

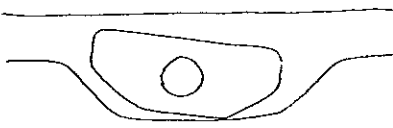
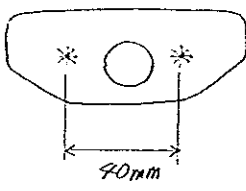


# FUEL TANK STATIC TEST

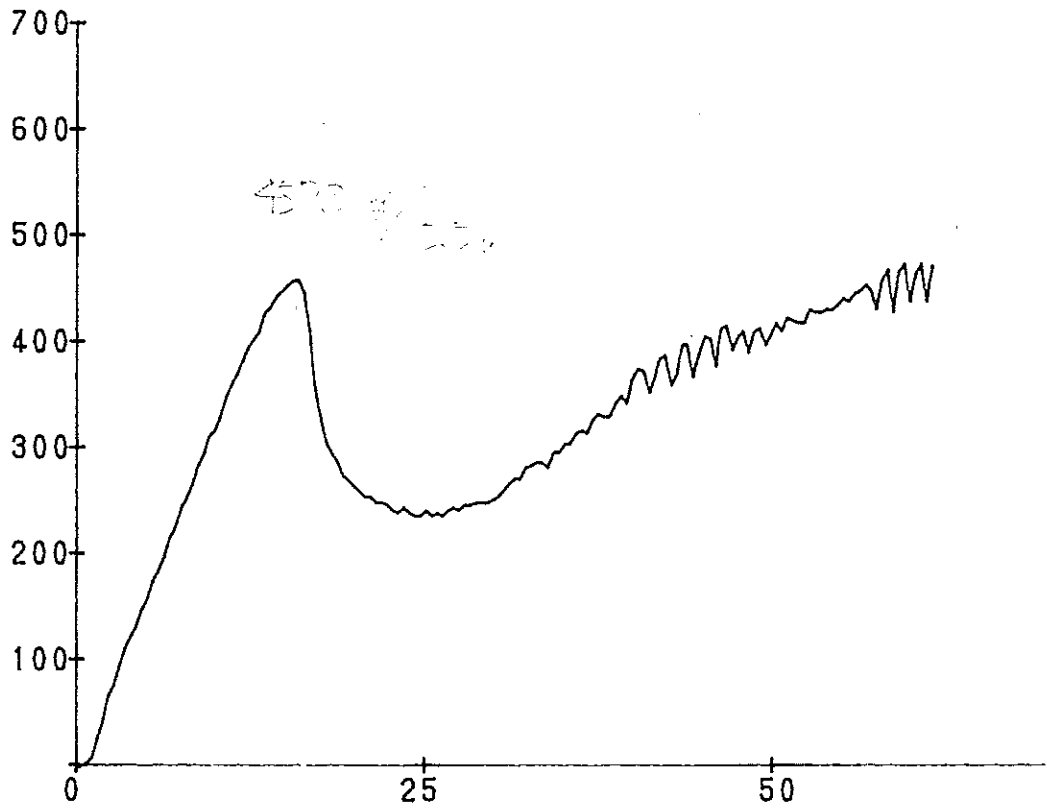
TEST No	<i>c - 1</i>	
TEST DATE	1996 / 6 / 7	
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	
	SPOT WELDING PITCH	

TEST No

C-1

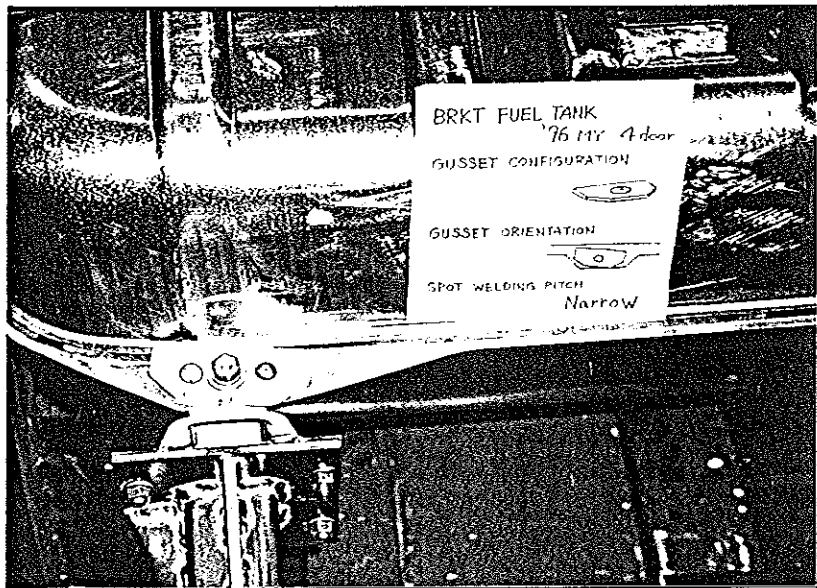
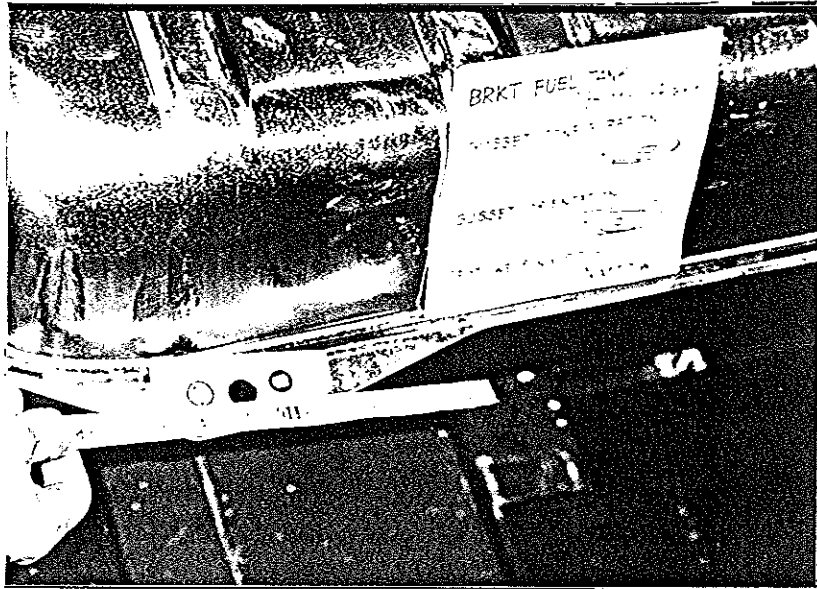
TEST RESULT

Gusset penetrates tank wall

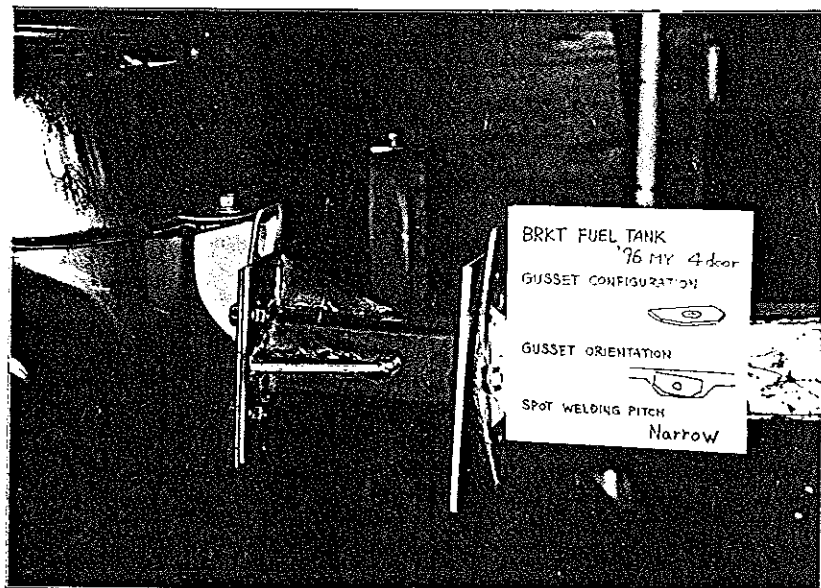
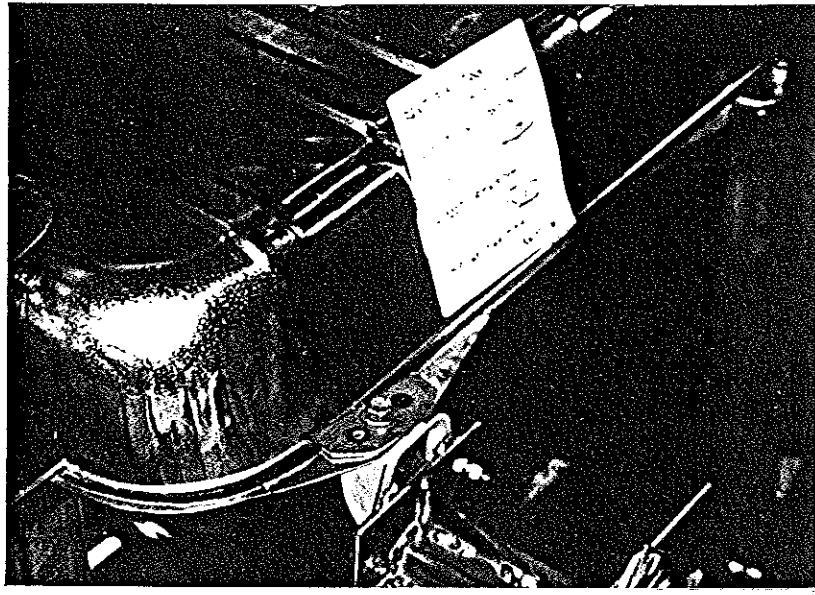


試験前 (Pre-Test)

2-

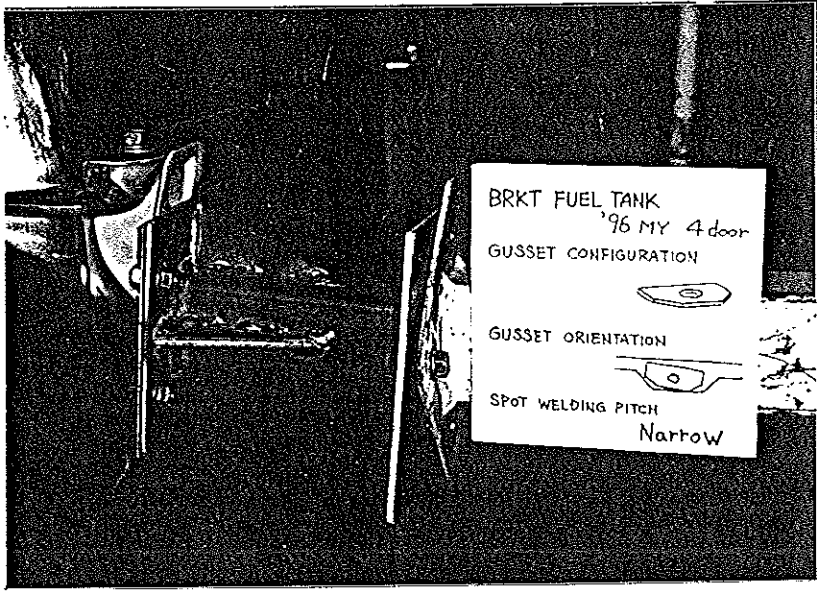
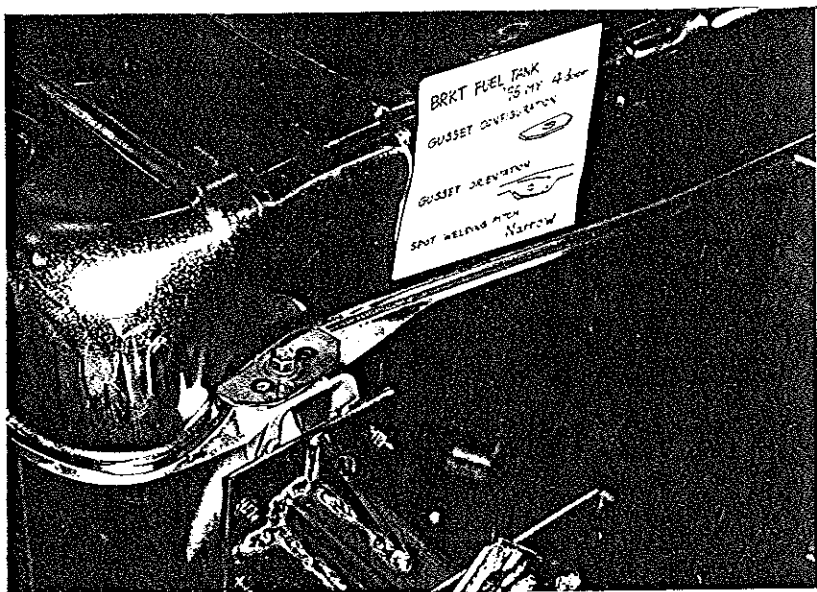
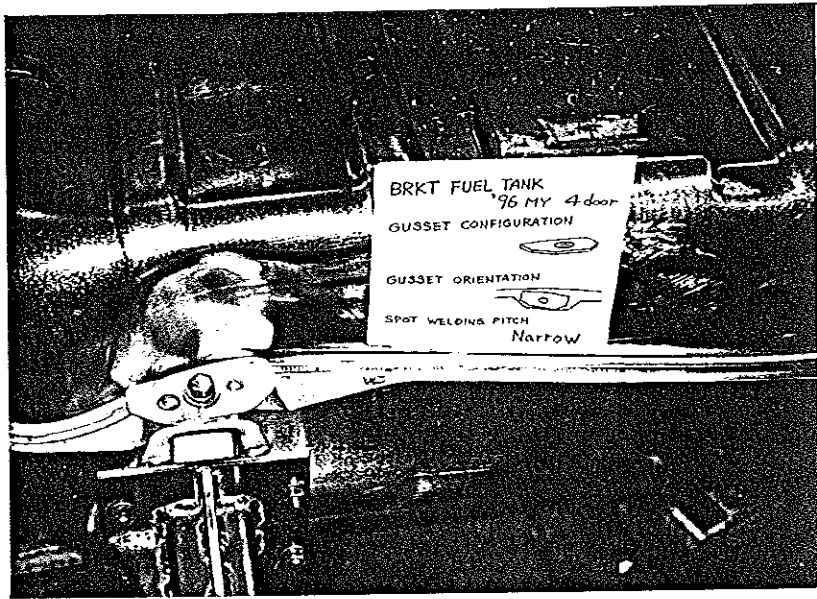


試験前 (Pre-Test)



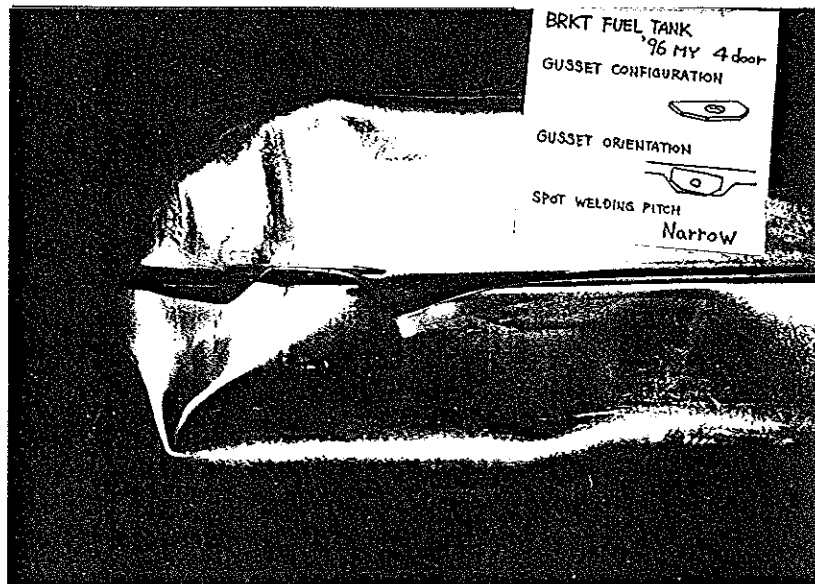
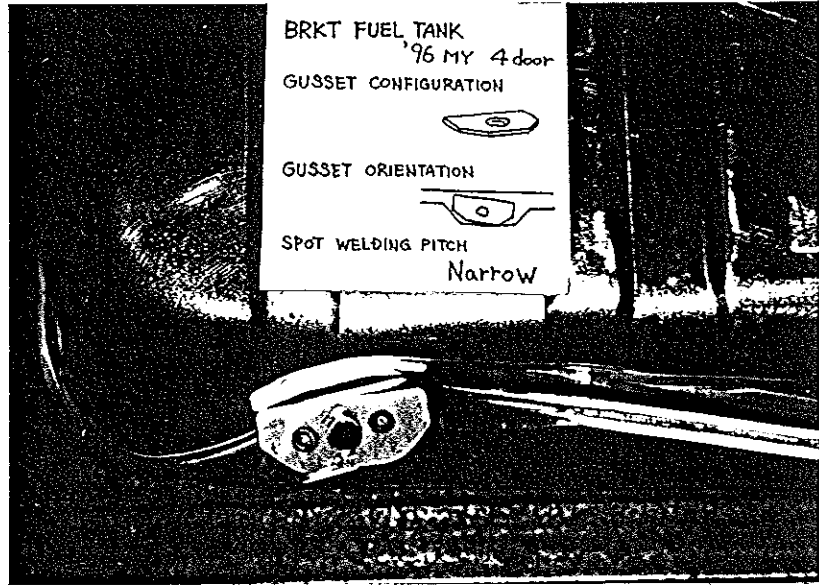


# 試験後 (Post-Test)



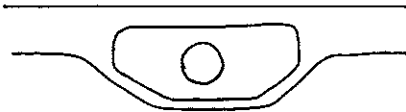
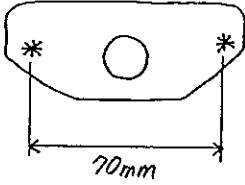


試験後 (Post-Test)

C-



FUEL TANK STATIC TEST

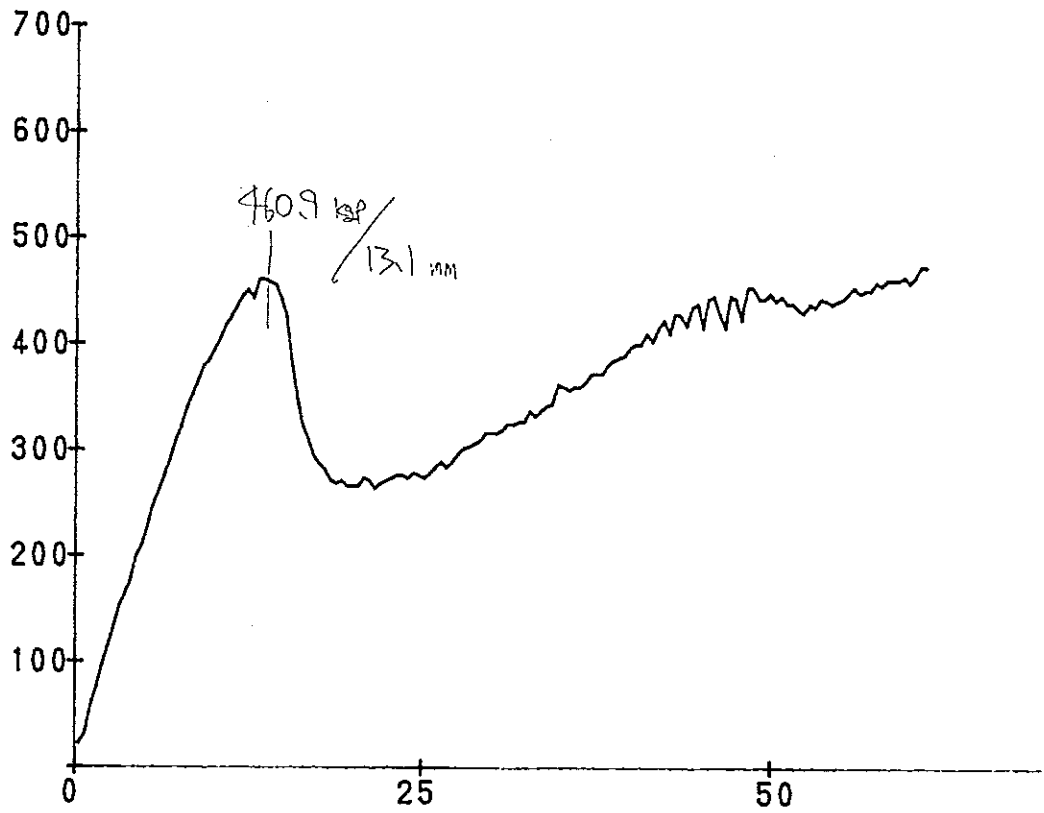
TEST No		C-2
TEST DATE		1996 / 6 / 7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	
	SPOT WELDING PITCH	

TEST No

C-2

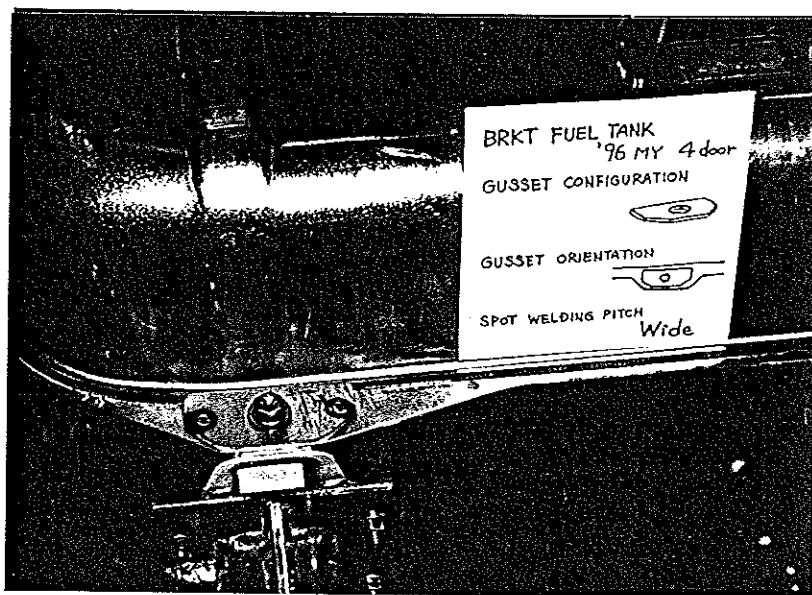
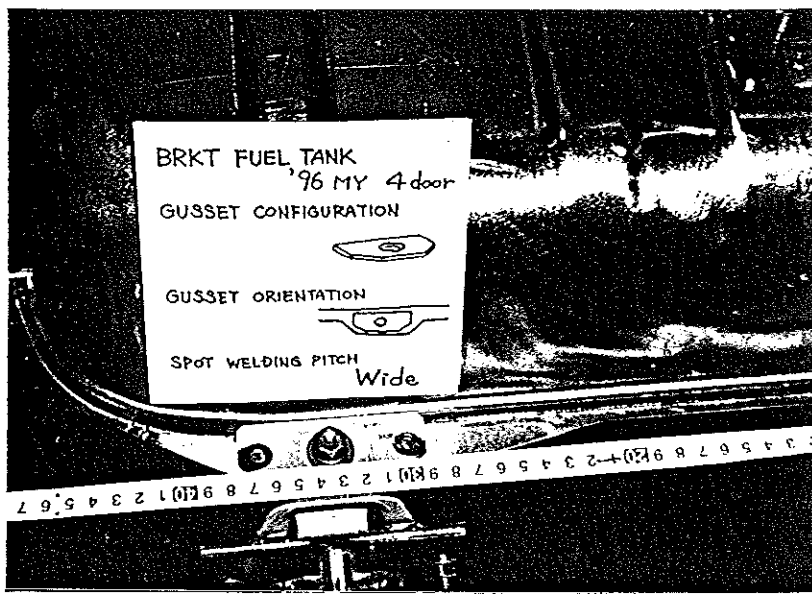
TEST RESULT

Gusset not contact tank wall



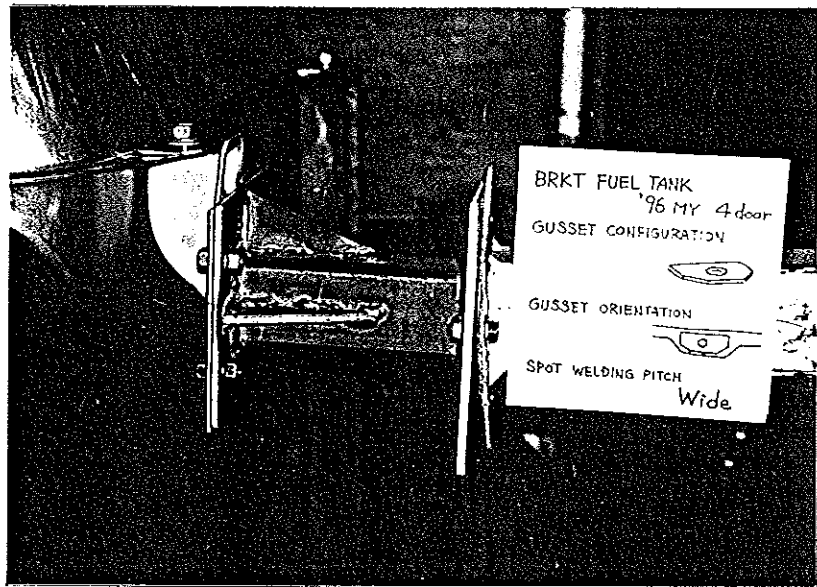
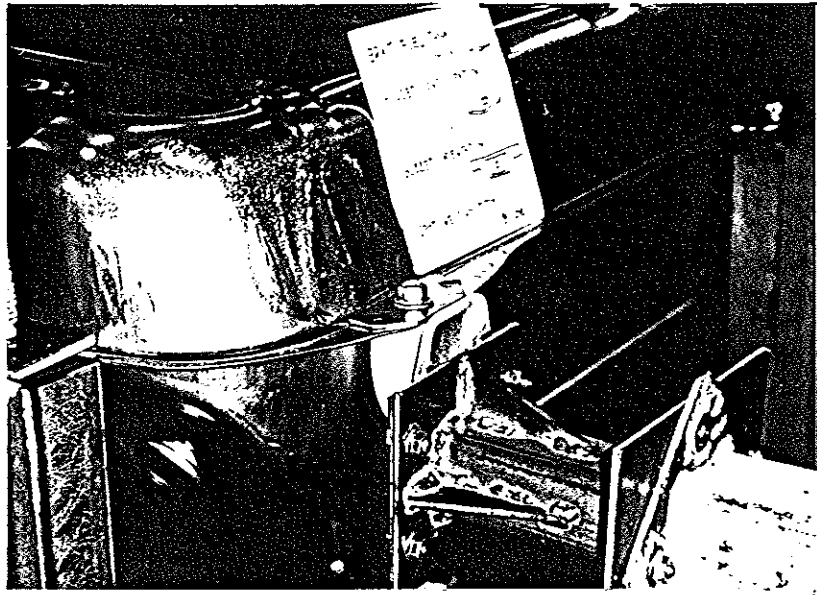
S 211449

# 試験前 (Pre-Test)



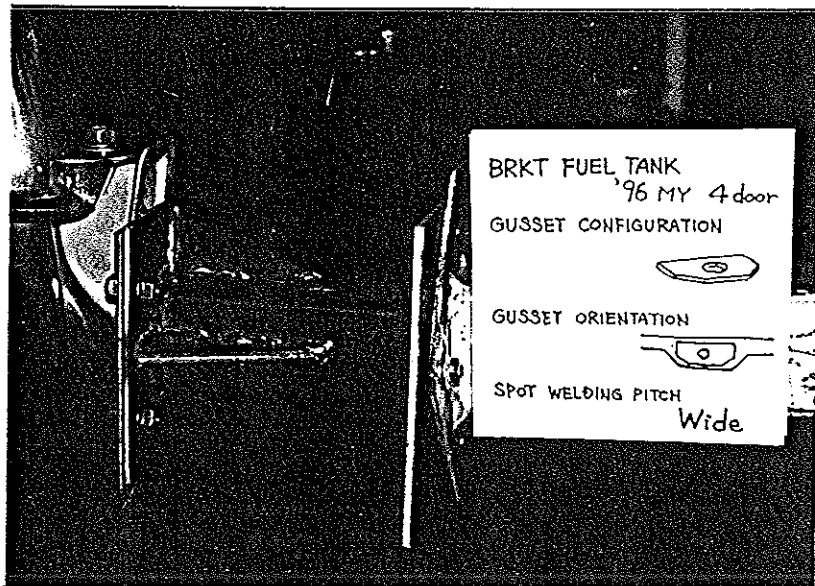
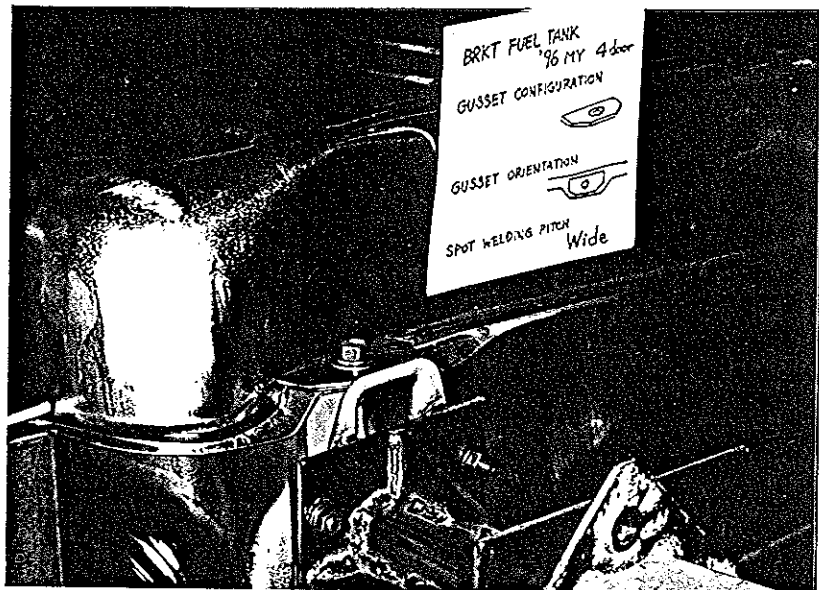
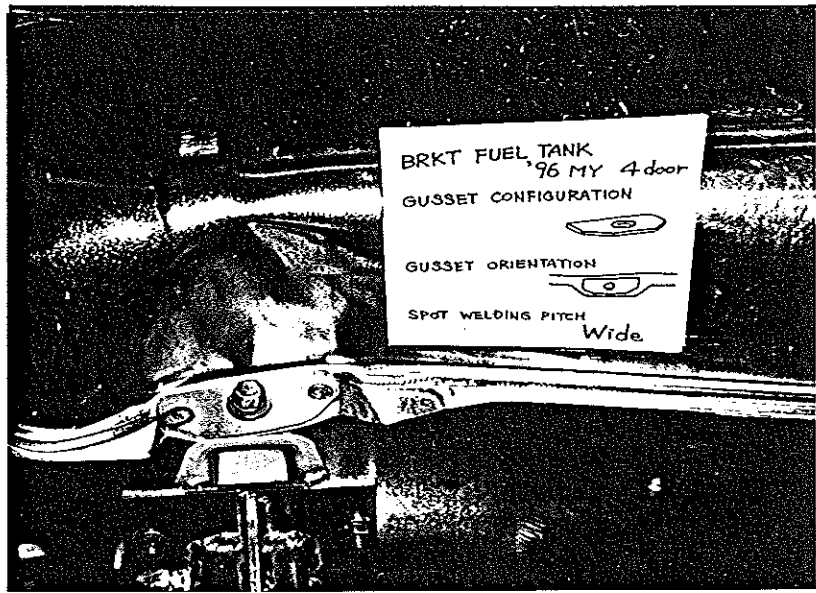
S 211450

# 試験前 (Pre-Test)

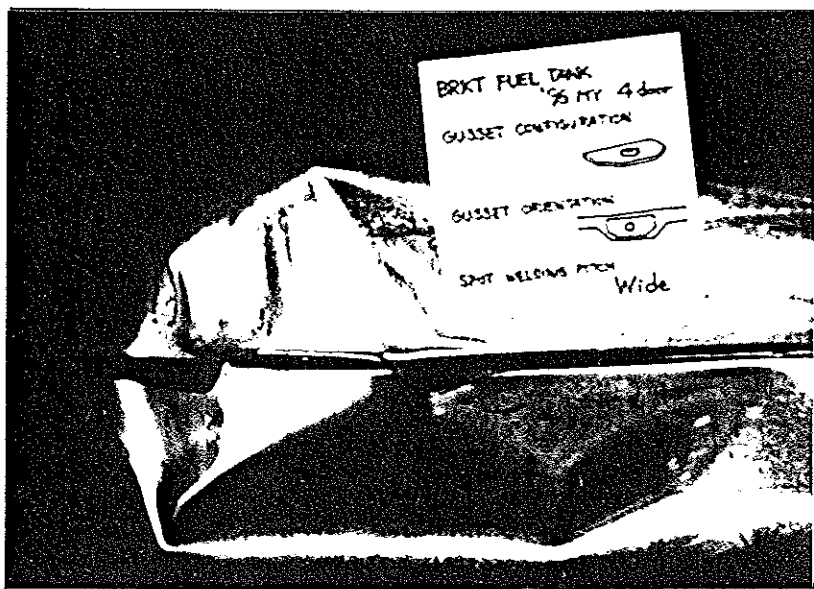
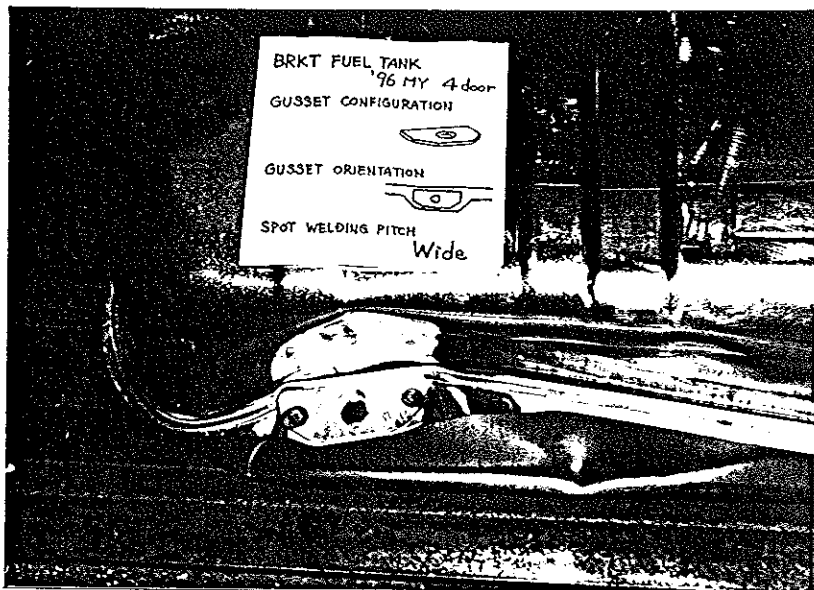


S 211451

試験後 (Post-Test)



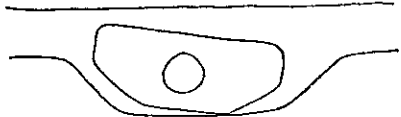
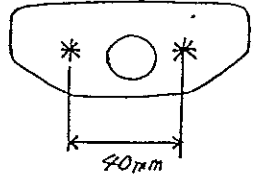


# 試験後 (Post-Test)





FUEL TANK STATIC TEST

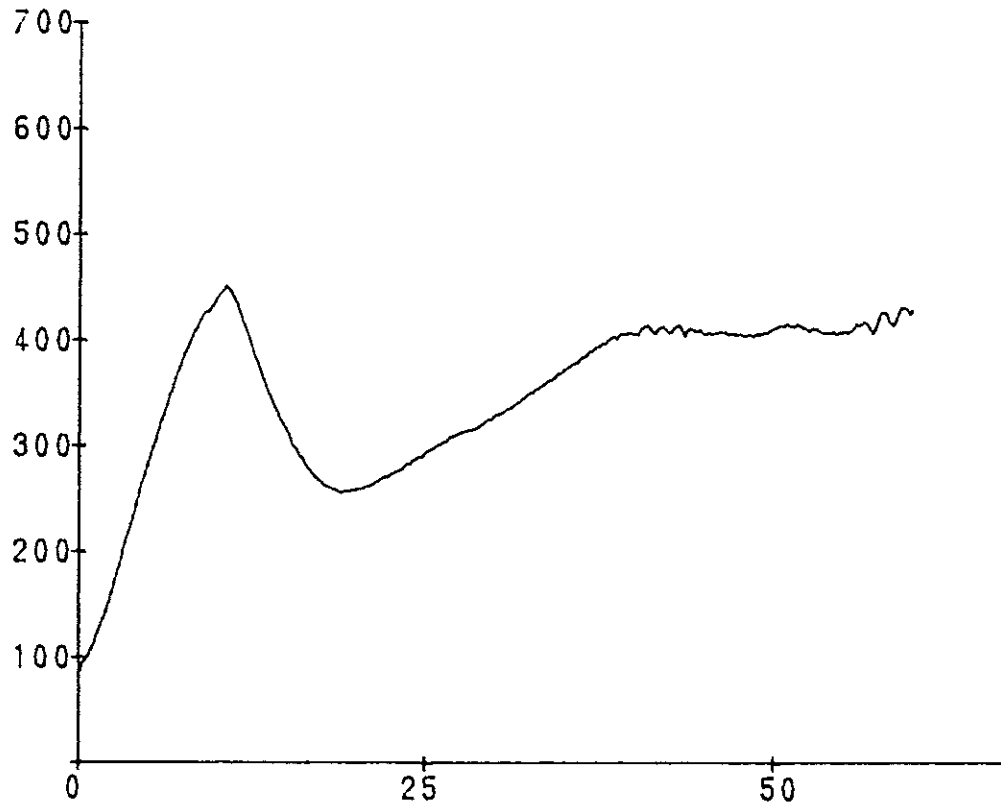
TEST No.		C2-1
TEST DATE		1997/5/7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	<p><math>a - b = -8 \text{ mm}</math></p> 
	SPOT WELDING PITCH	

**S 211498**

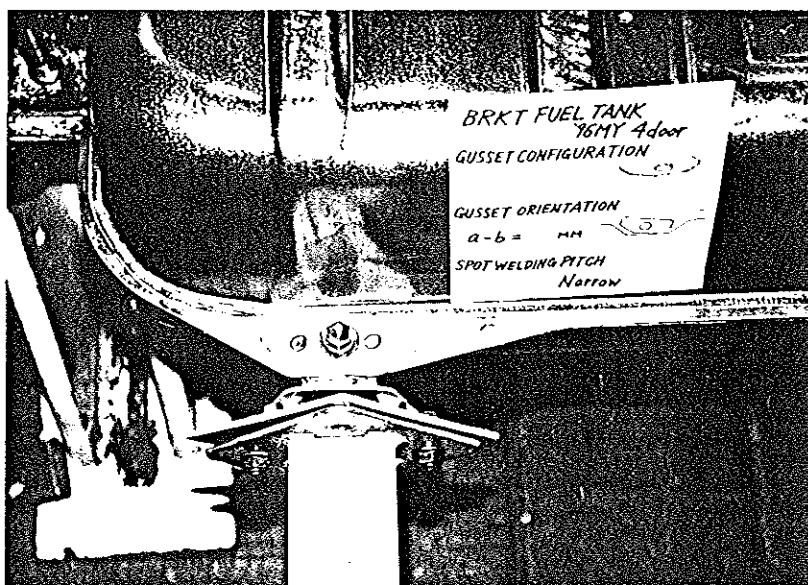
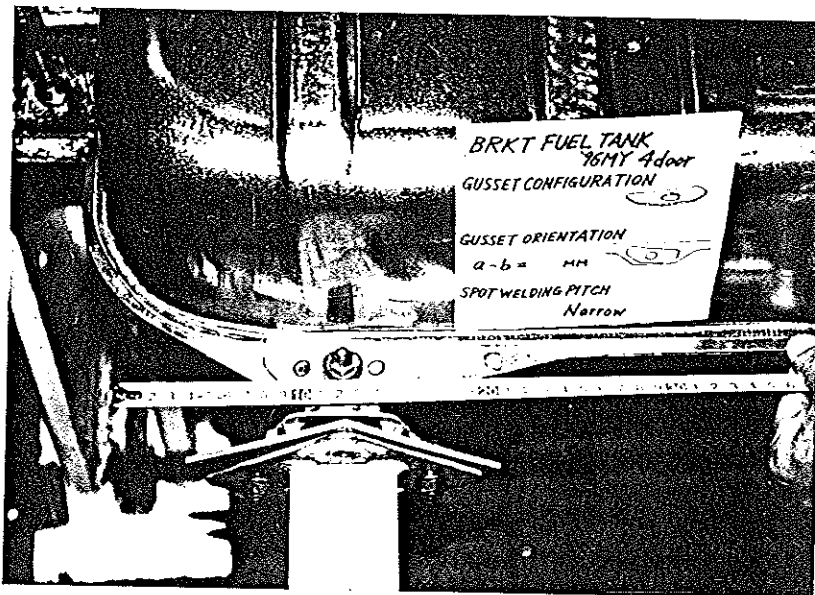
TEST No.	C2-1
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TEST RESULT

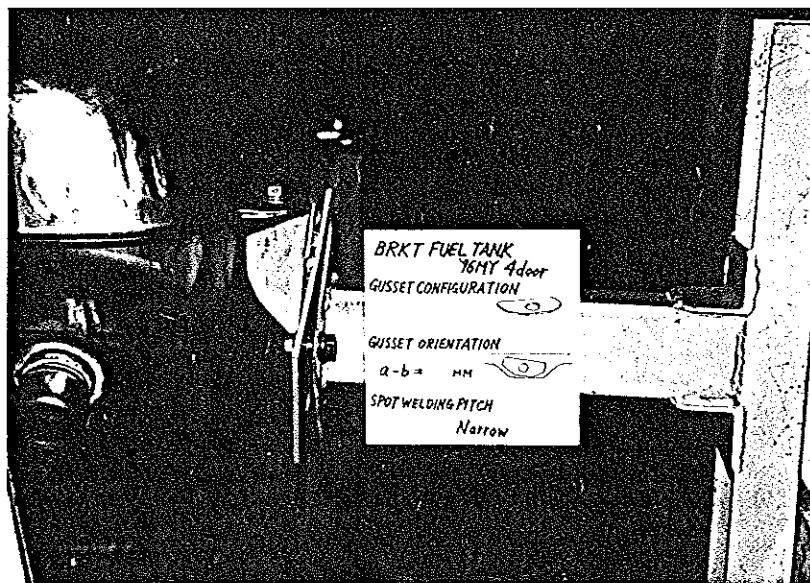
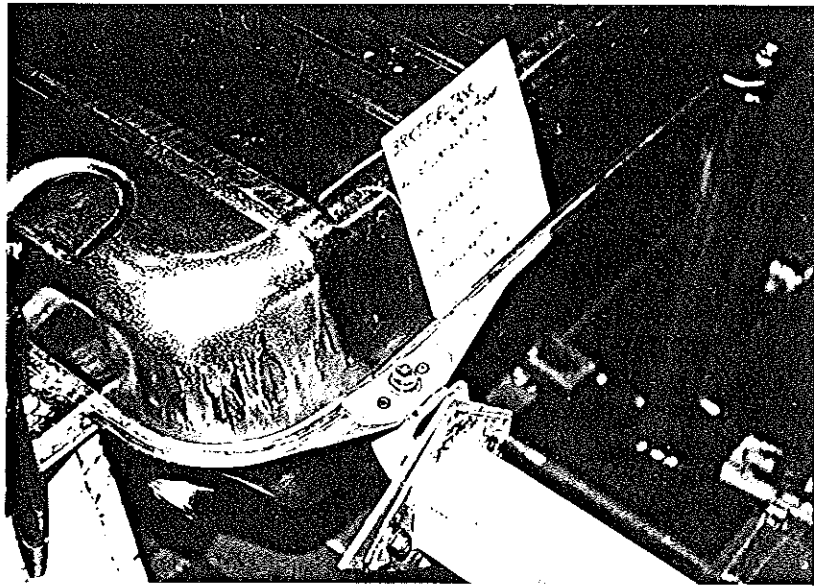
Gusset contacts with the tank wall.



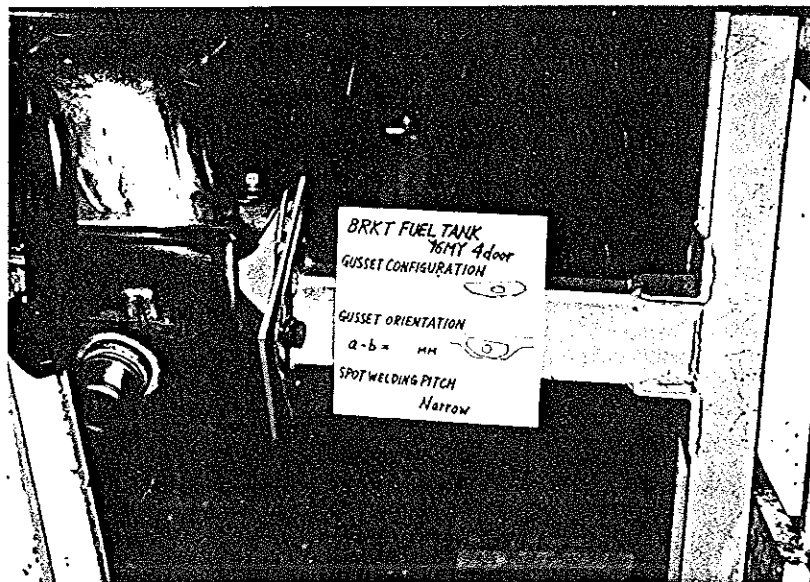
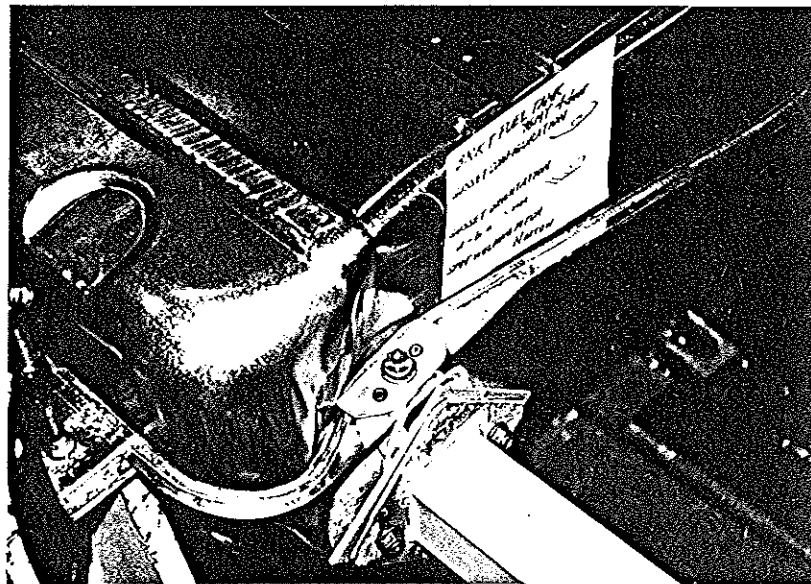
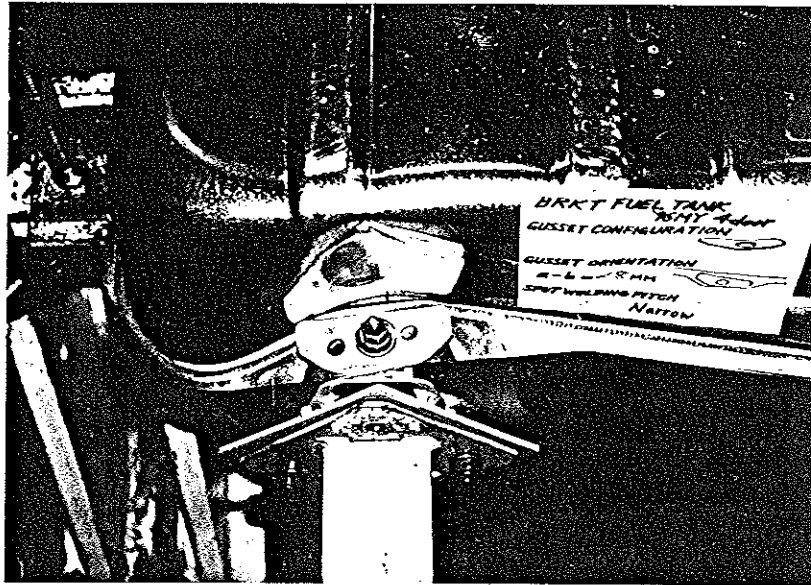
# 試験前 (Pre-Test)



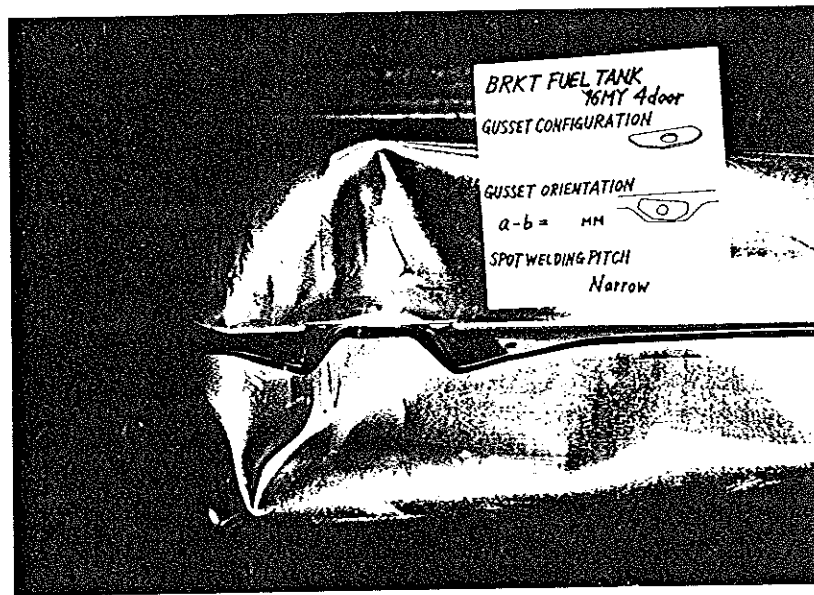
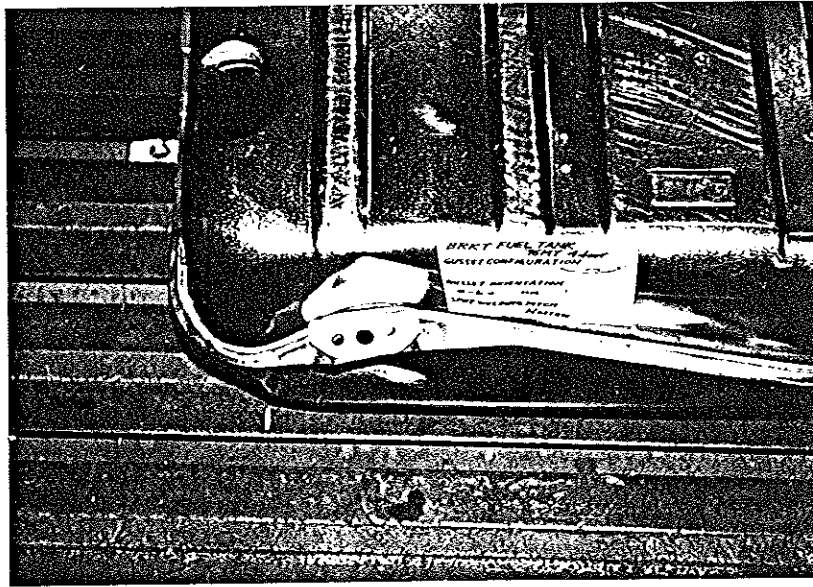
# 試験前 (Pre-Test)





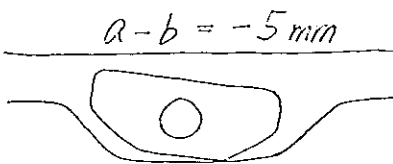
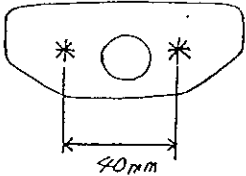
試験後 (Post-Test)



# 試験後 (Post-Test)



FUEL TANK STATIC TEST

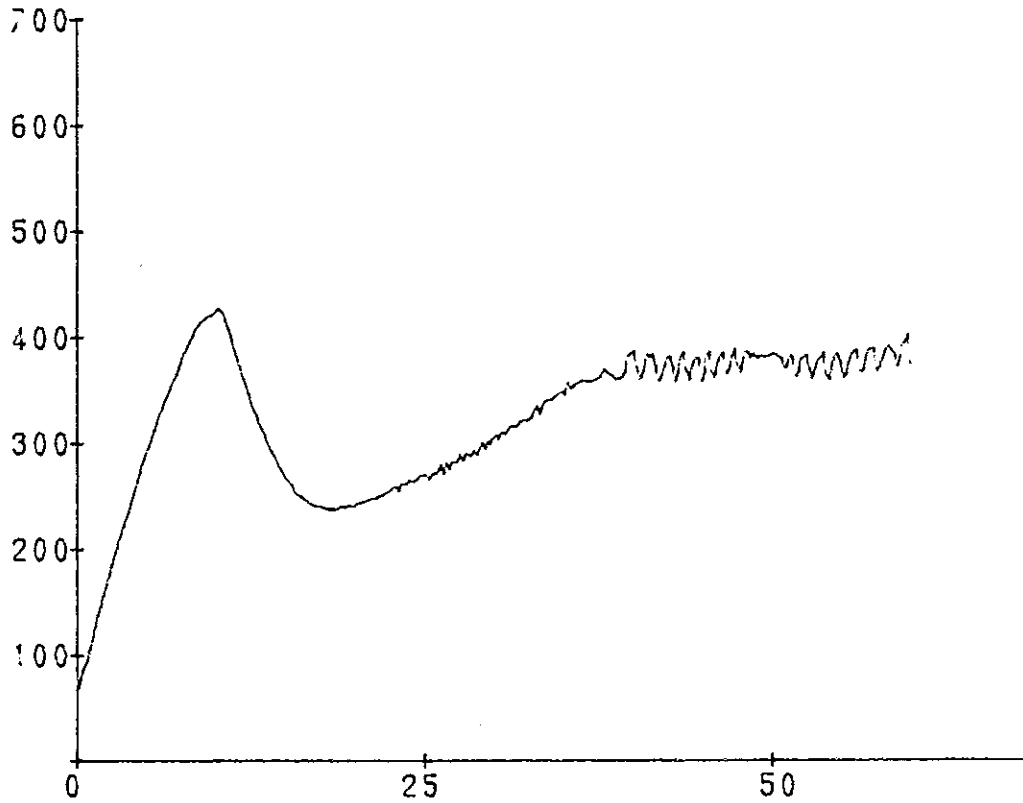
TEST No.	C2-2	
TEST DATE	1997/5/7	
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	<p><math>a - b = -5 \text{ mm}</math></p> 
	SPOT WELDING PITCH	

S 211504

TEST No.	C2-2
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TEST RESULT

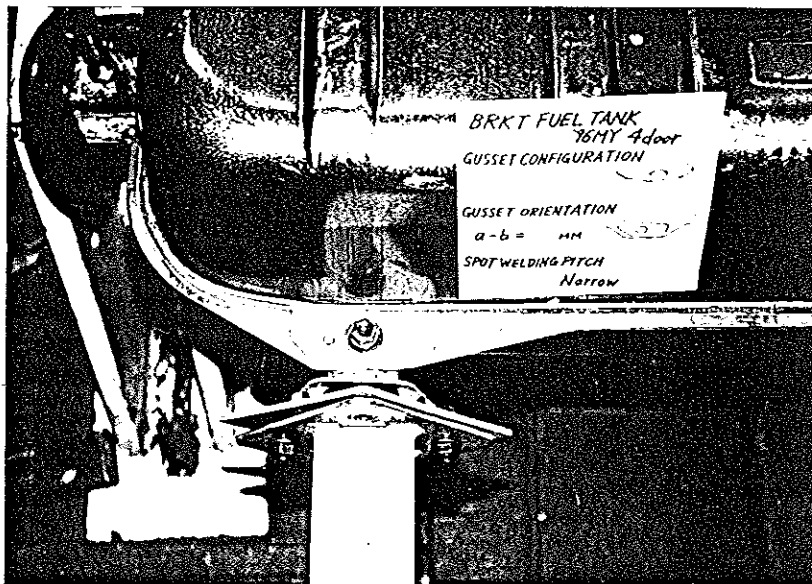
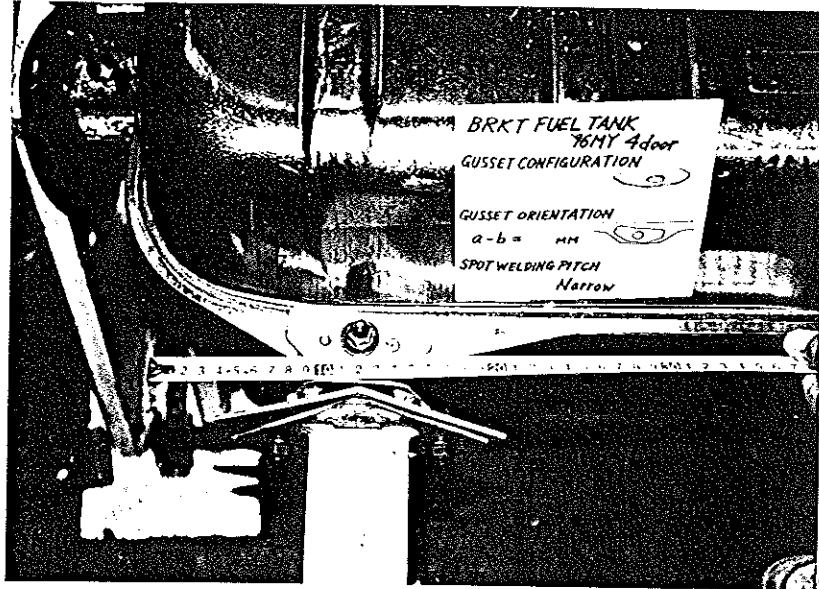
Gusset slightly contacts with the tank wall.



S 211505

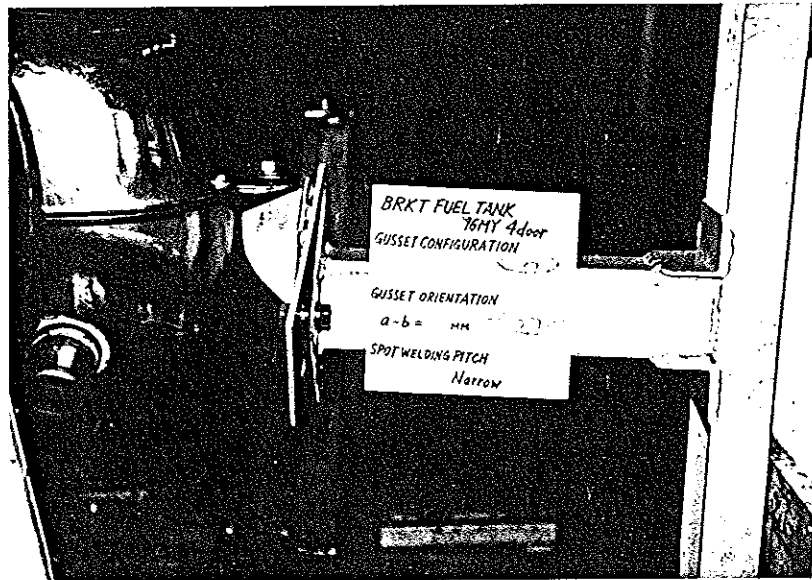
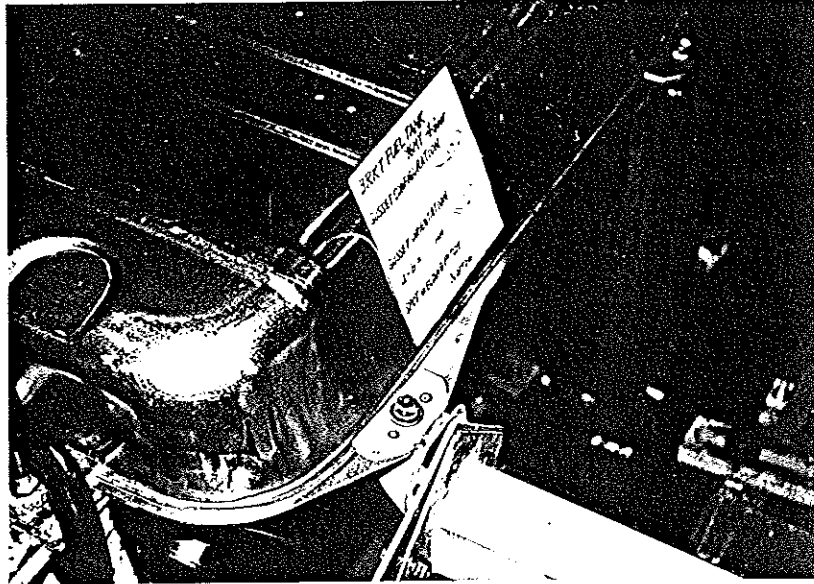


# 試験前 (Pre-Test)



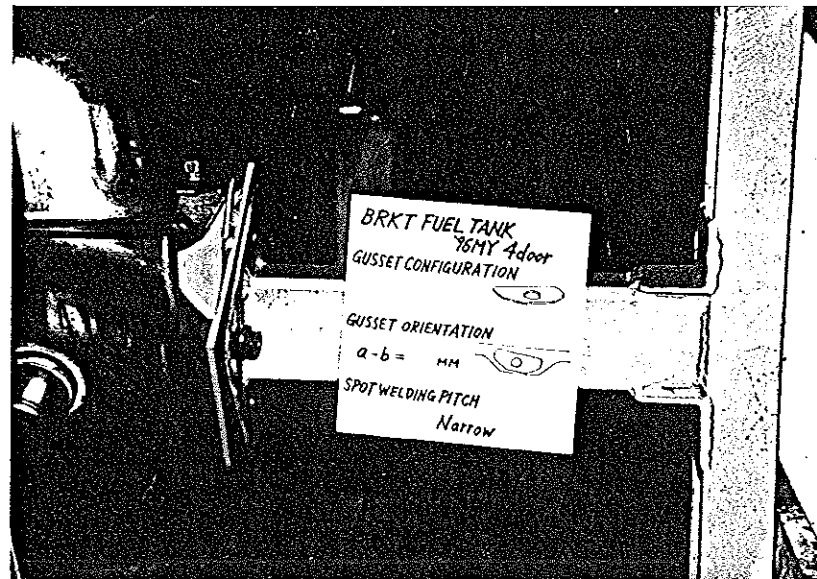
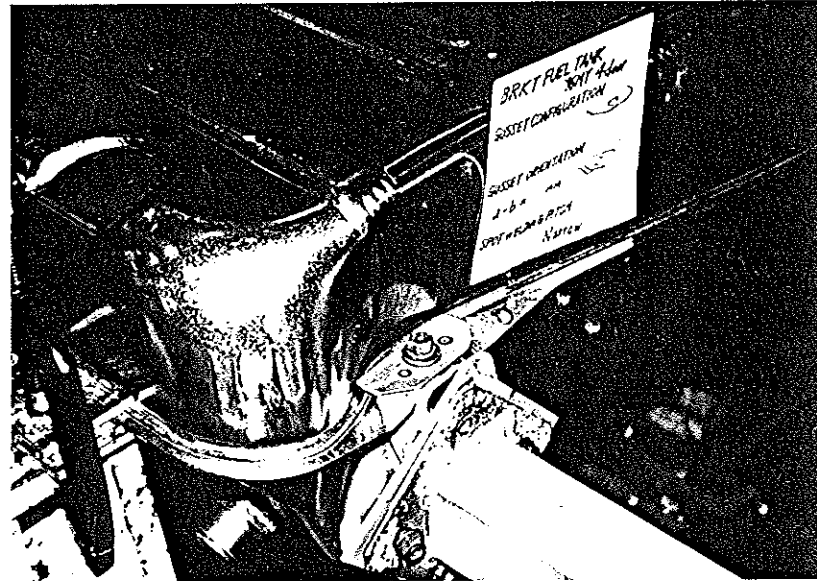
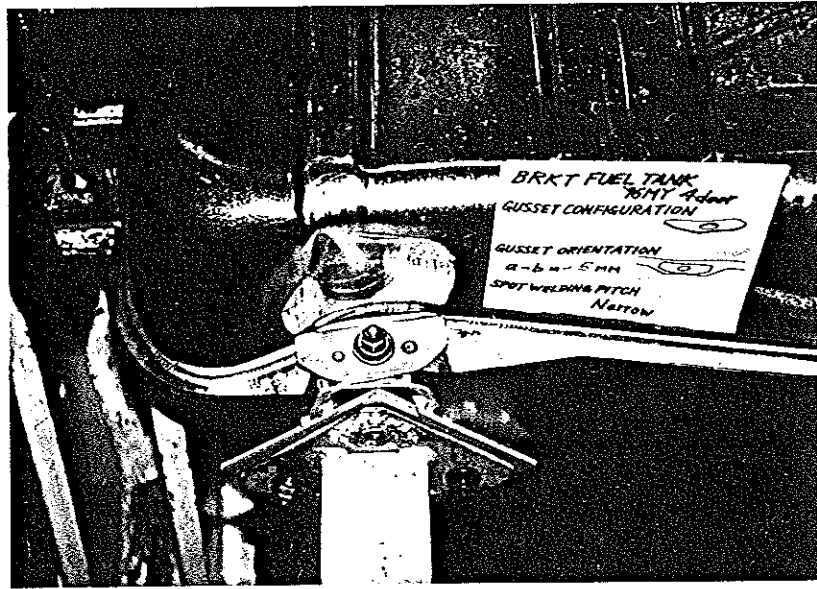
S 211506

# 試験前 (Pre-Test)

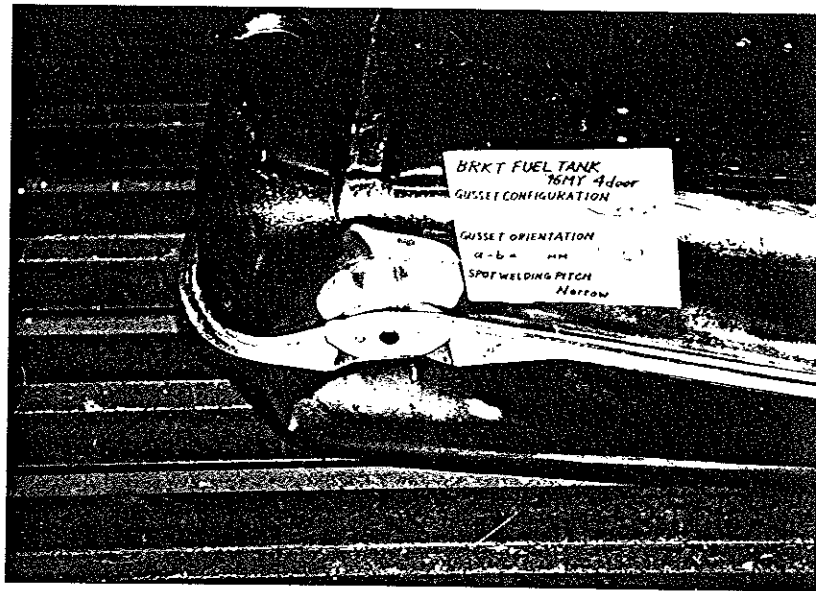


S 211507


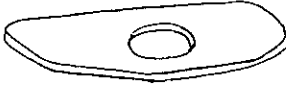

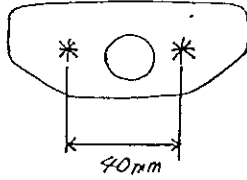
試験後 (Post-Test)



# 試験後 (Post-Test)



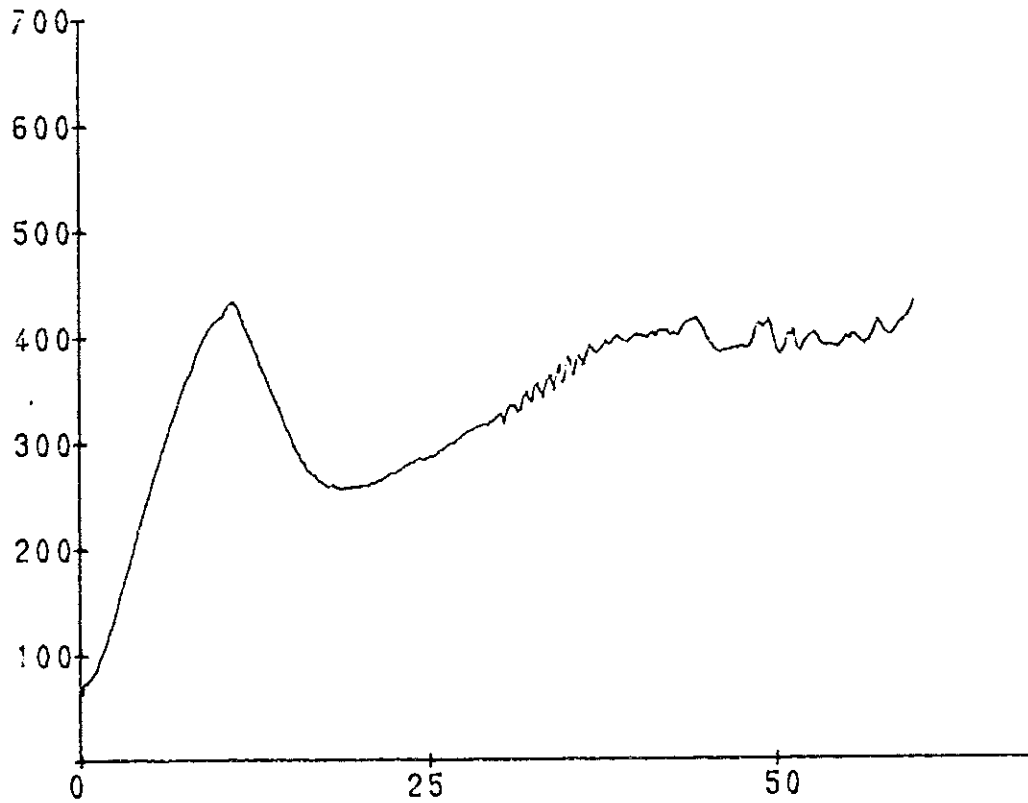
FUEL TANK STATIC TEST

TEST No.		02-3
TEST DATE		1997/5/7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	$a - b = -3 \text{ mm}$ 
	SPOT WELDING PITCH	

TEST No.	C2-3
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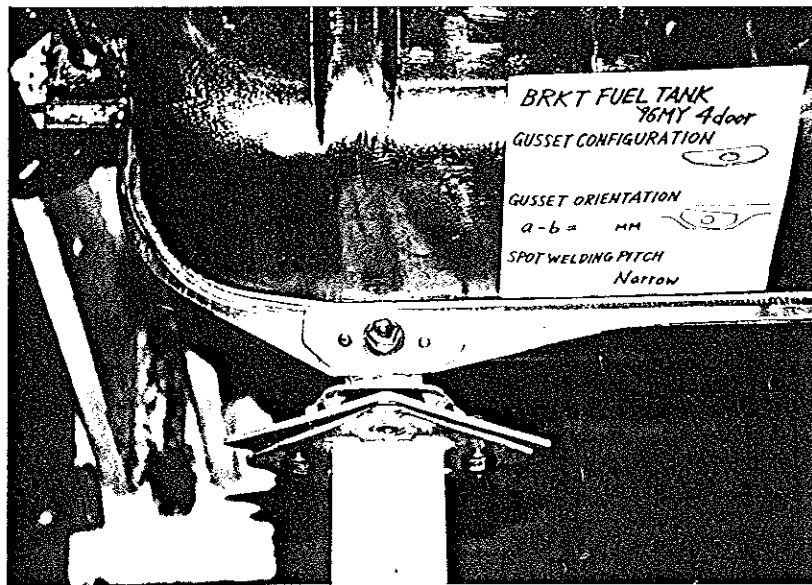
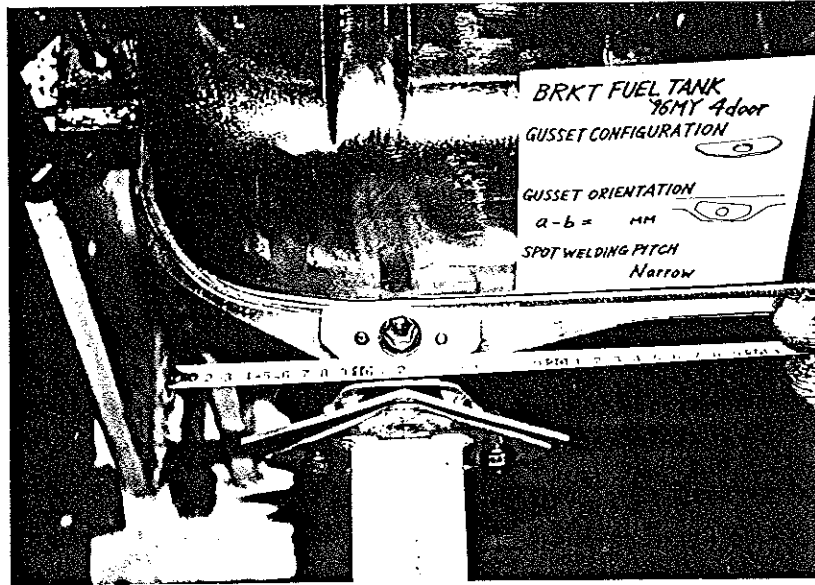
TEST RESULT

Gusset not contact with the tank wall.

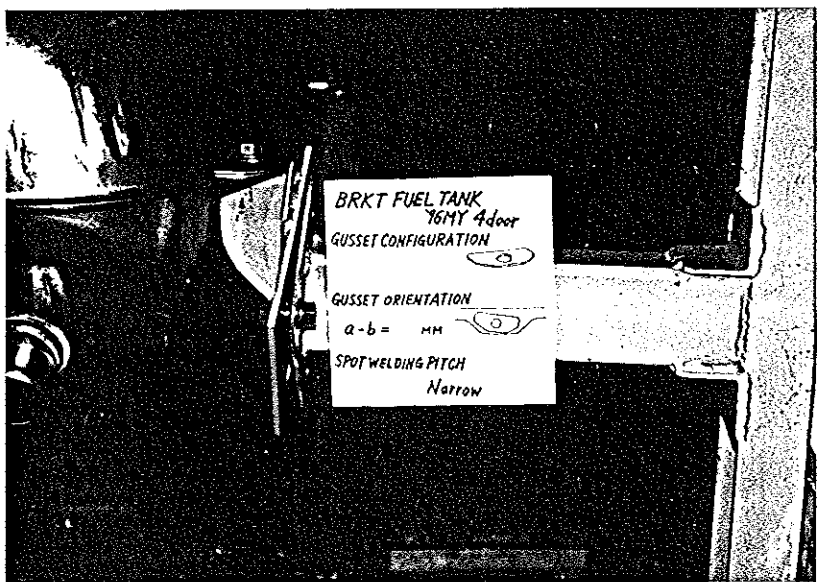
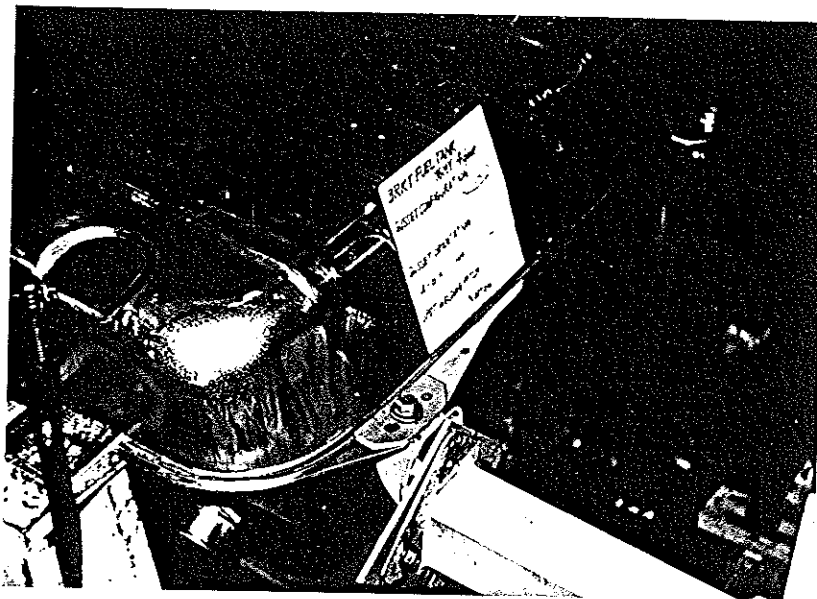


S 211511

# 試験前 (Pre-Test)

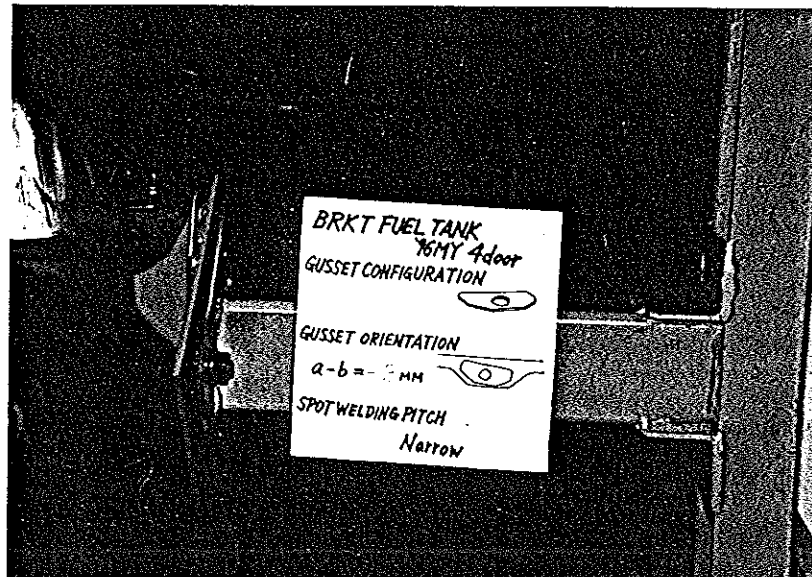
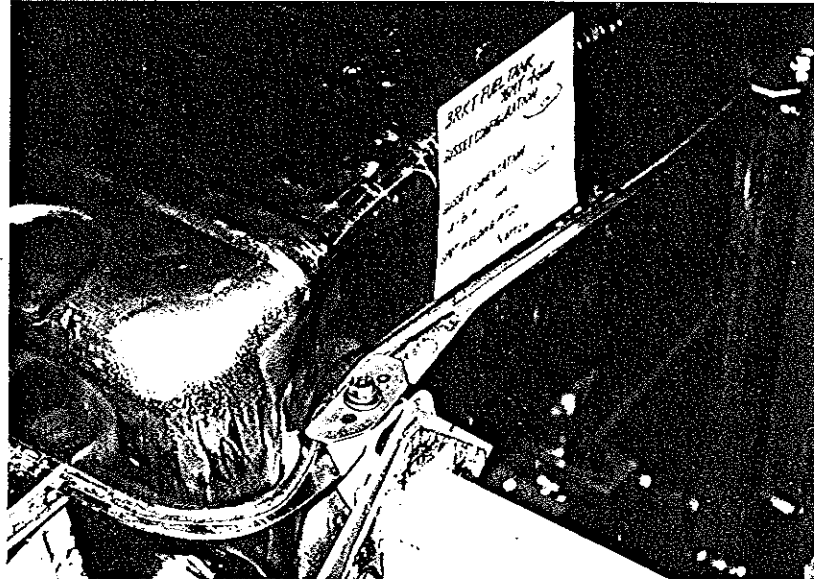
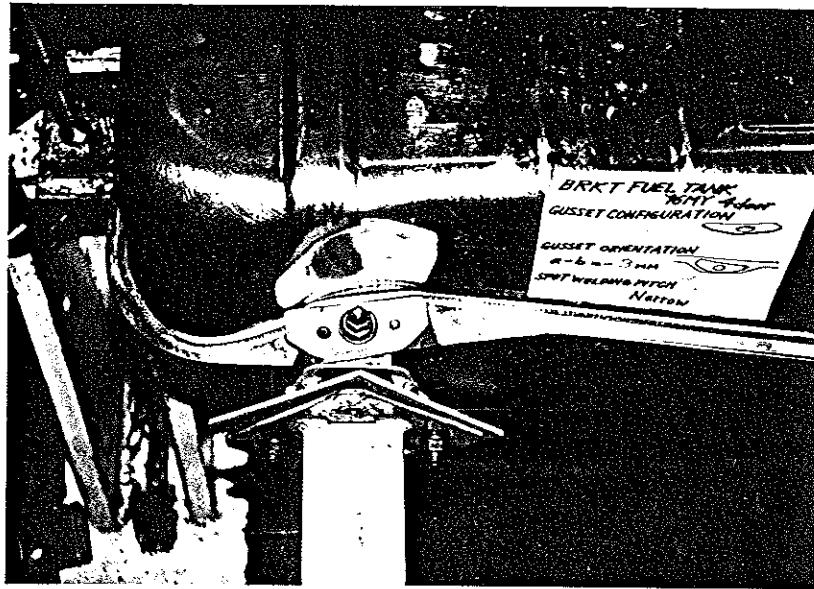


# 試験前 (Pre-Test)

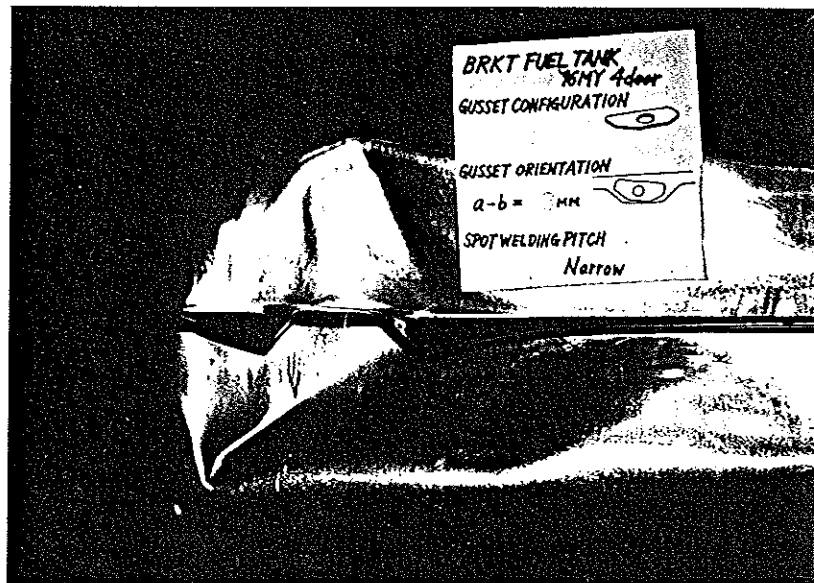
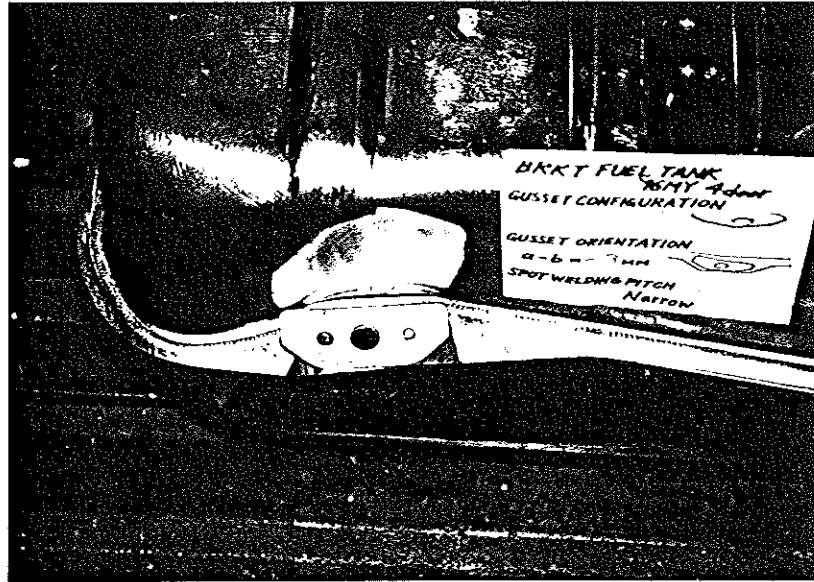






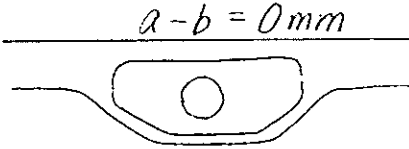
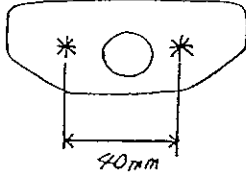
試験後 (Post-Test)



試 驗 後 (Post-Test)



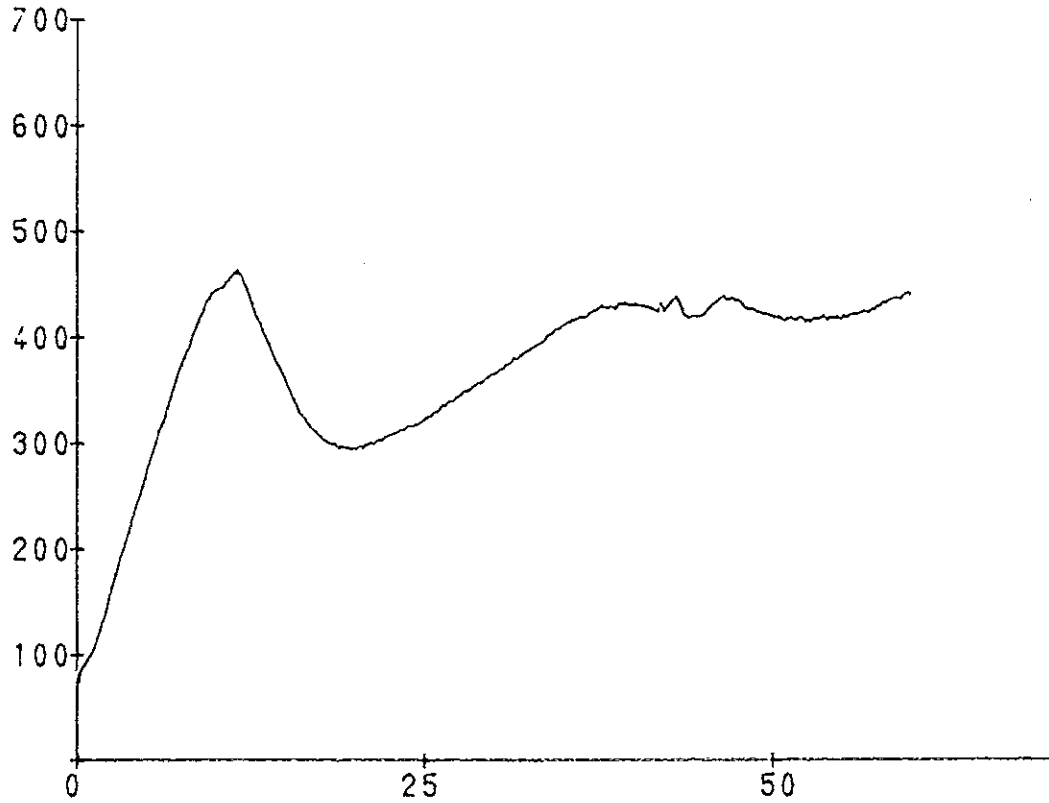
FUEL TANK STATIC TEST

TEST No.	C2-4	
TEST DATE	1997/5/7	
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	<p align="center"><math>a - b = 0 \text{ mm}</math></p> 
	SPOT WELDING PITCH	

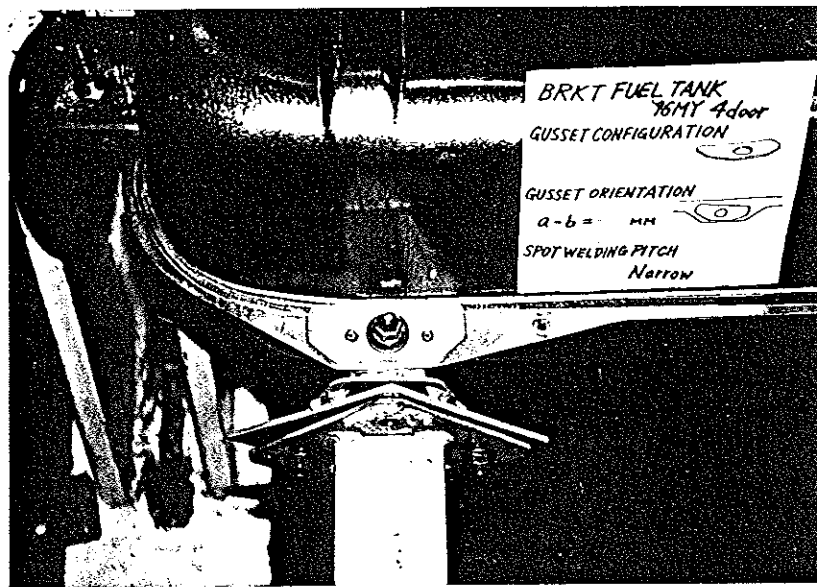
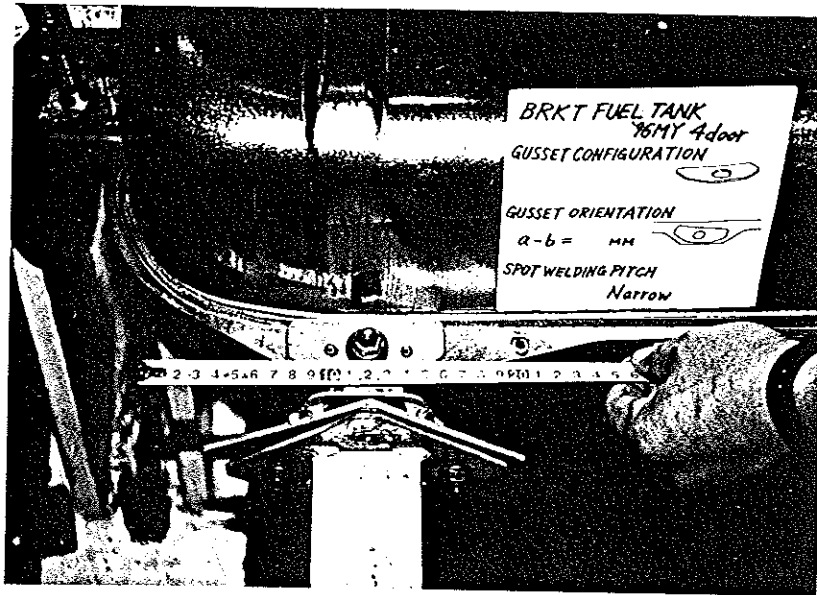
TEST No.	C2-4
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TEST RESULT

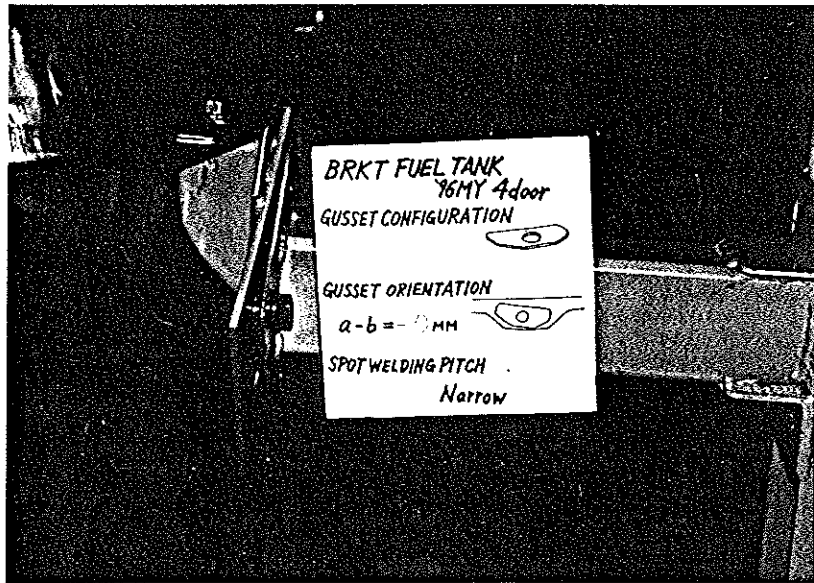
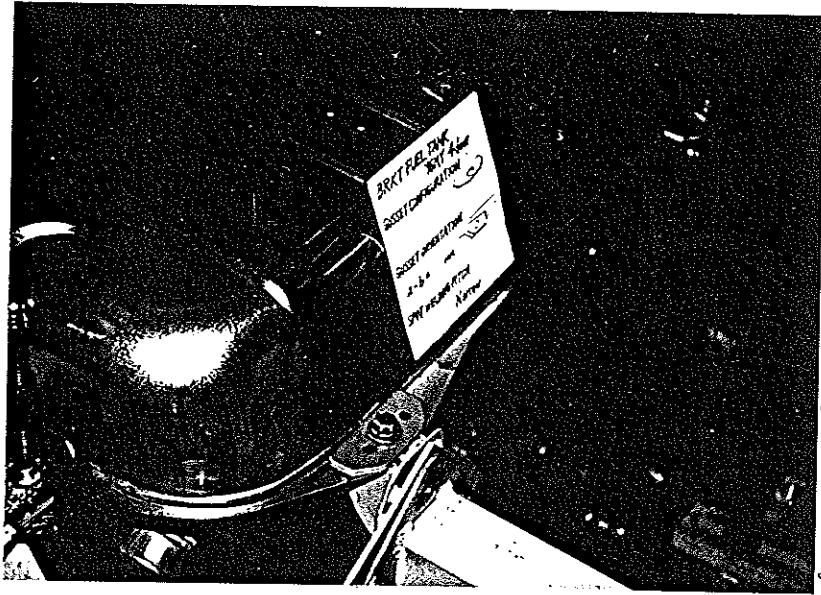
Gusset not contact with the tank wall.



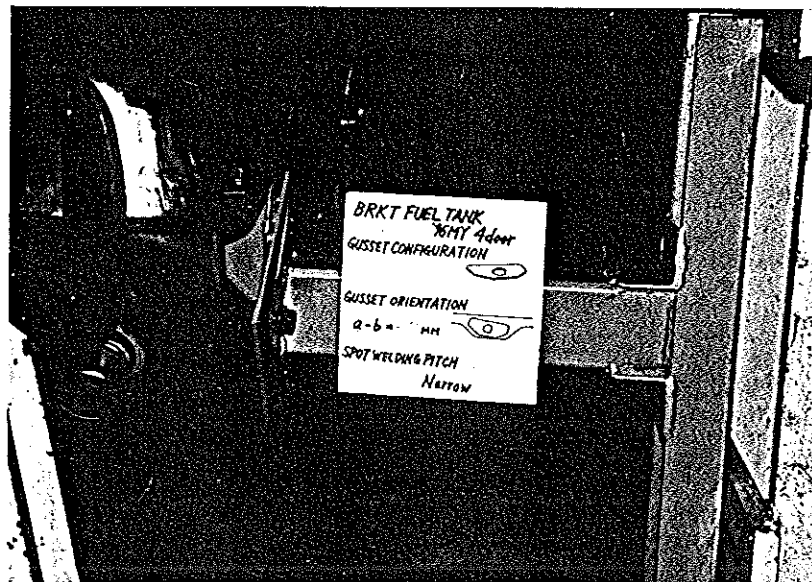
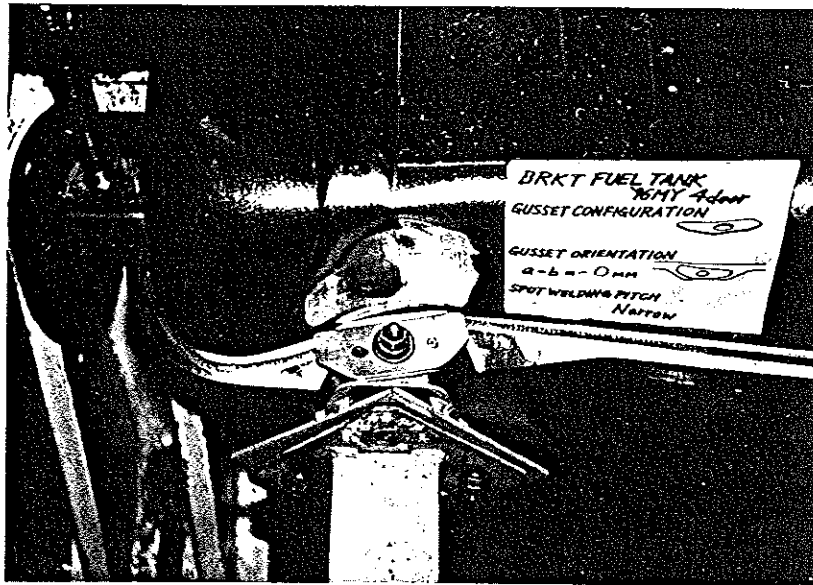
# 試験前 (Pre-Test)



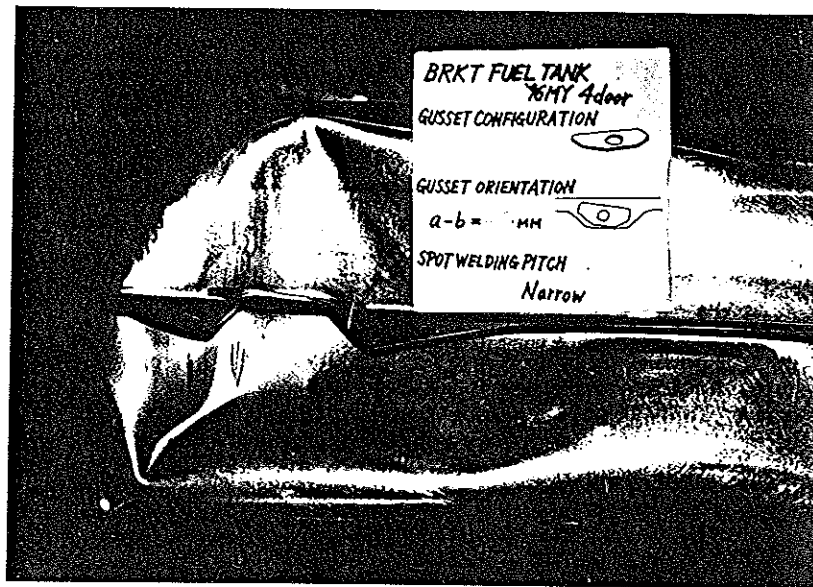
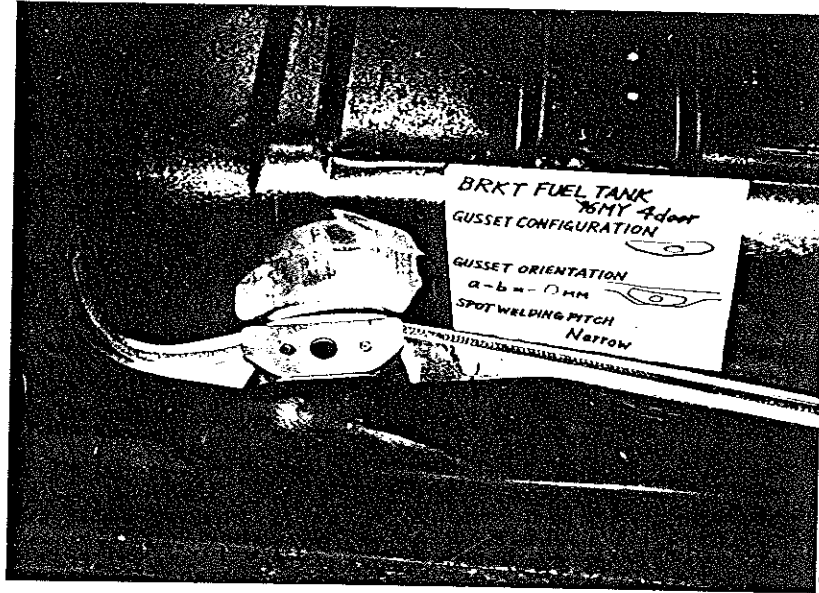
# 試験前 (Pre-Test)



試験後 (Post-Test)


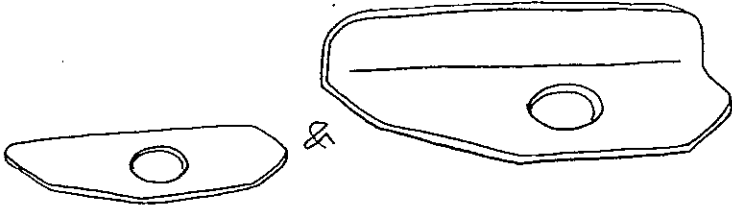

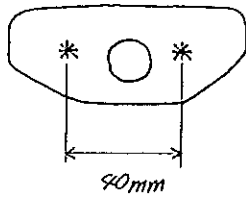


# 試験後 (Post-Test)





# FUEL TANK STATIC TEST

TEST No		C-3
TEST DATE		1996 / 6 / 7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	
	SPOT WELDING PITCH	

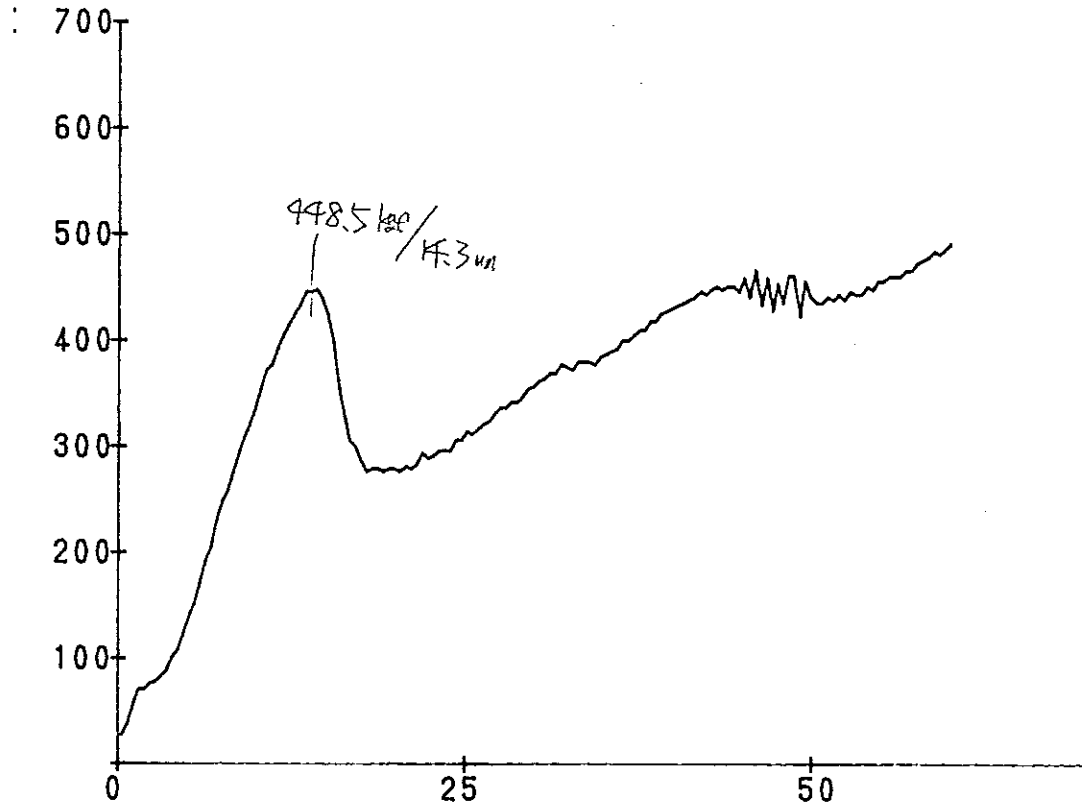
**S 211454**

TEST No

C-3

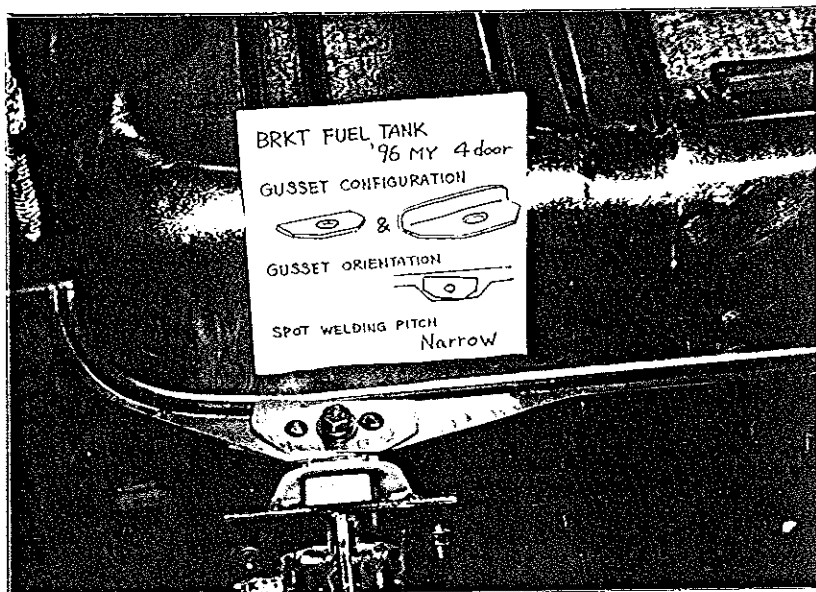
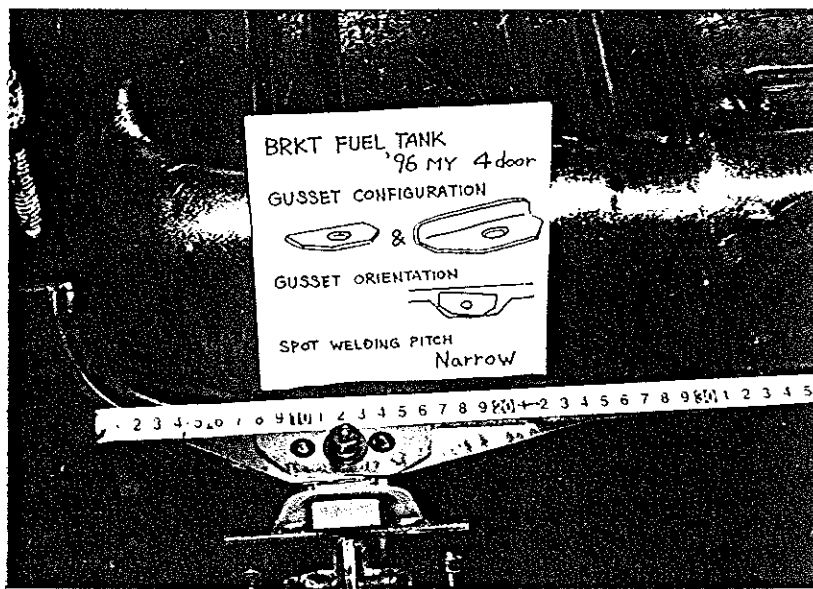
TEST RESULT

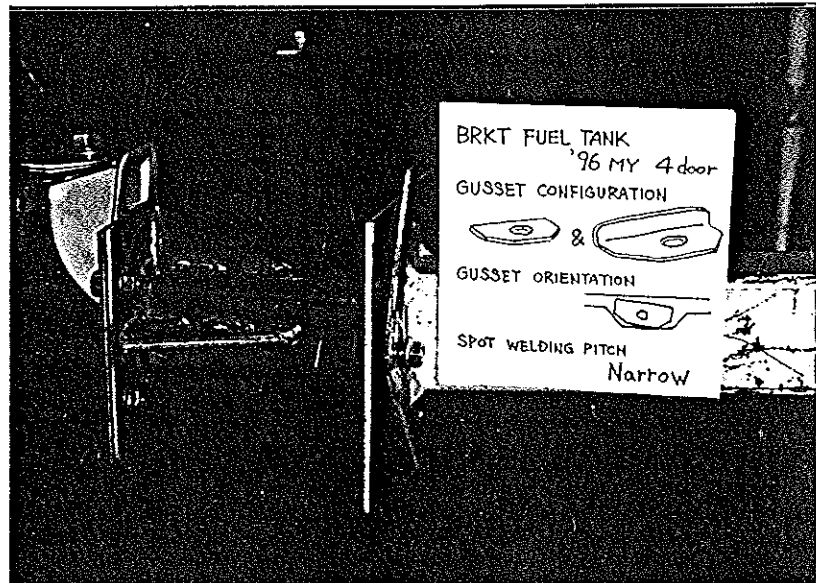
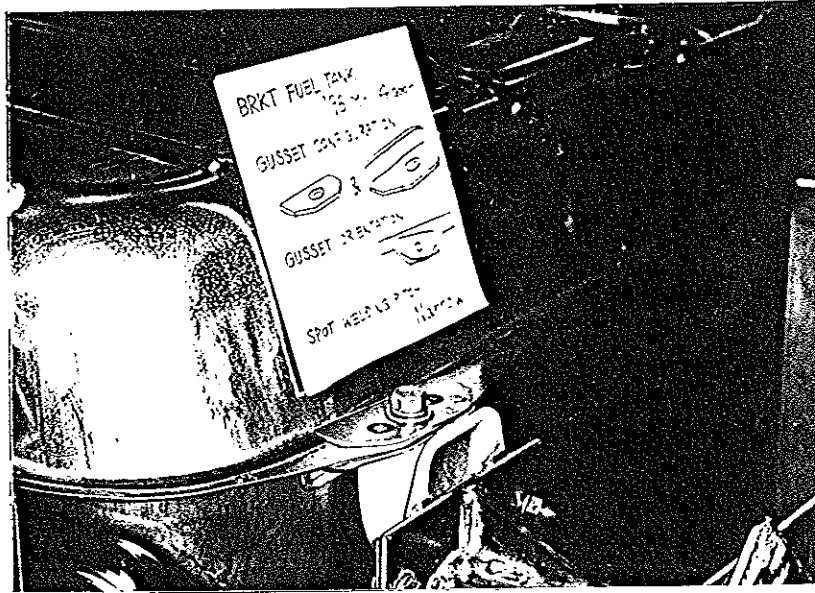
Gusset not contact tank wall



試験前 (Pre-Test)

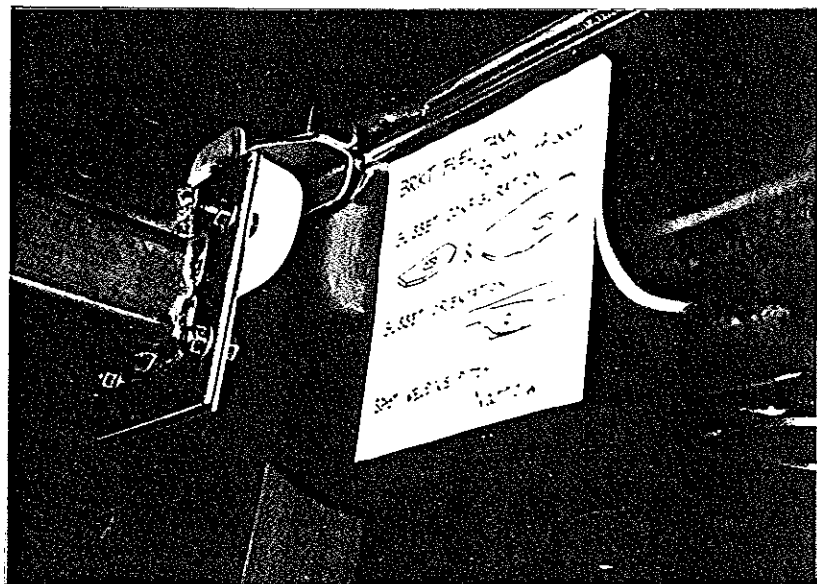
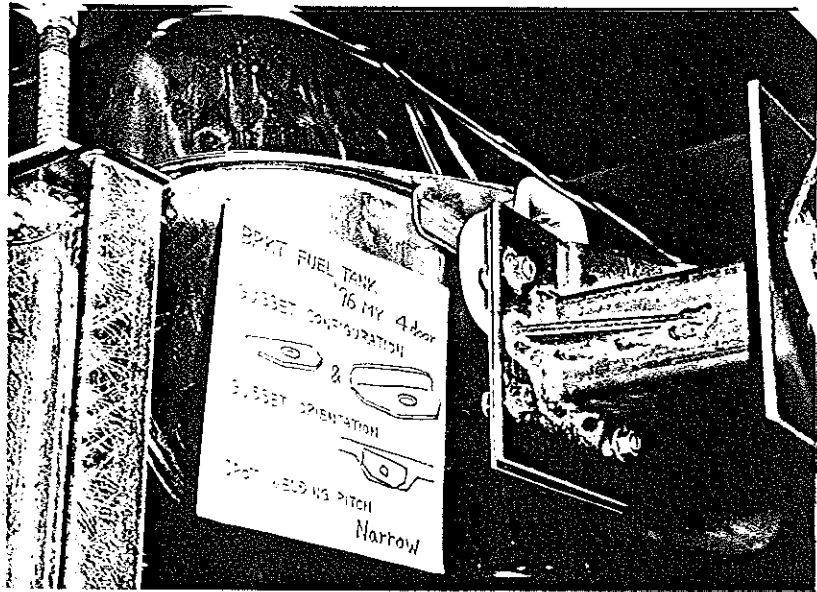
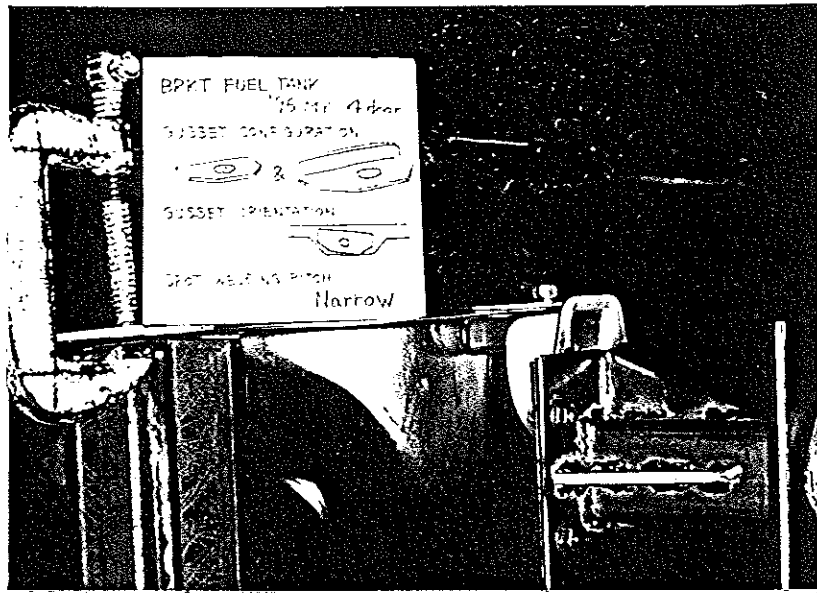
c-3



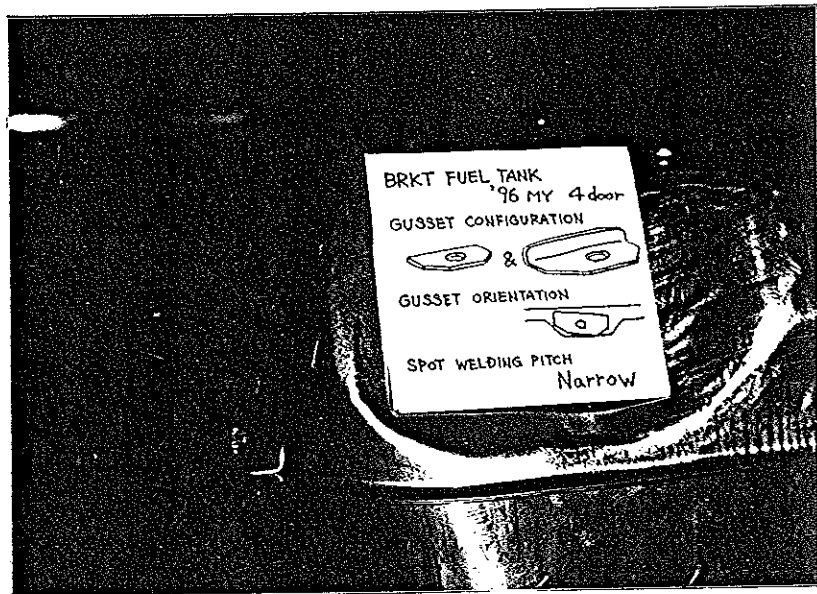
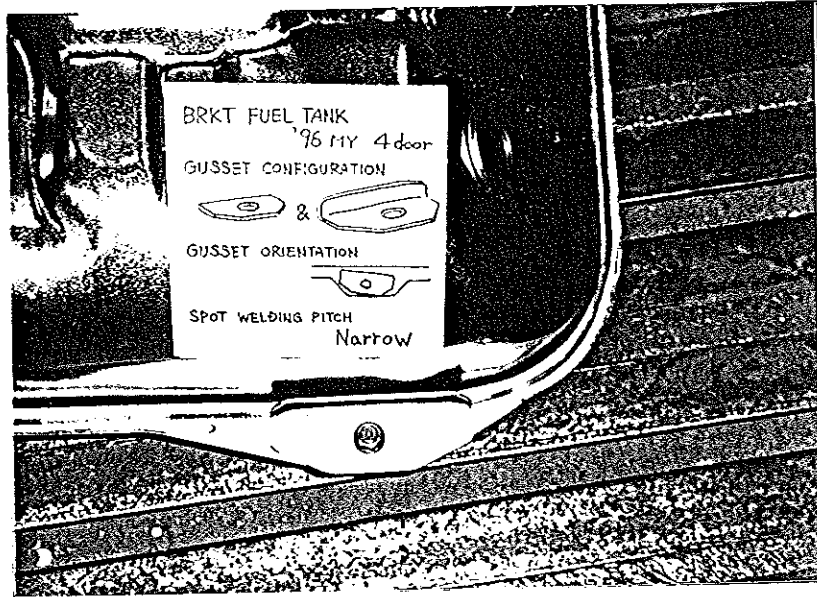


# 試験前 (Pre-Test)

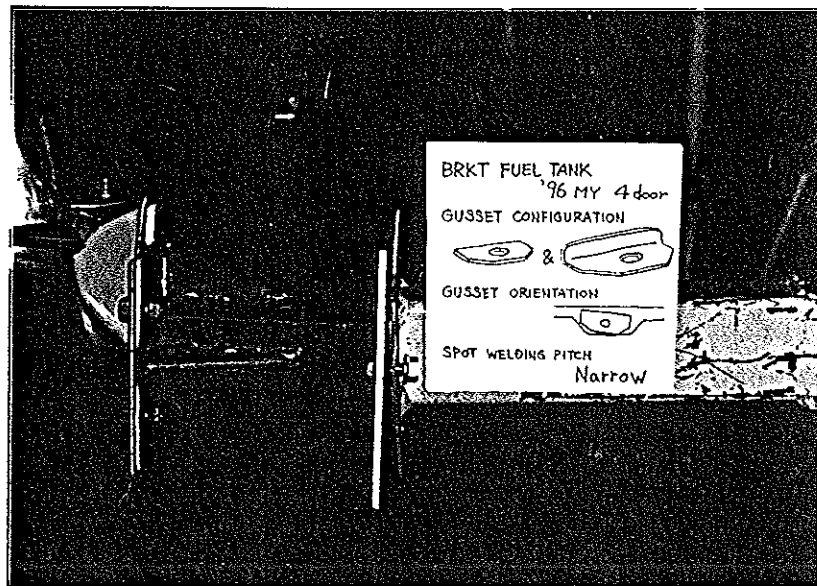
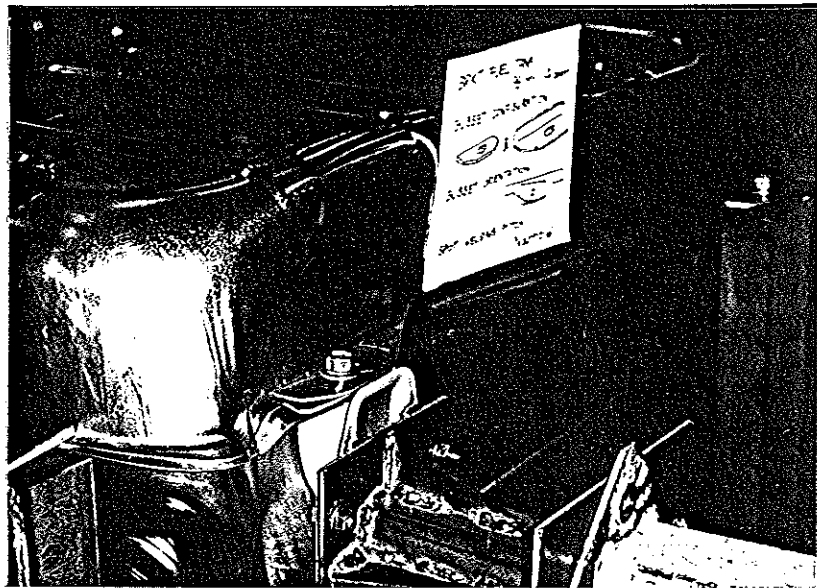
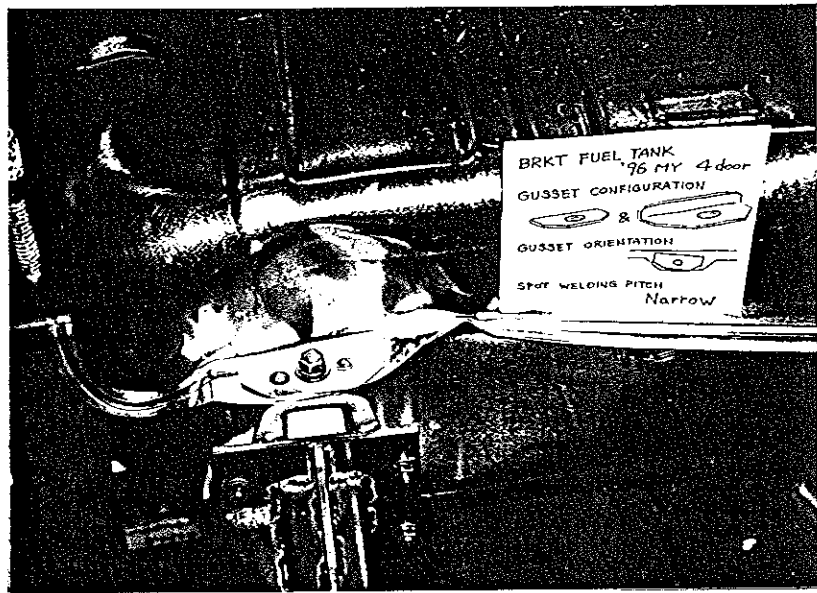
C-3



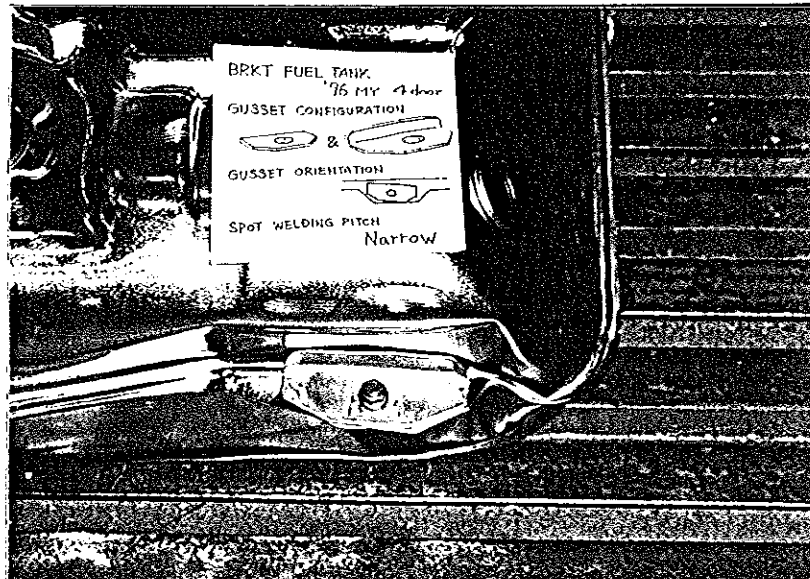
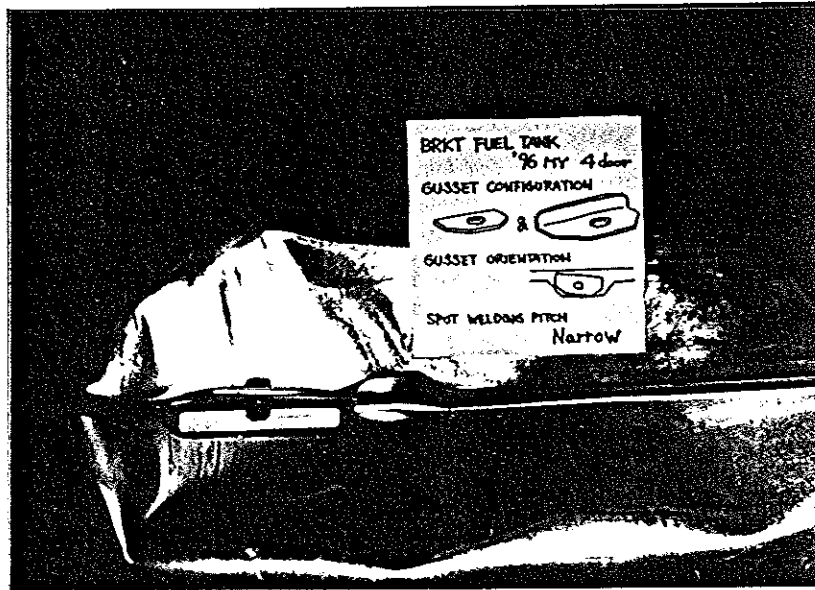
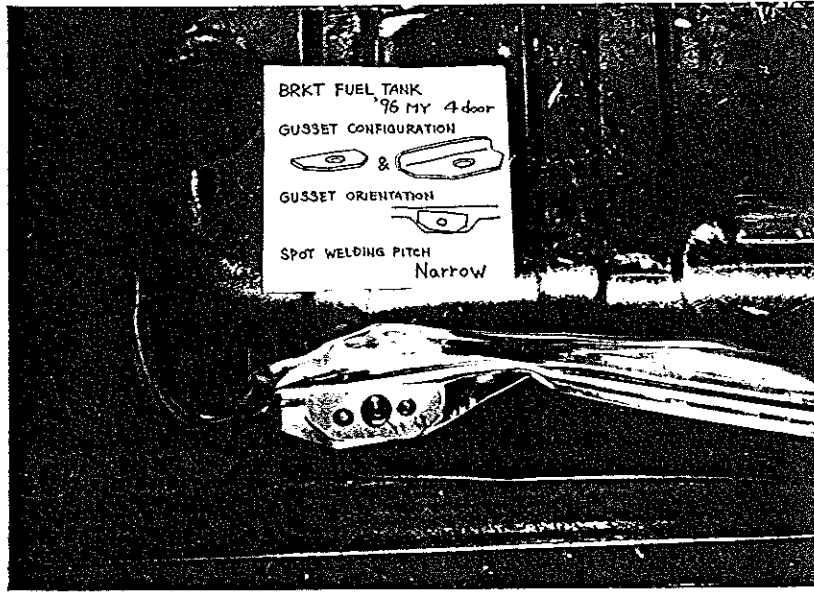
試験前 (Pre-Test)



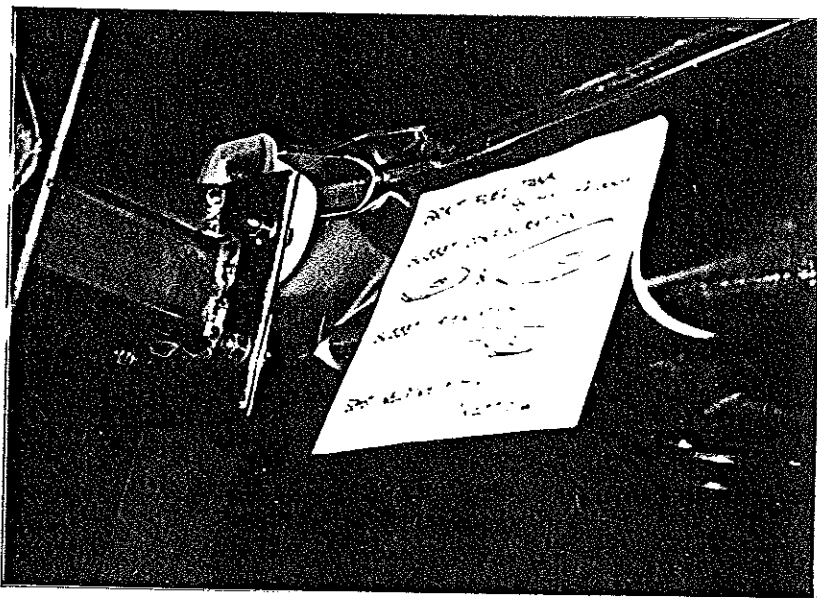
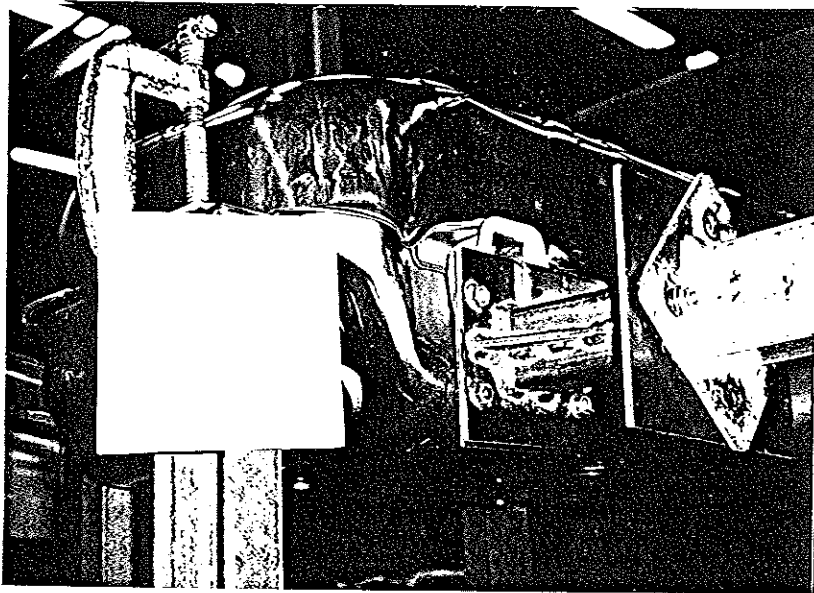
試験後 (Post-Test)




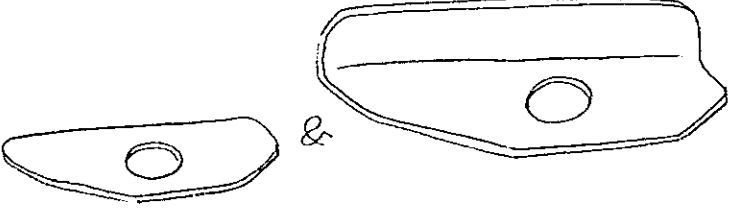
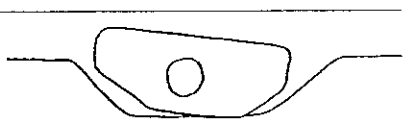
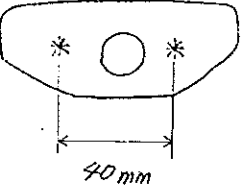
# 試験後 (Post-Test)







FUEL TANK STATIC TEST

TEST No		C-4
TEST DATE		1996 / 6 / 7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	
	SPOT WELDING PITCH	

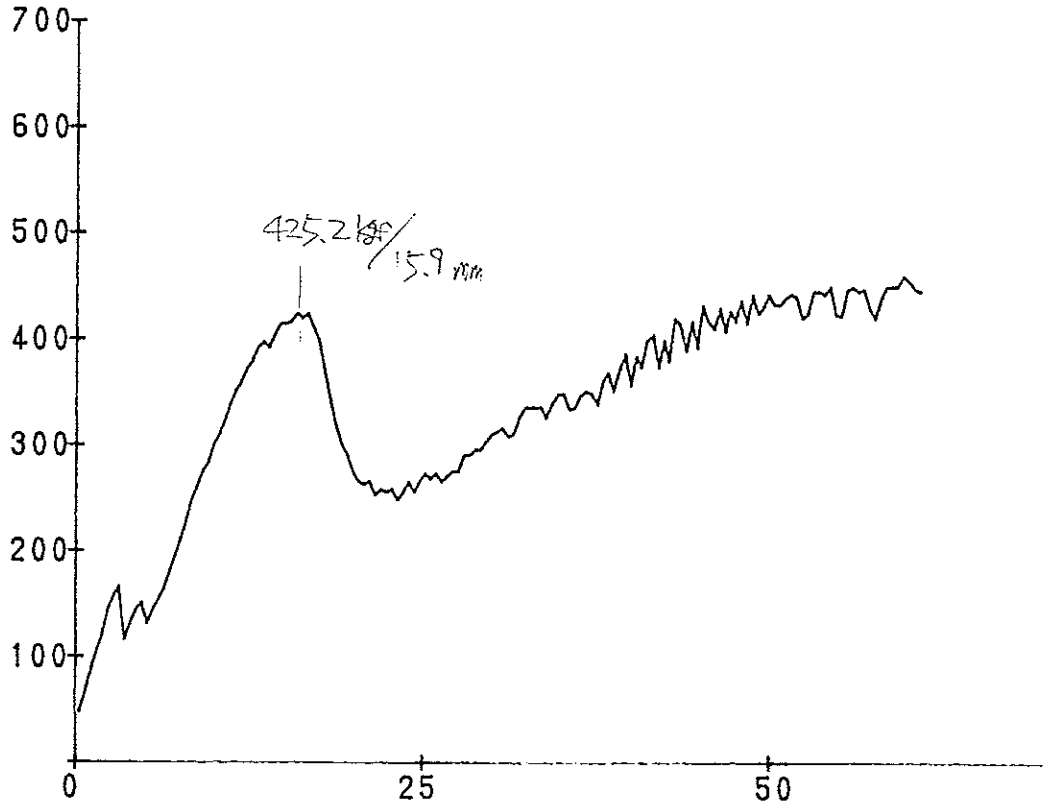
**S 211463**

TEST No

C - 4

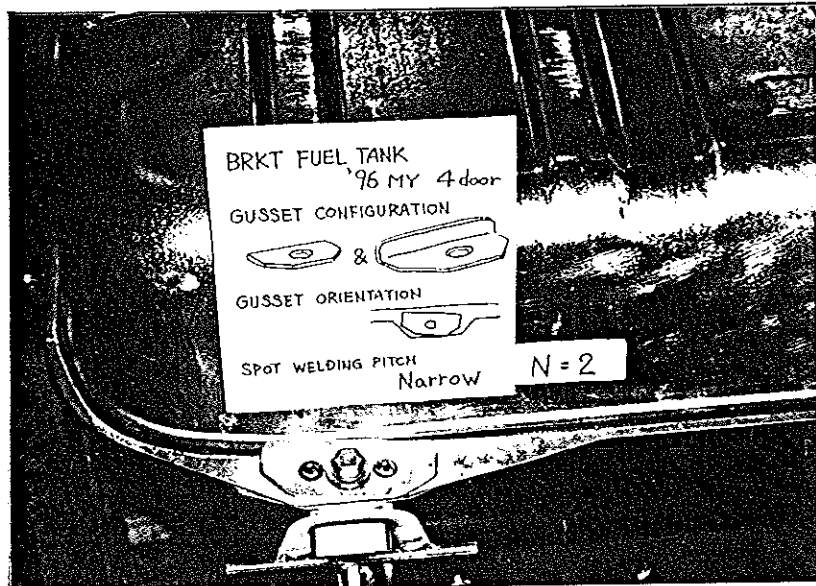
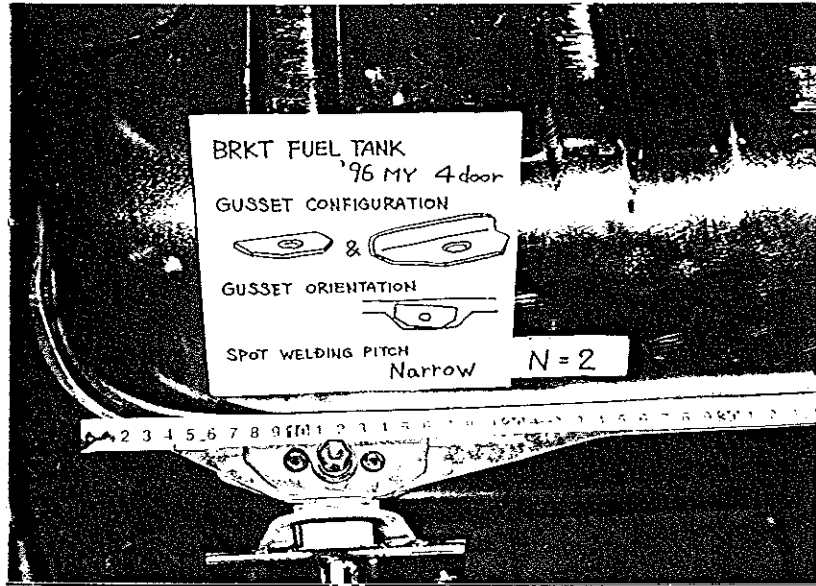
TEST RESULT

Gusset not contact tank wall



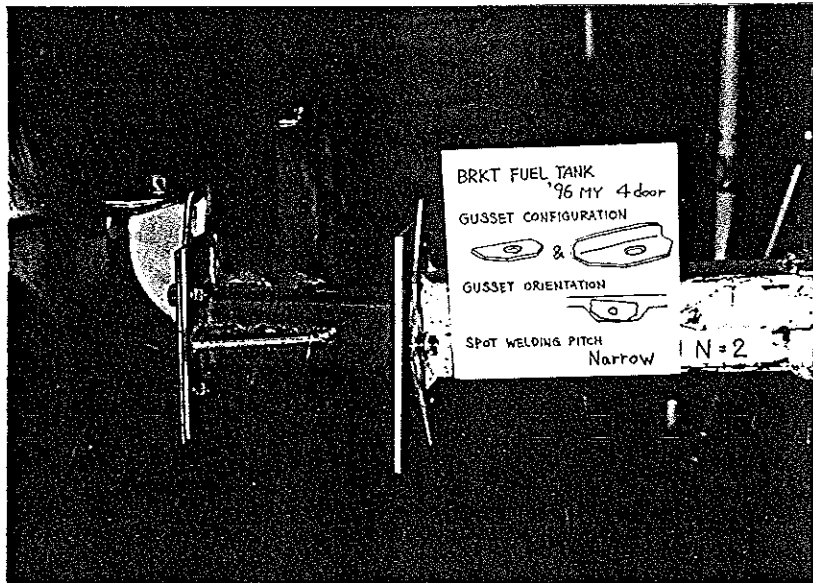
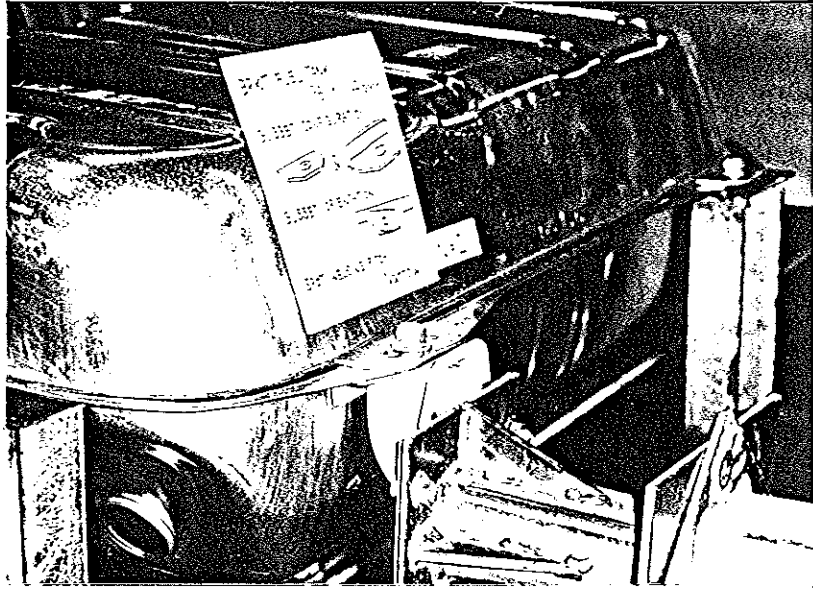
S 211464

試験前 (Pre-Test)



試験前 (Pre-Test)

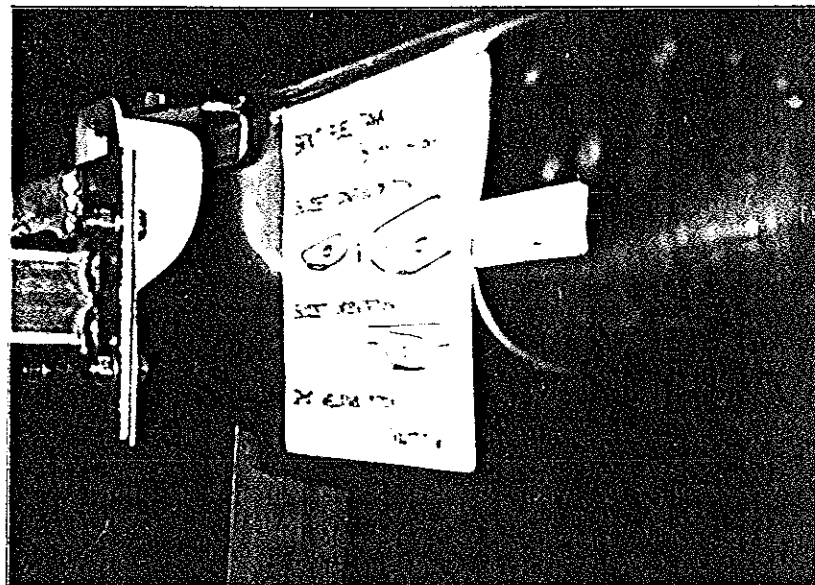
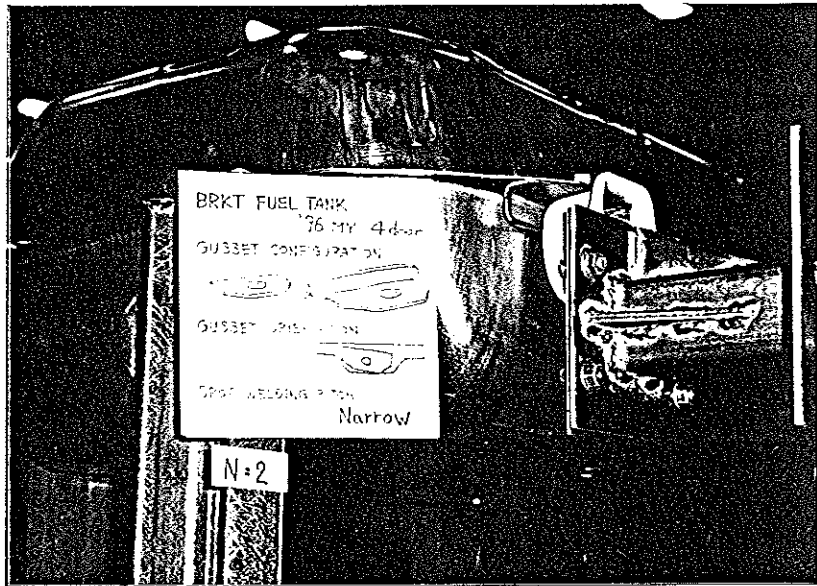
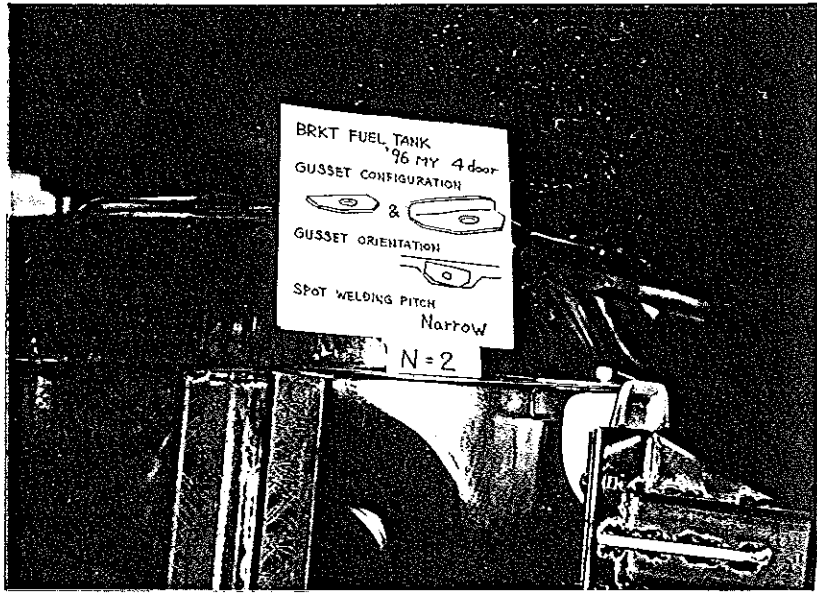
c-4



S 211466

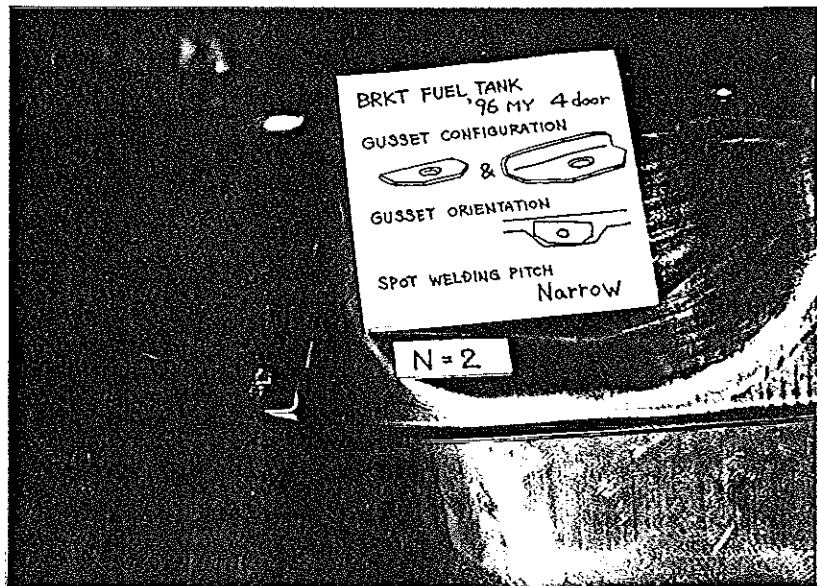
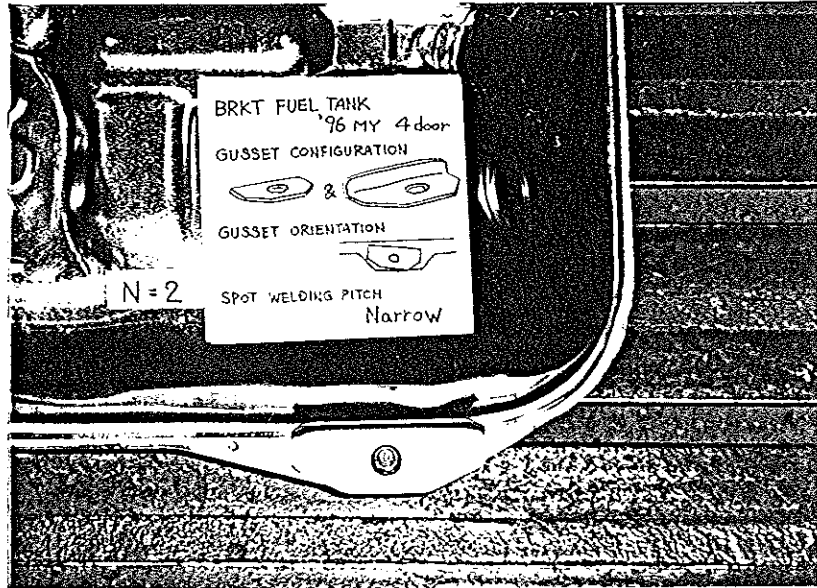
# 試験前 (Pre-Test)

C-4



試験前 (Pre-Test)

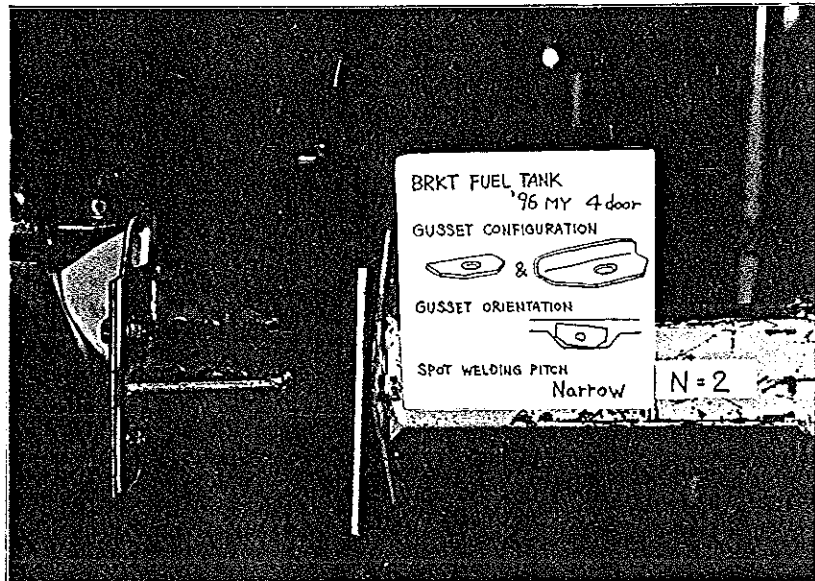
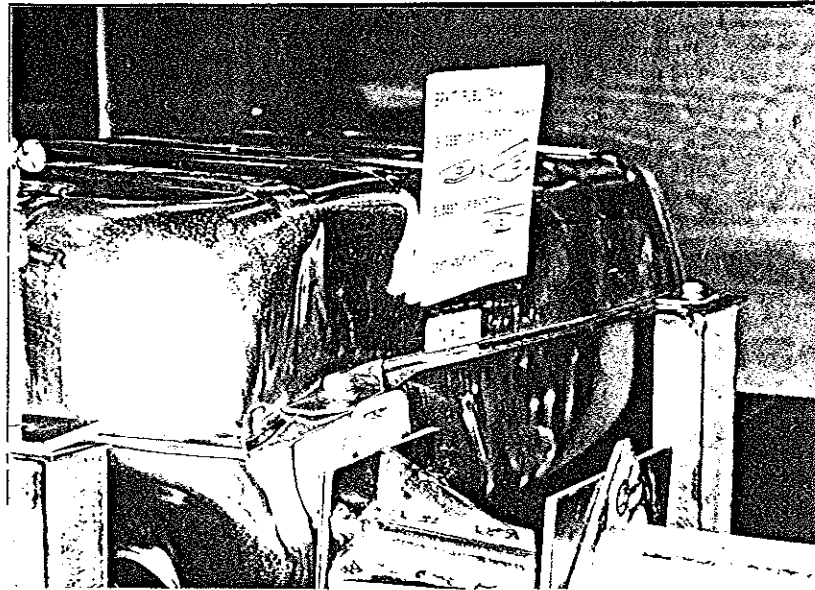
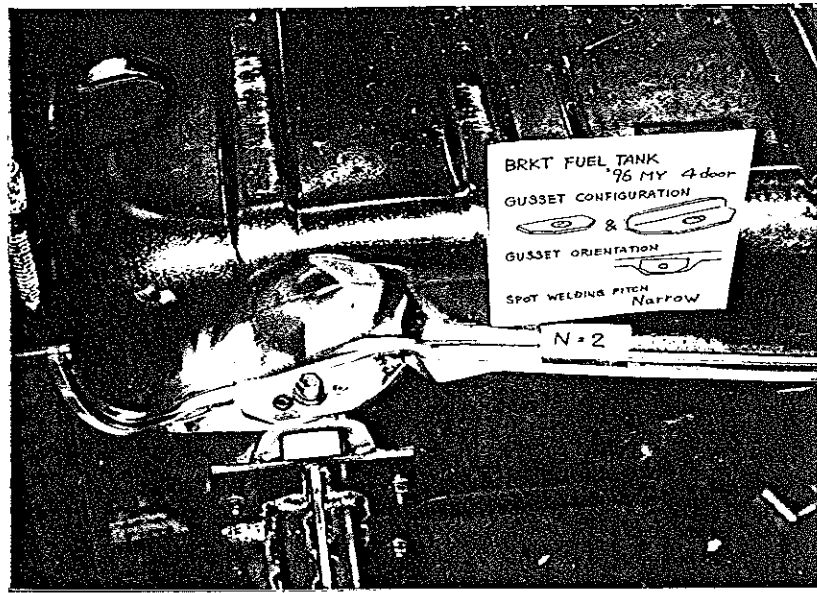
C-C



S 211468

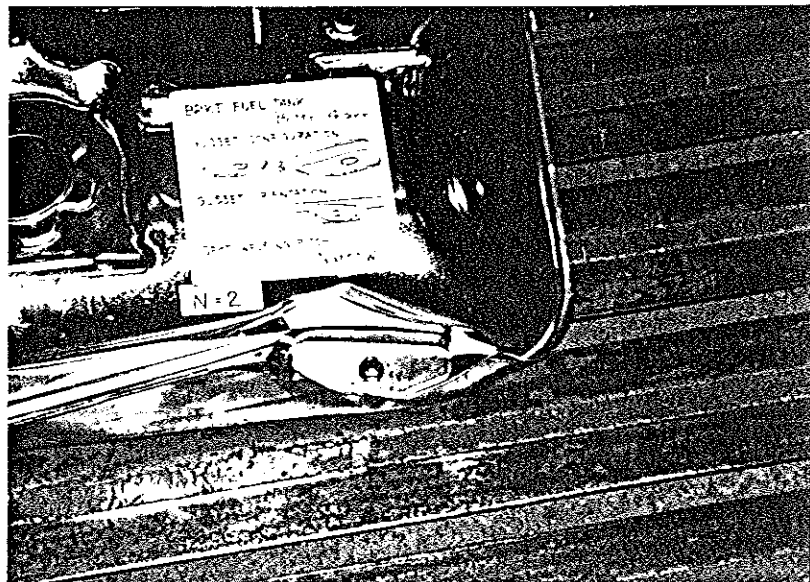
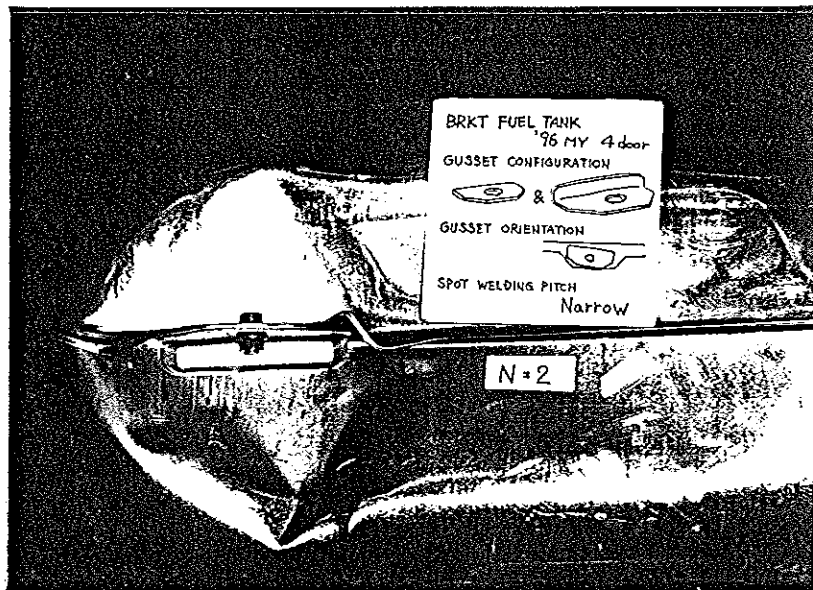
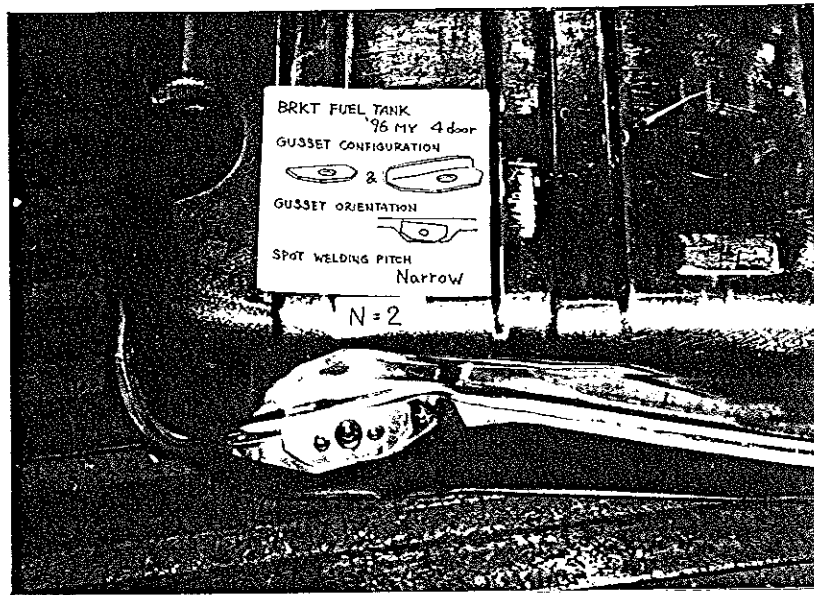
試験後 (Post-Test)

5-4

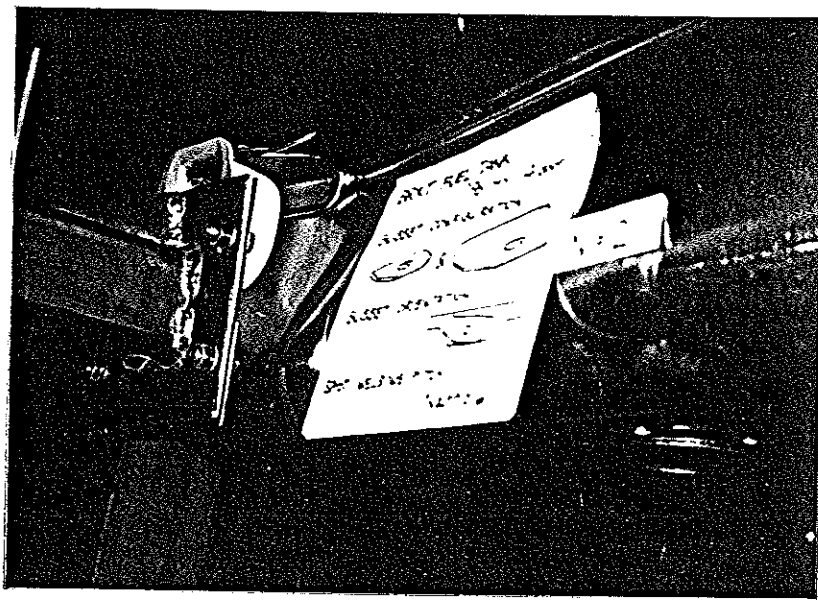
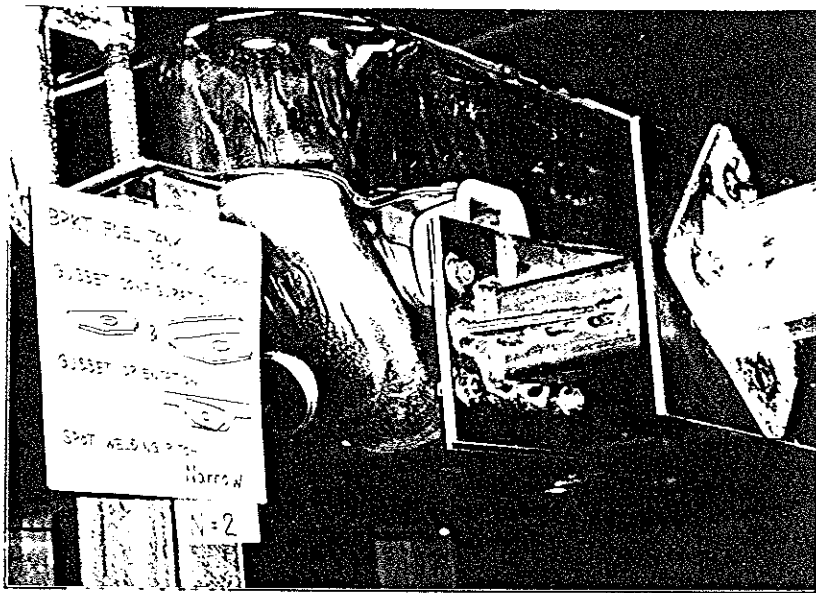




# 試験後 (Post-Test)




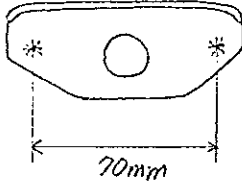


S 211470



S 211471

FUEL TANK STATIC TEST

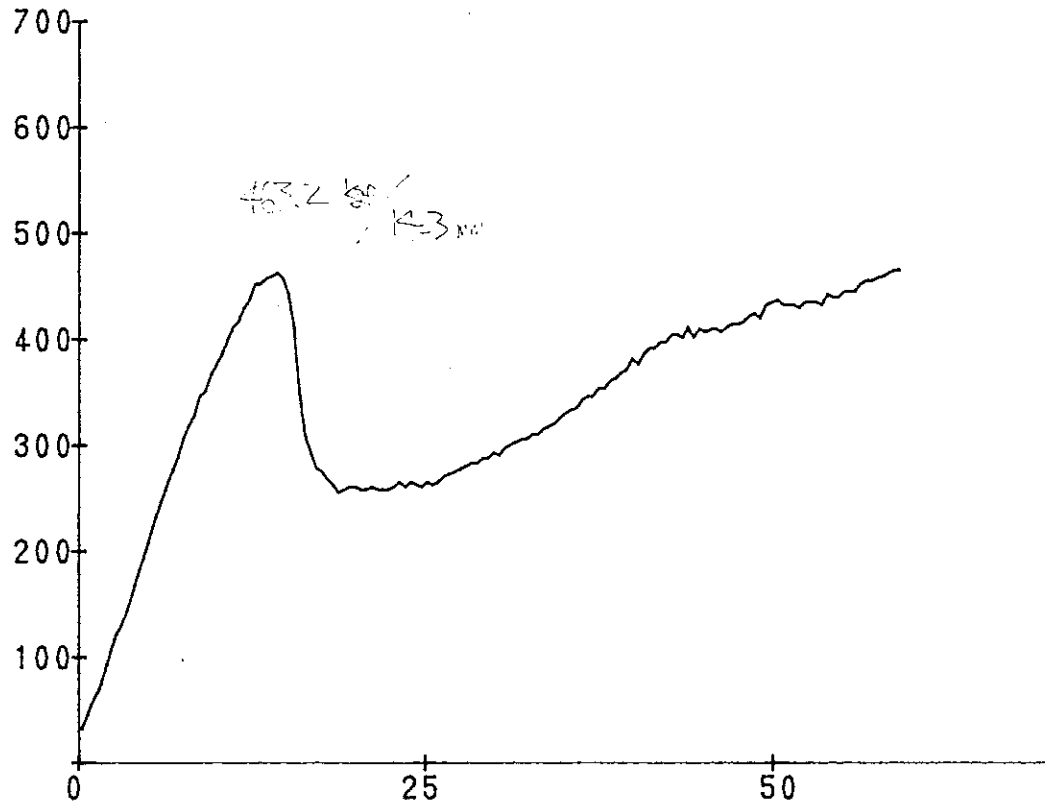
TEST No		c-5
TEST DATE		1996 / 6 / 7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	
	SPOT WELDING PITCH	

TEST No

C-5

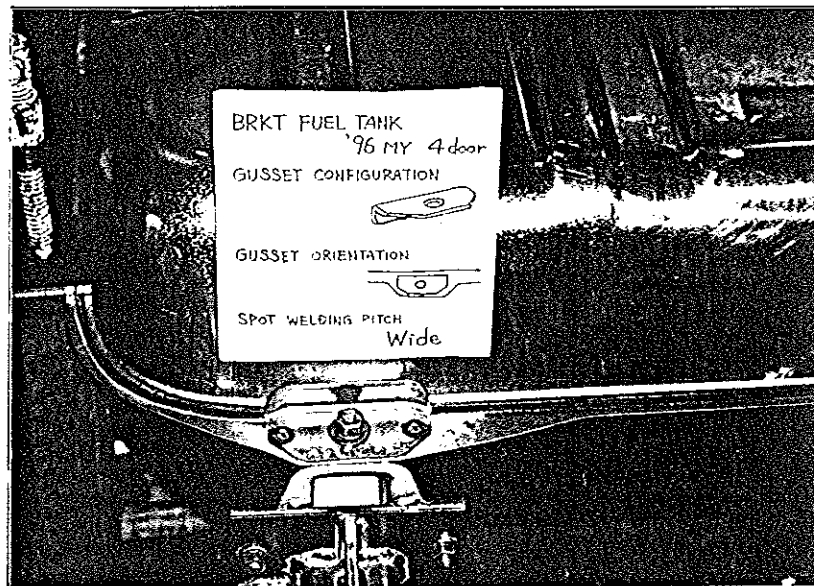
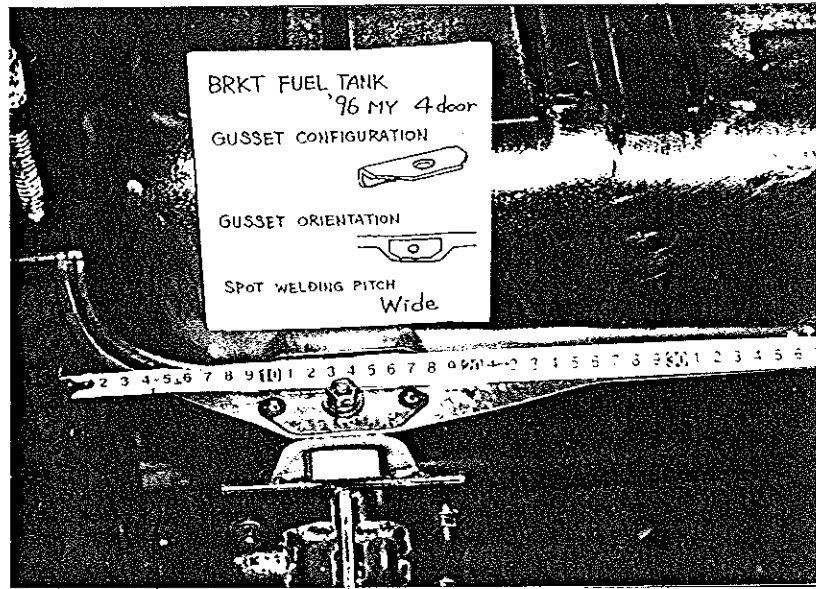
TEST RESULT

Gusset not contact tank wall

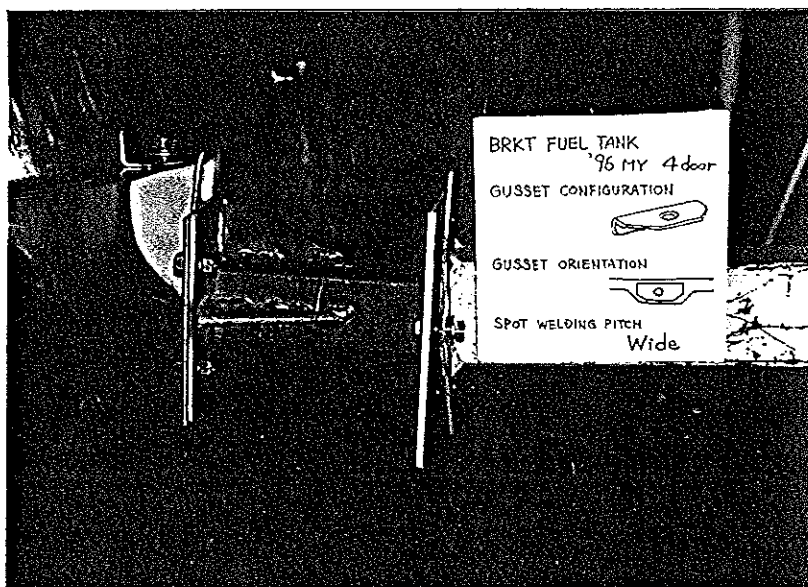
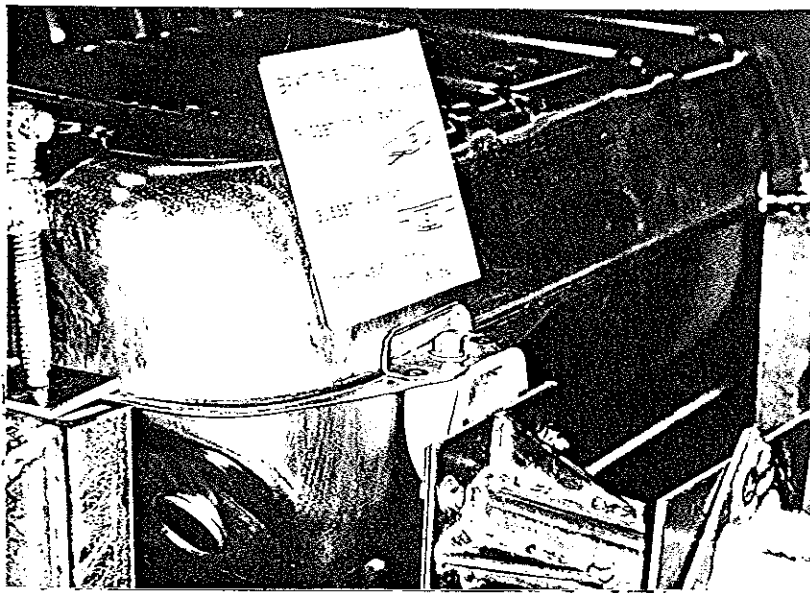


試験前 (Pre-Test)

c-5

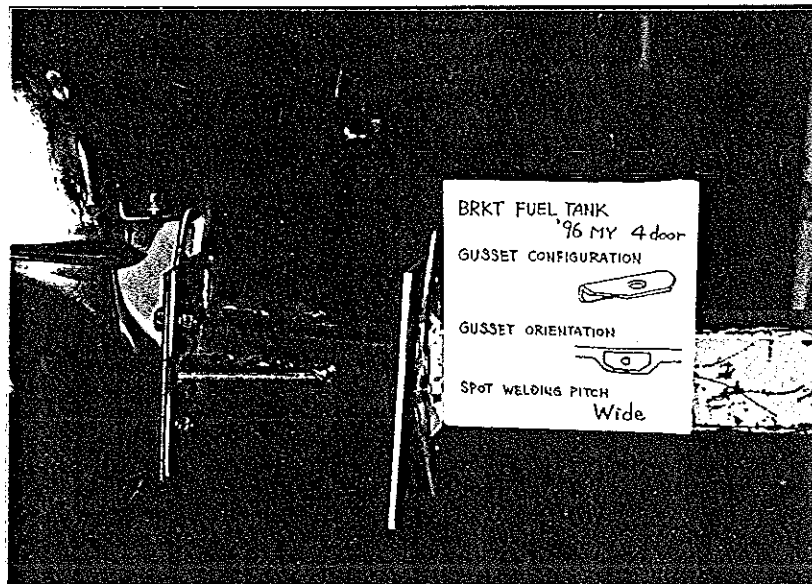
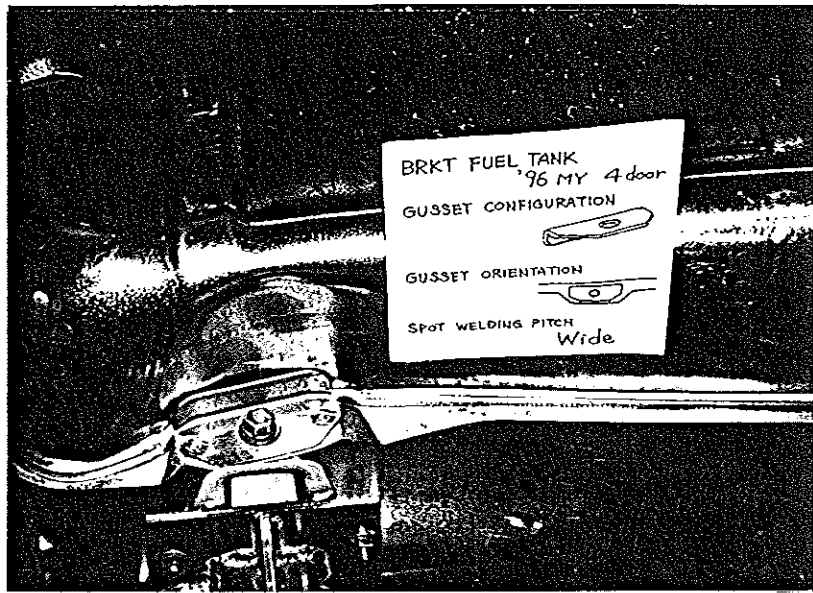


# 試験前 (Pre-Test)



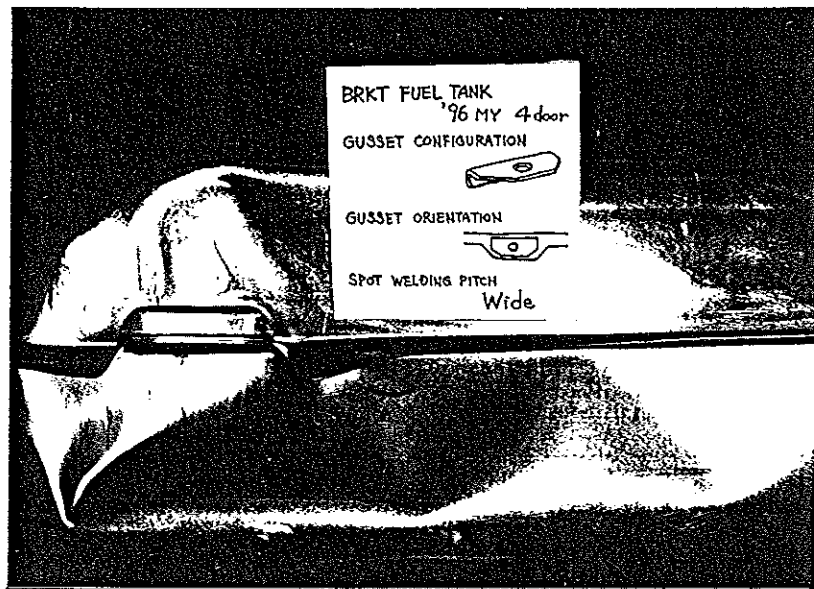
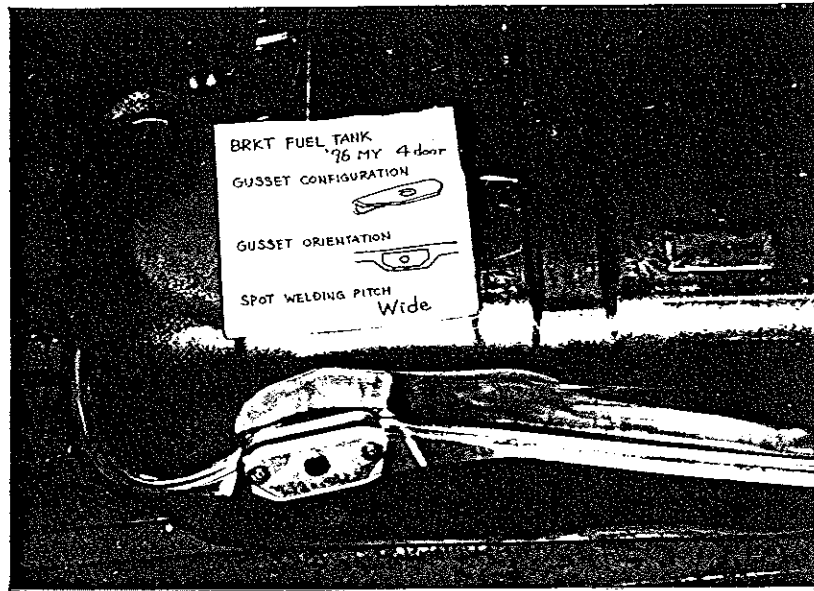
試験後 (Post-Test)

C-5



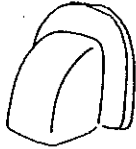


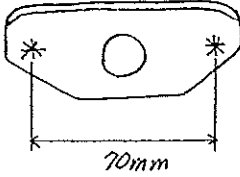
試験後 (Post-Test)

C-5





FUEL TANK STATIC TEST

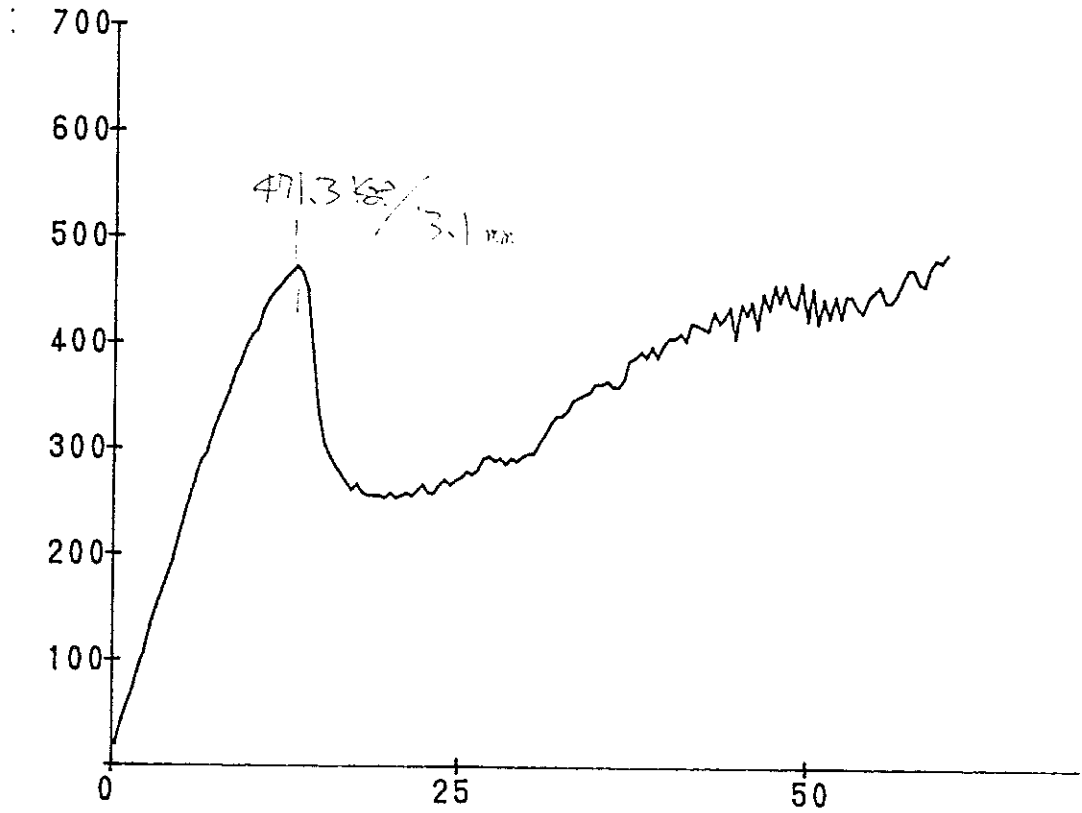
TEST No		c-6
TEST DATE		1996 / 6 / 7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	
	SPOT WELDING PITCH	

TEST No

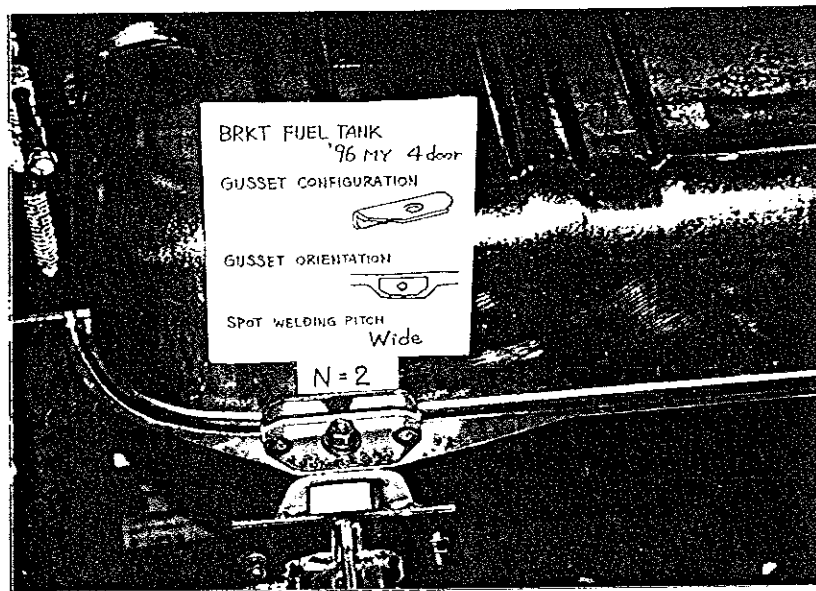
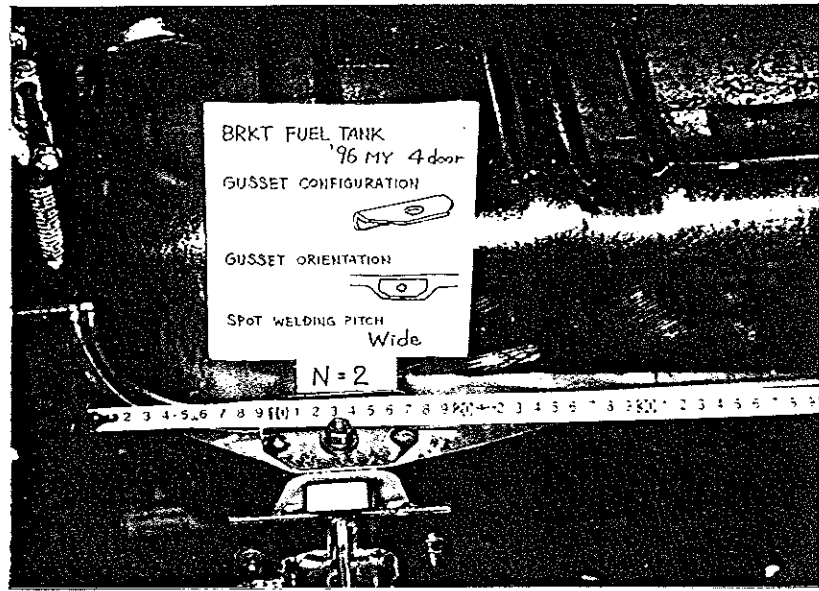
C-6

TEST RESULT

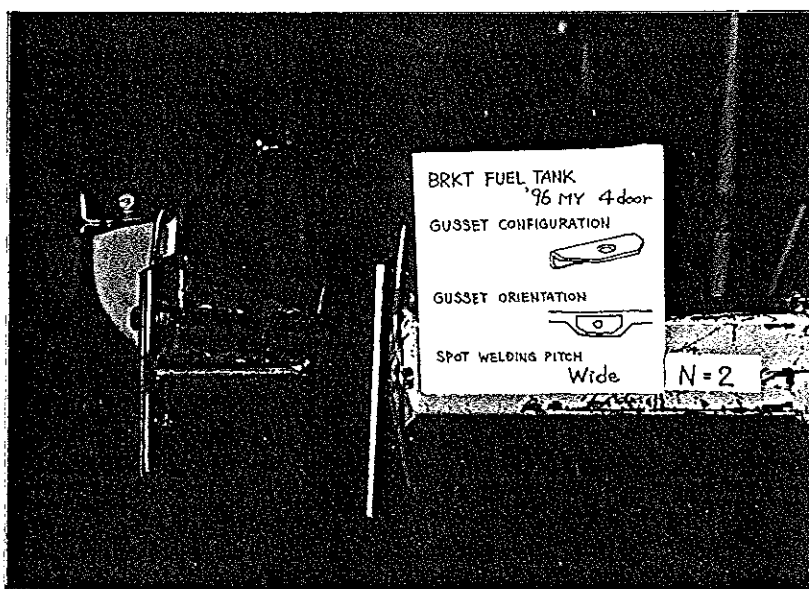
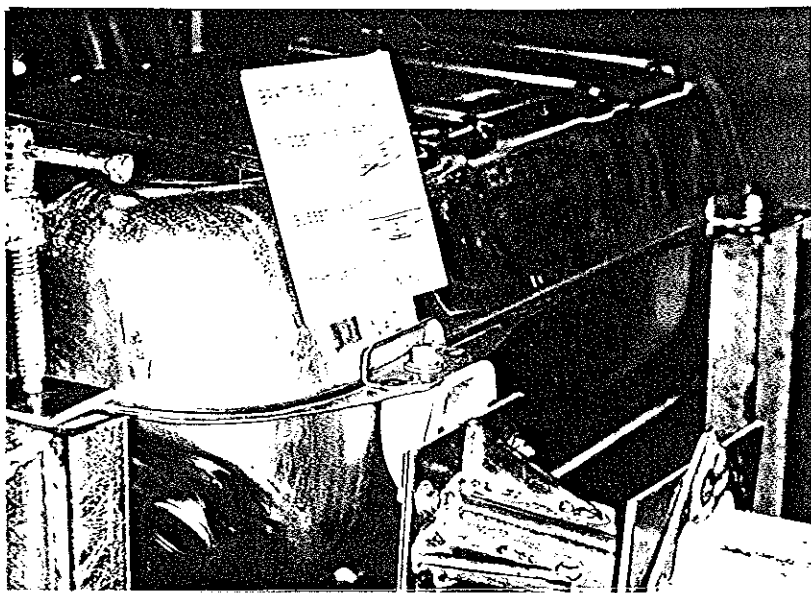
Gusset not contact tank wall



# 試験前 (Pre-Test)

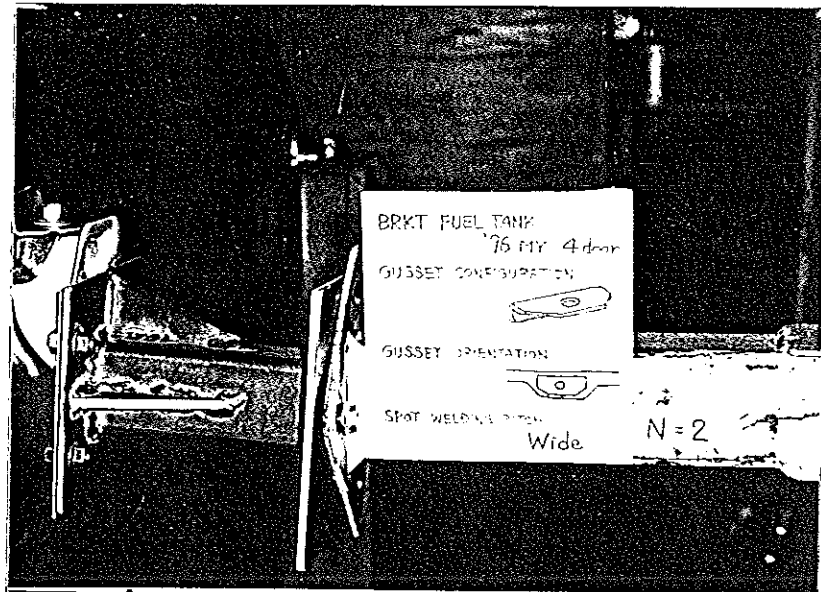
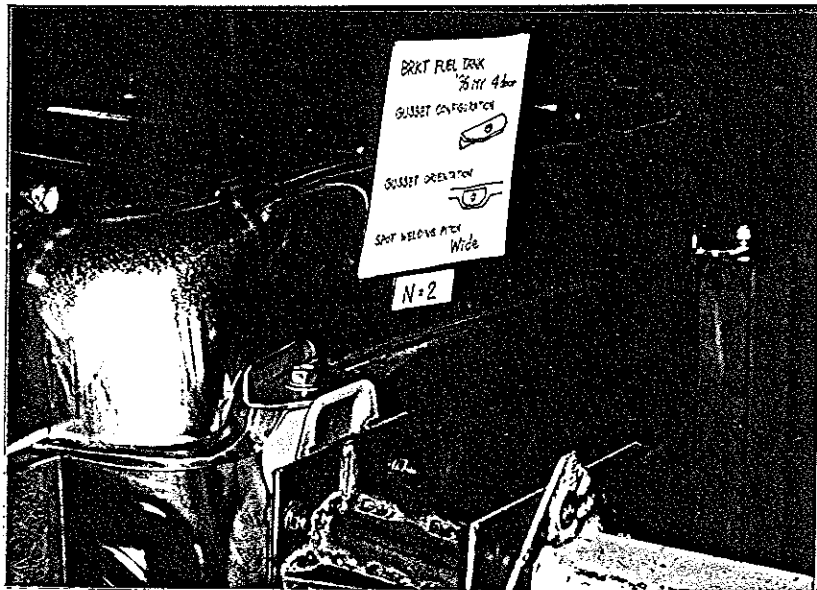
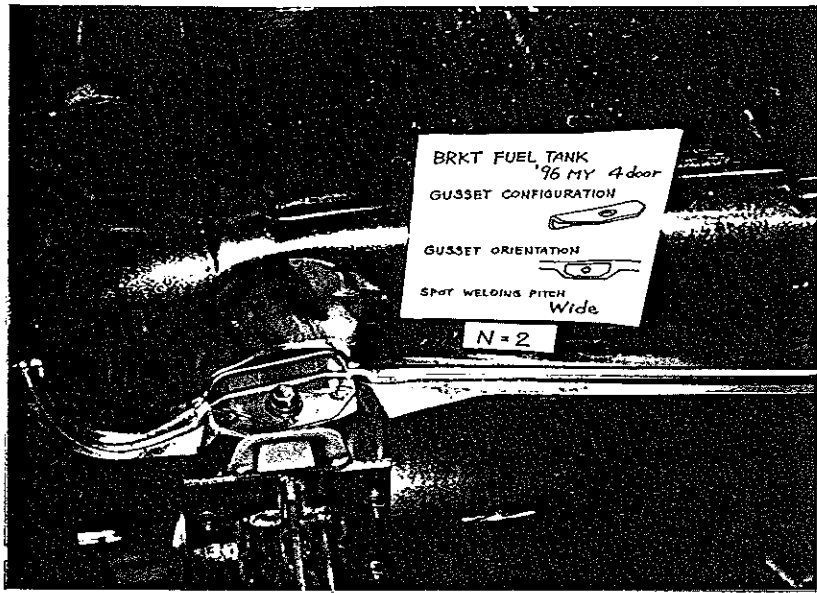


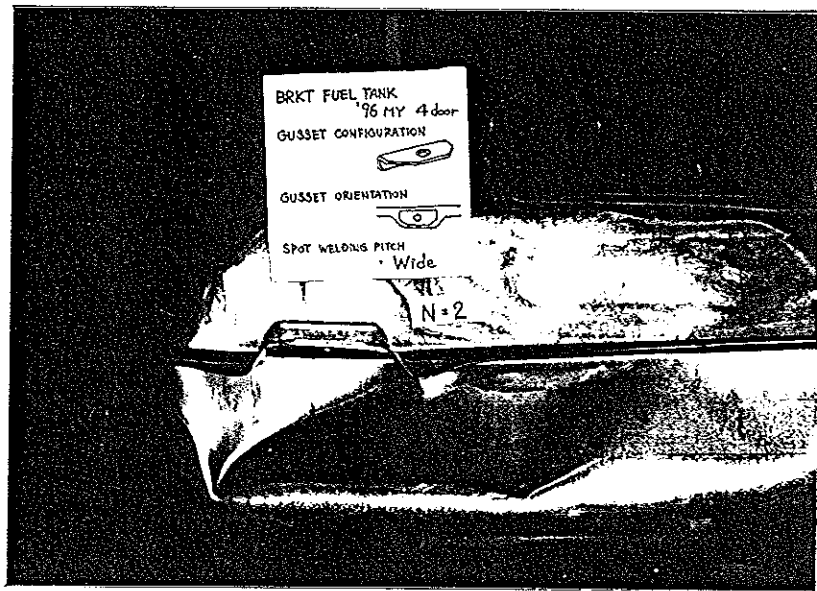
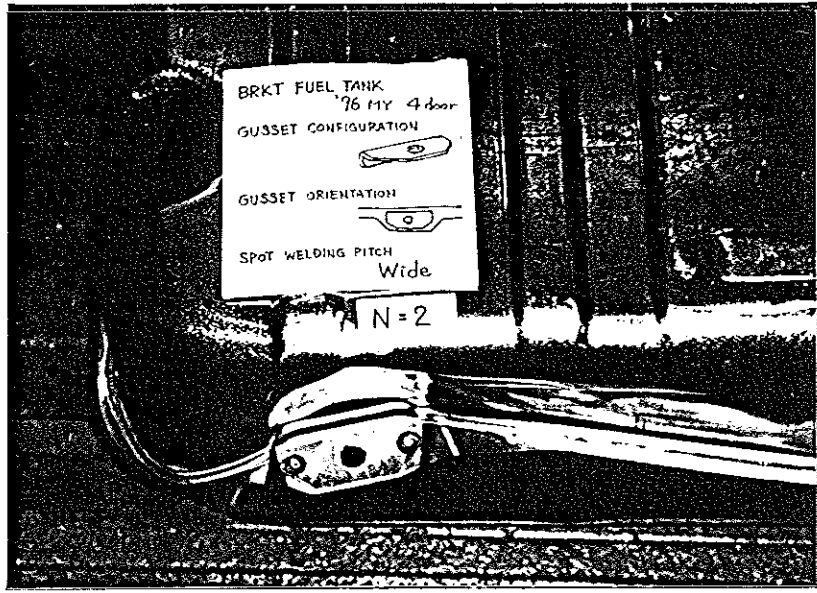
# 試験前 (Pre-Test)




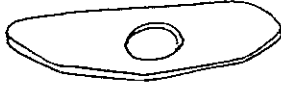
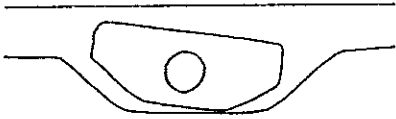
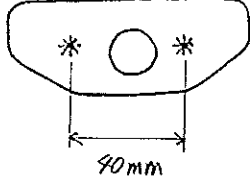
試験後 (Post-Test)

C-0





FUEL TANK STATIC TEST

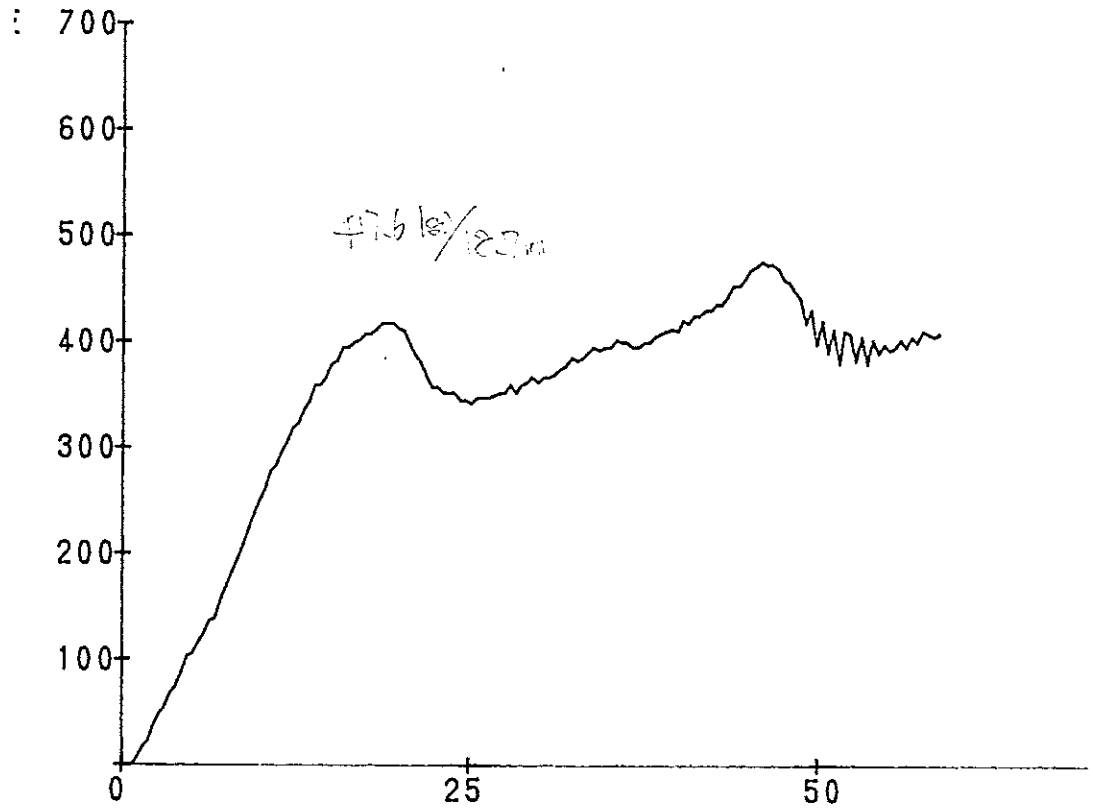
TEST No		C-7
TEST DATE		1996 / 6 / 7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	
	SPOT WELDING PITCH	

TEST No

e-7

TEST RESULT

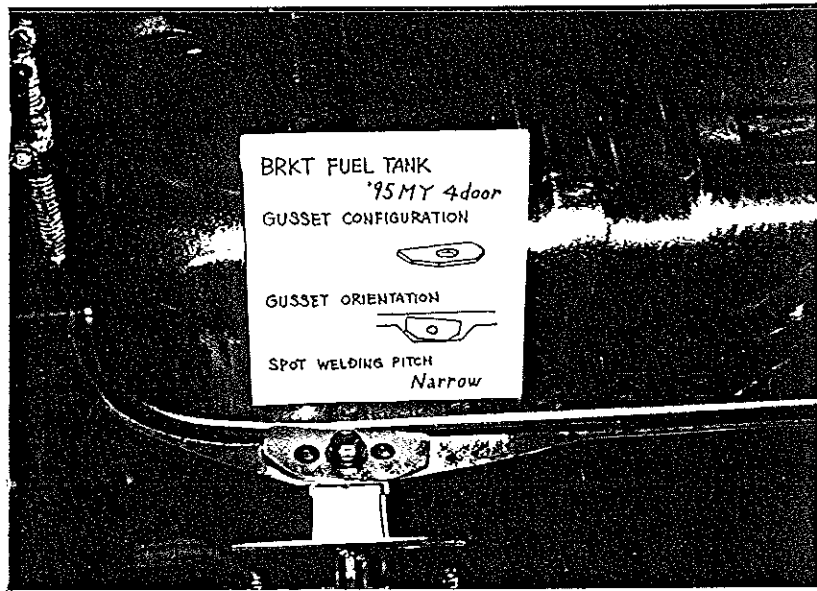
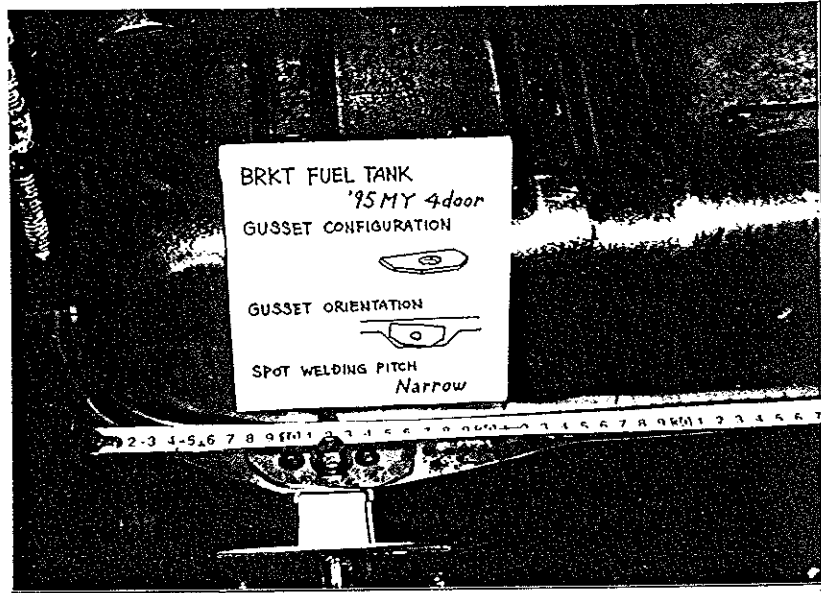
Gusset not contact tank wall



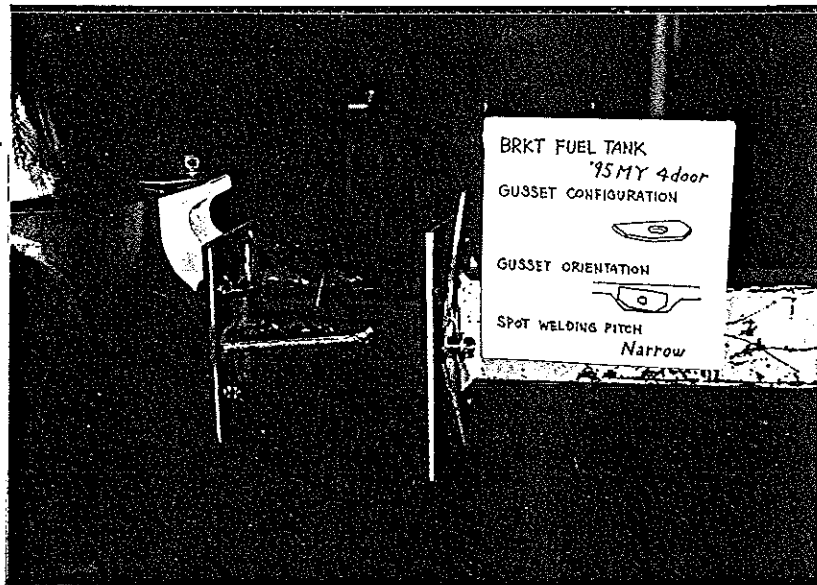
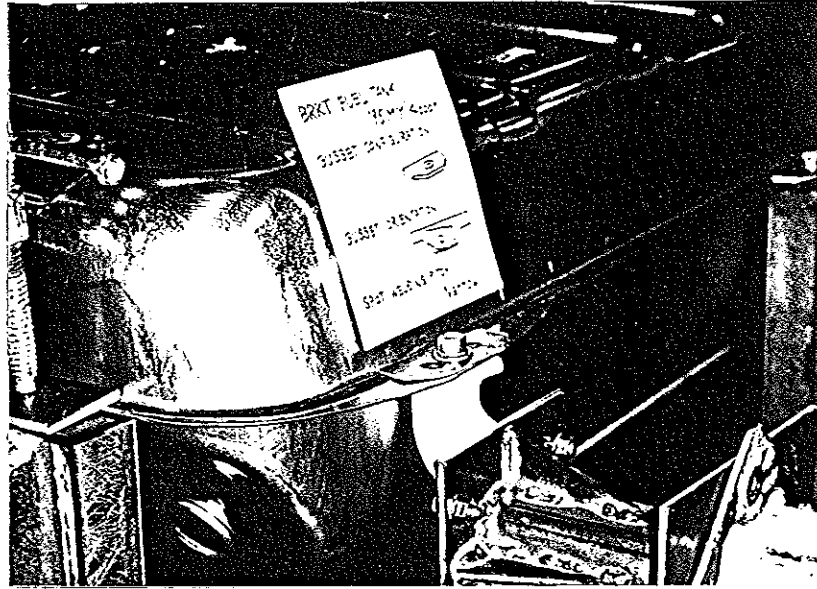
S 211485



試験前 (Pre-Test)

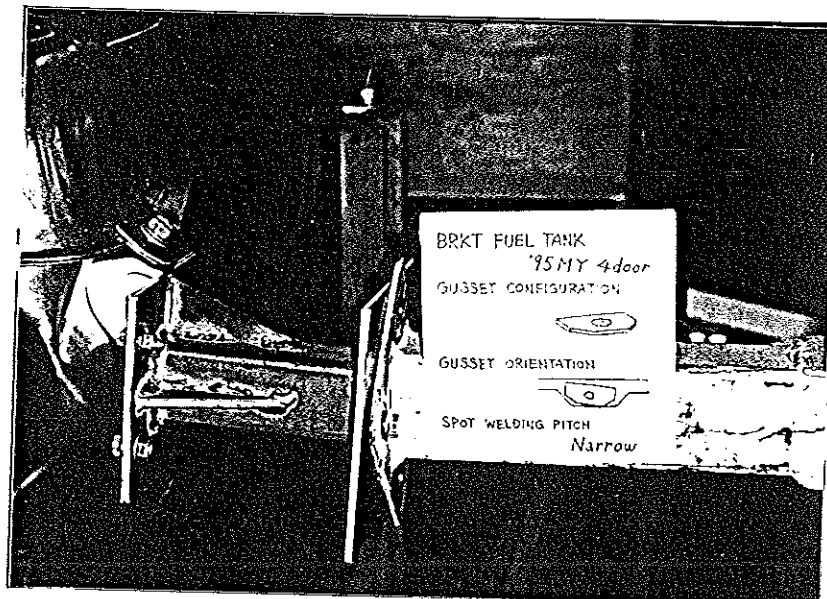
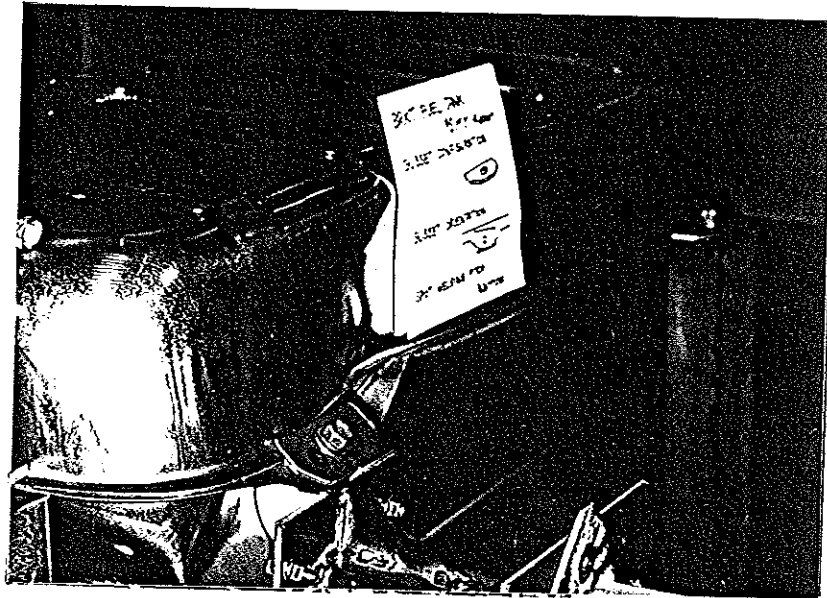
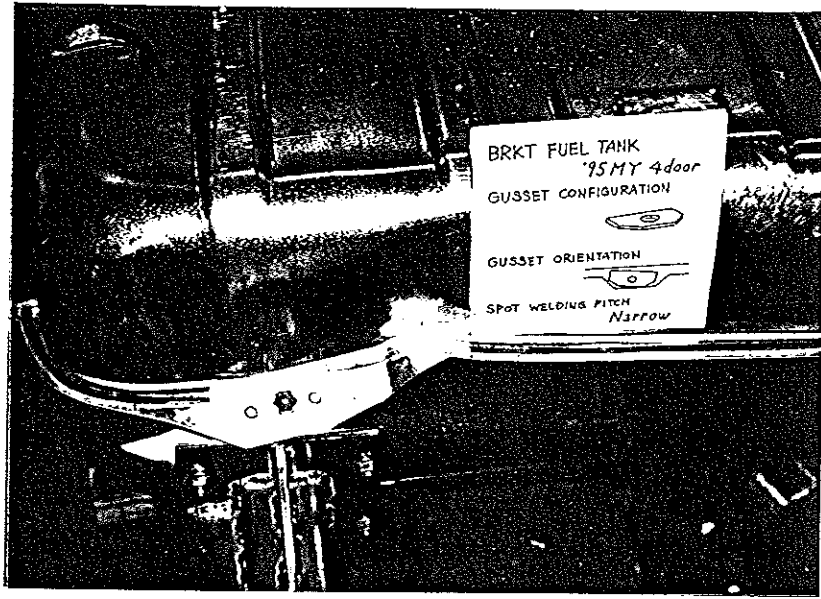


# 試験前 (Pre-Test)



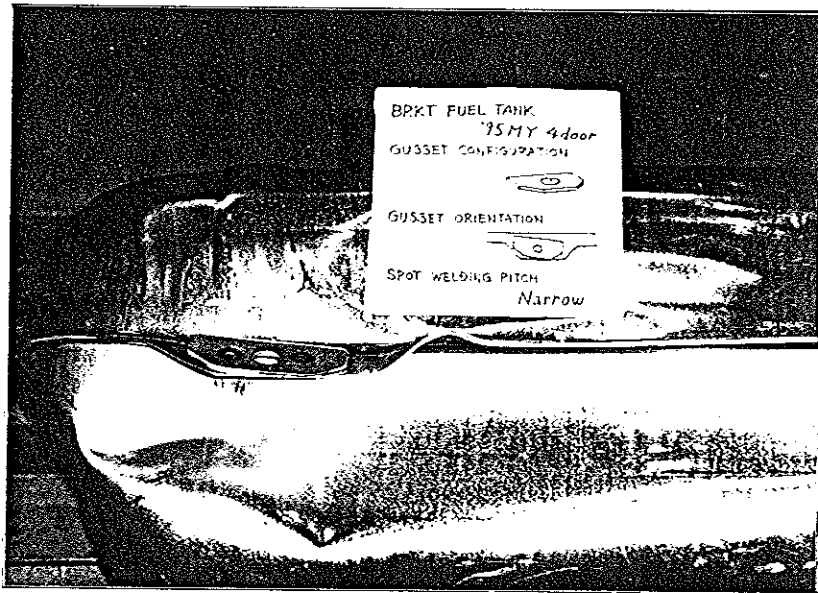
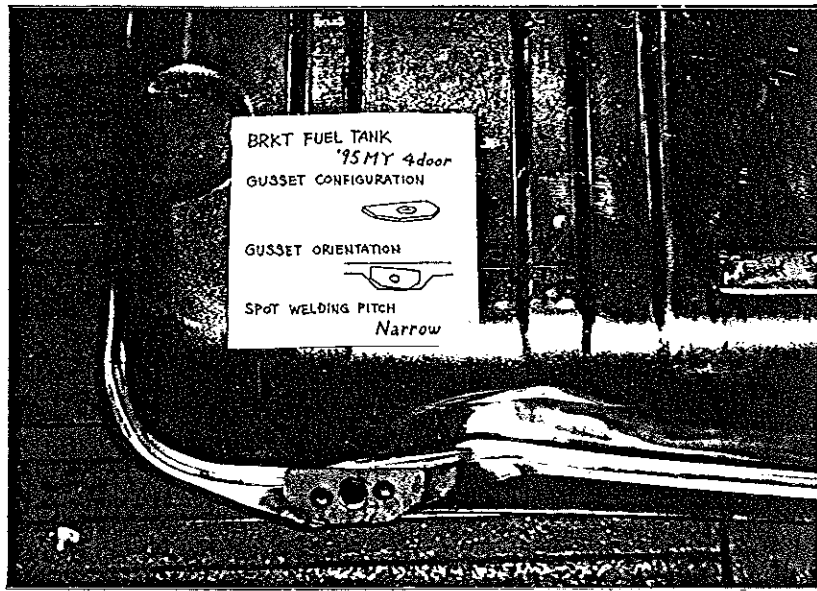
試験後 (Post-Test)

9-7



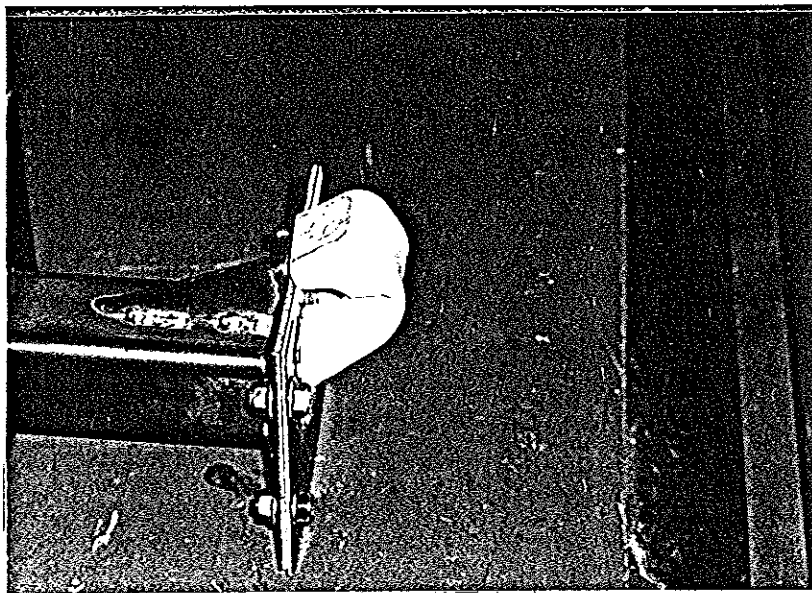
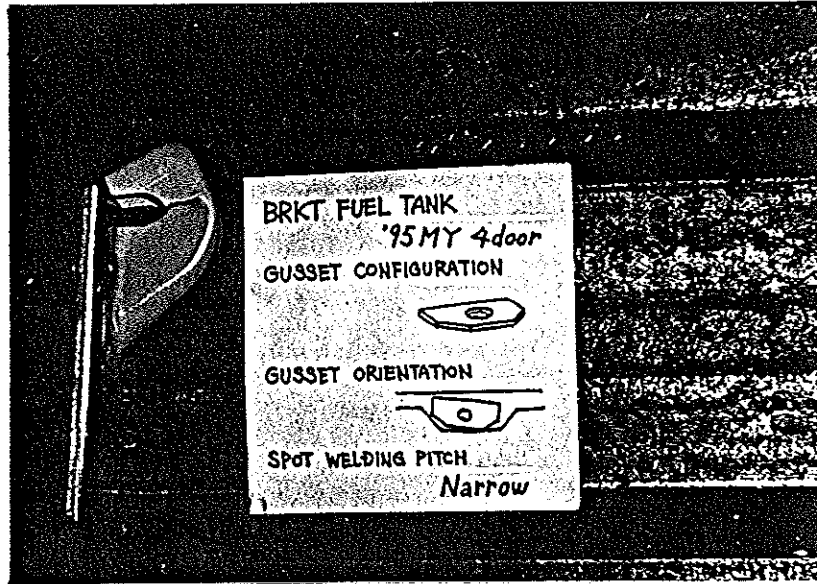
試験後 (Post-Test)

C-7




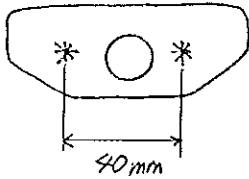


試験後 (Post-Test)

C-7



FUEL TANK STATIC TEST

TEST No		<i>C-8</i>
TEST DATE		1996 / 6 / 7
FUEL TANK BRACKET		
G U S S E T	CONFIGURATION	
	GUSSET ORIENTATION	
	SPOT WELDING PITCH	

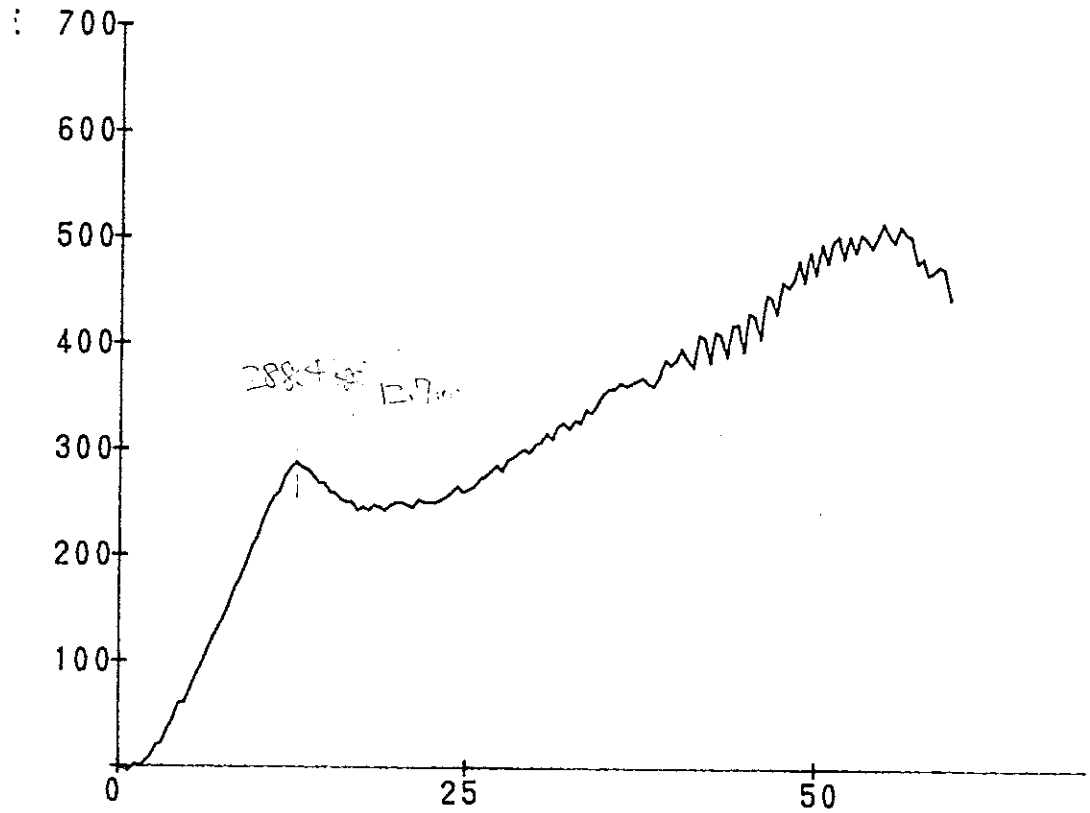
**S 211491**

TEST No

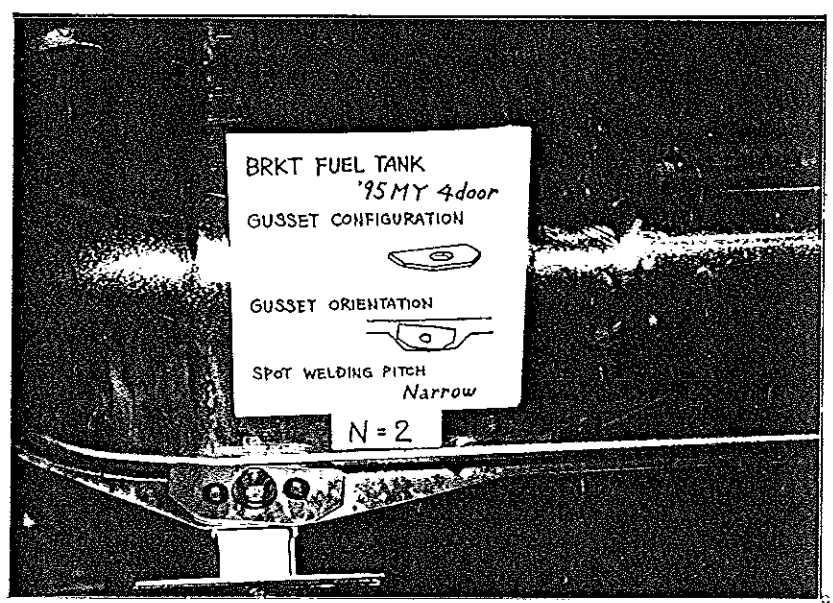
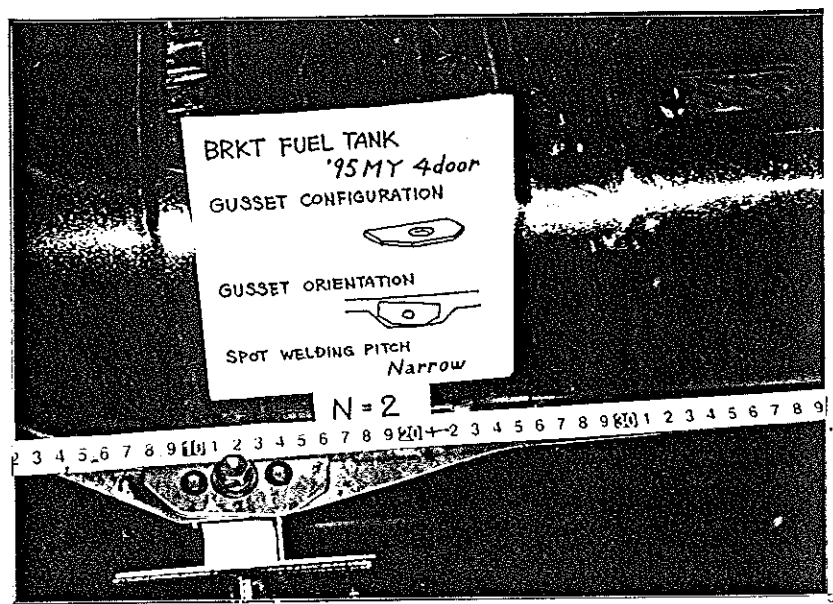
C-8

TEST RESULT

Gusset not contact tank wall



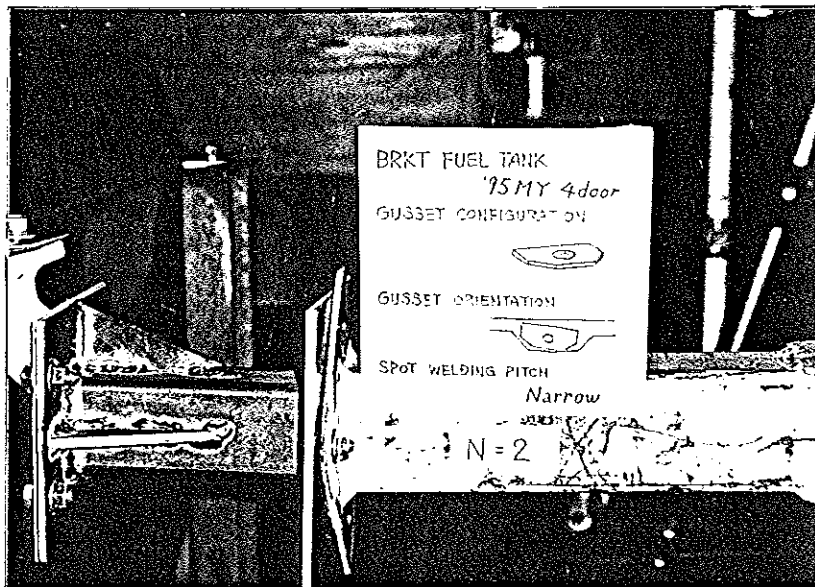
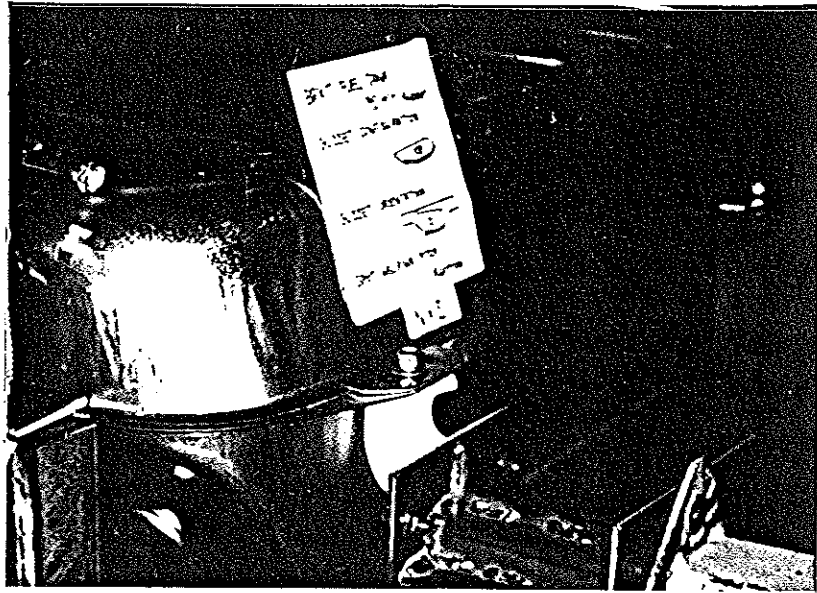
# 試験前 (Pre-Test)





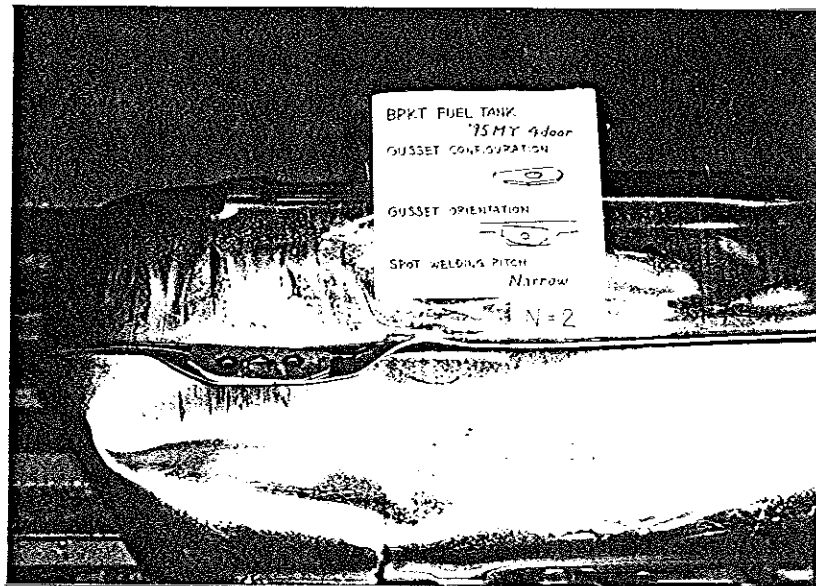
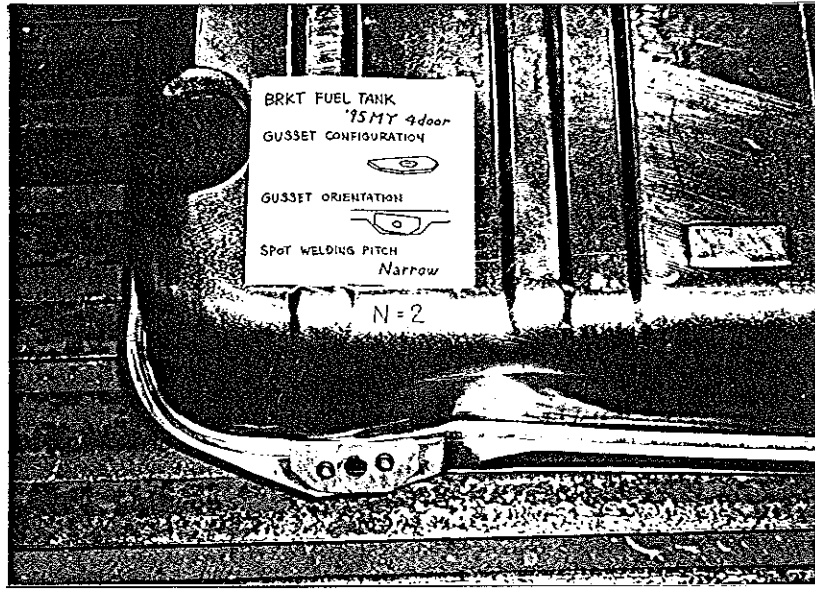
試験前 (Pre-Test)

C-5



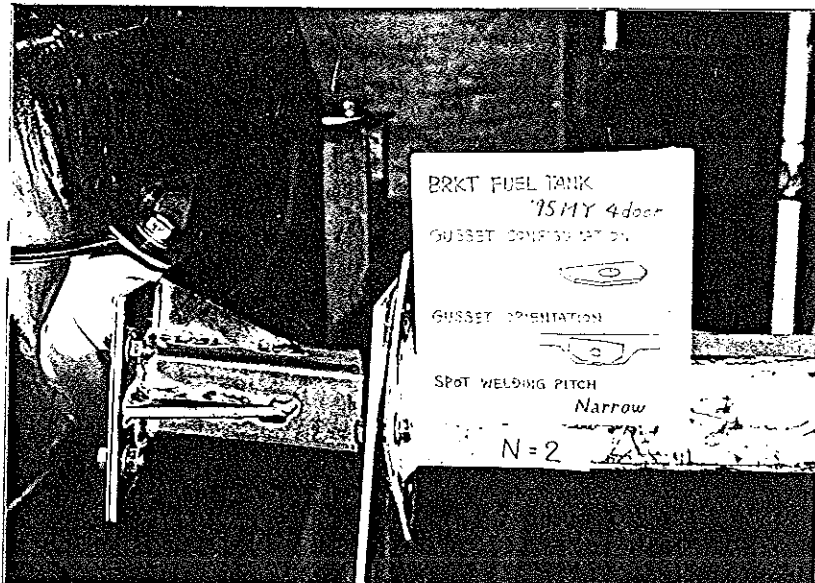
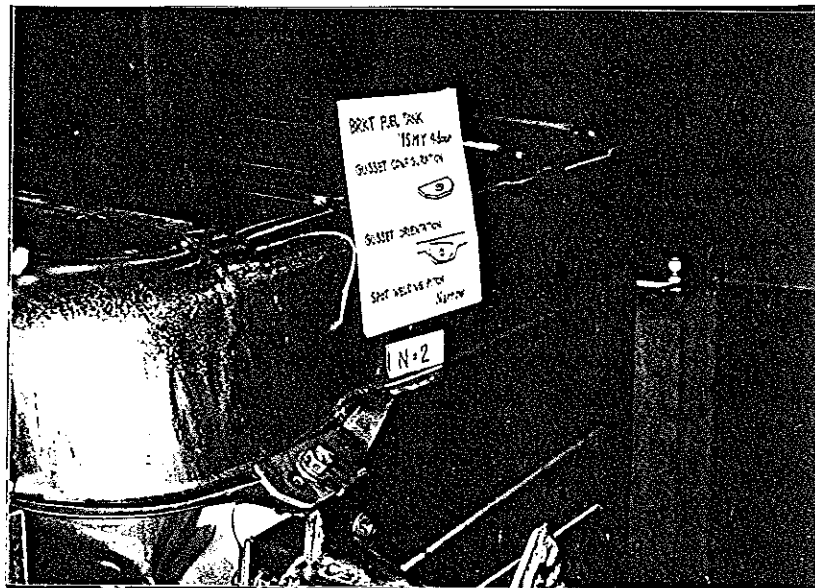
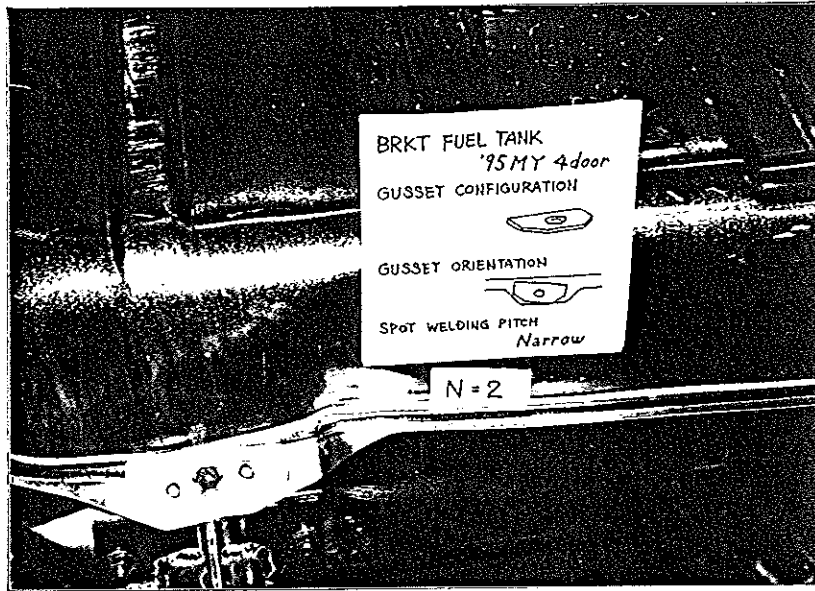
試験後 (Post-Test)

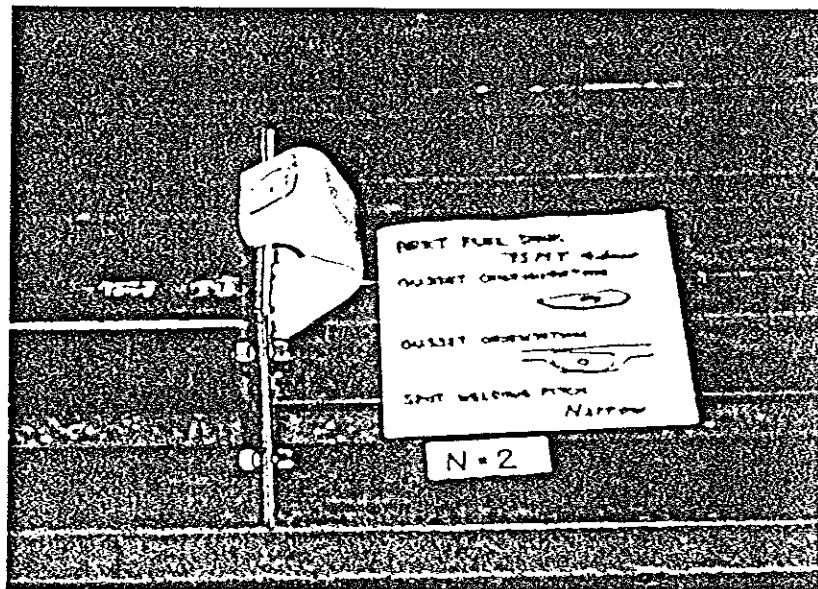
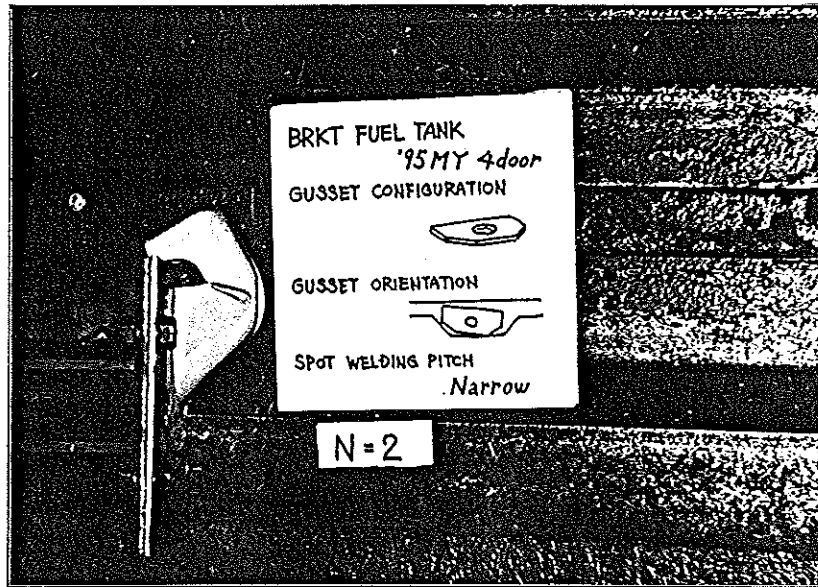
C-8



試験後 (Post-Test)

2-2





IR 1711 (2)

Mr. Millford Bennett, Director  
Safety Affairs, Safety Center  
Engineering Building S3-S17  
General Motors Corporation  
30200 Mound Rd. 1-11, P.O. Box 9010  
Warren, MI 48090-9010

IR 1711

Dear Mr. Bennett:

The National Highway Traffic Safety Administration (NHTSA) tested a 1996 Geo Tracker 4-door sport utility vehicle to the rear impact requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 301, "Fuel System Integrity", at SRL Calspan Corporation in Buffalo, New York, on May 17, 1996. The vehicle spilled 19.7 oz. of stoddard solvent in the 5 minute period directly following the 29.5 mph rear impact by the moving barrier. It continued to leak at a rate of 1.5 oz/minute for the next 25 minutes. These test results indicate that the vehicle appears to be in noncompliance with the standard.

On May 31, 1996, General Motors representatives visited Calspan and inspected the test vehicle. During the visit, your representatives requested a copy of the test report and film. A copy of each was mailed to Mr. Paul Eichrecht on June 6, 1996.

To aid in our analysis, we are requesting the following information for the Geo Tracker 4-door:

1. Provide a list of all tests used as a basis for certification of the subject vehicle to all of the requirements of FMVSS 301. Include developmental, and surveillance tests of preproduction, pilot and serial production vehicles. List the amount of leakage, if any, by weight for each test. Identify the test configuration for each test, i.e. frontal lateral, or rear. If no rear impact tests were performed on the subject vehicle, provide an explanation why rear impact tests were not performed. Include your engineering analyses which led you to make such a determination.
2. Provide the production starting date and the number of Geo Tracker 4-door vehicles imported for sale in the United States, until the date of response to this letter, with the same fuel system components and design as that in NHTSA's test. Include all model and trim lines.

EA12-005  
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AS 280637

3. Describe all changes (i.e., to components, manufacturing processes, quality audits, etc.) to the Geo Tracker 4-door beginning with the start of production and all subsequent changes, which may affect conformance to the requirements of FMVSS No.301. For each change, state the date it was implemented in production and reason for the change. State the date the NHTSA test vehicle was completed and identify which of the changes it contained.
4. Provide information, including a summarization of all engineering analyses, pertaining to your review of the compliance test conduct, test report and film.
5. Provide all information and data pertaining to investigations and corrective actions your company is considering or has initiated as a result of the test failure.
6. Provide a list of all consumer complaints your company has received that are related to the test failure.
7. Provide any other pertinent information you may wish to introduce.

A timely and complete response is required to avoid another potential violation of agency regulations. The response should repeat each question and provide a separate answer for each.

Two copies of your response referencing IR 1711 JJo must be sent to me within 20 working days after you receive this letter. If you need additional time to complete your response, please call Mr. James Jones on (202) 366-5294 at least 5 days prior to the due date. You must also submit the request in writing via mail or FAX to (202) 366-3081. You will be notified whether your request has been granted and for how long.

Confidential business information must be sent in a separate enclosure marked confidential. A copy of that material must be sent under separate cover to the agency's Chief Counsel/NCC-01. If you have any questions concerning confidential information, call Ms. Heidi Coleman on (202) 366-1834.

If you determine that a noncompliance does exist, 49 USC §30118(c) and §30120 (formerly sections 151 and 154 of the Act) require the prompt initiation of a recall notification and remedy campaign. The agency takes a manufacturer's timely and cooperative action into consideration when deciding the appropriateness and amount of civil penalty for a confirmed noncompliance.

If you have any technical question concerning this matter, please contact Mr. James A. Jones of my staff on (202) 366-5294.

Sincerely,



Marilynne Jacobs, Director  
Office of Vehicle Safety Compliance

J  
1/20/83

## RECALL CAMPAIGNS

NAME OF MANUFACTURER : GENERAL MOTORS

SUBJECT OF RECALL : EMYSS 301

RECALL CAMPAIGN NUMBER : 96V-121

### ACTION THAT INFLUENCED RECALL

#### MANUFACTURED INFLUENCED

#### ODI INFLUENCED:

ACTION NO. :

DED INVESTIGATOR :

RAD INVESTIGATOR :

#### OVSC INFLUENCED:

ACTION NO. : IR-1711

OVSC INVESTIGATOR : L. JONES





NAO Design & Engineering Centers

RECEIVED

95 JUL -1 AM 10: 35

OFFICE  
DEFECTS INVESTIGATION

June 28, 1996

Mr. Michael B. Brownlee  
Associate Administrator for Safety Assurance  
National Highway Traffic Safety Administration  
400 Seventh Street, S.W.  
Washington, D.C. 20590

96V-121 (01)

Dear Mr. Brownlee:

The following information is submitted pursuant to the requirements of 49 CFR 573.5 as it applies to a determination by General Motors of a noncompliance involving certain 1996 Geo Trackers.

573.5(c)(1): Chevrolet Motor Division of the General Motors Corporation.

573.5(c)(2)(3)(4): This information is shown on the attached sheet.

573.5(c)(5): General Motors has decided that certain 1996 Geo Tracker (4-Door Models Only) vehicles fail to conform to Federal Motor Vehicle Safety Standard (FMVSS) 301, "Fuel System Integrity". The fuel tank on these vehicles may become punctured by a fuel tank flange attachment reinforcement (gusset) during certain types of rear end collisions.

573.5(c)(6): General Motors was contacted by NHTSA in May of 1996 when a Tracker tested by the agency did not pass MVSS 301. An investigation was initiated to determine the cause and extent of the condition.

573.5(c)(8): This information is set forth in the dealer bulletin.

573.5(c)(9): Draft copies of the owner notification letter and dealer bulletin are attached. GM plans to begin mailing these notifications in July 1996. The final letter and bulletin will be forwarded when they are available.

Very truly yours,

E. E. Conner  
Director  
Product Investigations

1738  
attachments

EA12-005  
PRODUCED BY SUZUKI MOTOR CORPORATION

AS 280641

573.5(c)(2),(3),(4)

VEHICLES POTENTIALLY AFFECTED BY MAKE, MODEL, AND MODEL YEAR  
PLUS INCLUSIVE DATES OF MANUFACTURE

MAKE	MODEL SERIES	MODEL YEAR	NUMBER INVOLVED	INCLUSIVE MANUFACTURING DATES (FROM) (TO)	DESCRIPTIVE INFO. TO PROPERLY IDENT. VEH.	EST. NO. W/CONDITION
GEO	J Trk	1996	18,121	08/95 06/96	Tracker	*Unknown

\* All affected vehicles will be corrected.

1738

96V-121 (02)



# Campaign Bulletin

File In Section: Product Campaigns  
Bulletin No.: 96-C-38  
Date: June, 1996  
Draft 2: # <or> Final



96V-121 (03)

## PRODUCT RECALL CAMPAIGN

### FMVSS NON-COMPLIANCE CAMPAIGN

**SUBJECT: 96-C-38 - FUEL TANK LEAKAGE**

**MODELS: 1996 GEO TRACKER (4-DOOR ONLY)**

DRAFT  
A FINAL VERSION OF THIS DRAFT WILL BE USED  
IF THERE IS A DECISION TO CAMPAIGN

The Highway Safety Act, as amended, provides that each vehicle which is subject to a recall campaign of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty (60) days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time.

If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation.

To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. As you will see in reading the attached copy of the divisional letter that is being sent to customers, the customers are being instructed to contact the appropriate Customer Assistance Center if their dealer does not remedy the condition within five (5) days of the mutually agreed upon service date. If the condition is not remedied within a reasonable time, they are instructed on how to contact the National Highway Traffic Safety Administration.

### DEFECT INVOLVED

General Motors has decided that certain 1996 Geo Tracker (4-Door Models Only) vehicles fail to conform to Federal Motor Vehicle Safety Standard (FMVSS) 301, "Fuel System Integrity". The fuel tank on these vehicles may become punctured by a fuel tank flange attachment reinforcement (gusset) during certain types of rear-end collisions.

DEFECT INVOLVED (Con't)

96V-121 (04)

If this were to occur, a punctured fuel tank could allow fuel spillage in excess of the amount prescribed by FMVSS 301. If an ignition source was present, fuel leakage resulting from this puncture could result in a post-crash fire.

To correct this condition, dealers will install two new gussets between the fuel tank and attachment brackets to prevent the reinforcement from puncturing the fuel tank wall.

VEHICLES INVOLVED

Involved are CERTAIN 1996 Geo Tracker (4-Door Models Only) vehicles built within the following VIN breakpoints:

YEAR	DIVISION	MODEL	PLANT	PLANT CODE	FROM	THROUGH
1996	Chevrolet/ Geo	Tracker	CAMI	"6"	T6903522	T6956453

**NOTICE:** Dealers should confirm vehicle eligibility through VISS (Vehicle Information Service System) or prior to beginning campaign repairs. **[Not all vehicles within the above breakpoints may be involved]**

Involved vehicles have been identified by Vehicle Identification Number. Computer listings containing the complete Vehicle Identification Number, customer name and address data have been prepared, and are being furnished to involved dealers with the campaign bulletin. The Customer name and address data furnished will enable dealers to follow-up with customers involved in this campaign. Any dealer not receiving a computer listing with the campaign bulletin has no involved vehicles currently assigned.

These dealer listings may contain customer names and addresses obtained from State Motor Vehicle Registration Records. The use of such motor vehicle registration data for any other purpose is a violation of law in several states. Accordingly, you are urged to limit the use of this listing to the follow-up necessary to complete this campaign.

PARTS INFORMATION

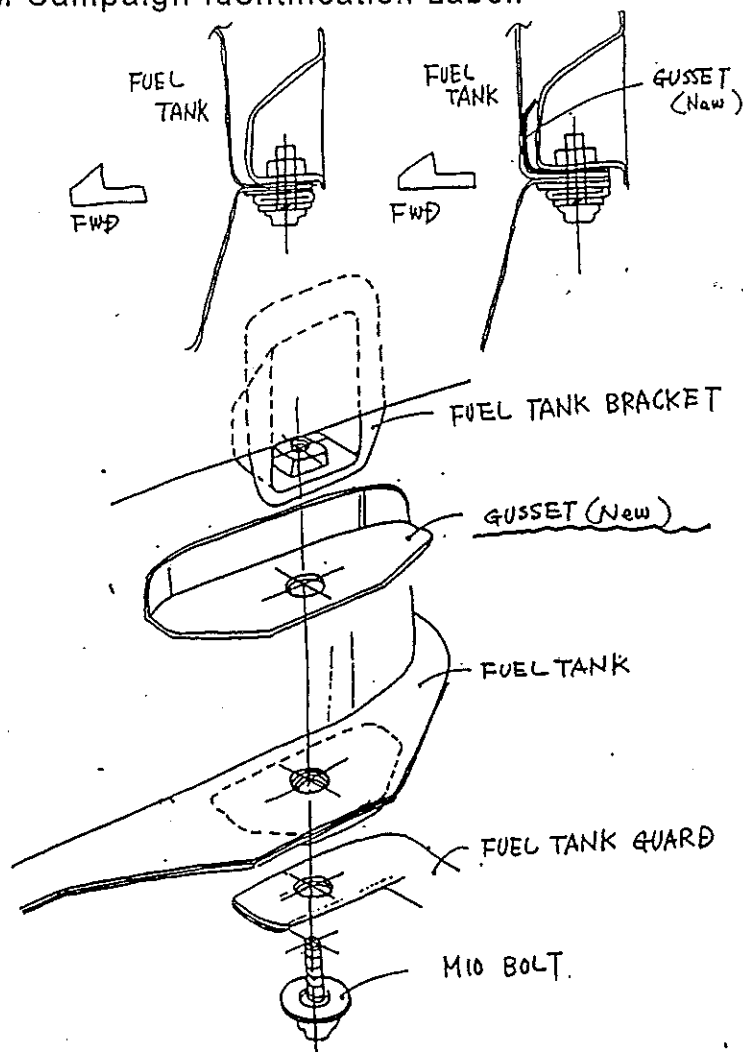
**Notice:** An initial supply of parts required to complete this campaign will be pre-shipped to involved dealers of record. This pre-shipment will occur the week of \_\_\_\_\_ ##, 1996. Parts received for a recently transferred vehicle should be forwarded by the original dealer (with a phone call) to the dealer that received the transferred vehicle. Pre-shipped parts will be charged to dealer's open parts account.

**AS 280644**

SERVICE PROCEDURE

96V-121 (06)

1. Raise and suitably support vehicle.
2. Support fuel tank with a suitable jack.
3. Slowly remove the two (2) rear fuel tank attachment bolts.
4. Install NEW gussets at each rear attachment locations as shown below.
5. Install rear fuel tank attachment bolts and torque to 35 Nm (26 lb. ft.).
6. Remove fuel tank support jack.
7. Lower vehicle.
8. Install the GM Campaign Identification Label.



AS 280646

(Notification Used By Chevrolet Motor Division)

July, 1996

Dear Geo Owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

#### **REASON FOR THIS RECALL**

General Motors has decided that certain 1996 Geo Tracker (4-Door Models Only) vehicles fail to conform to Federal Motor Vehicle Safety Standard (FMVSS) 301, "Fuel System Integrity". The fuel tank on these vehicles may become punctured by a fuel tank flange attachment reinforcement (gusset) during certain types of rear-end collisions. If this were to occur, a punctured fuel tank could allow fuel spillage in excess of the amount prescribed by FMVSS 301. If an ignition source was present, fuel leakage resulting from this puncture could result in a post-crash fire.

#### **WHAT WE WILL DO**

To correct this condition, dealers will install two new gussets between the fuel tank and attachment brackets to prevent the reinforcement from puncturing the fuel tank wall.

#### **WHAT YOU SHOULD DO**

Please contact your Chevrolet/Geo dealer as soon as possible to arrange a service date and so the dealer may order the necessary parts for the repair. Instructions for making this correction have been sent to your dealer. The labor time necessary to perform this service correction is approximately fifteen minutes. Please ask your dealer if you wish to know how much additional time will be needed to schedule and process your vehicle.

The enclosed owner reply card identifies your vehicle. Presentation of this card to your dealer will assist in making the necessary correction in the shortest possible time. If you have sold or traded your vehicle, please let us know by completing the postage paid reply card and returning it to us.

Your Chevrolet dealer is best equipped to provide service to ensure that your vehicle is corrected as promptly as possible. If, however, you take your vehicle to your dealer on the agreed service date, and they do not remedy this condition on that date or within five (5) days, we recommend you contact the Chevrolet Customer Assistance Center by calling 1-800-222-1020.

**AS 280648**

After contacting your dealer and the Customer Assistance Center, if you are still not satisfied that we have done our best to remedy this condition without charge and within a reasonable time, you may wish to write the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, S.W., Washington, D.C. 20590 or call 1-800-424-9393 (Washington D.C. residents use 202-366-0123).

We are sorry to cause you this inconvenience; however, we have taken this action in the interest of your safety and continued satisfaction with our products.

Chevrolet Motor Division  
GENERAL MOTORS

CORPORATION

Enclosure

AS 280649

Item # 5



North American Operations  
Engineering Center

July 24, 1996  
- USG 3265

Mr. Harry Thompson, Chief  
Vehicle Division  
Office of Vehicle Safety Compliance  
National Highway Traffic Safety Administration  
400 Seventh Street SW.  
Washington, DC 20590

Dear Mr. Thompson:

Subject: IR 1711 JJo, June 19, 1996  
1996 Geo Tracker 4-door / FMVSS 301

This letter transmits (by fax and mail) the General Motors Corporation (GM) request for an extension of ten (10) working days regarding the due date for GM's response to the subject Information Request (IR). The additional time is needed to provide a full and accurate response given the recent two-week GM holiday/vacation shutdown in July and the inherent timing associated with overseas communication and coordination with Suzuki Motor Company in Japan on this matter.

On July 19, 1996, Mr. Paul Eichbrecht of my staff discussed this matter by phone with Mr. James Jones of your staff. Mr. Jones stated that an additional 10 working days for our response would be acceptable. Accordingly, we expect to provide our response to the subject IR on or before August 7, 1996.

Thank you for your cooperation in this matter. Further questions may be directed to Mr. Paul Eichbrecht (810-947-1731) of this office.

Sincerely,

Francis R. Laux, Manager  
Safety Standards

c: Mr. James Jones, NHTSA OVSC



LAW OFFICES  
HONIGMAN MILLER SCHWARTZ AND COHN  
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS  
2890 FIRST NATIONAL BUILDING  
DETROIT, MICHIGAN 48226-3563  
FAX (313) 862-0176

ROBERT B. WEISS  
TELEPHONE: (313) 266-7746  
E-MAIL: rbw@honigman.com  
WEB SITE: <http://law.honigman.com>

WEST PALM BEACH, FLORIDA  
LANSING, MICHIGAN  
TAMPA, FLORIDA

April 2, 1997

Allen Kam, Esq.  
Acting Assistant Chief Counsel  
for Litigation  
U.S. Department of Transportation  
National Highway Traffic Safety Administration  
400 Seventh St., S.W.  
Washington, D.C. 20590

VIA FACSIMILE

Re: NCC-10 ZTV  
IR 1711  
Civil Penalty Notice Letter

Dear Mr. Kam:

The undersigned is counsel to CAMI Automotive, Inc. ("CAMI") in connection with the captioned matter. The purpose of this letter is to formally request an extension within which to respond to the above-referenced Civil Penalty Notice letter until May 11, 1997. I spoke this morning with Mr. Taylor Vinson of your office who suggested that we direct this request for an extension to you in writing. The purpose of the extension is to permit CAMI to undertake the necessary review and analysis in order to properly respond to the above-referenced notice letter. Your consideration of our request is greatly appreciated.

If you are in need of any additional information, please feel free to contact me.

Very truly yours,

*Robert B. Weiss*

Robert B. Weiss

RBW/jb  
cc: Susan Nicholson  
DET04/103963.1

AS 280651

item # 7

AUG 30 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Stephen Selander  
GM Legal Staff  
MC 480-106-304  
30500 Mound Road  
Warren, MI 48090

Re: IR 1711; NSA-31JJo; USG 3265, Part II; Confidentiality determination

Dear Mr. Selander:

This responds to Mr. Francis Laux's letter, dated August 12, 1996, in which General Motors requests confidential treatment for Attachments 5, 6, 7 and 9 relating to the above-referenced compliance investigation. I have decided to grant your request in part and deny it in part.

I will protect Attachments 5, 6 and 7 pursuant to Exemption 4 of the Freedom of Information Act. This grant of confidential protection is subject to certain conditions since it was submitted pursuant to a compliance investigation by the agency. It may be disclosed under the authority of 49 U.S.C. §30167(b) and 49 C.F.R. §512.9(a)(2), if the agency decides the disclosure will assist in carrying out the purposes of the National Traffic and Motor Vehicle Safety Act of 1966, as amended.

In addition, the information may be disclosed under 49 C.F.R. §512.8, based upon newly discovered or changed facts, and you must inform the agency of any changed circumstances which may affect the protection of the information (49 C.F.R. §512.4(I)). Prior to the release of information under 49 C.F.R. §512.8 or §512.9, you would be notified in accordance with the procedure established by our regulations.

However, I deny confidential protection to Attachment 9. Although it is customary to protect experimental or

developmental testing data, we have consistently denied confidentiality for testing material based on the Federal Motor Vehicle Safety Standards ("FMVSS"), or other standards that are known to the public, e.g., SAE standards.

Since a person may not manufacture for sale, sell, or offer for sale motor vehicle equipment that does not comply with the FMVSS (49 U.S.C. §30112), it is in the interest of a manufacturer to conduct such testing. The testing requirements and the procedures are public information (49 C.F.R. §575.301 and associated laboratory test procedures), and I am unable to find that an affirmative use of test procedures which fall within the parameters of those required by the FMVSS or of the test results could adversely affect your client's competitive position, Public Citizen Health Research Group v. Food and Drug Administration, 704 F.2d. 1280, (D.C. Cir., 1983).

If you disagree with this determination, you must request reconsideration and submit additional written justification with the certification required by 49 C.F.R. §512.4(e) within 10 working days after your receipt of this letter. Such justification must show the particular competitive harm to your client from the disclosure of the information for which confidentiality has been denied 49 C.F.R. §512.4(b)(3) and contain any legal arguments and citations upon which you rely. Should we receive no justification within the required period of time, your submitted information will be placed in the public file.

Sincerely,

151  
*Donaldson For*

Heidi L. Coleman  
Assistant Chief Counsel  
for General Law

AS 280661

LAW OFFICES  
HONIGMAN MILLER SCHWARTZ AND COHN  
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS  
2800 FIRST NATIONAL BUILDING  
DETROIT, MICHIGAN 48226-3583  
FAX (313) 968-0098

ROBERT B. WEISS  
TELEPHONE: (313) 266-7746  
E-MAIL: rbw@honigman.com  
WEB SITE: <http://www.honigman.com>

WEST PALM BEACH, FLORIDA  
LANSING, MICHIGAN  
TAMPA, FLORIDA

March 25, 1997

**VIA FACSIMILE AND  
FEDERAL EXPRESS**

Ms. Susan Nicholson  
CAMI Automotive, Inc.  
300 Ingersoll St.  
Ingersoll, Ontario Canada N5C 4A6

Re: CAMI Automotive, Inc. ("CAMI")

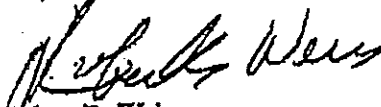
Dear Ms. Nicholson:

Pursuant to the terms of our firm's retention as Resident Agent for CAMI in the United States, attached is a copy of a letter dated March 20, 1997 from Erald Rubenstein, Acting Assistant Chief Counsel for Litigation of the U.S. Department of Transportation to the undersigned regarding NCC-10 ZTV, IR 1711, Civil Penalty Notice Letter. Under cover of a copy of this letter, we are forwarding to you by Federal Express for your receipt tomorrow the attachments referenced in the above-referenced March 20, 1997 letter.

We have spoken with Steve Selander of the GM Legal Staff to notify him of our receipt of the enclosed letter and attachments.

If we can be of any assistance to CAMI with regard to this matter, please feel free to call upon us. We would also appreciate your confirming receipt of this telefax and enclosure.

Very truly yours,

  
Robert B. Weiss

RBW/jb  
Enc.

DET04/103144.1

**SUZUKI FAX COMMUNICATION**

Mr. Dennis A. Hall  
Manager, International Small Car Eng.  
General Motors Corp.  
FAX: 0011-810-492-6842

April 1, 1997

Dear Hall-san;

Subject: Civil Penalty Notice Letter for 96MY Tracker FMVSS 301


I certainly appreciated your cooperation to this subject. The attachment is a copy of the letter from NHTSA sent to CAMI.

As I indicated over the phone, Suzuki is very much appreciated to receive your thoughts to the following questions.

- (1) A simple question is, "Do we, including CAMI, need to pay this kind of a penalty? If so, what is the legal base for this penalty?"
- (2) Have you experienced this penalty before?
- (3) Once it is found that the penalty must be paid, what is the process to decide the amount of penalty? Is there any guideline for the amount of the penalty?
- (4) CAMI is requested to respond within 20 calendar days of receipt of the letter. Actually, this letter was issued on 3/20/97. Responsible due date seems to be 4/10/97, and it is too short to respond to NHTSA. Is it possible for CAMI to request an extension to NHTSA?
- (5) Who is the appropriate person to deal directly with NHTSA about this issue, CAMI, GM or Suzuki? Or, legal staff of each organization?

Again, I appreciate very much for your cooperation.

Sincerely,



M. Igarashi, Ph.D.

(Fax: 81-53-440-2549 / Tel: 81-53-440-2720)

Manager, Analysis Dept., Automobile Testing Div.

(Total = 4 pages sent)



U.S. Department  
of Transportation  
National Highway  
Traffic Safety  
Administration

400 Seventh Street, S.W.  
Washington, D.C. 20590

MAR 20 1997

NCC-10 ZTV  
IR 1711  
Civil Penalty Notice Letter

CERTIFIED MAIL -- RETURN RECEIPT REQUESTED

Robert B. Weiss, Esq.  
Honigman, Miller, Schwartz and Cohn  
2290 First National Building  
Detroit, MI 48226

Dear Mr. Weiss:

We understand that CAMI Automotive Inc. of Canada ("CAMI") has designated you its agent under 49 CFR 551.45 to receive correspondence from the National Highway Traffic Safety Administration (NHTSA).

The Office of Vehicle Safety Compliance of NHTSA has completed its investigation of the manufacture by CAMI, and importation and sale by General Motors Corporation ("GM") and American Suzuki Motor Corporation ("Suzuki"), of Geo Tracker and Suzuki Sidekick motor vehicles that failed to comply with Federal Motor Vehicle Safety Standard No. 301, Fuel System Integrity, 49 CFR 571.301. I enclose the agency's public file of this investigation, and, in addition, certain materials that GM submitted subject to a claim of confidentiality, which has been granted. GM has partially waived confidentiality, for the limited purpose of permitting NHTSA to provide the documents to CAMI. These materials are Attachments 5, 6, and 7 to GM's letter to the agency of August 12, 1996.

With the conclusion of this investigation, and GM and Suzuki having commenced their notification and remedy campaigns as required by 49 U.S.C. § 30118 et seq., the file has been forwarded to the Office of Chief Counsel for appropriate civil penalty action.

The results of this investigation indicate to the Office of Chief Counsel that there is reason to believe that CAMI violated 49 U.S.C. §§ 30112(a) and 30115. These sections provide in pertinent part:

Section 30112(a) . . . [a] person may not manufacture for sale . . . any motor vehicle . . . manufactured on or after the date an applicable Federal motor vehicle safety standard prescribed under this chapter takes



AUTO SAFETY HOTLINE  
(800) 424-9393  
Wash. D.C. Area (202) 366-0123

effect unless the vehicle . . . complies with the standard and is covered by a certification issued under section 30115 of this title.

Section 30115 . . . A person may not issue the certificate if, in exercising reasonable care, the person has reason to know the certificate is false and misleading in a material respect. . . .

Section 30165(a) of Title 49 provides that:

A person that violates any of sections 30112, 30115 . . . or a regulation prescribed under those sections is liable to the United States Government for a civil penalty of not more than \$1,000 for each violation. A separate violation occurs for each motor vehicle . . . and for each failure . . . to perform an act required by those sections. The maximum penalty under this subsection for a related series of violations is \$800,000.

Section 30112(b) (2) (A) provides that section 30112(a) does not apply to:

a person establishing that the person had no reason to know, despite exercising reasonable care, that a motor vehicle . . . does not comply with applicable motor vehicle safety standards prescribed under this chapter . . . .

This is to advise you that NHTSA is considering commencing proceedings that could result in the imposition of a civil penalty against CAMI for its violation of sections 30112(a) and 30115. CAMI is hereby afforded an opportunity within 20 calendar days of receipt of this letter to submit to the undersigned any mitigating information, data, or arguments relevant to the exercise of reasonable care in this matter and the imposition of a civil penalty. Upon receipt and evaluation of CAMI's response, a decision will be made either to suggest that CAMI pay a specified sum in settlement of claims pending against it by NHTSA, or to close the case without such payment.

In determining the settlement sum, section 30165(c) requires that "the appropriateness of the penalty or compromise to the size of the business of the person charged and the gravity of the violation" shall be considered. Therefore, CAMI's response should also address these issues.

If you have any questions concerning this matter, you may call Taylor Vinson of this office at (202) 366-5263.

Sincerely,



Enid Rubenstein  
Acting Assistant Chief Counsel  
for Litigation

Enclosure



# COPY

Dear Mr. Eichbrecht:

Following is Suzuki's response to the information requested in NHTSA's letter of June 19, 1996 (IR 1711).

## Request #1

Attachment 1 contains a list of all tests used to evaluate compliance of the 1996 4-door Geo Tracker with the requirements of FMVSS No. 301. For all of the tests conducted by Suzuki, there was no evidence of fuel spillage.

## Request #2

GM has the information needed to respond to this request.

## Request #3

Attachment 2 describes all of the changes to the 1996 4-door Geo Tracker, from the start of production, which have the potential to affect compliance with FMVSS No. 301. The 1996 Geo Tracker tested by NHTSA was produced August 31, 1995, and it contained change #1 described in Attachment 2.

## Request #4

Suzuki's review of NHTSA's compliance test procedures, test report, and film, led to the conclusion that NHTSA's compliance test was properly conducted.

## Request #5

After NHTSA's compliance test, Suzuki initiated an investigation to determine the cause of the test failure. Suzuki's investigation led to identification of the following factors as contributors to the test failure:

- (1) Variability in location of the fuel tank flange gusset.

Attachment 3(a) shows a graphic illustration of variability in the position of the fuel tank flange gusset. As shown in the attachment, the separation distance between the gusset and the fuel tank wall can vary up to several millimeters at opposite ends of the gusset, resulting in one end of the gusset being closer to the fuel tank wall.

- (2) Variability in the separation distance between fuel tank flange gusset spot welds.

Attachment 3(b) shows the amount of variability in distance between the left and right gusset spot welds and the center bolt. When the gusset is subjected to torsional forces, a shorter spot weld separation distance can result in more

movement of the outer portion of the gusset compared to the amount of movement of the outer portion of the gusset which would occur if there was a greater spot weld separation distance.

#### Additional Explanation

Shortly after the start of production for the 1996 model year, the design of the rear fuel tank mounting brackets was changed. During NHTSA's FMVSS No. 301 compliance test on a Sidekick vehicle that incorporated this change, the fuel tank flange was deformed in the area of the outer portion of the gusset, where the gusset was closer to the fuel tank wall. This resulted in the edge of the gusset contacting the fuel tank wall as illustrated in Attachment 3(c).

For FMVSS No. 301 tests conducted on vehicles which incorporated the previous rear fuel tank mounting bracket, the mounting bracket was bent upward and there was no contact between the edge of the gusset and the fuel tank wall. This result is illustrated in Attachment 3(d). Attachment 3(e) shows the location of the rear fuel tank mounting brackets and illustrates the difference in design between the original bracket and the redesigned bracket.

After concluding our investigation, Suzuki introduced a modified gusset to replace the original gusset for subsequent vehicle production. Differences in design between the original gusset and modified gusset are shown in Attachment 4. Suzuki and GM also decided to conduct a recall campaign to install modified gussets on vehicles which have already been produced. This campaign is described in GM's Part 573 Report to NHTSA. Attachment 5 contains the results of tests conducted by Suzuki to confirm that new production vehicles with the modified gusset and already-produced vehicles retrofitted with modified gussets would meet the requirements of FMVSS No. 301.

#### Request #6

GM has the information needed to respond to this request.

#### Request #7

Suzuki has no other pertinent information we wish to provide.

## Changes Having Potential to Affect Compliance With FMVSS No. 301

Change #	Implementation Date	Description of Change and Reason
1	8/21/95	The strength of the rear fuel tank mounting brackets was increased to accommodate an increase in curb weight for 1996 model year vehicles.
2	6/21/96	The gussets installed between the fuel tank mounting brackets and fuel tank flange were changed from flat gussets to angled gussets. This change was made to ensure compliance with FMVSS No. 301.

AS 280669

Item #1

REPORT NUMBER: 301-CAL-96-10

**SAFETY COMPLIANCE TESTING FOR FMVSS 301  
FUEL SYSTEM INTEGRITY**

**CAMI-AUTOMOTIVE INC. CANADA  
1996 GEO TRACKER  
4-DOOR MPV**

**NHTSA NUMBER: CT0108**

**CALSPAN TEST NUMBER: 8344-10**

**CALSPAN SRL CORPORATION  
P.O. BOX 400  
BUFFALO, NEW YORK, 14225**



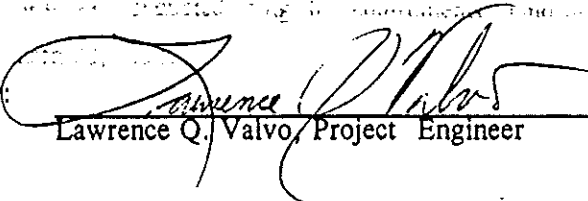
May 17, 1996

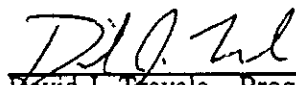
**FINAL REPORT**

**PREPARED FOR:**

**U. S. Department of Transportation  
National Highway Traffic Safety Administration  
ENFORCEMENT  
Office of Vehicle Safety Compliance  
400 Seventh Street, S. W.  
Room No. 6115 (NEF-30)  
Washington, DC 20590**

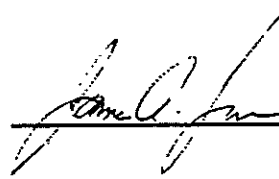
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Prepared By:   
Lawrence Q. Valvo, Project Engineer

Approved By:   
David J. Travale, Program Manager  
Transportation Sciences Center

Approval Date: June 3, 1996

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: 

Acceptance Date: 6/6/96

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No.  301-CAL-96-10		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Final Report of FMVSS301 Compliance Testing of a 1996 Geo Tracker 4-door MPV NHTSA No. CT0108				5. Report Date May 17, 1996	
				6. Performing Organization Code CAL	
7. Author(s) Lawrence Q. Valvo, Project Engineer David J. Travale, Program Manager				8. Performing Organization Report No. 8344-10	
9. Performing Organization Name and Address Calspan Advanced Technology Center P.O. Box 400 Buffalo, New York 14225				10. Work Unit No.	
				11. Contract or Grant No. DTNH22-94-C-01136	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Vehicle Safety Compliance (NEF-30) 400 Seventh St, S.W., Rm. 6115, Washington, D.C. 20590				13. Type of Report and Period Covered Final Test Report	
				14. Sponsoring Agency Code NEF-30	
15. Supplementary Notes					
16. Abstract  Compliance tests were conducted on the subject 1996 Geo Tracker 4-door MPV in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-301-01 for the determination of FMVSS 301 compliance. Test failures identified were as follows:  The test vehicle did not appear to comply with all requirements of FMVSS 301 "Fuel System Integrity." The vehicle spilled 19.7 oz. of stoddard by weight in the 5 minutes following the impact after the vehicle motion ceased and continued to leak at a rate of 1.5 oz./minute for the next 25 minutes. Both of these values exceeded the requirements of FMVSS No. 301 "Fuel System Integrity," therefore the rollover phase of the test was not conducted. Underbody high speed cameras documented stoddard leakage that occurred during the impact from the right rear quadrant of the fuel tank.					
17. Key Words Compliance Testing Safety Engineering FMVSS 301			18. Distribution Statement Copies of this report are available from: NHTSA Technical Reference Division Room 5108 (NAD-52), 400 Seventh, S.W., Washington, D.C. 20590 Telephone No. (202) 366-4946		
19. Security Classif. (of this report) UNCLASSIFIED		20. Security Classif. (of this page) UNCLASSIFIED		21. No. of Pages	22. Price

## TABLE OF CONTENTS

<u>Section</u>		<u>Page No.</u>
1	PURPOSE OF COMPLIANCE TEST	1-1
2	SUMMARY OF COMPLIANCE TEST RESULTS	2-1
3	COMPLIANCE TEST DATA	3-1
4	NONCOMPLIANCE DATA	4-1
APPENDIX A	PHOTOGRAPHS	A-1
APPENDIX B	VEHICLE AND DUMMY RESPONSE DATA (REAR IMPACT ONLY)	B-1

LIST OF FIGURES

<u>Figure No.</u>		<u>Page No.</u>
1	PART 572 DUMMY IN-VEHICLE POSITION	3-2
2	CAMERA POSITION FOR REAR IMPACT	3-9



LIST OF TABLES

<u>Table No.</u>		<u>Page No.</u>
1	CRASH TEST SUMMARY	2-2
2	GENERAL TEST AND VEHICLE PARAMETER DATA	2-3
3	MOVING BARRIER PARAMETER DATA	2-6
4	POST-IMPACT DATA	2-7
5	FRONT SEAT OCCUPANT MEASUREMENTS	3-3
6	FMVSS NO. 301 - "FUEL SYSTEM INTEGRITY" POST-IMPACT TEST DATA	3-4
7	FMVSS NO. 301 - STATIC ROLLOVER DATA SHEET	3-5
8	HIGH-SPEED CAMERA LOCATIONS	3-10
9	TEST VEHICLE NONCOMPLIANCE NOTICE	4-2

Section 1

PURPOSE OF COMPLIANCE TEST

This 30 mph rear moving barrier impact test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 301 Compliance Test Program conducted for the National Highway Traffic Safety Administration (NHTSA) by Calspan SRL Corporation under Contract No. DTNH22-94-C-01136. The purpose of this test was to determine if the subject vehicle, a 1996 Geo Tracker 4-door MPV, meets the performance requirements of FMVSS No. 301, "Fuel System Integrity." This compliance test was conducted using the requirements found in the OVSC Laboratory Test Procedure No. TP-301-01, dated March 28, 1994.

Section 2

COMPLIANCE TEST RESULTS SUMMARY

A 3239 pound 1996 Geo Tracker 4-door MPV was impacted from the rear by a 3959 pound moving barrier at a velocity of 29.5 mph. The test was performed by the Calspan SRL Corporation on May 17, 1996.

One instrumented Part 572 E and non-instrumented Part 572 B, 50th percentile male Anthropomorphic Test Device (ATD) were placed in the driver and right-front passenger seating positions respectively.

Average longitudinal crush was 11.8 inches. Pre- and post-test photographs of the vehicle can be found in appendix A.

Prior to the impact, the vehicle fuel tank contained 13.5 gallons of orange stoddard fluid (93% Usable Capacity). The vehicle spilled 19.7 oz. of stoddard by weight in the 5 minutes following the impact after the vehicle motion ceased and continued to leak at a rate of 1.5 oz./minute for the next 25 minutes. Both of these values exceeded the requirements of FMVSS No. 301 "Fuel System Integrity," therefore the rollover phase of the test was not conducted. Underbody high speed cameras documented stoddard leakage that occurred during the impact however this leakage was unable to be collected. Stoddard leakage seemed to occur from the right rear portion of the fuel tank near its vehicle attachment point. Section 3 of this report presents the compliance test data.

The crash event was recorded by one real-time and eight high-speed cameras. Camera locations and other pertinent camera information are found on pages 3-9 and 3-10 of this report.

Table 1

**CRASH TEST SUMMARY**

Vehicle NHTSA No.: CT0108 Test Mode: 30 mph Rear Barrier  
 Test Date: May 17, 1996 Time: 15:45 Temperature: 73 °F  
 Vehicle Make/Model/Body Style: 1996 Geo Tracker 4-door MPV  
 Vehicle Test Weight: 3239 lbs Impact Velocity: 29.5 mph  
 Static Crush: Left Side = 12.0 inches  
 Right Side = 11.9 inches  
 Centerline = 11.5 inches  
 Average Crush: 11.8 inches

**TYPE OF FRONT OCCUPANT RESTRAINT SYSTEM INSTALLED IN TEST VEHICLE:**

Driver's DSP: Airbag, 3-point belt system  
 Right Passenger's DSP: Airbag, 3-point belt system

**VISIBLE DUMMY CONTACT POINTS:**

Driver: Back of head with headrest, top of head with rear seat backrest.  
 Passenger: Back of head with headrest.

**DOOR OPENING DATA:**

Closed/Inoperable - Left Front  
Closed/Inoperable - Right Front

Stoddard Solvent Spillage from Vehicle's Fuel System: Stoddard leaked from the right rear portion of the fuel tank during and immediately following impact. Stoddard leaked from this area in amounts that exceeded the requirements of FMVSS No. 301. Leakage measurements can be found in Section 3.

Remarks: Both driver and passenger seat backs reclined to their full rearward positions during the impact. The recline mechanism remained operable following the impact.

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATATEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 1996 Geo Tracker 4-door MPV

NHTSA No.: CT0108 ; VIN: 2CNBJ1362T6905729 ; Color: Green

Engine Data: 4 cylinders; - CID; 1.6 Liters; - cc

Placement: X Longitudinal or In-Line; - Transverse or Lateral

Transmission Data: 4 speeds; - Manual; X Automatic; X Overdrive

Final Drive: - Rear Wheel Drive; - Front Wheel Drive; X Four Wheel Drive

Major Options: X A/C; X Pwr.Strg.; X Pwr. Brakes  
- Pwr. Windows; - Pwr. Door Locks; - Tilt Wheel

Date Received: 2-12-96 ; Odometer Reading 75 miles

Selling Dealer: West-Herr Chevrolet, Inc.

& Address: P.O. Box 158 Eden, NY 14057-0158

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: CAMI-AUTOMOTIVE INC. CANADA

Date of Manufacture: 08/95

GVWR: 3527 lbs.; GAWR: 1697 lbs. FRONT; 2116 lbs. REAR

DATA FROM TIRE PLACARD:

Location of Placard on Vehicle: Driver B-pillar

Tire Pressure with Maximum Capacity Vehicle Load: 44 psi FRONT 44 psi REAR

Recommended Tire Size: 205/75 R16

\* Recommended Cold Tire Pressure: 23 psi FRONT; 23 psi REAR

Size of Tires on Test Vehicle: 205/75 R16

Type of Spare Tire: 205/75 R16 (on rear gate)

Vehicle Capacity Data:

Type of Front Seats:	<u>-</u> Bench;	<u>X</u> Bucket;	<u>-</u> Split Bench
Number of Occupants:	<u>2</u> Front;	<u>2</u> Rear;	<u>4</u> Total
Vehicle Capacity Weight (VCW) =	<u>714</u> lbs.		
No. of Occupants x 150 lbs. =	<u>600</u> lbs.		
Rated Cargo/Luggage Weight (RCLW) =	<u>114</u>		

\*Tire pressure used for test

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATA ( cont. )WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER (with maximum fluids) = UDW:

Right Front	=	751	lbs.	Right Rear	=	653	lbs.
Left Front	=	727	lbs.	Left Rear	=	664	lbs.
TOTAL FRONT	=	1,478	lbs.	TOTAL REAR	=	1,317	lbs.
TOTAL DELIVERED WEIGHT	=	2,795	lbs.				
% of Total Front of Vehicle Weight	=	53	%	% of Total Rear Weight	=	47	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight	=	2,795	lbs.
Rated Cargo/Luggage Weight (RCLW)	=	114	lbs.
Weight of 2 p.572 Dummies, 167 & 164 lbs	=	331	lbs.
TARGET TEST WEIGHT	=	3,240	lbs.

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 113 POUNDS OF CARGO WEIGHT:

Right Front	=	872	lbs.	Right Rear	=	763	lbs.
Left Front	=	859	lbs.	Left Rear	=	745	lbs.
TOTAL FRONT	=	1,731	lbs.	TOTAL REAR	=	1,508	lbs.
TOTAL TEST WEIGHT	=	3,239	lbs.				
% of Total Front Weight	=	53	%	% of Total Rear Weight	=	47	%

\* Weight of Ballast Secured in Vehicle Trunk Area = 0 lbs.

Type of Ballast: None

Method of Securing Ballast: None

Vehicle Components Removed for Weight Reduction: None

VEHICLE ATTITUDE (all dimension in inches):

AS DELIVERED:	RF	30.8	LF	31.0	RR	31.1	LR	31.1
AS TESTED:	RF	29.7	LF	29.8	RR	30.3	LR	30.3
Vehicle's Wheel Base	=	97.6	in.					
Location of Vehicle's C.G.	=	45.4	inches rearward of front wheel center.					

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual	=	11.1	gallons	
Usable Capacity Figure Furnished by COTR	=	14.5	gallons	
Test Volume Range (91 to 94% of Usable Capacity)	=	13.2	to 13.6	gallons
ACTUAL TEST VOLUME	=	13.5**	gallons (with entire fuel system filled)	

\* Ballast weight includes the RCLW, the weight of drained vehicle fluids and the weight of any removed vehicle components less the weight of onboard instrumentation, cameras, and hardware.

\*\* One gallon less than the specified fuel tank Usable Capacity (93% of Usable Capacity).

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATA ( cont. )

FUEL SYSTEM DATA (continued):

Test Fluid Type:	Stoddard solution	
Test Fluid Specific Gravity:	0.764	
Test Fluid Kinematic Viscosity:	0.96	centistokes
Test Fluid Color:	Orange	("red" is preferred)
Type of Vehicle Fuel Pump:	Electric	
Electric Fuel Pump Operation with Ignition Switch ON and Engine OFF - Fuel pump operated.		
Details of Fuel System:	Fuel tank is located between the rear bumper and rear axle, fuel filler is located on the left rear quarter panel aft of the rear axle, fuel lines are routed along the inboard side of the right frame rail.	

Table 3

**MOVING BARRIER PARAMETER DATA**

**WEIGHT-OF MOVING BARRIER:**

Right Front	=	1091	lbs.	Right Rear	=	887	lbs.
Left Front	=	1095	lbs.	Left Rear	=	886	lbs.
TOTAL FRONT	=	2,186	lbs.	TOTAL REAR	=	1,773	lbs.
TOTAL BARRIER WEIGHT	=	3,959	lbs.				

**MOVING BARRIER DIMENSIONS:**

Barrier Face Height:	60.0	in.
Barrier Face Width:	78.0	in.
Barrier Face		
Ground Clearance:	5.0	in.
Tread Width:	59.5	in.
Wheel Base:	120.0	in.
Location of C.G.:	X: 53.7	inches rearward of front wheel center.
	Y: 0.0	inches from longitudinal-vertical plane of symmetry.
	Z: 16.0	inches above ground.

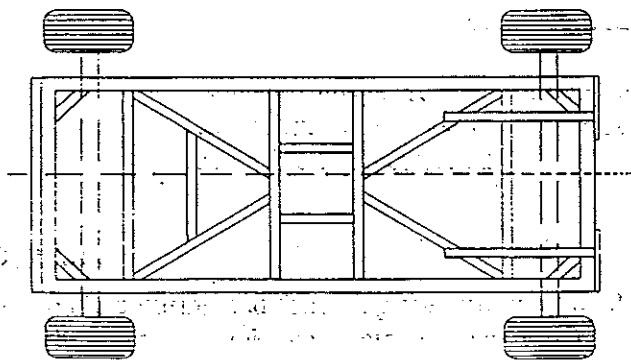
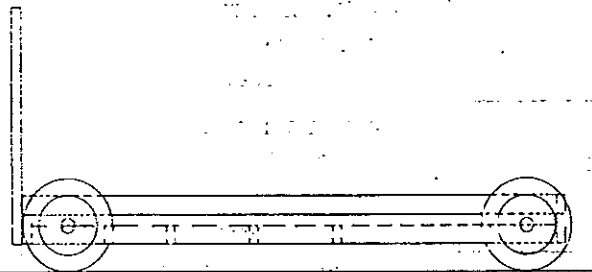




Table 4

POST IMPACT DATA

TYPE OF TEST:

Type of Test: Rear Barrier Impact Angle: 0°  
 Test Date: May 17, 1996 Time: 15:45 Temperature: 73 °F  
 Vehicle NHTSA No.: CT0108  
 Required Impact Velocity Range: 28.9 to 29.9 mph

BARRIER IMPACT VELOCITY: (Speed traps within 5 feet of impact plane.)

Trap No. 1 = 29.5 mph; Trap No. 2 = 29.5 mph  
 Average Impact Speed = 29.5 mph

VEHICLE STATIC CRUSH: (For frontal and rear impacts only.)

Vehicle Length:

Pre-Test	Right =	<u>155.4</u>	;	C/L =	<u>157.0</u>	;	Left =	<u>155.5</u>
Post-Test	Right =	<u>143.5</u>	;	C/L =	<u>145.5</u>	;	Left =	<u>143.5</u>
Crush	Right =	<u>11.9</u>	;	C/L =	<u>11.5</u>	;	Left =	<u>12.0</u>
AVERAGE	=	<u>11.8</u>		inches				

Section 3

COMPLIANCE TEST DATA

Figure 1

PART 572 DUMMY IN-VEHICLE POSITION  
(FOR REAR IMPACTS ONLY)

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS

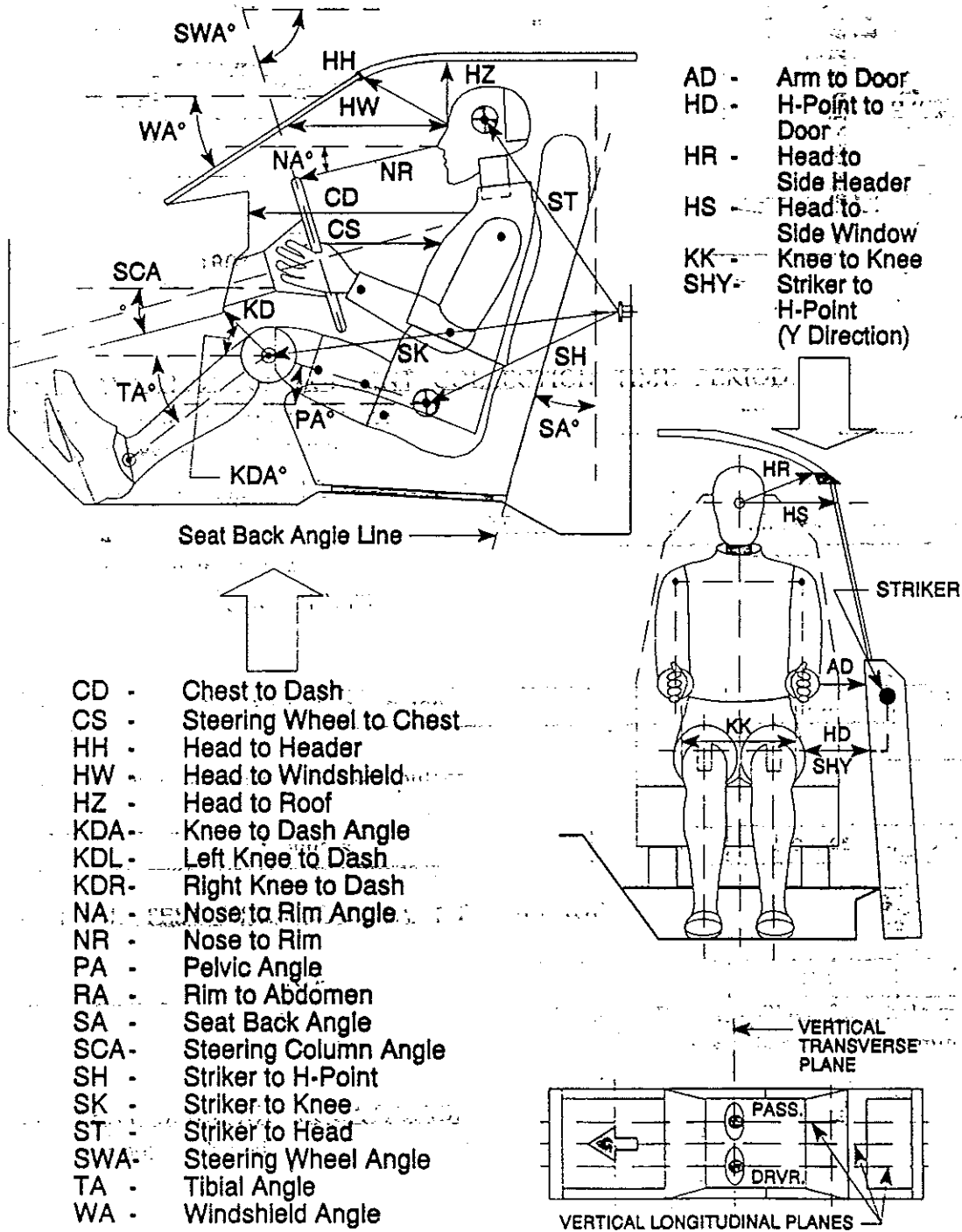


Table 5

**FRONT SEAT OCCUPANT MEASUREMENTS  
(FOR REAR IMPACT ONLY)**

	DRIVER (Serial #341)
WA°	44 deg.
SWA°	58 deg.
SCA°	32 deg.
SA°	18 deg.
HZ	10.4
HH	19.1
HW	24.7
HR	8.7
NR	17.0 Angle 13.0 deg.
CD	21.7
CS	12.8
RA	8.0
KDL	6.1 Angle (KDA) 36 deg.
KDR	5.8
PA°	24 deg.
TA°	41 deg.
KK	11.1
ST	22.1 Angle 10
SK	22.0 Angle 93
SH	7.3 Angle 127
SHY	7.8
HS	10.6
HD	5.3
AD	2.6

Table 6  
FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

FMVSS NO. 301

TEST VEHICLE NHTSA NO.: CT0108 TEST DATE: May 17, 1996

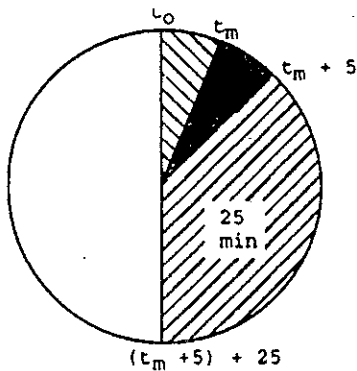
Vehicle Mfgr./Make/Model: 1996 Geo Tracker 4-door MPV

Test vehicle fuel tank filled to 91% to 94% of manufacturer's "usable" capacity and with electric fuel pump operating (if it will operate without engine operation). Part 572 test dummies located at each front designated seating position.

\*\*\*\*\*

TEST VEHICLE IMPACT TYPE: Frontal (30 mph)  
Oblique (30 mph) barrier face first  
 with (driver/passenger) side  
contacting  
 X Rear Moving Barrier (30 mph)  
 - Lateral Moving Barrier (20 mph)

FUEL SPILLAGE MEASUREMENT:



1. From impact until vehicle motion ceases
2. For five minute period after vehicle motion ceases
3. For next 25 minutes

ACTUAL	MAX ALLOWED
*	1 oz.
19.7 oz.	5 oz.
1.5 oz./1 min.	1 oz./1 min.

\* Solvent spillage from the vehicle fuel tank during the impact was evident in the underbody camera views. This spillage was unable to be collected.

SOLVENT SPILLAGE DETAILS:

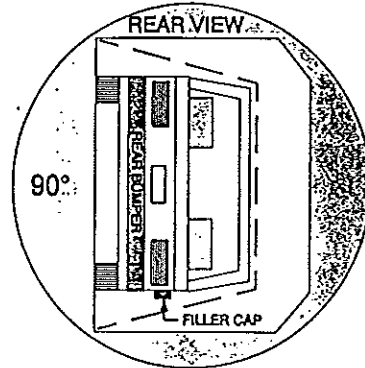
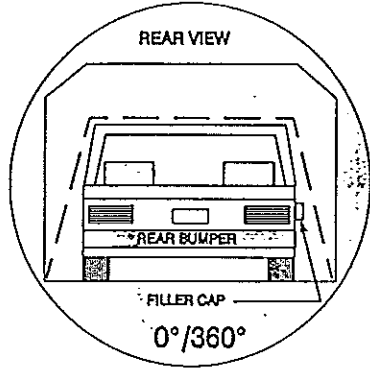
The vehicle fuel tank leaked stoddard during and following the impact. Stoddard appeared to exit the fuel tank at an area near or at the right rear tank and shield attachment bolt.

Table 7

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE :  
0-90 Deg.

Vehicle NHTSA ID No. :  
CT0108



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	-	minutes	-	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
<b>TOTAL</b>	0	minutes	0	seconds
Next whole minute interval	0	minutes		

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
--	----------	----------	----------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

N/A	N/A	N/A	N/A
-----	-----	-----	-----

Note: Record spillage for whole minute intervals only as determined above.

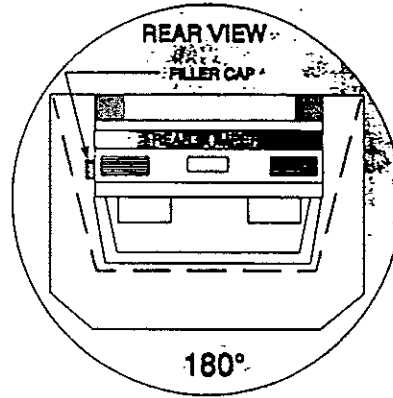
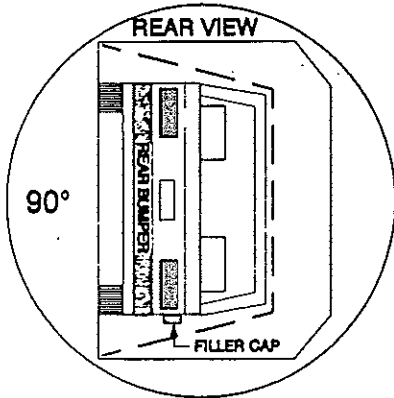
IV. SOLVENT SPILLAGE LOCATION(S):

Rollover not conducted.

Table 7  
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE :  
 90-180 Deg.

Vehicle NHTSA ID No. :  
 CT0108



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	-	minutes	-	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
<b>TOTAL</b>	0	minutes	0	seconds
Next whole minute interval	0	minutes		

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
--	----------	----------	----------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

N/A	N/A	N/A	N/A
-----	-----	-----	-----

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

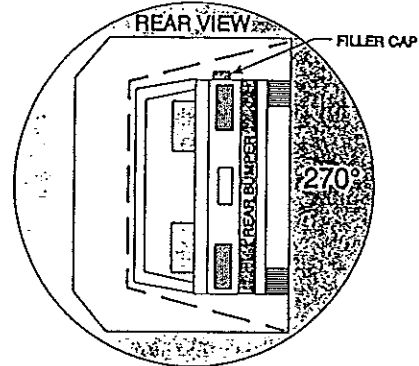
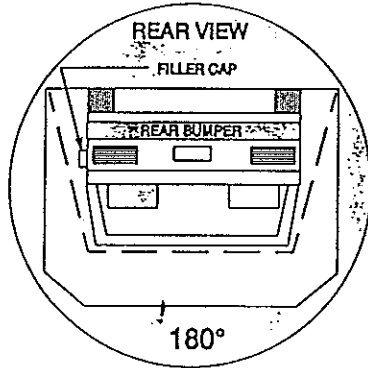
Rollover not conducted.

**S 211694**

Table 7  
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE :  
180-270 Deg.

Vehicle NHTSA ID No. :  
CT0108



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	-	minutes	-	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
TOTAL	0	minutes	0	seconds
Next whole minute interval	0	minutes		

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
--	----------	----------	----------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

N/A	N/A	N/A	N/A
-----	-----	-----	-----

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

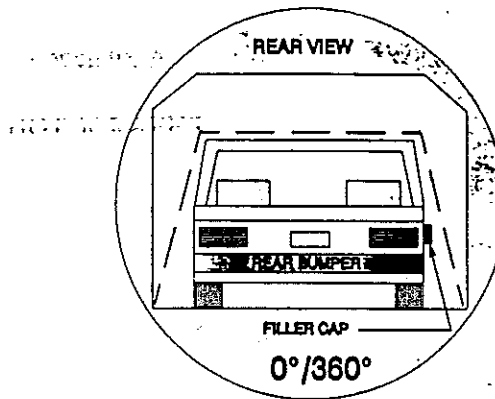
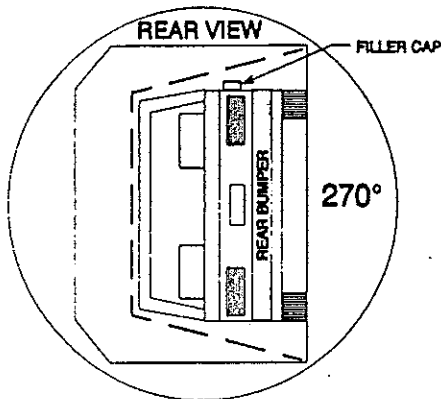
Rollover not conducted.



Table 7  
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE :  
270-360 Deg.

Vehicle NHTSA ID No.:  
CT0108



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	-	minutes	-	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
<b>TOTAL</b>	0	minutes	0	seconds
Next whole minute interval	0	minutes		

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
--	----------	----------	----------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

N/A	N/A	N/A	N/A
-----	-----	-----	-----

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

Rollover not conducted.

Figure 2

CAMERA POSITIONS FOR REAR IMPACTS

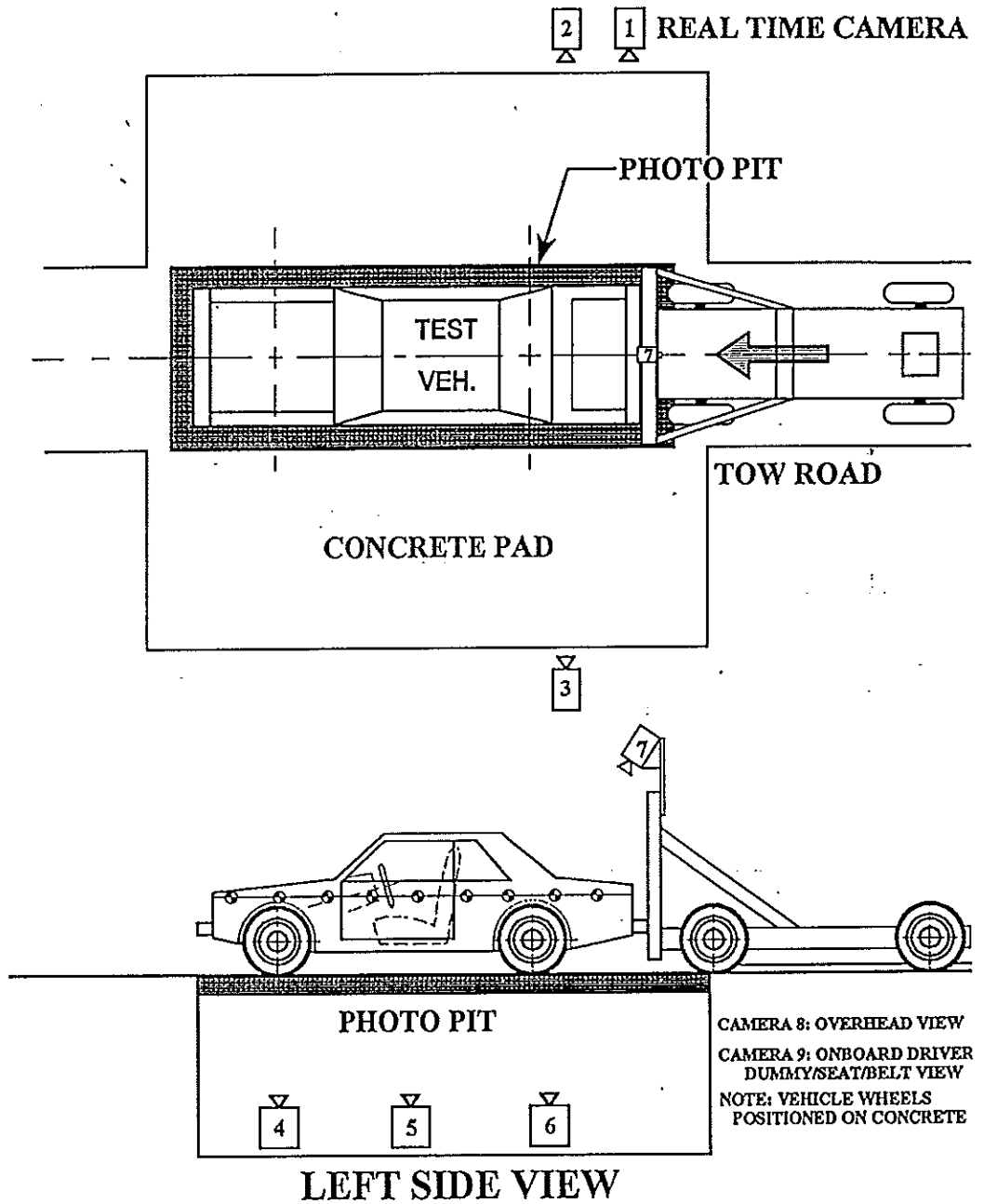


Table 8

## HIGH-SPEED CAMERA LOCATIONS

NHTSA No. CT0108 Vehicle 1996 Geo Tracker 4-door MPV

CAMERA NO.	VIEW	CAMERA POSITIONS (inches)			ANGLE**	LENS (mm)	SPEED (fps)
		X	Y	Z			
1	Real-Time Camera						24
2	Right Side View	-574	-32	45	75	13	830
3	Left Side View	522	-47	54	75	13	810
4	Vehicle Front Underbody View	0	-130	-77	90	13	640
5	Vehicle Mid-Section Underbody View	0	-78	-77	90	13	710
6	Vehicle Rear Underbody View	0	-36	-77	90	13	670
7	Moving Barrier View	0	0	99	-105	13	500
8	Overhead Overall View	0	-20	386	-90	13	740
9	Onboard Driver Dummy/Seat/Belt View					8	500

- \* X = film plane to monorail centerline (+ to left of rail)  
 Y = film plane to impact location (+ ahead of impact location)  
 Z = film plane to ground (+ above ground)  
 \*\* = referenced to horizontal plane

Section 4

NONCOMPLIANCE DATA

[The table content is extremely faint and illegible due to heavy noise and low contrast. It appears to be a multi-column table with several rows of data.]

S 211699

Table 9

TEST VEHICLE NONCOMPLIANCE NOTICE

NHTSA Contract Lab: Calspan SRL Corporation

Lab Project Manager & Telephone No.: David J. Travale (716) 632-7500

Date of Test: May 17, 1996 Vehicle NHTSA No. CT0108

Vehicle Manufacturer: CAMI AUTOMOTIVE INC CANADA

Model Year: 1996 VIN 2CNBH362T6905729

Model: Tracker Body Style 4-door MPV Build Date 03/95

Dummy Stabilized Temperature at Time of Test: 70 (Spec. 69 +/- 1)

Impact Velocity: 29.5 mph Time of Test: \_\_\_\_\_

Type of Automatic Restraint System: \_\_\_\_\_

Driver: Airbag 3-point belt system

Passenger: Airbag 3-point belt system

Failure Details:

The vehicle spilled 19.7 oz. by weight of stoddard in the 5 minute post impact period after the vehicle motion ceased. For the subsequent 25 minutes, the vehicle spilled stoddard at a rate of 1.5 oz./minute by weight.

Requirements:

FMVSS 301 allows a maximum of 5 oz. by weight of stoddard spillage in the 5 minutes after the vehicle motion ceases following the impact. For the subsequent 25 minutes, fuel spillage during any 1-minute interval shall not exceed 1 oz. by weight.

Approximate date that final test report will be made available to CTM:

6-4-96

Date Mfg. Rep. Notified: \_\_\_\_\_ Rep. Name: \_\_\_\_\_

Remarks: \_\_\_\_\_

Date of Proposed Joint Inspection of Test Vehicle: \_\_\_\_\_

NHTSA CMT: \_\_\_\_\_ CIR No. \_\_\_\_\_ Date: S 211700

Appendix A  
PHOTOGRAPHS

A-1

8344-10

LIST OF PHOTOGRAPHS

<u>Figure</u>	<u>Photograph Title</u>	<u>Page No.</u>
A-1	PRE-TEST FRONT VIEW .....	A-3
A-2	POST-TEST FRONT VIEW .....	A-4
A-3	PRE-TEST LEFT SIDE VIEW .....	A-5
A-4	POST-TEST LEFT SIDE VIEW .....	A-6
A-5	PRE-TEST RIGHT SIDE VIEW .....	A-7
A-6	POST-TEST RIGHT SIDE VIEW .....	A-8
A-7	PRE-TEST REAR VIEW .....	A-9
A-8	POST-TEST REAR VIEW .....	A-10
A-9	PRE-TEST LEFT FRONT THREE-QUARTER VIEW .....	A-11
A-10	POST-TEST LEFT FRONT THREE-QUARTER VIEW .....	A-12
A-11	PRE-TEST RIGHT REAR THREE-QUARTER VIEW .....	A-13
A-12	POST-TEST RIGHT REAR THREE-QUARTER VIEW .....	A-14
A-13	PRE-TEST FRONT UNDERBODY VIEW .....	A-15
A-14	POST-TEST FRONT UNDERBODY VIEW .....	A-16
A-15	PRE-TEST REAR UNDERBODY VIEW .....	A-17
A-16	POST-TEST REAR UNDERBODY VIEW .....	A-18
A-17	CERTIFICATION PLACARD .....	A-19
A-18	TIRE PLACARD .....	A-20
A-19	SUPPLEMENTARY PHOTO #1 (Stoddard spillage view) .....	A-21
A-20	SUPPLEMENTARY PHOTO #2 (Stoddard spillage view) .....	A-22
A-21	SUPPLEMENTARY PHOTO #3 (Stoddard spillage view) .....	A-23
A-22	SUPPLEMENTARY PHOTO #4 (Stoddard, 1st 5 min) .....	A-24
A-23	SUPPLEMENTARY PHOTO #5 (Stoddard, next 25 min) .....	A-25



Figure A-1 PRE-TEST FRONT VIEW





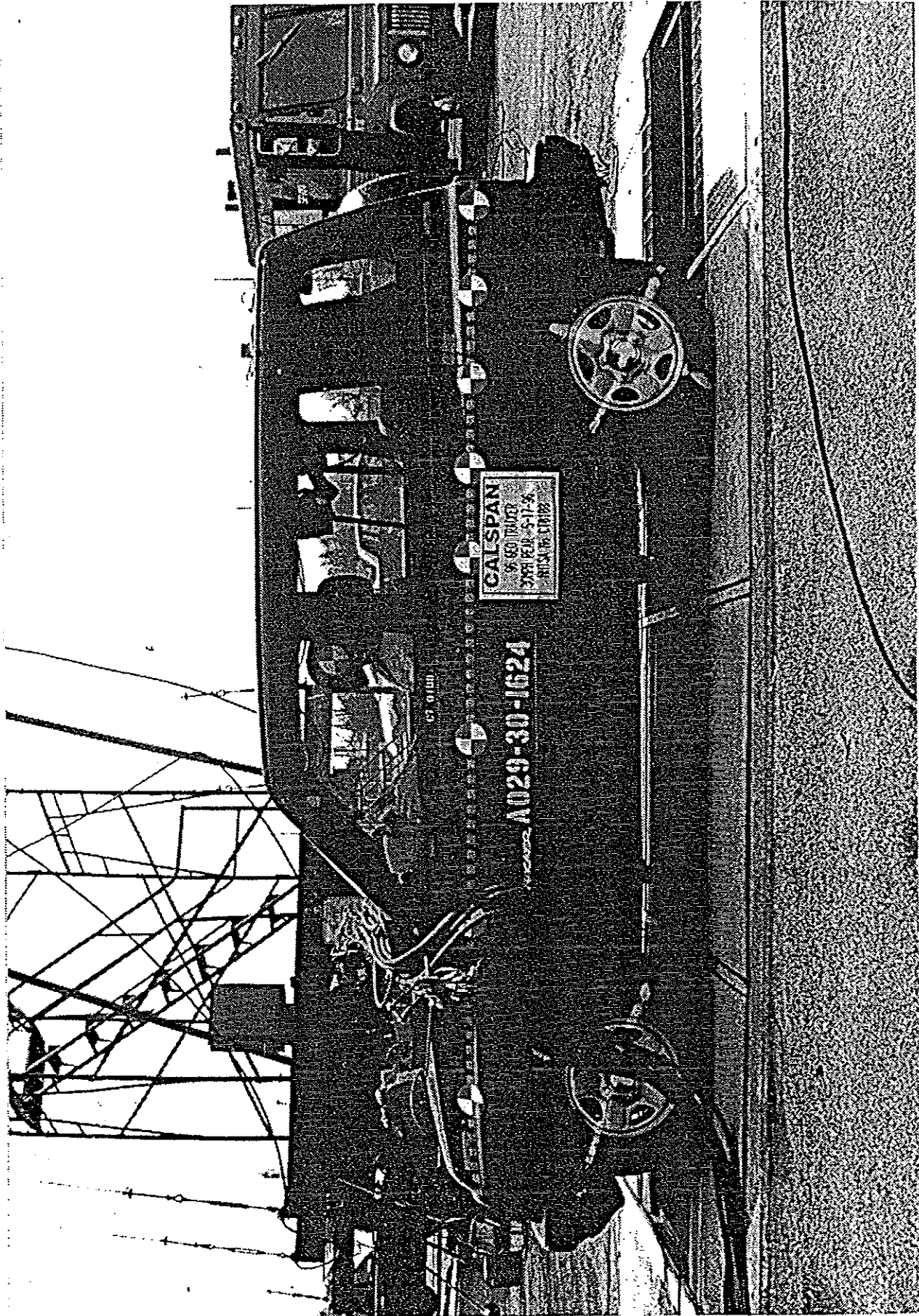


Figure A-3 PRE-TEST LEFT SIDE VIEW

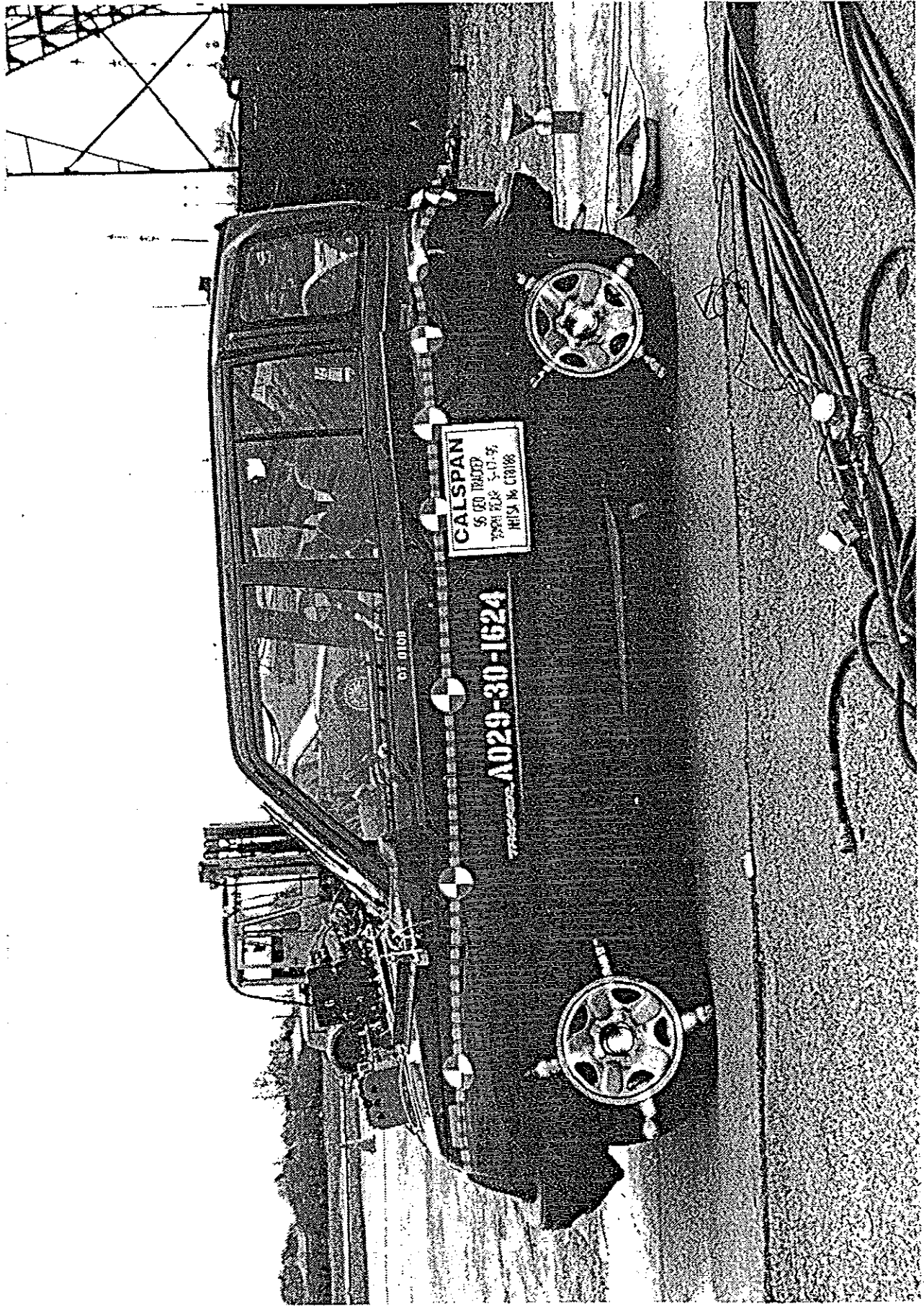






FIGURE A-5 THE FIRST NIGHT OF THE YEAR

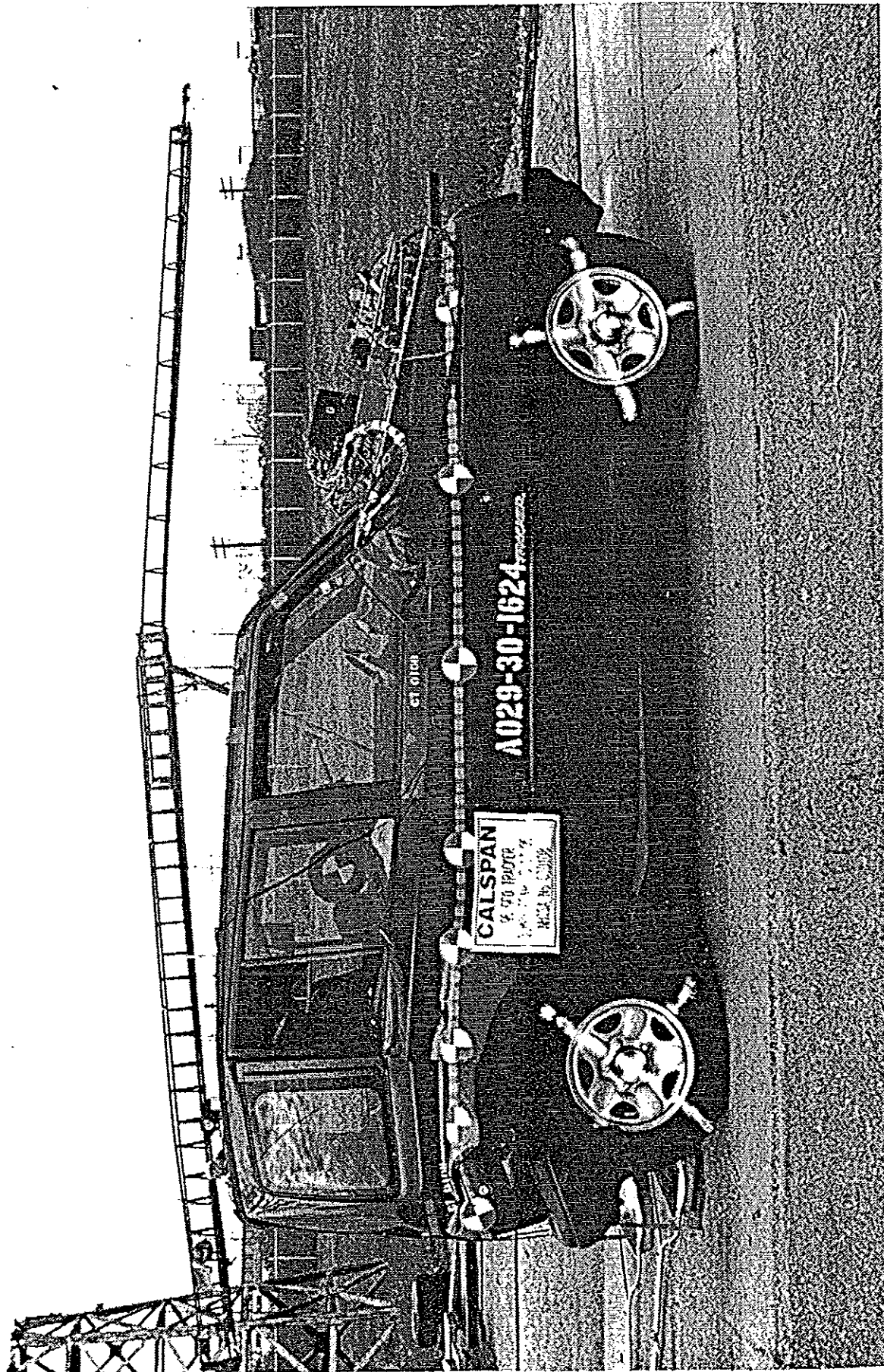


Figure A-6 POST-TEST RIGHT SIDE VIEW



Camera A.7 DDE TEST READ UNIT



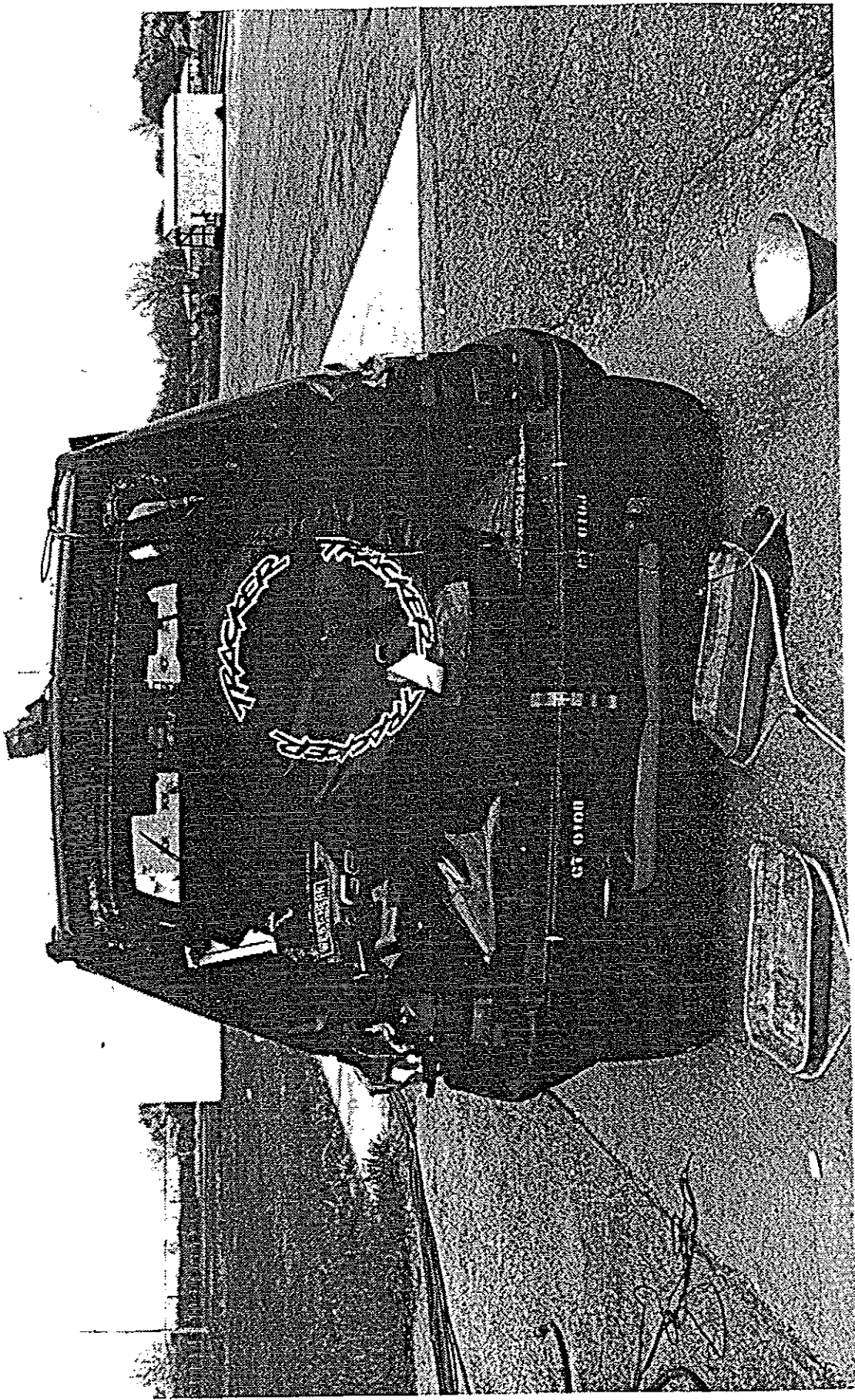


Figure A-8 POST-TEST REAR VIEW

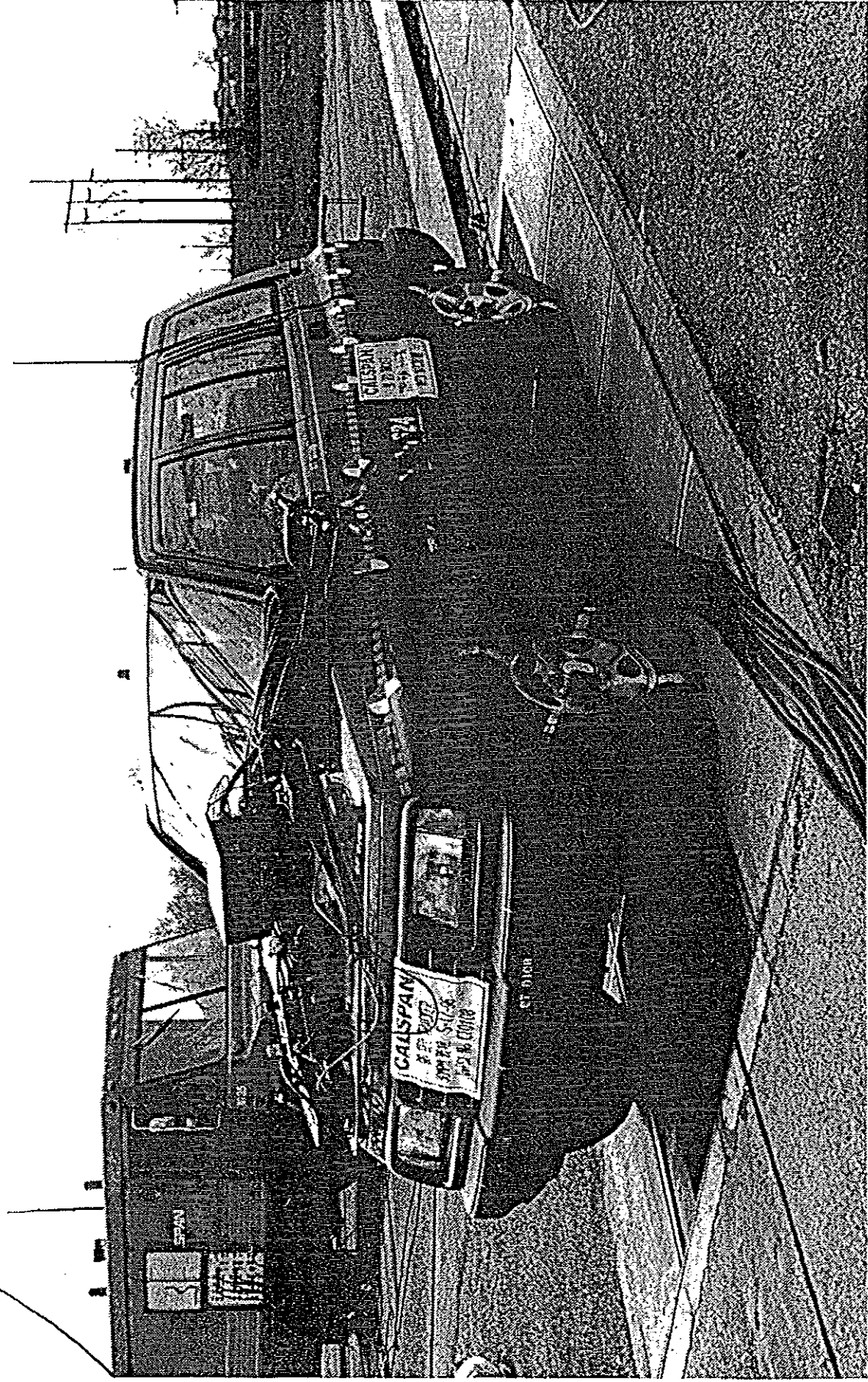


Figure A-9 PRE-TEST LEFT FRONT THREE-QUARTER VIEW





Figure A-10 POST-TEST LEFT FRONT THREE-QUARTER VIEW



Figure A-11 PRE-TEST RIGHT REAR THREE-QUARTER VIEW



Figure A-12 POST-TEST RIGHT REAR THREE-QUARTER VIEW



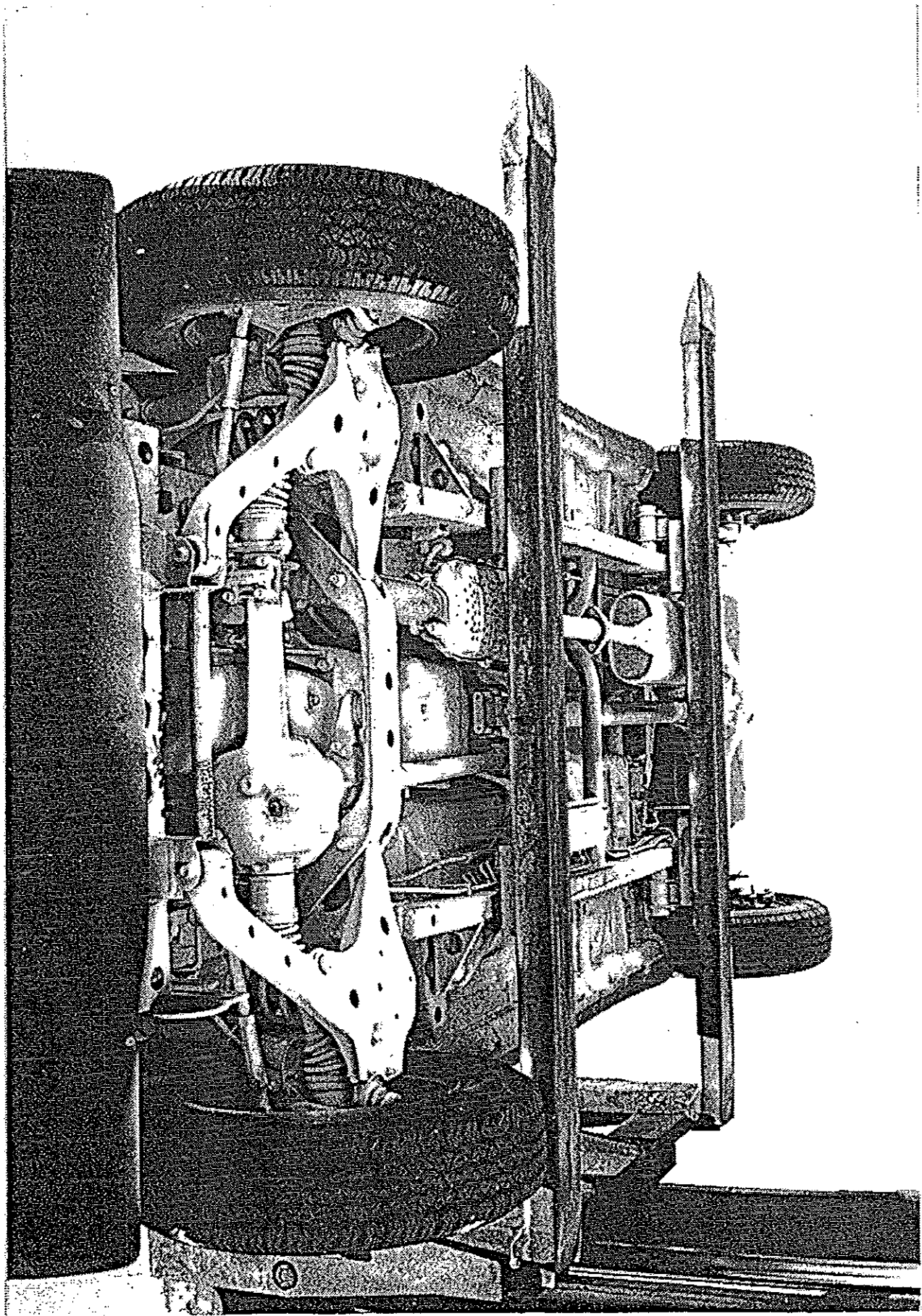


Figure A-13 PRE-TEST FRONT UNDERBODY VIEW

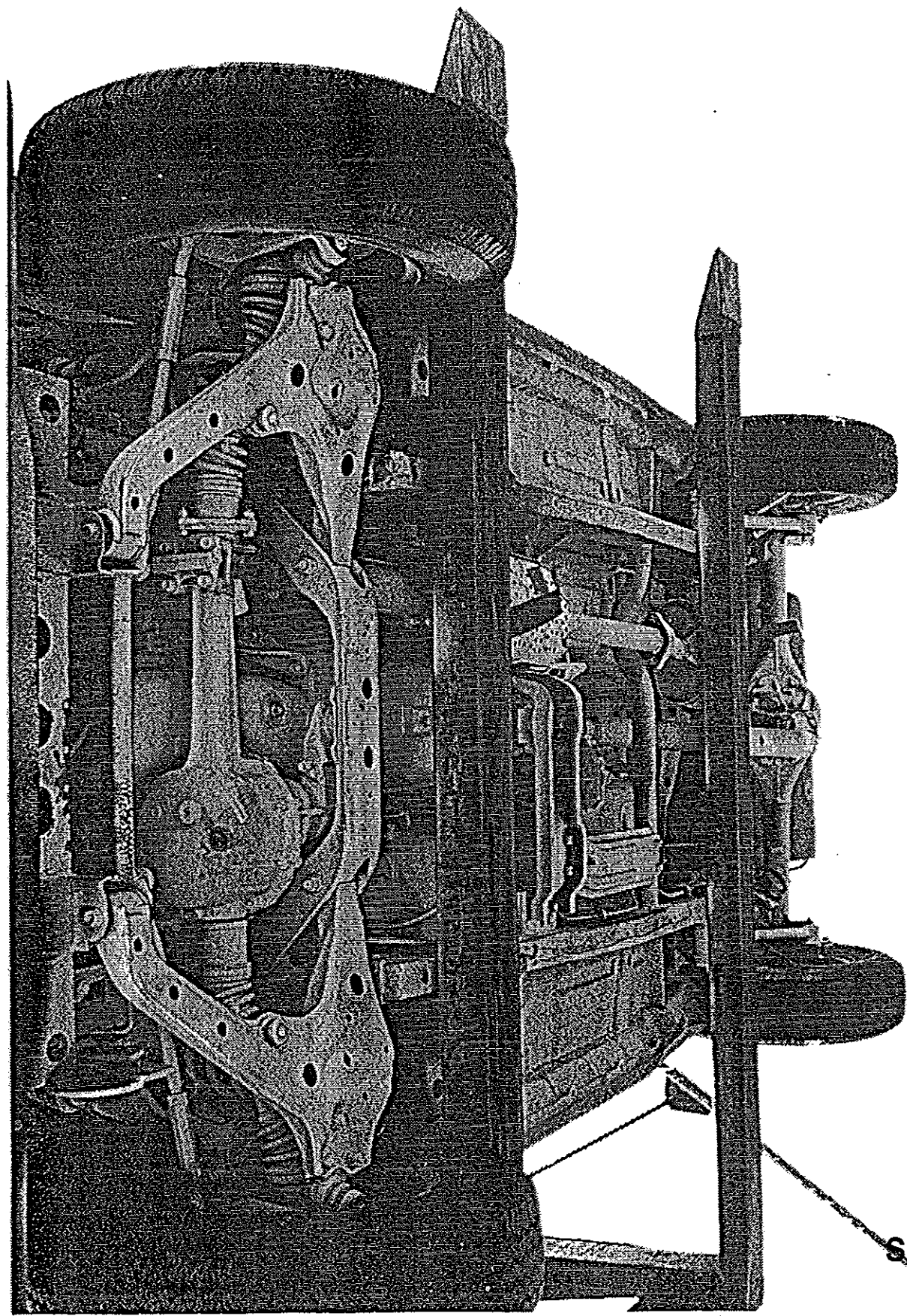


Figure A-14 POST-TEST FRONT UNDERBODY VIEW

S 211716

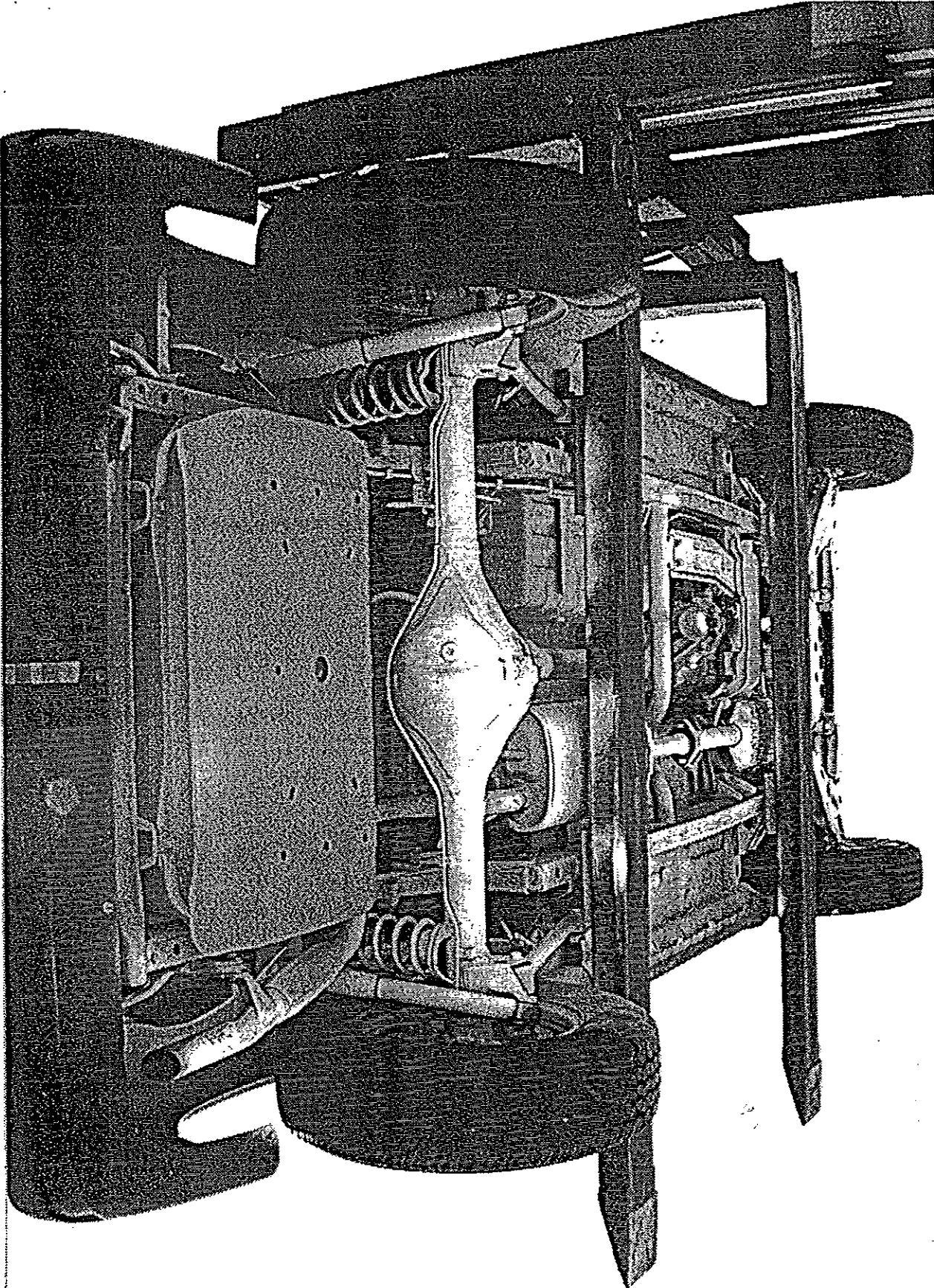


Figure A-15 PRE-TEST REAR UNDERBODY VIEW

S 211717

8344-10



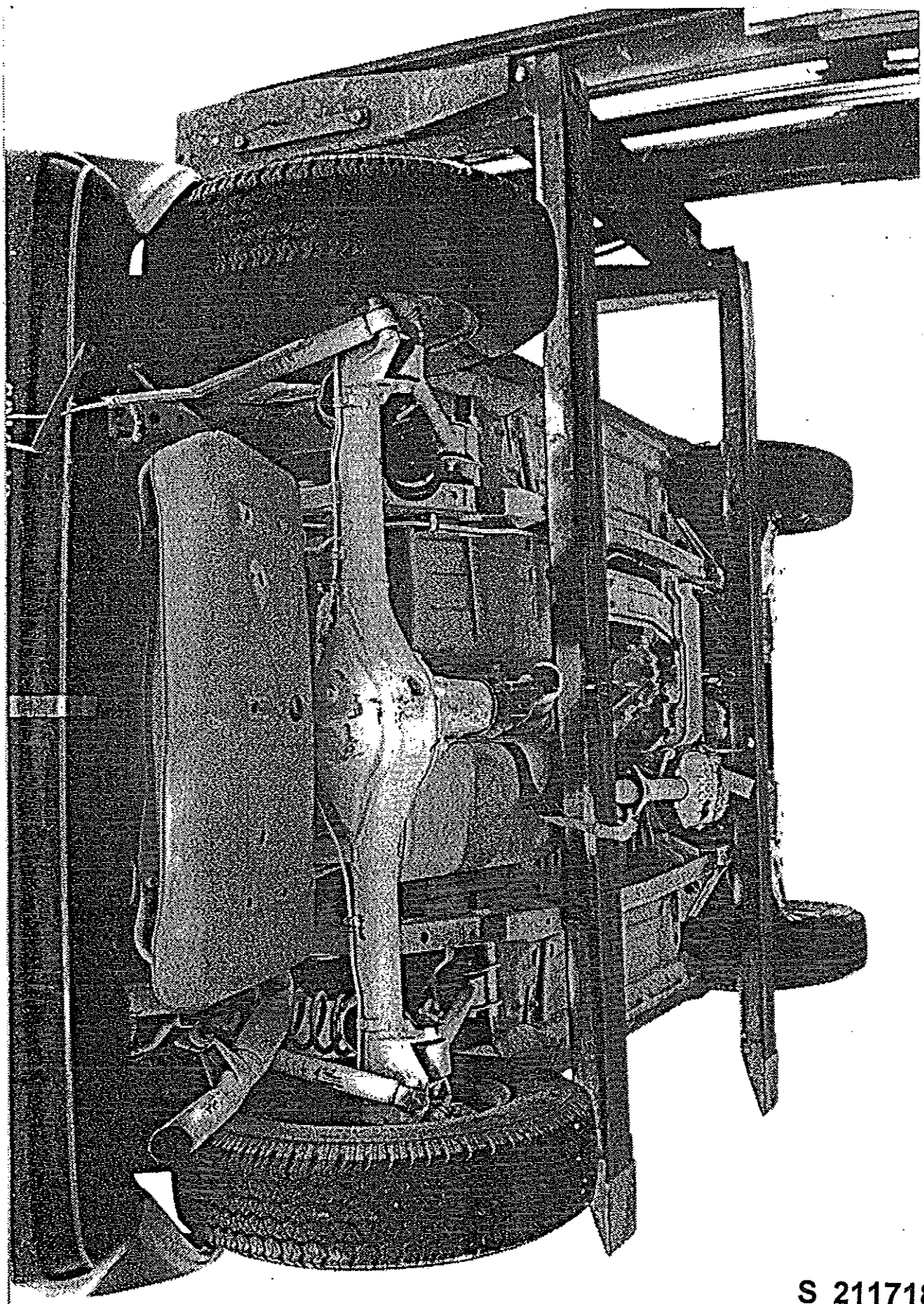


Figure A. 14 POST-TEST REAR UNDERBODY VIEW

S 211718

MFD BY CAMIAUTOMOTIVE INC. CANADA  
DATE 08/95  
GWR 3527LB 1697KG  
GAWR 4197LB 1906KG  
TIRE P205/75R15 (FRTRR) RIMS 15X5 1/2J (FRTRR)  
MAX LOAD TIRE PRESS 23PSI (160KPa) FRTRR  
THIS VEHICLE CONFORMS TO ALL  
APPLICABLE U.S. FEDERAL MOTOR VEHICLE  
SAFETY STANDARDS IN EFFECT ON THE  
DATE OF MANUFACTURE SHOWN ABOVE  
VIN J136216105729  
MULTIPURPOSE PASSENGER VEHICLE  
THIS VEHICLE EQUIPPED FOR 21487 324KG PAYLOAD  
SEE OWNER MANUAL FOR ADDITIONAL INFORMATION

TIRE	G
LB/kg	353
TIRES	
RIMS	
INFLATION PRESSURE COLD	
PSI/kPa	

Figure A-17 CERTIFICATION PLACARD



### TIRE PLACARD

	GAWR	GAWR FT	GAWR RP
LB/kg	3530/1600	1700/770	2120/960
TIRES		P205/75R15	P205/75R15
RIMS		15X5 1/2JJ	15X5 1/2JJ
INFLATION PRESSURE COLD PSI/kPa		23/160	23/160

56860

SUZUKI MOTOR CORPORATION  
 SUZUKI MOTOR VEHICLE  
 EFFECT ON THE  
 SHOWN ABOVE  
 PASSENGER VEHICLE  
 714LB/ 324KG PASSENGER  
 ORIGINAL INFORMATION

Figure A-18 TIRE PLACARD

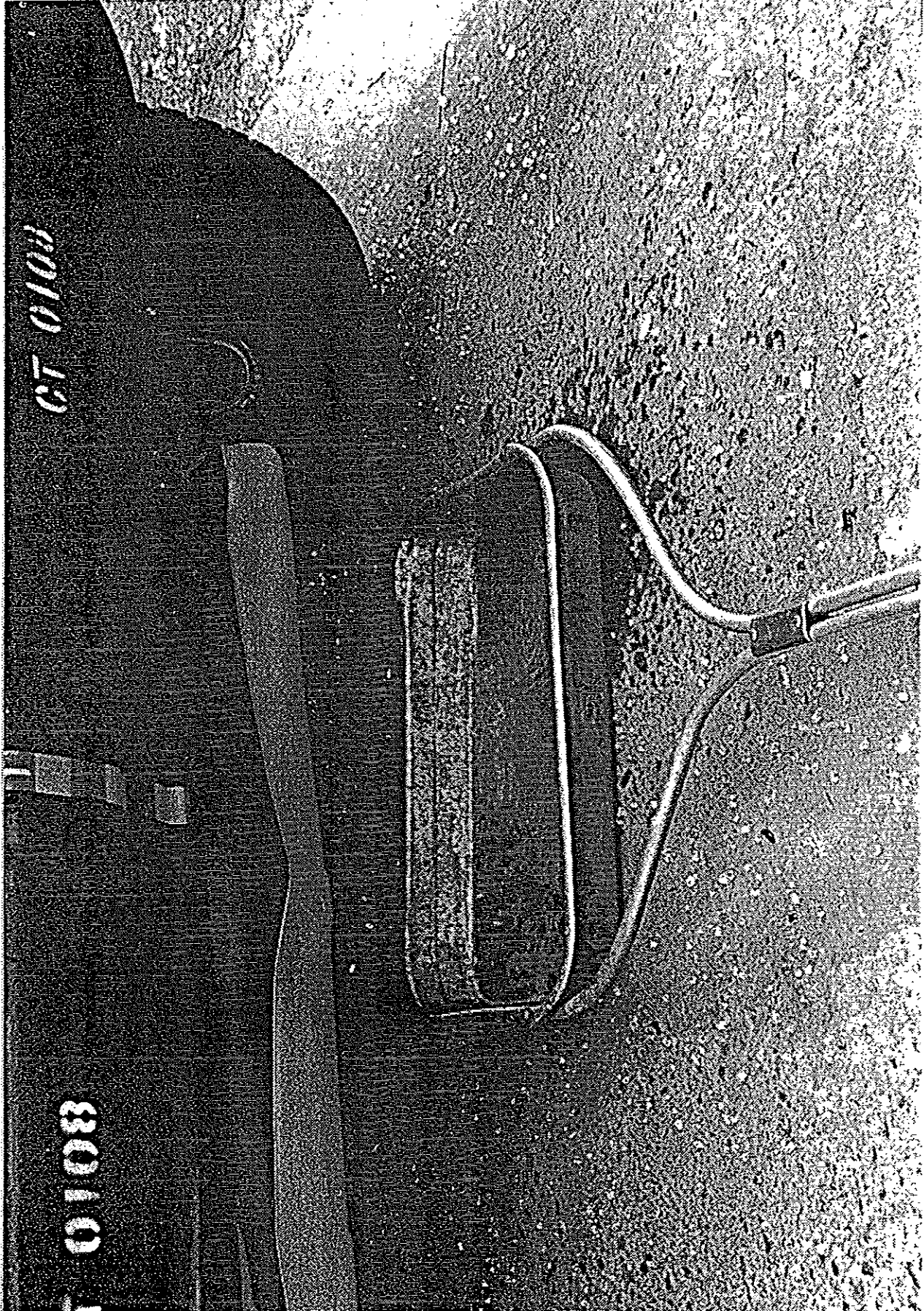


Figure A-19 SUPPLEMENTARY PHOTO #1

S 211721



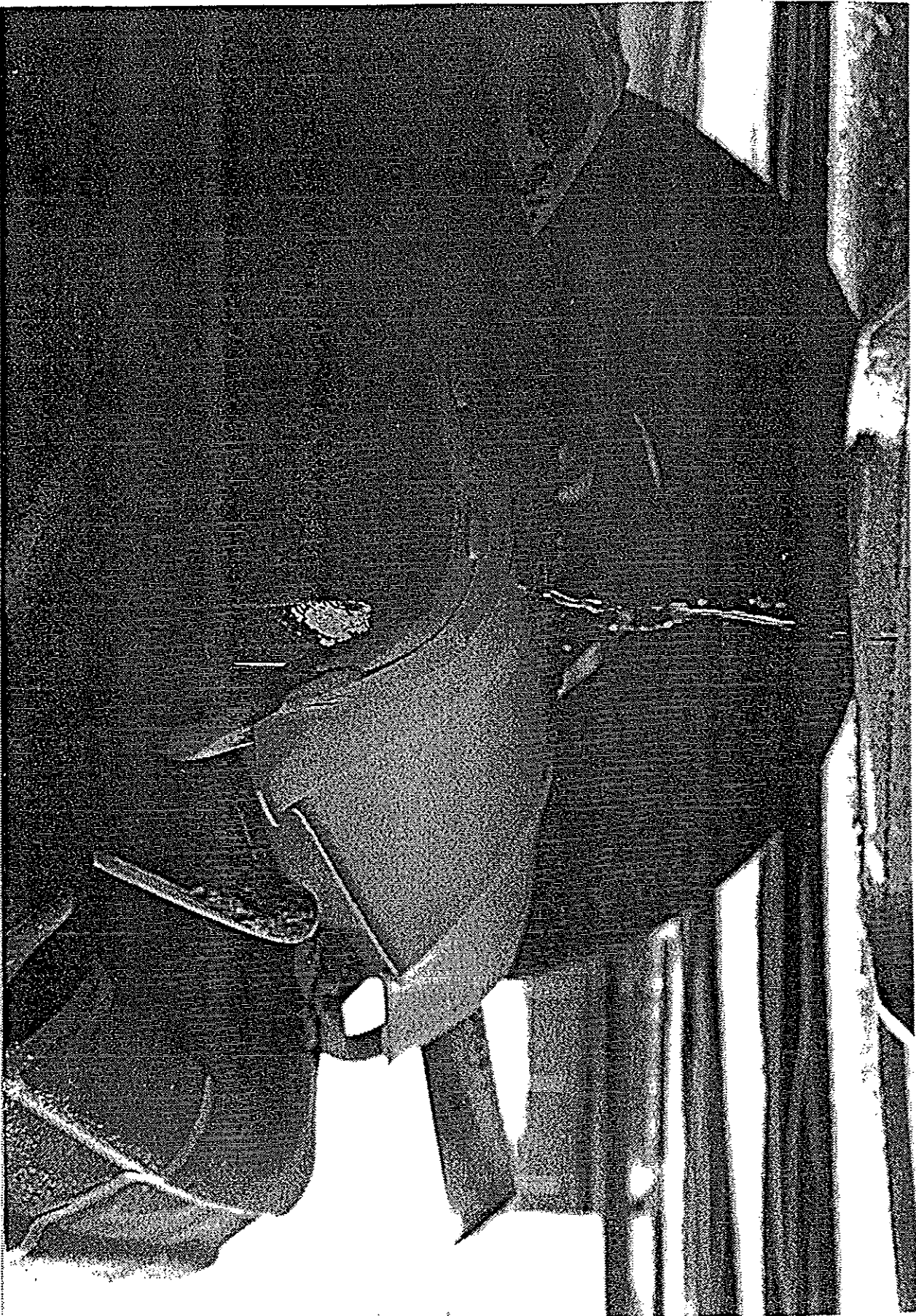


Figure A-20 SUPPLEMENTARY PHOTO #2

S 211722

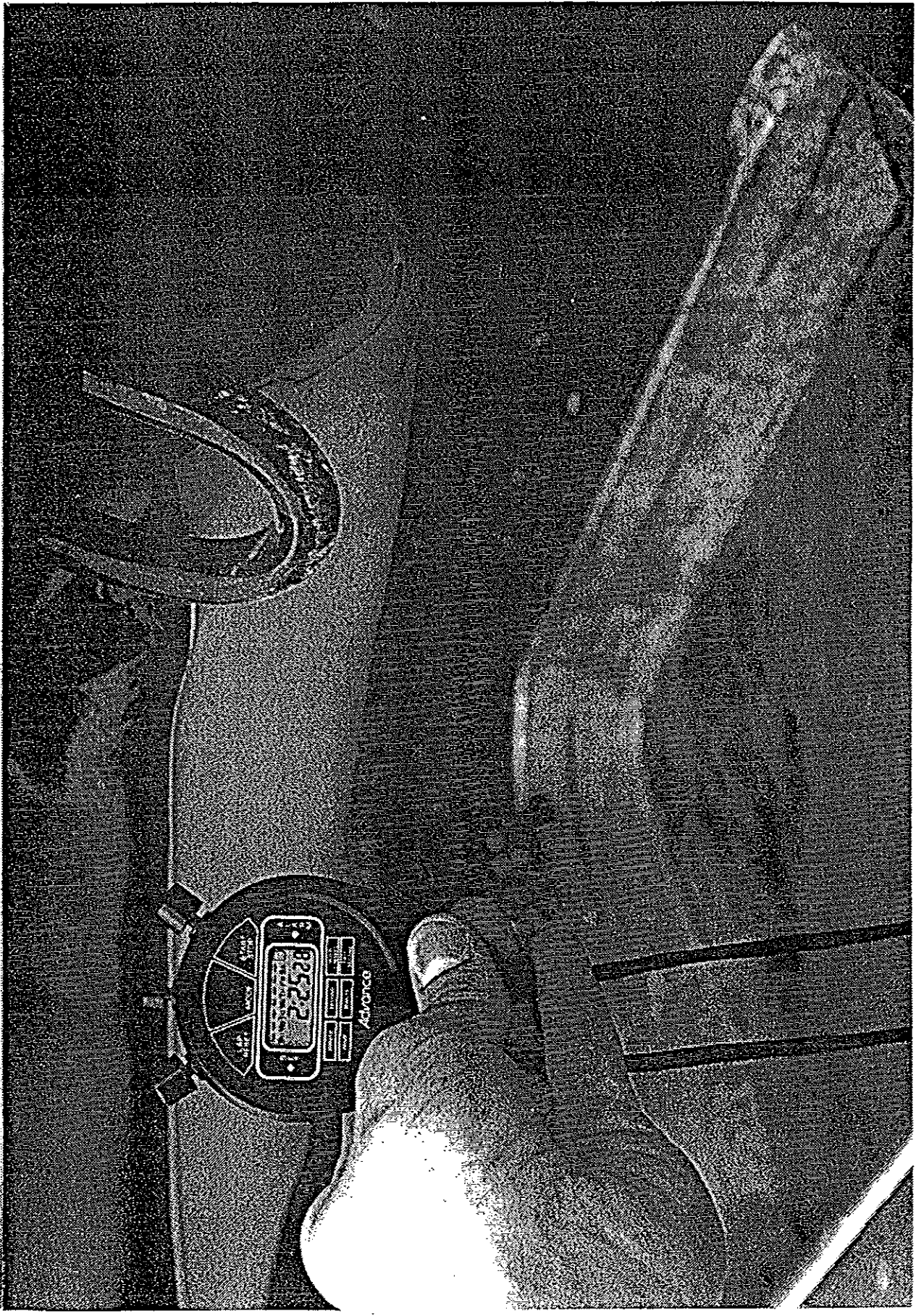


Figure A-21 SUPPLEMENTARY PHOTO #3

S 211723





S 211724

Figure A-22 SUPPLEMENTARY PHOTO #4

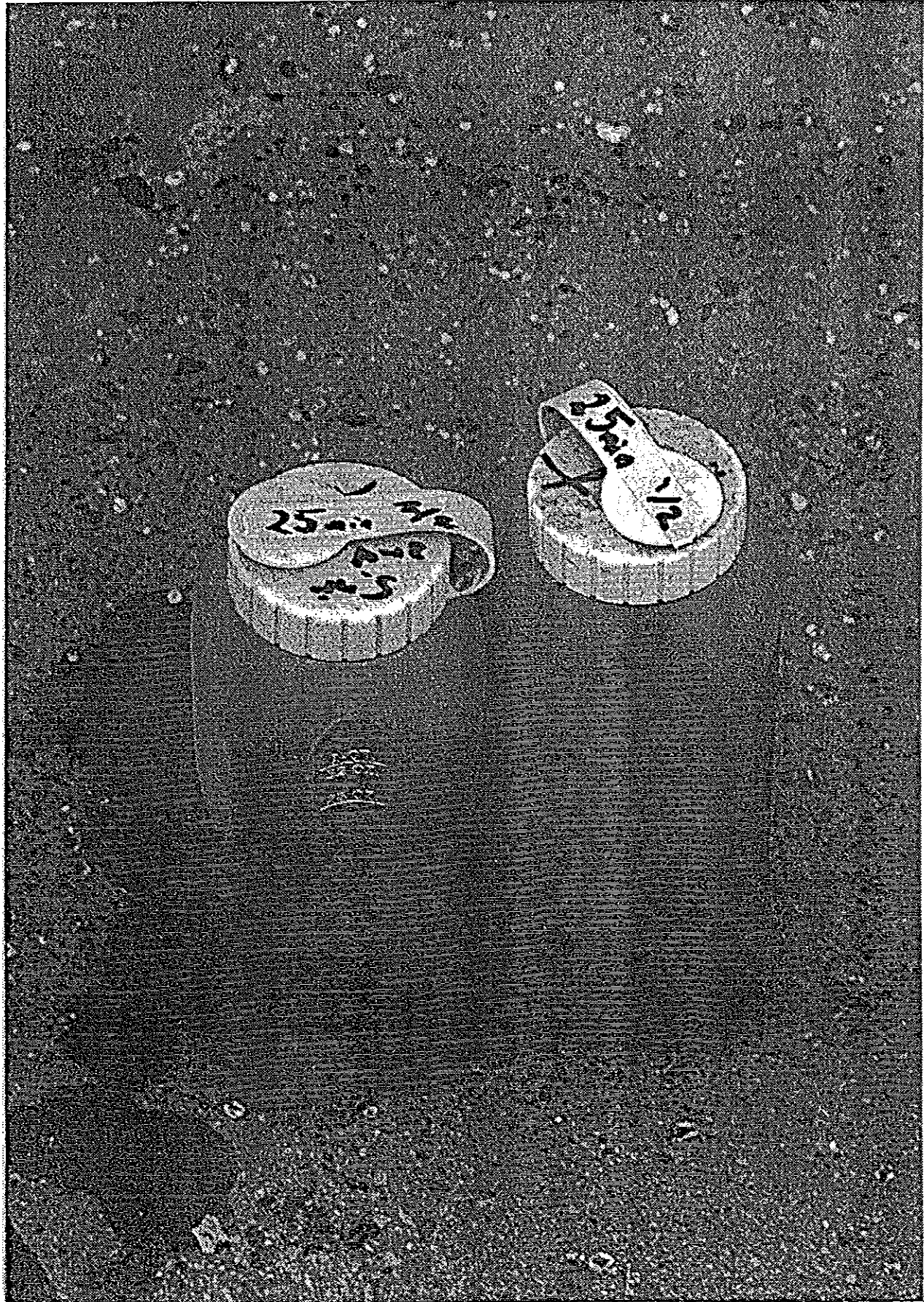


Figure A-23 SUPPLEMENTARY PHOTO #5

Appendix B

VEHICLE AND DUMMY RESPONSE DATA

(REAR IMPACT ONLY)

Note: Data is displayed using the NHTSA coordinate system.

FACILITY: Track  
RUN #: 1624  
SERIES #: 1

TEST DATE: 17 May 1996  
TEST TIME: 14:39:24  
BOARD: a

TITLE: 301 Rear 30 MPH-1996 Geo Tracker

CHANNEL NUMBER	DESCRIPTION	ENGR UNIT	MAXIMUM		MINIMUM		FILTER CLASS
			AMP	msec	AMP	msec	
1	Pos. 1 Head X	Gs	59.4	104.3	-5.2	82.8	1000.0
2	Pos. 1 Head Y	Gs	5.3	104.3	-2.9	42.1	1000.0
3	Pos. 1 Head Z	Gs	8.3	110.5	-8.7	100.8	1000.0
4	Pos. 1 Chest Disp	ins	N/A	N/A	N/A	N/A	180.0
5	Pos. 1 Chest X	Gs	21.4	90.8	-2.2	160.2	180.0
6	Pos. 1 Chest Y	Gs	4.1	96.7	-3.8	47.3	180.0
7	Pos. 1 Chest Z	Gs	2.6	325.3	-6.6	73.6	180.0
8	Pos. 1 Lap Belt Load	lbs	66.3	130.1	-13.0	58.7	60.0
9	Pos. 1 Pelvic X	Gs	19.1	79.9	-7.8	110.8	1000.0
10	Pos. 1 Pelvic Y	Gs	8.7	82.9	-4.4	43.6	1000.0
11	Pos. 1 Pelvic Z	Gs	4.0	324.0	-9.0	51.4	1000.0
12	Pos. 1 Belt Spoolout	ins	.2	351.2	-.5	324.0	60.0
13	Pos. 1 Upper Neck Fx	lbs	73.9	82.6	-69.6	106.4	1000.0
14	Pos. 1 Upper Neck Fy	lbs	41.4	82.6	-18.3	143.3	1000.0
15	Pos. 1 Upper Neck Fz	lbs	123.5	152.0	-142.7	114.5	1000.0
16	Left Rear Xmember X	Gs	27.0	12.0	-2.4	154.4	60.0
17	Pos. 1 Head Resultant	Gs	59.8	104.2	.0	12.7	1000.0
18	Pos. 1 Chest Resultant	Gs	21.8	90.7	.0	-31.4	180.0
19	Pos. 1 Pelvic Res.	Gs	19.8	79.8	.0	8.5	1000.0
20	Pos. 1 Upper Neck F(Res)	lbs	147.6	110.2	1.0	19.2	1000.0

V2 36 ms Fixed Duration HIC SUMMARY: Pos. 1 Head Resultant

hic: 235.68  
t1 = 94.920 msec  
t2 = 110.880 msec  
Average G's Over Hic Duration = 46.53

CLIP V2.1 SUMMARY: Pos. 1 Chest Resultant

Peak Resultant (3 ms CLIPPED DURATION) = 19.547 G's  
Tstart = 89.3591 ms  
Tend = 92.3591 ms  
CSI = 40.148



FACILITY: Track  
RUN #: 1624  
SERIES #: 1

TEST DATE: 17 May 1996  
TEST TIME: 14:39:24  
BOARD: b

TITLE: 301 Rear 30 MPH-1996 Geo Tracker

CHANNEL NUMBER	DESCRIPTION	ENGR UNIT	MAXIMUM		MINIMUM		FILTER CLASS
			AMP	msec	AMP	msec	
1	Pos. 1 Upper Neck Mx	ft-lbs	2.6	151.7	-4.8	71.0	600.0
2	Pos. 1 Upper Neck My	ft-lbs	48.7	107.9	-6.3	153.2	600.0
3	Pos. 1 Upper Neck Mz	ft-lbs	3.6	83.2	-5.9	165.8	600.0
4	Right Rear Xmember X	Gs	25.7	11.9	-3.7	101.2	60.0
5	Upper Seatback X	Gs	25.5	18.4	-20.2	42.6	60.0
6	Lower Seatback X	Gs	22.6	15.7	-7.8	124.6	60.0
17	Pos. 1 Neck Moment Res.	ft-lbs	48.9	107.9	.0	-66.2	600.0

TEST NO. CT0108

VEHICLE

SAE FILTER CHANNEL CLASS

60

Note: Angular seatback position is measured in degrees of rotation from the initial (design) position.

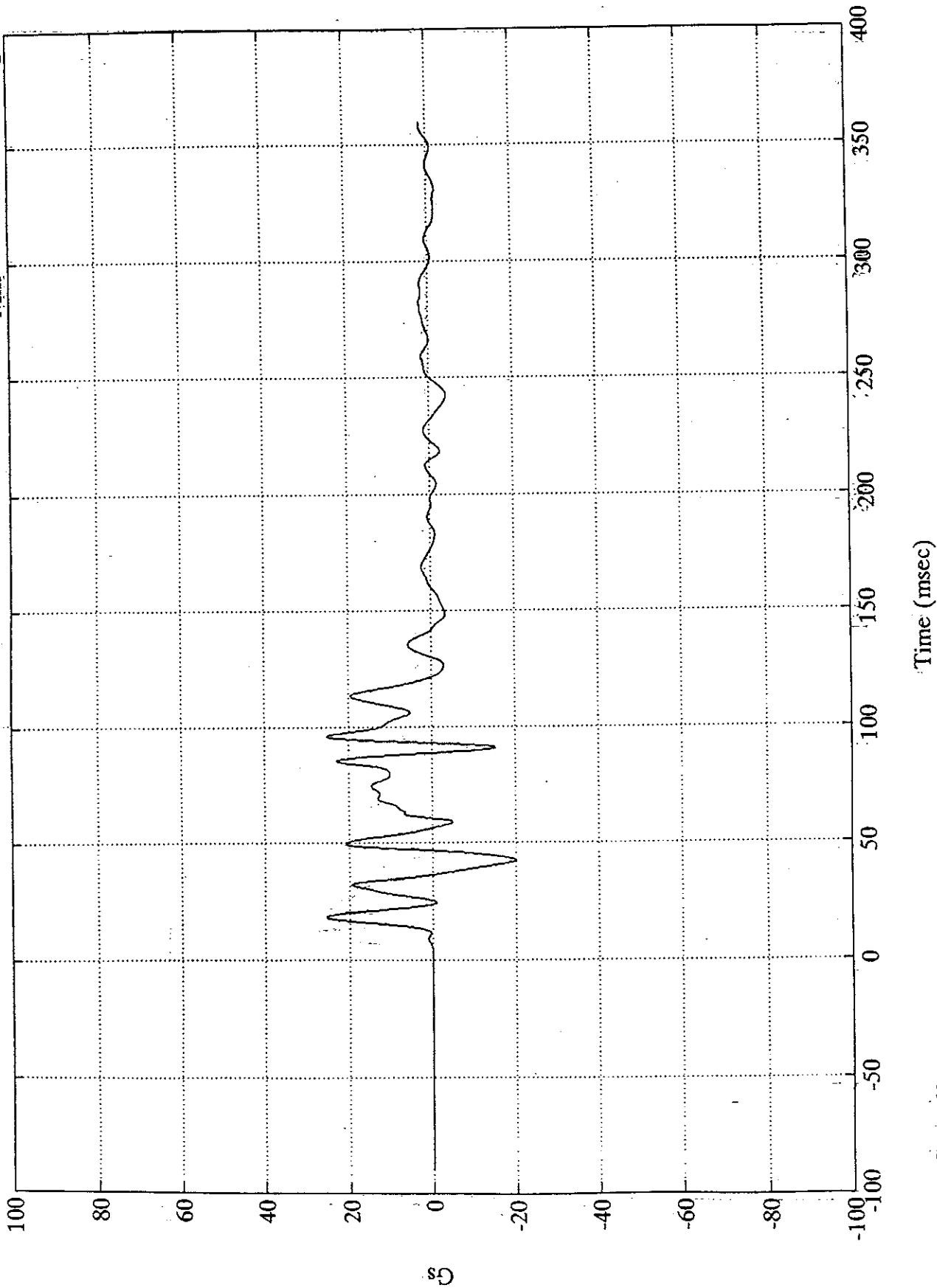
B-4

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Upper Seatback X

Max = 25.45 Gs @ 18.36 msec  
Min = -20.22 Gs @ 42.59 msec



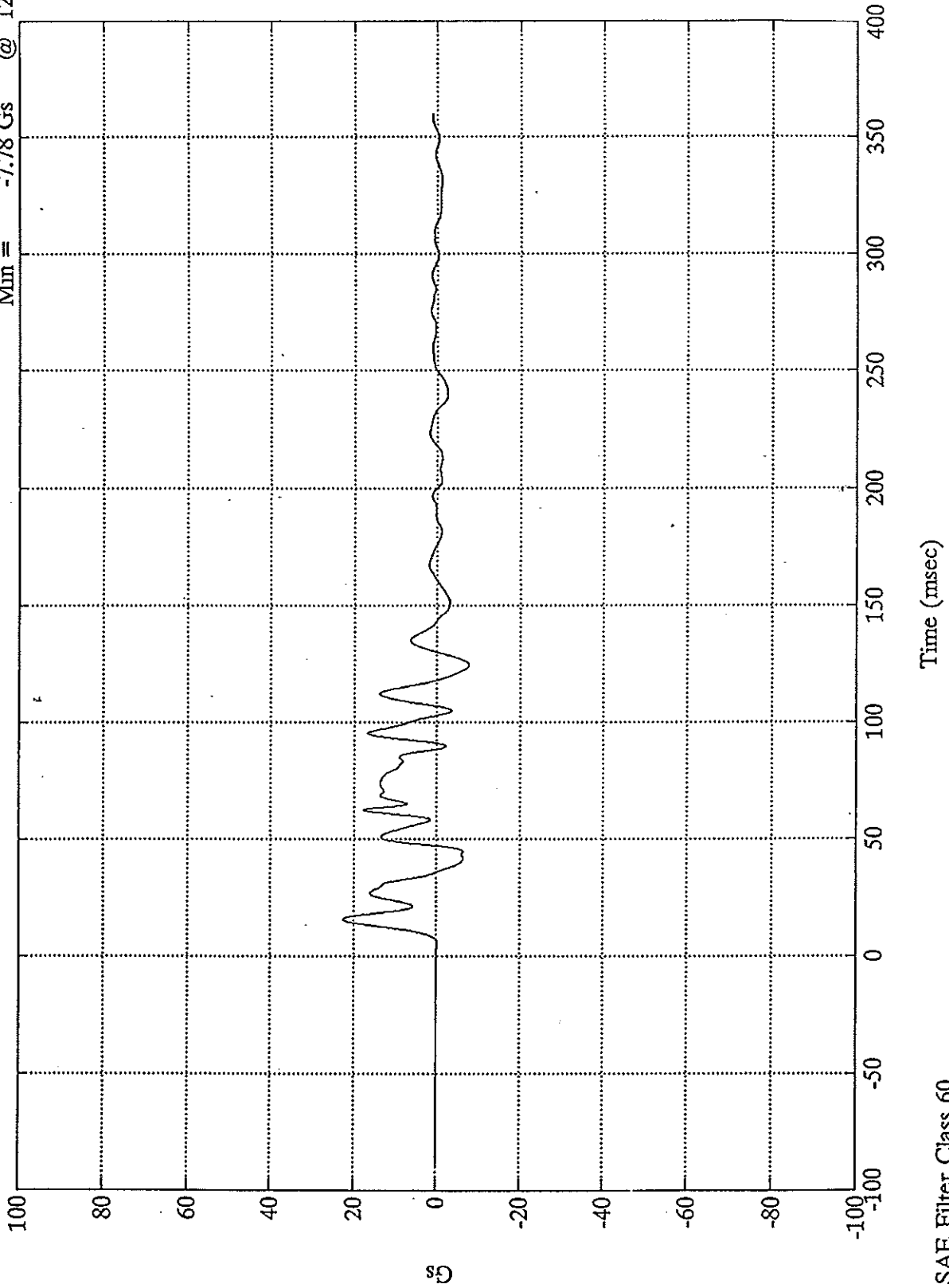
SAE Filter Class 60

EA12-005  
PRODUCED BY SUZUKI MOTOR CORPORATION

301 Rear 30 MPH-1996 Geo Tracker

Lower Seatback X

Max = 22.63 Gs @ 15.71 msec  
Min = -7.78 Gs @ 124.56 msec



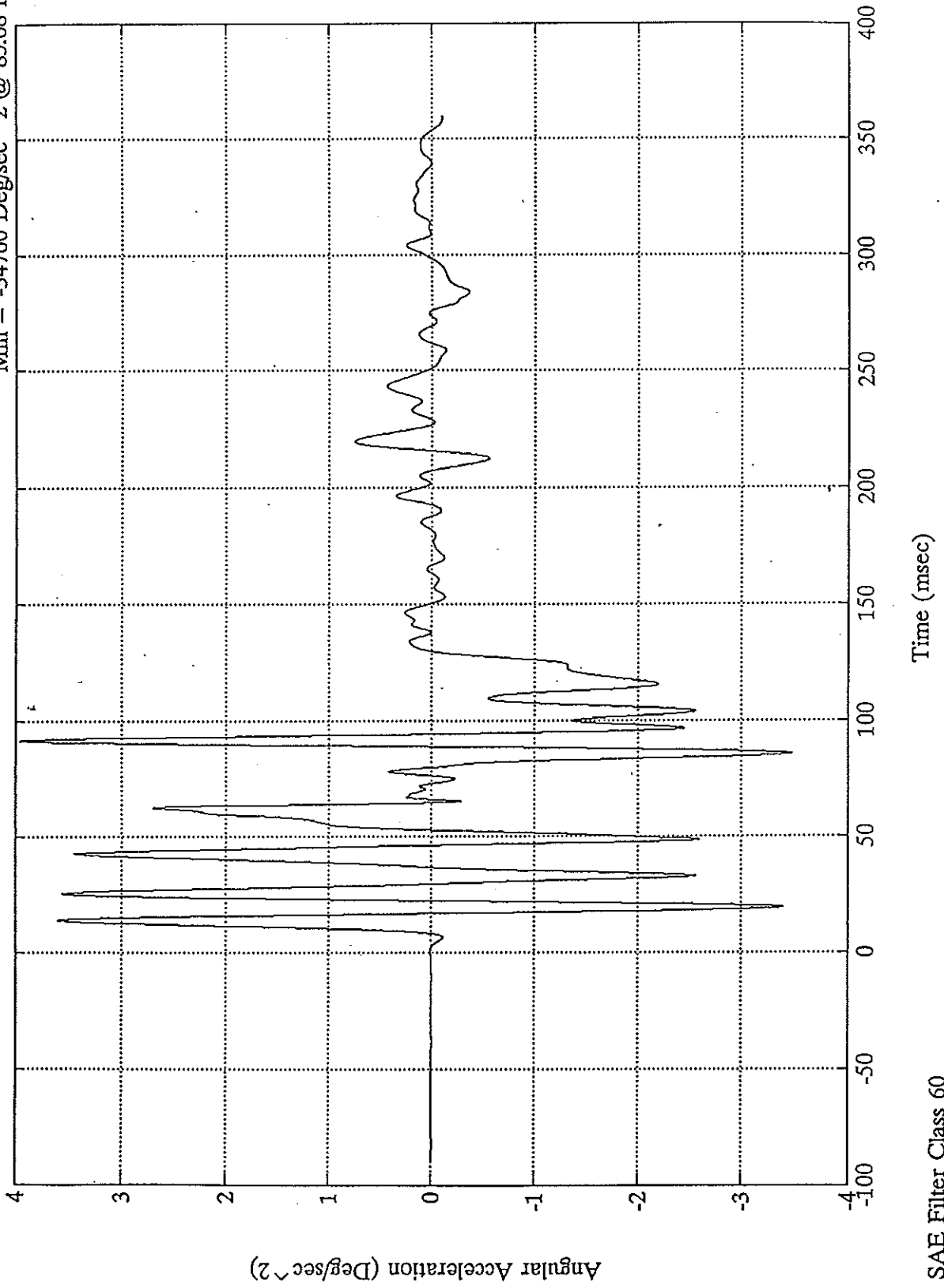
B-6

8344-10

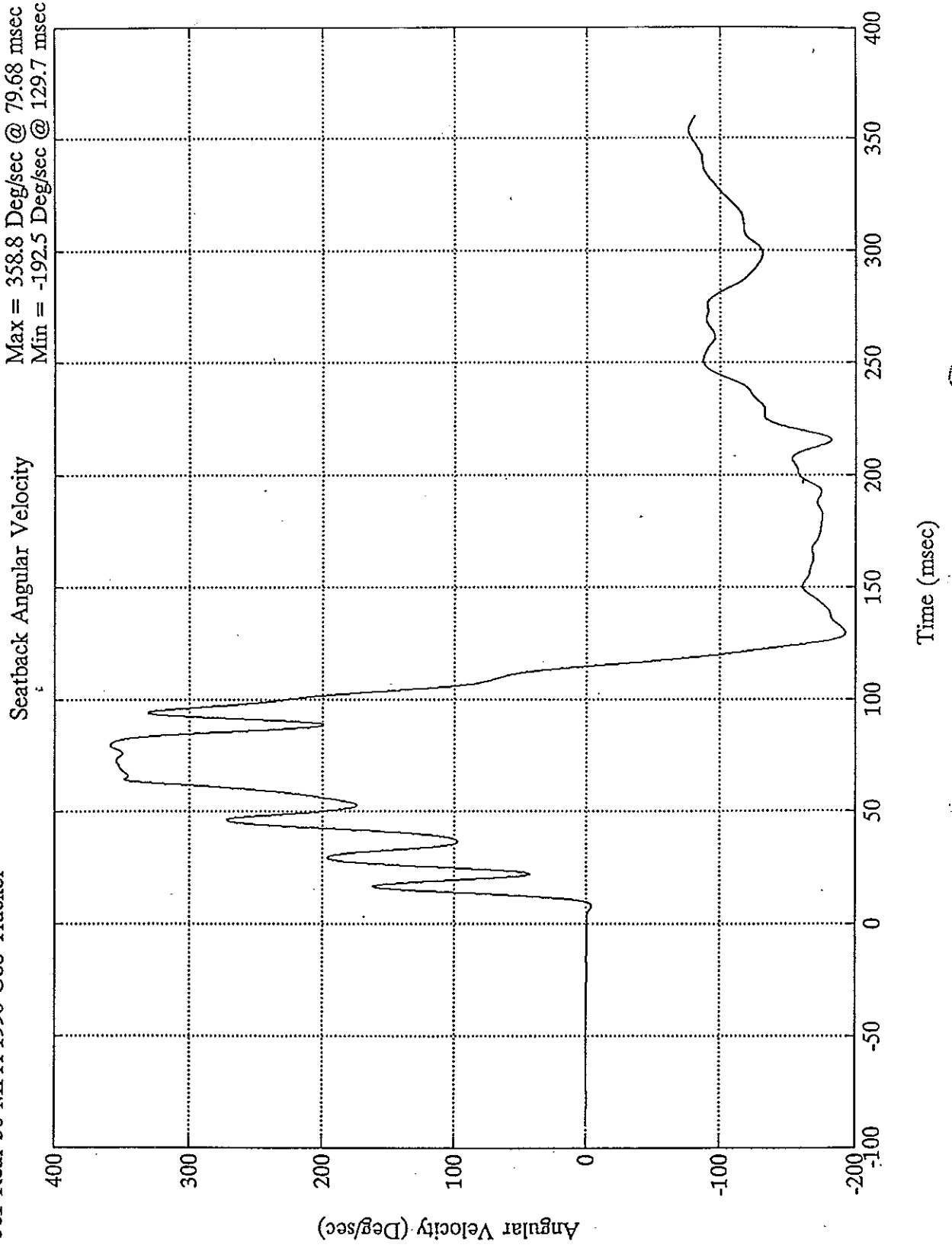
301 Rear 30 MPH-1996 Geo Tracker  
x10<sup>4</sup>

Max = 39640 Deg/sec<sup>2</sup> @ 91.56 msec  
Min = -34760 Deg/sec<sup>2</sup> @ 85.68 msec

Seatback Angular Acceleration



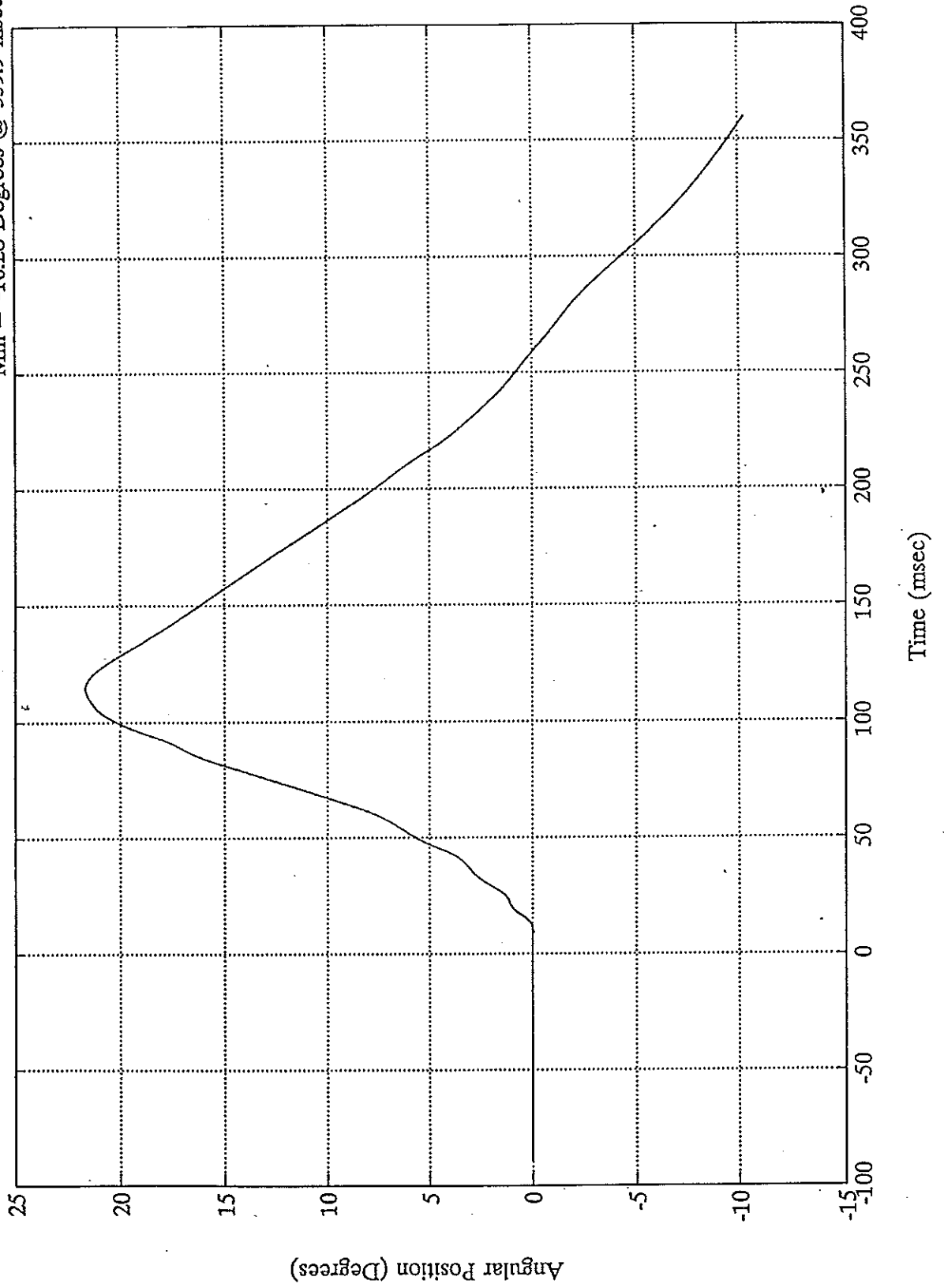
301 Rear 30 MPH-1996 Geo Tracker



301 Rear 30 MPH-1996 Geo Tracker

Max = 21.64 Degrees @ 114.7 msec  
Min = -10.28 Degrees @ 359.9 msec

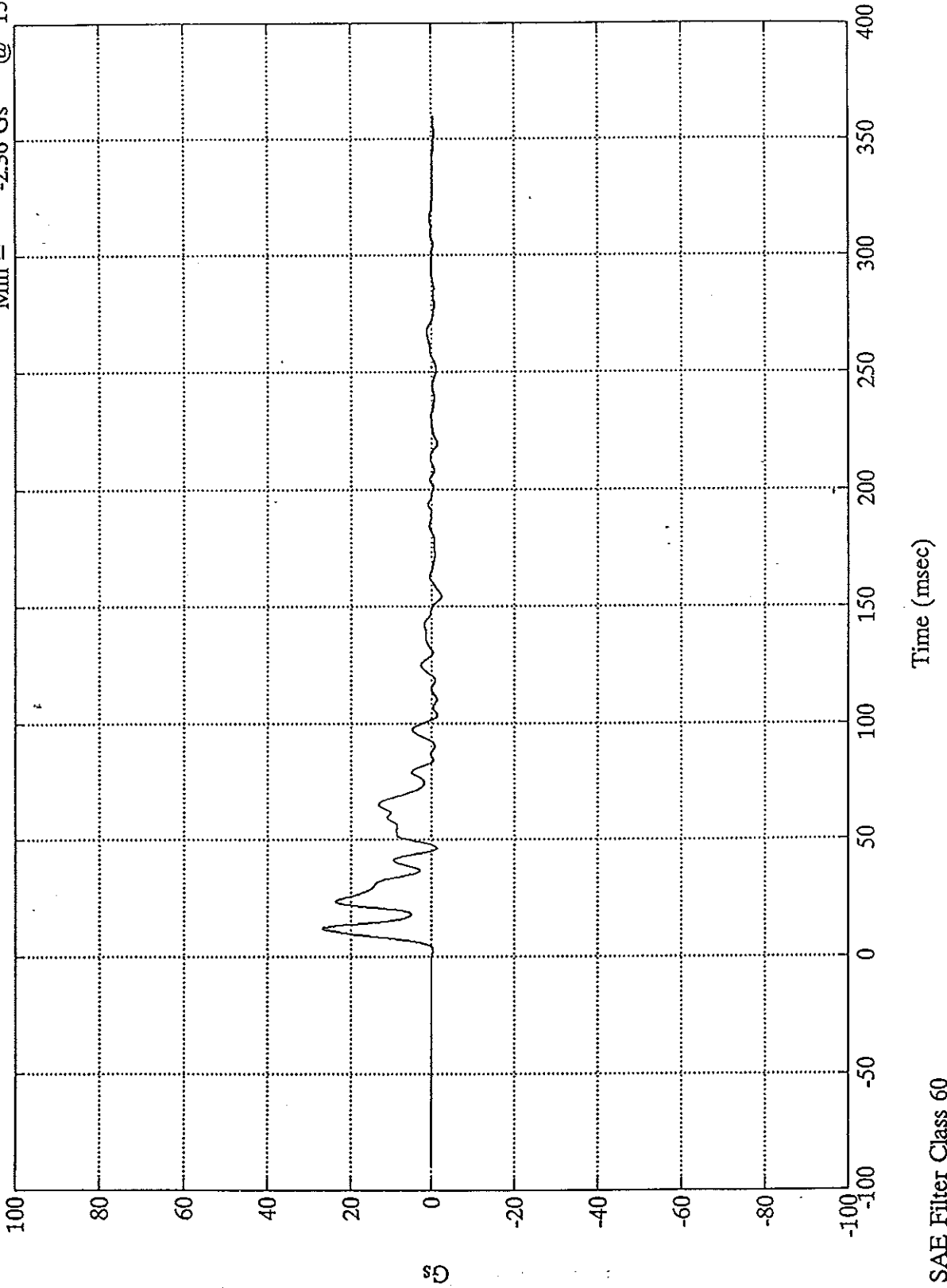
Seatback Angular Position



301 Rear 30 MPH-1996 Geo Tracker

Left Rear Xmember X

Max = 26.96 Gs @ 11.99 msec  
Min = -2.36 Gs @ 154.44 msec

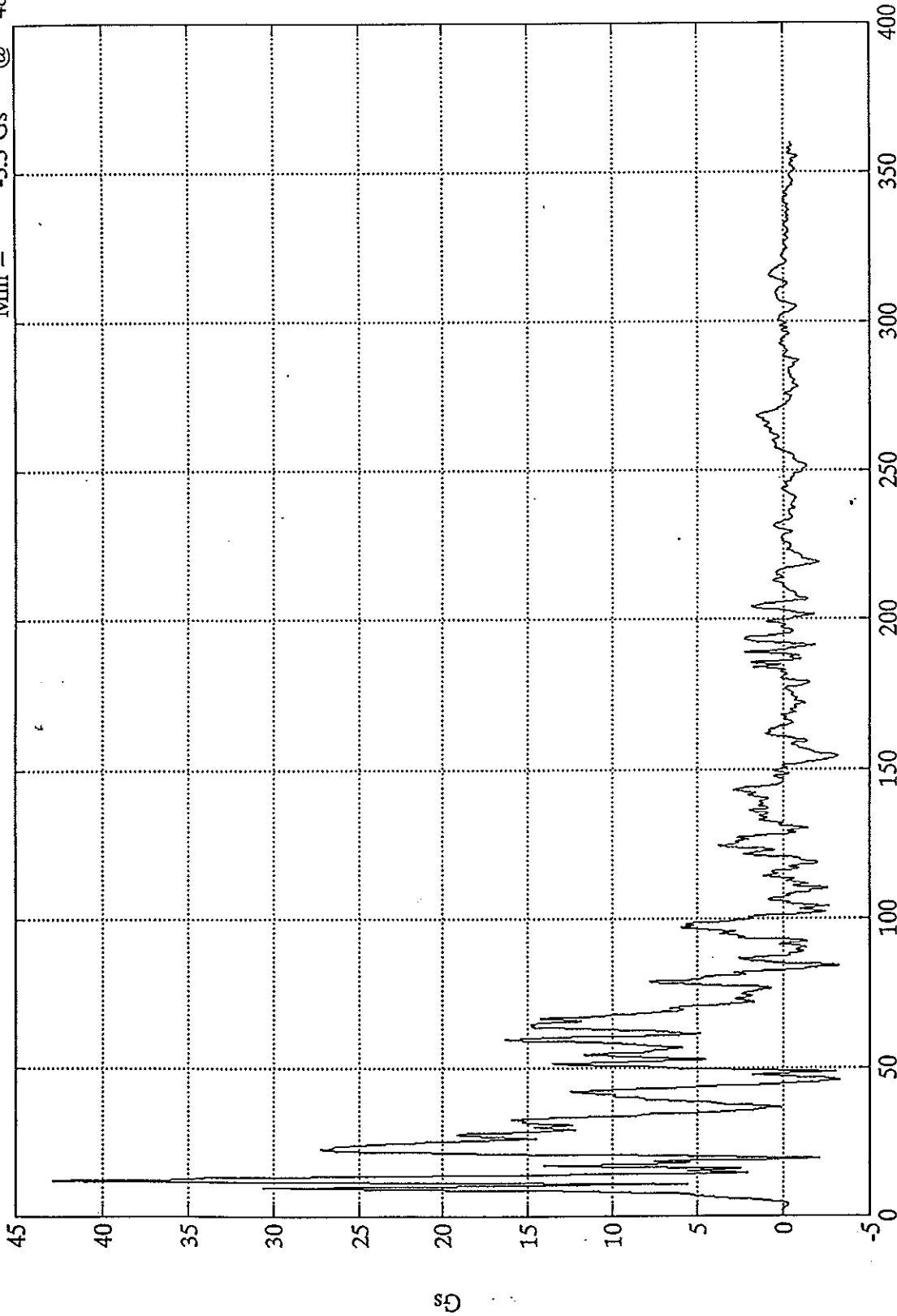




301 Rear 30 MPH-1996 Geo Tracker

Left Rear Xmember X

Max = 42.8 Gs @ 11.99 msec  
Min = -3.3 Gs @ 48.59 msec



Time (msec)

SAE Filter Class 180

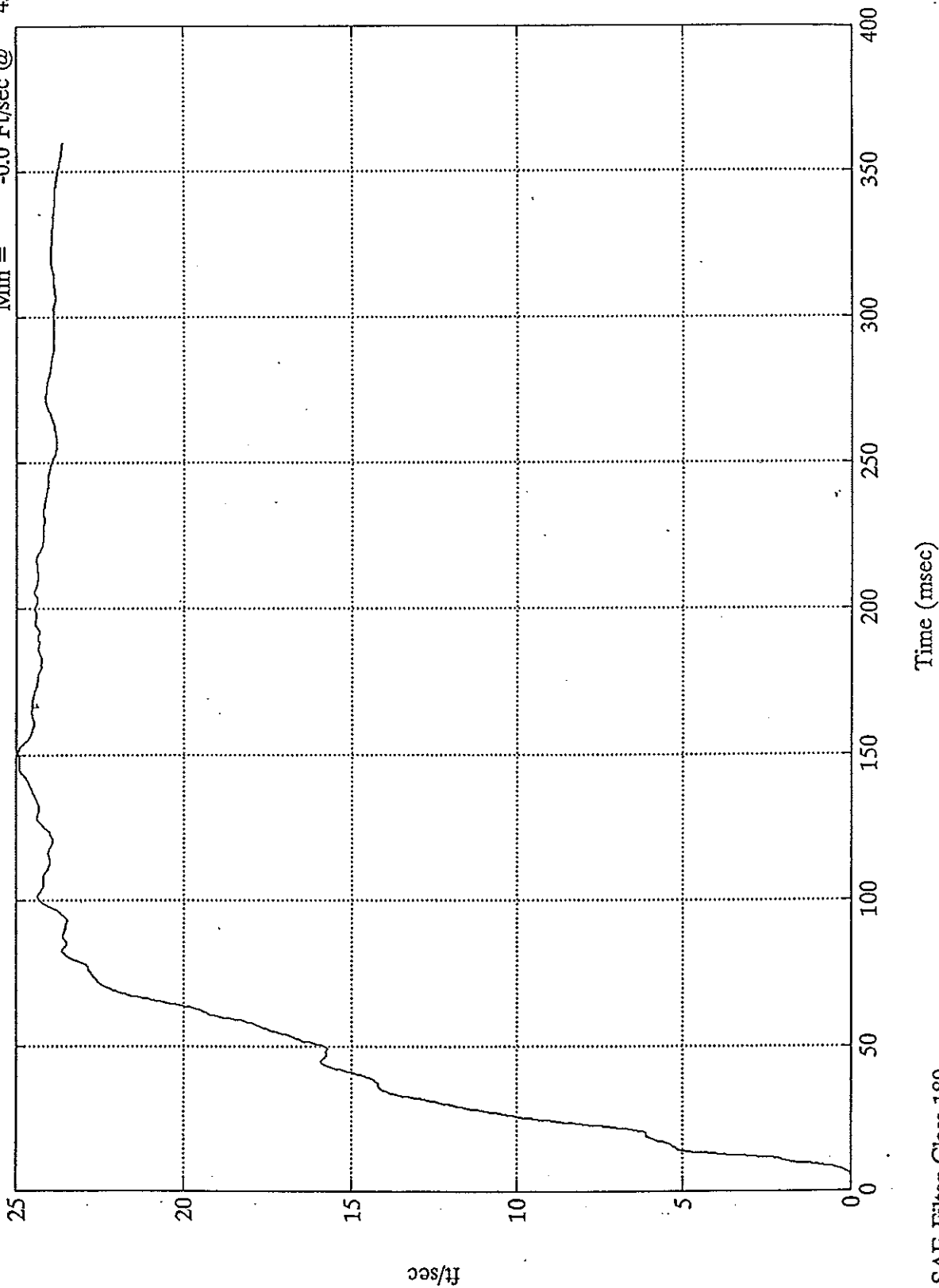
B-11

8344-10

301 Rear 30 MPH-1996 Geo Tracker

1st Integral Left Rear Xmember X

Max = 24.9 Ft/sec @ 150.24 msec  
Min = -0.0 Ft/sec @ 4.67 msec

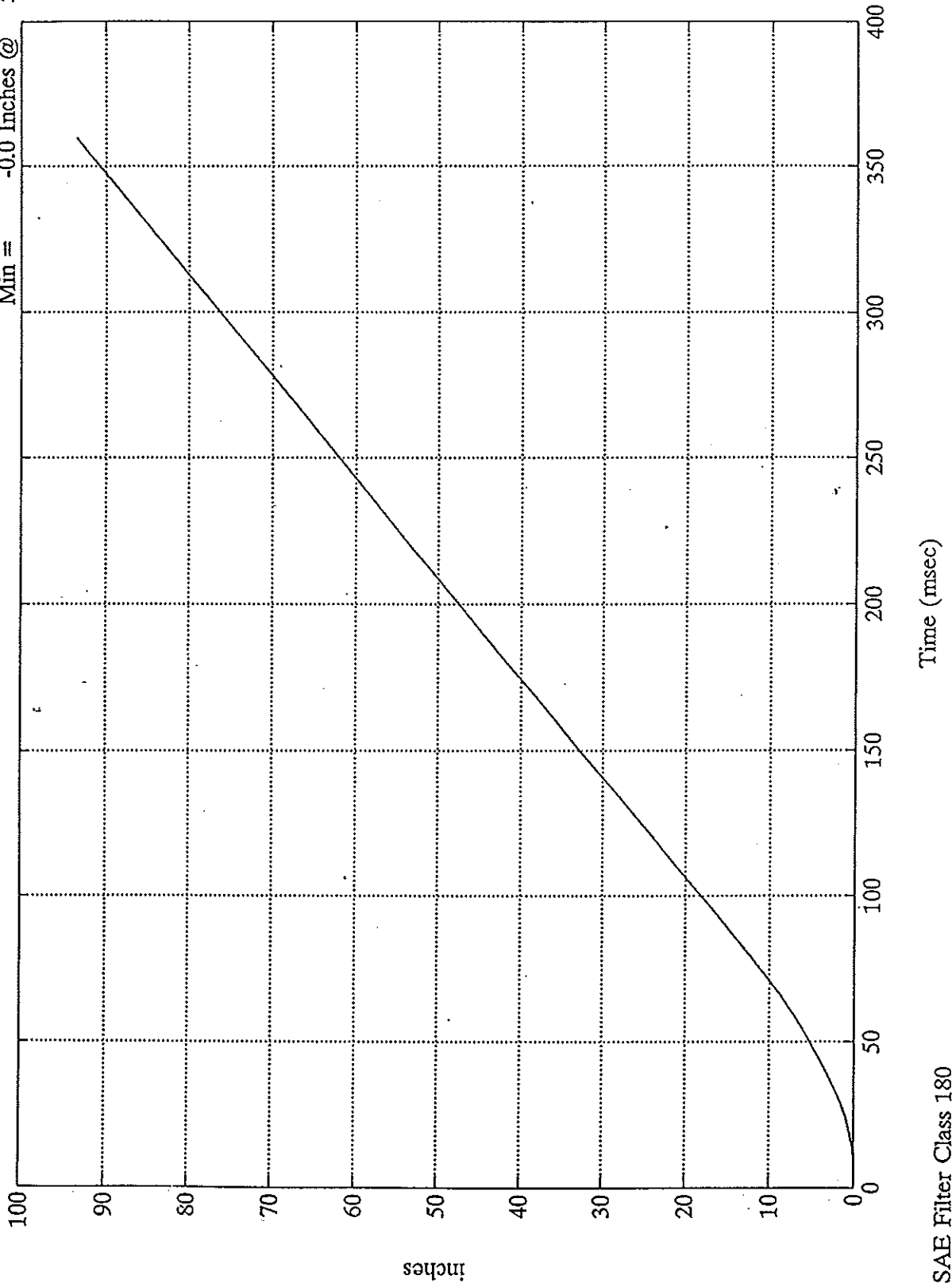


SAE Filter Class 180

301 Rear 30 MPH-1996 Geo Tracker

2nd Integral Left Rear Xmember X

Max = 93.5 Inches @ 359.88 msec  
Min = -0.0 Inches @ 5.39 msec

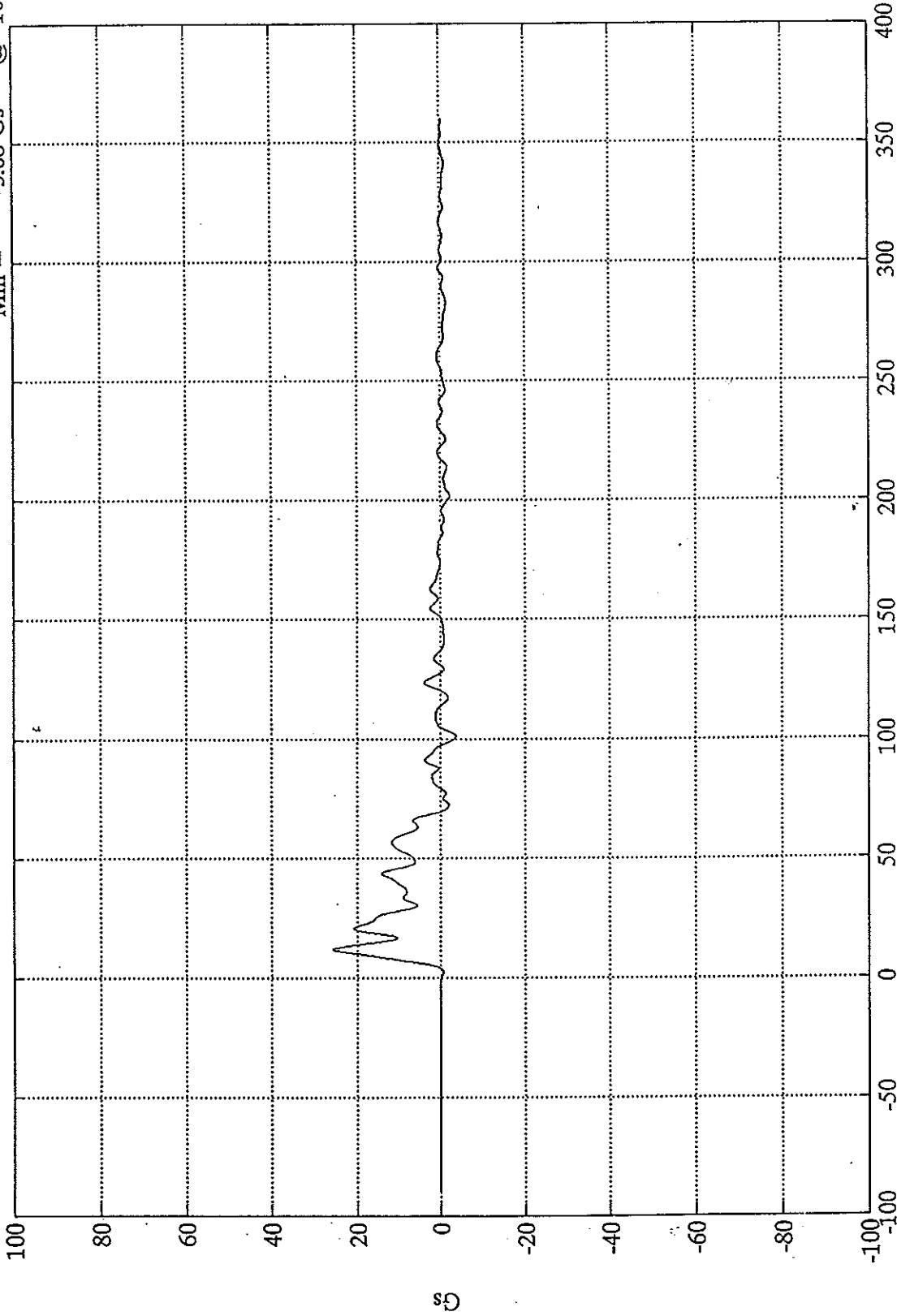


SAE Filter Class 180

301 Rear 30 MPH-1996 Geo Tracker

Right Rear Xmember X

Max = 25.73 Gs @ 11.87 msec  
Min = -3.68 Gs @ 101.16 msec



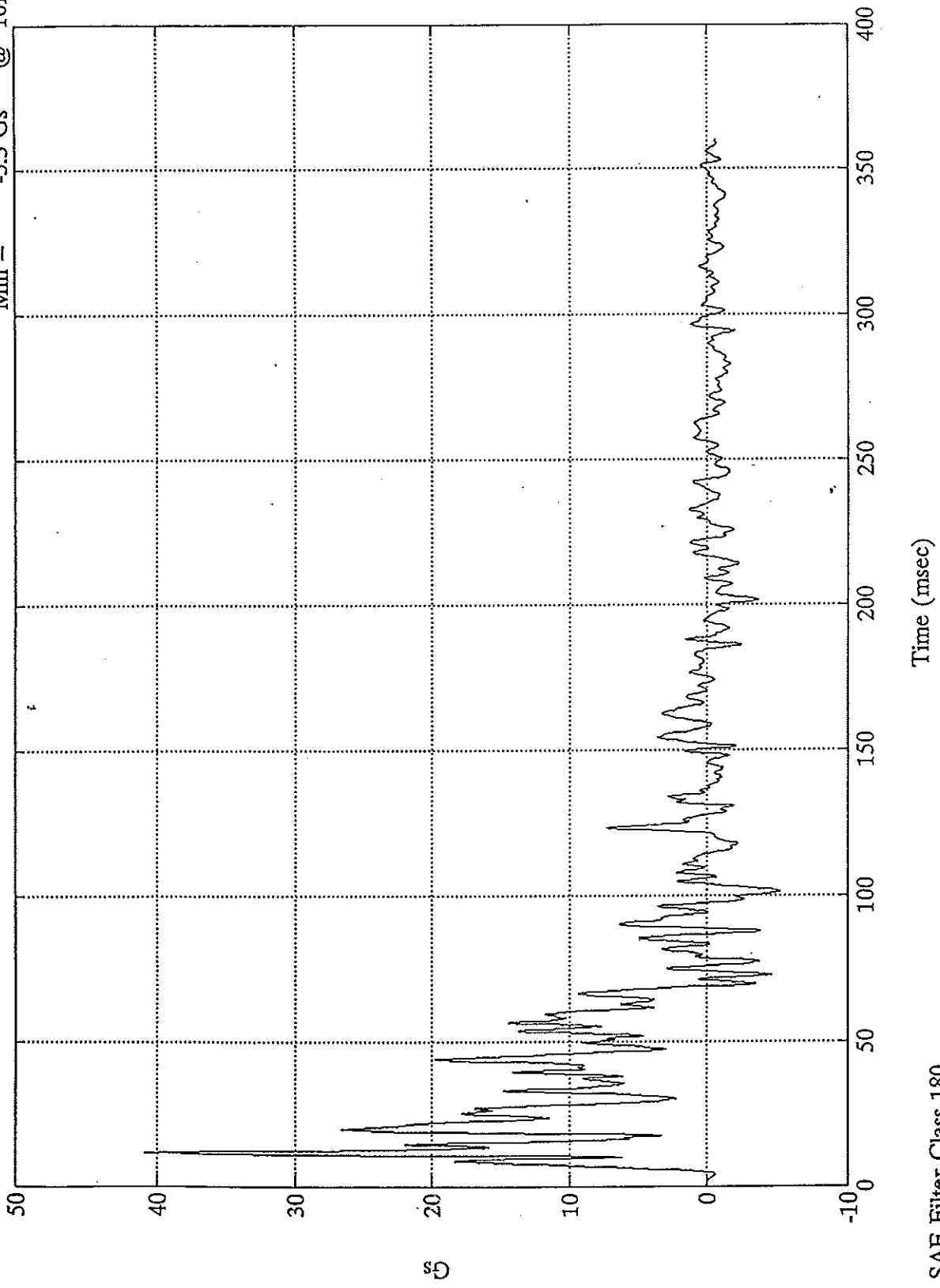
Time (msec)

SAE Filter Class 60

301 Rear 30 MPH-1996 Geo Tracker

Right Rear Xmember X

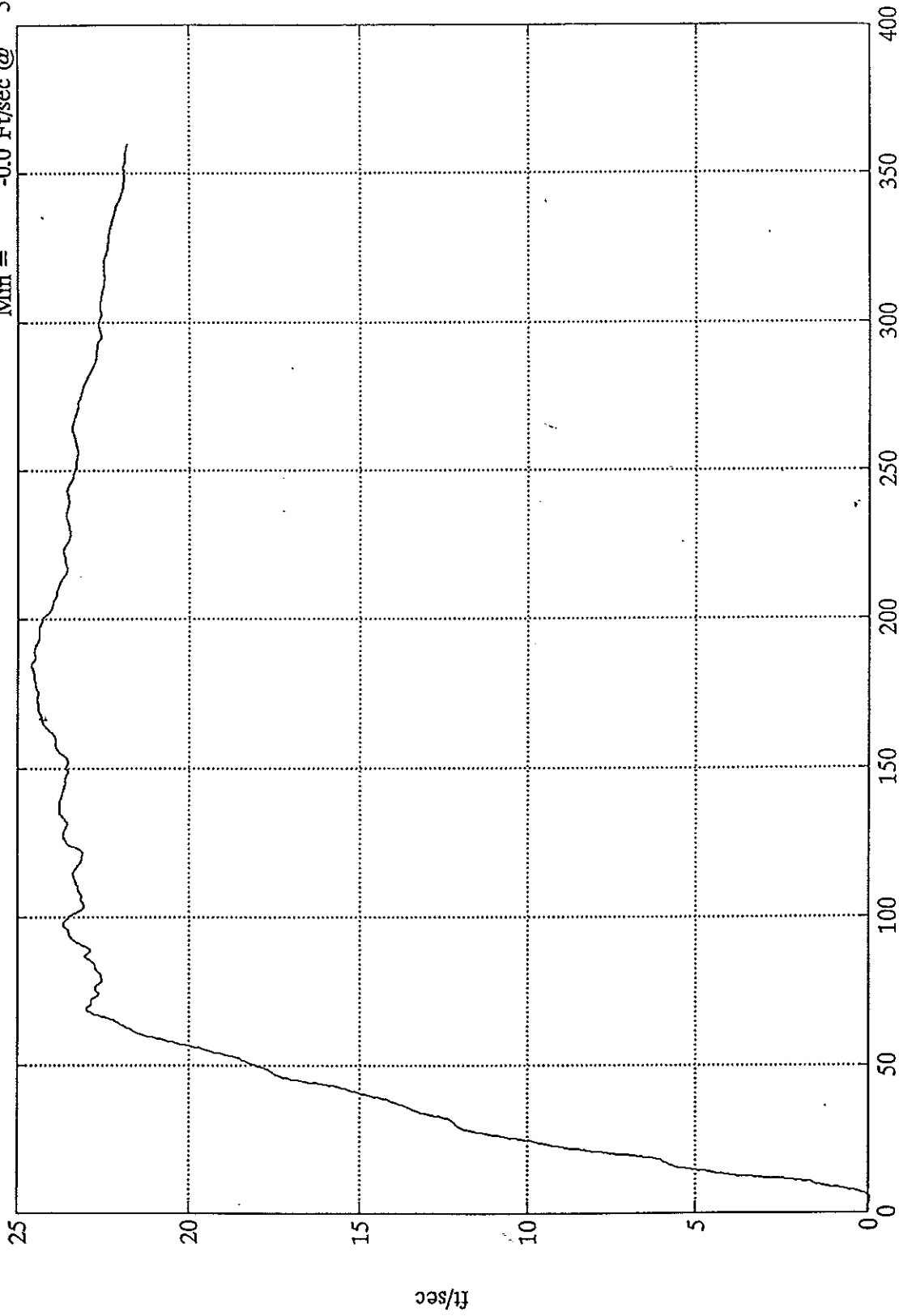
Max = 40.9 Gs @ 11.63 msec  
Min = -5.3 Gs @ 101.52 msec



301 Rear 30 MPH-1996 Geo Tracker

1st Integral Right Rear Xmember X

Max = 24.6 Ft/sec @ 184.79 msec  
Min = -0.0 Ft/sec @ 5.03 msec



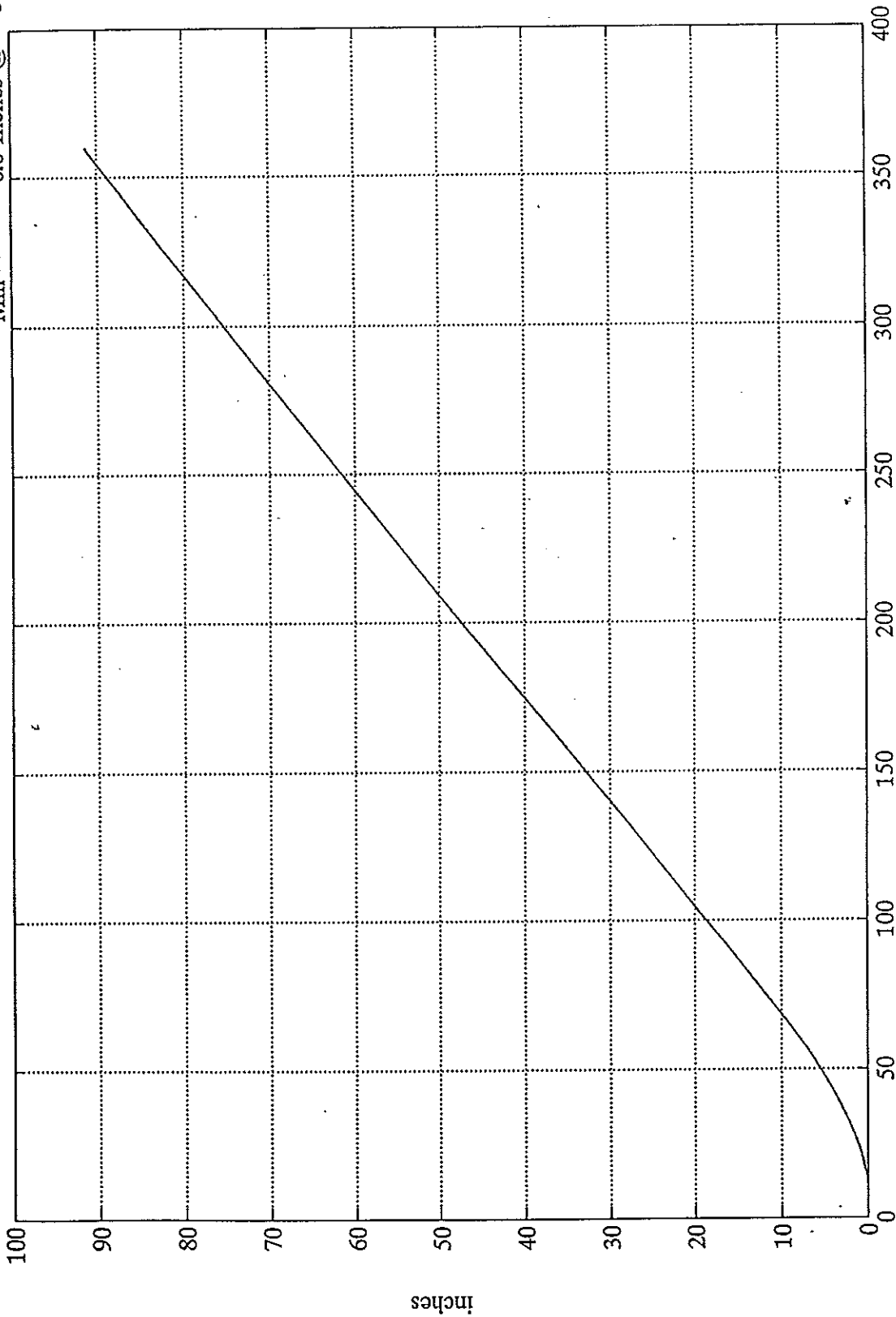
Time (msec)

SAE Filter Class 180

301 Rear 30 MPH-1996 Geo Tracker

2nd Integral Right Rear Xmember X

Max = 91.3 Inches @ 359.88 msec  
Min = -0.0 Inches @ 5.87 msec



SAE Filter Class 180

TEST NO. CT0108

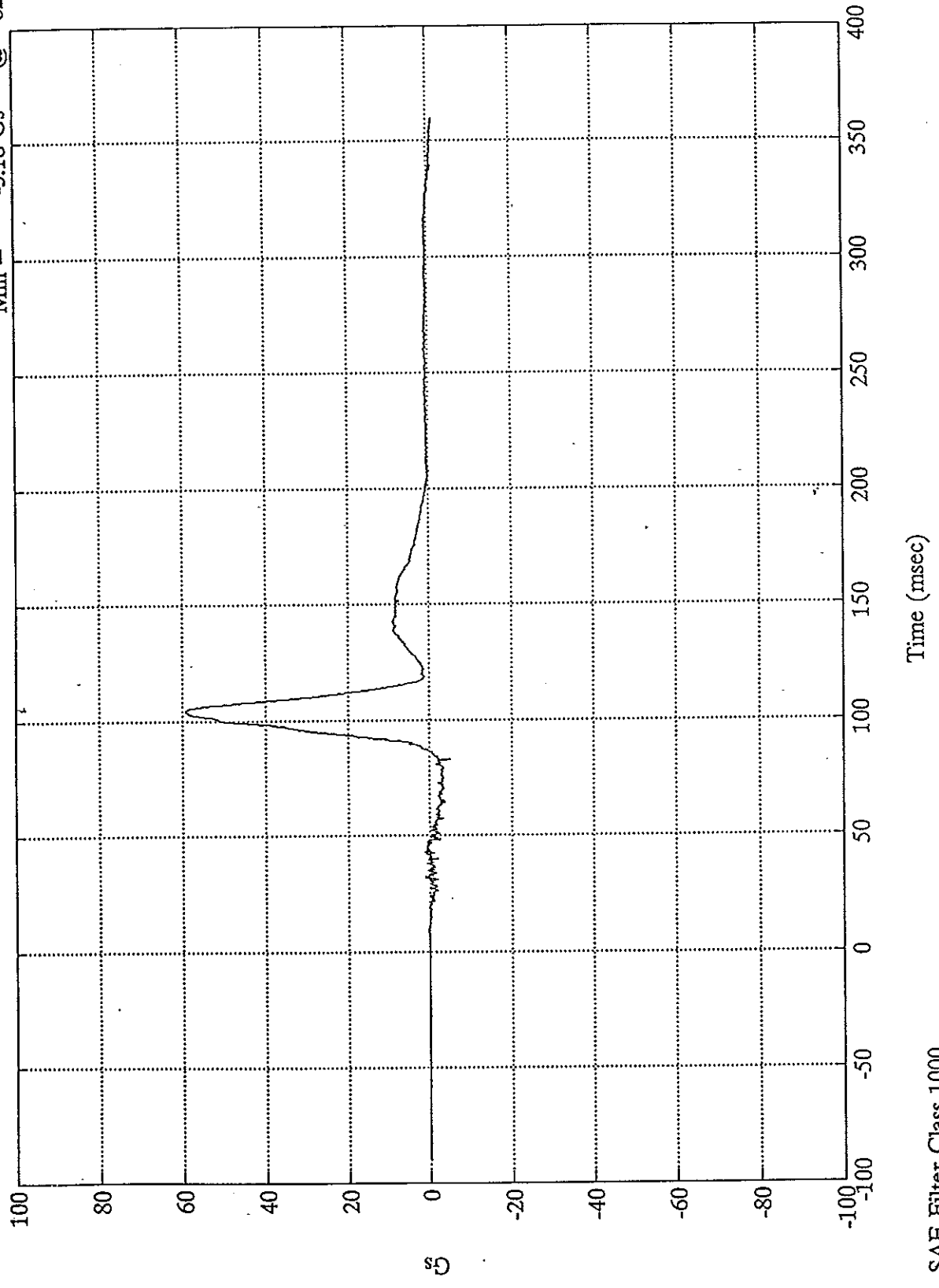
DRIVER DUMMY (Pos. 1)	SAE FILTER CHANNEL CLASS
Head Accelerations	1000
Chest Accelerations	180
Pelvic Accelerations	1000
Upper Neck Forces	1000
Upper Neck Moments	600
Belt Forces	60
Belt Spoolout	60



301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Head X

Max = 59.35 Gs @ 104.27 msec  
Min = -5.18 Gs @ 82.80 msec

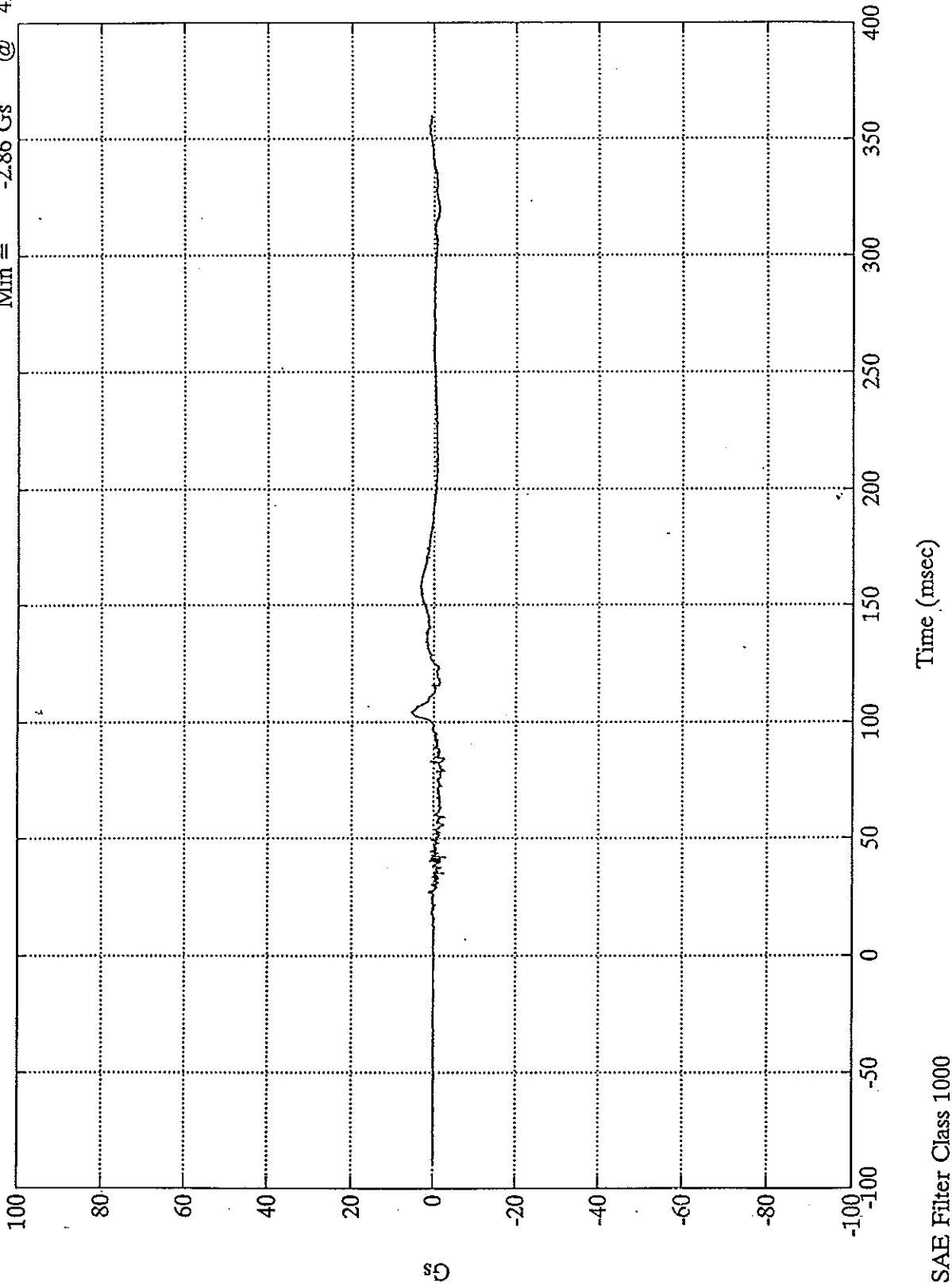


SAE Filter Class 1000

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Head Y

Max = 5.32 Gs @ 104.27 msec  
Min = -2.86 Gs @ 42.11 msec



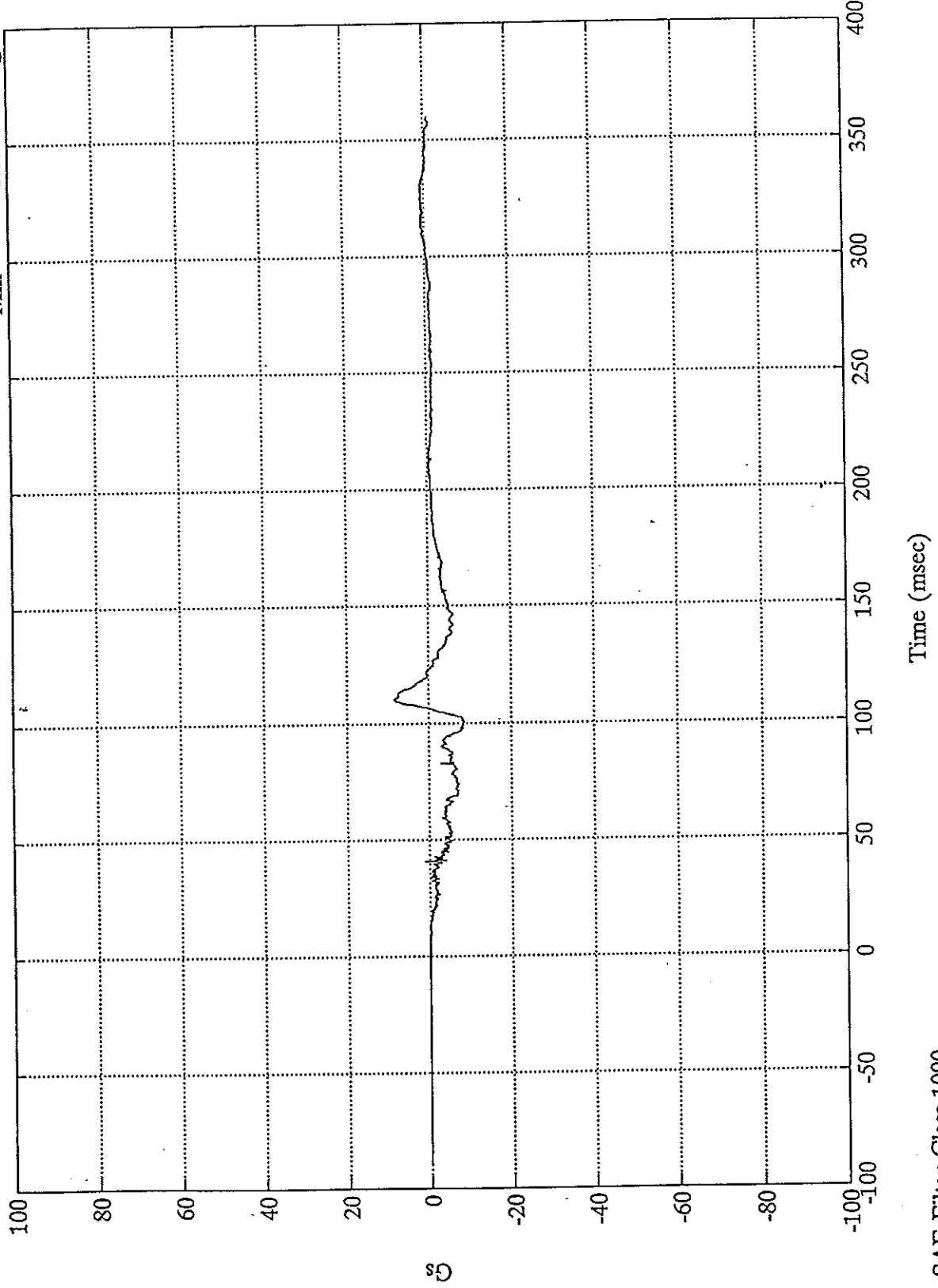
B-20

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Head Z

Max = 8.29 Gs @ 110.52 msec  
Min = -8.73 Gs @ 100.80 msec



SAE Filter Class 1000

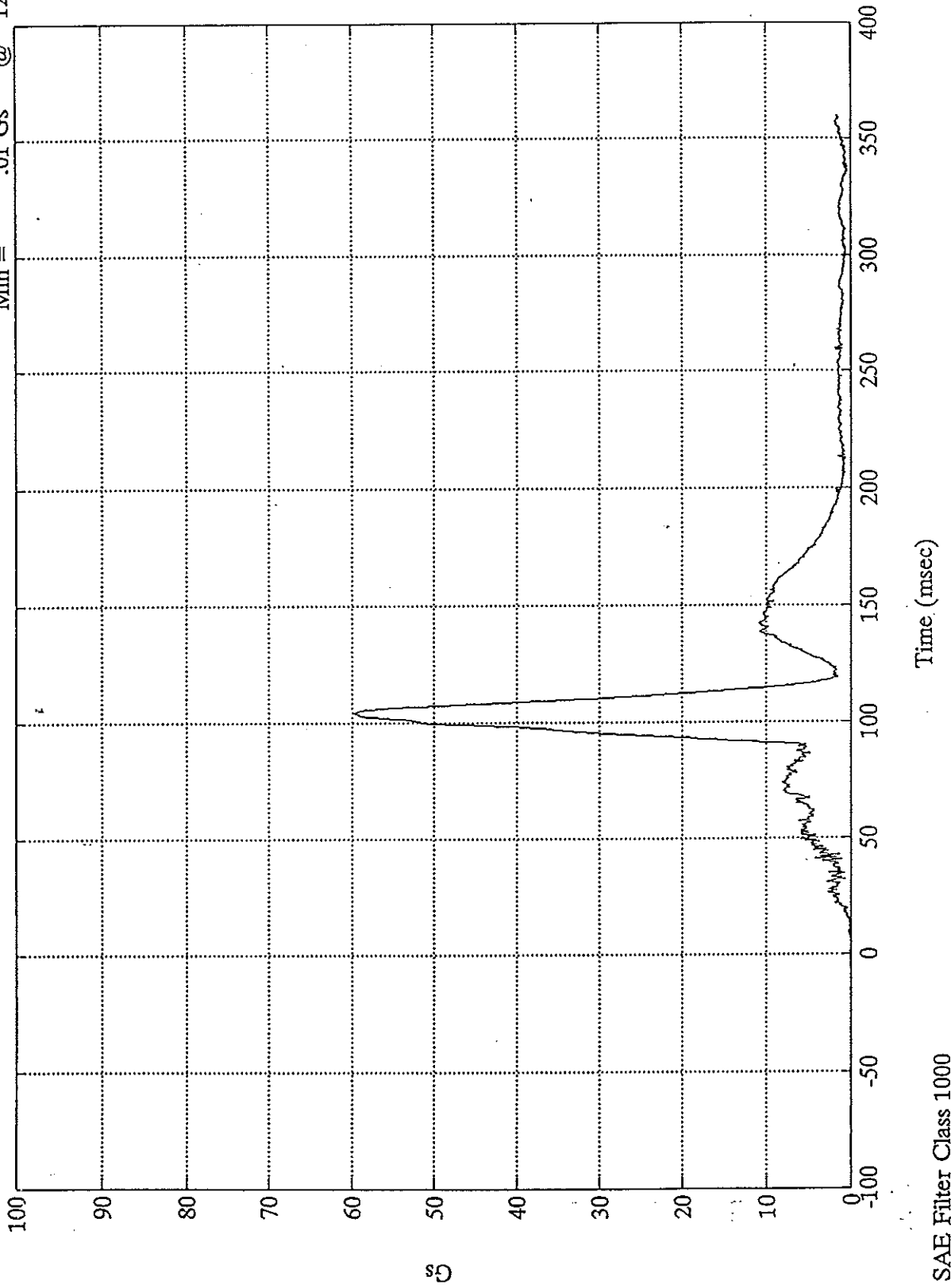
B-21

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Head Resultant

Max = 59.76 Gs @ 104.16 msec  
Min = .01 Gs @ 12.71 msec

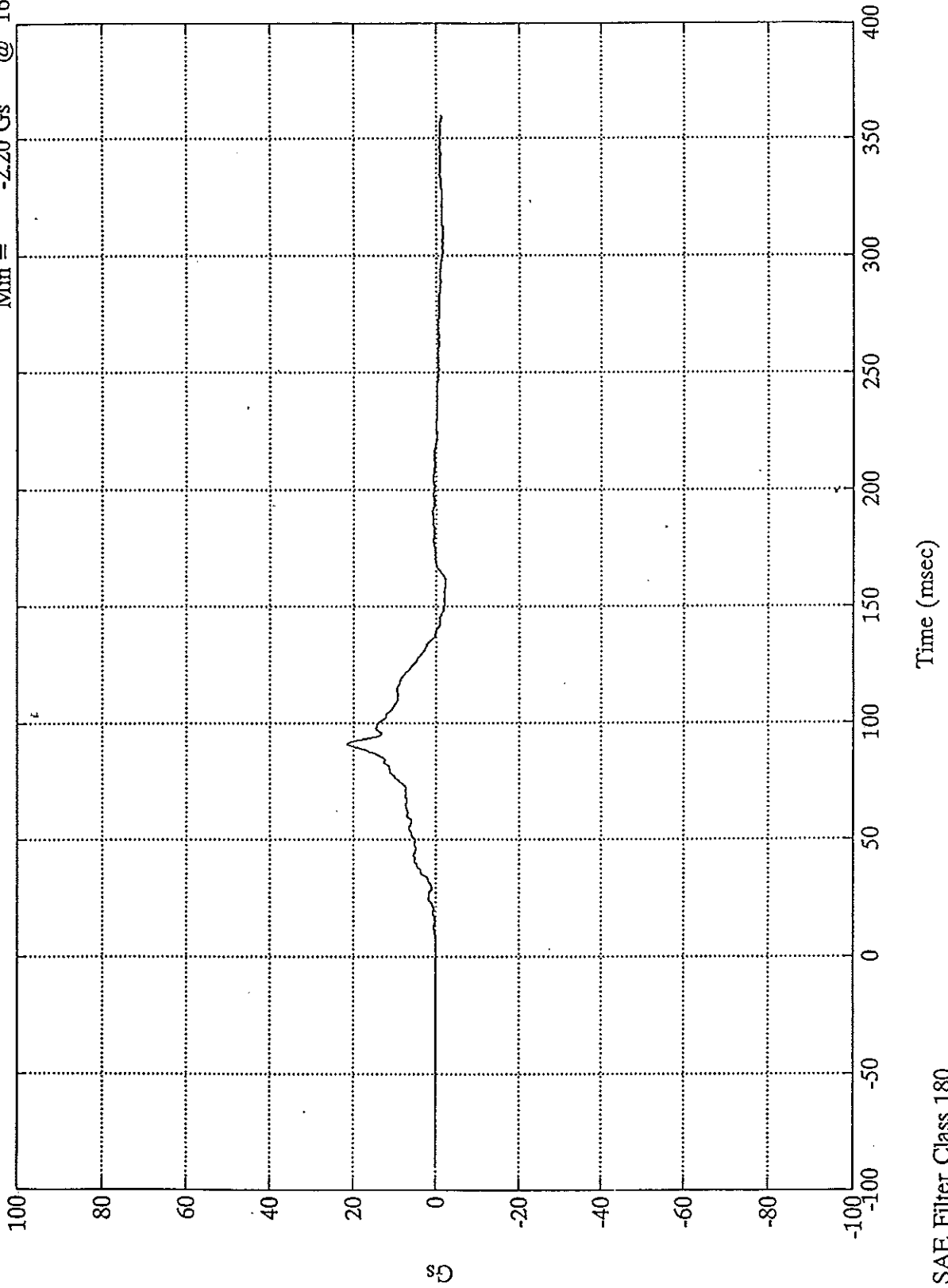


SAE Filter Class 1000

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Chest X

Max = 21.43 Gs @ 90.84 msec  
Min = -2.20 Gs @ 160.19 msec



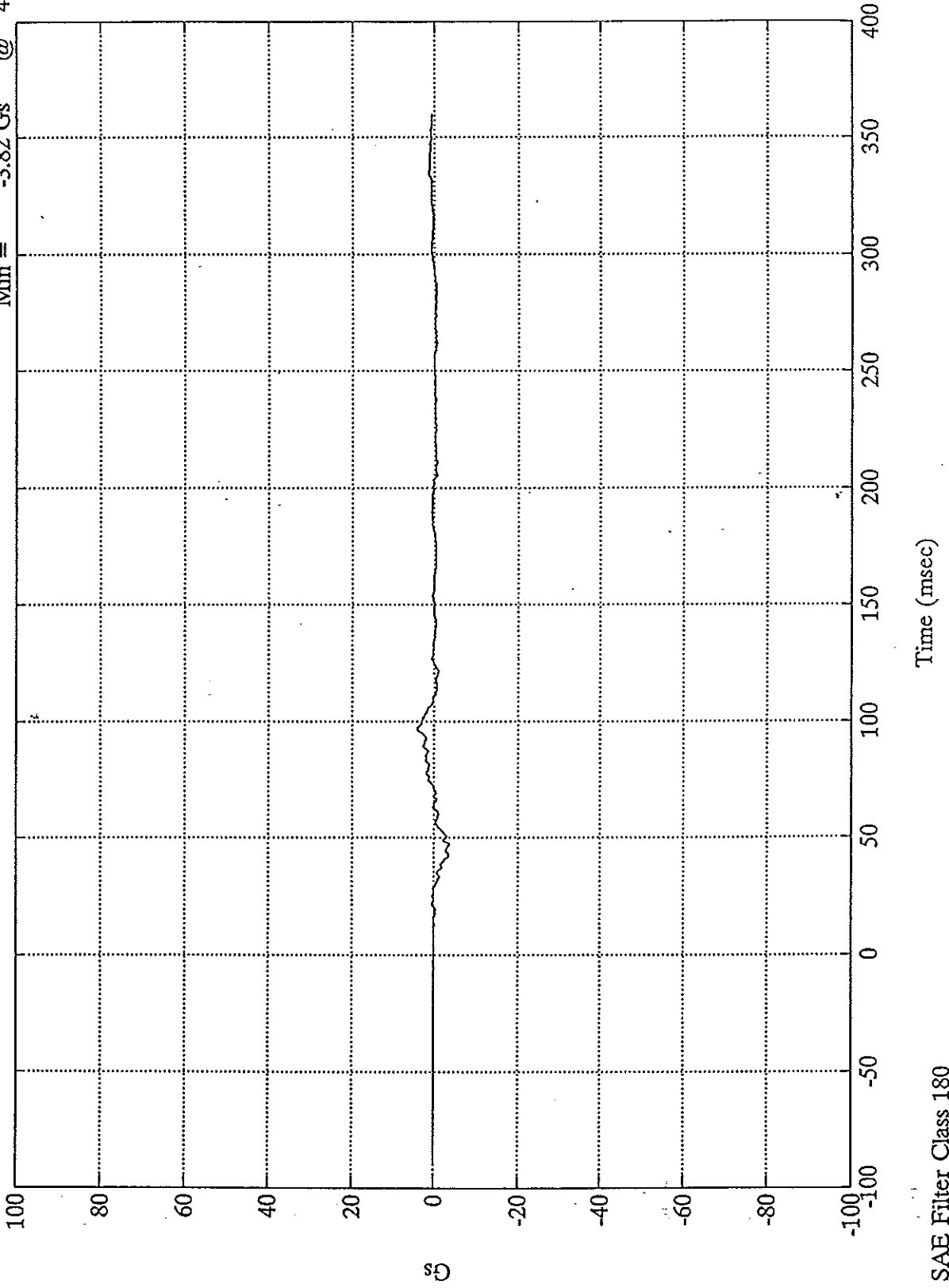
B-23

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Chest Y

Max = 4.05 Gs @ 96.72 msec  
Min = -3.82 Gs @ 47.27 msec



SAE Filter Class 180

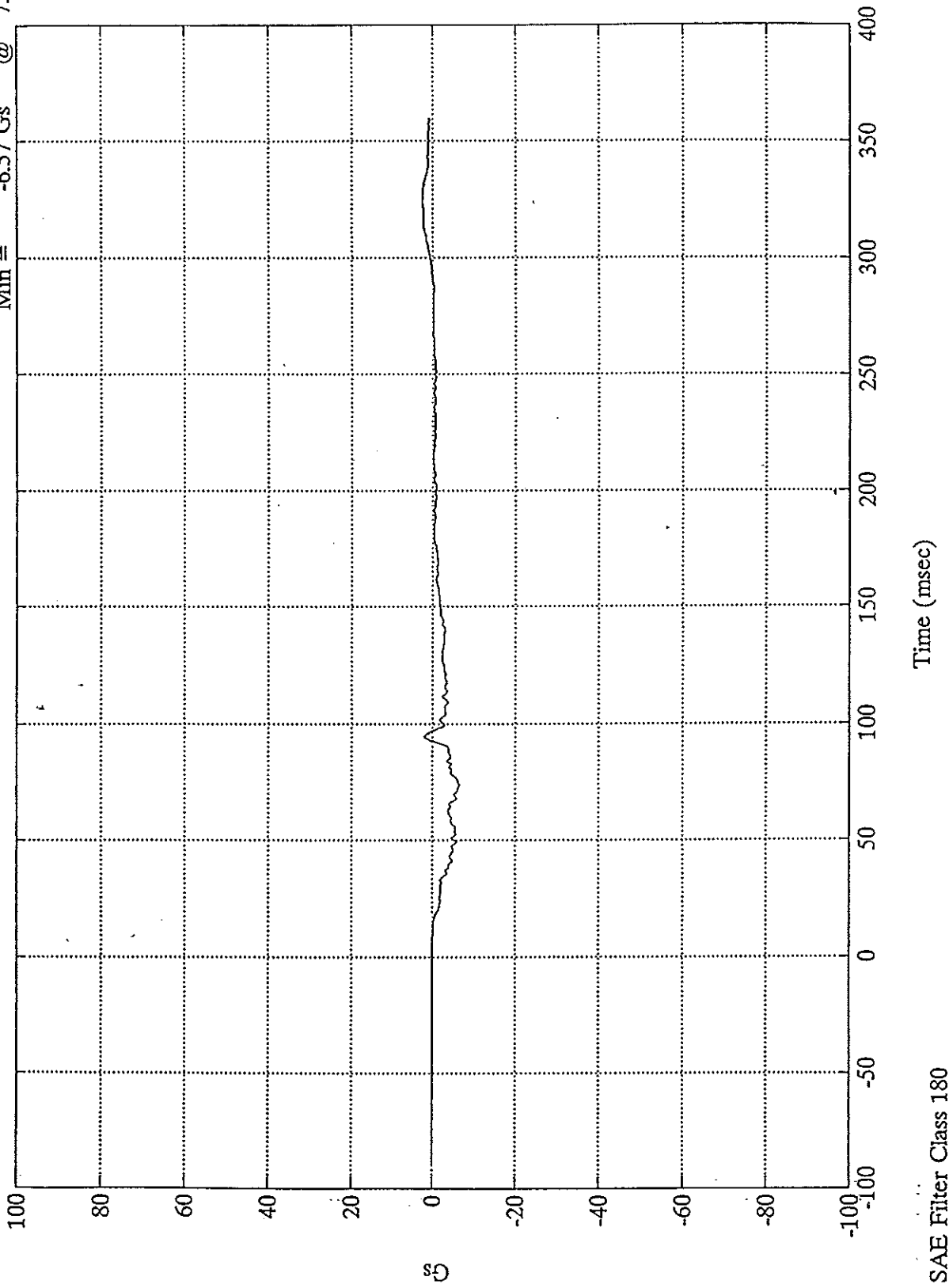
B-24

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Chest Z

Max = 2.58 Gs @ 325.32 msec  
Min = -6.57 Gs @ 73.55 msec



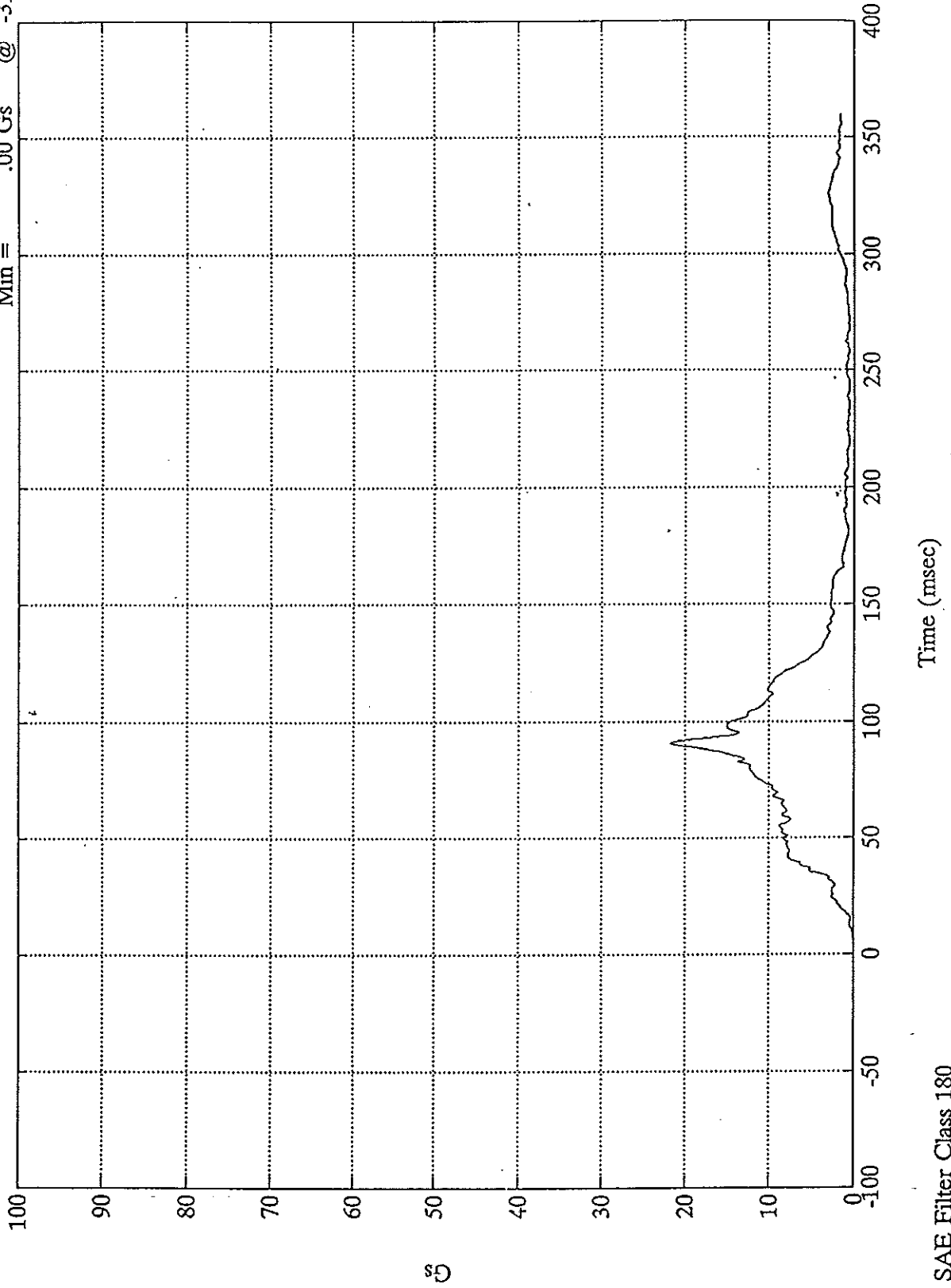
B-25

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Chest Resultant

Max = 21.78 Gs @ 90.72 msec  
Min = .00 Gs @ -31.44 msec



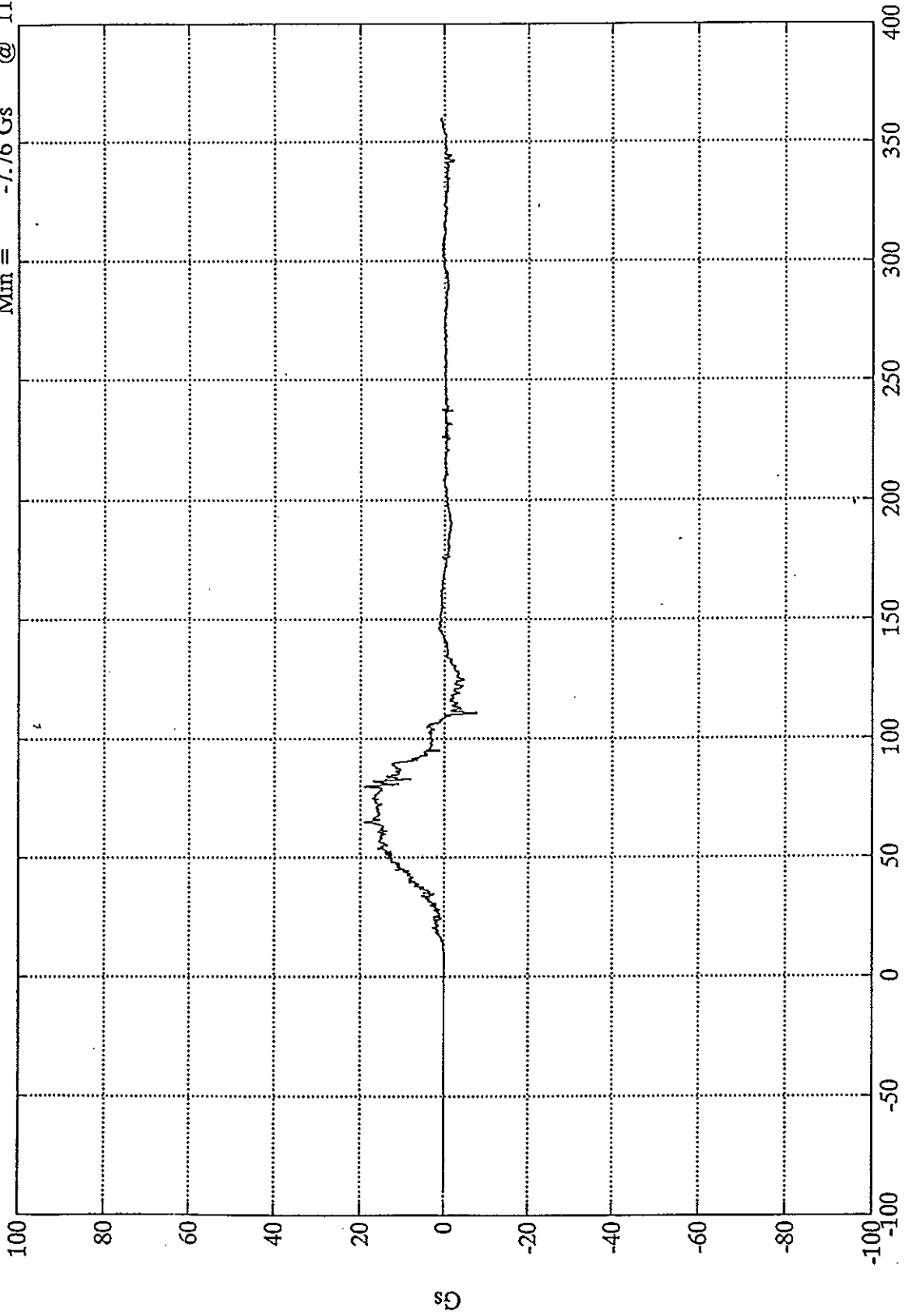
SAE Filter Class 180



301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Pelvic X

Max = 19.11 Gs @ 79.91 msec  
Min = -7.76 Gs @ 110.76 msec



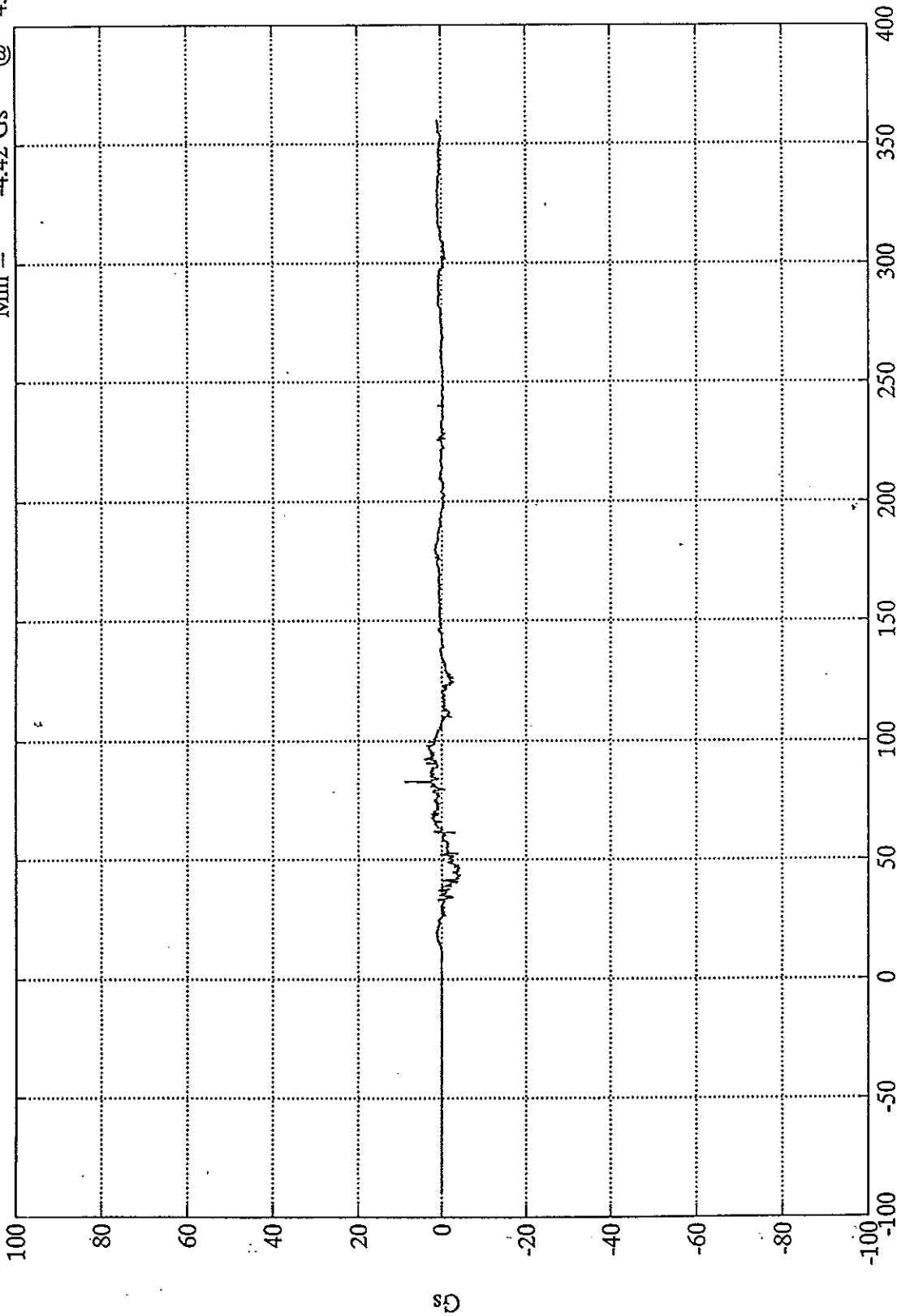
Time (msec)

SAE Filter Class 1000

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Pelvic Y

Max = 8.70 Gs @ 82.91 msec  
Min = -4.42 Gs @ 43.56 msec



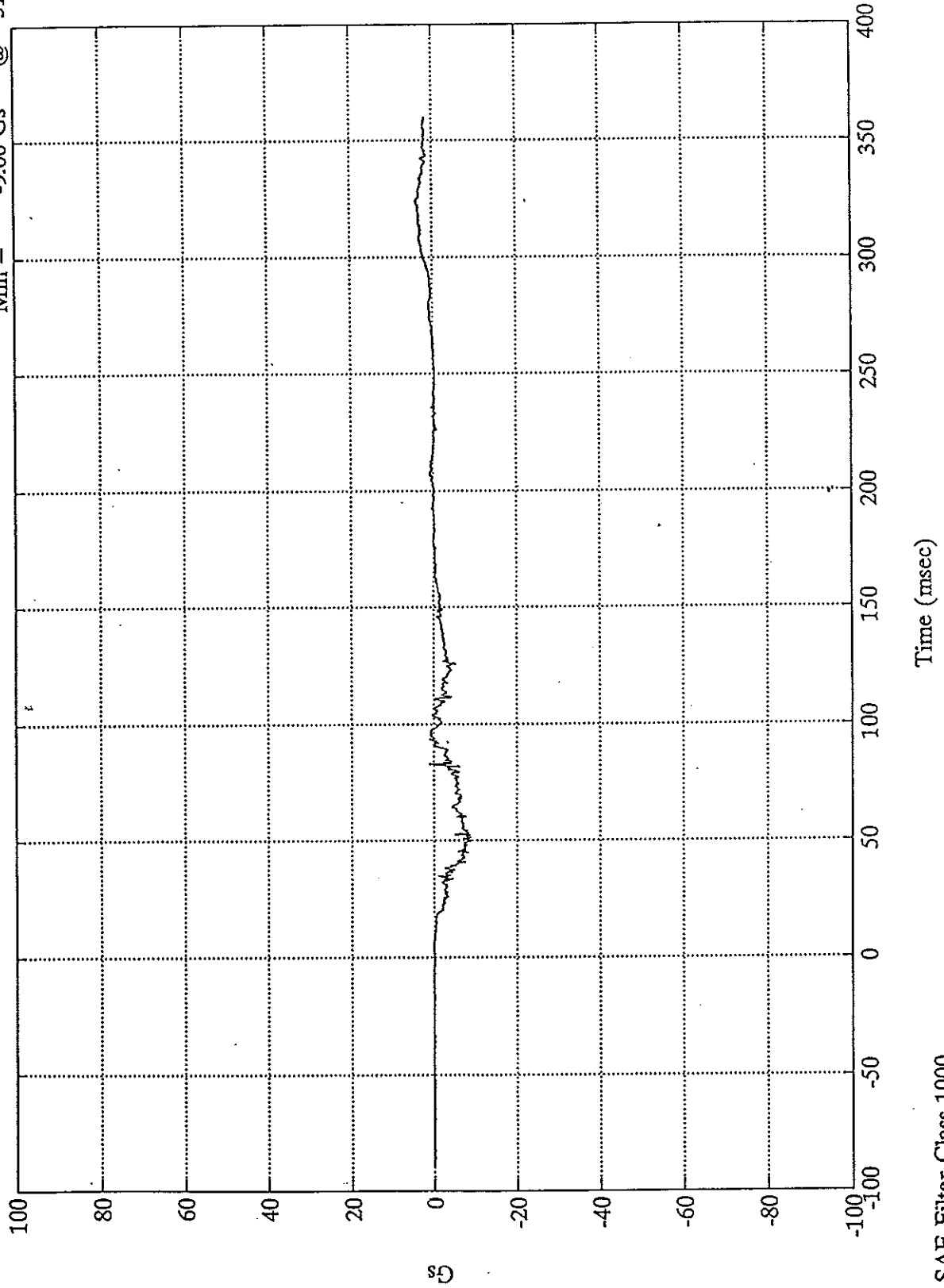
Time (msec)

SAE Filter Class 1000

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Pelvic Z

Max = 3.96 Gs @ 324.00 msec  
Min = -9.00 Gs @ 51.36 msec



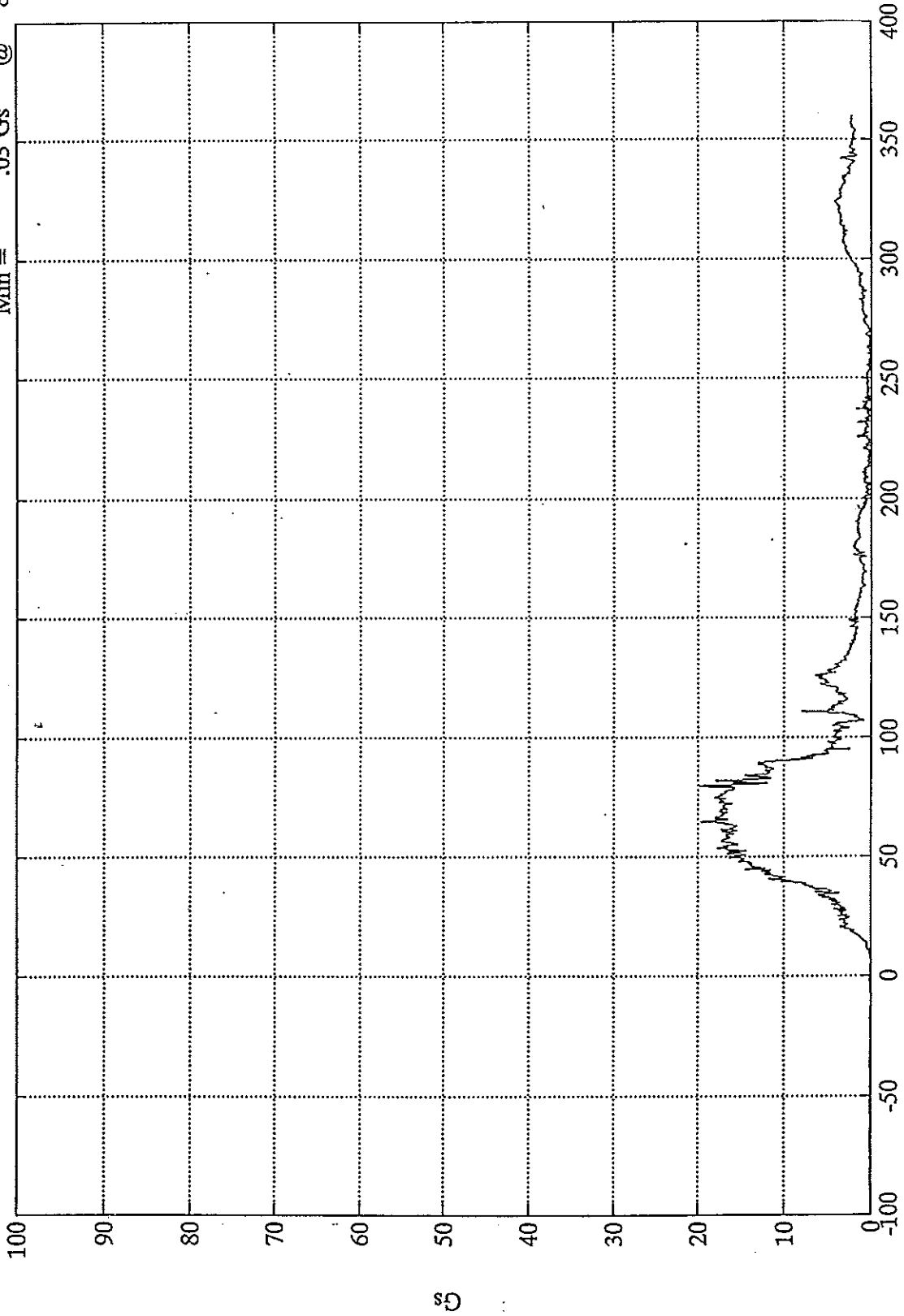
B-29

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Pelvic Res.

Max = 19.84 Gs @ 79.80 msec  
Min = .03 Gs @ 8.51 msec



Time (msec)

SAE Filter Class 1000

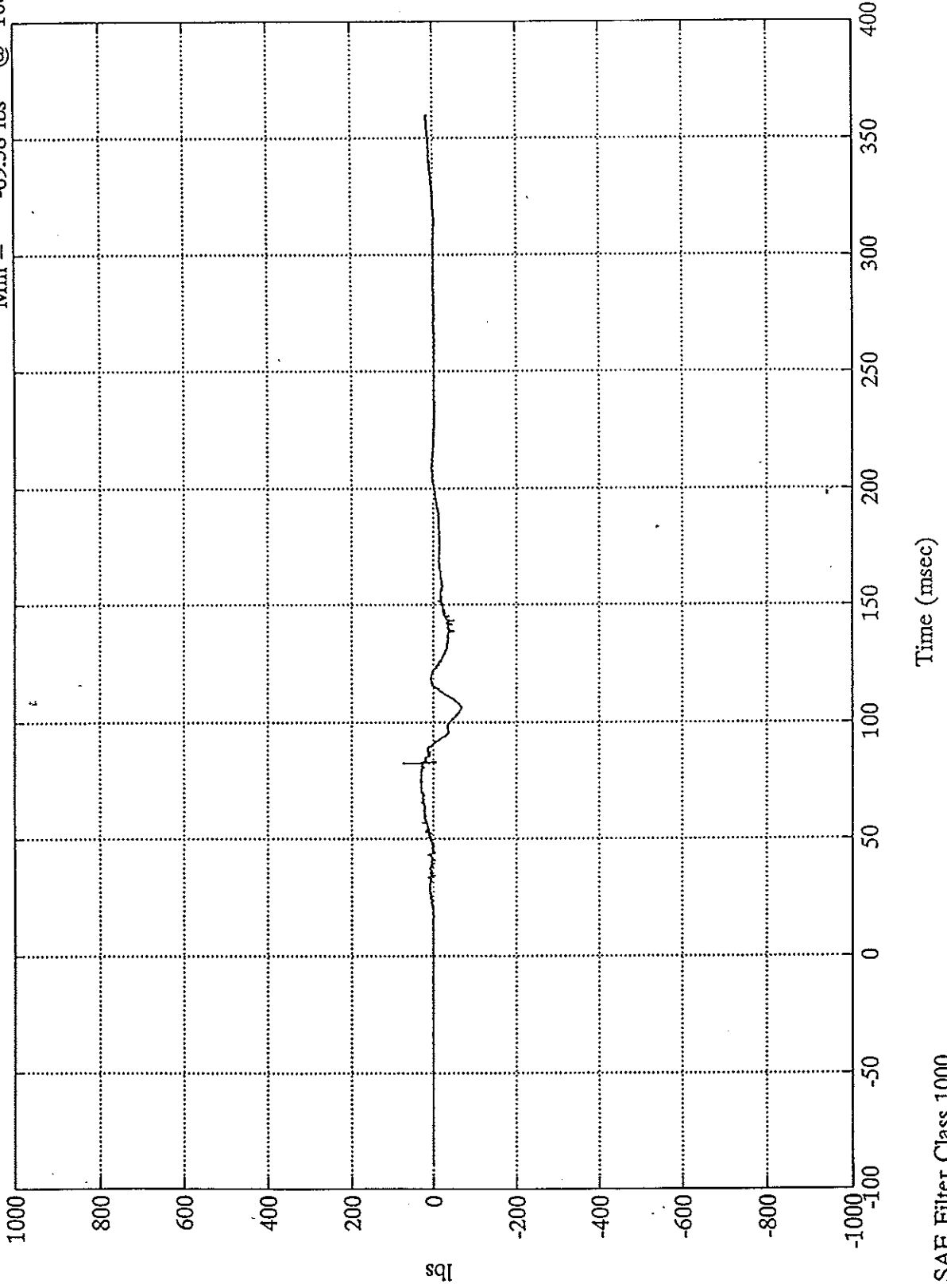
B-30

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Upper Neck Fx

Max = 73.93 lbs @ 82.56 msec  
Min = -69.58 lbs @ 106.44 msec

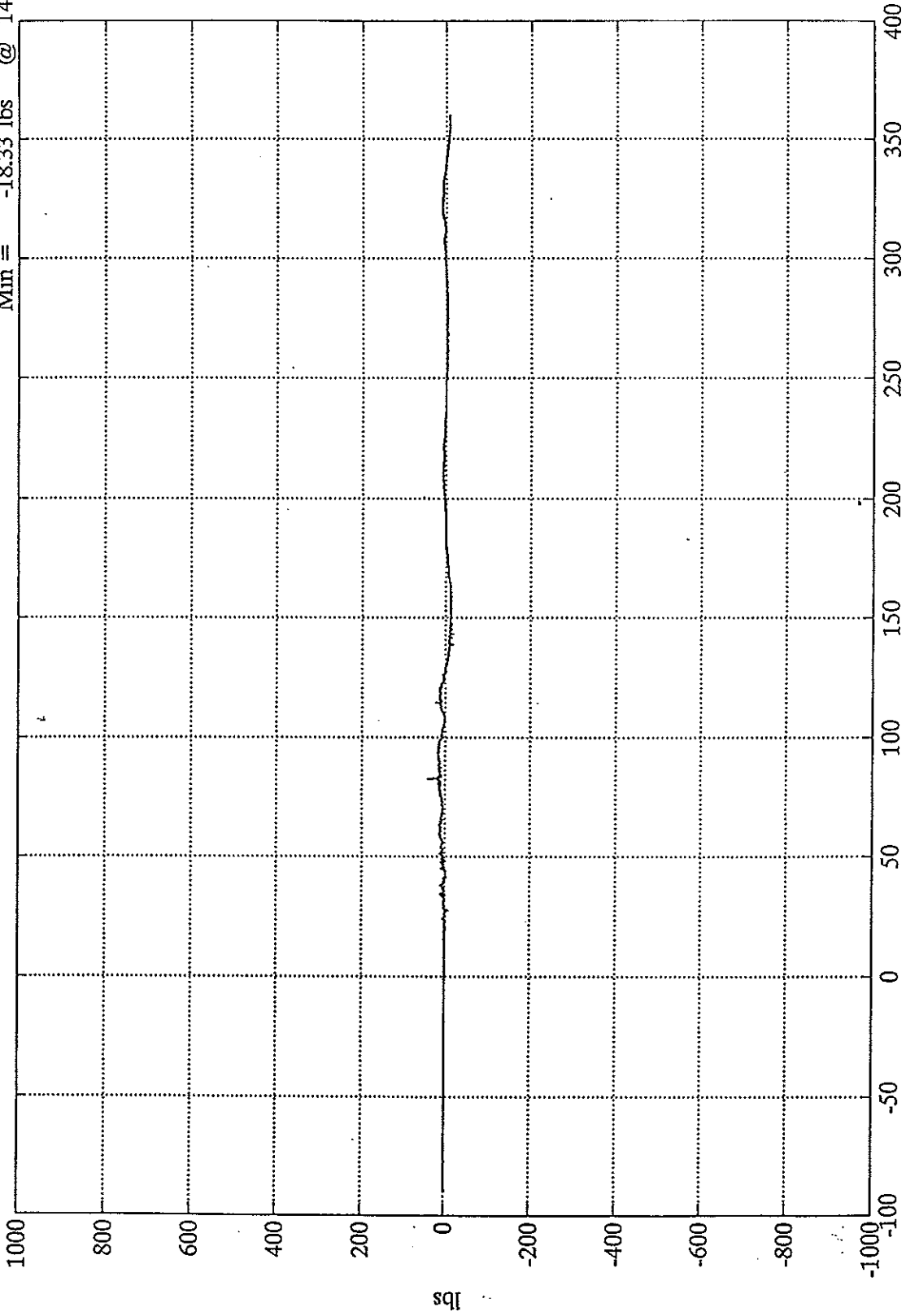


SAE Filter Class 1000

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Upper Neck Fy

Max = 41.37 lbs @ 82.56 msec  
Min = -18.33 lbs @ 143.27 msec



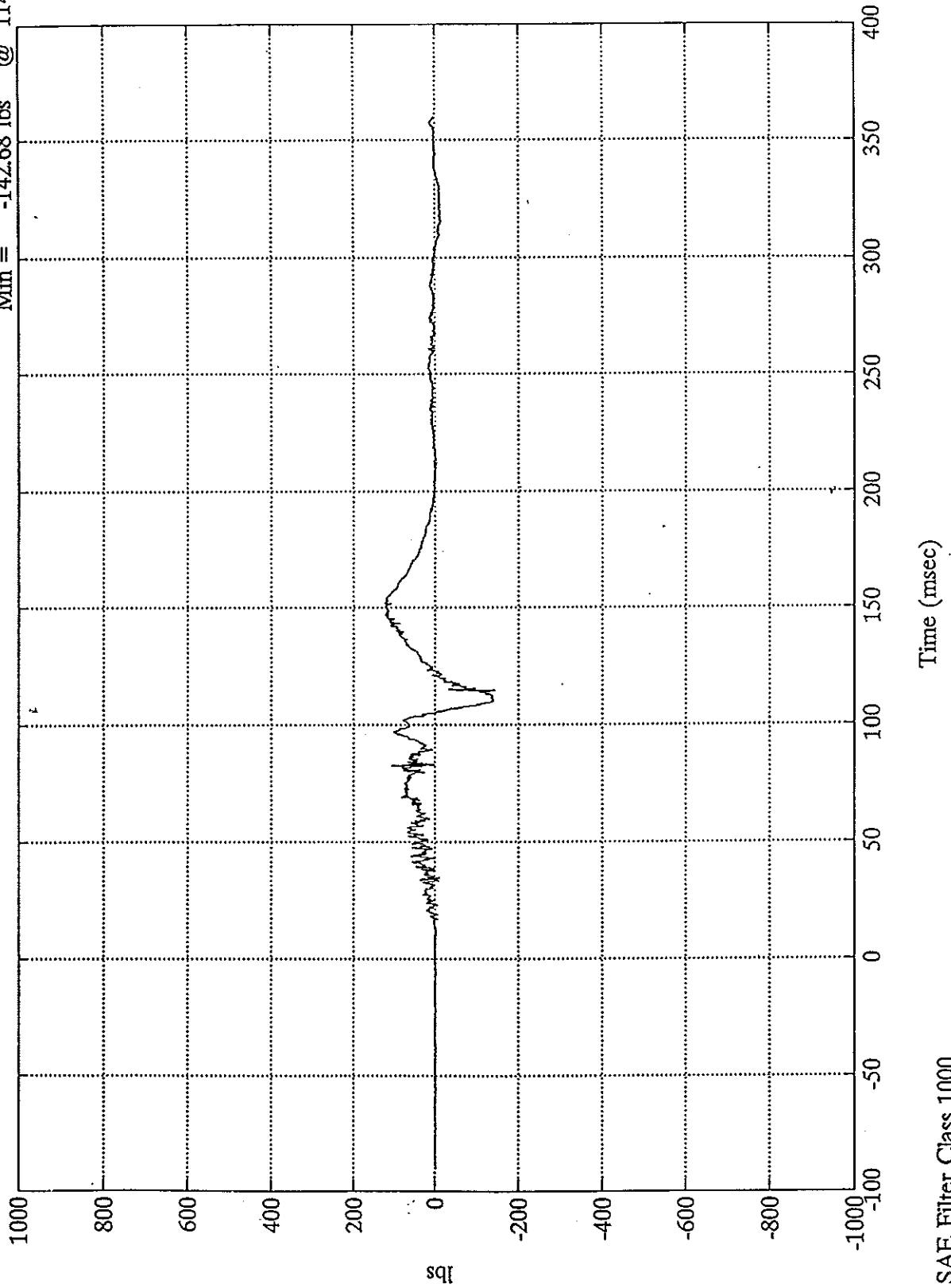
Time (msec)

SAE Filter Class 1000

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Upper Neck Fz

Max = 123.45 lbs @ 152.04 msec  
Min = -142.68 lbs @ 114.48 msec



SAE Filter Class 1000

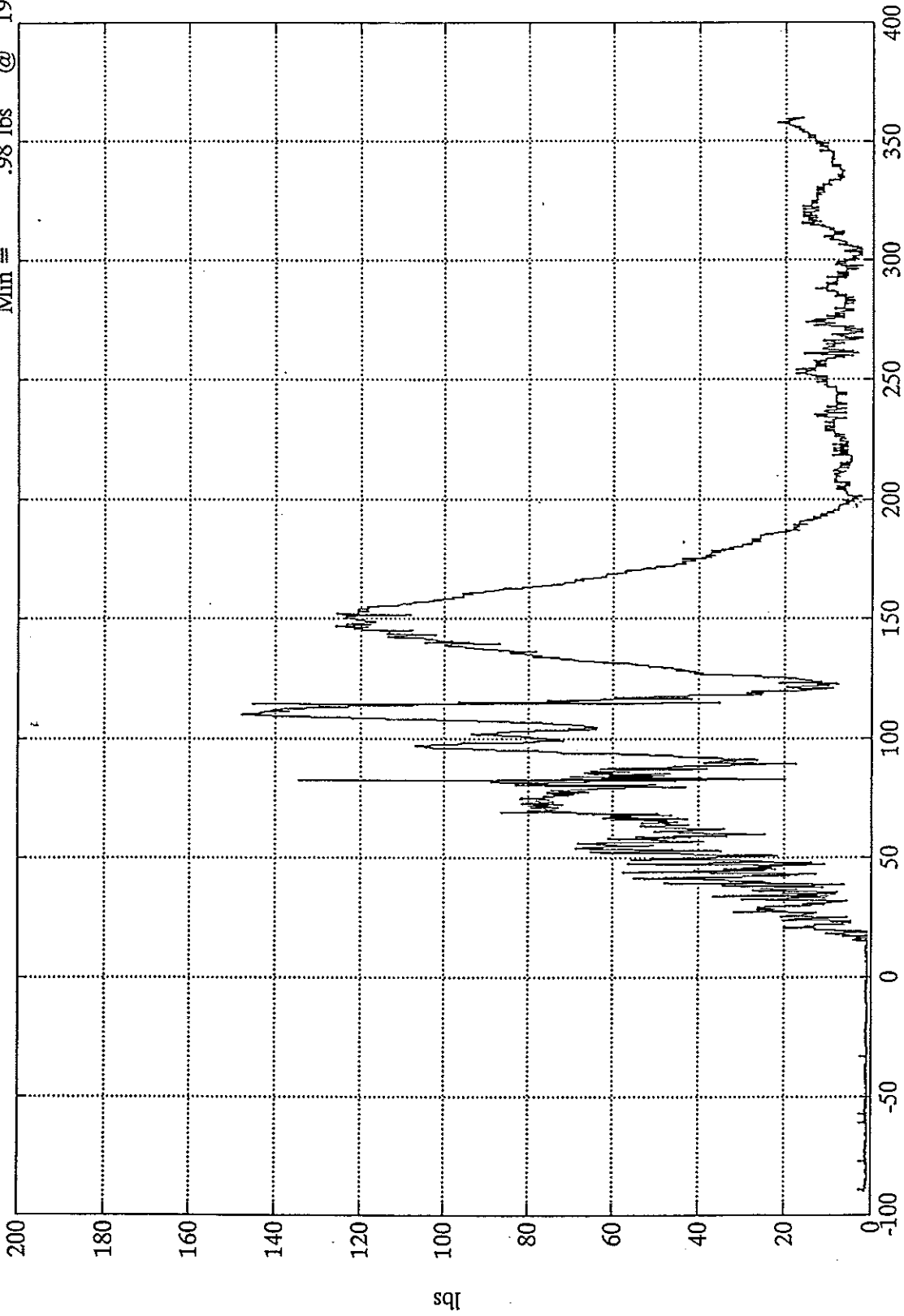
B-33

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Upper Neck F(Res)

Max = 147.64 lbs @ 110.16 msec  
Min = .98 lbs @ 19.19 msec



Time (msec)

SAE Filter Class 1000

B-34

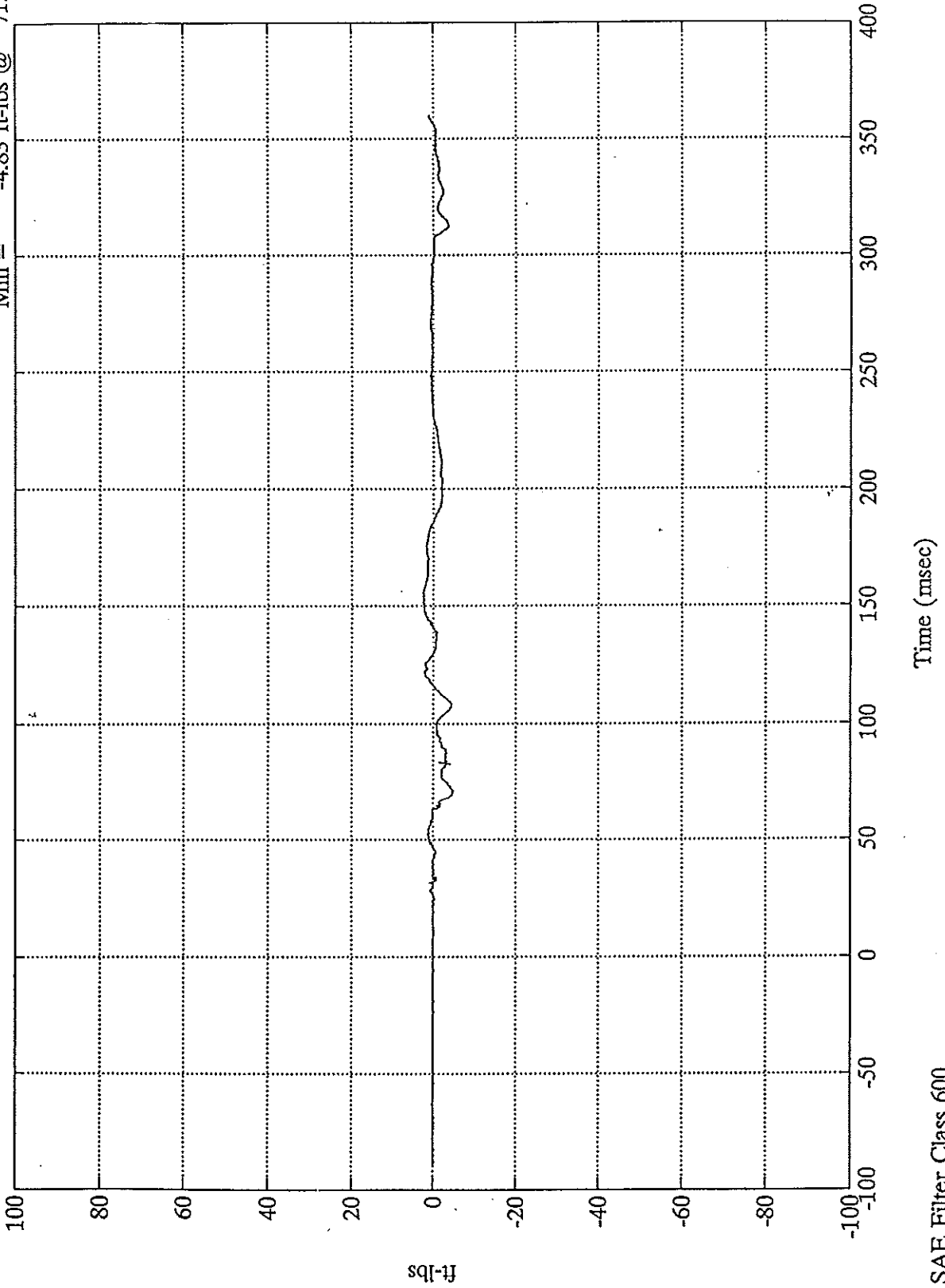
8344-10



301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Upper Neck Mx

Max = 2.57 ft-lbs @ 151.68 msec  
Min = -4.83 ft-lbs @ 71.04 msec



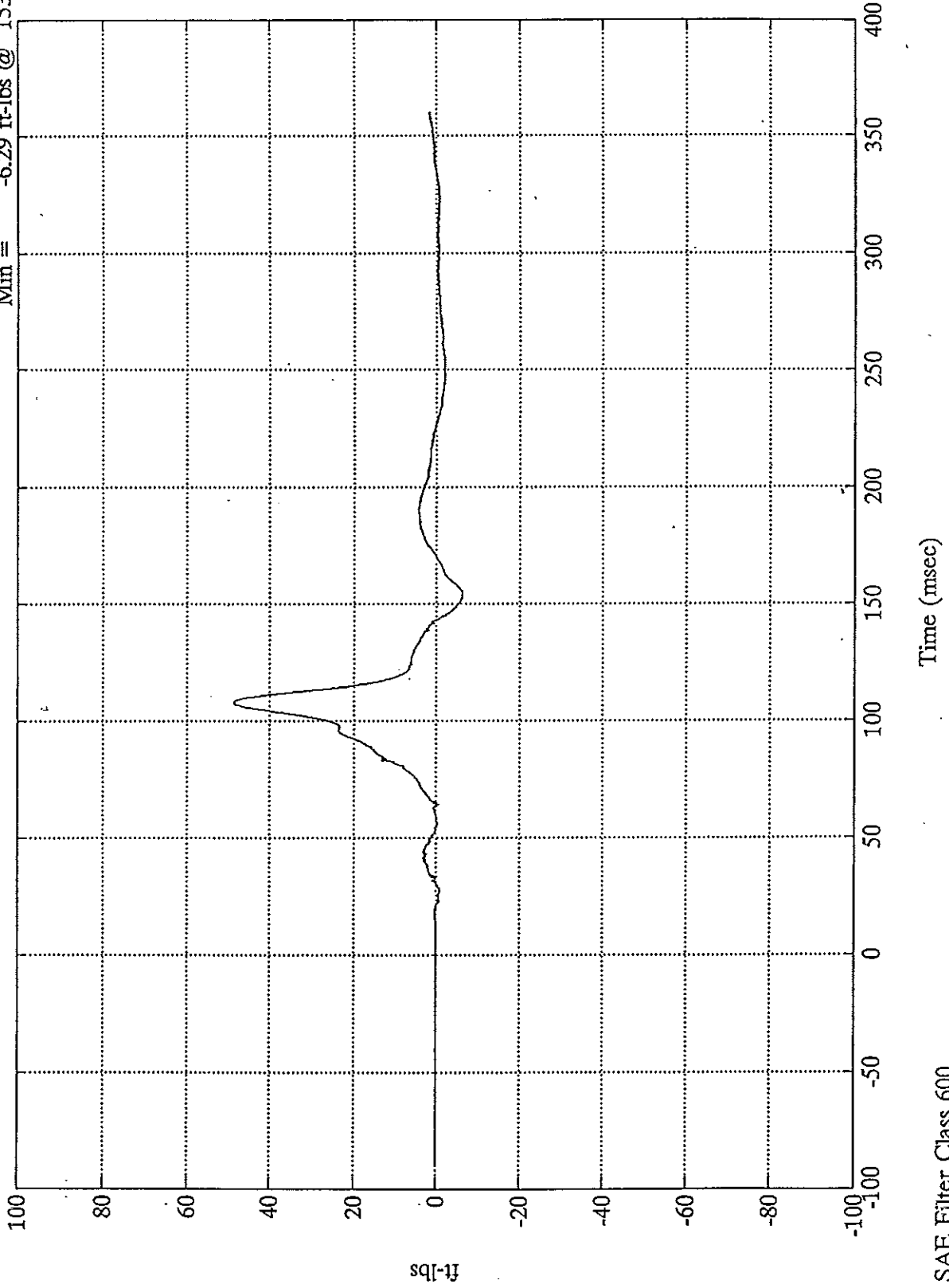
B-35

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Upper Neck My

Max = 48.67 ft-lbs @ 107.88 msec  
Min = -6.29 ft-lbs @ 153.24 msec



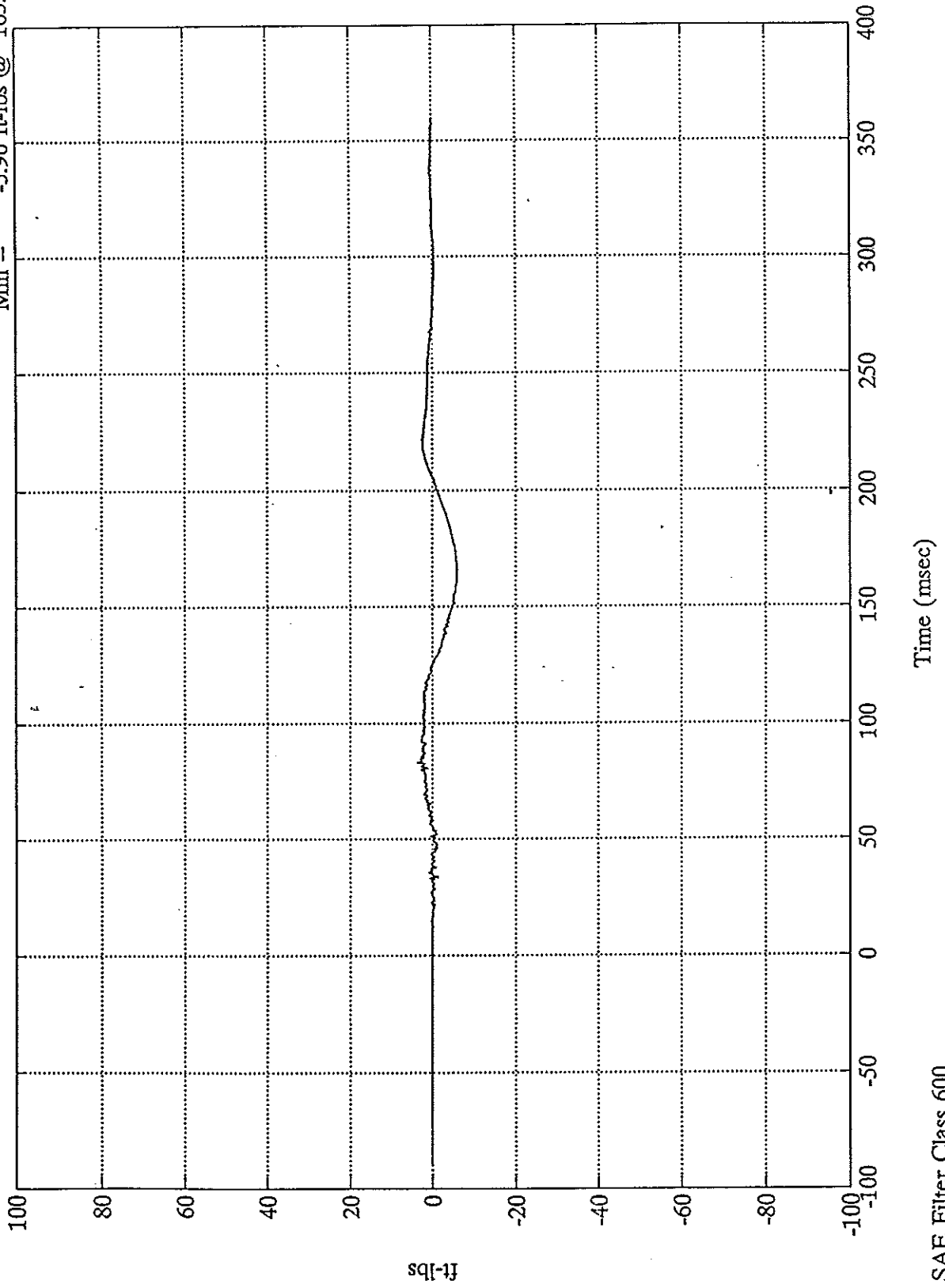
B-36

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Upper Neck Mz

Max = 3.56 ft-lbs @ 83.15 msec  
Min = -5.90 ft-lbs @ 165.83 msec



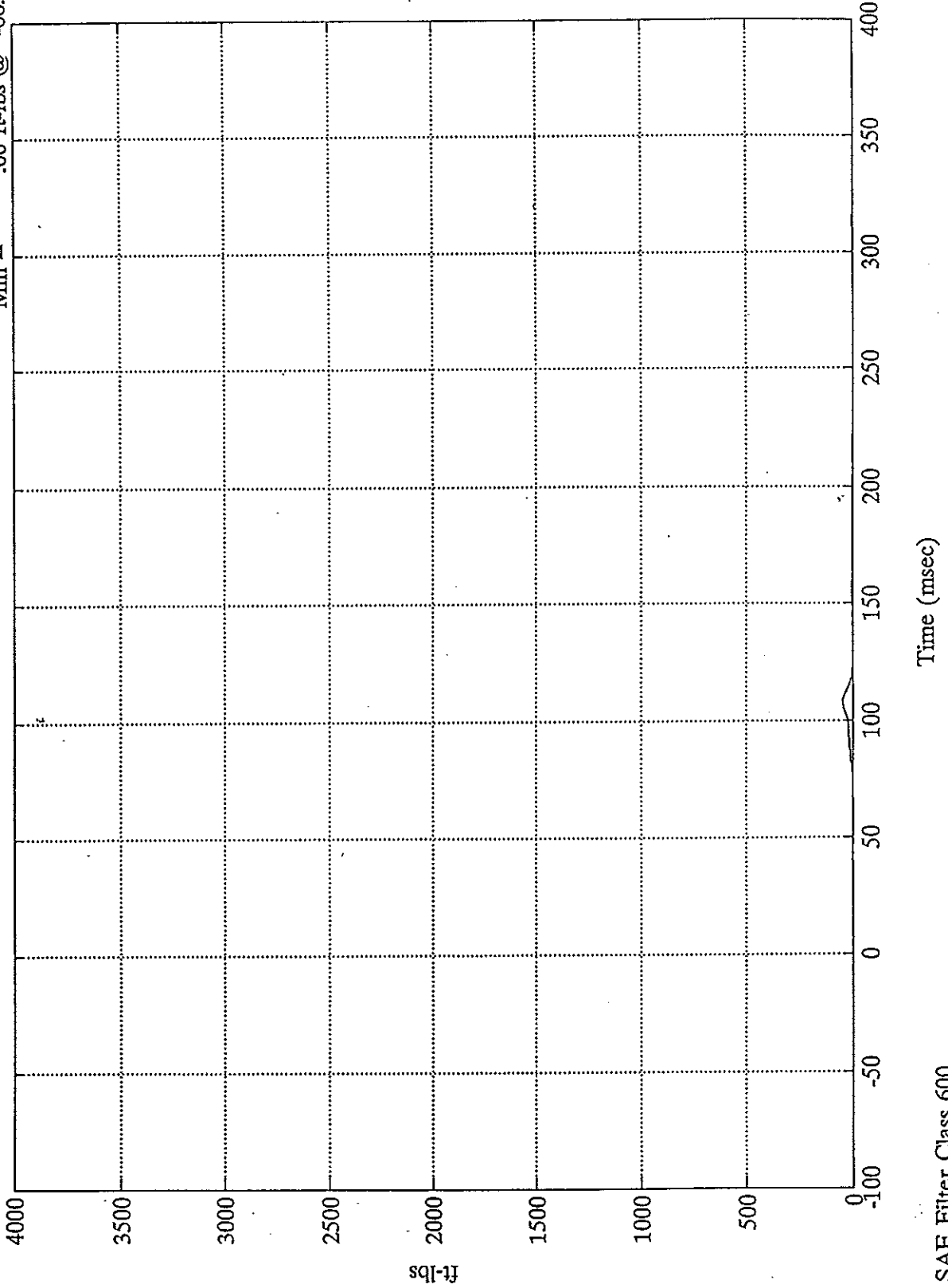
B-37

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Neck Moment Res.

Max = 48.91 ft-lbs @ 107.88 msec  
Min = .00 ft-lbs @ -66.24 msec



SAE Filter Class 600

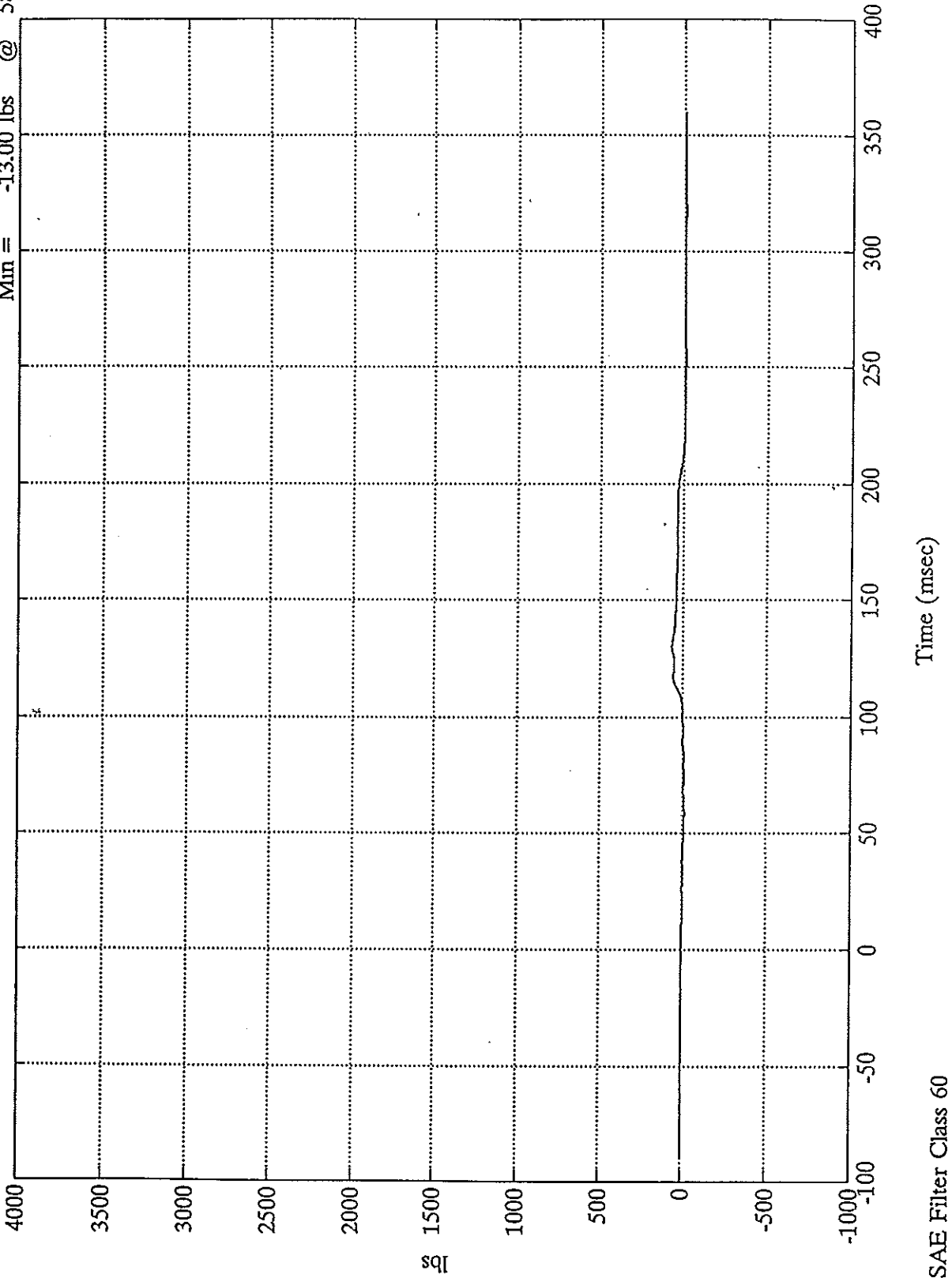
B-38

8344-10

301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Lap Belt Load

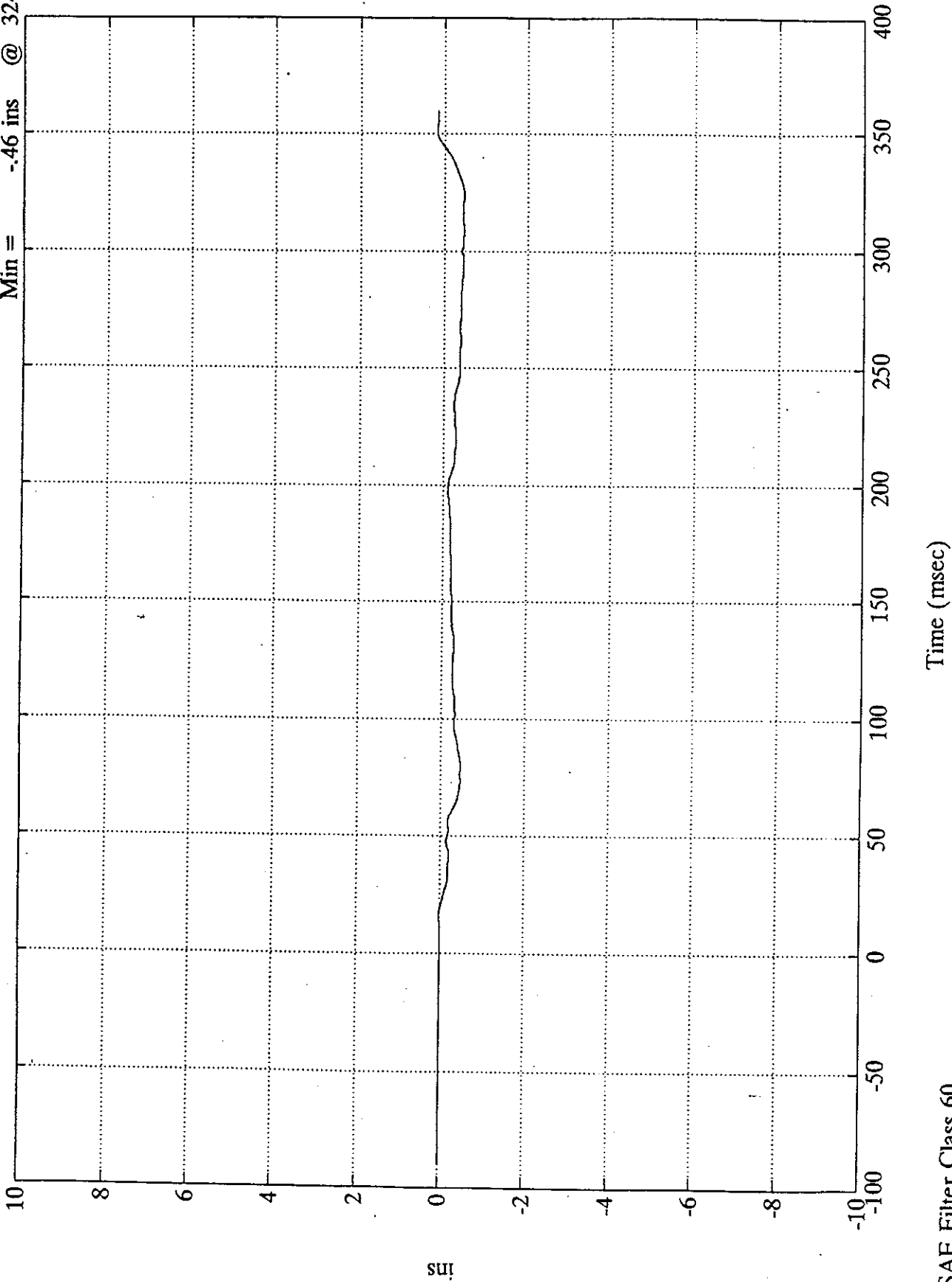
Max = 66.28 lbs @ 130.08 msec  
Min = -13.00 lbs @ 58.68 msec



301 Rear 30 MPH-1996 Geo Tracker

Pos. 1 Belt Spoolout

Max = .18 ins @ 351.24 msec  
Min = -.46 ins @ 324.00 msec



SAE Filter Class 60

S 211765

TEST RESULT

SUZUKI MOTOR CORPORATION

Suzuki Test Standard No. G-8816

FMVSS/CMVSS No. 301

TITLE : FUEL SYSTEM INTEGRITY

Test No. : 86-141

Test Date : 06/14/96

Vehicle : Model SIDEKICK 2door

Body Style CANVAS

Year 1996

Number JS3TA02CXT4140010

Make Proto-Pro.

Engine : Configuration G16A

Fuel Gasoline

Fuel Induction Electric Pump

Fuel Tank : Usable Cap. 42.0ℓ

Unusable Cap. 1.0ℓ

Transmission : M/T (5 Speed)

A/C : Yes  No

P/S : Yes  No

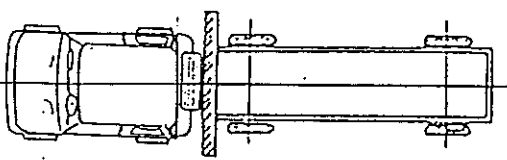
P/B : Yes  No

Impact Pattern : REAR IMPACT

Barrier Type : MOVING BARRIER

VEHICLE	
VELOCITY AT IMPACT 0.0 ( 0.0 ) km/h ( mph )	
TEST MASS (INCLUDED DUMMIES)	
FRONT	753.0 kg
REAR	619.0 kg
TOTAL	1372.0 kg
CARGO BALLAST	137 kg <input type="checkbox"/> LUGGAGE LOAD <input type="checkbox"/>
RATED CARGO	<input checked="" type="checkbox"/> NA <input type="checkbox"/>
FUEL TANK	CONTENTS : STODDARD SOLVENT VOLUME : 94 % OF USABLE CAPA.= 39.5 ℓ
ENGINE RUNNING	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

DUMMIES	
DRIVER	MAKE : ALDERSON NO : SN668
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL
RIGHT FRONT	MAKE : ALDERSON NO : SN664
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL

MOVING BARRIER	1815.0 kg	NA <input type="checkbox"/>
VELOCITY AT IMPACT 54.4 ( 33.8 ) km/h ( mph )		
PERPENDICULAR IMPACT NA <input checked="" type="checkbox"/>		
LOCATION AT IMPACT	DRIVER SRP <input type="checkbox"/> A-PILLER <input type="checkbox"/>	FUEL PIPE <input type="checkbox"/> OTHER <input type="checkbox"/>
ANGLE IMPACT NA <input checked="" type="checkbox"/>		
ACUTE ANGLE Degrees		
TEST CONFIGURATION :		
		

SUZUKI RESTRICTED

Page //2

S 211013

# TEST RESULT

SUZUKI MOTOR CORPORATION  
Test No. : 86-141

Test Results :

WAS FUEL SPILLAGE :		
LESS THAN 28.35 gm DURING IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING FIRST FIVE MINUTES AFTER IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING ONE MINUTE COLLECTION PERIODS AFTER IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING STATIC ROLLOVER FIVE MINUTES COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING STATIC ROLLOVER ONE MINUTE COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>

Test Data :

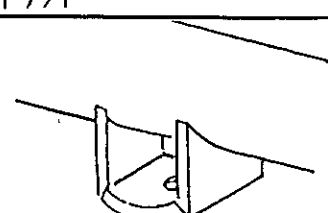
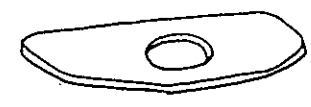
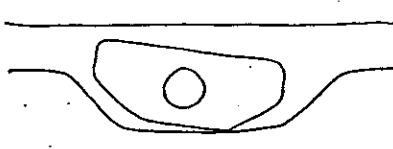
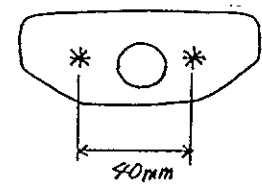
FUEL SPILLAGE BARRIER IMPACT SITE		
DURING IMPACT: 0.0 gm	DURING FIRST FIVE MINUTES AFTER IMPACT: 0.0 gm	
DURING THE ONE COLLECTION PERIODS ( 5 TO 30 MINUTES AFTER IMPACT ) : 0.0 gm		

FUEL SPILLAGE DURING STATIC ROLLOVER				
ROLLOVER DIRECTION : POSITIVE <input type="checkbox"/> NEGATIVE <input type="checkbox"/> BOTH <input checked="" type="checkbox"/>				
ROLLOVER RATE-APPROXIMATELY 2 MINUTES PER 90° INCREMENT				
ROLLOVER DATE : 06.14.96				
ROLLOVER INCREMENTS		FUEL SPILLAGE BY MASS		
		FUEL 5 MINUTES OF ROLLOVER INCREMENT	FOR NEXT MINUTE	FOR NEXT MINUTE
Positive Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm
Negative Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm



TEST NO. 86-141

1. TEST CONDITION

VEHICLE		IWATA 96MY 2DOOR 4WD																	
FUEL TANK		IWATA																	
FUEL TANK BRACKET																			
G U S S E T	CONFIGURATION																		
	GUSSET ORIENTATION																		
	SPOT WELDING PITCH																		
WEATHER & TEMPERATURE		RAIN      22 °C																	
TEST VEHICLE WEIGHT WITHOUT DUMMY (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>329.0</td> <td>284.0</td> <td>613.0</td> </tr> <tr> <td>RIGHT</td> <td>338.0</td> <td>277.0</td> <td>615.0</td> </tr> <tr> <td>TOTAL</td> <td>667.0</td> <td>561.0</td> <td>1228.0</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	329.0	284.0	613.0	RIGHT	338.0	277.0	615.0	TOTAL	667.0	561.0	1228.0
	FRONT	REAR	TOTAL																
LEFT	329.0	284.0	613.0																
RIGHT	338.0	277.0	615.0																
TOTAL	667.0	561.0	1228.0																
TEST VEHICLE WEIGHT WITH TWO DUMMIES (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>363.0</td> <td>316.0</td> <td>679.0</td> </tr> <tr> <td>RIGHT</td> <td>390.0</td> <td>303.0</td> <td>693.0</td> </tr> <tr> <td>TOTAL</td> <td>753.0</td> <td>619.0</td> <td>1372.0</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	363.0	316.0	679.0	RIGHT	390.0	303.0	693.0	TOTAL	753.0	619.0	1372.0
	FRONT	REAR	TOTAL																
LEFT	363.0	316.0	679.0																
RIGHT	390.0	303.0	693.0																
TOTAL	753.0	619.0	1372.0																

1. TEST CONDITION (CONTINUED)

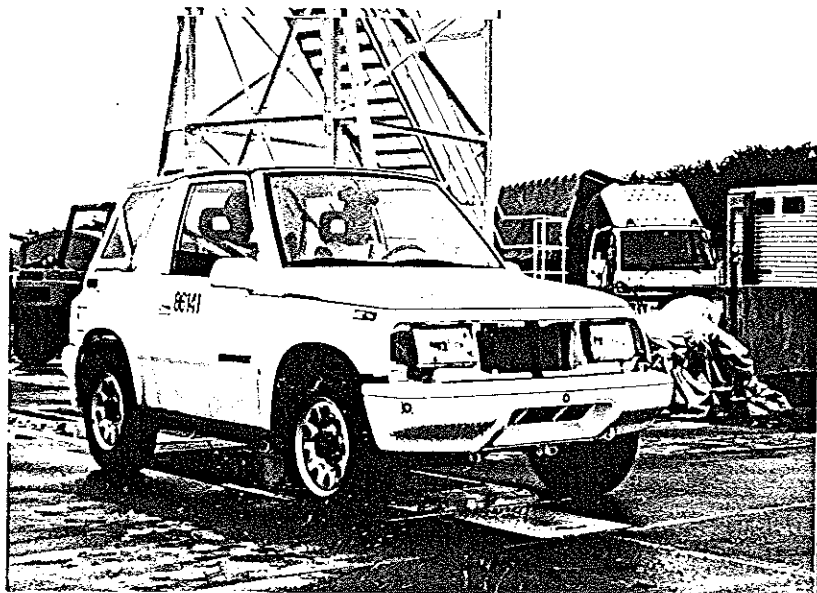
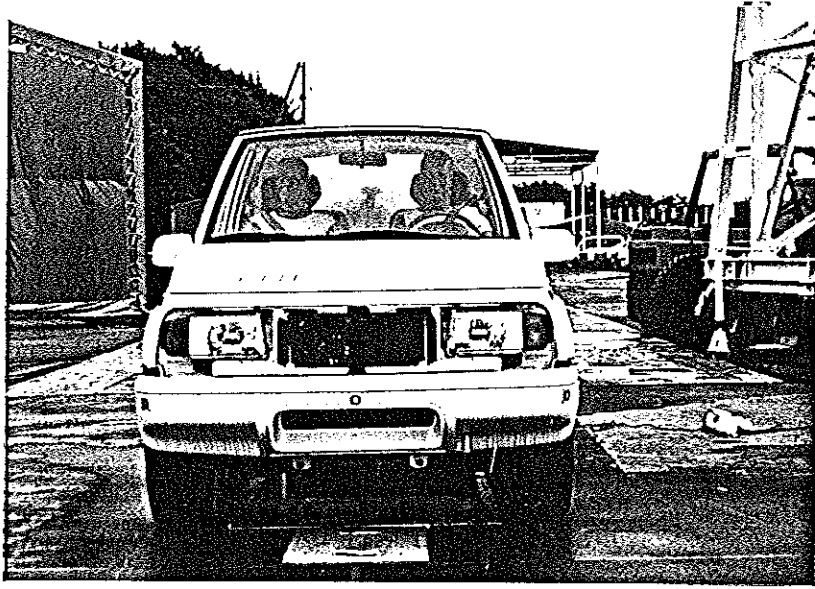
86141

TRIM HEIGHT (MM)		FRONT	REAR
	LEFT	750	764
	RIGHT	755	768
TRANSMISSION POSITION	Neutral		
TRANSFER POSITION	2H		

2. POST-TEST CONDITION

TEST SPEED	54.4 km/h	
DEVIATION OF MOVING BARRIER	18mm Left	
VEHICLE DEFORMATION (MM)	LEFT	354
	CENTER	368
	RIGHT	296
PROPELLER SHAFT	Separated	
FUEL TANK DEFORMATION SPECIFY if there is any portion where may cause fuel leakage	None	

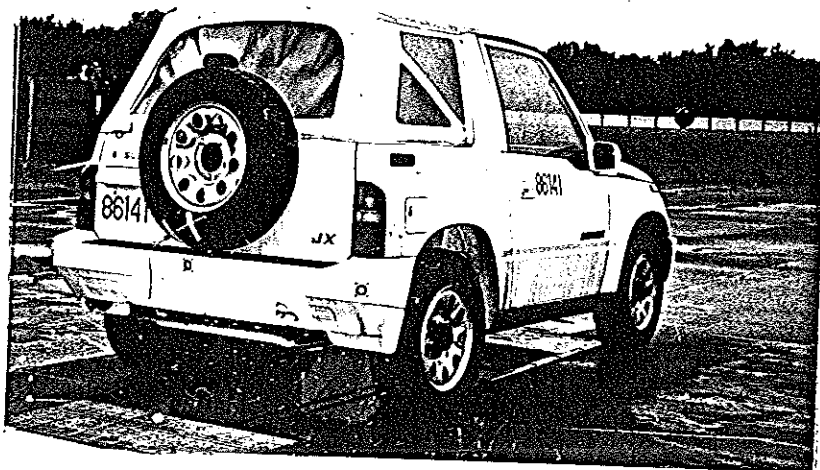
試験前 (Pre-Test)



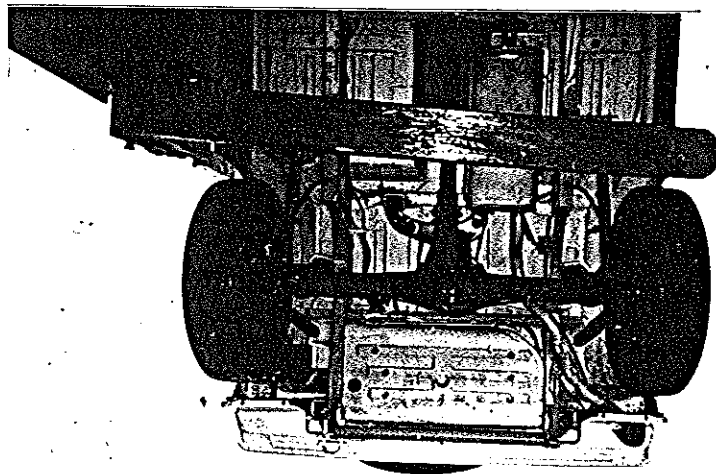
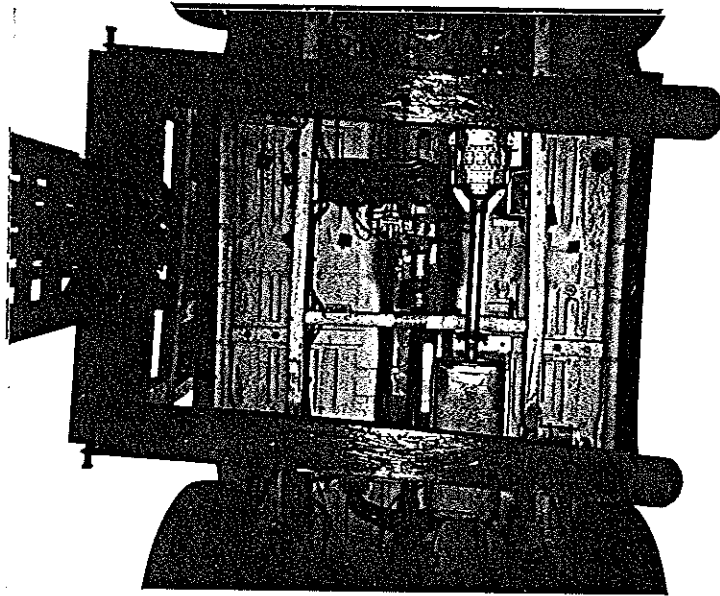
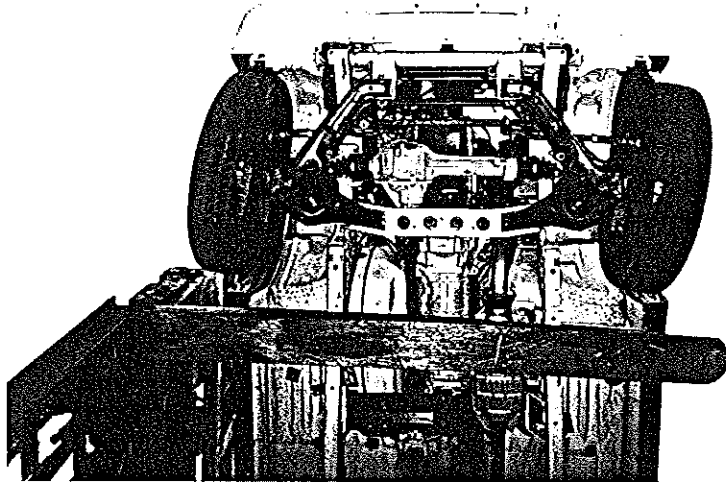
試験前 (Pre-Test)



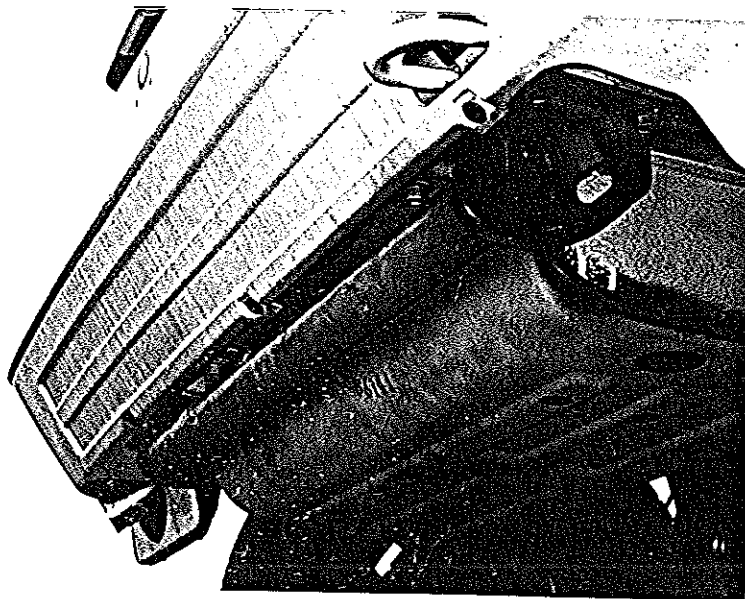
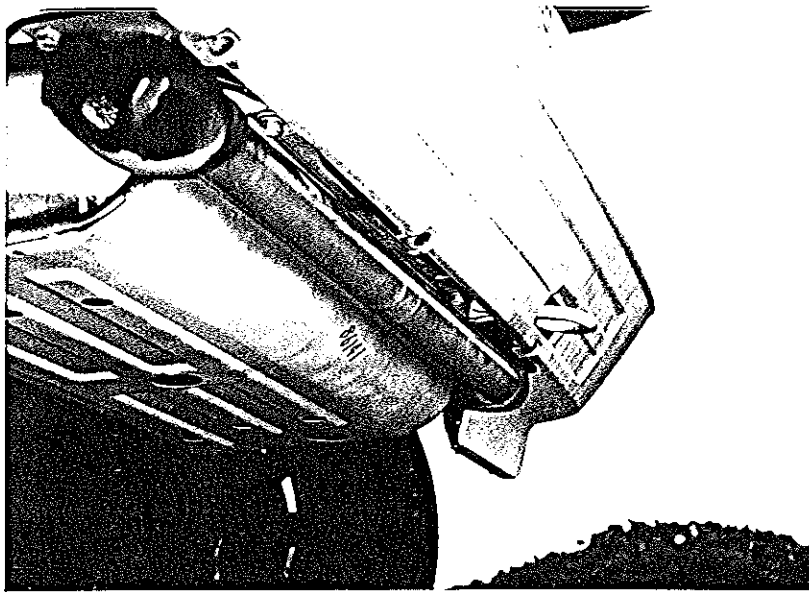
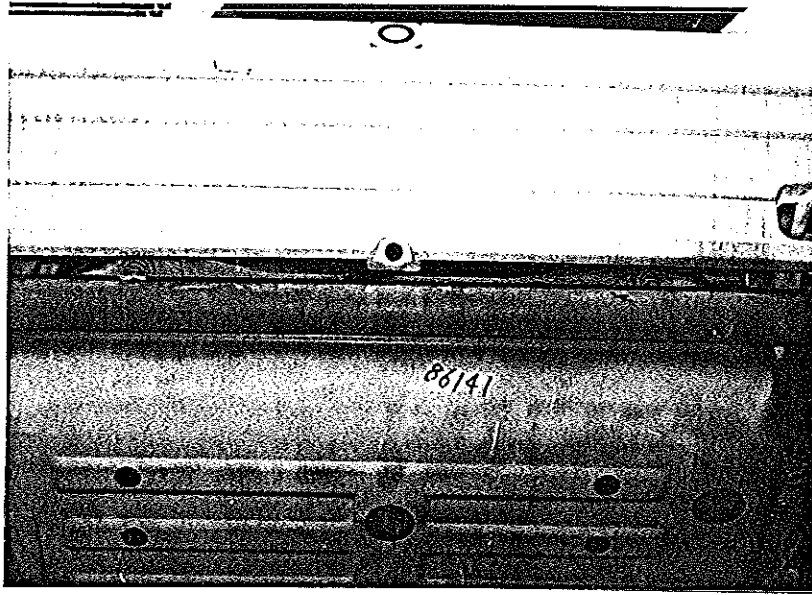
試験前 (Pre-Test)



試験前 (Pre-Test)

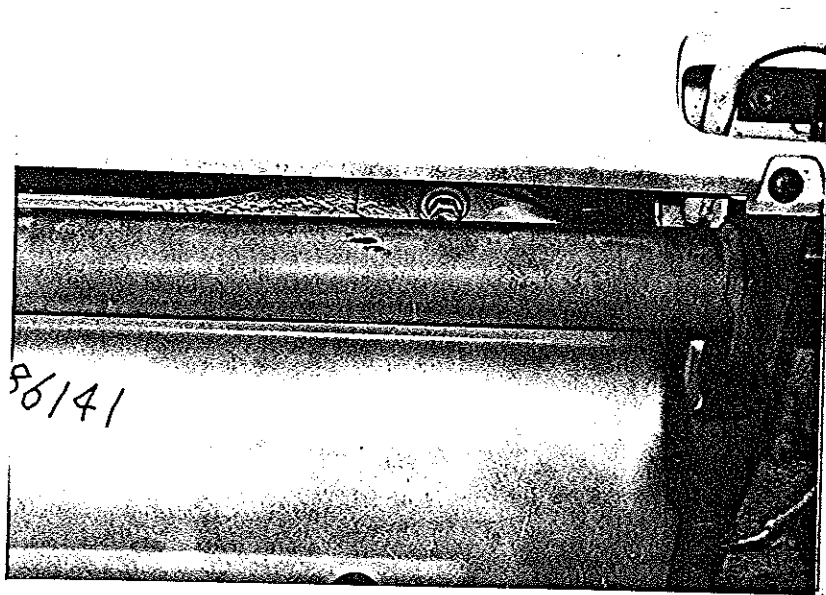
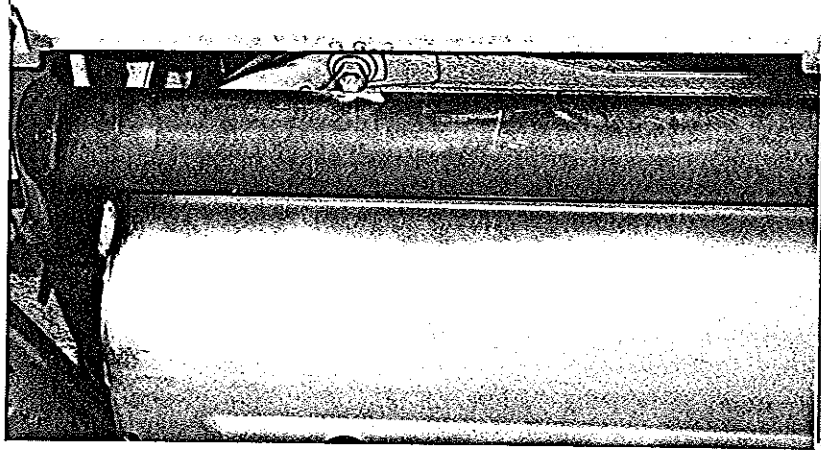


試験前 (Pre-Test)



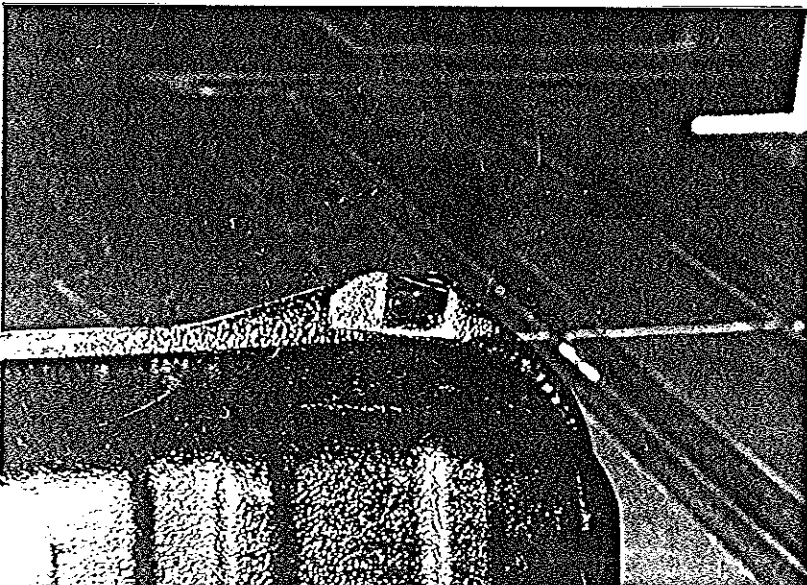
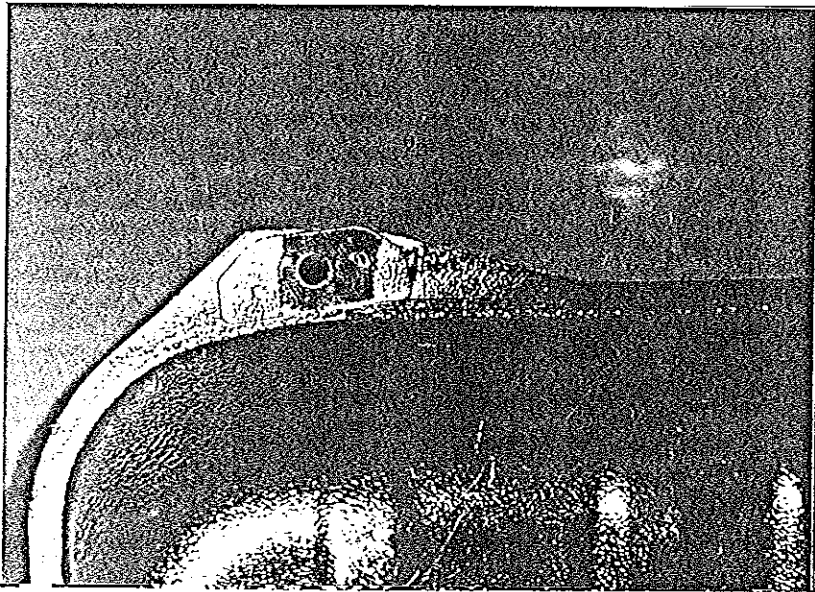
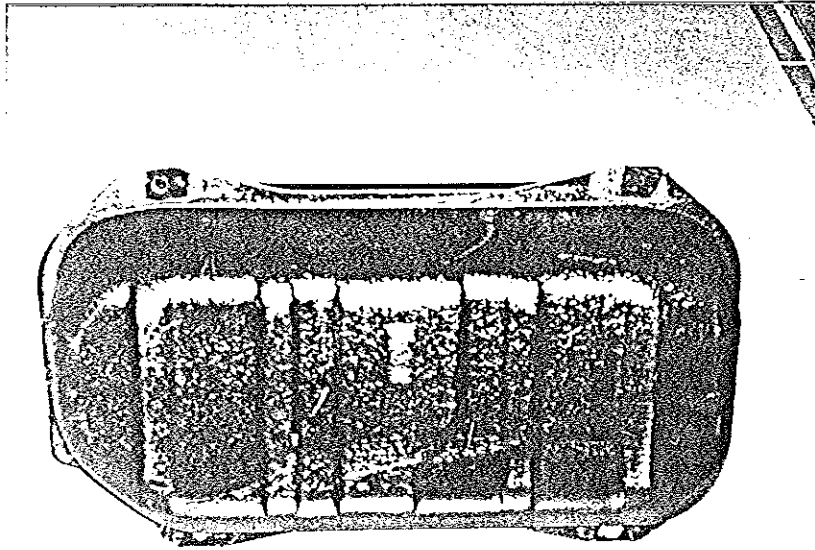
S 211021

試験前 (Pre-Test)

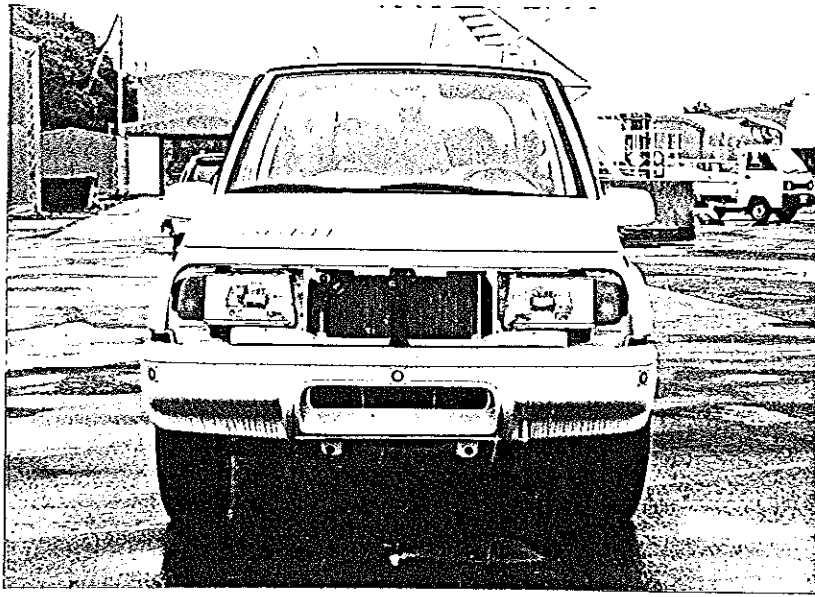




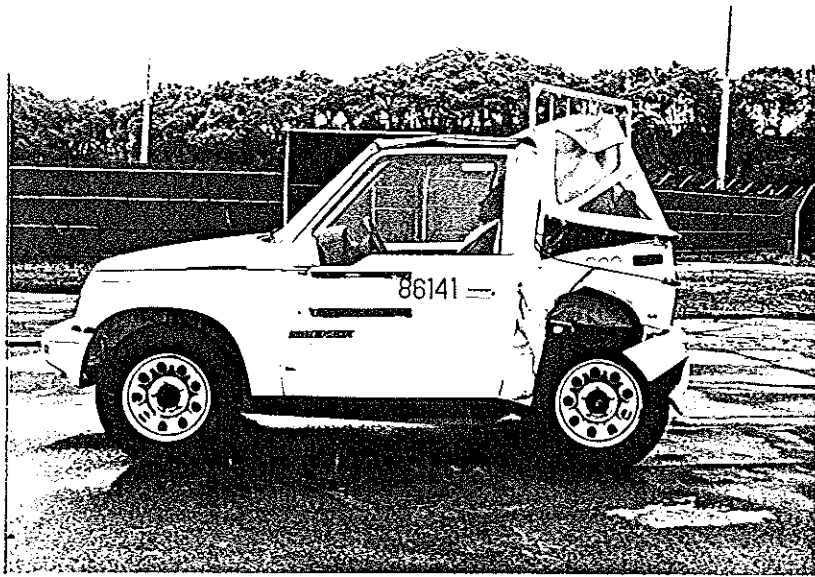
試験前 (Pre-Test)



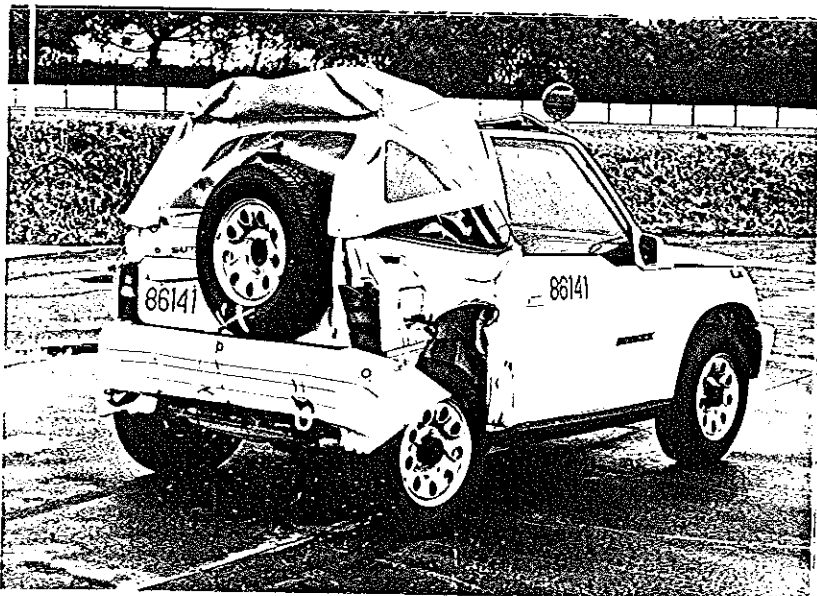
試験後 (Post-Test)



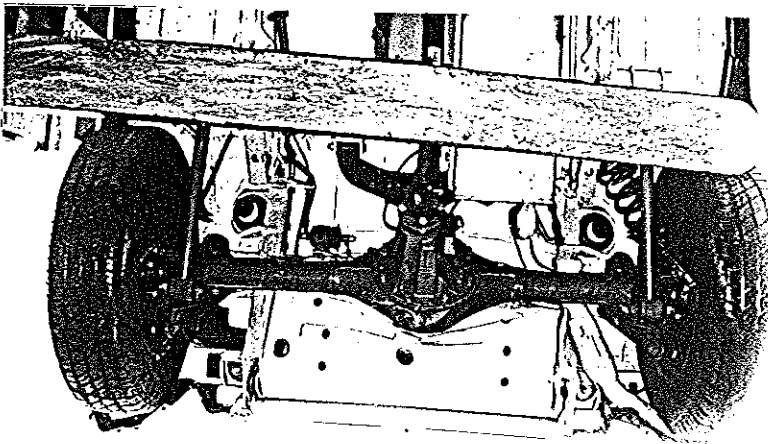
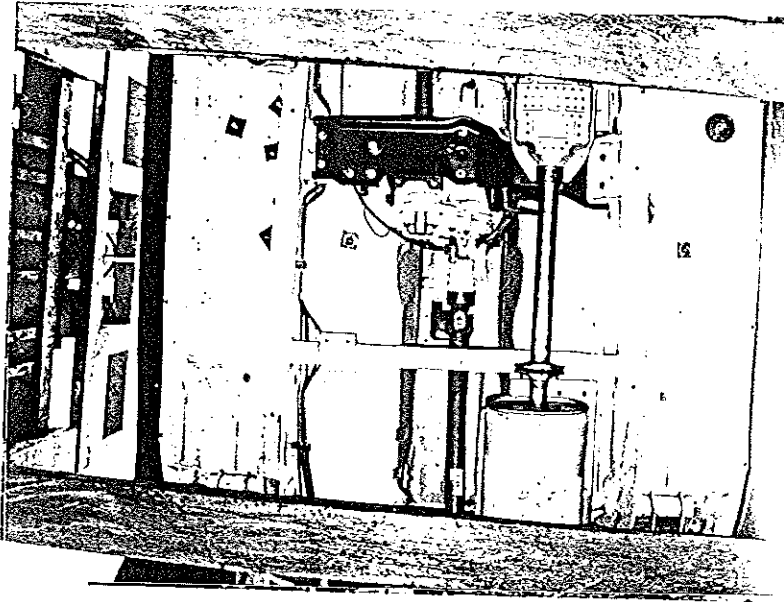
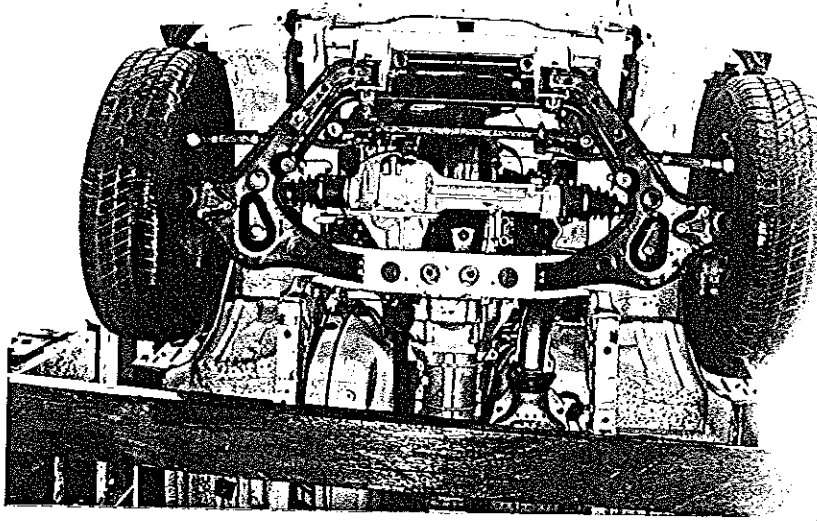
試験後 (Post-Test)



試験後 (Post-Test)

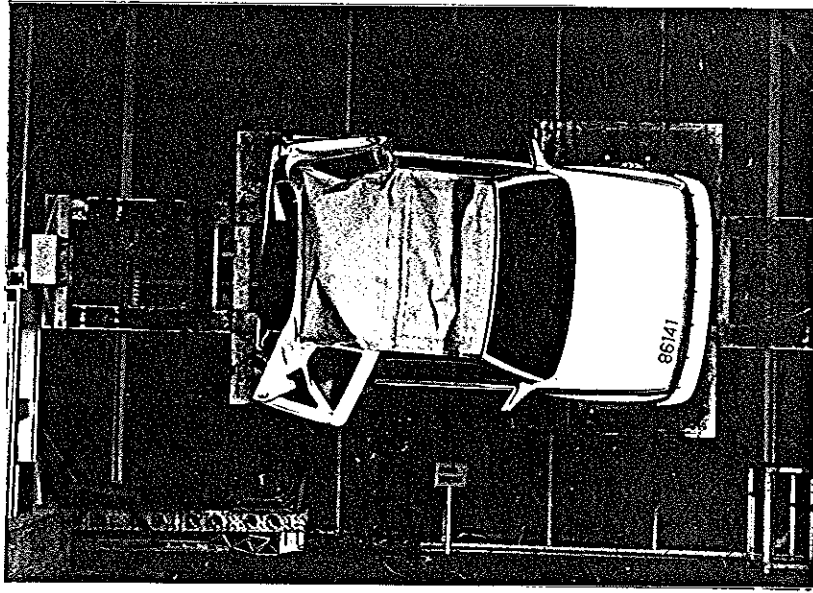
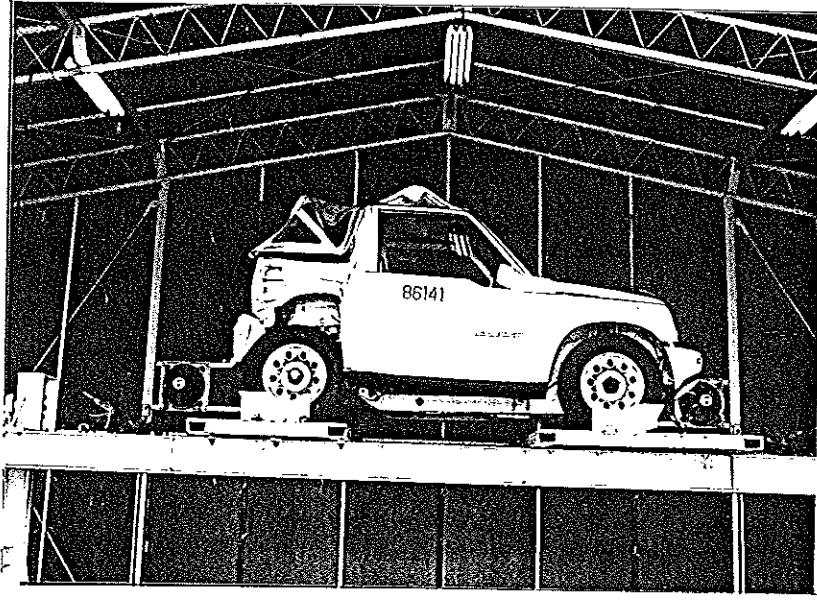


試験後 (Post-Test)

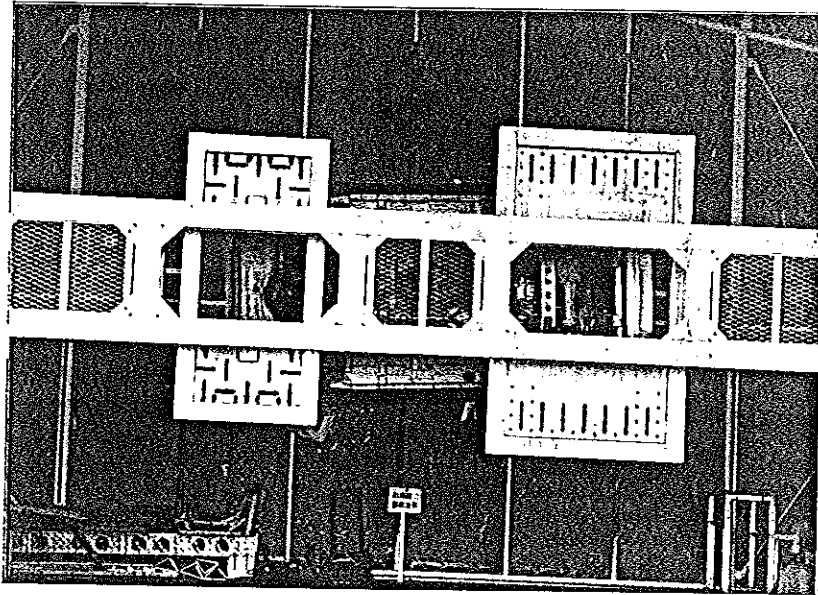
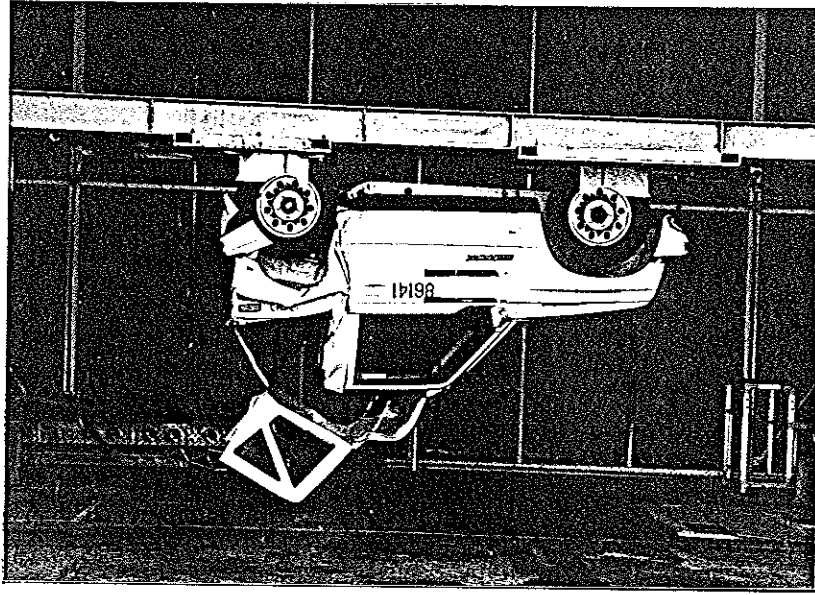


S 211027

試験後 (Post-Test)



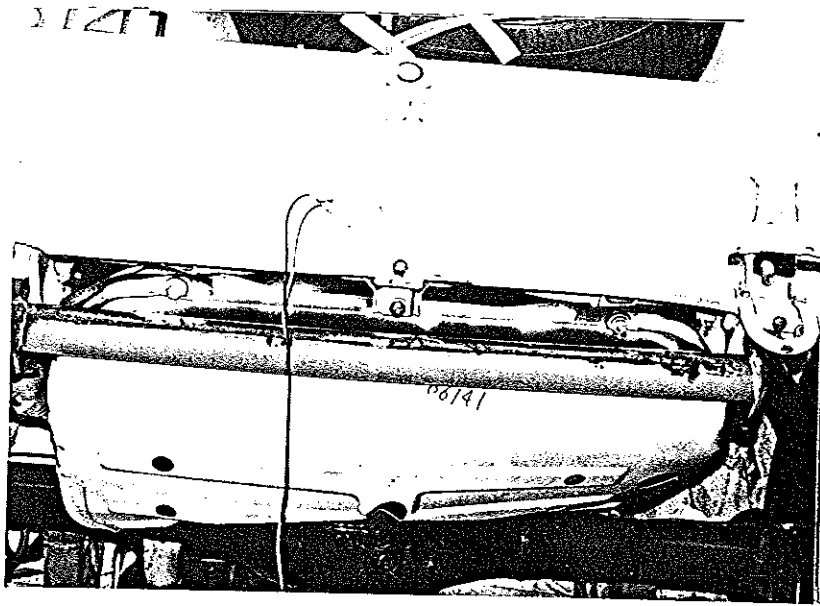
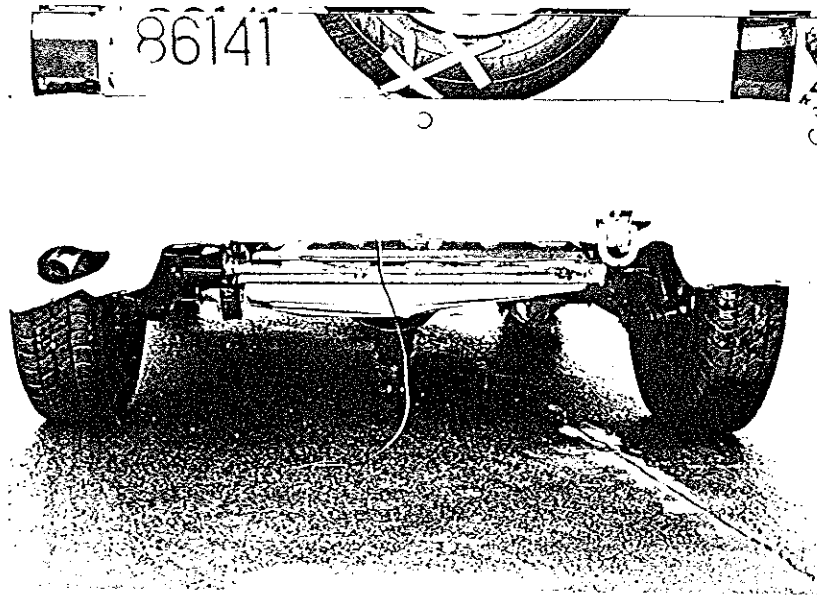
試験後 (Post-Test)



S 211029

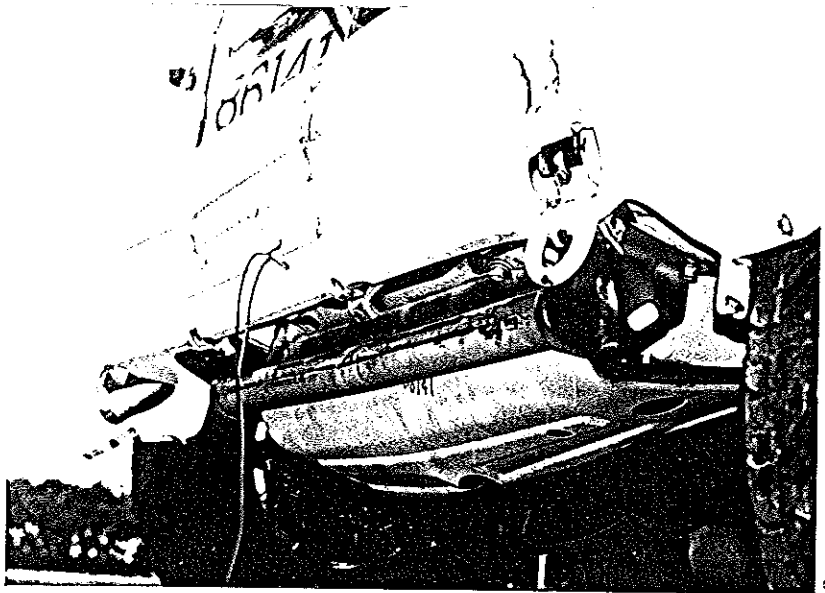
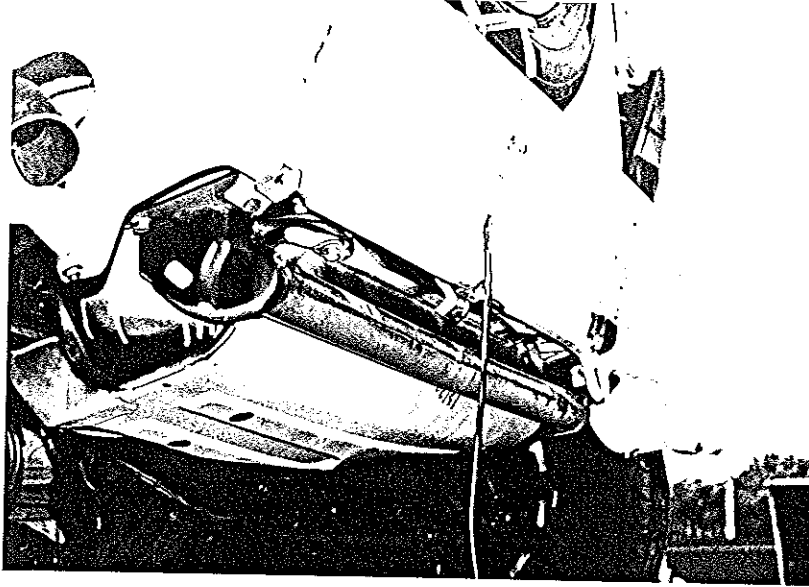


試験後 (Post-Test)

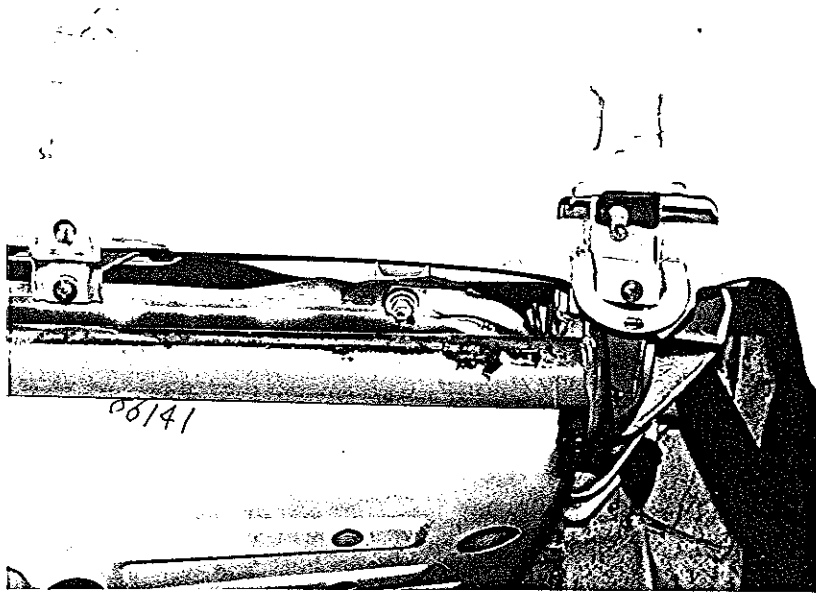
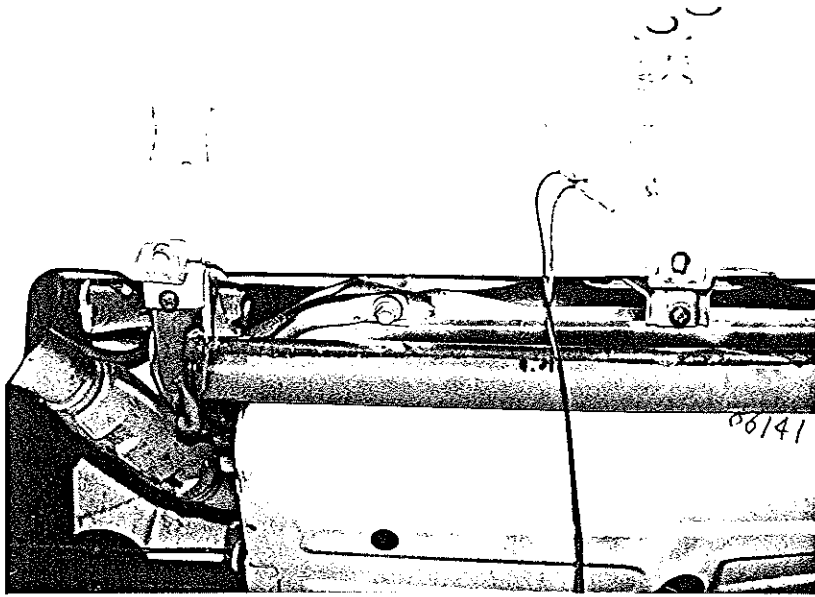




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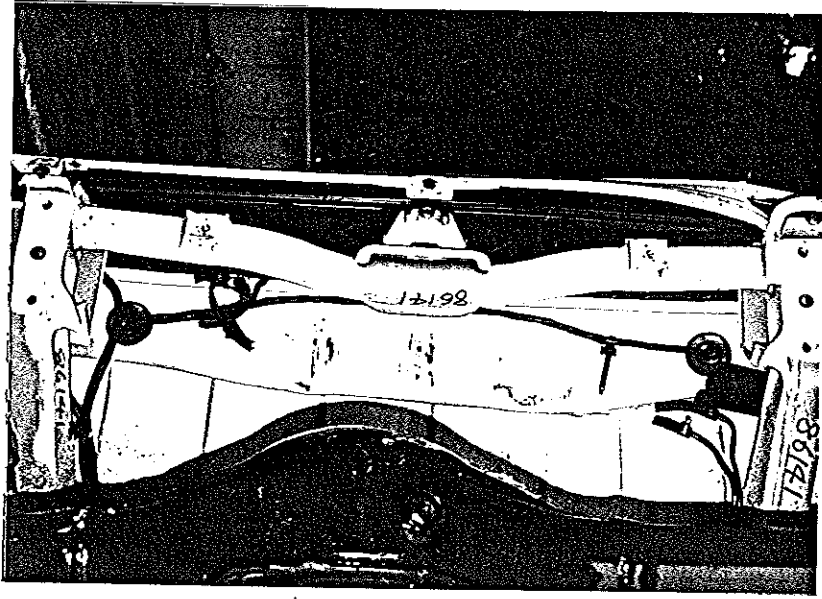
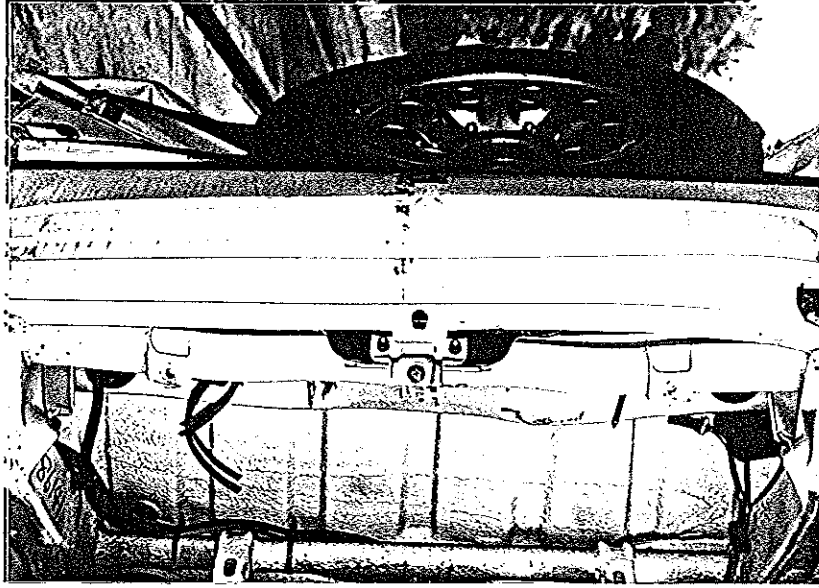


試験後 (Post-Test)

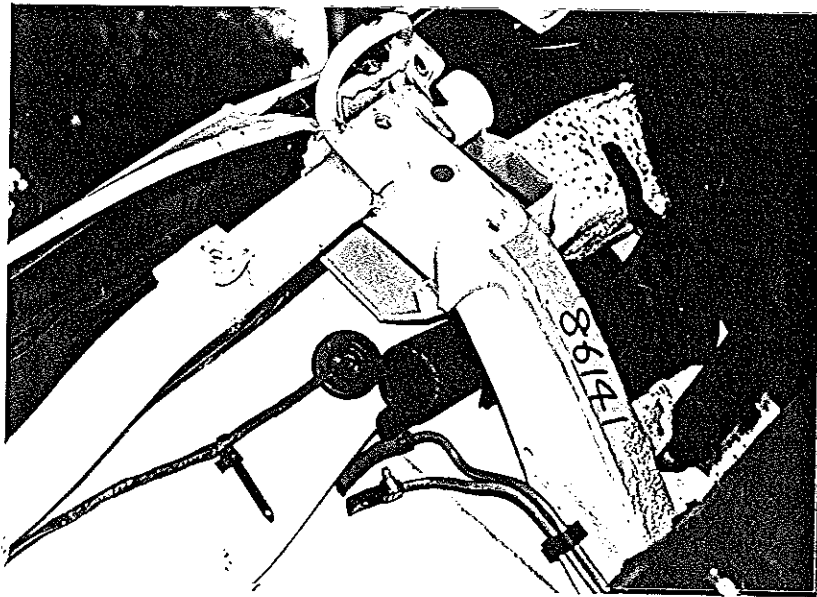


S 211032

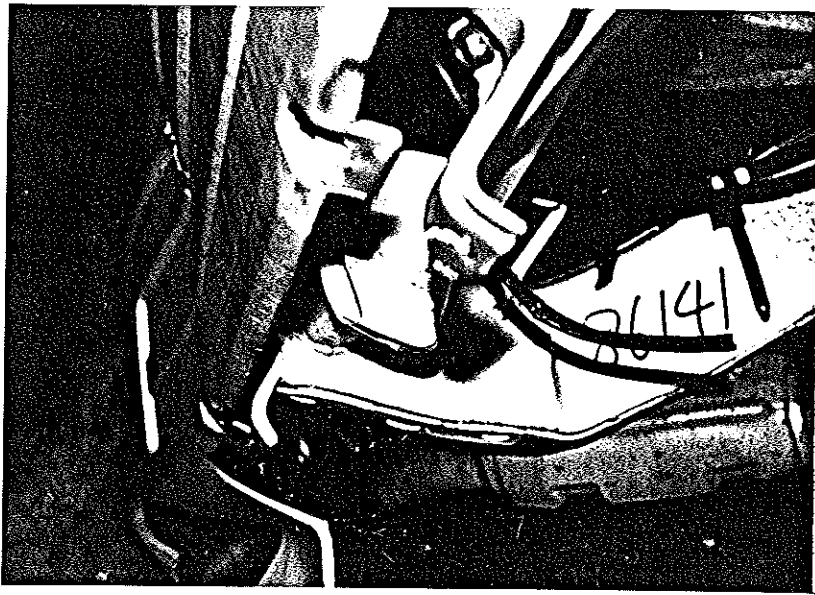
試験後 (Post-Test)



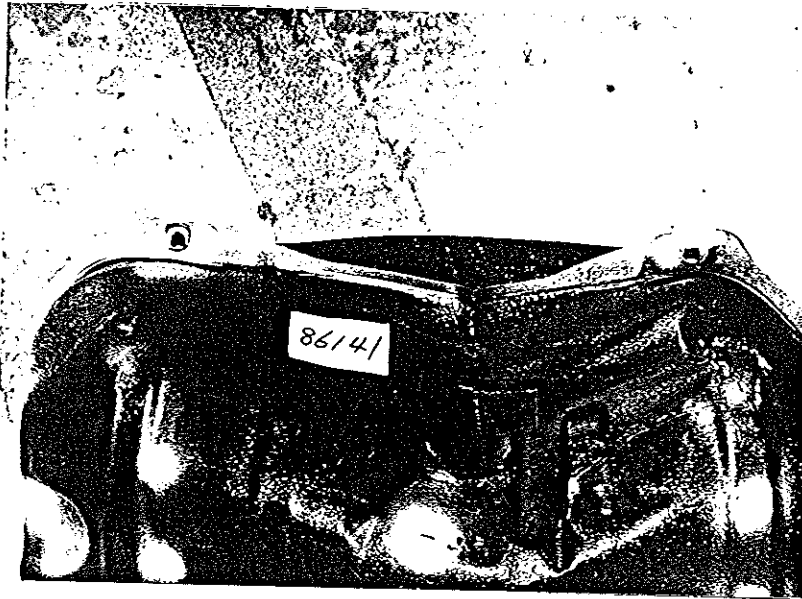
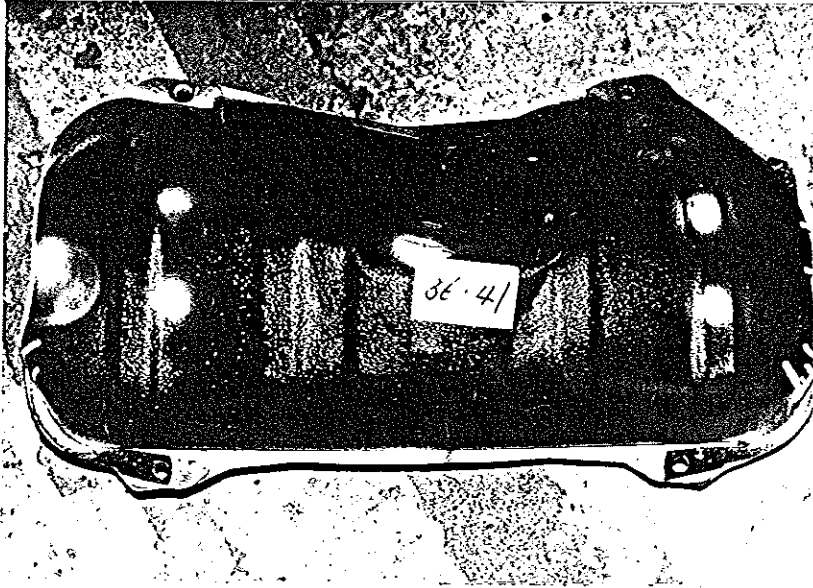
試験後 (Post-Test)



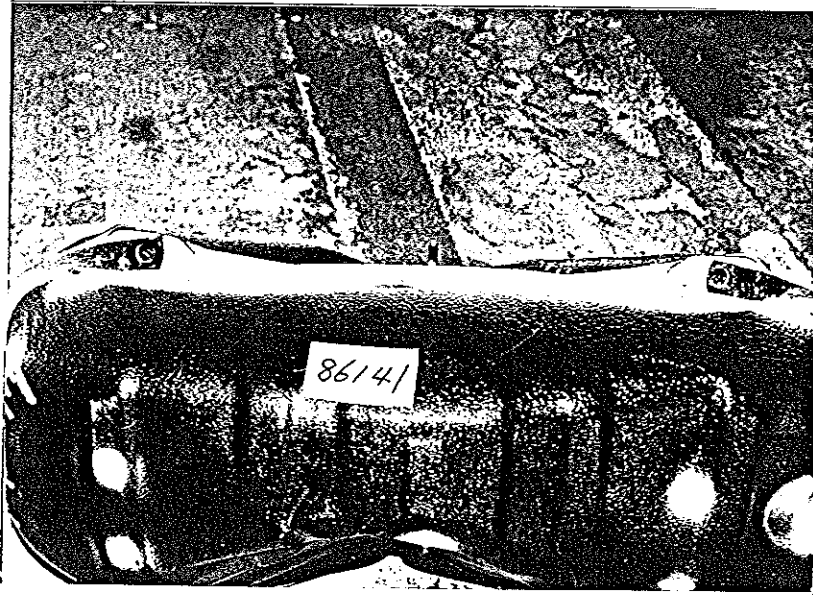
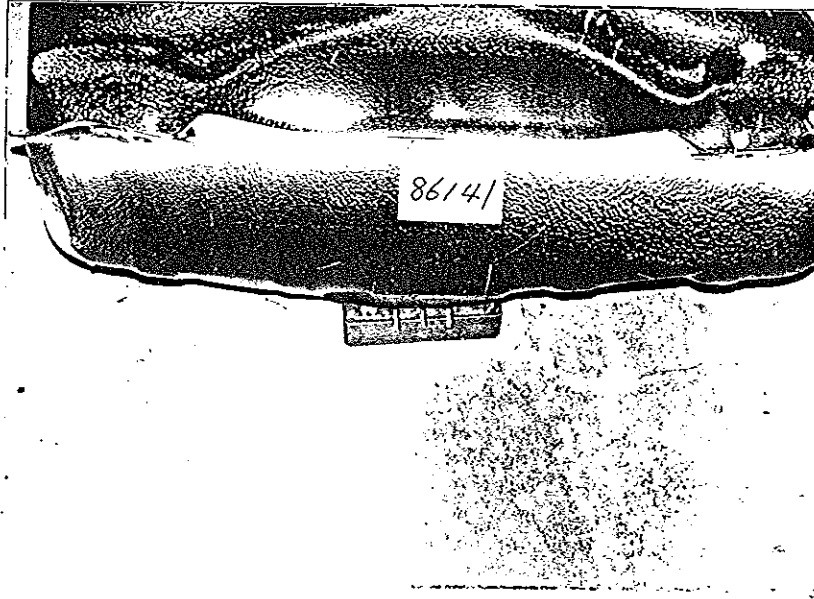
試験後 (Post-Test)



試験後 (Post-Test)

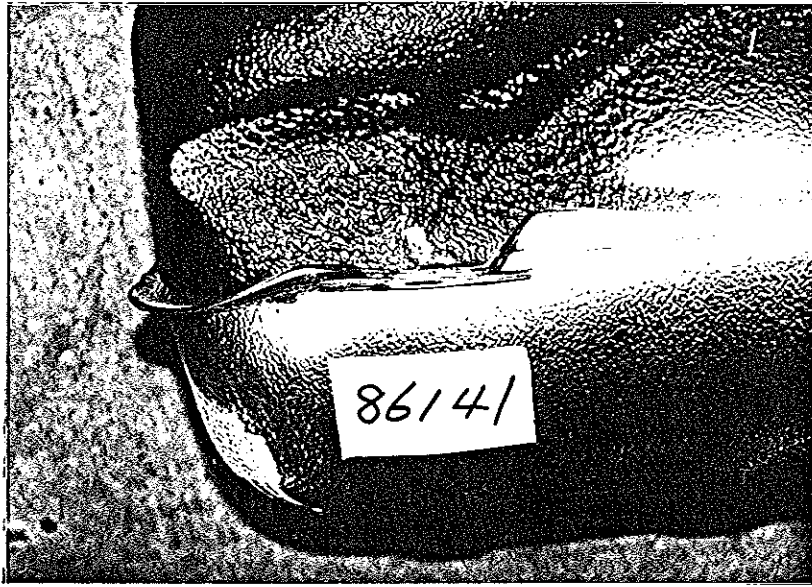


試験後 (Post-Test)



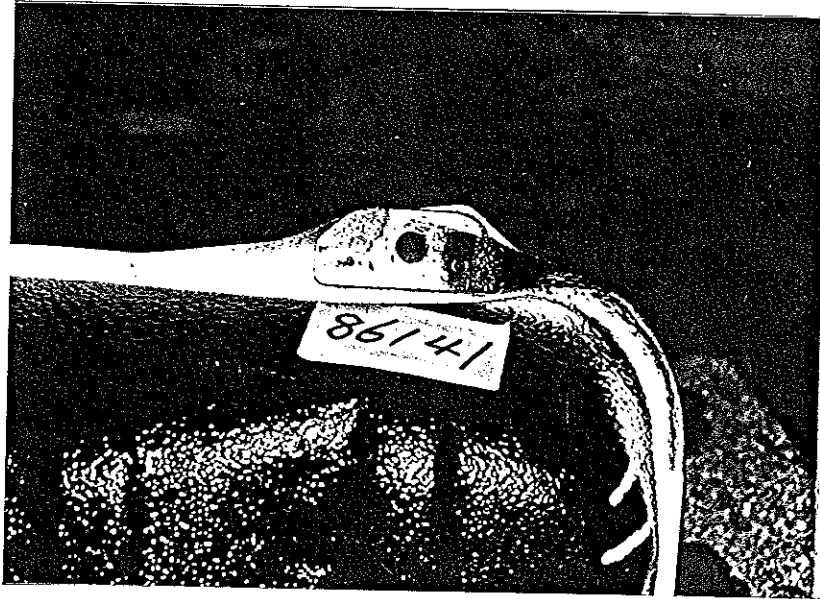
S 211037

試験後 (Post-Test)

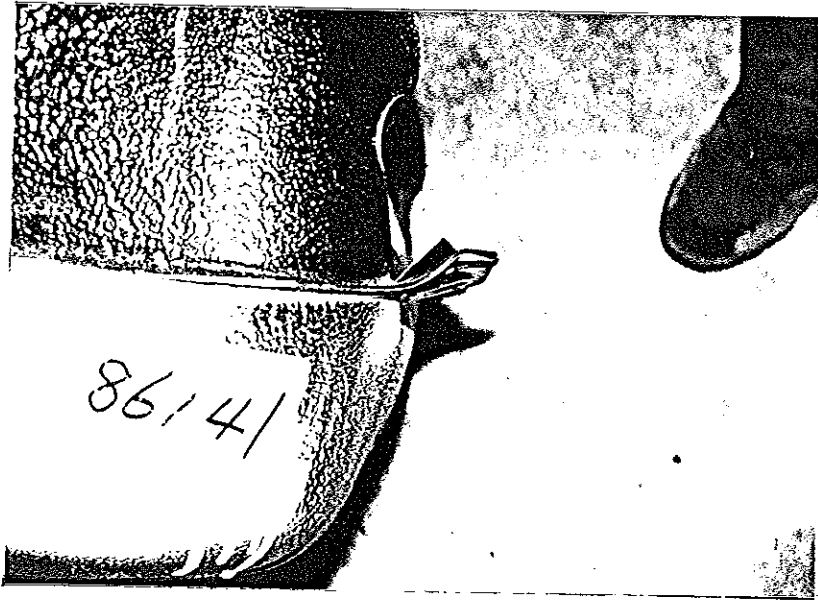




試験後 (Post-Test)



試験後 (Post-Test)



TEST RESULT

SUZUKI MOTOR CORPORATION

Suzuki Test Standard No. G-8816

FMVSS/CMVSS No. 301

TITLE : FUEL SYSTEM INTEGRITY

Test No. : 86-252

Test Date : 06/25/96

Vehicle : Model SIDEKICK 2door

Body Style CANVAS

Year 1997

Number JSAETA02C01150172

Make Production

Engine : Configuration G16A

Fuel Gasoline

Fuel Induction Electric Pump

Fuel Tank : Usable Cap. 42.0ℓ

Unusable Cap. 1.0ℓ

Transmission : A/T ( 4 Speed )

A/C : Yes  No

P/S : Yes  No

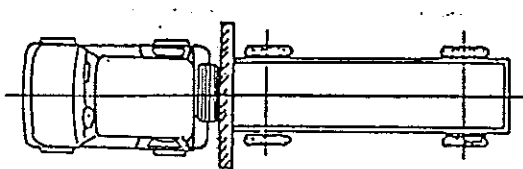
P/B : Yes  No

Impact Pattern : REAR IMPACT

Barrier Type : MOVING BARRIER

VEHICLE	
VELOCITY AT IMPACT 0.0 ( 0.0 ) km/h ( mph )	
TEST MASS (INCLUDED DUMMIES) FRONT 734.0 kg REAR 639.0 kg TOTAL 1373.0 kg	
CARGO BALLAST	137 kg <input type="checkbox"/> LUGGAGE LOAD <input type="checkbox"/>
	RATED CARGO <input checked="" type="checkbox"/> NA <input type="checkbox"/>
FUEL TANK	CONTENTS : STODDARD SOLVENT VOLUME : 94 % OF USABLE CAPA. = 39.5 ℓ
ENGINE RUNNING YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	

DUMMIES	
DRIVER	MAKE : ALDERSON NO : SN668
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL
RIGHT FRONT	MAKE : ALDERSON NO : SN664
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL

MOVING BARRIER 1815.0 kg		NA <input type="checkbox"/>
VELOCITY AT IMPACT 53.8 ( 33.4 ) km/h ( mph )		
PERPENDICULAR IMPACT		NA <input checked="" type="checkbox"/>
LOCATION AT IMPACT	DRIVER SRP <input type="checkbox"/> A-PILLER <input type="checkbox"/>	FUEL PIPE <input type="checkbox"/> OTHER <input type="checkbox"/>
ANGLE IMPACT		NA <input checked="" type="checkbox"/>
ACUTE ANGLE		Degrees
TEST CONFIGURATION :		
		

SUZUKI RESTRICTED

Page //2

S 211041

# TEST RESULT

SUZUKI MOTOR CORPORATION  
Test No. : 86-252

Test Results :

WAS FUEL SPILLAGE :	
LESS THAN 28.35 gm DURING IMPACT ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING FIRST FIVE MINUTES AFTER IMPACT ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING ONE MINUTE COLLECTION PERIODS AFTER IMPACT ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING STATIC ROLLOVER FIVE MINUTES COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING STATIC ROLLOVER ONE MINUTE COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>

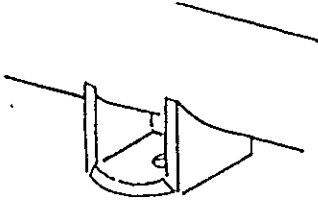

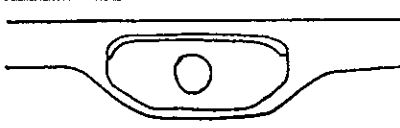
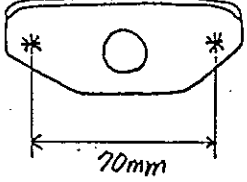
Test Data :

FUEL SPILLAGE BARRIER IMPACT SITE	
DURING IMPACT: 0.0 gm	DURING FIRST FIVE MINUTES AFTER IMPACT: 0.0 gm
DURING THE ONE COLLECTION PERIODS ( 5 TO 30 MINUTES AFTER IMPACT ) : 0.0 gm	

FUEL SPILLAGE DURING STATIC ROLLOVER				
ROLLOVER DIRECTION : POSITIVE <input type="checkbox"/> NEGATIVE <input type="checkbox"/> BOTH <input checked="" type="checkbox"/>				
ROLLOVER RATE—APPROXIMATELY 2 MINUTES PER 90° INCREMENT				
ROLLOVER DATE : 06.25.96				
		FUEL SPILLAGE BY MASS		
ROLLOVER INCREMENTS		FUEL 5 MINUTES OF ROLLOVER INCREMENT	FOR NEXT MINUTE	FOR NEXT MINUTE
Positive Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm
Negative Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm

TEST NO. 86252

1. TEST CONDITION

VEHICLE		IWATA '97MY 2door 4WD																	
FUEL TANK		IWATA																	
FUEL TANK BRACKET																			
G U S S E T	CONFIGURATION																		
	GUSSET ORIENTATION																		
	SPOT WELDING PITCH																		
WEATHER & TEMPERATURE		CLOUD 27 °C																	
TEST VEHICLE WEIGHT WITHOUT DUMMY (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>330.0</td> <td>280.0</td> <td>610.0</td> </tr> <tr> <td>RIGHT</td> <td>341.0</td> <td>278.0</td> <td>619.0</td> </tr> <tr> <td>TOTAL</td> <td>671.0</td> <td>558.0</td> <td>1229.0</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	330.0	280.0	610.0	RIGHT	341.0	278.0	619.0	TOTAL	671.0	558.0	1229.0
	FRONT	REAR	TOTAL																
LEFT	330.0	280.0	610.0																
RIGHT	341.0	278.0	619.0																
TOTAL	671.0	558.0	1229.0																
TEST VEHICLE WEIGHT WITH TWO DUMMIES (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>369.0</td> <td>314.0</td> <td>683.0</td> </tr> <tr> <td>RIGHT</td> <td>375.0</td> <td>315.0</td> <td>690.0</td> </tr> <tr> <td>TOTAL</td> <td>744.0</td> <td>629.0</td> <td>1373.0</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	369.0	314.0	683.0	RIGHT	375.0	315.0	690.0	TOTAL	744.0	629.0	1373.0
	FRONT	REAR	TOTAL																
LEFT	369.0	314.0	683.0																
RIGHT	375.0	315.0	690.0																
TOTAL	744.0	629.0	1373.0																

## 1. TEST CONDITION (CONTINUED)

86252

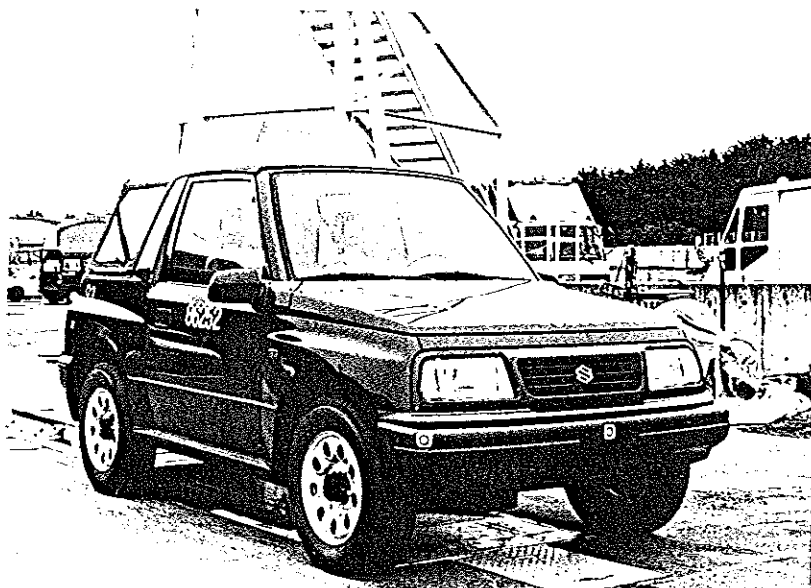
TRIM HEIGHT (MM)		FRONT	REAR
	LEFT	753	764
	RIGHT	757	773
TRANSMISSION POSITION	Neutral		
TRANSFER POSITION	2H		

## 2. POST-TEST CONDITION

TEST SPEED	53.8 km/h	
DEVIATION OF MOVING BARRIER	10mm Left	
VEHICLE DEFORMATION (MM)	LEFT	360
	CENTER	408
	RIGHT	375
PROPELLER SHAFT	Separated	
FUEL TANK DEFORMATION SPECIFY if there is any portion where may cause fuel leakage	None	

S 211044

試験前 (Pre-Test)



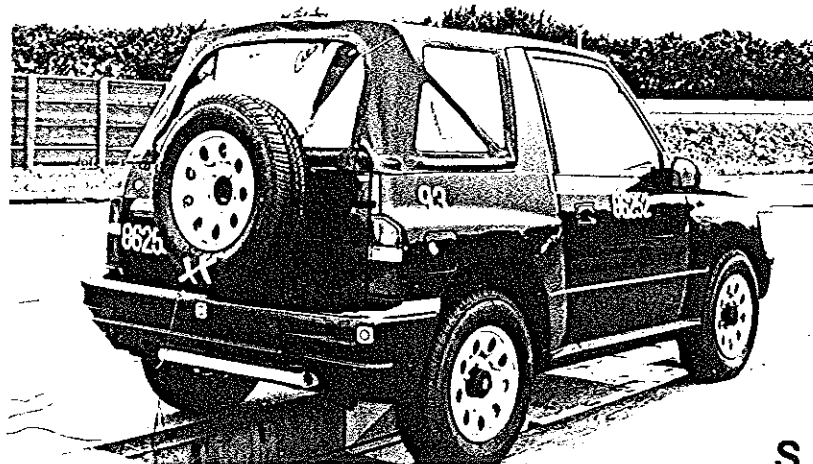
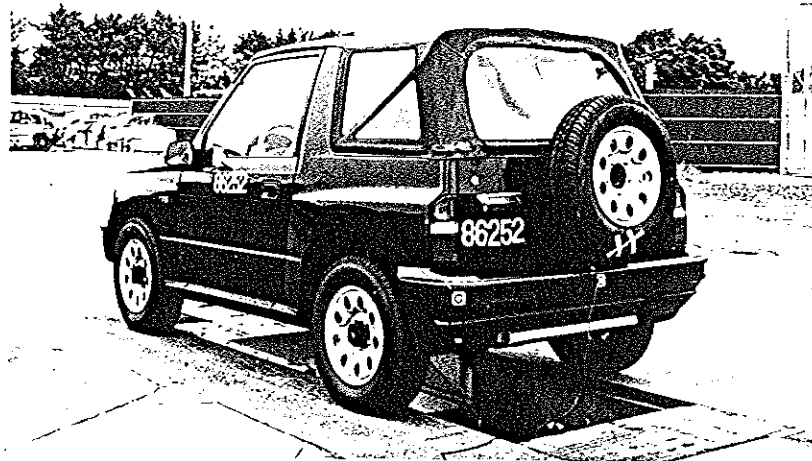
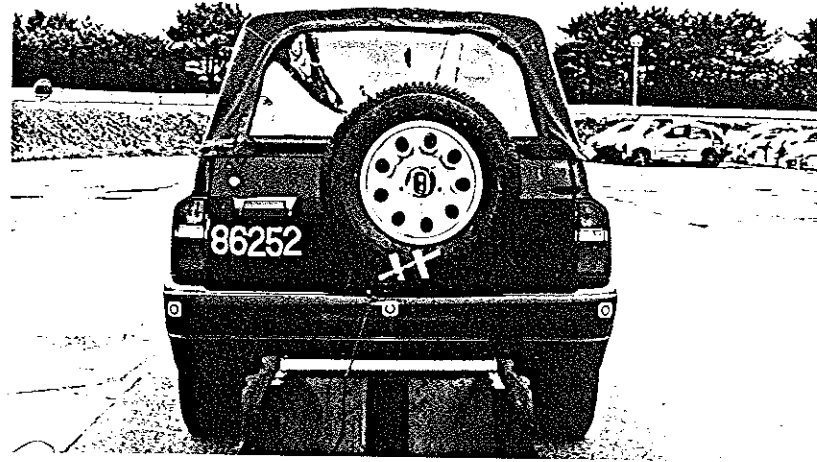
試験前 (Pre-Test)



S 211046

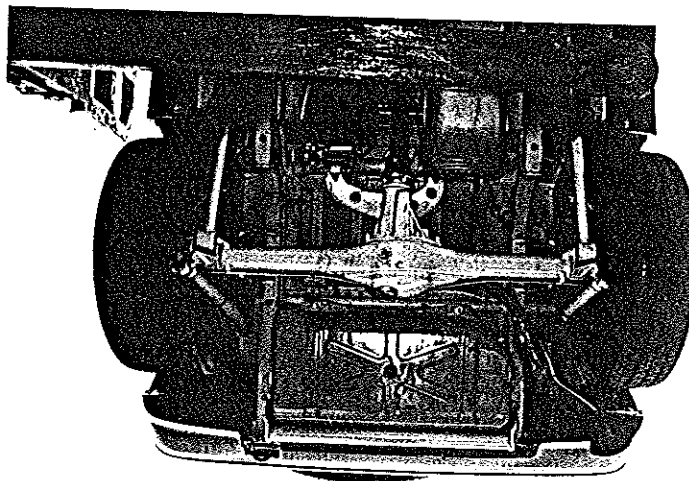
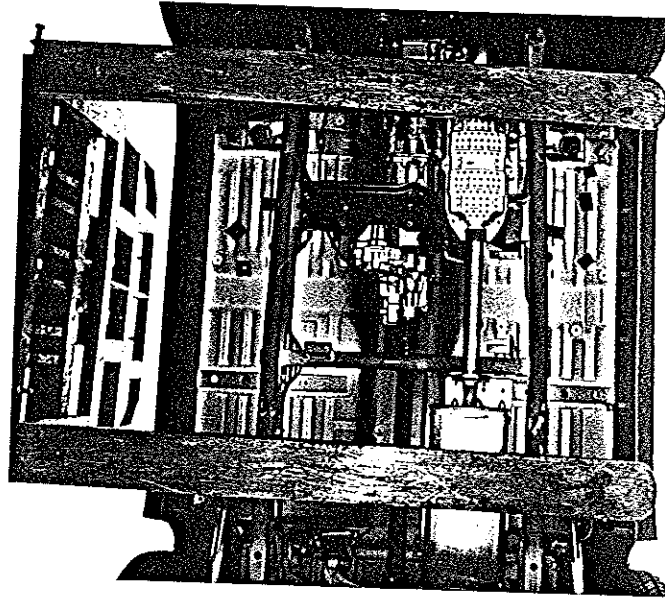
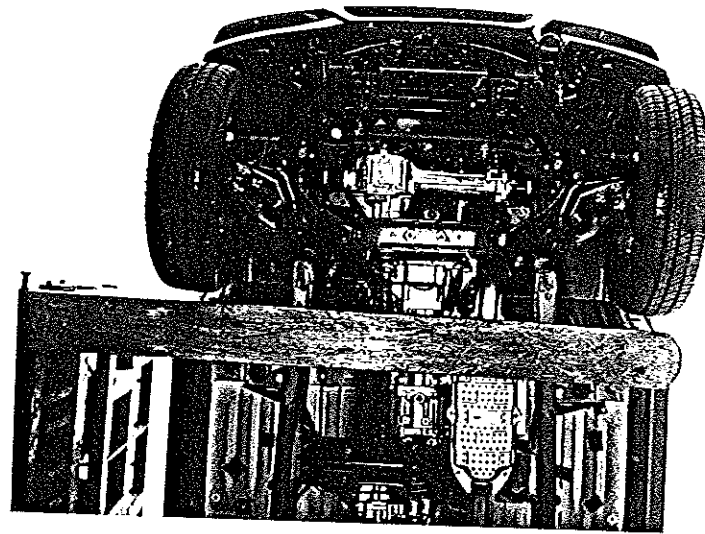


試験前 (Pre-Test)



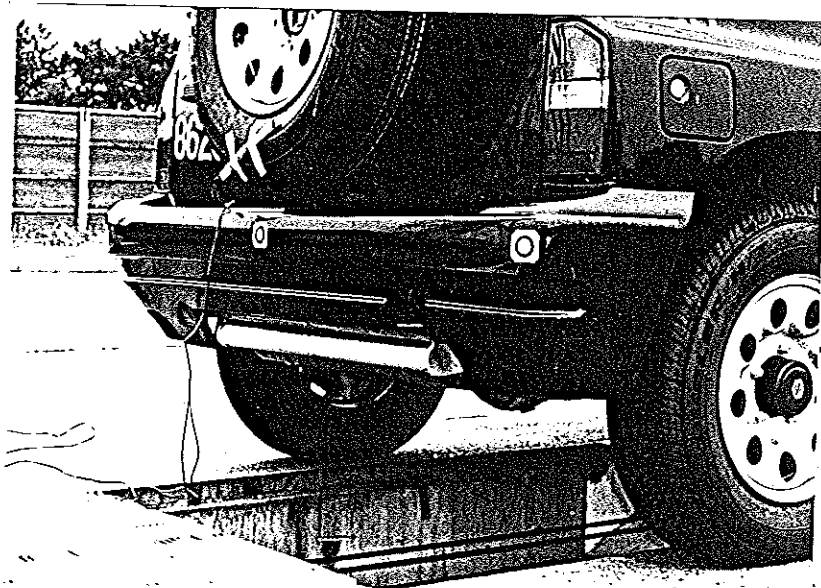
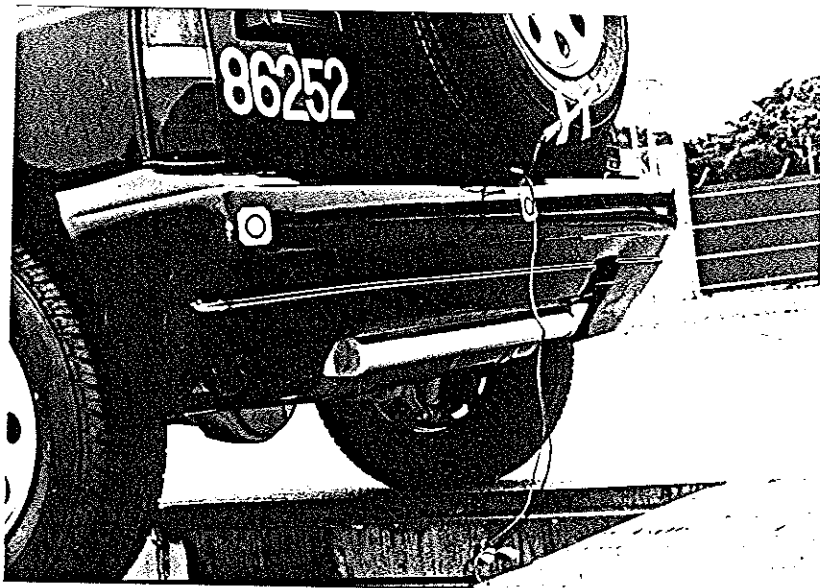
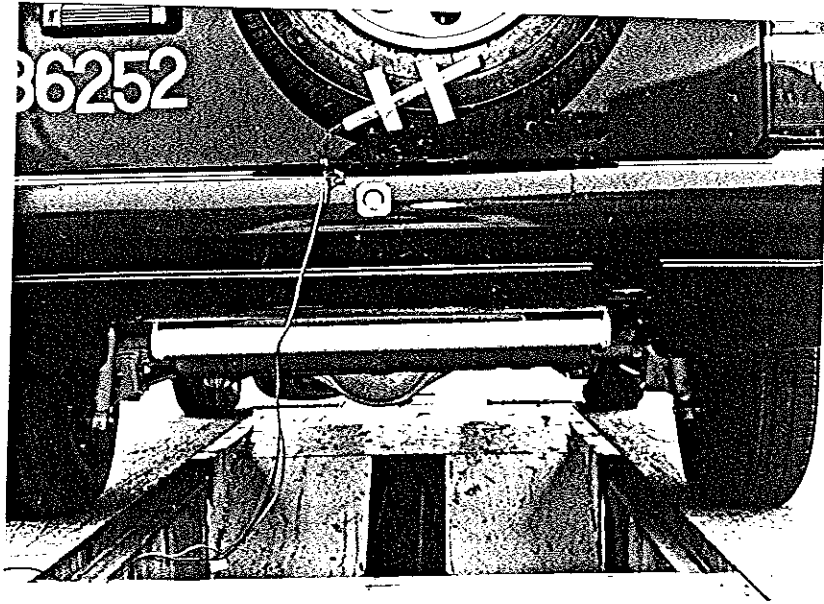
S-211047

試験前 (Pre-Test)



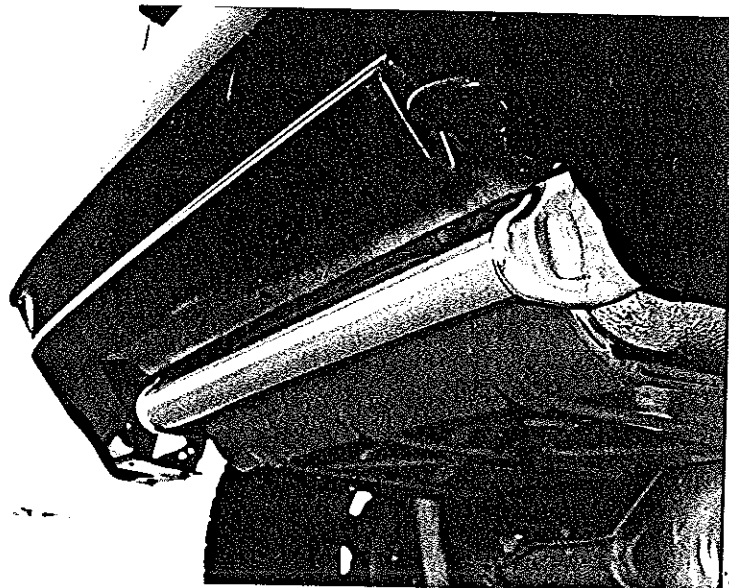
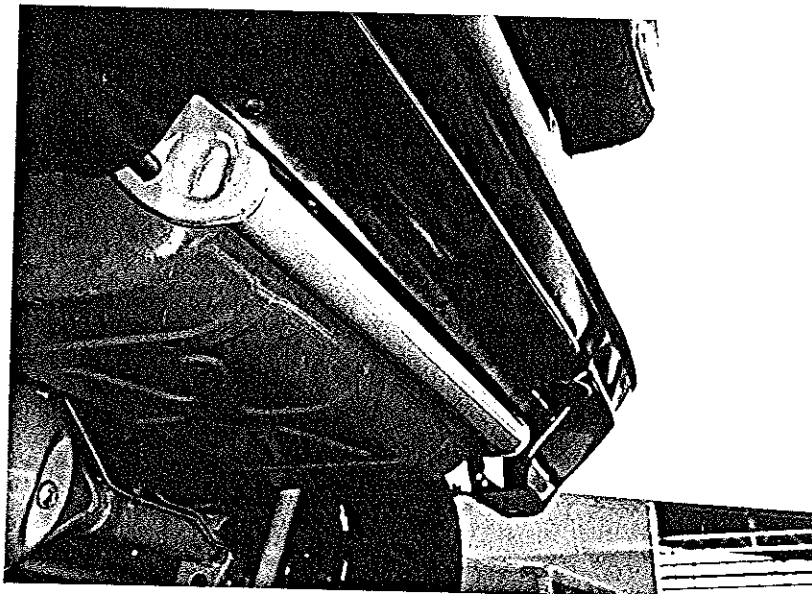
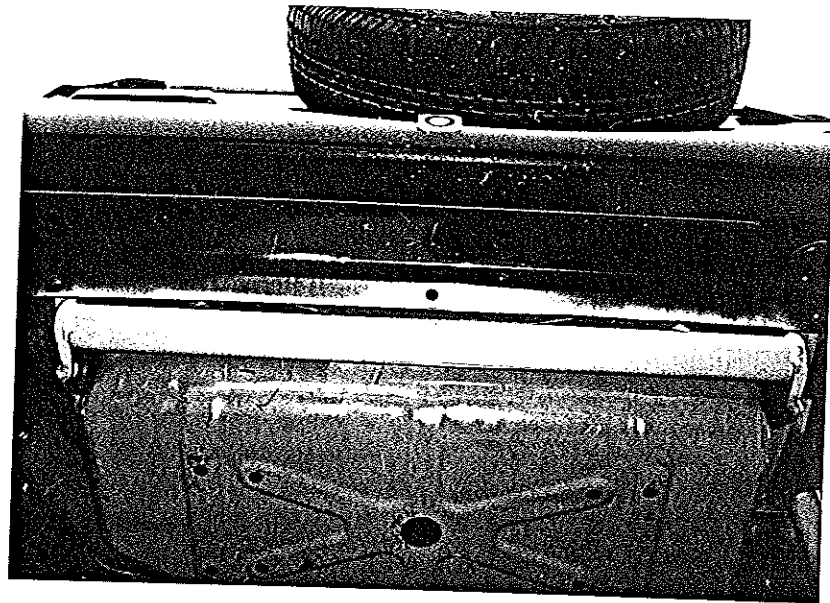
S 211048

試験前 (Pre-Test)

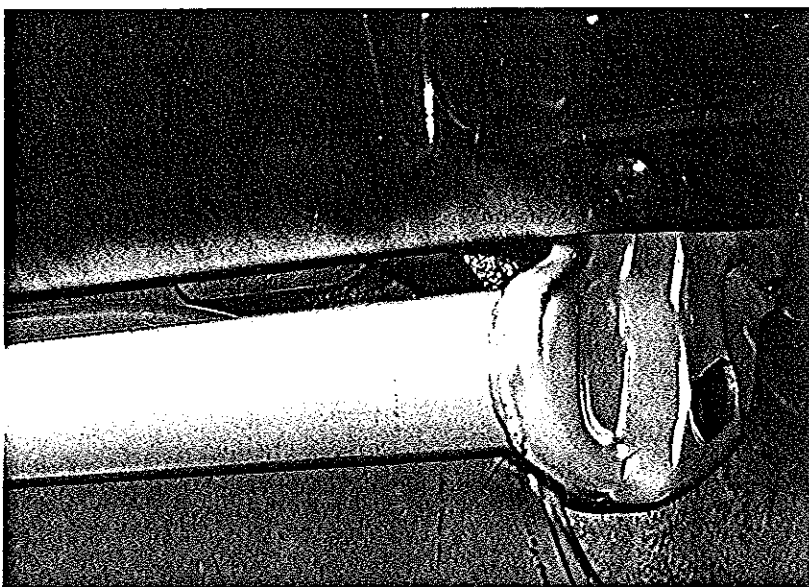


S 211049

試験前 (Pre-Test)

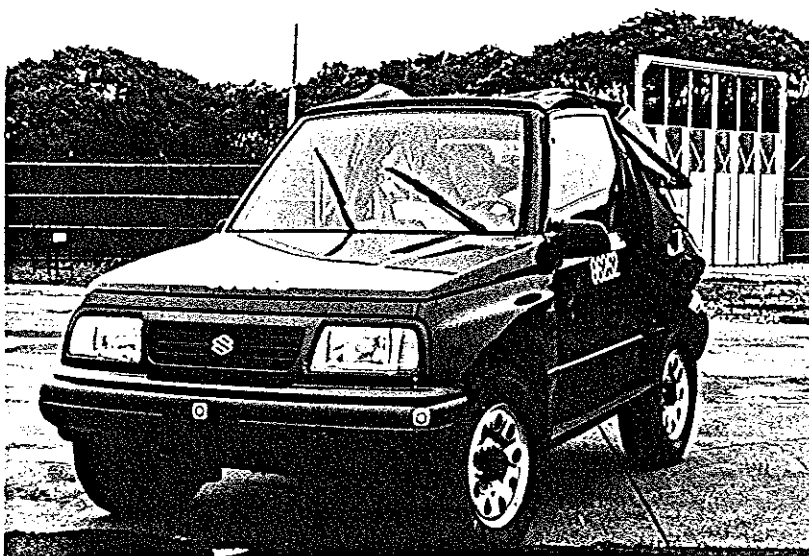
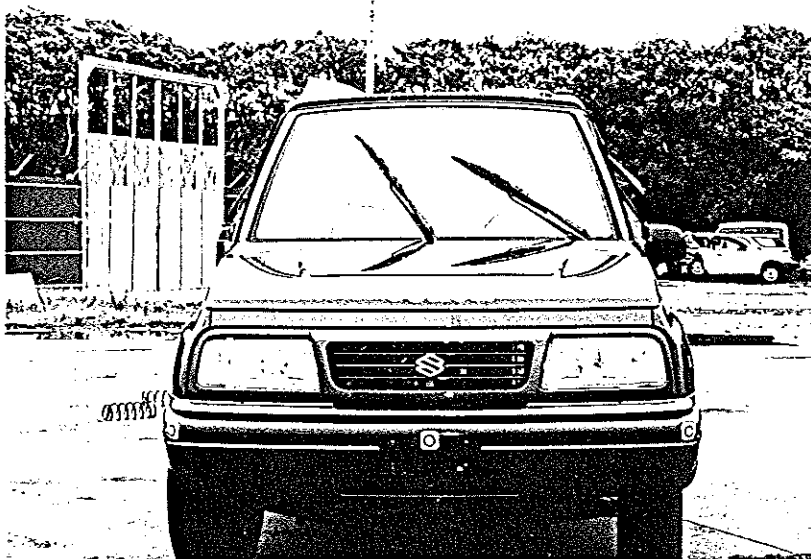


試験前 (Pre-Test)

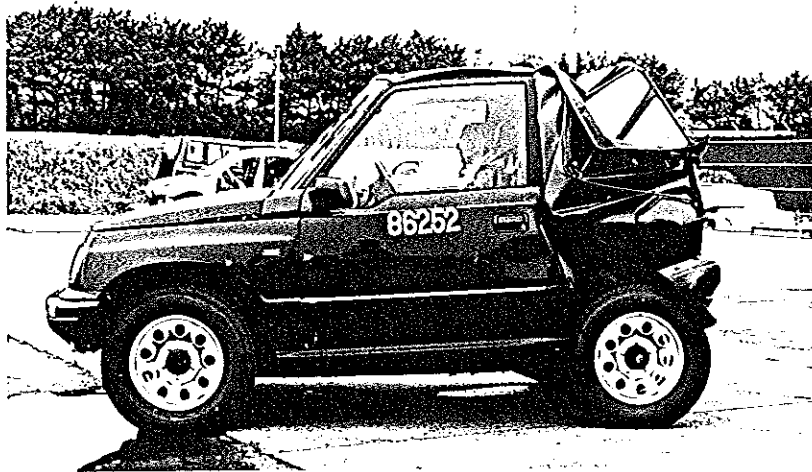


S. 211051

試験後 (Post-Test)

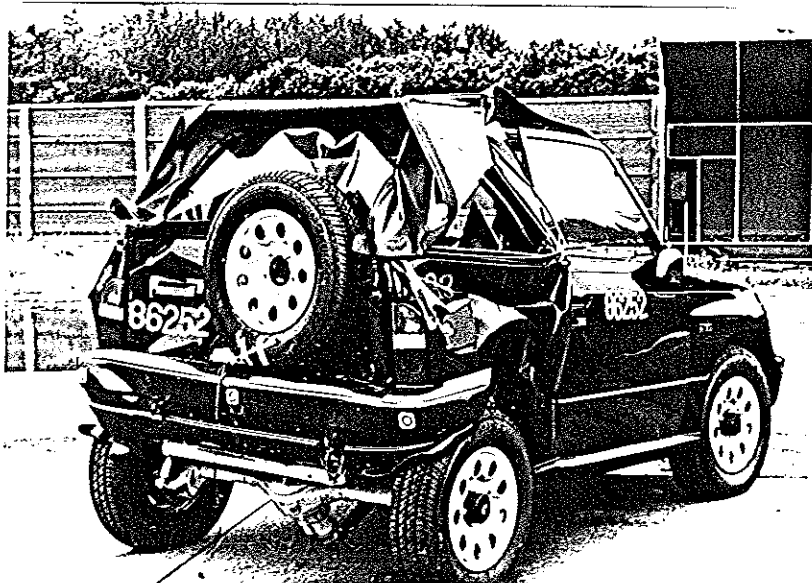
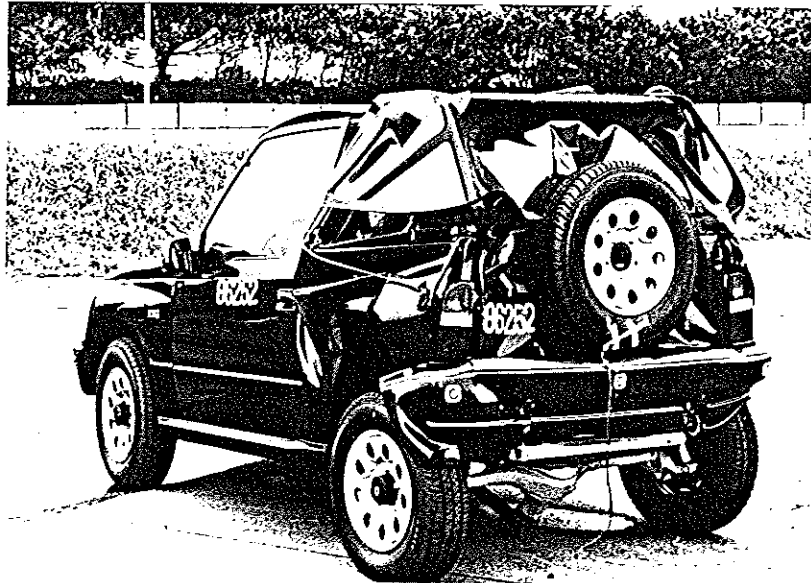
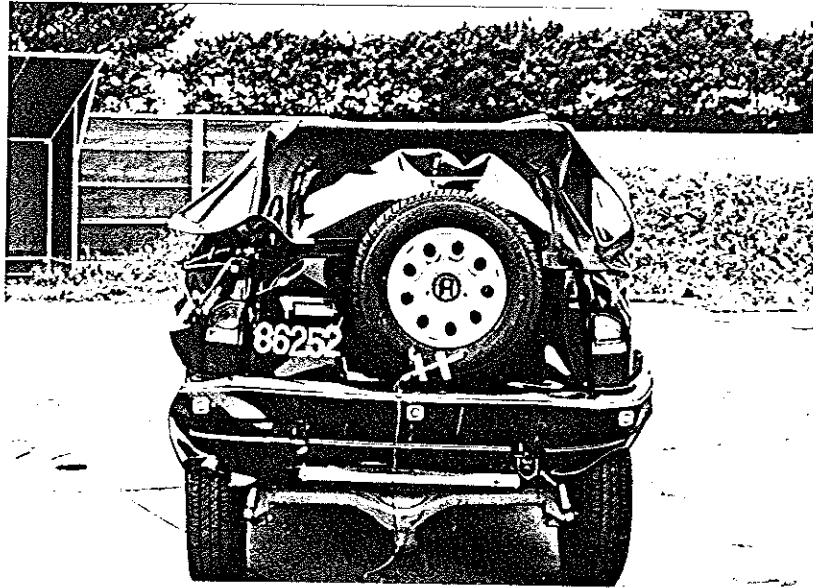


試験後 (Post-Test)



S 211053

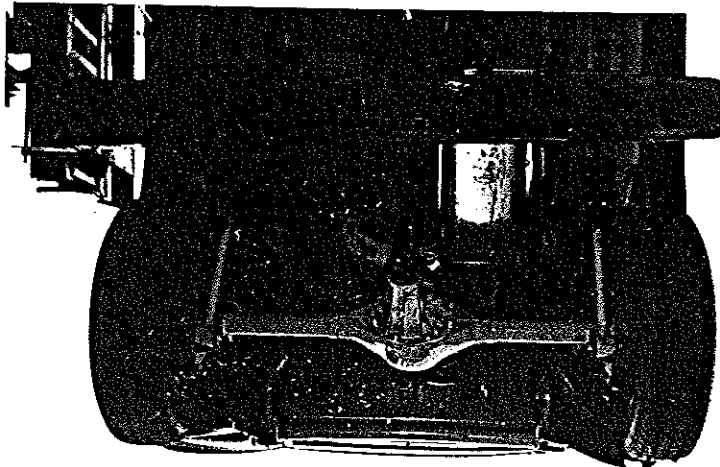
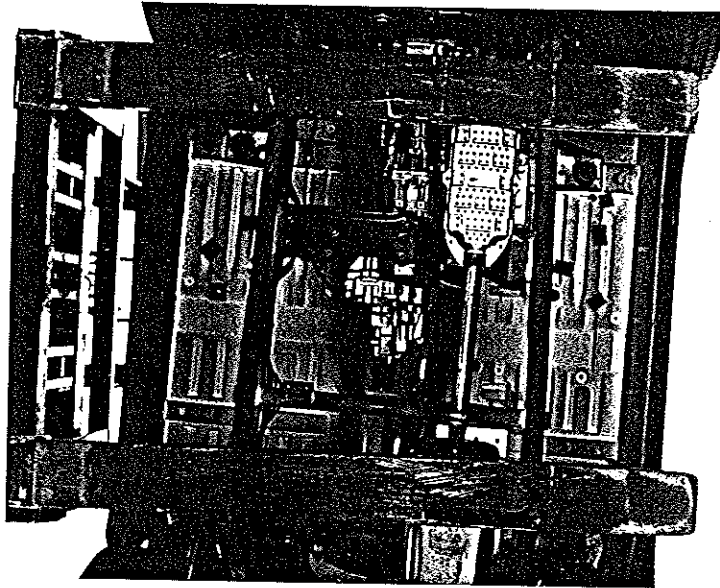
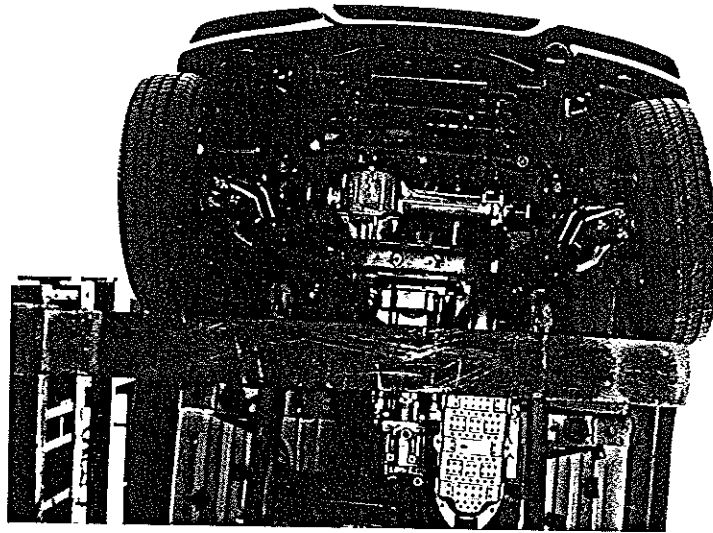
試験後 (Post-Test)



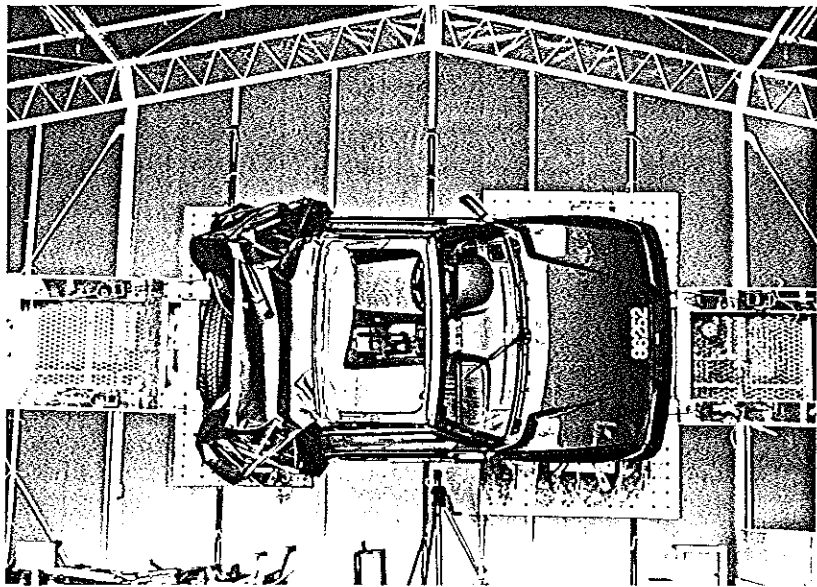
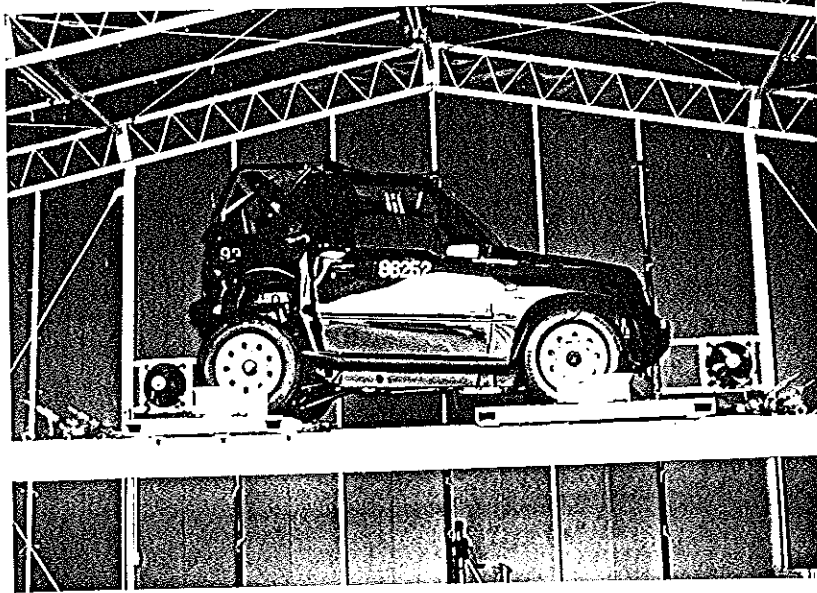
S 211054



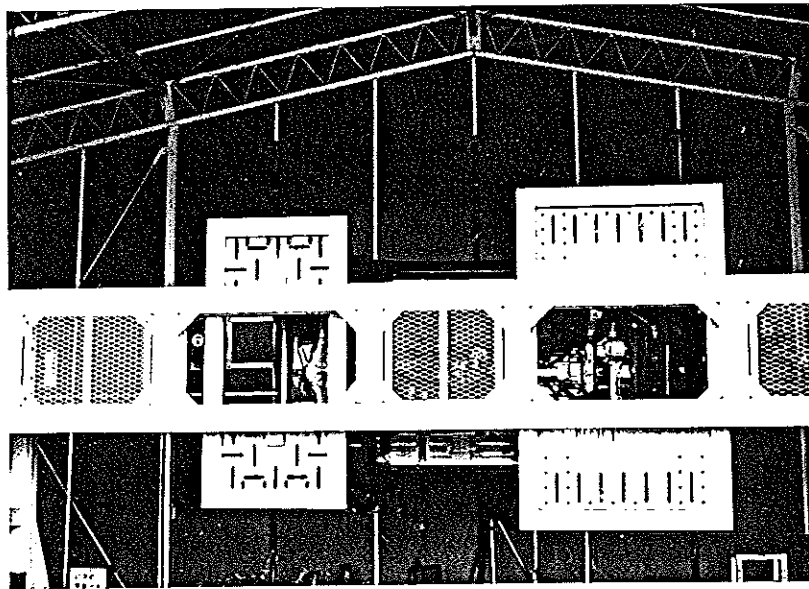
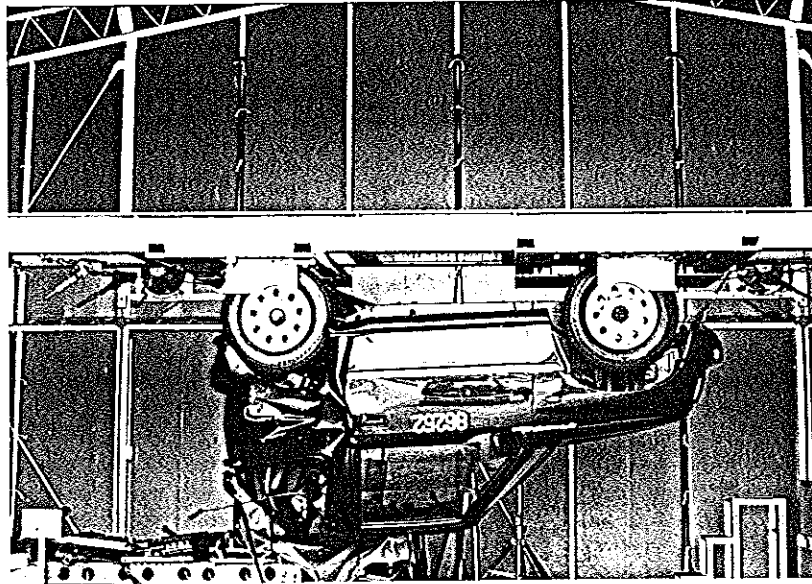
試験後 (Post-Test)



# 試験後 (Post-Test)

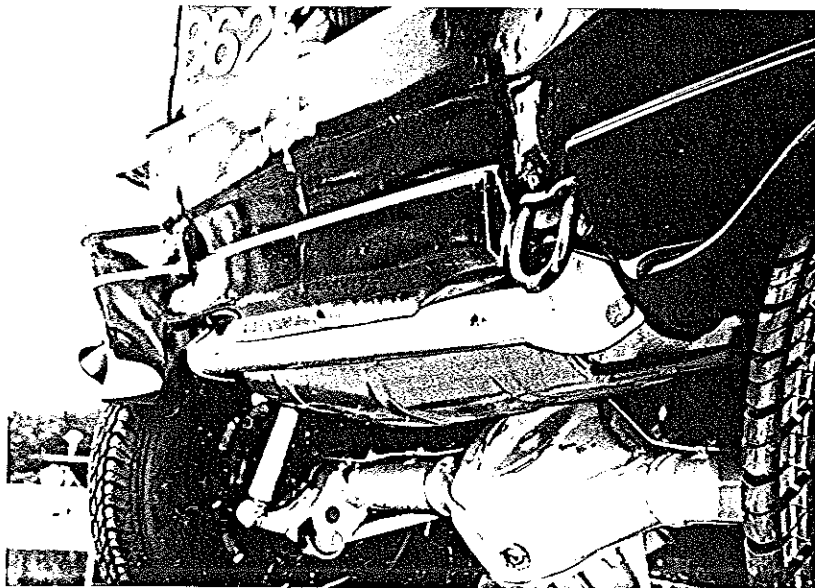
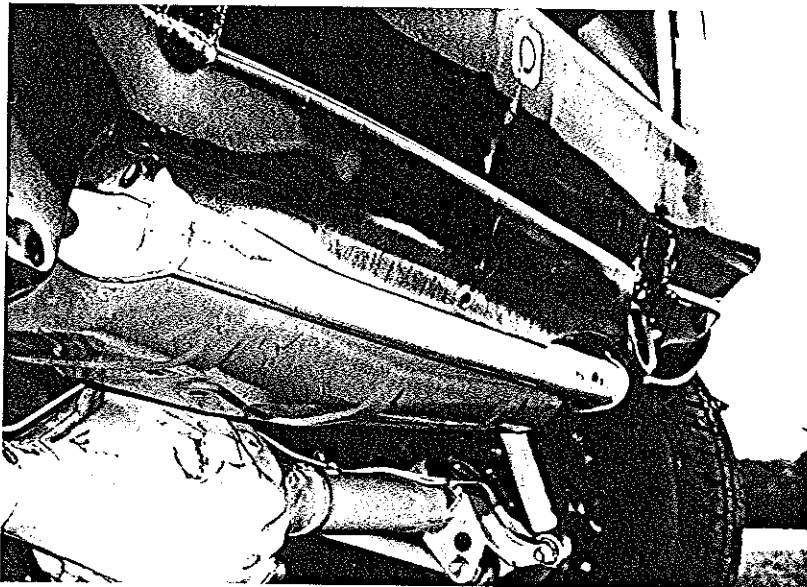
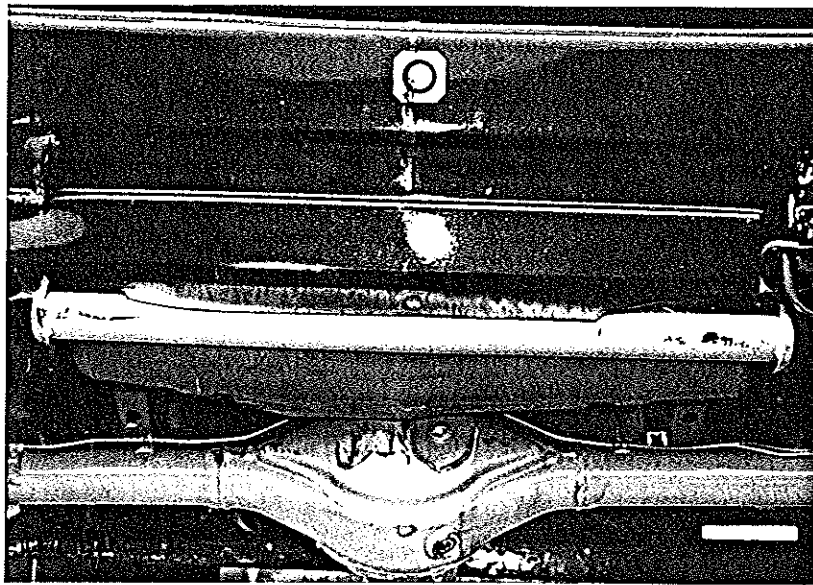


試験後 (Post-Test)



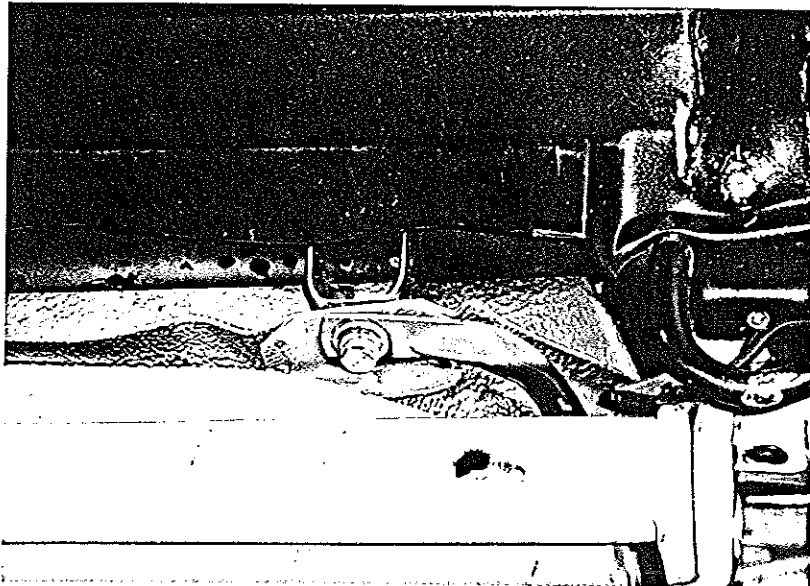
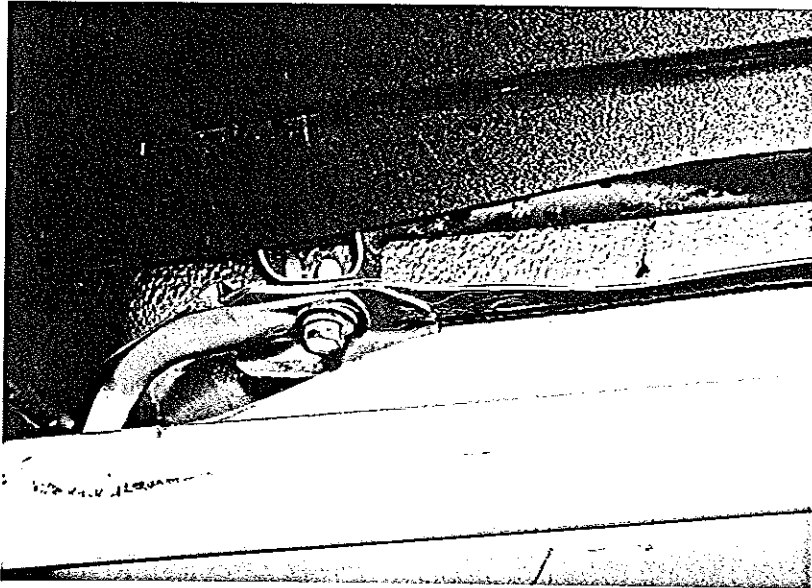
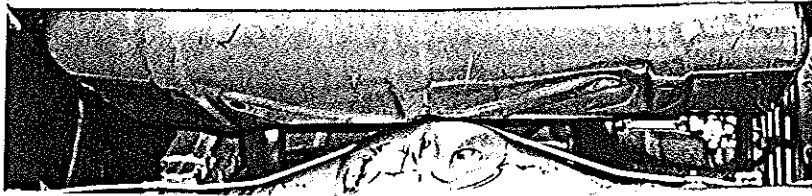
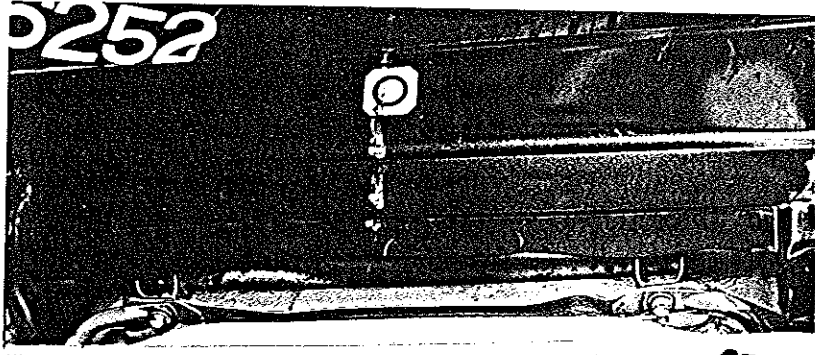
S 211057

試験後 (Post-Test)



S 211058

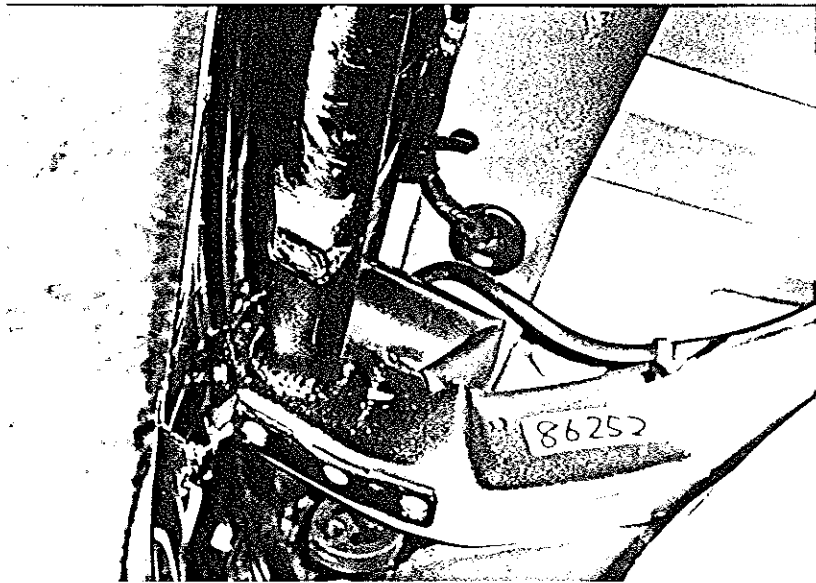
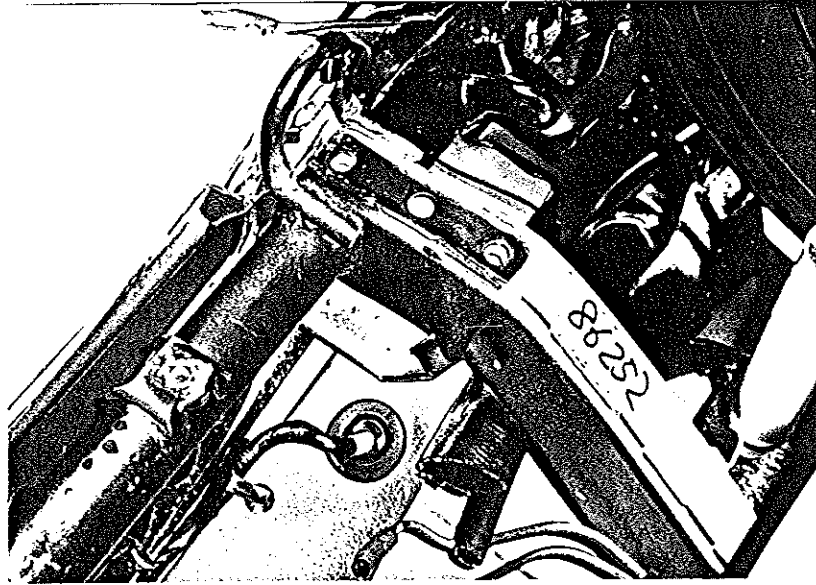
試験後 (Post-Test)



試験後 (Post-Test)

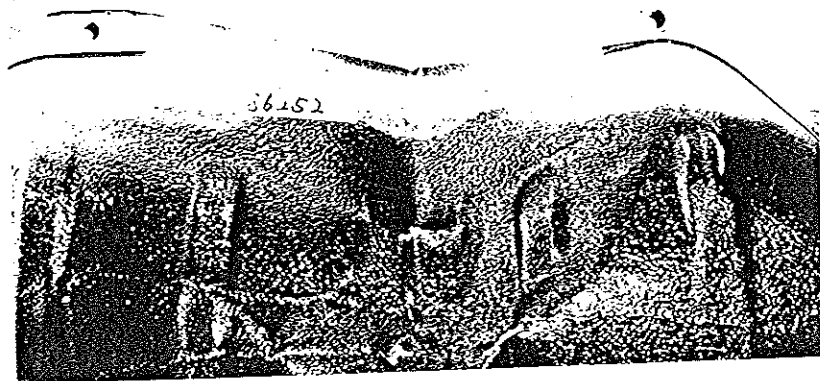
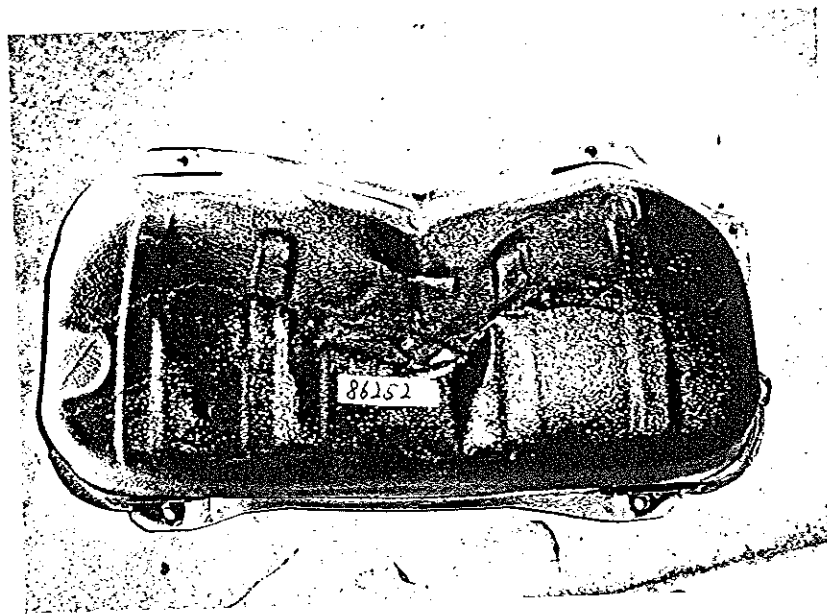


試験後 (Post-Test)



S 211061

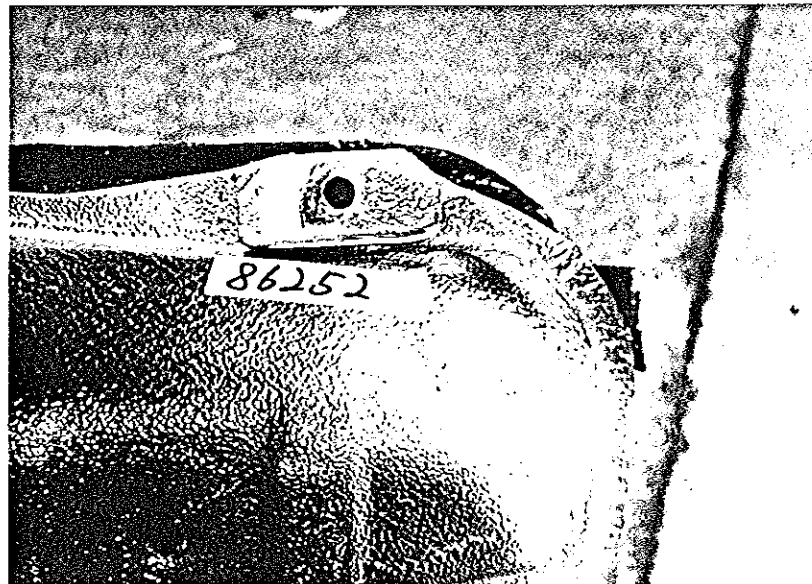
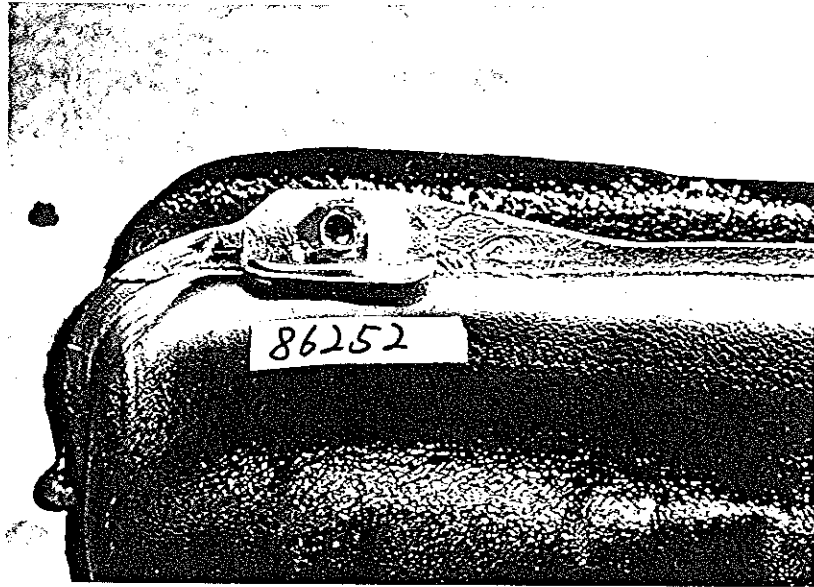
試験後 (Post-Test)



S 211062

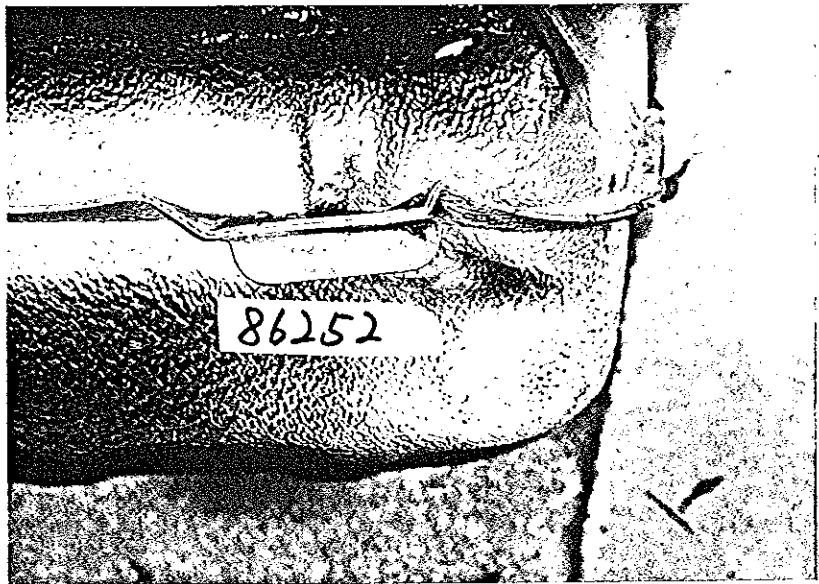
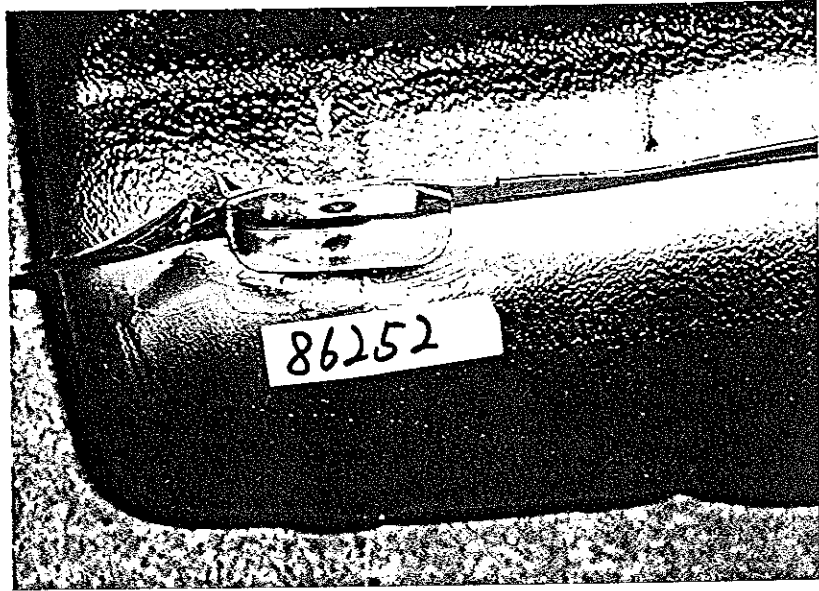


試験後 (Post-Test)



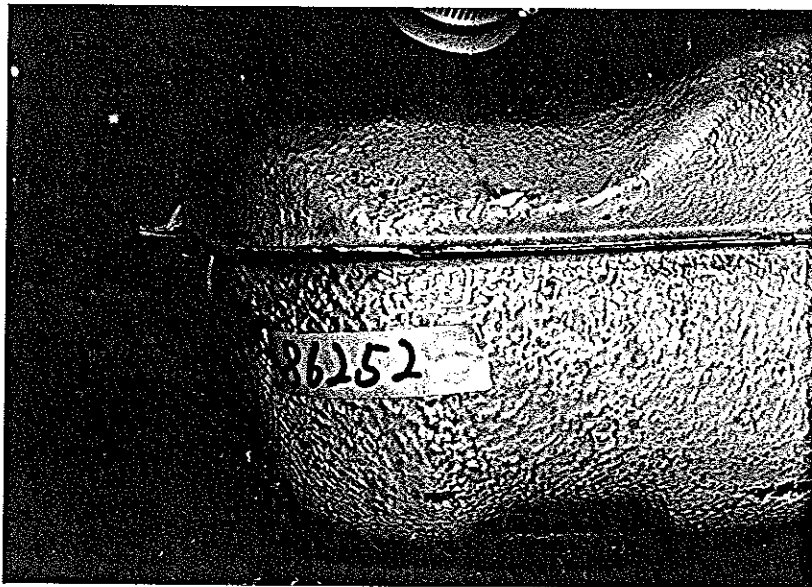
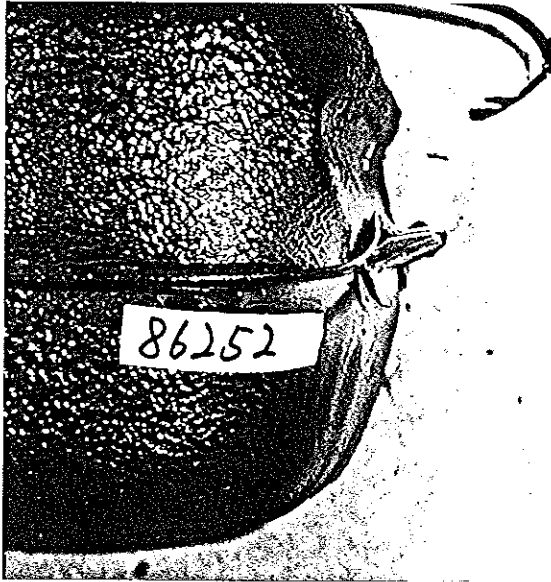
S 211063

試験後 (Post-Test)



S 211064

試験後 (Post-Test)



S 211065

TEST RESULT

SUZUKI MOTOR CORPORATION

Suzuki Test Standard No. G-8814

CAR TO CAR FULL

TITLE : FUEL SYSTEM INTEGRITY ( DEVELOPMENT TEST : CAR TO CAR 50 MPH )

Test No. : 86-261  
Test Date : 06/26/96

Vehicle : Model SIDEKICK 2 door Body Style CANVAS Year 1997  
Number JSAETA02C01150002 Make Production

Engine : Configuration G16A Fuel Gasoline Fuel Induction Electric Pump

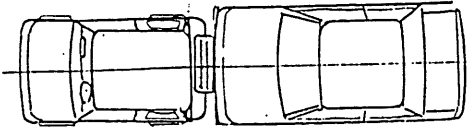
Fuel Tank : Usable Cap. 42.0ℓ Unusable Cap. 1.0ℓ Transmission : A/T ( 4 Speed )

A/C : Yes  No  P/S : Yes  No  P/B : Yes  No

Impact Pattern : REAR -FRONT FULL LAP Striking Car Type : TOYOTA CROWN

VEHICLE	
VELOCITY AT IMPACT	0.0 ( 0.0 ) km/h ( mph )
TEST MASS (INCLUDED DUMMIES)	FRONT 701.0 kg REAR 622.0 kg TOTAL 1323.0 kg
CARGO BALLAST	137 kg <input type="checkbox"/> RATED CARGO <input checked="" type="checkbox"/> LUGGAGE LOAD <input type="checkbox"/> NA <input type="checkbox"/>
FUEL TANK	CONTENTS : STODDARD SOLVENT VOLUME : 94 % OF USABLE CAPA.= 39.5 ℓ
ENGINE RUNNING	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

DUMMIES	
DRIVER	MAKE : ALDERSON NO : SNG68
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL
RIGHT FRONT	MAKE : ALDERSON NO : SNG64
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL

STRIKING CAR	1476.0 kg	NA <input type="checkbox"/>
VELOCITY AT IMPACT	79.3 ( 49.3 ) km/h ( mph )	
PERPENDICULAR IMPACT		NA <input checked="" type="checkbox"/>
LOCATION AT IMPACT	DRIVER SRP <input type="checkbox"/> A-PILLER <input type="checkbox"/>	FUEL PIPE <input type="checkbox"/> OTHER <input type="checkbox"/>
ANGLE IMPACT		NA <input checked="" type="checkbox"/>
ACUTE ANGLE	Degrees	
TEST CONFIGURATION :		
		

**S 211066**

TEST RESULT

SUZUKI MOTOR CORPORATION

Test No. : 86-261

Test Results :

WAS FUEL SPILLAGE :	
LESS THAN 28.35 gm DURING IMPACT ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING FIRST FIVE MINUTES AFTER IMPACT ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING ONE MINUTE COLLECTION PERIODS AFTER IMPACT ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING STATIC ROLLOVER FIVE MINUTES COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING STATIC ROLLOVER ONE MINUTE COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>

Test Data :

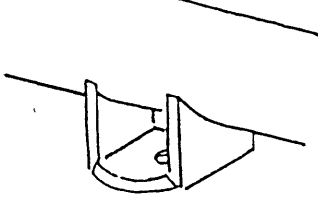
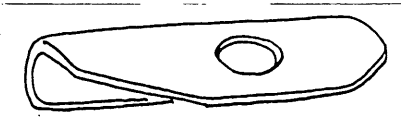
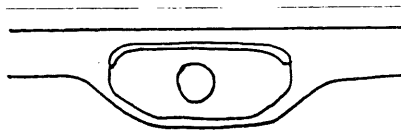
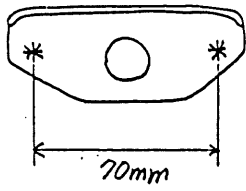
FUEL SPILLAGE BARRIER IMPACT SITE	
DURING IMPACT: 0.0 gm	DURING FIRST FIVE MINUTES AFTER IMPACT: 0.0 gm
DURING THE ONE COLLECTION PERIODS	( 5 TO 30 MINUTES AFTER IMPACT ) : 0.0 gm

FUEL SPILLAGE DURING STATIC ROLLOVER				
ROLLOVER DIRECTION : POSITIVE <input type="checkbox"/> NEGATIVE <input type="checkbox"/> BOTH <input checked="" type="checkbox"/>				
ROLLOVER RATE-APPROXIMATELY 2 MINUTES PER 90° INCREMENT				
ROLLOVER DATE : 06.26.96				
ROLLOVER INCREMENTS		FUEL SPILLAGE BY MASS		
		FUEL 5 MINUTES OF ROLLOVER INCREMENT	FOR NEXT MINUTE	FOR NEXT MINUTE
Positive Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm
Negative Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm

**S 211067**

TEST NO. 8626/

1. TEST CONDITION

VEHICLE		IWATA '97MY 2door 4WD																	
FUEL TANK		IWATA																	
FUEL TANK BRACKET																			
G U S S E T	CONFIGURATION																		
	GUSSET ORIENTATION																		
	SPOT WELDING PITCH																		
WEATHER & TEMPERATURE		FINE 28 °C																	
TEST VEHICLE WEIGHT WITHOUT DUMMY (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>313.0</td> <td>271.0</td> <td>584.0</td> </tr> <tr> <td>RIGHT</td> <td>321.0</td> <td>274.0</td> <td>595.0</td> </tr> <tr> <td>TOTAL</td> <td>634.0</td> <td>545.0</td> <td>1179.0</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	313.0	271.0	584.0	RIGHT	321.0	274.0	595.0	TOTAL	634.0	545.0	1179.0
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TEST VEHICLE WEIGHT WITH TWO DUMMIES (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>349.0</td> <td>311.0</td> <td>660.0</td> </tr> <tr> <td>RIGHT</td> <td>352.0</td> <td>311.0</td> <td>663.0</td> </tr> <tr> <td>TOTAL</td> <td>701.0</td> <td>622.0</td> <td>1323</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	349.0	311.0	660.0	RIGHT	352.0	311.0	663.0	TOTAL	701.0	622.0	1323
	FRONT	REAR	TOTAL																
LEFT	349.0	311.0	660.0																
RIGHT	352.0	311.0	663.0																
TOTAL	701.0	622.0	1323																

1. TEST CONDITION (CONTINUED)

86261

TRIM HEIGHT (MM)		FRONT	REAR
	LEFT	761	774
	RIGHT	765	778
TRANSMISSION POSITION	Neutral		
TRANSFER POSITION	2H		

2. POST-TEST CONDITION

TEST SPEED	79.3 km/h	
DEVIATION OF MOVING BARRIER	20 mm Left	
VEHICLE DEFORMATION (MM)	LEFT	469
	CENTER	495
	RIGHT	438
PROPELLER SHAFT	Separated	
FUEL TANK DEFORMATION <u>SPECIFY</u> if there is any portion where may cause fuel leakage	None	

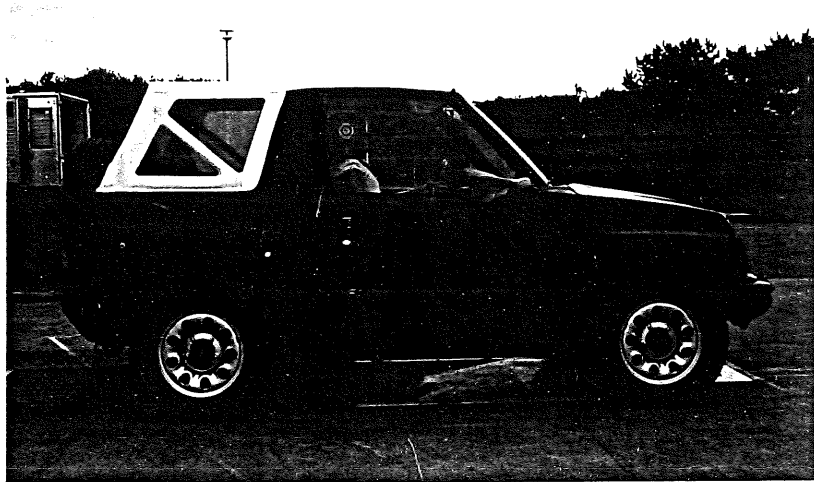
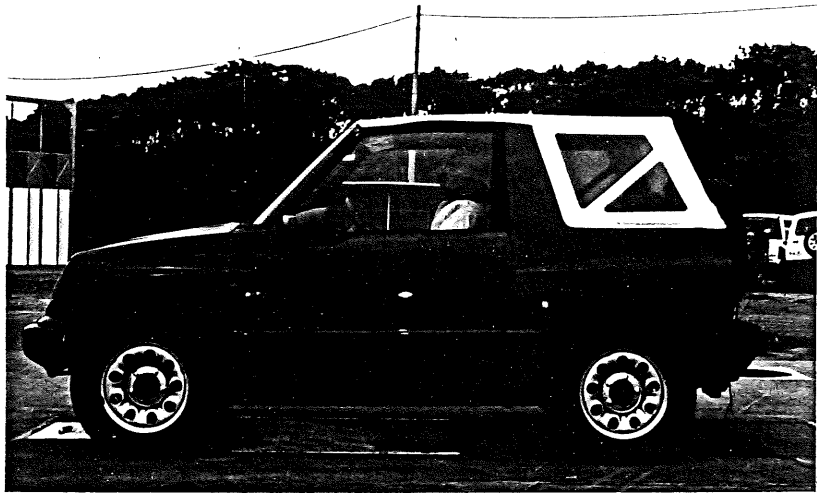
S 211069

試験前 (Pre-Test)

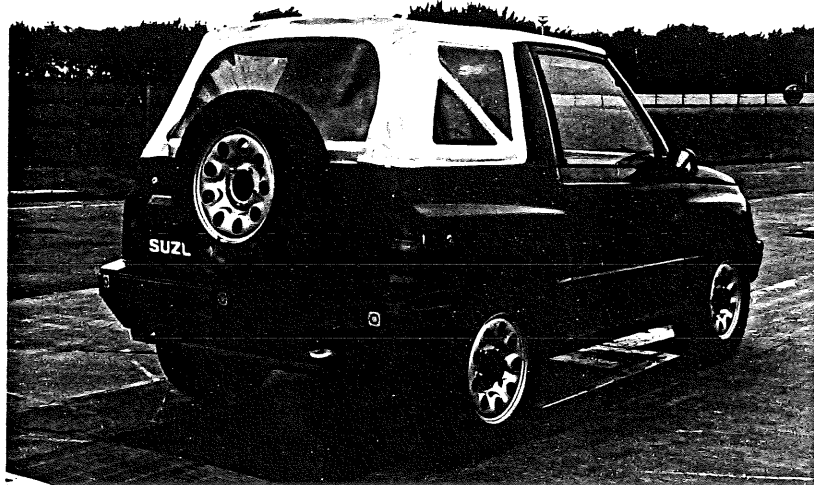




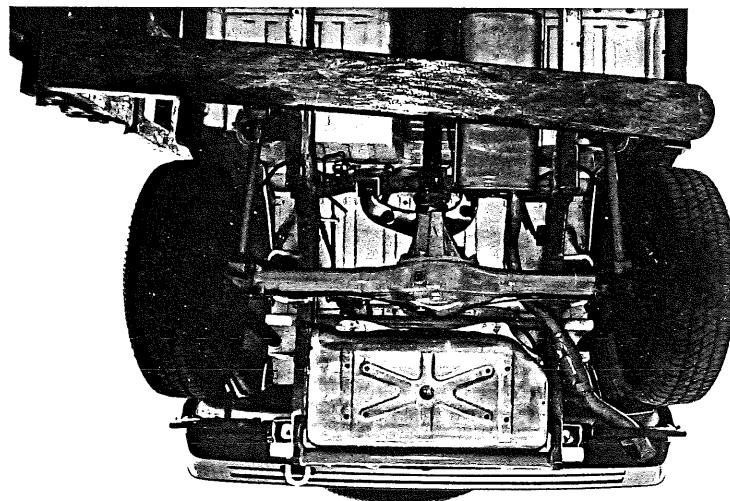
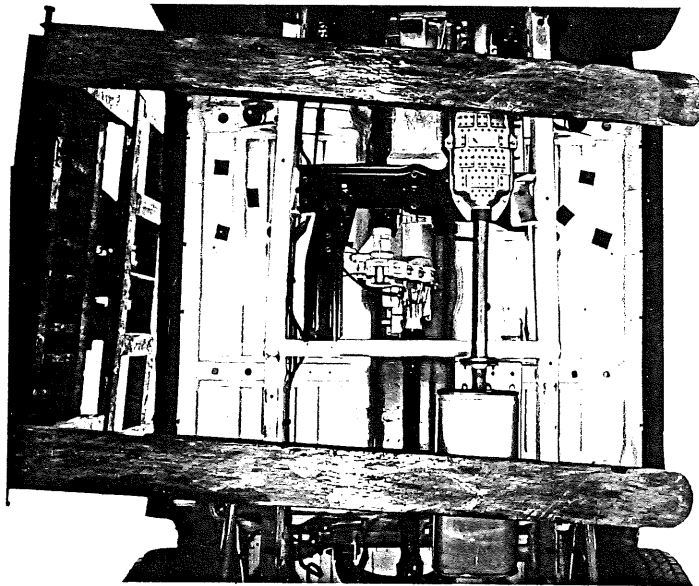
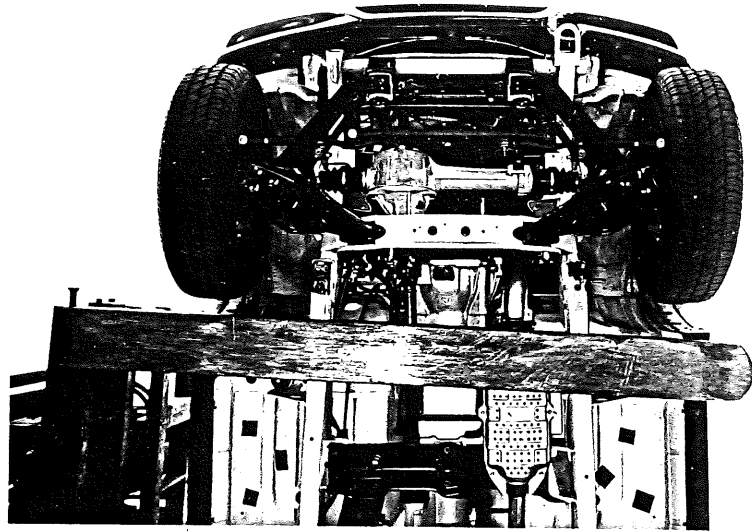
試験前 (Pre-Test)



試験前 (Pre-Test)

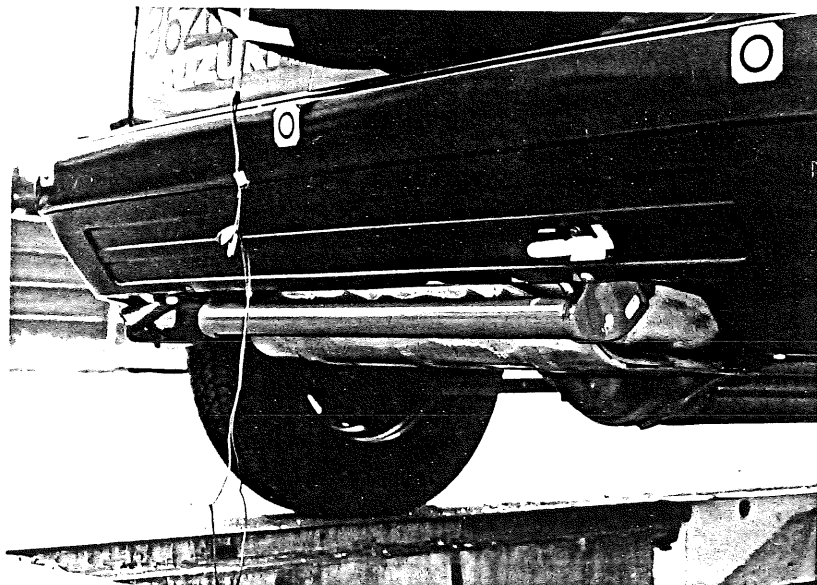
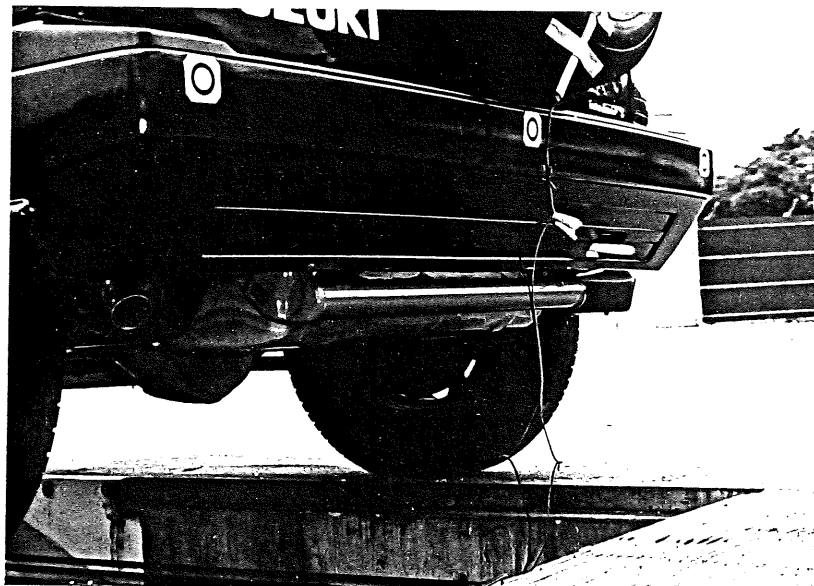
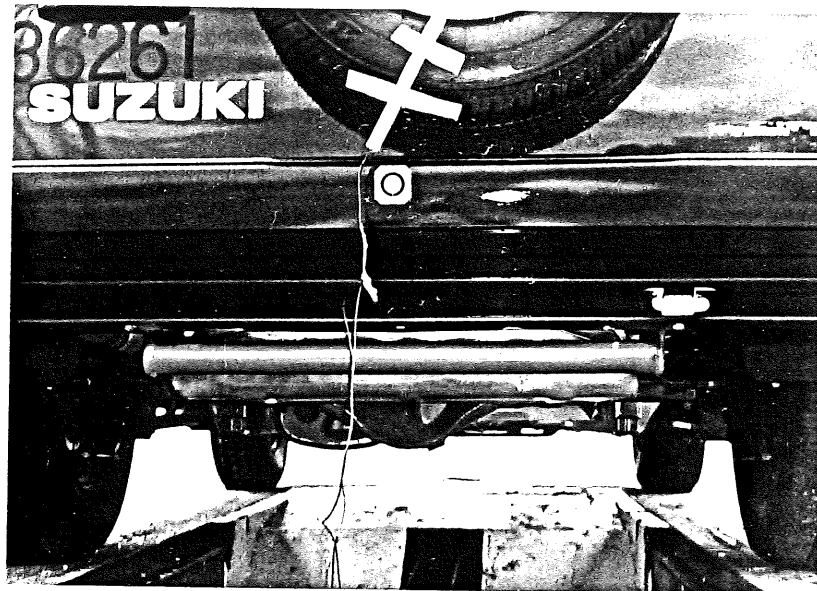


試験前 (Pre-Test)

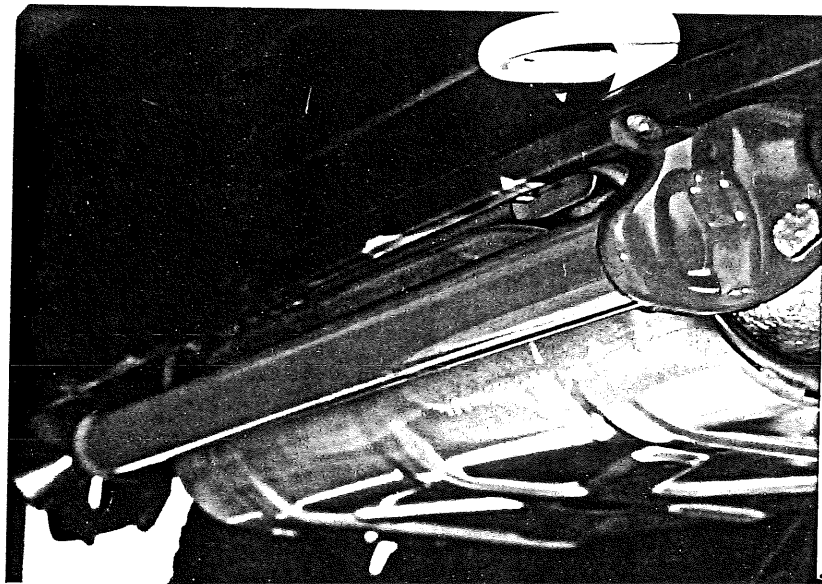
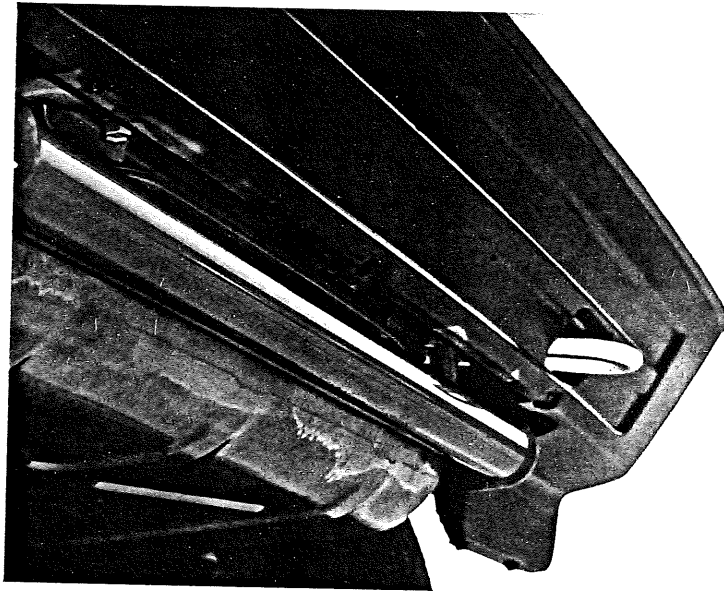
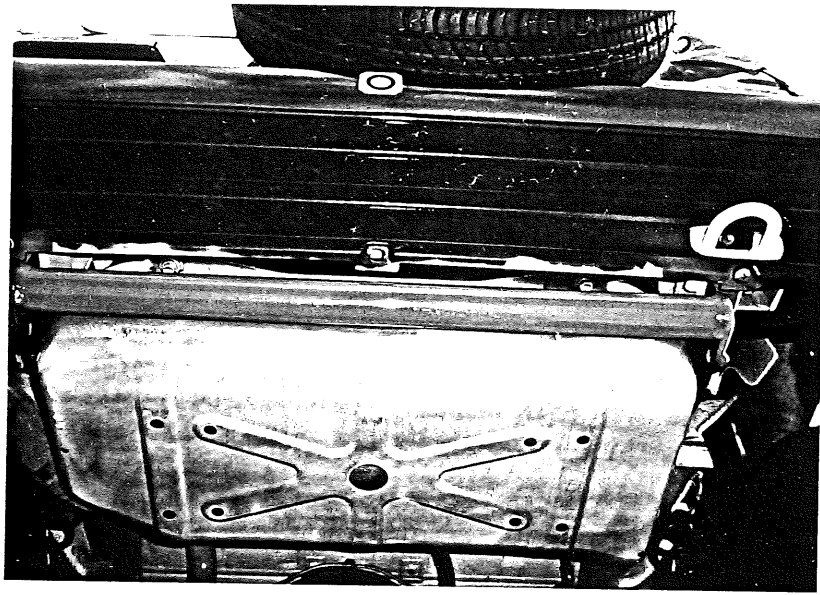


S 211073

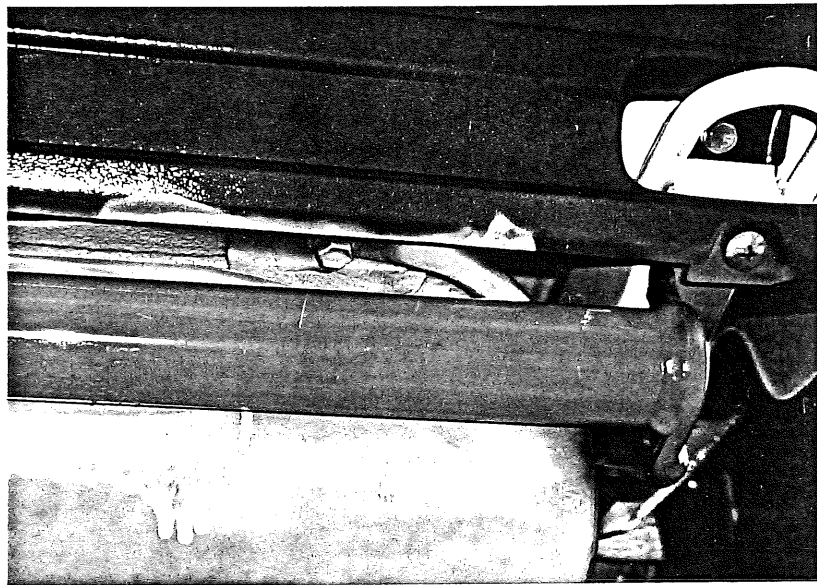
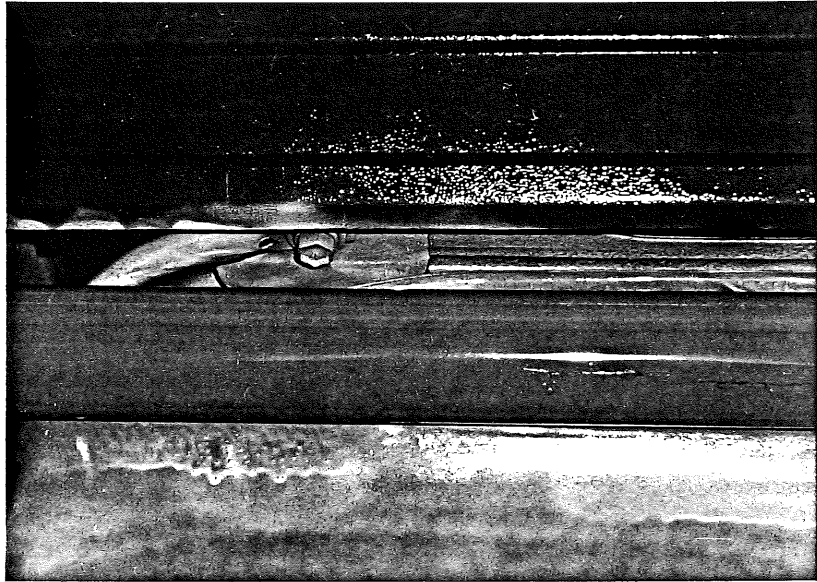
試験前 (Pre-Test)



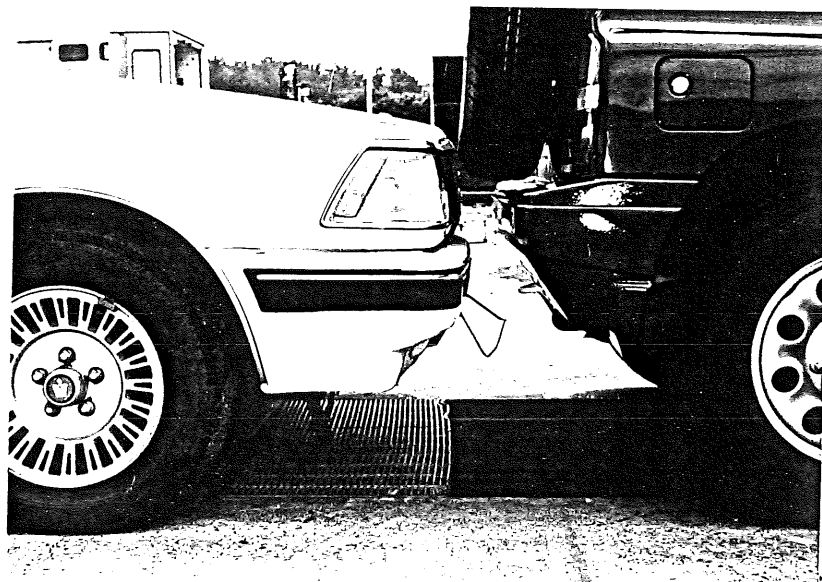
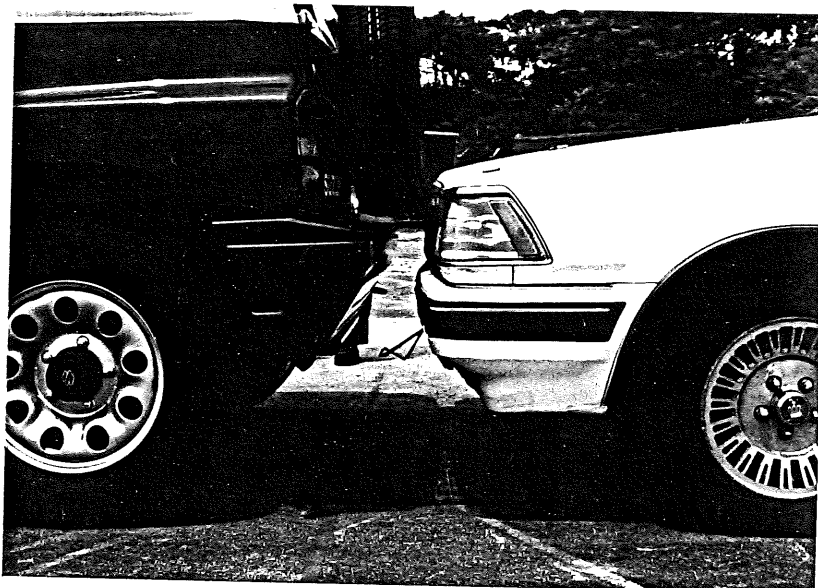
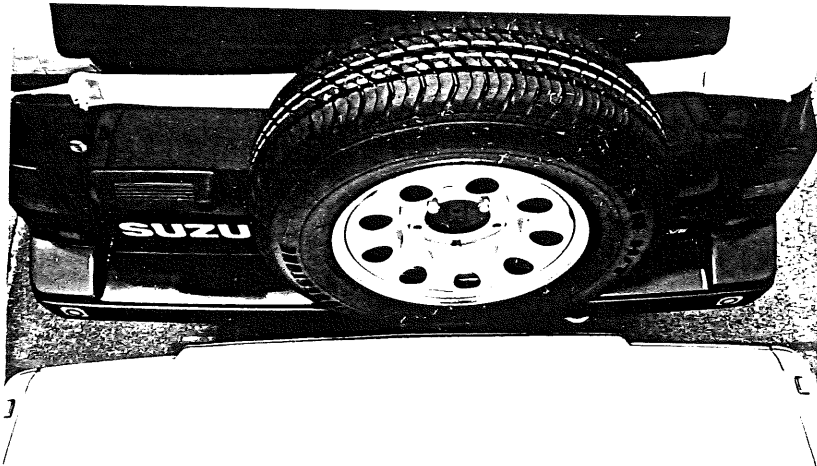
試験前 (Pre-Test)



試験前 (Pre-Test)



試験前 (Pre-Test)



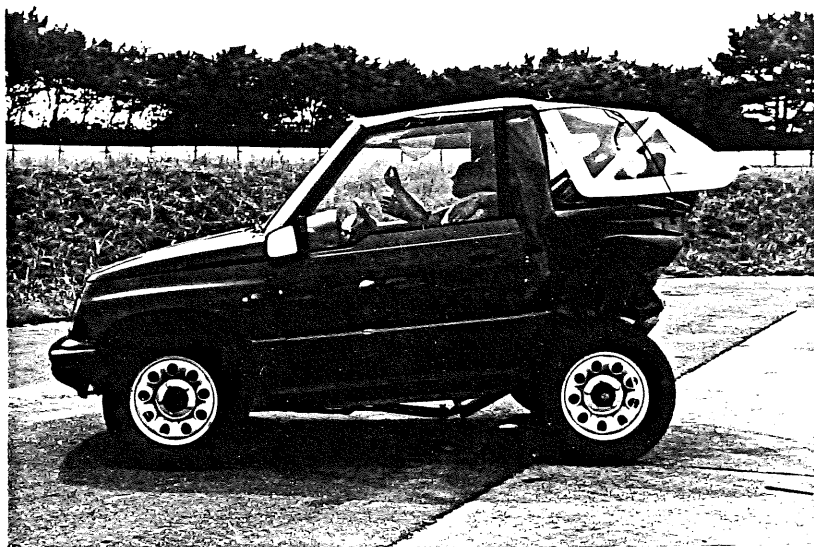


試験後 (Post-Test)





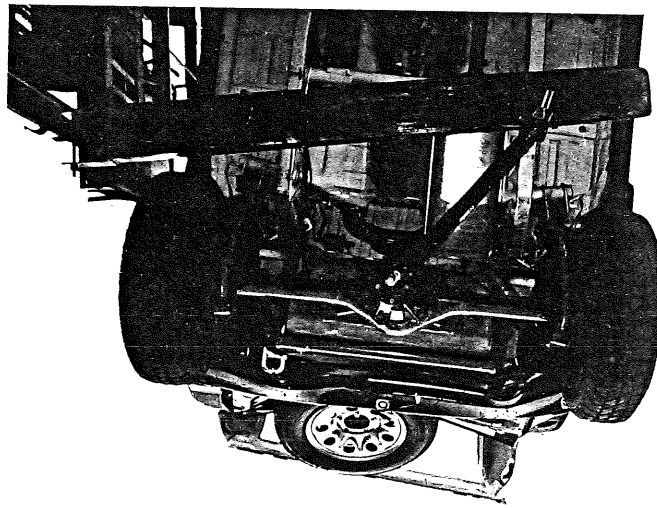
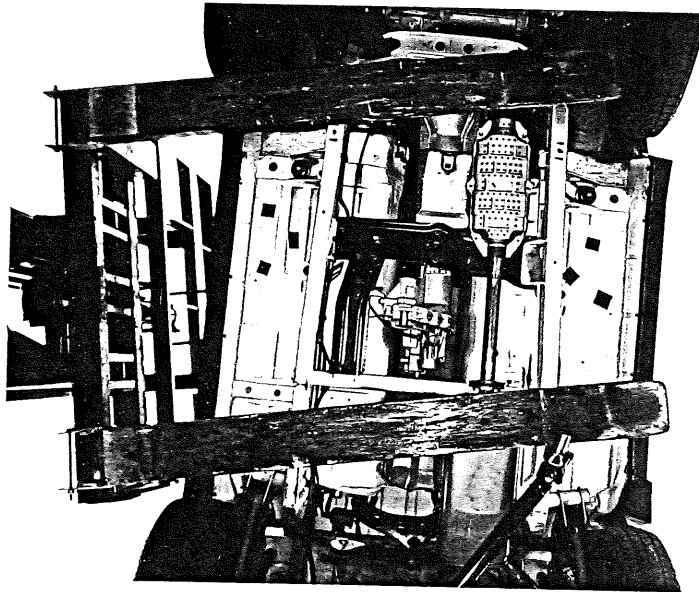
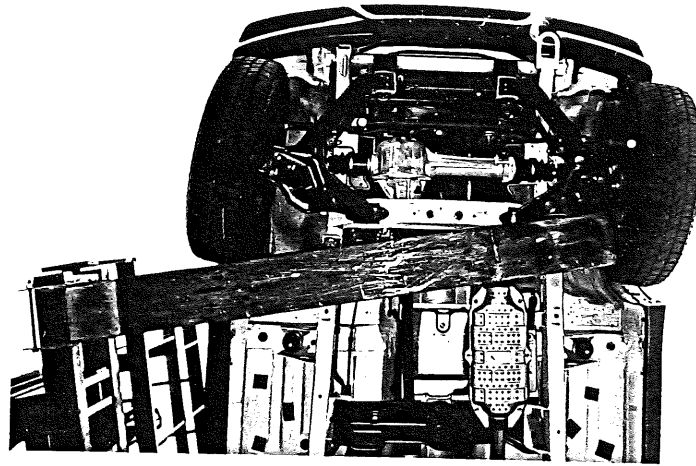
試験後 (Post-Test)



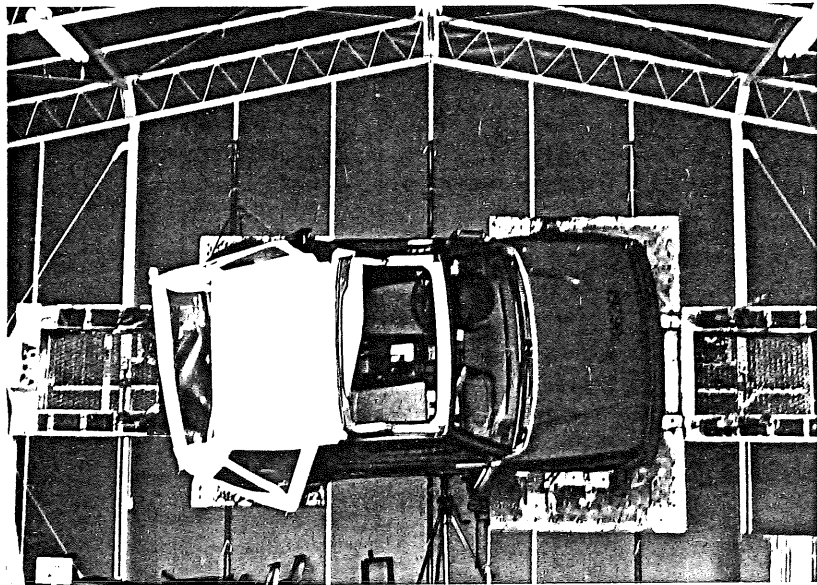
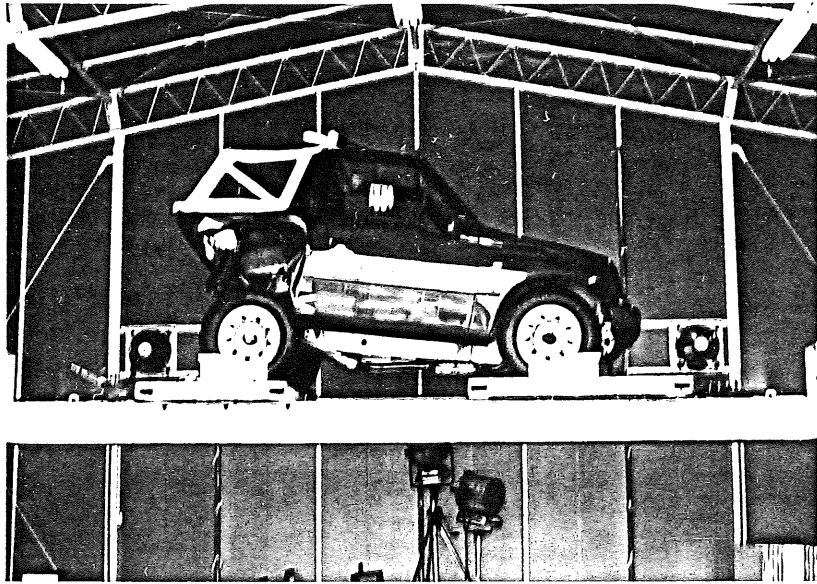
試験後 (Post-Test)



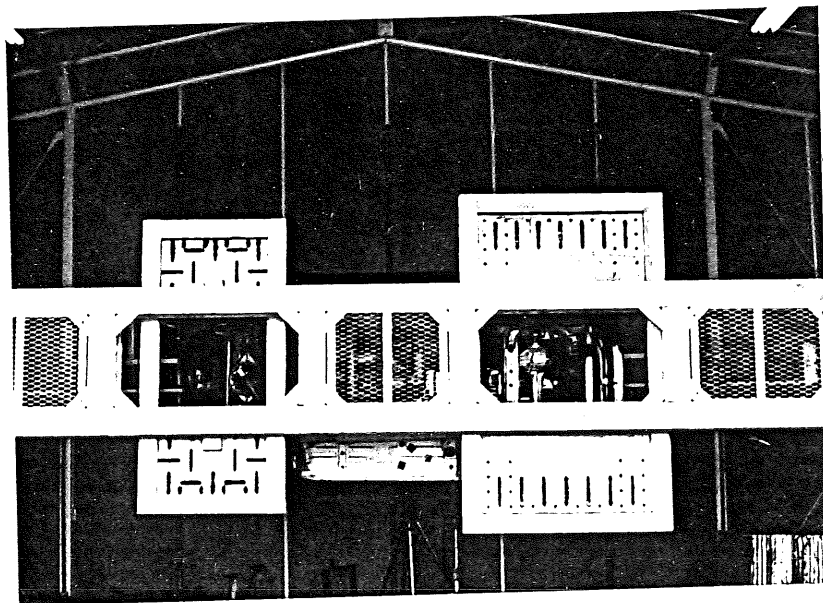
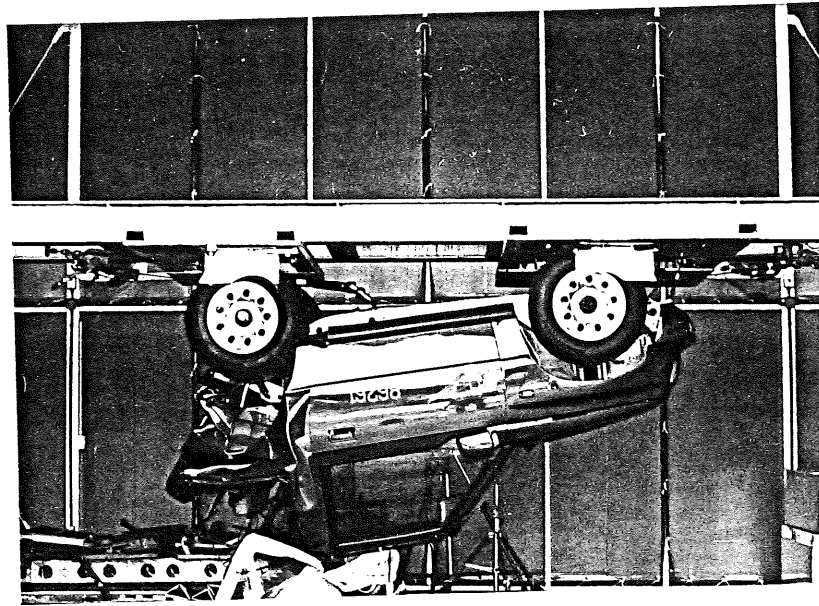
試験後 (Post-Test)



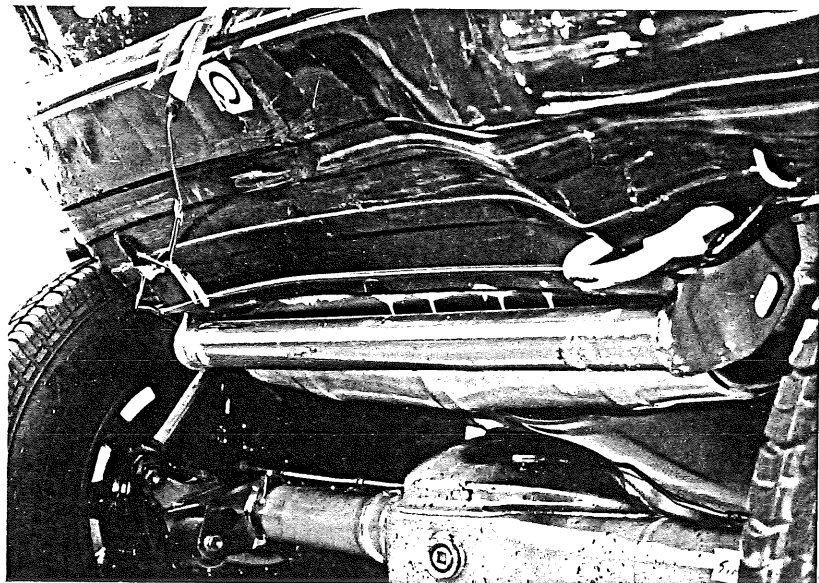
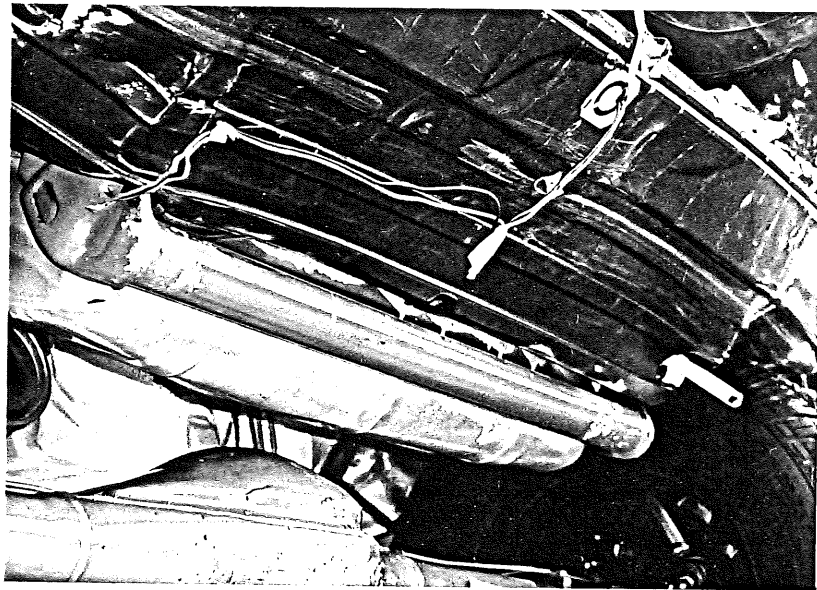
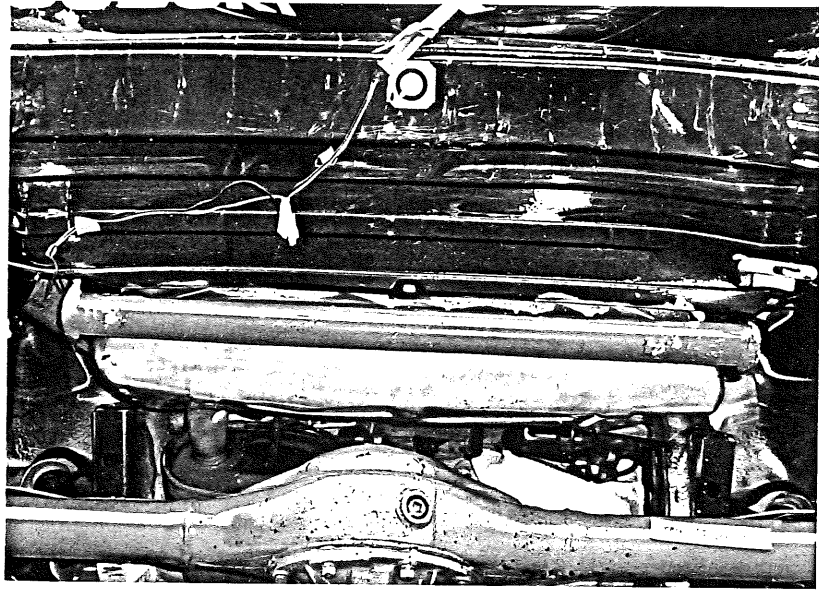
試験後 (Post-Test)



試験後 (Post-Test)

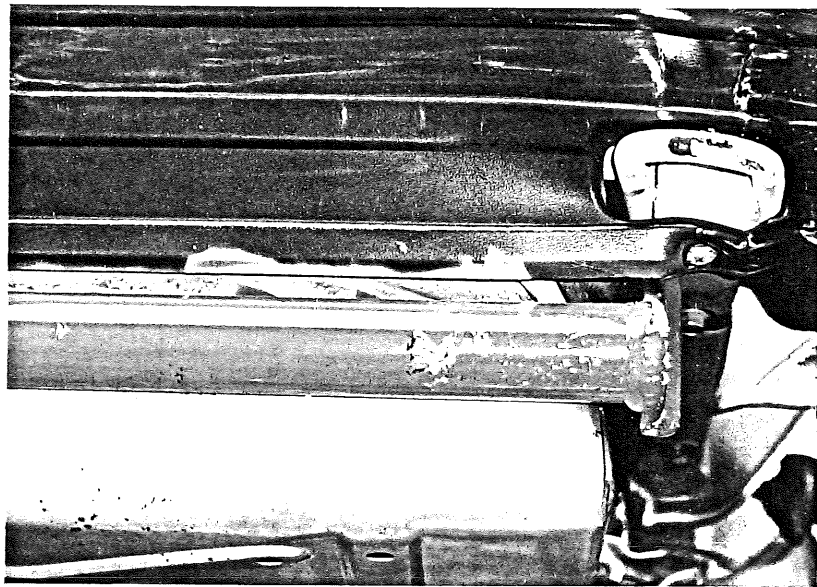
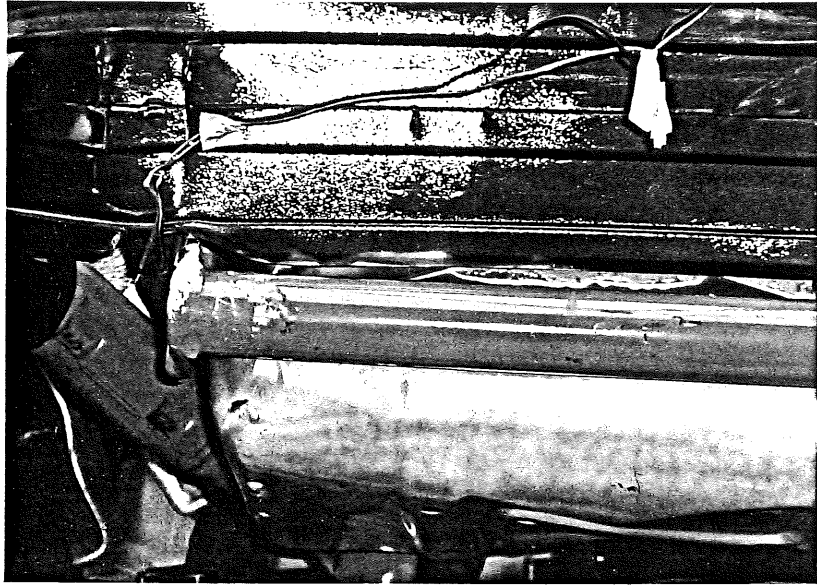


試験後 (Post-Test)

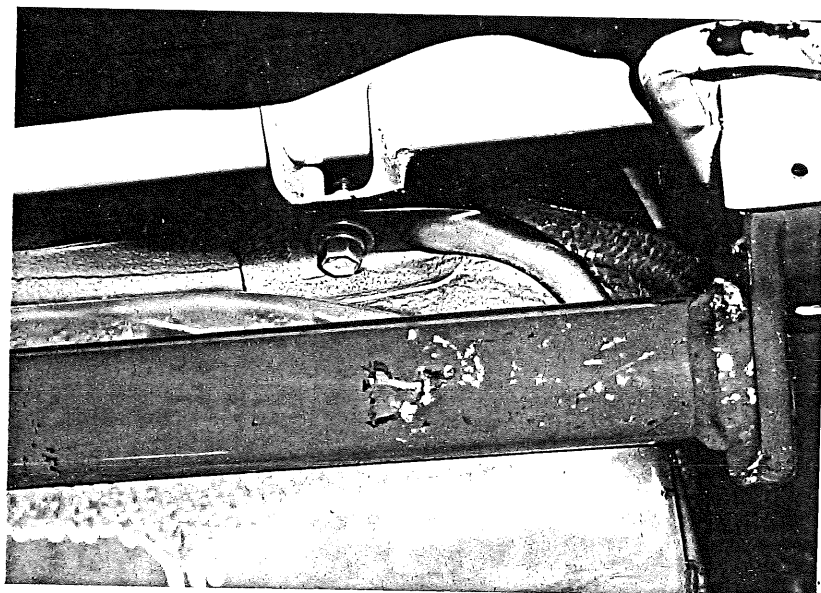
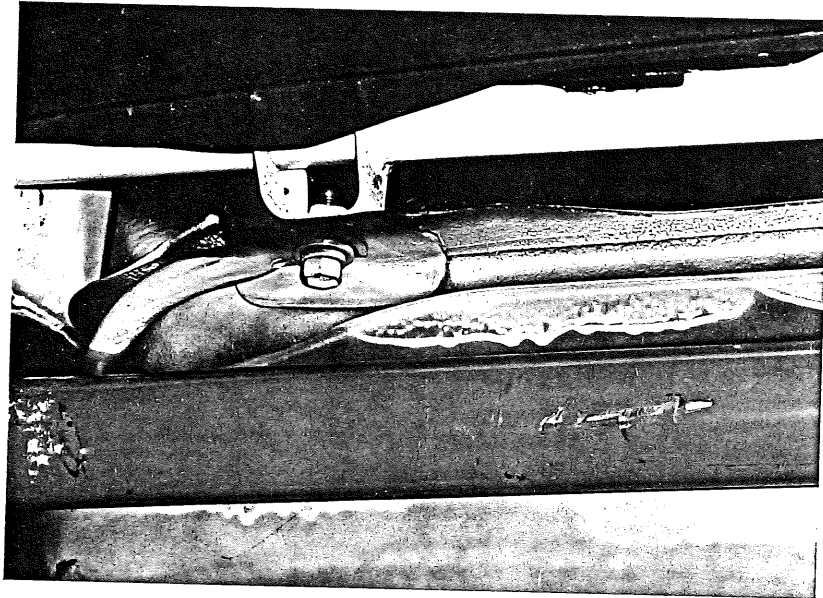
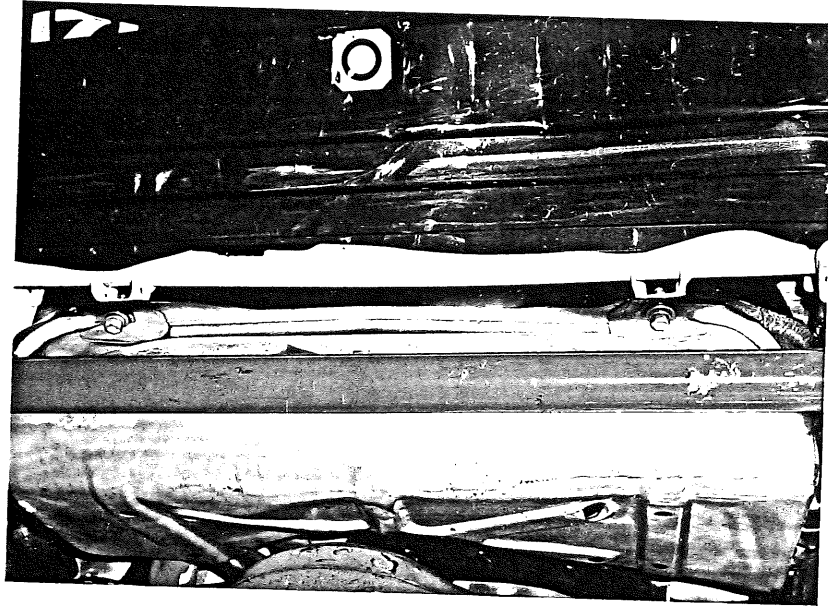




試験後 (Post-Test)

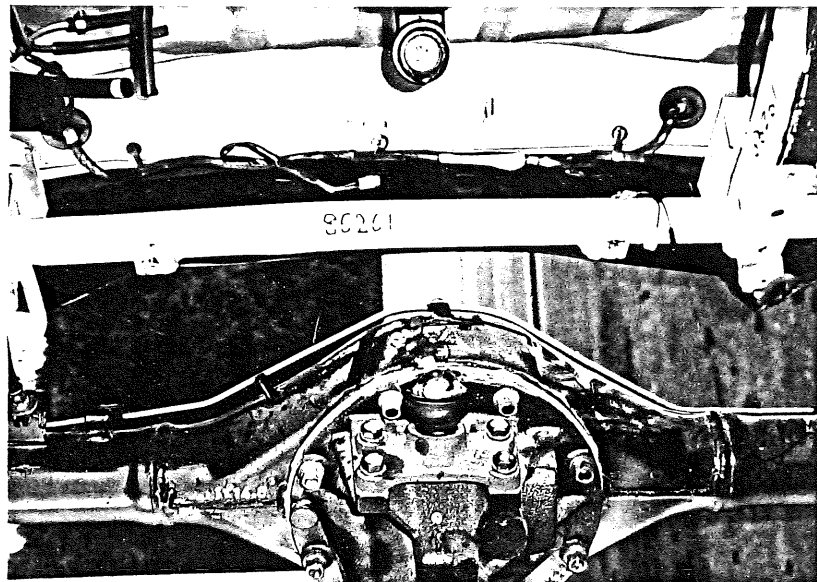
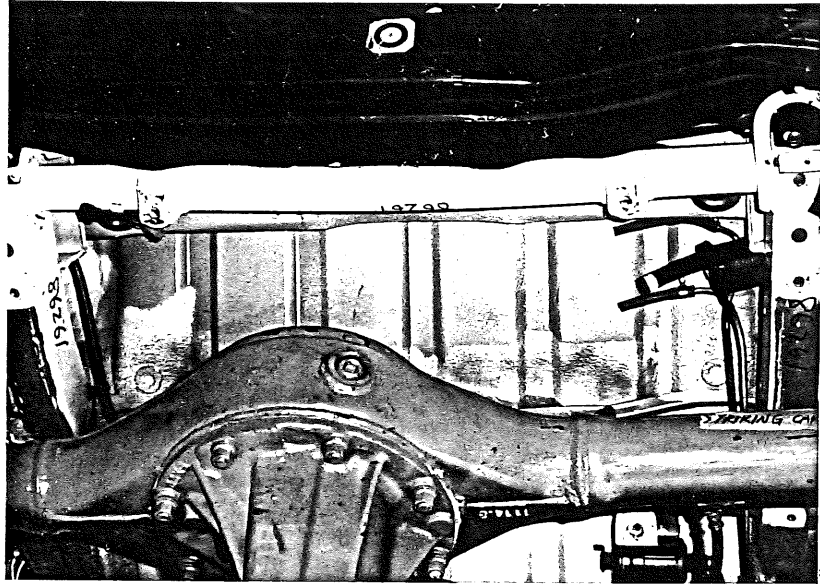


試験後 (Post-Test)

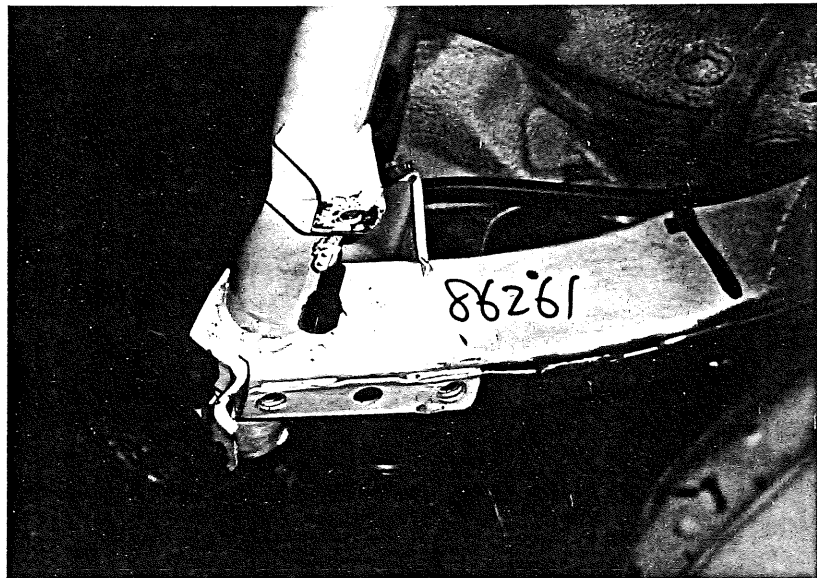
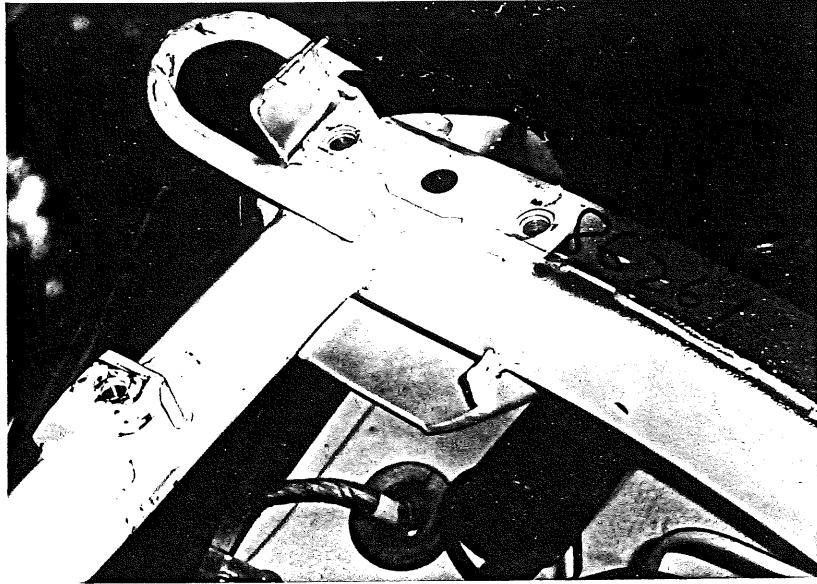




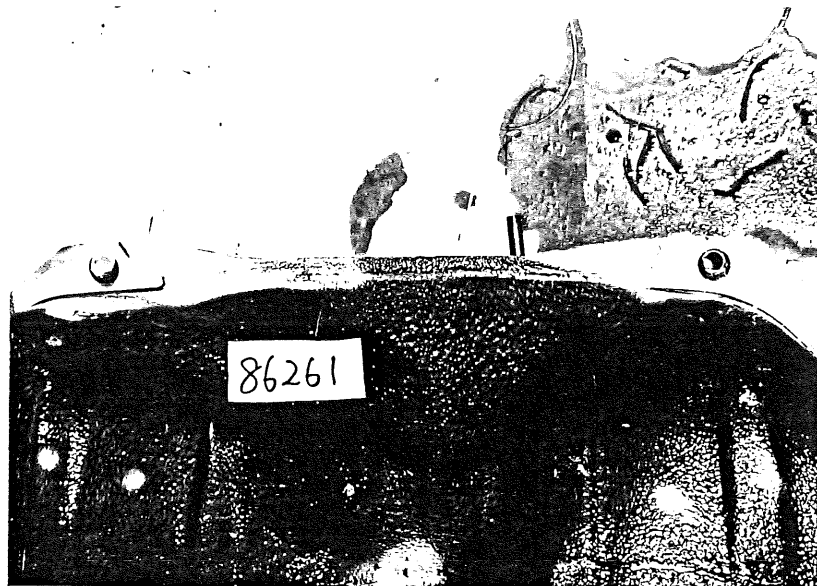
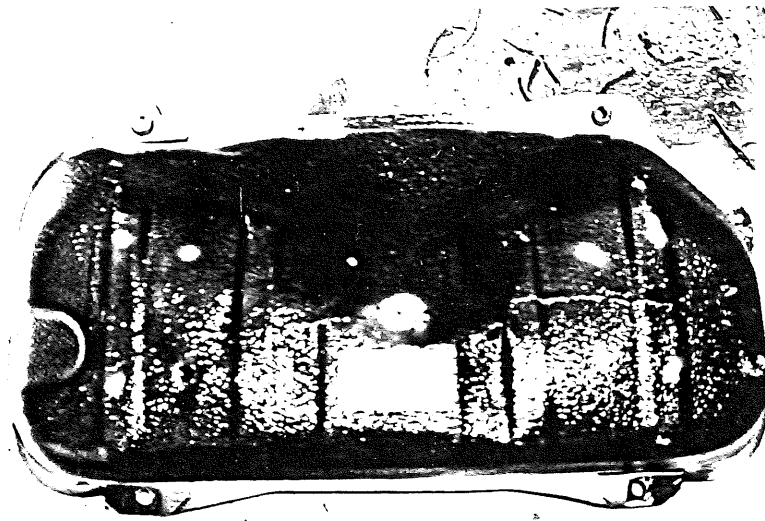
試験後 (Post-Test)



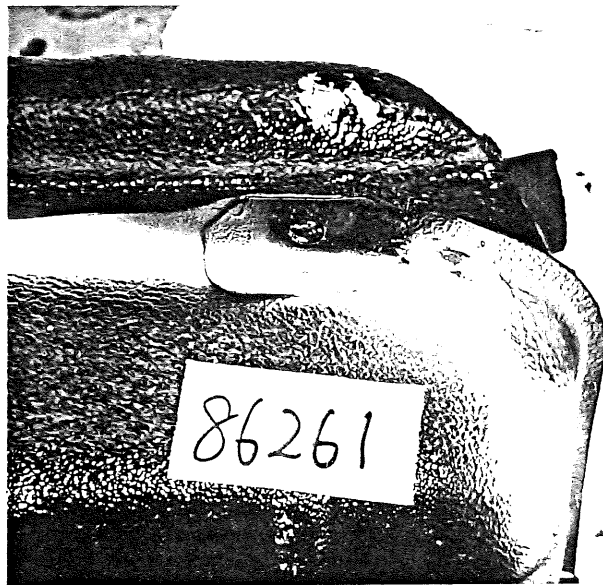
試験後 (Post-Test)



試験後 (Post-Test)



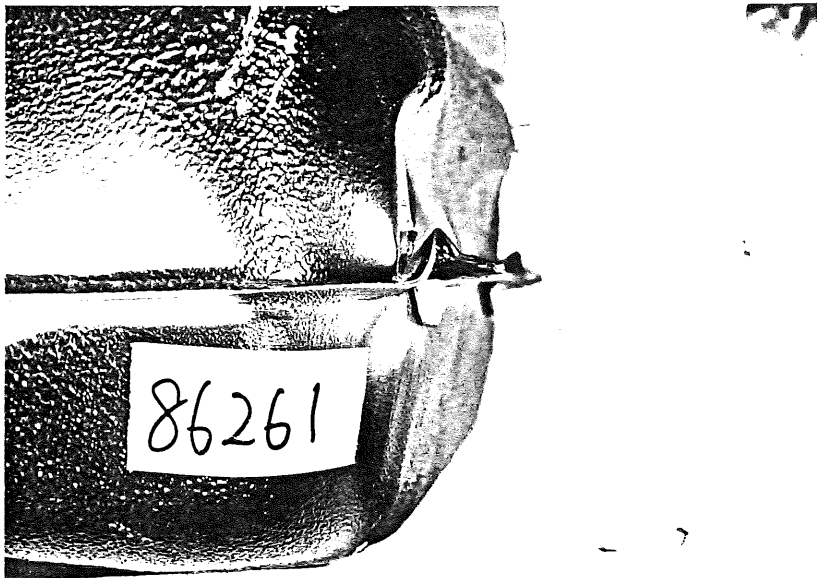
試験後 (Post-Test)



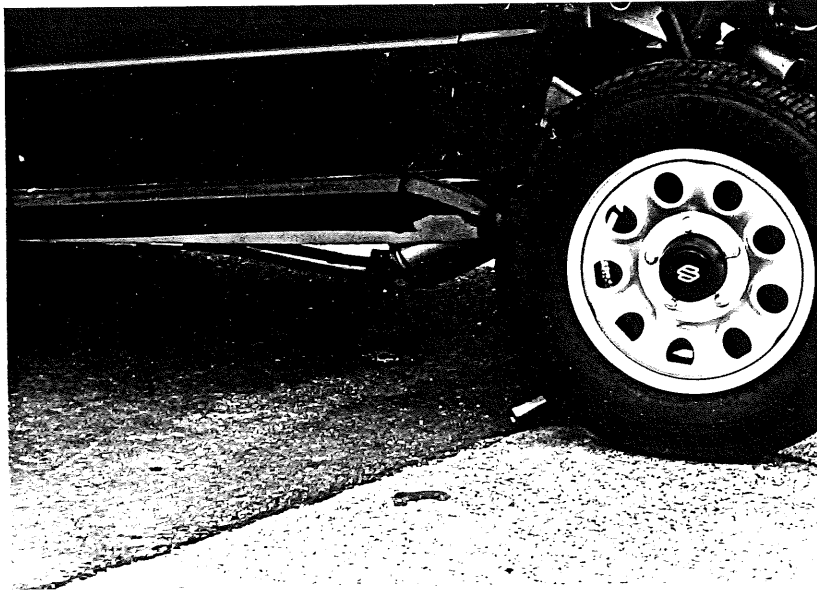
試験後 (Post-Test)



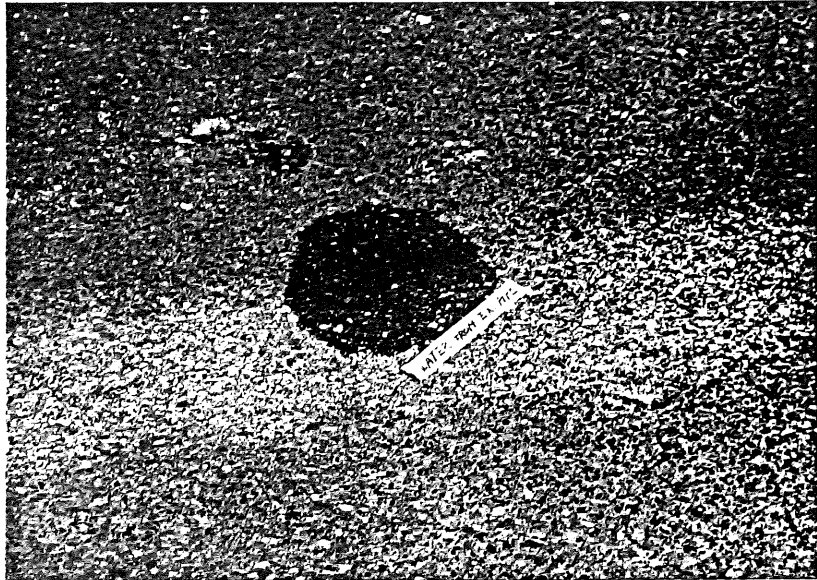
試験後 (Post-Test)



試験後 (Post-Test)



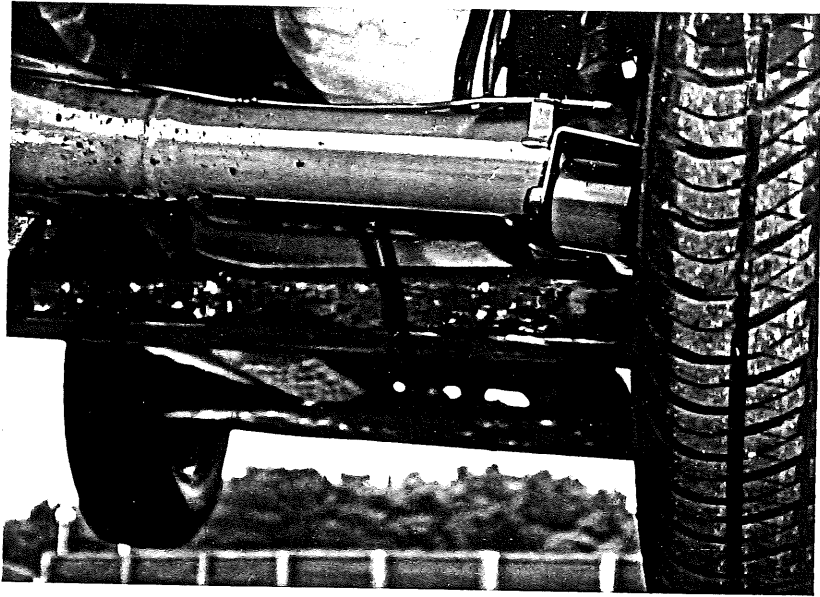
WATER FROM  
EX. PIPE



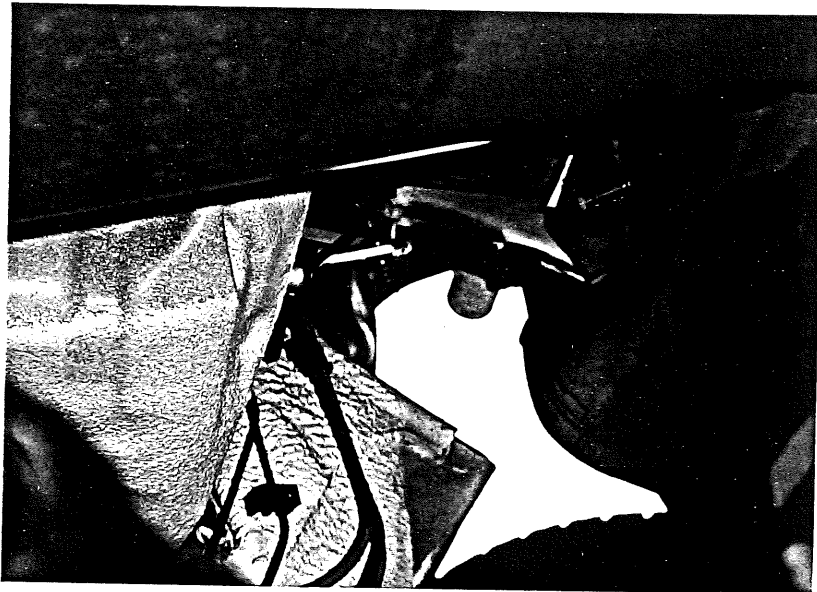
WATER FROM  
EX. PIPE

S 211093

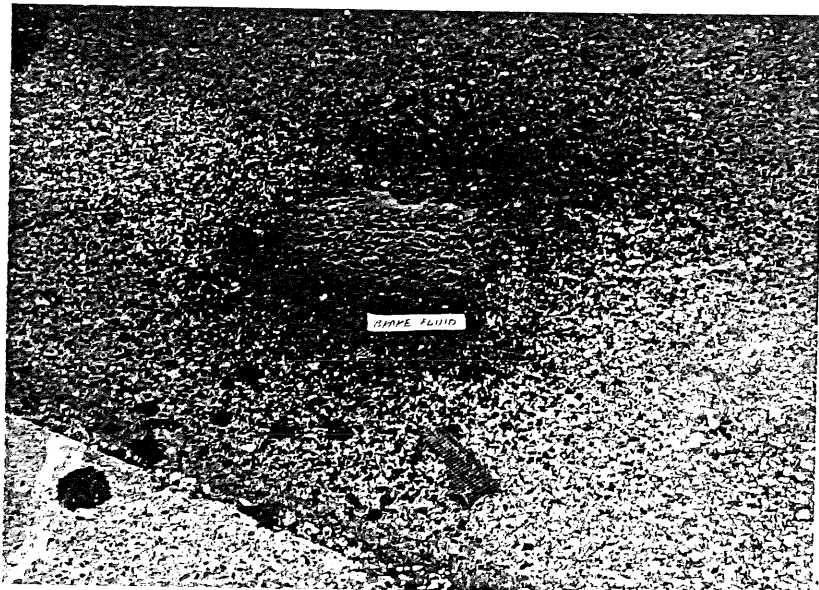
試験後 (Post-Test)



BRAKE HOSE  
TORN



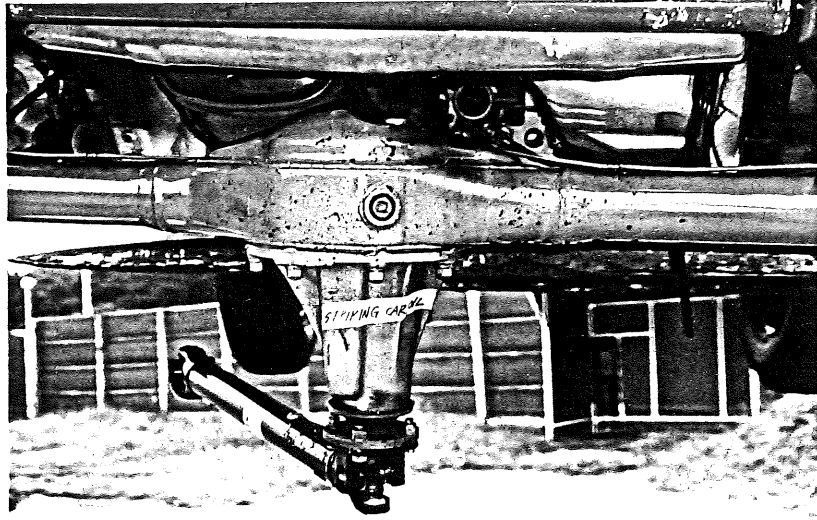
BRAKE HOSE  
TORN



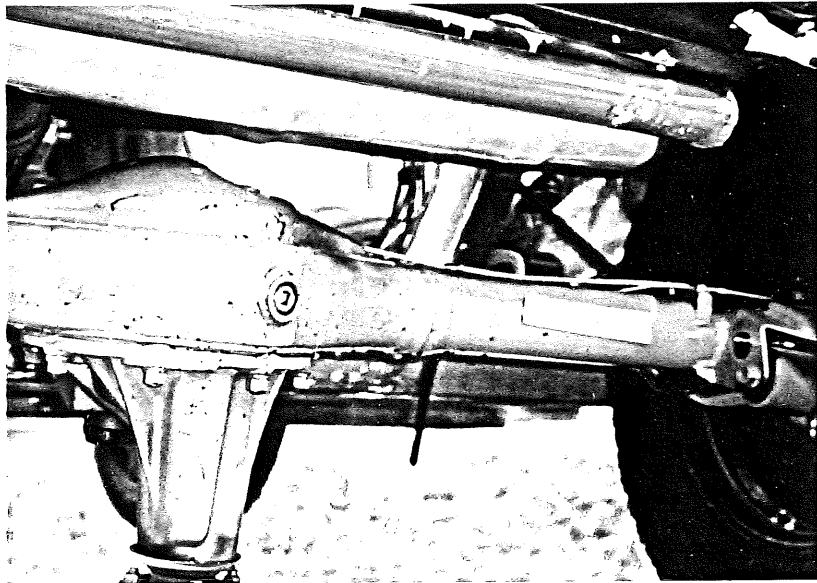
BRAKE  
FLUID



試験後 (Post-Test)

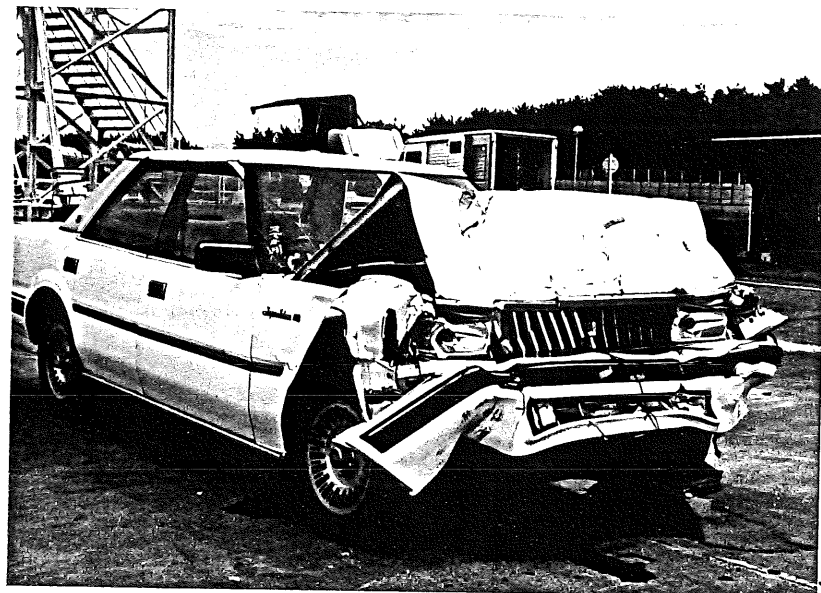
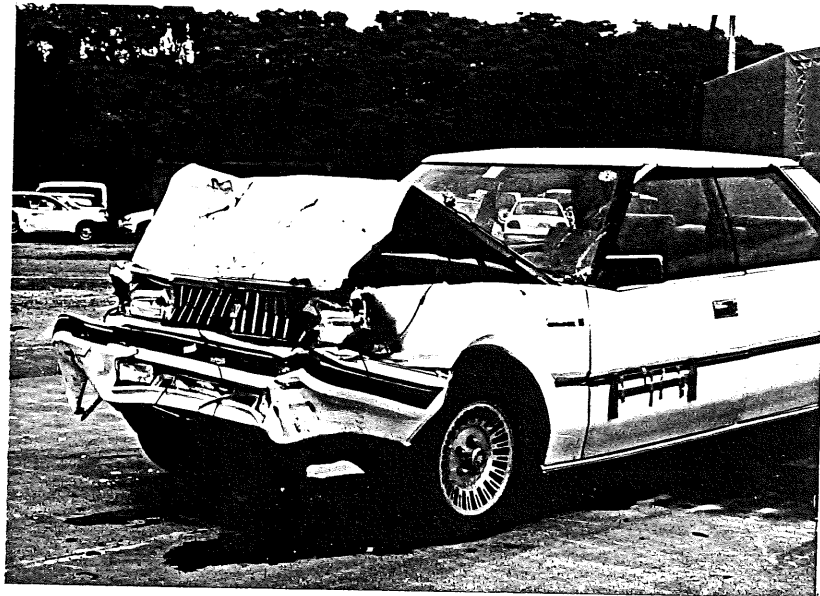


STRIKING  
CAR  
OIL

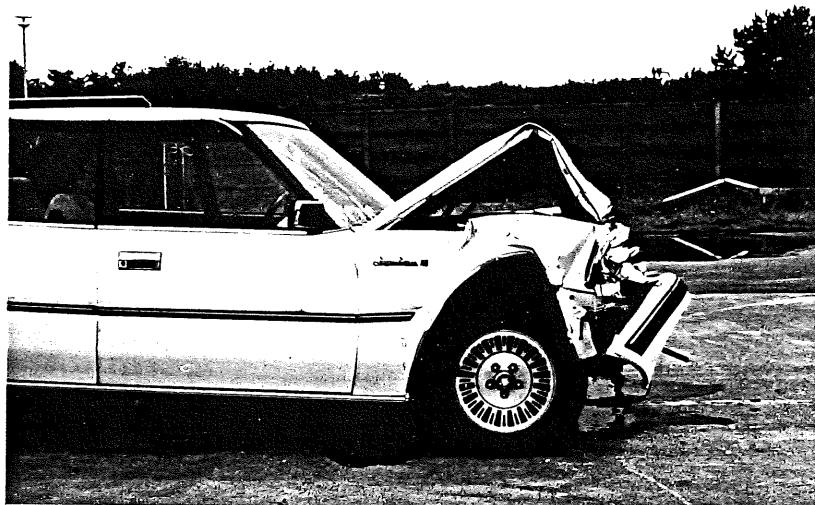
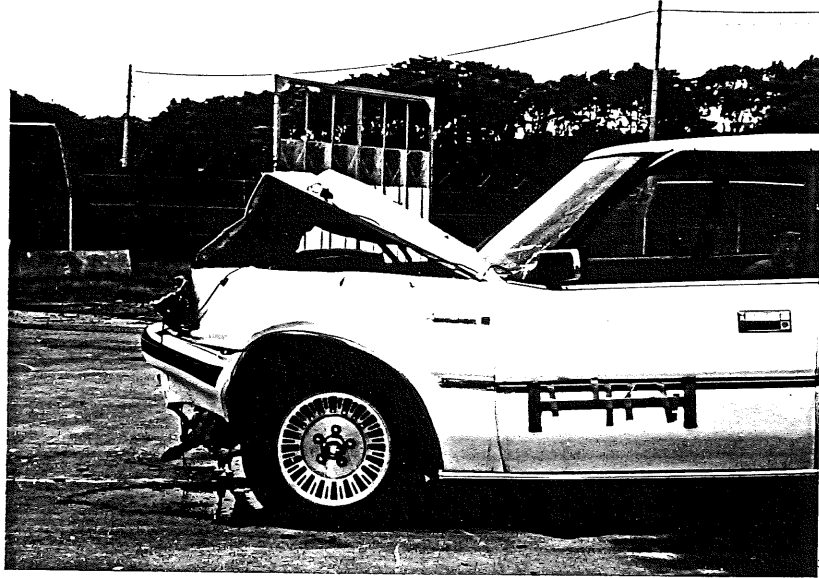


S 211095

試験後 (Post-Test)



試験後 (Post-Test)



TEST RESULT

SUZUKI MOTOR CORPORATION

Suzuki Test Standard No. G-8816  
 FMVSS/CMVSS No. 301

TITLE : FUEL SYSTEM INTEGRITY

Test No. : 86-101  
 Test Date : 06/10/96

Vehicle : Model SIDEKICK 4door Body Style VAN Year 1996  
 Number JS3TD03V8V4100003 Make Production

Engine : Configuration G16A Fuel Gasoline Fuel Induction Electric Pump

Fuel Tank : Usable Cap. 55.0ℓ Unusable Cap. 1.5ℓ Transmission : A/T (4 Speed)

A/C : Yes  No  P/S : Yes  No  P/B : Yes  No

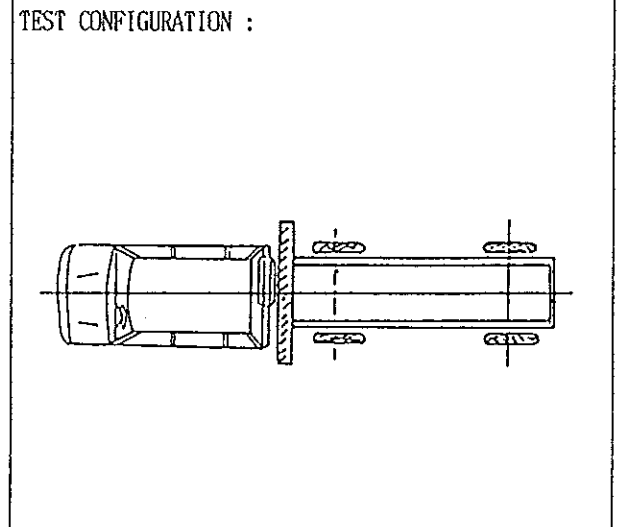
Impact Pattern : REAR IMPACT

Barrier Type : MOVING BARRIER

VEHICLE	
VELOCITY AT IMPACT 0.0 ( 0.0 ) km/h ( mph )	
TEST MASS (INCLUDED DUMMIES) FRONT 781.0 kg REAR 691.0 kg TOTAL 1472.0 kg	
CARGO BALLAST	137 kg <input type="checkbox"/> RATED CARGO <input checked="" type="checkbox"/> LUGGAGE LOAD <input type="checkbox"/> NA <input type="checkbox"/>
FUEL TANK	CONTENTS : STODDARD SOLVENT VOLUME : 94 % OF USABLE CAPA.= 51.7 ℓ
ENGINE RUNNING YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	

MOVING BARRIER 1815.0 kg NA <input type="checkbox"/>	
VELOCITY AT IMPACT 54.1 ( 33.6 ) km/h ( mph )	
PERPENDICULAR IMPACT NA <input checked="" type="checkbox"/>	
LOCATION AT IMPACT	DRIVER SRP <input type="checkbox"/> FUEL PIPE <input type="checkbox"/> A-PILLER <input type="checkbox"/> OTHER <input type="checkbox"/>
ANGLE IMPACT NA <input checked="" type="checkbox"/>	
ACUTE ANGLE	Degrees

DUMMIES	
DRIVER	MAKE : ALDERSON NO : SN668
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL
RIGHT FRONT	MAKE : ALDERSON NO : SN664
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL



S 211098

TEST RESULT

SUZUKI MOTOR CORPORATION  
Test No. : 86-101

Test Results :

WAS FUEL SPILLAGE :		
LESS THAN 28.35 gm DURING IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING FIRST FIVE MINUTES AFTER IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING ONE MINUTE COLLECTION PERIODS AFTER IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING STATIC ROLLOVER FIVE MINUTES COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING STATIC ROLLOVER ONE MINUTE COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>

Test Data :


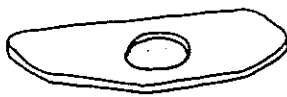

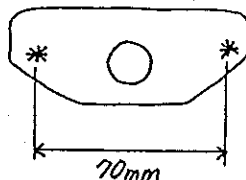
FUEL SPILLAGE BARRIER IMPACT SITE		
DURING IMPACT: 0.0 gm	DURING FIRST FIVE MINUTES AFTER IMPACT: 0.0 gm	
DURING THE ONE COLLECTION PERIODS	( 5 TO 30 MINUTES AFTER IMPACT ) : 0.0 gm	

FUEL SPILLAGE DURING STATIC ROLLOVER				
ROLLOVER DIRECTION : POSITIVE <input type="checkbox"/> NEGATIVE <input type="checkbox"/> BOTH <input checked="" type="checkbox"/>				
ROOLOVER RATE-APPROXIMATELY 2 MINUTES PER 90° INCREMENT				
ROLLOVER DATE : 06.10.96				
ROLLOVER INCREMENTS		FUEL SPILLAGE BY MASS		
		FUEL 5 MINUTES OF ROLLOVER INCREMENT	FOR NEXT MINUTE	FOR NEXT MINUTE
Positive Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm
Negative Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm

S 211099

TEST NO. 86-10.1

I. TEST CONDITION

VEHICLE		IWATA 96MY 4DOOR 4WD																	
FUEL TANK		IWATA																	
FUEL TANK BRACKET																			
G U S S E T	CONFIGURATION																		
	GUSSET ORIENTATION																		
	SPOT WELDING PITCH																		
WEATHER & TEMPERATURE		RAIN 18°C																	
TEST VEHICLE WEIGHT WITHOUT DUMMY (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>350.0</td> <td>321.0</td> <td>671.0</td> </tr> <tr> <td>RIGHT</td> <td>345.0</td> <td>312.0</td> <td>657.0</td> </tr> <tr> <td>TOTAL</td> <td>695.0</td> <td>633.0</td> <td>1328.0</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	350.0	321.0	671.0	RIGHT	345.0	312.0	657.0	TOTAL	695.0	633.0	1328.0
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TOTAL	781.0	691.0	1472.0																

## 1. TEST CONDITION (CONTINUED)

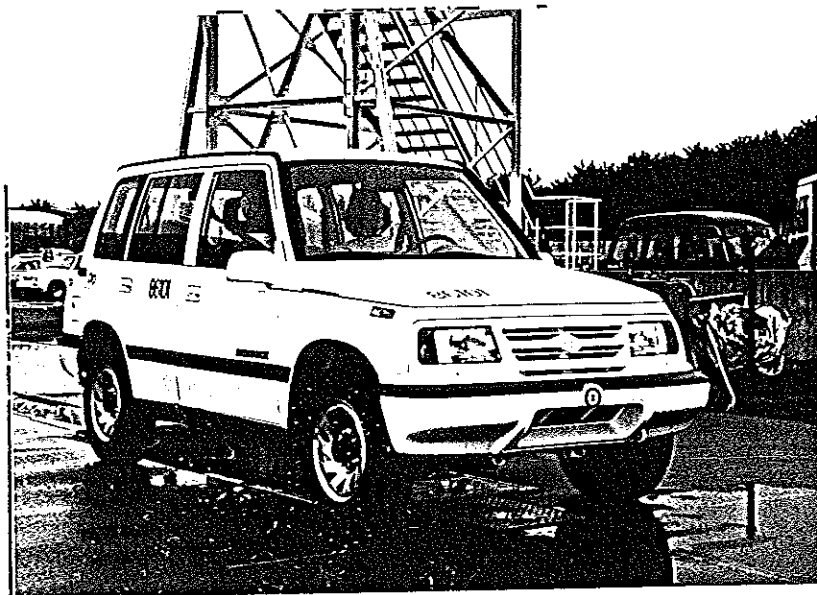
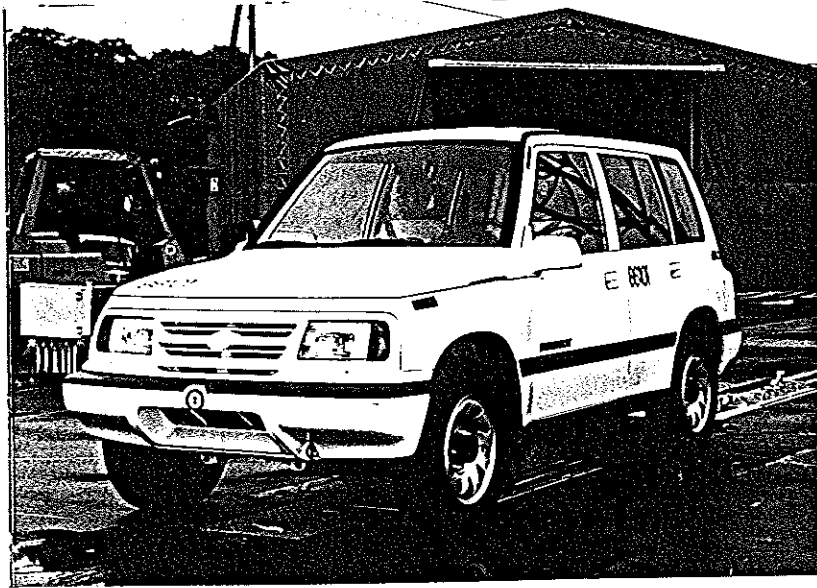
86101

TRIM HEIGHT (MM)		FRONT	REAR
	LEFT	762	768
	RIGHT	766	770
TRANSMISSION POSITION	<i>Neutral</i>		
TRANSFER POSITION	<i>2H</i>		

## 2. POST-TEST CONDITION

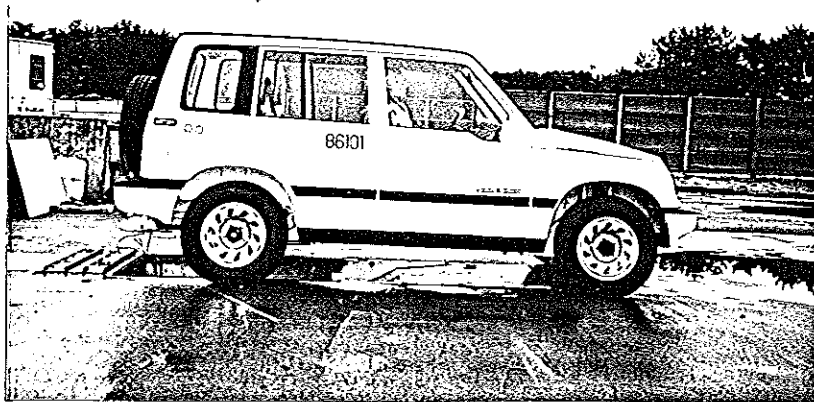
TEST SPEED	<i>54.1 km/h</i>	
DEVIATION OF MOVING BARRIER	<i>21 mm Left</i>	
VEHICLE DEFORMATION (MM)	LEFT	<i>341</i>
	CENTER	<i>374</i>
	RIGHT	<i>380</i>
PROPELLER SHAFT	<i>Separated</i>	
FUEL TANK DEFORMATION <u>SPECIFY</u> if there is any portion where may cause fuel leakage	<i>None</i>	

試験前 (Pre-Test)



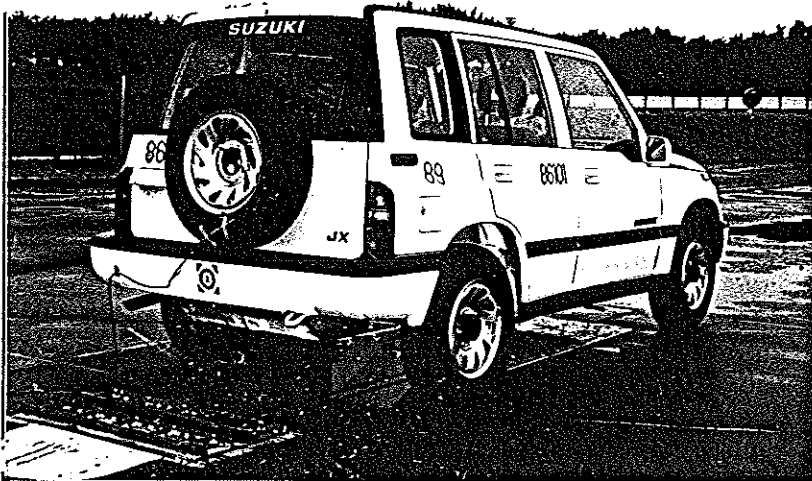
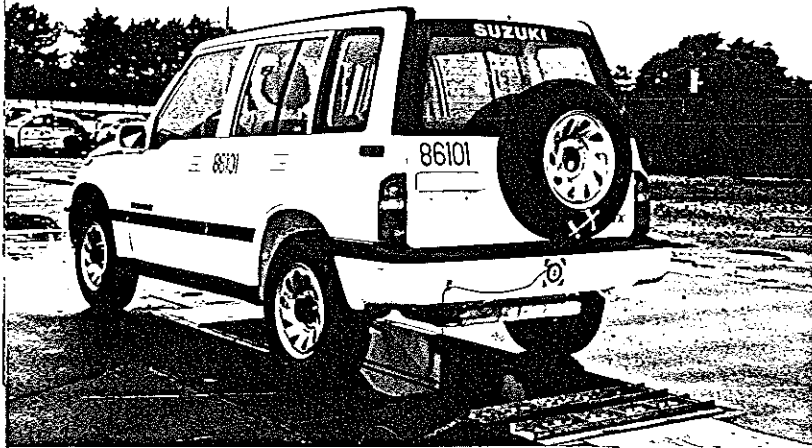


試験前 (Pre-Test)



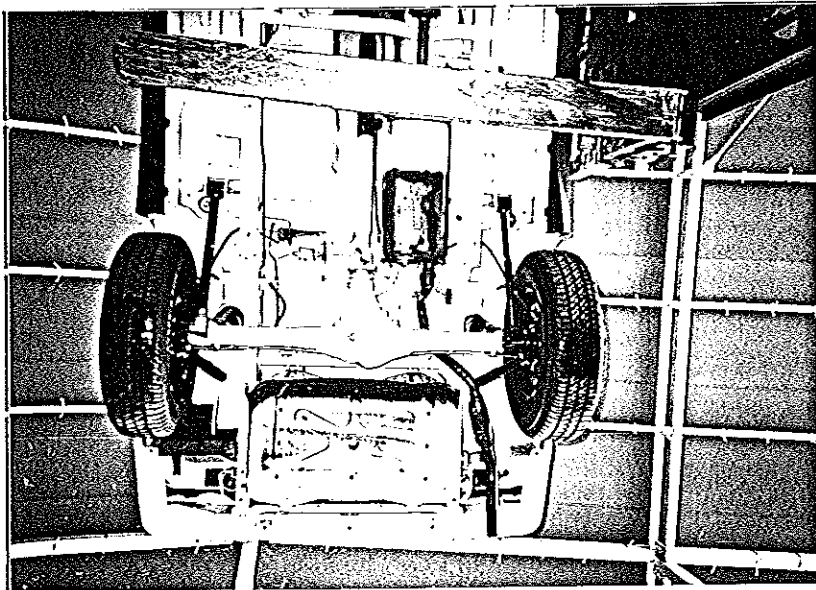
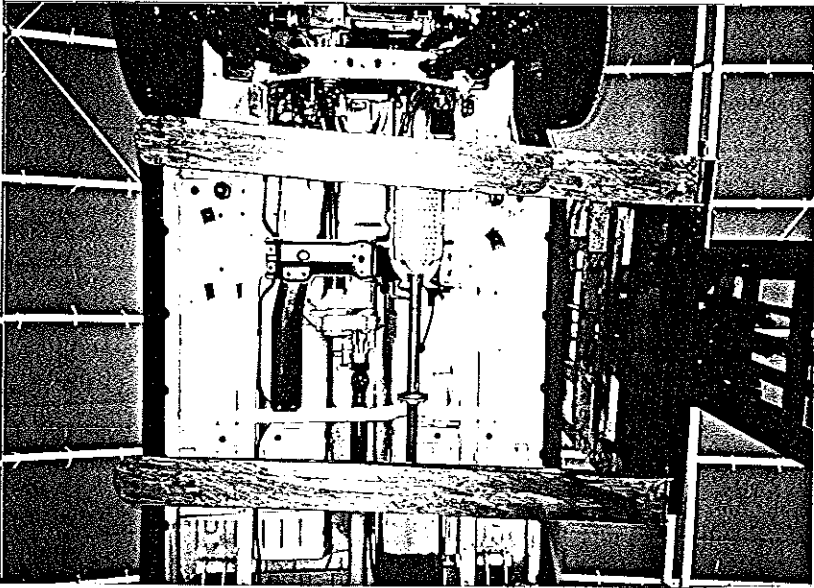
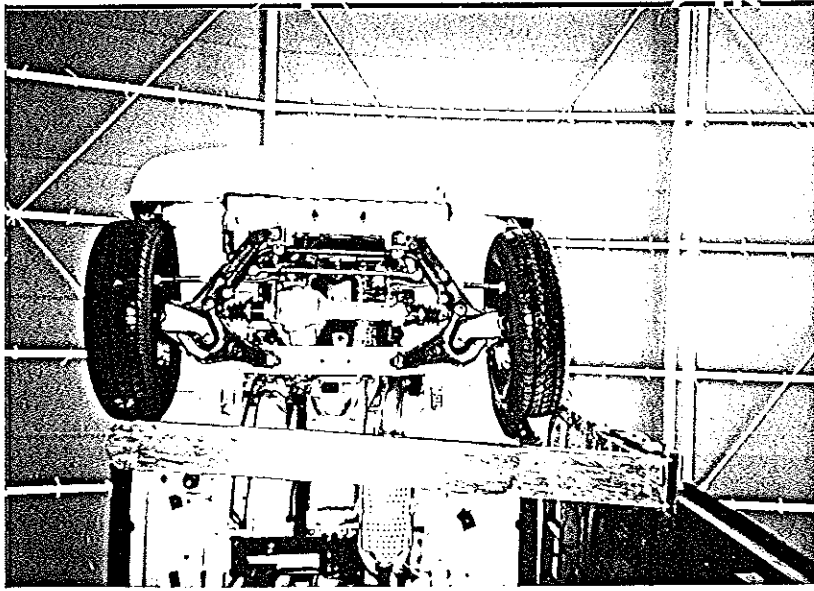
S 211103

試験前 (Pre-Test)



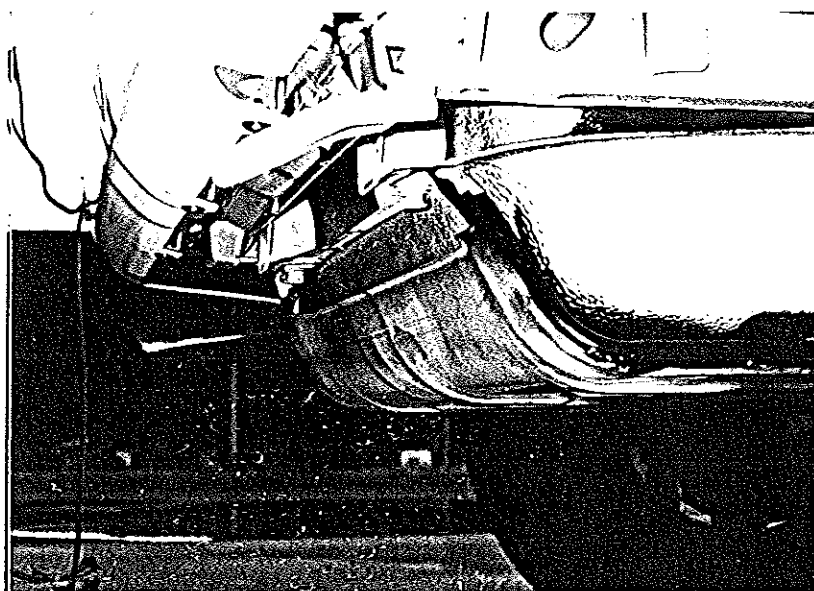
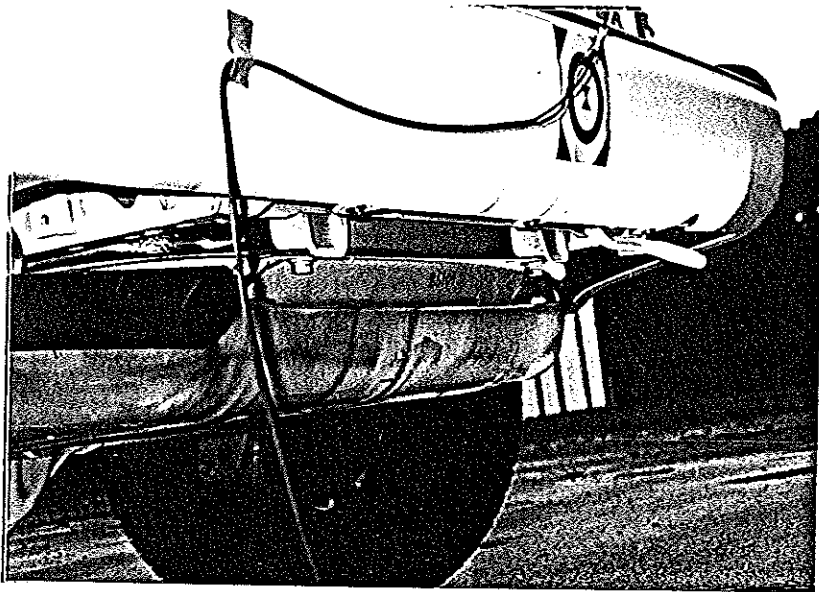
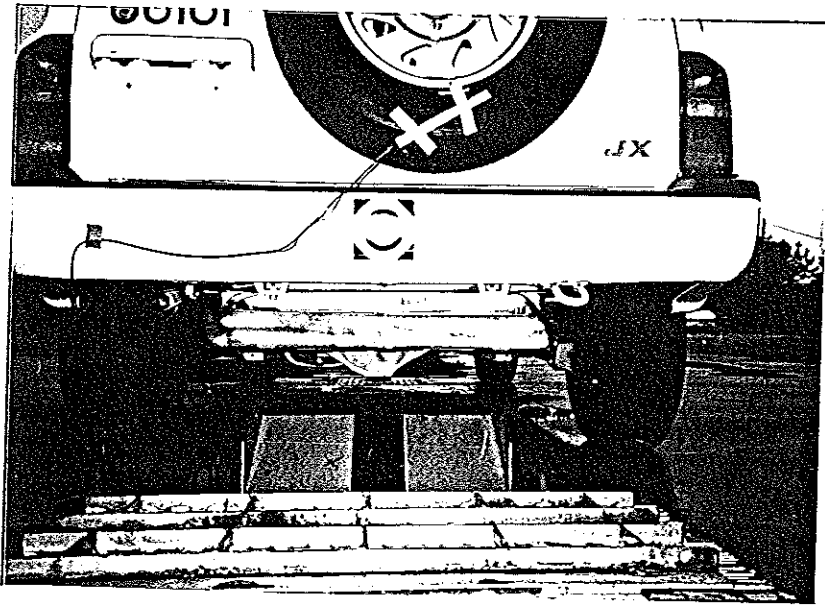
S 211104

試験前 (Pre-Test)



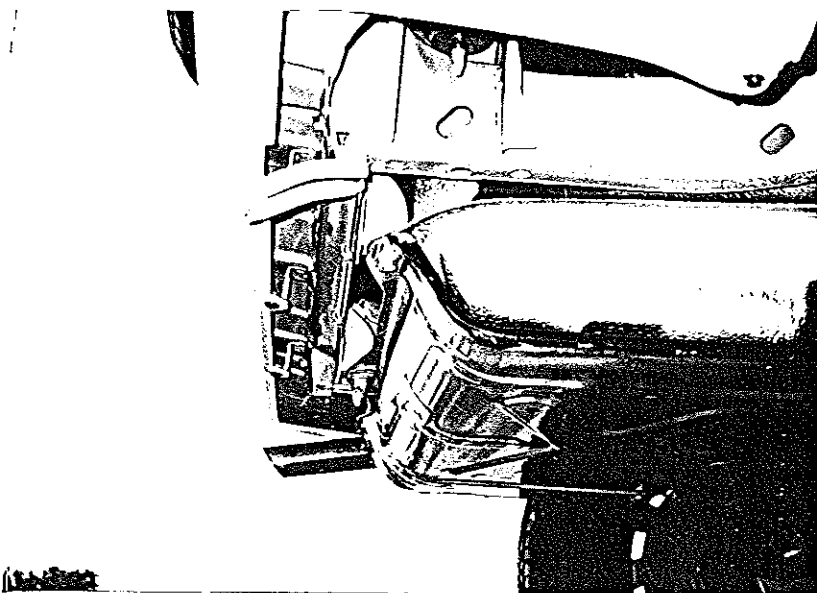
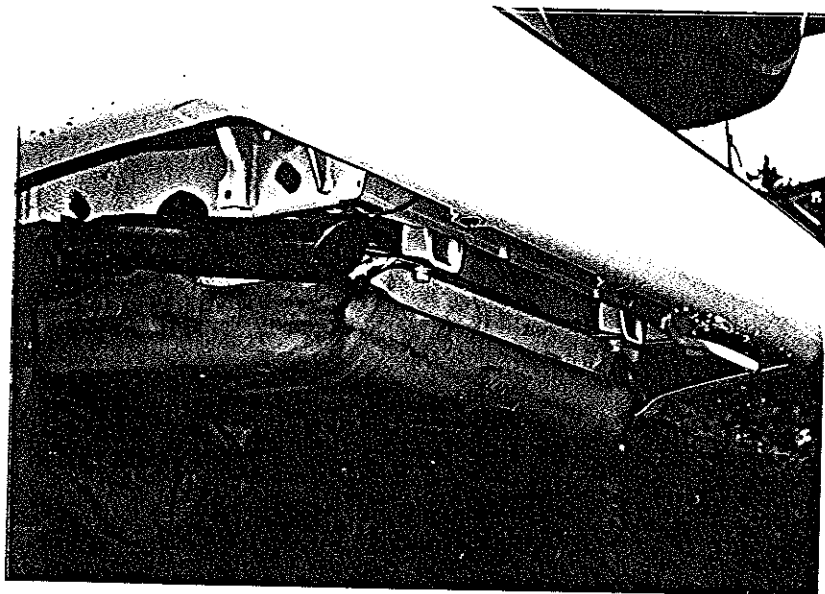
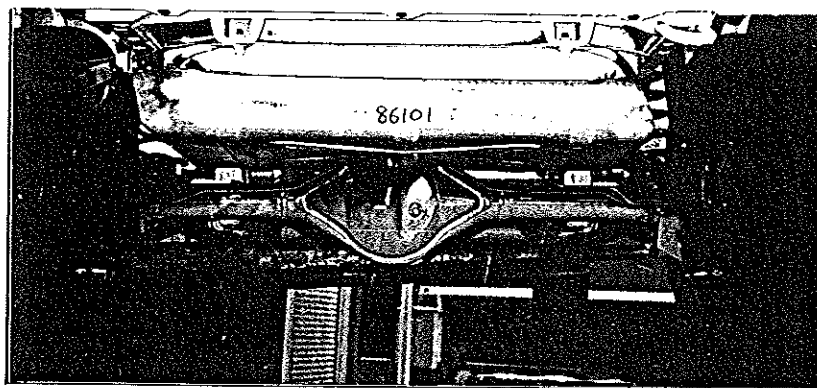
S 211105

試験前 (Pre-Test)



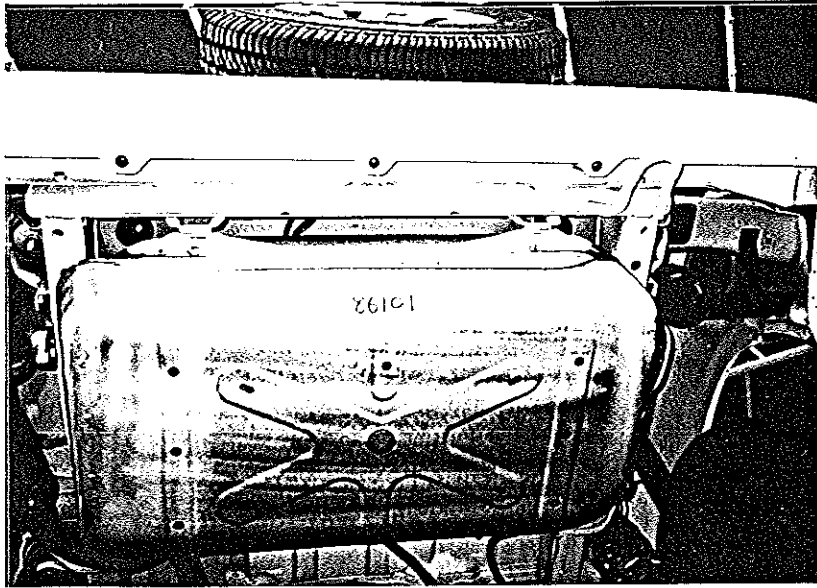
S 211106

試験前 (Pre-Test)



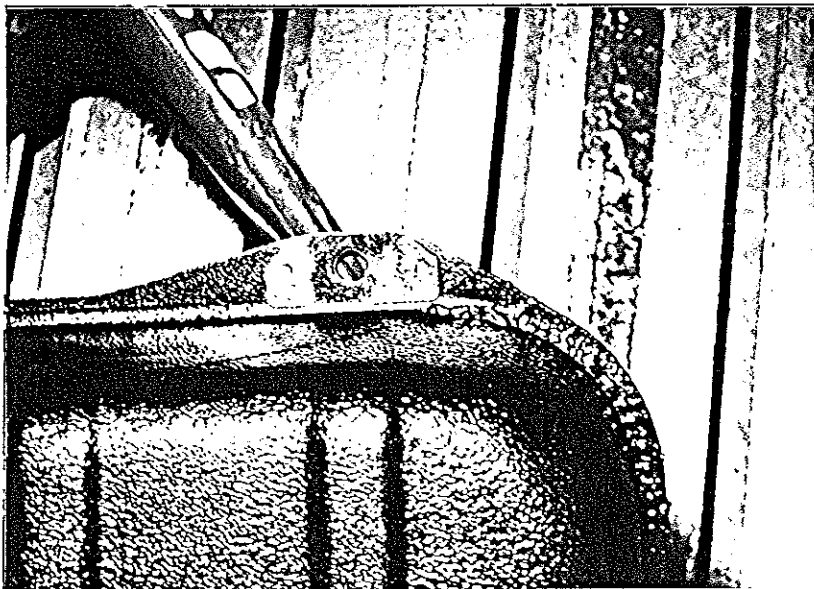
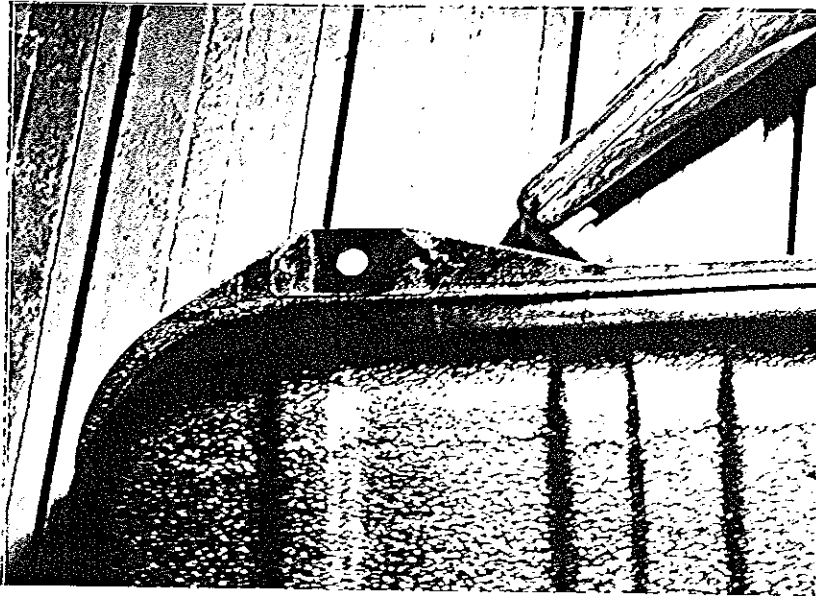
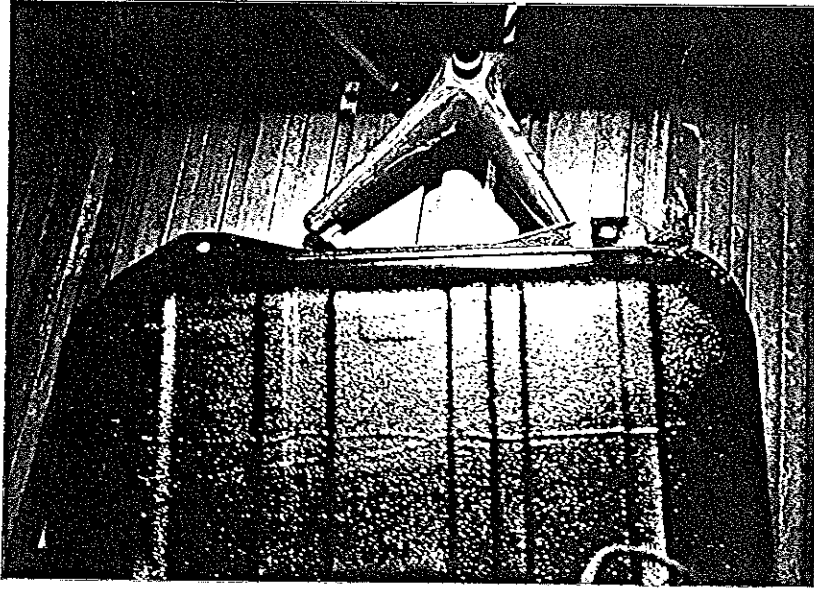
S 211107

試験前 (Pre-Test)



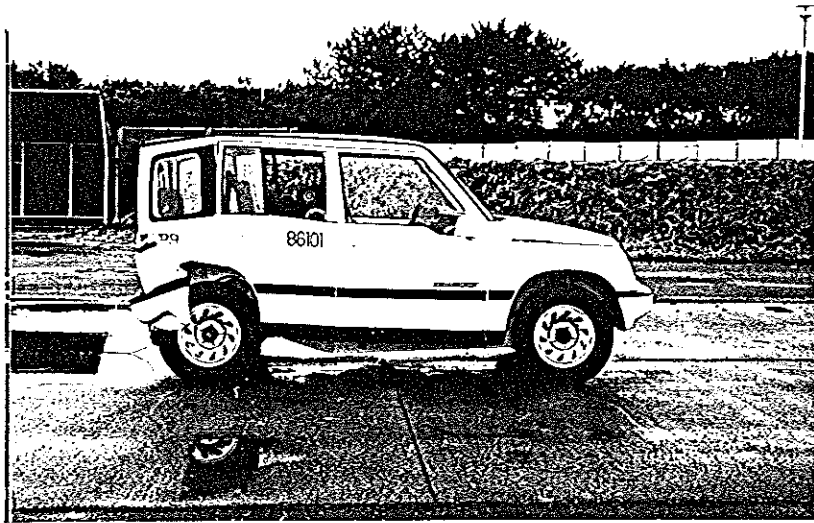
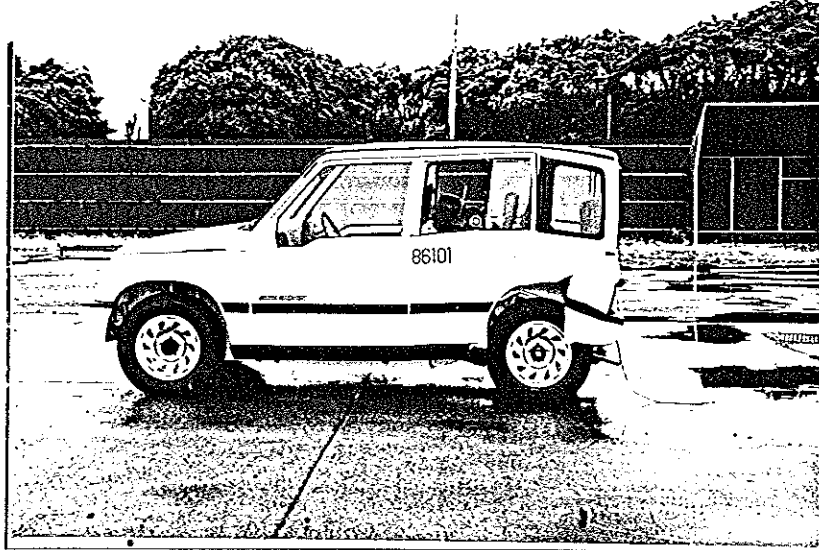
S 211108

試験前 (Pre-Test)



S 211109

試験後 (Post-Test)



S 211110

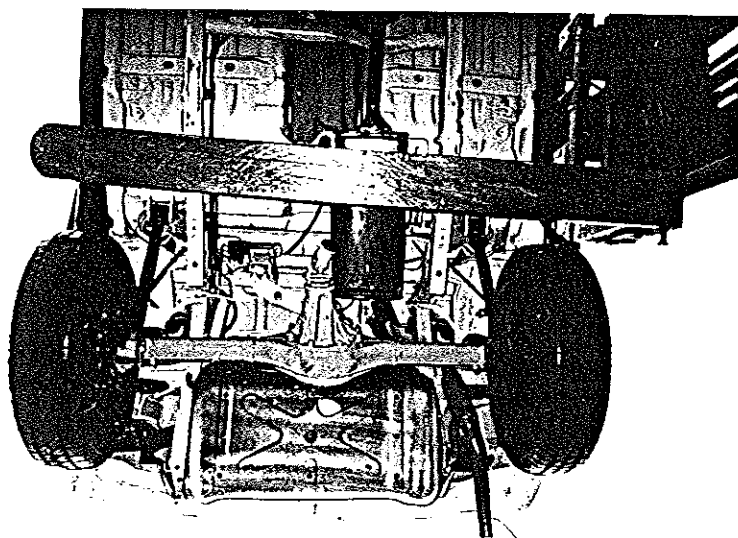
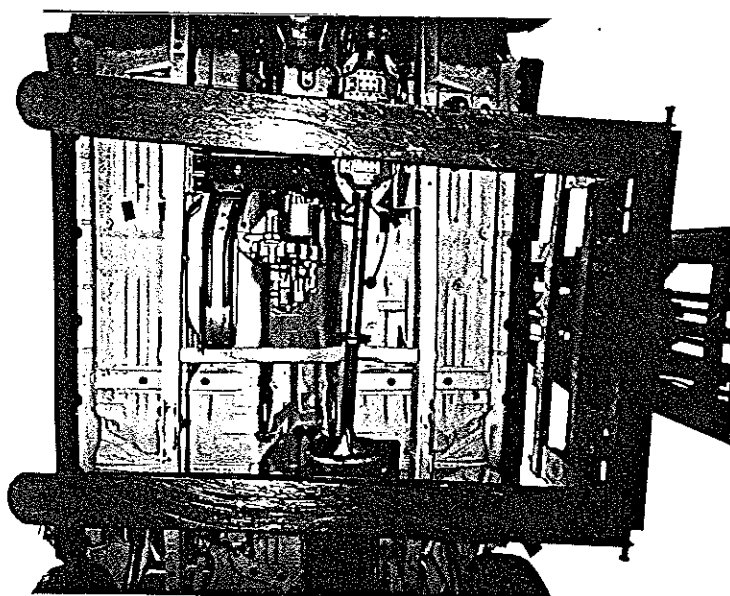
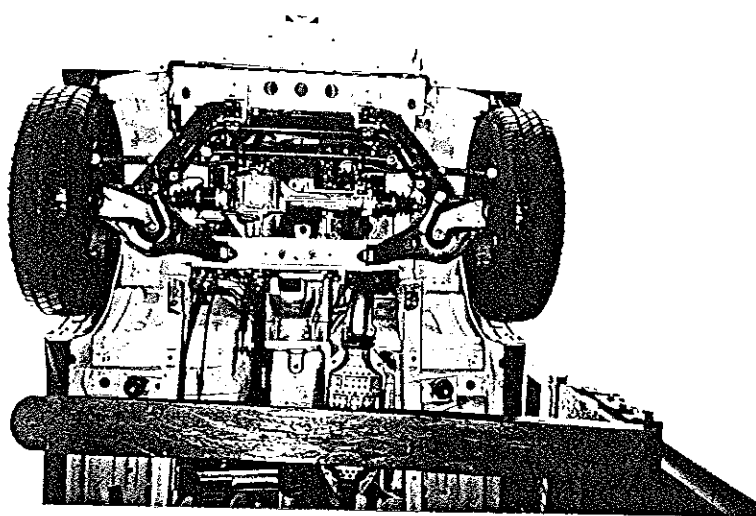


試験後 (Post-Test)



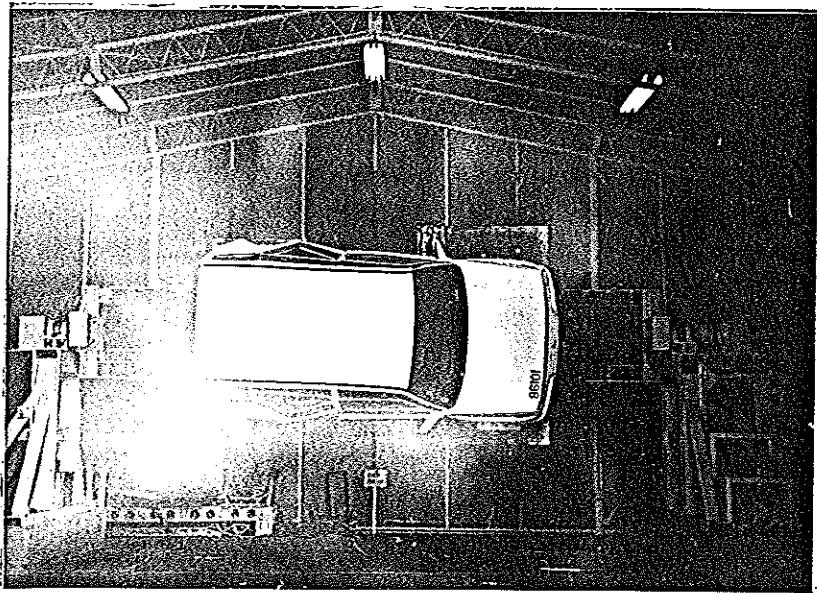
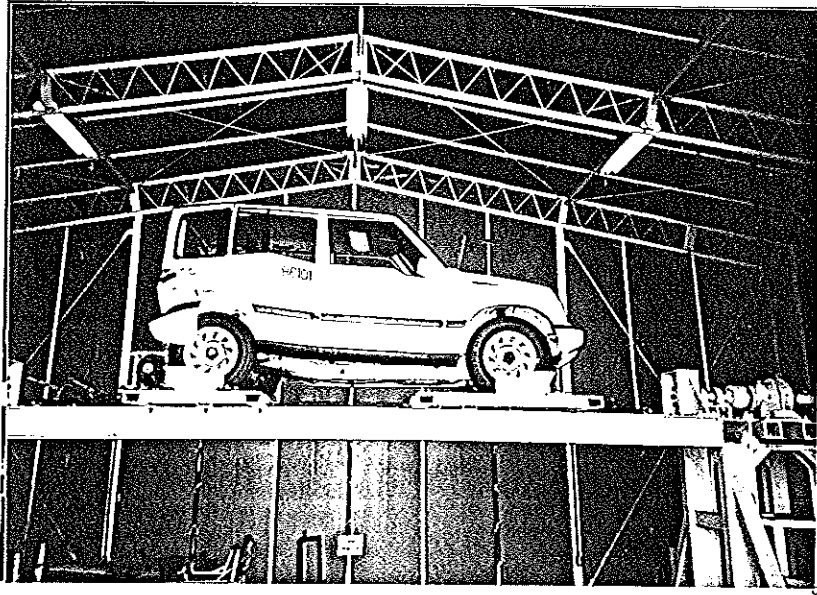
S 211111

試験後 (Post-Test)



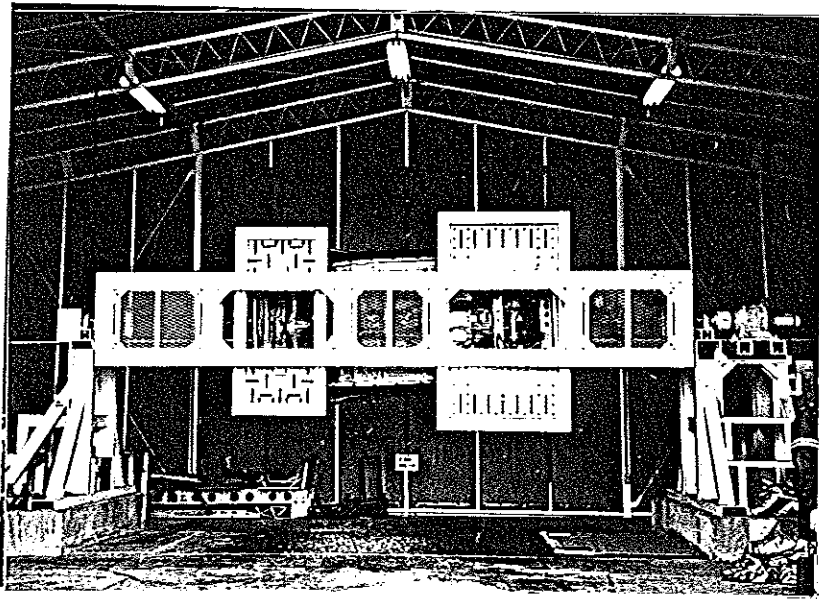
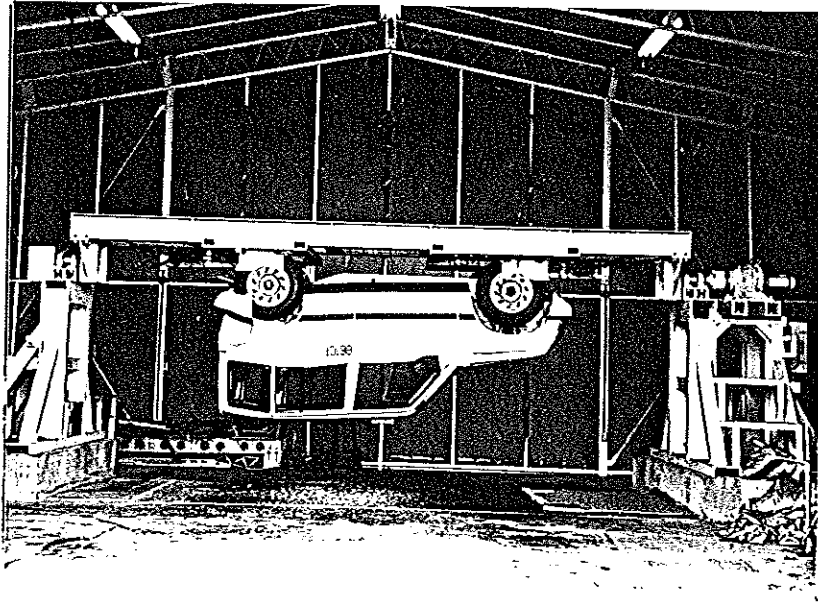
S 211112

試験後 (Post-Test)



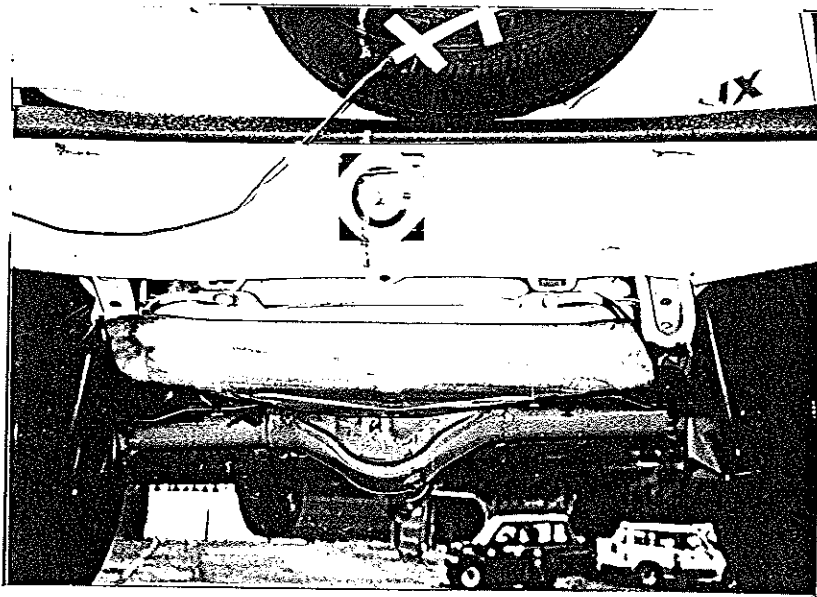
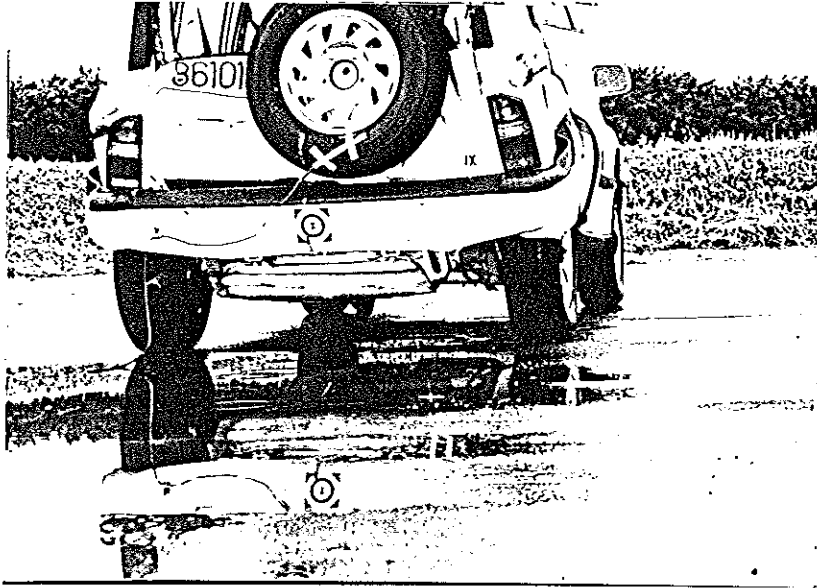
S 211113

試験後 (Post-Test)



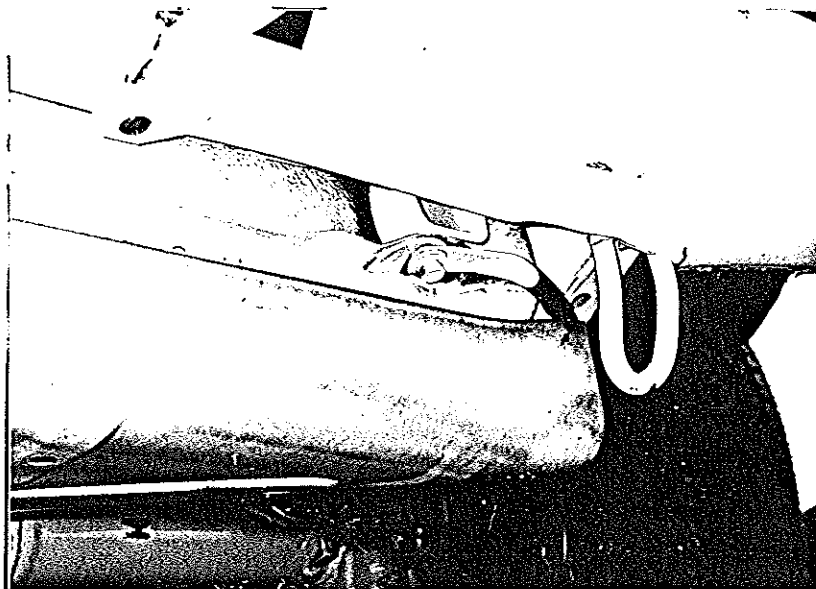
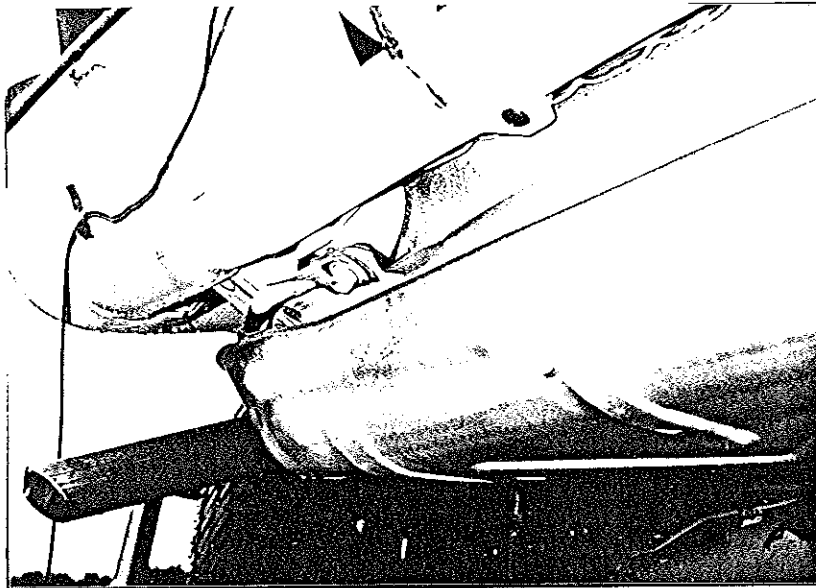
S 211114

試験後 (Post-Test)



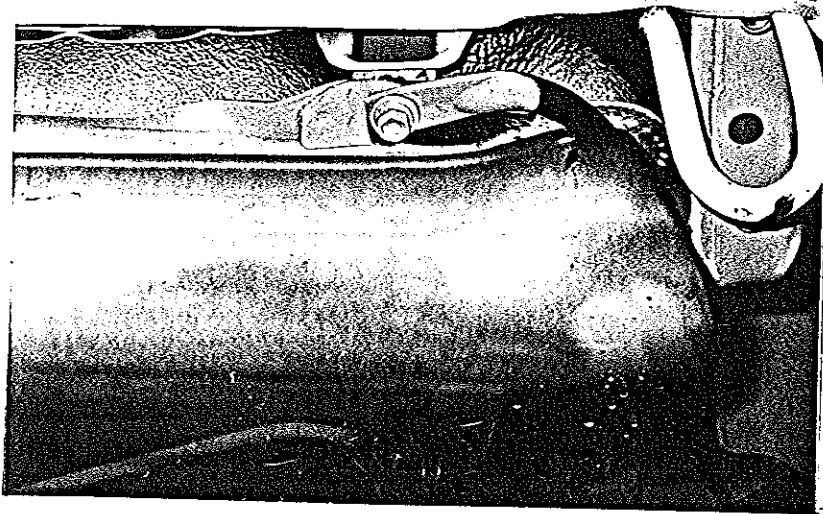
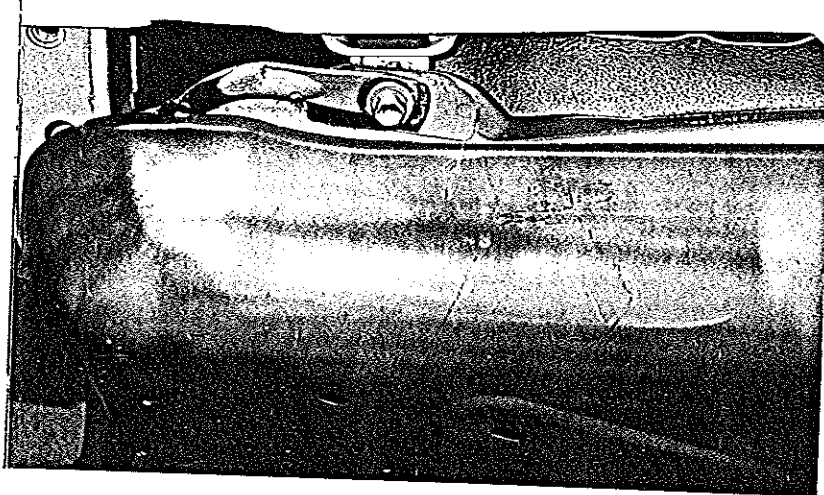
S 211115

試験後 (Post-Test)



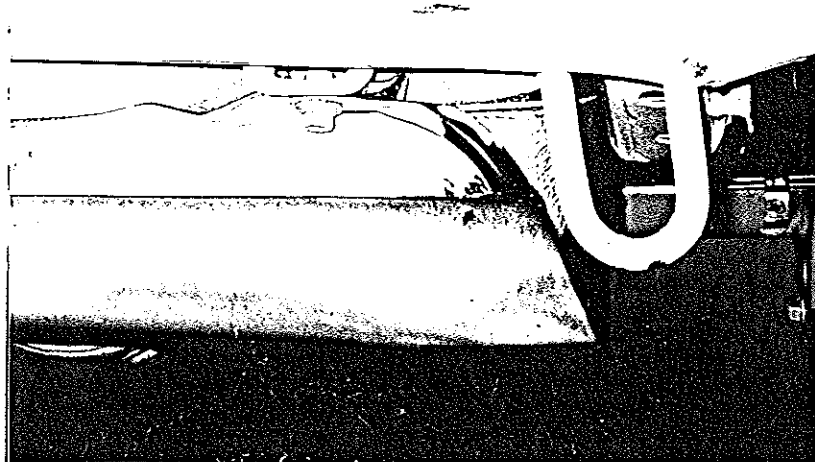
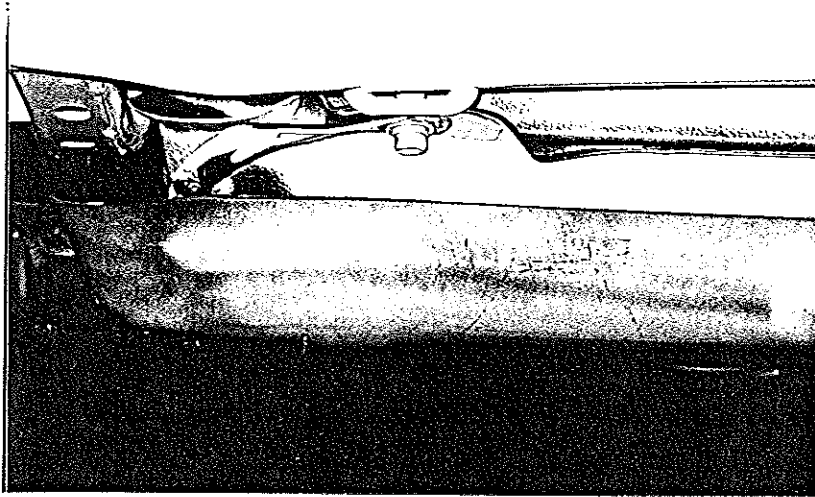
S 211116

試験後 (Post-Test)



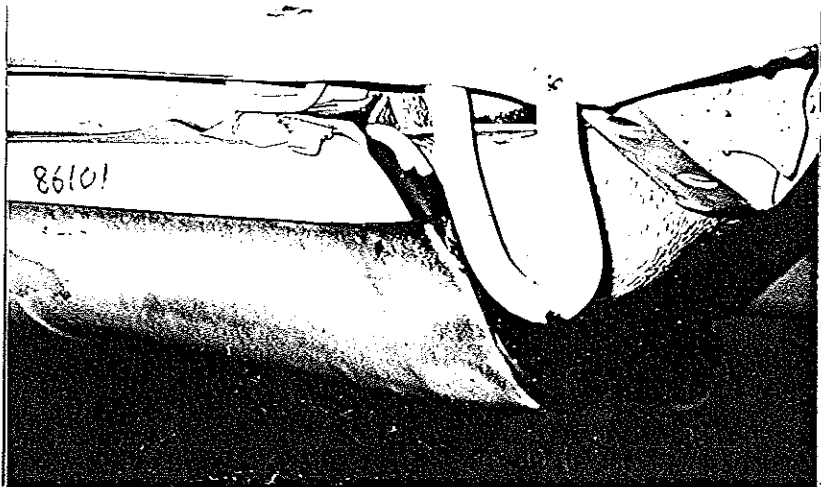
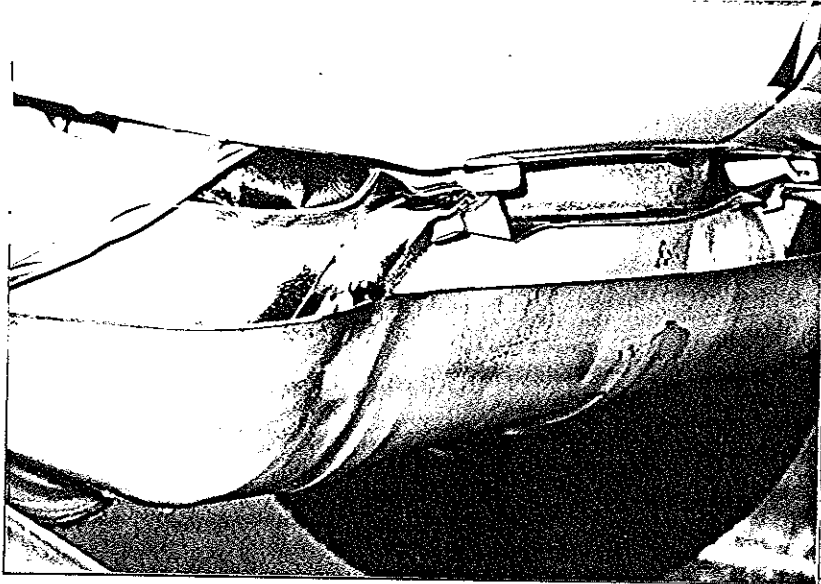
S 211117

試験後 (Post-Test)



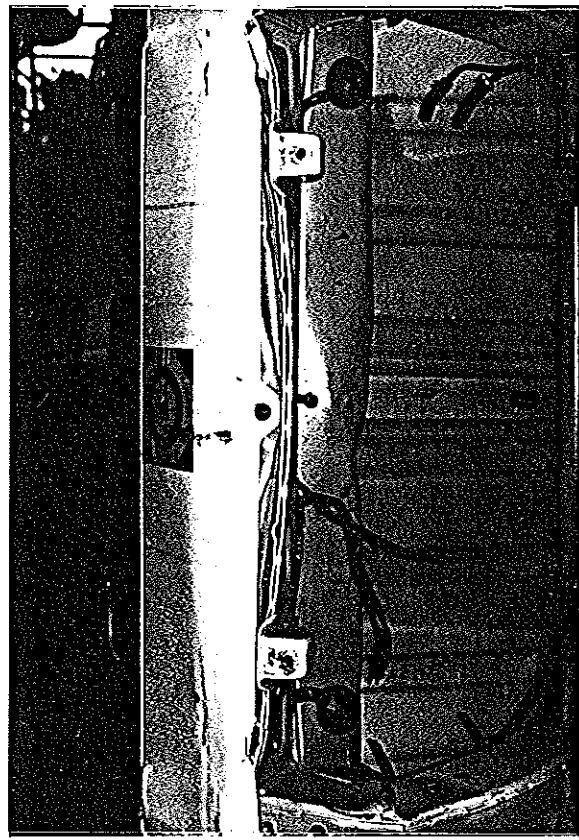
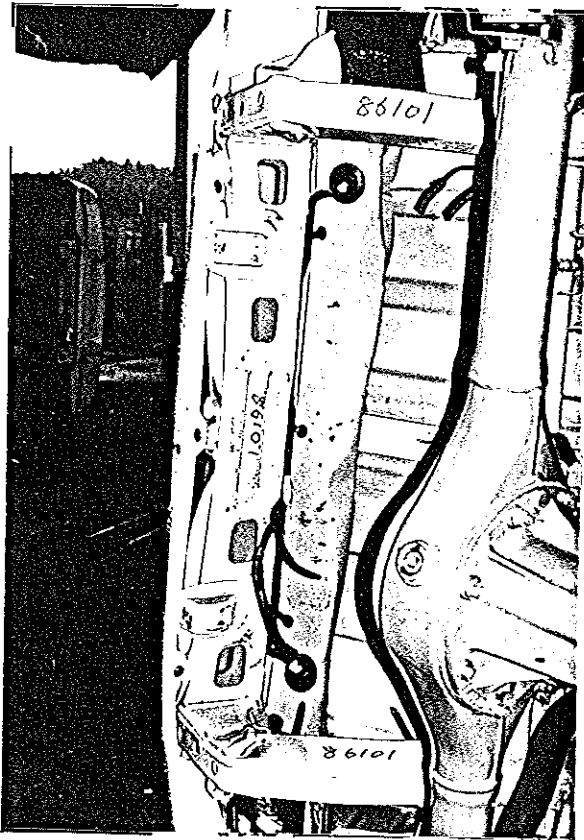


試験後 (Post-Test)

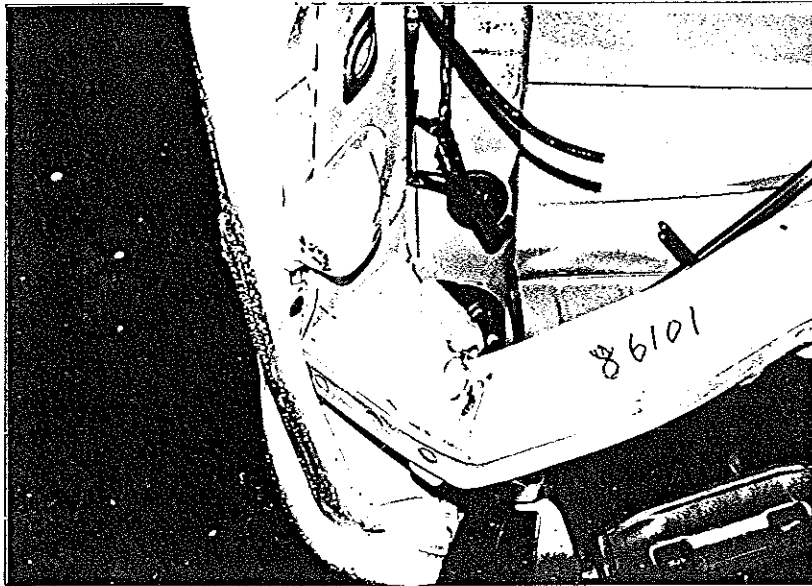
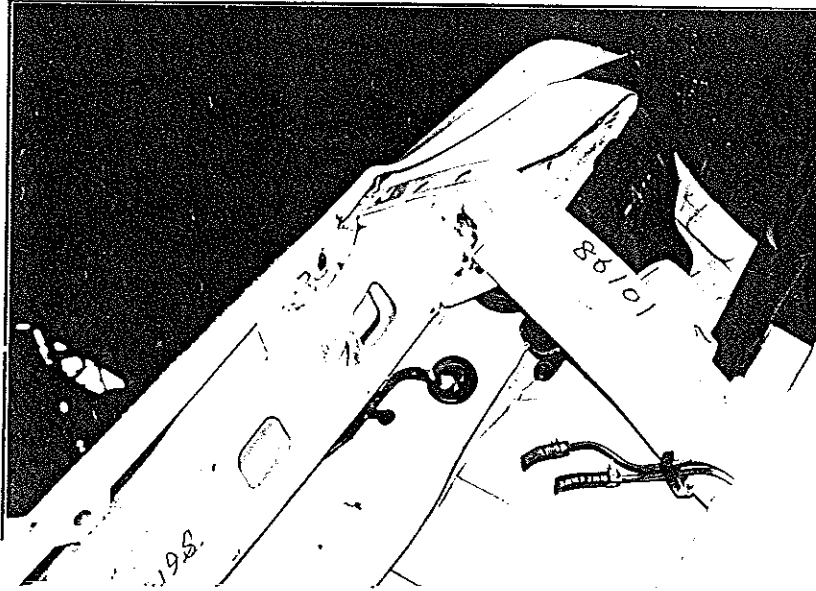


S 211119

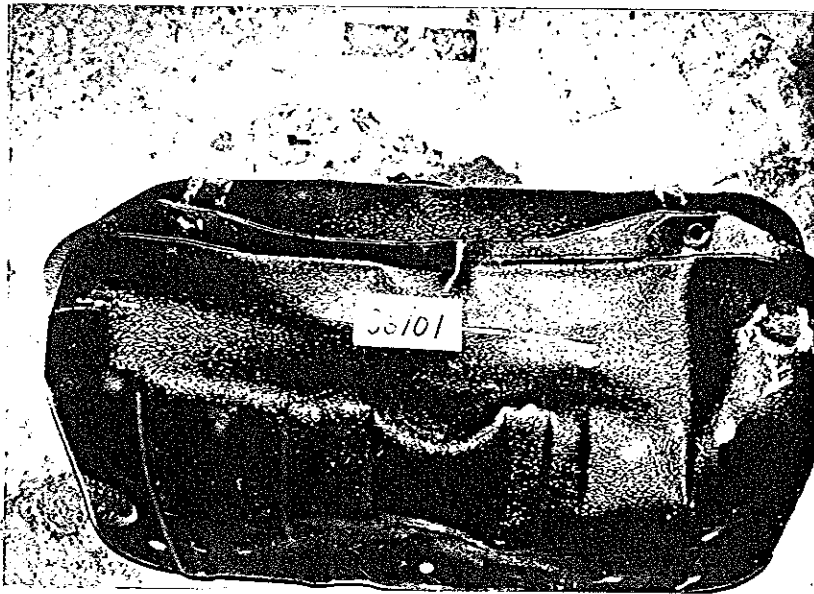
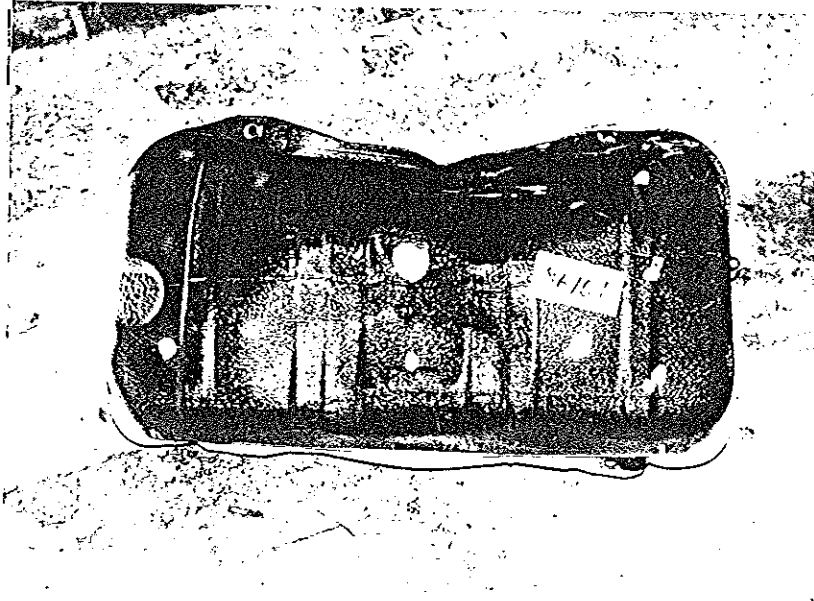
試験後 (Post-Test)



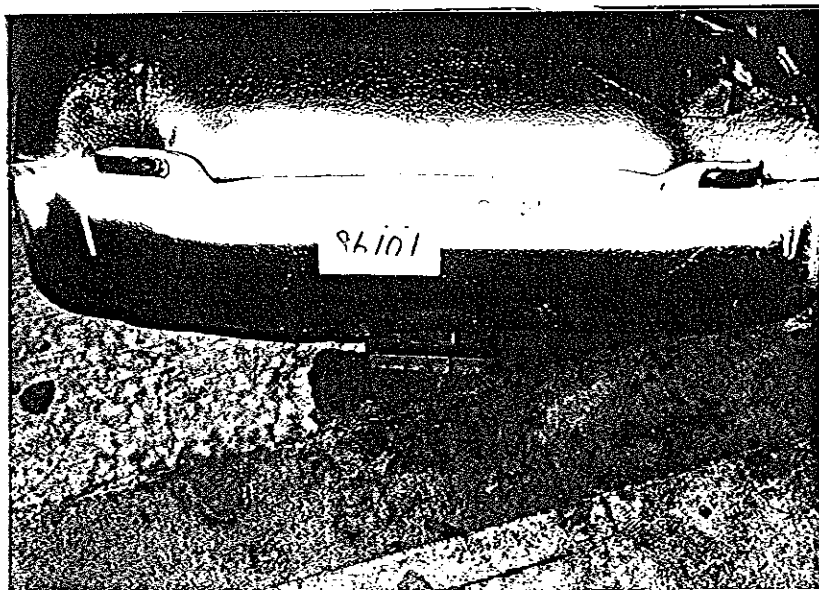
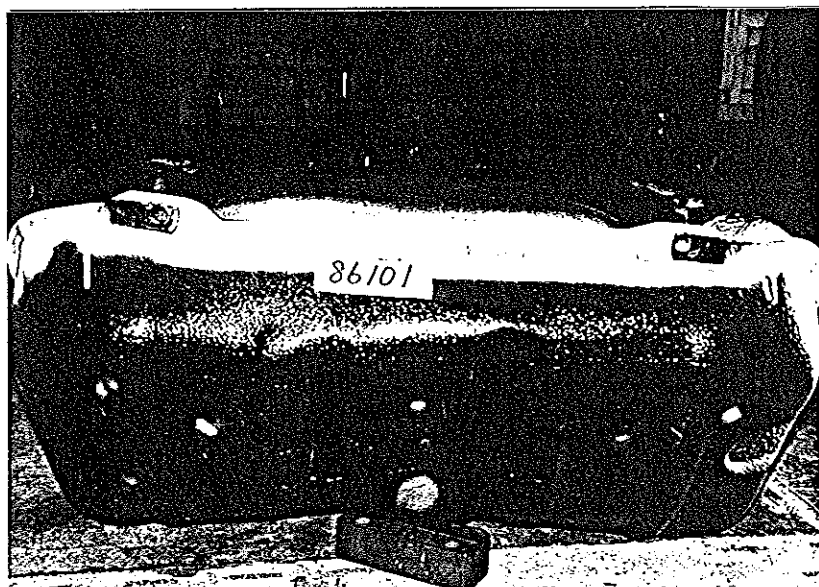
試験後 (Post-Test)



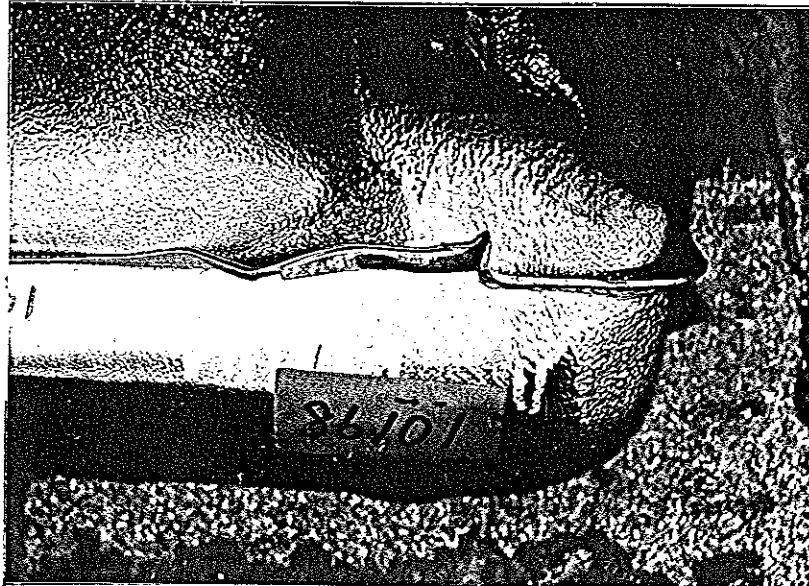
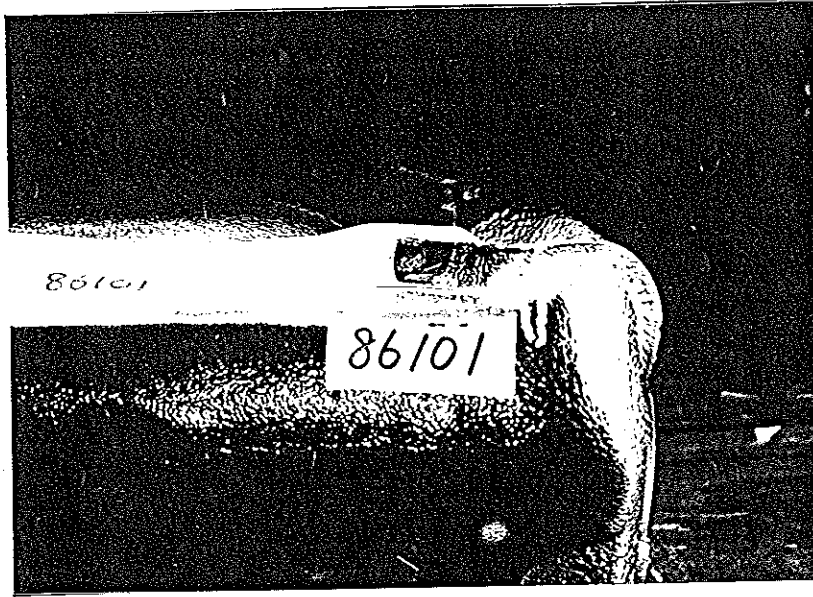
試験後 (Post-Test)



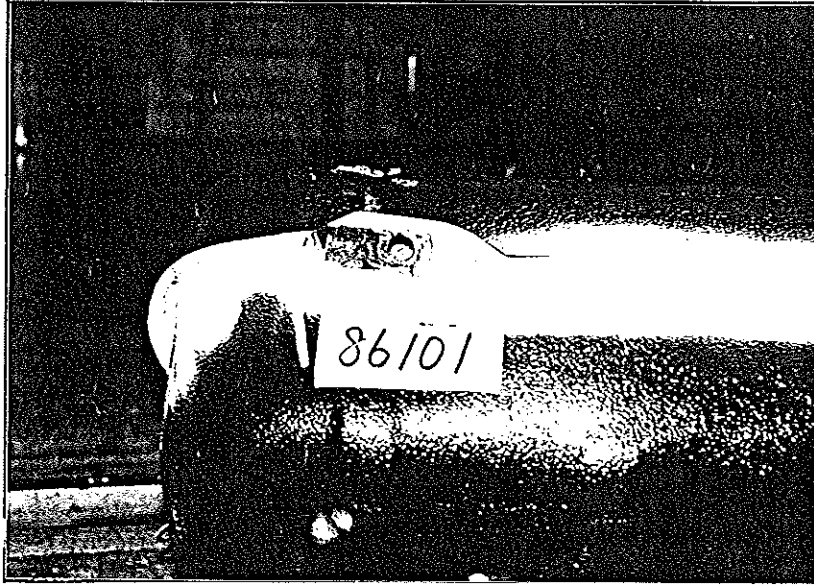
試験後 (Post-Test)



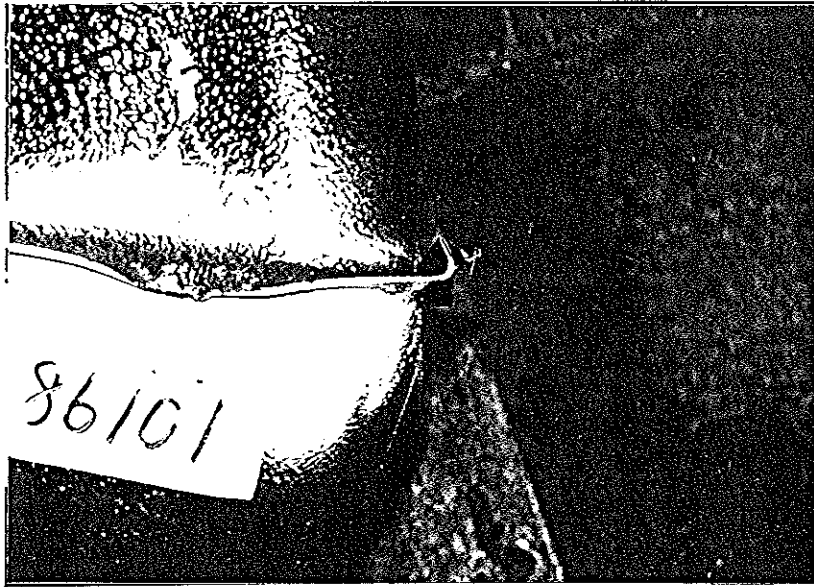
試験後 (Post-Test)



試験後 (Post-Test)



試験後 (Post-Test)





**TEST RESULT**

SUZUKI MOTOR CORPORATION

Suzuki Test Standard No. G-8816

FMVSS/CMVSS No. 301

TITLE : FUEL SYSTEM INTEGRITY

Test No. : 86-102

Test Date : 06/10/96

Vehicle : Model SIDEKICK 4door  
 Number JS3TE02V9T4100006

Body Style VAN Year 1995  
 Make Proto-Pro.

Engine : Configuration G16A Fuel Gasoline Fuel Induction Electric Pump

Fuel Tank : Usable Cap. 55.0ℓ Unusable Cap. 1.5ℓ Transmission : M/T (5 Speed)

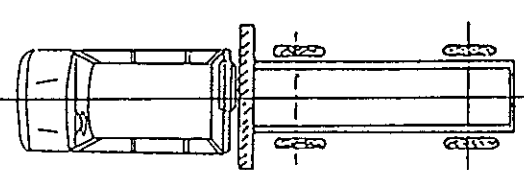
A/C : Yes  No  P/S : Yes  No  P/B : Yes  No

Impact Pattern : REAR IMPACT

Barrier Type : MOVING BARRIER

VEHICLE	
VELOCITY AT IMPACT	0.0 ( 0.0 ) km/h ( mph )
TEST MASS (INCLUDED DUMMIES)	FRONT 751.0 kg REAR 671.0 kg TOTAL 1422.0 kg
CARGO BALLAST	137 kg <input type="checkbox"/> RATED CARGO <input checked="" type="checkbox"/> LUGGAGE LOAD <input type="checkbox"/> NA <input type="checkbox"/>
FUEL TANK	CONTENTS : STODDARD SOLVENT VOLUME : 94 % OF USABLE CAPA.= 51.7 ℓ
ENGINE RUNNING	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

DUMMIES	
DRIVER	MAKE : ALDERSON NO : SNG68
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL
RIGHT FRONT	MAKE : ALDERSON NO : SNG64
	TYPE : HYBRID II MASS : 72.0 kg
	RESTRAINT : 3P MANUAL

MOVING BARRIER	1815.0 kg	NA <input type="checkbox"/>
VELOCITY AT IMPACT	54.1 ( 33.6 ) km/h ( mph )	
PERPENDICULAR IMPACT		NA <input checked="" type="checkbox"/>
LOCATION AT IMPACT	DRIVER SRP <input type="checkbox"/> A-PILLER <input type="checkbox"/>	FUEL PIPE <input type="checkbox"/> OTHER <input type="checkbox"/>
ANGLE IMPACT		NA <input checked="" type="checkbox"/>
ACUTE ANGLE	Degrees	
TEST CONFIGURATION :		
		

**S 211127**

TEST RESULT

SUZUKI MOTOR CORPORATION  
Test No. : 86-102

Test Results :

WAS FUEL SPILLAGE :		
LESS THAN 28.35 gm DURING IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING FIRST FIVE MINUTES AFTER IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING ONE MINUTE COLLECTION PERIODS AFTER IMPACT ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 141.75 gm DURING STATIC ROLLOVER FIVE MINUTES COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>
LESS THAN 28.35 gm DURING STATIC ROLLOVER ONE MINUTE COLLECTION PERIODS ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/> SEE REVERSE SIDE <input type="checkbox"/>

Test Data :



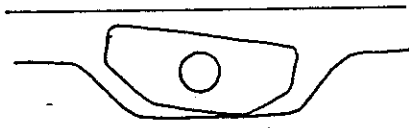
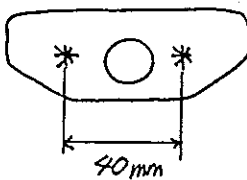
FUEL SPILLAGE BARRIER IMPACT SITE		
DURING IMPACT: 0.0 gm		DURING FIRST FIVE MINUTES AFTER IMPACT: 0.0 gm
DURING THE ONE COLLECTION PERIODS	( 5 TO 30 MINUTES AFTER IMPACT ) :	0.0 gm

FUEL SPILLAGE DURING STATIC ROLLOVER				
ROLLOVER DIRECTION : POSITIVE <input type="checkbox"/> NEGATIVE <input type="checkbox"/> BOTH <input checked="" type="checkbox"/>				
ROLLOVER RATE-APPROXIMATELY 2 MINUTES PER 90° INCREMENT				
ROLLOVER DATE : 06.10.96				
		FUEL SPILLAGE BY MASS		
ROLLOVER INCREMENTS		FUEL 5 MINUTES OF ROLLOVER INCREMENT	FOR NEXT MINUTE	FOR NEXT MINUTE
Positive Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm
Negative Direction	0° ~ 90°	0.0 gm	0.0 gm	0.0 gm
	90° ~ 180°	0.0 gm	0.0 gm	0.0 gm
	180° ~ 270°	0.0 gm	0.0 gm	0.0 gm
	270° ~ 360°	0.0 gm	0.0 gm	0.0 gm

**S 211128**

TEST NO. 86-102

1. TEST CONDITION

VEHICLE		IWATA 95HY 4DOOR 2WD																	
FUEL TANK		IWATA																	
FUEL TANK BRACKET																			
G U S S E T	CONFIGURATION																		
	GUSSET ORIENTATION																		
	SPOT WELDING PITCH																		
WEATHER & TEMPERATURE		RAIN 18 °C																	
TEST VEHICLE WEIGHT WITHOUT DUMMY (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>336.0</td> <td>314.0</td> <td>650.0</td> </tr> <tr> <td>RIGHT</td> <td>329.0</td> <td>299.0</td> <td>628.0</td> </tr> <tr> <td>TOTAL</td> <td>665.0</td> <td>613.0</td> <td>1278.0</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	336.0	314.0	650.0	RIGHT	329.0	299.0	628.0	TOTAL	665.0	613.0	1278.0
	FRONT	REAR	TOTAL																
LEFT	336.0	314.0	650.0																
RIGHT	329.0	299.0	628.0																
TOTAL	665.0	613.0	1278.0																
TEST VEHICLE WEIGHT WITH TWO DUMMIES (KG)		<table border="1"> <thead> <tr> <th></th> <th>FRONT</th> <th>REAR</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>370.0</td> <td>346.0</td> <td>716.0</td> </tr> <tr> <td>RIGHT</td> <td>381.0</td> <td>325.0</td> <td>706.0</td> </tr> <tr> <td>TOTAL</td> <td>751.0</td> <td>671.0</td> <td>1422.0</td> </tr> </tbody> </table>			FRONT	REAR	TOTAL	LEFT	370.0	346.0	716.0	RIGHT	381.0	325.0	706.0	TOTAL	751.0	671.0	1422.0
	FRONT	REAR	TOTAL																
LEFT	370.0	346.0	716.0																
RIGHT	381.0	325.0	706.0																
TOTAL	751.0	671.0	1422.0																

S 211129

1. TEST CONDITION (CONTINUED)

86102

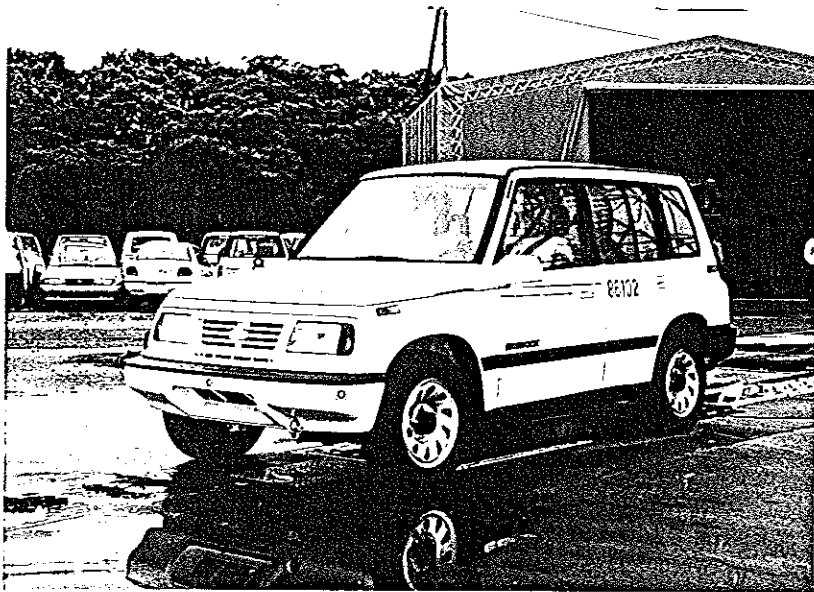
TRIM HEIGHT (MM)		FRONT	REAR
	LEFT	728	748
	RIGHT	737	753
TRANSMISSION POSITION	Neutral		
TRANSFER POSITION	—		

2. POST-TEST CONDITION

TEST SPEED	54.1 km/h	
DEVIATION OF MOVING BARRIER	25mm Left	
VEHICLE DEFORMATION (MM)	LEFT	324
	CENTER	338
	RIGHT	329
PROPELLER SHAFT	Separated	
FUEL TANK DEFORMATION SPECIFY if there is any portion where may cause fuel leakage	None	

S 211130

試験前 (Pre-Test)

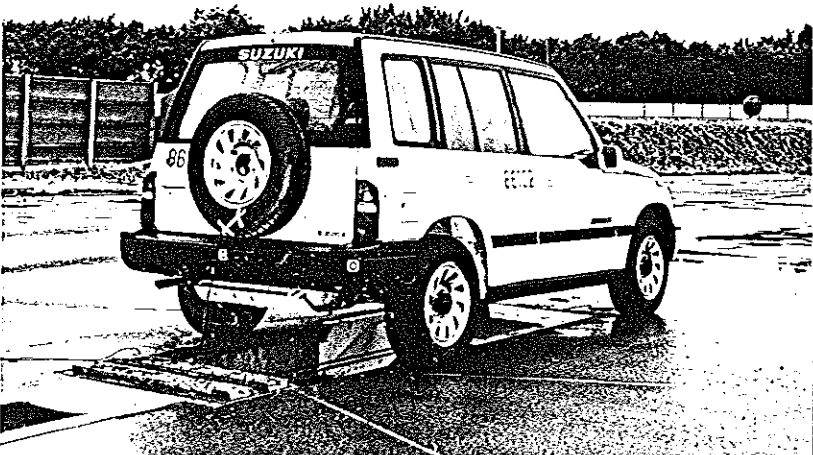
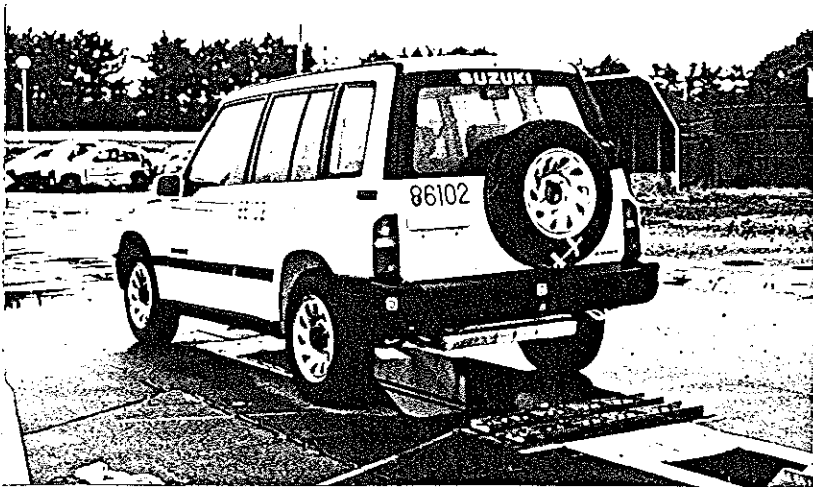


S 211131

試験前 (Pre-Test)

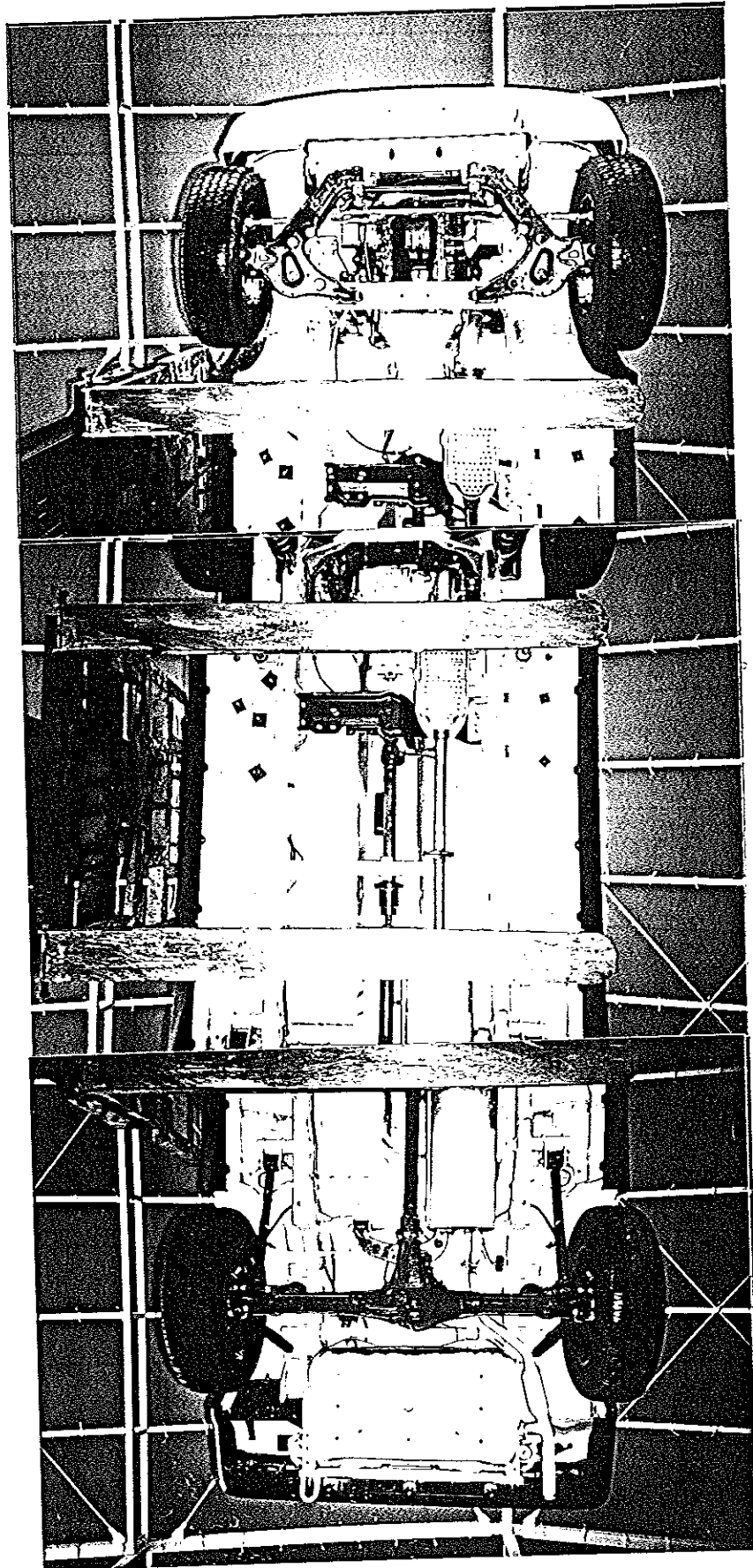


試験前 (Pre-Test)



S 211133

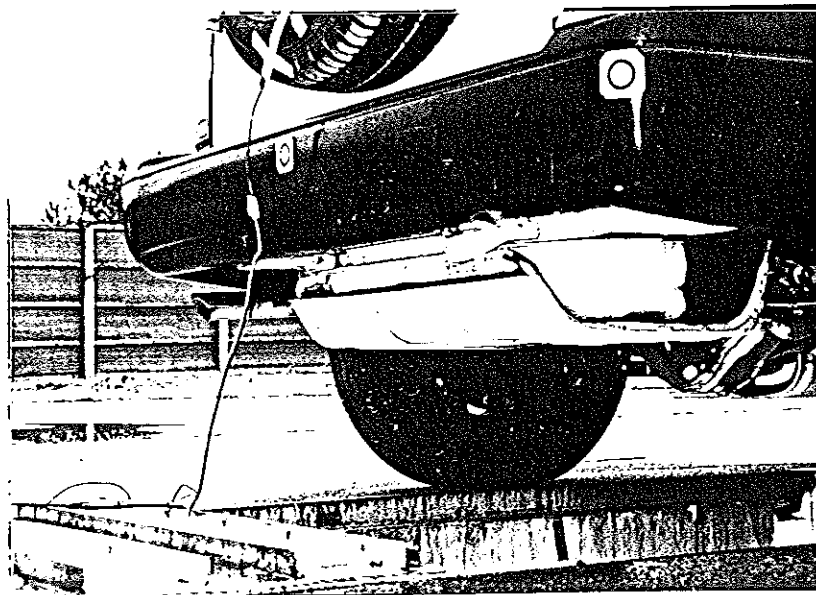
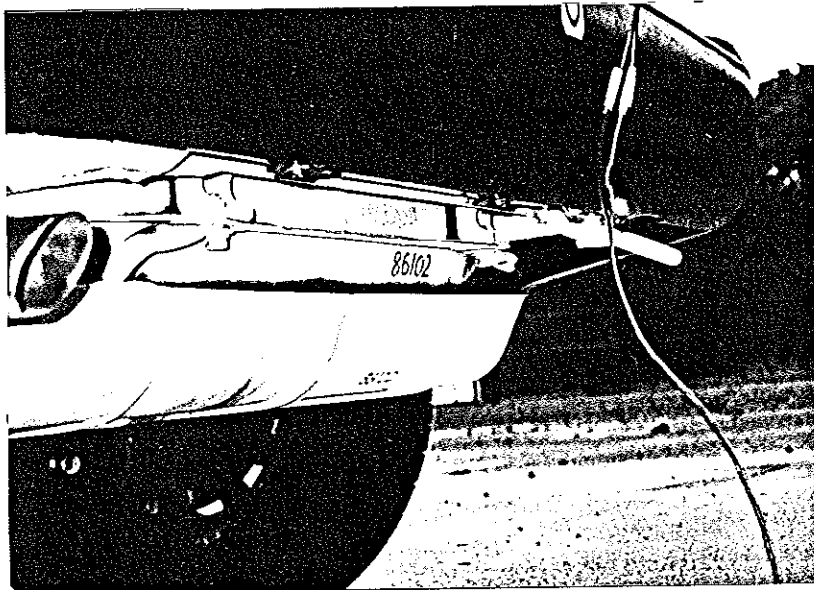
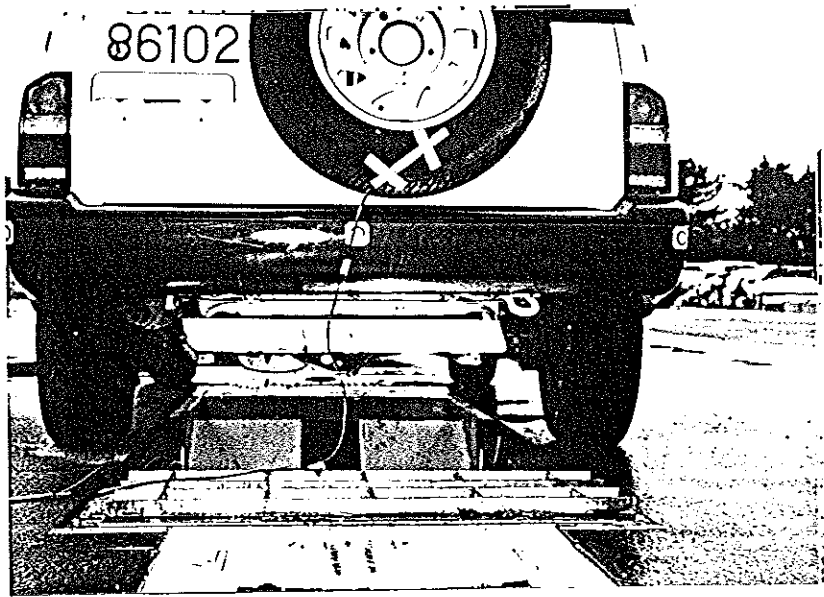
試験前 (Pre-Test)



S 211134

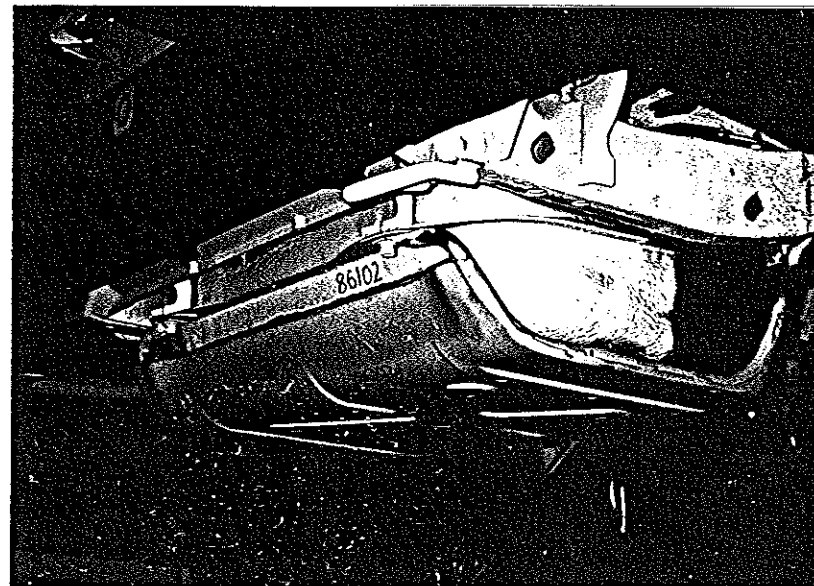
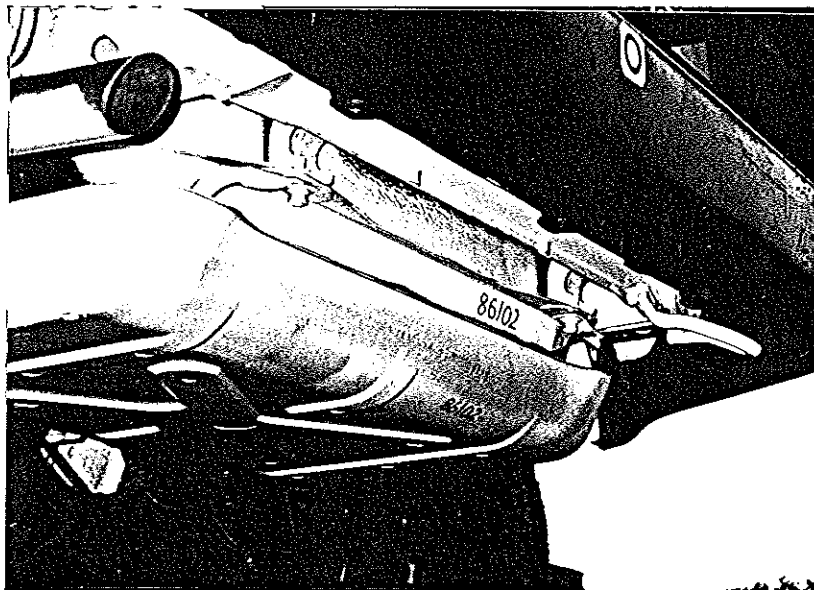
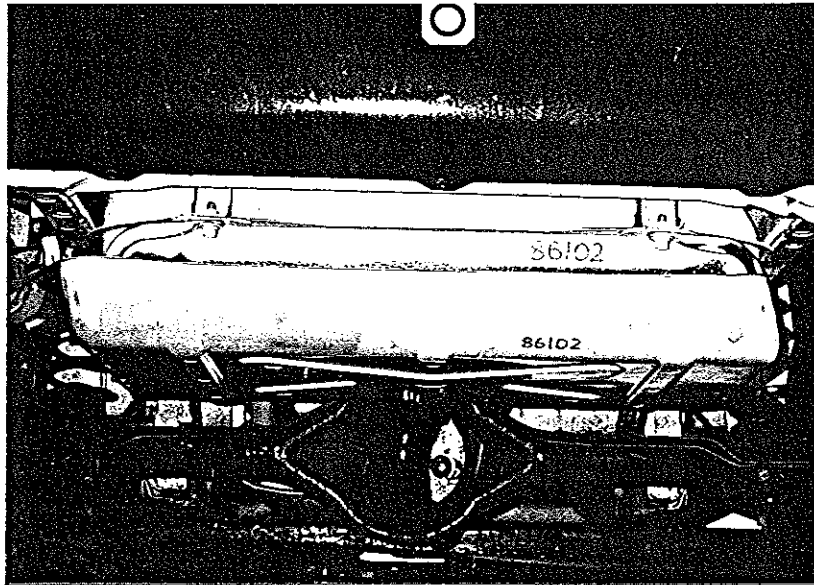


試験前 (Pre-Test)



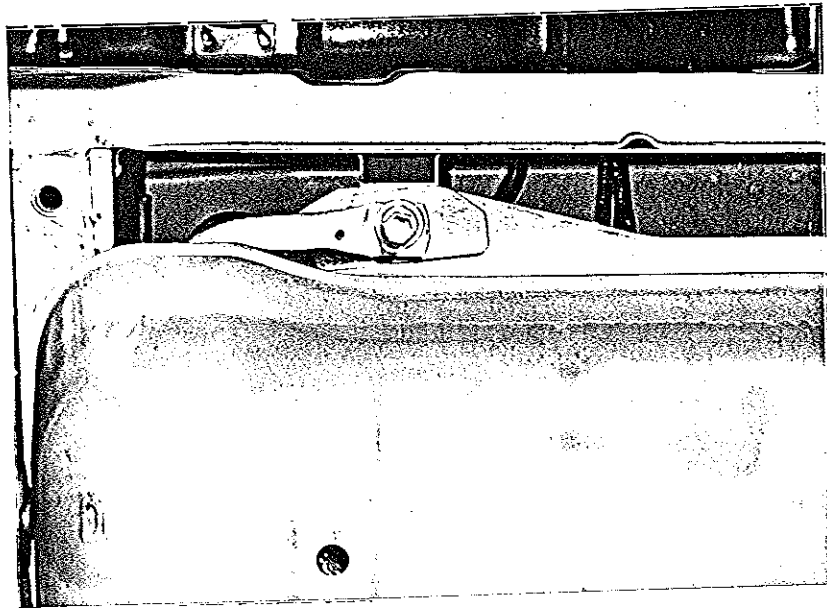
S 211135

試験前 (Pre-Test)



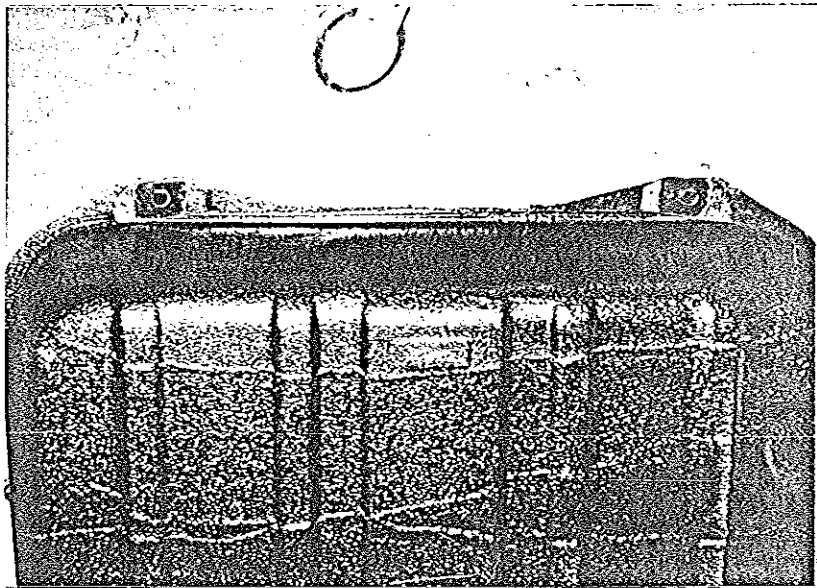
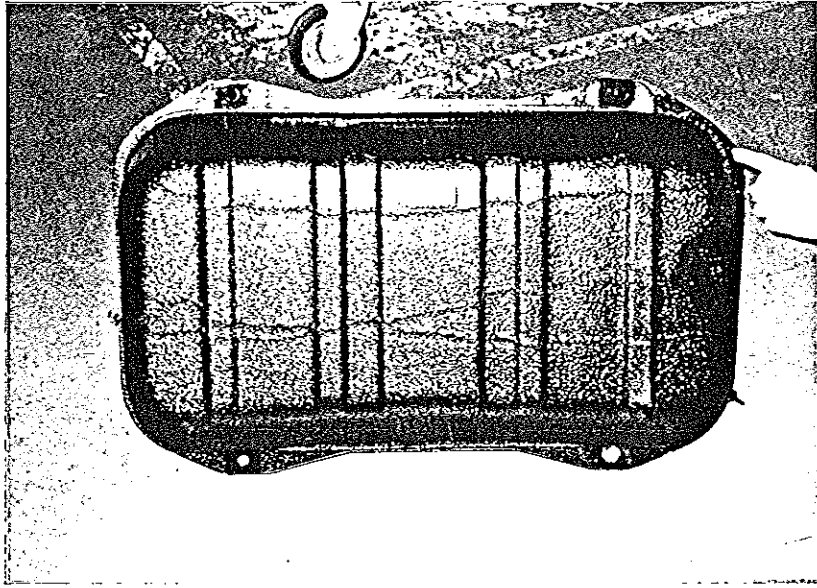
S 211136

試験前 (Pre-Test)

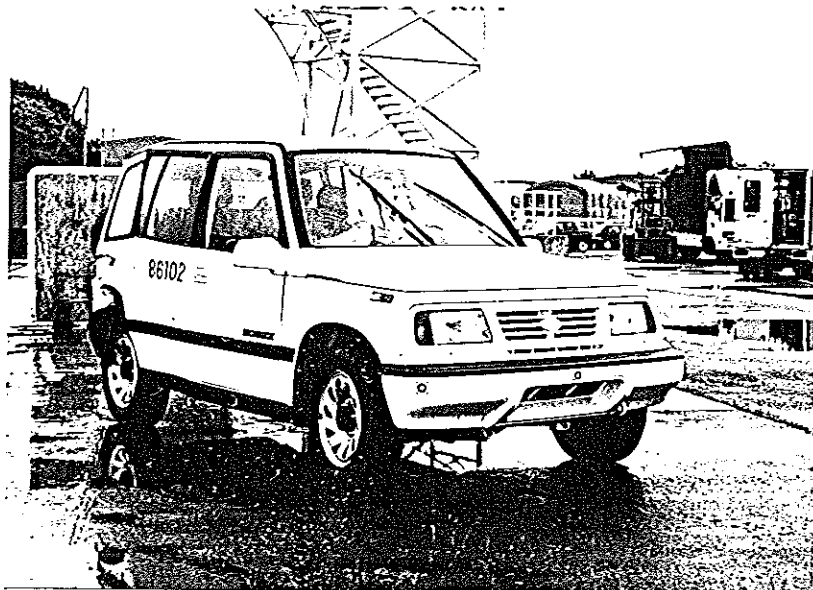


S 211137

試験前 (Pre-Test)

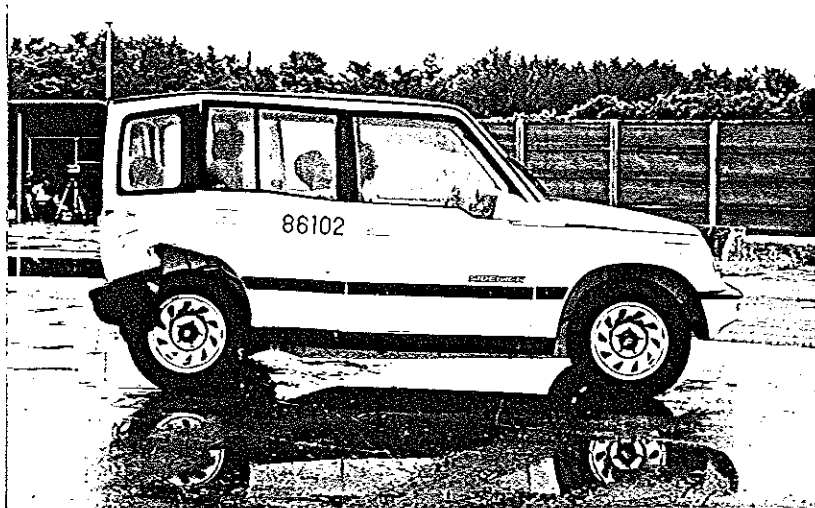
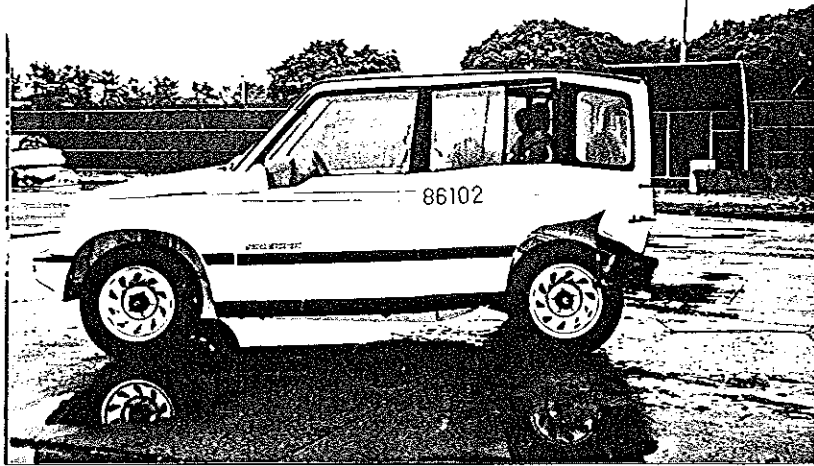


試験後 (Post-Test)



S 211139

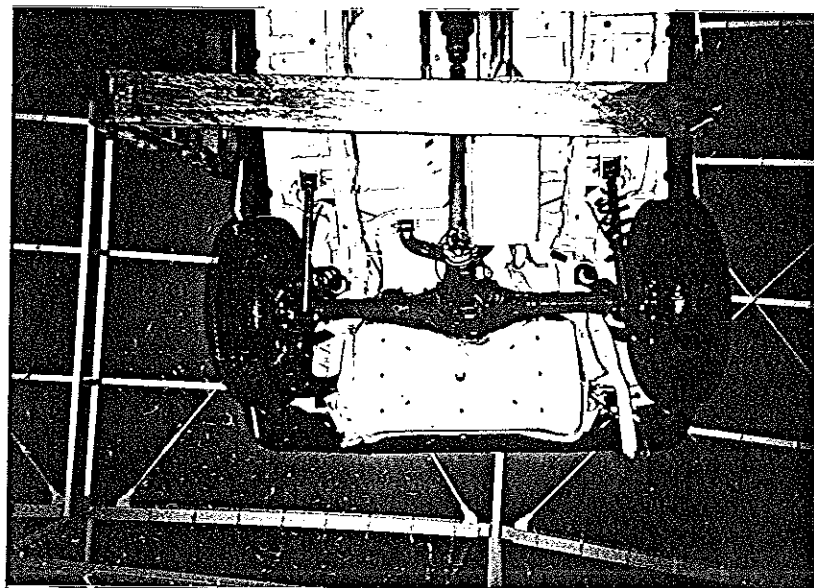
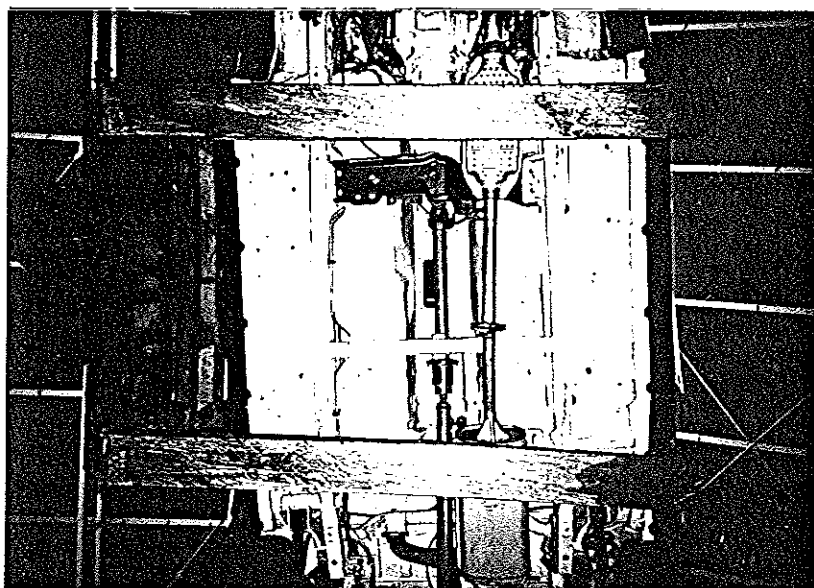
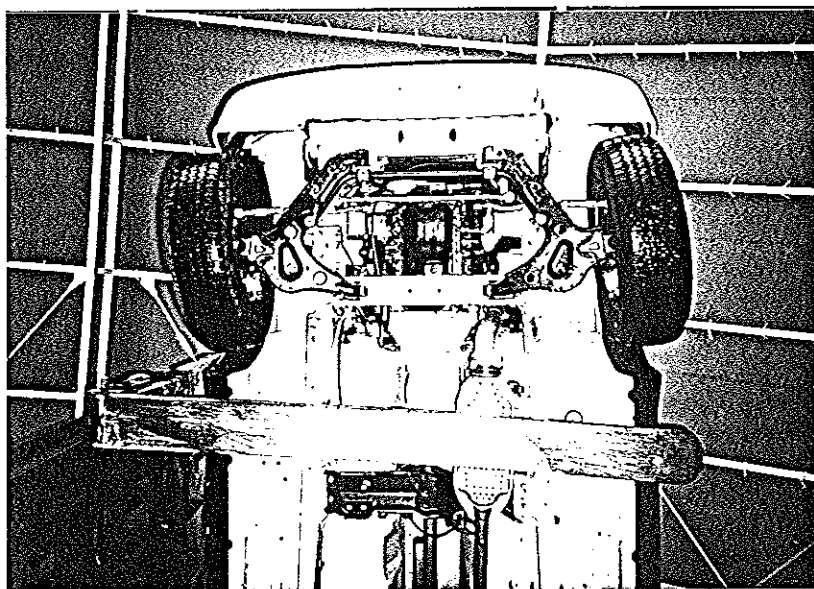
試験後 (Post-Test)



試験後 (Post-Test)

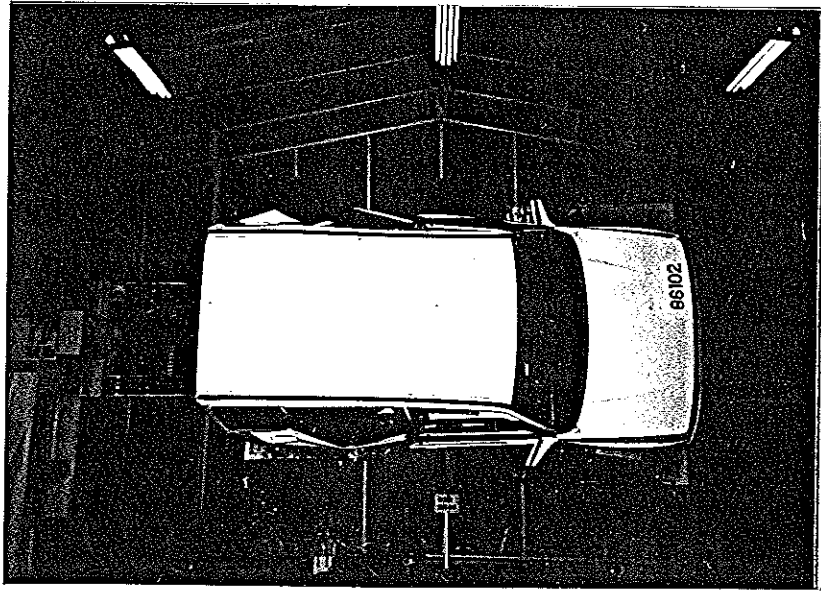
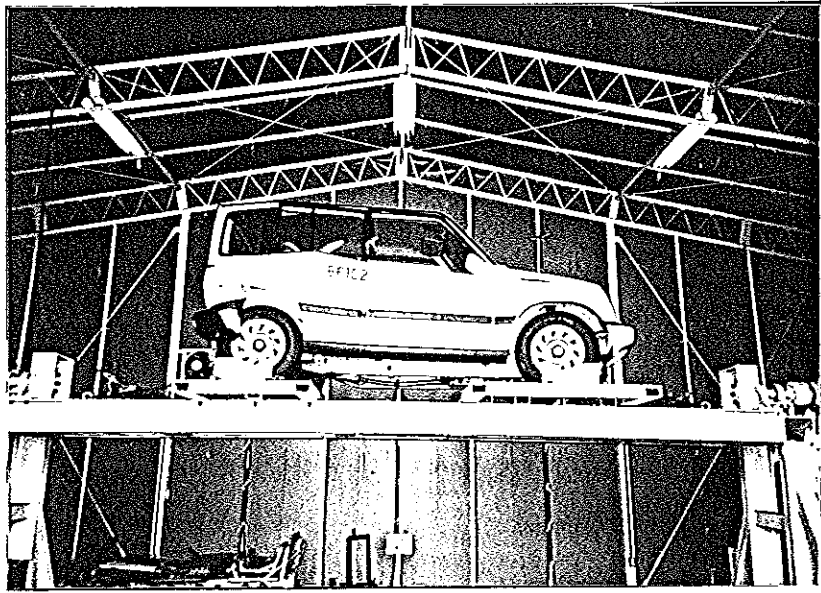


試験後 (Post-Test)

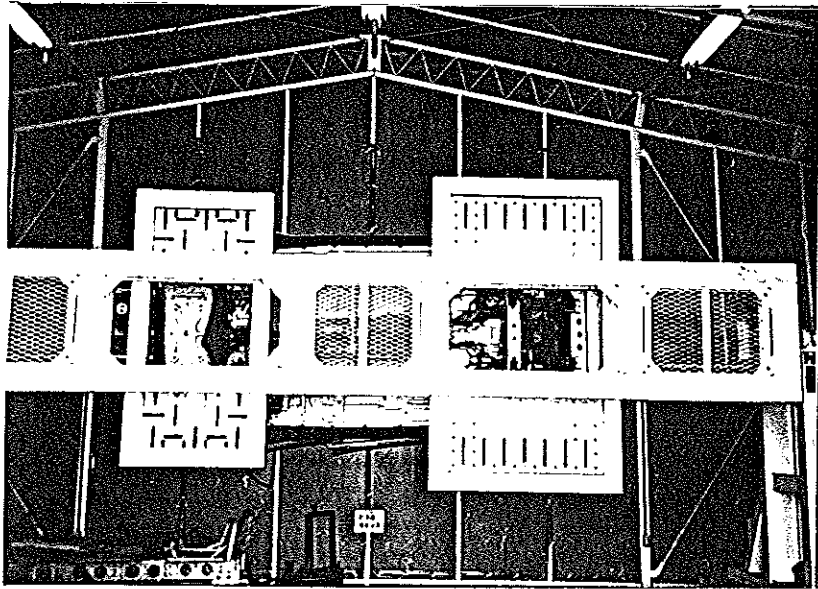
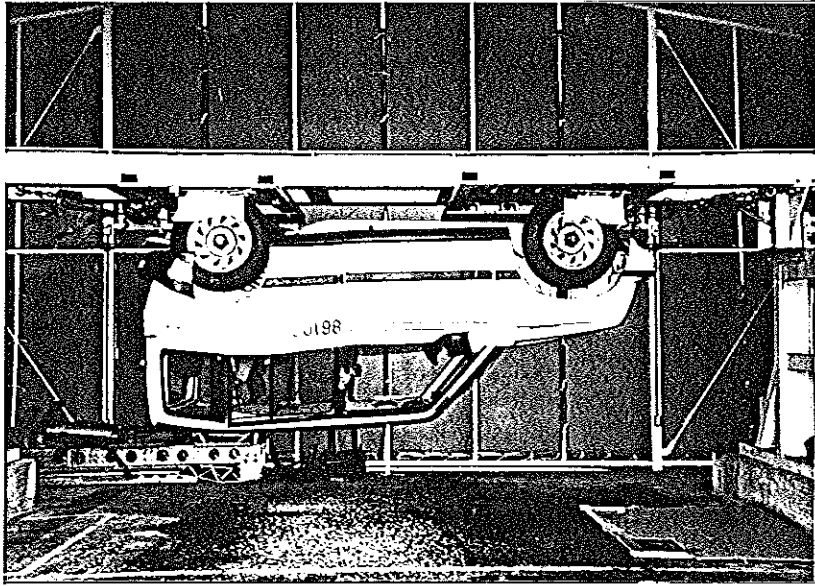




試験後 (Post-Test)

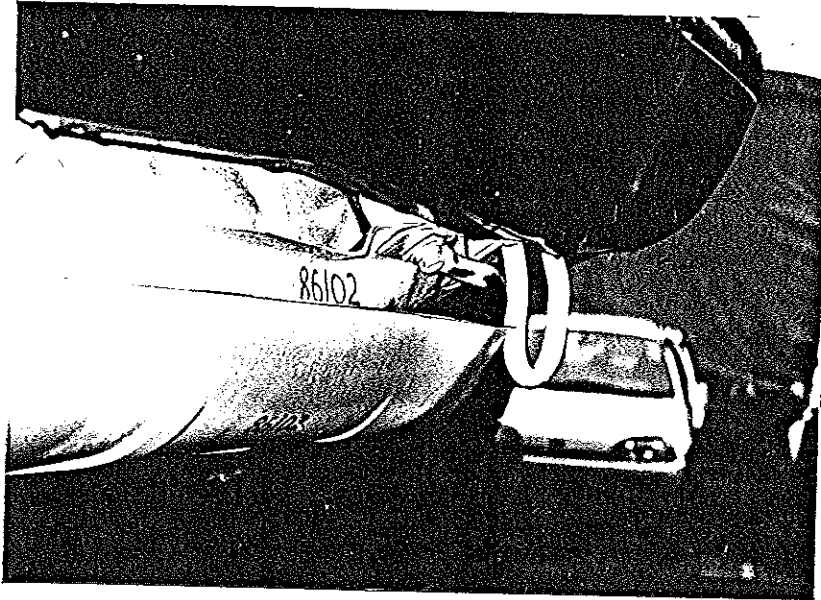
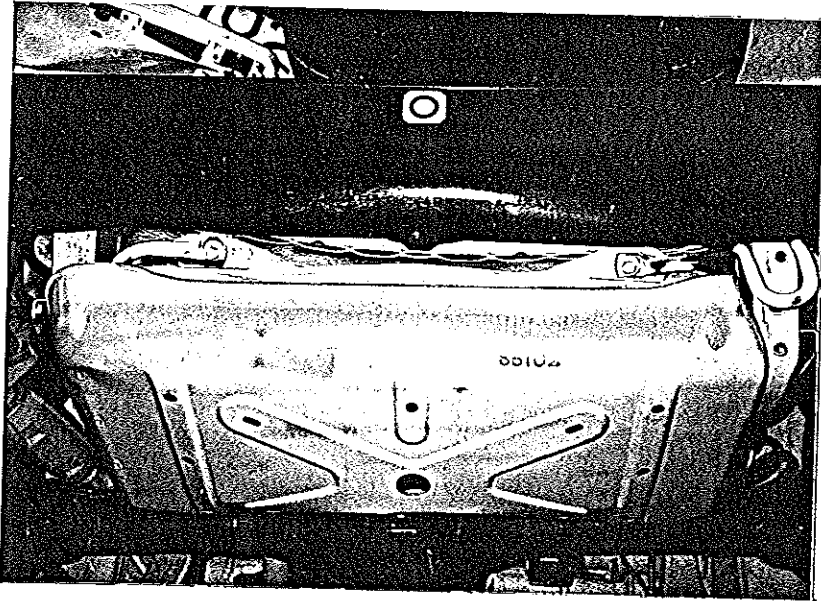


試験後 (Post-Test)



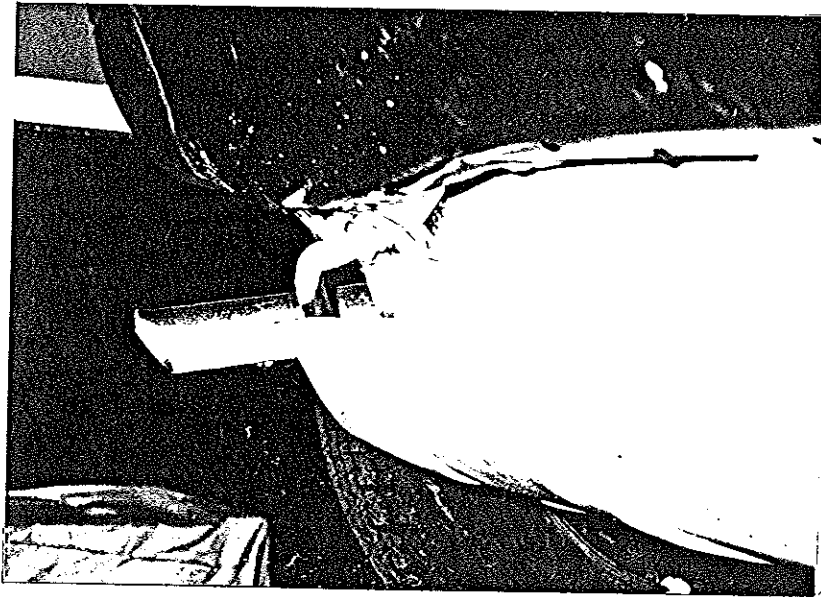
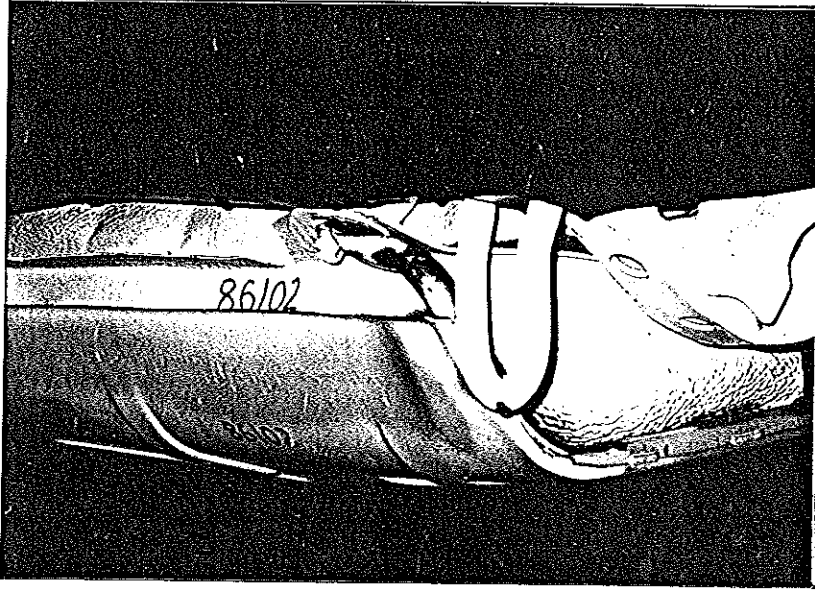
S 211144

試験後 (Post-Test)



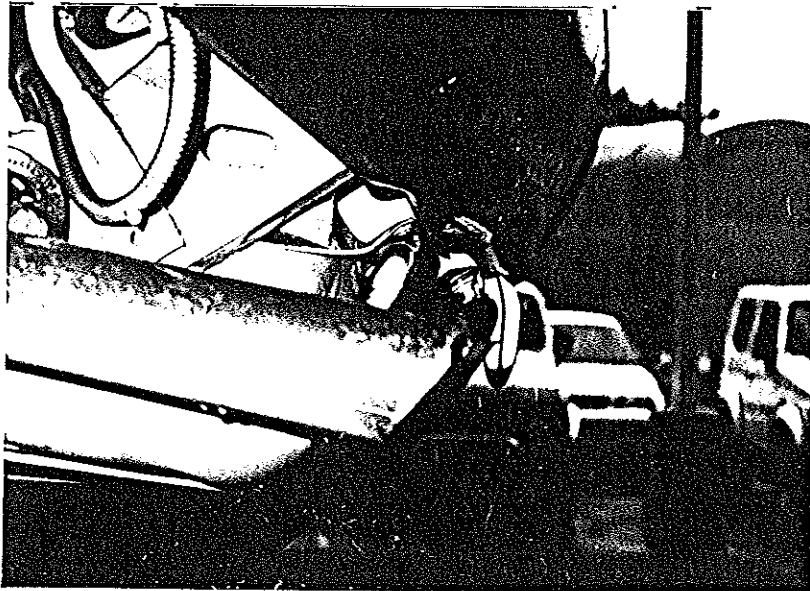
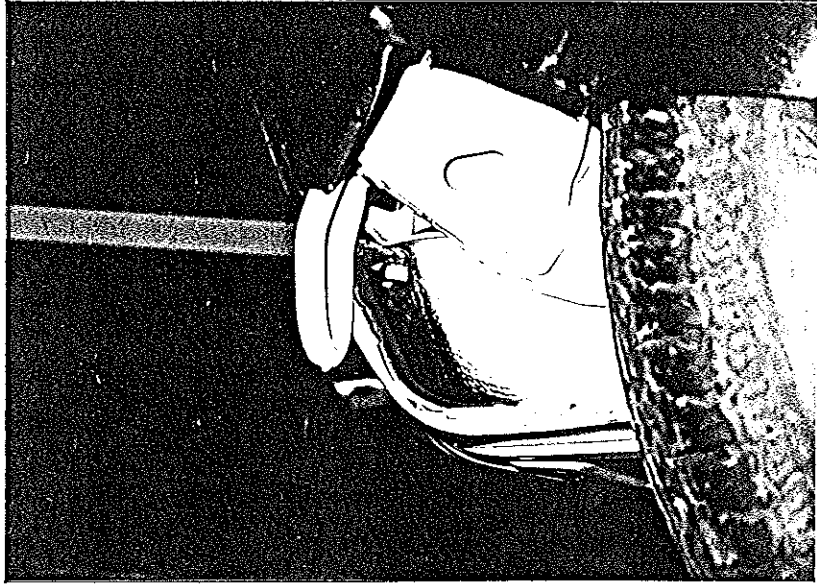
S 211145

試験後 (Post-Test)

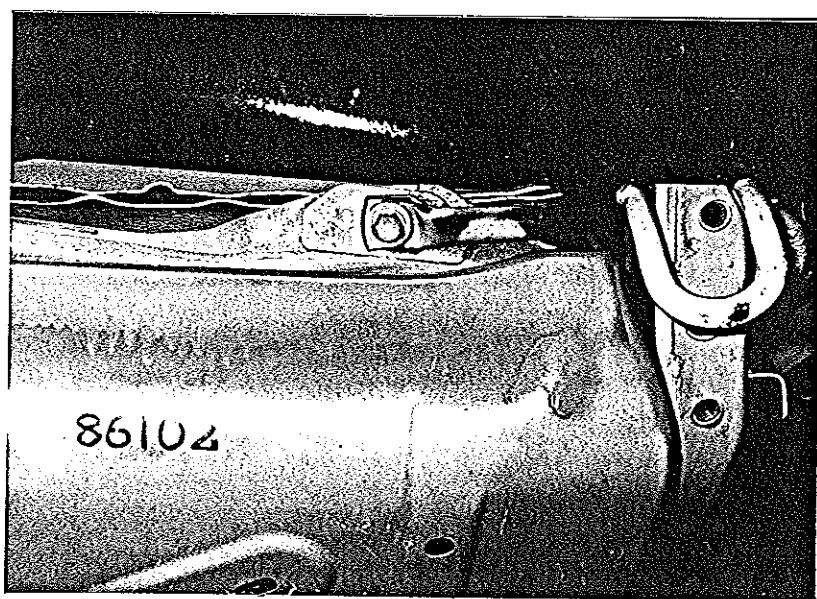
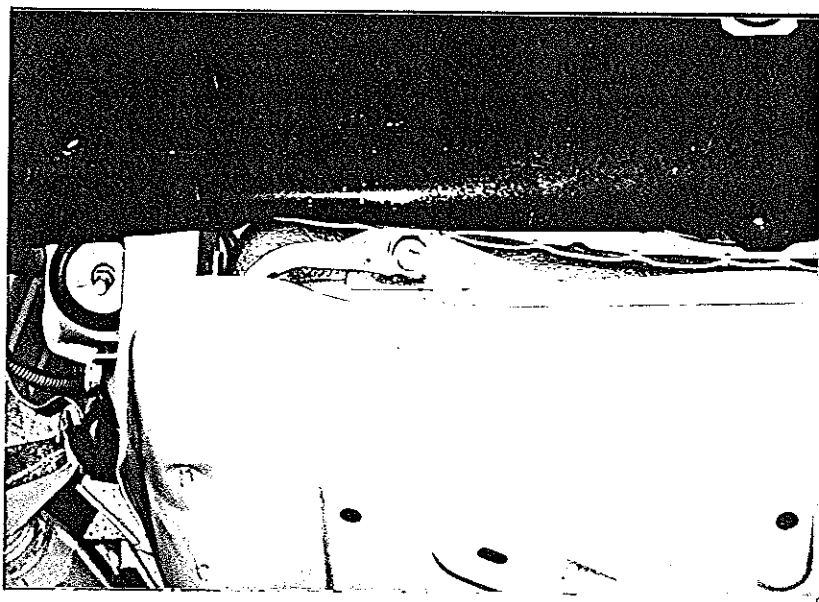


S 211146

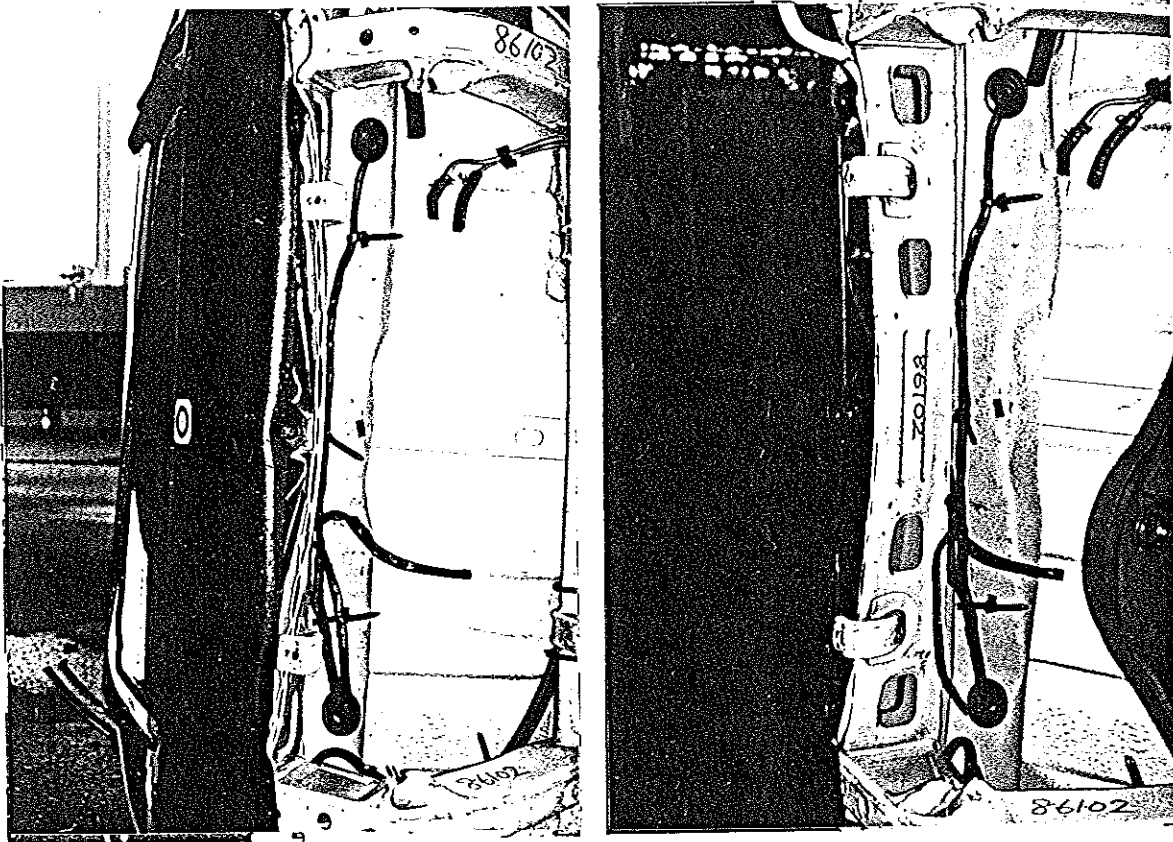
試験後 (Post-Test)



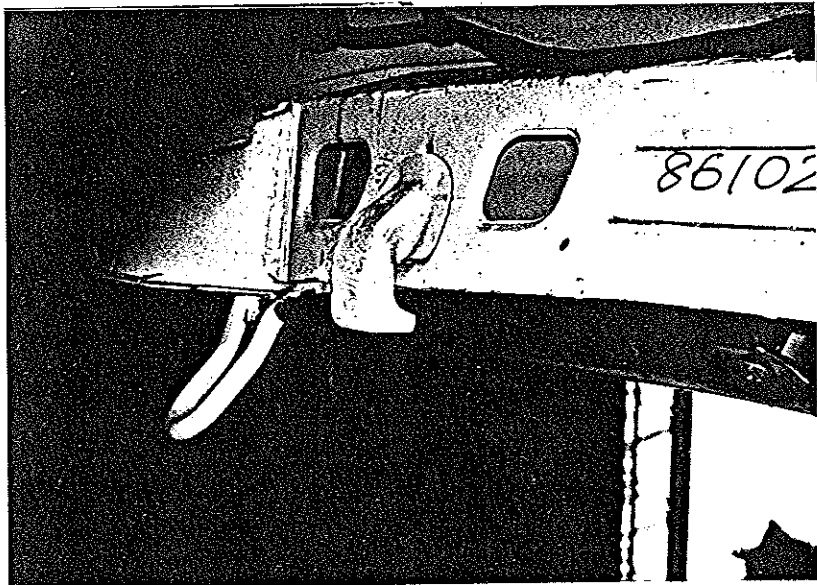
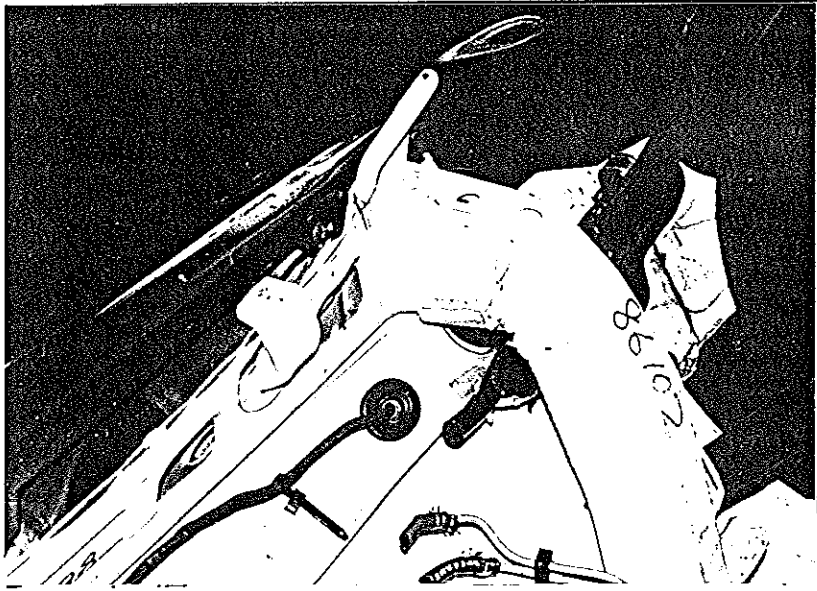
試験後 (Post-Test)



試験後 (Post-Test)



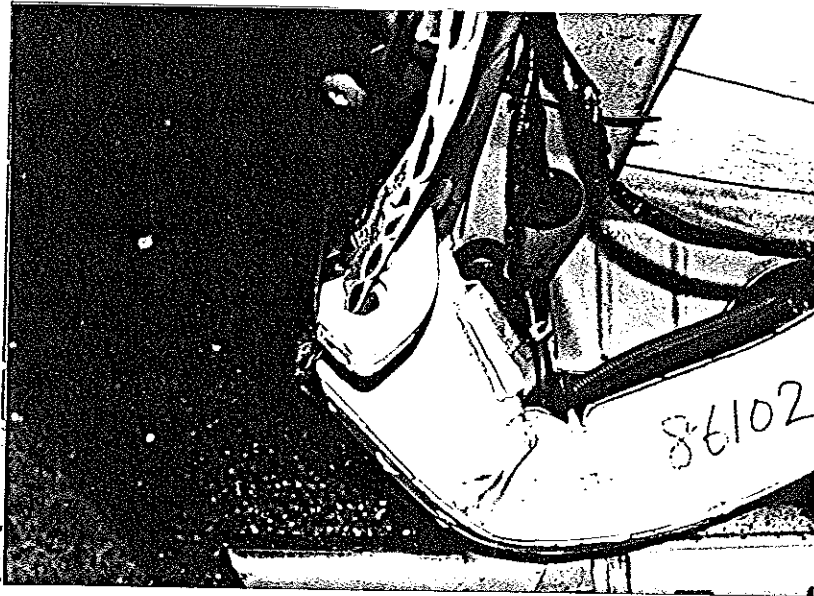
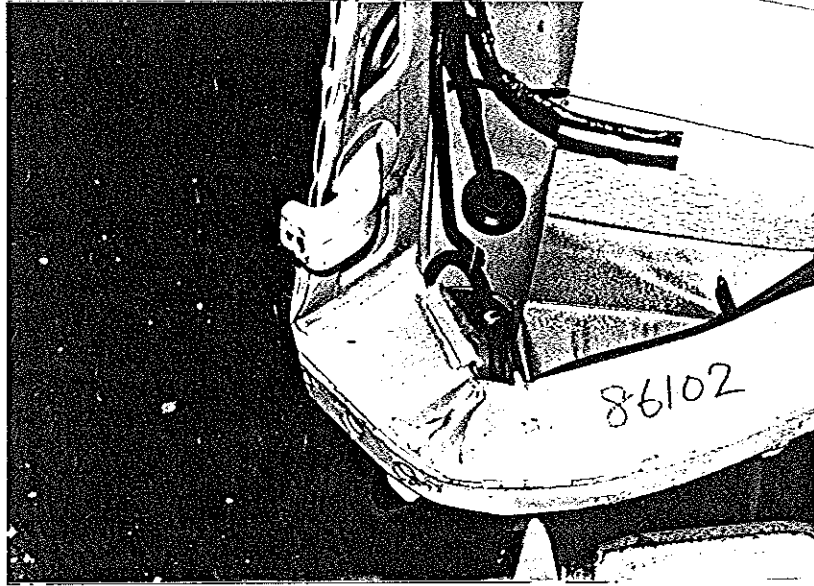
試験後 (Post-Test)



S 211150

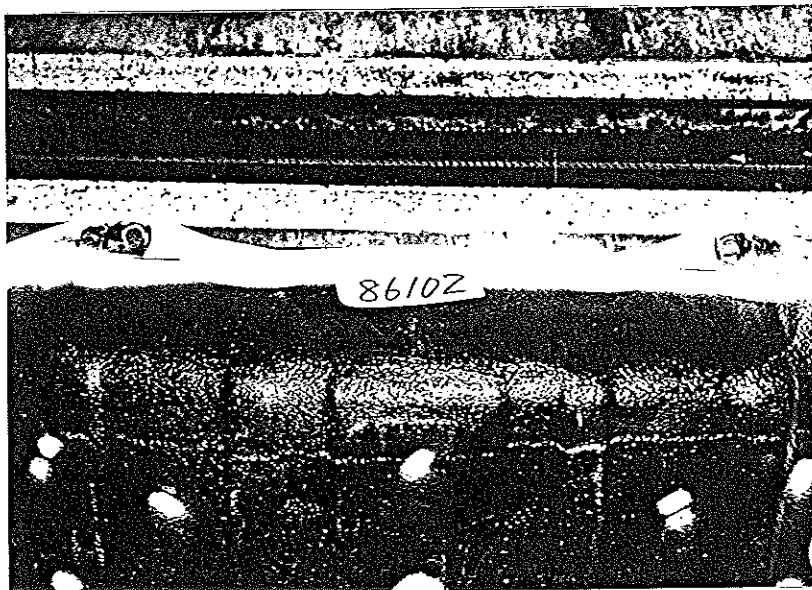
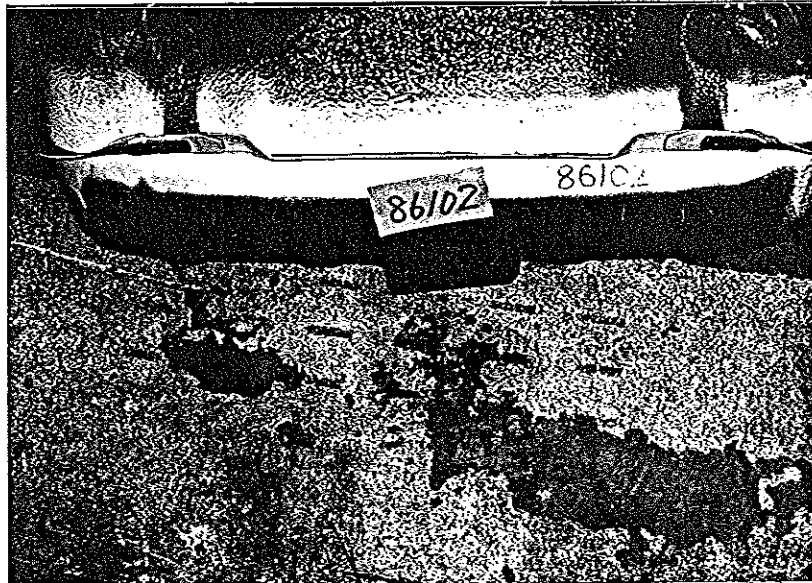
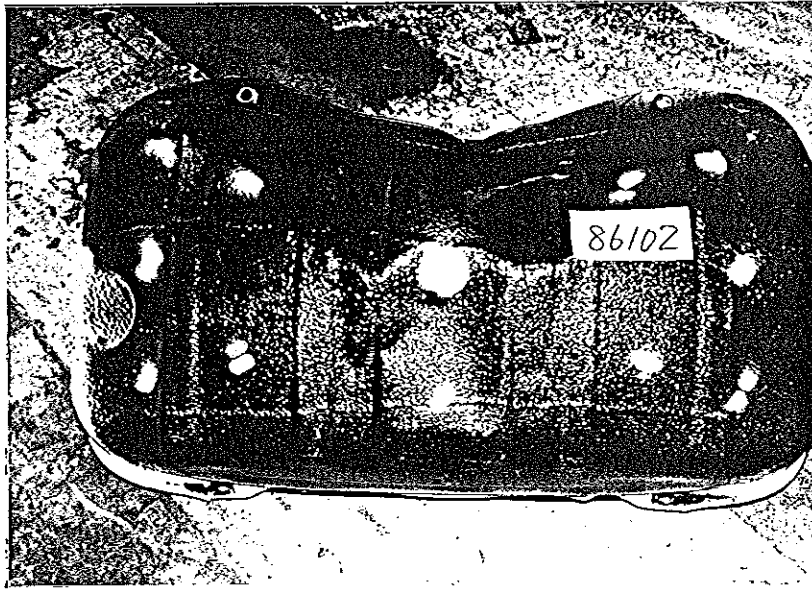


試験後 (Post-Test)



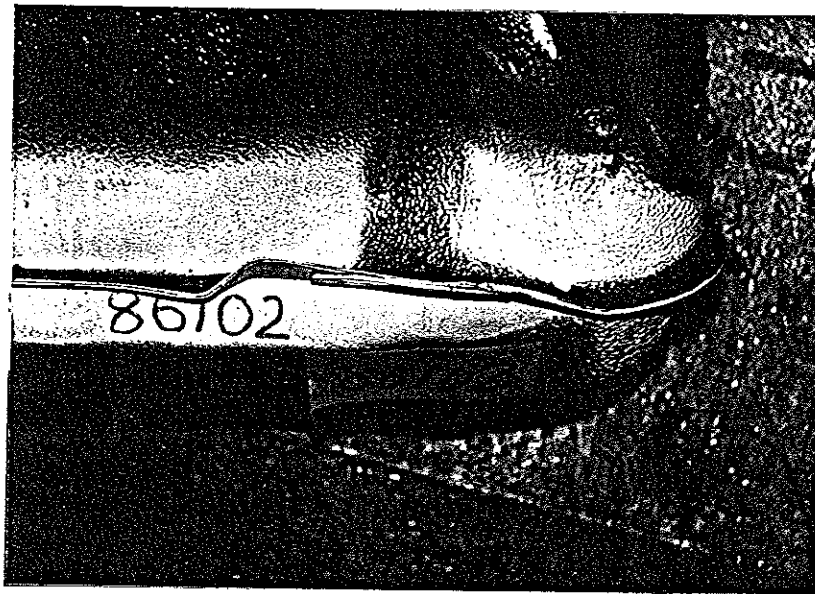
S 211151

試験後 (Post-Test)



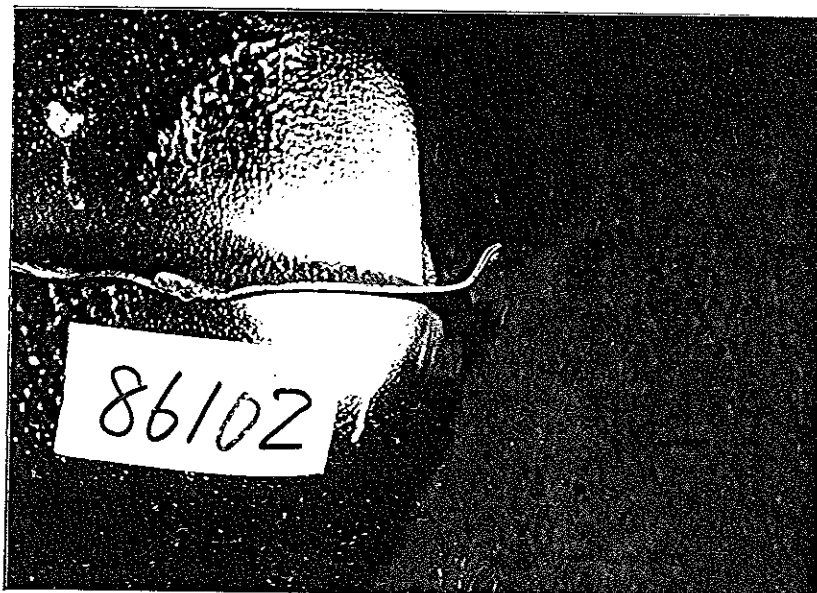
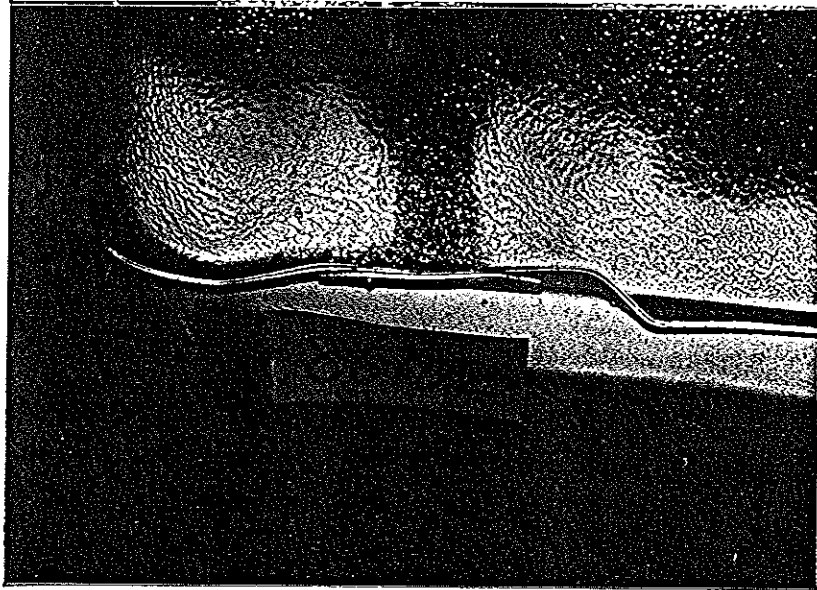
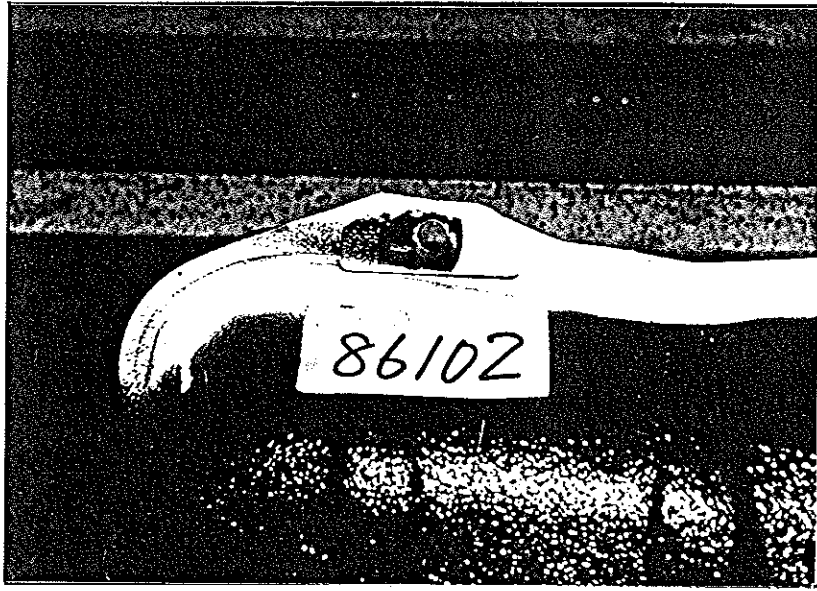
S 211152

試験後 (Post-Test)



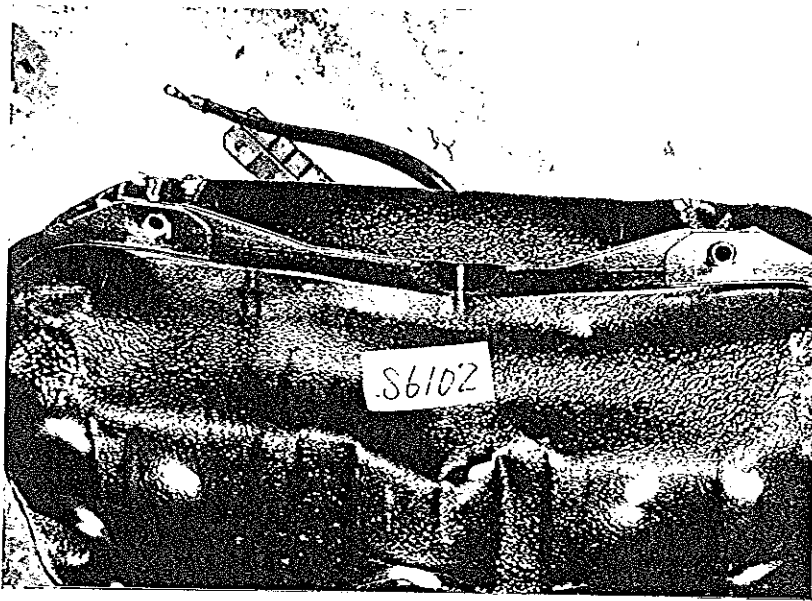
S 211153

試験後 (Post-Test)



S 211154

試験後 (Post-Test)



S 211155