532

RESEARCH RABBIT (MIV)
Modified Integrated Vehicle

Phase 1

VOLKSWAGENWERK
Aktiengesellschaft
WOLFSBURG

Contract No. DTNH 22-81-C-17085
June 1982
Final Report
Volume III/8 Side Impact

PREPARED FOR:
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The opinions, findings, and conclusions expressed in this publication are not necessarily those of the National Highway Traffic Safety Administration.

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15 Supplementary Notes

16 Abstract

Vehicle and vehicle occupant response data from side impact test No. 8 - Crabbed Barrier/Modified 4 door Rabbit (MIV) without modified padding at 60° impact angle and v = 30 mph impact speed are summarized in this report.

Volume III/8

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The Test Results belong to the specified NHTSA Test Configuration for Side Impacts with the Crabbed Barrier and HSRI-SID-Dummies both of which are currently under development.

NHTSA Project DTNH 22-81-C-17085

Volume III/ 8

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Vehicle and Dummy Test Response
Acceleration-/ and Velocity/Time History

B.1 Vehicle Test Response
- B.1.1 Target Vehicle
- B.1.2 Crabbed Barrier

B.2 Dummy Test Response
- B.2.1 Driver
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1. Introduction

The Objective of the MIV project was to optimize the contradictory design aspects of a high degree of passive safety and low fuel consumption.

The project was arranged in Phase I and II. The results of Phase I are the basis of this report. Phase II was redefined by NHTSA. According to this, the three engine/transmission concepts that were to be newly developed are no longer part of Phase II.

Possibilities were to be found for a 4 door Rabbit for further increasing occupant protection in specified side and frontal impacts. The Rabbit Modifications should be possible to implement on the production line. NHTSA's design goals were the 35 mph frontal fixed barrier impact and the 30, 35 or 40 mph side impact with the new 1.565 kg (3,450 lbs) deformable Crabbed Barrier and the new HSRI Dummy which were specially conceived for the side impact and are presently still under development.

Modifications for the 4 door Rabbit were derived from Crabbed Barrier/ Production Rabbit baseline tests.
NHTSA contract specifications called for a maximum weight increase of 20 lbs for the modified 4 door Rabbit.

The NHTSA goal to achieve the greatest possible reduction in dummy loads, in keeping with the objective of lowest possible weight together with the prerequisite that the design be suited to mass production at the lowest possible cost, required the development of a new "Integrated Structure" for the 4 Door Modified Rabbit. This concept requires that the greatest number of components be effective during a frontal and a side impact. The "Integrated Structure" approach, rather than the Budd strategy to use add-on parts, is necessary to achieve the goals established by NHTSA.

2. Method

2.1 Test Devices and Test Configuration

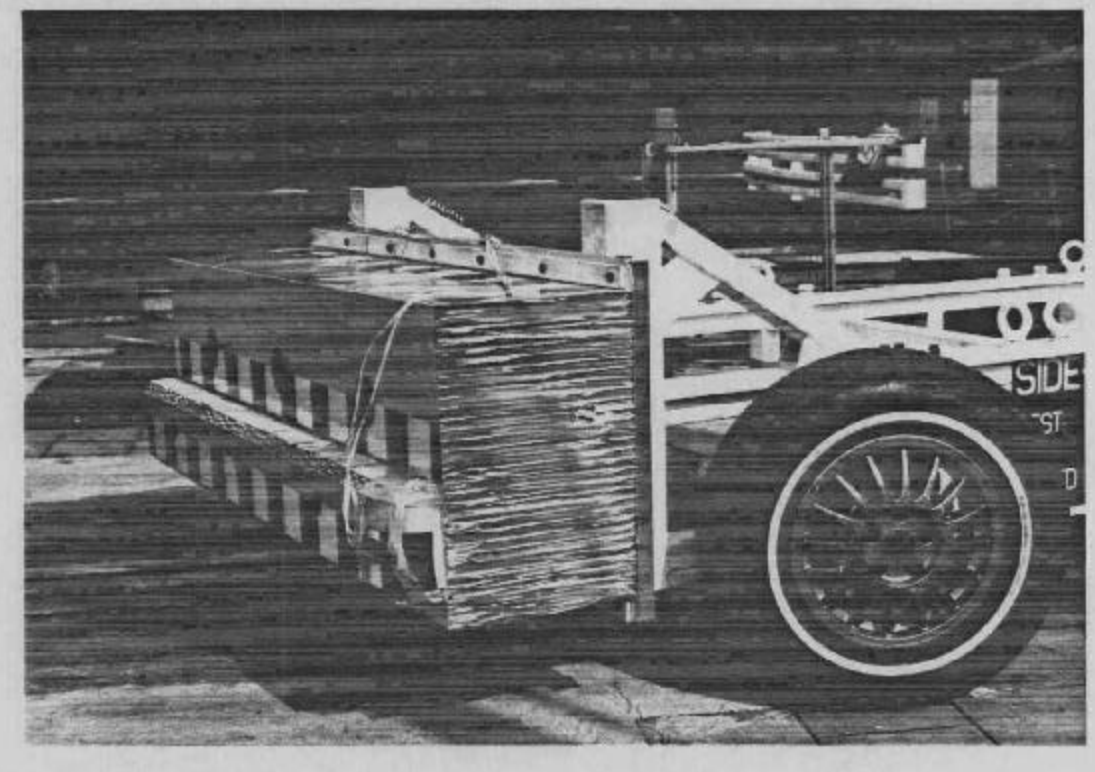
2.2 List of Accelerometer Location

2.2.1 Target Vehicle Instrumentation

2.2.2 Side Impactor Instrumentation

2.2.3 Dummy Instrumentation

2.3 Camera Location and Frame Rate



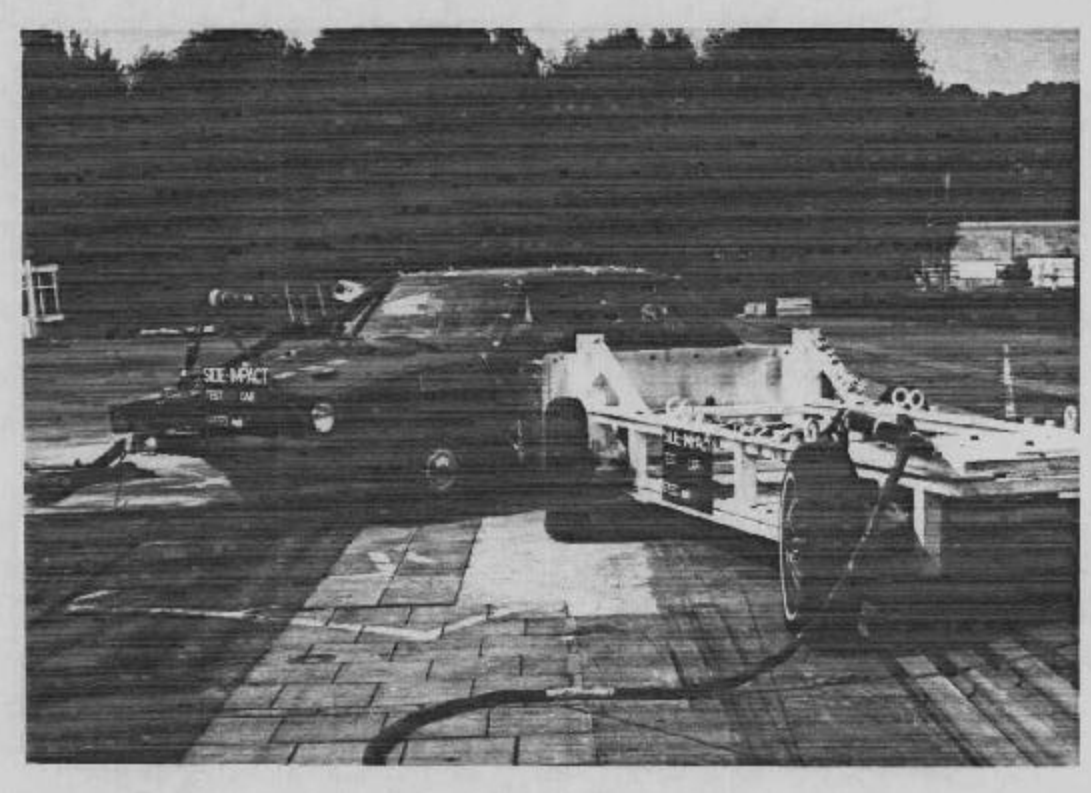


FIGURE 1 : 19° CRABBED BARRIER TEST DEVICE

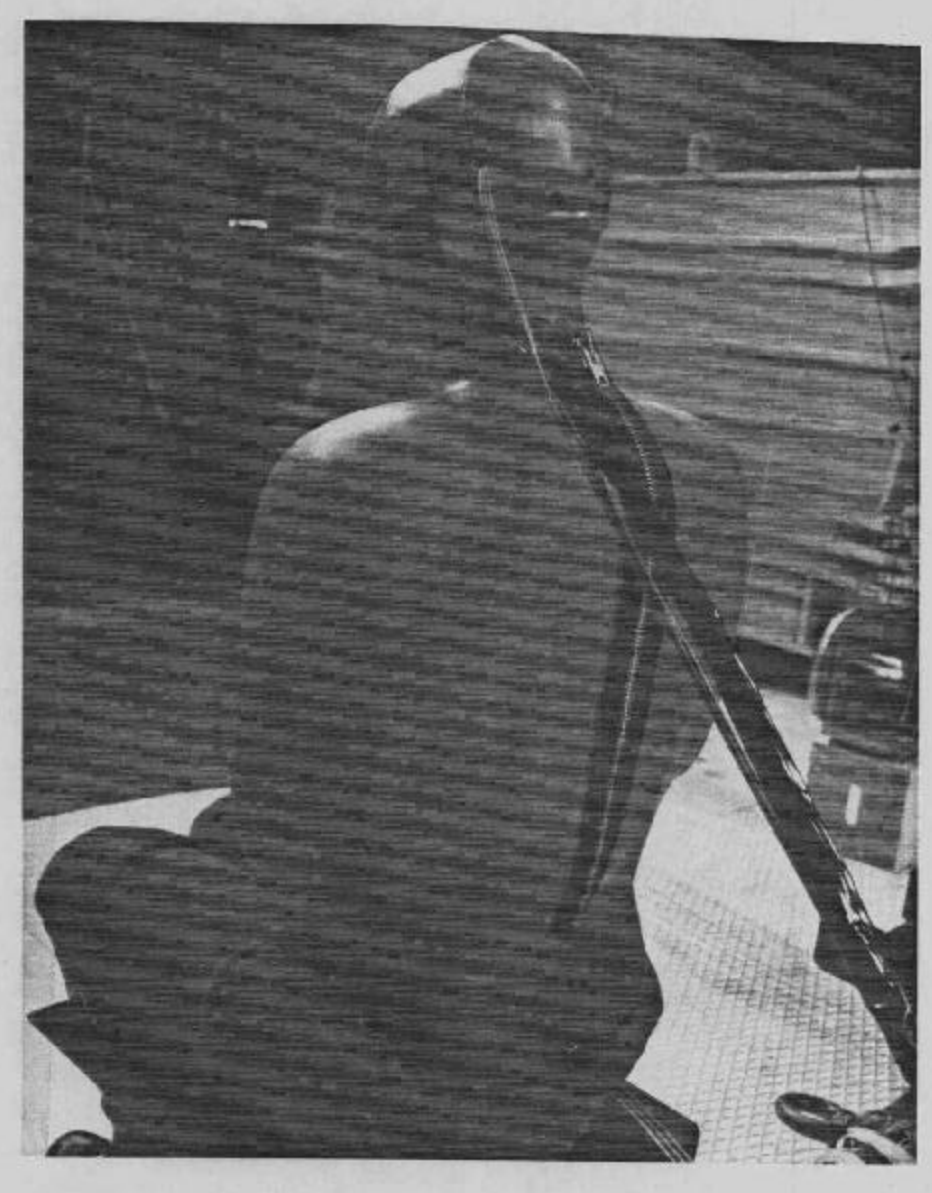
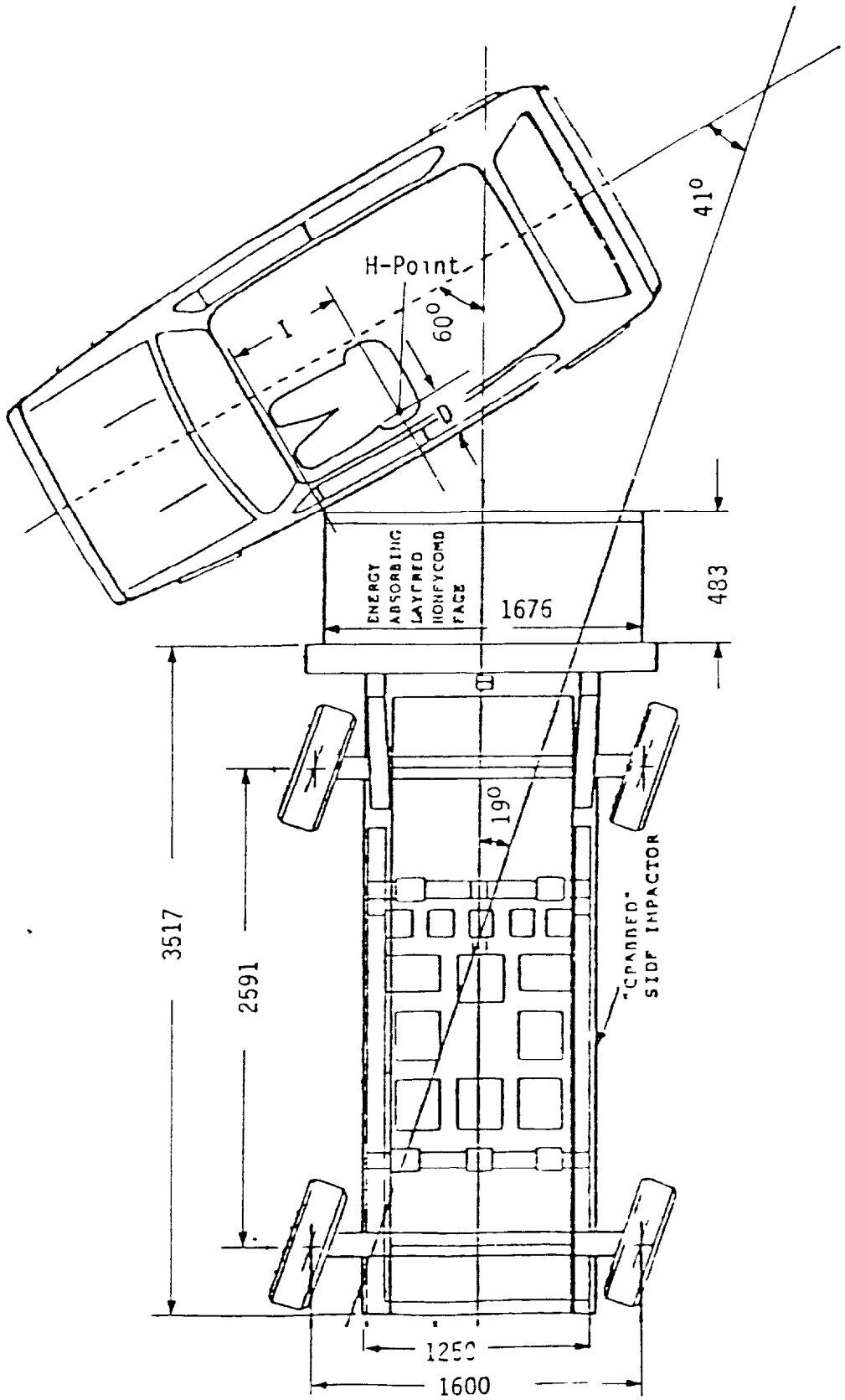


FIGURE 2 : HSRI SIDE IMPACT DUMMY



$$I = \frac{D + 6''}{0{,}8693} + 1{,}5 \quad (\pm 1{,}5'')$$

(D and I in inch)

Remarks: I = Impact-Point
D = Distance H-Point - Door Exterior

Figure 3: Test Configuration

Form FE 764

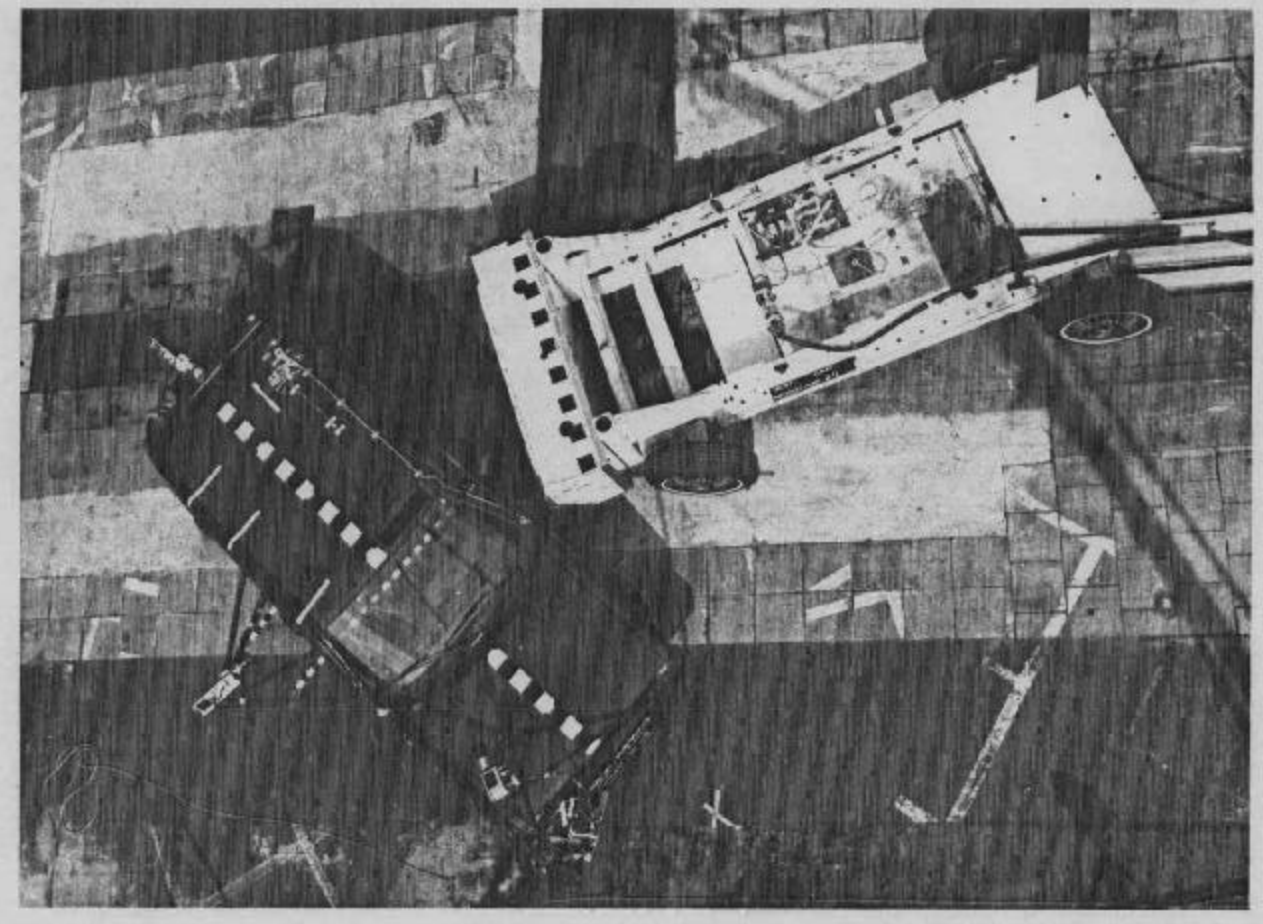


FIGURE 4 : SIDE IMPACT TEST CONFIGURATION

CRABBED BARRIER / VW RABBIT

Table 1 List of Accelerometer - Location

VEHICLE

No.	Location	Shortened Form	Direction
1	Right Front-Doorsill	TSVR	Y
2	Left Front-Doorsill	TSVL	Y
3	Left Rear-Doorsill	SHHL	Y
4	Rear Deck over Centerline	KOBO	X, Y, Z
5	Front Firewall over C_L	SWMI	X, Y, Z
6	Mid-front Edge of left Front-Door	TTRV	Y
7	Middle of left Front-Door	TTRM	Y
8	Shoulder Contact at Front-Door	SASL	Y
9	Pelvis Contact at Front-Door	BASL	Y
10	Left Front-Door on Windowsill	FBVL	Y
11	Right Front-Door on Windowsill, directly across No. 10	FBVR	Y
12	Left B-Pillar near Door Latch	BSLL	Y
13	Right B-Pillar across No. 12	BSLR	Y
14	Underneath left Front Seat attached to Seat	SGFA	Y
15	Vehicle Center of Gravity	RTMI	X, Y, Z
16	Left Front-Door Intrusion	FTWE	Y
17	B-Pillar Intrusion	THWE	Y
18	Shoulder Contact Driver	SKO1K	
19	Pelvis Contact Driver	BKO1K	
20	Shoulder Contact Left Rear Passenger	SKO3K	
21	Pelvis Contact Left Rear Passenger	BKO3K	

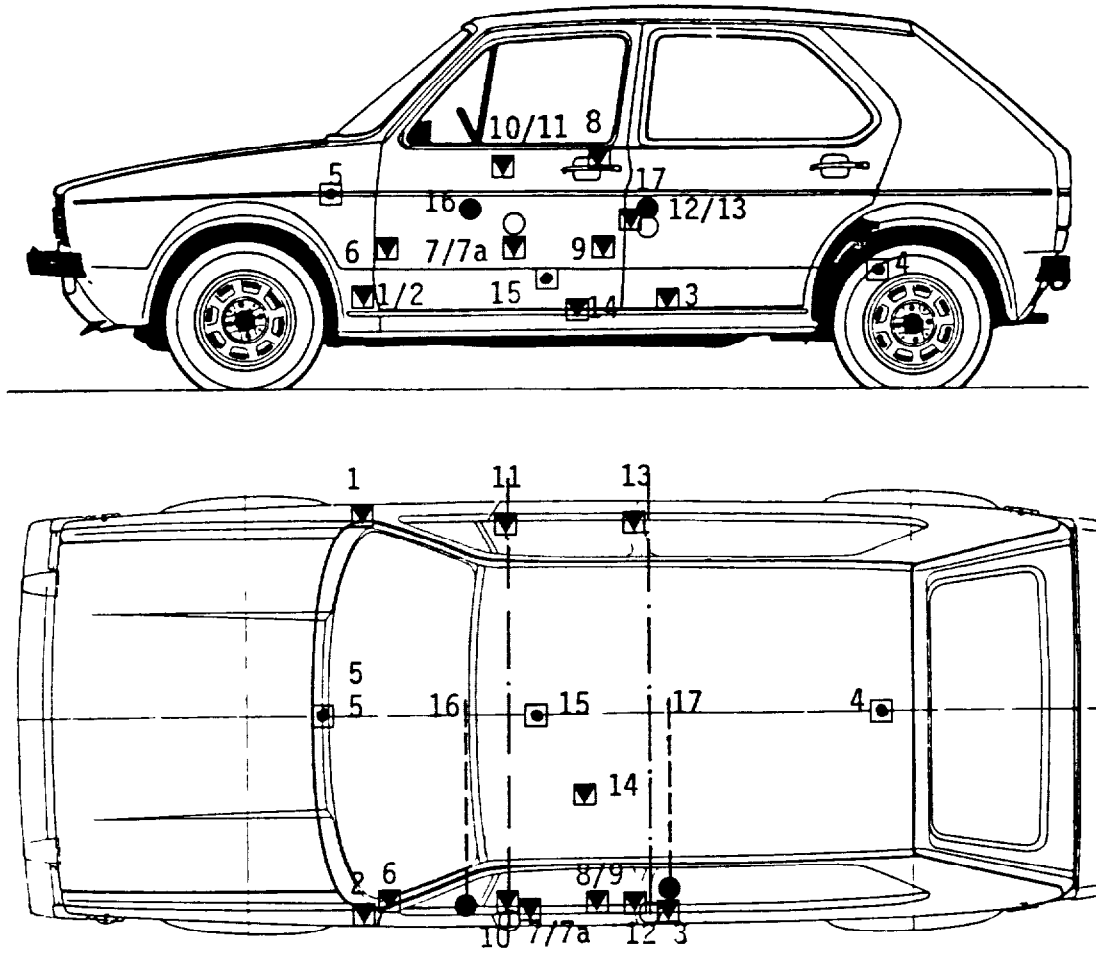
19° CRABBED SIDE IMPACTOR

1	Right Frame Rail	LTRR	X
2	Left Frame Rail	LTRL	X
3	Front Crossmember at C_L	QTVM	X
4	Right Rear Vertikal Framerail	RHTR	X, Y
5	Center of Gravity	SPKT	X, Y, Z

Declaration: X = Longitudinal
Y = Lataral
Z = Vertikal

Location of Accelerometer for the HSRI Side Impact Dummies

Location	Shortened Form	Direction
DRIVER		
Head Triaxial	K001	X, Y, Z
Upper Sternum	B001	X
Lower Sternum	BU01	X
Left upper Rib	L001	Y
Left lower Rib	LU01	Y
Right upper Rib	R001	Y
Right lower Rib	RU01	Y
Upper Thorax (T 1)	T001	X, Y, Z
Lower Thorax (T 12)	TU01	X, Y, Z
Pelvis Triaxial	BE01	X, Y, Z
Chest Deflection	WE01	Y
Shoulder Beltforce	GU01SA	
REAR LEFT PASSENGER		
Head Triaxial	K003	X, Y, Z
Upper Sternum	B003	X
Lower Sternum	BU03	X
Left upper Rib	L003	Y
Left lower Rib	LU03	Y
Right upper Rib	R003	Y
Right lower Rib	RU03	Y
Upper Thorax (T 1)	T003	X, Y, Z
Lower Thorax (T 12)	TU03	X, Y, Z
Pelvis Triaxial	BE03	X, Y, Z
Chest Deflection	WE03	Y
Pelvis Beltforce	GU03BA	



Axial Accelerometer (Y - Direction)

Biaxial Accelerometer (X, Y - Direction)

Triaxial Accelerometer (X, Y, Z -Direction)

Displacement Tube

Displacement Transducer

Note: See Table for Additional Information

Figur 5 : Target Vehicl Instrumentation

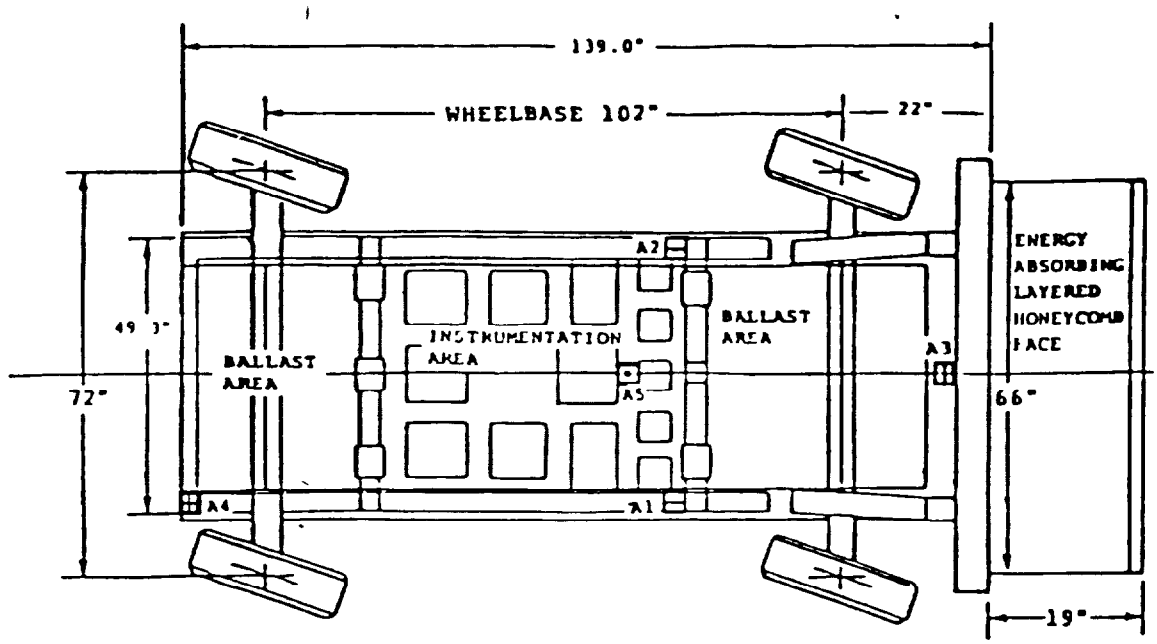
Accelerometer - No.	Location	Coordinates [mm] X *	Y *	Z *	Results [g_{max}] X	Y	Z
1	Occupant Compartment, right Front-Doorsill	2630	620	300		10.0	
2	Occupant Compartment, left Front-Doorsill	2630	-620	300		63.8	
3	Occupant Compartment, left Rear-Doorsill	1410	-560	290		43.4	
4	Rear Deck over Vehicle Centerline	910	0	440	13.3	18.0	16.0
5	Front Firewall over Vehicle Centerline	2890	0	650	6.3	8.8	11.9
6	Mid-front Edge of Left Front Door	2550	-620	457		78.8	
7	Middle of left Front Door	2060	-620	630		93.3	
8	Shoulder Contact Front Door	1775	-665	850		107.7	
9	Pelvis Contact Front Door	1840	-660	480		124.7	
10	Left Front Door on Windowsill, slightly forward of surrogate's	2050	-650	850		88.5	
11	Right Front Door on Windowsill, directly across from Nr. 10	2050	650	850		33.5	
12	Left B-Pillar near Door Lock	1480	-650	670		78.3	
13	Right B-Pillar across from Nr. 12	1480	650	670		57.6	
14	Underneath left Front Seat attached to Seat	1960	325	285		74.6	
15	Vehicle Center of Gravity					defect	
16	Displacement Transducer Front Door	2235	-	670		0.1 m	
17	Displacement Transducer B-Pillar	1415	-	850		0.31m	
7a	Middle of Left Front-Door-Beam	2060	-700	457		168.3	

* Reference Points: X - Rear Bumper
Y - Vehicle Centerline
Z - Ground Level

Table 2 : Summary of Target V hicl Instrumentation

TEST NO : 8

Form FE 76a



Axial Accelerometer, Longitudinal

Biaxial Accelerometer, Long., Lat.

Triaxial Accelerometer, Long., Lat., Vert.

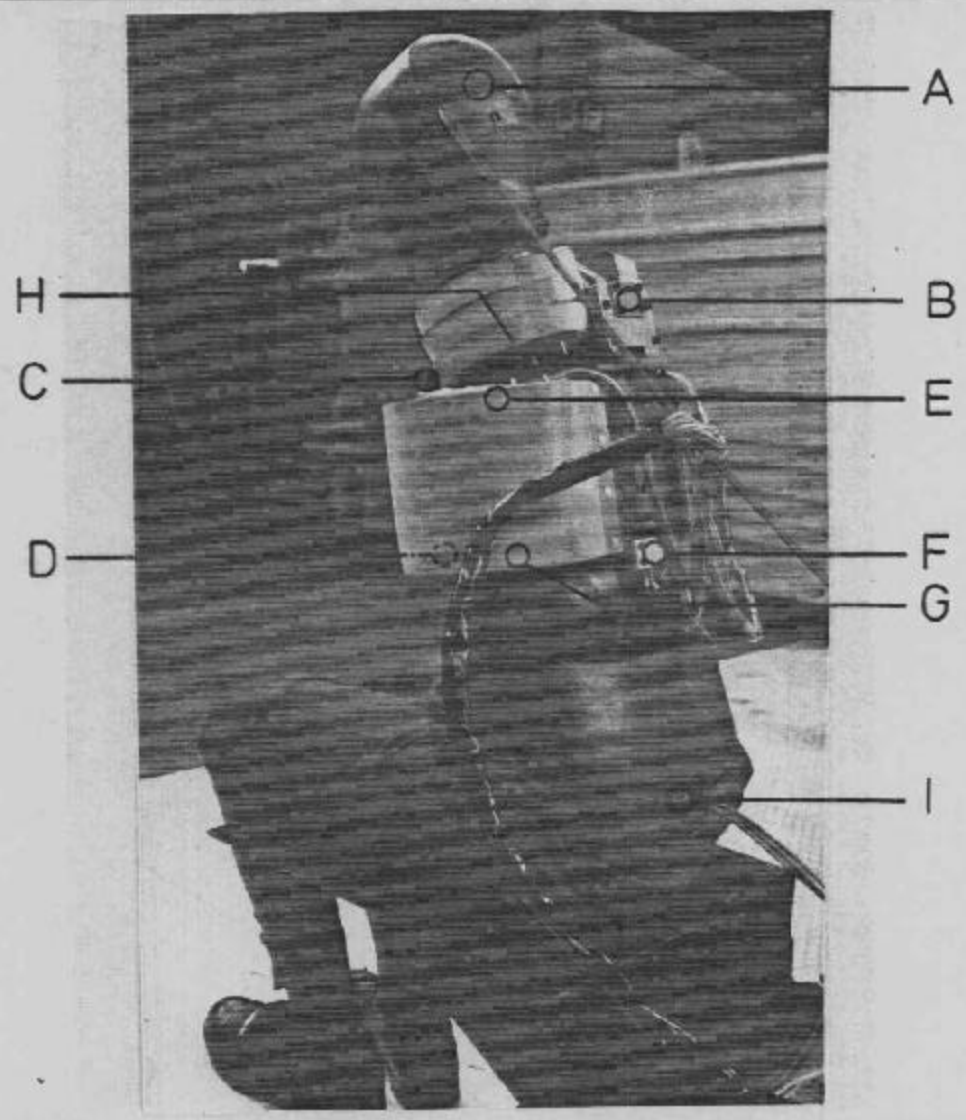
No.	Accelerometer - Location	Coordinates [mm]			Results [G]		
		X	Y	Z	Long	Lat	Vert
A 1	Right Frame Rail	2134	584	508	14.0		
A 2	Left Frame Rail	2134	-584	508	20.1		
A 3	Front Crossmember at Centerline	3300	0	610	16.1		
A 4	Right rear vertikal Frame Rail	228	560	407	11.1	20.6	
A 5	Side Impactor Center of Gravity	1727	0	305	19.5	6.6	5.9

Reference Plane: X - Rear of Side Impactor
Y - Side Impactor Centerline
Z - Ground

TEST NO : 8

FIGURE 6 : SIDE IMPACTOR INSTRUMENTATION

Form FE 76a



A. Head Triaxial
B. Upper Thorax (T 1), Triaxial
C. Upper Sternum, Longitudinal
D. Lower Sternum, Longitudinal
E. Left Upper Rib, Lateral (also on right)
F. Lower Thorax (T 12), Triaxial
G. Left Lower Rib, Lateral (also on right)
H. Displacement Transducer
I. Pelvis, Triaxial

Figure 7 : Location of 18 Accelerometer for Side Impact Dummy

Form FE 76a

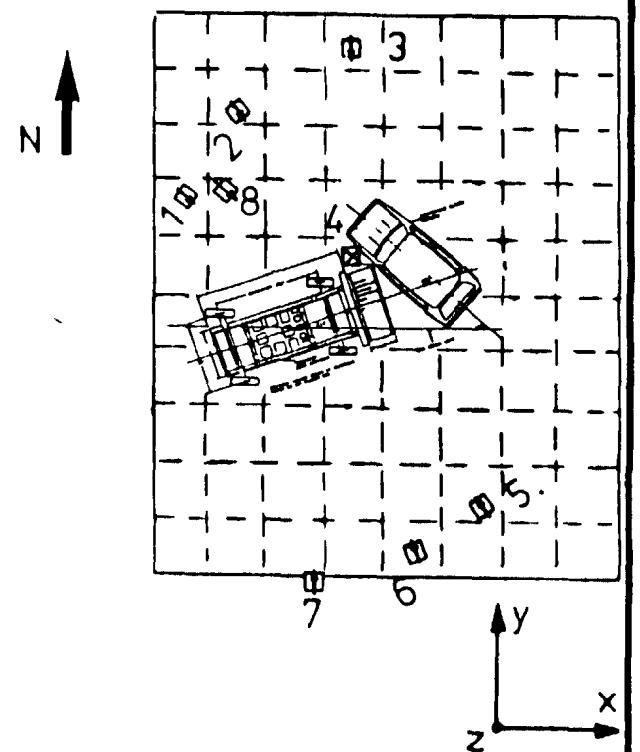
Test No: 8 Test Date: 04.22.1982

Test Type: 60° Side Impact Simulation

Vehicle A : Side Impactor

Vehicle B: VW-Rabbit

Comments: Side Impactor "Crabbed" 19°



Camera	Yes
Stills	
Movie	
Slides	
Polaroid	

Camera Symbols

- Pit
- Ground
- Barrier
- Overhead
- On-Board

Frame Rate

1. 1000 fr/sec
2. 25 fr/sec
3. 400 fr/sec

Timing Light, Speed

1. 100 Hz (10 msec/light)
2. Other

Loc. No.	Location	Field of View	Lens Size	Frm Rate	Tmng Spd	Real Fr.R.	Impact Dist-X	C. L. Dist-Y	Cam [m] Dist-Z
1	North Side -Parallel To Bullet	Overall of Both Vehicles (Locam)	16	3	10	340	-7.0	4.0	1.3
2	North Side -Parallel to Target	Close-up of Both Vehicles at Impact (Locam)	10	3	10	380	-3.0	4.5	2.2
3	North Side-Perpendicular to Bullet	Overall of Both Vehicles (Locam)	26	3	10	380	8.0	4.0	1.3
4	Overhead	Elevated - Looking Down at Impact Point (Locam)	10	3	10	350	-0.8	2.0	7.0
5	South Side -Parallel to Target	Close-up of Both Vehicles at Impact (Locam)	16	3	10	defect	10.0	-12.0	1.3
6	South Side- Perpendicular to Target	Overall of Both Vehicles (Arri)	16	2	-	25	5.0	-12.0	1.0
7	South Side	Overall of Both Vehicles (Locam)	16	3	10	390	2.0	-12.0	1.3
8	North Side	Overall of Both Vehicles (Mitchel)	50	2	-	45	-4.5	4.0	1.4

Figure 8 :Camera Location - Ground based

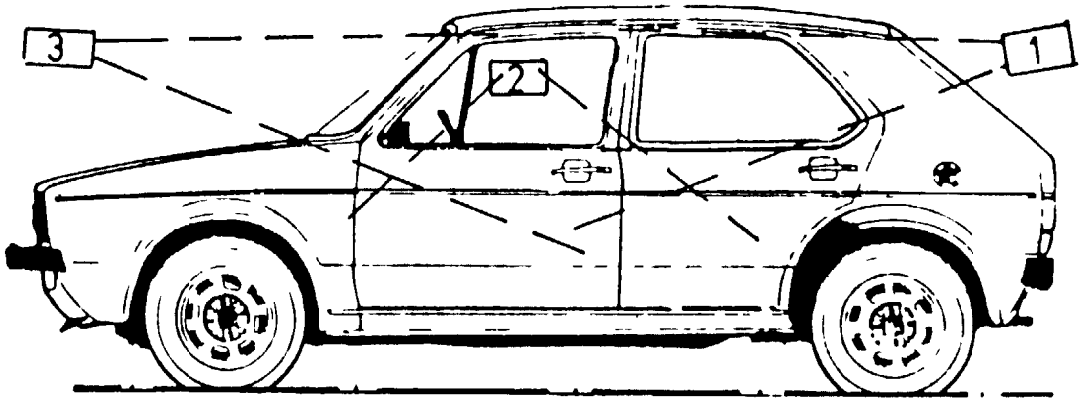
Test No.: 8 Test Date: 04.22.1982

Test Type: 60° Side Impact Simulation

Vehicle A: Side Impactor

Vehicle B: VW-Rabbit

Comments: Side Impactor "Crabbed" 19°



Camera Symbols

- ☐ on-Board
- ⊡ Ground
- △ Overhead

Frame Rate

1. 1000 fr/sec
2. 400 fr/sec
3. Other _____ fr/sec

Timing Light, Speed

1. 100 Hz (10msec/light)
2. Other _____

Loc. No.	Location	Field of View	Lens Size	Frm Rate	Tmng Spd	Real Fr.R	Impact Dist-X	C. L. Dist-Y	CAM Dist-Z [m]
1	Vehicle Rear Hatch-back Door	Front and Rear Occupant Compartment (Photosonics)	8	1	1	950			
2	Vehicle Right Front Door	Front Occupant Compartment (Photosonics)	8	1	1	820			
3	Vehicle Front Right Side	Front and Rear Occupant Compartment (Stalex)	8	1	1	1000			

Figure 9 : Camera Locations - on Board

3. Test Parameter and Results

- 3.1 Crash Test Summary
  - 3.1.1 Target Vehicle
  - 3.1.2 Side Impactor (19° Crabbed Barrier)
- 3.2 Pre-Test Conditions
  - 3.2.1 Driver Pre-Test Position
  - 3.2.2 Rear Passenger Pre-Test Position
- 3.3 Vehicle Pre- and Post-Test Position
- 3.4 Post-Test Observations
- 3.5 Dummy Test Response
  - 3.5.1 Dummy Test Response Summary - Driver
  - 3.5.2 Dummy Test Response Summary - Rear Passenger
  - 3.5.3 AIS and Coefficients
- 3.6 Target Vehicle Test Response
  - 3.6.1 Pre- and Post-Test Measurements
  - 3.6.2 Exterior and Interior Vehicle Measurement
  - 3.6.3 Exterior and Interior Static Crush (Top View)
  - 3.6.4 Exterior and Interior Static Crush (Front View)
- 3.7 Crabbed Barrier Test Response
  - 3.7.1 Pre- and Post-Test Frontal Profile
  - 3.7.2 Exterior Static Crush

TEST NO : 8

Table 4 : Crash Test Summary for Side Impactor

VEHICLE DATA	TEST 8
Test Vehicle	19^{0} Crabbed Side Impactor
Overall Lenght/Width (mm)	4000 / 2155
Test Weight by Axle (kp)	LR 398 RR 383 LF 390 RF 401
Total Weight (kp)	1572
Wheelbase (mm)	2591
Longitudinal C.G. (from Center of Front Axle) (mm)	1266
Impact Angle (deg)	60
Impact Speed (mph)	31.1
Maximum C.G. Resultant Velocity Change (mph // msec)	
Maximum C.G. Averange Resultant Compartment Acceleration (G // msec)	
Maximum Static Crush (mm)	
• Row C (Top of Stack Level)	79
• Row B (Mod-Stack Level)	71
• Row A (Bumper Level)	171
OCCUPANTS	
Type	-
Location	-
Restraints	-
INSTRUMENTATION	
Number of Data Channels	10
Number of Cameras (Ground Based)	8

TEST NO : 8

Table 3 : Crash T st Summary for Target Vehicle

VEHICLE DATA	TEST 8
Test Vehicle	Modified Rabbit 4-Door
Overall Length/Width (mm)	3980 / 1610
Test Weight by Wheel (kp)	LR 282 RR 261 LF 340 RF 317
Total Weight (kp)	1200
Wheelbase (mm)	2400
Longitudinal C.G. (from Center of Front Axle) (mm)	1086
Impact Angle (deg) *	60
Impact Speed (mph)	0 (stationary)
Maximum C.G. Resultant Velocity Change (mph // msec)	
Maximum C.G. Resultant Acceleration (G // msec)	
Maximum Door Acceleration (G // msec)**	168.3 // 9.0
Maximum Exterior Static Crush (mm)	
• Level 4 (32.0")	349
• Level 3 (26.0")	392
• Level 2 (20.0")	364
• Level 1 (12.0")	240
Maximum Post-test Intrusion (mm)	337
OCCUPANTS	
Type	SID SID
Location	Driver Left Rear Passenger
Restraints	VW-RA Pelvis Belt
INSTRUMENTATION	
Number of Data Channels	68
Number of cameras (On Board)	3

* With respect to bullet vehicle.
**At mid-rear edge of left front door.

Test No.: 8 Vehicle: 8 LF 340 (kp) RF 317 (kp)

Test Date: 04.22.1982 Total Test Wt. 1200 (kp) LR 282 (kp) RR 261 (kp

HEAD RESTS - up down other none

FRONT SEAT - forward midpoint rearward latched welded

FRONT SEAT TILT - forward midpoint back other 25° none

REAR SEAT - in place removed

STEERING WHEEL - up midpoint down not adjustable

SUN VISORS - up down removed

GLOVE COMPARTMENT - locked closed none

SEAT BELT - fastened unfastened removed none

SHOULDER HARNESSES - fastened unfastened removed

VENT WINDOW _ closed open removed none stationary

LEFT FRONT WINDOW - up down removed

RIGHT FRONT WINDOW - up down removed

LEFT REAR WINDOW - up down removed

RIGHT REAR WINDOW - up down removed

BACKLIGHT - in place removed

LEFT FRONT DOOR - closed locked removed

RIGHT FRONT DOOR - closed locked removed

LEFT REAR DOOR - closed locked removed

RIGHT REAR DOOR - closed locked removed

ENGINE - in place removed mounts modified

TRANSMISSION - neutral other _____ removed

DRIVESHAFT - in place removed

PARKING BRAKE - off on disconnected

FRONT BUMPER - in place removed none

REAR BUMPER - in place removed none

HOOD - in place removed

WINDSHIELD WIPERS - in place removed

FUEL TANK - 95 Percent full empty other _____

RADIATOR - full empty none removed

BATTERY - in place removed drained

SPARE TIRE - in place removed none

JACK - in place removed none

WHEEL COVERS - in place removed none

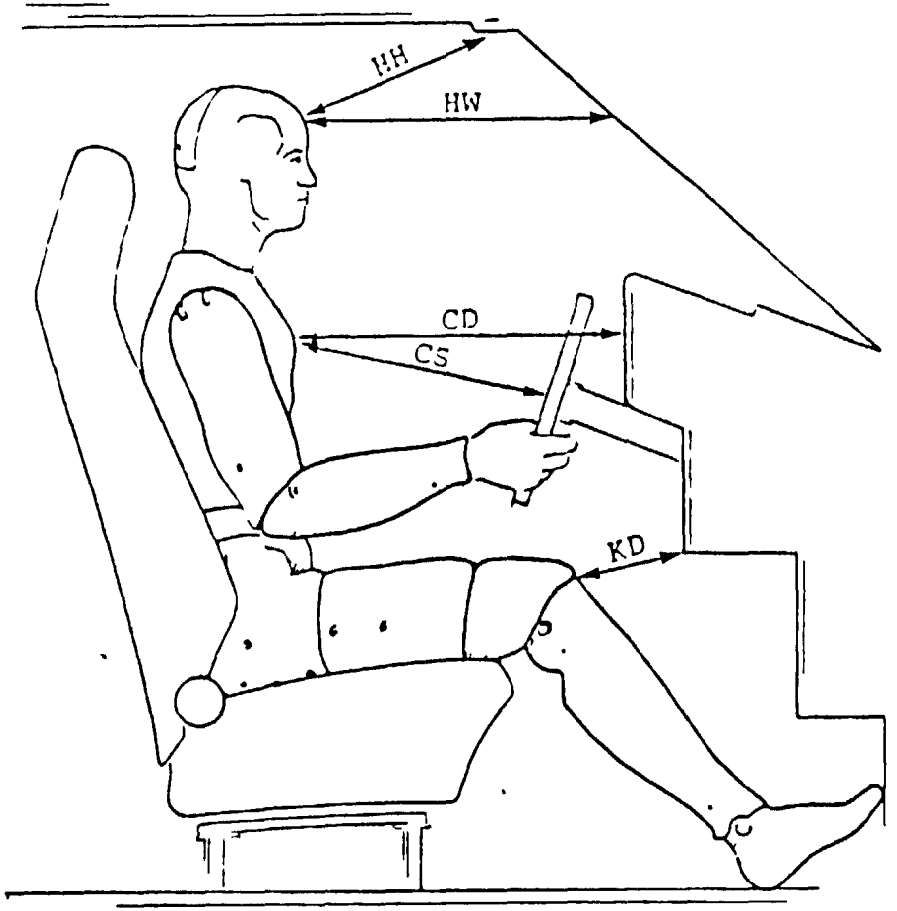
BALLAST - none _____ kg

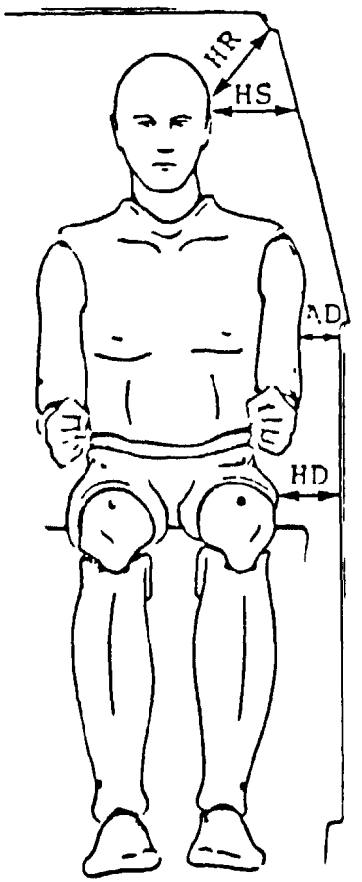
DUMMY LOCATION - LF RF LR RR none

DUMMY POSITIONING CRITERIA - FMVSS 208 side impact criteria other

Table 5 : Pre-T st Conditions

TEST NO : 8





HH=	380
HW=	520
CD=	510
CS=	390
KD=	90

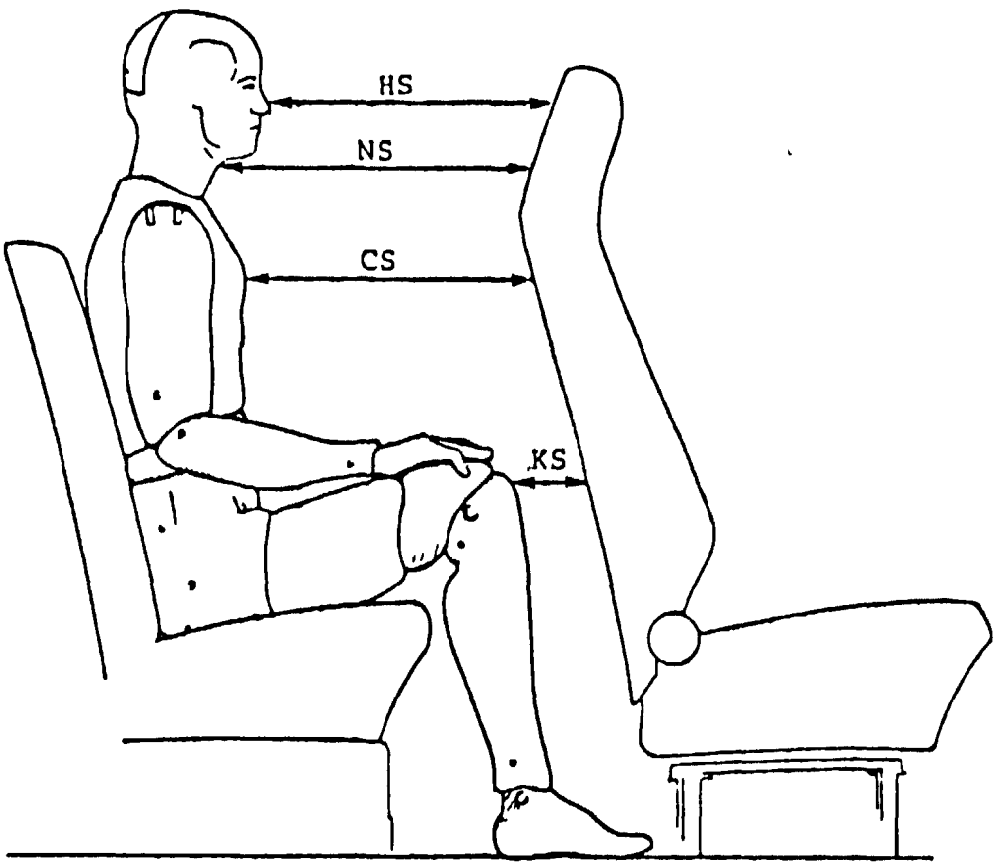
(ALL DIMENSION IN MM)

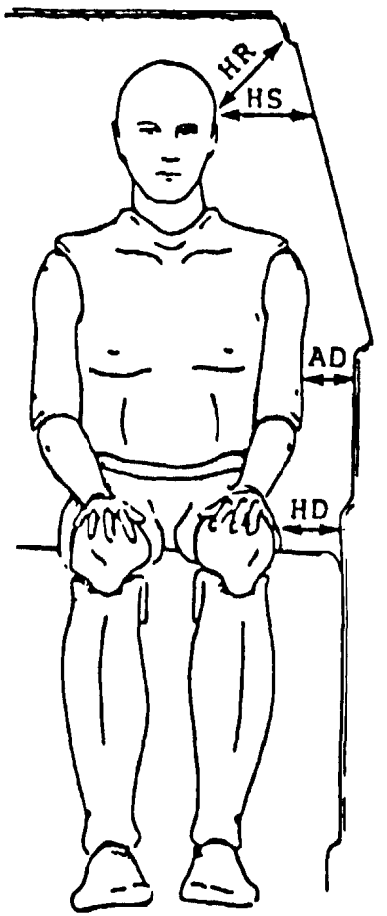
HR=	155
HS=	165
AD=	100
HD=	150

Table 6: Driver Pre-Test Position

Form FE 76.0

TEST NO : 8



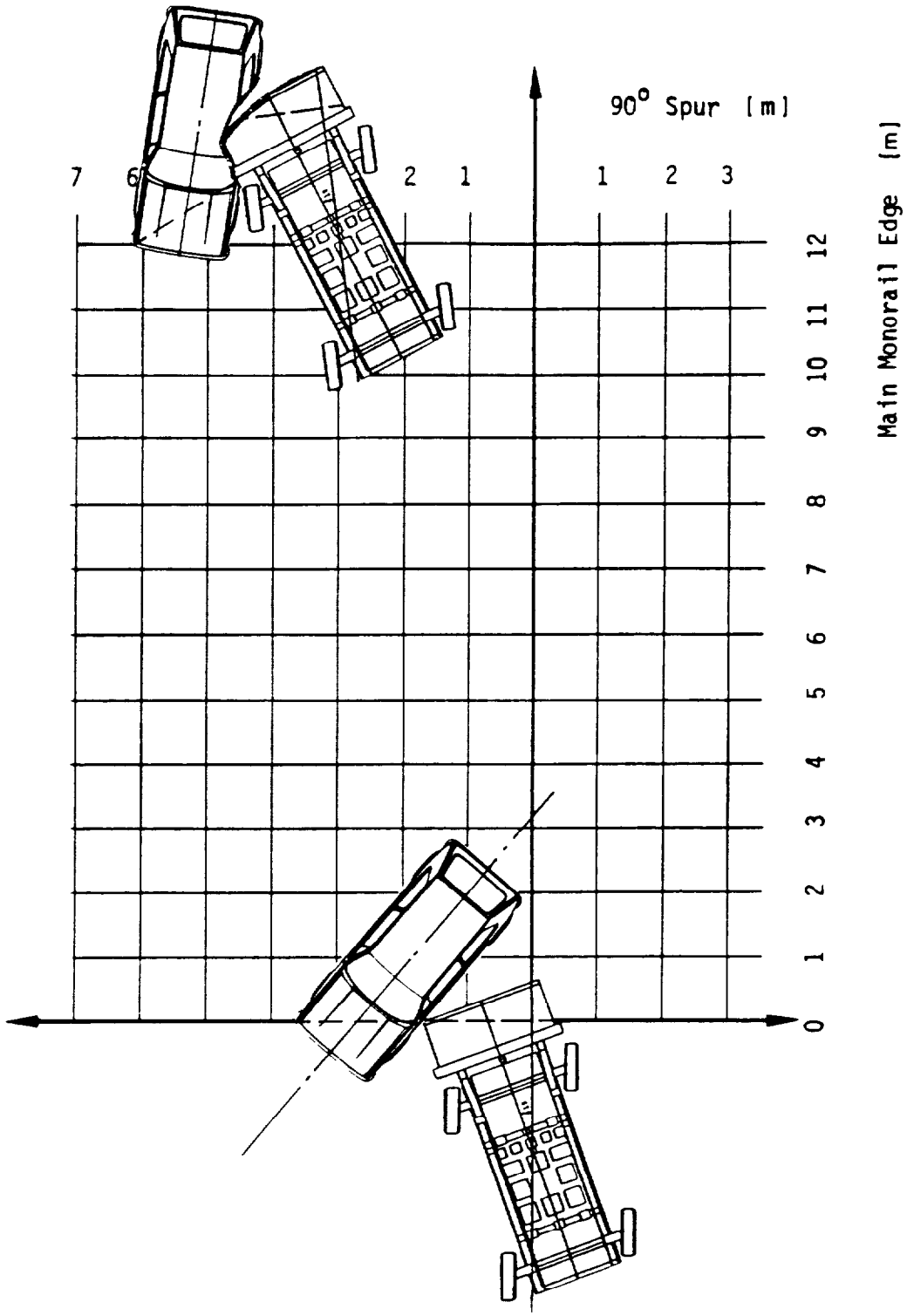


HS	480
NS	520
CS	420
KS	120

HR	170
HS	165
AD	125
HD	160

Table 7 : Rear Passenger Pr –Test Position

Table 8 : Vehicle Pre- and Post-Test Position



TEST NO : 8

Table 9: Summary of Post-Test Observations

VEHICLE: VW Rabbit 8

Test No. (Moving Test Device) 8

Dummy Contact Points:	Left Front	Left Rear
Head	no Contact	Contact at C-Pillar and Roof-Line
Chest	Upper Door Panel and Lower Window-Sill	Upper Door Panel and Lower Window-Sill
Knees/Hip	Lower Front-Door Panel	Lower Rear-Door Panel

Glazing: Left Front- and Rear Side-Window shattered. Windshield no damage.

Doors: Left Front- and Rear Door damaged, would not open.

Seat Belt Anchorages : Left Seat Frame damaged, but Seat Anchorages remained intact; Seat-Legs and Seat-Runner fixed in the Floor-Rails.

Restraints: Driver (RA) and Left Rear (Lap - Belt) in use.

Fuel Leakage: None

General Observations: Impact Point 650 mm from Front Axle.
Side Impactor Bumper impacted into the Door-Beams. B-Pillar damaged and bended on the Level of the Window-Sill.
Interlock of Door Beam-Side Sill and Door Beam to B-Pillar Attachement remained intact.
A-Pillar slightly bend on the Level of the Wheelhouse-Beam.

Driver Dummy - no damage

Left Rear Dummy - Damper-Bracket was broken.

TEST NO. 8 TEST DATE 04.22.1982

TEST CONFIGURATION:

Target Vehicle Modified Rabbit 4-Door Speed 0 [mph]

Bullet Vehicle 19° Crabbed Side Impactor Speed 31.10 [mph]

Impact Location behind Front Axle 650 [mm] Angle 60° [deg]

PASSENGER: D R I V E R

HEAD RESPONSE:

Peak a_R defect [g] Impacted Objekt none

HIC ---- Time T 1 -- [ms] T2 -- [ms]

CHEST RESPONSE:

Location	[g]	≥ 3ms [g]	SI	Δv_y [mph]	Imp. Time [ms]	Time a-max [ms]
Upper Sternum (X)	52.8	39.6	--	--	47	52.5
Lower Sternum (X)	51.7	42.8	--	--	45	59.5
LUR (Y)	153.3	83.1	--	19.99	44.5	51.5
LLR (Y)	119.4	64.0	--	18.87	43.5	51.0
RUR (Y)	114.6	80.9	--	18.68	48.0	57.5
RLR (Y)	92.9	76.5	--	21.22	42.0	59.0

CHEST DEFLECTION: Damper - DY 48.5 [mm]

VERTEBRAL COLUMN RESPONSE:

Location	Pk a_y [g]	Pk a_R [g]	> 3 ms [g]	SI	Δv_y [mph]	Imp. Time [ms]	Time a-max [ms]
Upper Thorax (T1)	75.7	77.4	69.8	533	19.61	45	64
Lower Thorax (T12)	86.5	86.9	81.3	618	23.16	45	54

PELVIS RESPONSE:

Pk a_R [g] 75.1 SI 300 ≥3 ms [g] 51.5 Impact Time [ms] 30

Table 10: Side Impact Dummy Test R spons Summary

TEST NO. 8 TEST DATE 04.22.1982

TEST CONFIGURATION:

Target Vehicle Modified Rabbit 4-Door Speed 0 [mph]

Bullet Vehicle 19^0 Crabbed Side Impactor Speed 31.10 [mph]

Impact Location behind Front Axle 650 [mm] Angle 60^0 [deg]

PASSENGER: L E F T R E A R

HEAD RESPONSE:

Peak a_R defect [g] Impacted Objekt C-Pillar and Roof Line

HIC --- Time T 1 -- [ms] T2 -- [ms]

CHEST RESPONSE:

Location	[g]	≥ 3ms [g]	SI	Δv_y [mph]	Imp.Time [ms]	Time a-max [ms]
Upper Sternum (X)	26.5	21.4	--	--	86	100.0
Lower Sternum (X)	44.3	29.4	--	--	75	87.5
LUR (Y)	32.6	29.8	--	--	75	82.0
LLR (Y)	46.3	34.5	--	--	71	80.0
RUR (Y)	33.0	28.5	--	--	77	90.0
RLR (Y)	40.1	31.2	--	--	75	88.5

CHEST DEFLECTION: Damper - DY 36.5 [mm]

VERTEBRAL COLUMN RESPONSE:

Location	Pk a_y[g]	Pk a_R[g]	≥3 ms[g]	SI	Δv_y[mph]	Imp.Time [ms]	Time a-max [ms]
Upper Thorax (T1)	36.4	37.9	32.5	197	16.1	90	100.5
Lower Thorax (T12)	42.8	48.2	36.8	204	24.0	78	94.0

PELVIS RESPONSE:

Pk a_R[g] 59.4 SI 309 ≥3 ms [g] 53.6 Impact Time [ms] 60

Table 11: Side Impact Dummy Test R sponse Summary

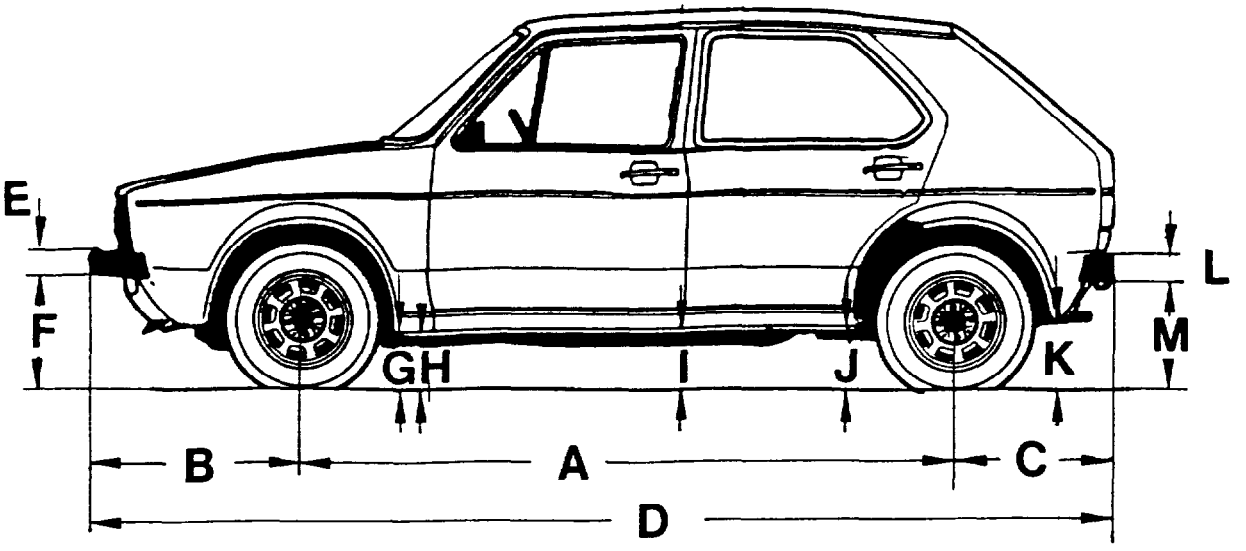
TEST NO. 8 TEST DATE 04.22.1982

COMPUTED COEFFICIENTS:

Location of Accelerometer	AIS B-Param.	AIS Av.Pow.	PAP TB / TE (ms)	B	Q	V_{1050}	V_{1090}	RVS
Left Upper Rib LUR	3.55	3.44	1781 49.4/ 55.6	6.8664	749.44	3.12	11.87	3.8000
Left Lower Rib LLR	3.52	3.43	1573 47.5/ 61.9	6.8431	897.62	5.00	17.50	3.5000
Upper Thorax T 1 Y	3.57	3.66	1944 53.1/ 68.8	6.8813	920.52	7.50	13.75	1.8333
Lower Thorax T 12 Y	3.64	3.66	1968 51.9/ 65.0	6.9267	810.09	4.37	10.62	2.4286

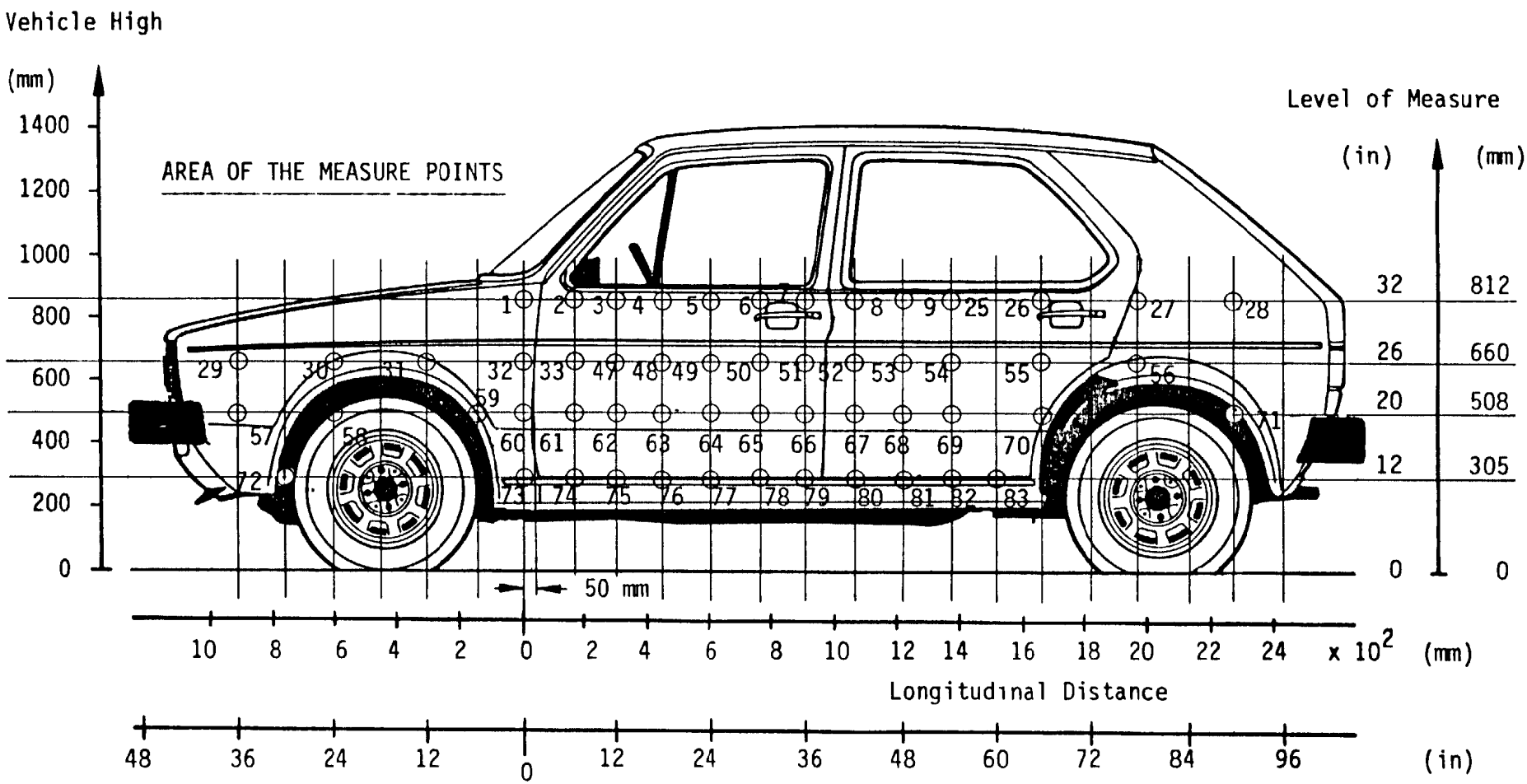
TABLE 12 : AIS AND COEFFICIENTS

TEST NO : 8



	PRE - TEST	POST - TEST	Δ CHANGE
A	2400	2320	- 80
B	825	830	5
C	700	690	- 10
D	3980	3920	- 60
E	125	125	0
F	372	435	63
G	168	198	30
H	166	192	26
I	154	195	41
J	152	200	48
K	180	220	40
L	125	125	0
M	280	335	55

Table 13: Pre-and Post-Test Measurements



TEST NO : 8

VEHICLE NO : 705 115

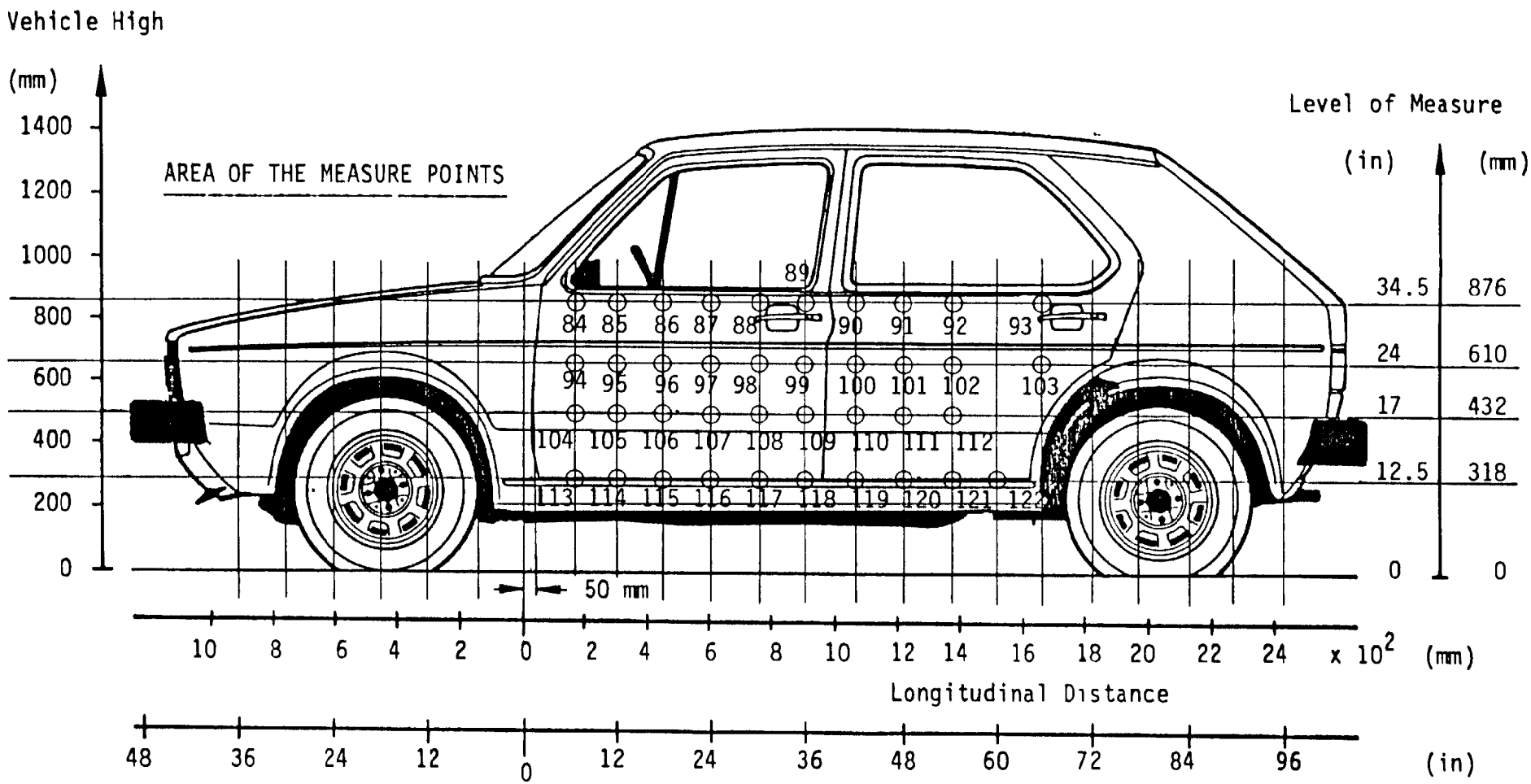
Figure 10: Vehicle Measurement Side (Exterior)

Table 14 : Exterior Static Crush for VW Rabbit

TEST NO : 8

		(Front)					Zero Distance Located at Door [mm]														(Rear)
Location	Height [mm] *	762	610	457	305	152	0	152	305	457	610	762	914	1067	1220	1372	1524	1676	1829	1981	2286
Window-Sill	812	--	--	--	--	--	6	62	159	227	293	335	349	311	256	180	--	45	--	0	+19
Bullet Vehicle Hood	660	+31	--	+18	1	--	14	105	205	292	347	392	363	318	279	242	--	80	--	4	--
Mid-Door	508	+33	--	+26	--	17	25	110	206	307	352	364	343	311	276	222	--	90	--	--	+20
Rocker-Sill	305	--	+41	--	--	--	16	114	144	185	200	224	240	223	139	77	31	--	--	--	--

* All heights measured above ground level.



TEST NO : 8

VEHICLE NO : 705 115

Figure 11 : Vehicle Measurement Side (Interior)

Table 15: Interior Static Intrusion for VW-Rabbit

TEST NO : 8

Location	Height [mm] *	Zero Distance Starting at Door [mm]											
		0	152	305	457	610	762	914	1067	1220	1372	1524	1676
Windowsill Level	876	--	42	133	199	261	296	337	316	242	163	--	27
Mid-door Level	610	--	55	166	228	270	303	331	282	214	157	--	74
Bullet Vehicle Bumper Level	432	--	111	185	215	227	251	265	234	157	--	--	--
Doorsill Level	305	--	55	70	105	134	152	192	142	48	--	--	--

* Heights measured above ground level.

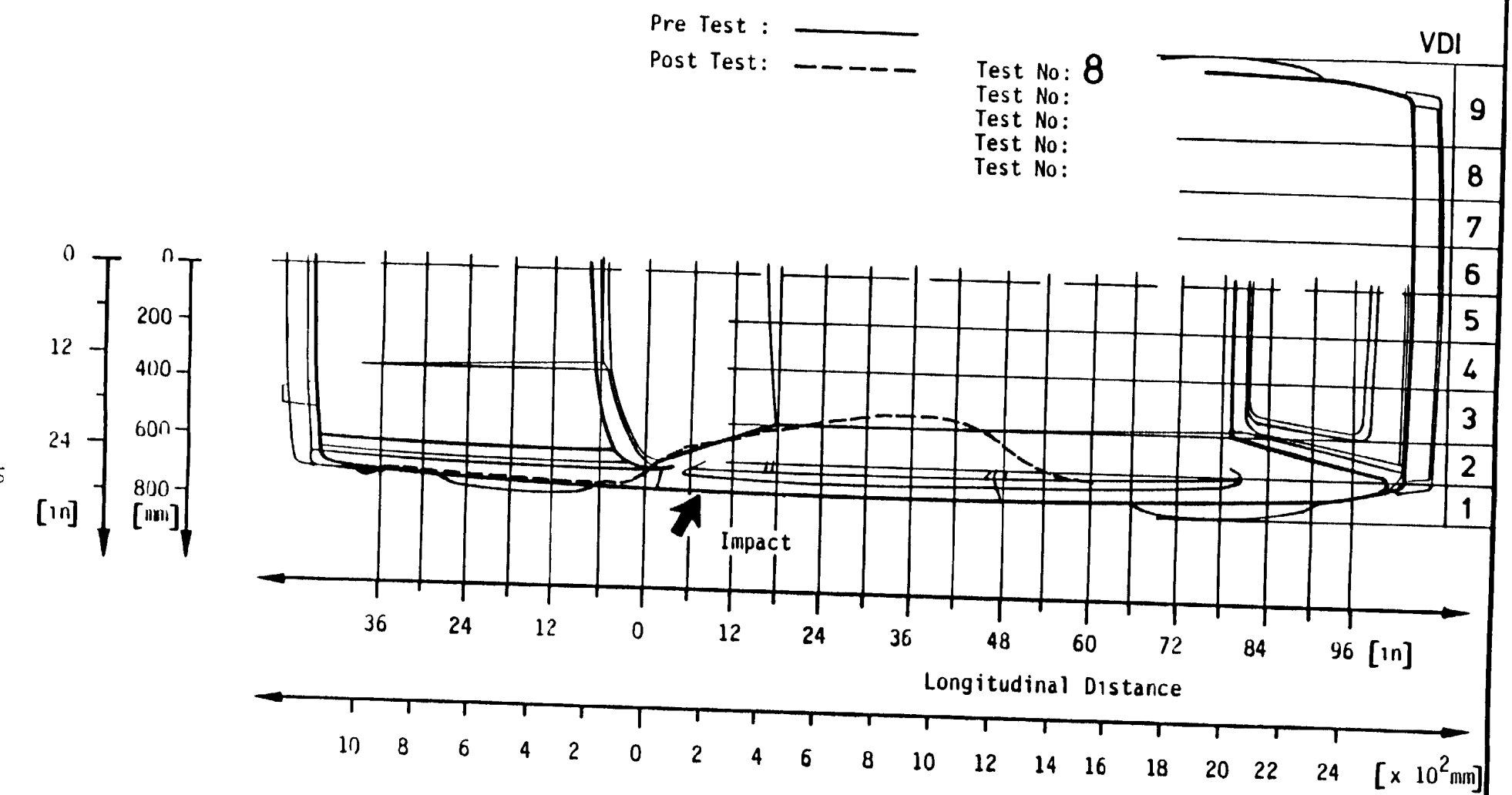
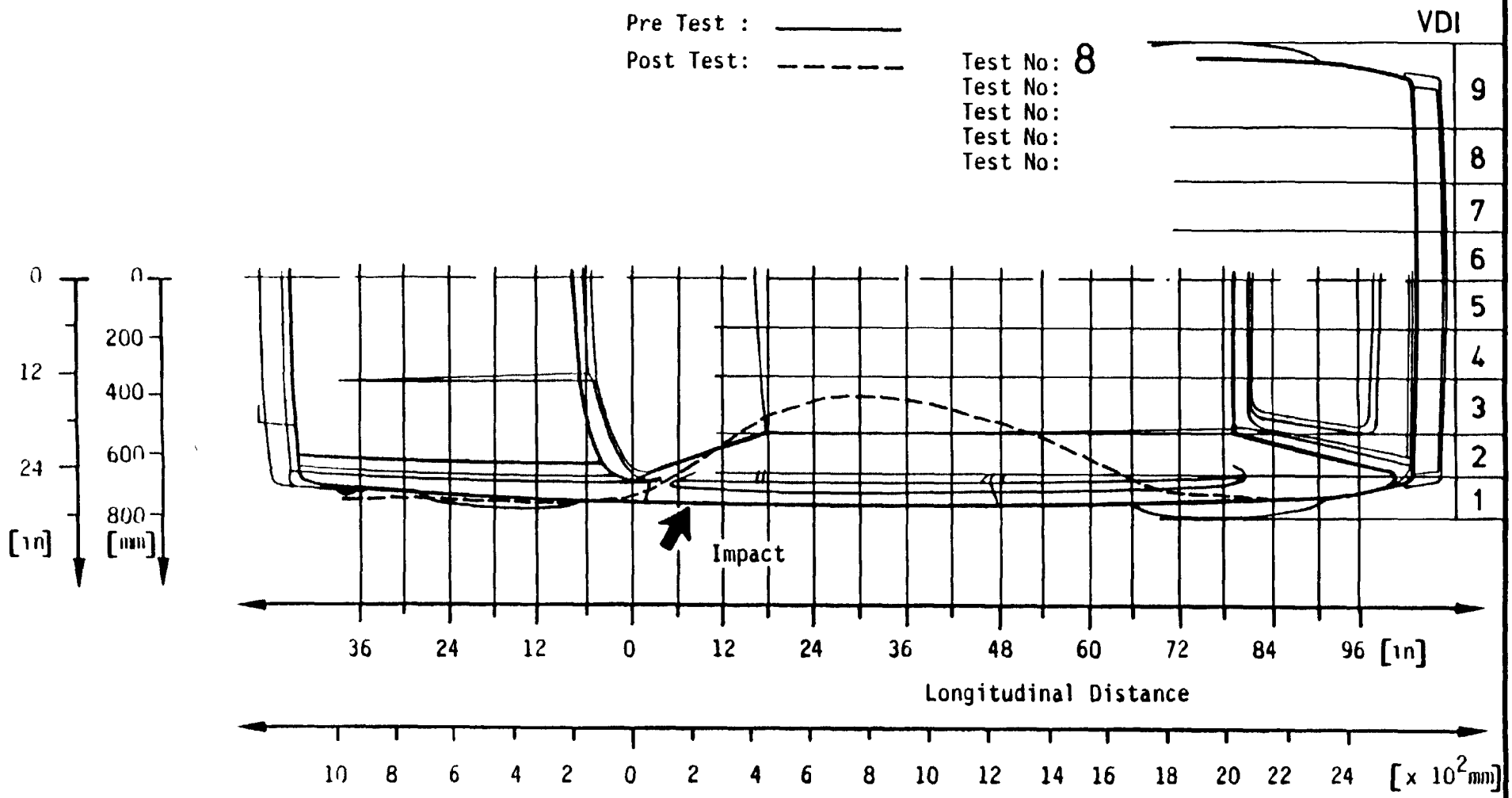


Table 16: Pre- and Post-Test Exterior Profiles at 305mm abov Ground L vel



Tabl 17: Pre - and Post - Test Exterior Profiles at 508 mm abov Ground L vel

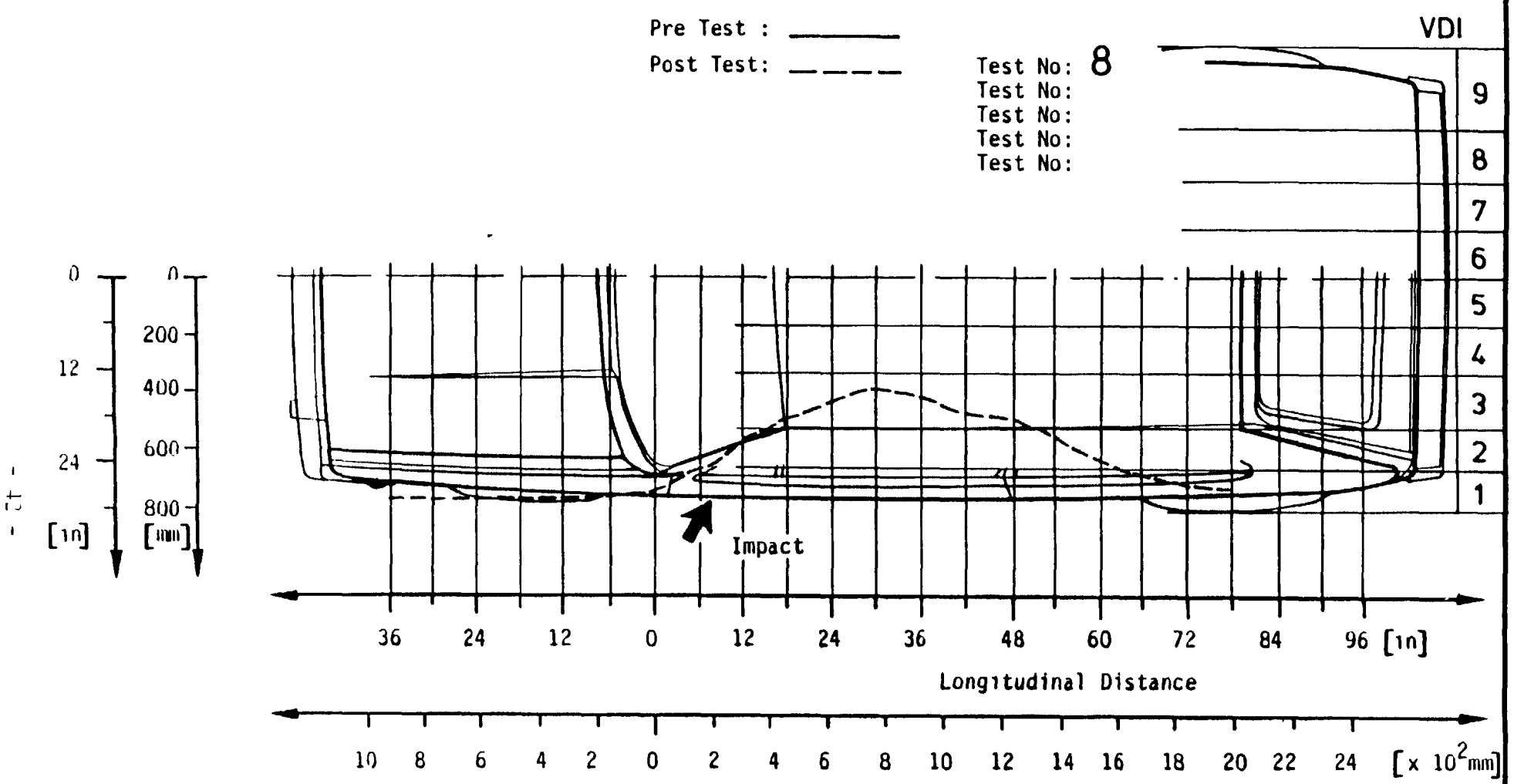
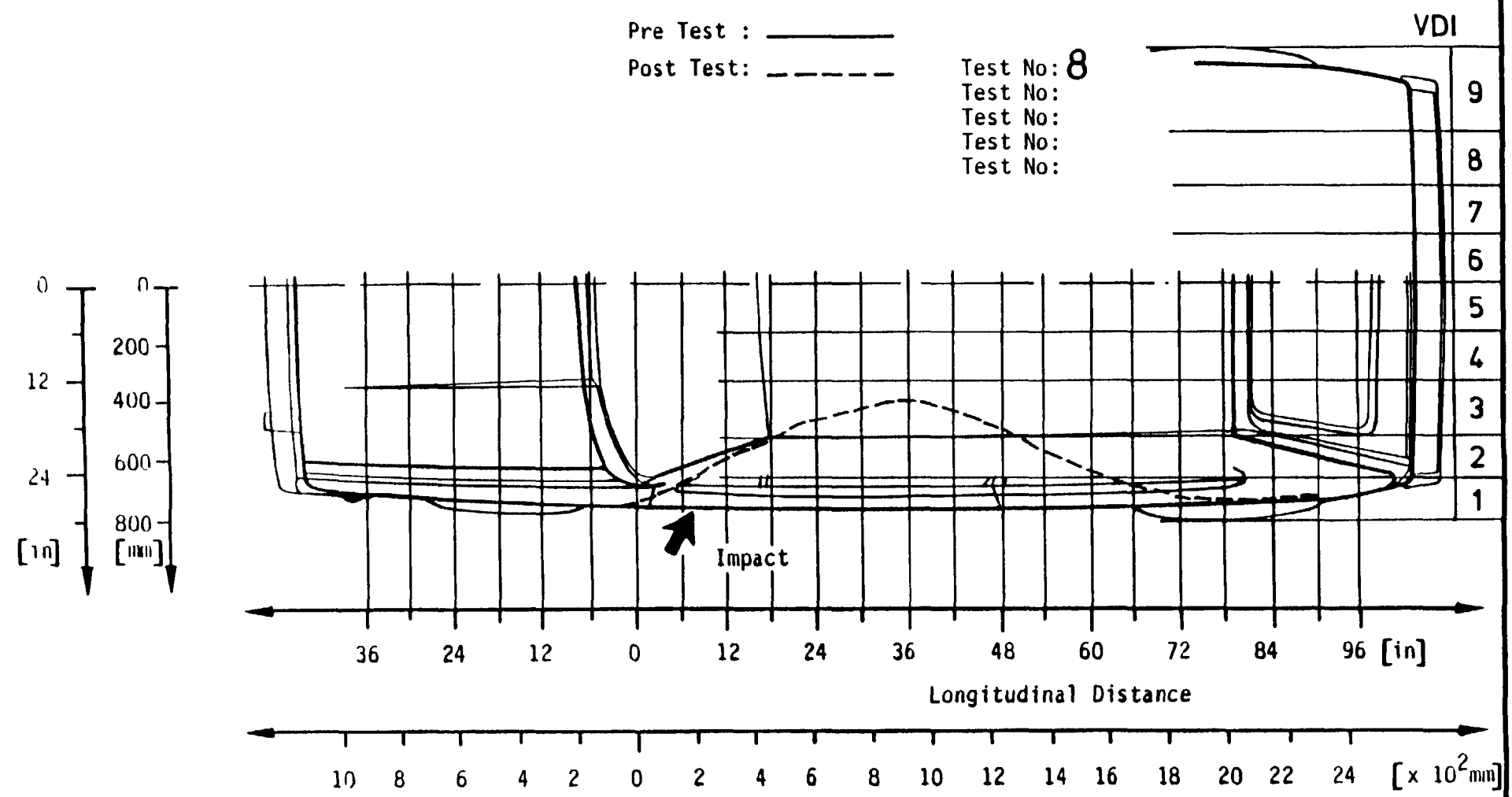


Table 18: Pre - and Post - Test Exterior Profiles at 660 mm abov Ground L vel



Tabl 19: Pre - and Post - T st Exterior Profil s at 812 mm above Ground L v l

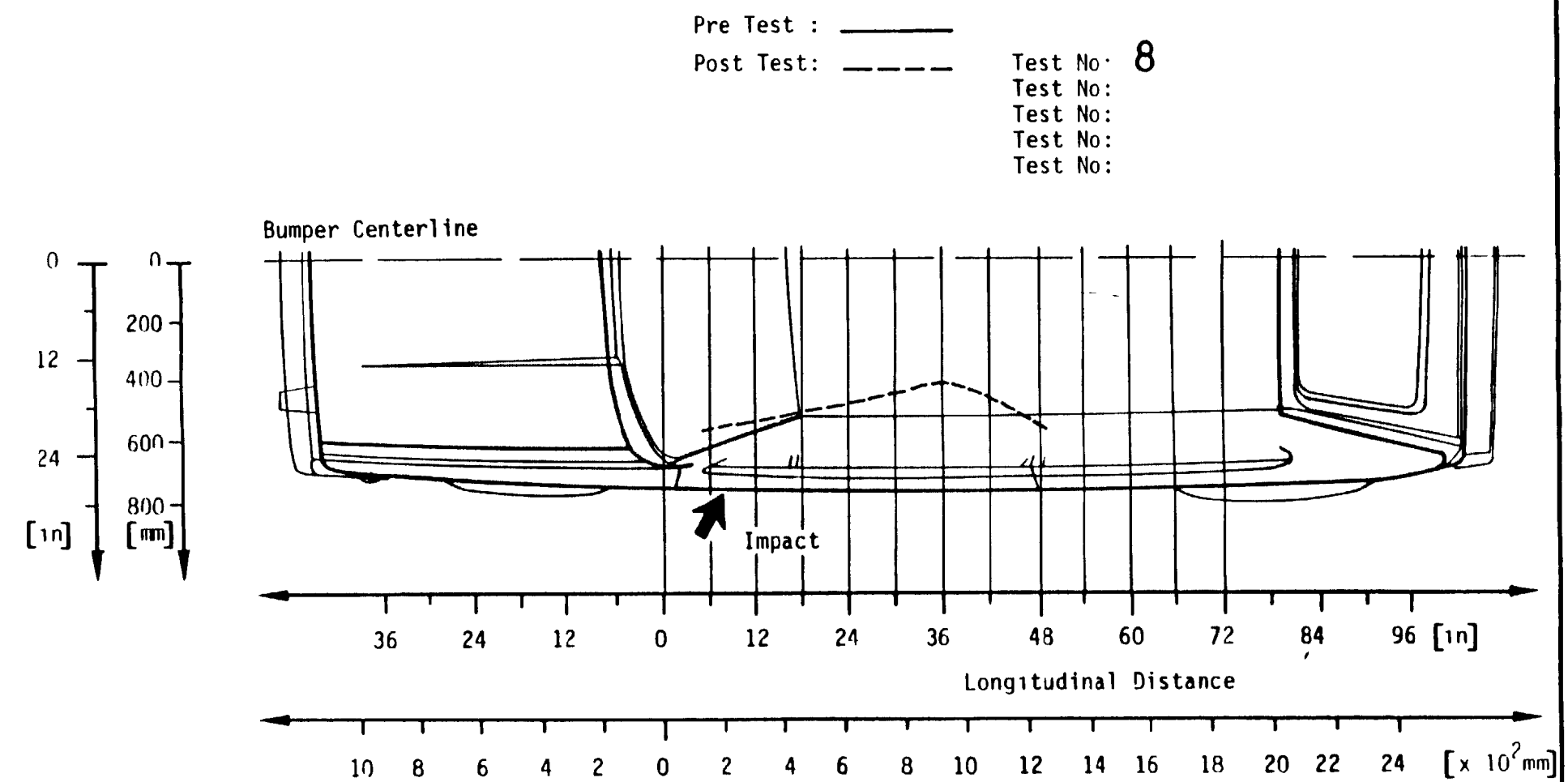


Table 20: Pre- and Post-Test Interior Profiles at 318 mm above Ground Level

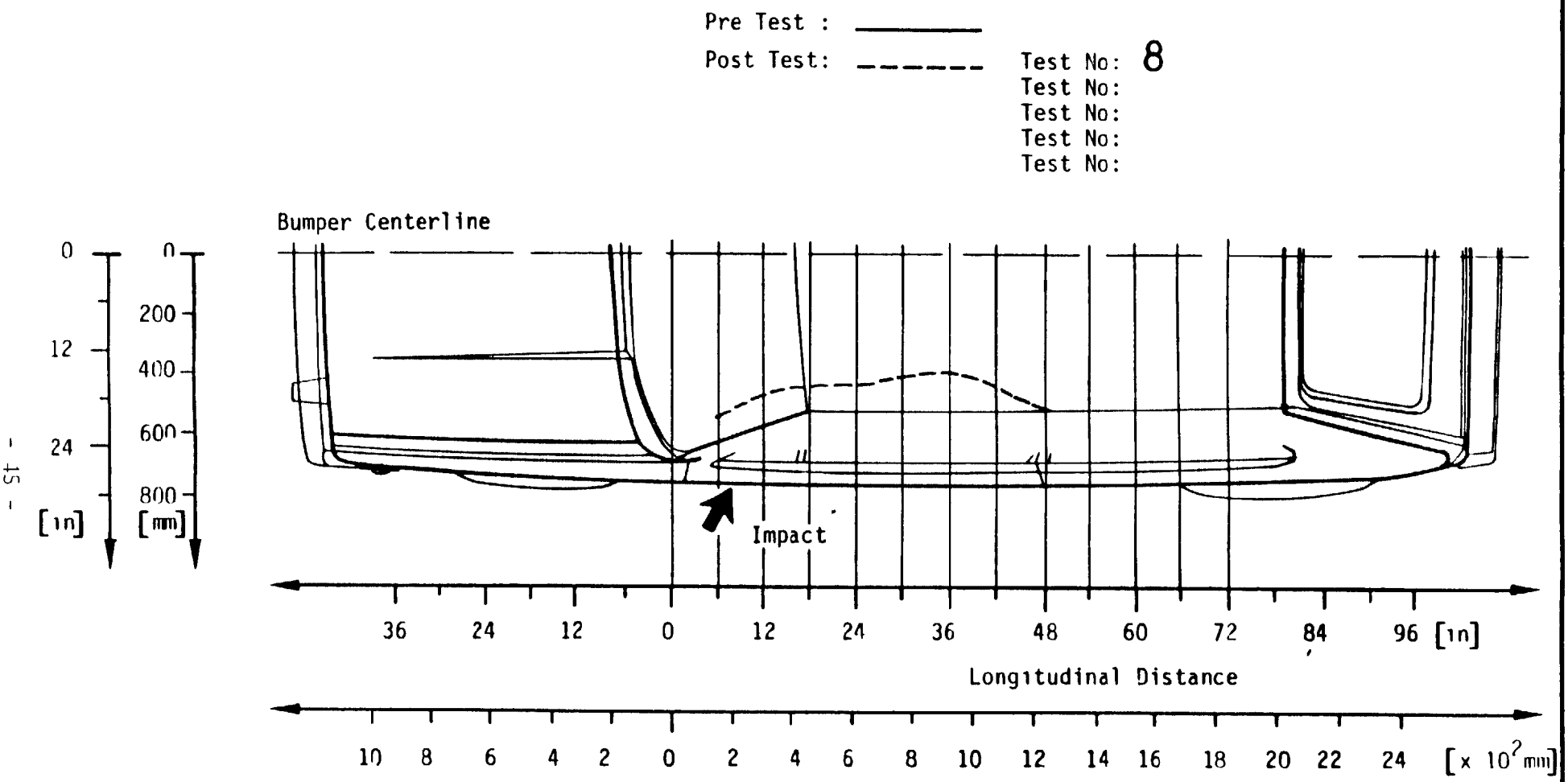
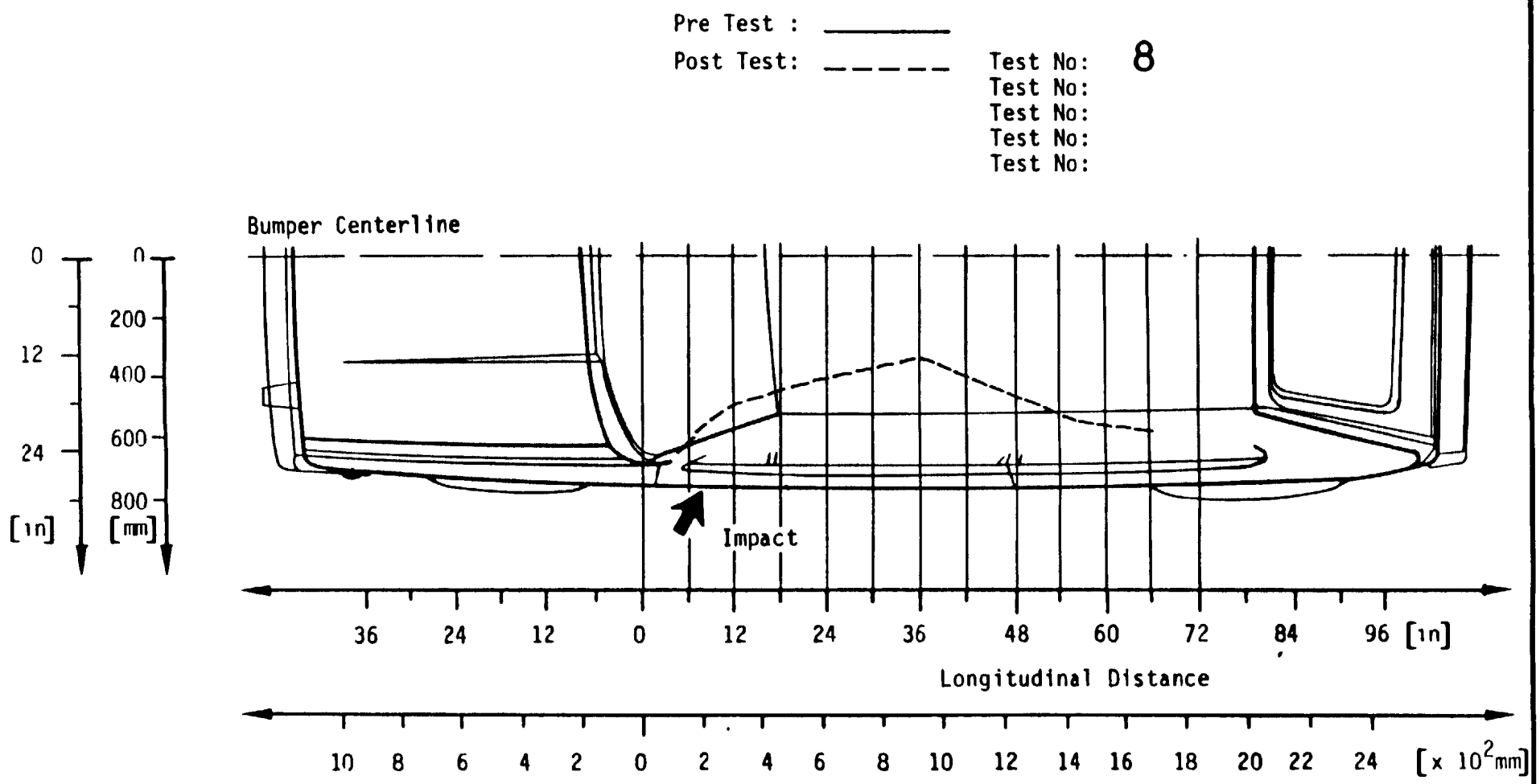


Table 21: Pre - and Post - Test Interior Profiles at 432 mm above Ground L v l



Tabl 22: Pre-and Post-T st Int rior Profil s at 610 mm above Ground L v l

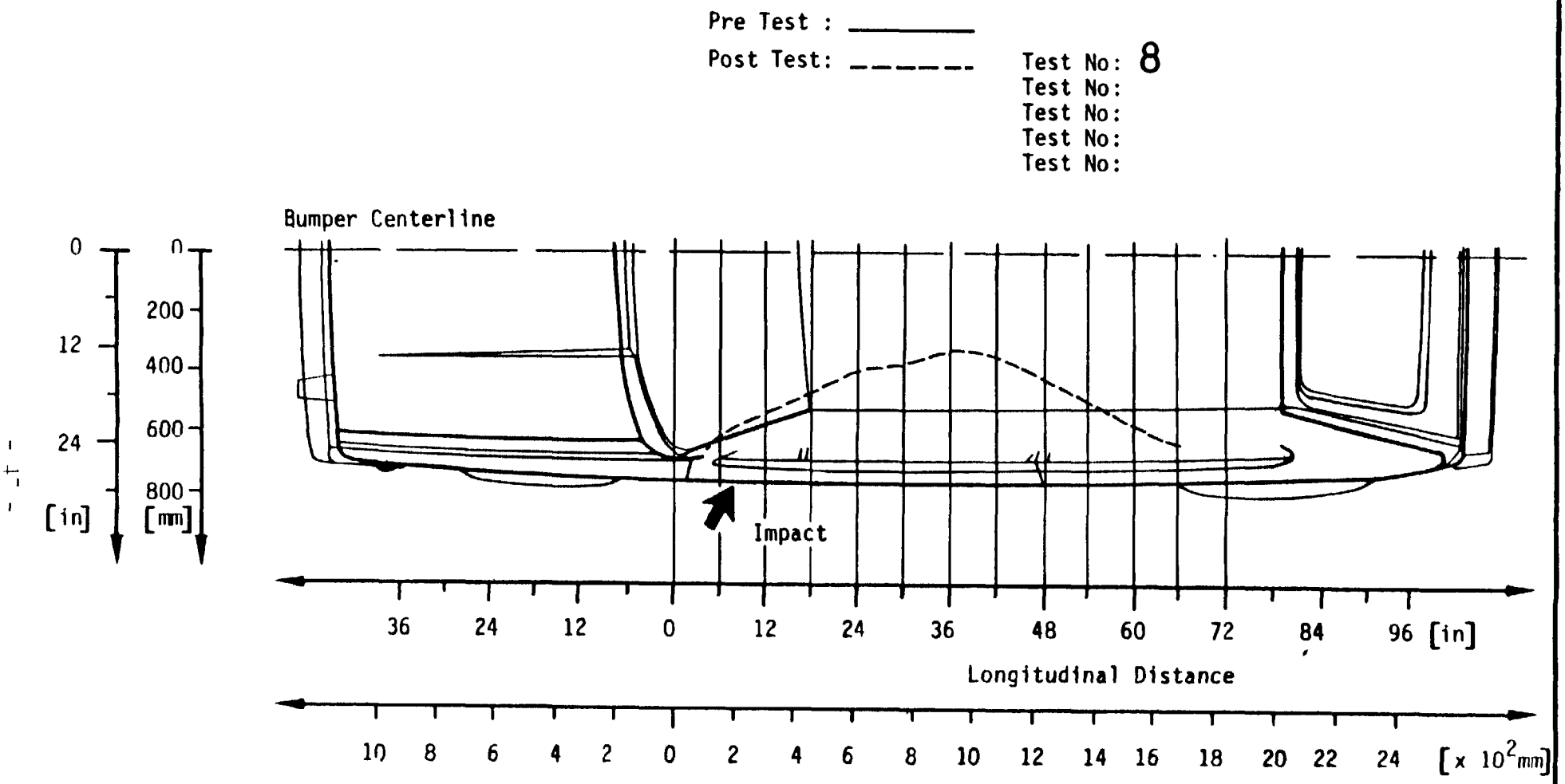
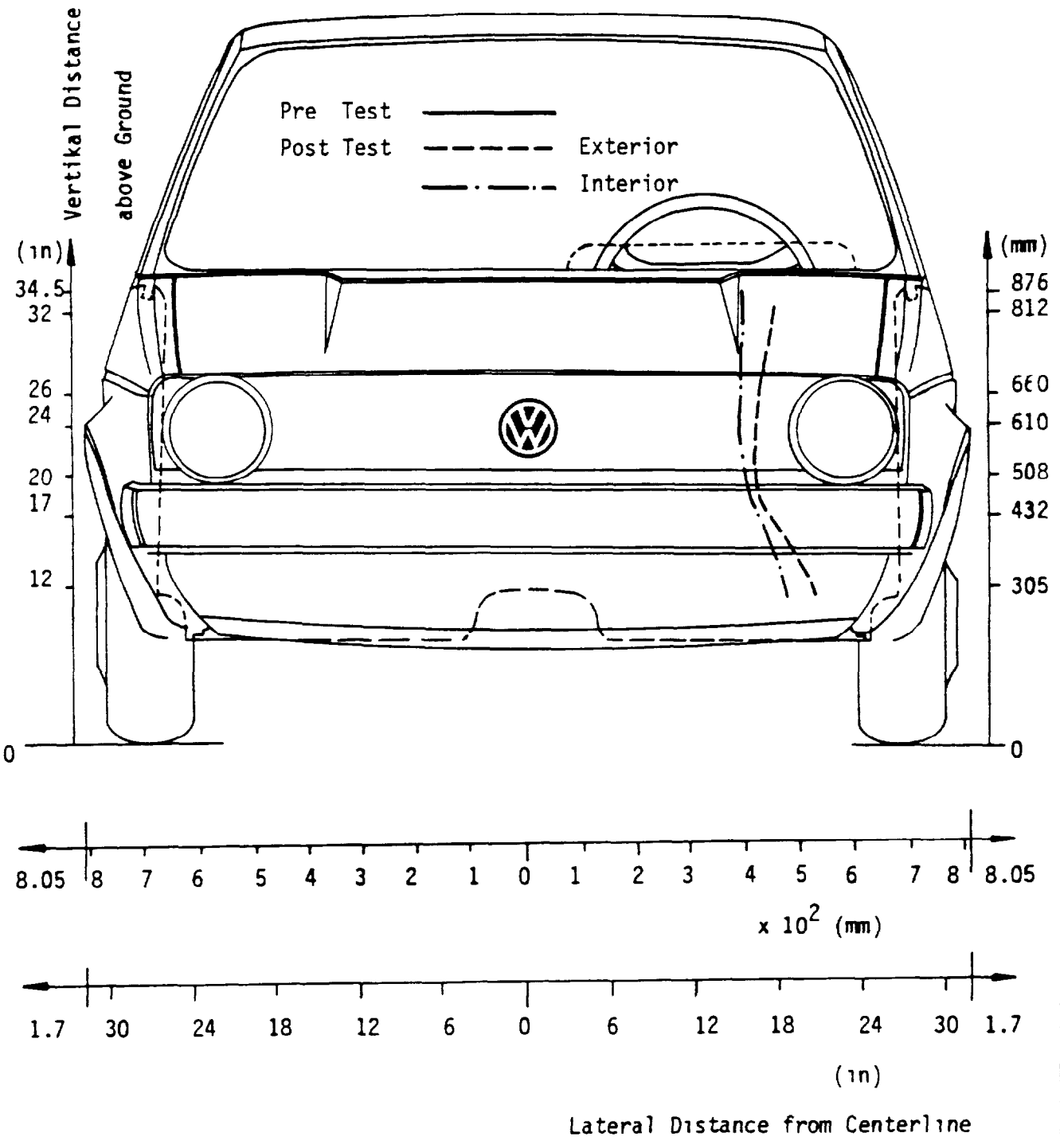
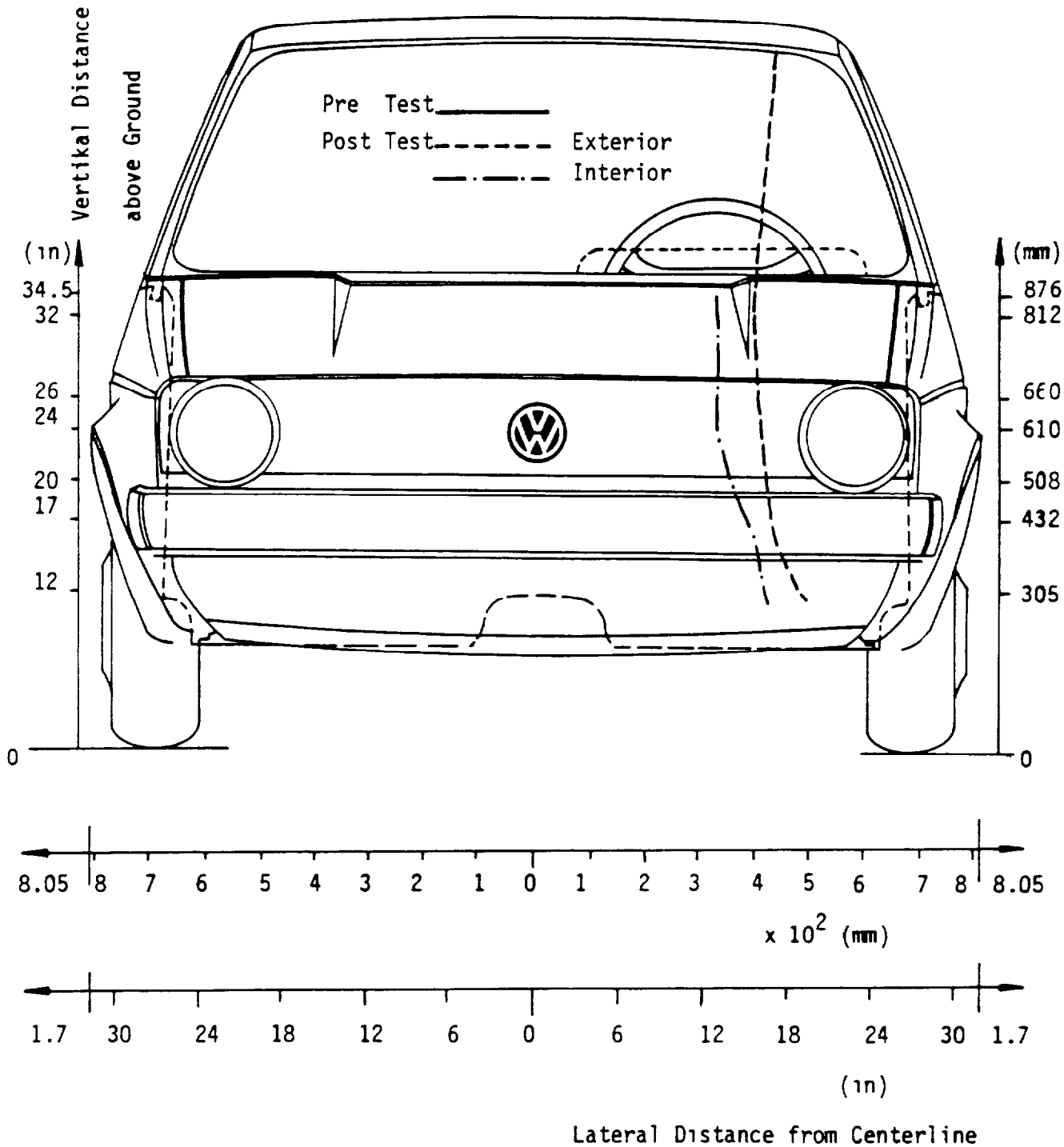


Table 23: Pre - and Post - Test Interior Profiles at 876 mm above Ground L v l



TEST NO : 8

FIGURE 12 : EXTERIOR AND INTERIOR STATIC PROFILES AT THE LONGITUDINAL DISTANCE 610 MM FROM DOOR



TEST NO : 8

FIGURE 13 : EXTERIOR AND INTERIOR STATIC PROFILES AT THE LONGITUDINAL DISTANCE 914 MM FROM DOOR

Tabl 24: Exterior Static Crush for Side Impactor

TEST NO : 8

Location	Height at C_L *	Distance right of Center [mm]								Distance left of Center [mm]**								
		835	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	835
Top of Stack Level	813	0	0	0	0	0	0	0	0	0	0	0	1	3	5	8	23	79
Mid - Stack Level	554	0	0	0	0	0	0	0	0	0	0	0	1	3	11	26	46	71
Bumper Level	432	0	0	0	0	8	16	21	28	36	39	46	52	70	91	113	139	171

* Heights measured above ground level.

** Impact side.

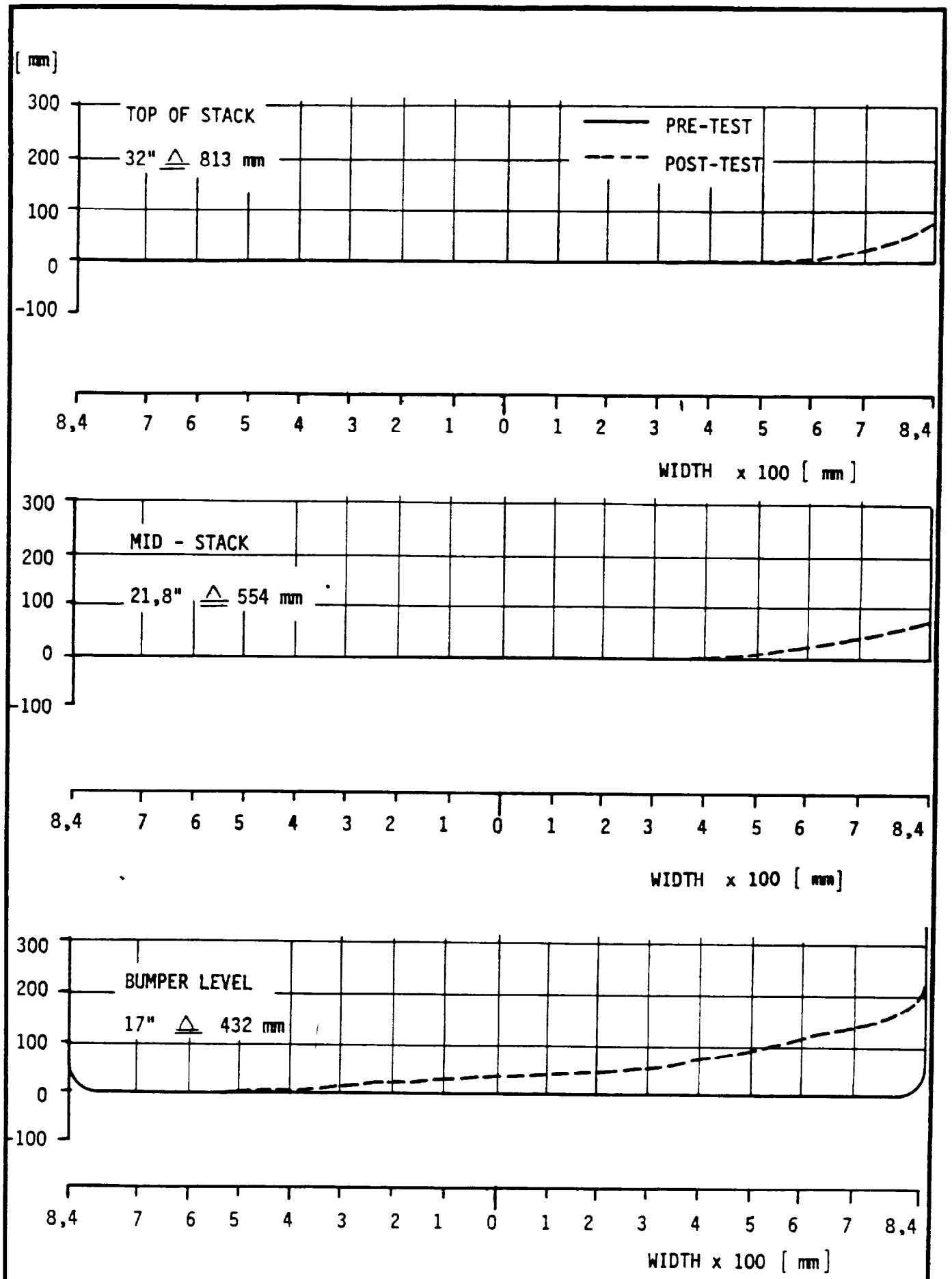


Table 25 : Pre- and Post-Test Frontal Profiles for Side Impactor (Test 8)

A P P E N D I X A

Photographs

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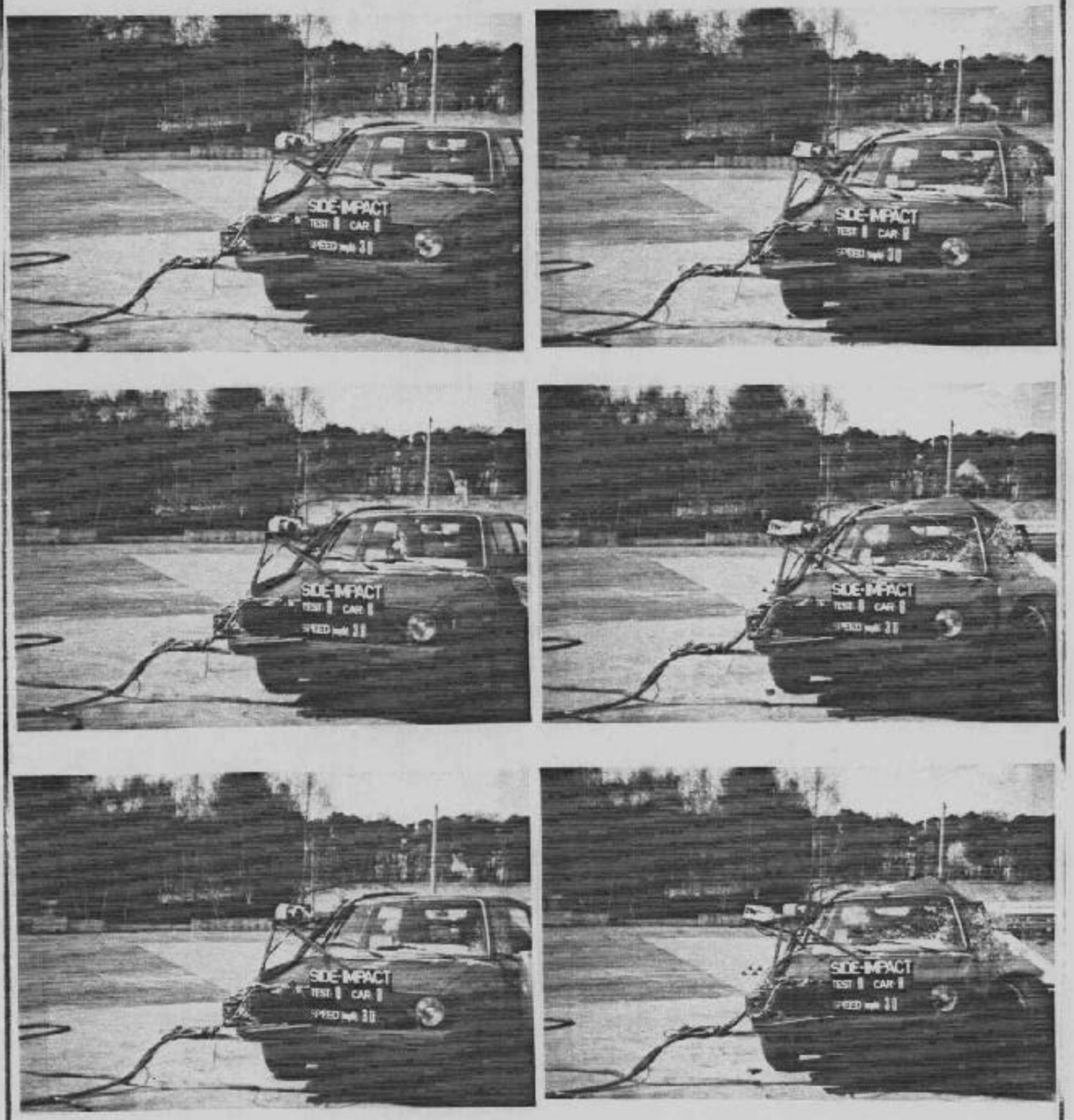
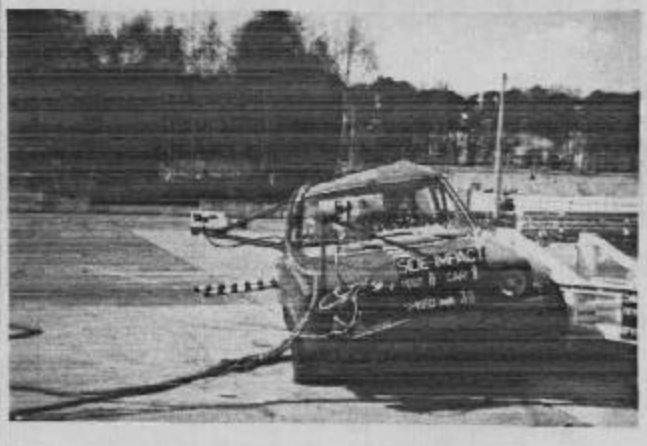
A 4	VW Rabbit Left Side Post Test View	A - 5
A 5	VW Rabbit Left Side Post Test View (Rear-Side Direction)	A - 6
A 6	Crabbed Barrier Post Test View	A - 7

Figure A1 : Crash Sequence Figures

TEST 8 - 30 mph





A - 2A

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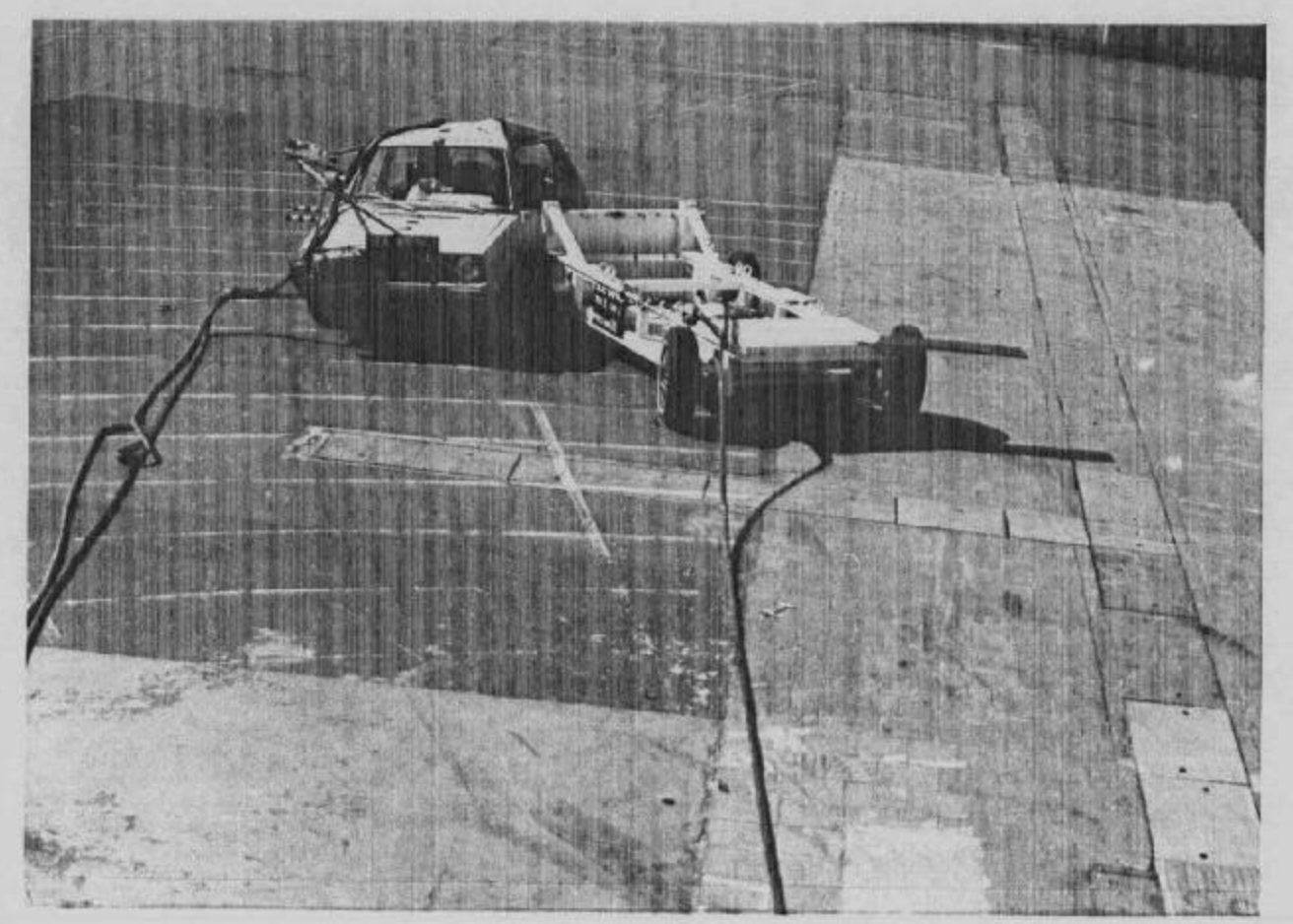


FIGURE A 2 : POST TEST 'POSITION'

CRABBED BARRIER AND VW RABBIT

FIGURE A 3 : VW RABBIT LEFT SIDE

POST TEST VIEW (FRONT-SIDE DIRECTION)

FIGURE A 4 : VW RABBIT LEFT SIDE

POST TEST VIEW

FIGURE A 5 : VW RABBIT LEFT SIDE

POST TEST VIEW (REAR-SIDE DIRECTION)

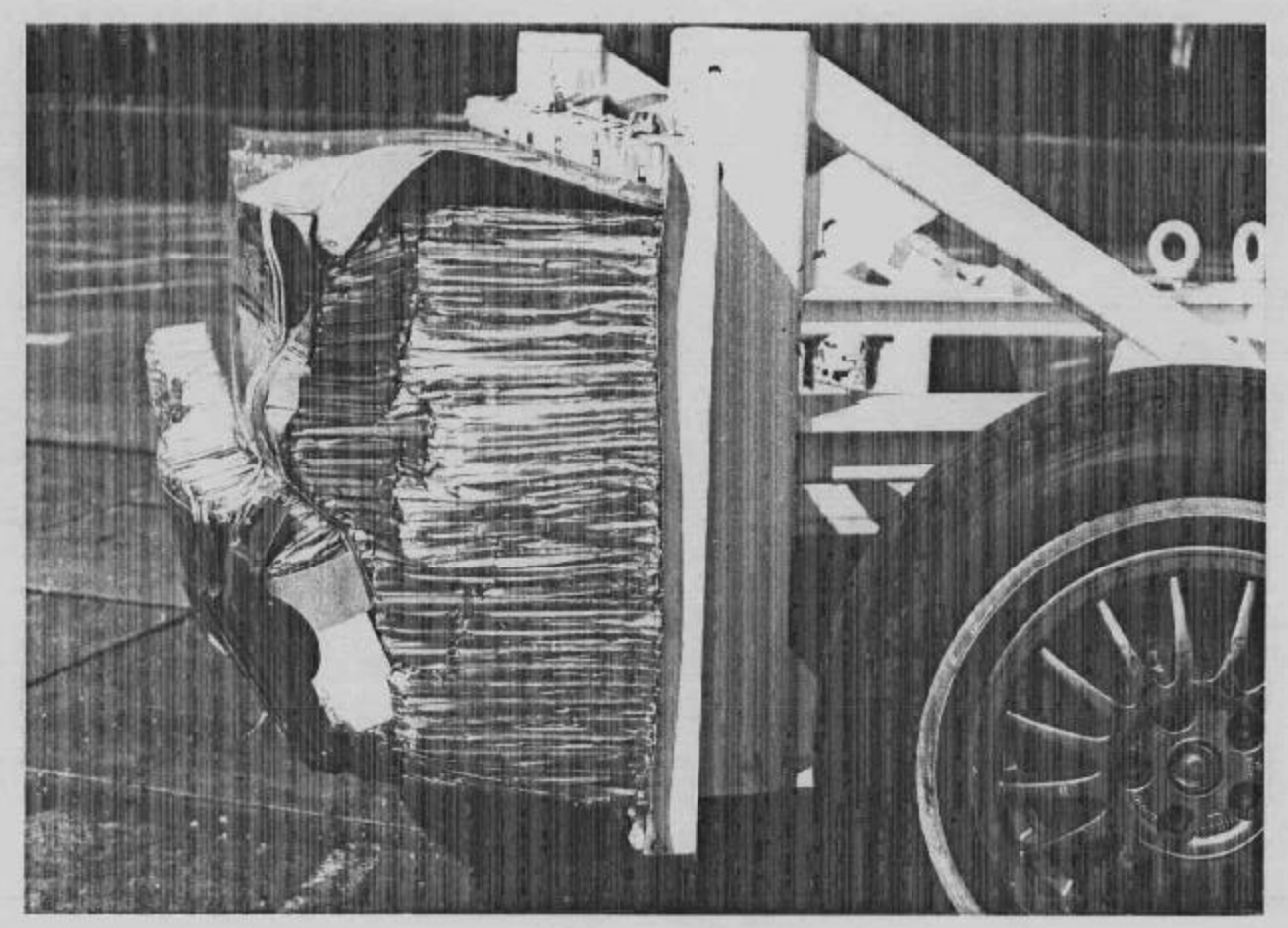


FIGURE A 6 : CRABBED BARRIER POST TEST VIEW

A P P E N D I X B

Vehicle and Dummy Test Respone
Acceleration/ - and Velocity/Time
History

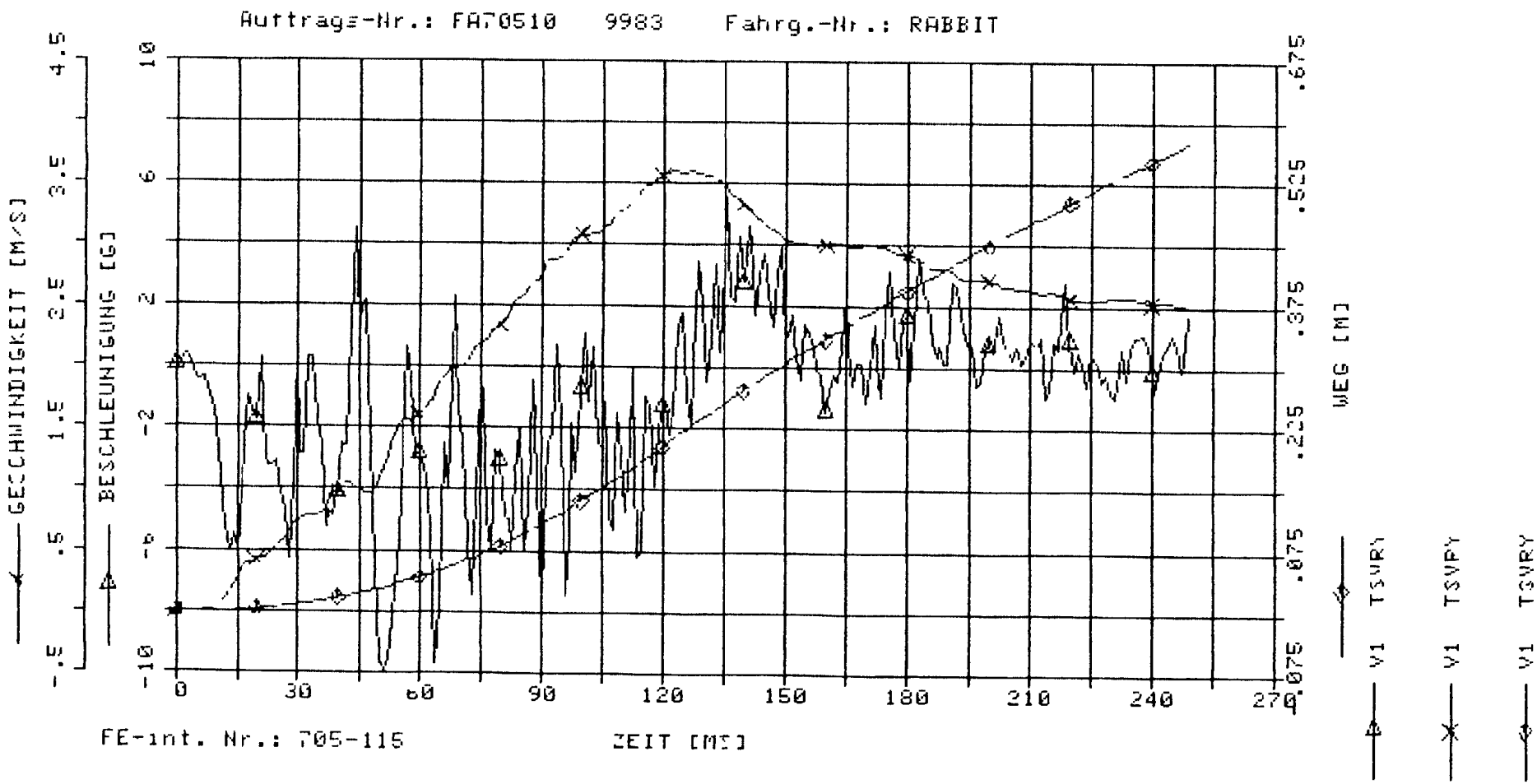
B.1 Vehicle Test Response
- B.1.1 Target Vehicle
- B.1.2 Crabbed Barrier

B.2 Dummy Test Response
- B.2.1 Driver
- B.2.2 Rear Passenger

B.1.1 Target Vehicle

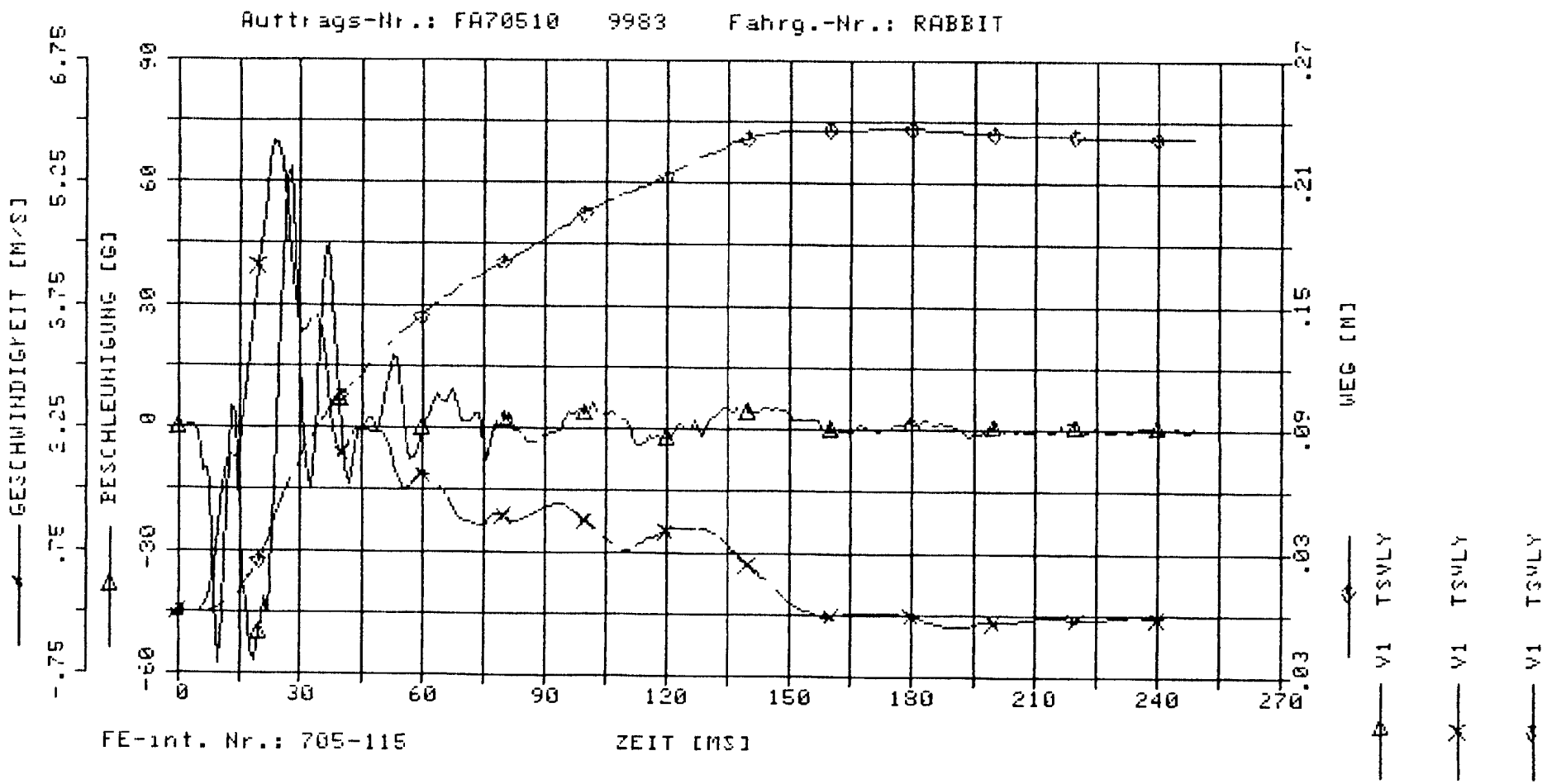
- Kenn Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	Ber Groesse	Extremum	t Extr	sMS
TSVRY	V1	BL g	-9 965	51 00	9 49
TSVRY	V1	GL m/s	3 607	128 00	0 00
TSVRY	V1	WE m	590	255 00	0 00



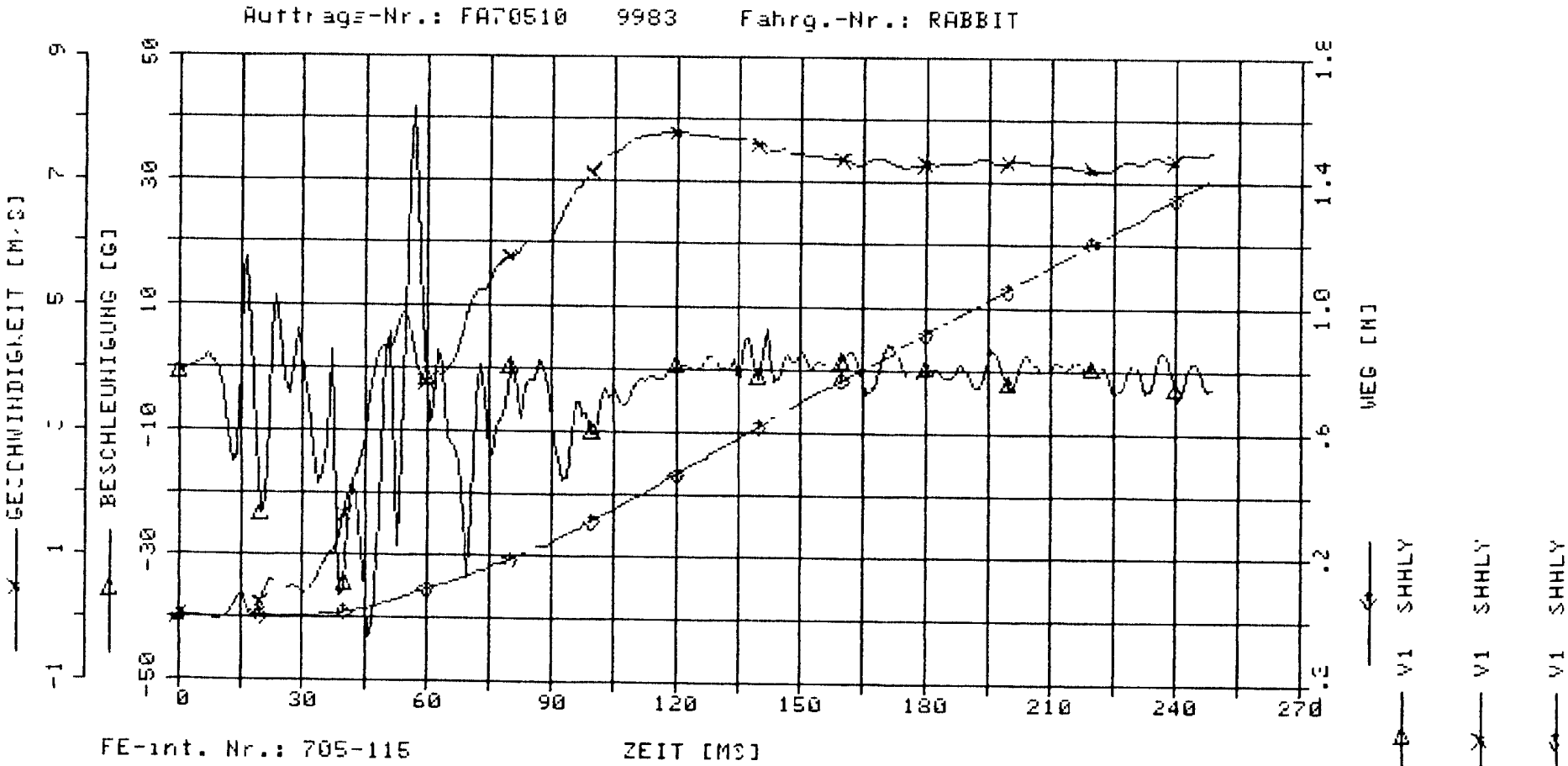
- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	ber Groesse	Extremum	t Extr	ms
TSVLY	V1	BE g	63 816	28 00	57 04
TSVLY	V1	GL m/s	5 738	24 00	0 00
TSVLY	V1	WE m	236	178 00	0 00



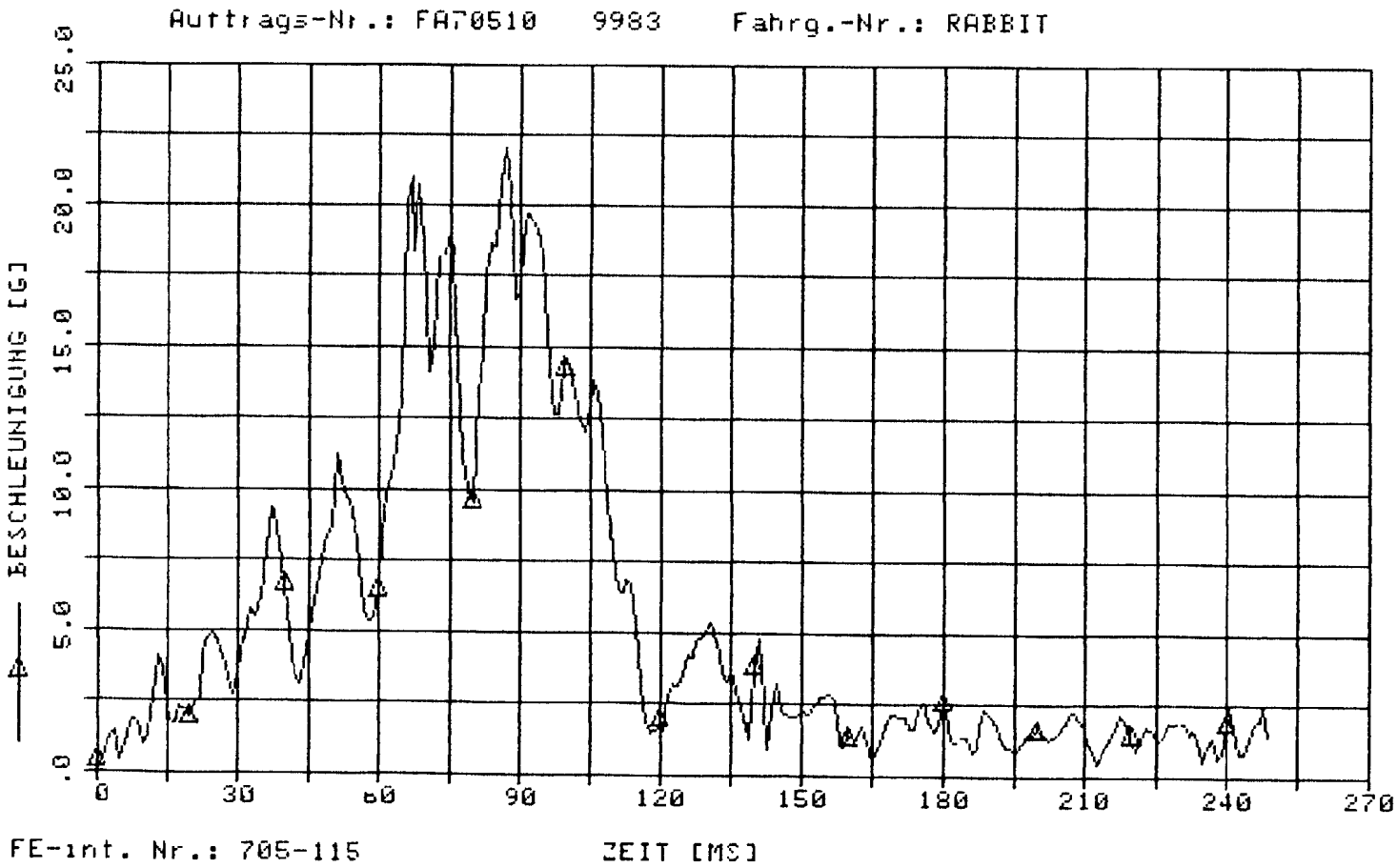
Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	bez Groesse	Extremum	t Extr	ms
SHHLY	V1	BE g	46 369	46 00	46 51
SHHLY	V1	GE m/s	7 775	118 00	0 00
SHHLY	V1	WE m	1 457	255 00	0 00



- Kenn Werte Auftrags Nr FA/0510 Versuchs Nr 9983

Mess-Stelle	UP	ber Groesse	Extremum	t Extr	3MS
KOBO	V1	BE g	22 057	87 00	20 65

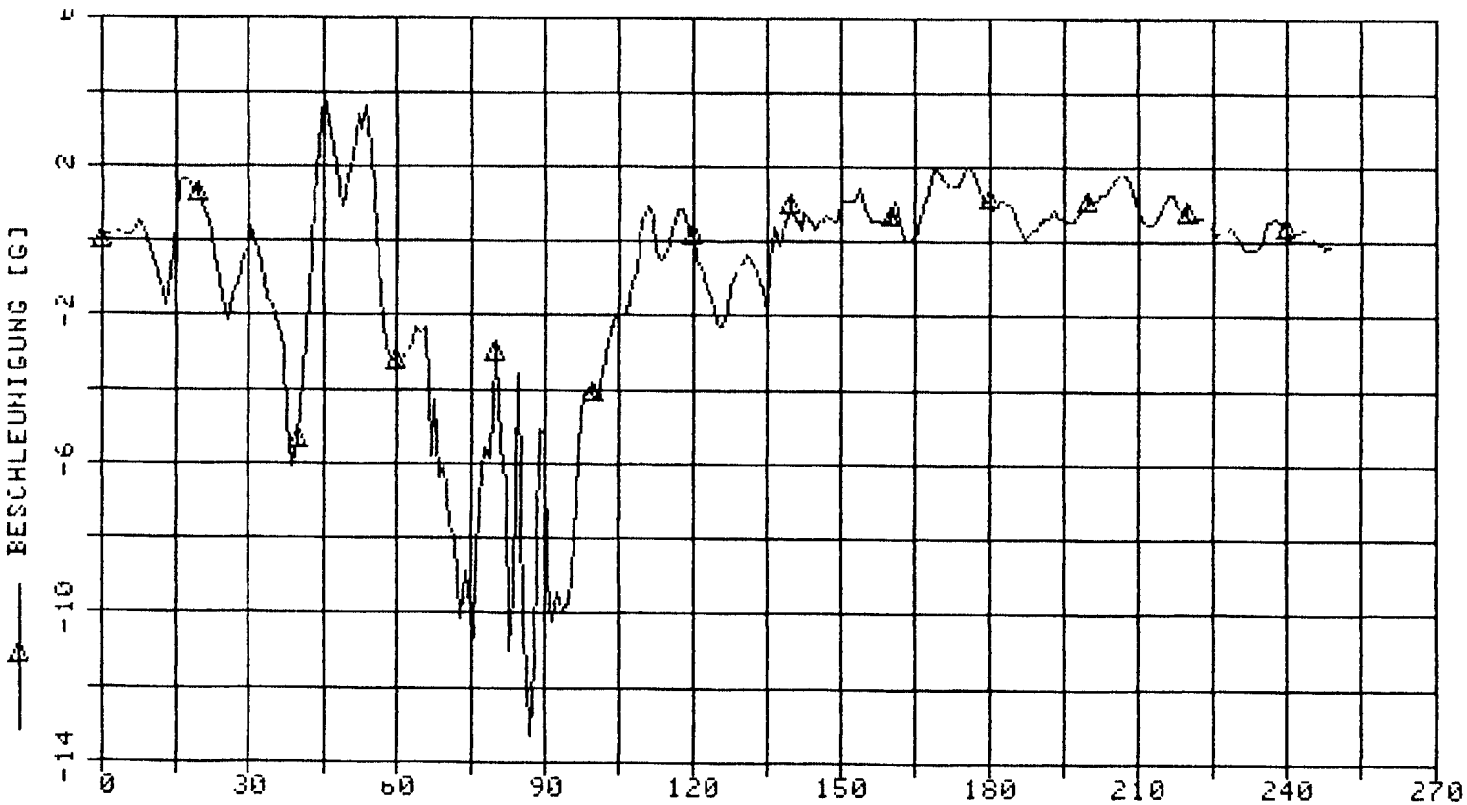


V1 KOBOX Y Z

- Kenn Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	3MS
KOBOX	V1	BE g	13 286	87 00	10 65

Auftrags-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT

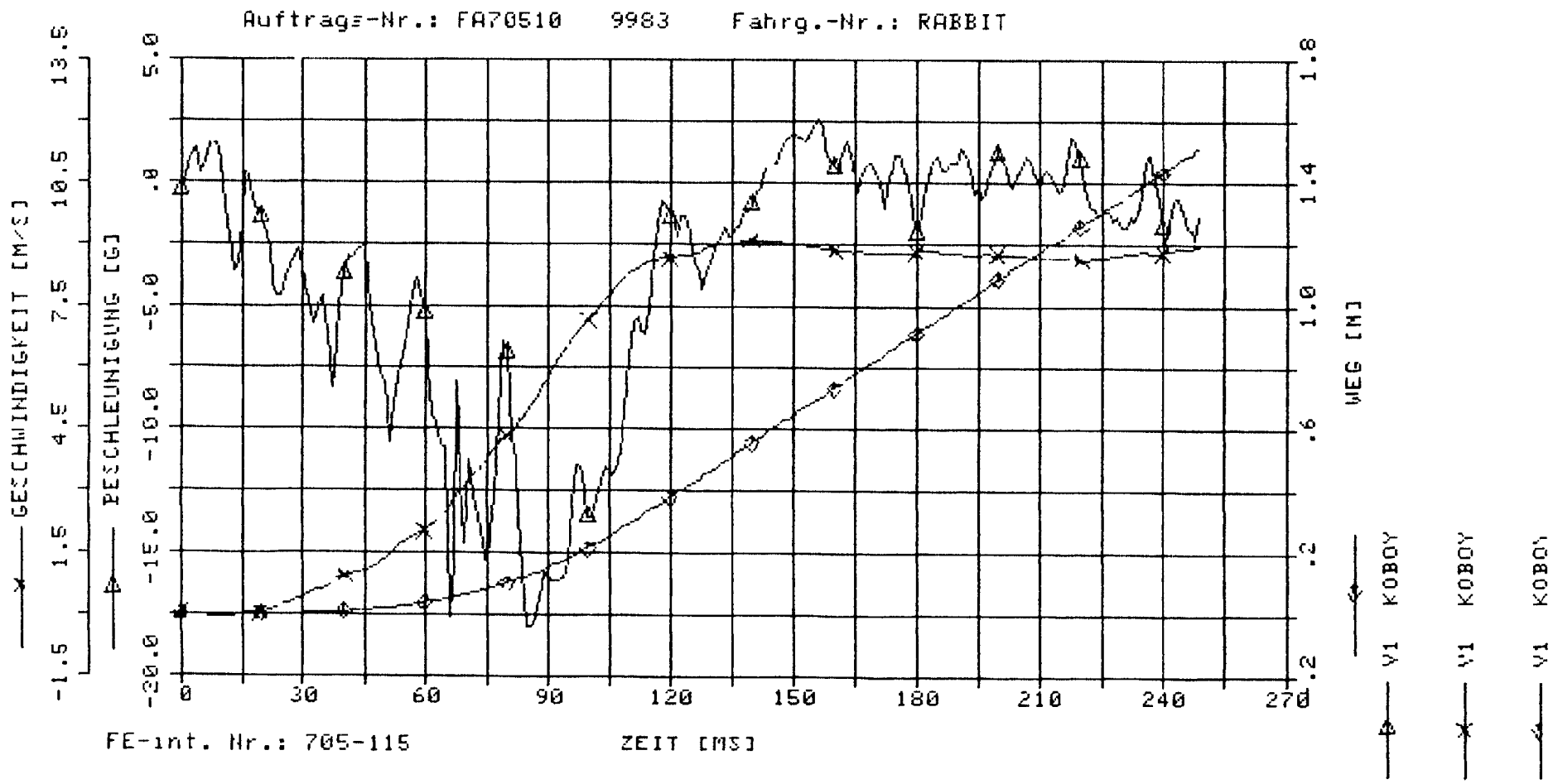


FE-int. Nr.: 705-115

V1 KOBOX

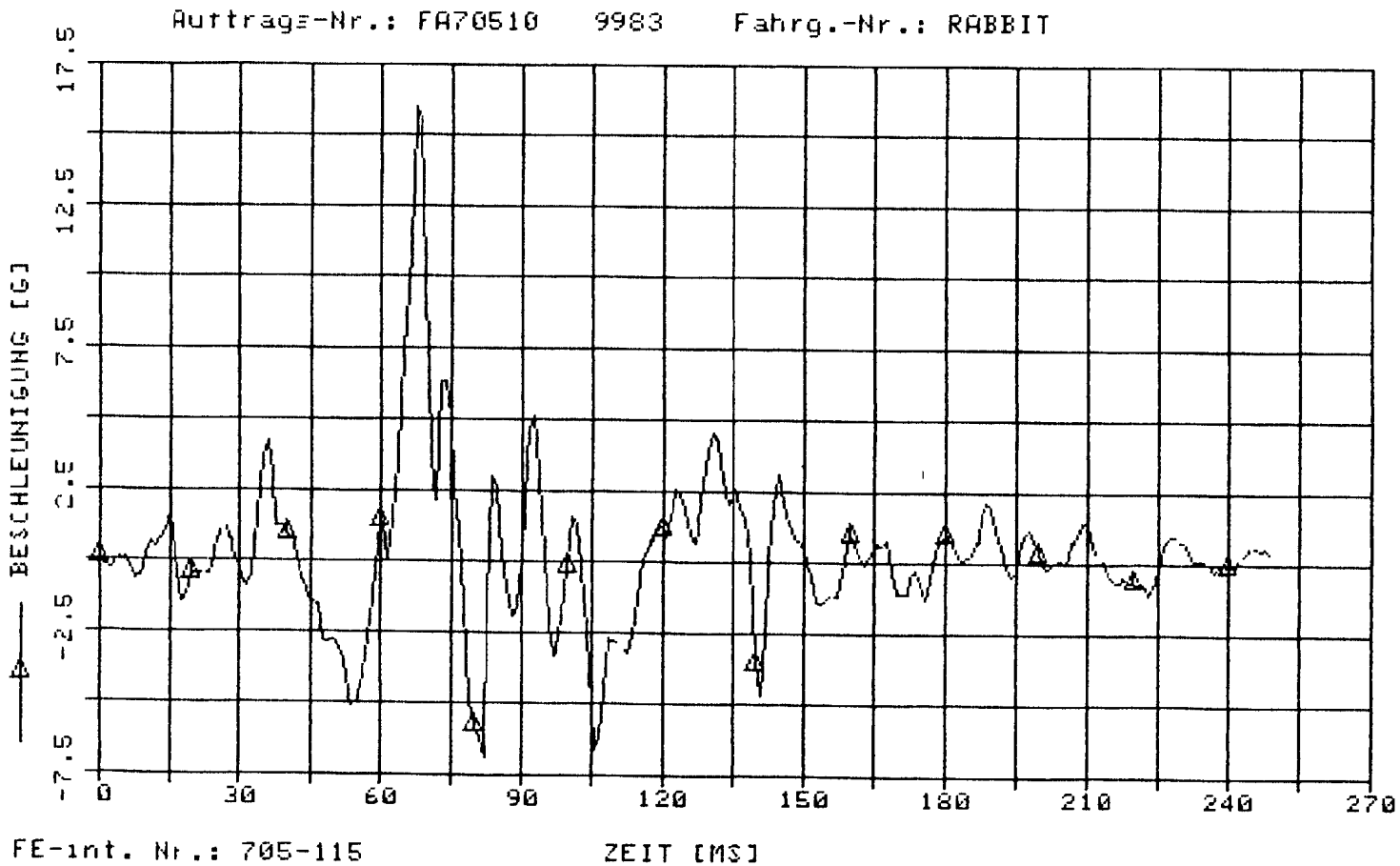
Kenn-Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	ber Groesse	Extremum	t Extr	SMS
KOBOY	V1	BE g	-17 937	86 00	16 81
KOBOY	V1	GE m/s	9 105	142 00	0 00
KOBOY	V1	WE m	1 565	255 00	0 00



- Kenn Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

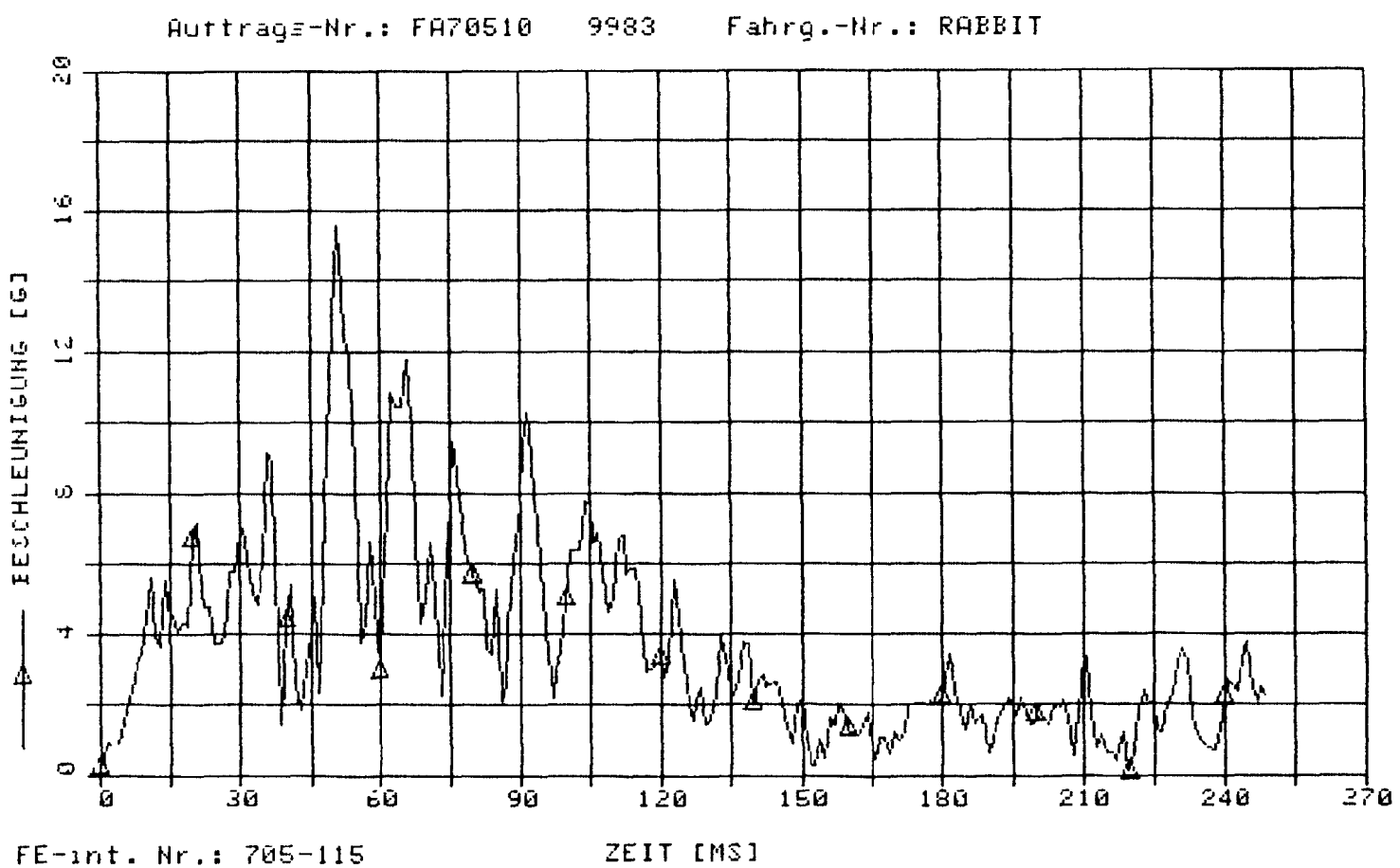
Mess Stelle					
	UP	ber Groesse	Extremum	t Extr	SMS
KOBOZ	V1	BE g	15 956	68 00	10 01



V1 KOBOZ

Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

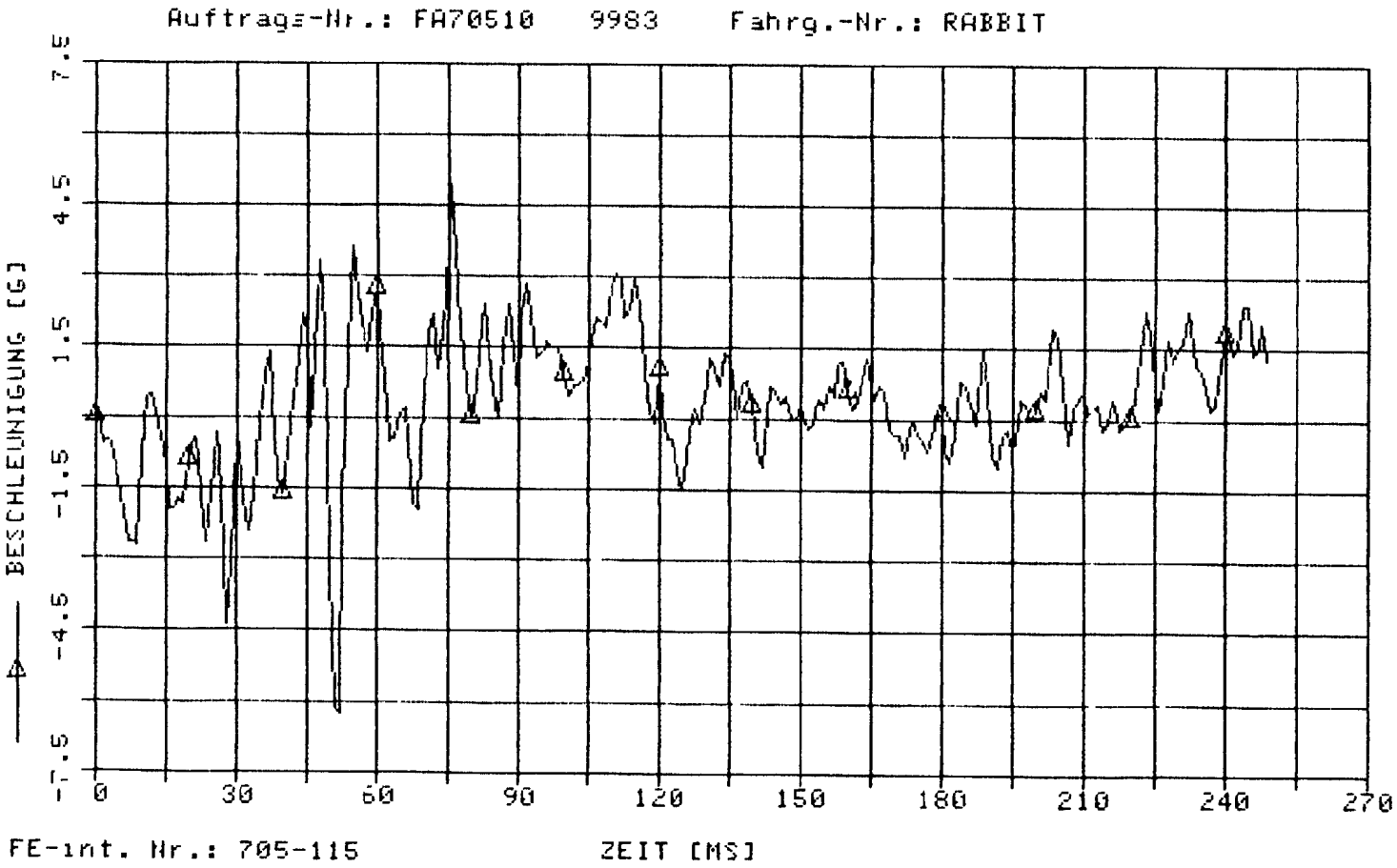
Mess Stelle	UP	ber Groesse	Extremum	t Extr	sMS
SWM1	V1	BE g	15 571	51 00	12 40



SWMX V1 Z

- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

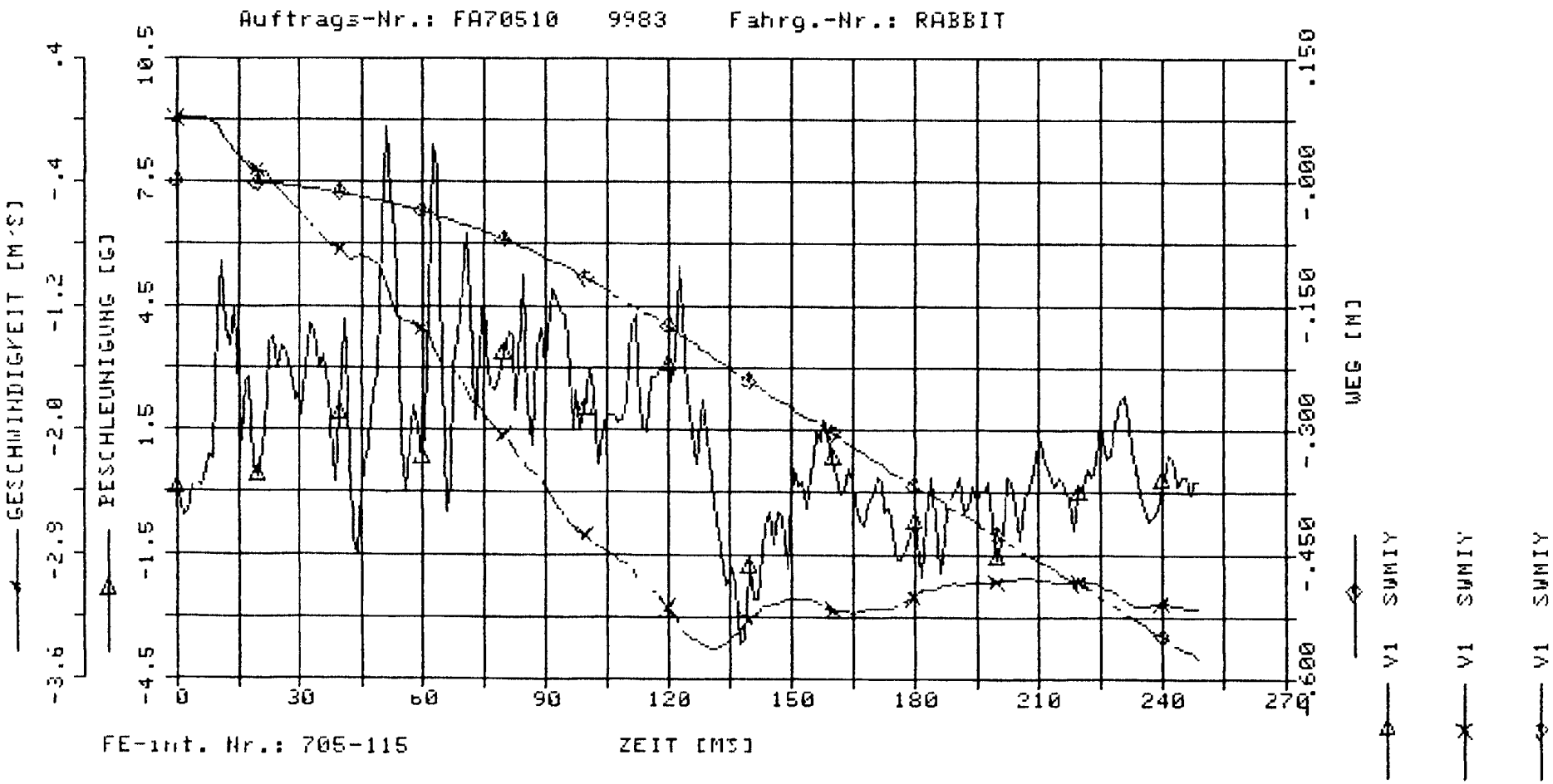
Mess Stelle	UP	ber Groesse	Extremum	t Extr	SMS
SWM1X	V1	BL g	-6.275	52.00	4.36



V1 SWM1X

Kenn Werte Auftrags Nr FA70510 Versuchs-Nr 9983

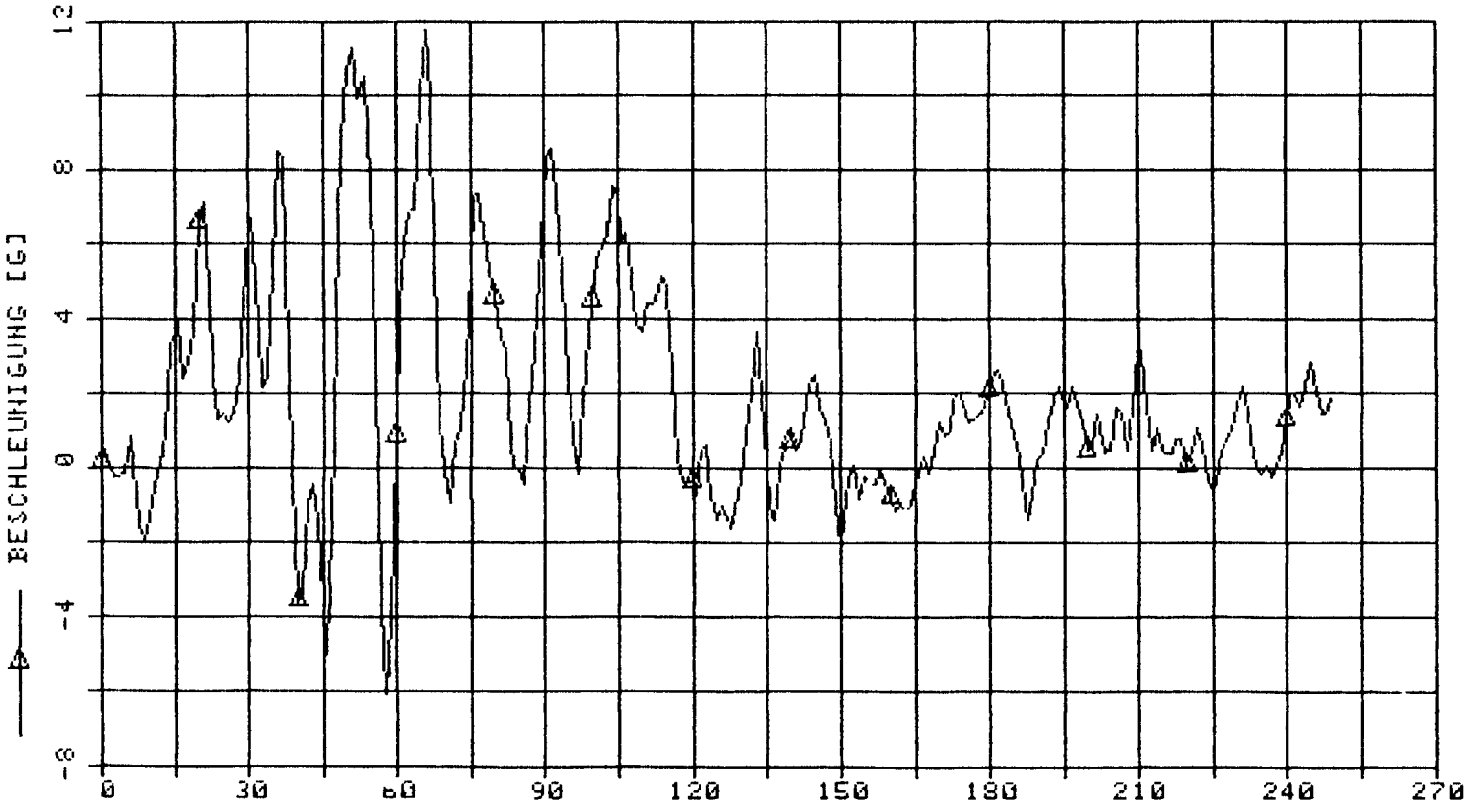
Mess Stelle	UP	ber Groesse	Extremum	t Extr	SMS
SWMIY	V1	BE g	8 845	51 00	7 10
SWMIY	V1	GE m/s	3 403	131 00	0 00
SWMIY	V1	WE m	5,94	255 00	0 00



Kenn-Werte Auftrags Nr FA70510 Versuchs-Nr 9983

Mess-Stelle	UP	ber Groesse	Extremum	t Extr	SMS
SWM12	V1	BE g	11 782	66 00	10 46

Auftrags-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT

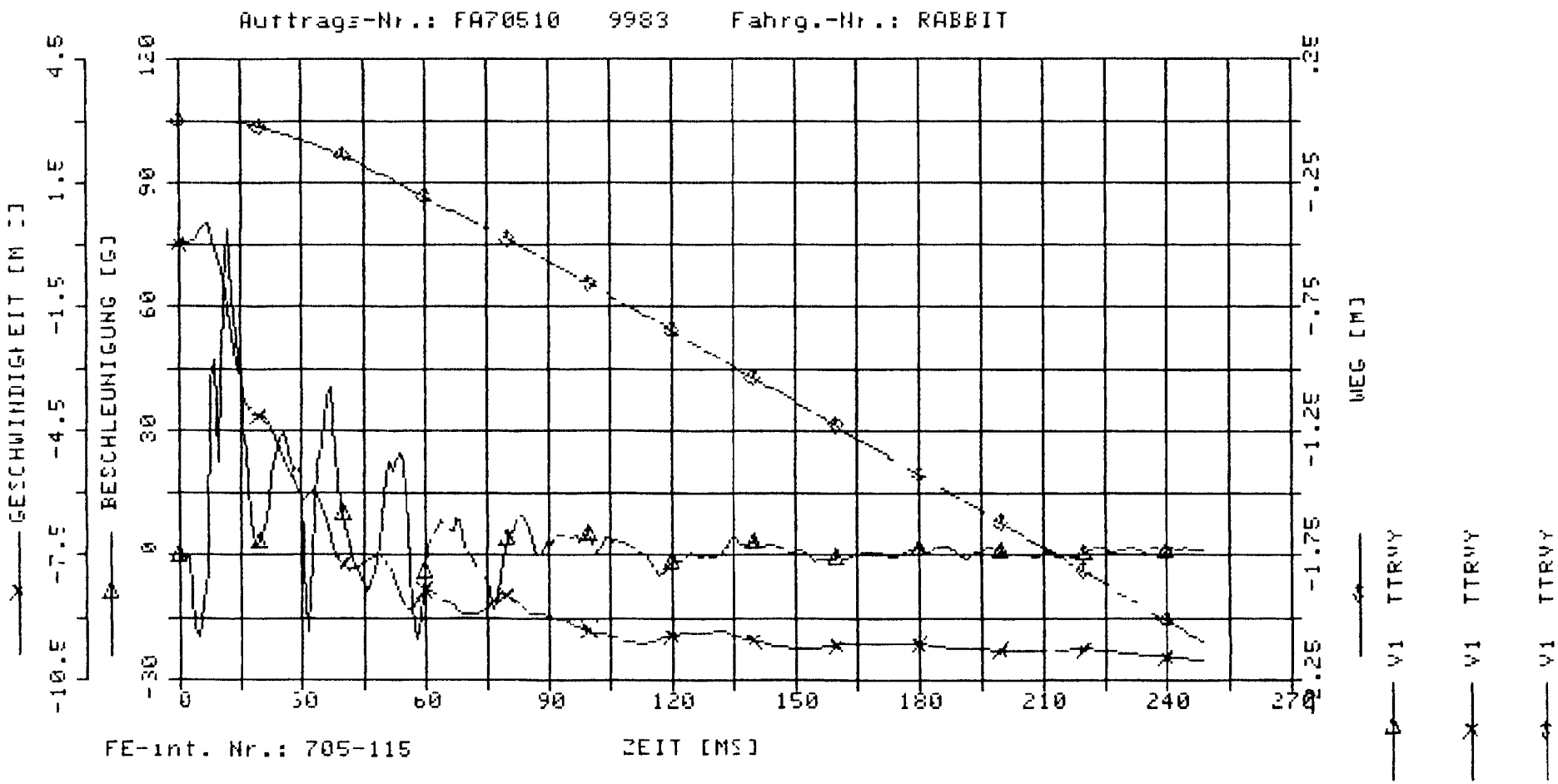


FE-int. Nr.: 705-115

V1 SWM12

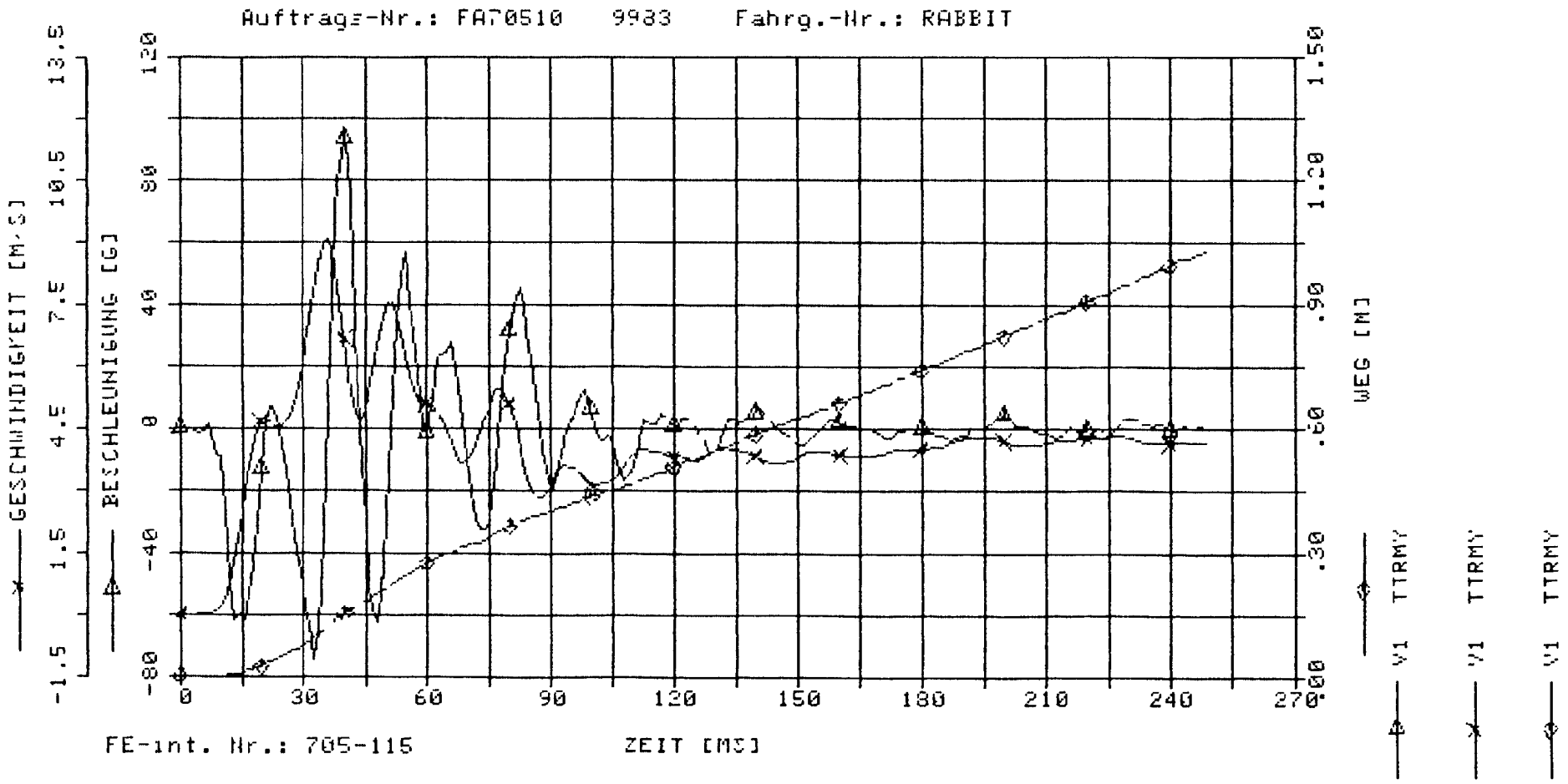
- kein Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse		Extremum	t Extr	ms
TTRVY	V1	BE	g	78 819	17 00	51 77
TTRVY	V1	GE	m/s	-10 108	255 00	0 00
TTRVY	V1	WE	m	-2 162	255 00	0 00



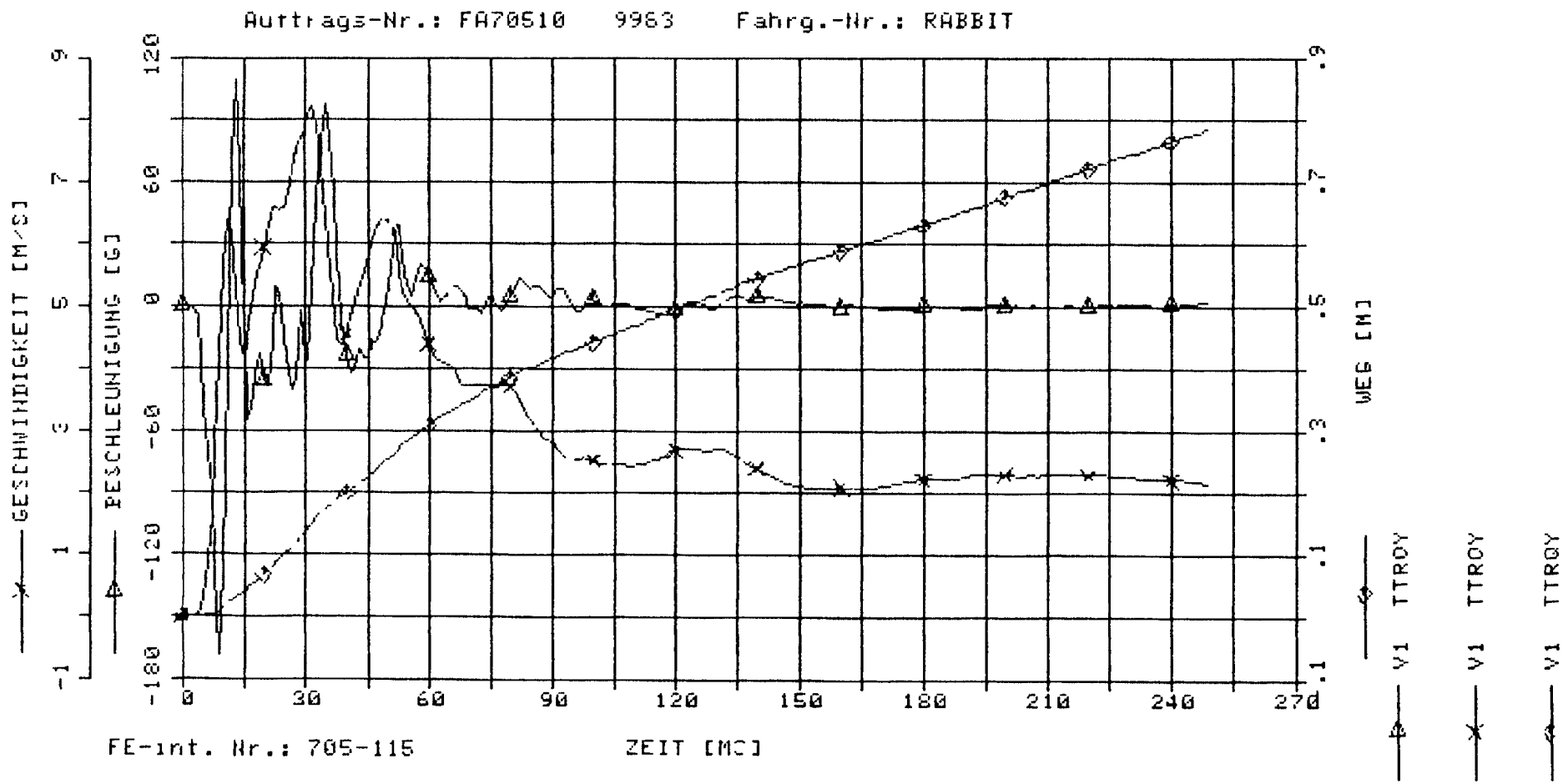
- Komm Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	sMS
TTRMY	V1	BE g	93 254	40 00	74 76
TTRMY	V1	GL m/s	9 091	36 00	0 00
TTRMY	V1	WE m	1 053	25' 00	0 00



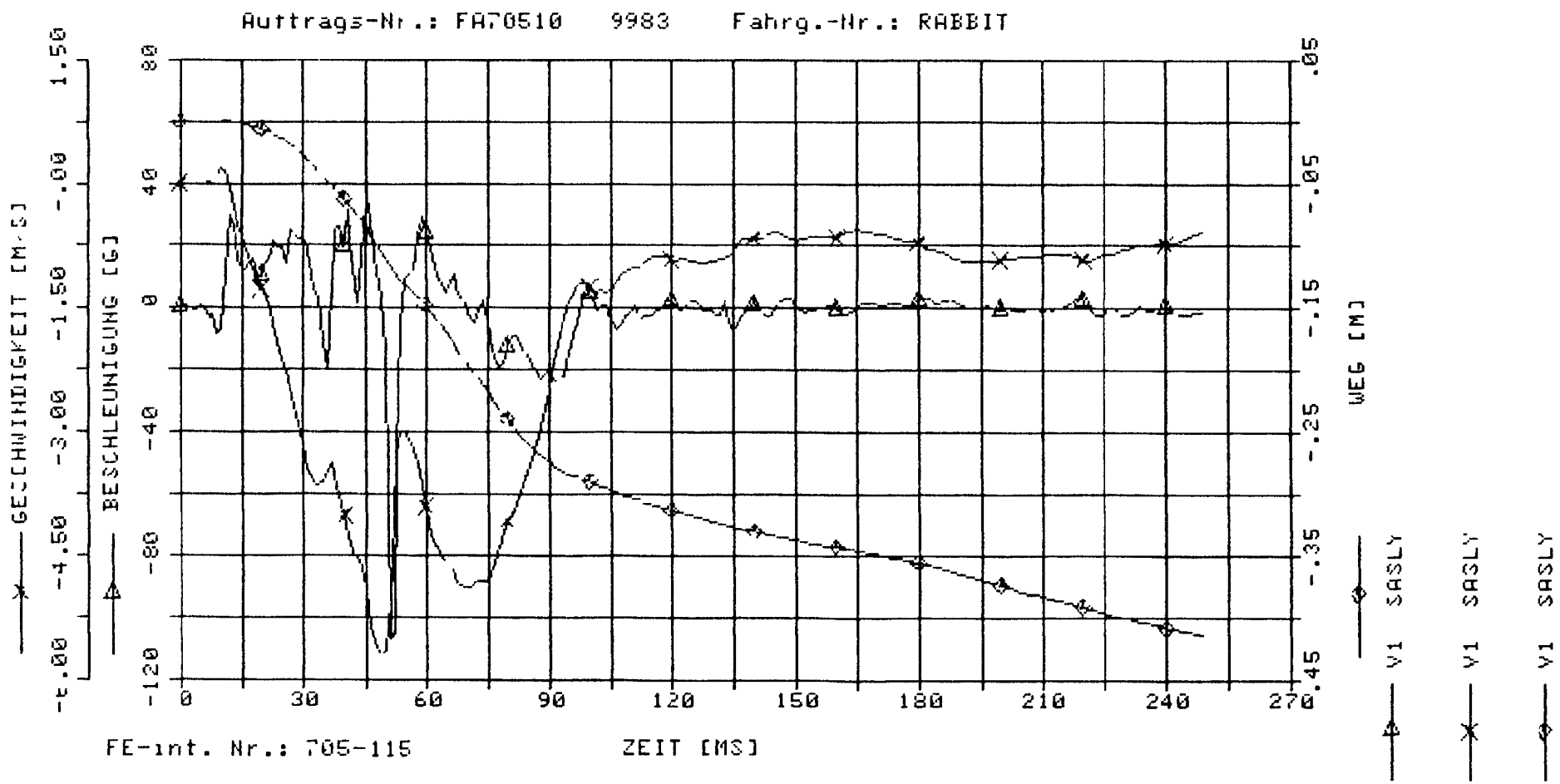
- konn Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Grosse	Extremum	t Extr	ms
TTRQY	V1	BE g	168 329	9 00	108 72
TTRQY	V1	GE m/s	8 186	32 00	0 00
TTRQY	V1	WE m	796	255 00	0 00



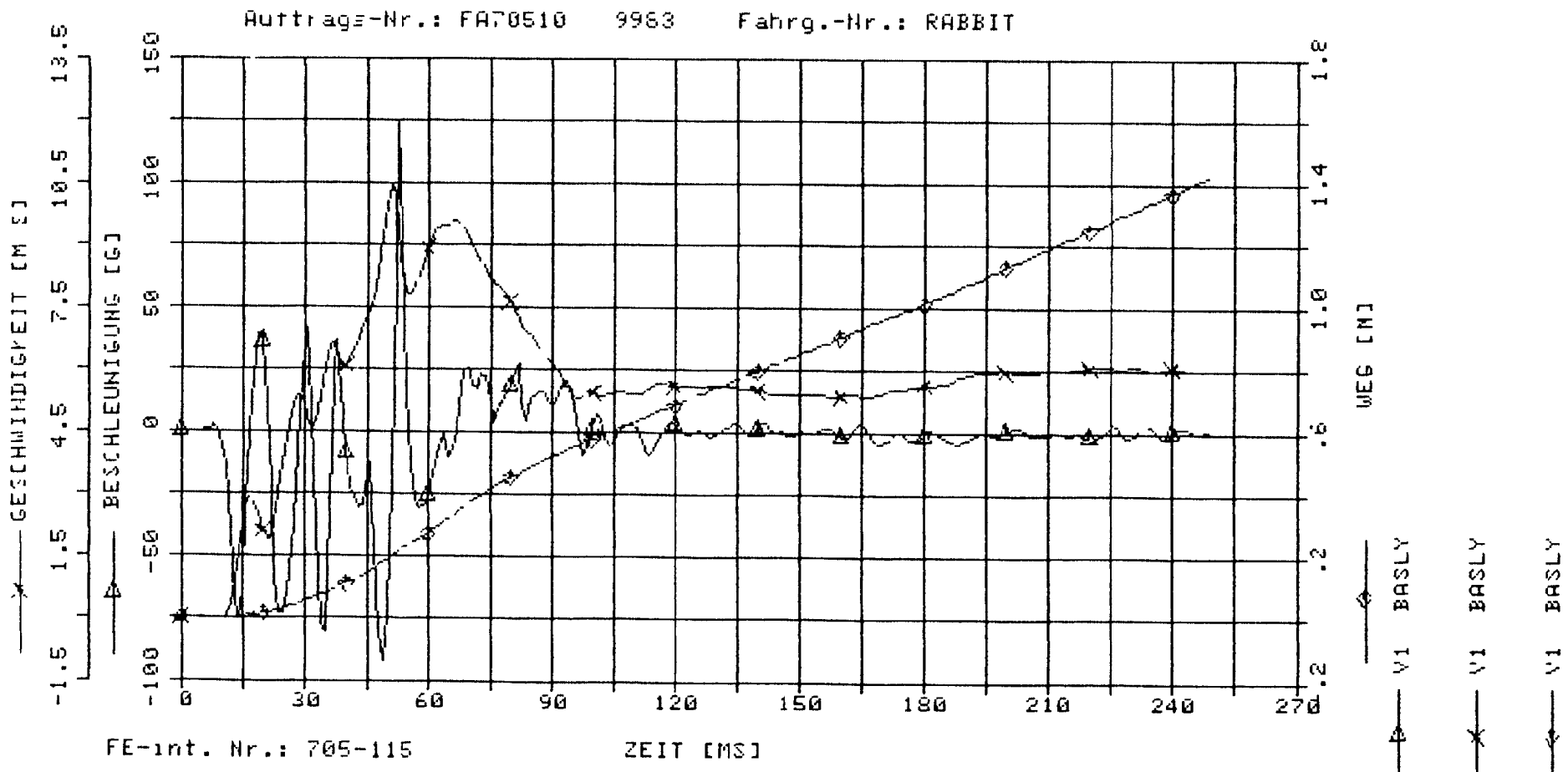
Kenn-Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	ber Grosse	Extremum	t Extr	sMS
SASLY	V1	BE g	-107 702	51 00	34 07
SASLY	V1	GE m/s	-5 705	49 00	0 00
SASLY	V1	WE m	417	255 00	0 00



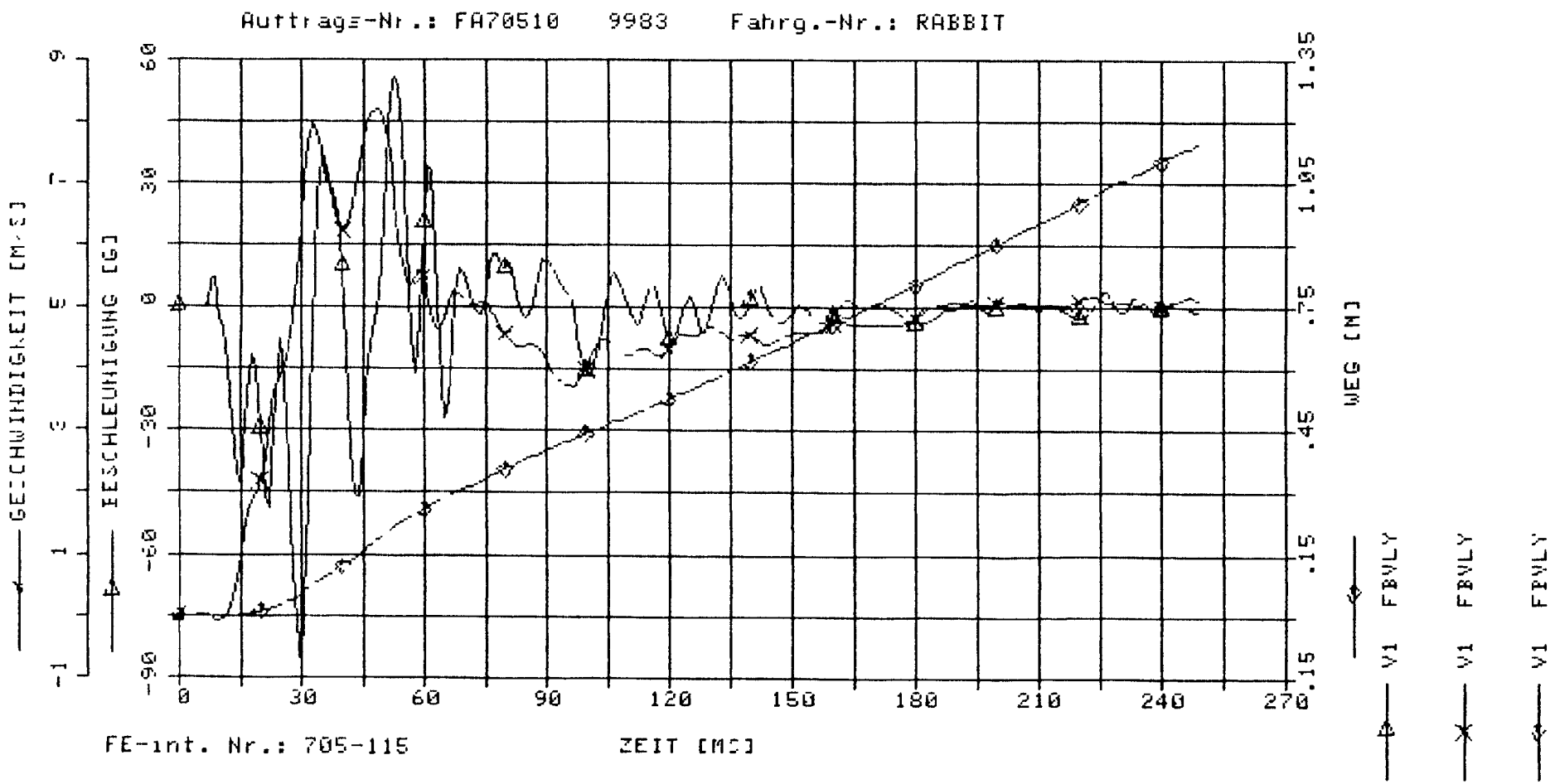
- Kenn Werte Auftrags Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	bez Groesse	Extremum	t Extr	SHS
BASLY	V1	BE g	124 714	53 00	79 54
BASLY	V1	GE m/s	10 435	51 00	0 00
BASLY	V1	WE m	1 457	255 00	0 00



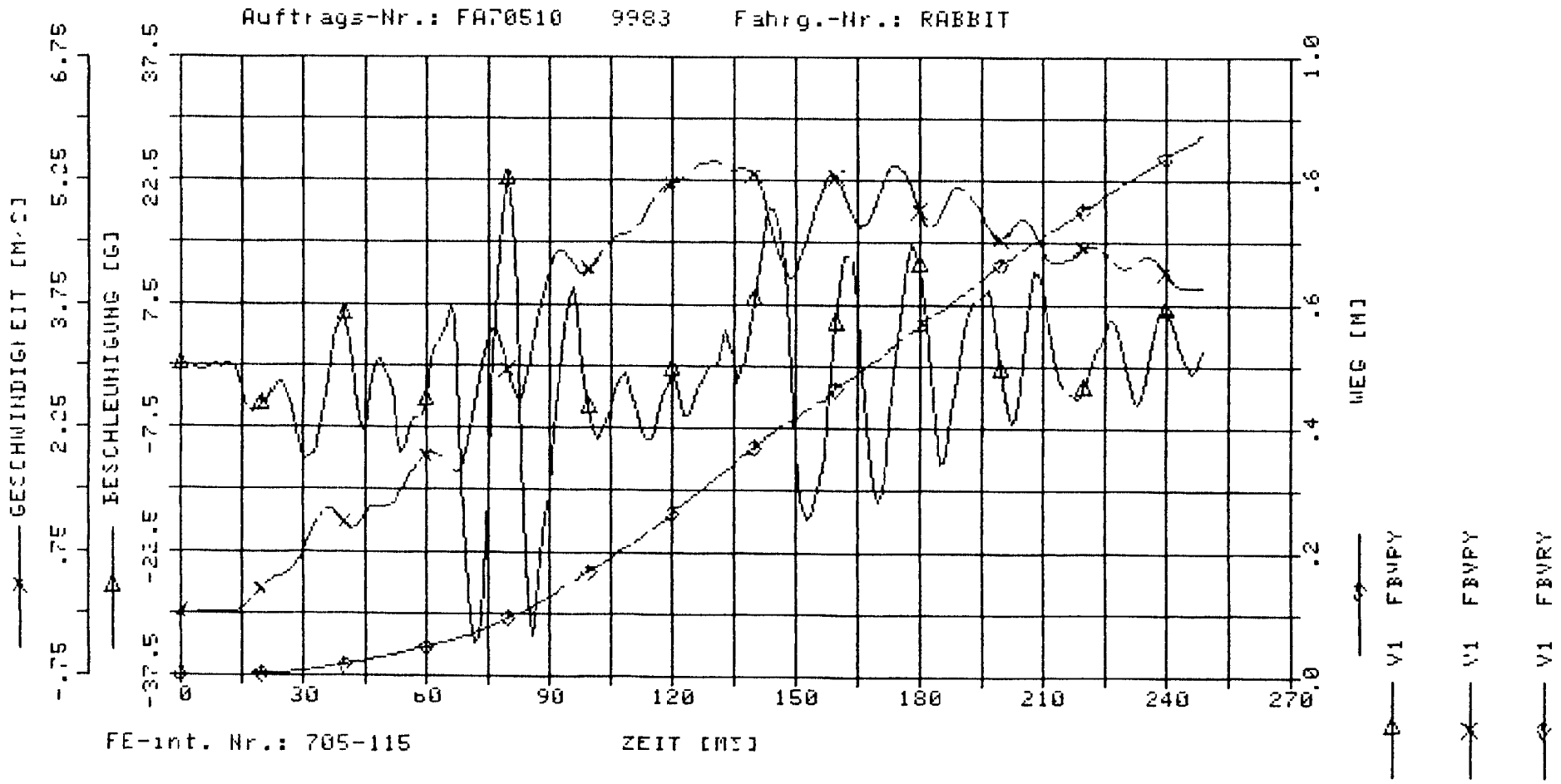
- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	Ber Groesse	Extremum	t Extr	3MS
FBVLY	V1	BE g	88 450	30 00	64 46
FBVLY	V1	GE m/s	8 151	49 00	0 00
FBVLY	V1	WE m	1 175	254 00	0 00



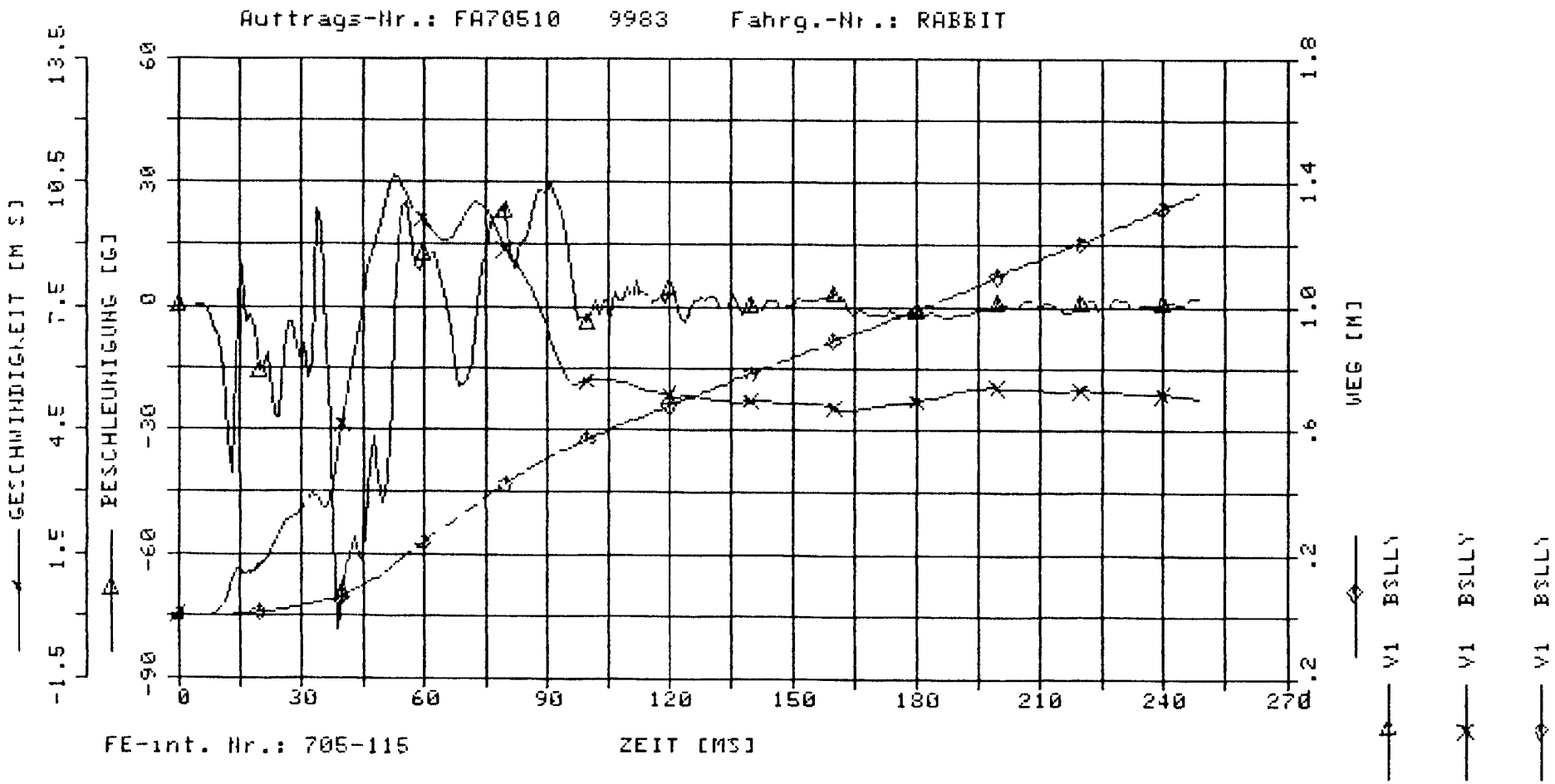
- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	sig
FBVRY	V1	BE g	33 480	72 00	30 70
FBVRY	V1	GE m/s	5 471	131 00	0 00
FBVRY	V1	WE m	896	255 00	0 00



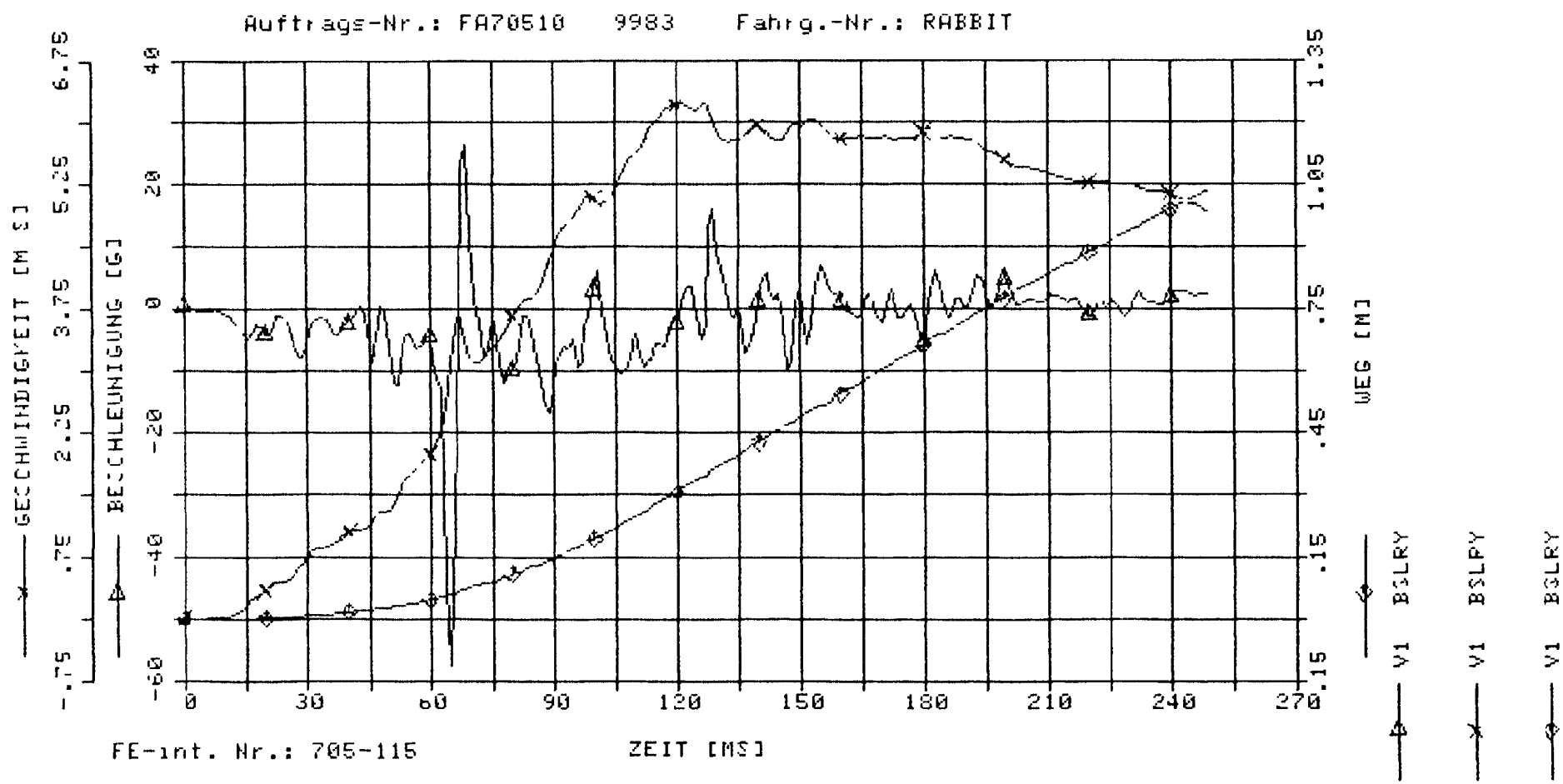
- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	sMS
BSLLY	V1	BE g	78 328	39 00	61 81
BSLLY	V1	GL m/s	10 646	53 00	0 00
BSLLY	V1	WE m	1 392	255 00	0 00



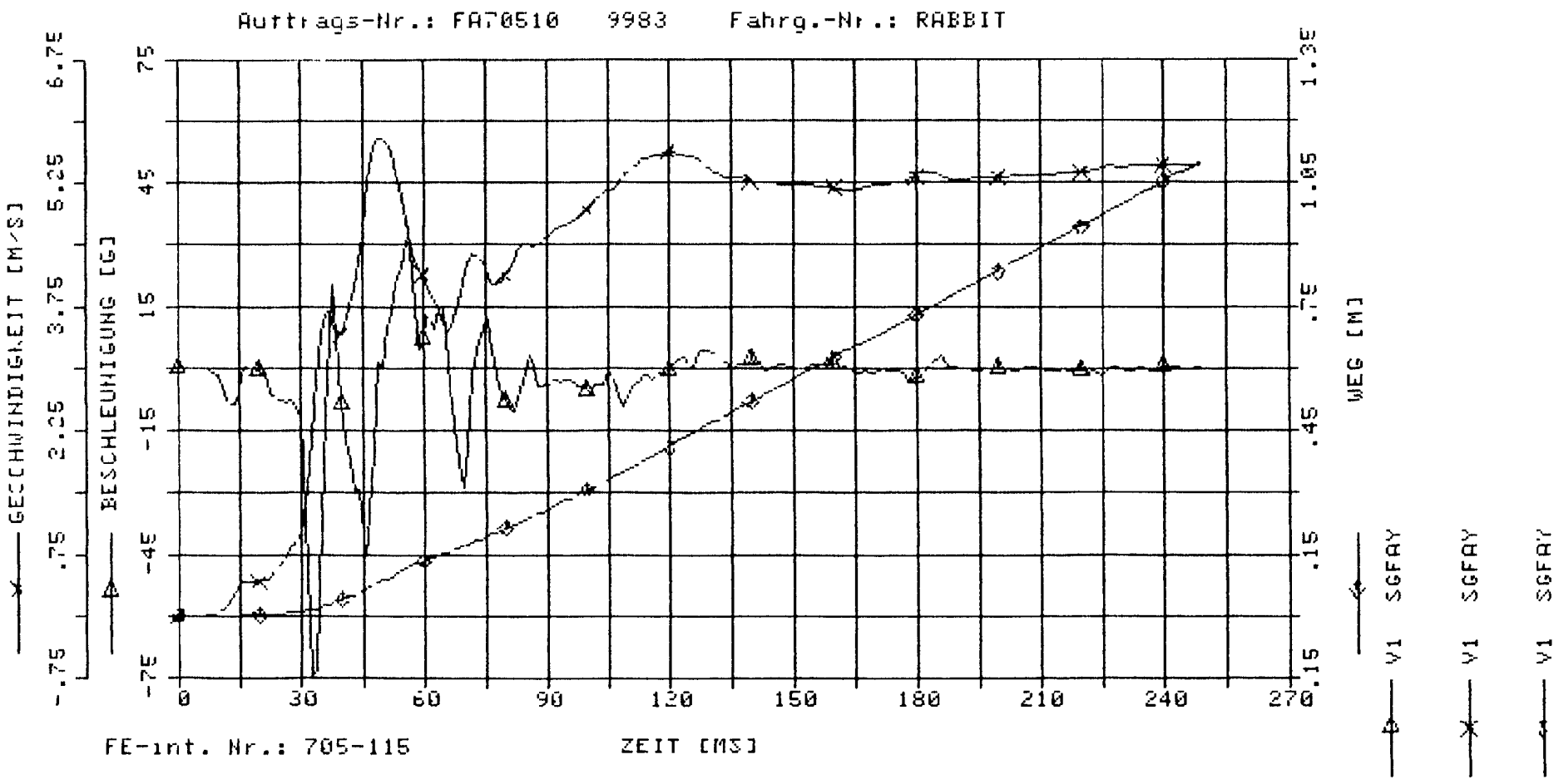
Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	ber Groesse	Extremum	t Extr	MS
BSLRY	V1	BL g	-57 566	65 00	76 37
BSLRY	V1	GL m/s	6 219	121 00	0 00
BSLRY	V1	WL m	1 061	255 00	0 00



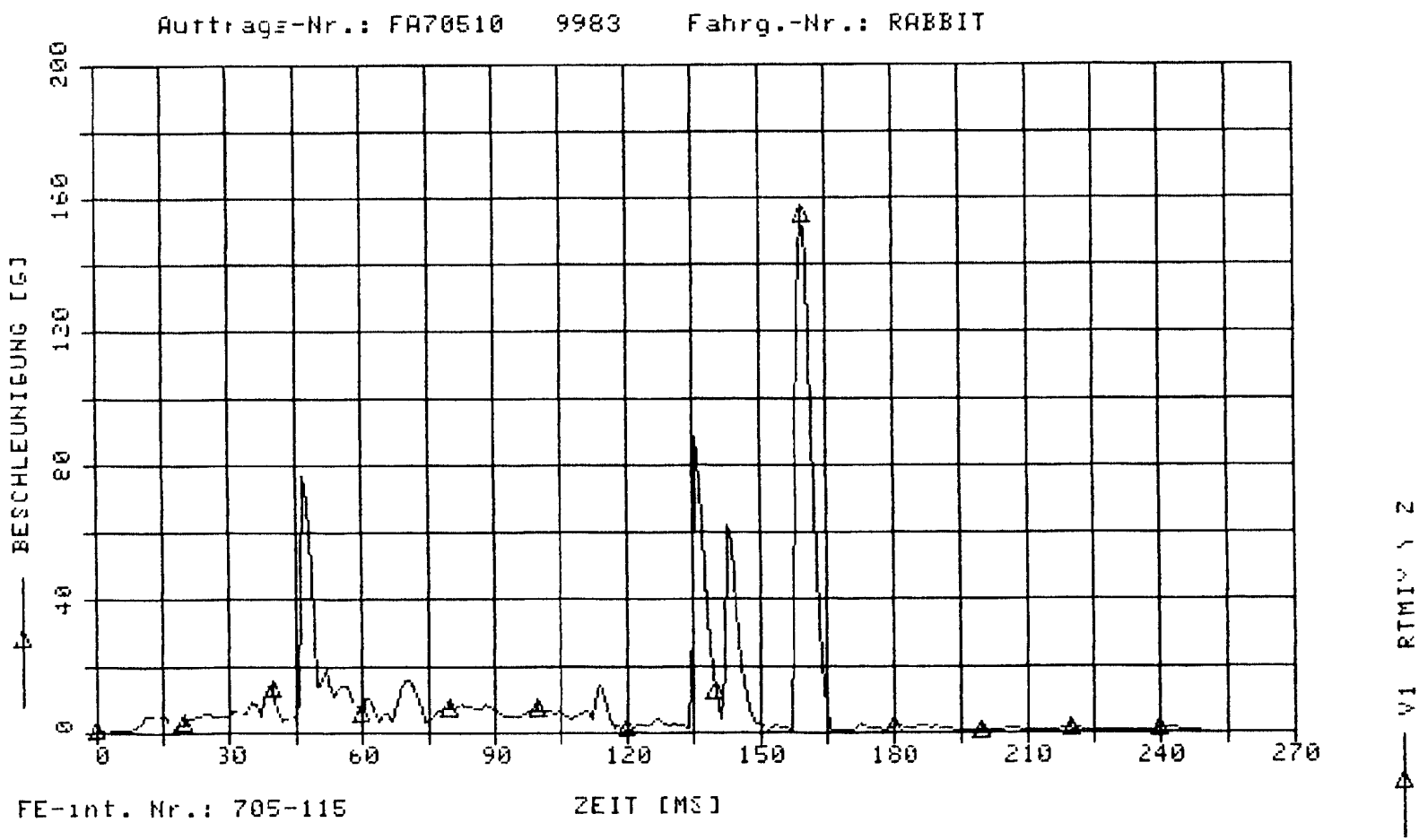
- Kein Wert e Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	der Groesse	Extremum	t Extr	ms
SGFAY	V1	BE g	74 563	33 00	15 32
SGFAY	V1	GI m/s	5 786	49 00	0 00
SGFAY	V1	WL m	1 131	255 00	0 00



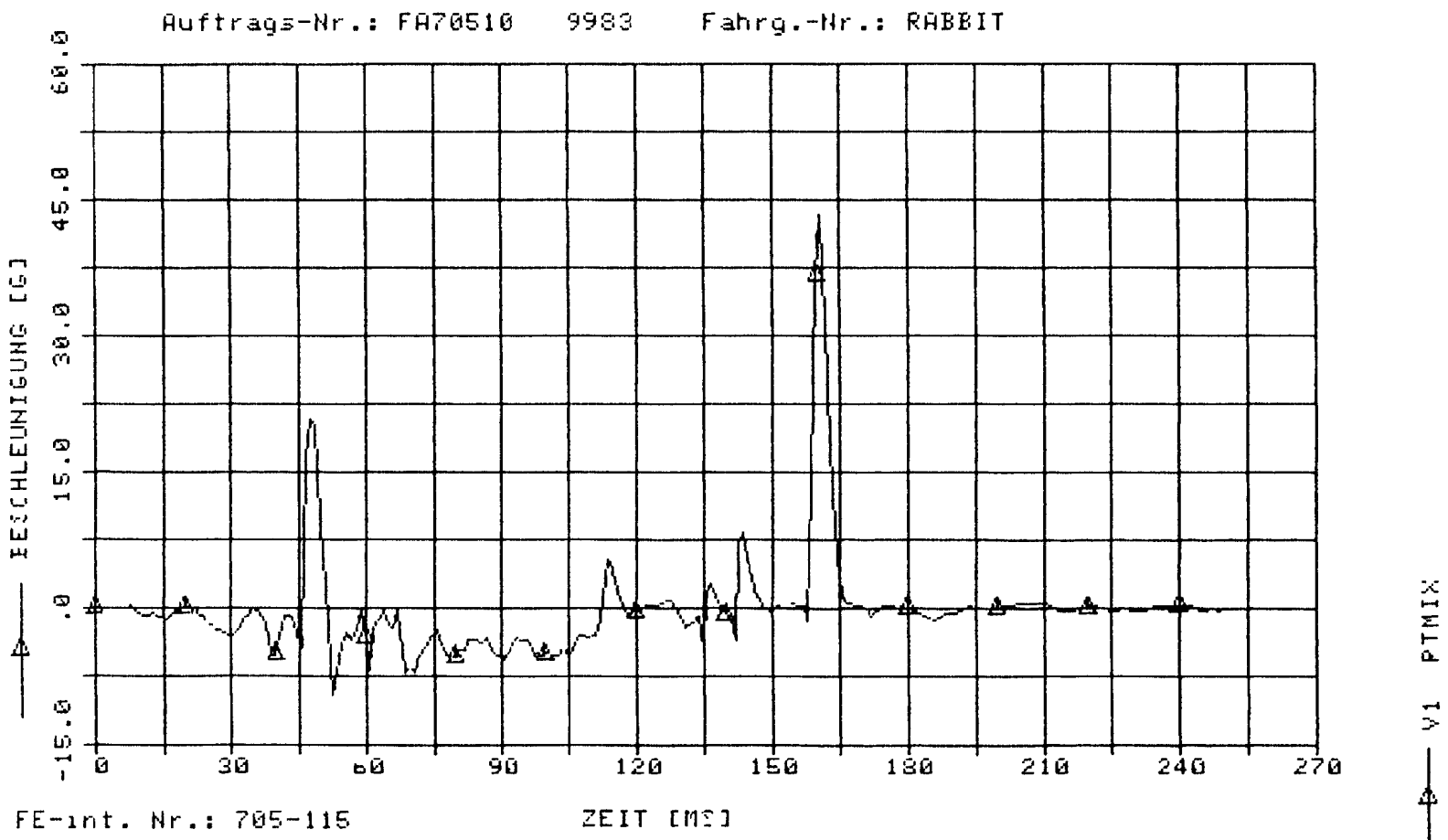
- Kenn Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	ms
RIML	V1	BE g	154 467	160 00	91 75



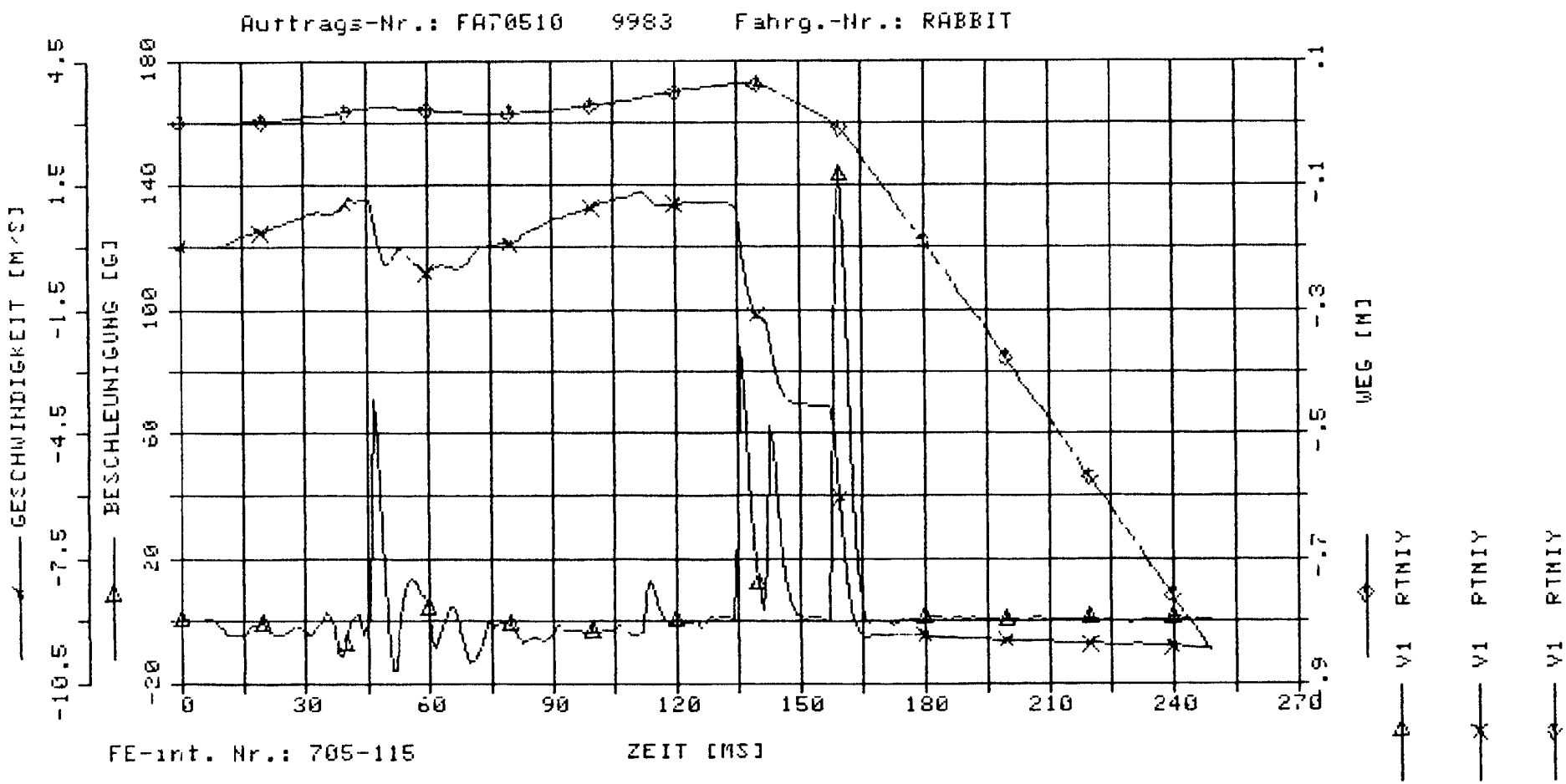
- Kenn Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	SMS
RIMIX	V1	BE g	43 437	161 00	20 79



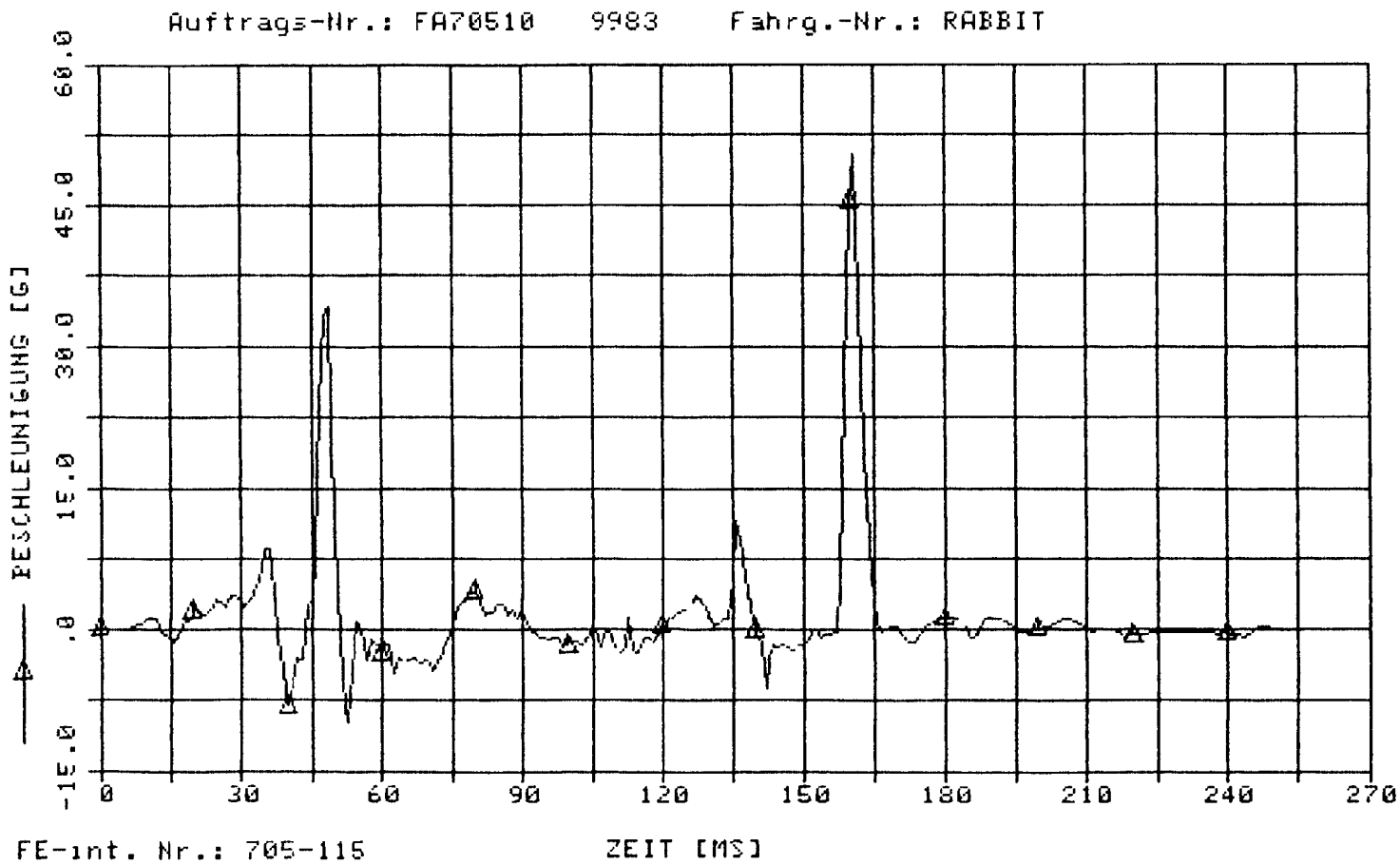
- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	sMS
RIMIY	V1	BL g	143 031	160 00	87 37
RIMIY	V1	GE m/s	9 680	255 00	0 00
RIMIY	V1	WL m	906	255 00	0 00

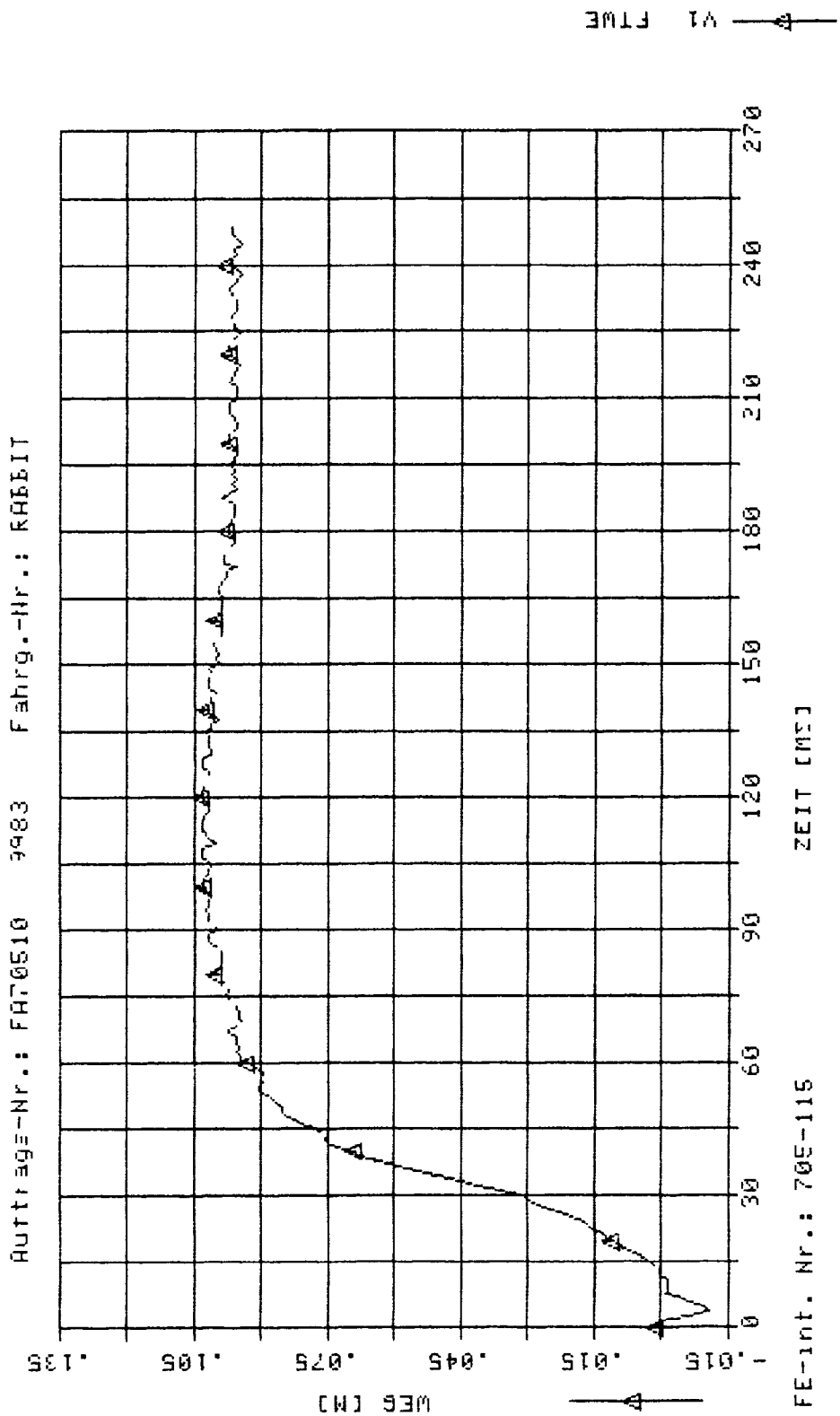


- Kenn-Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	ms
RTMIZ	V1	BE g	50 391	161 00	34 09



V1 RTMIZ


V1 FTWE
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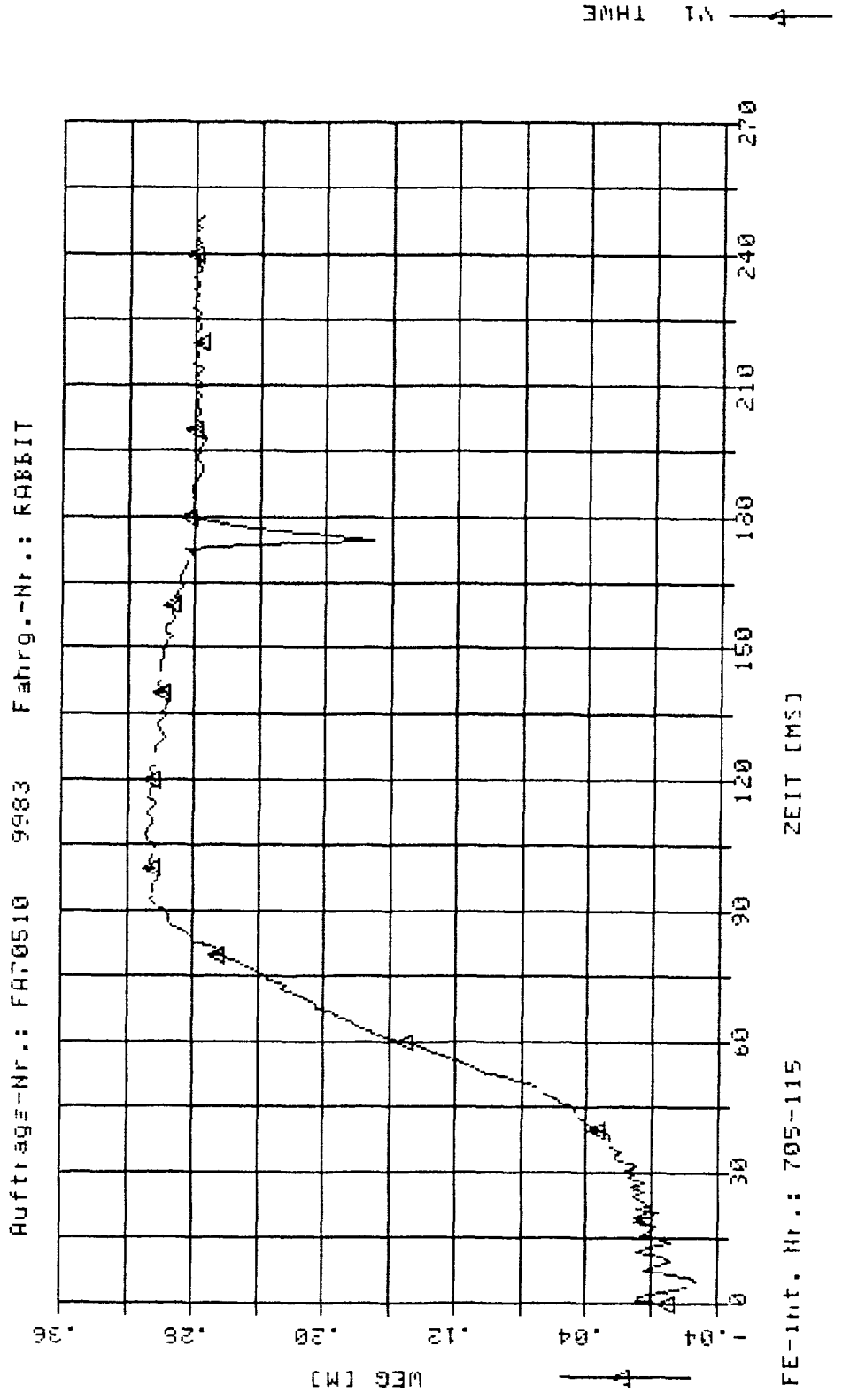
ZEIT [MS]
FE-int. Nr.: 705-115


Auftrags-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT
FE-Int. Nr.: 705-115
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WEG [M]
V1 THWE
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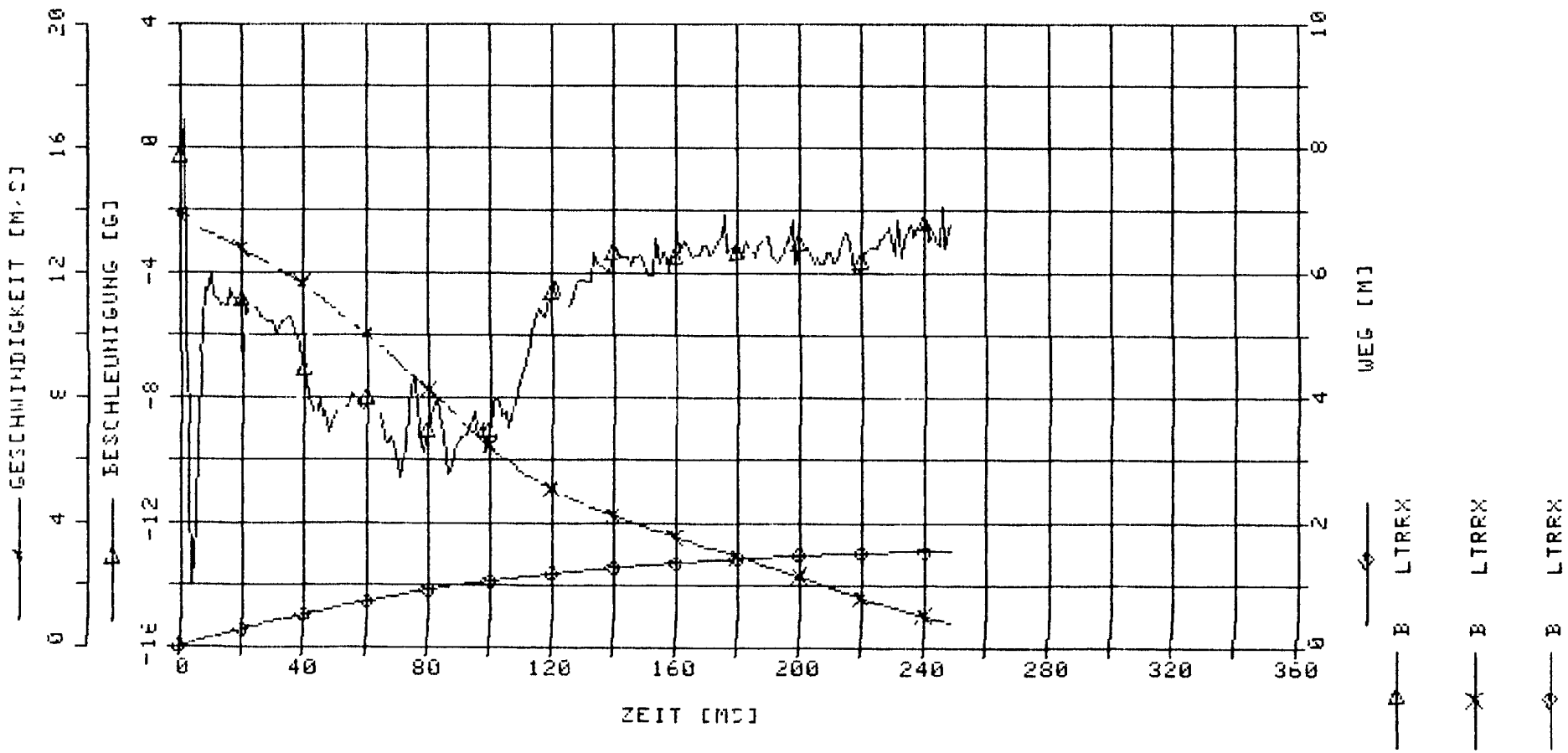
-.04
.04
.12
.20
.28
.36

B.1.2 Crabbed Barrier

Kenn-Werte Auftrags Nr FA70510 Versuchs-Nr 9983

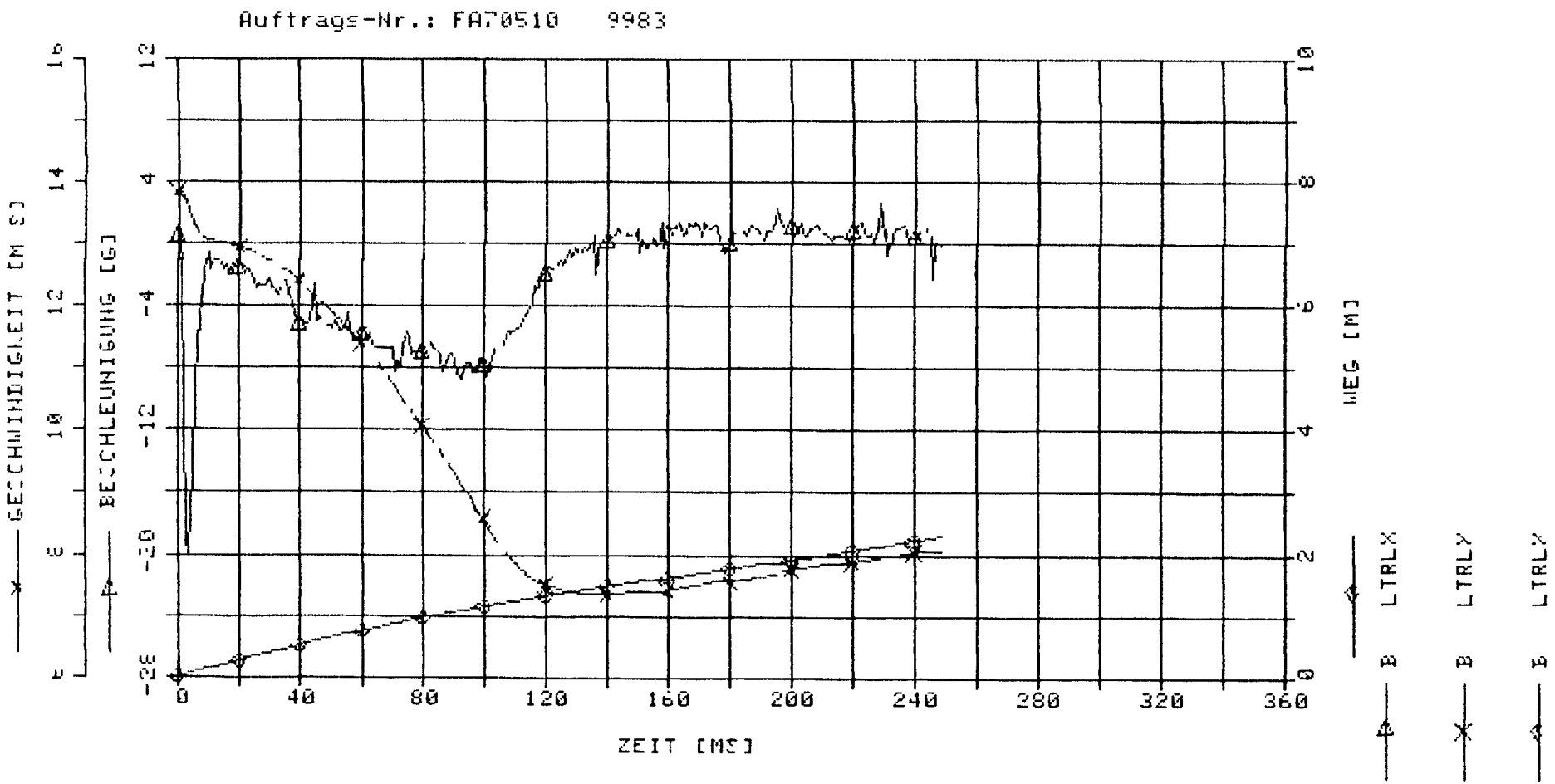
Mess Stelle	UP	Ber Groesse		Extremum	t Extr	SMS
LTRRX	B	BI	g	14 010	4 00	10 62
LTRRX	B	GI	m/s	13 828	2 00	0 00
LTRRX	B	WE	m	1 533	255 00	0 00

Auftrage-Nr.: FA70510 9983



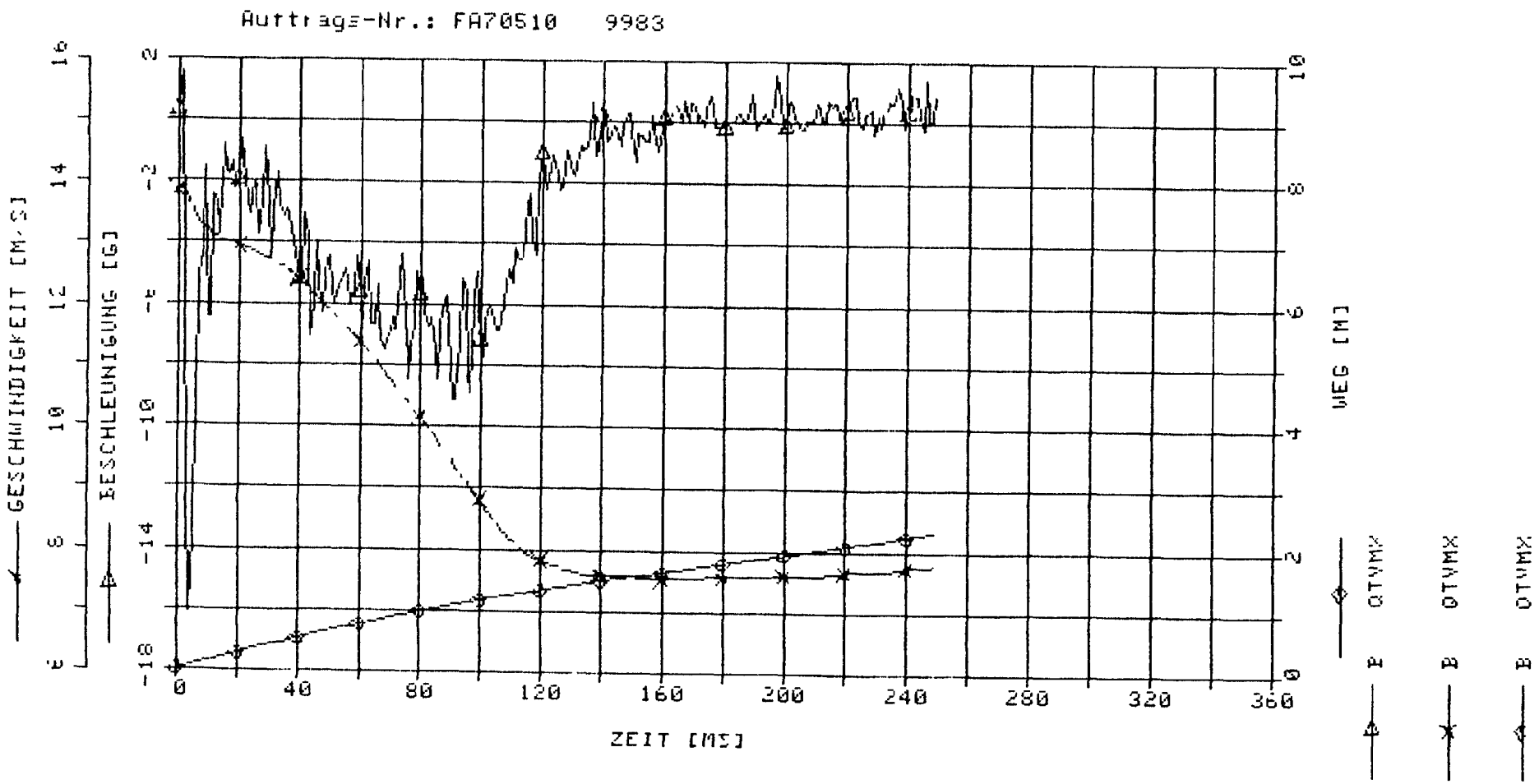
- Kenn-Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess-Stelle	UP	Ber Groesse	Extremum	t Extr	SHS
LTRLX	B	BE g	20.052	4.00	9.25
LTRLX	B	GE m/s	13.828	1.00	0.00
LTRLX	B	WE m	2.351	255.00	0.00



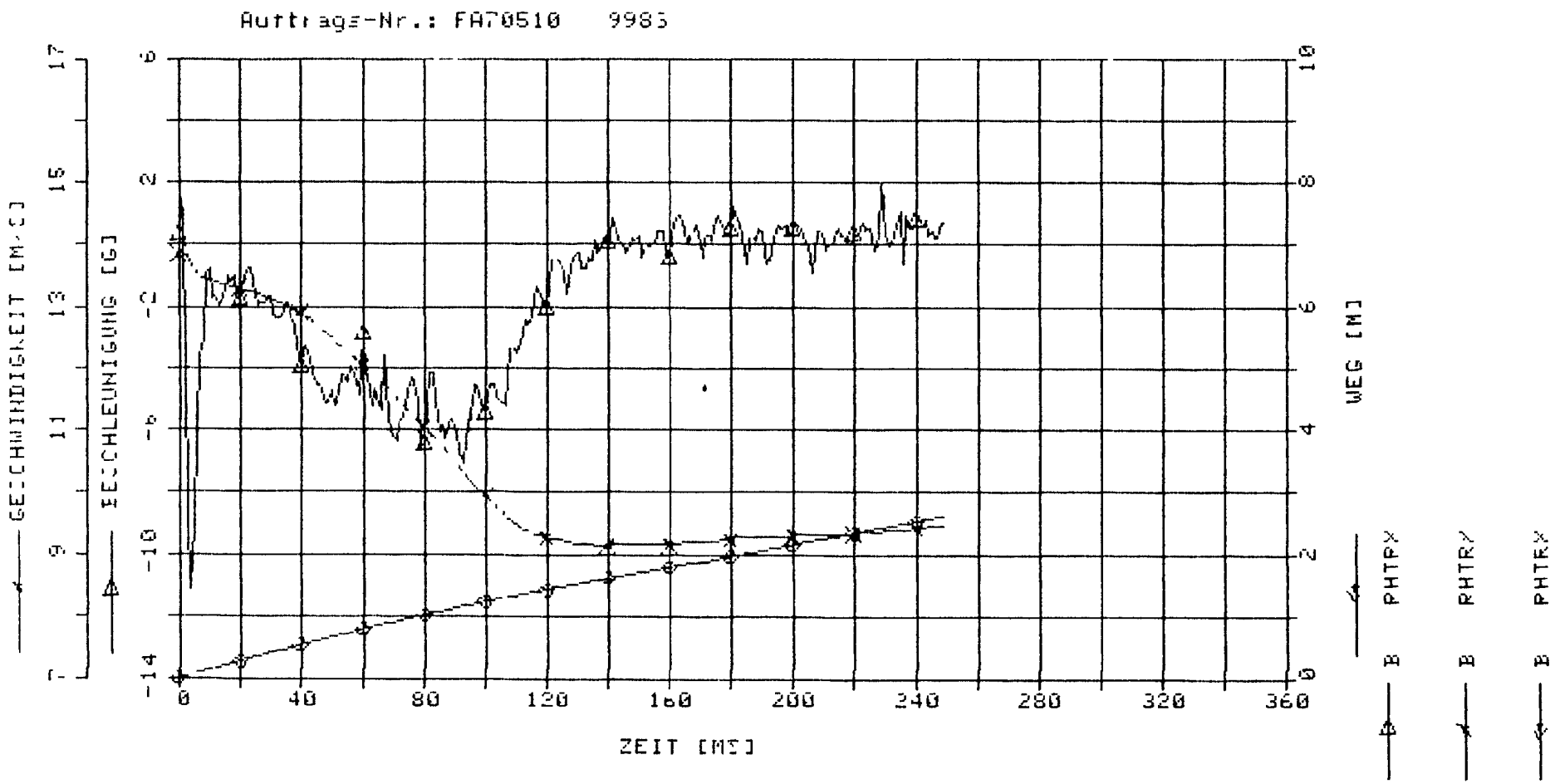
- Kenn-Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	der Groesse	Extremum	t Extr	SMS
QTVMX	B	BI g	16 116	4 00	9 07
QTVMX	B	GE m/s	13 843	2 00	0 00
QTVMX	B	WE m	2 355	250 00	0 00



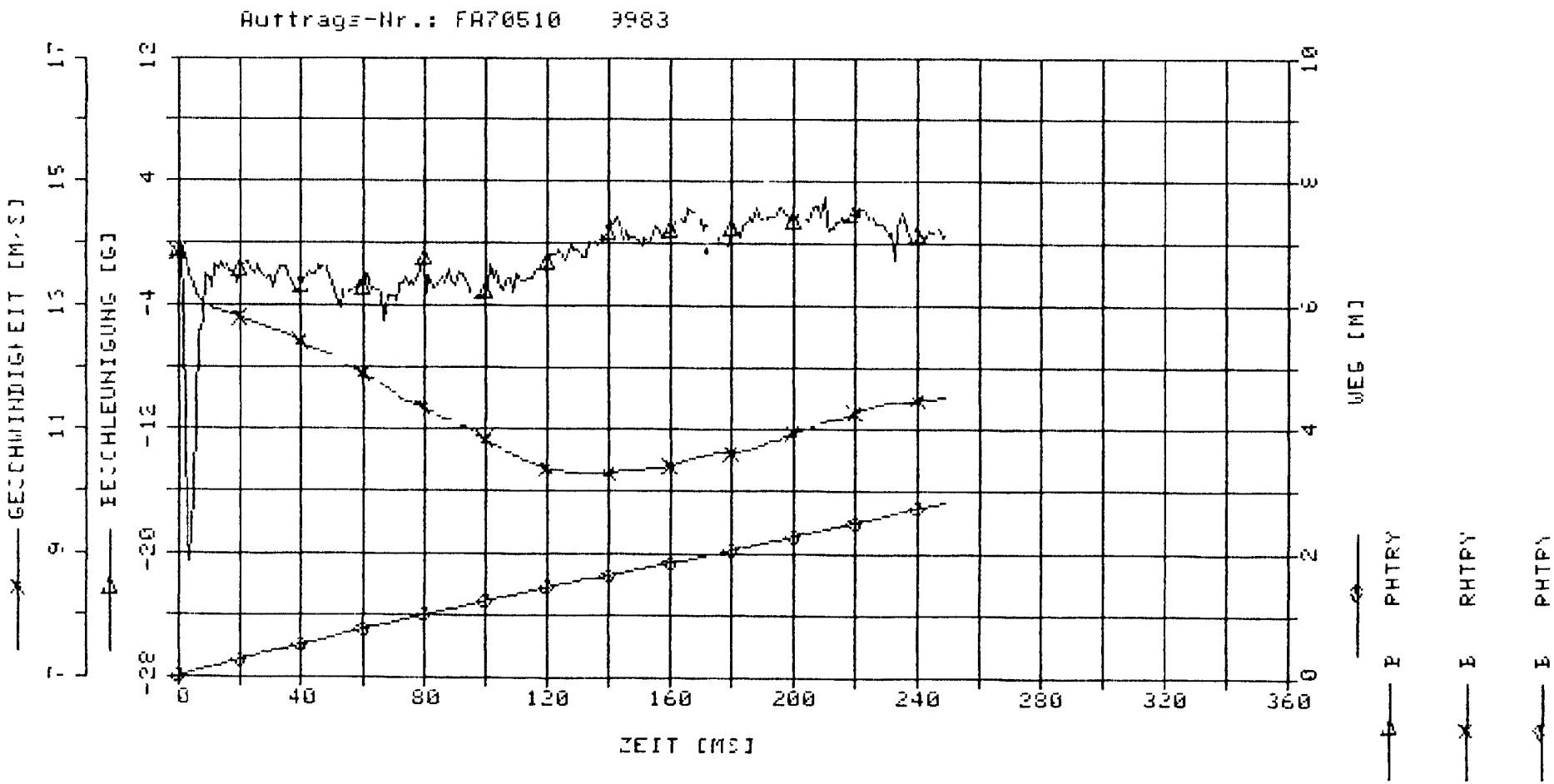
Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	Ber Grosse	Extremum	t Extr	SMS
RHTRX	B	BF g	11 133	4 00	7 12
RHTRX	B	GL m/s	13 847	2 00	0 00
RHTRX	B	WE m	2 665	25 00	0 00



Komm Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	Ber Grosse	Extremum	t Extr	SM5
RHTRY	B	BF g	20 601	4 00	10 71
RHTRY	B	GL m/s	13 827	0 00	0 00
RHTRY	B	WE m	2 885	255 00	0 00

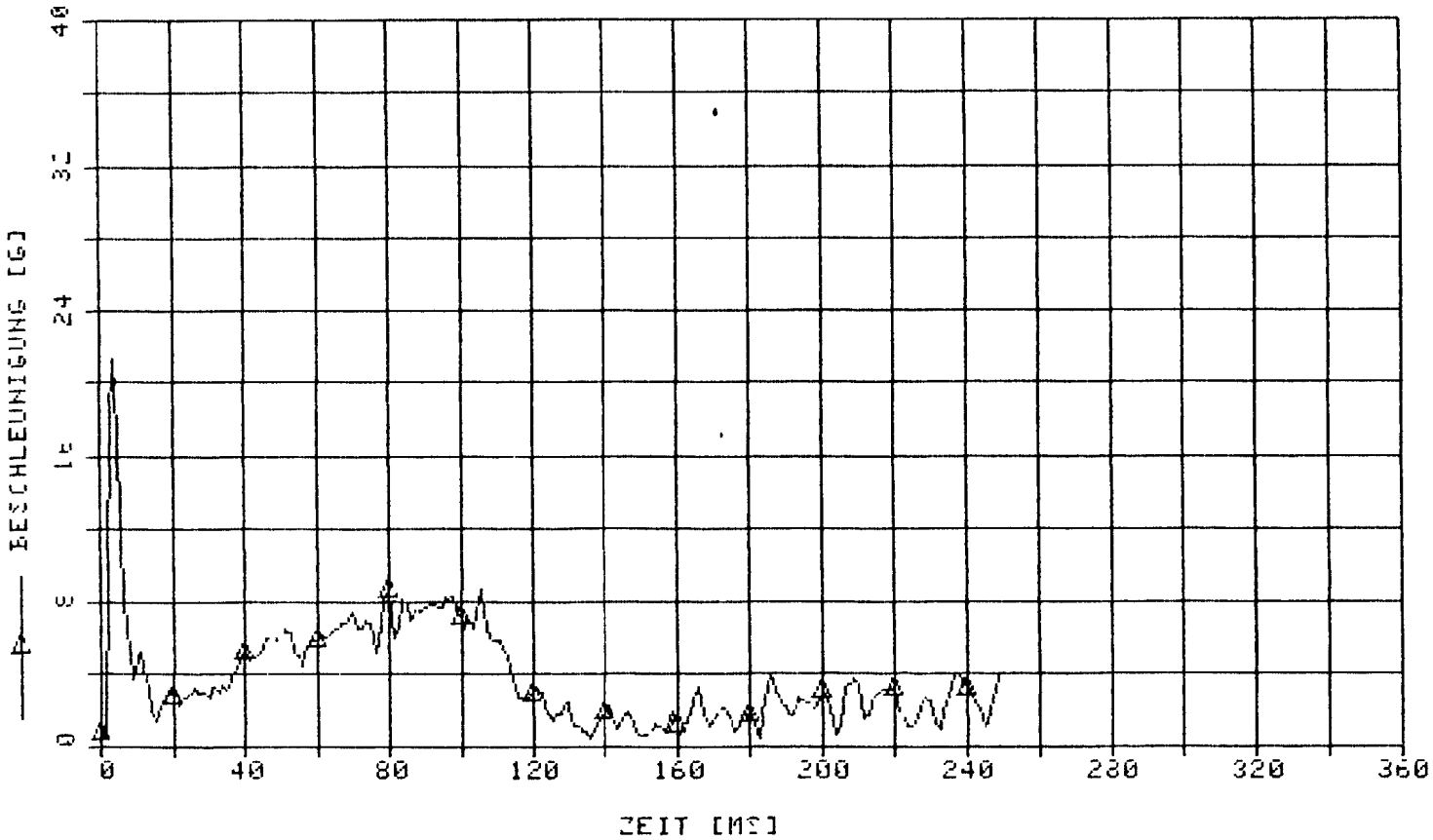


Kein Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle UP bei Extremum t ms
Groesse Extr

SPK1 B BE g 21.325 4.00 11.98

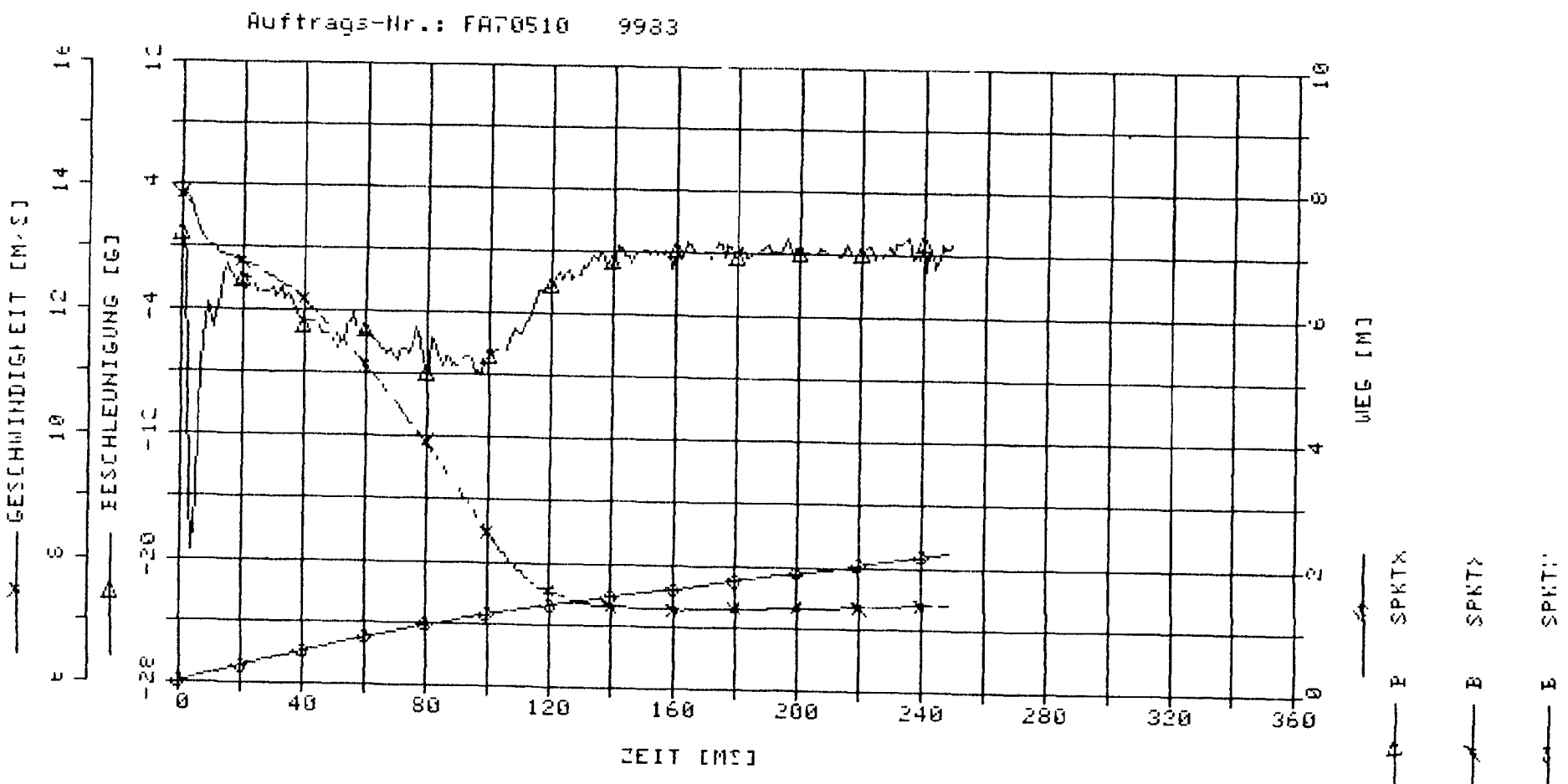
Auftrags-Nr.: FA70510 9983



SPKTR Y Z

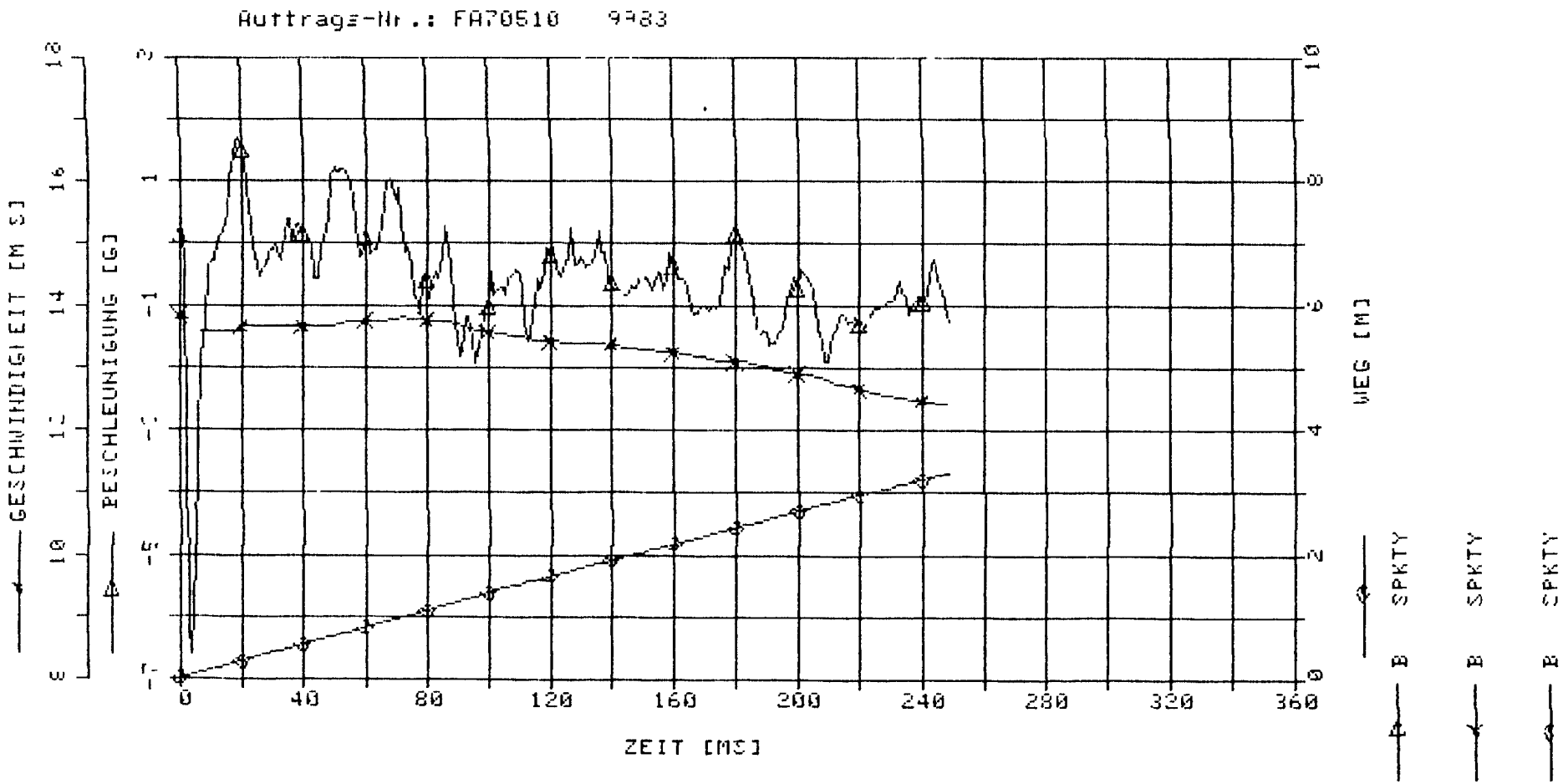
Kein Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	bez Grosse	Extremum	t Extr	SUB
SPKTX	B	BE g	19 533	4 00	11 04
SPKTX	B	GE m/s	13 828	1 00	0 00
SPKTX	B	WE m	2 288	255 00	0 00



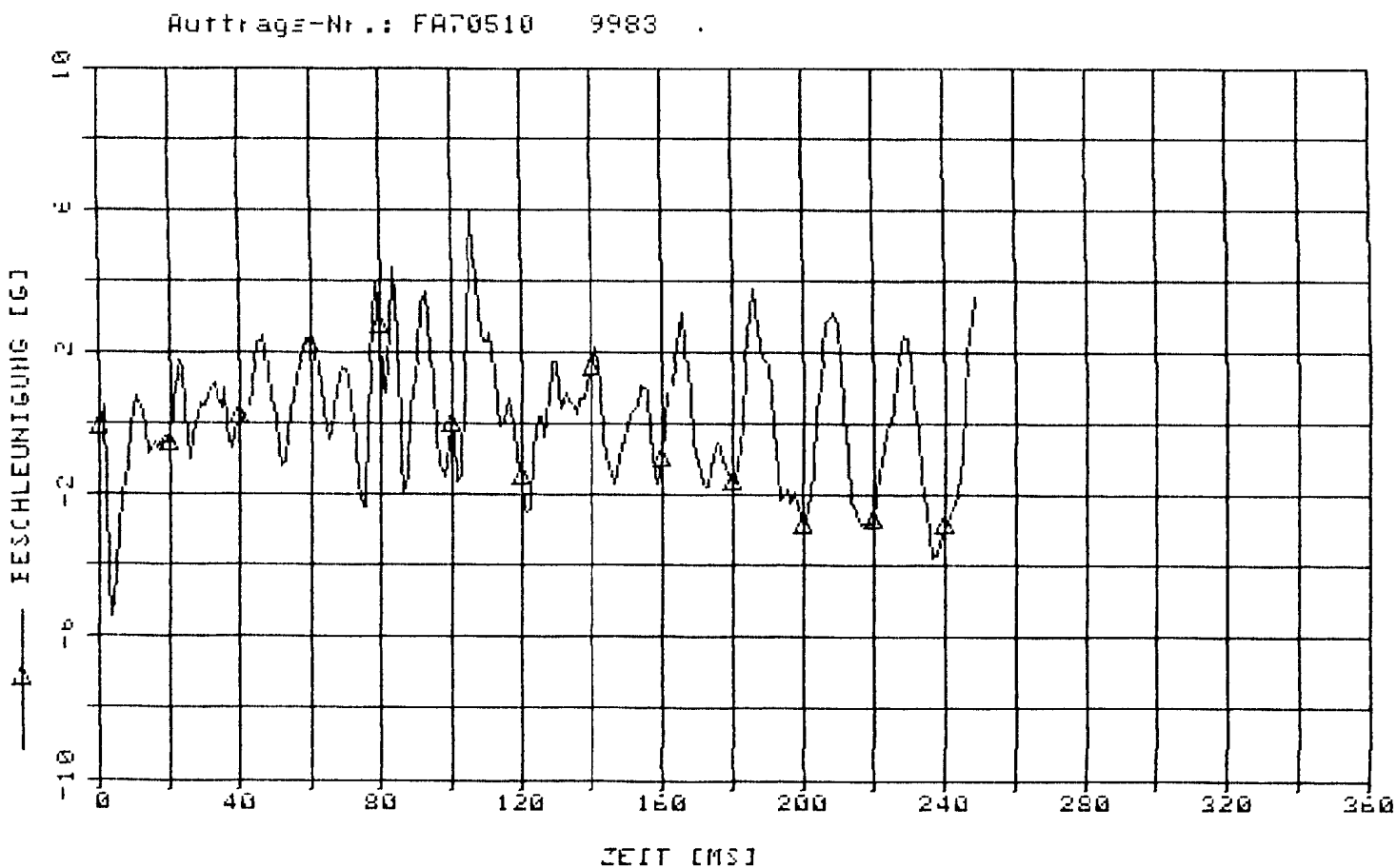
- Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	SMS
SPKTY	B	BL g	-6 613.	4 00	3 22
SPKTY	B	GF m/s	13 824	1 00	0 00
SPKTY	B	WF m	3 388	255 00	0 00



Kenn Werte	Auftrags Nr	FA70510	Versuchs Nr	9983

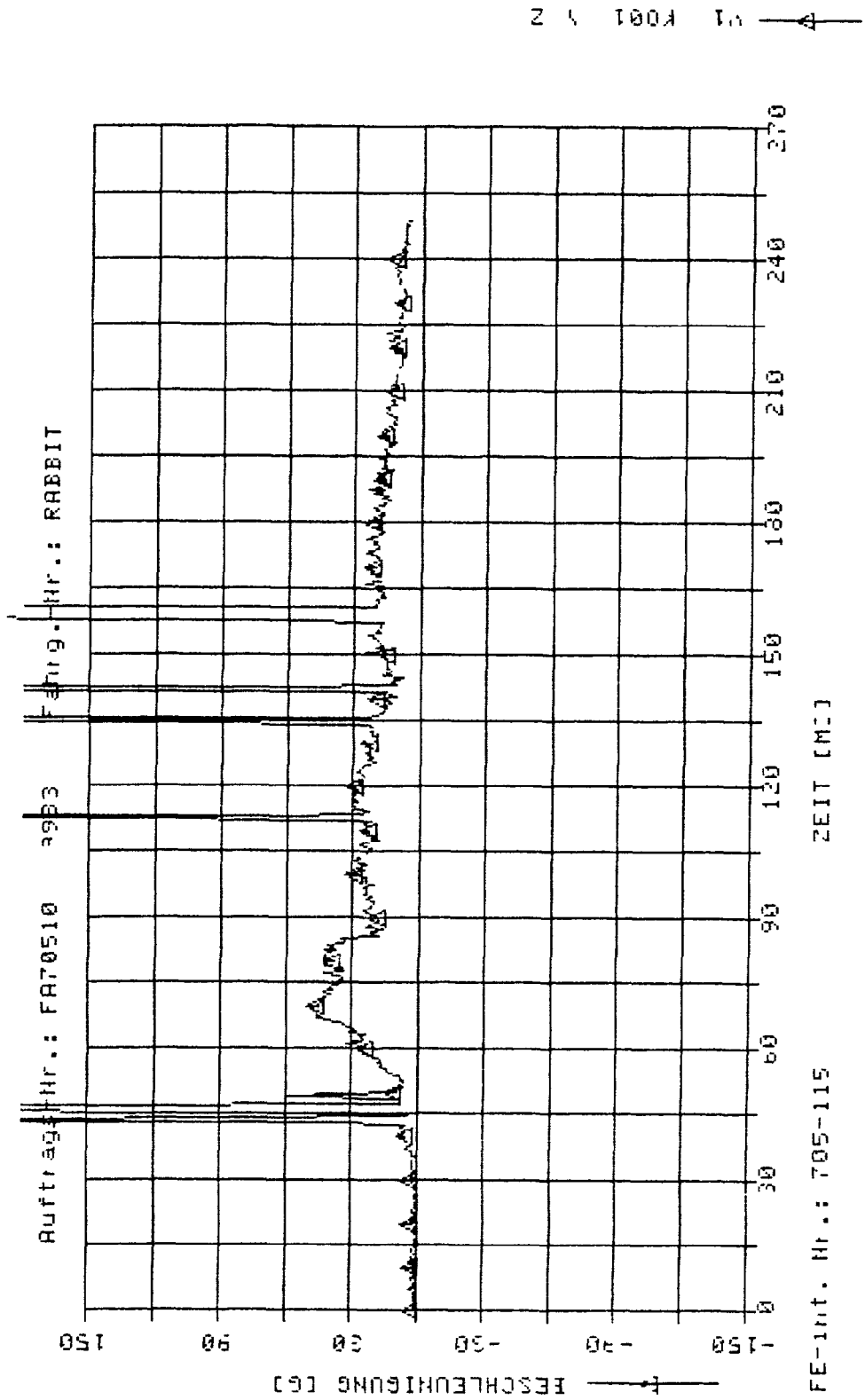
Mess Stelle	UP	Ber Groesse	Extremum	t Extr	sMS
SPKTZ	B	BE g	5 905	106 00	4 56



P SPKTZ

B.2 Dummy Test Response

B.2.1 Driver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Fahrg.-Nr.: RABBIT
FE-Int. Nr.: 705-115
ZEIT [MI]
ESCHLEUNIGUNG [G]
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90
120
150
180
210
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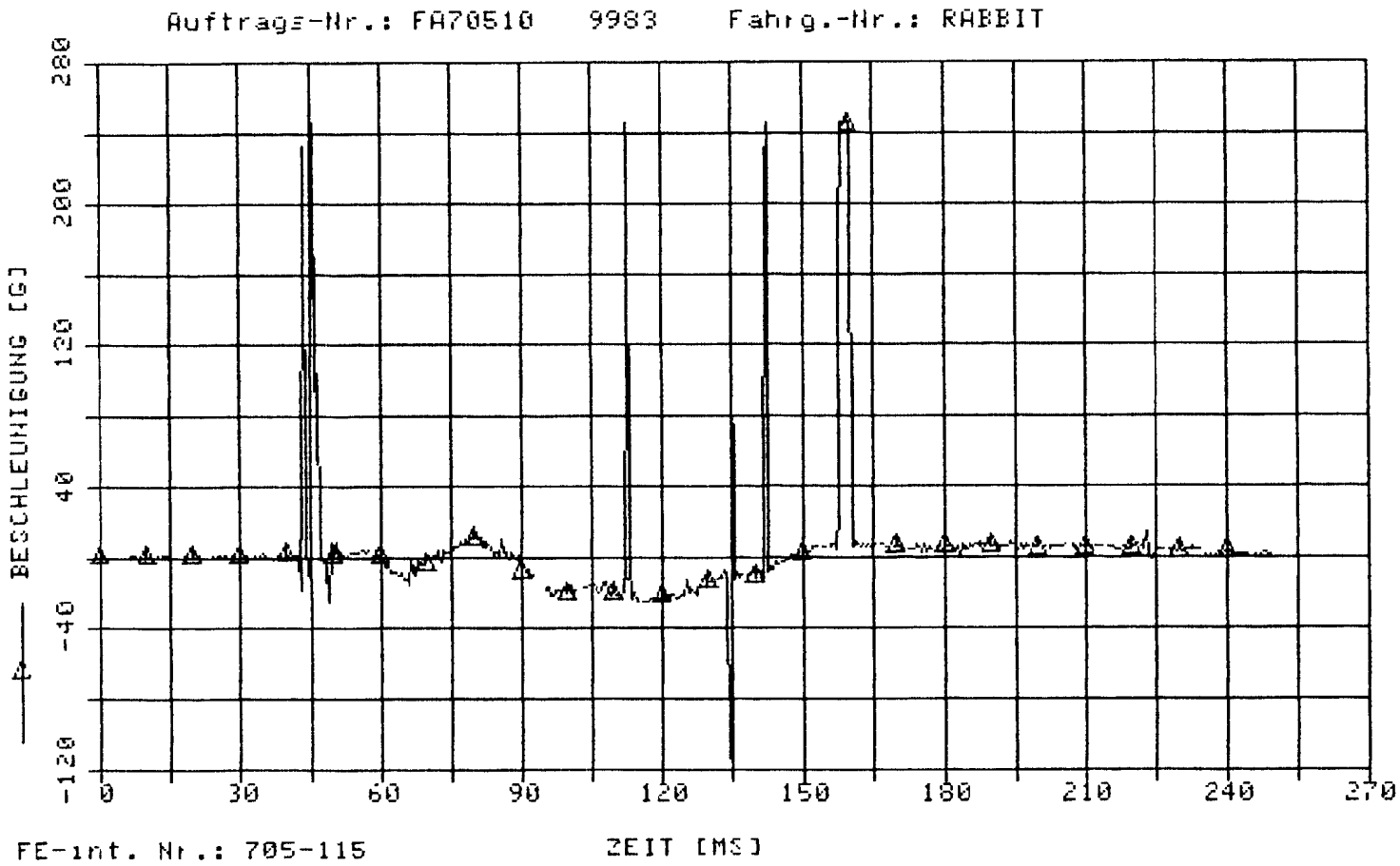
270
150
90
30
-30
-90
-150


Auftrags-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT
BESCHLEUNIGUNG [G]
280
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120
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-40
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60
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120
150
180
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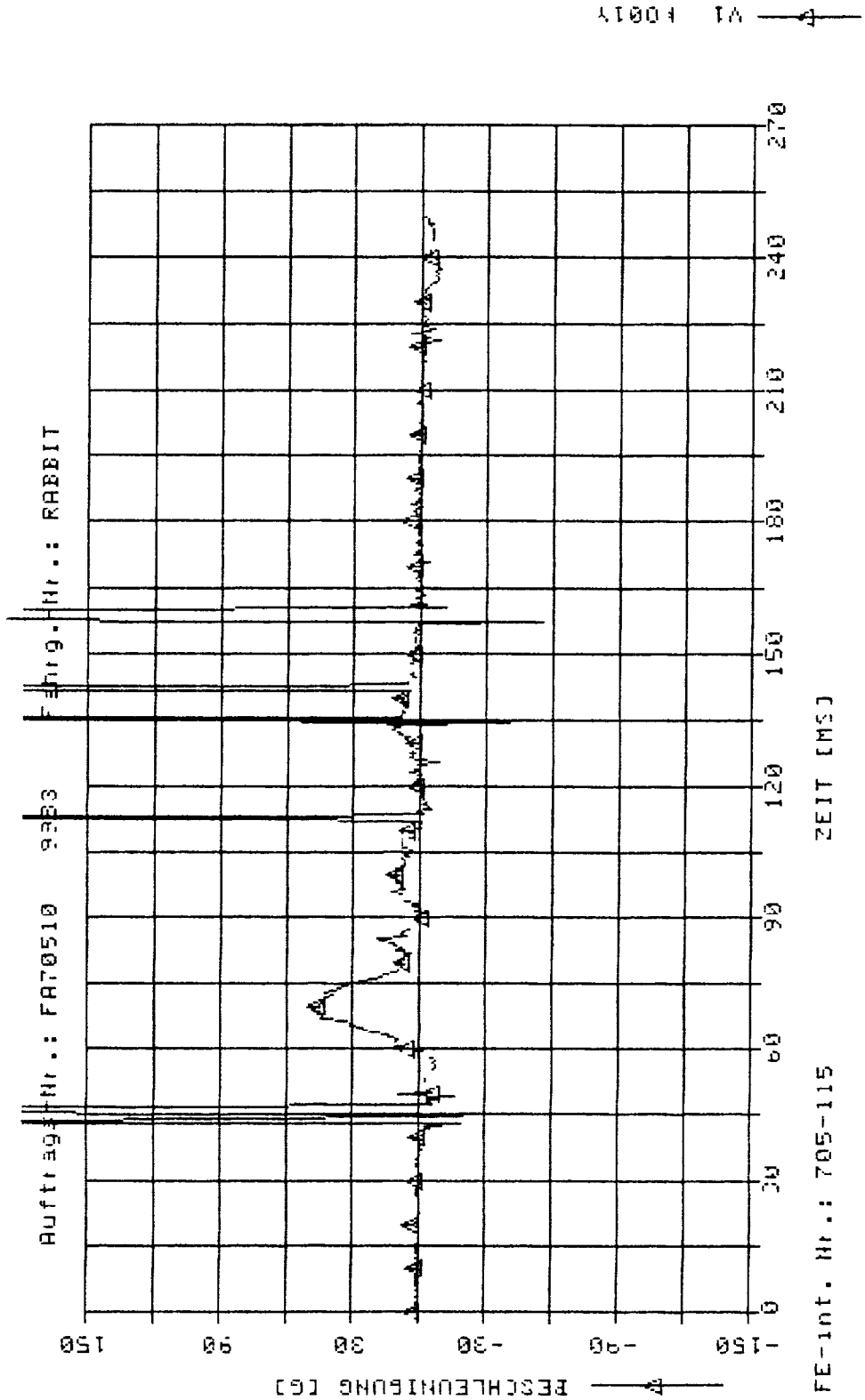
270
ZEIT [MS]
FE-int. Nr.: 705-115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Trig. Nr.: RABBIT
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BESCHLEUNIGUNG [G]
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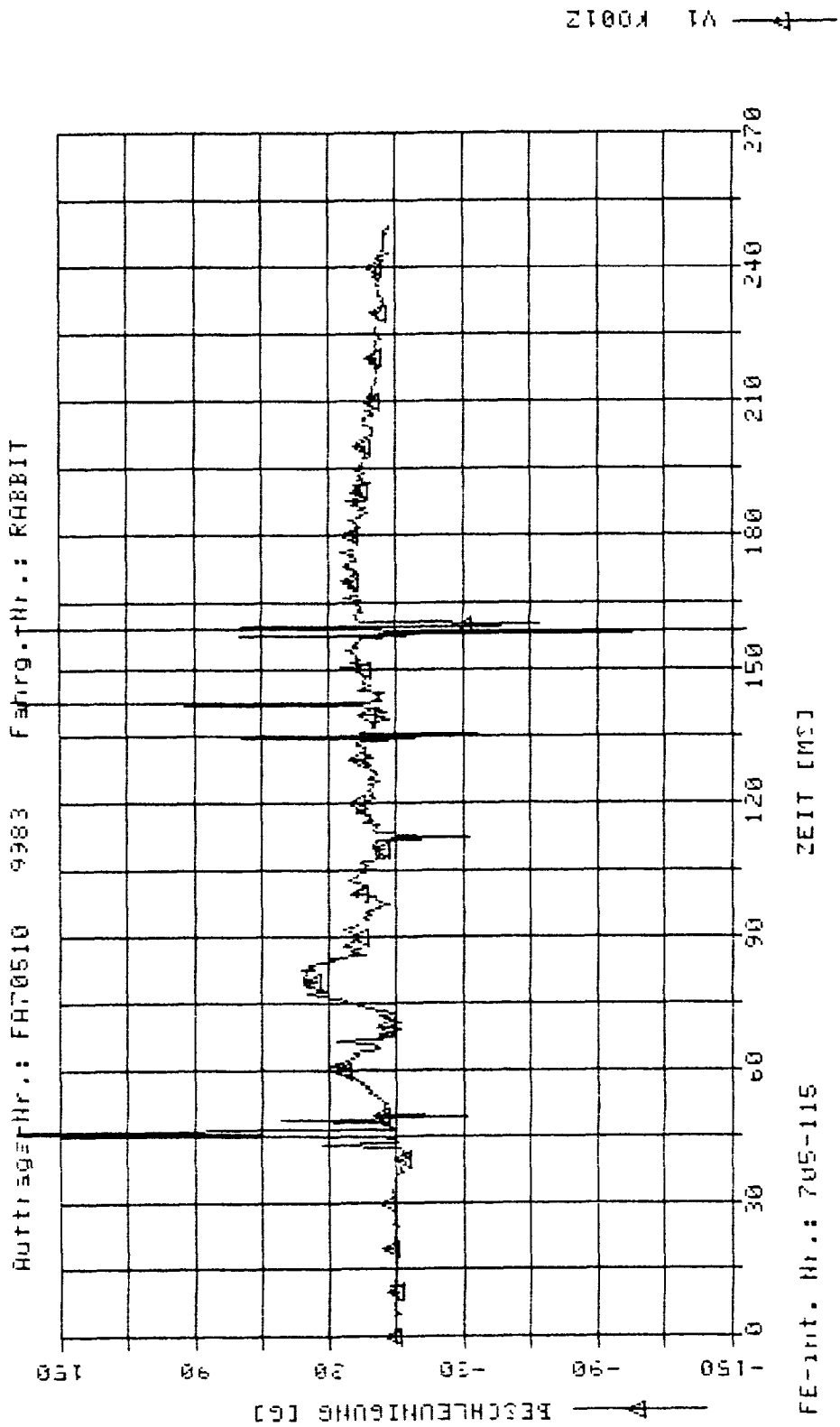
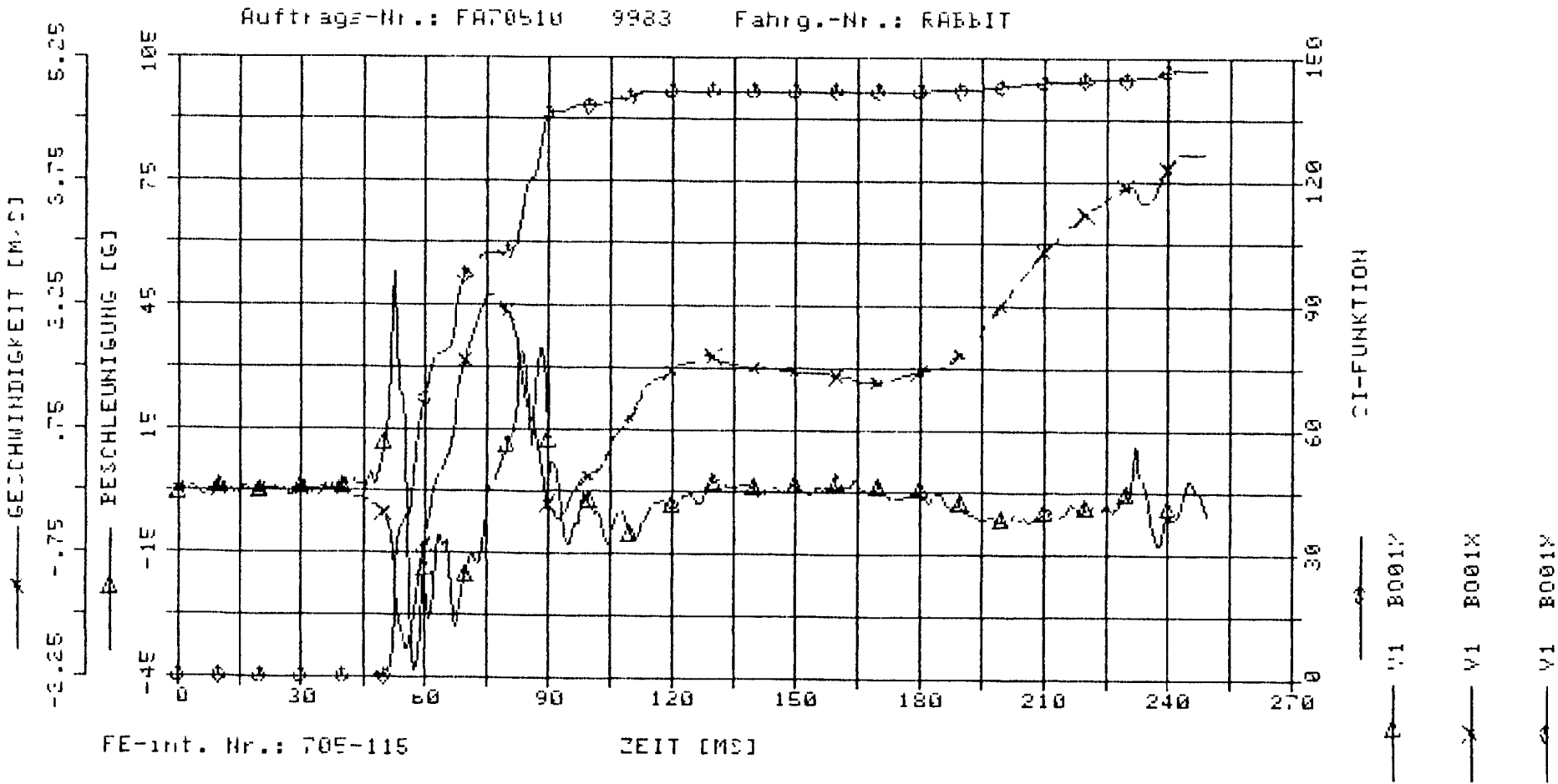

V1 R0012
Auftrage-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT
FE-Int. Nr.: 705-115
ZEIT [MS]
BESCHLEUNIGUNG [G]
0
30
60
90
120
150
180
210
240
270
150
90
30
-30
-90
-150

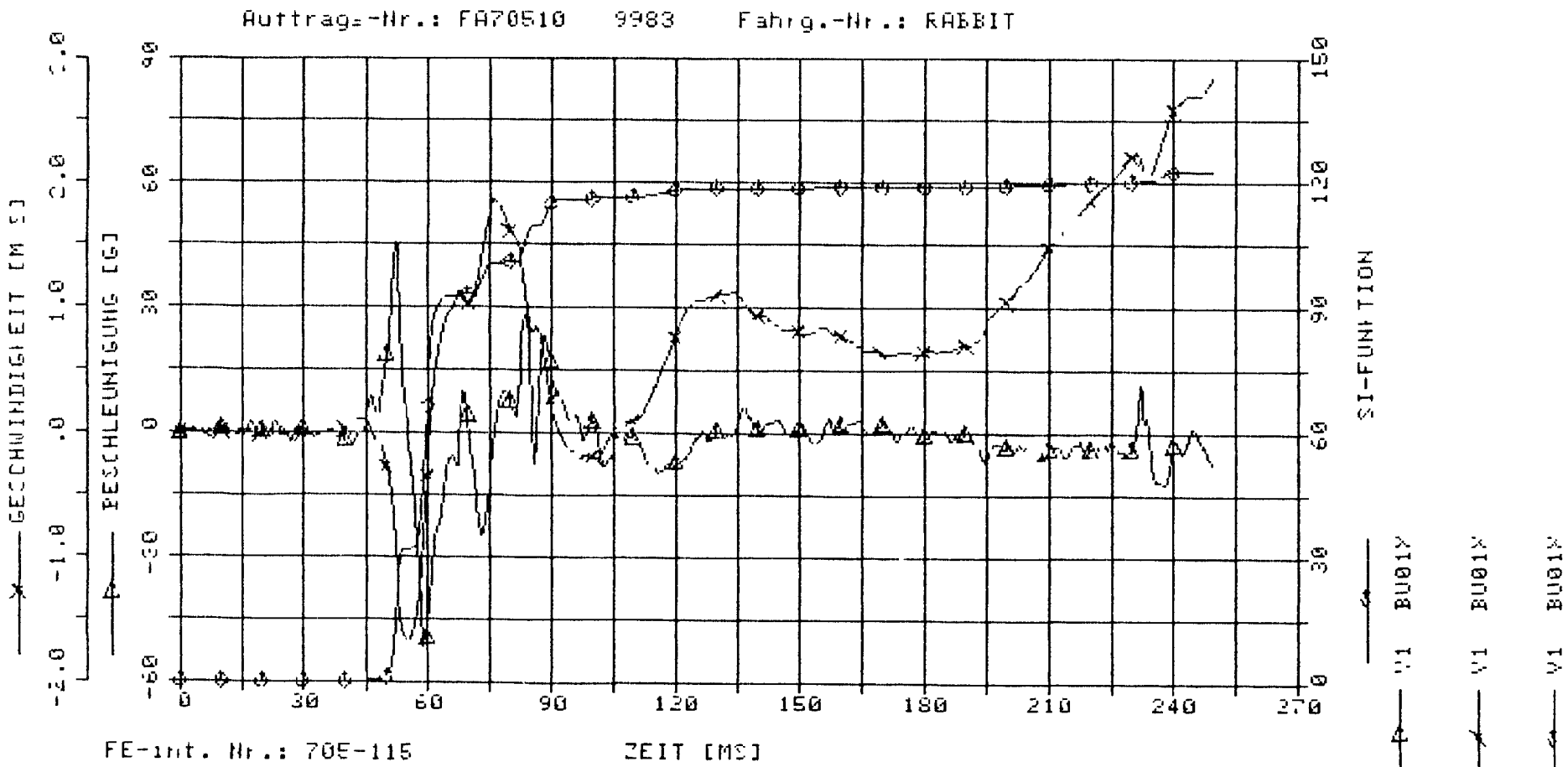
Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	DP	Bez Grösse	Extremum	t Extr	ms
B001X	V1	BL g	52.606	52.50	39.53
B001X	V1	GL m/s	4.333	255.50	0.00
B001X	V1	SI	146.589	250.00	0.00



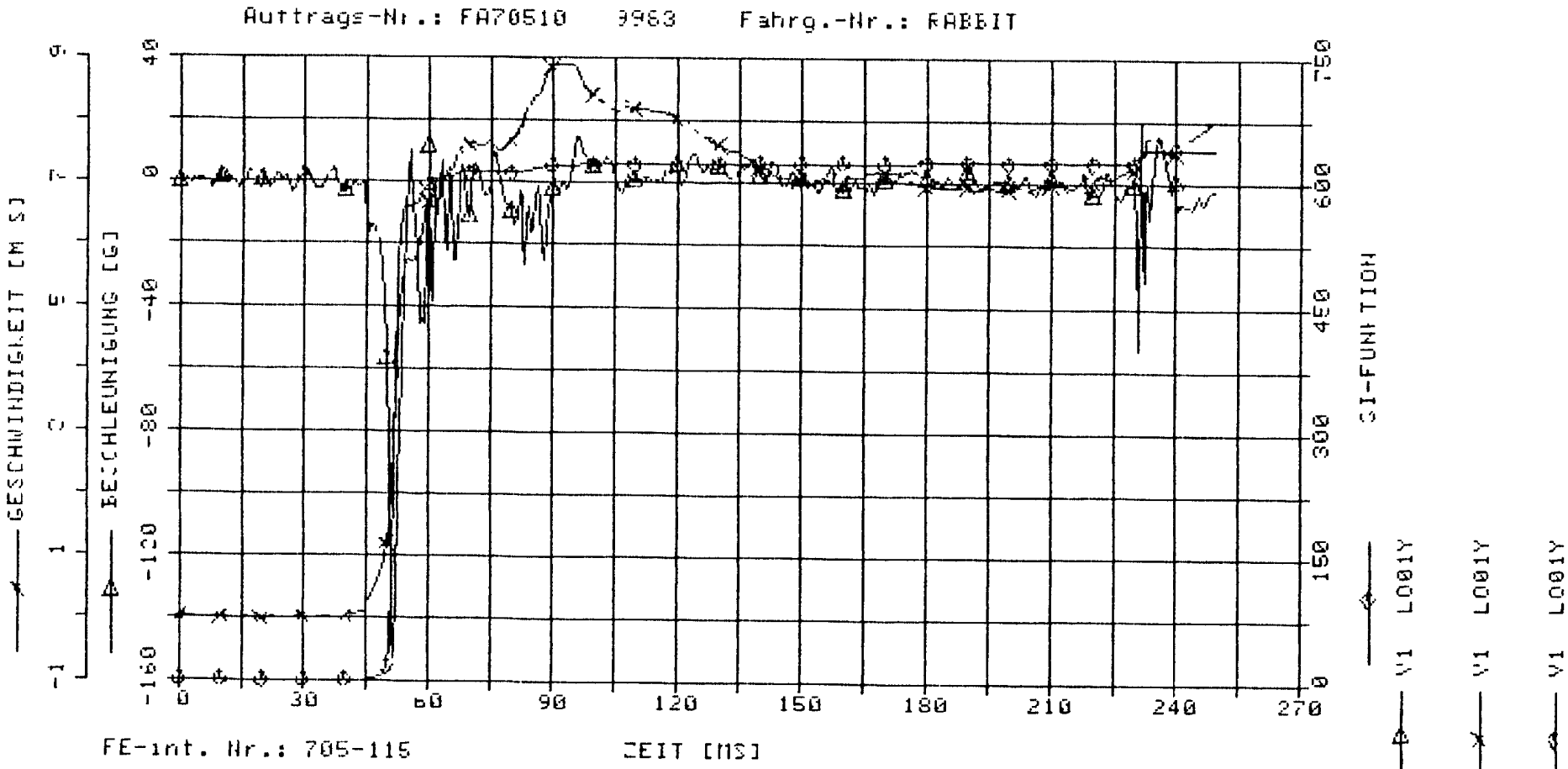
Kenn-Werte Auftrags-Nr. FA70510 Versuchs-Nr. 9983

Mess-Stelle	UP	der Grosse	Extremum	t Extr	ms
BU01X	V1	BI g	51.660	59.00	42.32
BU01X	V1	GI m/s	3.233	255.50	0.00
BU01X	V1	SI	122.637	250.00	0.00



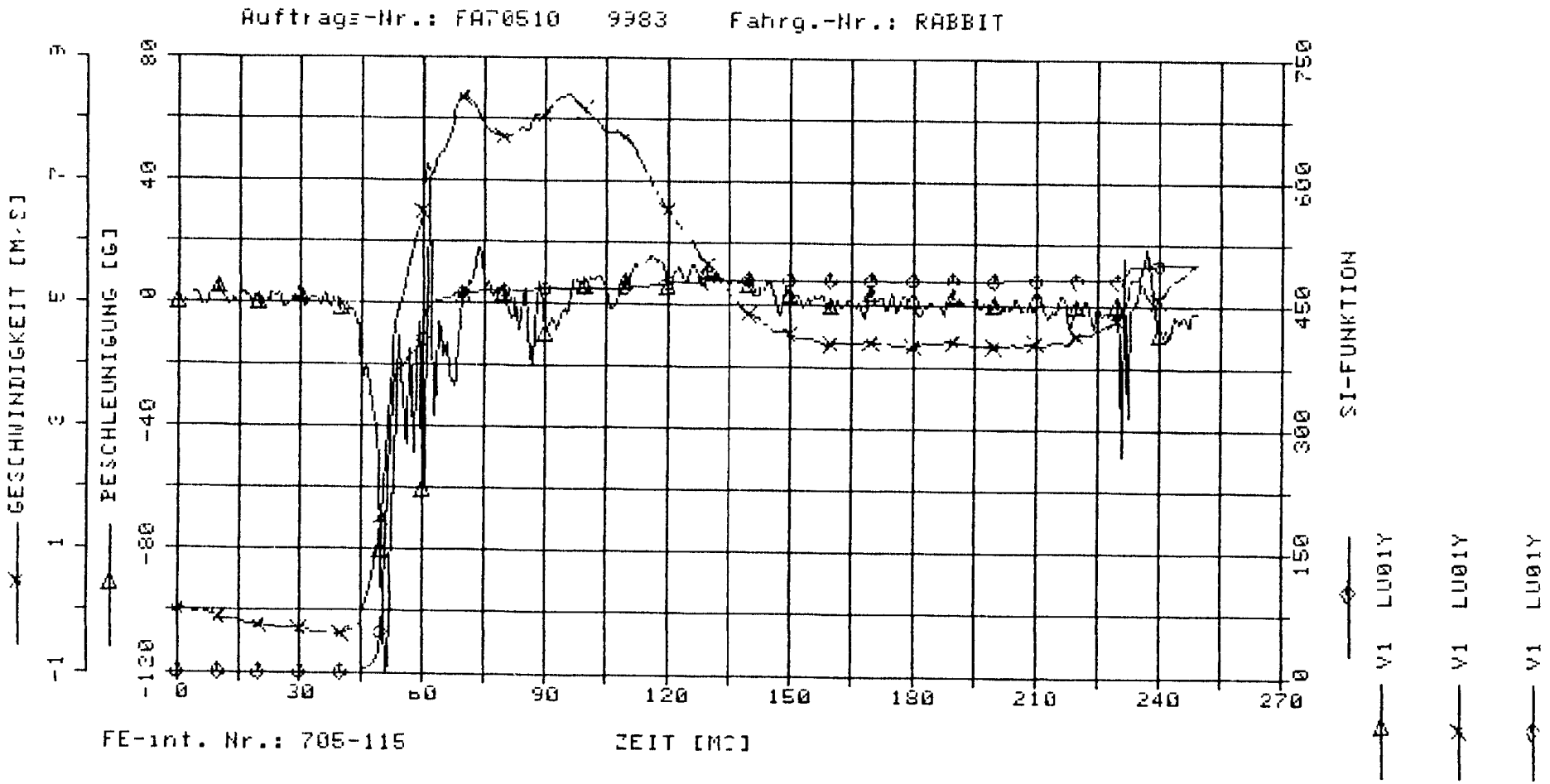
Kenn-Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	Ber Grösse	Extremum	t Extr	ms
L001Y	V1	BL g	153 306	51 50	83 09
L001Y	V1	GE m/s	8 886	94 50	0 00
L001Y	V1	SI	640 500	250 00	0 00



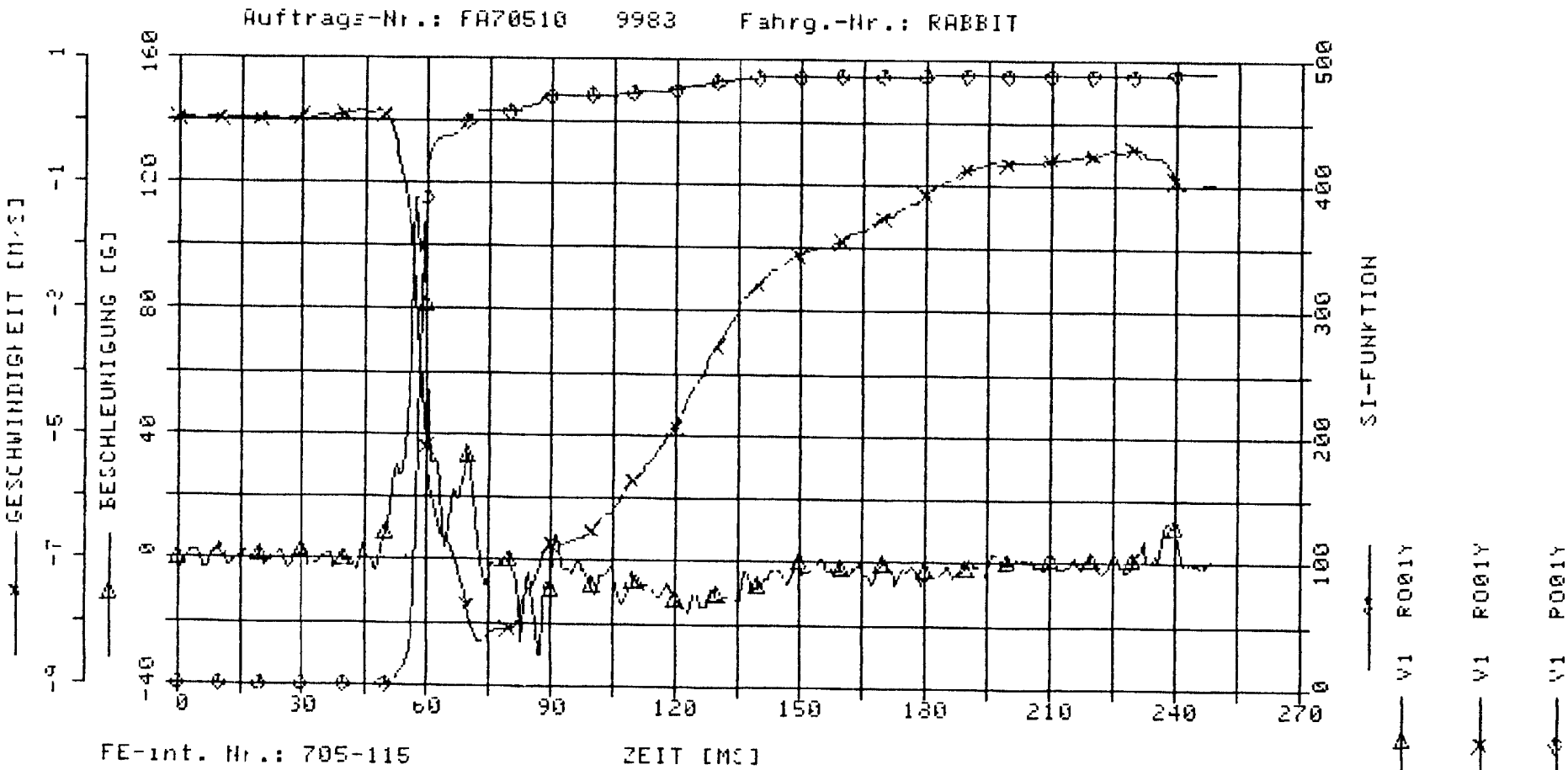
Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	Der Groesse	Extremum	t Extr	SMS
LU01Y	V1	BL g	-119 400	51 00	64 05
LU01Y	V1	GL m/s	8 386	96 00	0 00
LU01Y	V1	SI	500 036	250 00	0 00



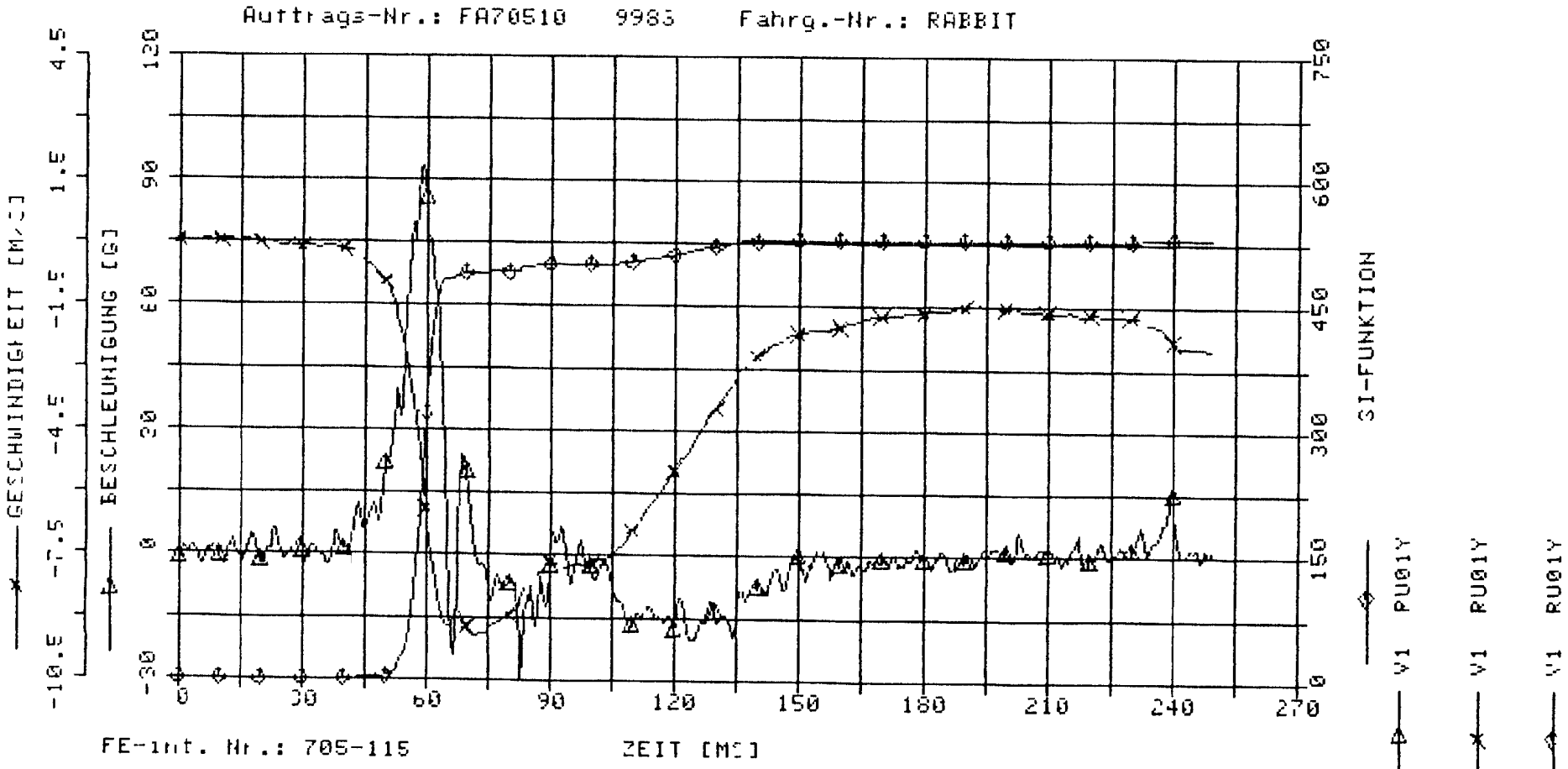
- Komm Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	Mess Grosse	Extremum	t Extr	SMS
R001Y	V1	BE g	114 563	57 50	80 92
R001Y	V1	GE m/s	8 303	73 00	0 00
R001Y	V1	SI	488 406	250 00	0 00



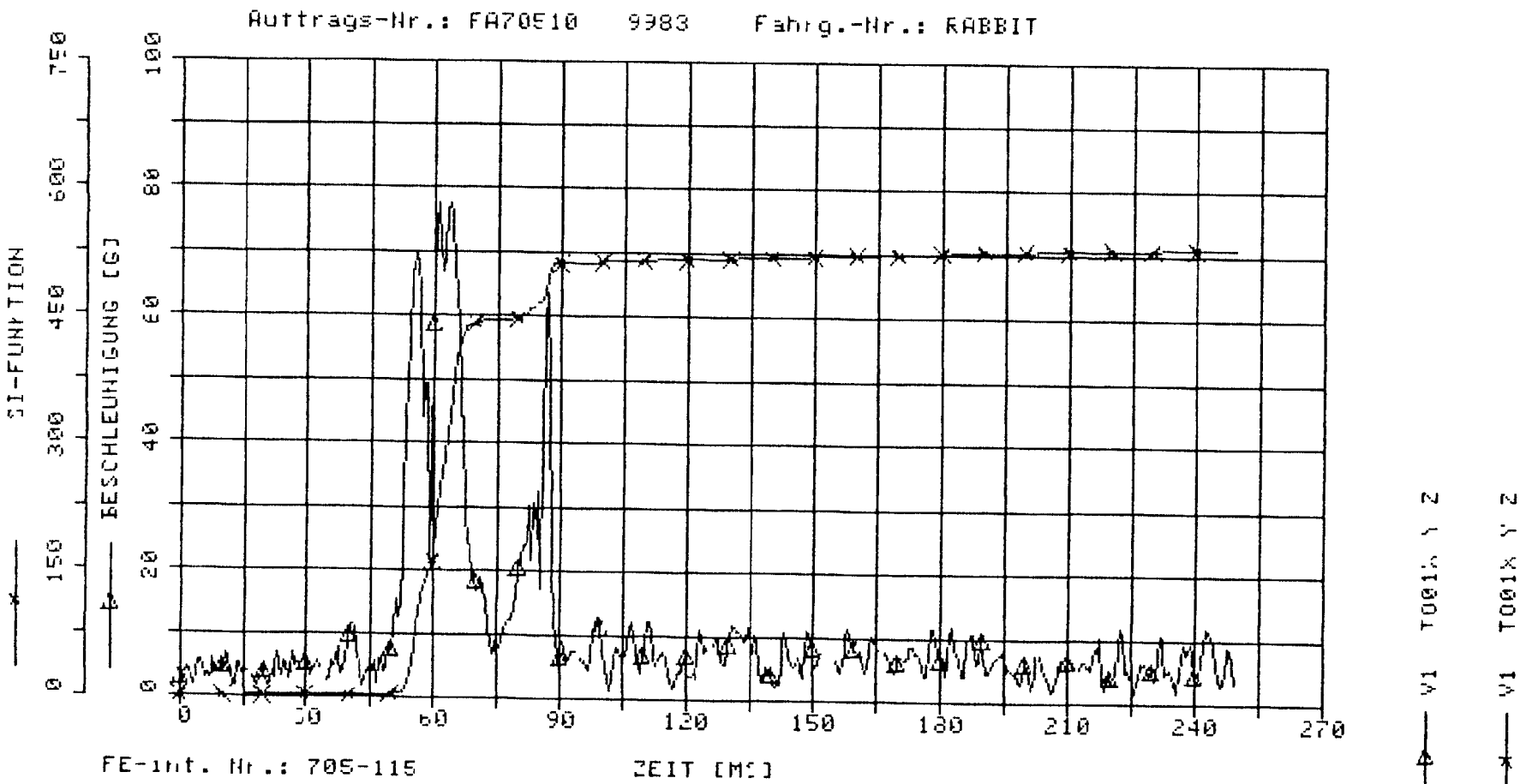
- Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	Der Grossse	Extremum	t Extr	ms
RU01Y	V1	BE g	92 396	59 00	76 50
RU01Y	V1	GE m/s	9 431	72 00	0 00
RU01Y	V1	SI	530 719	250 00	0 00



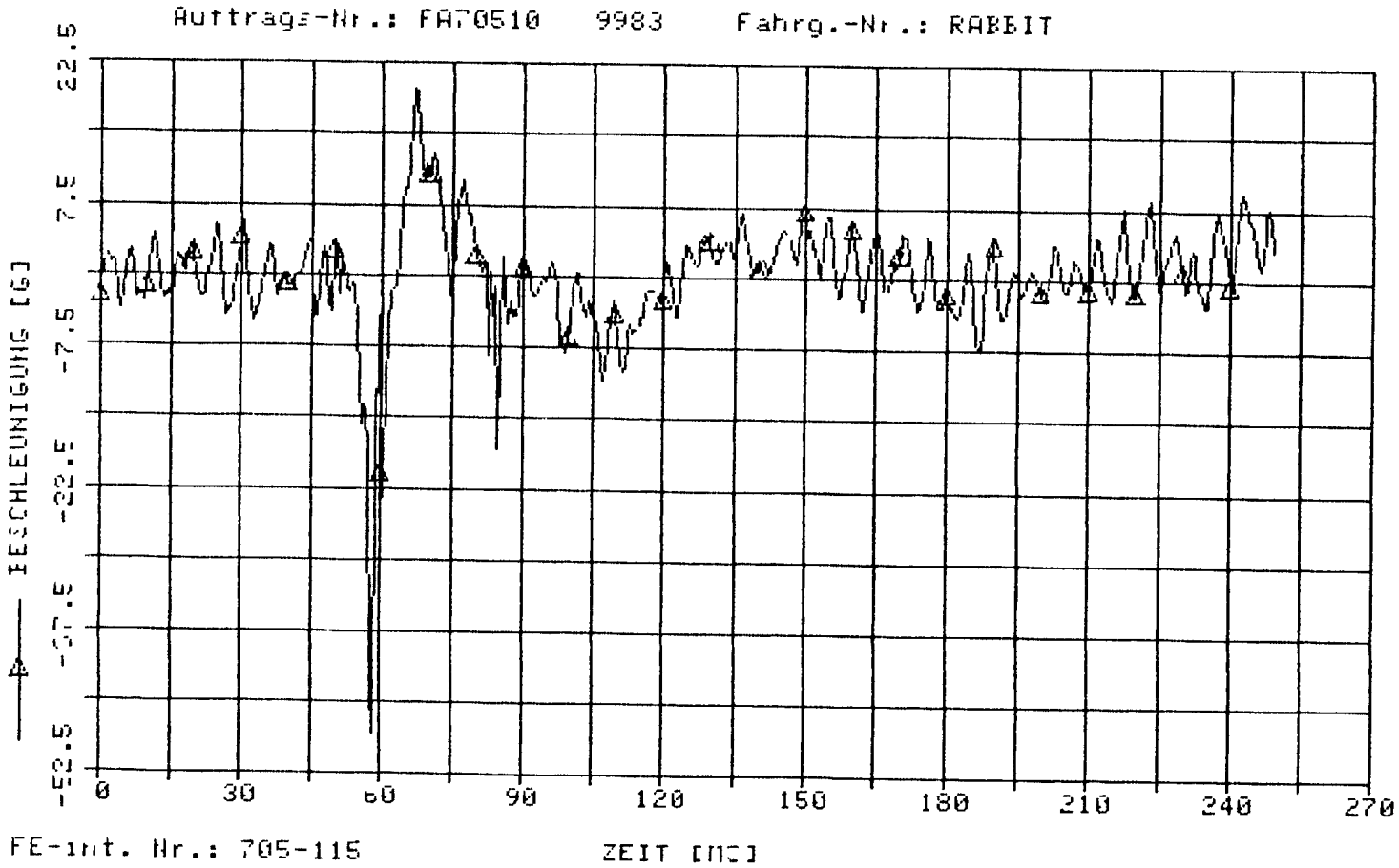
Kom Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	der Grosse	Extremum	t Extr	ms
1001	V1	BE g	77 366	61 50	69 76
1001	V1	SI	553 490	250 00	0 00



- Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	Max Grosse	Extremum	t Extr	ms
T001X	V1	8F g	48 235	58 50	19 64

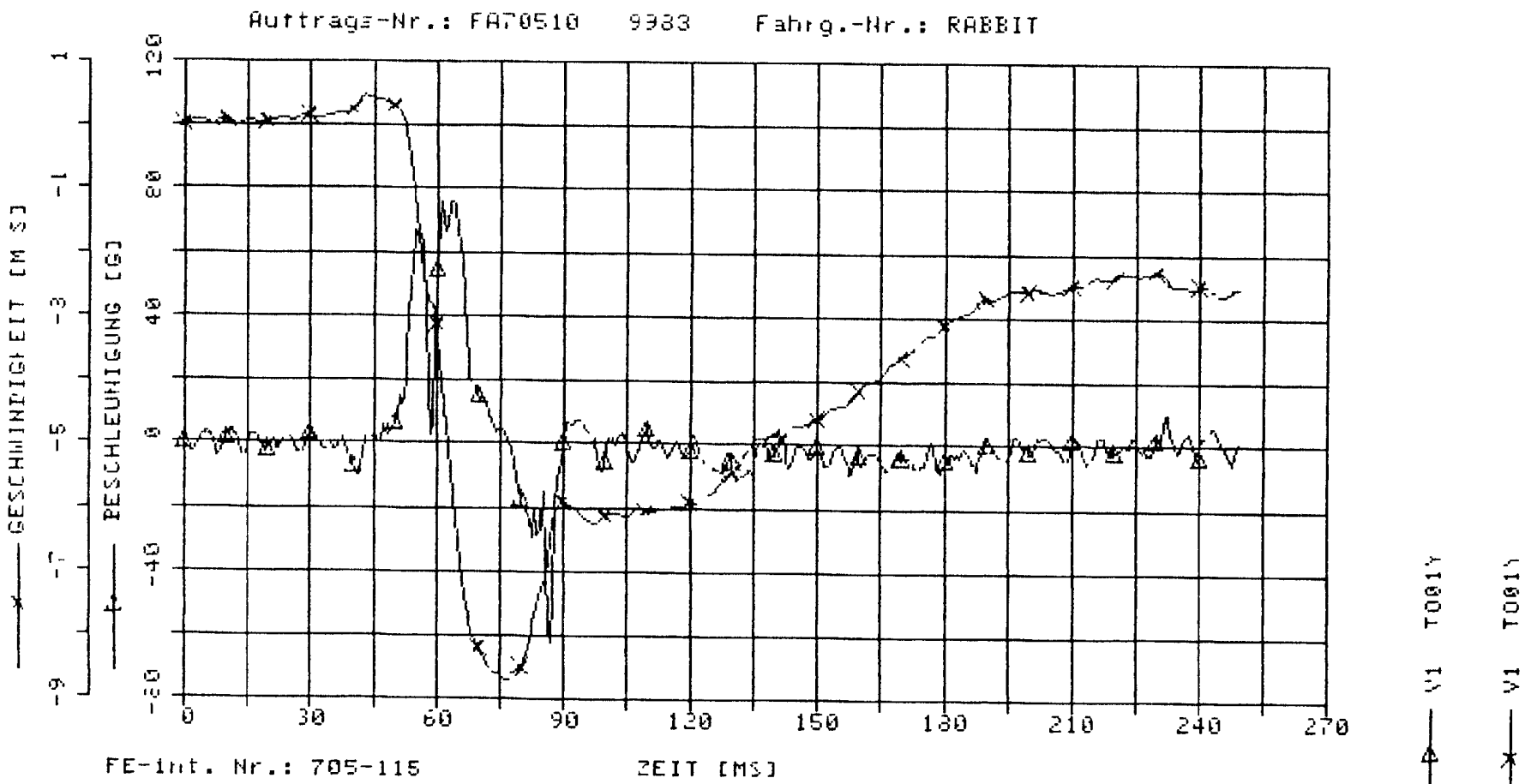


FE-int. Nr.: 705-115

V1 T001X

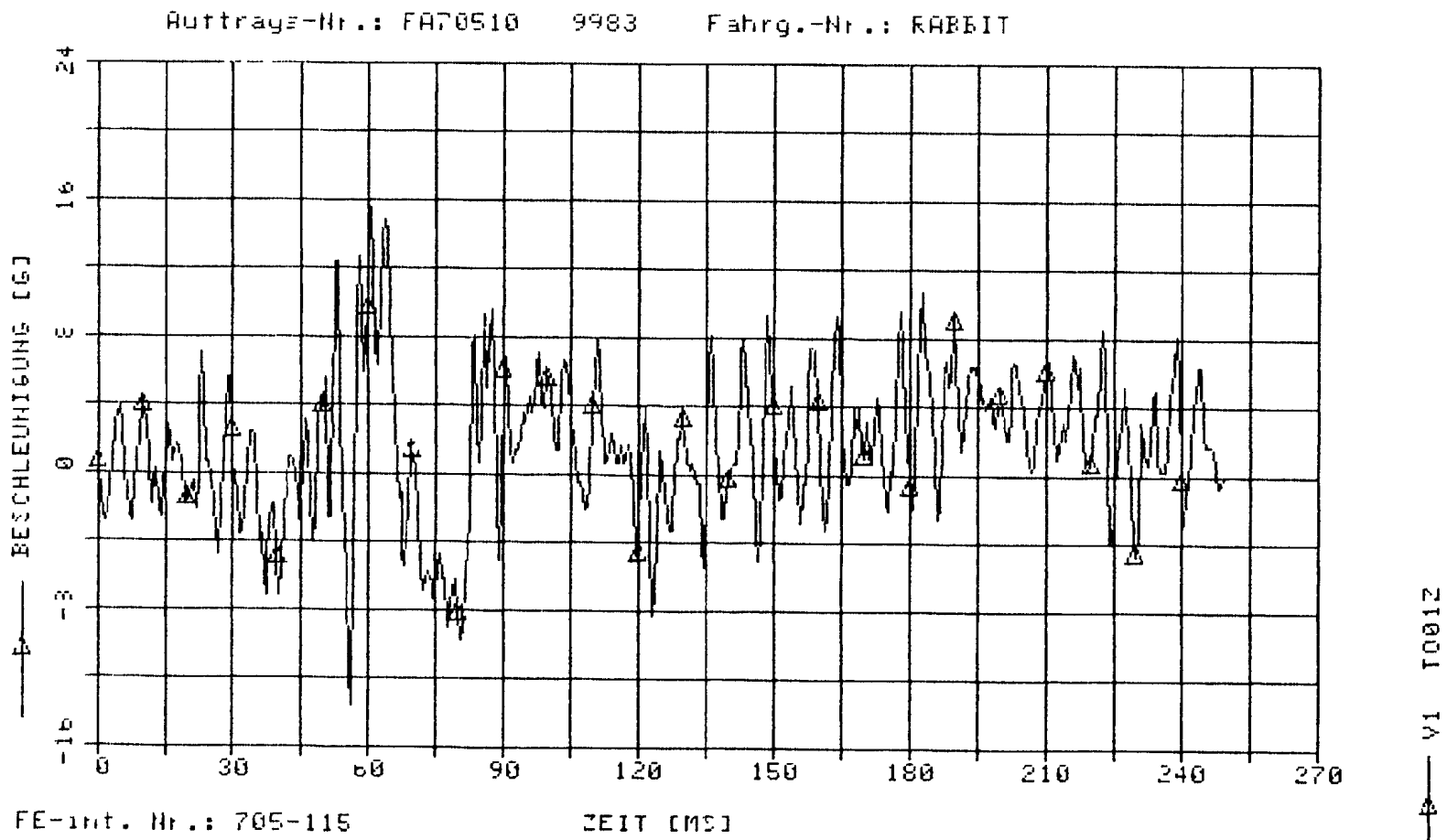
Kenn Werte Auftrags-Nr. FA70510 Versuchs Nr. 9983

Mess Stelle	UP	bez Groesse	Extremum	t Extr	SMS
T001Y	V1	BE g	75 730	64 00	68 26
T001Y	V1	GL m/s	8 715	77 00	0 00



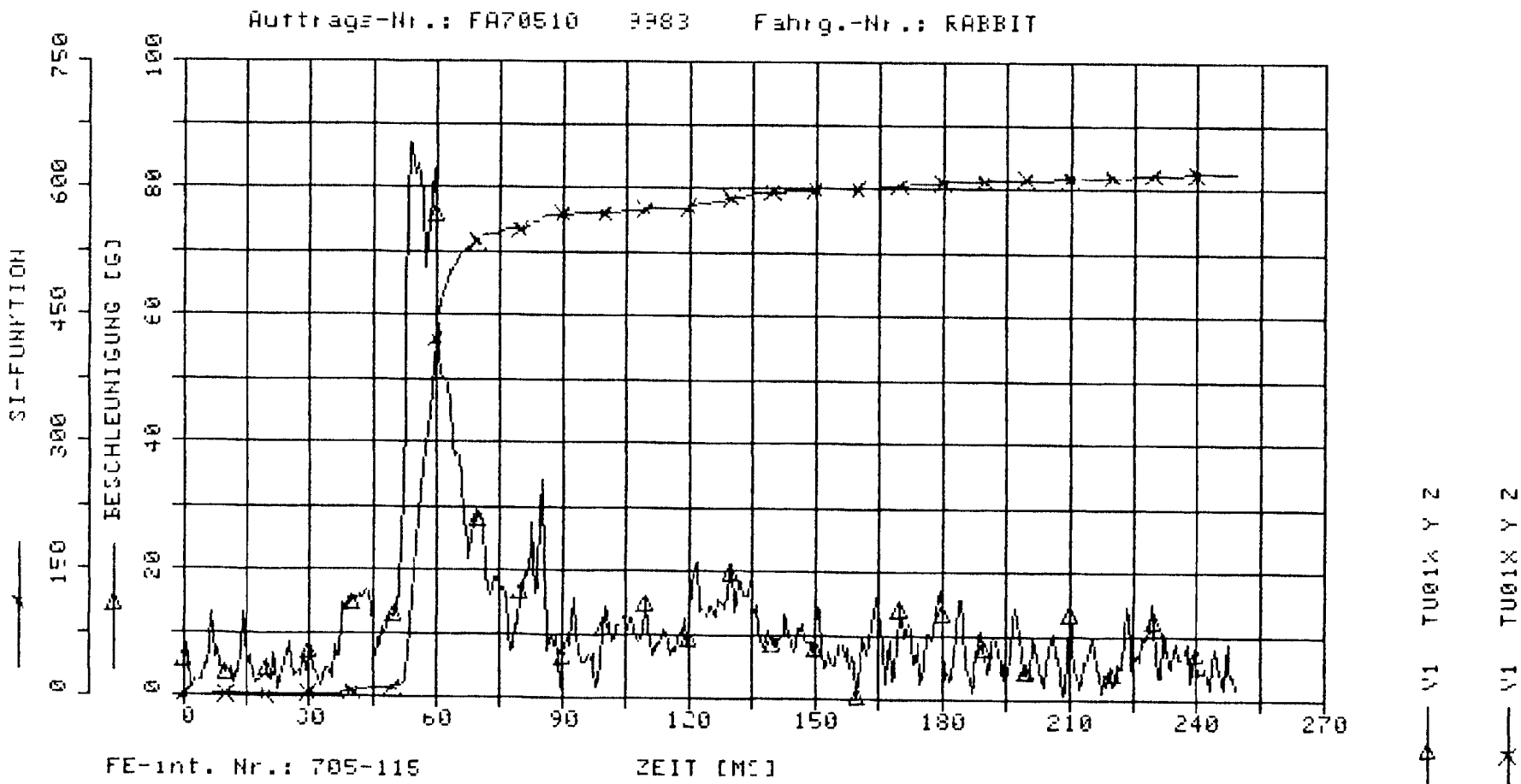
- Komm Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle					
	UP	bei Groesse	Extremum	t Extr	ms
T0012	V1	Bl g	15 504	61 00	12 24

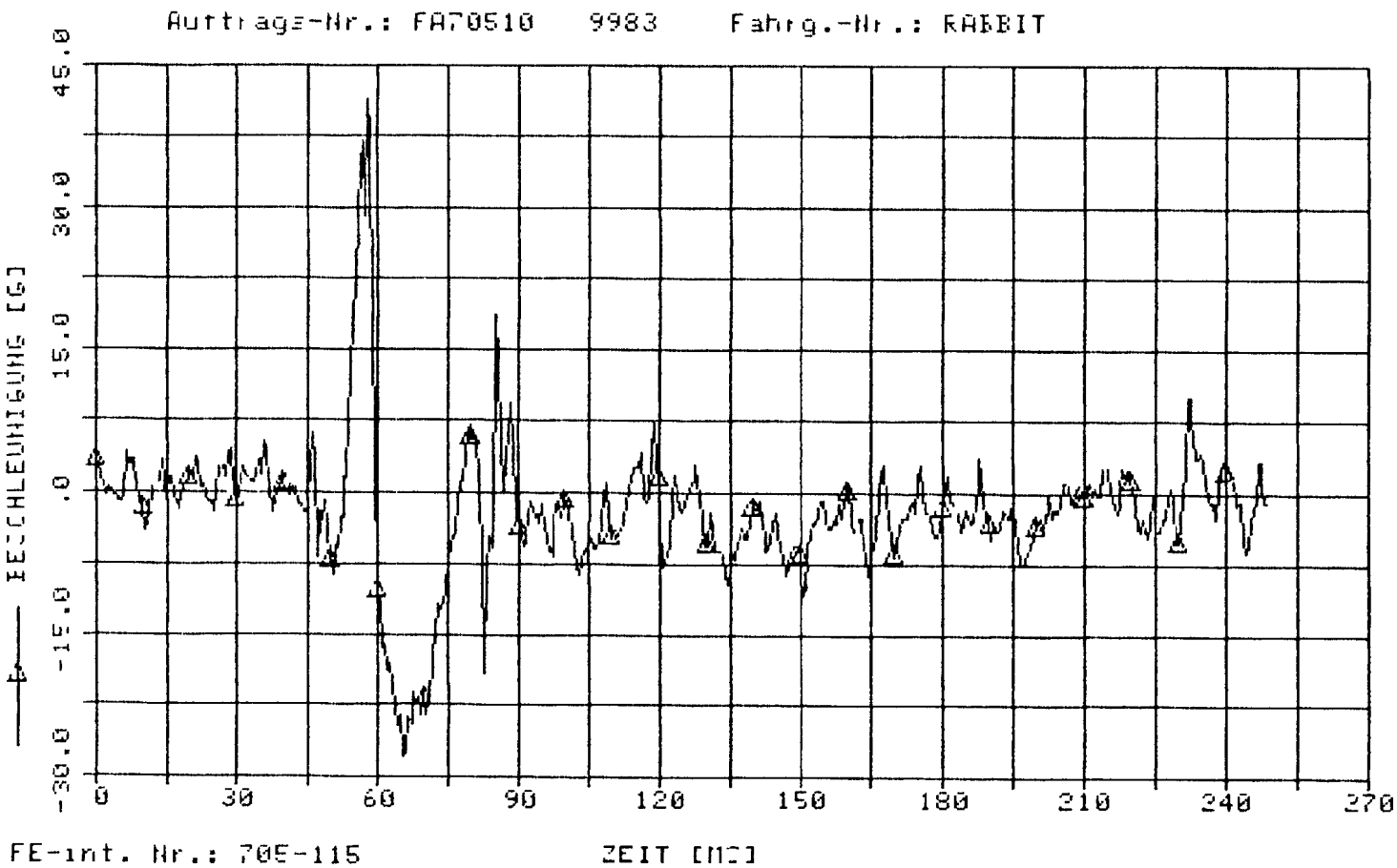


- Komm Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	Ber Grosse	Extremum	t Extr	ms
TU01	V1	Bt g	86 942	54 00	81 51
TU01	V1	S1	617 609	250 00	0 00



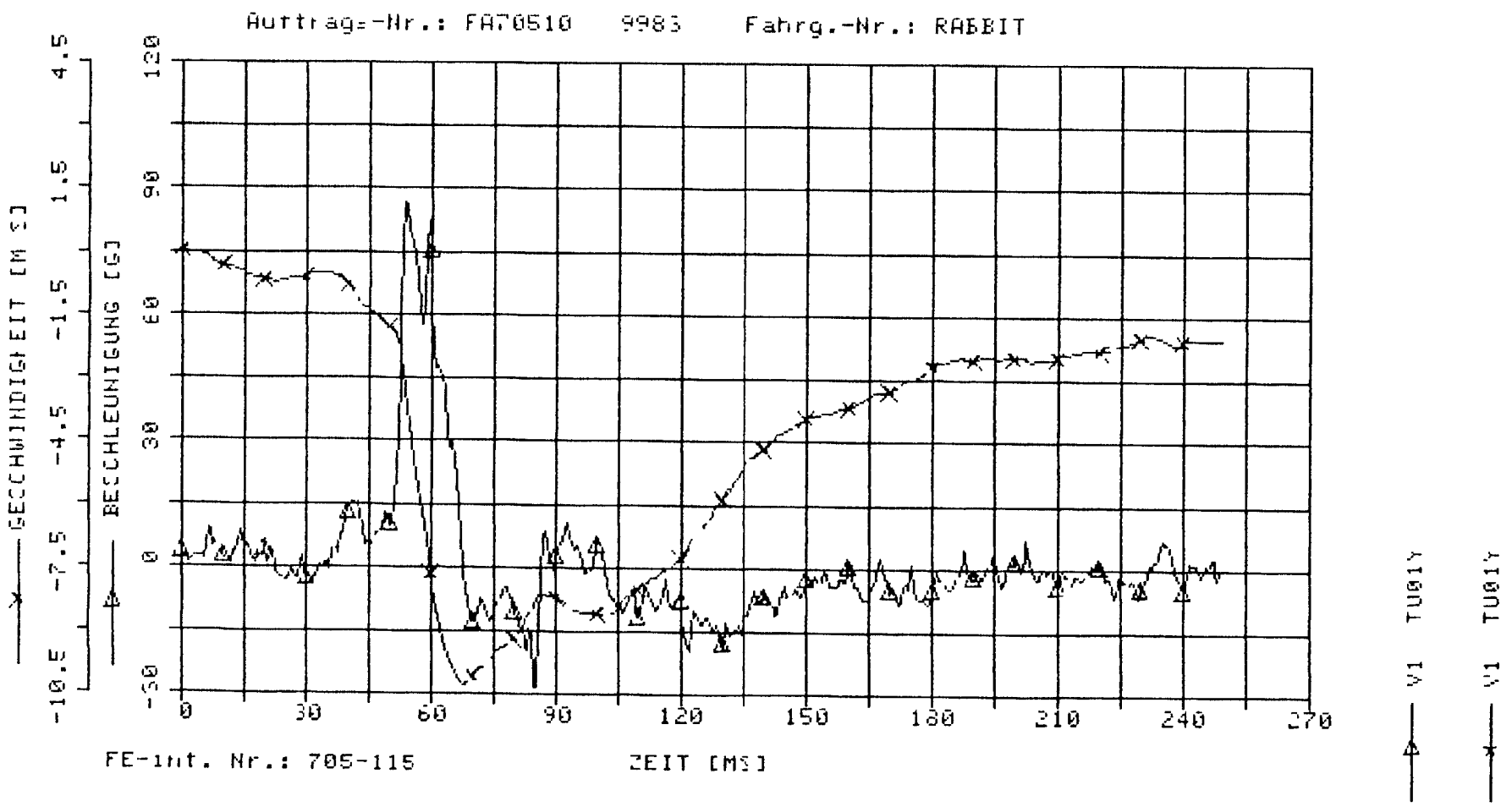
Kenn-Worte	Auftrags Nr	FA70510	Versuchs Nr	9983
Mess Stelle	UP	Der Grosse	Extremum	t Extr	SMS
1001X	V1	10 g	41 476	58 00	28 06



V1 1001X

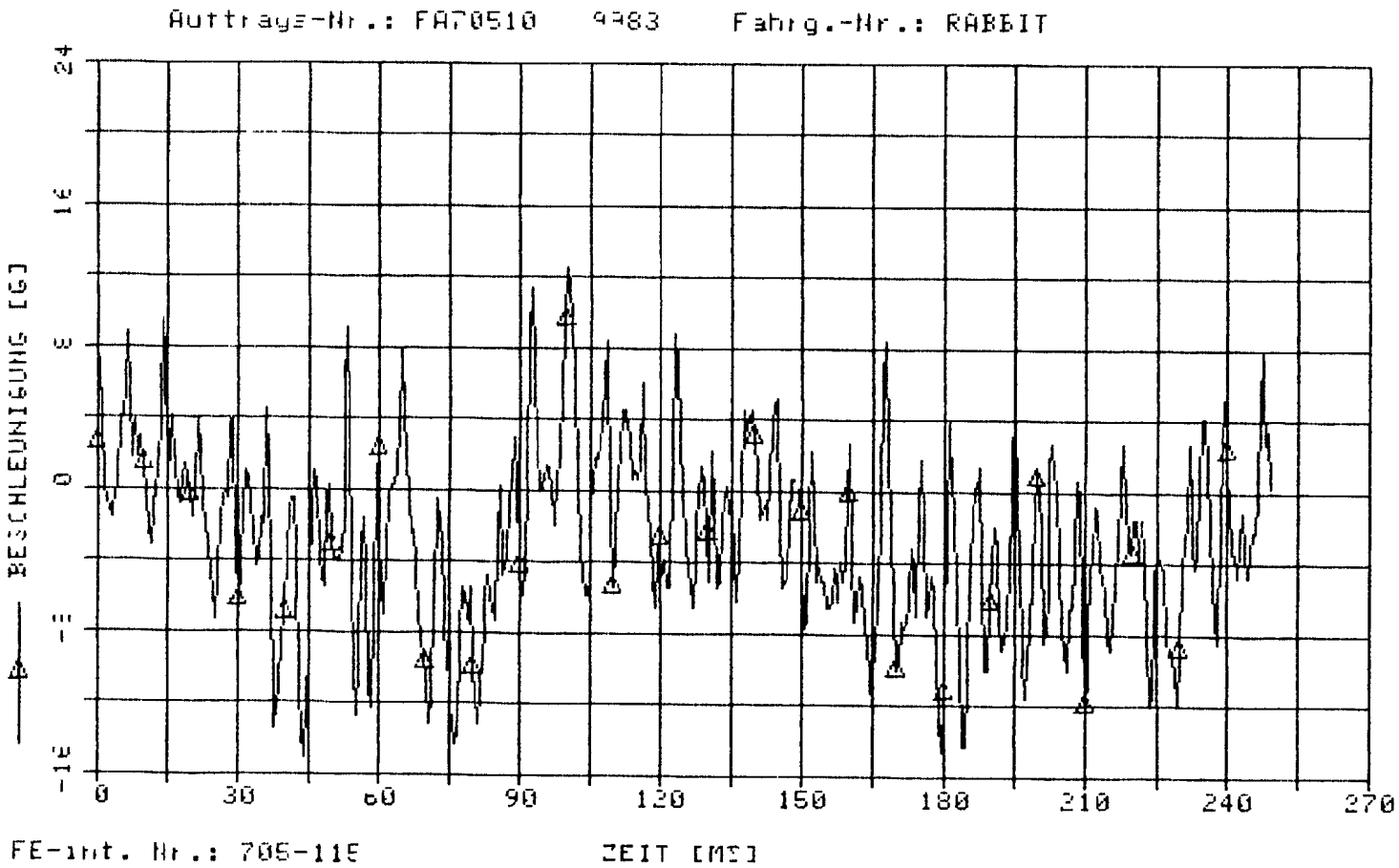
- Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	der Grosse	Extremum	t Extr	SAS
TU01Y	V1	BE g	86 489	54 00	76 22
TU01Y	V1	GE m/s	10 292	67 50	0 00



Kenn Werte Auftrag Nr FA70510 Versuchs Nr 9983

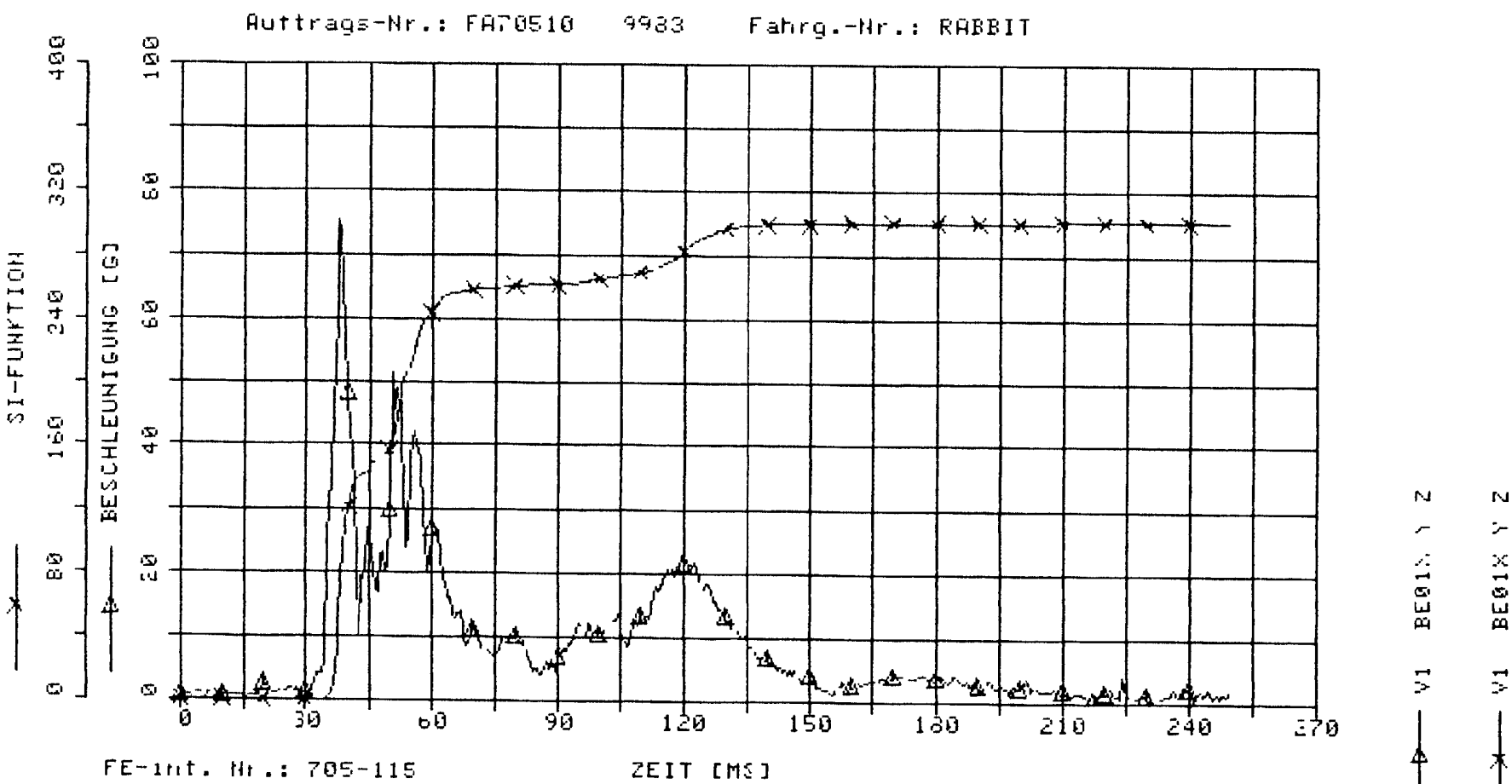
Mess Stelle					
	UP	bez	Extremum	t	ms
		Grosse		Extr	
TU012	V1	BF g	15 047	44 00	13 90



V1 TU012

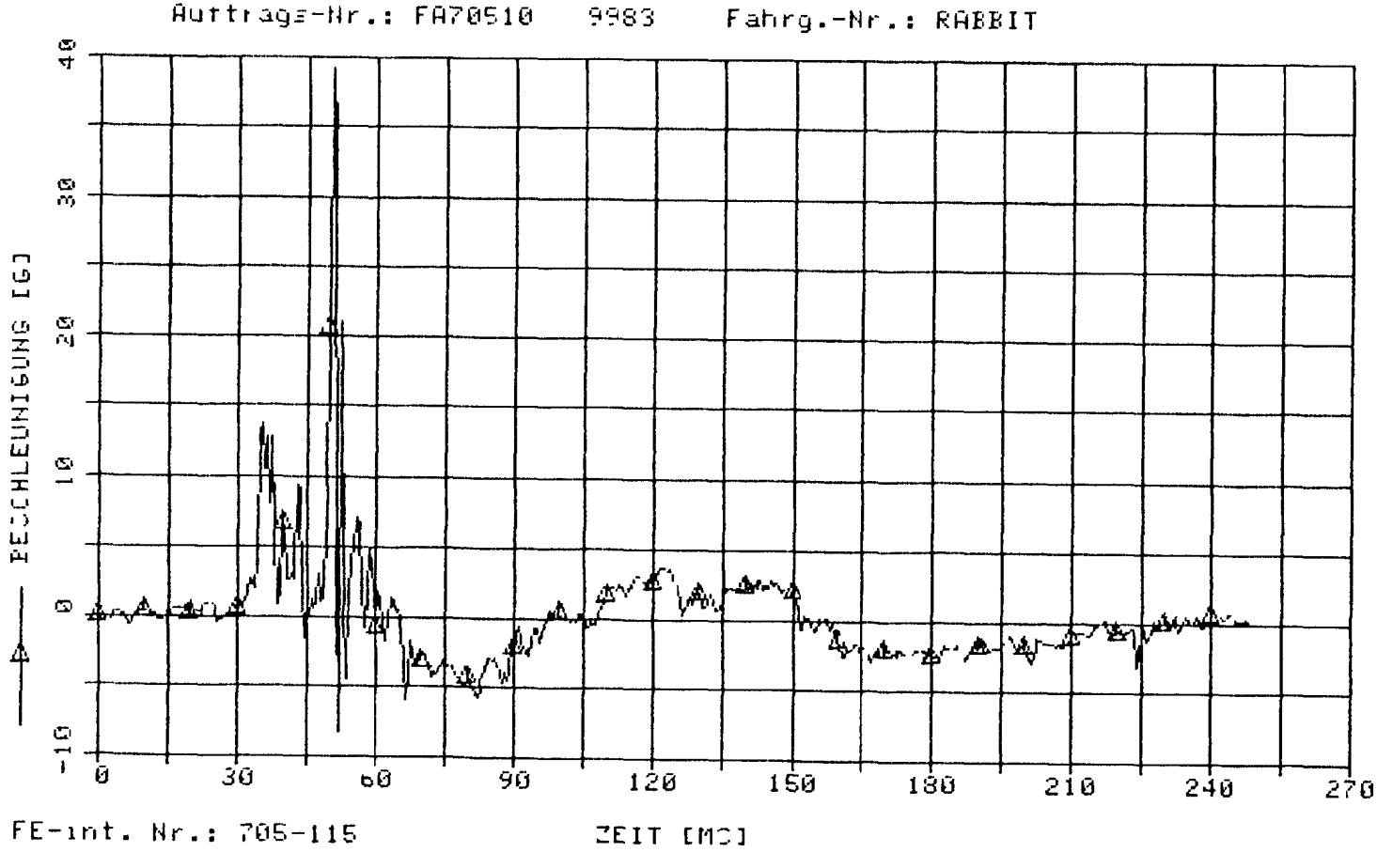
- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	bei Grosse	Extremum	t Extr	[MS]
BE01	V1	BE g	75 077	33 00	51 48
BE01	V1	S1	300 380	250 00	0 00



- Kenn-Werte Auftrags-Nr FA/0510 Versuchs-Nr 9983

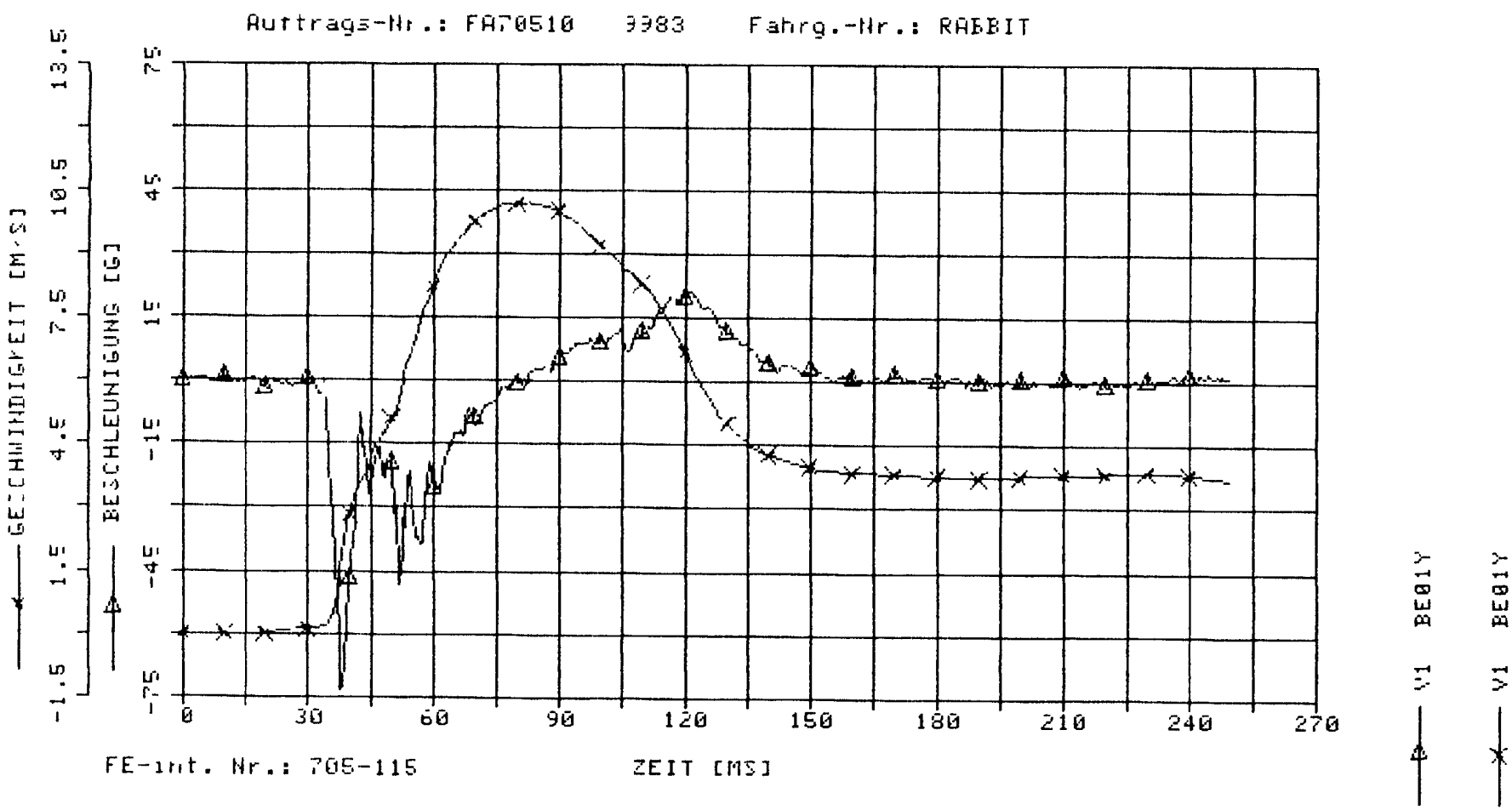
Mess Stelle	UP	Ber Grosse	Extremum	t Extr	sMS
BE01X	V1	BF g	39.306	50.50	13.09



V1 BE01X

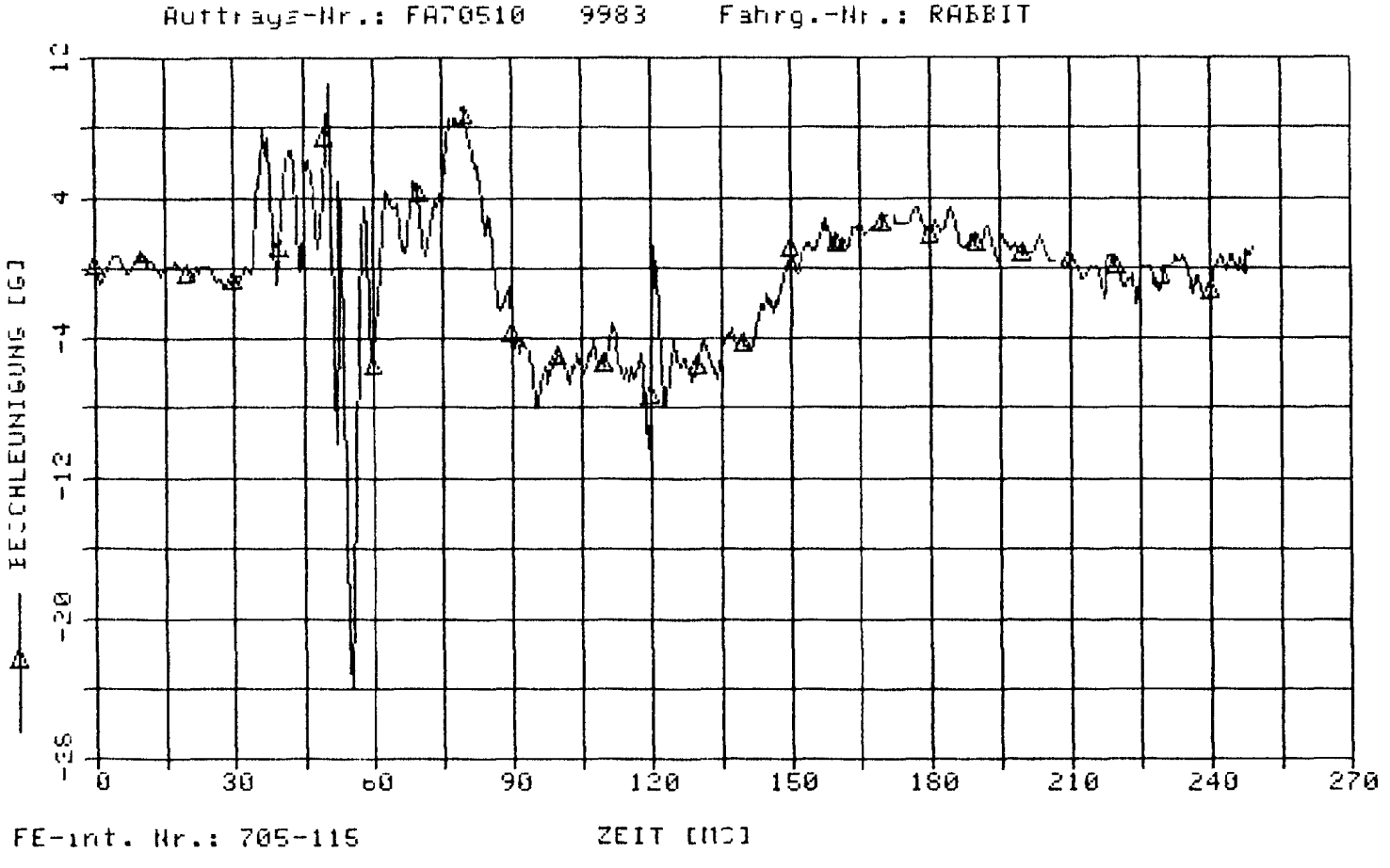
Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	SMS
BE01Y	V1	BE g	73 613	38 00	48 29
BL01Y	V1	GL m/s	10 195	87 50	0 00

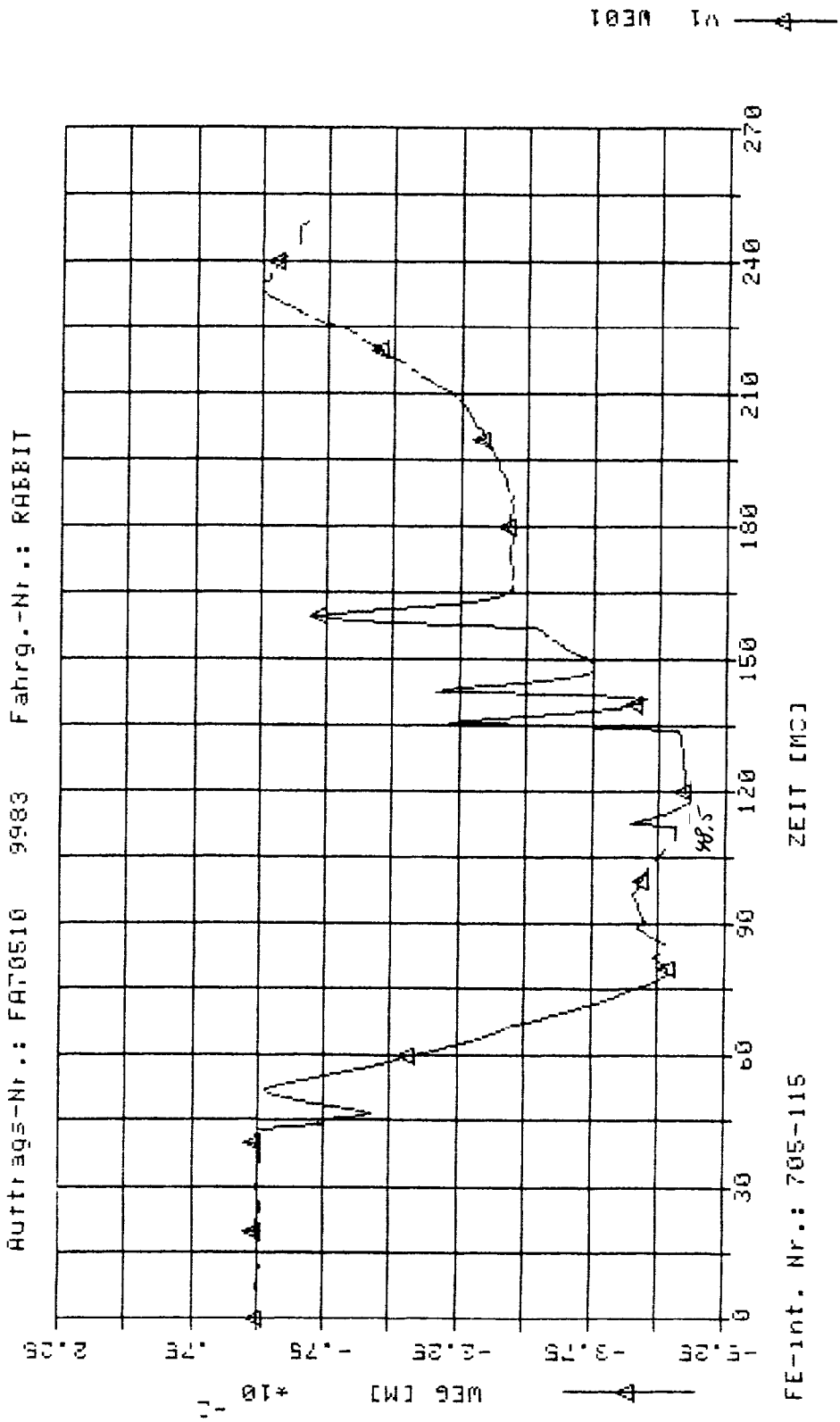


- Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	Der Groesse	Extremum	t Extr	SMS
BE012	V1	BE g	24 044	55 50	10 53

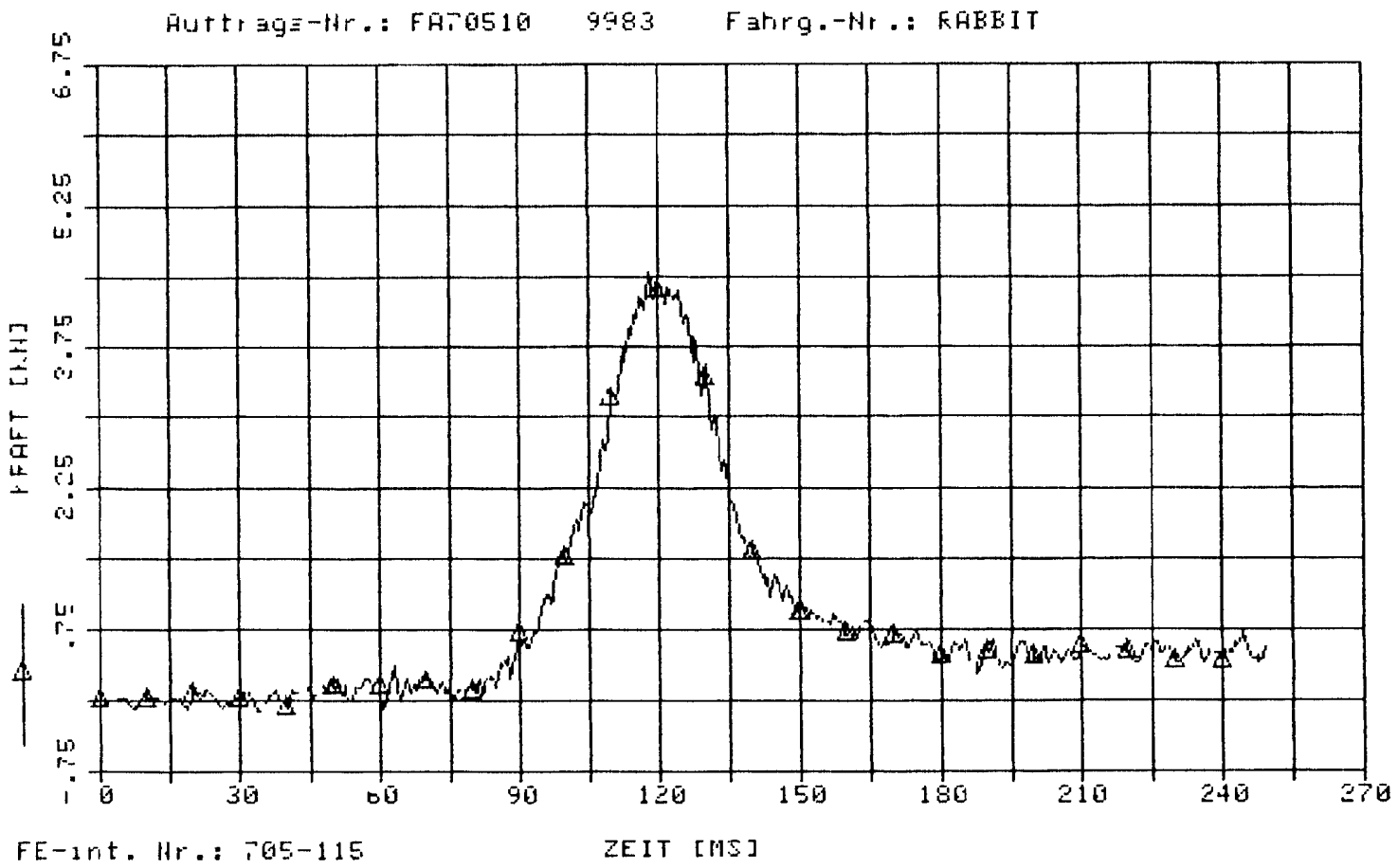


V1 BE012


Auftrags-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT
FE-int. Nr.: 705-115
ZEIT [MS]
WEG [M] *10 -2
V1 WE01
0
30
60
90
120
150
180
210
240
270
-5.25
-3.75
-2.25
-.75
.75
2.25
5.84

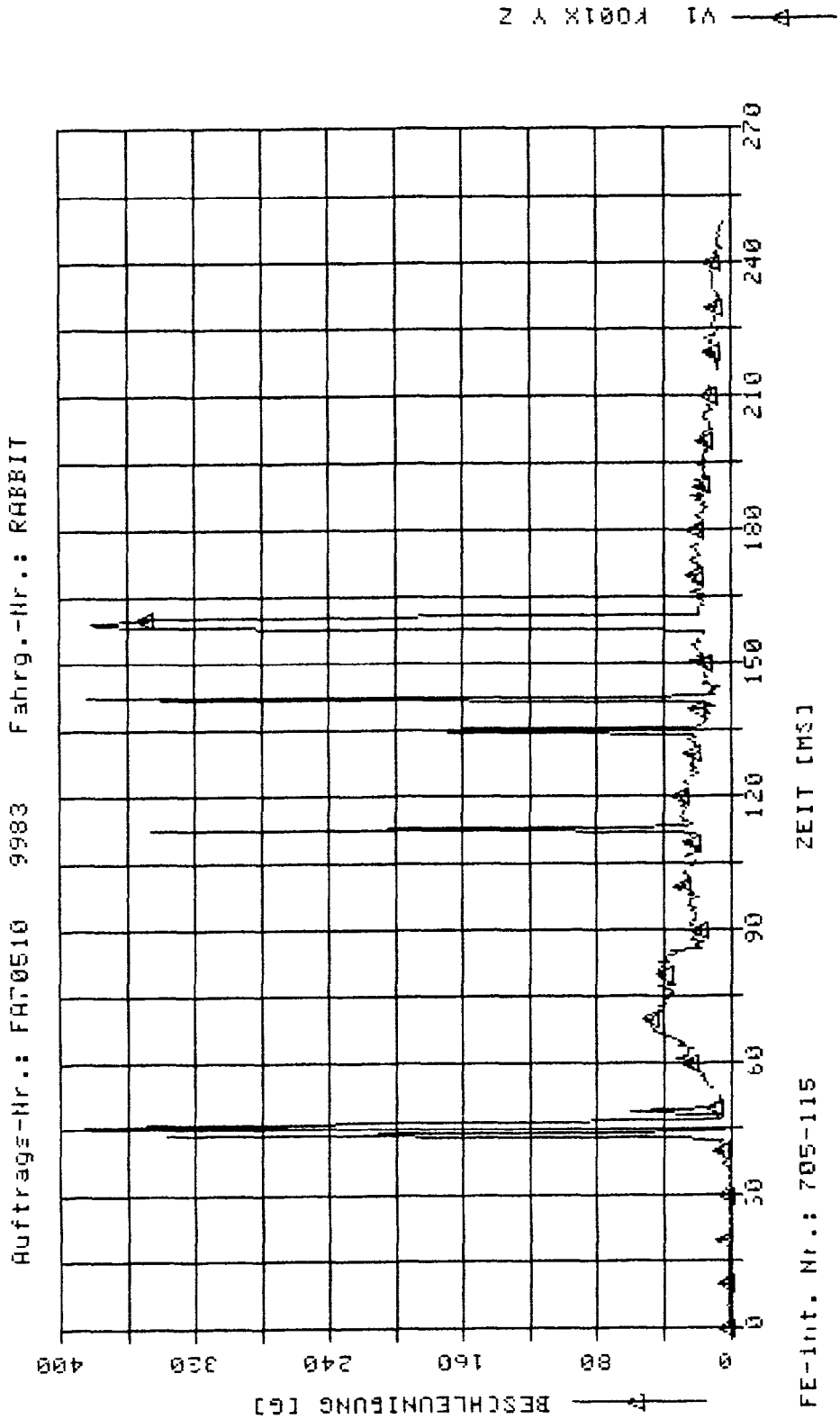
- Kenn Werte Auftrags-Nr FA70510 Versuchs Nr 9983

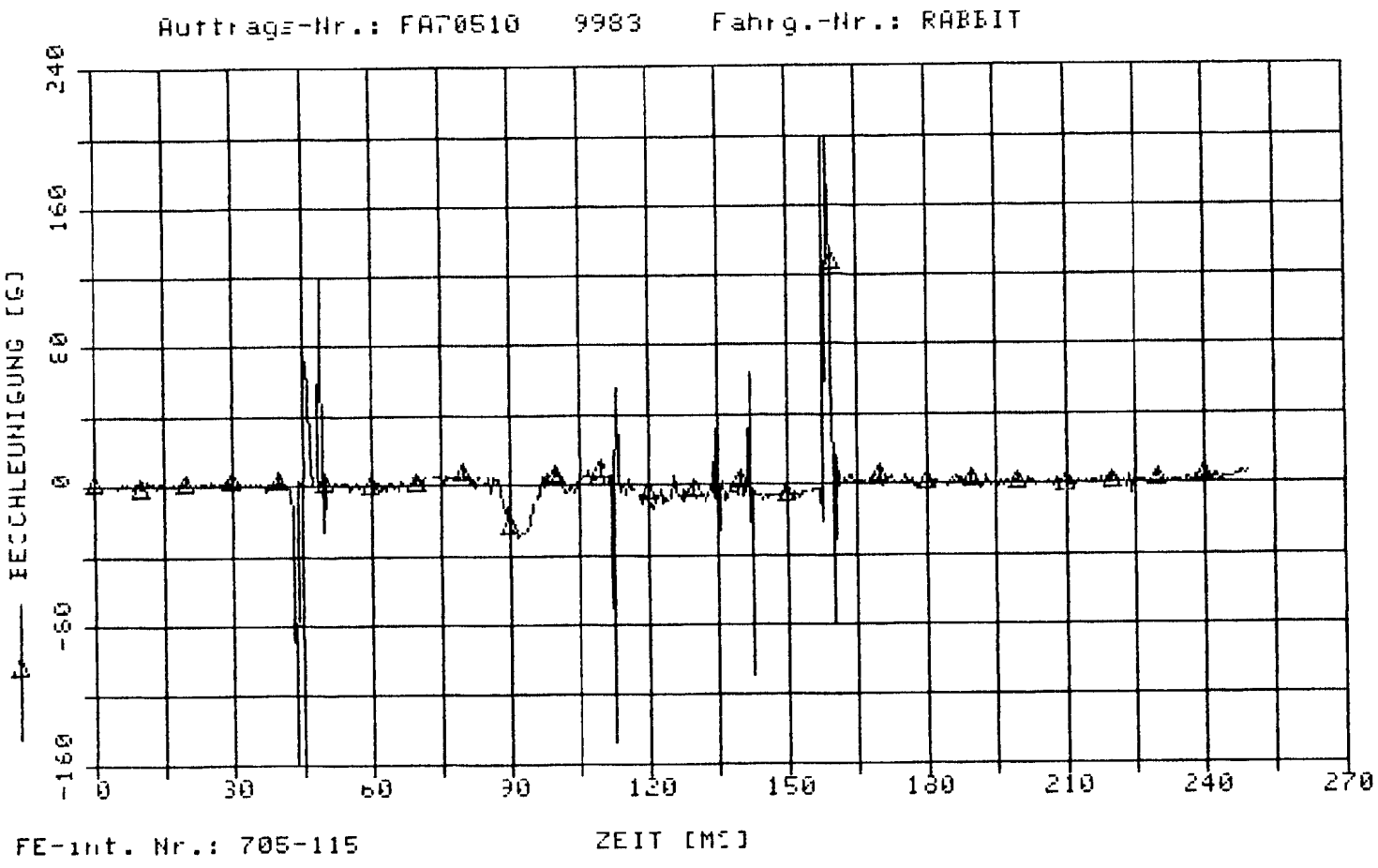
Mess Stelle	UP	bei Grosse	Extremum	t Extr	ms
GU015A	V1	KR kN	4 544	118 00	0 00

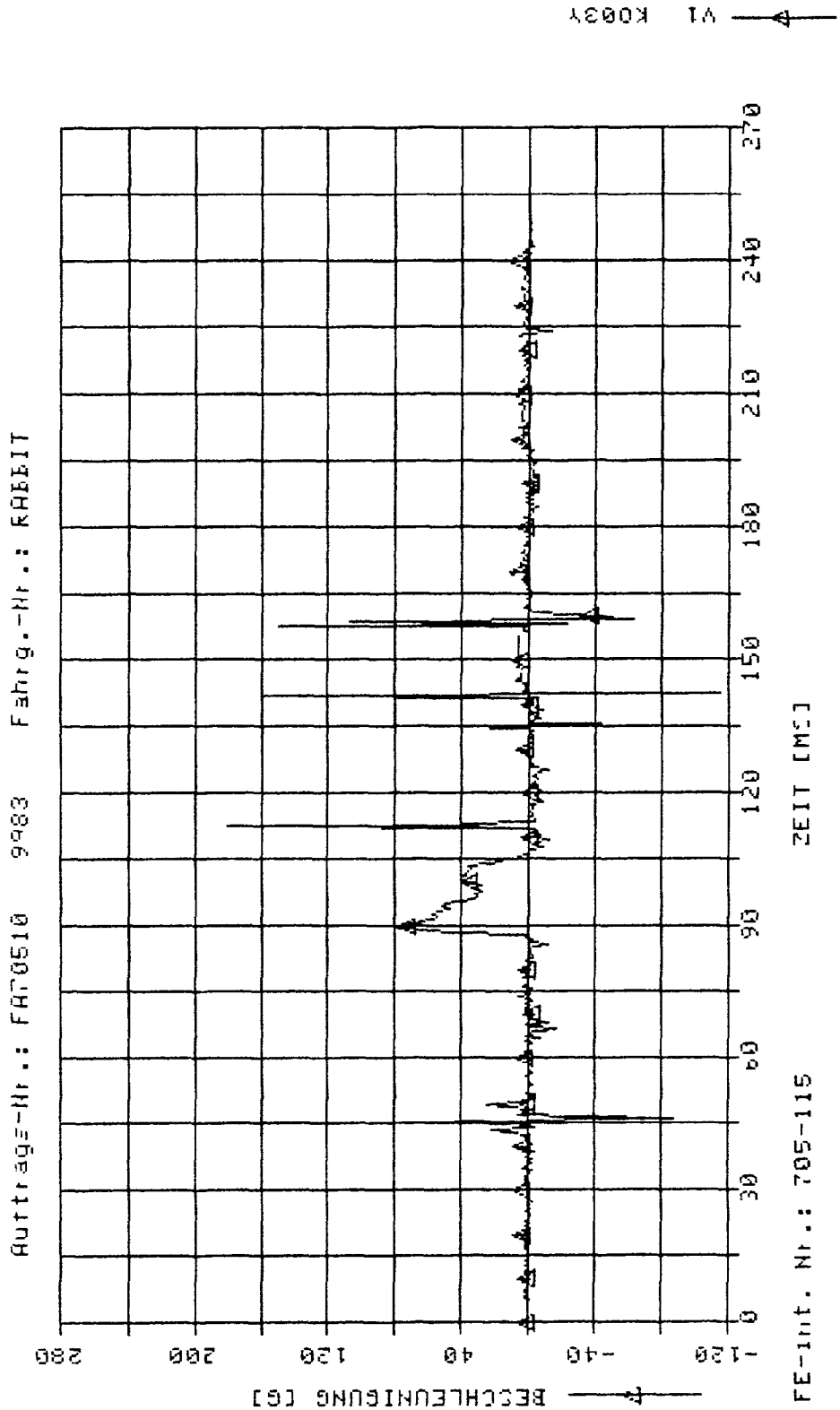


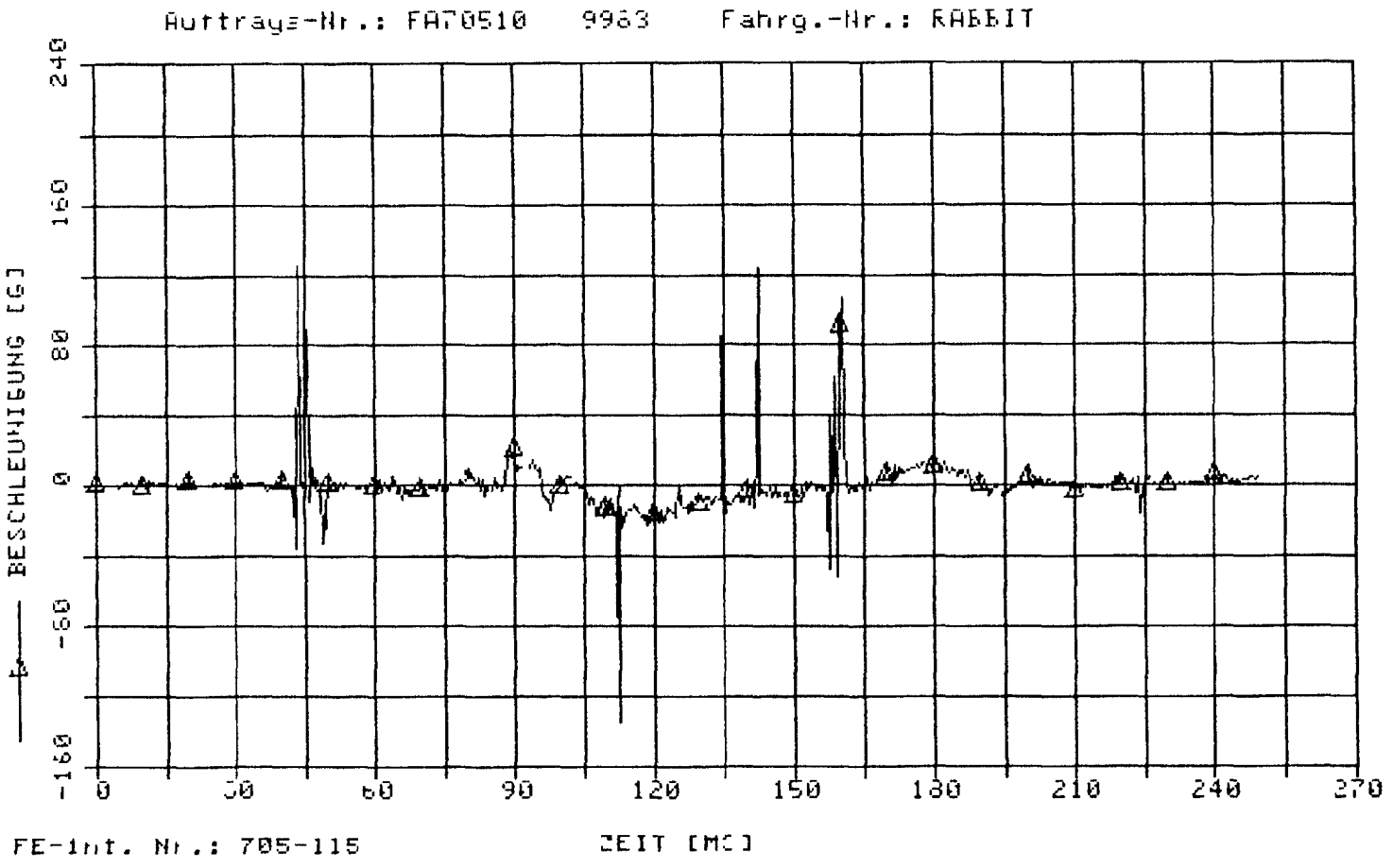
V1 GU015A

B.2.2 Rear Passenger


V1 F001X Y Z
Auftrage-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT
BESCHLEUNIGUNG [G]
400
320
240
160
80
0
ZEIT [MS]
0
30
60
90
120
150
180
210
240
270
FE-Int. Nr.: 705-115

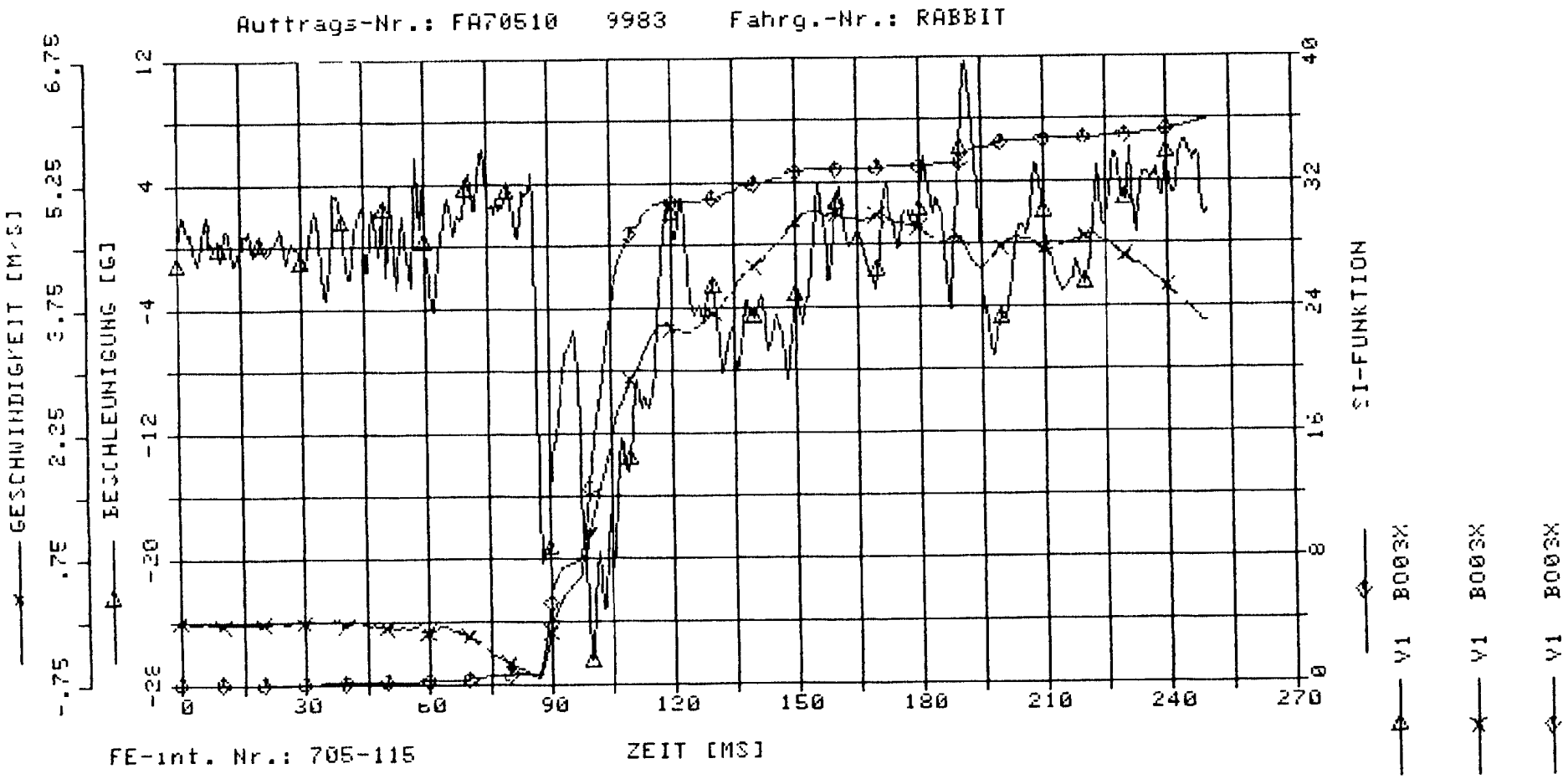

Auftrags-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT
240
160
80
0
-80
-160
BESCHLEUNIGUNG [G]
0
30
60
90
120
150
180
210
240
270
ZEIT [MS]
FE-int. Nr.: 705-115
V1 K003


V1 K0031
Auftrags-Nr.: FA70510 9983 Fahrg.-Nr.: RABBIT
BESCHLEUNIGUNG [G]
280
200
120
40
-40
-120
ZEIT [MS]
0
30
60
90
120
150
180
210
240
270
FE-Int. Nr.: 705-115


Auftrags-Nr.: FA70510 9963 Fahrg.-Nr.: RABBIT
BESCHLEUNIGUNG [G]
240
160
80
0
-80
-160
0
30
60
90
120
150
180
210
240
270
FE-Int. Nr.: 705-115
ZEIT [MS]
K0032

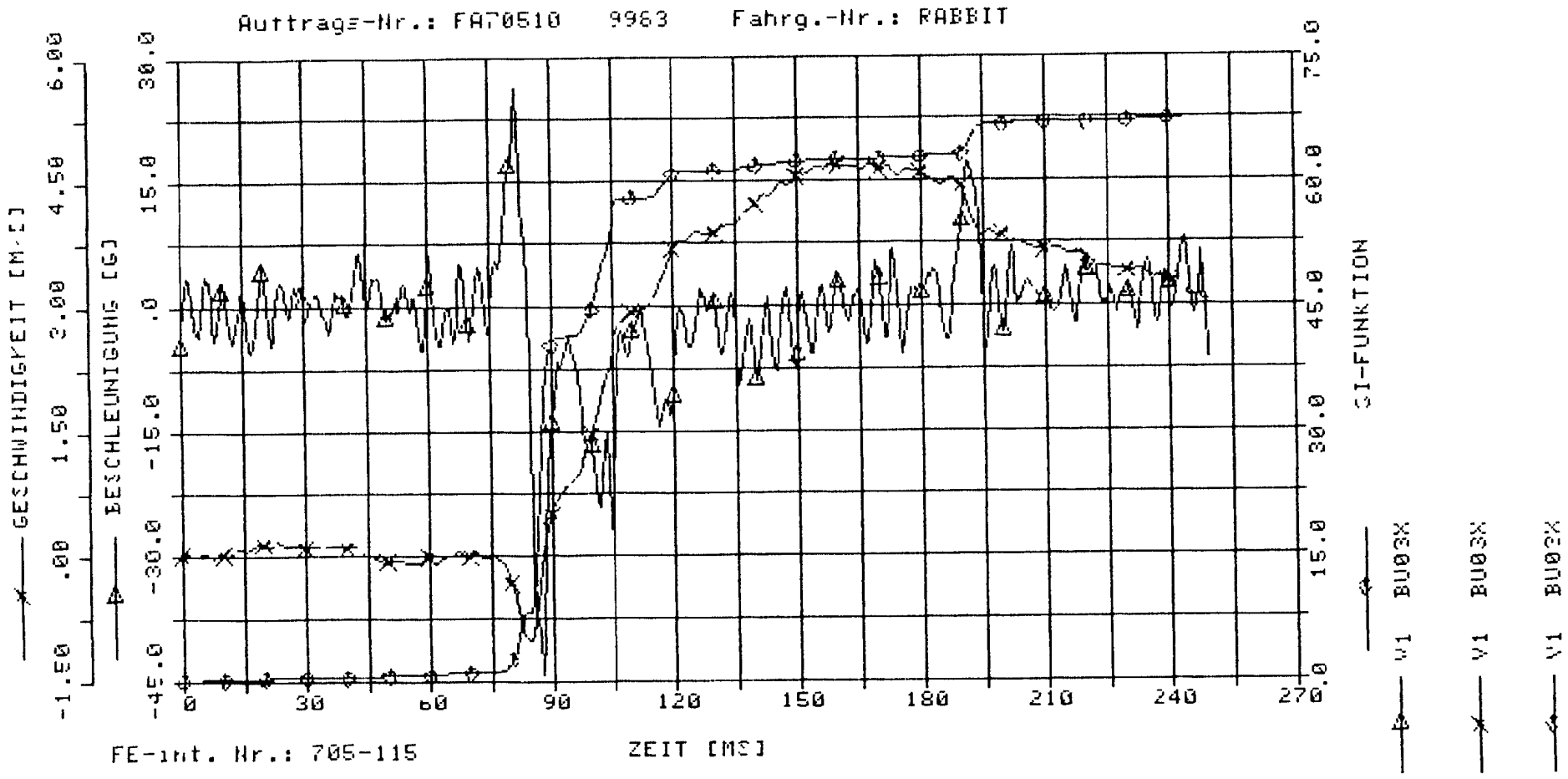
- Kenn Werte Auftrags Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	SMS
B003X	V1	BE g	26 542	100 00	21 36
B003X	V1	GE m/s	4 905	154 50	0 00
B003X	V1	SI	35 779	250 00	0 00



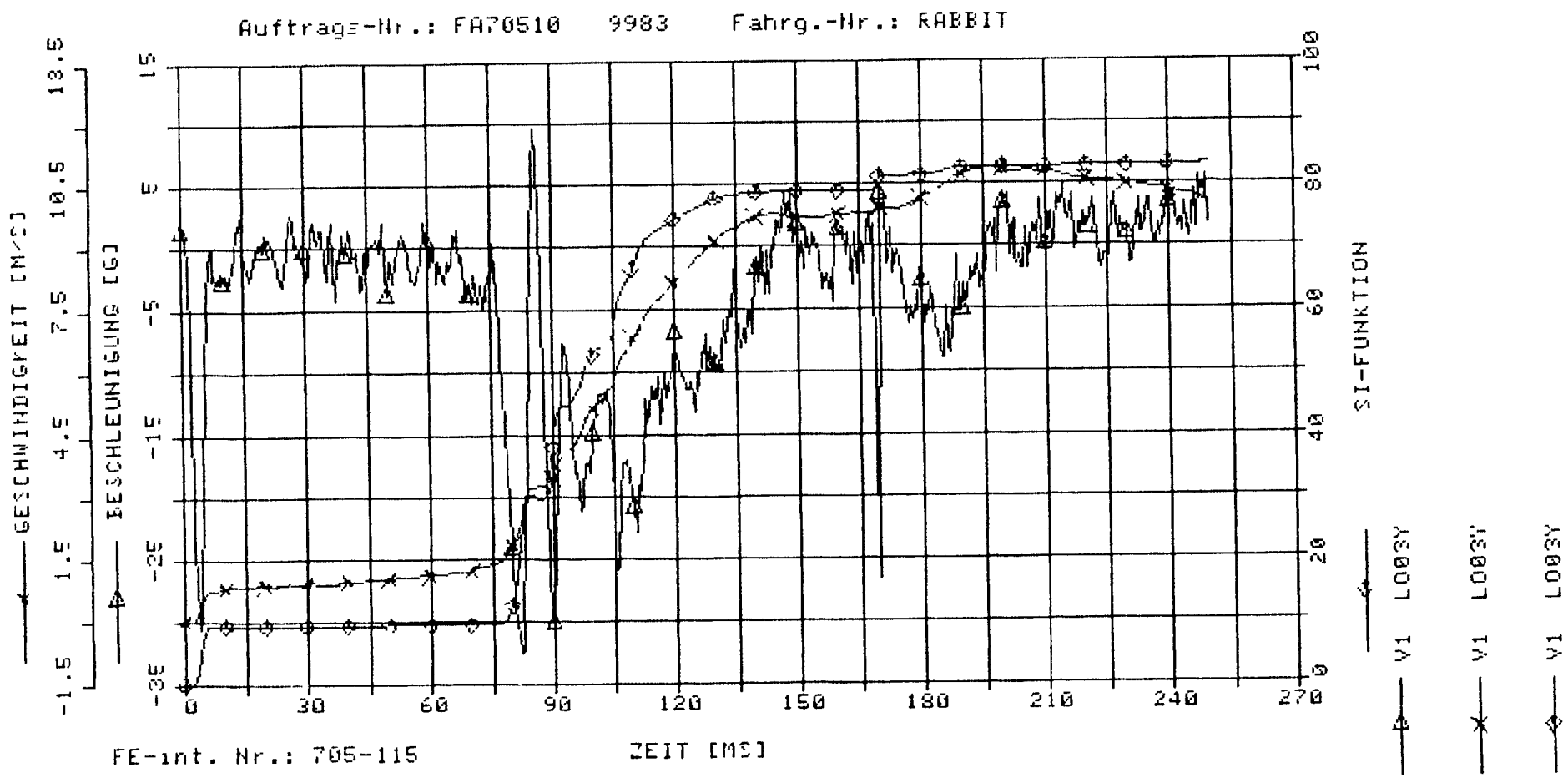
Kenn Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	bez Grosse	Extremum	t Extr	SMS
BU03X	V1	BE g	44 780	87 50	29 40
BU03X	V1	GE m/s	4 688	159 00	0 00
BU03X	V1	SI	67 533	250 00	0 00



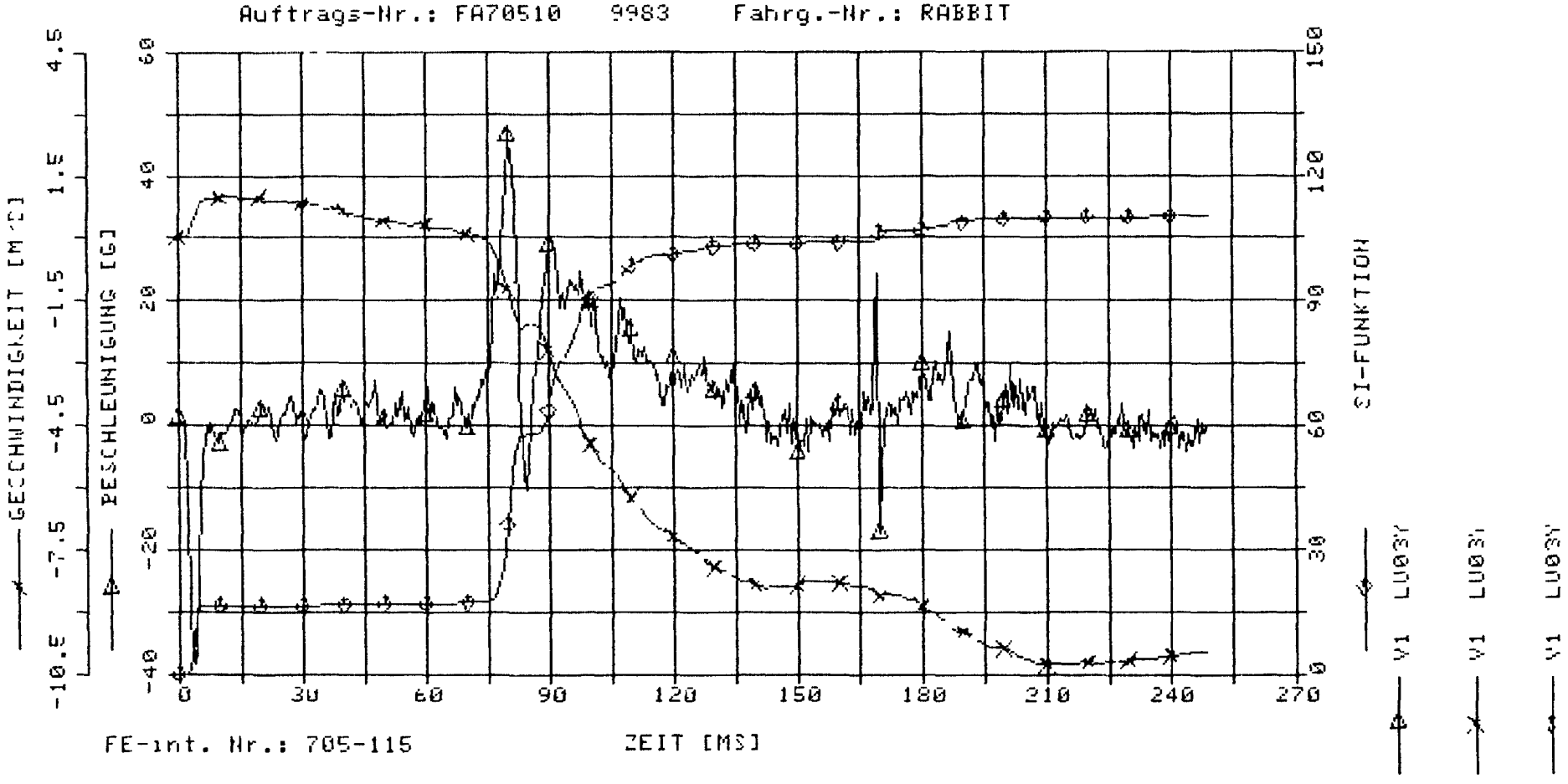
- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	ms
L003Y	V1	BE g	32 586	82 00	29 82
L003Y	V1	GE m/s	10 869	196 00	0 00
L003Y	V1	SI	83 009	250 00	0 00



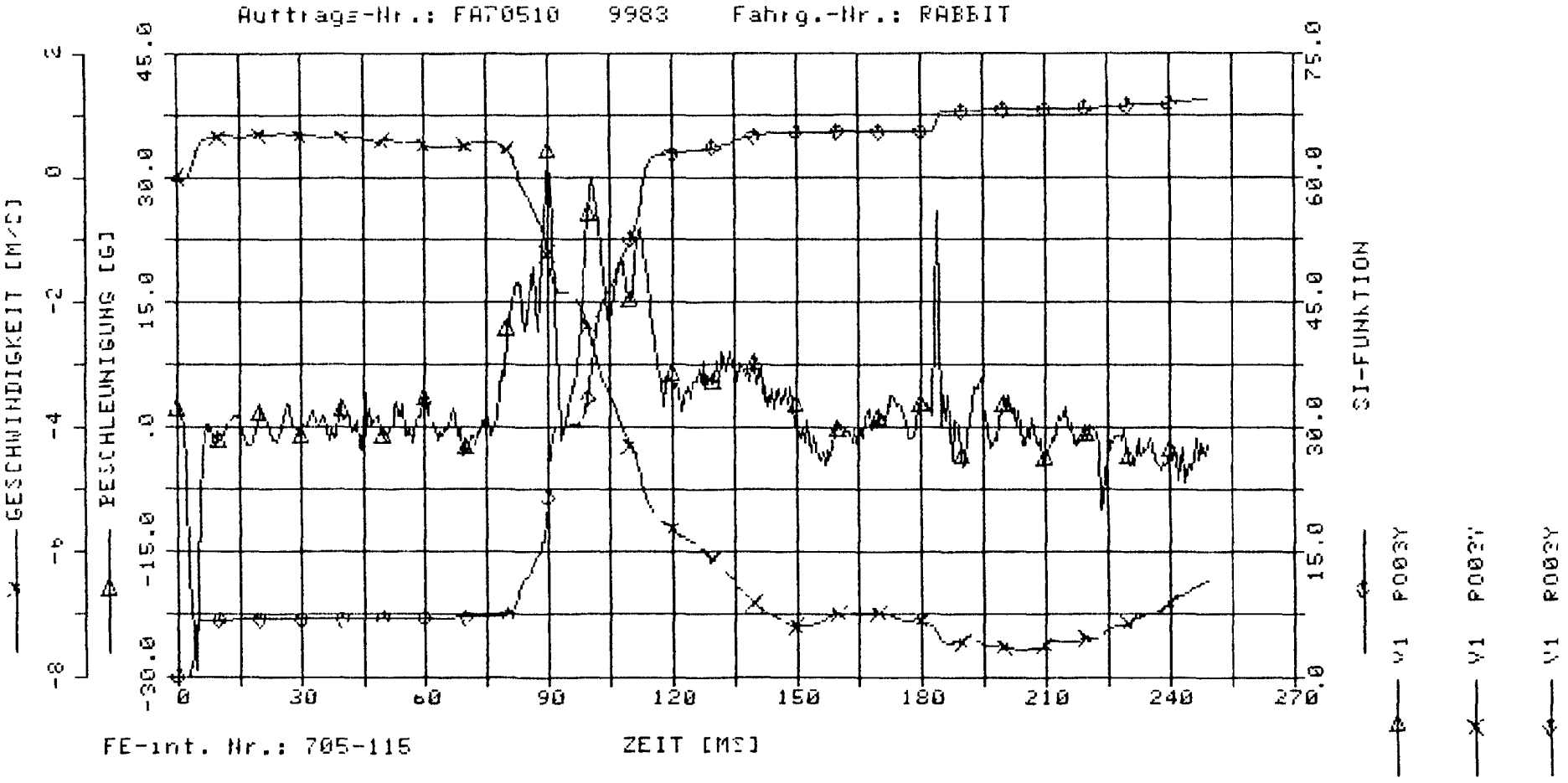
Kenn-Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	bei Groesse	Extremum	t Extr	SMS
LU03Y	V1	BL g	46 269	80 00	34 45
LU03Y	V1	GE m/s	10 279	209 50	0 00
LU03Y	V1	SI	110 041	250 00	0 00



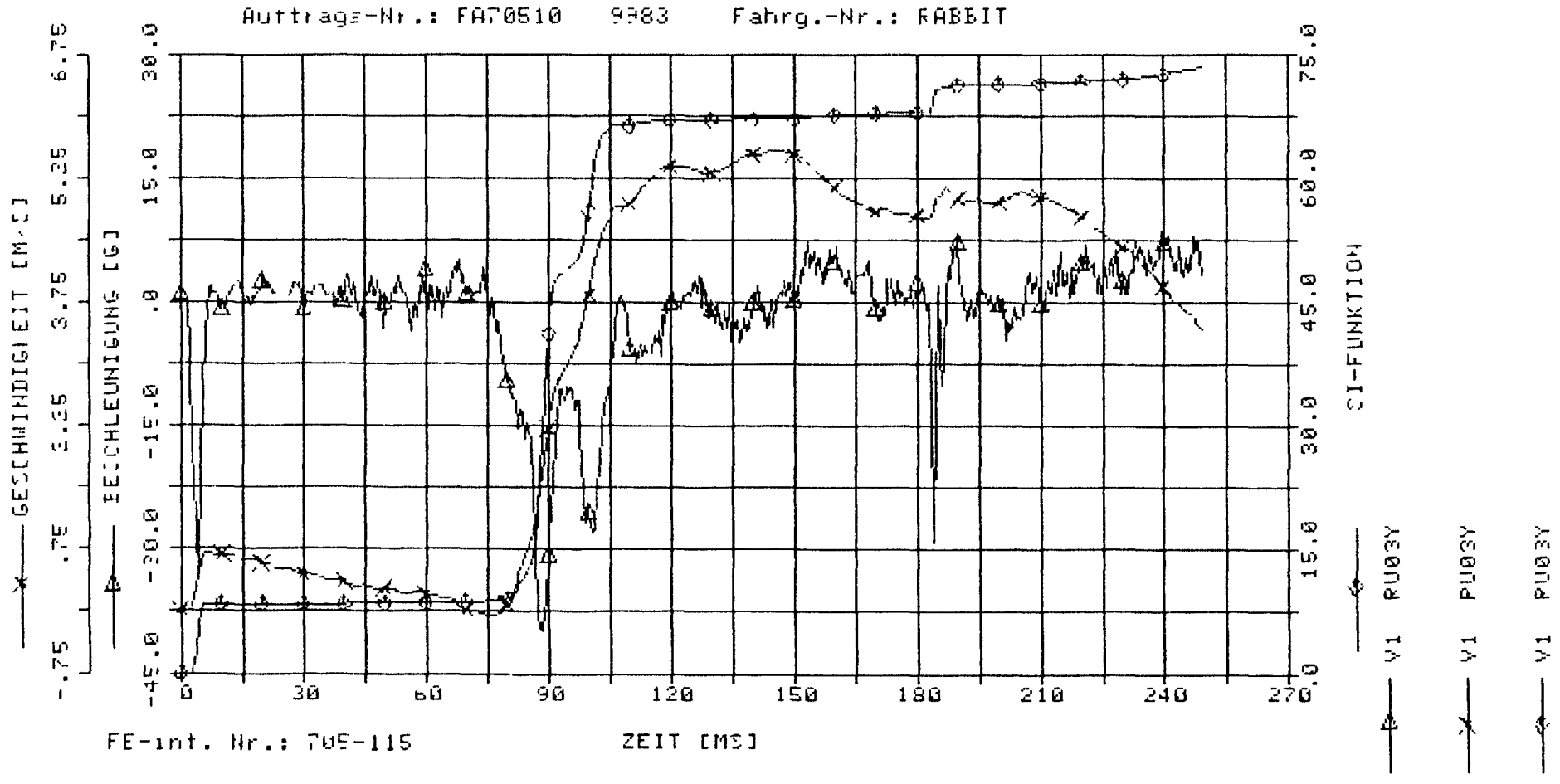
Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	bei Grosse	Extremum	t Extr	SMS
R003Y	V1	BE g	33 040	90 00	28 [illegible]
R003Y	V1	GE m/s	7 584	204 50	0 00
R003Y	V1	SI	69 717	250 00	0 00



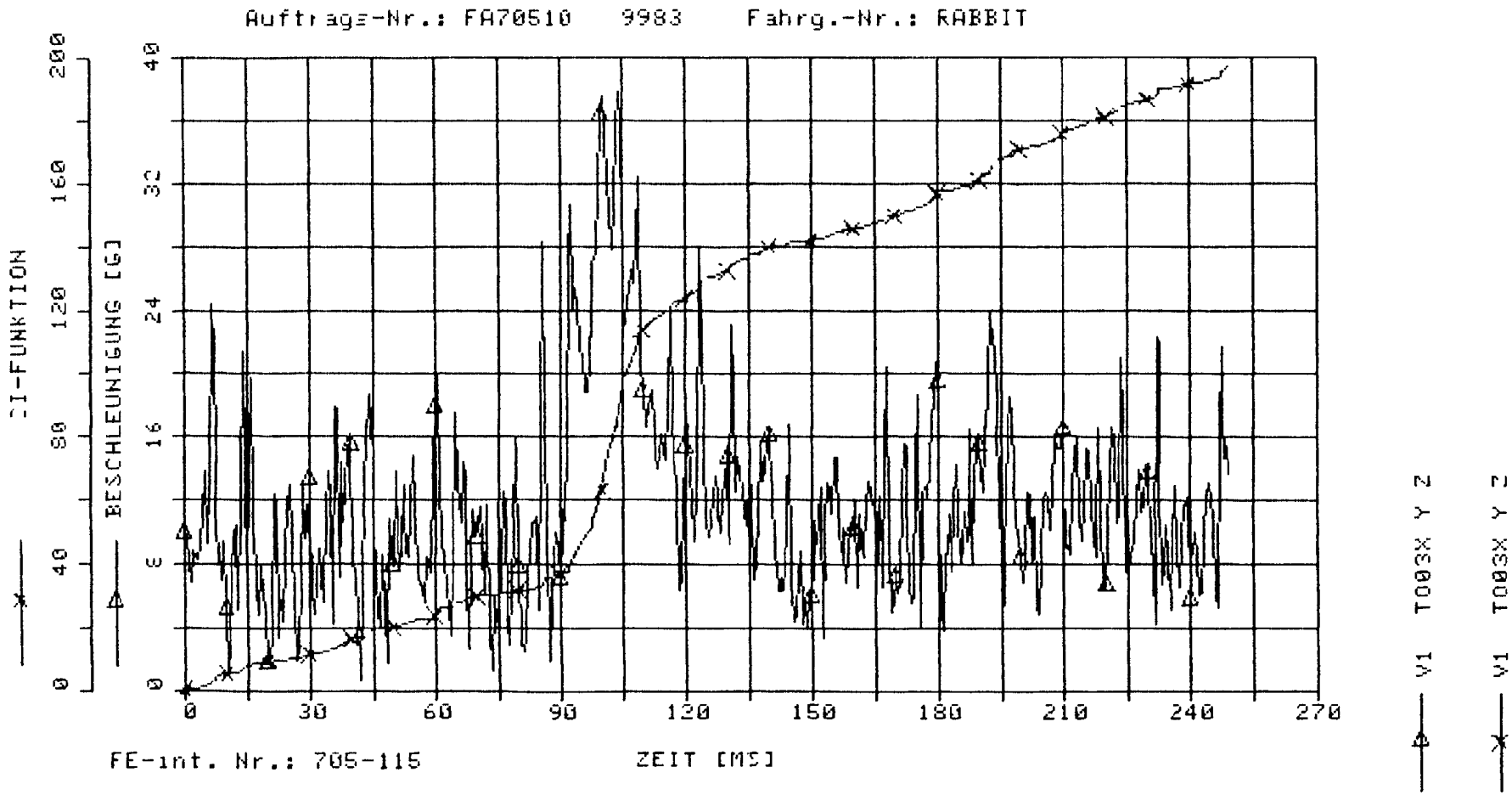
Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	bei Grösse	Extremum	t Extr	ms
RU03X	V1	BI g	-40 062	88 50	31 18
RU03Y	V1	GI m/s	5 576	145 50	0 00
RU03Y	V1	SI	73 279	250 00	0 00



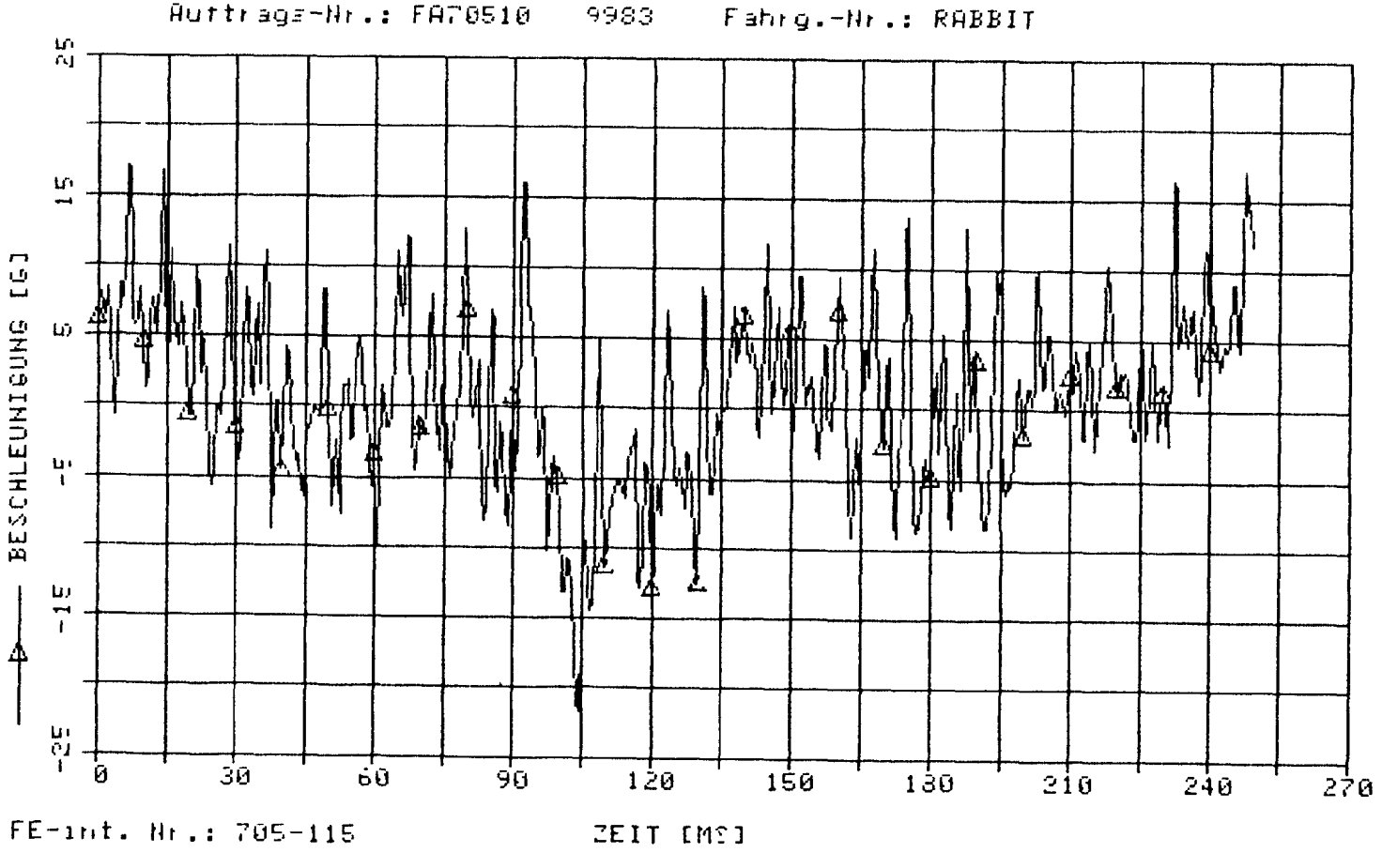
- Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Grooesse	Extremum	t Extr	SIG
T003	V1	BL g	37 872	104 00	62 45
T003	V1	SI	196 615	250 00	0 00



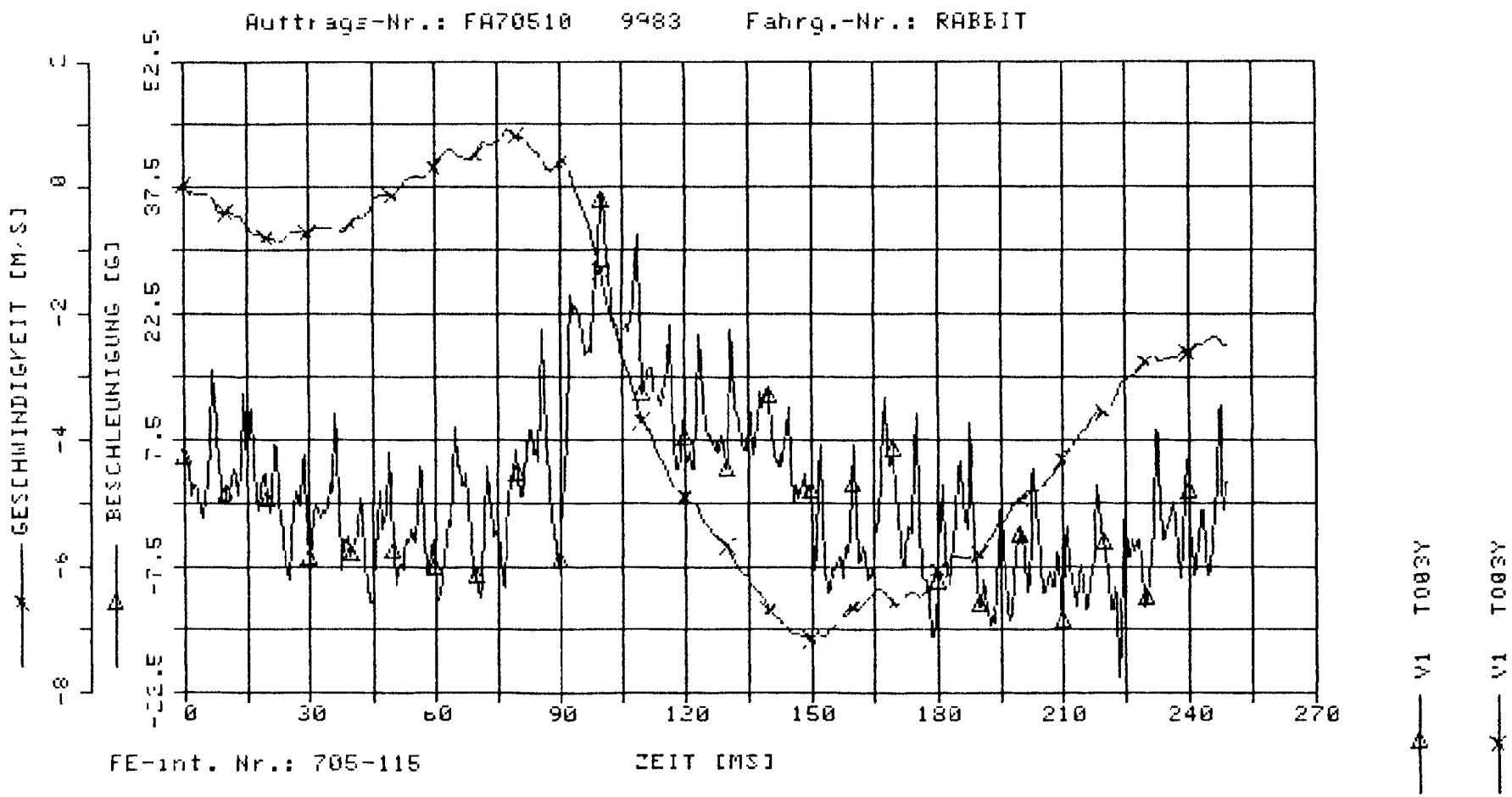
Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	bez Grosse	Extremum	t extr	SMS
1003X	V1	BL g	-.21 7.53	104 50	16 40



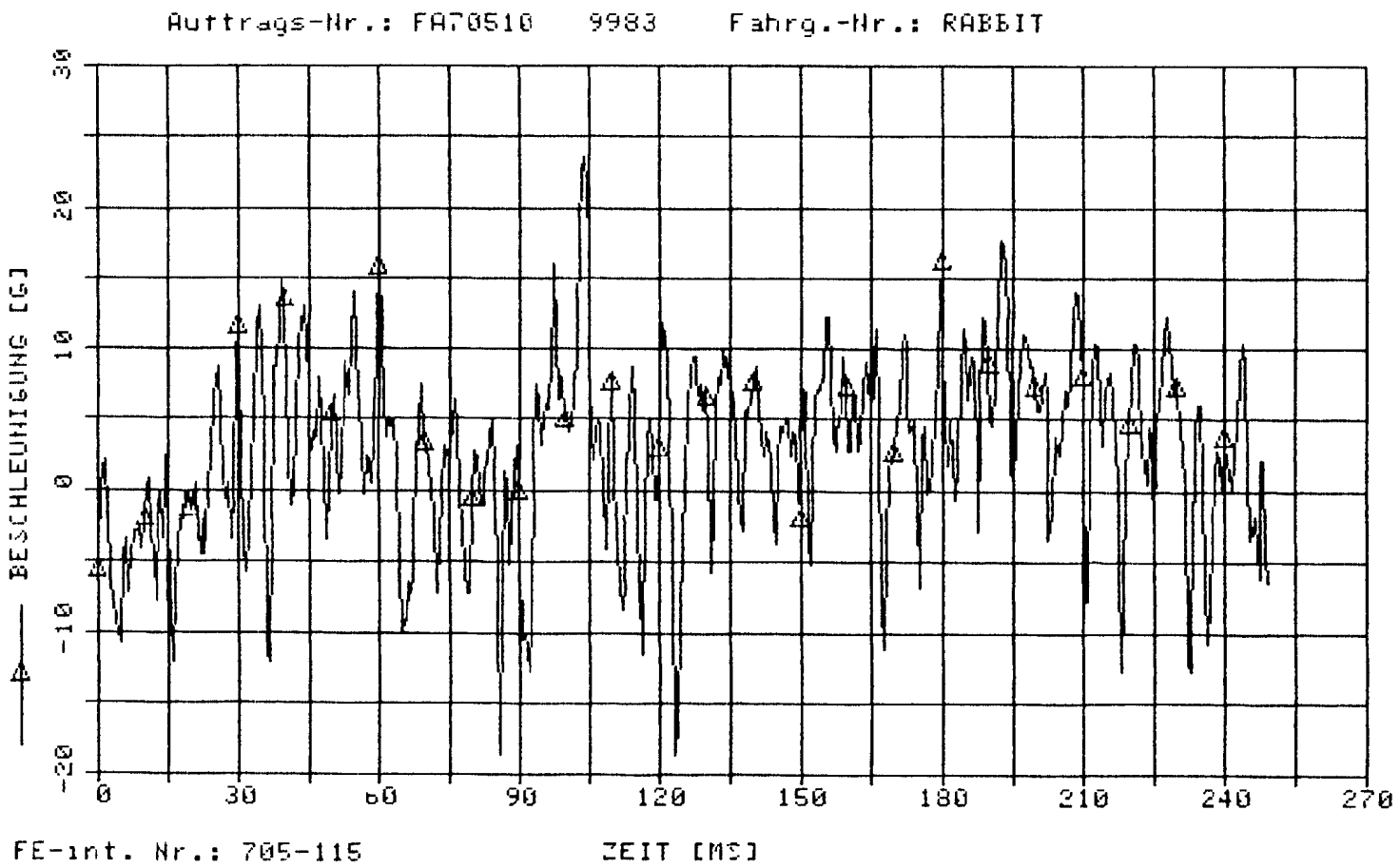
Kenn-Werte Auftrags Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	ber Grosse	Extremum	t Extr	sMS
T003Y	V1	BE g	36 411	100 50	28 55
T003Y	V1	GI m/s	-7 156	150 00	0 00



- Kenn Werte Auftrags Nr FA70510 Versuchs Nr 9983

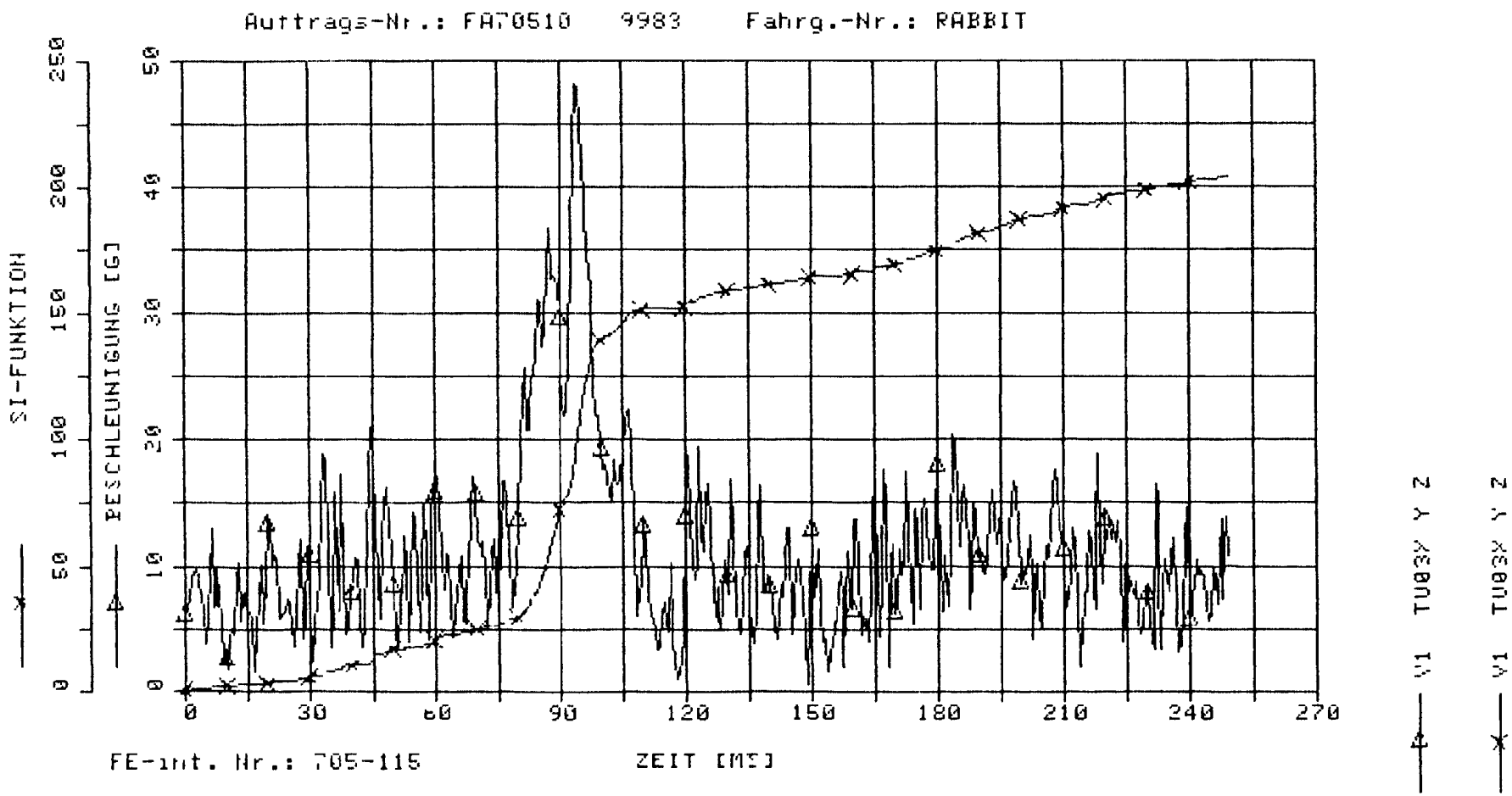
Mess Stelle	UP	ber Grosse	Extremum	t Extr	SMS
T0032	V1	BE g	26 479	104 00	17 64



V1 T0032

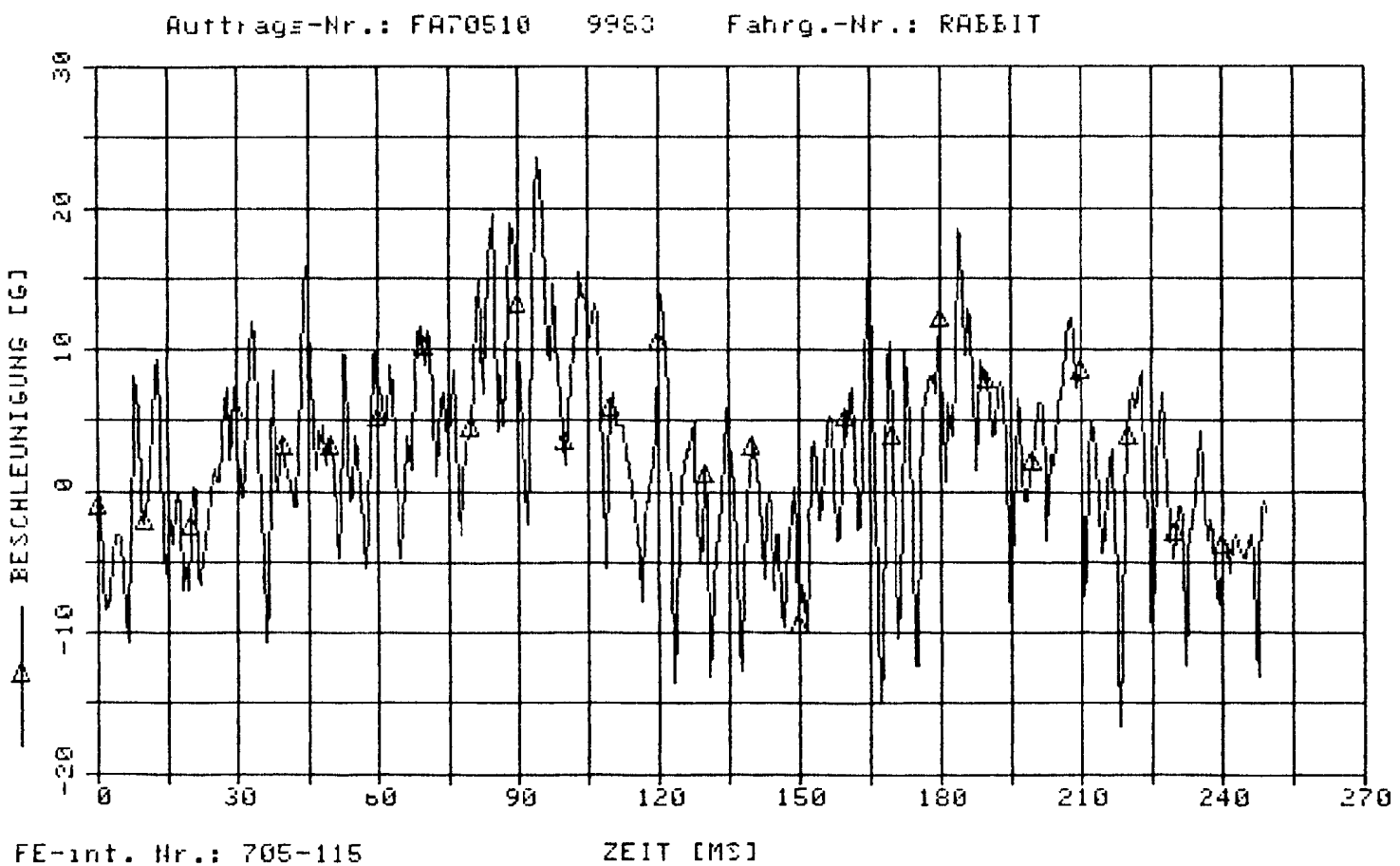
Kenn Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	3MS
TU03	V1	BE g	48 188	94 00	36 31
TU03	V1	S1	204 175	250 00	0 00



- Kenn Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

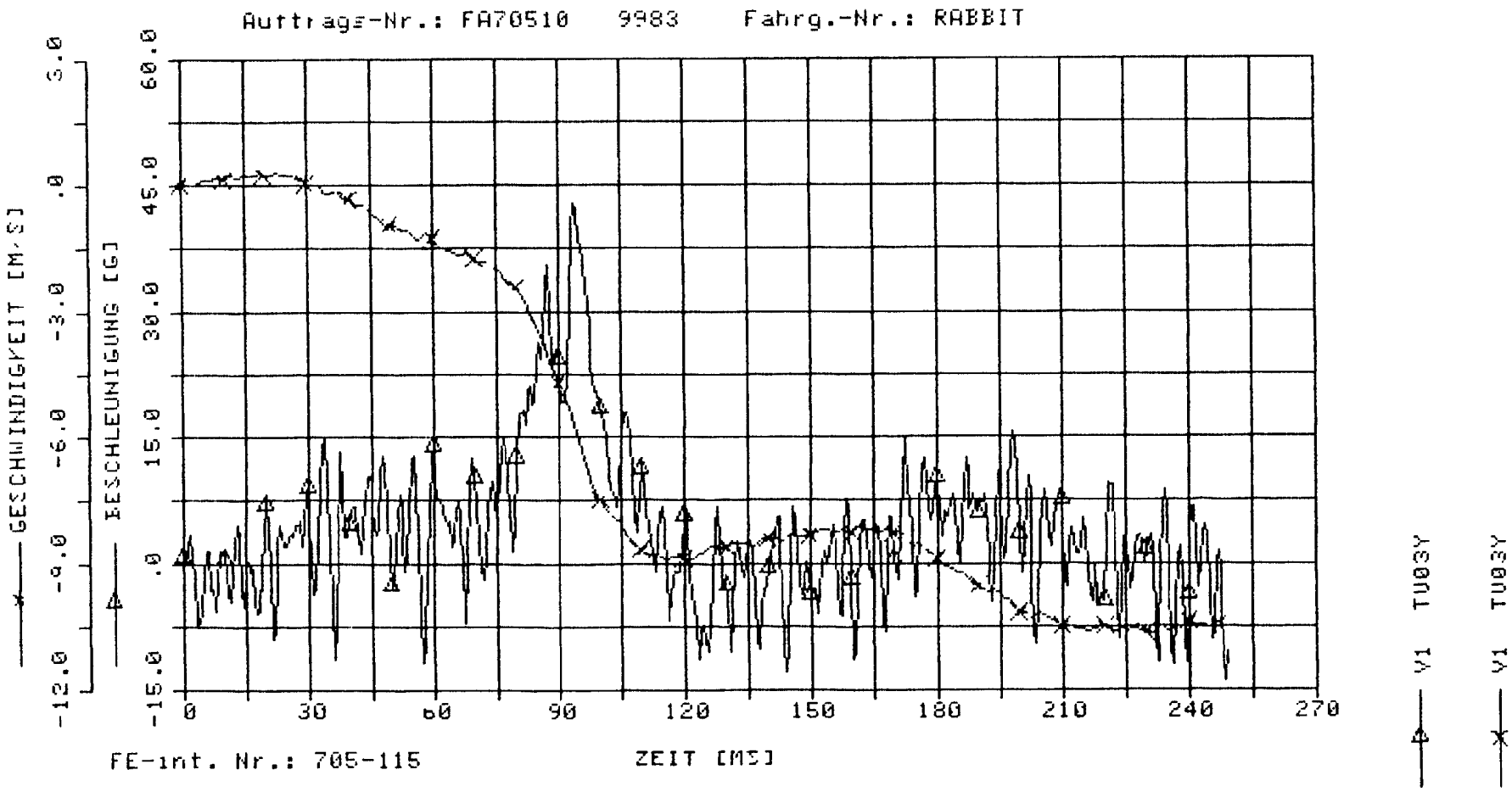
Mess Stelle	UP	ber Grosse	Extremum	t Extr	SMS
TU03X	V1	BE g	23.528	94.50	18.51



V1 TU03X

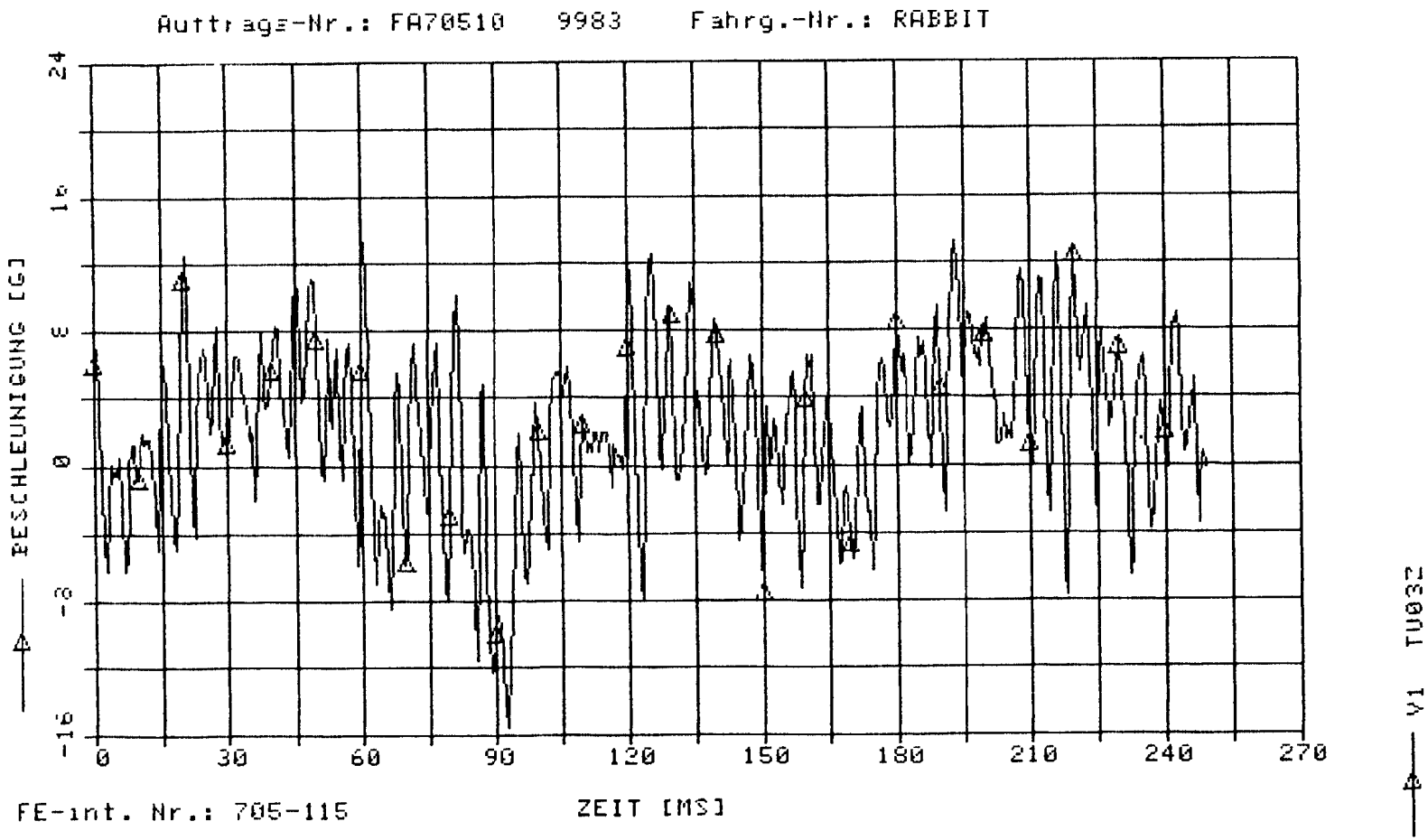
- Kenn Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	ber Groesse		Extremum	t Extr	3MS
TU03Y	V1	BL	g	42 318	94 00	33 06
TU03Y	V1	GL	m/s	-10 671	231 50	0 00



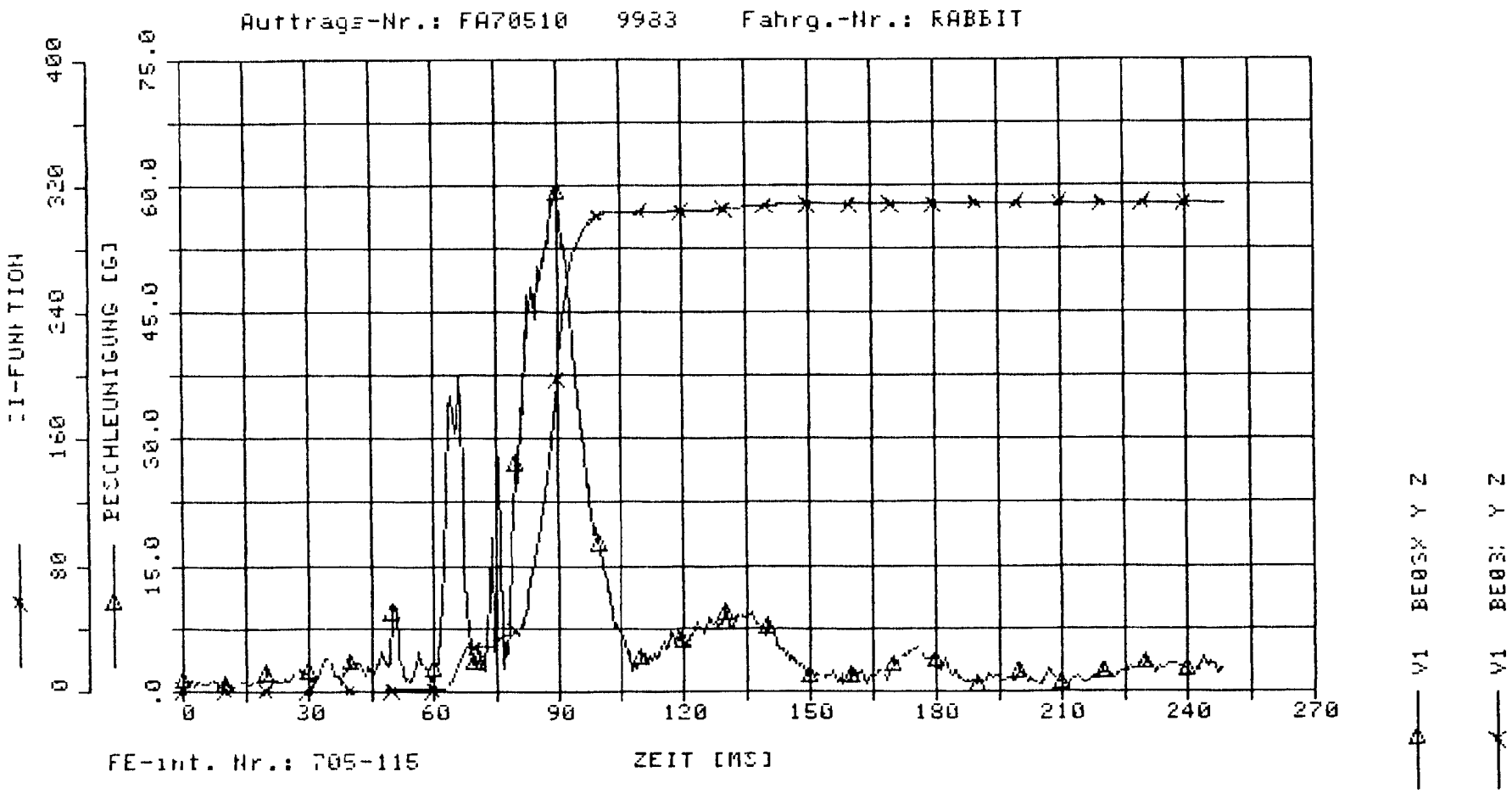
Kenn Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	Ber Groesse	Extremum	t Extr	ms
TU032	V1	BF g	15.545	93.00	12.54



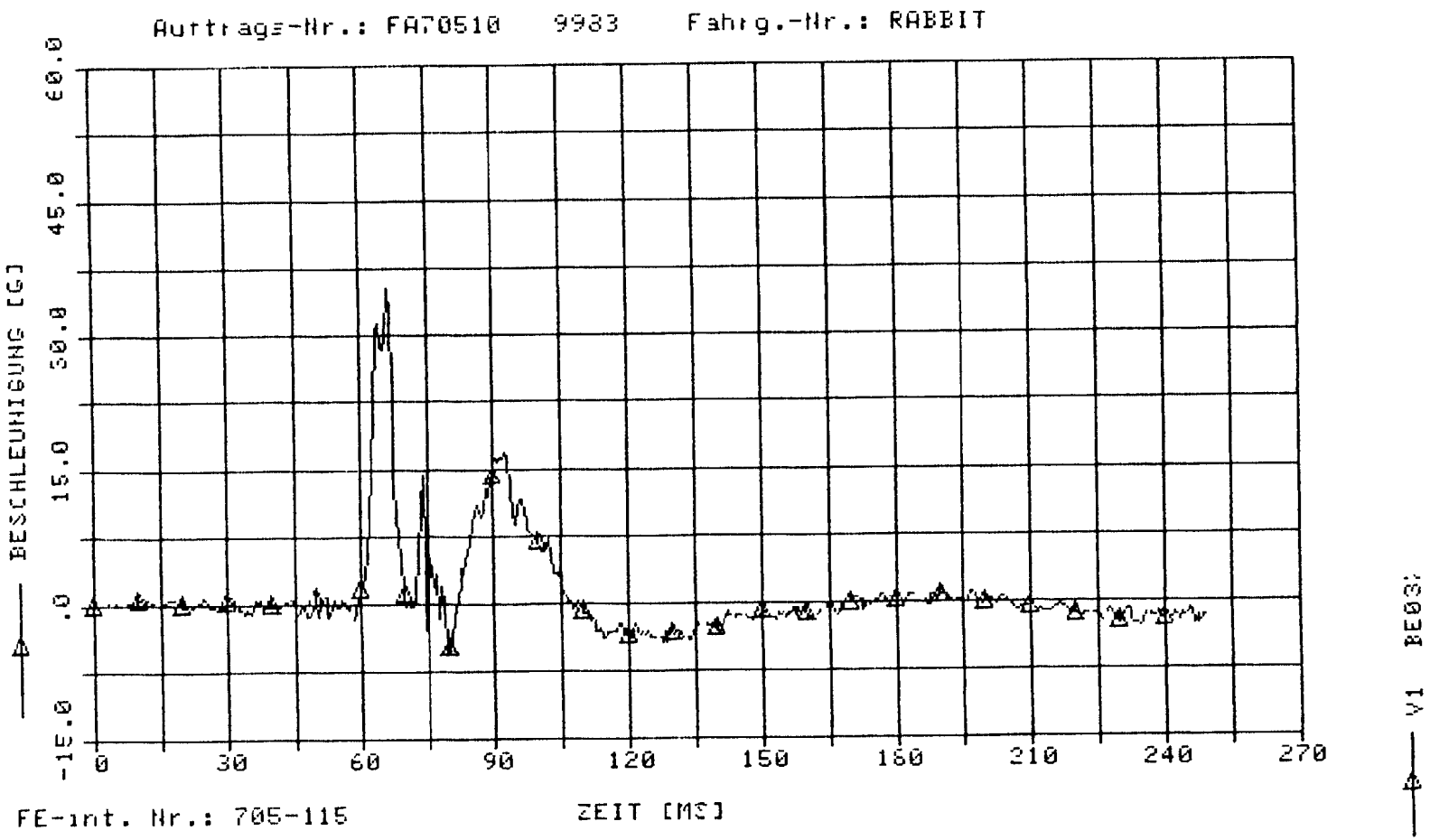
- Kenn Werte Auftrags Nr FA70510 Versuchs-Nr 9983

Mess-Stelle	UP	ber Groesse	Extremum	t Extr	ms
BE03	V1	BL g	59 414	89 50	53 57
BL03	V1	SI	308 643	250 00	0 00



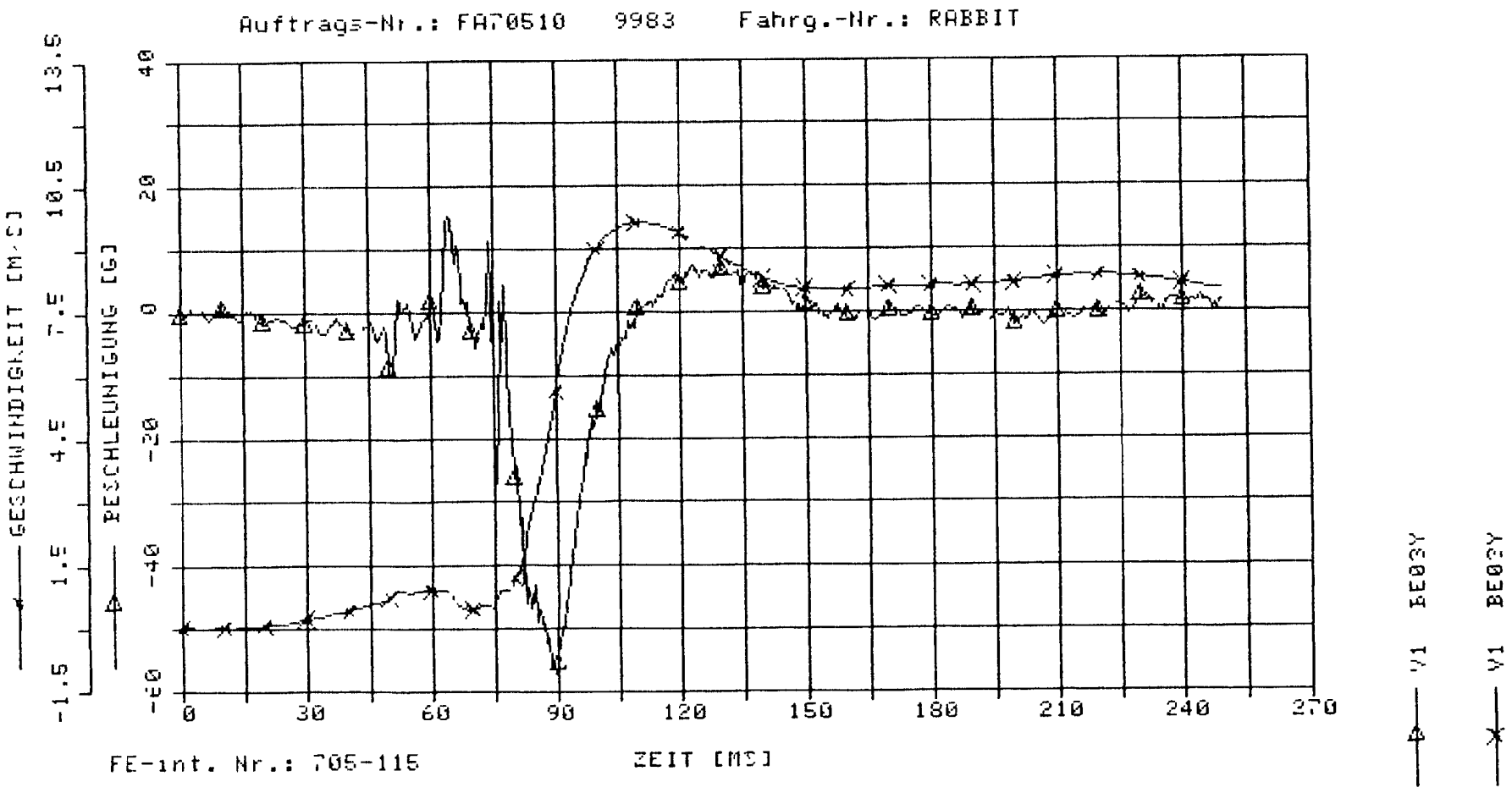
- Kenn-Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess Stelle	UP	ber Grosse	Extremum	t Extr	SMS
BE03X	V1	BE g	35.333	66.50	28.276



- Kenn Werte Auftrags-Nr FA70510 Versuchs-Nr 9983

Mess Stelle	UP	ber Groesse	Extremum	t Extr	SMS
BL03Y	V1	BE g	57 083	89 50	52 11
BL03Y	V1	GE m/s	9 622	110 00	0 00



Kenn-Werte	Auftrags-Nr	FA70510	Versuchs Nr	9983

Mess-Stelle	UP	der Grosse	Extremum	t Extr	ΔMS
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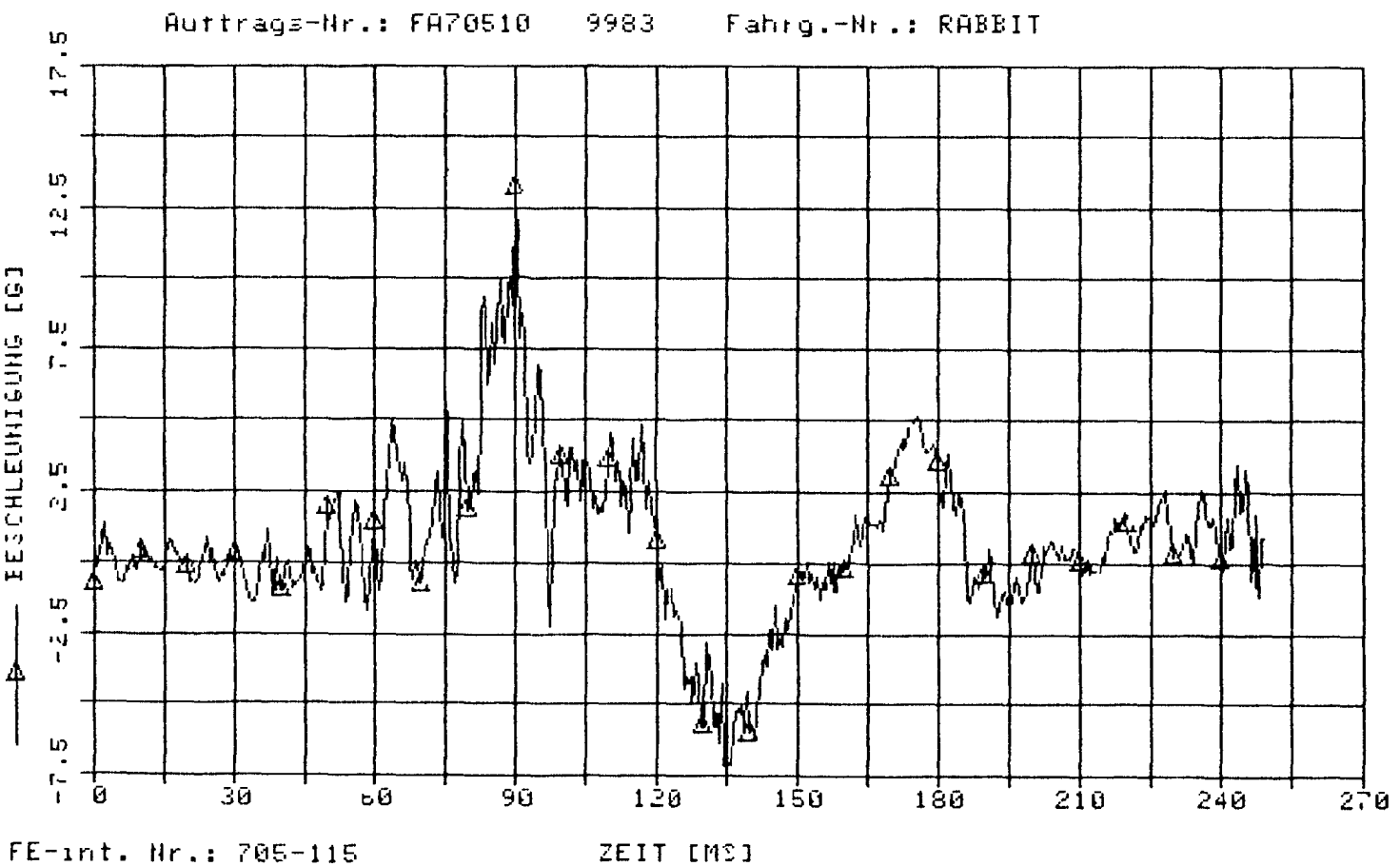
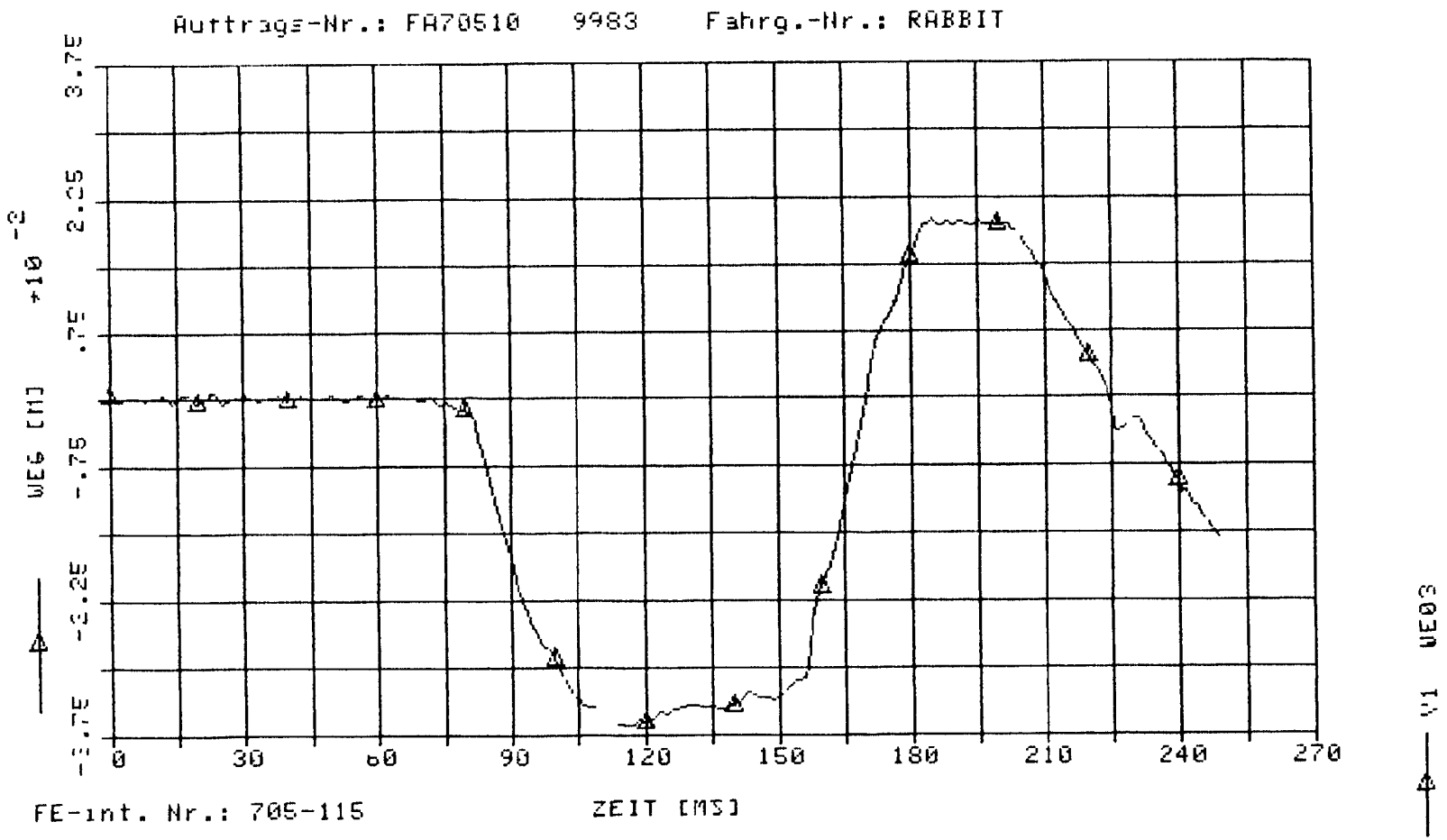


V1 BE032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WEG [M] +10 -2
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-2.25E
-3.75E
0
30
60
90
120
150
180
210
240
270
ZEIT [MS]
FE-int. Nr.: 705-115
UEBS

Kenn-Werte Auftrags-Nr FA70510 Versuchs Nr 9983

Mess-Stelle	UP	der Grosse	Extremum	t Extr	ms
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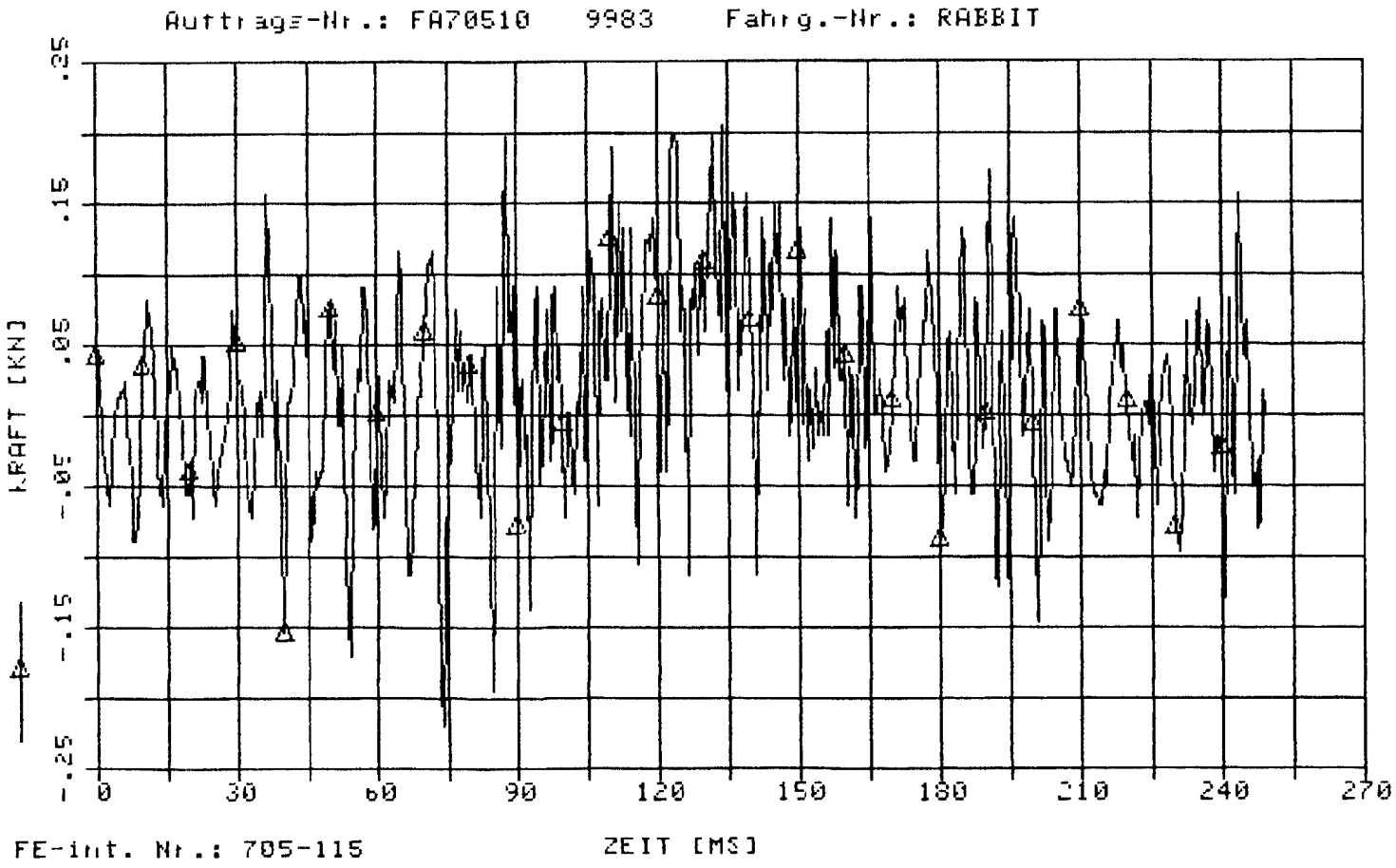

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