

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.
TEST DATE 01/18/96

TEST PURPOSE PRIMARY, 1997 USA 301 DEVELOPMENT.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; REAR
BARRIER TYPE; REAR TYPE IV
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO 4x4
TRANS. NOTE; SELECT-TRAC
VIN AS TESTED; 1J4EZ78?6TC100062 MOD.
VIN AS BUILT; 1J4EZ78S6TC100062 MOD.

TEST SPEED 30.0 MPH BY ELECTRONIC TRAP.

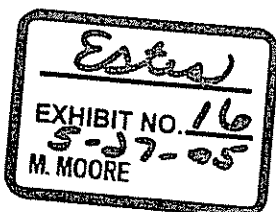
TEST WEIGHT (LBS) 4828 TOTAL, 2710 FRONT, 2118 REAR

OCCUPANTS LEFT FRONT, HYB II, BALLAST. AD-65
RESTRAINT-BELTS ONLY.
RIGHT FRONT, HYB II, BALLAST. AD-67
RESTRAINT-BELTS ONLY.

BUILD CONDITION 1996 PRODUCTION ZJ MODIFIED TO REPRESENT 1997.
4.0 LITRE (I6) ENGINE, 4 SPEED AUTO TRANS. 4X4,
POWER STEERING, ABS BRAKES, AIR CONDITIONING.
HEATED LEATHER SEATS ON ELECTRIC TRACKS.
FULL CENTER CONSOLE AND OVERHEAD CONSOLE.
P225/70 R16 TIRES ON ALUMINUM RIMS & FULL SIZE
SPARE.
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN

TARGET WEIGHT (LBS) 4185 TOTAL, 2336 FRONT, 1849 REAR, REP MAX OPT WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 21.5 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST SECURED IN REAR
SEATING AREA.
50 LBS OF BALLAST SECURED TO REAR SEATING AREA.



DC 01996

SAFETY TEST
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PAGE 02

VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.
TEST DATE 01/18/96

POST TEST REMARKS THERE WERE NO FUEL LEAKS AT IMPACT OR IN THE 25
MINUTES AFTER THE IMPACT. THERE WAS FUEL LEAKAGE
IN EXCESS OF THE ALLOWABLE LIMITS IN THE ENGINE
COMPARTMENT AREA DURING POST TEST STATIC ROLLOVER.

REPORT CODES A = TRANSDUCER DATA B = ALL FILM DATA
 C = HIGH SPEED FILM D = ENGINEER'S REPORT
 E = DUMMY KINEMATICS F = STEERING COLUMN
 G = UNDERBODY H = A-POST
 I = DYNAMIC CRUSH J = ENGINE COMPARTMENT
 K = DOOR CRUSH L = FORCE/CRUSH/ENERGY
 M = SPECIAL N = CATALOG EDP DATA
 * = REPORT REQUESTOR

DISTRIBUTION D.J. MCKENZIE 422-05-01 (AB)
 J.B. ESTES 514-15-58 (AB)

DATE 01/22/96 TIME 14.39.46.

DC 01997

CHRYSLER MOTORS
SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

ITEM ZJ8370 CHARGE NO. DOUREADME? ISSUE DATE 1/8/96

VC 5789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI.
1997 MVSS DEVELOPMENT - 301.

TEST DATE

1/12/96

ENGINEER

CollingsSPEED 30.1 MPH

SOURCE

TEST PURPOSE

PRIMARY, 1997 USA 301 DEVELOPMENT.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE

TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; REAR
BARRIER TYPE; REAR TYPE IV
BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO 4x4
TRANS. NOTE; quadra-trac
VIN AS TESTED; 1J4EZ78?6TC100062 MOD.
VIN AS BUILT; 1J4EZ78S6TC100062 MOD.

BUILD CONDITION

1996 PRODUCTION ZJ MODIFIED TO REPRESENT 1997.
4.0 LITRE (16) ENGINE, 4 SPEED AUTO TRANS. 4X4,
POWER STEERING, ABS BRAKES, AIR CONDITIONING.
HEATED LEATHER SEATS ON ELECTRIC TRACKS.
FULL CENTER CONSOLE AND OVERHEAD CONSOLE.
P225/70 R16 TIRES ON ALUMINUM RIMS & FULL SIZE
SPARE.
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN.

TARGET WEIGHT (LBS) 4185 TOTAL, 2336 FRONT, 1849 REAR, REP MAX OPT WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

TEST WEIGHT (LBS)

4200 TOTAL, 2110 FRONT, 2110 REAR

FUEL BALLAST

21.5 GALLONS OF STODDARD SOLVENT.

LUGGAGE BALLAST

300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.

OTHER BALLAST

None
None
None

POST TEST REMARKS

None
None
None

DC 01998

CHRYSLER MOTORS
SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

OCCUPANTS

LEFT FRONT, HYB II, BALLAST.
RESTRAINT-BELTS ONLY.
RIGHT FRONT, HYB II, BALLAST.
RESTRAINT-BELTS ONLY.

AD NO 65AD NO 67

MECHANICAL REQ

PLACE SEAT IN MID TRACK POSITION.
FUEL PUMP TO BE RUNNING DURING TEST.
RUN FUEL PUMP PRE TEST TO CHECK CONNECTIONS.
PRESSURE CHECK PRE AND POST TEST.
STATIC ROLL POST TEST.
PAINT REAR DIFFERENTIAL AND GAS TANK FOR VIEWING.
PAINT FILLER NECK AREA FOR VISIBILITY.

INSTRUMENTATION REQ

SEE 3RD SHEET NO. 107 FOR ACCELEROMETER REQUIREMENTS AND LOCATIONS (THE 4 SILL ACCELEROMETERS ARE TO BE BI-AXIAL).
TRI-AXIAL ON ASDM BRACKET.
MONITOR ASDM SAFING, SQUIB AND IN. ACC. OUTPUTS.
BI-AXIS ACC. AT FRONT ROLOMITE LOCATIONS. (X&Z)
INSURE AIRBAGS DO NOT FIRE.

PHOTOGRAPHIC REQ

1-LEFT SIDE OVERALL CAMERA TO VIEW ENTIRE VEHICLE.
1-RIGHT SIDE OVERALL CAMERA TO VIEW ENTIRE VEHICLE
1-CATWALK CAMERA TO VIEW ENTIRE VEHICLE.
1-PIT CAMERA TO VIEW UNDERBODY, AXLE TO BUMPER.
1-PIT CAMERA CLOSE UP OF TRACK BAR BRACKET.
PRE AND POST TEST PHOTOS OVERALL AND UNDERBODY ON
8 X 10 PAPER IN COLOR.

FILM ANALYSIS

VEHICLE VELOCITY, ONLY IF REQUESTED.
DYNAMIC CRUSH.

REMARKS

MAKE 1 FILM COPY AND 1 VHS COPY, SEND TO:
J.B. ESTES 514-15-58
PLEASE RETURN VEHICLE POST TEST TO JTE.

I. E. REPORT

301 FUEL SYSTEMS REPORT REQUIRED.

REPORT CODES

A = TRANSDUCER DATA	B = ALL FILM DATA
C = HIGH SPEED FILM	D = ENGINEER'S REPORT
E = DUMMY KINEMATICS	F = STEERING COLUMN
G = UNDERBODY	H = A-POST
I = DYNAMIC CRUSH	J = ENGINE COMPARTMENT
K = DOOR CRUSH	L = FORCE/CRUSH/ENERGY
M = SPECIAL	N = CATALOG EDP DATA
* = REPORT REQUESTOR	

CHRYSLER MOTORS
SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

DISTRIBUTION

D.J. MCKENZIE
J.B. ESTES

422-05-01 (AB)
514-15-58 (AB)

CHRYSLER MOTORS
SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

*****CHANGED 01/09/96 AT 12.52.20.

SUPPLEMENT NO. 01

VEHICLE

MODIFY	VIN AS TESTED;	1J4EZ78?1TC100096	MOD.
TO READ	VIN AS TESTED;	1J4EZ78?6TC100062	MOD.
MODIFY	VIN AS BUILT;	1J4EZ78S1TC100096	MOD.
TO READ	VIN AS BUILT;	1J4EZ78S6TC100062	MOD.

X, Y, Z DIMENSIONS

TEST NUMBER VC5789

TEST ENGINEER COLLINGS

ITEM NUMBER ZJ8370 V.I.N. 1J4EZ78?6TC100062

TEST DATE 1/8/90

TEST TYPE: 30 MPH REAR TYPE IV MOVING BARRIER IMPACT

LOCATION	X	Y	Z	LOCATION	X	Y	Z
BC1	0.5	0.0	XXXX	BC2	XXXX	0.0	XXXX
BI	0	-	XXXX	B2	0	-	XXXX
LFS	63.7	44- 33.6	11.8			44-	
LMS	74.2	44- 33.4	15.0			44-	
LRA	134.5	44- 31.5	13.3			44-	
LAP	57.6	44- 24.3	46.8			44-	
LCP	100.0	44- 67.4	62.0			44-	

TRAMMEL DIMENSIONS:

LMS-LRS PRE 30.15

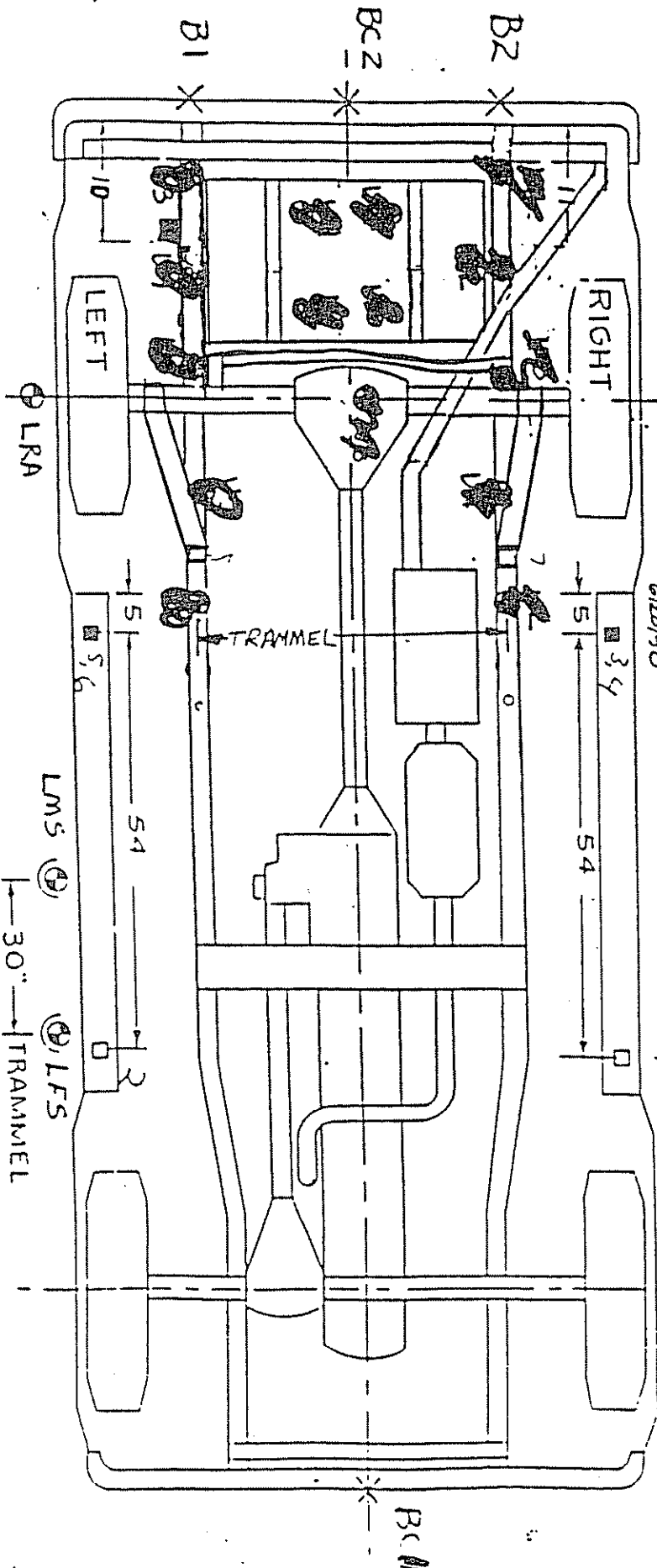
ORD SHEET 106, ITEM ZJ8370 V05789
 4x4
 JEEP ZJ
 TARGET AND ACCELEROMETER LOCATIONS
 FOR REAR IMPACTS

ZENONS RECD ON ROOF.

ELEC FUEL PUMP TO BE
 RUNNING DURING IMPACT

DC 02003

ACCEL. LOCATIONS ARE XJ (REF. SHEET 102)
 ACTUAL LOCATIONS PER TRAMMEL



TARGETS

- X PUNCH POINT
- ⊕ UNDERBODY
- ⊕ SIDE VIEW

LEGEND

ACCELEROM - □ SINGLE AXIS, X
 ETTERS ⊕ BIAXIAL, X & Z

1. PRE AND POST DIMENSIONS ARE REQUIRED
 2. NUMBERS ASSIGNED TO EACH TARGET ARE PERMANENT
 3. TARGETS MAY BE DELETED BY NUMBER PER TR.
 4. ADDITIONAL TARGETS MAY BE REQUESTED BY TR.
 5. LOCATIONS SHOWN ARE APPROX TO ± 0.5 IN.
- ACTUAL MEASUREMENT TO ± 0.1 INCH.

TUBE COLOR Blue

FRONT SILL

X =	63.9
Y =	-33.6
Z =	11.2

REAR SILL

X =	94.2
Y =	-33.4
Z =	11.9

REAR AXLE

X =	132.5
Y =	-21.5
Z =	13.5

PHOTO REFERENCE TUBE

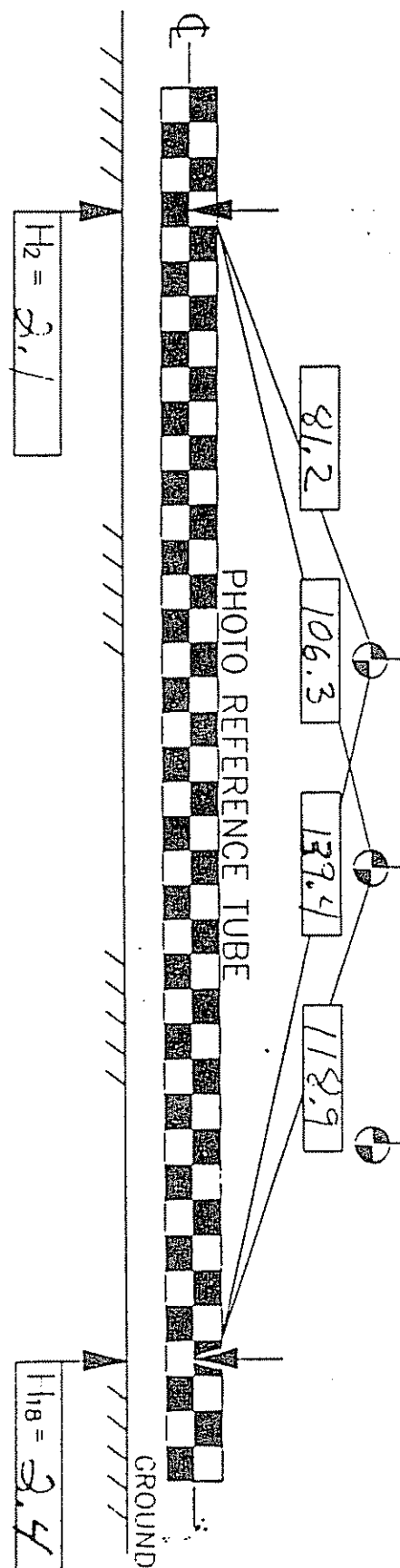
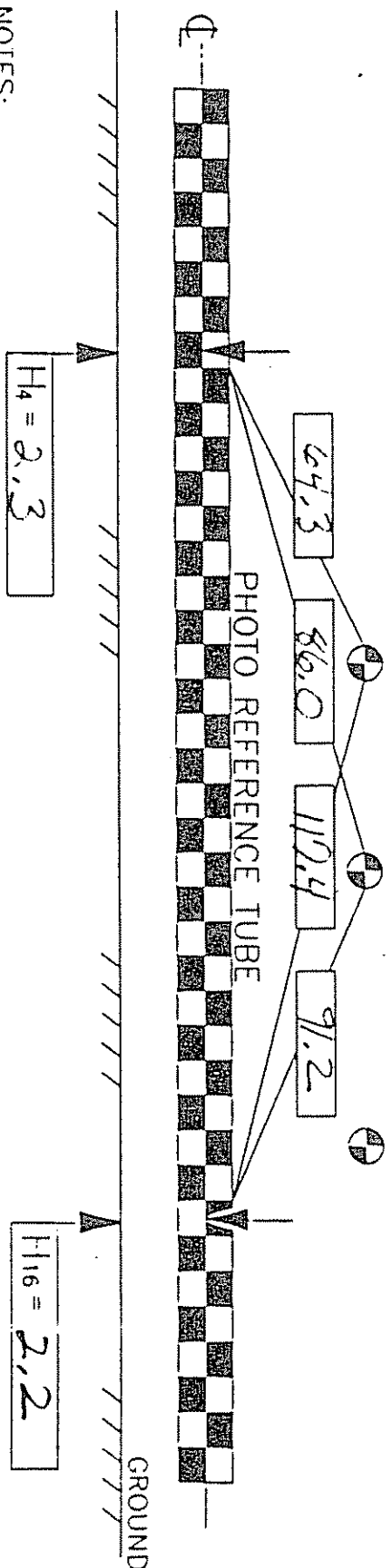


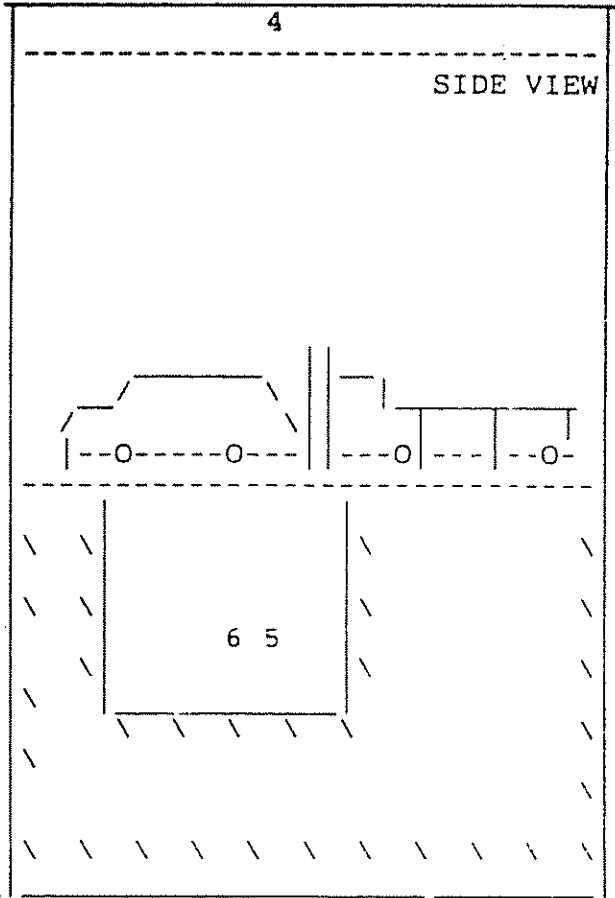
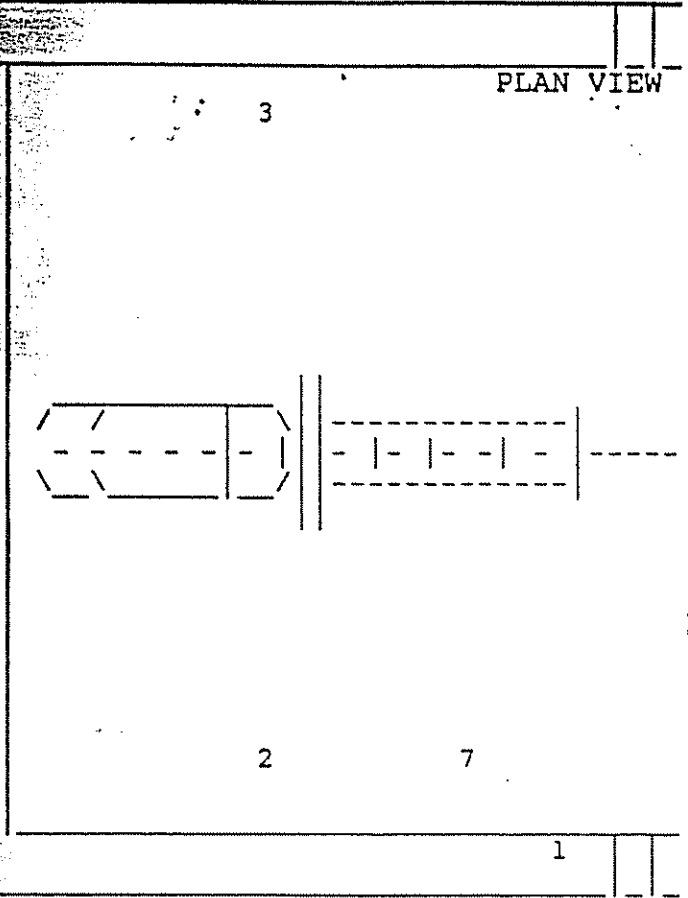
PHOTO REFERENCE TUBE



NOTES:

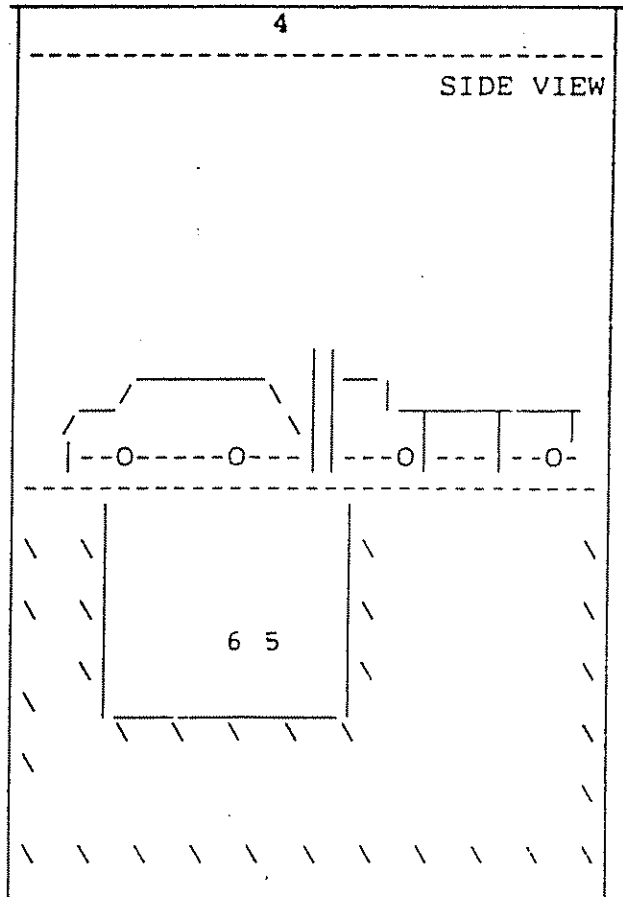
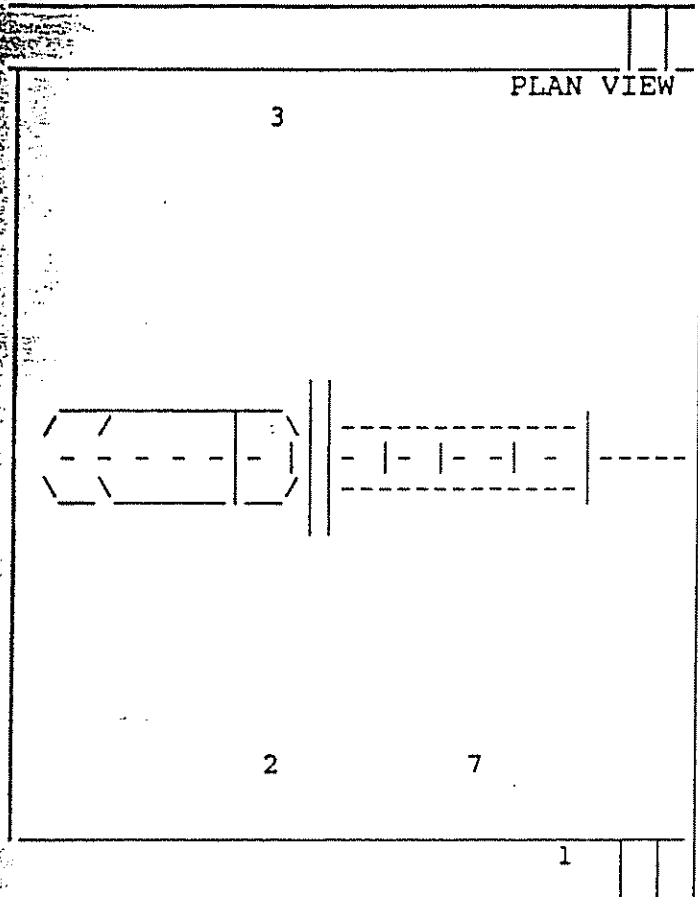
1. THE Z DIMENSION FOR THE SILL TARGETS AND REAR AXLE MUST BE RETAKEN AT THE TEST SITE
2. IF OTHER TUBE POINTS ARE USED, SO INDICATE

FOR REAR IMPACT TESTS - DIMENSIONING BETWEEN SILL TARGETS AND PHOTO REFERENCE TUBE TEST ENGR Collings VC 5789



TEST NUMBER VC5789 TEST TYPE: 30 MPH TYPE IV MOVING BARRIER REAR IMPACT
 TEST ENGINEER COLLINGS REQUEST DATE : 1/17/96 VEHICLE BODY CLASS : ZJ

#	VIEW DESCRIPTION	CAM S/N	LENS F.L.	LENS S/N	LENS MFG.	F-STOP	PNL	SKT	CBL	CAM MFG
1	PANNING									
2	A LEFT - DYNAMIC CRUSH	1810	25mm	10						
3	RIGHT OVERALL									
4	CATWALK OVERALL									
5	PIT-AXLE TO BUMPER									
6	PIT-TRACK BAR BRACKET									
7	A VELOCITY									



TEST NUMBER VC5789 TEST TYPE: 30 MPH TYPE IV MOVING BARRIER REAR IMPACT
 TEST ENGINEER COLLINGS REQUEST DATE : 1/17/96 VEHICLE BODY CLASS : ZJ

#	VIEW DESCRIPTION	CAM S/N	LENS F.L.	LENS S/N	LENS MFG.	F- STOP	PNL	SKT	CBL	CAM MFG
1	PANNING									
2	A LEFT - DYNAMIC CRUSH	18710	105mm	10						
3	RIGHT OVERALL									
4	CATWALK OVERALL									
5	PIT-AXLE TO BUMPER									
6	PIT-TRACK BAR BRACKET									
7	A VELOCITY									

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC5789 ITEM NUMBER ZJ8370 TEST ENGINEER COLLINGS

V.I.N. 1J4EZ78?6TC100062, TEST DATE 1/12/96 ROLL DATE 1/24/96

TEST TYPE; 30 MPH REAR TYPE IV MOVING BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT. 21.5 GALLONS

TEST SPEED 30.0 MPH. TEST WEIGHT 4828 POUNDS.

POST TEST FUEL SYSTEM OBSERVATIONS NO FUEL LEAKS AT IMPACT.

POST IMPACT LEAKAGE(OZ): AT IMPACT 0
 1ST 5 MIN. 0
 NEXT 25 MIN. 0

POST TEST PRESSURE CHECK OK

ELECTRIC FUEL PUMP RUN OK

STATIC ROLL LEAKAGE WITH VEHICLE OK SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME			
0-90	1ST 5 MIN		
	POST 5 MIN		
90-180	1ST 5 MIN		
	POST 5 MIN		
180-270	1ST 5 MIN		
	POST 5 MIN		
270-360	1ST 5 MIN		
	POST 5 MIN		

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

LAST FORM MODIFICATION 5/27/93 GAF

DATE 01/22/96
TIME 15.09.56.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC05789 ITEM ZJ8370
VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.
TEST DATE 01/18/96

TEST PURPOSE PRIMARY, 1997 USA 301 DEVELOPMENT.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; REAR
BARRIER TYPE; REAR TYPE IV
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; ZJ
CAR LINE; C
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO 4X4
TRANS. NOTE; SELECT-TRAC
VIN AS TESTED; 1C4E27896TC010061 MOD.
VIN AS BUILT; 1C4E27896TC010061 MOD.

TEST SPEED 30.1 MPH BY ELECTRONIC TRAP.

TEST WEIGHT LBS 4818 TOTAL, 2710 FRONT, 2118 REAR

OCCUPANTS LEFT FRONT, HYB II, BALLAST AD #5
RESTRAINT-BELTS ONLY.
RIGHT FRONT, HYB II, BALLAST. A#67
RESTRAINT-BELTS ONLY.

BUILD CONDITION 1997 PRODUCTION ZJ MODIFIED TO REPRESENT 1997
4.0 LITRE 16V ENGINE, 4 SPEED AUTO TRANS, 4X4.
POWER STEERING, ABS BRAKES, AIR CONDITIONING.
HEATED LEATHER SEATS ON ELECTRIC TRAYS.
FULL CENTER CONSOLE AND OVERHEAD CONSOLE.
FULL SIZE TIRES IN ALUMINUM RIMS & FULL SIZE
SPARE.
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN.

TARGET WEIGHT LBS 4185 TOTAL, 2386 FRONT, 1849 REAR, REP MAX OPT WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 21.5 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST SECURED IN REAR
SEATING AREA.
100 LBS OF BALLAST SECURED IN REAR SEATING AREA

DATE 01/22/96
TIME 15.09.56.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC05789 ITEM ZJ8370
VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.
TEST DATE 01/18/96

POST TEST REMARKS THERE WERE NO FUEL LEAKS AT IMPACT OR IN THE 25
MINUTES AFTER THE IMPACT. THERE WAS FUEL LEAKAGE
IN EXCESS OF THE ALLOWABLE LIMITS IN THE ENGINE
COMPARTMENT AREA DURING POST TEST STATIC ROLLOVER.

EDP TECHNICIAN S. MARCHENIA

No. of Pages 39
CC

J. B. ESTES 514-15-56
D. J. MCKENZIE 422-05-01

DC 02008

TITLE: Page Index of EDP plots Pages 001 - 039

***** VCC5789A *****

Page I-01

TITLE: Transducer Summary Reports Pages 001 - 003

PAGE: 001 TSR Channels 001 - 008

PAGE: 002 TSR Channels 009 - 016

PAGE: 003 TSR Channels 017 - 024

***** VC05789B *****

TITLE: Vehicle Channels Pages 004 - 037

PAGE: 004 Average of Sill Chls 1, 3, 5, & 7

PAGE: 005 Average of Frt Sill Chls 1 & 3

PAGE: 006 LEFT FRONT SILL X, Chl 1

PAGE: 007 LEFT FRONT SILL X, Chl 1, VD

PAGE: 008 LEFT FRONT SILL Z, Chl 2

PAGE: 009 RIGHT FRONT SILL X, Chl 3

PAGE: 010 RIGHT FRONT SILL X, Chl 3, VD

PAGE: 011 RIGHT FRONT SILL Z, Chl 4

PAGE: 012 LEFT REAR SILL X, Chl 5

PAGE: 013 LEFT REAR SILL X, Chl 5, VD

PAGE: 014 LEFT REAR SILL Z, Chl 6

PAGE: 015 RIGHT REAR SILL X, Chl 7

PAGE: 016 RIGHT REAR SILL X, Chl 7, VD

PAGE: 017 RIGHT REAR SILL Z, Chl 8

PAGE: 018 LT RAIL TRAIL ARM PIV X, Chl 9

PAGE: 019 LT RAIL TRAIL ARM PIV X, Chl 9, VD

PAGE: 020 RT RAIL TRAIL ARM PIV X, Chl 10

PAGE: 021 RT RAIL TRAIL ARM PIV X, Chl 10, VD

PAGE: 022 RT REAR RAIL MID TANK X, Chl 11

PAGE: 023 RT REAR RAIL MID TANK X, Chl 11, VD

PAGE: 024 RT REAR RAIL MID TANK Z, Chl 12

PAGE: 025 AECM SQUIB, Chl 13, Event

N

PAGE: 026 AECM SAFING SEN, Chl 14, Event

N

PAGE: 027 AECM INTERN ACCEL G, Chl 15

PAGE: 028 AECM EXTERN X, Chl 16

PAGE: 029 AECM EXTERN X, Chl 16, VD

PAGE: 030 AECM EXTERN Y, Chl 17

PAGE: 031 AECM EXTERN Z, Chl 18

PAGE: 032 LT FT SENSOR TOP X, Chl 19

PAGE: 033 LT FT SENSOR TOP X, Chl 19, VD

PAGE: 034 LT FT SENSOR TOP Z, Chl 20

PAGE: 035 RT FT SENSOR TOP X, Chl 21

PAGE: 036 RT FT SENSOR TOP X, Chl 21, VD

PAGE: 037 RT FT SENSOR TOP Z, Chl 22

***** VC05789C *****

TITLE: Moving barrier Channels Pages 038 - 039

PAGE: 038 LT RAIL MBAR MID X Chl 23

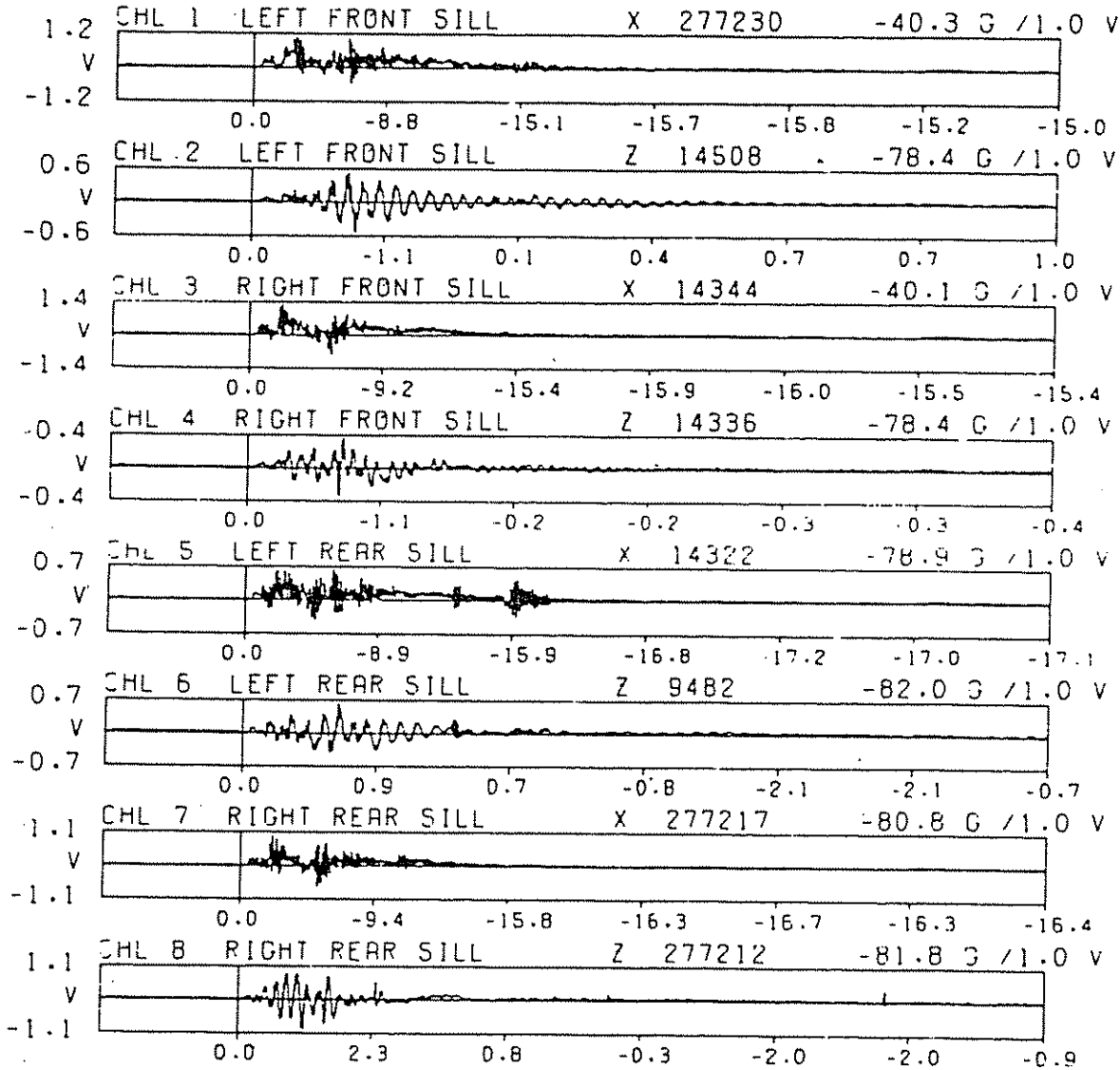
PAGE: 039 LT RAIL MBAR MID X, Chl 23, VD

TRANSDUCER SUMMARY REPORT

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
 1997 MVSS DEVELOPMENT - 301.
 IMPACT ANALYSIS DEPT. 5320
 JAN 22.1996

PAGE 001
 OF 039
 DATA SET 01/18/95BA
 ERRATA 1

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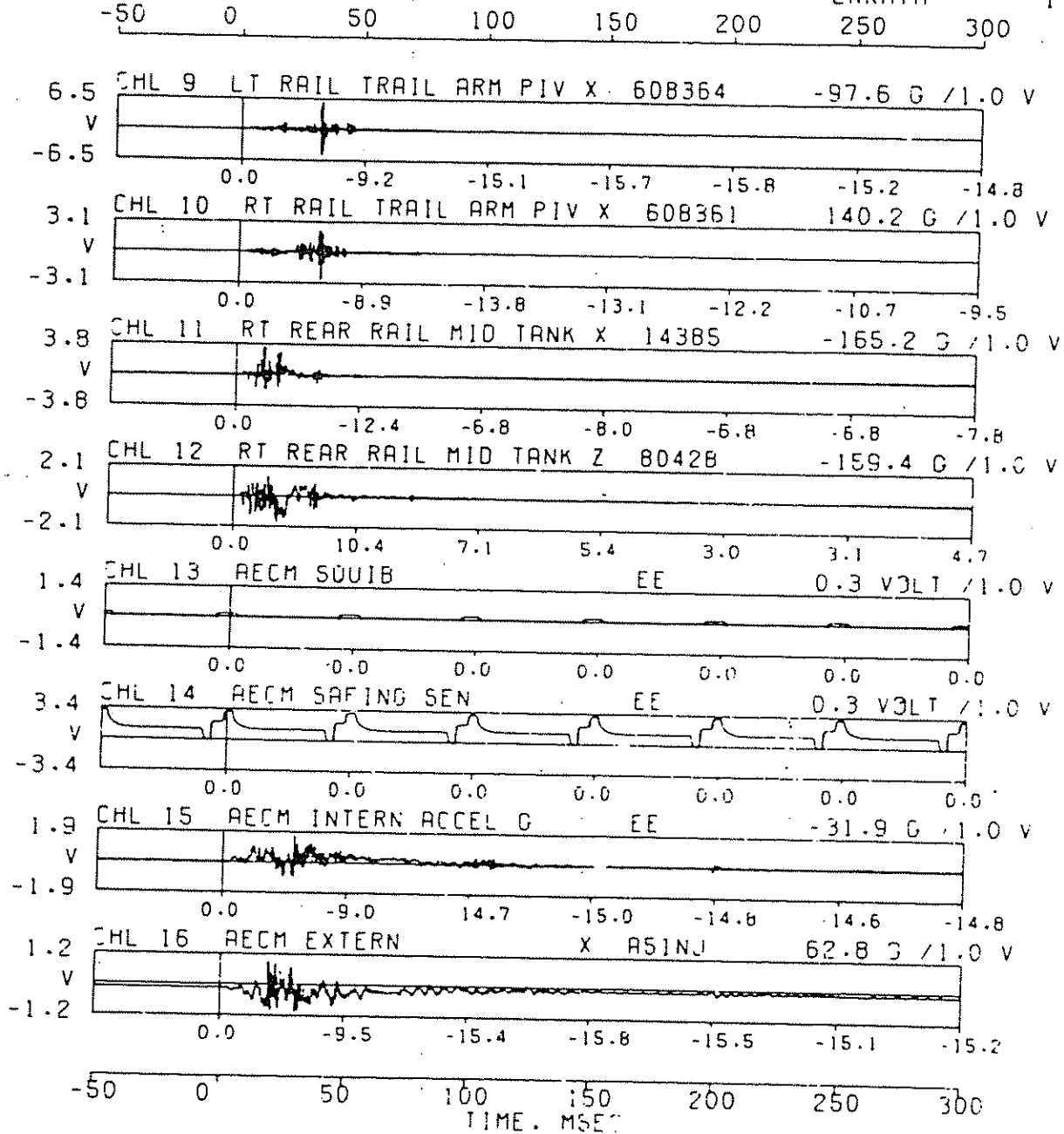
-50 0 50 100 150 200 250 300
 TIME. MSEC

NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

TRANSDUCER SUMMARY REPORT

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
 1997 MVSS DEVELOPMENT - 301.
 IMPACT ANALYSIS DEPT. 5320
 JAN 22.1996

PAGE 002
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 ERRATA 1



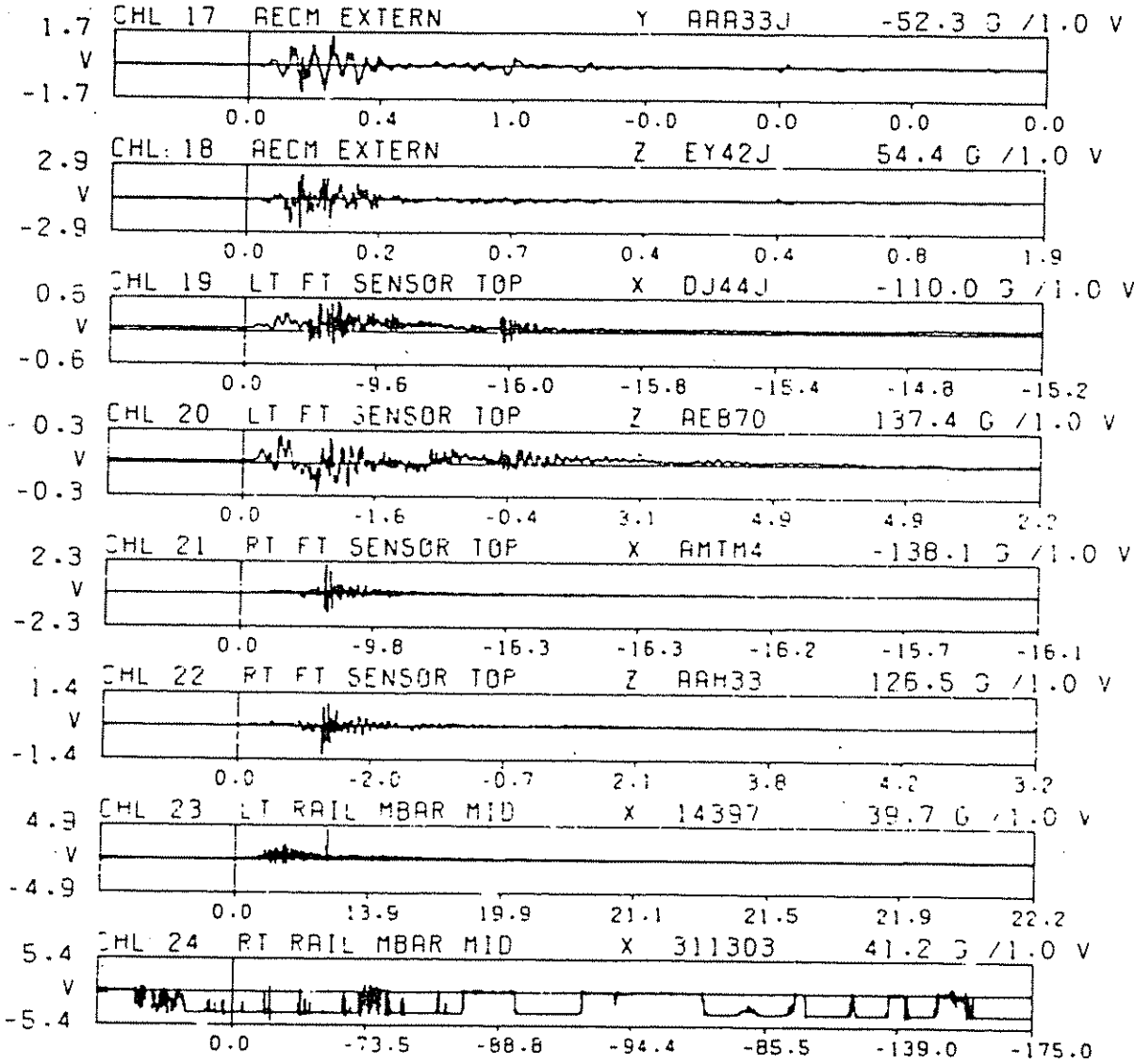
NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

TRANSDUCER SUMMARY REPORT

VCC5789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI, ITEM ZJ8370
 1997 MVSS DEVELOPMENT - 301.
 IMPACT ANALYSIS DEPT. 5320
 JAN 22, 1996

PAGE 003
 OF 039
 DATA SET 01/18/95BB
 ERRATA 1

-50 0 50 100 150 200 250 300



NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.

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AVERAGE OF

CHANNEL 001 LEFT FRONT SILL	X	277230
CHANNEL 003 RIGHT FRONT SILL	X	14344
CHANNEL 005 LEFT REAR SILL	X	14322
CHANNEL 007 RIGHT REAR SILL	X	277217

FILTER TYPE: SAE J2118/80 DC C60(TPF-R) EFF 3/24/86

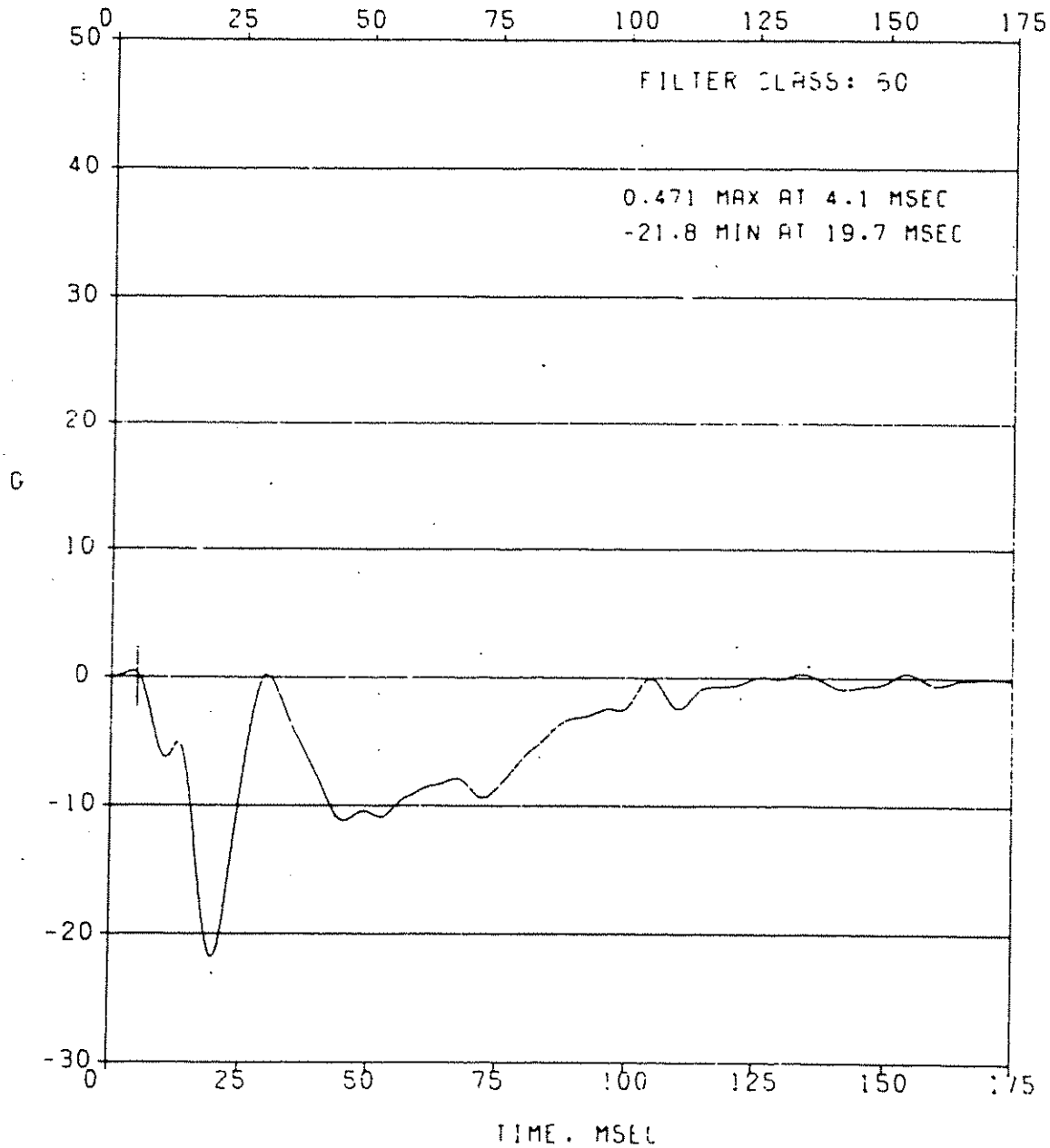
IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22.1996

ERRATA

1



DC 02013

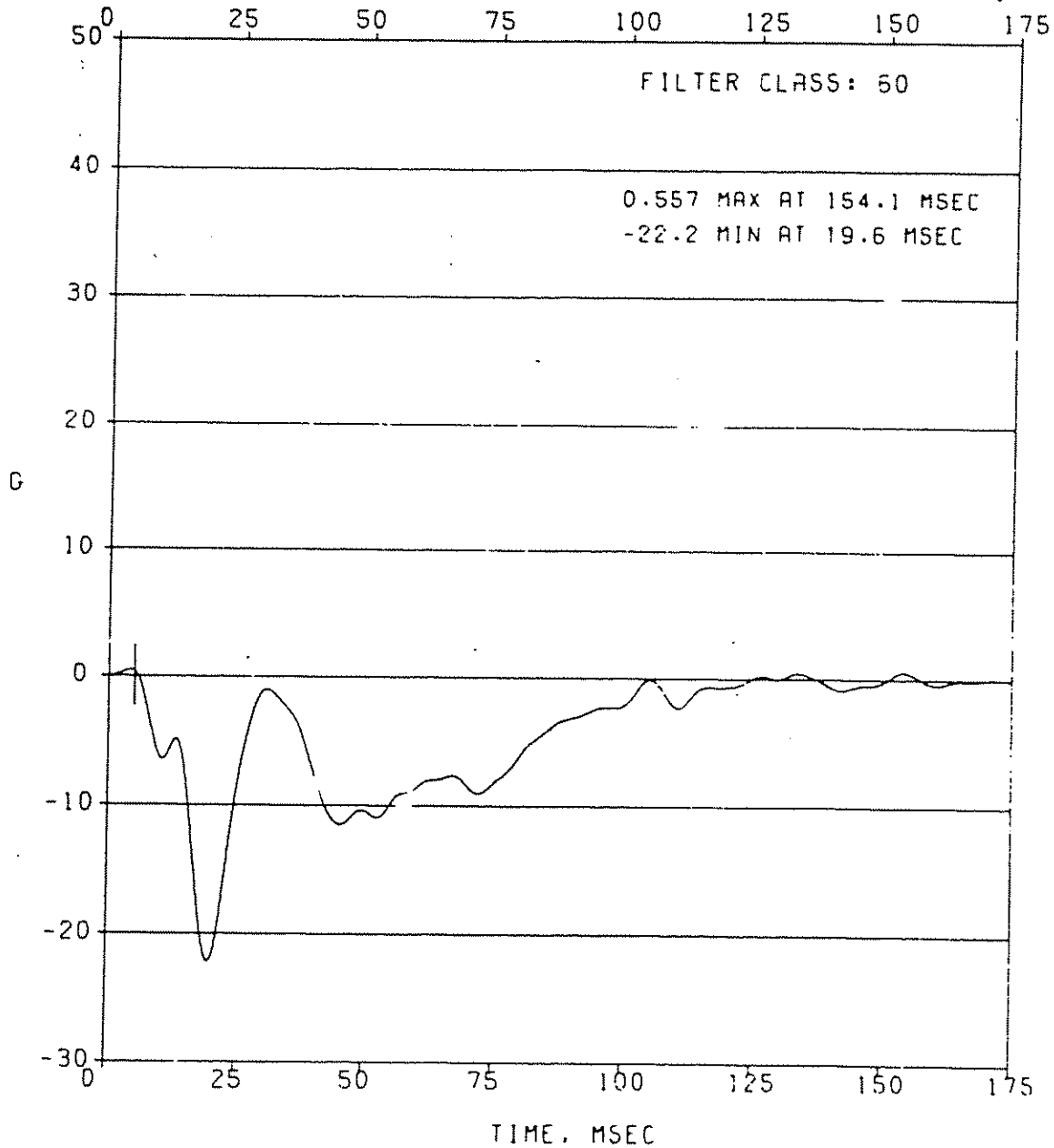
VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.

PAGE 005
OF 039

AVERAGE OF

CHANNEL 001 LEFT FRONT SILL X 277230
CHANNEL 003 RIGHT FRONT SILL X 14344

FILTER TYPE: SAE J211B/80 DC C60(TPF-R) EFF 3/24/86
IMPACT ANALYSIS DEPT. 5320 DATA SET 01/18/96BA
JAN 22.1996 ERRATA 1



DC 02014

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370

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1997 MVSS DEVELOPMENT - 301.
CHANNEL 001 LEFT FRONT SILL X 277230

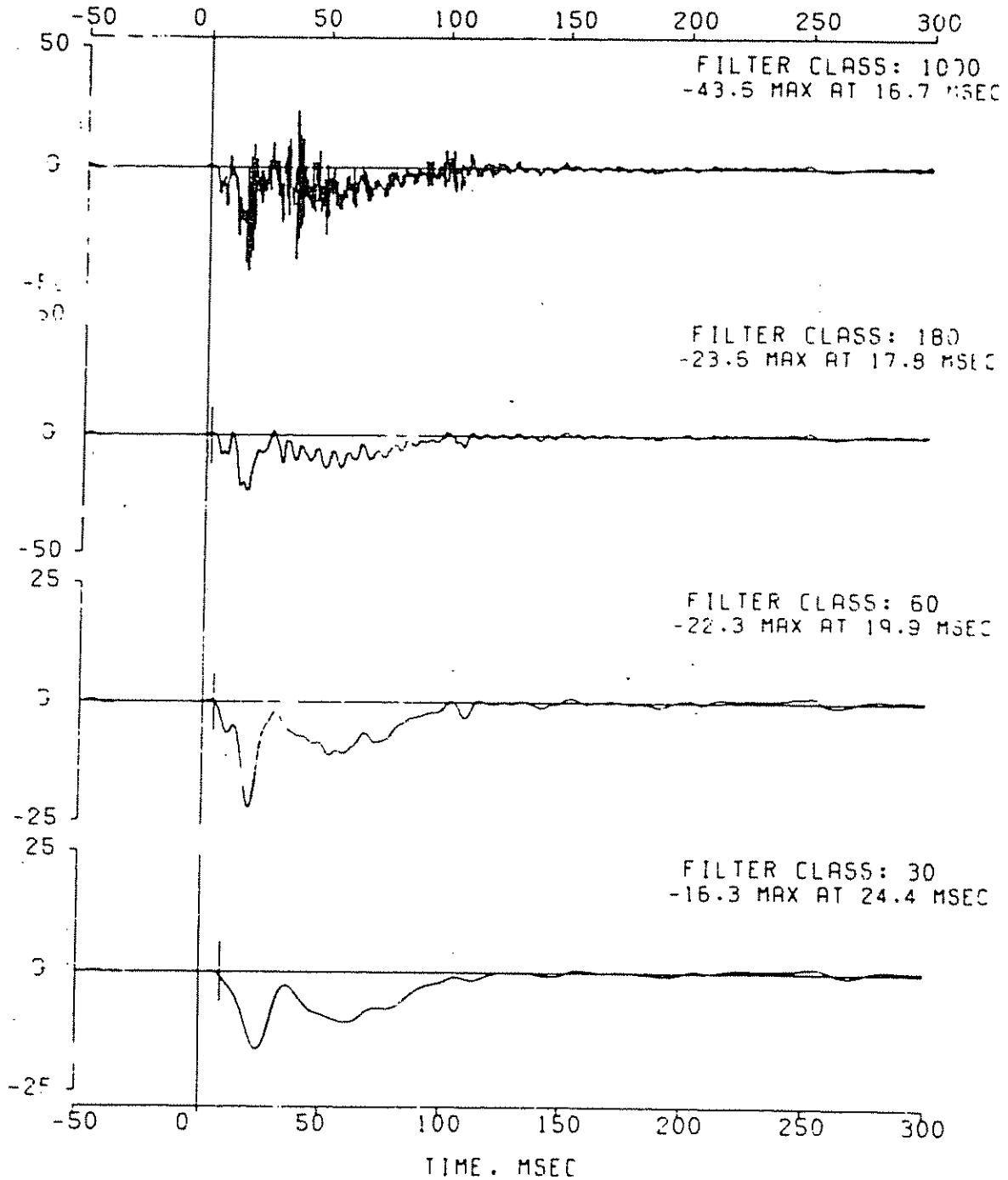
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IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22 1996

ERRATA 1



DC 02015

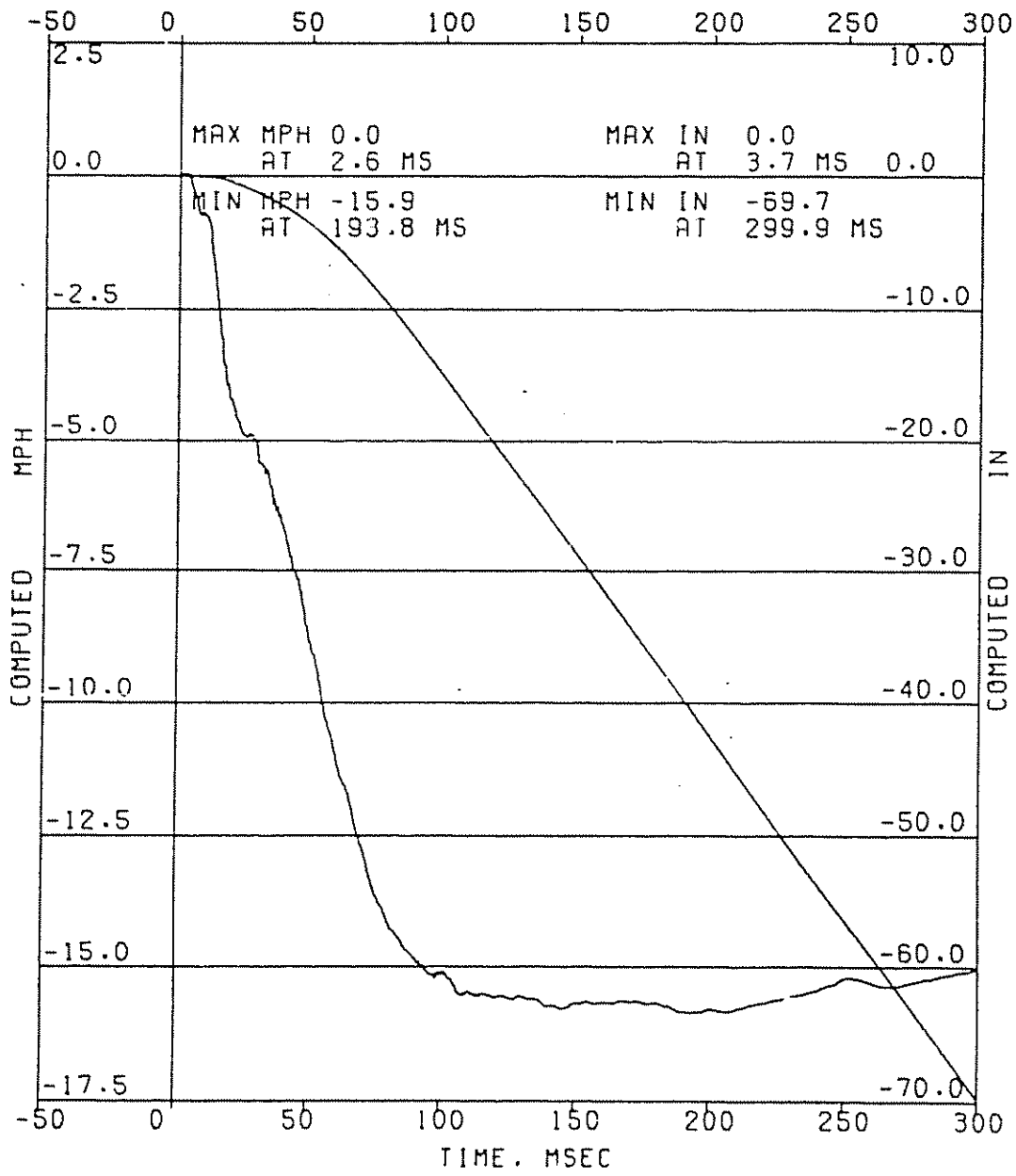
VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 001 LEFT FRONT SILL X 277230

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FILTER TYPE: 0BDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

DATA SET 01/18/96BA
ERRATA 1



COMPUTED MPH
COMPUTED IN

DC 02016

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.

PAGE 008
OF 039

CHANNEL 002 LEFT FRONT SILL Z 14508

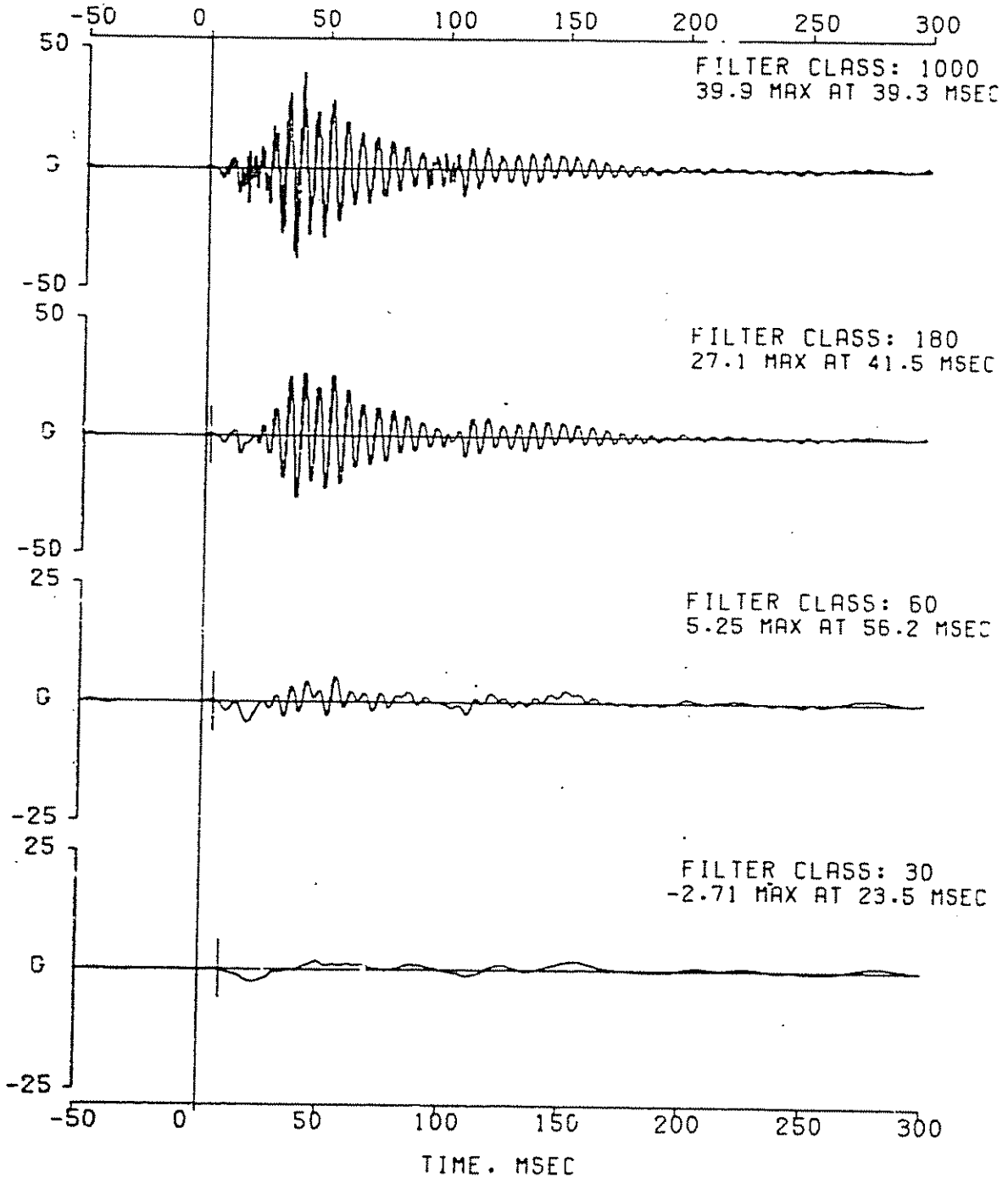
FILTER TYPE: 0BDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22.1996

ERRATA 1



DC 02017

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.

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CHANNEL 003 RIGHT FRONT SILL X 14344

FILTER TYPE: 0BDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

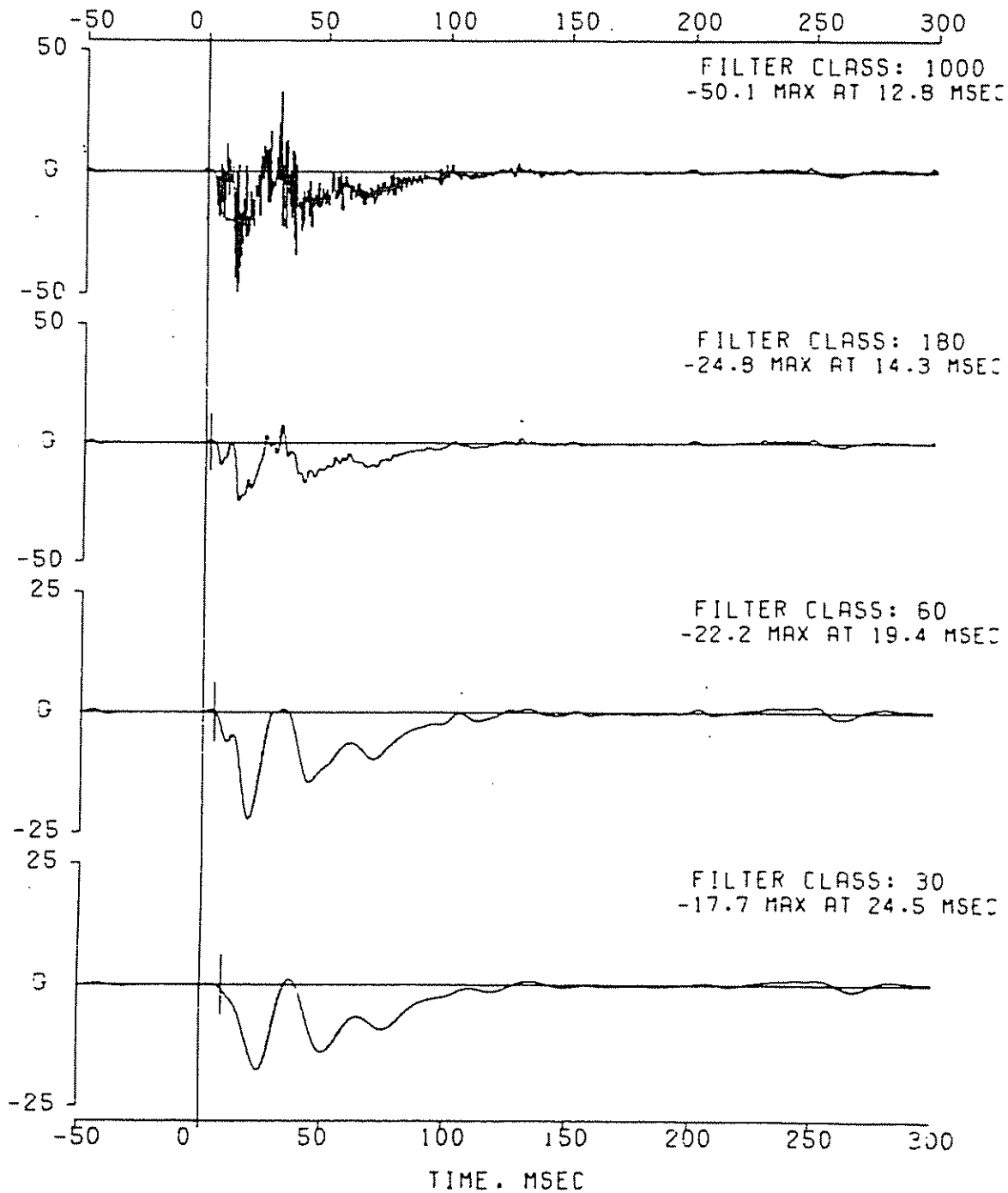
IMPACT ANALYSIS DEPT. 5320

DATA SET D1/18/96BA

JAN 22.1996

ERRATA

1



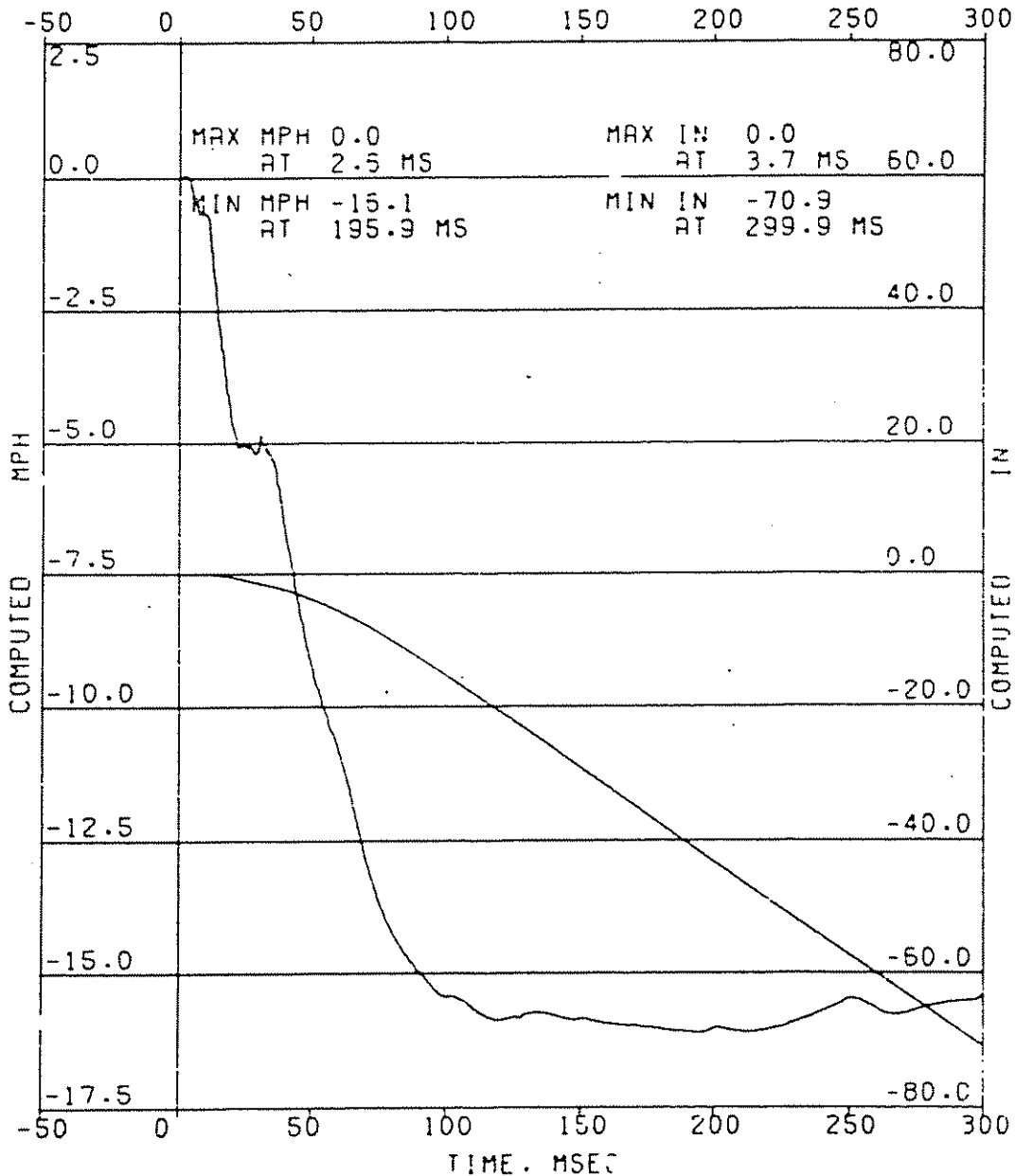
VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 003 RIGHT FRONT SILL X 14344

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FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

DATA SET 01/18/96BA
ERRATA 1



COMPUTED MPH
COMPUTED IN

DC 02019

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370

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1997 MVSS DEVELOPMENT - 301.

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CHANNEL 004 RIGHT FRONT SILL Z 14336

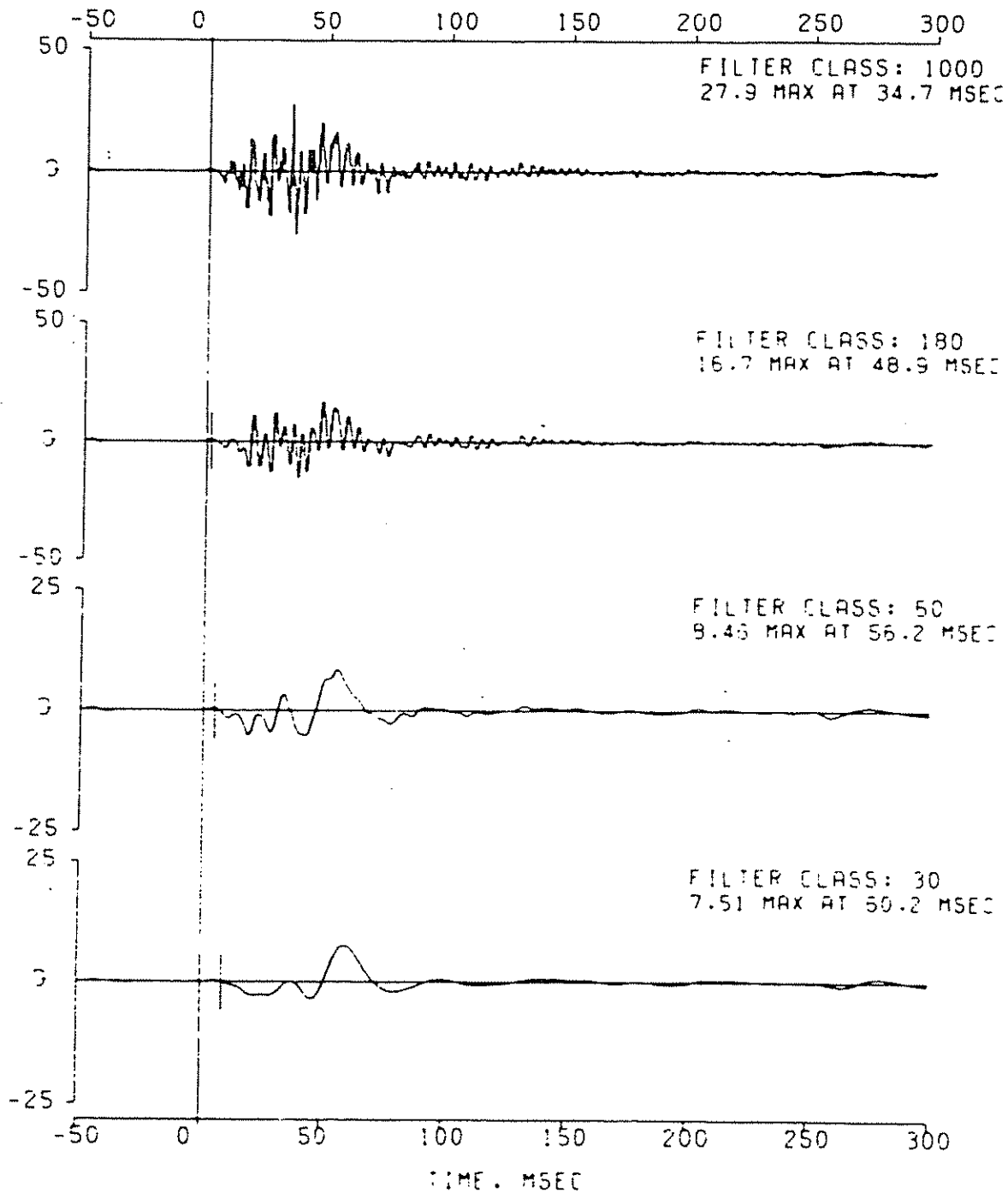
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22.1996

ERRATA 1

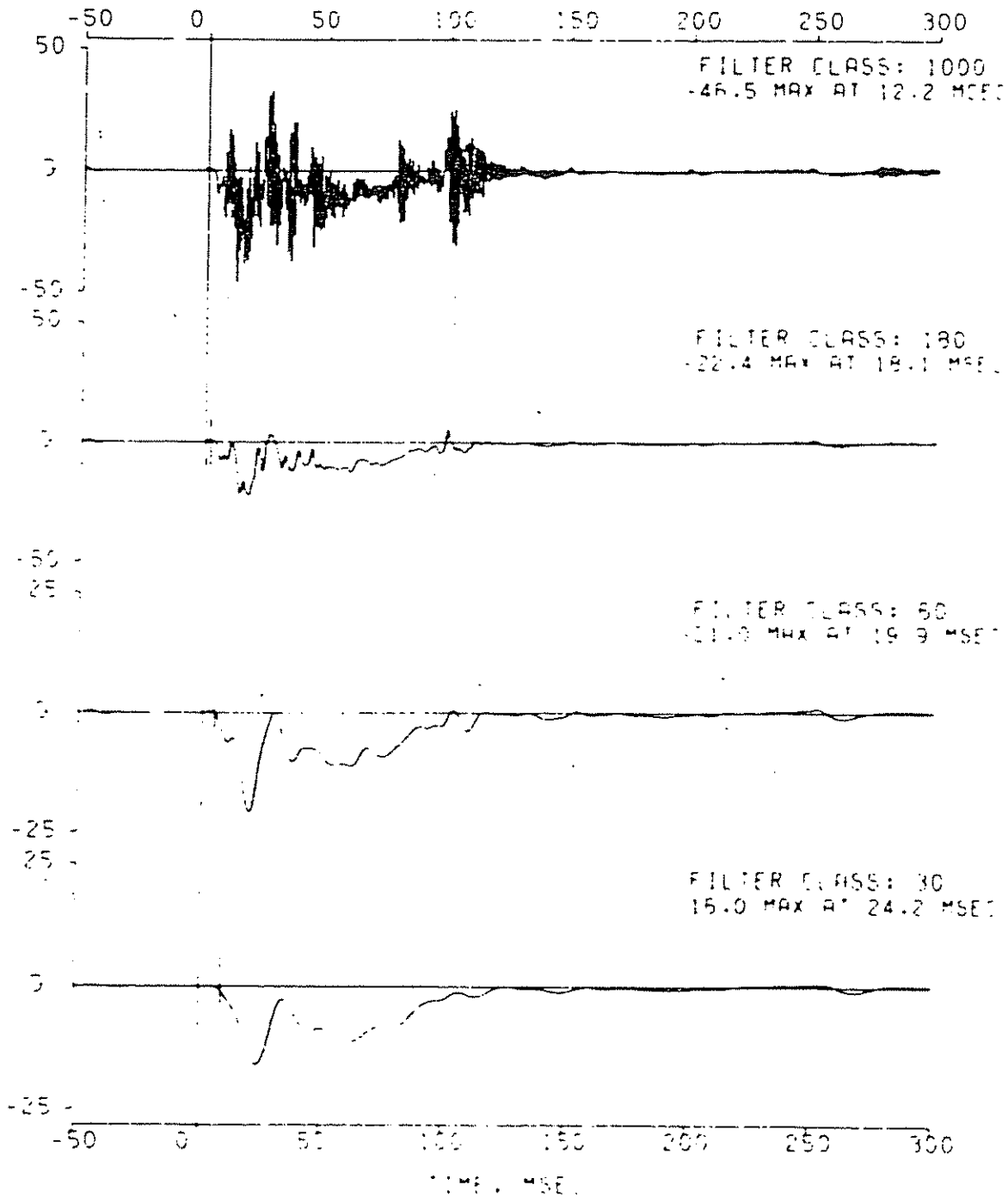


DC 02020

VC05789 30 MPH REAR BARRIER. ZJ074. 4.0L MP1. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 005 LEFT REAR SILL * 14322
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
IMPACT ANALYSIS DEPT. 5323
JAN 22.1996

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DATA SET 01/16/96BA
ERRATA 1



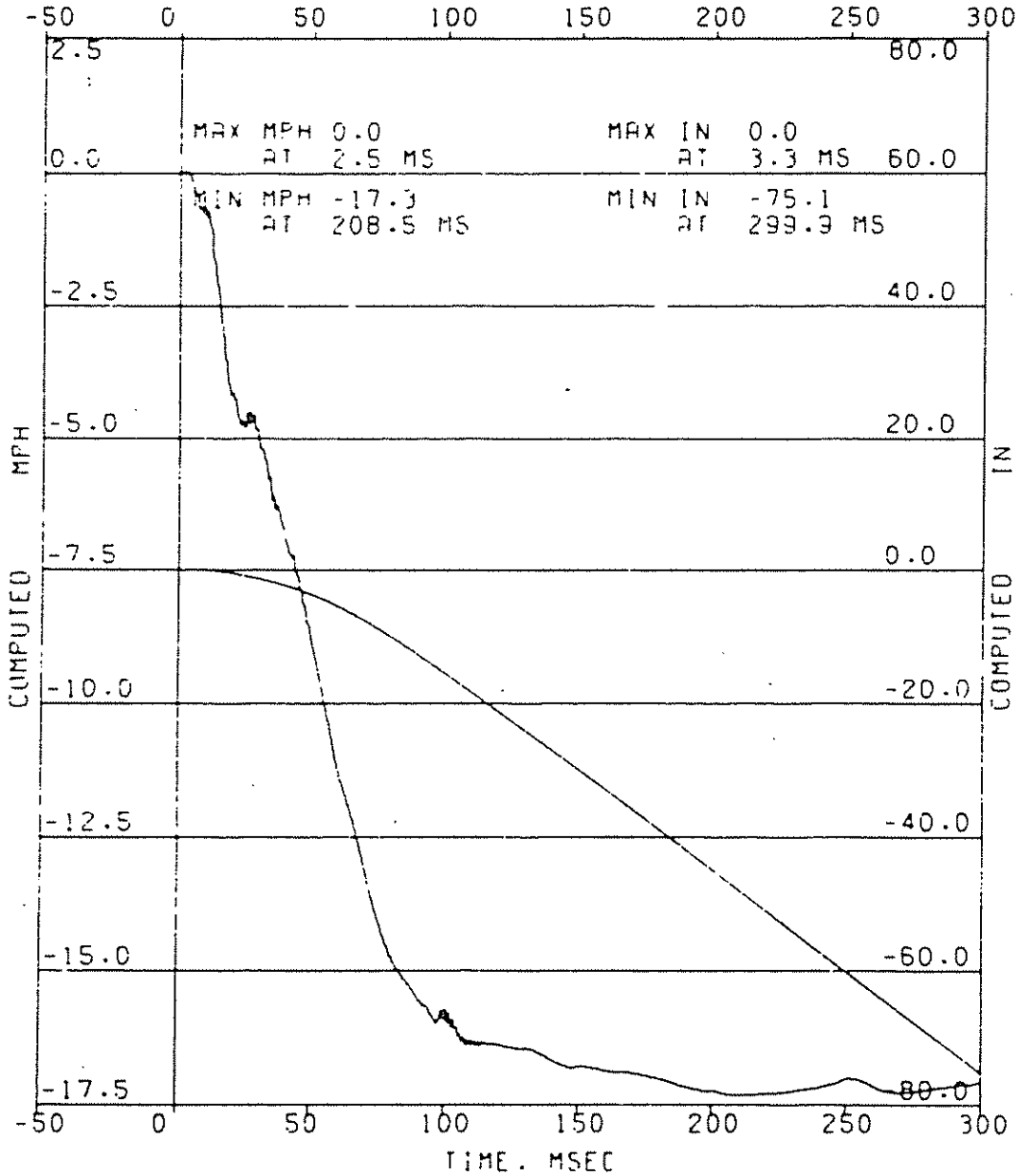
VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
 1997 MVSS DEVELOPMENT - 301.
 CHANNEL 005 LEFT REAR SILL X 14322

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FILTER TYPE: 0BDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
 JAN 22.1996

DATA SET 01/18/96BA
 ERRATA 1



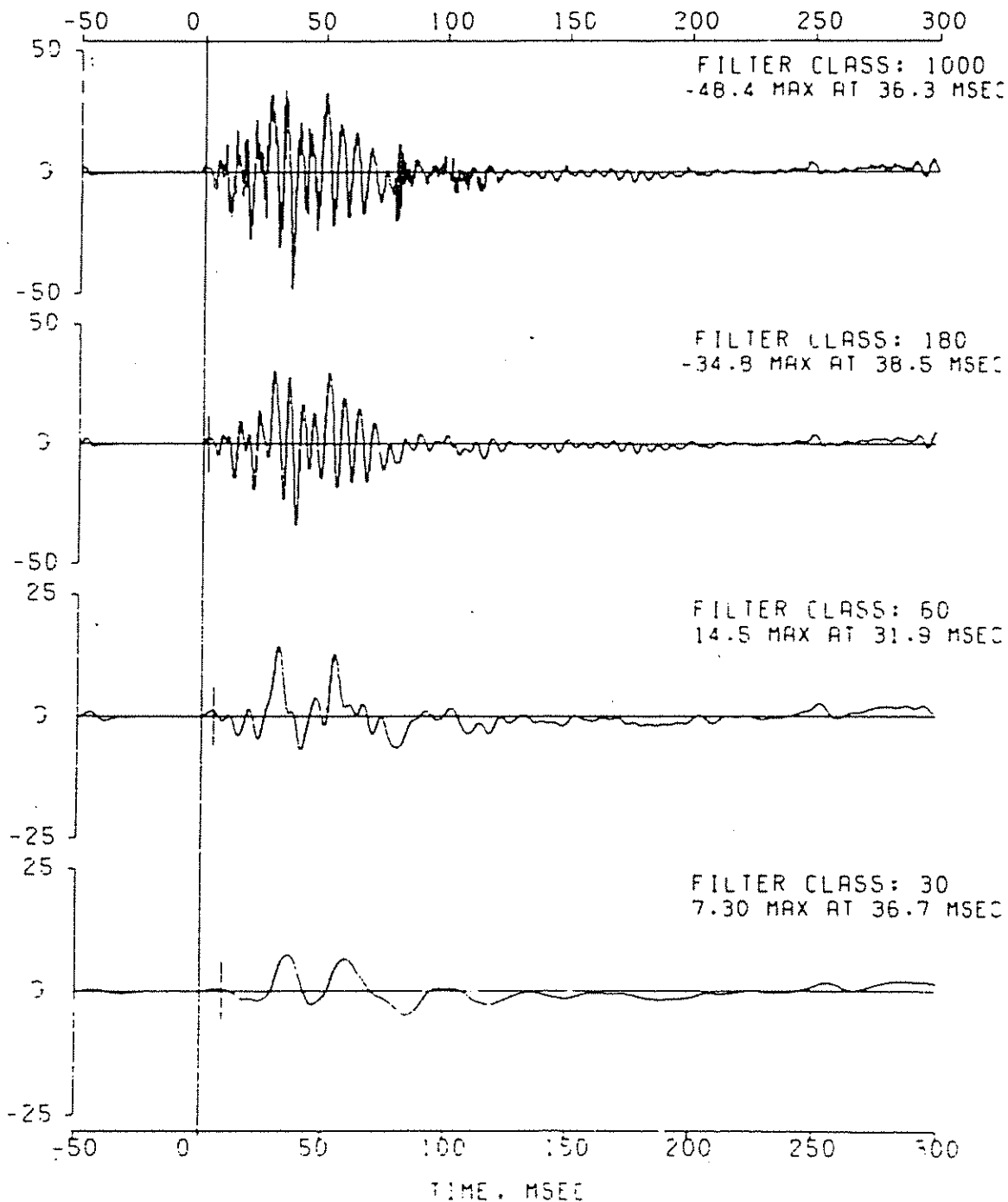
COMPUTED MPH
 COMPUTED IN

DC 02022

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 006 LEFT REAR SILL Z 9482
FILTER TYPE: 0BDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

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DATA SET 01/18/95BA
ERRATA 1



DC 02023

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370

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OF 039

1997 MVSS DEVELOPMENT - 301.

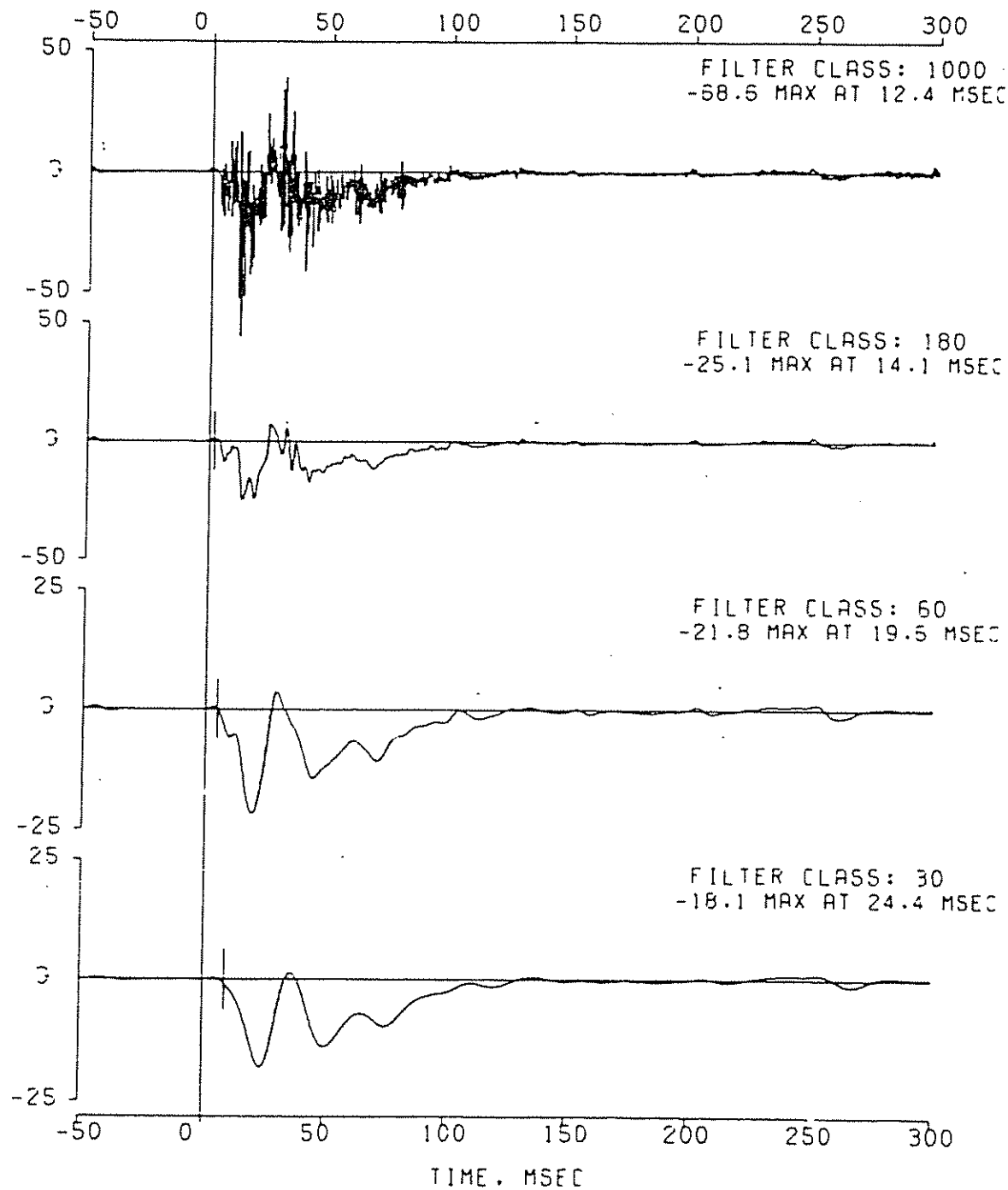
CHANNEL 007 RIGHT REAR SILL X 277217

FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

DATA SET 01/18/96BA

JAN 22, 1996

ERRATA 1



DC 02024

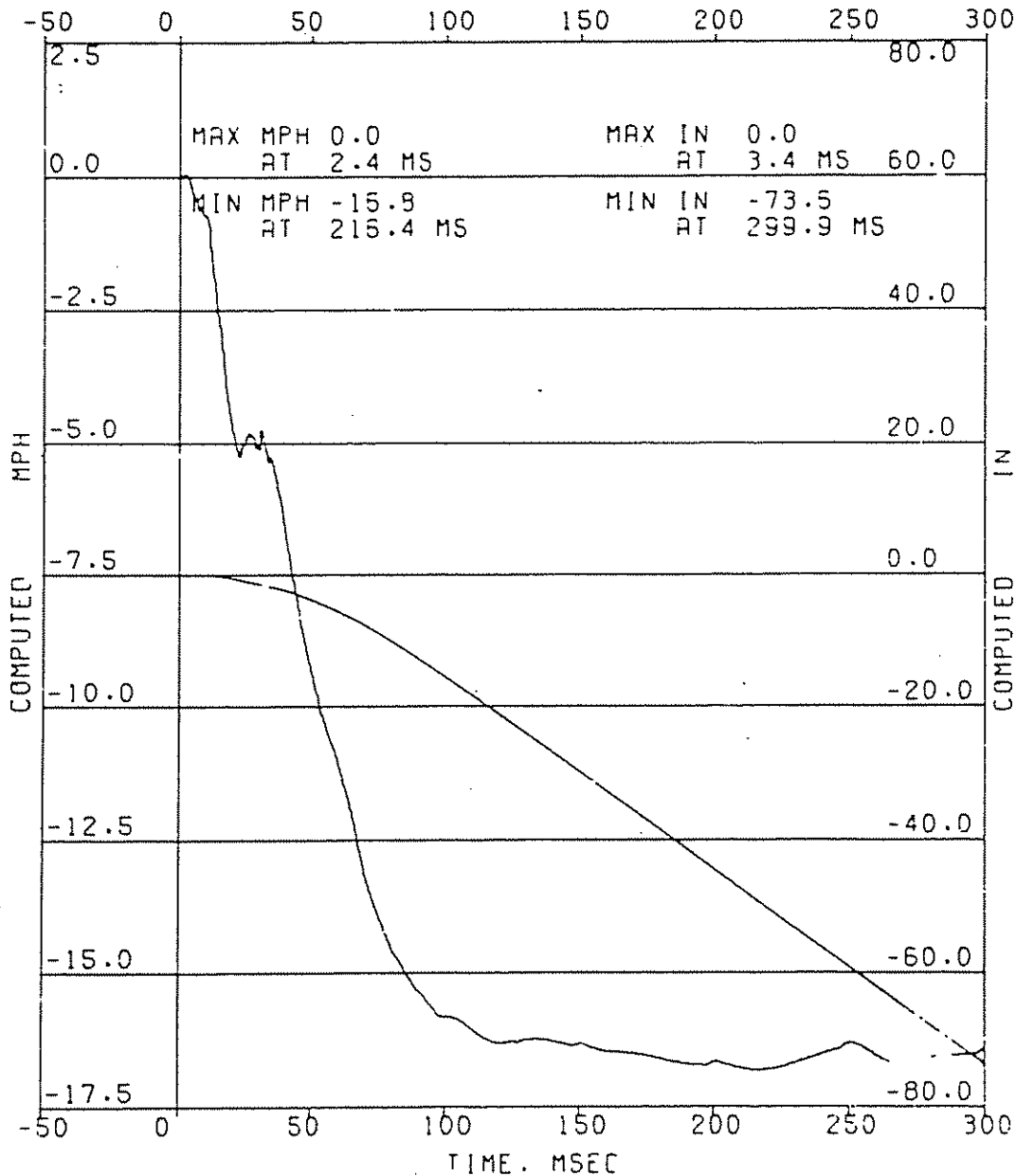
VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI, ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 007 RIGHT REAR SILL X 277217

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FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
JAN 22, 1996

DATA SET 01/18/96BA
ERRATA 1



COMPUTED MPH
COMPUTED IN

DC 02025

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370

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CHANNEL 008 RIGHT REAR SILL Z 277212

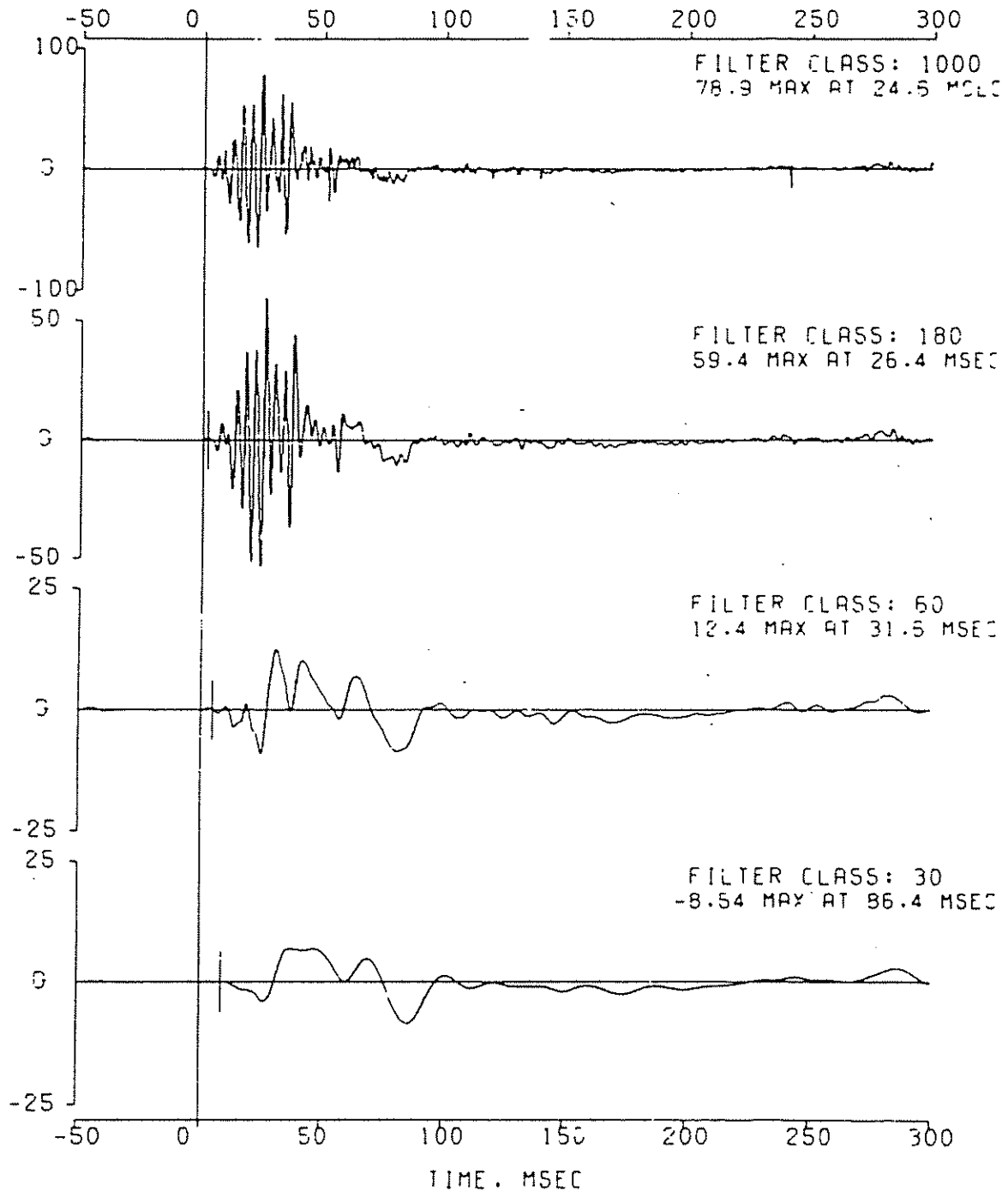
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22.1996

ERRATA 1



DC 02026

VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI, ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.

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CHANNEL 009 LT RAIL TRAIL ARM PIV X 608364

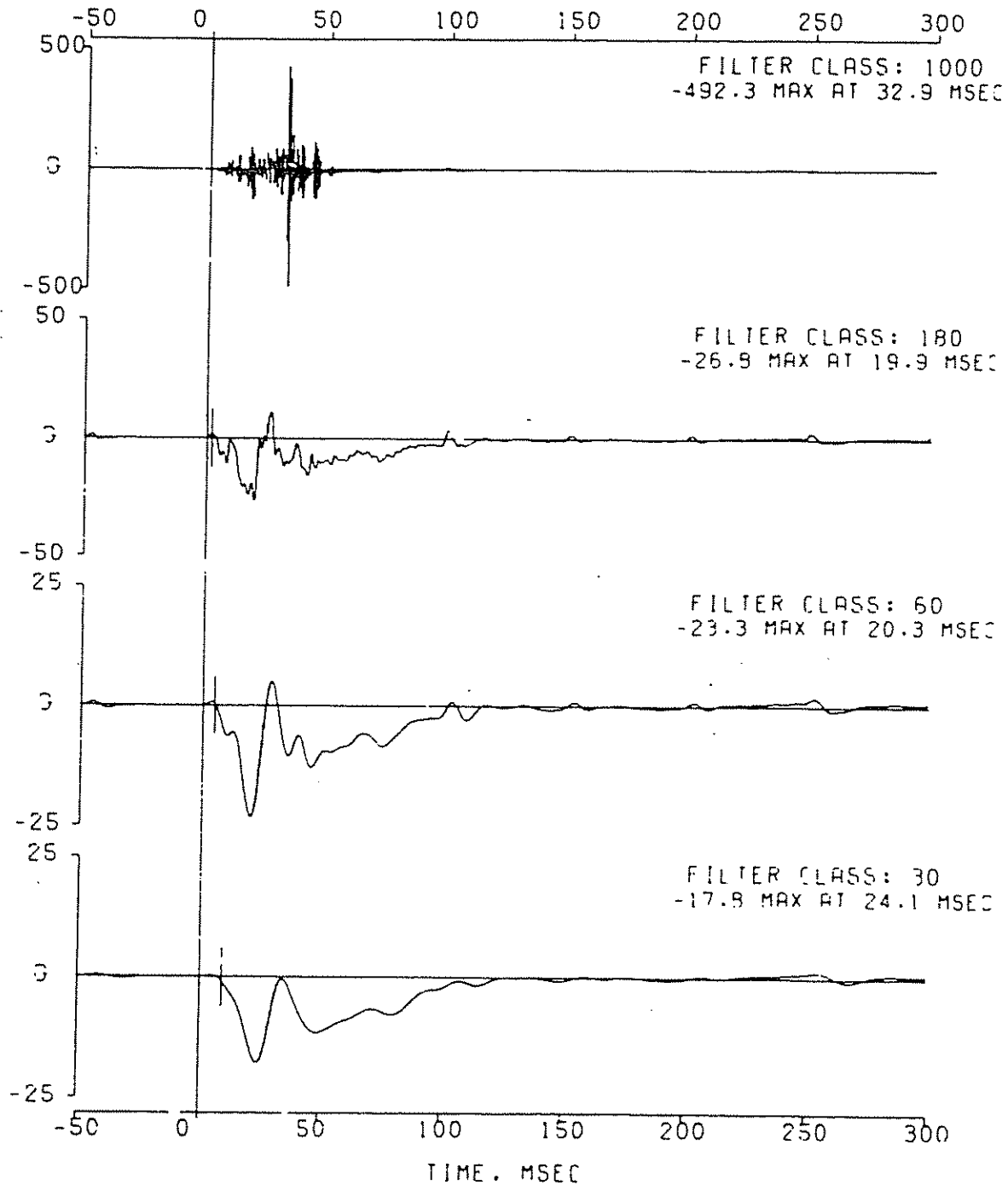
FILTER TYPE: 08DAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22.1996

ERRATA 1

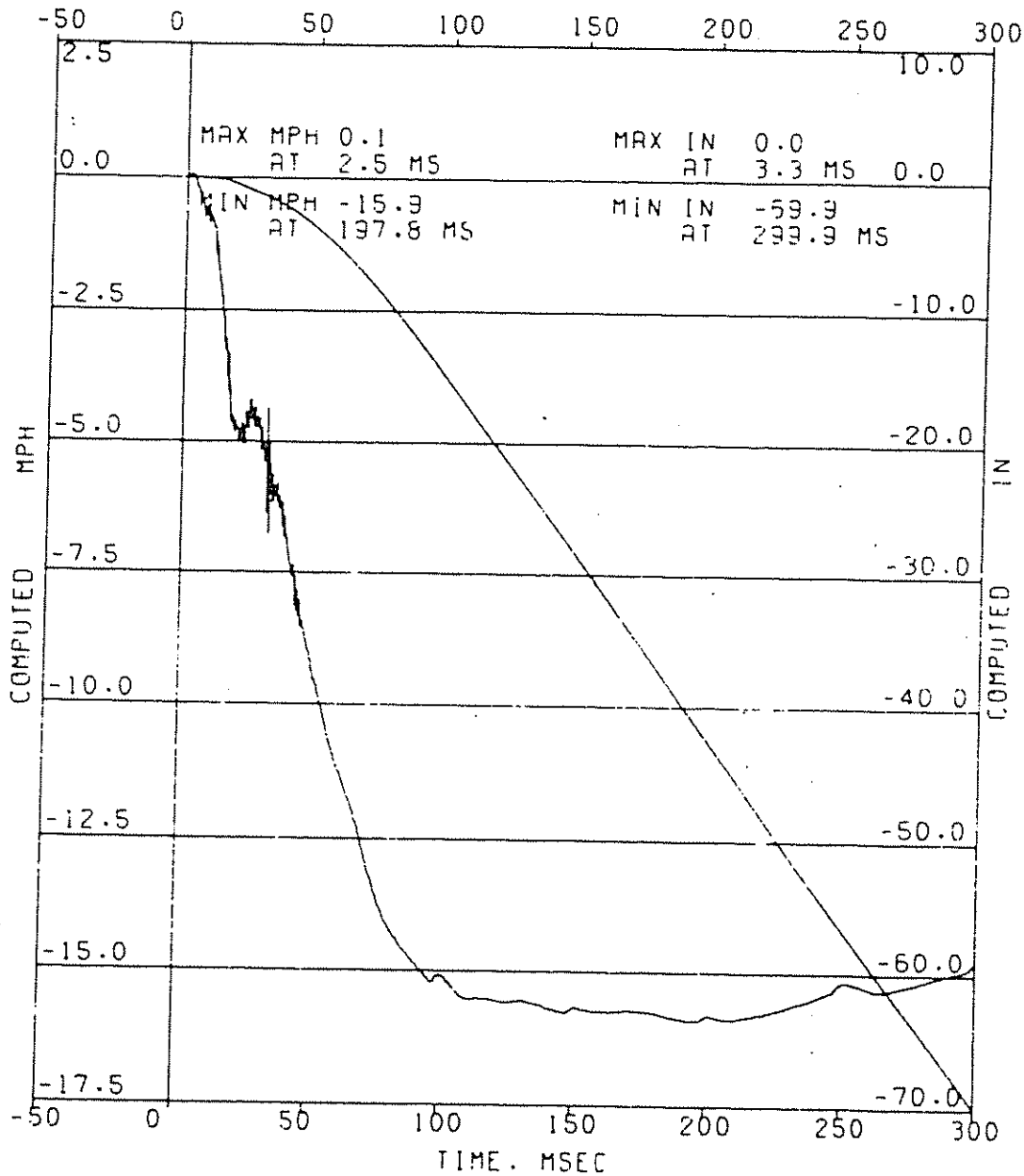


DC 02027

FILTER TYPE: OBDAS-I!! RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

DATA SET 01/18/96BA
ERRATA 1



COMPUTED MPH
COMPUTED IN

DC 02028

VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI, ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.

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CHANNEL 010 RT RAIL TRAIL ARM PIV X 609361

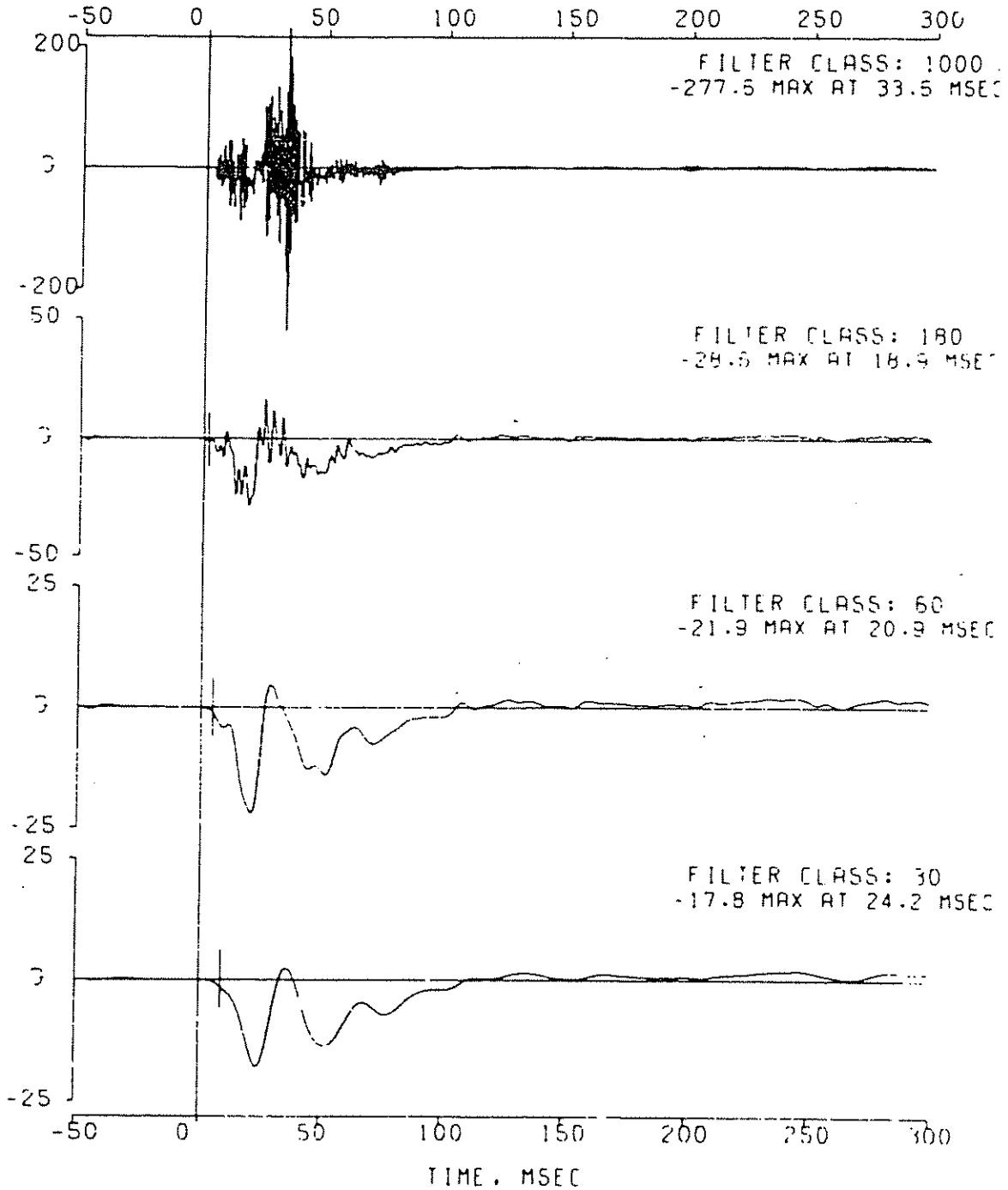
FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER: 16501

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22, 1996

ERRATA 1



DC 02029

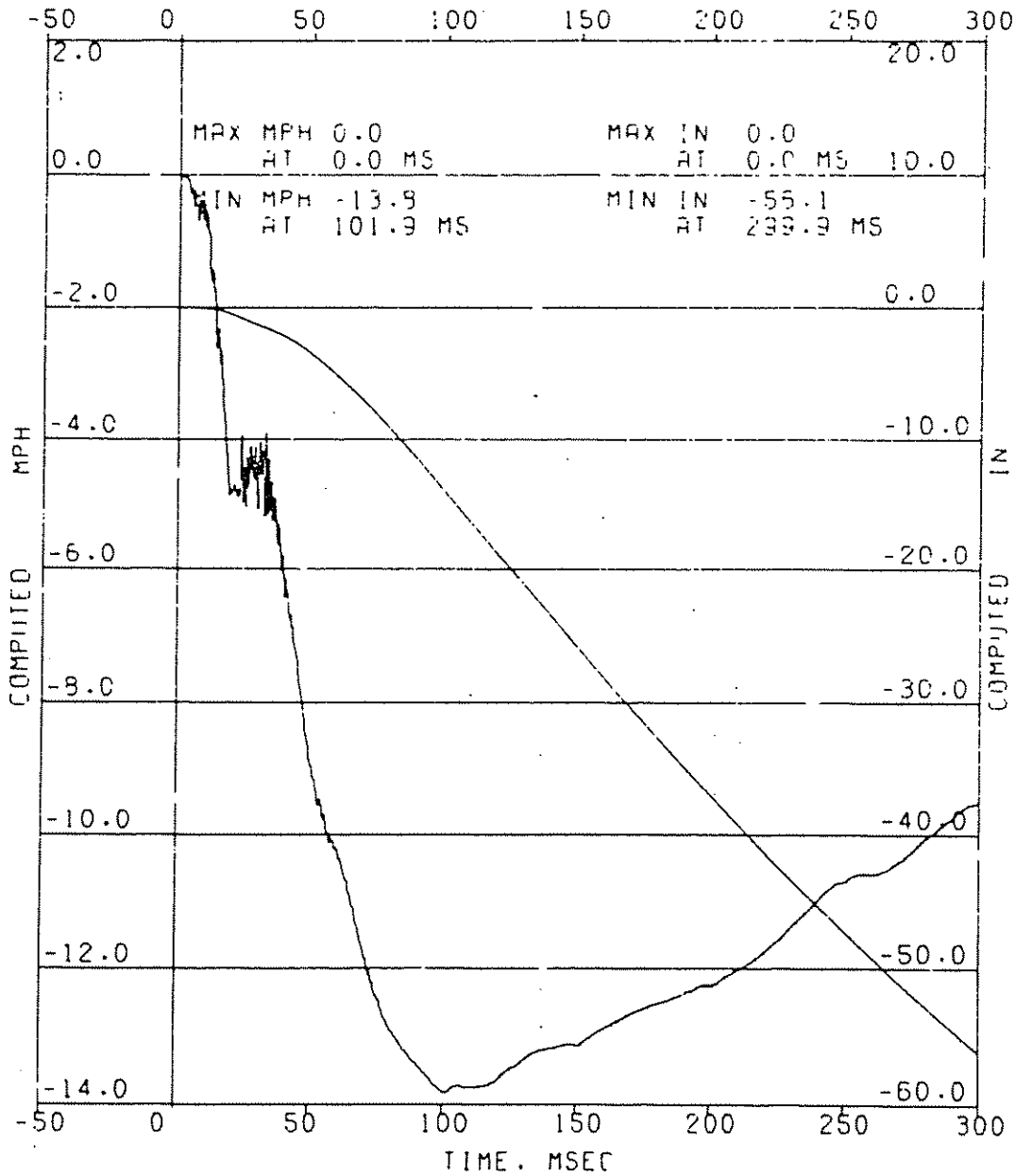
VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI, ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 010 RT RAIL TRAIL ARM PIV X 608361

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FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
JAN 22, 1996

DATA SET 01/18/96BA
ERRATA 1



COMPUTED MPH
COMPUTED IN

DC 02030

VF05789 30 MPH REAR BARRIER. 20074. 4.0L MPH. ITEM 218370

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1997 MVSS DEVELOPMENT 301.

M 019

CHANNEL 011 RT REAR RAIL MID TANK * 14385

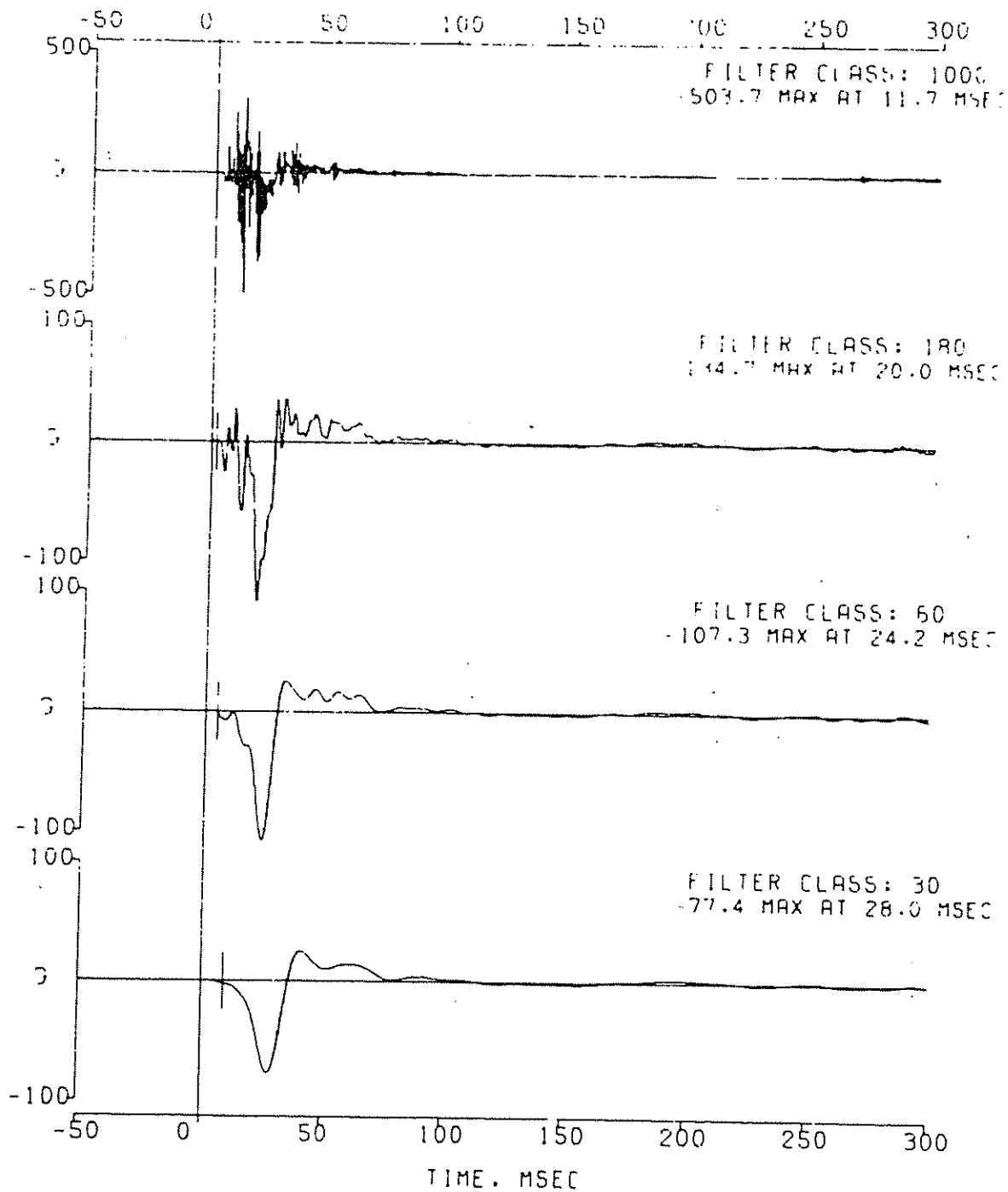
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1050)

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96PA

JAN 22, 1996

ERRATA 1



DC 02031

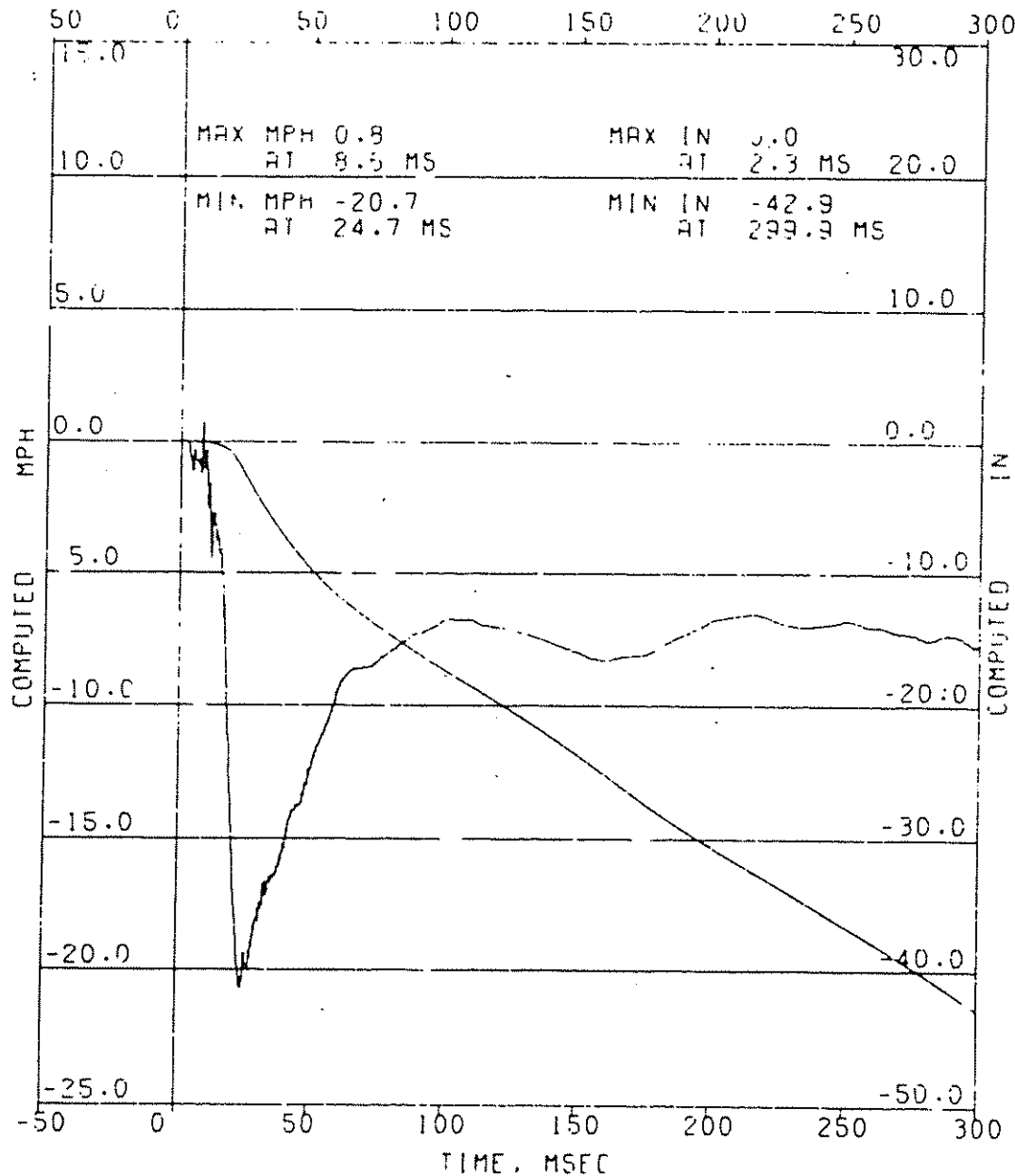
V05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
 1997 MVSS DEVELOPMENT 301.
 CHANNEL 011 RT REAR RAIL MID TANK X 14385

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FILTER TYPE: 080AS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
 JAN 22, 1996

DATA SET 01/18/96BA
 ERRATA 1



COMPUTED MPH
 COMPUTED IN

DC 02032

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.

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CHANNEL 012 RT REAR RAIL MID TANK Z 80429

FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

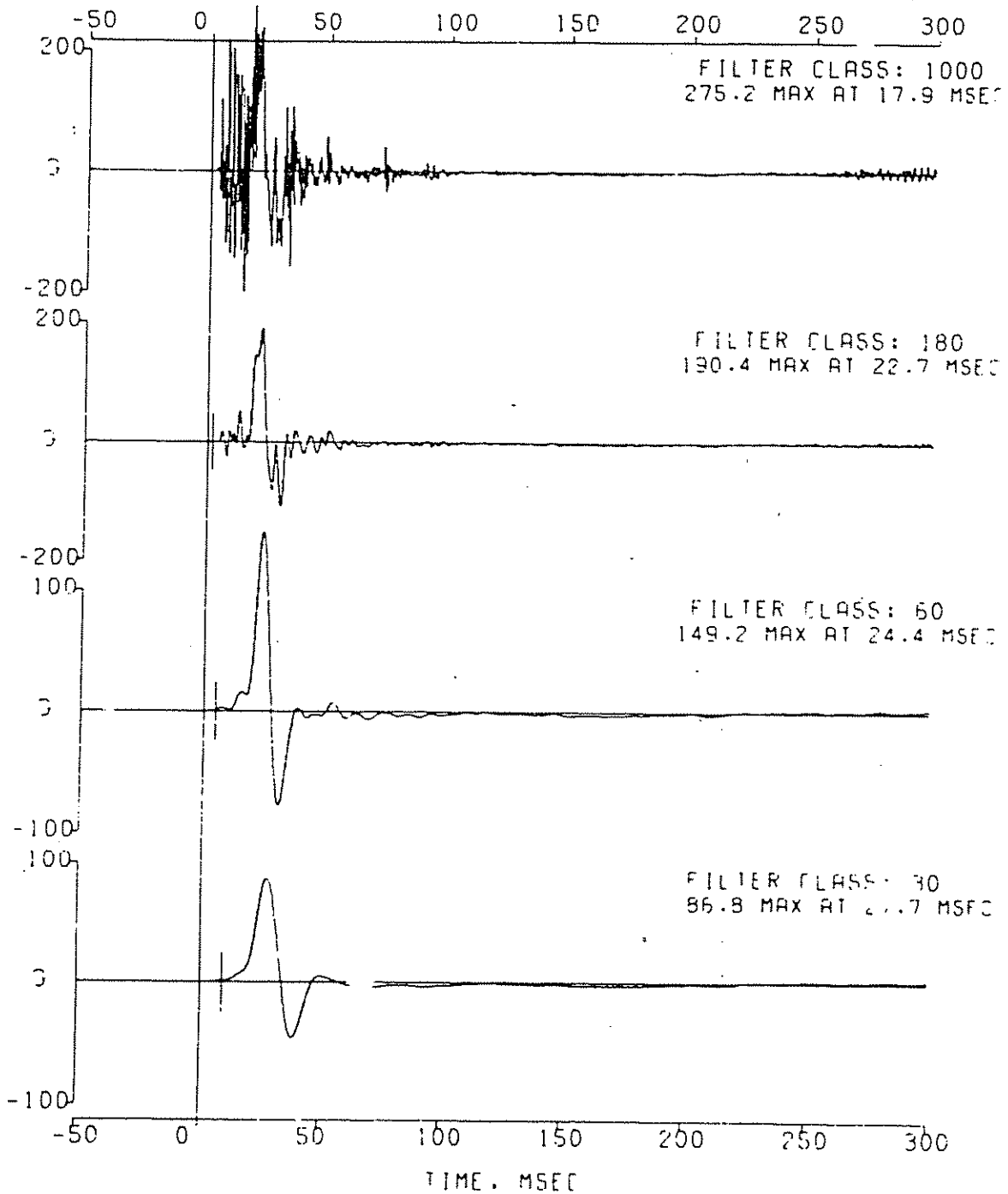
IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22.1996

ERRATA

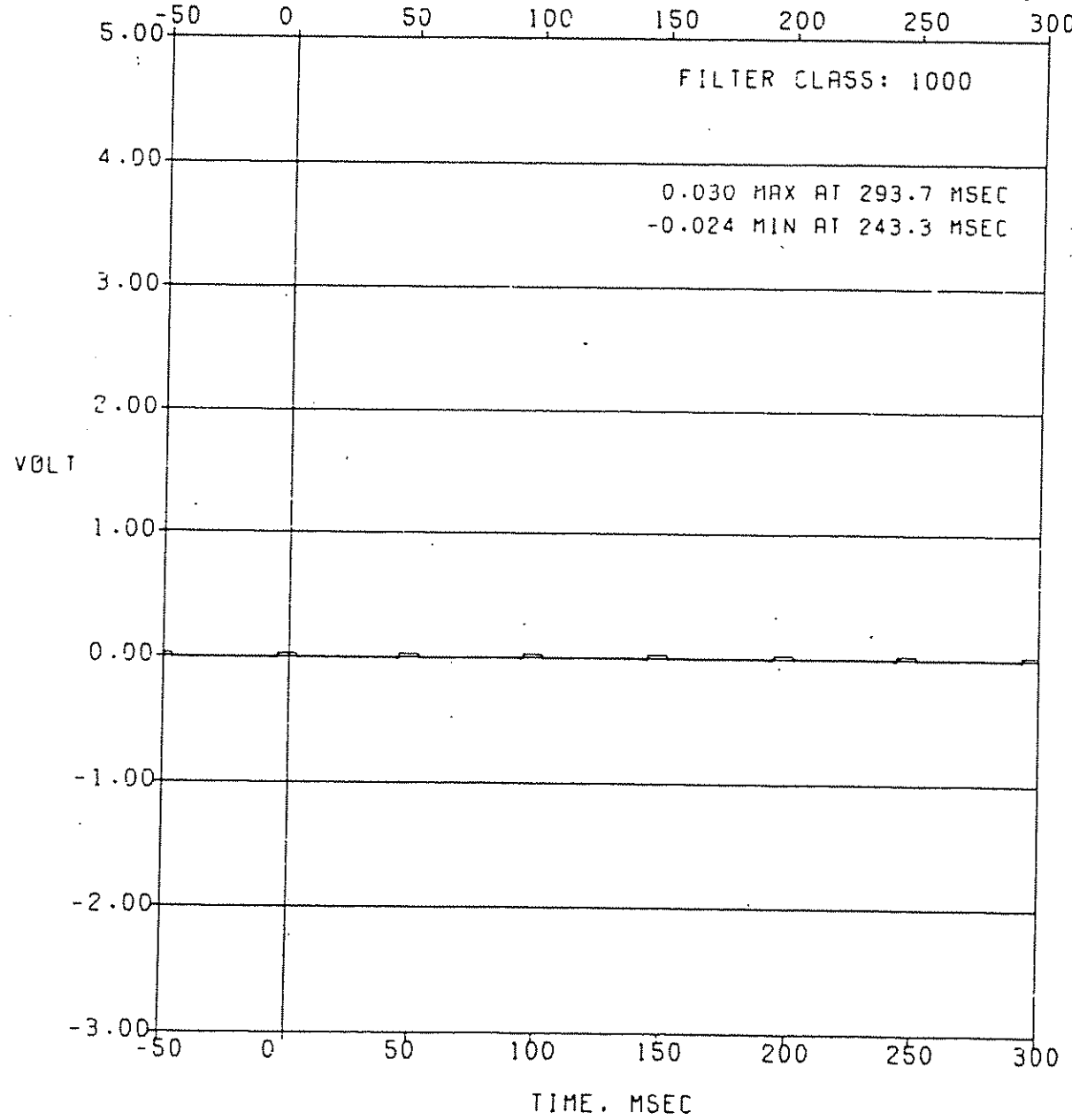
1



DC 02033

CHANNEL 013 RECM SQUIB EE

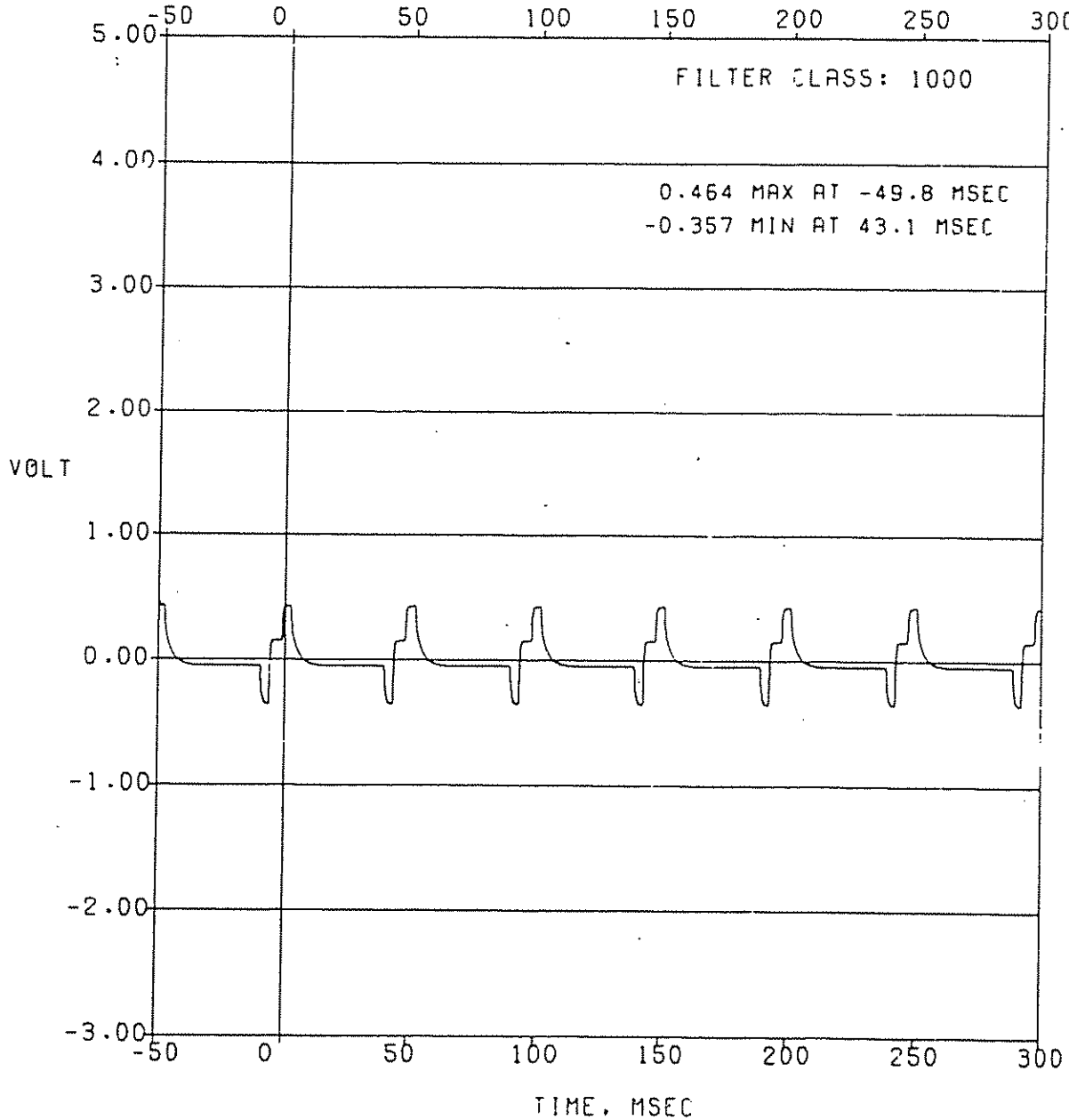
FILTER TYPE: 0BDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
IMPACT ANALYSIS DEPT. 5320 DATA SET 01/18/96BA
JAN 22.1996 ERRATA 1



***** NOTE *****
***** NO EVENT *****

CHANNEL 014 RECM SAFING SEN EE

FILTER TYPE: 0BDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
IMPACT ANALYSIS DEPT. 5320 DATA SET 01/18/96BA
JAN 22, 1996 ERRATA 1



***** NOTE *****
***** NO EVENT *****

V005789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.

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CHANNEL 015 RECM INTERN ACCEL G EE

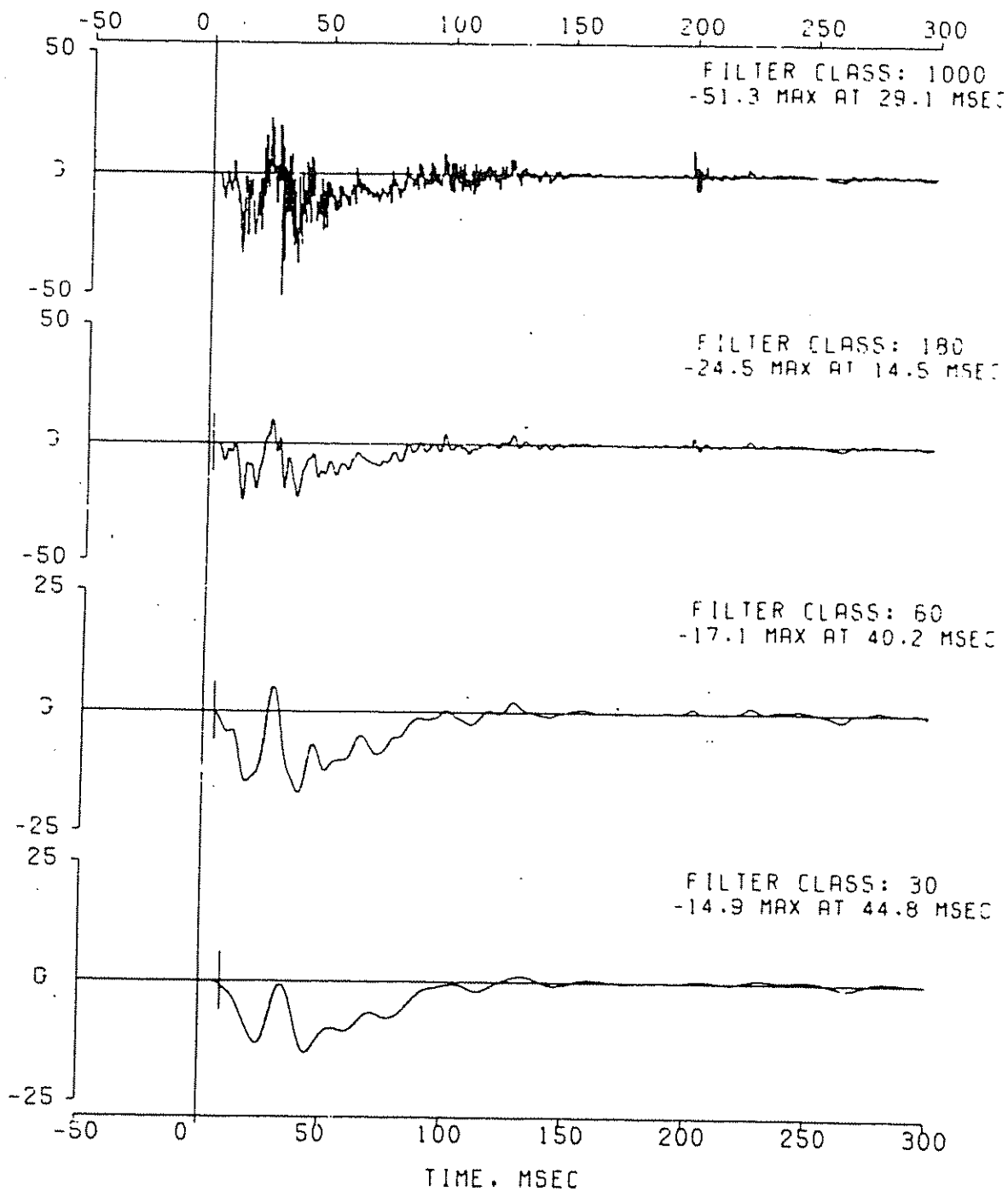
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER: 1650

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BA

JAN 22, 1996

ERRATA 1



DC 02036

VC05789 30 MPH REAR BARRIER. ZJ074. 4.0L MPI. ITEM ZJ8370

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1997 MVSS DEVELOPMENT - 301.

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CHANNEL 016 RECM EXTERN

X ASINJ

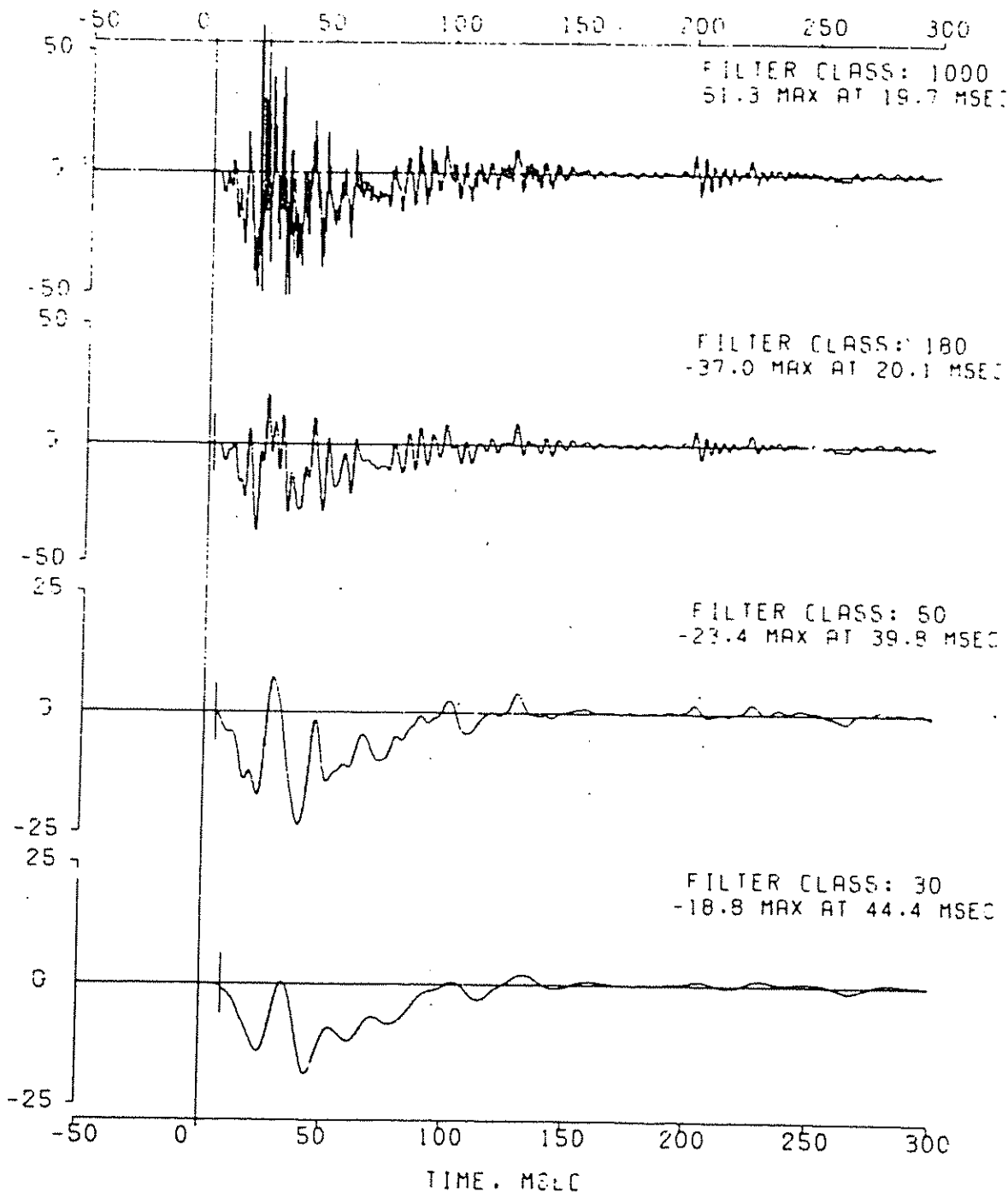
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

IMPACT ANALYSIS DEPT. 5300

DATA SET 01/18/96BA

JAN 22, 1996

ERRATA

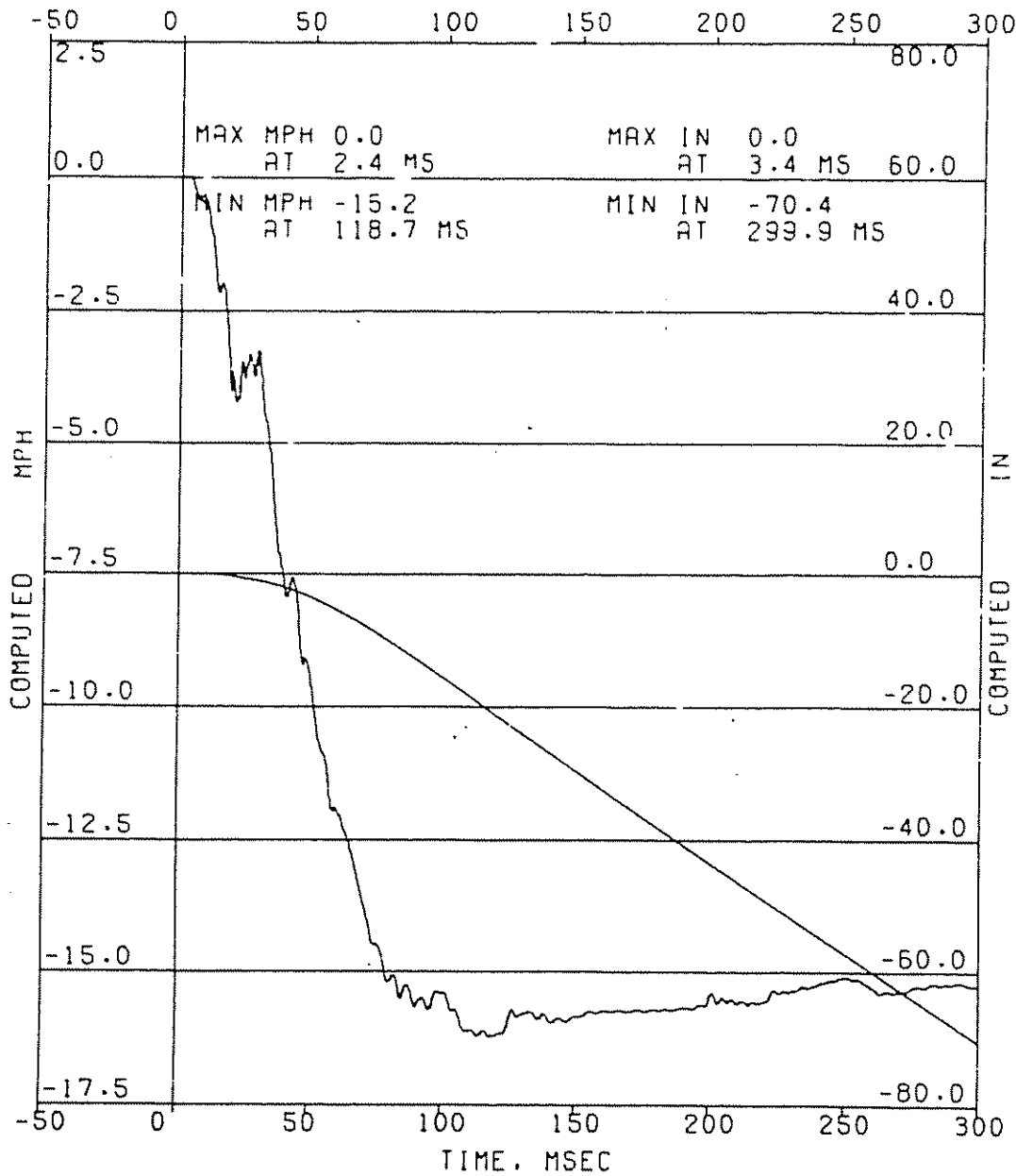


DC 02037

FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER 16501
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

DATA SET 01/18/96BA
ERRATA 1



COMPUTED MPH
COMPUTED IN

DC 02038

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.

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CHANNEL 017 RECM EXTERN

Y AAA33J

FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

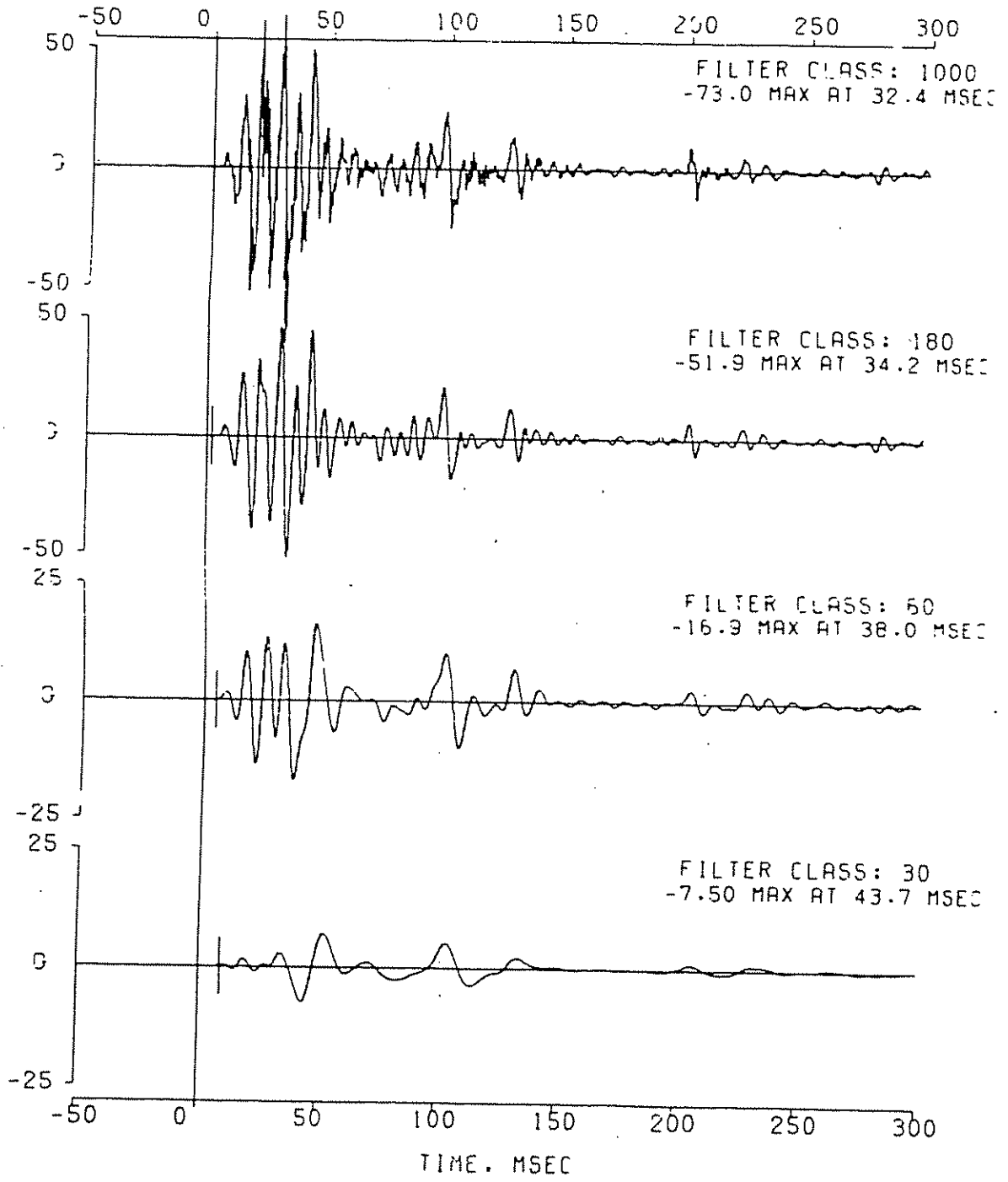
IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BB

JAN 22, 1996

ERRATA

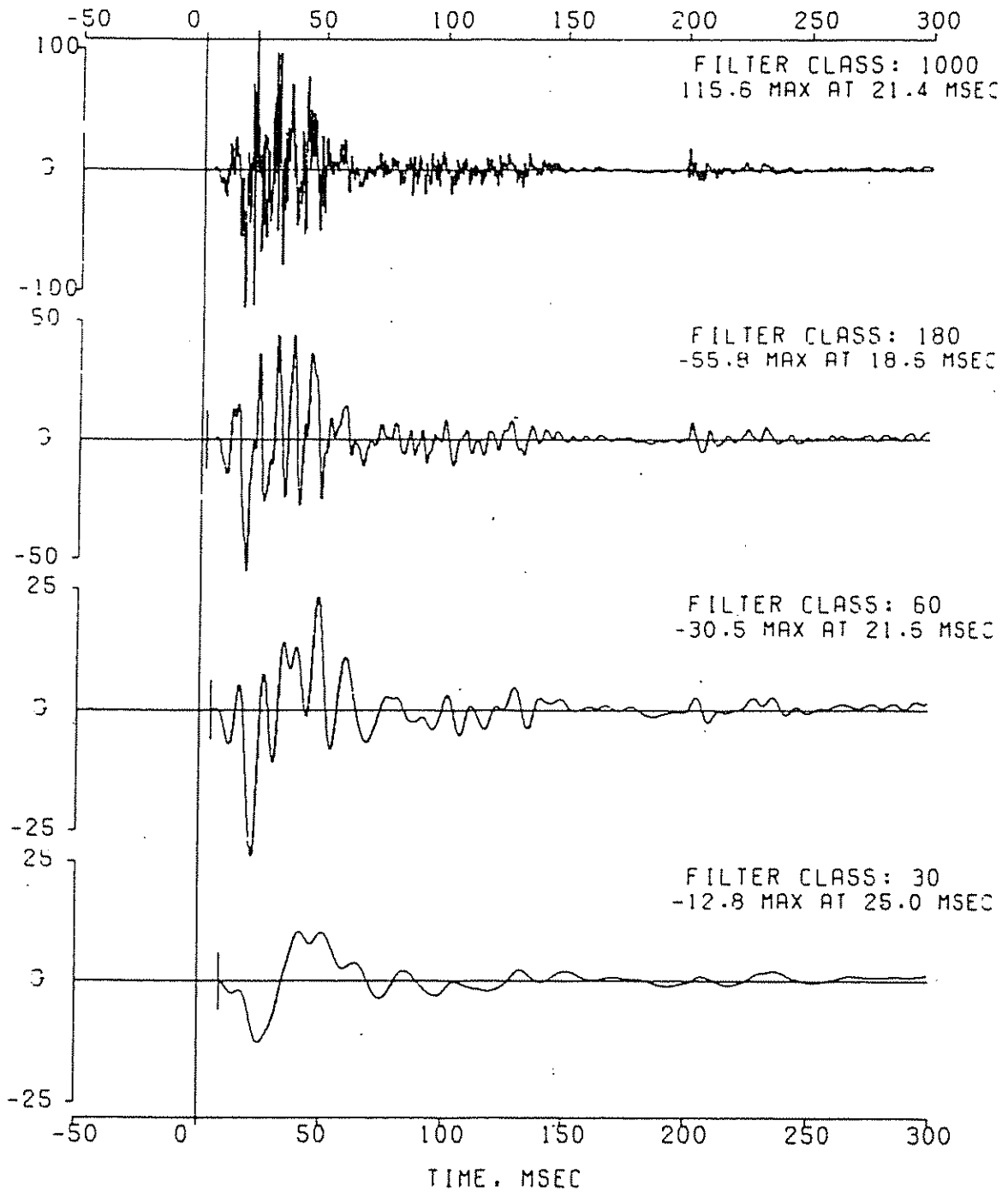
1



VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 018 RECM EXTERN Z EY42J
FILTER TYPE: 080AS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

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DATA SET 01/18/96BB
LRRATA 1



DC 02040

VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI, ITEM ZJ8370

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1997 MVSS DEVELOPMENT - 301.

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CHANNEL 019 LT FT SENSOR TOP X DJ44J

FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)

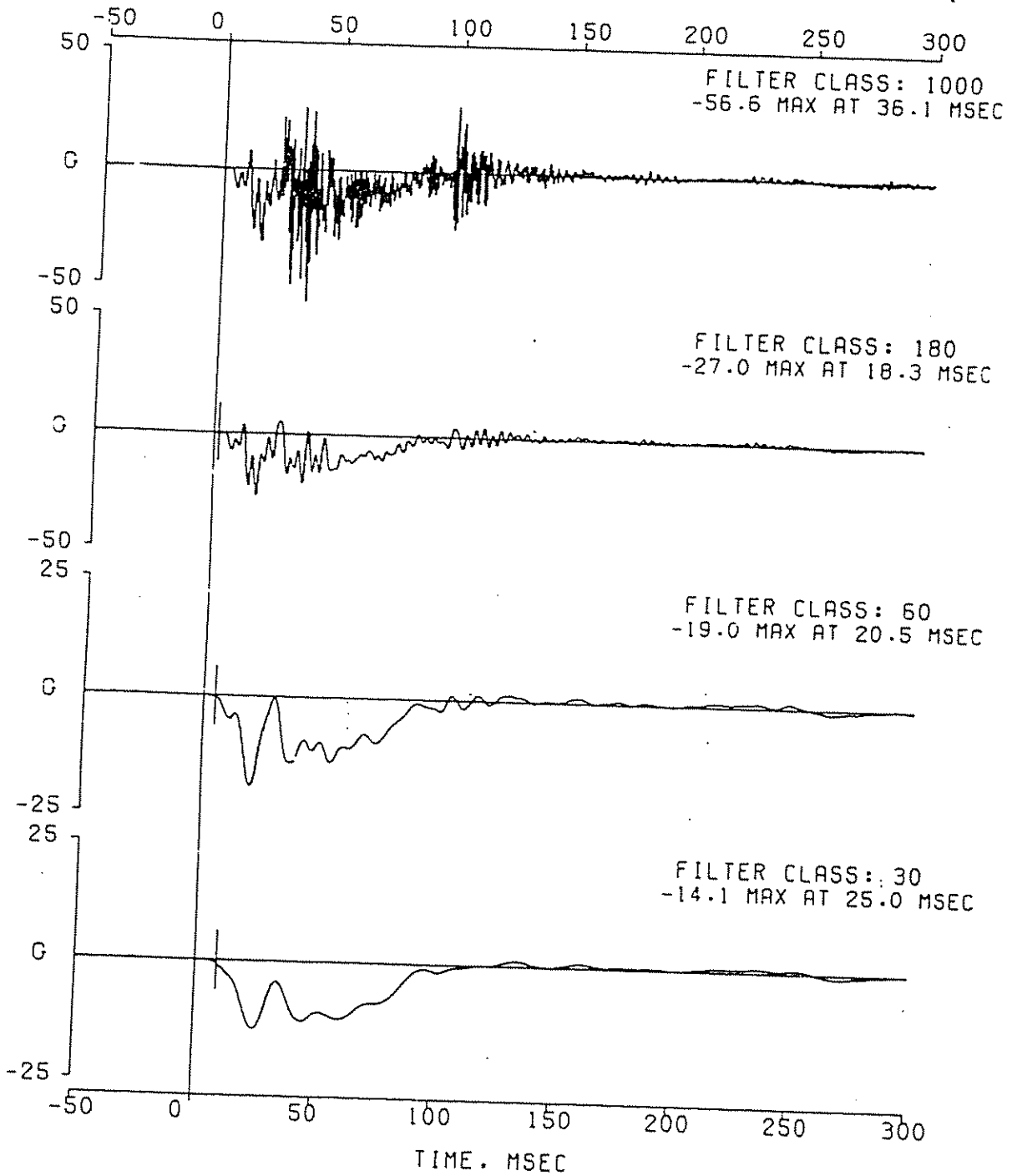
IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BB

JAN 22, 1996

ERRATA

1



DC 02041

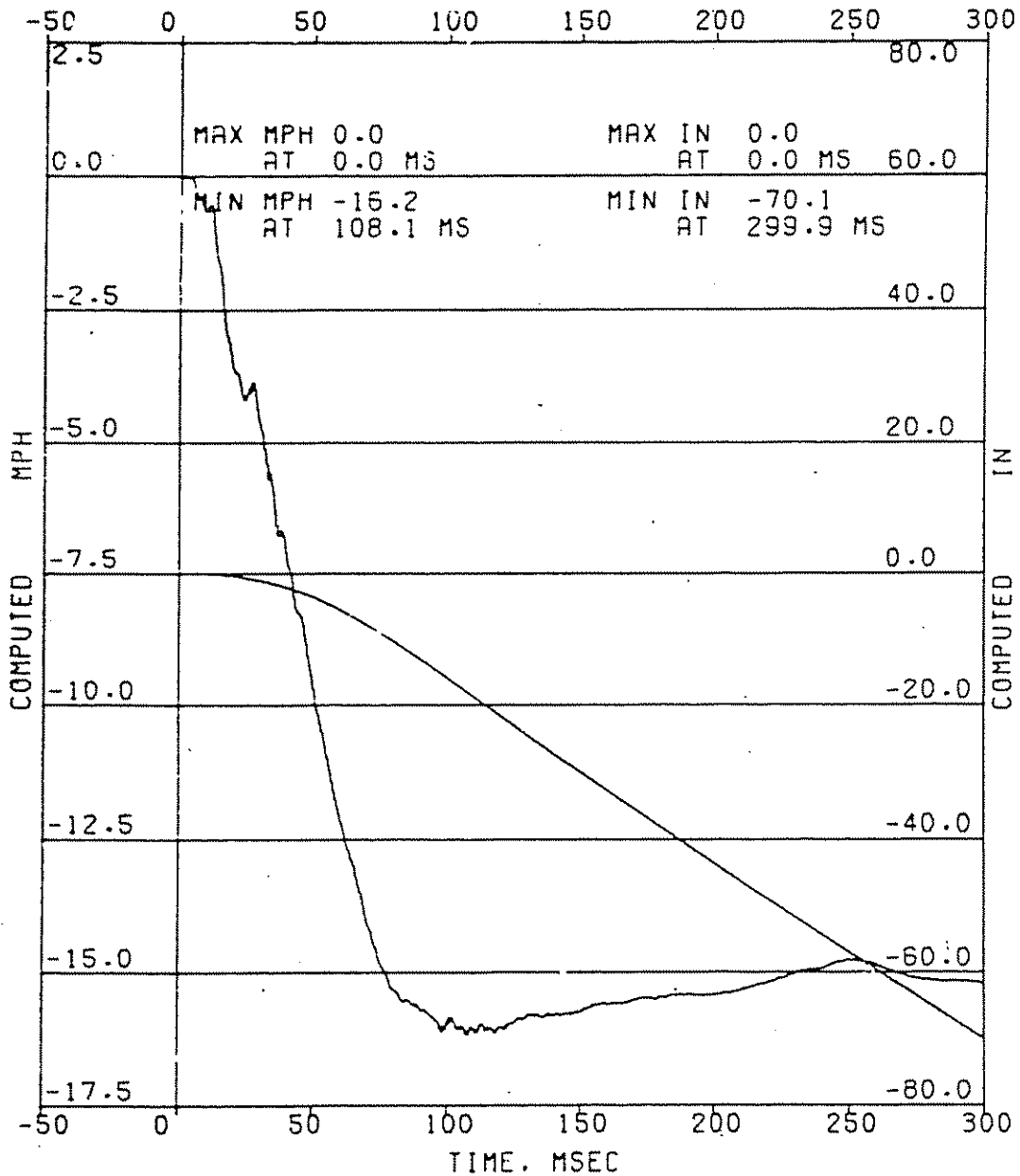
VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 019 LT FT SENSOR TOP X DJ44J

PAGE 033
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FILTER TYPE: UBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

DATA SET 01/18/96BB
ERRATA 1



COMPUTED MPH
COMPUTED IN

DC 02042

VC75789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370

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1997 MVSS DEVELOPMENT - 301.

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CHANNEL 020 LT FT SENSOR TOP Z AE870

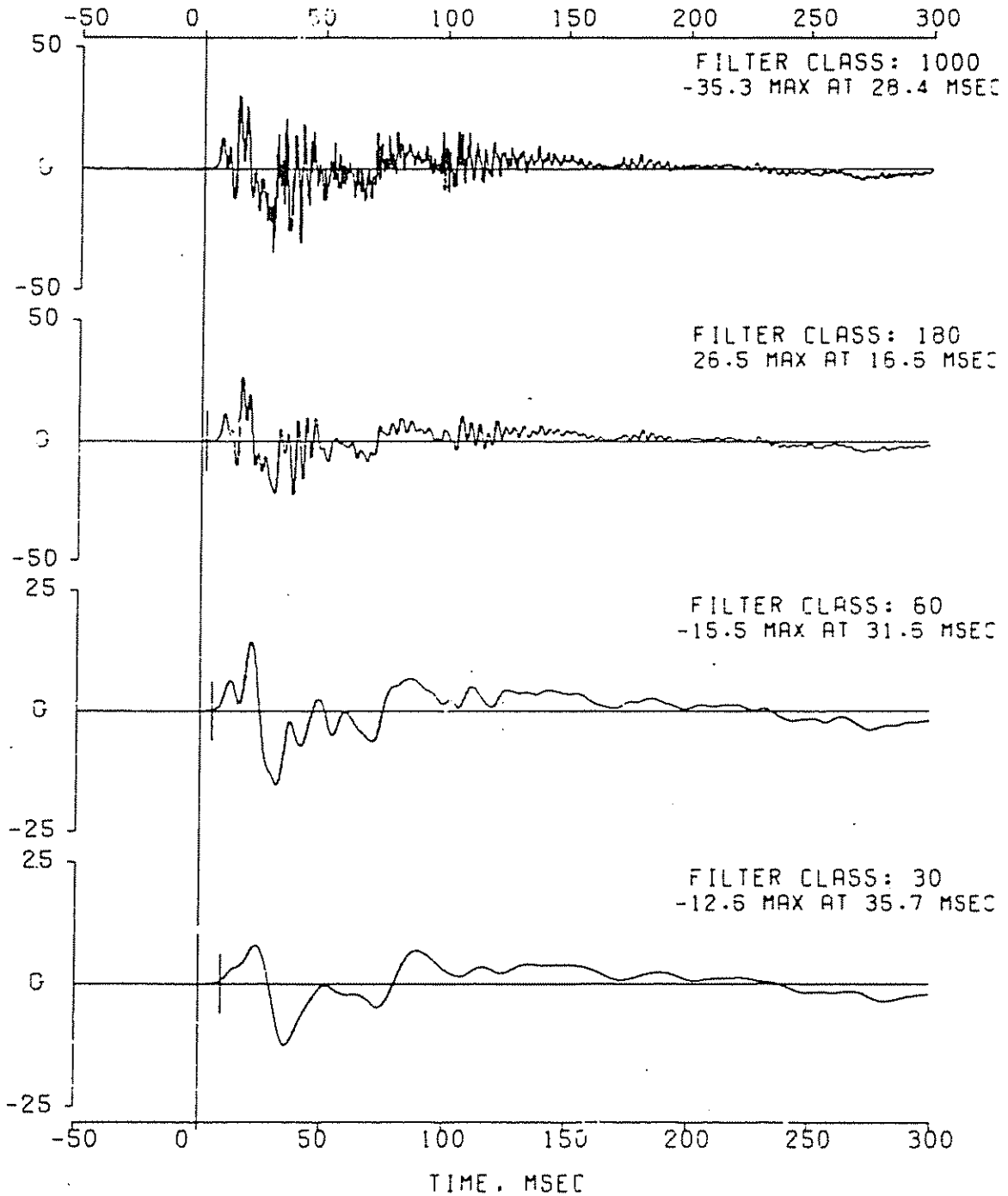
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/9688

JAN 22.1996

ERRATA ;

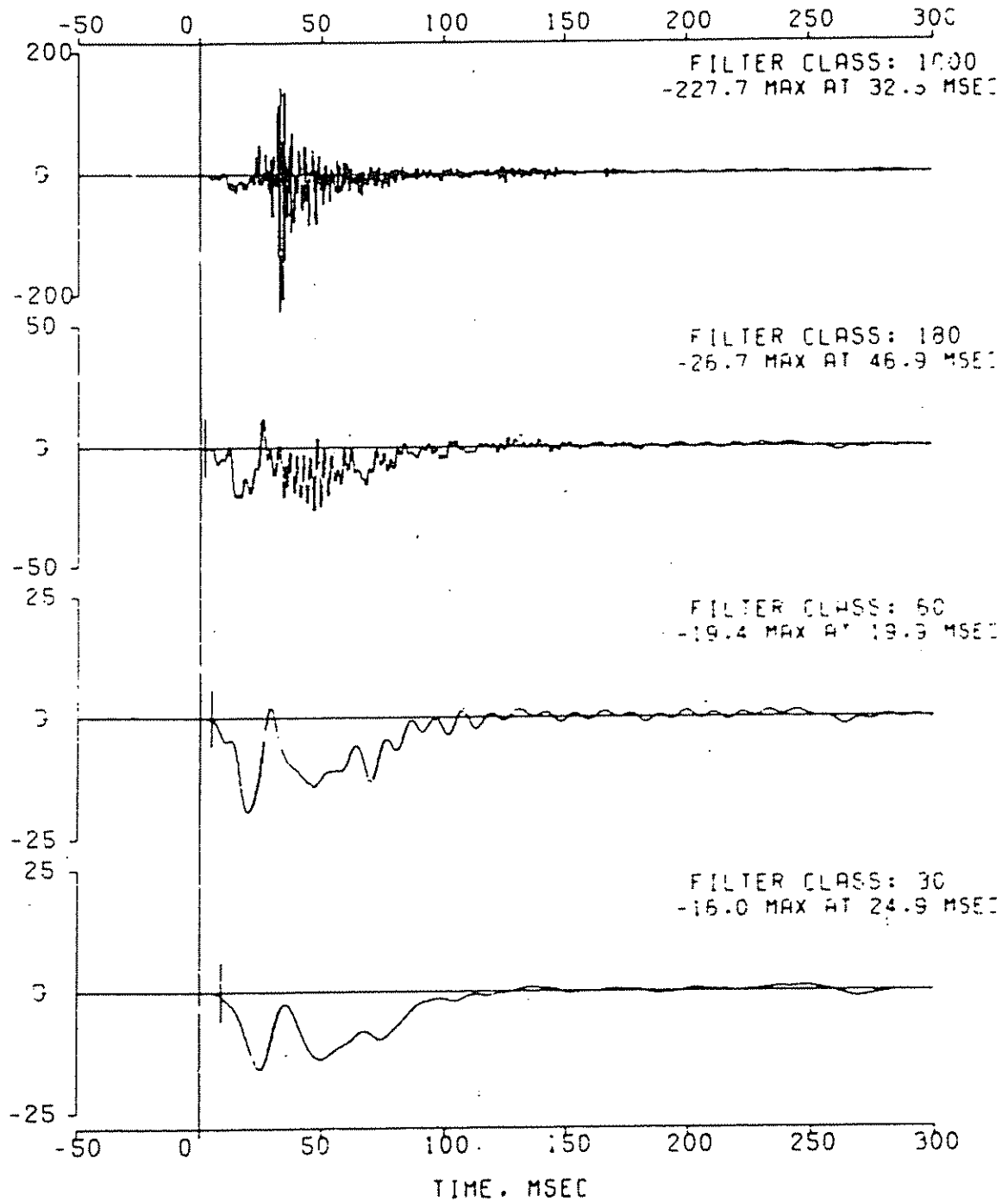


DC 02043

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 021 RT FT SENSOR TOP X AMTM4
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER 116501
IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

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DATA SET 01/18/96BB
ERRATA 1



DC 02044

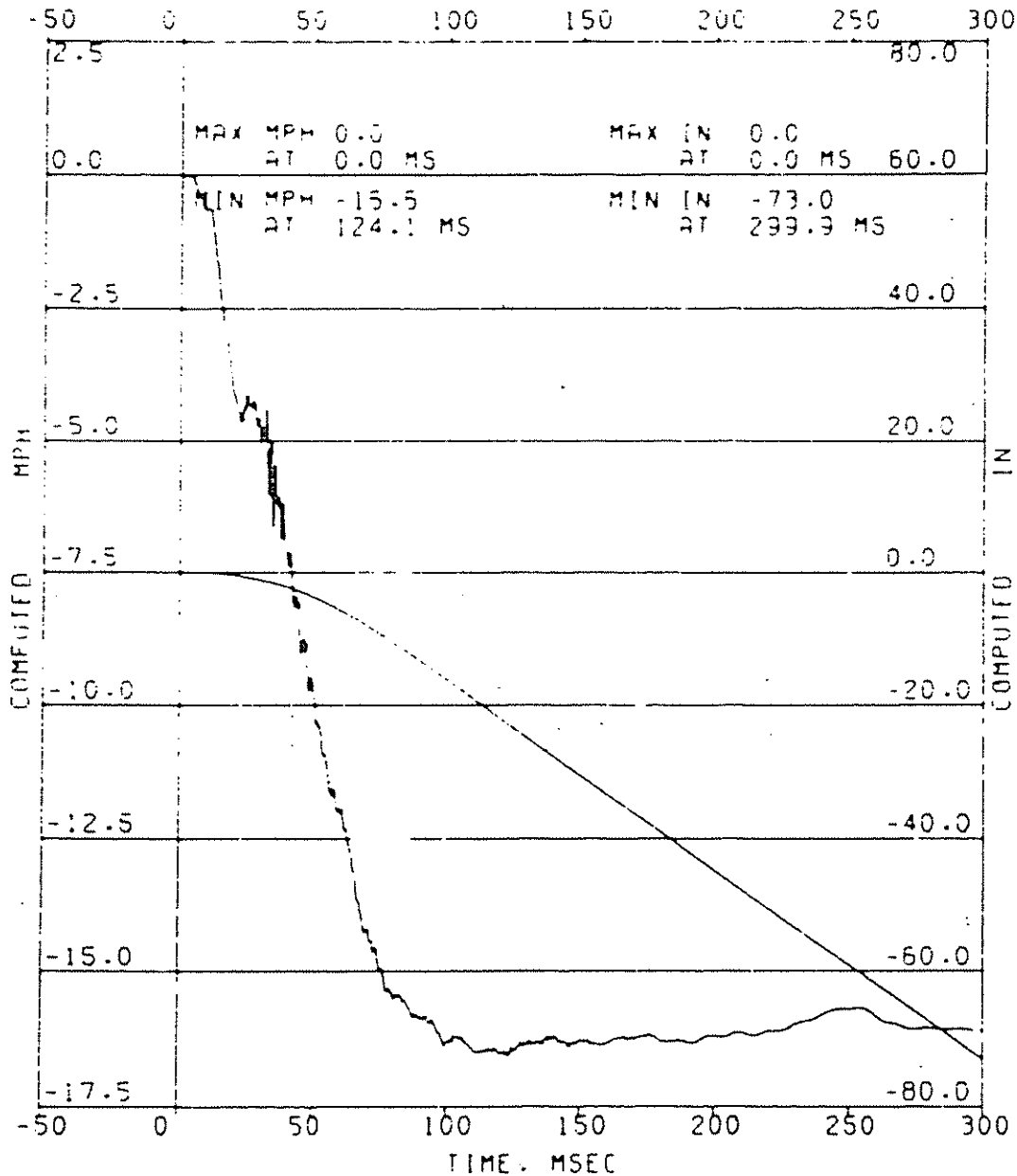
VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
 1997 MVSS DEVELOPMENT - 301.
 CHANNEL 021 RT FT SENSOR TOP X AMT4

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 BF 039

FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
 JAN 22.1996

DATA SET 01/18/9688
 ERRATA 1



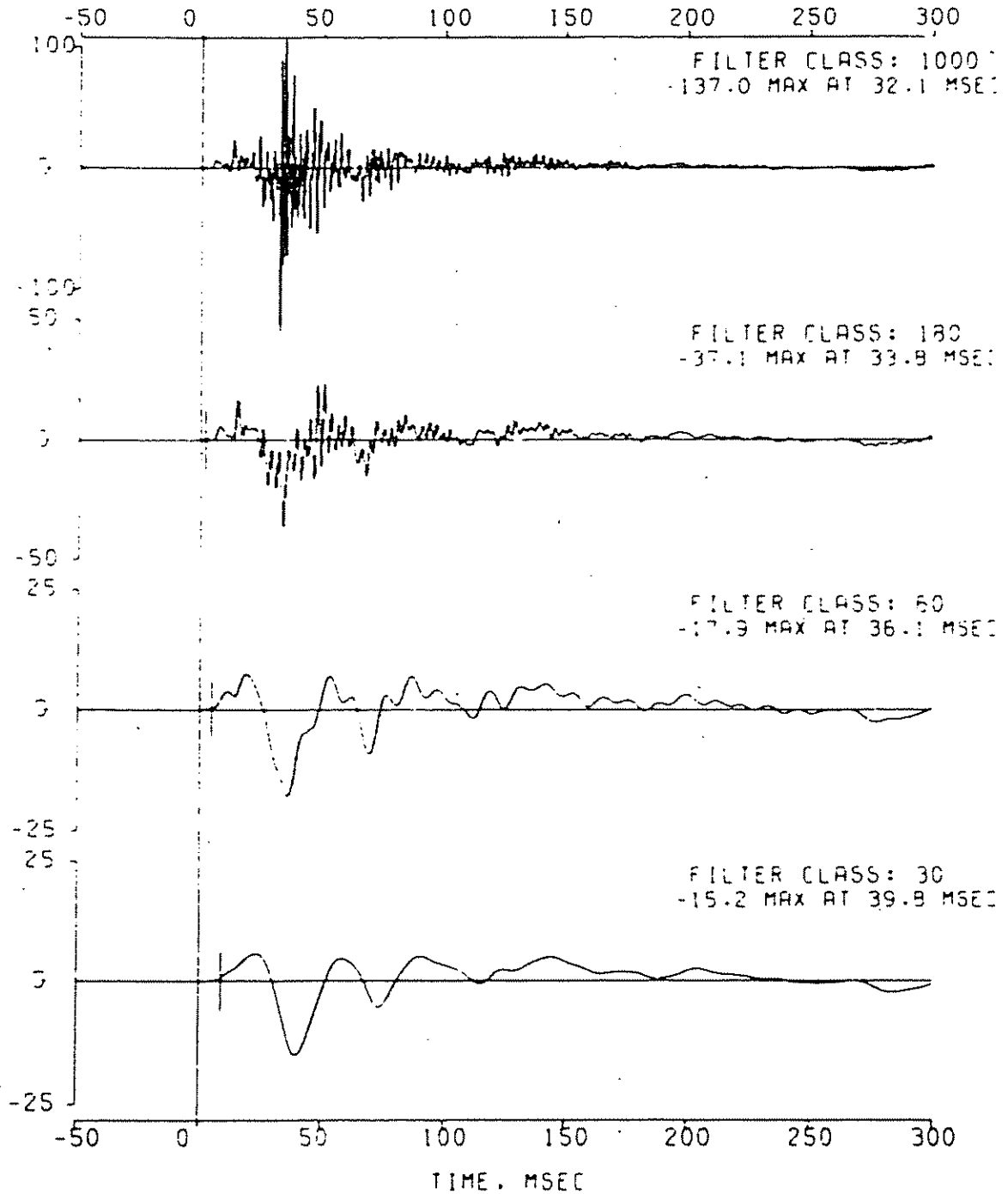
COMPUTED MPH
 COMPUTED IN

DC 02045

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370
1997 HVSS DEVELOPMENT - 301.
CHANNEL 022 AT FT SENSOR TOP Z AAH33
FILTER TYPE: 080AS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1450)
IMPACT ANALYSIS DEPT. 5320
JAN 22. 1996

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DATA SET 01/18/96BB
ERRATA 1



DC 02046

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJB370

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1997 MVSS DEVELOPMENT - 301.

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CHANNEL 023 LT RAIL MBAR MID X 14397

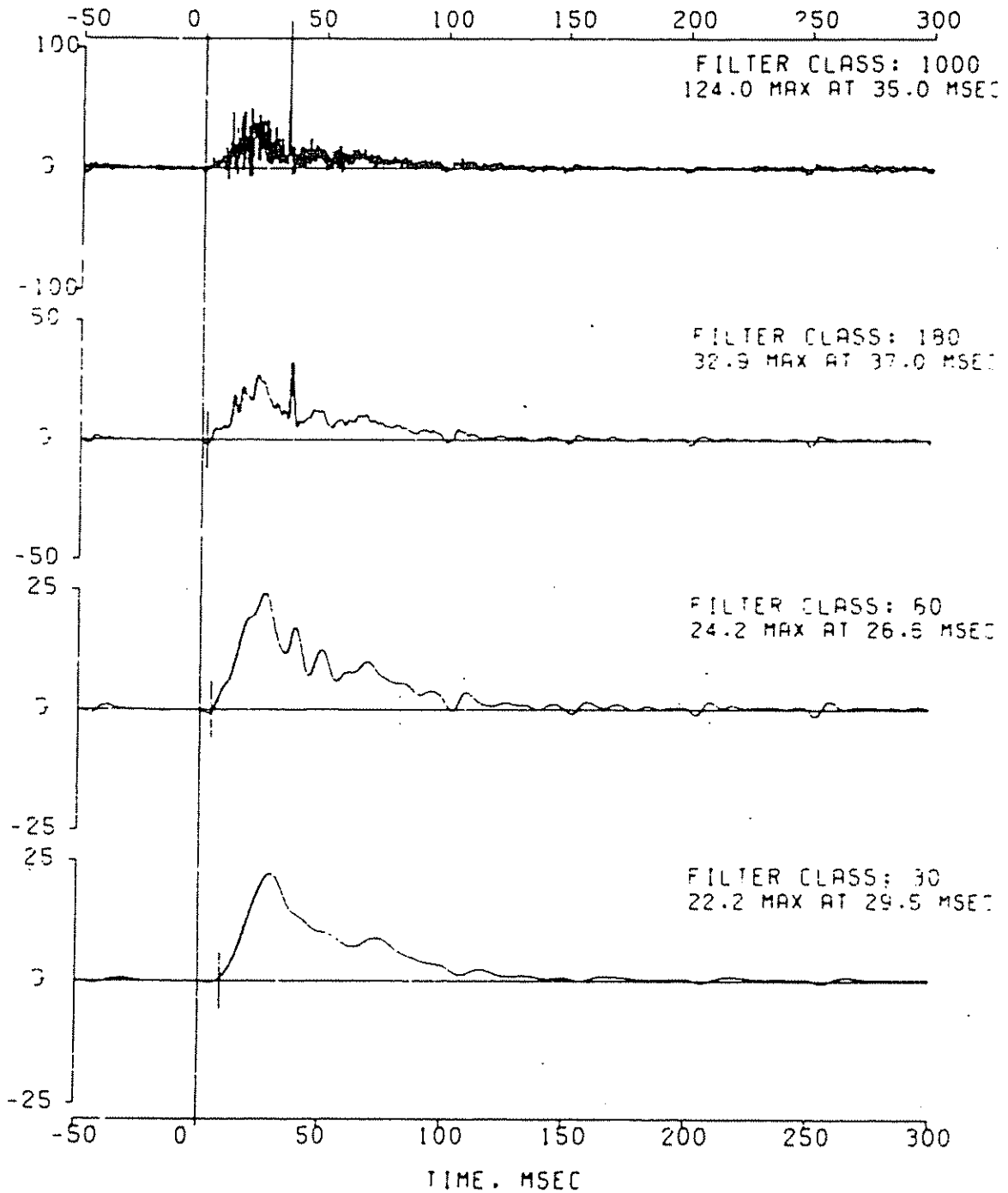
FILTER TYPE: OBDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER(1650)

IMPACT ANALYSIS DEPT. 5320

DATA SET 01/18/96BB

JAN 22.1996

ERRATA 1



DC 02047

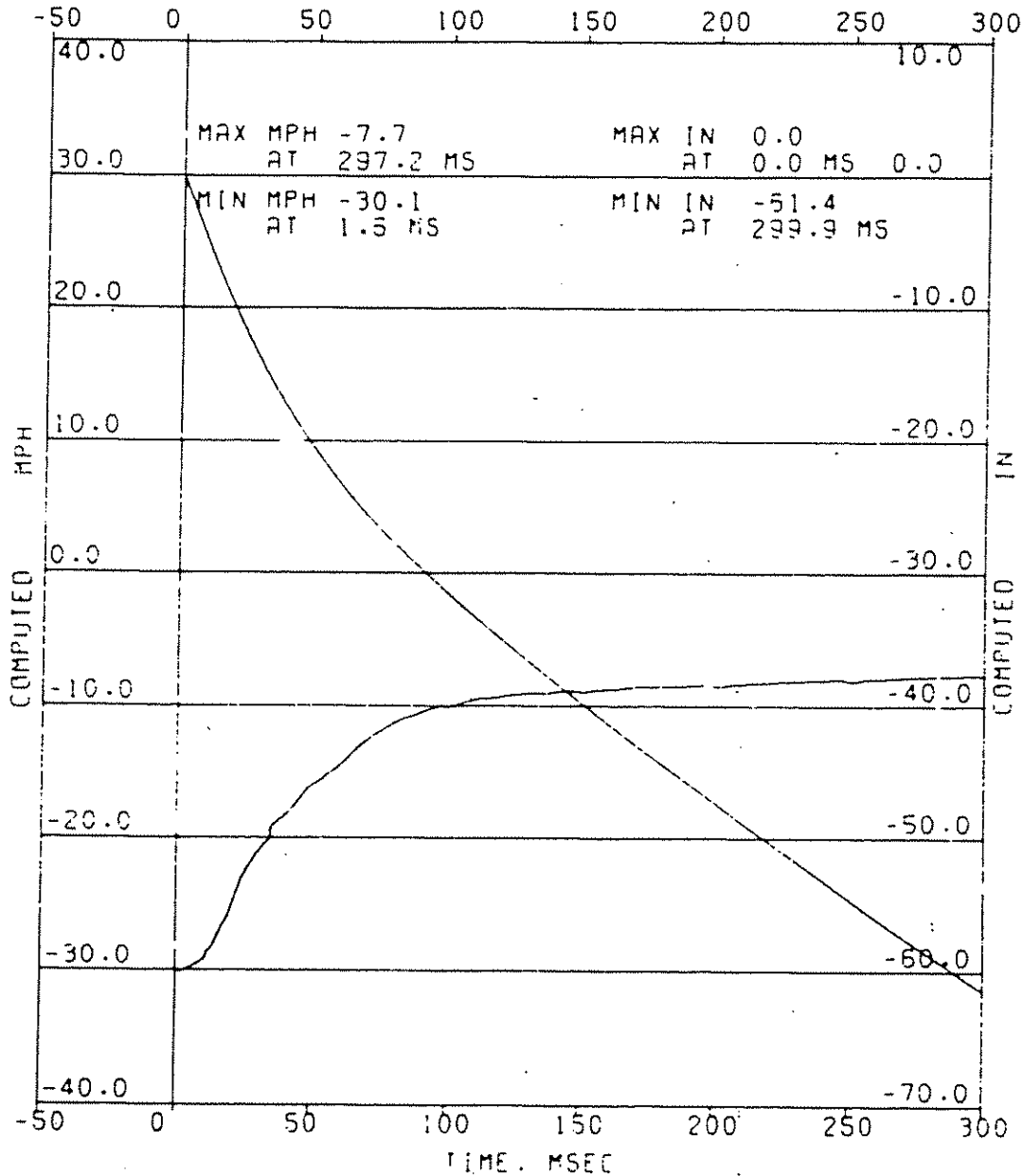
VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI. ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.
CHANNEL 023 LT RAIL MBAR MID X 14397

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FILTER TYPE: 0BDAS-III RESPONSE CORRECTION. CLASS 1000 FILTER 16501
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320
JAN 22.1996

DATA SET 01/18/9688
ERRATA 1



COMPUTED MPH
COMPUTED IN

DC 02048

8-1-1996

INTER COMPANY CORRESPONDENCE

DATE 01/26/96

TO
DISTRIBUTION

FROM
K. M. HAUT

DEPARTMENT
5320

PLANT/OFFICE
CTC

CIMS NUMBER
481-02-18

SUBJECT:
REAR DYNAMIC CRUSH ANALYSIS
VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.
TEST DATE 01/18/96

TEST PURPOSE PRIMARY. 1997 USA 301 DEVELOPMENT.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED: 30.1 MPH
DAMAGE LOCATION: REAR
BARRIER TYPE: REAR TYPE IV
BARRIER SURFACE: PLYWOOD

VEHICLE BODY CLASS: ZJ
CAR LINE: J
BODY: 74
ENGINE: 4.0 LITRE
ENGINE NOTE: ELECTRONIC FUEL INJECTION
TRANSMISSION: 4 SPEED AUTO 4x4
TRANS. NOTE: SELECT-TRAC
VIN AS TESTED: 1J4EZ7876TC100062 MOD.
VIN AS BUILT: 1J4EZ78S6TC100062 MOD.

TEST SPEED 30.0 MPH BY ELECTRONIC TRAP.

TEST WEIGHT (LBS) 4828 TOTAL. 2710 FRONT. 2118 REAR

OCCUPANTS LEFT FRONT. HYB II. BALLAST. AD-65
RESTRAINT-BELTS ONLY.
RIGHT FRONT. HYB II. BALLAST. AD-67
RESTRAINT-BELTS ONLY.

BUILD CONDITION 1996 PRODUCTION ZJ MODIFIED TO REPRESENT 1997.
4.0 LITRE (116) ENGINE. 4 SPEED AUTO TRANS. 4x4.
POWER STEERING. ABS BRAKES. AIR CONDITIONING.
HEATED LEATHER SEATS ON ELECTRIC TRACKS.
FULL CENTER CONSOLE AND OVERHEAD CONSOLE.
P225/70 R16 TIRES ON ALUMINUM RIMS & FULL SIZE
SPARE.
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN.

TARGET WEIGHT (LBS) 4185 TOTAL. 2335 FRONT. 1849 REAR. REP MAX OPT WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 21.5 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST SECURED IN REAR

TEST VC05789 01/26/96 08.25 PAGE 1 OF 2

DC 02049

SEATING AREA.
50 LBS OF BALLAST SECURED TO REAR SEATING AREA.

POST TEST REMARKS THERE WERE NO FUEL LEAKS AT IMPACT OR IN THE 25
MINUTES AFTER THE IMPACT. THERE WAS FUEL LEAKAGE
IN EXCESS OF THE ALLOWABLE LIMITS IN THE ENGINE
COMPARTMENT AREA DURING POST TEST STATIC ROLLOVER.

DYNAMIC CRUSH, PITCH, AND REAR WHEEL MOTION RELATIVE TO THE FRONT
SILL HAVE BEEN DETERMINED BY FILM ANALYSIS. TIME WAS BASED ON
CAMERA TIMING DATA.

DYNAMIC CRUSH 20.0 +OR- 1 INCH AT 77. +OR- 5 MSEC.



L. G. PLATA



K. M. HAUT

GRAPHS - 4

G L O S S A R Y O F T E R M S

U S E D I N S T A N D A R D R E P O R T S

AD	ANTHROPOMORPHIC DEVICE
ADT	ANTHROPOMORPHIC TEST DEVICE
BASE COORD	BASE COORDINATE SYSTEM
C/L	CENTERLINE
CAR COORD	CAR COORDINATE SYSTEM
CCW	COUNTER CLOCKWISE
CORR-IN	SEPARATION IN INCHES (MINUS INITIAL LENGTH)
CORR-MM	SEPARATION IN MM (MINUS INITIAL LENGTH)
CORR-P	CORRECTED (ZEROED) PITCH
CORR-R	CORRECTED (ZEROED) ROLL
CORR-Y	CORRECTED (ZEROED) YAW
CW	CLOCKWISE
EFI	ELECTRONIC FUEL INJECTOR
ENG	ENGINE
ENGPY	ENGINE PITCH AND YAW
FESH	FRONT END SHEET METAL
FIDUCIAL	REFERENCE POINT OR TARGET
FS	FRONT SILL TARGET
FWD	FORWARD
IP	INSTRUMENT PANEL TARGET
LBS	POUNDS
LCP.LQP	LEFT C-POST & QUARTER PANEL TARGETS
LFS.LMS.LRS	LEFT FRONT SILL, MID SILL, & REAR SILL TARGETS
LT	LEFT
MS	MID SILL TARGET
NORMALIZE	PUT ON A COMMON BASIS
NOSE-DOWN	LEADING END BELOW TRAILING
NOSE-UP	LEADING END ABOVE TRAILING
PERF	PERFORMANCE
REF	REFERENCE
REL	RELATIVE TO (ONE-DIMENSIONAL)
RCP.RQP	RIGHT C-POST & QUARTER PANEL TARGETS
RFS.RMS.RRS	RIGHT FRONT, MID, & REAR SILL TARGETS
ROLL-LEFT	LEFT SIDE LOWER THAN RIGHT
ROLL-RIGHT	RIGHT SIDE LOWER THAN LEFT
RS	REAR SILL TARGET
RT	RIGHT
SEP	SEPARATION OF (THREE-DIMENSIONAL)
SYS	SYSTEM
TBI	THROTTLE BODY INJECTOR
TIME.MS	TIME IN MILLISECONDS
U/B	UNDERBODY
VS	VERSUS
X	LONGITUDINAL AXIS (INCREASING TOWARD TRAILING EDGE)
XF	X-FILTERED
Y	LATERAL AXIS (INCREASING TO THE RIGHT)
YAW-LEFT	LEADING EDGE TO LEFT
YAW-RIGHT	LEADING EDGE TO RIGHT
Z	VERTICAL AXIS (INCREASING UPWARD)
ZERDED	SHIFTED TO START AT ZERO
ZERO-IN	ZERDED INCHES
ZERO-MM	ZERDED MILLIMETERS

IMPACT ANALYSIS
DEPARTMENT 5320
01/26/96 08.25
TEST VC05789

DC 02051

VC05789 30 MPH REAR BARRIER. ZJJ74. 4.0L MPI ITEM ZJ8370
1997 MVSS DEVELOPMENT - 301.

ZEROED Z OF WHEEL RELATIVE TO LFS IN CAR COORD
VERSUS ZEROED X OF WHEEL RELATIVE TO LFS IN CAR COORD
REAR DYNAMIC CRUSH AND REAR WHEEL MOTION ANALYSIS

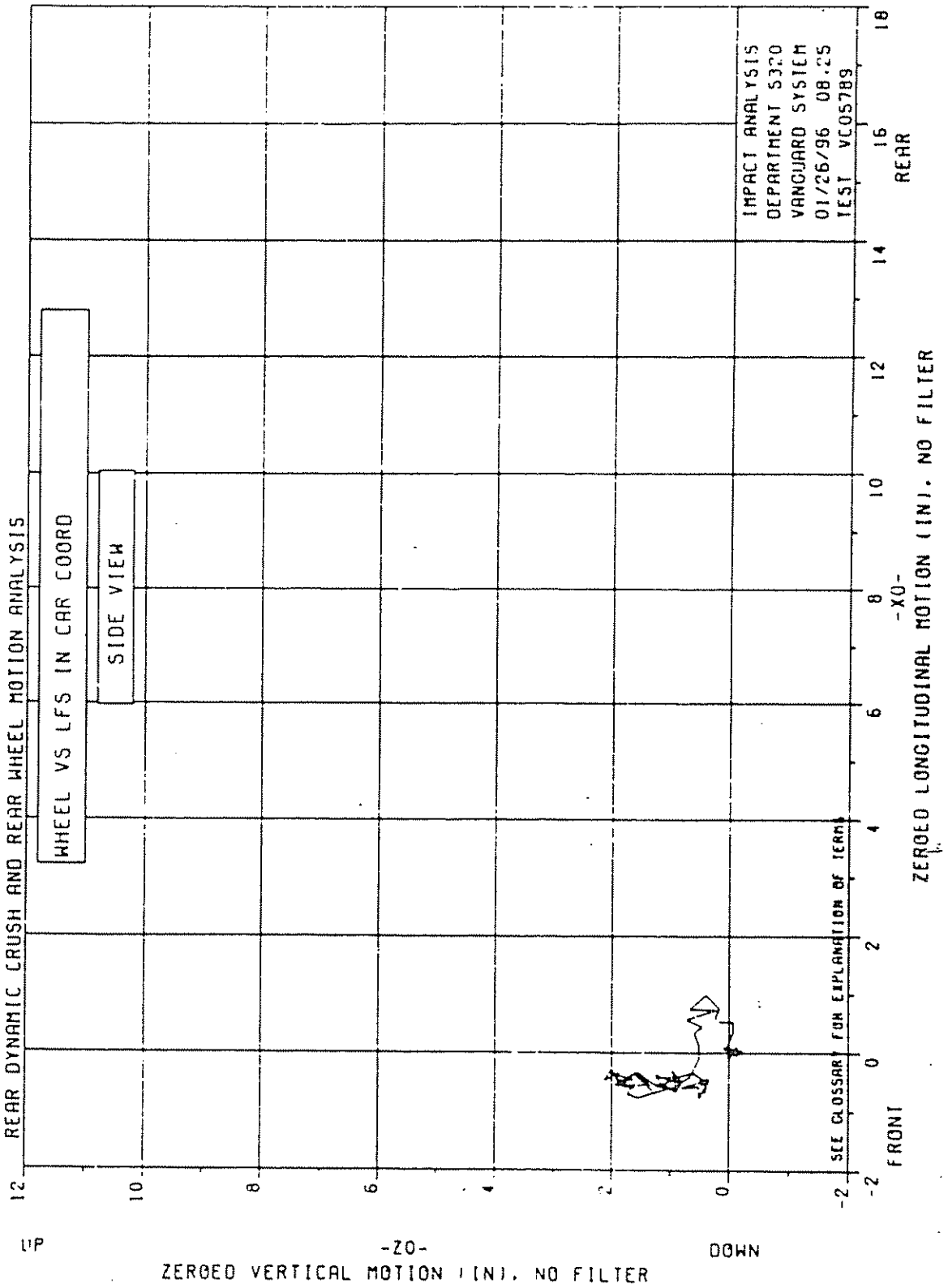


FIGURE 2

VC05789 30 MPH REAR BARRIER, ZJJ74, 4.0L MPI IIEH ZJ8370
 1997 MVSS DEVELOPMENT - 301.

ZEROED PITCH OF LMS TO LFS IN BASE COORD SYSTEM
 VERSUS TIME IN MILLISECONDS

REAR DYNAMIC CRUSH AND REAR WHEEL MOTION ANALYSIS

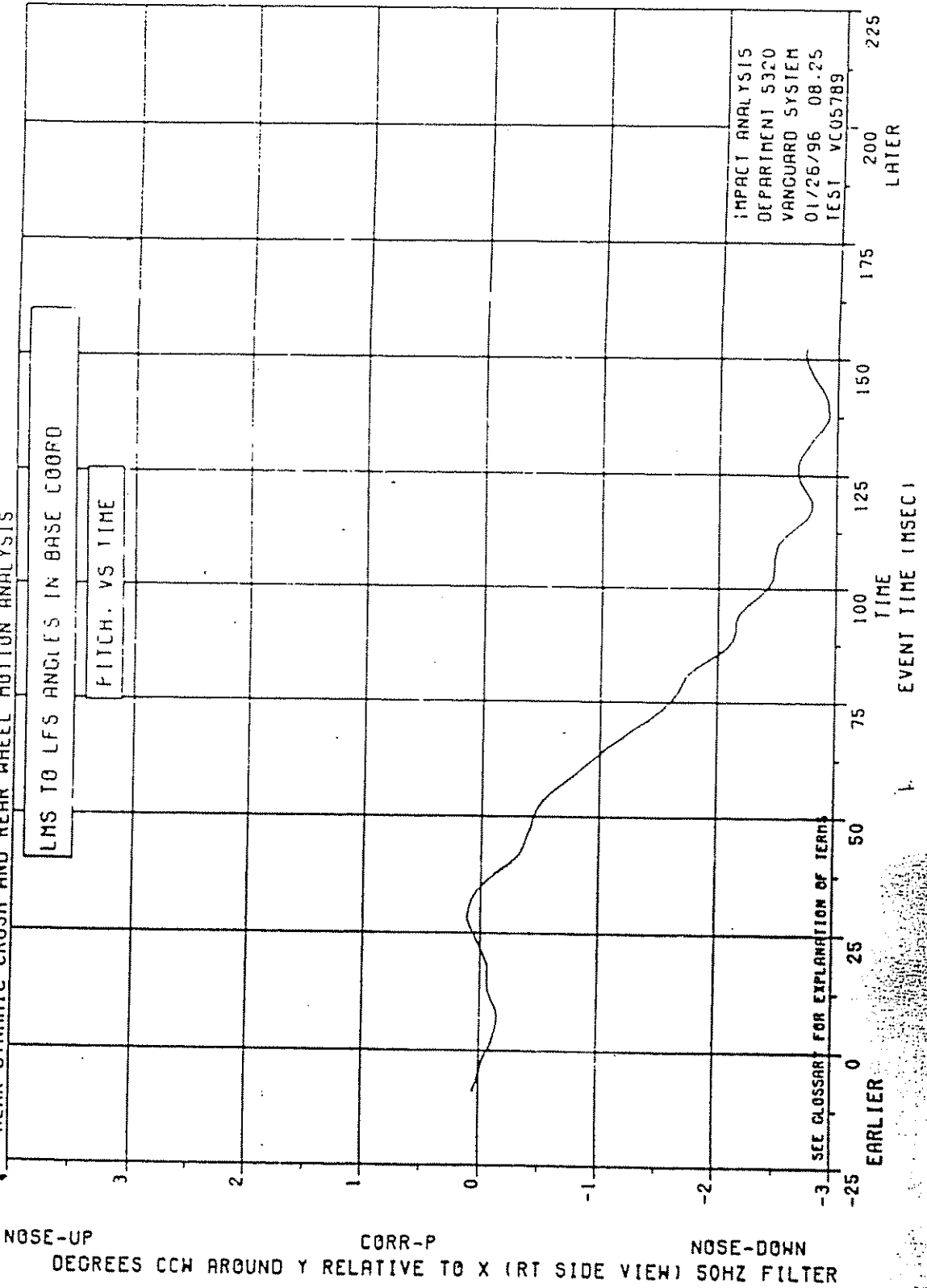


FIGURE 3

DC 02053

VC05789 30 MPH REAR BARRIER, ZJJ74. 4.0L MPI ITEM ZJ8370
 1997 MVSS DEVELOPMENT - 301.

LMS TO LFS DISTANCE - 30.15 INCHES (INITIAL DIST) (IN)
 VERSUS TIME IN HILLISECONDS

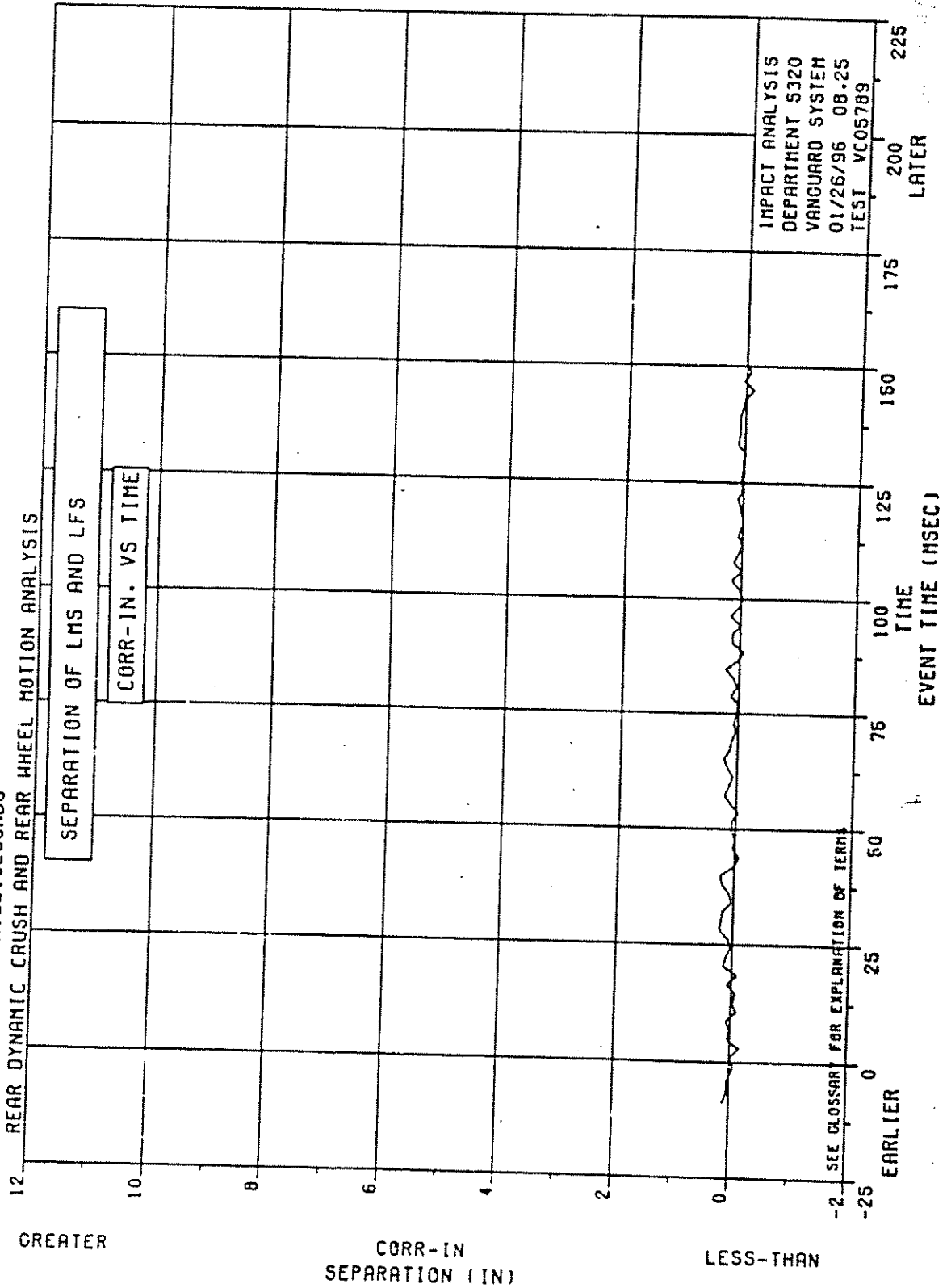
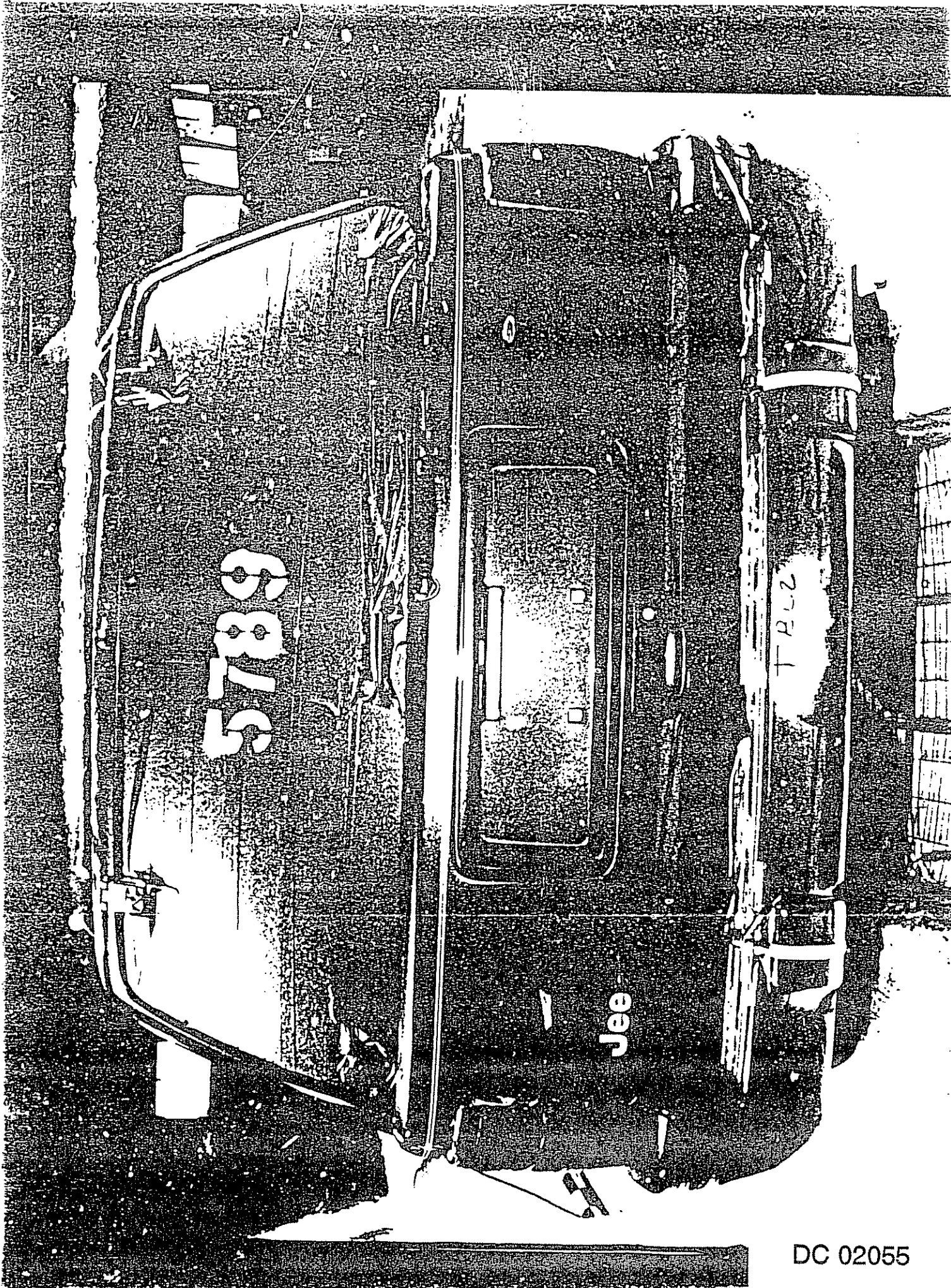


FIGURE 4



57899

Jeep

TR 2

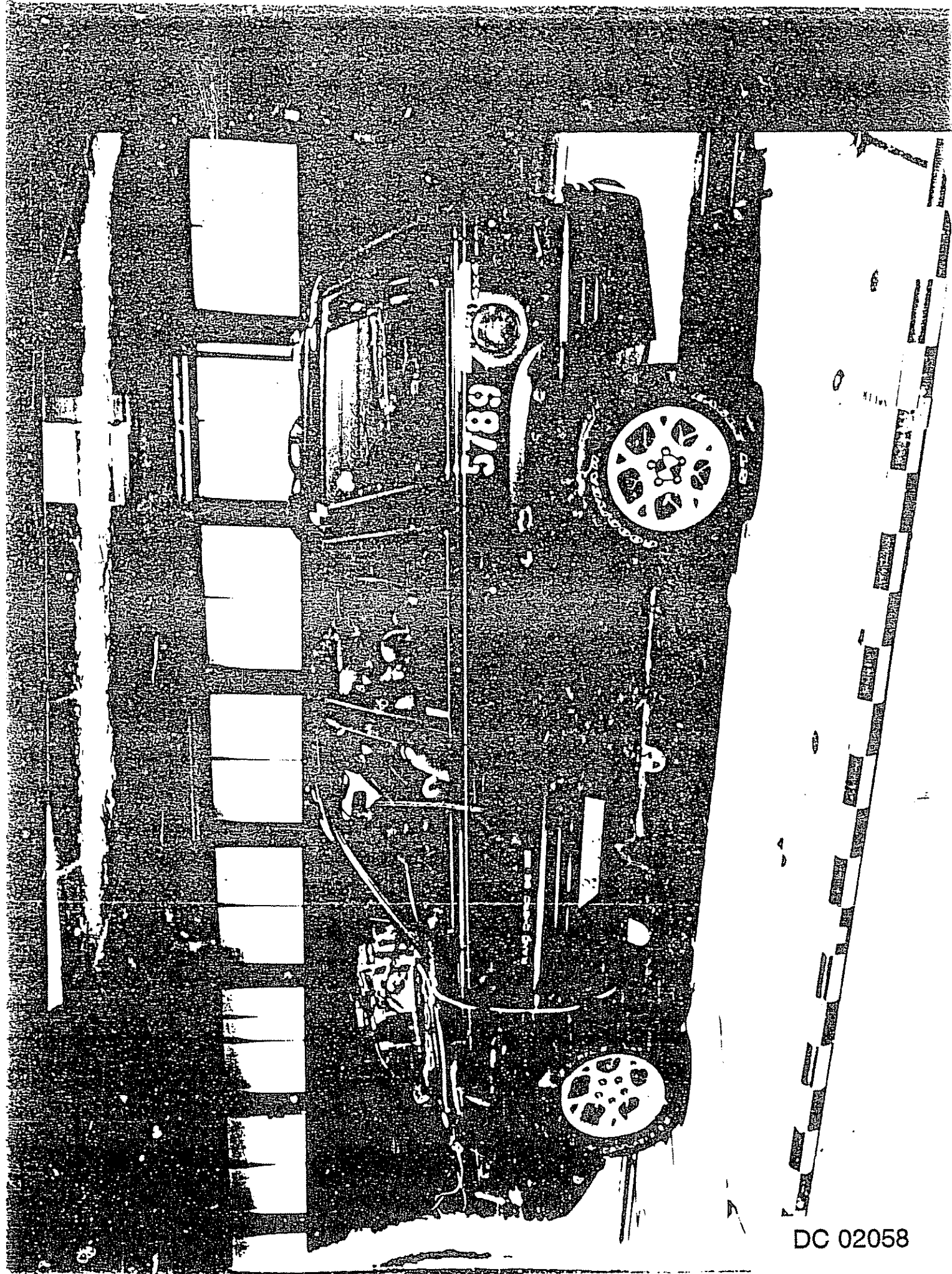
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TBC2

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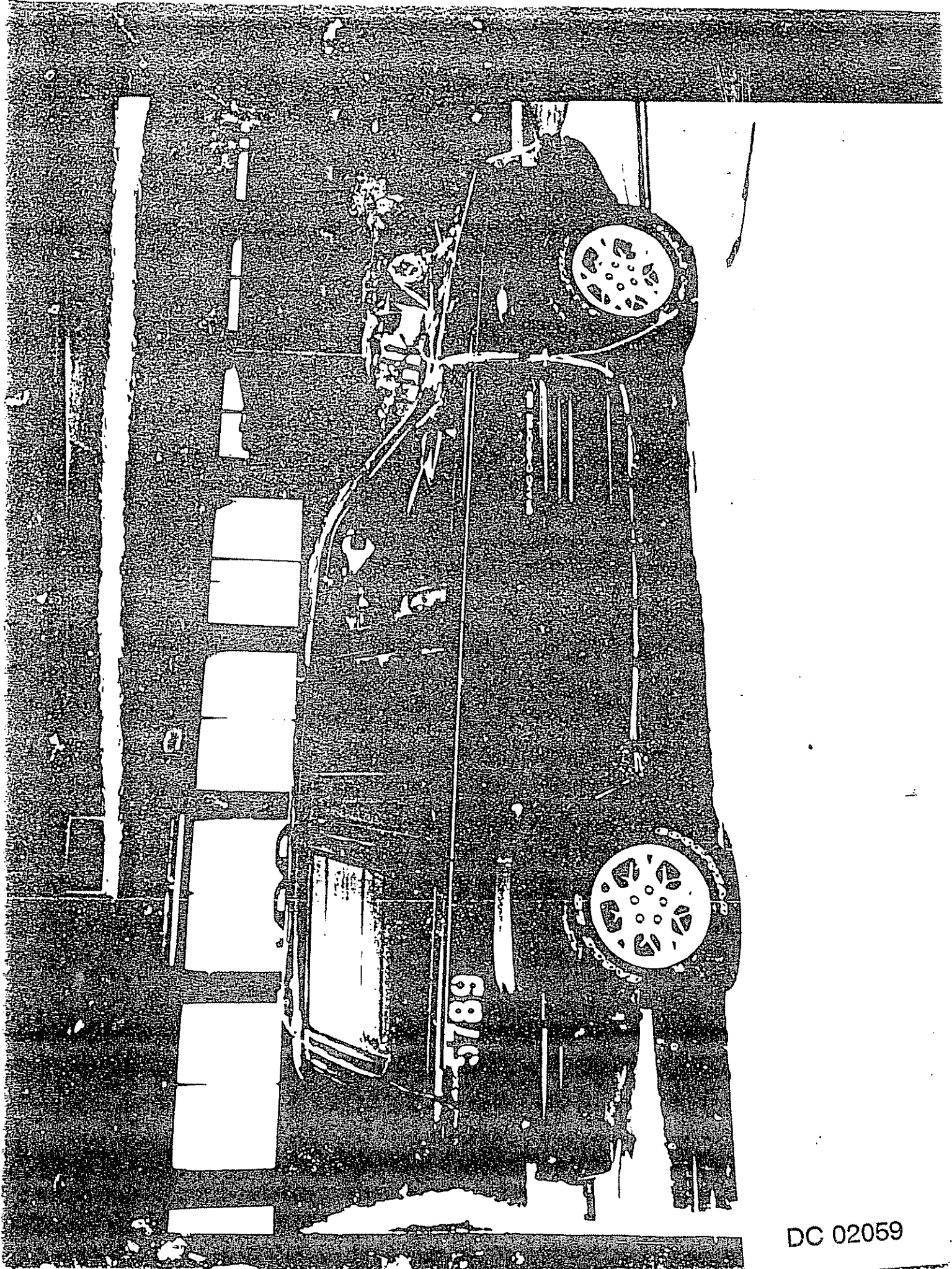
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DC 02058

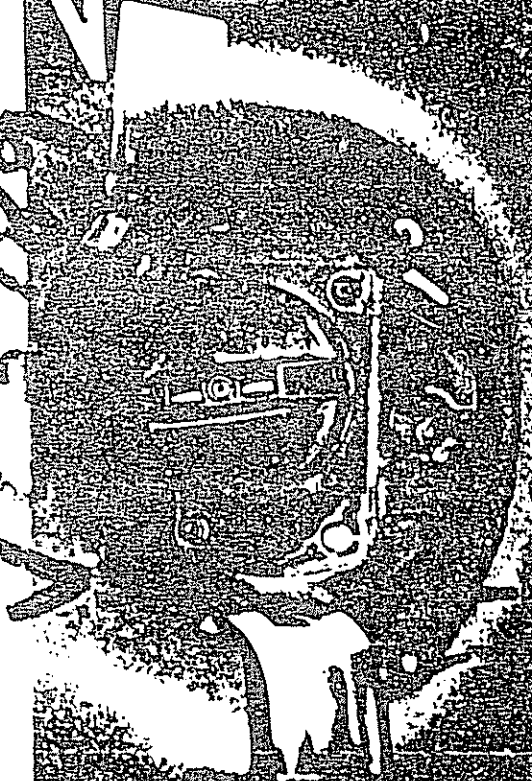


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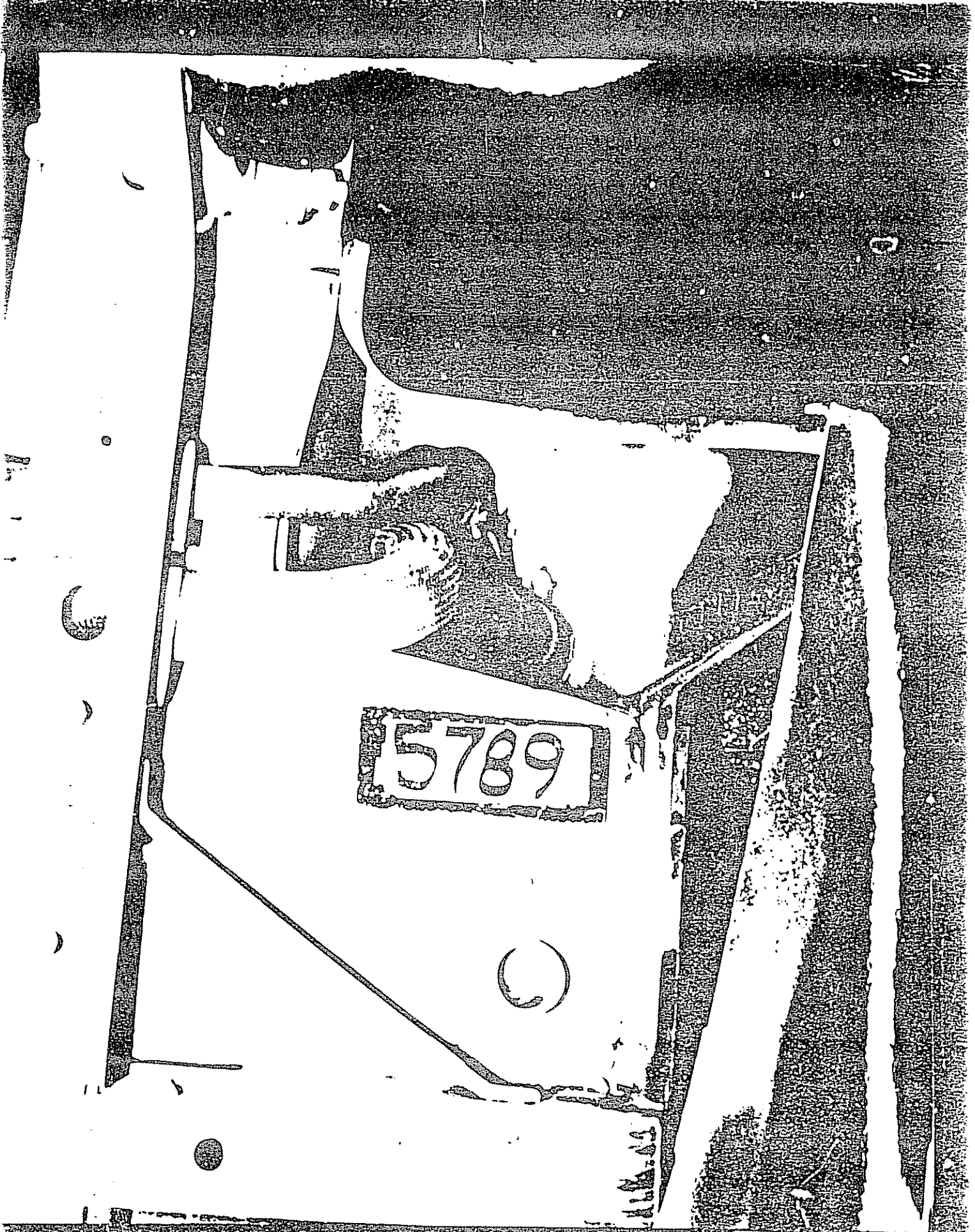
1989
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4X1

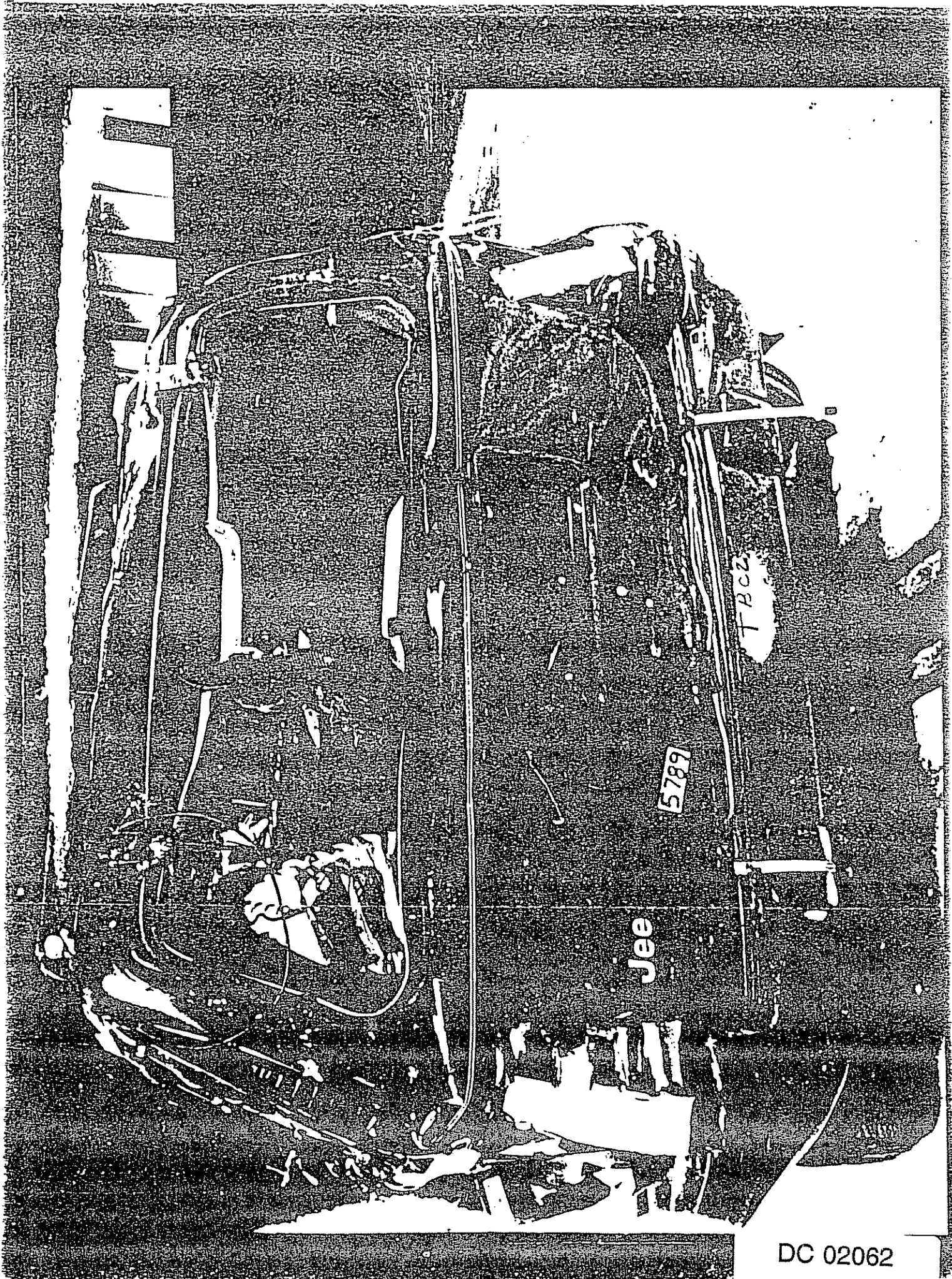
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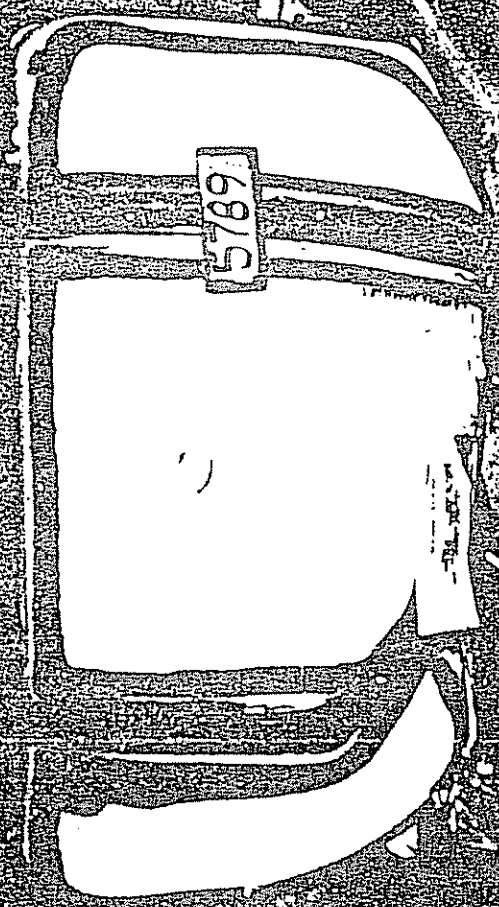
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Jee

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TRCZ



DC 02063

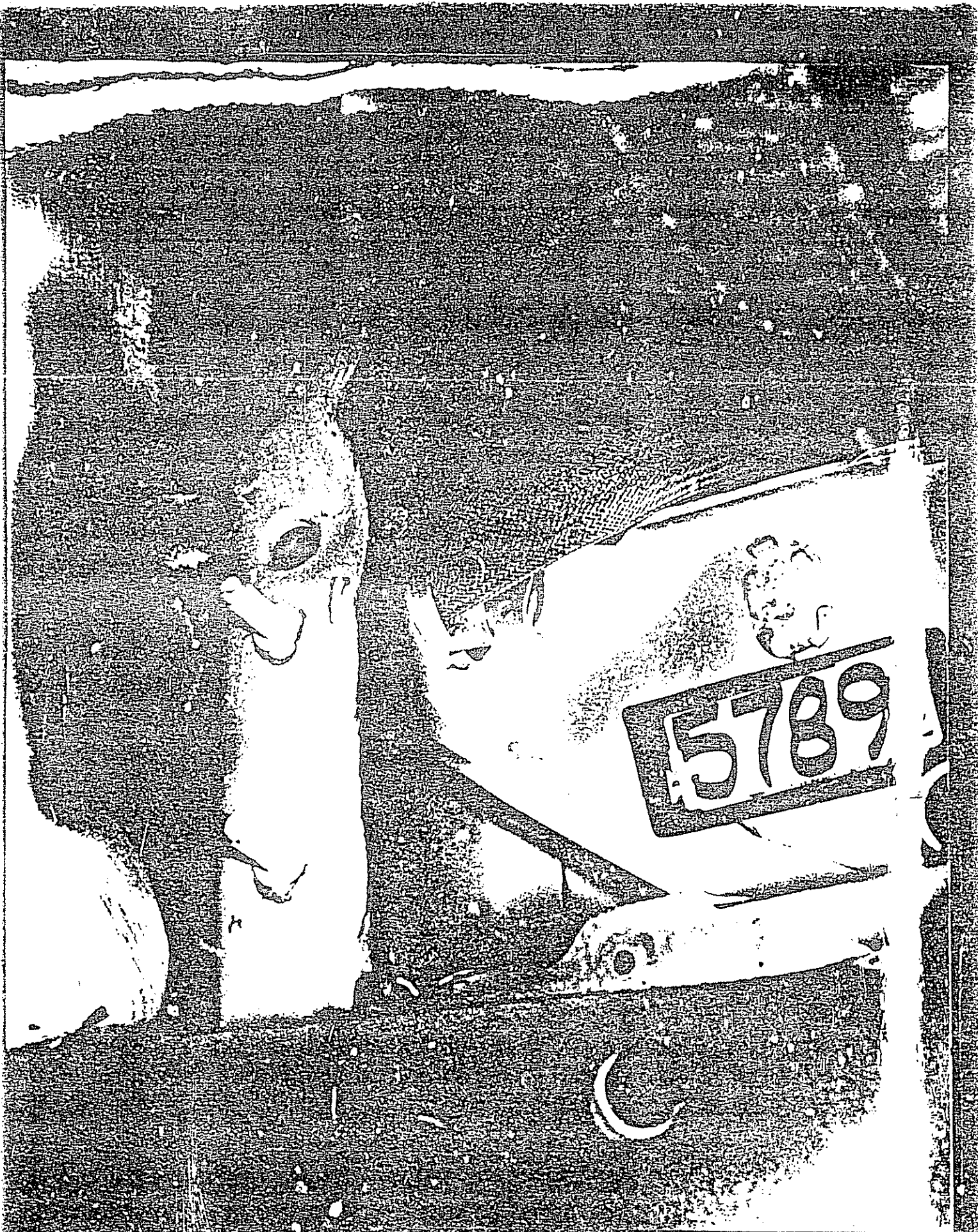
21
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X

21



POST
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DC 02068