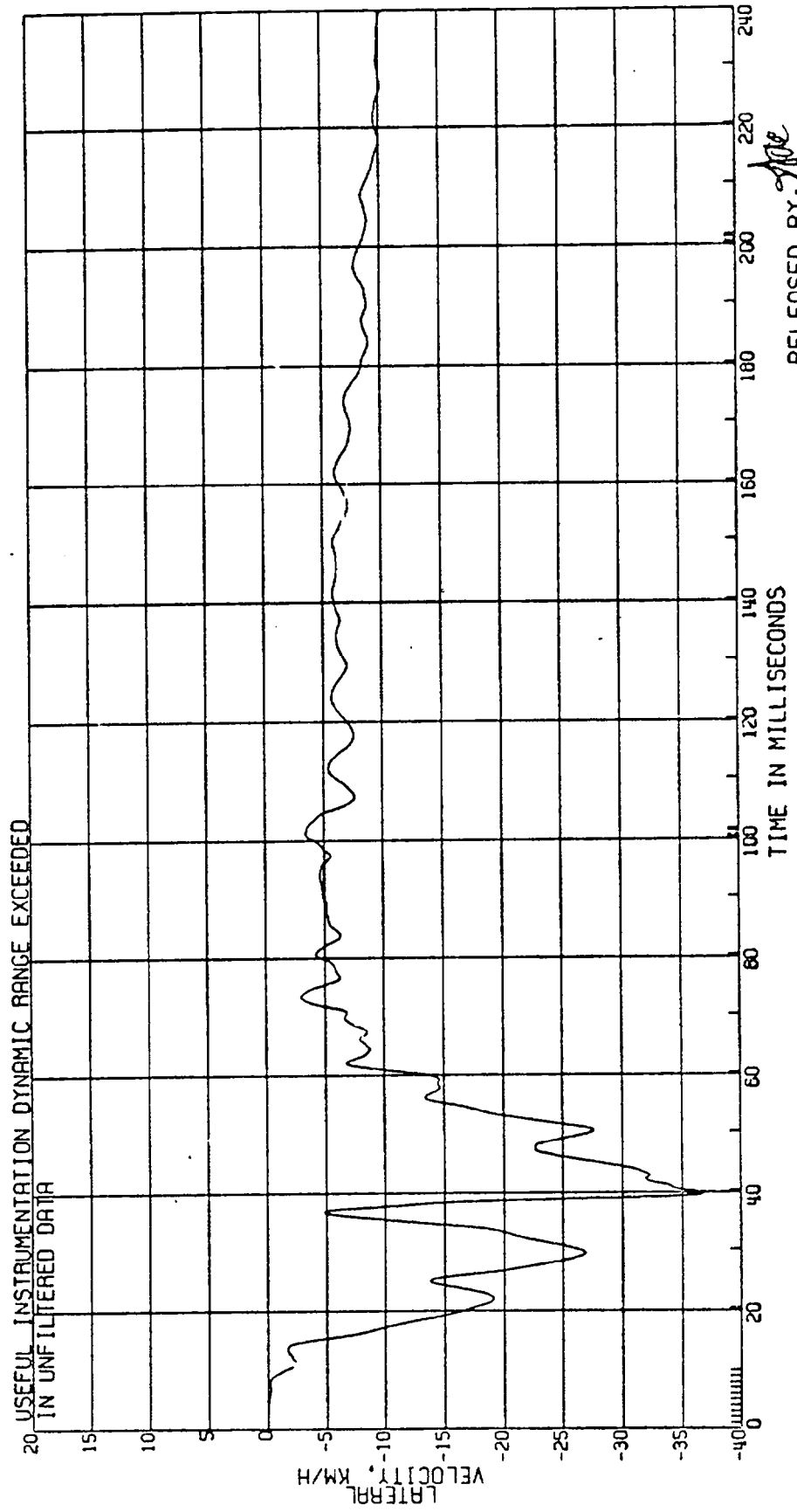


RELEASED BY: *JAL*
47 PROCESSED 20 DE 84 13:27

3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180

COMPUTED RT.FRT.DOOR-POINT D VELOCITY
(1ST INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84



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50 PROCESSED 20 DE 84 13:28

3865-848

F.B. CC454

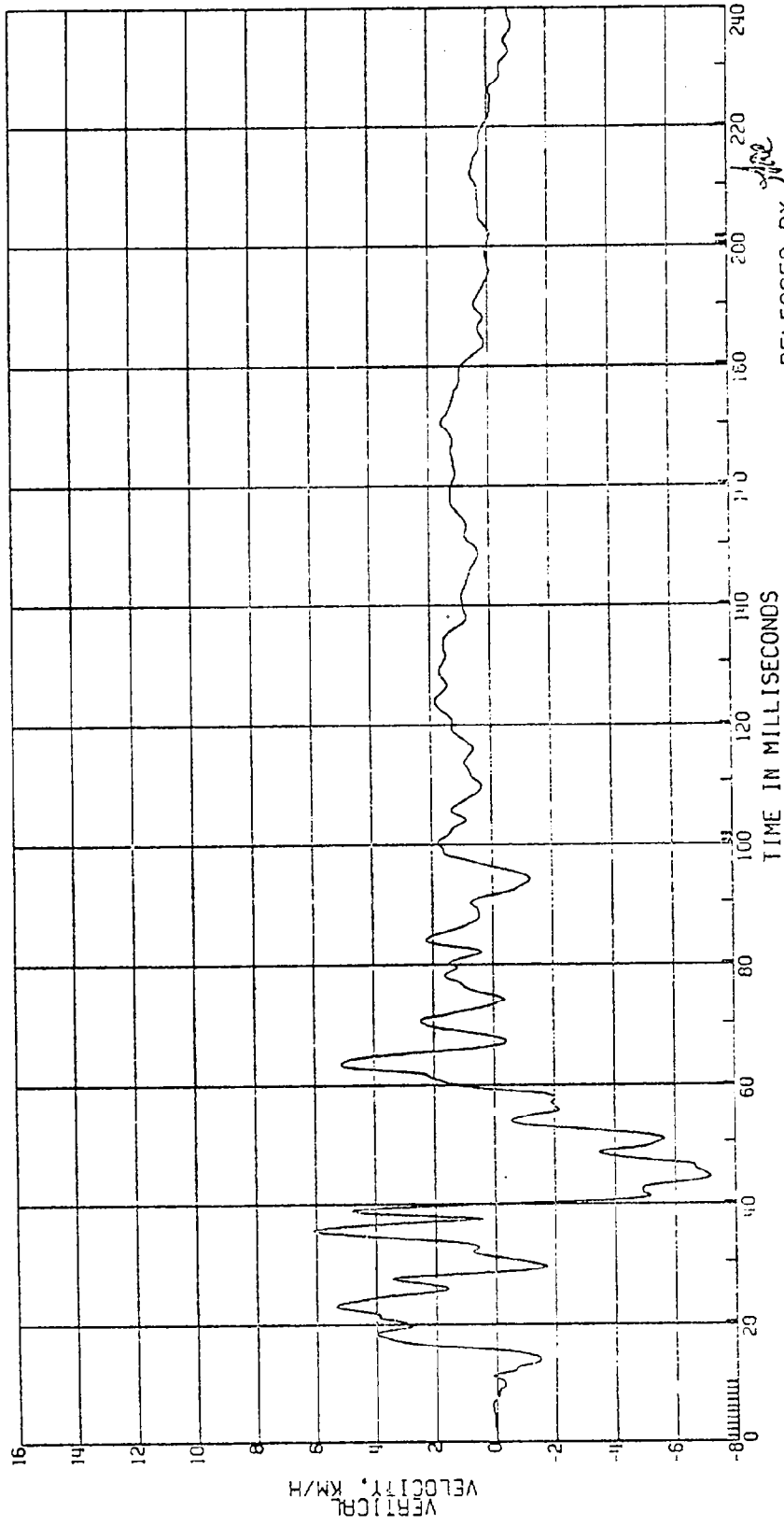
A-D DATA SAE CLASS 180

(STRUCK VEH)

COMPUTED RT.FRT.DOOR-POINT D VELOCITY

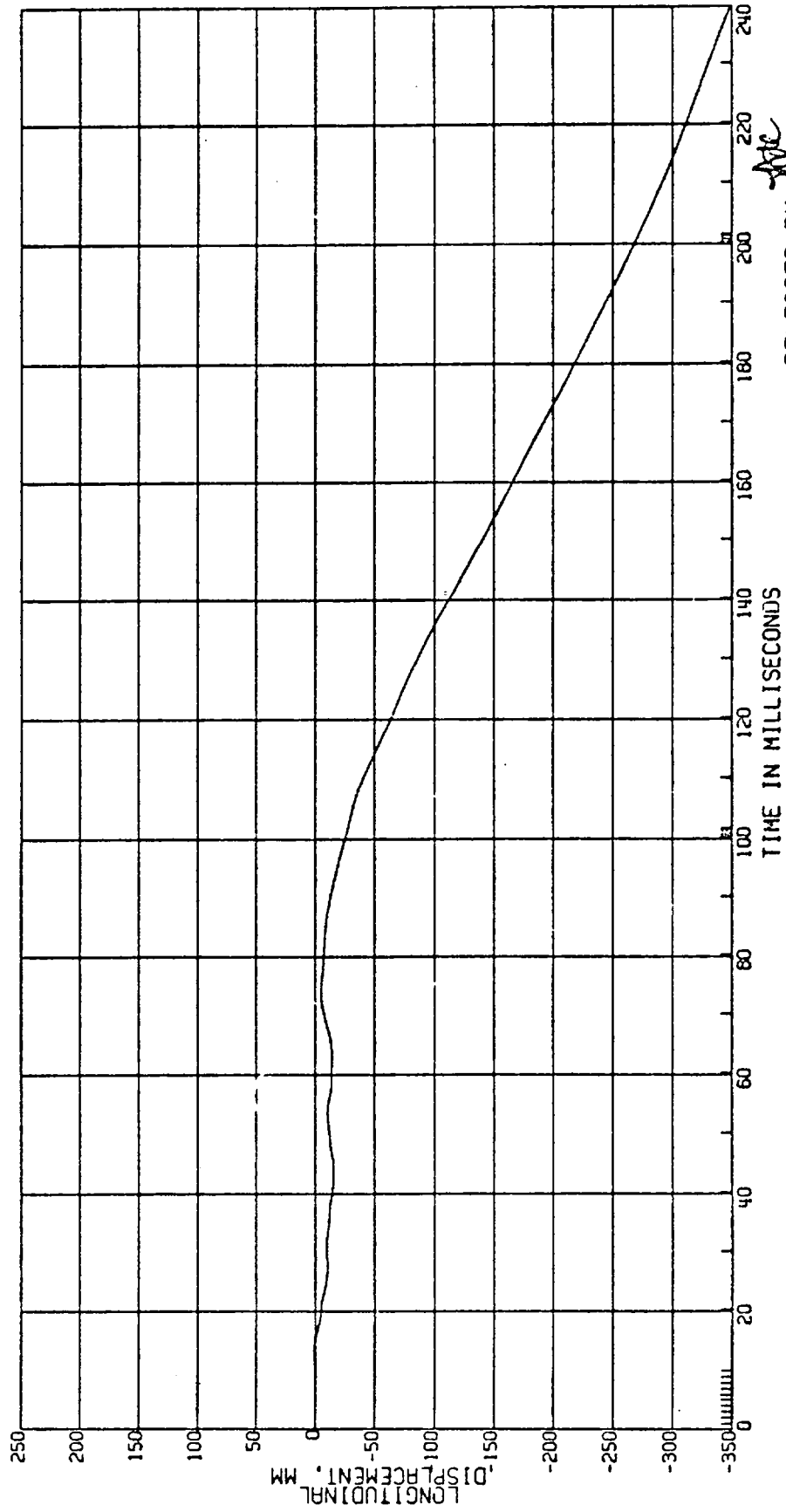
(1ST INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84



RELEASED BY: *file*
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3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180
COMPUTED RT.FRT.DOOR-POINT A DISPLACEMENT
(2ND INTEGRAL PASS-SIDE ACCELERATION)
TEST DATE: 12-19-84



ATC

RELEASED BY: *ATC*
21 PROCESSED 20 DE 84 13:17

3865-848

F.B. CC454

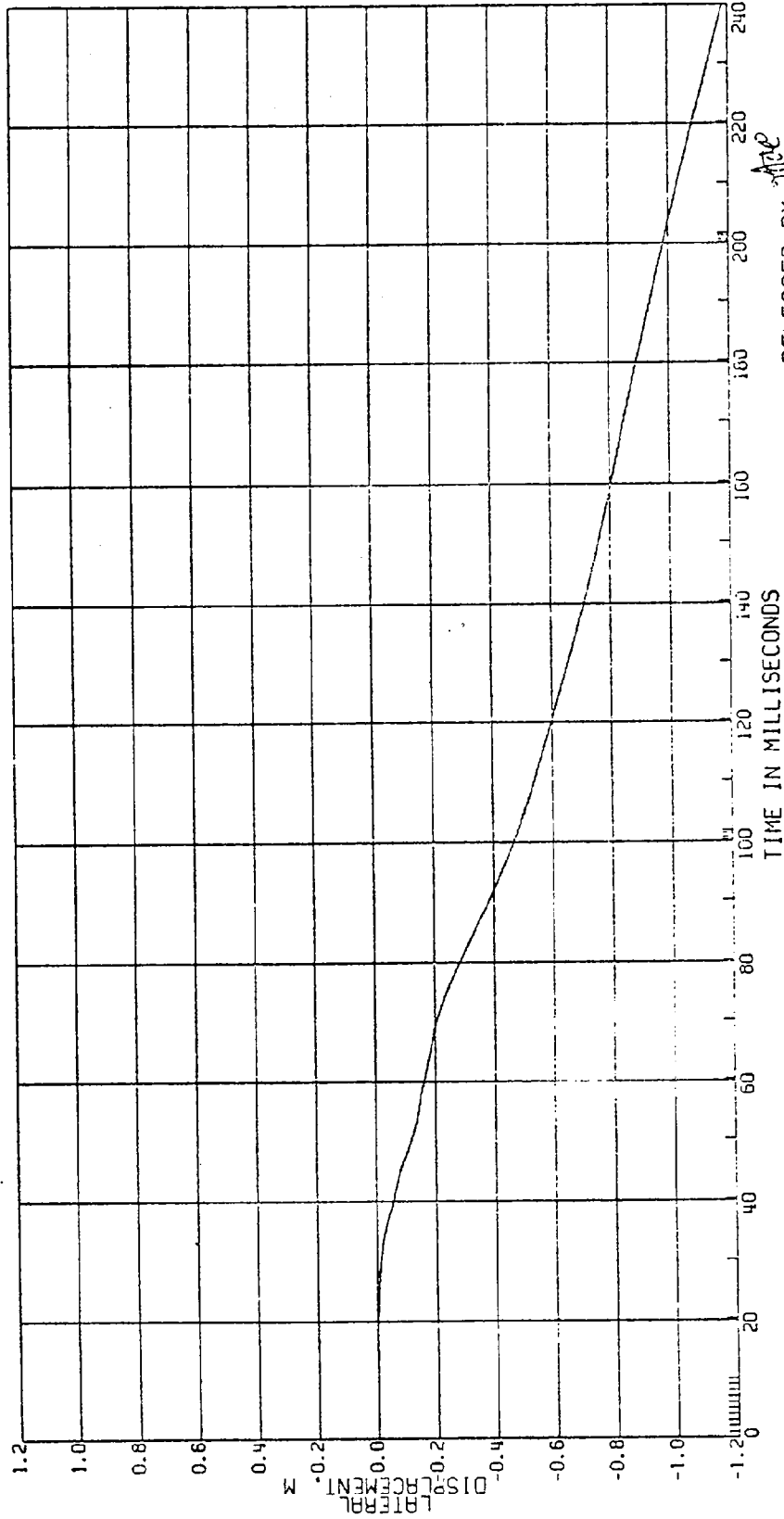
A-D DATA SAE CLASS 180

(STUCK VEH)

COMPUTED RT.FAT.DOOR-POINT A DISPLACEMEN

(2ND INTEGRAL PASS-SIDE ACCELERATION)

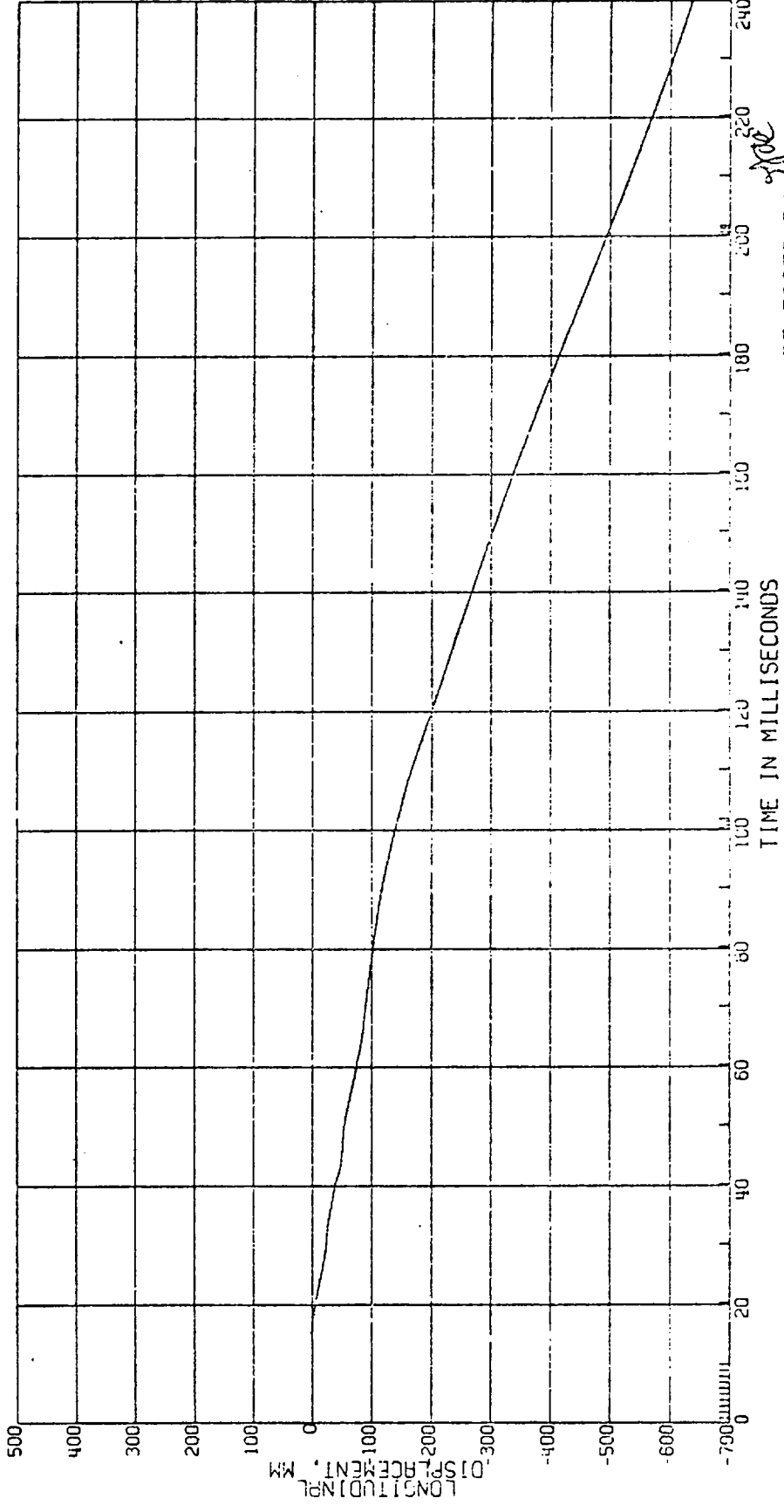
TEST DATE: 12-19-84



RELEASED BY: *APC*

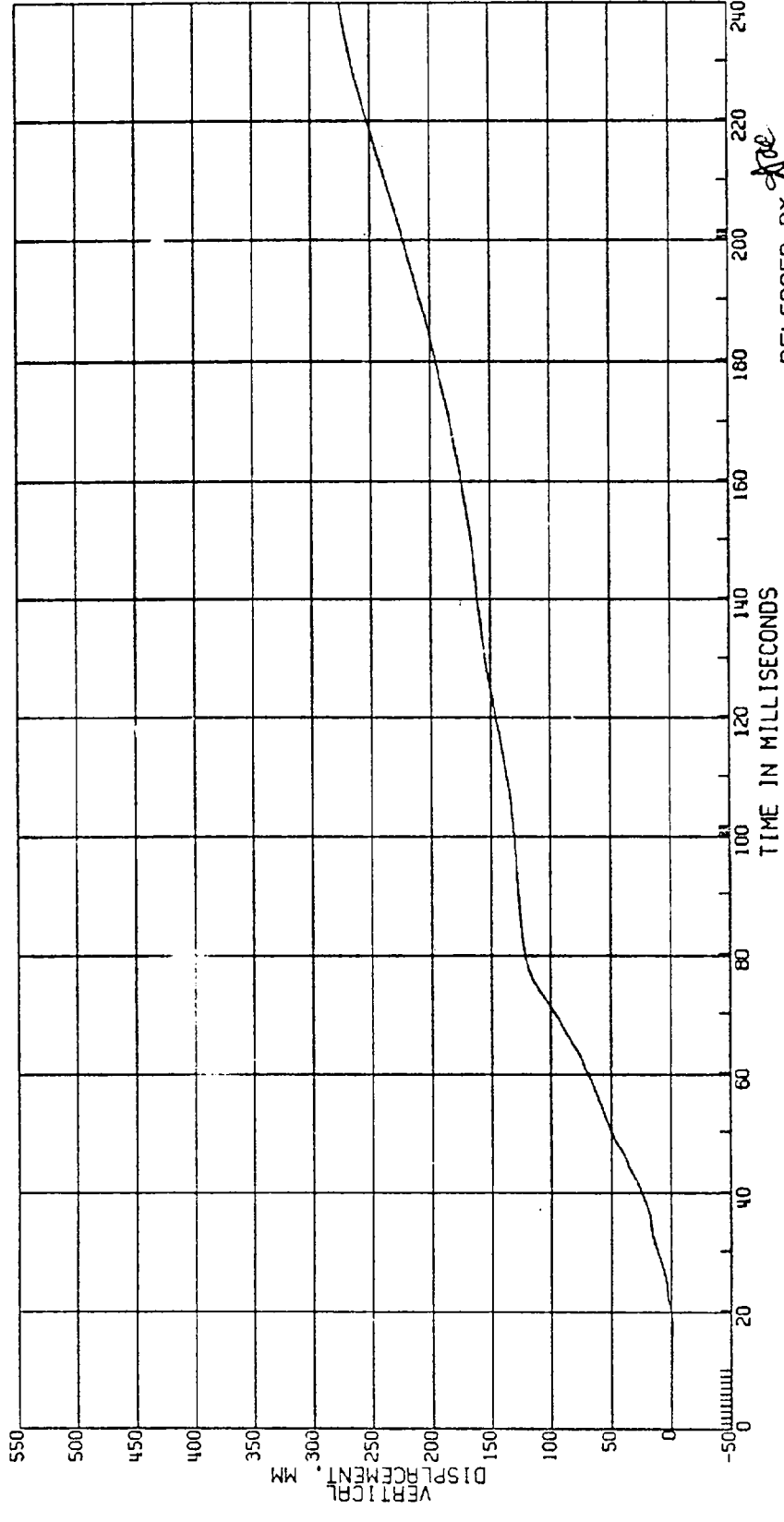
24 PROCESSED 20 DE 84 13:17

F.B. CC454 (STRUCK VEH) COMPUTED RT.FRT.DOOR-POINT B DISPLACEMENT TEST DATE:12-19-84
A-D DATA SAE CLASS 180 (2ND INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *gpc*
30 PROCESSED 20 DE 84 13:19

3865-848 (STRUCK VEH) TEST DATE: 12-19-84
F.B. CC454 (2ND INTEGRAL PASS-SIDE ACCELERATION)
A-D DATA SAE CLASS 180



RELEASED BY: *Joe*
27 PROCESSED 20 DE 84 13:18

3003-048

F.B. CC454

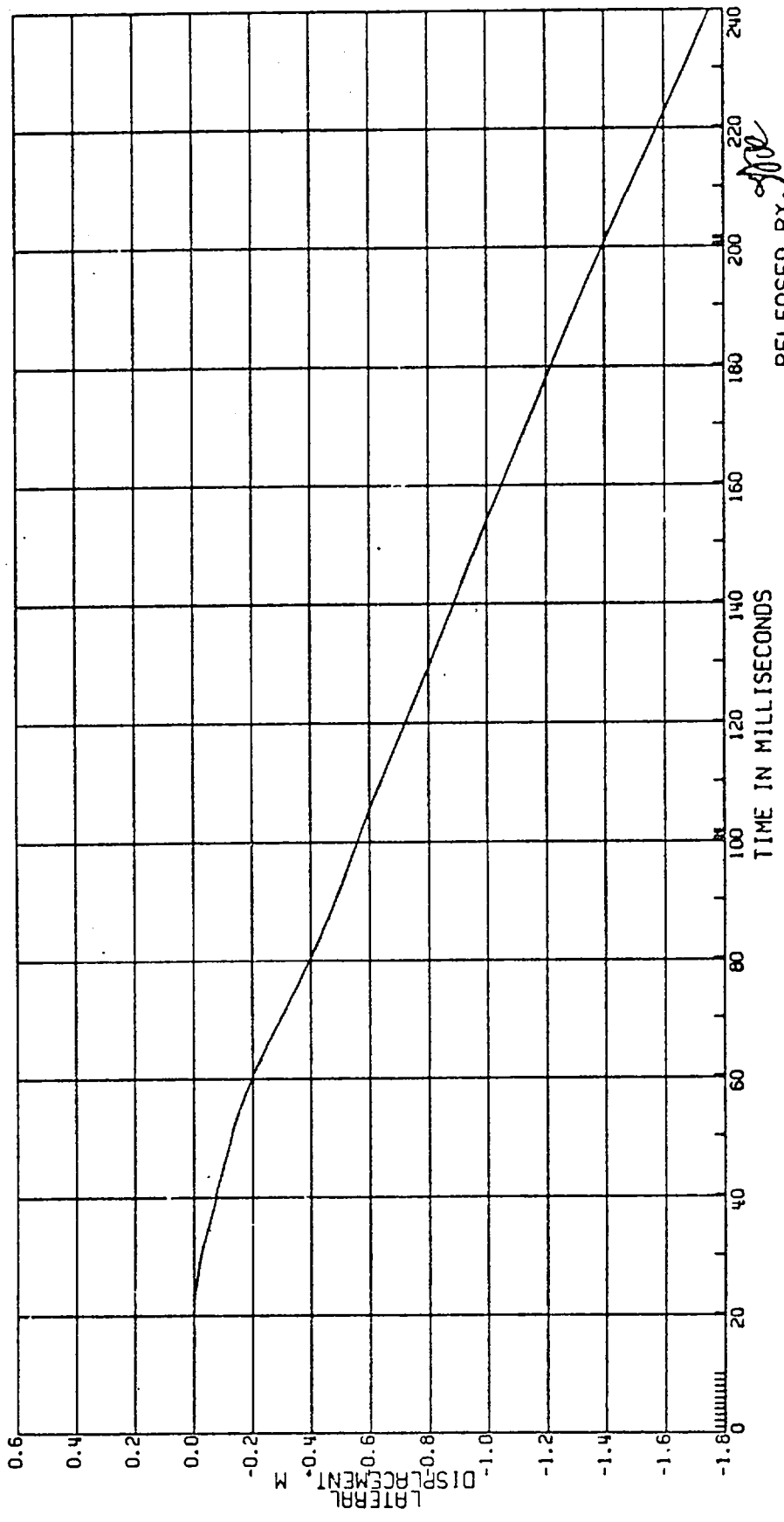
(STRUCK VEH)

A-D DATA SAE CLASS 180

COMPUTED RT. FAT. DOOR-POINT B DISPLACEMENT

TEST DATE: 12-19-84

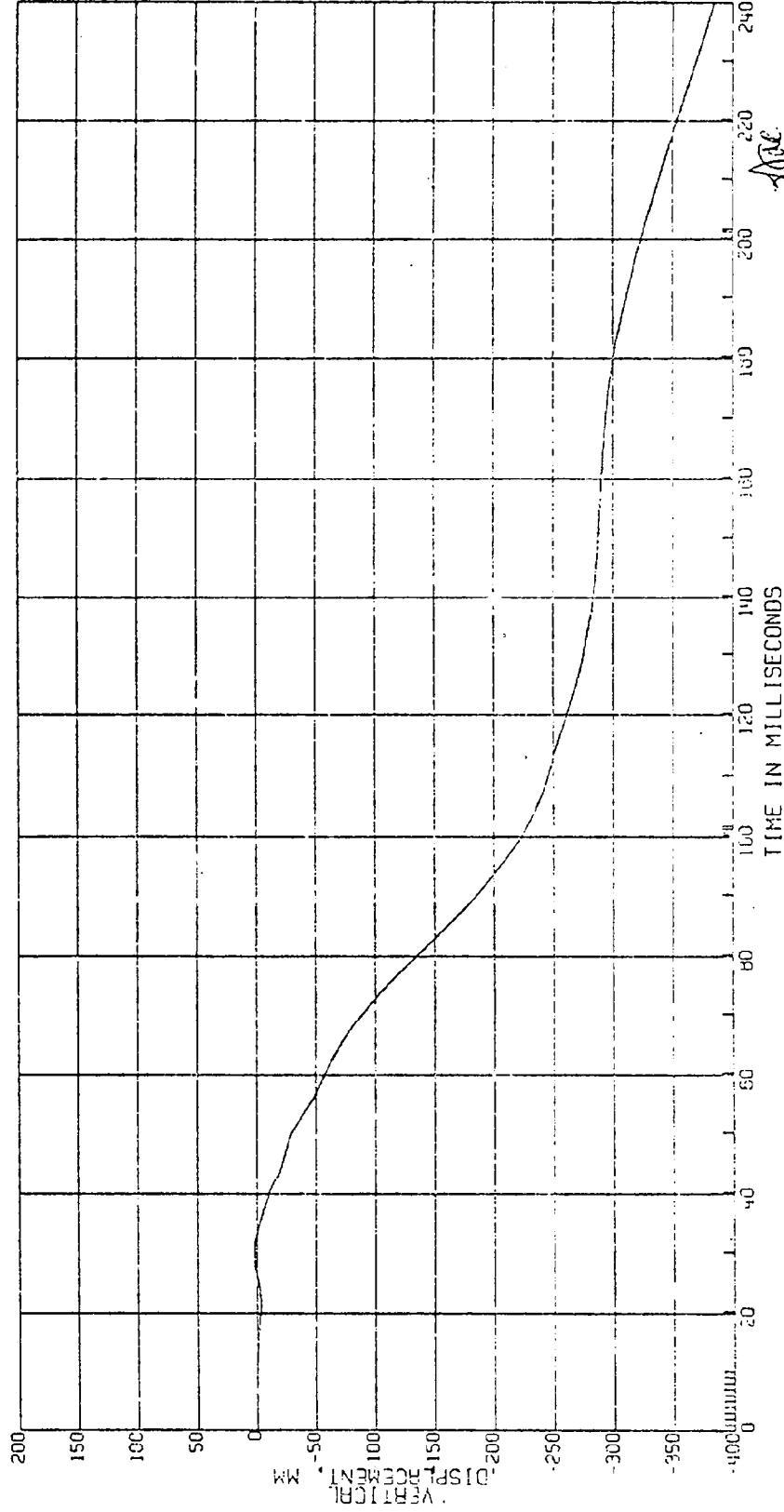
(2ND INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *[Signature]*

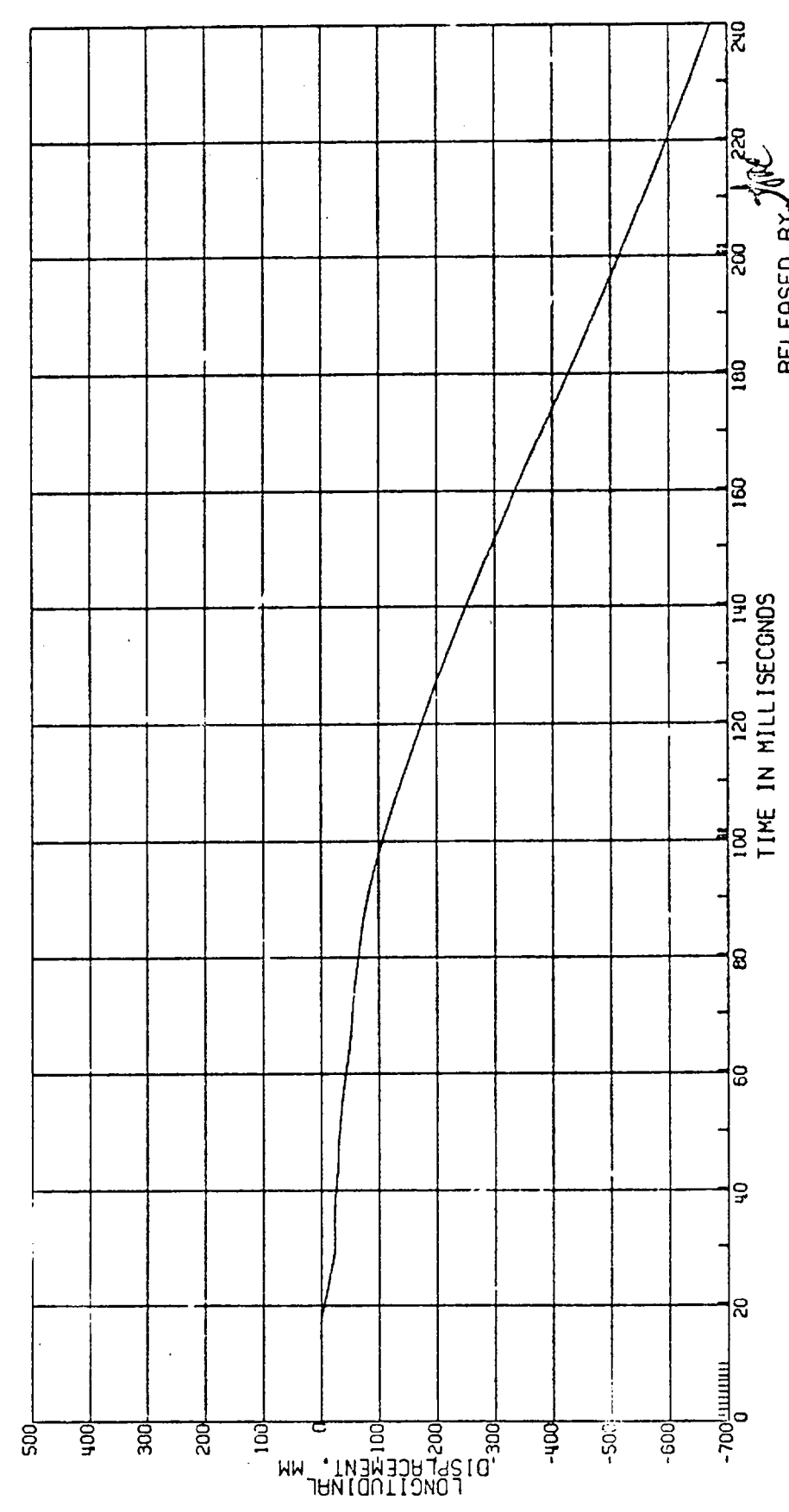
33 PROCESSED 20 DE 84 13:21

F.B. CC454 (STRUCK VEH) COMPUTED R1.FRI.UUUR-PUINI B DISPLACEMENT TEST DATE:12-19-84
A-D DATA SAE CLASS 180 (2ND INTEGRAL PASS-SIDE ACCELERATION)



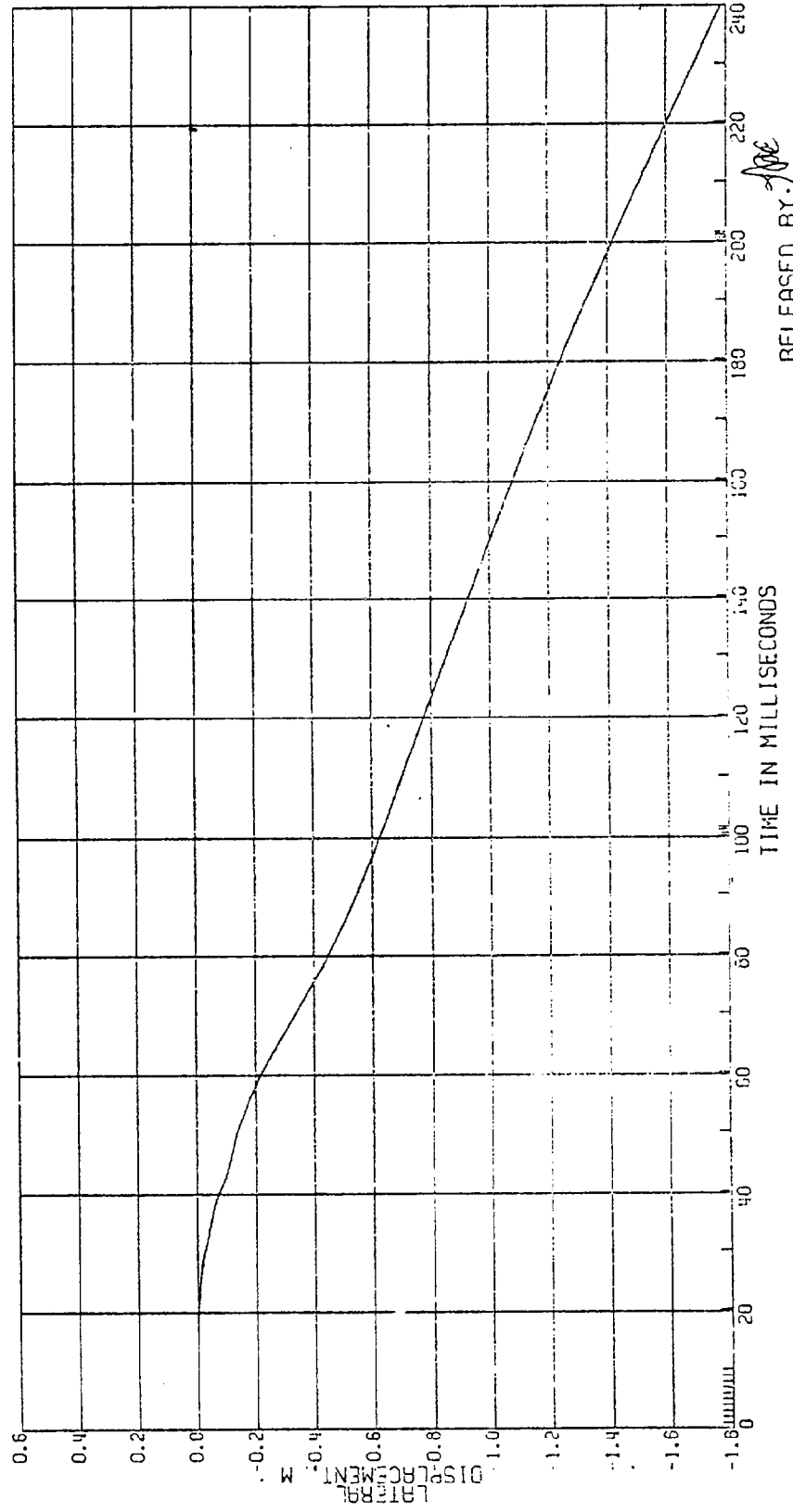
RELEASED BY: *Mac*
36 PROCESSED 20 DE 84 13:22

F.B. CC454 (STRUCK VEH) COMPUTED RT.FRT.DOOR-POINT C DISPLACEMENT TEST DATE: 12-19-84
A-D DATA SAE CLASS 180 (2ND INTEGRAL PASS-SIDE ACCELERATION)



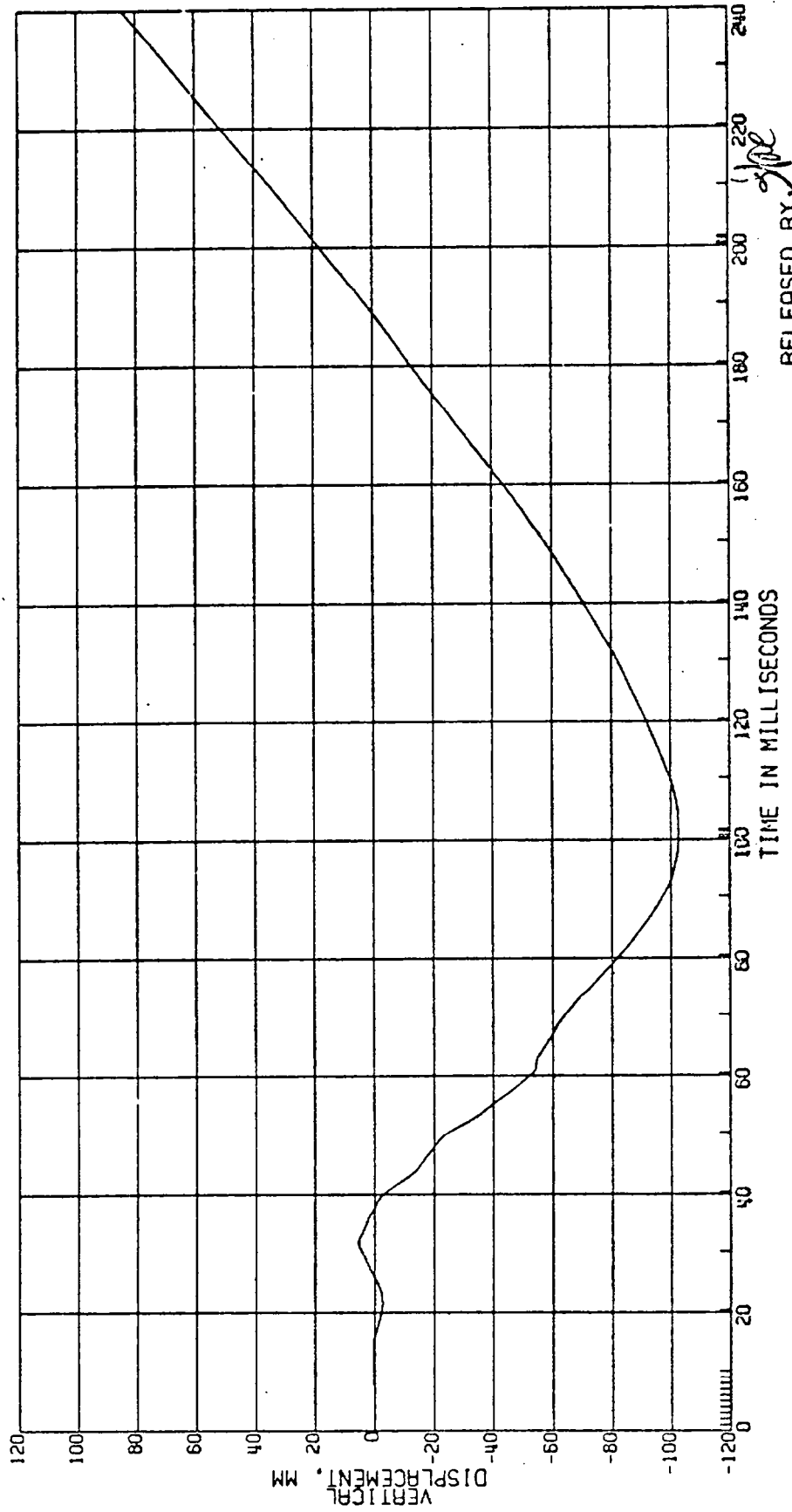
RELEASED BY: [Signature]
39 PROCESSED 20 DE 84 13:23

CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-3a
 3865-848
 F.B. C0454 (STRUCK VEH) COMPUTED RT.FRT.DOOR-POINT C DISPLACEMEN TEST DATE:12-19-84
 A-D DATA SAE CLASS 180 (2ND INTEGRAL PASS-SIDE ACCELERATION)



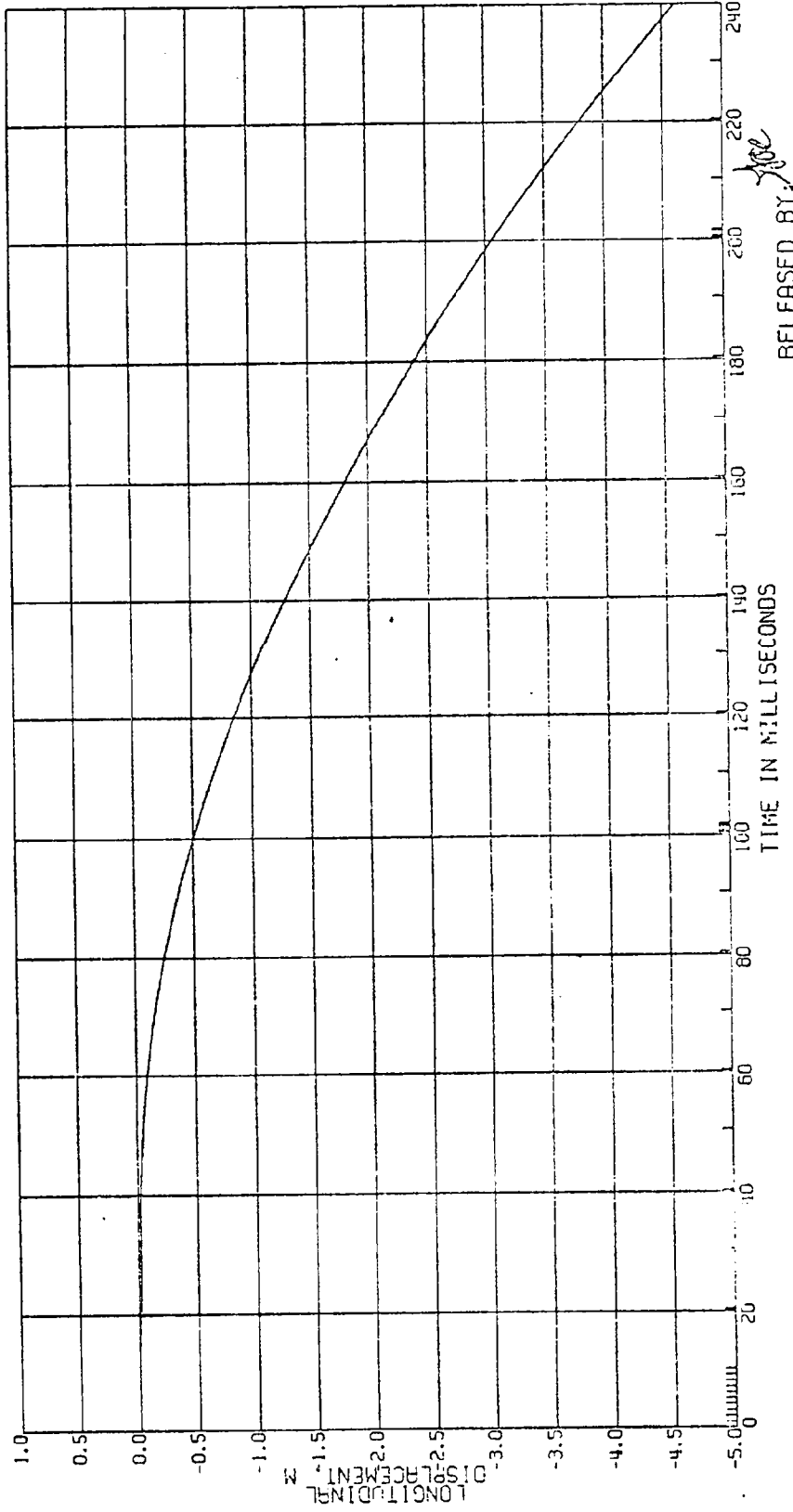
RELEASED BY: JRE
 92 APR 10 1984 BY 19-24

C6115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -33
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180
COMPUTED AT.FRT.DOOR-POINT C DISPLACEMENT TEST DATE:12-19-84
(2ND INTEGRAL PASS-SIDE ACCELERATION)

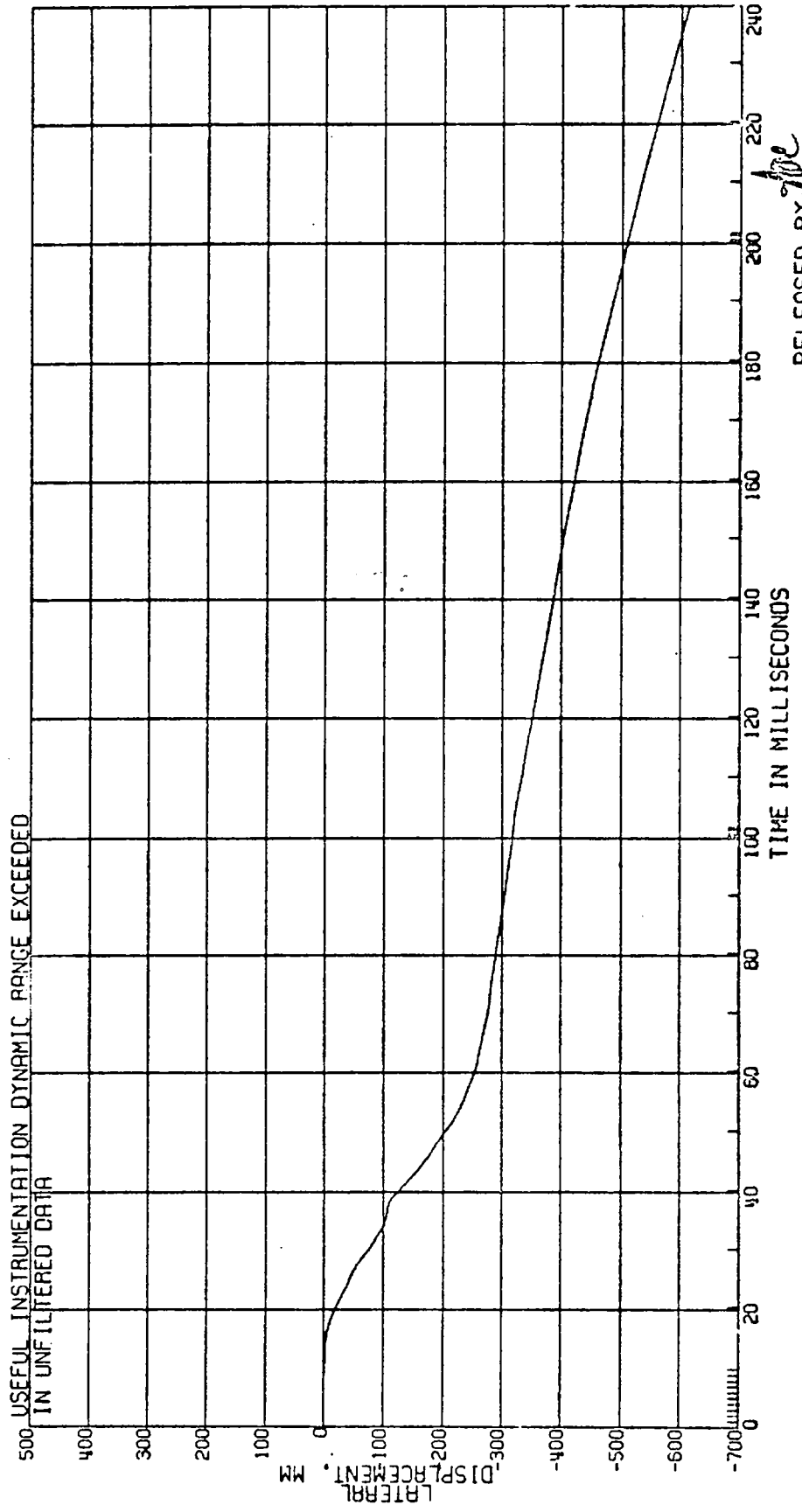


RELEASED BY: *[Signature]*
US PROCESSED 20 DEC 04 13:26

CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -34
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180
COMPUTED RT.FRT. DOOR-POINT D DISPLACEMENT TEST DATE: 12-19-84
(2ND INTEGRAL PASS-SIDE ACCELERATION)

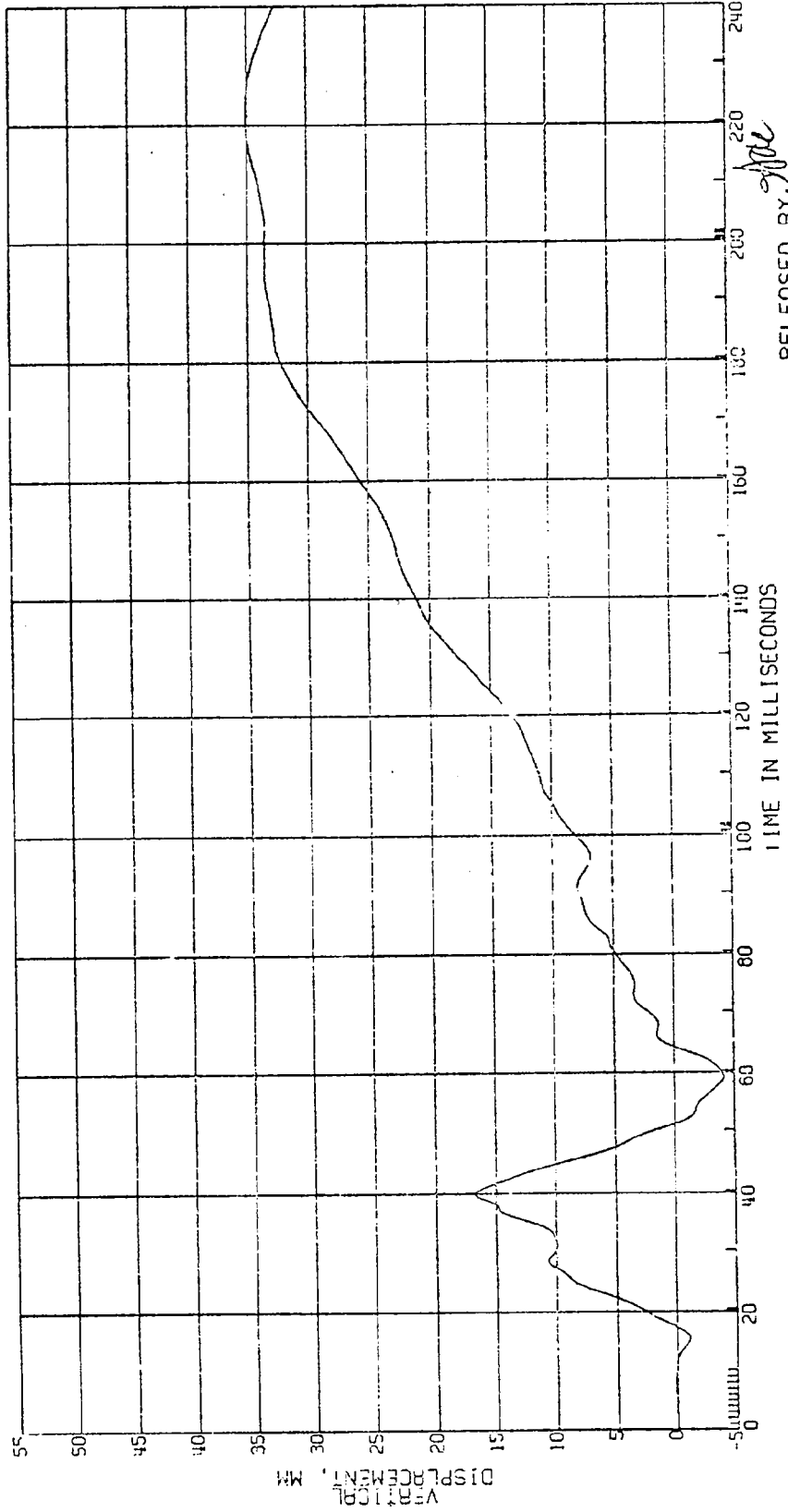


C6115B RIGHT SIDE IMP. SO DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -35
3865-848
F.B. C0454 (STRUCK VEH) COMPUTED RT. FRT. DOOR-POINT D DISPLACEMENT TEST DATE: 12-19-84
A-D DATA SAE CLASS 180 (2ND INTEGRAL PASS-SIDE ACCELERATION)



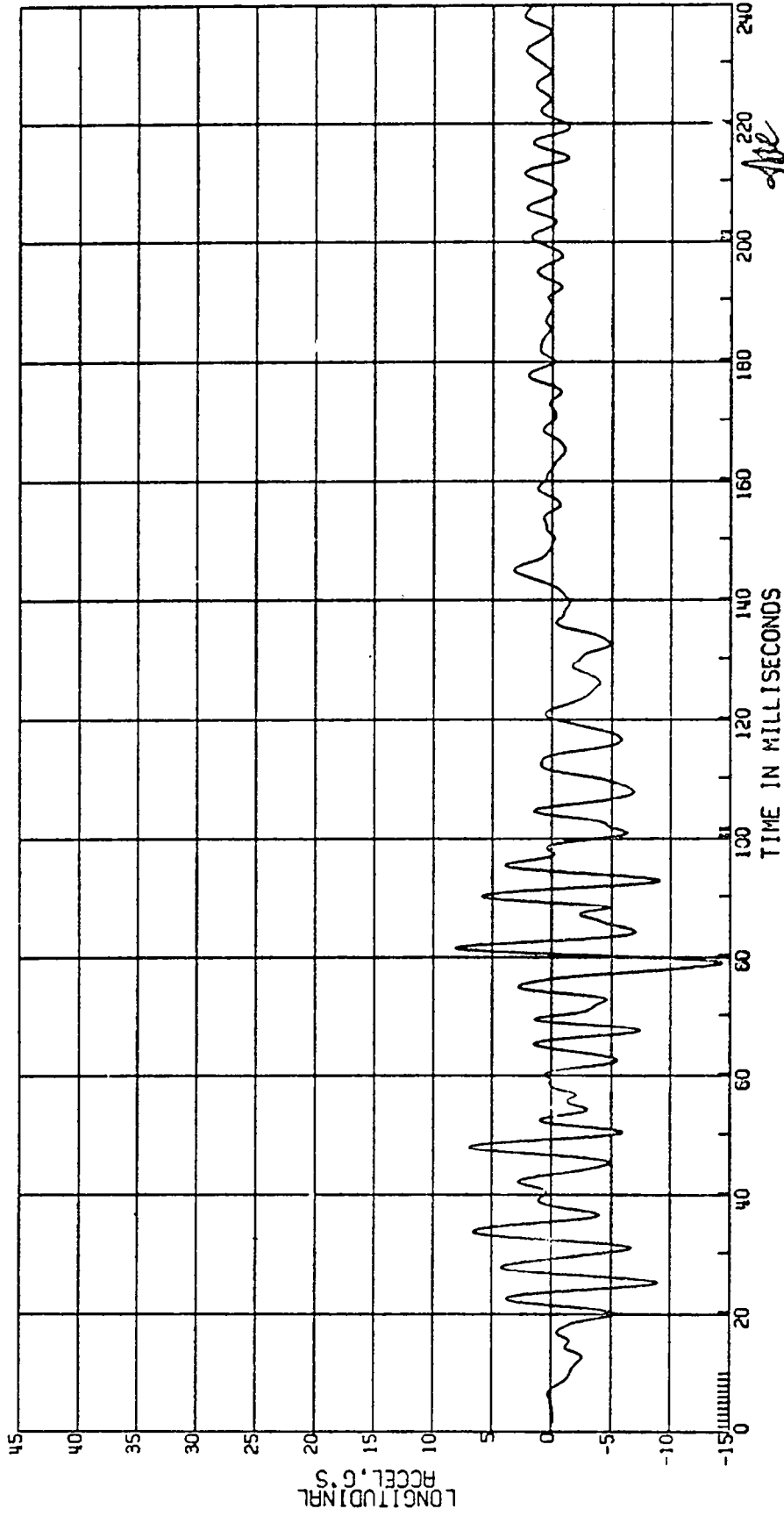
RELEASED BY *me*
51 PROCESSED 20 DEC 84 13:28

C6115B RIGHT SIDE IMP. 60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -36
 3865-848
 F.B. CC454 (STRUCK VEH)
 A-D DATA SAE CLASS 180
 COMPUTED RT. FRT. DOOR-POINT D DISPLACEMENT
 (2ND INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *APC*
 54 PROCESSED 20 DE 84 13:30

CG61158 RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD.SMALL CAR 55.0KM/H FIGURE -37
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 60 TEST DATE:12-19-84
DR-SIDE FLOOR PAN ACCEL.



RELEASED BY: *APC*
67 PROCESSED 20 DE 84 13:34

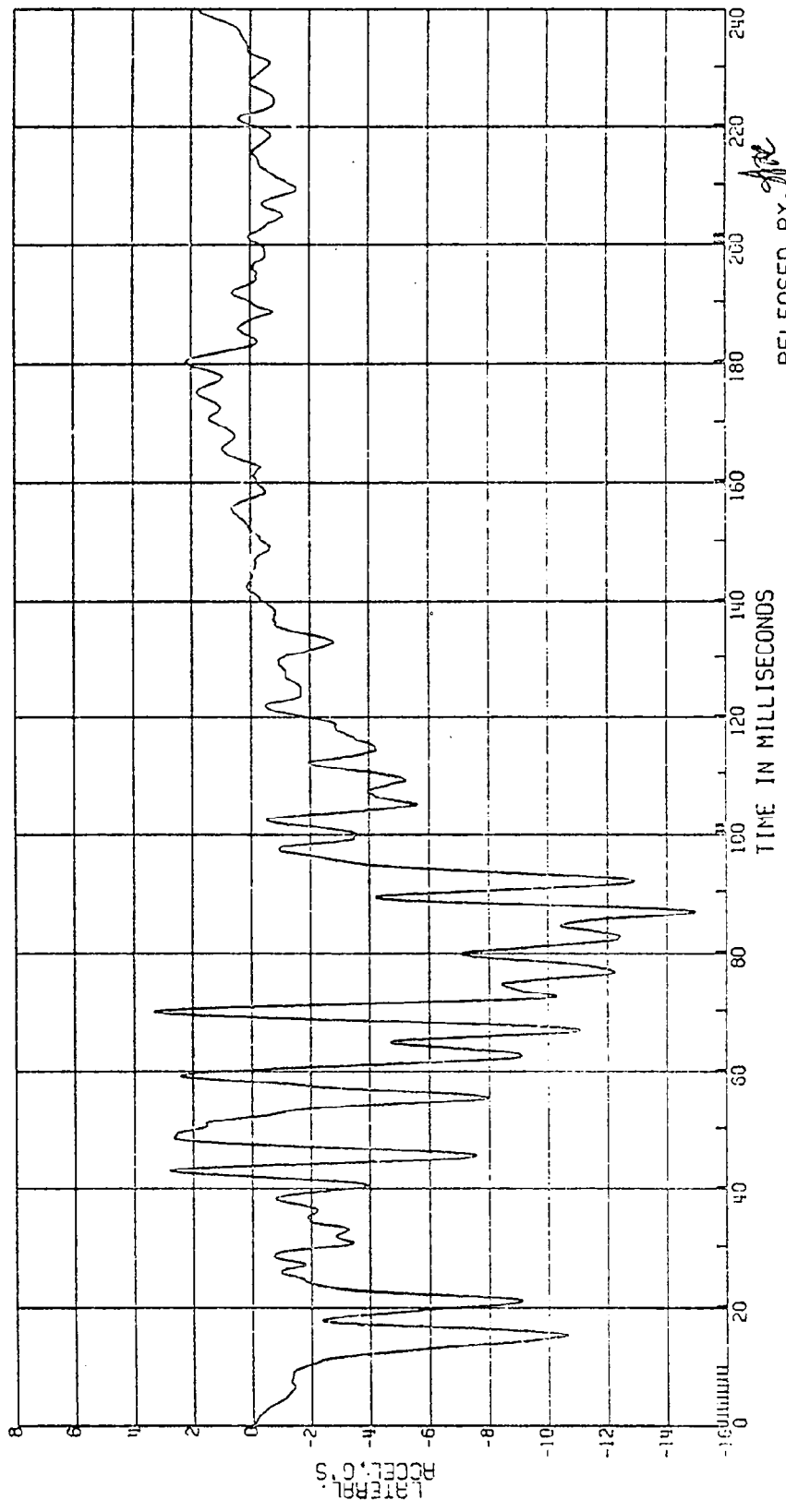
3865-848

F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 60

DR-SIDE FLOOR PAN ACCEL.

TEST DATE: 12-19-84



RELEASED BY: *APC*
76 PROCESSED 20 DE 84 13:37

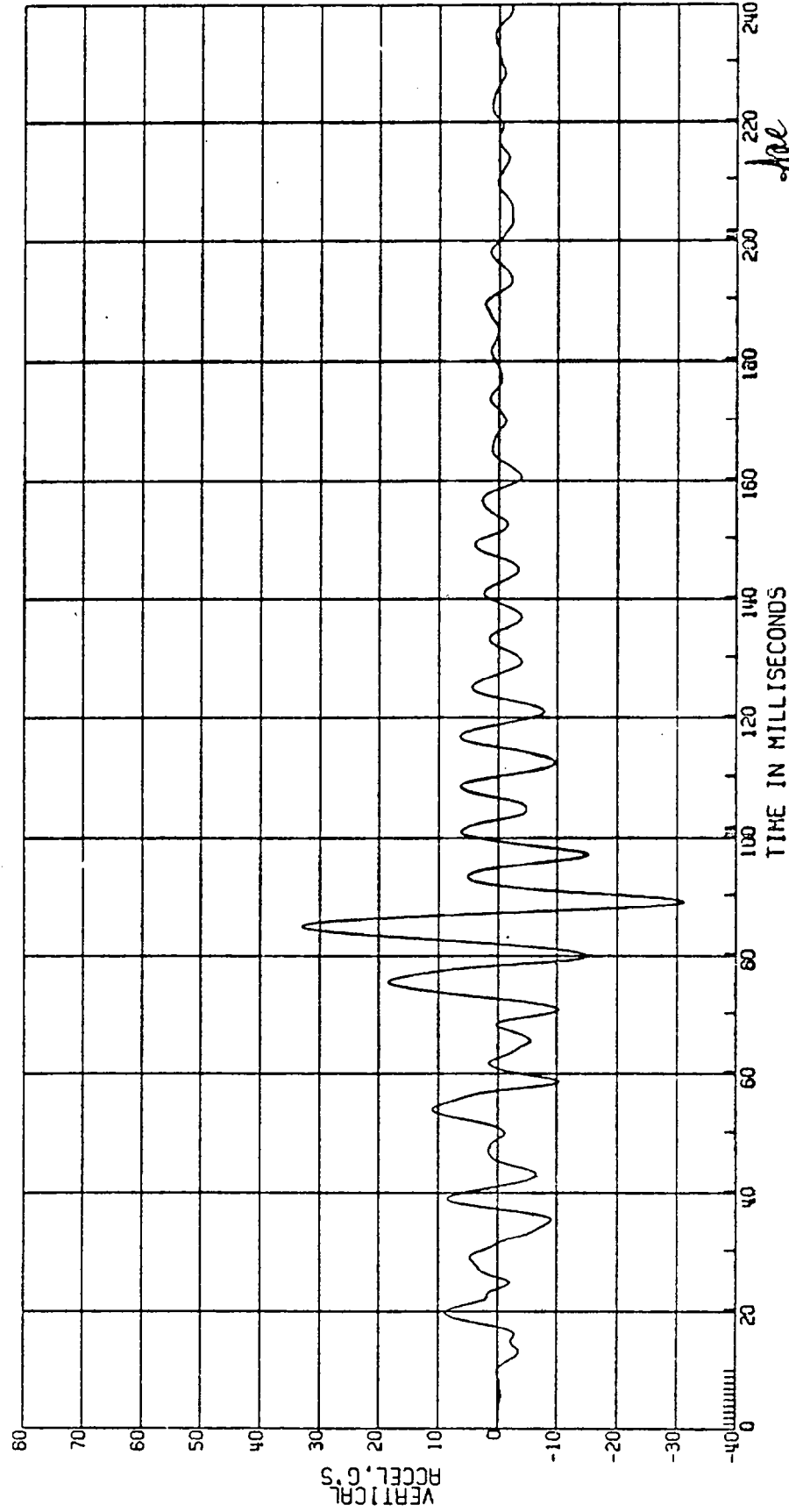
3865-848

F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 60

DR-SIDE FLOOR PAN ACCEL.

TEST DATE: 12-19-84

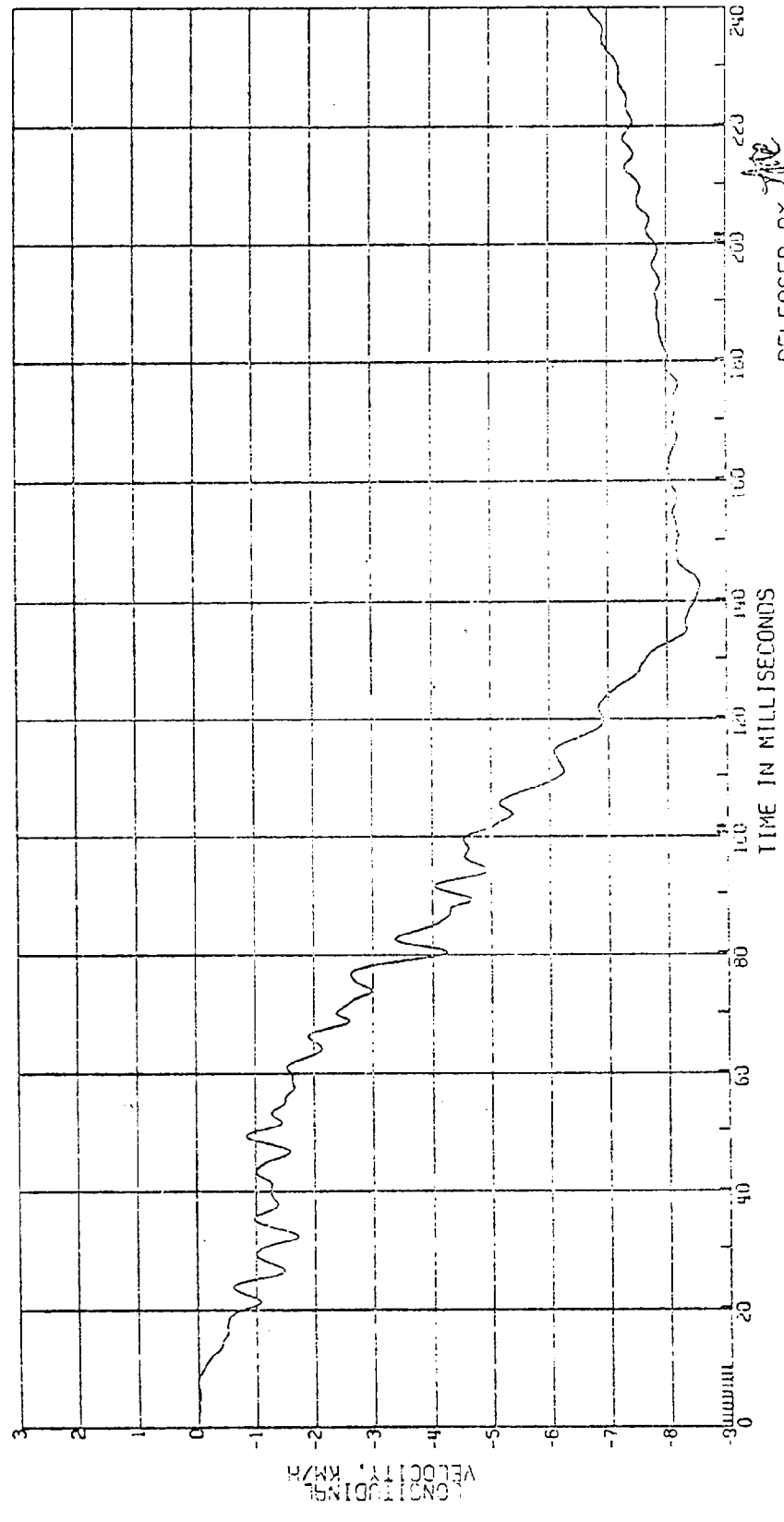


RELEASED BY: *JPL*
79 PROCESSED 20 DE 84 13:37

F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180

COMPUTED FLOOR PAN VELOCITY
(1ST INTEGRAL DR-SIDE ACCELERATION)

TEST DATE: 12-19-84



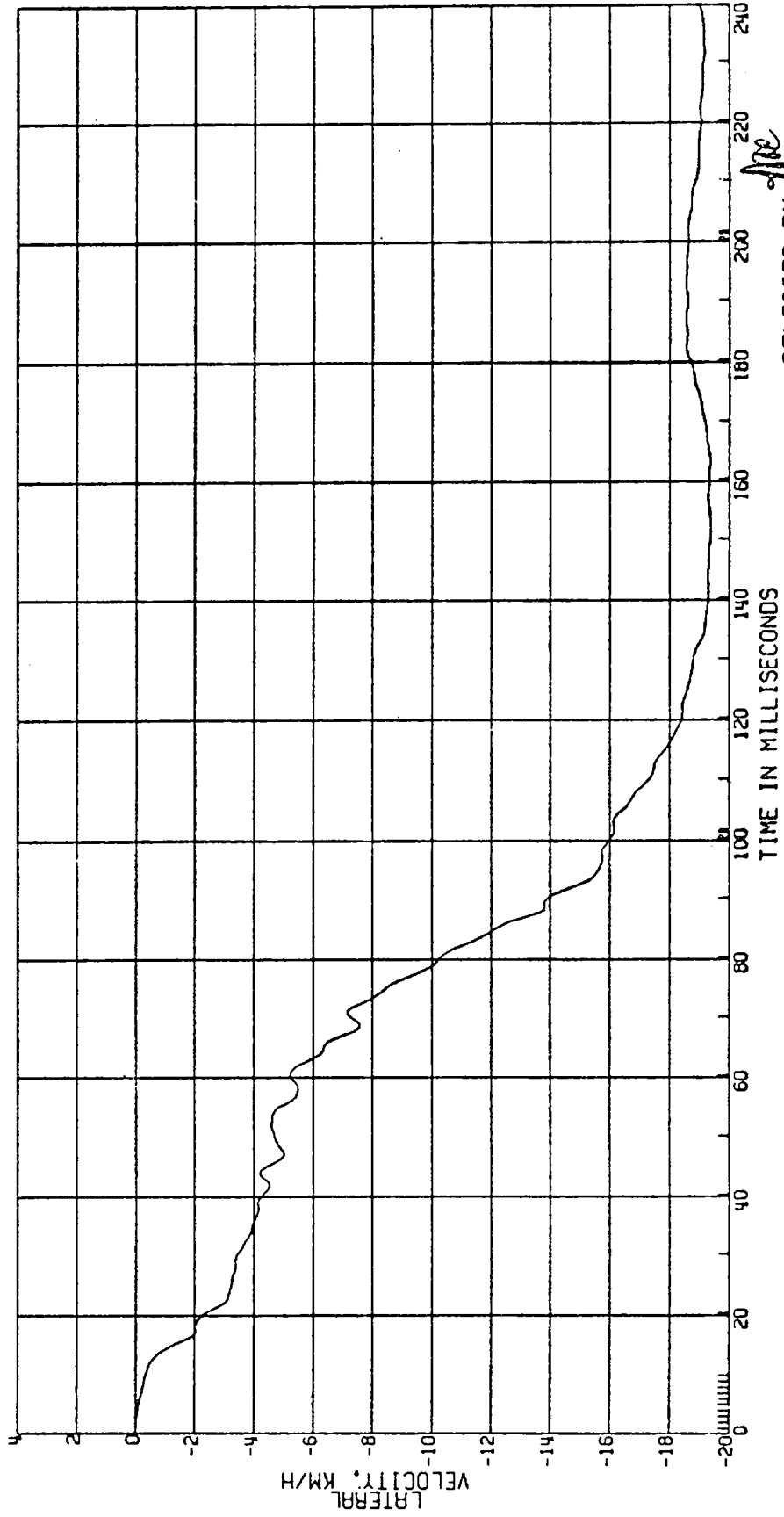
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68 PROCESSED 20 DE 84 13:35

WVW WTV
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180

COMPUTED FLOOR PAN VELOCITY
(1ST INTEGRAL DR-SIDE ACCELERATION)

TEST DATE: 12-19-84



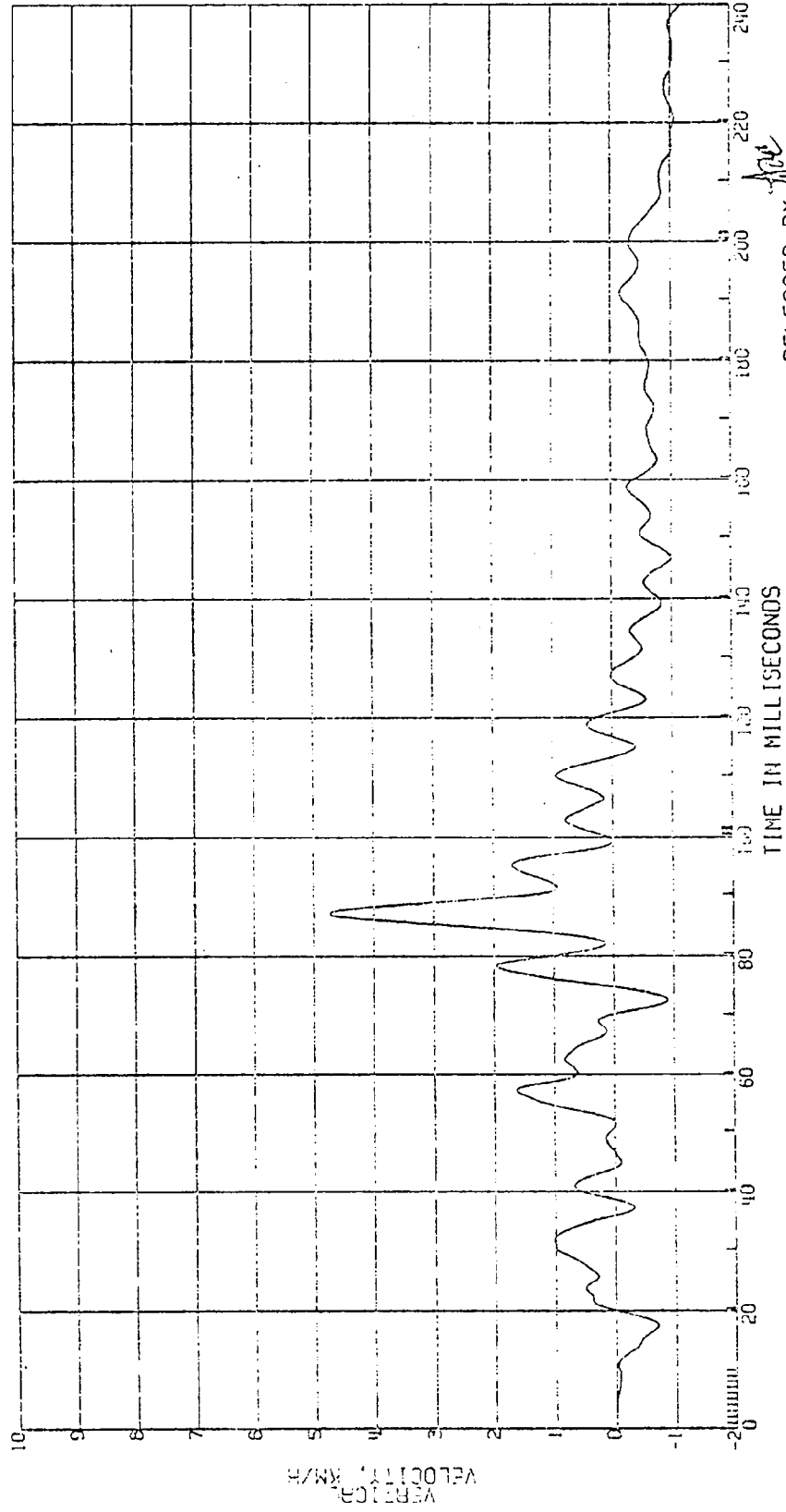
me

RELEASED BY:
77 PROCESSED 20 DE 84 13:37

F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180

COMPUTED FLOOR PAN VELOCITY
(1ST INTEGRAL DR-SIDE ACCELERATION)

TEST DATE: 12-19-84



RELEASED BY: *[Signature]*
60 PROCESSED 20 DE 84 13:38

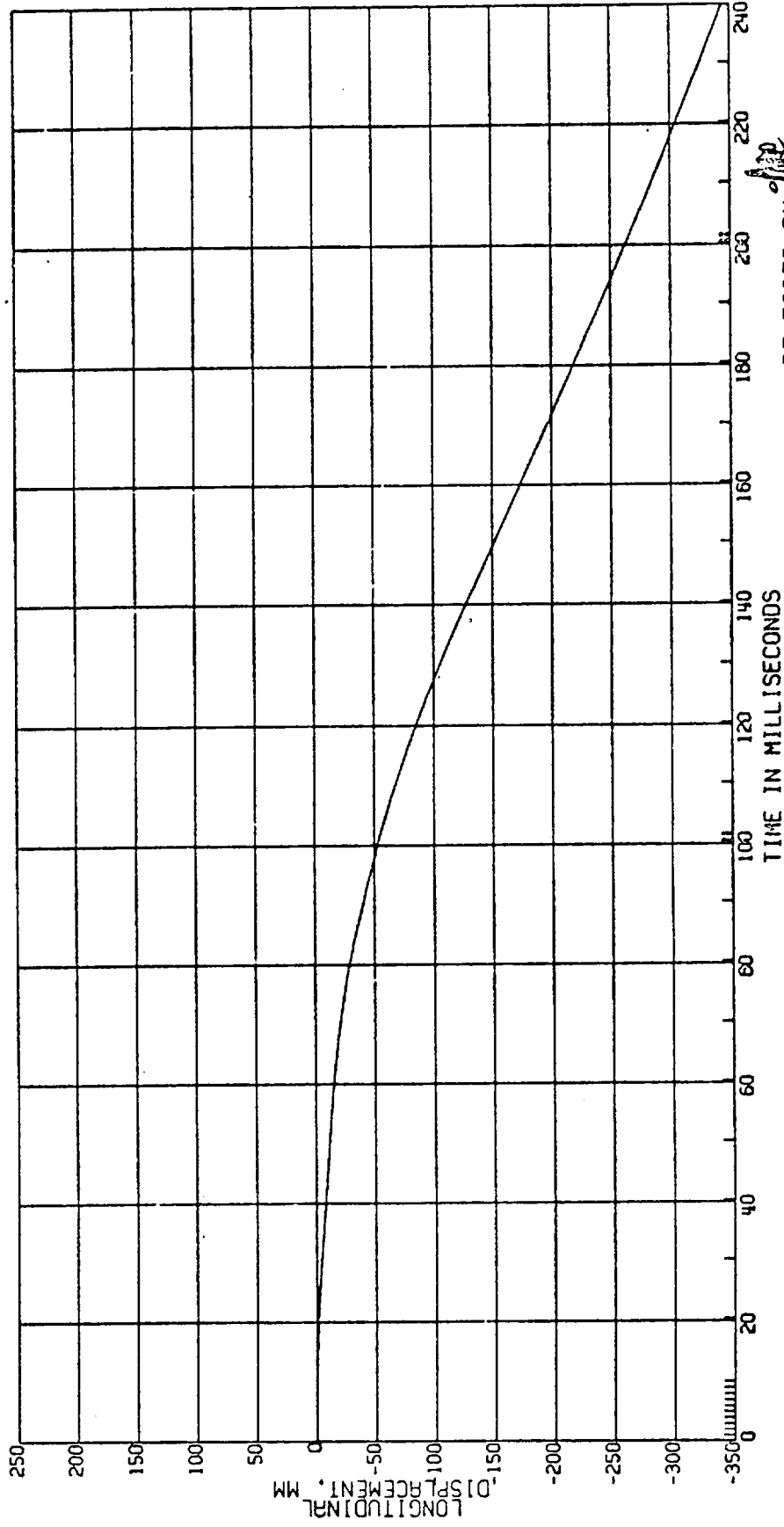
3000-040

F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 180

COMPUTED FLOOR PAN DISPLACEMENT
(2ND INTEGRAL DR-SIDE ACCELERATION)

TEST DATE: 12-19-84

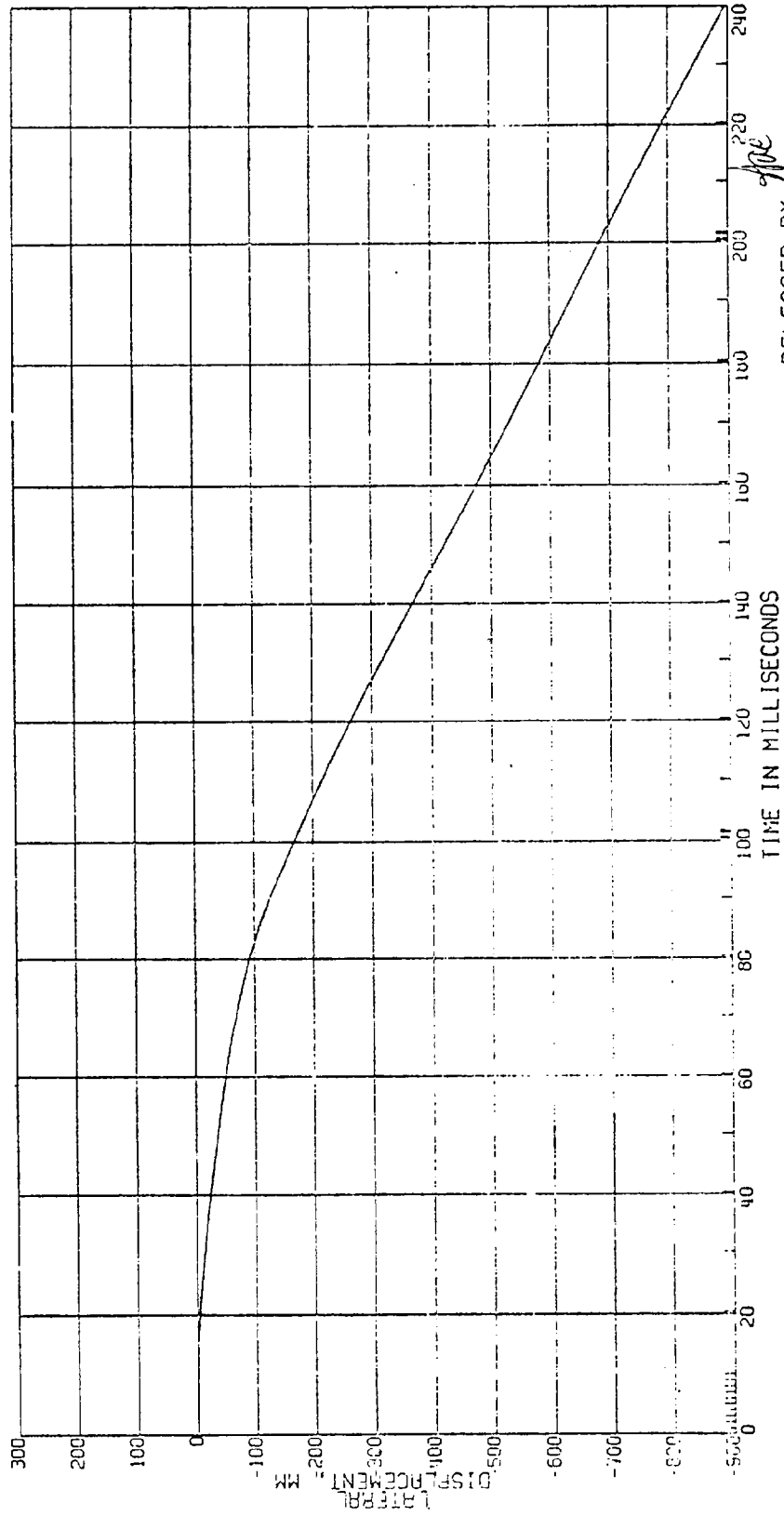


RELEASED BY: *[Signature]*
69 PROCESSED 20 DE 84 13:35

TEST DATE: 12-19-84

LUMPY FLOOR PAN DISPLACEMENT
(2ND INTEGRAL DR-SIDE ACCELERATION)

F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180

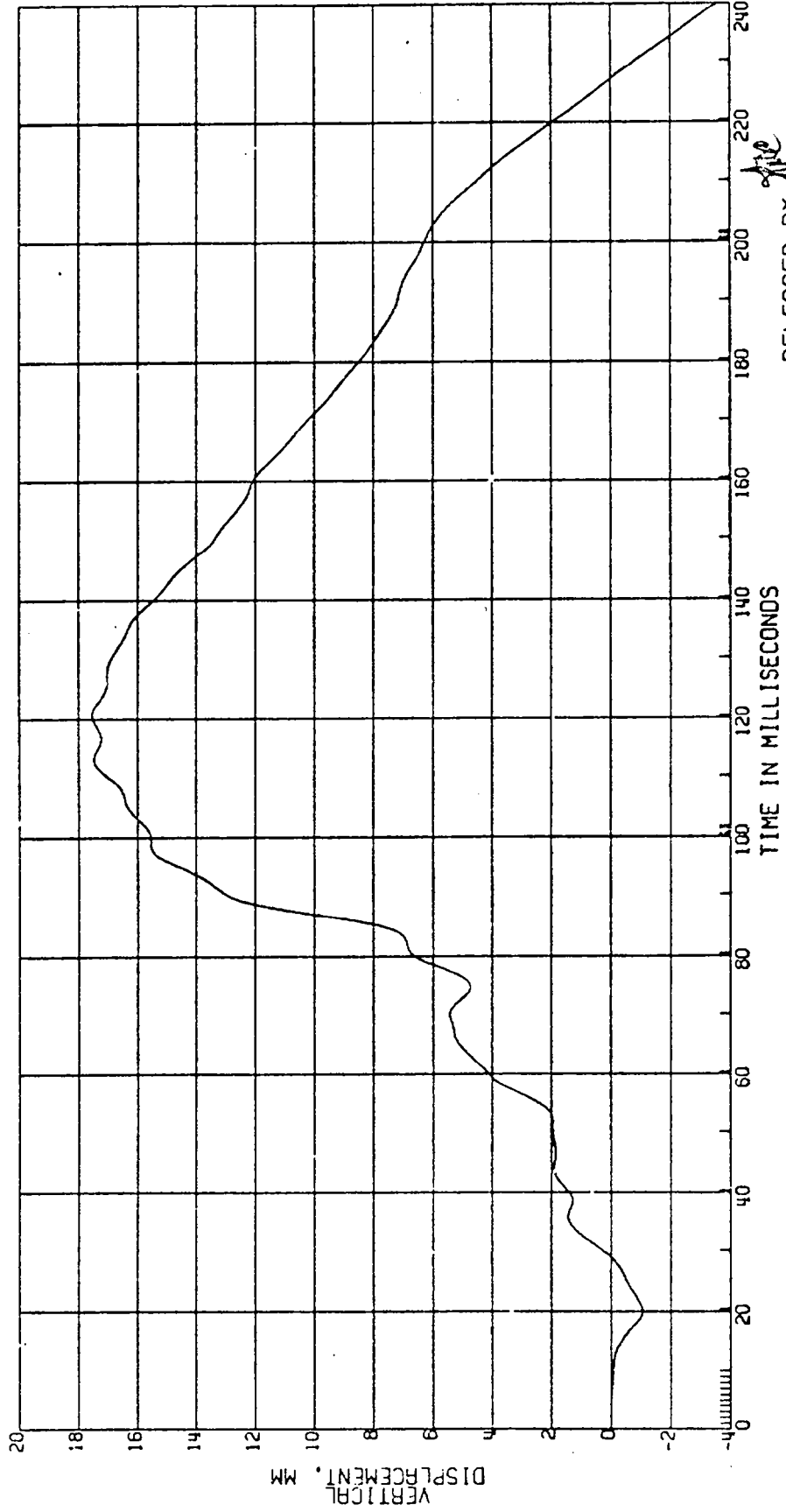


RELEASED BY: *ME*
78 PROCESSED 20 DE 84 13:37

F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 180

LUMPY FLOOR PIN DISPLACEMENT
(2ND INTEGRAL DR-SIDE ACCELERATION)

TEST DATE: 12-19-84



RELEASED BY: *JHE*
R1 PROCESSED 20 DE 84 13:36

C6115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-4c

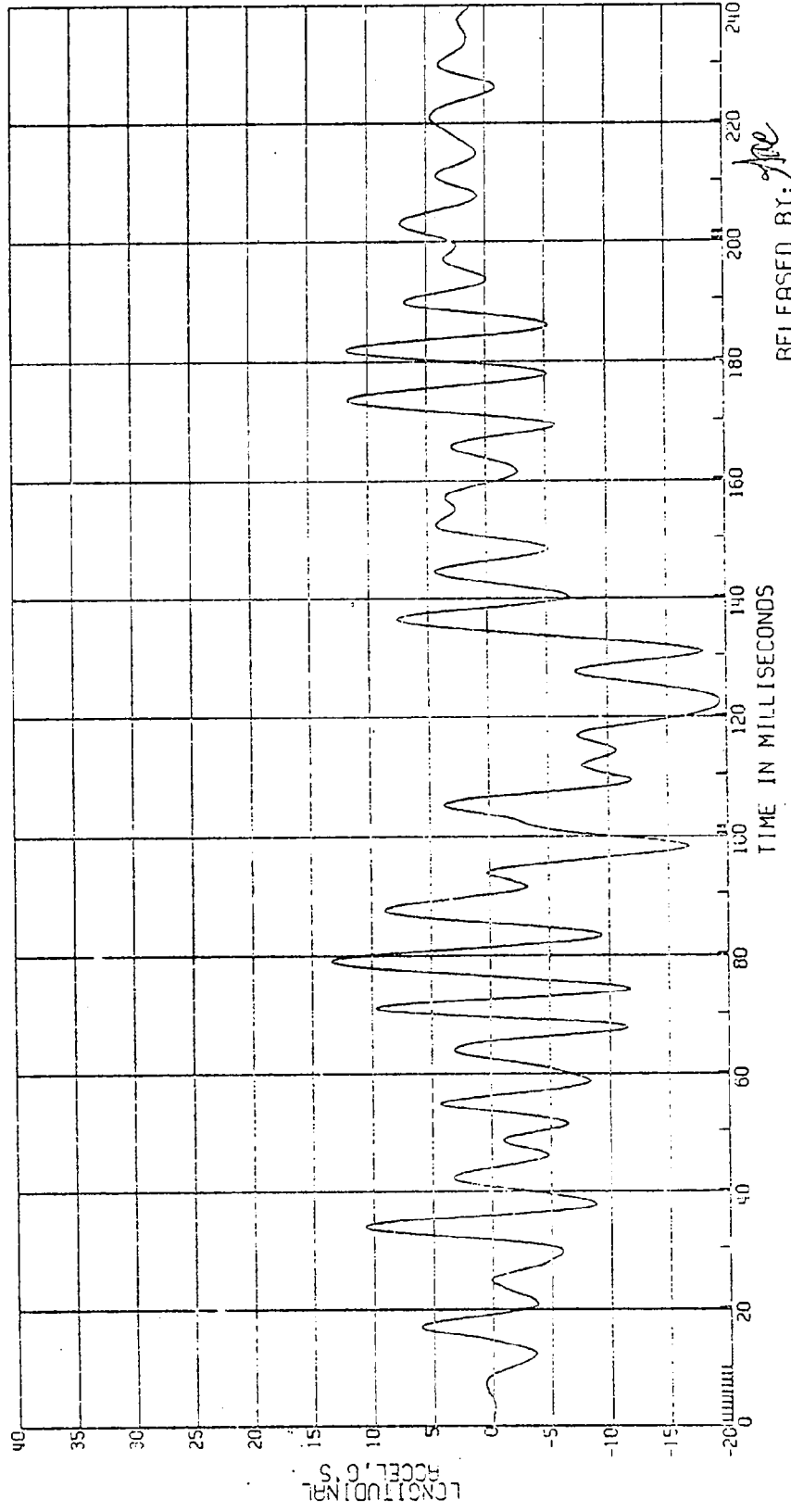
3365-848

F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 60

PASS-SIDE TRUNK ACCEL.

TEST DATE: 12-19-84



RELEASED BY: *JRE*
12-19-84 13:30

CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-47

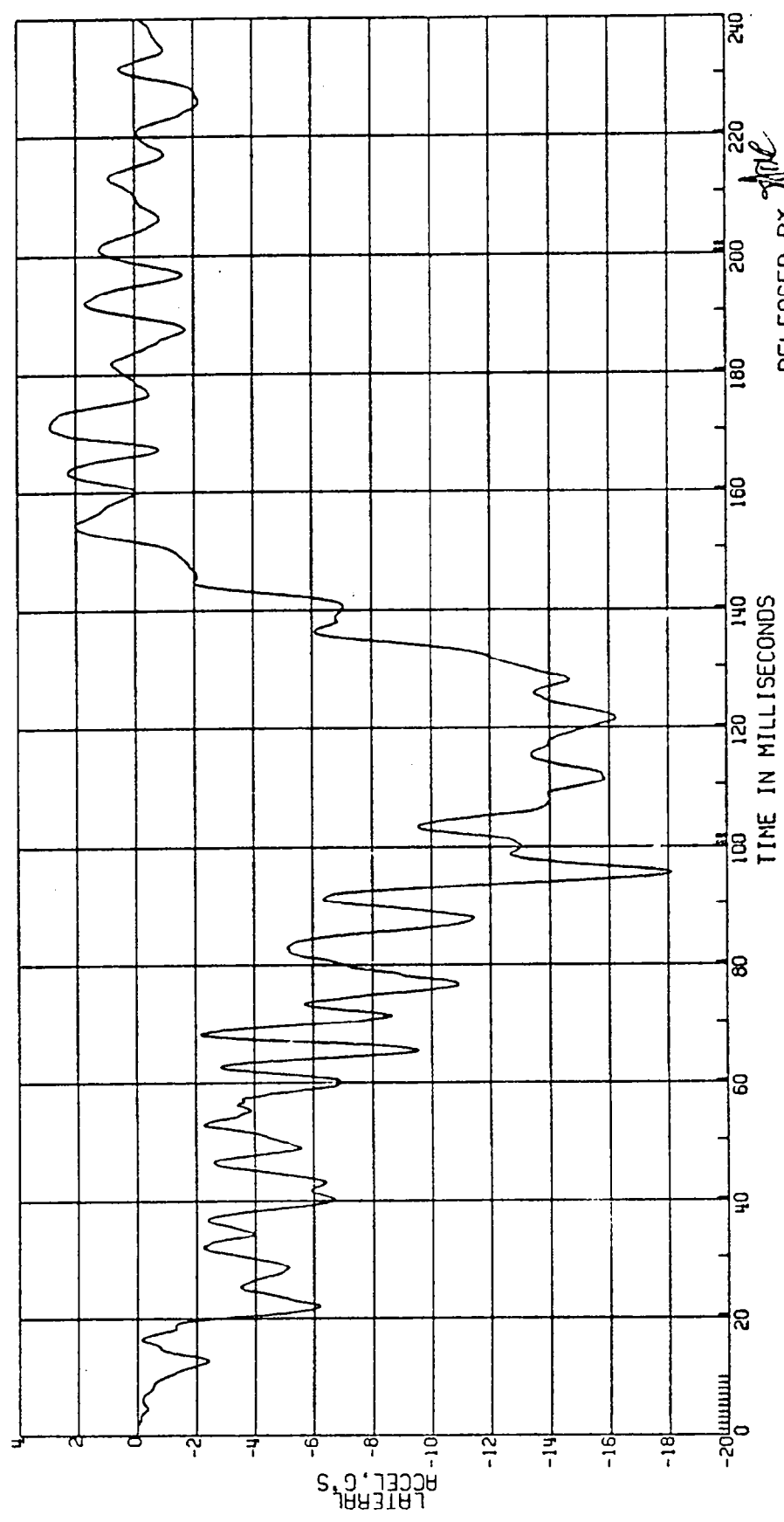
3865-848

F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 60

PASS-SIDE TRUNK ACCEL.

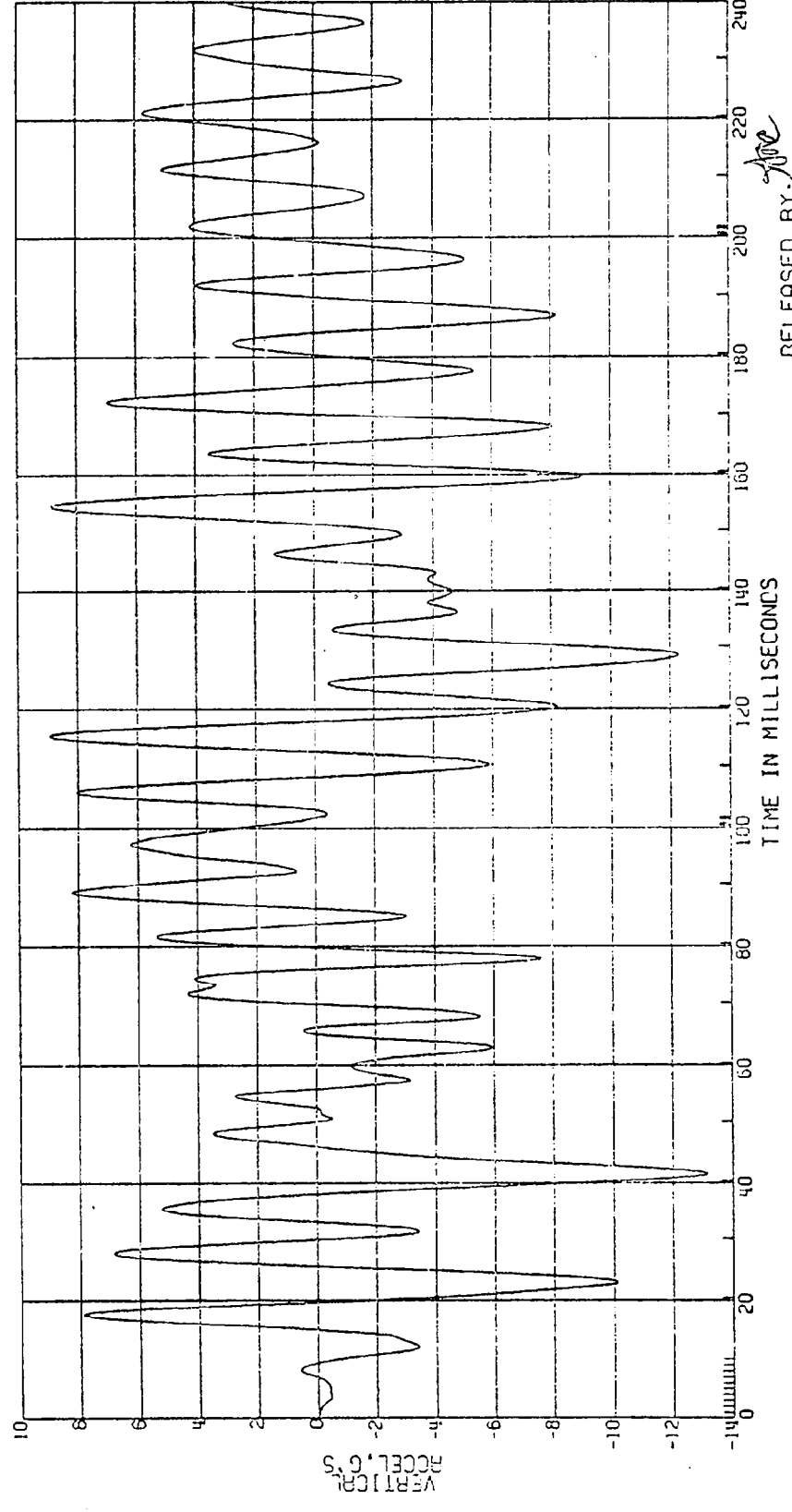
TEST DATE: 12-19-84



RELEASED BY: *APL*

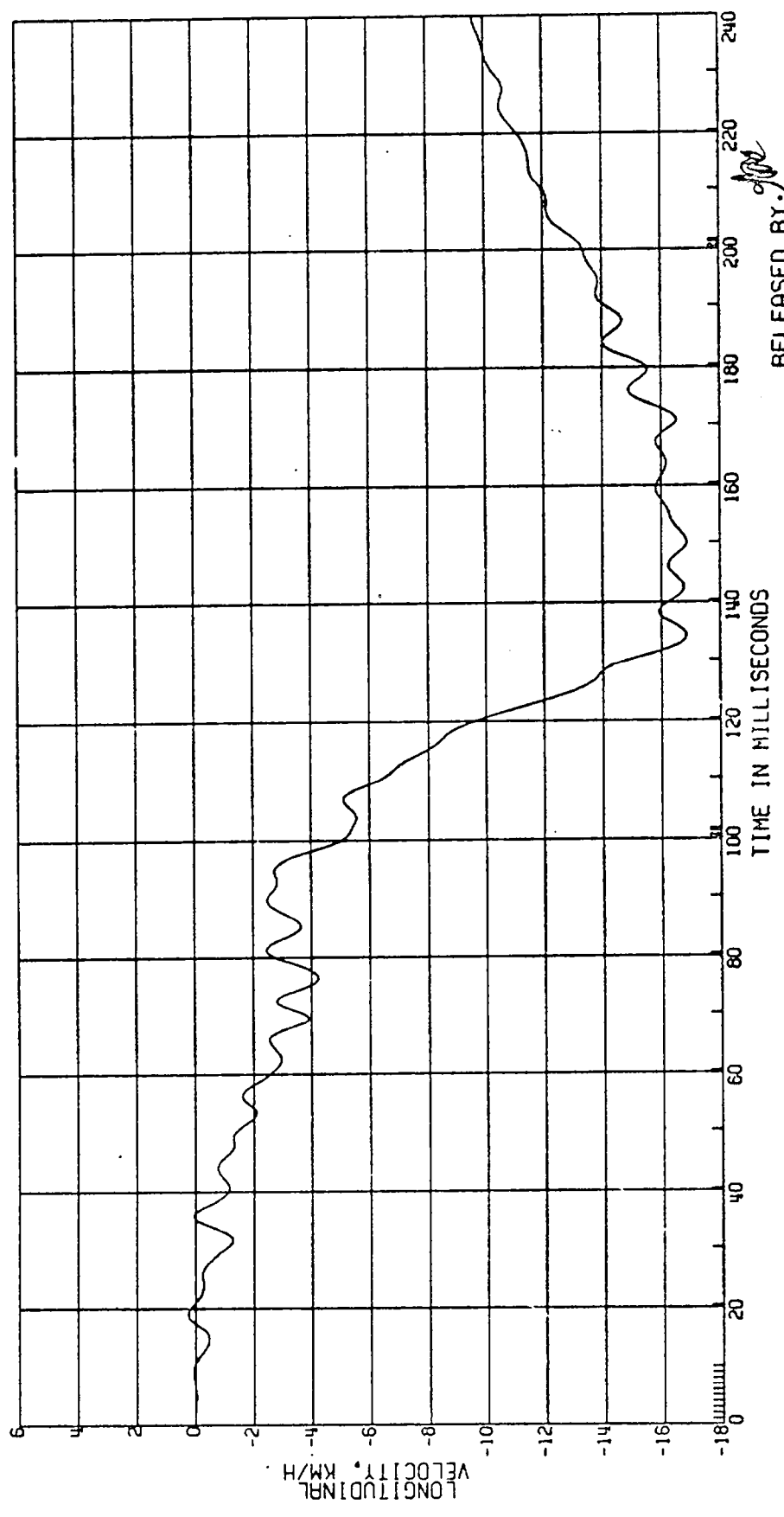
15 APR 1985 10:39

C61158 RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-48
3865-848
F.B. CC454 (STRUCK VEH)
A-D DATA SAE CLASS 60
PASS-SIDE TRUNK ACCEL.
TEST DATE:12-19-84



RELEASED BY: *APC*
FBI LABORATORY 20 DE 84 13:19

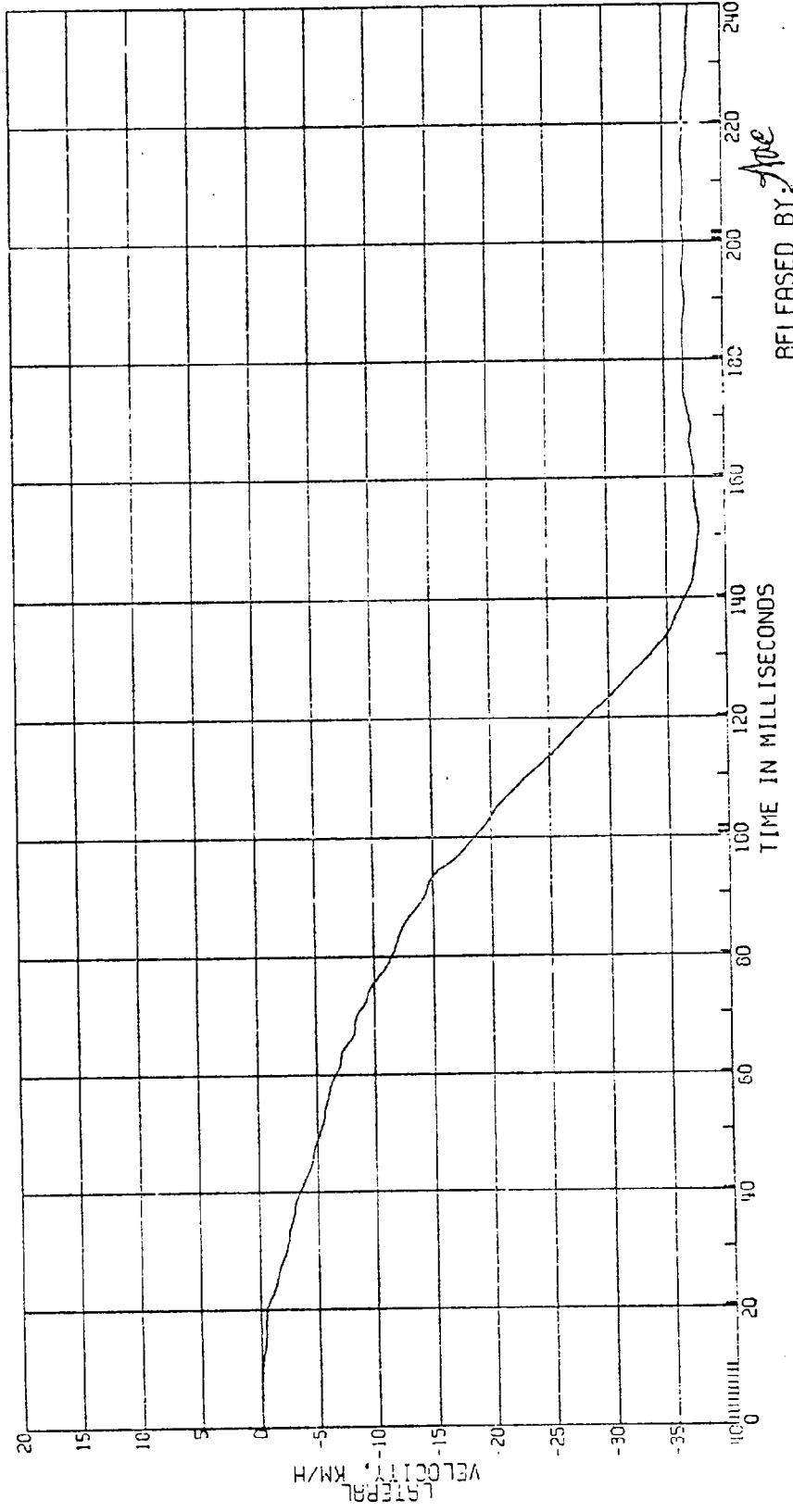
CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.TO MOD.SMALL CAR 55.0KM/H FIGURE -49
3865-848
F.B. C454 (STRUCK VEH)
A-D DATA, SAE CLASS 180
COMPUTED TRUNK VELOCITY
TEST DATE:12-19-84
(1ST INTEGRAL PASS-SIDE ACCELERATION)



[Signature]

RELEASED BY:
83 PROCESSED 20 DE 84 13:38

C6115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -50
3865-848
F.B. CC454 (STRUCK VEH)
A-0 DATA SAE CLASS 180
COMPUTED TRUNK VELOCITY
(1ST INTEGRAL PASS-SIDE ACCELERATION)
TEST DATE:12-19-84



RELEASED BY: *APC*

U6115B HIGH SIDE IMP.60 DIFF MOVING NAISH BARR.10 MUJ.5MILL CHM 55.0KM/H FIGURE-51

3865-848

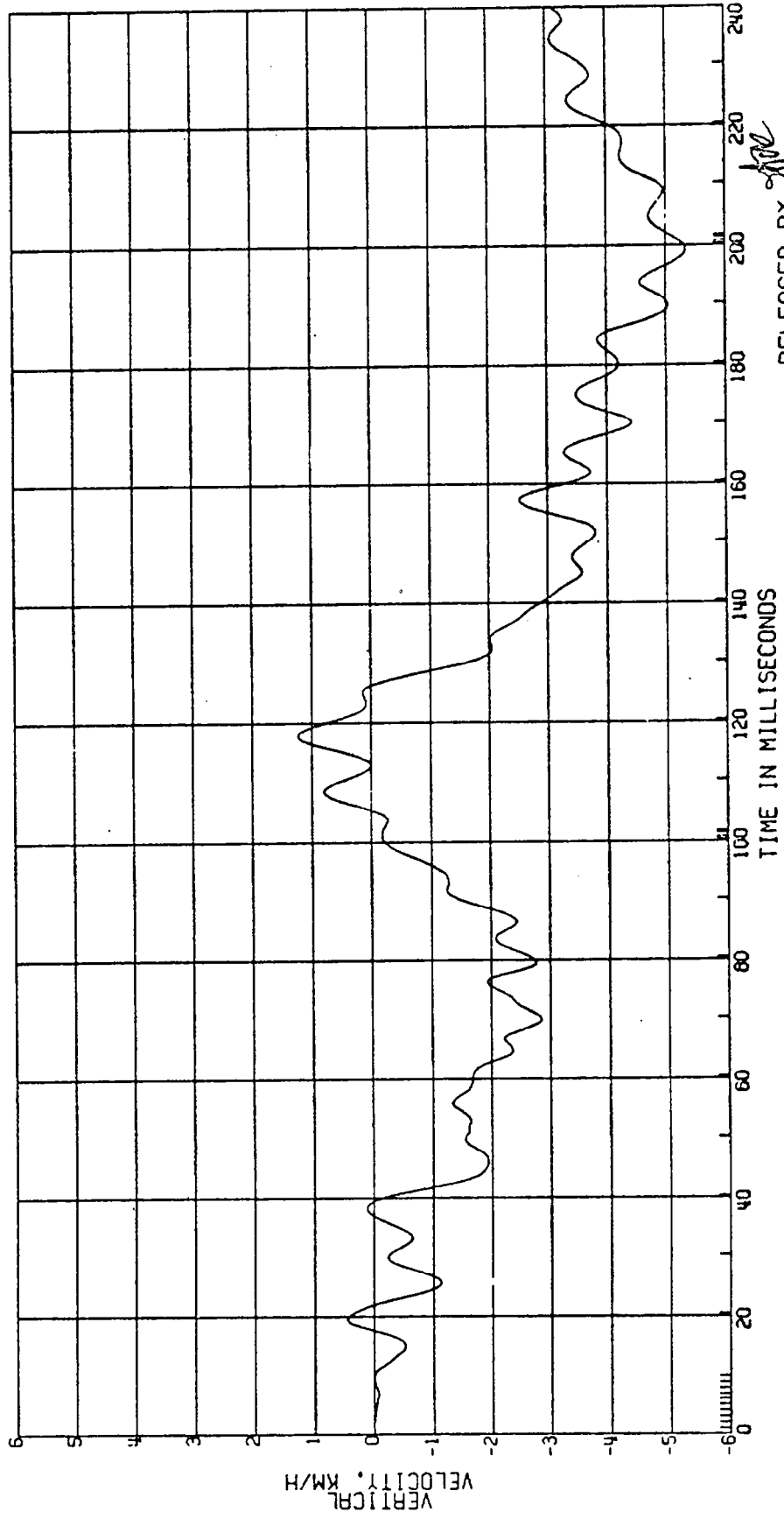
F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 180

COMPUTED TRUNK VELOCITY

TEST DATE:12-19-84

(1ST INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *[Signature]*
89 PROCESSED 20 DE 84 13:39

3865-848

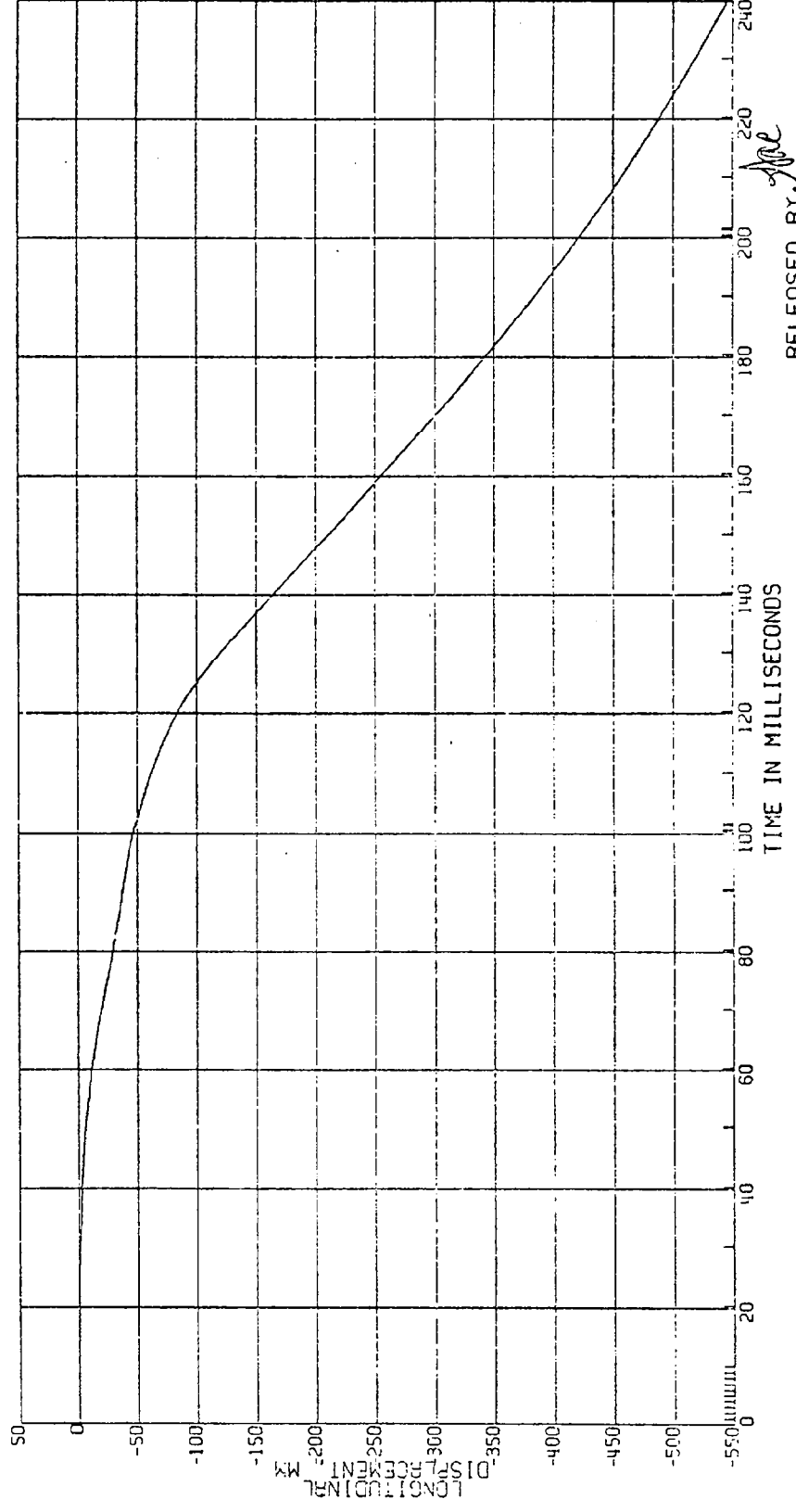
F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 180

COMPUTED TRUNK DISPLACEMENT

TEST DATE: 12-19-84

(2ND INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *APC*
84 PROCESSED 20 DE 84 13:38

3865-848

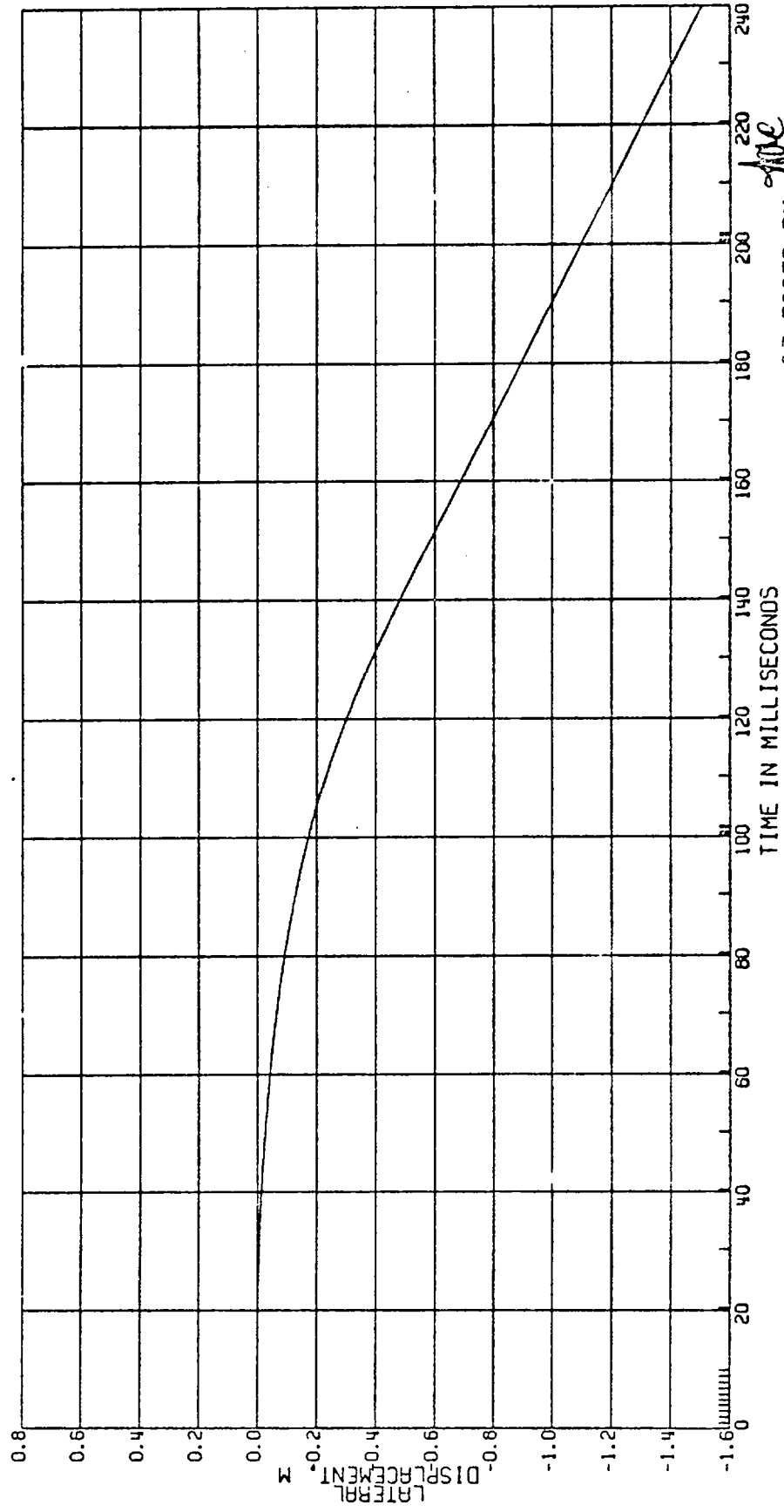
F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 180

COMPUTED TRUNK DISPLACEMENT

TEST DATE: 12-19-84

(2ND INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *JME*

87 PROCESSED 20 DE 84 13:39

3865-848

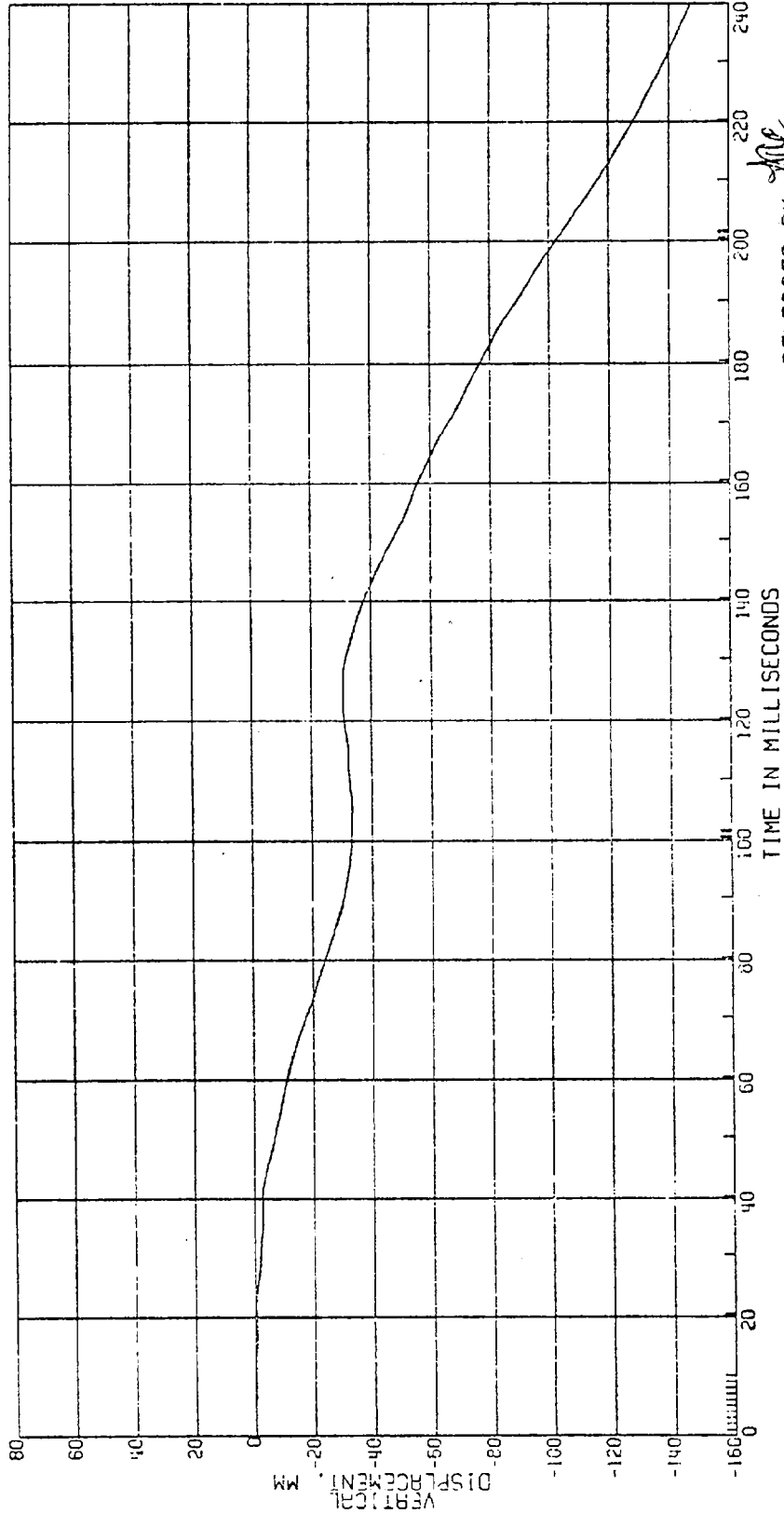
F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 180

COMPUTED TRUNK DISPLACEMENT

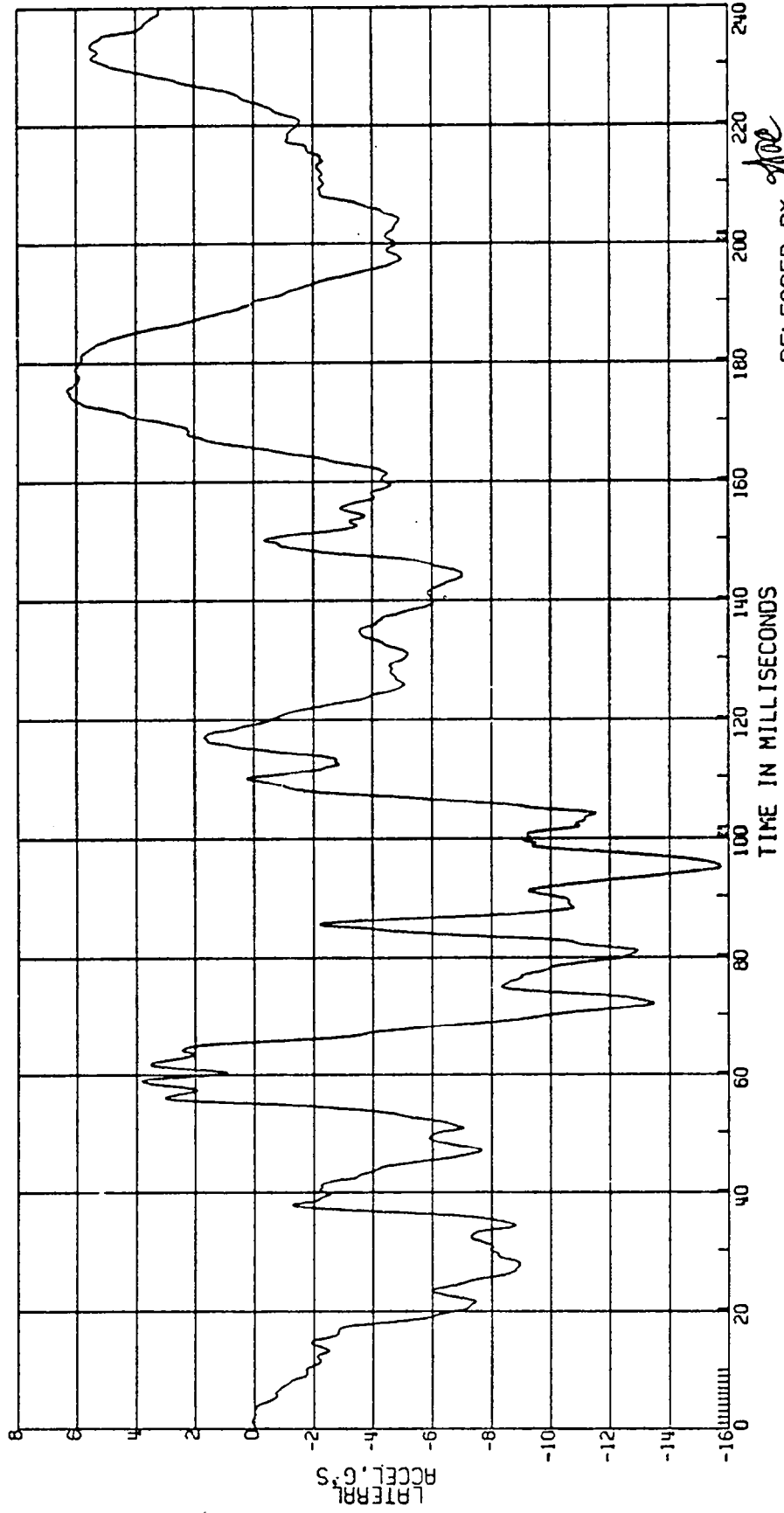
(2ND INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84



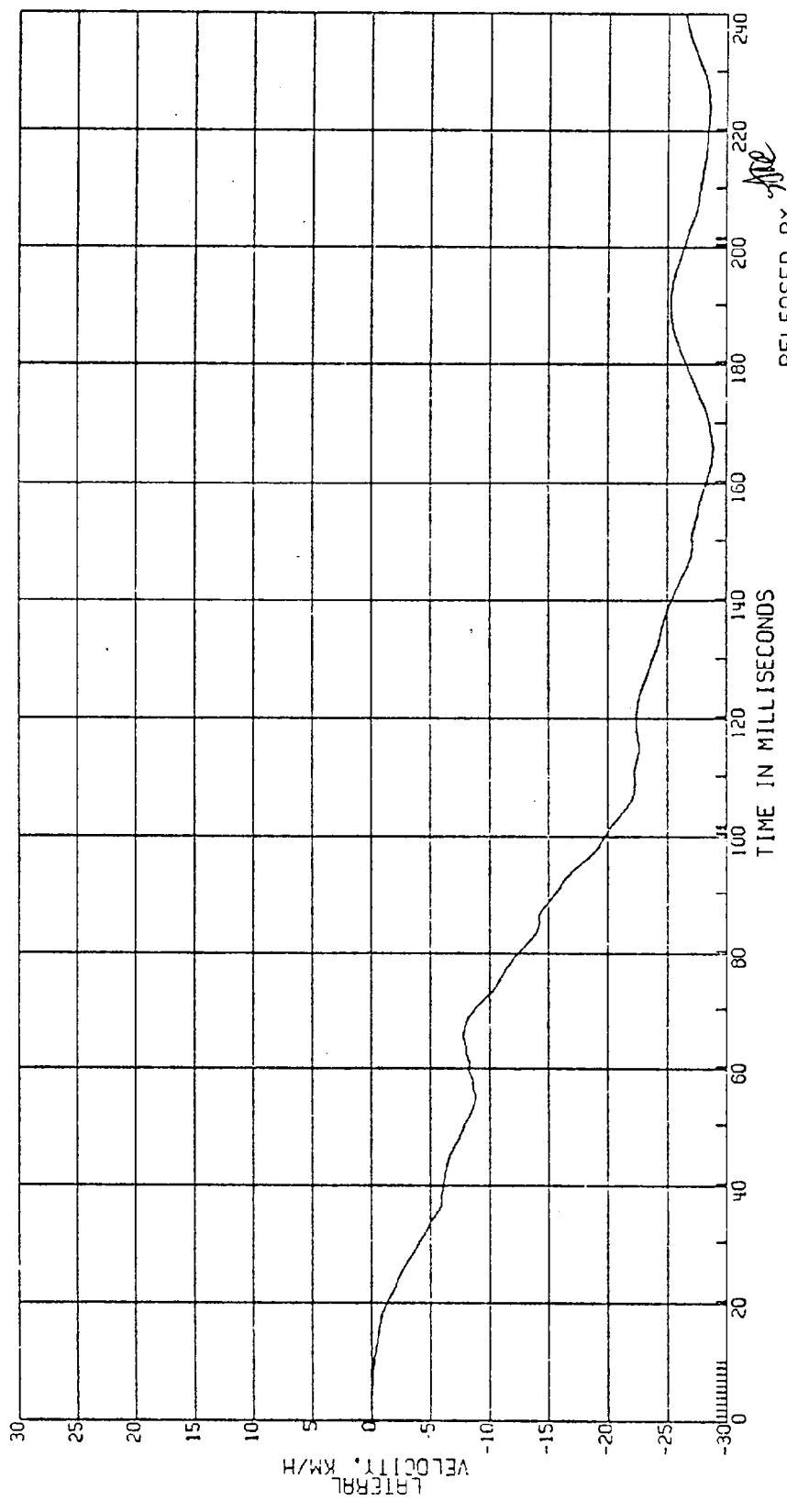
RELEASED BY: *ME*
90 PROCESSED 20 DE 84 13:39

3865-848
F.B. CC454 (STUCK VEH)
A-D DATA SAE CLASS 60
DR-SIDE LT.FRT.DOOR - POINT A' ACCEL.
TEST DATE: 12-19-84



RELEASED BY: *AOE*
64 PROCESSED 20 DE 84 13:34

F.B. CC454 (STRUCK VEH) TEST DATE: 12-19-84
A-0 DATA CODE CLASS 180 (1ST INTEGRAL DR-SIDE ACCELERATION)
COMPUTED LT.FRT.DOOR-POINT A' VELOCITY



RELEASED BY: *ME*
65 PROCESSED 20 DE 84 13:34

3003-040

F.B. CC454

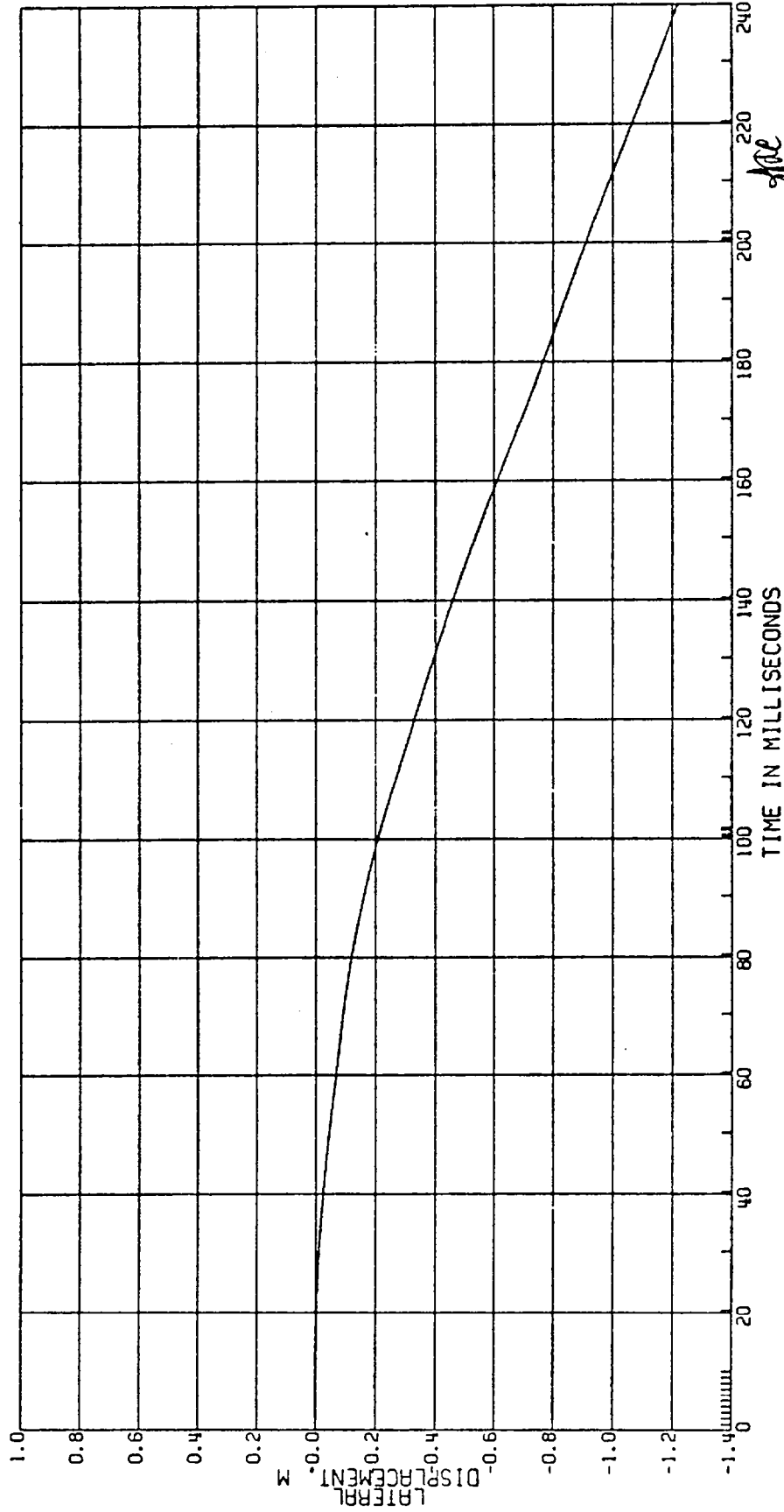
(STRUCK VEH)

A-0 DATA SAE CLASS 180

COMPUTED LT.FRT.DOOR-POINT A' DISPLACEME

TEST DATE: 12-19-84

(2ND INTEGRAL DR-SIDE ACCELERATION)

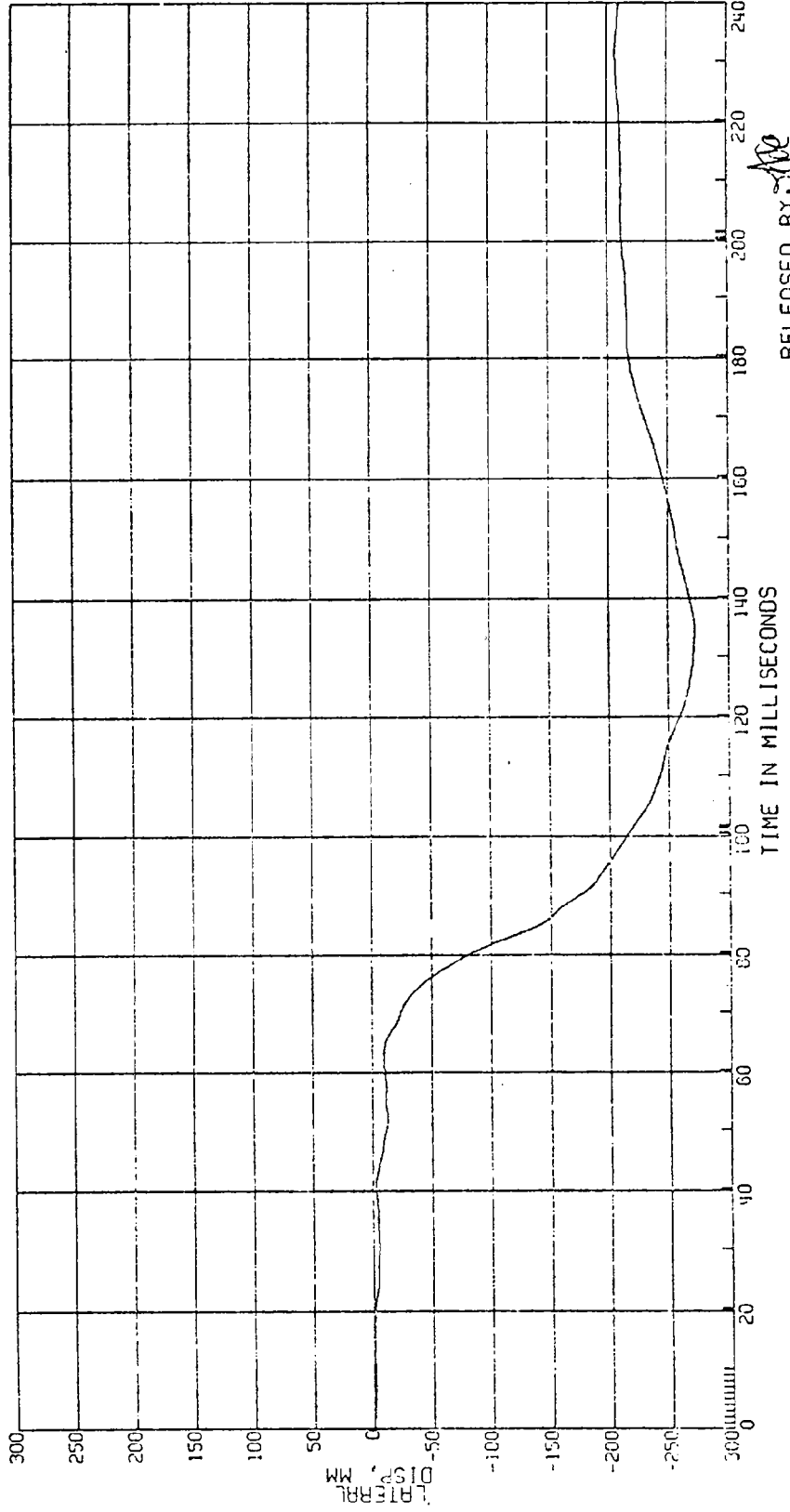


RELEASED BY: *APL*

66 PROCESSED 20 DE 84 13:34

F.B. C0454 (STRUCK VEH) TEST DATE: 12-19-84
A-D DATA SAE CLASS 60

THROTTLE POSITION & DELTA LINE DISP.

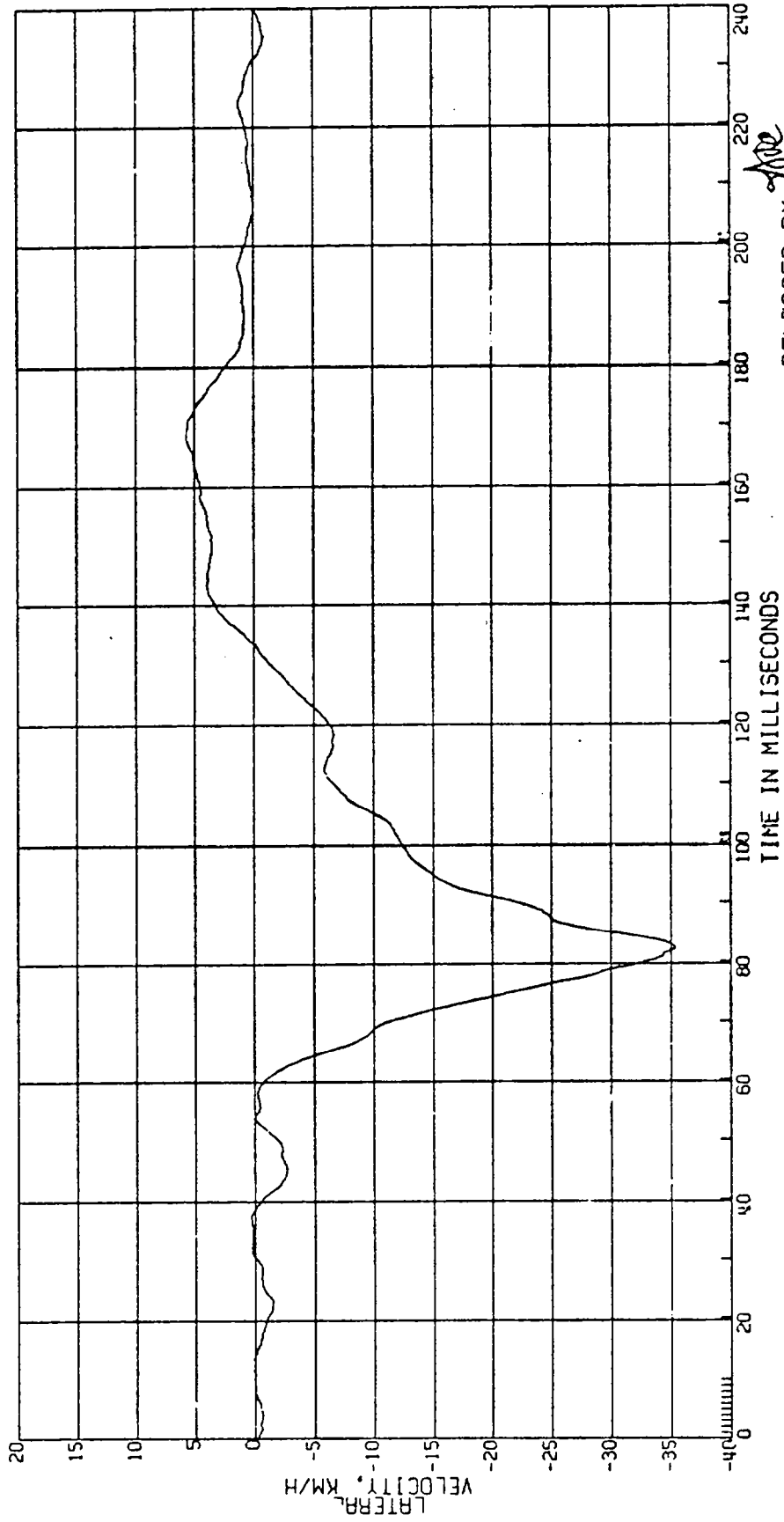


RELEASED BY: *ADG*
91 PROCESSED 20 DE 84 13:40

F.B. C0454 (STRUCK VEH)
A-D DATA SAE CLASS 15

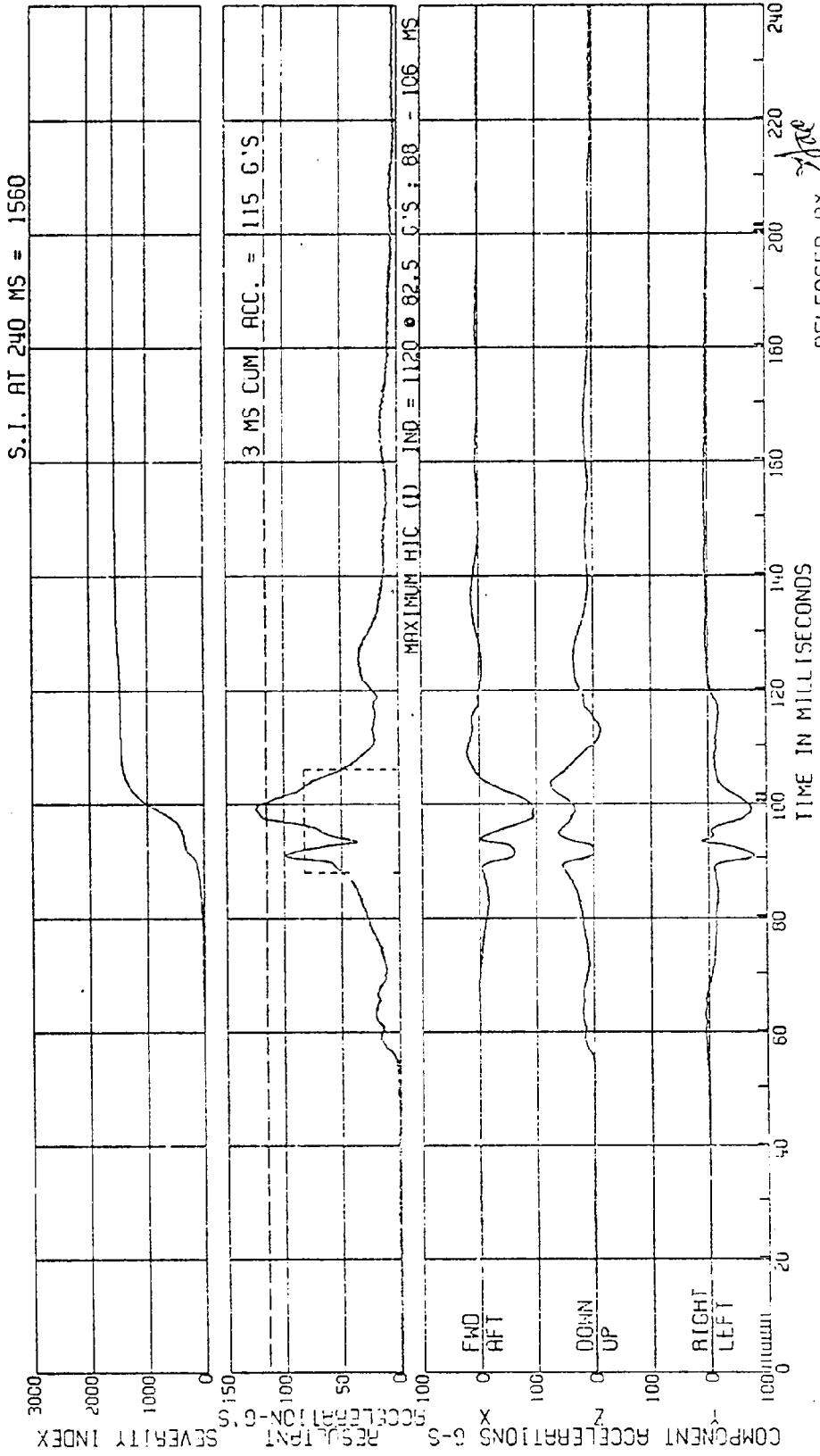
TEST DATE: 12-19-84

COMPUTED B-PILLAR @ BELTLINE VELOCITY

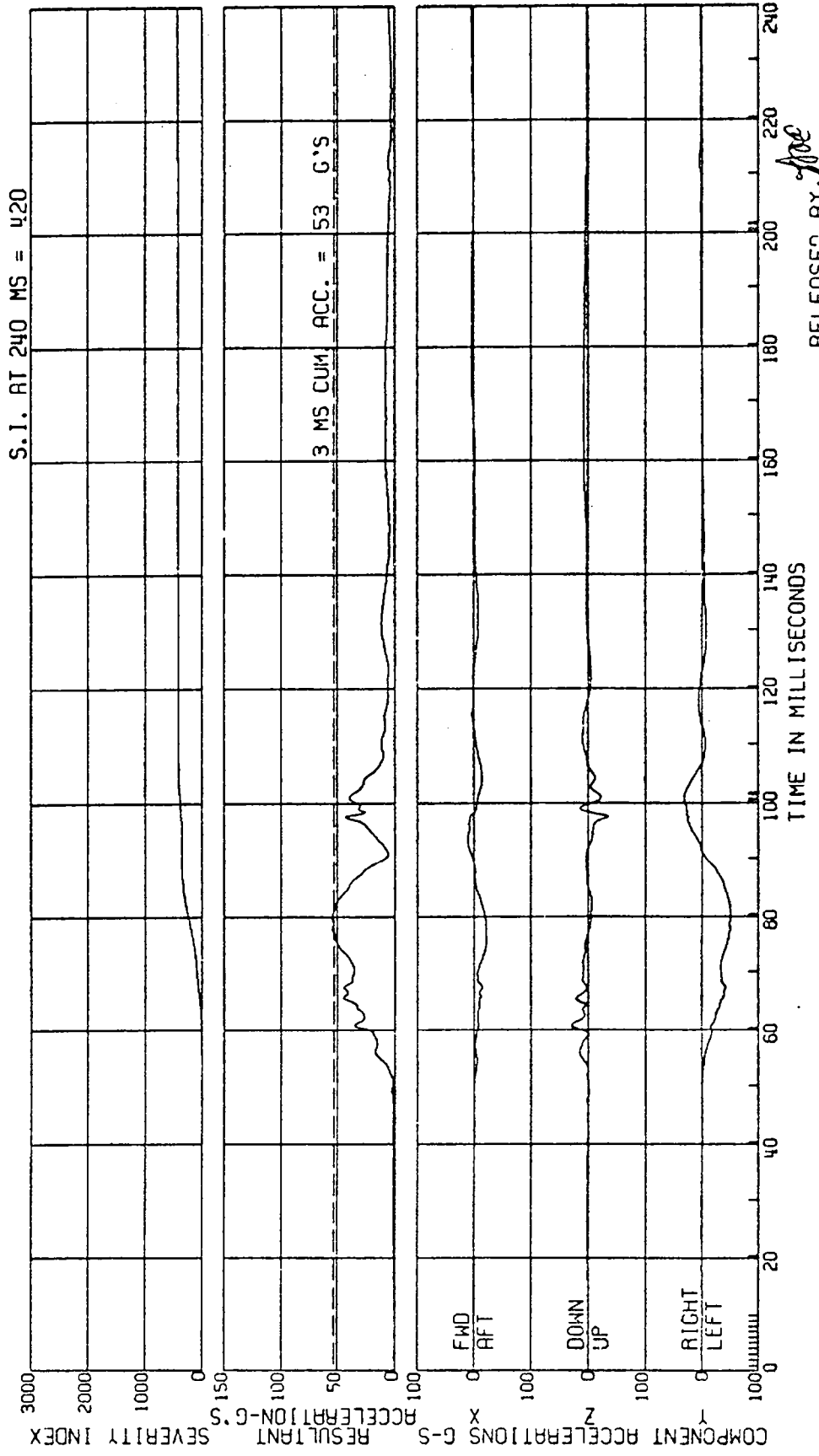


RELEASED BY: *me*
92 PROCESSED 20 DE 84 13:40

C61158 RIGHT SIDE IMP. 60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-60
 3865-848 (STRUCK VEH) R FRT HEAD ACCEL. GM50SI TEST DATE: 12-19-84
 A-D DATA



C61158 RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-61
 3865-848
 F.B. CC454 (STRUCK VEH)
 R FRT CHEST ACCEL. GM50SI
 A-D DATA SAE CLASS 180
 TEST DATE: 12-19-84



RELEASED BY: *AOE*
 1985

CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-62

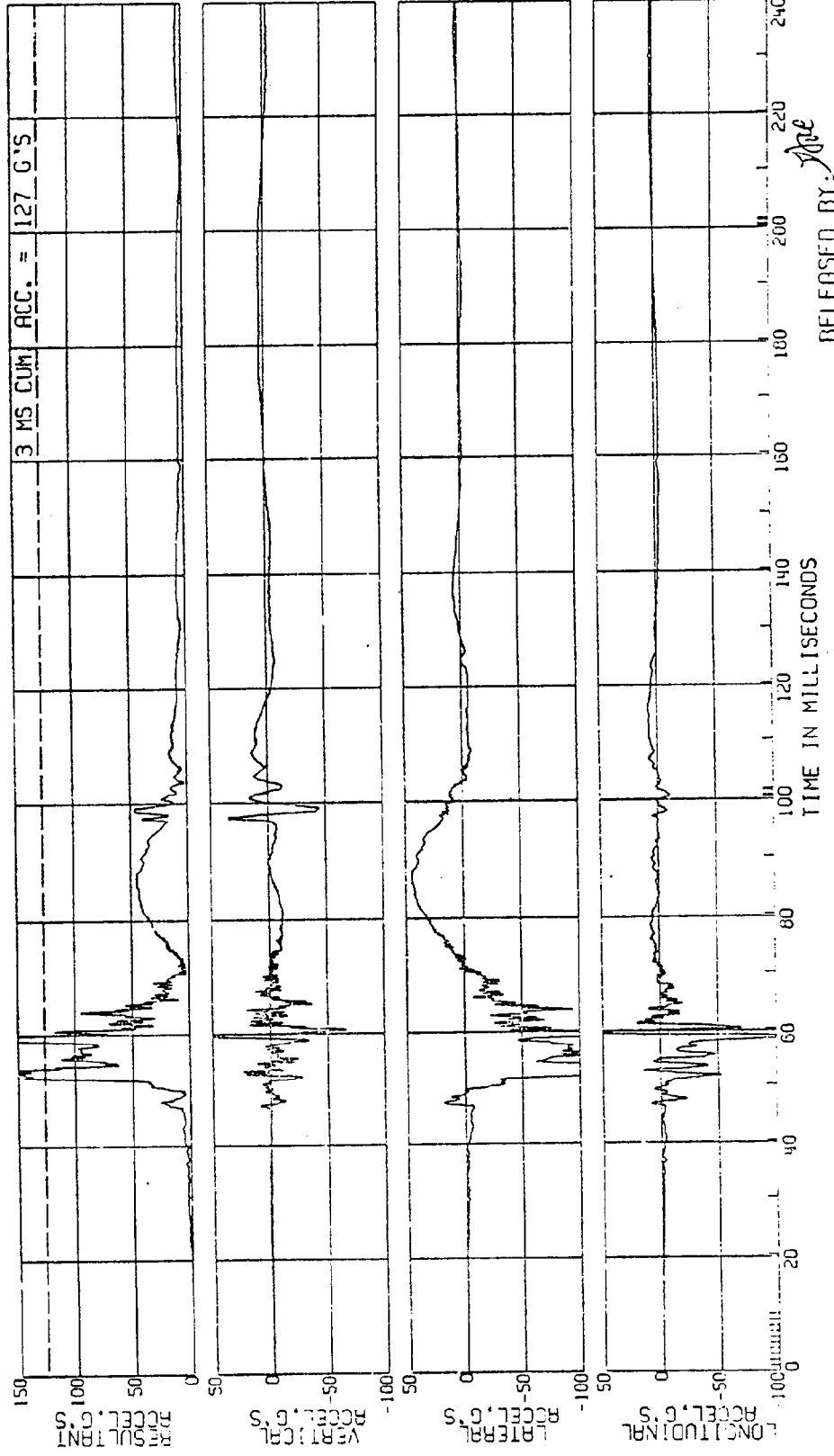
3865-848

F.B. CC454 (STRUCK VEH)

A-D DATA SAE CLASS 600

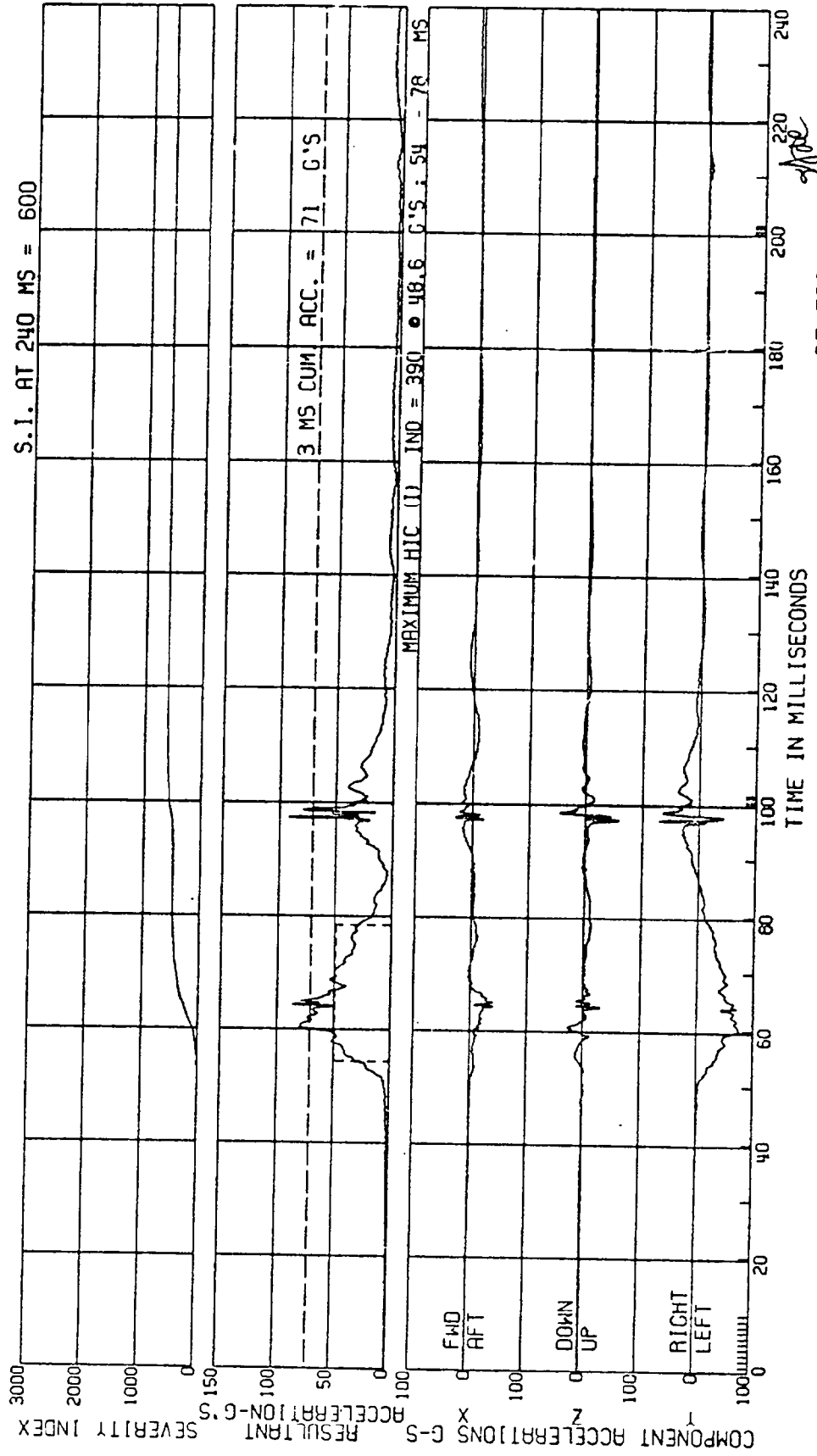
R FRT PELVIC ACCEL. GM50SI

TEST DATE: 12-19-84



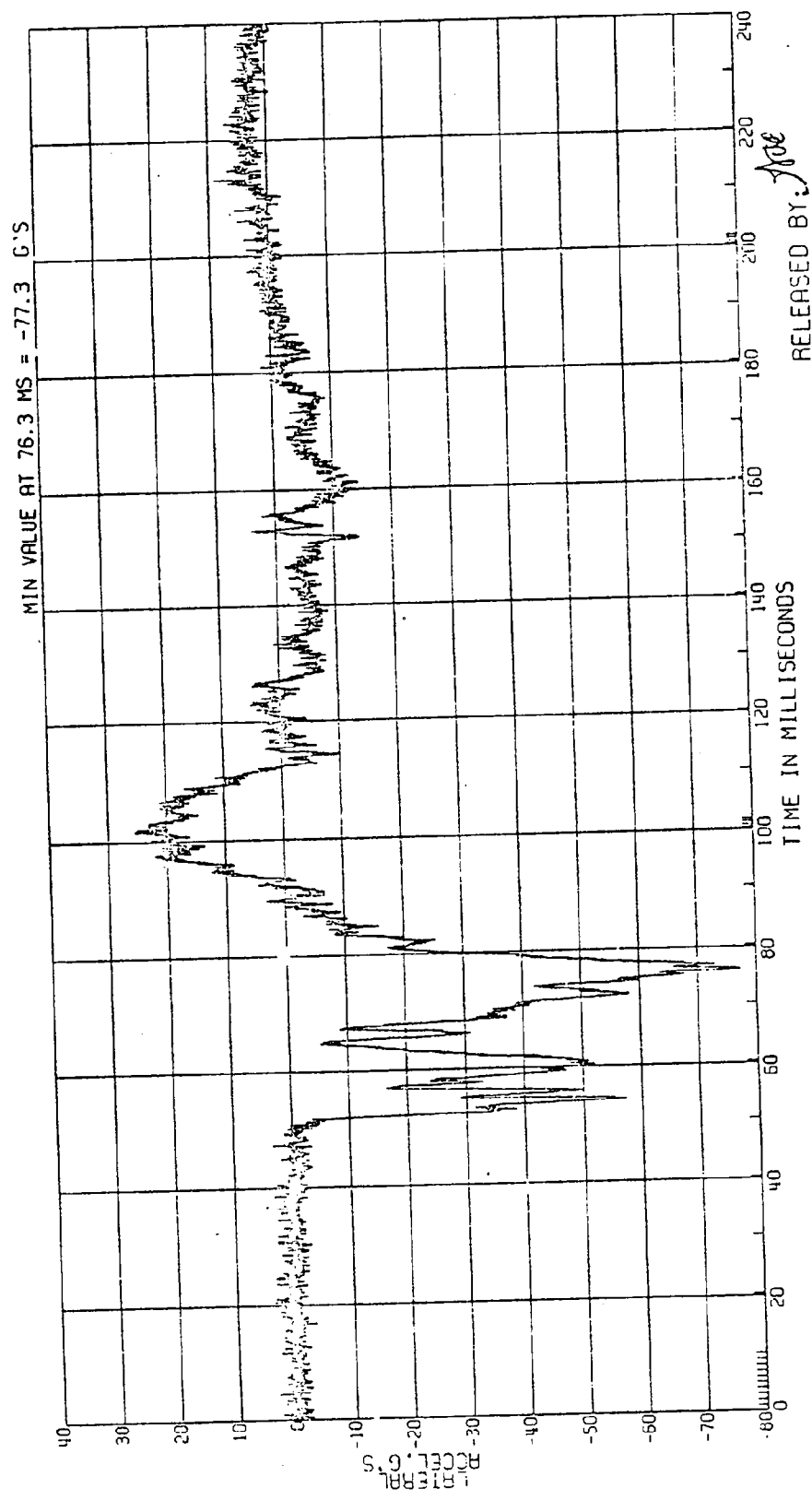
RELEASED BY: *None*

CG115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-G3
 3865-848
 F.B. CC454 (STRUCK VEH) R FRT LOWER SPINE ACCEL. GM50SI
 A-D DATA TEST DATE: 12-19-84



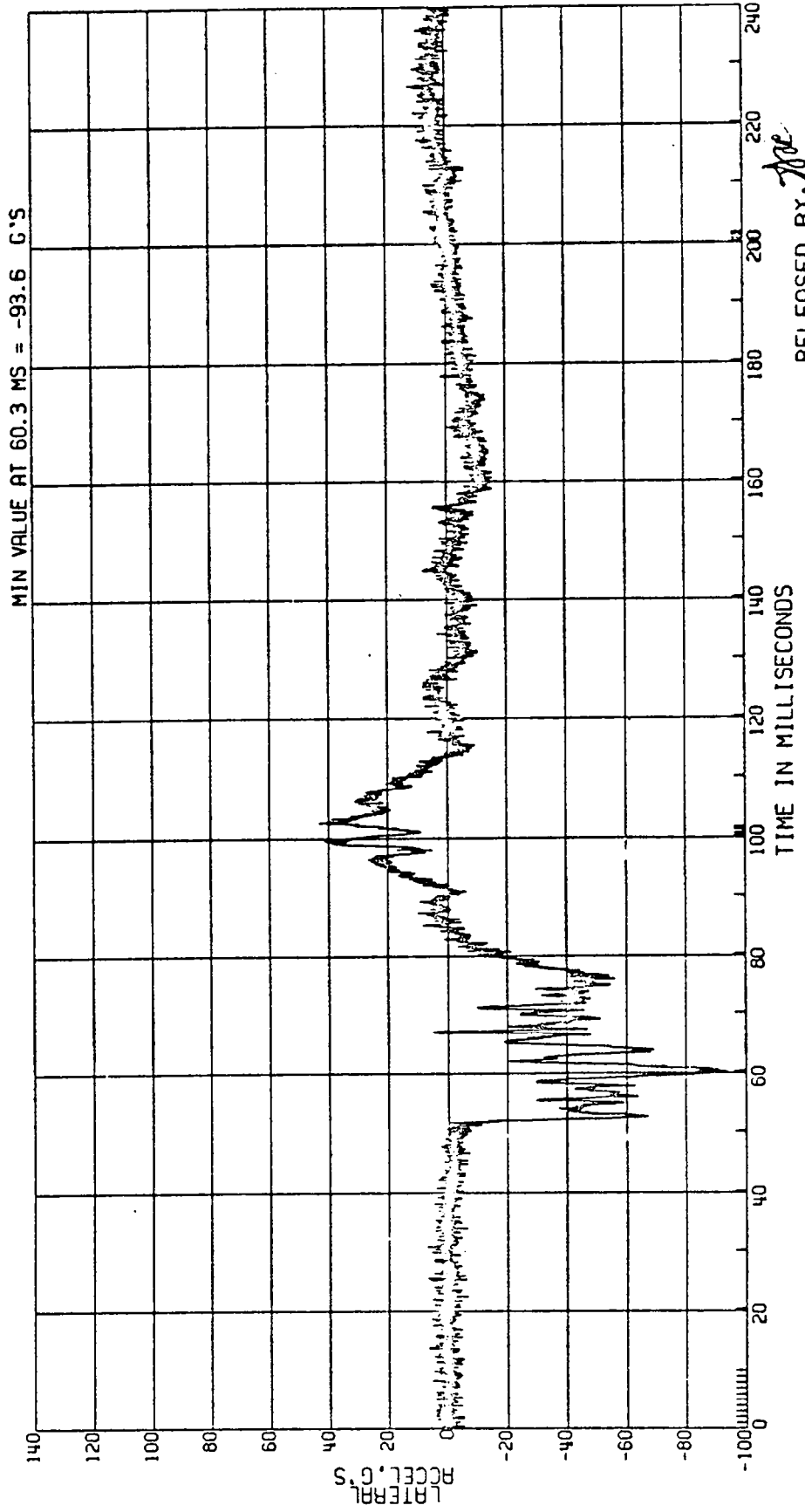
RELEASED BY: *[Signature]*
 18 RECORDED 20 DEC 84 13:16

C61158 RIGHT SIDE IMP.60 DIFF MJVING NHTSA BARR.TO MOD.SMALL CAR 55.0KM/H FIGURE-64
3865-848 (STRUCK VEH) R FRT RIGHT UPPER RIB ACCEL. GM50SI TEST DATE:12-19-84
F.B. CC454
A-D DATA



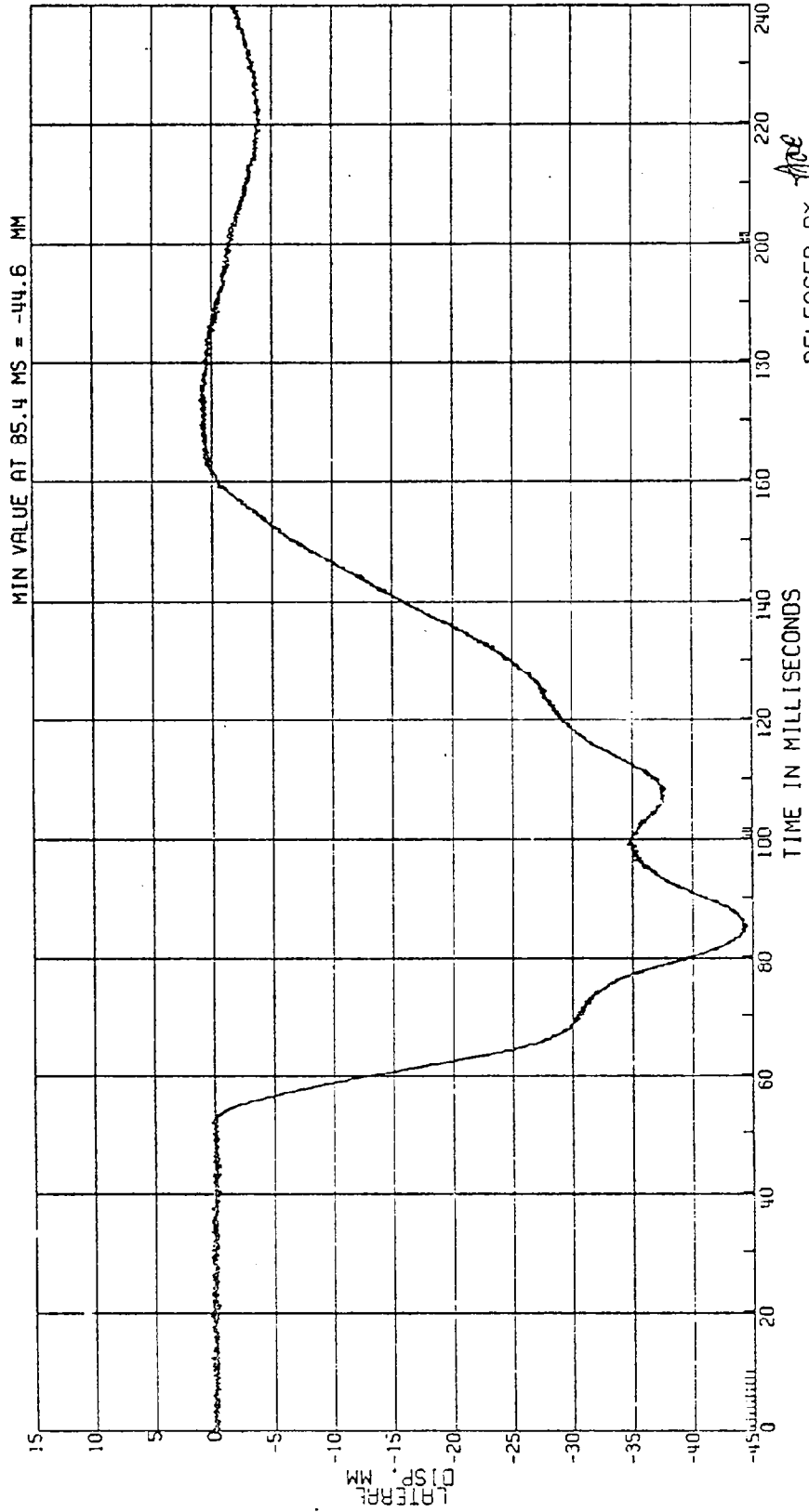
RELEASED BY: JDE
9 PROCESSED 20 DE 84 13:13

C6115B RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.TO MOD.SMALL CAR 55.0KM/H FIGURE-65
3865-848
F.B. CC454 (STRUCK VEH) R FRT RIGHT LOWER RIB ACCEL. GM50SI TEST DATE:12-19-84
A-D DATA



RELEASED BY: *me*
11 PROCESSED 20 DE 84 13:14

LB115B HIGH SIDE IMP. BU DIFF MOVING HIGH BHH. 10 MUU. SMALL CHR 55. UKM/H FIGURE-66
 3865-848
 F.B. CC454 (STRUCK VEH) R FRT RIGHT UPPER RIB DISP. GM50SI TEST DATE: 12-19-84
 A-D DATA

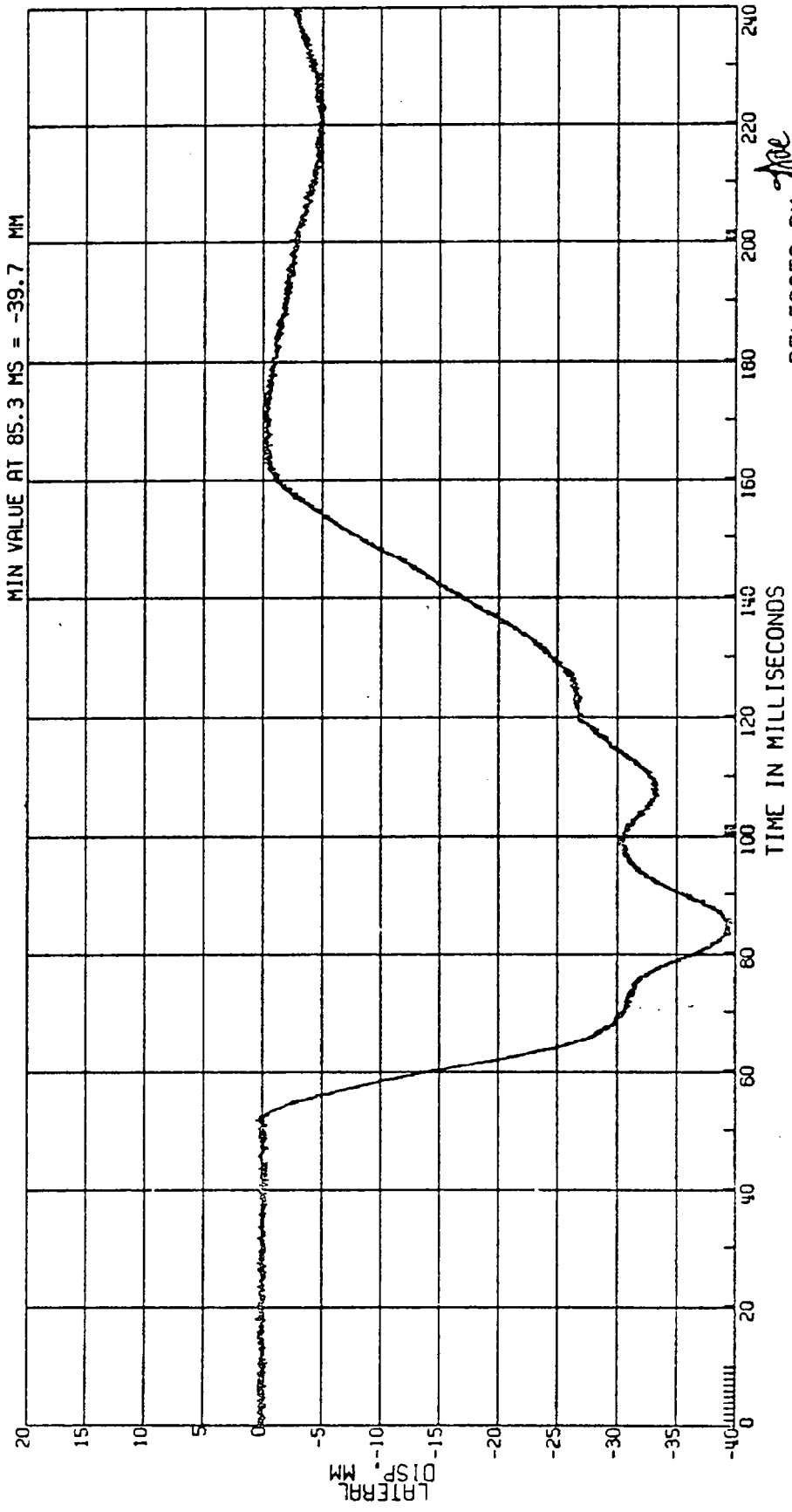


RELEASED BY: *SPD*
 5 PROCESSED 20 DE 84 13:12

3865-848 (STRUCK VEH) R FRT RIGHT LOWER RIB DISP. GM50SI

TEST DATE: 12-19-84

A-D DATA



Handwritten signature

RELEASED BY: 7 PROCESSED 20 DE 84 13:12

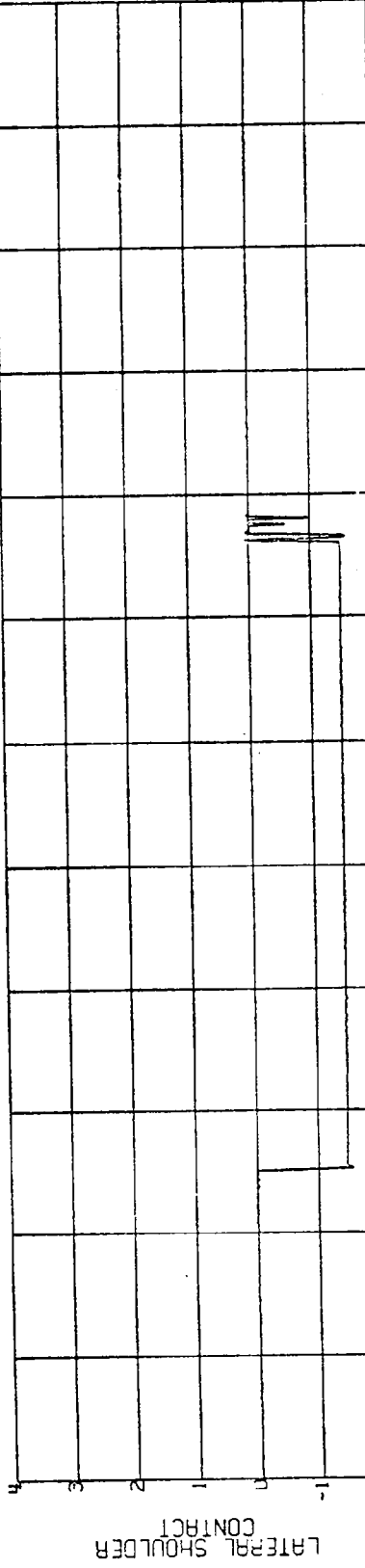
3865-848
F.B. CC454
A-D DATA

(STRUCK VEH)

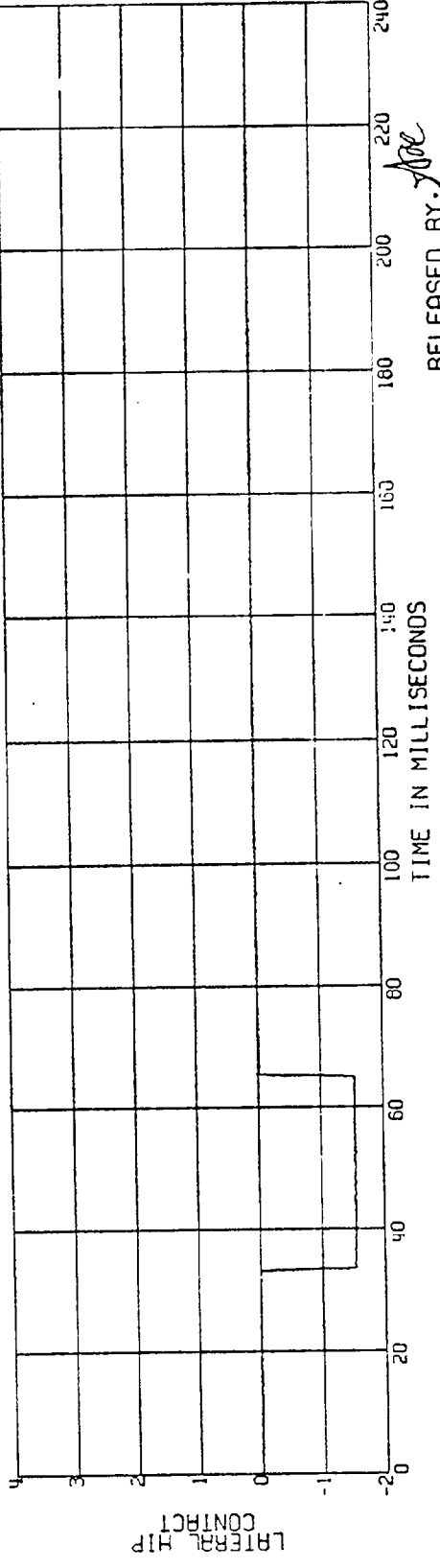
FRONT DUMMY TO RT. FRT. DOOR CONTACT

TEST DATE: 12-19-84

INITIAL CONTACT OCCURRED AT 50.4 MS



INITIAL CONTACT OCCURRED AT 33.5 MS



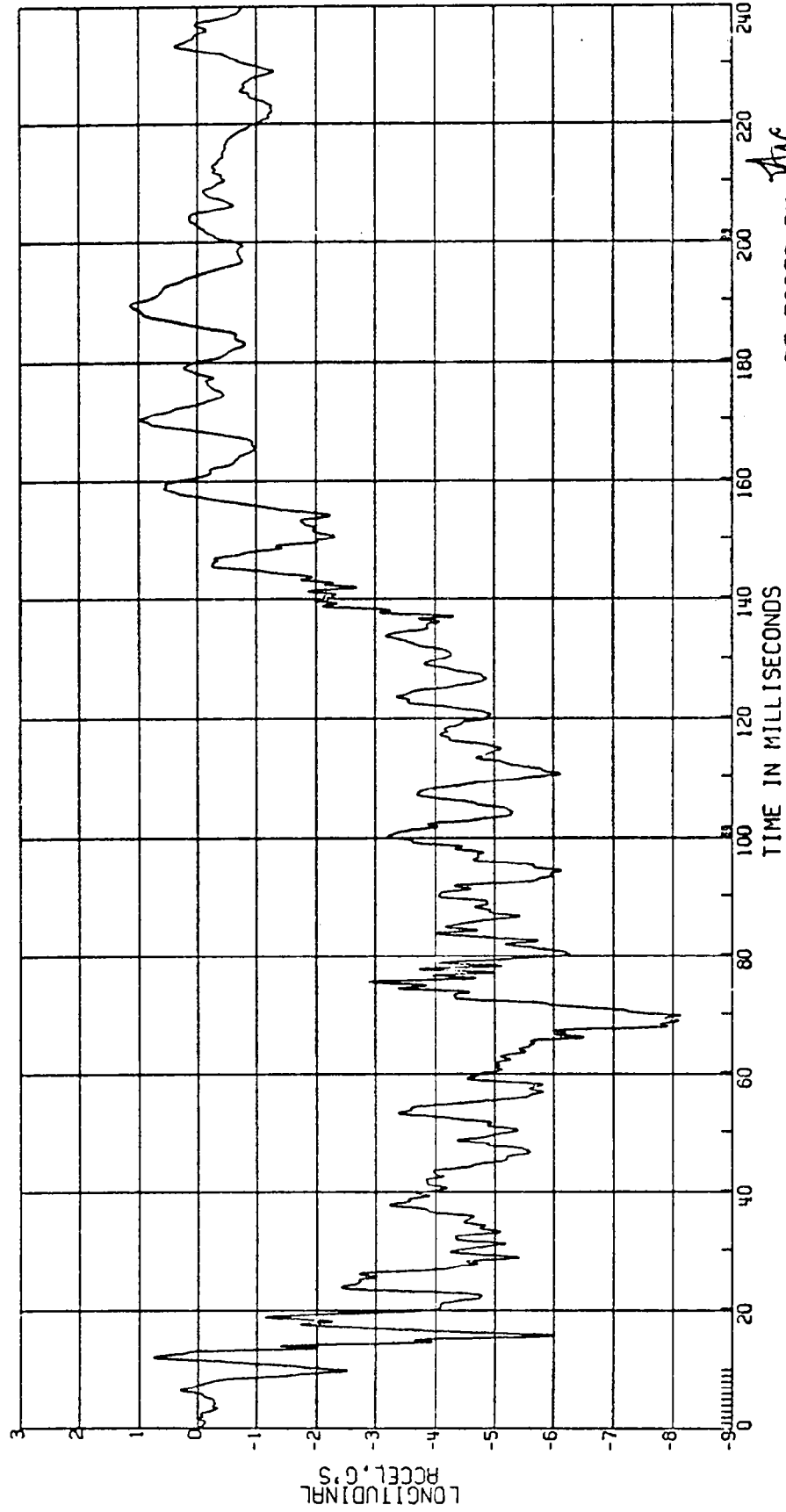
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3865-848

F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60

DR-SIDE FRONT OF BARRIER ACCEL.

TEST DATE: 12-19-84



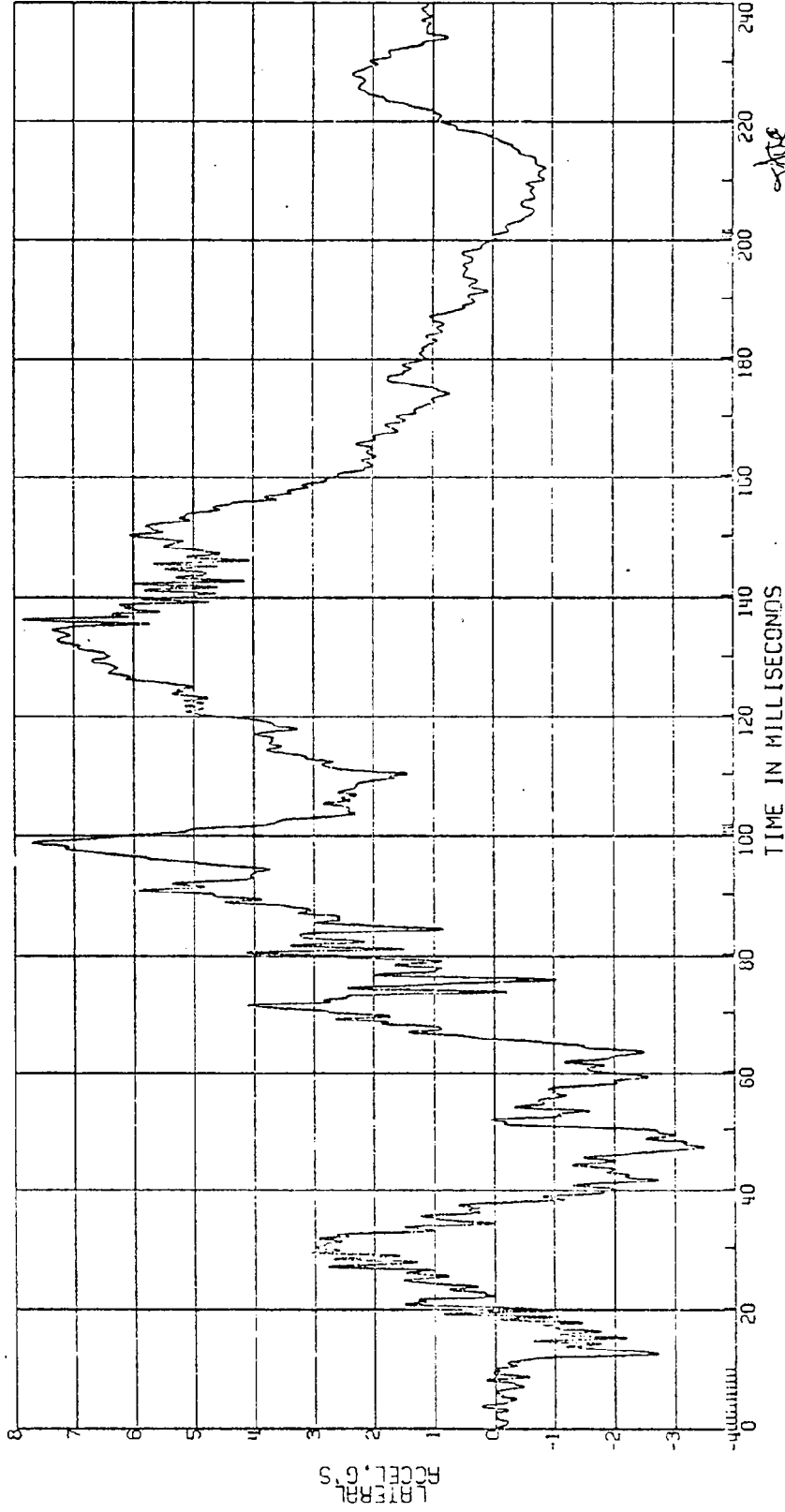
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DR-SIDE FRONT OF BARRIER ACCEL.

TEST DATE: 12-19-84

F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60



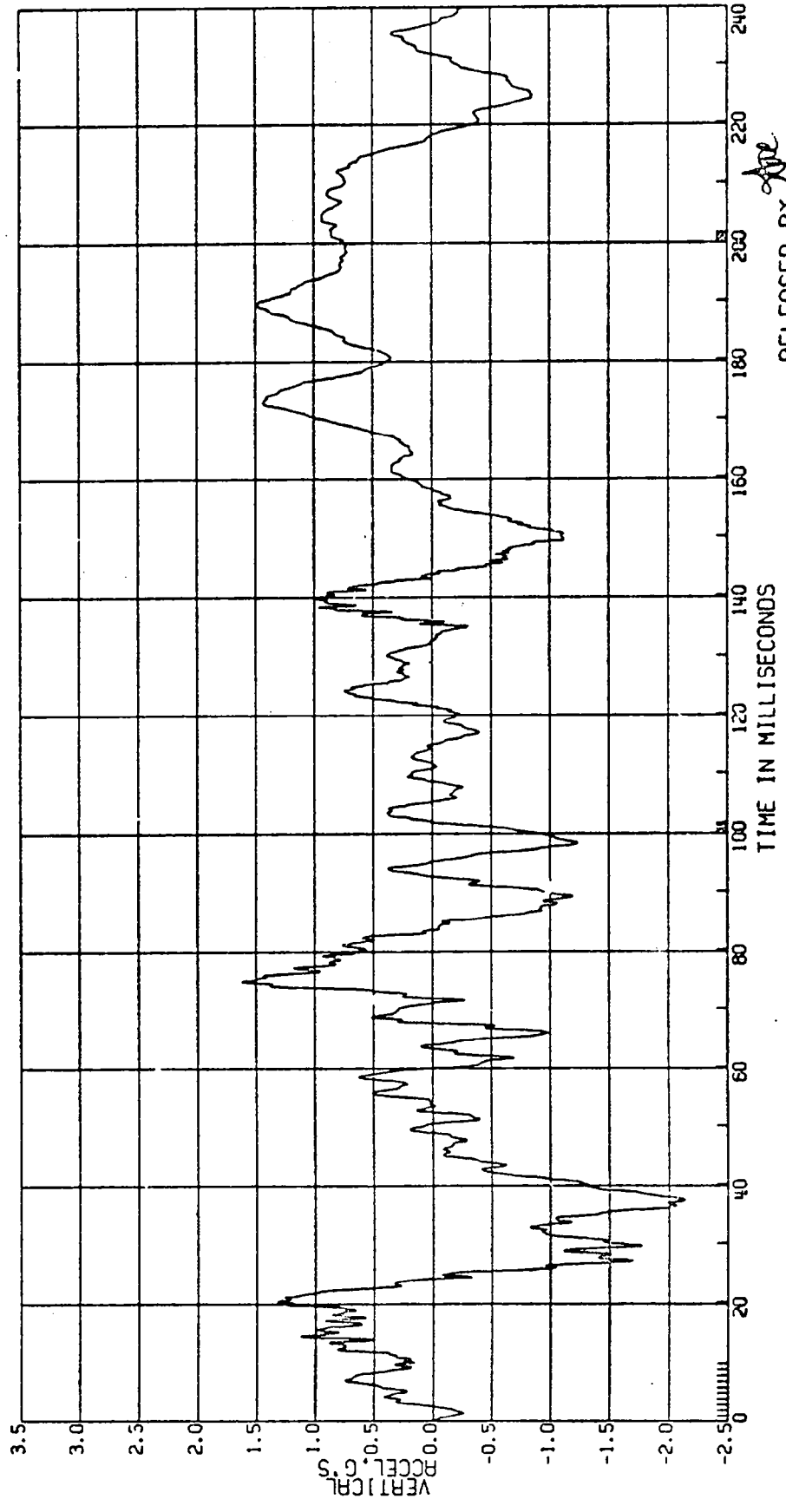
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F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60

DR-SIDE FRONT OF BARRIER ACCEL.

TEST DATE: 12-19-84



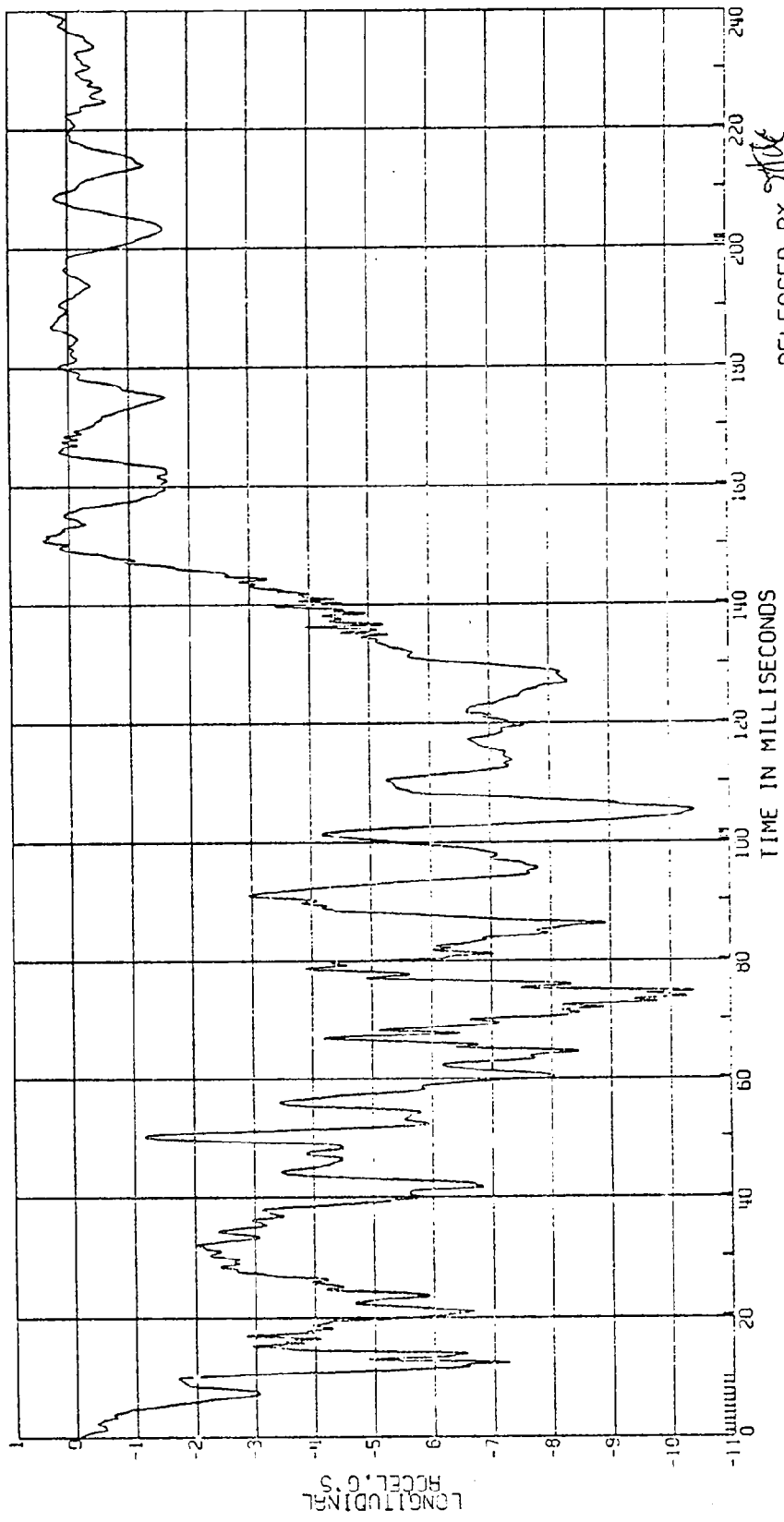
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19 PROCESSED 20 DE 84 12:34

TEST DATE: 12-19-84

PASS-SIDE FRONT OF BARRIER ACCEL.

F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60



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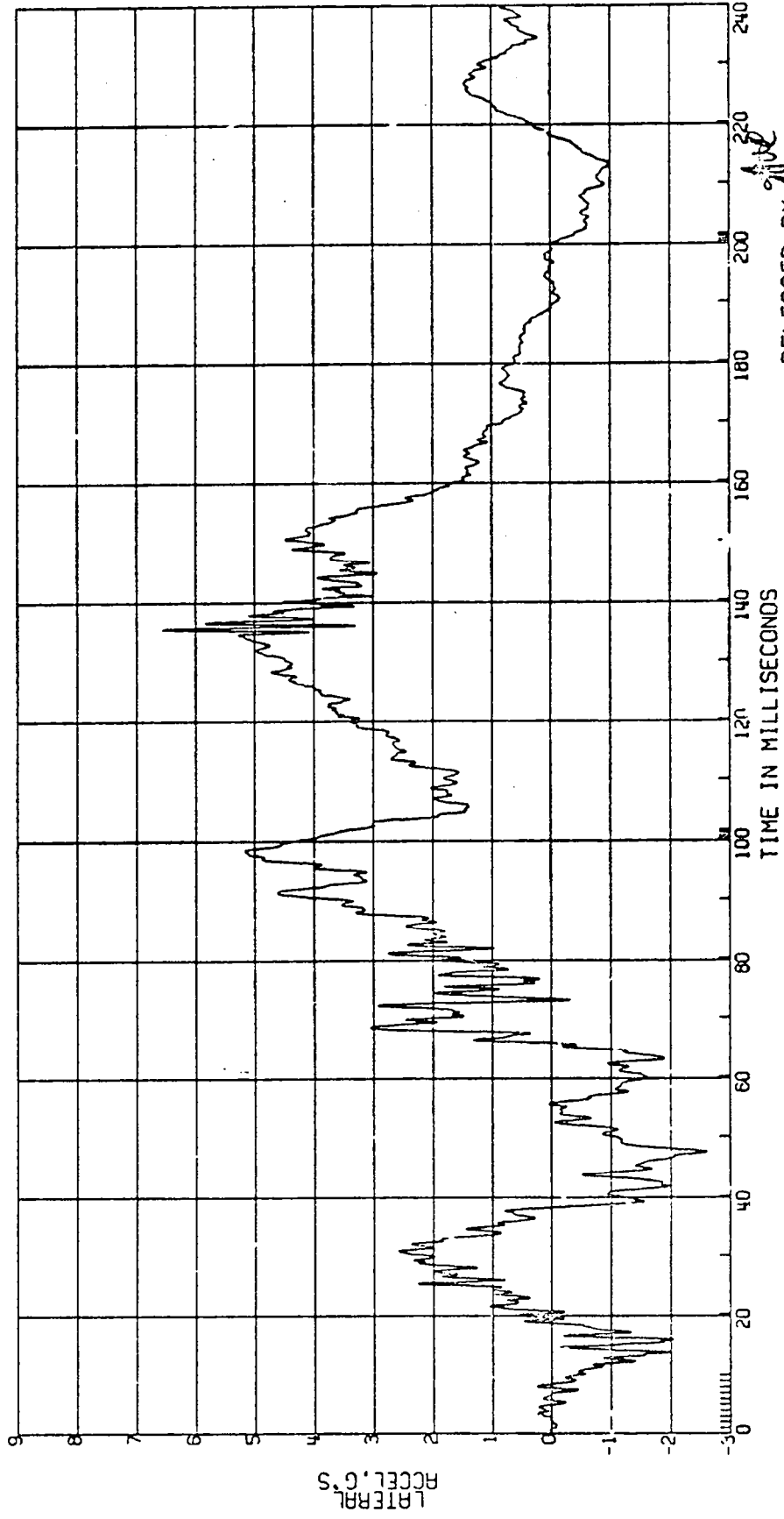
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F B, NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60

PASS-SIDE FRONT OF BARRIER ACCEL.

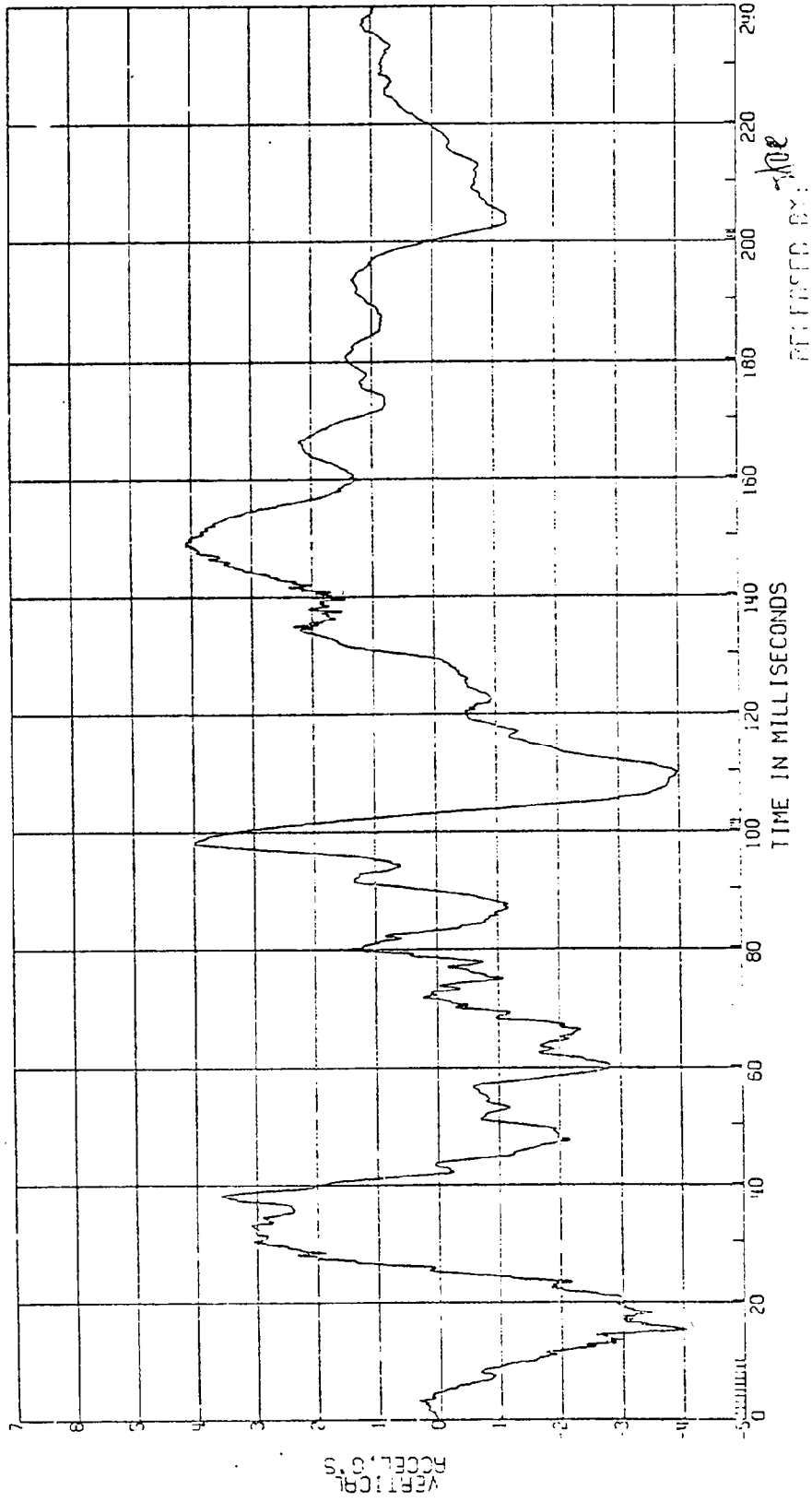
TEST DATE: 12-19-84



RELEASED BY *[Signature]*

13 PROCESSED 20 DE 84 12:32

CG1150 RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.TO MOD.SMALL CAR 55.0KM/H FIGURE-74
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60 TEST DATE:12-19-84

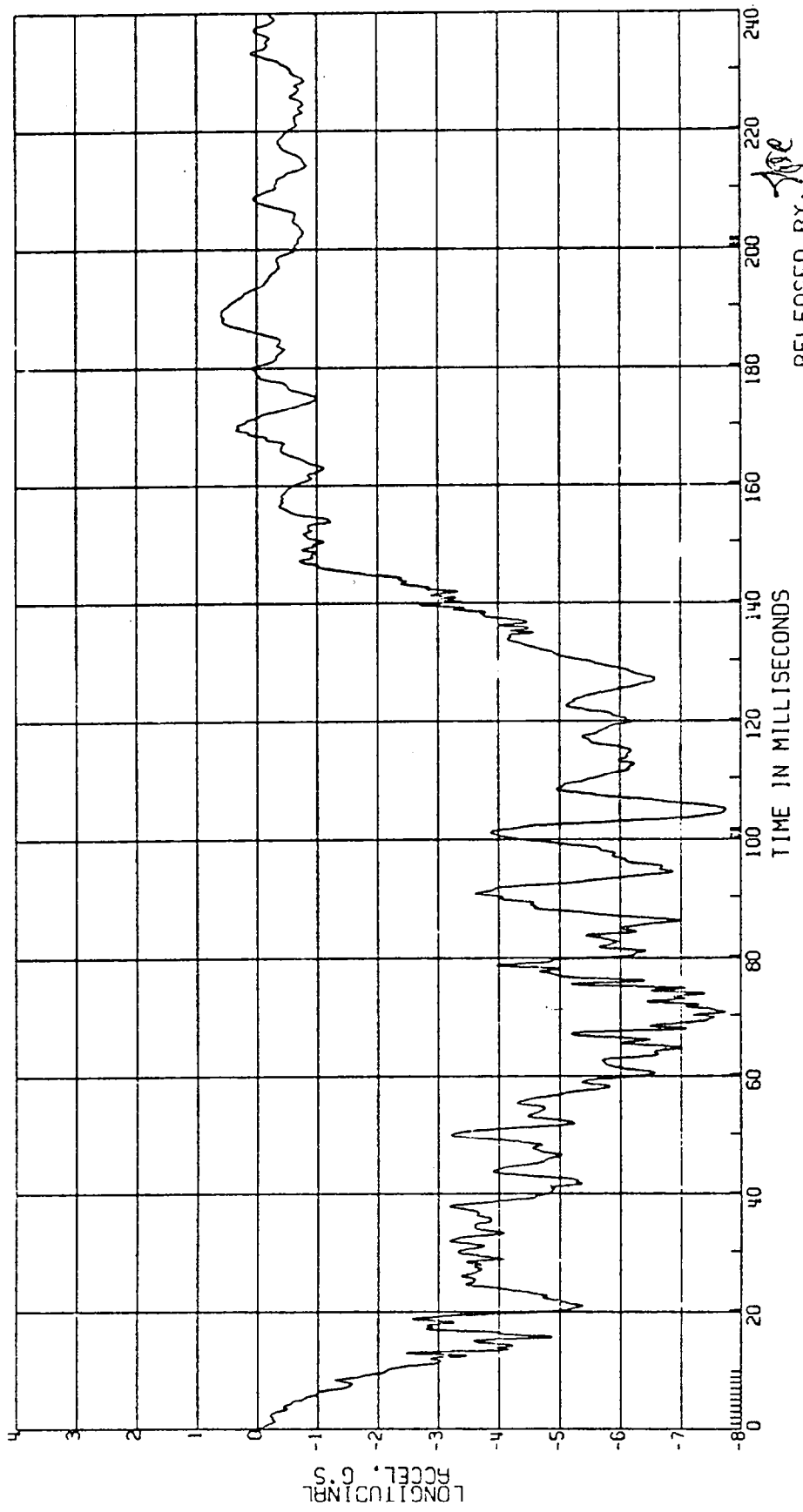


RECEIVED BY: JDR

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -75
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60

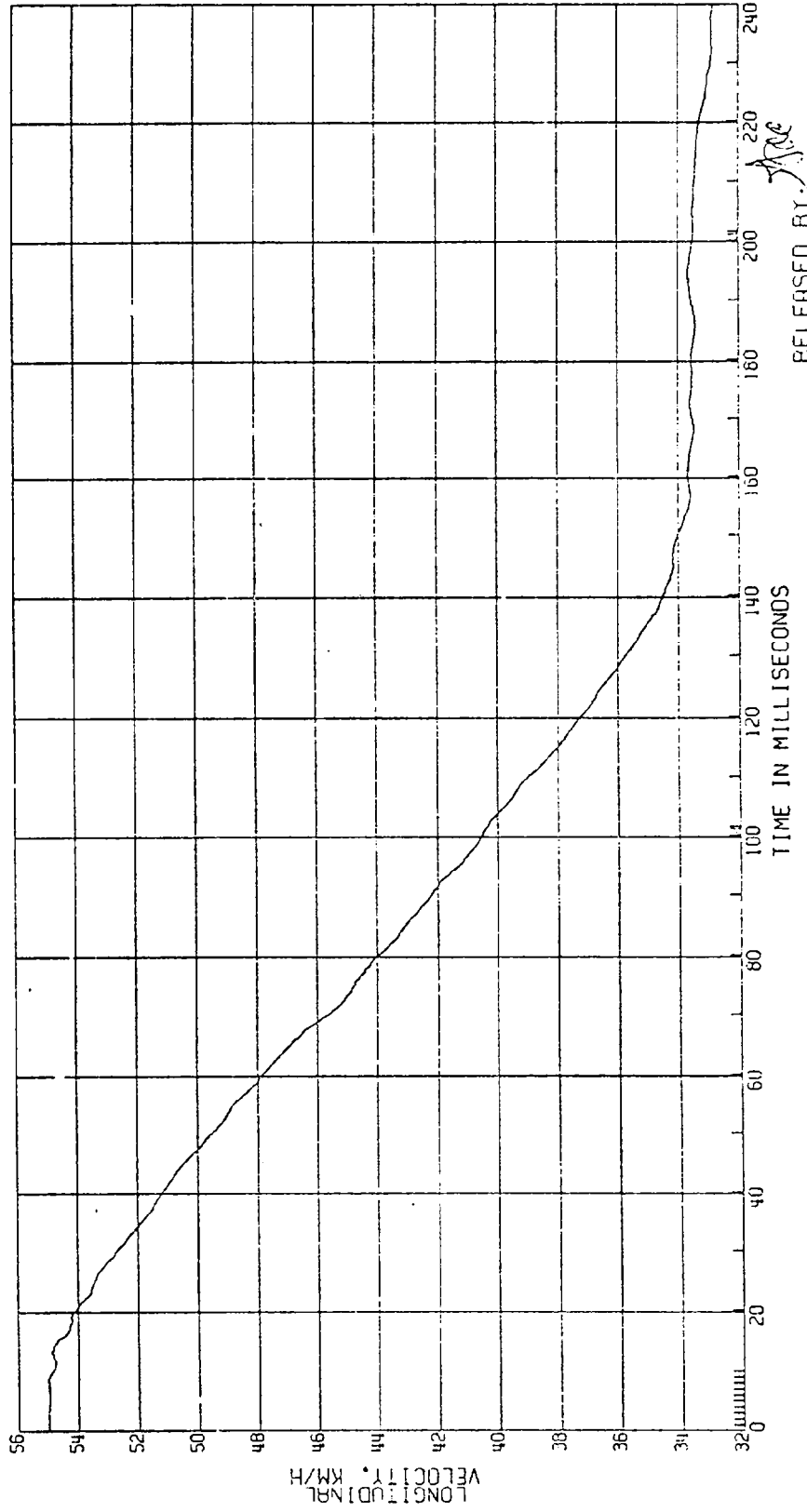
AVERAGED DRIVER & PASSENGER SIDE
FRONT OF BARRIER ACCELERATION

TEST DATE:12-19-84



RELEASED BY: *ME*

C6115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-76
 3865-848
 F.B. NHTSA BARR. (STRIKING VEH)
 A-D DATA SAE CLASS 180
 COMPUTED FRONT OF BARRIER VELOCITY
 TEST DATE: 12-19-84
 (1ST INTEGRAL DR-SIDE ACCELERATION)

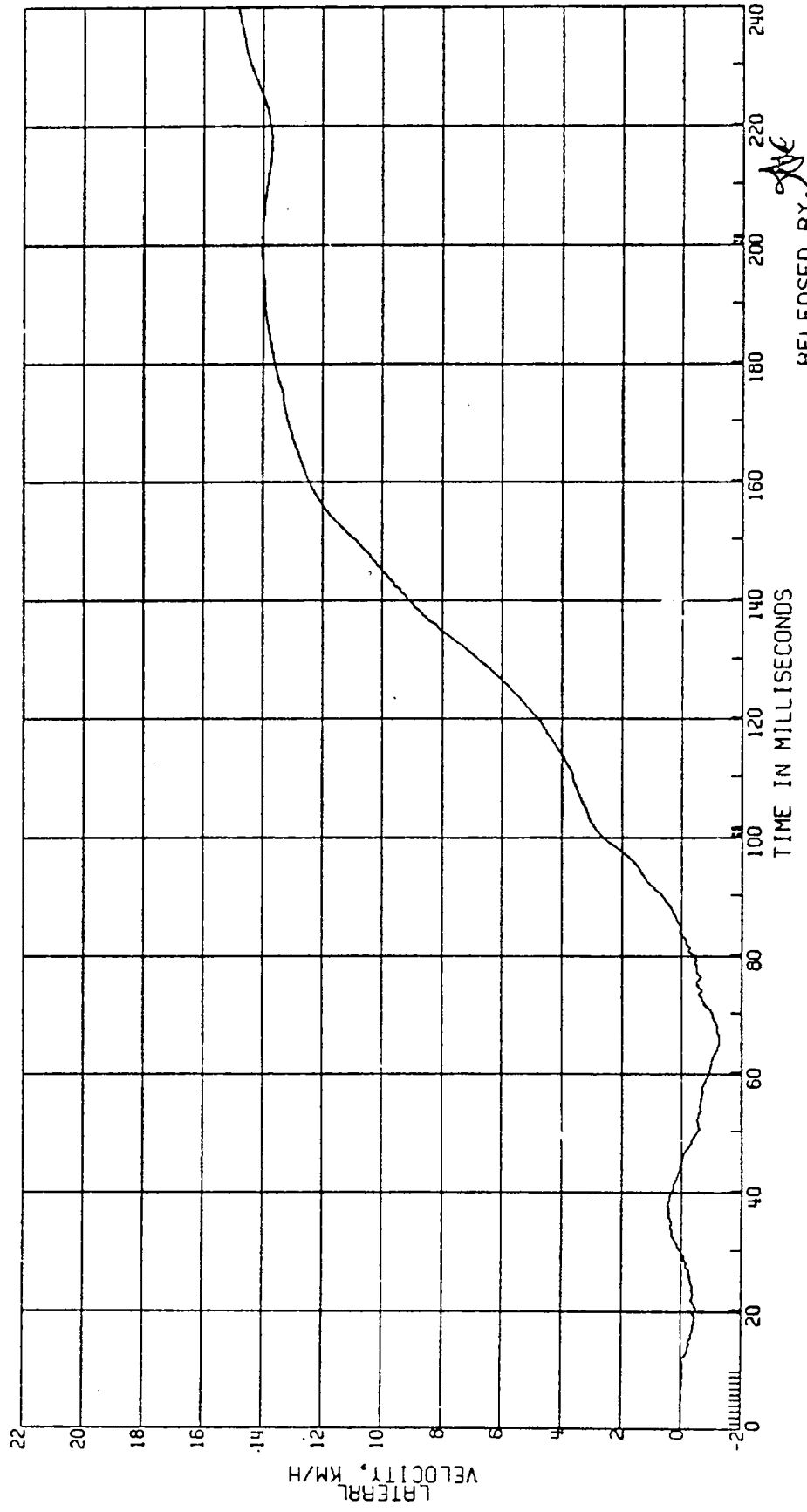


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CG115A RIGHT SIDE IMP. 60 DIFF
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180

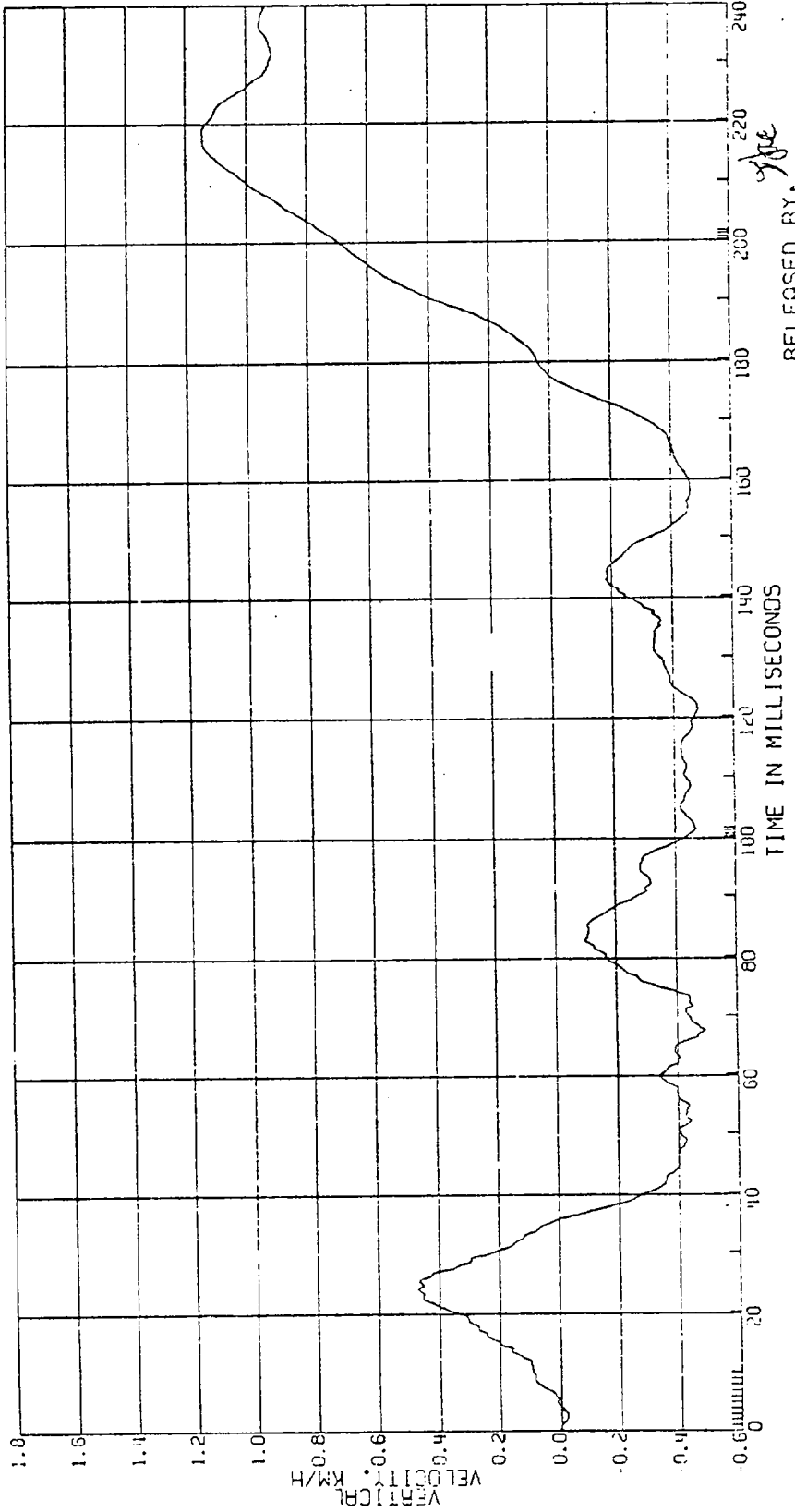
MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -77
COMPUTED FRONT OF BARRIER VELOCITY
(1ST INTEGRAL DR-SIDE ACCELERATION)

TEST DATE: 12-19-84



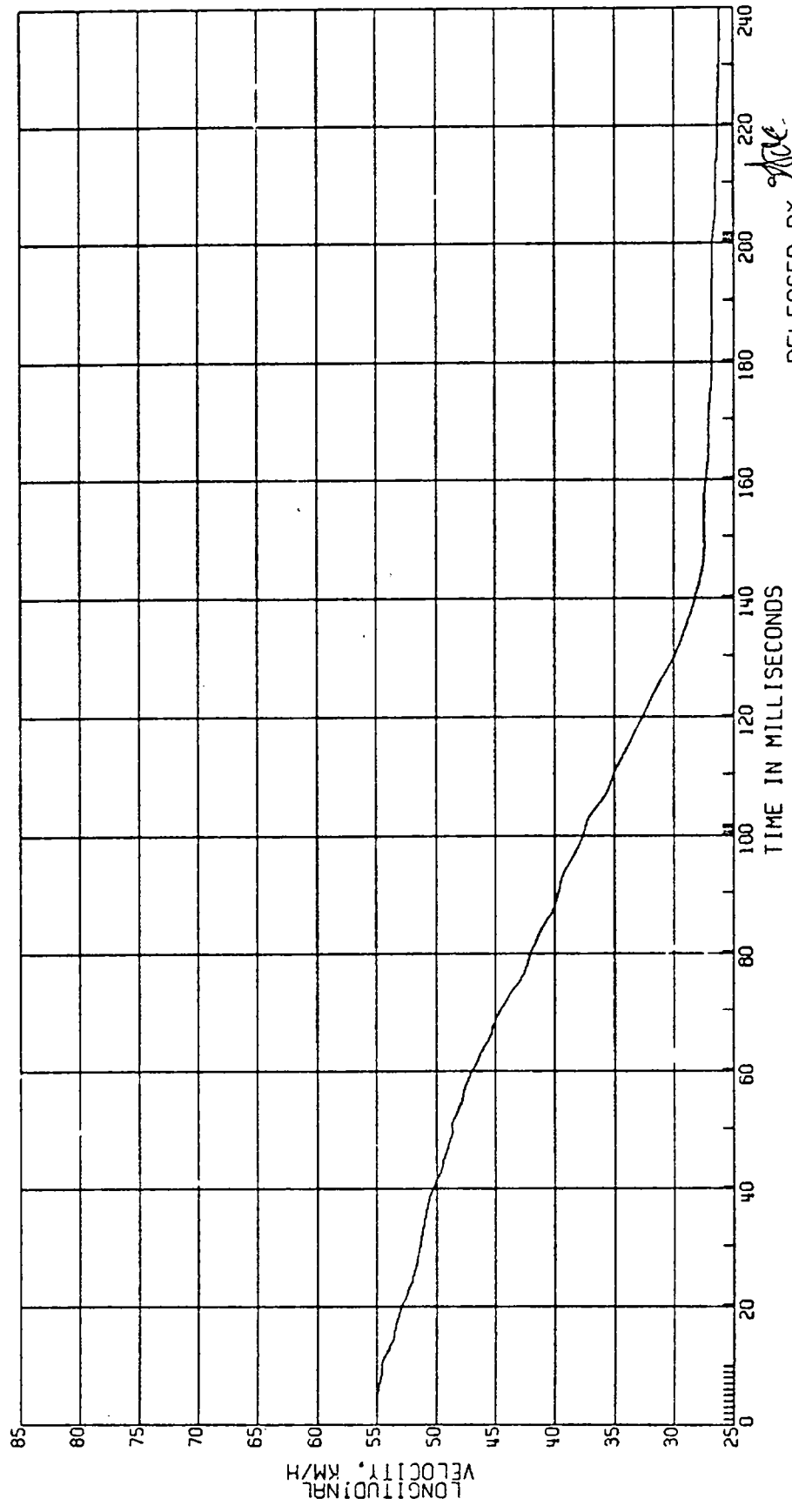
RELEASED BY: *ME*
ON 08/13/2010 12:47

CG115A RIGHT SIDE IMP.60 DIFF . MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE - 7B
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180
COMPUTED FRONT OF BARRIER VELOCITY
(1ST INTEGRAL DR-SIDE ACCELERATION)
TEST DATE: 12-19-84



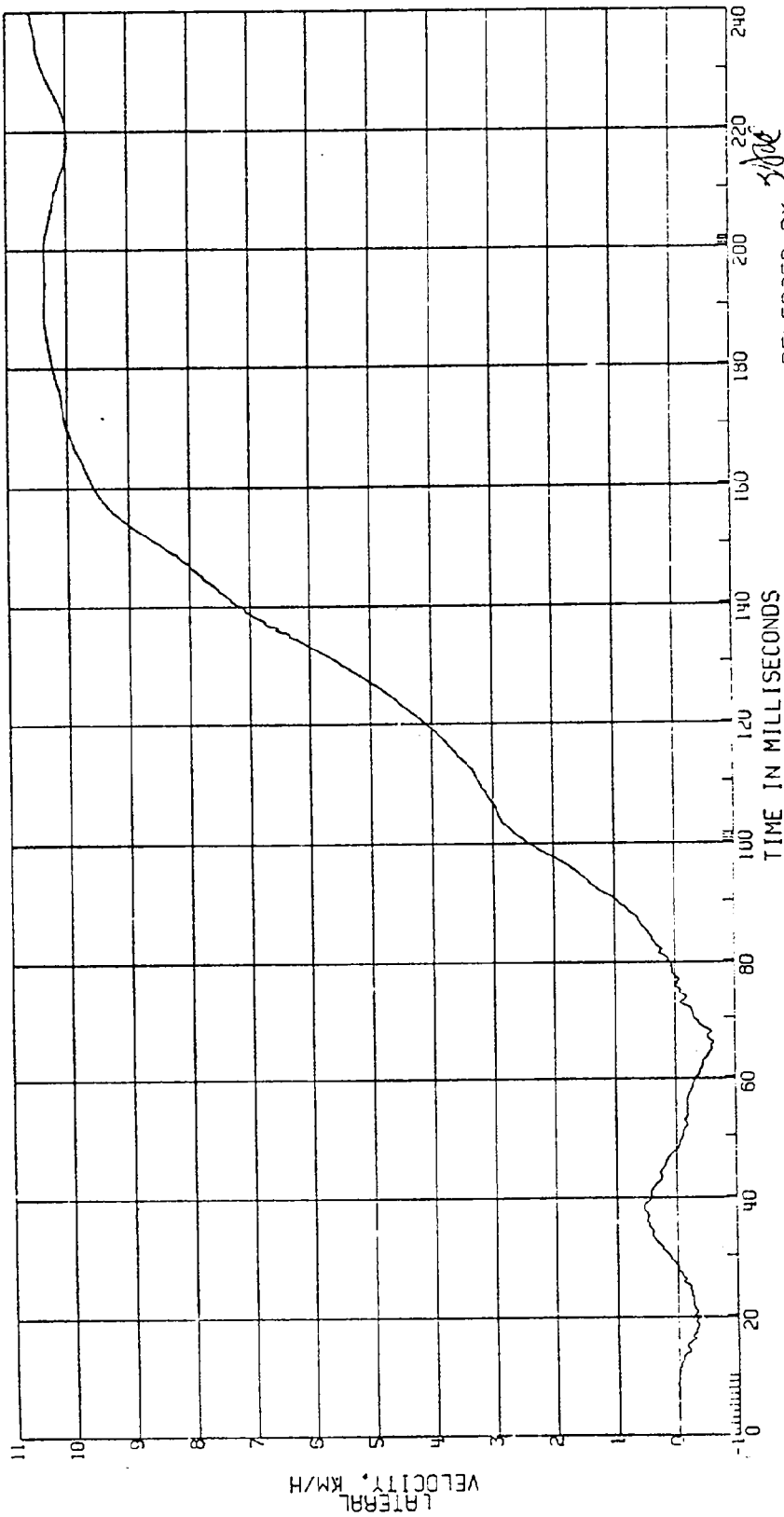
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20 PROCESSED 20 DE 84 12:34

CS115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.10 MOD.SMALL CAR 55.0KM/H FIGURE-79
 3865-848
 F.B. NHTSA BARR. (STRIKING VEH) COMPUTED FRONT OF BARRIER VELOCITY TEST DATE:12-19-84
 A-D DATA SAE CLASS 180 (1ST INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *ME*
 5 PROCESSED 20 DE 84 12:30

UG115H RIGHT SIDE IMP. BU DIFF MOVING NHTSA BARR. 10 MUO. SMILL LHM 55. UMM/H FIGURE - 80
 3865-848
 F.B. NHTSA BARR. (STRIKING VEH)
 A-D DATA SAE CLASS 180
 COMPUTED FRONT OF BARRIER VELOCITY
 TEST DATE: 12-19-84
 (1ST INTEGRAL PASS-SIDE ACCELERATION)



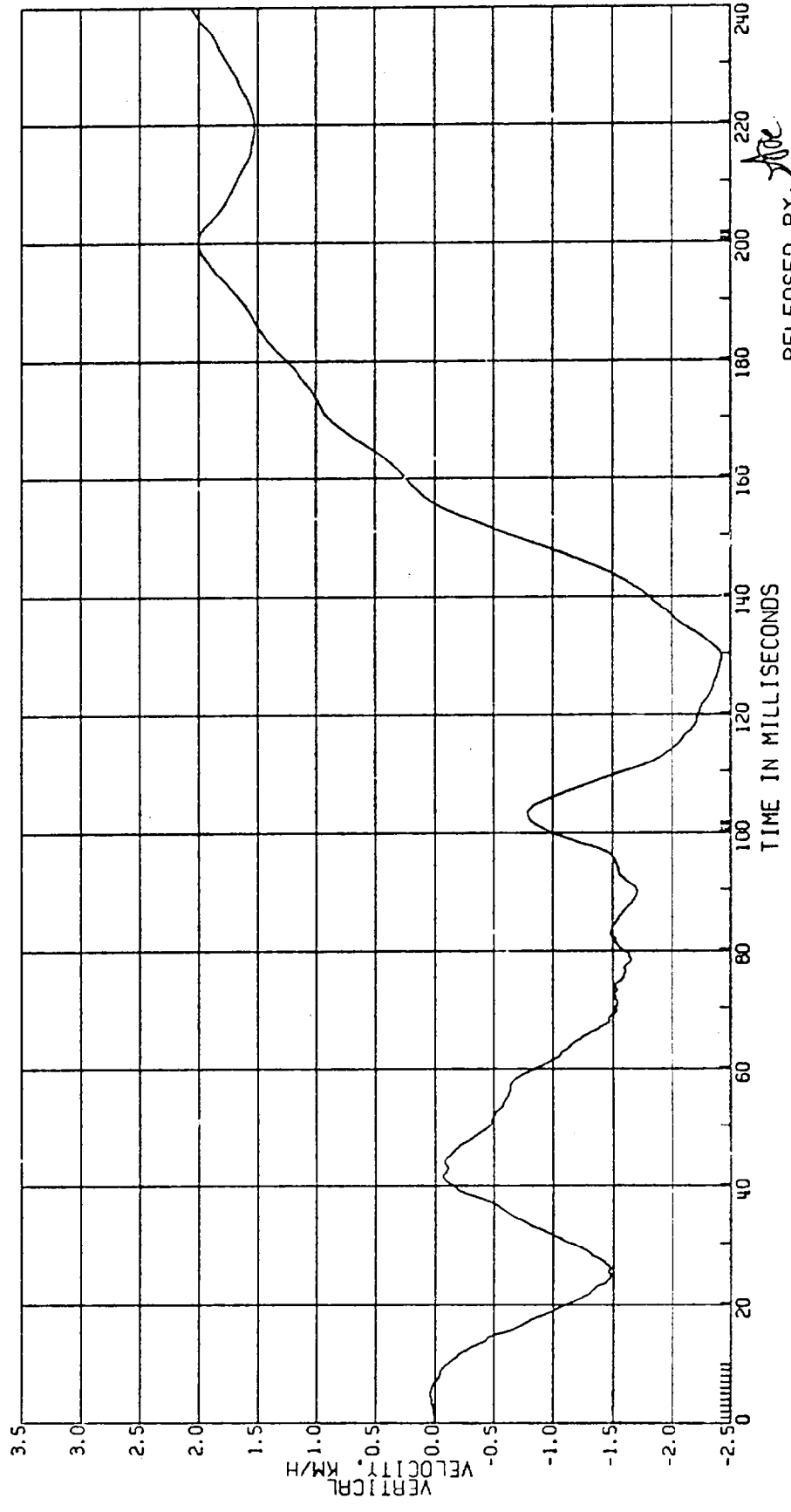
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 14 PROCESSED 20 DE 84 12:33

3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180

MUOVING INTRICH BARR. IU MUOV. SMHLL LHM 55. UKM/M FIGURE - 81

COMPUTED FRONT OF BARRIER VELOCITY
(1ST INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84



RELEASED BY: *[Signature]*
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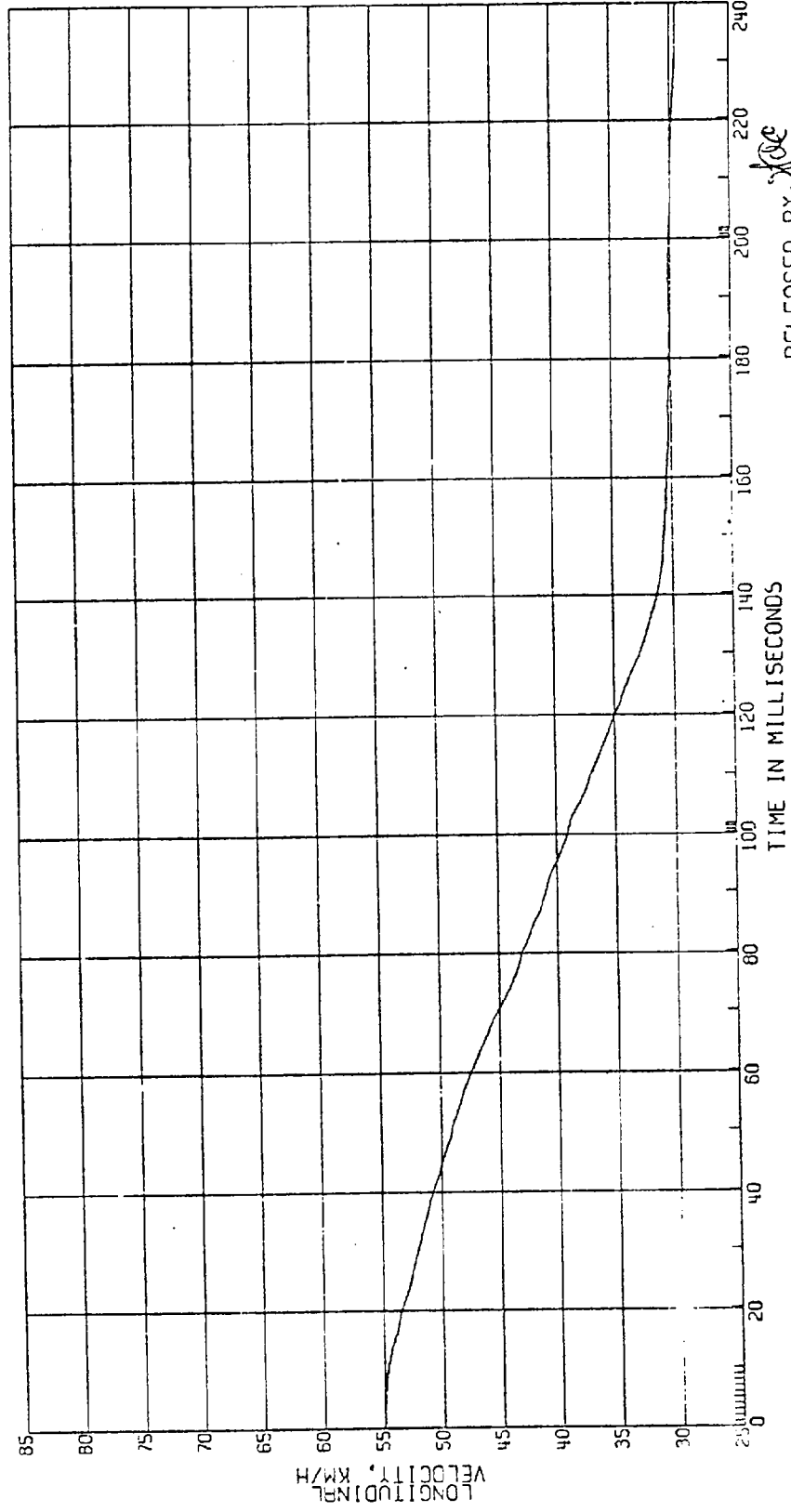
3865-848

F.B. NHTSA BARR. (STRIKING VEH)

A-D DATA SAE CLASS 180

COMPUTED FRONT OF BARRIER VELOCITY
(1ST INTEGRAL AVERAGED ACCELERATION)

TEST DATE: 12-19-84



RELEASED BY: JOE

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3865-848

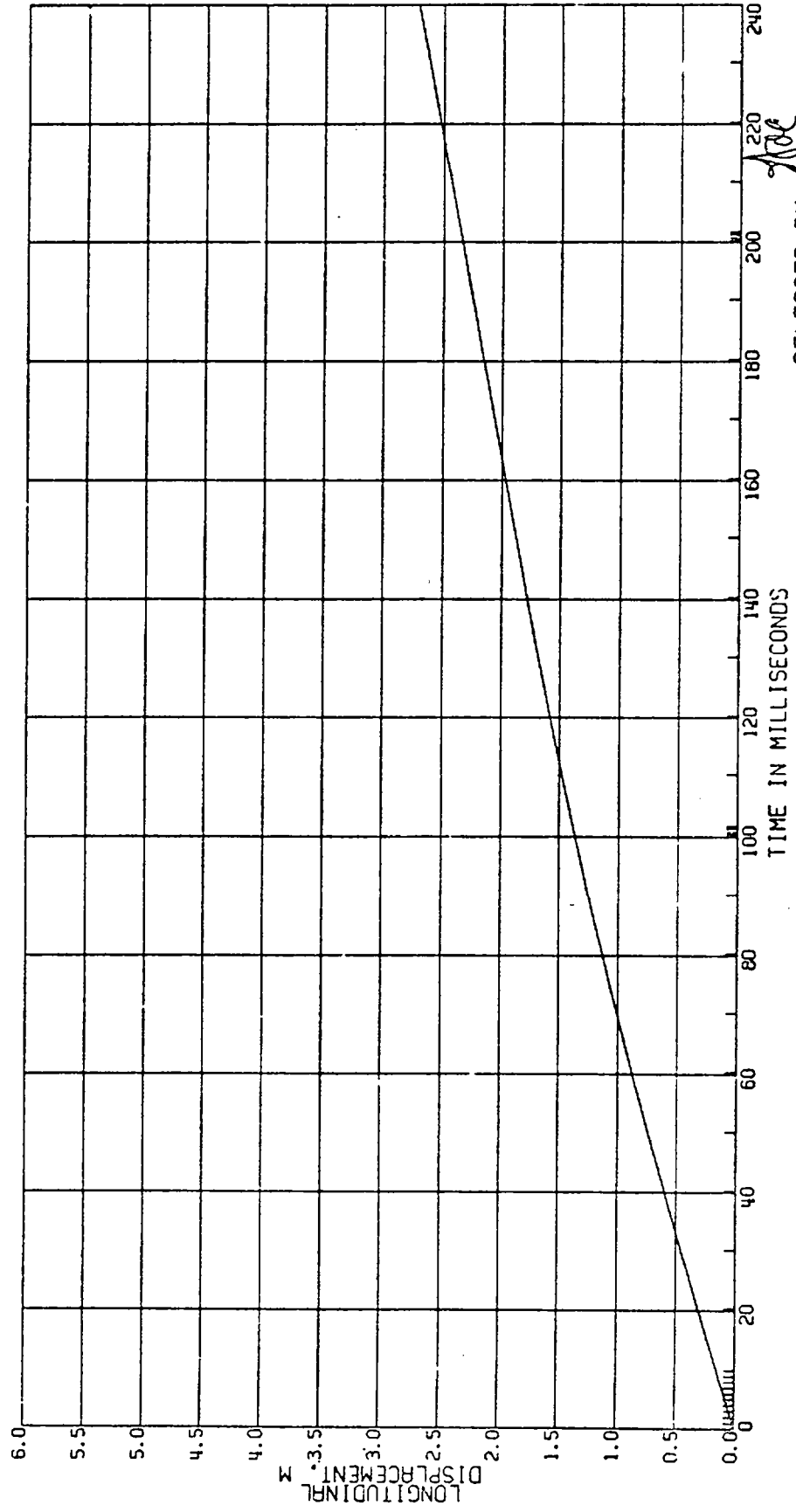
F.B. NHTSA BARR. (STRIKING VEH)

A-D DATA SAE CLASS 180

COMPUTED FRONT OF BARRIER DISPLACEMENT

(2ND INTEGRAL DR-SIDE ACCELERATION)

TEST DATE: 12-19-84



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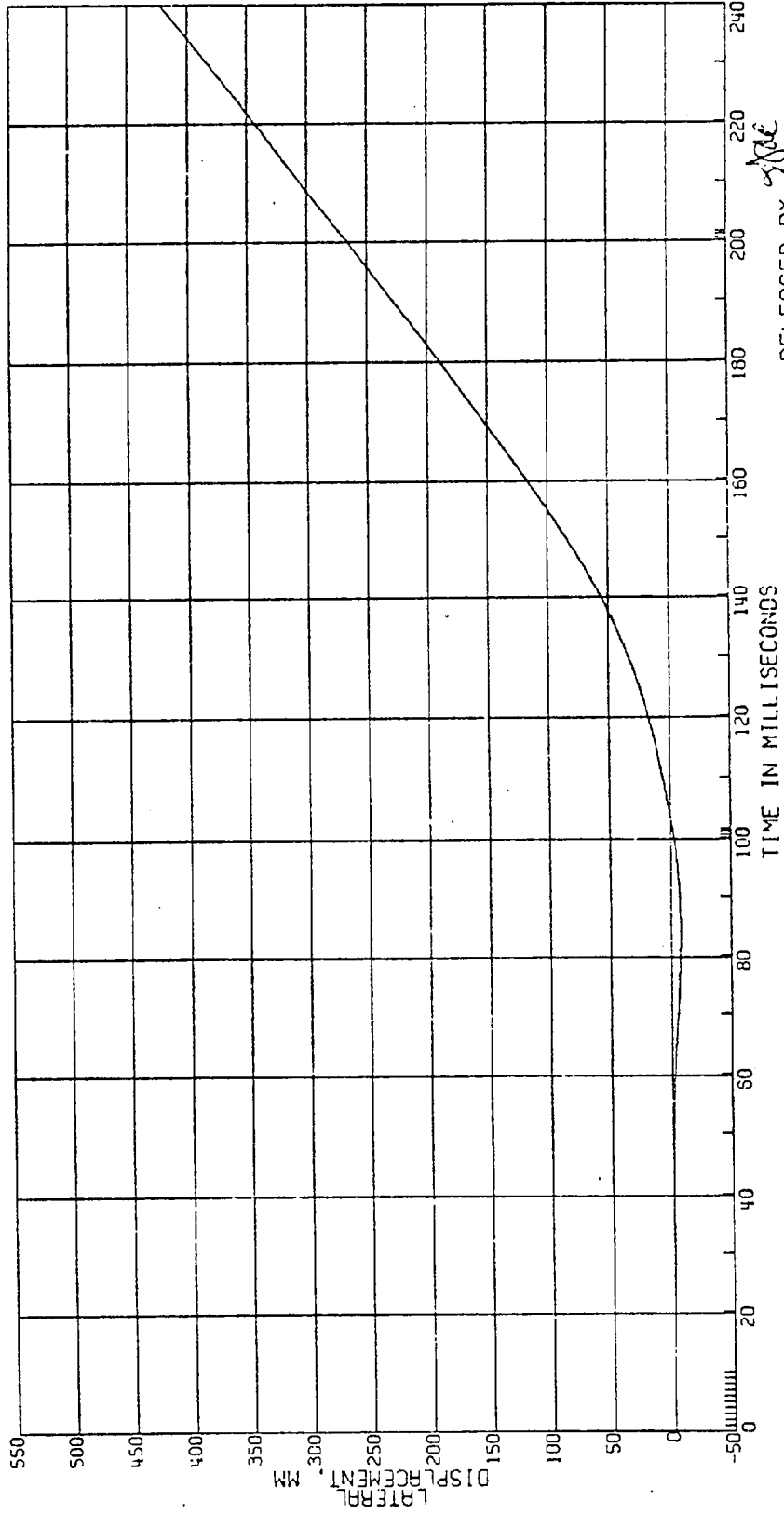
F.B. NHTSA BARR. (STRIKING VEH)

A-D DATA SAE CLASS 180

COMPUTED FRONT OF BARRIER DISPLACEMENT

(2ND INTEGRAL DR-SIDE ACCELERATION)

TEST DATE: 12-19-84



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3865-848

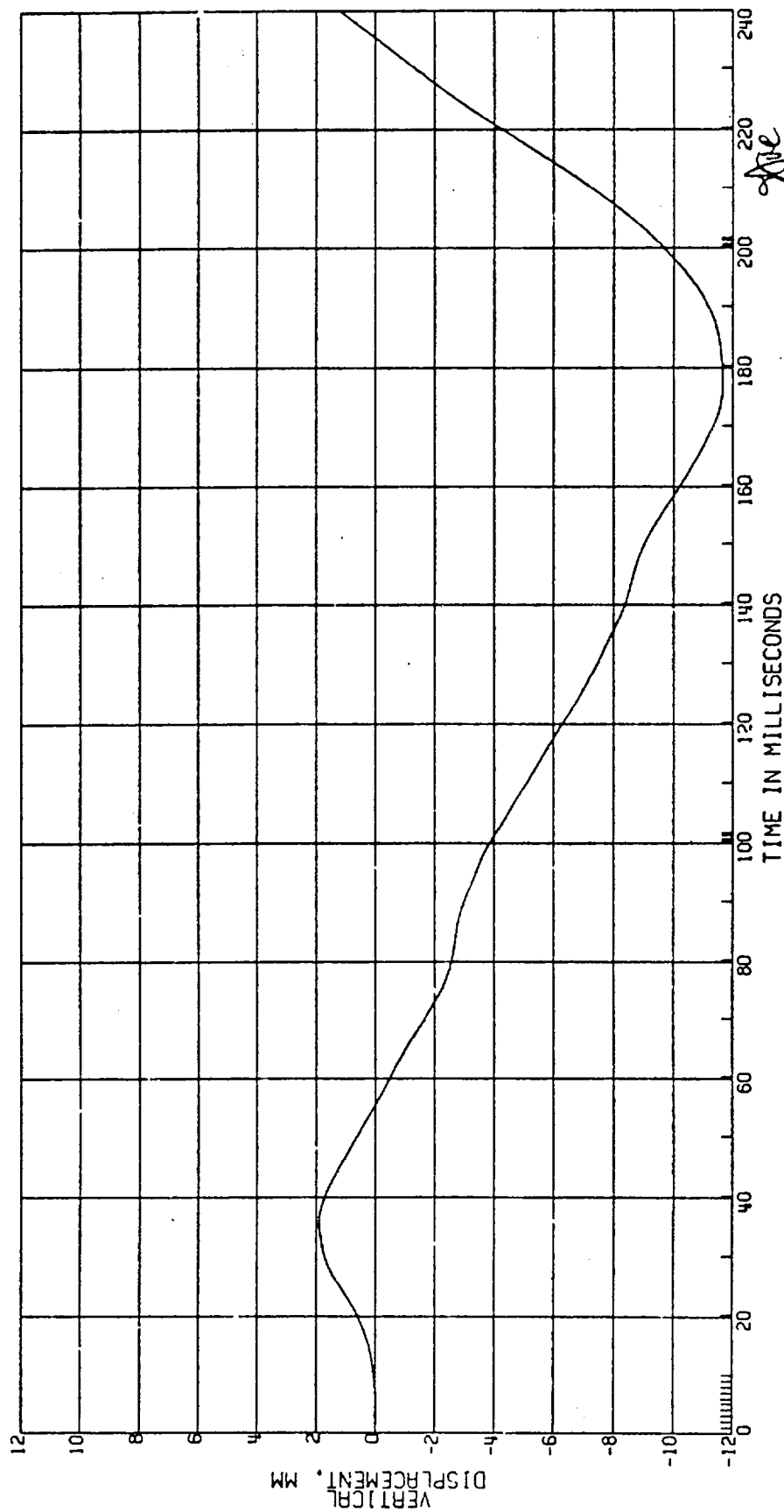
F.B. NHTSA BARR. (STRIKING VEH)

A-D DATA SAE CLASS 180

COMPUTED FRONT OF BARRIER DISPLACEMENT

(2ND INTEGRAL DR-SIDE ACCELERATION)

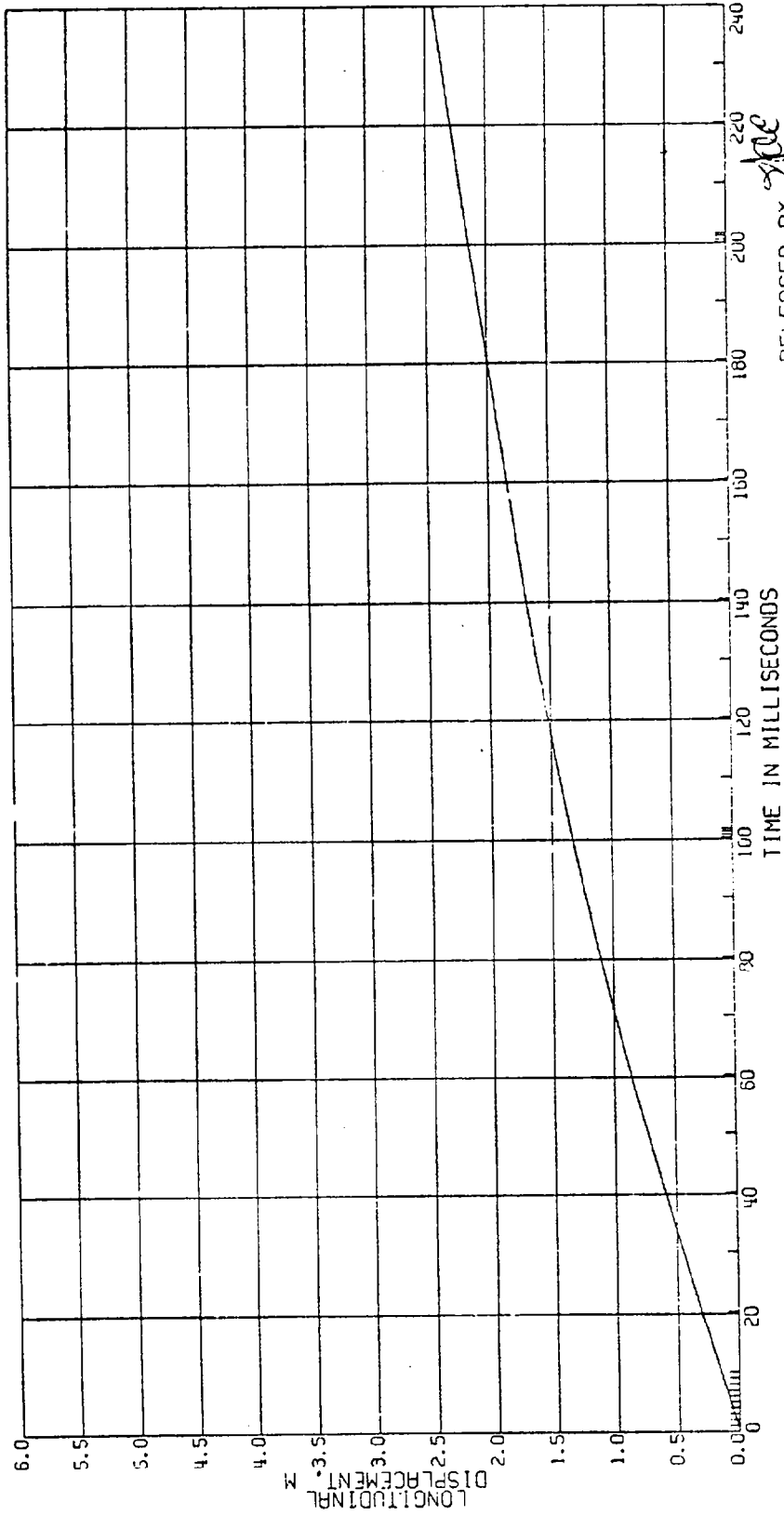
TEST DATE: 12-19-84



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21 PROCESSED 20 DE 84 12:35

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F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180
COMPUTED FRONT OF BARRIER DISPLACEMENT
(2ND INTEGRAL PASS-SIDE ACCELERATION)
TEST DATE: 12-19-84

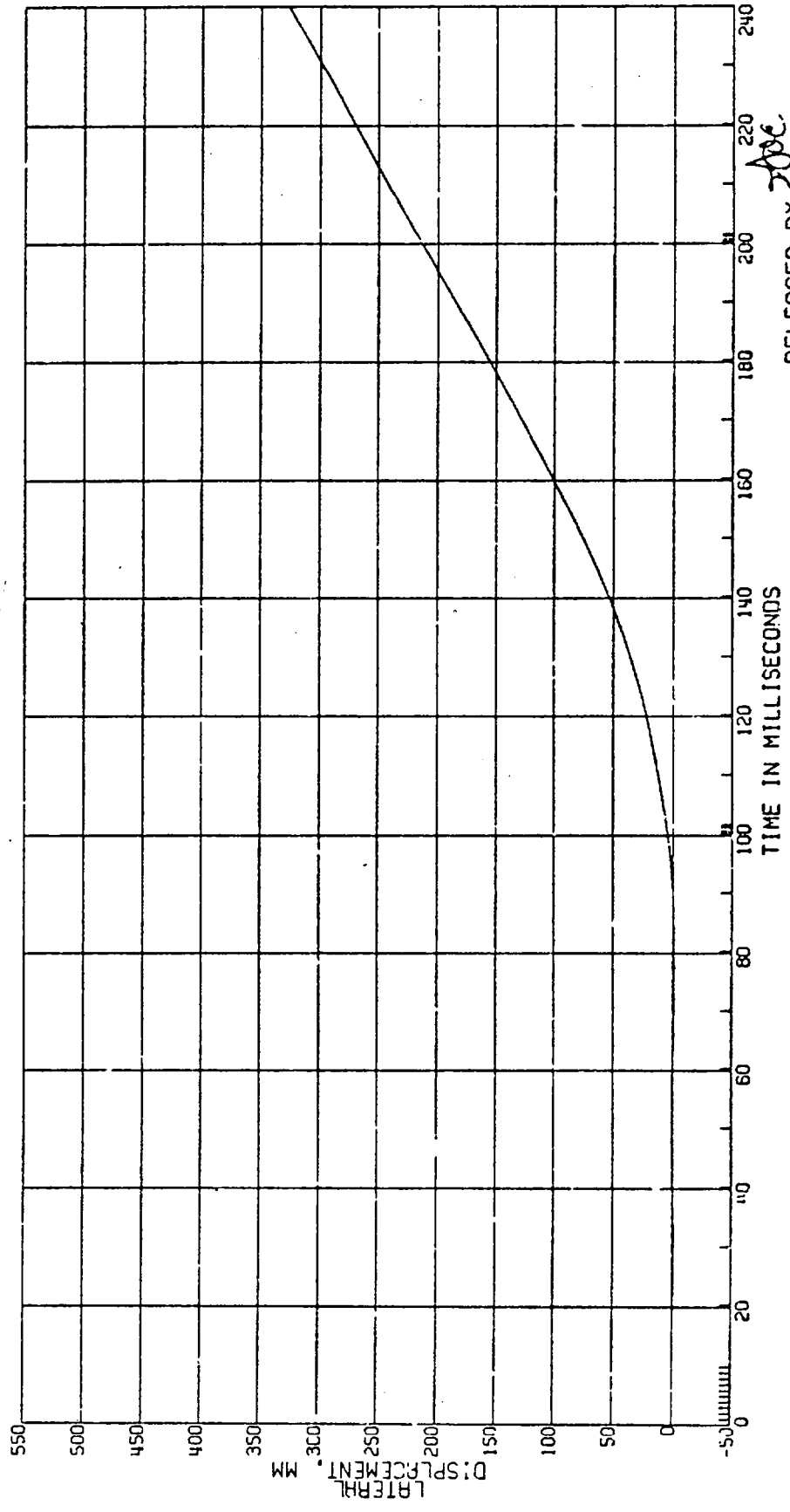


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COMPUTED FRONT OF BARRIER DISPLACEMENT
(2ND INTEGRAL PASS-SIDE ACCELERATION)

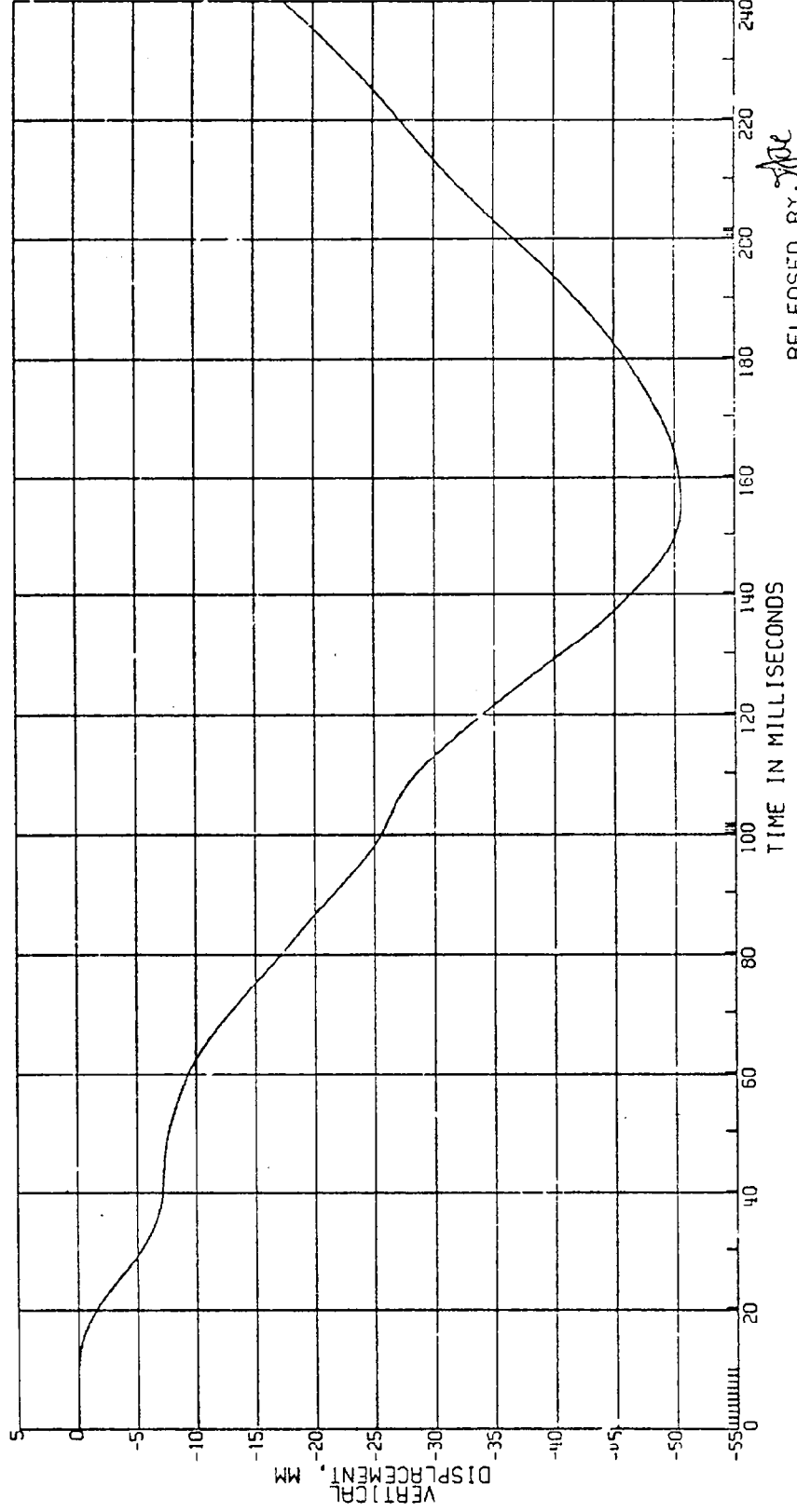
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F.B. NHTSA BARR. (STRIKING VEH)
H-D DATA SAE CLASS 180



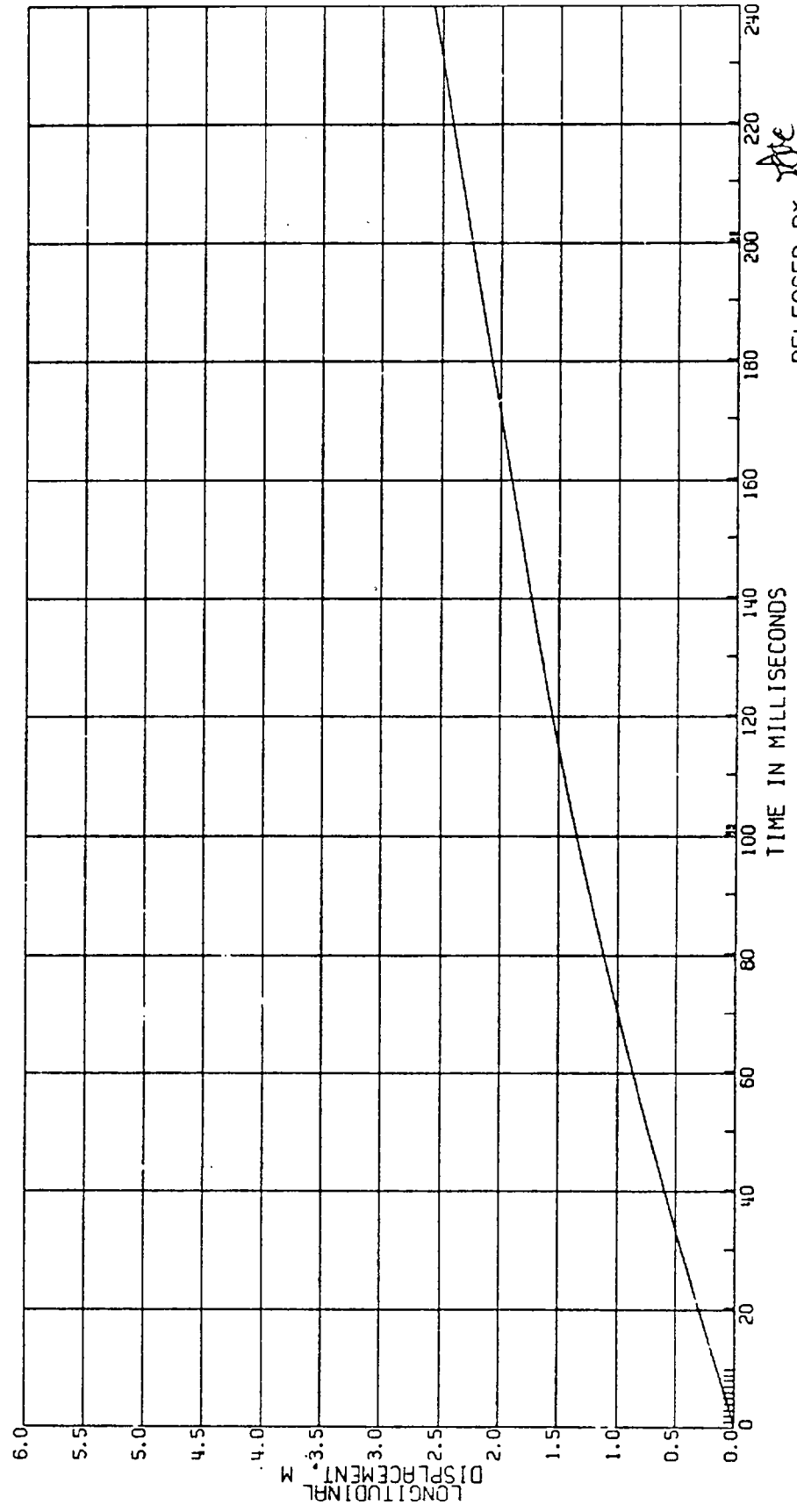
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15 PROCESSED 20 DE 84 12:34

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-88
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180
COMPUTED FRONT OF BARRIER DISPLACEMENT TEST DATE: 12-19-84
(2ND INTEGRAL PASS-SIDE ACCELERATION)



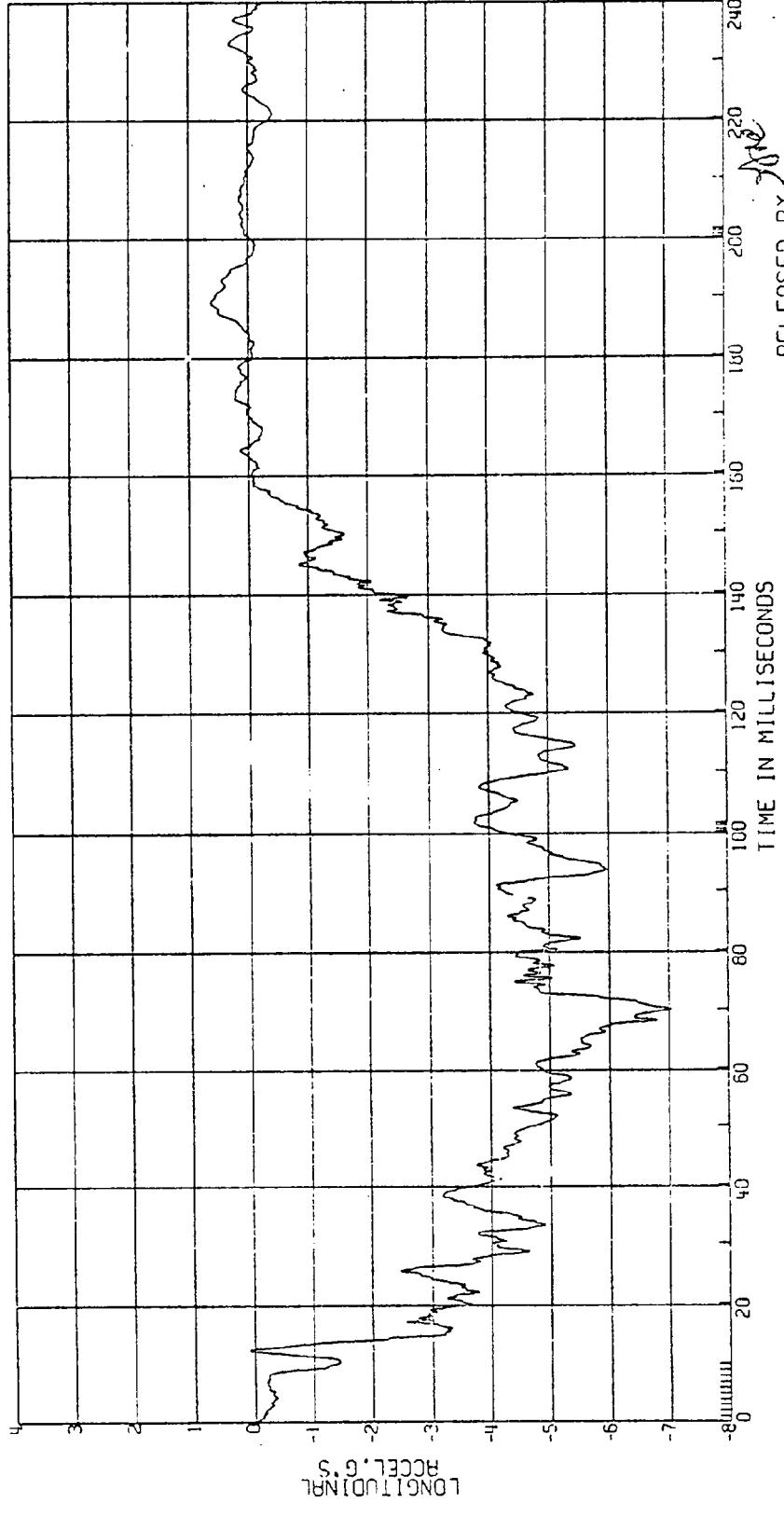
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24 APR 1985 09:00 AM '85

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE - 89
 3865-848
 F.B. NHTSA BARR. (STRIKING VEH) COMPUTED FRONT OF BARRIER DISPLACEMENT TEST DATE: 12-19-84
 A-D DATA SAE CLASS 180 (2ND INTEGRAL AVERAGED ACCELERATION)



RELEASED BY: *Joe*
 9 FEBRUARY 20 06 04 12:31

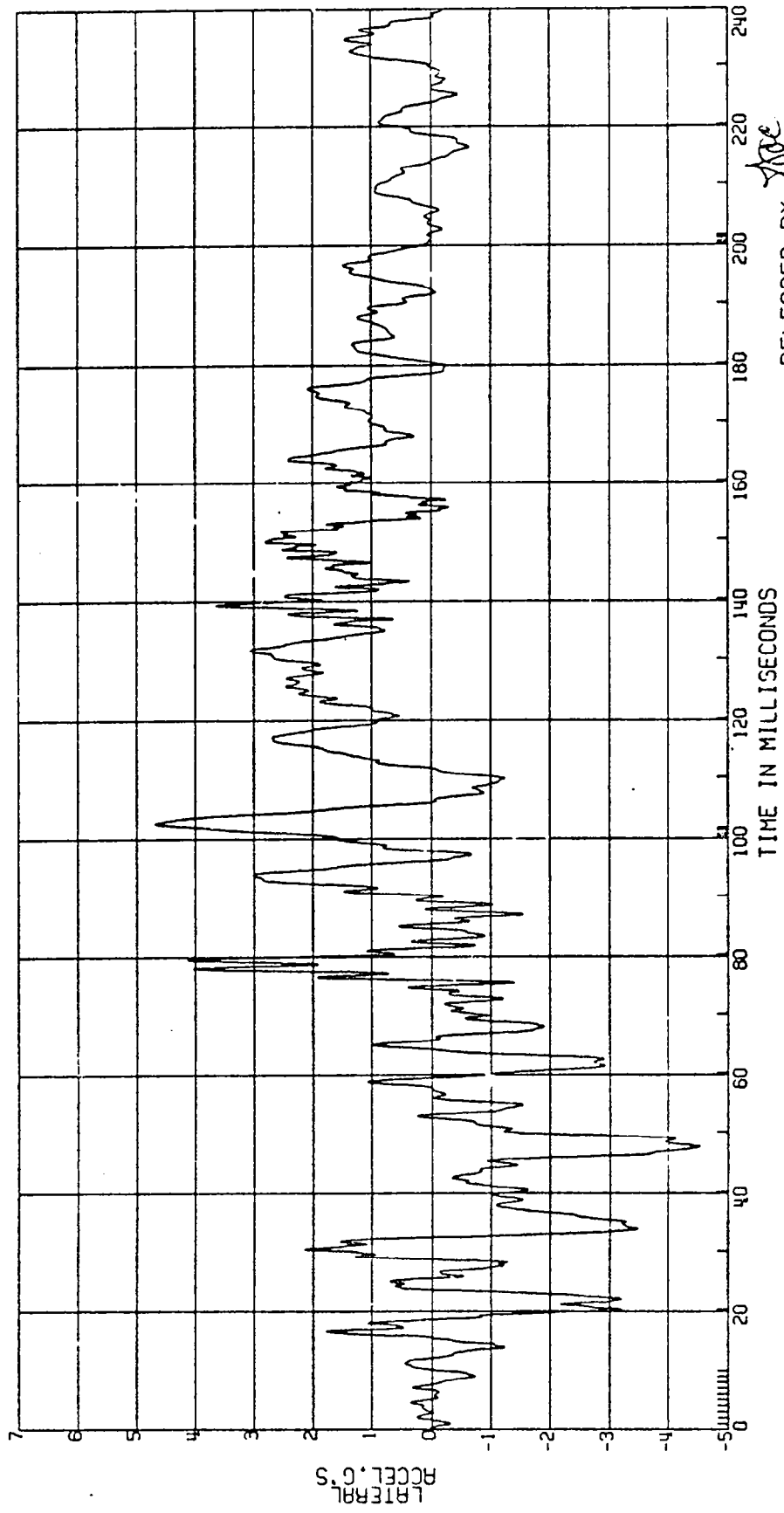
CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE - 90
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60
DR-SIDE MIDDLE OF BARRIER ACCEL.
TEST DATE: 12-19-84



RELEASED BY: JMC
28 PROCESSED 20 DEC 84 12:37

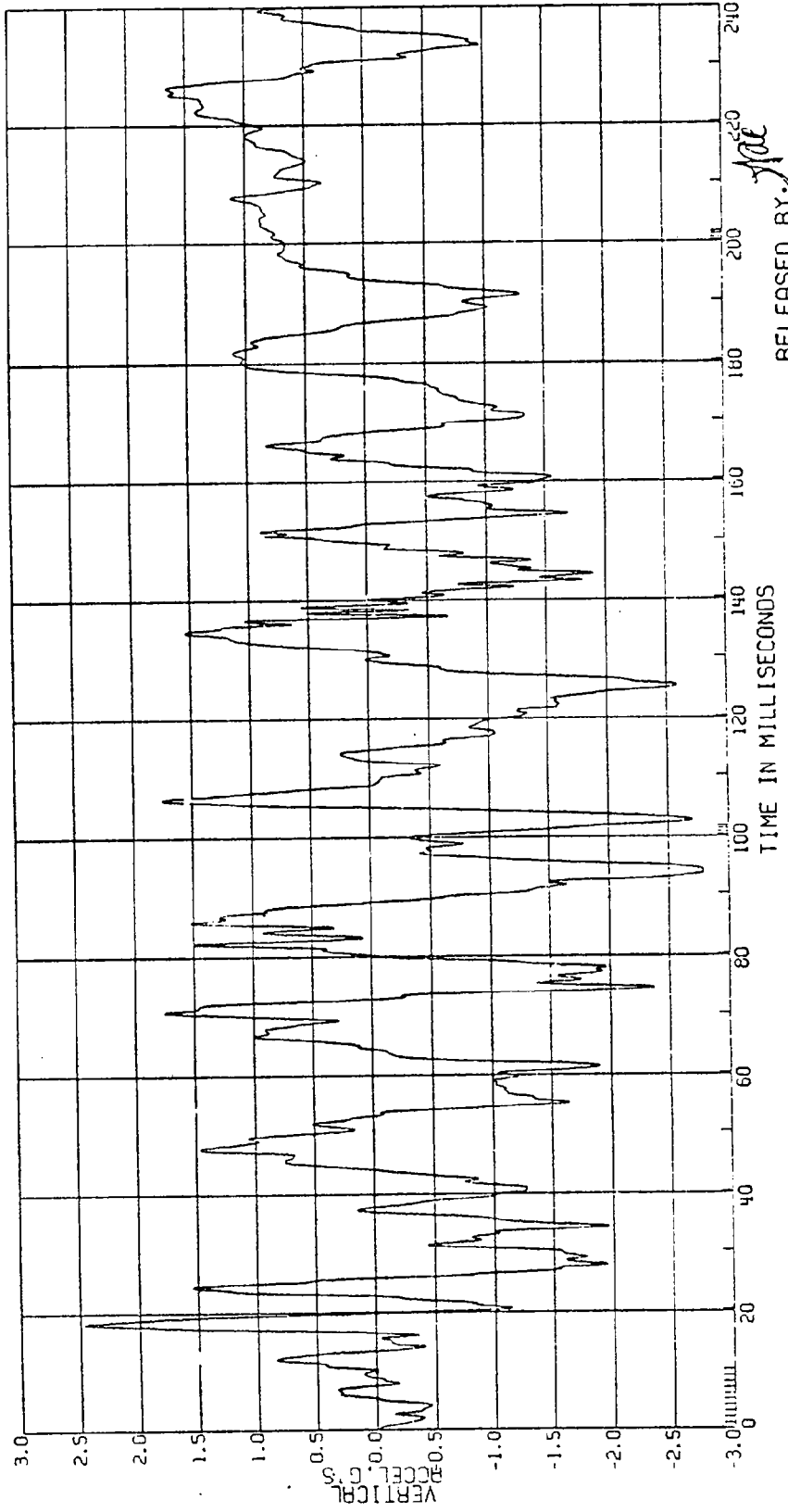
CG115A RIGHT SIDE IMP.60 DIFF
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60

MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-91
DR-SIDE MIDDLE OF BARRIER ACCEL.
TEST DATE: 12-19-84



RELEASED BY: JOC
37 PROCESSED 20 DE 84 12:39

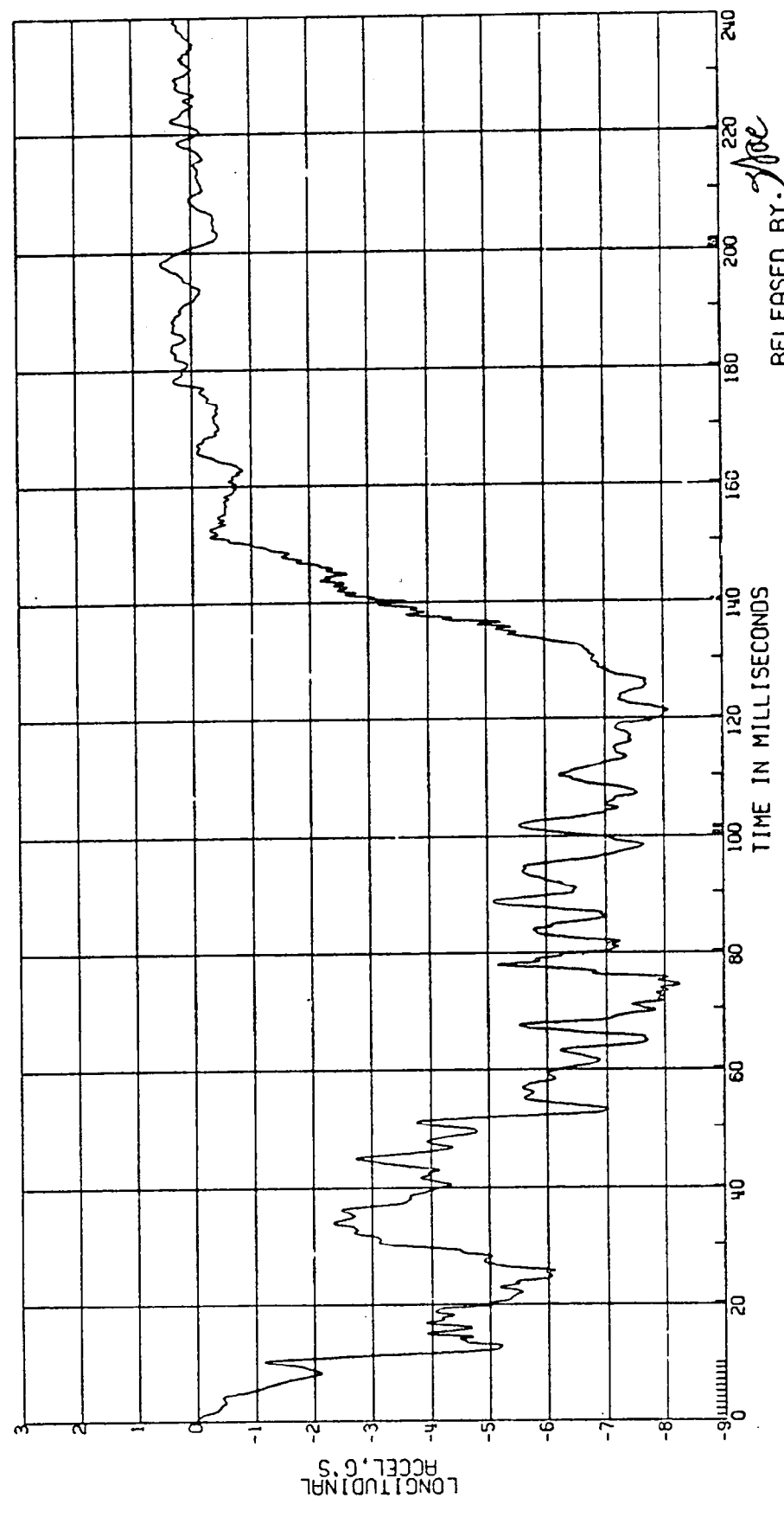
CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD.SMALL CAR 55.0KM/H FIGURE -92
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60 TEST DATE:12-19-84



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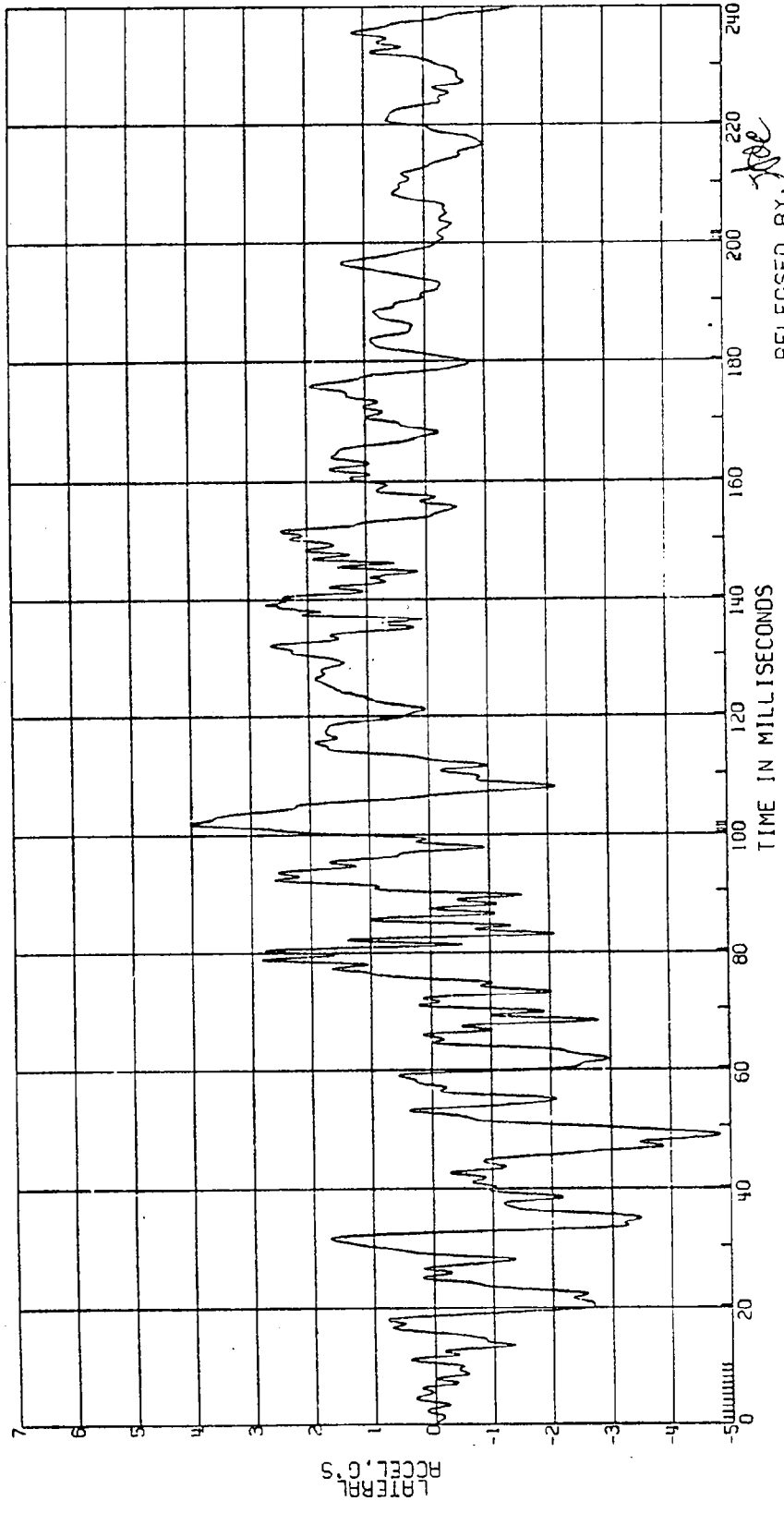
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CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-93
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60 TEST DATE:12-19-84



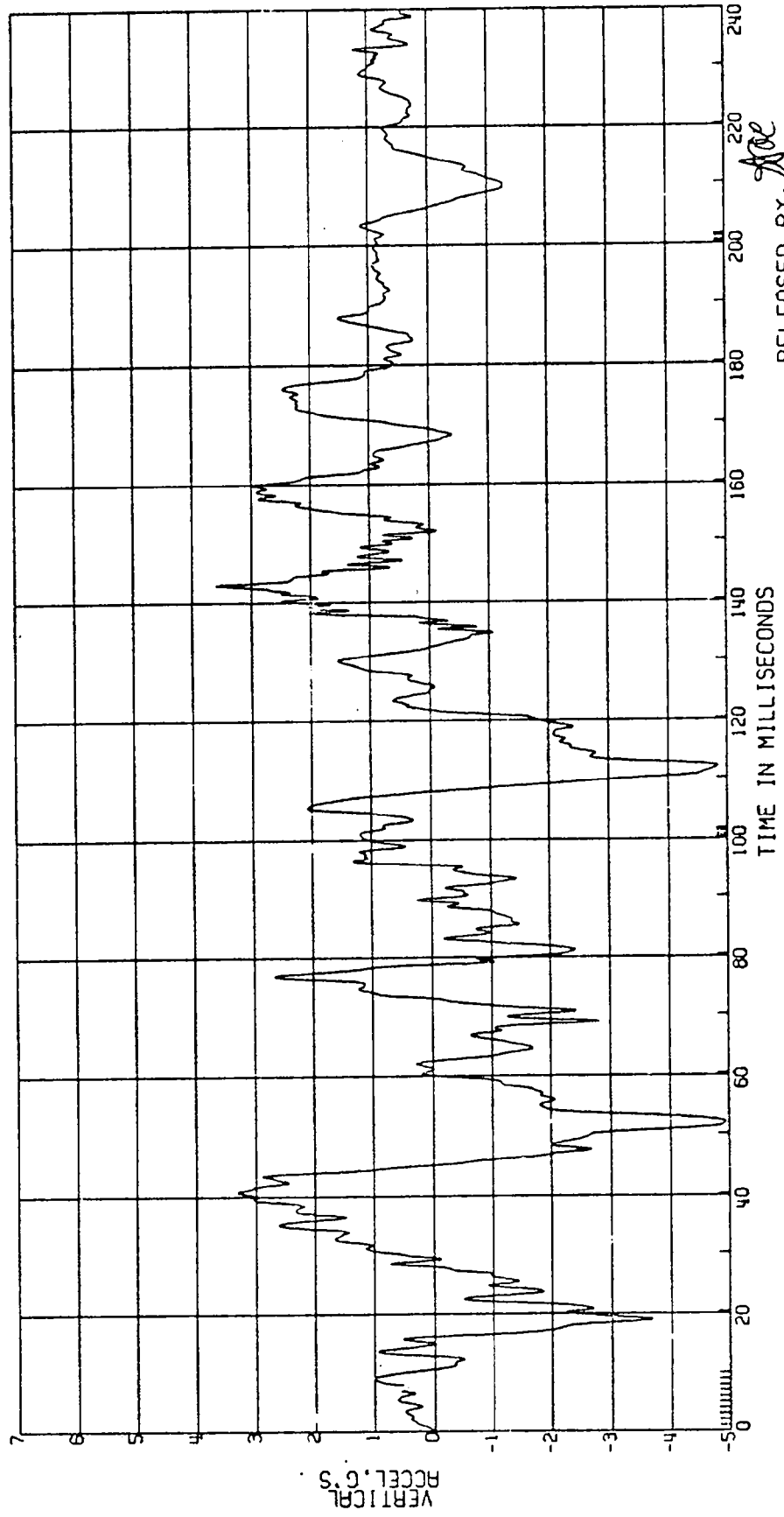
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31 PROCESSED 20 DE 84 12:37

C6115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-94
3865-848 PASS-SIDE MIDDLE OF BARRIER ACCEL. TEST DATE:12-19-84
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60



RELEASED BY: *JOE*
40 PROCESSED 20 DE 84 12:40

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -95
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 60 PASS-SIDE MIDDLE OF BARRIER ACCEL. TEST DATE:12-19-84



RELEASED BY: *AOE*
49 PROCESSED 20 DE 84 12:42

C6115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. 10 MOD. SMALL CHH 55. UKM/H FIGURE-96

3865-848

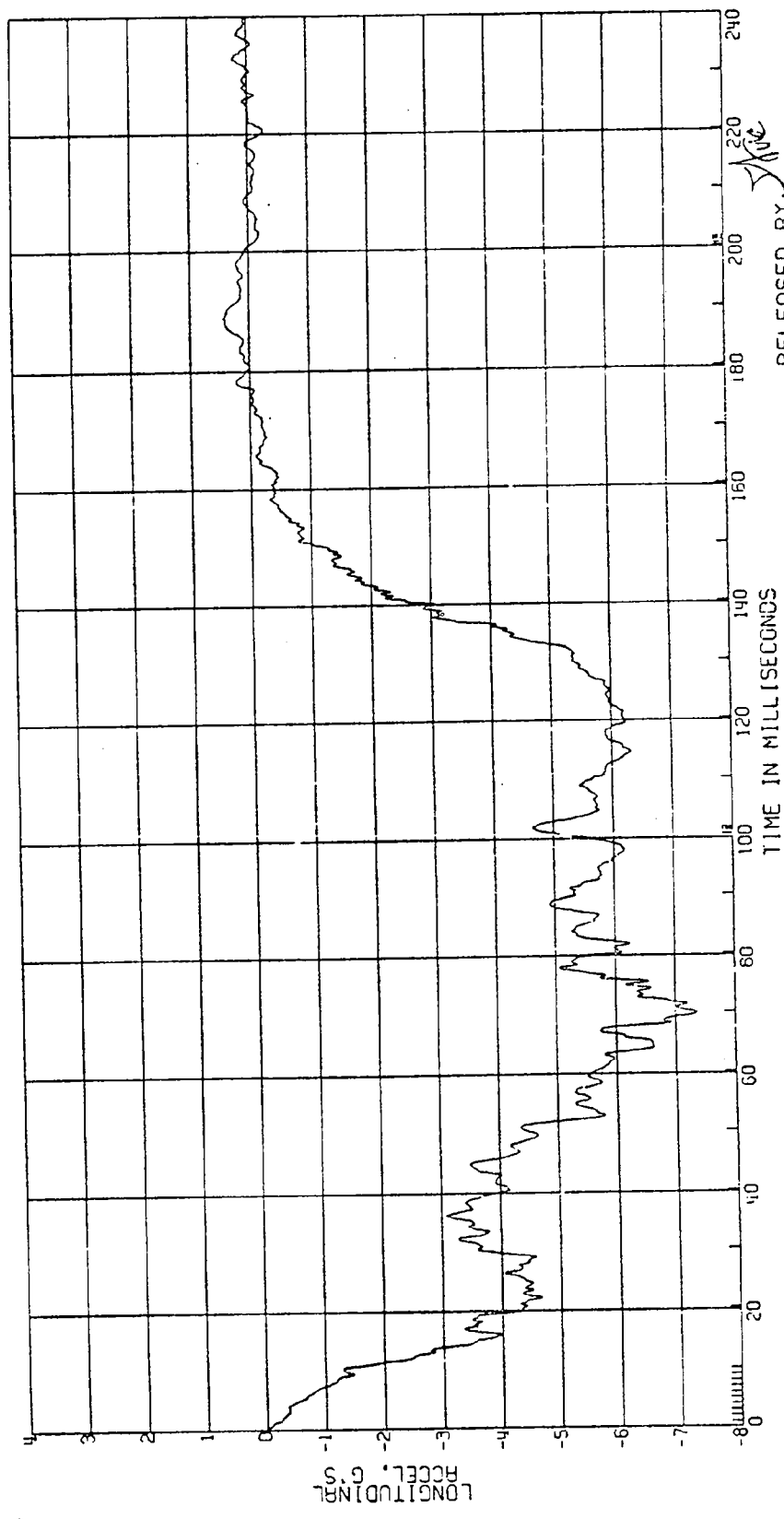
F.B. NHTSA BARR. (STRIKING VEH)

A-D DATA SAE CLASS 60

AVERAGED DRIVER & PASSENGER SIDE

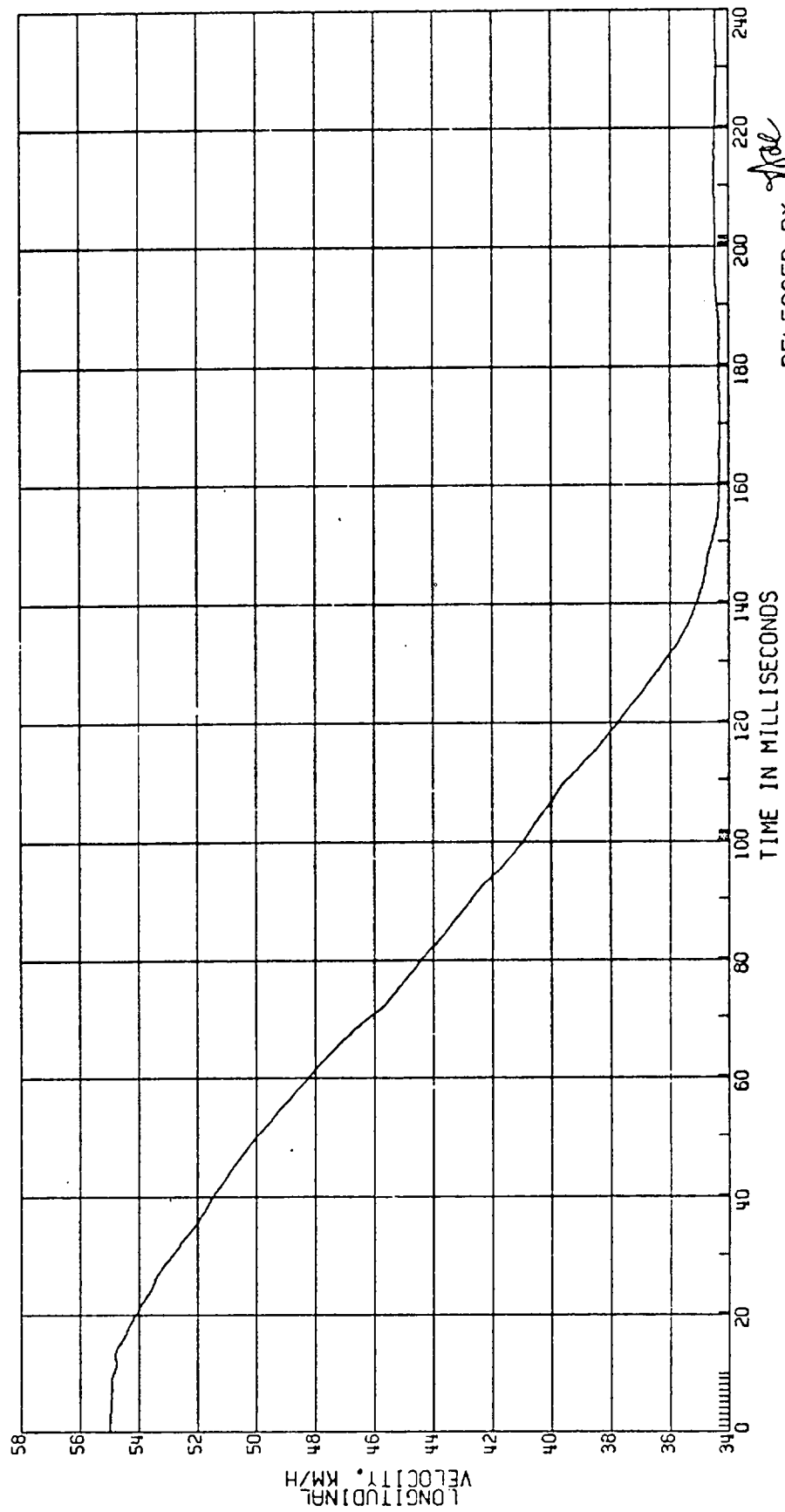
MIDDLE OF BARRIER ACCELERATION

TEST DATE:12-19-84



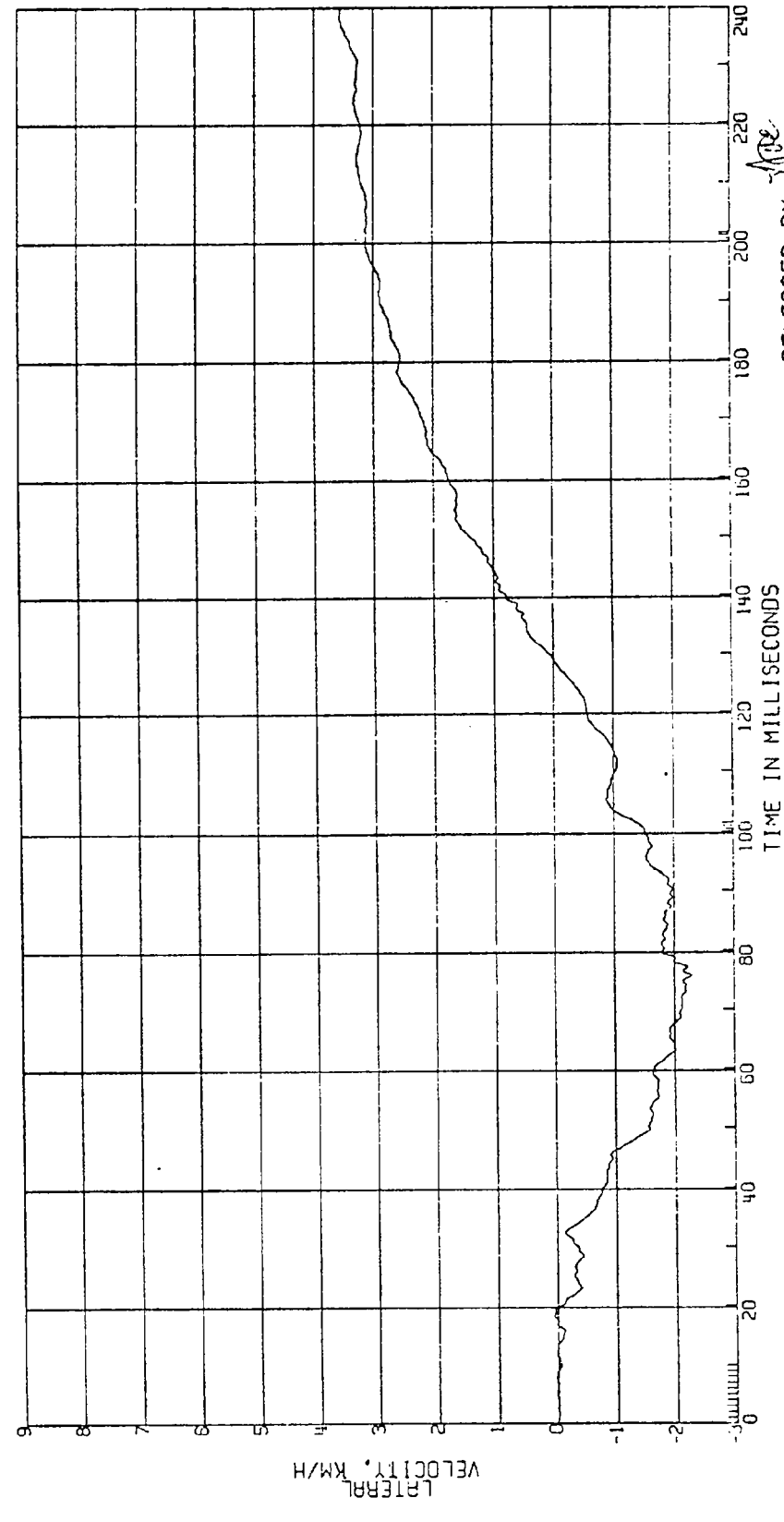
RELEASED BY: *[Signature]*
34 PROCESSED 20 DE 84 12:38

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-97
 3865-848
 F.B. NHTSA BARR. (STRIKING VEII) COMPUTED MIDDLE OF BARRIER VELOCITY TEST DATE:12-19-84
 A-D DATA SAE CLASS 180 (1ST INTEGRAL DR-SIDE ACCELERATION)



RELEASED BY: *John*
 29 PROCESSED 20 DE 84 12:37

CG115A RIGHT SIDE IMP. 60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0 KM/H FIGURE-98
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180
COMPUTED MIDDLE OF BARRIER VELOCITY
TEST DATE: 12-19-84
(1ST INTEGRAL DR-SIDE ACCELERATION)



RELEASED BY: *ME*
38 PROCESSED 20 DE 84 12:39

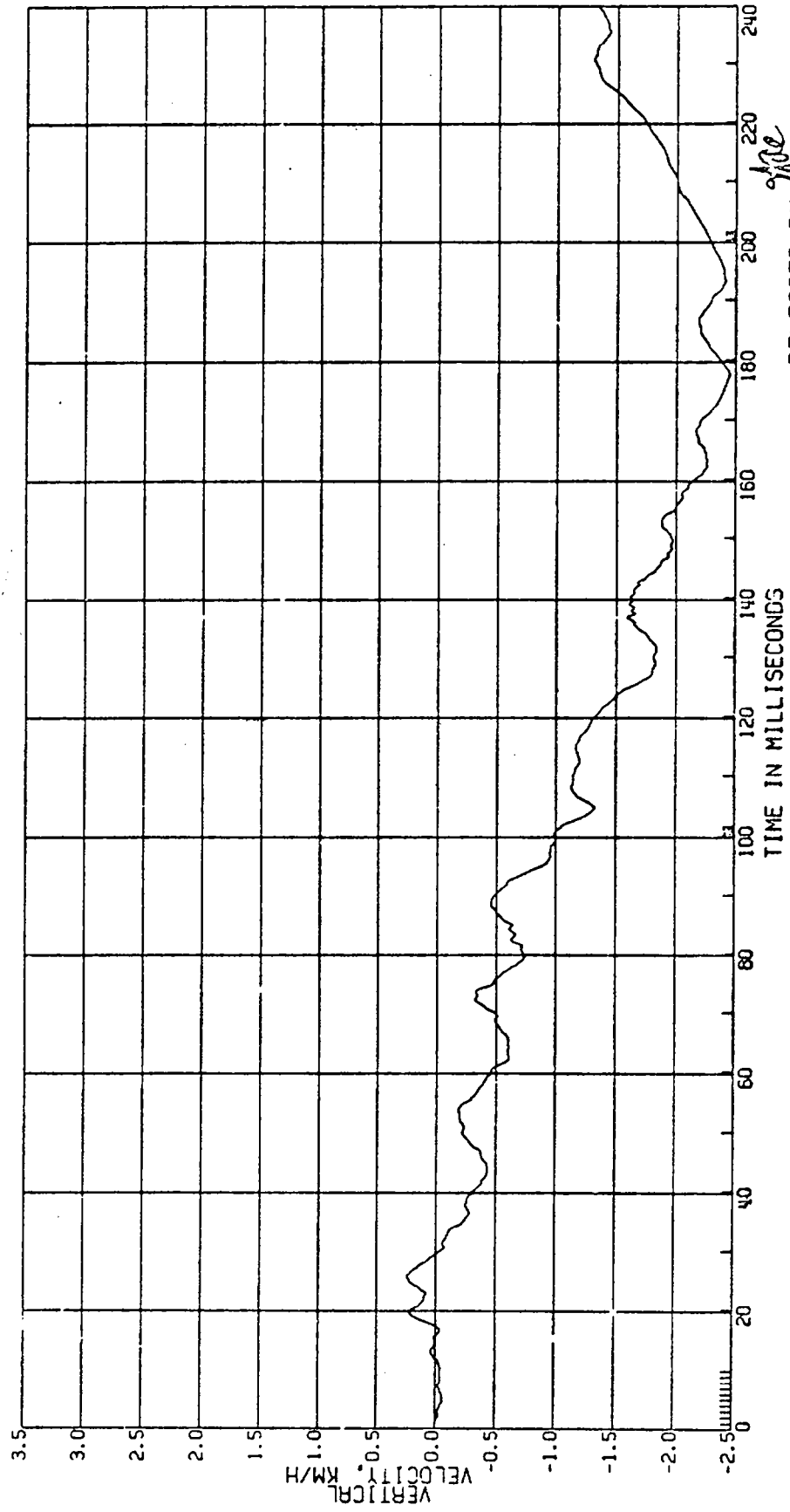
CG115A RIGHT SIDE IMP.60 DIFF
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180

MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE-99

COMPUTED MIDDLE OF BARRIER VELOCITY

TEST DATE: 12-19-84

(1ST INTEGRAL DR-SIDE ACCELERATION)



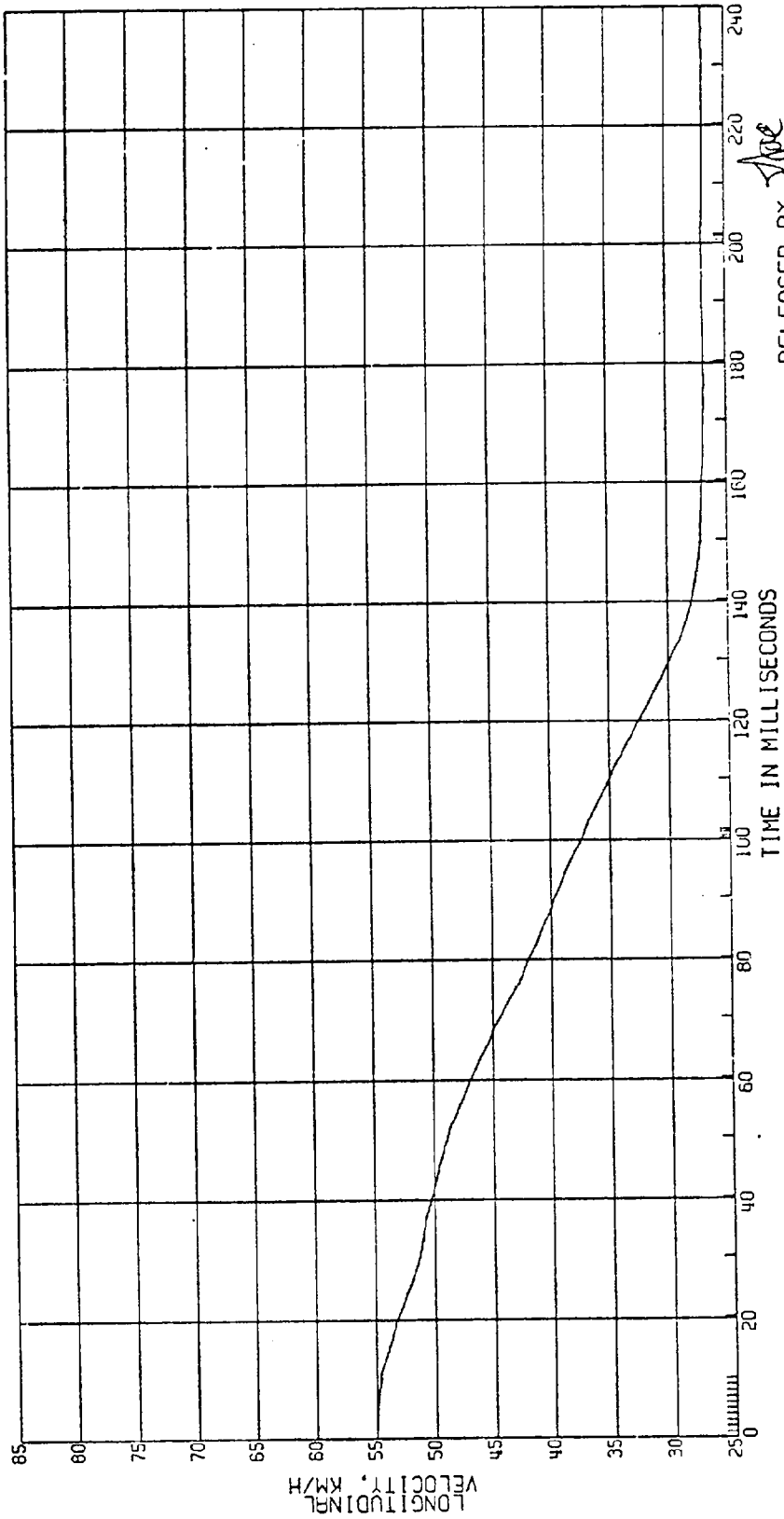
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47 PROCESSED 23 DE 84 12:41

LONGITUDINAL VELOCITY (KM/H) VS. TIME (MILLISECONDS)

3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180

COMPUTED MIDDLE OF BARRIER VELOCITY
(1ST INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84



RELEASED BY: JAE
32 PROCESSED 20 DE 84 12:37

LOLISH KUBMI SIDE IMP. BU DIFF
3865-848

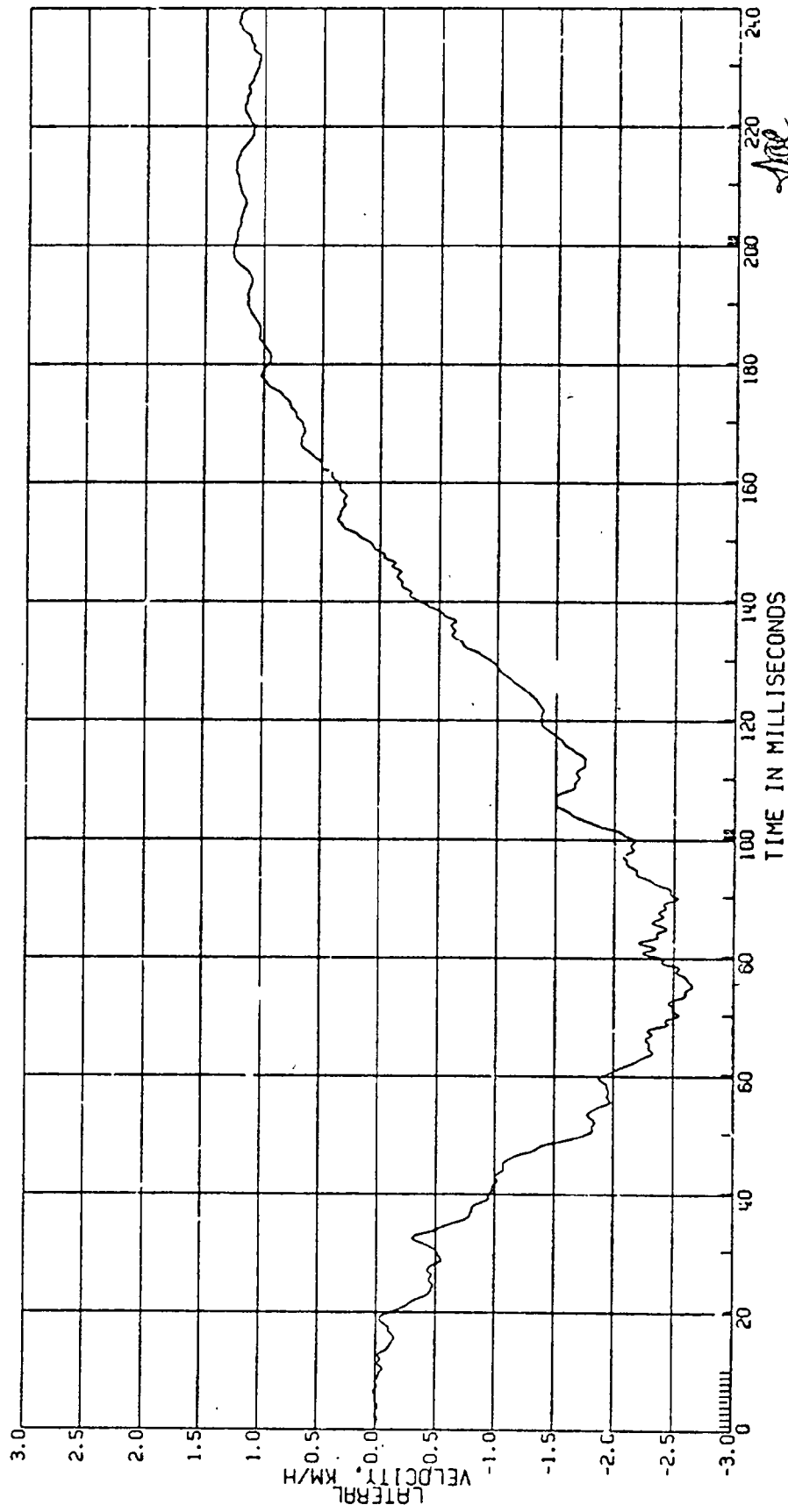
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180

MUVING NHISH BARR. 10 MUD. SMALL CAR 55.0KM/H FIGURE -101

COMPUTED MIDDLE OF BARRIER VELOCITY

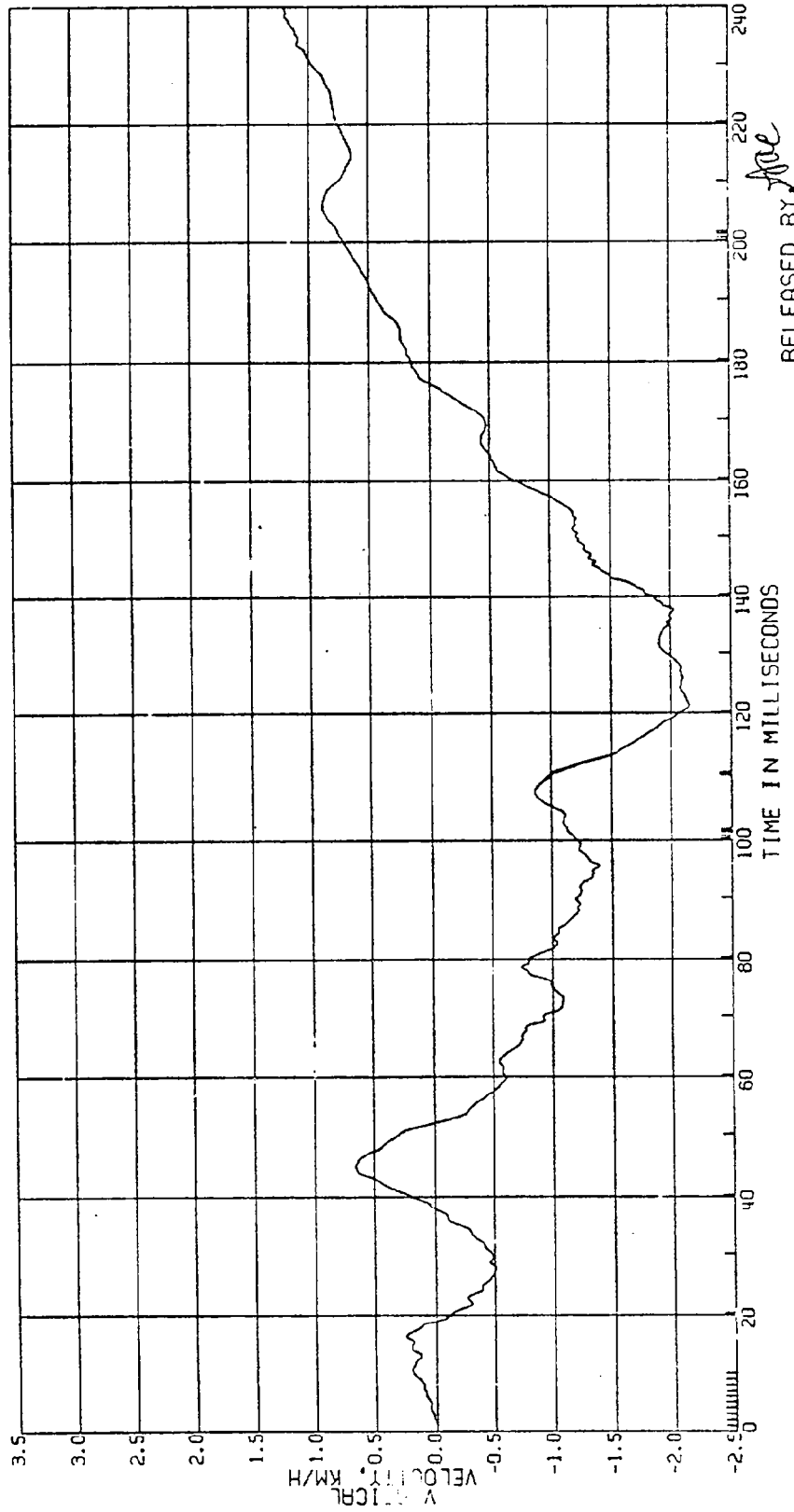
TEST DATE: 12-19-84

(1ST INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *AOE*
41 PROCESSED 20 DE 84 12:40

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE - 102
 3865-848
 F.B. NHTSA BARR. (STRIKING VEH)
 A-D DATA SAE CLASS 180
 COMPUTED MIDDLE OF BARRIER VELOCITY
 (1ST INTEGRAL PASS-SIDE ACCELERATION)
 TEST DATE: 12-19-84

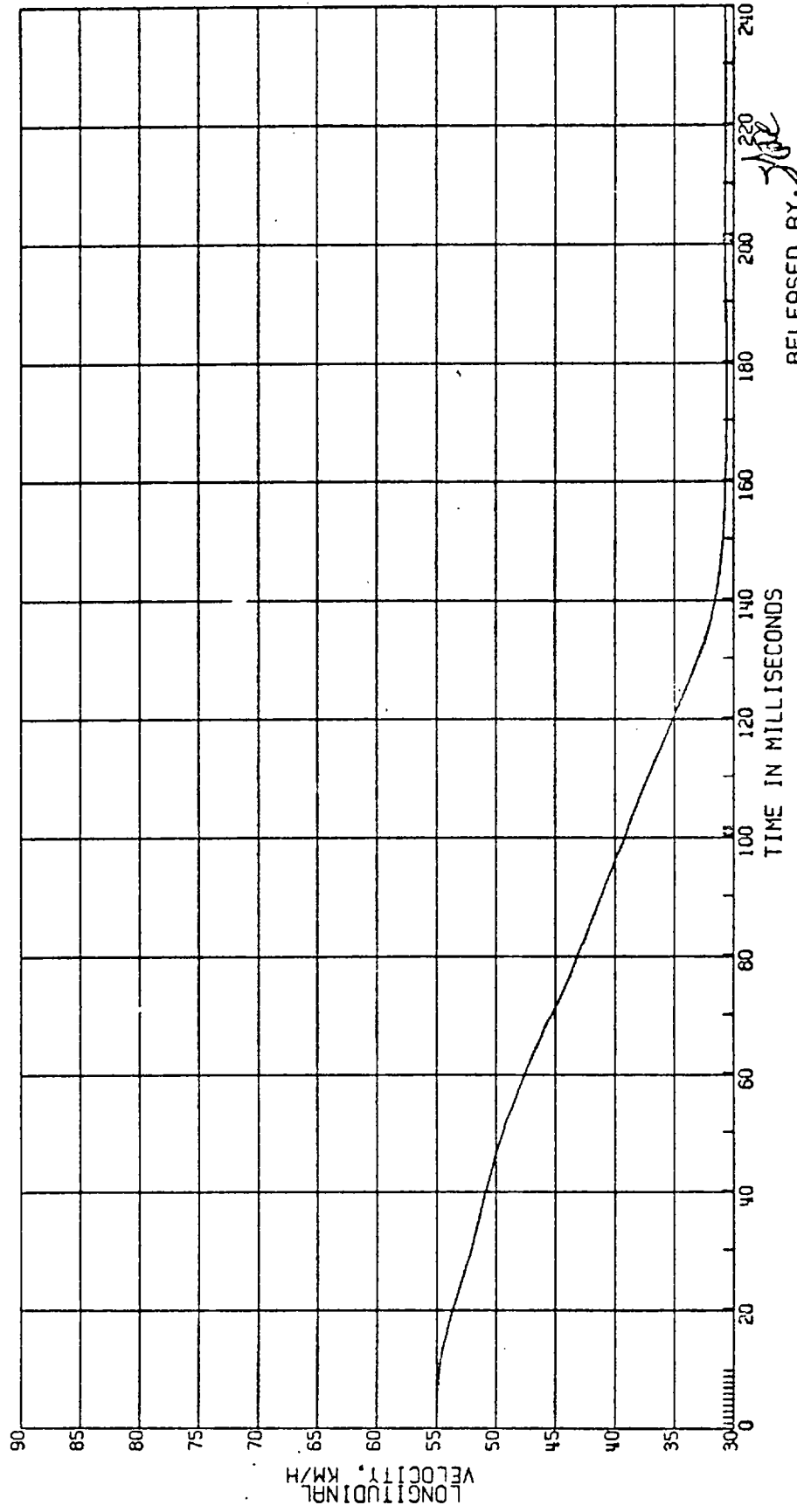


RELEASED BY: *hpc*
 50 MAR 1985 09 12:42

CG115A RIGHT SIDE IMP.60 DIFF
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180

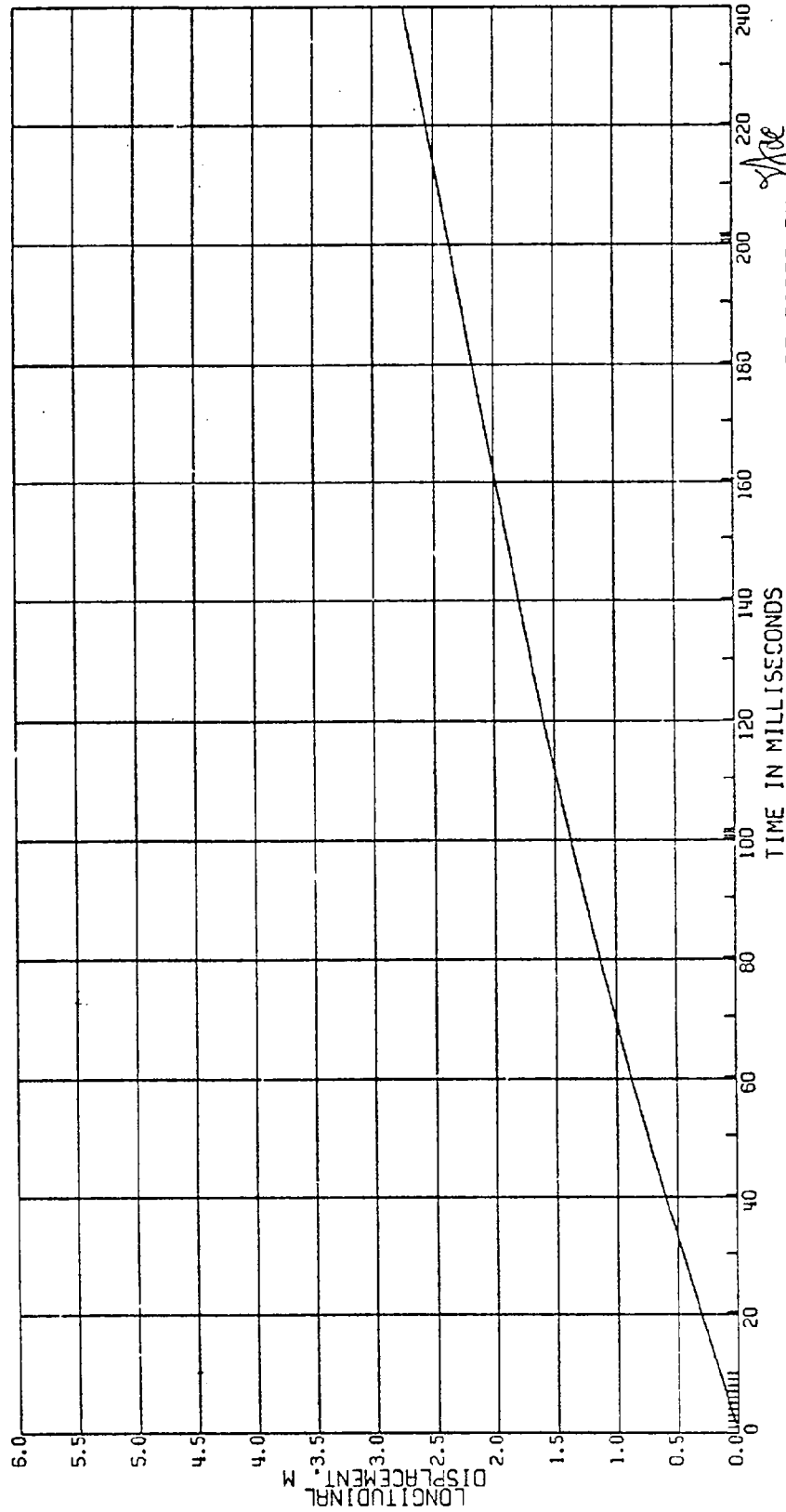
MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE - 103
COMPUTED MIDDLE OF BARRIER VELOCITY
(1ST INTEGRAL AVERAGED ACCELERATION)

TEST DATE: 12-19-84



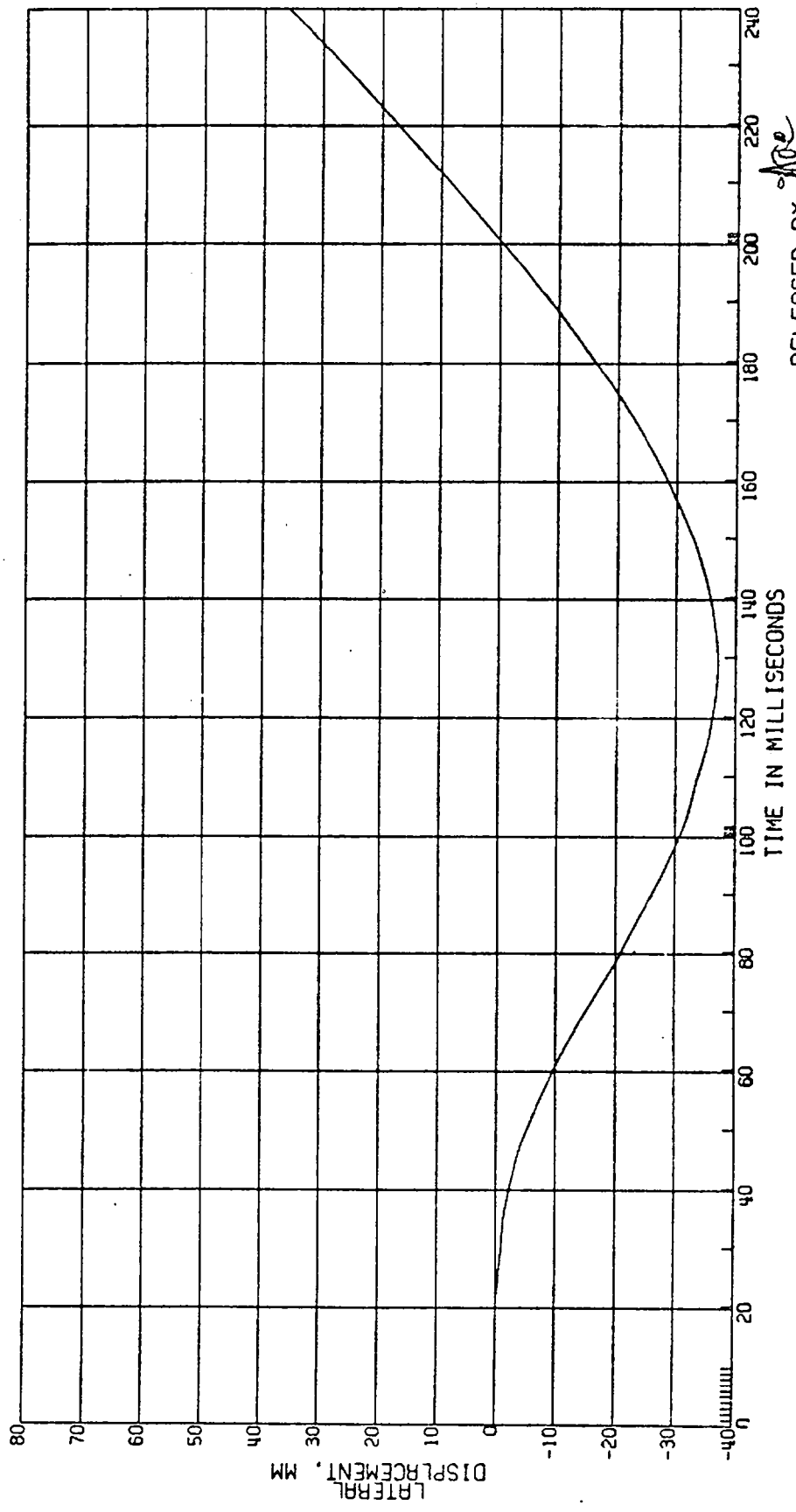
RELEASED BY: *[Signature]*
05 FEB 1985 09:00 AM 12:30

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -104
3865-848
F.B. NHTSA BARR. (STRIKING VEH) COMPUTED MIDDLE OF BARRIER DISPLACEMENT TEST DATE: 12-19-84
A-D DATA SAE CLASS 180 (2ND INTEGRAL DR-SIDE ACCELERATION)



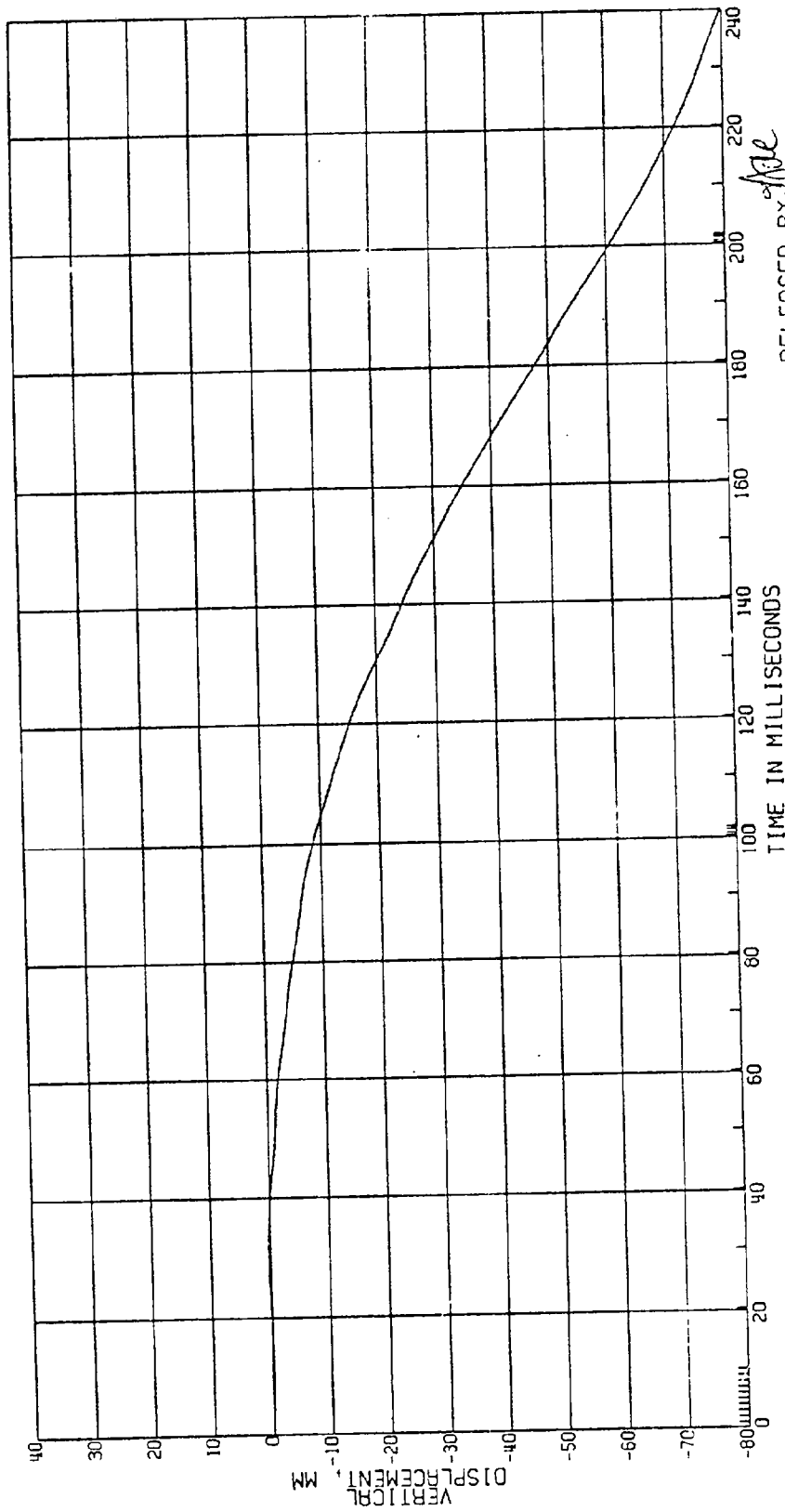
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30 PROCESSED 20 DE 84 12:37

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -105
 3865-848
 F.B. NHTSA BARR. (STRIKING VEH) COMPUTED MIDDLE OF BARRIER DISPLACEMENT TEST DATE: 12-19-84
 A-D DATA SAE CLASS 180 (2ND INTEGRAL DR-SIDE ACCELERATION)



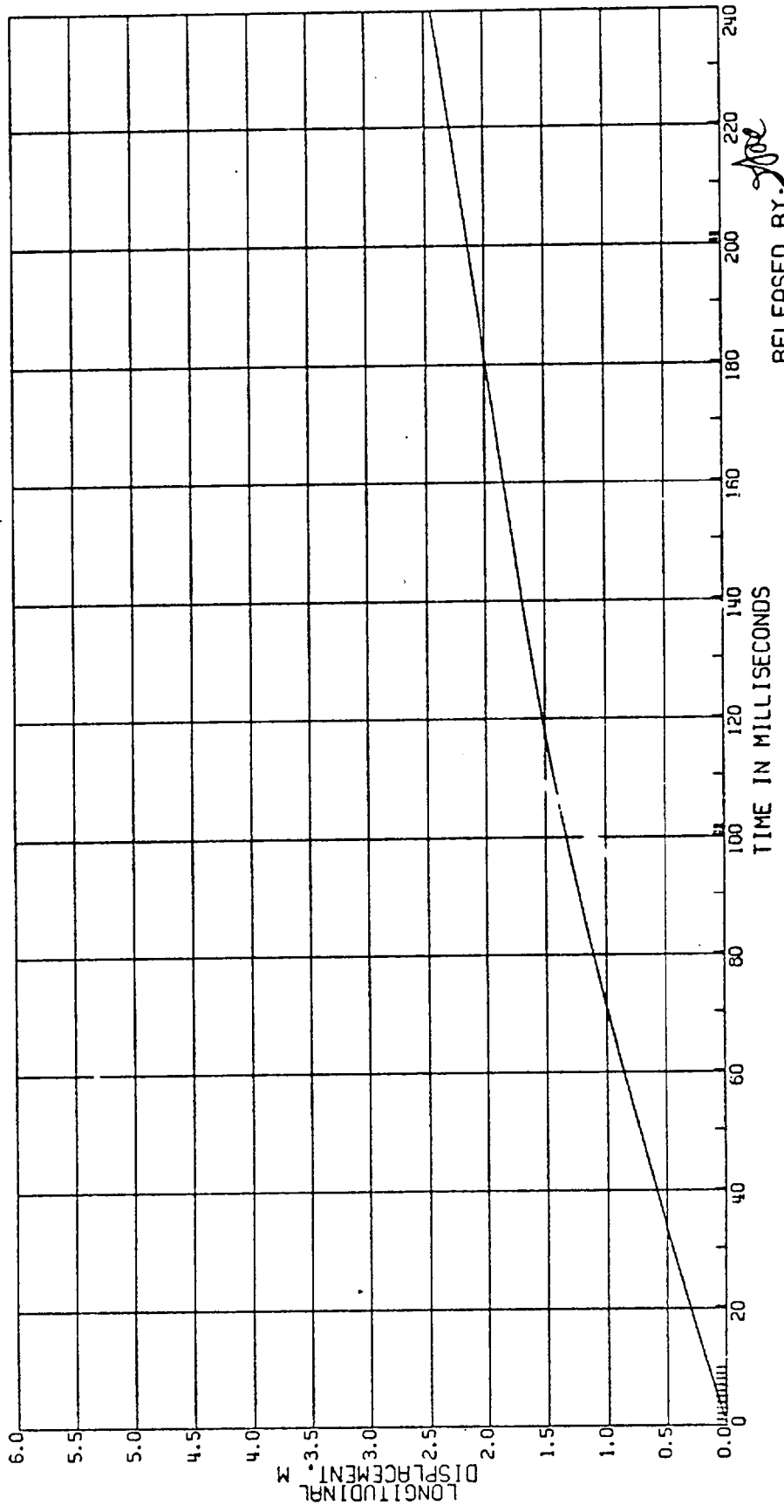
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 39 PROCESSED 20 DE 84 12:39

CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.TC MOD.SMALL CAR 55.0KM/H FIGURE - 106
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLIP 180
COMPUTED MIDDLE OF BARRIER DISPLACEMENT TEST DATE:12-19-84
(2ND INTEGRAL DR-SIDE ACCELERATION)



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418 PROCESSED 20 DE 84 12:41

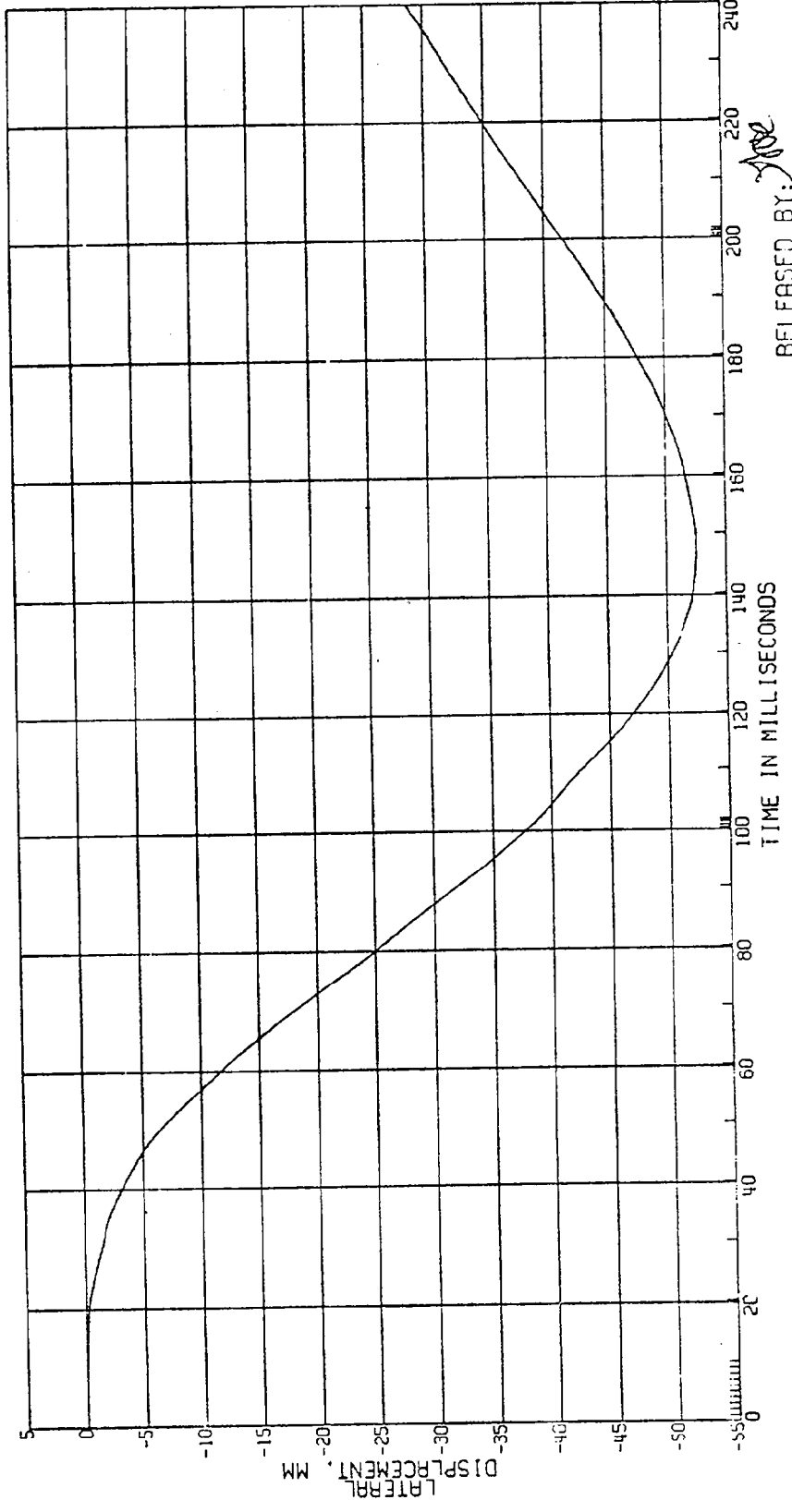
CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR.TO MOD.SMALL CAR 55.0KM/H FIGURE -107
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180
COMPUTED MIDDLE OF BARRIER DISPLACEMENT
(2ND INTEGRAL PASS-SIDE ACCELERATION) TEST DATE:12-19-84



RELEASED BY: *Joe*
33 PROCESSED 20 DE 84 12:38

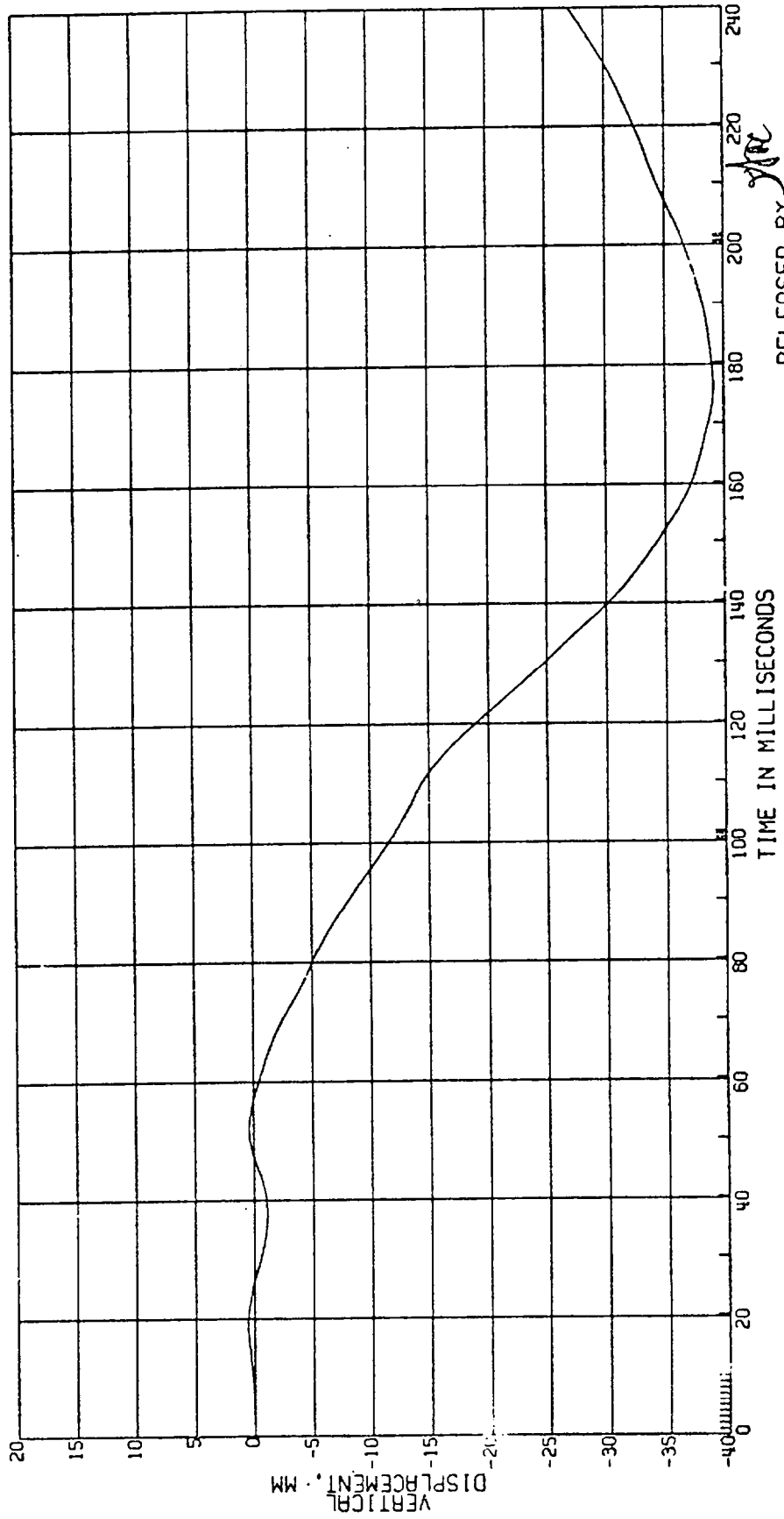
CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE - 108
3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180
COMPUTED MIDDLE OF BARRIER DISPLACEMENT
(2ND INTEGRAL PASS-SIDE ACCELERATION)

TEST DATE: 12-19-84



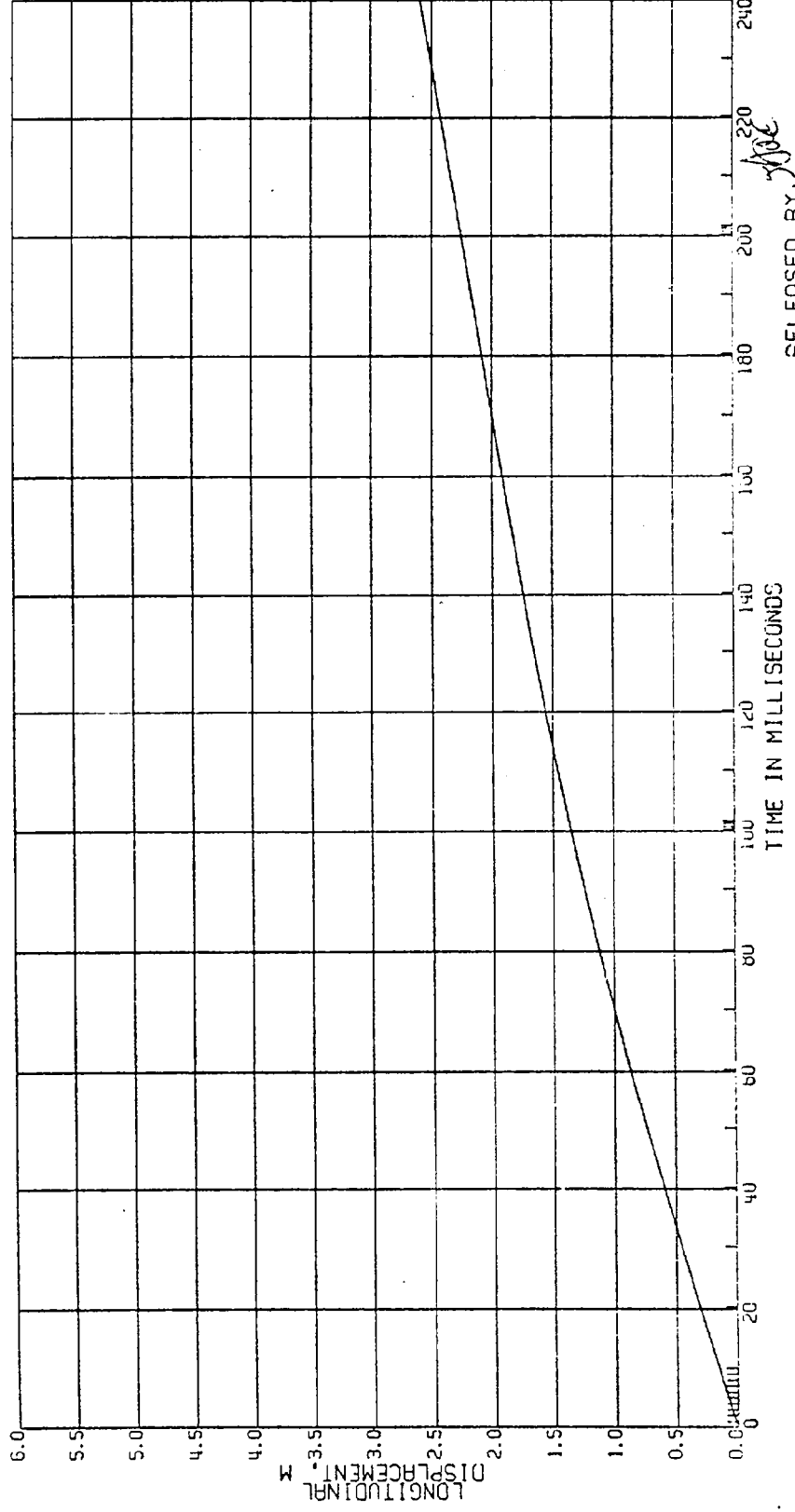
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CG115A RIGHT SIDE IMP.60 DIFF MOVING NHTSA BARR. TO MOD. SMALL CAR 55.0KM/H FIGURE -109
3865-848
F.B. NHTSA BARR. (STRIKING VEH) COMPUTED MIDDLE OF BARRIER DISPLACEMENT TEST DATE:12-19-84
A-D DATA SAE CLASS 180 (2ND INTEGRAL PASS-SIDE ACCELERATION)



RELEASED BY: *ARC*
51 PROCESSED 20 DE 84 12:42

3865-848
F.B. NHTSA BARR. (STRIKING VEH)
A-D DATA SAE CLASS 180
COMPUTED MIDDLE OF BARRIER DISPLACEMENT
(2ND INTEGRAL AVERAGED ACCELERATION)
TEST DATE: 12-19-84



RELEASED BY: *ABE*
36 PROCESSED 20 DE 84 12:38

C6115 AT SIDE IMPACT 60 DIFF MOVING NHTSA BARR TO MOD SMALL CAR 55.0KM/H FIGURE - 111

2005-040

FISHER BODY

FILM DATA

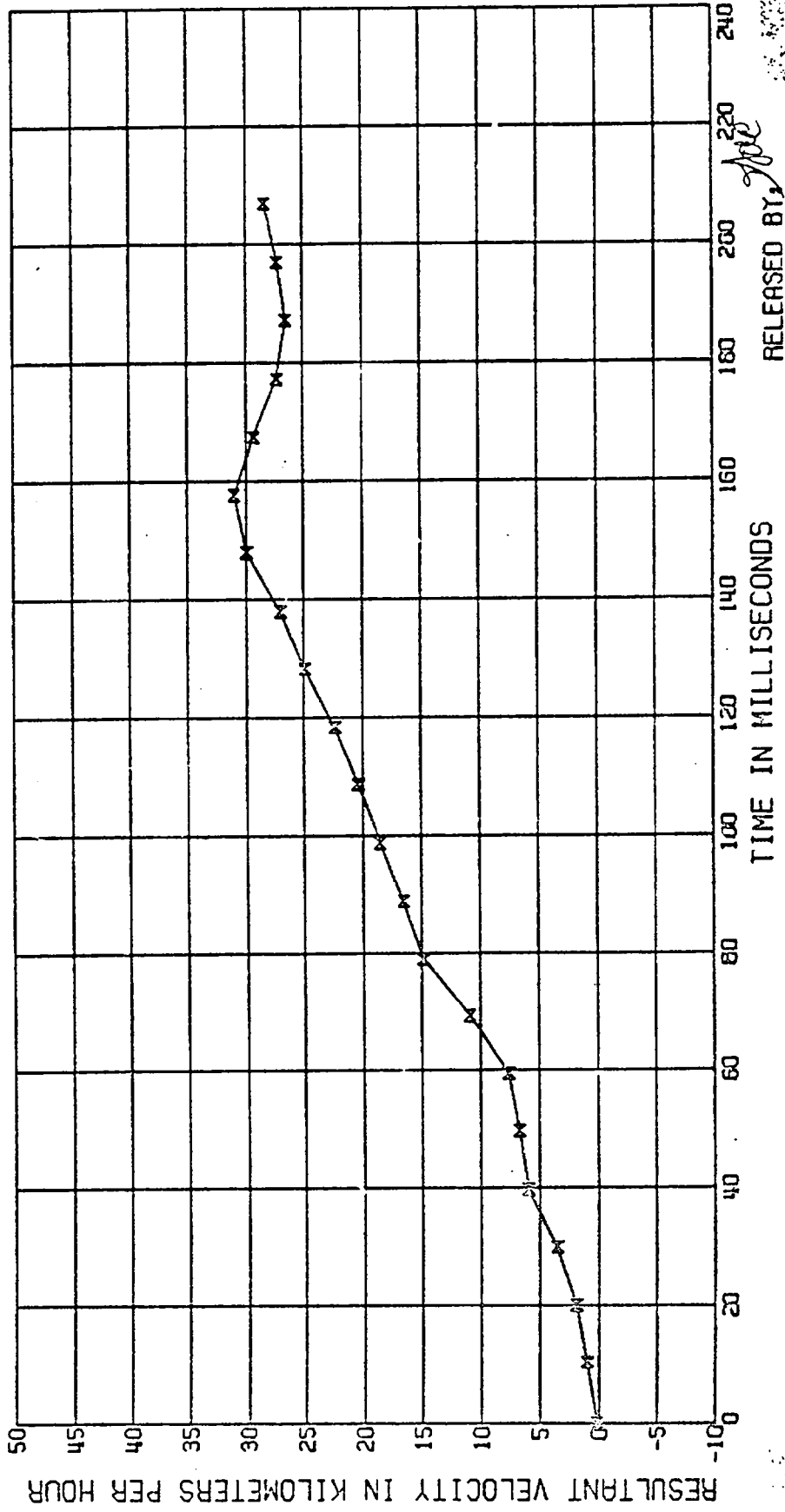
CC454 NHTSA

OVERHEAD ANALYSIS

TEST DATE: 12-19-84

VELOCITY CALCULATED FROM SMOOTHED X-Z RESULTANT DISP. DATA

STRUCK VEH TARGET RELATIVE TO GROUND REFERENCE



RELEASED BY: JPL
11 PROCESSED 4 JAN 85 00:17

CG115 AT SIDE IMPACT 60 DIFF MOVING NHTSA BARR TO MOD SMALL CAR 55.0KM/H FIGURE-112

3905-848

FISHER BODY

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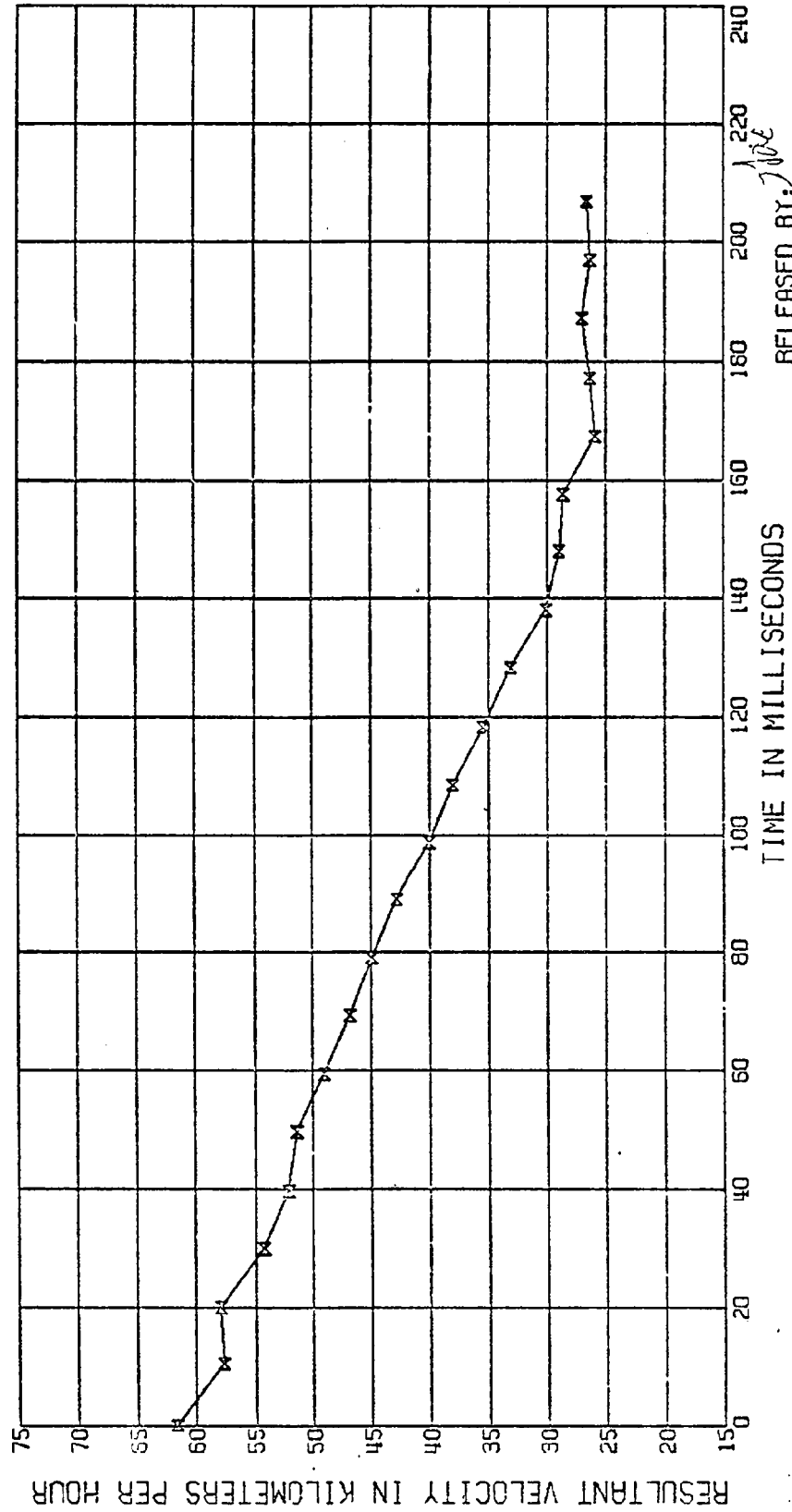
CC454 NHTSA

OVERHEAD ANALYSIS

TEST DATE: 12-19-84

VELOCITY CALCULATED FROM SMOOTHED X-Z RESULTANT DISP. DATA

STRIKING VEH TARGET RELATIVE TO GROUND REFERENCE



RELEASED BY: JDE
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C6115 AT SIDE IMPACT 60 DIFF MOVING NHTSA BARR TO MOD SMALL CAR 55.0KM/H FIGURE - 113

3865-848

FISHER BODY

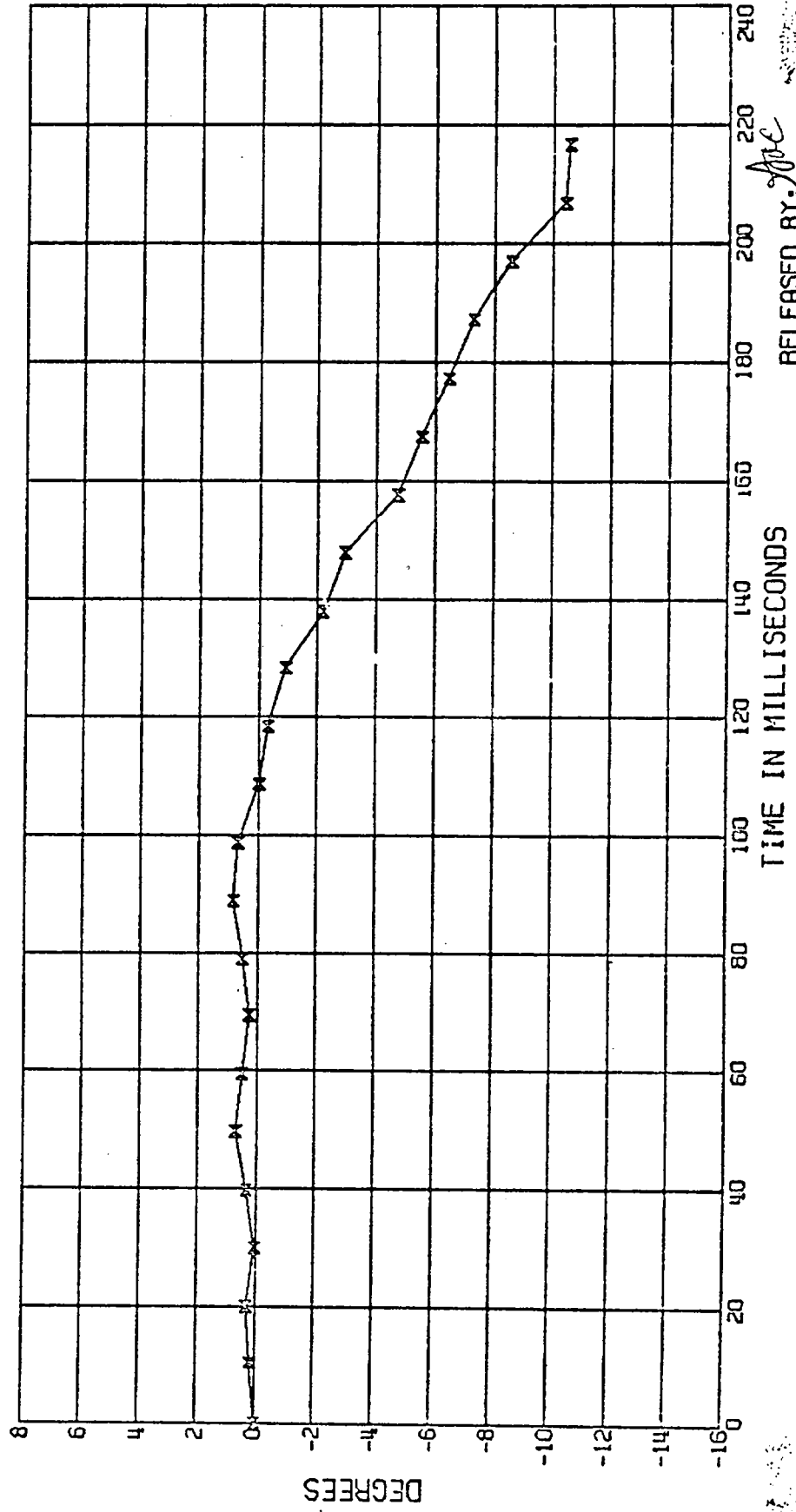
CC454 NHTSA

FILM DATA

OVERHEAD ANALYSIS

TEST DATE: 12-19-84

STRUCK VEH YAW RELATIVE TO GROUND REFERENCE



RELEASED BY: *JPC*
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CG115 AT SIDE IMPACT 60 DIFF MOVING NHTSA BARR TO MOD SMALL CAR 55.0KM/H FIGURE - 114

3865-848

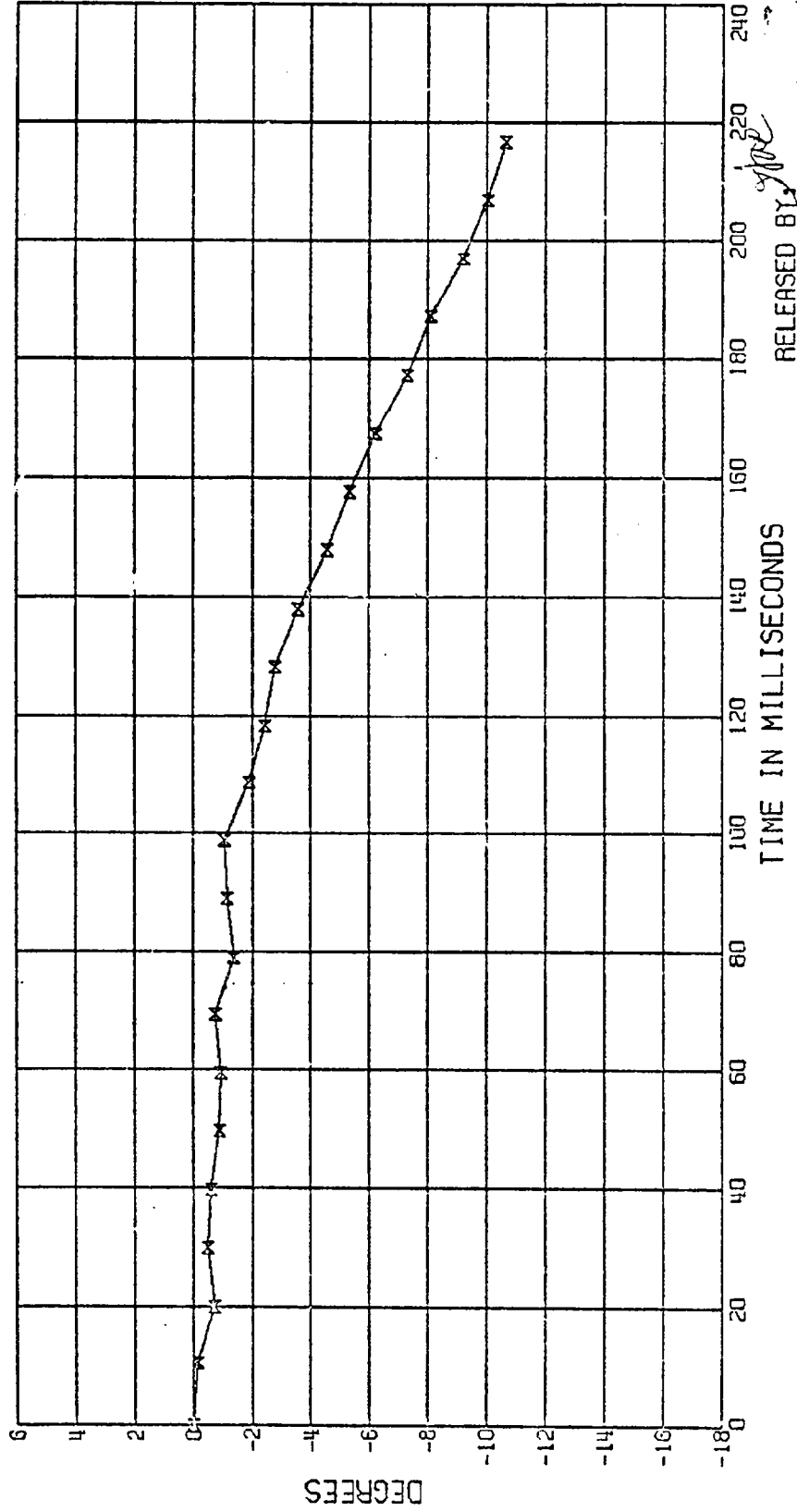
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FILM DATA

OVERHEAD ANALYSIS

TEST DATE: 12-19-84

STRIKING VEH YAW RELATIVE TO GROUND: REFERENCE



RELEASED BY: *MR*
13 PROCESSED 4 .A 05 08:19

CG115 AT SIDE IMPACT 60 DIFF MOVING NHTSA BARR TO MOD SMALL CAR 55.0KM/H FIGURE -115

3205-848

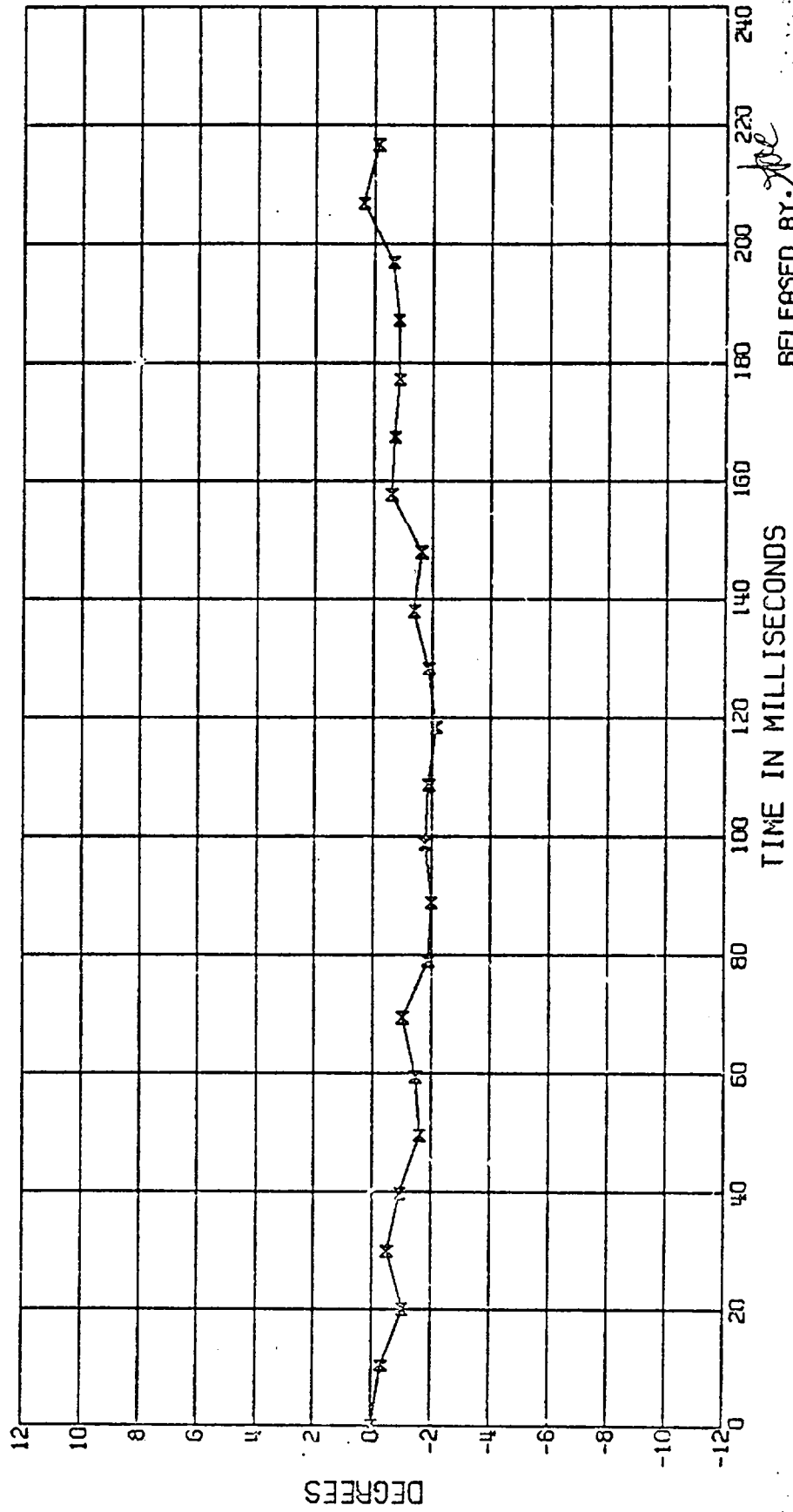
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FILM DATA

OVERHEAD ANALYSIS

TEST DATE: 12-19-84

STRIKING VEH YAW RELATIVE TO STRUCK VEH YAW



RELEASED BY: JPL
17 PROCESSED 4 APR 05 08:21

CG115 RT SIDE IMPACT 60 DIFF MOVING NHTSA BARR TO MOD SMALL CAR 55.0KM/H FIGURE - 116

3865-848

FISHER BODY

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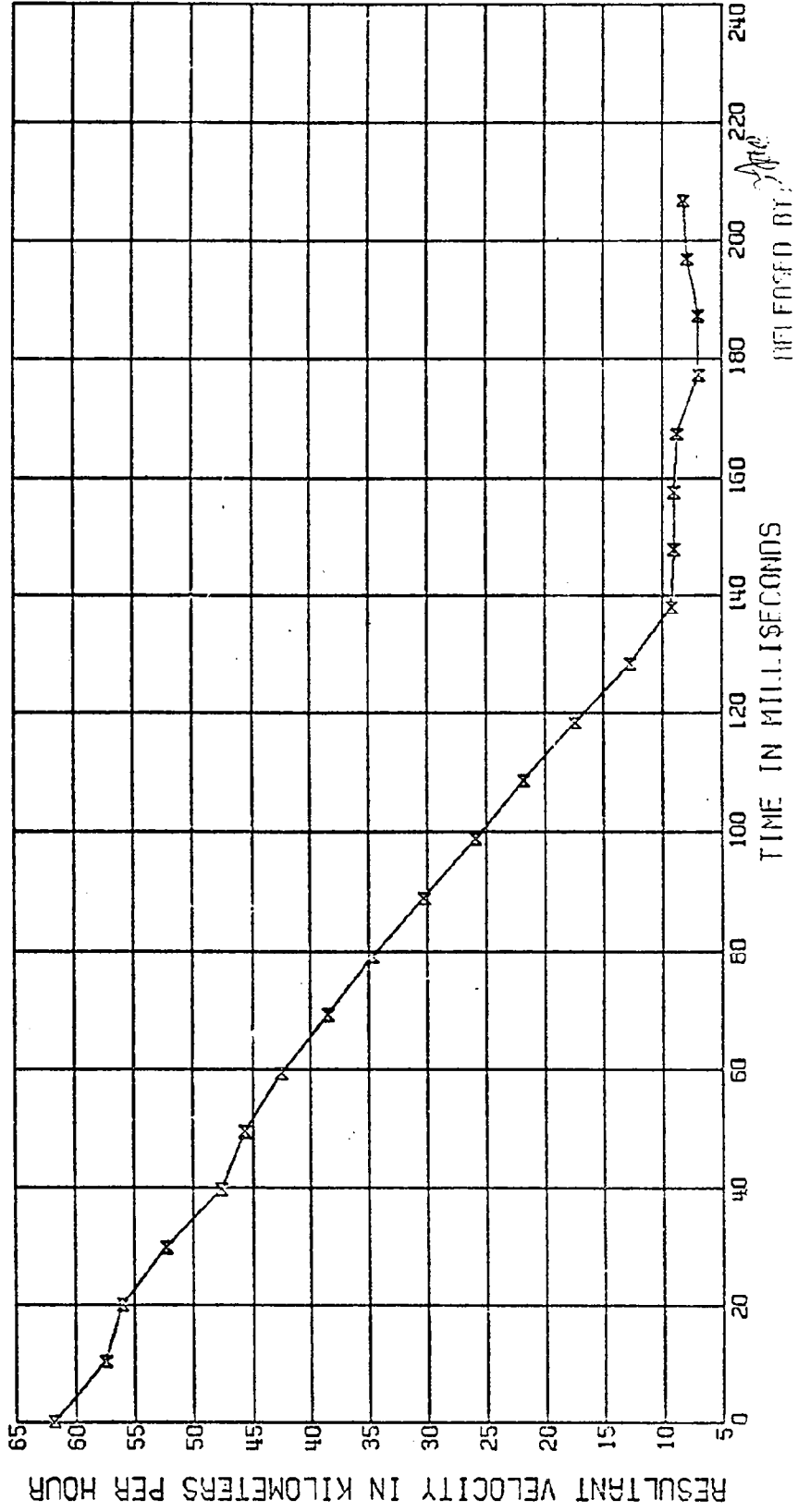
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OVERHEAD ANALYSIS

TEST DATE: 12-19-84

VELOCITY CALCULATED FROM SMOOTHED X-Z RESULTANT DISP. DATA

STRIKING VEH TARGET RELATIVE TO STRUCK VEH TARGET



REFUSED BY

APR

CG115 AT SIDE IMPACT 60 DIFF MOVING NHTSA BARR TO MOD SMALL CAR 55.0KM/H FIGURE - 117

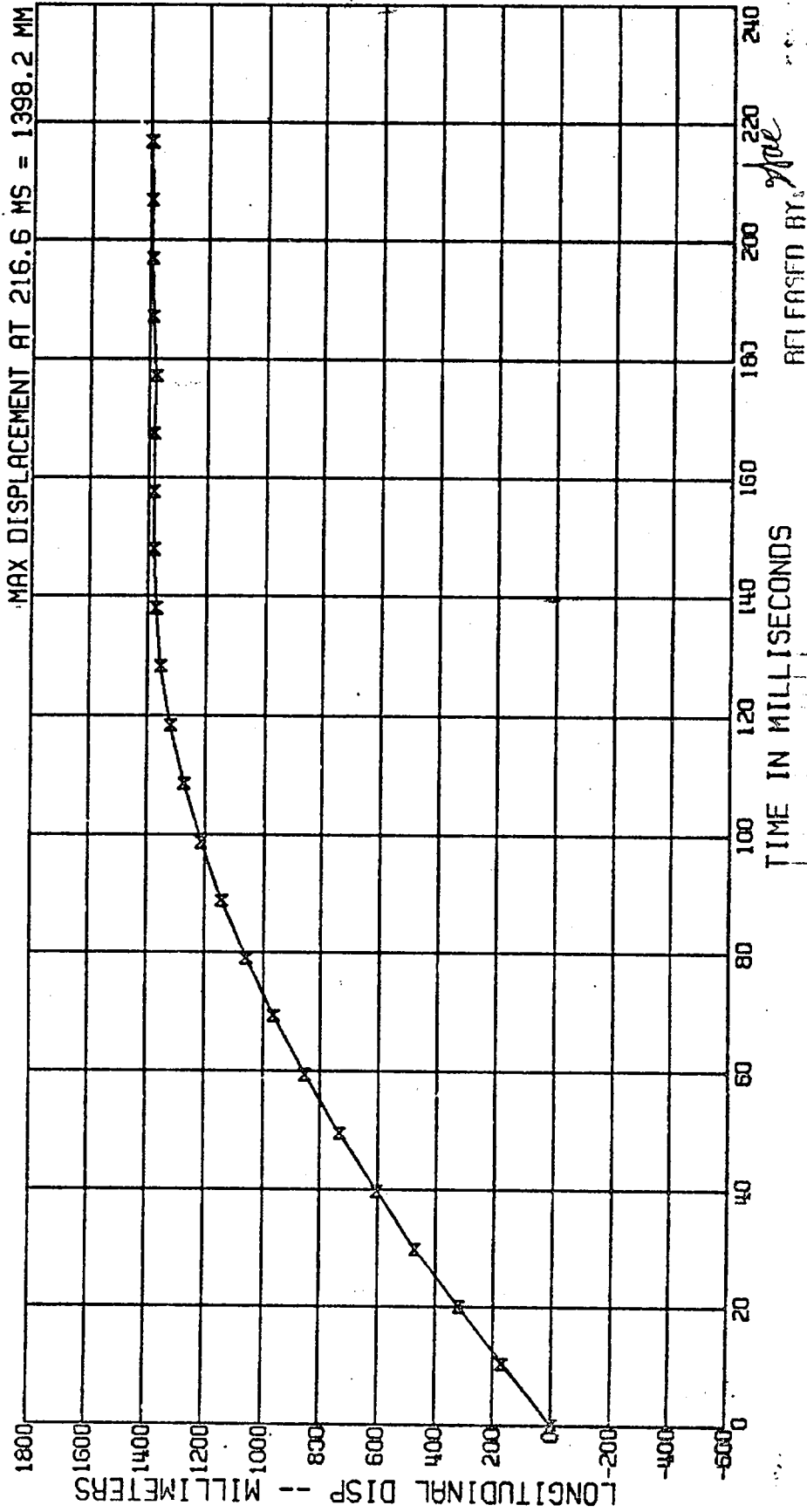
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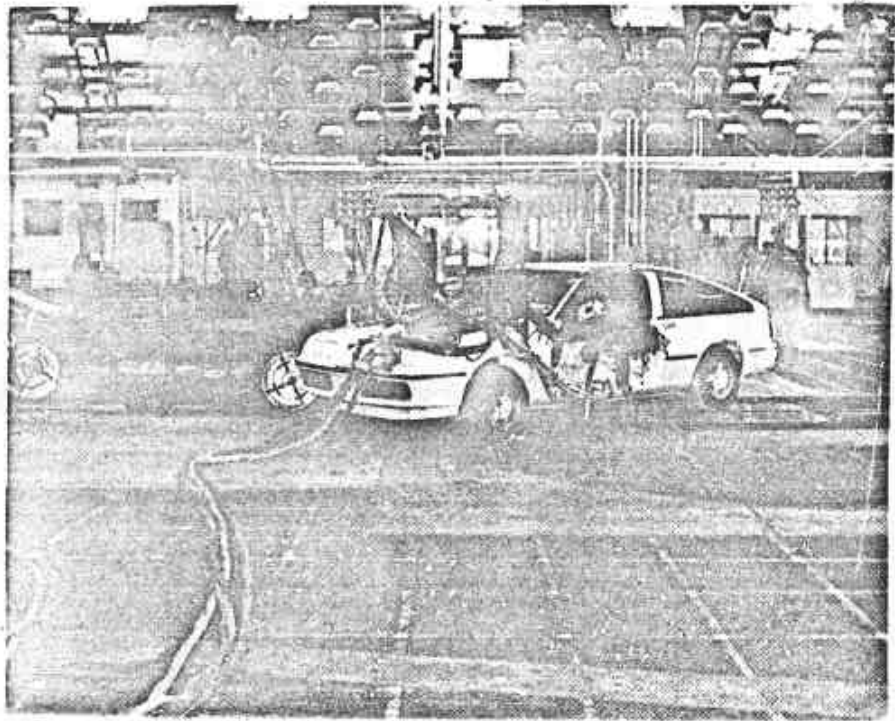
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OVERHEAD ANALYSIS

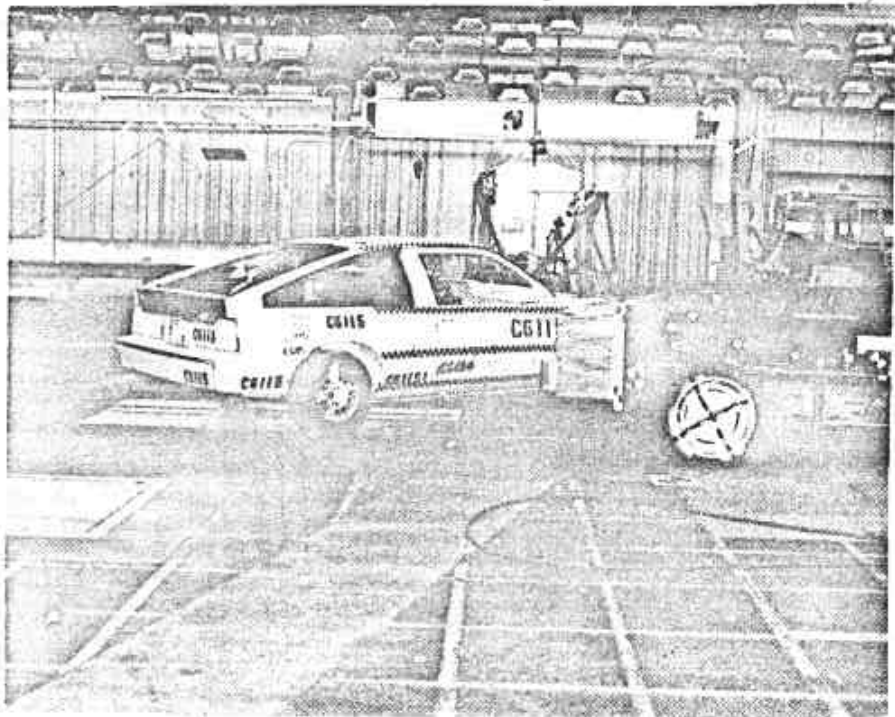
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STRIKING VEH TARGET RELATIVE TO STRUCK VEH TARGET



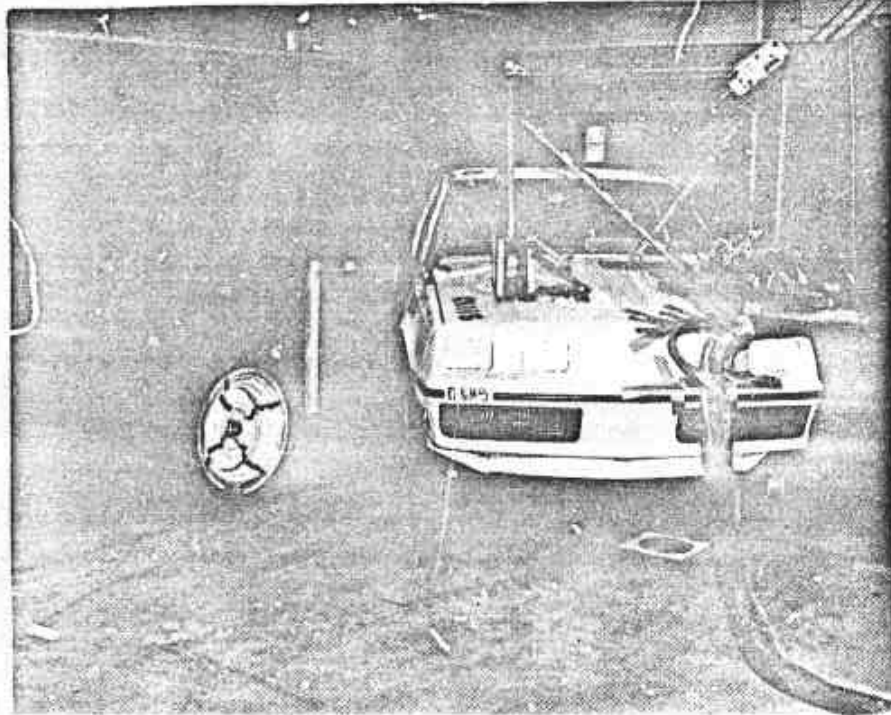


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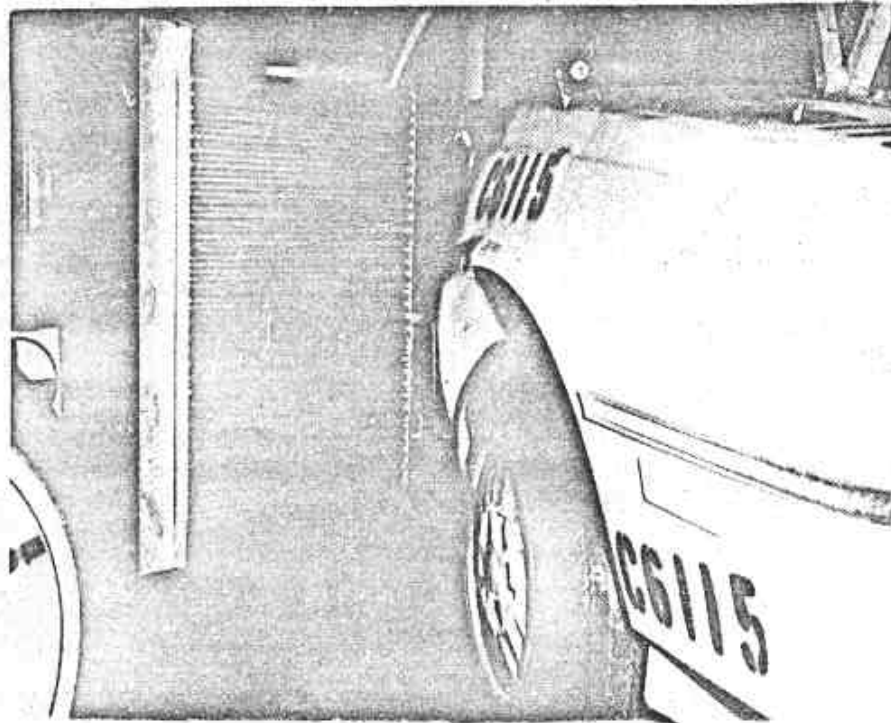


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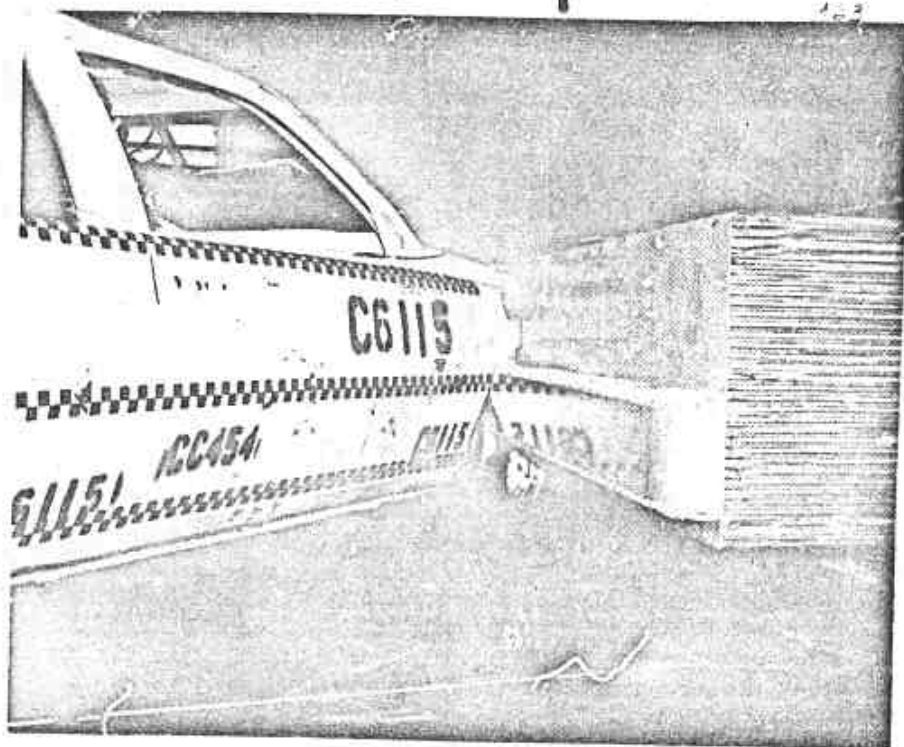
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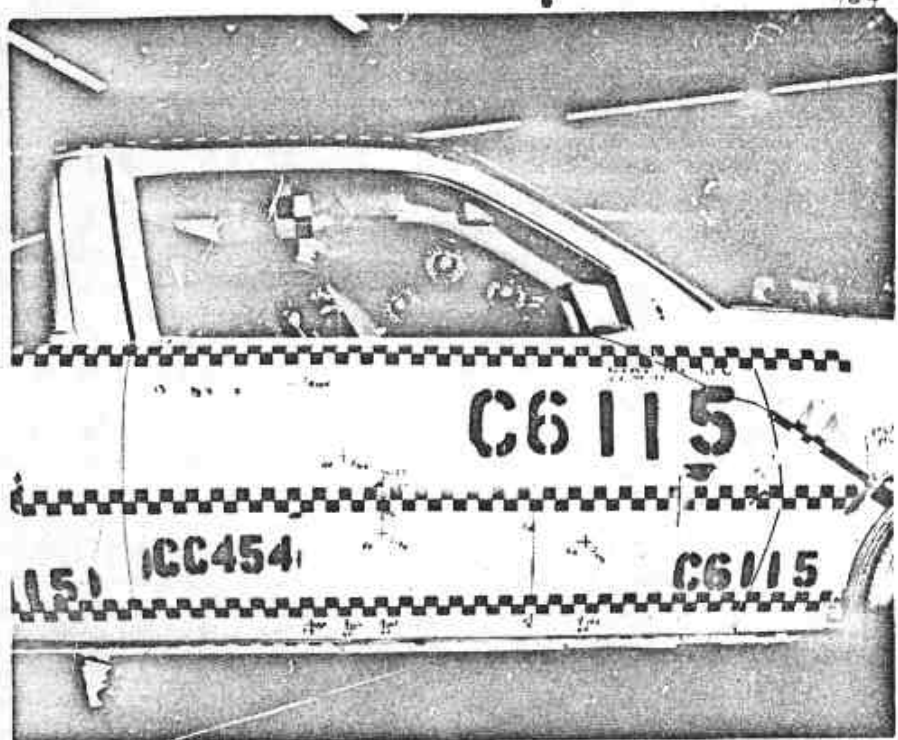


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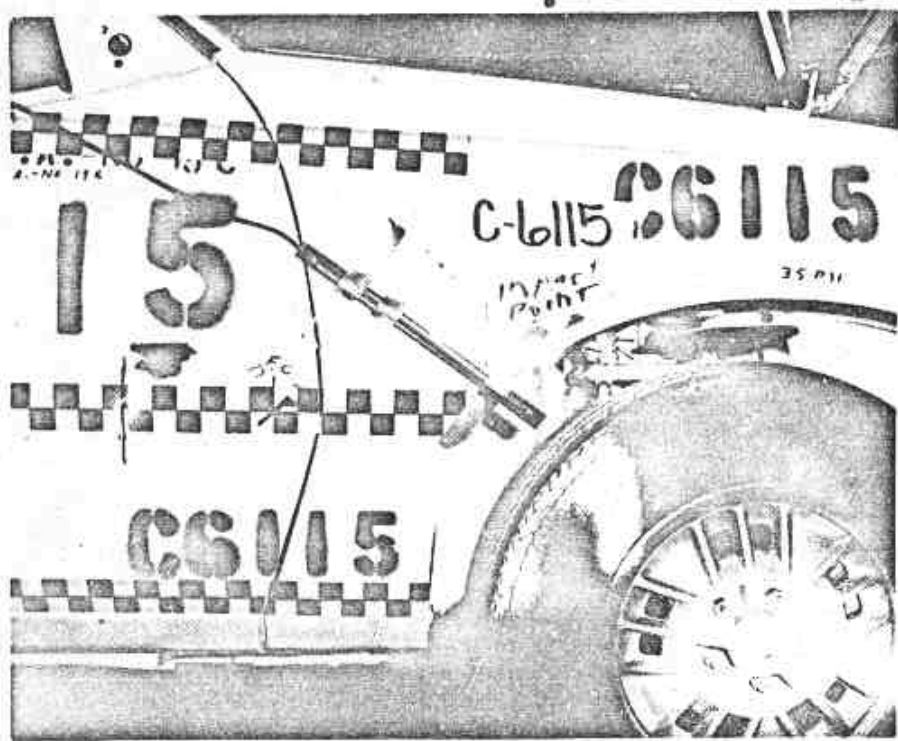
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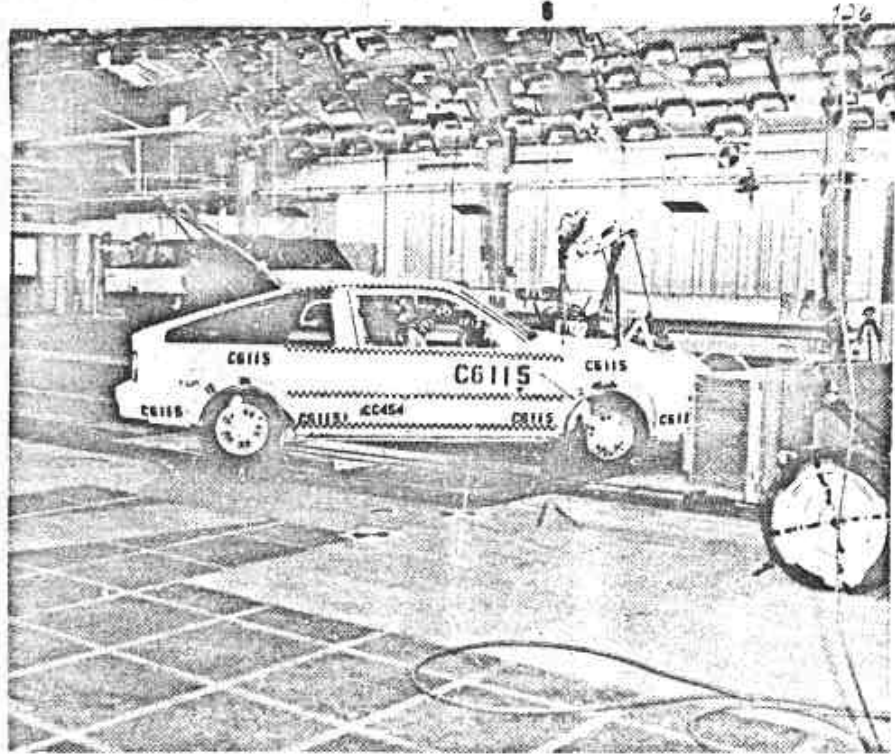


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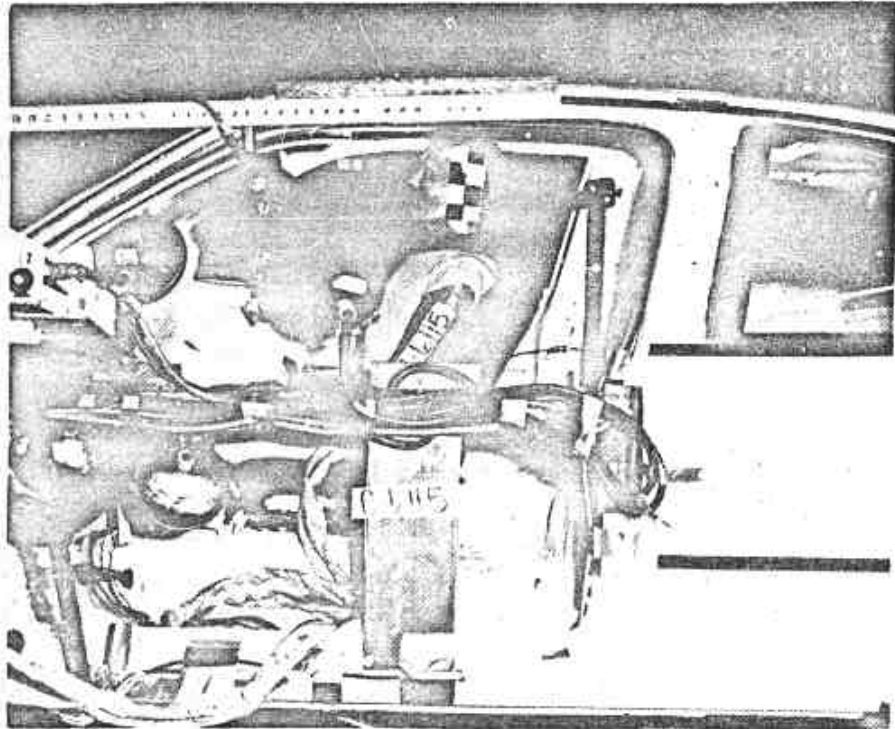
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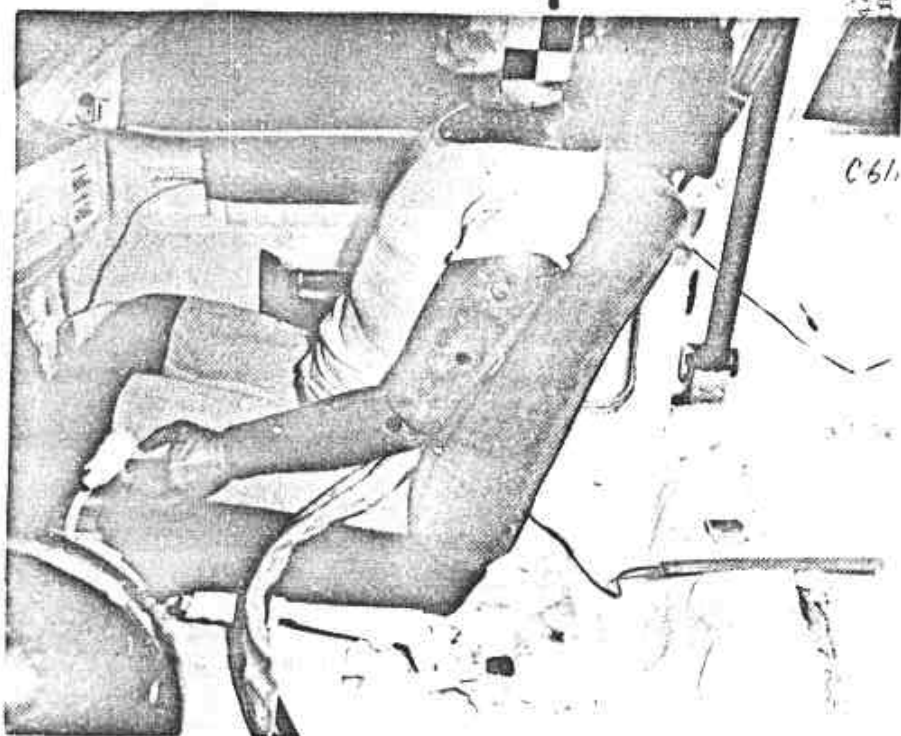
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119/27	

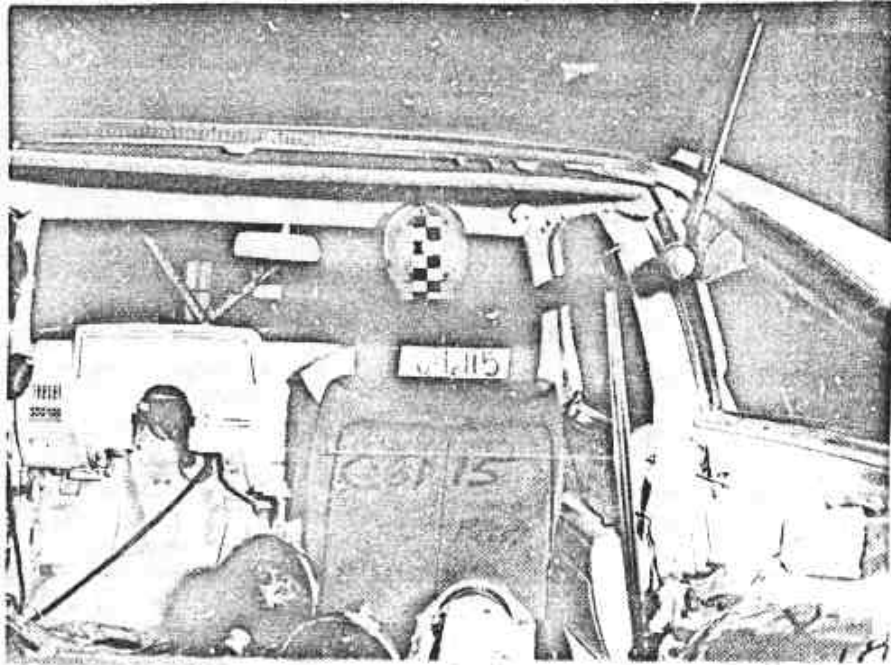


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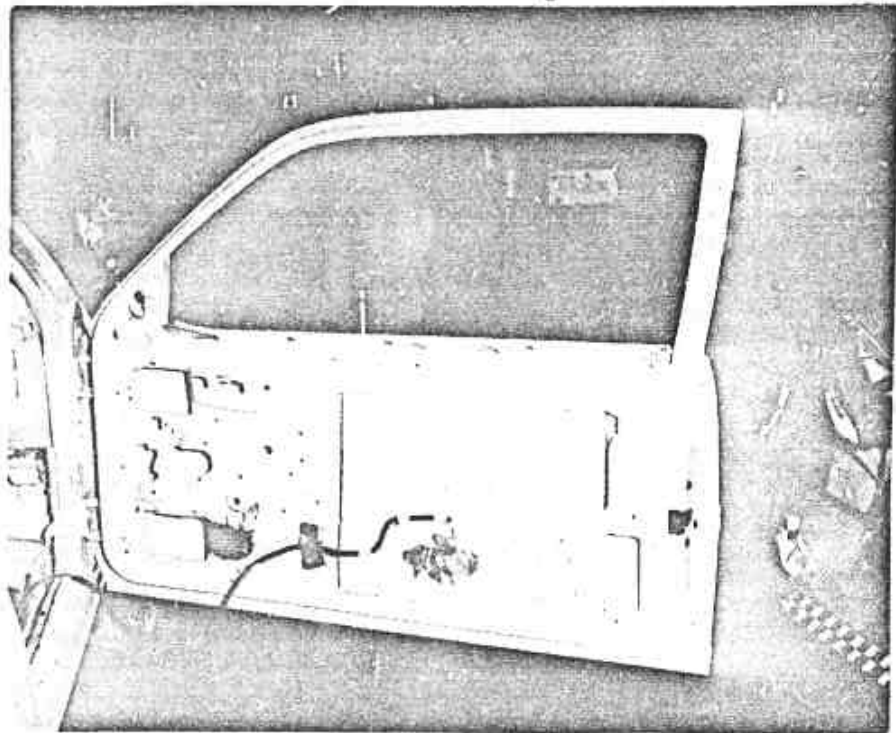


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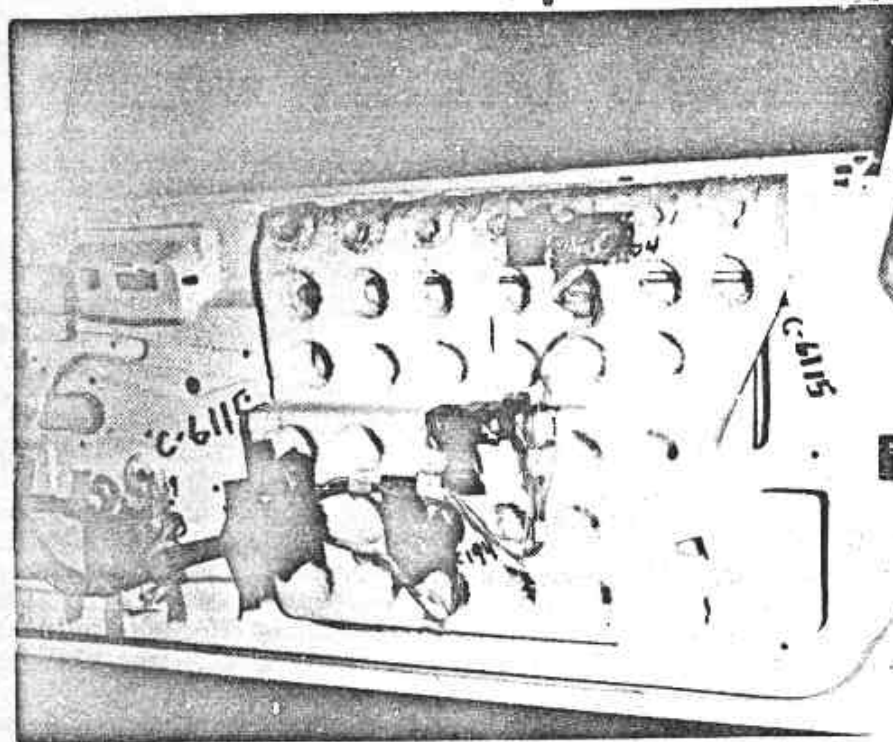
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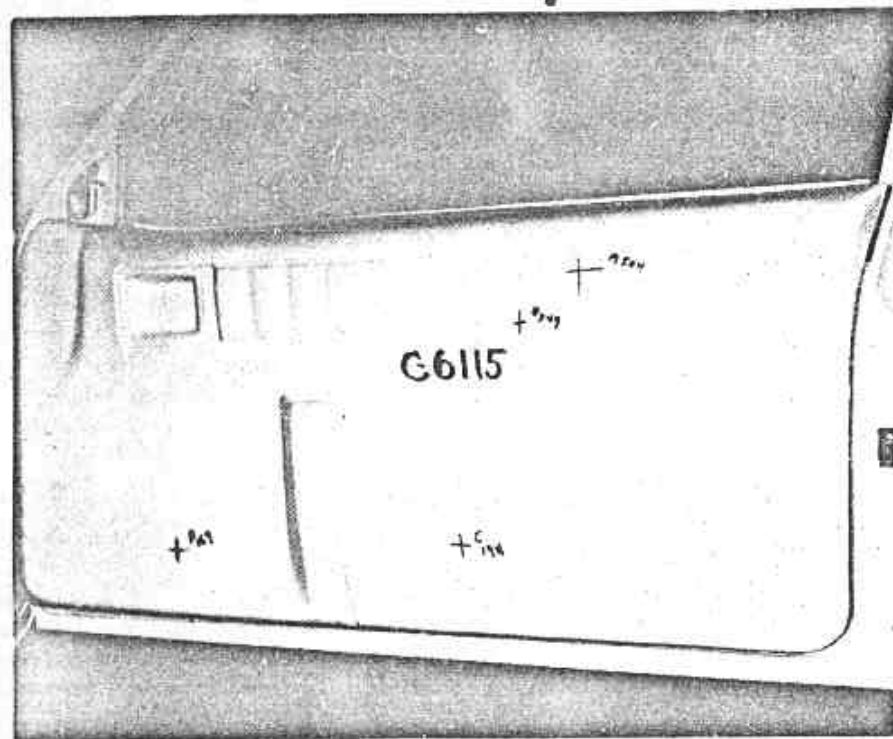
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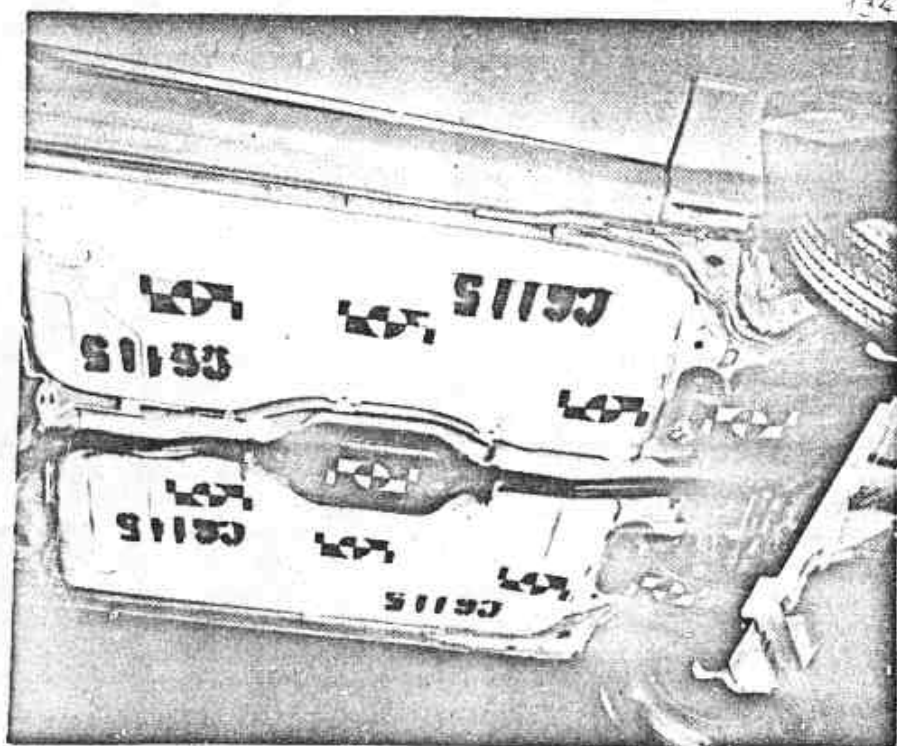


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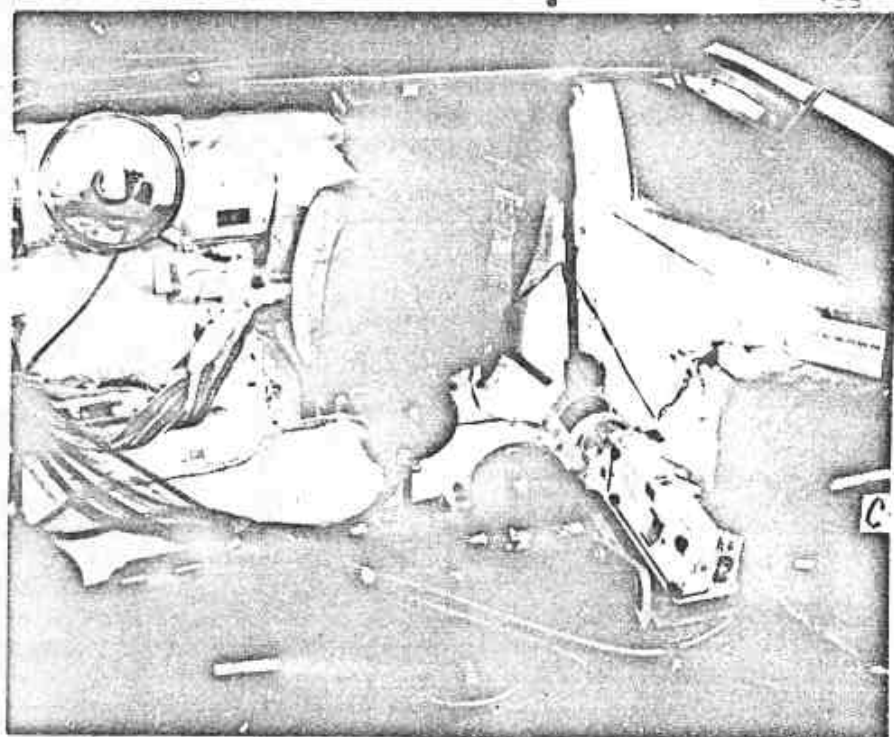
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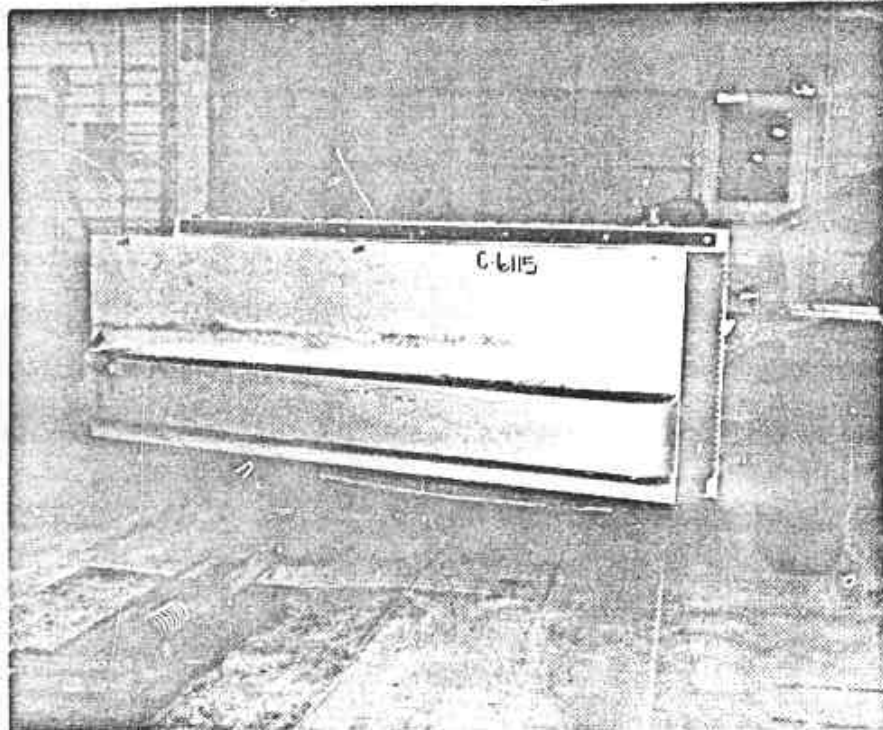
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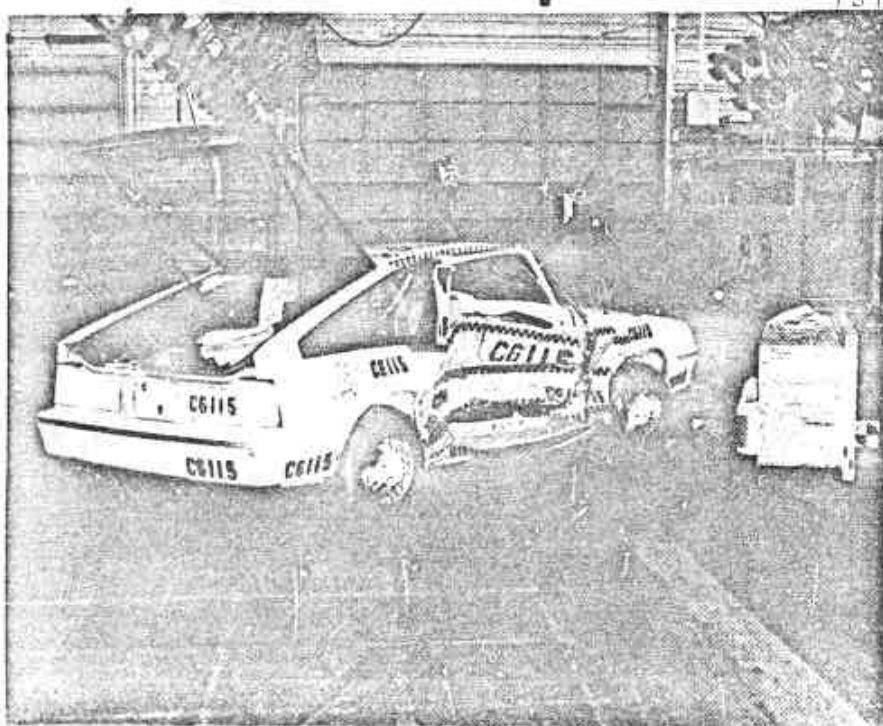
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137



nt	Fig. No.
	9/37

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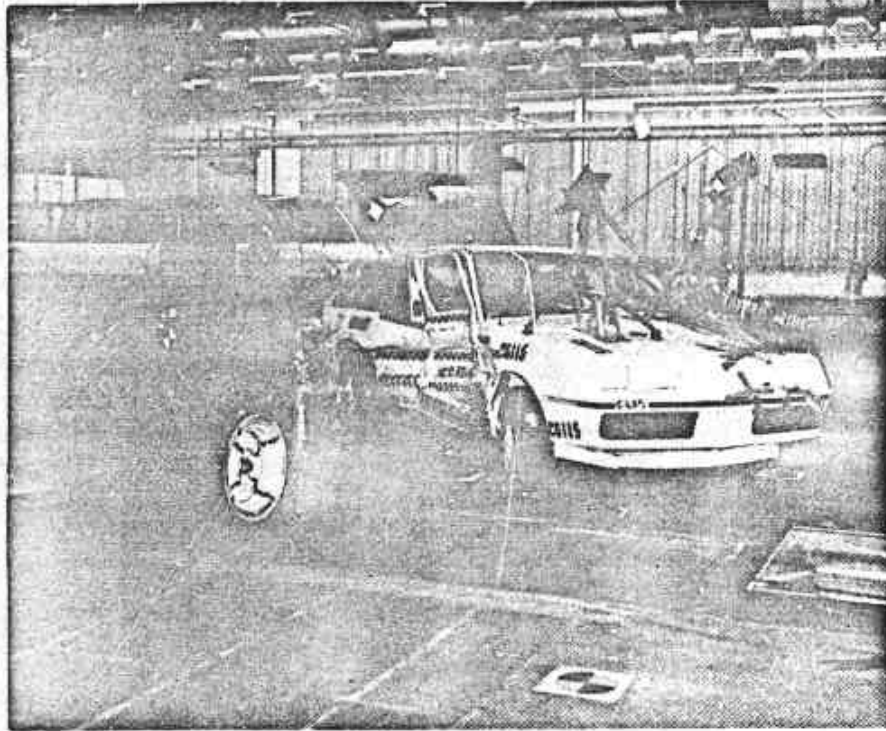


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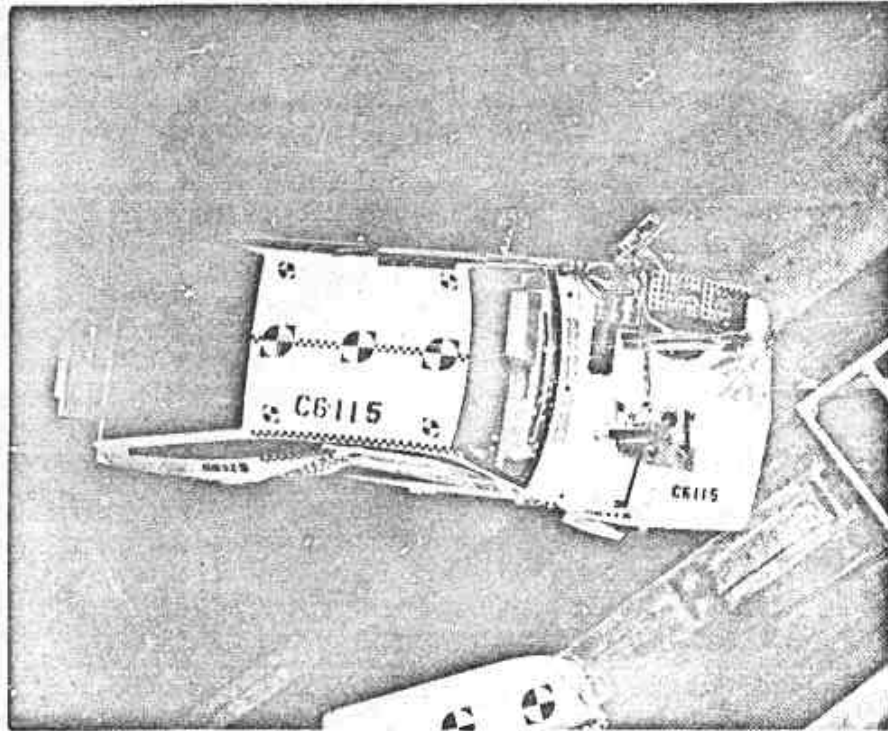


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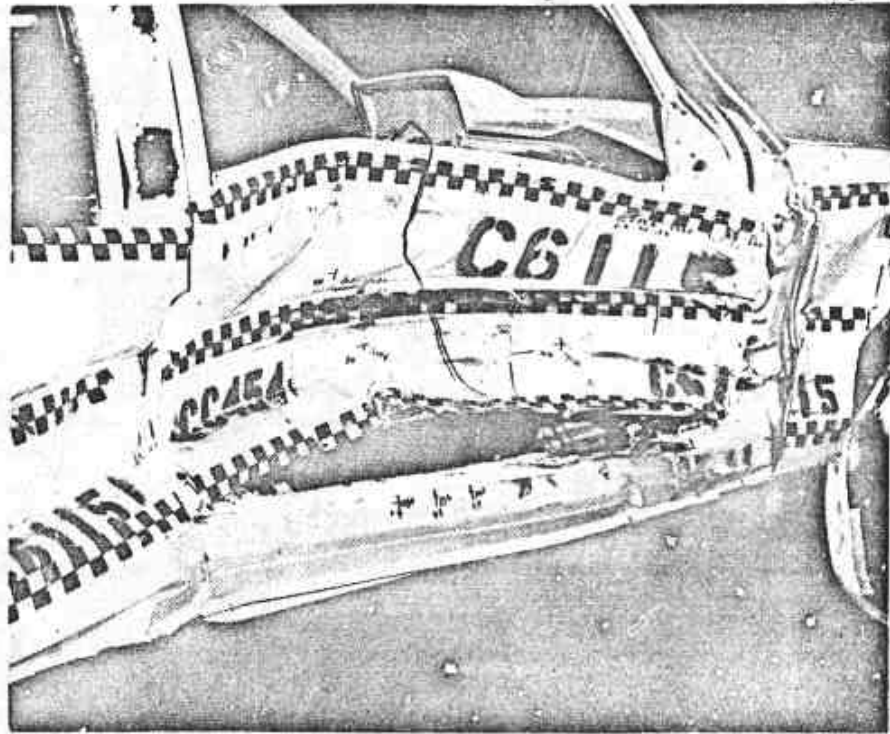


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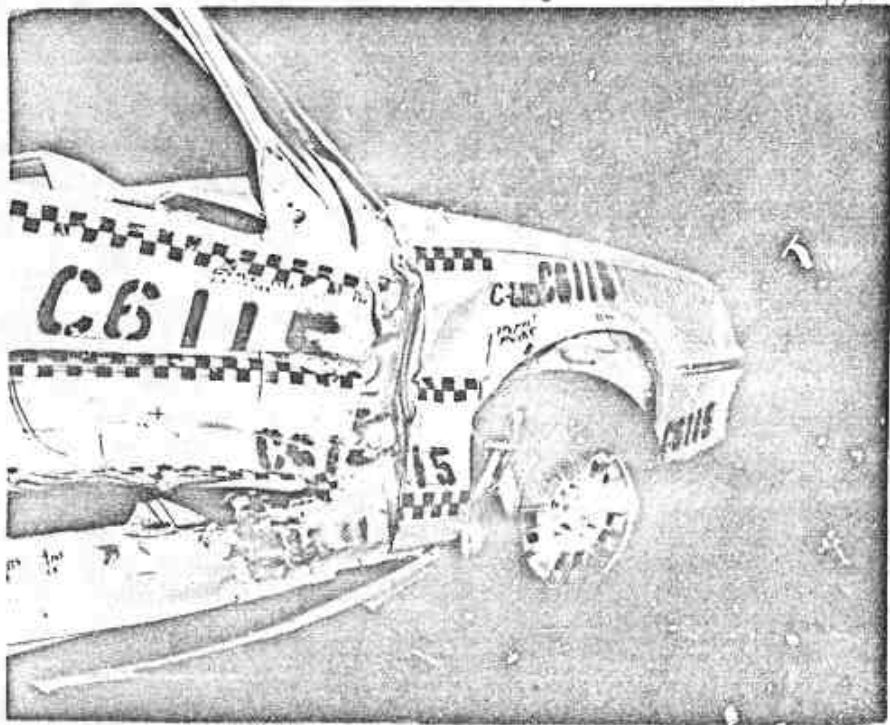
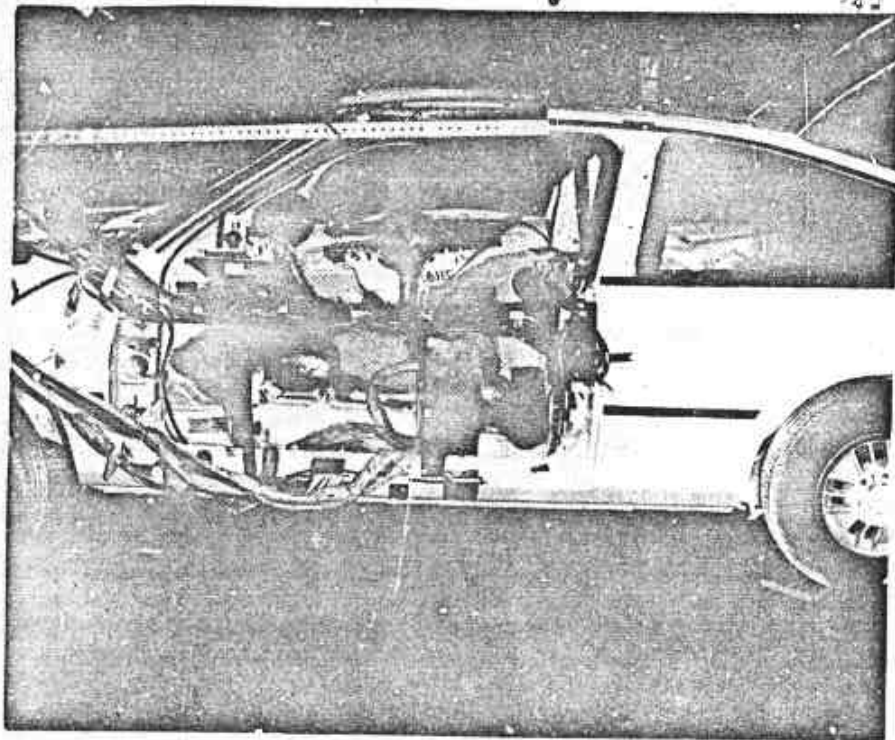
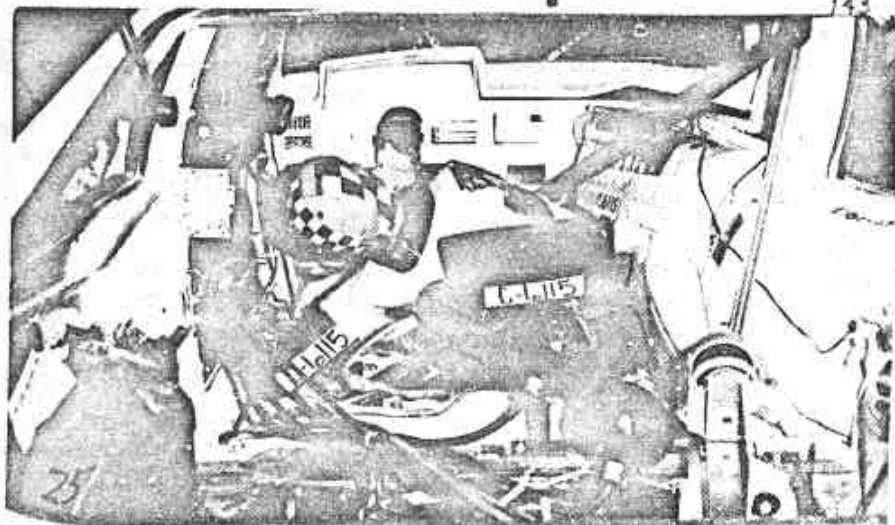


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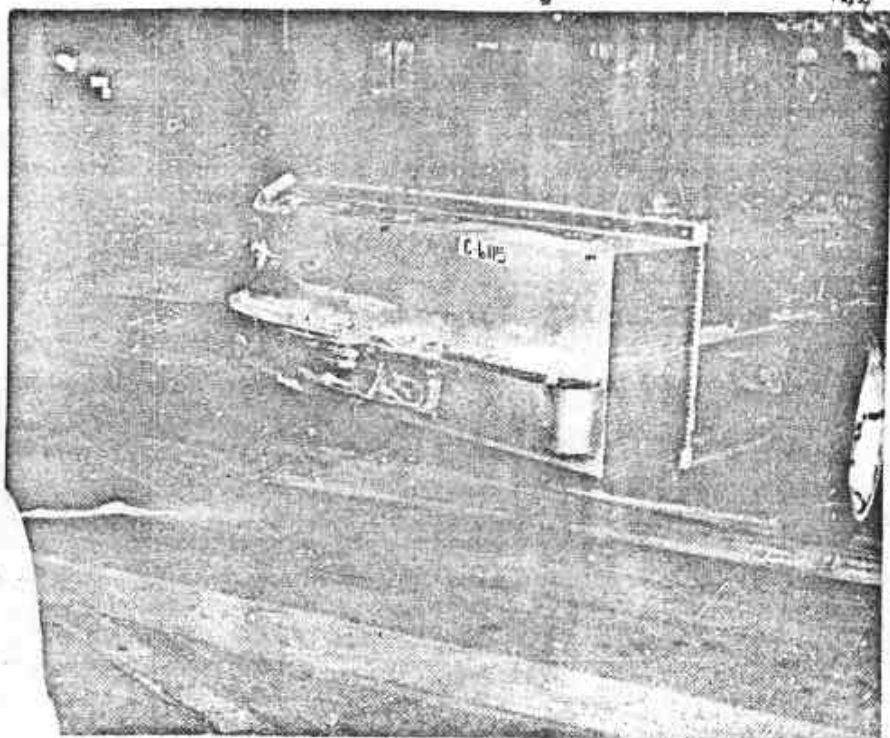


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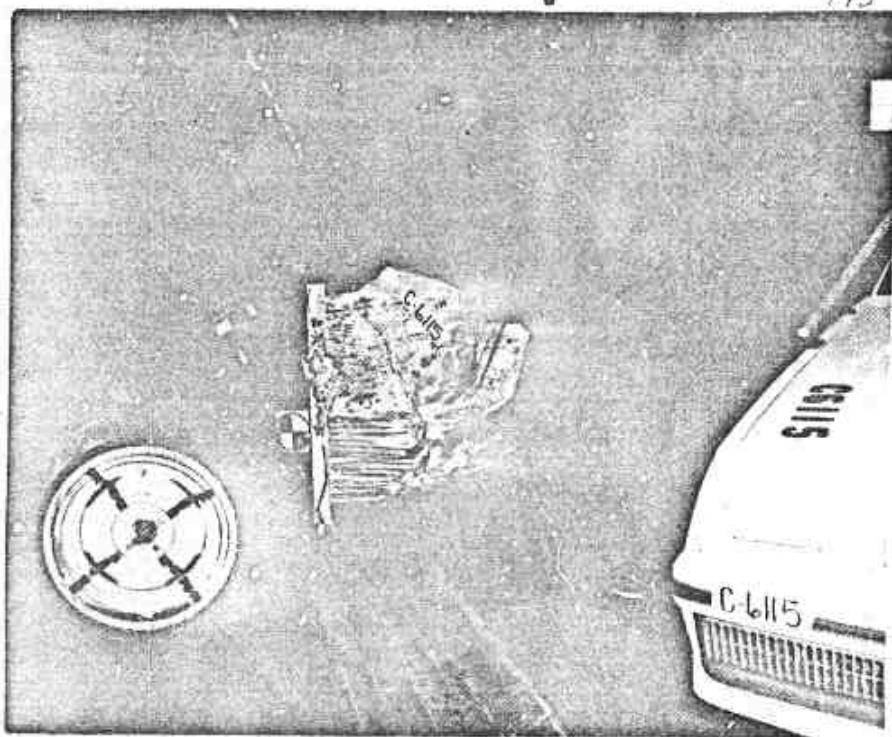
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144



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145



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