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Longitudinal Acceleration Tests of Overhead Luggage Bins and Auxiliary Fuel Tank in a Transport Airplane Airframe Section

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16. Abstract

This report contains the description and test results of overhead stowage bin calibrations and longitudinal impact testing of a 10-foot transport airframe section conducted at the Transportation Research Center Inc. (TRC). The purpose of the tests was to measure the structural responses and interaction between the fuselage, overhead stowage bins, and auxiliary fuel tank under simulated, potentially survivable, crash conditions.

A 10-foot section from a Boeing 737, Model 200 was used as the test section. The overhead stowage bin connection supports were instrumented with strain gages and calibrated. Two types of overhead storage bins were installed in the transport airframe and pulled in a longitudinal direction at various known loads to monitor and record the strain gage outputs.

The transport airframe was longitudinally impact tested using TRC's 24-inch shock tester. Peak accelerations and corresponding velocity changes of 6.1 g (23.2 ft/sec), 8.2 g (32.2 ft/sec), and 14.2 g (41.7 ft/sec) were recorded. The transport airframe section was configured with a 120-inch overhead stowage bin (Bin A) attached to the left/pilot side, a 60-inch overhead stowage bin (Bin B) attached to the right/copilot side, and a 500-gallon auxiliary fuel tank attached underneath the airframe's passenger floor section. The test articles were equipped with accelerometers, strain gages, and potentiometers totaling approximately 90 channels of data per simulated crash test.

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PREFACE

This report was jointly prepared by the Federal Aviation Administration William J. Hughes Technical Center and the Transportation Research Center Inc. (TRC) under FAA contract DTFA03-95-R-00028. The report contains a description of the overhead bin pull calibrations and longitudinal impact tests which were performed using an FAA furnished transport airframe section and TRC's in-house equipment. The project was administered by Mr. Robert McGuire, FAA Project Engineer with contractor facility support provided by Mr. Tim Macy, TRC Engineering Technician. Technical assistance was provided by Messrs. Stephen Soltis, Gary Frings, Tong Vu, and Anthony Dang from the FAA William J. Hughes Technical Center and Messrs. Jeffery Sankey and John Stultz of TRC.

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EXECUTIVE SUMMARY

A 10-foot transport airframe section was longitudinally impact tested at the Transportation Research Center Inc. (TRC). The purpose of the test was to measure the structural responses of and the interaction between the overhead stowage bins, auxiliary fuel tank, and the fuselage under simulated, potentially survivable, impact conditions. Three tests were conducted using TRC's 24-inch Hyge Shock Tester. The first test attained a peak acceleration of 6.1 g and a velocity change of 23.2 ft/sec. The second test reached 8.2 g and 32.2 ft/sec. The third test reached 14.2 g and 41.7 ft/sec. The input acceleration pulses were triangular in shape. The airframe test section was configured with a 120-inch (Bin A) overhead stowage bin on the left/pilot side, a 60-inch overhead stowage bin (Bin B) on the right/copilot side, and a 500-gallon auxiliary fuel tank located in the cargo area.

Acceleration measurements were obtained from the instrumented fuselage, overhead stowage bins, auxiliary fuel tank, and the Hyge sled. Load measurements were obtained from the overhead stowage bin attachment supports. Displacement measurements were obtained from potentiometers attached to the overhead stowage bins and auxiliary fuel tank. Peak longitudinal floor acceleration levels were 25.7 g in the front and 27.2 g in the rear for the first test, 8.5 g in the front and 8.2 g in the rear for the second test, and 16.7 g in the front and 16.4 g in the rear for the third test. Both overhead stowage bins remained attached to the fuselage for Tests 1 and 2. Bin A detached from the fuselage during Test 3. Bin B remained attached to the fuselage during Test 3. The ballast installed in the overhead stowage bins was contained in all tests. The auxiliary fuel tank detached from its floor attachment fixture during Test 1 but was restrained by the test fixture. The impact of the auxiliary fuel tank on the forward closure of the test fixture in the first test produced some data spikes in the recorded cabin floor accelerations. The auxiliary fuel tank was removed for Tests 2 and 3.

DATA ACQUISITION EXPLANATIONS

Test 1

The auxiliary fuel tank separated from the fuselage structure at 76 to 85 milliseconds into the test and data channel outputs after this event are questionable. Floor accelerometers recorded data spikes from the auxiliary fuel tank separation and its subsequent contact with the front fuselage-to-sled attachment framework.

Test 3

Bin A separated from the fuselage structure 67 milliseconds into the test and data channel outputs after this event are questionable.

INTRODUCTION

A 10-foot section of a transport airframe was longitudinally impact tested at the Transportation Research Center Inc. (TRC). The purpose of the test was to measure the structural responses of and the interaction between the overhead stowage bins, auxiliary fuel tank, and the fuselage under simulated, potentially survivable, impact conditions. Three tests were conducted using TRC's 24-inch Hyge Shock Tester. This longitudinal acceleration test is one in a series of section and full-scale tests conducted in support of the Federal Aviation Administration's (FAA) Crash Dynamics and Engineering Development Program [1]. Such tests included a full-scale transport controlled impact demonstration [2], a vertical drop test of a transport airframe section [3], and a vertical drop test of a narrow-body fuselage section with overhead stowage bins and an auxiliary fuel tank on board [4].

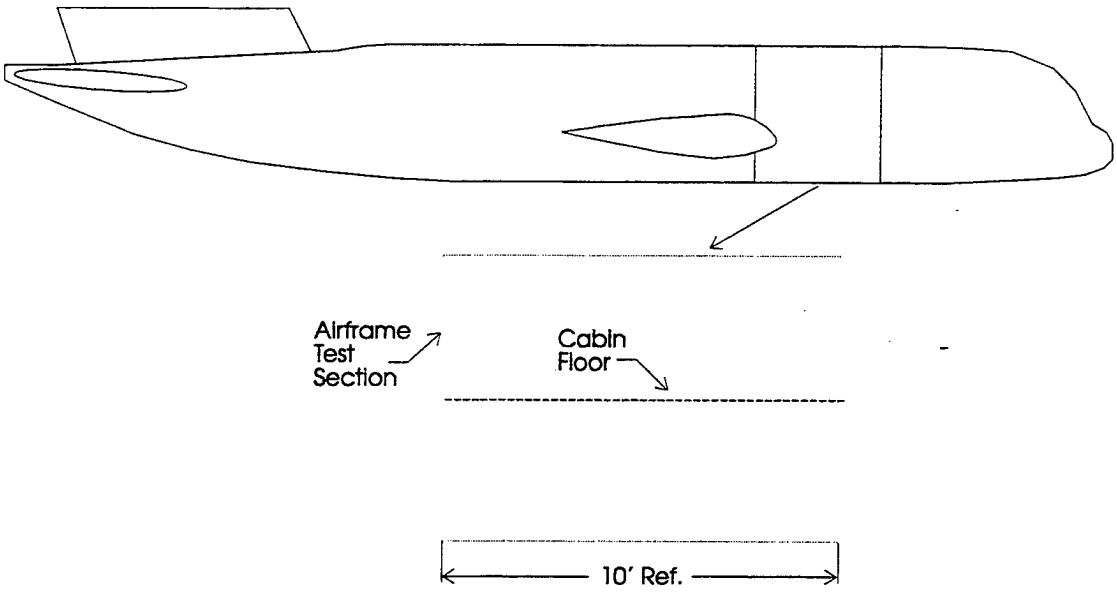
The objective of this test was to determine the structural response and interaction between a transport airplane fuselage section and the overhead stowage bins, in a crash environment considered to be potentially survivable. Response data obtained from these tests will be used to determine the dynamic response characteristics of the airframe installation.

A 10-foot-long airframe section was longitudinally impact tested at peak acceleration levels of 6.1 g (23.2 ft/sec), 8.2 g (32.2 ft/sec), and 14.2 g (41.7 ft/sec). The airframe section contained two sets of overhead stowage bins weighing 92 pounds and 53 pounds, respectively, and one 500-gallon auxiliary fuel tank filled with 3,550 pounds of water. Structural response data were obtained during the test from instrumentation installed on the fuselage structure, overhead stowage bins, and the auxiliary fuel tank.

DESCRIPTION

TEST ARTICLE.

The airframe test article was a 10-foot section cut from the mid fuselage of a B737-200 transport airplane (figure 1). The section structure was separated forward of frame section (FS) 400 and aft of (FS) 500A. The airframe section was configured with two overhead stowage bin assemblies. One 120-inch overhead stowage bin assembly (referred to as Bin A) was attached to the left/pilot side of the airframe between FS400 and FS500A, and one 60-inch stowage bin (referred to as Bin B) was attached to the right/copilot side between FS420 and FS500. In addition, a 500-gallon auxiliary fuel tank and mounting framework were secured to the underside of the passenger compartment floor beams between FS420 and FS480. The test article's description and weight are shown in table 1.



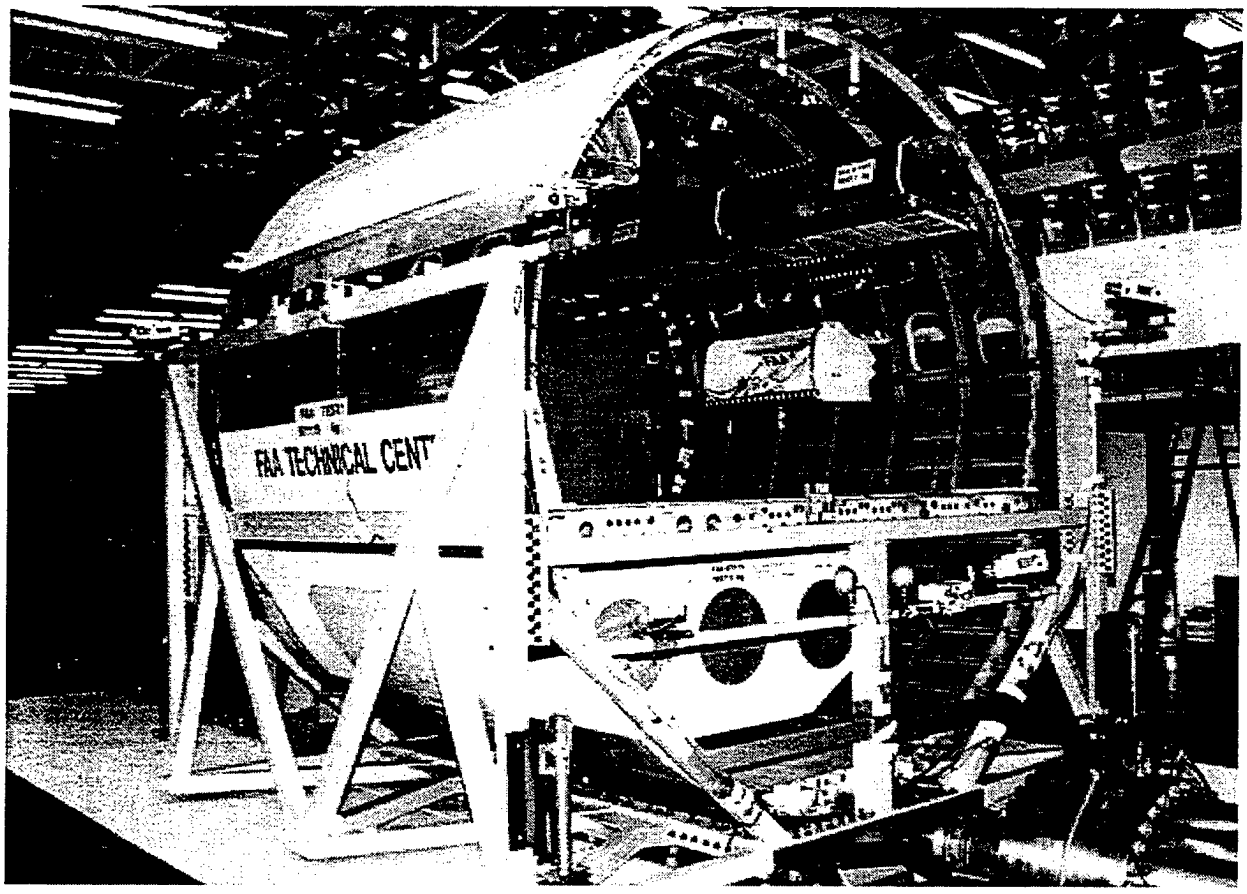


FIGURE 1. AIRFRAME TEST SECTION AND FLOOR PLAN

TABLE 1. AIRFRAME TEST SECTION INSTALLATION WEIGHT

Item	Description	Total Weight (lb.)
Airframe Section Framework	FS400 to FS500A	7180
500-Gallon Auxiliary Fuel Tank	Patrick Aircraft Tank System Inc.	343
Auxiliary Fuel Tank Ballast	Water	3550
Overhead Stowage Bin A Passenger Service Unit	C and D Interiors 120-inch bin	92
Overhead Stowage Bin A Ballast	¾-inch plywood sections	210
Overhead Stowage Bin B Passenger Service Unit	Hexcel 60-inch bin	53
Overhead Stowage Bin B Ballast	¾-inch plywood sections	120
Empty Weight of Airframe	B737-200	2036
Total Weight		13,584

TEST METHOD.

An existing test fixture was modified to attach the airframe section to the sled. The critical design constraints were to keep the weight to a minimum and to minimize the effect of the fixture on the structural integrity of the airframe by not altering the floor-fuselage shell interface load path. Refer to "Longitudinal Impact Test of a Transport Airframe Section" [5] for a detailed description of the test fixture. The test fixture was used to complete the overhead bin calibrations.

Three longitudinal impact tests were conducted. The first test was conducted with a peak acceleration level of 6.1 g, the second with a peak acceleration level of 8.2 g, and the third with a peak acceleration of 14.2 g. Twelve high-speed cameras (500 feet per second) and two real-time video tape cameras were used to document the first longitudinal impact. Ten high-speed cameras (500 feet per second) and two real-time video tape cameras were used to document the second longitudinal impact. Ten high-speed cameras (500 feet per second) and one real-time video tape camera were used to document the third longitudinal impact. Four of the high-speed cameras and all video tape cameras viewed the test events from various positions along the test track.

INSTRUMENTATION.

A series of overhead stowage bin pull tests were conducted prior to the impact tests to calibrate the bin attachment support strain gages and to determine each strain gage output. The Bin A calibration was conducted from 0 to 1800 lb. in 200-lb. increments, and from 1800 to 0 lb. in 400-lb. increments. Readings from the Bin B calibrations were taken from 0 to 1000 lb. and from 1000 to 0 lb. in 200-lb. increments. A comparison was made between recorded values and expected values of each channel. The bins were pulled by a steel cable applied through the center of gravity. Tension was applied to the cable by using a threaded rod and nut attached to the end of the cable. See figures C-6 through C-10. The stowage bin calibrations were documented on video tape.

The airframe section, the overhead storage bins, and the auxiliary fuel tank were instrumented with accelerometers and potentiometers. The attachment supports for the overhead stowage bins were instrumented with strain gages. Table 2 identifies the instrumentation used in Tests 1, 2, and 3. The instrumentation locations are documented in figures 2 through 5 and in appendix A. The plots of recorded acceleration, displacement, load responses, and integrated channels are presented in appendix B, with calibration data contained in appendix C. Appendix C also presents methods, calibration data, and illustrations from static pull tests that were conducted on the overhead stowage bins prior to the longitudinal impact tests. These static tests involved longitudinally loading the overhead stowage bins and measuring the overall pull force, with load cell OBAPXF, and the corresponding load on each instrumented support. These data were compared with the data generated in static calibration tests of the individual supports conducted by the FAA William J. Hughes Technical Center prior to this test program.

TABLE 2. INSTRUMENTATION

Tests 1	Accelerometer			Strain Gage	Displacement Potentiometer	Channels
	Longitudinal	Lateral	Vertical			
Fuselage	6	4	6	-	-	16
Floor	2	2	2	-	-	6
Overhead Stowage Bin A*	3	3	3	-	1	10
Overhead Stowage Bin A* Attachment Supports	-	-	-	21	-	21
Overhead Stowage Bin B**	3	3	3	-	1	10
Overhead Stowage Bin B** Attachment Supports	-	-	-	16	-	16
Auxiliary Fuel Tank	3	2	2	-	1	8
Drive Fixture/Sled	1	-	-	-	-	1
Total						87

Tests 2 and 3	Accelerometer			Strain Gage	Displacement Potentiometer	Channels
	Longitudinal	Lateral	Vertical			
Fuselage	6	4	6	-	-	16
Floor	2	2	2	-	-	6
Overhead Stowage Bin A*	3	3	3	-	1	10
Overhead Stowage Bin A* Attachment Supports	-	-	-	21	-	21
Overhead Stowage Bin B**	3	3	3	-	1	10
Overhead Stowage Bin B** Attachment Supports	-	-	-	16	-	16
Drive Fixture/Sled	1	-	-	-	-	1
Total						79

*Bin A 120-inch long overhead stowage bin on the left/pilot side
**Bin B 60-inch long overhead stowage bin on the right/copilot side

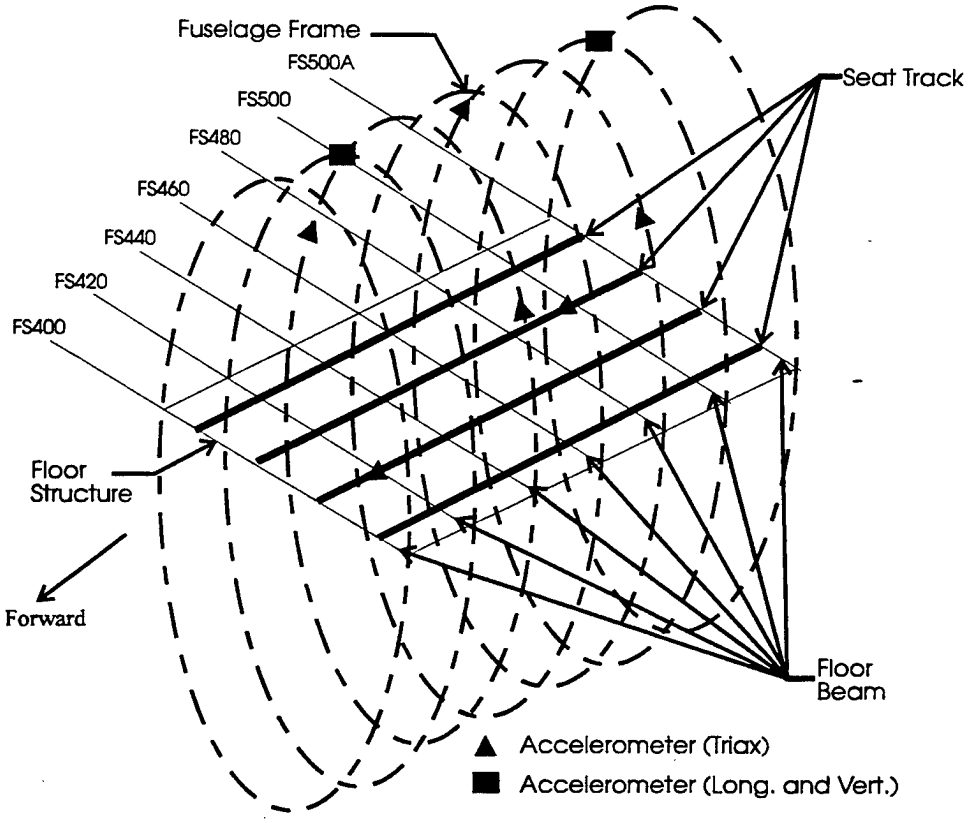


FIGURE 2. FUSELAGE INSTRUMENTATION LOCATIONS

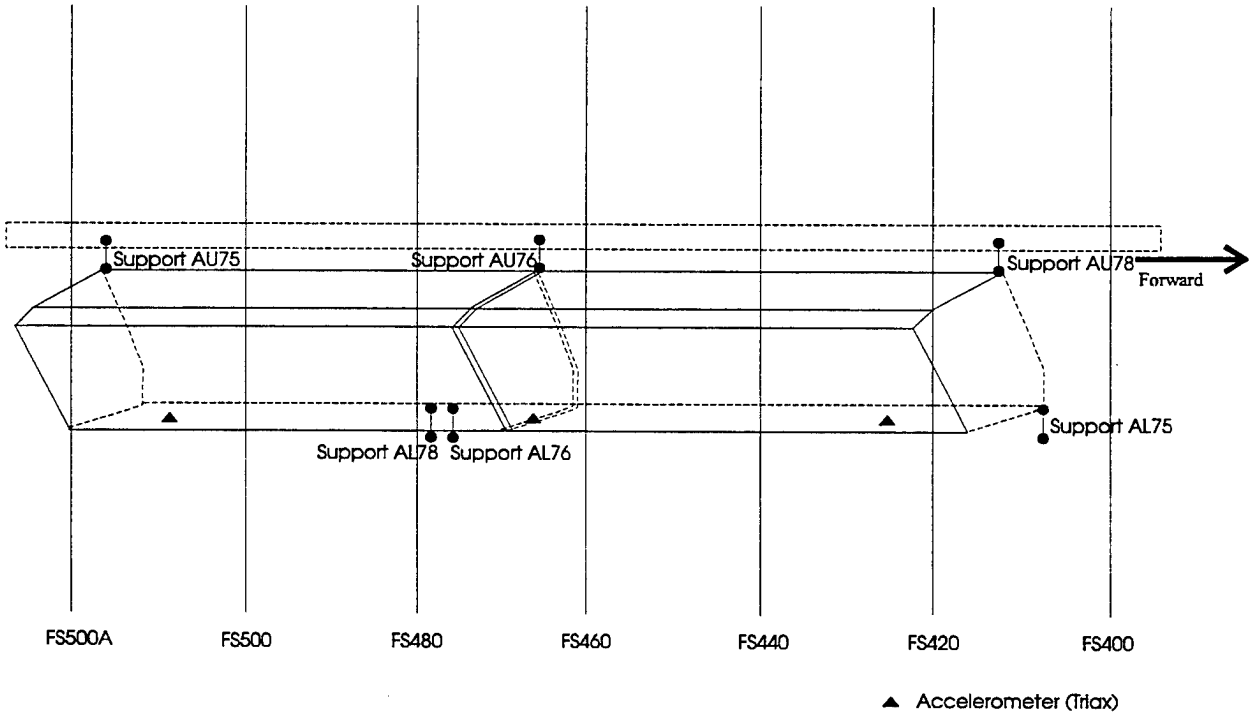


FIGURE 3. BIN A INSTRUMENTATION LOCATIONS

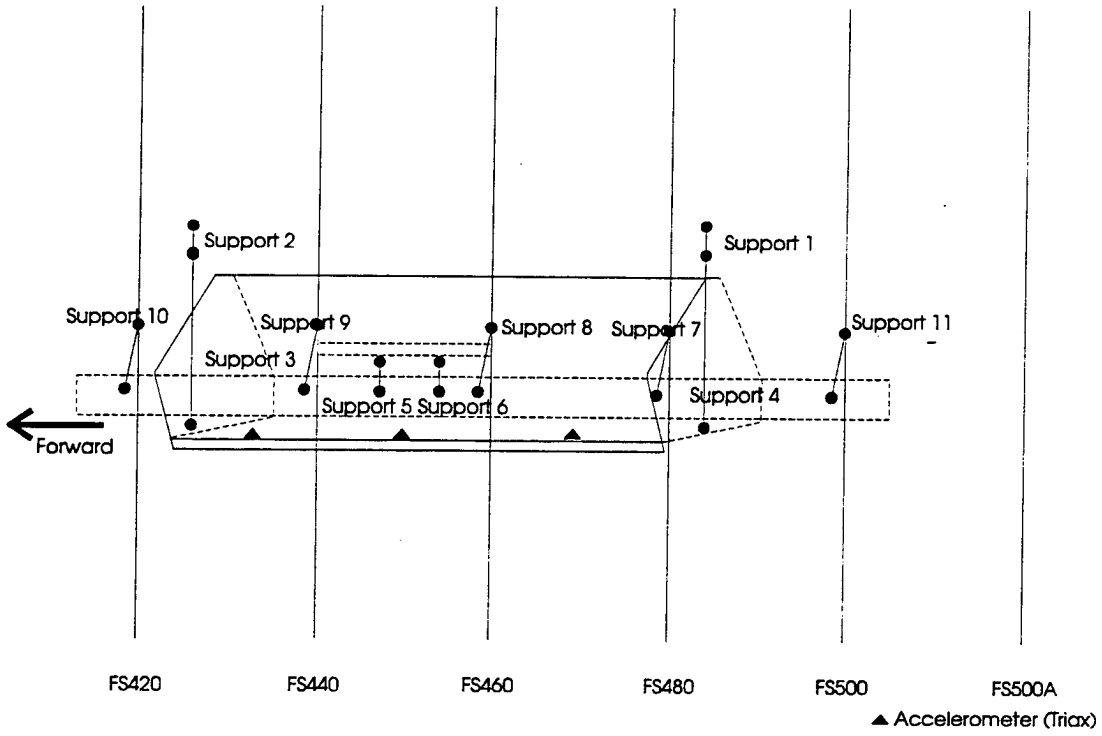


FIGURE 4. BIN B INSTRUMENTATION LOCATIONS

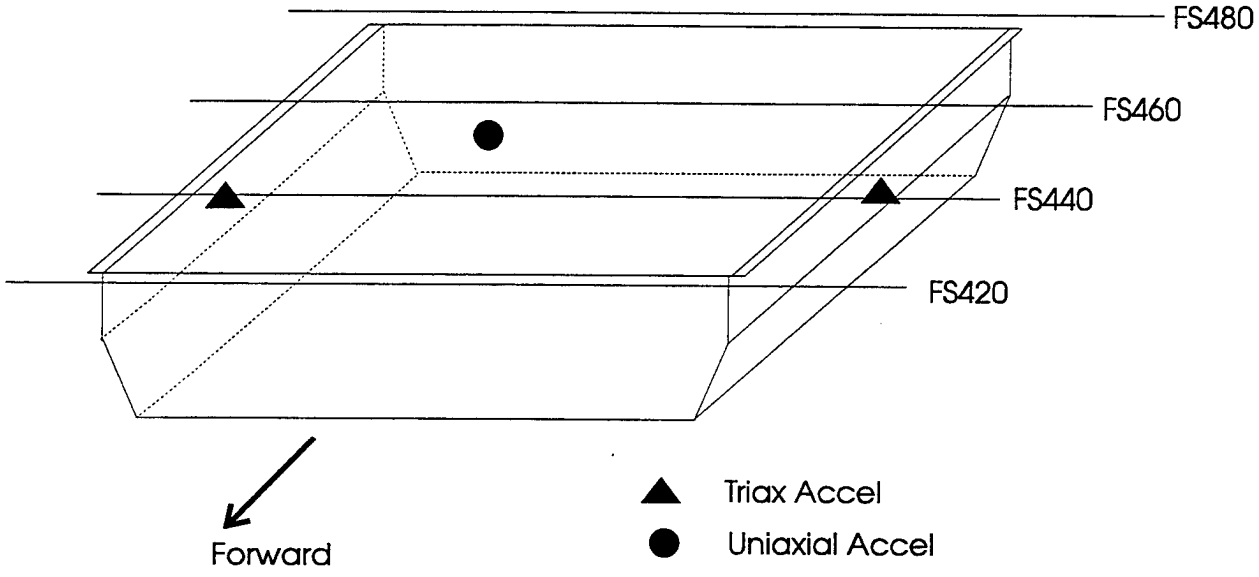


FIGURE 5. AUXILIARY FUEL TANK INSTRUMENTATION LOCATIONS

TEST SUMMARY AND DISCUSSION

TEST DATA.

The airframe test section was longitudinally tested at low-, intermediate-, and high-energy impact conditions.

Test 1 subjected the airframe and its contents to a 6.1-g peak acceleration. Figures 6 through 80, at the end of this report, illustrate the pre- and posttest conditions. No visual evidence of deformation of the fuselage structure or the overhead stowage bins was observed following the test. The auxiliary fuel tank broke loose from its attachment framework at approximately 75 to 85 milliseconds into the test event and was eventually restrained by the test fixture approximately 50 milliseconds later. Posttest observations of the auxiliary fuel tank and its attachment framework indicated the front edges of the fuel tank's aluminum side rails sheared off against the framework's front stops. In addition, the fuel tank's lower attachment straps broke loose from the airframe's cargo floor. Figures 55 through 80 document posttest observations of the auxiliary fuel tank system. The auxiliary fuel tank was removed and was not included in subsequent impact tests.

Test 2 subjected the airframe and its contents to an 8.2-g peak acceleration. Pretest conditions are illustrated in figures 81 and 82. Posttest photographs were not taken as no visible evidence of deformation or damage to the fuselage or its contents was observed.

Test 3 subjected the airframe and its contents to a 14.2-g peak acceleration. Pre- and posttest conditions are illustrated in figures 83 through 131. The test fixture and fuselage section suffered no significant visible damage or deformation. Bin A detached from the fuselage frame sections during the test event. The fuselage frame sections were damaged due to the detachment of overhead stowage Bin A. Damage is described in the posttest observation section of this report.

DATA EXPLANATIONS.

At the beginning of the longitudinal impact test program, overhead stowage bins were loaded with cargo ballast and the data channels were zeroed. Prior to each test, the data channels were checked for obvious problems. Posttest data processing included digitally processing each channel by prefiltering each channel at 1650 Hertz, removing any data offsets (zeroing each data channel) prior to the test event, integrating selected channels to provide displacements and velocities, and filtering each channel per SAE J211/MAR 95. Data plots were reviewed following each test for indications of anomalies.

TEST 1. Sixteen airframe accelerations, eighteen overhead stowage bins accelerations (nine each on Bin A and Bin B), twenty-one support loads on Bin A, sixteen support loads on Bin B, seven auxiliary fuel tank accelerations, three displacement measurements (one each on Bin A, Bin B, and the auxiliary fuel tank), and one sled acceleration were recorded. Instrumentation locations are shown in figures 2 through 5.

TEST 2. Sixteen airframe accelerations, eighteen overhead stowage bins accelerations (nine each on Bin A and Bin B), twenty-one support loads on Bin A, sixteen support loads on Bin B, two displacement measurements (one each on Bin A and Bin B), and one sled acceleration were recorded. Instrumentation locations are shown in figures 2 through 4.

TEST 3. Sixteen airframe accelerations, eighteen overhead stowage bins accelerations (nine each on Bin A and Bin B), twenty-one support loads on Bin A, sixteen support loads on Bin B, two displacement measurements (one each on Bin A and Bin B), and one sled acceleration were recorded. Instrumentation locations are shown in figures 2 through 4.

POSTTEST OBSERVATIONS.

TEST 1. There was no noticeable evidence of damage or deformation to either Bin A or Bin B. The auxiliary fuel tank had released from its upper and lower attachment framework and supports. The front part (approximately 90%) of the auxiliary fuel tank was suspended below the upper attachment framework. The rear part (approximately 10%) of the auxiliary fuel tank was still above the framework's lower longitudinal runners. Figures 60, 62, 63, 65, 66, 69, 70, and 72 illustrate the interaction between the upper auxiliary fuel tank framework attachments and the fuel tank side suspension runners. The front-lower edge of the auxiliary fuel tank was resting on top of the cargo bay floor. Both lower auxiliary fuel tank braces detached from the cargo bay floor. Figures 55, 56, and 74 through 80 illustrate the fuel tank lower braces and cargo bay floor damage.

TEST 2. There was no noticeable evidence of damage or deformation to either Bin A or Bin B. The auxiliary fuel tank was not installed for this test.

TEST 3. Bin A detached from the airframe. It was restrained by a tether rope attached prior to the test. Figures 85 through 89 illustrate the restraint on Bin A. The top attachment rail for Bin A detached from the airframe's section numbers FS400, FS440, FS460, FS500, and FS500A. The detachment damaged the frame section. Figures 94 through 99, 106, 107, 110, 111, 114, 115, 118 through 120, and 123 through 125 illustrate damage to the frame sections. The top attachment rail remained attached to the upper bin supports. No damage was evident on instrumented upper bin supports (serial numbers 78, 76, and 75) of Bin A.

The front-lower bin support (serial number 75) and the bracket that attaches the support to the air duct detached from the bin and air duct. The bin support and its air duct attachment bracket remained fastened together. The bin support's turnbuckle attachments were deformed but still attached to the fuselage brace. Figures 91 through 94 illustrate damage observed to the bin, instrumented front-lower bin support with attachment bracket, turnbuckles, and air duct.

The mid lower bin support (serial number 76) remained attached to the overhead stowage bin. The bin support attachment bracket detached from the air duct. The bin support and its air duct attachment bracket remained fastened together. The bin support lower turnbuckle broke while the upper turnbuckle was only bent. The turnbuckles-to-fuselage attachment brace detached from the fuselage but remained attached to the turnbuckle ends.

The aft-lower bin support (serial number 78) remained attached to the overhead stowage bin. The bin support's attachment bracket detached from FS480 and from the support itself. Figures 95 through 105 illustrate the damage observed to lower bin supports serial numbers 76 and 78 and their related attachments.

Bin B Link numbers 2 and 7 through 11 were slightly deformed due to the forward movement of the bin. The overhead stowage bin remained attached to the supports and airframe. Figures 127 through 131 illustrate the posttest condition of Bin B and its attachment supports.

The data summary for Tests 1, 2, and 3 is shown in tables 3, 4, and 5.

TABLE 3. DATA SUMMARY – TEST 1 6 g

No.	Location	Positive Direction	Negative Direction
1.	Sled		
	Acceleration	1.1 g @ 224.2 ms	6.1 g @ 94.4 ms
	Velocity	-0.1 ft/sec @ 224.2 ms	23.2 ft/sec @ 215.0 ms
2.	Fuselage, Floor FS420		
	Acceleration		
	Longitudinal	25.7 g @ 234.6 ms	25.1 g @ 241.0 ms
	Lateral	6.1 g @ 228.8 ms	4.9 g @ 148.7 ms
	Vertical	142. g @ 160.8 ms	14.4 g @ 105.5 ms
3.	Fuselage, Floor FS500		
	Acceleration		
	Longitudinal	27.2 g @ 232.4 ms	25.2 g @ 240.6 ms
	Lateral	4.3 g @ 270.3 ms	3.8 g @ 234.7 ms
	Vertical	21.4 g @ 251.0 ms	18.5 g @ 226.1 ms
4.	Fuselage, Top FS420		
	Acceleration		
	Longitudinal	3.5 g @ 221.4 ms	7.3 g @ 135.4 ms
	Vertical	5.6 g @ 269.0 ms	5.9 g @ 297.3 ms
5.	Fuselage, Top FS500		
	Acceleration		
	Longitudinal	3.2 g @ 221.9 ms	7.1 g @ 135.5 ms
	Vertical	9.8 g @ 252.0 ms	10.0 g @ 261.0 ms
6.	Fuselage, Left FS440		
	Acceleration		
	Longitudinal	2.6 g @ 220.3 ms	6.7 g @ 107.2 ms
	Lateral	9.0 g @ 237.1 ms	10.0 g @ 259.8 ms
	Vertical	3.4 g @ 151.8 ms	3.6 g @ 145.3 ms
7.	Fuselage, Left FS480		
	Acceleration		
	Longitudinal	2.8 g @ 236.2 ms	6.9 g @ 135.4 ms
	Lateral	10.5 g @ 267.8 ms	9.3 g @ 244.9 ms
	Vertical	4.0 g @ 253.0 ms	4.4 g @ 245.8 ms

TABLE 3. DATA SUMMARY – TEST 1 6 g (Continued)

No. Location	Positive Direction	Negative Direction
8. Fuselage, Right FS440 Acceleration		
Longitudinal	3.0 g @ 234.1 ms	7.0 g @ 135.0 ms
Lateral	5.4 g @ 232.9 ms	4.7 g @ 225.6 ms
Vertical	1.7 g @ 228.4 ms	2.7 g @ 179.0 ms
9. Fuselage, Right FS480 Acceleration		
Longitudinal	3.6 g @ 220.2 ms	7.3 g @ 135.0 ms
Lateral	7.3 g @ 246.6 ms	6.3 g @ 237.4 ms
Vertical	2.3 g @ 236.8 ms	2.7 g @ 247.9 ms
10. Bin A, Front Acceleration		
Longitudinal	3.3 g @ 229.4 ms	7.1 g @ 97.2 ms
Lateral	2.8 g @ 235.5 ms	3.1 g @ 213.6 ms
Vertical	4.3 g @ 277.2 ms	5.2 g @ 242.4 ms
11. Bin A, Center Acceleration		
Longitudinal	3.2 g @ 229.2 ms	7.0 g @ 97.4 ms
Lateral	1.6 g @ 241.4 ms	2.0 g @ 279.8 ms
Vertical	2.6 g @ 278.8 ms	3.1 g @ 284.6 ms
12. Bin A, Aft Acceleration		
Longitudinal	2.9 g @ 229.2 ms	7.1 g @ 97.4 ms
Lateral	2.5 g @ 195.0 ms	2.9 g @ 282.6 ms
Vertical	4.8 g @ 245.4 ms	4.7 g @ 174.0 ms
13. Bin A, Lower Front Support Force		
Longitudinal	94.1 lb @ 274.2 ms	285.8 lb @ 94.7 ms
Lateral	136.5 lb @ 102.7 ms	105.3 lb @ 242.2 ms
Vertical	54.5 lb @ 236.3 ms	45.9 lb @ 154.7 ms
14. Bin A, Lower Mid Support Force		
Longitudinal	149.4 lb @ 279.7 ms	448.6 lb @ 85.6 ms
Lateral	63.5 lb @ 299.0 ms	69.5 lb @ 199.1 ms
Vertical	61.0 lb @ 247.7 ms	41.4 lb @ 225.3 ms
15. Bin A, Lower Aft Support Force		
Longitudinal	30.6 lb @ 282.0 ms	142.0 lb @ 95.8 ms
Lateral	84.1 lb @ 267.4 ms	164.4 lb @ 99.6 ms
Vertical	22.7 lb @ 213.4 ms	79.3 lb @ 84.5 ms

TABLE 3. DATA SUMMARY – TEST 1 6 g (Continued)

No. Location	Positive Direction	Negative Direction
16. Bin A, Upper Front Support Force/Strain		
Inner Longitudinal	111.5 lb @ 98.8 ms	102.6 lb @ 285.4 ms
Outer Longitudinal	215.8 lb @ 72.6 ms	106.0 lb @ 303.4 ms
Outer Vertical	2.0 mv @ 283.0 ms	1.8 mv @ 165.0 ms
Inner Vertical	0.7 mv @ 307.4 ms	0.6 mv @ 284.2 ms
17. Bin A, Upper Mid Support Force/Strain		
Inner Longitudinal	698.9 lb @ 98.9 ms	133.1 lb @ 262.1 ms
Outer Longitudinal	702.1 lb @ 99.2 ms	233.8 lb @ 251.7 ms
Outer Vertical	0.9 mv @ 251.1 ms	0.5 mv @ 306.9 ms
Inner Vertical	0.4 mv @ 81.7 ms	0.2 mv @ 284.2 ms
18. Bin A, Upper Aft Support Force/Strain		
Inner Longitudinal	181.3 lb @ 90.2 ms	33.8 lb @ 250.7 ms
Outer Longitudinal	471.4 lb @ 75.6 ms	96.6 lb @ 244.9 ms
Outer Vertical	3.3 mv @ 250.0 ms	1.7 mv @ 275.5 ms
Inner Vertical	0.5 mv @ 258.7 ms	0.7 mv @ 251.4 ms
19. Bin B, Front Acceleration		
Longitudinal	3.4 g @ 254.2 ms	7.7 g @ 106.5 ms
Lateral	3.4 g @ 235.9 ms	5.3 g @ 227.0 ms
Vertical	4.2 g @ 281.8 ms	3.3 g @ 288.3 ms
20. Bin B, Center Acceleration		
Longitudinal	3.6 g @ 301.9 ms	7.6 g @ 106.6 ms
Lateral	3.2 g @ 251.4 ms	2.8 g @ 227.4 ms
Vertical	9.4 g @ 269.0 ms	9.0 g @ 245.2 ms
21. Bin B, Aft Acceleration		
Longitudinal	3.5 g @ 223.3 ms	7.9 g @ 106.4 ms
Lateral	5.4 g @ 250.0 ms	4.1 g @ 208.1 ms
Vertical	5.0 g @ 247.5 ms	5.7 g @ 271.0 ms
22. Bin B, Aft Support 1 Force		
Vertical	73.0 lb @ 173.4 ms	61.8 lb @ 244.4 ms
23. Bin B, Forward Support 2 Force		
Vertical	94.3 lb @ 272.2 ms	88.5 lb @ 95.0 ms
24. Bin B, Forward Support 3 Force		
Vertical	80.1 lb @ 272.2 ms	257.9 lb @ 112.1 ms

TABLE 3. DATA SUMMARY – TEST 1 6 g (Continued)

No. Location	Positive Direction	Negative Direction
25. Bin B, Aft Support 4 Force Vertical	46.8 lb @ 174.0 ms	42.3 lb @ 244.5 ms
26. Bin B, Aft Plate Support 5 Force Longitudinal	166.6 lb @ 256.6 ms	638.0 lb @ 108.6 ms
27. Bin B, Forward Plate Support 6 Force Longitudinal	180.0 lb @ 255.3 ms	- 561.3 lb @ 111.2 ms
28. Bin B, L Support 7, Gage 1 Force Lateral	56.2 lb @ 109.0 ms	26.2 lb @ 263.5 ms
29. Bin B, L Support 7, Gage 2 Force Lateral	48.8 lb @ 308.4 ms	98.9 lb @ 114.2 ms
30. Bin B, L Support 8, Gage 1 Force Lateral	31.6 lb @ 303.8 ms	36.2 lb @ 86.3 ms
31. Bin B, L Support 8, Gage 2 Force Lateral	41.9 lb @ 260.2 ms	123.4 lb @ 107.0 ms
32. Bin B, L Support 9, Gage 1 Force Lateral	155.0 lb @ 107.4 ms	61.1 lb @ 308.7 ms
33. Bin B, L Support 9, Gage 2 Force Lateral	16.3 lb @ 305.7 ms	30.8 lb @ 182.6 ms
34. Bin B, L Support 10, Gage 1 Force Lateral	384.2 lb @ 106.8 ms	153.0 lb @ 308.6 ms
35. Bin B, L Support 10, Gage 2 Force Lateral	165.3 lb @ 104.8 ms	44.0 lb @ 301.8 ms
36. Bin B, L Support 11, Gage 1 Force Lateral	35.6 lb @ 224.1 ms	53.6 lb @ 172.8 ms
37. Bin B, L Support 11, Gage 2 Force Lateral	52.1 lb @ 261.7 ms	85.4 lb @ 114.7 ms

TABLE 3. DATA SUMMARY – TEST 1 6 g (Continued)

No. Location	Positive Direction	Negative Direction
38. Fuel Tank, Left		
Acceleration		
Longitudinal	7.4 g @ 207.7 ms	10.1 g @ 232.6 ms
Lateral	6.7 g @ 135.0 ms	6.3 g @ 138.5 ms
Vertical	10.0 g @ 130.2 ms	2.8 g @ 144.4 ms
39. Fuel Tank, Right		
Acceleration		
Longitudinal	10.6 g @ 220.7 ms	9.4 g @ 280.6 ms
Lateral	5.2 g @ 138.7 ms	5.6 g @ 240.3 ms
Vertical	3.6 g @ 230.6 ms	2.9 g @ 220.2 ms
40. Fuel Tank, Top		
Acceleration		
Longitudinal	12.3 g @ 130.6 ms	11.3 @ 233.0 ms
41. Bin A		
Displacement Measured		
Longitudinal	0.3 in @ 108.3 ms	0.1 in @ 309.1 ms
42. Bin B		
Displacement Measured	@ 115.9 ms	
Longitudinal	0.1 in	0.1 in @ 263.4 ms
43. Auxiliary Fuel Tank		
Displacement Measured		
Longitudinal	22.0 in @ 310.0 ms	0.0 in @ 0.0 ms

TABLE 4. DATA SUMMARY – TEST 2 9 g

No. Location	Positive Direction	Negative Direction
1. Sled		
Acceleration	2.3 g @ 271.4 ms	8.2 g @ 98.6 ms
Velocity	-0.1 ft/sec @ 271.4 ms	32.2 ft/sec @ 269.1 ms
2. Fuselage, Floor FS420		
Acceleration		
Longitudinal	2.6 g @ 292.1 ms	8.5 g @ 99.0 ms
Lateral	1.1 g @ 278.2 ms	0.7 g @ 283.3 ms
Vertical	2.5 g @ 292.9 ms	2.0 g @ 297.8 ms
3. Fuselage, Floor FS500		
Acceleration		
Longitudinal	2.6 g @ 279.7 ms	8.2 g @ 99.5 ms
Lateral	1.4 g @ 283.8 ms	1.0 g @ 299.4 ms
Vertical	1.9 g @ 309.3 ms	1.1 g @ 72.2 ms

TABLE 4. DATA SUMMARY – TEST 2 9 g (Continued)

No.	Location	Positive Direction	Negative Direction
4.	Fuselage, Top FS420		
	Acceleration		
	Longitudinal	1.8 g @ 302.3 ms	8.8 g @ 93.7 ms
	Vertical	3.4 g @ 299.3 ms	3.6 g @ 309.9 ms
5.	Fuselage, Top FS500		
	Acceleration		
	Longitudinal	1.7 g @ 302.1 ms	9.0 g @ 92.9 ms
	Vertical	2.8 g @ 292.8 ms	4.1 g @ 288.4 ms
6.	Fuselage, Left FS440		
	Acceleration		
	Longitudinal	1.2 g @ 301.6 ms	8.9 g @ 100.3 ms
	Lateral	1.9 g @ 300.3 ms	2.0 g @ 309.8 ms
	Vertical	2.3 g @ 304.5 ms	2.5 g @ 309.8 ms
7.	Fuselage, Left FS480		
	Acceleration		
	Longitudinal	1.4 g @ 291.6 ms	8.7 g @ 100.6 ms
	Lateral	1.7 g @ 298.6 ms	1.3 g @ 274.2 ms
	Vertical	1.3 g @ 303.8 ms	1.9 g @ 308.3 ms
8.	Fuselage, Right FS440		
	Acceleration		
	Longitudinal	1.6 g @ 301.6 ms	8.5 g @ 106.8 ms
	Lateral	2.0 g @ 294.2 ms	1.8 g @ 285.9 ms
	Vertical	1.3 g @ 290.2 ms	1.7 g @ 294.6 ms
9.	Fuselage, Right FS480		
	Acceleration		
	Longitudinal	1.7 g @ 290.2 ms	8.3 g @ 106.0 ms
	Lateral	1.9 g @ 275.7 ms	2.5 g @ 291.7 ms
	Vertical	2.2 g @ 281.8 ms	1.7 g @ 275.8 ms
10.	Bin A, Front		
	Acceleration		
	Longitudinal	1.3 g @ 247.0 ms	10.4 g @ 78.2 ms
	Lateral	1.1 g @ 285.8 ms	2.4 g @ 94.1 ms
	Vertical	1.7 g @ 165.1 ms	2.8 g @ 303.8 ms
11.	Bin A, Center		
	Acceleration		
	Longitudinal	1.3 g @ 247.0 ms	10.3 g @ 78.8 ms
	Lateral	0.9 g @ 111.7 ms	0.6 g @ 267.1 ms
	Vertical	0.7 g @ 96.1 ms	1.1 g @ 79.0 ms
12.	Bin A, Aft		
	Acceleration		
	Longitudinal	1.3 g @ 245.7 ms	10.4 g @ 78.8 ms
	Lateral	2.8 g @ 95.0 ms	1.5 g @ 73.8 ms
	Vertical	1.4 g @ 304.8 ms	1.7 g @ 90.7 ms

TABLE 4. DATA SUMMARY – TEST 2 9 g (Continued)

No. Location	Positive Direction	Negative Direction
13. Bin A, Lower Front Support Force		
Longitudinal	22.1 lb @ 250.7 ms	492.7 lb @ 94.1 ms
Lateral	197.8 lb @ 98.0 ms	23.4 lb @ 279.4 ms
Vertical	23.4 lb @ 236.0 ms	38.9 lb @ 135.8 ms
14. Bin A, Lower Mid Support Force		-
Longitudinal	84.9 lb @ 306.2 ms	641.0 lb @ 83.3 ms
Lateral	33.3 lb @ 269.6 ms	64.4 lb @ 106.2 ms
Vertical	33.9 lb @ 151.4 ms	7.8 lb @ 42.2 ms
15. Bin A, Lower Aft Support Force		
Longitudinal	31.0 lb @ 252.3 ms	196.5 lb @ 86.2 ms
Lateral	2.1 lb @ 17.8 ms	296.8 lb @ 99.8 ms
Vertical	17.9 lb @ 235.4 ms	133.9 lb @ 83.0 ms
16. Bin A, Upper Front Support Force/Strain		
Inner Longitudinal	286.5 lb @ 92.4 ms	13.4 lb @ 310.0 ms
Outer Longitudinal	304.1 lb @ 79.8 ms	83.3 lb @ 306.3 ms
Outer Vertical	0.4 mv @ 246.2 ms	2.2 mv @ 136.0 ms
Inner Vertical	0.4 mv @ 46.5 ms	0.7 mv @ 302.1 ms
17. Bin A, Upper Mid Support Force/Strain		
Inner Longitudinal	909.4 lb @ 89.7 ms	59.2 lb @ 274.2 ms
Outer Longitudinal	934.7 lb @ 92.6 ms	69.2 lb @ 273.4 ms
Outer Vertical	1.5 mv @ 79.8 ms	0.9 mv @ 285.5 ms
Inner Vertical	0.5 mv @ 80.6 ms	0.6 mv @ 296.1 ms
18. Bin A, Upper Aft Support Force/Strain		
Inner Longitudinal	276.8 lb @ 86.7 ms	12.4 lb @ 257.4 ms
Outer Longitudinal	661.4 lb @ 78.3 ms	52.5 lb @ 307.4 ms
Outer Vertical	2.2 mv @ 74.7 ms	0.9 mv @ 302.1 ms
Inner Vertical	0.4 mv @ 120.2 ms	0.5 mv @ 273.6 ms
19. Bin B, Front Acceleration		
Longitudinal	2.0 g @ 281.0 ms	9.0 g @ 106.8 ms
Lateral	1.5 g @ 121.0 ms	1.0 g @ 57.8 ms
Vertical	1.9 g @ 283.1 ms	1.9 g @ 306.2 ms

TABLE 4. DATA SUMMARY – TEST 2 9 g (Continued)

No. Location	Positive Direction	Negative Direction
20. Bin B, Center Acceleration		
Longitudinal	1.9 g @ 281.0 ms	8.9 g @ 105.8 ms
Lateral	0.7 g @ 278.4 ms	0.9 g @ 104.5 ms
Vertical	2.3 g @ 289.6 ms	2.2 g @ 64.9 ms
21. Bin B, Aft Acceleration		
Longitudinal	1.8 g @ 281.0 ms	9.1 g @ 106.2 ms
Lateral	2.2 g @ 277.0 ms	3.0 g @ 293.7 ms
Vertical	3.0 g @ 305.0 ms	2.5 g @ 300.1 ms
22. Bin B, Aft Support 1 Force		
Vertical	65.6 lb @ 172.5 ms	33.3 lb @ 202.3 ms
23. Bin B, Forward Support 2 Force		
Vertical	40.7 lb @ 264.5 ms	89.4 lb @ 98.1 ms
24. Bin B, Forward Support 3 Force		
Vertical	15.7 lb @ 65.4 ms	264.3 lb @ 136.1 ms
25. Bin B, Aft Support 4 Force		
Vertical	43.4 lb @ 172.6 ms	19.1 lb @ 202.6 ms
26. Bin B, Aft Support 5 Force		
Longitudinal	82.9 lb @ 267.9 ms	833.3 lb @ 108.5 ms
27. Bin B, Forward Support 6 Force		
Longitudinal	76.9 lb @ 268.4 ms	729.0 lb @ 108.1 ms
28. Bin B, L Support 7, Gage 1 Force		
Lateral	89.5 lb @ 98.1 ms	7.2 lb @ 275.6 ms
29. Bin B, L Support 7, Gage 2 Force		
Lateral	11.5 lb @ 283.6 ms	154.4 lb @ 110.9 ms
30. Bin B, L Support 8, Gage 1 Force		
Lateral	29.8 lb @ 310.0 ms	53.3 lb @ 64.6 ms
31. Bin B, L Support 8, Gage 2 Force		
Lateral	40.6 lb @ 265.4 ms	146.5 lb @ 101.8 ms

TABLE 4. DATA SUMMARY – TEST 2 9 g (Continued)

No. Location	Positive Direction	Negative Direction
32. Bin B, L Support 9, Gage 1 Force Lateral	202.2 lb @ 106.9 ms	17.3 lb @ 270.0 ms
33. Bin B, L Support 9, Gage 2 Force Lateral	-0.2 lb @ 106.9 ms	41.4 lb @ 119.5 ms
34. Bin B, L Support 10, Gage 1 Force Lateral	460.5 lb @ 106.2 ms	93.2 lb @ 268.5 ms
35. Bin B, L Support 10, Gage 2 Force Lateral	219.7 lb @ 107.6 ms	5.1 lb @ 269.0 ms
36. Bin B, L Support 11, Gage 1 Force Lateral	42.3 lb @ 310.0 ms	57.9 lb @ 64.3 ms
37. Bin B, L Support 11, Gage 2 Force Lateral	32.9 lb @ 283.4 ms	111.3 lb @ 68.7 ms
38. Bin A Displacement Longitudinal	0.5 in @ 103.2 ms	0.0 in @ 18.4 ms
39. Bin B Displacement Longitudinal	0.2 in @ 119.4 ms	0.0 in @ 265.7 ms

TABLE 5. DATA SUMMARY – TEST 3 16 g

No. Location	Positive Direction	Negative Direction
1. Sled		
Acceleration	0.5 g @ 261.4 ms	14.2 g @ 80.1 ms
Velocity	–0.1 ft/sec @ 261.4 ms	41.7 ft/sec @ 179.7 ms
Displacement	0.0 in @ 261.4 ms	111.6 in @ 310.0 ms
2. Fuselage, Floor FS420 Acceleration		
Longitudinal	1.0 g @ 227.7 ms	16.7 g @ 84.9 ms
Lateral	0.7 g @ 131.8 ms	0.7 g @ 77.9 ms
Vertical	2.6 g @ 161.4 ms	2.8 g @ 130.3 ms
3. Fuselage, Floor FS500 Acceleration		
Longitudinal	1.5 g @ 228.6 ms	16.4 g @ 85.4 ms
Lateral	1.4 g @ 45.7 ms	0.4 g @ 203.1 ms
Vertical	2.3 g @ 157.0 ms	2.8 g @ 134.8 ms

TABLE 5. DATA SUMMARY – TEST 3 16 g (Continued)

No. Location	Positive Direction	Negative Direction
4. Fuselage, Top FS420 Acceleration		
Longitudinal	2.0 g @ 207.0 ms	17.4 g @ 77.6 ms
Vertical	5.1 g @ 99.1 ms	6.0 g @ 167.2 ms
5. Fuselage, Top FS500 Acceleration		
Longitudinal	1.9 g @ 206.7 ms	18.1 g @ 78.6 ms
Vertical	11.9 g @ 131.6 ms	10.5 g @ 102.1 ms
6. Fuselage, Left FS440 Acceleration		
Longitudinal	10.4 g @ 155.1 ms	33.6 g @ 94.3 ms
Lateral	10.5 g @ 90.2 ms	7.4 g @ 120.4 ms
Vertical	4.5 g @ 89.7 ms	4.7 g @ 122.6 ms
7. Fuselage, Left FS480 Acceleration		
Longitudinal	29.3 g @ 115.4 ms	17.1 g @ 89.6 ms
Lateral	18.6 g @ 114.1 ms	22.0 g @ 110.7 ms
Vertical	40.9 g @ 114.2 ms	36.3 g @ 109.4 ms
8. Fuselage, Right FS440 Acceleration		
Longitudinal	1.9 g @ 207.2 ms	16.1 g @ 79.9 ms
Lateral	3.5 g @ 135.0 ms	3.3 g @ 129.9 ms
Vertical	2.5 g @ 129.8 ms	2.8 g @ 134.8 ms
9. Fuselage, Right FS480 Acceleration		
Longitudinal	1.6 g @ 251.3 ms	15.6 g @ 81.0 ms
Lateral	6.4 g @ 143.1 ms	5.6 g @ 157.2 ms
Vertical	2.5 g @ 157.0 ms	3.3 g @ 116.4 ms
10. Bin A, Front Acceleration		
Longitudinal	2.0 g @ 211.7 ms	14.6 g @ 67.0 ms
Lateral	5.7 g @ 106.5 ms	9.4 g @ 125.0 ms
Vertical	11.3 g @ 120.7 ms	14.0 g @ 97.9 ms
11. Bin A, Center Acceleration		
Longitudinal*	--- g @ --- ms	15.0 g @ 99.9 ms
Lateral	4.2 g @ 102.2 ms	7.2 g @ 114.8 ms
Vertical	4.3 g @ 121.4 ms	4.4 g @ 136.1 ms

TABLE 5. DATA SUMMARY – TEST 3 16 g (Continued)

No. Location	Positive Direction	Negative Direction
12. Bin A, Aft Acceleration		
Longitudinal	816.7 g @ 291.8 ms	27.0 g @ 283.2 ms
Lateral	5.5 g @ 85.3 ms	8.9 g @ 116.2 ms
Vertical	6.1 g @ 113.4 ms	7.0 g @ 124.6 ms
13. Bin A, Lower Front Support Force		
Longitudinal*	-3.9 lb @ 113.4 ms	--- lb @ --- ms
Lateral*	--- lb @ --- ms	601.8 lb @ 118.9 ms
Vertical*	130.0 lb @ 104.4 ms	--- lb @ --- ms
14. Bin A, Lower Mid Support Force		
Longitudinal*	76.0 lb @ 124.4 ms	--- lb @ --- ms
Lateral*	--- lb @ --- ms	--- lb @ --- ms
Vertical*	12.4 lb @ 63.4 ms	--- lb @ --- ms
15. Bin A, Lower Aft Support Force		
Longitudinal*	-0.9 lb @ 63.4 ms	--- lb @ --- ms
Lateral*	--- lb @ --- ms	--- lb @ --- ms
Vertical*	-0.7 lb @ 191.5 ms	--- lb @ --- ms
16. Bin A, Upper Front Support Force/Strain		
Inner Longitudinal	431.9 lb @ 82.9 ms	151.9 lb @ 115.3 ms
Outer Longitudinal	459.4 lb @ 65.0 ms	602.2 lb @ 105.2 ms
Outer Vertical	1.1 mv @ 86.7 ms	3.0 mv @ 96.4 ms
Inner Vertical	0.4 mv @ 100.5 ms	1.2 mv @ 84.5 ms
17. Bin A, Upper Mid Support Force/Strain		
Inner Longitudinal	1193.6 lb @ 65.8 ms	369.4 lb @ 136.6 ms
Outer Longitudinal	1235.3 lb @ 65.6 ms	401.2 lb @ 136.8 ms
Outer Vertical	8.8 mv @ 88.0 ms	2.1 mv @ 155.9 ms
Inner Vertical	0.8 mv @ 88.2 ms	0.8 mv @ 101.2 ms
18. Bin A, Upper Aft Support Force/Strain		
Inner Longitudinal	357.3 lb @ 66.6 ms	136.3 lb @ 177.8 ms
Outer Longitudinal	855.7 lb @ 66.3 ms	265.9 lb @ 189.8 ms
Outer Vertical	3.7 mv @ 63.4 ms	2.3 mv @ 94.1 ms
Inner Vertical	0.8 mv @ 84.2 ms	0.5 mv @ 119.5 ms

TABLE 5 DATA SUMMARY – TEST 3 16 g (Continued)

No. Location	Positive Direction	Negative Direction
19. Bin B, Front		
Acceleration		
Longitudinal	2.4 g @ 187.8 ms	16.6 g @ 87.8 ms
Lateral	4.5 g @ 103.4 ms	2.9 g @ 131.4 ms
Vertical	4.0 g @ 151.9 ms	4.4 g @ 143.9 ms
20. Bin B, Center		
Acceleration		
Longitudinal	2.4 g @ 187.5 ms	16.7 g @ 93.0 ms
Lateral	2.2 g @ 143.8 ms	5.6 g @ 154.9 ms
Vertical	3.9 g @ 124.0 ms	4.4 g @ 184.1 ms
21. Bin B, Aft		
Acceleration		
Longitudinal	2.6 g @ 187.4 ms	16.9 g @ 93.3 ms
Lateral	5.3 g @ 143.0 ms	8.7 g @ 155.9 ms
Vertical	7.8 g @ 146.5 ms	11.9 g @ 157.8 ms
22. Bin B, Aft Support 1		
Force		
Vertical	227.4 lb @ 164.7 ms	161.0 lb @ 113.0 ms
23. Bin B, Forward Support 2		
Force		
Vertical	126.7 lb @ 168.7 ms	305.9 lb @ 100.5 ms
24. Bin B, Forward Support 3		
Force		
Vertical	80.1 lb @ 53.0 ms	1224.2 lb @ 103.7 ms
25. Bin B, Aft Support 4		
Force		
Vertical	68.3 lb @ 164.8 ms	314.5 lb @ 113.4 ms
26. Bin B, Aft Plate Support 5		
Force		
Longitudinal	111.8 lb @ 223.9 ms	1529.9 lb @ 95.0 ms
27. Bin B, Forward Plate Support 6		
Force		
Longitudinal	90.7 lb @ 225.0 ms	1378.3 lb @ 96.5 ms
28. Bin B, L Support 7, Gage 1		
Force		
Lateral	131.4 lb @ 62.5 ms	92.1 lb @ 153.4 ms
29. Bin B, L Support 7, Gage 2		
Force		
Lateral	14.0 lb @ 211.6 ms	295.8 lb @ 95.9 ms
30. Bin B, L Support 8, Gage 1		
Force		
Lateral	84.9 lb @ 178.1 ms	67.9 lb @ 55.0 ms

TABLE 5. DATA SUMMARY – TEST 3 16 g (Continued)

No. Location	Positive Direction	Negative Direction
31. Bin B, L Support 8, Gage 2 Force Lateral	114.1 lb @ 202.3 ms	199.3 lb @ 82.8 ms
32. Bin B, L Support 9, Gage 1 Force Lateral	356.3 lb @ 98.3 ms	60.8 lb @ 233.0 ms
33. Bin B, L Support 9, Gage 2 Force Lateral	-0.3 lb @ 5.2 ms	- 104.7 lb @ 107.5 ms
34. Bin B, L Support 10, Gage 1 Force Lateral	691.5 lb @ 93.8 ms	273.9 lb @ 183.5 ms
35. Bin B, L Support 10, Gage 2 Force Lateral	517.7 lb @ 99.7 ms	2.1 lb @ 0.0 ms
36. Bin B, L Support 11, Gage 1 Force Lateral	61.2 lb @ 228.8 ms	127.3 lb @ 58.1 ms
37. Bin B, L Support 11, Gage 2 Force Lateral	9.5 lb @ 211.6 ms	262.8 lb @ 95.7 ms
38. Bin A Displacement Measured Longitudinal	19.6 in @ 310.0 ms	0.0 in @ 9.0 ms
39. Bin B Displacement Measured Longitudinal	0.4 in @ 97.7 ms	0.0 in @ 1.9 ms

* See Data Acquisition Explanations; page xii

SUMMARY OF RESULTS

A Boeing 737 airframe section was instrumented and longitudinally tested at input levels of 6.1 g (23.2 ft/sec), 8.2 g (32.2 ft/sec), and 14.2 g (41.7 ft/sec). A summary of the test results follows.

1. The fuselage shell and floor structure had no visible separation or structural damage at the low-impact condition (Test 1).

2. Bin A and its attachment hardware had no visible damage at the low-impact condition (Test 1).

3. Bin B and its attachment hardware had no visible damage at the low-impact condition (Test 1).

4. The front of the auxiliary fuel tank's side attachment runners sheared off against the floor/fuel tank attachment framework stops, and the lower attachment points separated from the airframe structure at the low-impact condition (Test 1). The auxiliary fuel tank moved forward in the airframe until it contacted the sled attachment framework. The auxiliary fuel tank was removed from the airframe and was not included in subsequent impact tests.

5. The fuselage shell and floor structure had no visible separation or structural damage at the intermediate-impact condition (Test 2).

6. Bin A and its attachment hardware had no visible damage at the intermediate-impact condition (Test 2).

7. Bin B and its attachment hardware had no visible damage at the intermediate-impact condition (Test 2).

8. The floor structure had no visible separation or structural damage at the maximum-impact condition (Test 3).

9. The fuselage shell experienced damage to its left side frame sections due to the detachment of Bin A in the maximum-impact test condition (Test 3).

10. At the maximum test condition (Test 3), Bin A detached from the fuselage frame sections. The overhead stowage bin was restrained by a tether that was attached prior to the impact test. The upper longitudinal rail, which was fastened to the frame sections and served as an attachment point for the upper bin supports, detached from the fuselage frame section. The upper longitudinal rail remained attached to the upper bin supports. The upper bin supports remained attached to the overhead stowage bins. The forwardmost lower bin support detached from the overhead stowage bin and air duct but remained attached to the fuselage by its turnbuckles. The lower mid and aft bin supports detached from the fuselage and air ductwork. These supports remained attached to the overhead stowage bin.

REFERENCES

1. Airframe Longitudinal Testing, FAA Contract DTFA03-95-G00022, Dated September 26, 1995.

2. Johnson, D. and Garodz, L., Crashworthiness Experiment Summary—Full-Scale Transport Controlled Impact Demonstration Program, FAA Report DOT/FAA/CT-85/21, June 1986.

3. Johnson, D. and Wilson, T., Vertical Drop Test of a Transport Airframe Section, FAA Report DOT/FAA/CT-TN86/34, October 1986.

4. Logue, T. and McGuire, R., Vertical Drop Test of a Narrow-Body Fuselage Section with Overhead Stowage Bins and Auxiliary Fuel Tank on Board, FAA Report DOT/FAA/CT-94/116, April 1995.

5. Wade, B. and Johnson, D., Longitudinal Impact Test of a Transport Airframe Section, August 1988.

TEST 1. (FIGURES 6 THROUGH 80)



FIGURE 6. PRETEST OVERALL AIRFRAME LEFT SIDE VIEW

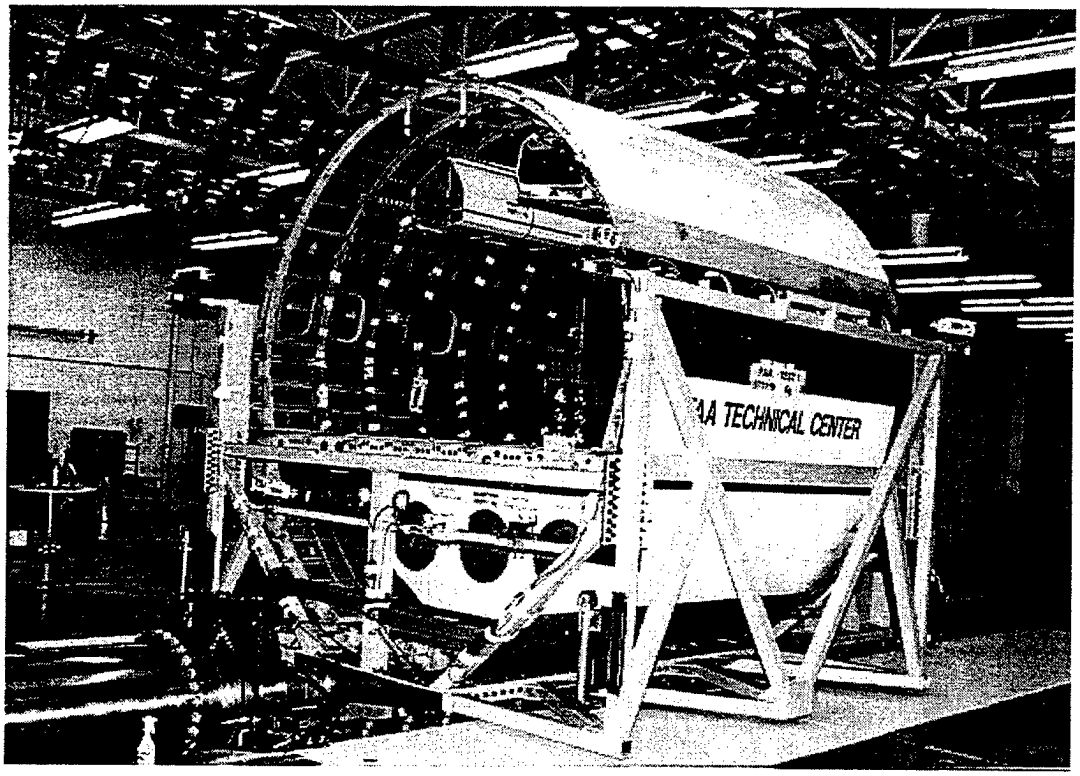


FIGURE 7. PRETEST OVERALL AIRFRAME LEFT FRONT ANGLE VIEW

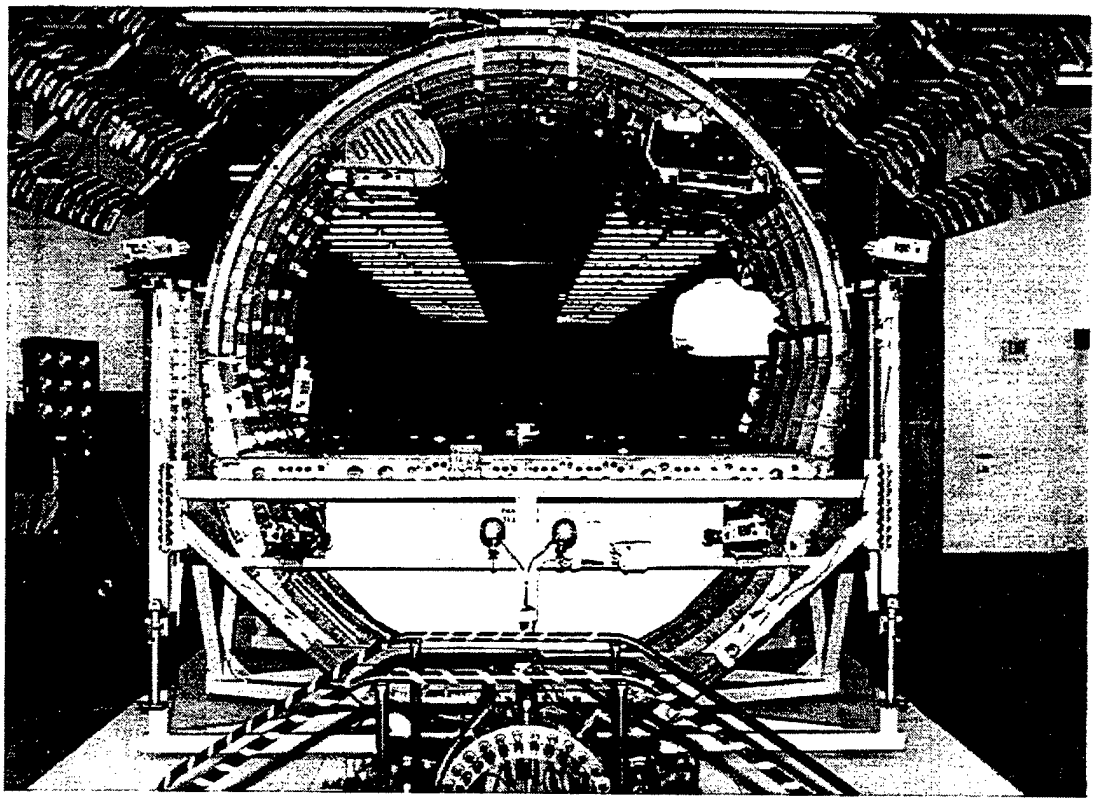


FIGURE 8. PRETEST OVERALL AIRFRAME FRONT VIEW

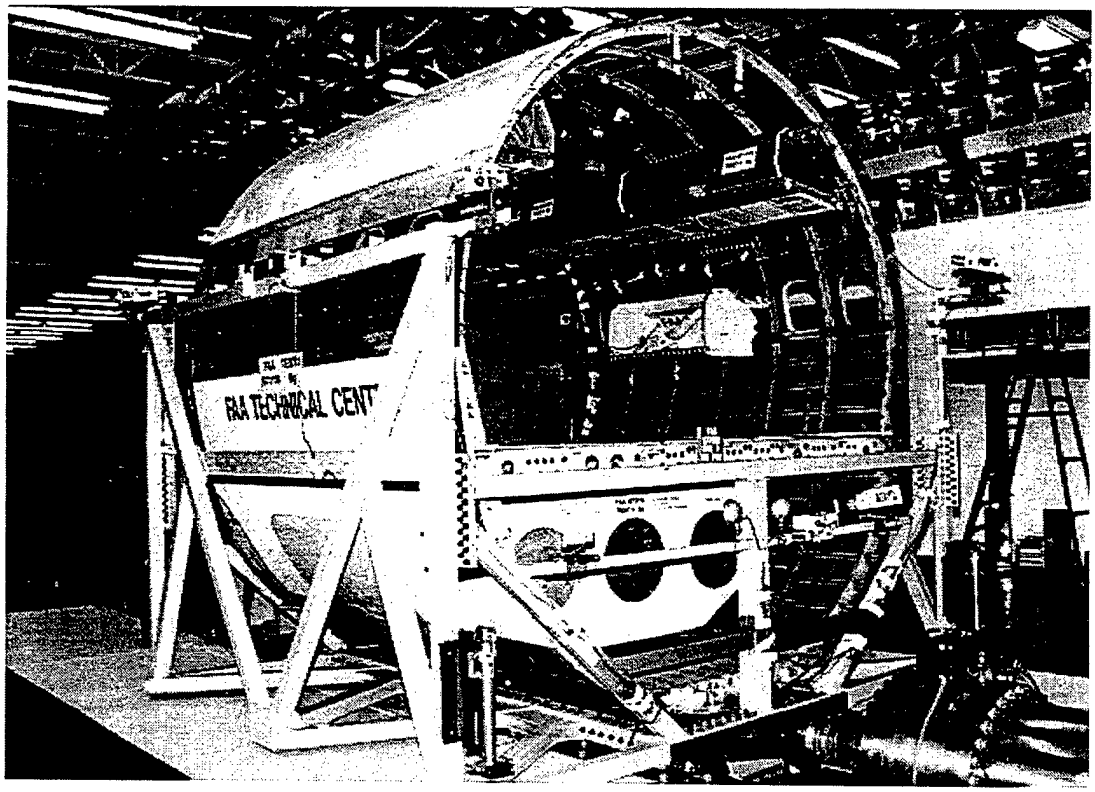


FIGURE 9. PRETEST OVERALL AIRFRAME RIGHT FRONT ANGLE VIEW

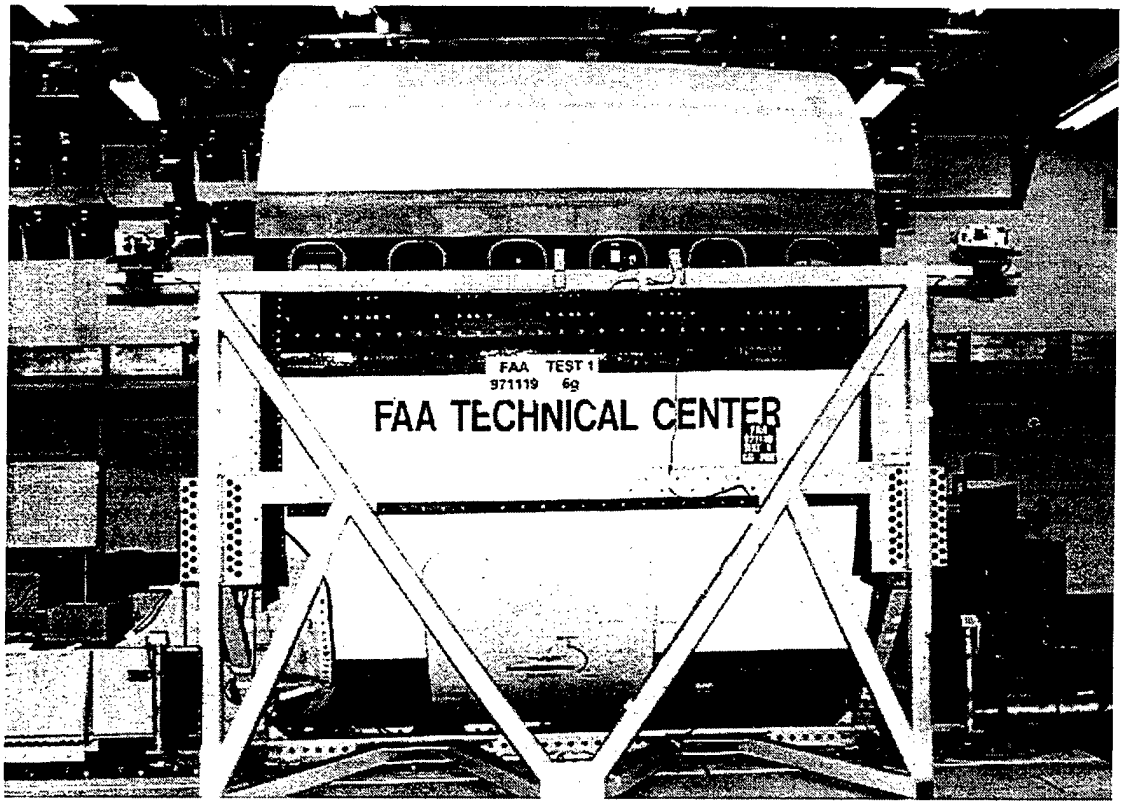


FIGURE 10. PRETEST OVERALL AIRFRAME RIGHT SIDE VIEW

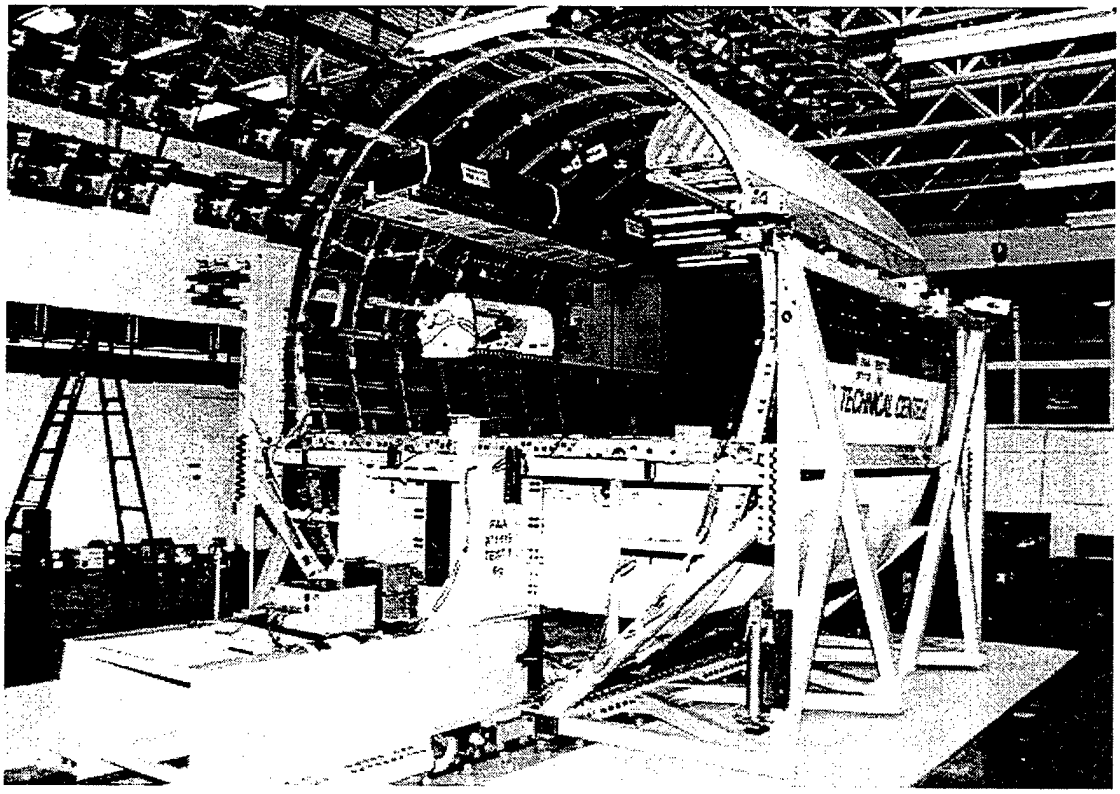


FIGURE 11. PRETEST OVERALL AIRFRAME RIGHT REAR ANGLE VIEW

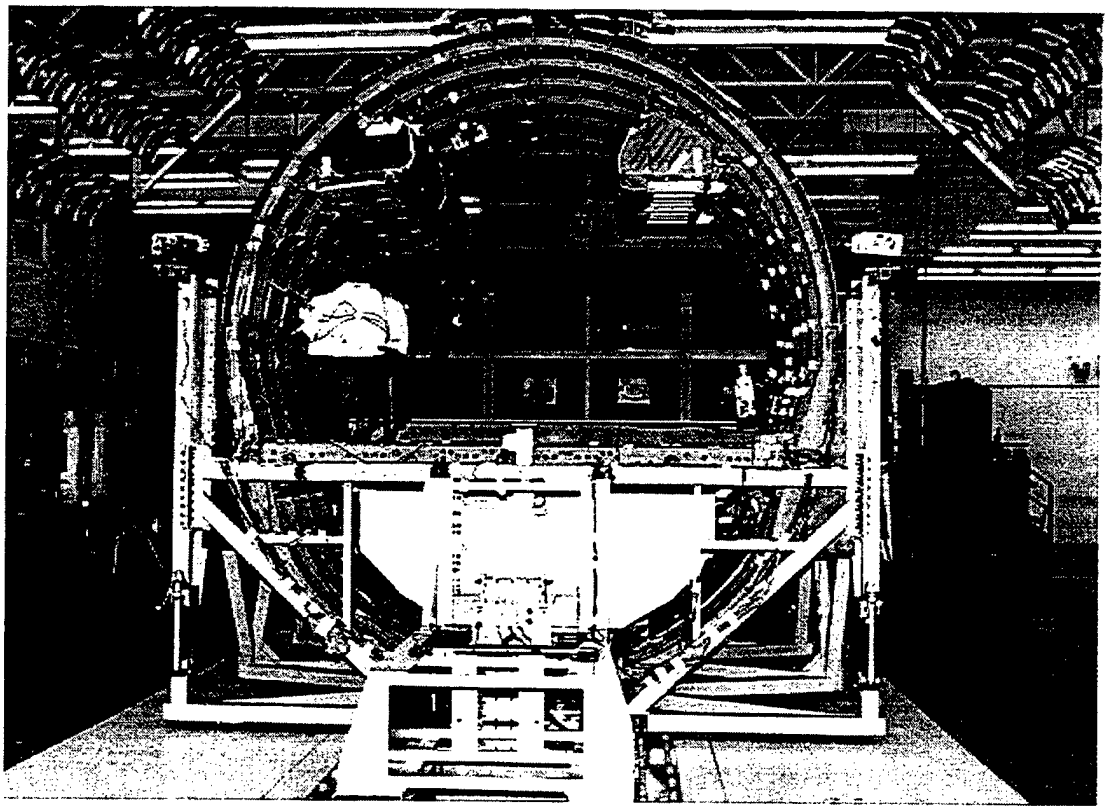


FIGURE 12. PRETEST OVERALL AIRFRAME REAR VIEW

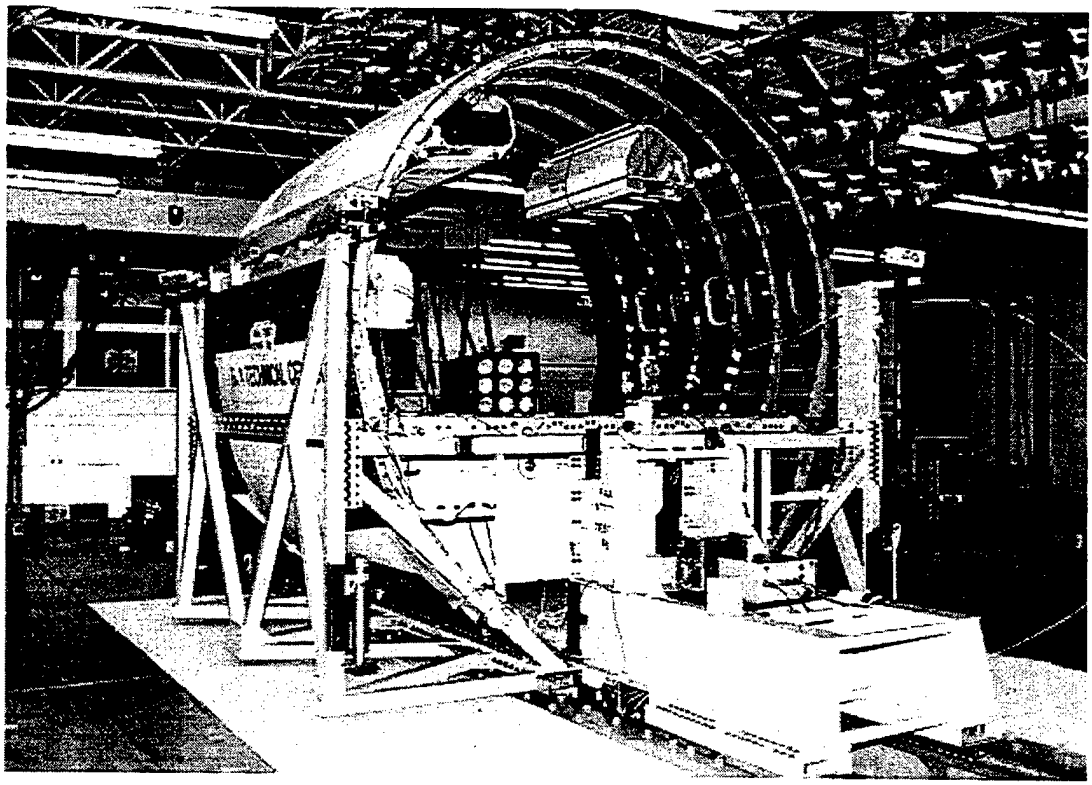


FIGURE 13. PRETEST OVERALL AIRFRAME LEFT REAR ANGLE VIEW

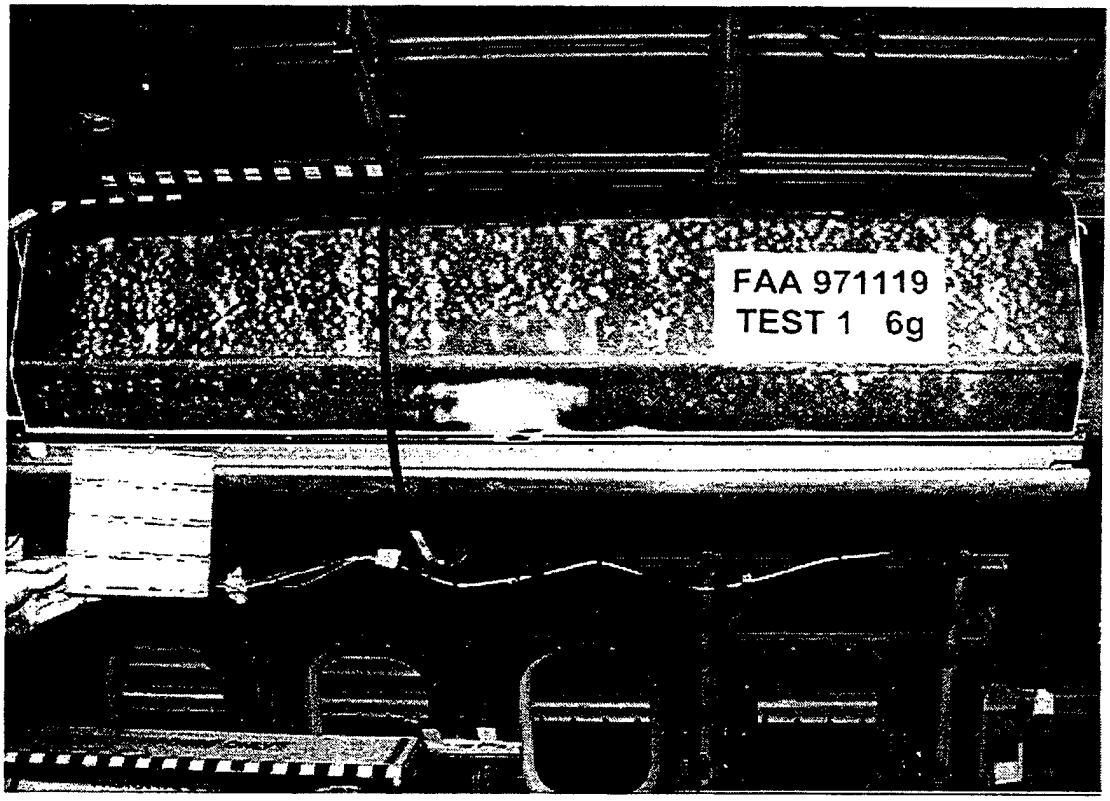


FIGURE 14. PRETEST BIN A FORE SECTION RIGHT OVERALL SIDE VIEW

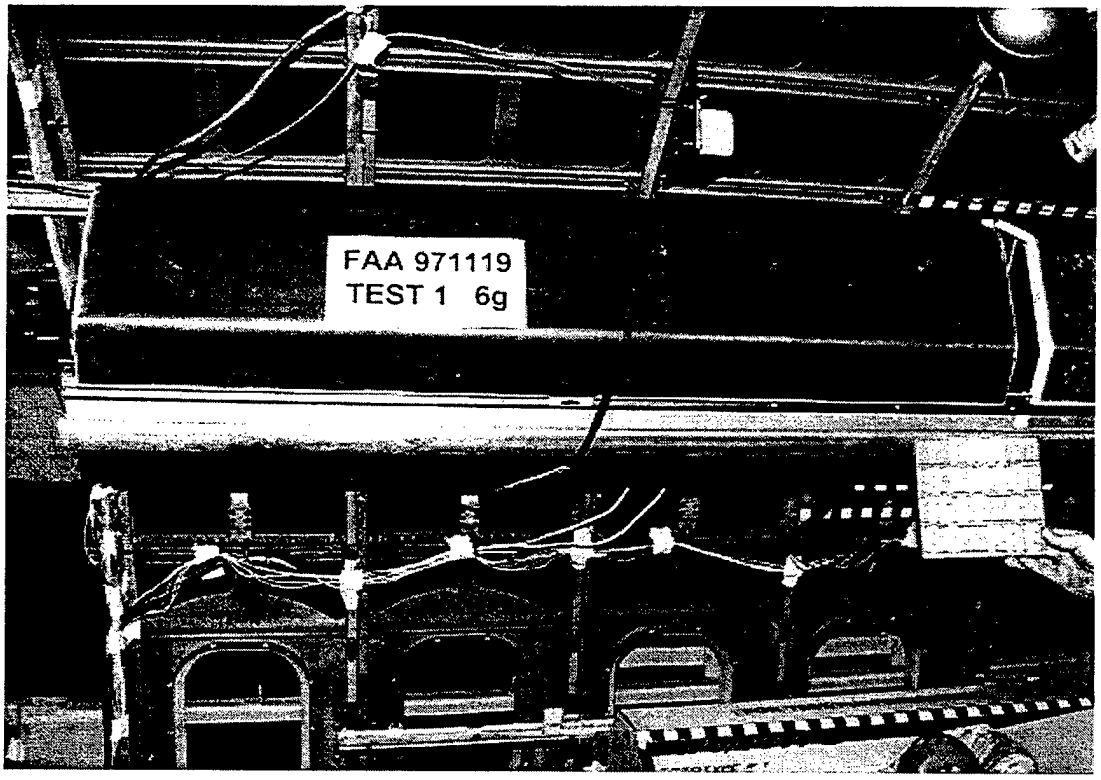


FIGURE 15. PRETEST BIN A AFT SECTION RIGHT OVERALL SIDE VIEW

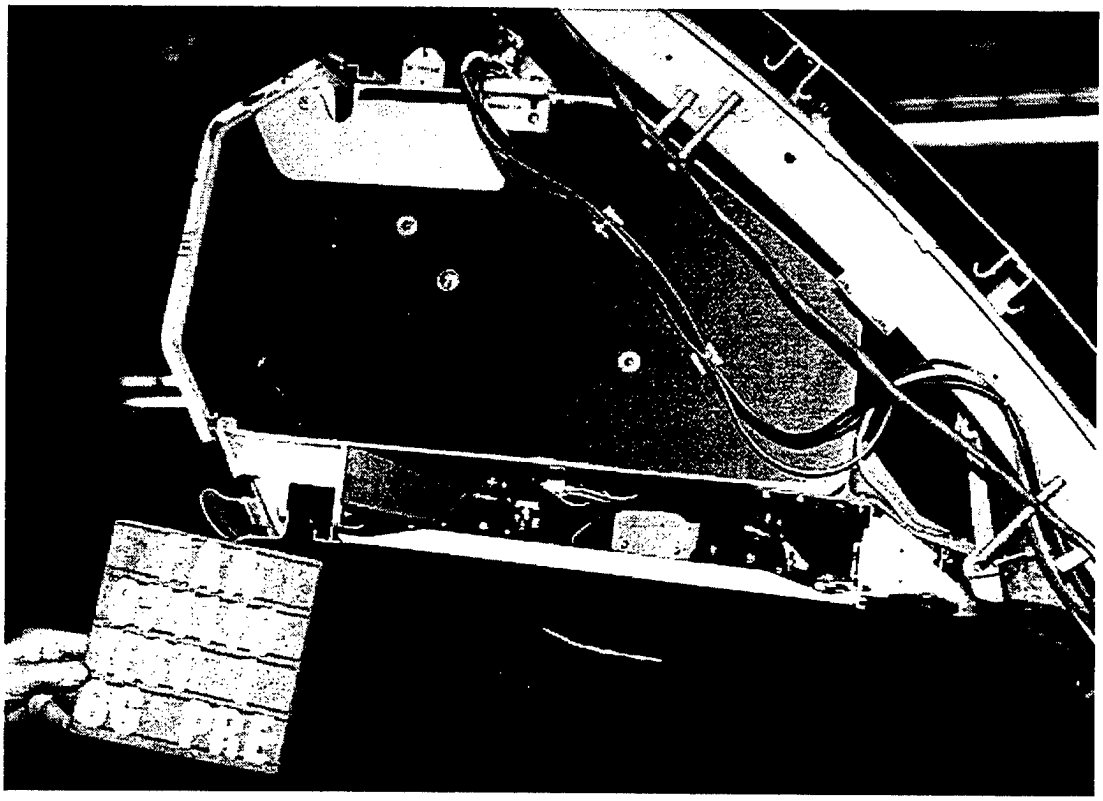


FIGURE 16. PRETEST BIN A FRONT VIEW

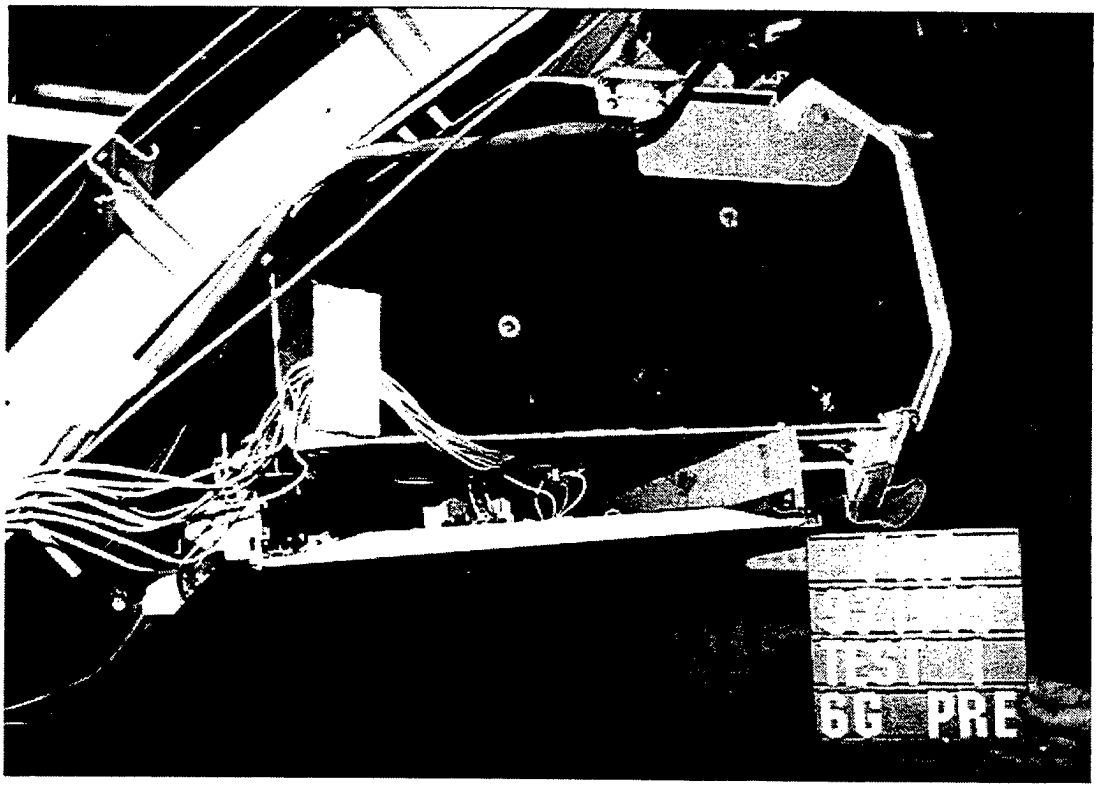


FIGURE 17. PRETEST BIN A REAR VIEW

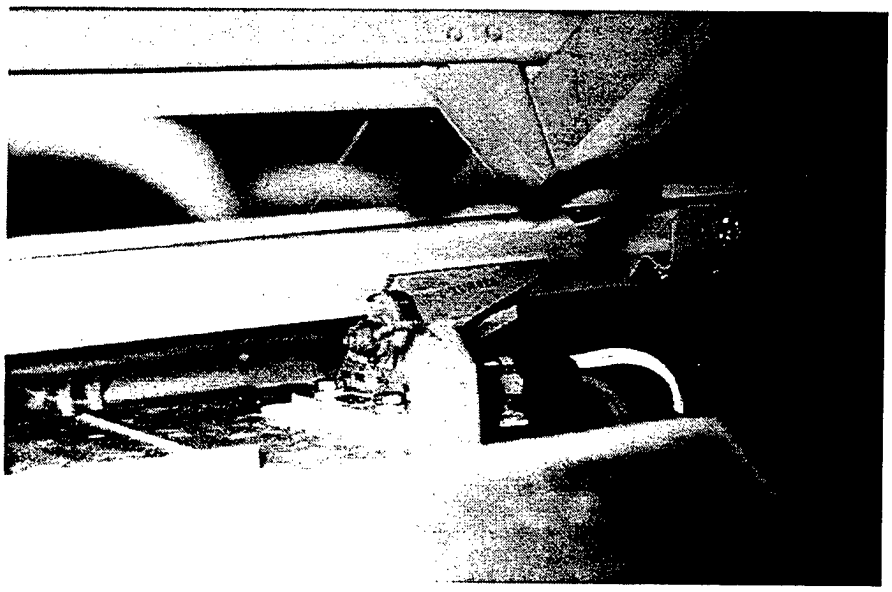


FIGURE 18. PRETEST BIN A FORWARDMOST UPPER ATTACHMENT SUPPORT NO. 78 VIEW

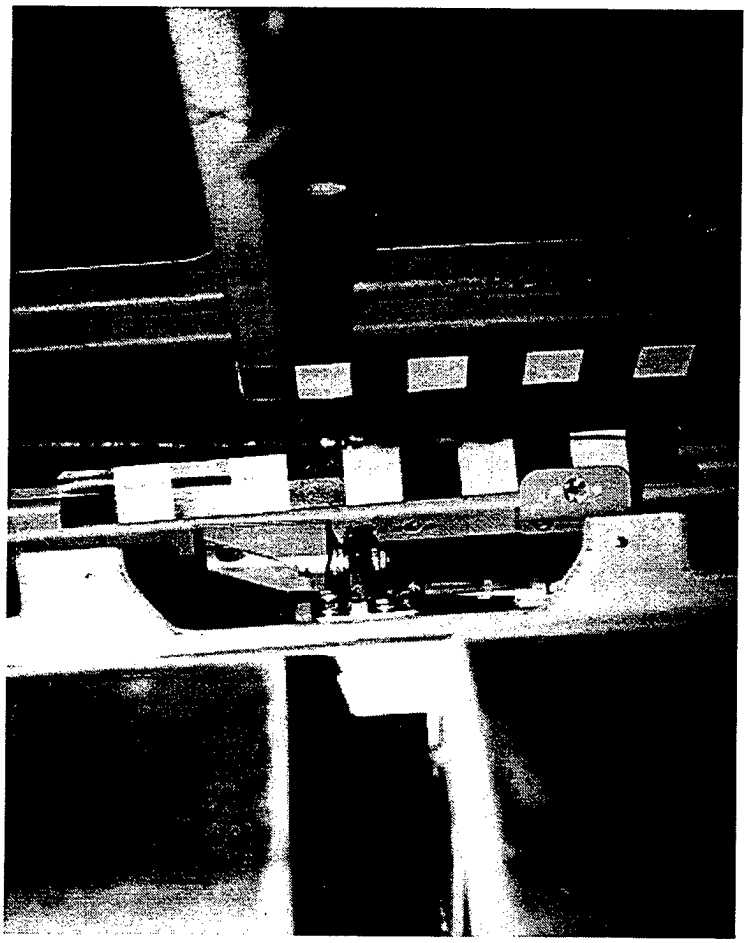


FIGURE 19. PRETEST BIN A MID UPPER ATTACHMENT SUPPORT NO. 76 VIEW

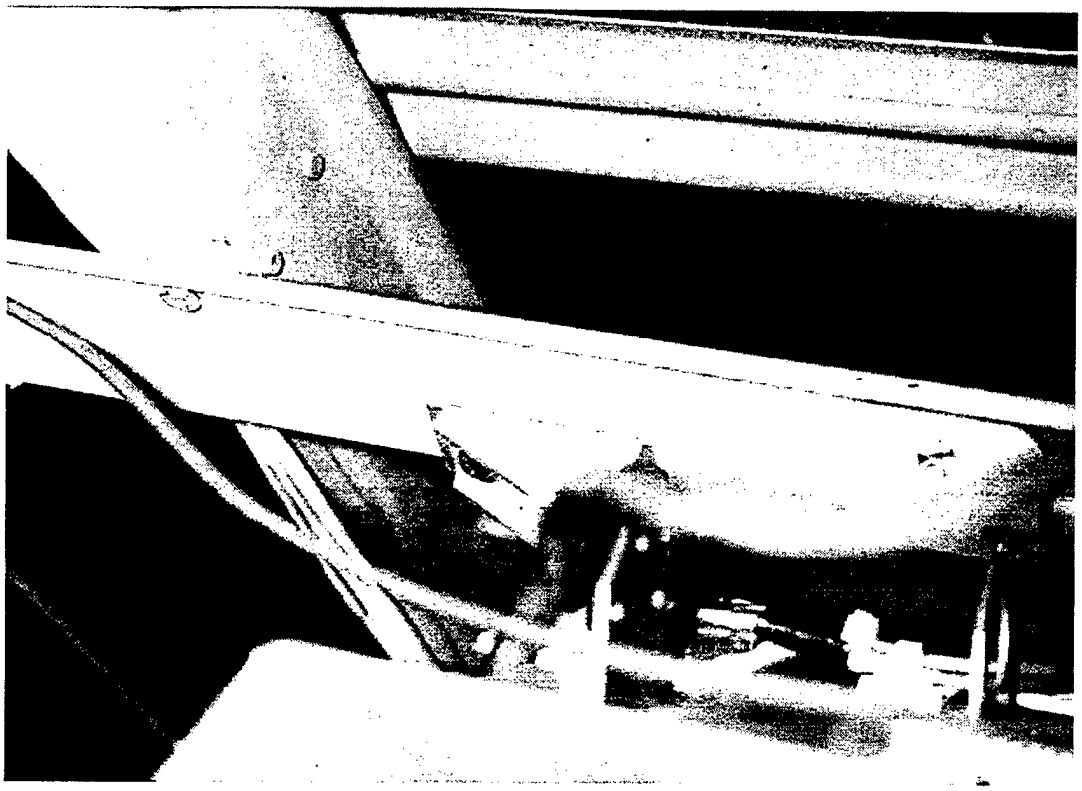


FIGURE 20. PRETEST BIN A AFT UPPER ATTACHMENT SUPPORT NO. 75 VIEW

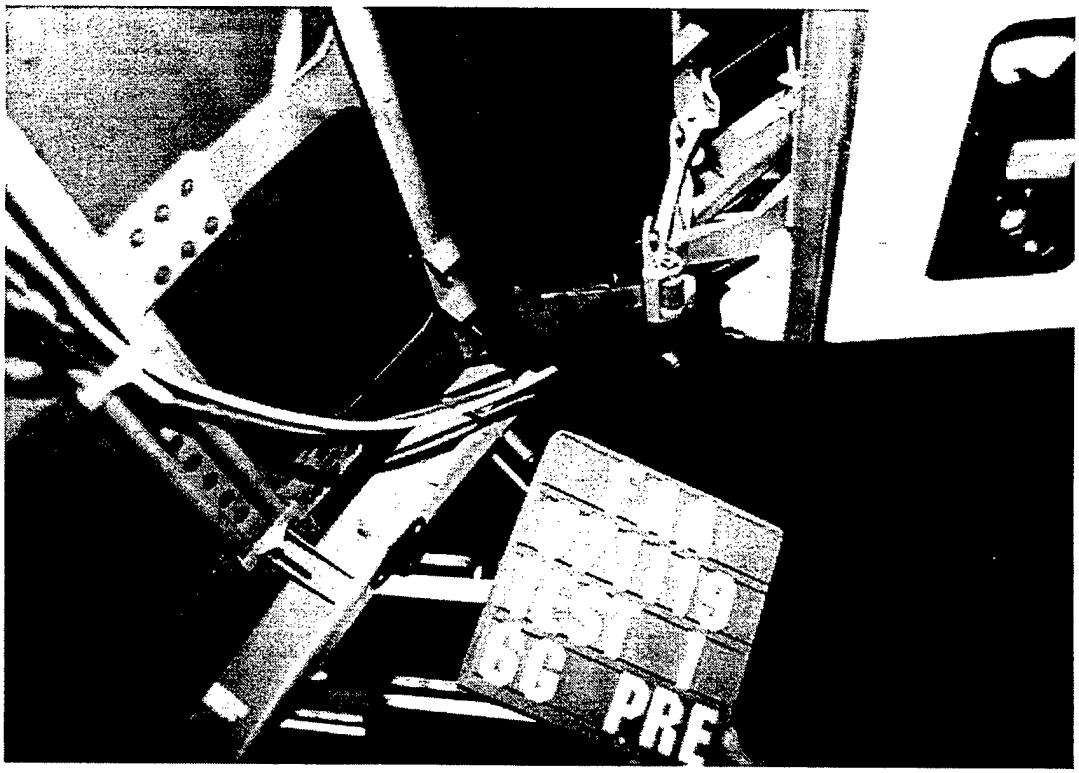


FIGURE 21. PRETEST BIN A FORWARDMOST LOWER ATTACHMENT SUPPORT NO. 75 VIEW



FIGURE 22. PRETEST BIN A MID (BS480) LOWER ATTACHMENT SUPPORT NO. 76 VIEW



FIGURE 23. PRETEST BIN A AFT (BS480) LOWER ATTACHMENT SUPPORT NO. 78 VIEW

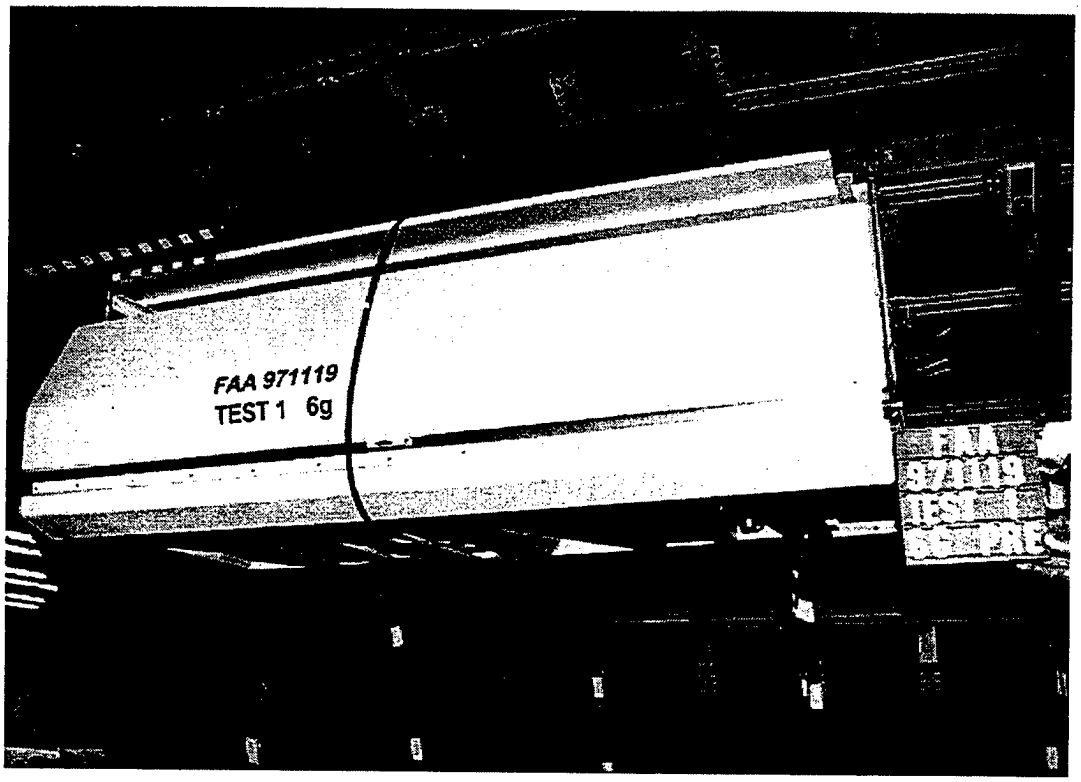


FIGURE 24. PRETEST BIN B OVERALL SIDE VIEW

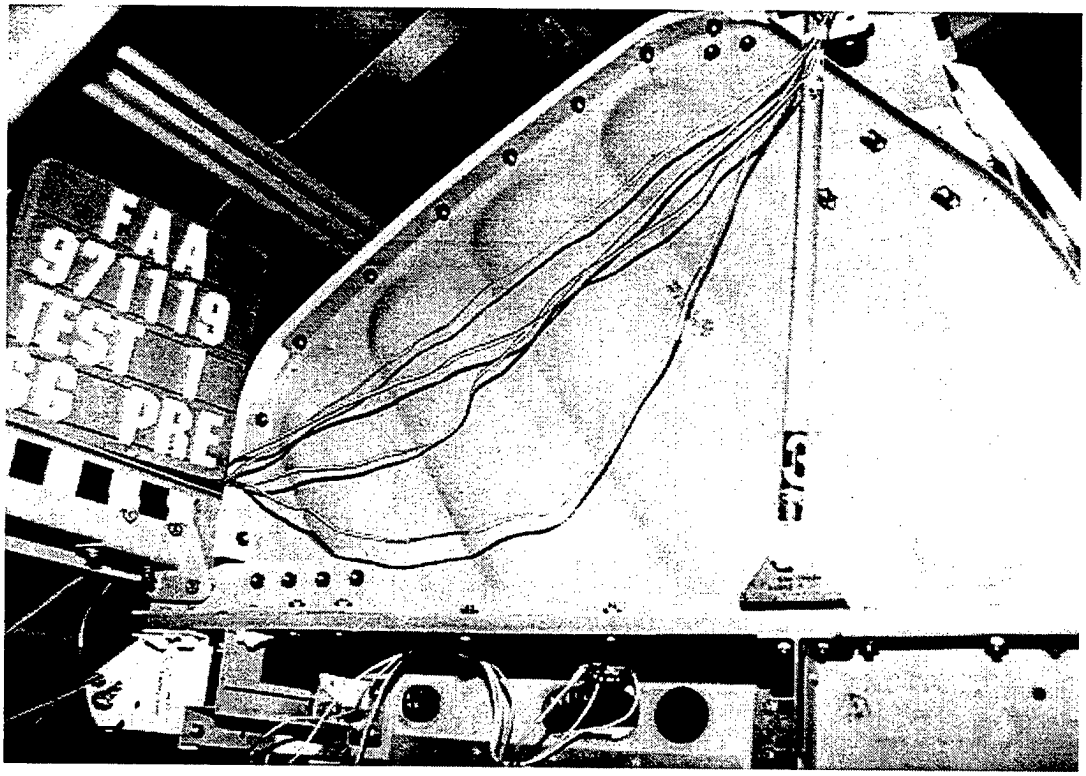


FIGURE 25. PRETEST BIN B FRONT VIEW

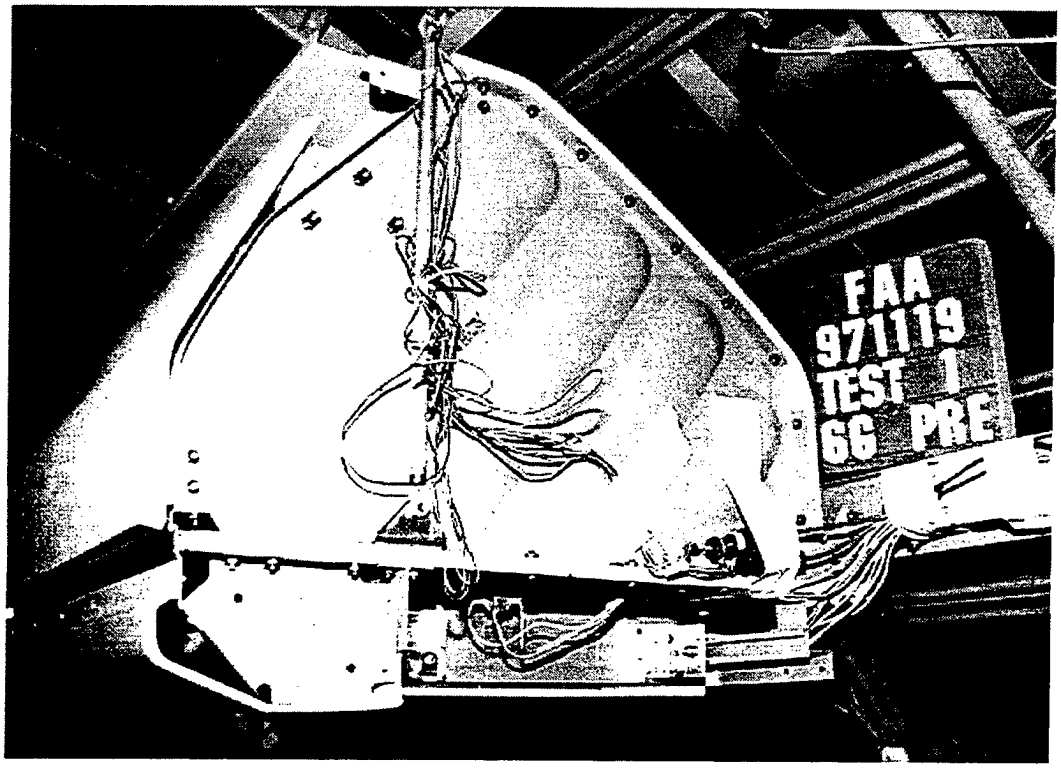


FIGURE 26. PRETEST BIN B REAR VIEW



FIGURE 27. PRETEST BIN B ATTACHMENT SUPPORTS NOS. 5, 6, 8, AND 9 BOTTOM VIEW

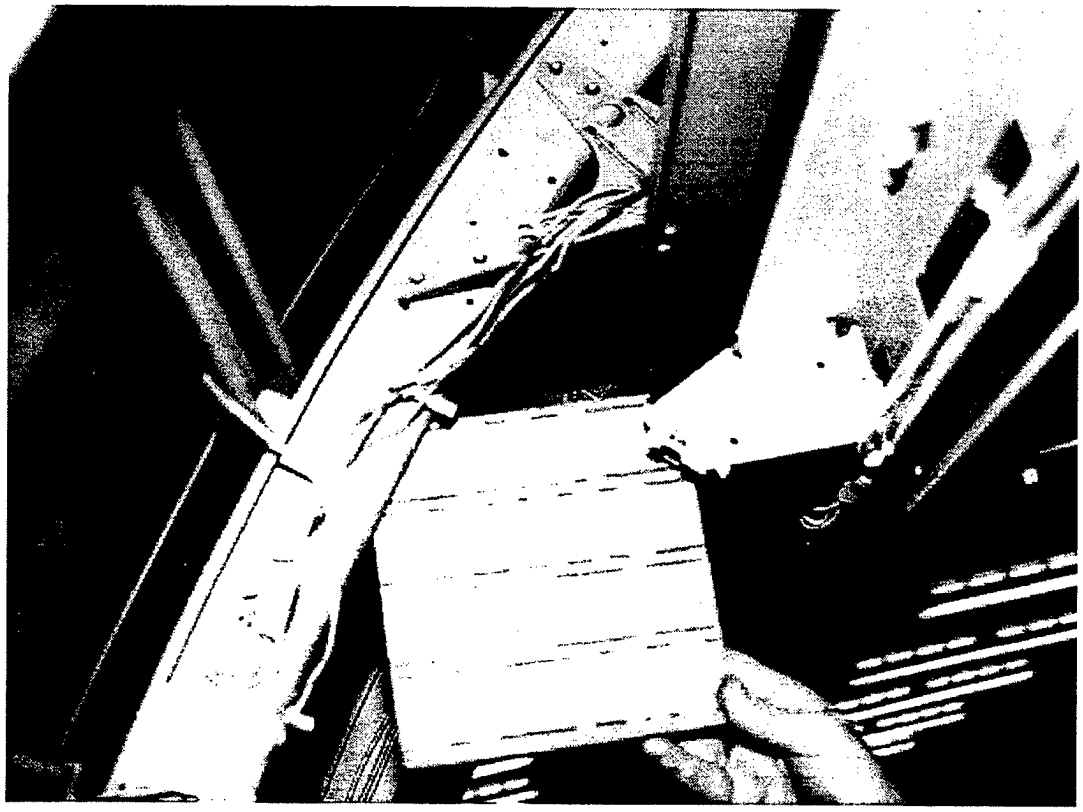


FIGURE 28. PRETEST BIN B ATTACHMENT SUPPORT NO. 7 FRONT VIEW

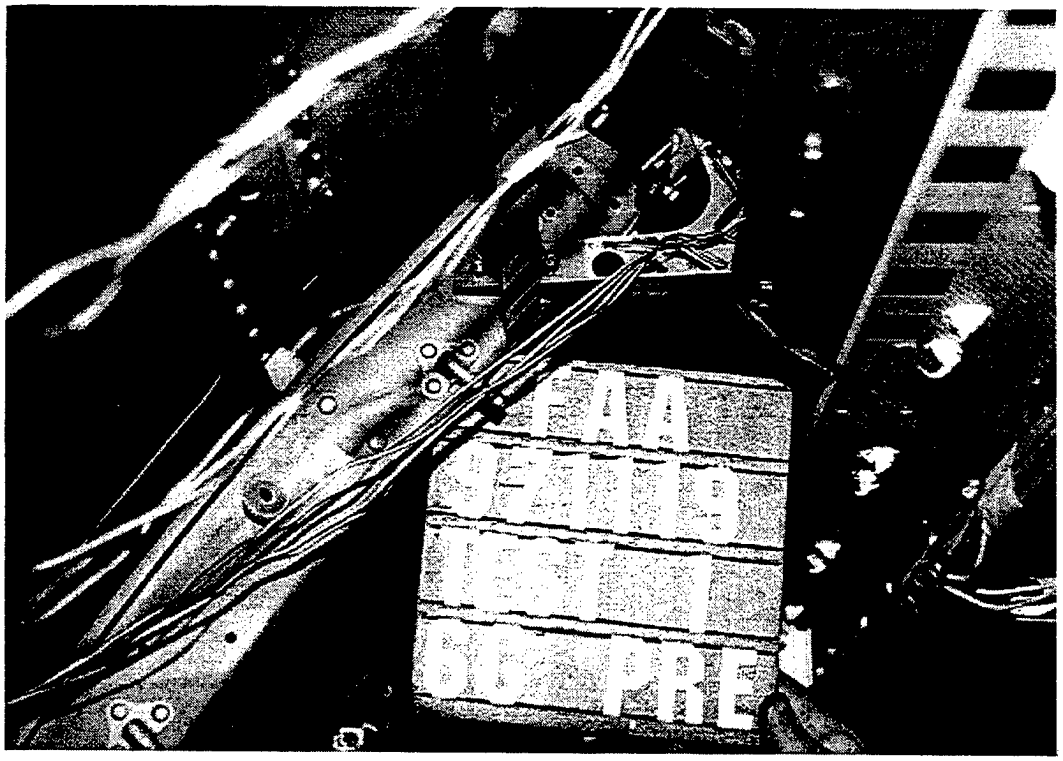


FIGURE 29. PRETEST BIN B ATTACHMENT SUPPORT NO. 8 FRONT LOWER VIEW



FIGURE 30. PRETEST BIN B ATTACHMENT SUPPORT NO. 9 FRONT LOWER VIEW

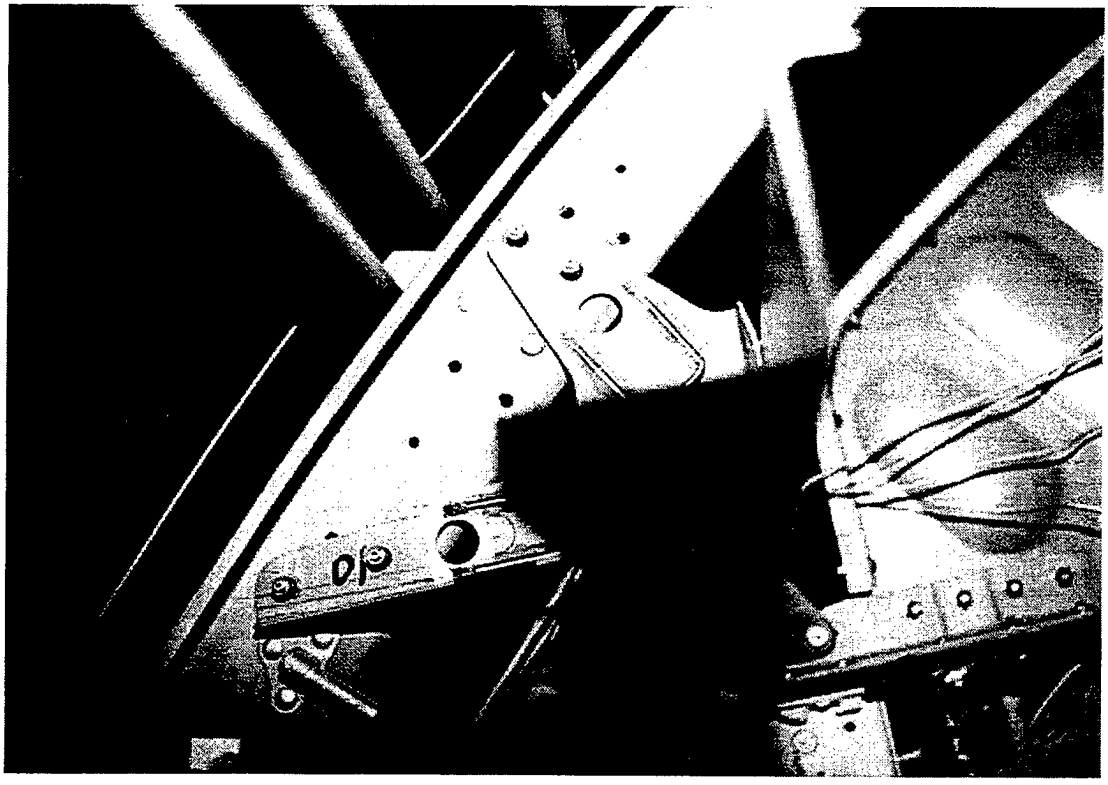


FIGURE 31. PRETEST BIN B ATTACHMENT SUPPORT NO. 10 FRONT VIEW

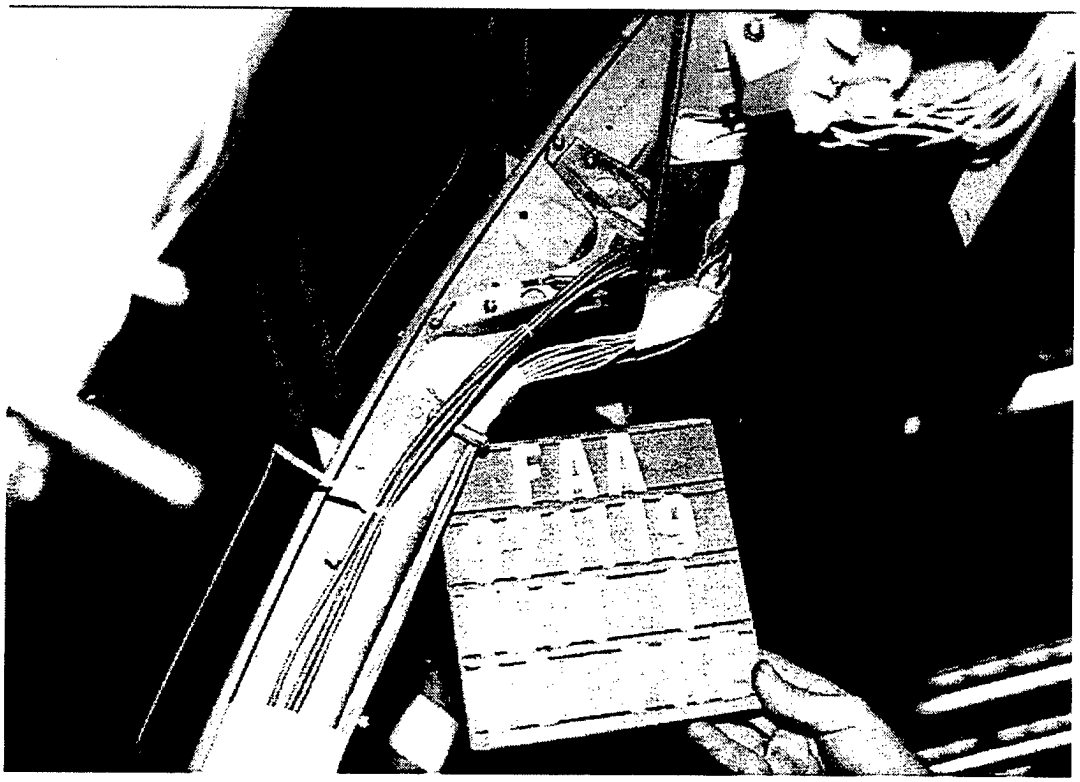


FIGURE 32. PRETEST BIN B ATTACHMENT SUPPORT NO. 11 FRONT LOWER VIEW

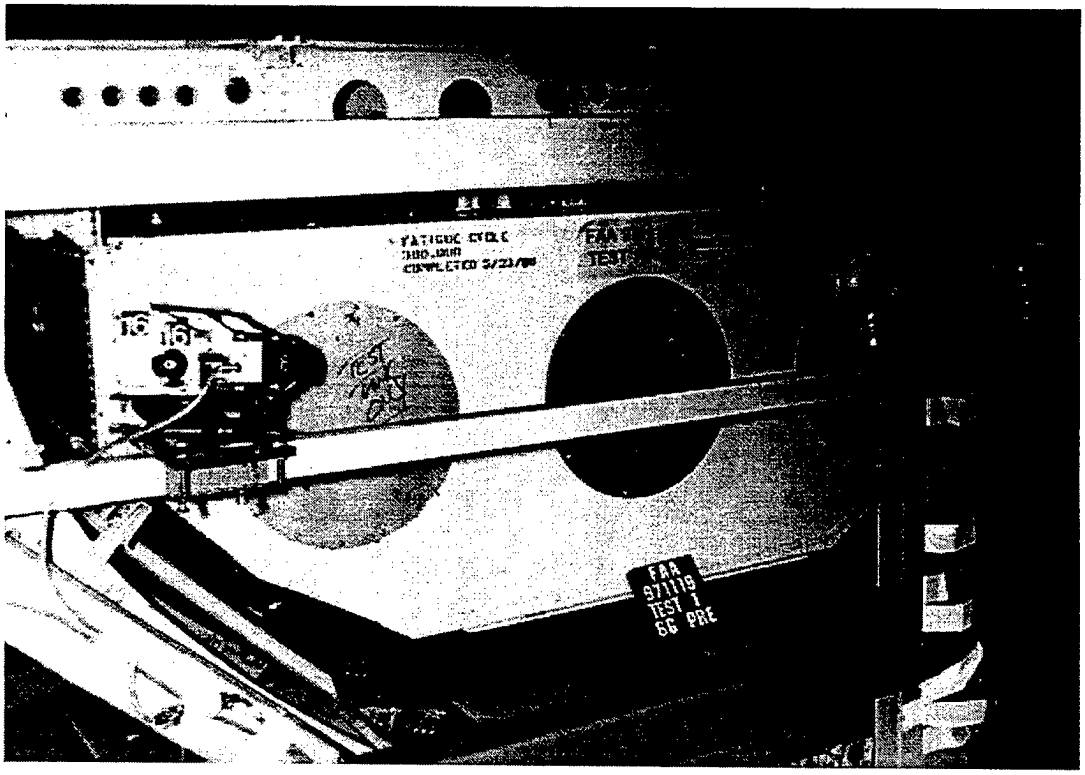


FIGURE 33. PRETEST AUXILIARY FUEL TANK FRONT OVERALL VIEW



FIGURE 34. PRETEST AUXILIARY FUEL TANK FRONT VIEW 1

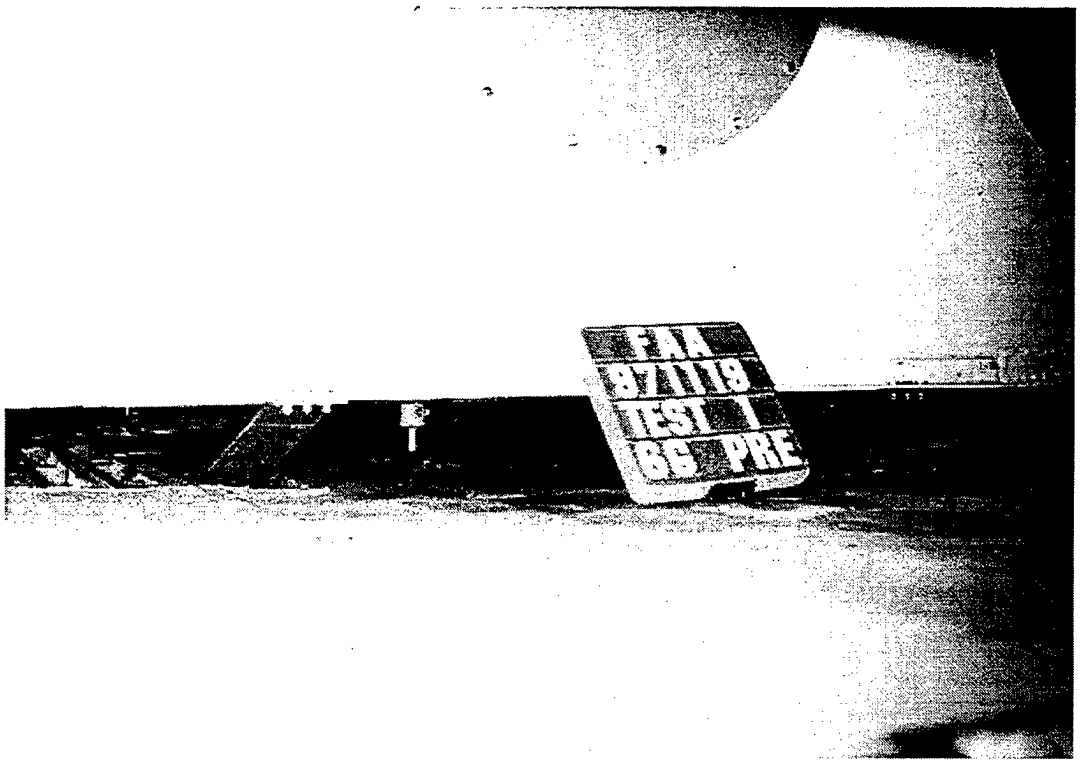


FIGURE 35. PRETEST AUXILIARY FUEL TANK FRONT VIEW 2

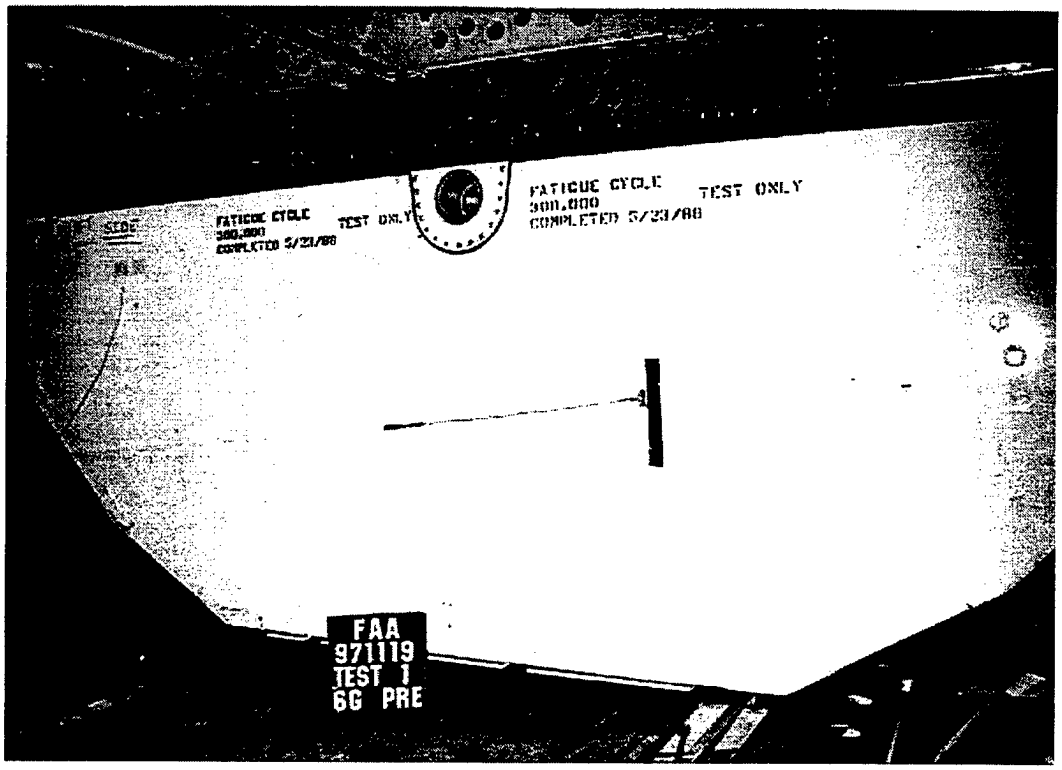


FIGURE 36. PRETEST AUXILIARY FUEL TANK REAR OVERALL VIEW

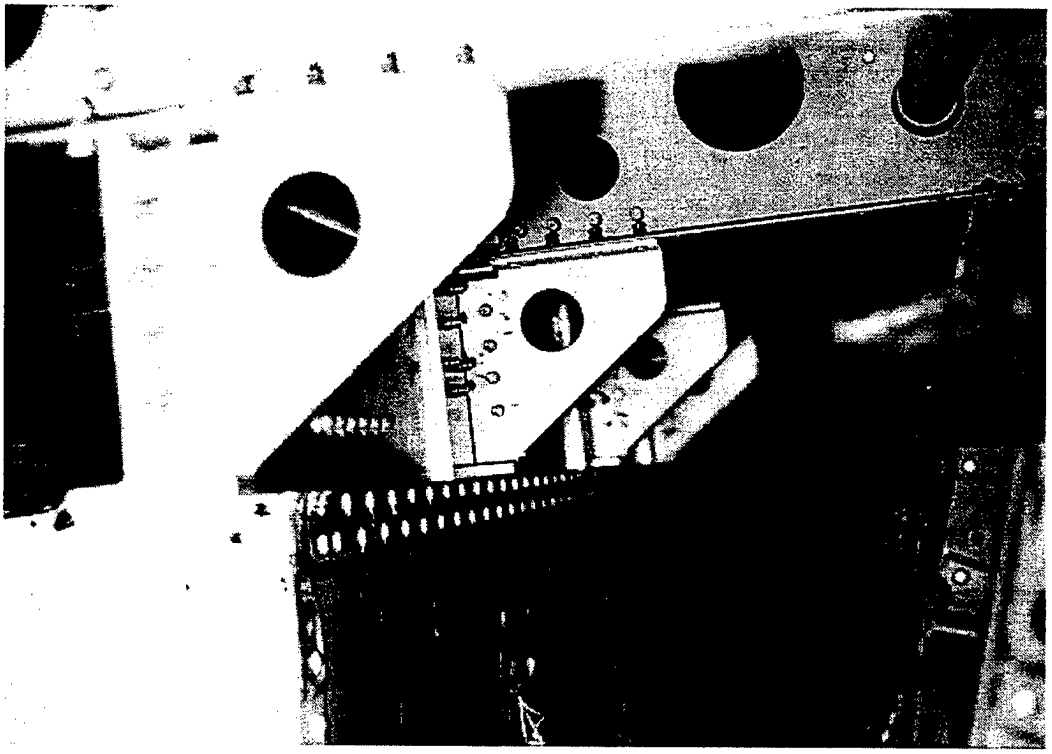


FIGURE 37. PRETEST AUXILIARY FUEL TANK LEFT ATTACHMENT FRAMEWORK FRONT OUTER VIEW

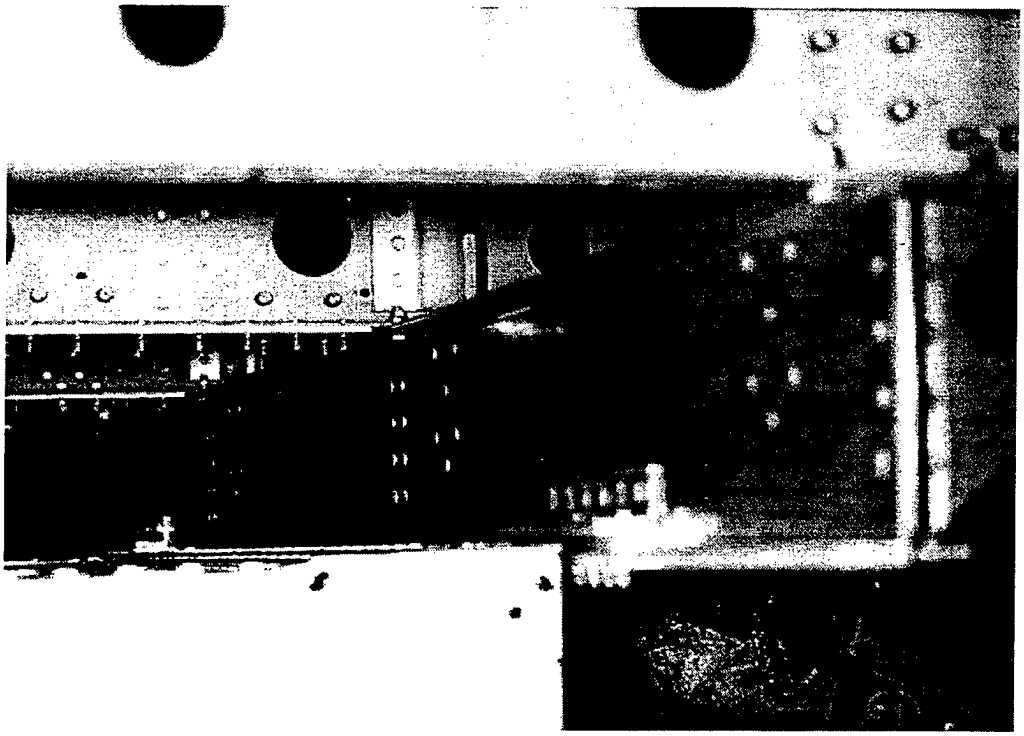


FIGURE 38. PRETEST AUXILIARY FUEL TANK LEFT ATTACHMENT FRAMEWORK FRONT INNER VIEW

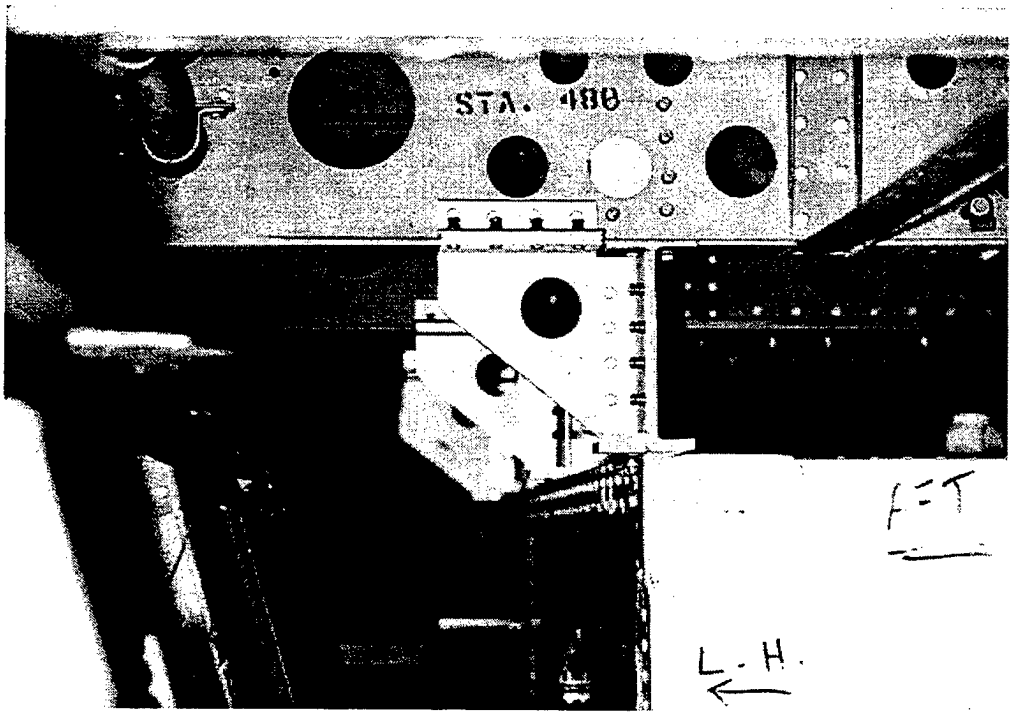


FIGURE 39. PRETEST AUXILIARY FUEL TANK LEFT ATTACHMENT FRAMEWORK REAR OUTER VIEW

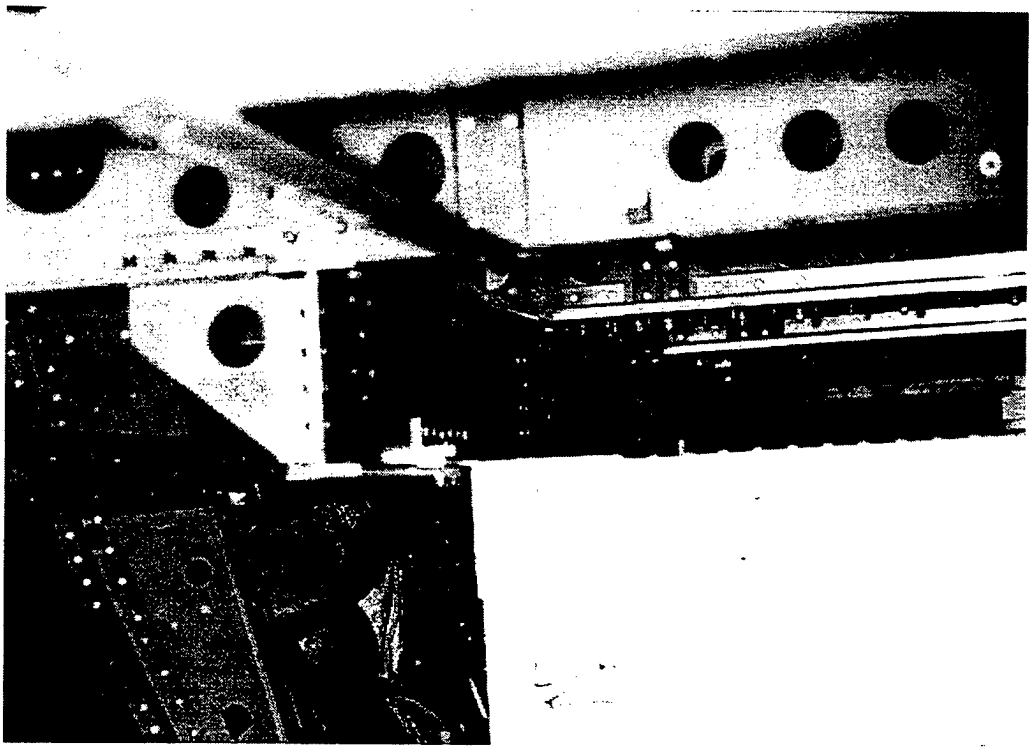


FIGURE 40. PRETEST AUXILIARY FUEL TANK LEFT ATTACHMENT FRAMEWORK REAR INNER VIEW

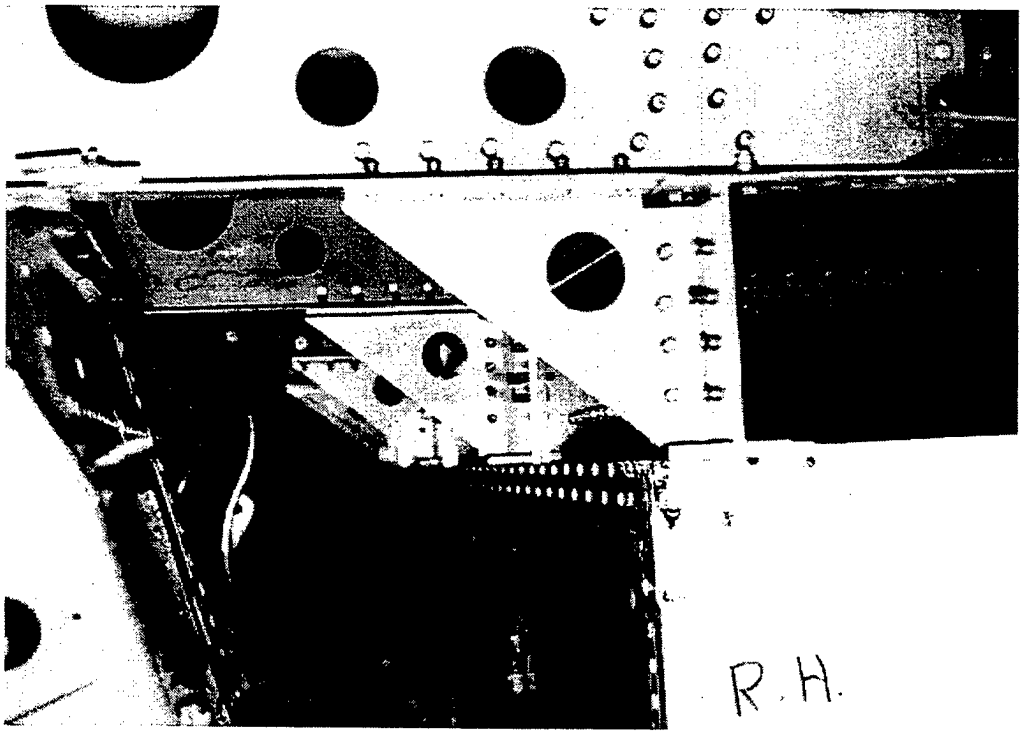


FIGURE 41. PRETEST AUXILIARY FUEL TANK RIGHT ATTACHMENT FRAMEWORK FRONT OUTER VIEW

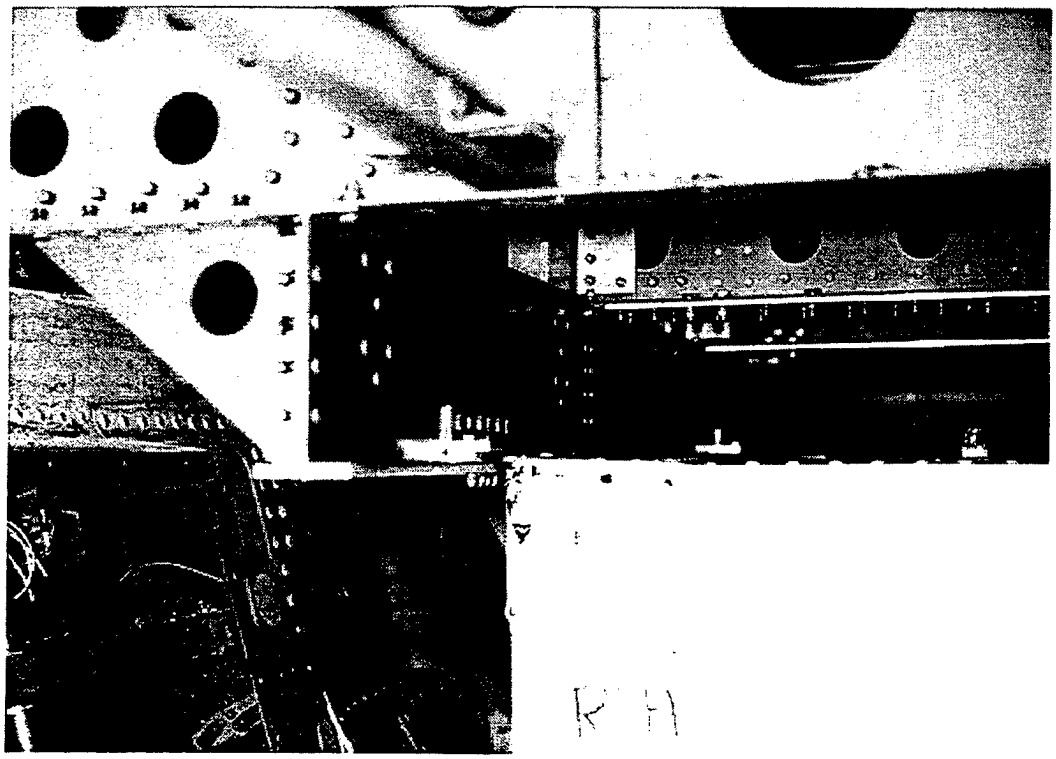


FIGURE 42. PRETEST AUXILIARY FUEL TANK RIGHT ATTACHMENT FRAMEWORK FRONT INNER VIEW

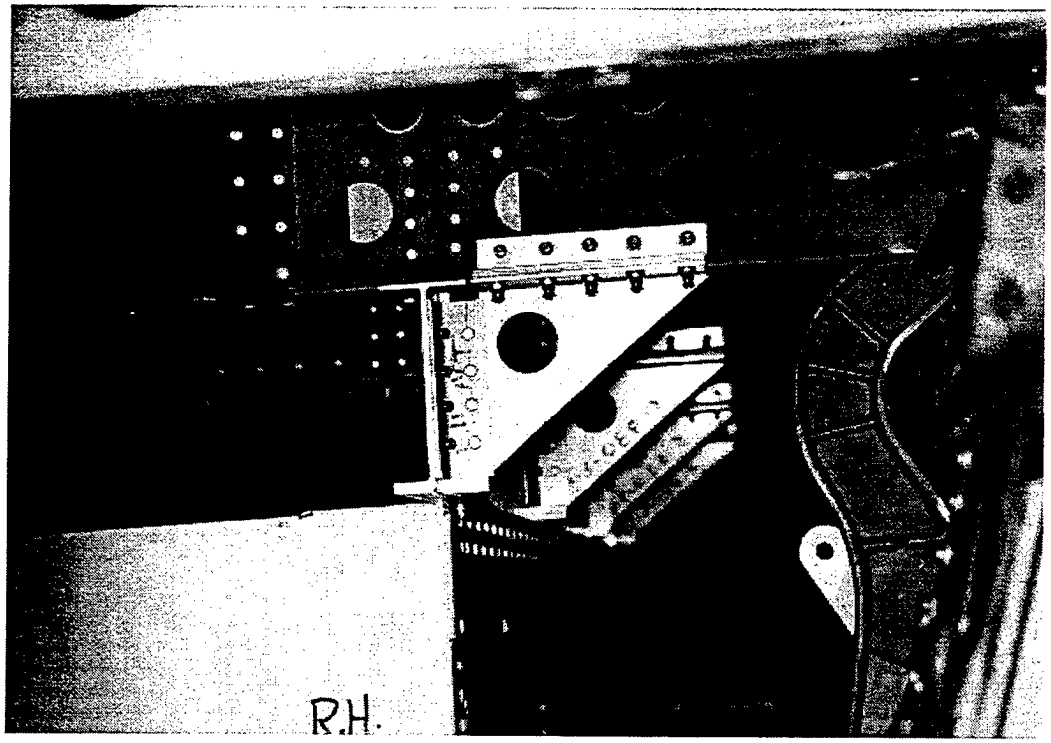


FIGURE 43. PRETEST AUXILIARY FUEL TANK RIGHT ATTACHMENT FRAMEWORK REAR OUTER VIEW

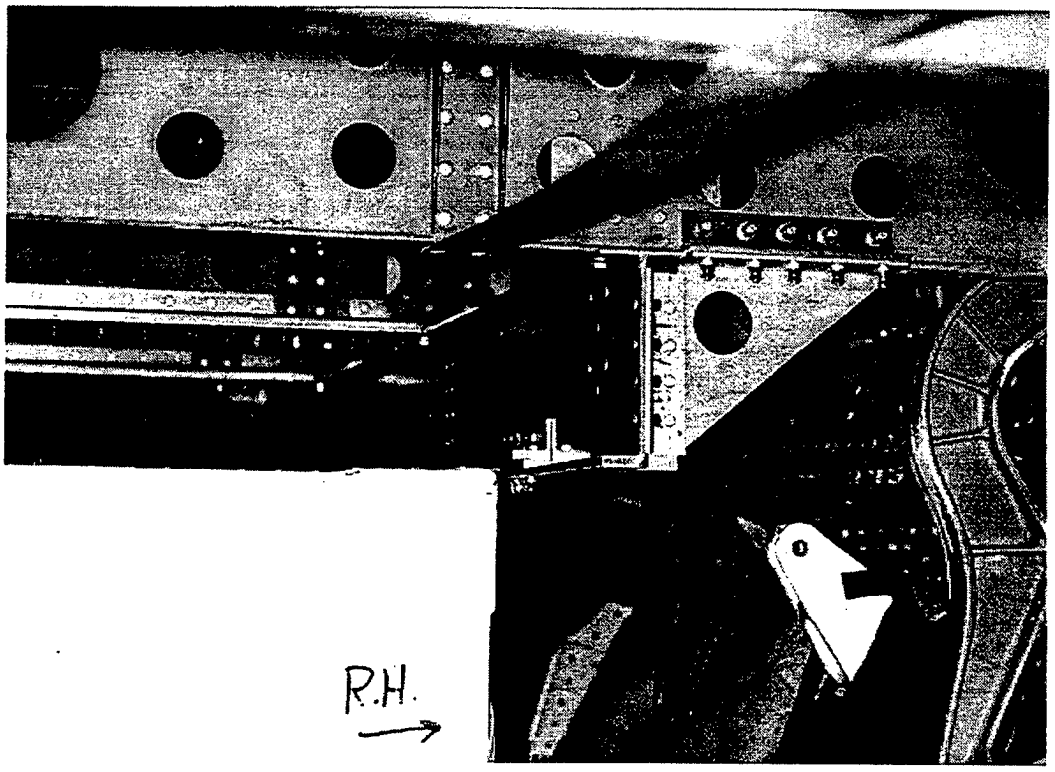


FIGURE 44. PRETEST AUXILIARY FUEL TANK RIGHT ATTACHMENT FRAMEWORK REAR INNER VIEW

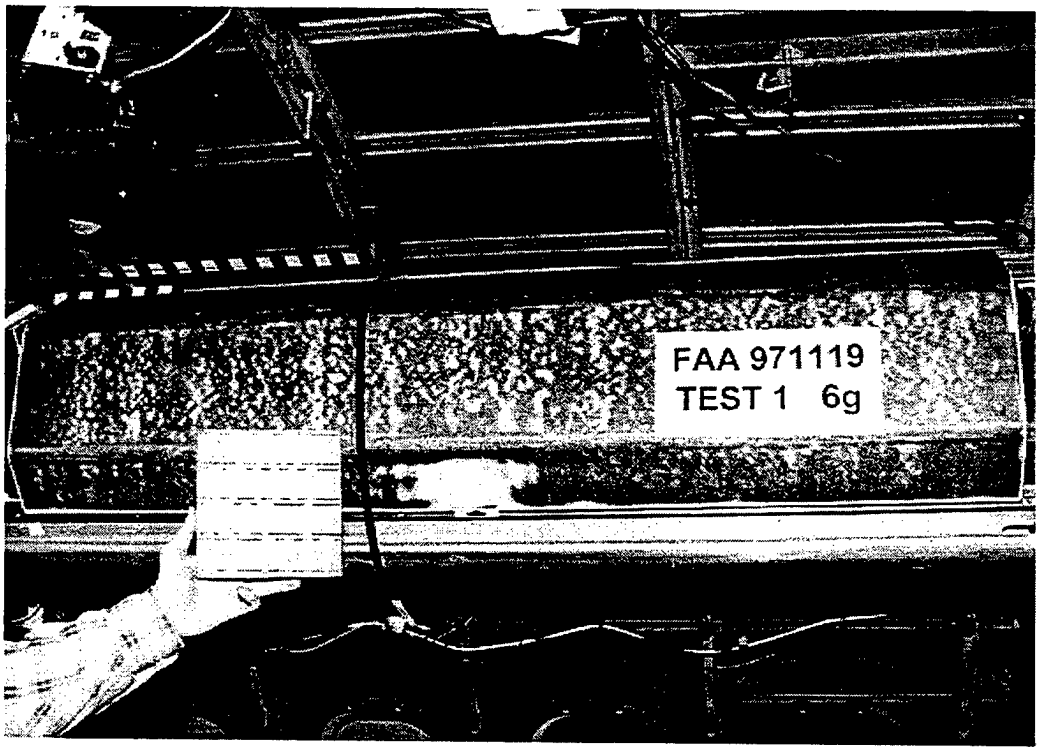


FIGURE 45. POSTTEST BIN A FORE SECTION RIGHT SIDE VIEW

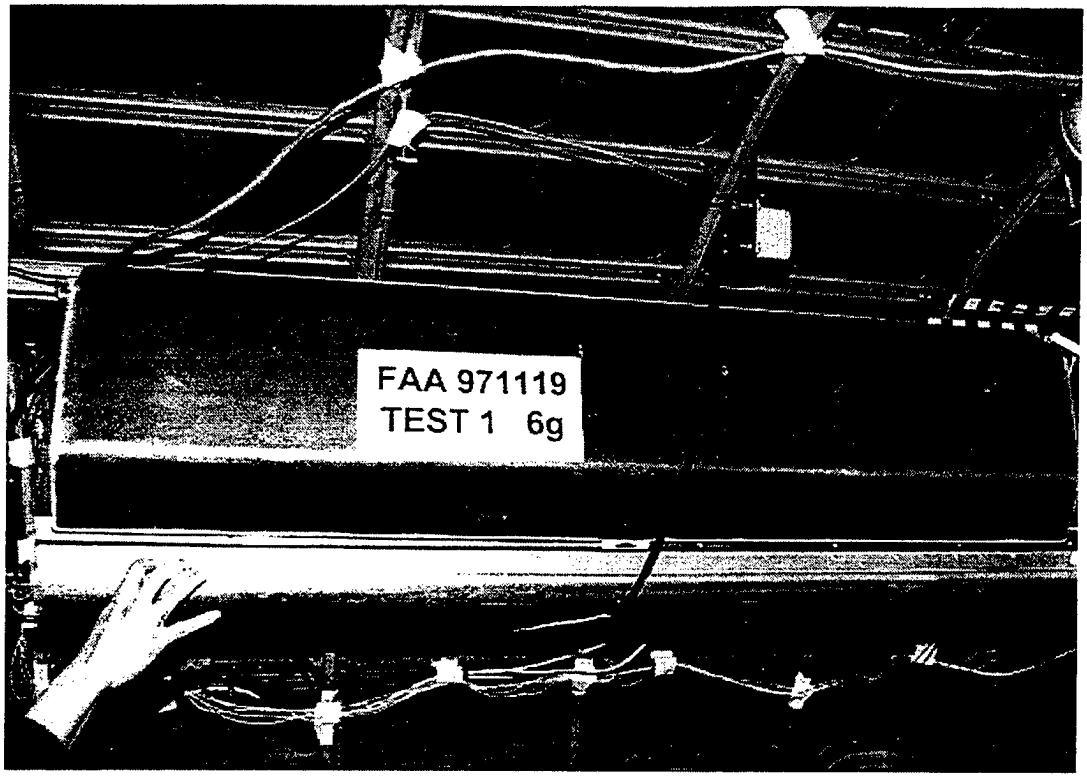


FIGURE 46. POSTTEST BIN A AFT SECTION RIGHT SIDE VIEW

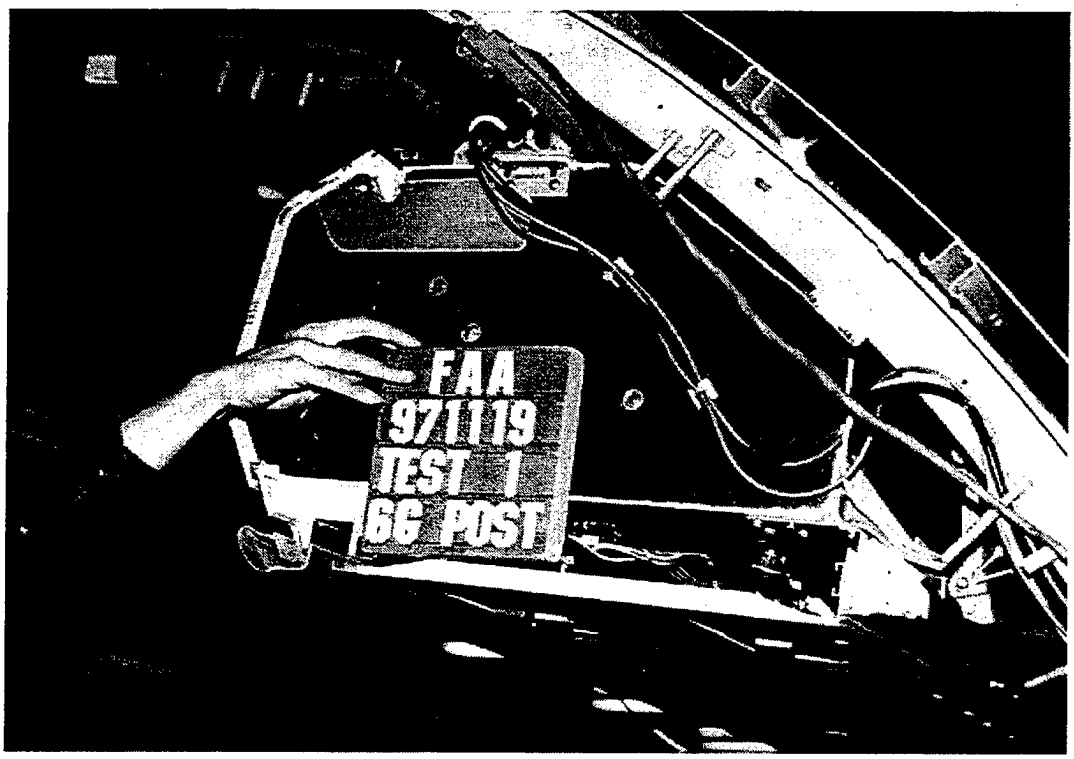


FIGURE 47. POSTTEST BIN A FRONT VIEW

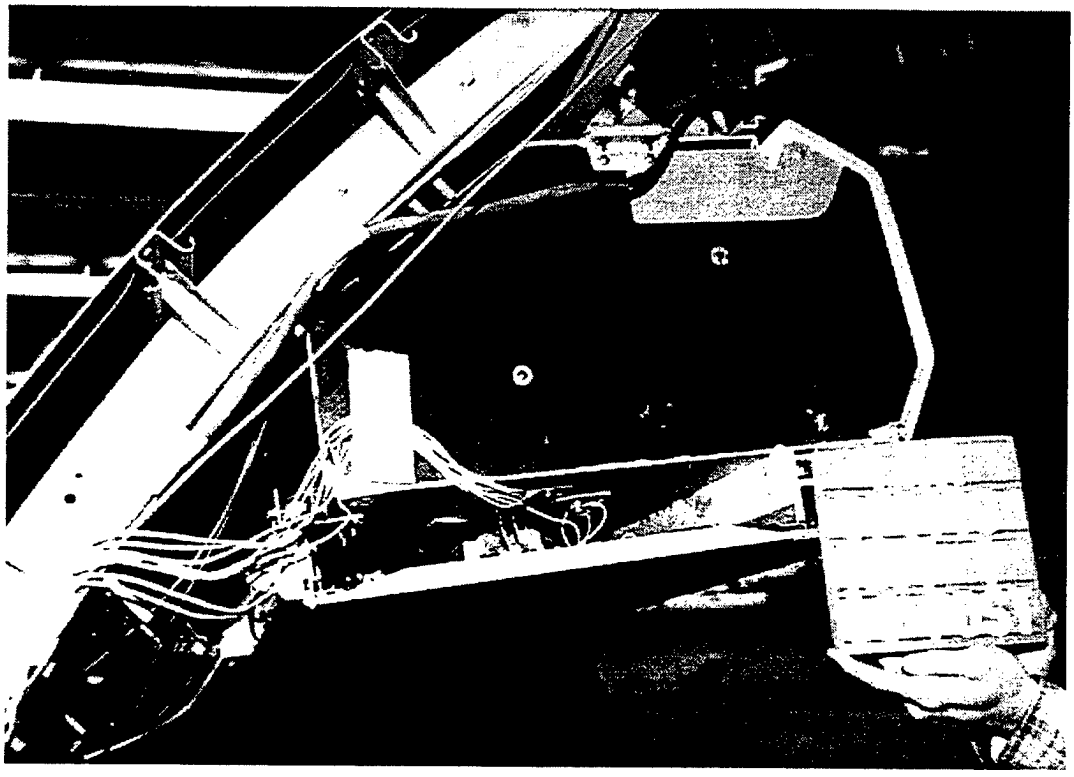


FIGURE 48. POSTTEST BIN A REAR VIEW

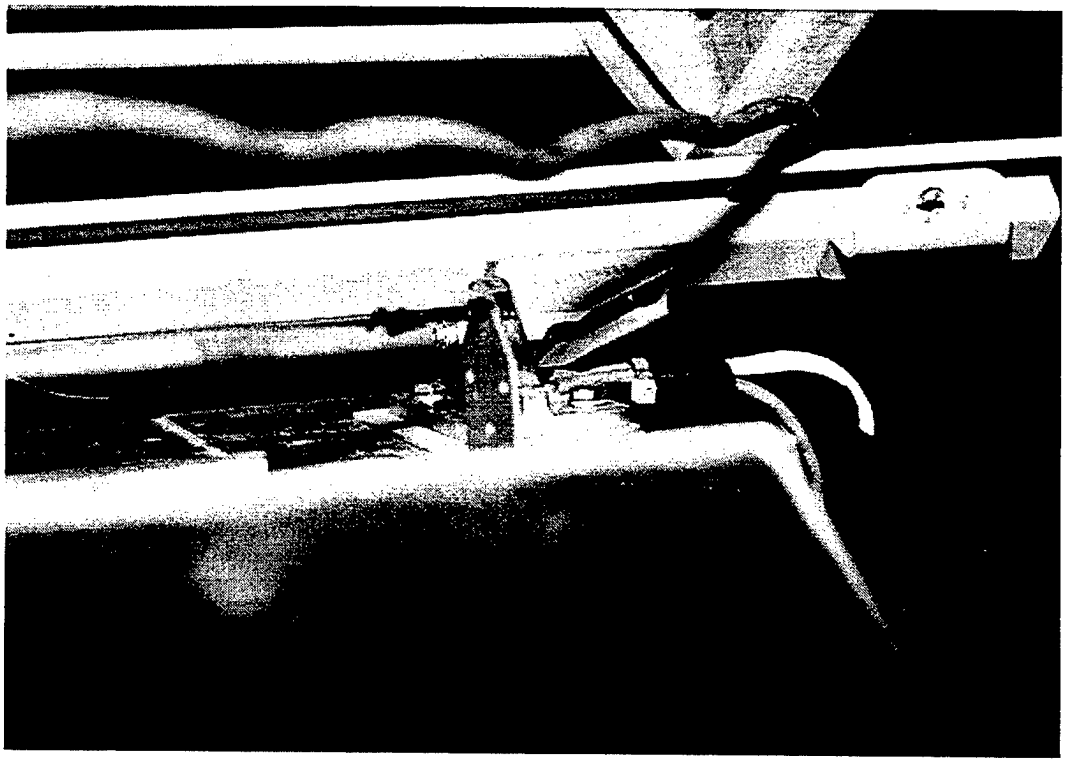


FIGURE 49. POSTTEST BIN A FORWARDMOST UPPER ATTACHMENT SUPPORT NO. 78 VIEW

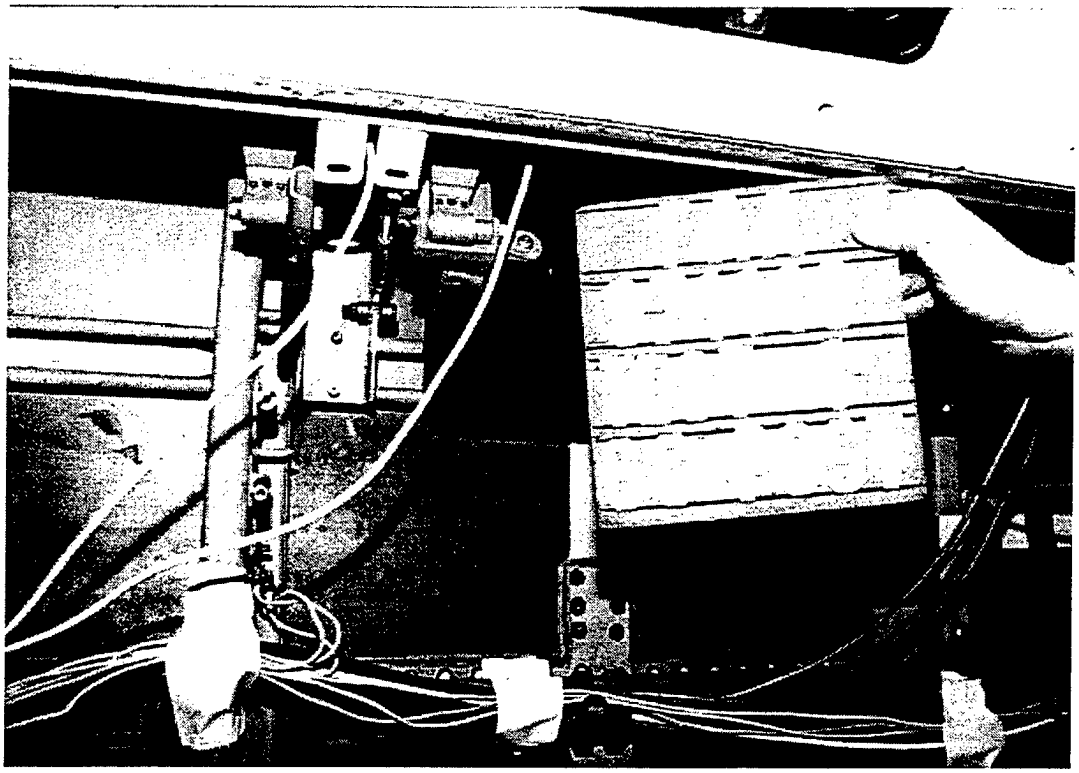


FIGURE 50. POSTTEST BIN A MID/AFT (BS480) LOWER ATTACHMENT SUPPORTS NOS. 76 AND 78 VIEW

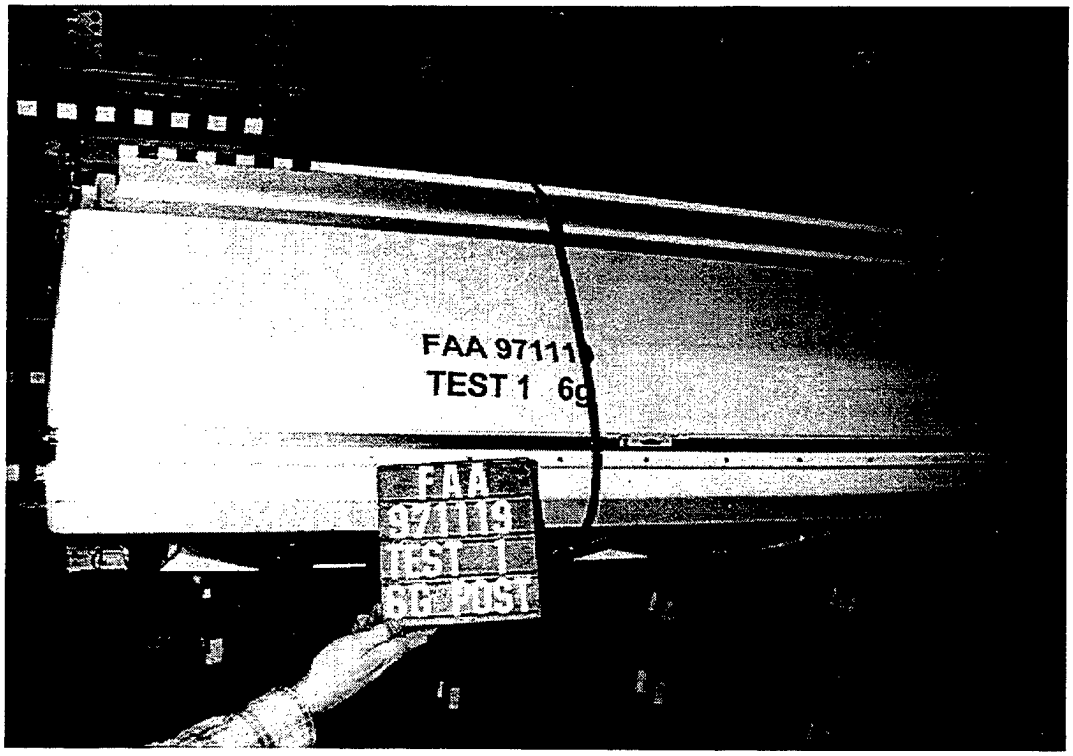


FIGURE 51. POSTTEST BIN B OVERALL SIDE VIEW

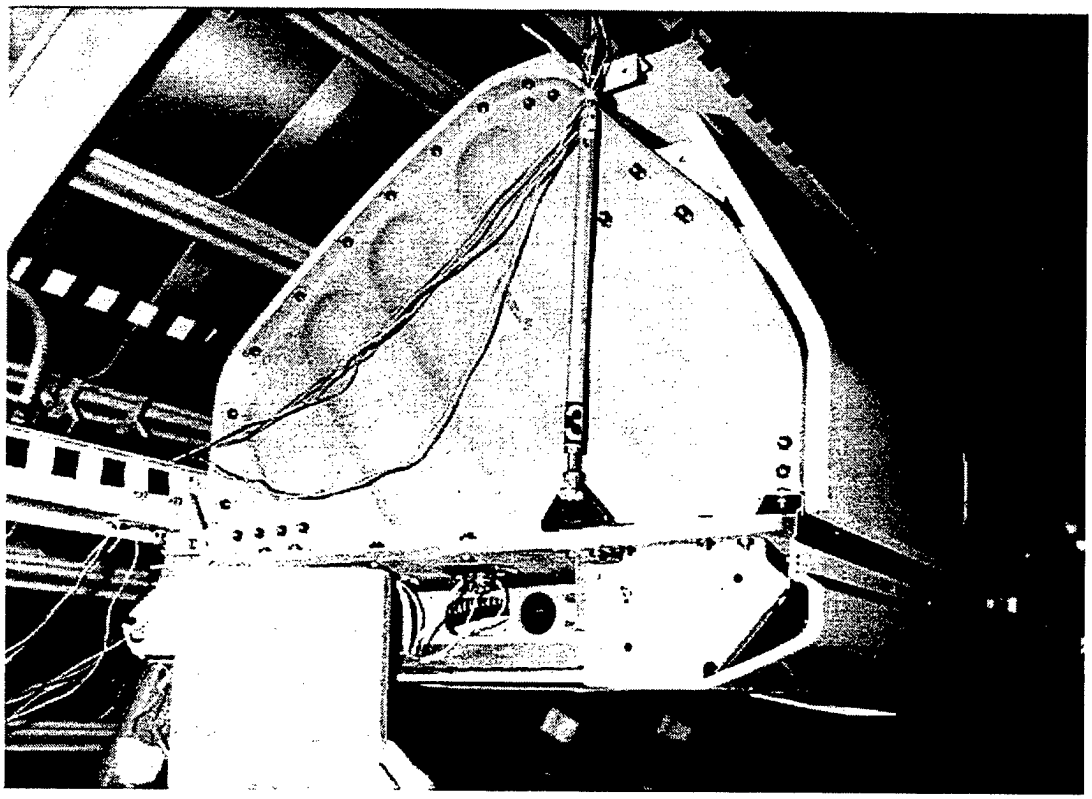


FIGURE 52. POSTTEST BIN B FRONT VIEW

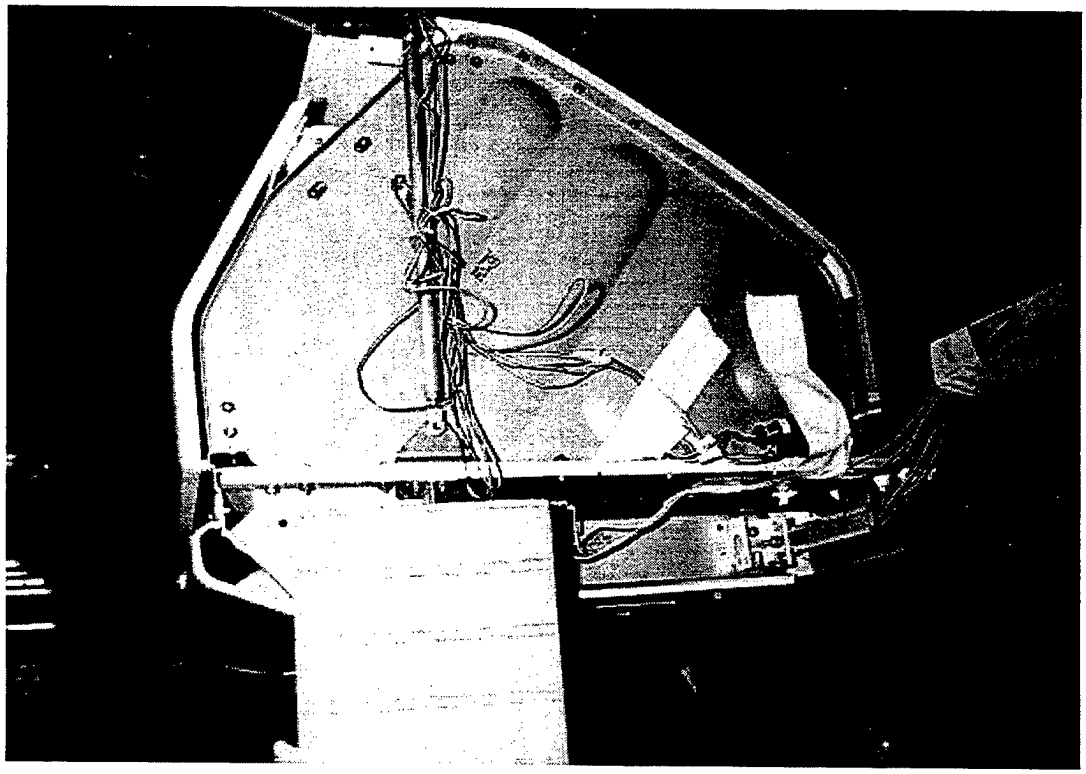


FIGURE 53. POSTTEST BIN B REAR VIEW

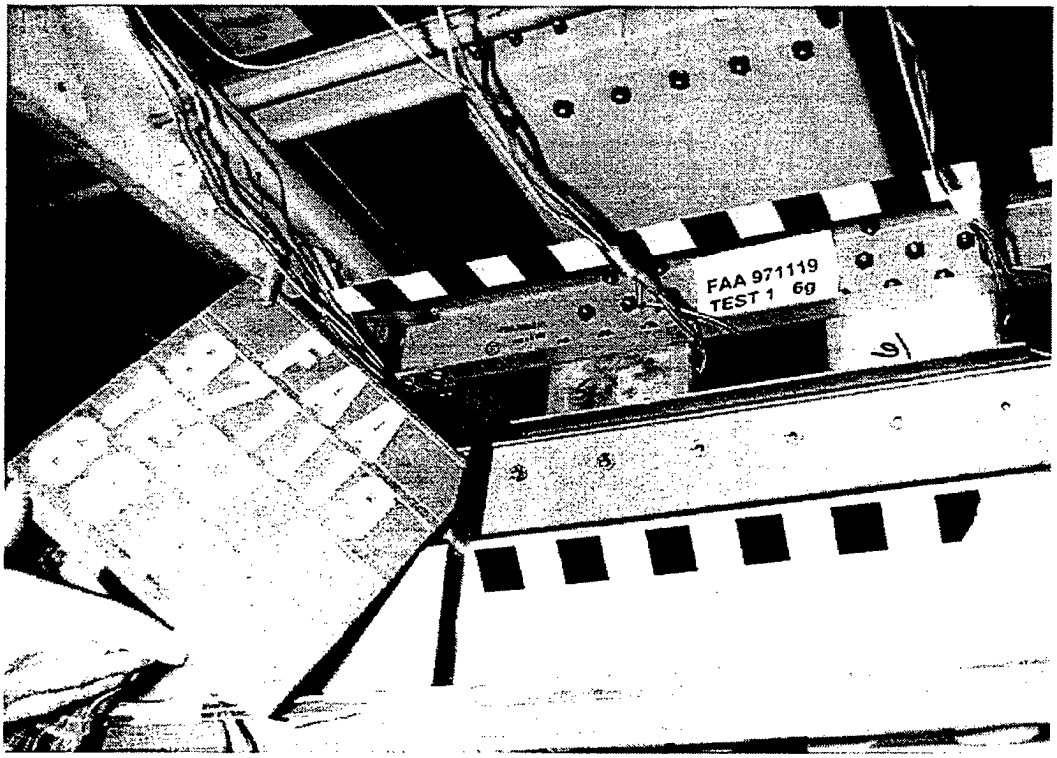


FIGURE 54. POSTTEST BIN B ATTACHMENT SUPPORTS NOS. 5 AND 6 BOTTOM VIEW

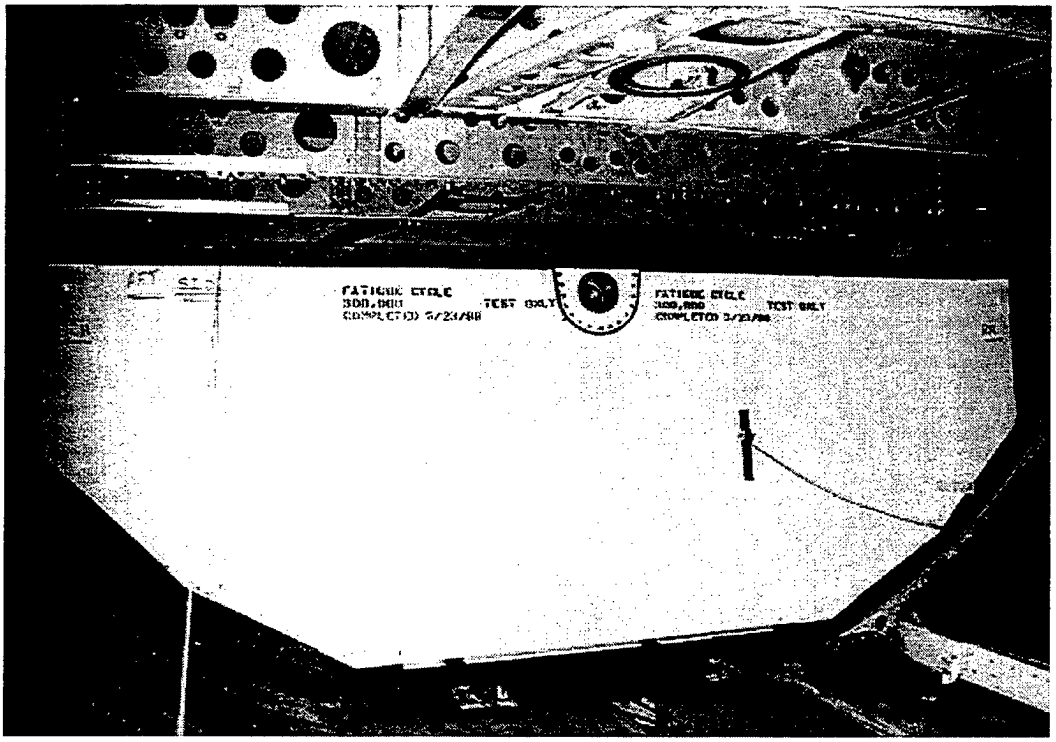


FIGURE 55. POSTTEST AUXILIARY FUEL TANK REAR VIEW

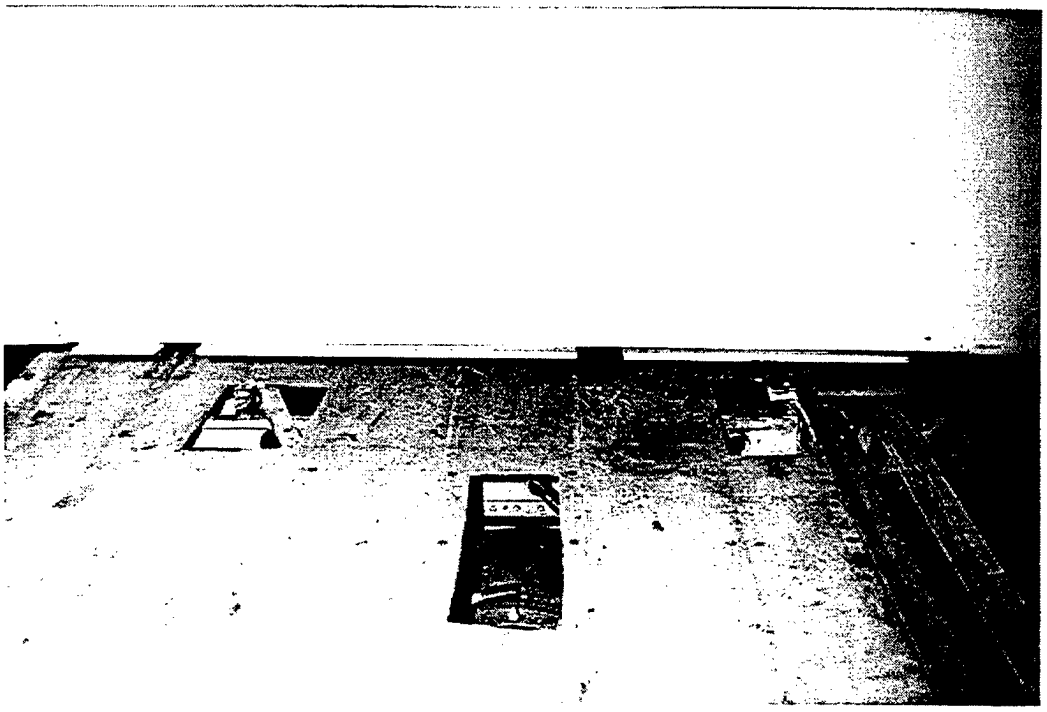


FIGURE 56. POSTTEST AUXILIARY FUEL TANK FLOOR ATTACHMENT STRAPS REAR VIEW

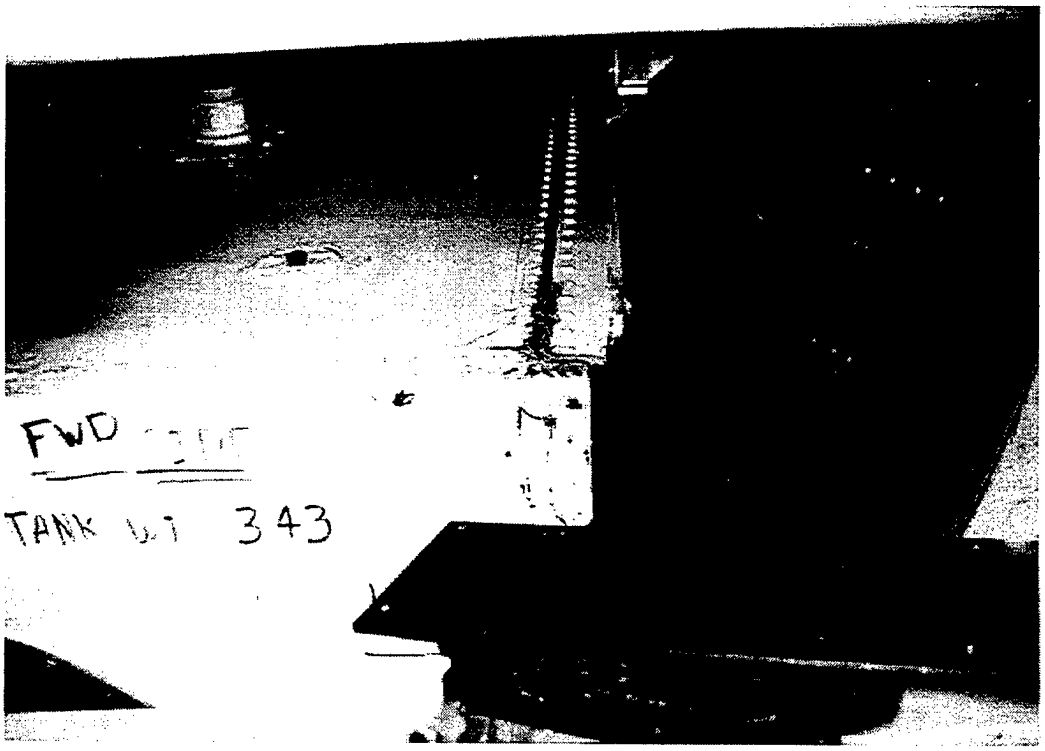


FIGURE 57. POSTTEST AUXILIARY FUEL TANK FRONT UPPER LEFT CORNER FRONT VIEW

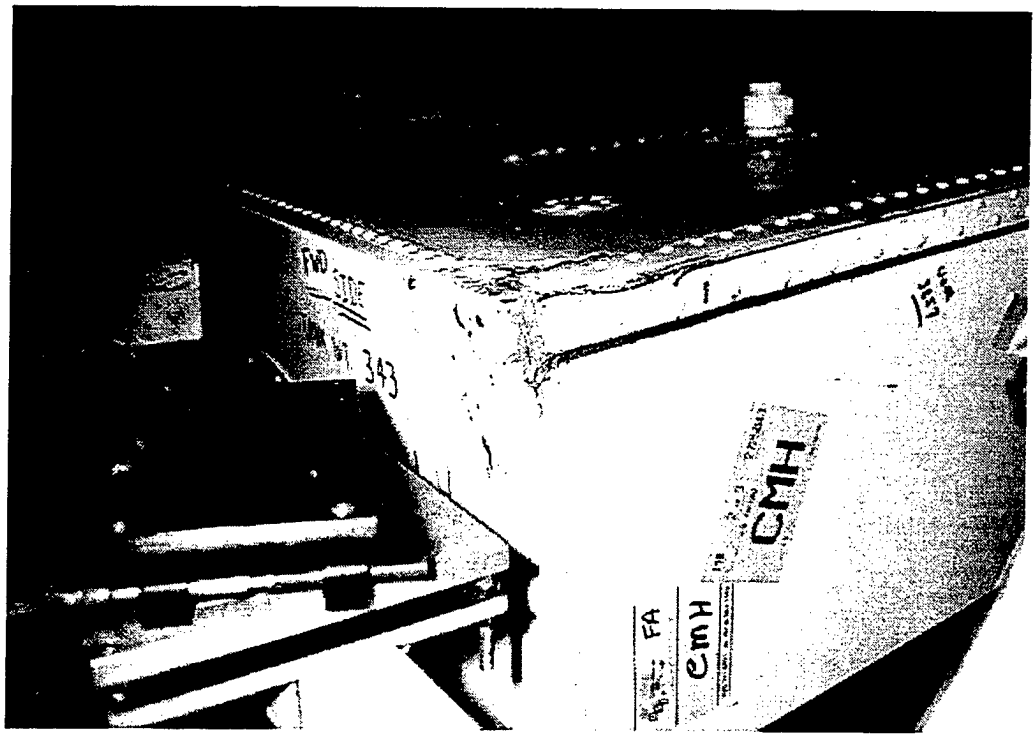


FIGURE 58. POSTTEST AUXILIARY FUEL TANK FRONT UPPER LEFT CORNER FRONT ANGLE VIEW 1

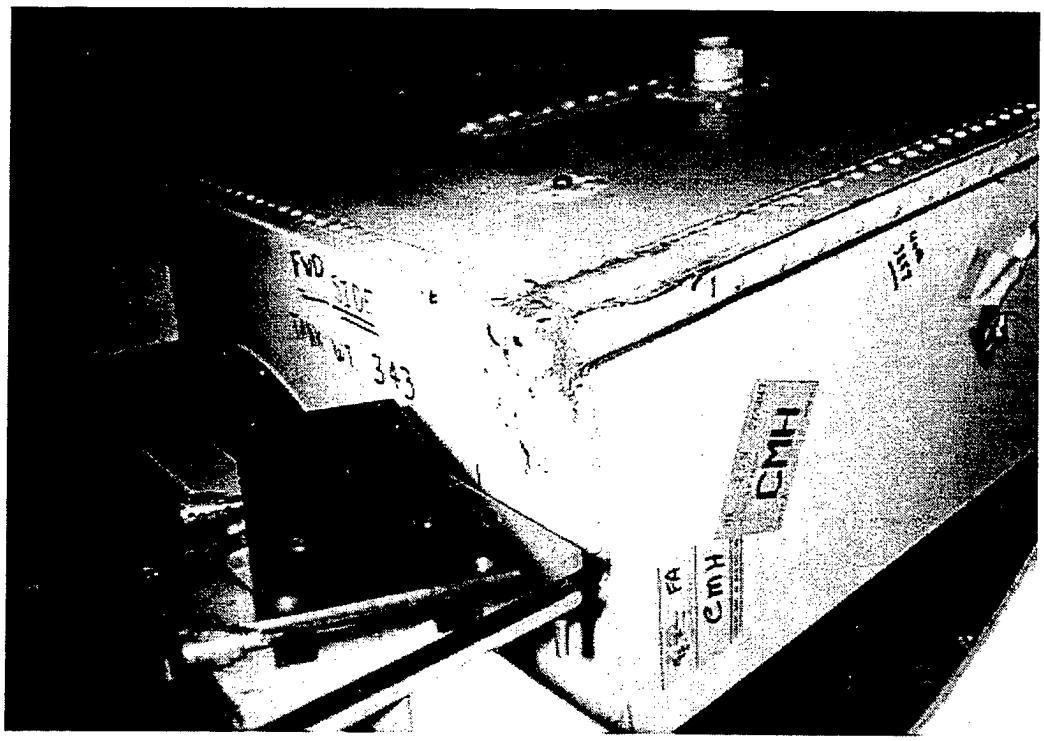


FIGURE 59. POSTTEST AUXILIARY FUEL TANK FRONT UPPER LEFT CORNER FRONT ANGLE VIEW 2

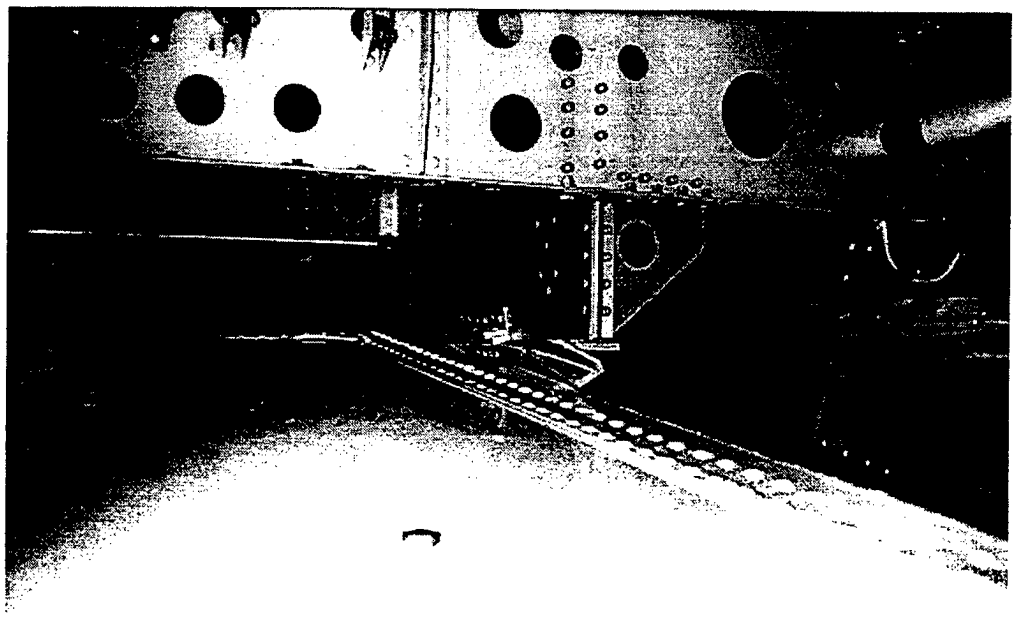


FIGURE 60. POSTTEST AUXILIARY FUEL TANK LEFT ATTACHMENT FRAMEWORK FRONT VIEW

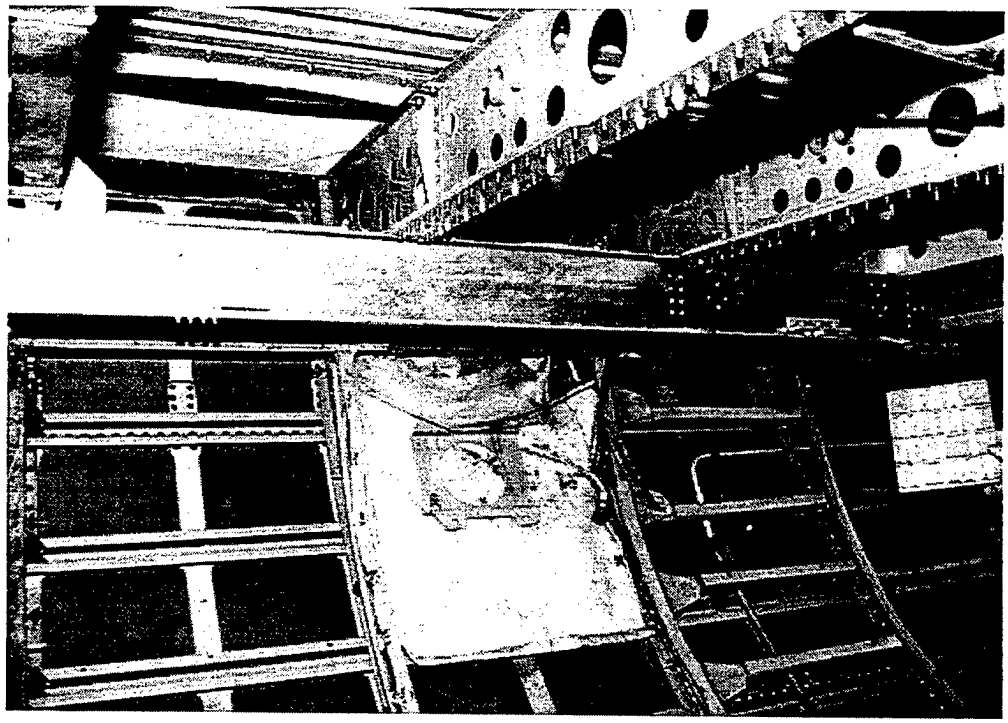


FIGURE 61. POSTTEST AUXILIARY FUEL TANK LEFT ATTACHMENT FRAMEWORK OVERALL SIDE VIEW

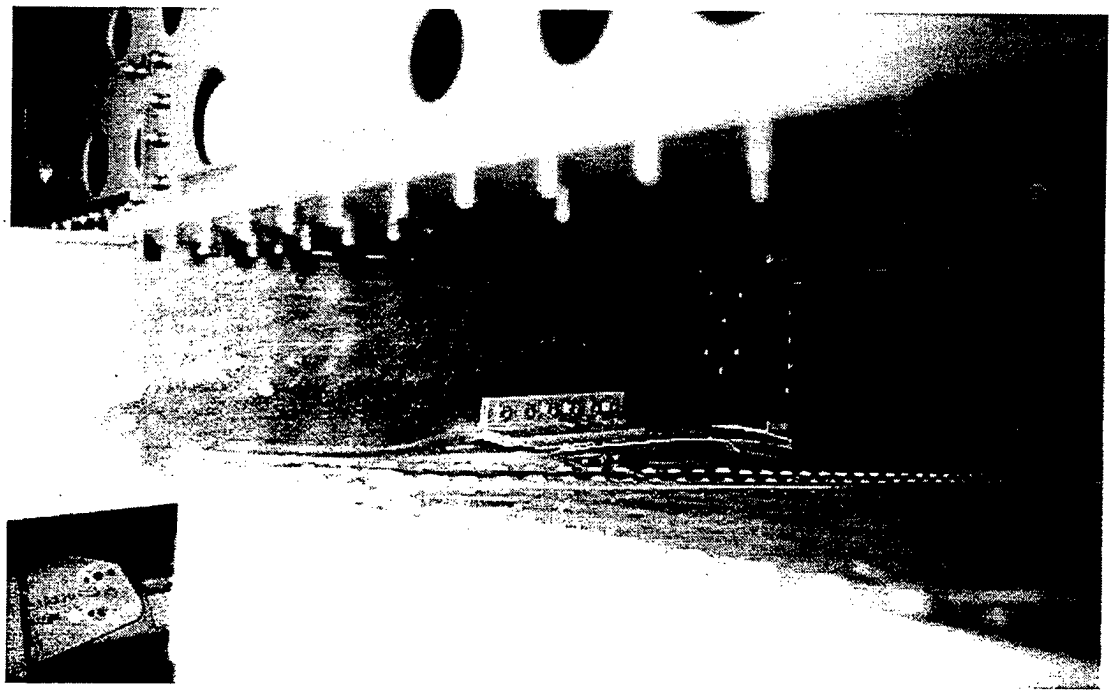


FIGURE 62. POSTTEST AUXILIARY FUEL TANK LEFT FRONT ATTACHMENT FRAMEWORK SIDE VIEW 1

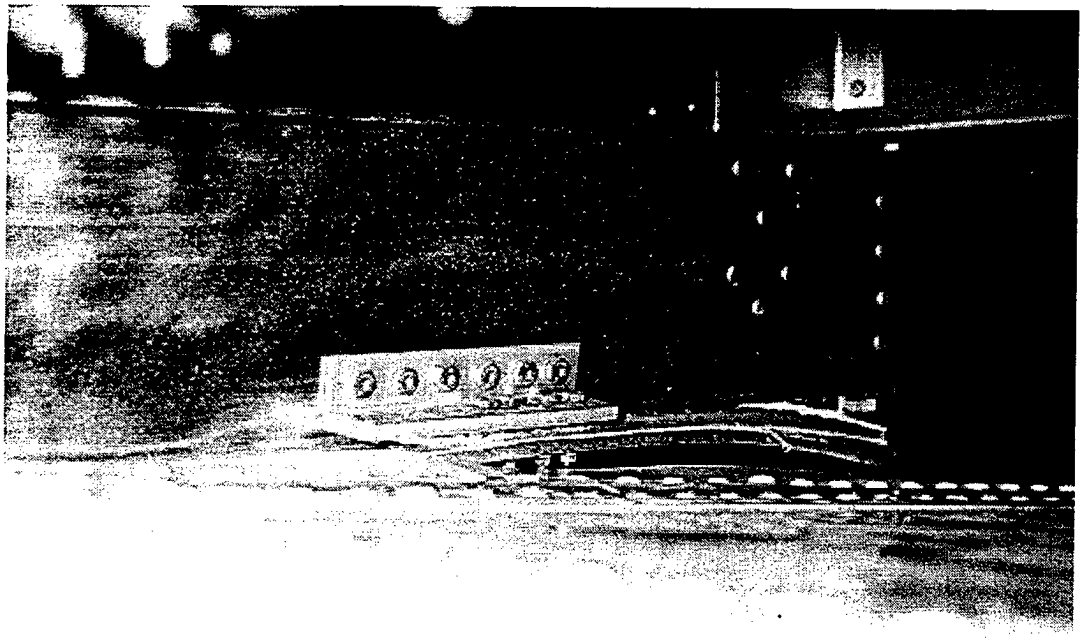


FIGURE 63. POSTTEST AUXILIARY FUEL TANK LEFT FRONT ATTACHMENT FRAMEWORK SIDE VIEW 2

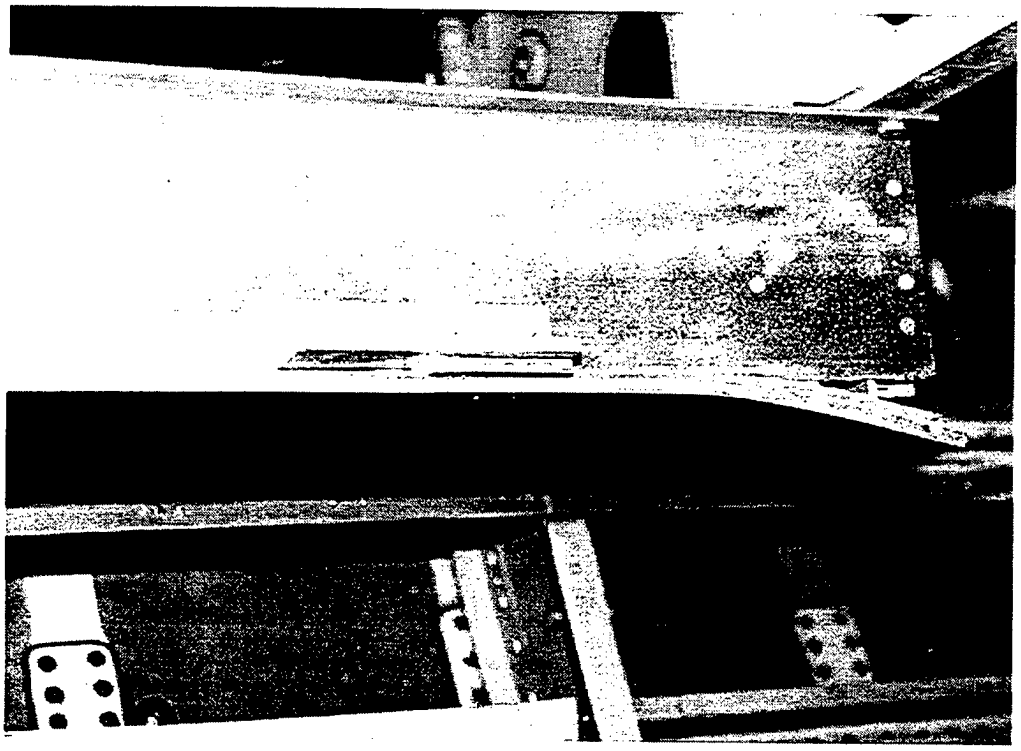


FIGURE 64. POSTTEST AUXILIARY FUEL TANK LEFT FRONT ATTACHMENT FRAMEWORK SIDE VIEW 3

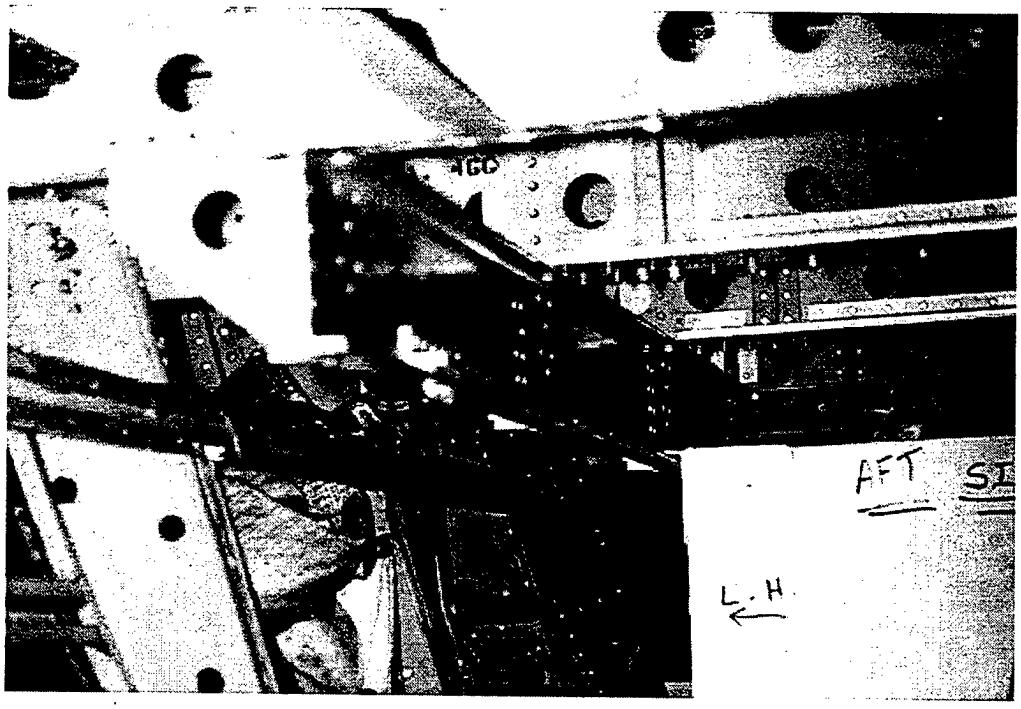


FIGURE 65. POSTTEST AUXILIARY FUEL TANK LEFT ATTACHMENT FRAMEWORK REAR VIEW 1

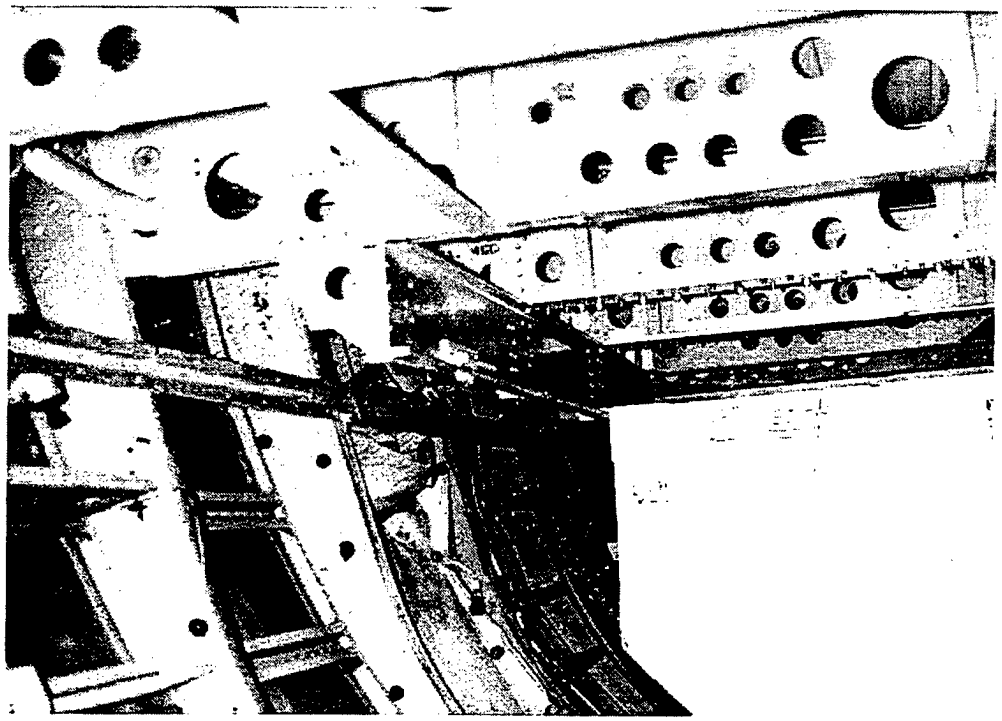


FIGURE 66. POSTTEST AUXILIARY FUEL TANK LEFT ATTACHMENT FRAMEWORK REAR VIEW 2

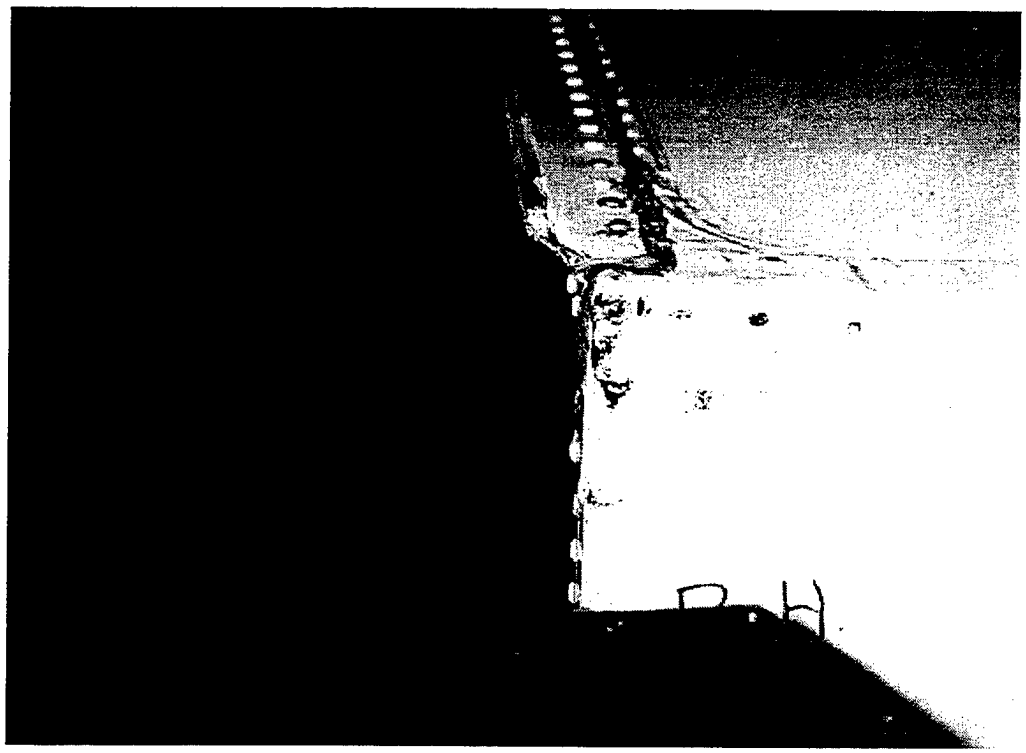


FIGURE 67. POSTTEST AUXILIARY FUEL TANK FRONT UPPER RIGHT CORNER CLOSE VIEW 1

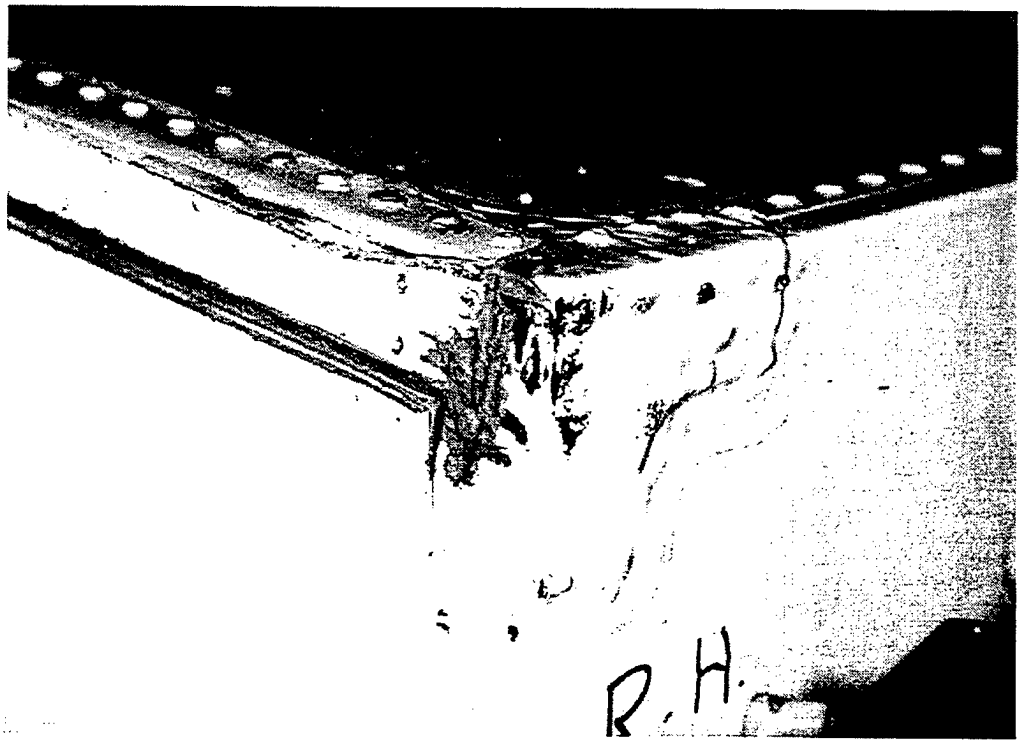


FIGURE 68. POSTTEST AUXILIARY FUEL TANK FRONT UPPER RIGHT CORNER CLOSE VIEW 2

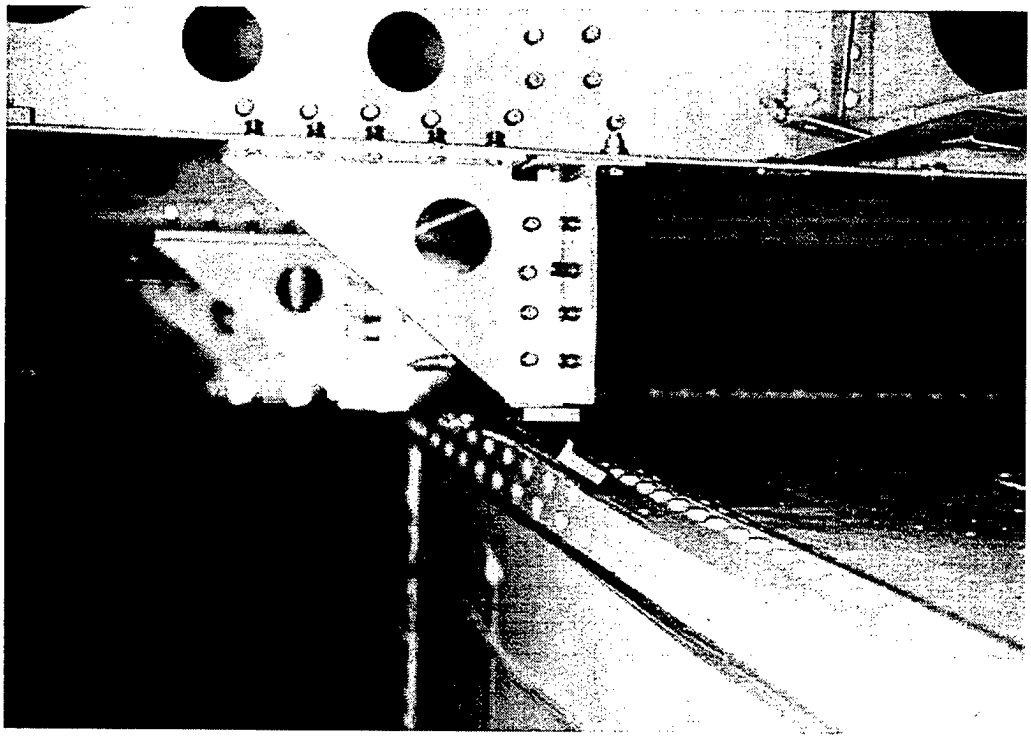


FIGURE 69. POSTTEST AUXILIARY FUEL TANK RIGHT ATTACHMENT FRAMEWORK FRONT VIEW 1

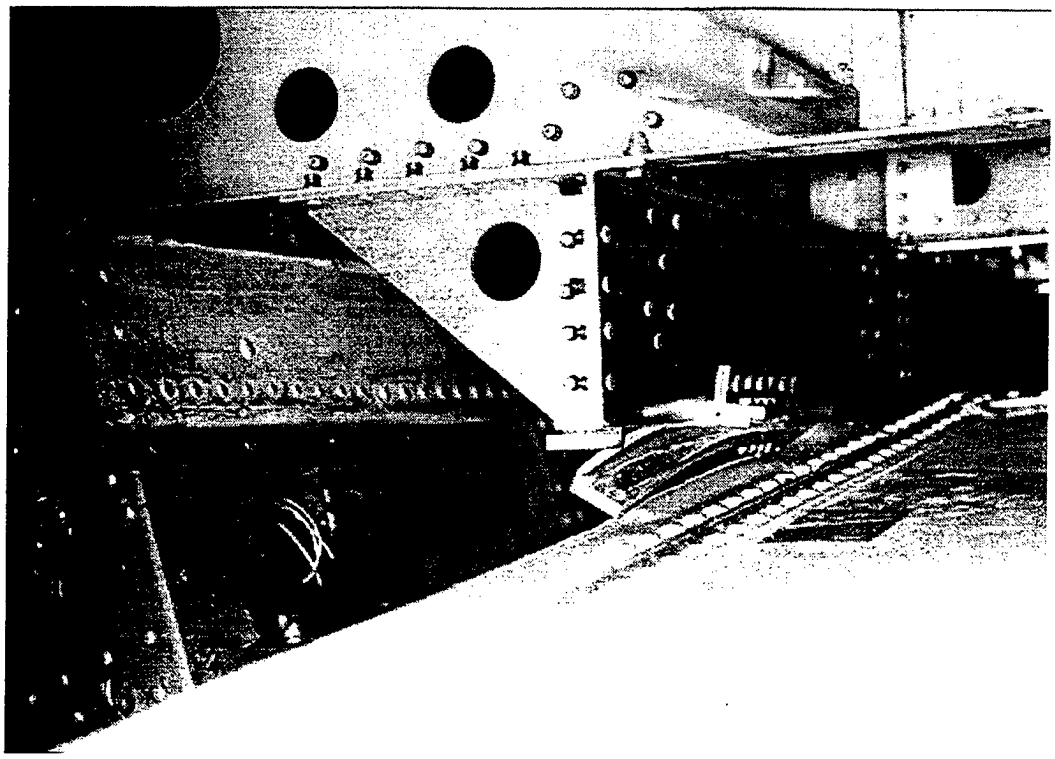


FIGURE 70. POSTTEST AUXILIARY FUEL TANK RIGHT ATTACHMENT FRAMEWORK FRONT VIEW 2

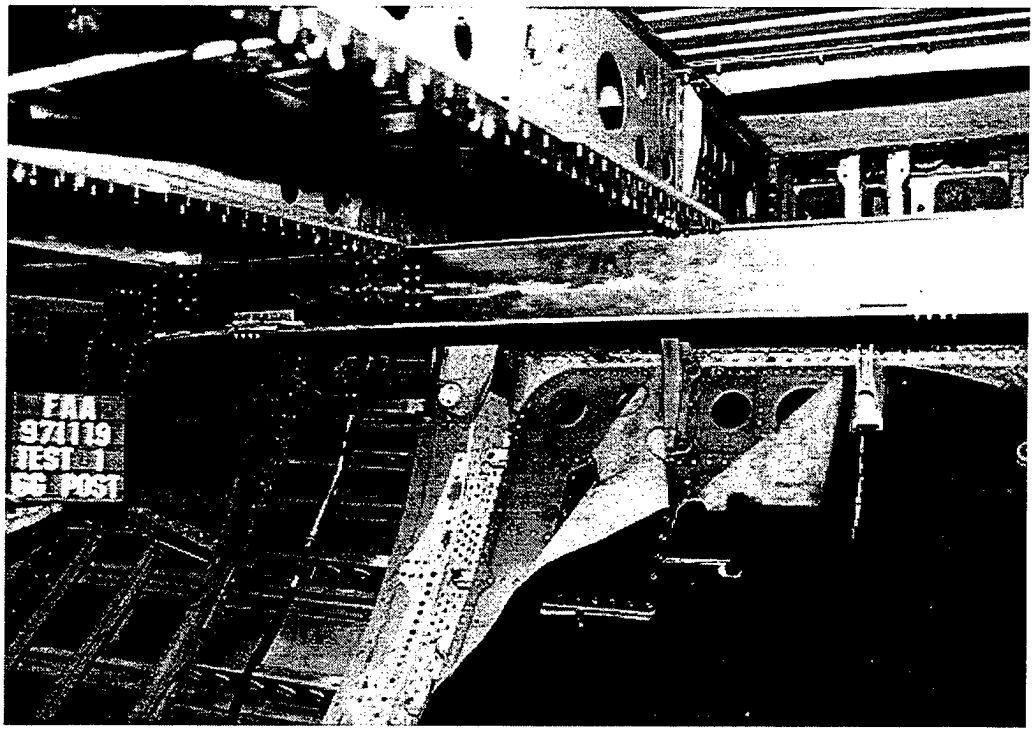


FIGURE 71. POSTTEST AUXILIARY FUEL TANK RIGHT ATTACHMENT FRAMEWORK OVERALL SIDE VIEW

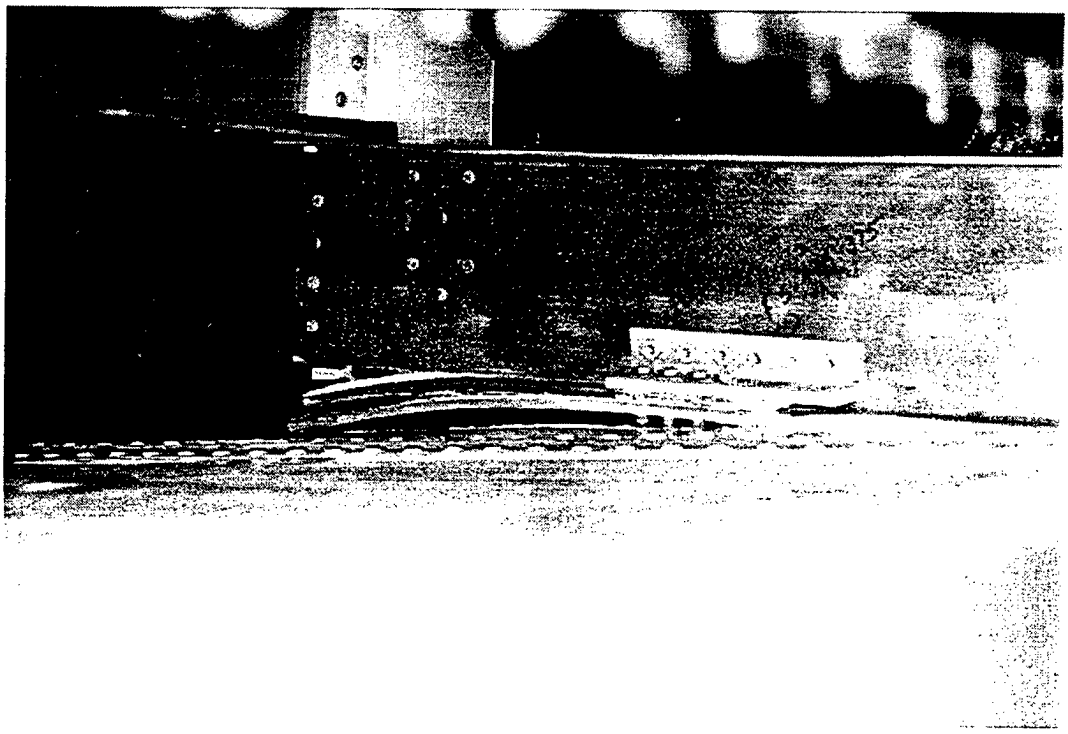


FIGURE 72. POSTTEST AUXILIARY FUEL TANK RIGHT FRONT ATTACHMENT FRAMEWORK SIDE VIEW 1

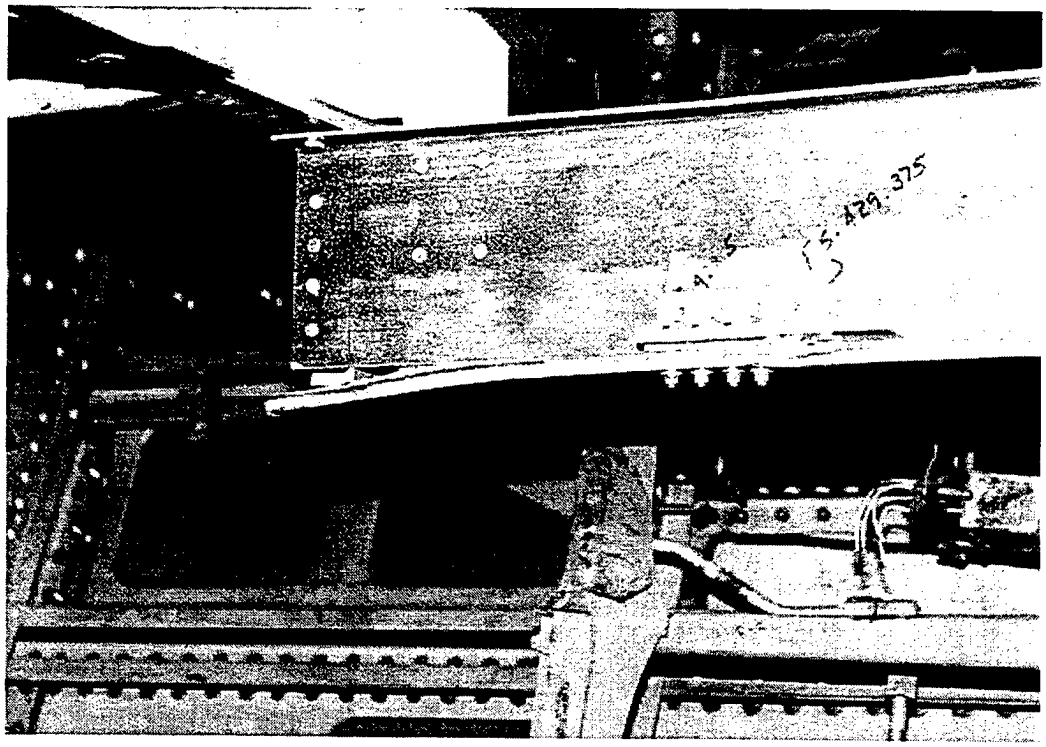


FIGURE 73. POSTTEST AUXILIARY FUEL TANK RIGHT FRONT ATTACHMENT FRAMEWORK SIDE VIEW 2

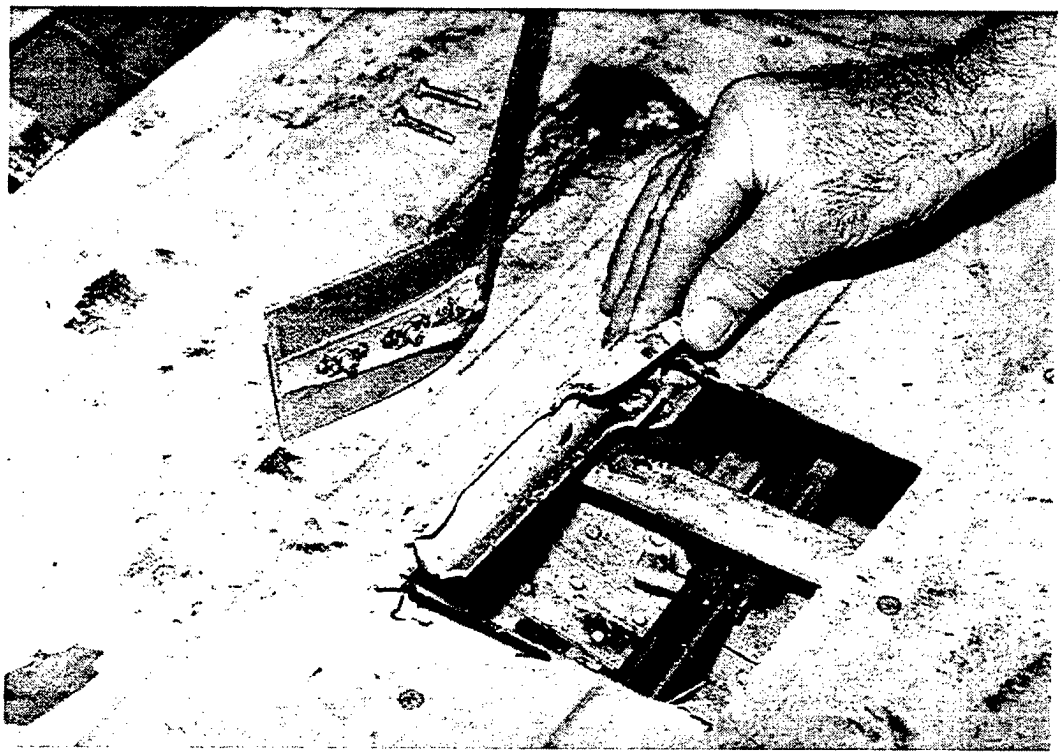


FIGURE 74. POSTTEST AUXILIARY FUEL TANK LOWER LEFT BRACKET DETACHMENT VIEW 1

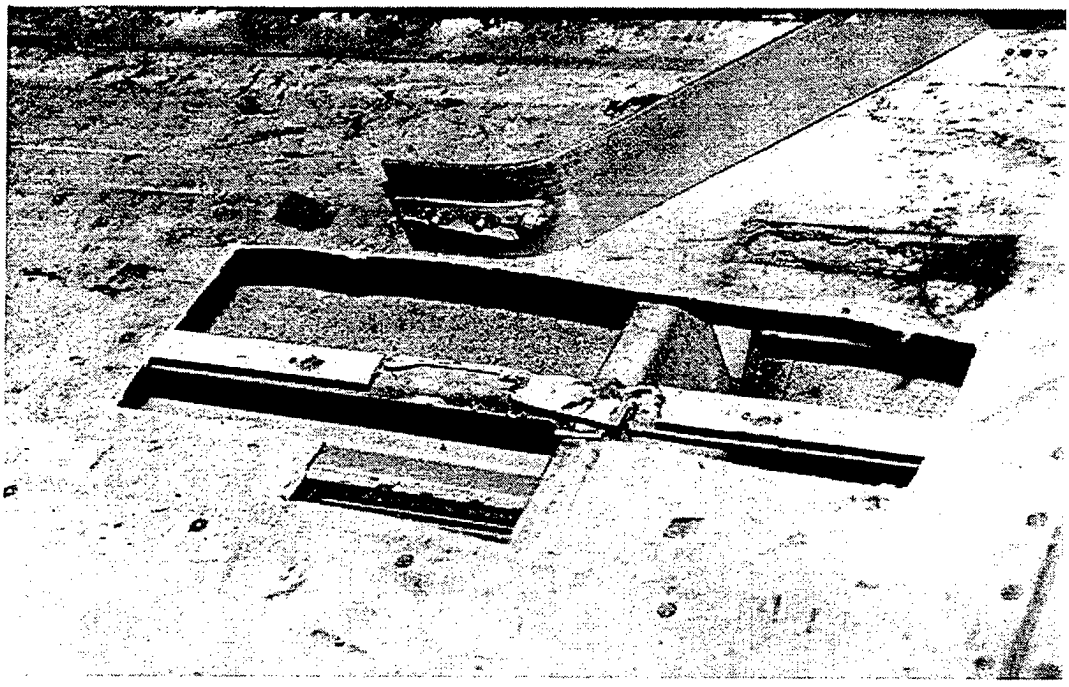


FIGURE 75. POSTTEST AUXILIARY FUEL TANK LOWER LEFT BRACKET DETACHMENT VIEW 2

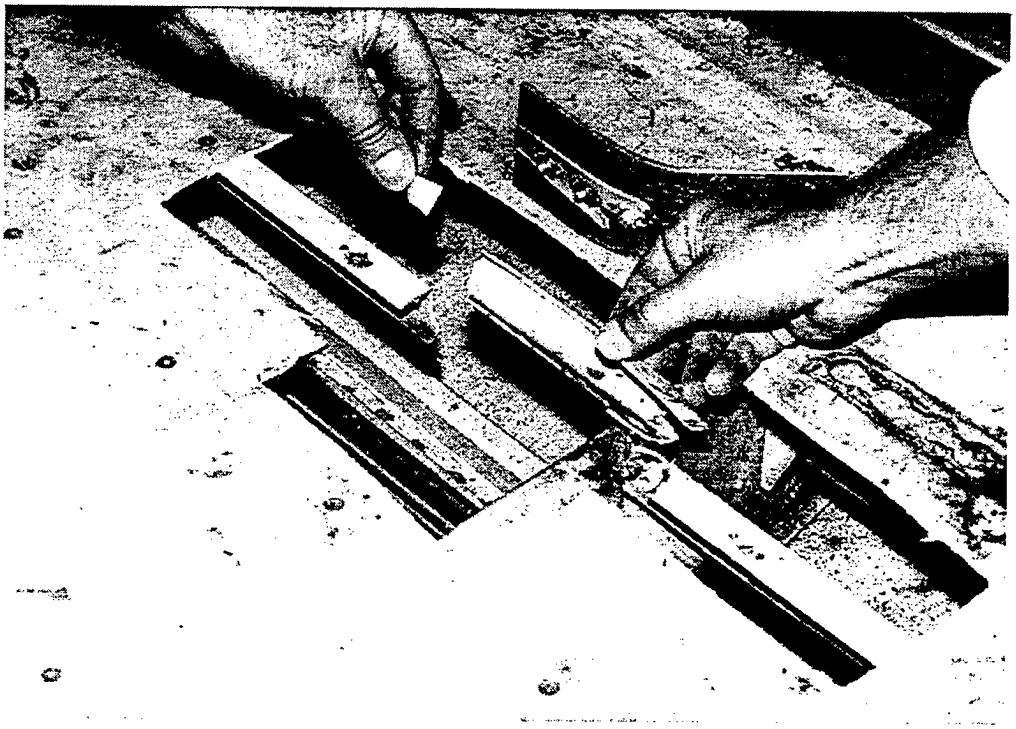


FIGURE 76. POSTTEST AUXILIARY FUEL TANK LOWER LEFT BRACKET DETACHMENT VIEW 3

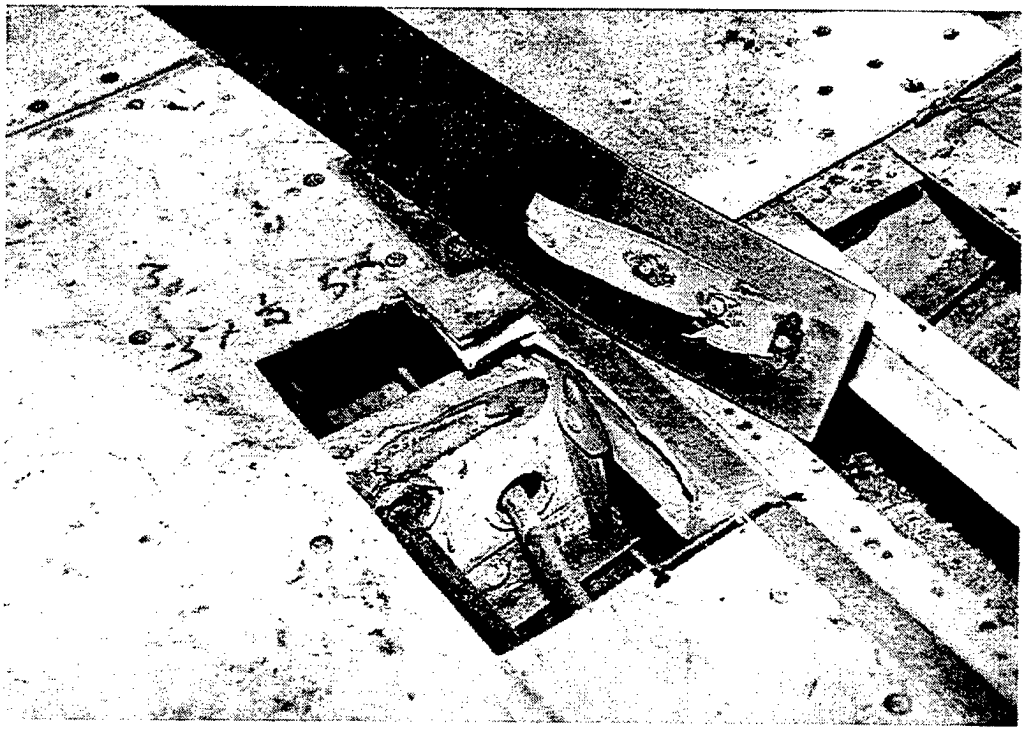


FIGURE 77. POSTTEST AUXILIARY FUEL TANK LOWER RIGHT BRACKET DETACHMENT VIEW 1

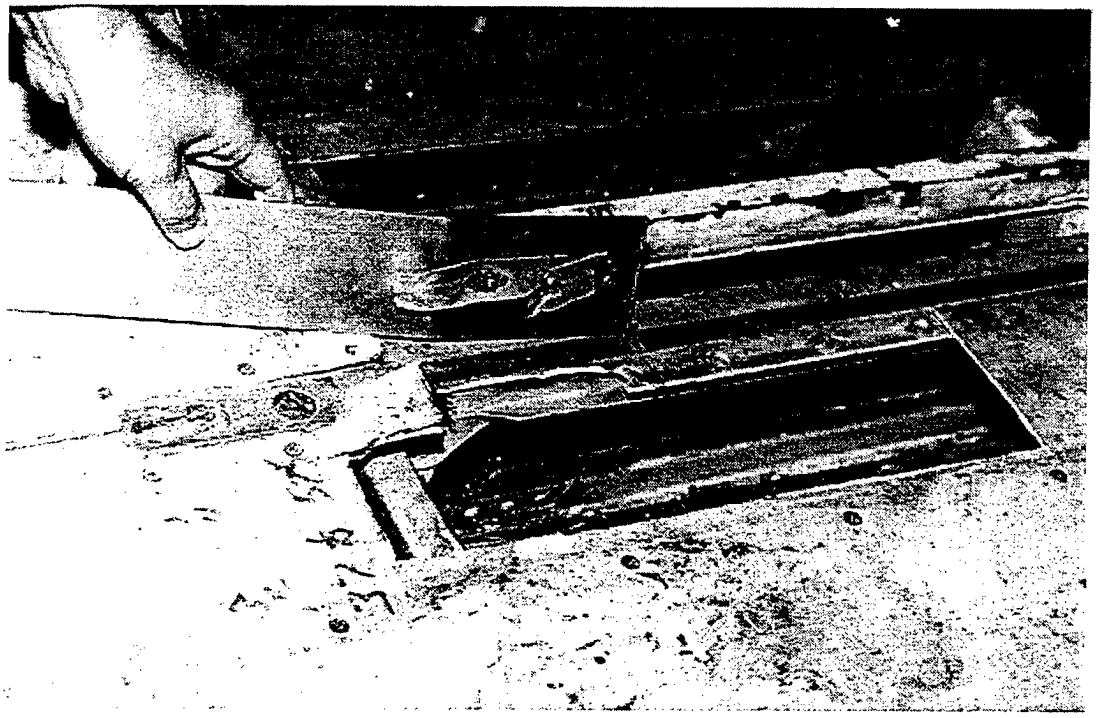


FIGURE 78. POSTTEST AUXILIARY FUEL TANK LOWER RIGHT BRACKET DETACHMENT VIEW 2

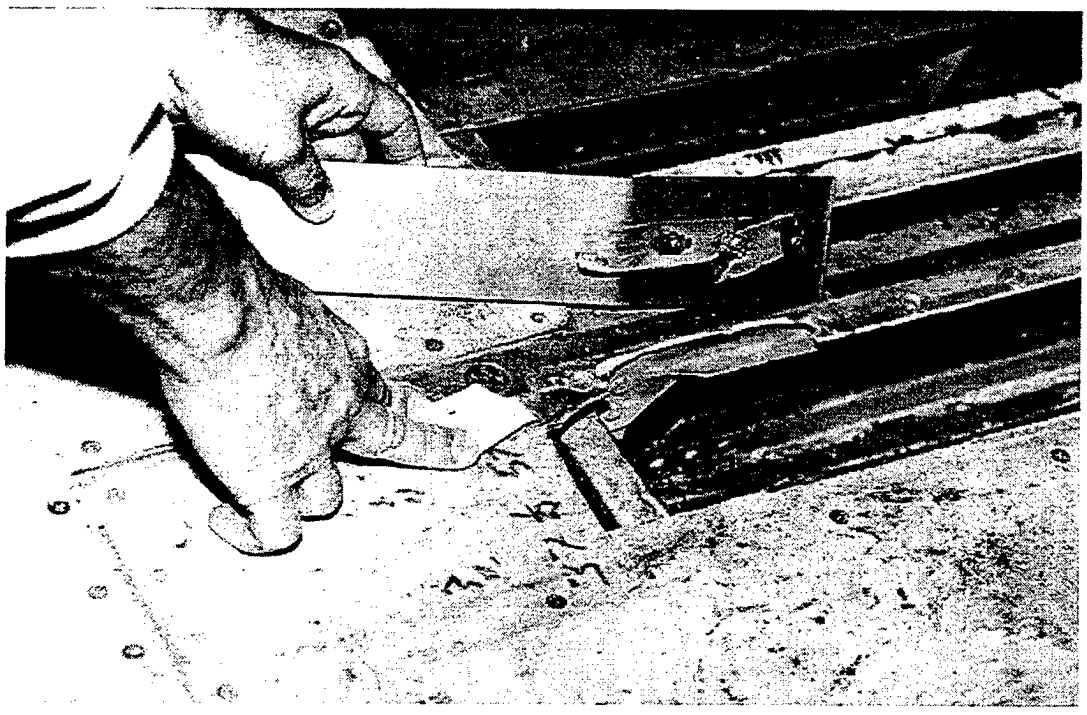


FIGURE 79. POSTTEST AUXILIARY FUEL TANK LOWER RIGHT BRACKET DETACHMENT VIEW 3

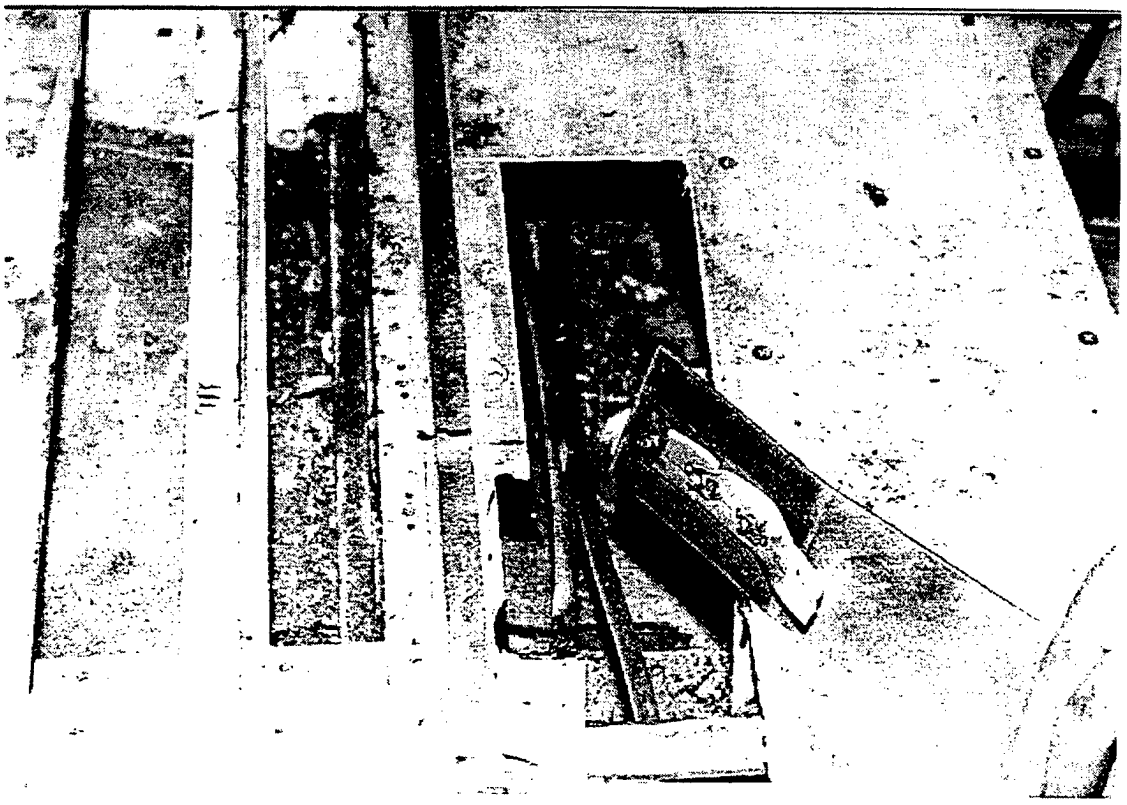


FIGURE 80. POSTTEST AUXILIARY FUEL TANK LOWER RIGHT BRACKET DETACHMENT VIEW 4

TEST 2. (FIGURES 81 THROUGH 82)

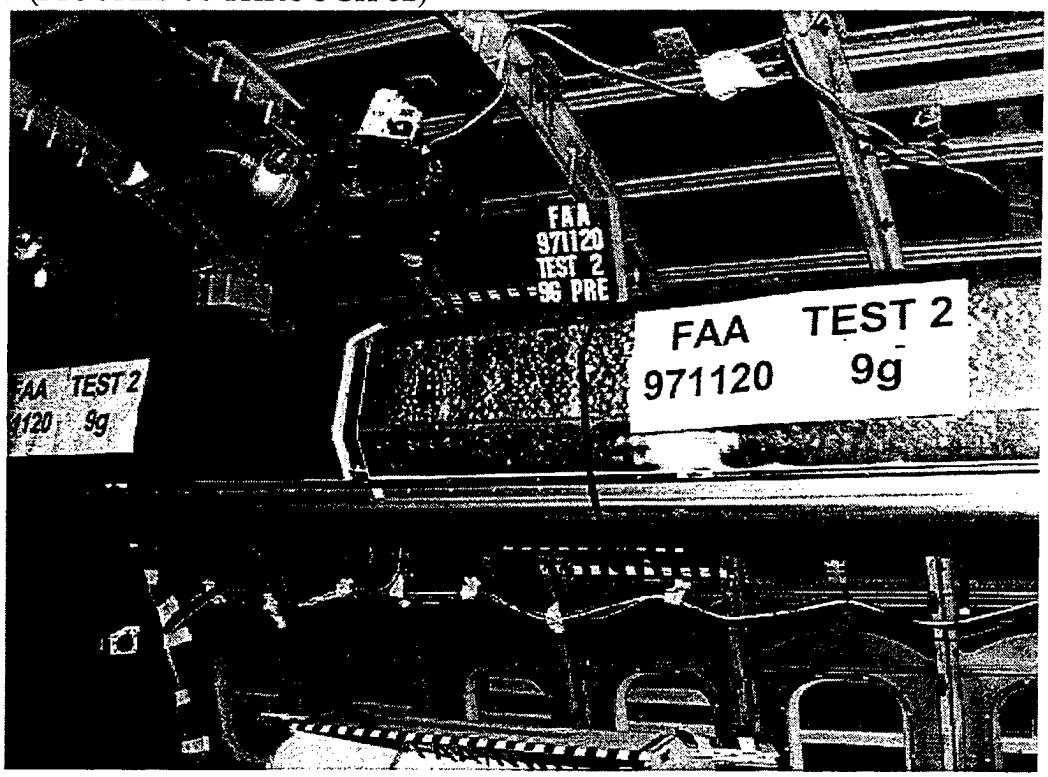


FIGURE 81. PRETEST BIN A OVERALL SIDE VIEW

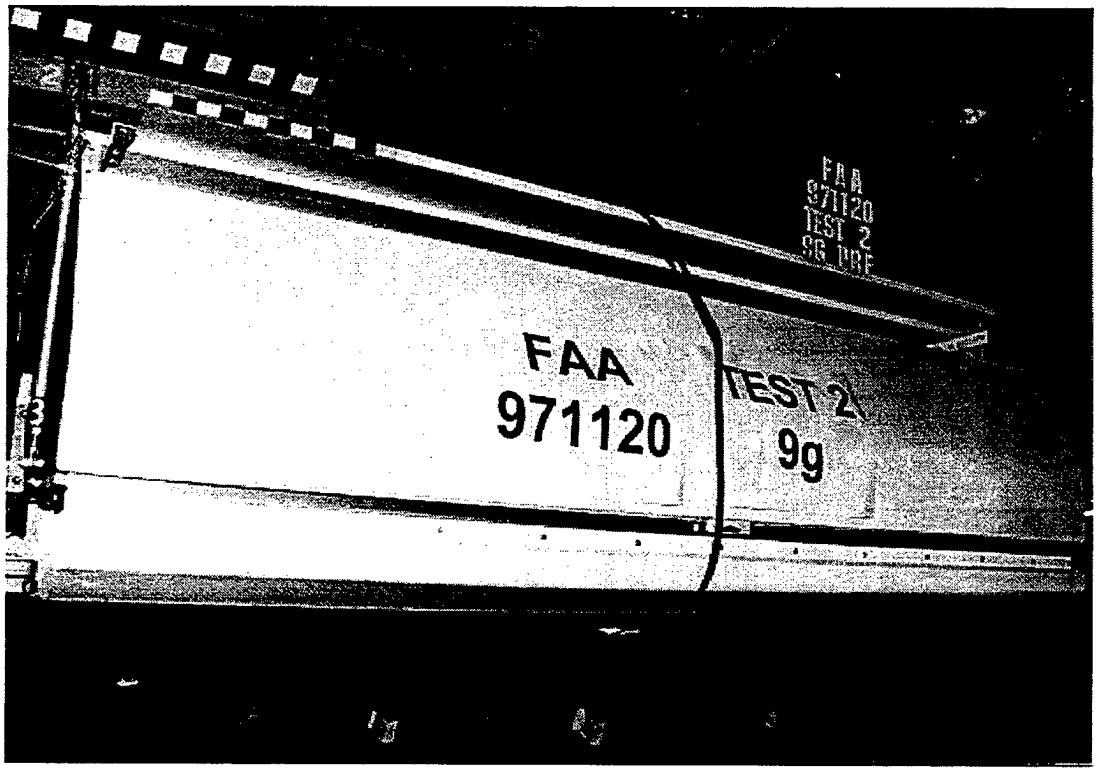


FIGURE 82. PRETEST BIN B OVERALL SIDE VIEW

TESTS 3. (FIGURES 83 THROUGH 131)

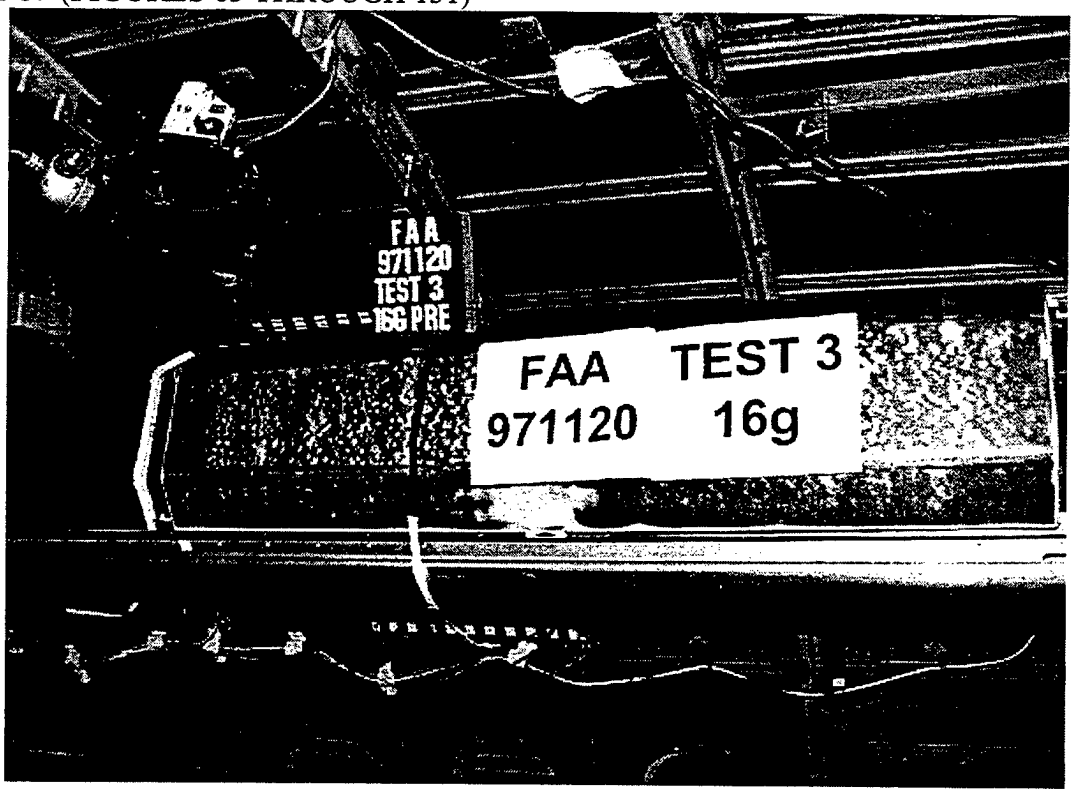


FIGURE 83. PRETEST BIN A OVERALL SIDE VIEW



FIGURE 84. PRETEST BIN B OVERALL SIDE VIEW

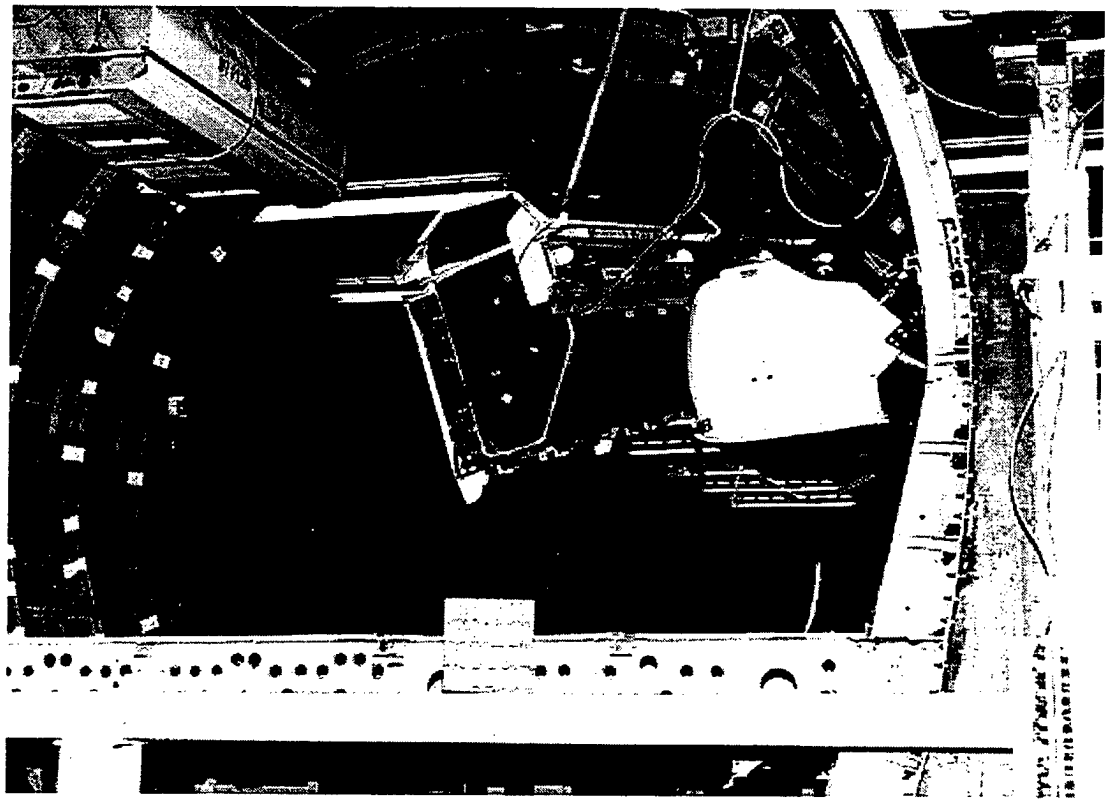


FIGURE 85. POSTTEST BIN A FRONT VIEW

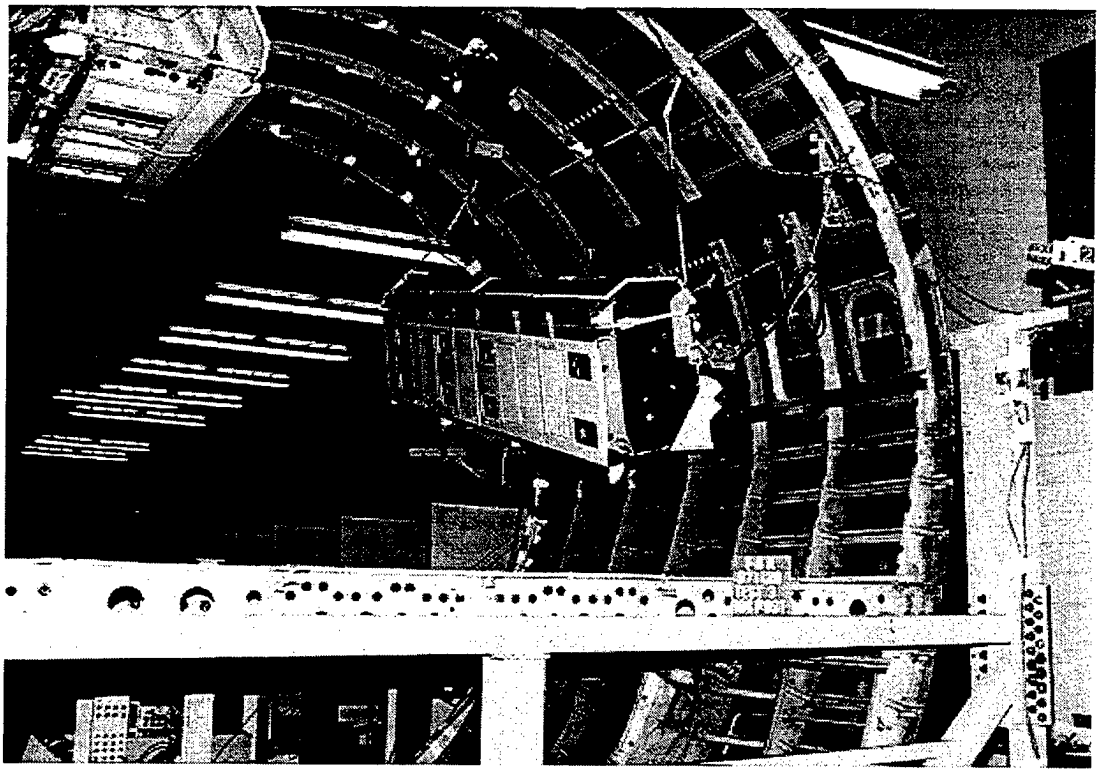


FIGURE 86. POSTTEST BIN A FRONT RIGHT ANGLE VIEW

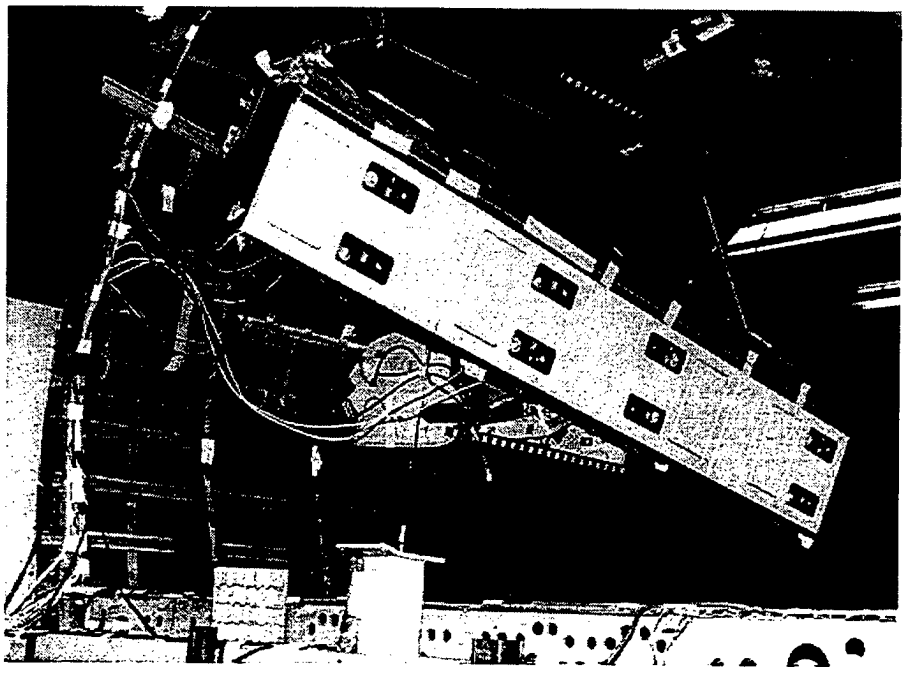


FIGURE 87. POSTTEST BIN A REAR RIGHT ANGLE VIEW

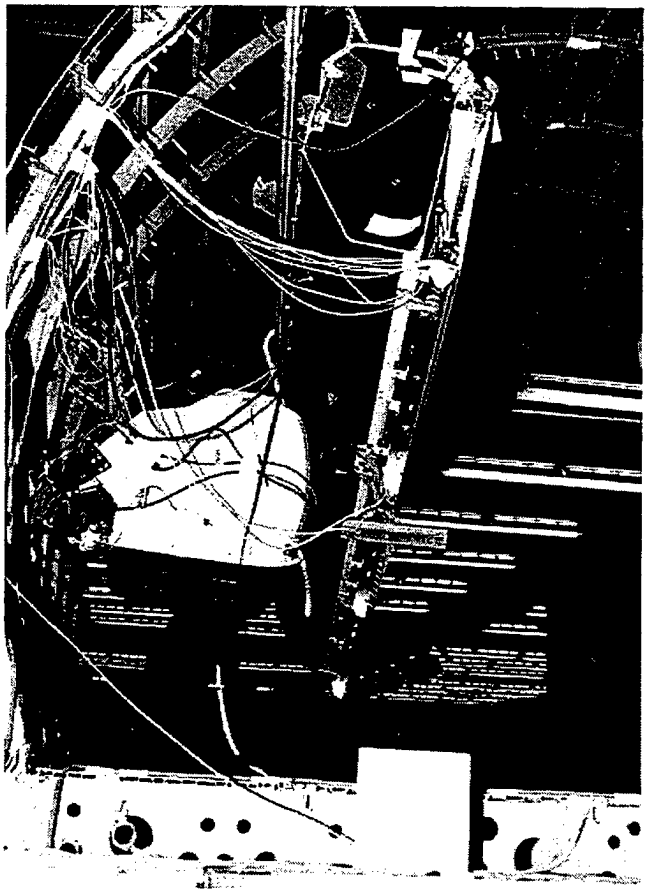


FIGURE 88. POSTTEST BIN A REAR VIEW

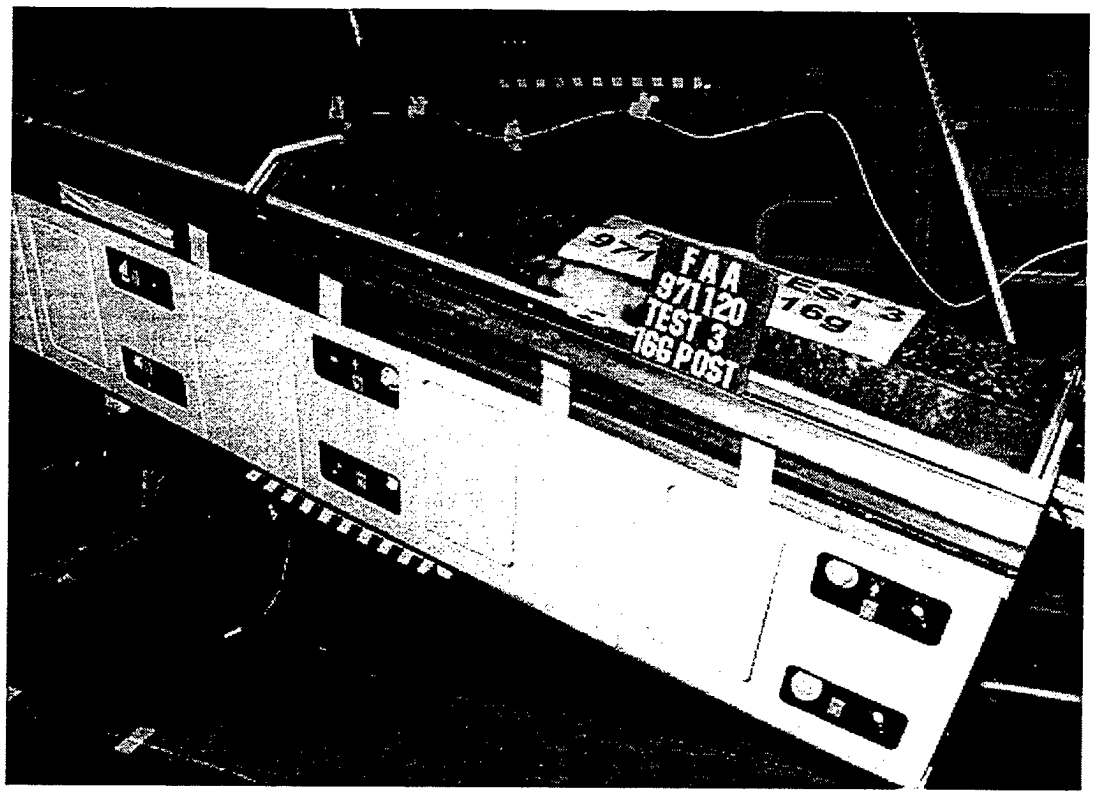


FIGURE 89. POSTTEST BIN A FRONT SECTION SIDE VIEW

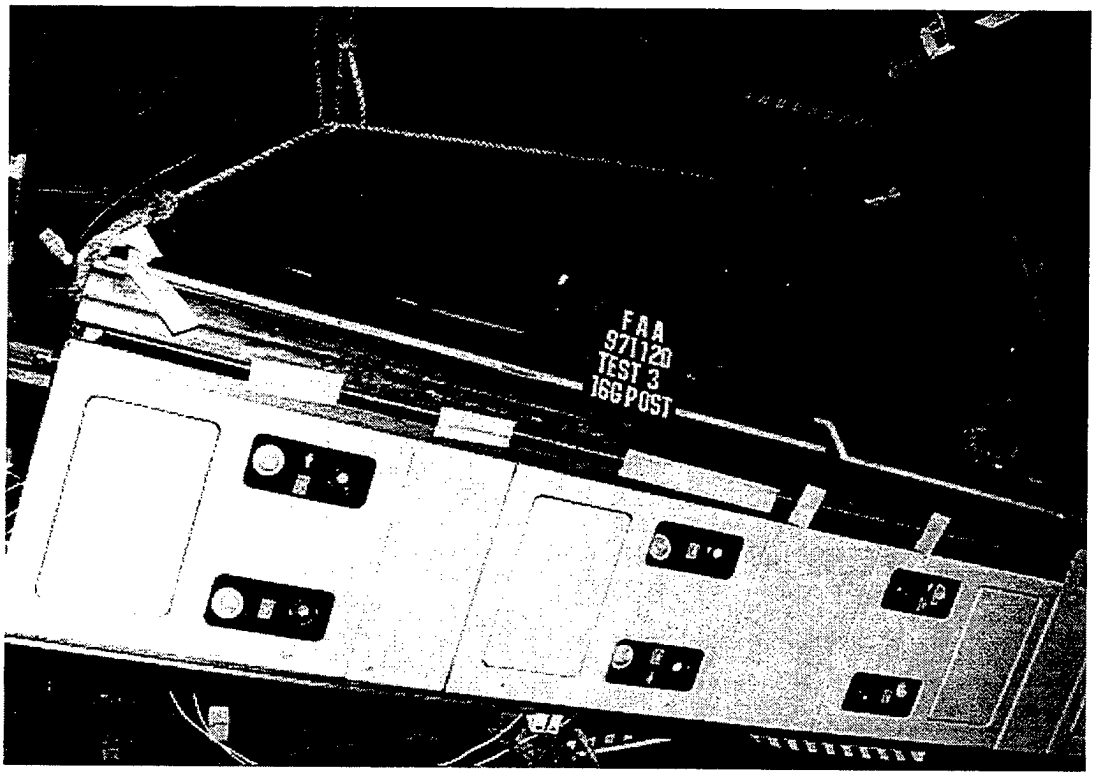


FIGURE 90. POSTTEST BIN A REAR SECTION SIDE VIEW

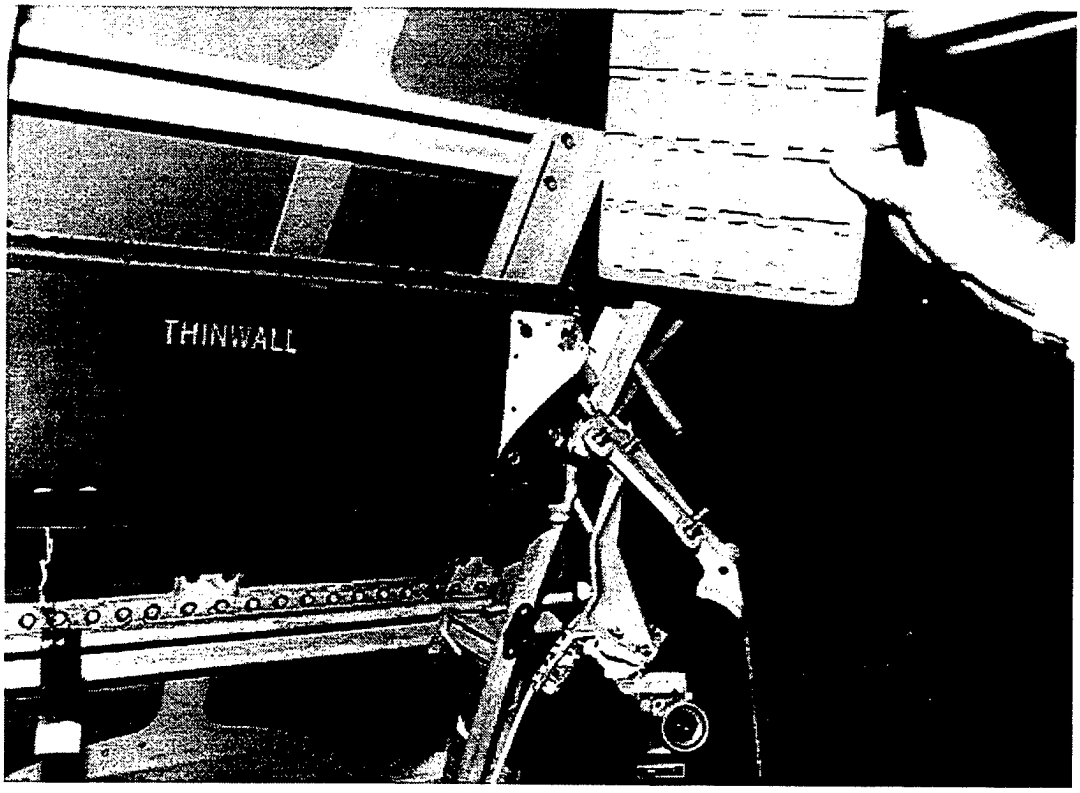


FIGURE 91. POSTTEST BIN A FRONT LOWER SUPPORT VIEW 1

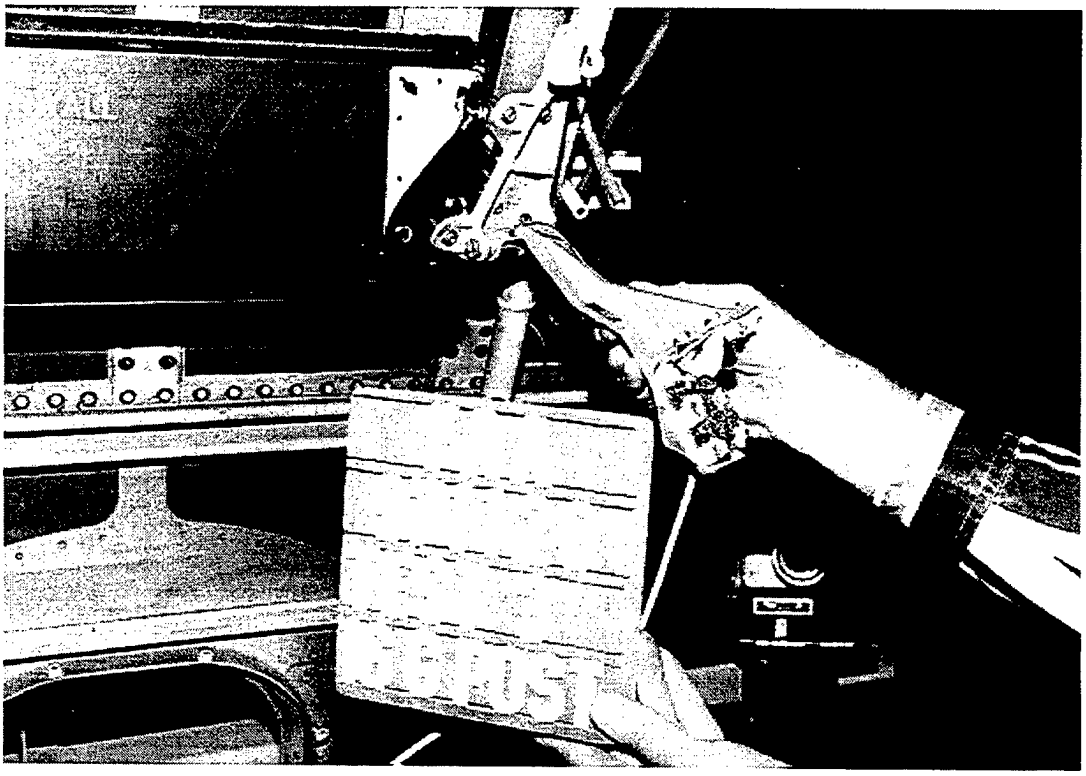


FIGURE 92. POSTTEST BIN A FRONT LOWER SUPPORT VIEW 2

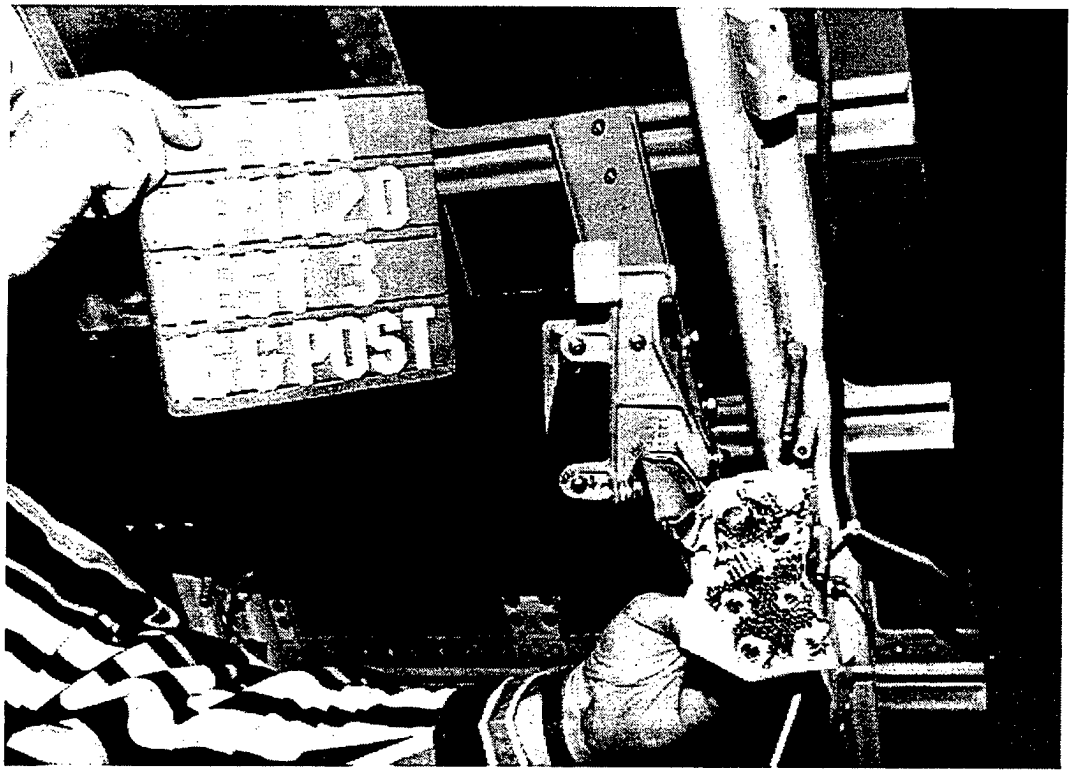


FIGURE 93. POSTTEST BIN A FRONT LOWER SUPPORT VIEW 3

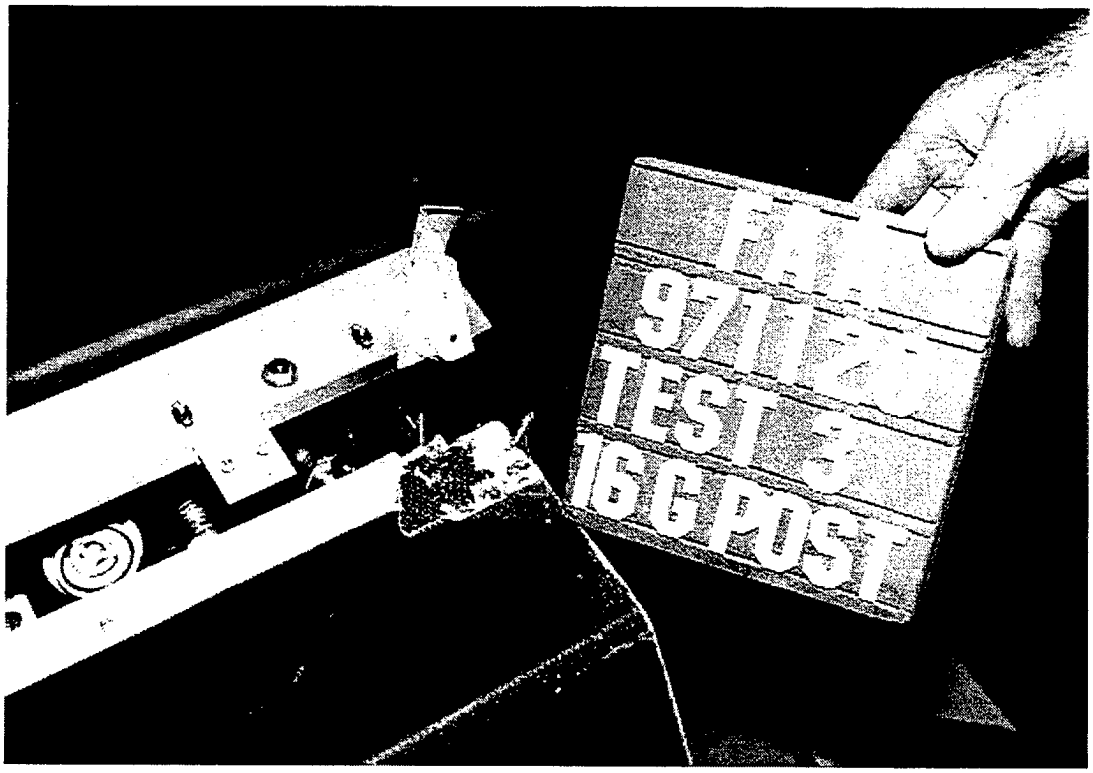


FIGURE 94. POSTTEST BIN A FRONT LOWER BIN VIEW

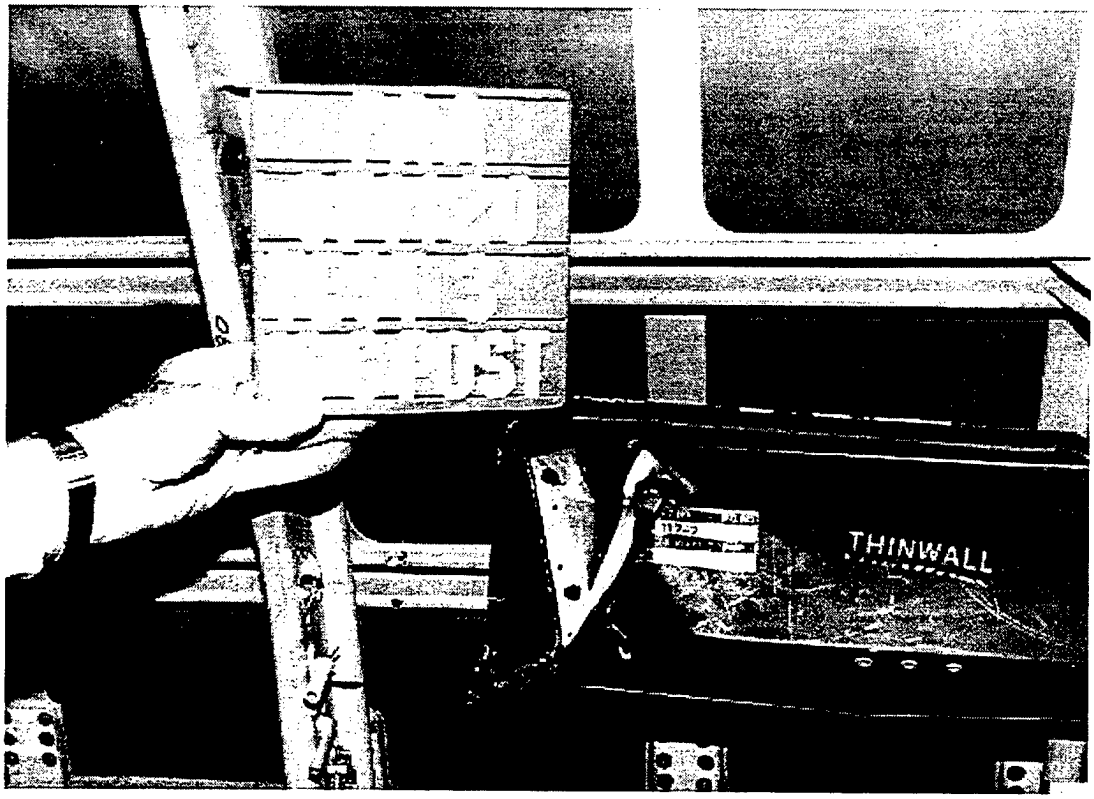


FIGURE 95. POSTTEST BIN A AIR DUCT AT FS480 VIEW 1

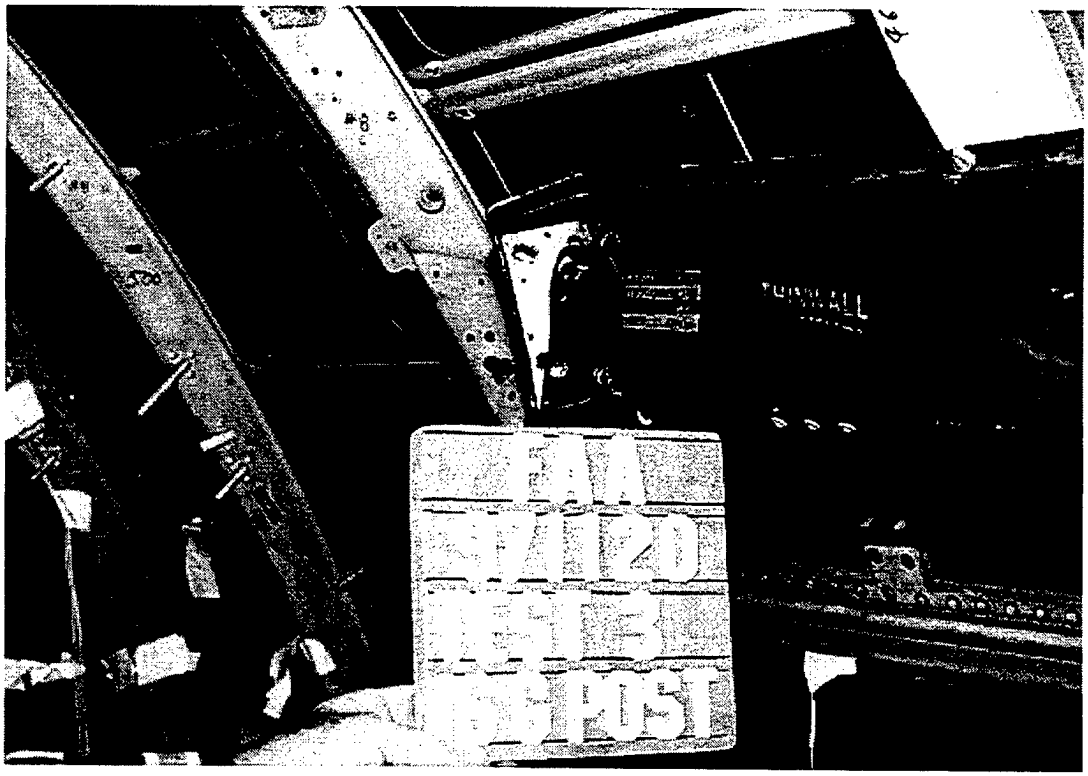


FIGURE 96. POSTTEST BIN A AIR DUCT AT FS480 VIEW 2



FIGURE 97. POSTTEST FS480 BIN A SUPPORT ATTACHMENT LOCATION VIEW 1



FIGURE 98. POSTTEST FS480 BIN A SUPPORT ATTACHMENT LOCATION VIEW 2



FIGURE 99. POSTTEST FS480 BIN A SUPPORT ATTACHMENT LOCATION VIEW 3

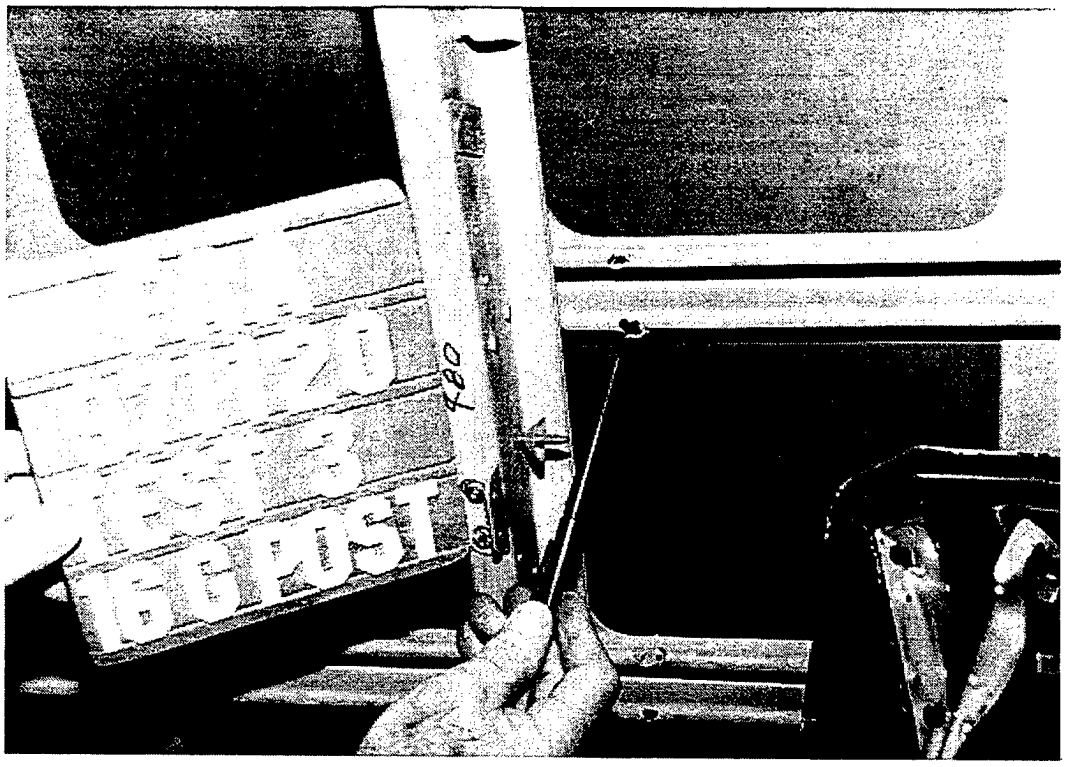


FIGURE 100. POSTTEST FS480 BIN A SUPPORT ATTACHMENT LOCATION VIEW 4

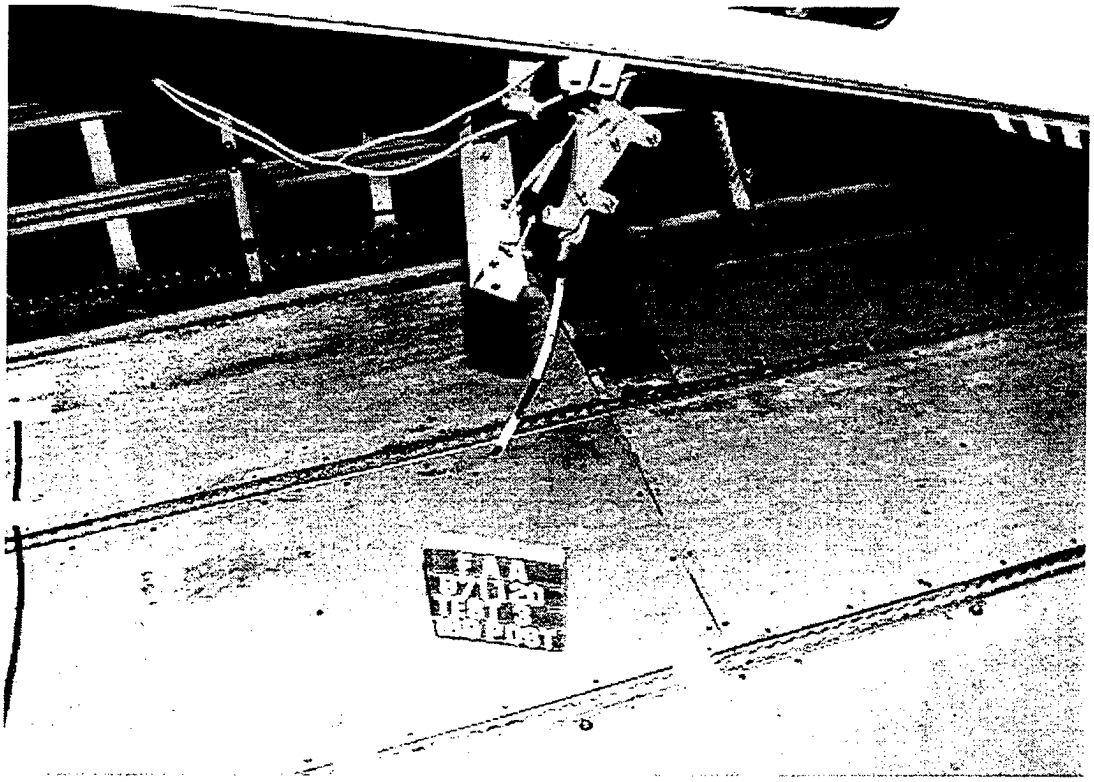


FIGURE 101. POSTTEST BIN A MID AND AFT LOWER SUPPORTS VIEW 1

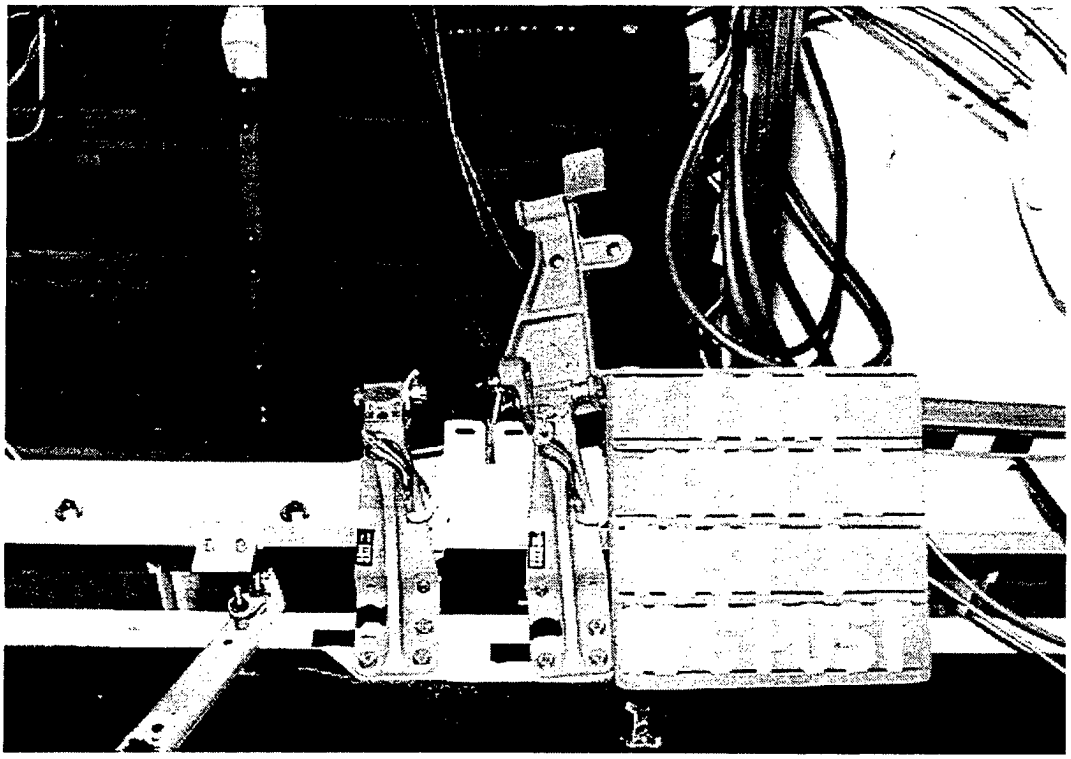


FIGURE 102. POSTTEST BIN A MID AND AFT LOWER SUPPORTS VIEW 2

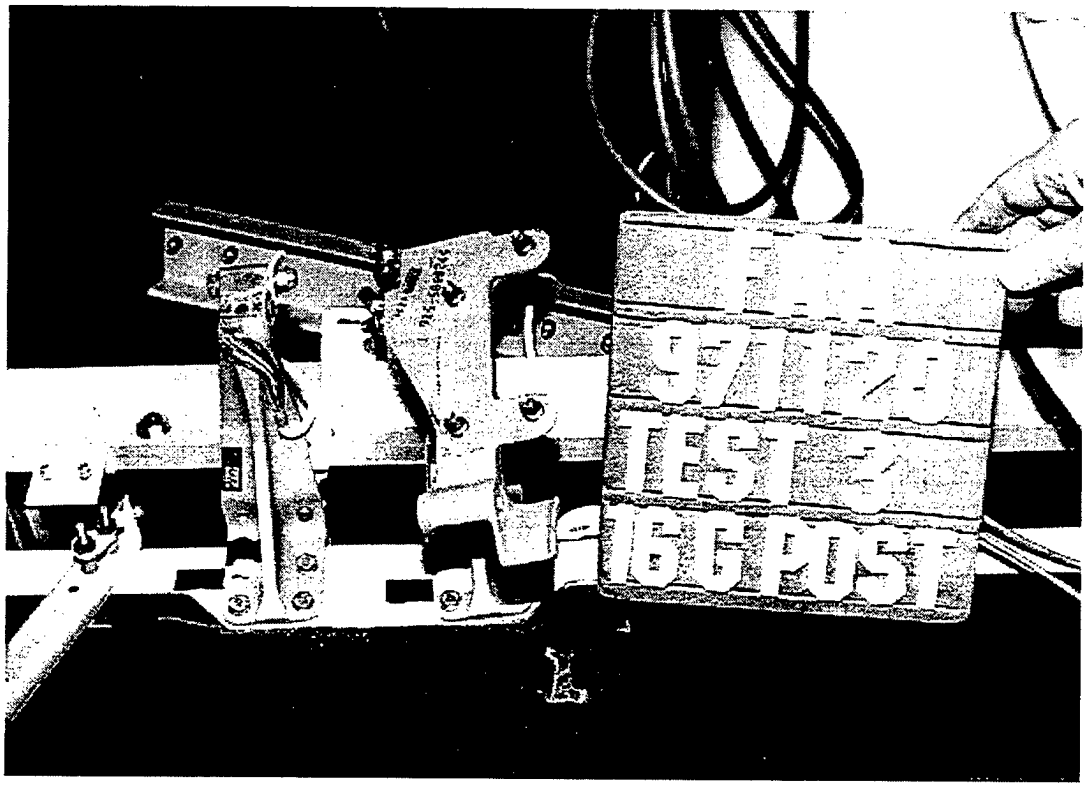


FIGURE 103. POSTTEST BIN A MID AND AFT LOWER SUPPORTS VIEW 3

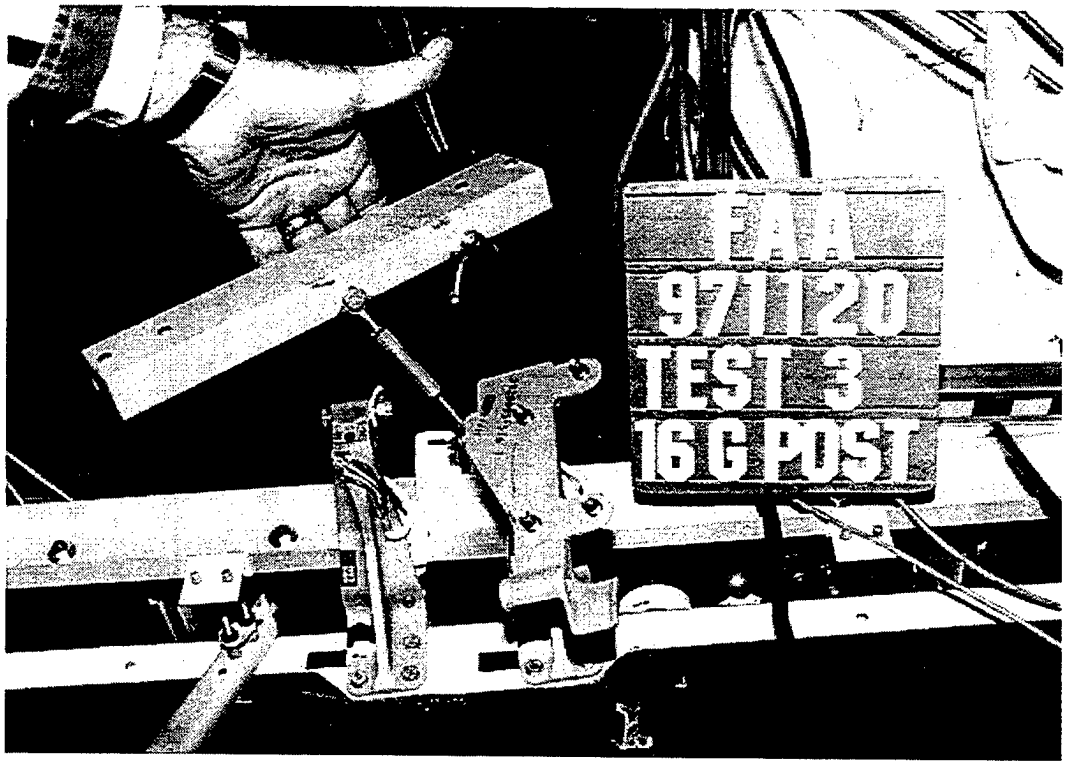


FIGURE 104. POSTTEST BIN A MID AND AFT LOWER SUPPORTS VIEW 4



FIGURE 105. POSTTEST BIN A MID AND AFT LOWER SUPPORTS VIEW 5

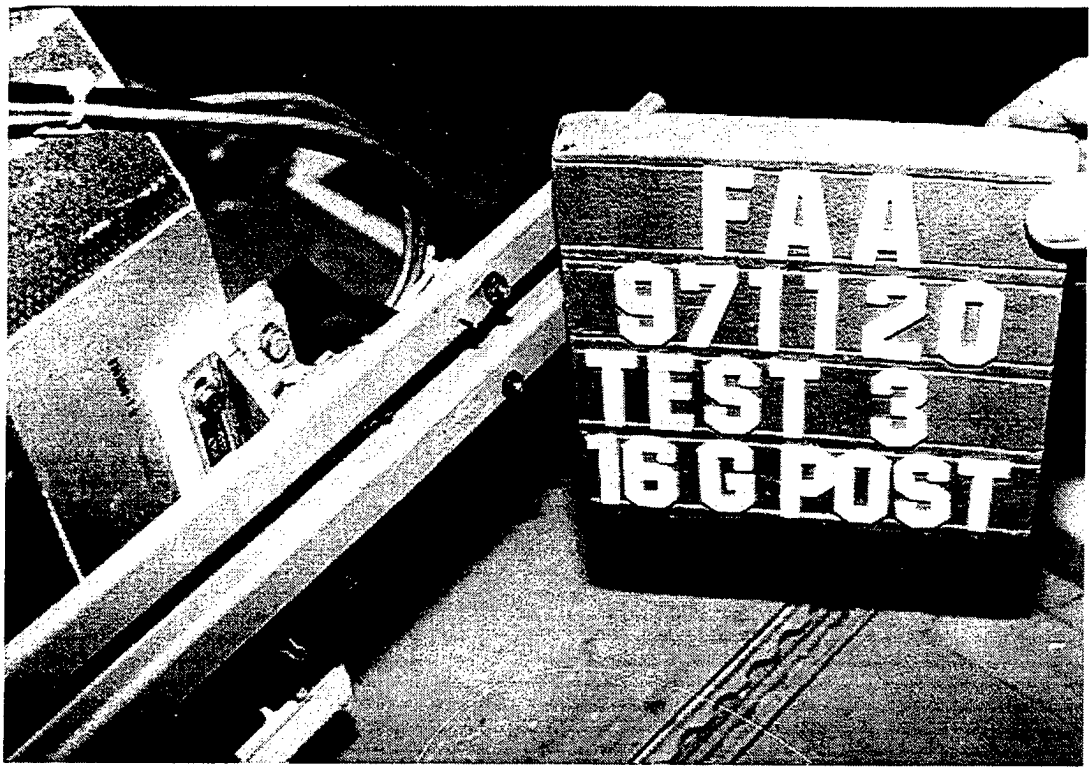


FIGURE 106. POSTTEST BIN A UPPER RAIL (FS400) DETACHMENT VIEW AT BIN



FIGURE 107. POSTTEST BIN A UPPER RAIL (FS400) DETACHMENT VIEW AT FS VIEW 1

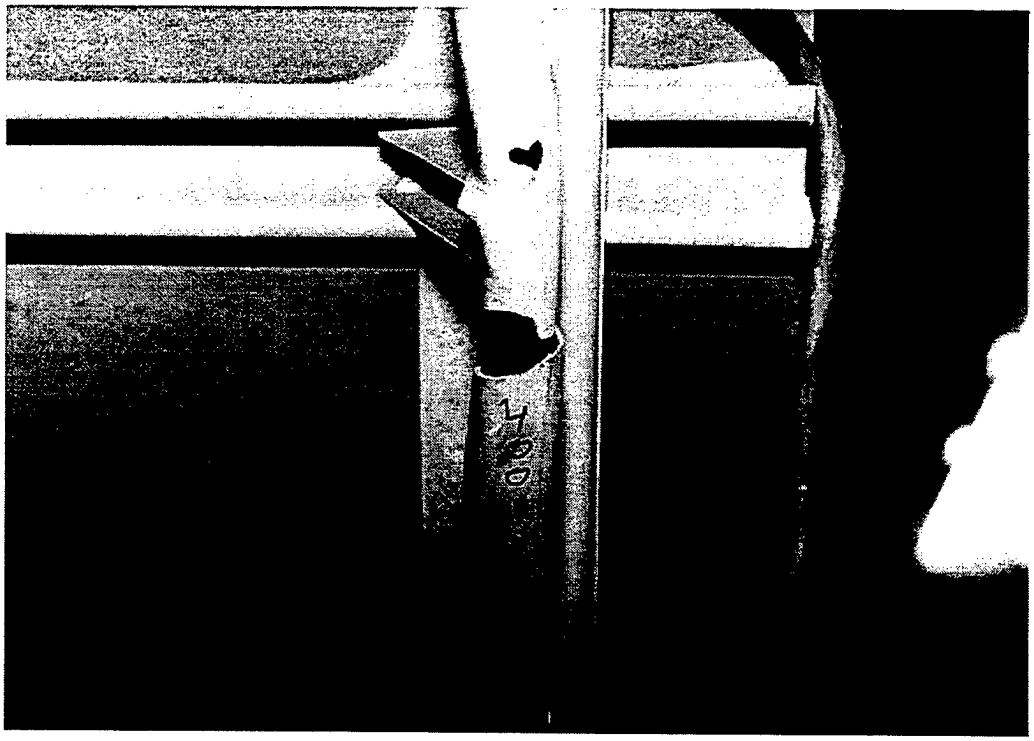


FIGURE 108. POSTTEST BIN A UPPER RAIL (FS400) DETACHMENT VIEW AT FS VIEW 2

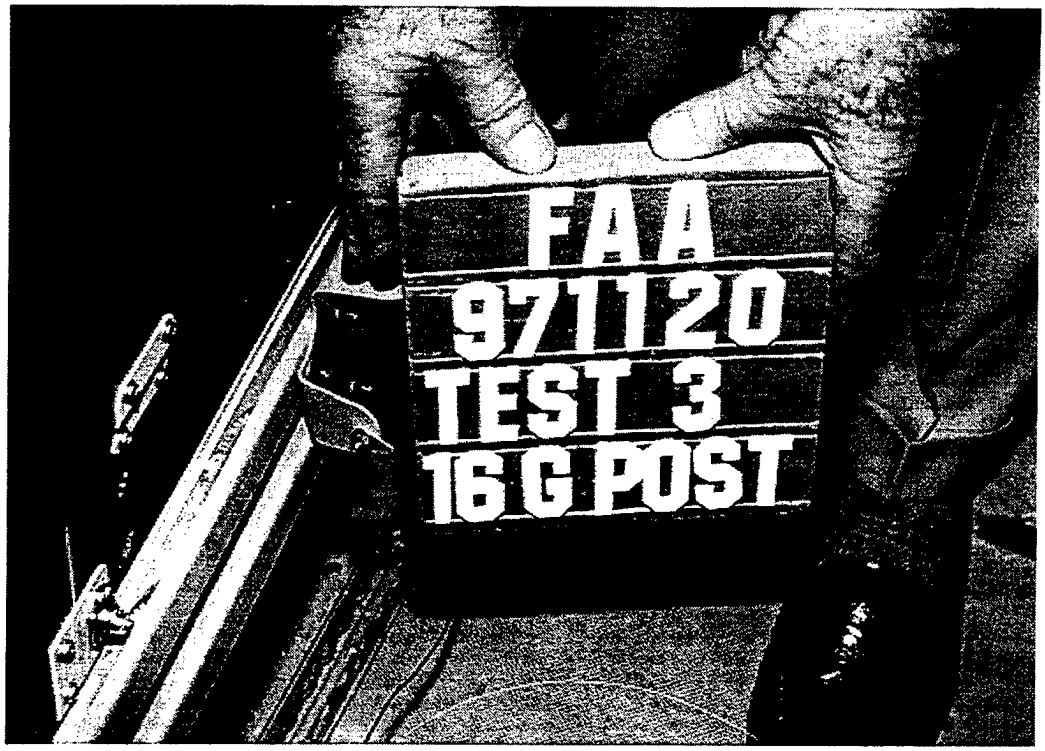


FIGURE 109. POSTTEST BIN A UPPER RAIL (FS440) DETACHMENT VIEW AT BIN VIEW 1

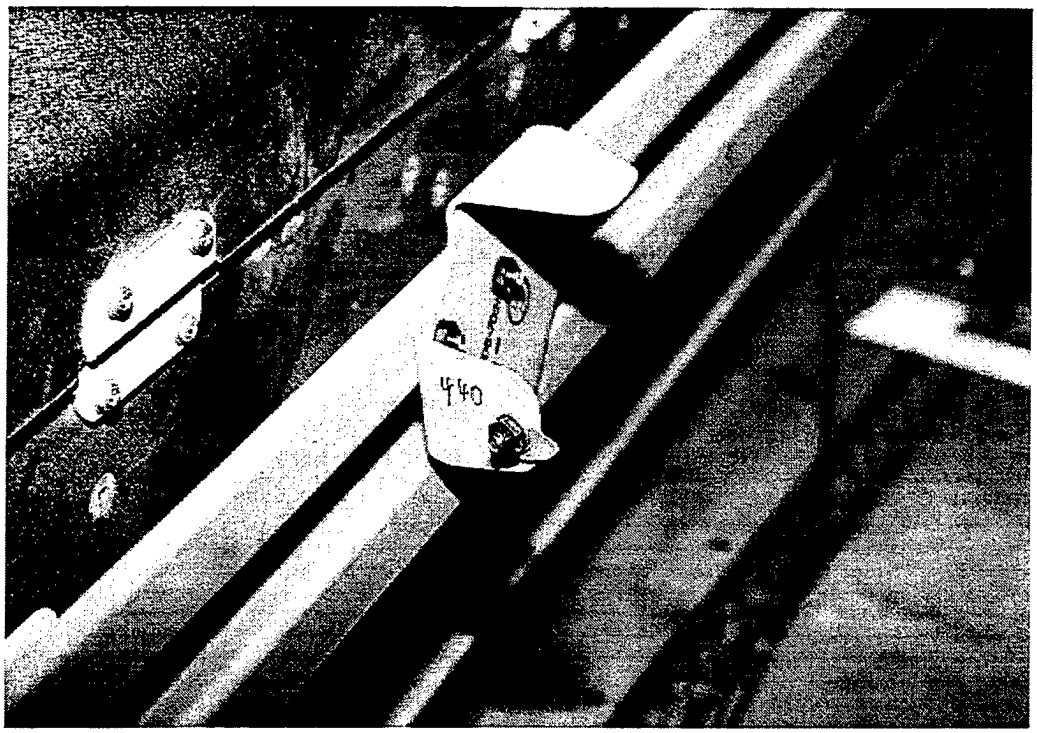


FIGURE 110. POSTTEST BIN A UPPER RAIL (FS440) DETACHMENT VIEW AT BIN VIEW 2



FIGURE 111. POSTTEST BIN A UPPER RAIL (FS440) DETACHMENT VIEW AT FS VIEW 1

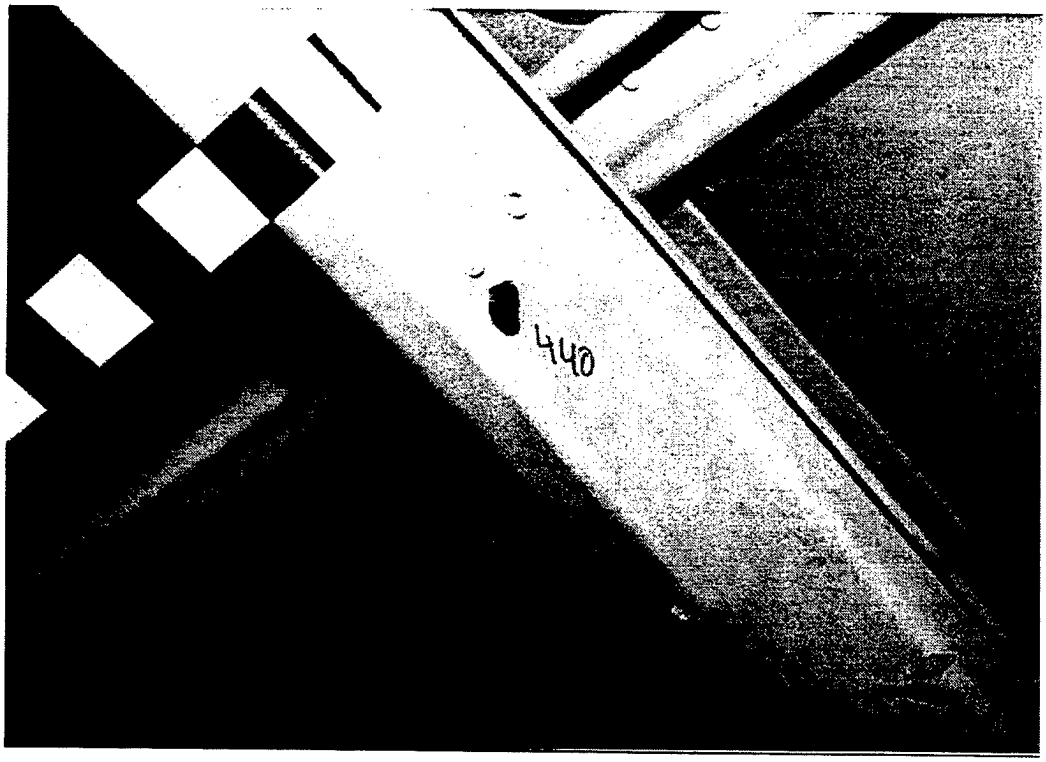


FIGURE 112. POSTTEST BIN A UPPER RAIL (FS440) DETACHMENT VIEW AT FS VIEW 2

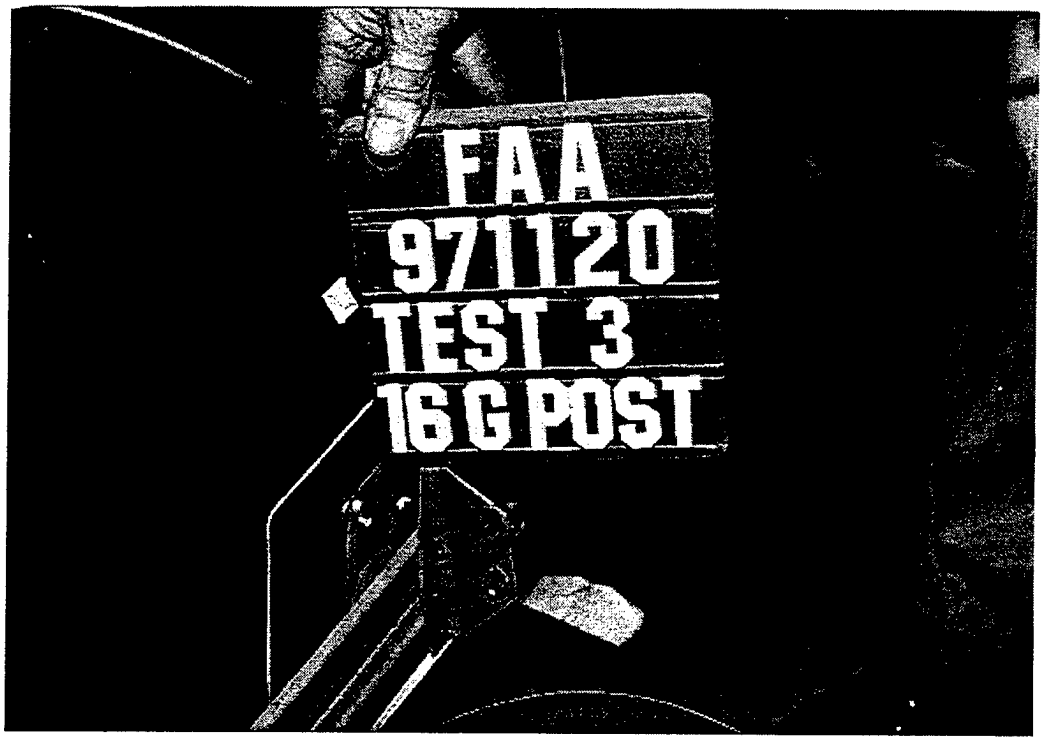


FIGURE 113. POSTTEST BIN A UPPER RAIL (FS460) DETACHMENT VIEW AT BIN VIEW 1

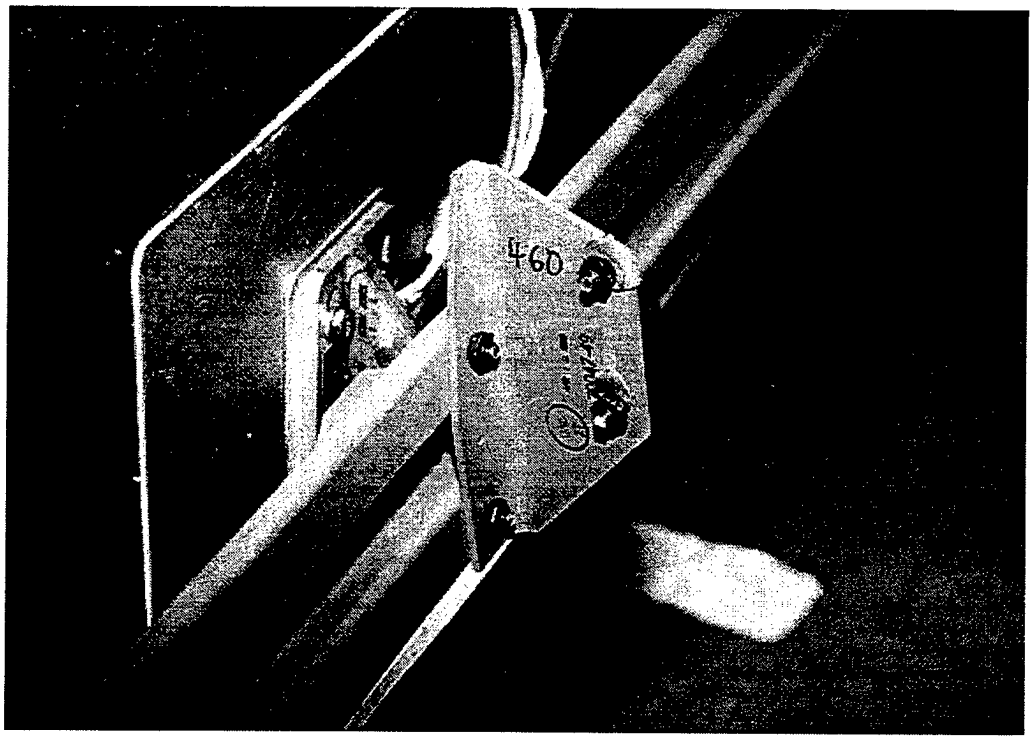


FIGURE 114. POSTTEST BIN A UPPER RAIL (FS460) DETACHMENT VIEW AT BIN VIEW 2



FIGURE 115. POSTTEST BIN A UPPER RAIL (FS460) DETACHMENT VIEW AT FS VIEW 1

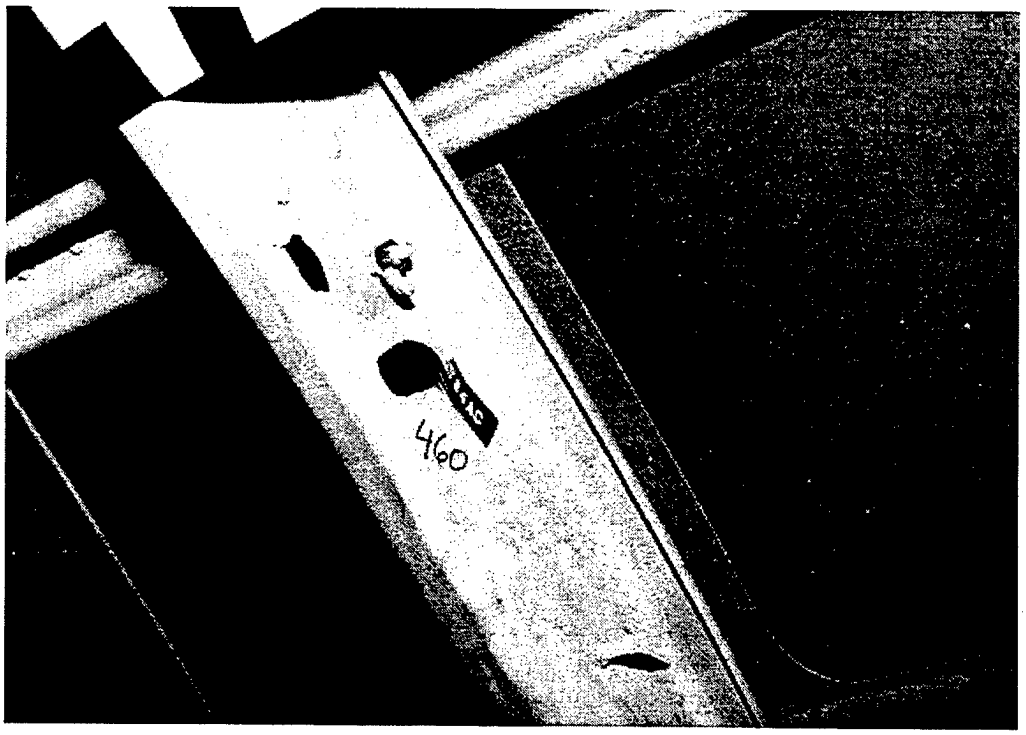


FIGURE 116. POSTTEST BIN A UPPER RAIL (FS460) DETACHMENT VIEW AT FS VIEW 2

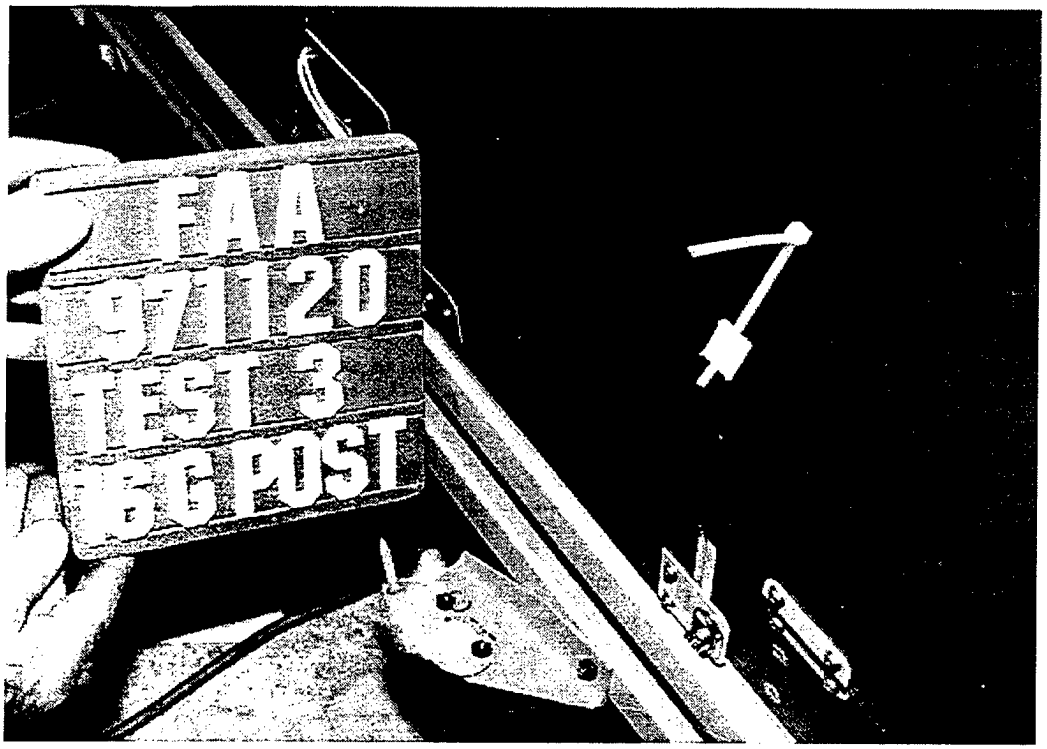


FIGURE 117. POSTTEST BIN A UPPER RAIL (FS500) DETACHMENT VIEW AT BIN VIEW 1

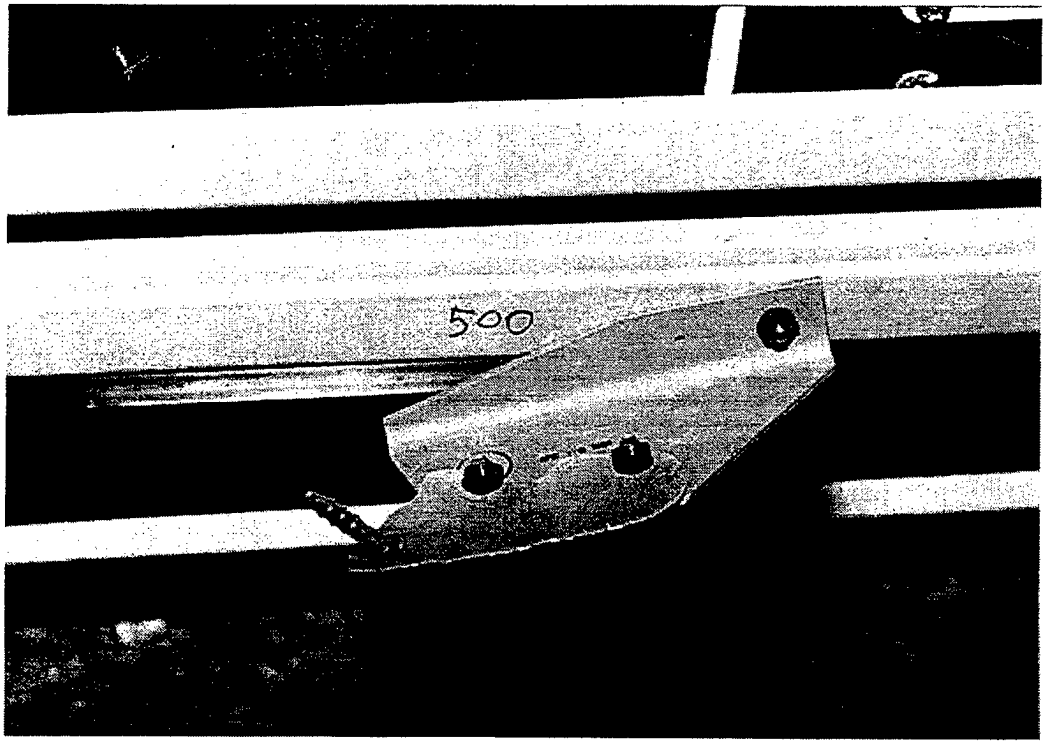


FIGURE 118. POSTTEST BIN A UPPER RAIL (FS500) DETACHMENT VIEW AT BIN VIEW 2

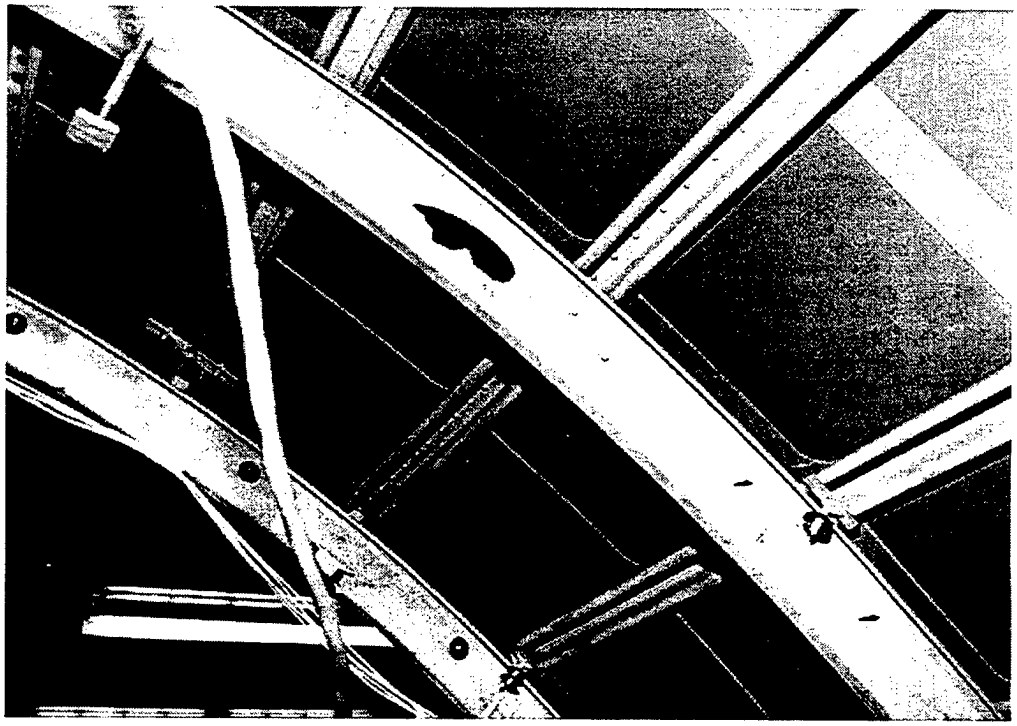


FIGURE 119. POSTTEST BIN A UPPER RAIL (FS500) DETACHMENT VIEW AT FS VIEW 1

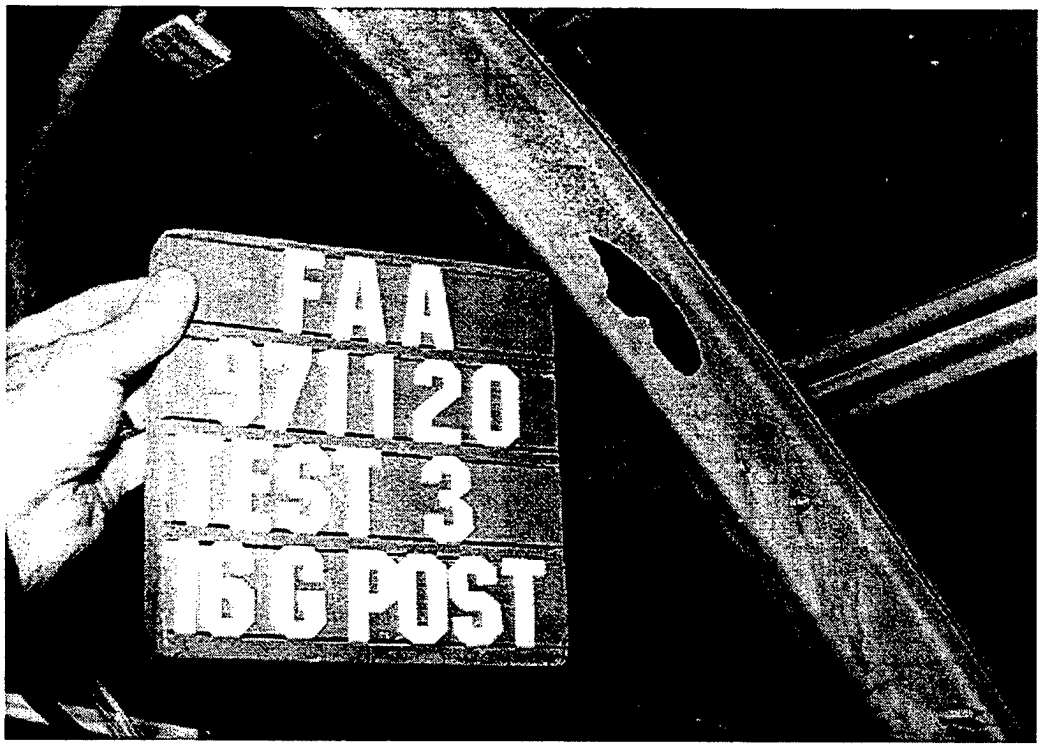


FIGURE 120. POSTTEST BIN A UPPER RAIL (FS500) DETACHMENT VIEW AT FS VIEW 2



FIGURE 121. POSTTEST BIN A UPPER RAIL (FS500) DETACHMENT VIEW AT FS VIEW 3



FIGURE 122. POSTTEST BIN A UPPER RAIL (FS500A) DETACHMENT VIEW AT BIN VIEW 1

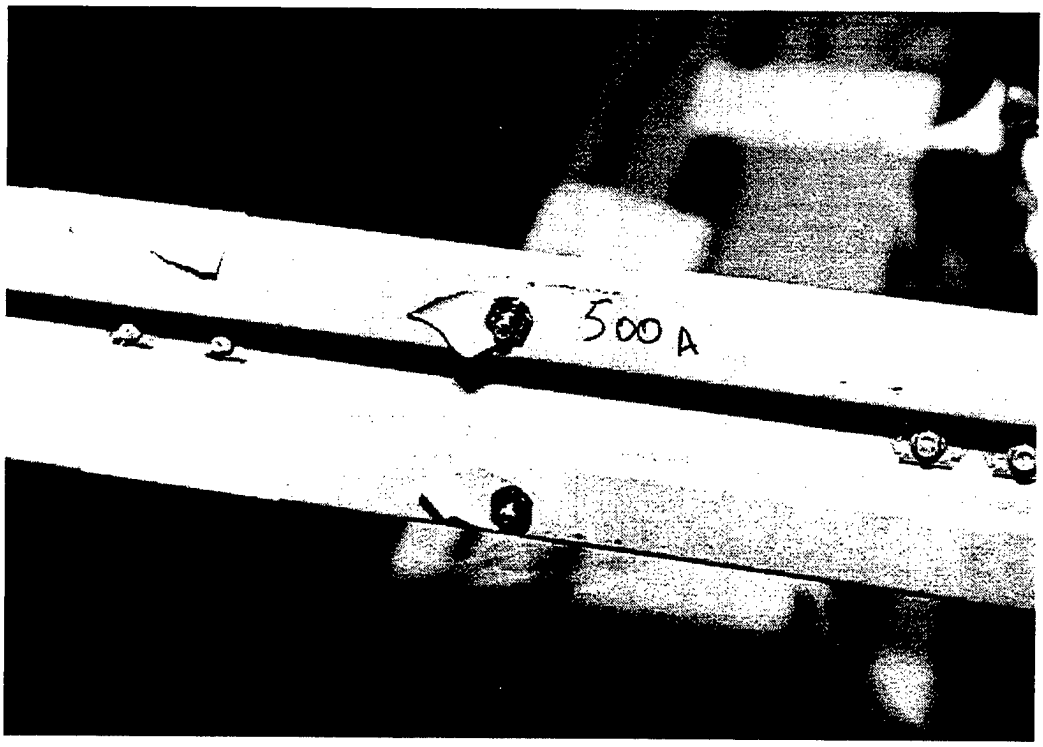


FIGURE 123. POSTTEST BIN A UPPER RAIL (FS500A) DETACHMENT VIEW AT BIN VIEW 2

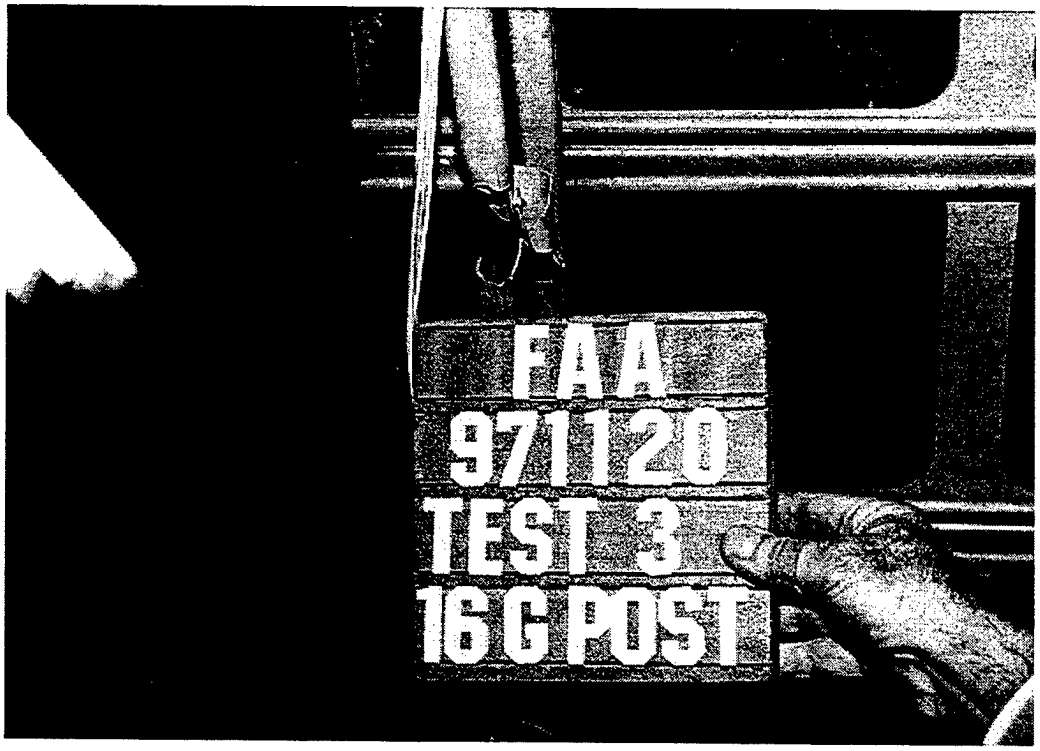


FIGURE 124. POSTTEST BIN A UPPER RAIL (FS500A) DETACHMENT VIEW AT FS VIEW 1

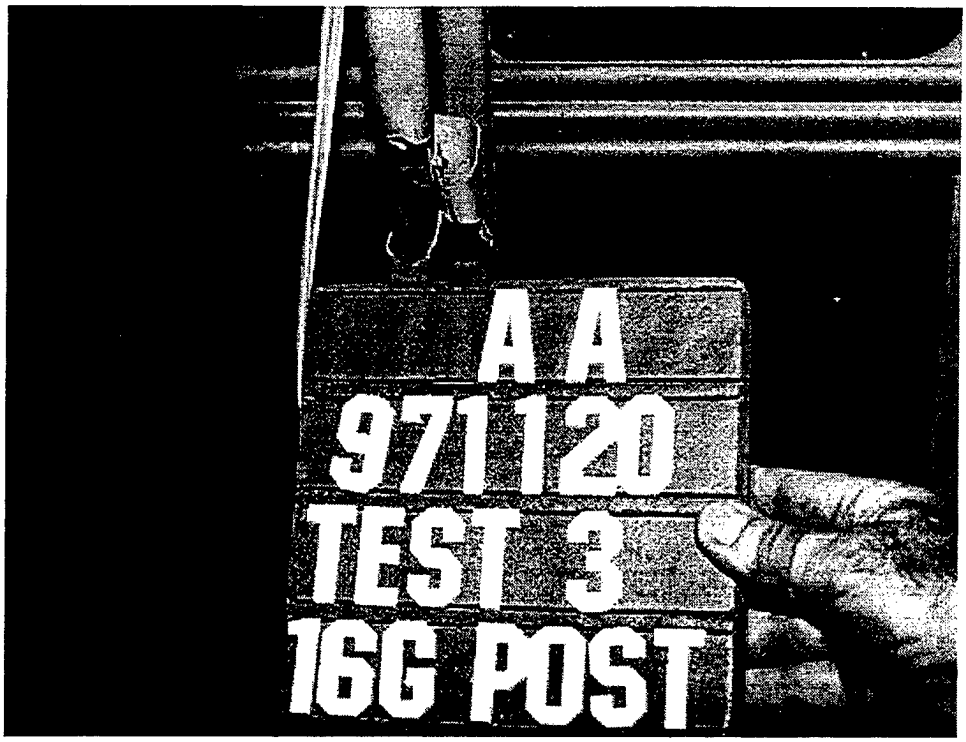


FIGURE 125. POSTTEST BIN A UPPER RAIL (FS500A) DETACHMENT VIEW AT FS VIEW 2

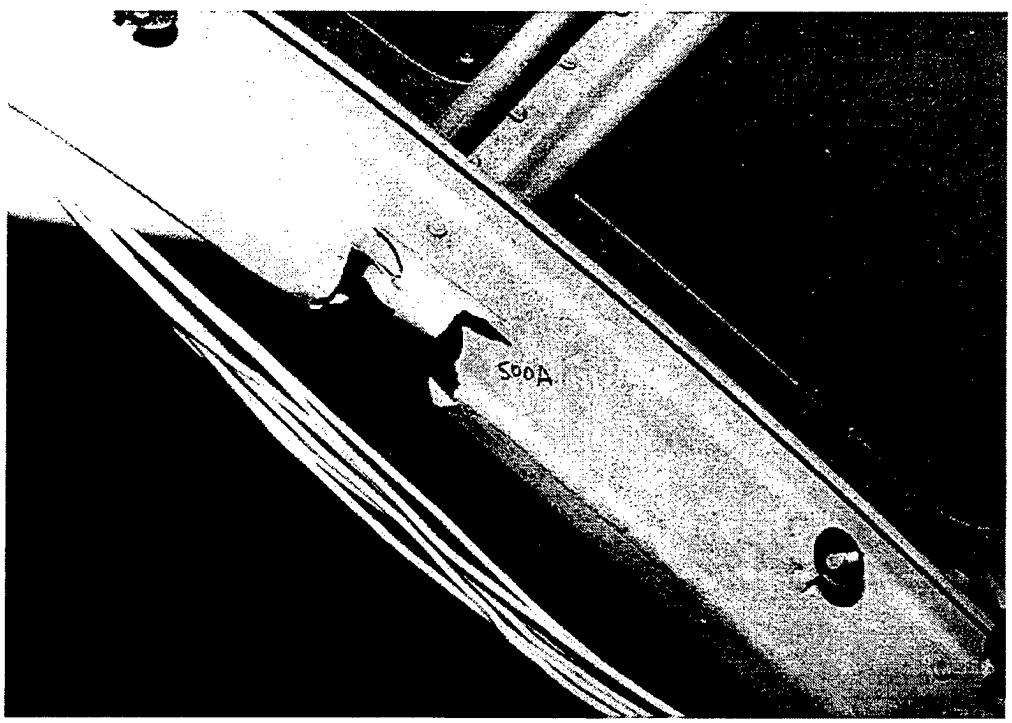


FIGURE 126. POSTTEST BIN A UPPER RAIL (FS500A) DETACHMENT VIEW AT FS VIEW 3

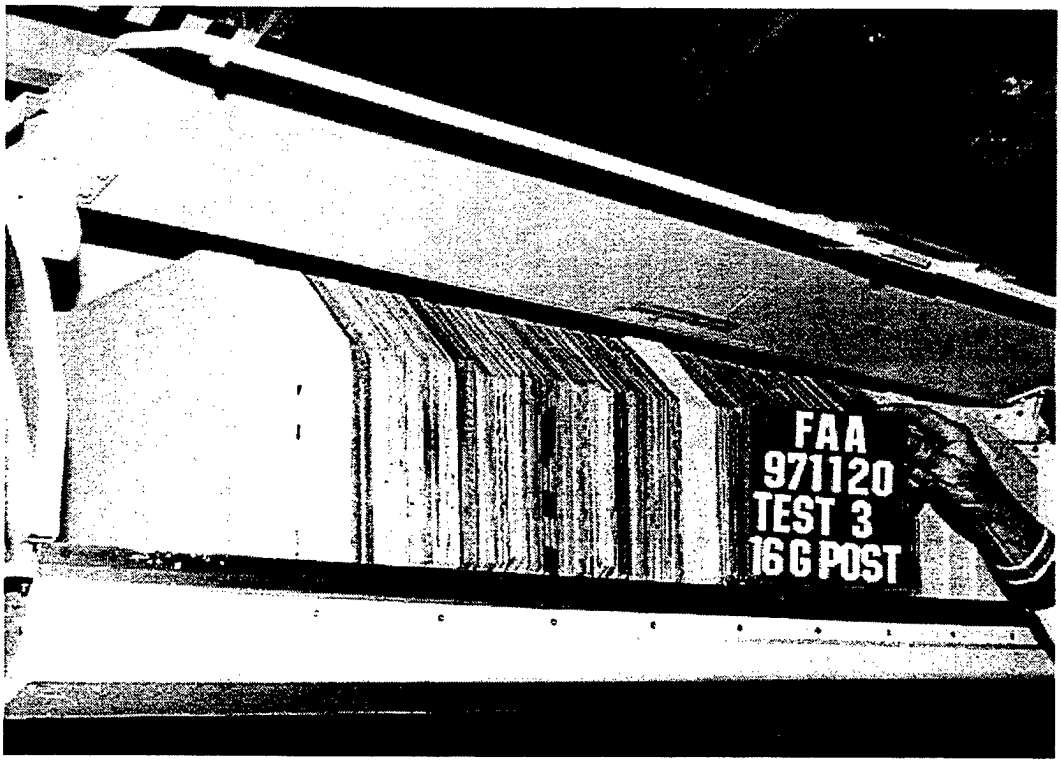


FIGURE 127. POSTTEST BIN B WITH DOOR OPEN SIDE VIEW

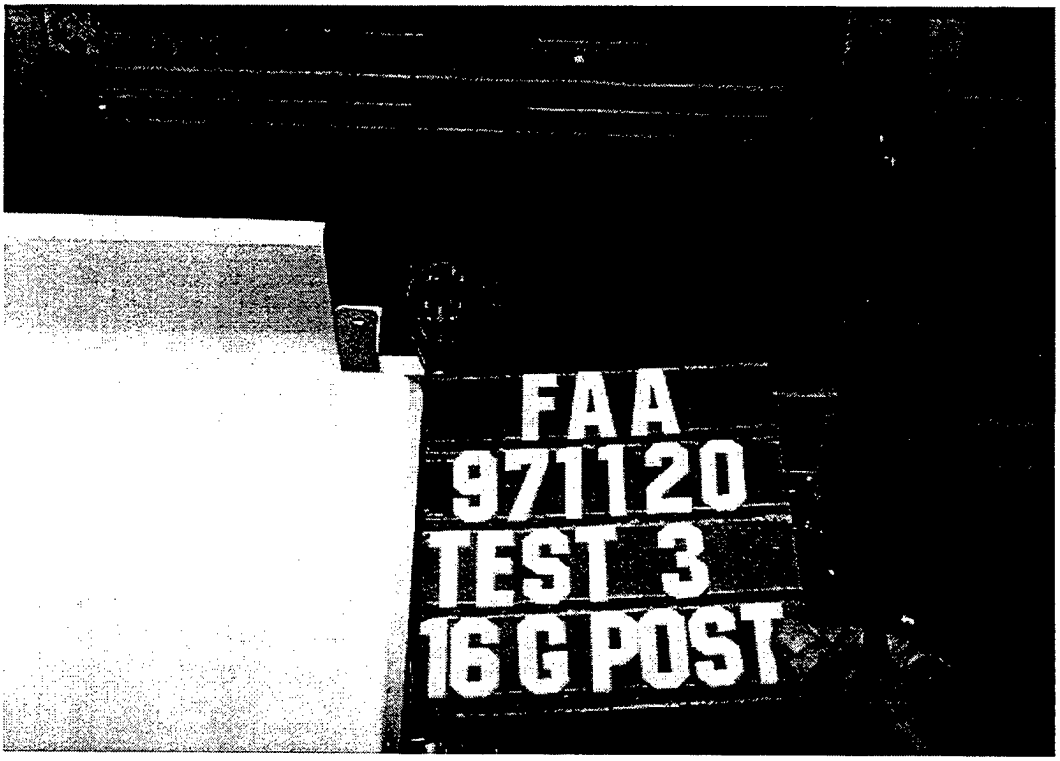


FIGURE 128. POSTTEST BIN B SUPPORT NUMBER 1 SIDE VIEW

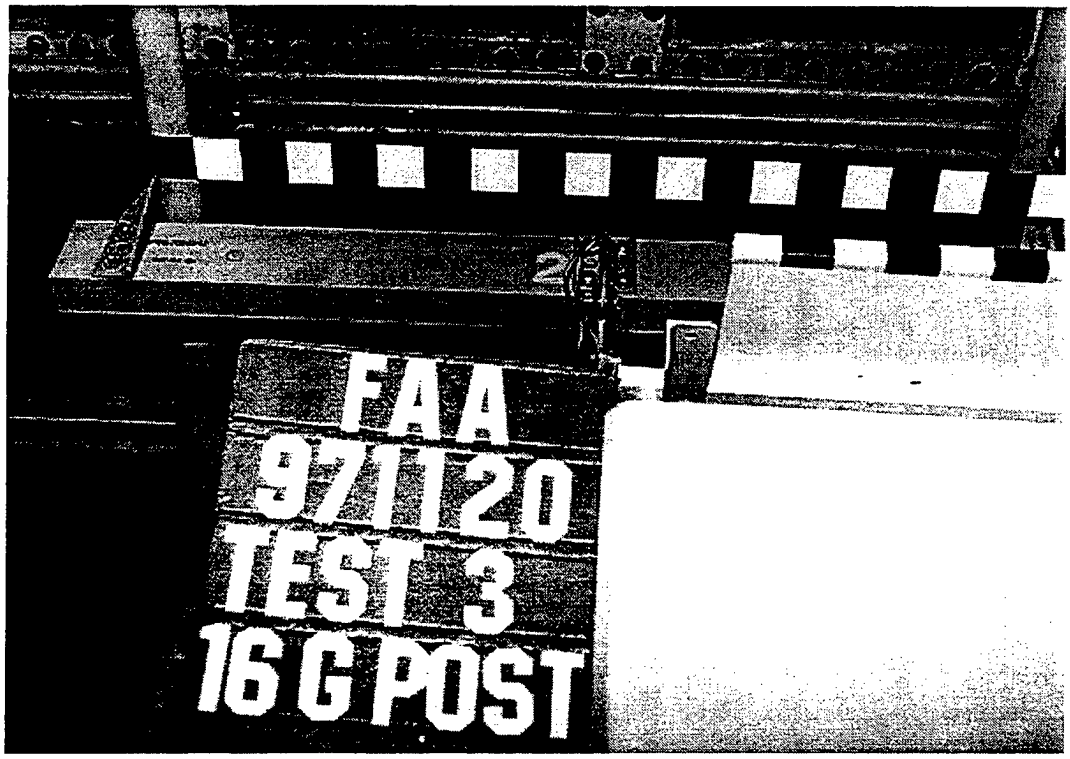


FIGURE 129. POSTTEST BIN B SUPPORT NUMBER 2 SIDE VIEW



FIGURE 130. POSTTEST BIN B SUPPORT NUMBERS 5, 6, 8, AND 9 LOWER VIEW

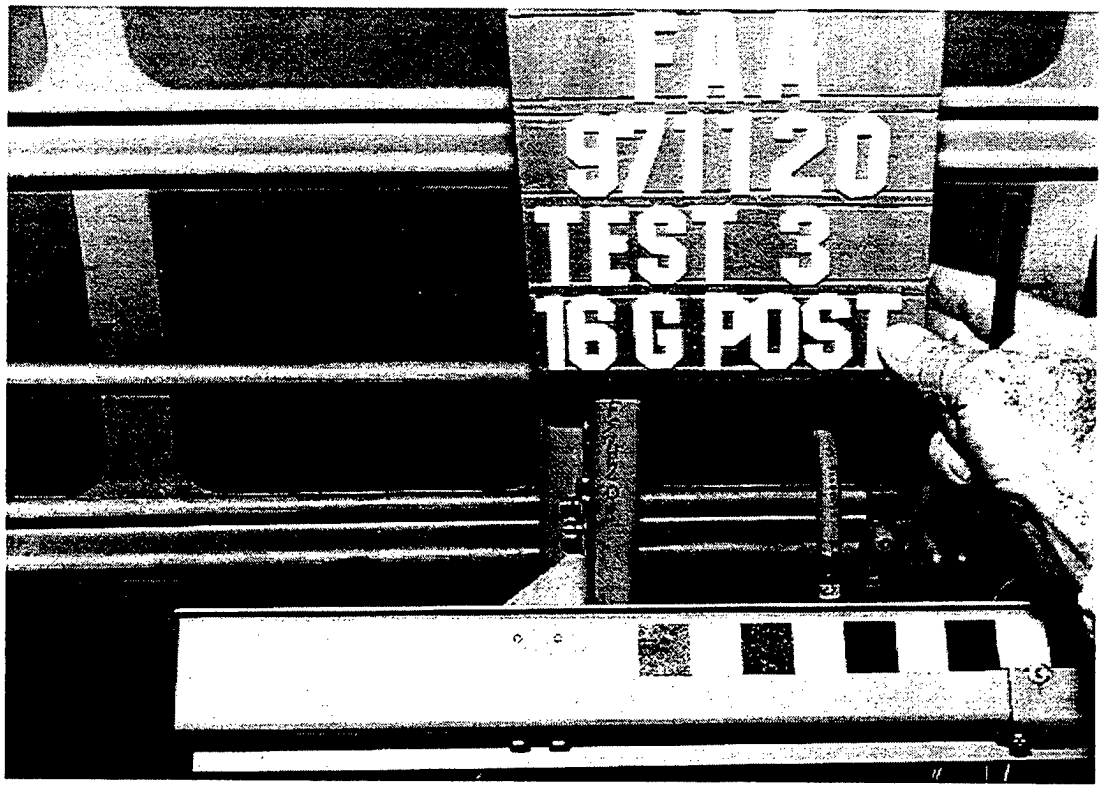


FIGURE 131. POSTTEST BIN B SUPPORT NUMBER 7 SIDE VIEW

APPENDIX A—INSTRUMENTATION LIST

SLED AND FUSELAGE INSTRUMENTATION

Channel Mnemonic	Channel Title
SLDXG	Sled Longitudinal Acceleration
SLDXV*	Sled Longitudinal Velocity
F420XG	Fuselage Floor BS 420 Longitudinal Acceleration
F420YG	Fuselage Floor BS 420 Lateral Acceleration
F420ZG	Fuselage Floor BS 420 Vertical Acceleration
FT420XV*	Fuselage Floor BS 420 Longitudinal Velocity
F500XG	Fuselage Floor BS 500 Longitudinal Acceleration
F500YG	Fuselage Floor BS 500 Lateral Acceleration
F500ZG	Fuselage Floor BS 500 Vertical Acceleration
FT500XV*	Fuselage Floor BS 500 Longitudinal Velocity
T420XG	Fuselage Top BS 420 Longitudinal Acceleration
T420ZG	Fuselage Top BS 420 Vertical Acceleration
T420XV*	Fuselage Top BS 420 Longitudinal Velocity
T500XG	Fuselage Top BS 500 Longitudinal Acceleration
T500ZG	Fuselage Top BS 500 Vertical Acceleration
T500XV*	Fuselage Top BS 500 Longitudinal Velocity
L440XG	Fuselage Left Side BS 440 Longitudinal Acceleration
L440YG	Fuselage Left Side BS 440 Lateral Acceleration
L440ZG	Fuselage Left Side BS 440 Vertical Acceleration
L440XV*	Fuselage Left Side BS 440 Longitudinal Velocity
L480XG	Fuselage Left Side BS 480 Longitudinal Acceleration
L480YG	Fuselage Left Side BS 480 Lateral Acceleration
L480ZG	Fuselage Left Side BS 480 Vertical Acceleration
L480XV*	Fuselage Left Side BS 480 Longitudinal Velocity
R440XG	Fuselage Right Side BS 440 Longitudinal Acceleration
R440YG	Fuselage Right Side BS 440 Lateral Acceleration
R440ZG	Fuselage Right Side BS 440 Vertical Acceleration
R440XV*	Fuselage Right Side BS 440 Longitudinal Velocity
R480XG	Fuselage Right Side BS 480 Longitudinal Acceleration
R480YG	Fuselage Right Side BS 480 Lateral Acceleration
R480ZG	Fuselage Right Side BS 480 Vertical Acceleration
R480XV*	Fuselage Right Side BS 480 Longitudinal Velocity

* CALCULATED DATA CHANNELS (integration of acceleration)

OVERHEAD STOWAGE BIN INSTRUMENTATION

Channel Mnemonic	Channel Title
BAFXG	Bin A Front Longitudinal Acceleration
BAFYG	Bin A Front Lateral Acceleration
BAFZG	Bin A Front Vertical Acceleration
BAFXV*	Bin A Front Longitudinal Velocity
BACXG	Bin A Center Longitudinal Acceleration
BACYG	Bin A Center Lateral Acceleration
BACZG	Bin A Center Vertical Acceleration
BACXV*	Bin A Center Longitudinal Velocity
BAAXG	Bin A Aft Longitudinal Acceleration
BAAYG	Bin A Aft Lateral Acceleration
BAAZG	Bin A Aft Vertical Acceleration
BAAXV*	Bin A Aft Longitudinal Velocity
AL75XF	Bin A Lower Front Support Longitudinal Force
AL75YF	Bin A Lower Front Support Lateral Force
AL75ZF	Bin A Lower Front Support Vertical Force
AL76XF	Bin A Lower Mid Support Longitudinal Force
AL76YF	Bin A Lower Mid Support Lateral Force
AL76ZF	Bin A Lower Mid Support Vertical Force
AL78XF	Bin A Lower Aft Support Longitudinal Force
AL78YF	Bin A Lower Aft Support Lateral Force
AL78ZF	Bin A Lower Aft Support Vertical Force
AU78XA	Bin A Upper Front Support Inner Longitudinal Force
AU78XB	Bin A Upper Front Support Outer Longitudinal Force
AU78ZC	Bin A Upper Front Support Outer Vertical Force
AU78ZD	Bin A Upper Front Support Inner Vertical Force
AU76XA	Bin A Upper Mid Support Inner Longitudinal Force
AU76XB	Bin A Upper Mid Support Outer Longitudinal Force
AU76ZC	Bin A Upper Mid Support Outer Vertical Force
AU76ZD	Bin A Upper Mid Support Inner Vertical Force
AU75XA	Bin A Upper Aft Support Inner Longitudinal Force
AU75XB	Bin A Upper Aft Support Outer Longitudinal Force
AU75ZC	Bin A Upper Aft Support Outer Vertical Force
AU75ZD	Bin A Upper Aft Support Inner Vertical Force
BBFXG	Bin B Front Longitudinal Acceleration
BBFYG	Bin B Front Lateral Acceleration
BBFZG	Bin B Front Vertical Acceleration
BBFXV*	Bin B Front Longitudinal Velocity
BBCXG	Bin B Center Longitudinal Acceleration
BBCYG	Bin B Center Lateral Acceleration

* CALCULATED DATA CHANNELS (integration of acceleration)

OVERHEAD STOWAGE BIN INSTRUMENTATION (Continued)

Channel Mnemonic	Channel Title
BBCZG	Bin B Center Vertical Acceleration
BBCXV*	Bin B Center Longitudinal Velocity
BBAXG	Bin B Aft Longitudinal Acceleration
BBAYG	Bin B Aft Lateral Acceleration
BBAZG	Bin B Aft Vertical Acceleration
BBAXV*	Bin B Aft Longitudinal Velocity
B1ZF	Bin B Aft Bracket 1 Vertical Force
B2ZF	Bin B Fwd Bracket 2 Vertical Force
B3ZF	Bin B Fwd Rod 3 Vertical Force
B4ZF	Bin B Aft Rod 4 Vertical Force
B5XF	Bin B Aft Plate Bracket 5 Longitudinal Force
B6XF	Bin B Fwd Plate Bracket 6 Longitudinal Force
B7YF1	Bin B L Bracket 7 Gage 1 Lateral Force
B7YF2	Bin B L Bracket 7 Gage 2 Lateral Force
B8YF1	Bin B L Bracket 8 Gage 1 Lateral Force
B8YF2	Bin B L Bracket 8 Gage 2 Lateral Force
B9YF1	Bin B L Bracket 9 Gage 1 Lateral Force
B9YF2	Bin B L Bracket 9 Gage 2 Lateral Force
B10YF1	Bin B L Bracket 10 Gage 1 Lateral Force
B10YF2	Bin B L Bracket 10 Gage 2 Lateral Force
B11YF1	Bin B L Bracket 11 Gage 1 Lateral Force
B11YF2	Bin B L Bracket 11 Gage 2 Lateral Force
BINAXD	Bin A Longitudinal Displacement
BINBXD	Bin B Longitudinal Displacement

* CALCULATED DATA CHANNELS (integration of acceleration)

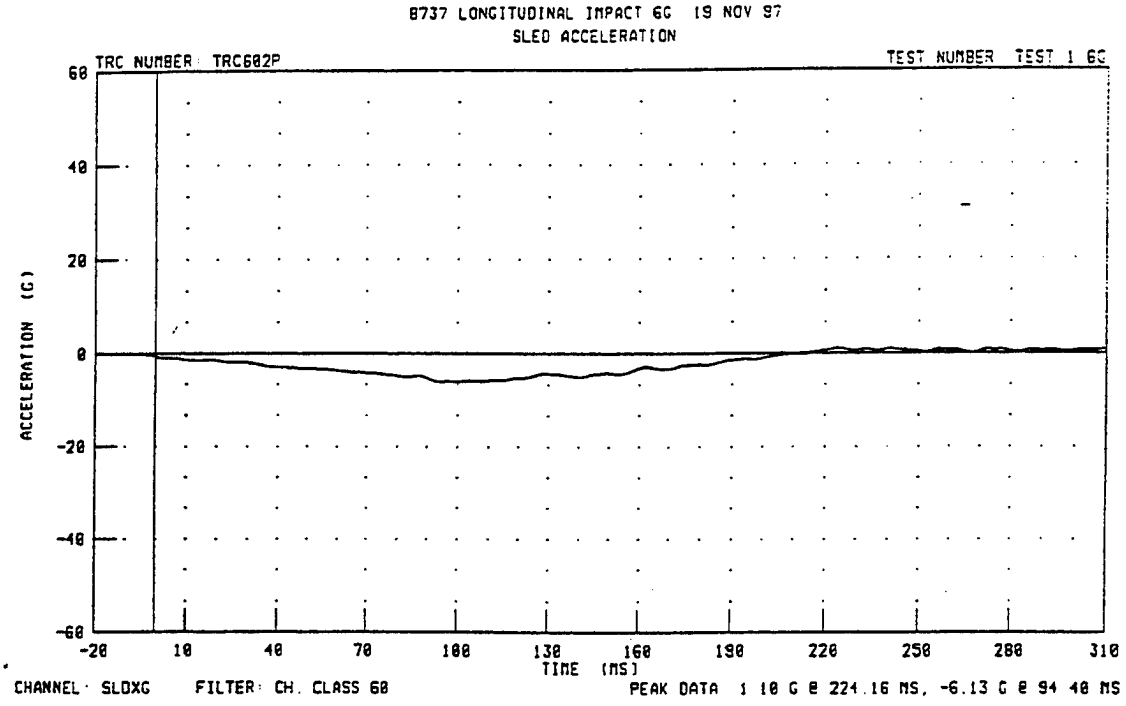
AUXILIARY FUEL TANK

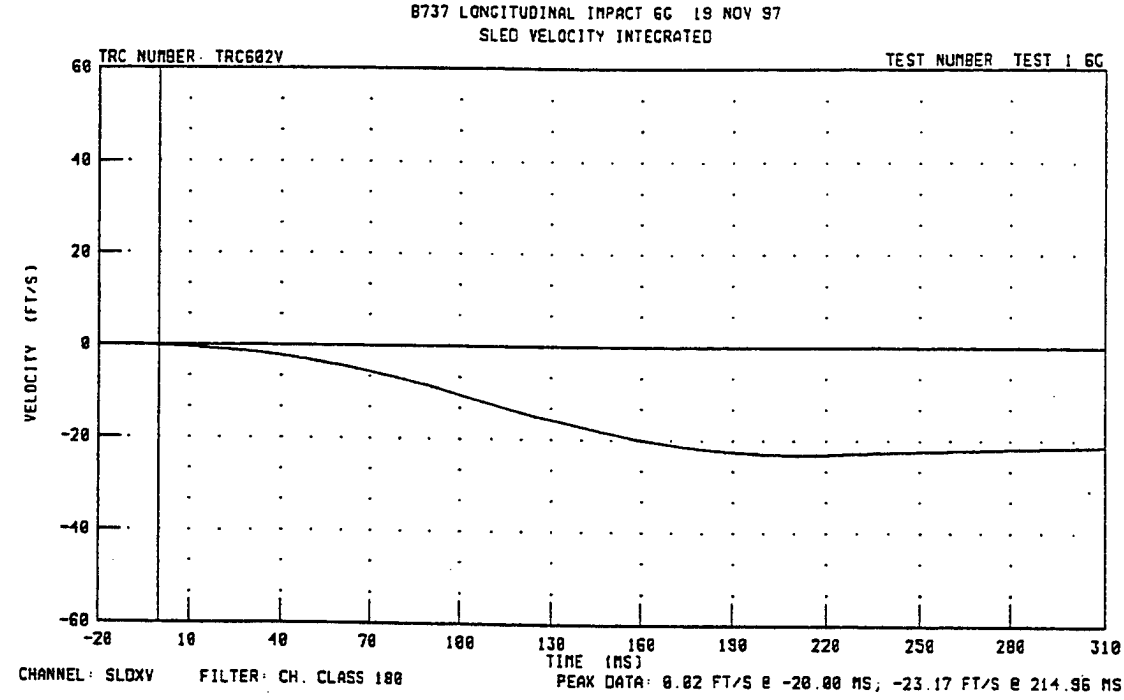
Channel Mnemonic	Channel Title
FTLXG	Fuel Tank Left Longitudinal Acceleration
FTLYG	Fuel Tank Left Lateral Acceleration
FTLZG	Fuel Tank Left Vertical Acceleration
FTLXV*	Fuel Tank Left Longitudinal Velocity
FTRXG	Fuel Tank Right Longitudinal Acceleration
FTRYG	Fuel Tank Right Lateral Acceleration
FTRZG	Fuel Tank Right Vertical Acceleration
FTRXV*	Fuel Tank Right Longitudinal Velocity
FTTXG	Fuel Tank Top Longitudinal Acceleration
FTTXV*	Fuel Tank Top Longitudinal Velocity
FTXD	Fuel Tank Longitudinal Displacement

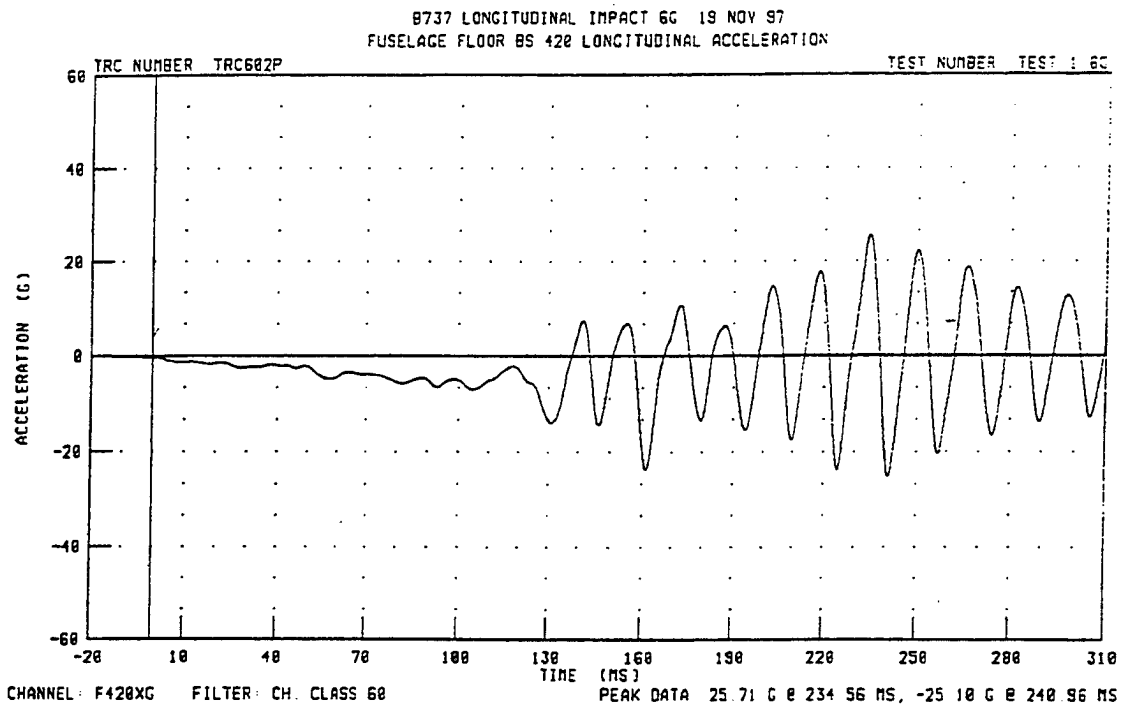
* CALCULATED DATA CHANNELS (integration of acceleration)

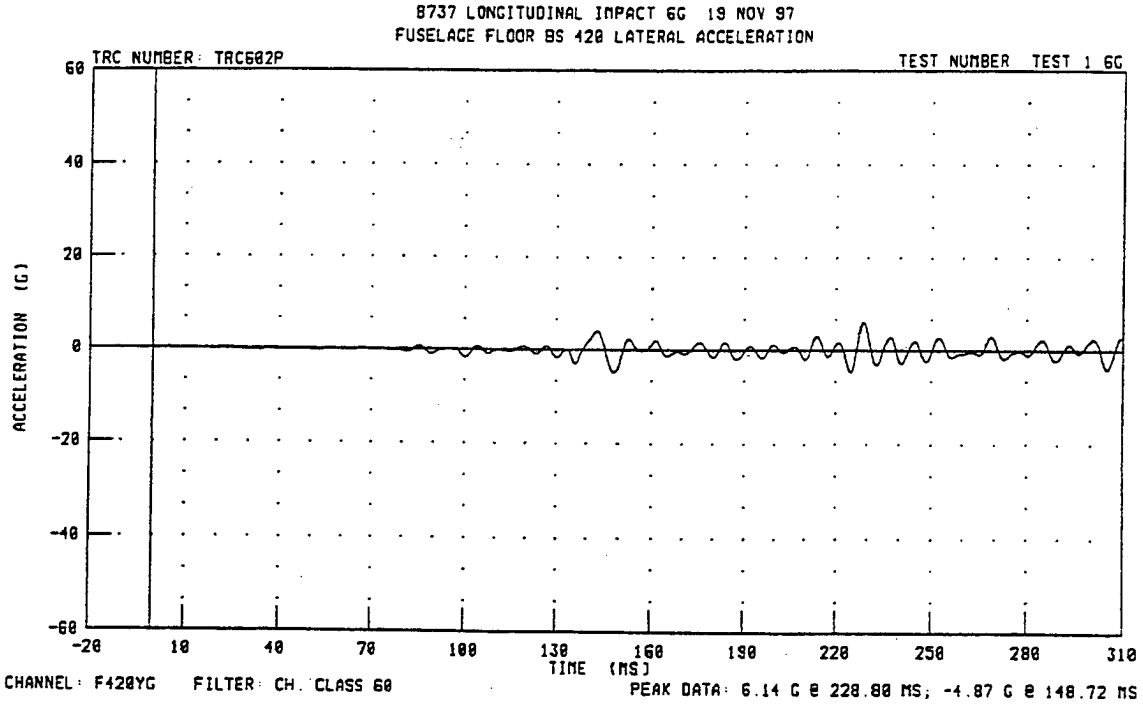
APPENDIX B—DATA PLOTS

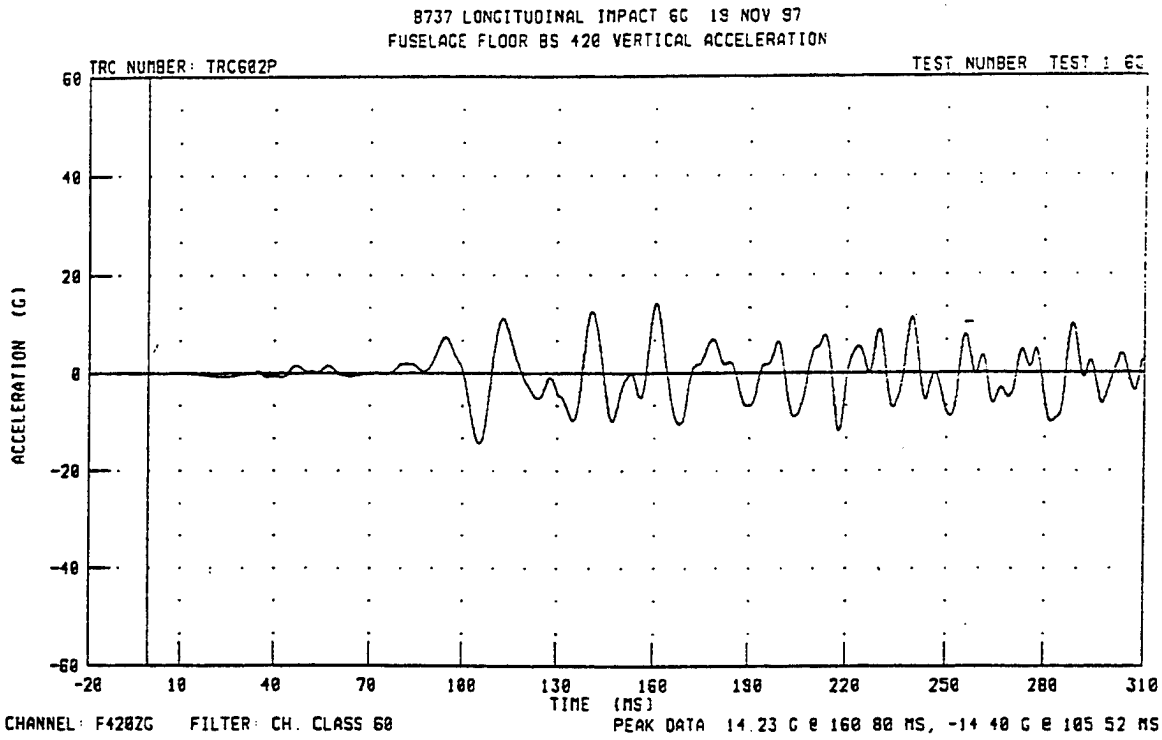
TEST 1

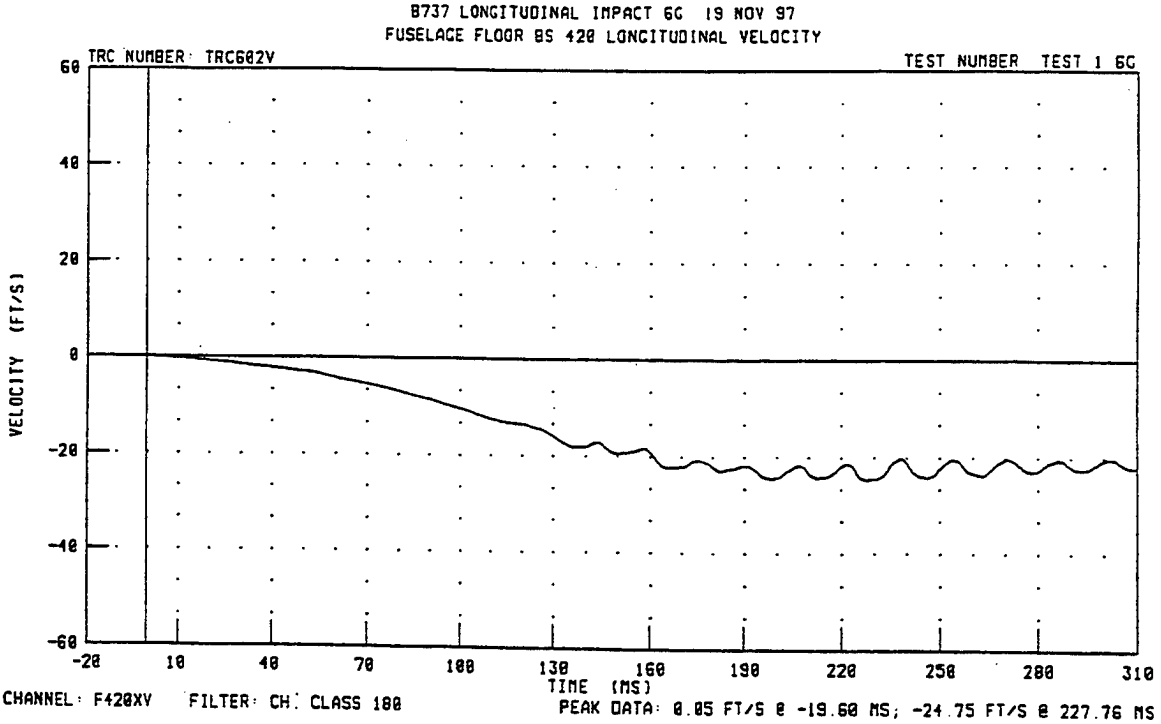


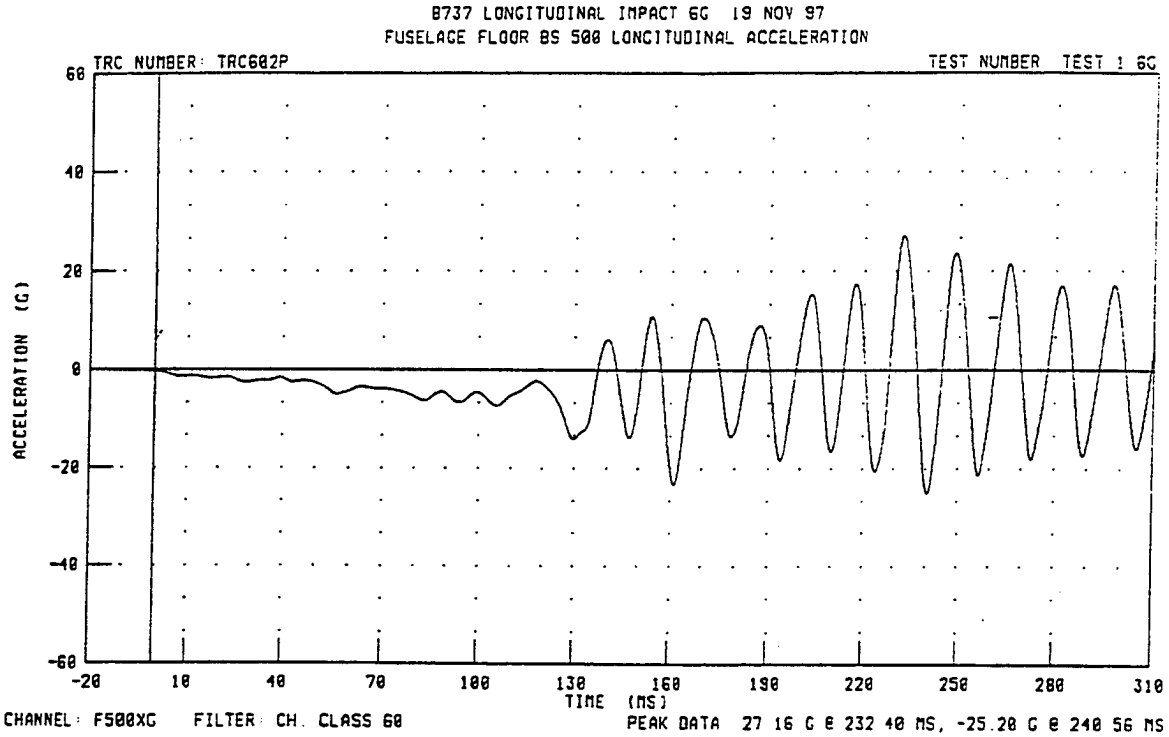


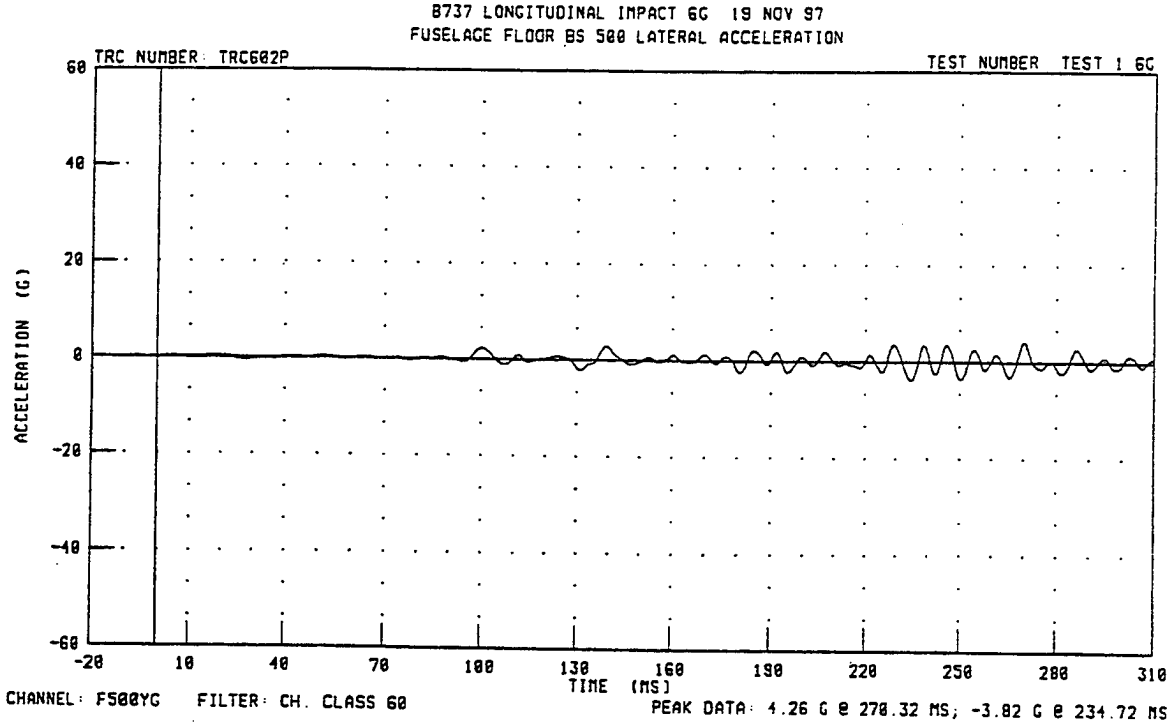

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE FLOOR BS 420 LONGITUDINAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420XG
FILTER: CH. CLASS 60
PEAK DATA 25.71 G @ 234.56 MS, -25.10 G @ 240.96 MS

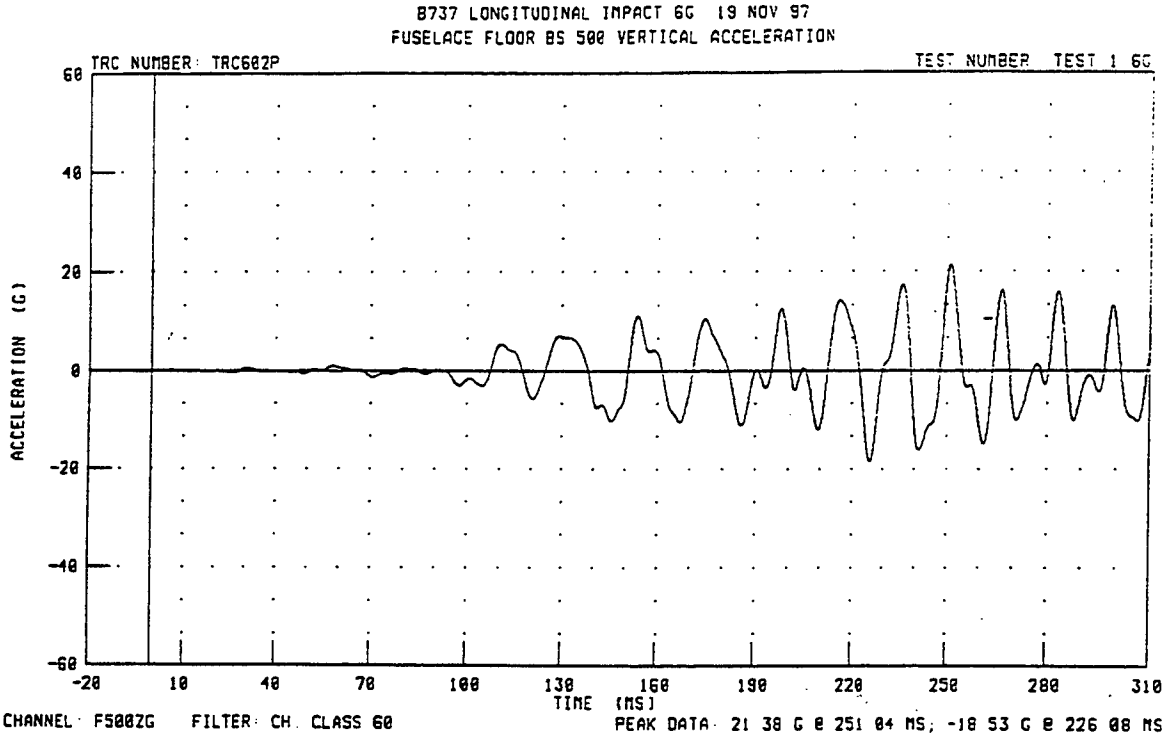

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE FLOOR BS 420 LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420YG
FILTER: CH. CLASS 60
PEAK DATA: 6.14 G @ 228.80 MS; -4.87 G @ 148.72 MS

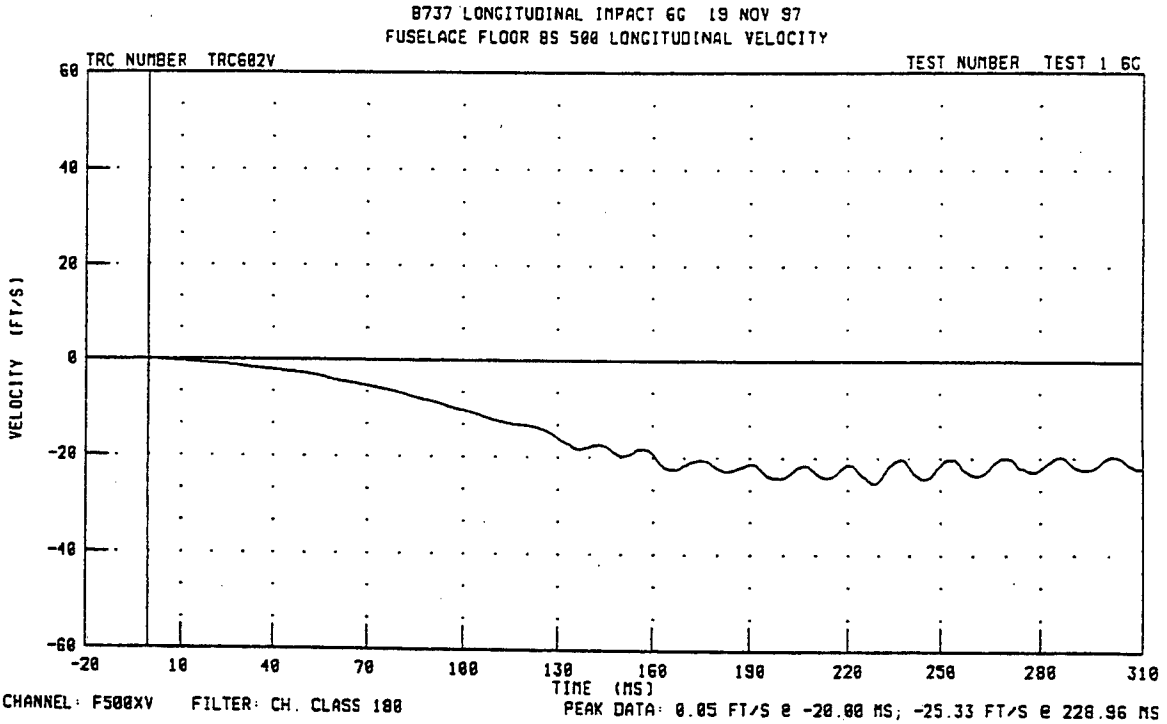

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE FLOOR BS 420 VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420ZG
FILTER: CH. CLASS 60
PEAK DATA 14.23 G @ 160.80 MS, -14.40 G @ 105.52 MS

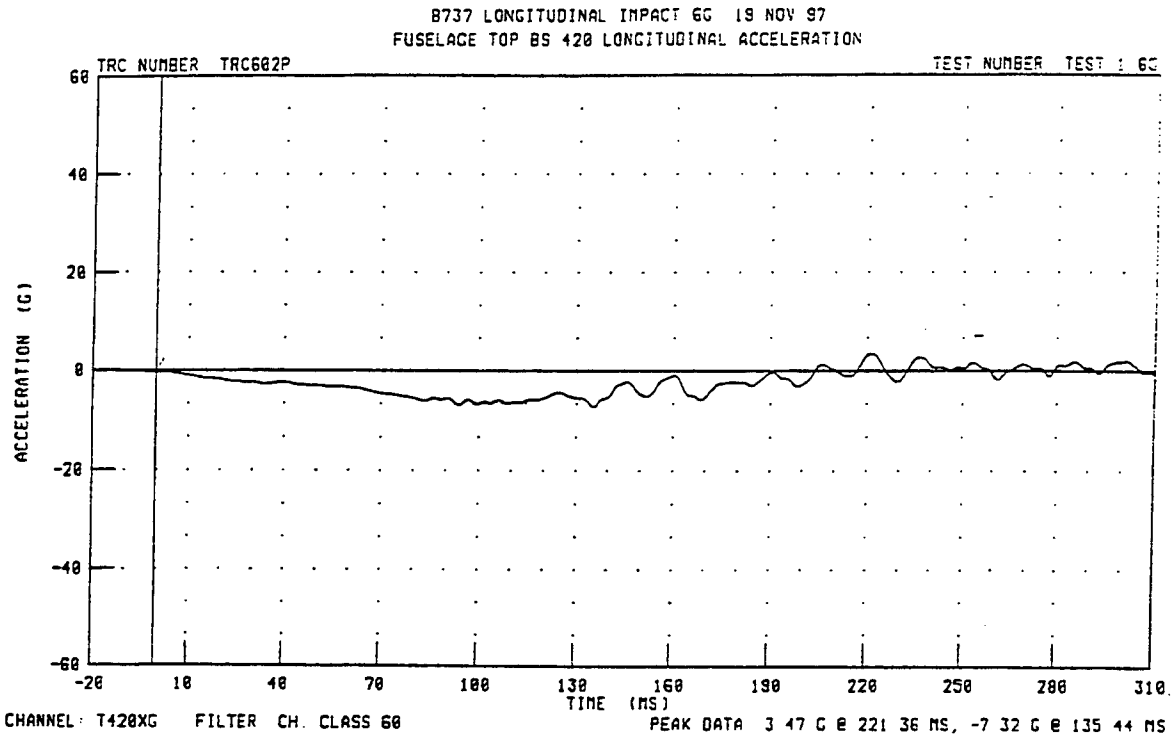

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE FLOOR BS 420 LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420XV
FILTER: CH. CLASS 180
PEAK DATA: 0.05 FT/S @ -19.60 MS; -24.75 FT/S @ 227.76 MS

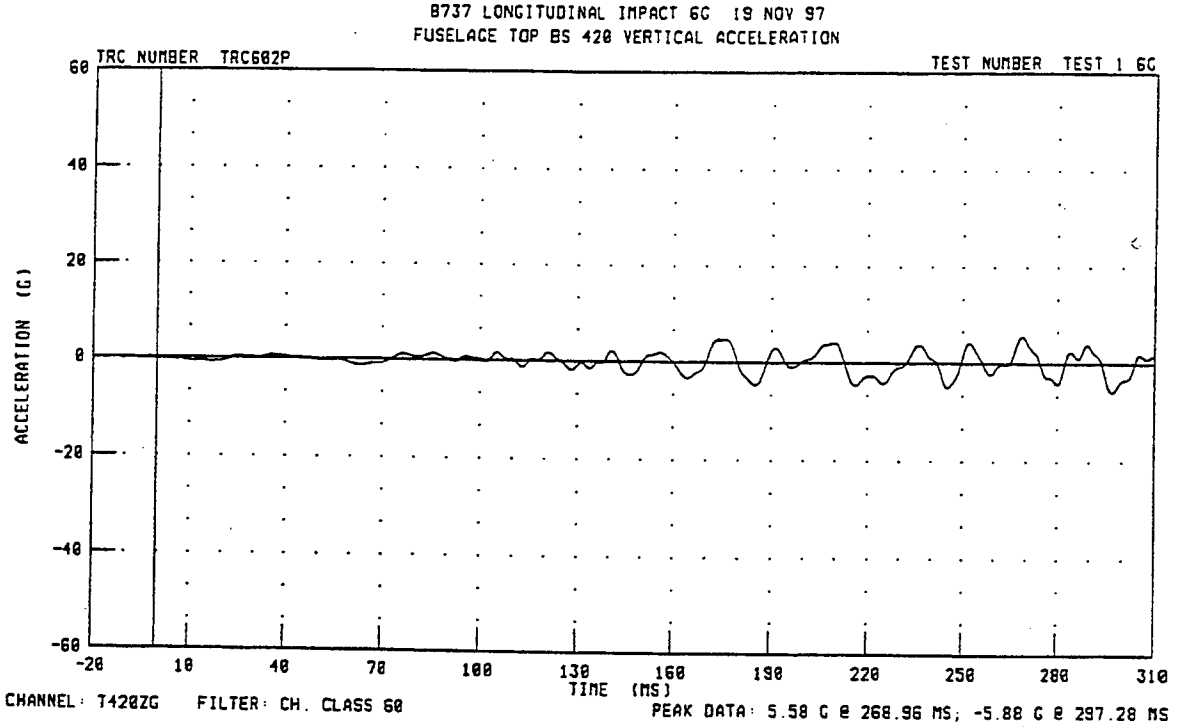

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE FLOOR BS 500 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500XG
FILTER: CH. CLASS 60
PEAK DATA 27.16 G @ 232.40 MS, -25.20 G @ 240.56 MS

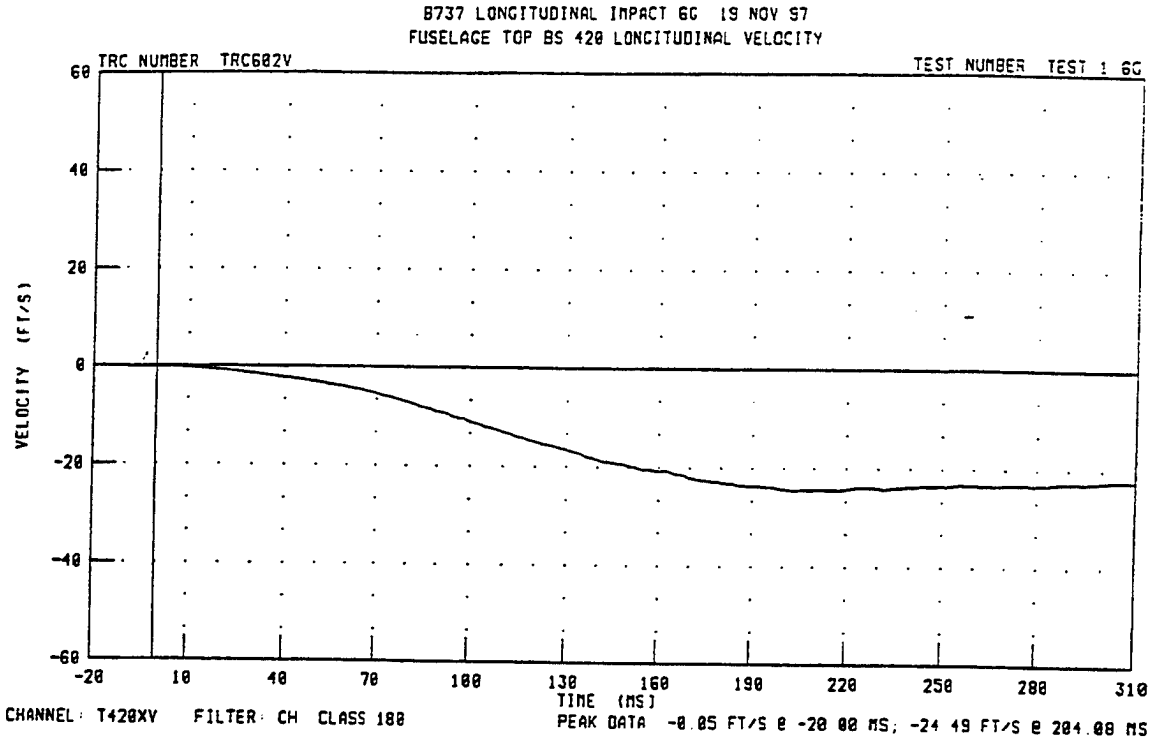

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE FLOOR BS 500 LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500YG
FILTER: CH. CLASS 60
PEAK DATA: 4.26 G @ 270.32 MS; -3.82 G @ 234.72 MS

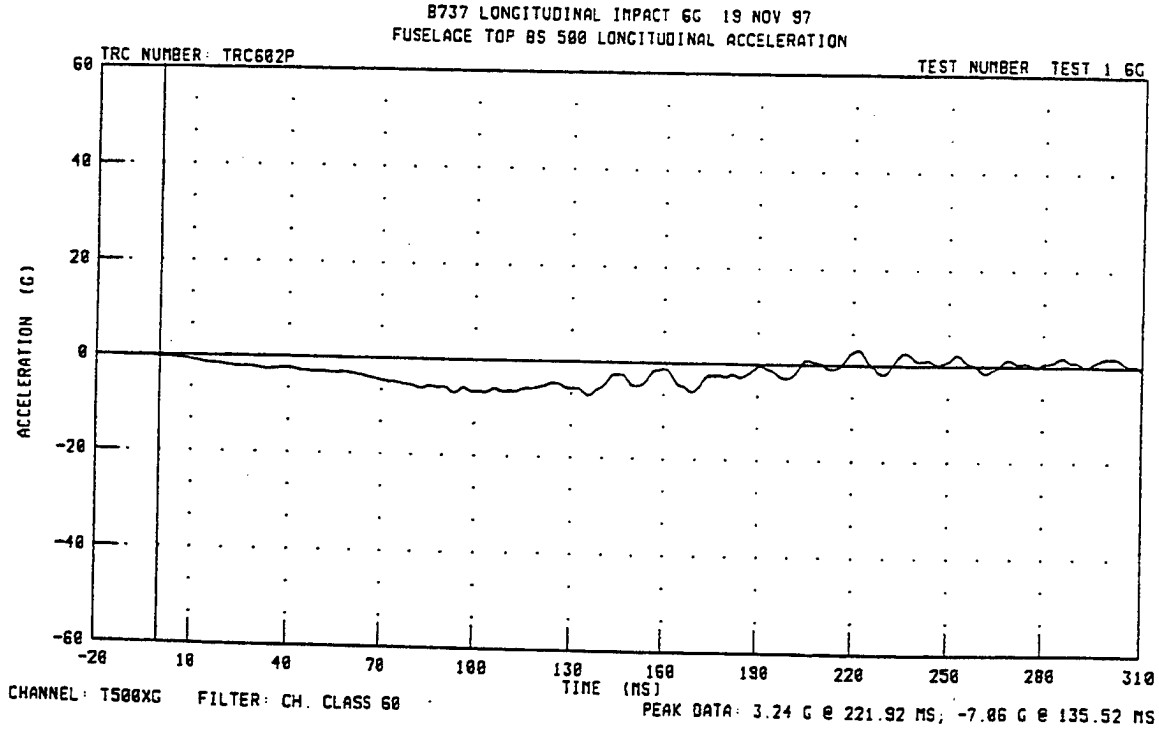

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE FLOOR BS 500 VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500ZG
FILTER: CH. CLASS 60
PEAK DATA: 21.38 G @ 251.04 MS; -18.53 G @ 226.08 MS

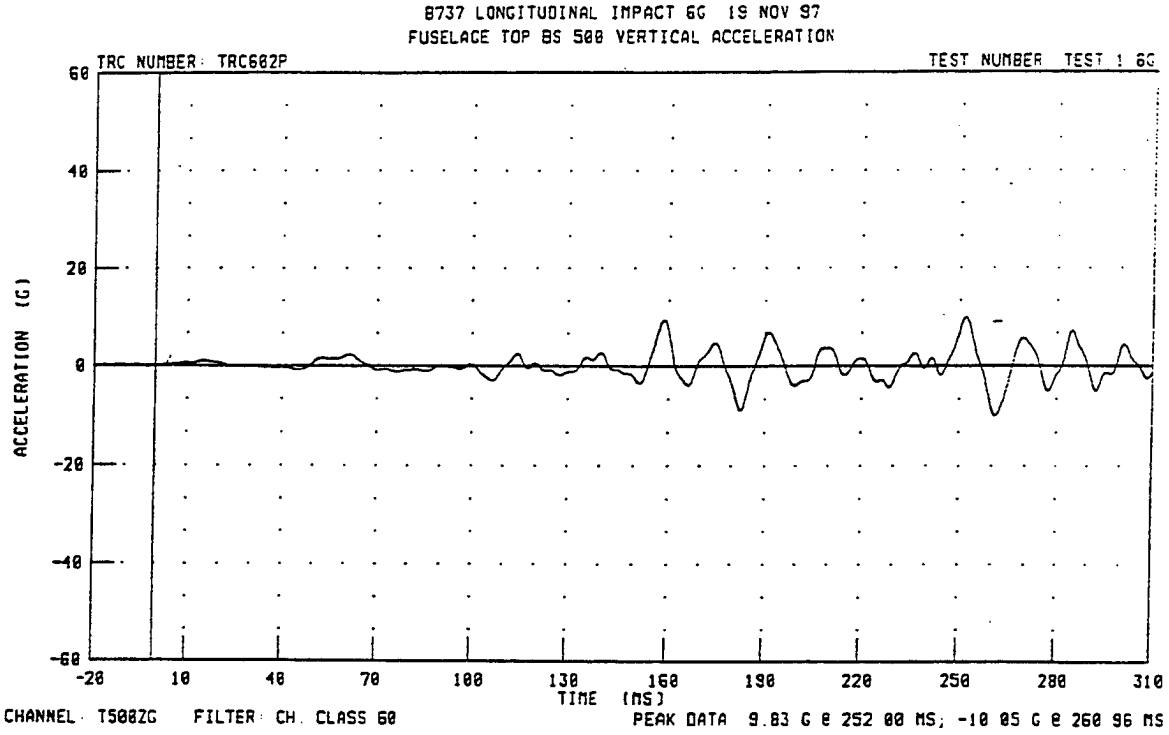

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE FLOOR BS 500 LONGITUDINAL VELOCITY
TRC NUMBER TRC602V
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
VELOCITY (FT/S)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500XV
FILTER: CH. CLASS 180
PEAK DATA: 0.05 FT/S @ -20.00 MS; -25.33 FT/S @ 228.96 MS

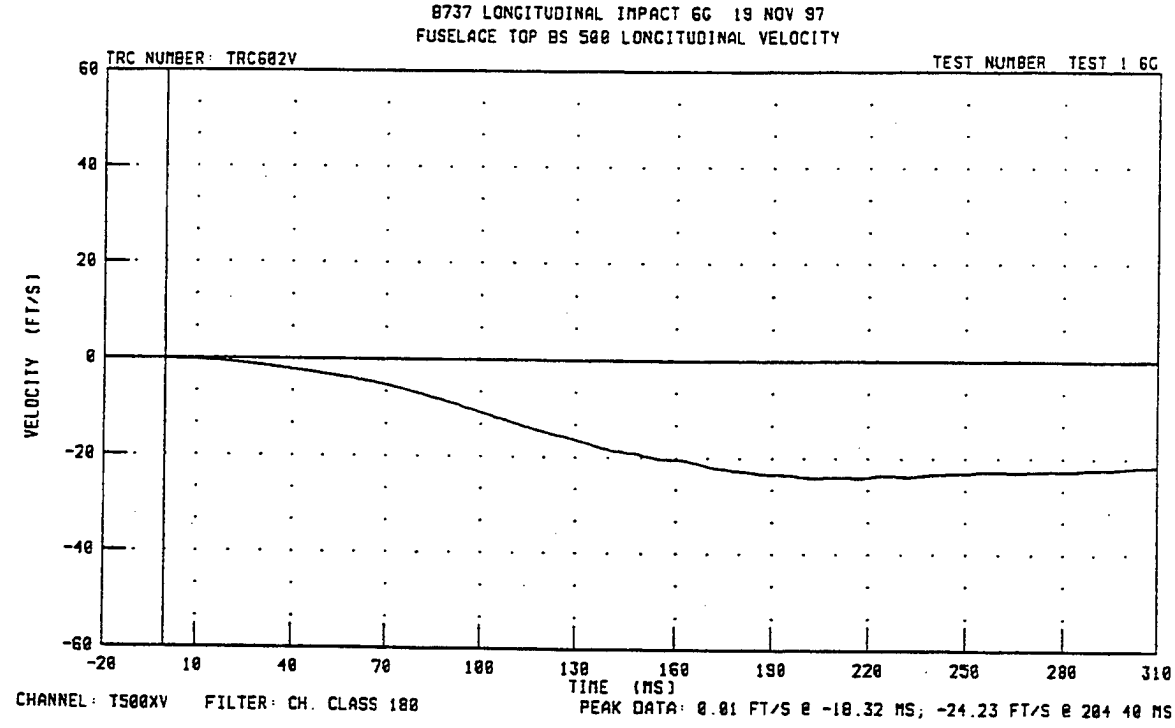

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE TOP BS 420 LONGITUDINAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20 10 40 70 100 130 160 190 220 250 280 310
TIME (MS)
CHANNEL: T420XG FILTER CH. CLASS 60
PEAK DATA 3 47 G @ 221 36 MS, -7 32 G @ 135 44 MS

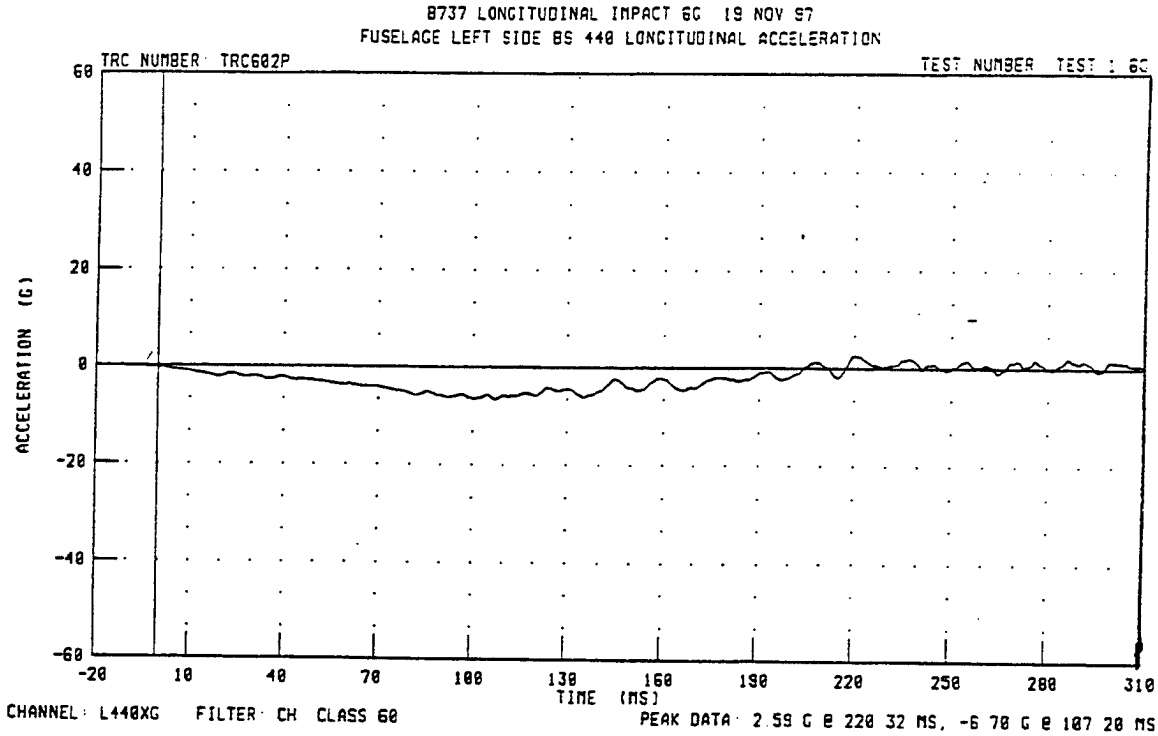

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE TOP BS 420 VERTICAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20 10 40 70 100 130 160 190 220 250 280 310
TIME (MS)
CHANNEL: T420ZG FILTER: CH. CLASS 60
PEAK DATA: 5.58 G @ 268.96 MS; -5.88 G @ 297.28 MS

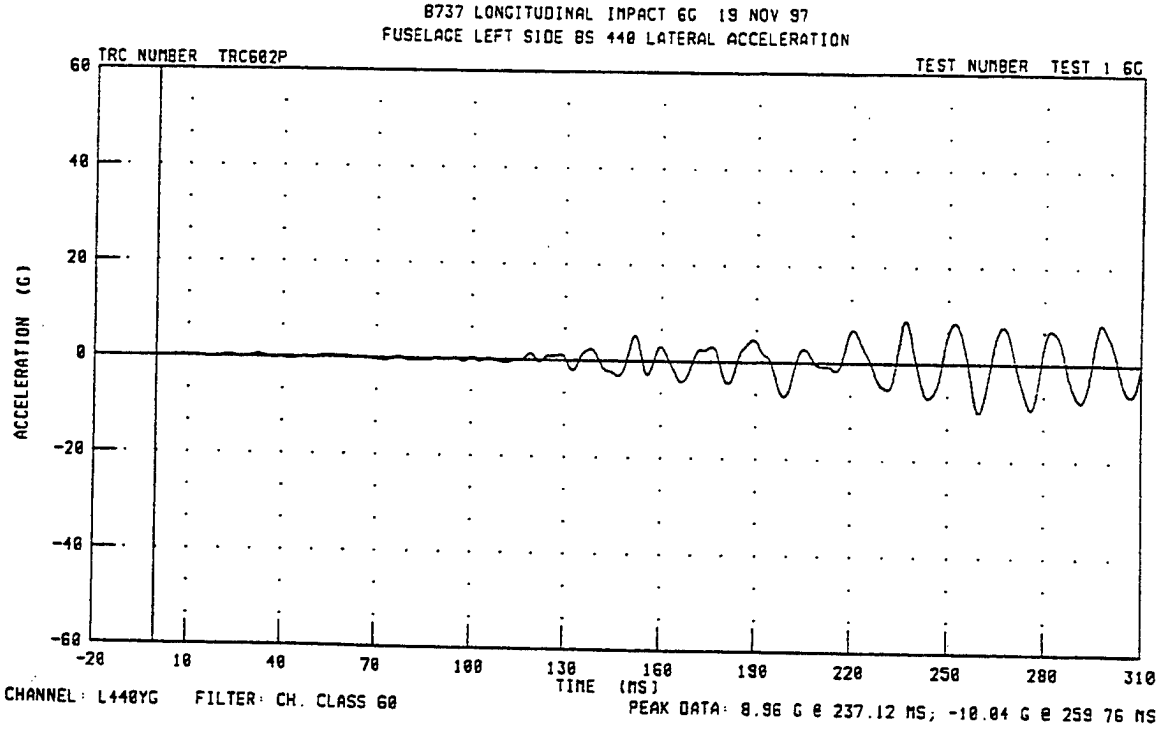

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE TOP BS 420 LONGITUDINAL VELOCITY
TRC NUMBER TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T420XV FILTER: CH CLASS 180
PEAK DATA -0.85 FT/S @ -20.00 MS; -24.49 FT/S @ 204.00 MS

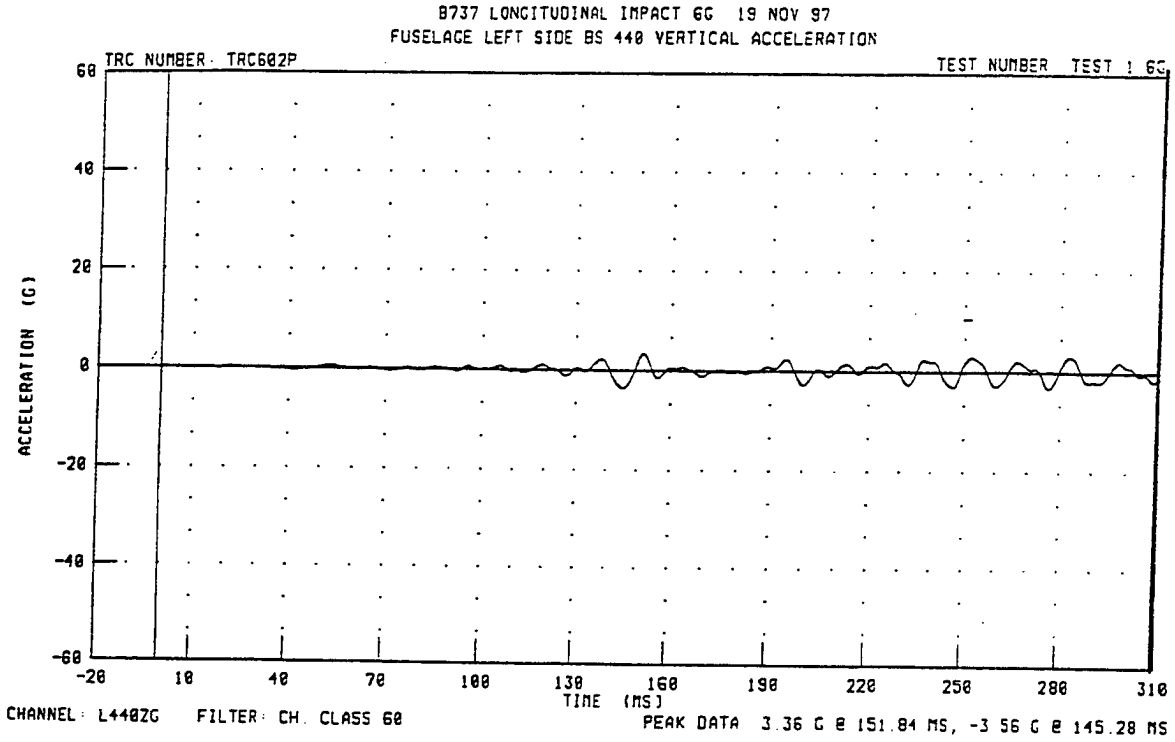

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE TOP BS 500 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500XG FILTER: CH. CLASS 60
PEAK DATA: 3.24 G @ 221.92 MS; -7.06 G @ 135.52 MS

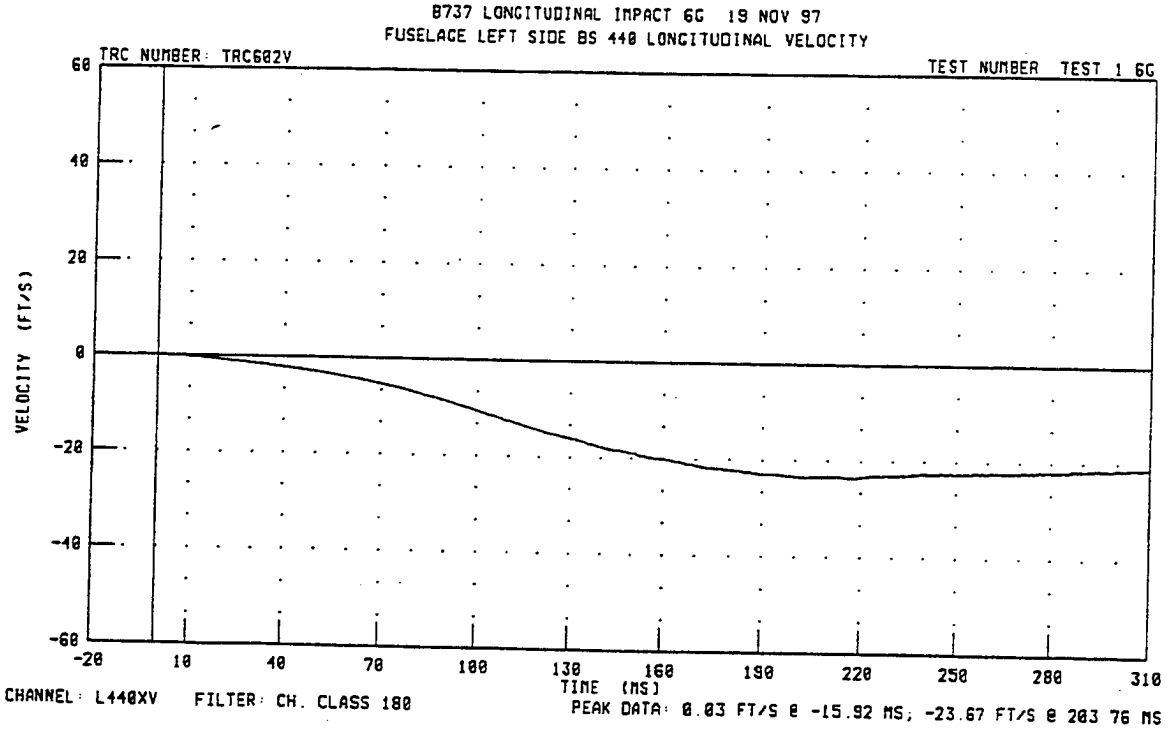

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE TOP BS 500 VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500ZG FILTER: CH. CLASS 60
PEAK DATA 9.83 G @ 252 00 MS; -10 05 G @ 260 96 MS

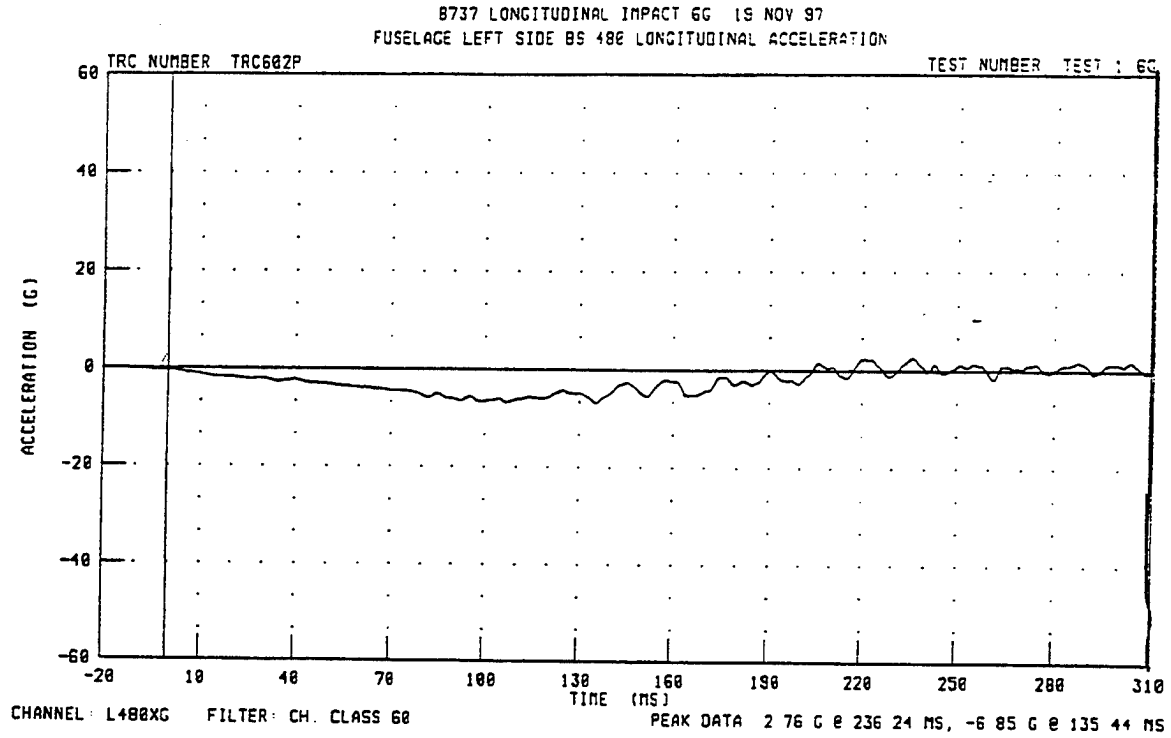

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE TOP BS 500 LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500XV FILTER: CH. CLASS 180
PEAK DATA: 0.01 FT/S @ -18.32 MS; -24.23 FT/S @ 204 40 MS

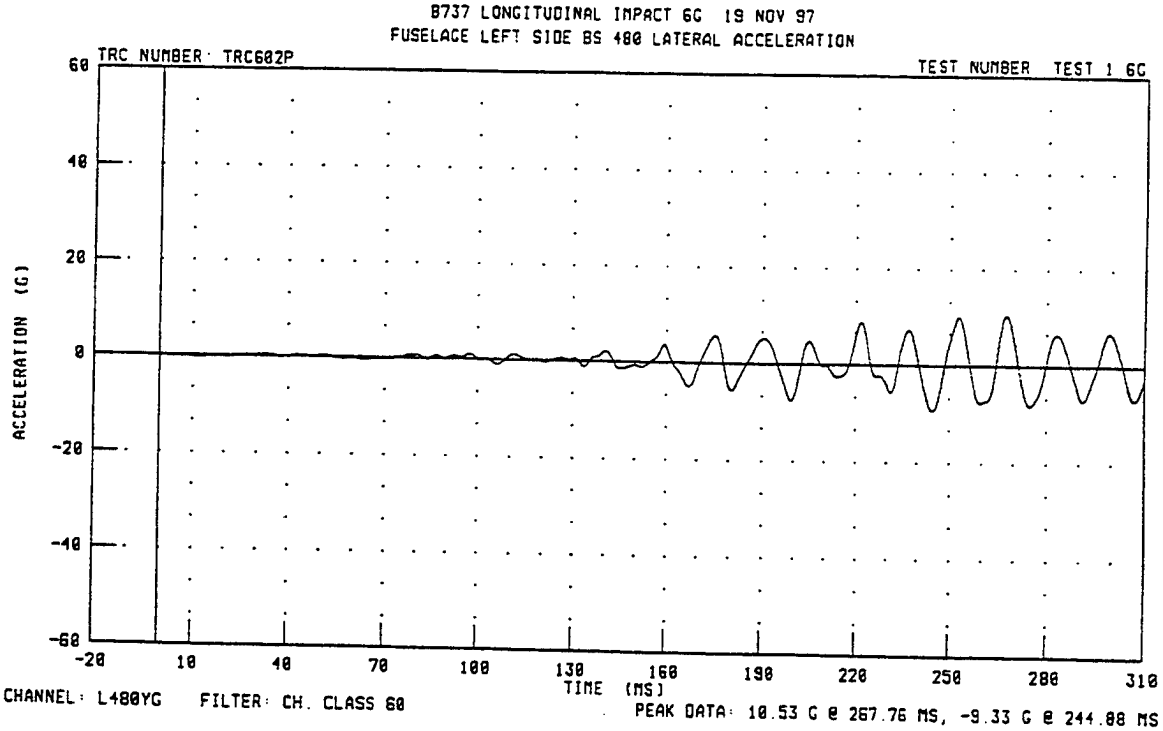

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE LEFT SIDE BS 440 LONGITUDINAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440XG FILTER: CH CLASS 60
PEAK DATA: 2.59 G @ 220.32 MS, -6.70 G @ 107.20 MS

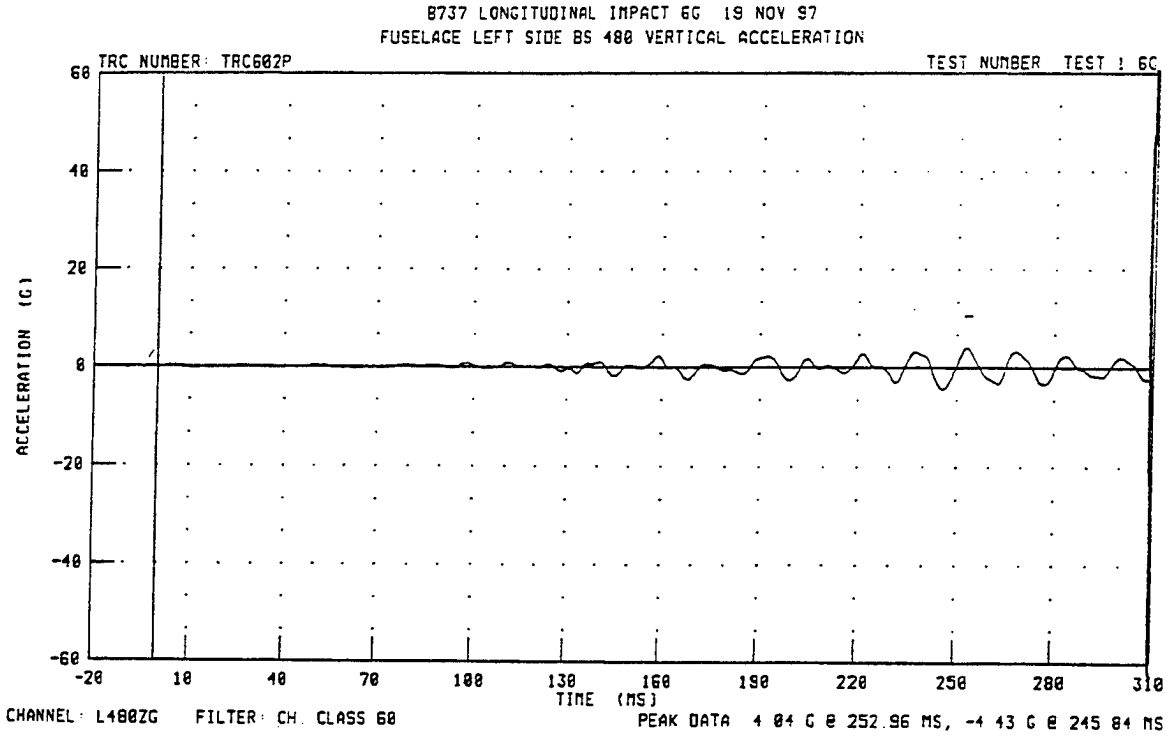

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE LEFT SIDE BS 440 LATERAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440YG FILTER: CH. CLASS 60
PEAK DATA: 8.96 G @ 237.12 MS; -10.04 G @ 259.76 MS

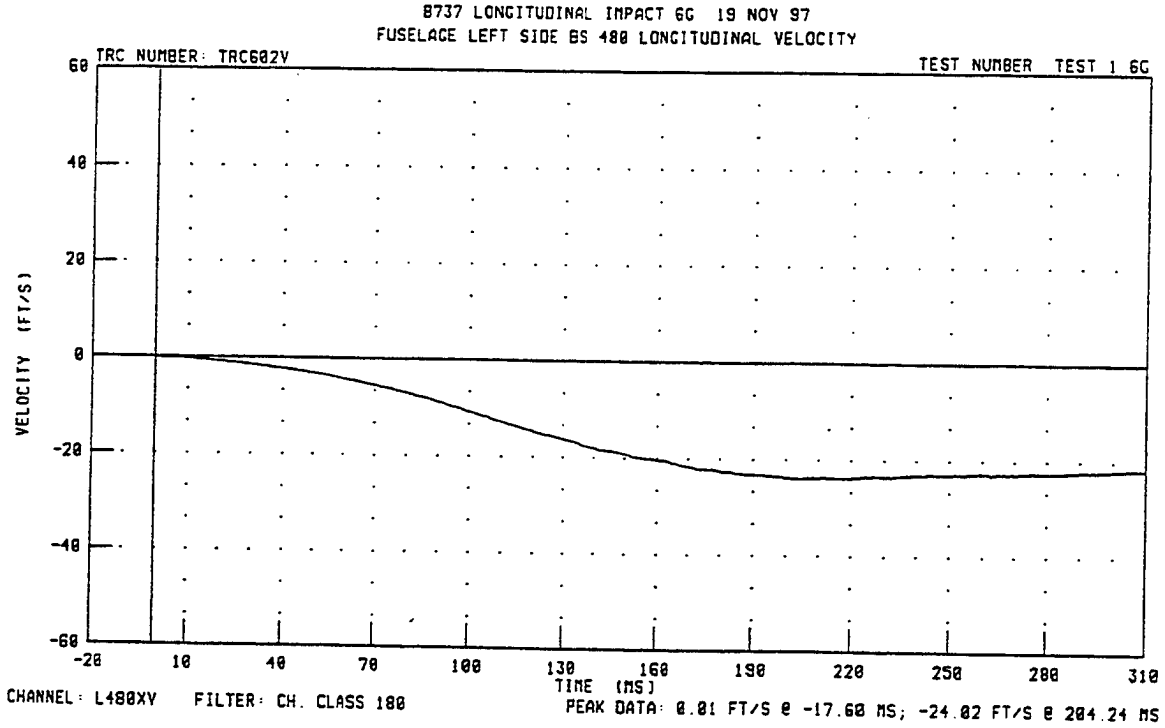

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE LEFT SIDE BS 440 VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440ZG
FILTER: CH. CLASS 60
PEAK DATA 3.36 G @ 151.84 MS, -3.56 G @ 145.28 MS

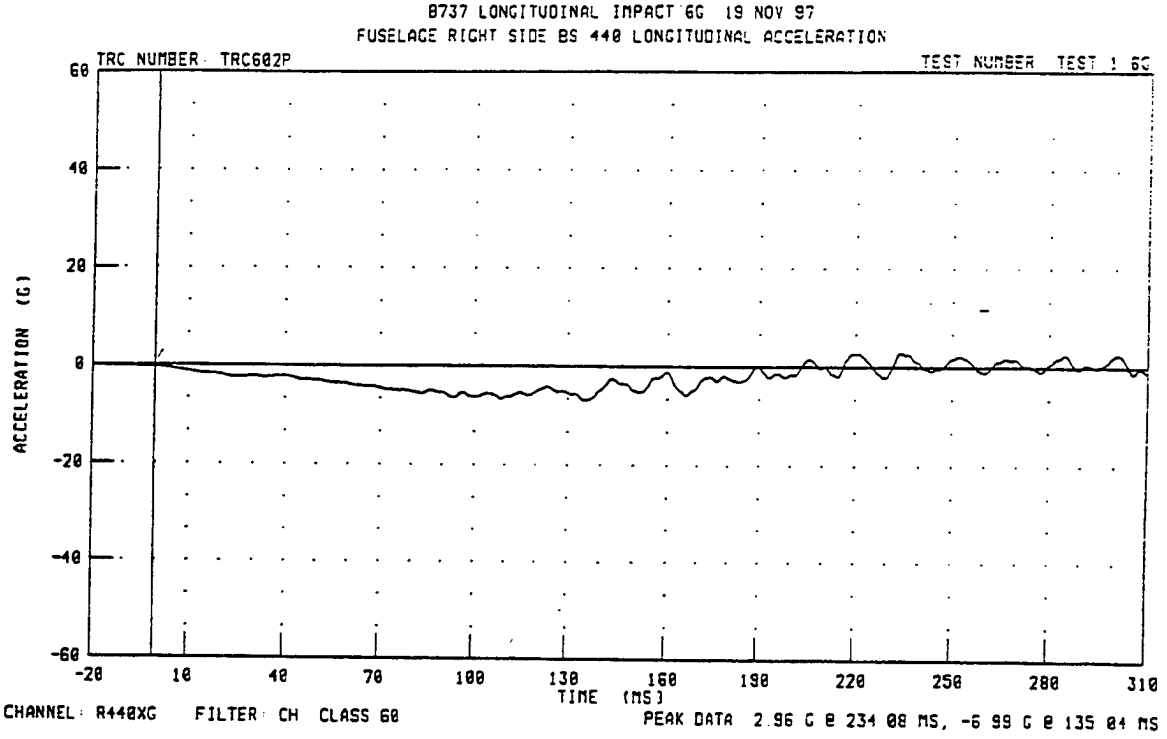

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE LEFT SIDE BS 440 LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440XV
FILTER: CH. CLASS 180
PEAK DATA: 0.03 FT/S @ -15.92 MS; -23.67 FT/S @ 203.76 MS

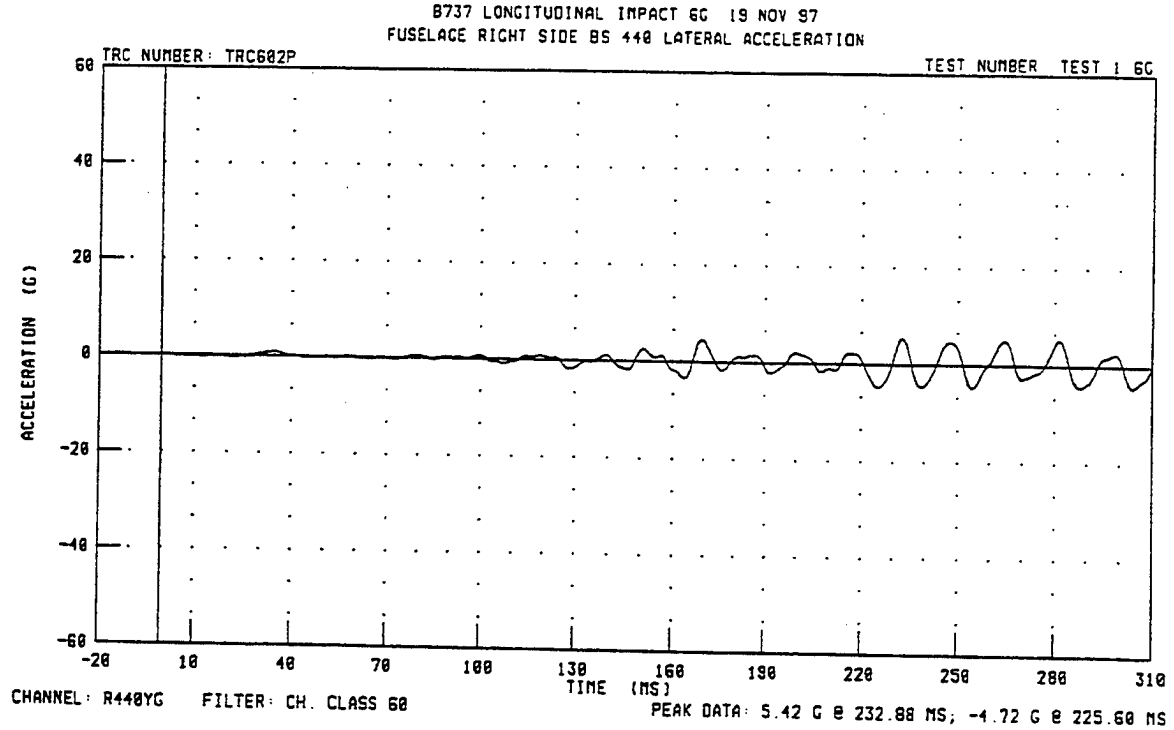

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE LEFT SIDE BS 480 LONGITUDINAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480XG
FILTER: CH. CLASS 60
PEAK DATA 2.76 G @ 236.24 MS, -6.85 G @ 135.44 MS

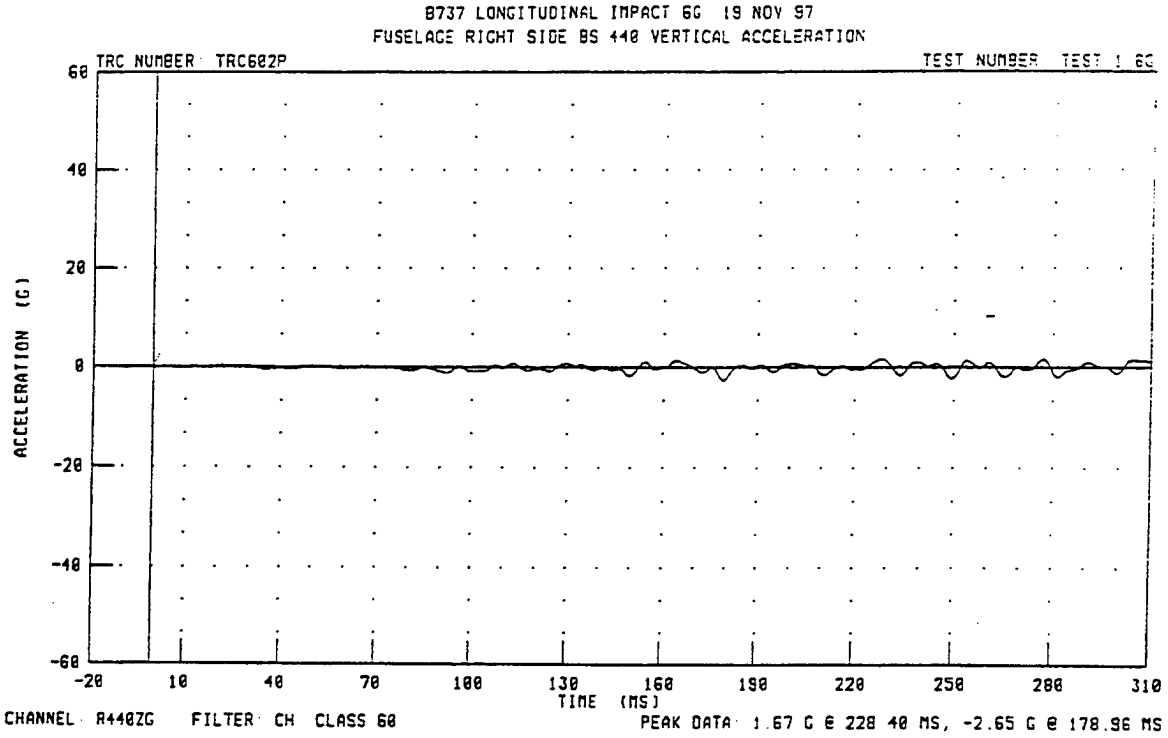

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE LEFT SIDE BS 480 LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480YG
FILTER: CH. CLASS 60
PEAK DATA: 10.53 G @ 267.76 MS, -9.33 G @ 244.88 MS

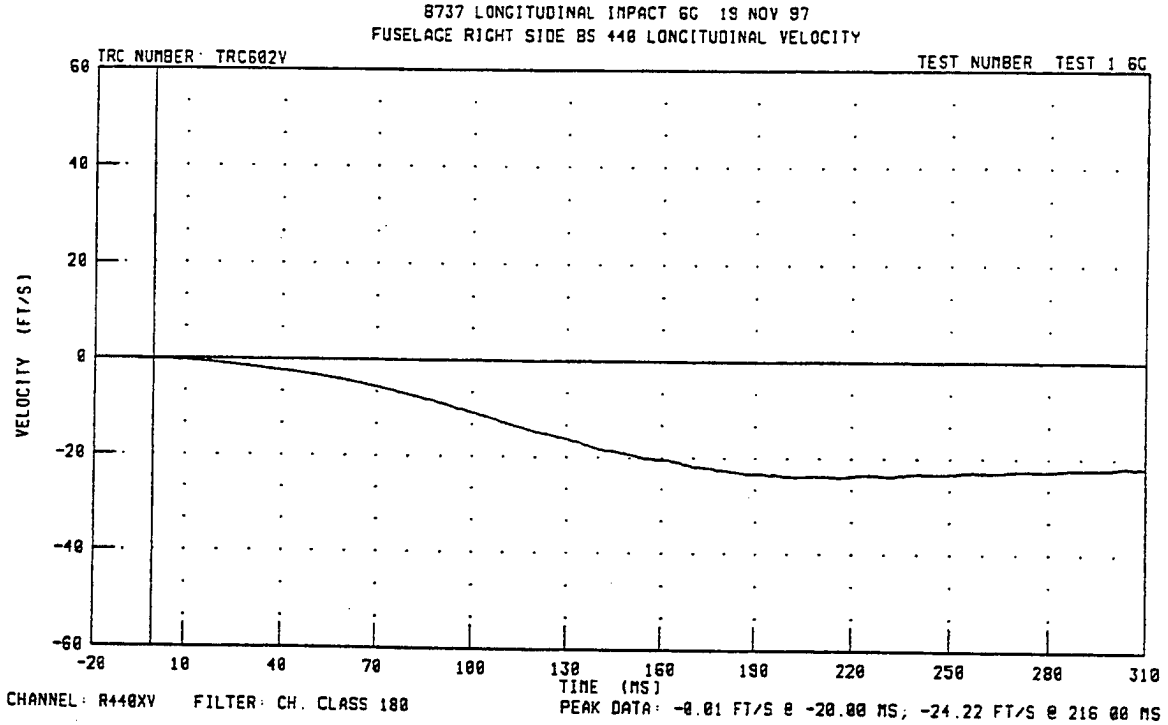

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE LEFT SIDE BS 480 VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480ZG
FILTER: CH. CLASS 60
PEAK DATA 4.04 G @ 252.96 MS, -4.43 G @ 245.84 MS

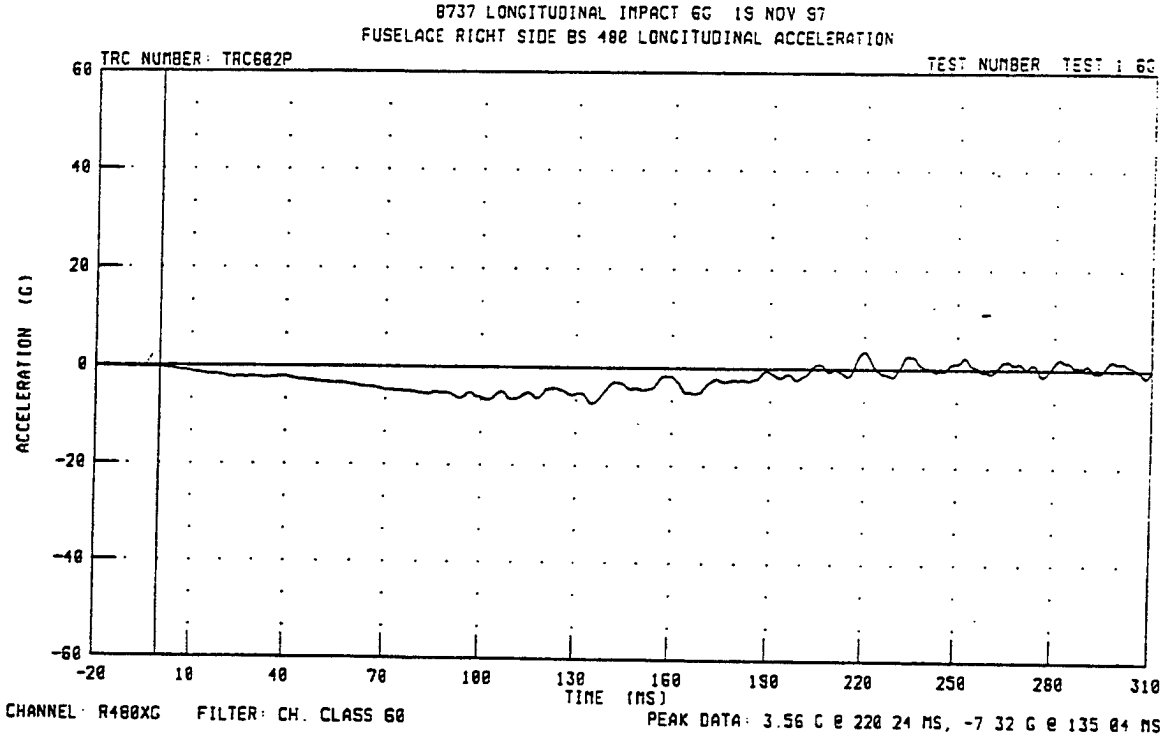

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE LEFT SIDE BS 480 LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6C
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480XV
FILTER: CH. CLASS 180
PEAK DATA: 0.01 FT/S @ -17.60 MS; -24.02 FT/S @ 204.24 MS

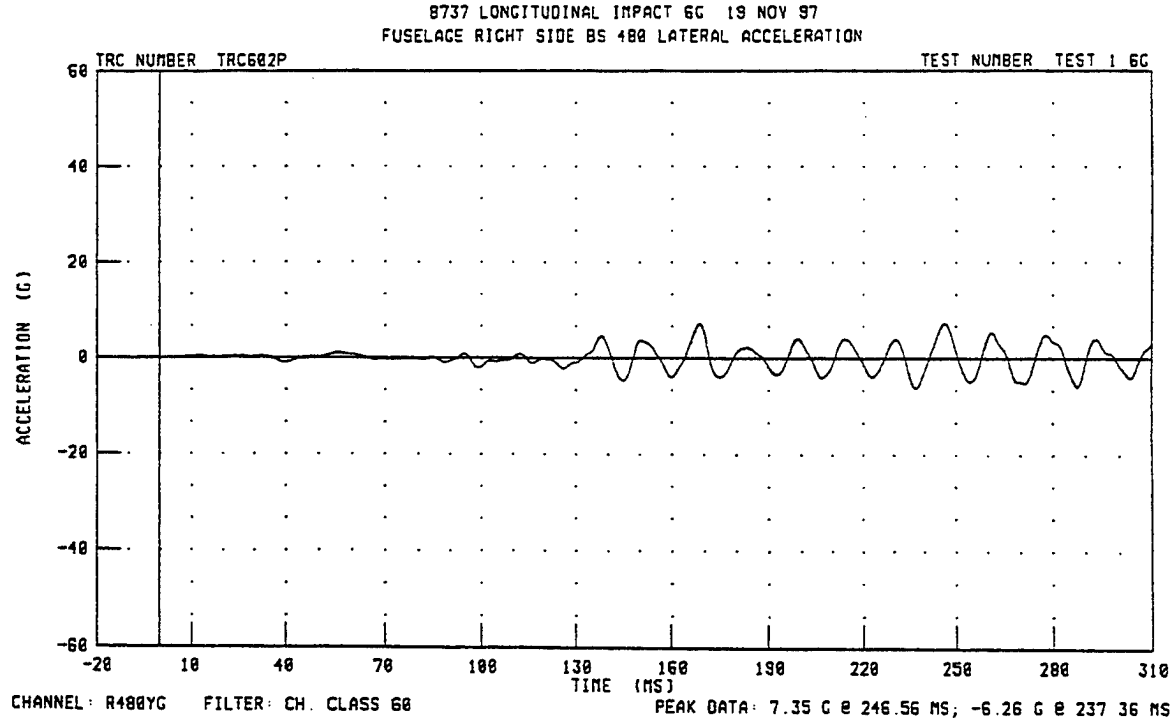

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE RIGHT SIDE BS 440 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440XG
FILTER: CH CLASS 60
PEAK DATA 2.96 G @ 234.00 MS, -6.99 G @ 135.04 MS

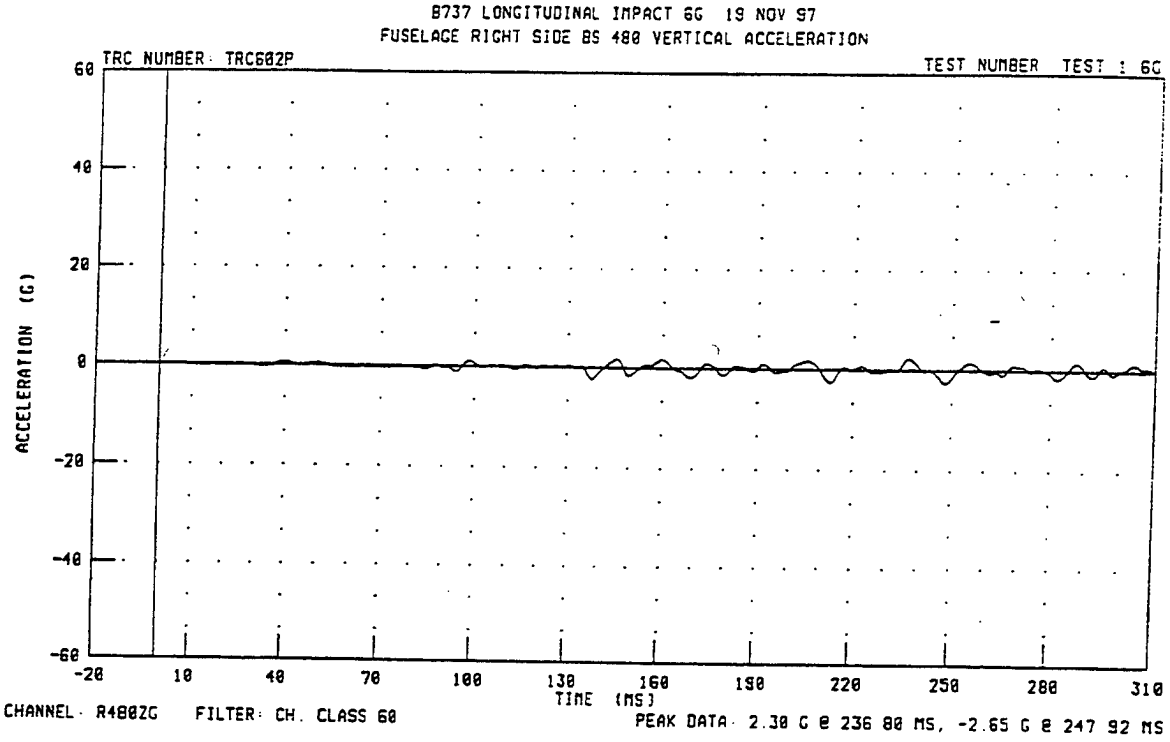

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE RIGHT SIDE BS 440 LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440YG
FILTER: CH. CLASS 60
PEAK DATA: 5.42 G @ 232.88 MS; -4.72 G @ 225.60 MS

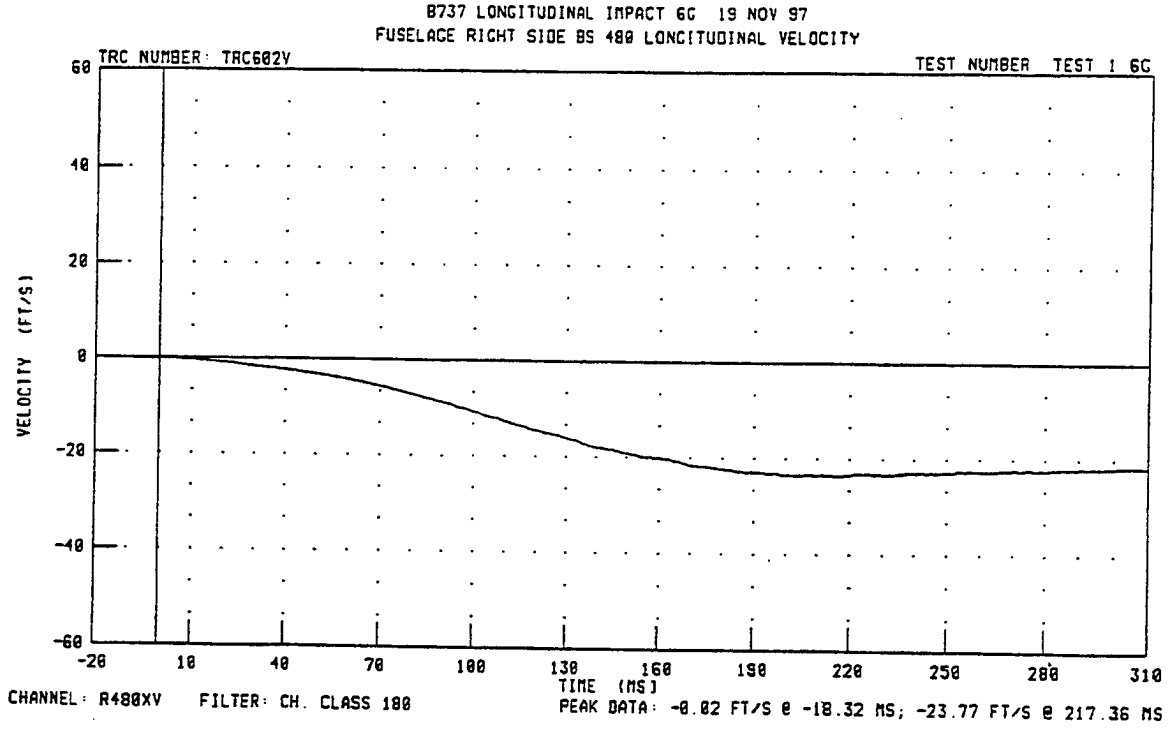

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE RIGHT SIDE BS 440 VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER: TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440ZG
FILTER: CH CLASS 60
PEAK DATA: 1.67 G @ 228.40 MS, -2.65 G @ 178.96 MS

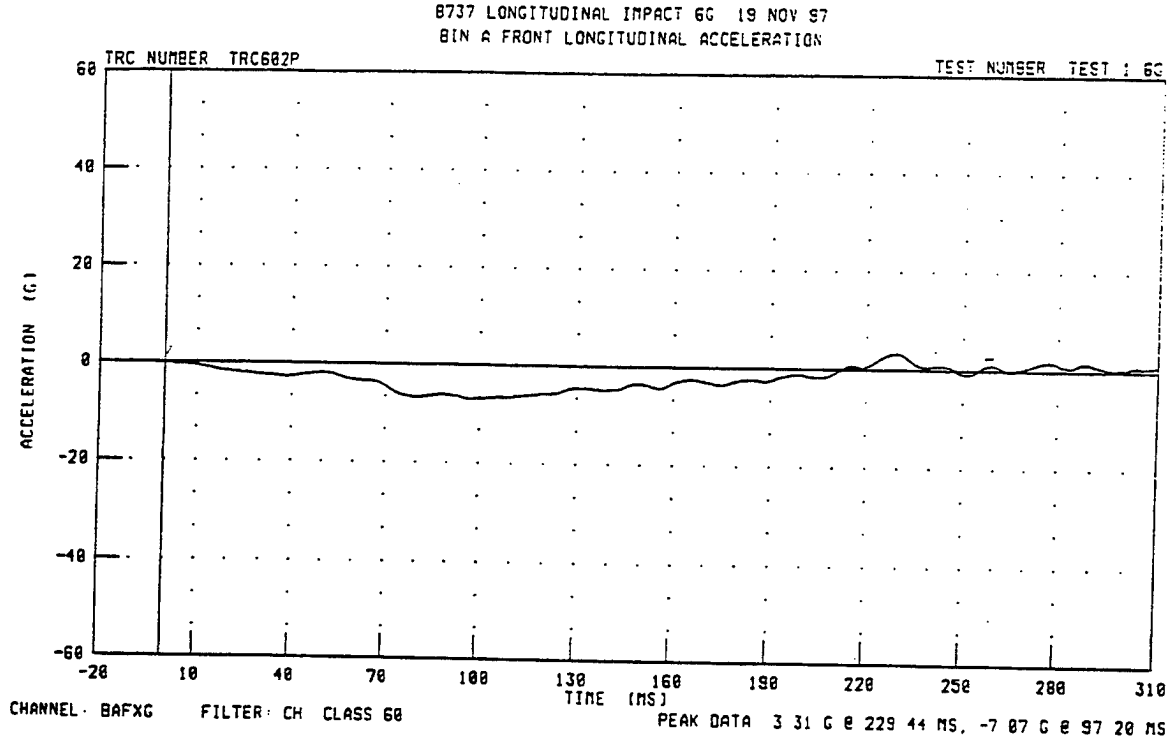

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE RIGHT SIDE BS 440 LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER: TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440XV
FILTER: CH. CLASS 180
PEAK DATA: -0.01 FT/S @ -20.00 MS; -24.22 FT/S @ 216.00 MS

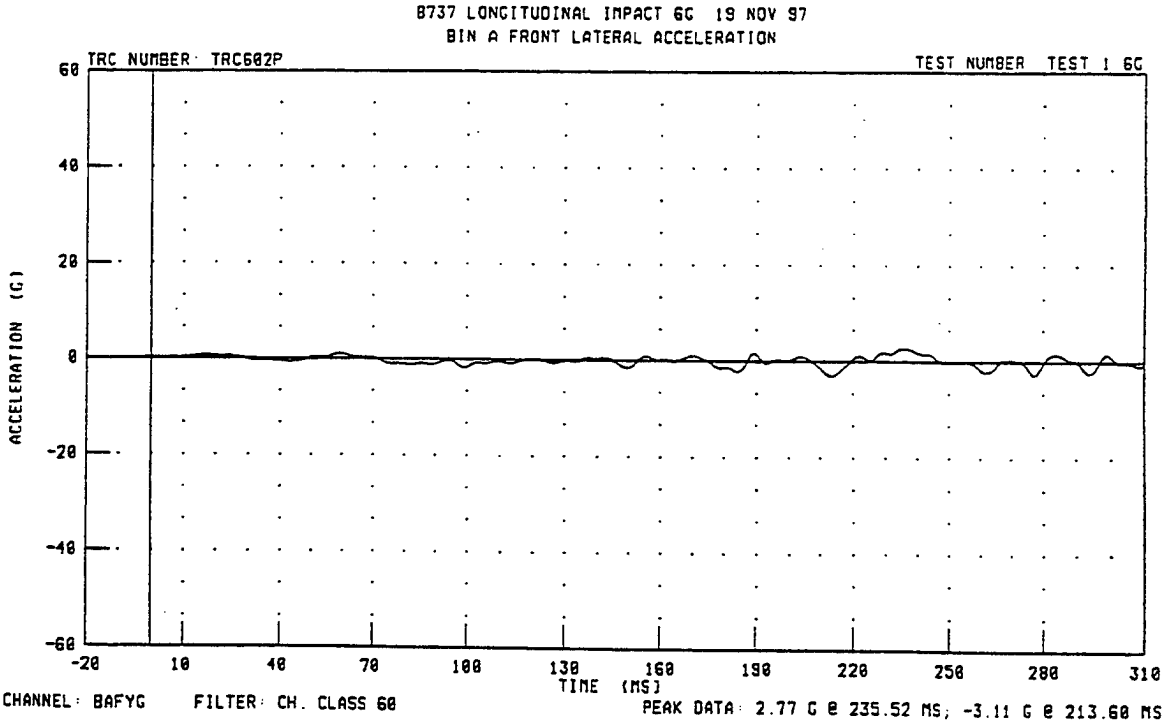

B737 LONGITUDINAL IMPACT 6G 15 NOV 97
FUSELAGE RIGHT SIDE BS 480 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480XG
FILTER: CH. CLASS 60
PEAK DATA: 3.56 G @ 220 24 MS, -7 32 G @ 135 04 MS

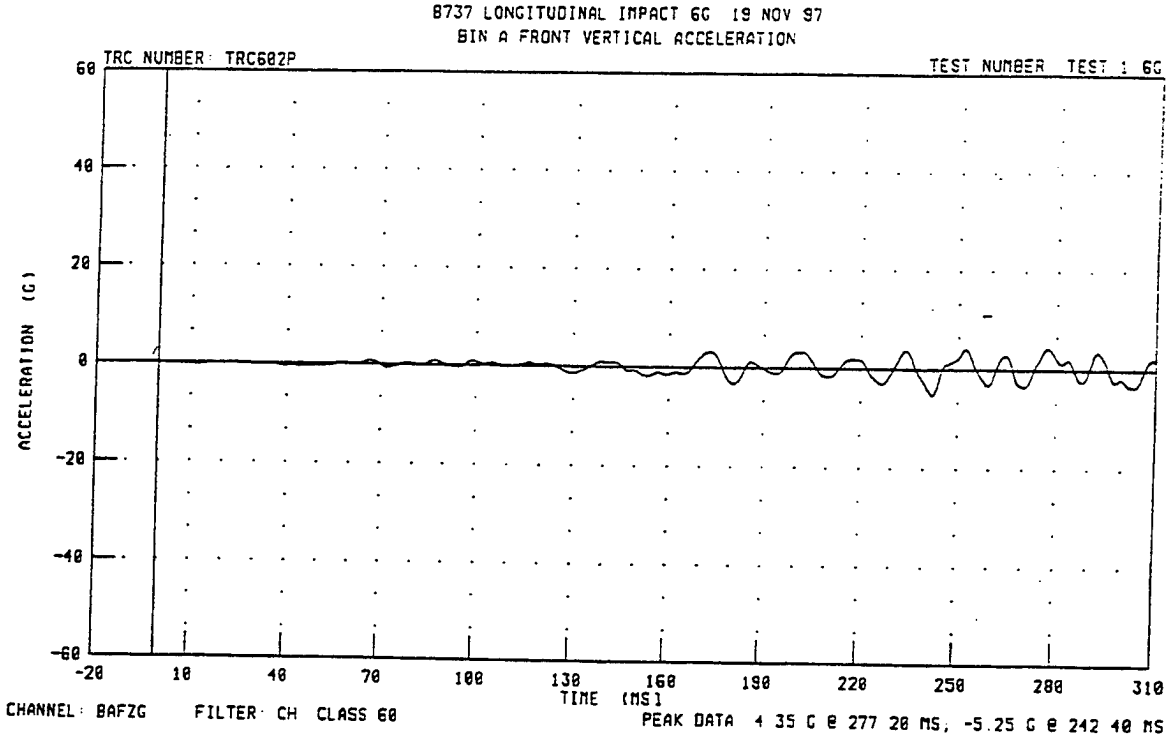

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE RIGHT SIDE BS 480 LATERAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480YG
FILTER: CH. CLASS 60
PEAK DATA: 7.35 G @ 246.56 MS; -6.26 G @ 237 36 MS

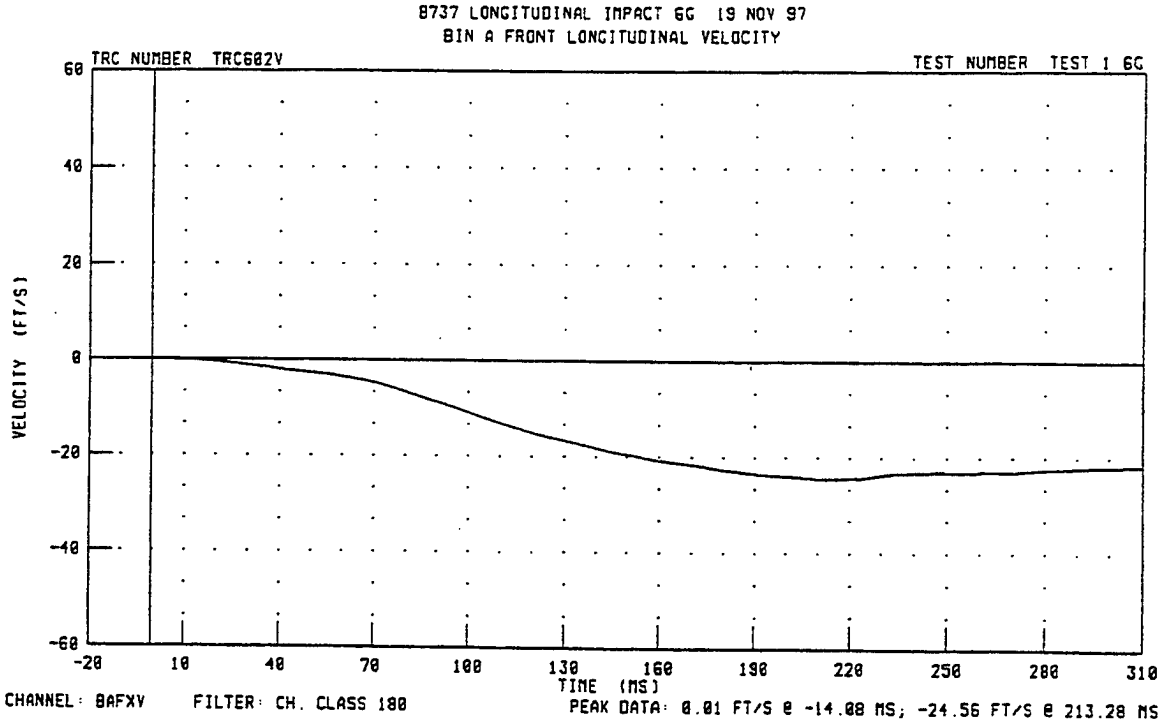

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE RIGHT SIDE BS 480 VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480ZG
FILTER: CH. CLASS 60
PEAK DATA: 2.30 G @ 236.80 MS, -2.65 G @ 247.92 MS

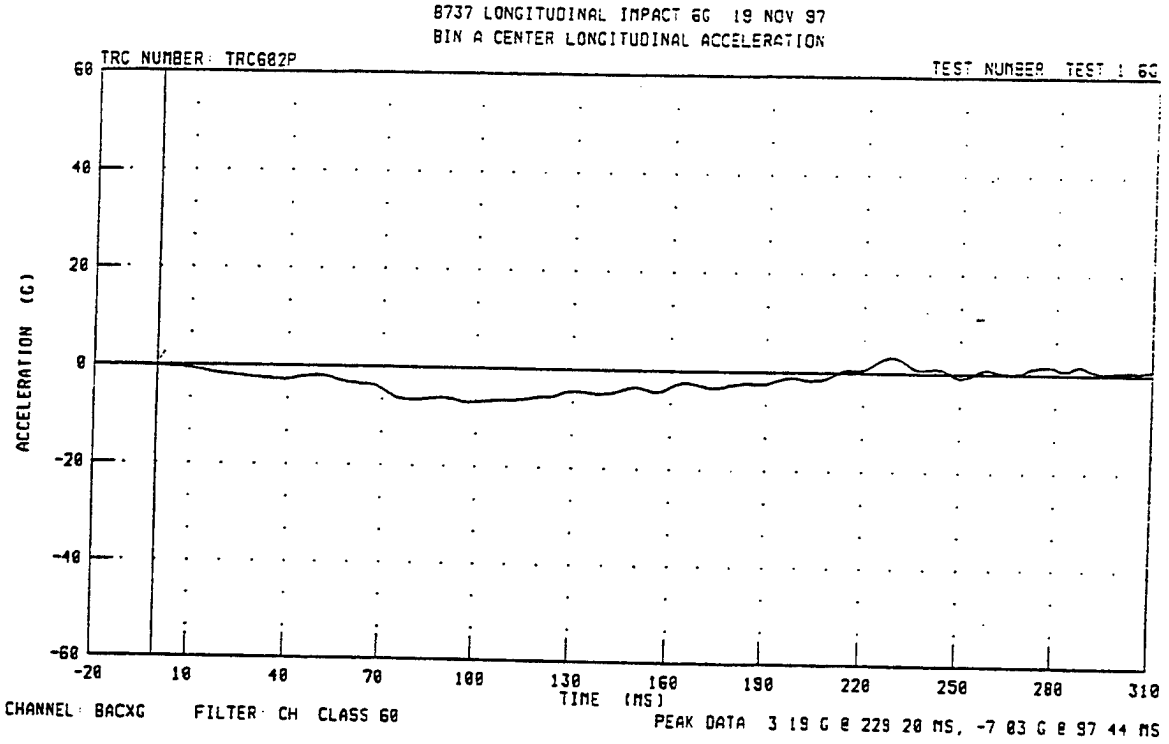

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUSELAGE RIGHT SIDE BS 480 LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480XV
FILTER: CH. CLASS 180
PEAK DATA: -0.02 FT/S @ -18.32 MS; -23.77 FT/S @ 217.36 MS

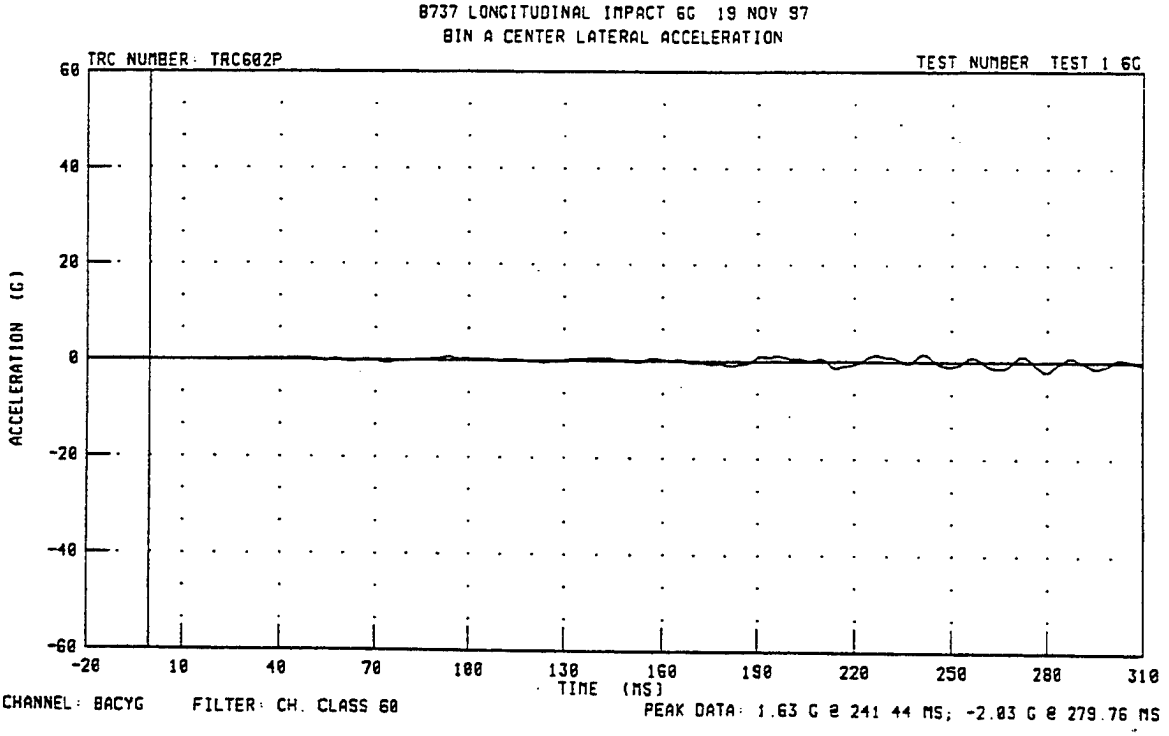

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A FRONT LONGITUDINAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFXG
FILTER: CH CLASS 60
PEAK DATA 3 31 G @ 229 44 MS, -7 07 G @ 97 20 MS

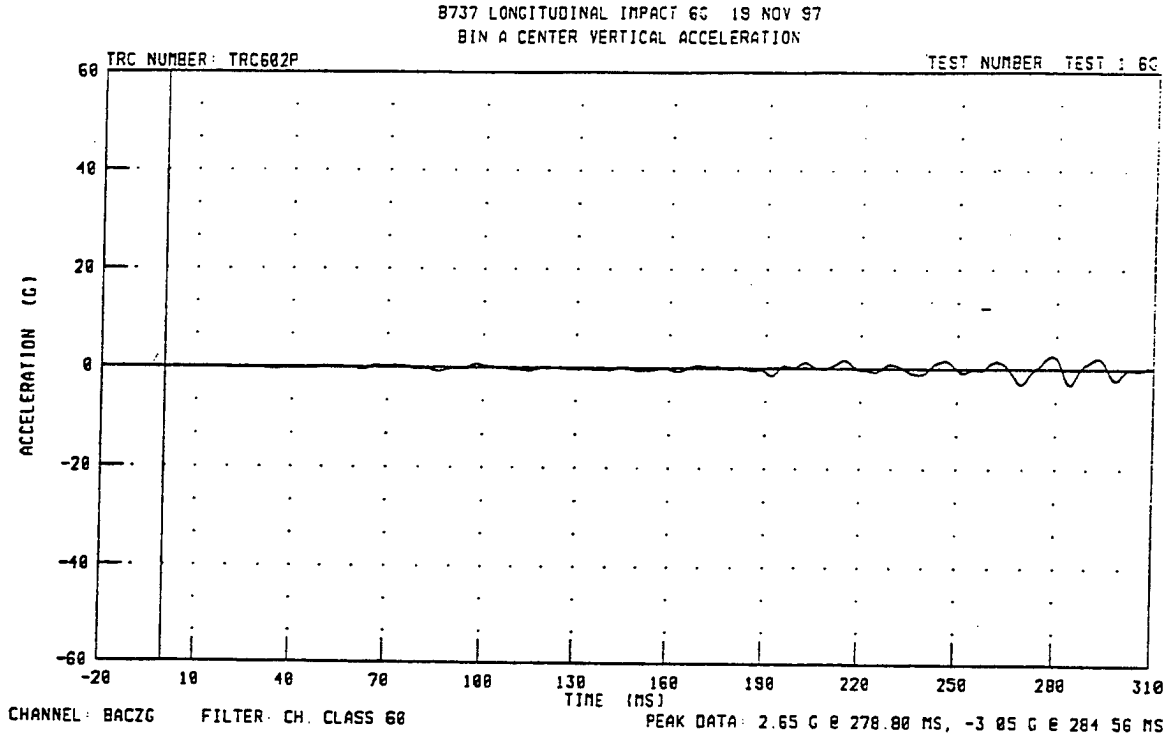

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A FRONT LATERAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFYG
FILTER: CH. CLASS 60
PEAK DATA: 2.77 G @ 235.52 MS; -3.11 G @ 213.60 MS

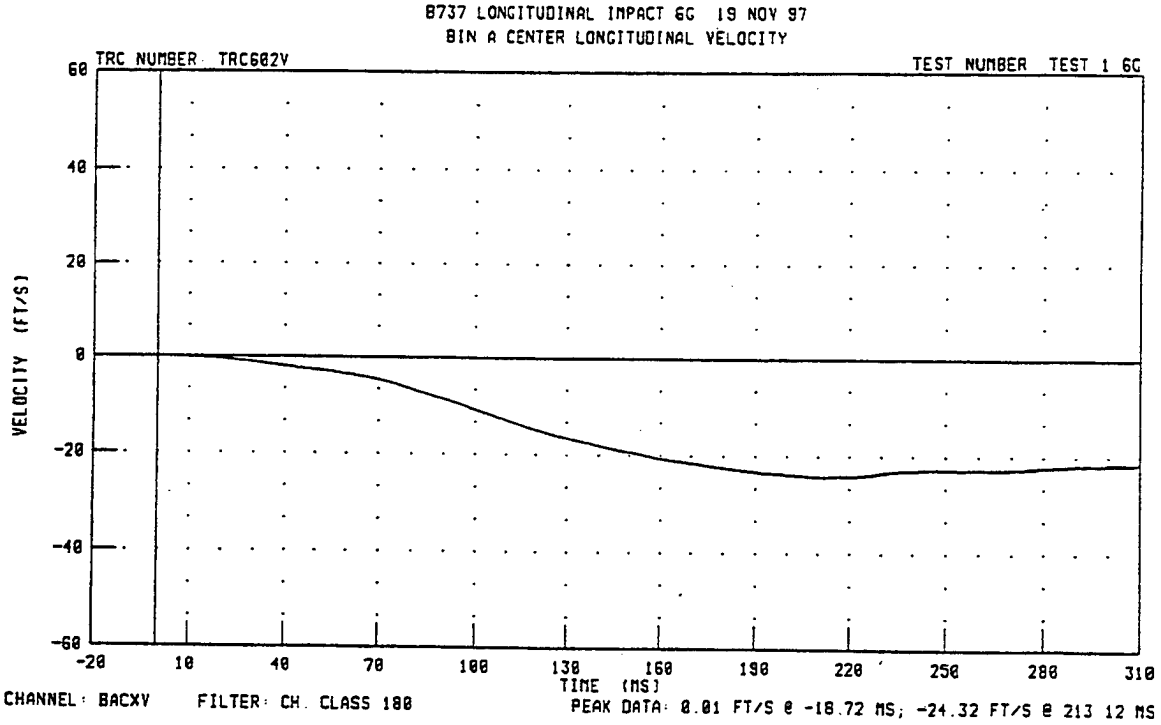

8737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A FRONT VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFZG
FILTER: CH CLASS 60
PEAK DATA 4.35 G @ 277.20 MS; -5.25 G @ 242.40 MS

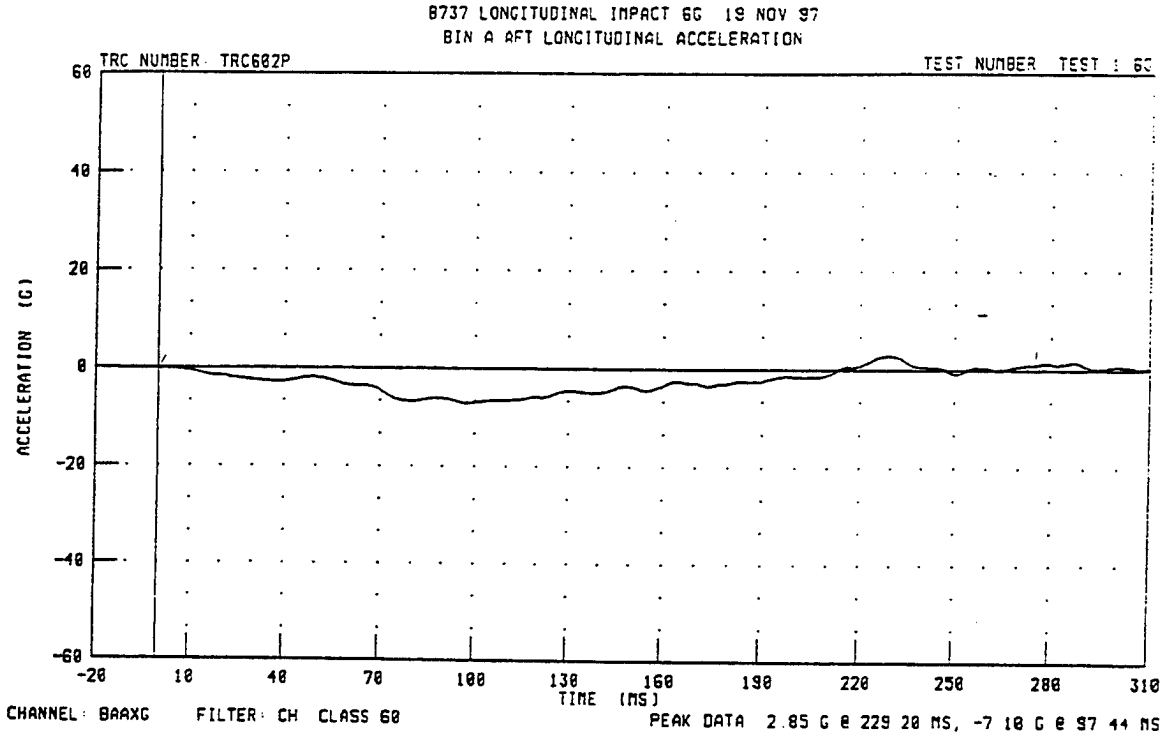

8737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A FRONT LONGITUDINAL VELOCITY
TRC NUMBER TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFXV
FILTER: CH. CLASS 180
PEAK DATA: 0.01 FT/S @ -14.08 MS; -24.56 FT/S @ 213.28 MS

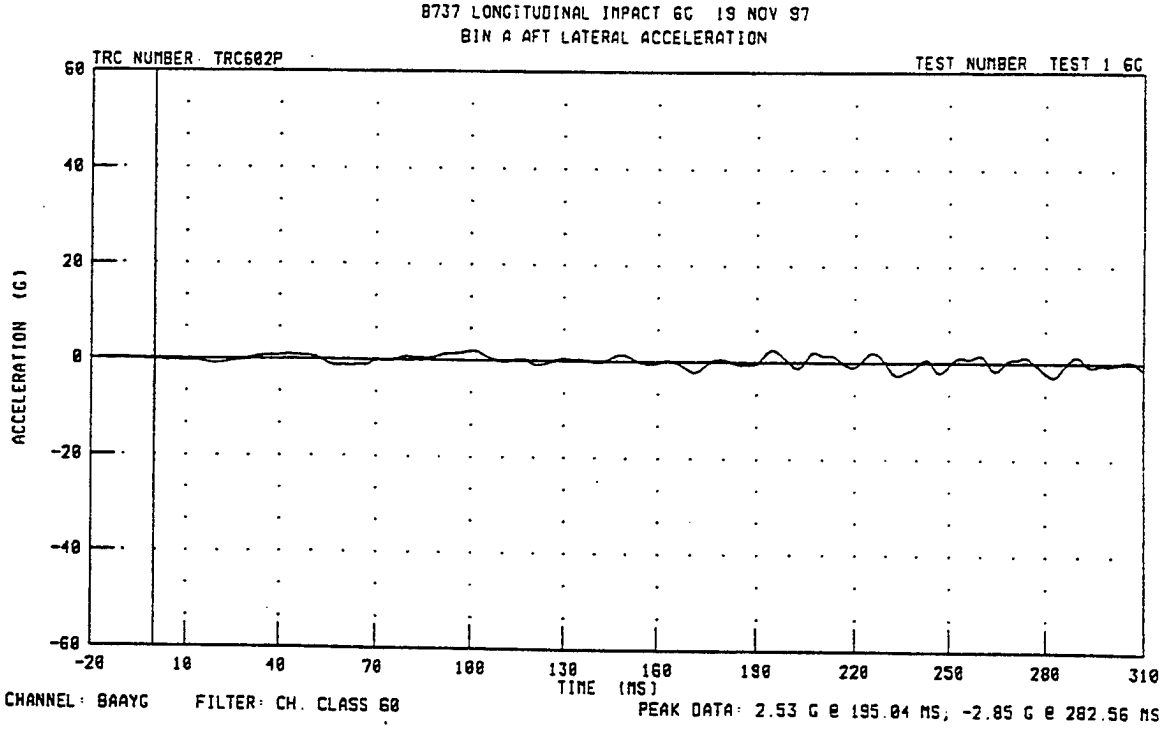

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A CENTER LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACXG
FILTER: CH CLASS 60
PEAK DATA 3.19 G @ 229.20 MS, -7.83 G @ 97.44 MS

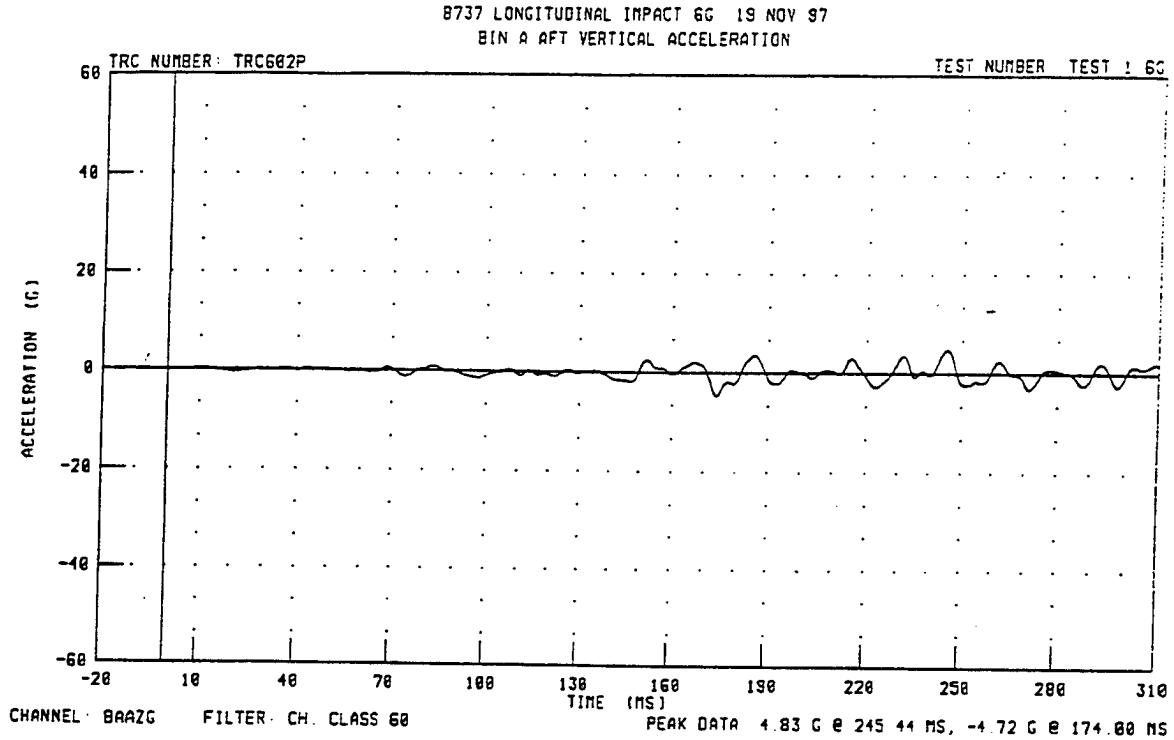

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A CENTER LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACYG
FILTER: CH. CLASS 60
PEAK DATA: 1.63 G @ 241.44 MS; -2.03 G @ 279.76 MS

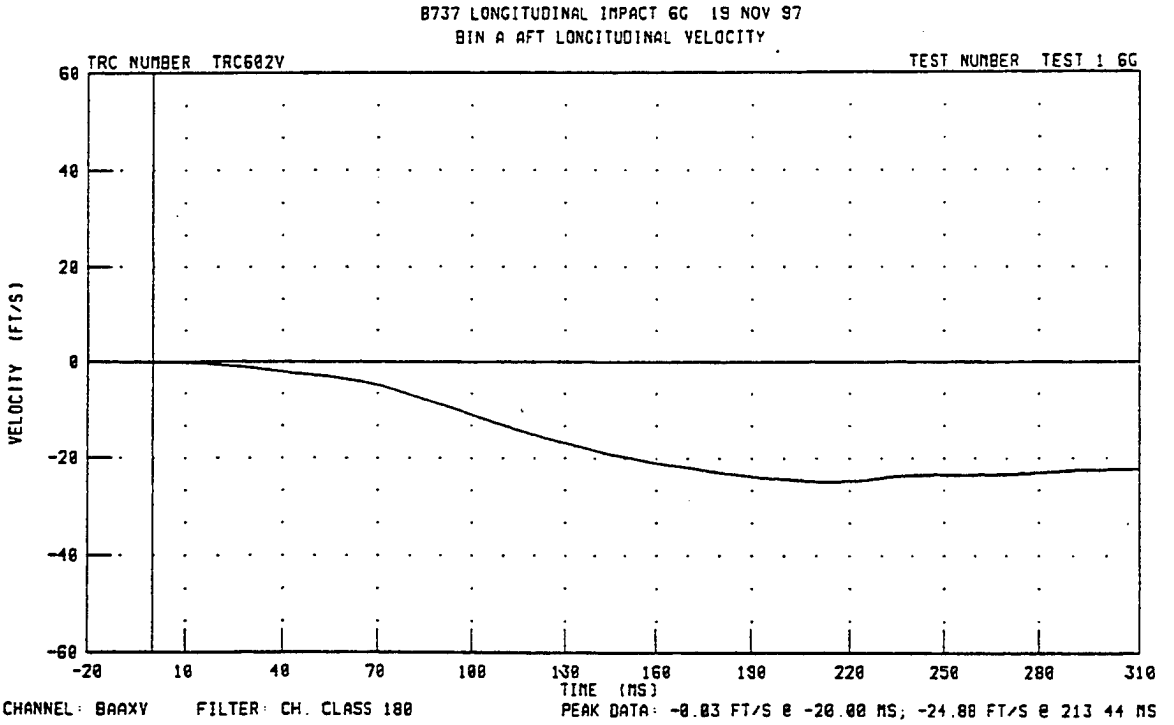

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A CENTER VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACZG
FILTER: CH. CLASS 60
PEAK DATA: 2.65 G @ 278.80 MS, -3 05 G @ 284 56 MS

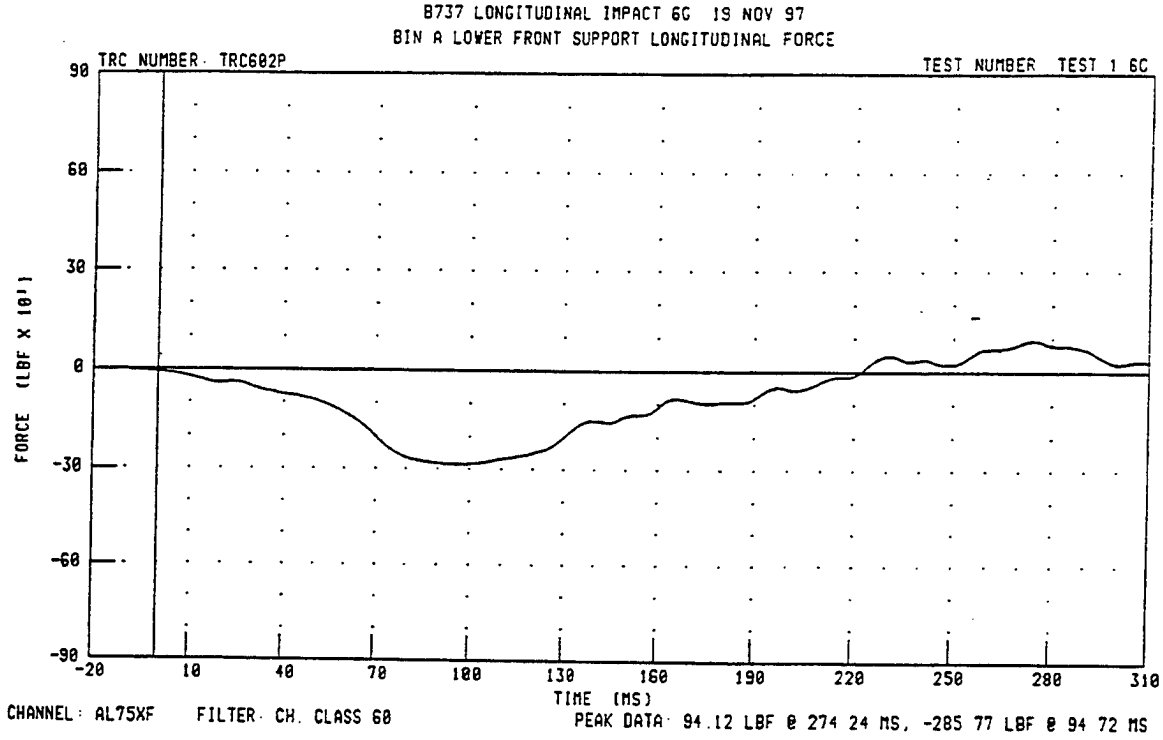

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A CENTER LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACXV
FILTER: CH. CLASS 180
PEAK DATA: 0.01 FT/S @ -18.72 MS; -24.32 FT/S @ 213 12 MS

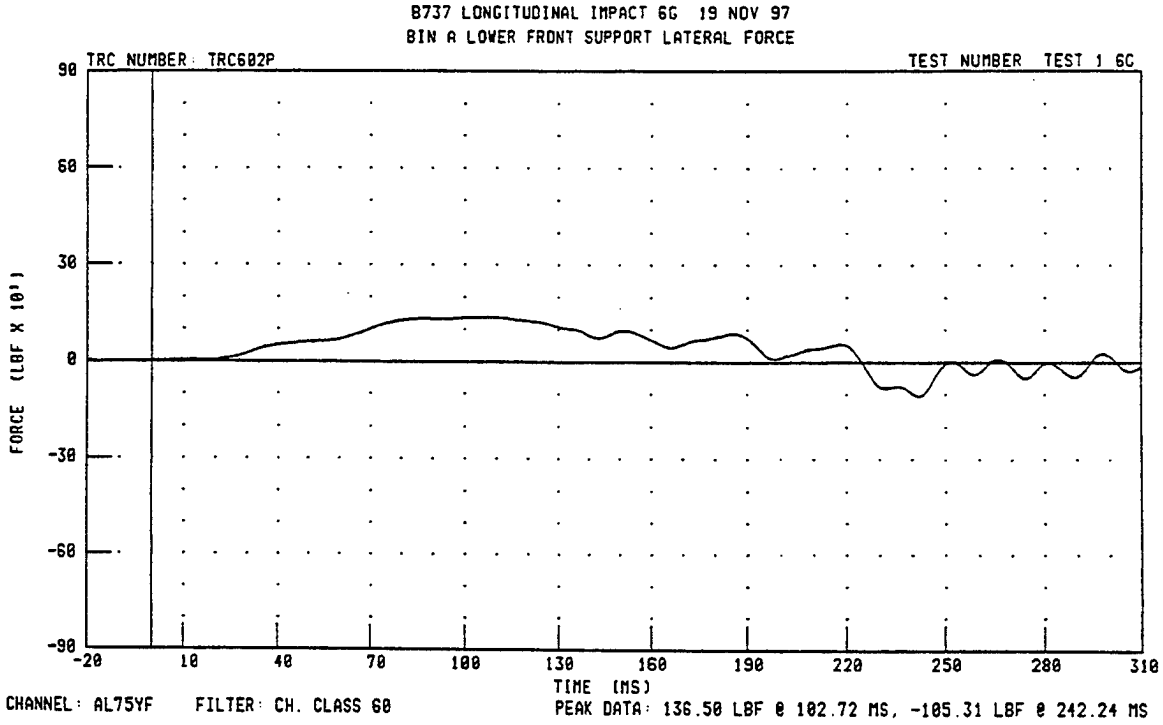

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A AFT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAXG
FILTER: CH CLASS 60
PEAK DATA 2.85 G @ 229.20 MS, -7.10 G @ 97.44 MS

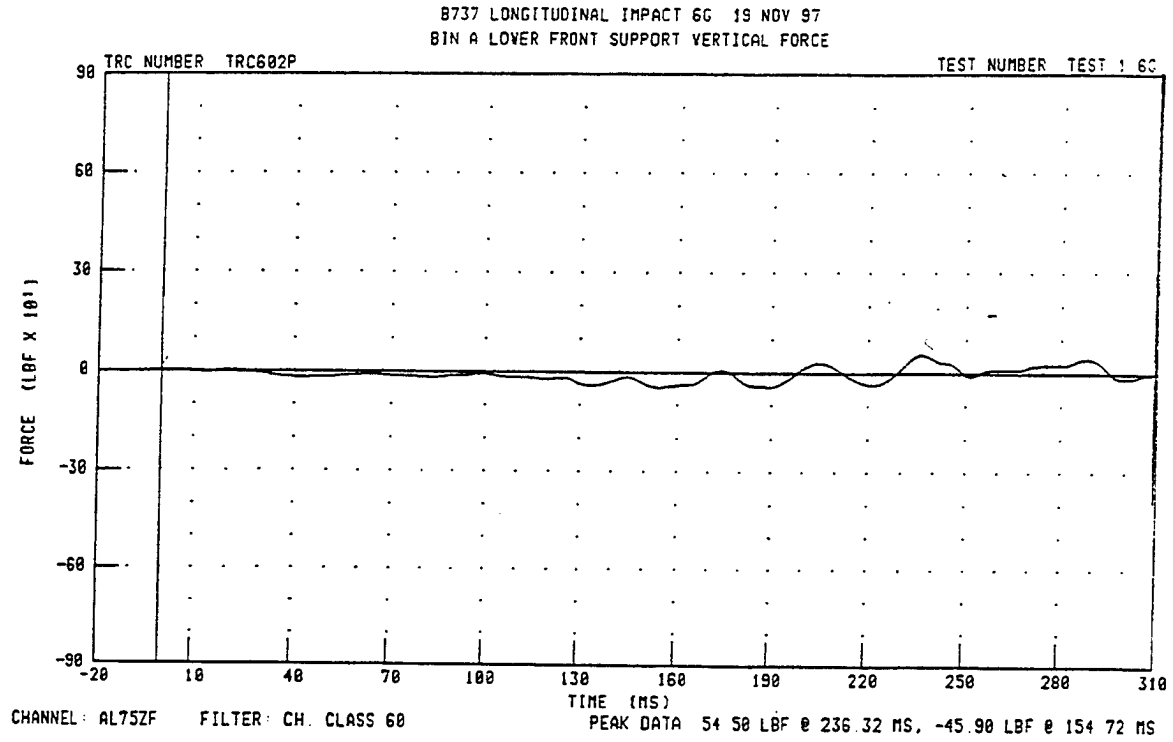

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A AFT LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAYG
FILTER: CH. CLASS 60
PEAK DATA: 2.53 G @ 195.04 MS; -2.85 G @ 282.56 MS

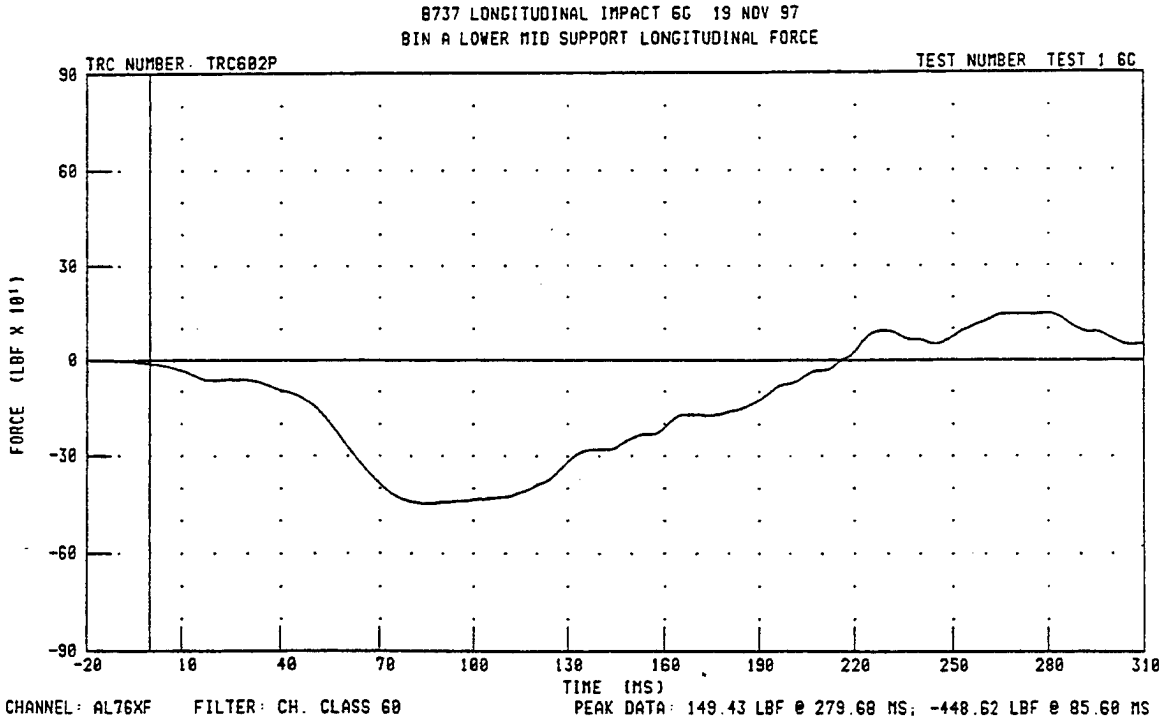

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A AFT VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAZG
FILTER: CH. CLASS 60
PEAK DATA 4.83 G @ 245.44 MS, -4.72 G @ 174.00 MS

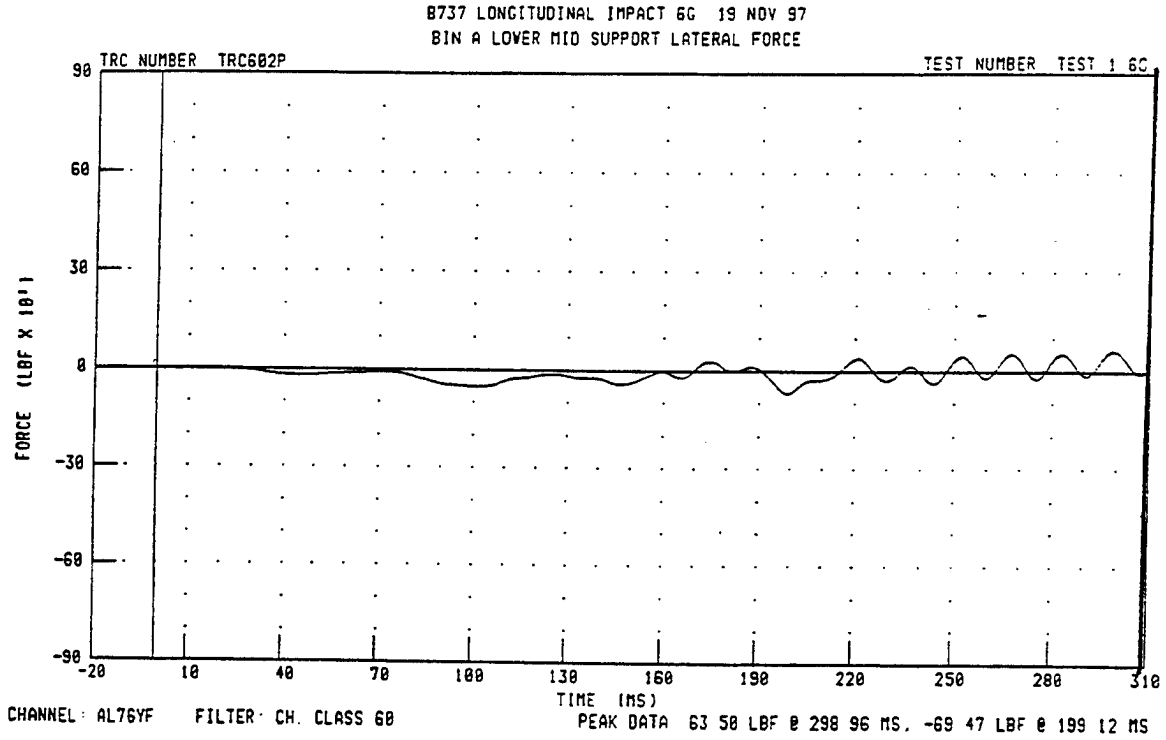

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A AFT LONGITUDINAL VELOCITY
TRC NUMBER TRC602V
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
VELOCITY (FT/S)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAXV
FILTER: CH. CLASS 180
PEAK DATA: -0.83 FT/S @ -20.00 MS; -24.88 FT/S @ 213.44 MS

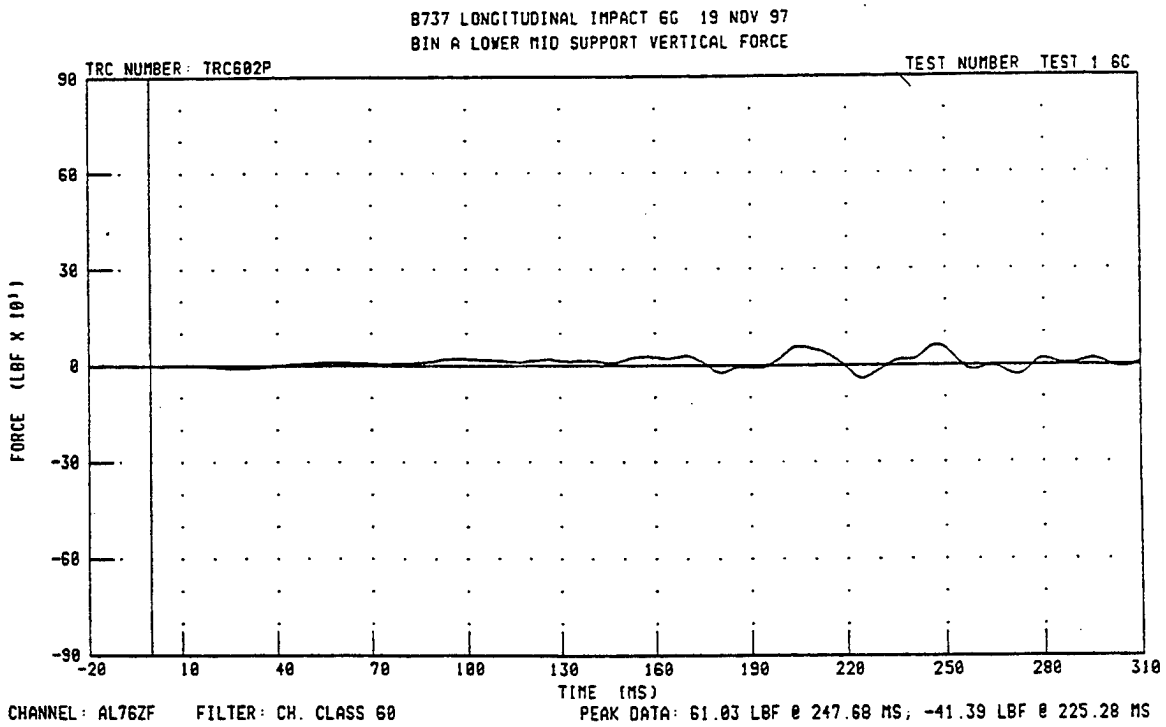

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER FRONT SUPPORT LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL75XF
FILTER: CH. CLASS 60
PEAK DATA: 94.12 LBF @ 274.24 MS, -285.77 LBF @ 94.72 MS

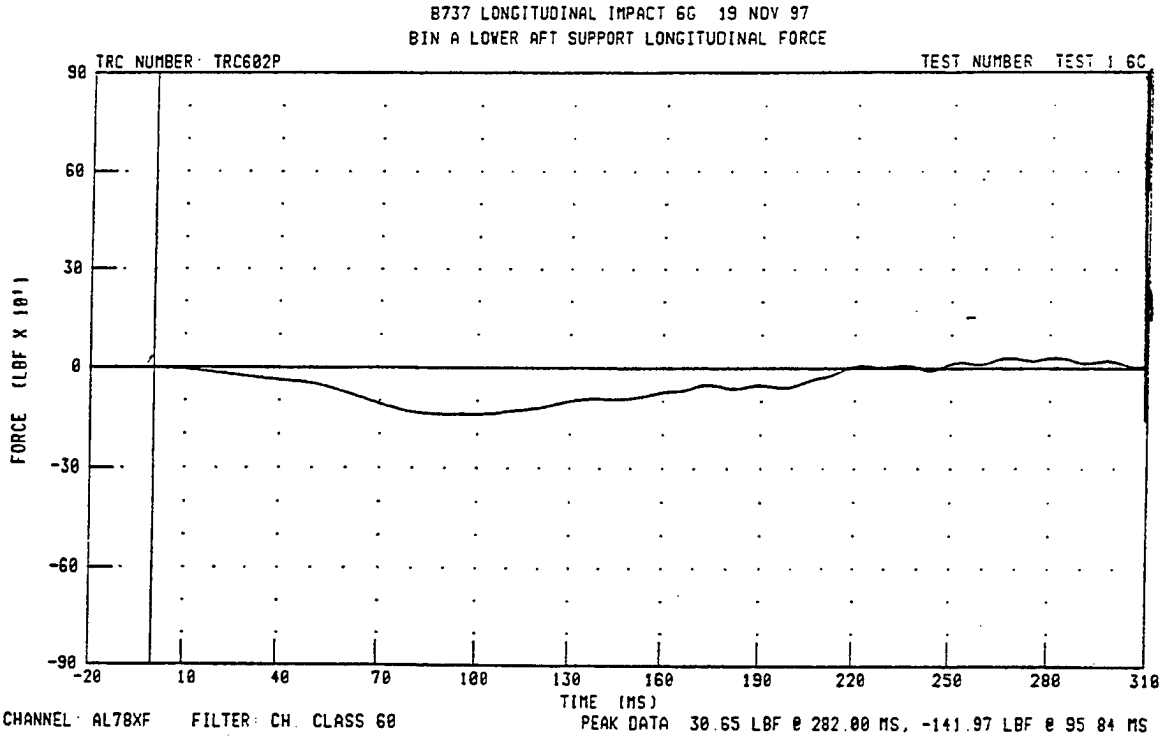

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER FRONT SUPPORT LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL75YF
FILTER: CH. CLASS 60
PEAK DATA: 136.50 LBF @ 102.72 MS, -105.31 LBF @ 242.24 MS

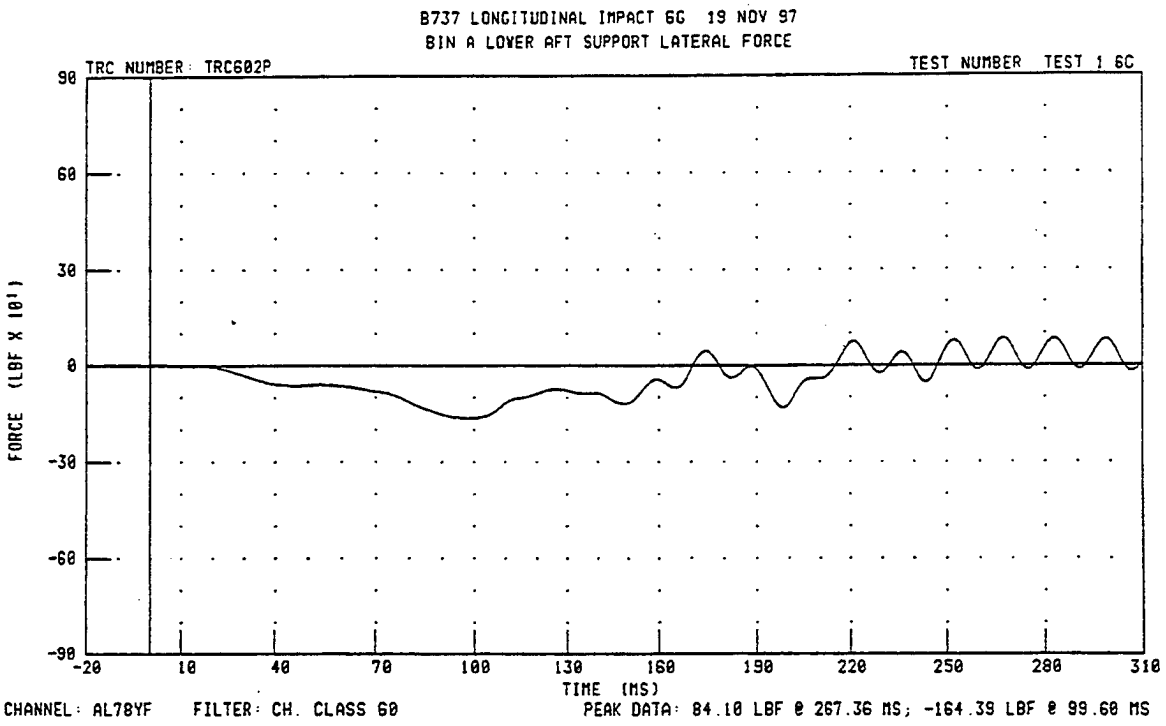

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER FRONT SUPPORT VERTICAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL75ZF
FILTER: CH. CLASS 60
PEAK DATA 54.50 LBF @ 236.32 MS, -45.90 LBF @ 154.72 MS

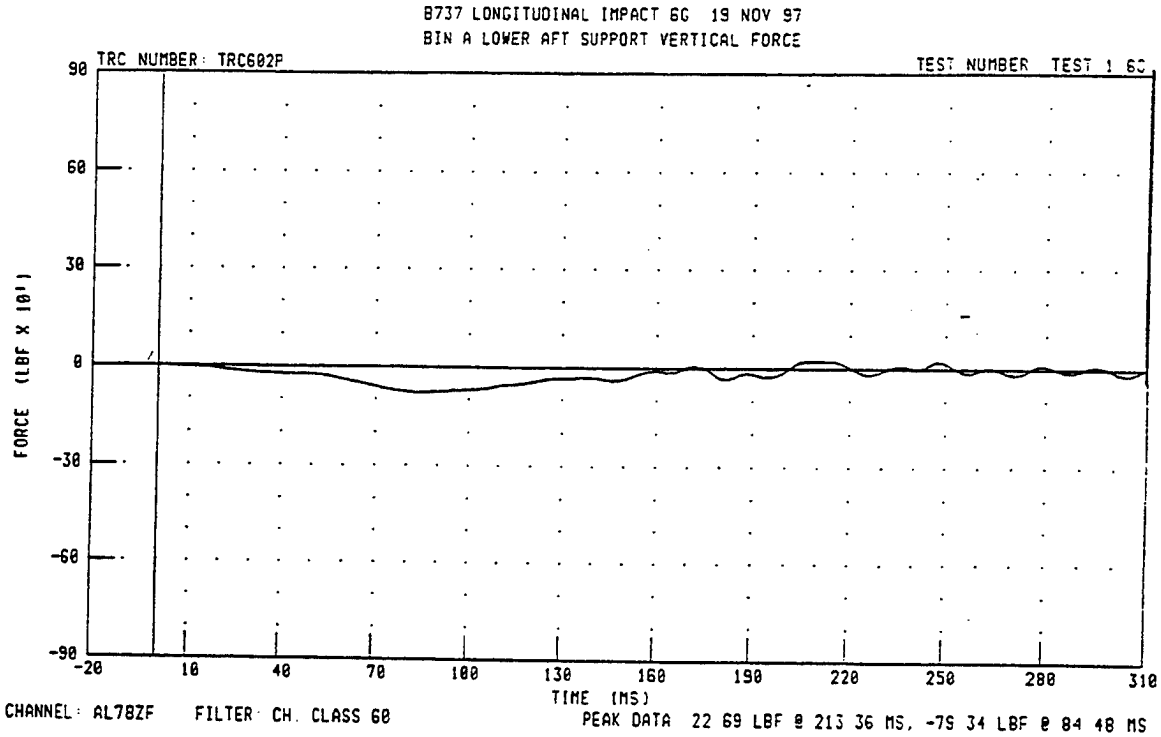

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER MID SUPPORT LONGITUDINAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL76XF
FILTER: CH. CLASS 60
PEAK DATA: 149.43 LBF @ 279.68 MS; -448.62 LBF @ 85.60 MS

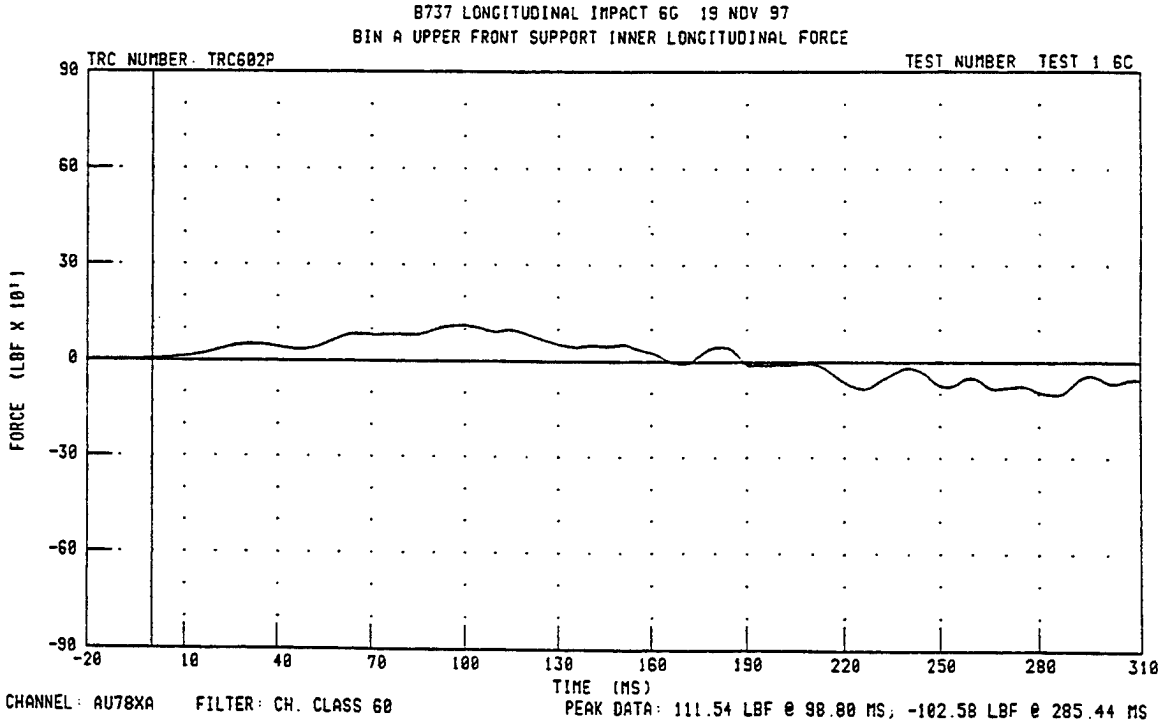

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER MID SUPPORT LATERAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL76YF
FILTER: CH. CLASS 60
PEAK DATA 63 58 LBF @ 298 96 MS, -69 47 LBF @ 199 12 MS

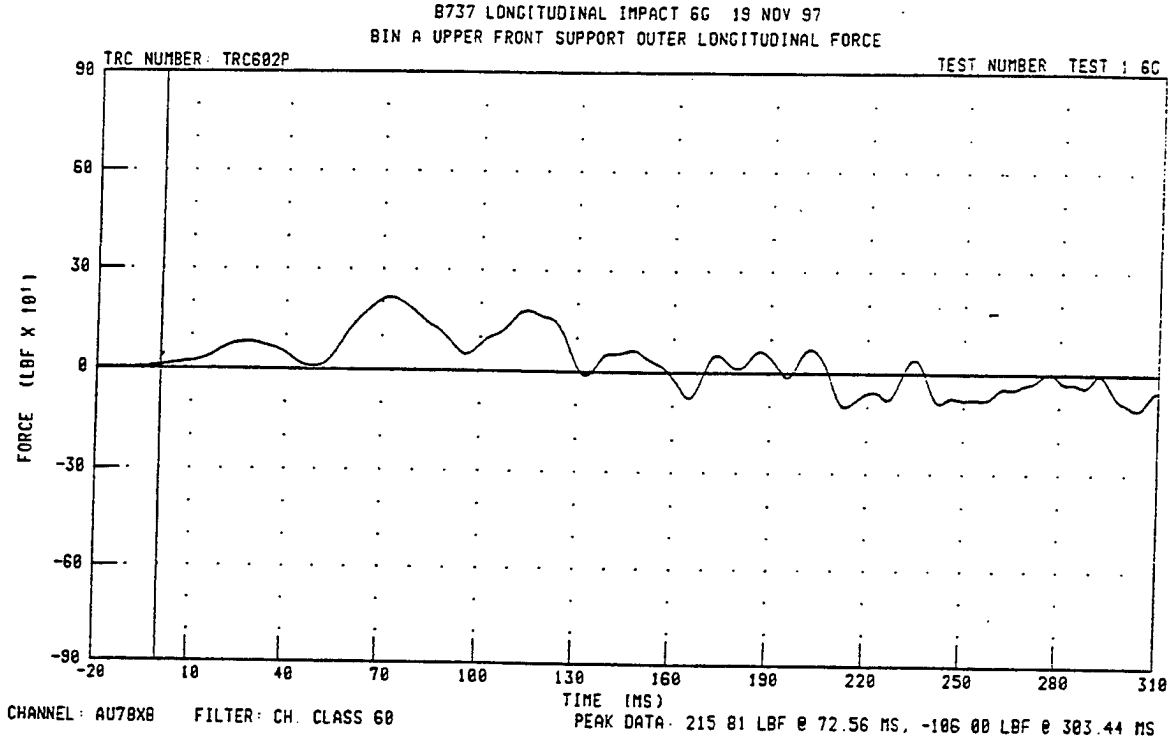

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER MID SUPPORT VERTICAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL76ZF
FILTER: CH. CLASS 60
PEAK DATA: 61.03 LBF @ 247.68 MS; -41.39 LBF @ 225.28 MS

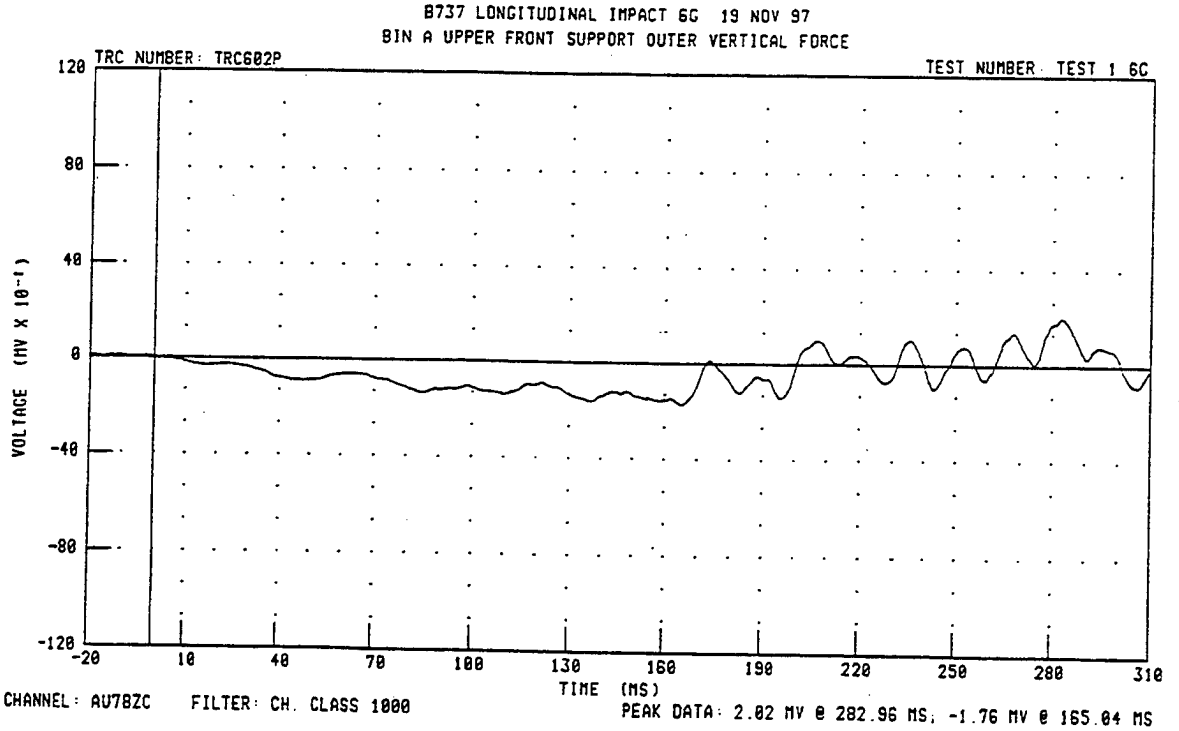

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER AFT SUPPORT LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78XF
FILTER: CH. CLASS 60
PEAK DATA 30.65 LBF @ 282.00 MS, -141.97 LBF @ 95 84 MS

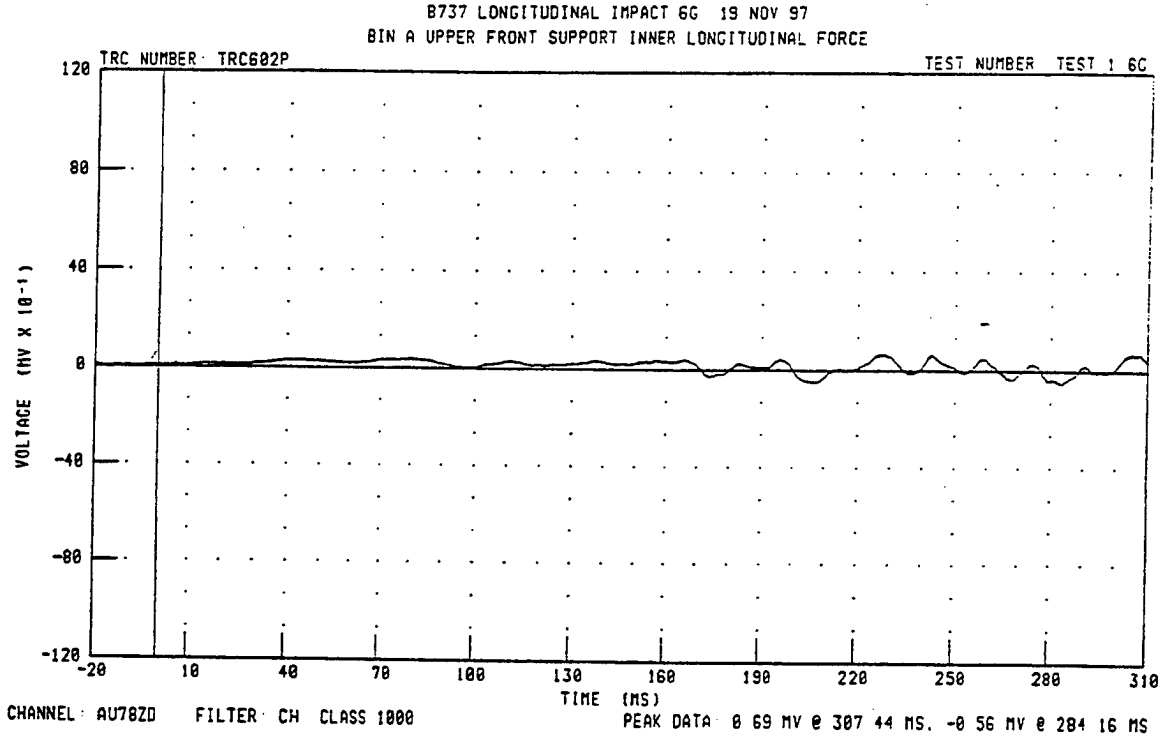

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER AFT SUPPORT LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78YF
FILTER: CH. CLASS 60
PEAK DATA: 84.10 LBF @ 267.36 MS; -164.39 LBF @ 99.60 MS

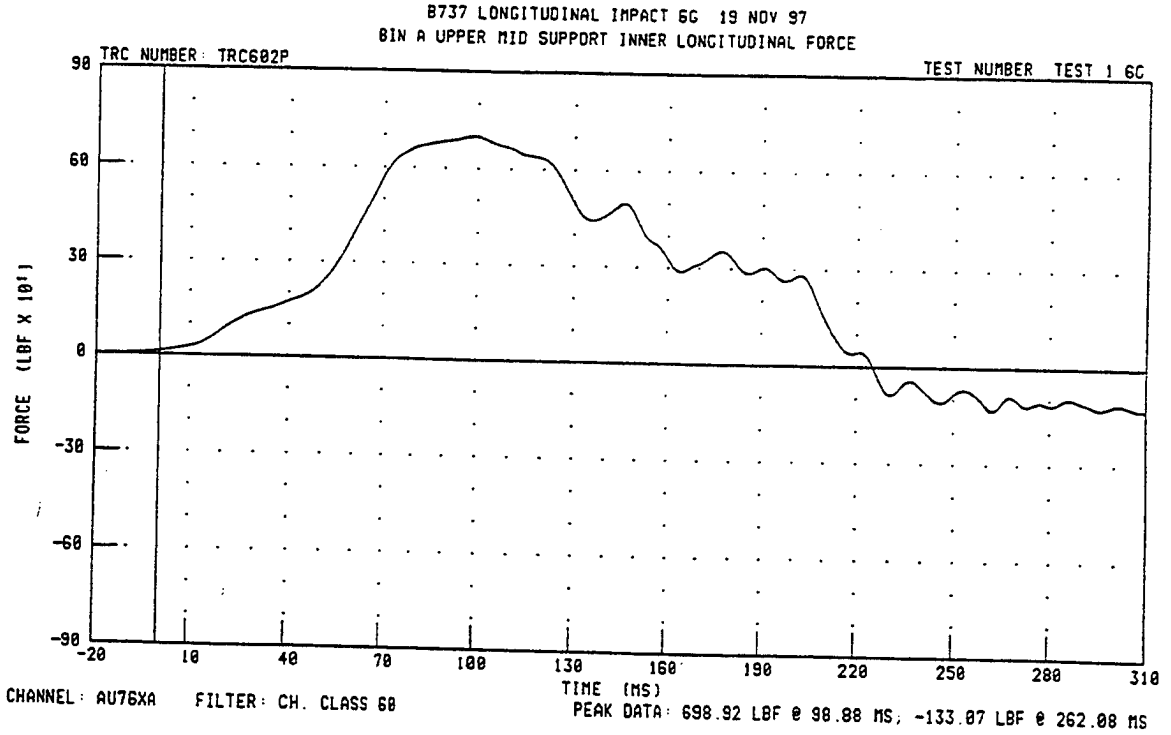

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A LOWER AFT SUPPORT VERTICAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78ZF
FILTER: CH. CLASS 60
PEAK DATA 22.69 LBF @ 213.36 MS, -79.34 LBF @ 84.48 MS

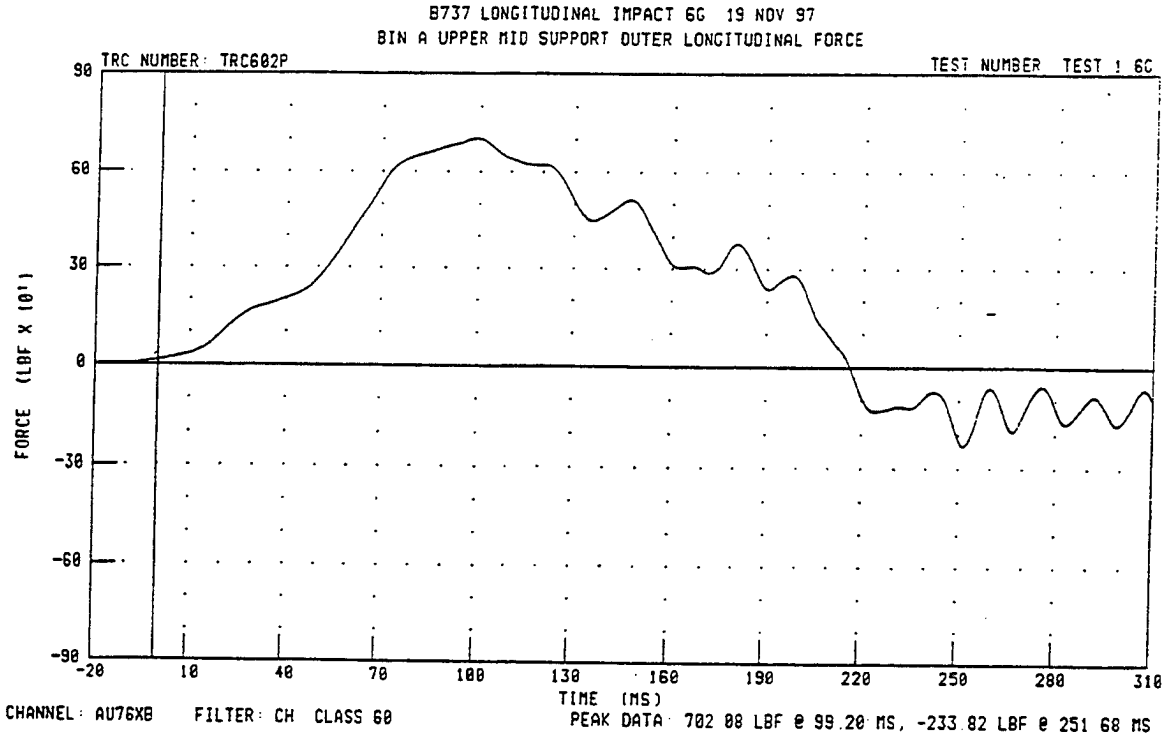

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER FRONT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78XA
FILTER: CH. CLASS 60
PEAK DATA: 111.54 LBF @ 98.80 MS, -102.58 LBF @ 285.44 MS

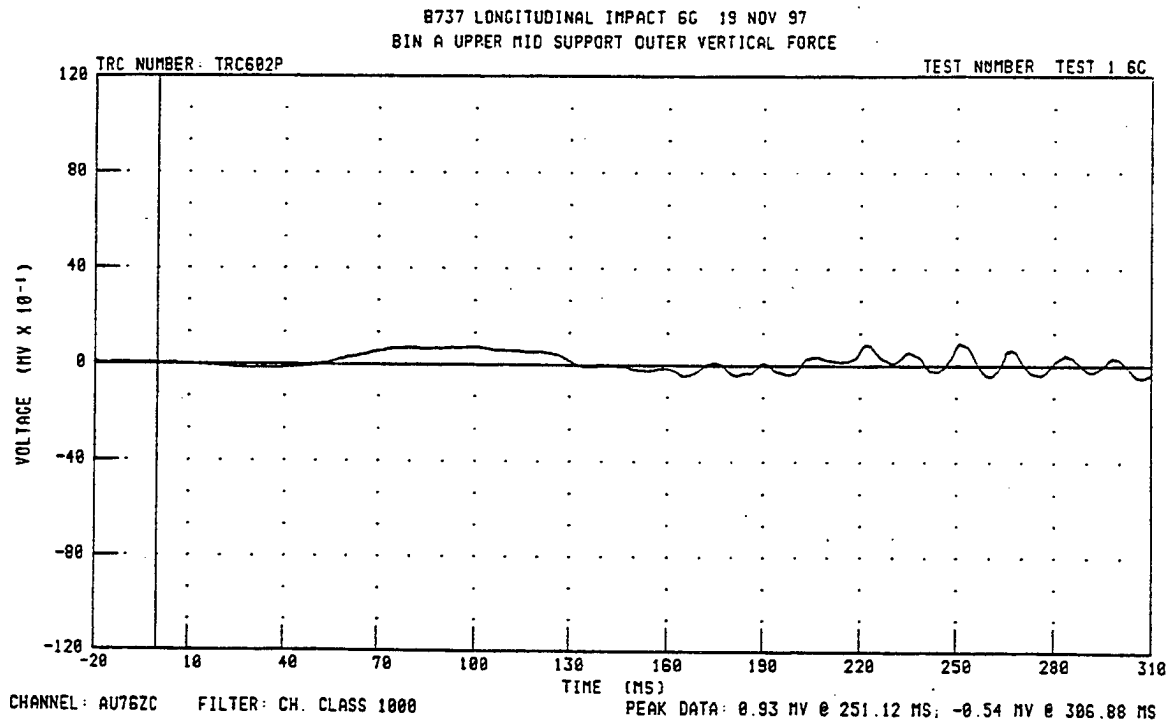

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER FRONT SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78XB
FILTER: CH. CLASS 60
PEAK DATA: 215.81 LBF @ 72.56 MS, -106.00 LBF @ 303.44 MS

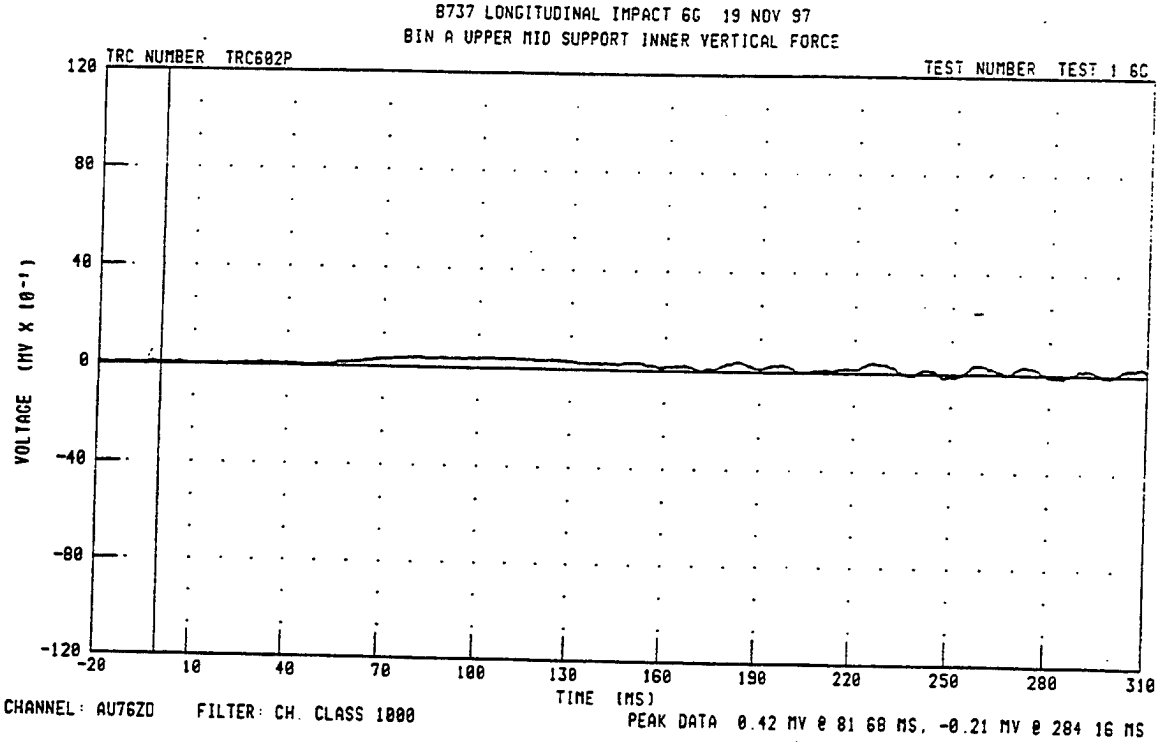

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER FRONT SUPPORT OUTER VERTICAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER: TEST 1 6C
VOLTAGE (MV X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78ZC
FILTER: CH. CLASS 1000
PEAK DATA: 2.02 MV @ 282.96 MS, -1.76 MV @ 165.04 MS

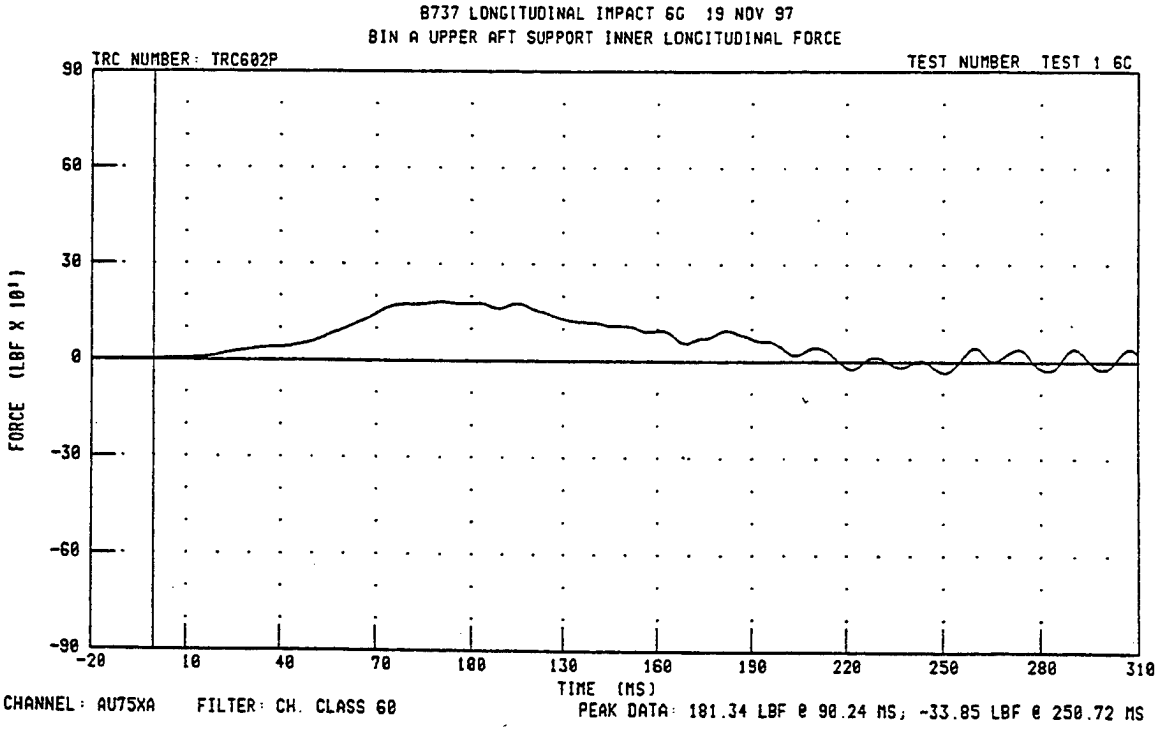

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER FRONT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
VOLTAGE (MV X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78ZD
FILTER: CH CLASS 1000
PEAK DATA: 0 69 MV @ 307 44 MS, -0 56 MV @ 284 16 MS

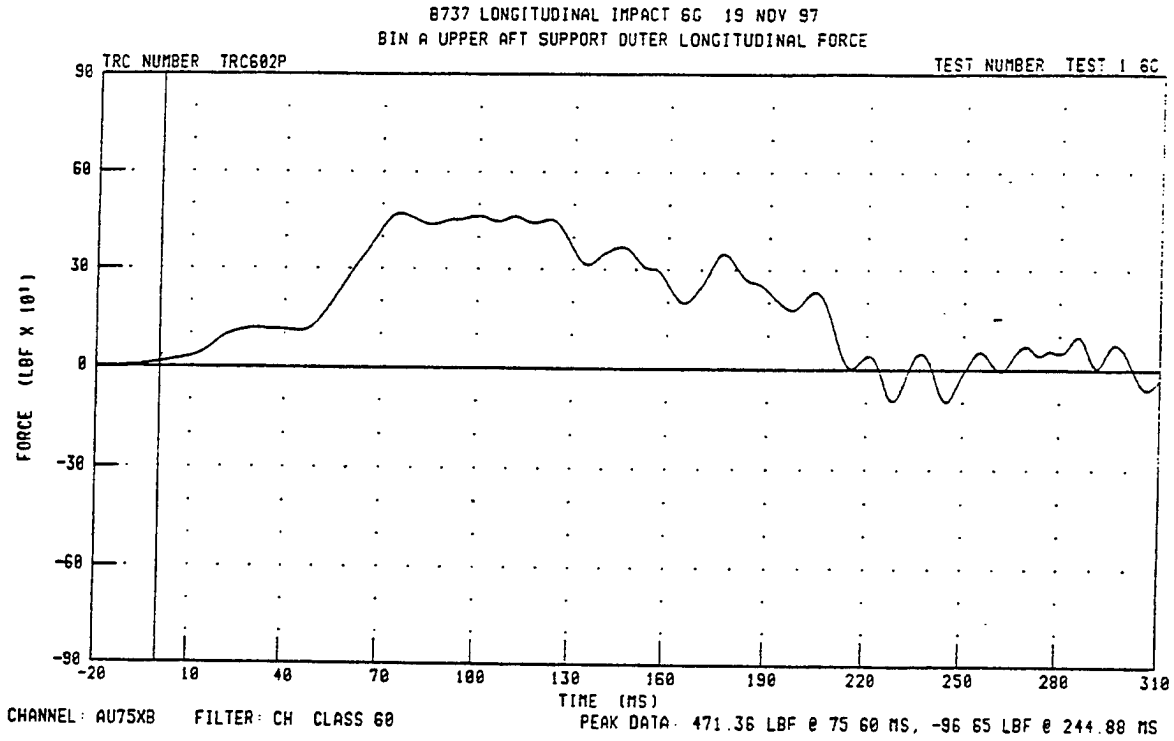

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER MID SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76XA
FILTER: CH. CLASS 60
PEAK DATA: 698.92 LBF @ 98.88 MS; -133.07 LBF @ 262.08 MS

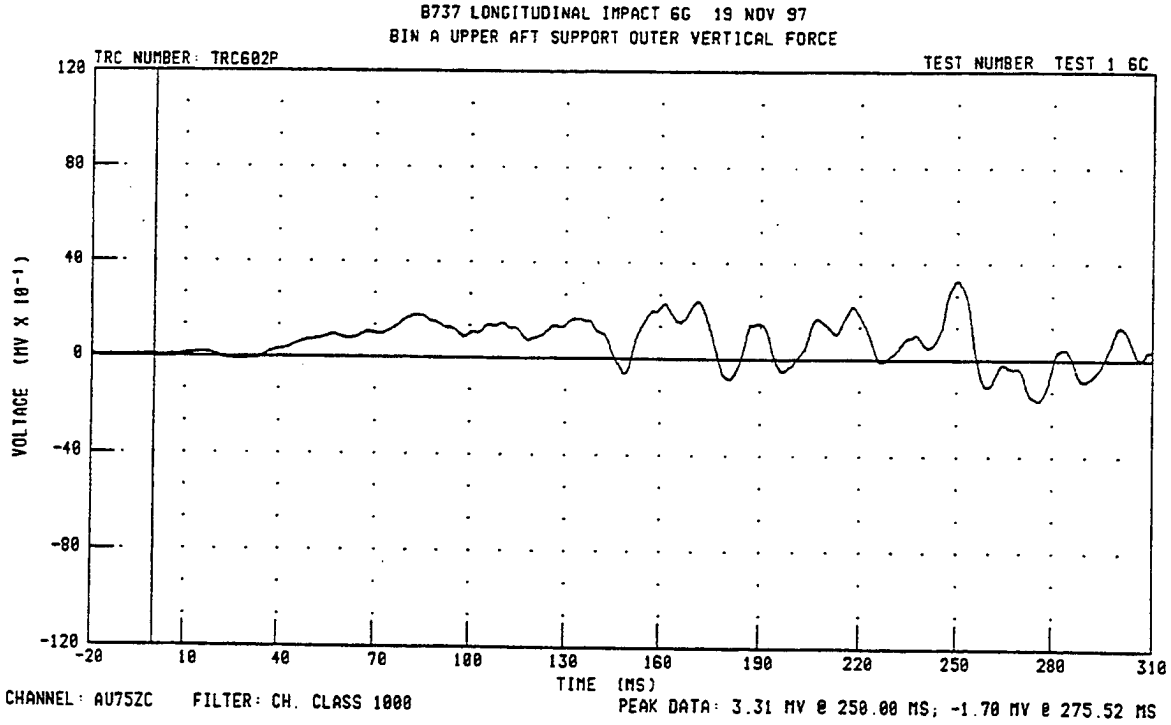

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER MID SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X (10¹))
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76XB
FILTER: CH CLASS 60
PEAK DATA: 702 08 LBF @ 99.20 MS, -233.82 LBF @ 251 68 MS

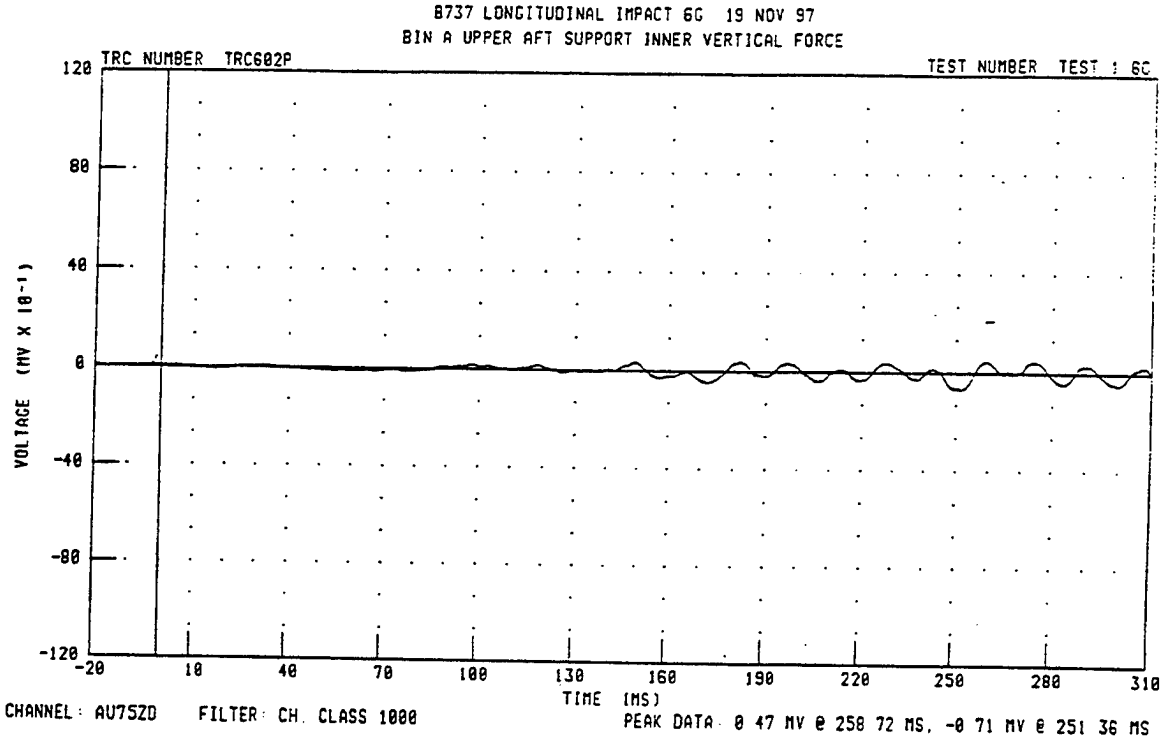

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER MID SUPPORT OUTER VERTICAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
VOLTAGE (MV X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76ZC
FILTER: CH. CLASS 1000
PEAK DATA: 0.93 MV @ 251.12 MS; -0.54 MV @ 306.88 MS

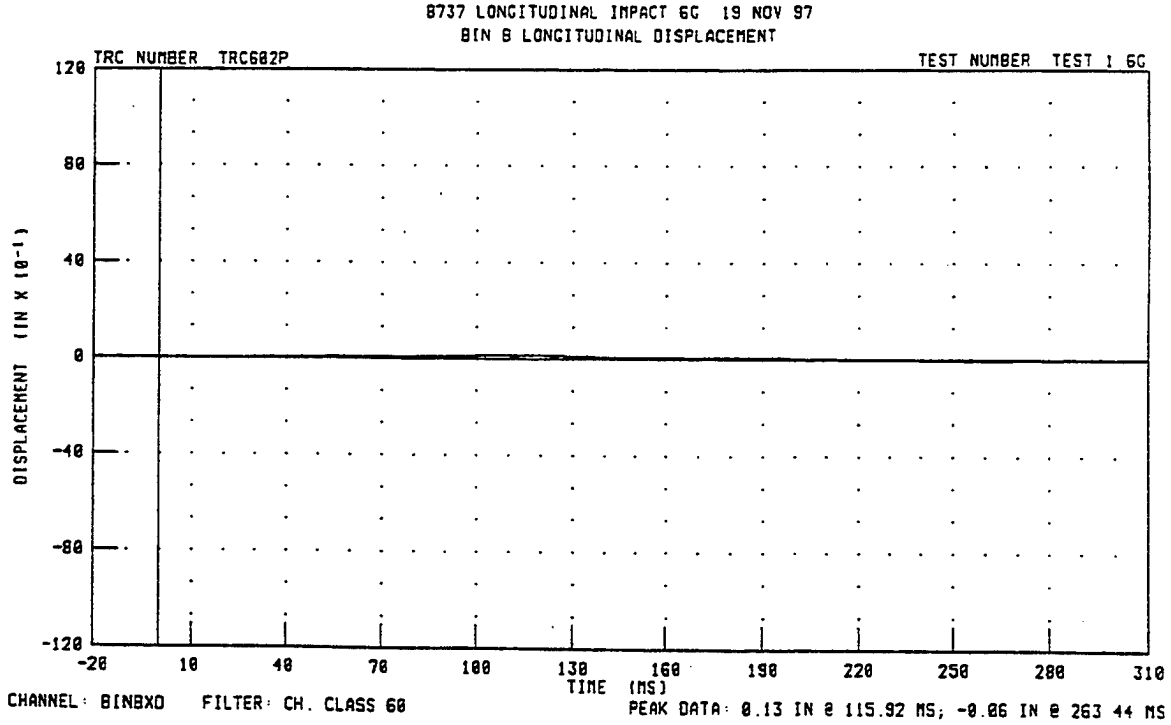

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER MID SUPPORT INNER VERTICAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
VOLTAGE (MV X 10-1)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76ZD
FILTER: CH. CLASS 1000
PEAK DATA 0.42 MV @ 81 68 MS, -0.21 MV @ 284 16 MS

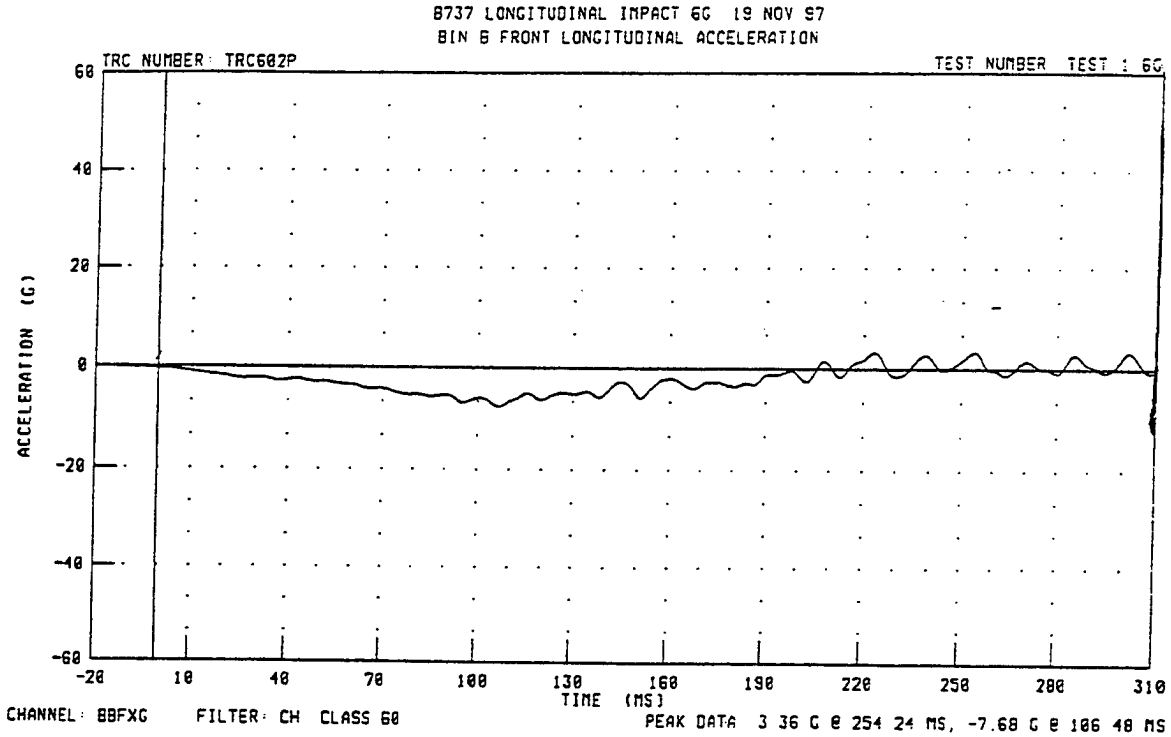

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER AFT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 101)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75XA
FILTER: CH. CLASS 60
PEAK DATA: 181.34 LBF @ 90.24 MS; -33.85 LBF @ 250.72 MS

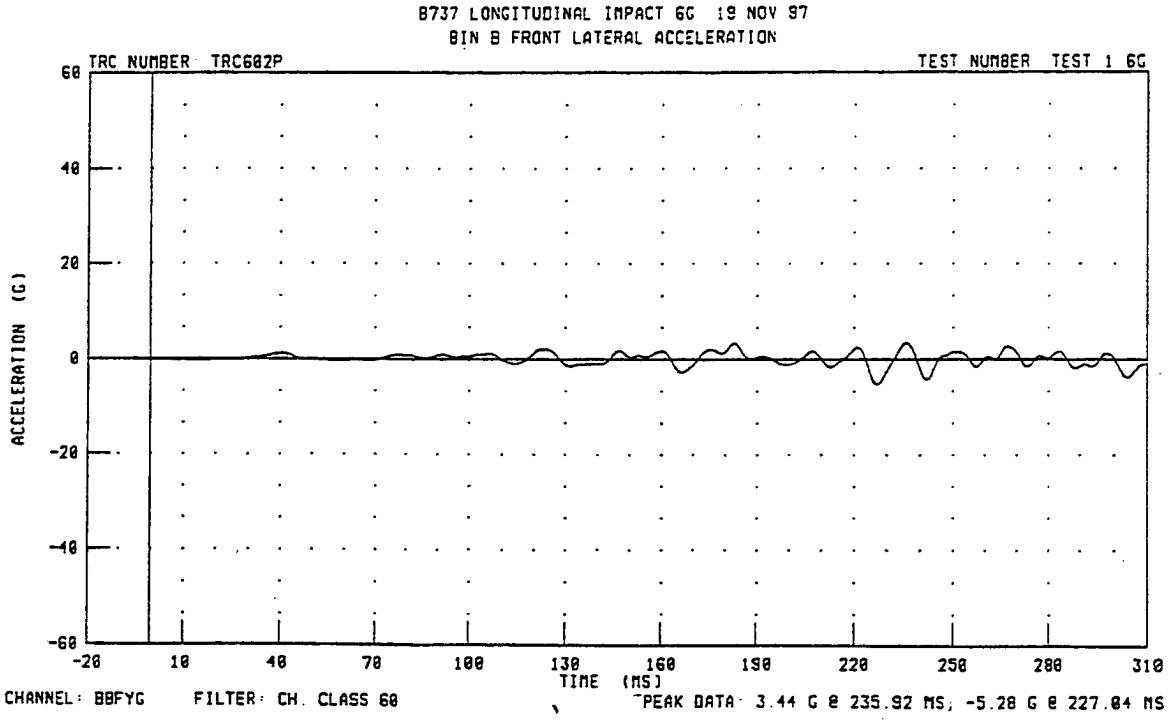

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER AFT SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75XB
FILTER: CH CLASS 60
PEAK DATA: 471.36 LBF @ 75.60 MS, -96.65 LBF @ 244.88 MS

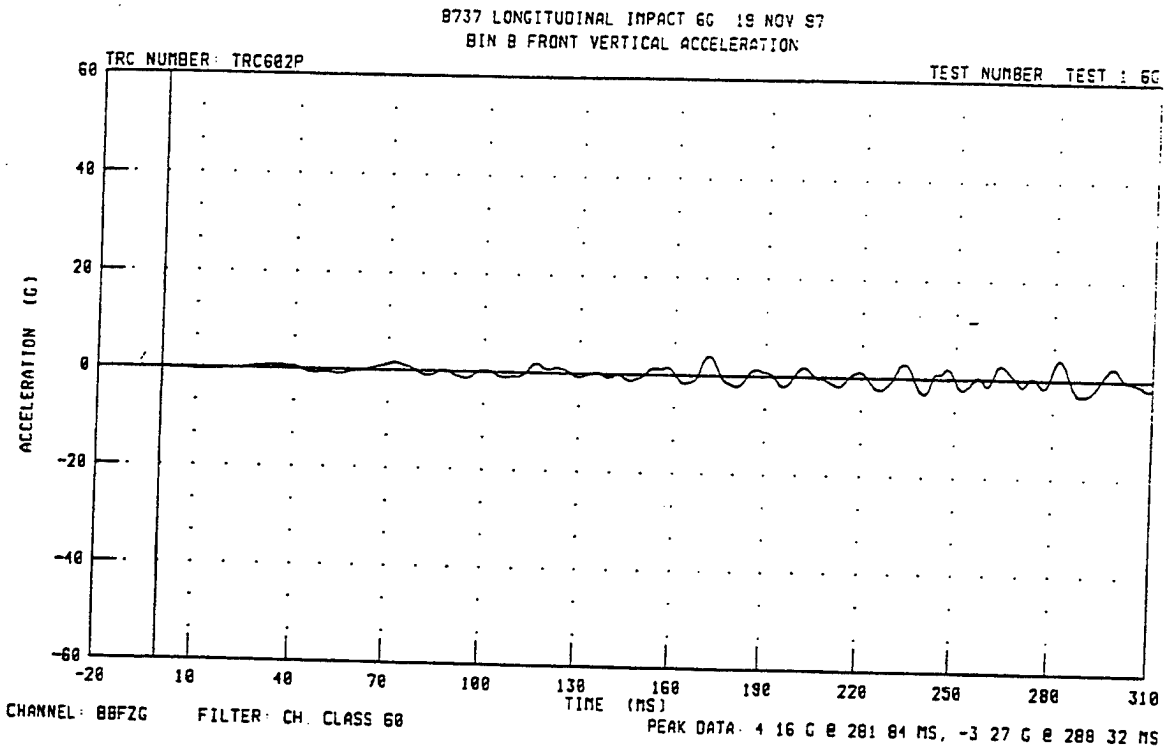

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER AFT SUPPORT OUTER VERTICAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
VOLTAGE (MV X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75ZC
FILTER: CH. CLASS 1000
PEAK DATA: 3.31 MV @ 250.00 MS; -1.70 MV @ 275.52 MS

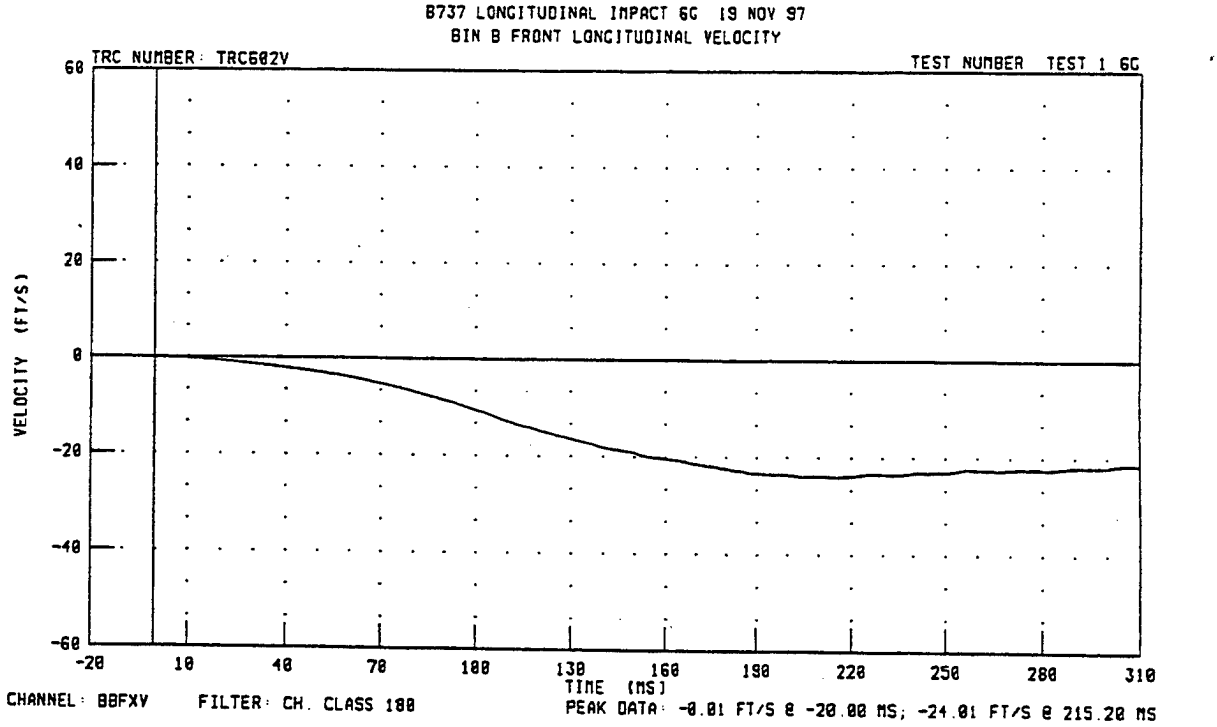

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN A UPPER AFT SUPPORT INNER VERTICAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST : 6C
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU7SZD
FILTER: CH. CLASS 1000
PEAK DATA: 0 47 MV @ 258 72 MS, -0 71 MV @ 251 36 MS

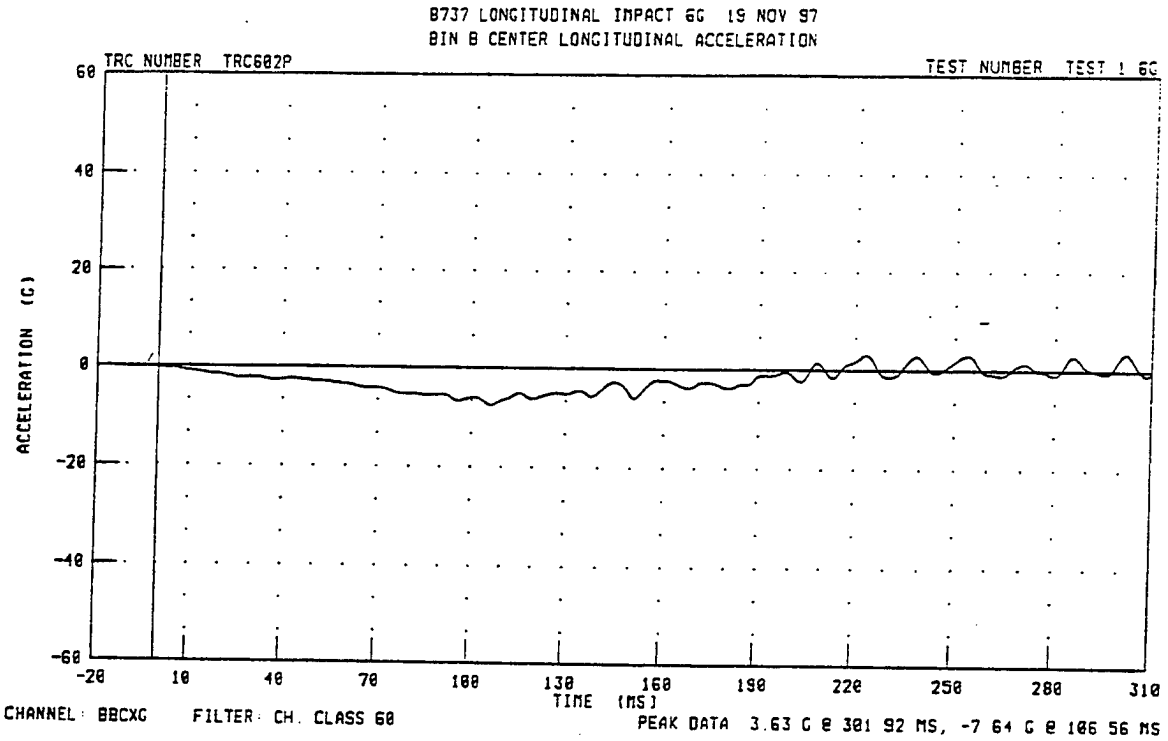

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B LONGITUDINAL DISPLACEMENT
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
120
80
40
0
-40
-80
-120
DISPLACEMENT (IN X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BINBXD
FILTER: CH. CLASS 60
PEAK DATA: 0.13 IN @ 115.92 MS; -0.06 IN @ 263 44 MS

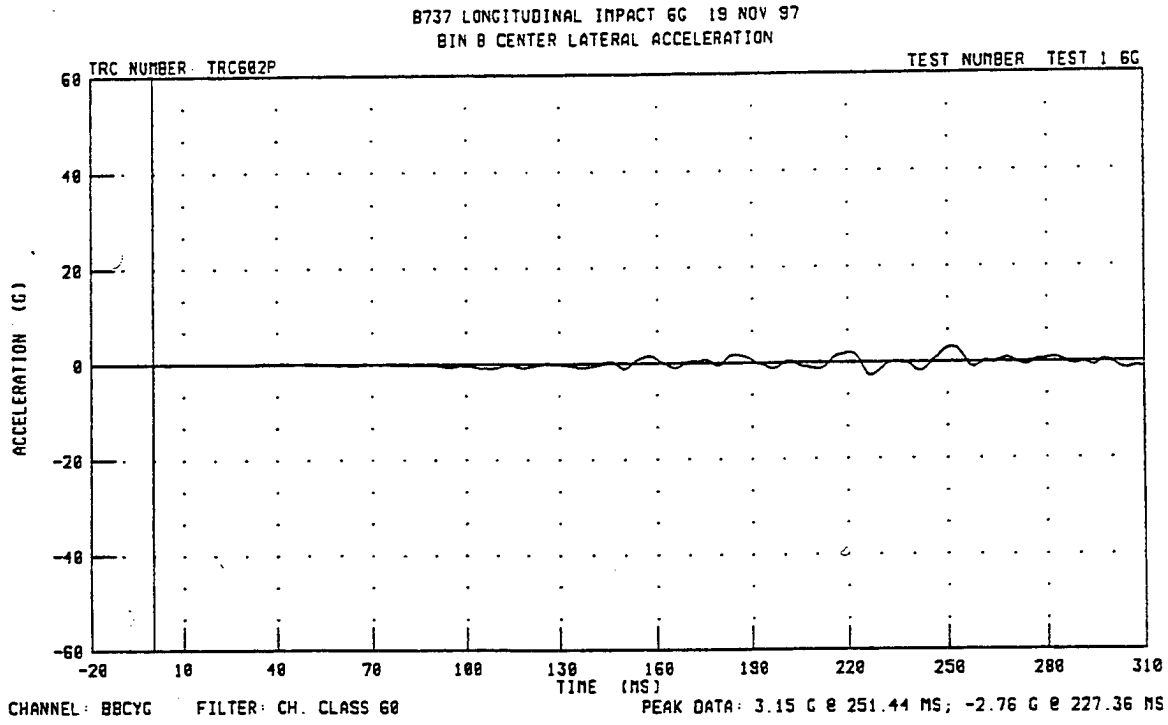

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B FRONT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST : 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBFXG
FILTER: CH CLASS 60
PEAK DATA 3.36 G @ 254.24 MS, -7.68 G @ 106.48 MS

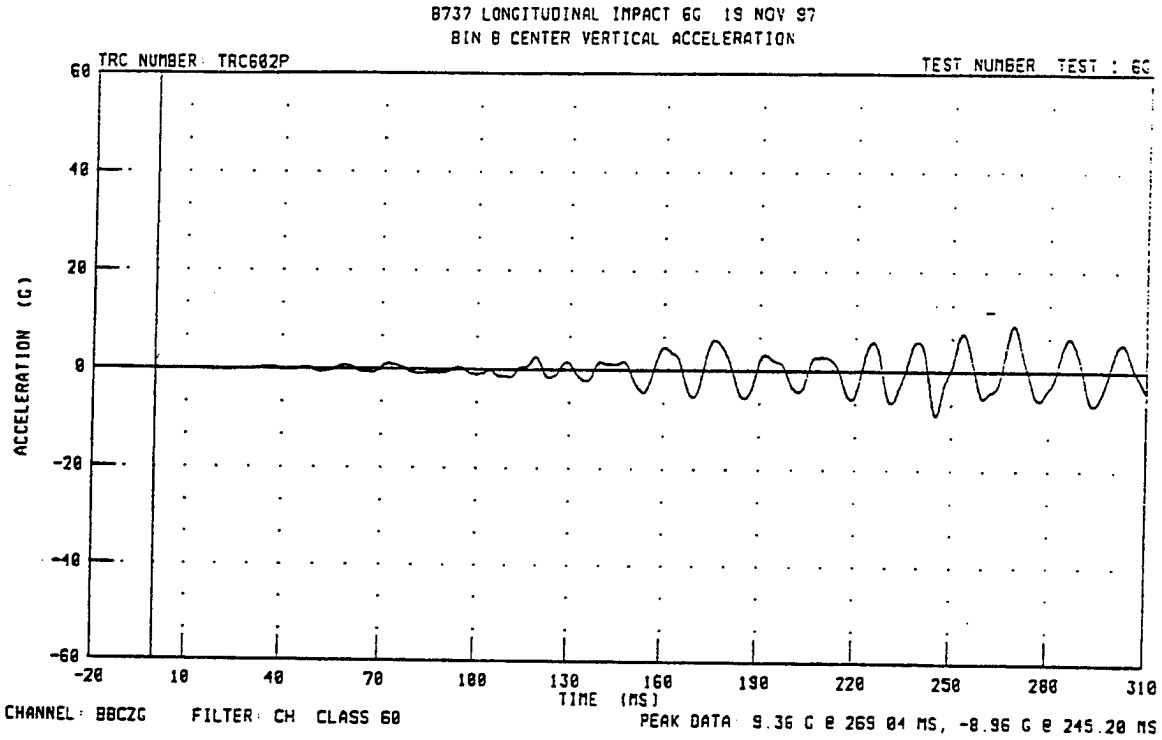

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B FRONT LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBFYG
FILTER: CH. CLASS 60
PEAK DATA: 3.44 G @ 235.92 MS; -5.28 G @ 227.84 MS

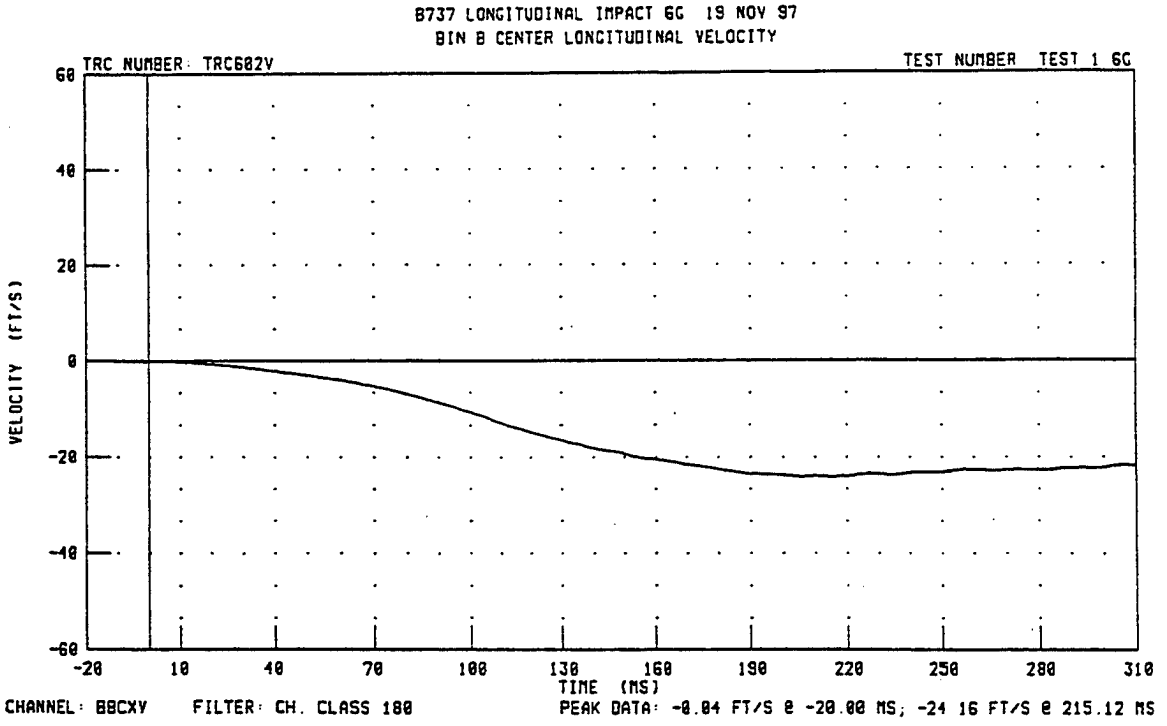

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B FRONT VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8FZG
FILTER: CH. CLASS 60
PEAK DATA: 4.16 G @ 281.84 MS, -3.27 G @ 288.32 MS

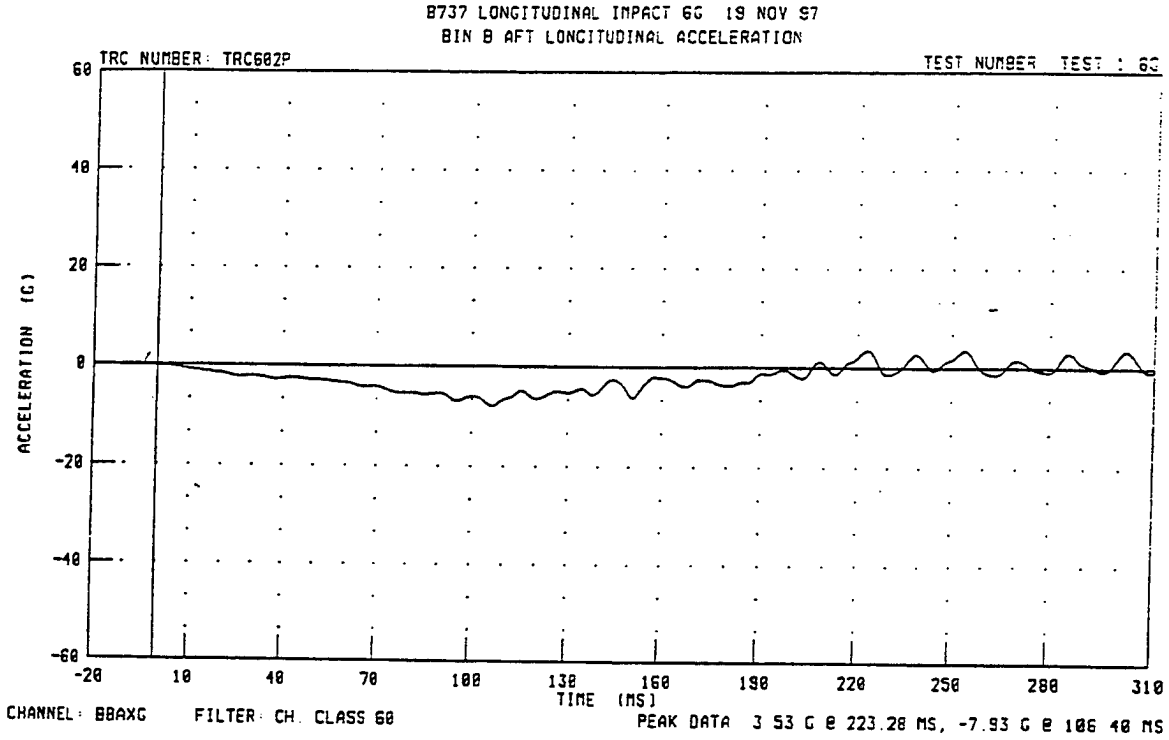

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B FRONT LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8FXV
FILTER: CH. CLASS 180
PEAK DATA: -0.01 FT/S @ -20.00 MS; -24.01 FT/S @ 215.20 MS

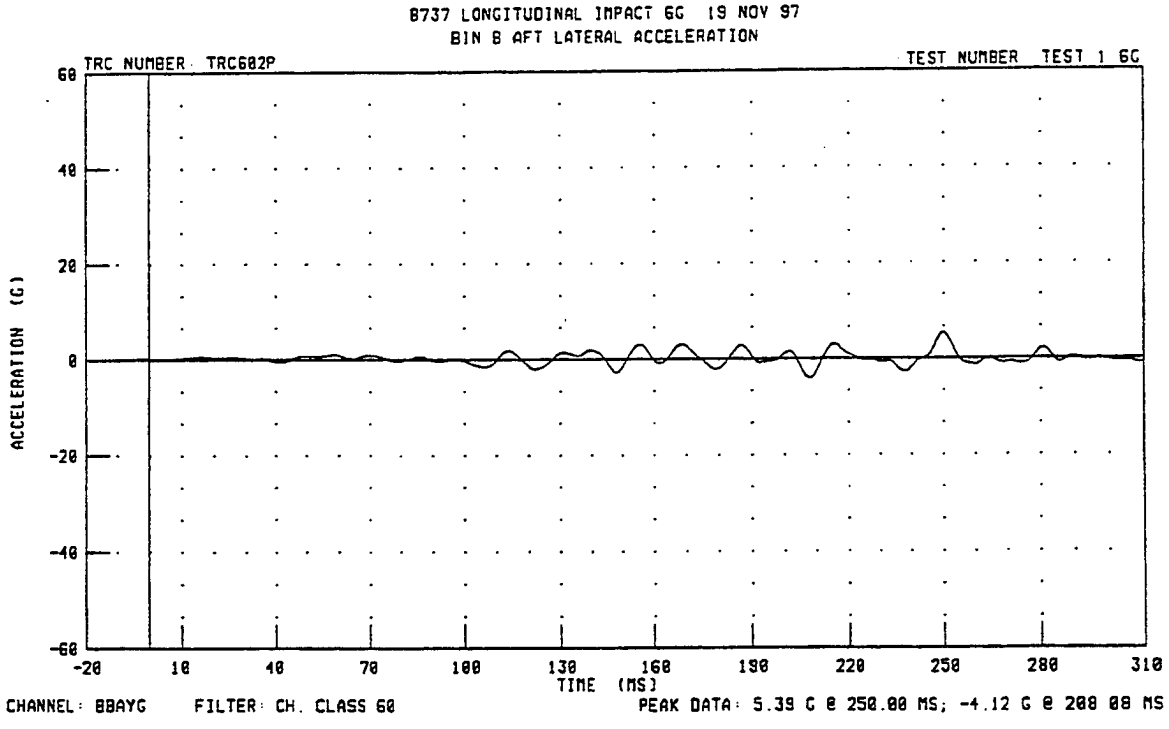

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B CENTER LONGITUDINAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBCXG
FILTER: CH. CLASS 60
PEAK DATA 3.63 G @ 301 92 MS, -7 64 G @ 106 56 MS

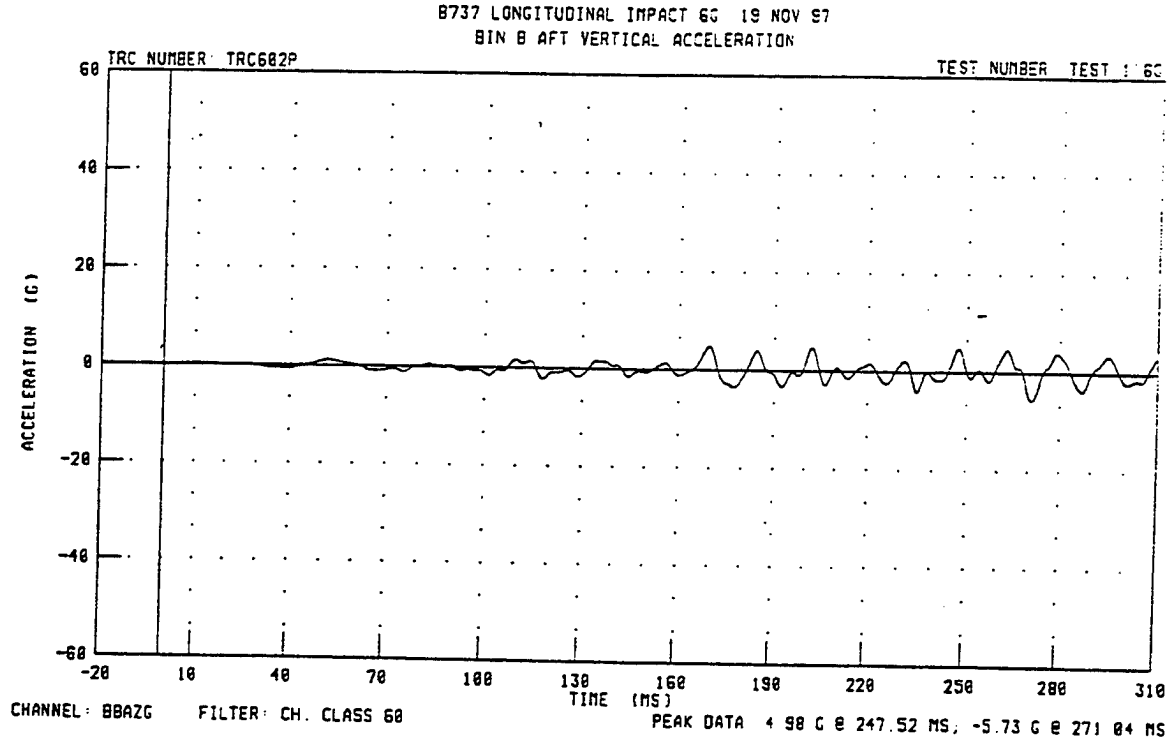

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B CENTER LATERAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBCYG
FILTER: CH. CLASS 60
PEAK DATA: 3.15 G @ 251.44 MS; -2.76 G @ 227.36 MS

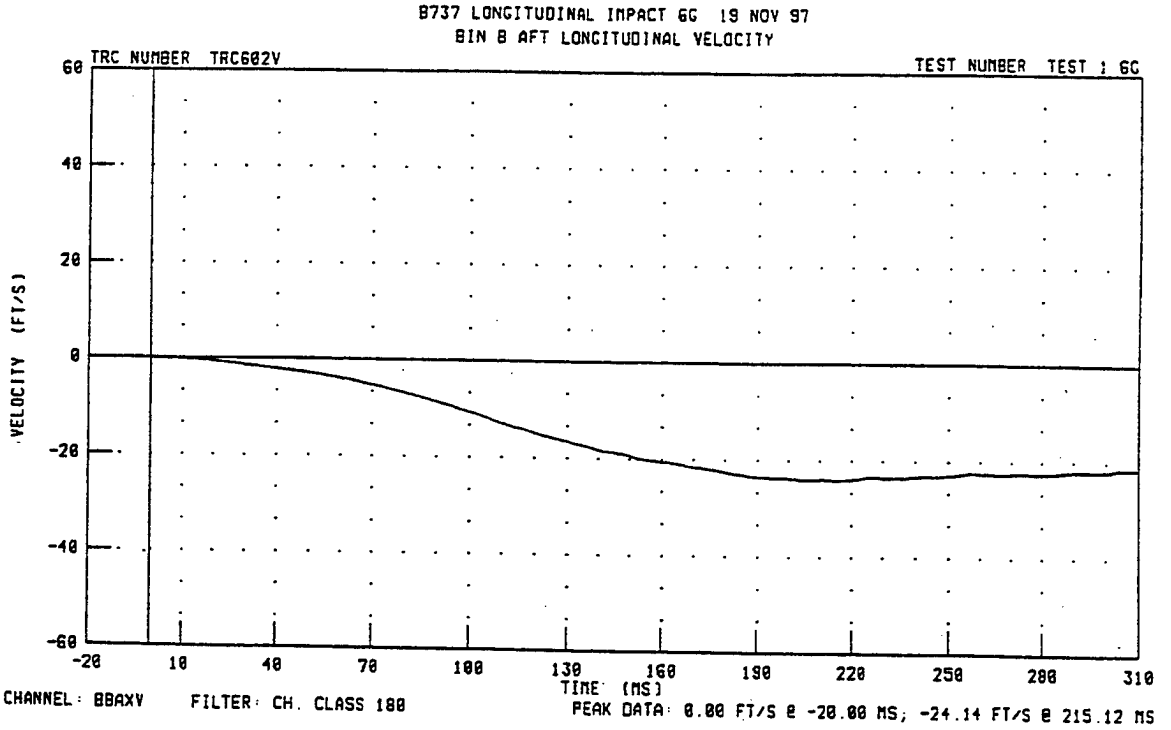

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B CENTER VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST : 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8CZG
FILTER: CH CLASS 60
PEAK DATA 9.36 G @ 269 04 MS, -8.96 G @ 245.20 MS

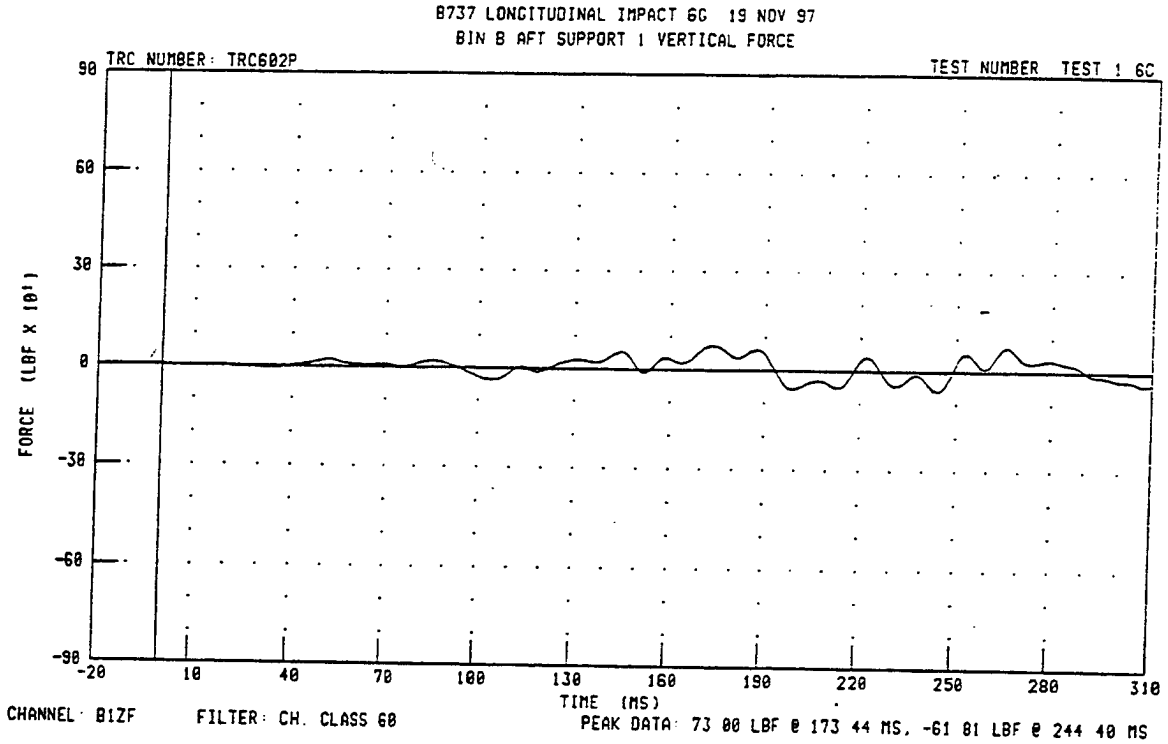

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B CENTER LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8CXV
FILTER: CH. CLASS 180
PEAK DATA: -0.04 FT/S @ -20.00 MS; -24 16 FT/S @ 215.12 MS

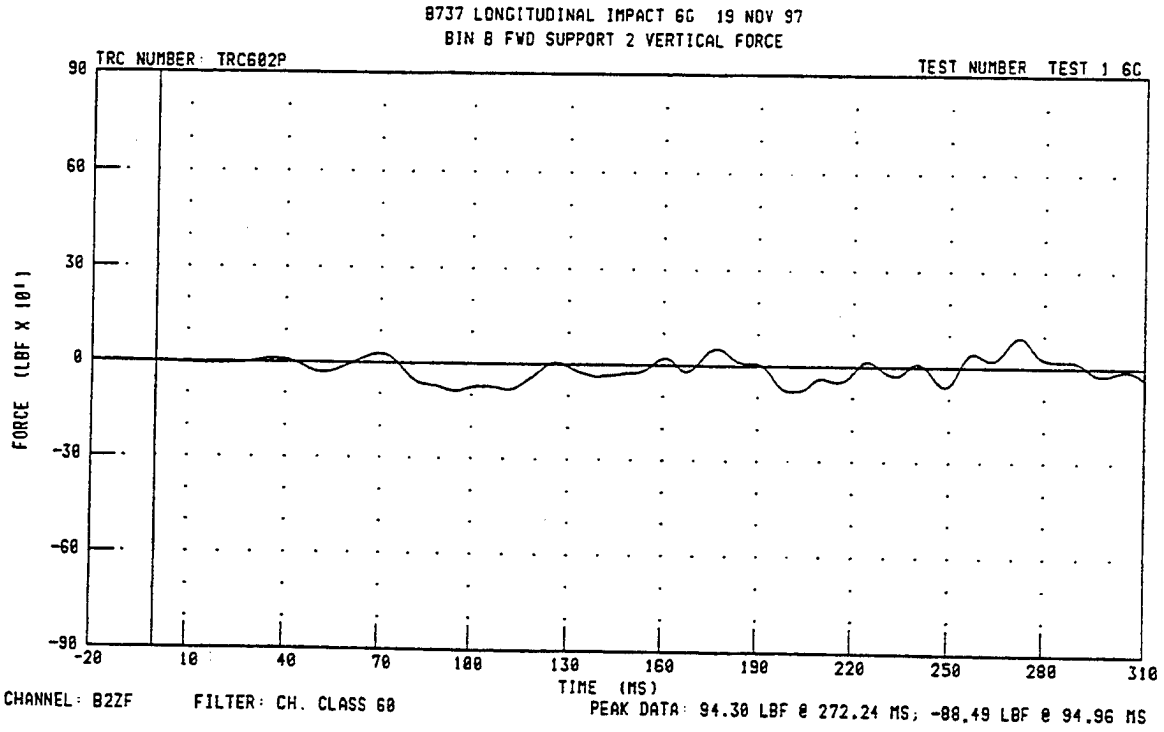

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B AFT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST : 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBAXG
FILTER: CH. CLASS 60
PEAK DATA 3 53 G @ 223.28 MS, -7.93 G @ 106 40 MS

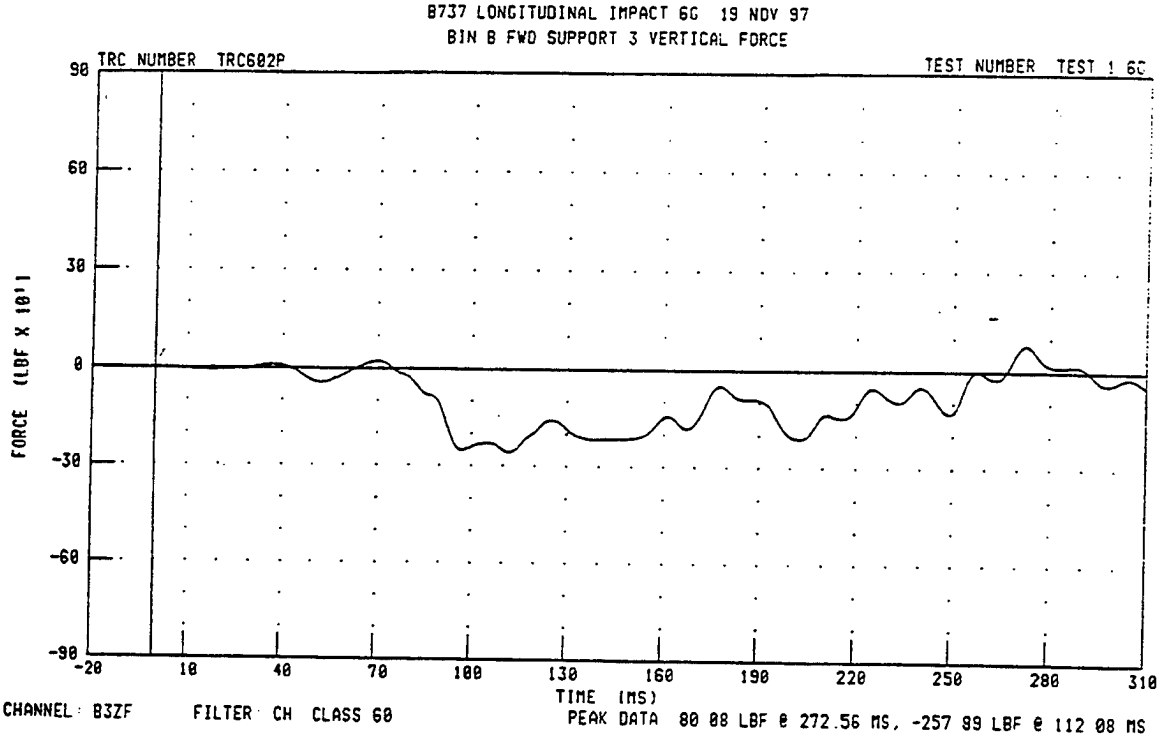

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B AFT LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBAYG
FILTER: CH. CLASS 60
PEAK DATA: 5.39 G @ 250.00 MS; -4.12 G @ 208 00 MS

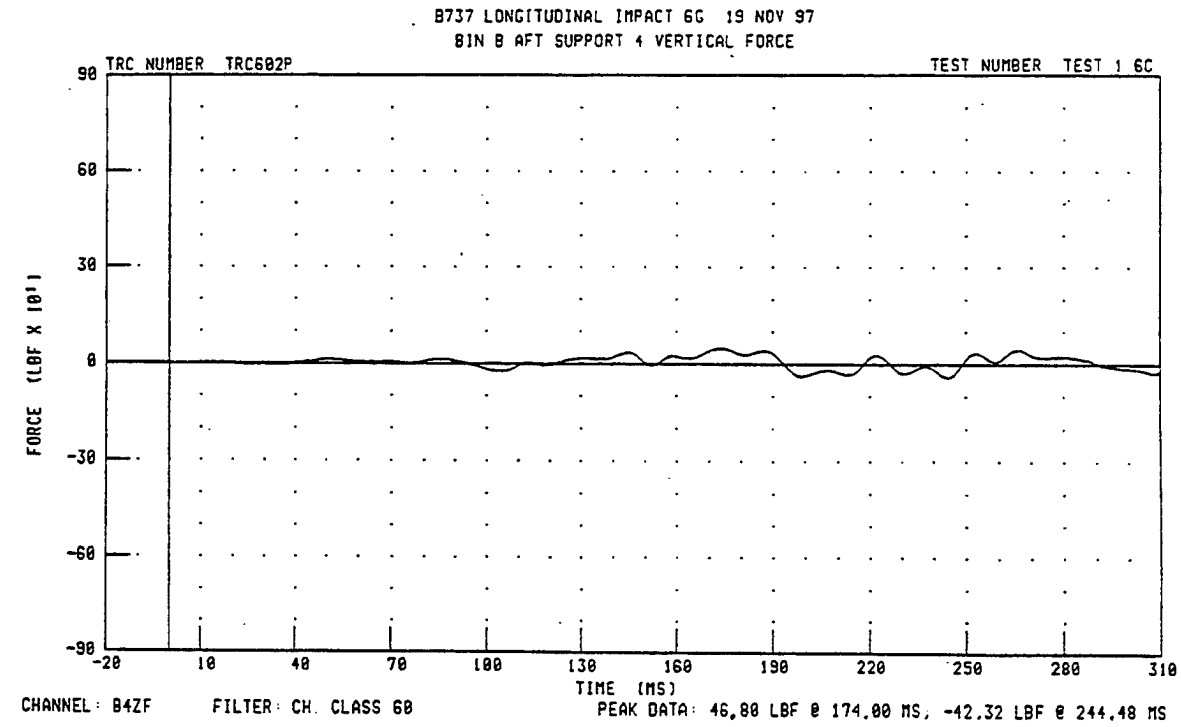

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B AFT VERTICAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST : 6C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBAZG
FILTER: CH. CLASS 60
PEAK DATA 4.98 G @ 247.52 MS; -5.73 G @ 271.04 MS

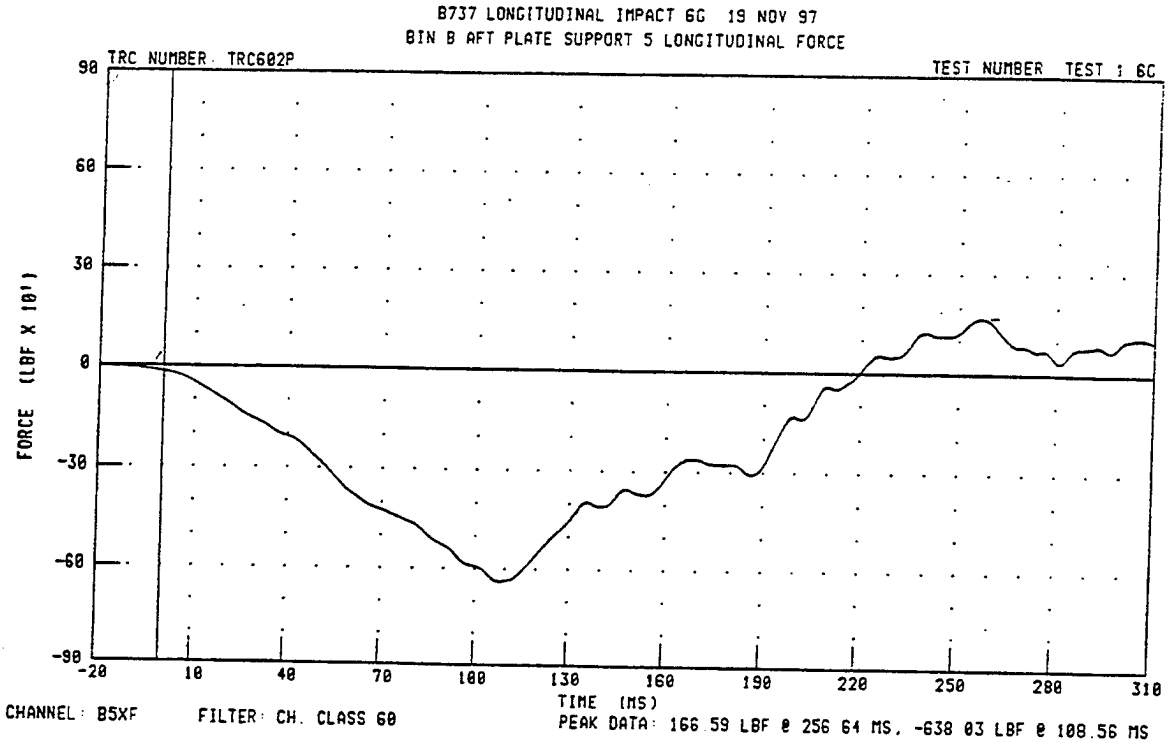

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B AFT LONGITUDINAL VELOCITY
TRC NUMBER TRC602V
TEST NUMBER TEST : 6C
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBAXV
FILTER: CH. CLASS 180
PEAK DATA: 0.00 FT/S @ -20.00 MS; -24.14 FT/S @ 215.12 MS

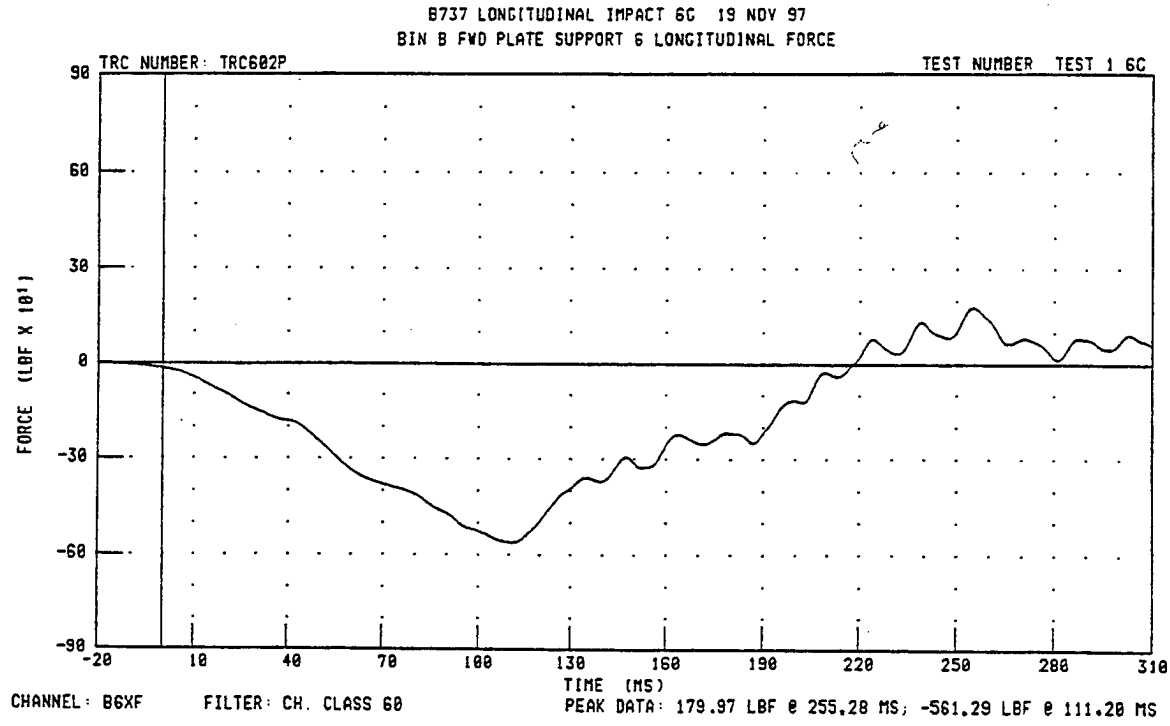

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B AFT SUPPORT 1 VERTICAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B1ZF
FILTER: CH. CLASS 60
PEAK DATA: 73.00 LBF @ 173.44 MS, -61.81 LBF @ 244.40 MS

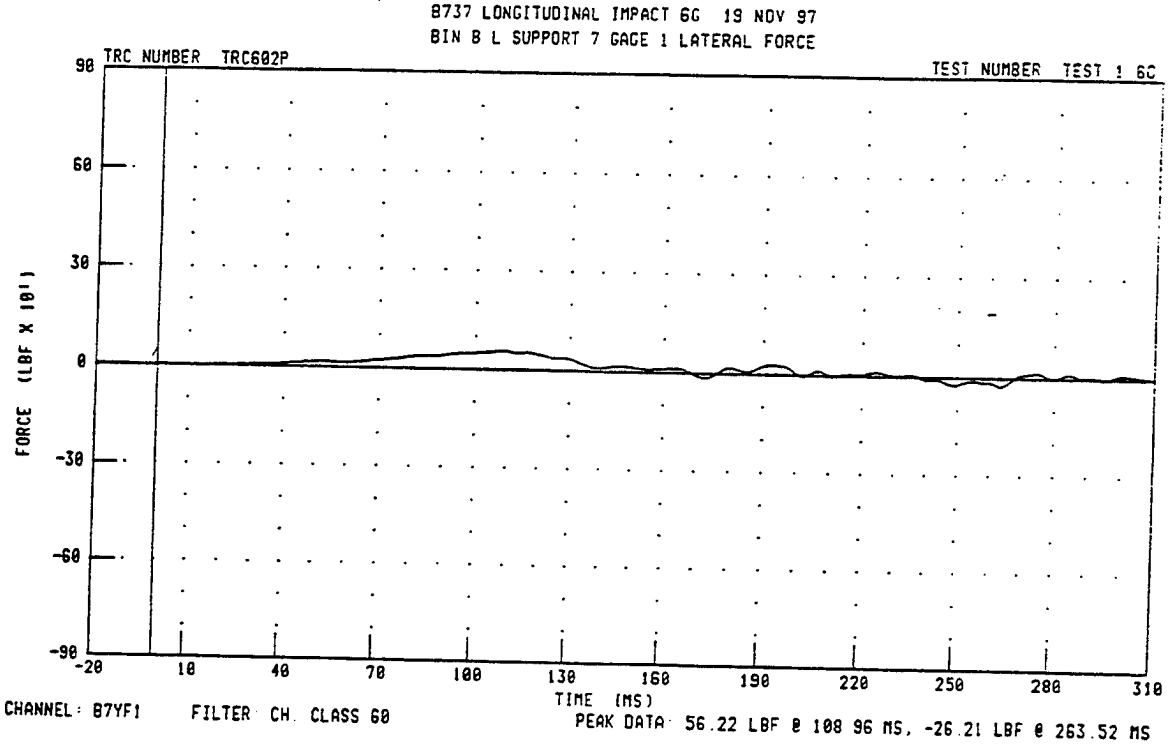

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B FWD SUPPORT 2 VERTICAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B2ZF
FILTER: CH. CLASS 60
PEAK DATA: 94.30 LBF @ 272.24 MS, -88.49 LBF @ 94.96 MS

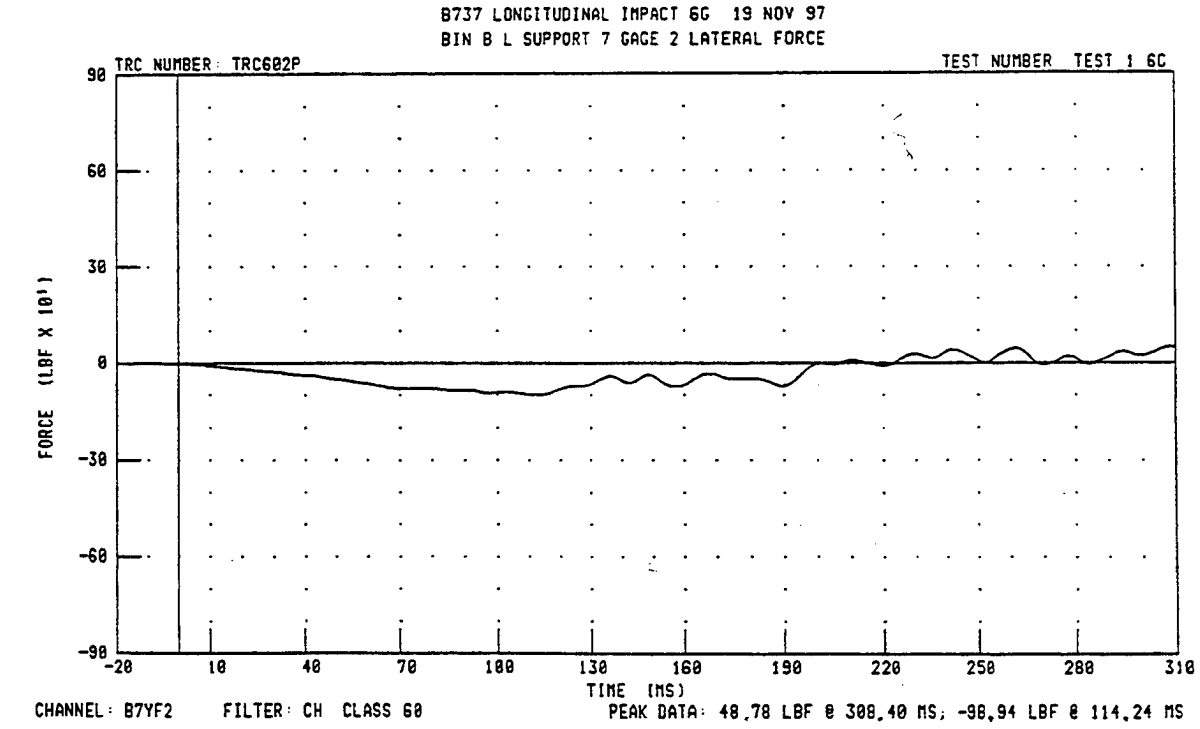

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B FWD SUPPORT 3 VERTICAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B3ZF
FILTER: CH CLASS 60
PEAK DATA 80 08 LBF @ 272.56 MS, -257 89 LBF @ 112 08 MS

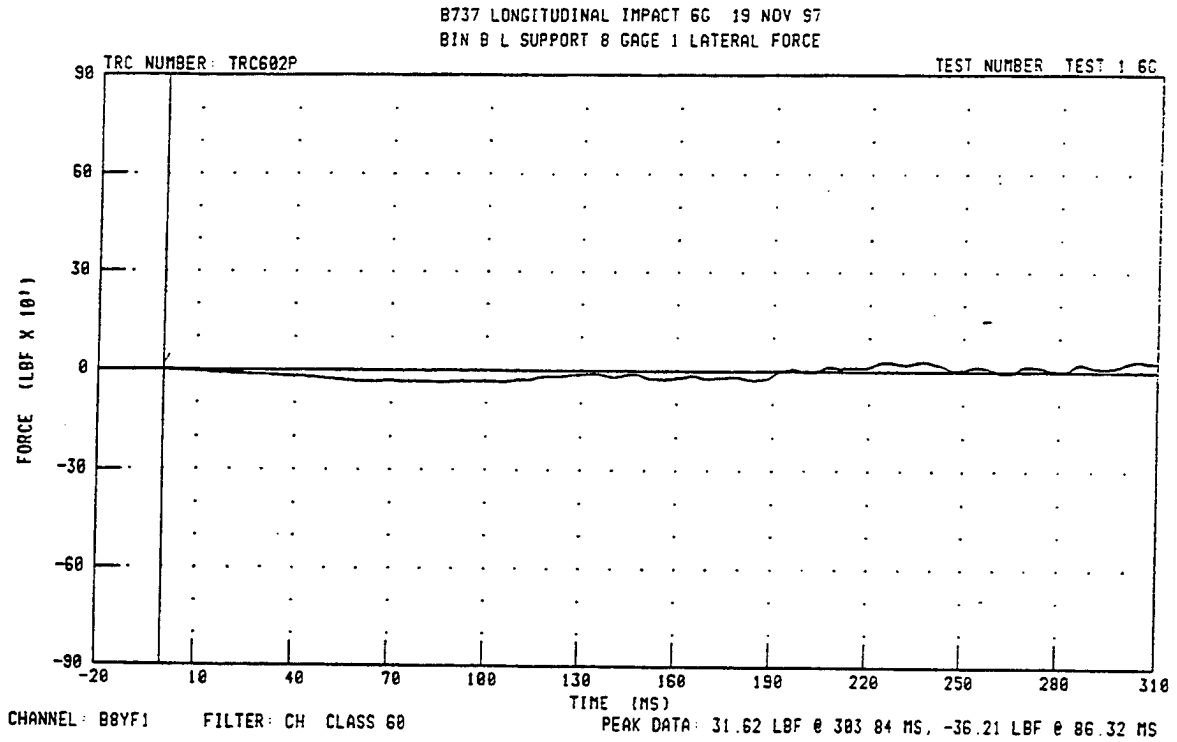

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B AFT SUPPORT 4 VERTICAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B4ZF
FILTER: CH. CLASS 60
PEAK DATA: 46.80 LBF @ 174.00 MS, -42.32 LBF @ 244.48 MS

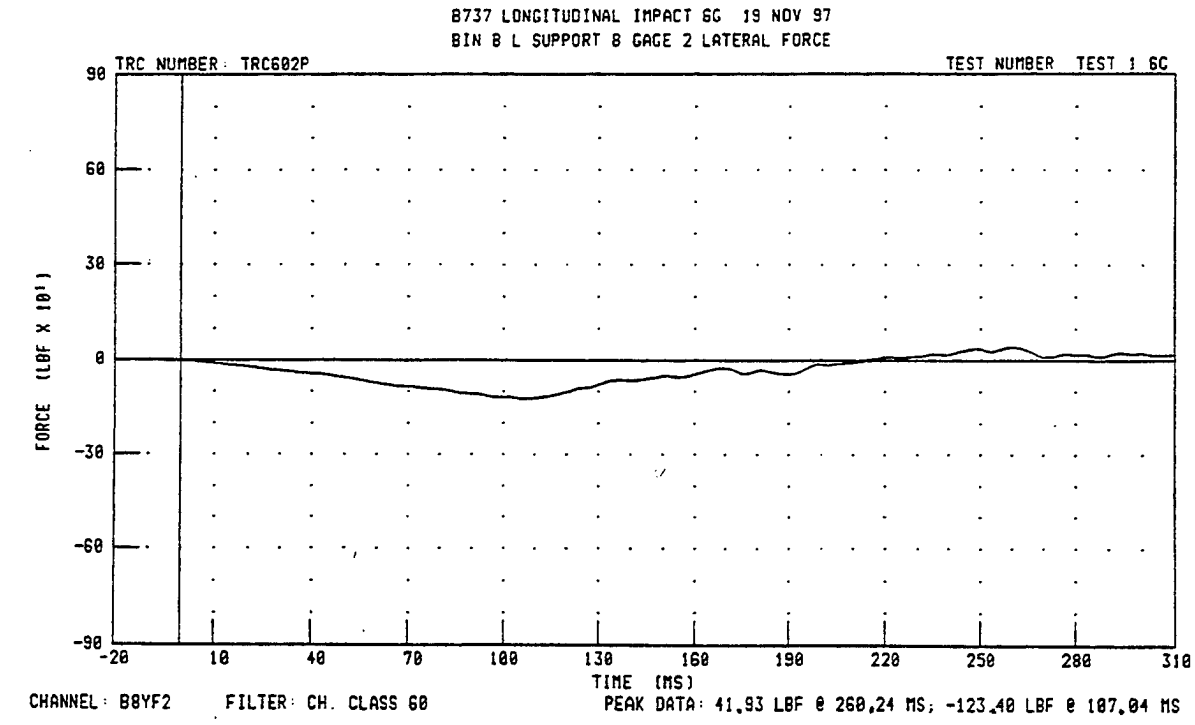

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B AFT PLATE SUPPORT 5 LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B5XF
FILTER: CH. CLASS 60
PEAK DATA: 166.59 LBF @ 256.64 MS, -638.03 LBF @ 108.56 MS

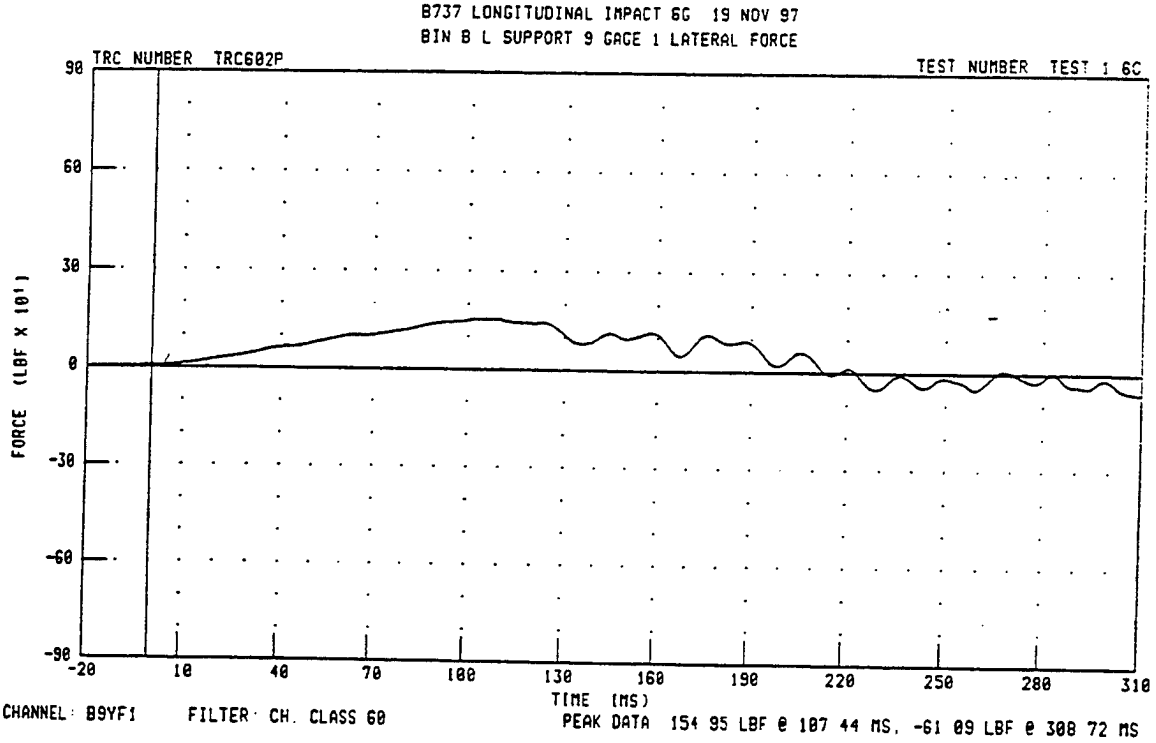

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B FWD PLATE SUPPORT 6 LONGITUDINAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B6XF
FILTER: CH. CLASS 60
PEAK DATA: 179.97 LBF @ 255.28 MS; -561.29 LBF @ 111.20 MS

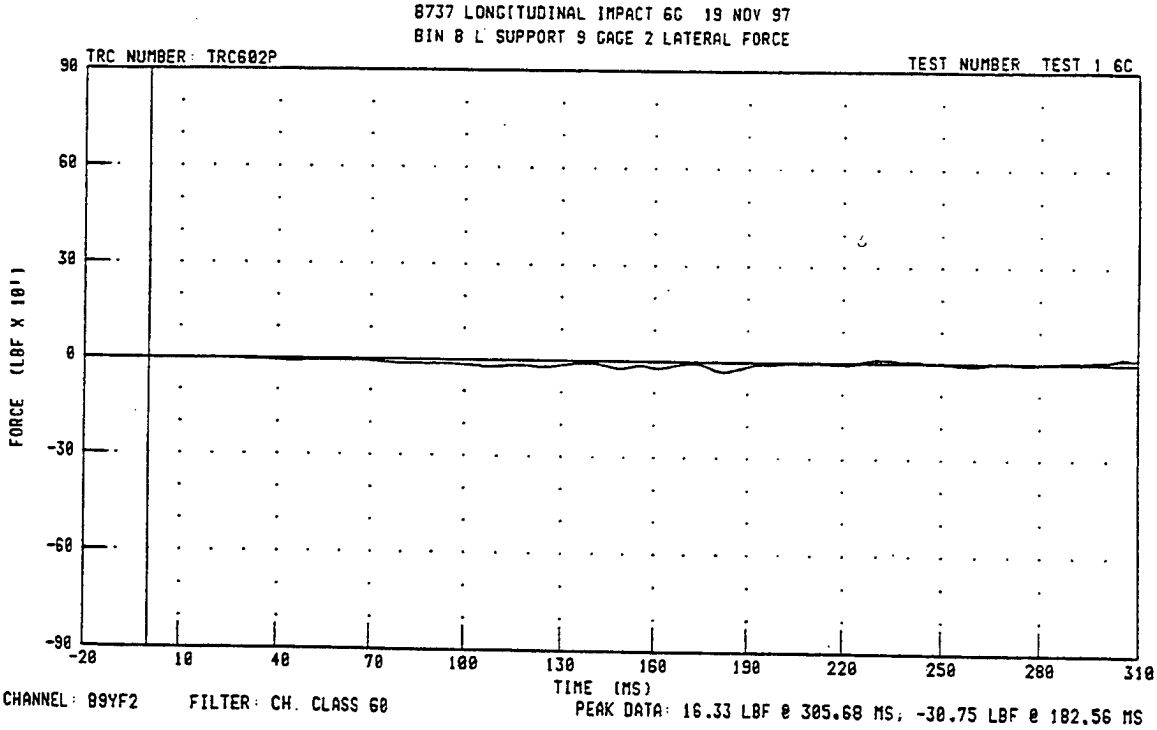

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT 7 GAGE 1 LATERAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B7YF1
FILTER CH CLASS 60
PEAK DATA: 56.22 LBF @ 108.96 MS, -26.21 LBF @ 263.52 MS

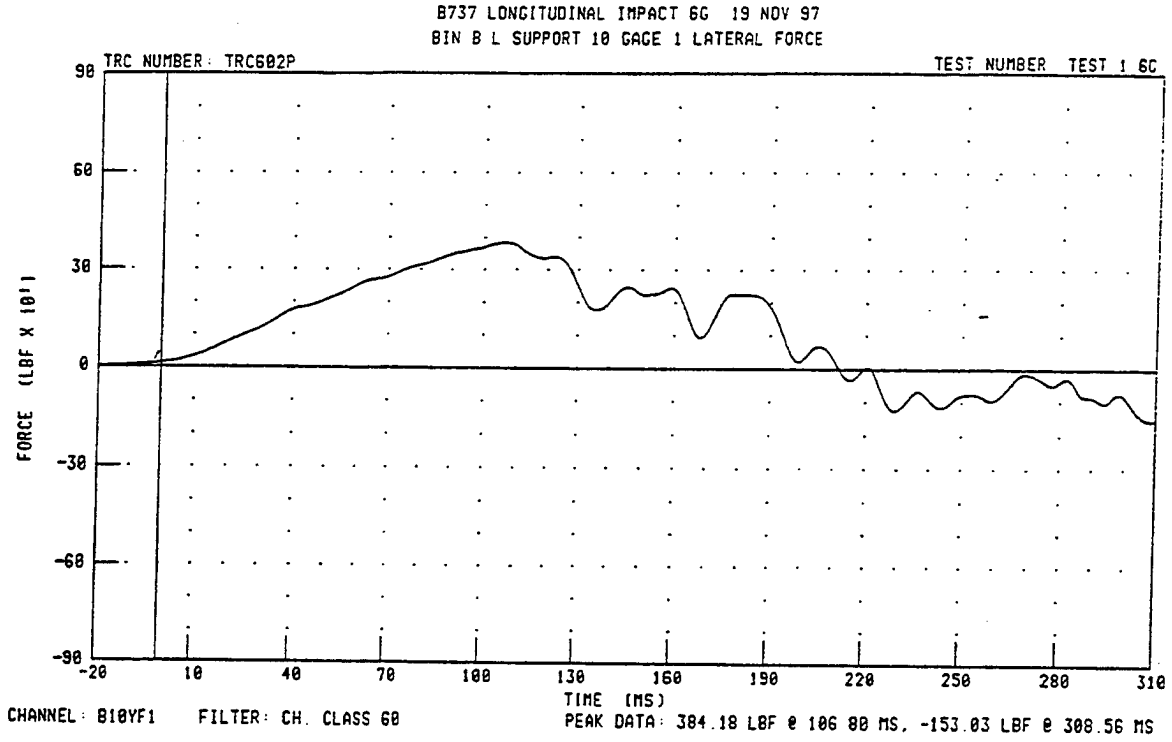

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT 7 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B7YF2
FILTER: CH CLASS 60
PEAK DATA: 48.78 LBF @ 308.40 MS; -98.94 LBF @ 114.24 MS

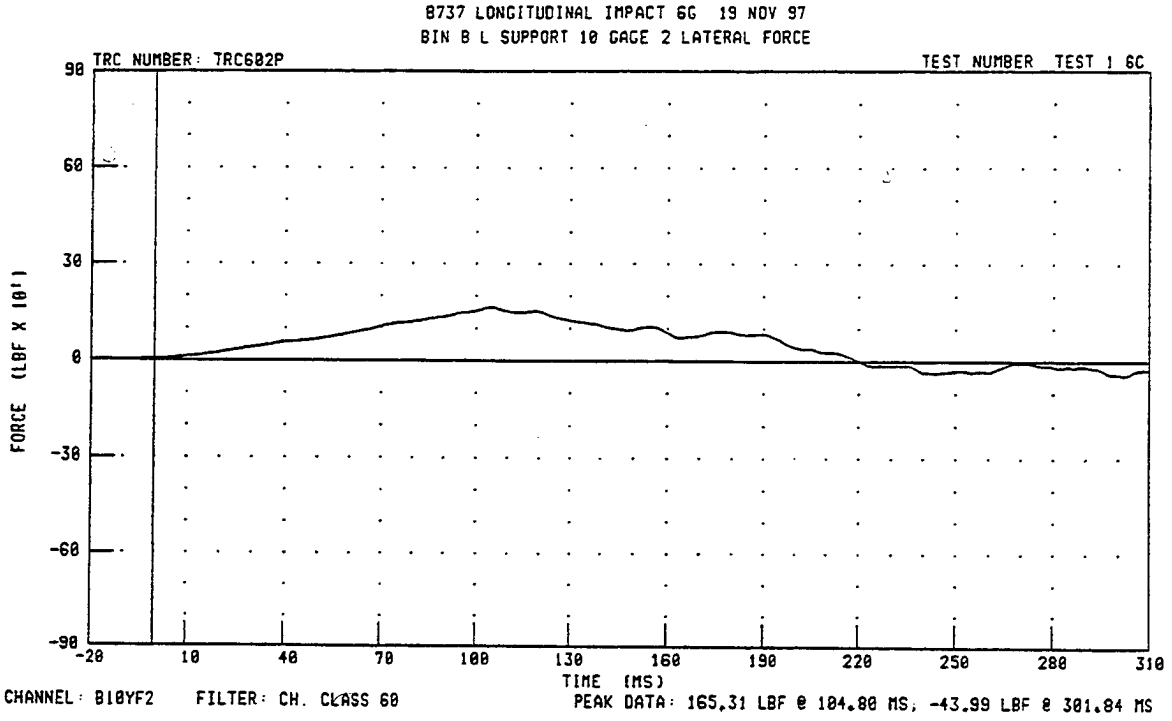

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT B GAGE 1 LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8YF1
FILTER: CH CLASS 60
PEAK DATA: 31.62 LBF @ 303 84 MS, -36.21 LBF @ 86.32 MS

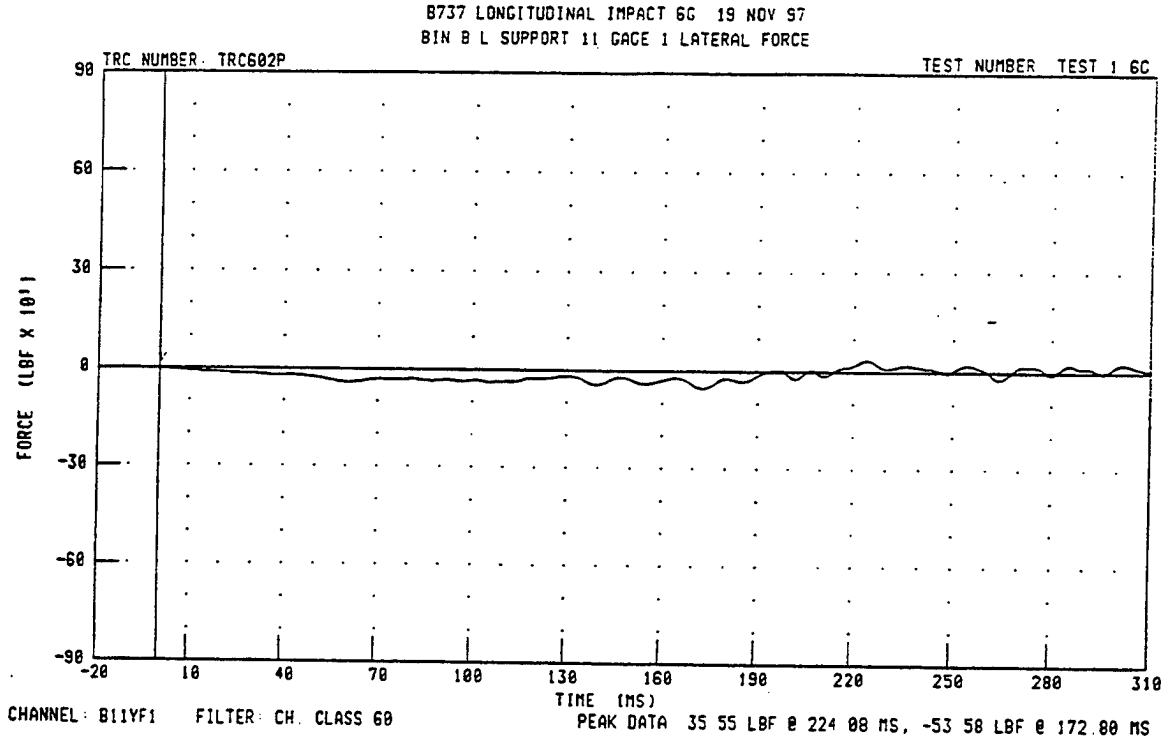

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT B GAGE 2 LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8YF2
FILTER: CH. CLASS 60
PEAK DATA: 41.93 LBF @ 260.24 MS; -123.40 LBF @ 107.04 MS

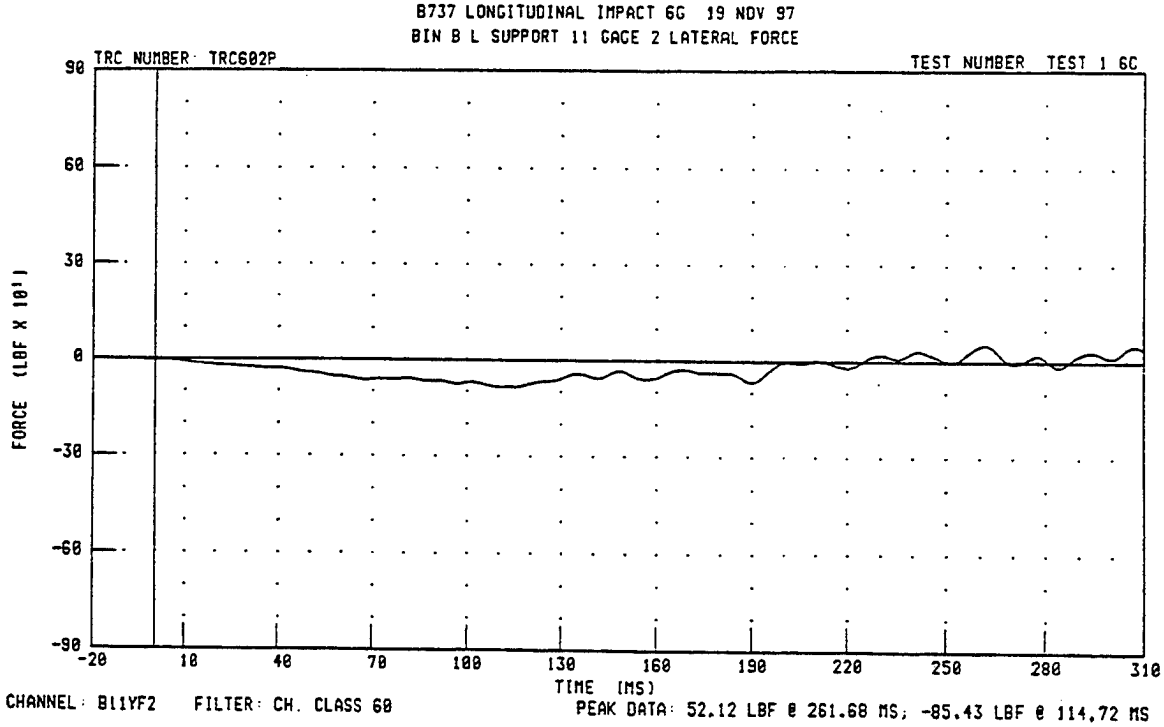

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT 9 GAGE 1 LATERAL FORCE
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B9YF1
FILTER: CH. CLASS 60
PEAK DATA 154.95 LBF @ 107.44 MS, -61.09 LBF @ 308.72 MS

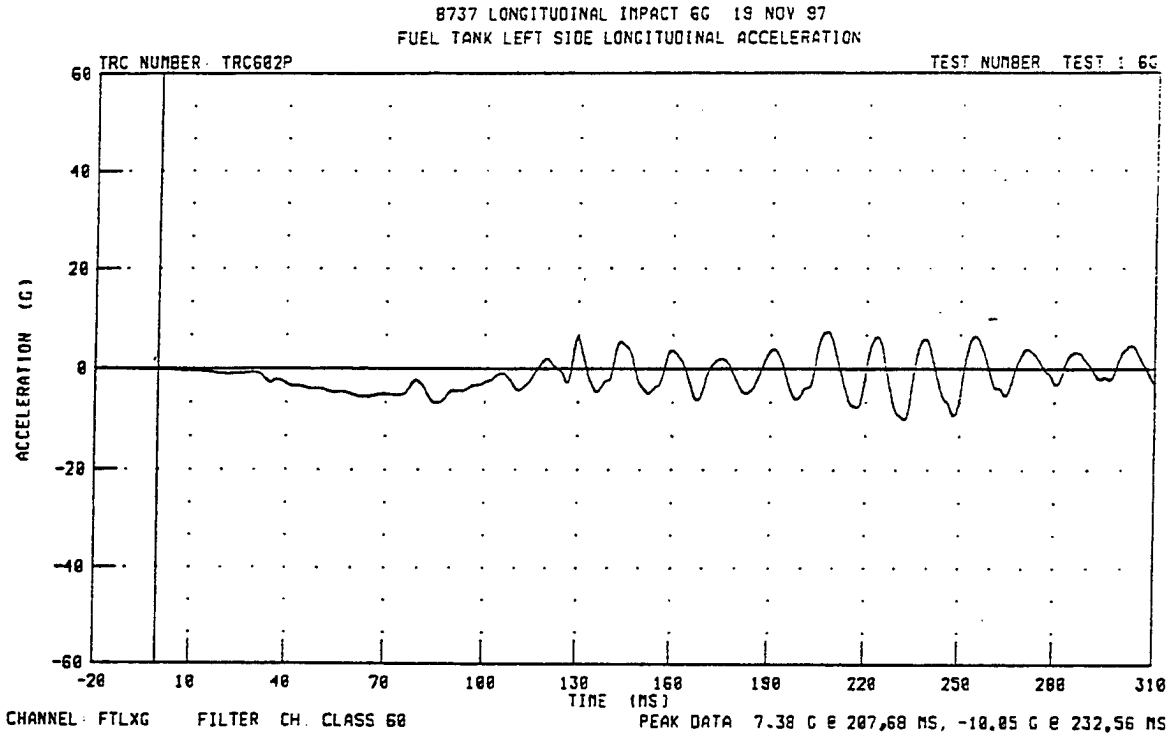

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT 9 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B9YF2
FILTER: CH. CLASS 60
PEAK DATA: 16.33 LBF @ 305.68 MS, -30.75 LBF @ 182.56 MS

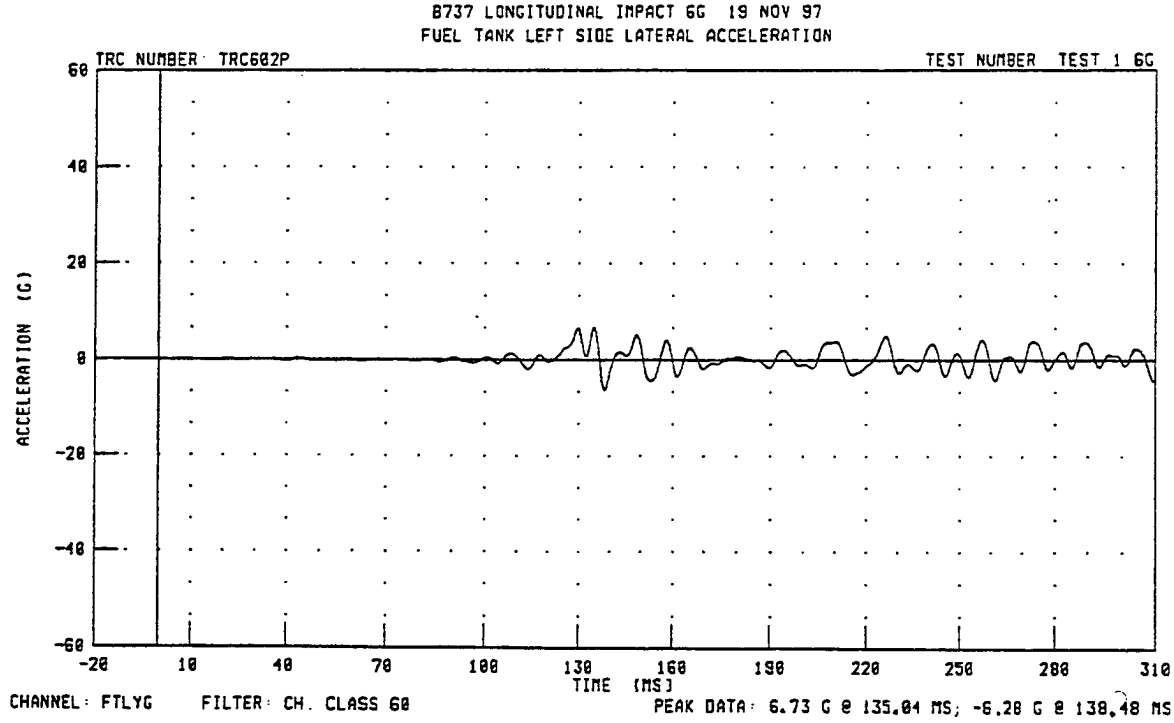

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT 10 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B10YF1
FILTER: CH. CLASS 60
PEAK DATA: 384.18 LBF @ 106.80 MS, -153.03 LBF @ 308.56 MS

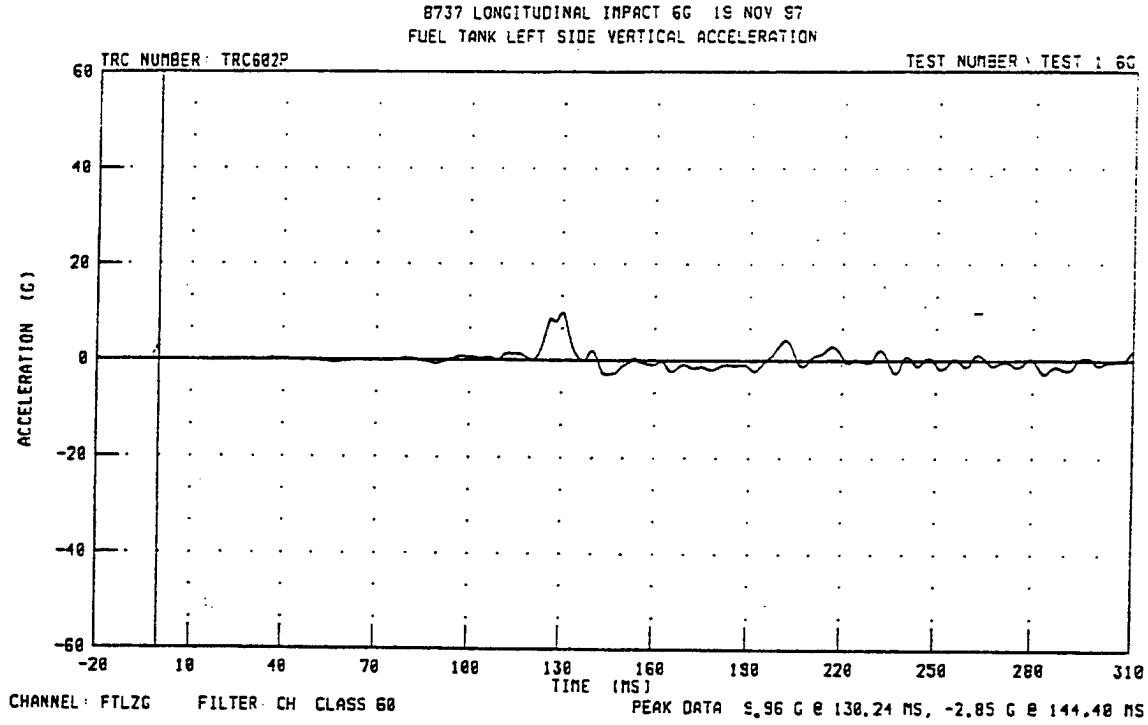

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT 10 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B10YF2
FILTER: CH. CLASS 60
PEAK DATA: 165.31 LBF @ 104.80 MS, -43.99 LBF @ 301.84 MS

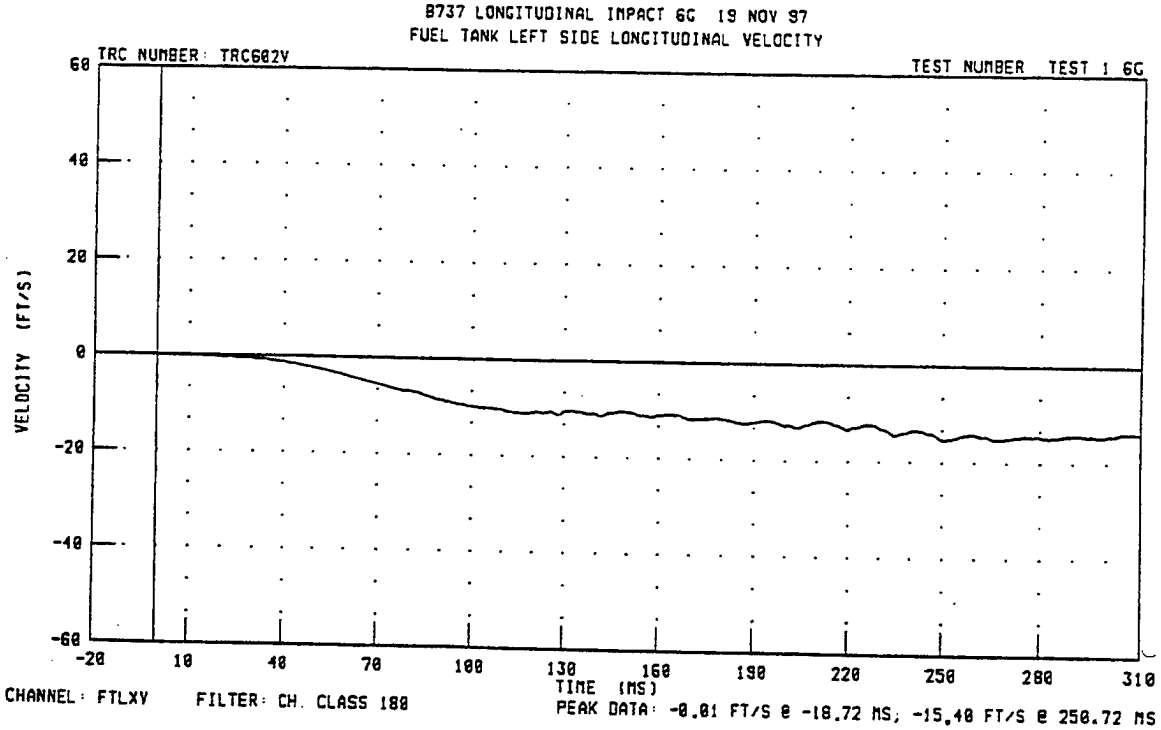

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT 11 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER: TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B11YF1
FILTER: CH. CLASS 60
PEAK DATA 35.55 LBF @ 224.08 MS, -53.58 LBF @ 172.80 MS

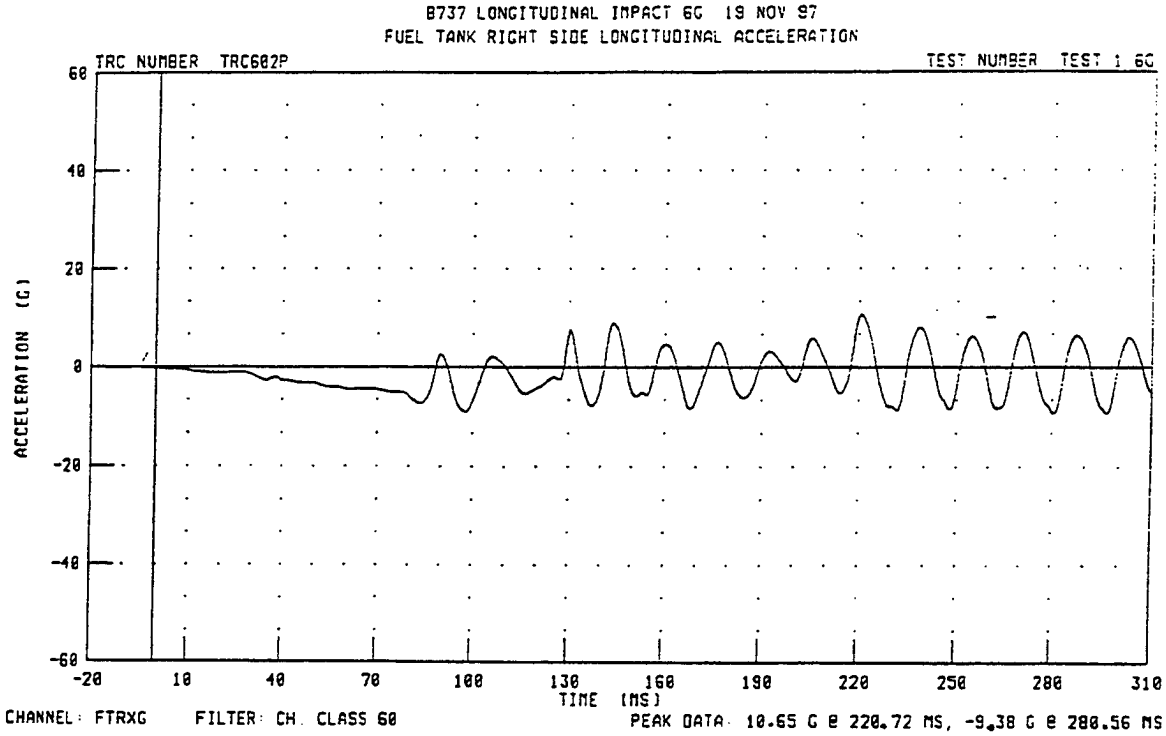

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
BIN B L SUPPORT 11 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC602P
TEST NUMBER: TEST 1 6C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B11YF2
FILTER: CH. CLASS 60
PEAK DATA: 52.12 LBF @ 261.68 MS; -85.43 LBF @ 114.72 MS

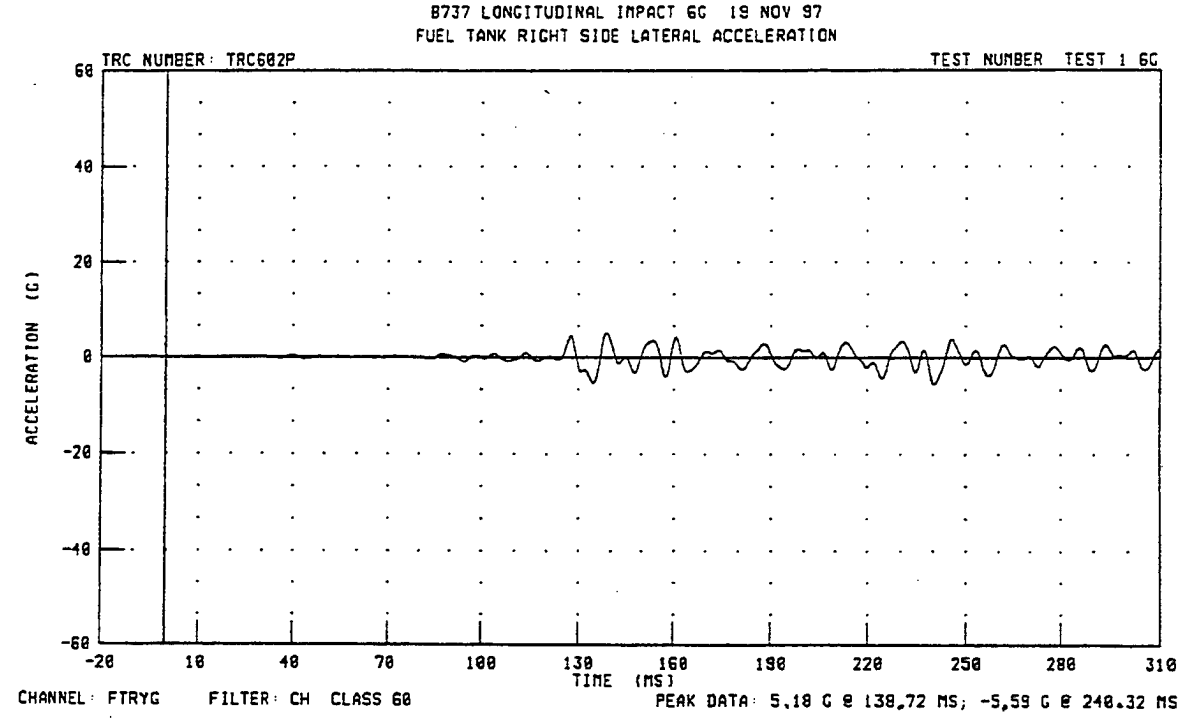

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK LEFT SIDE LONGITUDINAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL FTLXG
FILTER CH. CLASS 60
PEAK DATA 7.38 G @ 207.68 MS, -10.05 G @ 232.56 MS

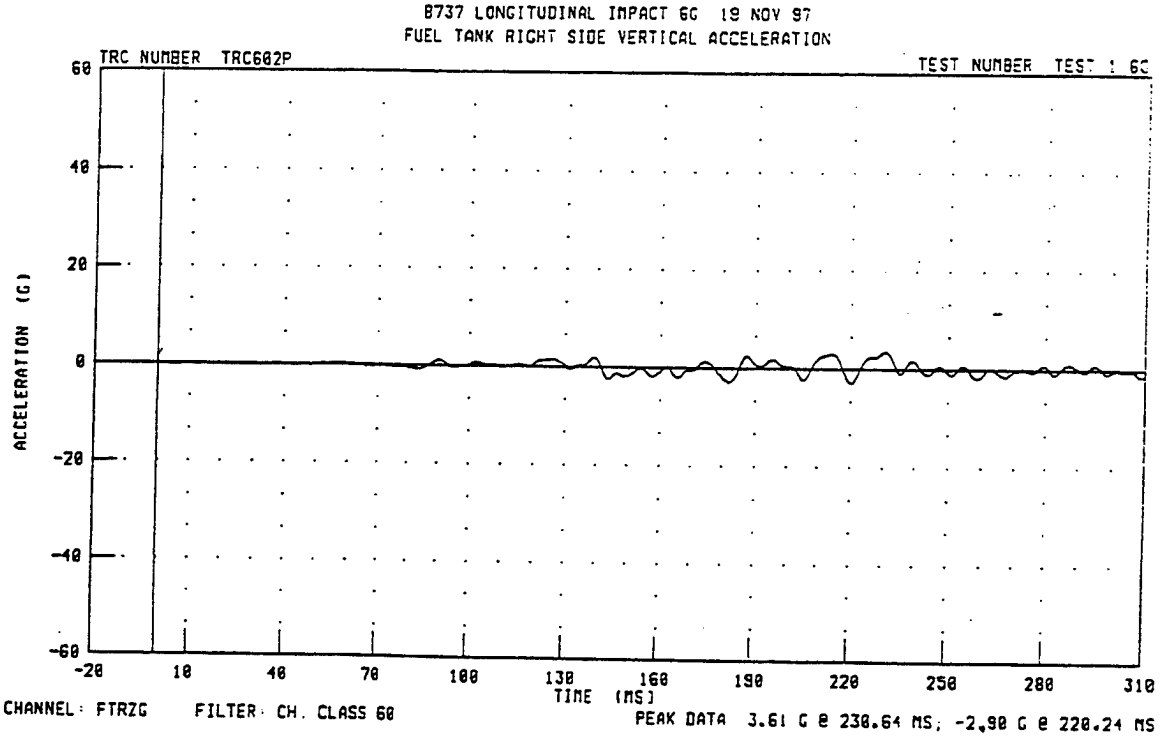

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK LEFT SIDE LATERAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL FTLYG
FILTER CH. CLASS 60
PEAK DATA 6.73 G @ 135.04 MS, -6.28 G @ 138.48 MS

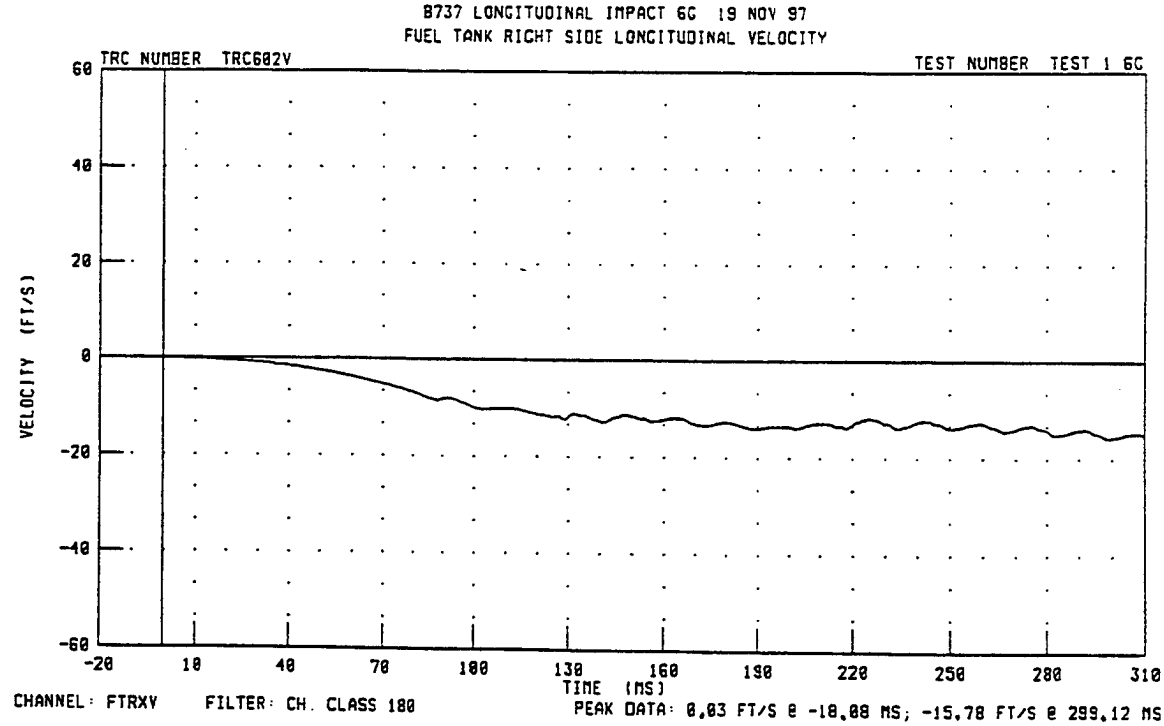

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK LEFT SIDE VERTICAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER: TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FTLZG
FILTER: CH CLASS 60
PEAK DATA 5.96 G @ 130.24 MS, -2.85 G @ 144.48 MS

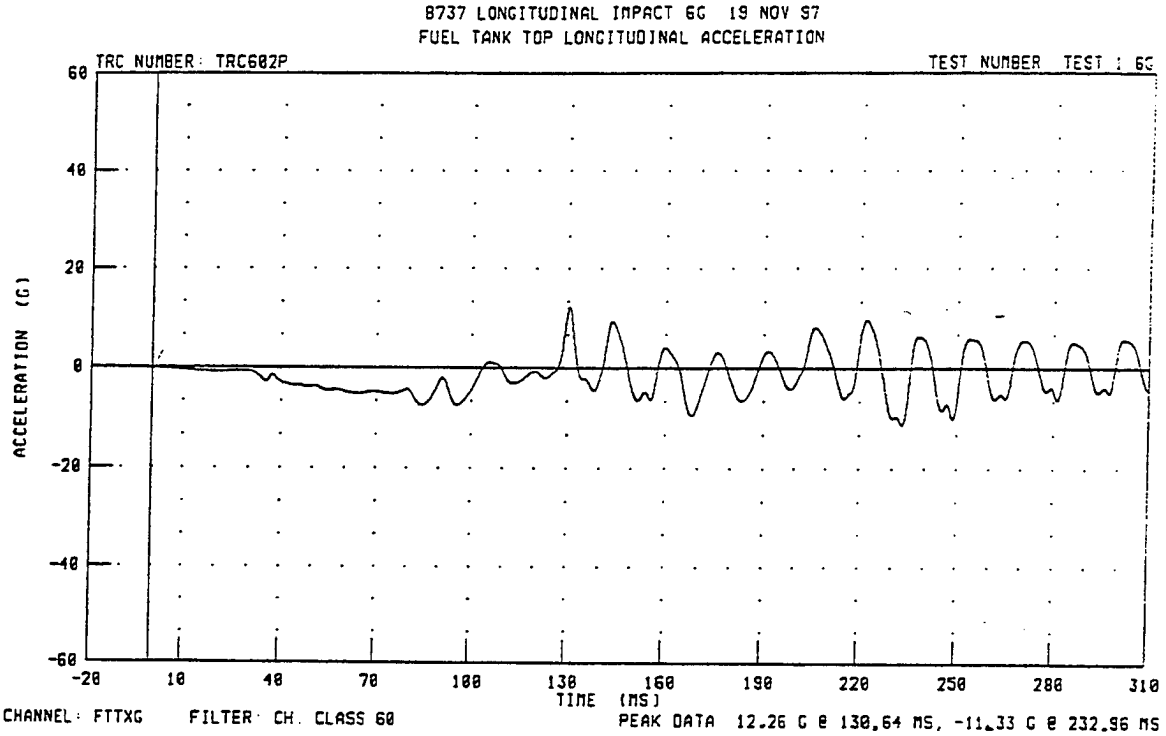

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK LEFT SIDE LONGITUDINAL VELOCITY
TRC NUMBER: TRC602V
TEST NUMBER TEST 1 6G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FTLXV
FILTER: CH. CLASS 180
PEAK DATA: -0.01 FT/S @ -18.72 MS; -15.40 FT/S @ 250.72 MS

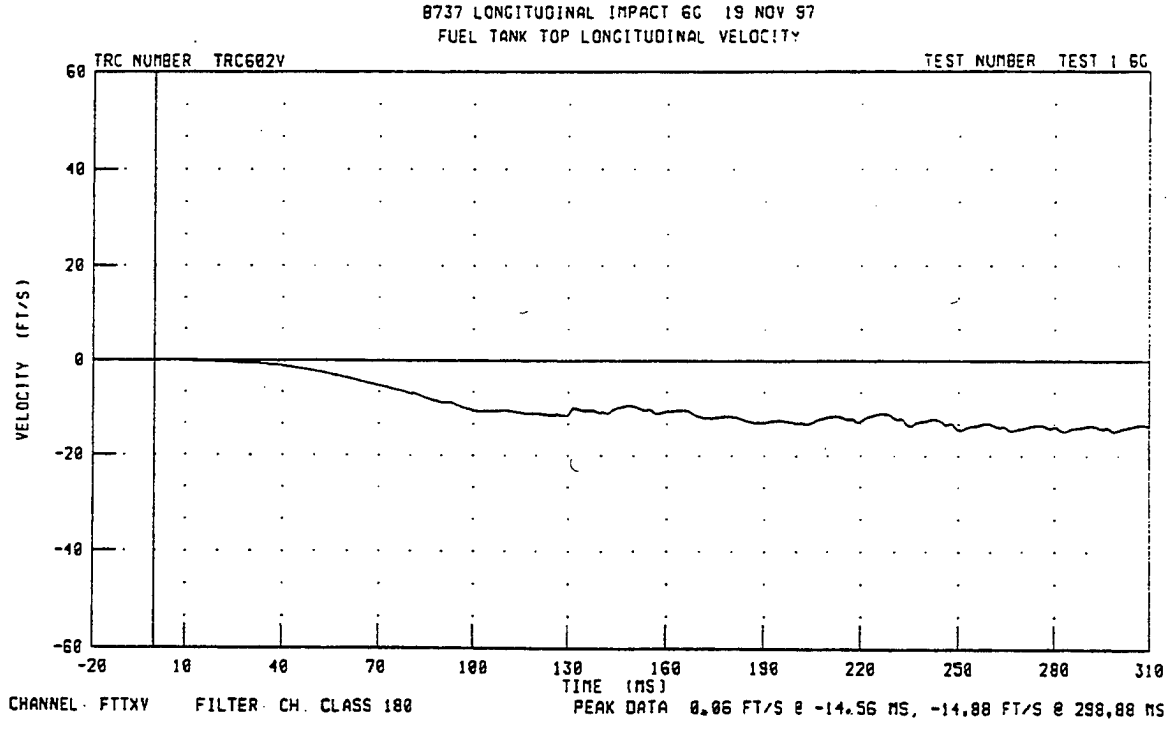

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK RIGHT SIDE LONGITUDINAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FTRXG
FILTER: CH. CLASS 60
PEAK DATA: 10.65 G @ 220.72 MS, -9.38 G @ 280.56 MS

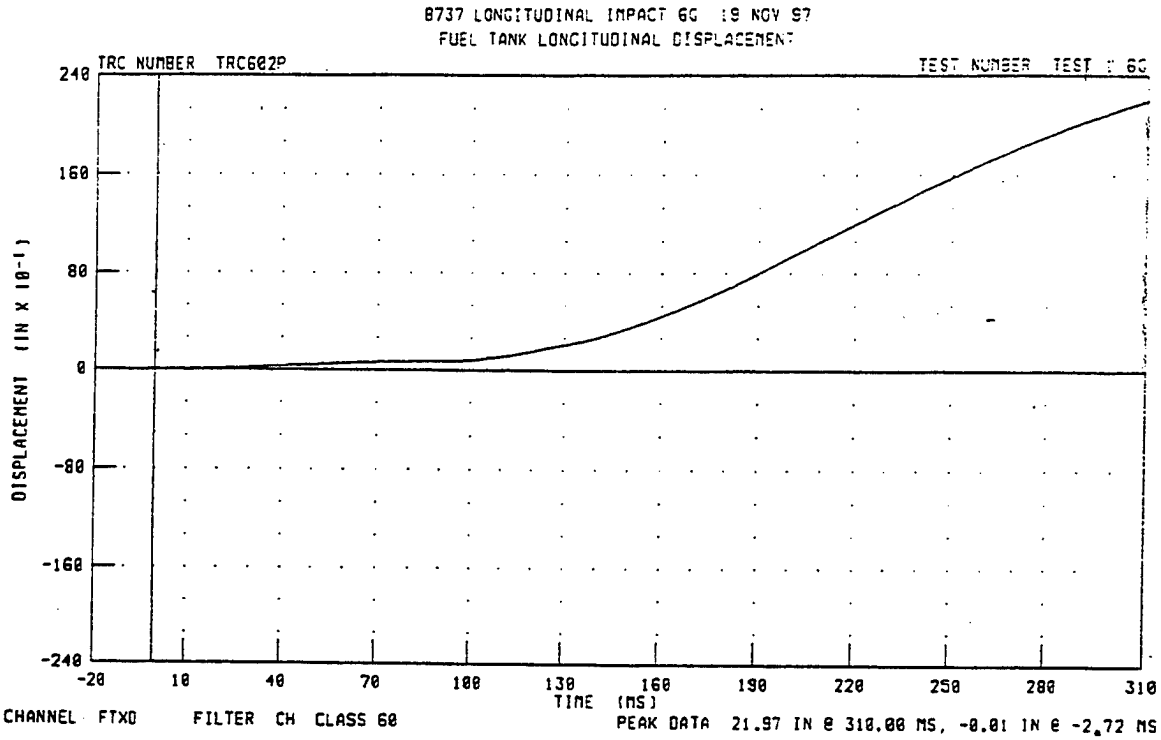

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK RIGHT SIDE LATERAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST 1 6G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FTRYG
FILTER: CH CLASS 60
PEAK DATA: 5.18 G @ 138.72 MS; -5.59 G @ 240.32 MS


B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK RIGHT SIDE VERTICAL ACCELERATION
TRC NUMBER TRC602P
TEST NUMBER TEST 1 6C
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FTRZG
FILTER: CH. CLASS 60
PEAK DATA 3.61 G @ 230.64 MS; -2.90 G @ 220.24 MS

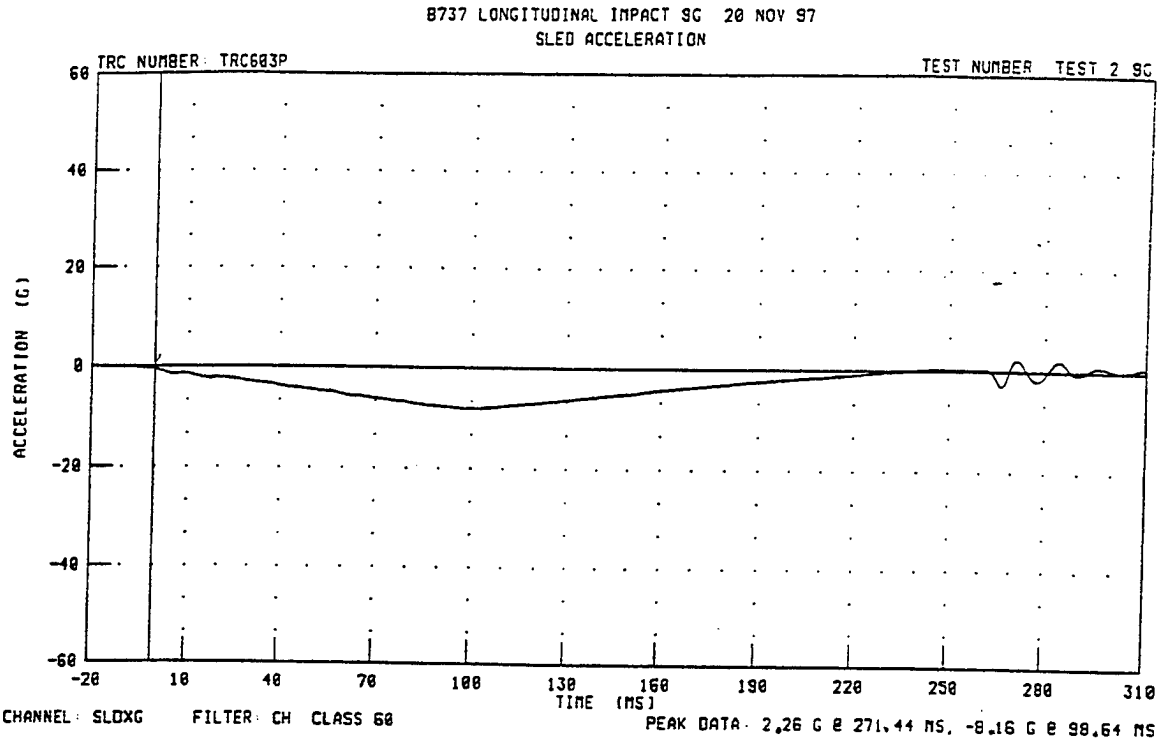

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK RIGHT SIDE LONGITUDINAL VELOCITY
TRC NUMBER TRC602V
TEST NUMBER TEST 1 6C
60
40
20
0
-20
-40
-60
VELOCITY (FT/S)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FTRXV
FILTER: CH. CLASS 180
PEAK DATA: 0.03 FT/S @ -18.88 MS; -15.78 FT/S @ 299.12 MS

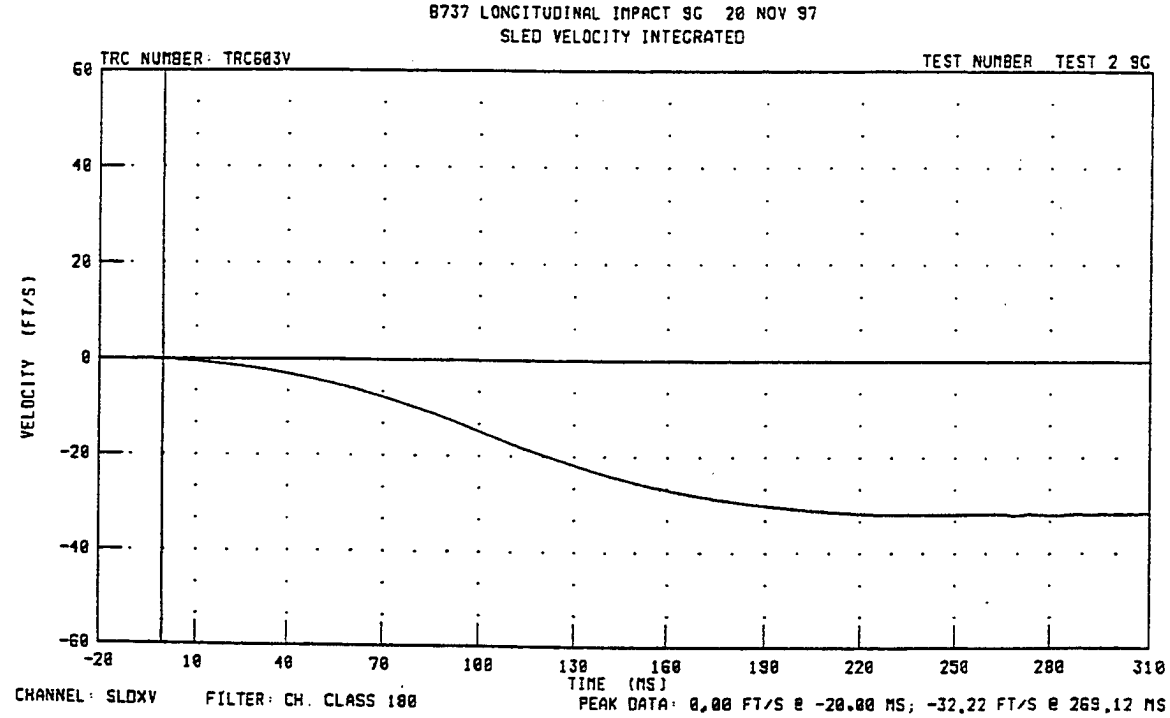

B737 LONGITUDINAL IMPACT 6C 19 NOV 97
FUEL TANK TOP LONGITUDINAL ACCELERATION
TRC NUMBER: TRC602P
TEST NUMBER TEST : 6C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FTTXG
FILTER: CH. CLASS 60
PEAK DATA 12.26 G @ 130.64 MS, -11.33 G @ 232.96 MS

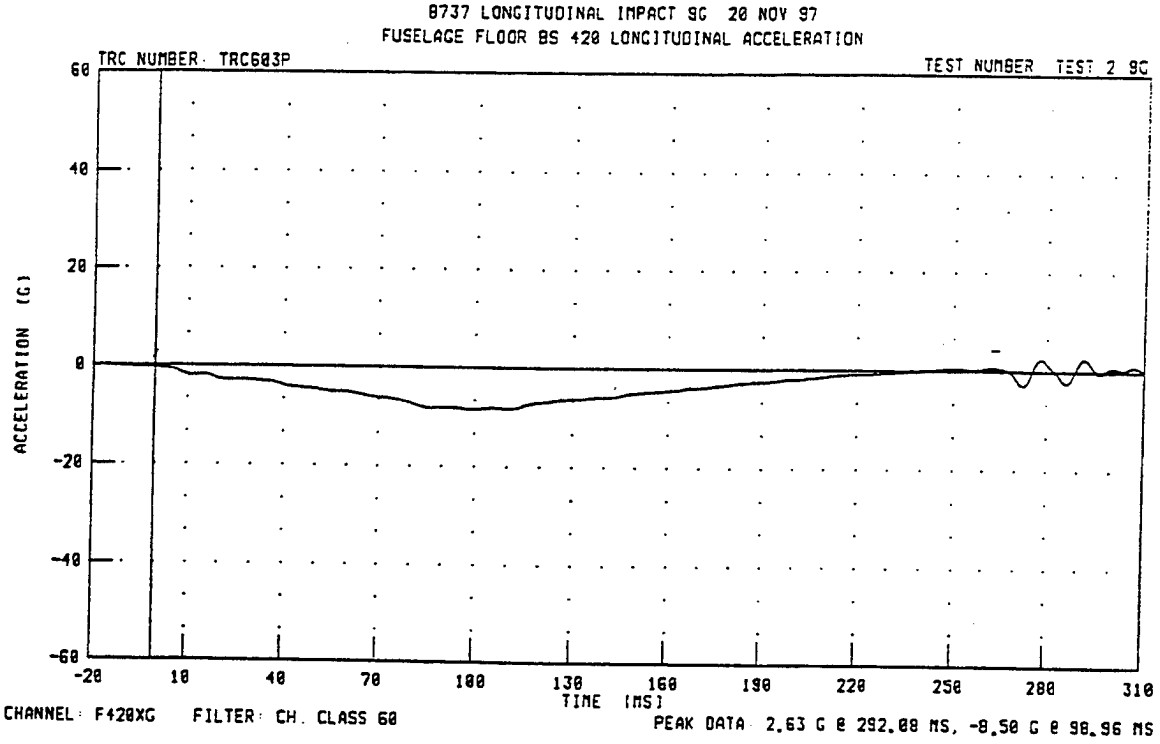

B737 LONGITUDINAL IMPACT 6C 19 NOV 97
FUEL TANK TOP LONGITUDINAL VELOCITY
TRC NUMBER TRC602V
TEST NUMBER TEST 1 6C
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: FTTXV
FILTER: CH. CLASS 180
PEAK DATA 0.06 FT/S @ -14.56 MS, -14.88 FT/S @ 298.88 MS

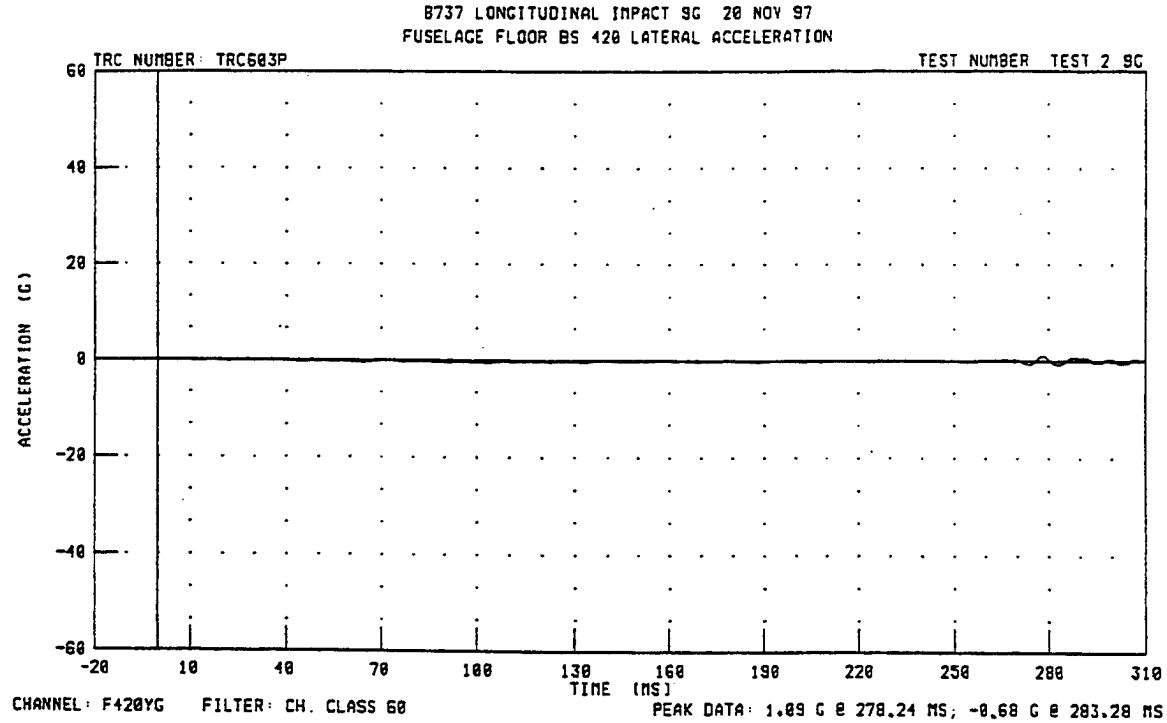

B737 LONGITUDINAL IMPACT 6G 19 NOV 97
FUEL TANK LONGITUDINAL DISPLACEMENT
TRC NUMBER TRC602P
TEST NUMBER TEST # 6G
240
160
80
0
-80
-160
-240
DISPLACEMENT (IN X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL FTXD
FILTER CH CLASS 60
PEAK DATA 21.97 IN @ 310.00 MS, -0.01 IN @ -2.72 MS

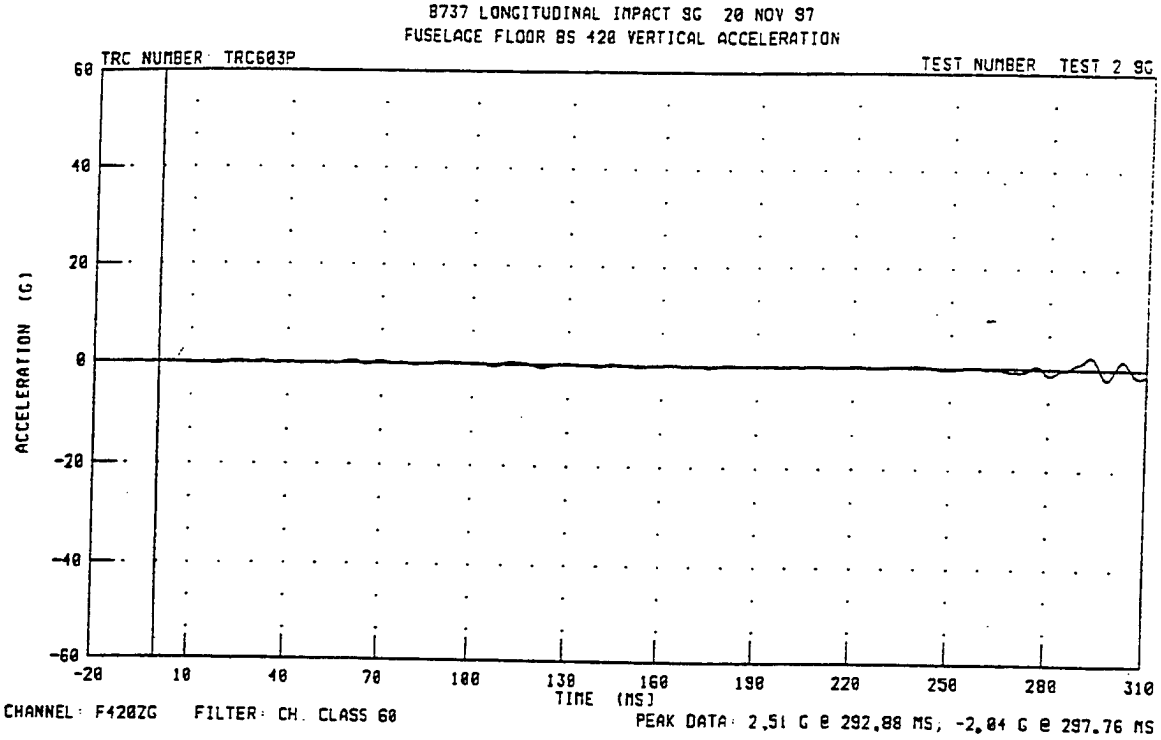
TEST 2

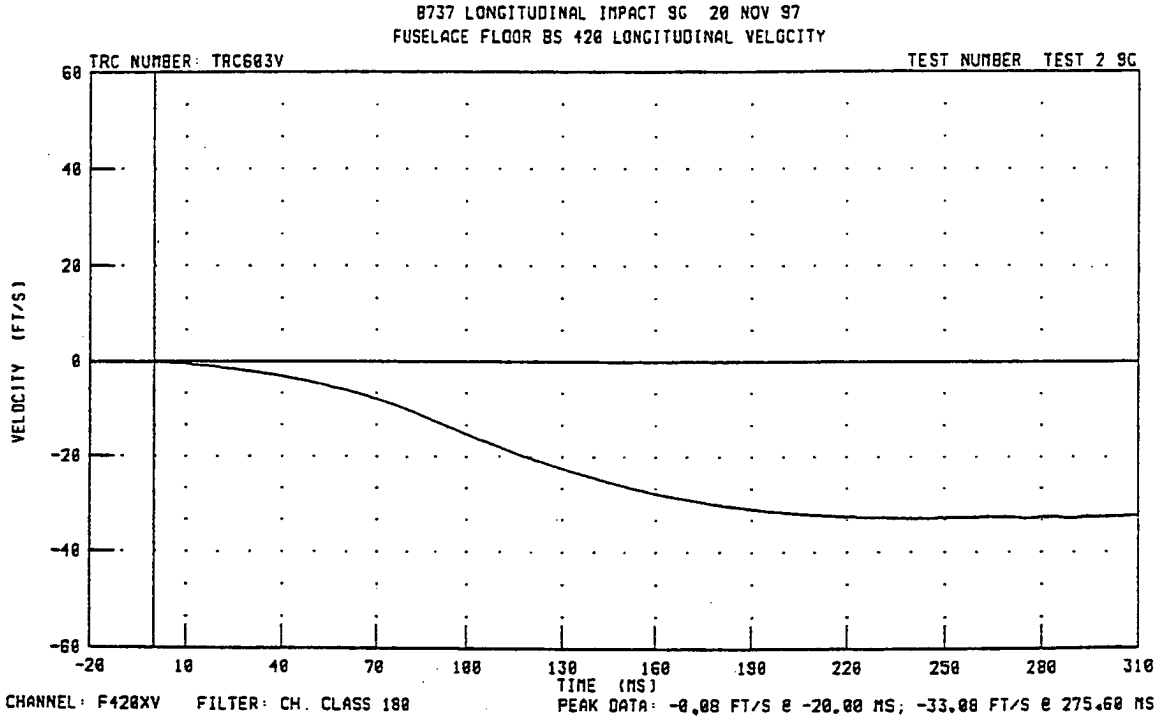

B737 LONGITUDINAL IMPACT SG 20 NOV 97
SLED ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SG
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: SLDXG
FILTER: CH CLASS 60
PEAK DATA: 2.26 G @ 271.44 MS, -8.16 G @ 98.64 MS

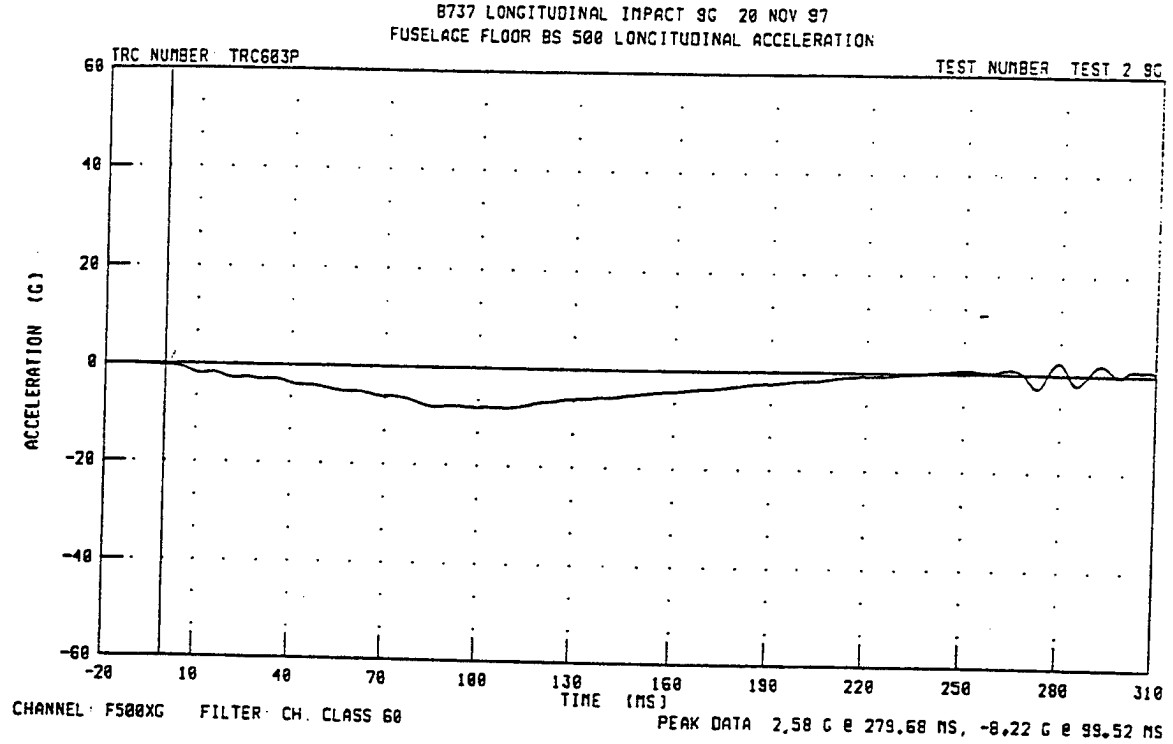

B737 LONGITUDINAL IMPACT SG 20 NOV 97
SLED VELOCITY INTEGRATED
TRC NUMBER: TRC603V
TEST NUMBER TEST 2 SG
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: SLDXV
FILTER: CH. CLASS 180
PEAK DATA: 0.00 FT/S @ -20.00 MS; -32.22 FT/S @ 269.12 MS

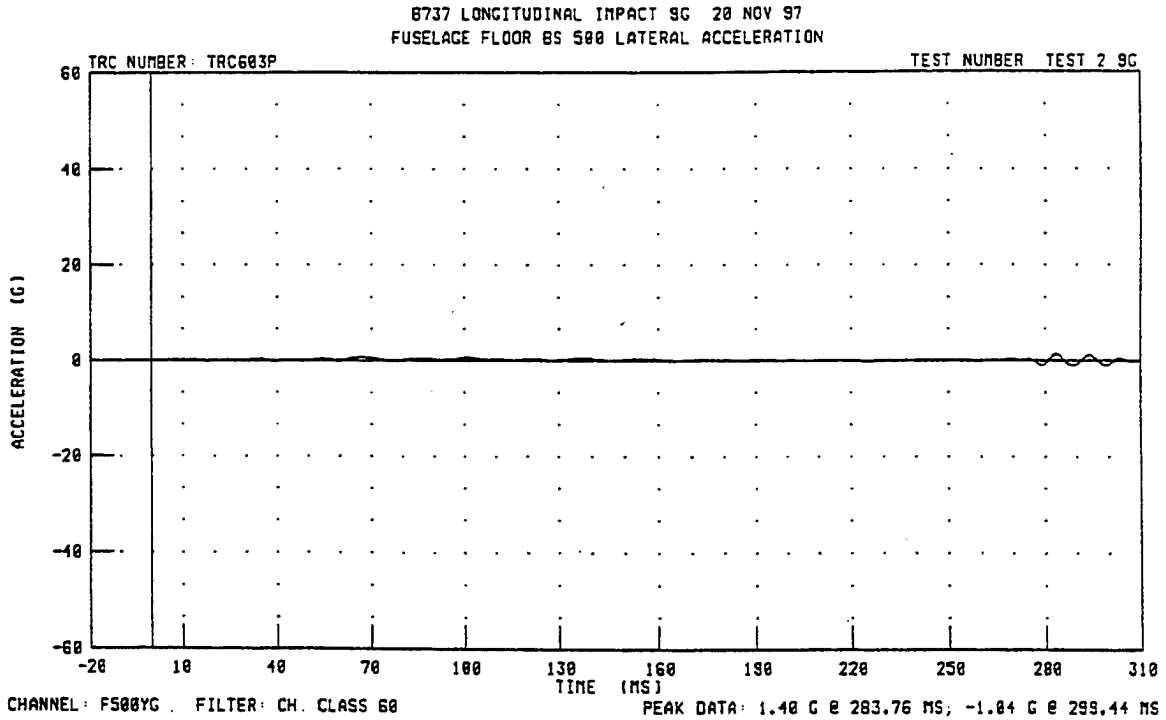

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE FLOOR BS 420 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420XG
FILTER: CH. CLASS 60
PEAK DATA: 2.63 G @ 292.08 MS, -8.50 G @ 98.96 MS

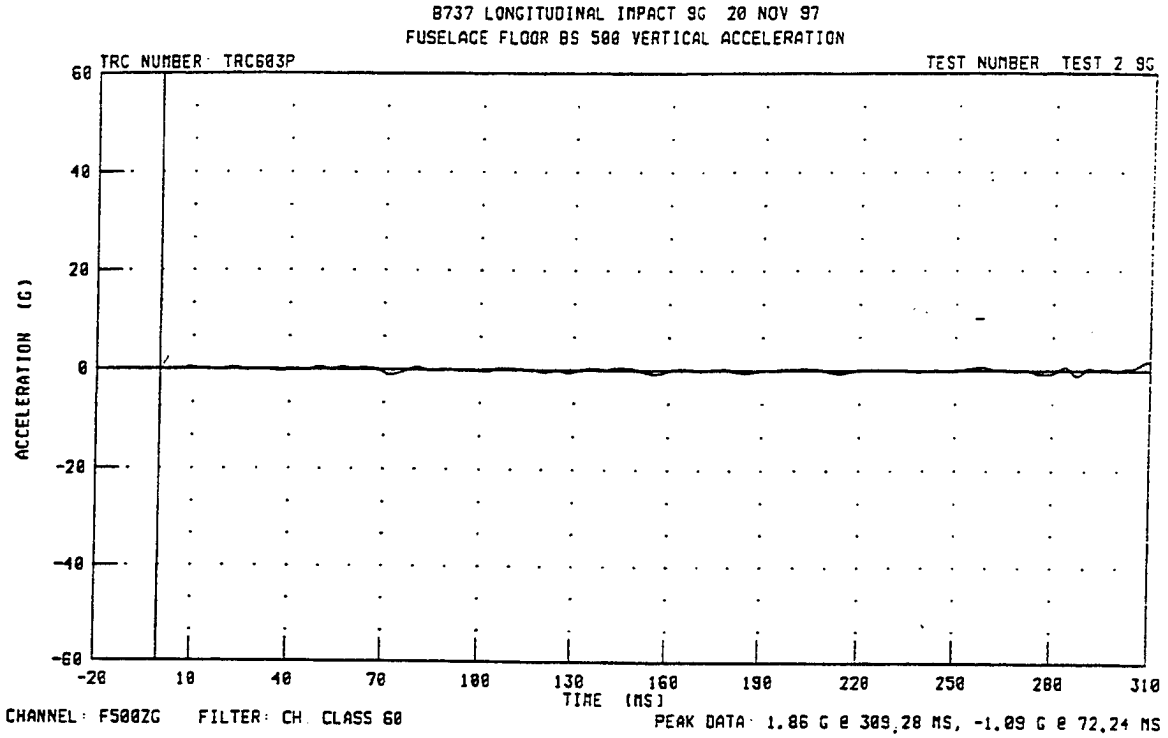

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE FLOOR BS 420 LATERAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420YG
FILTER: CH. CLASS 60
PEAK DATA: 1.09 G @ 278.24 MS; -0.68 G @ 283.28 MS

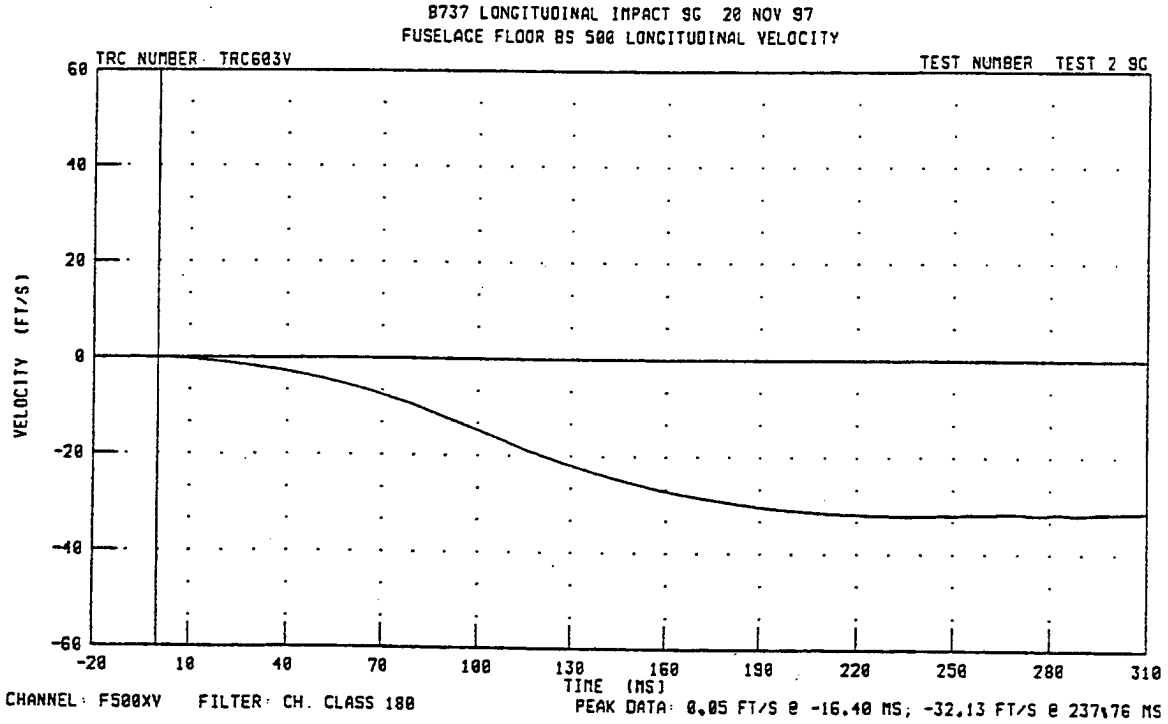

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE FLOOR BS 420 VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420ZG
FILTER: CH. CLASS 60
PEAK DATA: 2.51 G @ 292.88 MS; -2.04 G @ 297.76 MS

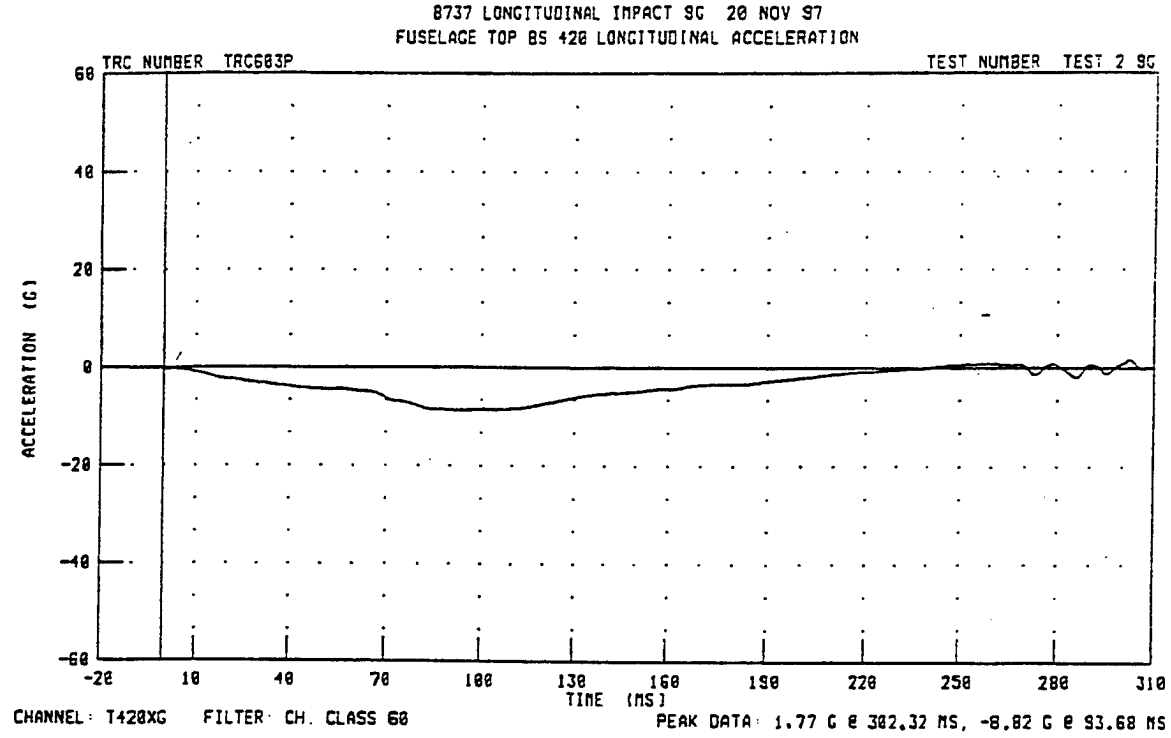

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE FLOOR BS 420 LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER TEST 2 SC
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420XV
FILTER: CH. CLASS 180
PEAK DATA: -0.08 FT/S @ -20.00 MS; -33.08 FT/S @ 275.60 MS

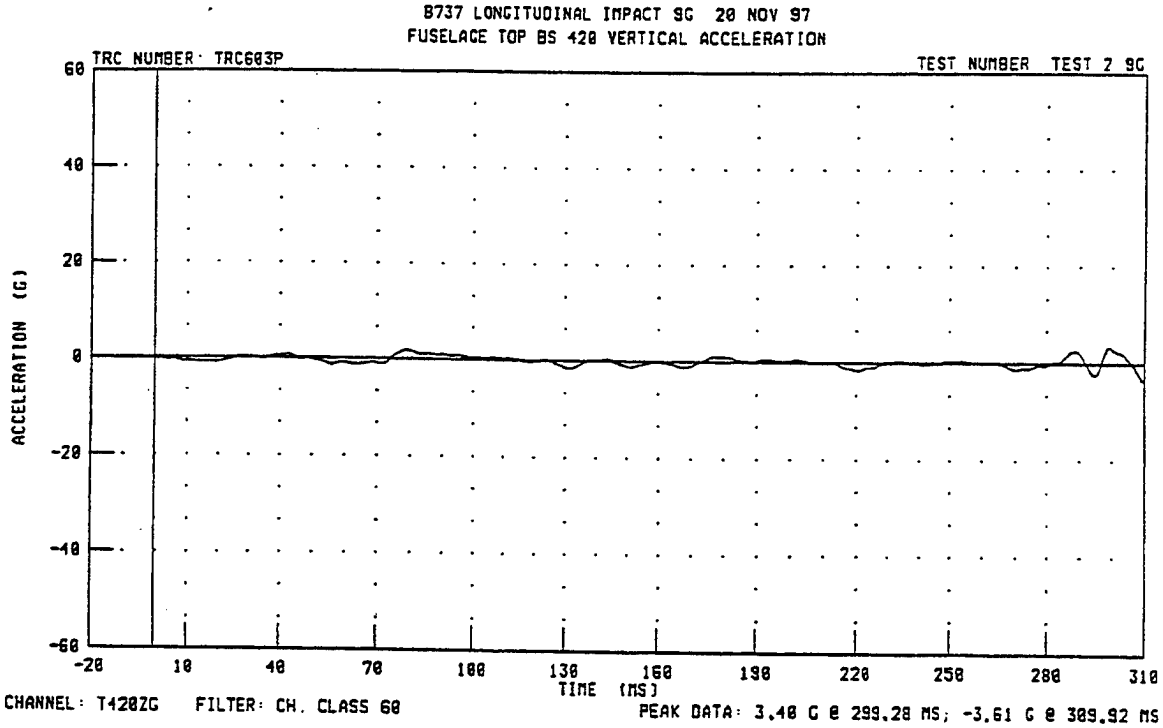

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE FLOOR BS 500 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500XG
FILTER: CH. CLASS 60
PEAK DATA: 2.58 G @ 279.68 MS, -8.22 G @ 99.52 MS

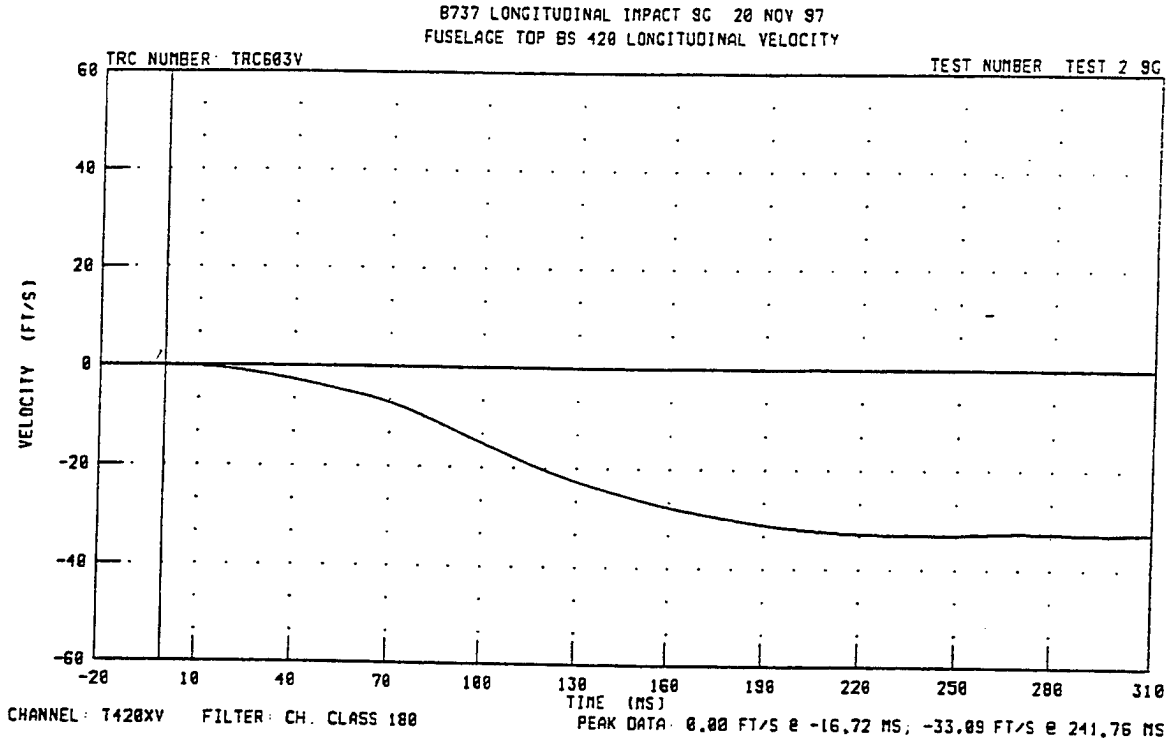

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE FLOOR BS 500 LATERAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500YG
FILTER: CH. CLASS 60
PEAK DATA: 1.40 G @ 283.76 MS, -1.04 G @ 299.44 MS

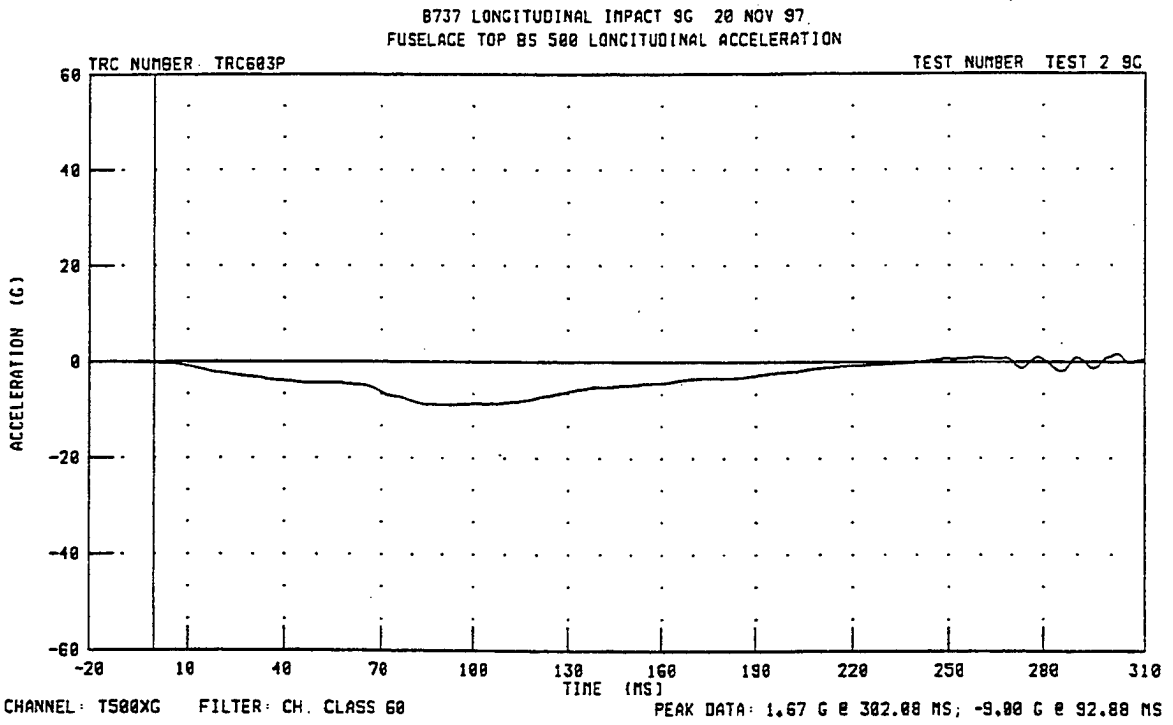

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE FLOOR BS 500 VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500ZG
FILTER: CH. CLASS 60
PEAK DATA: 1.86 G @ 309.28 MS, -1.09 G @ 72.24 MS

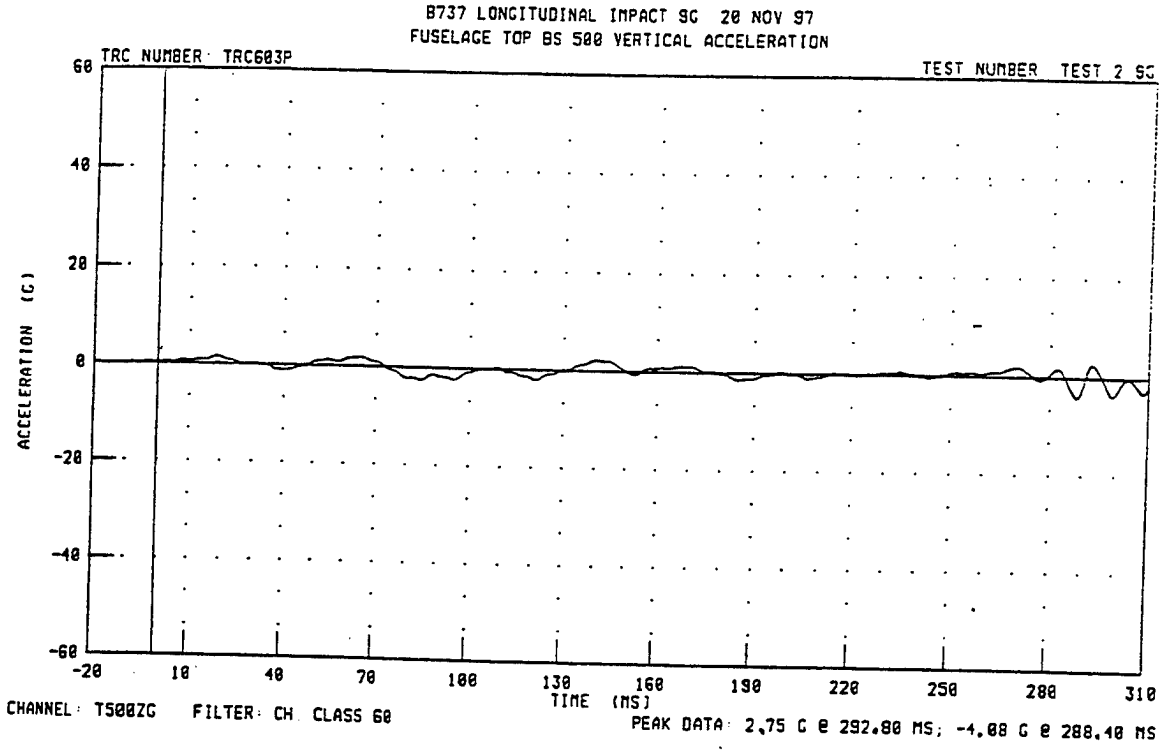

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE FLOOR BS 500 LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER: TEST 2 9G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500XV
FILTER: CH. CLASS 180
PEAK DATA: 0.05 FT/S @ -16.40 MS; -32.13 FT/S @ 237.76 MS

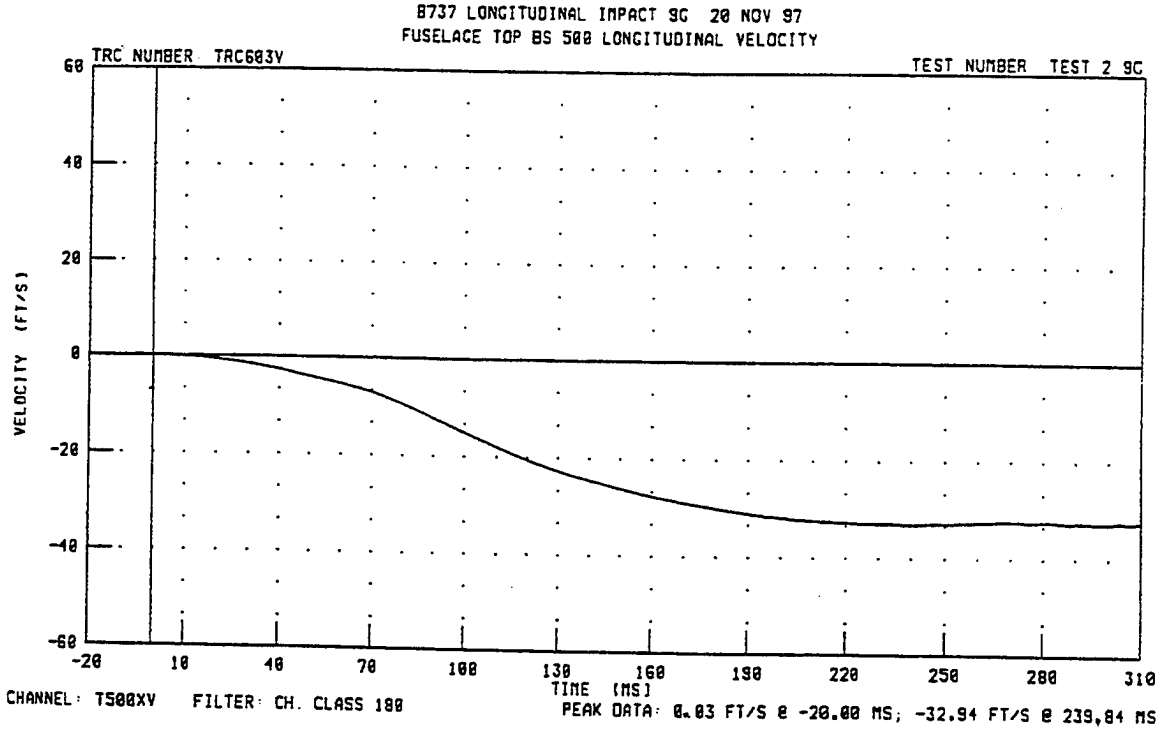

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE TOP BS 420 LONGITUDINAL ACCELERATION
TRC NUMBER TRC683P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T420XG
FILTER: CH. CLASS 60
PEAK DATA: 1.77 G @ 302.32 MS, -8.82 G @ 93.68 MS

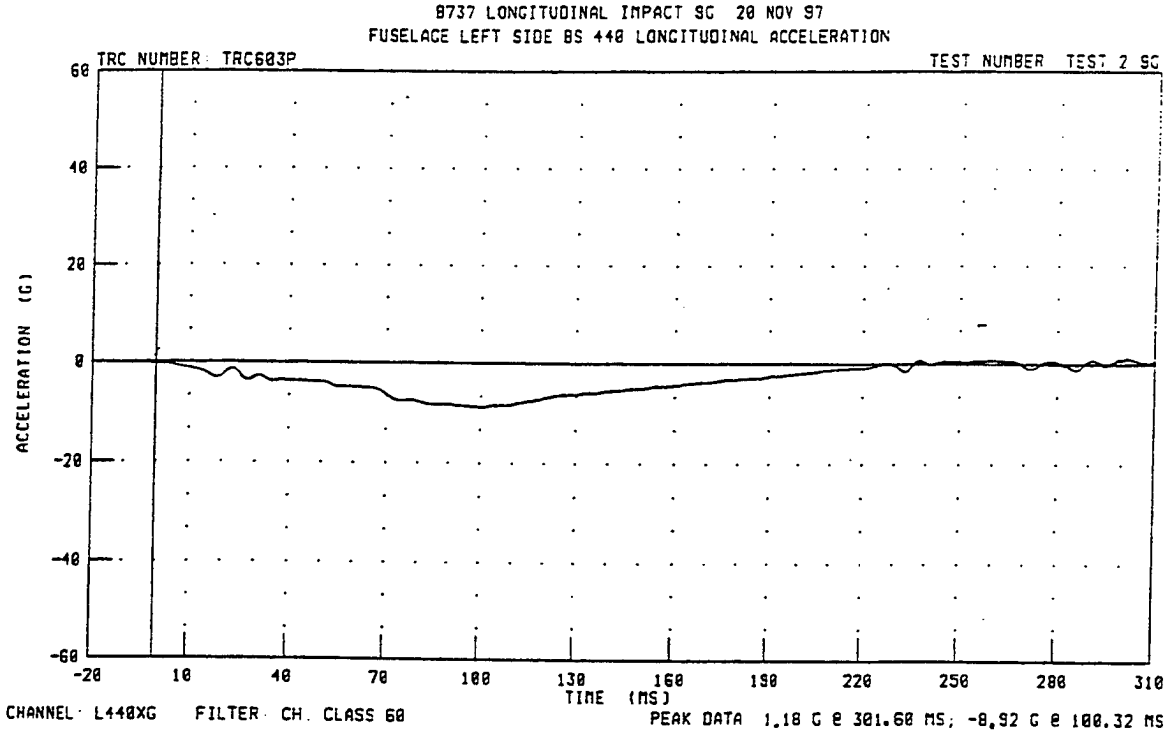

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE TOP BS 420 VERTICAL ACCELERATION
TRC NUMBER: TRC683P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T420ZG
FILTER: CH. CLASS 60
PEAK DATA: 3.48 G @ 299.28 MS; -3.61 G @ 309.92 MS

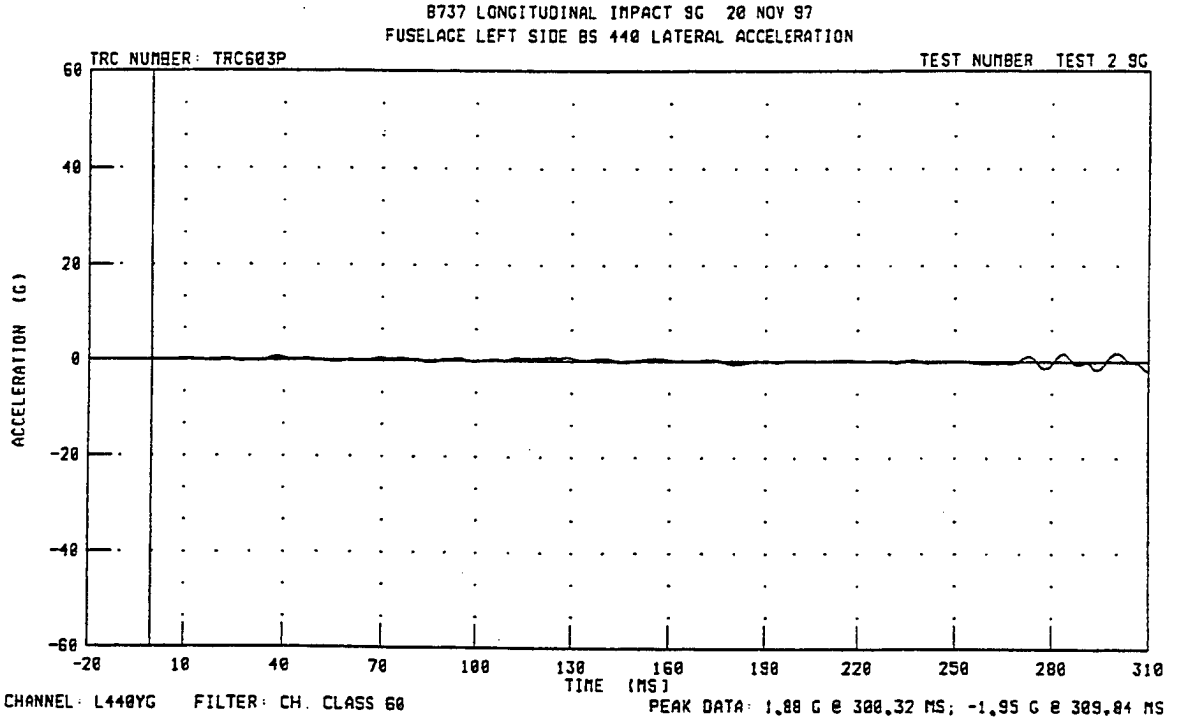

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE TOP BS 420 LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER TEST 2 9G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T420XV
FILTER: CH. CLASS 180
PEAK DATA: 0.00 FT/S @ -16.72 MS; -33.09 FT/S @ 241.76 MS

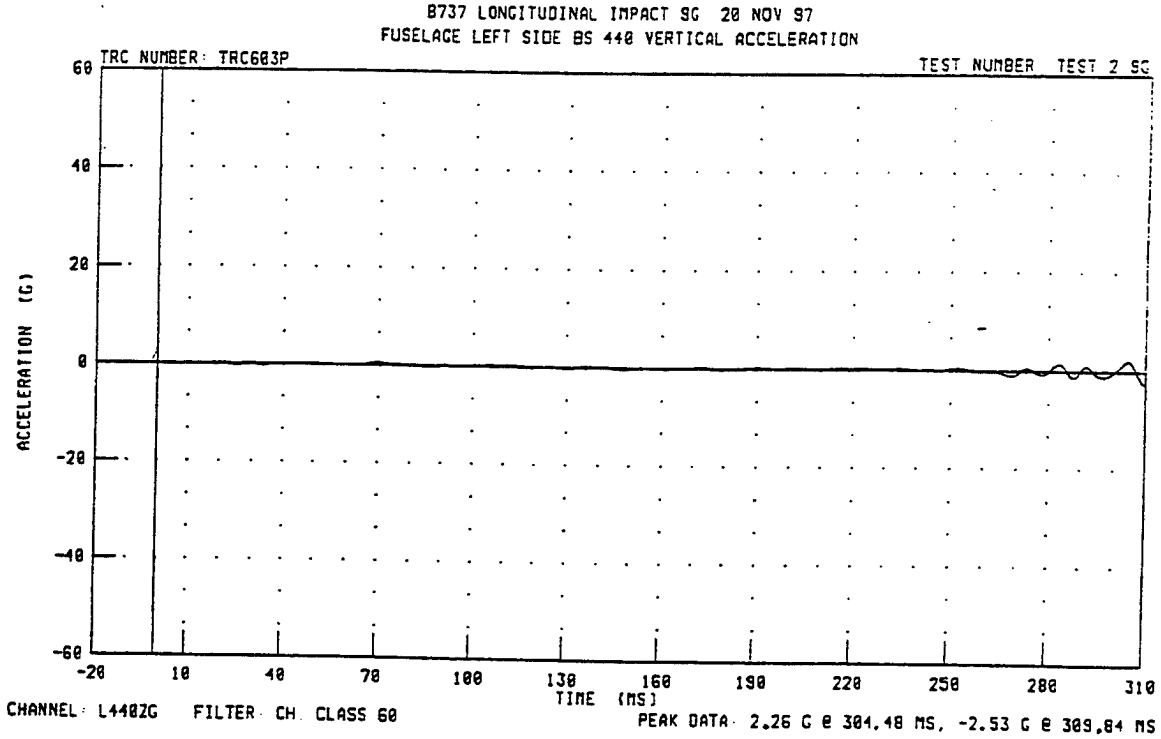

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE TOP BS 500 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500XG
FILTER: CH. CLASS 60
PEAK DATA: 1.67 G @ 302.08 MS; -9.00 G @ 92.88 MS

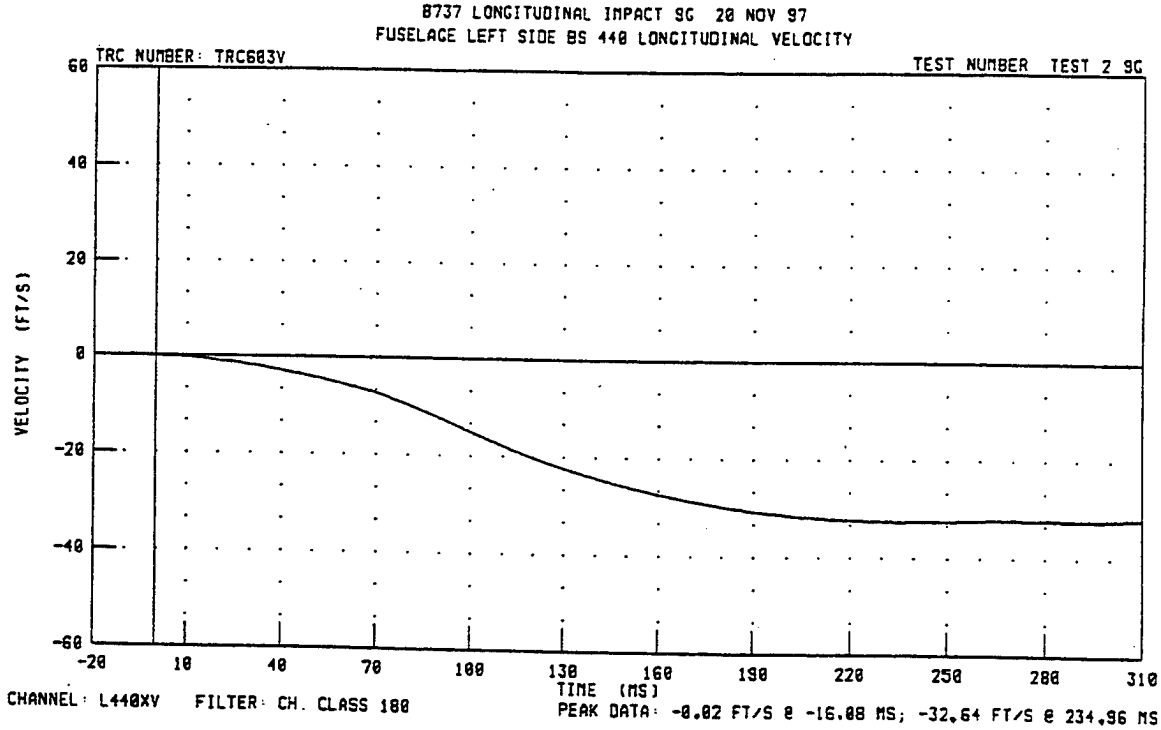

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE TOP BS 500 VERTICAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500ZG FILTER: CH. CLASS 60
PEAK DATA: 2.75 G @ 292.80 MS; -4.88 G @ 288.40 MS

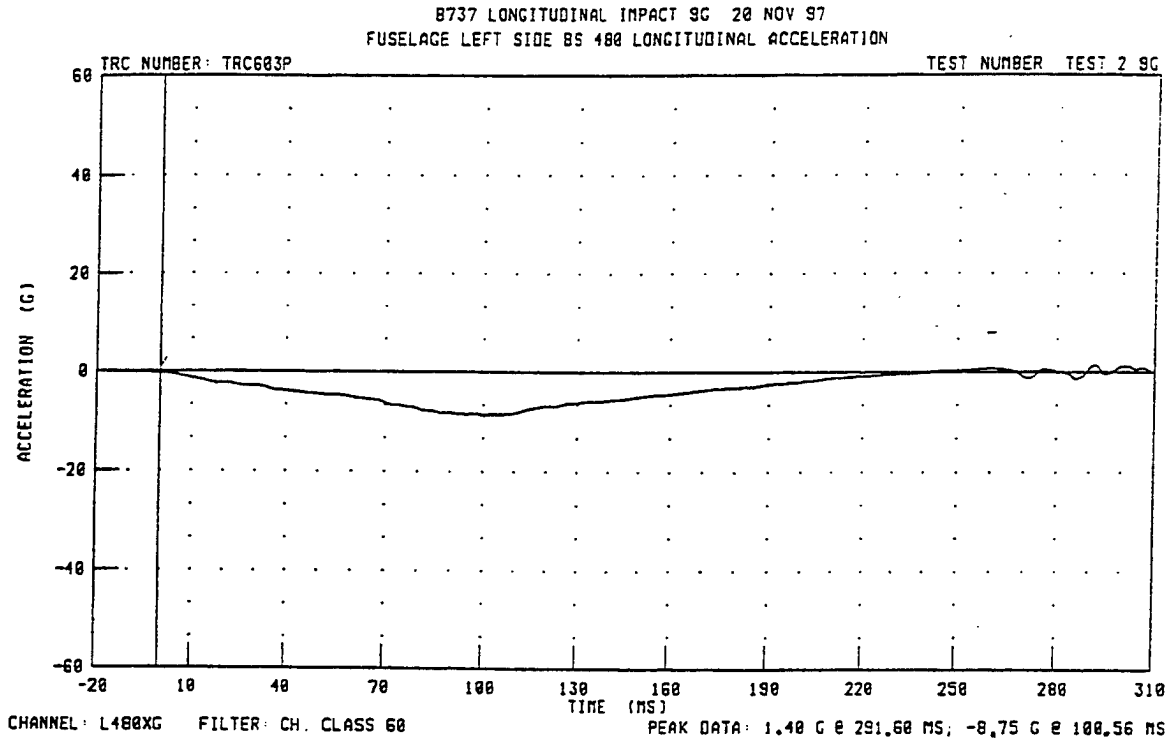

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE TOP BS 500 LONGITUDINAL VELOCITY
TRC NUMBER TRC603V
TEST NUMBER TEST 2 9G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500XV FILTER: CH. CLASS 180
PEAK DATA: 0.03 FT/S @ -20.00 MS; -32.94 FT/S @ 239.84 MS

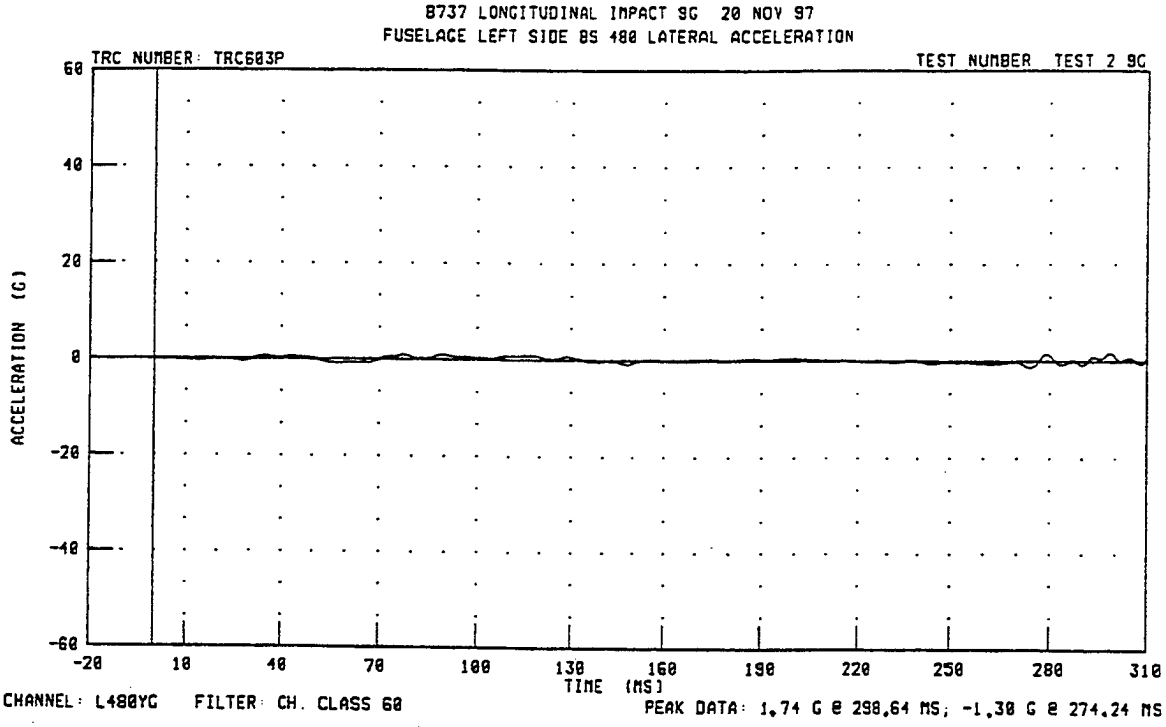

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE LEFT SIDE BS 440 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440XG
FILTER: CH. CLASS 60
PEAK DATA 1.18 G @ 301.60 MS; -8.92 G @ 100.32 MS

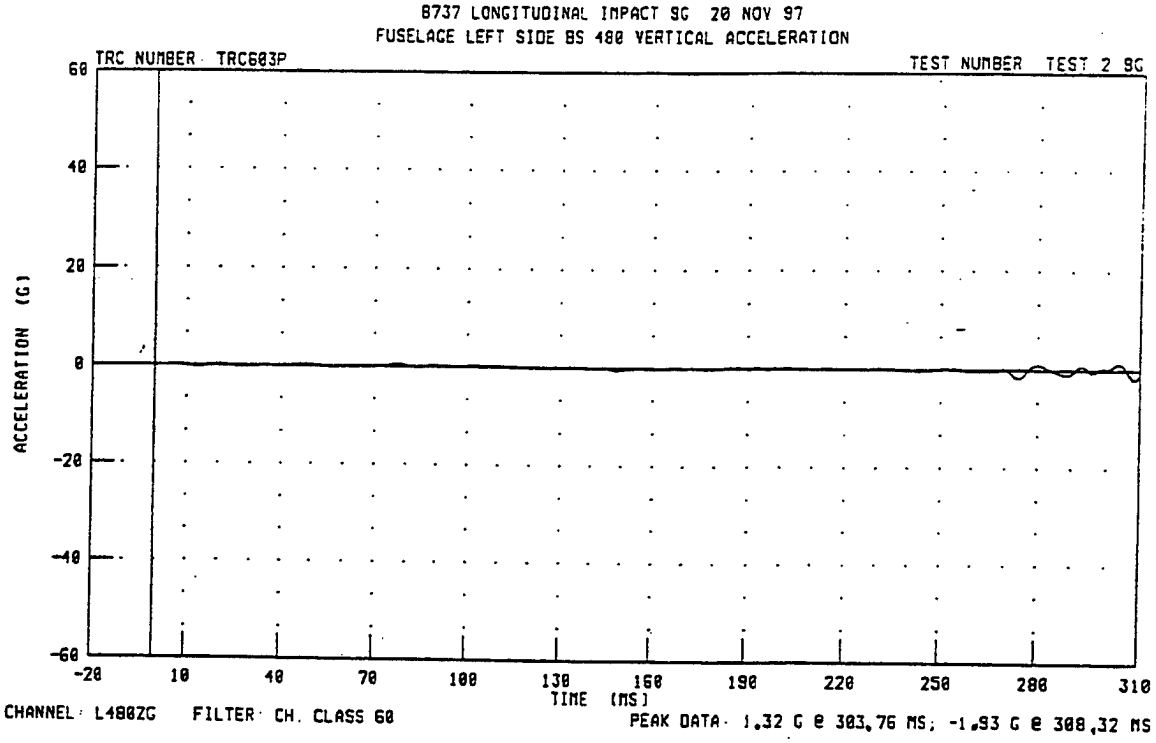

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE LEFT SIDE BS 440 LATERAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440YG
FILTER: CH. CLASS 60
PEAK DATA: 1.88 G @ 300.32 MS; -1.95 G @ 309.84 MS

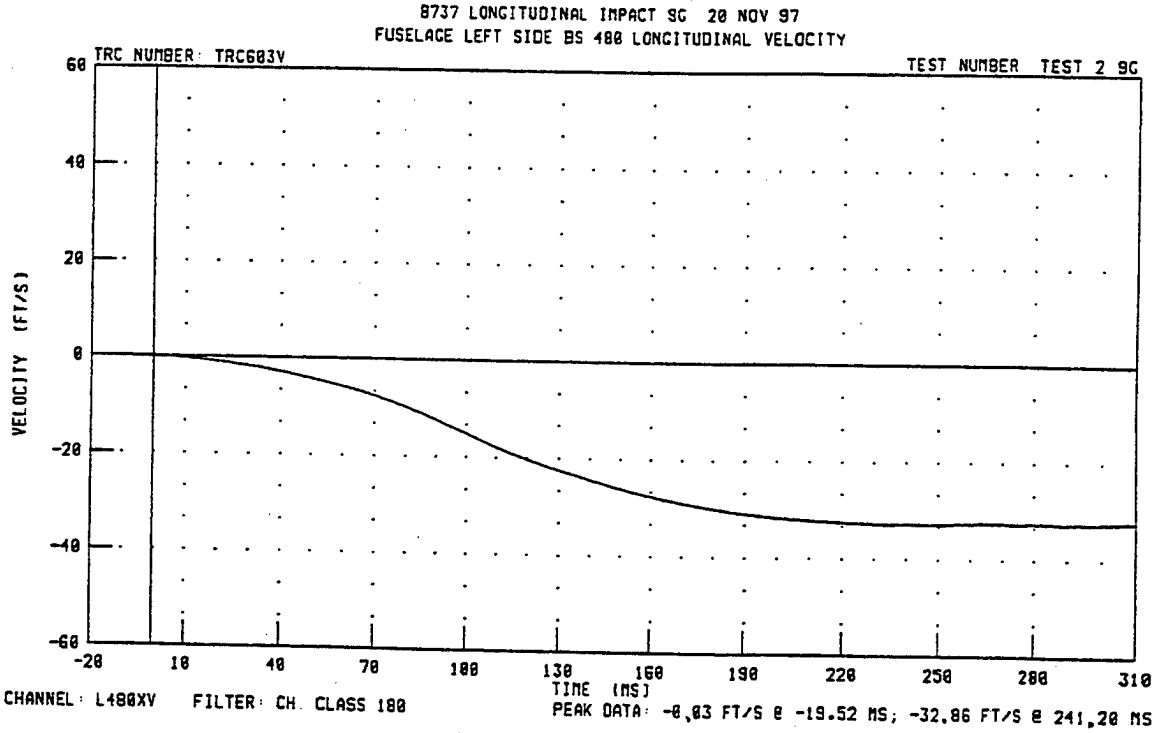

B737 LONGITUDINAL IMPACT SG 20 NOV 97
FUSELAGE LEFT SIDE BS 440 VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SG
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440ZG FILTER: CH. CLASS 60
PEAK DATA: 2.26 G @ 304.48 MS, -2.53 G @ 309.84 MS

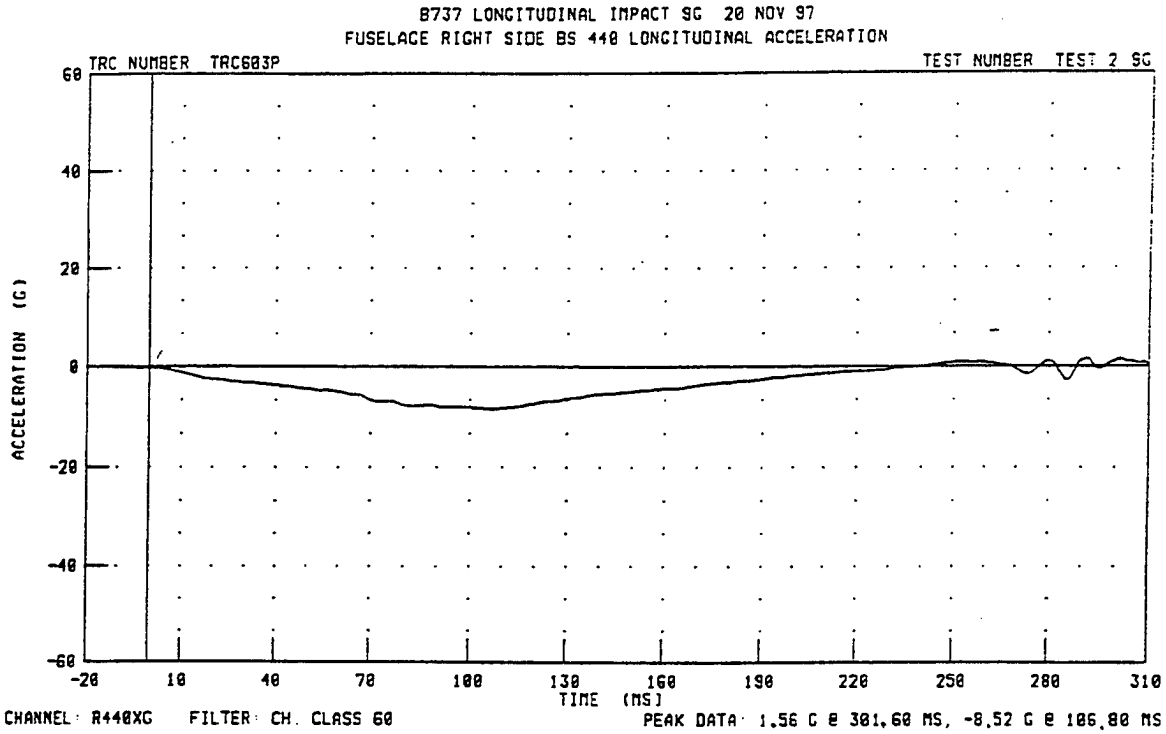

B737 LONGITUDINAL IMPACT SG 20 NOV 97
FUSELAGE LEFT SIDE BS 440 LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER TEST 2 SG
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440XV FILTER: CH. CLASS 180
PEAK DATA: -0.02 FT/S @ -16.08 MS; -32.64 FT/S @ 234.96 MS

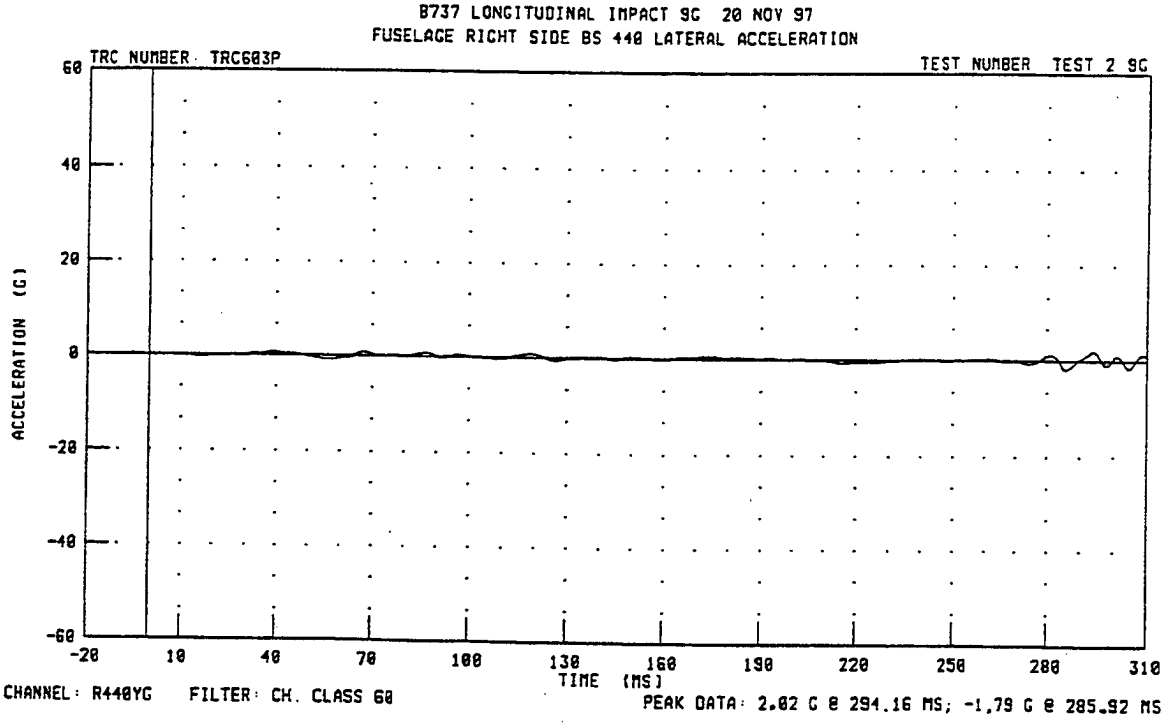

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE LEFT SIDE BS 480 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480XG
FILTER: CH. CLASS 60
PEAK DATA: 1.40 G @ 291.60 MS; -8.75 G @ 100.56 MS

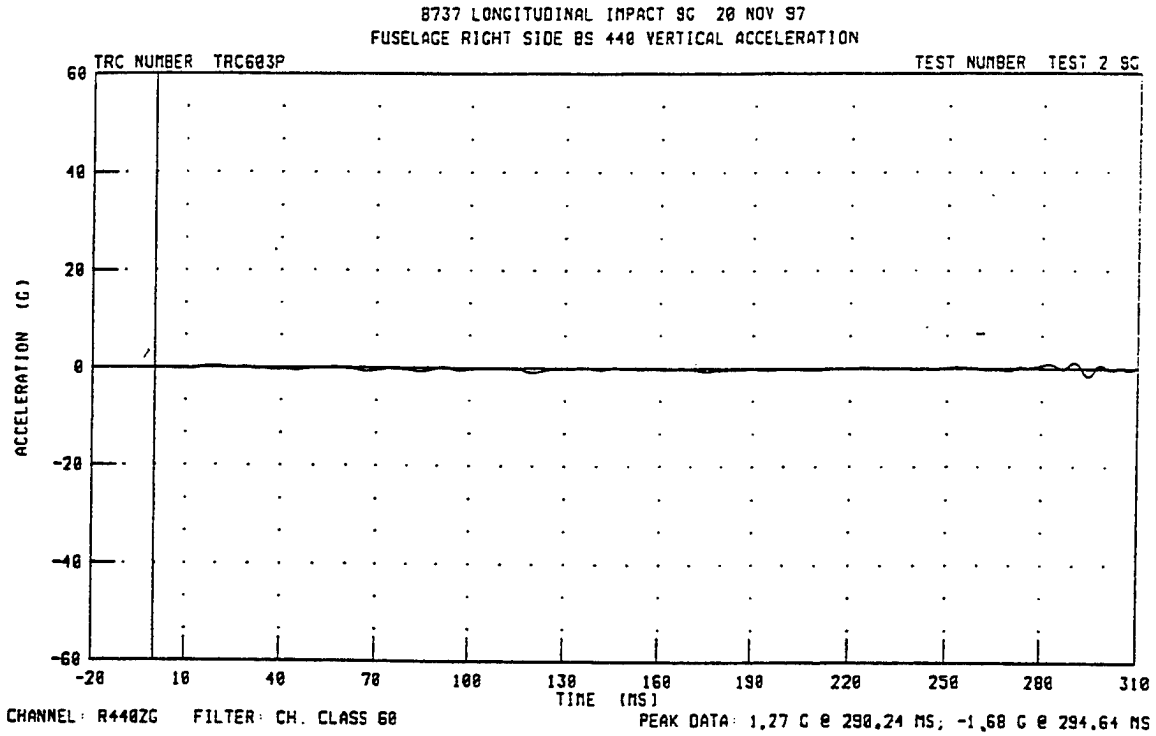

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE LEFT SIDE BS 480 LATERAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480YG
FILTER: CH. CLASS 60
PEAK DATA: 1.74 G @ 298.64 MS; -1.30 G @ 274.24 MS

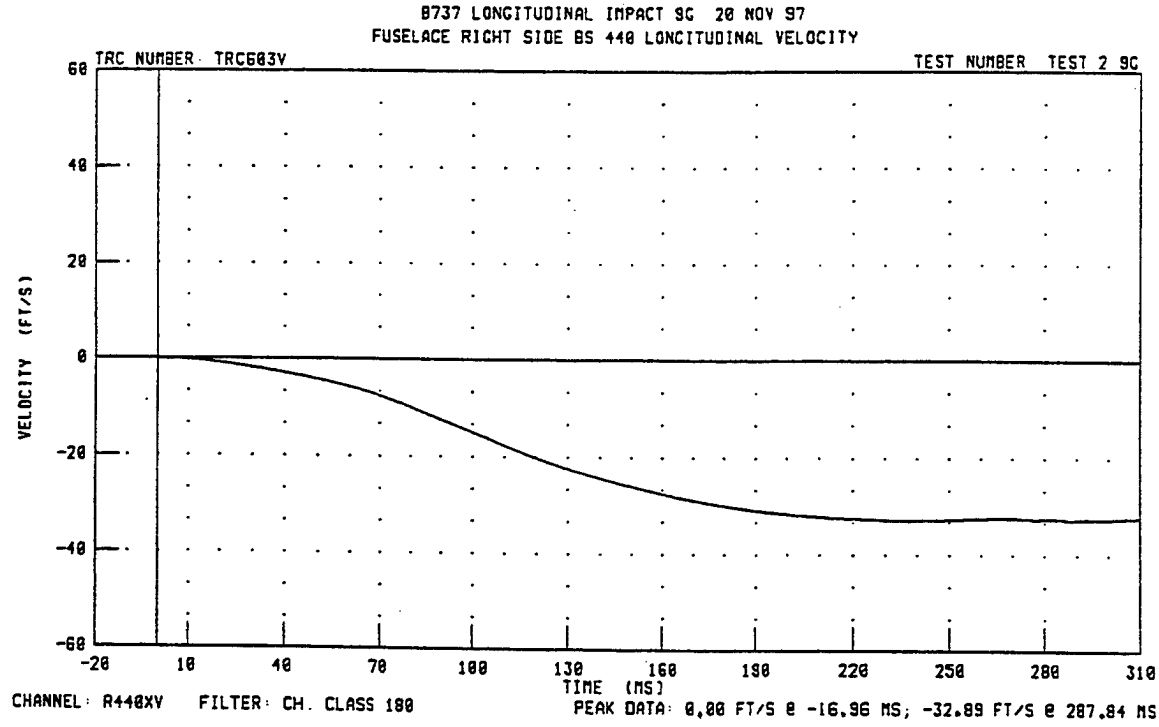

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE LEFT SIDE BS 480 VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480ZG
FILTER: CH. CLASS 60
PEAK DATA: 1.32 G @ 303.76 MS; -1.93 G @ 308.32 MS

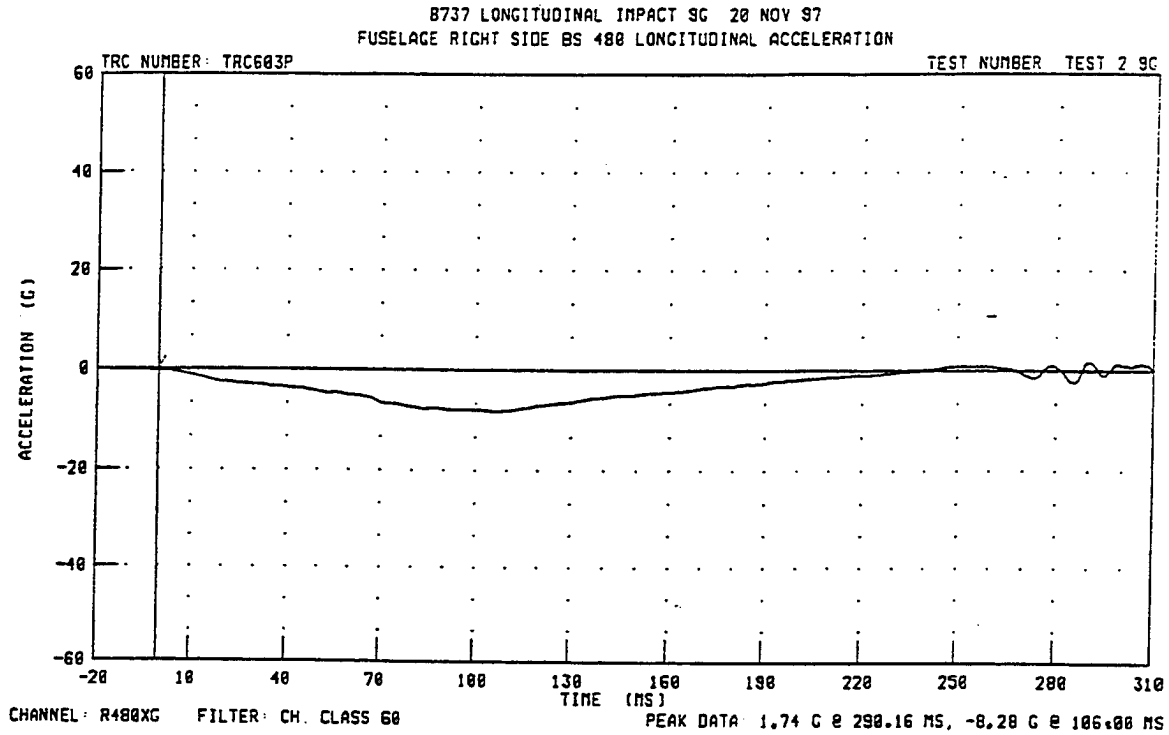

B737 LONGITUDINAL IMPACT SC 20 NOV 97
FUSELAGE LEFT SIDE BS 480 LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER TEST 2 SC
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480XV
FILTER: CH. CLASS 180
PEAK DATA: -0.03 FT/S @ -19.52 MS; -32.86 FT/S @ 241.20 MS

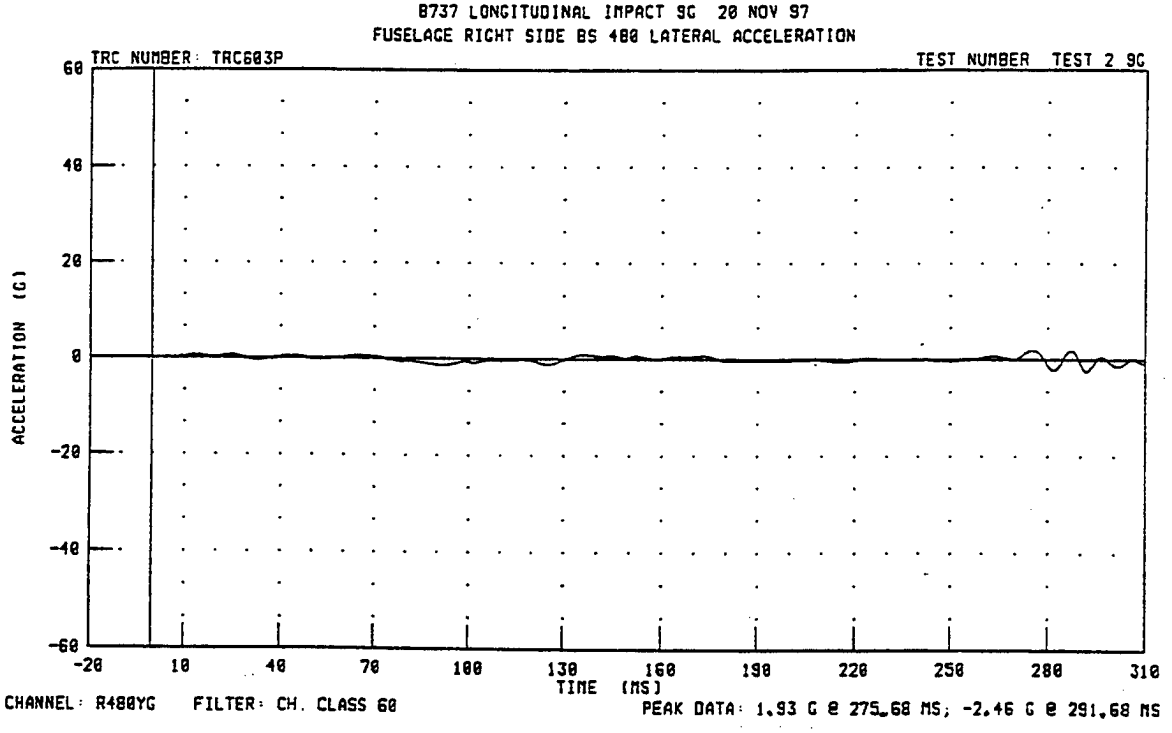

B737 LONGITUDINAL IMPACT SG 20 NOV 97
FUSELAGE RIGHT SIDE BS 440 LONGITUDINAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 SG
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440XG
FILTER: CH. CLASS 60
PEAK DATA: 1.56 G @ 301.60 MS, -8.52 G @ 186.80 MS

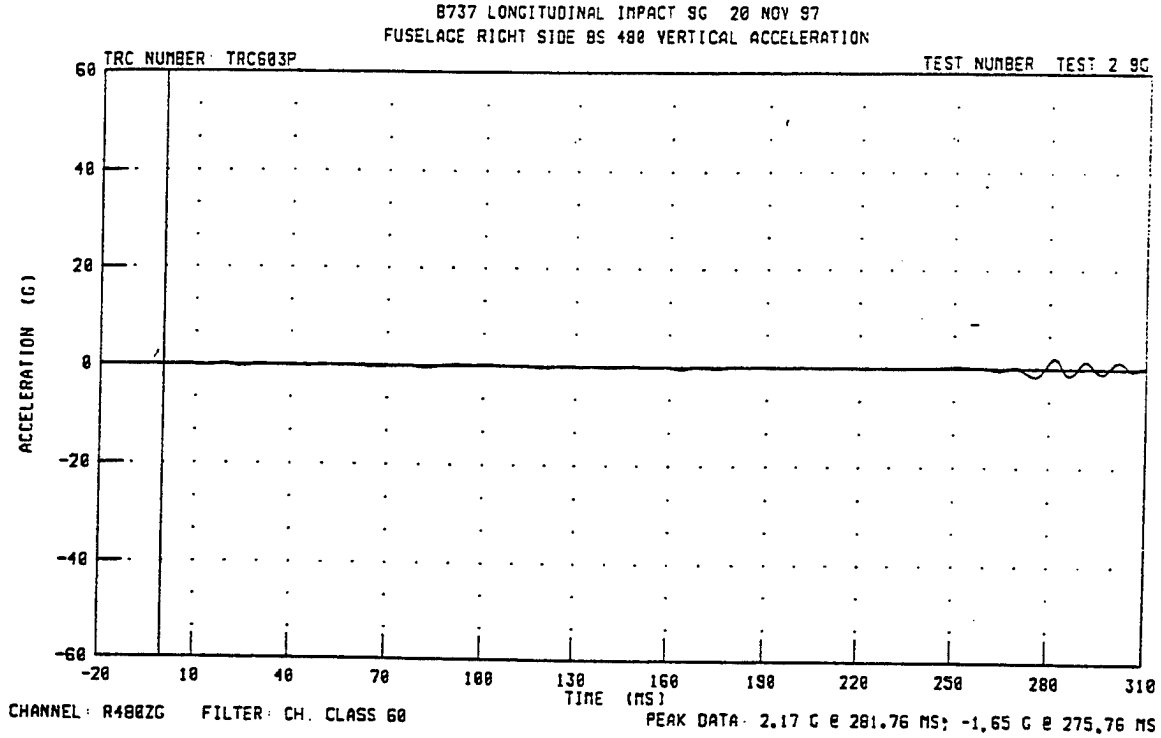

B737 LONGITUDINAL IMPACT SG 20 NOV 97
FUSELAGE RIGHT SIDE BS 440 LATERAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 SG
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440YG
FILTER: CH. CLASS 60
PEAK DATA: 2.02 G @ 294.16 MS; -1.79 G @ 285.92 MS

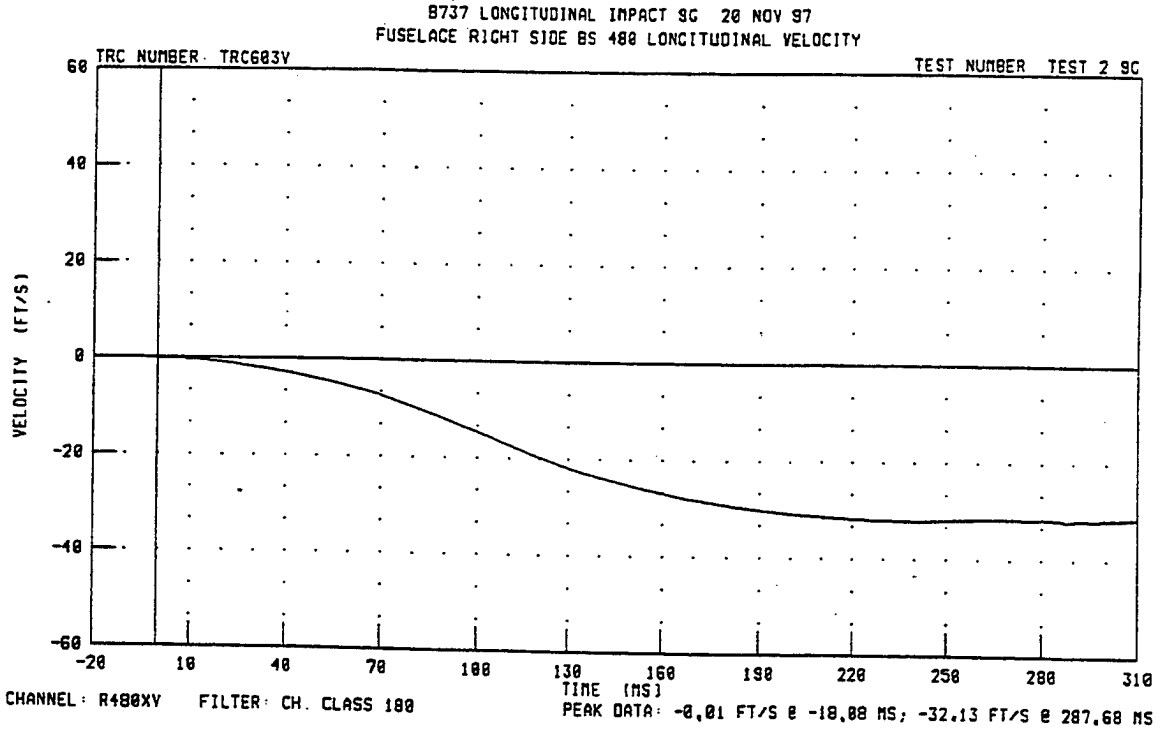

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE RIGHT SIDE BS 440 VERTICAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440ZG
FILTER: CH. CLASS 60
PEAK DATA: 1.27 G @ 290.24 MS; -1.68 G @ 294.64 MS

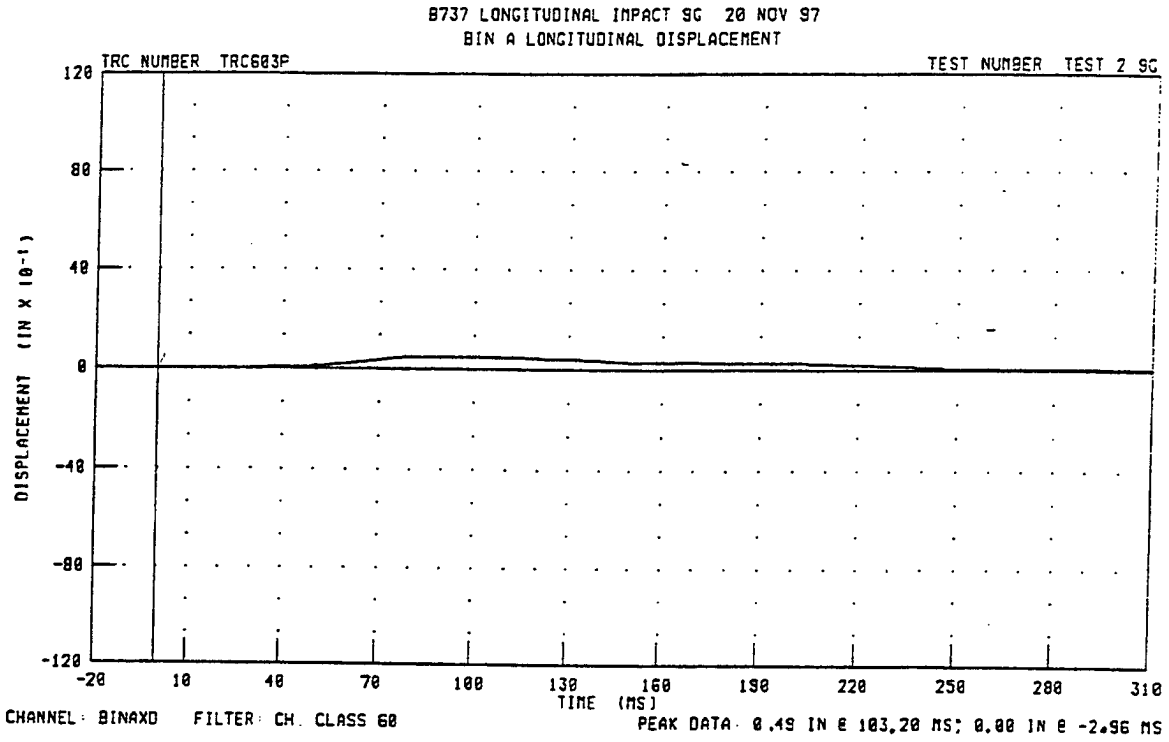

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE RIGHT SIDE BS 440 LONGITUDINAL VELOCITY
TRC NUMBER TRC603V
TEST NUMBER TEST 2 9G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440XV
FILTER: CH. CLASS 180
PEAK DATA: 0.00 FT/S @ -16.96 MS; -32.89 FT/S @ 287.84 MS

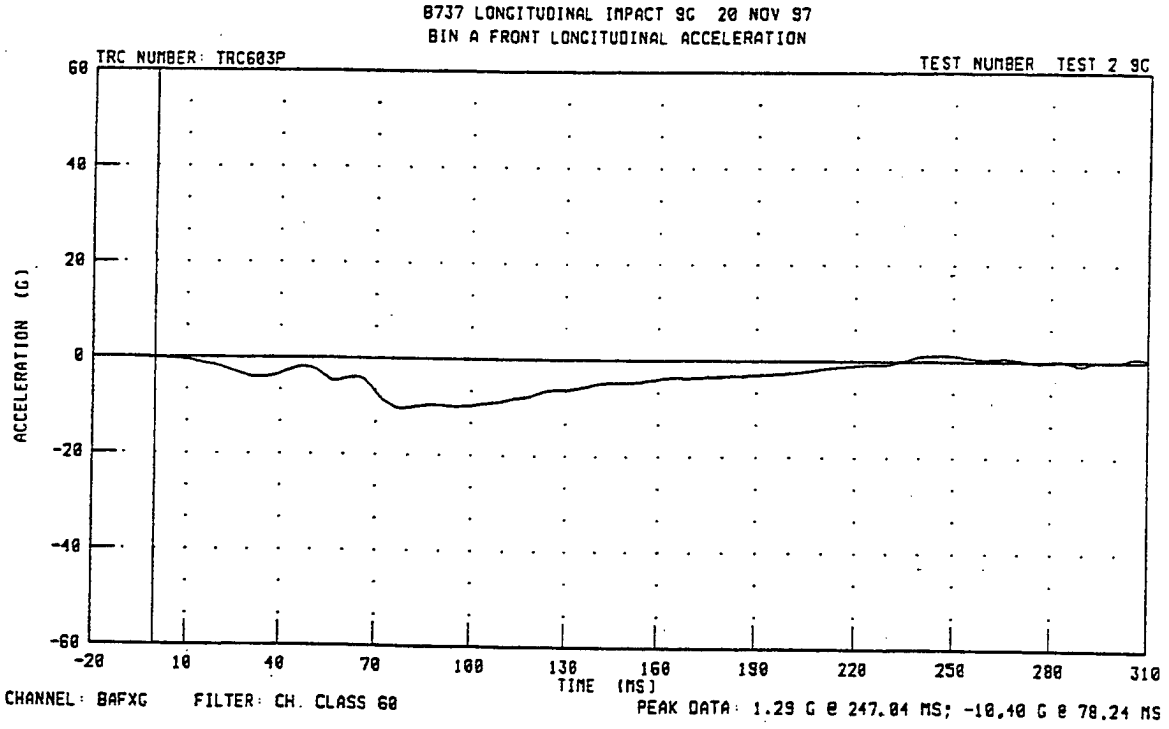

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE RIGHT SIDE BS 480 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480XG
FILTER: CH. CLASS 60
PEAK DATA: 1.74 G @ 298.16 MS, -8.28 G @ 106.00 MS

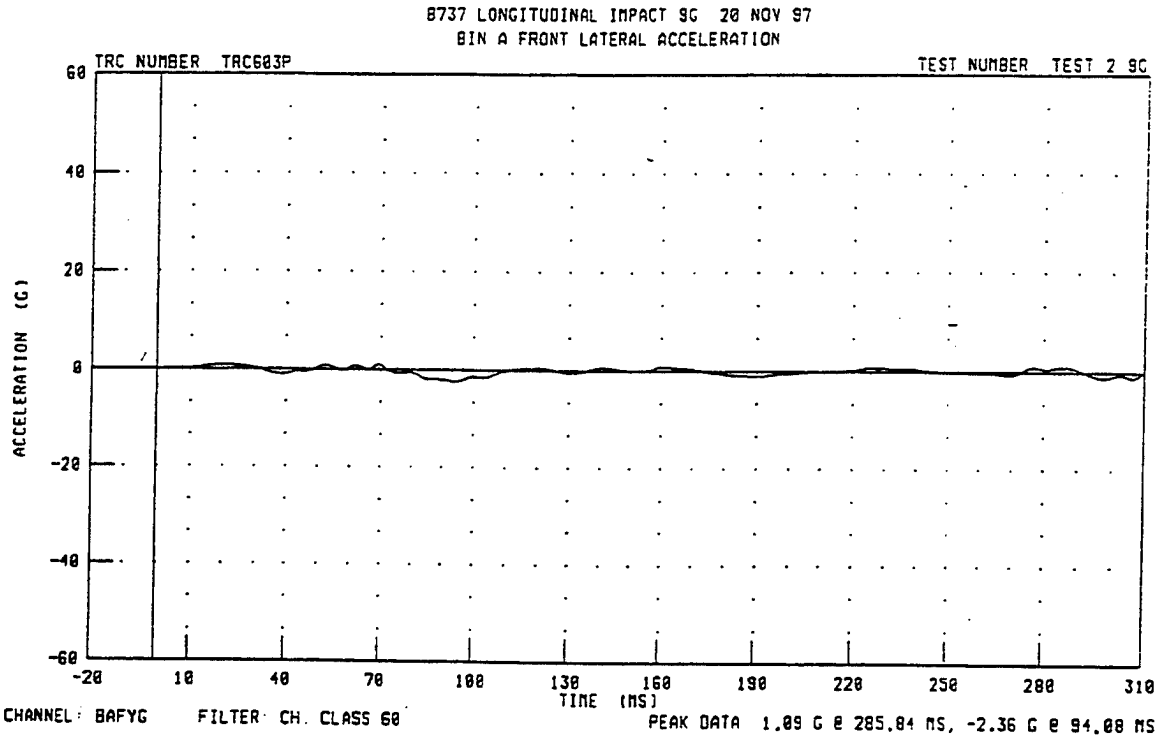

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE RIGHT SIDE BS 480 LATERAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480YG
FILTER: CH. CLASS 60
PEAK DATA: 1.93 G @ 275.68 MS; -2.46 G @ 291.68 MS

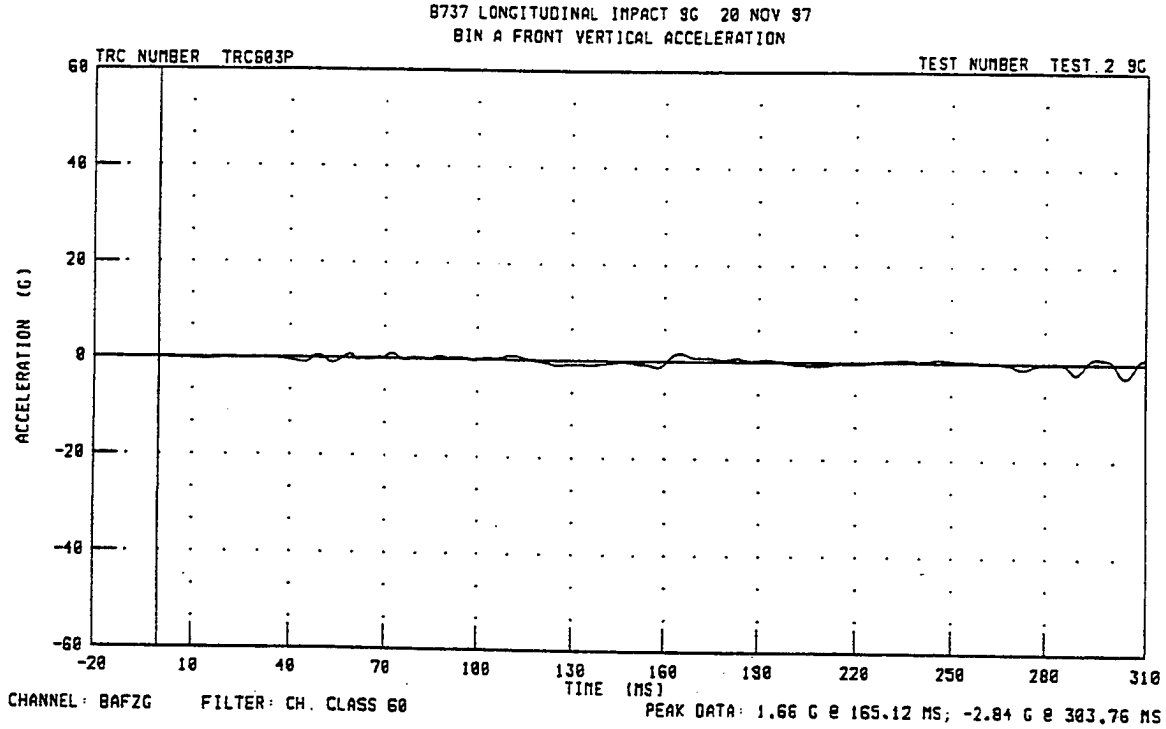

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE RIGHT SIDE BS 480 VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480ZG
FILTER: CH. CLASS 60
PEAK DATA: 2.17 G @ 281.76 MS; -1.65 G @ 275.76 MS

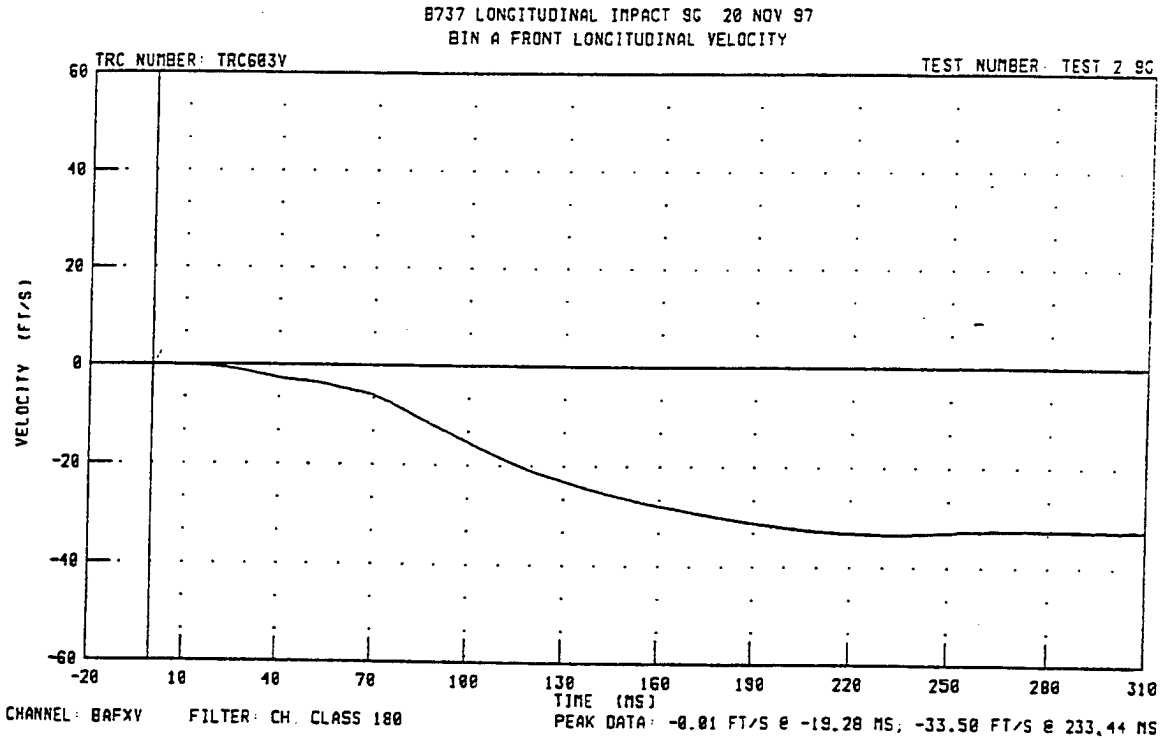

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
FUSELAGE RIGHT SIDE BS 480 LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER: TEST 2 9G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480XV
FILTER: CH. CLASS 180
PEAK DATA: -0.01 FT/S @ -18.88 MS; -32.13 FT/S @ 287.68 MS

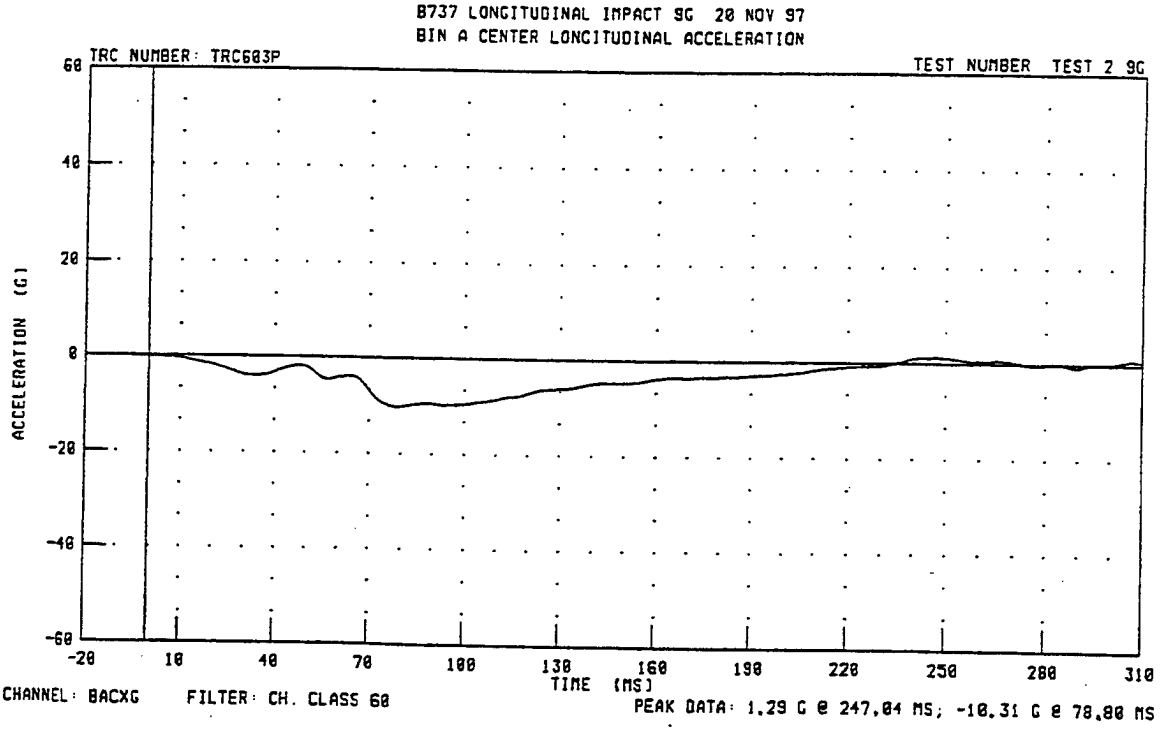

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LONGITUDINAL DISPLACEMENT
TRC NUMBER TRC603P
TEST NUMBER TEST 2 9G
DISPLACEMENT (IN X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BINAXD
FILTER: CH. CLASS 60
PEAK DATA: 0.49 IN @ 103.20 MS; 0.00 IN @ -2.96 MS

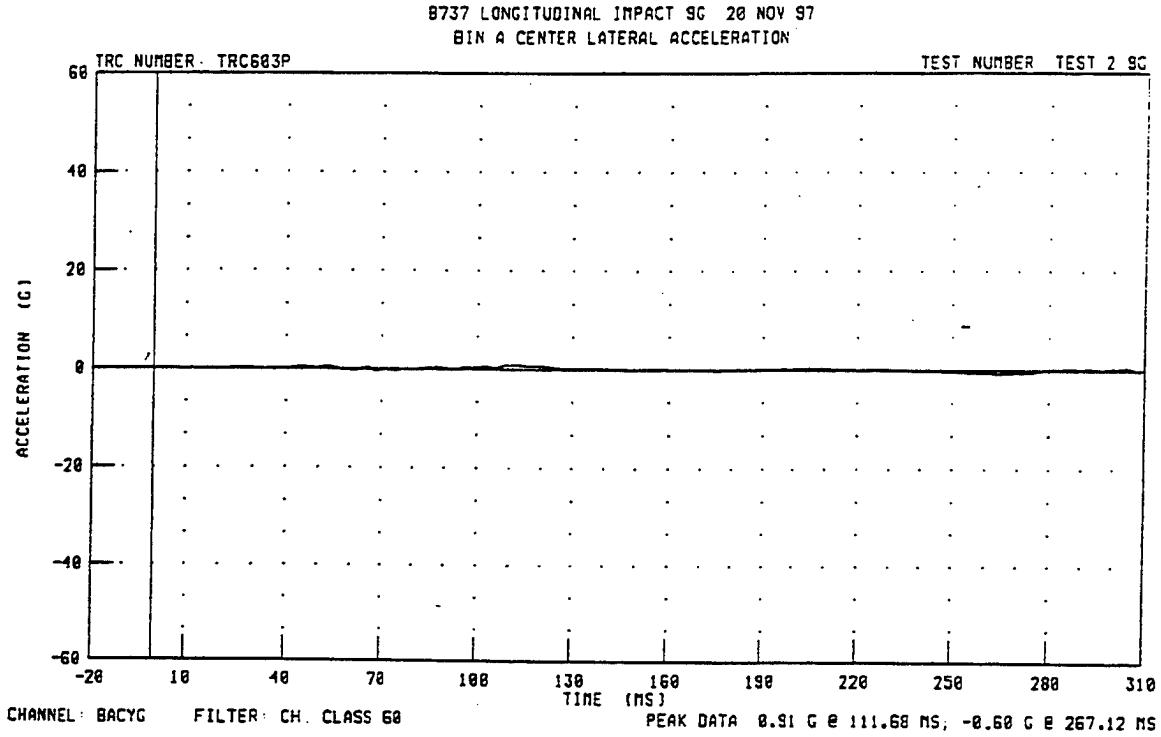

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A FRONT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFXG
FILTER: CH. CLASS 60
PEAK DATA: 1.29 G @ 247.04 MS; -10.40 G @ 78.24 MS

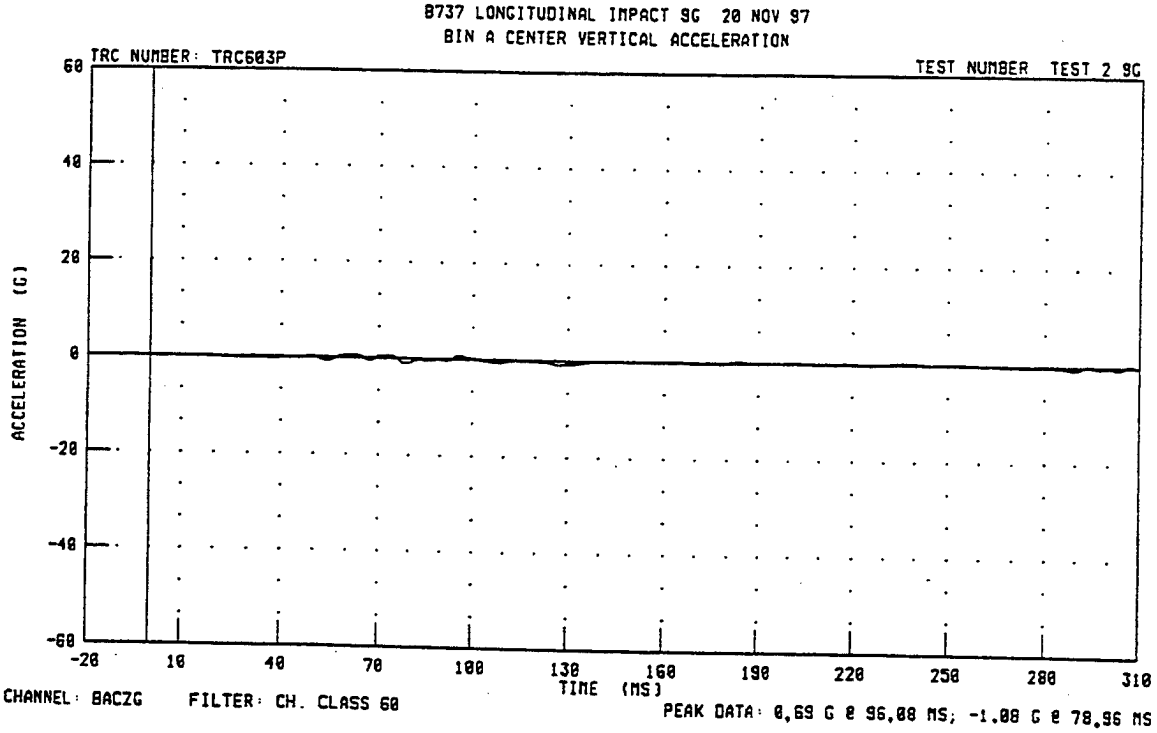

B737 LONGITUDINAL IMPACT SC 20 NOV 97
BIN A FRONT LATERAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFYG
FILTER: CH. CLASS 60
PEAK DATA 1.09 G @ 285.84 MS, -2.36 G @ 94.08 MS

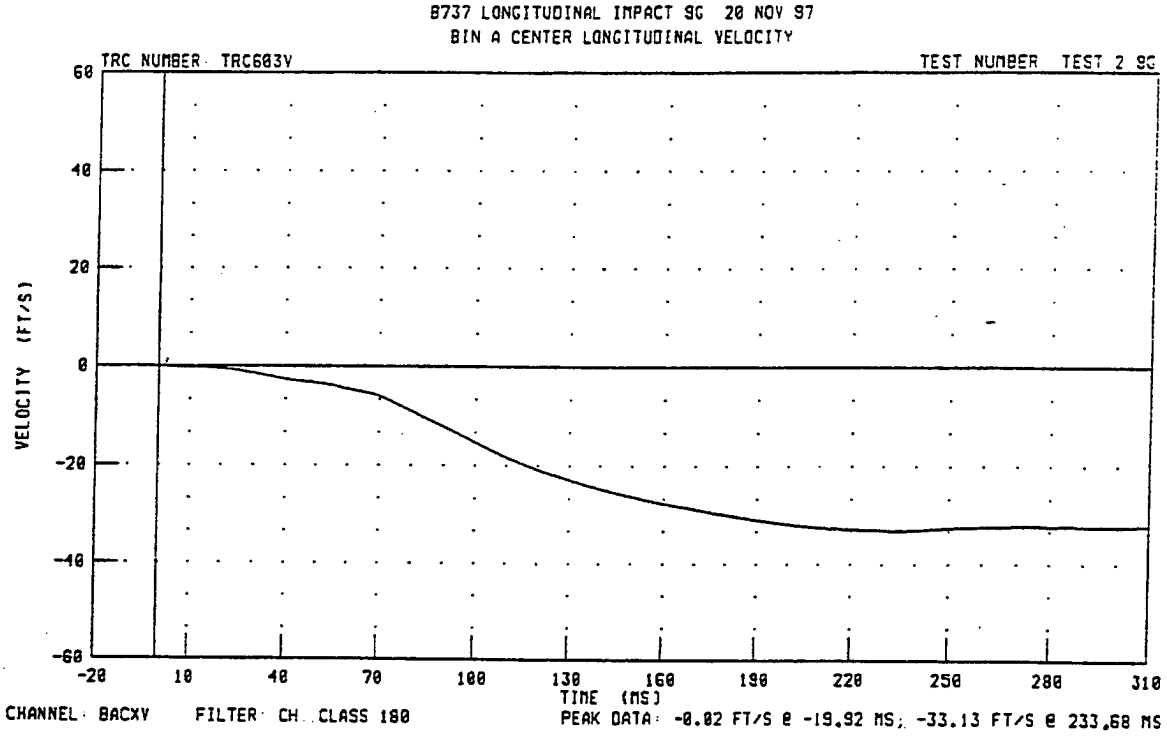

B737 LONGITUDINAL IMPACT SC 20 NOV 97
BIN A FRONT VERTICAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFZG
FILTER: CH. CLASS 60
PEAK DATA: 1.66 G @ 165.12 MS; -2.84 G @ 303.76 MS

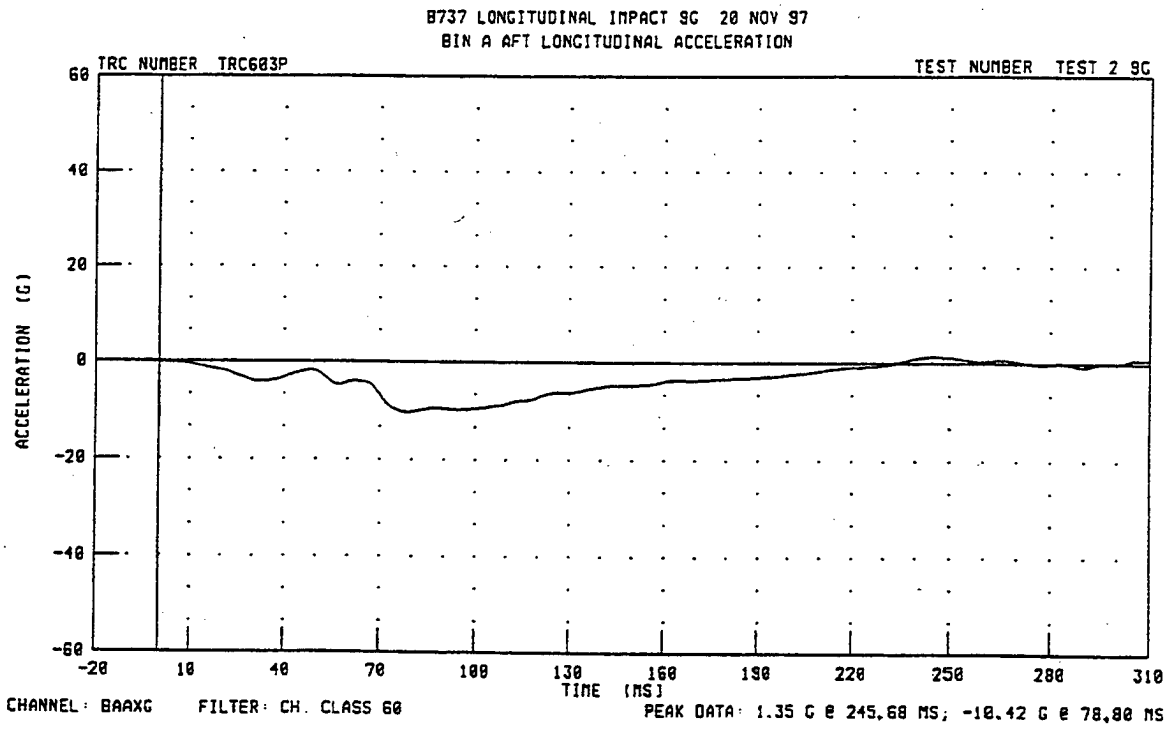

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A FRONT LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER: TEST 2 9G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFXV
FILTER: CH. CLASS 180
PEAK DATA: -0.01 FT/S @ -19.28 MS; -33.50 FT/S @ 233.44 MS

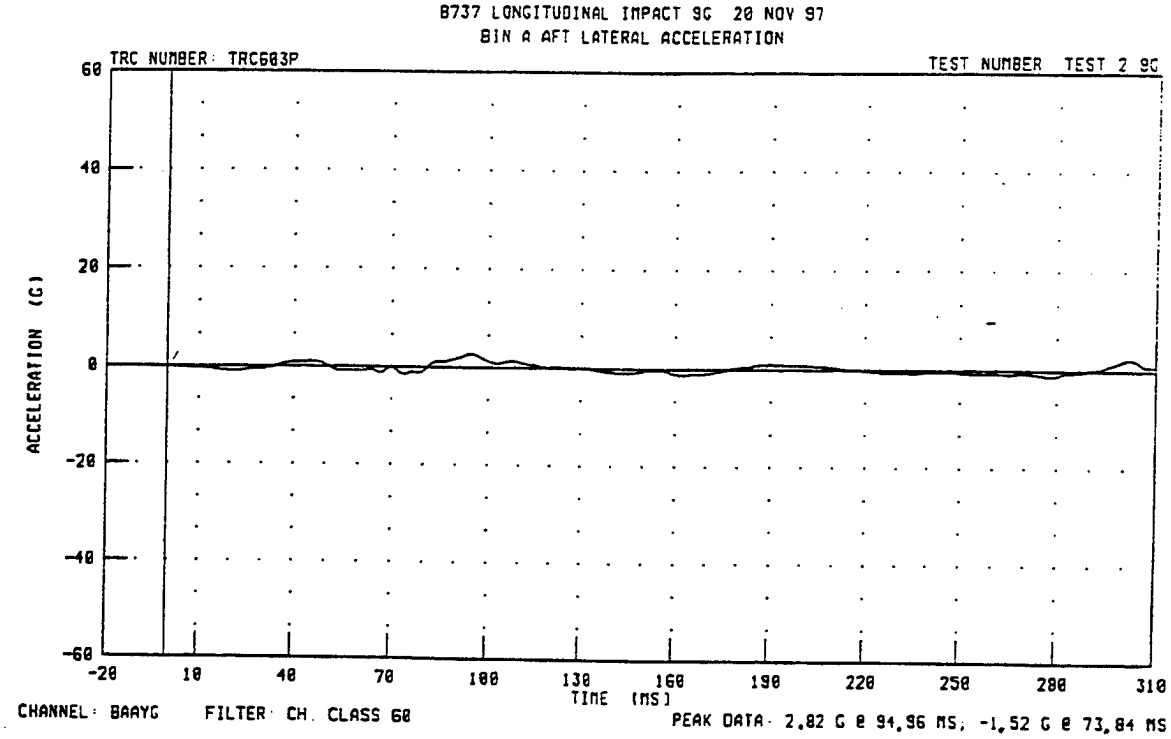

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A CENTER LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACXG
FILTER: CH. CLASS 60
PEAK DATA: 1.29 G @ 247.04 MS; -10.31 G @ 78.80 MS

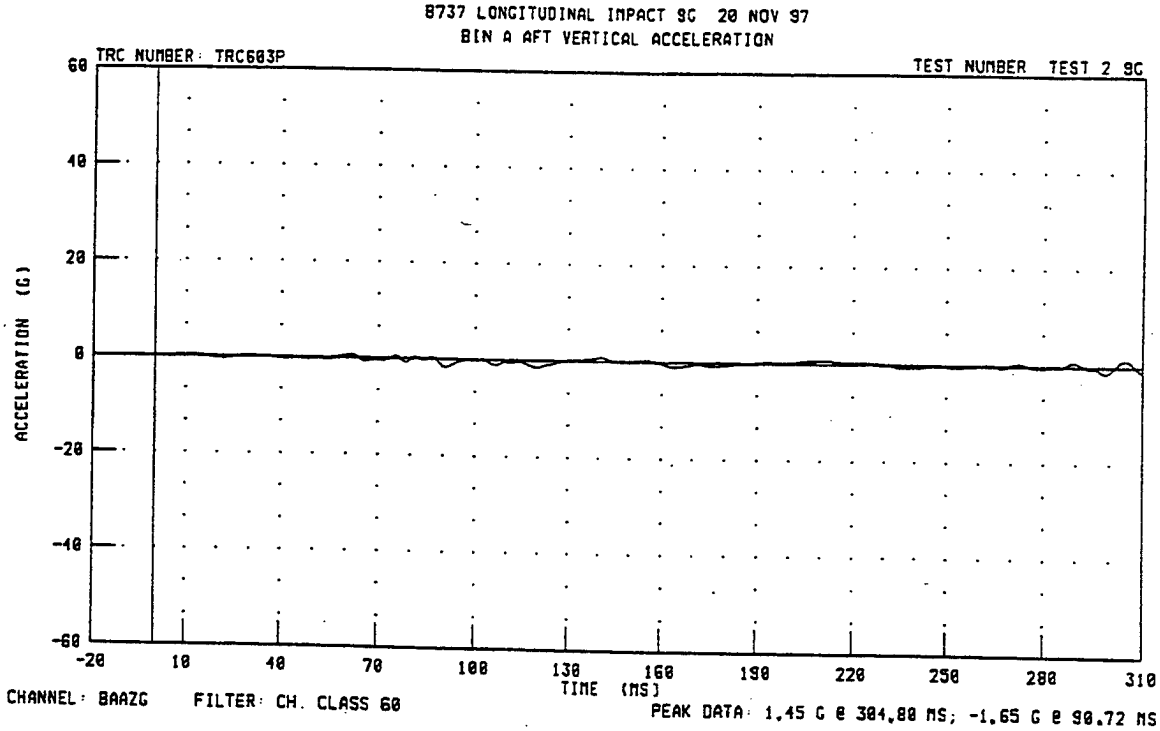

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A CENTER LATERAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACYG
FILTER: CH. CLASS 60
PEAK DATA 0.91 G @ 111.68 MS; -0.60 G @ 267.12 MS

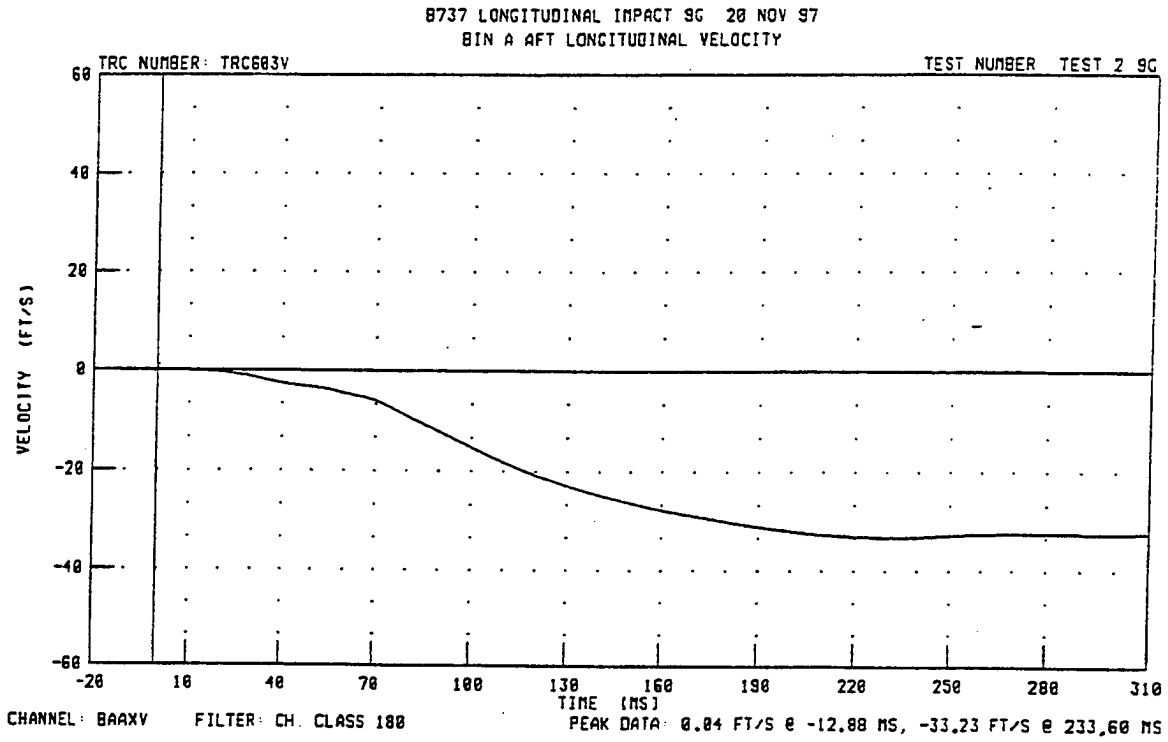

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A CENTER VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACZG
FILTER: CH. CLASS 60
PEAK DATA: 0.69 G @ 96.08 MS; -1.08 G @ 78.96 MS

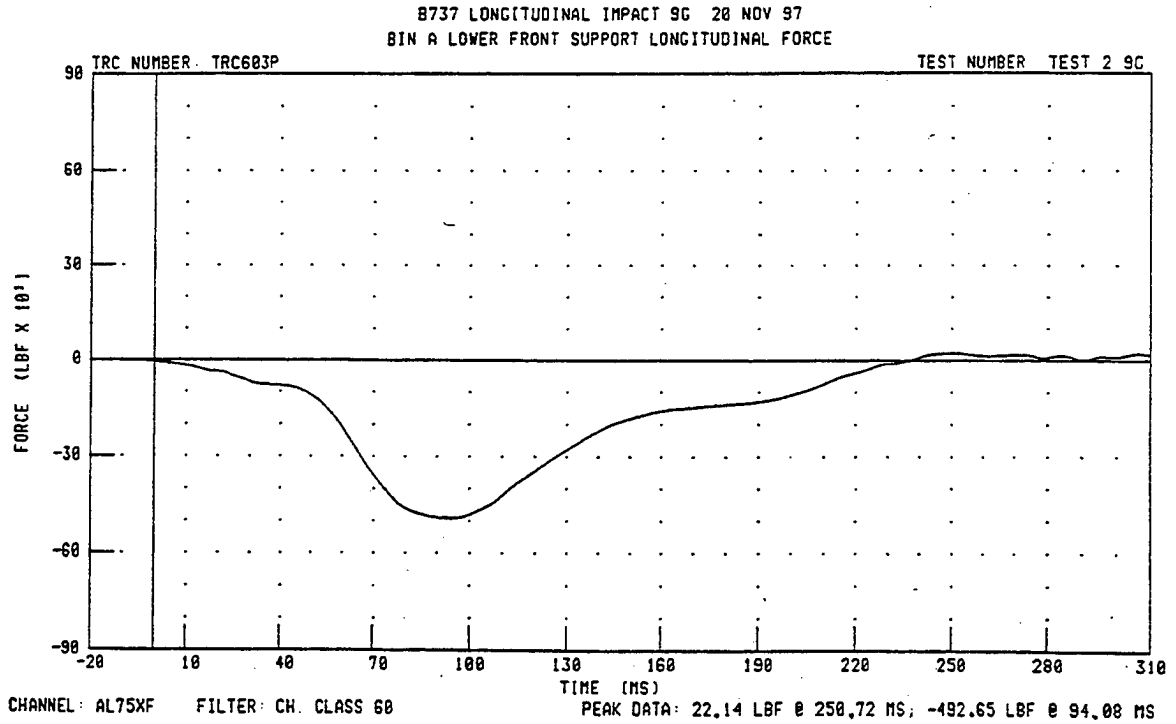

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A CENTER LONGITUDINAL VELOCITY
TRC NUMBER TRC603V
TEST NUMBER TEST 2 9G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACXV
FILTER: CH. CLASS 180
PEAK DATA: -0.02 FT/S @ -19.92 MS; -33.13 FT/S @ 233.68 MS

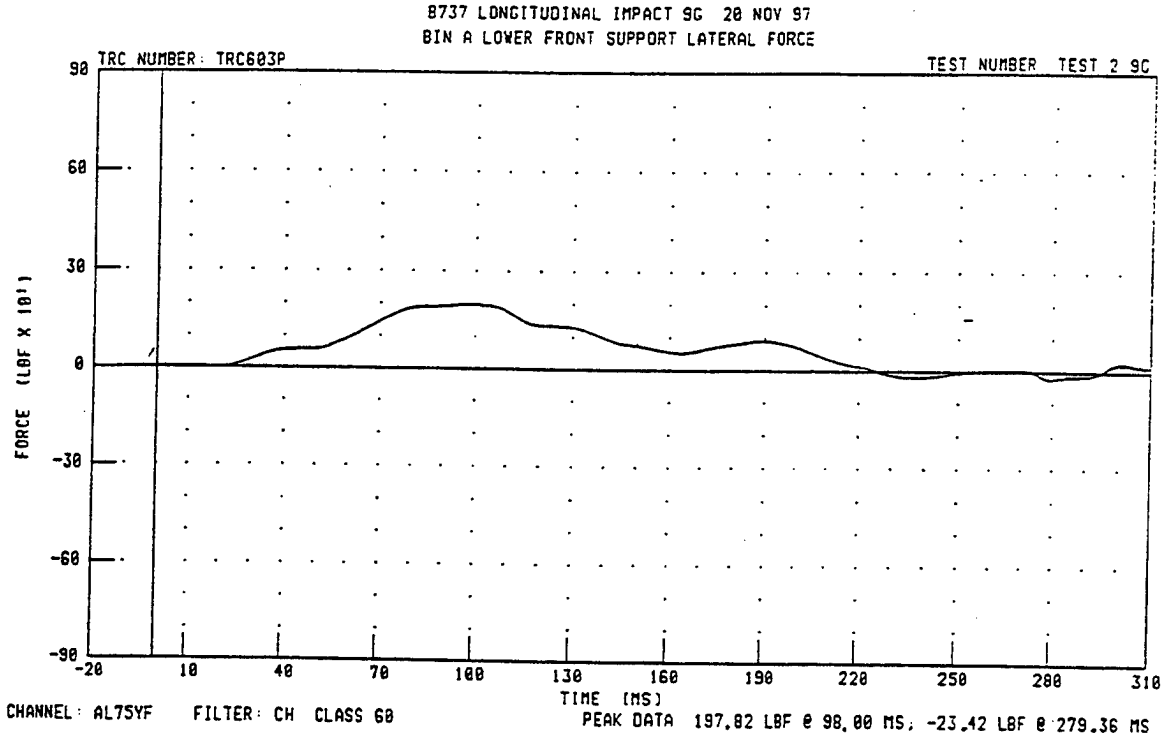

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A AFT LONGITUDINAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAXG
FILTER: CH. CLASS 60
PEAK DATA: 1.35 G @ 245.68 MS; -10.42 G @ 78.80 MS

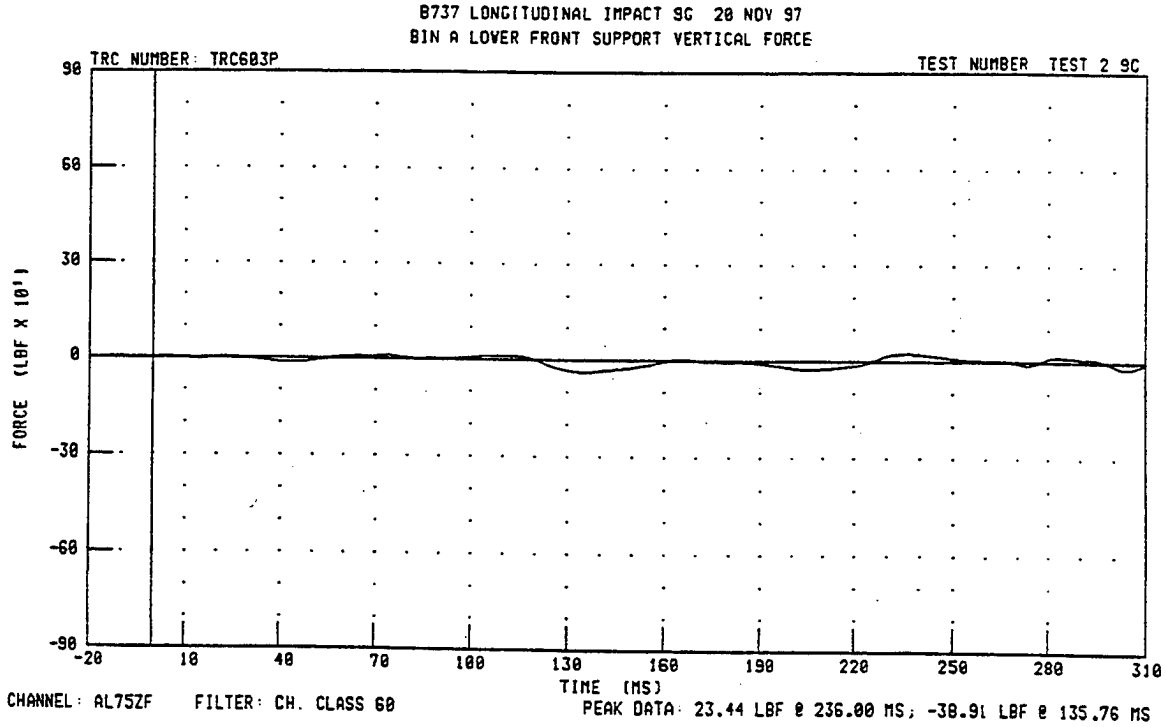

B737 LONGITUDINAL IMPACT 9C 20 NOV 97
BIN A AFT LATERAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAYC
FILTER: CH. CLASS 60
PEAK DATA: 2.82 G @ 94.96 MS; -1.52 G @ 73.84 MS

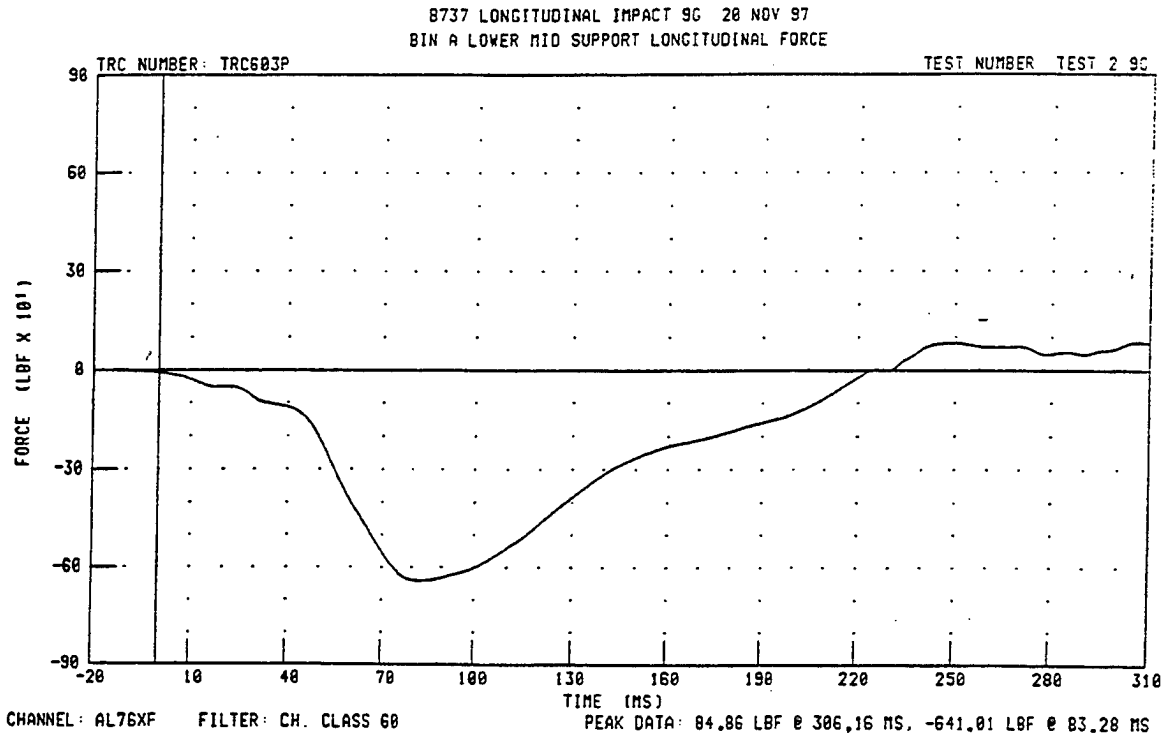

B737 LONGITUDINAL IMPACT 9C 20 NOV 97
BIN A AFT VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAZC
FILTER: CH. CLASS 60
PEAK DATA: 1.45 G @ 304.80 MS; -1.65 G @ 90.72 MS

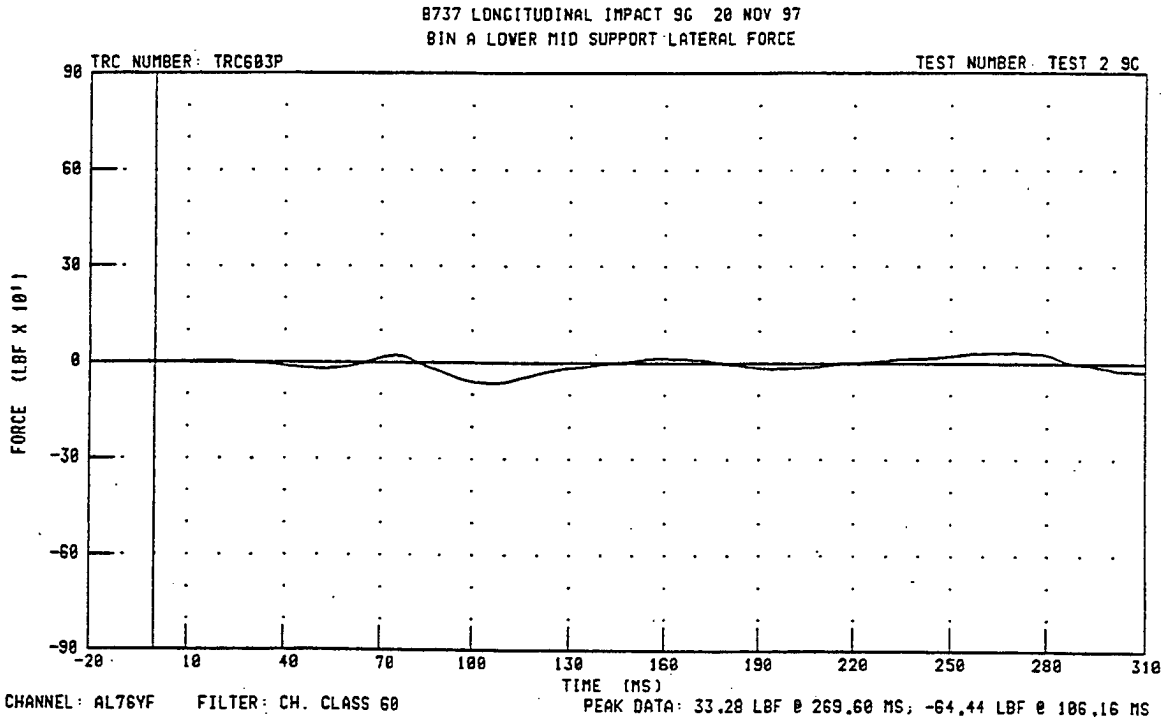

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A AFT LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER TEST 2 9G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAXV
FILTER: CH. CLASS 180
PEAK DATA: 0.04 FT/S @ -12.88 MS, -33.23 FT/S @ 233.60 MS

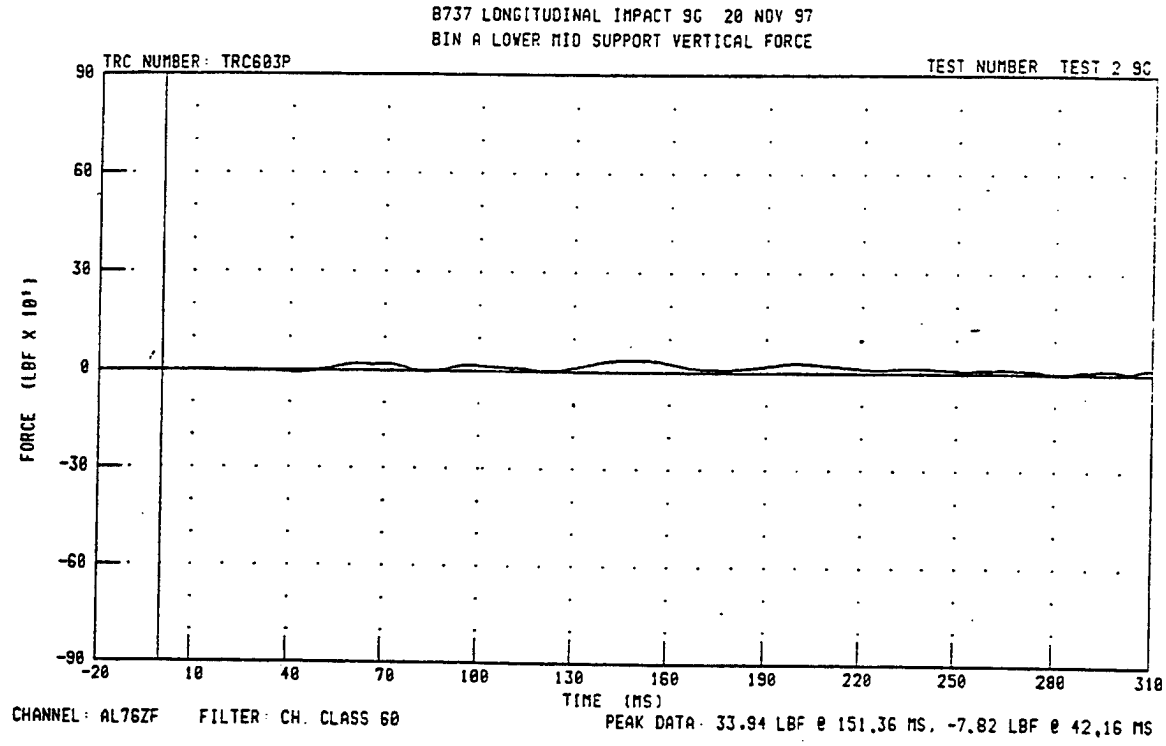

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER FRONT SUPPORT LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL75XF
FILTER: CH. CLASS 60
PEAK DATA: 22.14 LBF @ 250.72 MS; -492.65 LBF @ 94.08 MS

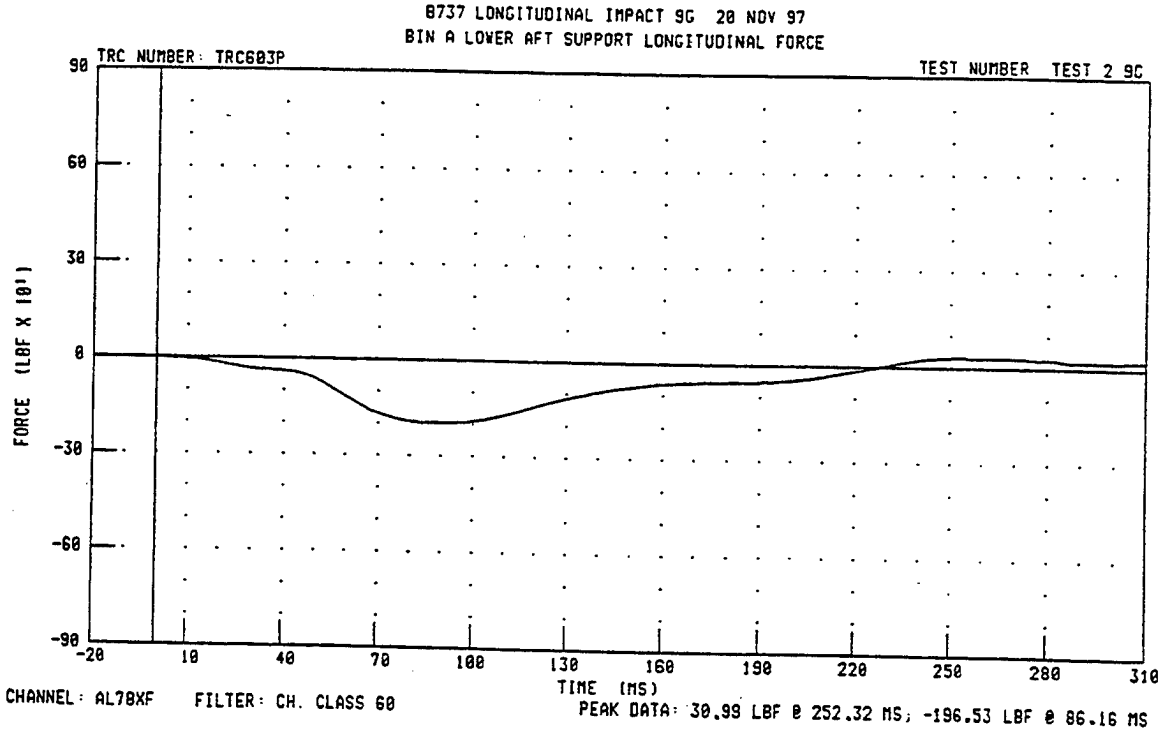

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER FRONT SUPPORT LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10')
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL75YF
FILTER: CH CLASS 60
PEAK DATA 197.82 LBF @ 98.00 MS; -23.42 LBF @ 279.36 MS

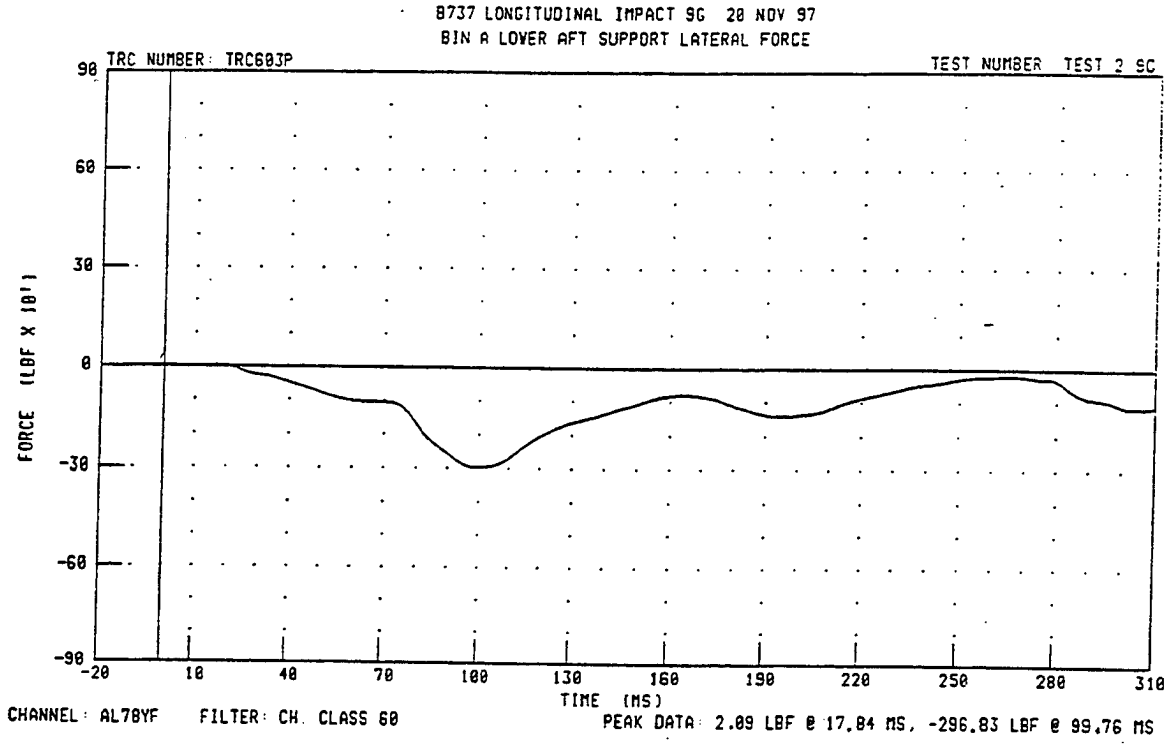

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER FRONT SUPPORT VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10')
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL75ZF
FILTER: CH. CLASS 60
PEAK DATA: 23.44 LBF @ 236.00 MS; -38.91 LBF @ 135.76 MS

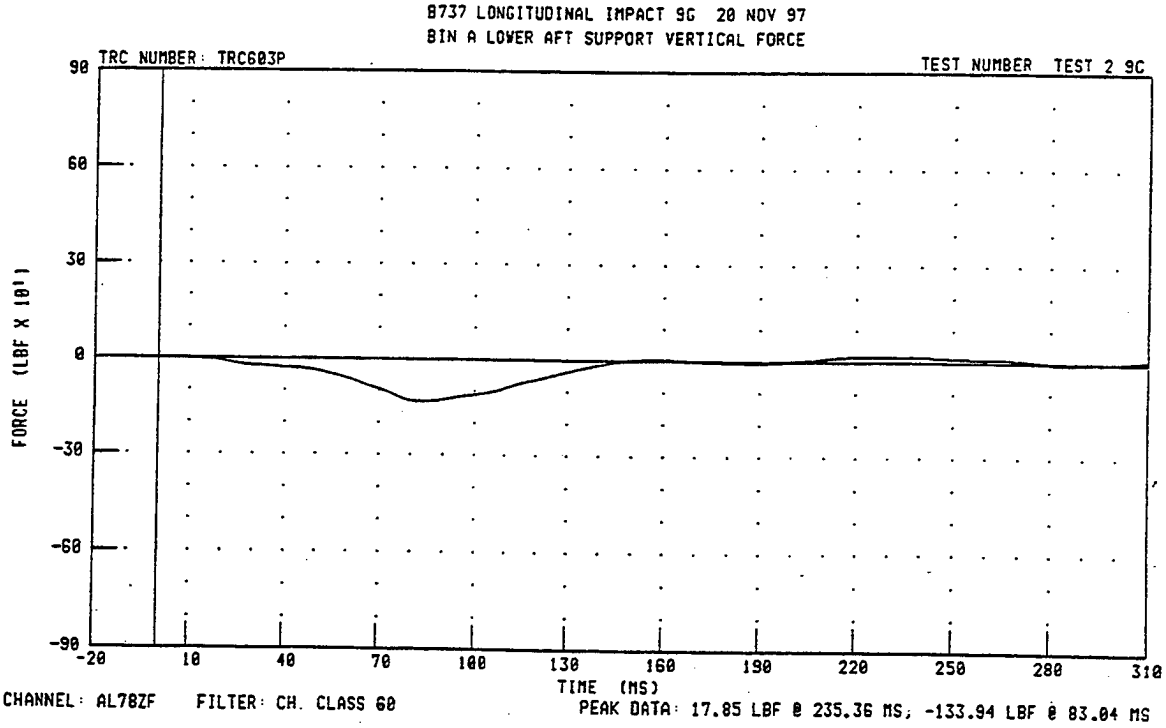

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER MID SUPPORT LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL76XF
FILTER: CH. CLASS 60
PEAK DATA: 84.86 LBF @ 306.16 MS, -641.01 LBF @ 83.28 MS

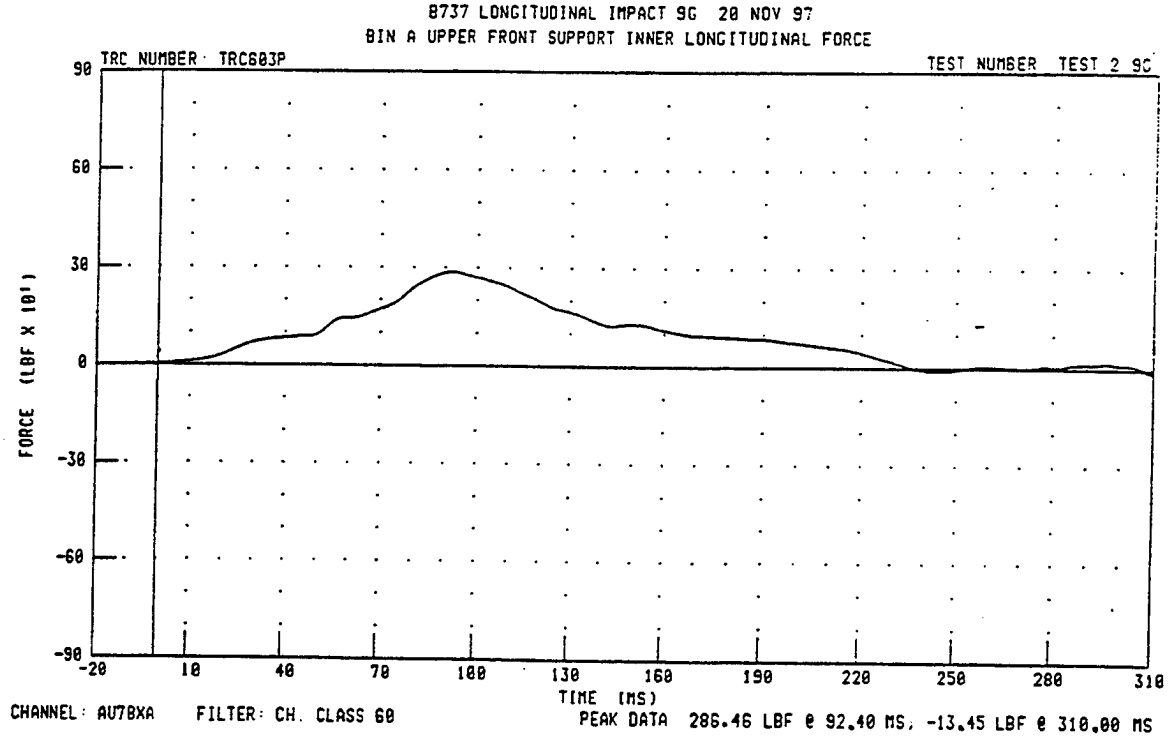

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER MID SUPPORT LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL76YF
FILTER: CH. CLASS 60
PEAK DATA: 33.28 LBF @ 269.60 MS; -64.44 LBF @ 186.16 MS

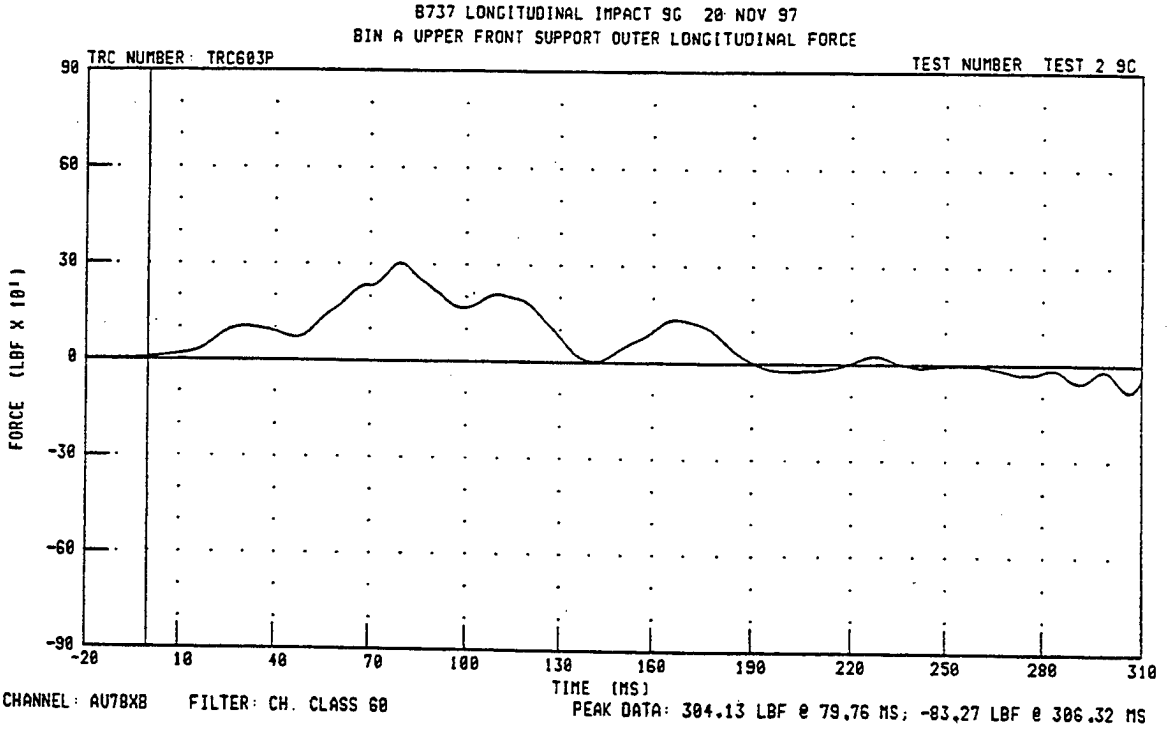

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER MID SUPPORT VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL76ZF
FILTER: CH. CLASS 60
PEAK DATA: 33.94 LBF @ 151.36 MS, -7.82 LBF @ 42.16 MS

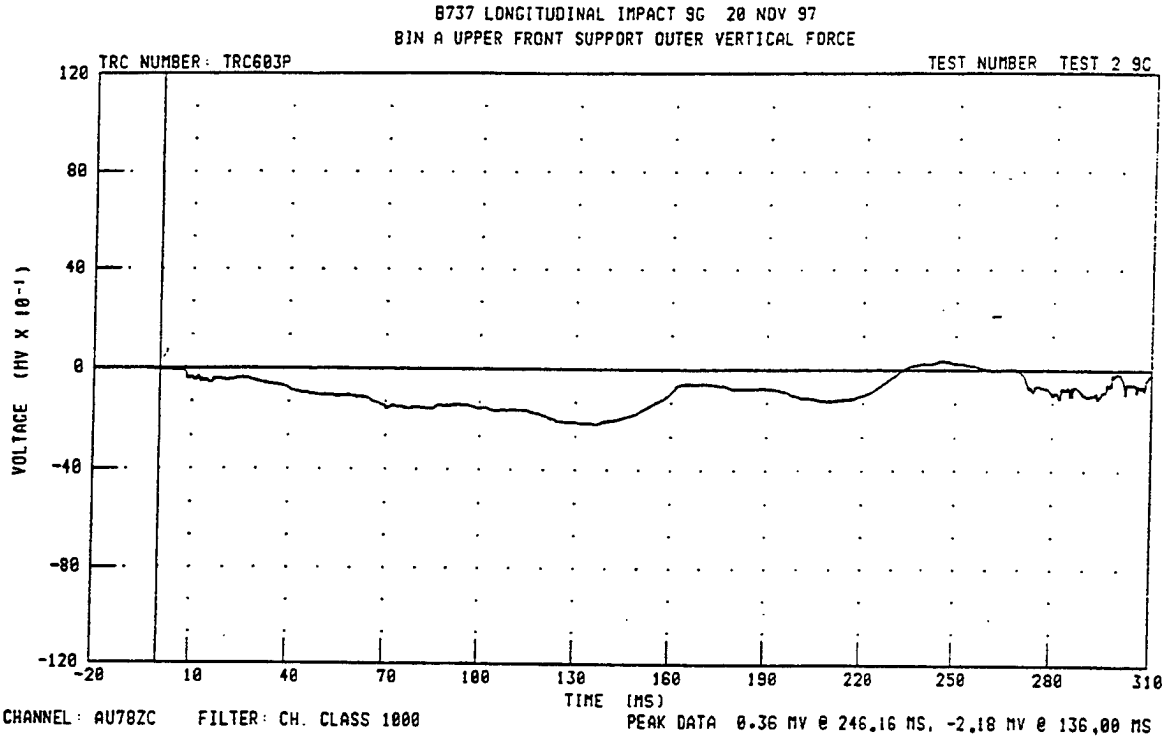

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER AFT SUPPORT LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78XF
FILTER: CH. CLASS 60
PEAK DATA: 30.99 LBF @ 252.32 MS, -196.53 LBF @ 86.16 MS

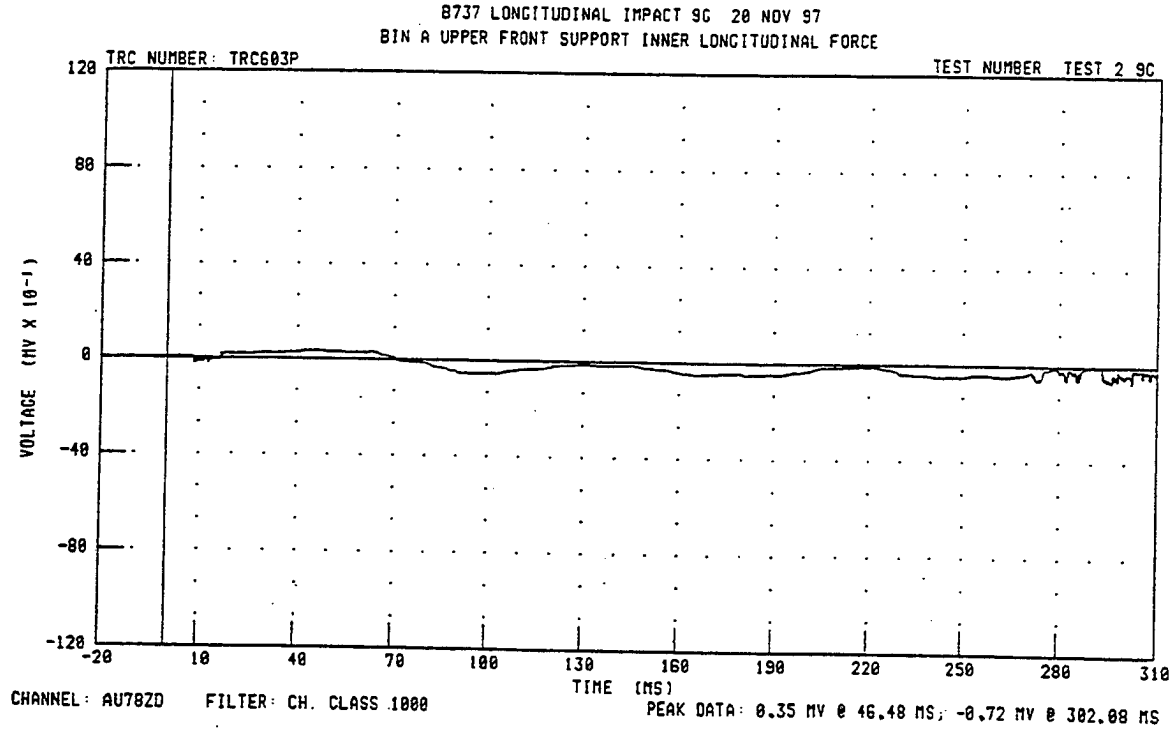

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER AFT SUPPORT LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78YF
FILTER: CH. CLASS 60
PEAK DATA: 2.09 LBF @ 17.84 MS, -296.83 LBF @ 99.76 MS

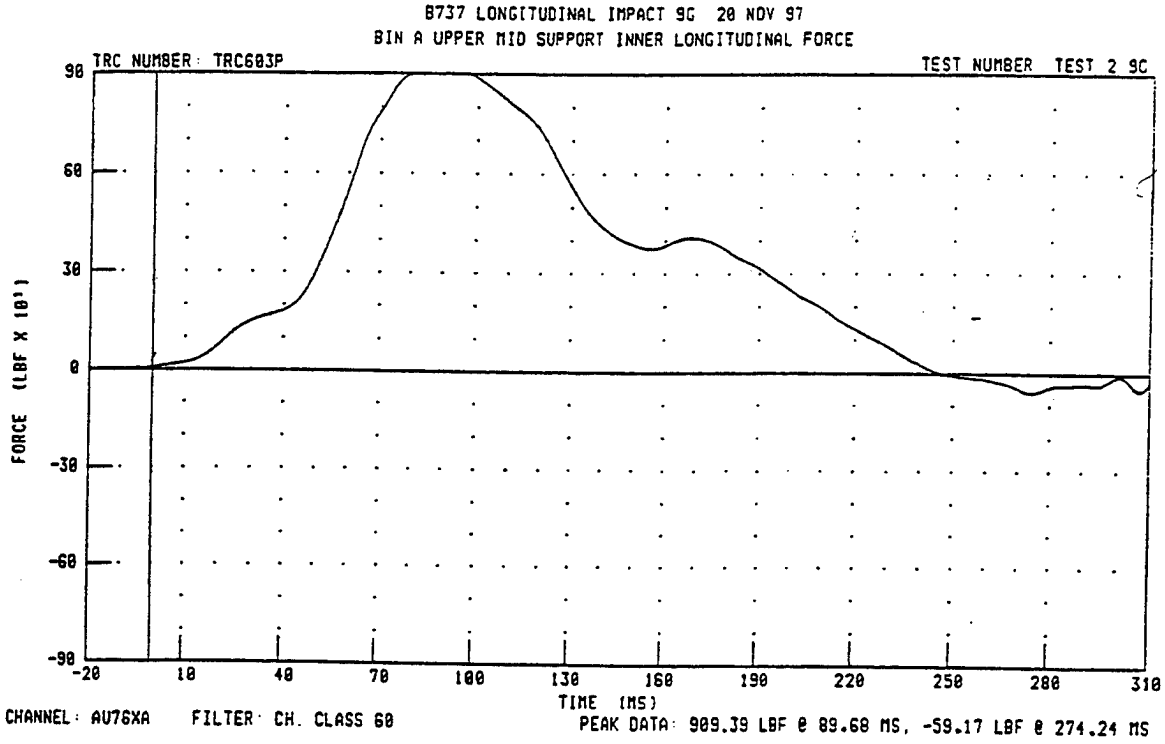

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A LOWER AFT SUPPORT VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78ZF
FILTER: CH. CLASS 60
PEAK DATA: 17.85 LBF @ 235.36 MS, -133.94 LBF @ 83.04 MS

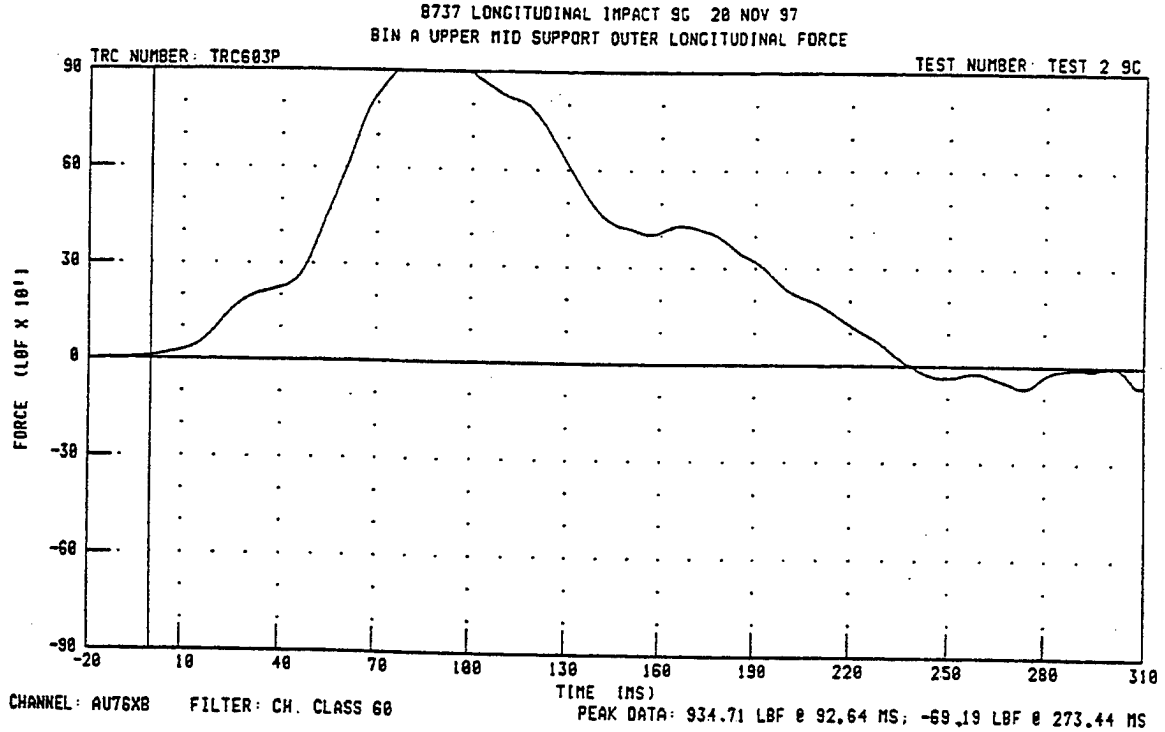

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER FRONT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78XA
FILTER: CH. CLASS 60
PEAK DATA 286.46 LBF @ 92.40 MS; -13.45 LBF @ 310.00 MS

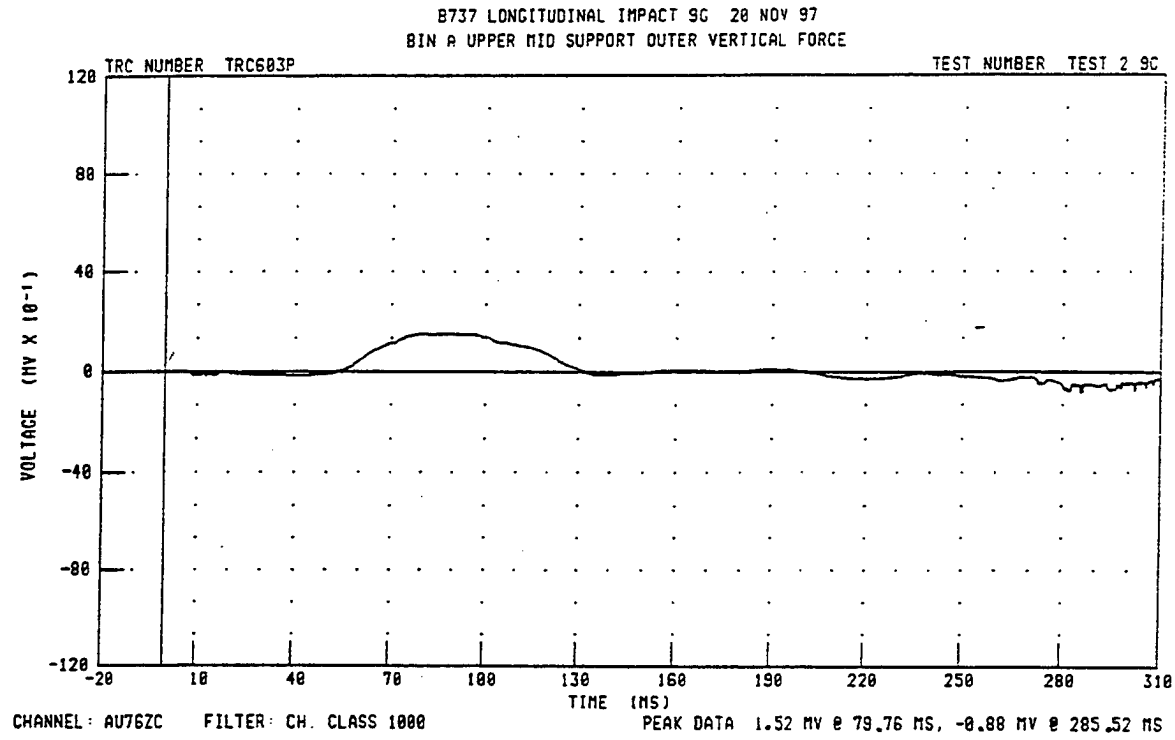

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER FRONT SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78XB
FILTER: CH. CLASS 60
PEAK DATA: 304.13 LBF @ 79.76 MS; -83.27 LBF @ 306.32 MS

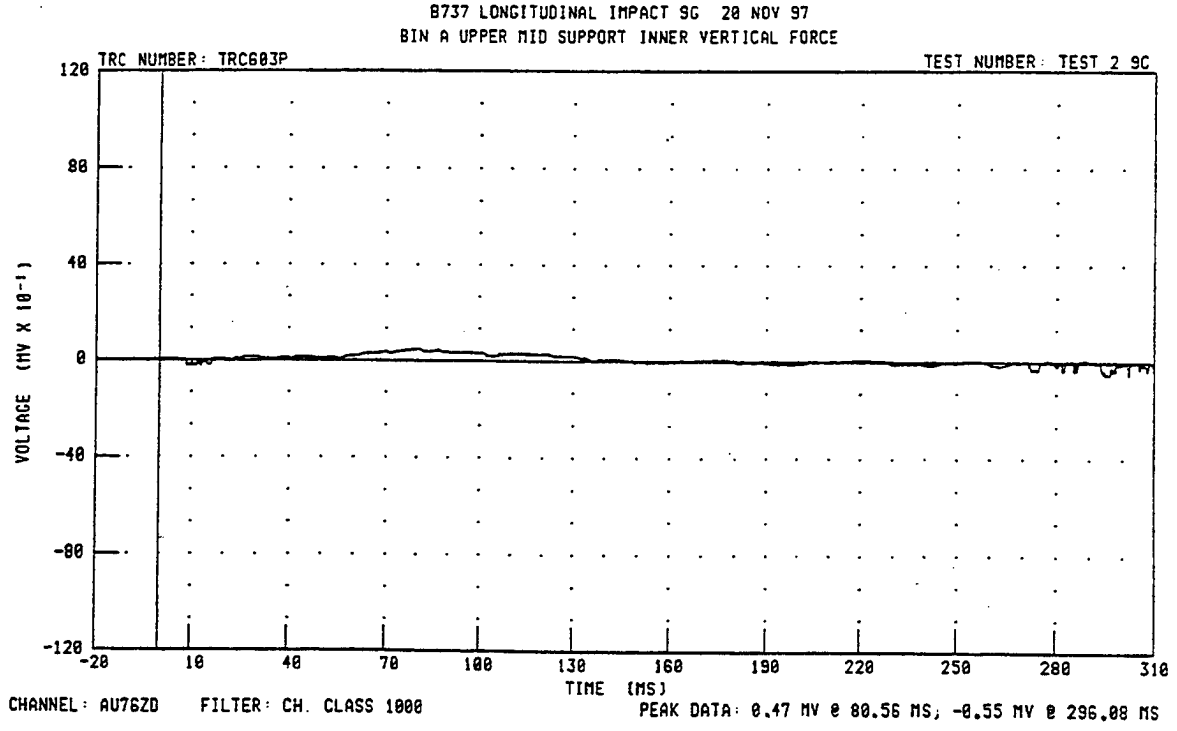

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER FRONT SUPPORT OUTER VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78ZC
FILTER: CH. CLASS 1000
PEAK DATA 0.36 MV @ 246.16 MS, -2.18 MV @ 136.00 MS

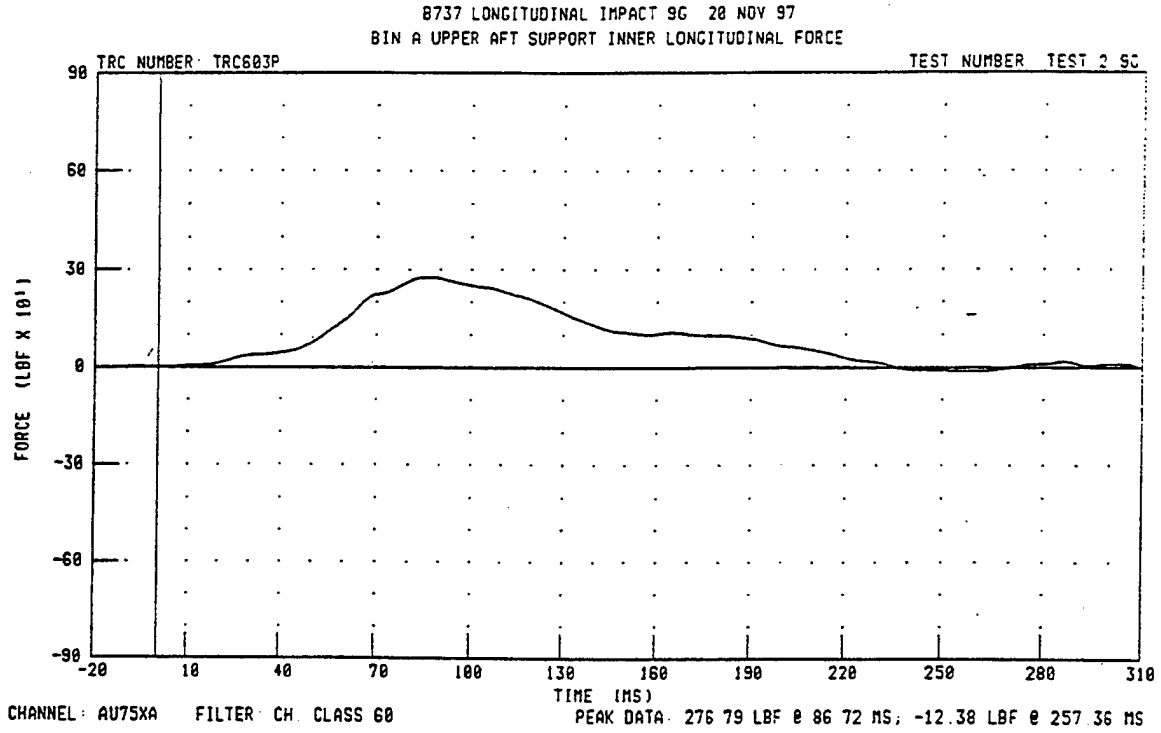

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER FRONT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78ZD
FILTER: CH. CLASS 1000
PEAK DATA: 0.35 MV @ 46.48 MS; -0.72 MV @ 302.08 MS

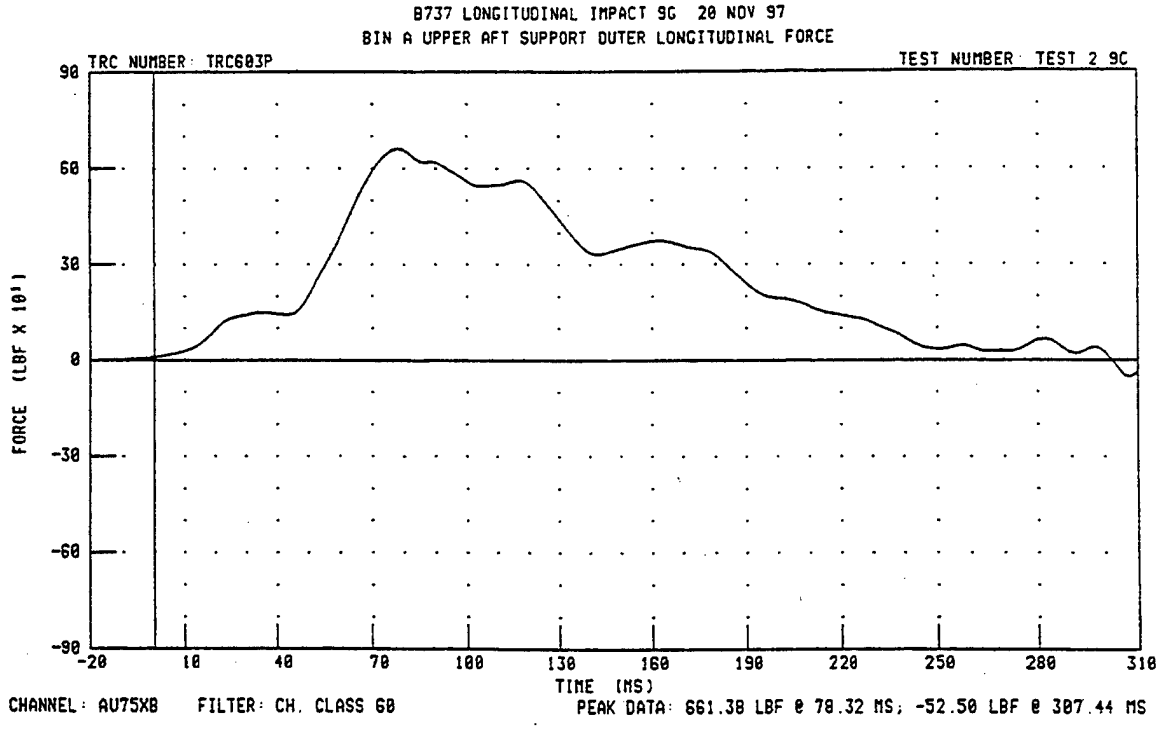

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER MID SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76XA
FILTER: CH. CLASS 60
PEAK DATA: 909.39 LBF @ 89.68 MS, -59.17 LBF @ 274.24 MS

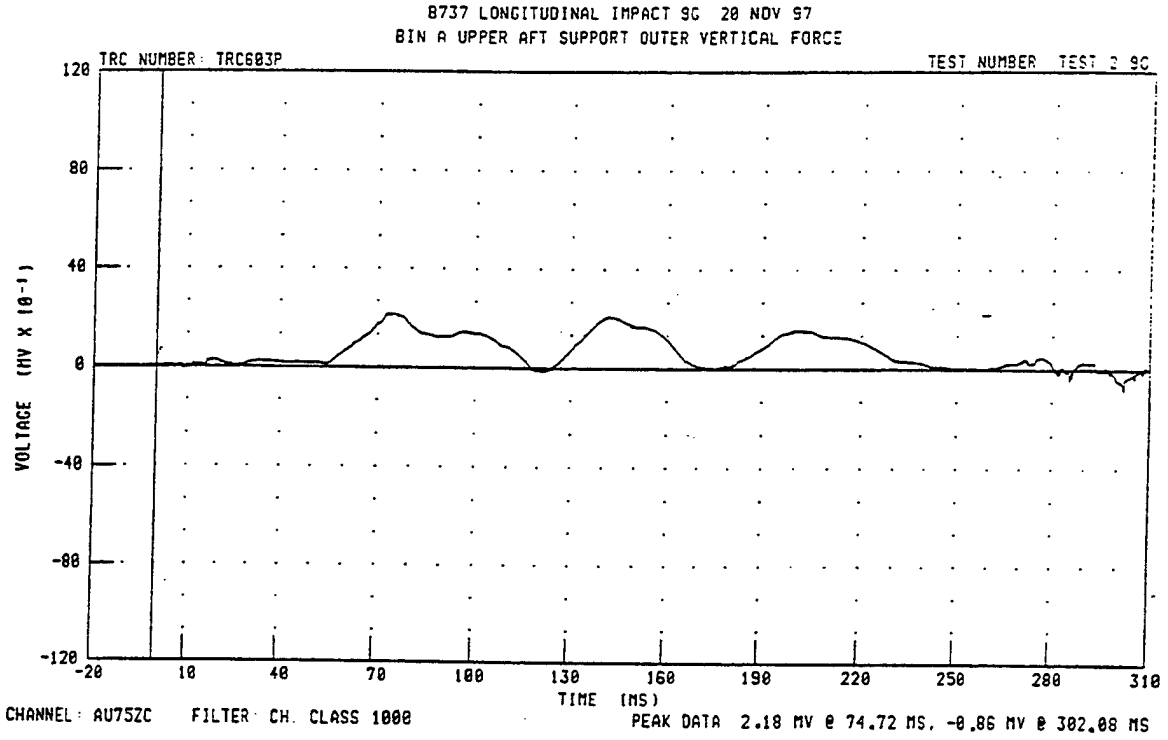

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER MID SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76XB
FILTER: CH. CLASS 60
PEAK DATA: 934.71 LBF @ 92.64 MS; -69.19 LBF @ 273.44 MS

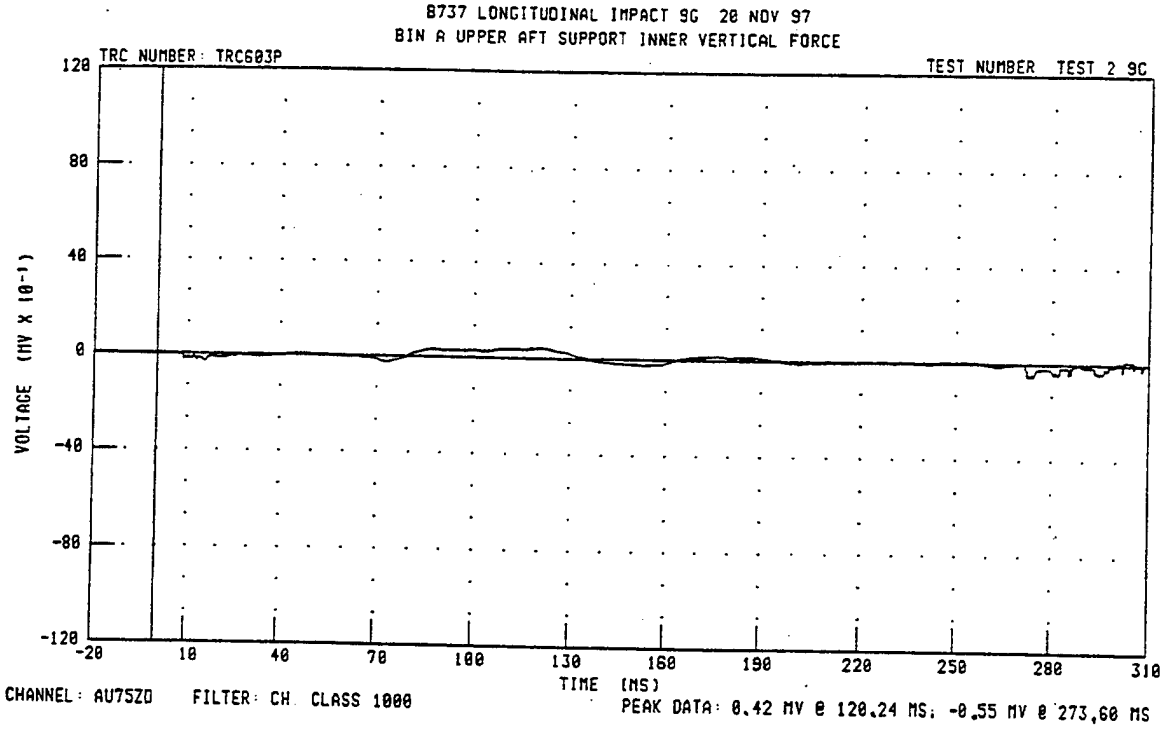

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER MID SUPPORT OUTER VERTICAL FORCE
TRC NUMBER TRC603P
TEST NUMBER TEST 2 9C
VOLTAGE (MV X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76ZC
FILTER: CH. CLASS 1000
PEAK DATA 1.52 MV @ 79.76 MS, -0.88 MV @ 285.52 MS

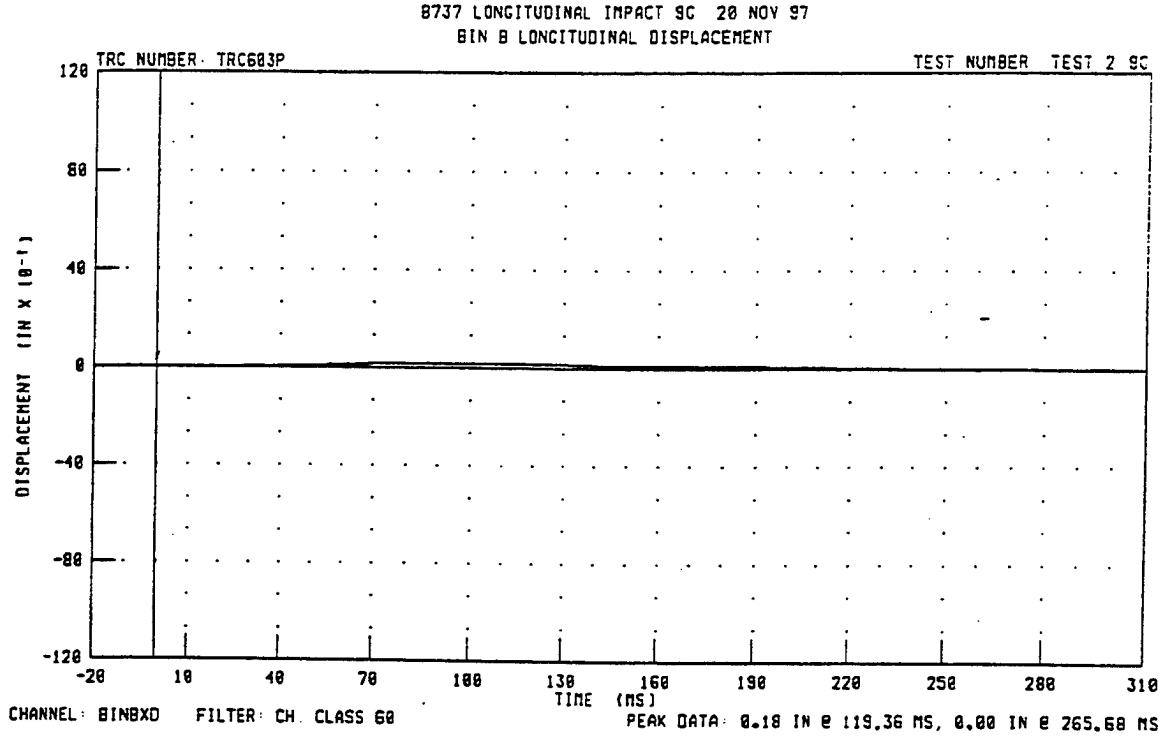

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER MID SUPPORT INNER VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9C
VOLTAGE (MV X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76ZD
FILTER: CH. CLASS 1000
PEAK DATA: 0.47 MV @ 80.56 MS, -0.55 MV @ 296.08 MS

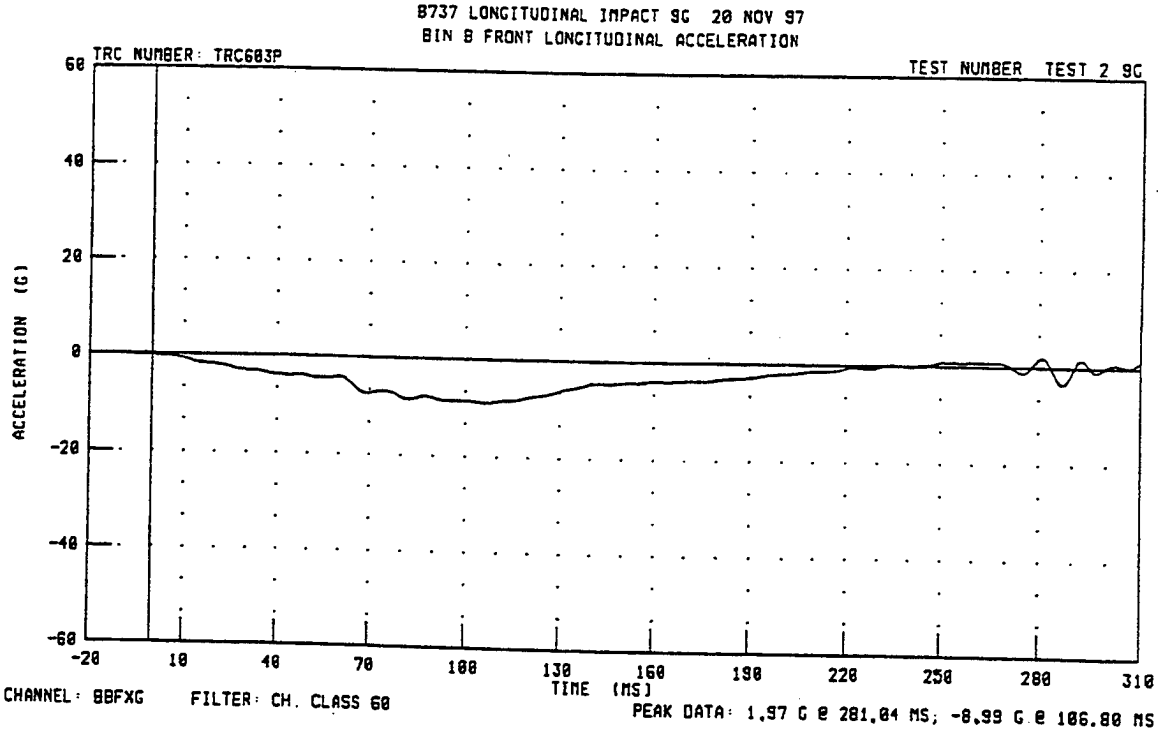

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER AFT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75XA
FILTER: CH. CLASS 60
PEAK DATA: 276.79 LBF @ 86.72 MS; -12.38 LBF @ 257.36 MS

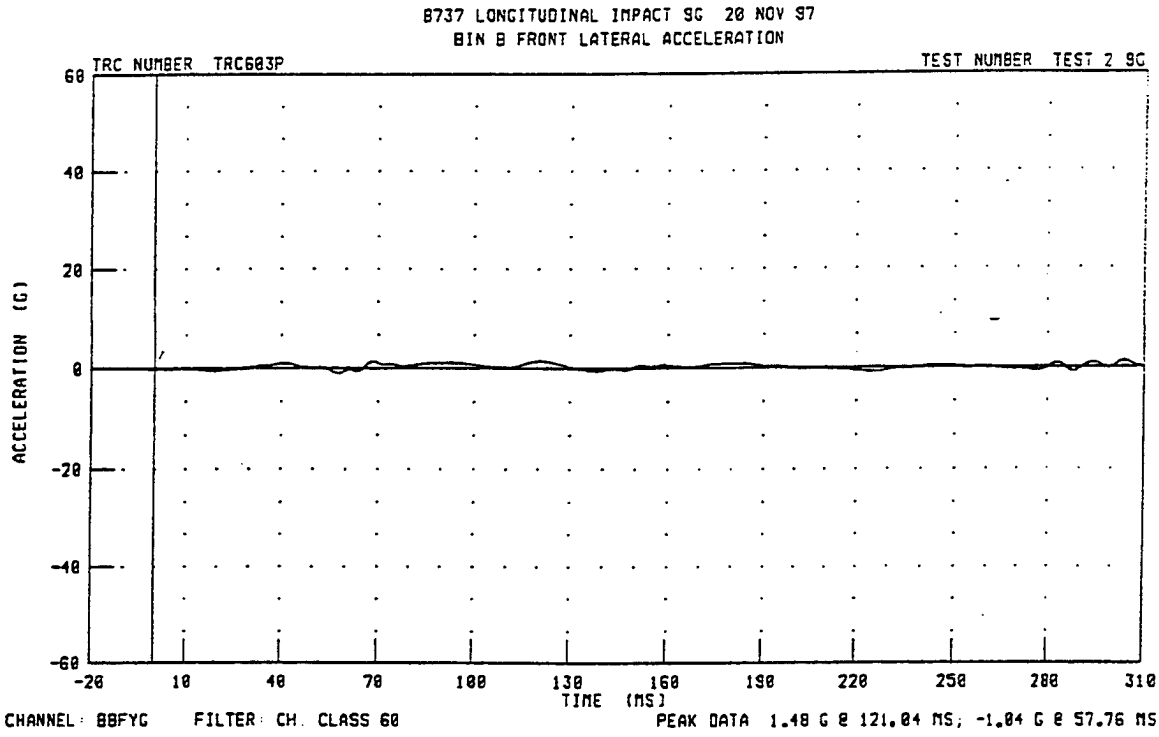

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER AFT SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75XB
FILTER: CH. CLASS 60
PEAK DATA: 661.38 LBF @ 78.32 MS; -52.50 LBF @ 307.44 MS

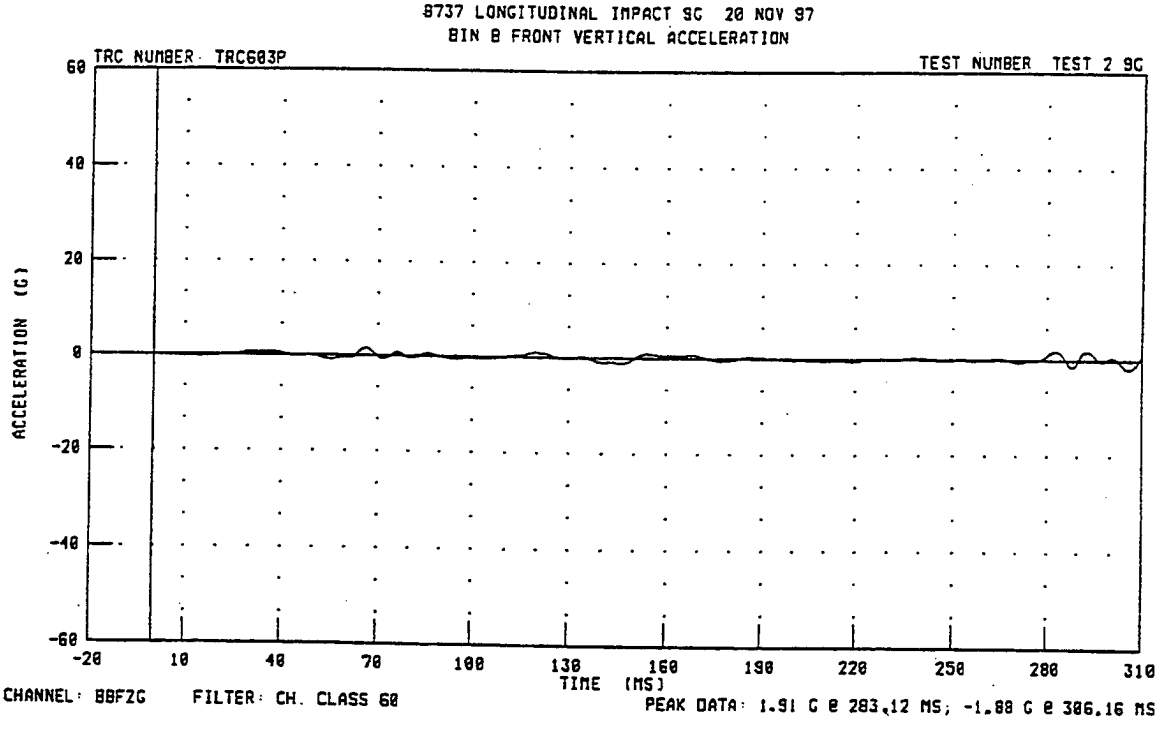

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER AFT SUPPORT OUTER VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75ZC
FILTER: CH. CLASS 1000
PEAK DATA 2.18 MV @ 74.72 MS, -0.86 MV @ 302.08 MS

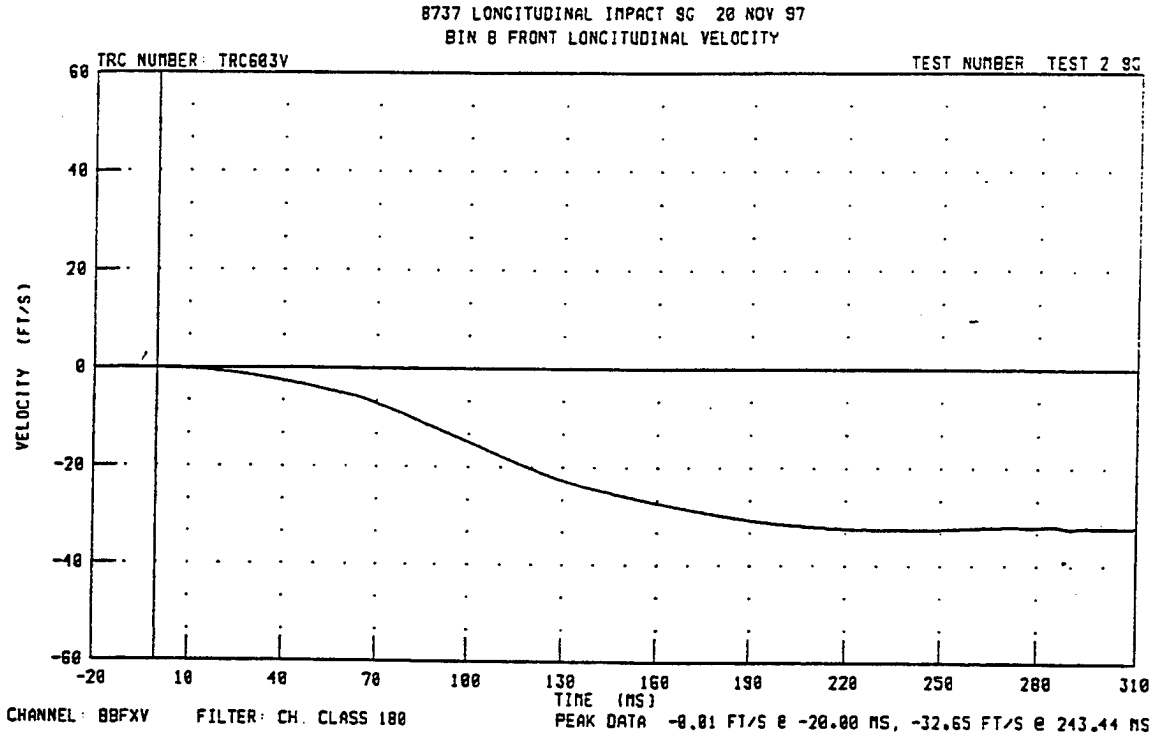

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN A UPPER AFT SUPPORT INNER VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75ZD
FILTER: CH. CLASS 1000
PEAK DATA: 0.42 MV @ 120.24 MS; -0.55 MV @ 273.60 MS

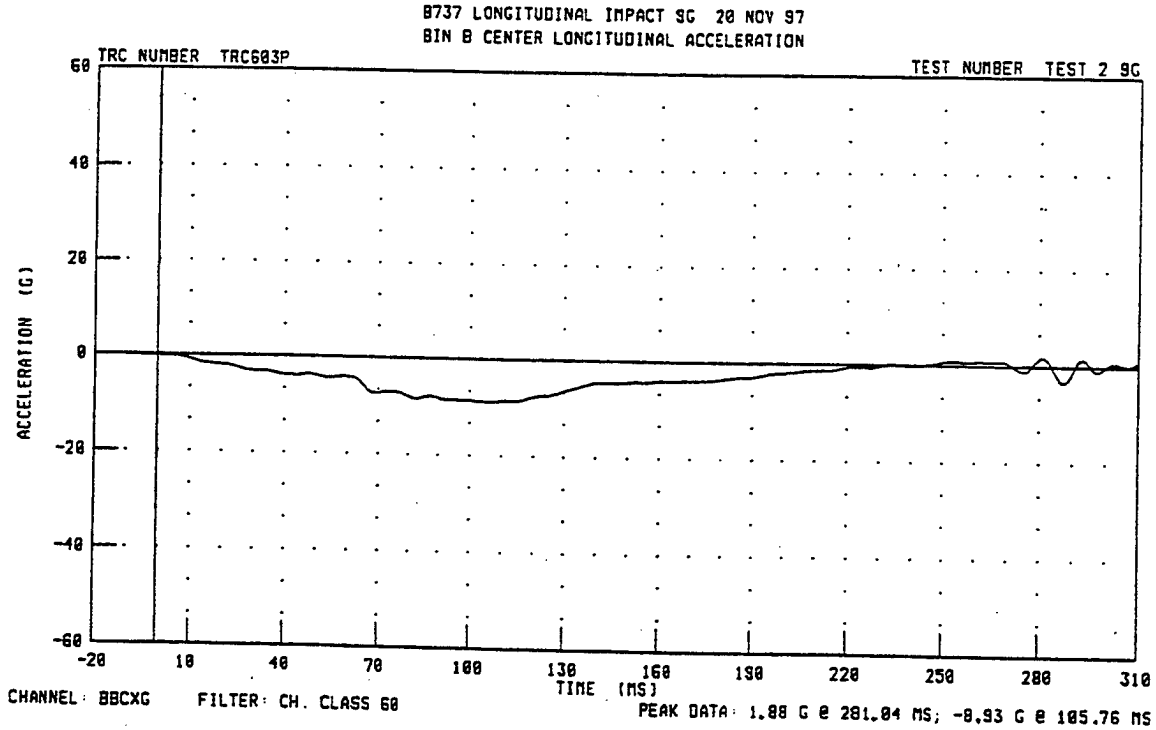

B737 LONGITUDINAL IMPACT 9C 20 NOV 97
BIN B LONGITUDINAL DISPLACEMENT
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
DISPLACEMENT (IN X 10-1)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BINBXD
FILTER: CH. CLASS 60
PEAK DATA: 0.18 IN @ 119.36 MS, 0.00 IN @ 265.68 MS

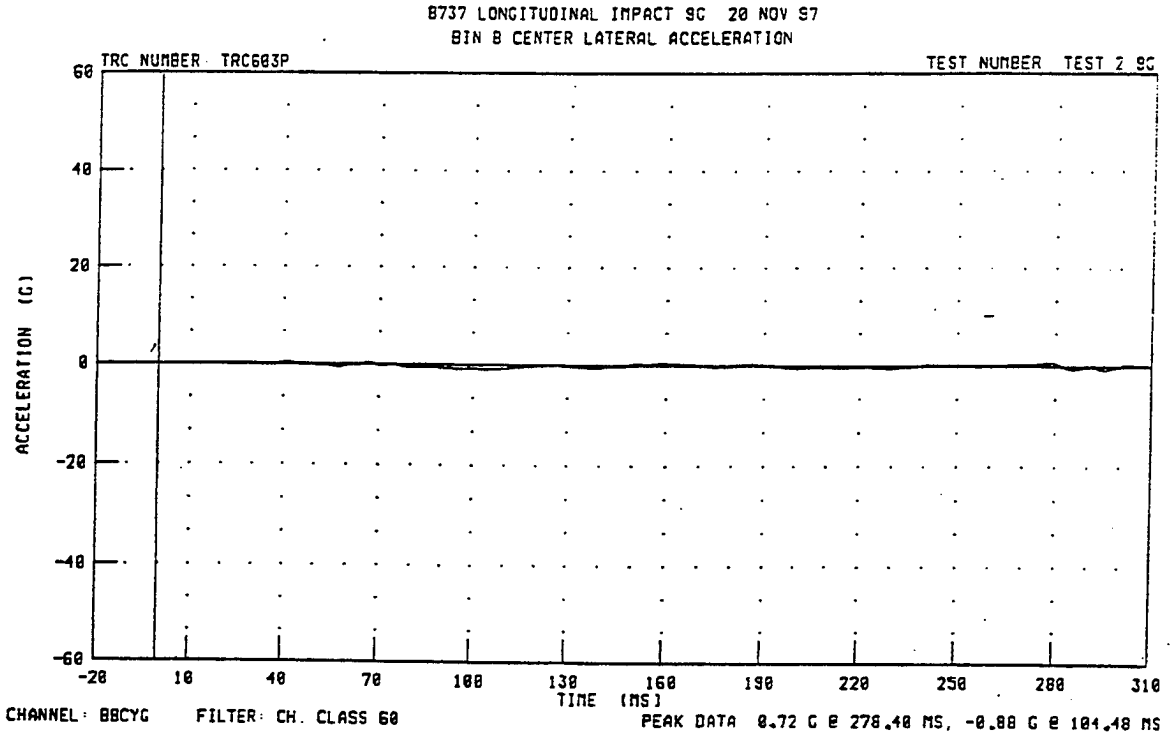

B737 LONGITUDINAL IMPACT 9C 20 NOV 97
BIN B FRONT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBFXG
FILTER: CH. CLASS 60
PEAK DATA: 1.97 G @ 281.04 MS; -8.99 G @ 106.80 MS

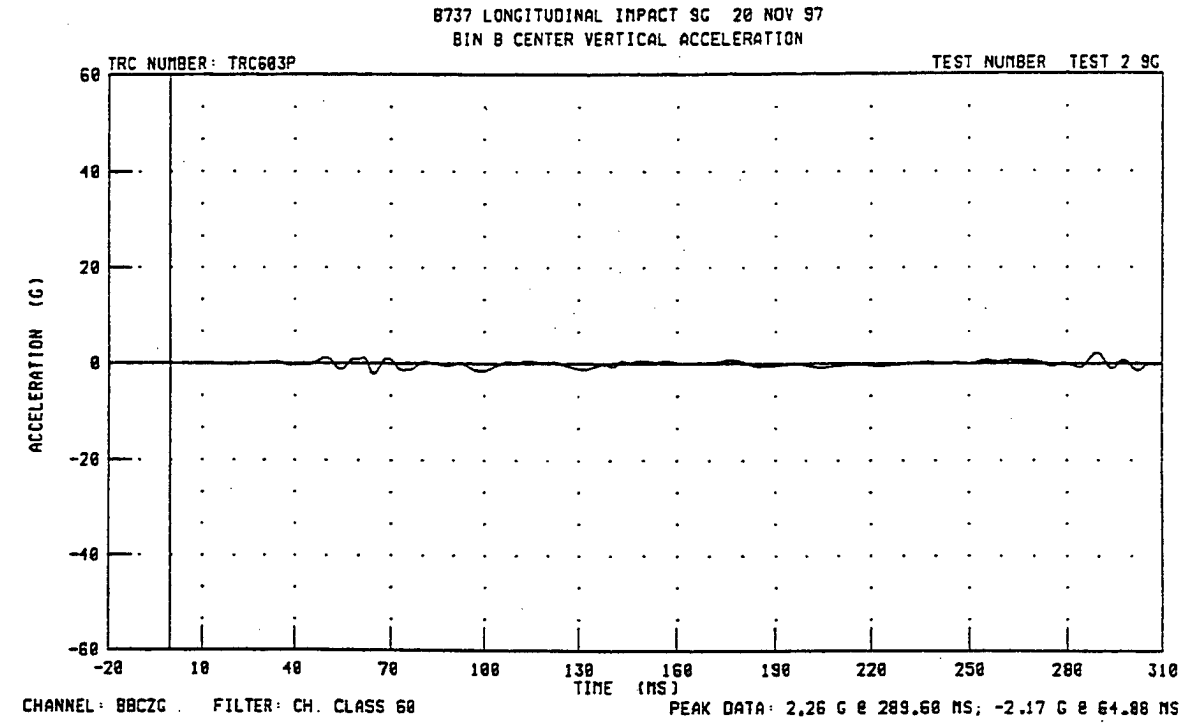

B737 LONGITUDINAL IMPACT SC 20 NOV 97
BIN B FRONT LATERAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 88FYC
FILTER: CH. CLASS 60
PEAK DATA 1.48 G @ 121.04 MS; -1.04 G @ 57.76 MS

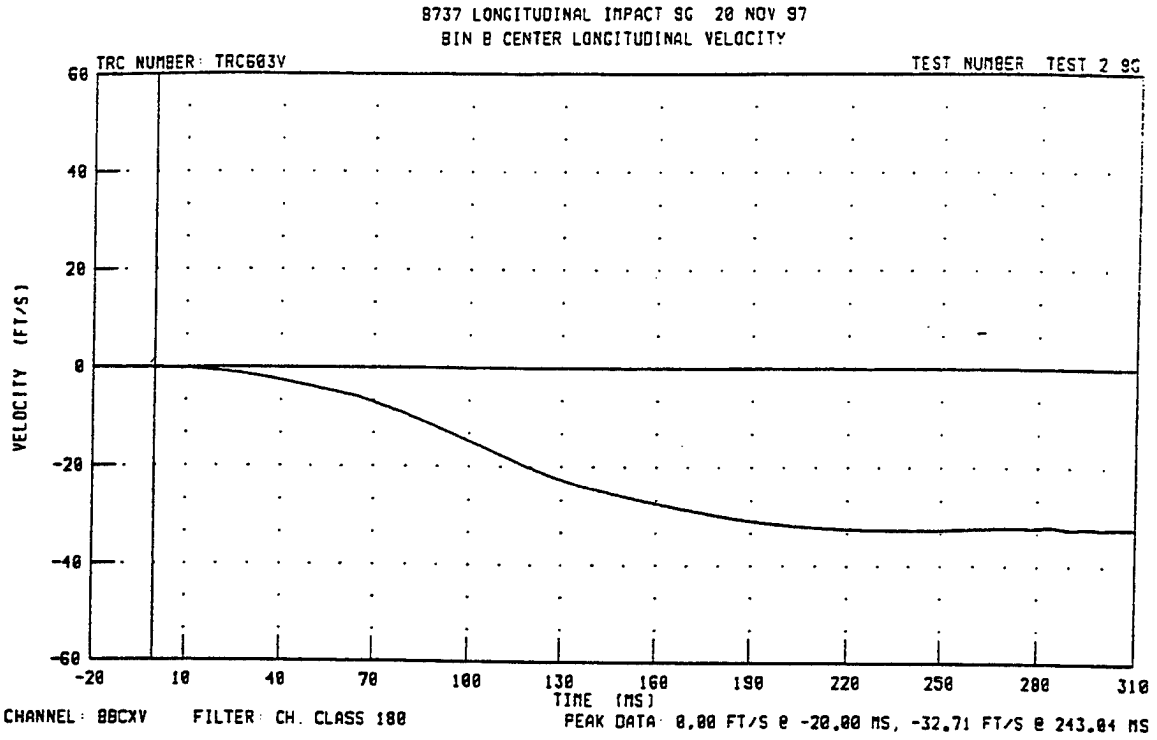

B737 LONGITUDINAL IMPACT SC 20 NOV 97
BIN B FRONT VERTICAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 88FZC
FILTER: CH. CLASS 60
PEAK DATA: 1.91 G @ 283.12 MS; -1.88 G @ 306.16 MS

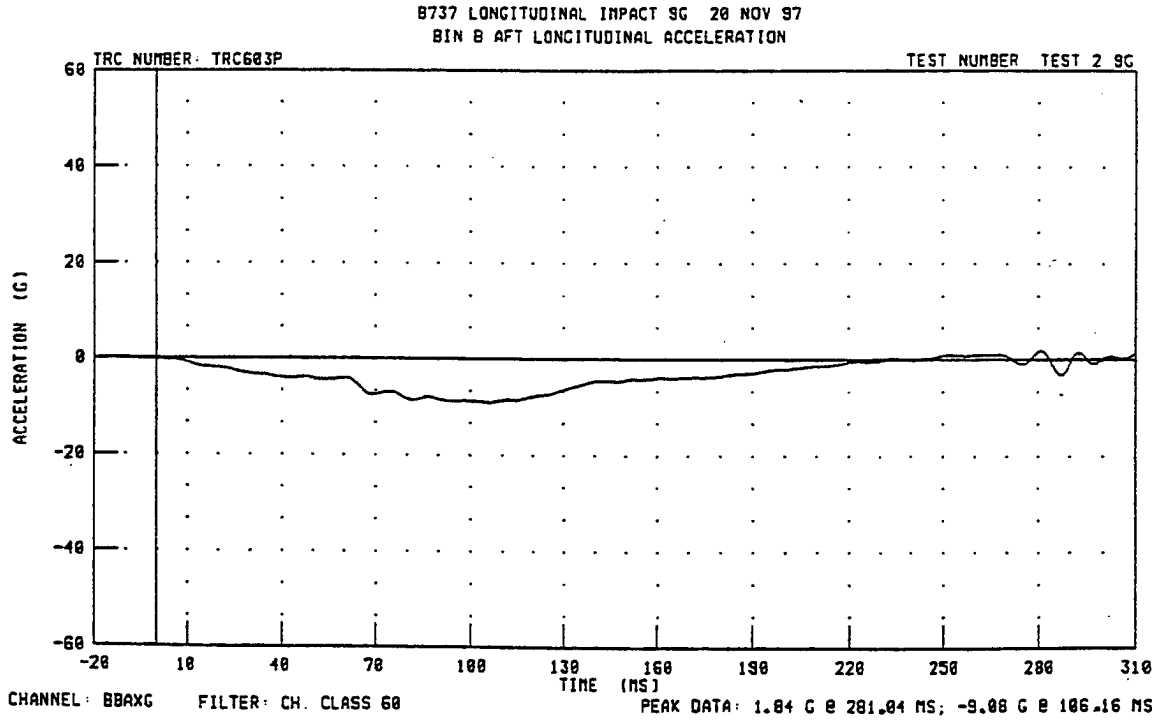

B737 LONGITUDINAL IMPACT SC 20 NOV 97
BIN B FRONT LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER TEST 2 SC
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBFXV
FILTER: CH. CLASS 180
PEAK DATA -0.01 FT/S @ -20.00 MS, -32.65 FT/S @ 243.44 MS

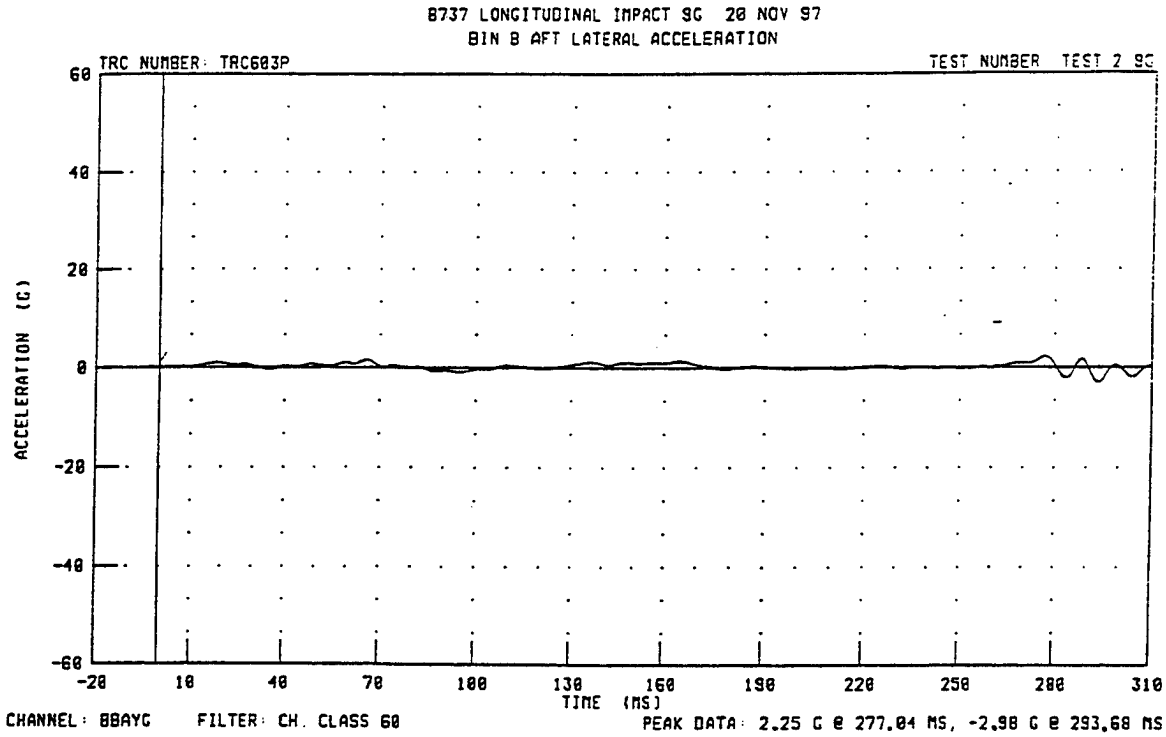

B737 LONGITUDINAL IMPACT SC 20 NOV 97
BIN B CENTER LONGITUDINAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 SC
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBCXG
FILTER: CH. CLASS 60
PEAK DATA: 1.88 G @ 281.04 MS; -8.93 G @ 105.76 MS

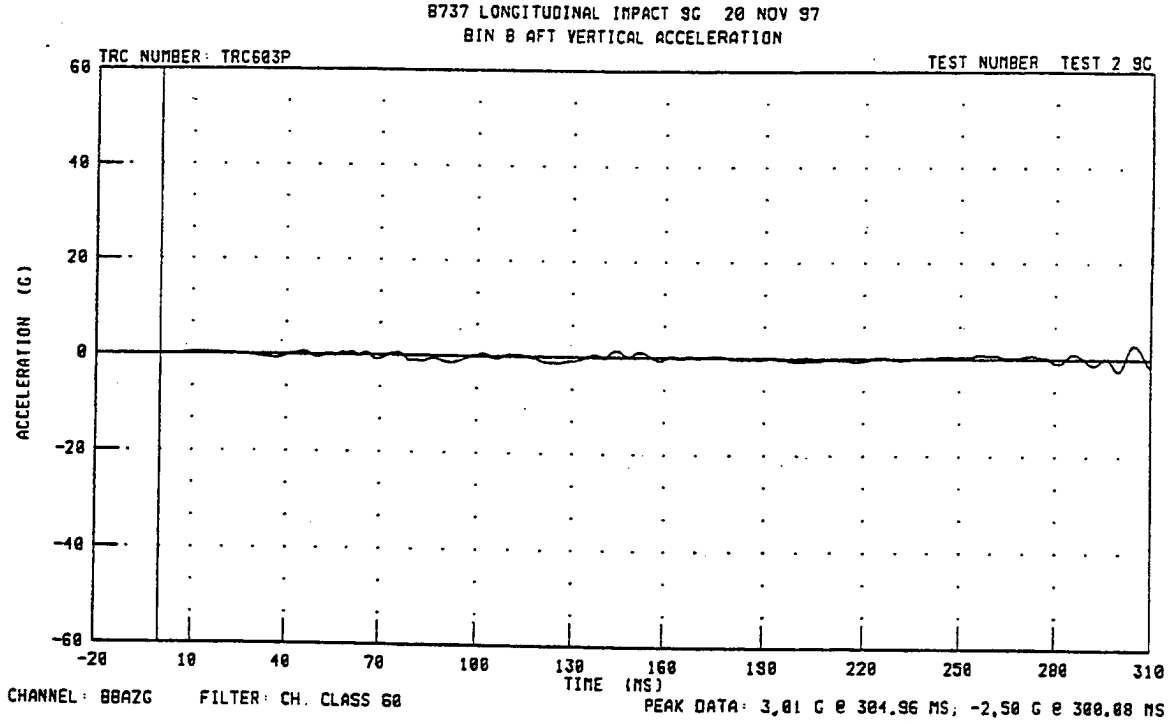

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B CENTER LATERAL ACCELERATION
TRC NUMBER TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBCYG
FILTER: CH. CLASS 60
PEAK DATA 0.72 G @ 278.40 MS, -0.88 G @ 104.48 MS

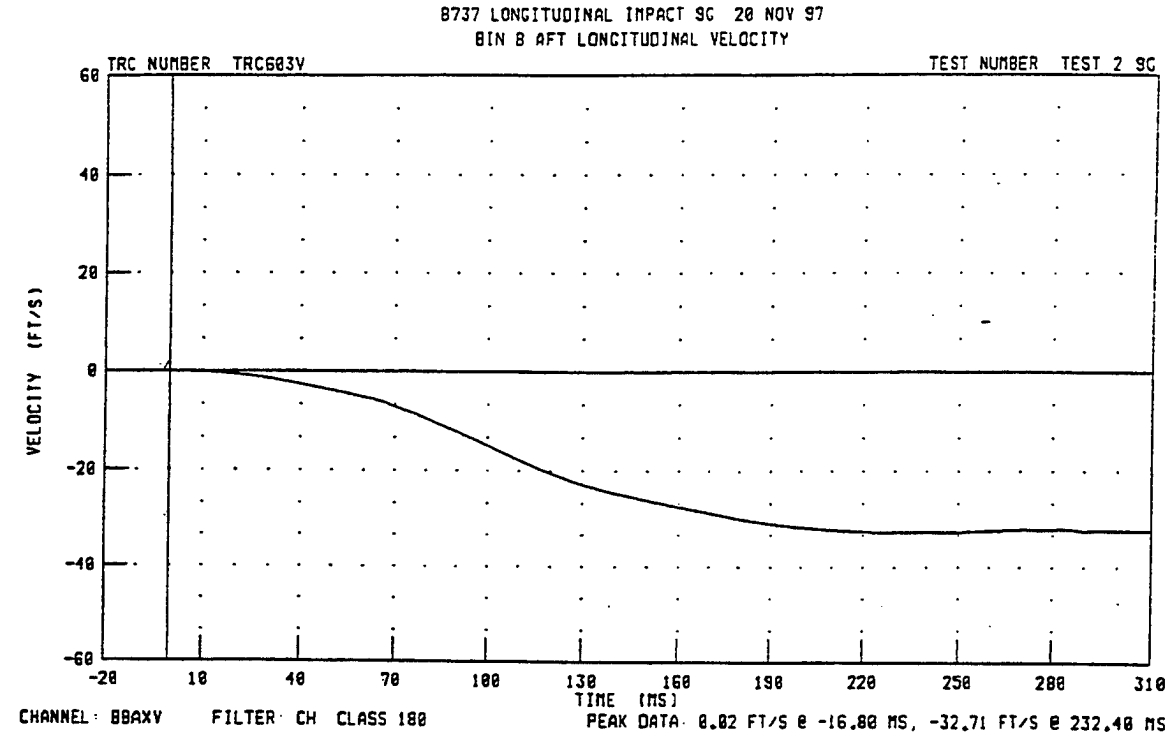

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B CENTER VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBCZG
FILTER: CH. CLASS 60
PEAK DATA: 2.26 G @ 289.60 MS; -2.17 G @ 64.88 MS

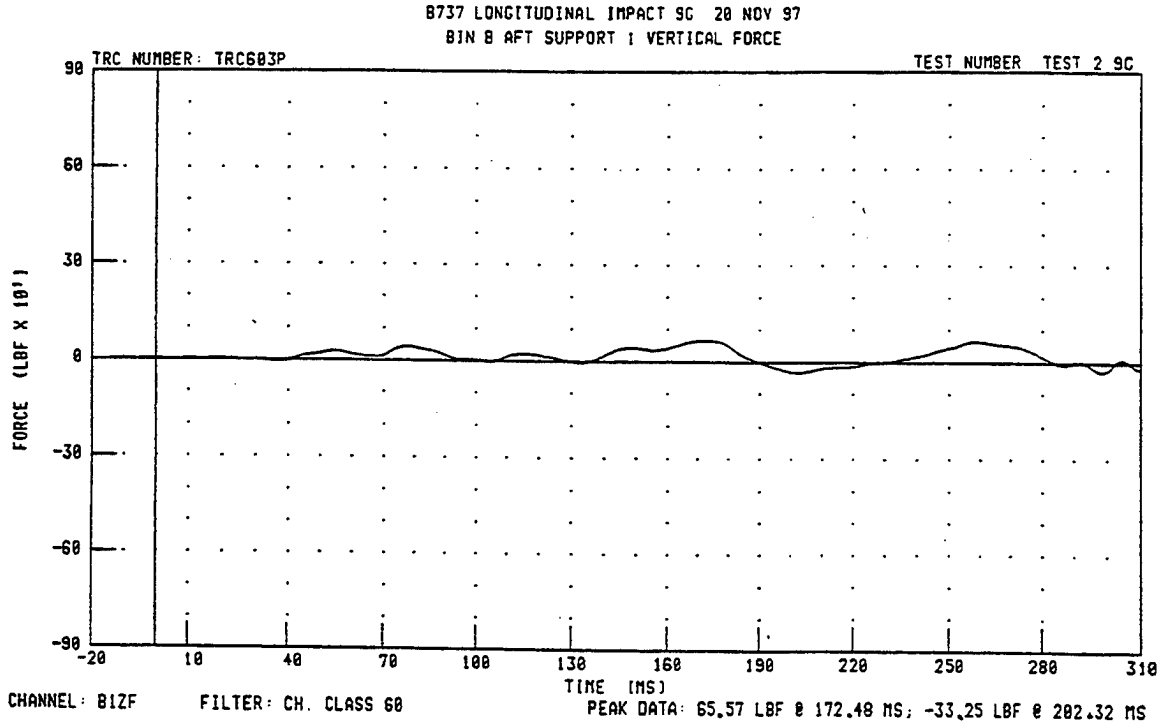

B737 LONGITUDINAL IMPACT SG 20 NOV 97
BIN B CENTER LONGITUDINAL VELOCITY
TRC NUMBER: TRC603V
TEST NUMBER TEST 2 SG
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBCXV
FILTER: CH. CLASS 180
PEAK DATA: 0.00 FT/S @ -20.00 MS, -32.71 FT/S @ 243.04 MS

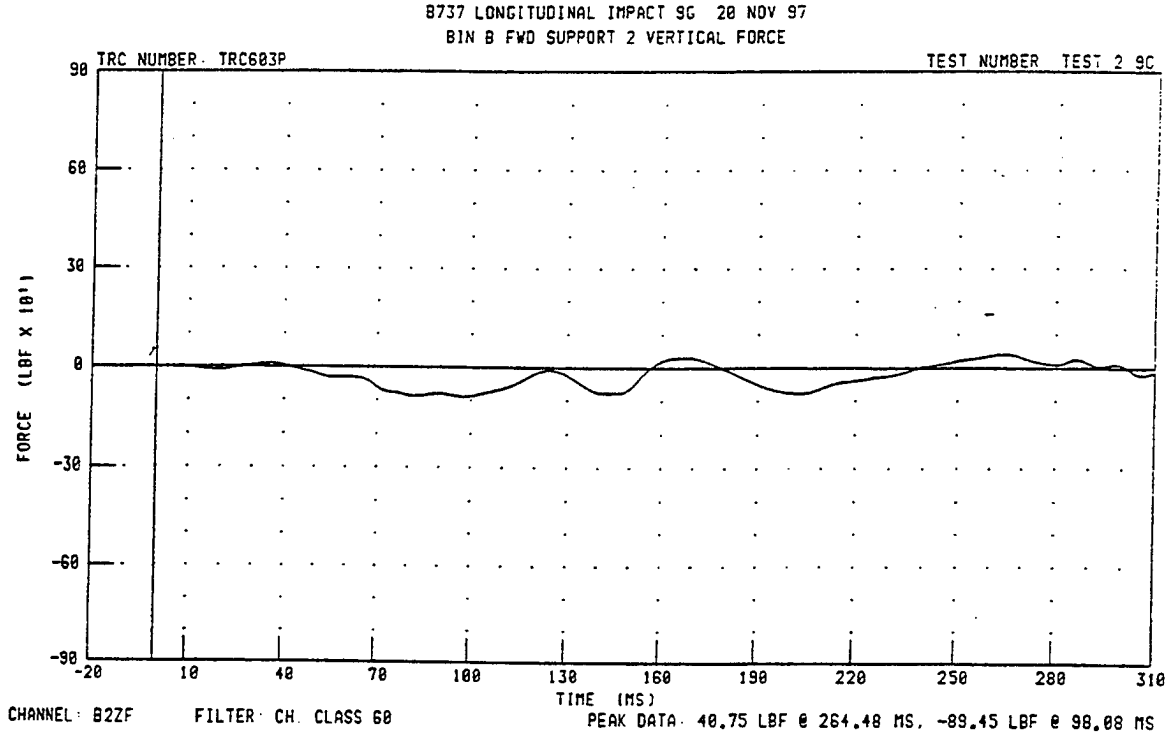

B737 LONGITUDINAL IMPACT SG 20 NOV 97
BIN B AFT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 SG
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBAXG
FILTER: CH. CLASS 60
PEAK DATA: 1.84 G @ 281.04 MS; -9.08 G @ 106.16 MS

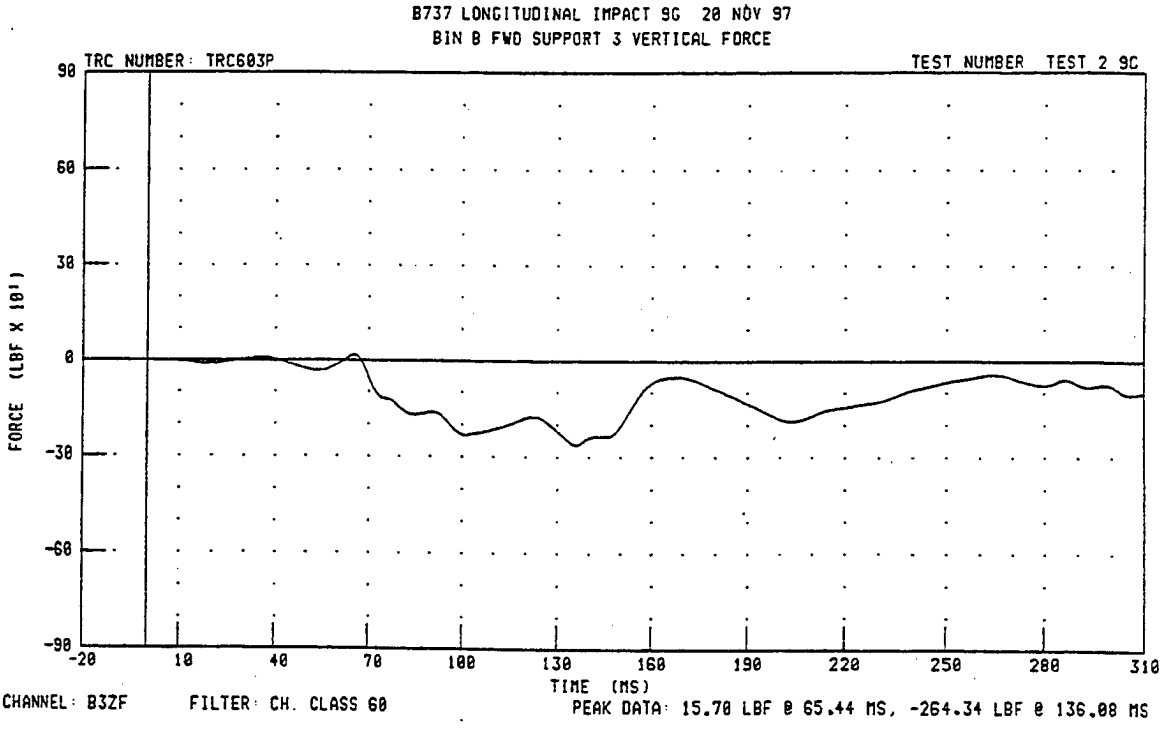

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B AFT LATERAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 88AYG
FILTER: CH. CLASS 60
PEAK DATA: 2.25 G @ 277.04 MS, -2.98 G @ 293.68 MS

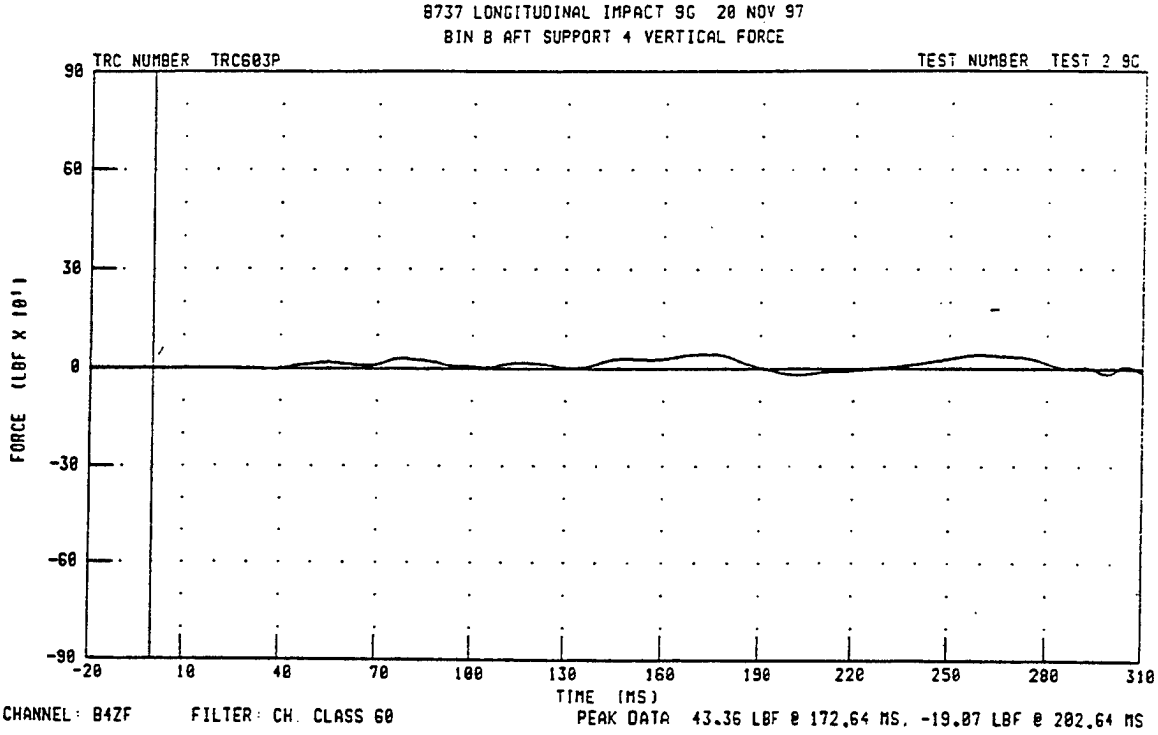

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B AFT VERTICAL ACCELERATION
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 88AZG
FILTER: CH. CLASS 60
PEAK DATA: 3.01 G @ 304.96 MS; -2.50 G @ 300.88 MS

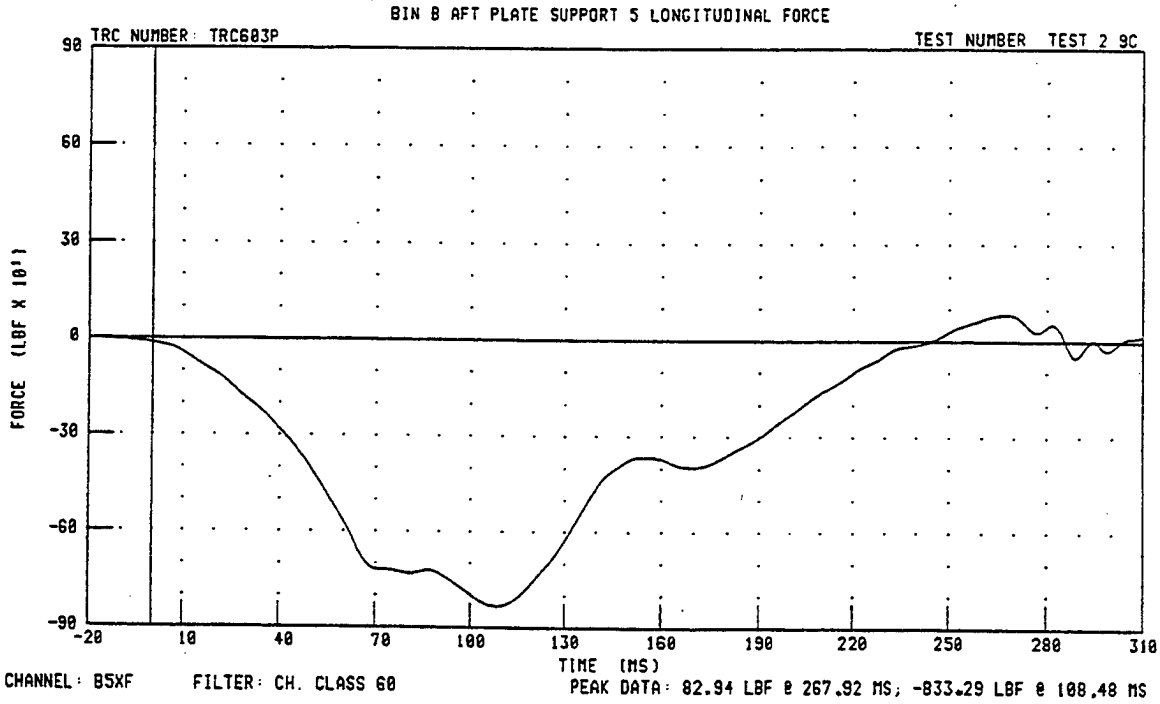

B737 LONGITUDINAL IMPACT 9C 20 NOV 97
BIN 8 AFT LONGITUDINAL VELOCITY
TRC NUMBER TRC603V
TEST NUMBER TEST 2 9C
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 8BAXV
FILTER: CH CLASS 180
PEAK DATA: 0.02 FT/S @ -16.80 MS, -32.71 FT/S @ 232.40 MS

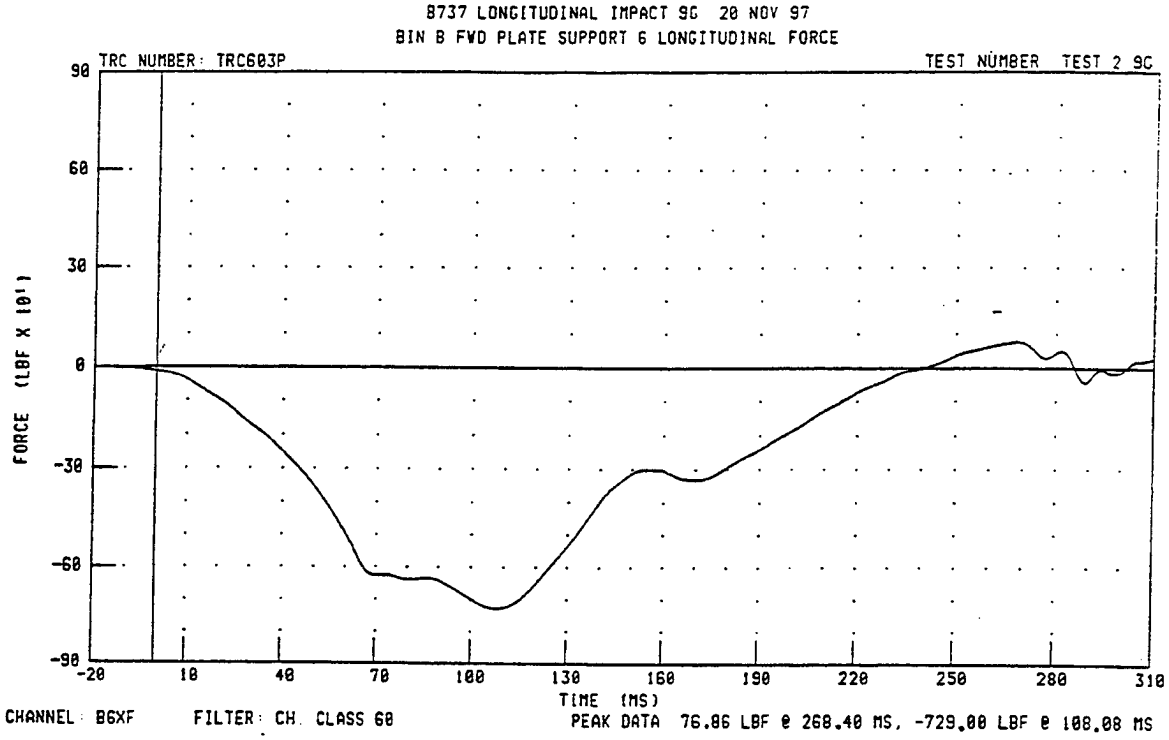

B737 LONGITUDINAL IMPACT 9C 20 NOV 97
BIN 8 AFT SUPPORT 1 VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10')
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B1ZF
FILTER: CH. CLASS 60
PEAK DATA: 65.57 LBF @ 172.48 MS; -33.25 LBF @ 202.32 MS

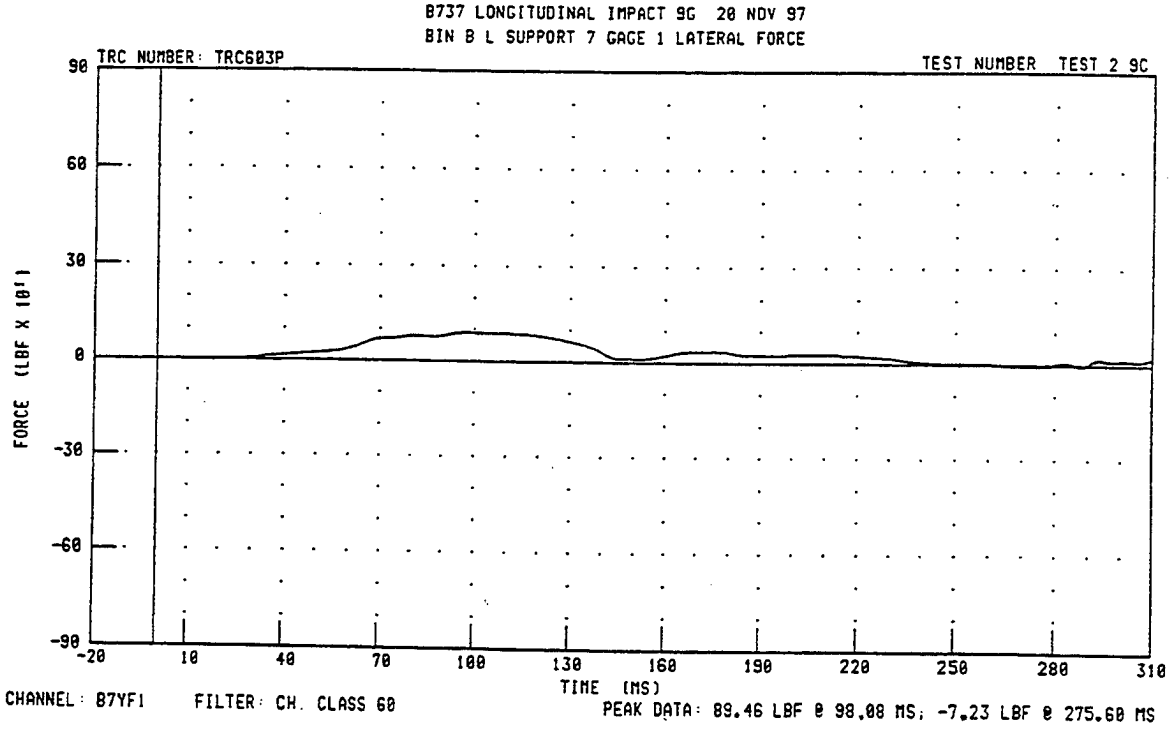

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B FWD SUPPORT 2 VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B2ZF
FILTER: CH. CLASS 60
PEAK DATA: 40.75 LBF @ 264.48 MS, -89.45 LBF @ 98.08 MS

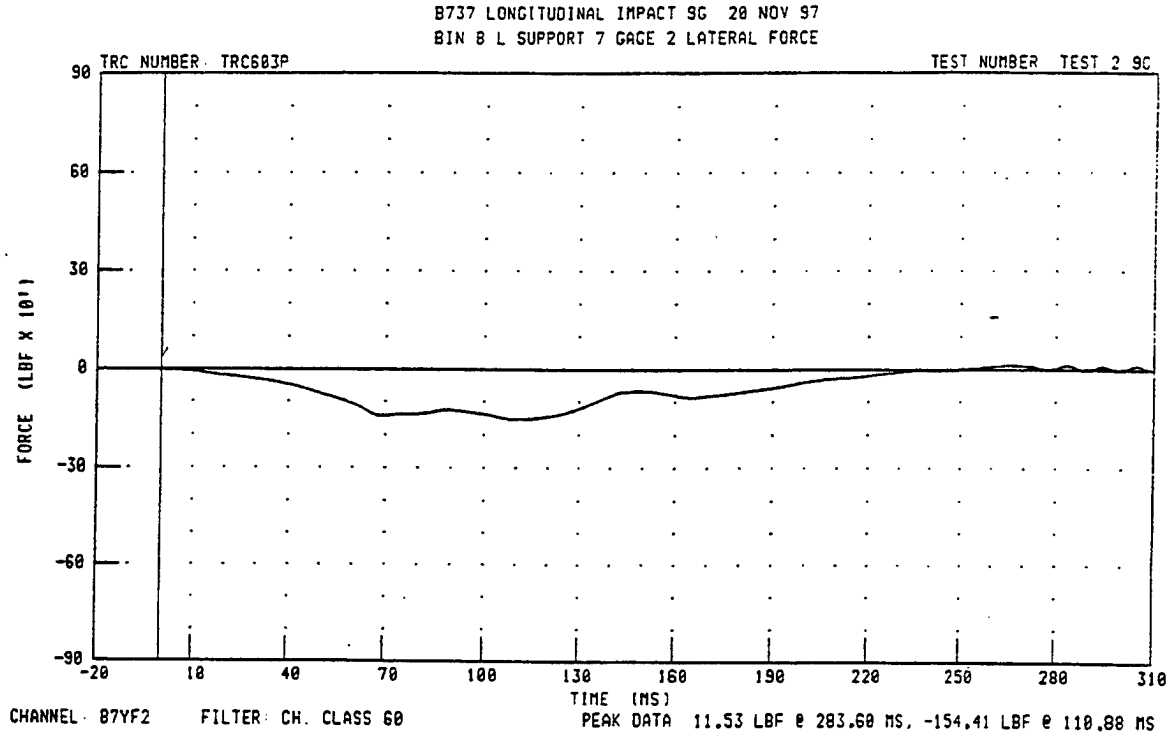

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B FWD SUPPORT 3 VERTICAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B3ZF
FILTER: CH. CLASS 60
PEAK DATA: 15.70 LBF @ 65.44 MS, -264.34 LBF @ 136.08 MS

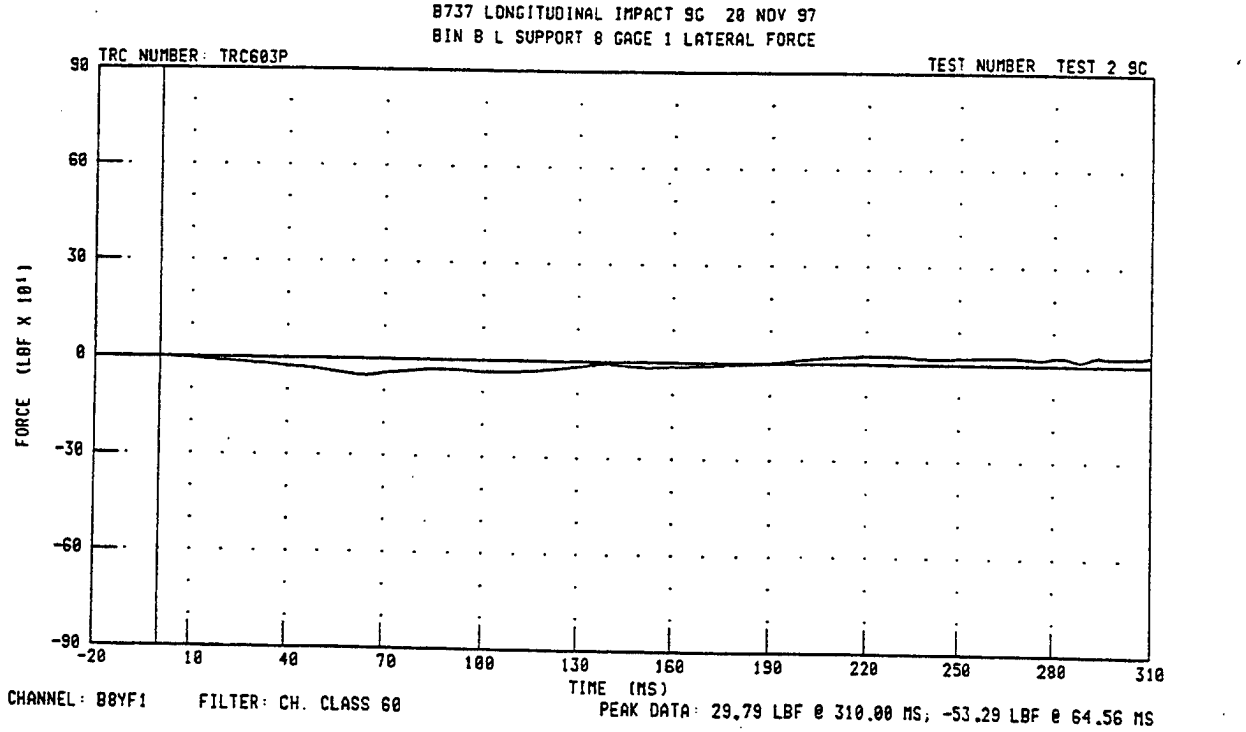

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN 8 AFT SUPPORT 4 VERTICAL FORCE
TRC NUMBER TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B4ZF
FILTER: CH. CLASS 60
PEAK DATA 43.36 LBF @ 172.64 MS, -19.07 LBF @ 202.64 MS

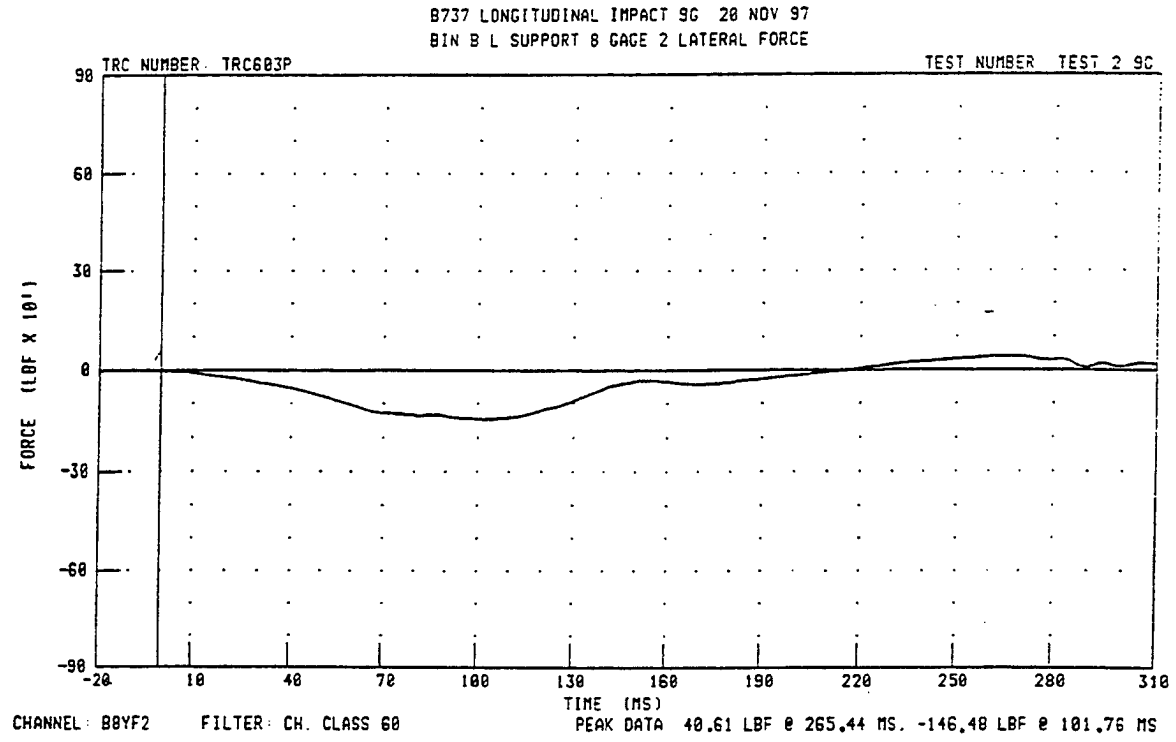

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN 8 AFT PLATE SUPPORT 5 LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B5XF
FILTER: CH. CLASS 60
PEAK DATA: 82.94 LBF @ 267.92 MS; -833.29 LBF @ 108.48 MS

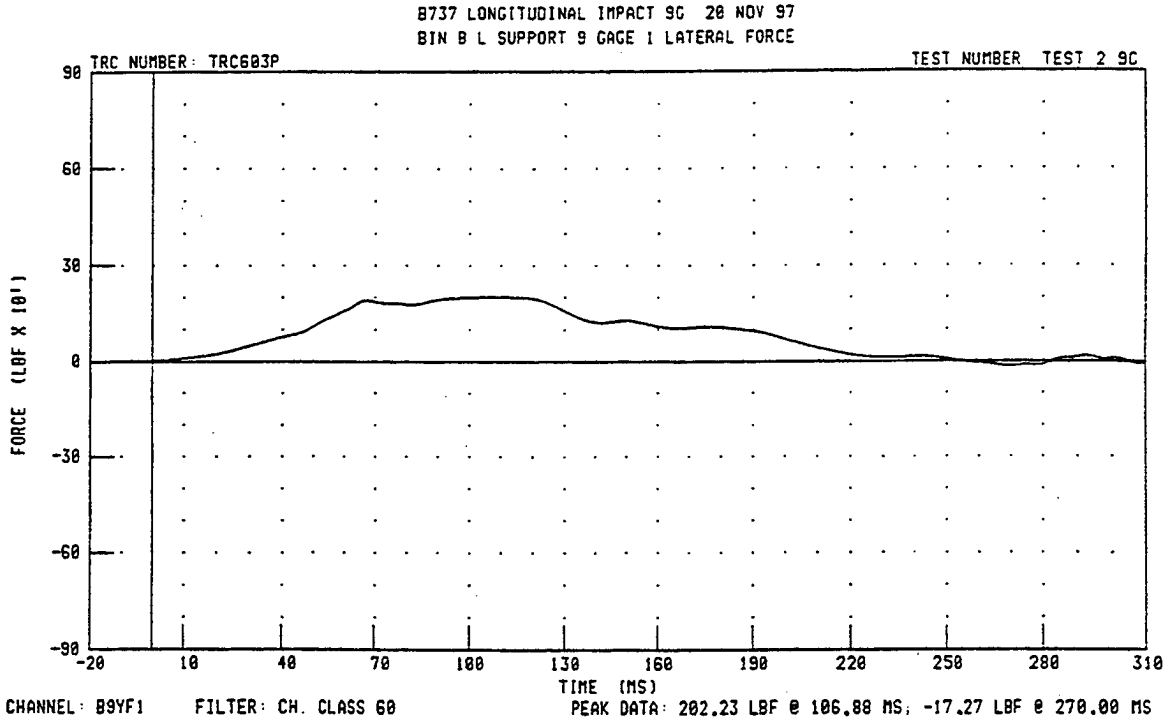

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B FWD PLATE SUPPORT 6 LONGITUDINAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B6XF
FILTER: CH. CLASS 60
PEAK DATA 76.86 LBF @ 268.40 MS, -729.00 LBF @ 108.08 MS

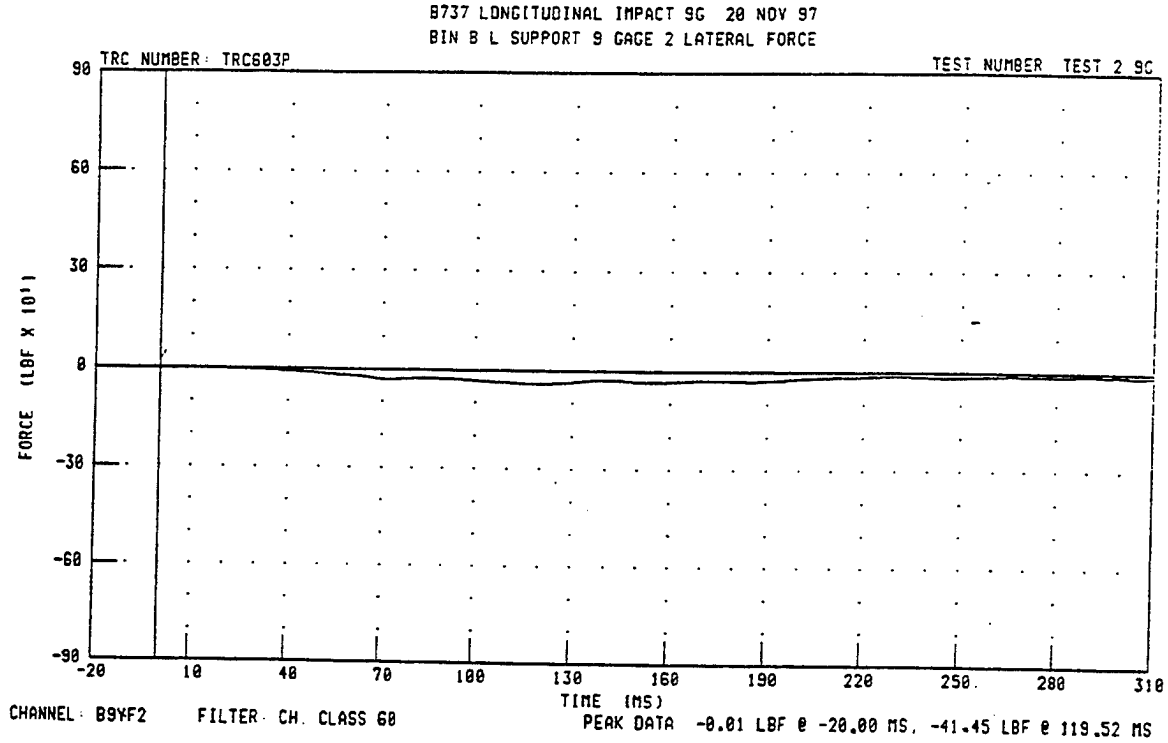

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B L SUPPORT 7 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B7YF1
FILTER: CH. CLASS 60
PEAK DATA: 89.46 LBF @ 98.08 MS; -7.23 LBF @ 275.60 MS

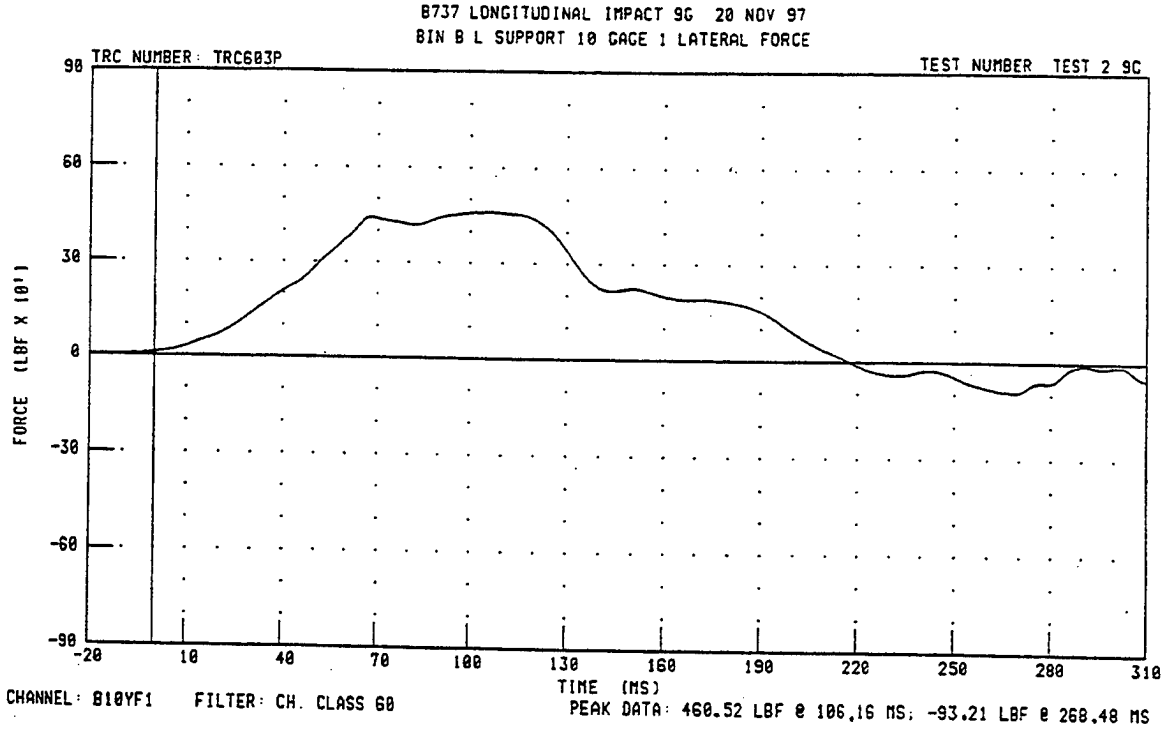

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B L SUPPORT 7 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B7YF2
FILTER: CH. CLASS 60
PEAK DATA 11.53 LBF @ 283.60 MS, -154.41 LBF @ 110.88 MS

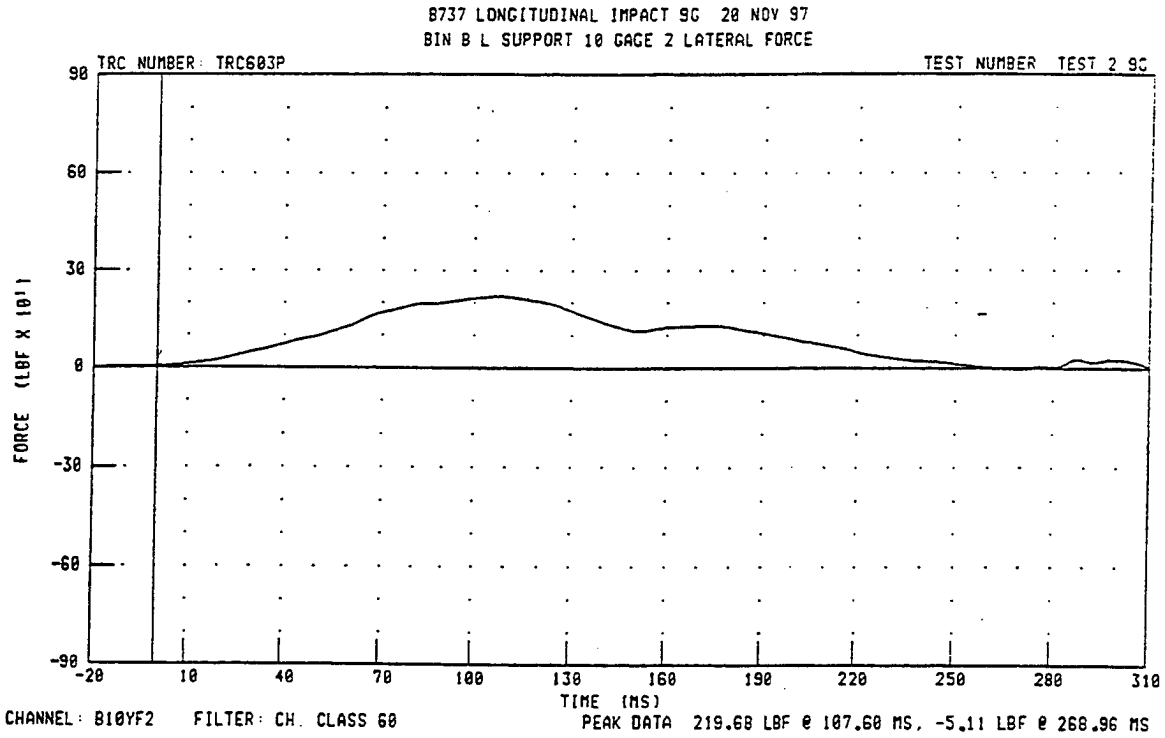

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B L SUPPORT 8 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8YF1
FILTER: CH. CLASS 60
PEAK DATA: 29.79 LBF @ 310.00 MS; -53.29 LBF @ 64.56 MS

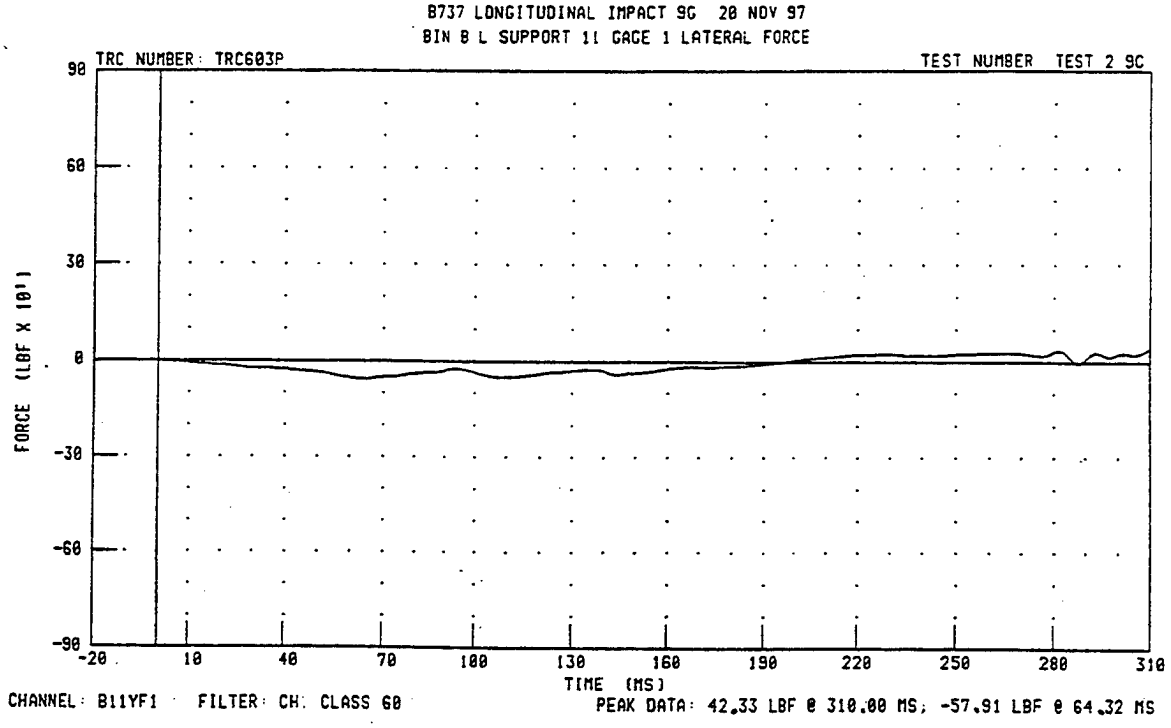

B737 LONGITUDINAL IMPACT 9C 20 NOV 97
BIN B L SUPPORT 8 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9C
FORCE (LBF X 10')
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8YF2
FILTER: CH. CLASS 60
PEAK DATA 40.61 LBF @ 265.44 MS. -146.48 LBF @ 101.76 MS

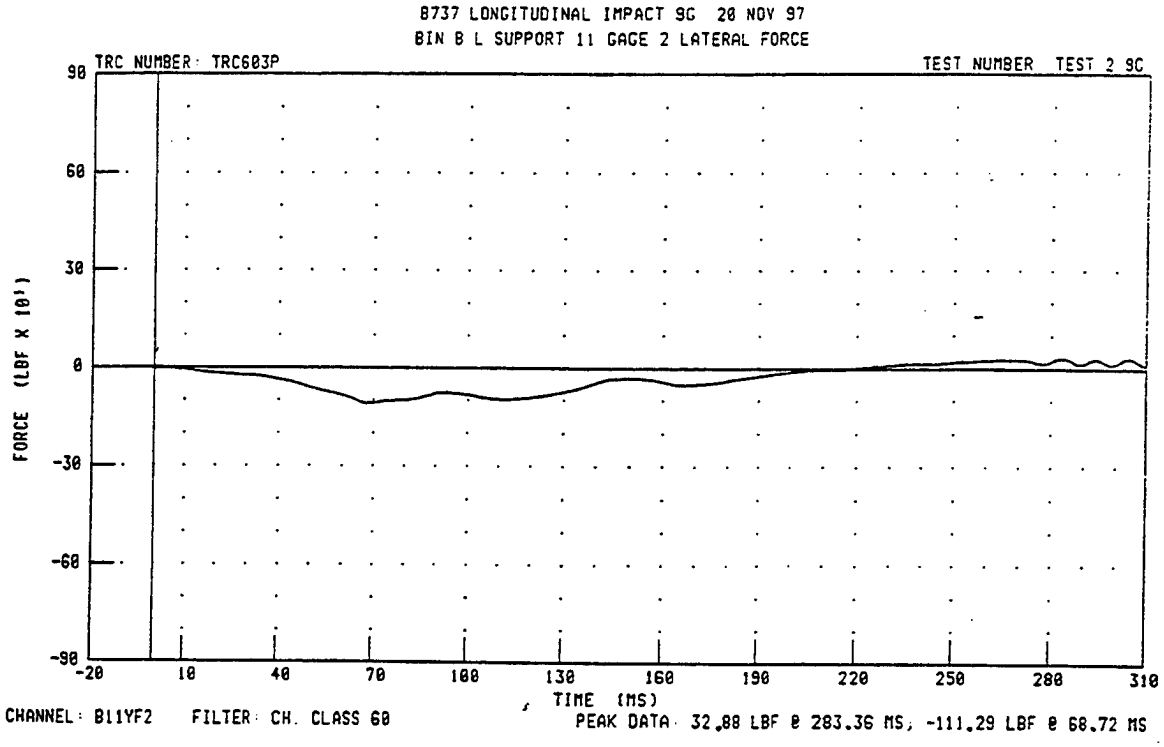

B737 LONGITUDINAL IMPACT 9C 20 NOV 97
BIN B L SUPPORT 9 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER: TEST 2 9C
FORCE (LBF X 10')
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B9YF1
FILTER: CH. CLASS 60
PEAK DATA: 202.23 LBF @ 106.88 MS; -17.27 LBF @ 270.00 MS


B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B L SUPPORT 9 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B9YF2
FILTER: CH. CLASS 60
PEAK DATA -0.01 LBF @ -20.00 MS, -41.45 LBF @ 119.52 MS

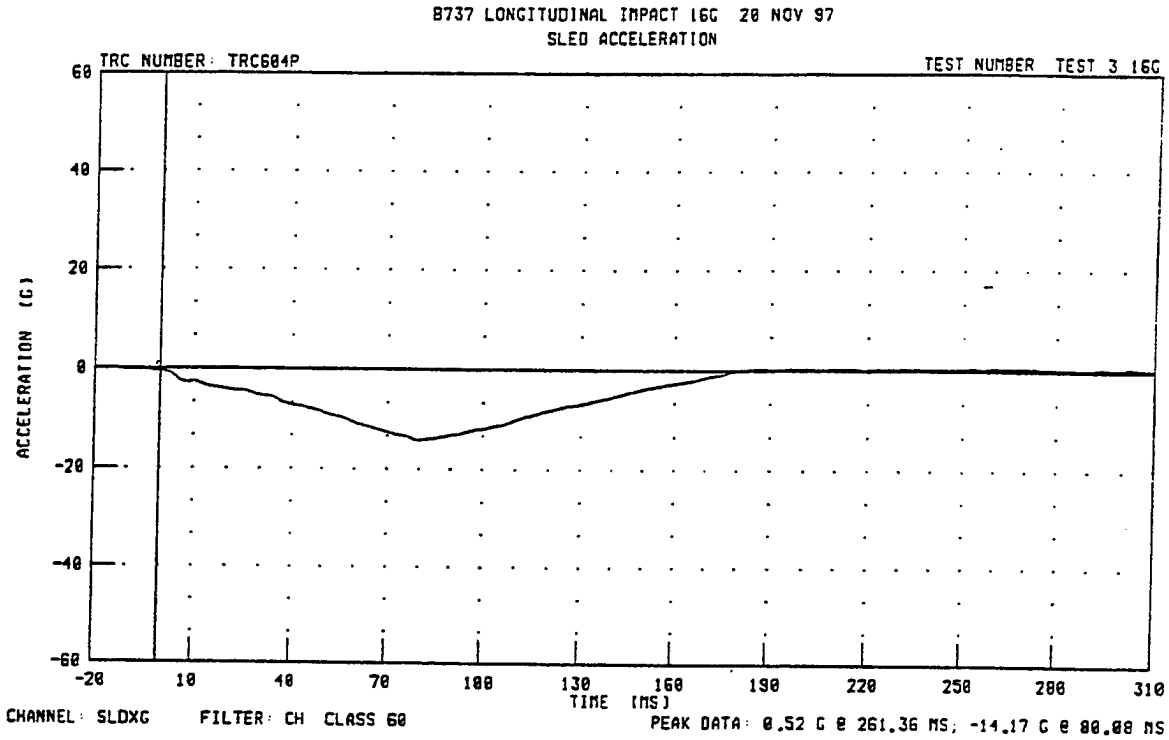

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B L SUPPORT 10 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B10YF1
FILTER: CH. CLASS 60
PEAK DATA: 460.52 LBF @ 106.16 MS; -93.21 LBF @ 268.48 MS

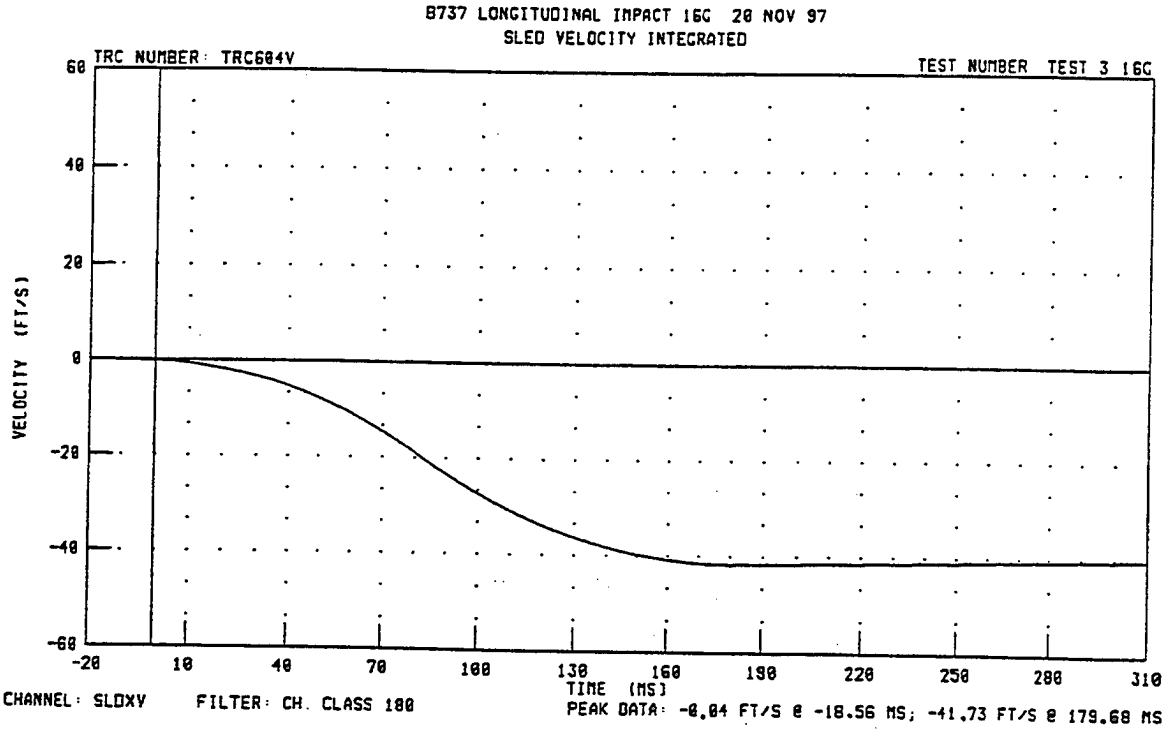

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B L SUPPORT 10 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B10YF2
FILTER: CH. CLASS 60
PEAK DATA 219.68 LBF @ 107.60 MS, -5.11 LBF @ 268.96 MS

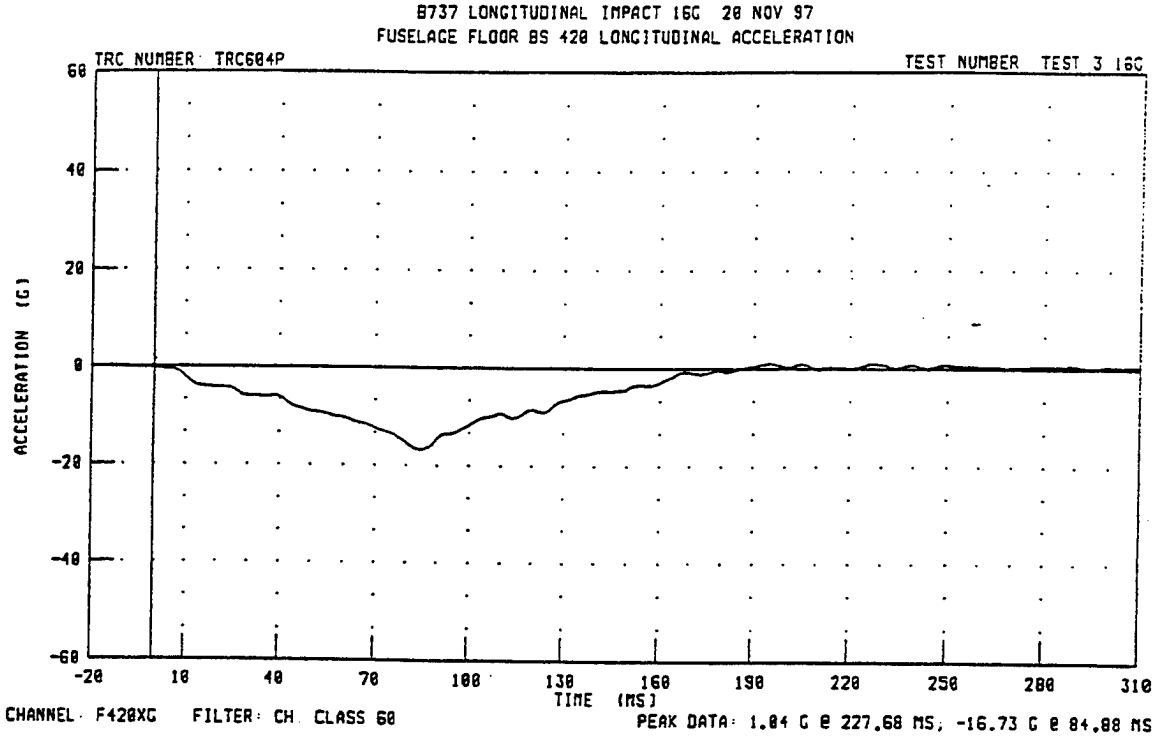

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B L SUPPORT 11 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B11YF1
FILTER: CH. CLASS 60
PEAK DATA: 42.33 LBF @ 310.00 MS; -57.91 LBF @ 64.32 MS

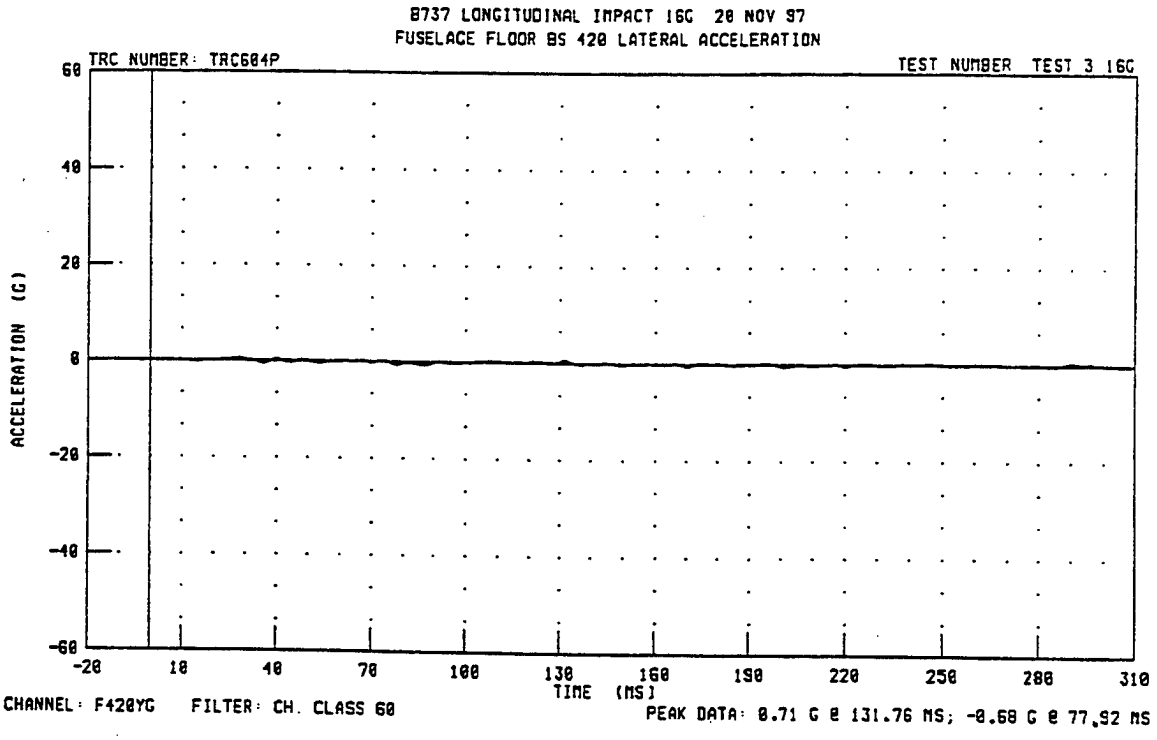

B737 LONGITUDINAL IMPACT 9G 20 NOV 97
BIN B L SUPPORT 11 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC603P
TEST NUMBER TEST 2 9C
90
60
30
0
-30
-60
-90
FORCE (LBF X 10')
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B11YF2
FILTER: CH. CLASS 60
PEAK DATA: 32.88 LBF @ 283.36 MS; -111.29 LBF @ 68.72 MS

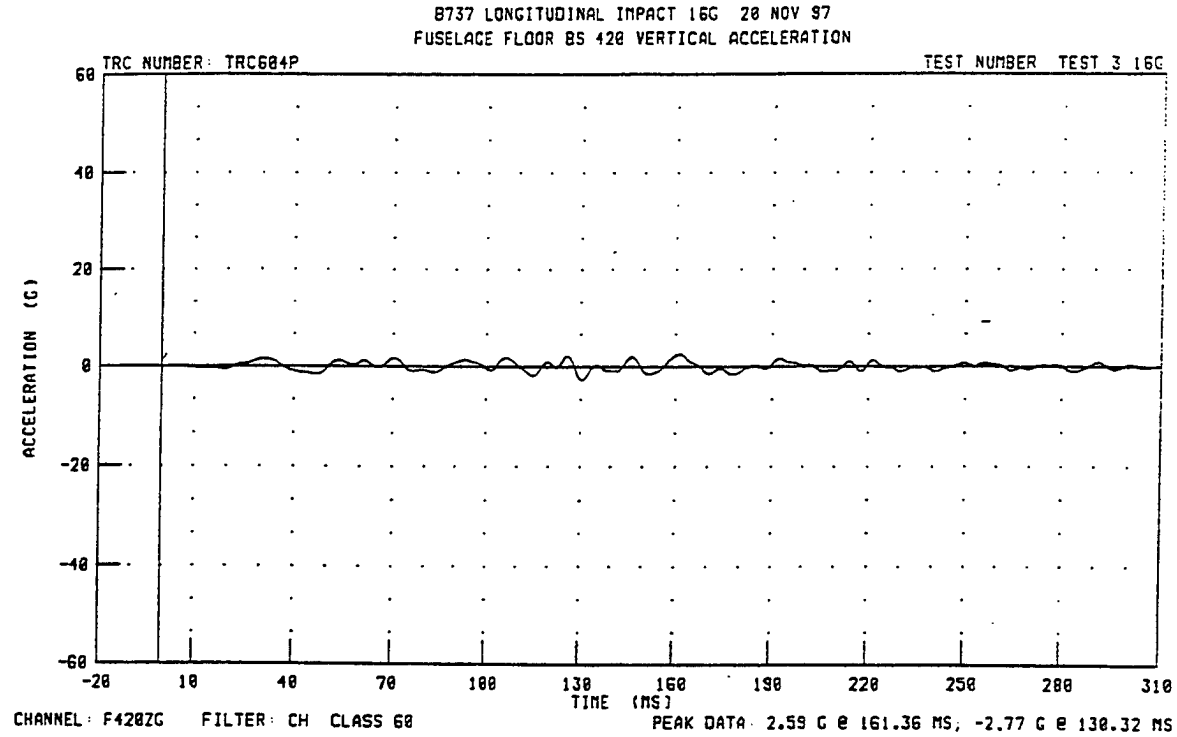
TEST 3

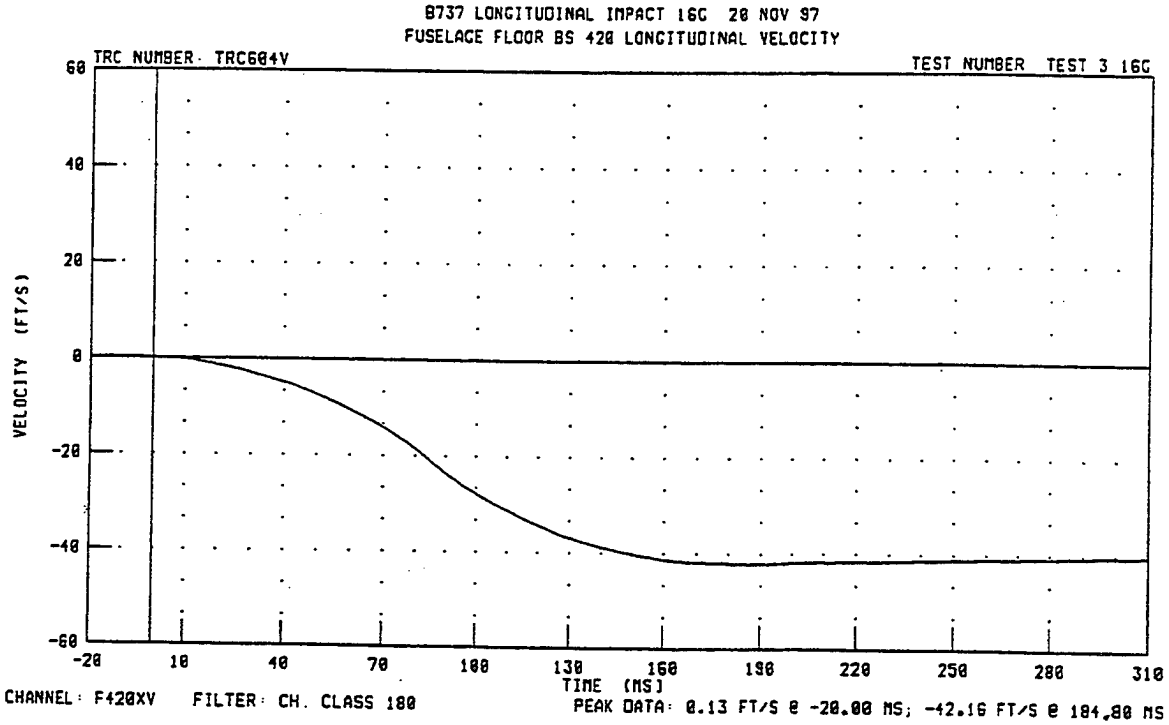

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
SLED ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: SLDXG
FILTER: CH CLASS 60
PEAK DATA: 0.52 G @ 261.36 MS; -14.17 G @ 80.08 MS

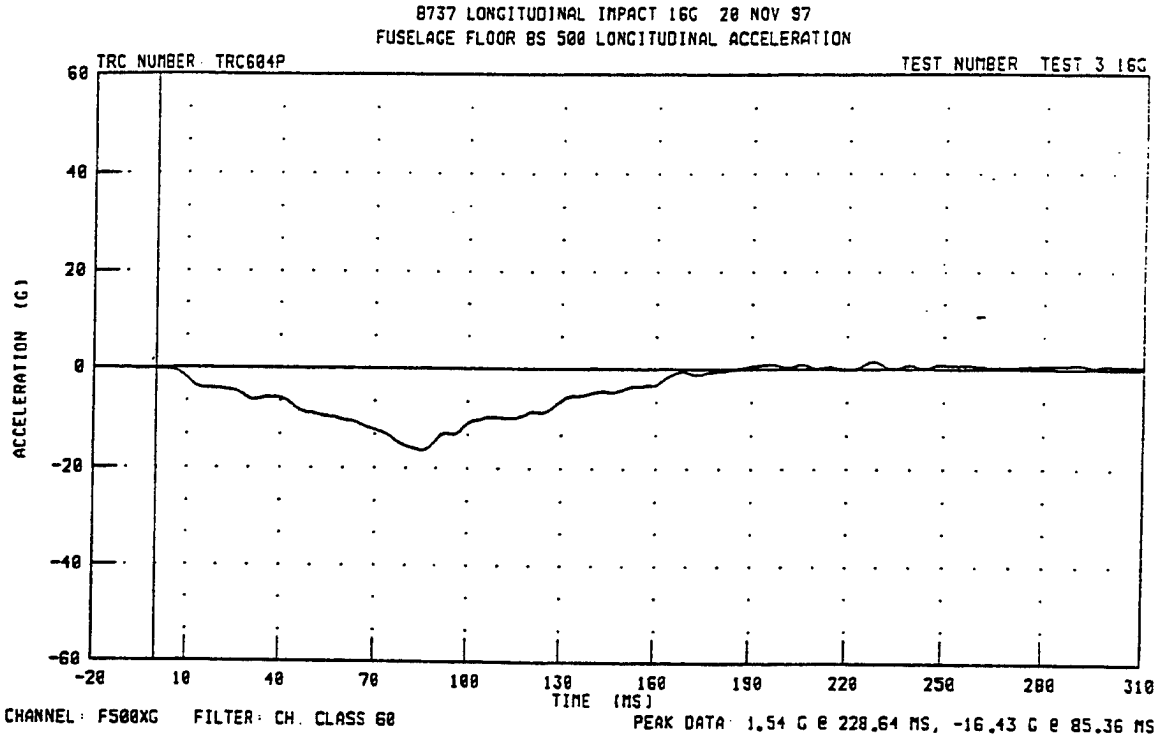

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
SLED VELOCITY INTEGRATED
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: SLDXV
FILTER: CH. CLASS 180
PEAK DATA: -0.04 FT/S @ -18.56 MS; -41.73 FT/S @ 179.68 MS

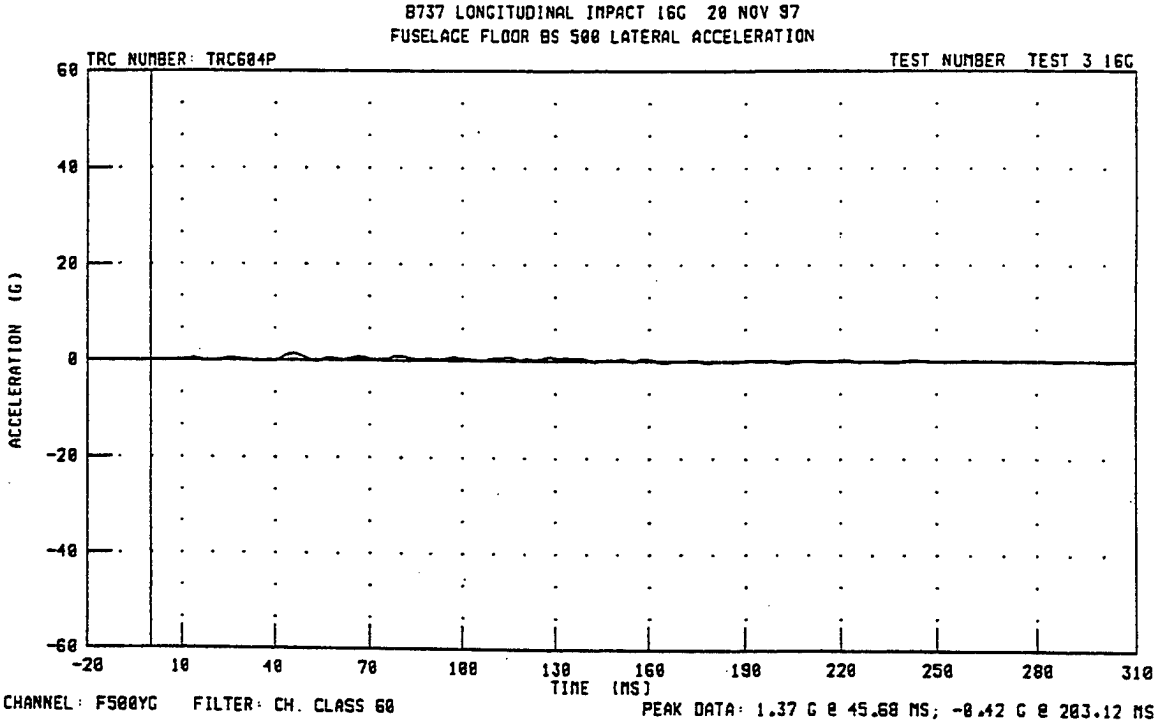

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE FLOOR BS 420 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420XG FILTER: CH. CLASS 60
PEAK DATA: 1.04 G @ 227.68 MS; -16.73 G @ 84.88 MS

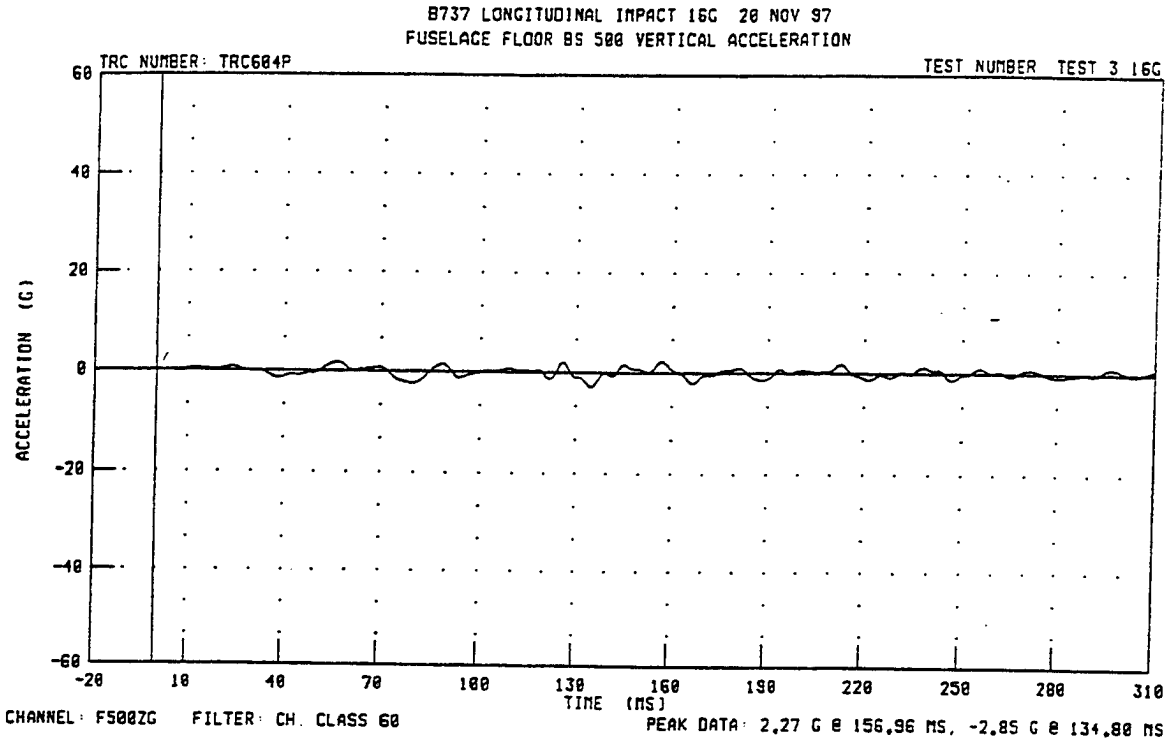

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE FLOOR BS 420 LATERAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420YG FILTER: CH. CLASS 60
PEAK DATA: 0.71 G @ 131.76 MS; -0.68 G @ 77.92 MS

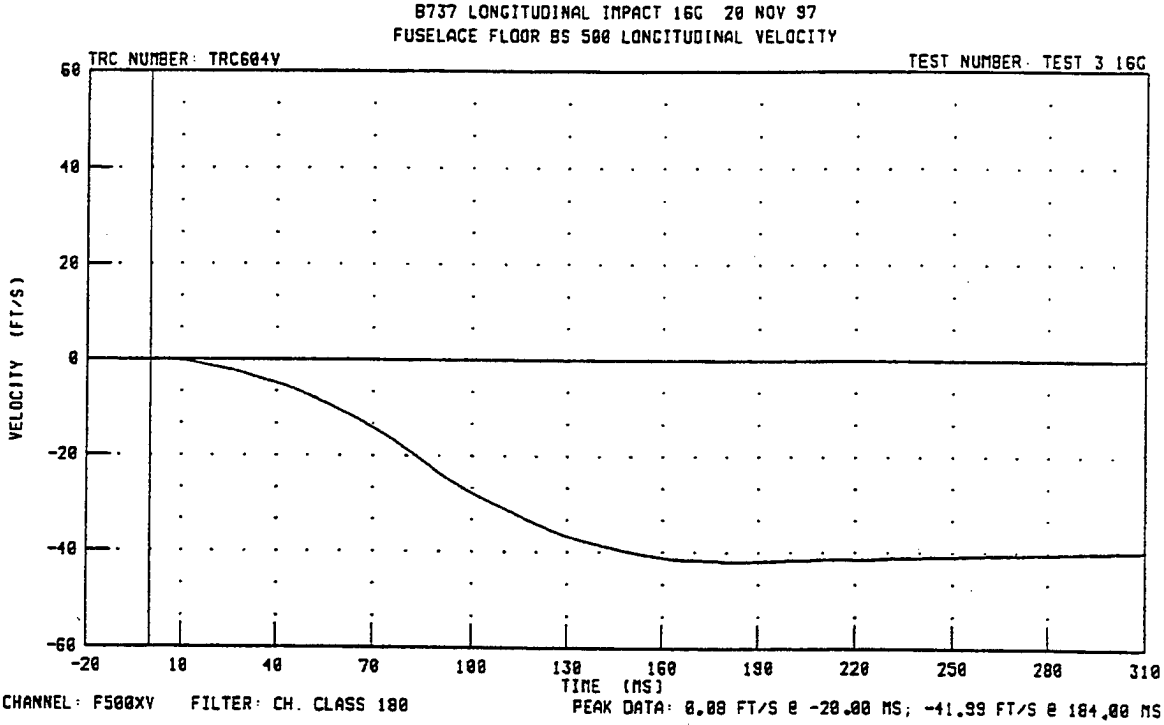

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE FLOOR BS 420 VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420ZG FILTER: CH CLASS 60
PEAK DATA: 2.59 G @ 161.36 MS; -2.77 G @ 130.32 MS

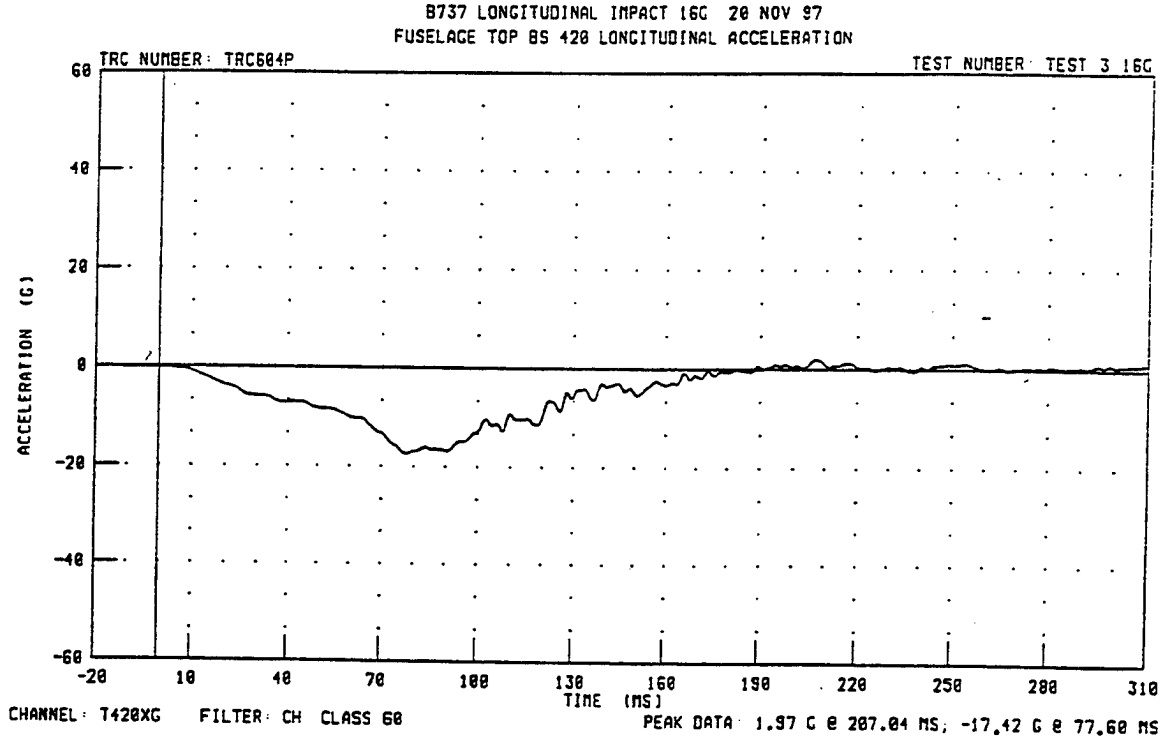

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE FLOOR BS 420 LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F420XV FILTER: CH. CLASS 180
PEAK DATA: 0.13 FT/S @ -20.00 MS; -42.16 FT/S @ 184.80 MS

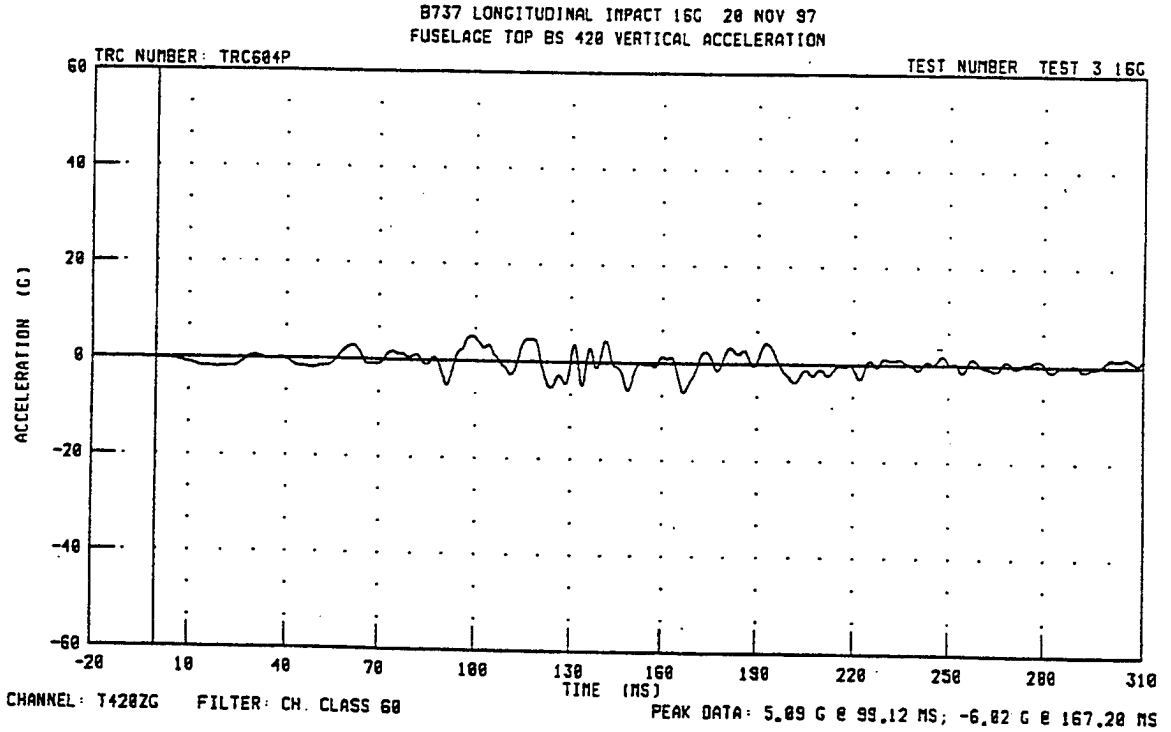

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE FLOOR BS 500 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC684P
TEST NUMBER TEST 3 16G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500XG
FILTER: CH. CLASS 60
PEAK DATA: 1.54 G @ 228.64 MS, -16.43 G @ 85.36 MS

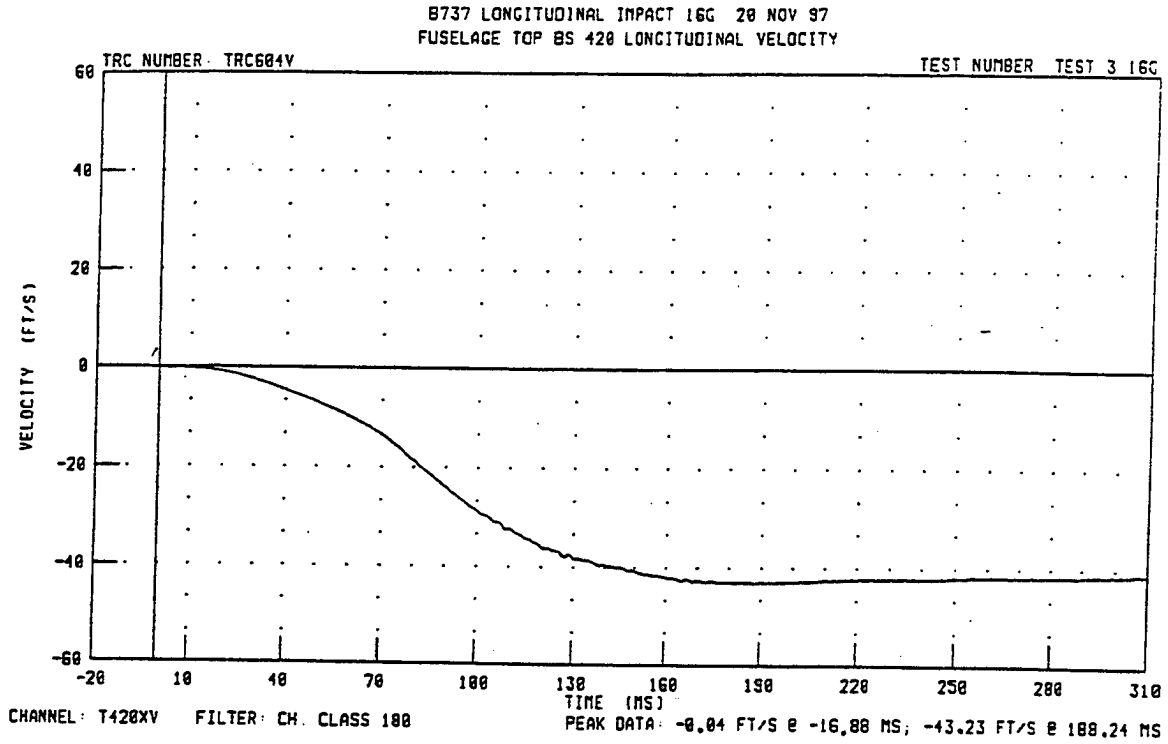

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE FLOOR BS 500 LATERAL ACCELERATION
TRC NUMBER: TRC684P
TEST NUMBER TEST 3 16G
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500YG
FILTER: CH. CLASS 60
PEAK DATA: 1.37 G @ 45.68 MS; -0.42 G @ 203.12 MS

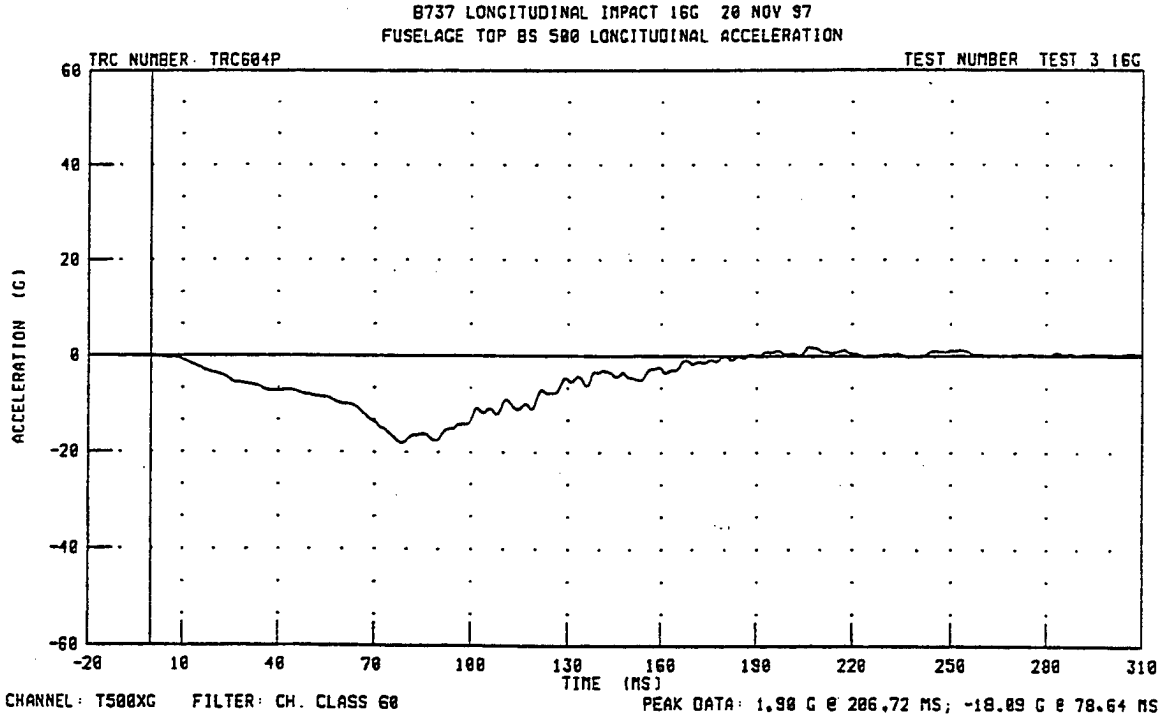

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE FLOOR BS 500 VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500ZG
FILTER: CH. CLASS 60
PEAK DATA: 2.27 G @ 156.96 MS, -2.85 G @ 134.80 MS

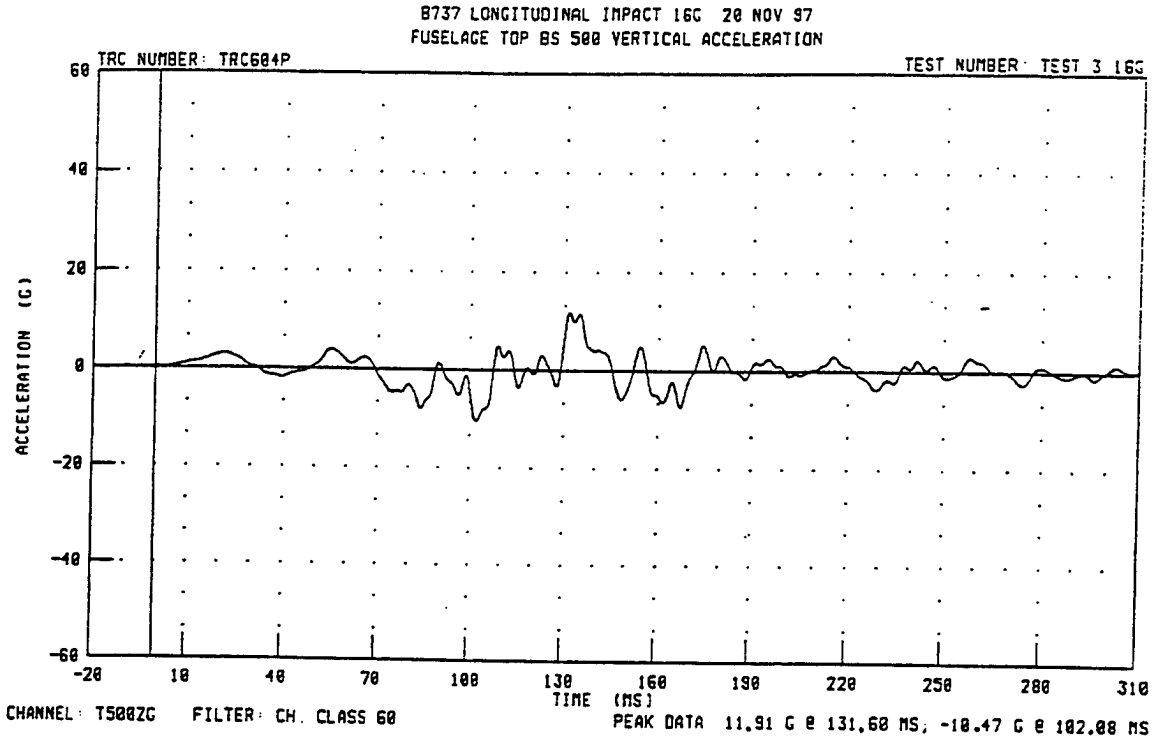

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE FLOOR BS 500 LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER: TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: F500XV
FILTER: CH. CLASS 180
PEAK DATA: 0.00 FT/S @ -20.00 MS; -41.99 FT/S @ 184.00 MS

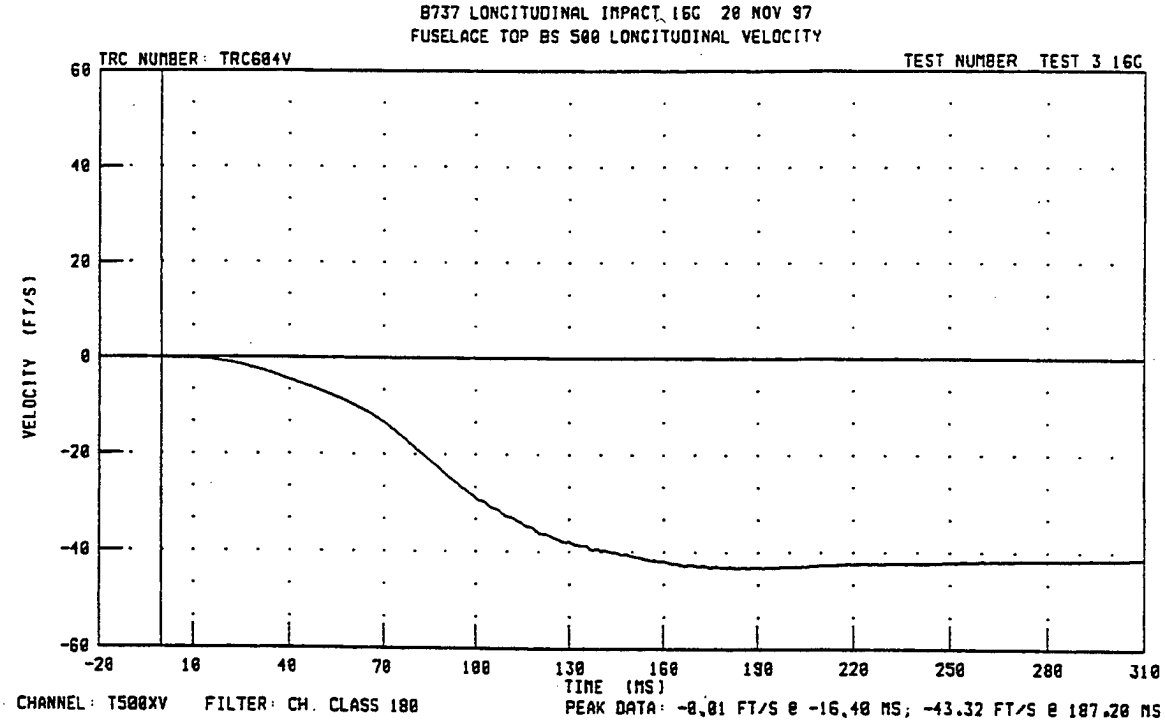

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE TOP BS 420 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T420XG
FILTER: CH CLASS 60
PEAK DATA: 1.97 G @ 207.04 MS; -17.42 G @ 77.60 MS

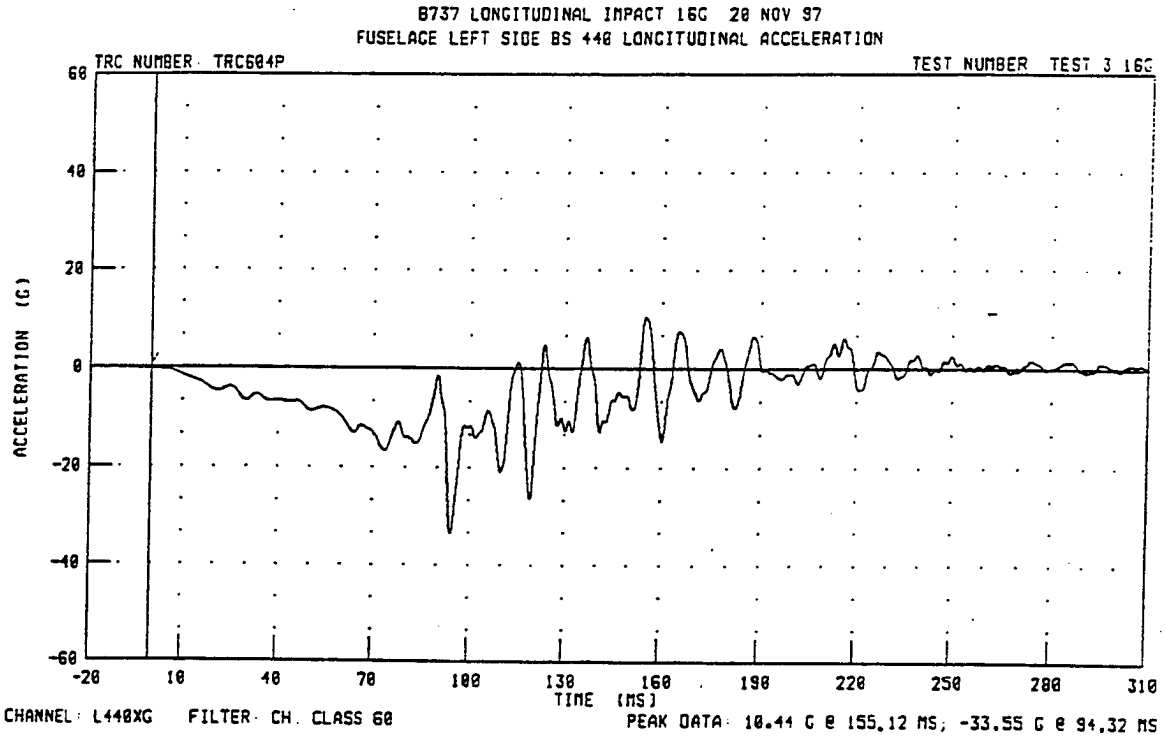

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE TOP BS 420 VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T420ZG
FILTER: CH. CLASS 60
PEAK DATA: 5.09 G @ 99.12 MS; -6.82 G @ 167.20 MS

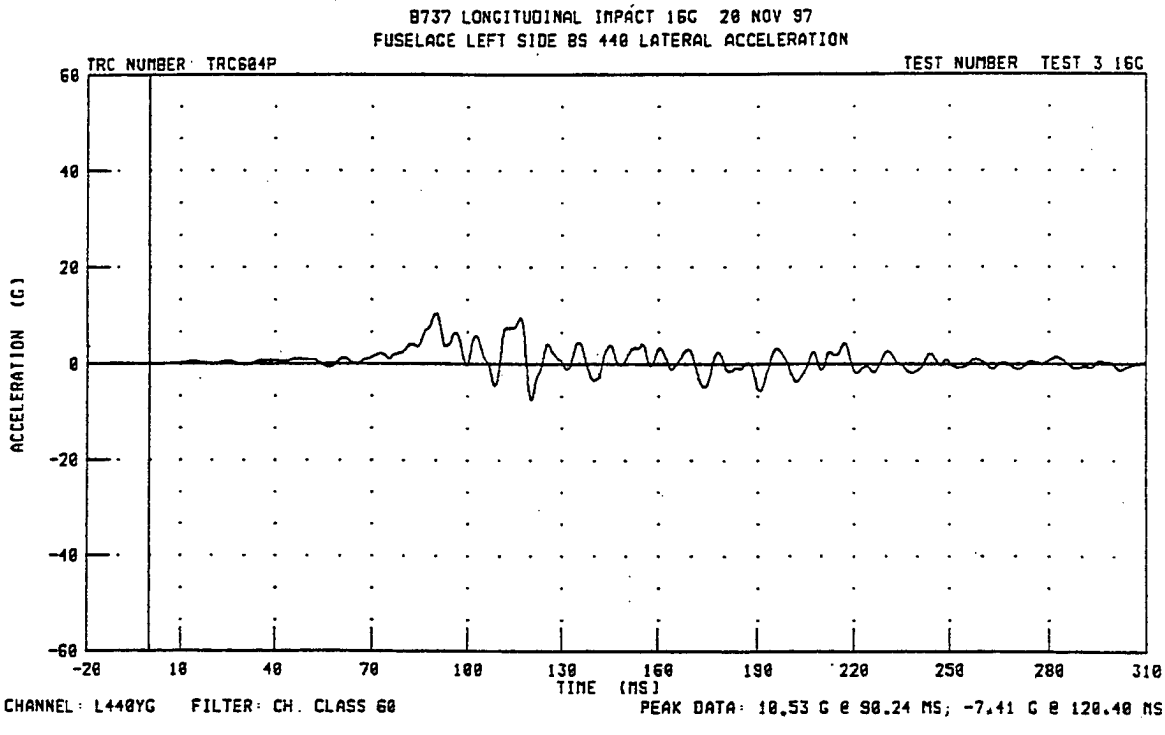

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE TOP BS 420 LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER: TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T420XV
FILTER: CH. CLASS 180
PEAK DATA: -0.04 FT/S @ -16.88 MS; -43.23 FT/S @ 188.24 MS

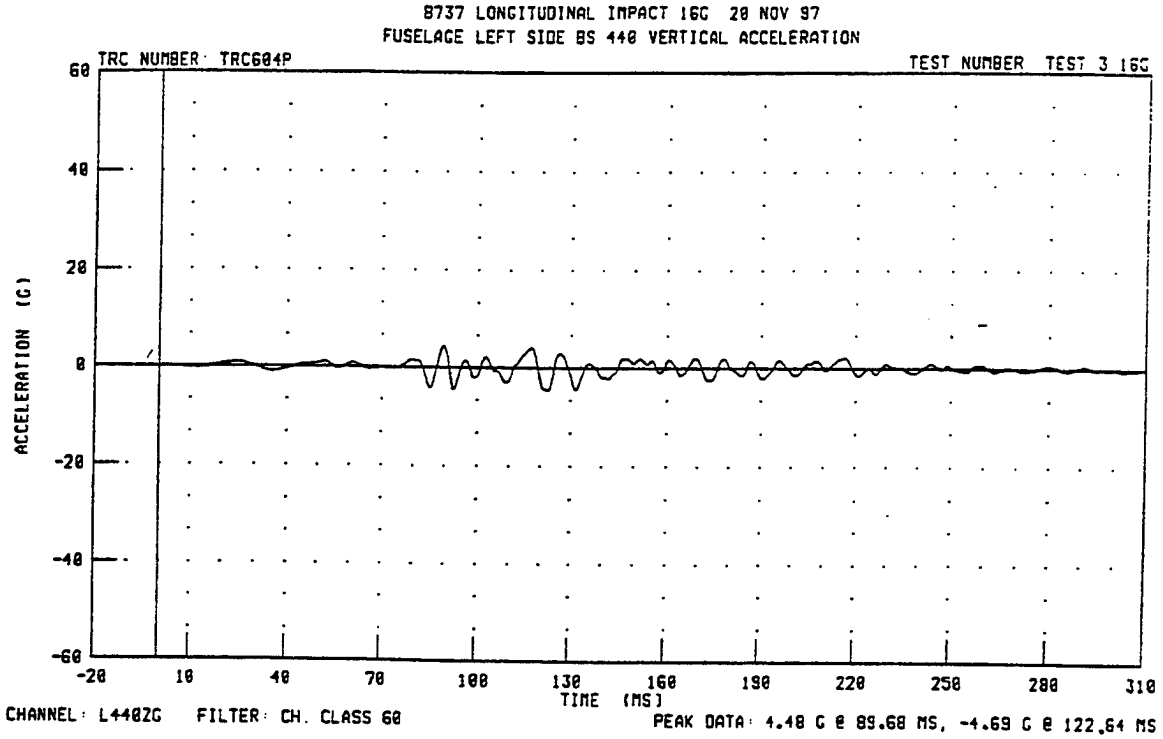

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE TOP BS 500 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500XG
FILTER: CH. CLASS 60
PEAK DATA: 1.90 G @ 206.72 MS; -18.09 G @ 78.64 MS

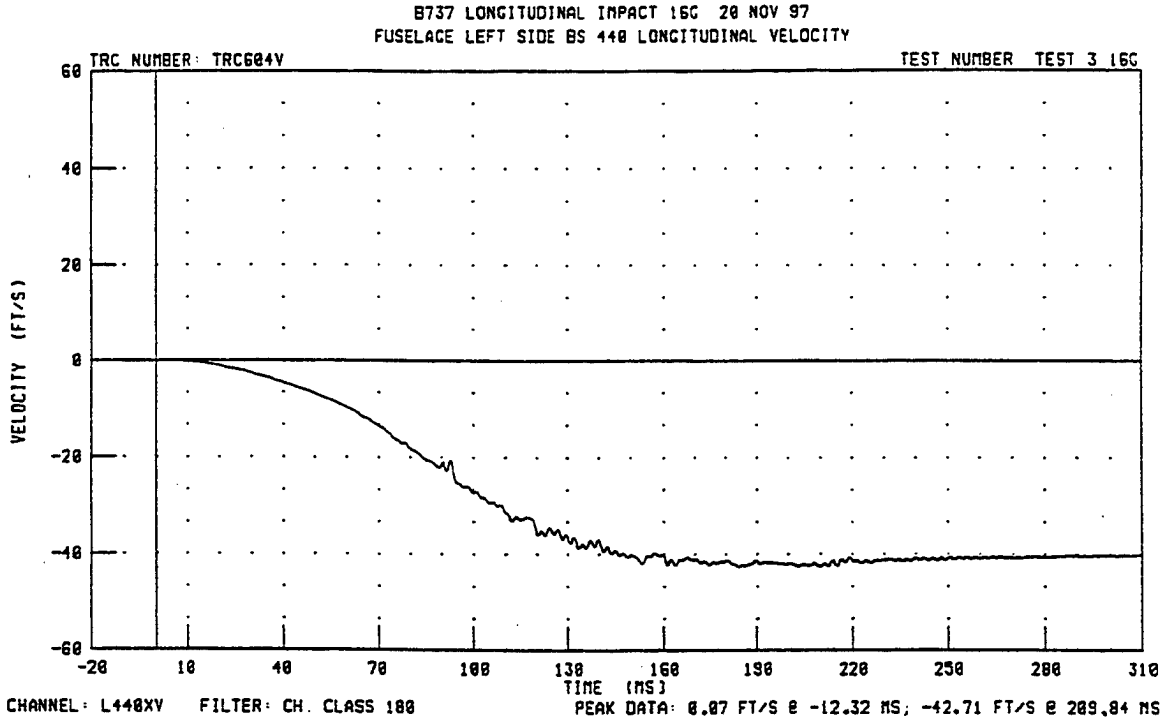

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE TOP BS 500 VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500ZG
FILTER: CH. CLASS 60
PEAK DATA 11.91 G @ 131.60 MS; -10.47 G @ 102.00 MS

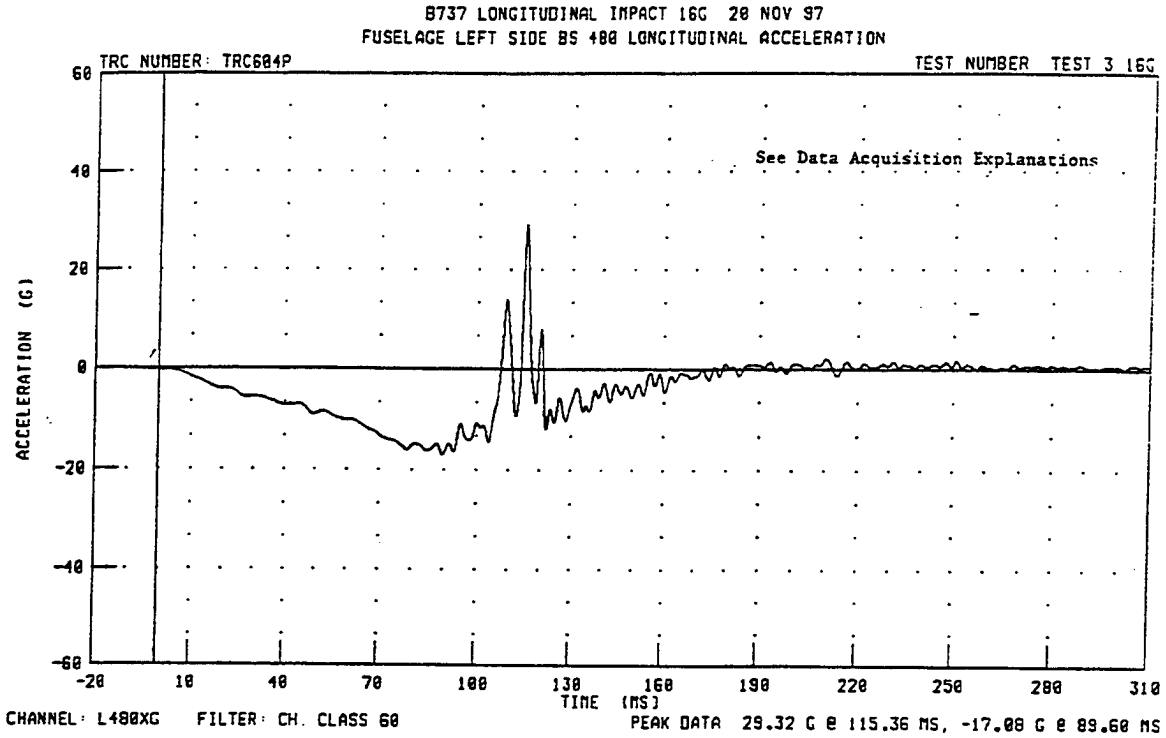

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE TOP BS 500 LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: T500XV
FILTER: CH. CLASS 180
PEAK DATA: -8.01 FT/S @ -16.40 MS; -43.32 FT/S @ 187.20 MS

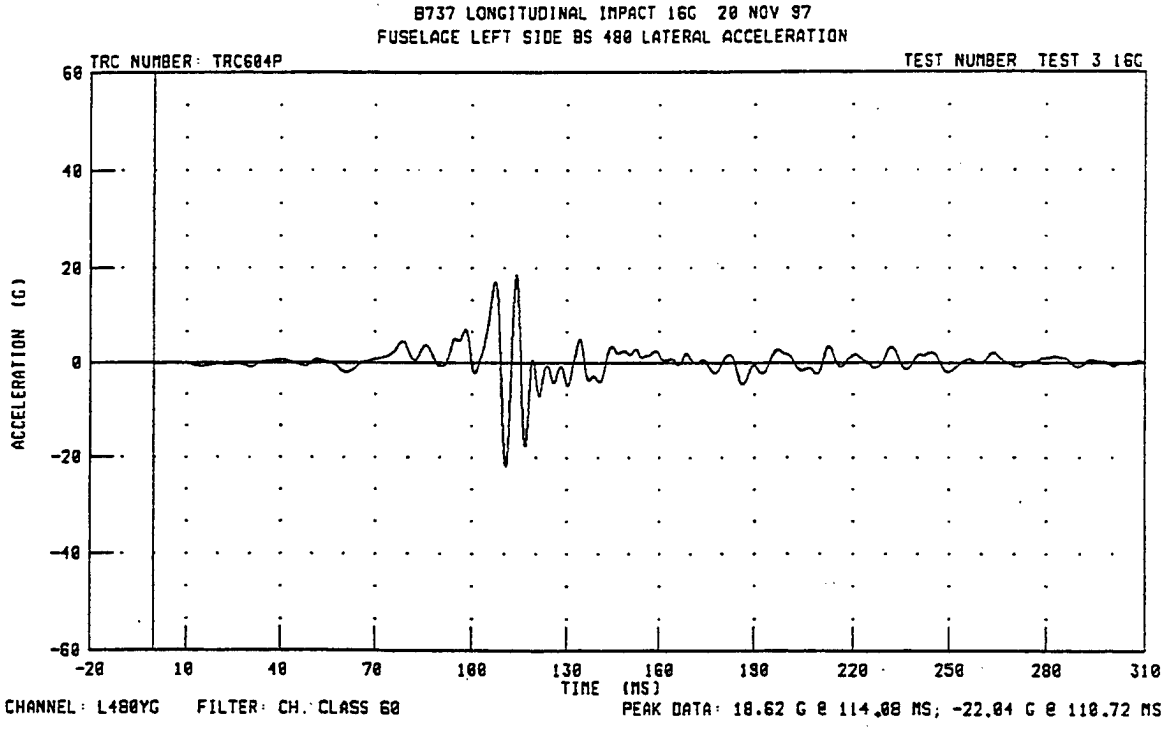

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE LEFT SIDE BS 440 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440XG
FILTER: CH. CLASS 60
PEAK DATA: 10.44 G @ 155.12 MS; -33.55 G @ 94.32 MS

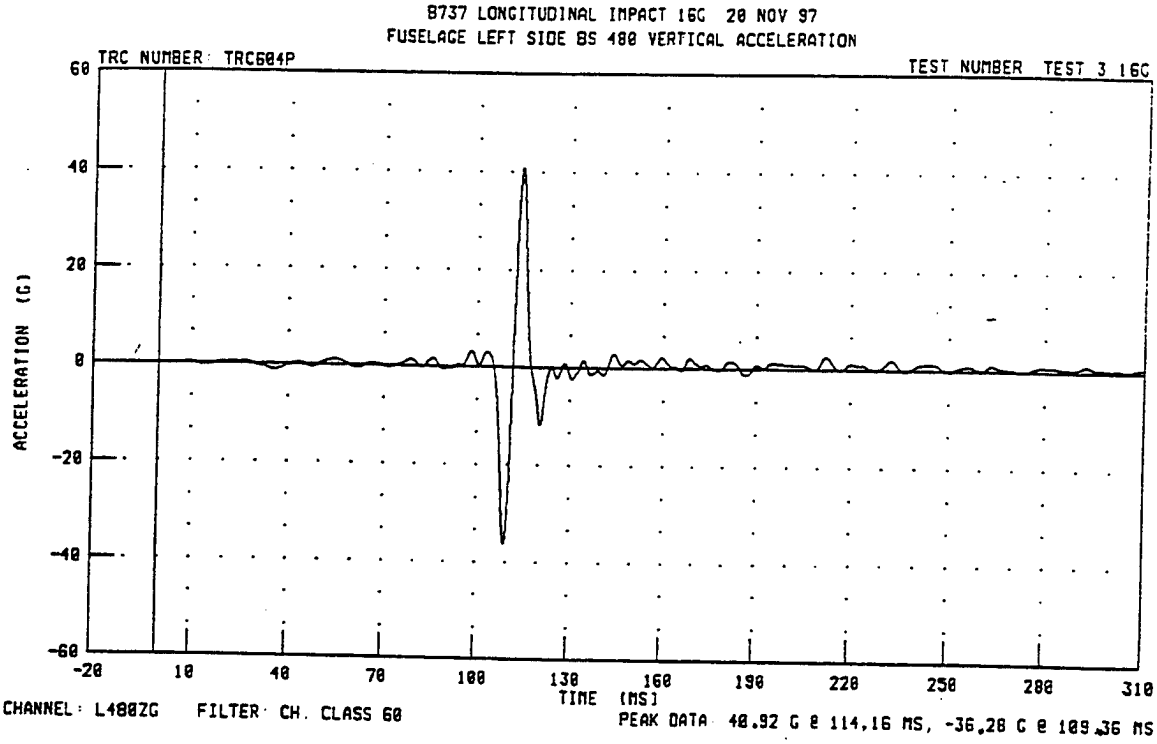

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE LEFT SIDE BS 440 LATERAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440YG
FILTER: CH. CLASS 60
PEAK DATA: 10.53 G @ 90.24 MS; -7.41 G @ 120.40 MS

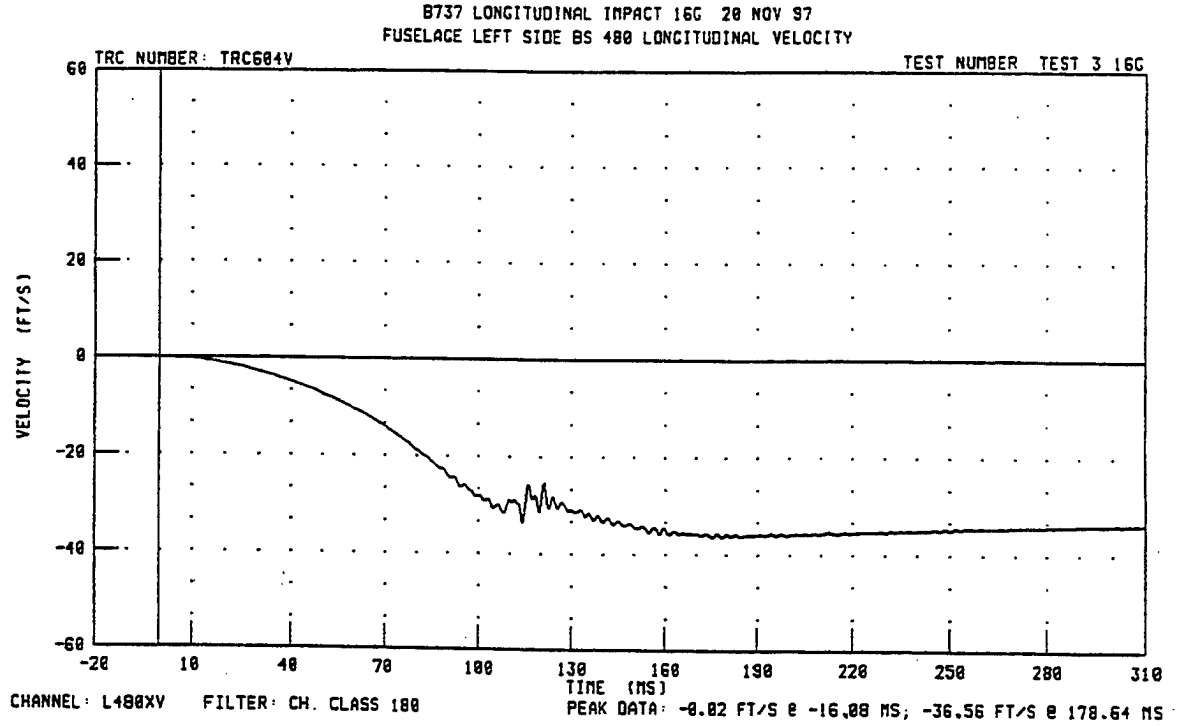

B737 LONGITUDINAL IMPACT 16C 20 NOV 97
FUSELAGE LEFT SIDE BS 440 VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440ZG
FILTER: CH. CLASS 60
PEAK DATA: 4.48 G @ 89.68 MS, -4.69 G @ 122.64 MS

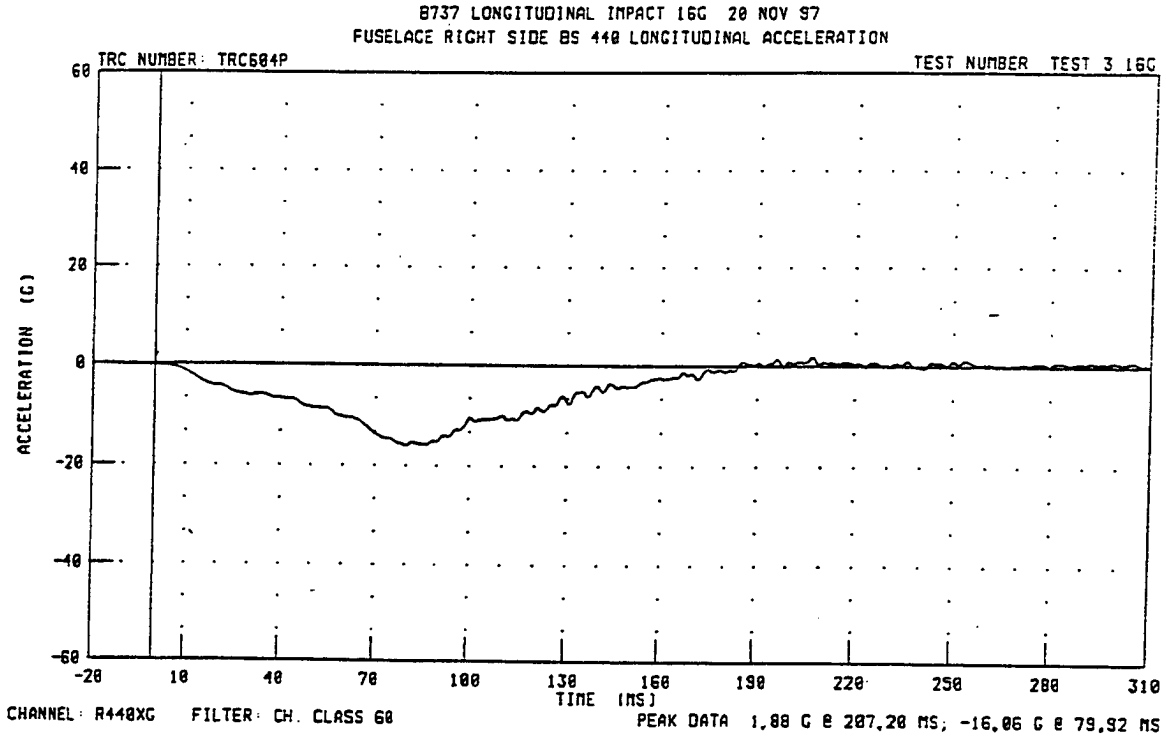

B737 LONGITUDINAL IMPACT 16C 20 NOV 97
FUSELAGE LEFT SIDE BS 440 LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16C
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L440XV
FILTER: CH. CLASS 180
PEAK DATA: 0.07 FT/S @ -12.32 MS; -42.71 FT/S @ 289.84 MS

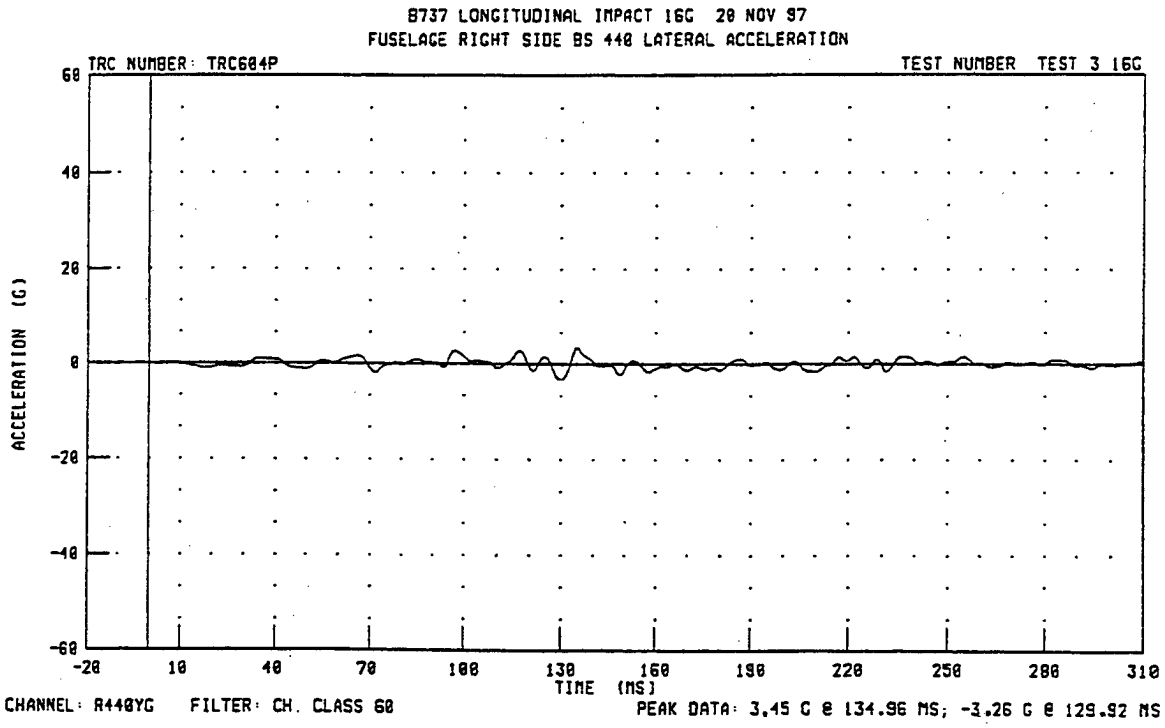

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE LEFT SIDE BS 480 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480XG
FILTER: CH. CLASS 60
PEAK DATA 29.32 G @ 115.36 MS, -17.08 G @ 89.60 MS

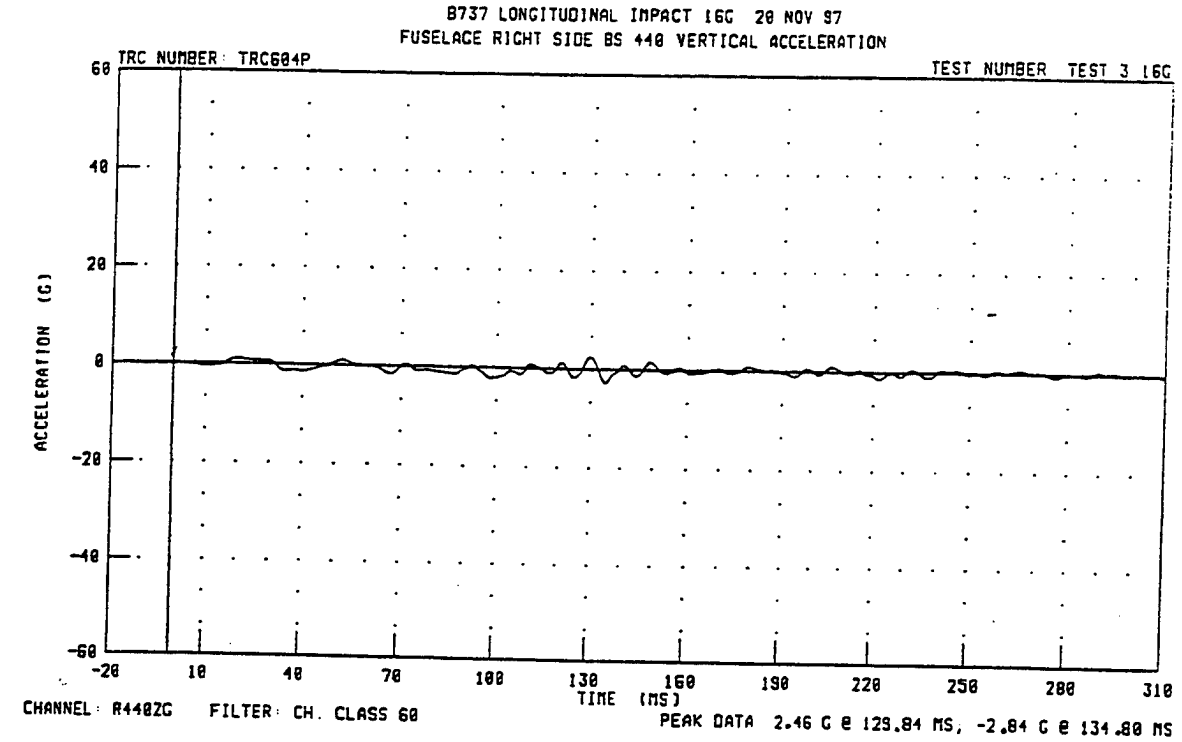

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE LEFT SIDE BS 480 LATERAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480YG
FILTER: CH. CLASS 60
PEAK DATA: 18.62 G @ 114.08 MS; -22.04 G @ 110.72 MS

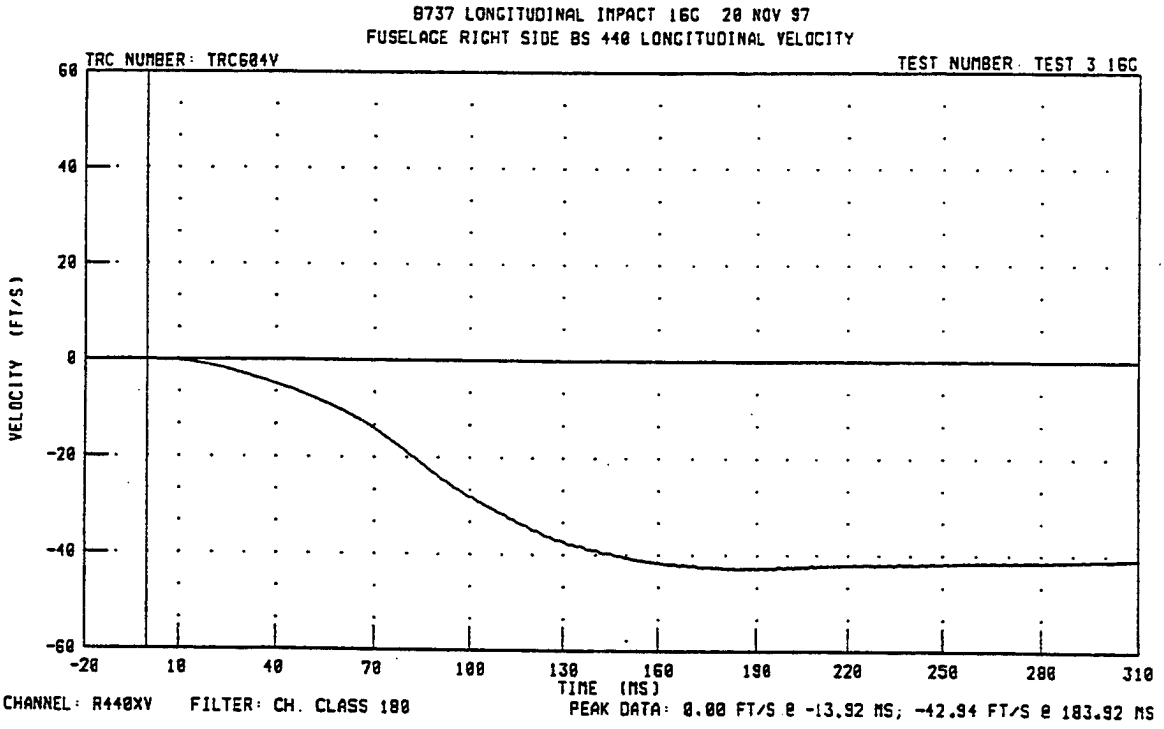

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE LEFT SIDE BS 480 VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480ZG
FILTER: CH. CLASS 60
PEAK DATA: 40.92 G @ 114.16 MS, -36.28 G @ 189.36 MS

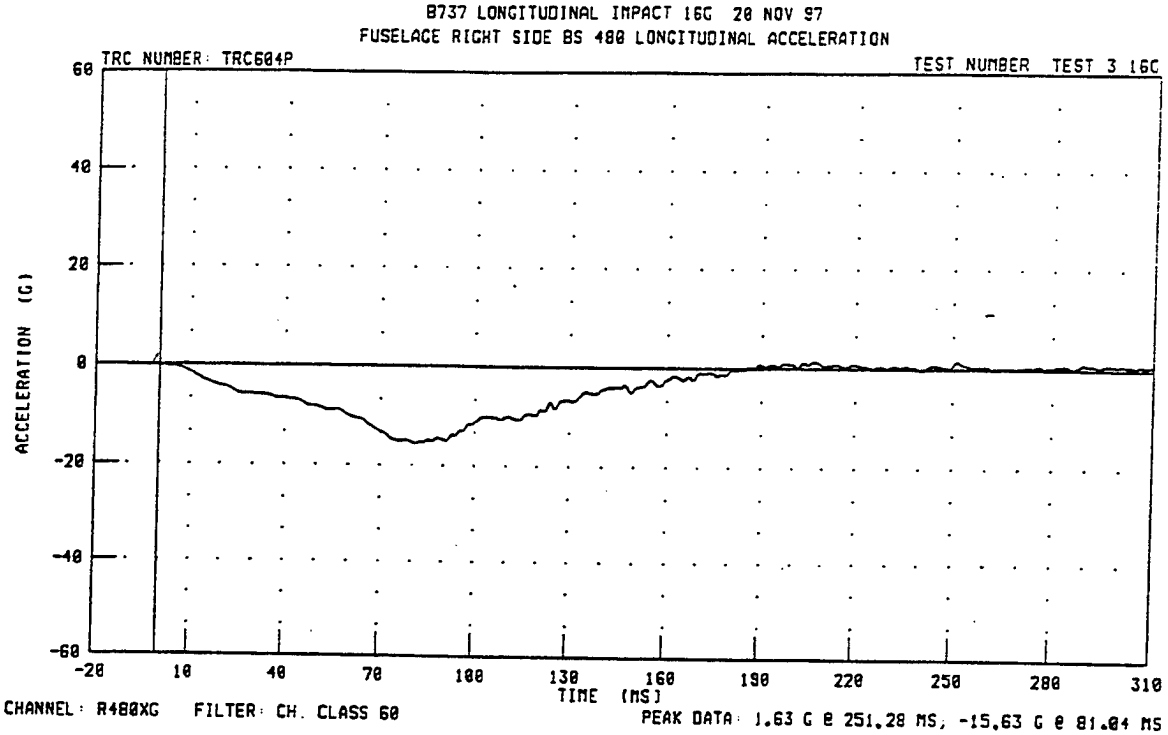

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE LEFT SIDE BS 480 LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: L480XV
FILTER: CH. CLASS 180
PEAK DATA: -0.02 FT/S @ -16.08 MS; -36.56 FT/S @ 178.64 MS

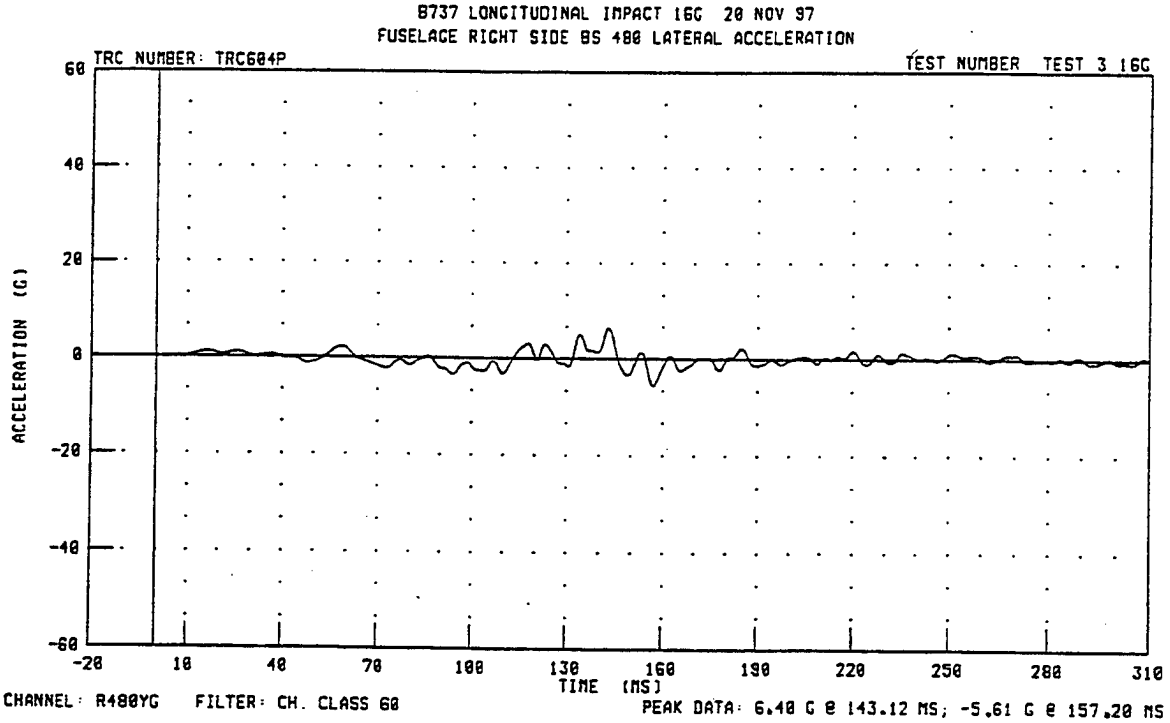

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE RIGHT SIDE BS 440 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
TIME (MS)
CHANNEL: R440XG FILTER: CH. CLASS 60
PEAK DATA 1.88 G @ 207.20 MS; -16.06 G @ 79.92 MS

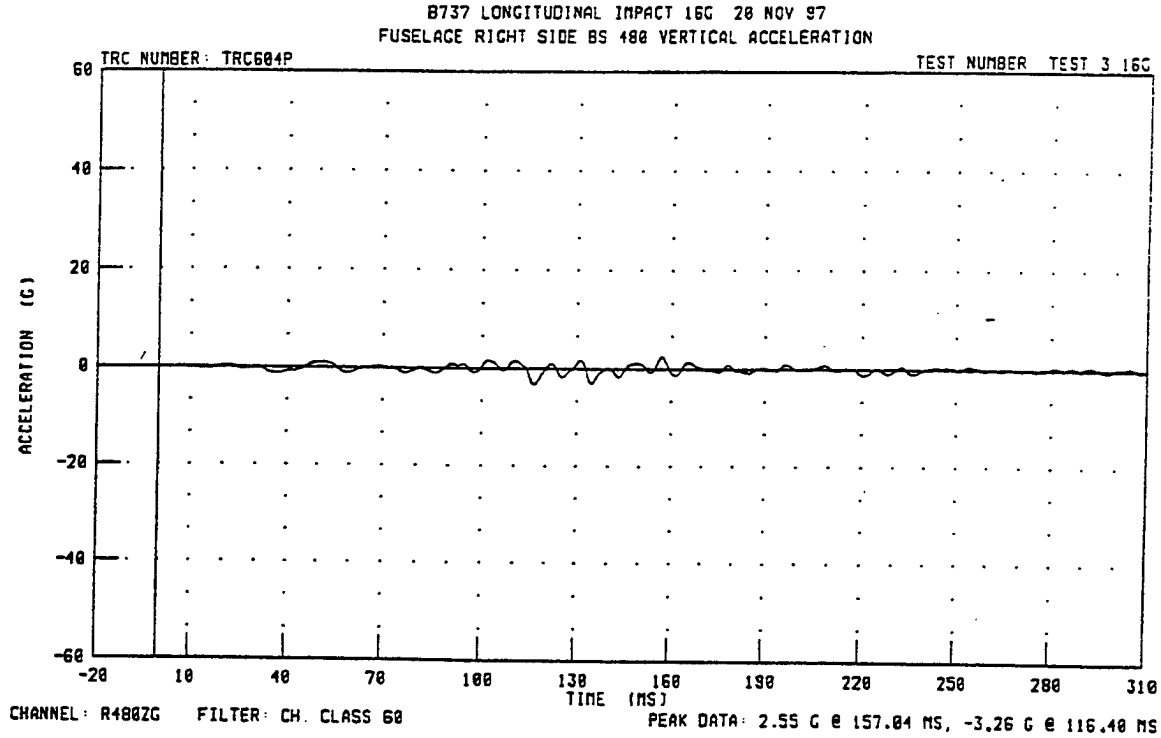

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE RIGHT SIDE BS 440 LATERAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
TIME (MS)
CHANNEL: R440YG FILTER: CH. CLASS 60
PEAK DATA: 3.45 G @ 134.96 MS; -3.26 G @ 129.92 MS

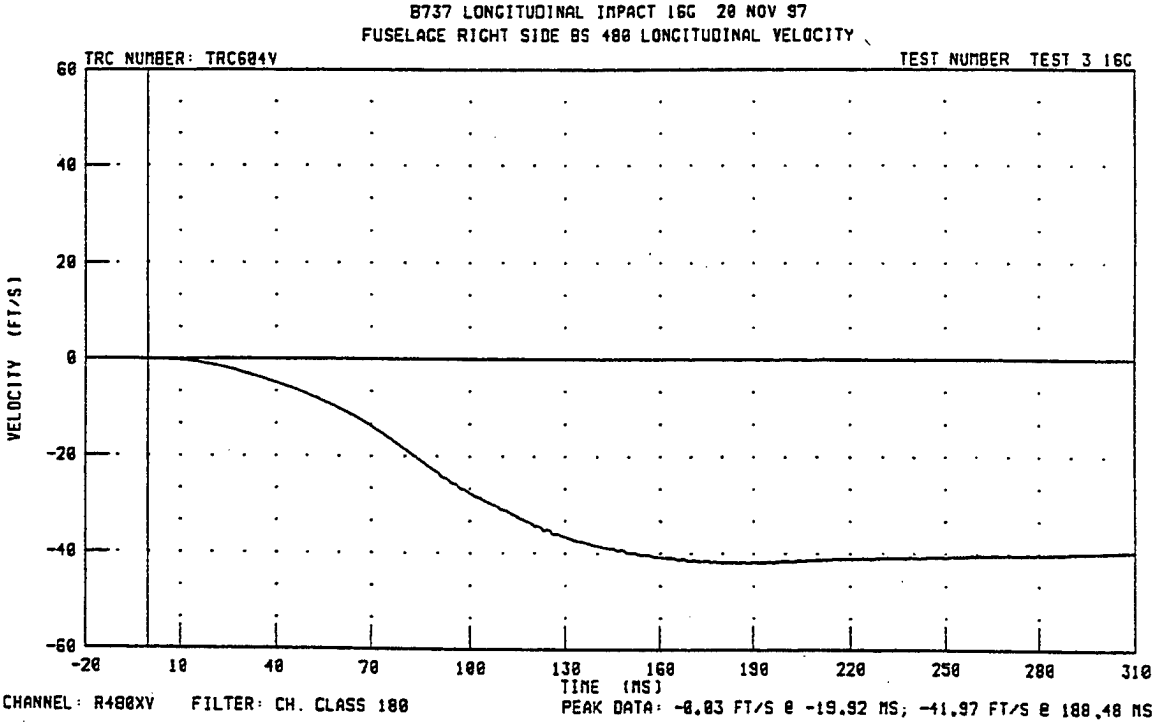

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE RIGHT SIDE BS 440 VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440ZG
FILTER: CH. CLASS 60
PEAK DATA 2.46 G @ 129.84 MS, -2.84 G @ 134.80 MS

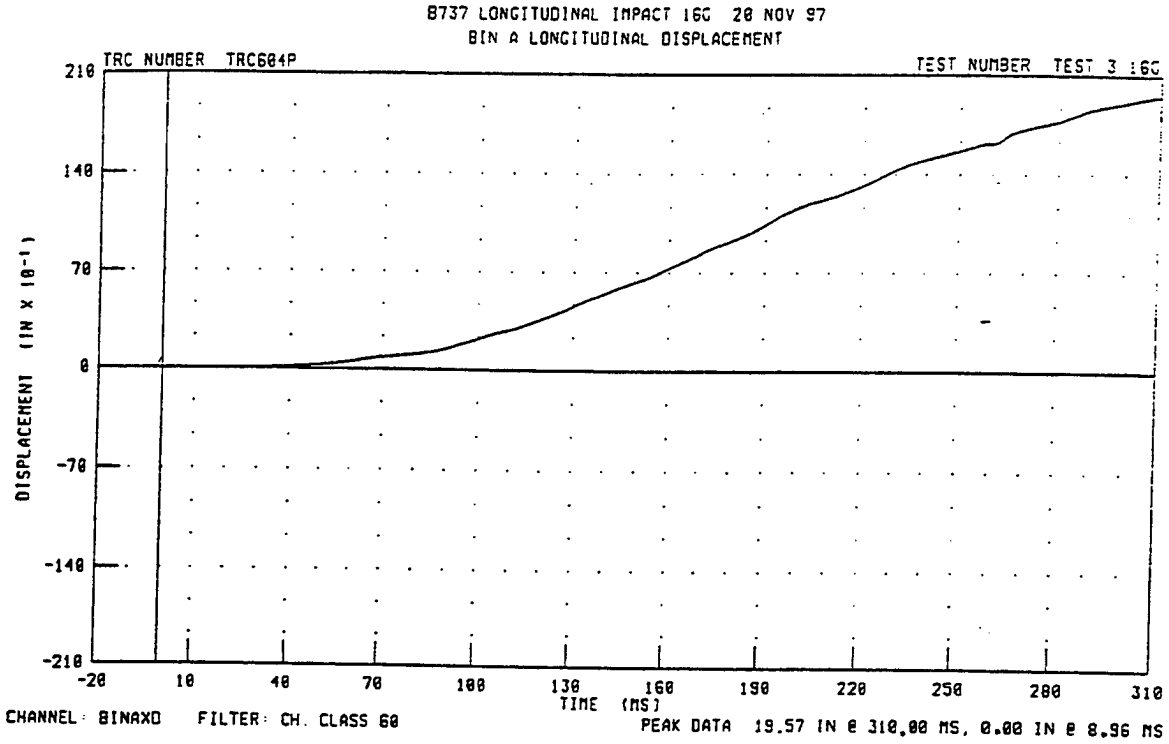

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE RIGHT SIDE BS 440 LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER: TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R440XV
FILTER: CH. CLASS 180
PEAK DATA: 0.00 FT/S @ -13.92 MS; -42.94 FT/S @ 183.92 MS

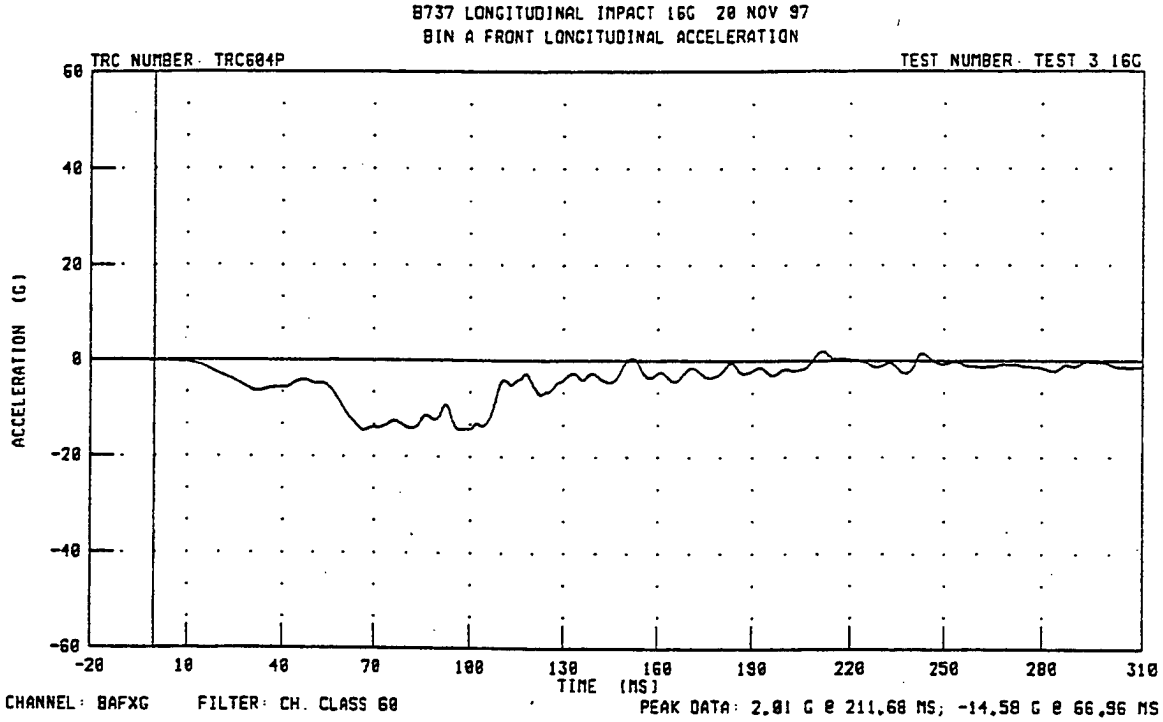

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE RIGHT SIDE BS 480 LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480XG
FILTER: CH. CLASS 60
PEAK DATA: 1.63 G @ 251.28 MS; -15.63 G @ 81.04 MS

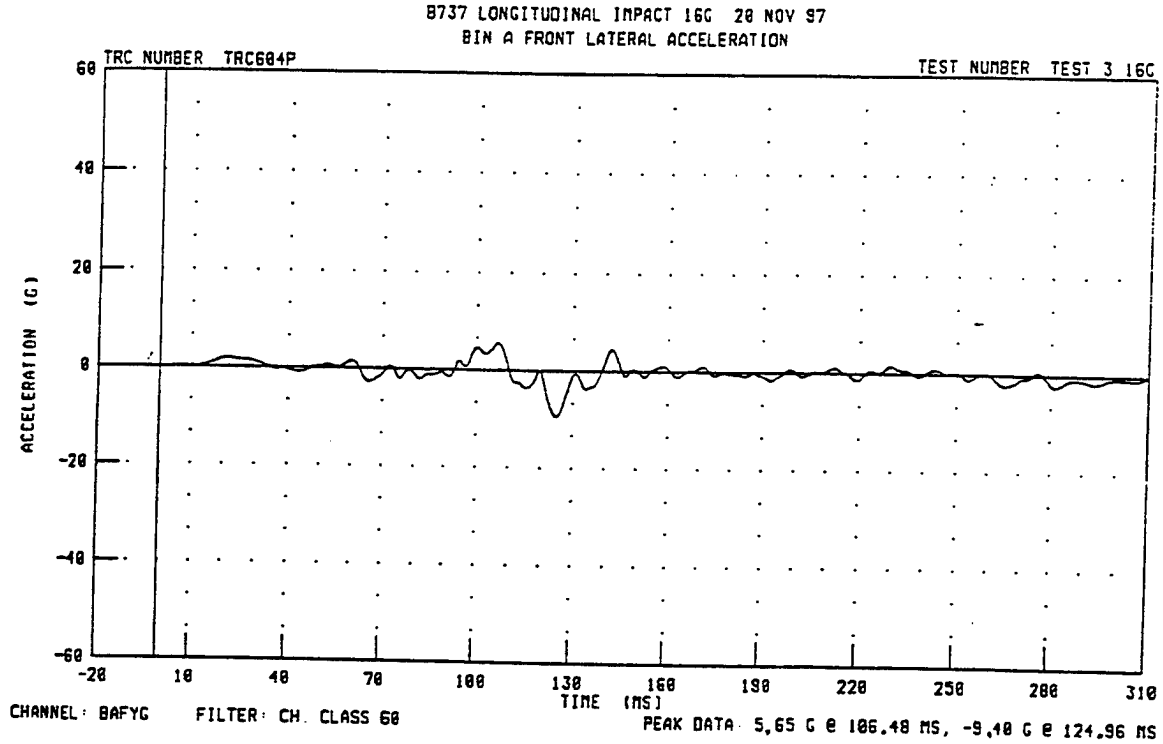

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE RIGHT SIDE BS 480 LATERAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480YG
FILTER: CH. CLASS 60
PEAK DATA: 6.40 G @ 143.12 MS; -5.61 G @ 157.20 MS

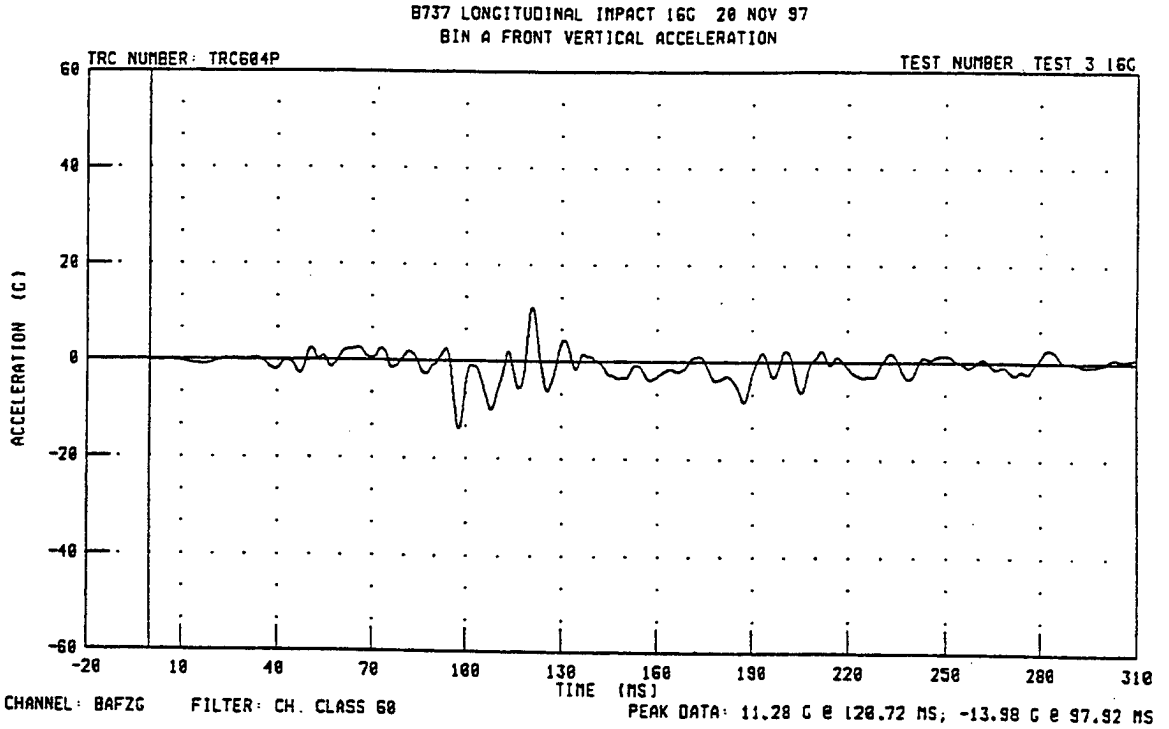

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE RIGHT SIDE BS 480 VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480ZG
FILTER: CH. CLASS 60
PEAK DATA: 2.55 G @ 157.04 MS, -3.26 G @ 116.40 MS

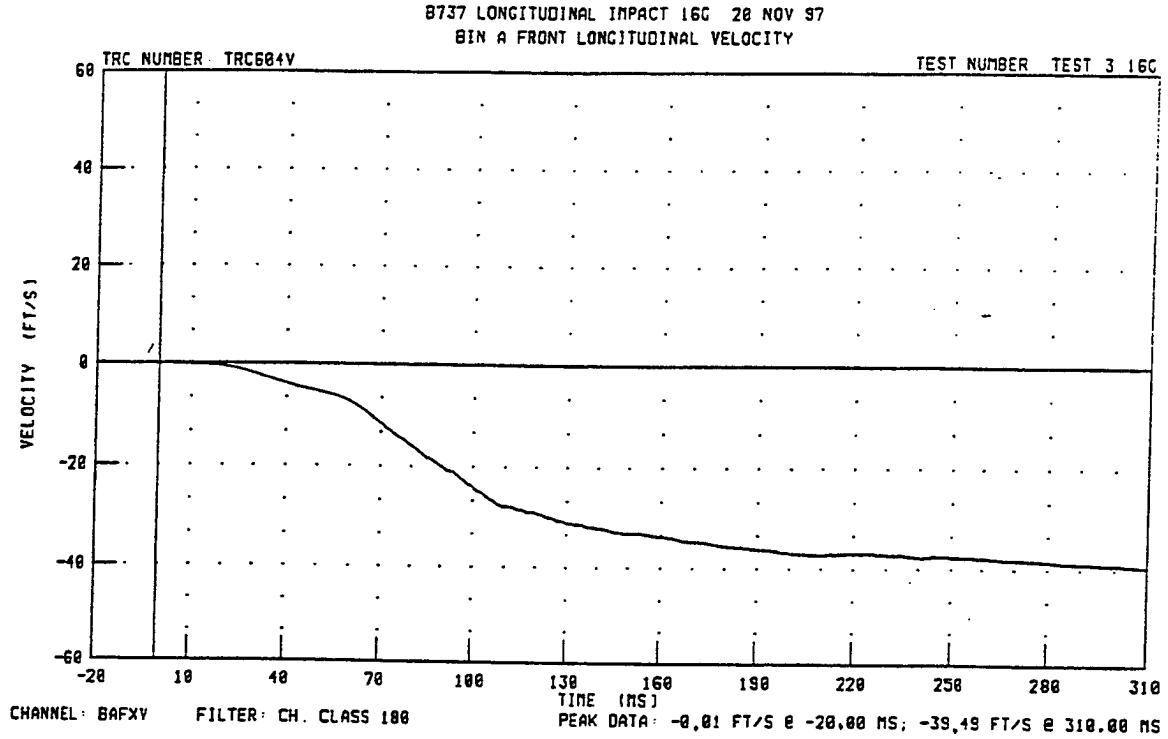

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
FUSELAGE RIGHT SIDE BS 480 LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: R480XV
FILTER: CH. CLASS 180
PEAK DATA: -0.03 FT/S @ -19.92 MS; -41.97 FT/S @ 188.48 MS

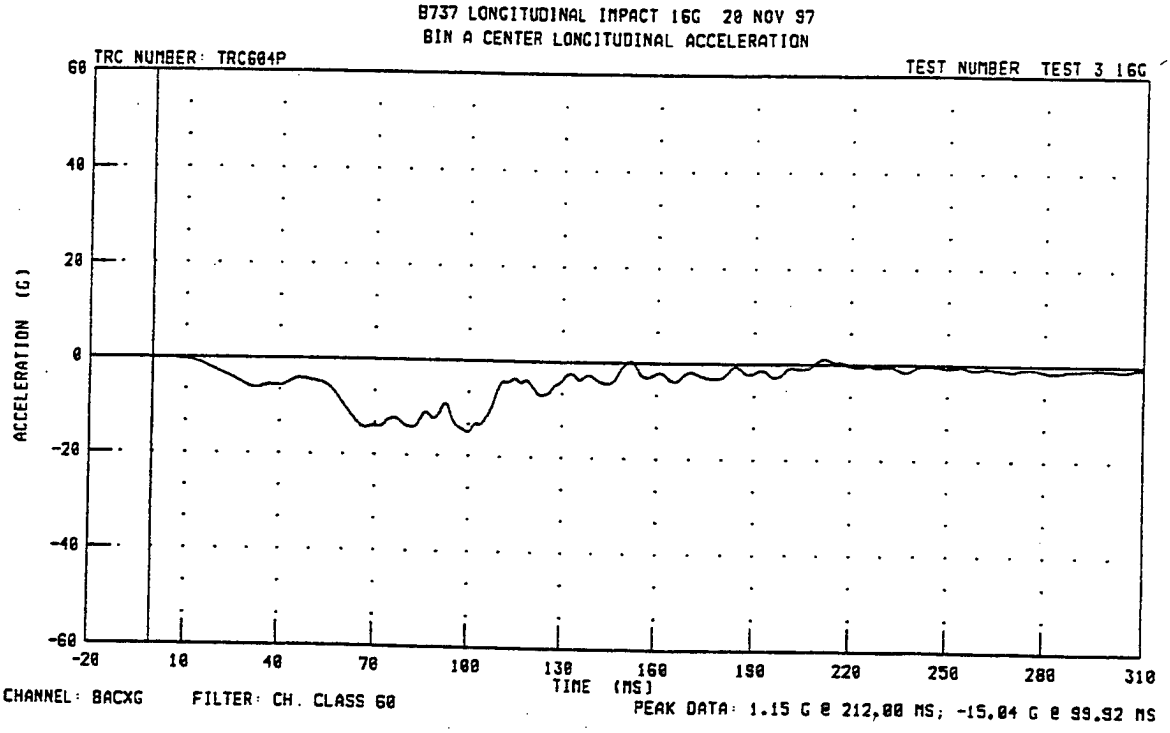

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LONGITUDINAL DISPLACEMENT
TRC NUMBER TRC604P
TEST NUMBER TEST 3 16G
DISPLACEMENT (IN X 10⁻¹)
210
140
70
0
-70
-140
-210
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BINAXD
FILTER: CH. CLASS 60
PEAK DATA 19.57 IN @ 310.00 MS, 0.00 IN @ 8.96 MS

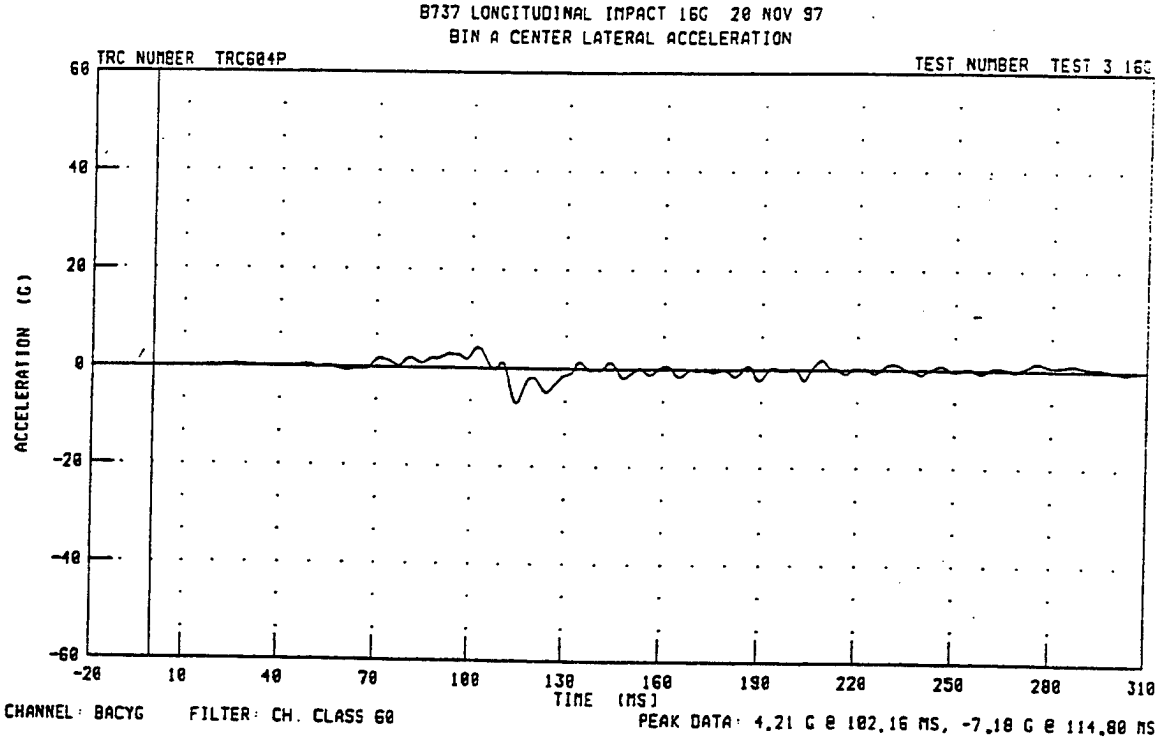

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A FRONT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFXG
FILTER: CH. CLASS 60
PEAK DATA: 2.81 G @ 211.68 MS; -14.58 G @ 66.96 MS

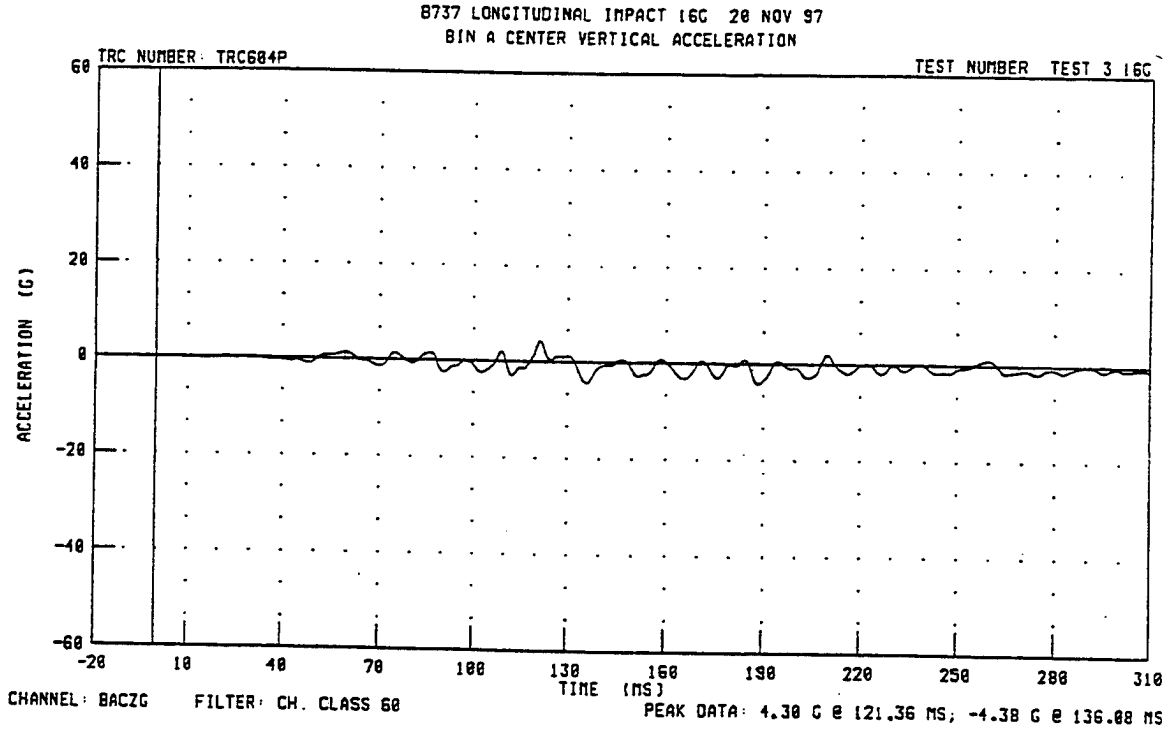

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A FRONT LATERAL ACCELERATION
TRC NUMBER TRC604P
TEST NUMBER TEST 3 16C
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFYG
FILTER: CH. CLASS 60
PEAK DATA 5.65 G @ 106.48 MS, -9.40 G @ 124.96 MS

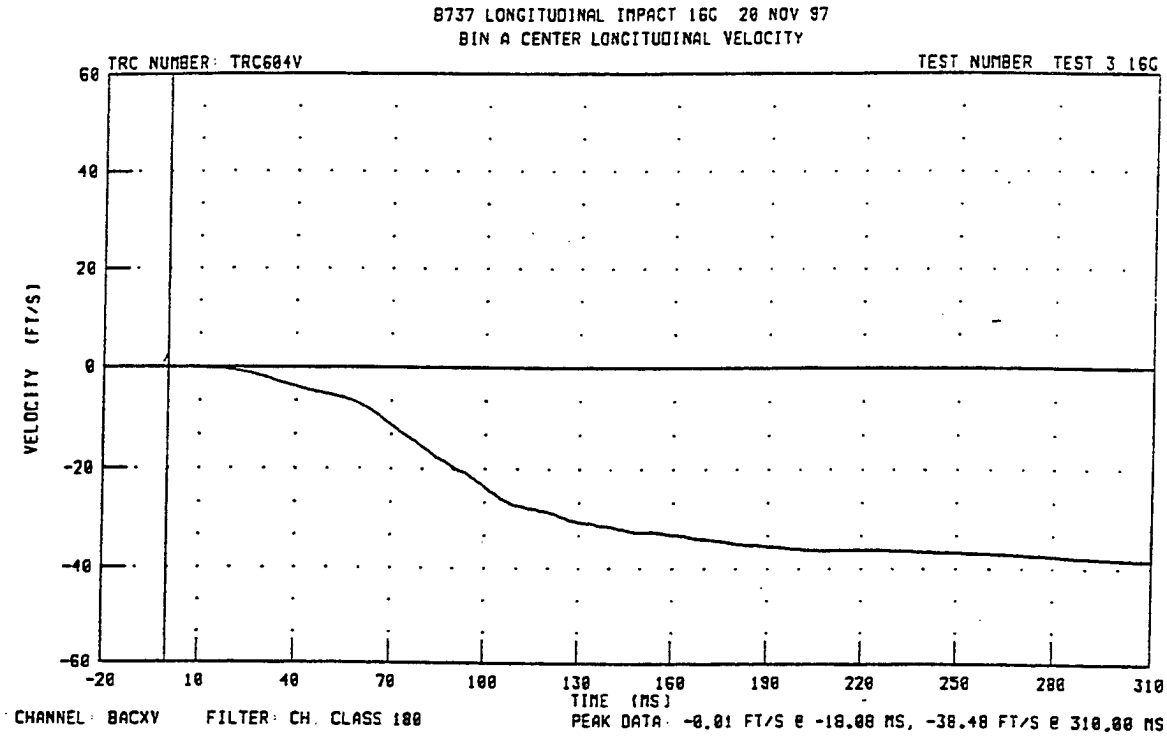

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A FRONT VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16C
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFZG
FILTER: CH. CLASS 60
PEAK DATA: 11.28 G @ 128.72 MS; -13.98 G @ 97.92 MS

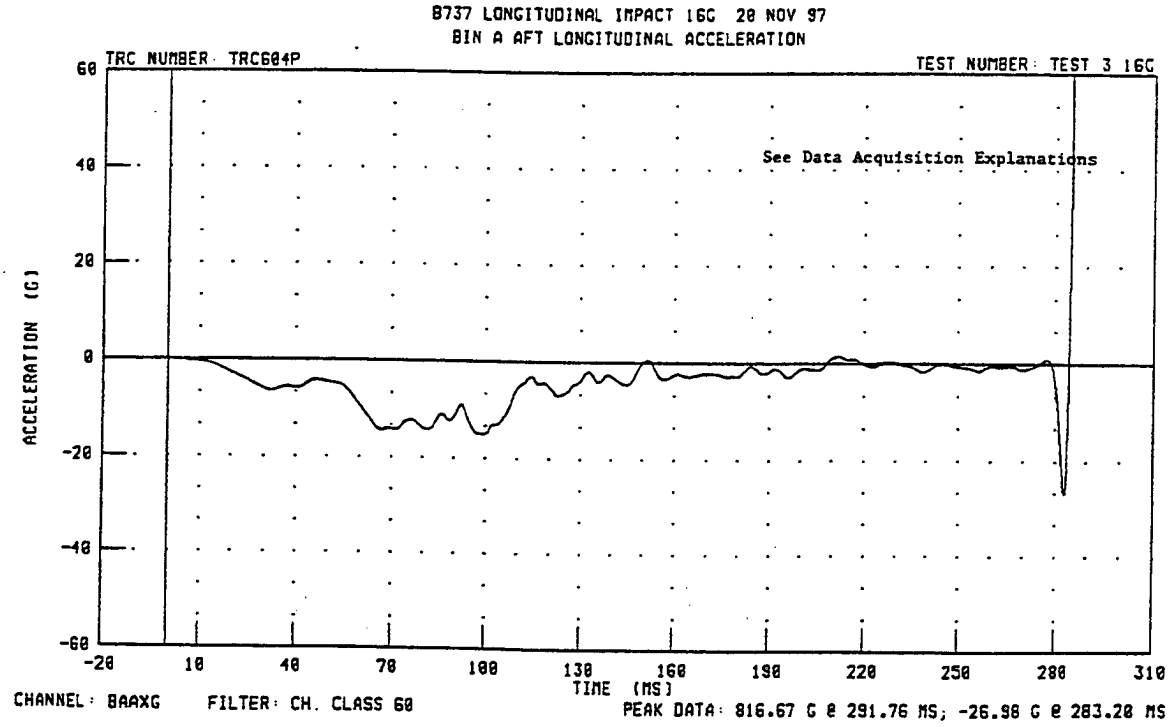

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A FRONT LONGITUDINAL VELOCITY
TRC NUMBER TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAFXV
FILTER: CH. CLASS 180
PEAK DATA: -0.01 FT/S @ -20.00 MS; -39.49 FT/S @ 310.00 MS

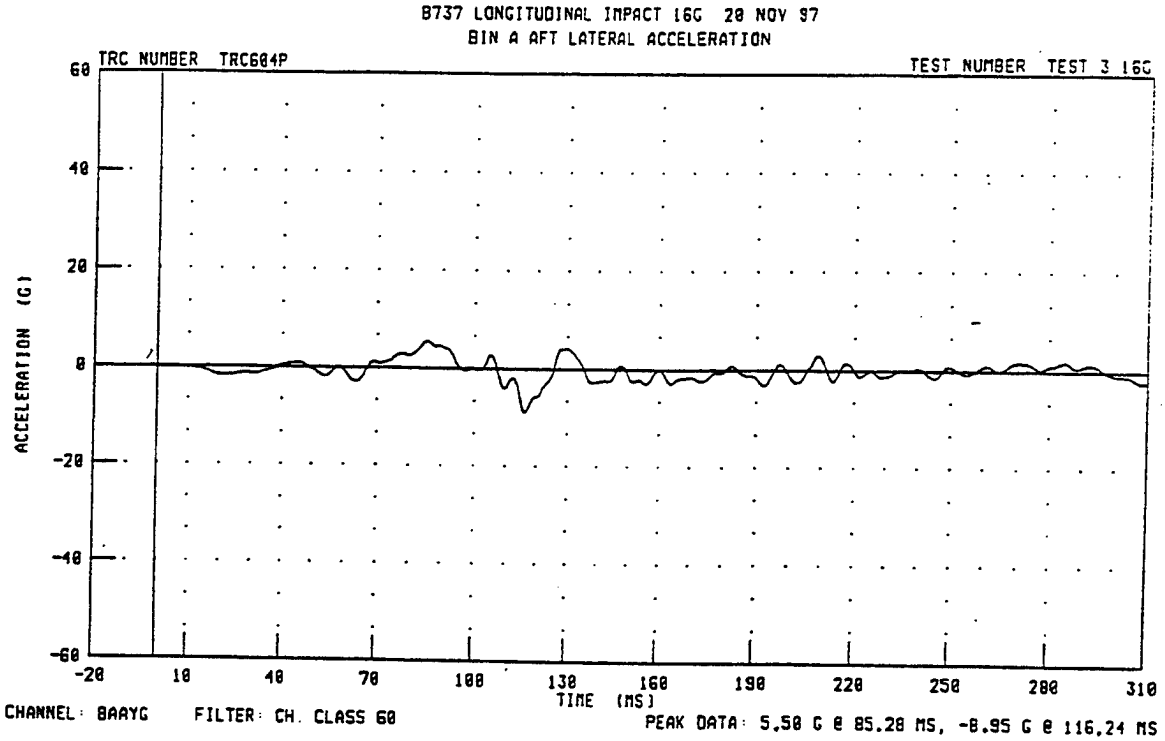

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A CENTER LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACXG
FILTER: CH. CLASS 60
PEAK DATA: 1.15 G @ 212.00 MS; -15.04 G @ 99.92 MS

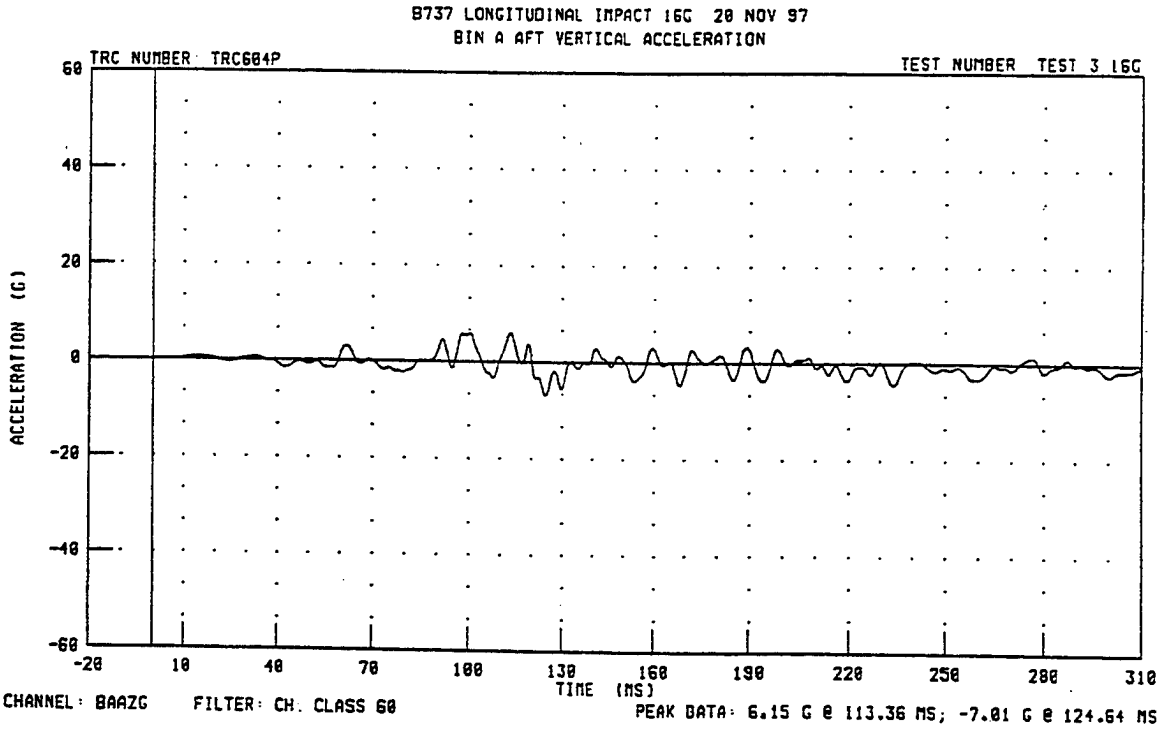

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A CENTER LATERAL ACCELERATION
TRC NUMBER TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACYG
FILTER: CH. CLASS 60
PEAK DATA: 4.21 G @ 102.16 MS, -7.18 G @ 114.80 MS

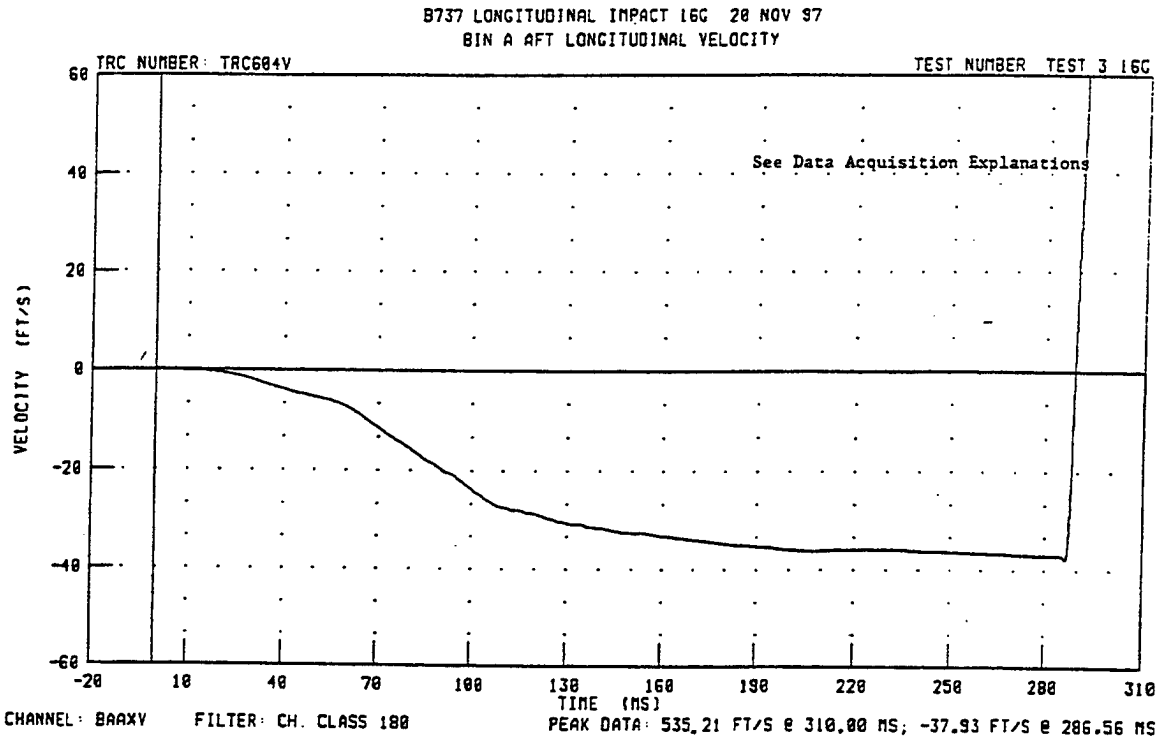

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A CENTER VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACZG
FILTER: CH. CLASS 60
PEAK DATA: 4.30 G @ 121.36 MS; -4.38 G @ 136.88 MS

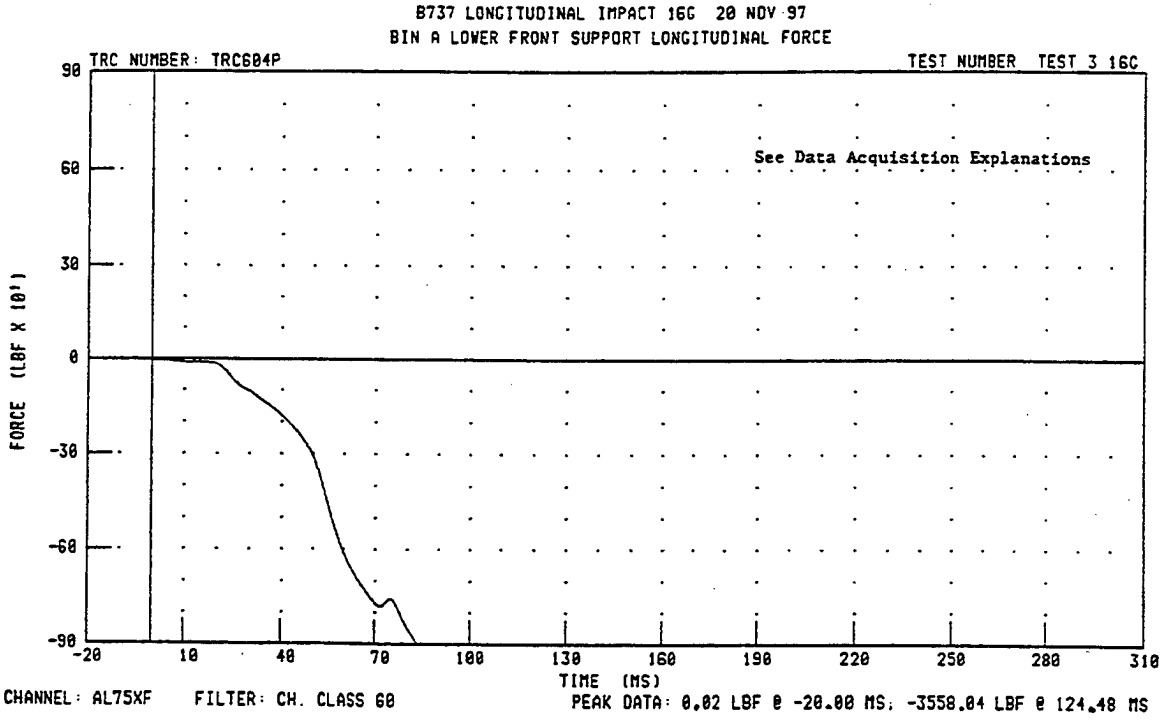

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A CENTER LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BACXV
FILTER: CH. CLASS 180
PEAK DATA: -0.01 FT/S @ -18.00 MS, -38.48 FT/S @ 310.00 MS

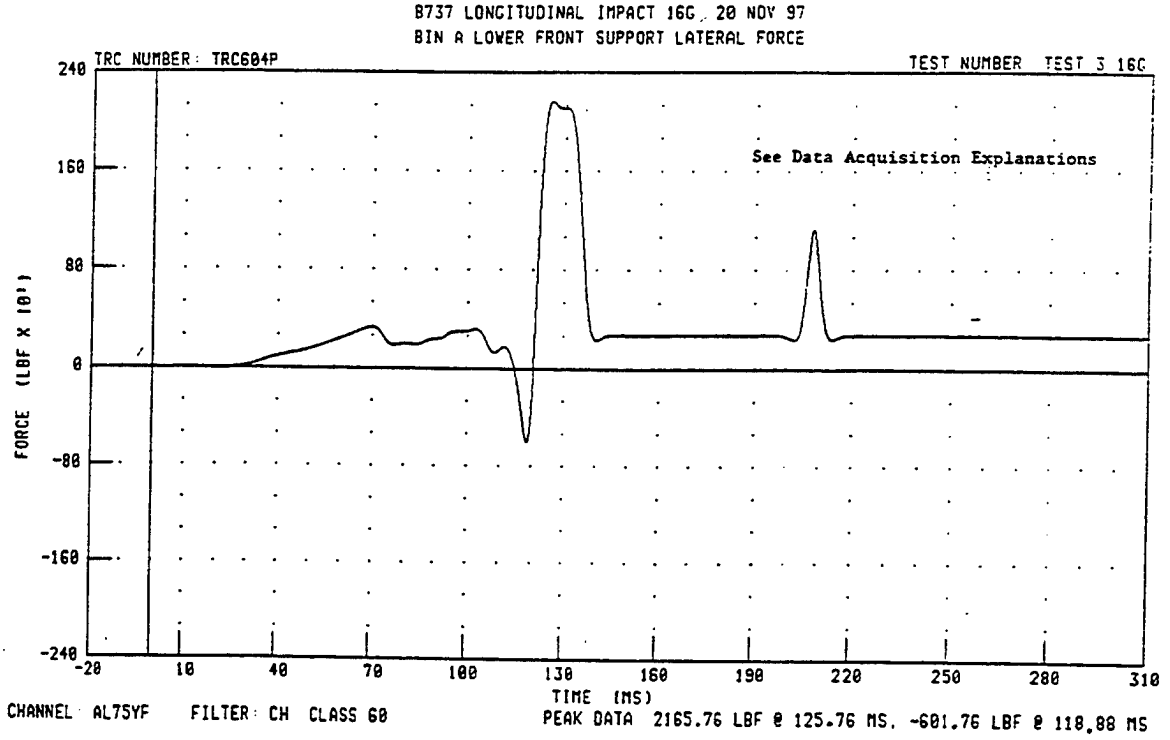

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A AFT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
See Data Acquisition Explanations
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAXG
FILTER: CH. CLASS 60
PEAK DATA: 816.67 G @ 291.76 MS; -26.98 G @ 283.20 MS

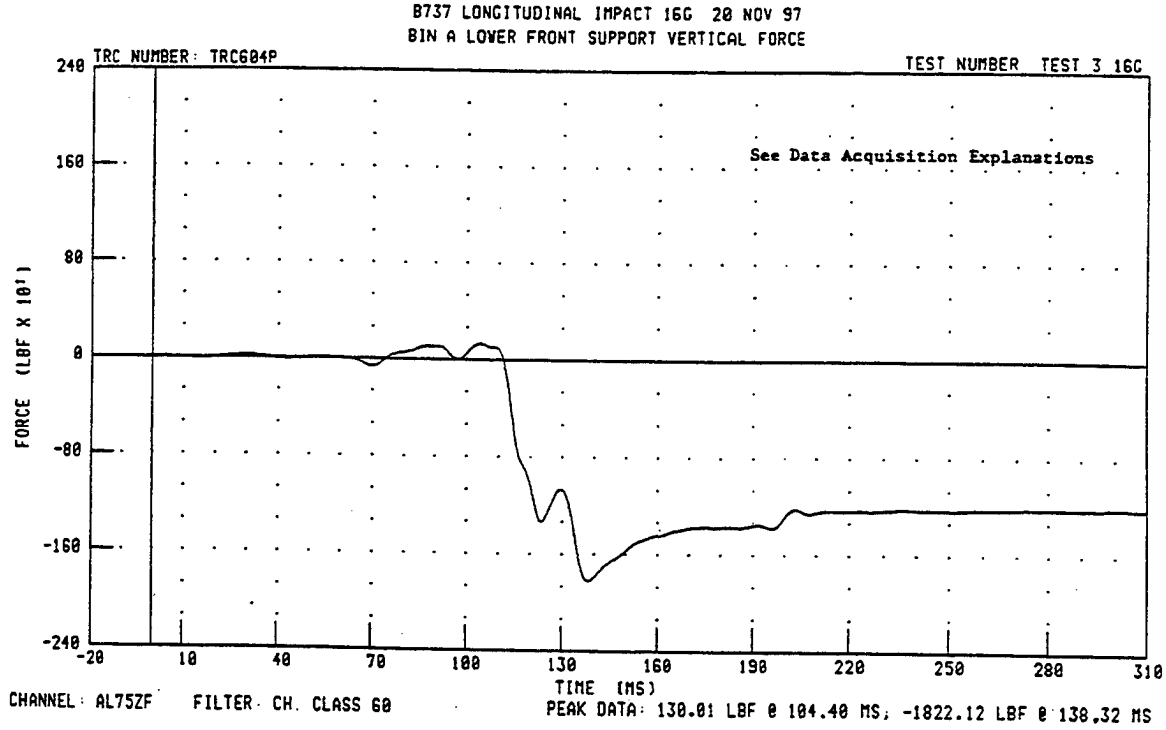

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A AFT LATERAL ACCELERATION
TRC NUMBER TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAYG
FILTER: CH. CLASS 60
PEAK DATA: 5.50 G @ 85.28 MS, -8.95 G @ 116.24 MS

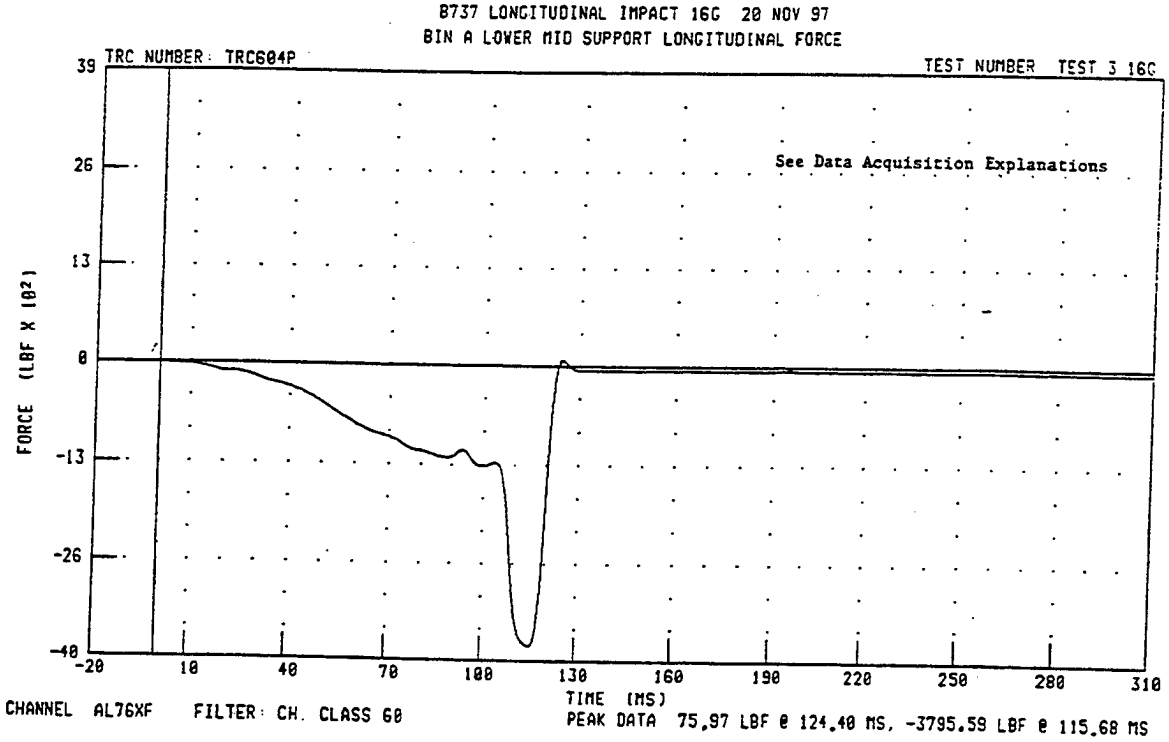

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A AFT VERTICAL ACCELERATION
TRC NUMBER TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAZG
FILTER: CH. CLASS 60
PEAK DATA: 6.15 G @ 113.36 MS; -7.01 G @ 124.64 MS

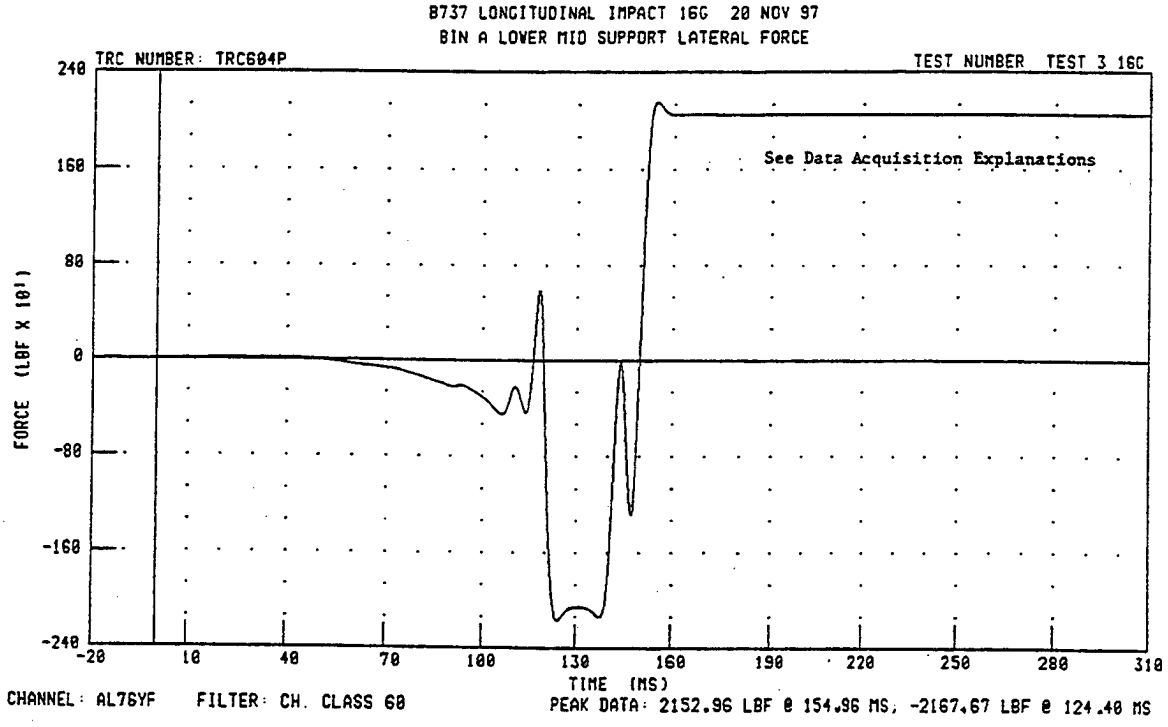

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A AFT LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BAAXV
FILTER: CH. CLASS 180
PEAK DATA: 535.21 FT/S @ 310.00 MS; -37.93 FT/S @ 286.56 MS

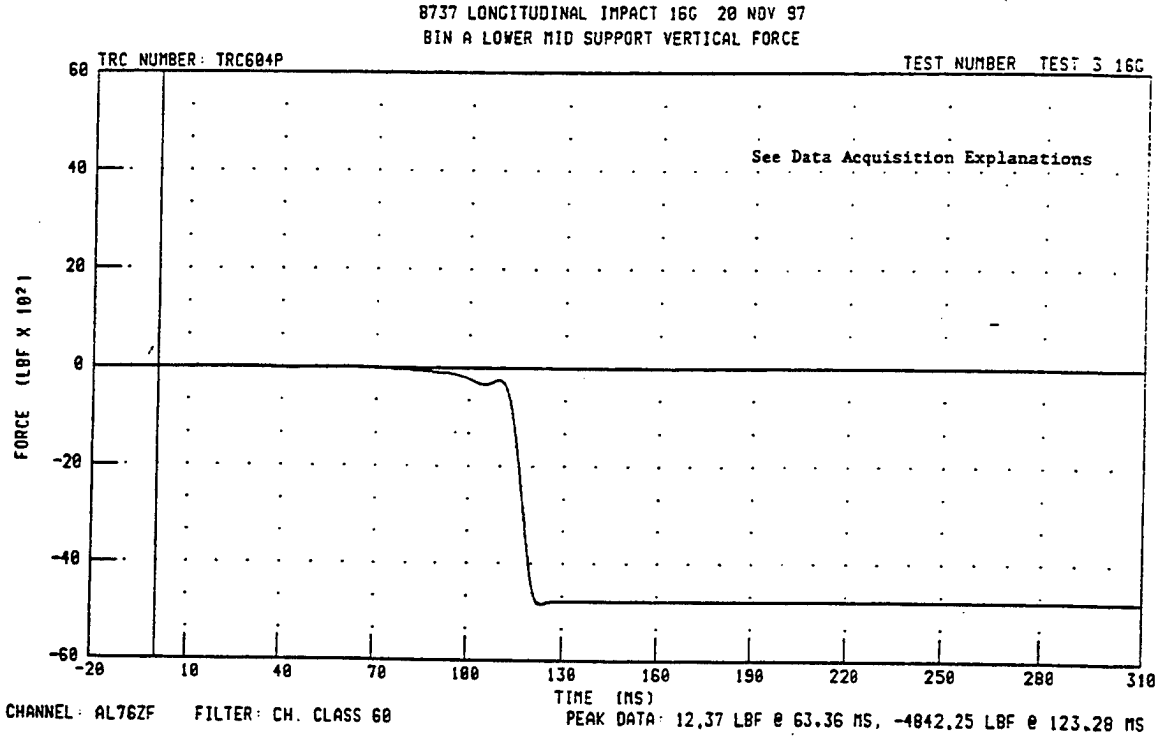

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER FRONT SUPPORT LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL75XF
FILTER: CH. CLASS 60
PEAK DATA: 0.02 LBF @ -20.00 MS; -3558.04 LBF @ 124.48 MS

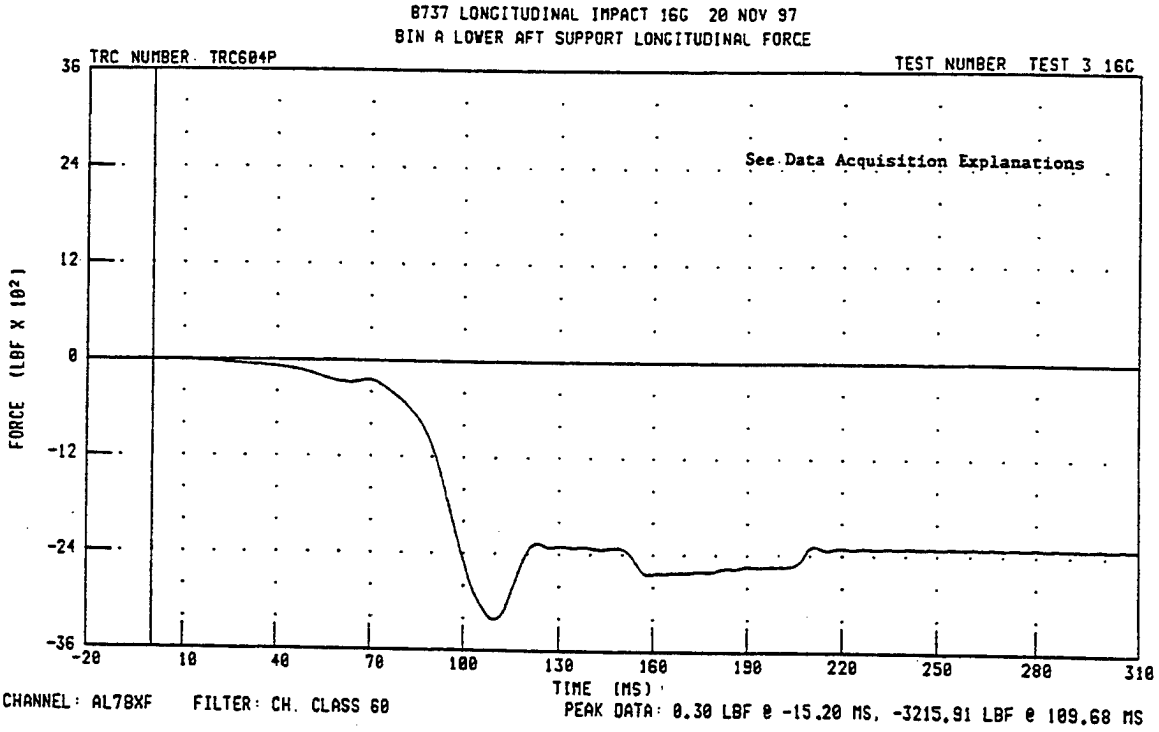

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER FRONT SUPPORT LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10¹)
240
160
80
0
-80
-160
-240
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL AL75YF FILTER: CH CLASS 60
PEAK DATA 2165.76 LBF @ 125.76 MS, -601.76 LBF @ 118.88 MS

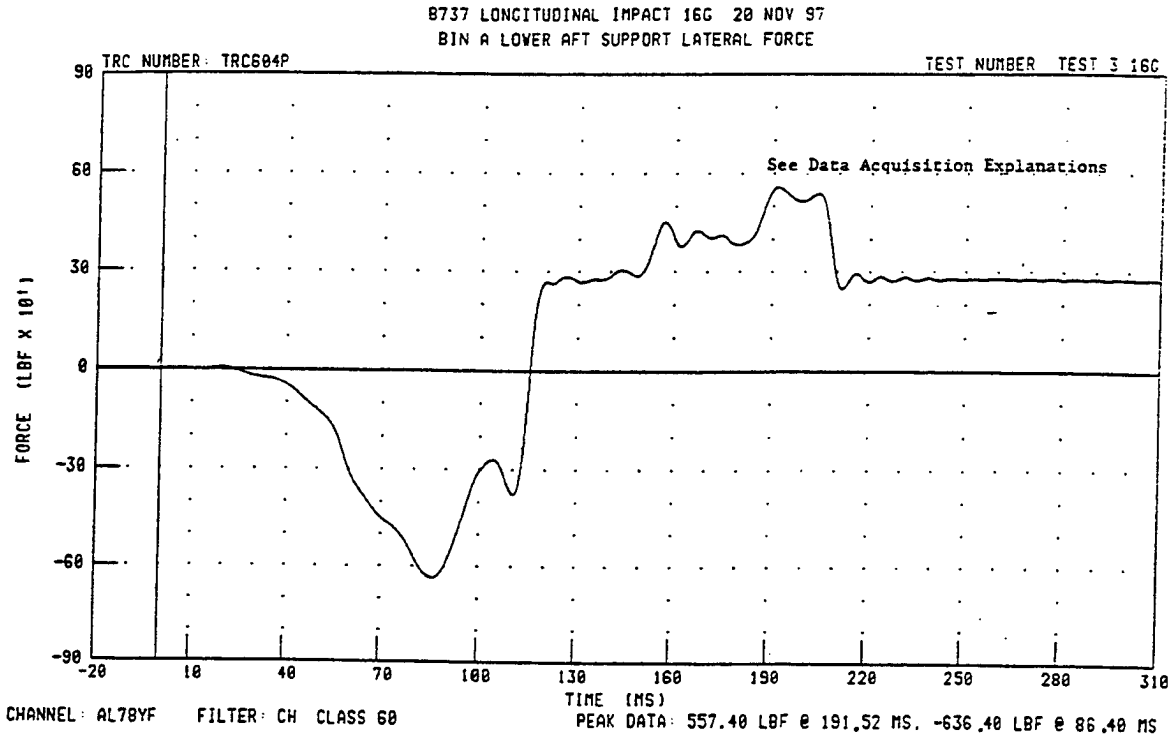

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER FRONT SUPPORT VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10¹)
240
160
80
0
-80
-160
-240
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL75ZF FILTER: CH. CLASS 60
PEAK DATA: 130.01 LBF @ 104.40 MS; -1822.12 LBF @ 138.32 MS

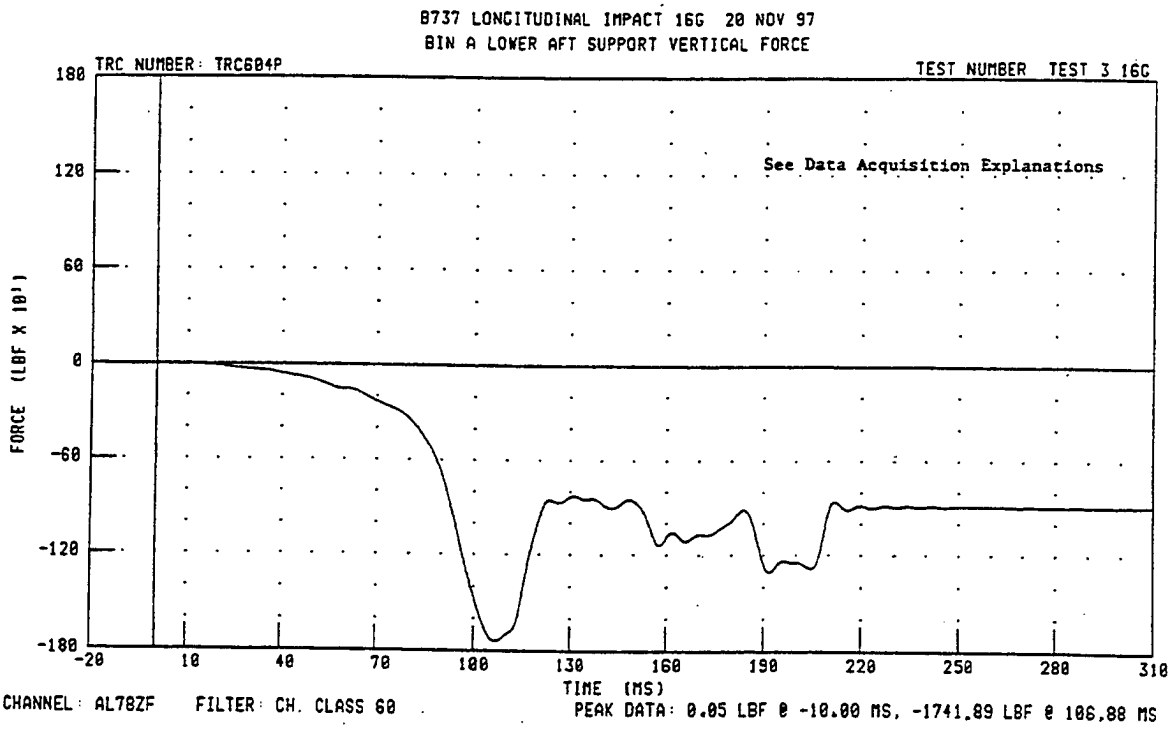

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER MID SUPPORT LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10²)
39
26
13
0
-13
-26
-40
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL AL76XF
FILTER: CH. CLASS 60
PEAK DATA 75.97 LBF @ 124.40 MS, -3795.59 LBF @ 115.68 MS

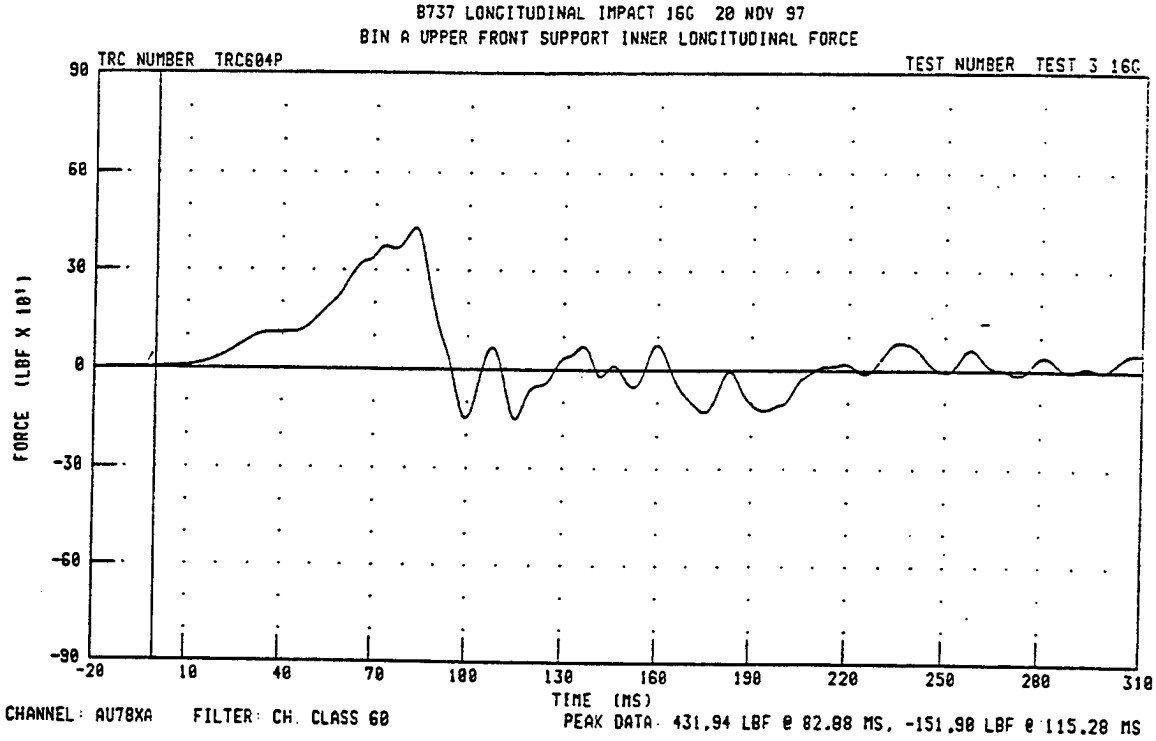

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER MID SUPPORT LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10¹)
240
160
80
0
-80
-160
-240
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL76YF
FILTER: CH. CLASS 60
PEAK DATA: 2152.96 LBF @ 154.96 MS, -2167.67 LBF @ 124.40 MS

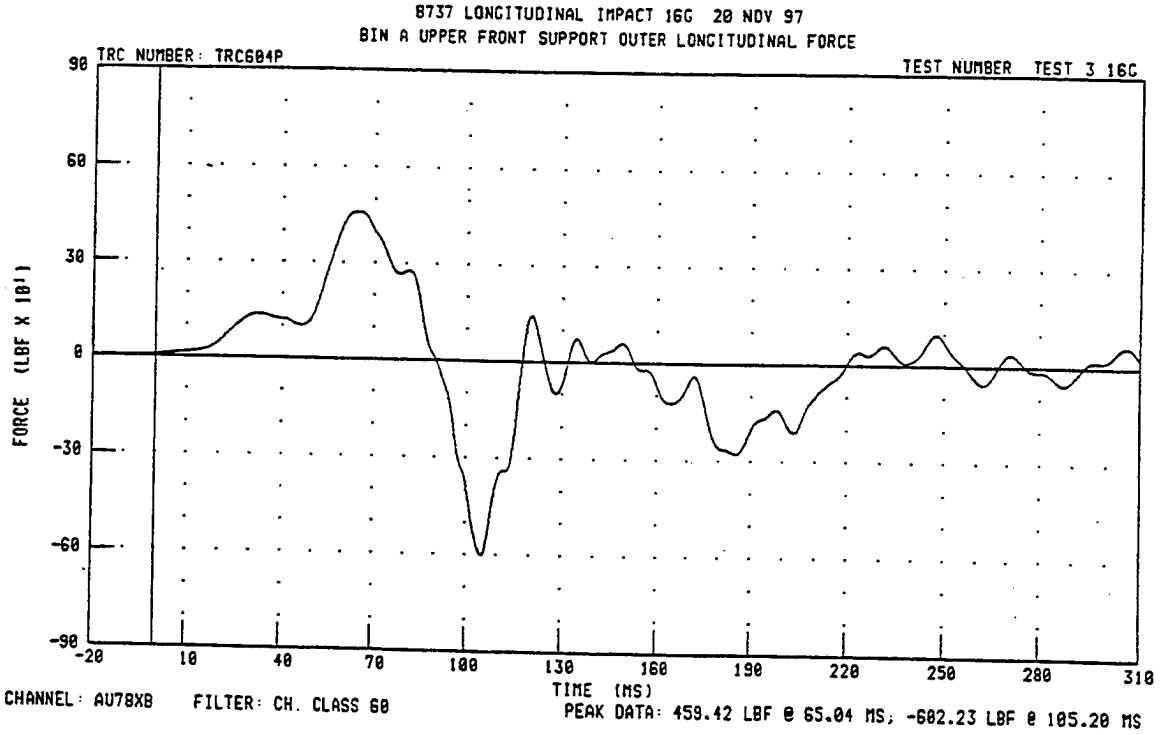

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER MID SUPPORT VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10²)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL76ZF
FILTER: CH. CLASS 60
PEAK DATA: 12.37 LBF @ 63.36 MS, -4842.25 LBF @ 123.28 MS

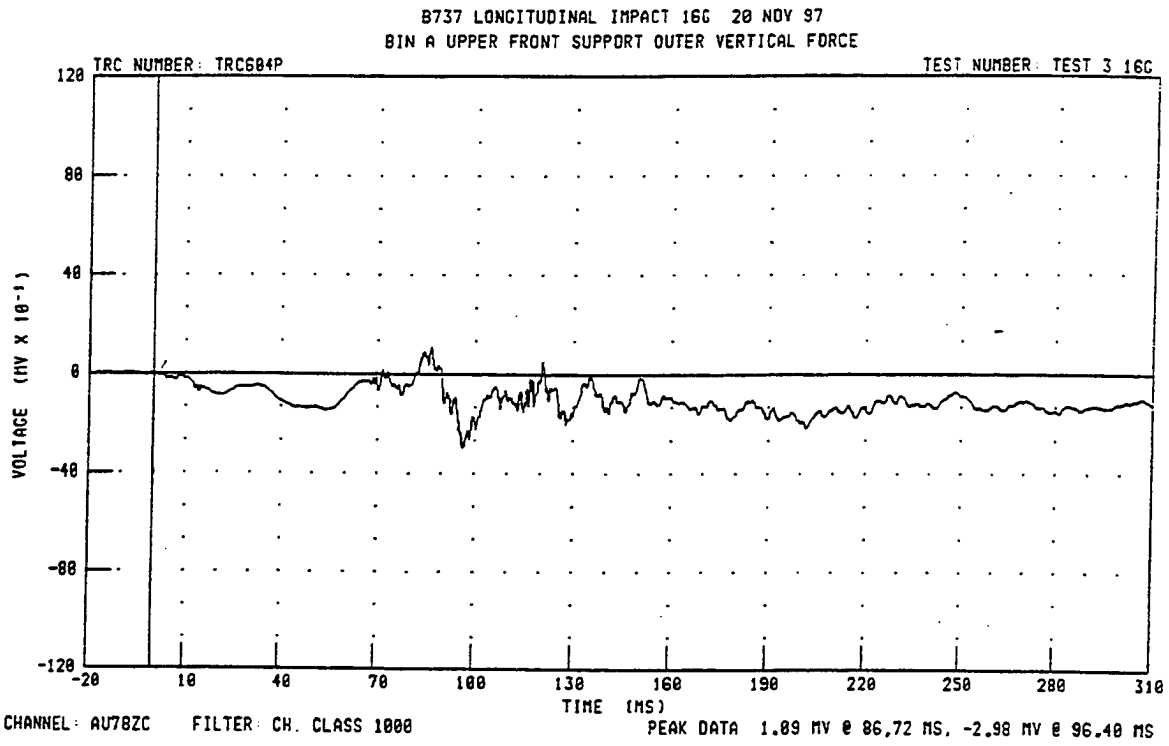

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER AFT SUPPORT LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10²)
36
24
12
0
-12
-24
-36
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78XF
FILTER: CH. CLASS 60
PEAK DATA: 0.30 LBF @ -15.20 MS, -3215.91 LBF @ 109.68 MS

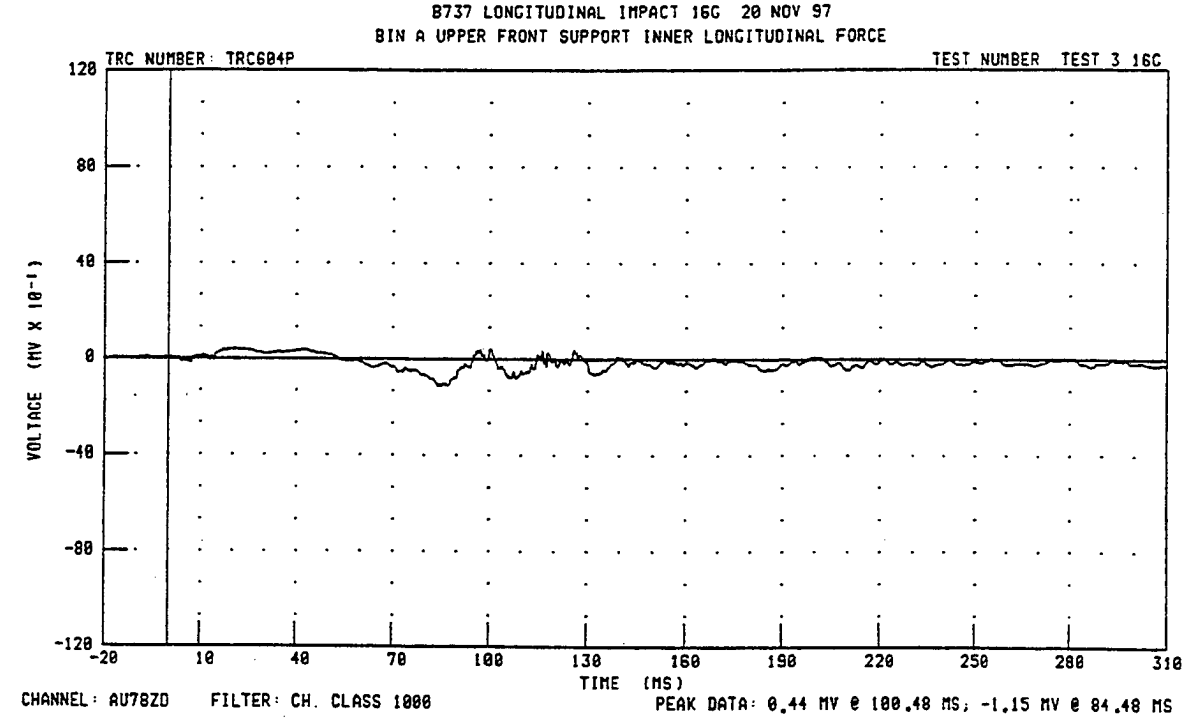

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER AFT SUPPORT LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78YF
FILTER: CH CLASS 60
PEAK DATA: 557.40 LBF @ 191.52 MS. -636.40 LBF @ 86.40 MS

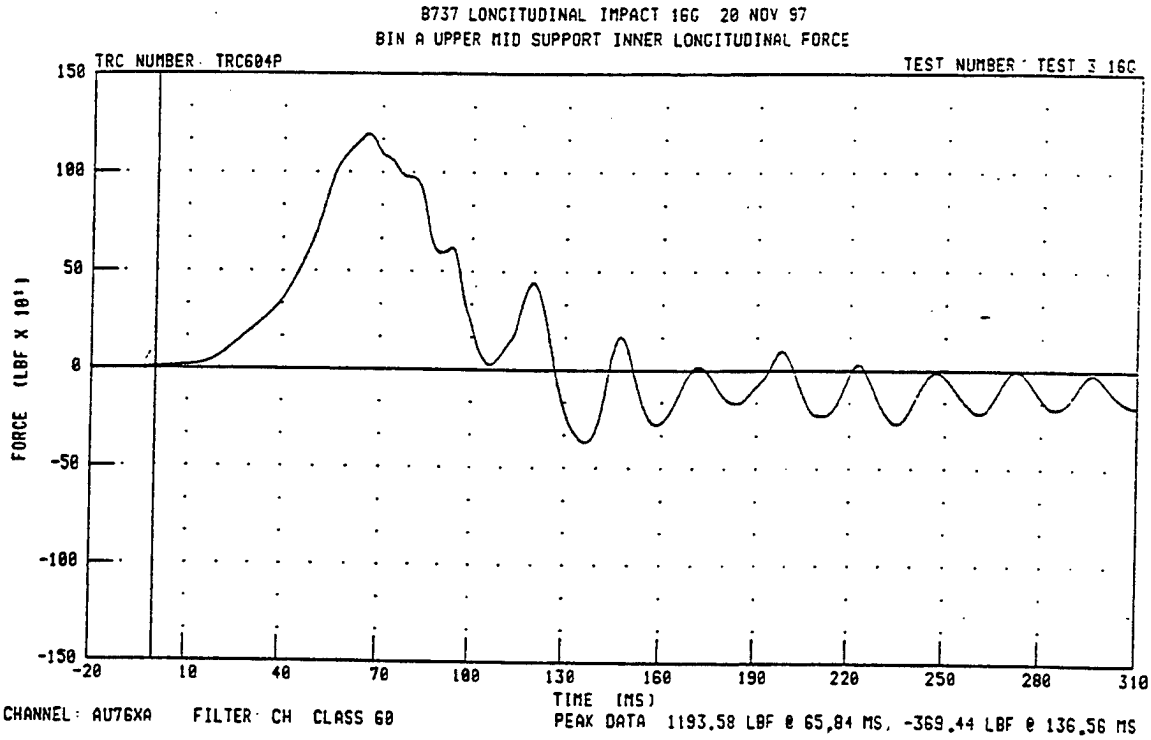

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A LOWER AFT SUPPORT VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
See Data Acquisition Explanations
FORCE (LBF X 10¹)
180
120
60
0
-60
-120
-180
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AL78ZF
FILTER: CH. CLASS 60
PEAK DATA: 0.05 LBF @ -10.00 MS. -1741.89 LBF @ 106.88 MS

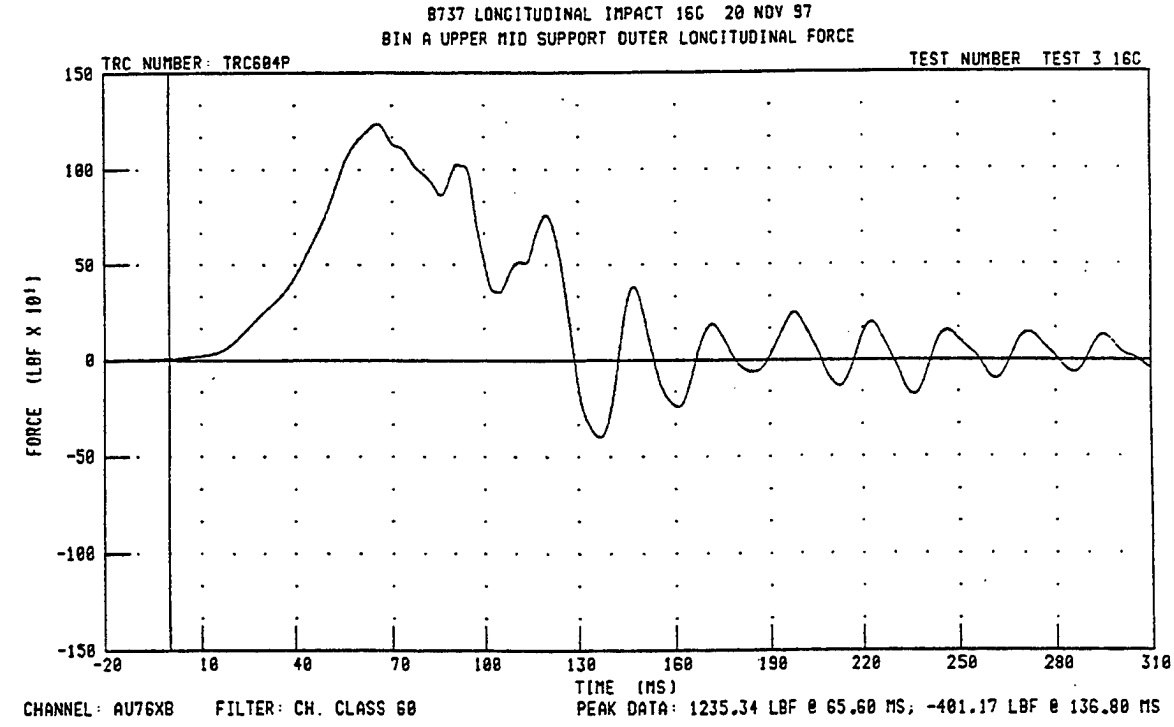

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER FRONT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78XA
FILTER: CH. CLASS 60
PEAK DATA: 431.94 LBF @ 82.88 MS, -151.98 LBF @ 115.28 MS

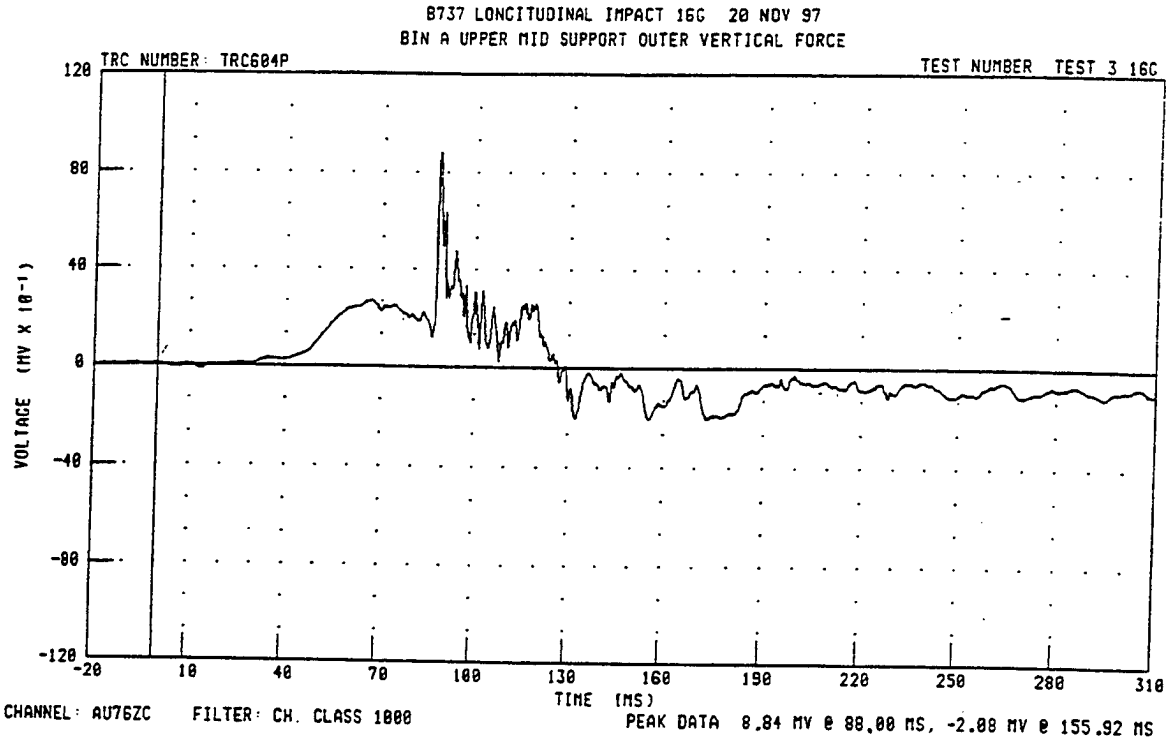

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER FRONT SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78XB
FILTER: CH. CLASS 60
PEAK DATA: 459.42 LBF @ 65.04 MS, -602.23 LBF @ 105.20 MS

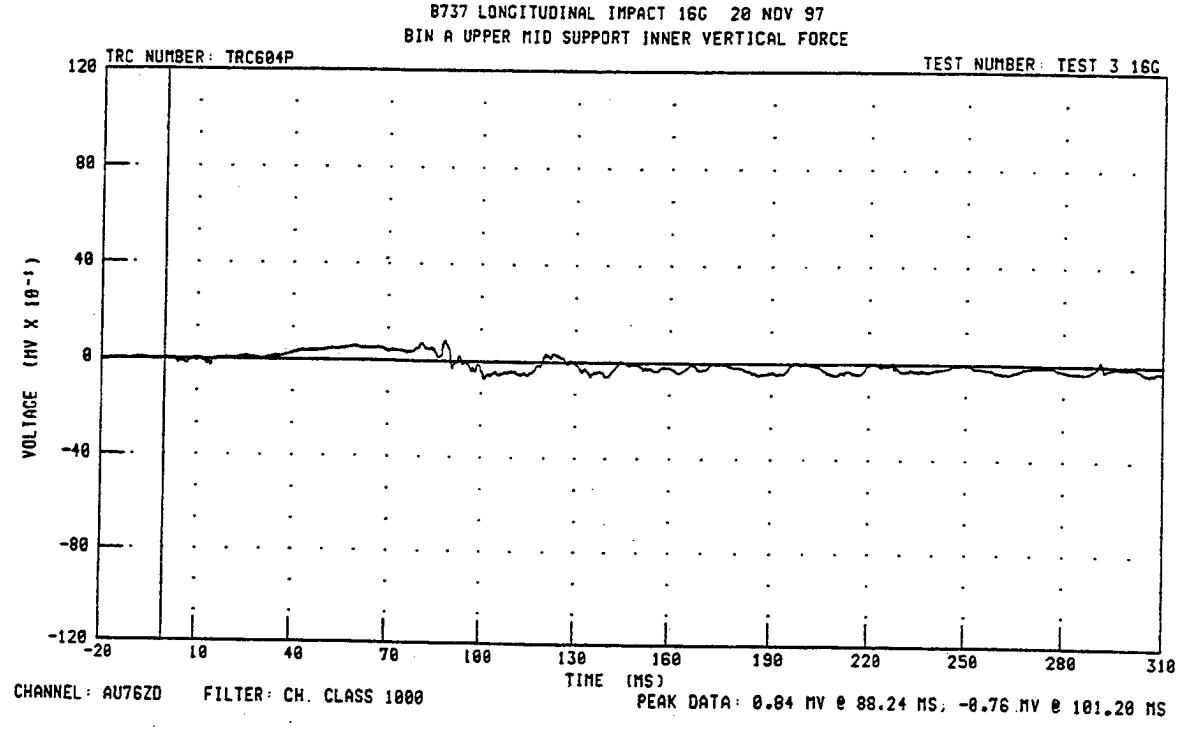

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER FRONT SUPPORT OUTER VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
VOLTAGE (MV X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78ZC
FILTER: CH. CLASS 1000
PEAK DATA 1.09 MV @ 86.72 MS, -2.98 MV @ 96.40 MS

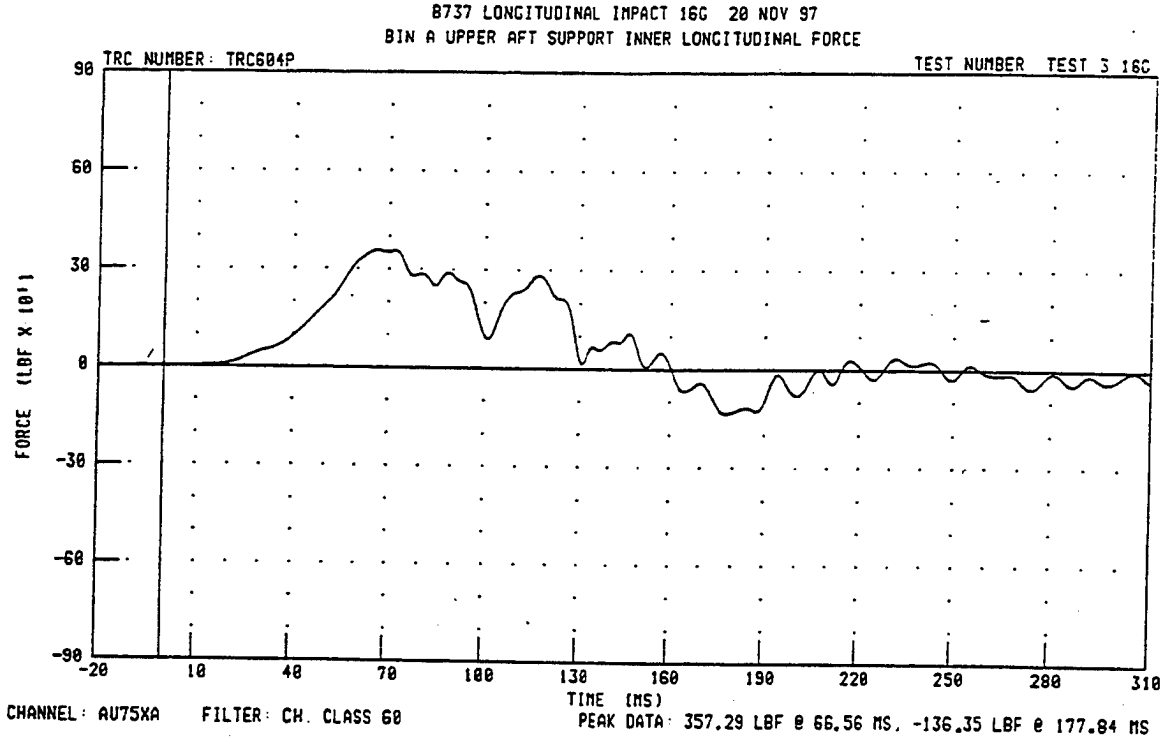

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER FRONT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
VOLTAGE (MV X 10⁻¹)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU78ZD
FILTER: CH. CLASS 1000
PEAK DATA: 0.44 MV @ 100.48 MS; -1.15 MV @ 84.48 MS

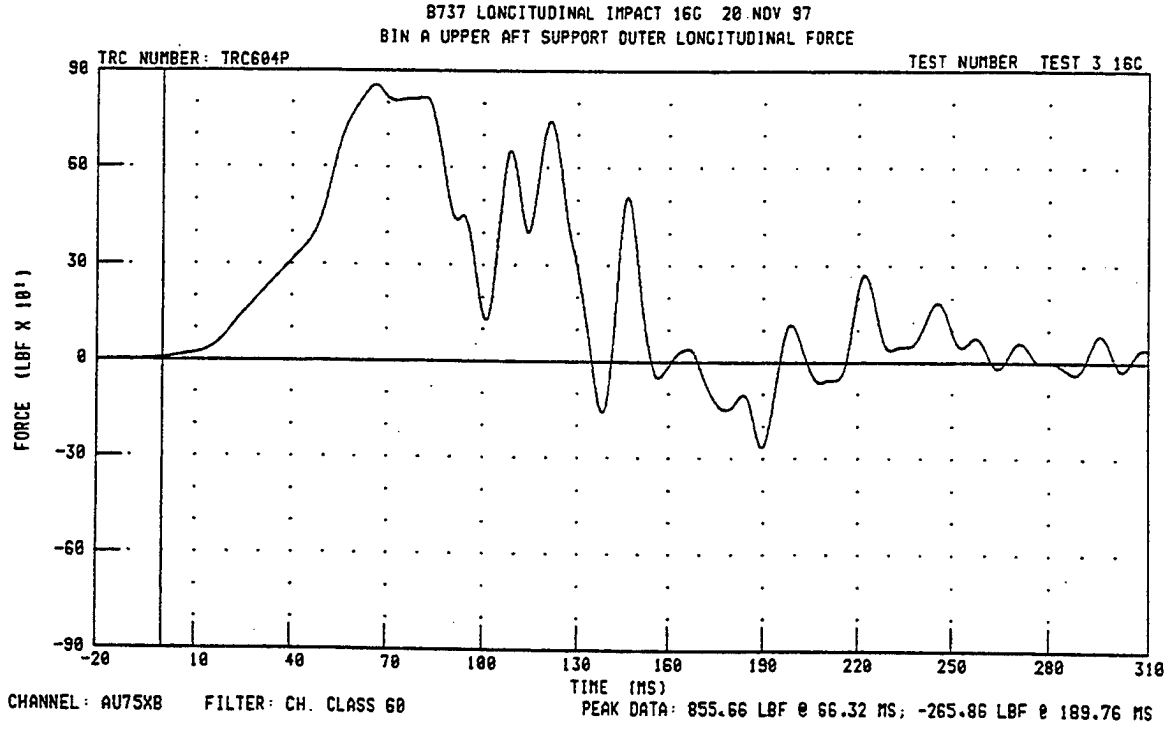

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER MID SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
FORCE (LBF X 10¹)
150
100
50
0
-50
-100
-150
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76XA
FILTER: CH CLASS 60
PEAK DATA 1193.58 LBF @ 65.84 MS, -369.44 LBF @ 136.56 MS

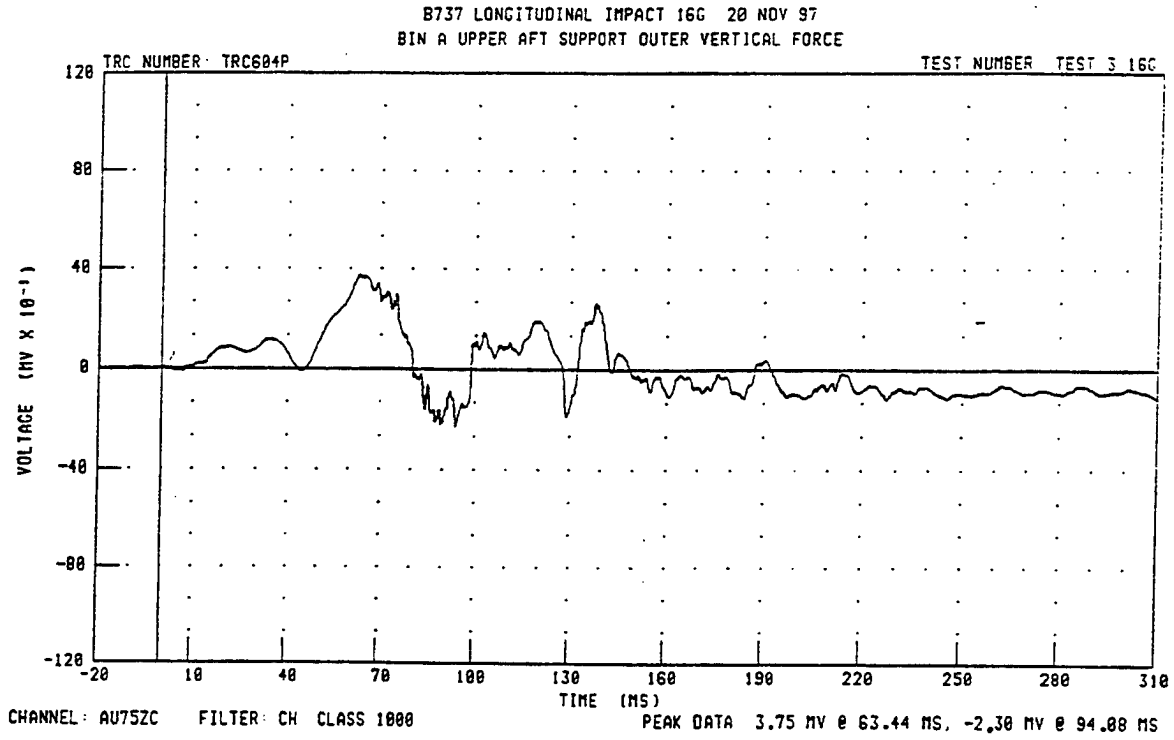

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER MID SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
150
100
50
0
-50
-100
-150
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76XB
FILTER: CH. CLASS 60
PEAK DATA: 1235.34 LBF @ 65.60 MS; -401.17 LBF @ 136.80 MS

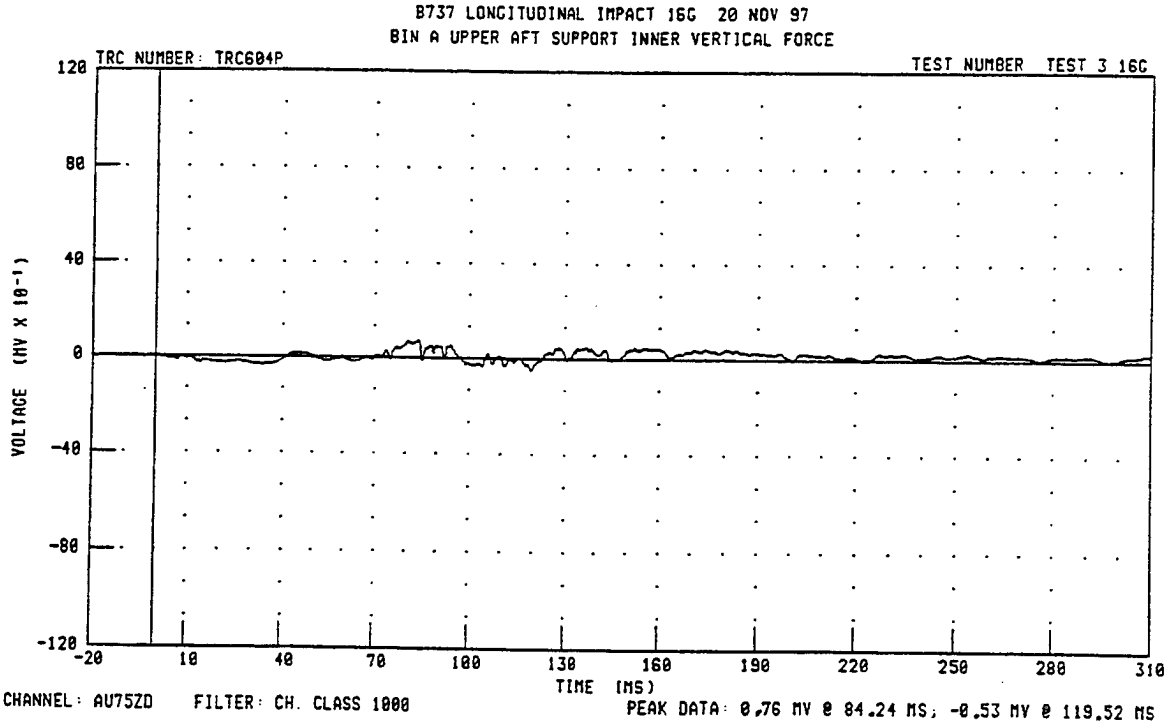

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER MID SUPPORT OUTER VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76ZC
FILTER: CH. CLASS 1000
PEAK DATA 8.84 MV @ 88.00 MS, -2.08 MV @ 155.92 MS

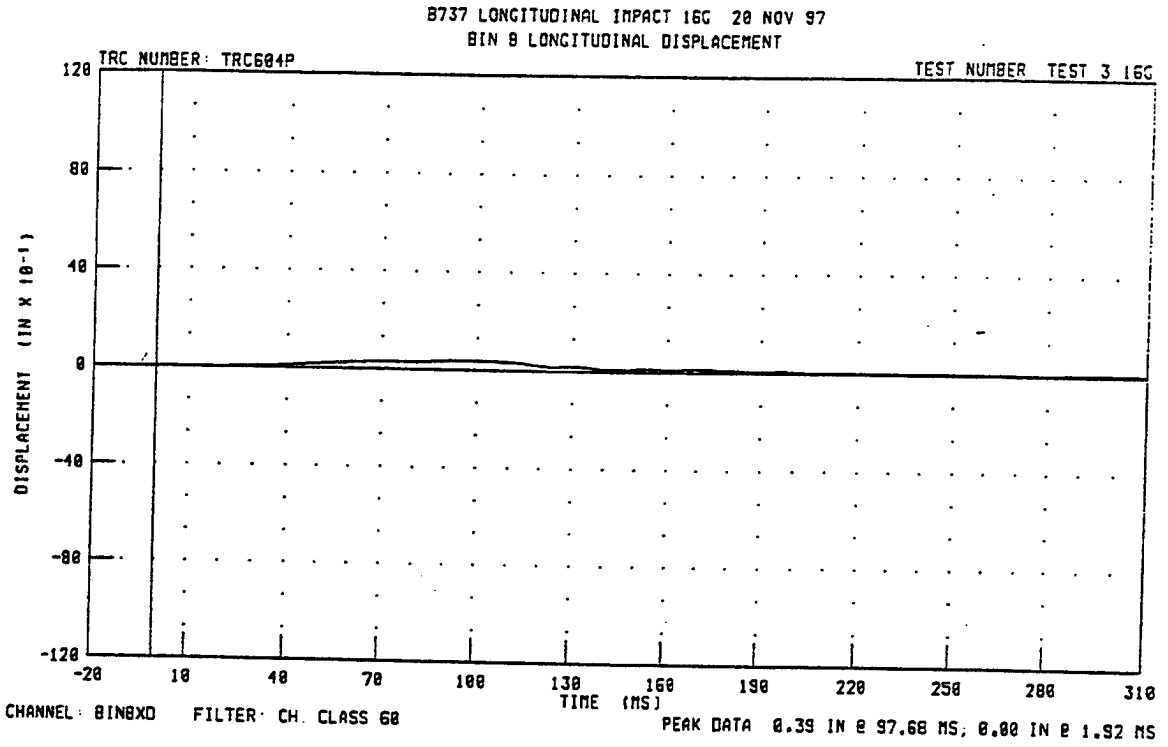

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER MID SUPPORT INNER VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU76ZD
FILTER: CH. CLASS 1000
PEAK DATA: 0.84 MV @ 88.24 MS, -0.76 MV @ 101.20 MS

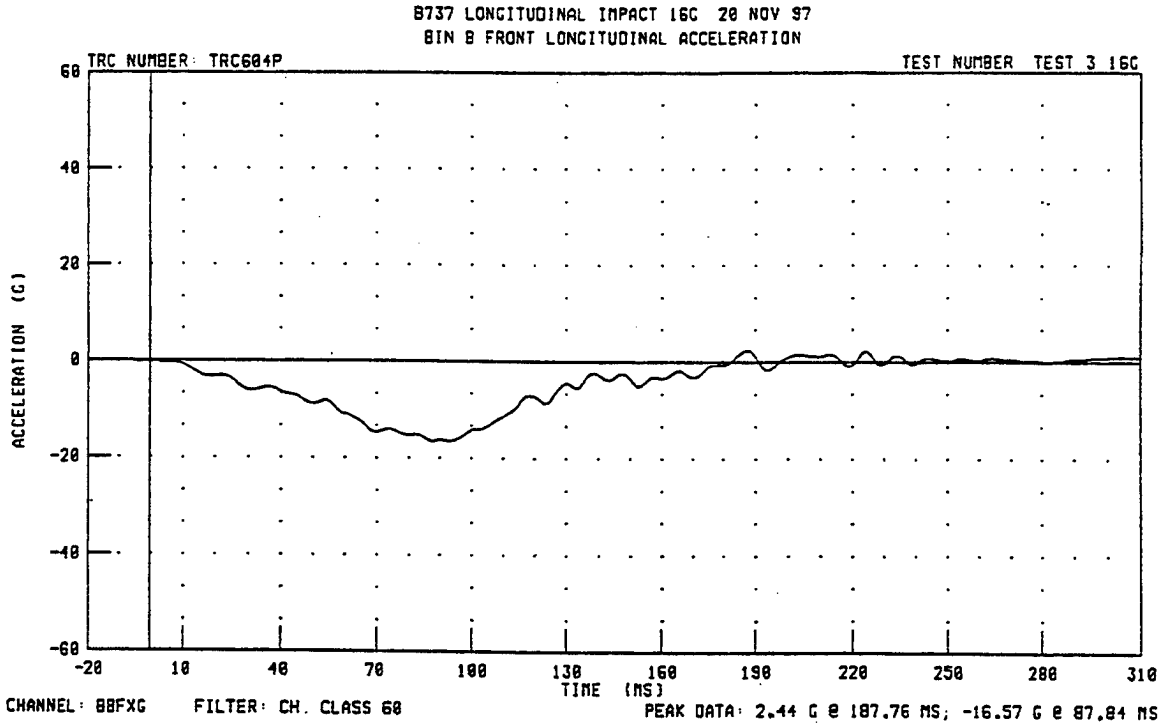

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER AFT SUPPORT INNER LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75XA
FILTER: CH. CLASS 60
PEAK DATA: 357.29 LBF @ 66.56 MS, -136.35 LBF @ 177.84 MS

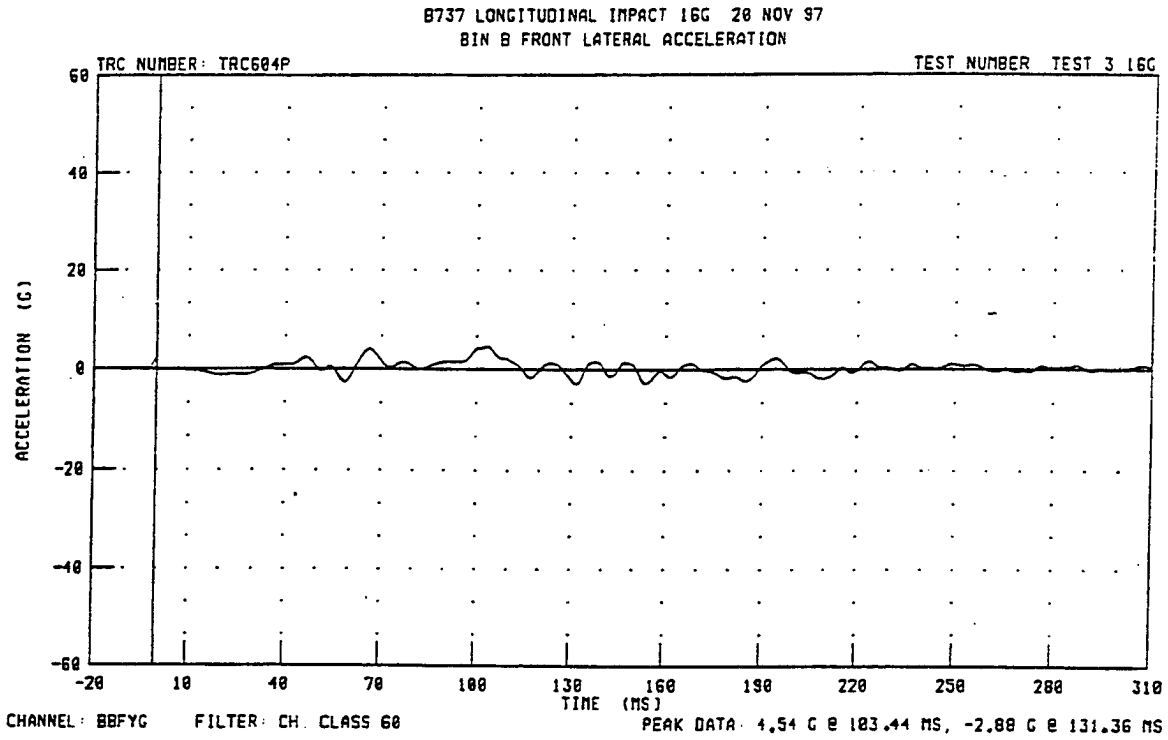

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER AFT SUPPORT OUTER LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75XB
FILTER: CH. CLASS 60
PEAK DATA: 855.66 LBF @ 66.32 MS; -265.86 LBF @ 189.76 MS

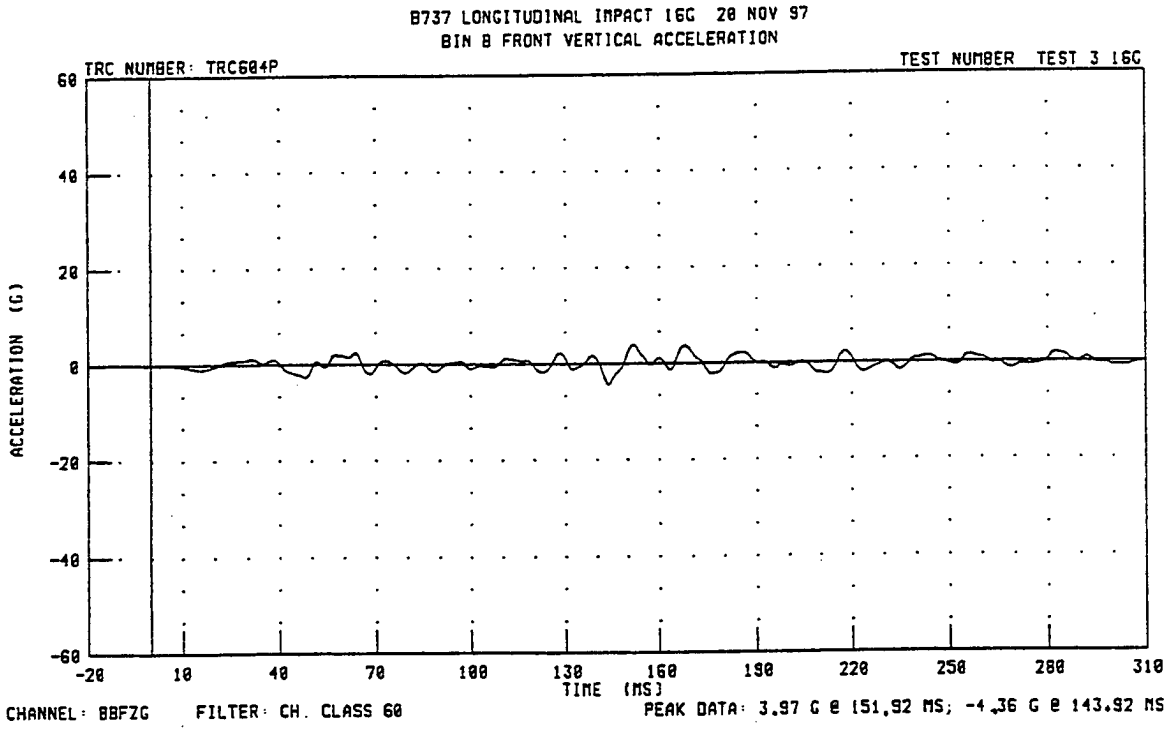

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER AFT SUPPORT OUTER VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75ZC
FILTER: CH CLASS 1000
PEAK DATA 3.75 MV @ 63.44 MS, -2.30 MV @ 94.08 MS

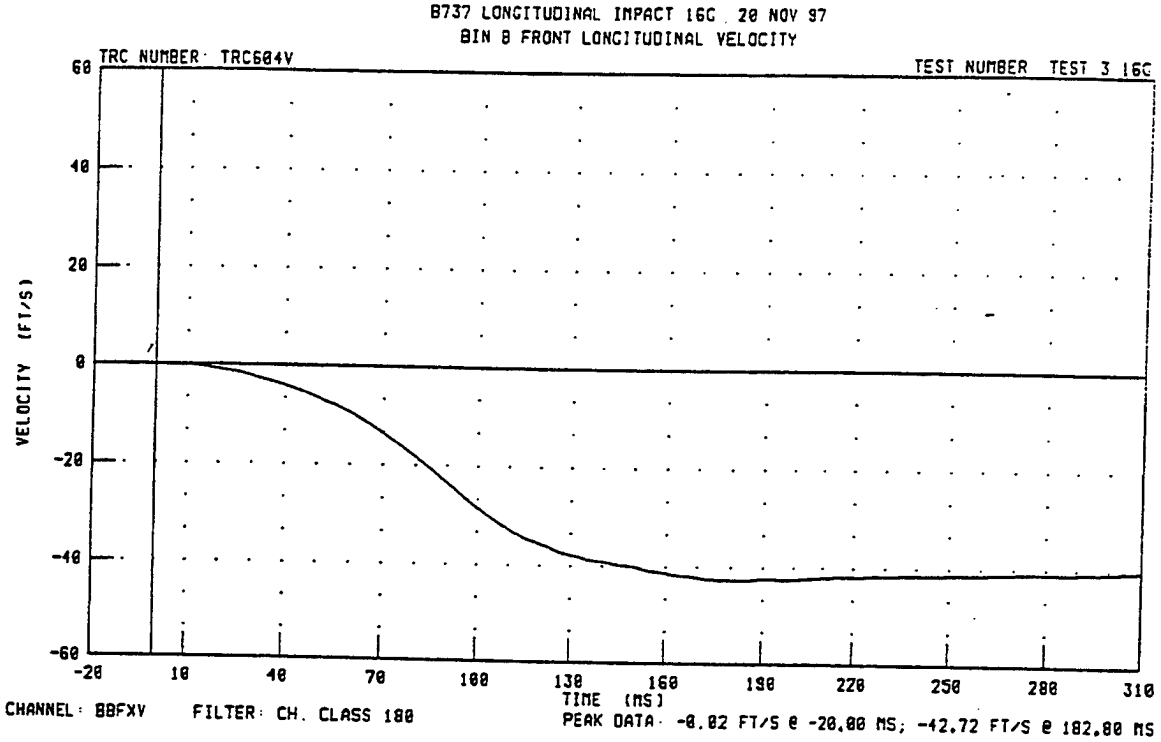

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN A UPPER AFT SUPPORT INNER VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
120
80
40
0
-40
-80
-120
VOLTAGE (MV X 10⁻¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: AU75ZD
FILTER: CH. CLASS 1000
PEAK DATA: 0.76 MV @ 84.24 MS; -0.53 MV @ 119.52 MS

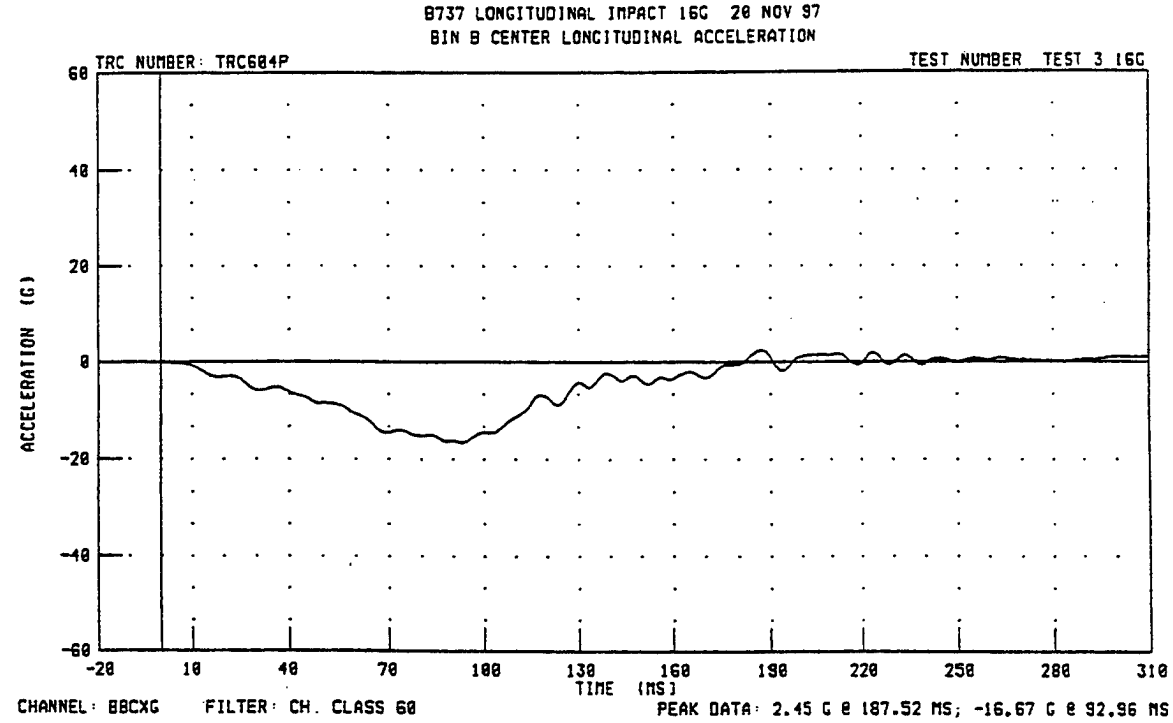

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN 8 LONGITUDINAL DISPLACEMENT
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
DISPLACEMENT (IN X 10-1)
120
80
40
0
-40
-80
-120
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 8IN8XD
FILTER: CH. CLASS 60
PEAK DATA 0.39 IN @ 97.68 MS; 0.00 IN @ 1.92 MS

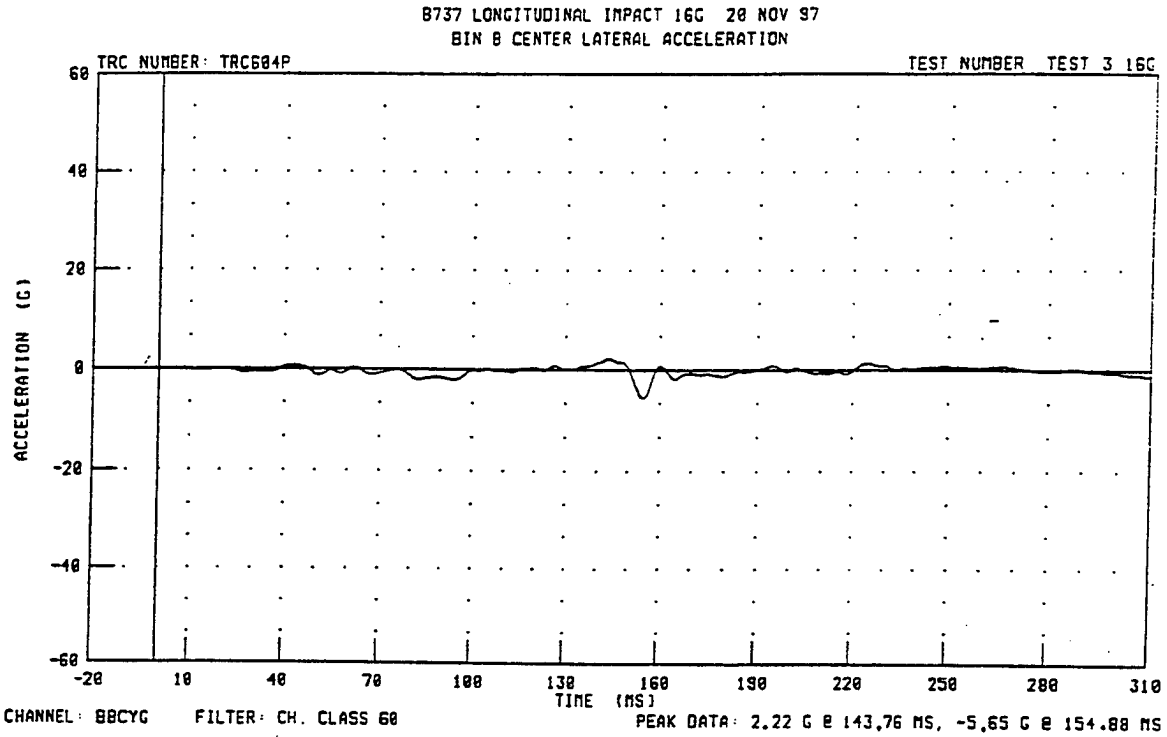

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN 8 FRONT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 88FXG
FILTER: CH. CLASS 60
PEAK DATA: 2.44 G @ 187.76 MS; -16.57 G @ 87.84 MS

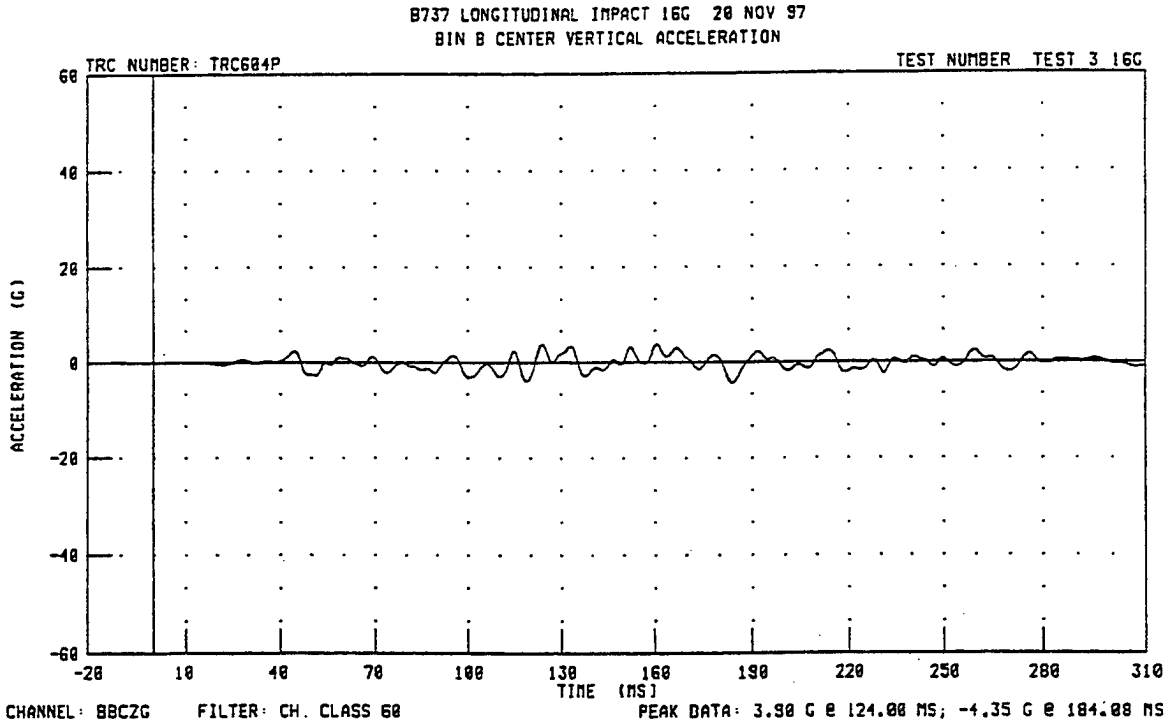

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B FRONT LATERAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBFYG
FILTER: CH. CLASS 60
PEAK DATA: 4.54 G @ 103.44 MS, -2.88 G @ 131.36 MS

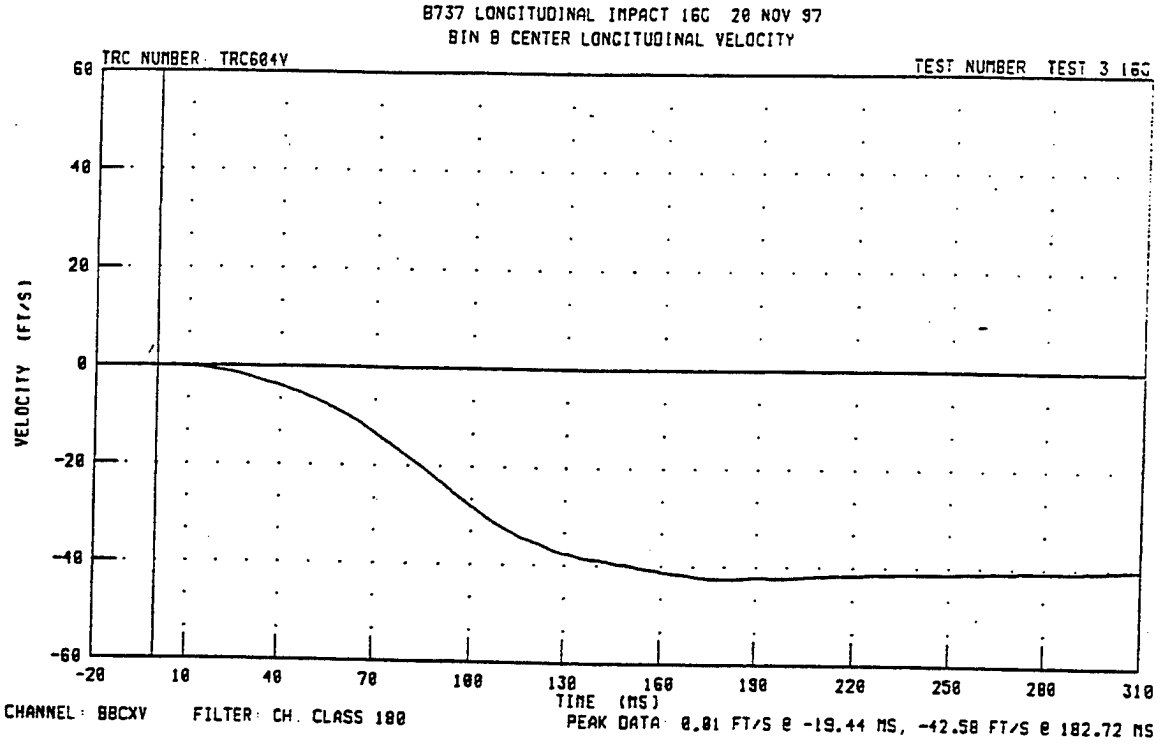

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B FRONT VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBFZG
FILTER: CH. CLASS 60
PEAK DATA: 3.97 G @ 151.92 MS; -4.36 G @ 143.92 MS

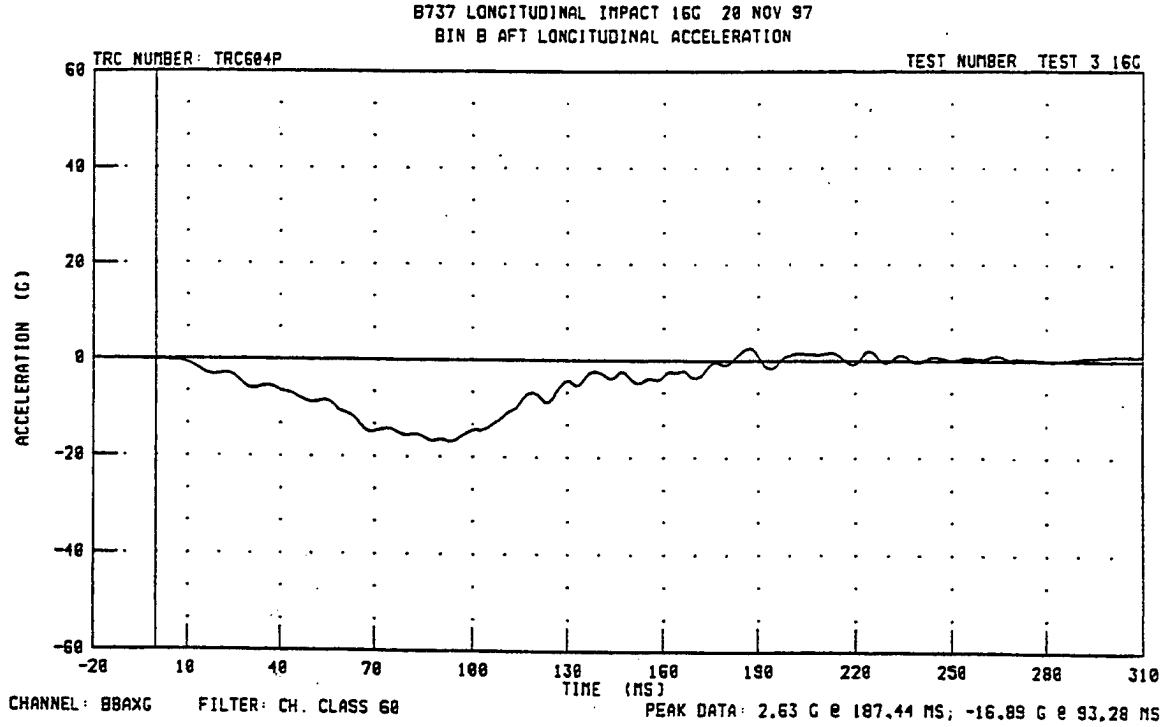

B737 LONGITUDINAL IMPACT 16C 20 NOV 97
BIN 8 FRONT LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16C
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 8BFXV
FILTER: CH. CLASS 180
PEAK DATA: -8.82 FT/S @ -20.00 MS; -42.72 FT/S @ 182.80 MS

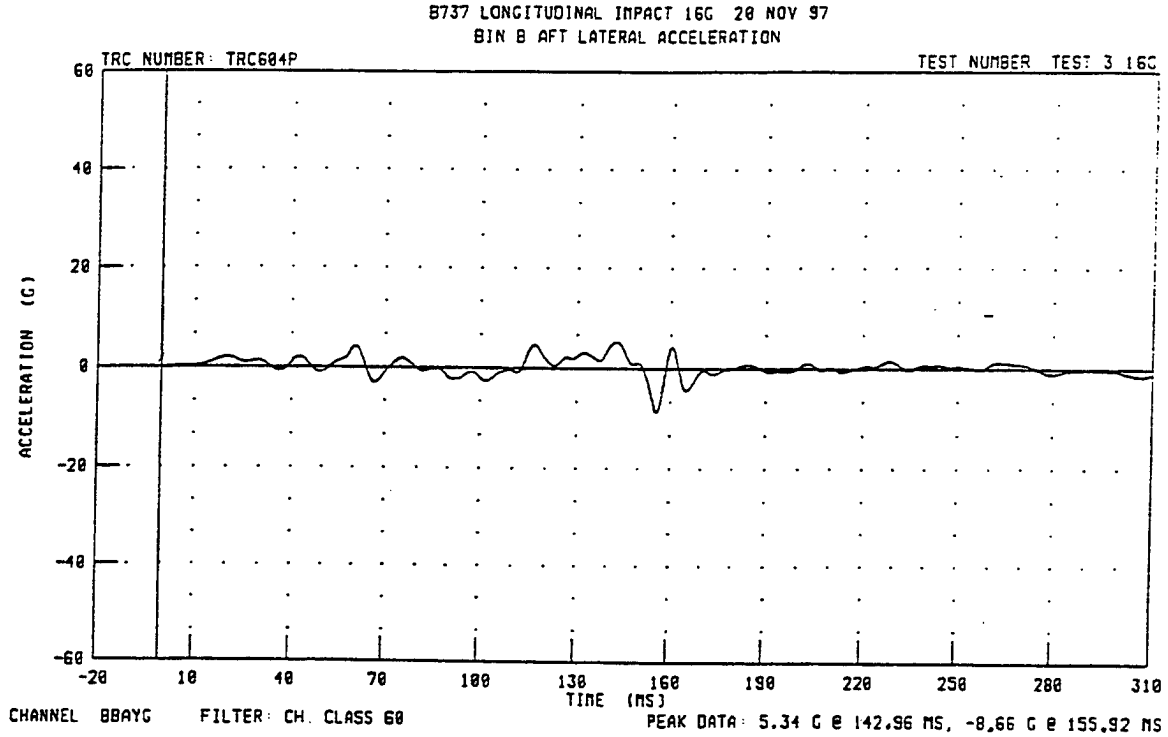

B737 LONGITUDINAL IMPACT 16C 20 NOV 97
BIN 8 CENTER LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16C
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 8BCXG
FILTER: CH. CLASS 60
PEAK DATA: 2.45 G @ 187.52 MS; -16.67 G @ 92.96 MS

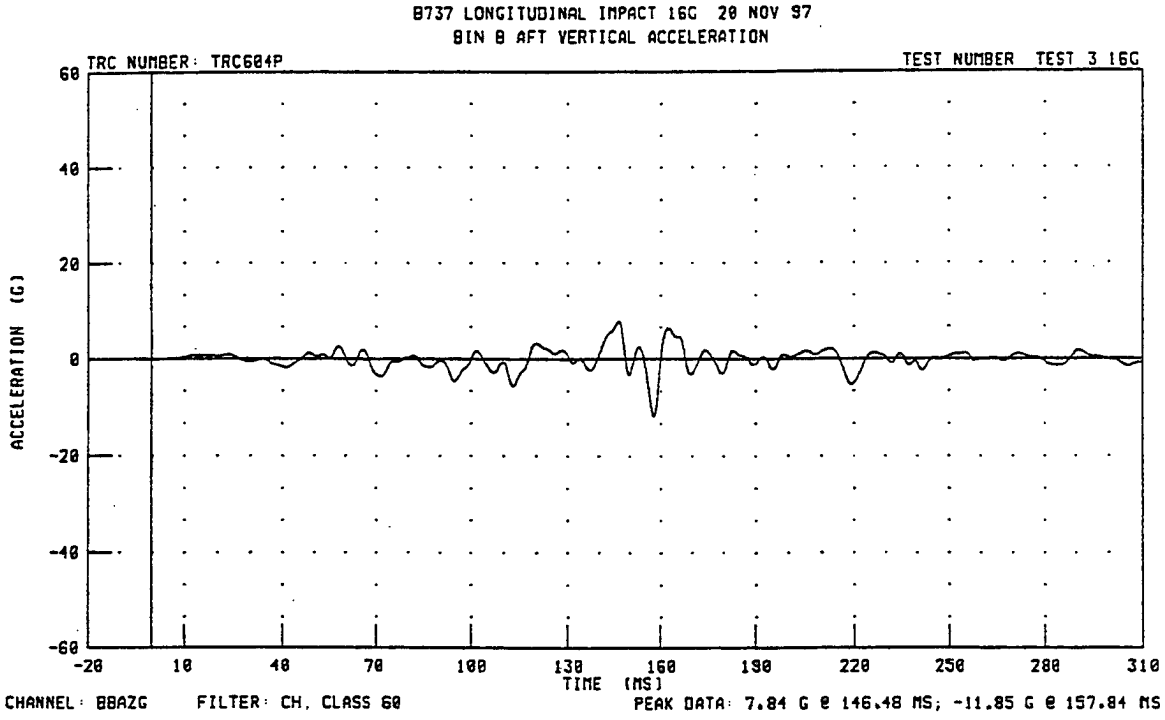

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B CENTER LATERAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 8BCYG
FILTER: CH. CLASS 60
PEAK DATA: 2.22 G @ 143.76 MS, -5.65 G @ 154.88 MS

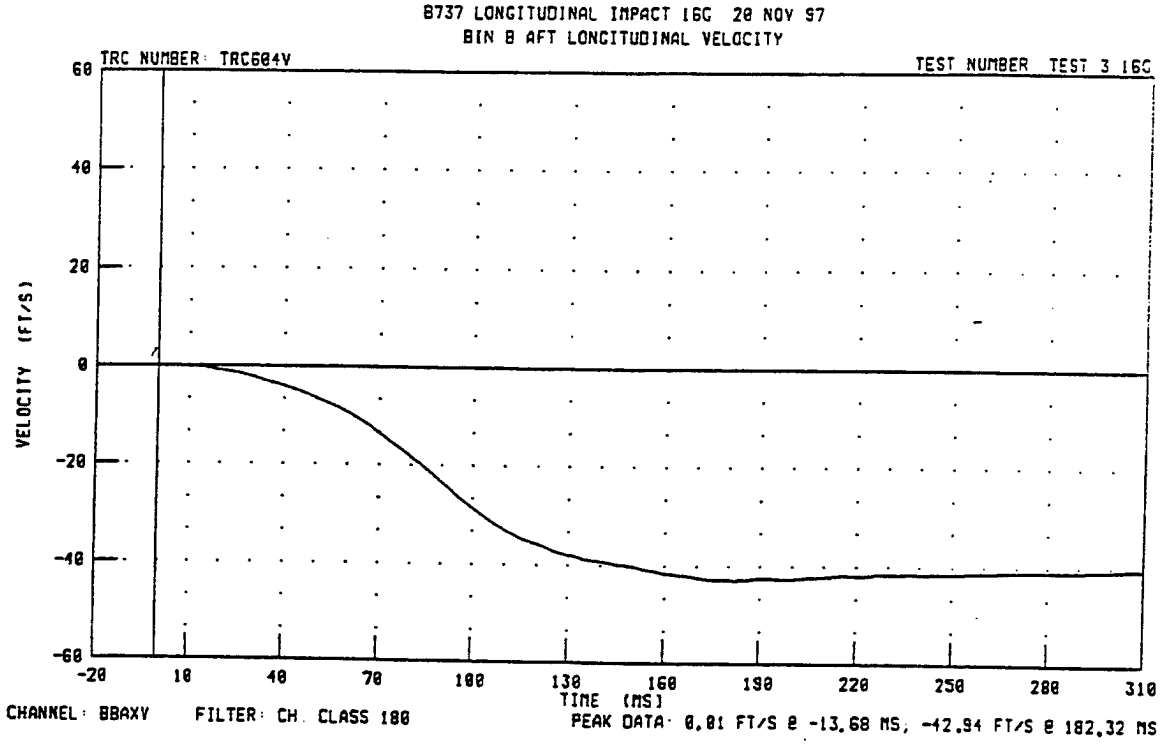

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B CENTER VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 8BCZG
FILTER: CH. CLASS 60
PEAK DATA: 3.90 G @ 124.00 MS; -4.35 G @ 184.08 MS

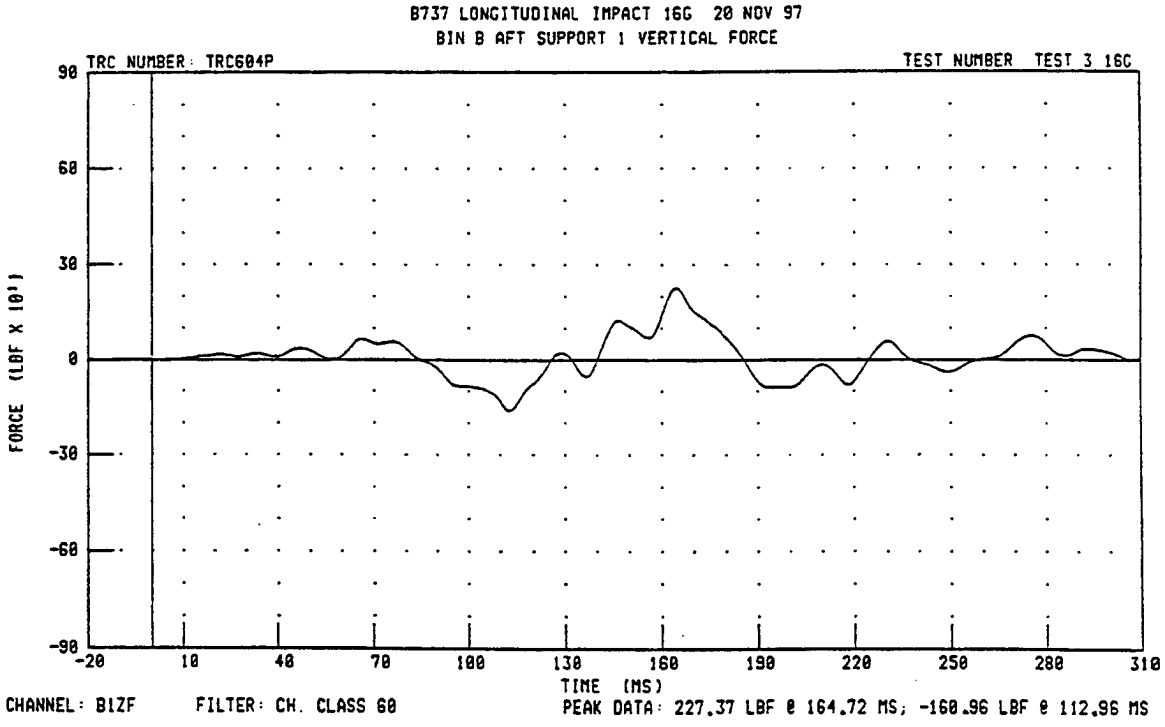

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B CENTER LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBCXV
FILTER: CH. CLASS 180
PEAK DATA: 0.81 FT/S @ -19.44 MS, -42.58 FT/S @ 182.72 MS

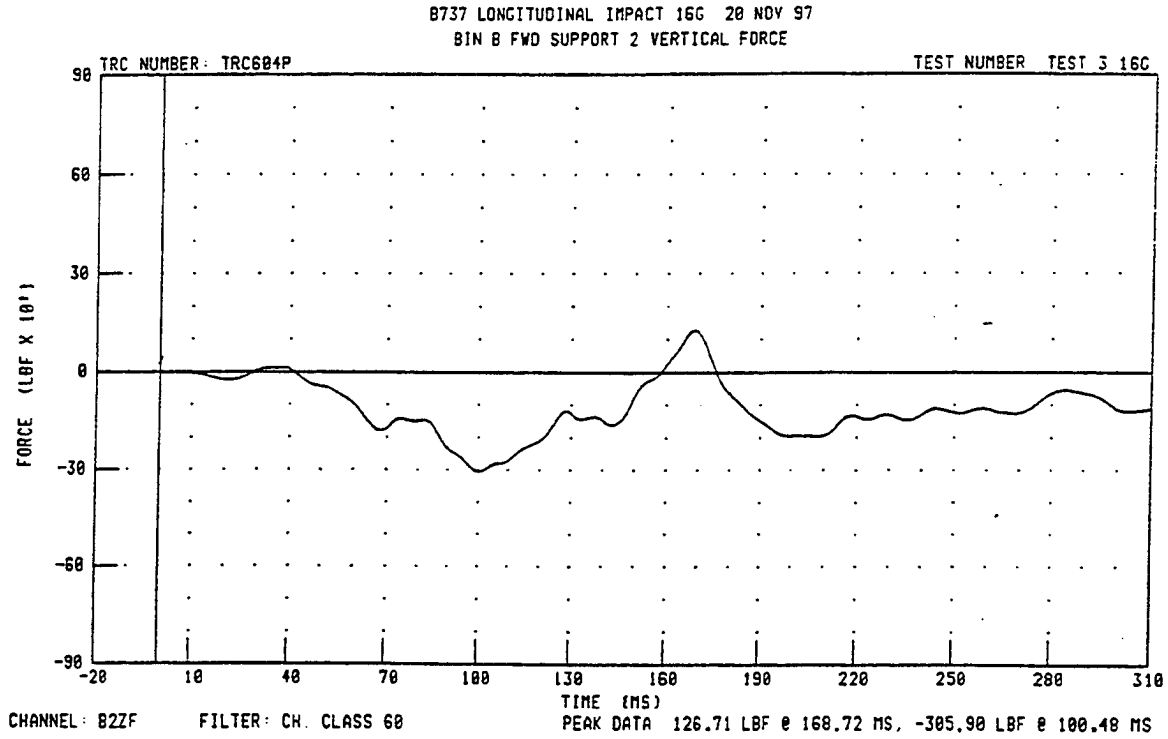

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B AFT LONGITUDINAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBAXG
FILTER: CH. CLASS 60
PEAK DATA: 2.63 G @ 187.44 MS; -16.89 G @ 93.28 MS

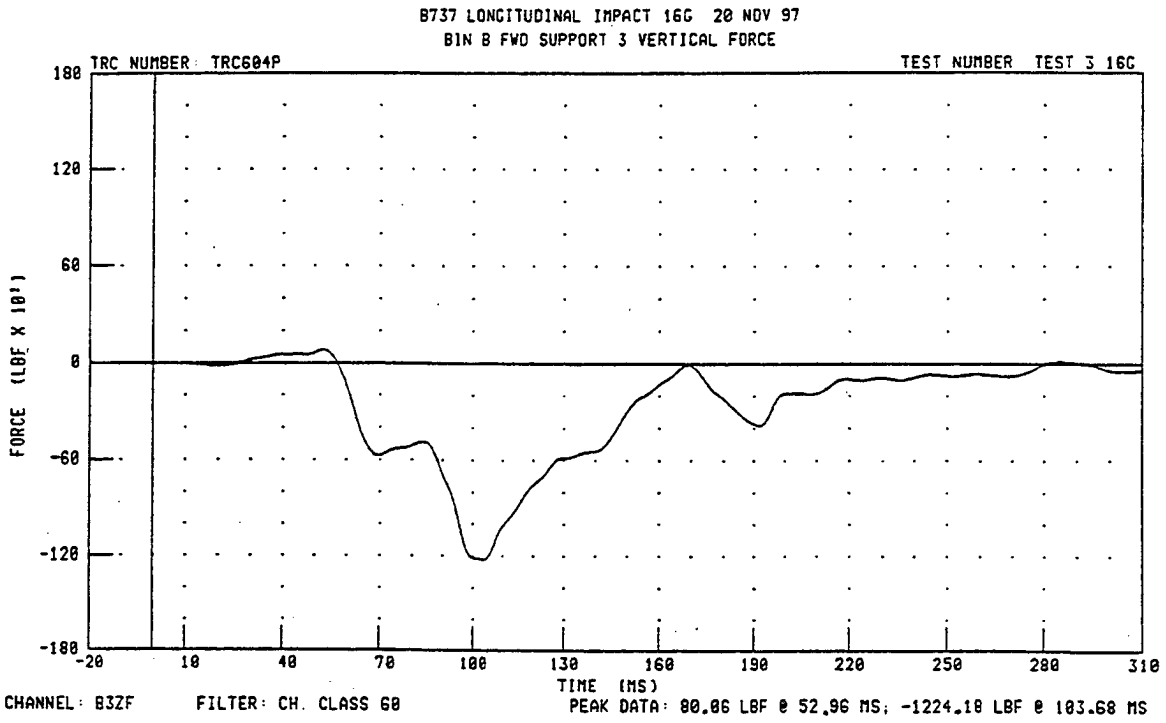

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B AFT LATERAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL BBAYG
FILTER: CH. CLASS 60
PEAK DATA: 5.34 G @ 142.96 MS, -8.66 G @ 155.92 MS

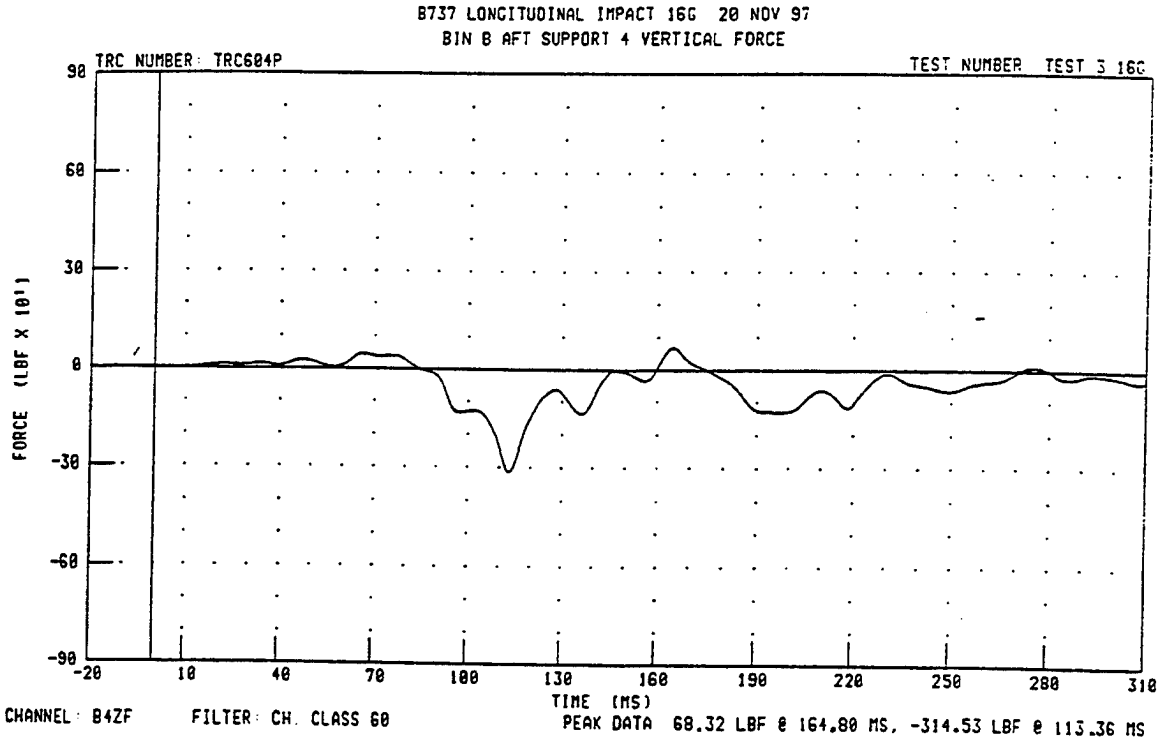

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B AFT VERTICAL ACCELERATION
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBAZG
FILTER: CH. CLASS 60
PEAK DATA: 7.84 G @ 146.48 MS; -11.85 G @ 157.84 MS

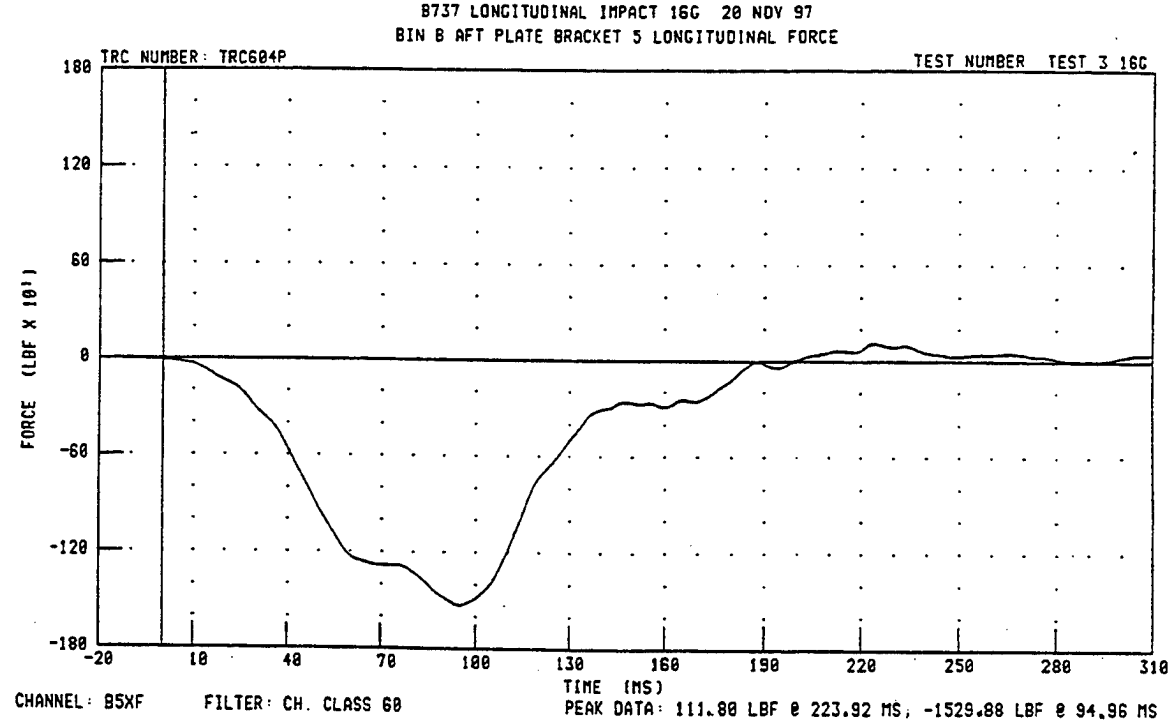

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B AFT LONGITUDINAL VELOCITY
TRC NUMBER: TRC604V
TEST NUMBER TEST 3 16G
VELOCITY (FT/S)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BBAXV
FILTER: CH. CLASS 180
PEAK DATA: 0.01 FT/S @ -13.68 MS; -42.94 FT/S @ 182.32 MS

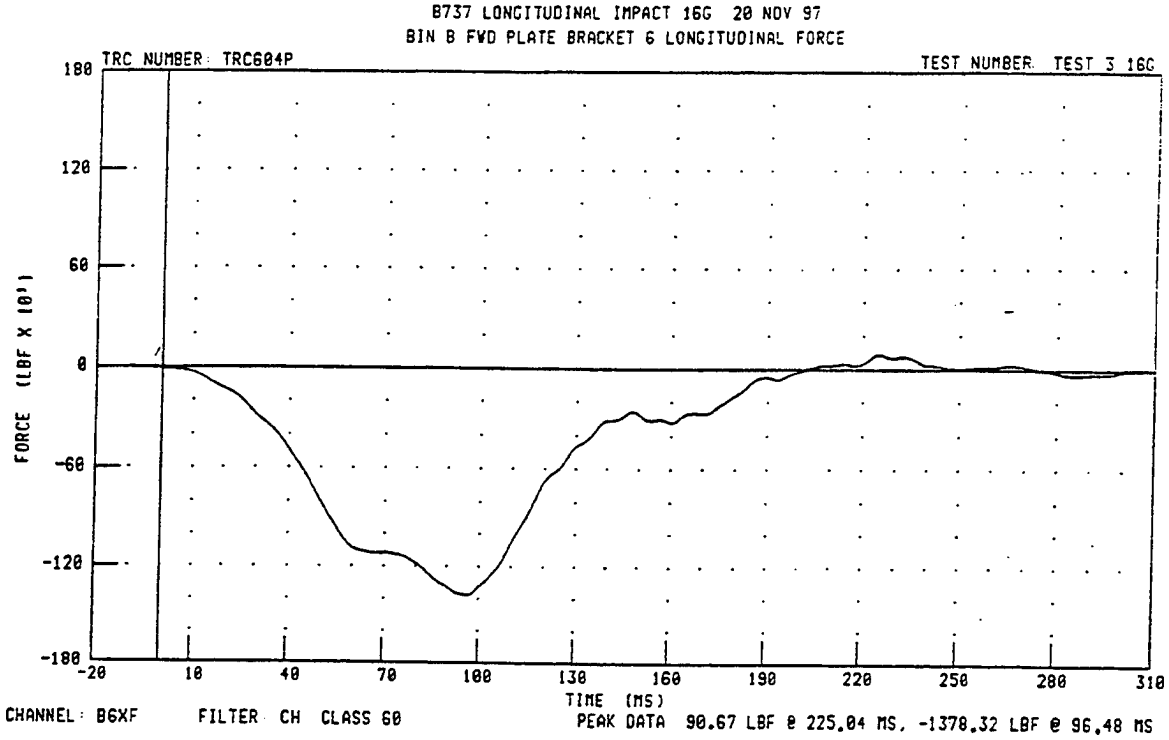

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B AFT SUPPORT 1 VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B1ZF
FILTER: CH. CLASS 60
PEAK DATA: 227.37 LBF @ 164.72 MS; -160.96 LBF @ 112.96 MS

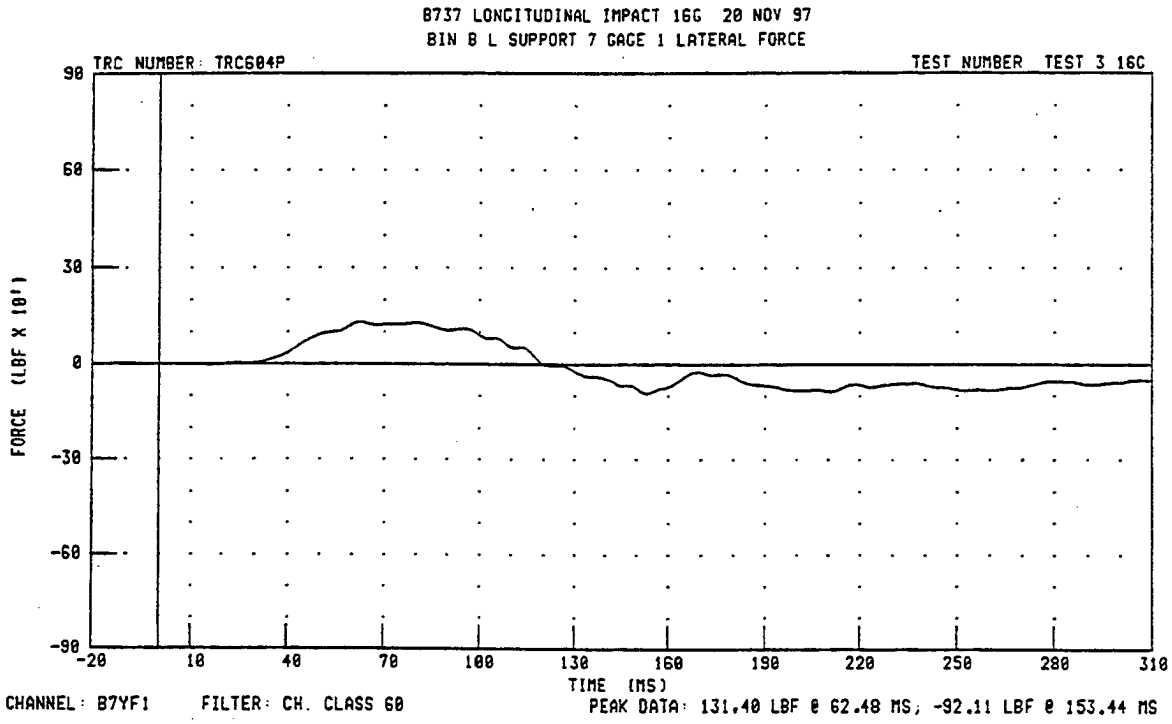

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B FWD SUPPORT 2 VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B2ZF
FILTER: CH. CLASS 60
PEAK DATA 126.71 LBF @ 168.72 MS, -305.90 LBF @ 100.48 MS

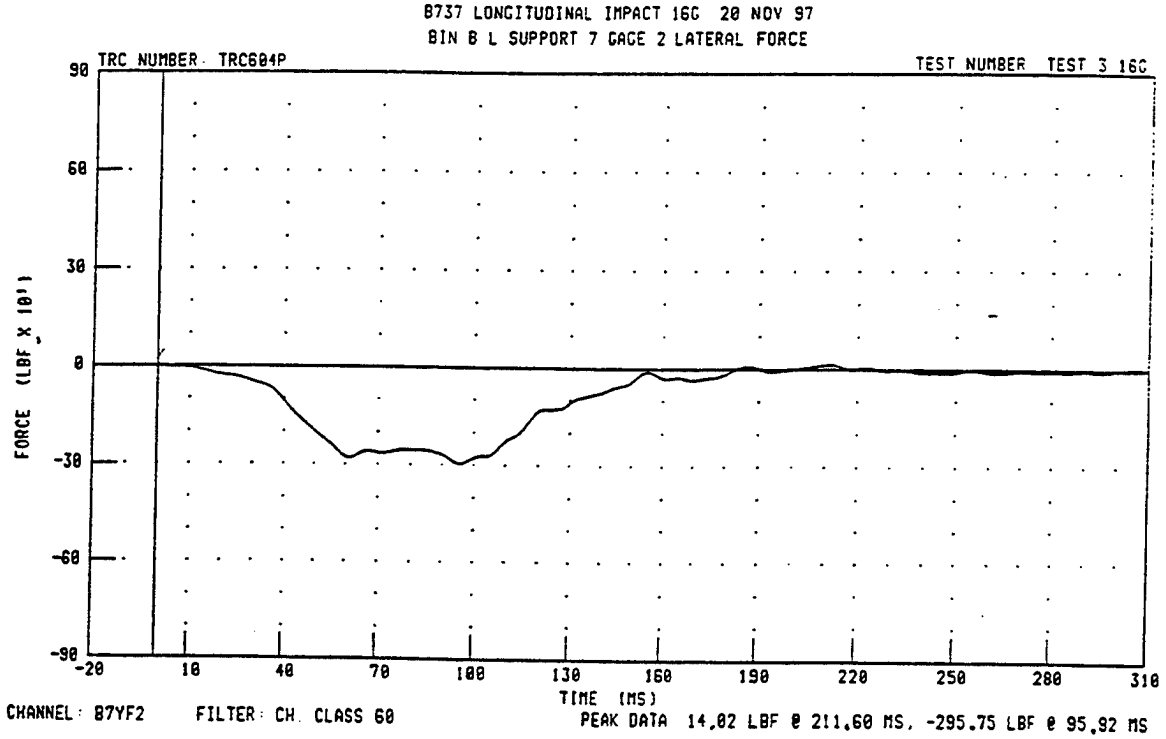

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B FWD SUPPORT 3 VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
180
120
60
0
-60
-120
-180
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B3ZF
FILTER: CH. CLASS 60
PEAK DATA: 80.06 LBF @ 52.96 MS; -1224.18 LBF @ 103.68 MS

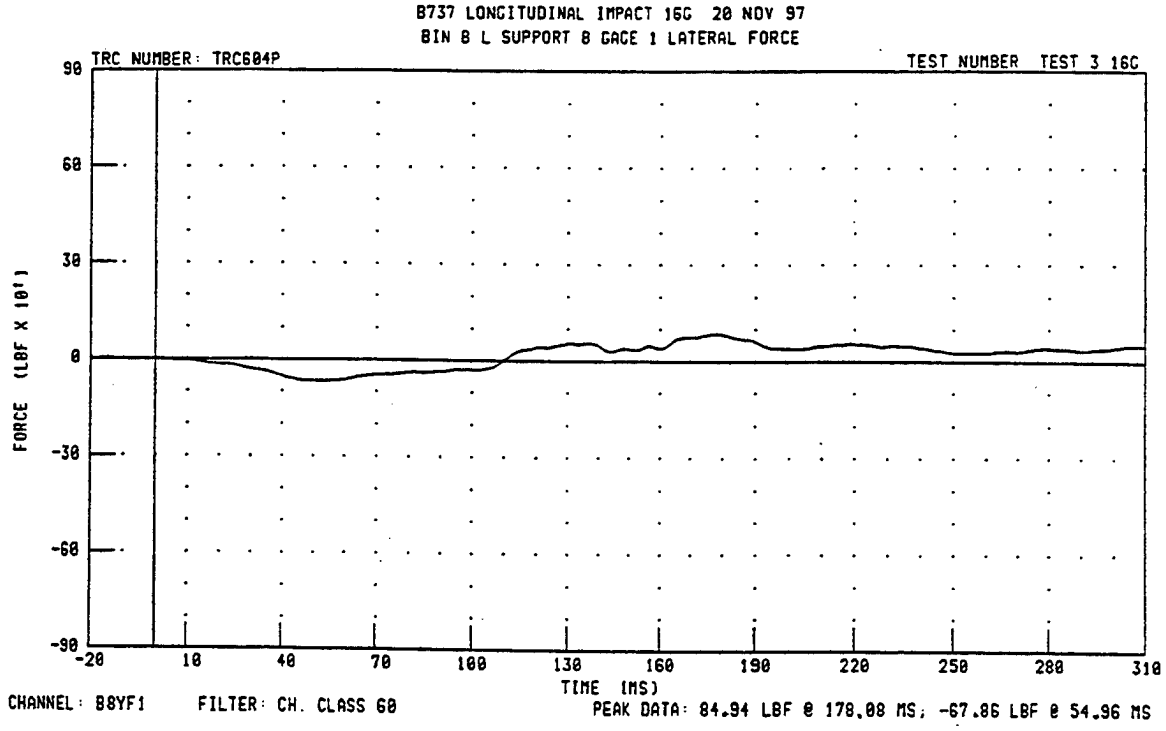

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B AFT SUPPORT 4 VERTICAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B4ZF
FILTER: CH. CLASS 60
PEAK DATA 68.32 LBF @ 164.80 MS, -314.53 LBF @ 113.36 MS

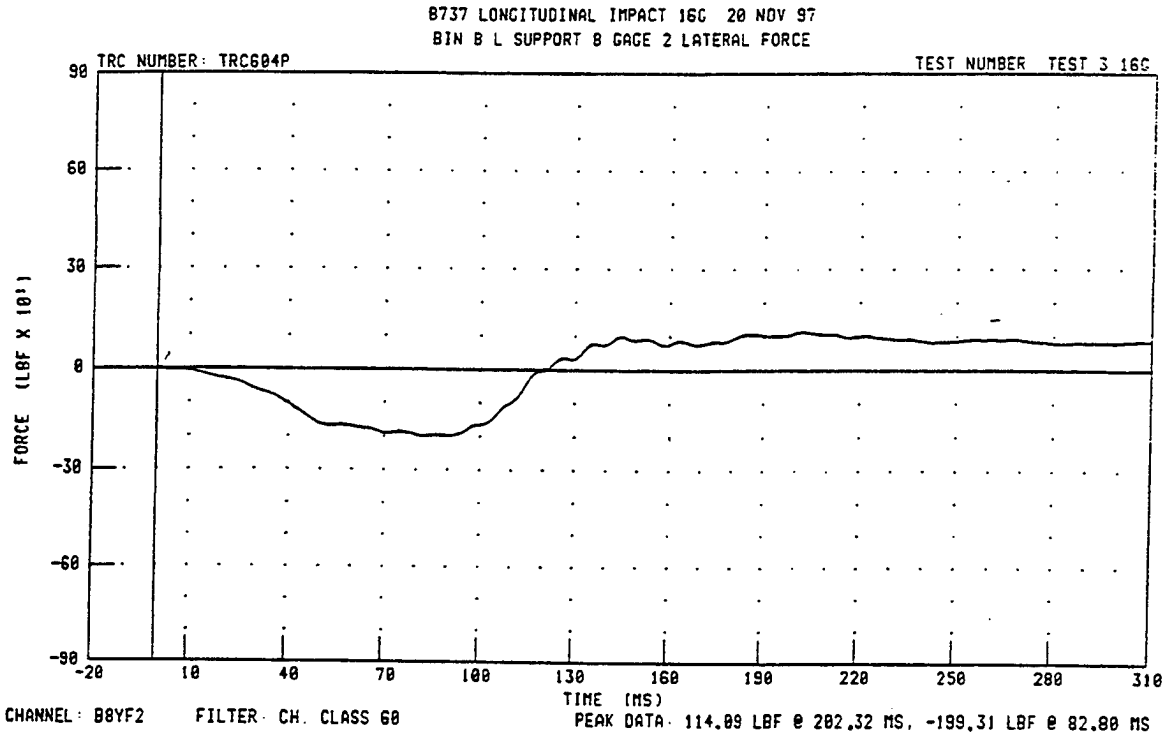

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B AFT PLATE BRACKET 5 LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
180
120
60
0
-60
-120
-180
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B5XF
FILTER: CH. CLASS 60
PEAK DATA: 111.80 LBF @ 223.92 MS, -1529.88 LBF @ 94.96 MS

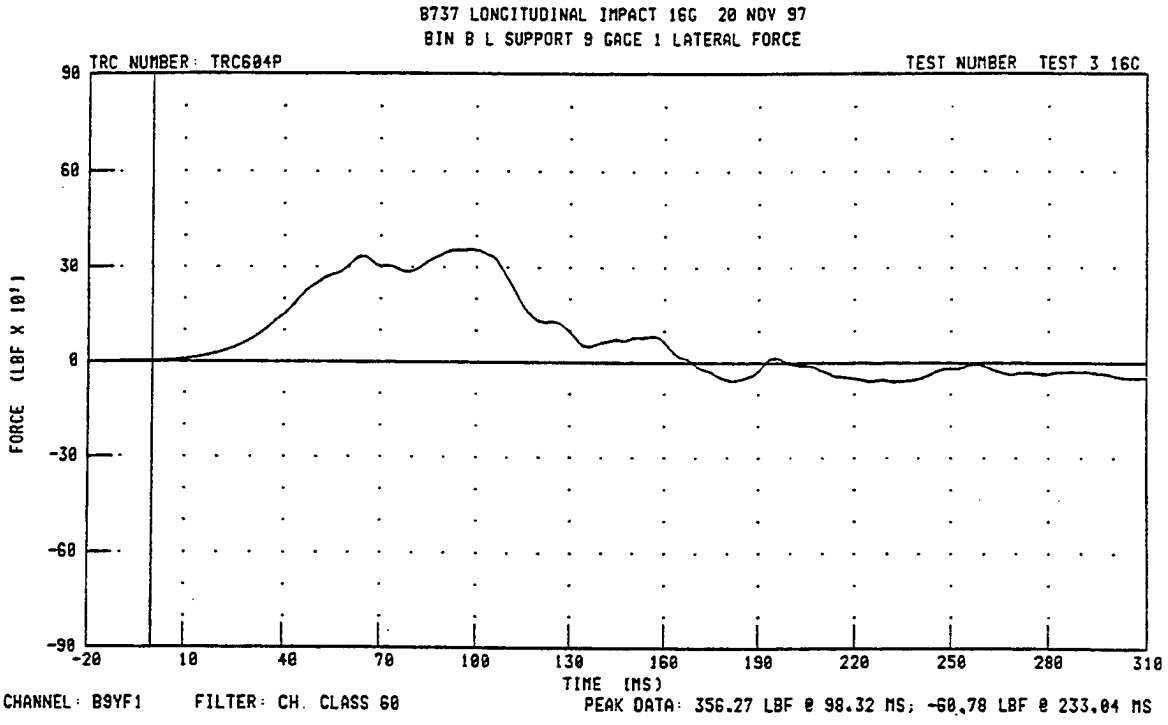

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B FWD PLATE BRACKET 6 LONGITUDINAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
FORCE (LBF X 10')
180
120
60
0
-60
-120
-180
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B6XF
FILTER: CH CLASS 60
PEAK DATA 90.67 LBF @ 225.04 MS, -1378.32 LBF @ 96.48 MS

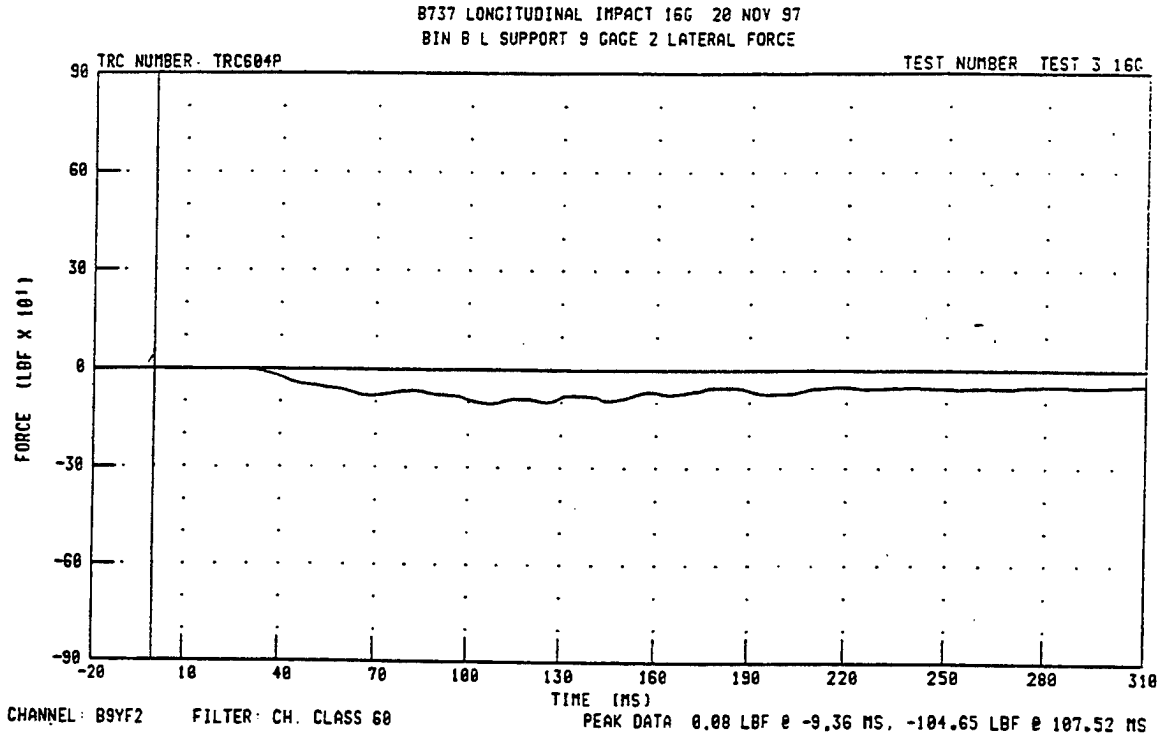

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 7 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
FORCE (LBF X 10')
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B7YF1
FILTER: CH. CLASS 60
PEAK DATA: 131.40 LBF @ 62.48 MS; -92.11 LBF @ 153.44 MS

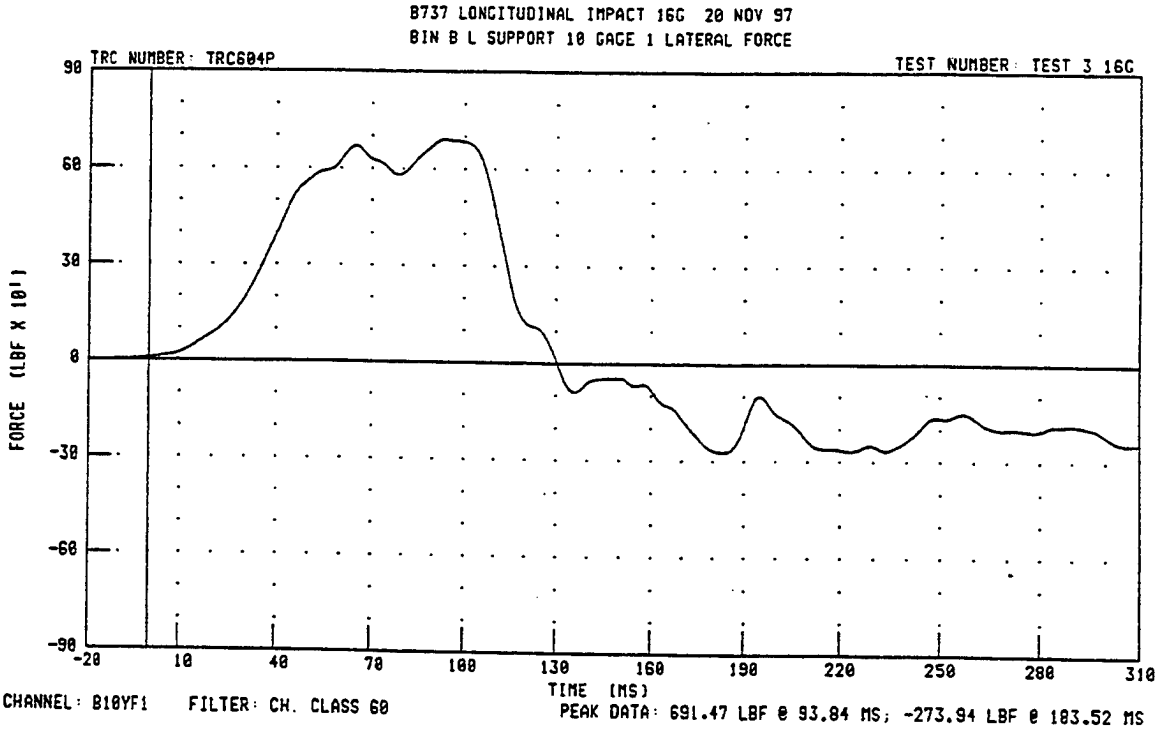

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 7 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B7YF2
FILTER: CH. CLASS 60
PEAK DATA 14.02 LBF @ 211.60 MS, -295.75 LBF @ 95.92 MS

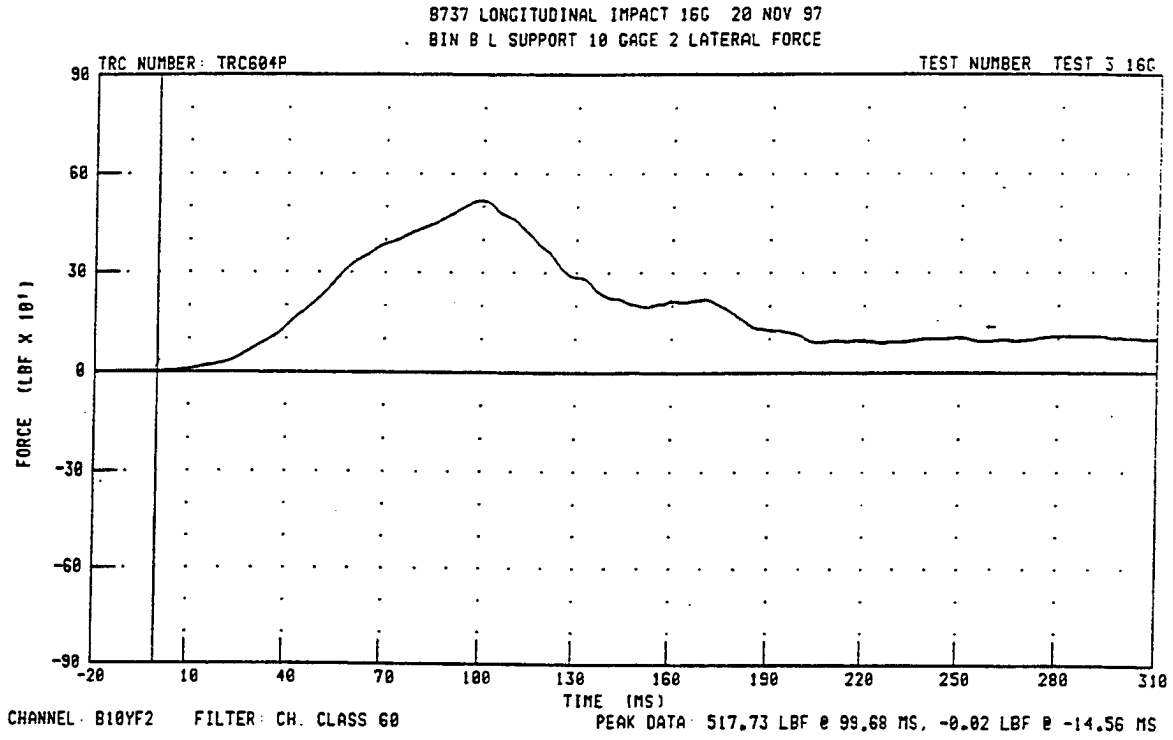

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 8 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8YF1
FILTER: CH. CLASS 60
PEAK DATA: 84.94 LBF @ 178.08 MS; -67.86 LBF @ 54.96 MS

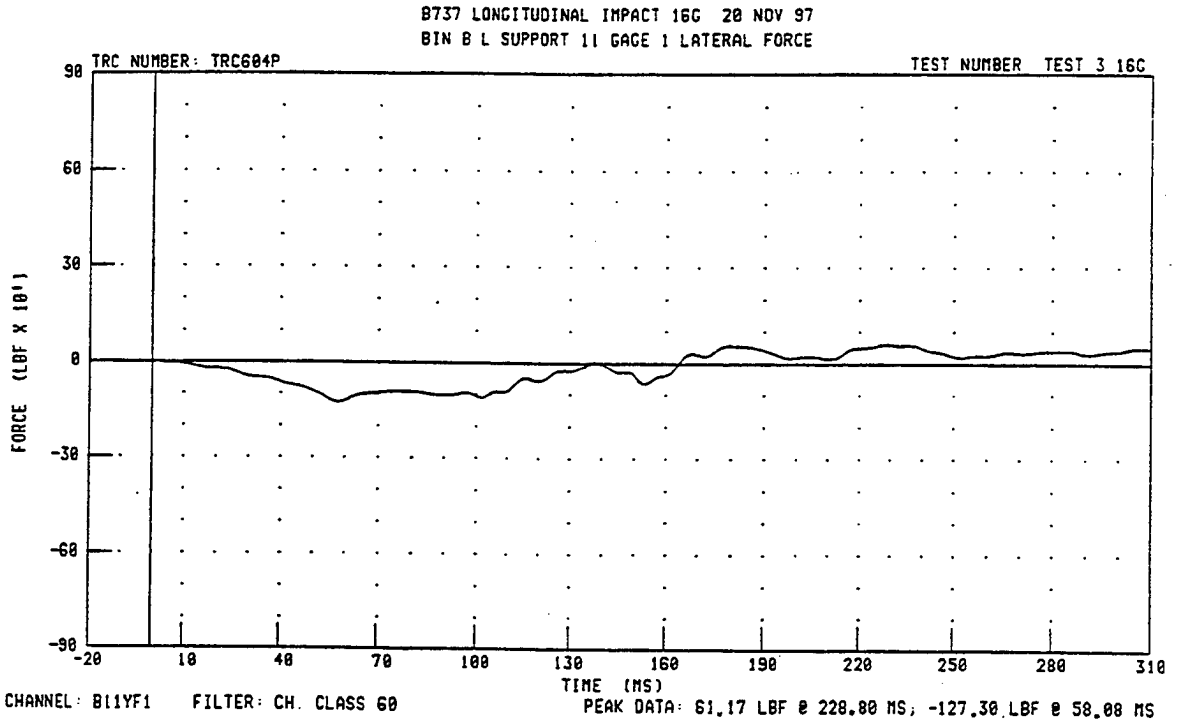

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT B GAGE 2 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B8YF2
FILTER: CH. CLASS 60
PEAK DATA: 114.09 LBF @ 202.32 MS, -199.31 LBF @ 82.80 MS

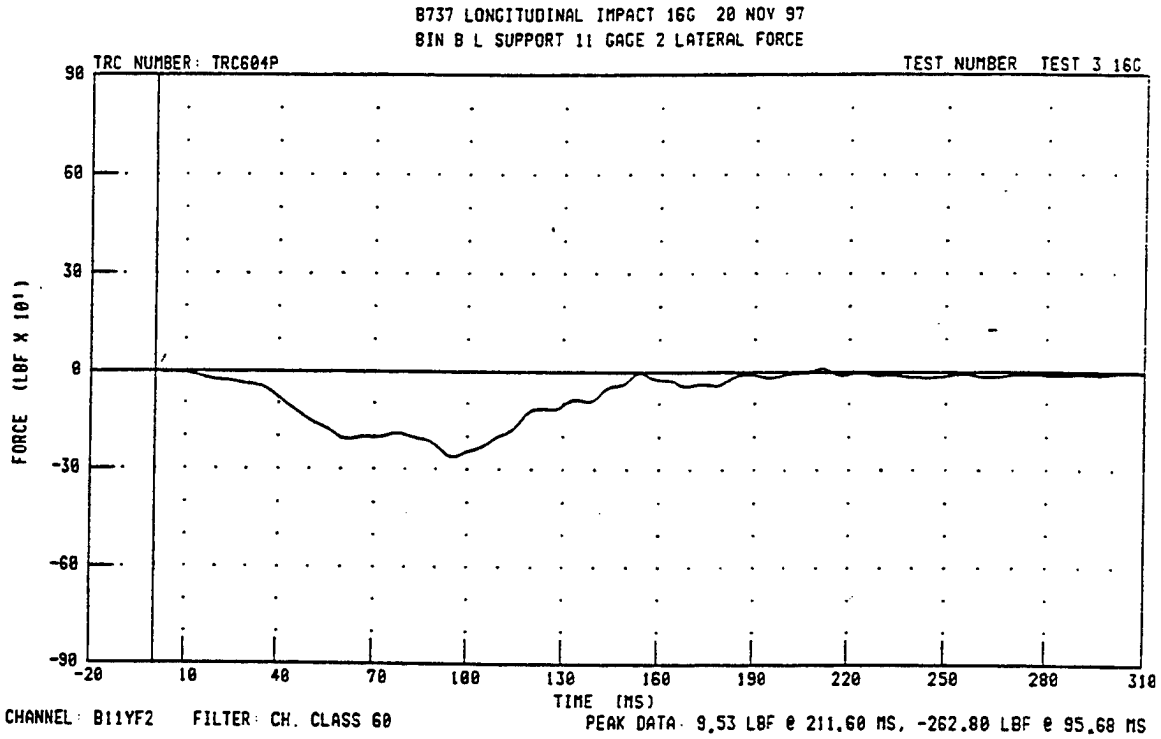

B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 9 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B9YF1
FILTER: CH. CLASS 60
PEAK DATA: 356.27 LBF @ 98.32 MS; -60.78 LBF @ 233.04 MS


B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 9 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B9YF2
FILTER: CH. CLASS 60
PEAK DATA 0.08 LBF @ -9.36 MS, -104.65 LBF @ 107.52 MS


B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 10 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER: TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B10YF1
FILTER: CH. CLASS 60
PEAK DATA: 691.47 LBF @ 93.84 MS; -273.94 LBF @ 183.52 MS


B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 10 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B10YF2
FILTER: CH. CLASS 60
PEAK DATA: 517.73 LBF @ 99.68 MS, -0.02 LBF @ -14.56 MS


B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 11 GAGE 1 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
FORCE (LBF X 10¹)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B11YF1
FILTER: CH. CLASS 60
PEAK DATA: 61.17 LBF @ 228.80 MS; -127.30 LBF @ 58.08 MS


B737 LONGITUDINAL IMPACT 16G 20 NOV 97
BIN B L SUPPORT 11 GAGE 2 LATERAL FORCE
TRC NUMBER: TRC604P
TEST NUMBER TEST 3 16G
90
60
30
0
-30
-60
-90
FORCE (LBF X 10¹)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B11YF2
FILTER: CH. CLASS 60
PEAK DATA: 9.53 LBF @ 211.60 MS, -262.80 LBF @ 95.68 MS

APPENDIX C—CALIBRATION DATA

LIST OF ILLUSTRATIONS

OVERHEAD STOWAGE BIN A STATIC CALIBRATION - PULL 1

Figure		Page
C-1	Bin A Instrumentation Locations	C-4
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OVERHEAD STOWAGE BIN A STATIC CALIBRATION - PULL 1

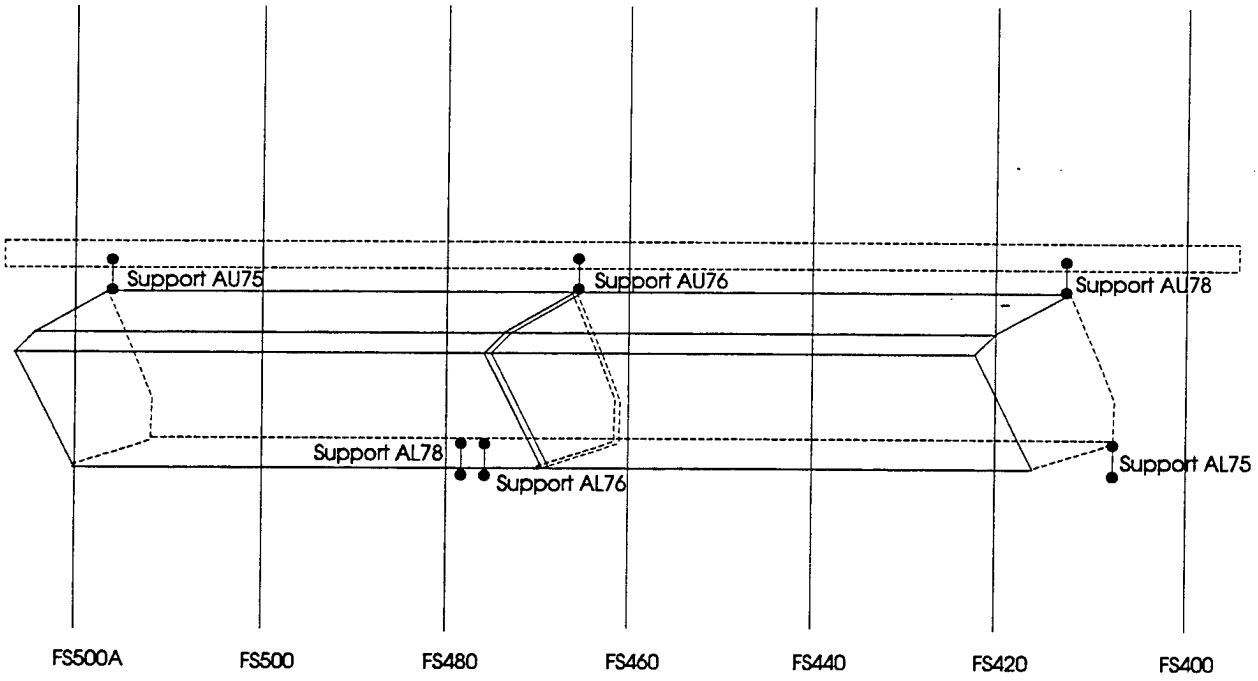


FIGURE C-1. BIN A INSTRUMENTATION LOCATIONS

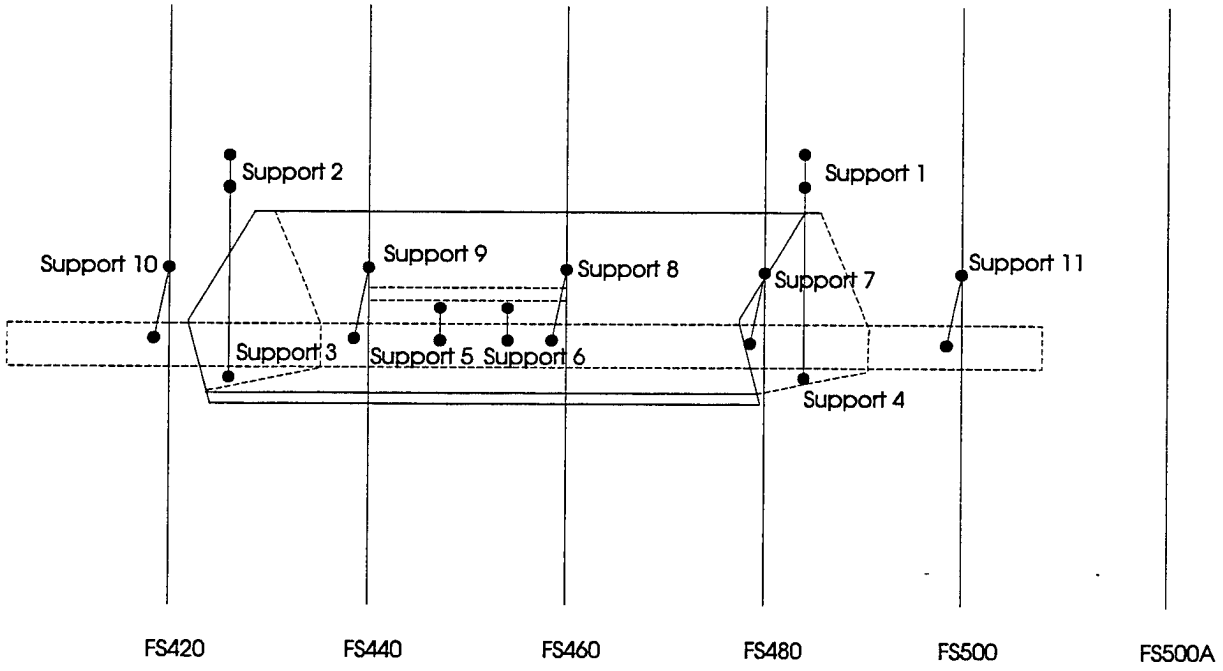


FIGURE C-2. BIN B INSTRUMENTATION LOCATIONS

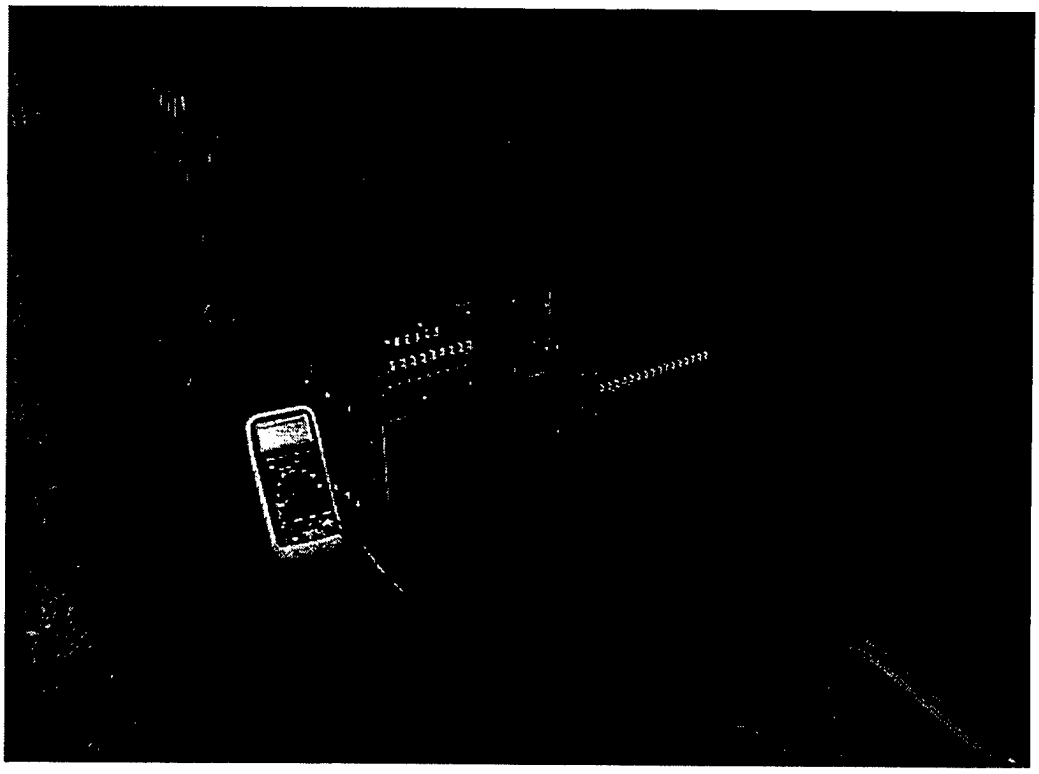


FIGURE C-3. FRONT VIEW OF DATA ACQUISITION SYSTEM

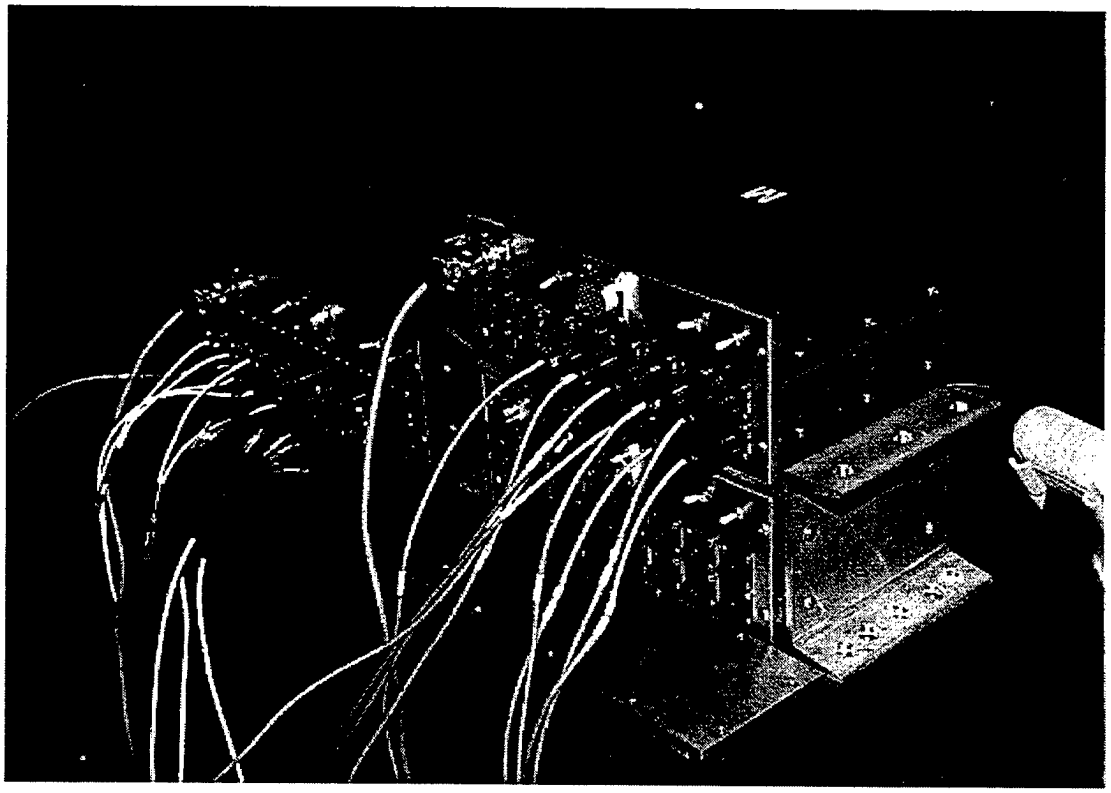


FIGURE C-4. REAR VIEW OF DATA ACQUISITION SYSTEM

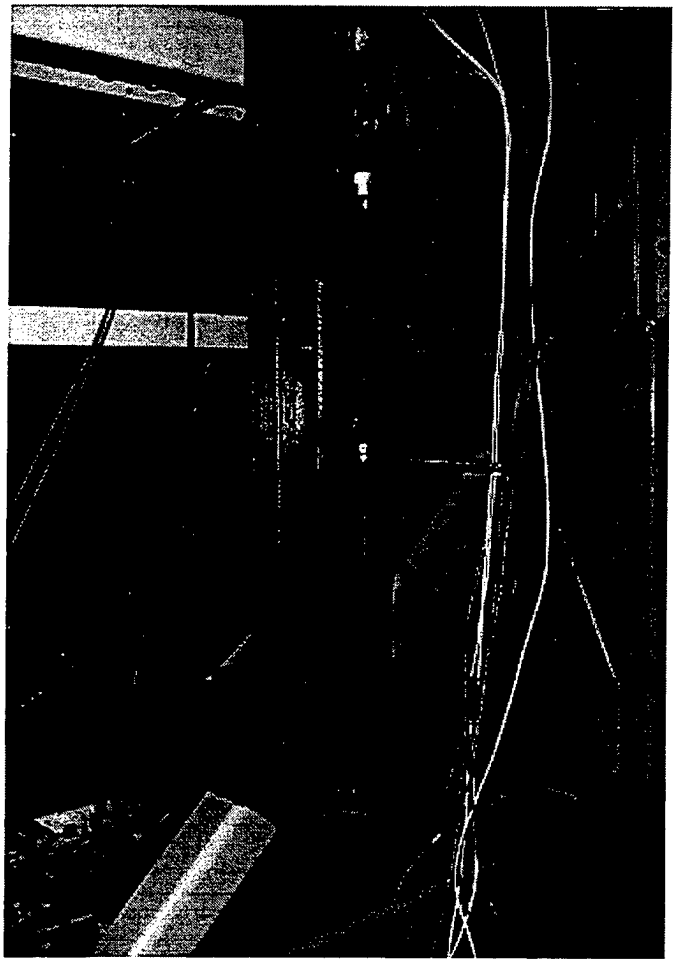


FIGURE C-5. FRONT ANGLE VIEW OF STEEL CABLE TENSIONING DEVICE

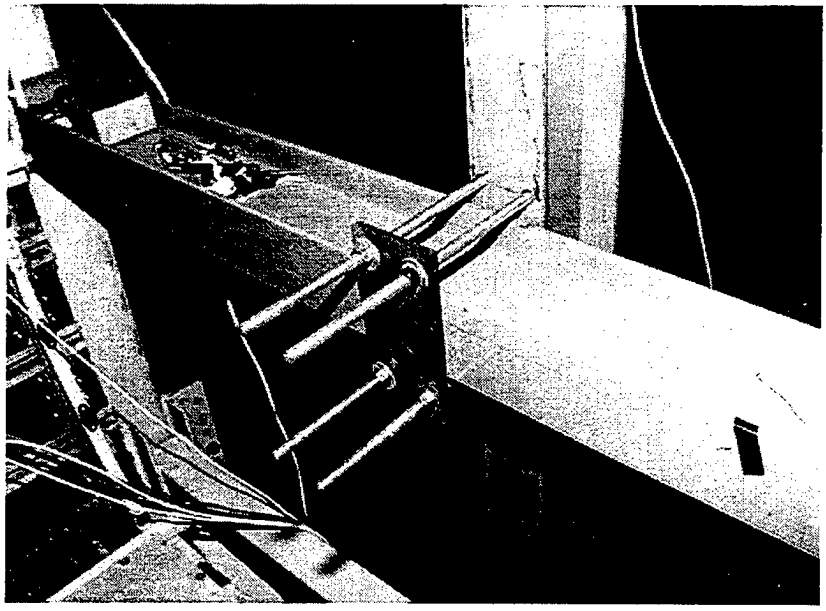


FIGURE C-6. CALIBRATION TEST FIXTURE VIEW 1

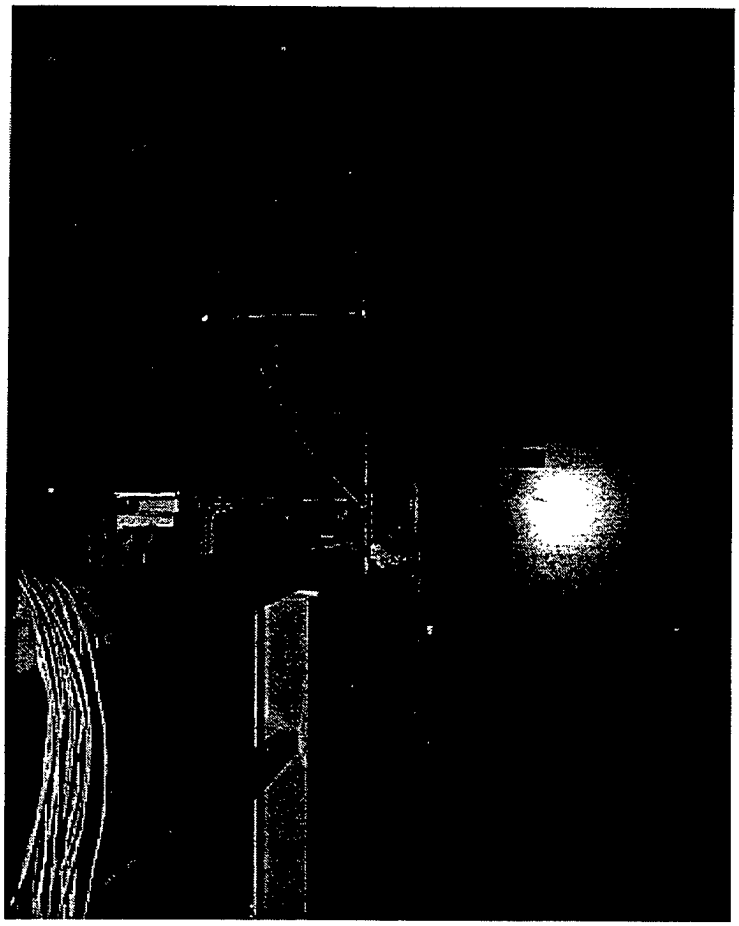


FIGURE C-7. CALIBRATION TEST FIXTURE VIEW 2

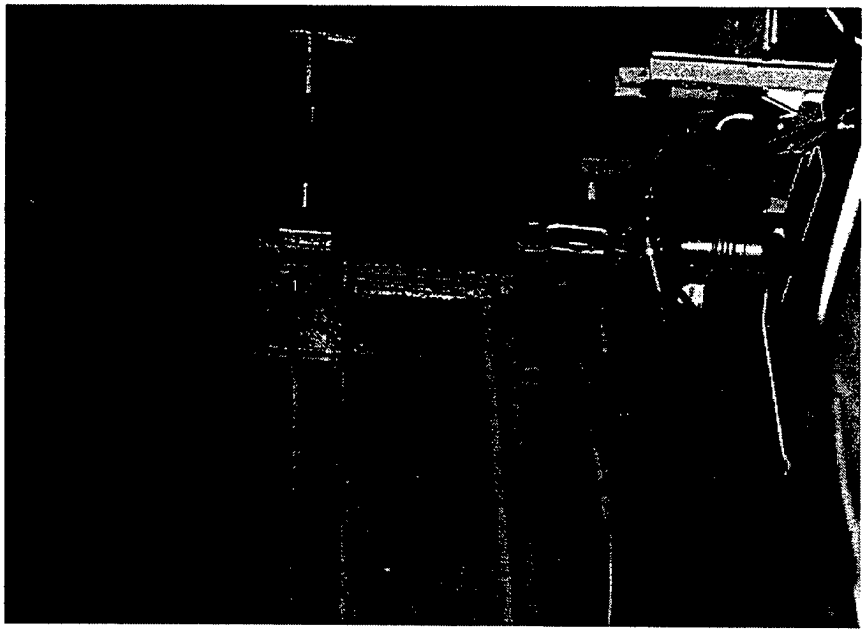


FIGURE C-8. CALIBRATION TEST FIXTURE VIEW 3

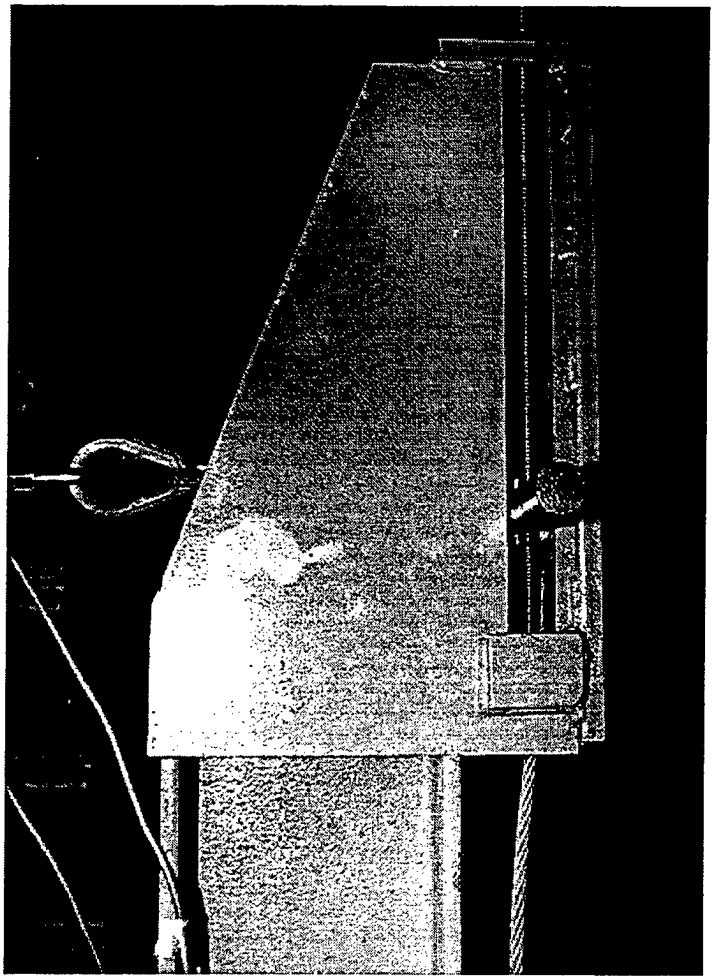


FIGURE C-9. CALIBRATION TEST FIXTURE VIEW 4

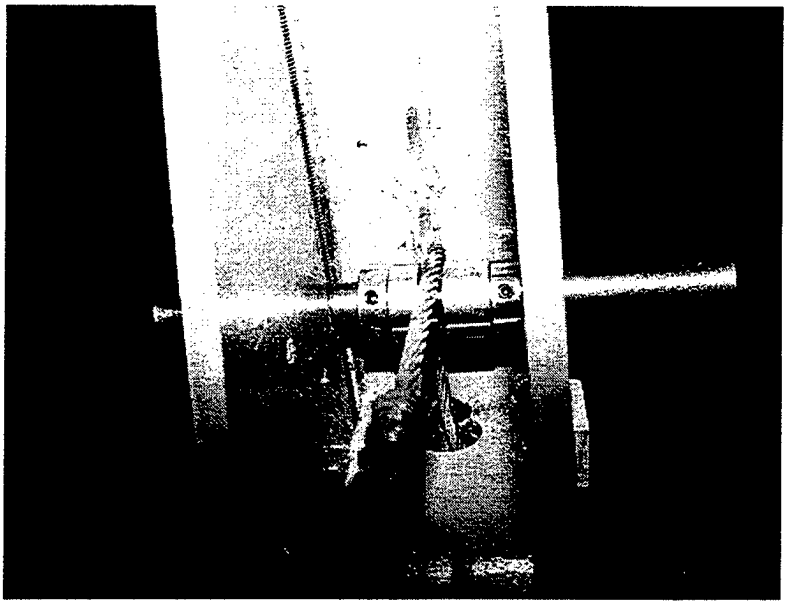


FIGURE C-10. CALIBRATION TEST FIXTURE VIEW 5

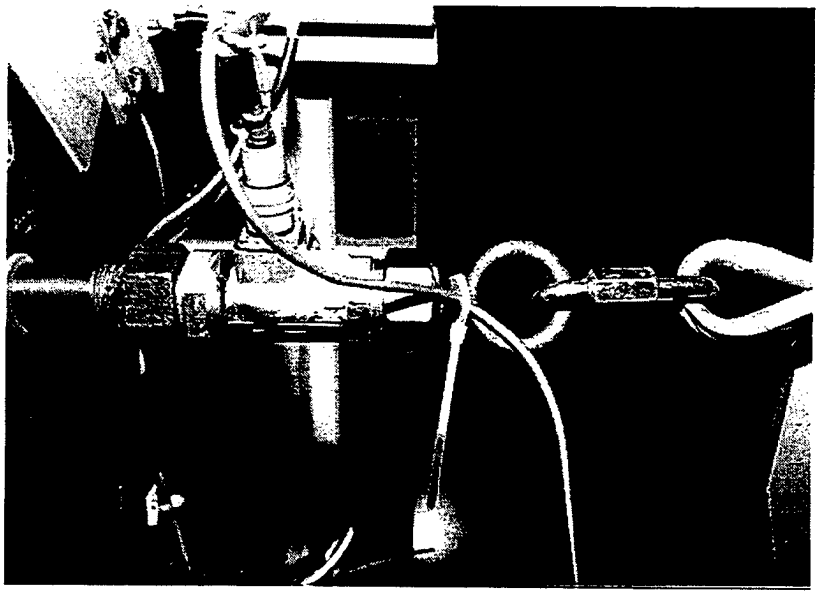


FIGURE C-11. CALIBRATION FORCE TRANSDUCER SIDE VIEW

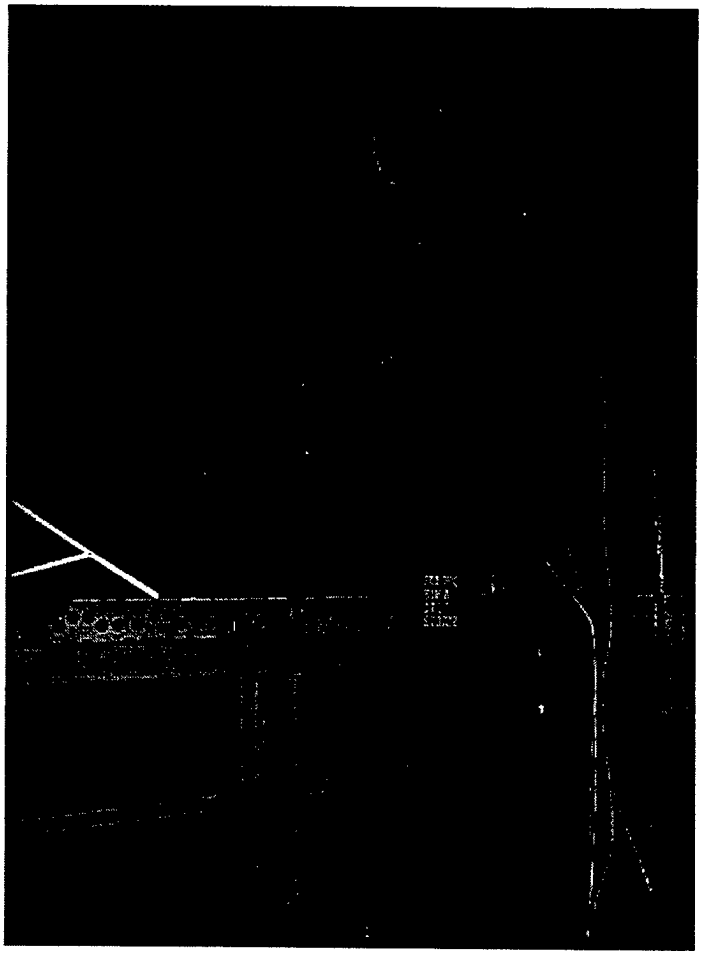


FIGURE C-12. PRETEST BIN A AND TEST FIXTURE FRONT RIGHT ANGLE OVERALL VIEW

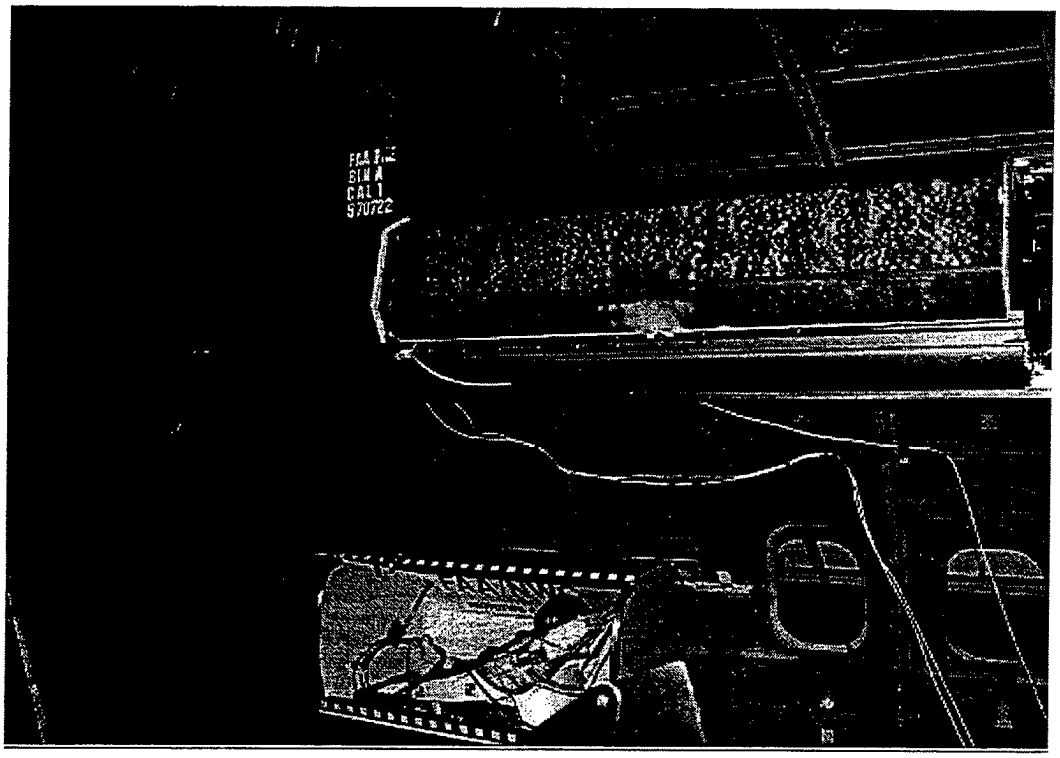


FIGURE C-13. PRETEST BIN A SIDE VIEW



FIGURE C-14. PRETEST BIN A FRONT RIGHT ANGLE VIEW

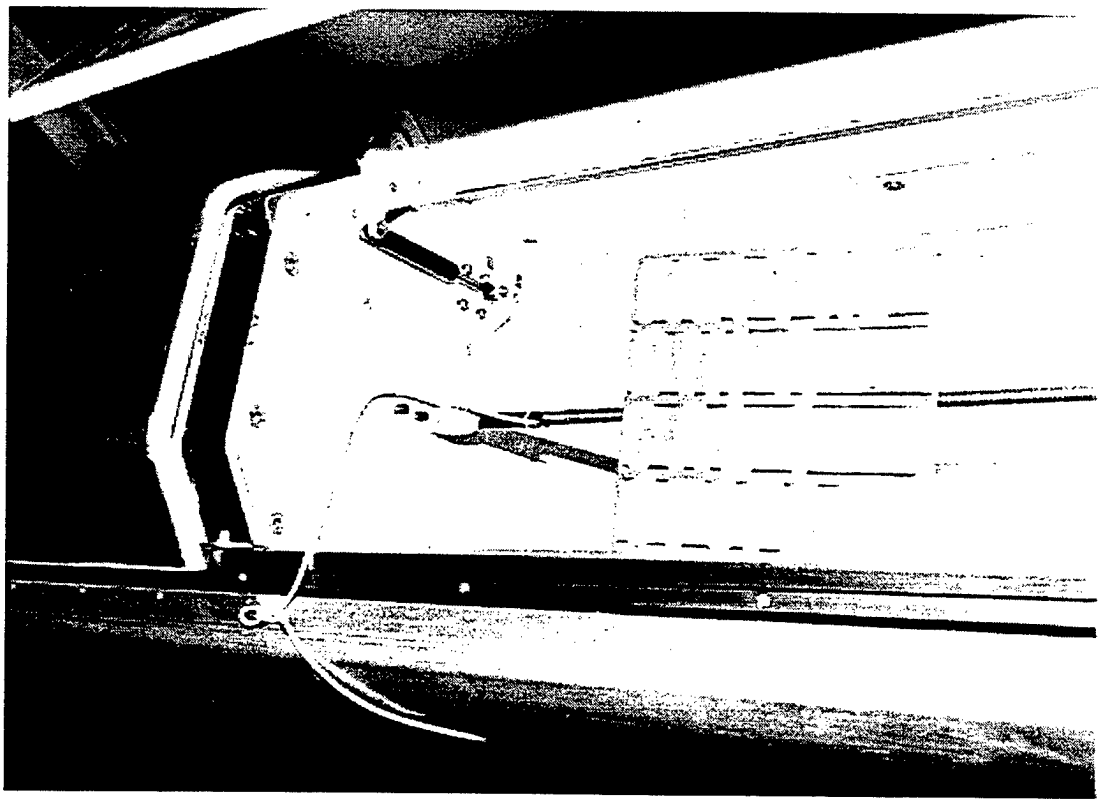


FIGURE C-15. PRETEST BIN A LINEAR POTENTIOMETER ATTACHMENT VIEW

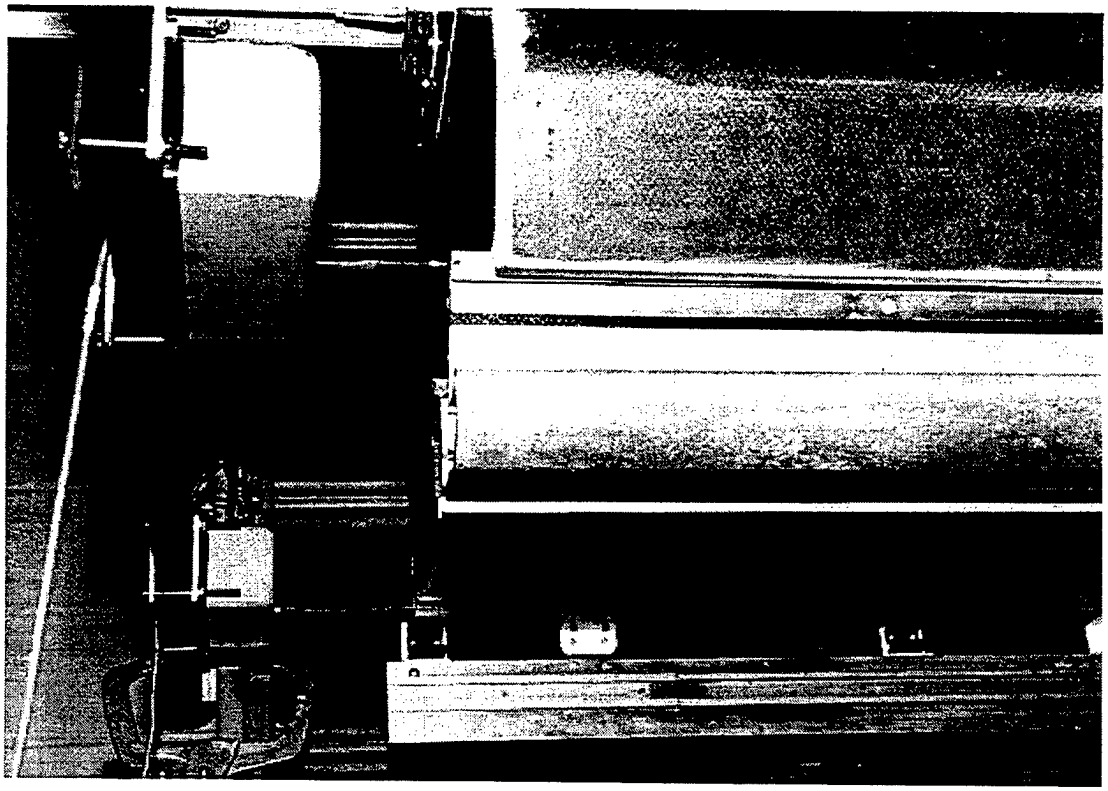


FIGURE C-16. PRETEST BIN A STRING POTENTIOMETER ATTACHMENT SIDE VIEW



FIGURE C-17. PRETEST BIN A AND STRING POTENTIOMETER ATTACHMENT REAR ANGLE VIEW

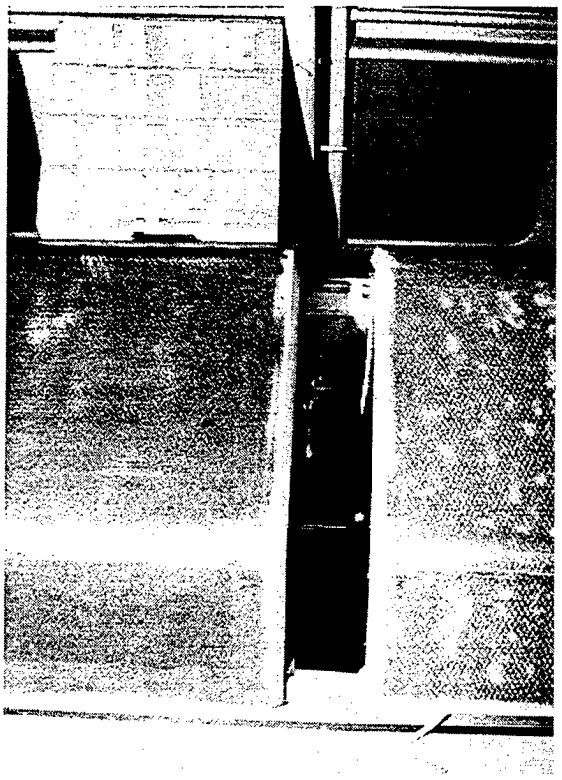


FIGURE C-18. PRETEST BIN A BETWEEN FRONT AND REAR SECTIONS SIDE VIEW

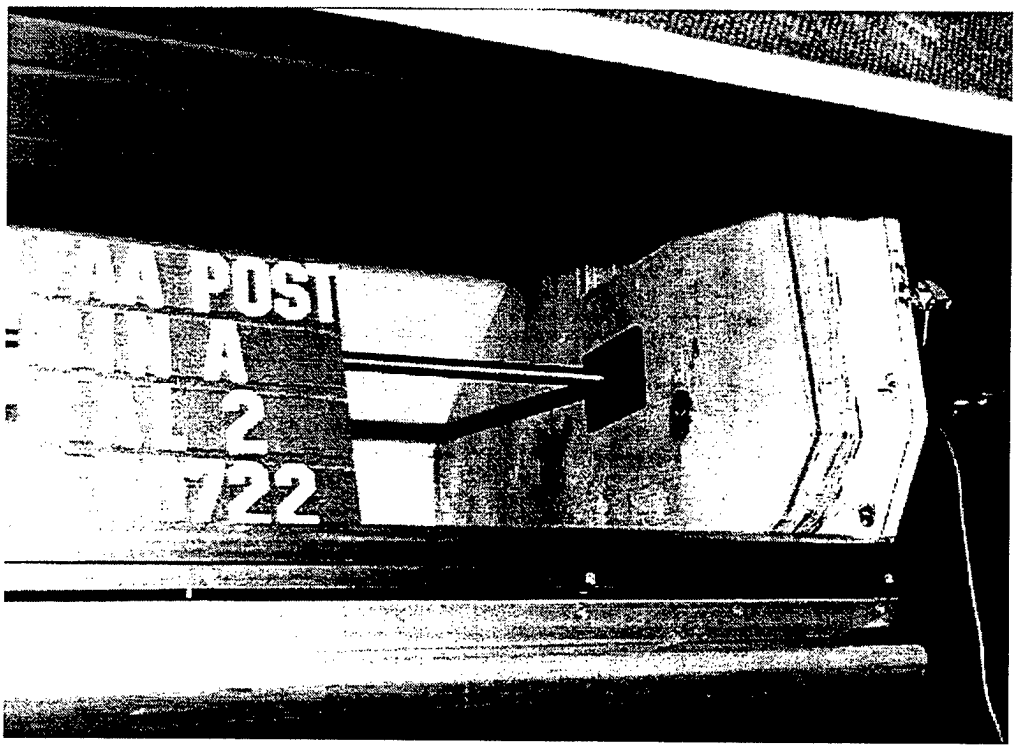


FIGURE C-19. PRETEST BIN A THREADED ROD ATTACHMENT TO FRONT SECTION VIEW

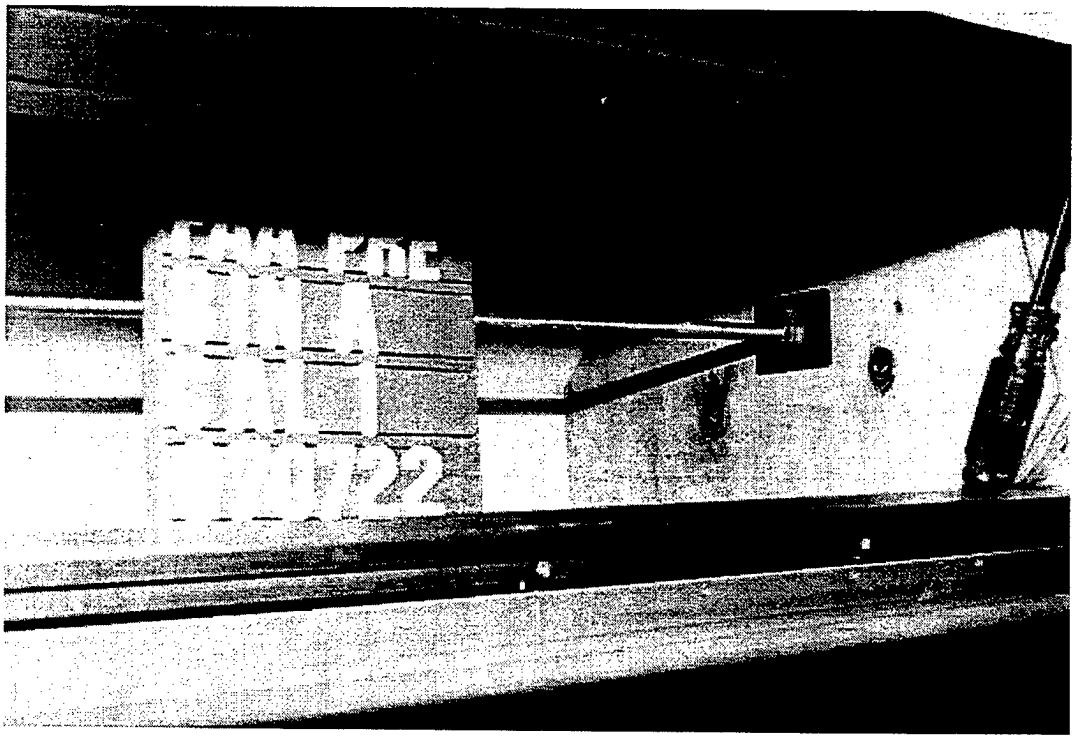


FIGURE C-20. PRETEST BIN A THREADED ROD ATTACHMENT TO REAR SECTION VIEW

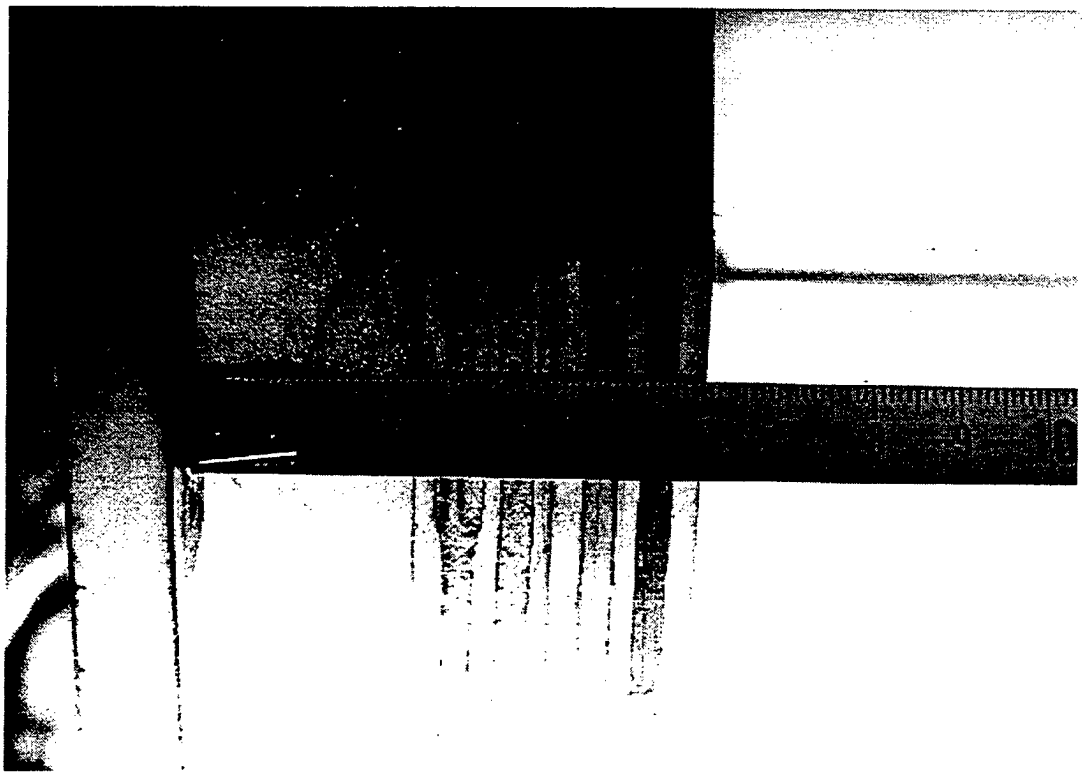


FIGURE C-21. PRETEST BIN A FOAM AND PLYWOOD BASE FOR LOAD APPLICATION VIEW

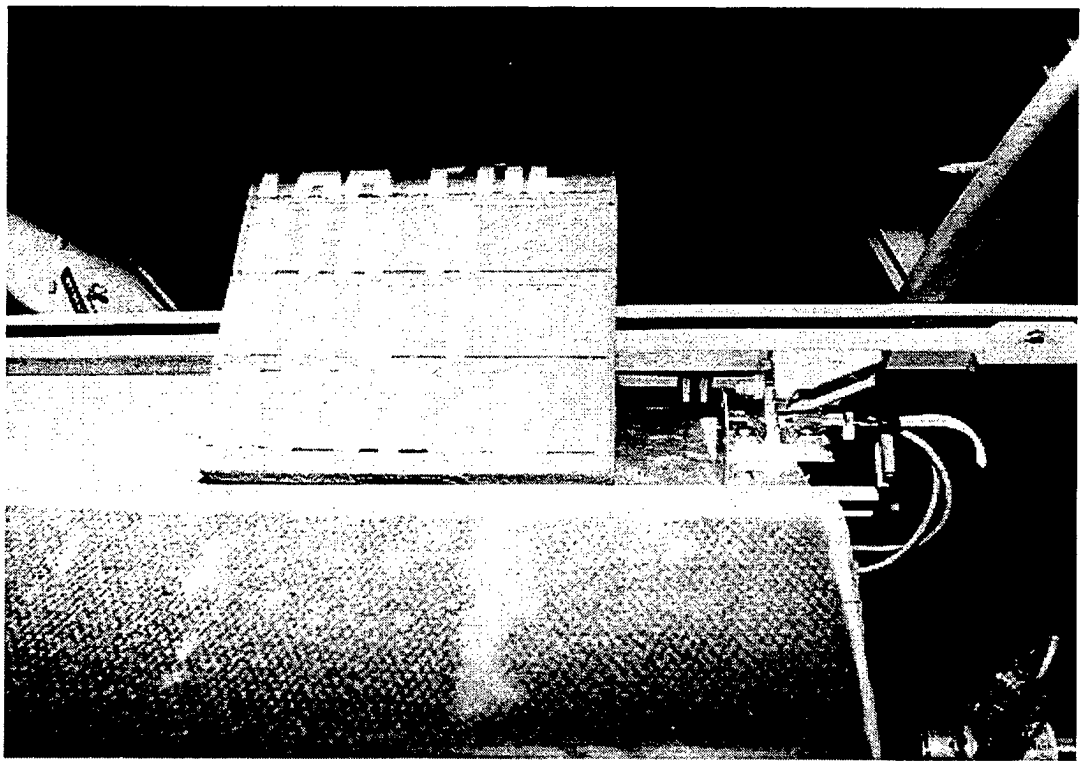


FIGURE C-22. PRETEST BIN A UPPER FRONT SUPPORT SIDE VIEW

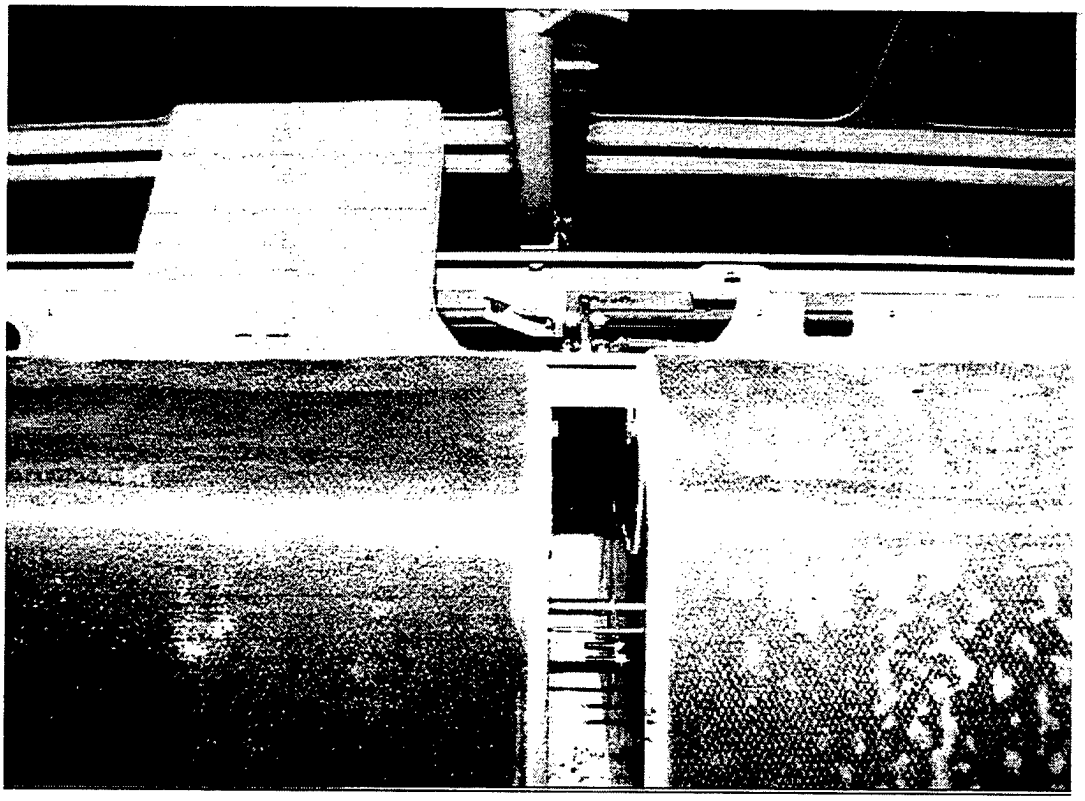


FIGURE C-23. PRETEST BIN A UPPER MID SUPPORT SIDE VIEW 1

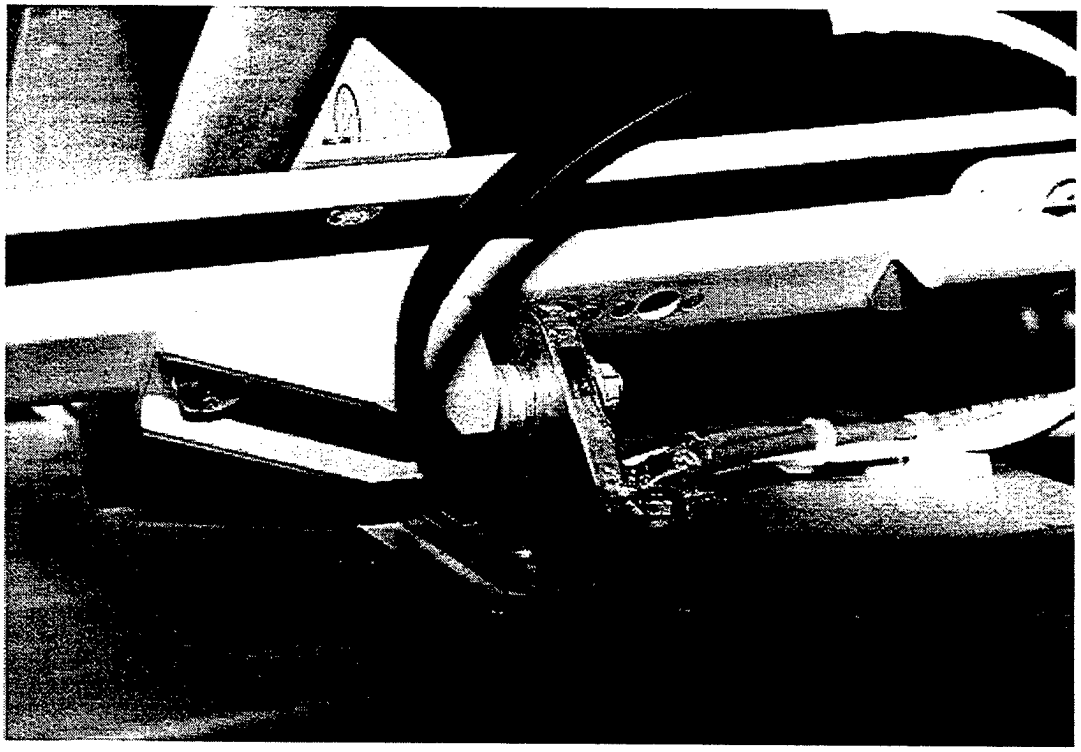


FIGURE C-24. PRETEST BIN A UPPER MID SUPPORT SIDE VIEW 2

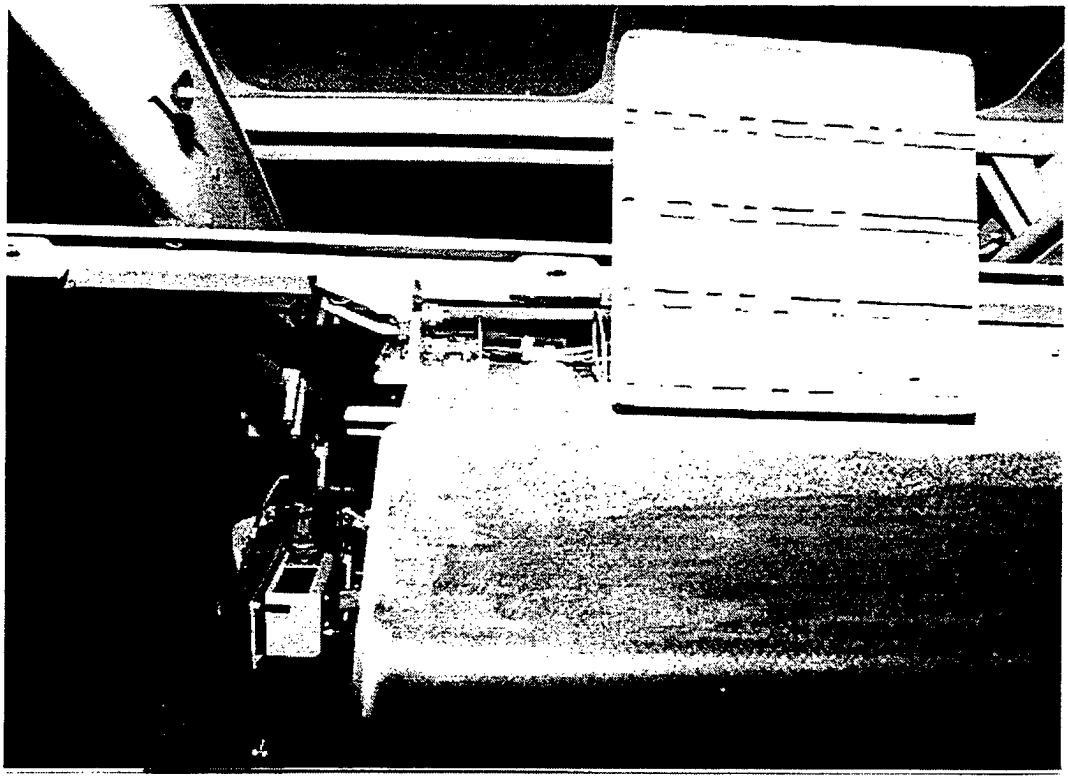


FIGURE C-25. PRETEST BIN A UPPER AFT SUPPORT SIDE VIEW

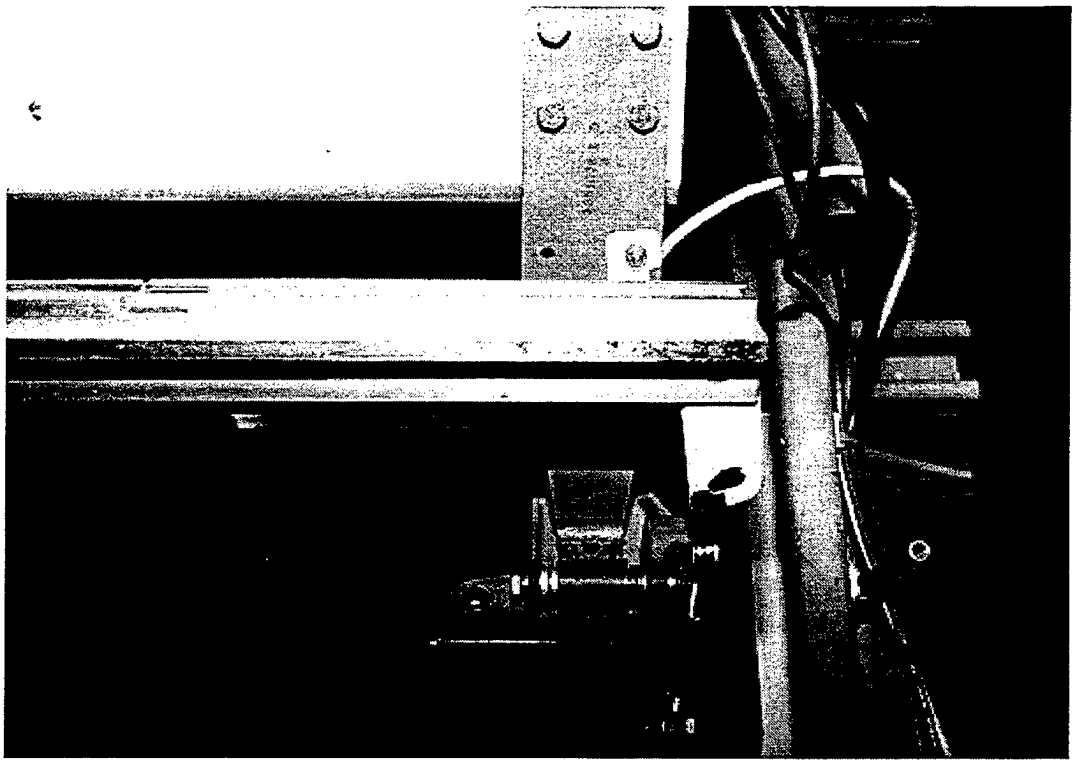


FIGURE C-26. PRETEST BIN A LOWER FRONT SUPPORT BOTTOM VIEW

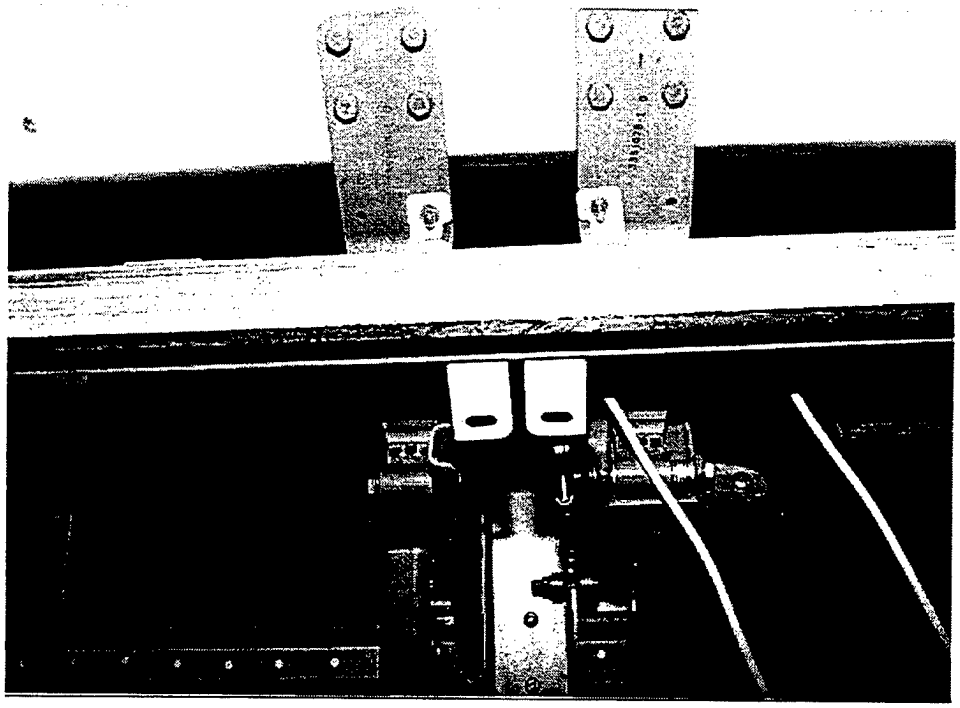


FIGURE C-27. PRETEST BIN A MID AND AFT SUPPORTS BOTTOM VIEW

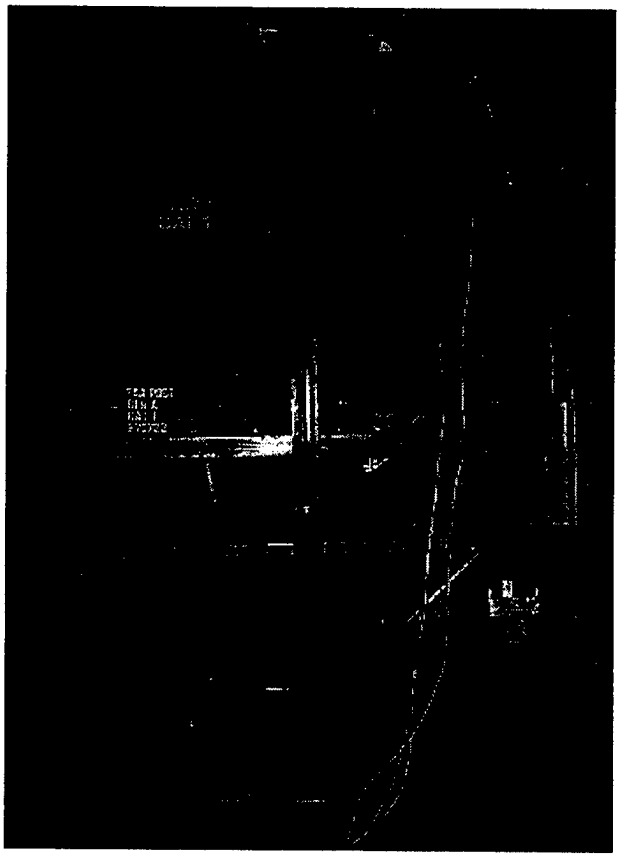


FIGURE C-28. POSTTEST BIN A AND TEST FIXTURE FRONT OVERALL VIEW

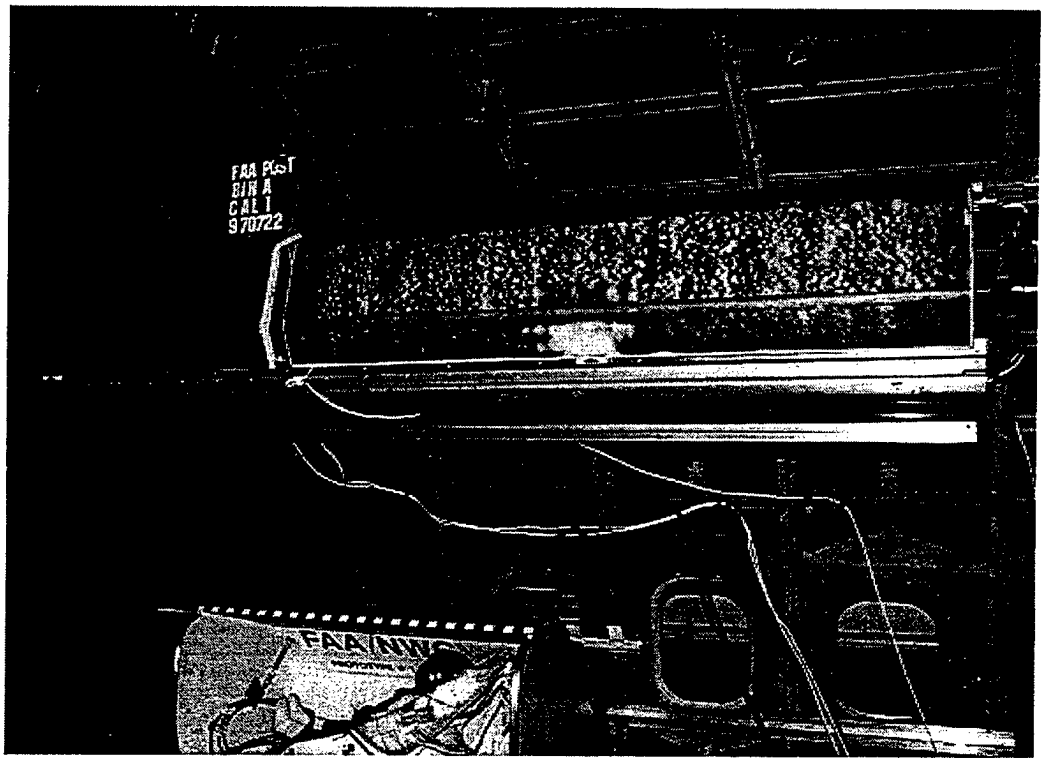


FIGURE C-29. POSTTEST BIN A SIDE VIEW



FIGURE C-30. POSTTEST BIN A REAR RIGHT ANGLE VIEW



FIGURE C-31. POSTTEST BIN A BETWEEN FRONT AND REAR SECTIONS SIDE VIEW

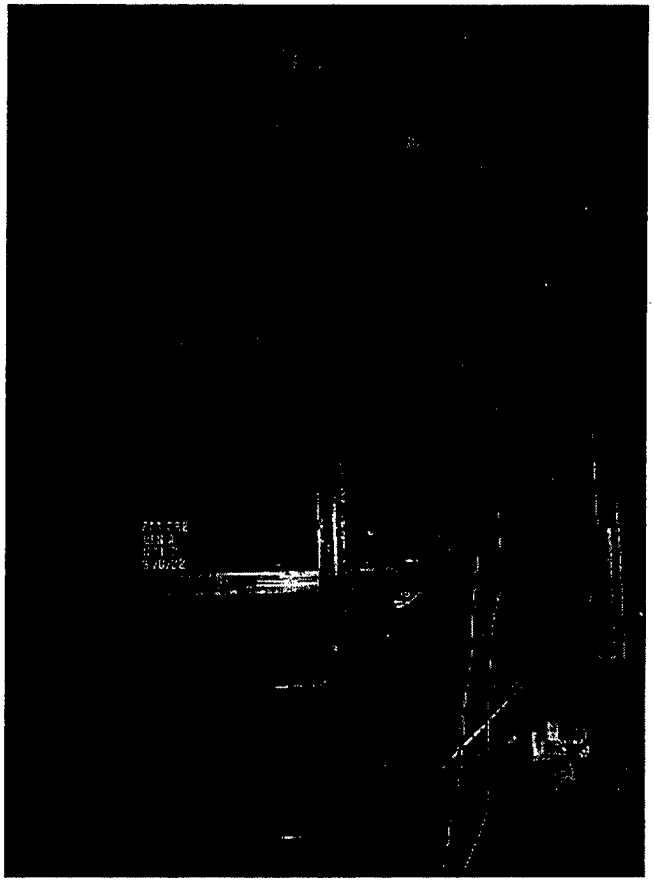


FIGURE C-32. PRETEST BIN A AND TEST FIXTURE FRONT OVERALL VIEW



FIGURE C-33. PRETEST BIN A SIDE VIEW

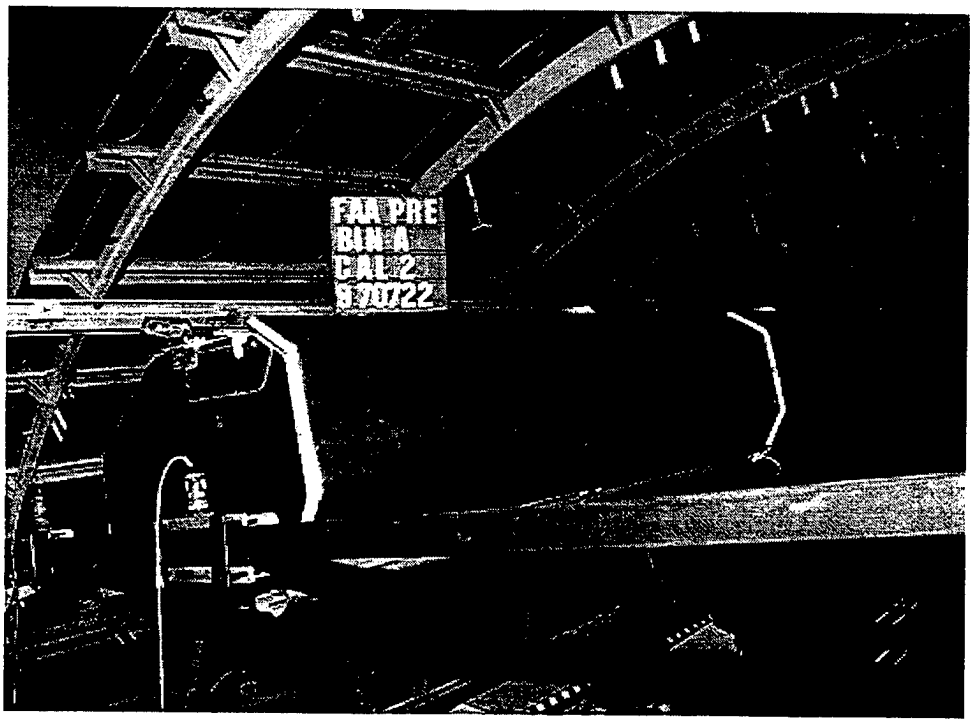


FIGURE C-34. PRETEST BIN A REAR RIGHT ANGLE VIEW



FIGURE C-35. PRETEST BIN A BETWEEN FRONT AND REAR SECTIONS SIDE VIEW

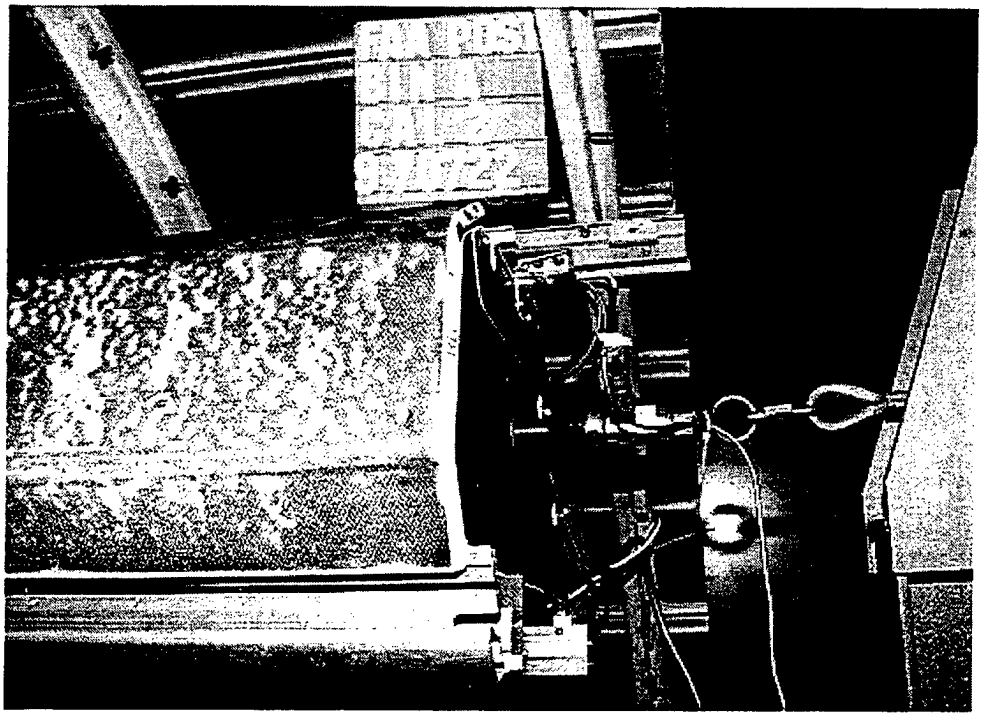


FIGURE C-36. POSTTEST BIN A AND CALIBRATION FORCE TRANSDUCER SIDE VIEW

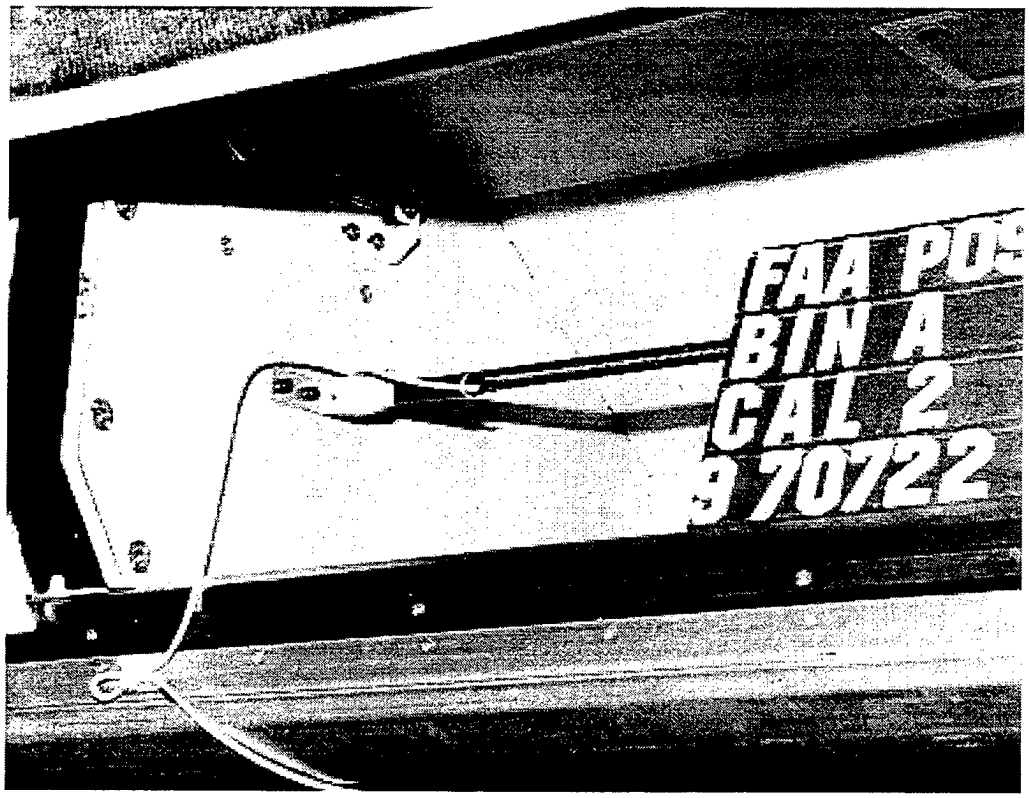


FIGURE C-37. POSTTEST BIN A LINEAR POTENTIOMETER ATTACHMENT VIEW

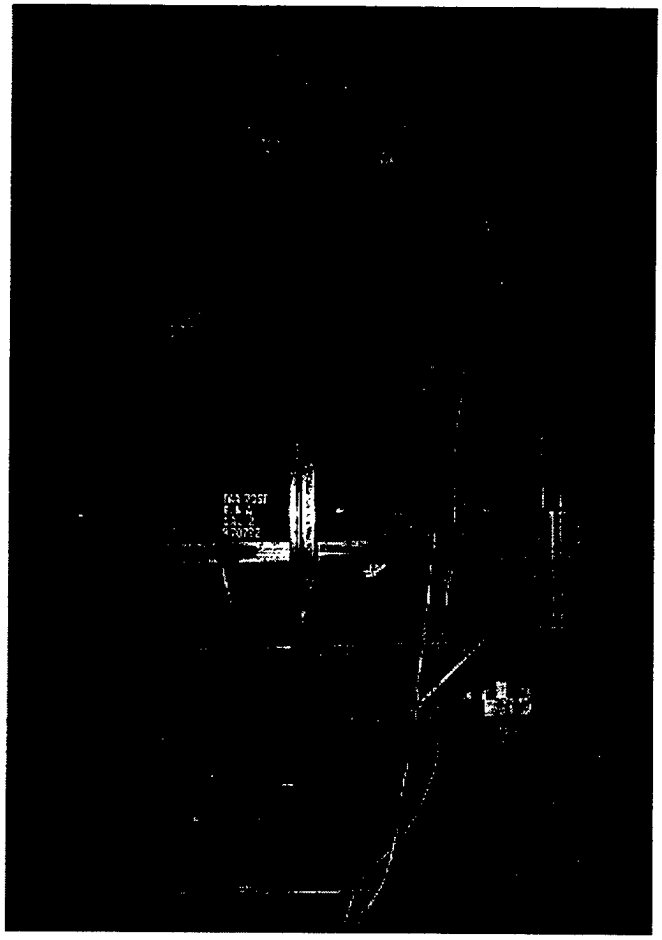


FIGURE C-38. POSTTEST BIN A AND TEST FIXTURE FRONT OVERALL VIEW

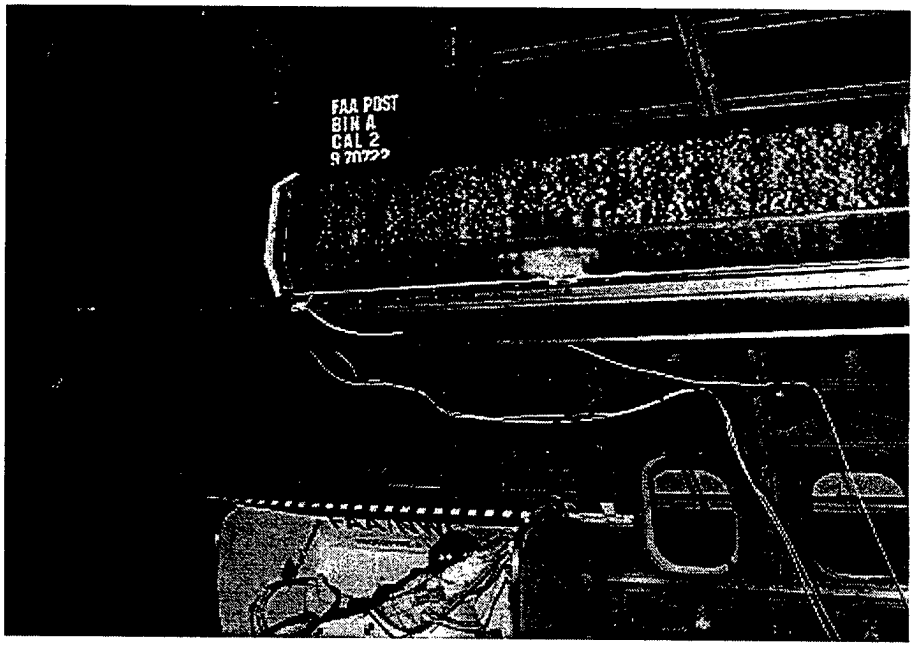


FIGURE C-39. POSTTEST BIN A SIDE VIEW

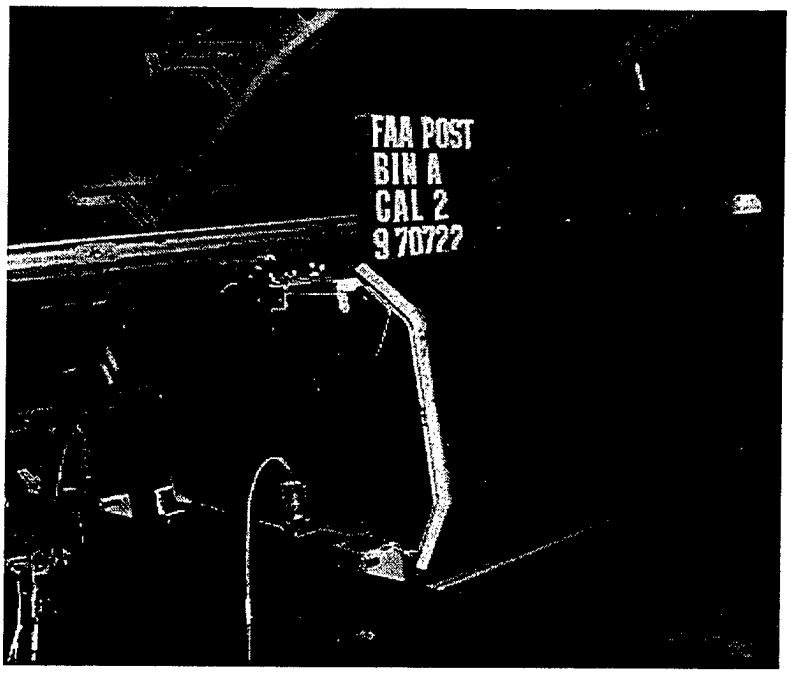


FIGURE C-40. POSTTEST BIN A REAR RIGHT ANGLE VIEW

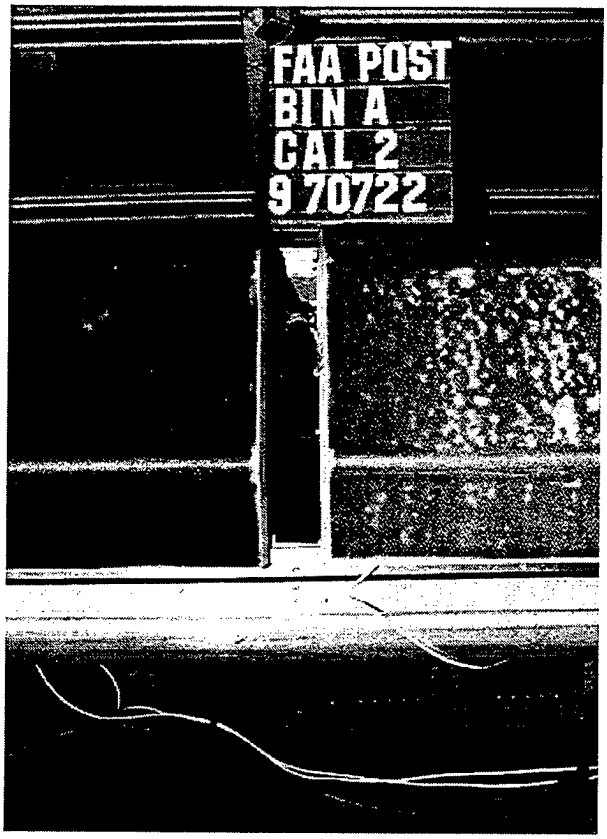


FIGURE C-41. POSTTEST BIN A BETWEEN FRONT AND REAR SECTIONS SIDE VIEW



FIGURE C-42. POSTTEST BIN A THREADED ROD ATTACHMENT TO FRONT SECTION VIEW



FIGURE C-43. POSTTEST BIN A THREADED ROD ATTACHMENT TO FRONT AND REAR SECTION VIEW



FIGURE C-44. POSTTEST BIN A REAR SECTION SIDE VIEW

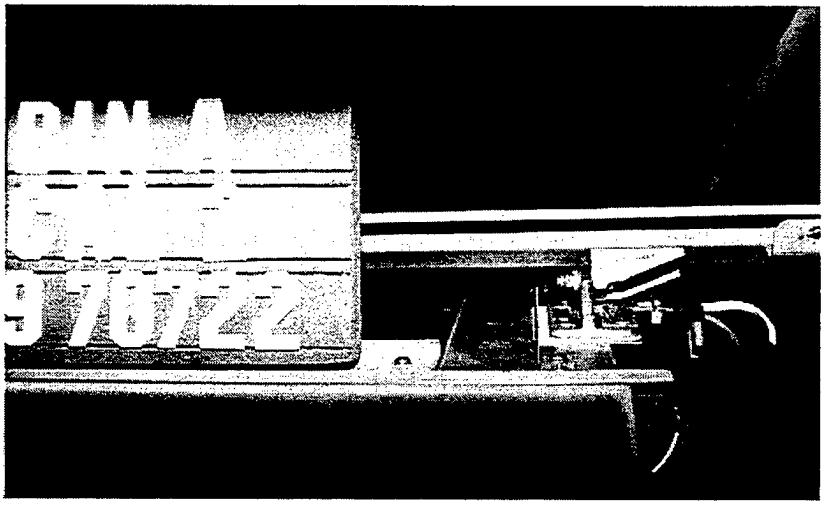


FIGURE C-45. POSTTEST BIN A UPPER FRONT SUPPORT SIDE VIEW

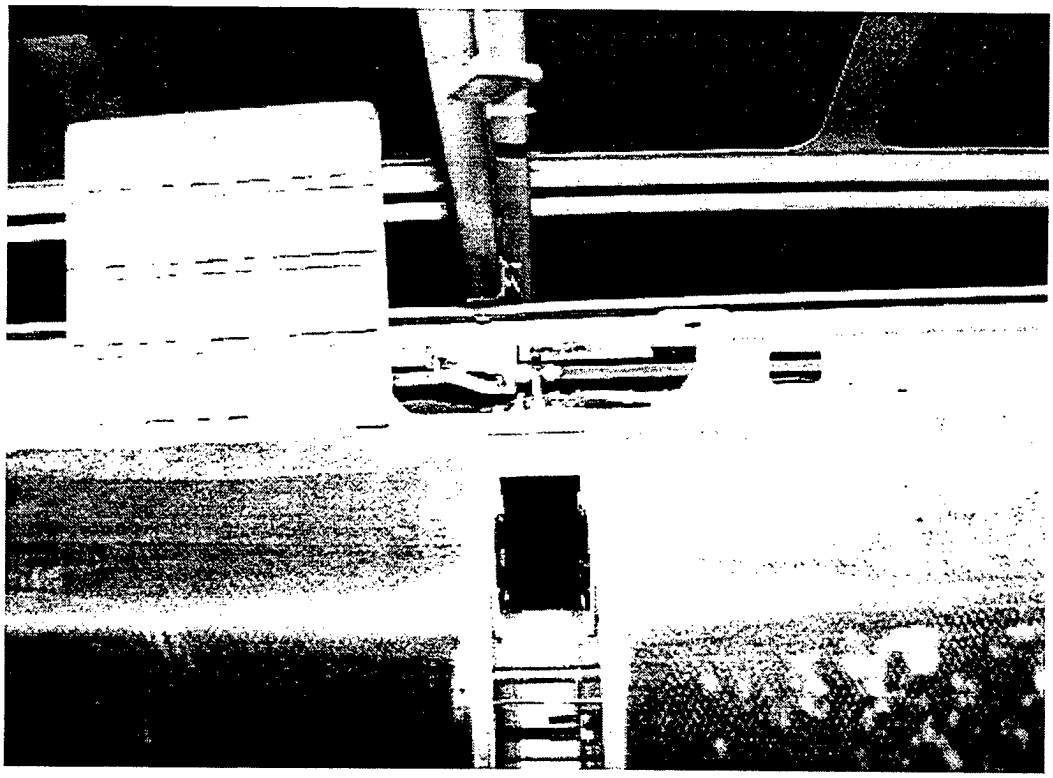


FIGURE C-46. POSTTEST BIN A UPPER MID SUPPORT SIDE VIEW

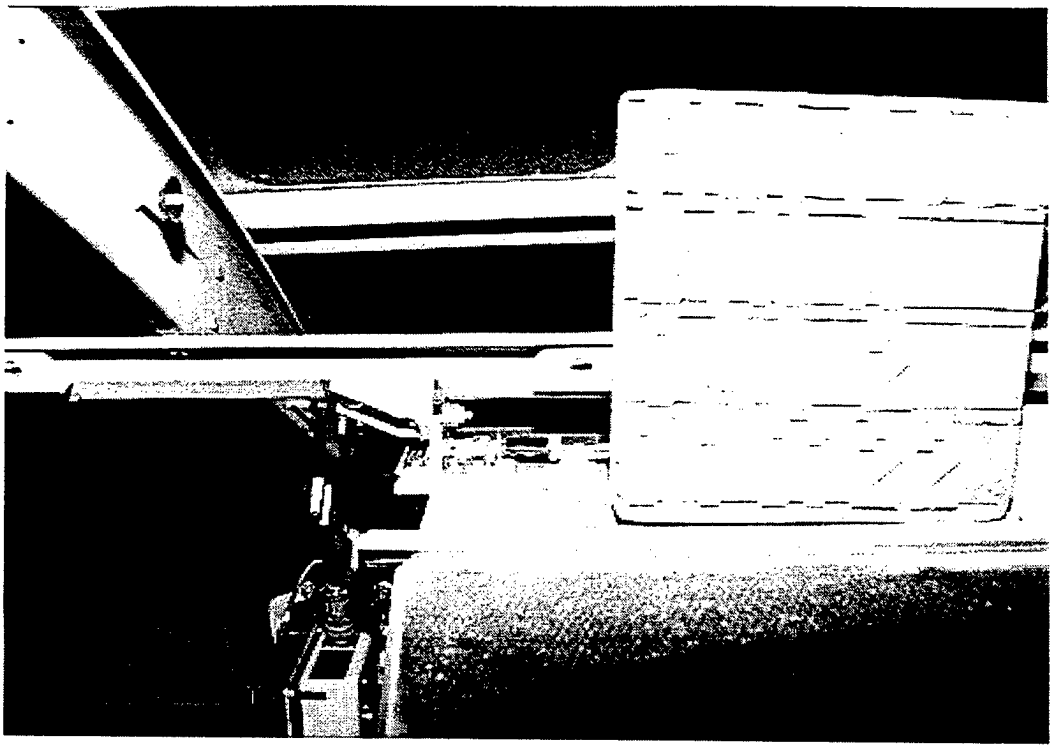


FIGURE C-47. POSTTEST BIN A UPPER AFT SUPPORT SIDE VIEW

OVERHEAD STOWAGE BIN B STATIC CALIBRATION - PULL 1

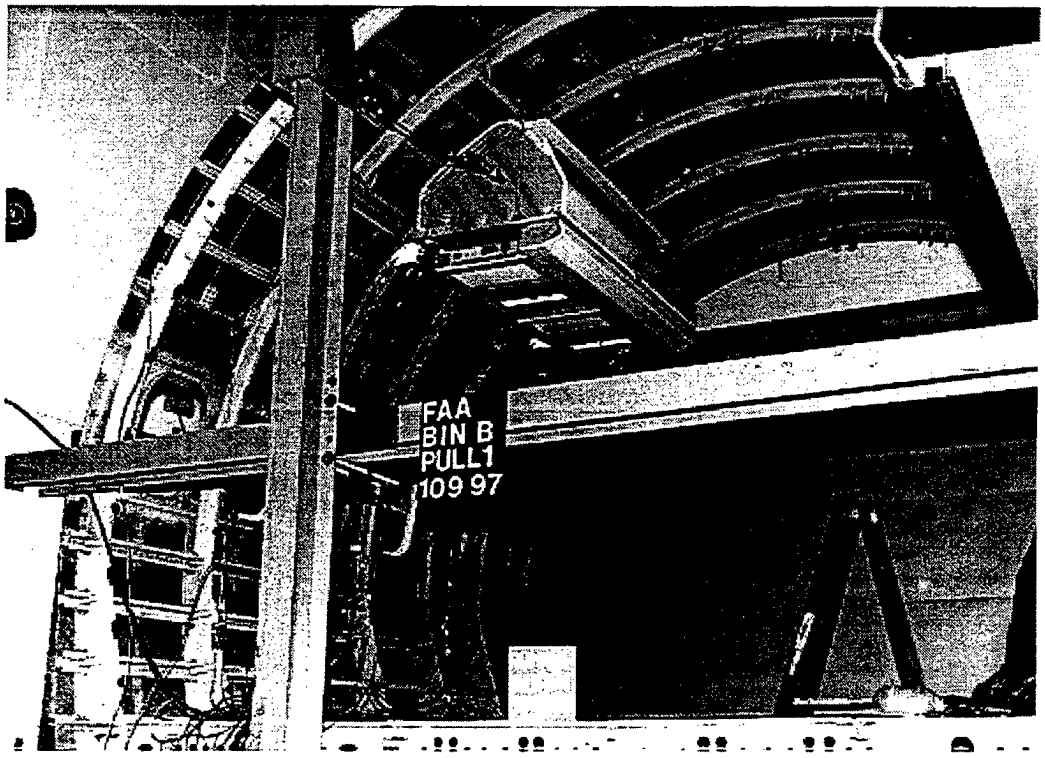


FIGURE C-48. PRETEST BIN B AND TEST FIXTURE FRONT ANGLE OVERALL VIEW

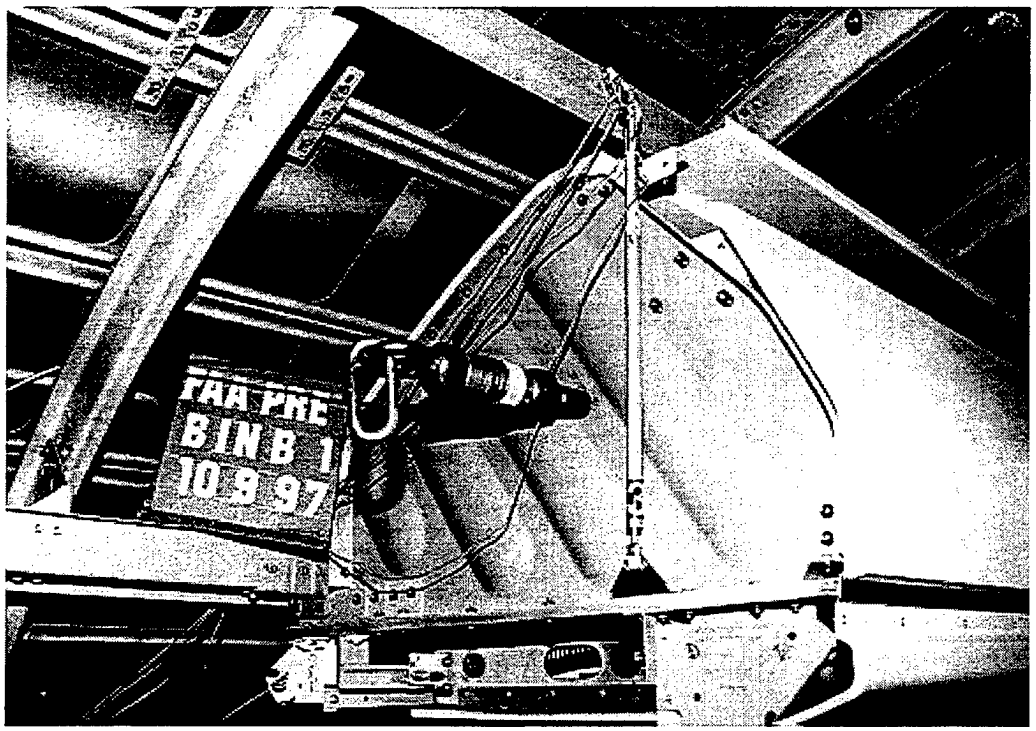


FIGURE C-49. PRETEST BIN B FRONT ANGLE CLOSE VIEW

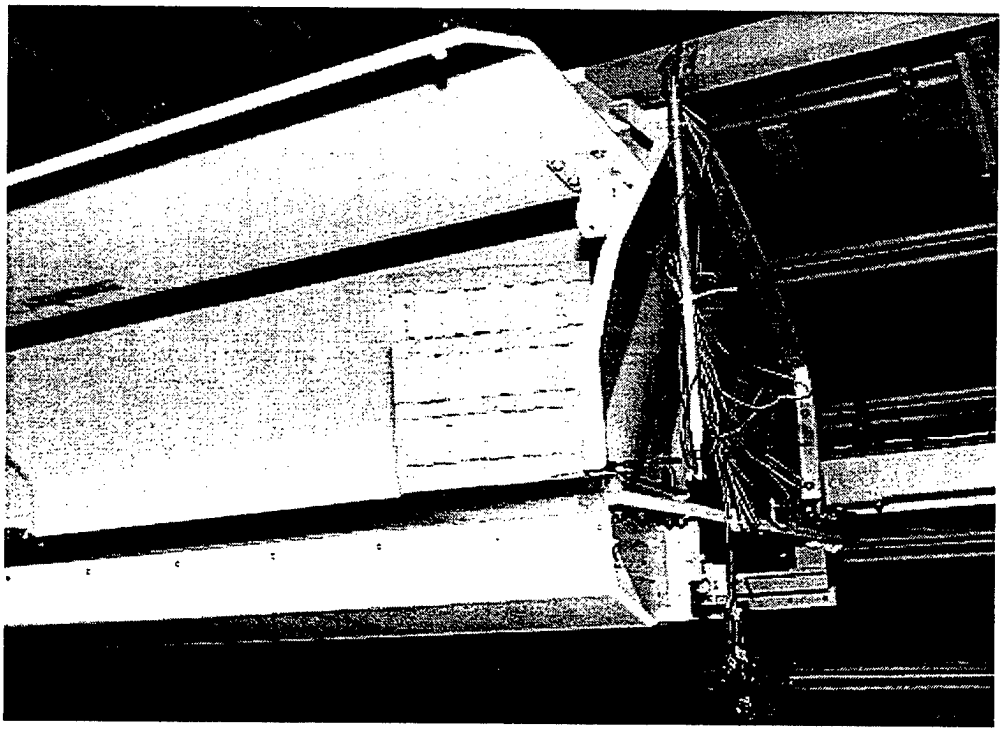


FIGURE C-50. PRETEST BIN B REAR ANGLE VIEW

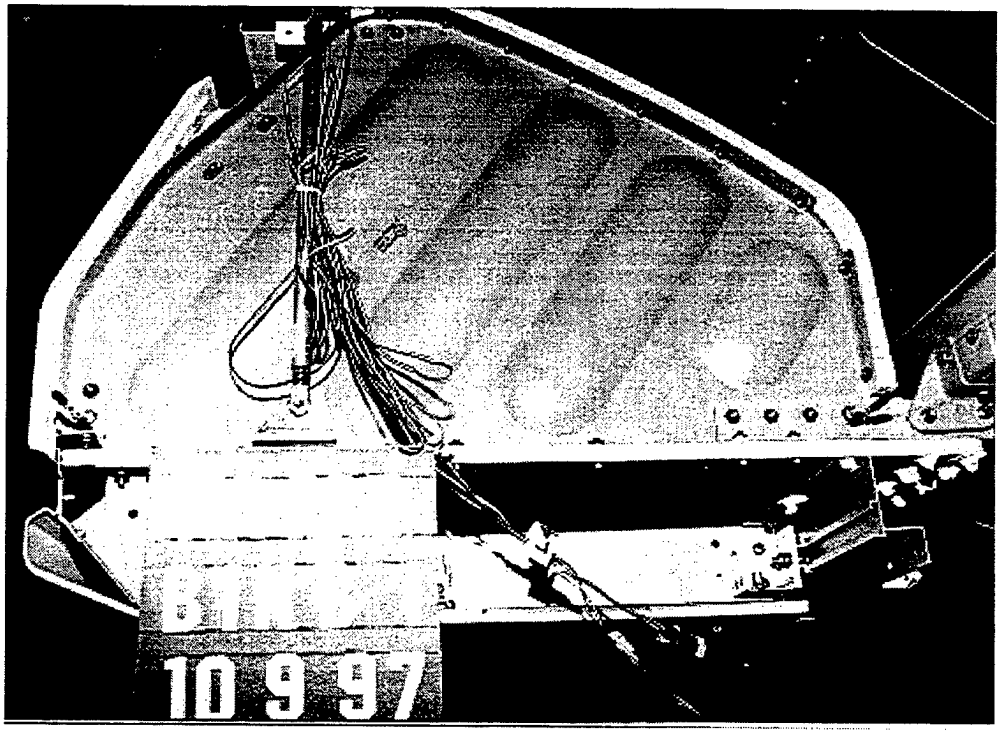


FIGURE C-51. PRETEST BIN B REAR CLOSE VIEW



FIGURE C-52. PRETEST BIN B THREADED ROD ATTACHMENT REAR ANGLE VIEW

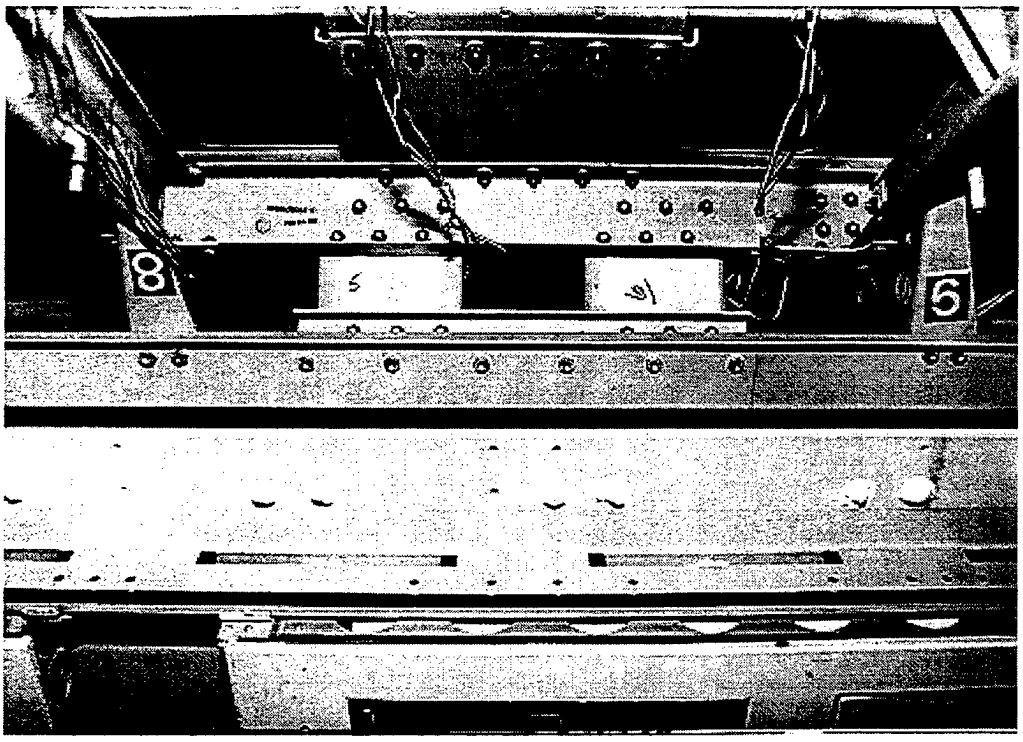


FIGURE C-53. PRE TEST BIN B SUPPORTS 5, 6, 8, AND 9 BOTTOM VIEW

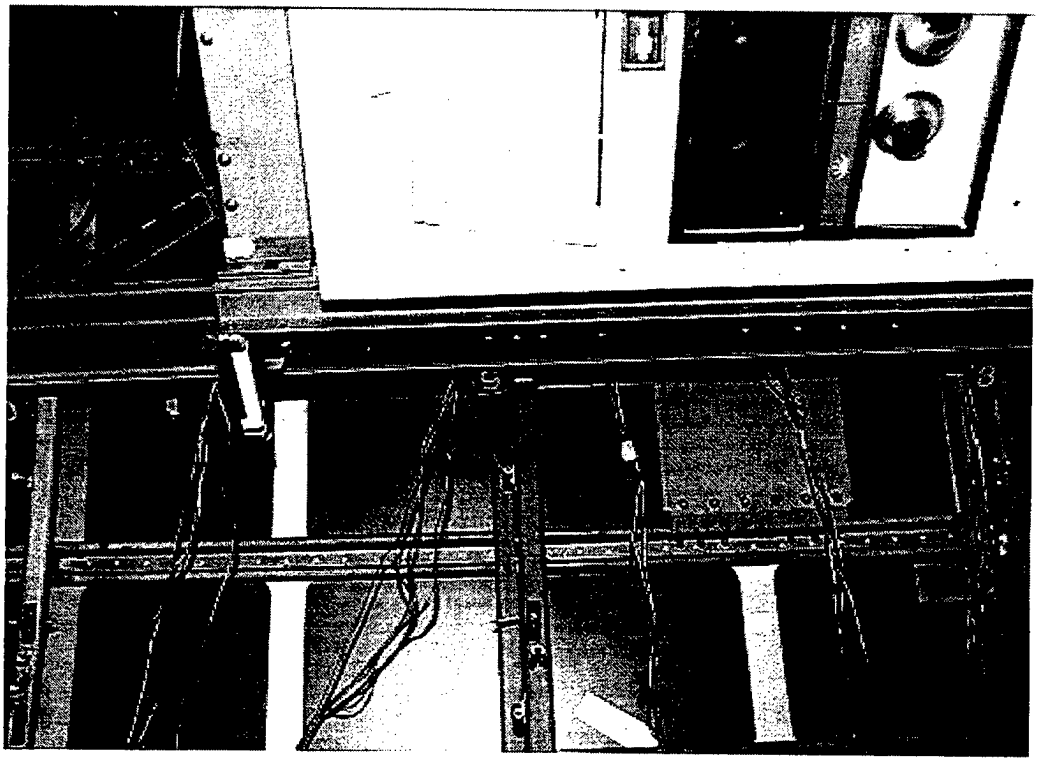


FIGURE C-54. PRETEST BIN B SUPPORTS 8, 9, AND 10 BOTTOM VIEW

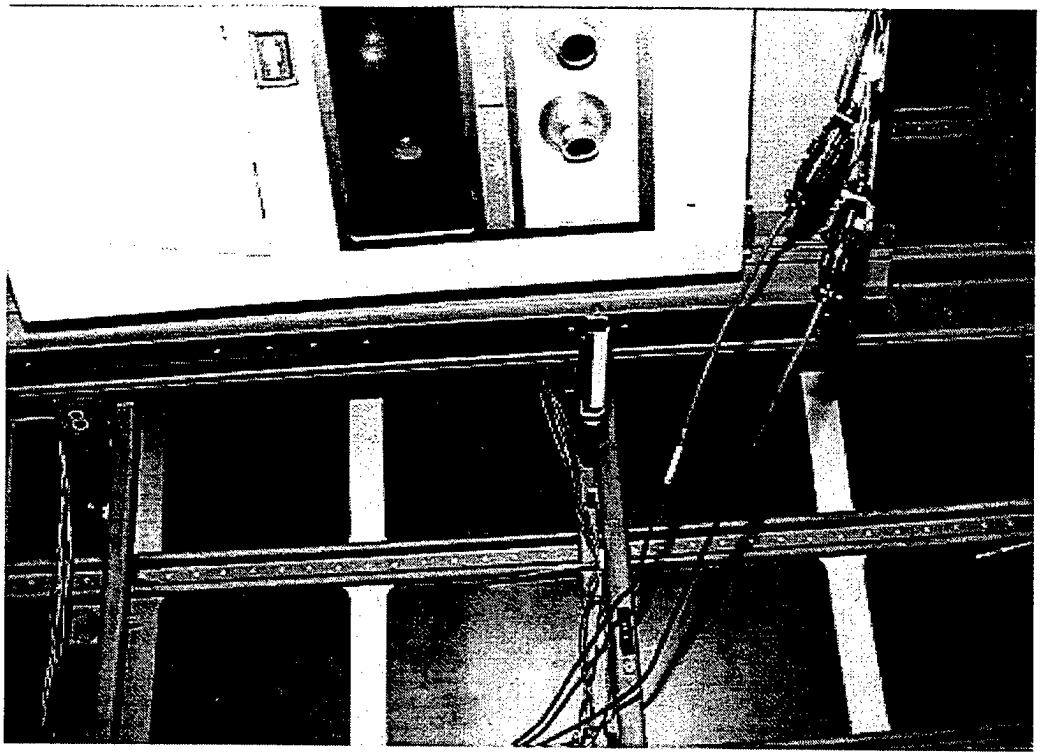


FIGURE C-55. PRETEST BIN B SUPPORTS 7 AND 8 BOTTOM VIEW

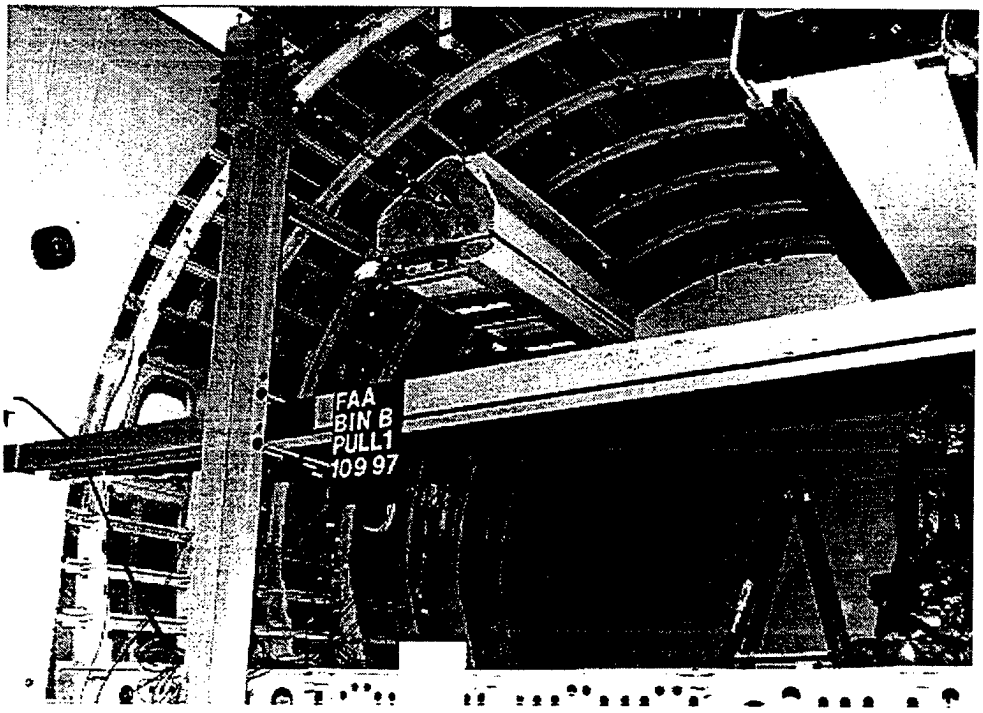


FIGURE C-56. POSTTEST BIN B AND TEST FIXTURE FRONT ANGLE OVERALL VIEW

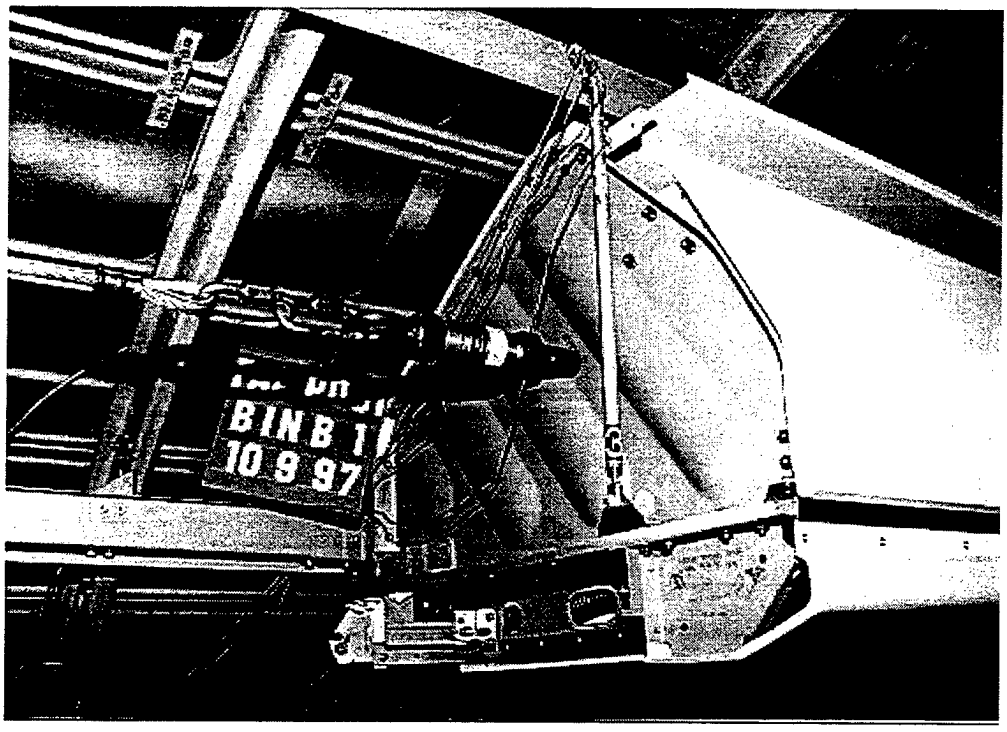


FIGURE C-57. POSTTEST BIN B FRONT ANGLE CLOSE VIEW

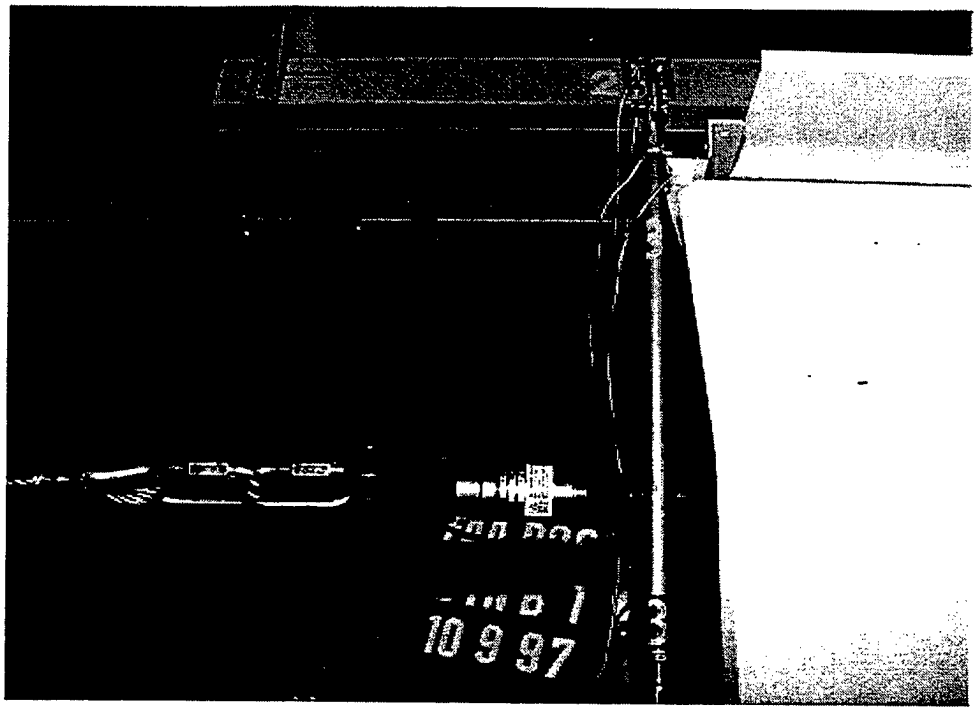


FIGURE C-58. POSTTEST BIN B FORCE TRANSDUCER AND SUPPORT 1 SIDE VIEW



FIGURE C-59. POSTTEST BIN B THREADED ROD ATTACHMENT REAR ANGLE VIEW

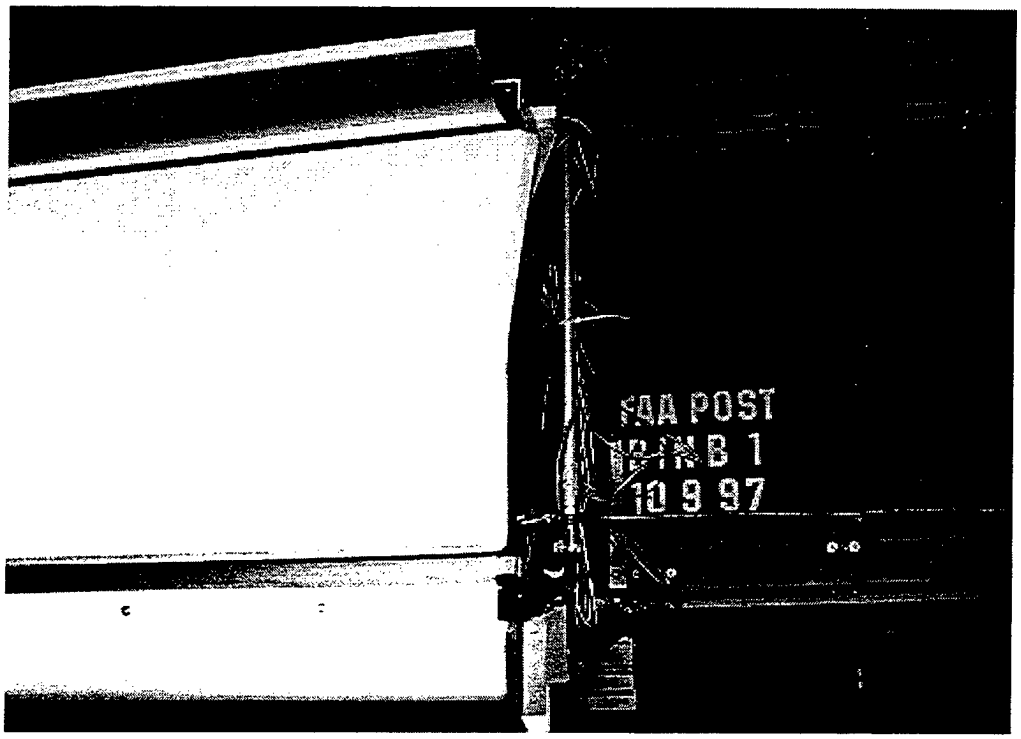


FIGURE C-60. POSTTEST BIN B SUPPORTS 1 AND 4 SIDE VIEW

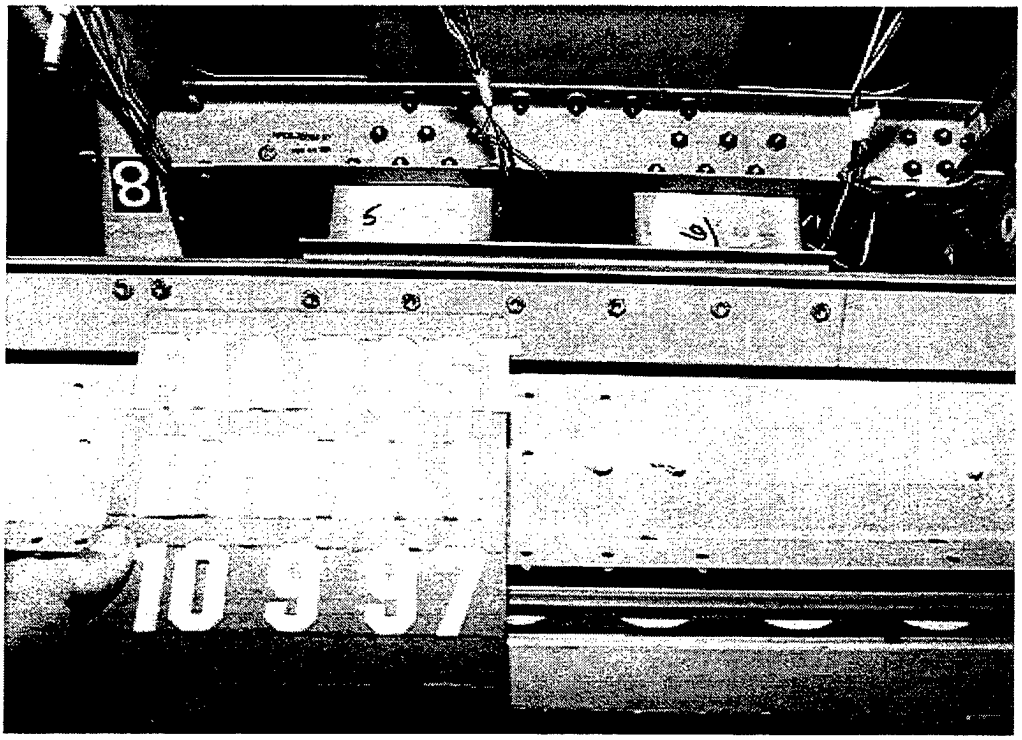


FIGURE C-61. POST TEST BIN B SUPPORTS 5, 6, 8, AND 9 BOTTOM VIEW

OVERHEAD STOWAGE BIN B STATIC CALIBRATION - PULL 2

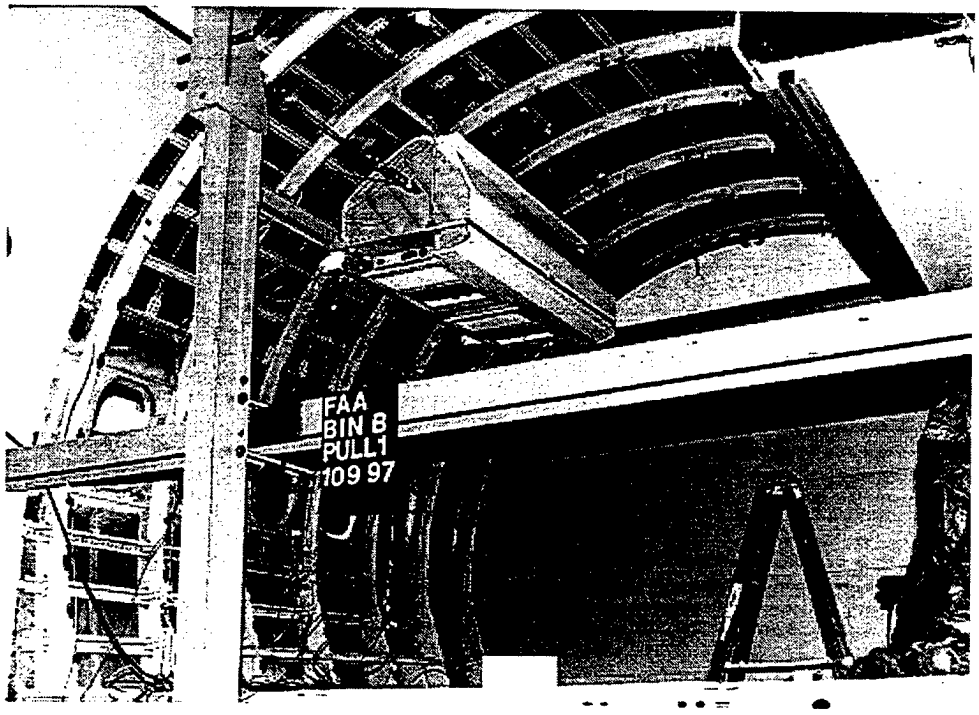


FIGURE C-62. PRETEST BIN B AND TEST FIXTURE FRONT ANGLE OVERALL VIEW

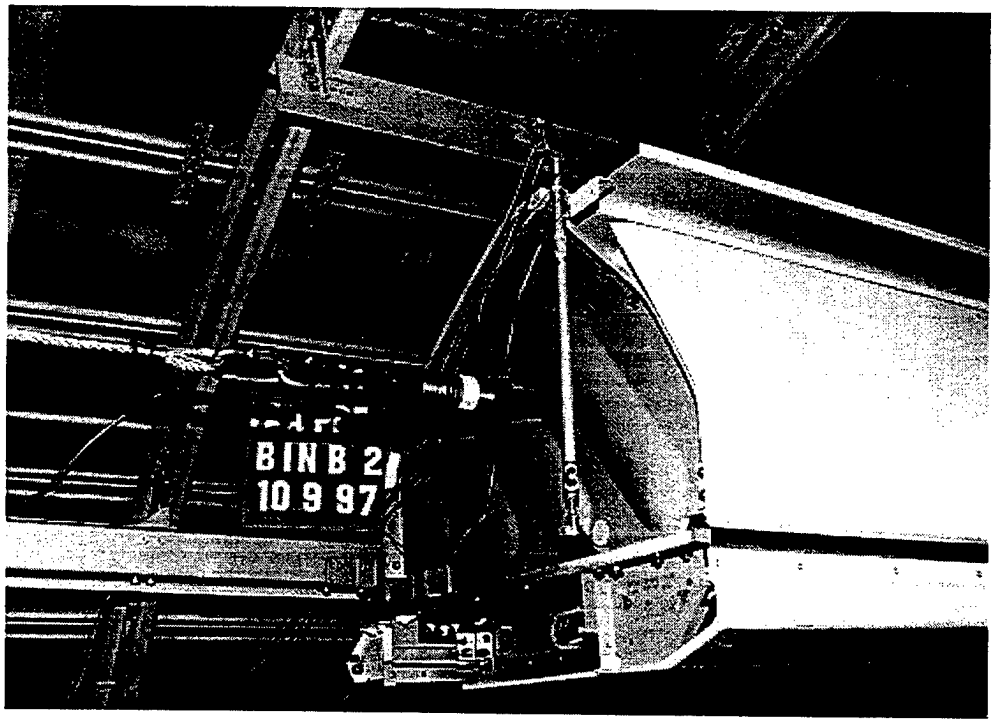


FIGURE C-63. PRETEST BIN B FRONT ANGLE CLOSE VIEW

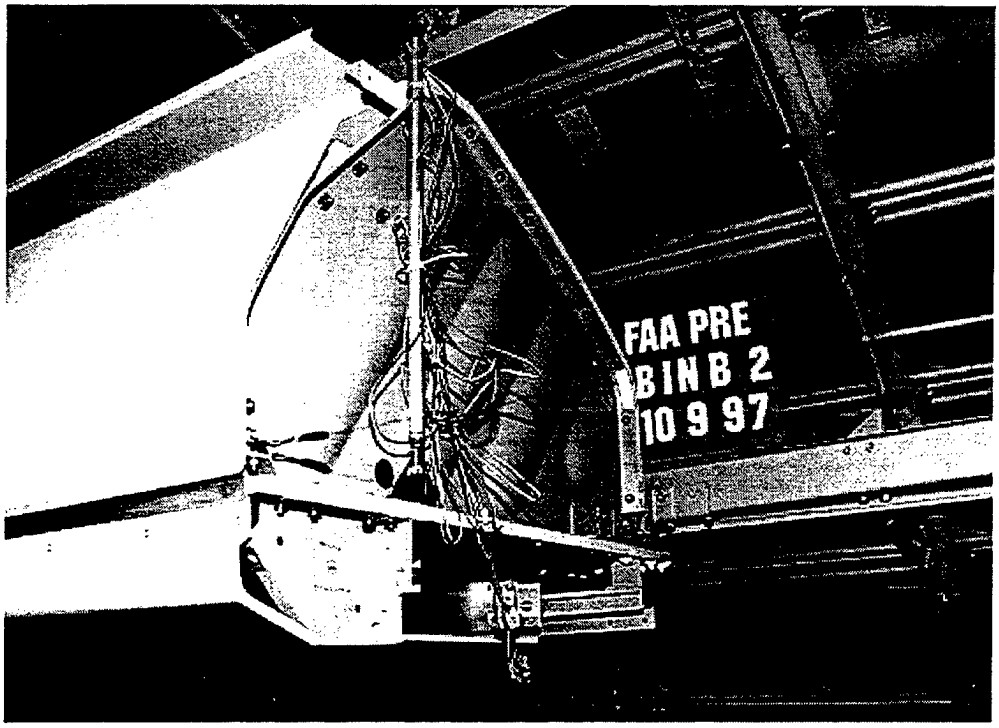


FIGURE C-64. PRETEST BIN B REAR ANGLE CLOSE VIEW

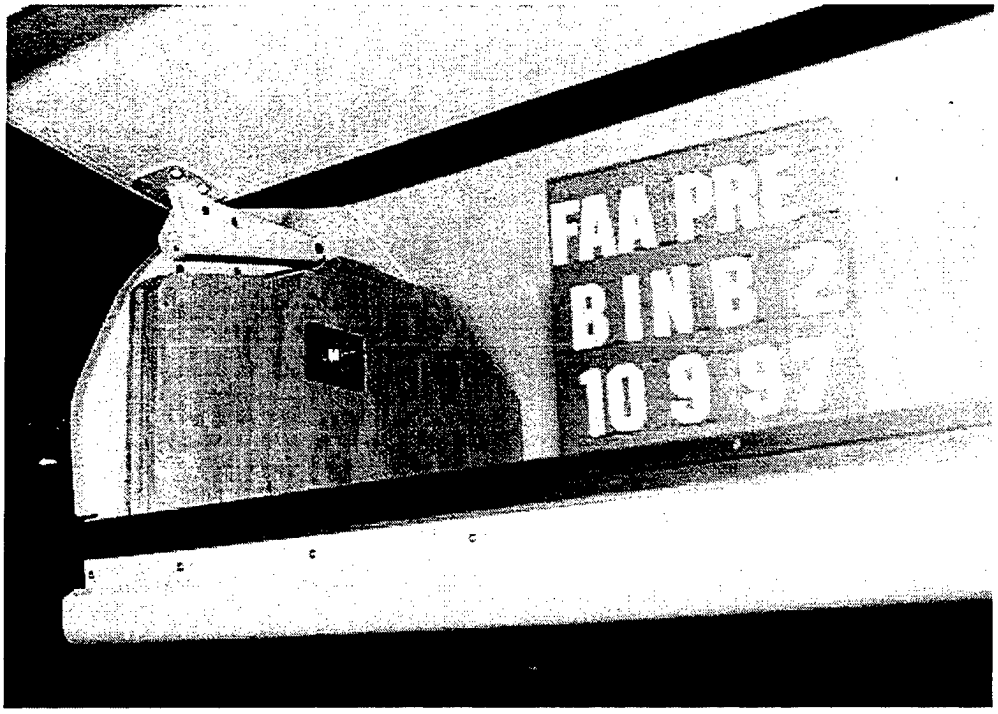


FIGURE C-65. PRETEST BIN B THREADED ROD ATTACHMENT REAR ANGLE VIEW

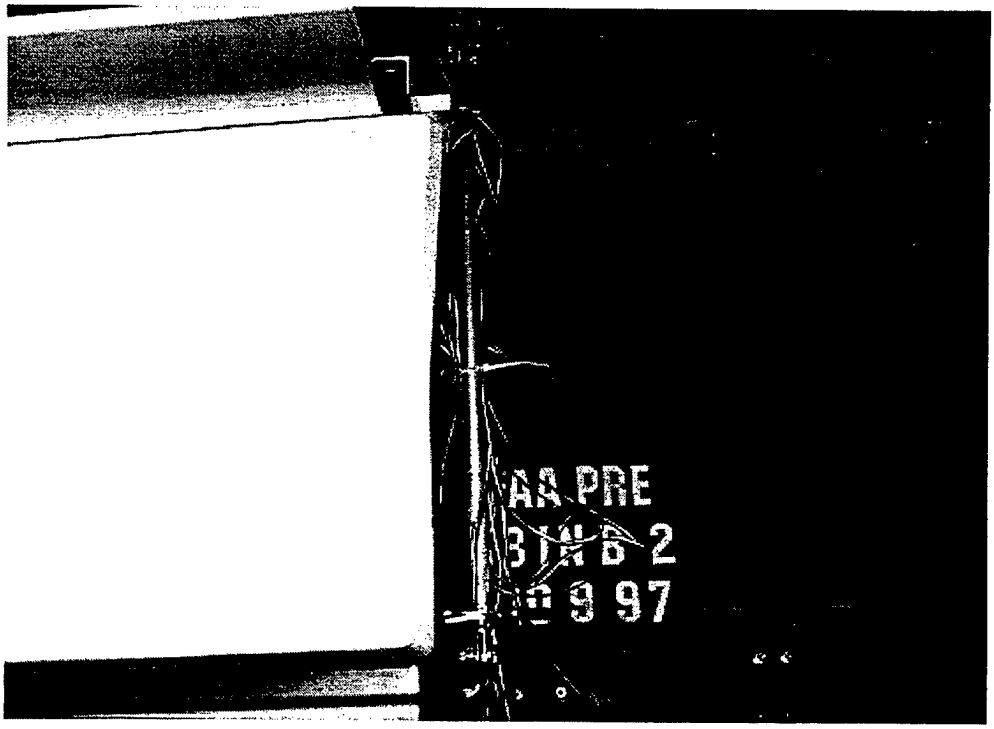


FIGURE C-66. PRETEST BIN B SUPPORTS 1 AND 4 SIDE VIEW

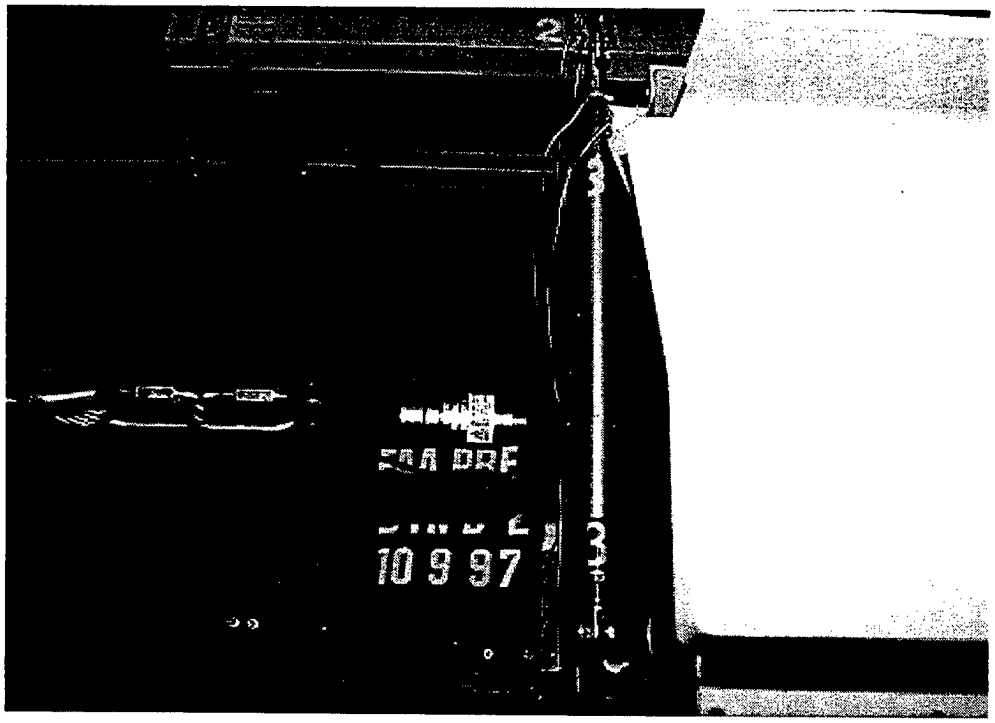


FIGURE C-67. PRETEST BIN B SUPPORTS 2 AND 3 SIDE VIEW

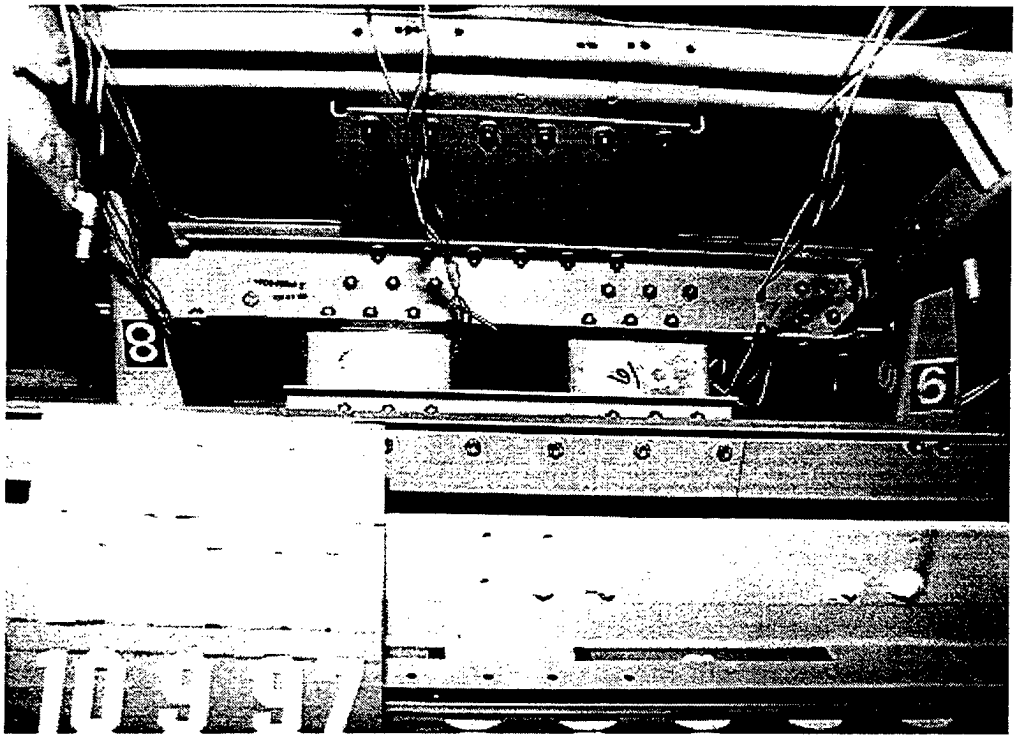


FIGURE C-68. PRE TEST BIN B SUPPORTS 5, 6, 8, AND 9 BOTTOM VIEW

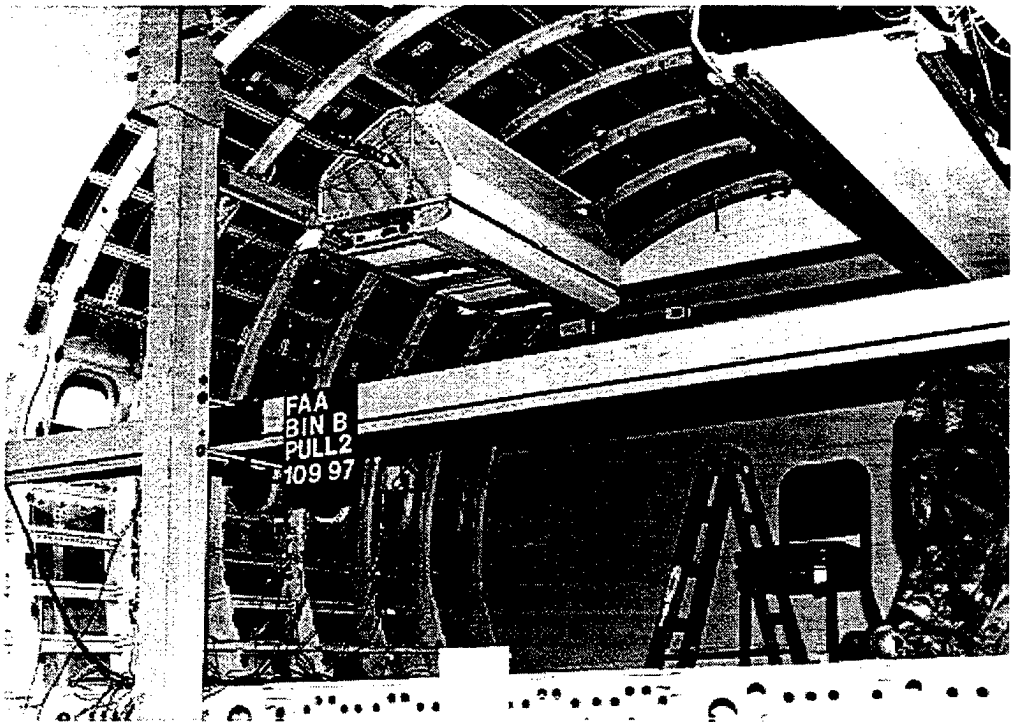


FIGURE C-69. POSTTEST BIN B AND TEST FIXTURE FRONT ANGLE OVERALL VIEW

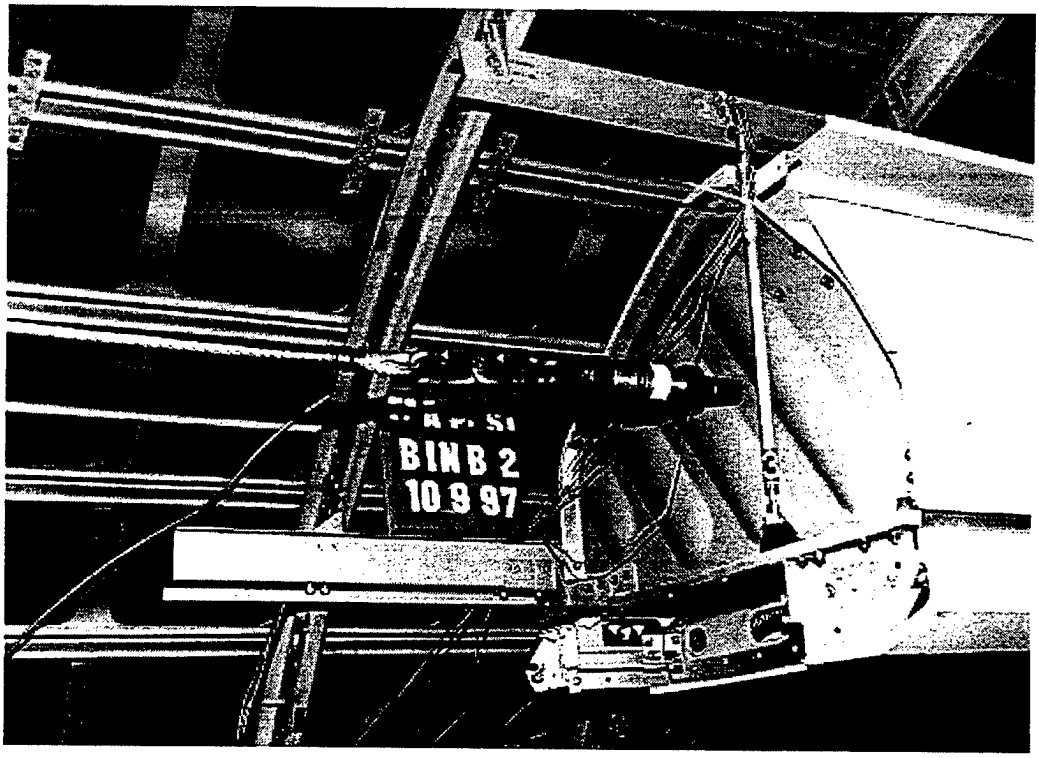


FIGURE C-70. POSTTEST BIN B FRONT ANGLE CLOSE VIEW

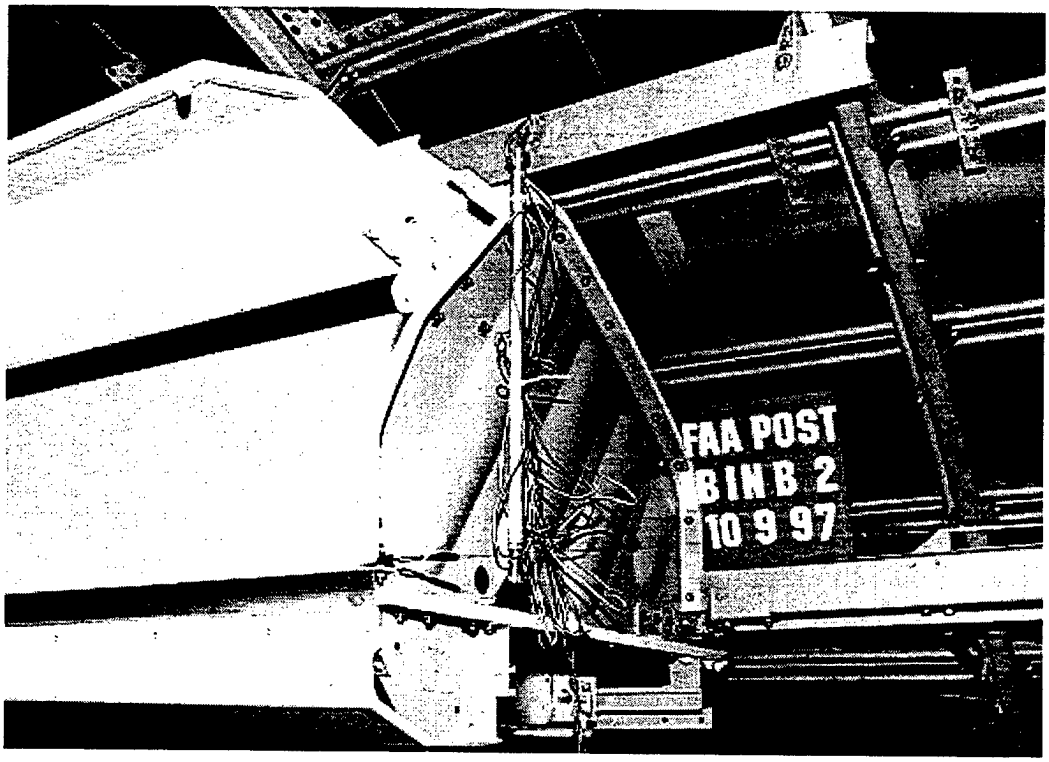


FIGURE C-71. POSTTEST BIN B REAR ANGLE CLOSE VIEW

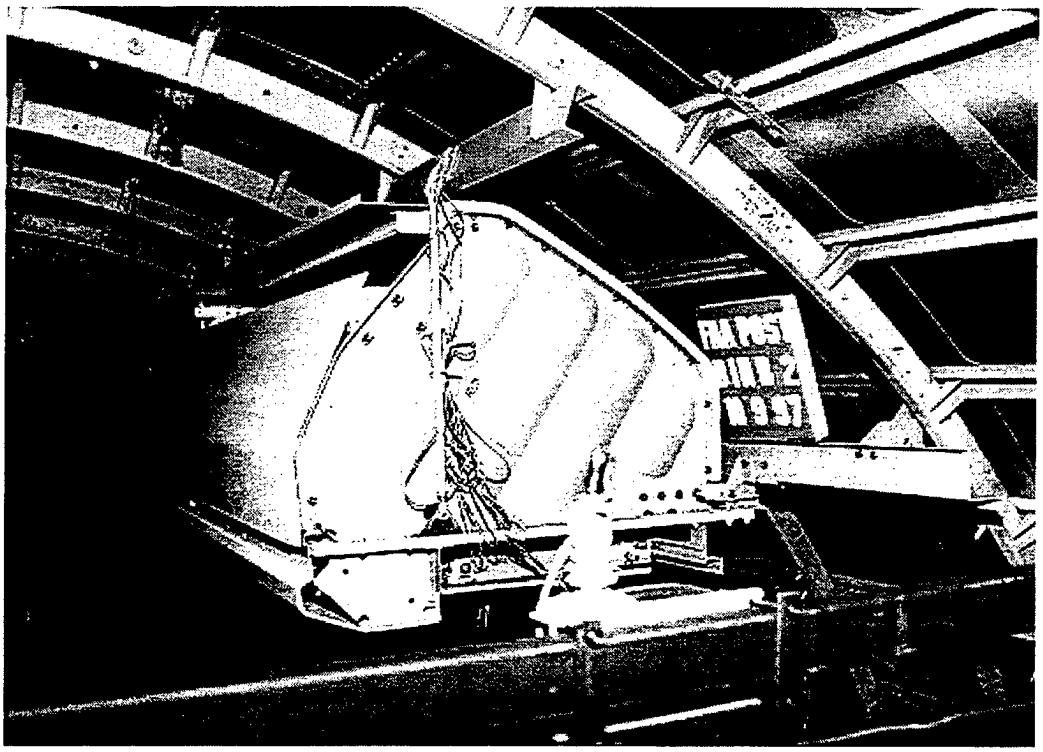


FIGURE C-72. POSTTEST BIN B REAR VIEW

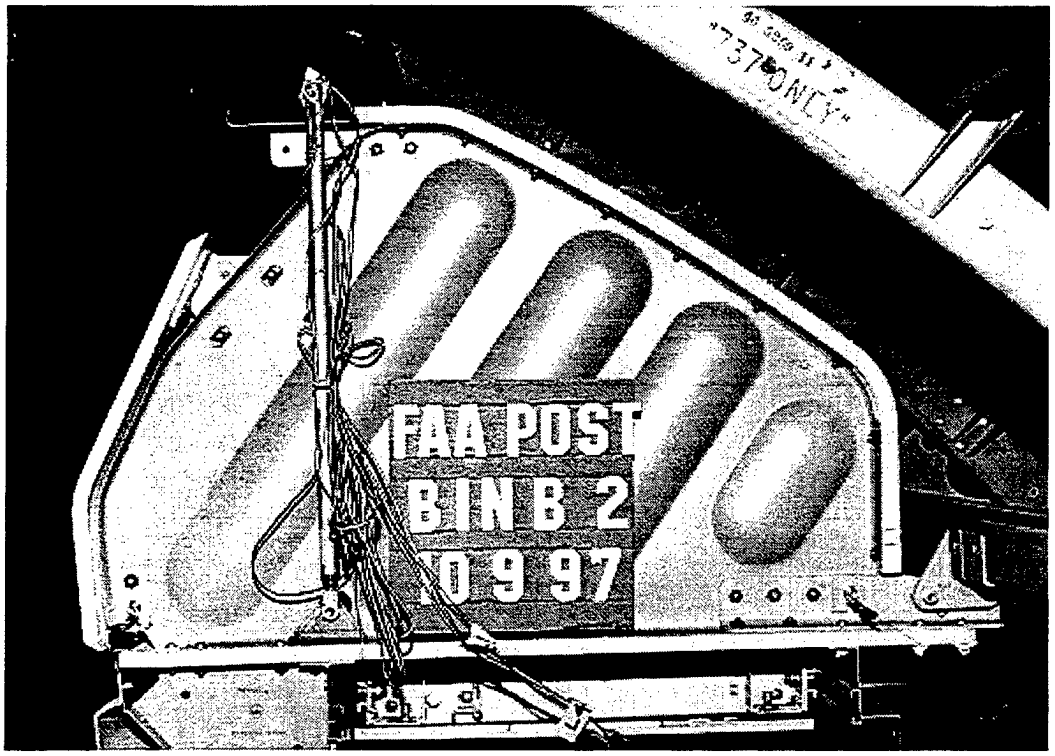


FIGURE C-73. POSTTEST BIN B REAR CLOSE VIEW

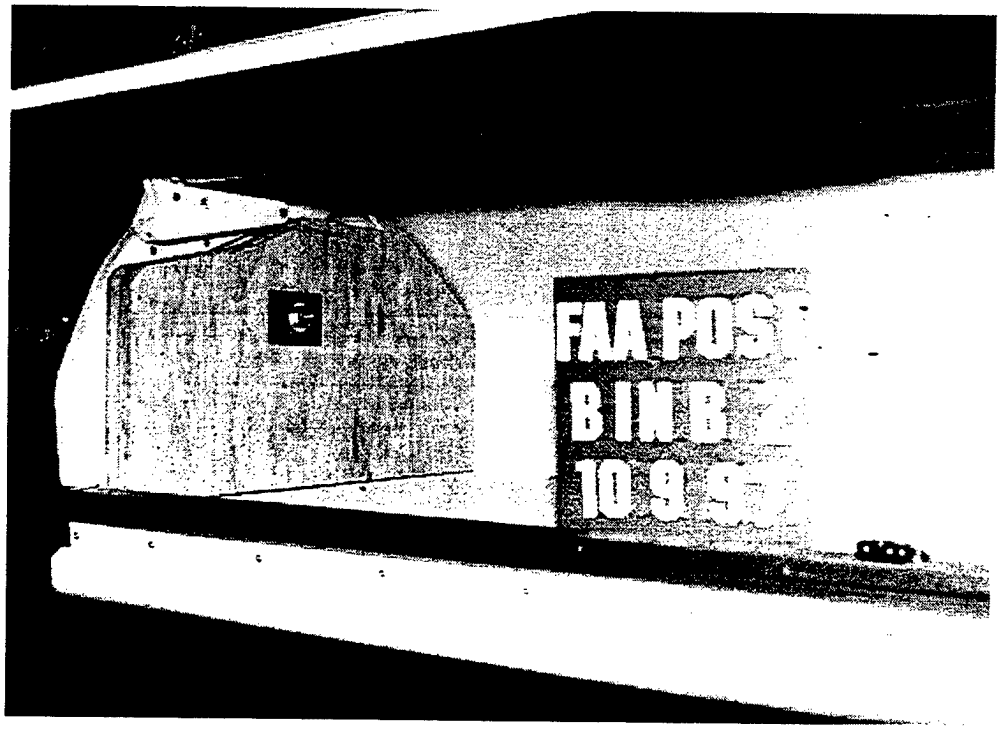


FIGURE C-74. POSTTEST BIN B THREADED ROD ATTACHMENT REAR ANGLE VIEW

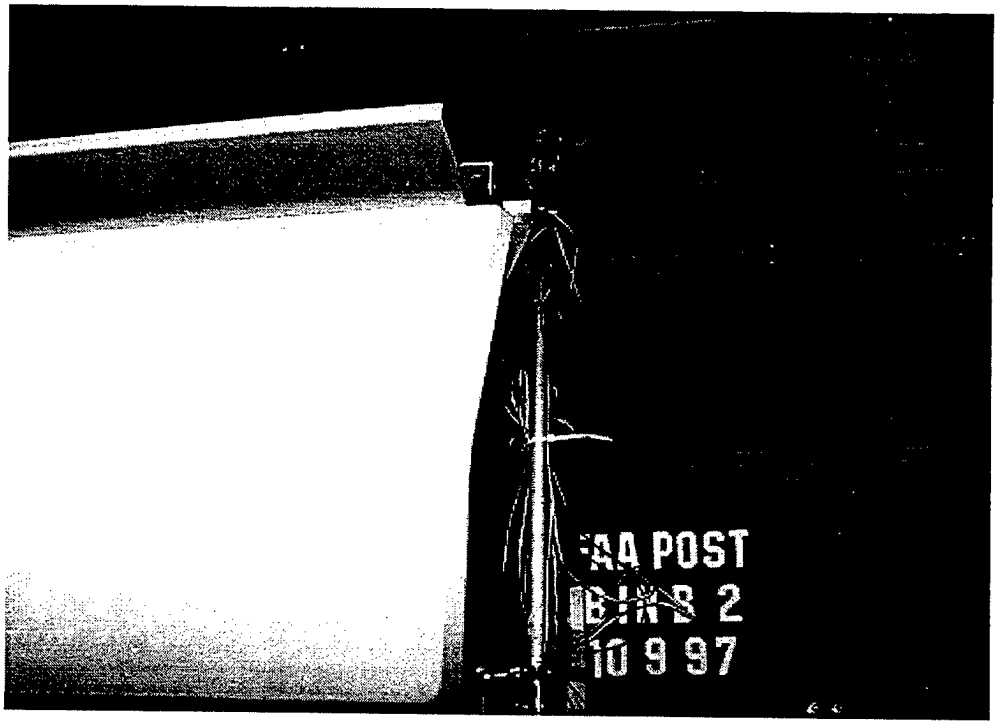


FIGURE C-75. POSTTEST BIN B SUPPORTS 1 AND 4 SIDE VIEW

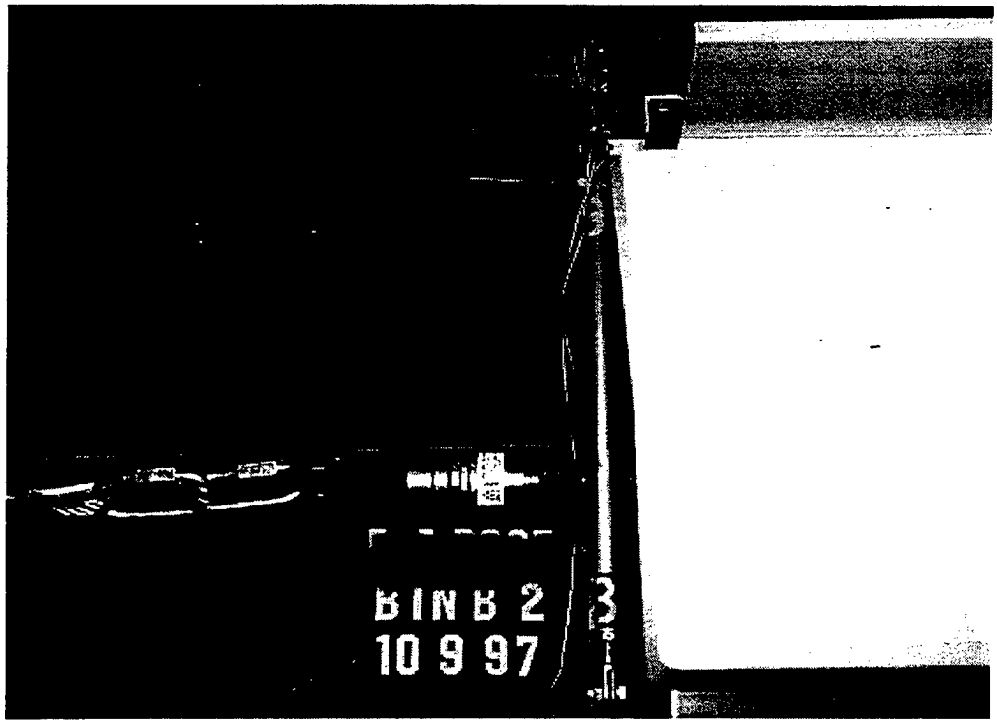


FIGURE C-76. POSTTEST BIN B SUPPORTS 2 AND 3 SIDE VIEW

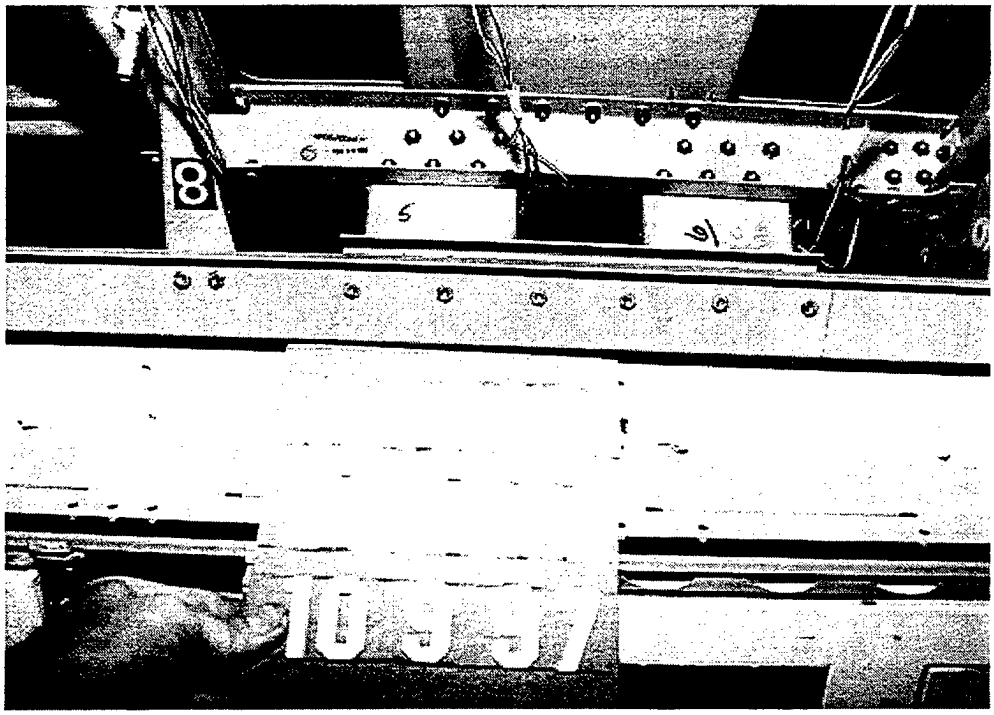


FIGURE C-77. POST TEST BIN B SUPPORTS 5, 6, 8, AND 9 BOTTOM VIEW



FIGURE C-78. POSTTEST BIN B SUPPORTS 7 AND 11 BOTTOM VIEW

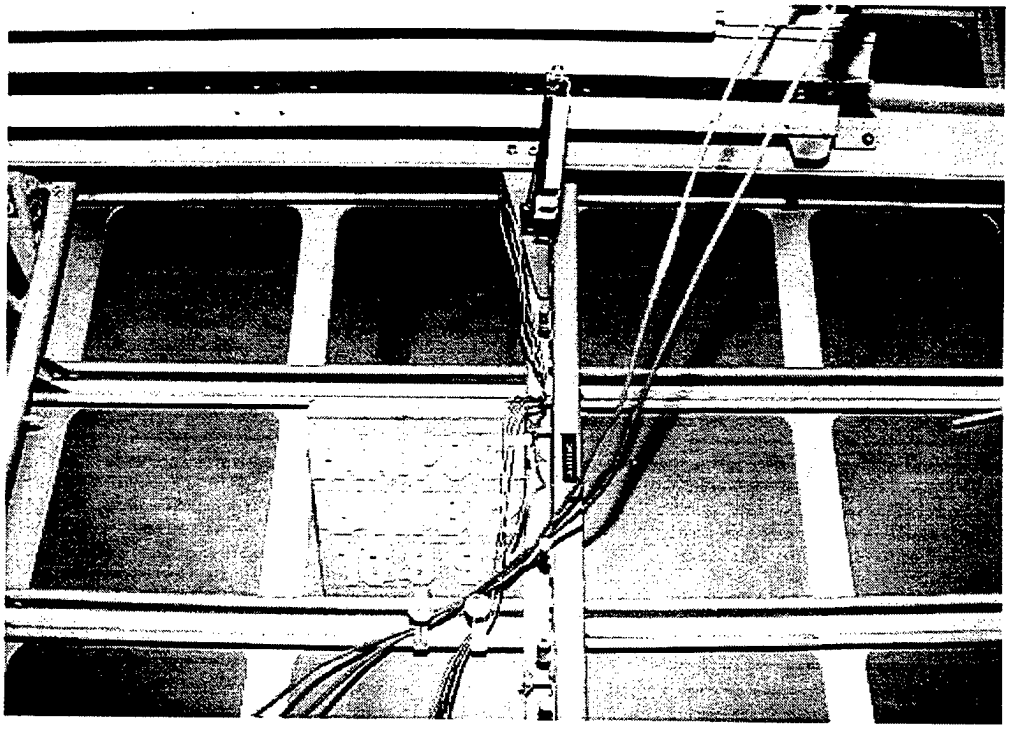


FIGURE C-79. POSTTEST BIN B SUPPORTS 7 AND 8 BOTTOM VIEW

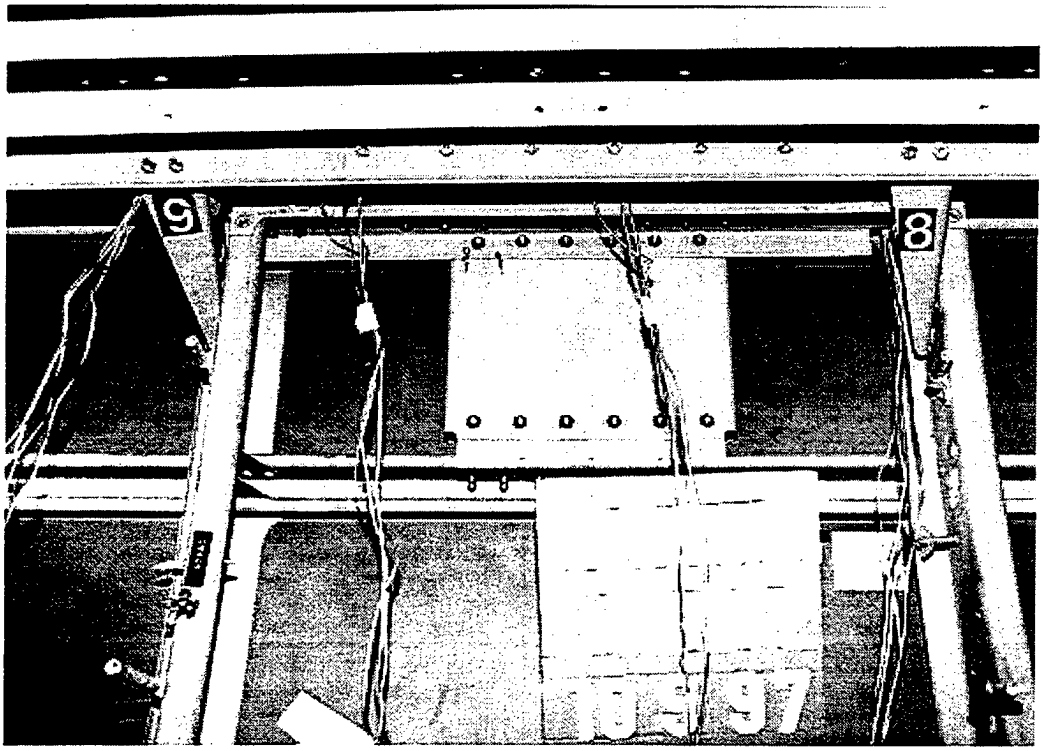


FIGURE C-80. POSTTEST BIN B SUPPORTS 8 AND 9 BOTTOM VIEW

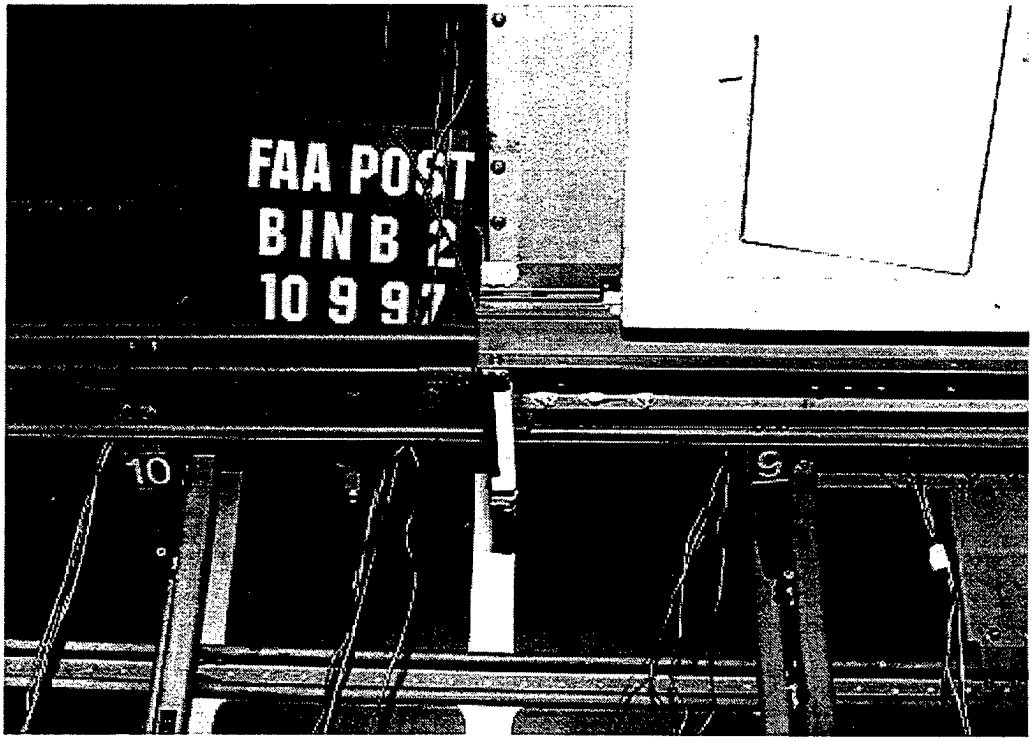


FIGURE C-81. POSTTEST BIN B SUPPORTS 9 AND 10 BOTTOM VIEW

TABLE C-1. ACCELEROMETER INFORMATION

Channel Mnemonic	Accel. Mfr.	Model Number	Serial Number	Sensitivity Mv/G	Cal. Date
SLDXG	ENDEVCO	7232C-750	CB51	.1997	8/19/97
F420XG	ENDEVCO	7264T-2000	J20036	.2706	10/13/97
F420YG	ENDEVCO	7264T-2000	J19728	.2476	11/7/97
F420ZG	ENDEVCO	7264T-2000	J19979	.3054	10/13/97
F500XG	ENDEVCO	7264T-2000	J15388	.2844	10/15/97
F500YG	ENDEVCO	7264T-2000	J19982	.2765	8/15/97
F500ZG	ENDEVCO	7264T-2000	J20009	.3038	8/15/97
T420XG	ENDEVCO	7264T-2000	J22167	.2783	11/13/97
T420YG	ENDEVCO	7264T-2000	J19116	.2303	11/7/97
T420ZG	ENDEVCO	7264T-2000	J20287	.2461	8/15/97
T500XG	ENDEVCO	7264T-2000	J22168	.2757	11/13/97
T500YG	ENDEVCO	7264T-2000	J22170	.2383	11/13/97
T500ZG	ENDEVCO	7264T-2000	J20440	.2612	11/13/97
L440XG	ENDEVCO	7264T-2000	J18844	.2766	11/13/97
L440YG	ENDEVCO	7264T-2000	J19309	.2256	9/11/97
L440ZG	ENDEVCO	7264T-2000	J22166	.2646	11/13/97
L480XG	ENDEVCO	7264T-2000	J20605	.2389	11/13/97
L480YG	ENDEVCO	7264T-2000	J20422	.2561	11/13/97
L480ZG	ENDEVCO	7264T-2000	J22080	.2334	11/13/97
R440XG	ENDEVCO	7264T-2000	J19951	.2637	8/15/97
R440YG	ENDEVCO	7264T-2000	AC721	.3290	6/12/97
R440ZG	ENDEVCO	7264T-2000	AHRYO	.2158	10/24/97
R480XG	ENDEVCO	7264T-2000	J19942	.2710	8/15/97
R480YG	ENDEVCO	7264T-2000	J15369	.3542	10/28/97
R480ZG	ENDEVCO	7264T-2000	J19697	.2265	6/16/97
BAFXG	ENDEVCO	7264T-2000	J22078	.2642	11/13/97
BAFYG	ENDEVCO	7264T-2000	J19976	.2859	8/15/97
BAFZG	ENDEVCO	7264T-2000	J20353	.2367	11/13/97
BACXG	ENDEVCO	7264T-2000	J20284	.3456	9/11/97
BACYG	ENDEVCO	7264T-2000	AGR85	.2458	9/16/97
BACZG	ENDEVCO	7264T-2000	J22093	.2836	11/13/97
BAAXG	ENDEVCO	7264T-2000	J22079	.2436	11/13/97

TABLE C-1. ACCELEROMETER INFORMATION (Continued)

Channel Mnemonic	Accel. Mfr.	Model Number	Serial Number	Sensitivity Mv/G	Cal. Date
BAAYG	ENDEVCO	7264T-2000	J22094	.2464	9/9/97
BAAZG	ENDEVCO	7264T-2000	J20348	.2359	10/14/97
BBFXG	ENDEVCO	7264T-2000	A24FJ	.2611	10/14/97
BBFYG	ENDEVCO	7264T-2000	J19498	.2445	10/13/97
BBFZG	ENDEVCO	7264T-2000	J19557	.2405	10/28/97
BBCXG	ENDEVCO	7264T-2000	J19943	.2426	8/15/97
BBCYG	ENDEVCO	7264T-2000	10288	.2321	9/11/97
BBAXG	ENDEVCO	7264T-2000	J20185	.2652	10/13/97
BBAYG	ENDEVCO	7264T-2000	J19629	.2543	8/15/97
BBAZG	ENDEVCO	7264T-2000	J14337	.2887	8/20/97
FTLXG	ENDEVCO	7264T-2000	J20363	.2617	11/13/97
FTLYG	ENDEVCO	7264T-2000	J22095	.2370	11/13/97
FTLZG	ENDEVCO	7264T-2000	ACB93	.2447	11/13/97
FTRXG	ENDEVCO	7264T-2000	J20218	.2502	11/13/97
FTRYG	ENDEVCO	7264T-2000	J22076	.2719	11/13/97
FTRZG	ENDEVCO	7264T-2000	J22210	.2769	11/13/97
FTTXG	ENDEVCO	7264T-2000	J22049	.2626	11/13/97

TABLE C-2. POTENTIOMETER INFORMATION

Channel Mnemonic	Pot. Mfr.	Model Number	Serial Number	Sensitivity Mv/V/In.	Cal. Date
AACIXD	CELESCO	PT101	A23305	16.28	7/22/97
AACOXD	CELESCO	PT101	A51807	18.95	7/22/97
RXDFAC	BOURNS	3 INCH	S12	333.0	7/22/97
BIXD	CELESCO	PT101	A51807	18.95	7/22/97
BOXD	CELESC0	PT101	A23305	16.28	7/22/97
BINAXD	CELESCO	PT101	A23305	16.28	7/22/97
BINBXD	CELESCO	PT101	A51807	18.95	7/22/97
FTXD	CELESCO	PT101	A35691	23.4	11/18/97

TABLE C-3. LOAD CELL INFORMATION

Channel Mnemonic	Load Cell Manufacturer	Model Number	Serial Number	Sensitivity Mv/V/Lb	Cal. Date
OBBPXF	Key Reference Load Cell	1315-101-06	166a	.00117/.00117	3/3/97-/ 9/26/97
AL75XF	DENTON	FAA/C&D	75	.001385	2/26/97
AL75YF	DENTON	FAA/C&D	75	.002389	2/26/97
AL75ZF	DENTON	FAA/C&D	75	-.001024	2/26/97
AL76XF	DENTON	FAA/C&D	76	.001342	2/26/97
AL76YF	DENTON	FAA/C&D	76	.002388	2/26/97
AL76ZF	DENTON	FAA/C&D	76	-.001022	2/26/97
AL78XF	DENTON	FAA/C&D	78	.001353	2/27/97
AL78YF	DENTON	FAA/C&D	78	.002381	2/27/97
AL78ZF	DENTON	FAA/C&D	78	-.001058	2/27/97
AU78XA	DENTON	FAA/A&B	78	.003529	2/25/97
AU78XB	DENTON	FAA/A&B	78	.002817	2/25/97
AU78ZC	M&M	NA	NA	NA	NA
AU78ZD	M&M	NA	NA	NA	NA
AU76XA	DENTON	FAA/A&B	76	.003584	2/25/97
AU76XB	DENTON	FAA/A&B	76	.002829	2/25/97
AU76ZC	M&M	NA	NA	NA	NA
AU76ZD	M&M	NA	NA	NA	NA
AU75XA	DENTON	FAA/A&B	75	.003546	2/25/97
AU75XB	DENTON	FAA/A&B	75	.002796	2/25/97
AU75ZC	M&M	NA	NA	NA	NA
AU75XD	M&M	NA	NA	NA	NA
B1ZF	FAA	HPD9700667	SUPPORT 1	.0012	9/15/97
B2ZF	FAA	HPD9700667	SUPPORT 2	.0013	9/15/97
B3ZF	FAA	HPD91103243	SUPPORT 3	.0009	9/15/97
B4ZF	FAA	HPD91103243	SUPPORT 4	.0008	9/15/97
B5XF	FAA	HPD570060159	SUPPORT 5	-.0013	9/15/97
B6XF	FAA	HPD570060159	SUPPORT 6	-.0014	9/15/97
B7YF1	FAA	HPD57004146	SUPPORT 7-1	.0015	NA
B7YF2	FAA	HPD57004146	SUPPORT 7-2	.0018	NA
B8YF1	FAA	HPD57004146	SUPPORT 8-1	.0014	NA
B8YF2	FAA	HPD57004146	SUPPORT 8-2	.0013	NA
B9YF1	FAA	HPD57004146	SUPPORT 9-1	-.0014	NA
B9YF2	FAA	HPD57004146	SUPPORT 9-2	-.0021	NA
B10YF1	FAA	HPD57004146	SUPPORT 10-1	-.0011	NA
B10YF2	FAA	HPD57004146	SUPPORT 10-2	-.0017	NA
B11YF1	FAA	HPD57004146	SUPPORT 11-1	.0014	NA
B11YF2	FAA	HPD57004146	SUPPORT 11-2	.0020	NA

STATIC CALIBRATION TESTS

A series of static overhead stowage bin pull tests were conducted on July 22, 1997, and October 9, 1997. The static test results were used to verify the expected loads on the instrumented bin attachment supports. Four tests were conducted as follows:

Bin A - Cal 1 was pulled on the forward face of the 120-inch bin at a maximum load of 1800 pounds. Data were recorded every 200 pounds up to 1800 pounds and every 400 pounds back to 0 pounds pull force. Data were recorded a total of fifteen points. High-density foam and plywood sections were placed inside of the forward panel to distribute the loading. No damage to the overhead stowage bin or attachment supports was observed.

Bin A - Cal 2 was pulled the same method as Bin A - Cal 1. No damage to the overhead stowage bin or attachment supports was observed. Both Bin A static pull tests were conducted on July 22, 1997.

Bin B - Cal 1 was pulled on the forward face of the 60-inch bin at a maximum load of 1000 pounds. Data were recorded every 200 pounds up to 1000 pounds and every 200 pounds back to 0 pounds pull force. Data were recorded at a total of eleven points. Plywood sections were placed inside of the forward panel to distribute the loading. No damage to the overhead stowage bin or attachment supports was observed.

Bin B - Cal 2 was pulled the same method as Bin B - Cal 1. No damage to the overhead stowage bin or attachment supports was observed. Both Bin B static pull tests were conducted on October 9, 1997.

INSTRUMENTATION

Bin A Cal - 1 and Cal - 2 had a total of twenty-eight channels of data recorded for each test. Instrumentation for both tests had one load cell, OBAPXF, to measure the pull force two string type potentiometers to measure the forward movement of the bin, and one linear potentiometer to measure the relative movement between the bin sections installed. In addition, each bin attachment support was instrumented with strain gages.

Bin B Cal - 1 and Cal - 2 had a total of nineteen channels of data recorded for each test. Instrumentation for both tests had one load cell, OBAPXF, to measure the pull force and two string type potentiometers to measure the forward movement of the bin. In addition, each bin attachment support was instrumented with strain gages.

RESULTS

Table C-3 contains the results of the four calibration tests. Following the table of data are figures of the calibration setup and tests.

TABLE C-4. OVERHEAD STOWAGE BIN CALIBRATION TEST RESULTS [TEST BIN A - CAL 1]

Mnemonic	Nominal Pull Force (lbs.) 0	200	400	600	800	1000	1200	1400	1600	1800	1400	1000	600	200	0
OBAPXF	0.00	197.6	395.2	590.6	786.8	982.1	1177.4	1370.7	1568.4	1762.2	1369.9	984.1	591.5	200.1	6.8
AL75XF	0.00	-39.63	-67.29	-86.56	-102.24	-111.84	-124.19	-151.14	-187.78	-227.27	-156.65	-89.45	-35.94	5.70	31.5
AL75YF	0.00	15.03	29.02	43.46	57.38	70.9	86.4	98.56	112.57	127.59	106.43	74.39	43.97	12.28	-2.73
AL75ZF	0.00	5.86	14.14	20.79	26.95	34.54	39.25	42.14	45.09	48.55	48.21	40.76	26.02	11.47	4.03
AL76XF	0.00	-28.26	-71.38	-120.31	-169.33	-211.18	-241.46	-270.63	-299.29	-327.74	-233.52	-136.63	-32.52	31.11	74.6
AL76YF	0.00	-3.76	-4.54	-5.05	-9.14	-15.75	-23.41	-28.88	-33.4	-36.71	-30.9	-22.89	-14.75	-9.06	-9.4
AL76ZF	0.00	-4.57	-8.22	-11.34	-15.39	-22.31	-29.92	-34.82	-38.06	-41.03	-37.57	-31.31	-21.72	-16.15	-16.8
AL78XF	0.00	-11.51	-23.18	.36.02	-49.24	-64.03	-80.81	-97.31	-113.78	-129.41	-103.59	-78.67	-53.5	-24.41	-11.3
AL78YF	0.00	-10.51	-22.69	-36.26	-48.07	-58.31	-68.04	-79.01	-91.63	-104.18	-73.72	-46.65	-22.06	2.46	17.2
AL78ZF	0.00	2.13	3.21	4.96	7.70	11.80	18.36	23.99	29.89	34.97	13.50	-1.65	-12.27	-18.4	-19.4
AU78XA	0.00	-7.04	-11.01	-14.16	-14.35	-8.15	0.06	7.72	13.41	18.3	22.9	30.69	41.45	46.4	51.4
AU78XB	0.00	-10.44	-18.63	-23.46	-25.79	-22.26	-21.56	-26.37	-33.96	-44.0	-50.66	-42.65	-17.43	4.29	29.1
AU78ZC**	0.00	-0.19	-0.33	-0.49	-0.63	-0.79	-0.93	-1.03	-1.10	-1.13	-0.97	-0.81	-0.54	-0.08	0.15
AU78ZD**	0.00	0.05	0.09	0.14	0.18	0.21	0.20	0.19	0.16	0.12	0.07	0.01	-0.05	-0.17	-0.20
AU76XA	0.00	73.74	147.65	219.67	291.44	368.26	450.12	523.83	596.33	667.12	550.25	429.03	298.7	142.9	70.9
AU76XB	0.00	74.98	148.97	218.13	283.84	350.61	416.42	475.51	533.75	590.36	478.73	361.19	231.93	74.41	2.25
AU76ZC**	0.00	-0.02	-0.01	0.06	0.17	0.31	0.48	0.66	0.82	0.98	0.63	0.32	0.10	-0.01	-0.03
AU76ZD**	0.00	-0.03	-0.03	-0.05	-0.06	-0.06	-0.06	-0.05	-0.04	-0.03	-0.10	-0.14	-0.16	-0.16	-0.14
AU75XA	0.00	14.8	32.81	49.77	67.52	85.68	101.94	119.76	137.82	156.45	121.77	86.01	48.66	10.27	-7.58
AU75XB	0.00	39.7	83.05	128.32	177.14	233.77	293.26	343.53	390.83	435.97	369.84	302.57	228.13	123.4	81.3
AU75ZC**	0.00	0.00	0.01	-0.03	-0.09	-0.14	-0.15	-0.15	-0.11	-0.07	-0.04	-0.02	-0.03	-0.13	-0.16
AU75ZD**	0.00	0.01	0.02	0.04	0.06	0.07	0.05	0.04	0.03	0.02	-0.03	-0.07	-0.11	-0.1	-0.11
AACIXD*	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.33	0.38	0.43	0.36	0.28	0.21	0.1	0.05
AACOXD*	0.00	0.01	0.06	0.08	0.12	0.17	0.21	0.25	0.28	0.35	0.29	0.24	0.18	0.10	0.06
RXDFAC*	0.00	-0.01	-0.03	-0.04	-0.06	-0.07	-0.08	-0.10	-0.12	-0.14	-0.13	-0.10	-0.07	-0.04	-0.04

Force in Pounds / *Inch / **Millivolt

TABLE C-4. OVERHEAD STOWAGE BIN CALIBRATION TEST RESULTS, Continued, [TEST BIN A - CAL 2]

Mnemonic	Nominal Pull Force (lbs.) 0	200	400	600	800	1000	1200	1400	1600	1800	1400	1000	600	200	0
OBAPXF	0.00	197.04	393.7	591.01	784.93	981.27	1177.72	1373.6	1568.79	1761.76	1373.75	982.77	591.12	199.88	1.06
AL75XF	0.00	-33.62	-44.97	-85.94	-107.98	-129.36	-155.3	-187.05	-220.17	-255.99	-185.75	-116.69	-65.35	-24.57	2.51
AL75YF	0.00	14.61	29.26	46.49	61.34	73.72	86.25	100.55	114.71	128.83	109.08	77.58	48.12	16.3	0.88
AL75ZF	0.00	7.49	13.78	18.61	26.76	34.3	38.44	40.84	43.69	47.05	47.13	39.46	24.11	9.81	1.67
AL76XF	0.00	-56.09	-97.8	-115.63	-172.23	-228.29	-280.21	-326.31	-366.77	-397.5	-304.81	-206.92	-102.06	-39.5	3.0
AL76YF	0.00	-1.62	-3.29	-2.75	-7.64	-12.09	-16.19	-20.60	-25.01	-28.74	-22.80	-14.69	-5.91	-0.07	0.75
AL76ZF	0.00	0.45	-3.12	-3.45	-6.3	-9.62	-12.96	-16.30	-19.57	-23.03	-20.58	-14.32	-5.48	-0.38	-1.28
AL78XF	0.00	-9.74	-23.70	-38.65	-50.17	-62.92	-75.92	-89.19	-102.74	-117.63	-91.98	-66.61	-41.34	-11.75	1.09
AL78YF	0.00	-12.98	-26.61	-43.46	-55.06	-66.86	-79.25	-97.86	-104.82	-118.38	-88.68	-61.80	-37.62	-13.17	1.07
AL78ZF	0.00	-6.74	-12.3	-17.07	-21.32	-25.98	-31.57	-37.41	-43.90	-50.48	-29.45	-13.92	-3.83	2.56	3.37
AU78XA	0.00	-12.52	-16.21	-20.33	-26.22	-31.12	-36.42	-40.73	-43.34	-40.94	-34.84	-27.90	-17.44	-10.23	-3.61
AU78XB	0.00	-24.59	-31.26	-36.22	-48.36	-58.34	-67.79	-76.27	-83.45	-87.39	-92.52	-84.43	-60.21	-37.13	-11.9
AU78ZC**	0.00	-0.16	-0.37	-0.59	-0.75	-0.88	-1.04	-1.18	-1.3	-1.4	-1.23	-1.05	-0.78	-0.29	-0.05
AU78ZD**	0.00	0.03	0.09	0.17	0.20	0.24	0.28	0.30	0.31	0.28	0.23	0.19	0.12	0.00	-0.04
AU76XA	0.00	64.46	142.63	217.02	281.53	347.09	411.63	475.66	539.56	602.64	487.22	365.52	235.58	81.28	7.30
AU76XB	0.00	70.66	153.95	230.29	294.45	357.74	418.72	477.72	536.23	595.66	485.54	366.75	235.96	75.61	-1.99
AU76ZC**	0.00	-0.01	0.00	0.06	0.15	0.28	0.44	0.63	0.82	1.00	0.66	0.34	0.12	0.01	0.00
AU76ZD**	0.00	-0.02	-0.03	-0.02	-0.01	0.01	0.02	0.04	0.07	0.09	0.02	-0.02	-0.04	-0.03	-0.01
AU75XA	0.00	16.58	35.22	52.34	68.97	86.22	104.08	122.72	141.54	160.90	126.86	90.29	52.38	14.13	-3.96
AU75XB	0.00	34.14	84.46	134.32	171.02	208.27	245.53	282.70	321.58	364.64	299.71	232.47	157.44	51.70	5.94
AU75ZC**	0.00	-0.01	0.01	0.04	0.03	0.03	0.03	0.03	0.06	0.14	0.16	0.18	0.17	0.08	0.06
AU75ZD**	0.00	0.04	0.05	0.04	0.06	0.08	0.10	0.11	0.12	0.11	0.07	0.03	-0.01	-0.11	-0.01
AACIXD*	0.00	0.05	0.09	0.14	0.18	0.21	0.27	0.30	0.34	0.39	0.32	0.24	0.17	0.07	0.01
AACOXD*	0.00	0.01	0.05	0.09	0.11	0.15	0.18	0.21	0.24	0.29	0.24	0.18	0.12	0.04	0.00
RXDFAC*	0.00	-0.01	-0.03	-0.04	-0.06	-0.07	-0.09	-0.010	-0.12	-0.13	-0.12	-0.09	-0.06	-0.03	-0.01

Force in Pounds / *Inch / **Millivolt

TABLE C-4. OVERHEAD STOWAGE BIN CALIBRATION TEST RESULTS, Continued, [TEST BIN B - CAL 1]

Mnemonic	Nominal Pull Force (lbs.) 0	200	400	600	800	1000	800	600	400	200	0
OBBPXF	0.00	195.72	391.83	587.75	783.31	981.13	782.08	589.12	392.27	196.35	11.53
B1ZF	0.00	-2.54	-2.80	-7.30	-10.52	-14.98	-8.87	-3.64	-1.95	-3.18	-3.66
B2ZF	0.00	-6.63	-12.04	-13.59	-24.03	-36.47	-29.39	-19.86	-15.06	-9.69	-6.22
B3ZF	0.00	0.17	-6.91	-9.31	-3.24	-50.73	-83.27	-70.96	-42.78	-40.31	-33.63
B4ZF	0.00	-0.12	-0.03	-2.13	-4.42	-13.09	-8.43	-4.24	-2.49	-2.61	-3.31
B5XF	0.00	93.48	190.88	290.26	385.16	481.55	393.05	305.17	209.61	111.23	17.43
B6XF	0.00	83.26	167.38	250.58	328.89	408.45	328.69	249.96	165.16	79.08	-1.93
B7YF1	0.00	8.33	17.04	26.40	34.26	46.10	31.92	21.58	10.59	-0.08	-8.62
B7YF2	0.00	-22.74	-45.80	-68.70	-90.87	-115.16	-91.55	-69.82	-47.00	-23.49	-1.49
B8YF1	0.00	-9.75	-16.97	-22.75	-25.47	-22.73	-13.59	-4.59	4.57	13.55	21.35
B8YF2	0.00	-18.44	-36.28	-53.20	-69.22	-84.56	-66.18	-48.90	-31.99	-15.23	0.34
B9YF1	0.00	31.02	62.42	92.45	120.28	146.14	119.17	92.16	62.41	30.43	-0.33
B9YF2	0.00	-2.06	-4.30	-6.79	-9.71	-13.42	-10.31	-73.8	-4.52	-1.66	0.96
B10YF1	0.00	80.17	158.23	227.54	280.54	313.36	245.06	177.50	106.66	35.83	-26.92
B10YF2	0.00	15.99	31.72	48.65	67.36	91.79	78.71	65.36	49.48	31.40	11.57
B11YF1	0.00	-5.00	-9.13	-13.88	-20.44	-28.75	-21.73	-14.56	-9.39	-4.92	-0.21
B11YF2	0.00	-26.63	-53.41	-79.24	-104.30	-129.07	-105.91	-83.77	-57.97	-30.85	-4.78
BIXD*	0.00	0.02	0.04	0.06	0.09	0.12	0.11	0.09	0.06	0.04	0.01
BOXD*	0.00	0.01	0.03	0.04	0.06	0.07	0.07	0.05	0.04	0.03	0.01

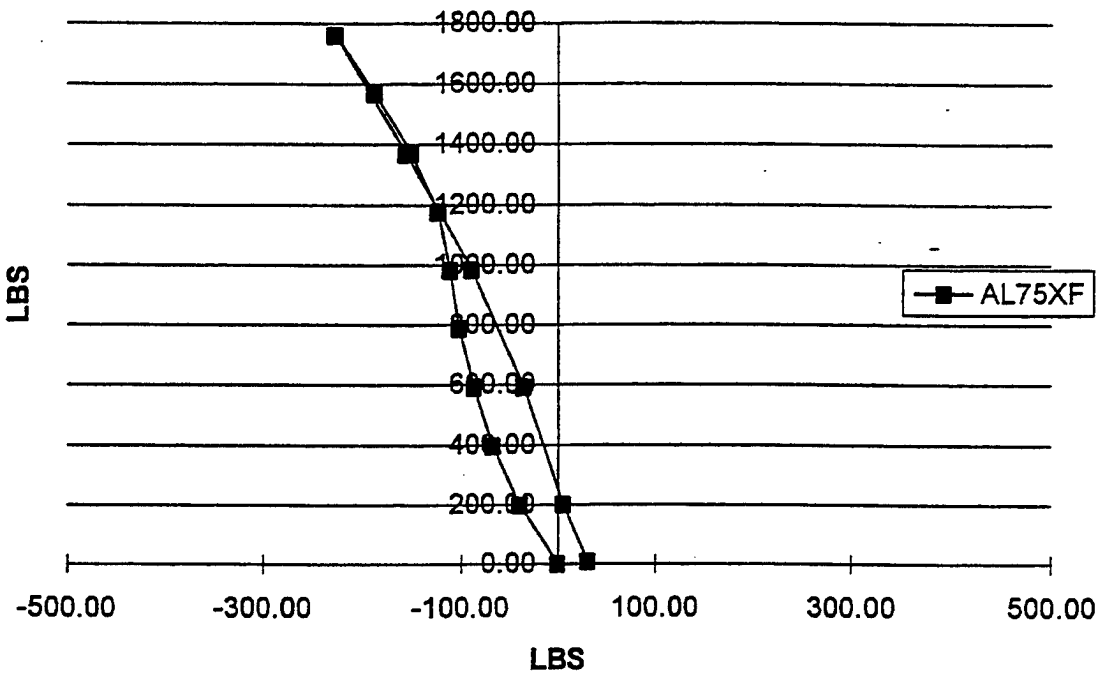
Force in Pounds / *Inch / **Millivolt

TABLE C-4. OVERHEAD STOWAGE BIN CALIBRATION TEST RESULTS, Continued, [TEST BIN B - CAL 2]

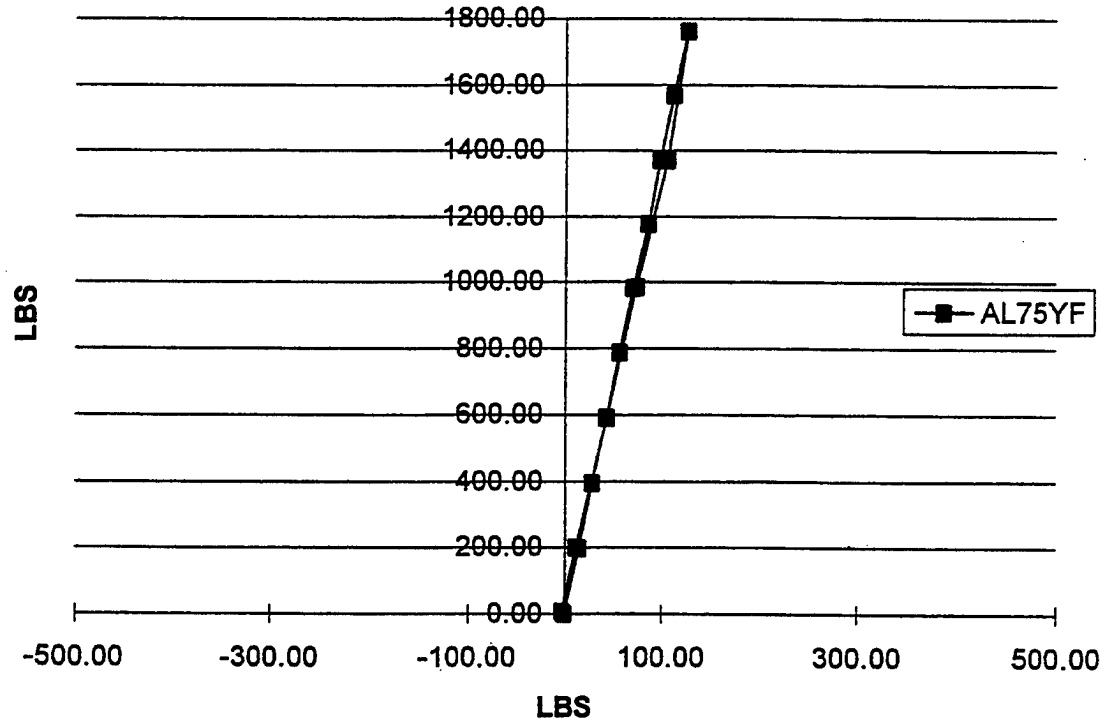
	Nominal Pull Force (lbs.)										
Mnemonic	0	200	400	600	800	1000	800	600	400	200	0
OBBPXF	0.00	196.33	391.99	587.52	785.75	980.41	782.95	588.17	393.41	199.12	-7.29
B1ZF	0.00	-3.47	-2.81	-4.82	-9.96	-14.93	-9.40	-4.02	-2.28	-3.27	-3.51
B2ZF	0.00	-6.25	-12.09	-15.79	-25.60	-36.94	-30.33	-20.16	-14.92	-9.11	-4.48
B3ZF	0.00	-5.40	-10.13	-1.75	5.88	-47.86	-76.25	-58.06	-12.08	-10.6	-3.69
B4ZF	0.00	-2.43	-1.61	-2.79	-6.27	-9.83	-5.53	-2.16	-0.30	-0.58	-0.35
B5XF	0.00	91.66	187.27	285.08	377.02	469.12	381.58	293.08	199.45	101.71	-2.65
B6XF	0.00	82.96	168.85	254.93	334.50	413.26	333.89	254.70	171.60	85.97	-3.90
B7YF1	0.00	7.70	18.99	28.88	37.28	52.24	37.72	26.28	15.73	6.02	7.52
B7YF2	0.00	-23.17	-45.97	-69.57	-91.71	-116.46	-92.94	-70.73	-48.29	-24.93	1.42
B8YF1	0.00	-10.01	-19.47	-28.81	-37.81	-44.74	-35.16	-25.88	-16.72	-7.77	1.42
B8YF2	0.00	-18.40	-35.92	-53.23	-69.28	-85.11	-66.41	-49.25	-32.43	-15.82	1.90
B9YF1	0.00	31.14	62.79	93.90	120.60	147.13	120.42	93.41	64.60	32.71	-1.20
B9YF2	0.00	-2.10	-4.45	-7.61	-11.29	-15.14	-12.27	-9.25	-6.36	-3.52	1.18
B10YF1	0.00	81.25	157.62	228.11	286.70	339.38	270.45	202.59	134.11	64.73	-7.01
B10YF2	0.00	16.90	32.33	48.94	64.71	81.71	69.50	56.11	40.41	22.05	1.12
B11YF1	0.00	-5.46	-9.00	-13.93	-21.28	-29.09	-22.87	-16.25	-11.16	-6.85	-0.46
B11YF2	0.00	-26.10	-52.18	-78.40	-102.54	+126.37	-103.64	-81.36	-56.37	-29.42	0.49
BIXD*	0.00	0.00	0.03	0.05	0.08	0.10	0.10	0.07	0.05	0.02	0.00
BOXD*	0.00	0.01	0.02	0.04	0.05	0.06	0.06	0.05	0.03	0.02	0.00

Force in Pounds / *Inch / **Millivolt

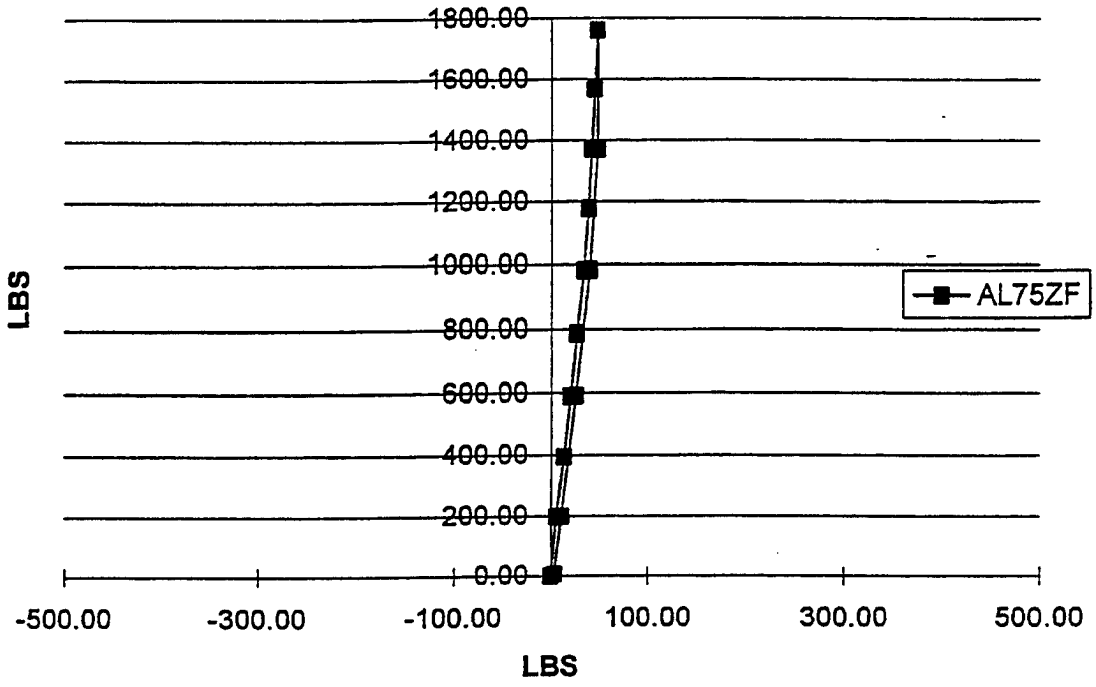
BIN A / CAL 1 LOWER FRONT SUPPORT / LONGITUDINAL FORCE



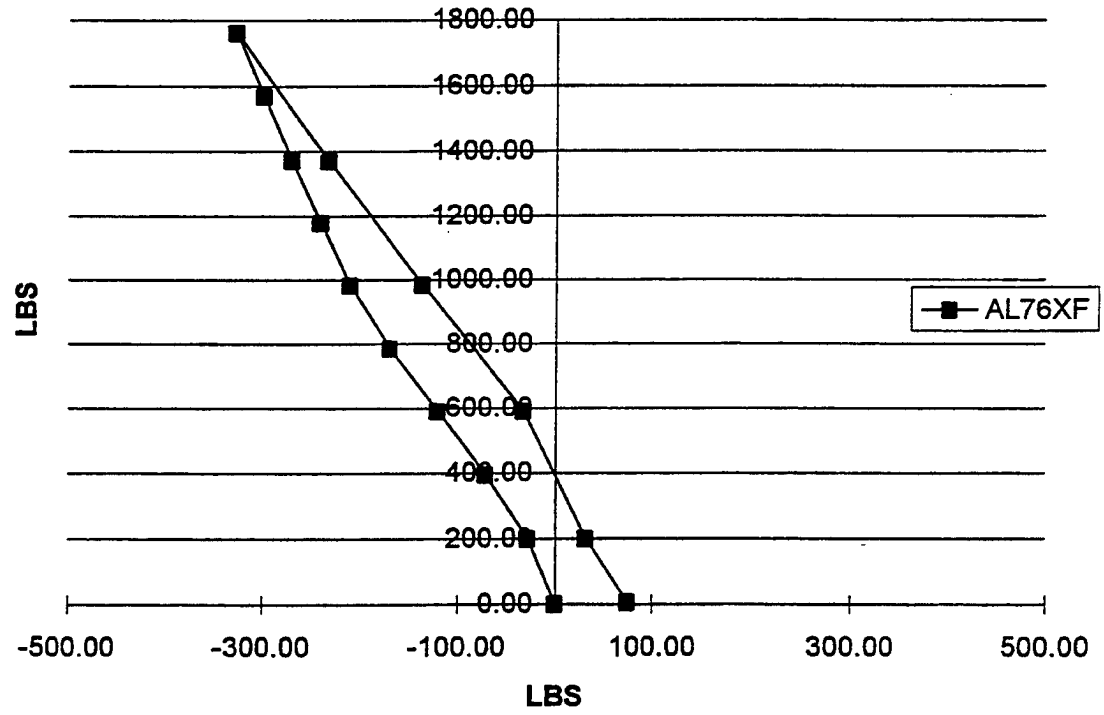
BIN A / CAL 1 LOWER FRONT SUPPORT / LATERAL FORCE



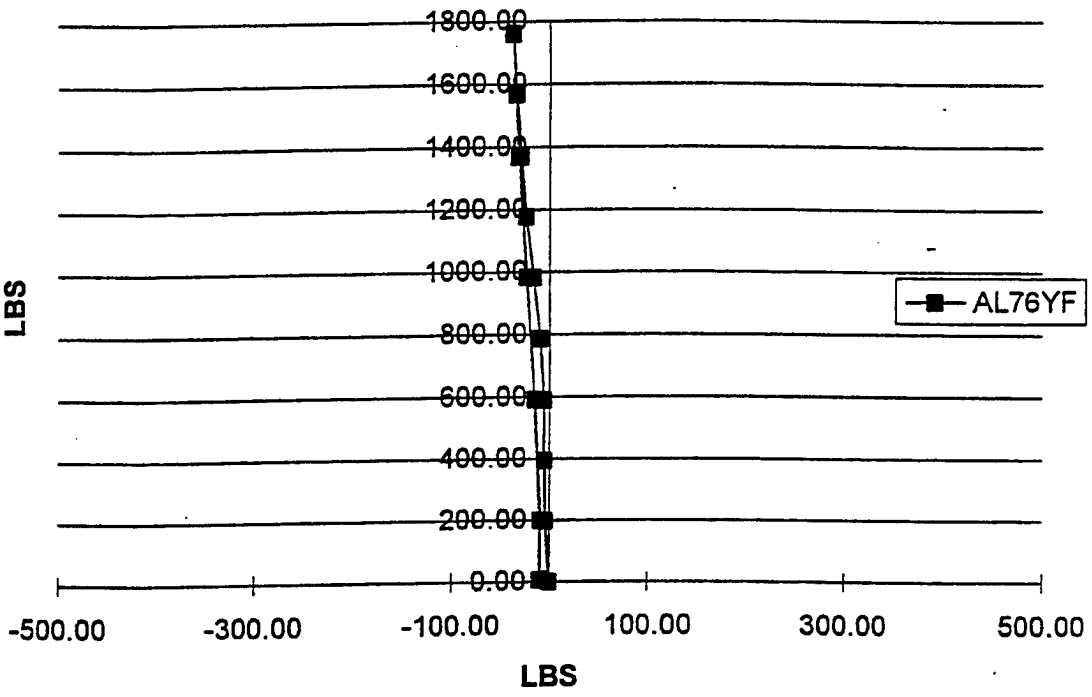
BIN A / CAL 1 LOWER FRONT SUPPORT / VERTICAL FORCE



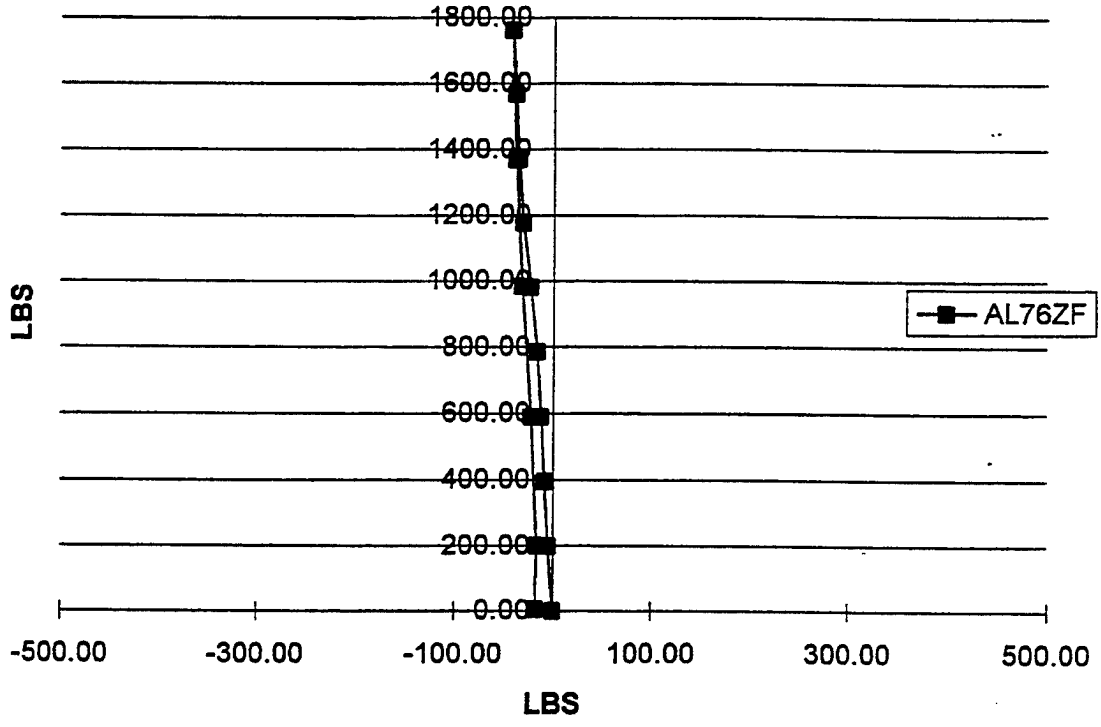
BIN A / CAL 1 LOWER MID SUPPORT / LONGITUDINAL FORCE



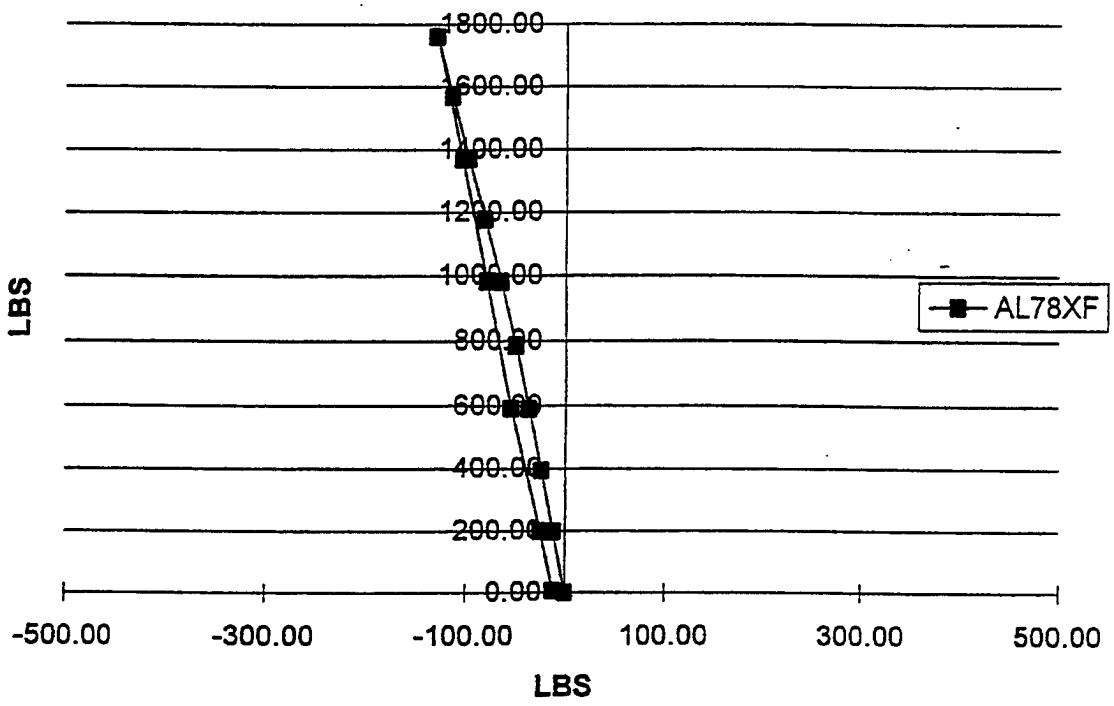
BIN A / CAL 1 LOWER MID SUPPORT / LATERAL FORCE



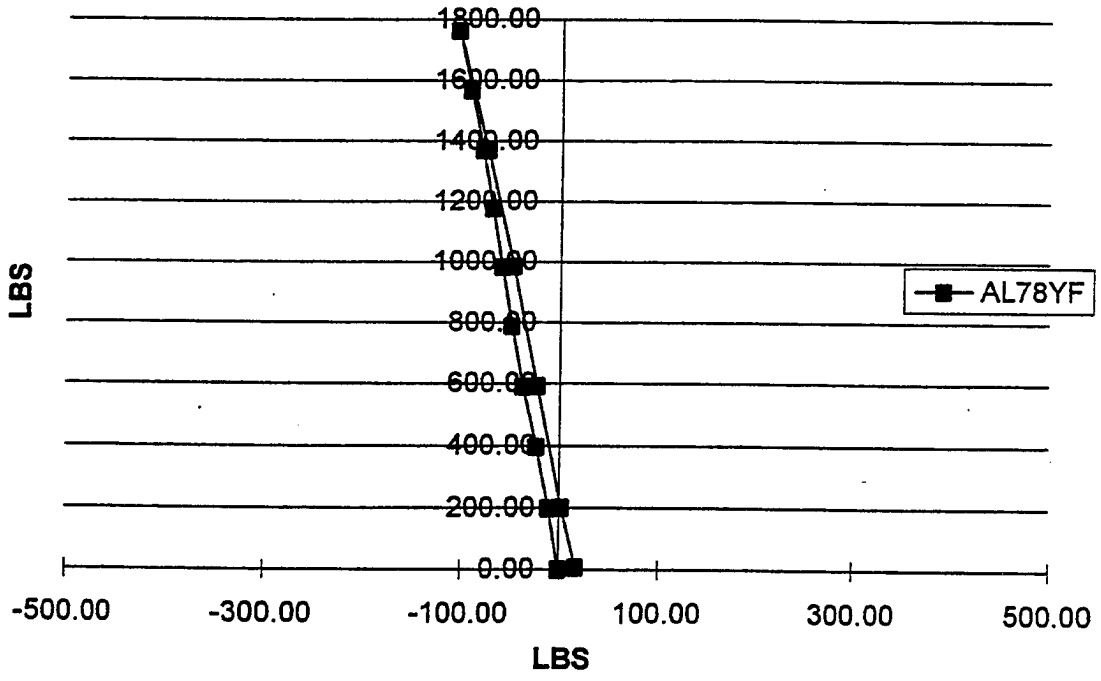
BIN A / CAL 1 LOWER MID SUPPORT / VERTICAL FORCE



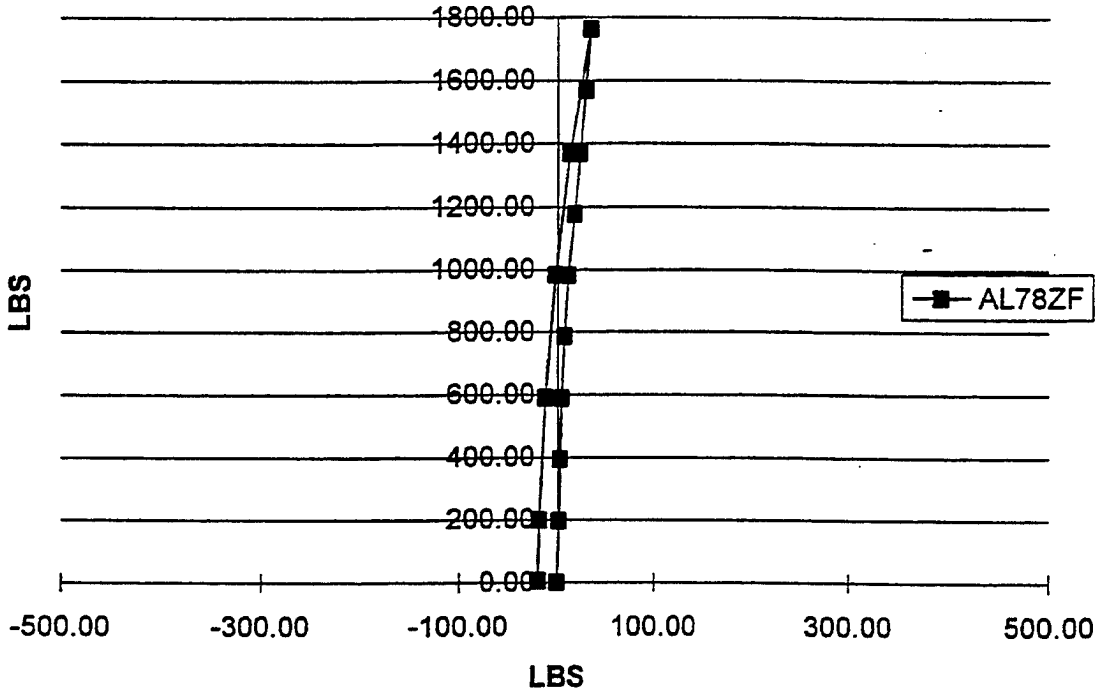
BIN A / CAL 1 LOWER AFT SUPPORT / LONGITUDINAL FORCE



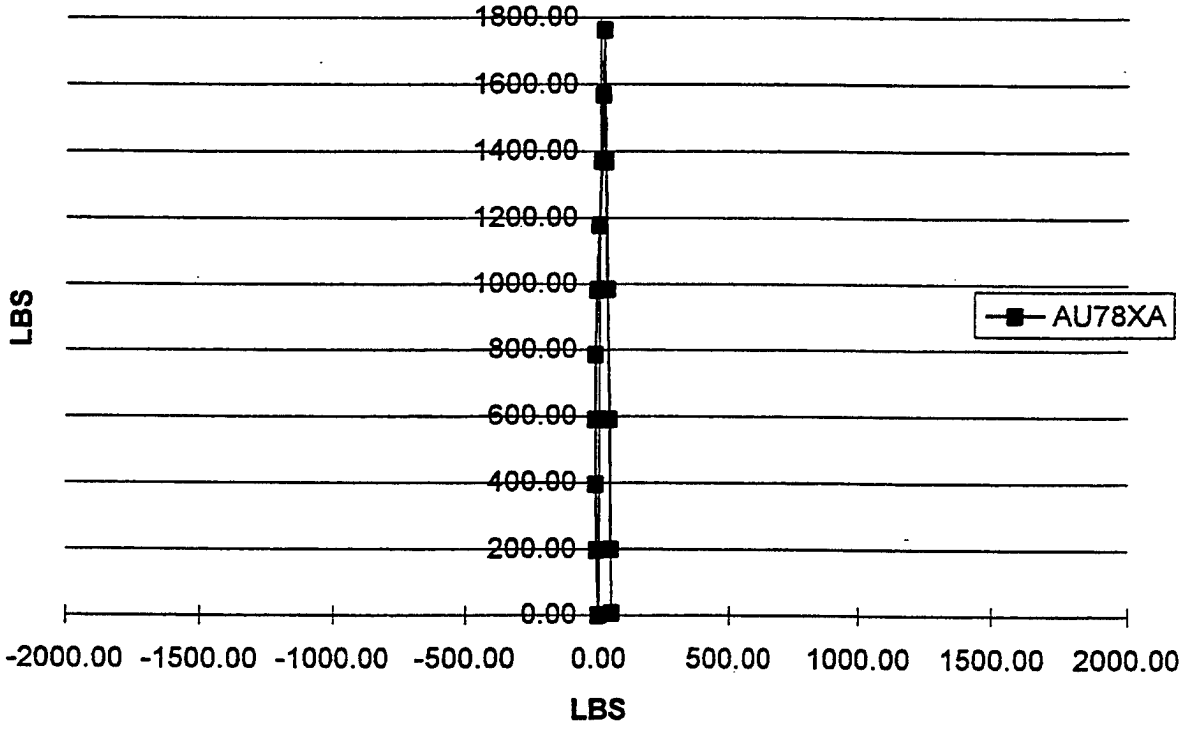
BIN A / CAL 1 LOWER AFT SUPPORT / LATERAL FORCE



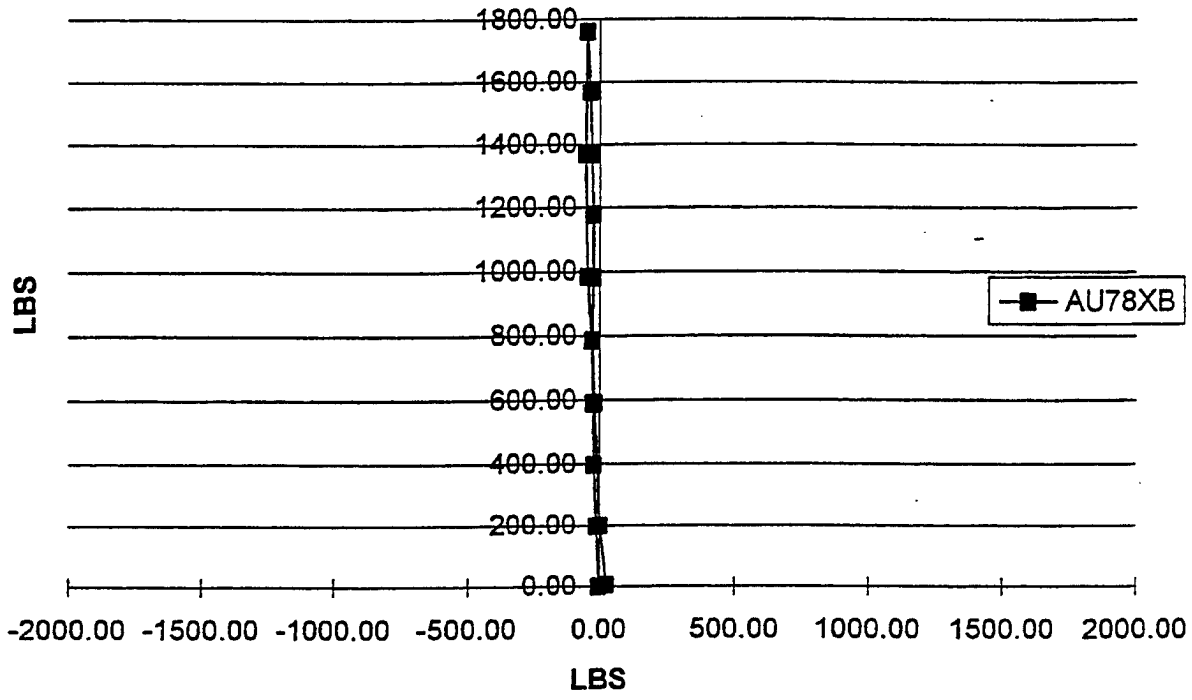
BIN A / CAL 1 LOWER AFT SUPPORT / INNER VERTICAL FORCE



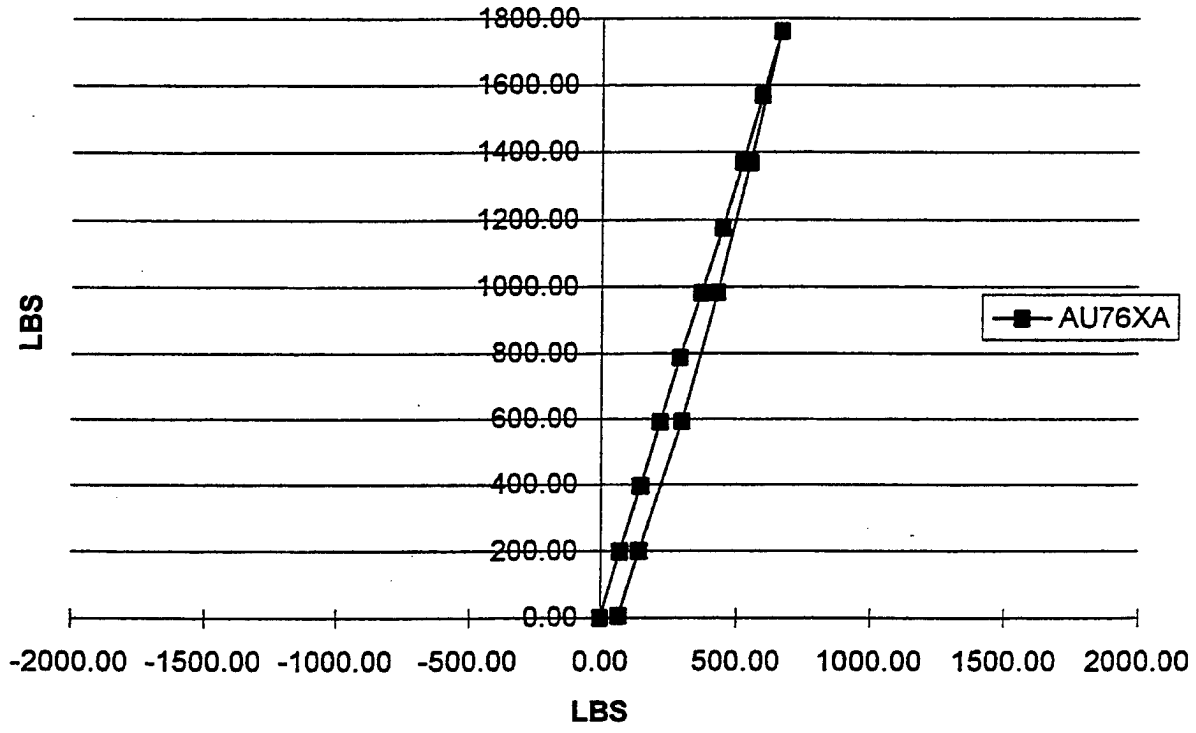
BIN A / CAL 1 UPPER FRONT SUPPORT / INNER LONGITUDINAL FORCE



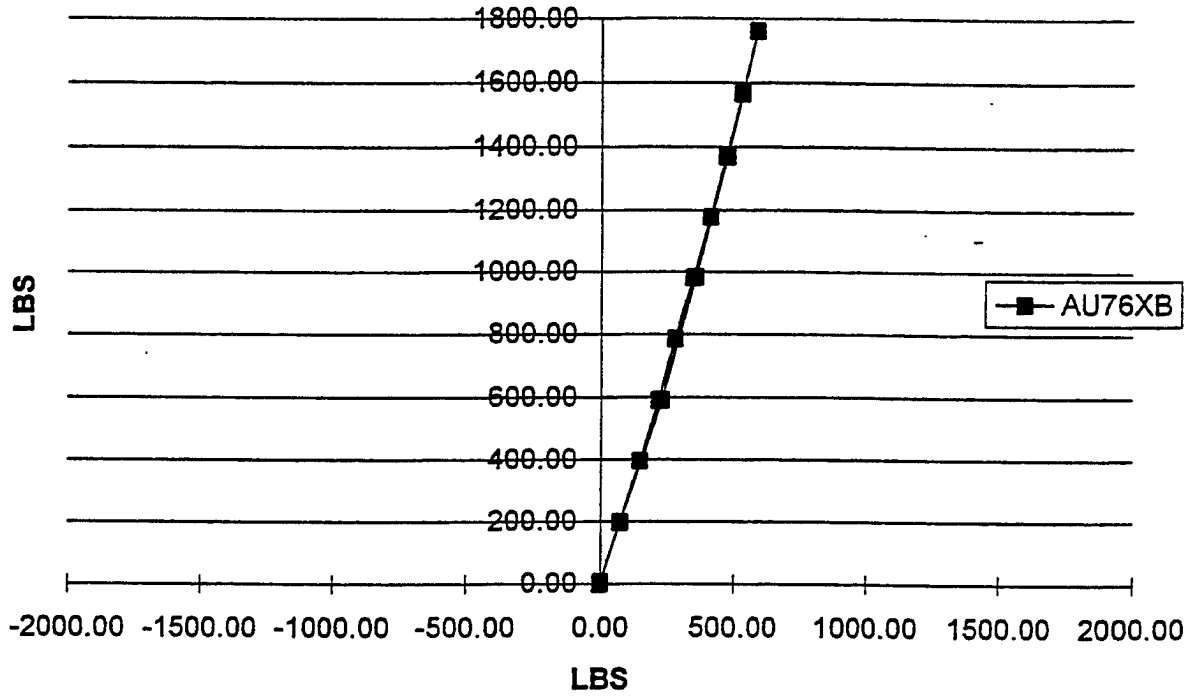
BIN A / CAL 1 UPPER FRONT SUPPORT / OUTER LONGITUDINAL FORCE



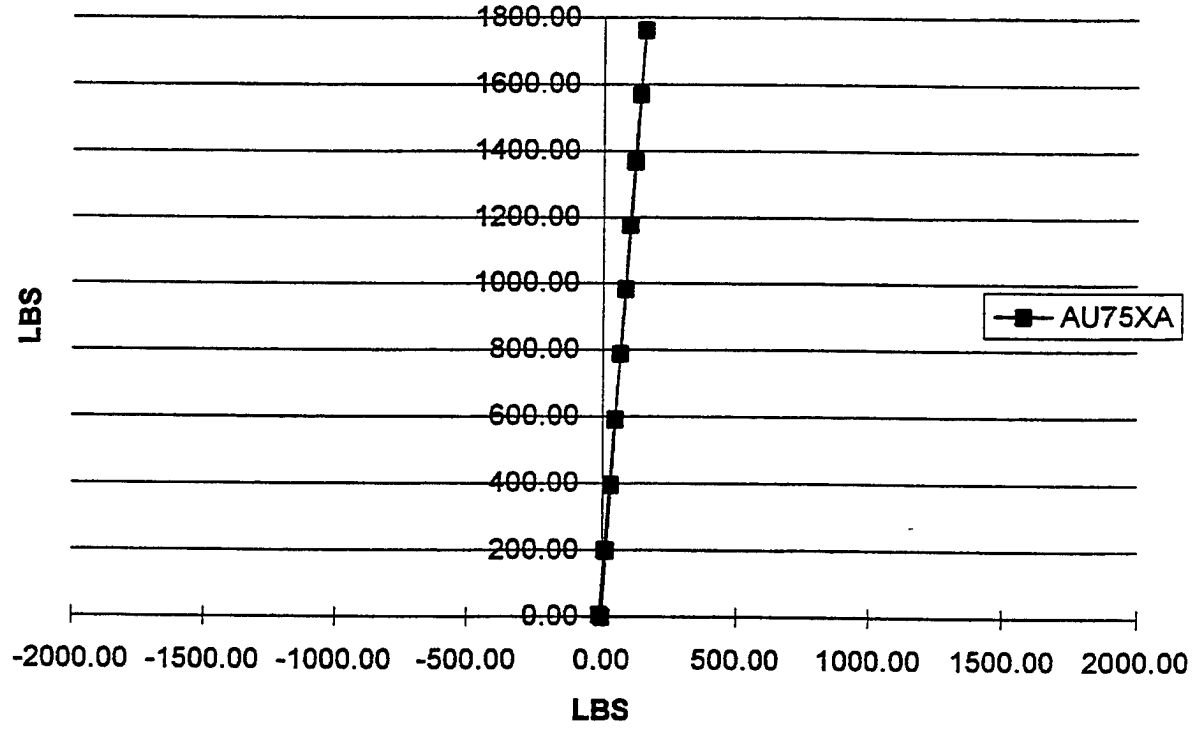
BIN A / CAL 1 UPPER MID SUPPORT / INNER LONGITUDINAL FORCE



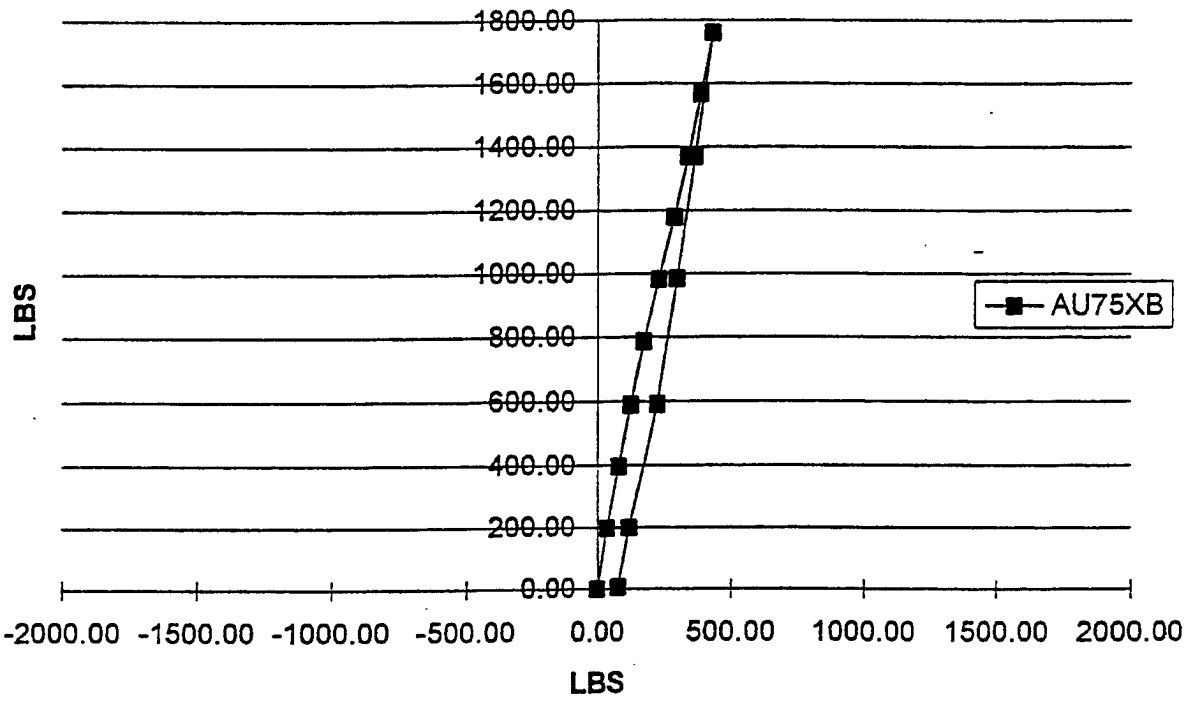
BIN A / CAL 1 UPPER MID SUPPORT / OUTER LONGITUDINAL FORCE



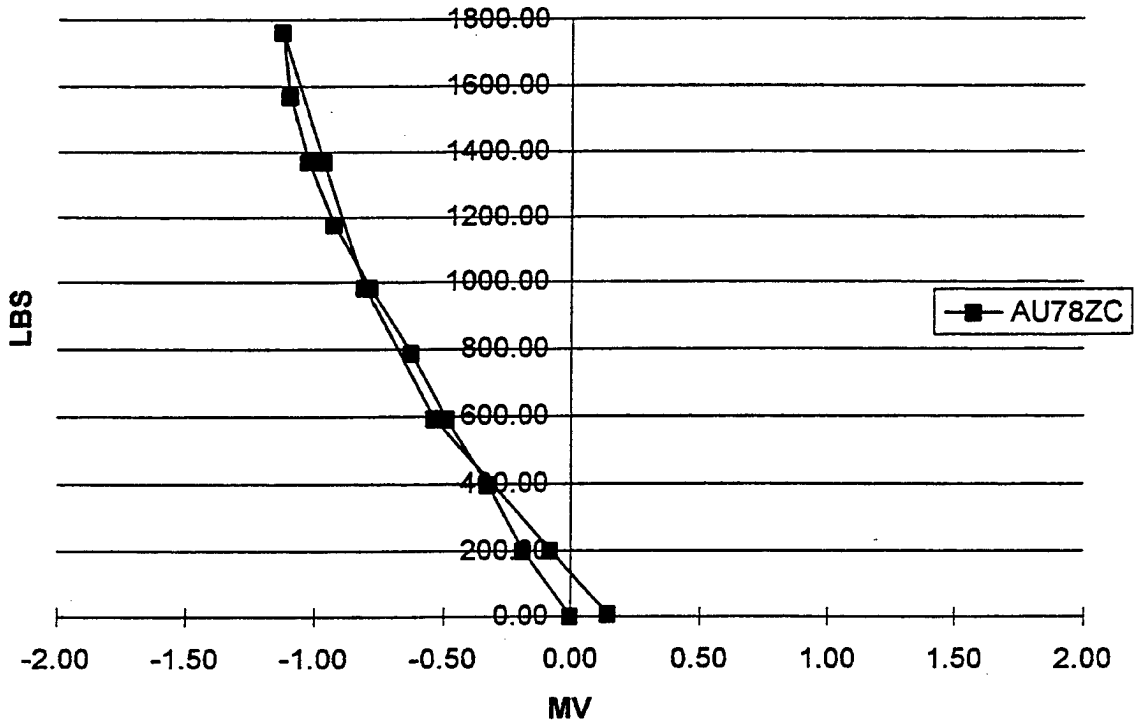
BIN A / CAL 1 UPPER AFT SUPPORT / INNER LONGITUDINAL FORCE



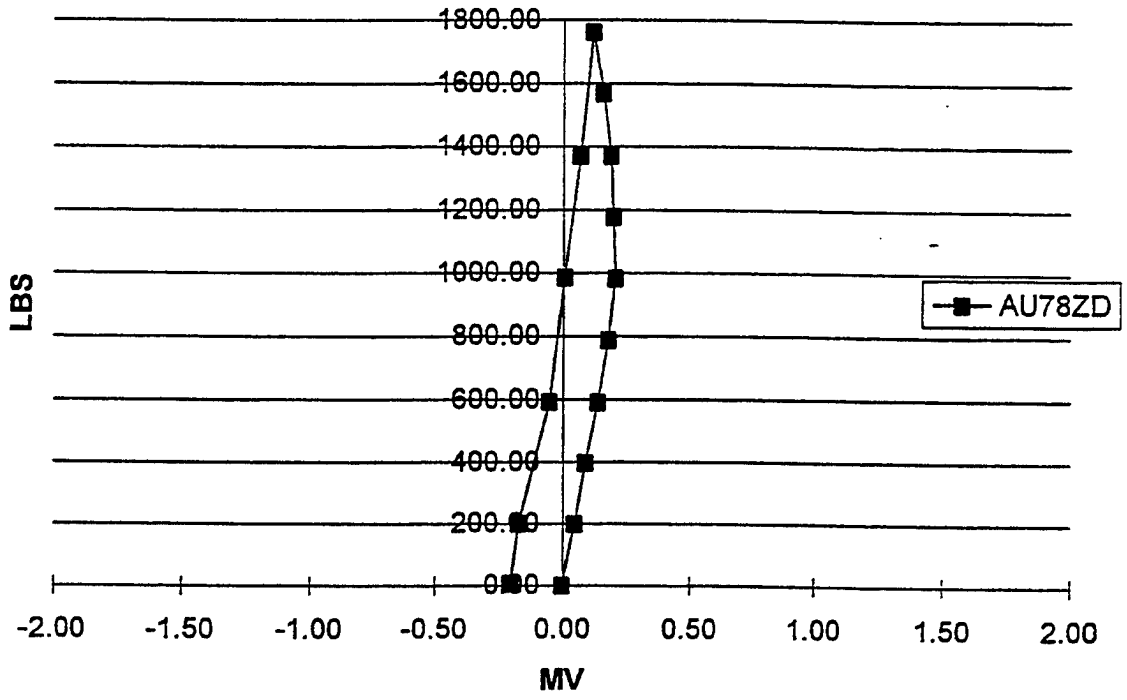
BIN A / CAL 1 UPPER AFT SUPPORT / OUTER LONGITUDINAL FORCE



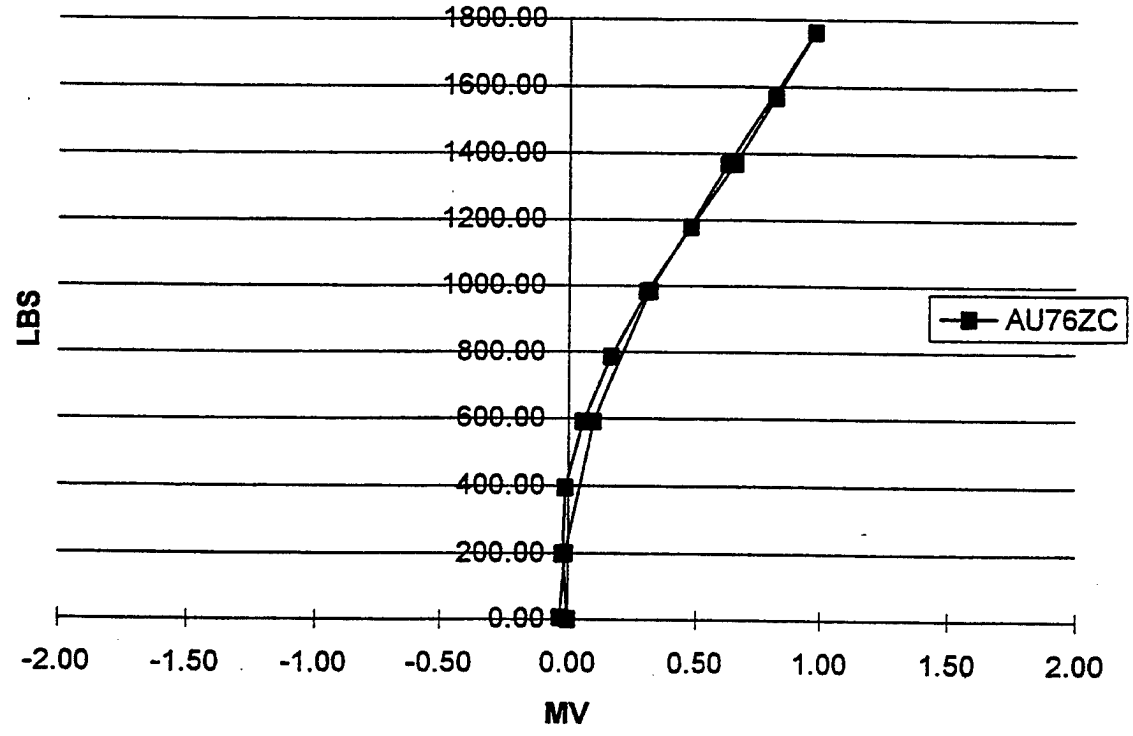
BIN A / CAL 1 UPPER FRONT SUPPORT / OUTER VERTICAL MV



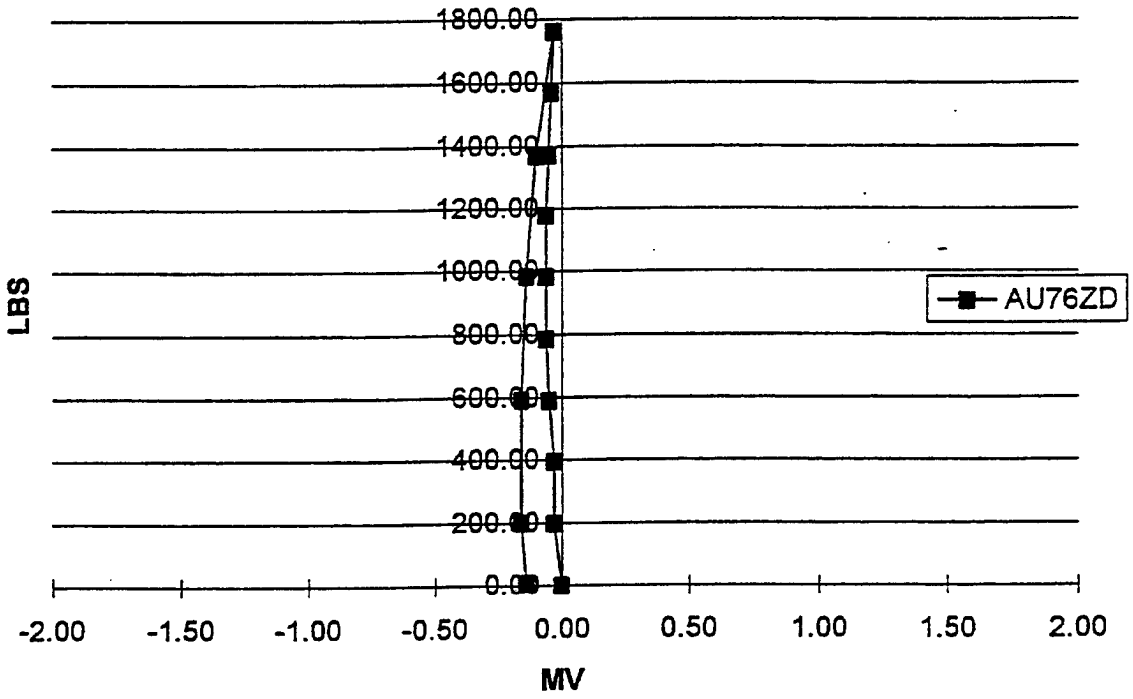
BIN A / CAL 1 UPPER FRONT SUPPORT / INNER VERTICAL MV



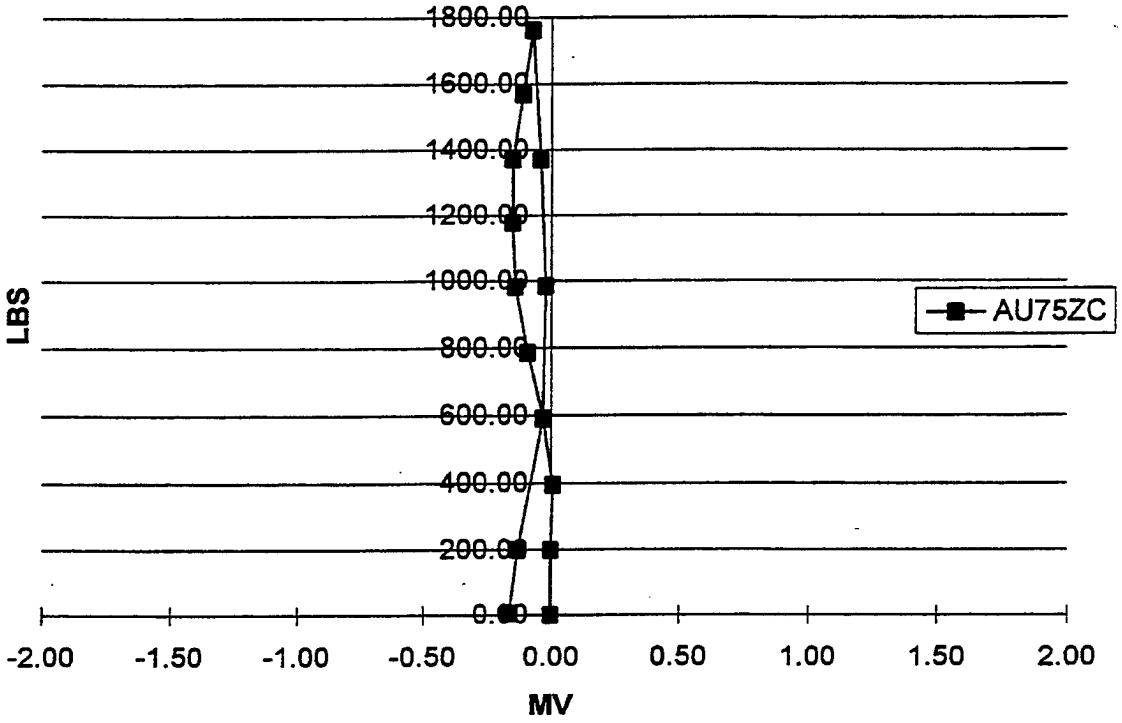
BIN A / CAL 1 UPPER MID SUPPORT / OUTER VERTICAL MV



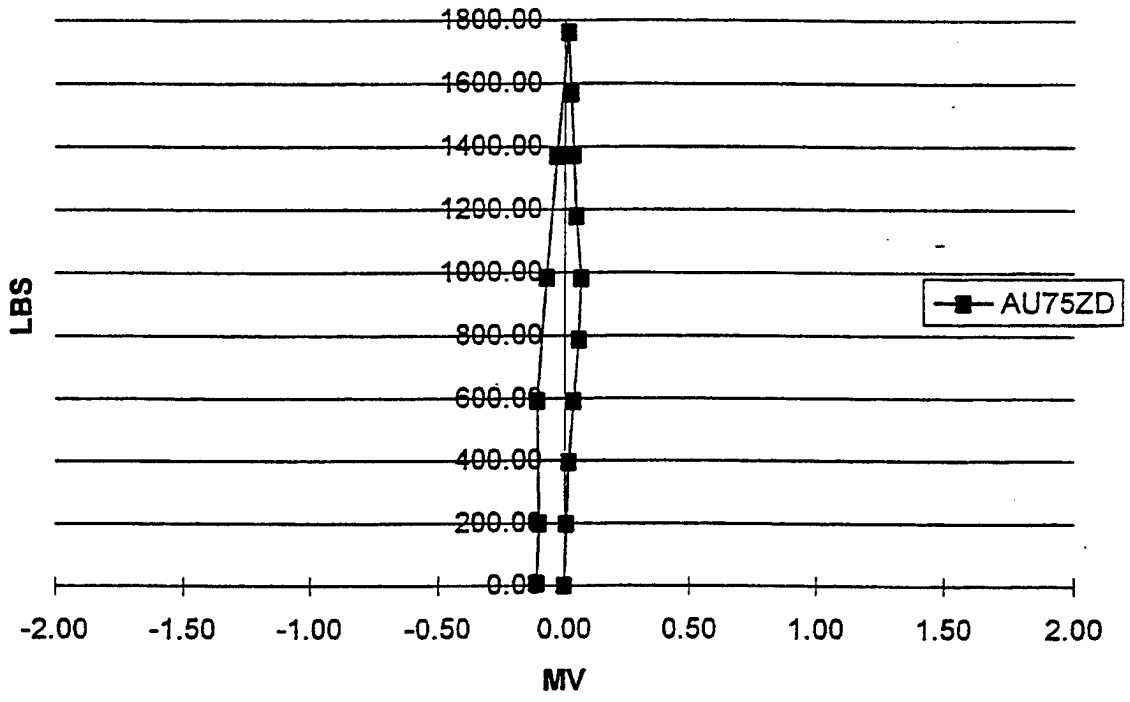
BIN A / CAL 1 UPPER MID SUPPORT / INNER VERTICAL MV



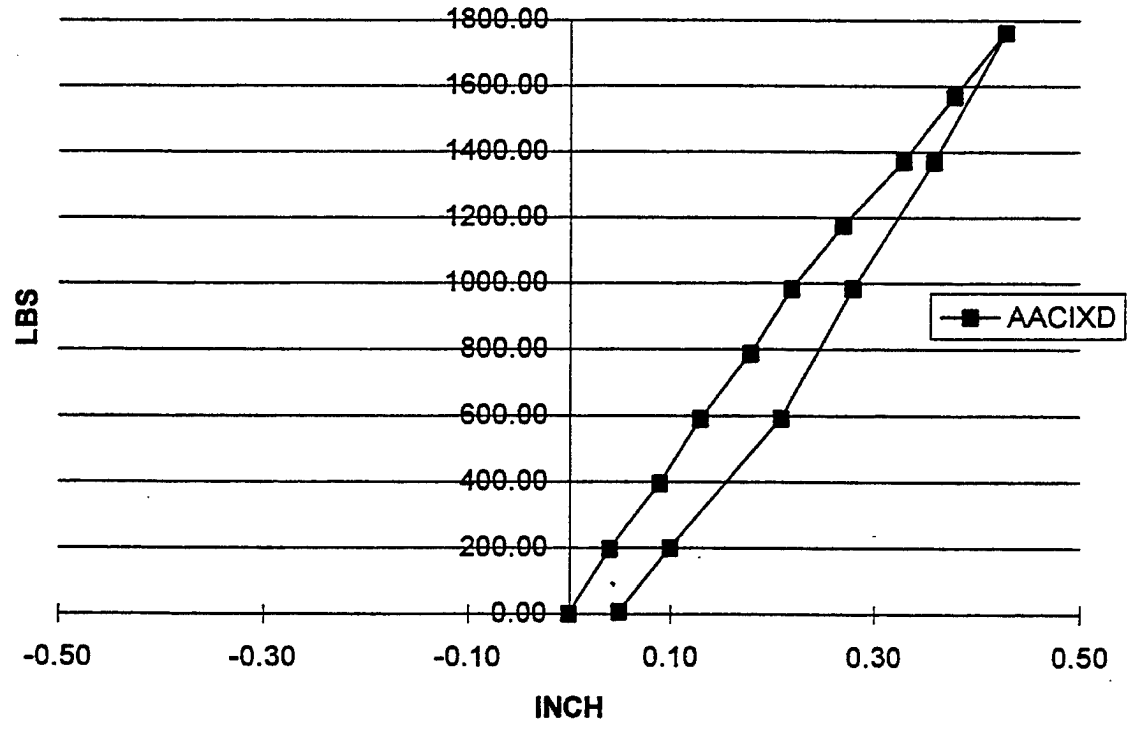
BIN A / CAL 1 UPPER AFT SUPPORT / OUTER VERTICAL MV



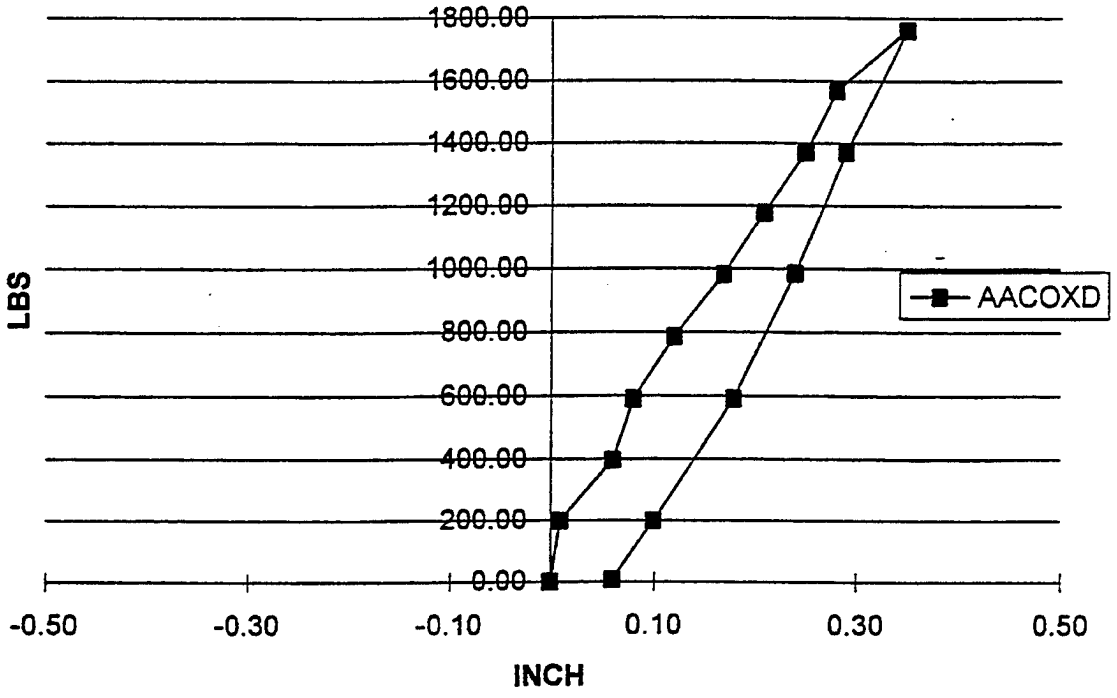
BIN A / CAL 1 UPPER AFT SUPPORT / INNER VERTICAL MV



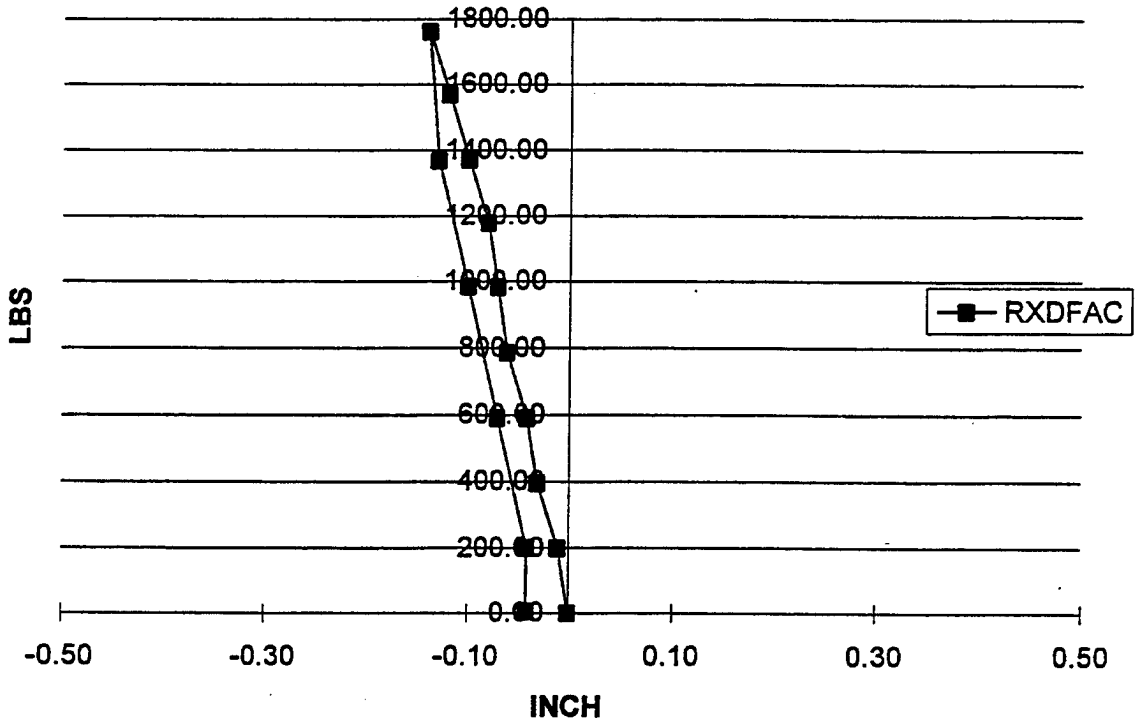
BIN A / CAL 1 AFT COMPARTMENT / INNER LONGITUDINAL DISPLACEMENT



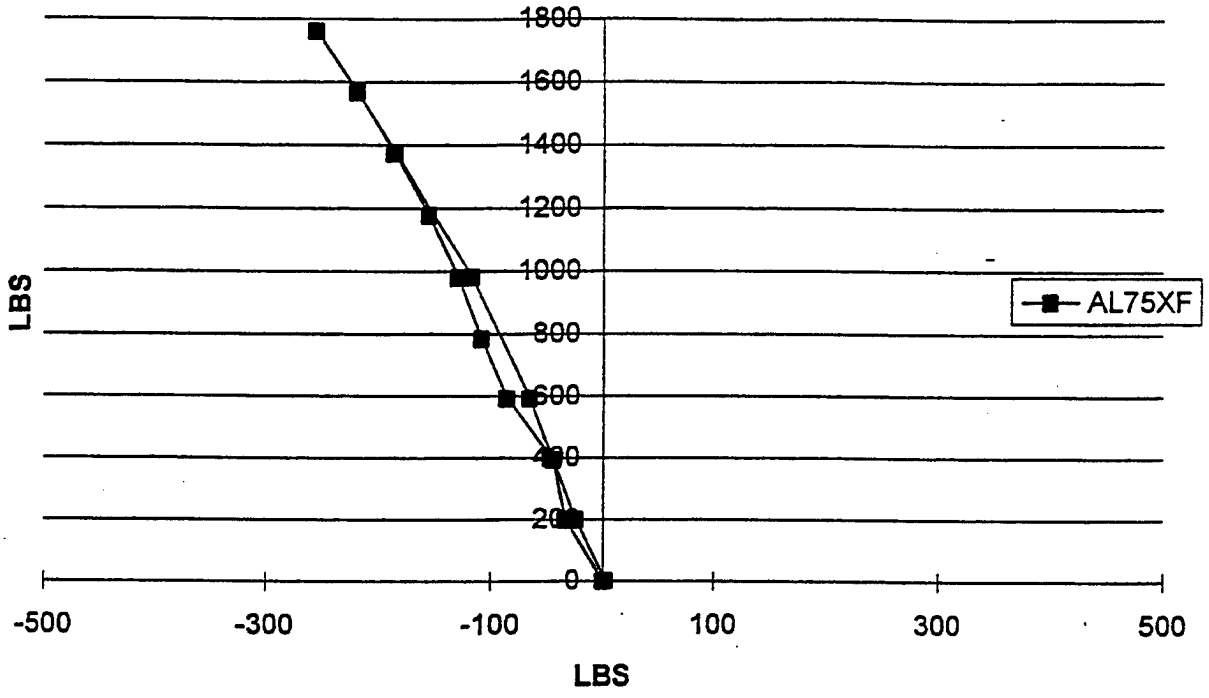
BIN A / CAL 1 AFT COMPARTMENT / OUTER LONGITUDINAL DISPLACEMENT



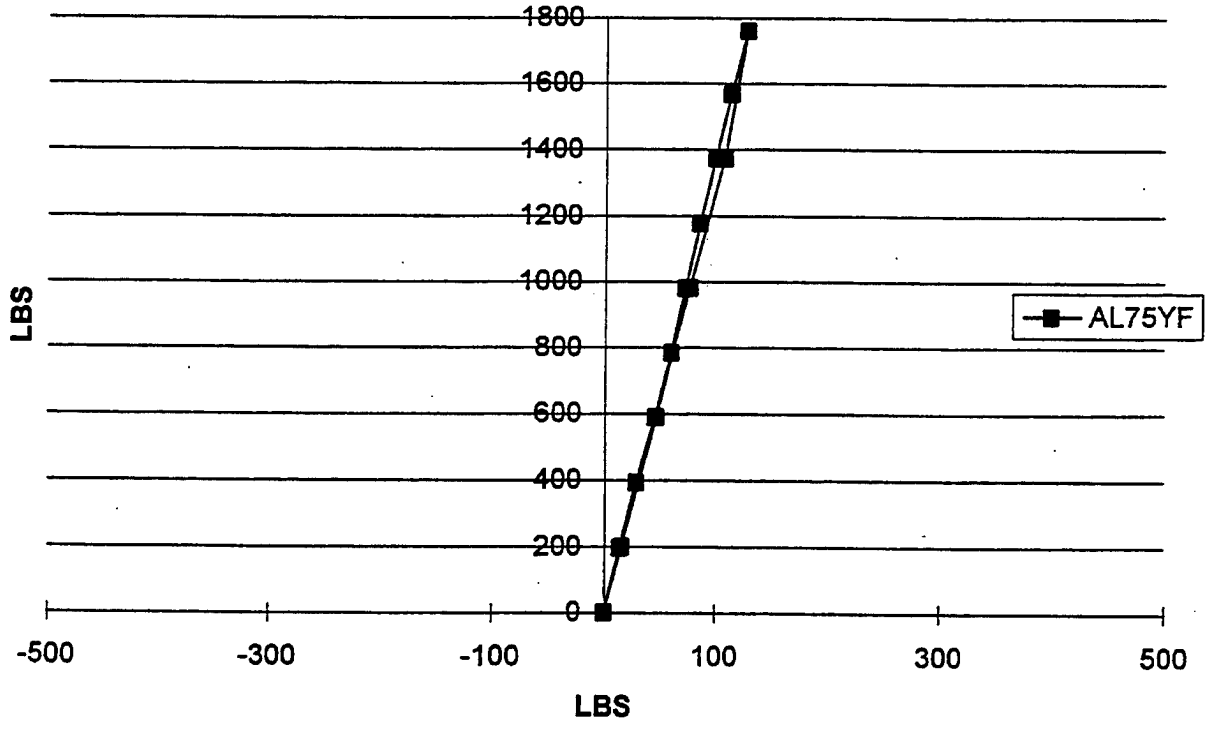
BIN A / CAL 1 RELATIVE LONGITUDINAL DISPLACEMENT FROM FRONT-TO-AFT COMPARTMENTS



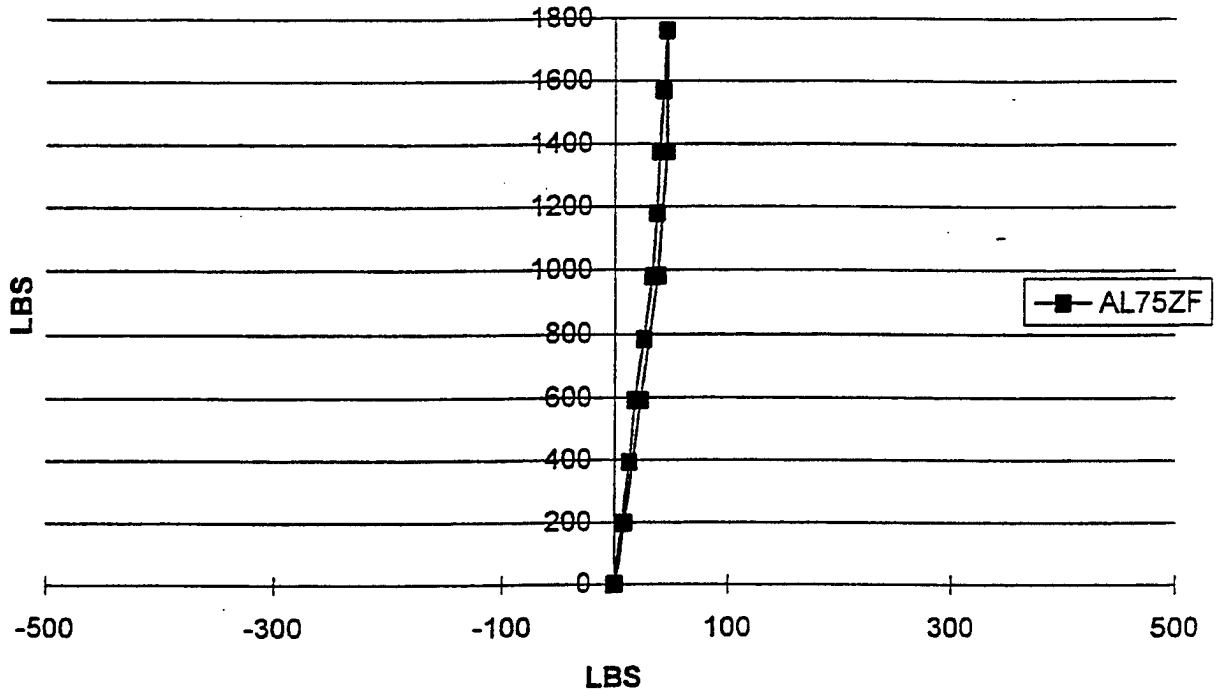
BIN A / CAL 2 LOWER FRONT SUPPORT / LONGITUDINAL FORCE



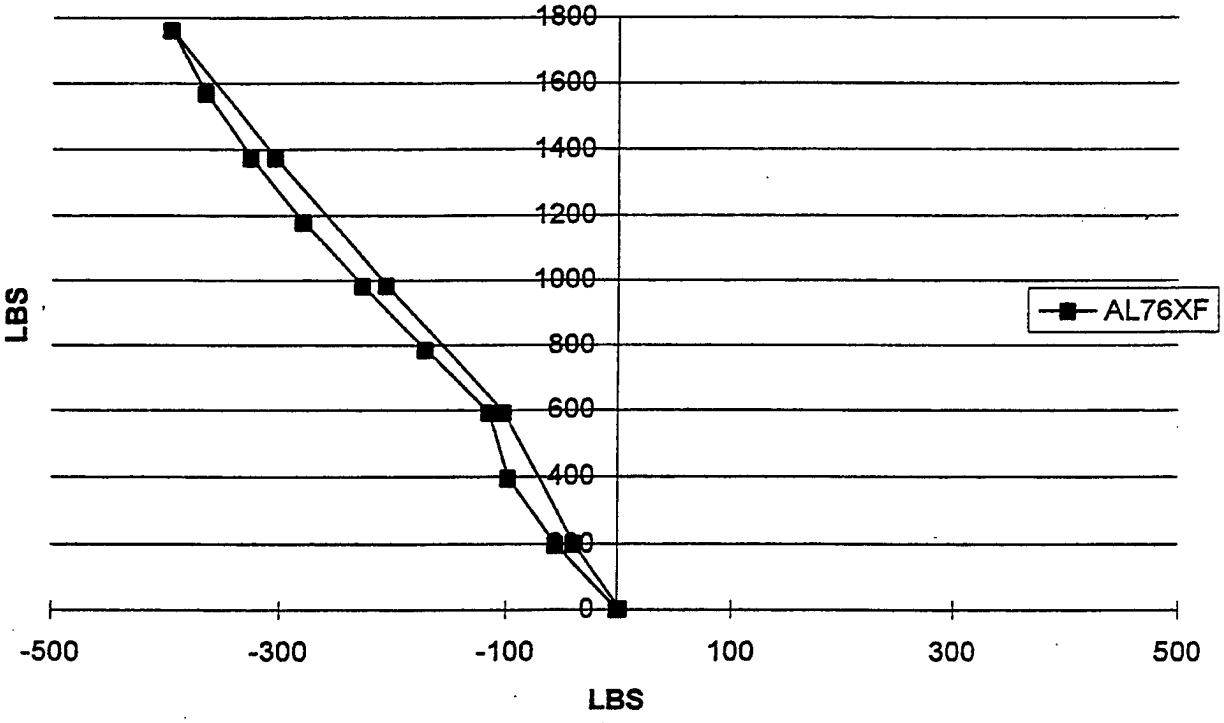
BIN A / CAL 2 LOWER FRONT SUPPORT / LATERAL FORCE



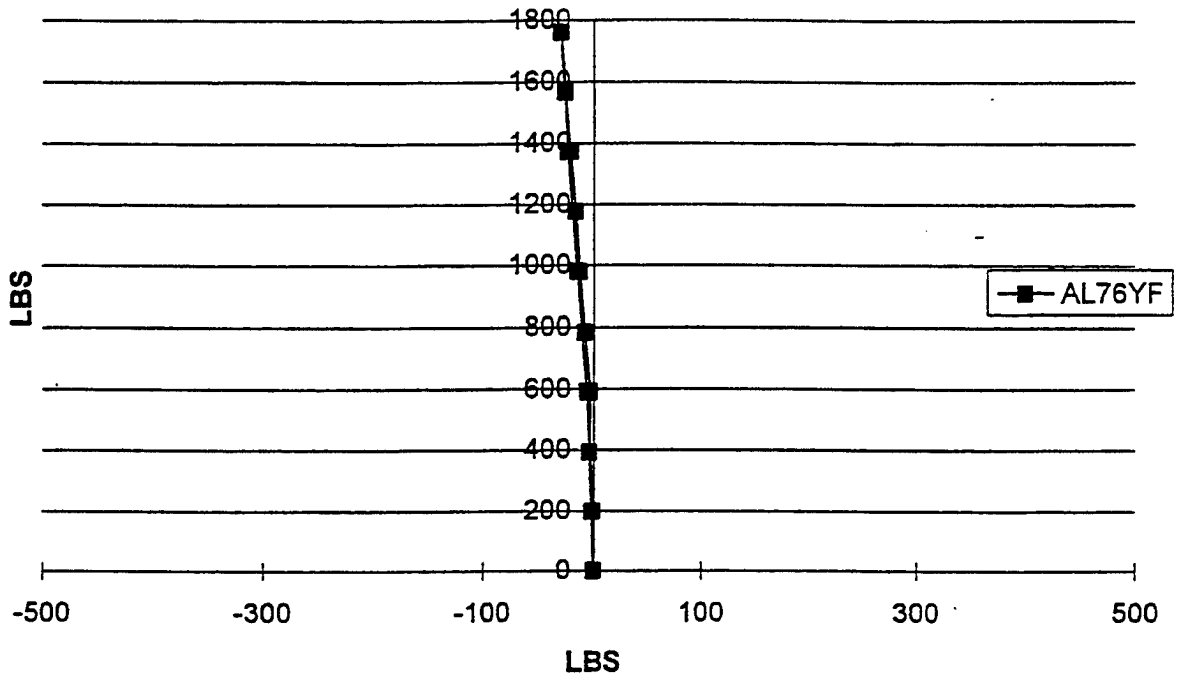
BIN A / CAL 2 LOWER FRONT SUPPORT / VERTICAL FORCE



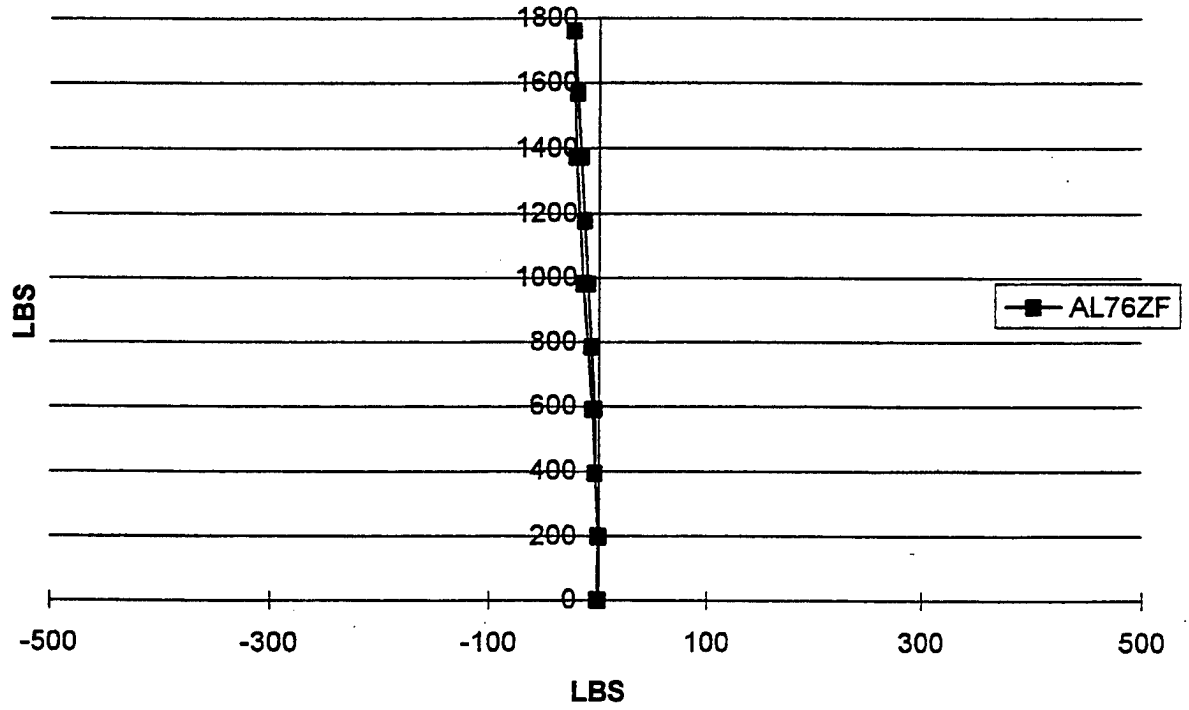
BIN A / CAL 2 LOWER MID SUPPORT / LONGITUDINAL FORCE



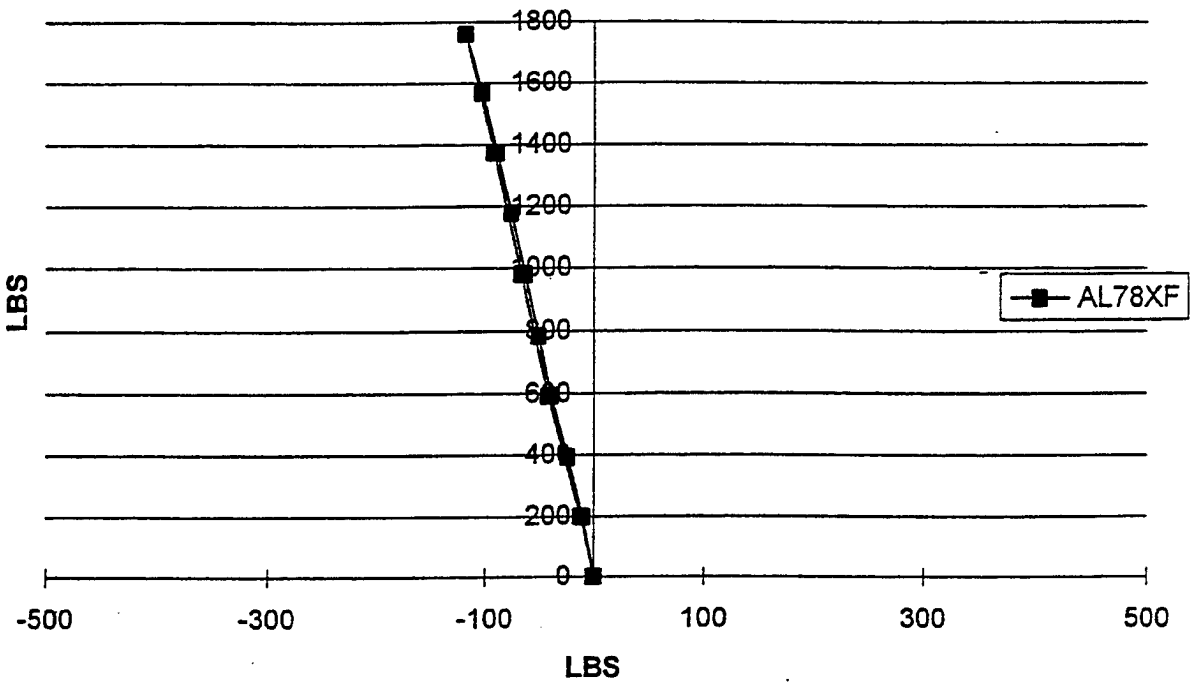
BIN A / CAL 2 LOWER MID SUPPORT / LATERAL FORCE



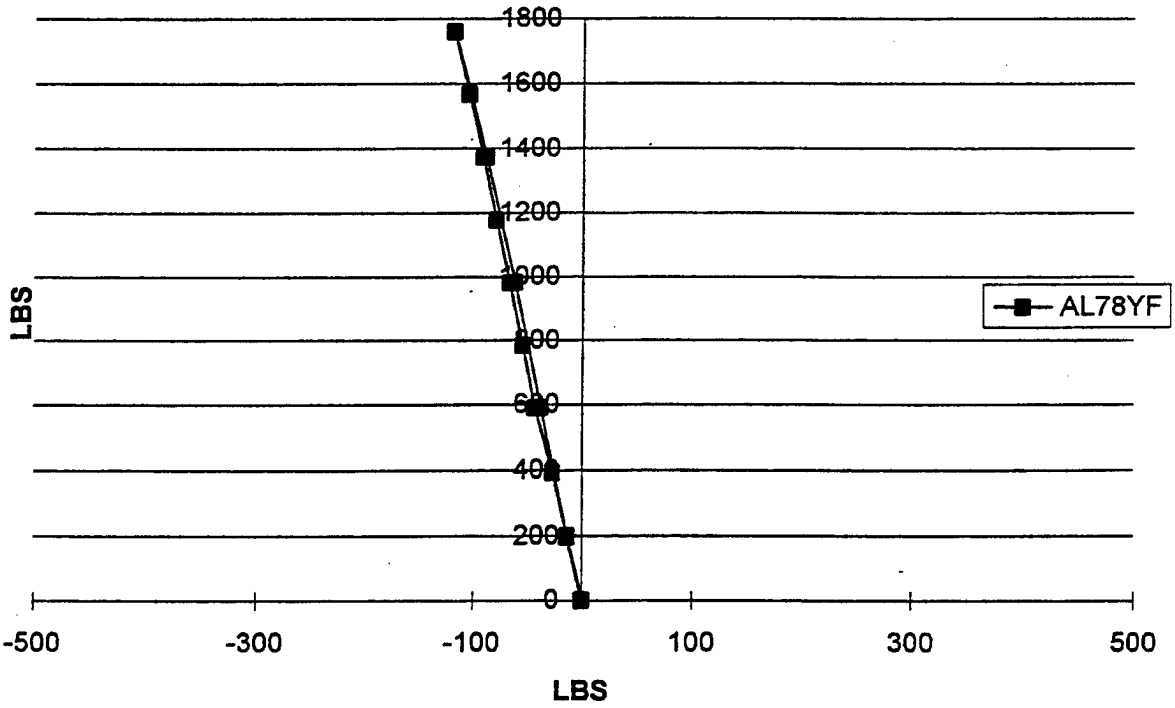
BIN A / CAL 2 LOWER MID SUPPORT / VERTICAL FORCE



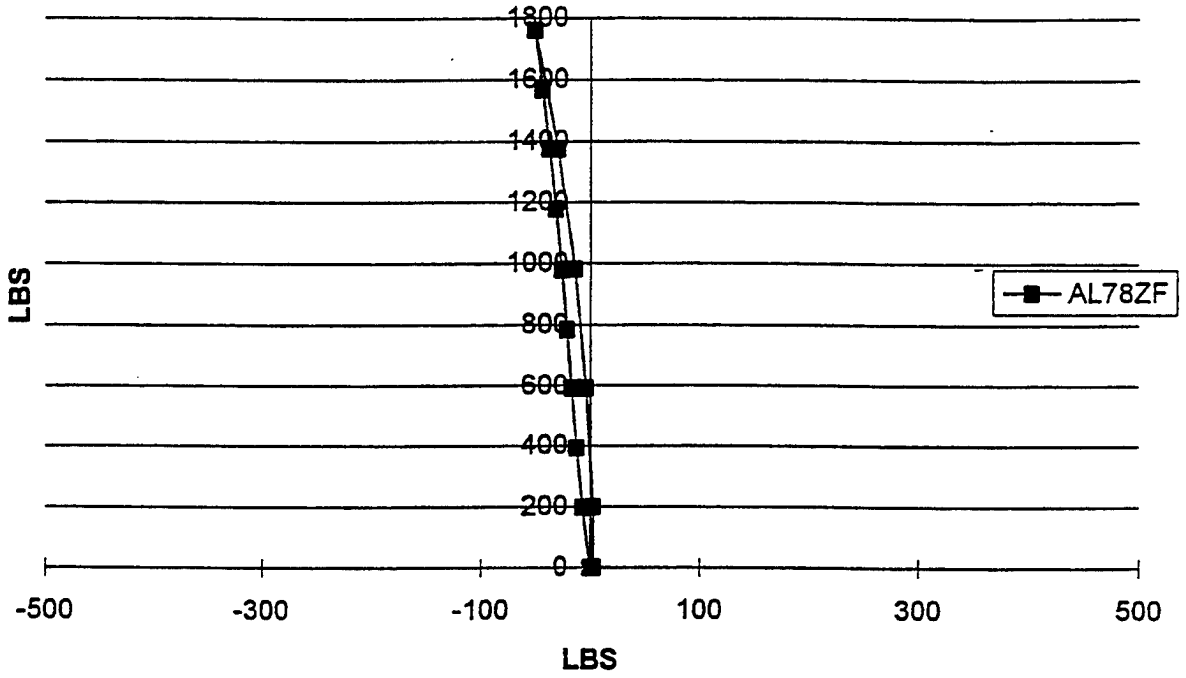
BIN A / CAL 2 LOWER AFT SUPPORT / LONGITUDINAL FORCE



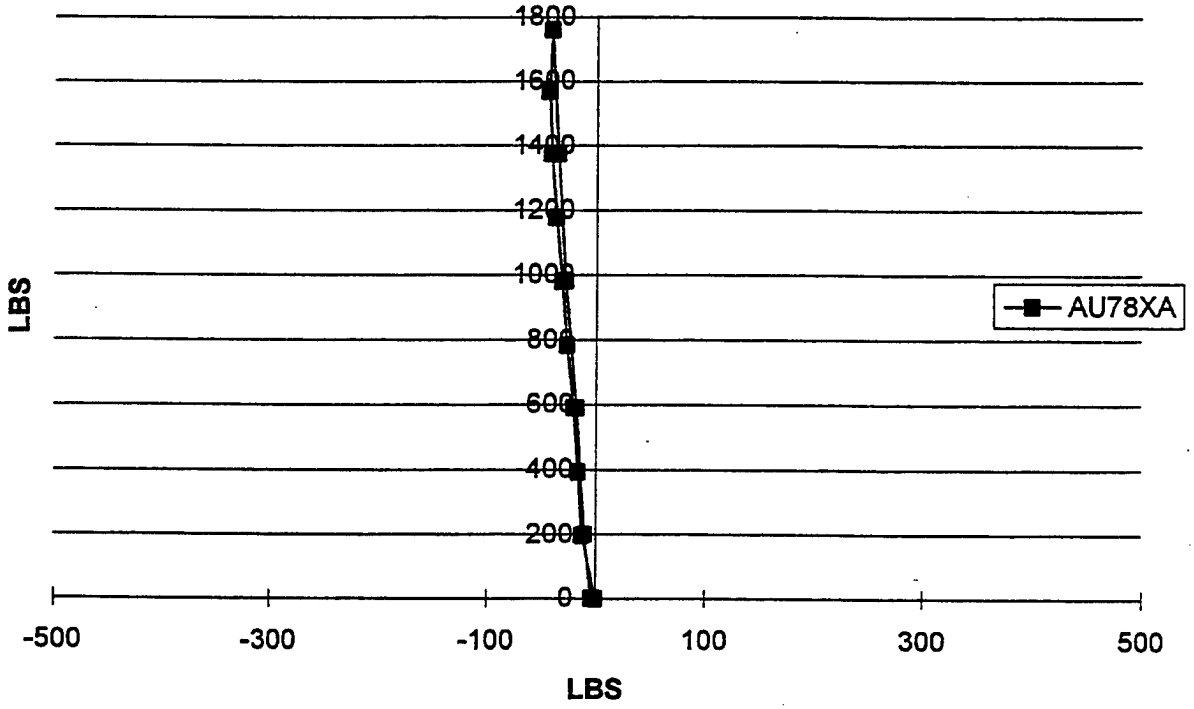
BIN A / CAL 2 LOWER AFT SUPPORT / LATERAL FORCE



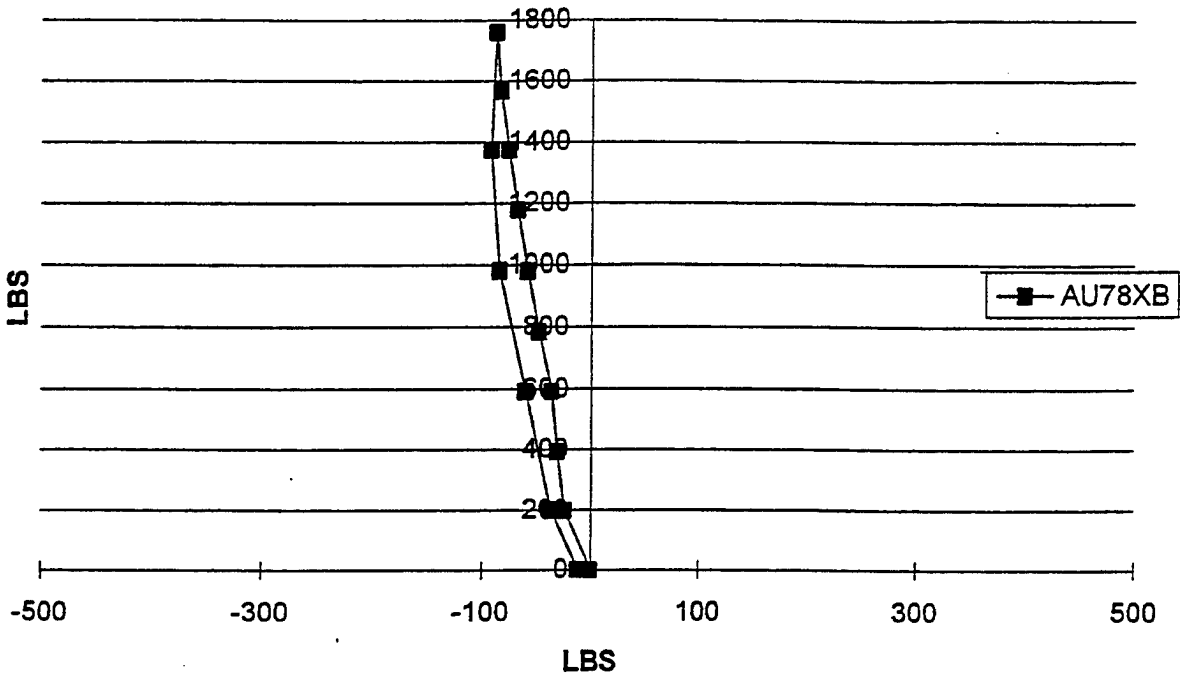
BIN A / CAL 2 LOWER AFT SUPPORT / VERTICAL FORCE



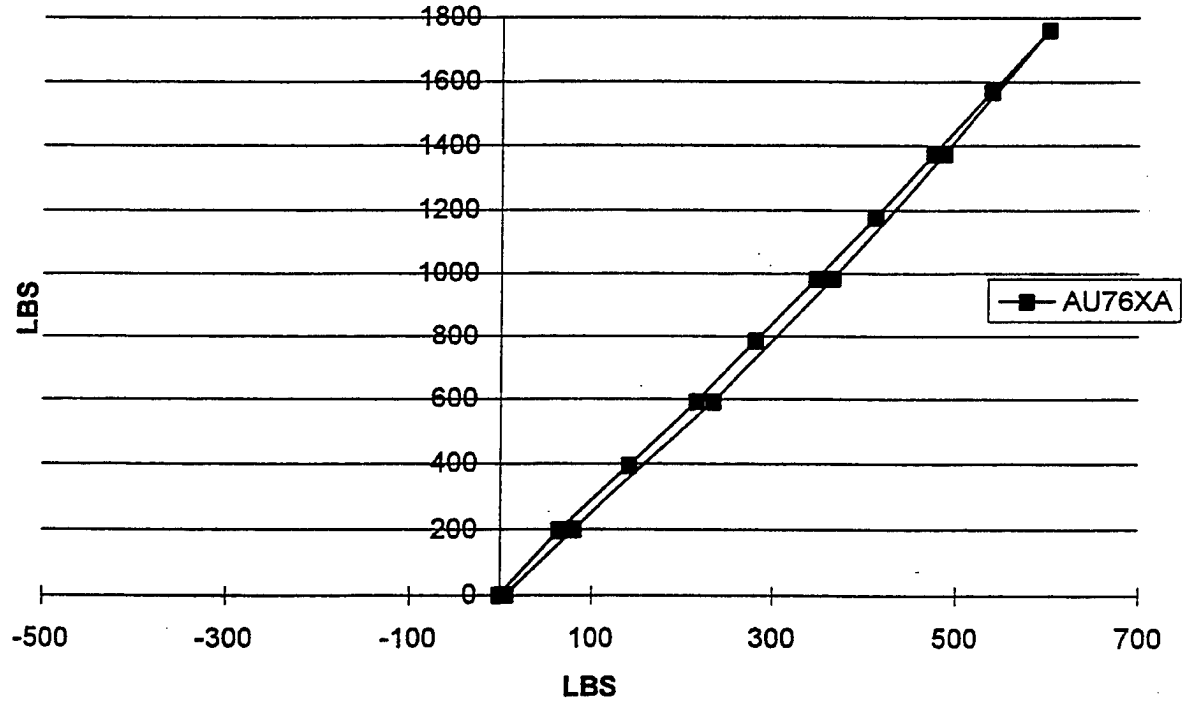
BIN A / CAL 2 UPPER FRONT SUPPORT / INNER LONGITUDINAL FORCE



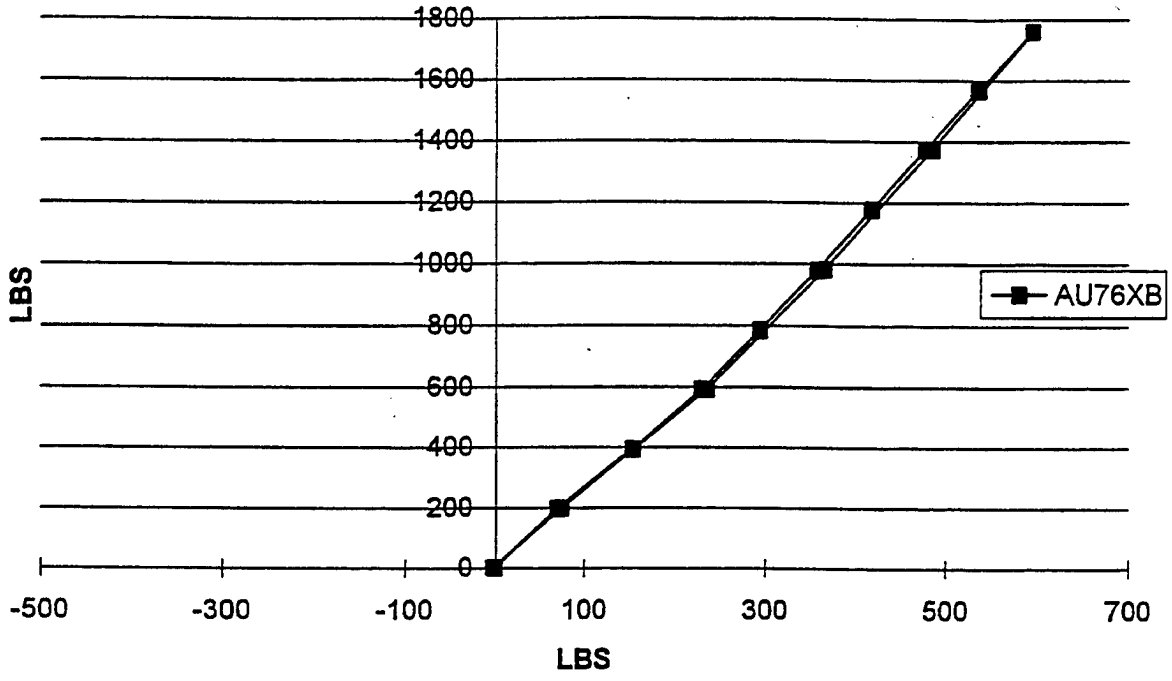
BIN A / CAL 2 UPPER FRONT SUPPORT / OUTER LONGITUDINAL FORCE



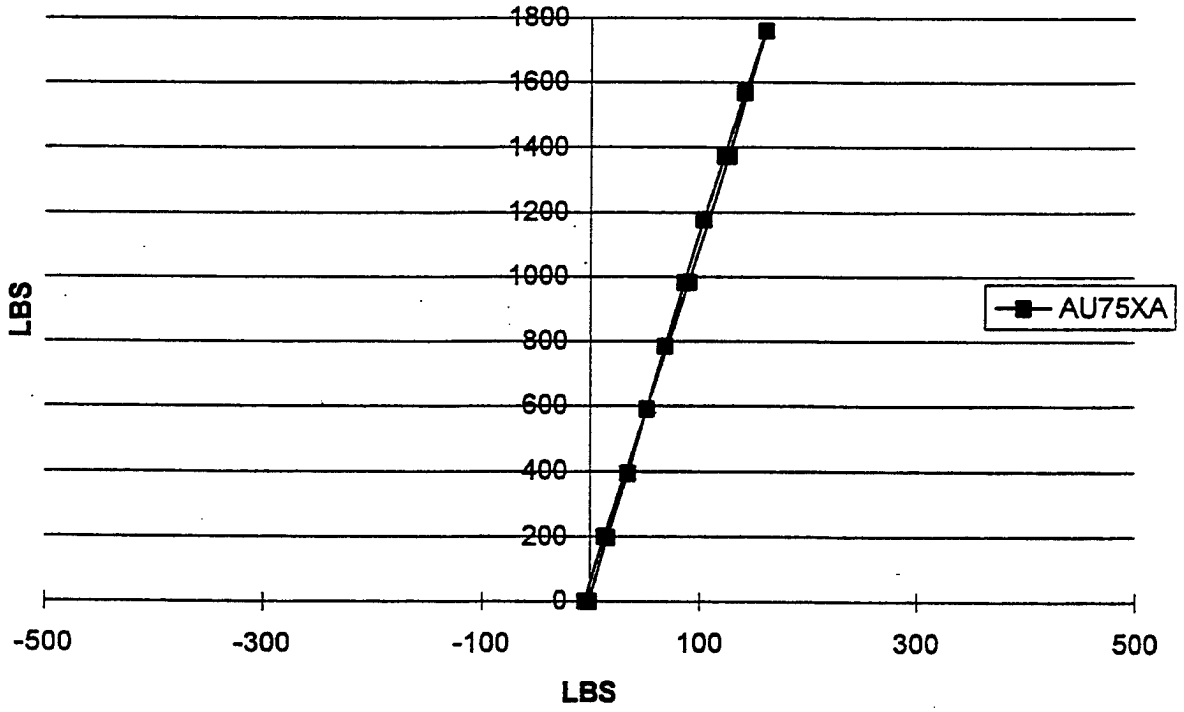
BIN A / CAL 2 UPPER MID SUPPORT / INNER LONGITUDINAL FORCE



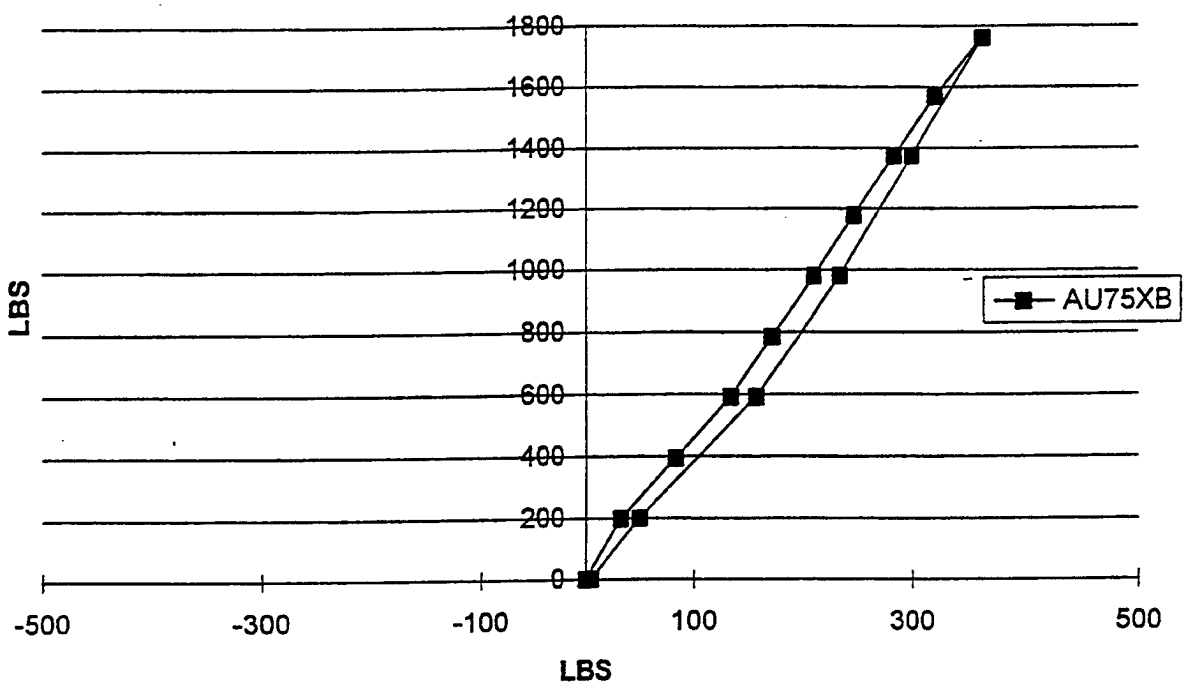
BIN A / CAL 2 UPPER MID SUPPORT / OUTER LONGITUDINAL FORCE



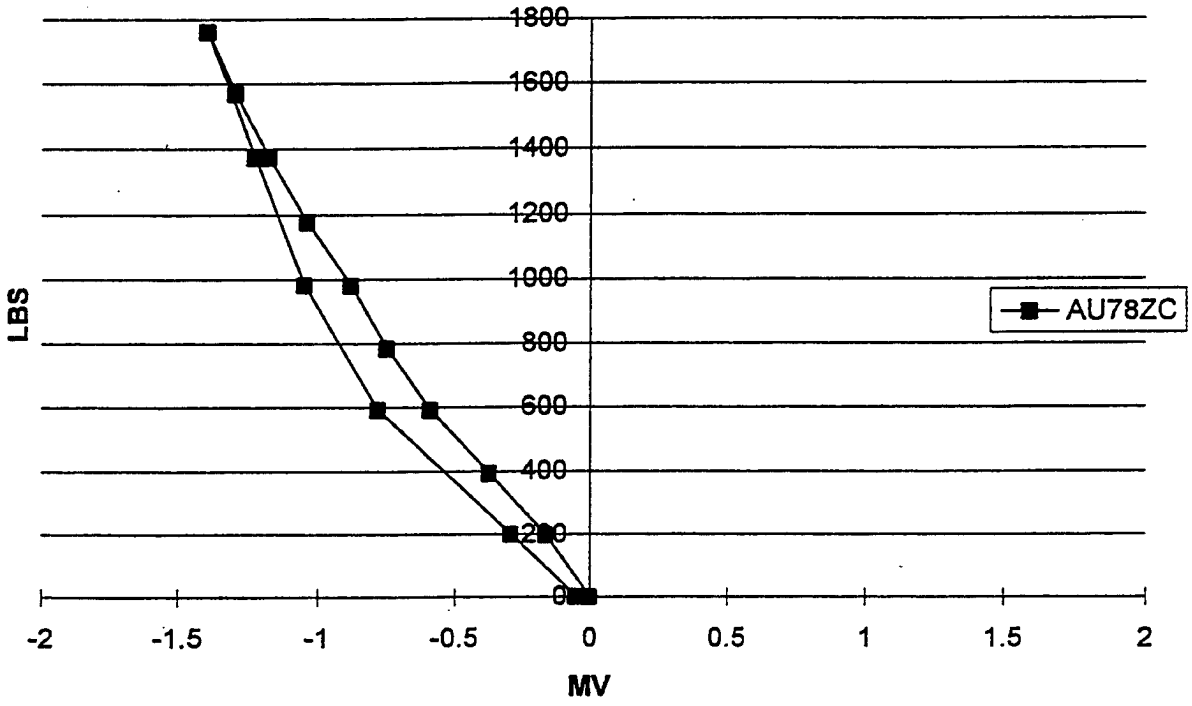
BIN A / CAL 2 UPPER AFT SUPPORT / INNER LONGITUDINAL FORCE



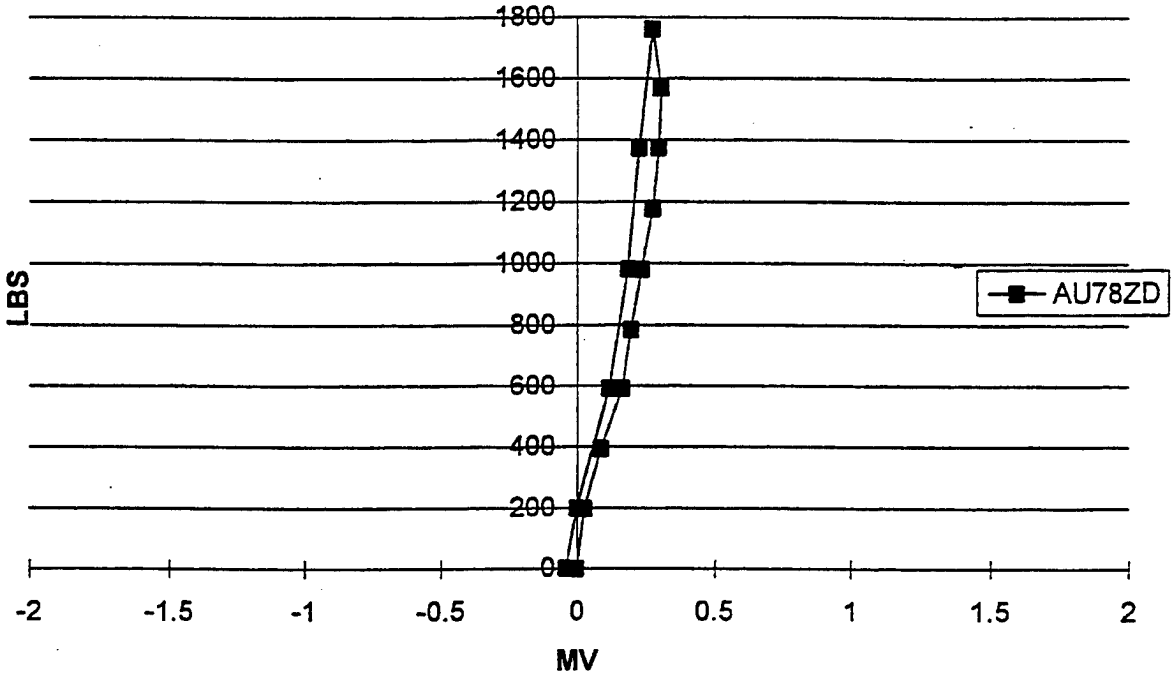
BIN A / CAL 2 UPPER AFT SUPPORT / OUTER LONGITUDINAL FORCE



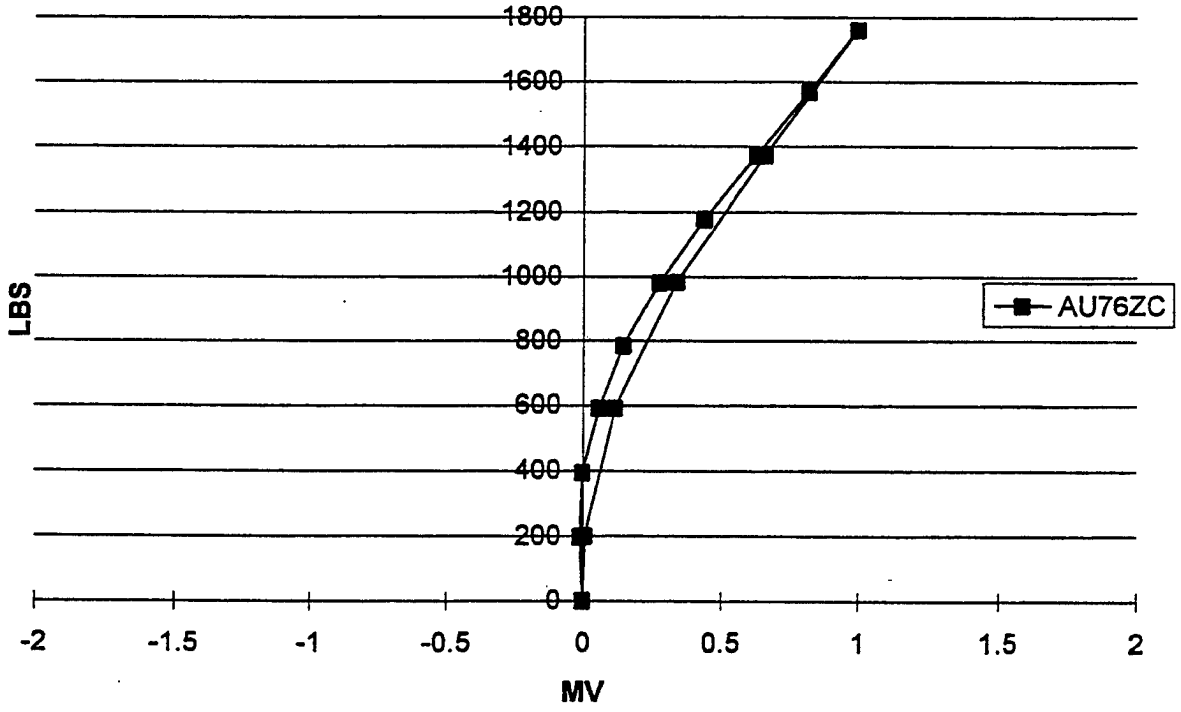
BIN A / CAL 2 UPPER FRONT SUPPORT / OUTER VERTICAL MV



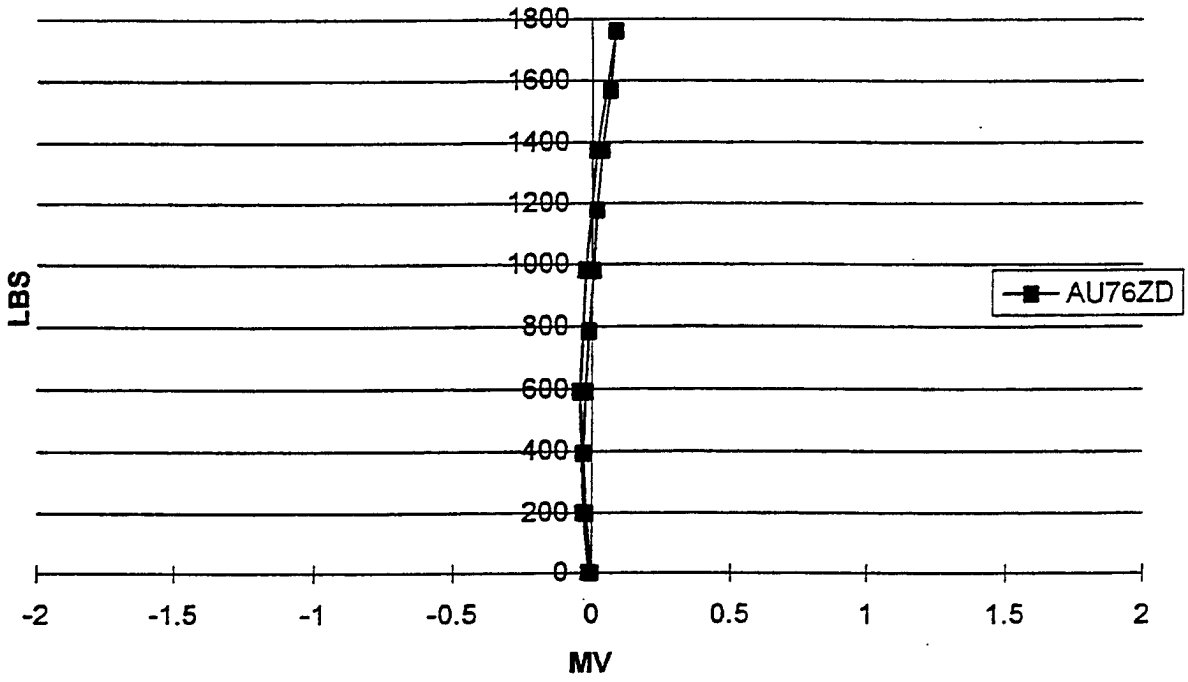
BIN A / CAL 2 UPPER FRONT SUPPORT / INNER VERTICAL MV



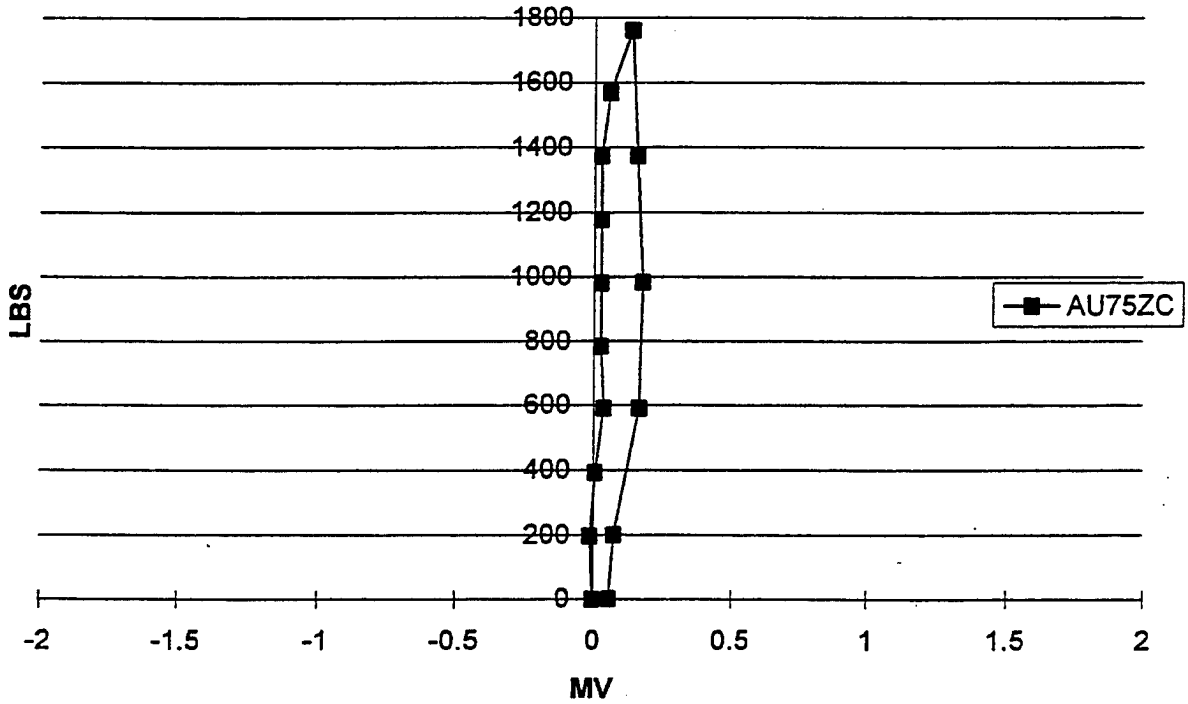
BIN A / CAL 2 UPPER MID SUPPORT / OUTER VERTICAL MV



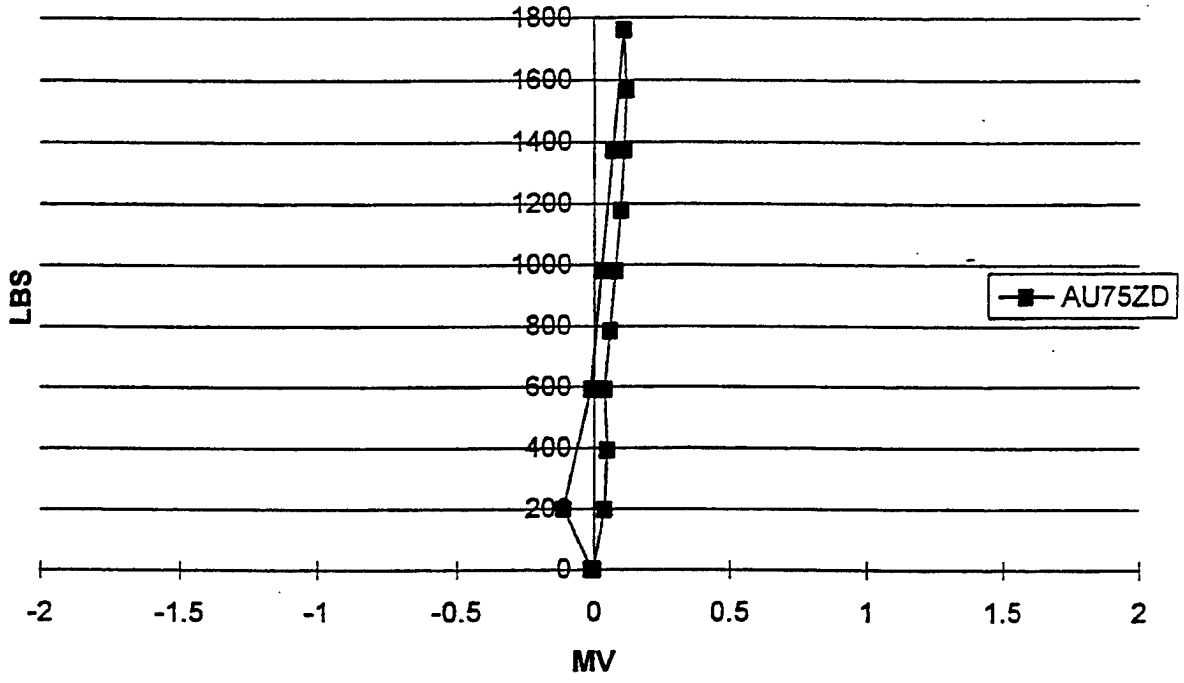
BIN A / CAL 2 UPPER MID SUPPORT / INNER VERTICAL MV



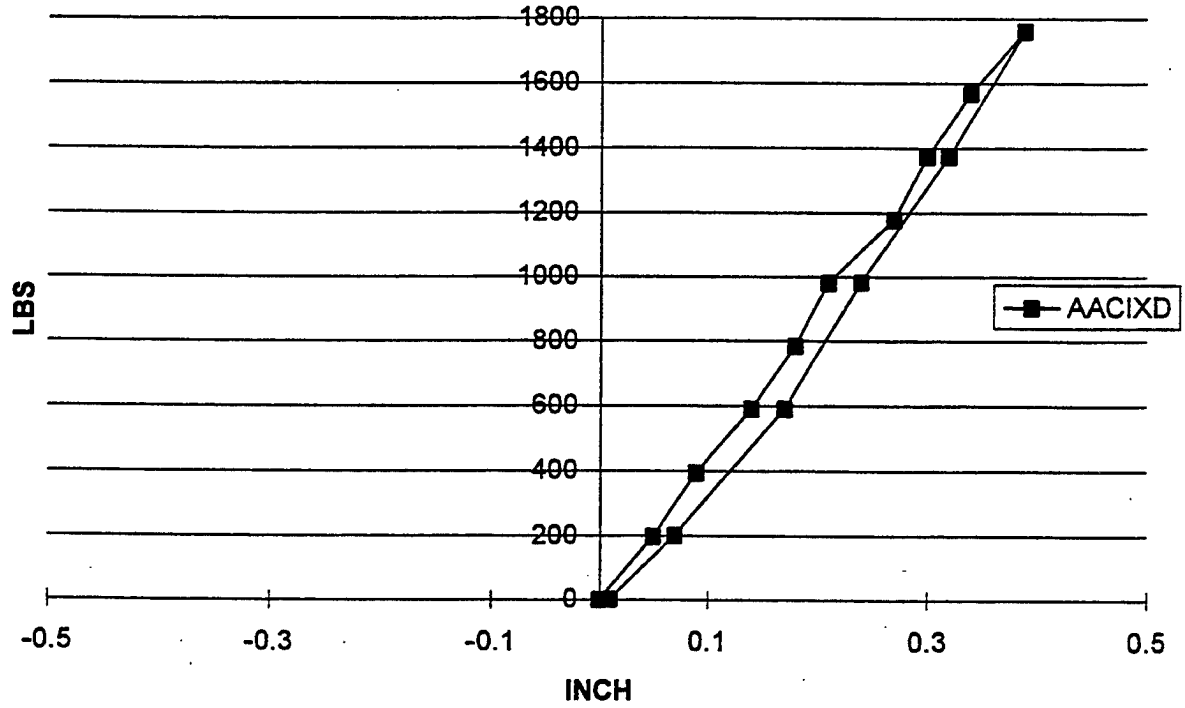
BIN A / CAL 2 UPPER AFT SUPPORT / OUTER VERTICAL MV



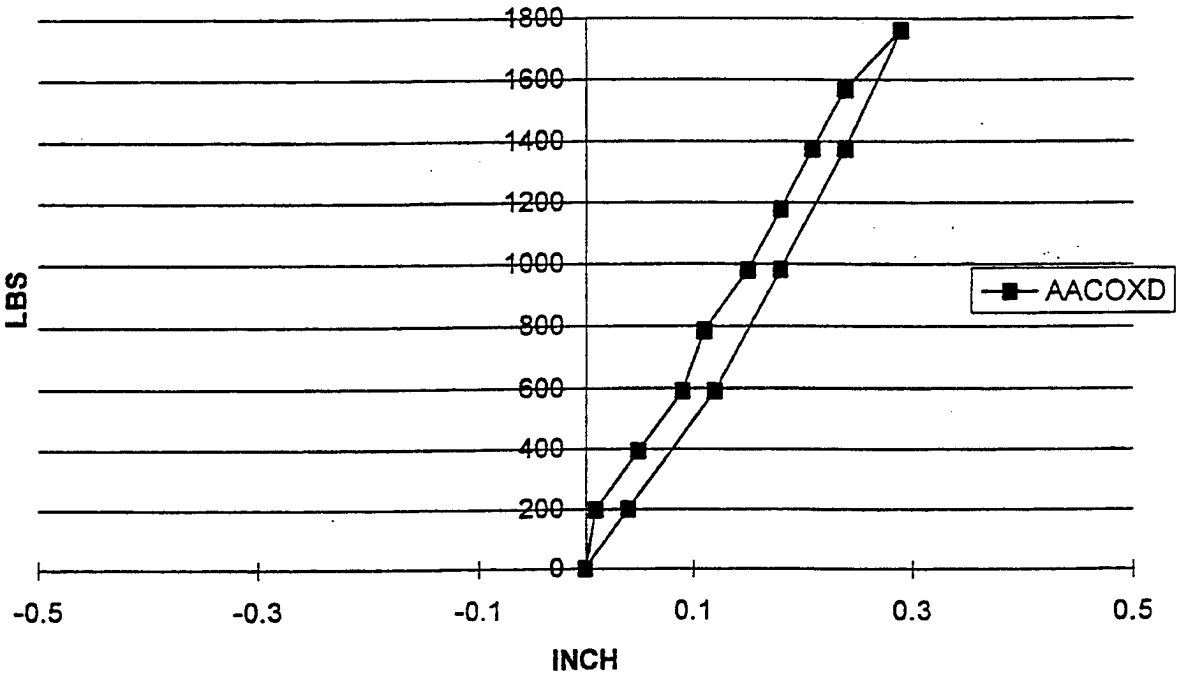
BIN A / CAL 2 UPPER AFT SUPPORT / INNER VERTICAL MV



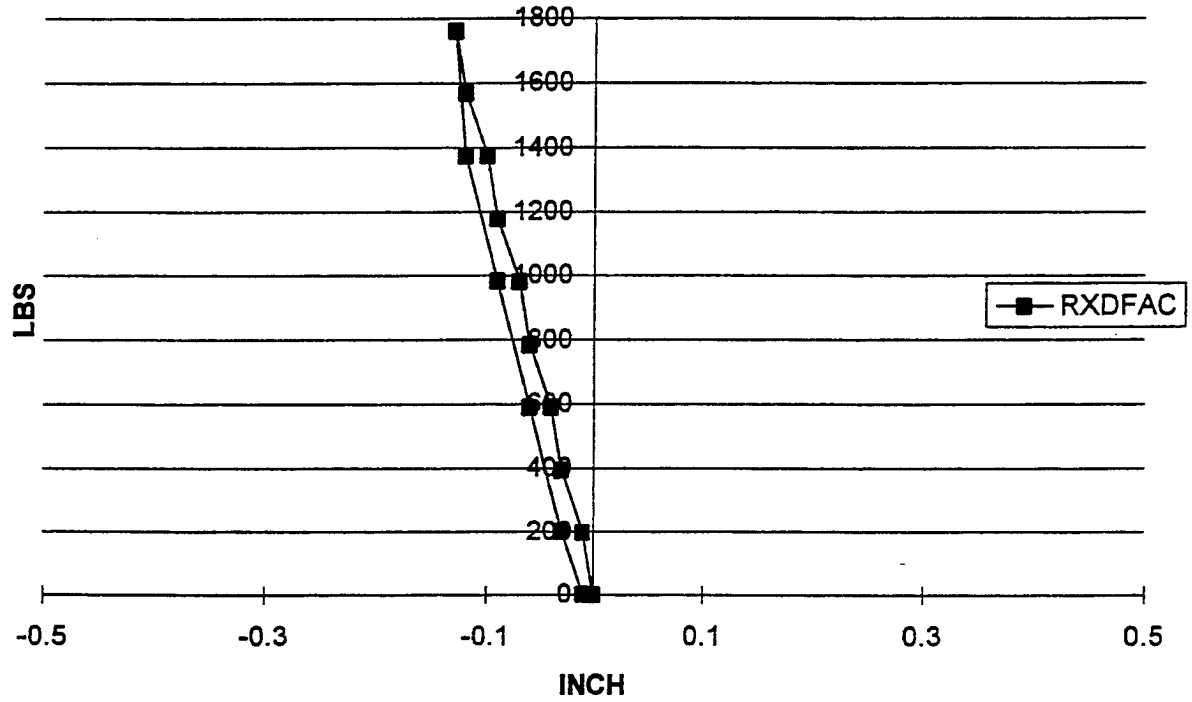
BIN A / CAL 2 AFT COMPARTMENT / INNER LONGITUDINAL DISPLACEMENT



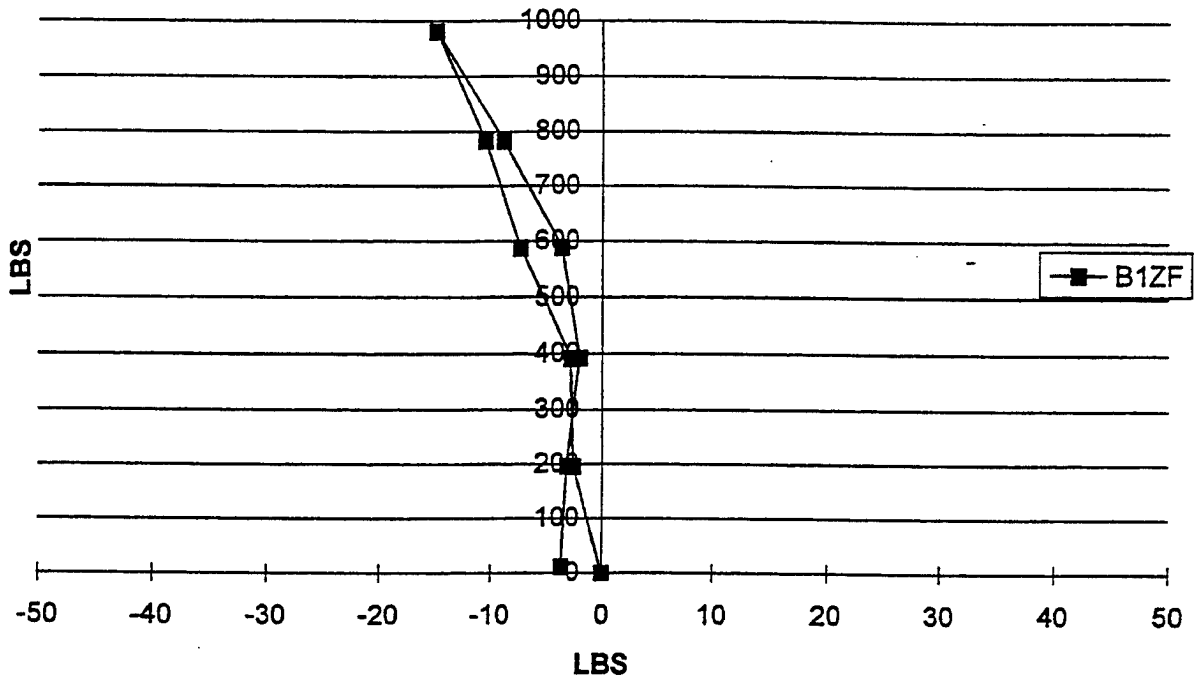
BIN A / CAL 2 AFT COMPARTMENT / OUTER LONGITUDINAL DISPLACEMENT



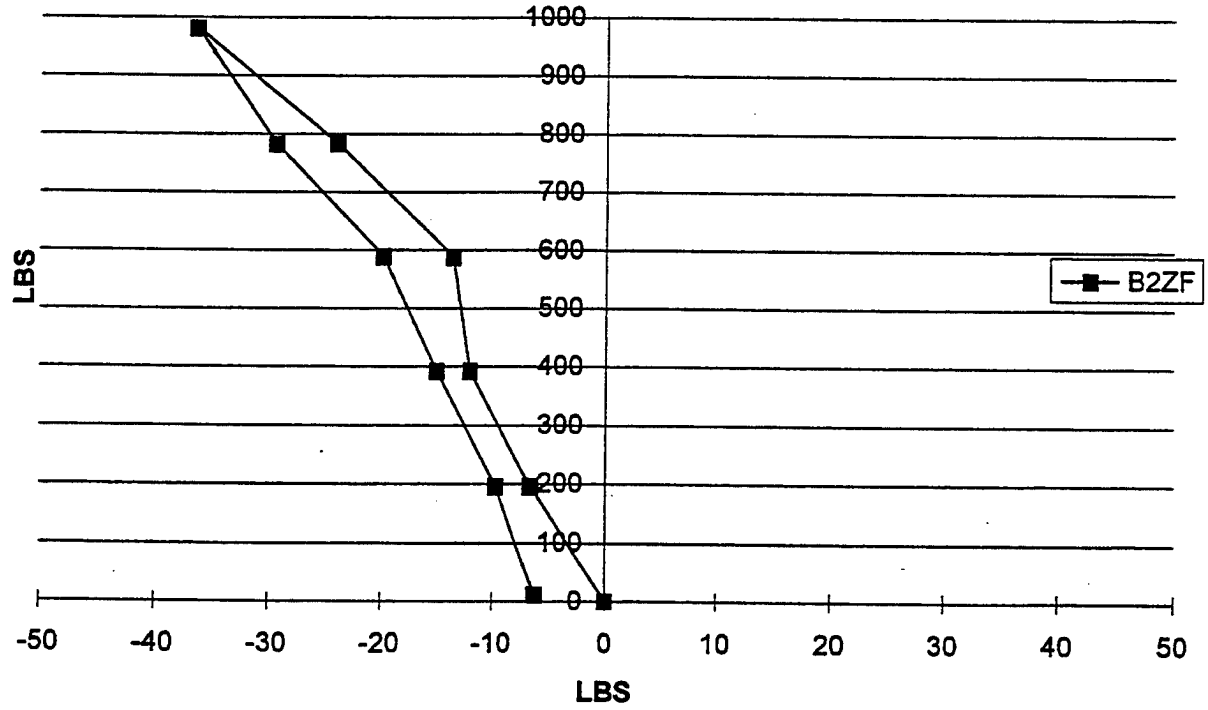
BIN A / CAL 2 RELATIVE LONGITUDINAL DISPLACEMENT FROM FRONT-TO-AFT COMPARTMENTS / MID



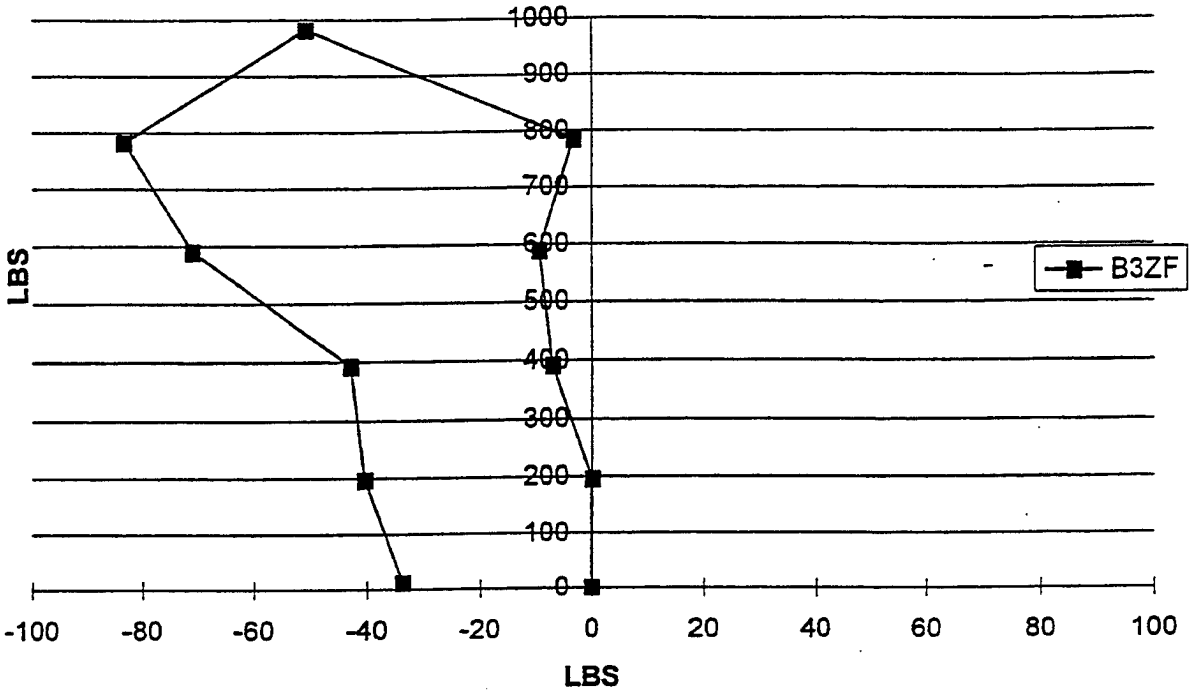
BIN B / CAL 1 HPD9 70066-7 / AFT SUPPORT 1 / VERTICAL FORCE



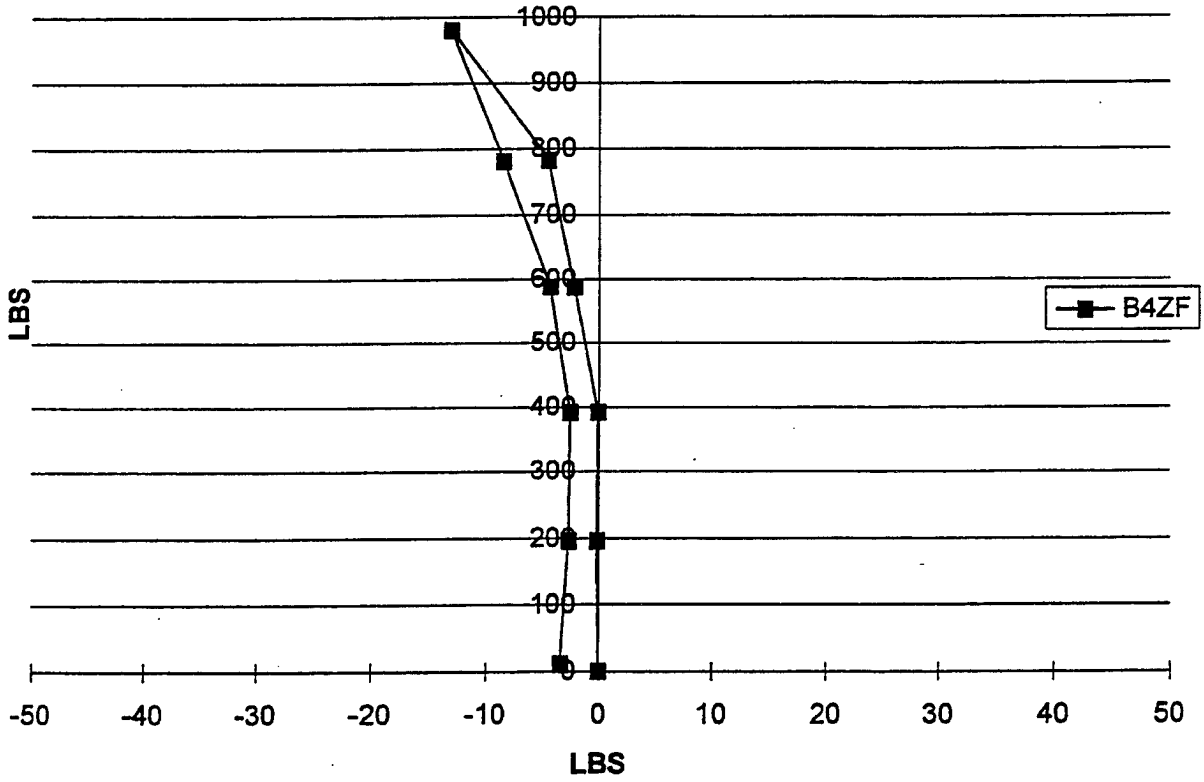
BIN B / CAL 1 HPD9 70066-7 / FWD SUPPORT 2 / VERTICAL FORCE



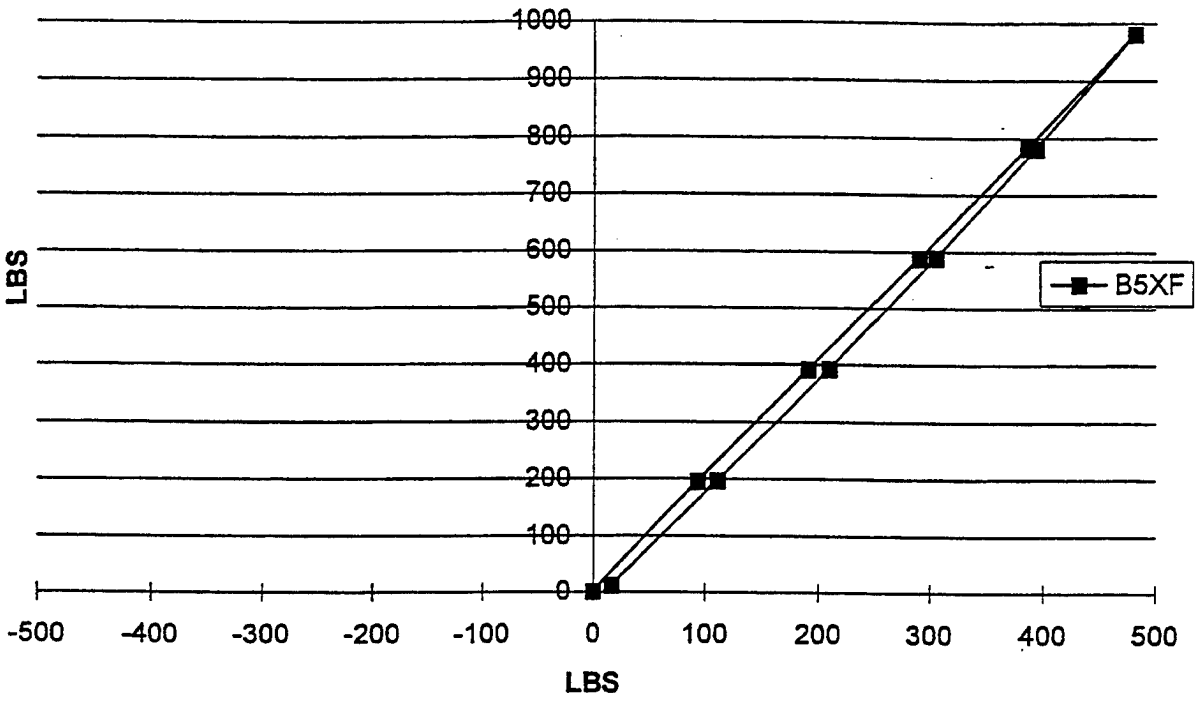
BIN B / CAL 1 HPD9 11032-43 / FWD SUPPORT 3 / VERTICAL FORCE



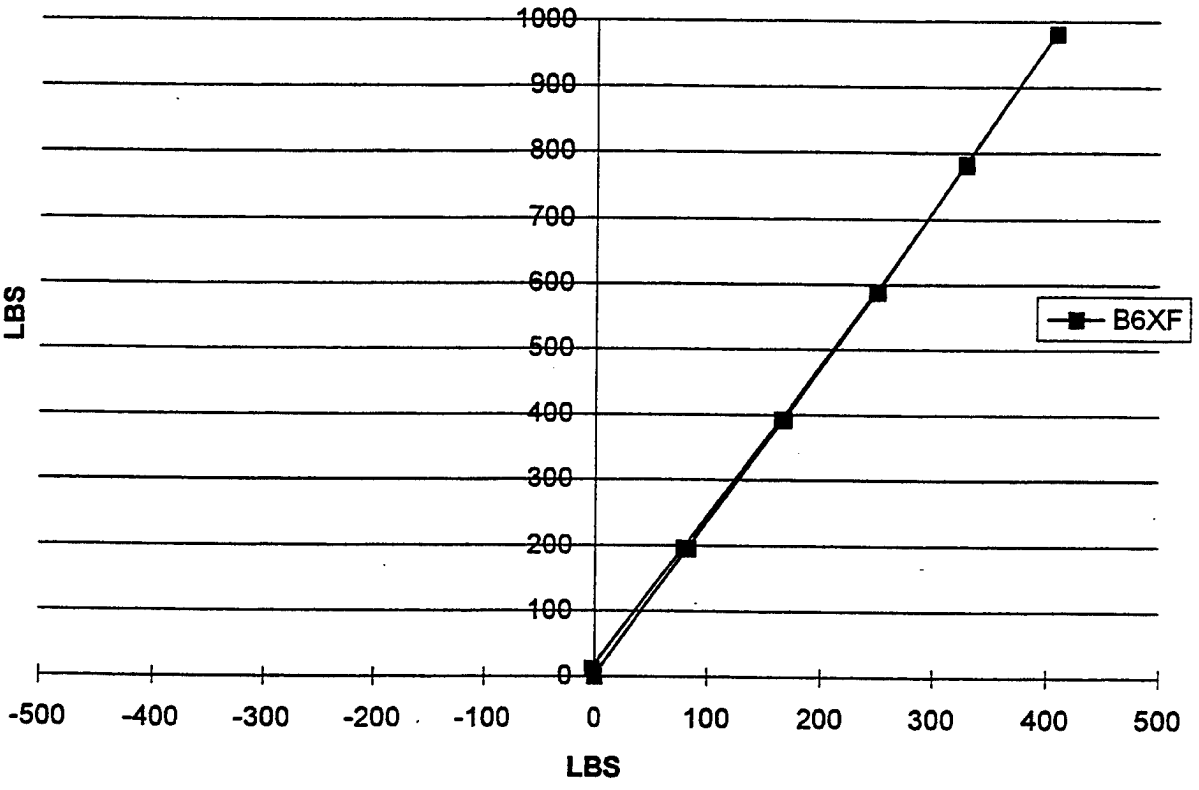
BIN B / CAL 1 HPD9 11032-43 / AFT SUPPORT 4 / VERTICAL FORCE



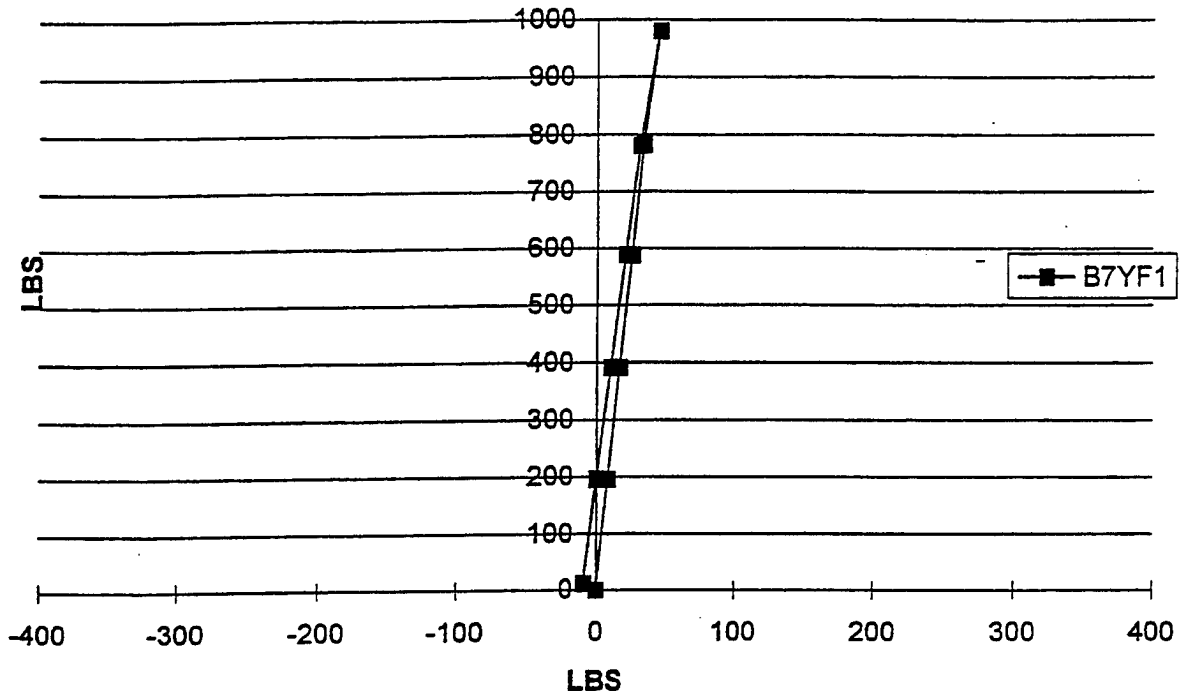
BIN B / CAL 1 HPD5 70060-159 / AFT PLATE SUPPORT 5 / LONGITUDINAL FORCE



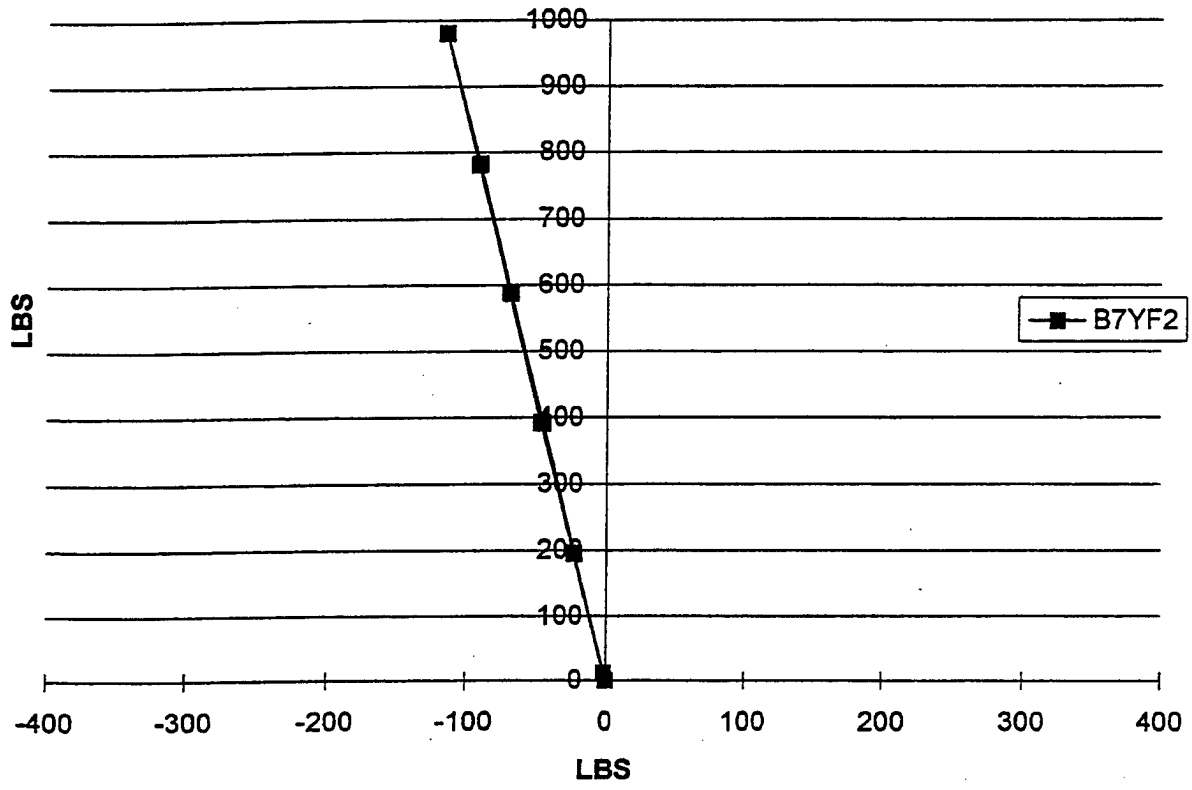
BIN B / CAL 1 HPD5 70060-159 / FWD PLATE SUPPORT 6 / LONGITUDINAL FORCE



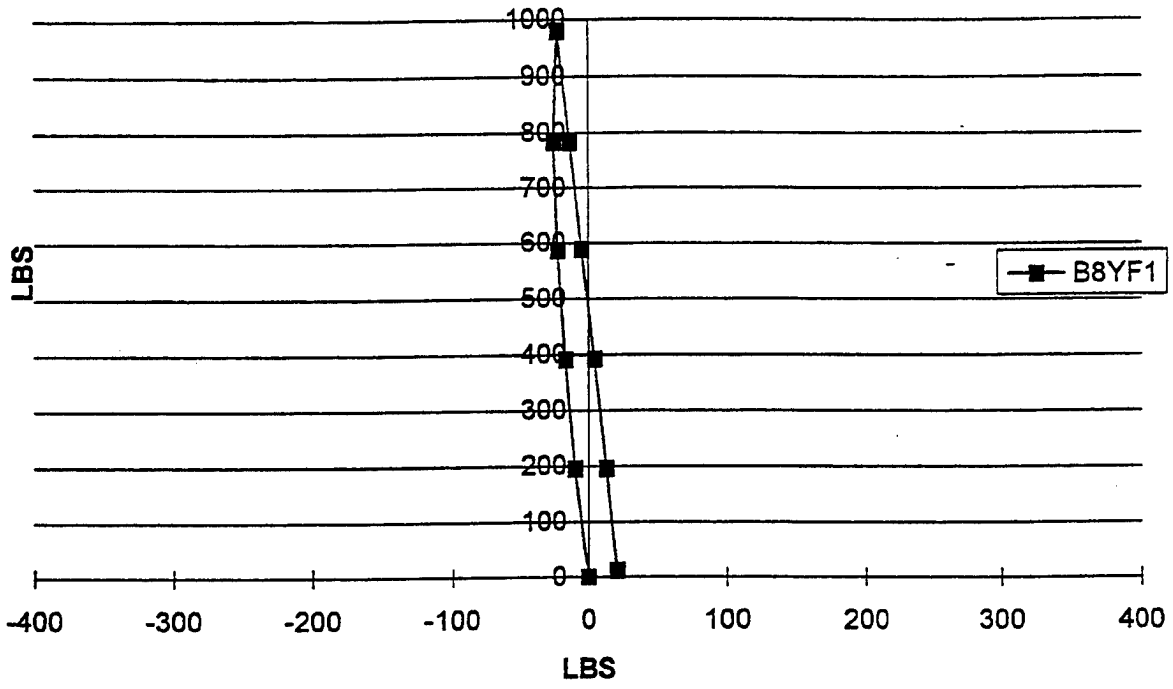
BIN B / CAL 1 HPD5 70041-46 / L SUPPORT 7 / GAGE 1 (LOWER) / LATERAL FORCE



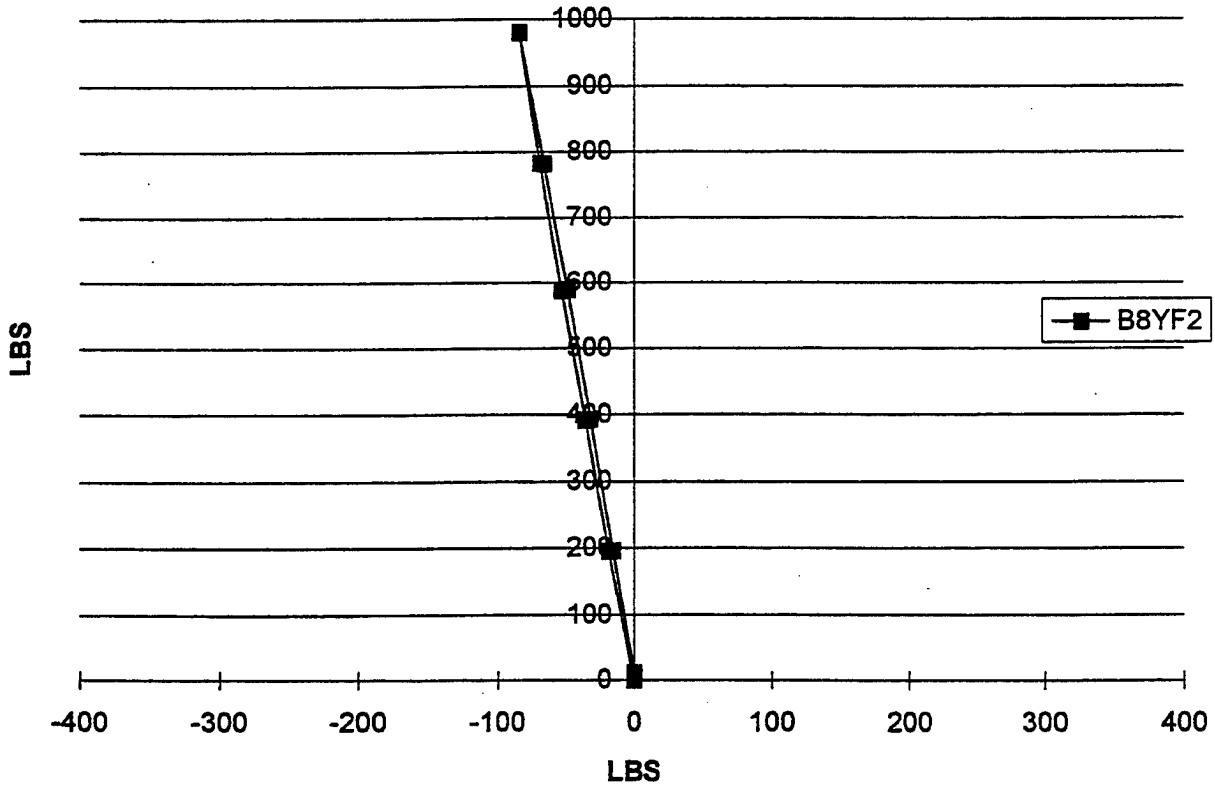
BIN B / CAL 1 HPD5 70041-46 / L SUPPORT 7 / GAGE 2 (UPPER) / LATERAL FORCE



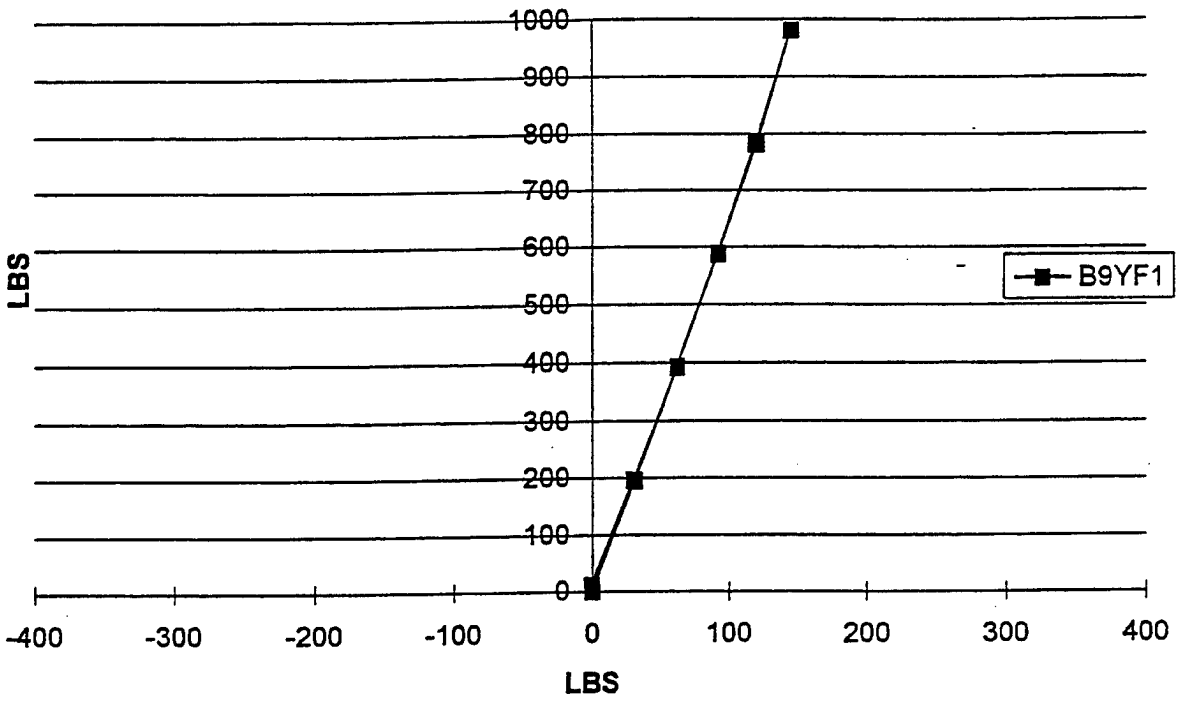
BIN B / CAL 1 HPD5 70041-46 / L SUPPORT 8 / GAGE 1 (LOWER) / LATERAL FORCE



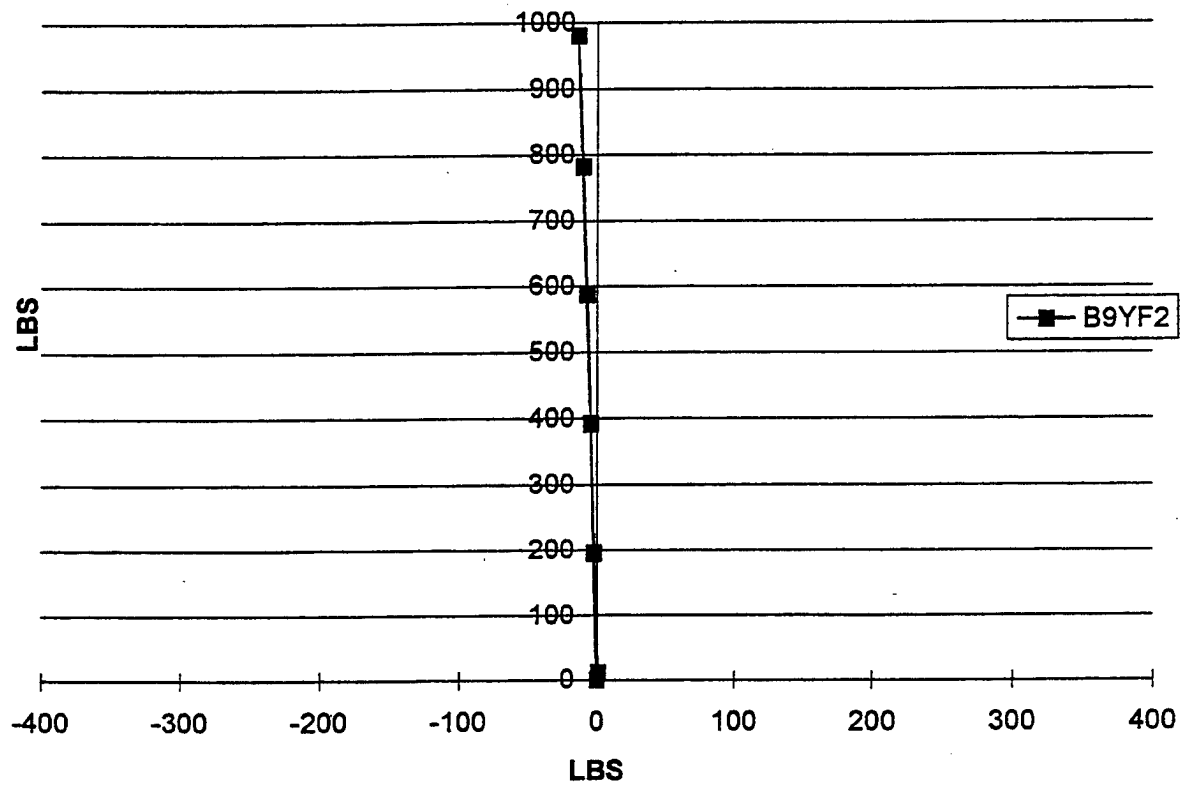
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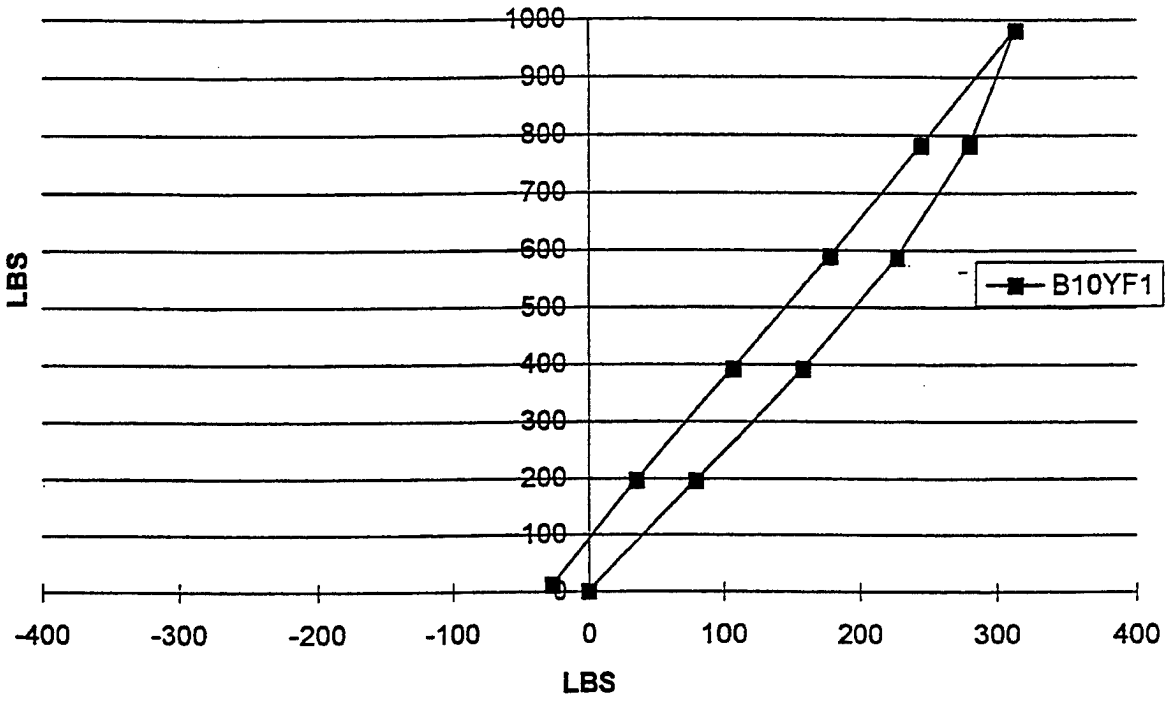
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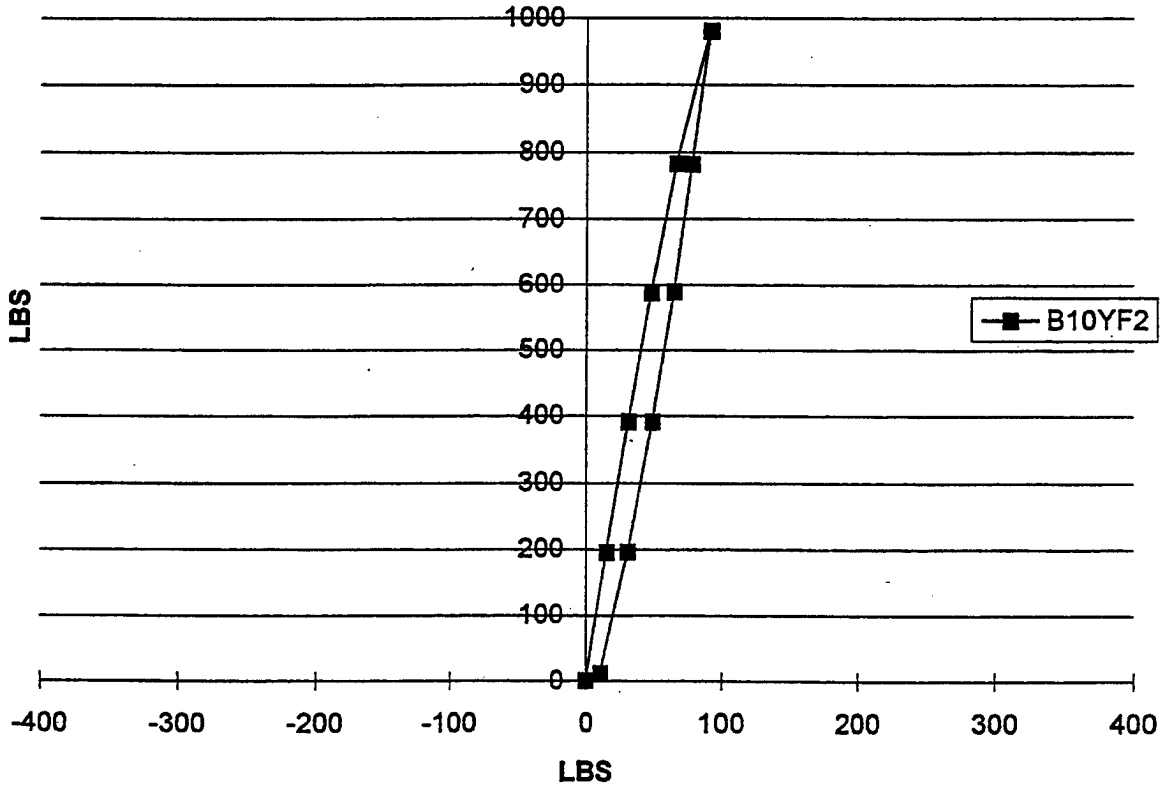
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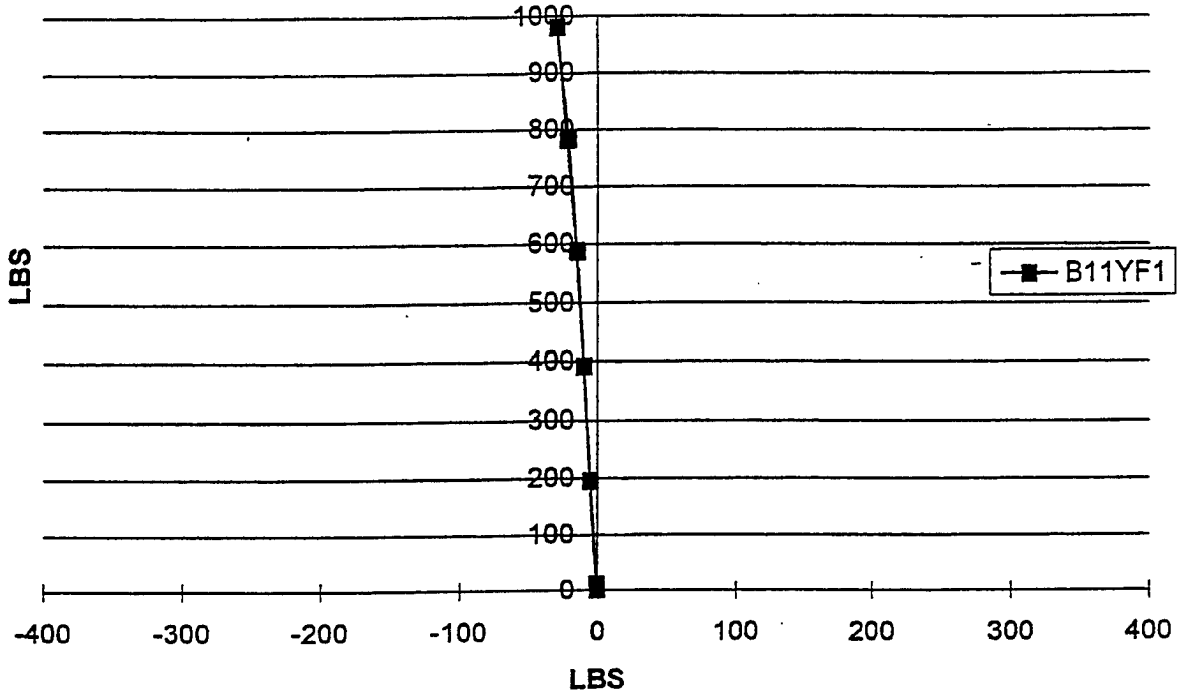
BIN B / CAL 1 HPD5 70041-46 / SUPPORT 10 / GAGE 1 (LOWER) / LATERAL FORCE



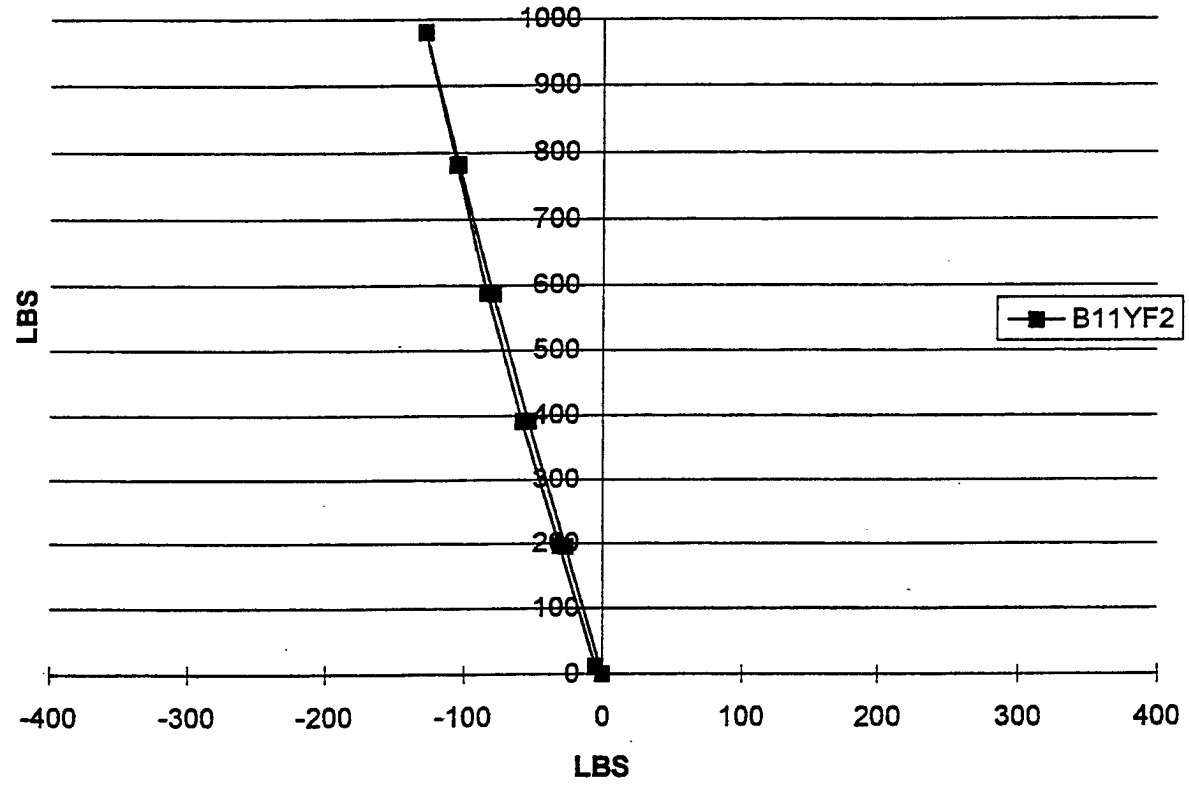
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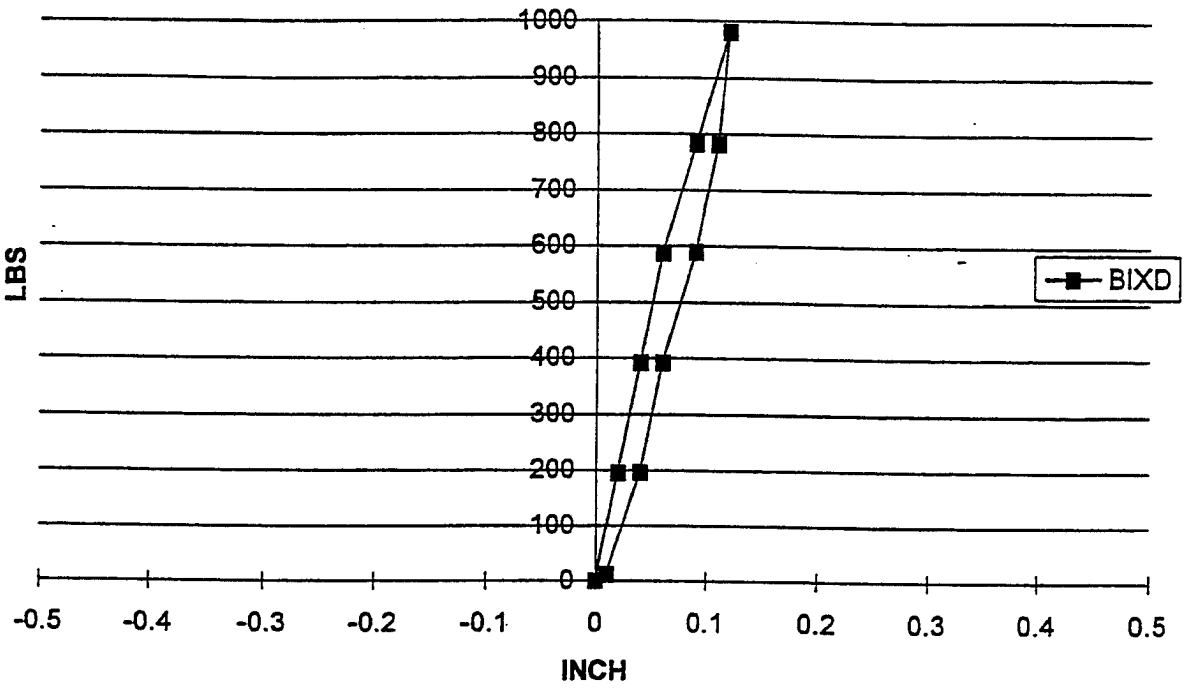
BIN B / CAL 1 HPD5 70041-46 / AFT L SUPPORT 11 / GAGE 1 (LOWER) / LATERAL FORCE



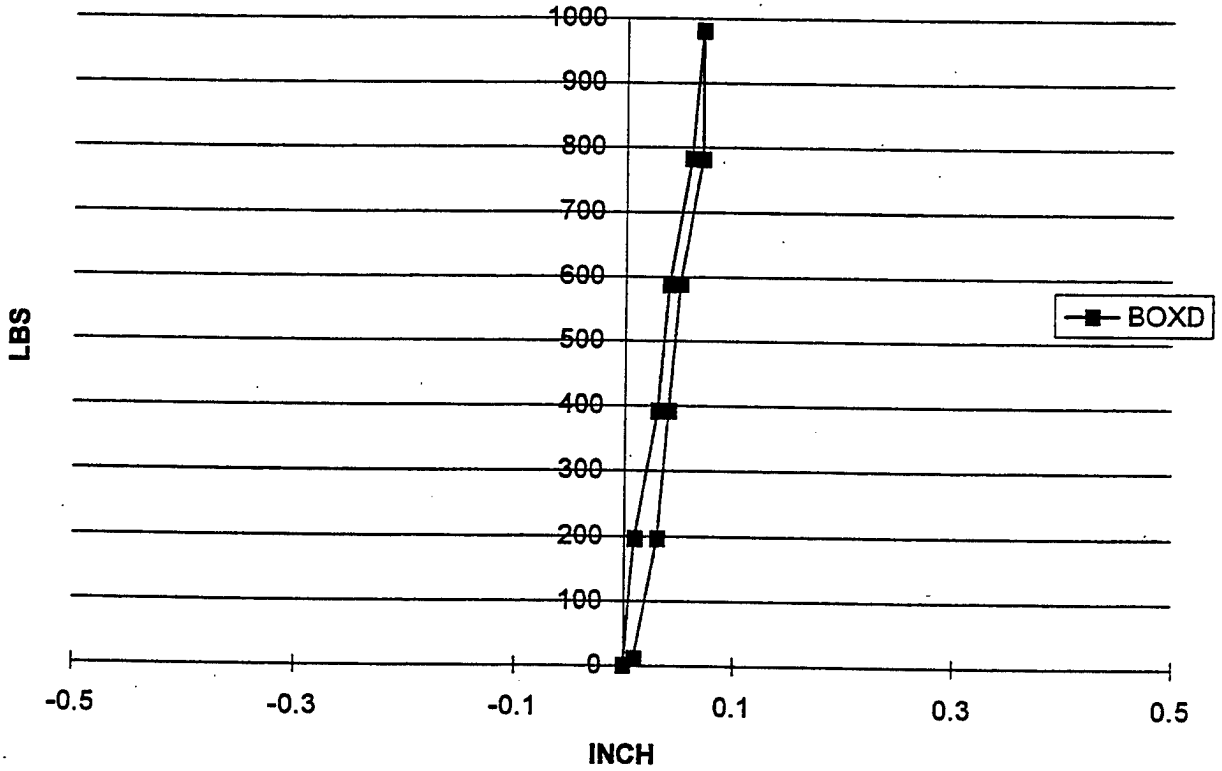
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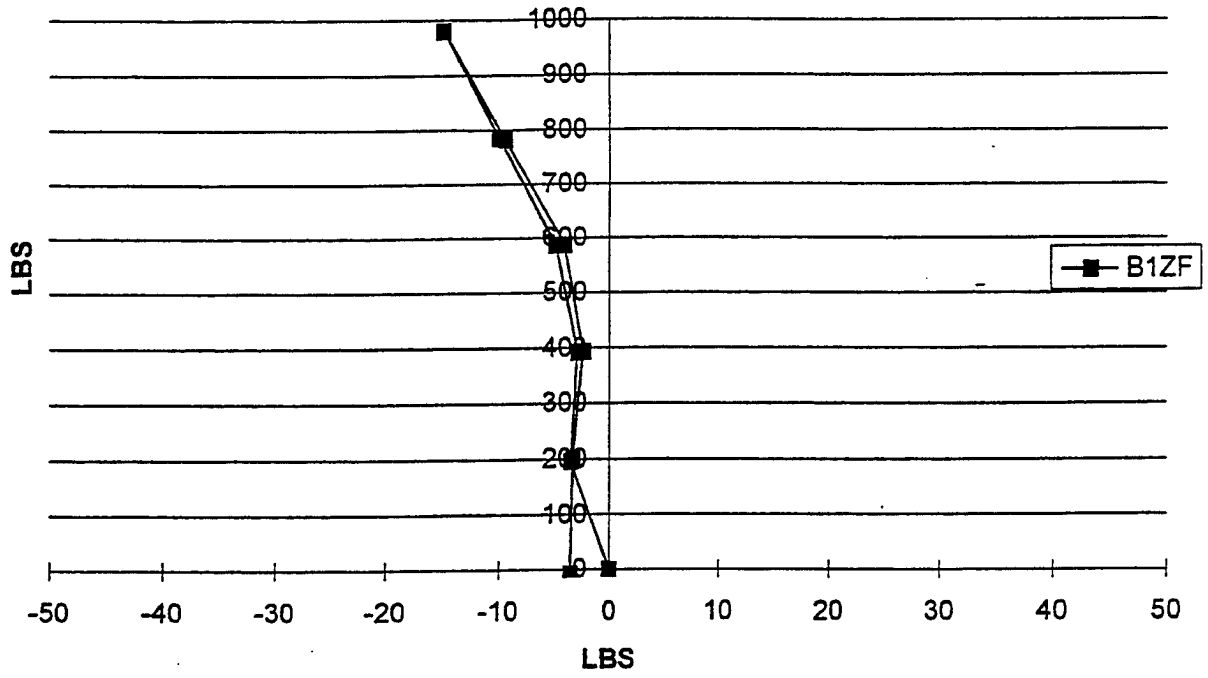
BIN B / CAL 1 INNER LONGITUDINAL DISPLACEMENT



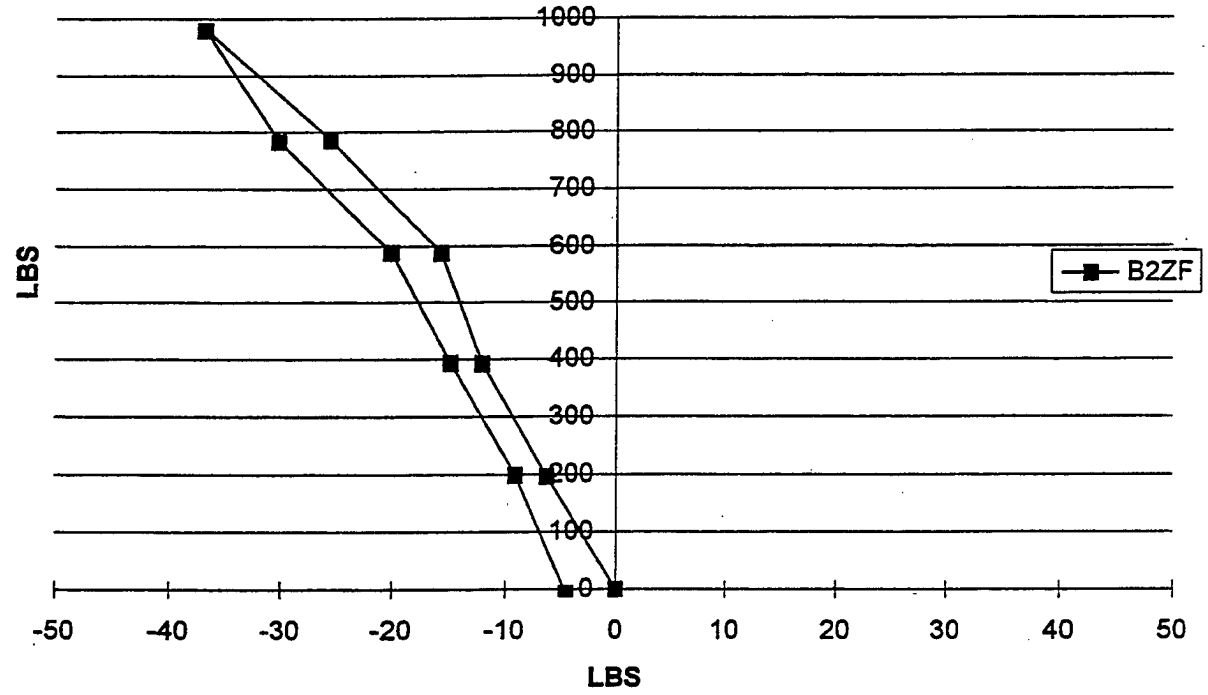
BIN B / CAL 1 OUTER LONGITUDINAL DISPLACEMENT



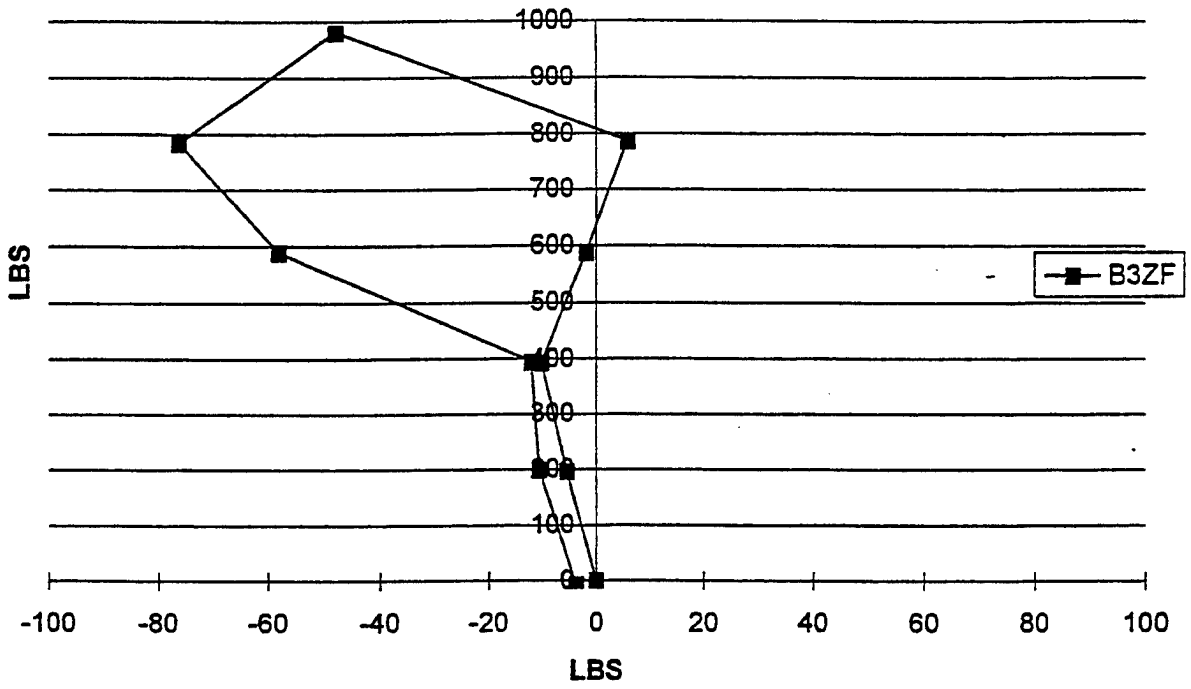
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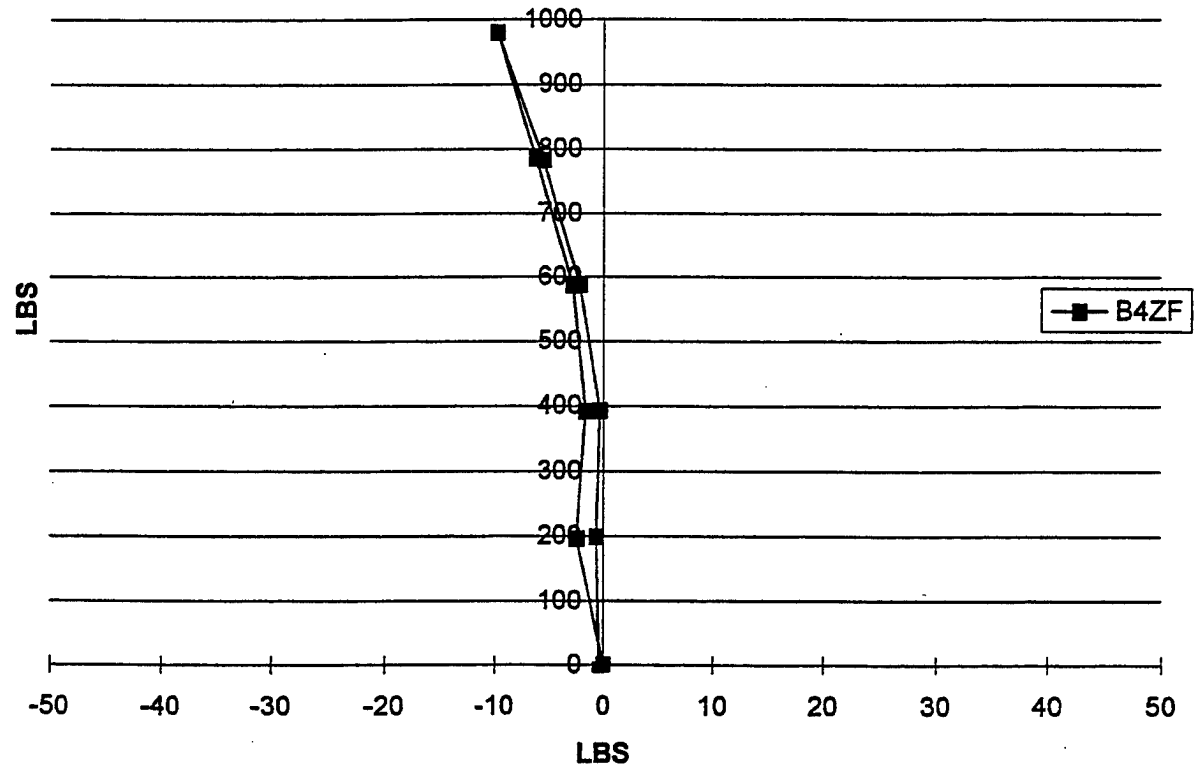
BIN B / CAL 2 HPD9 70066-7 / FWD SUPPORT 2 / VERTICAL FORCE



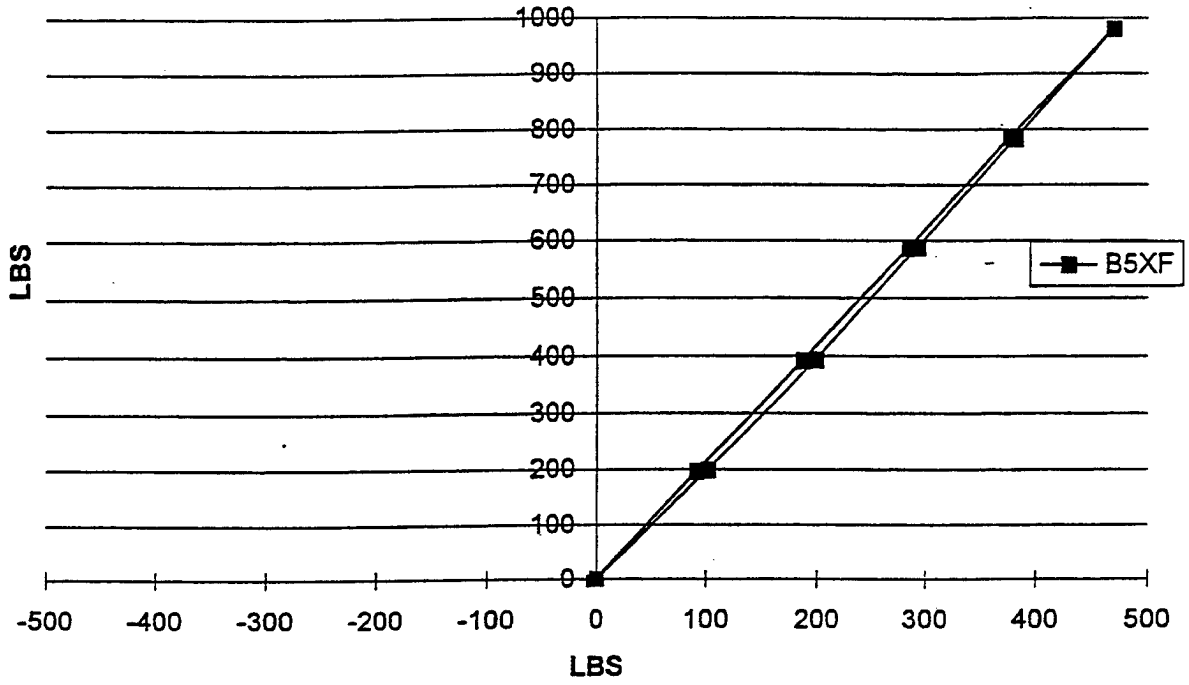
BIN B / CAL 2 HPD9 11032-43 / FWD SUPPORT 1 / VERTICAL FORCE



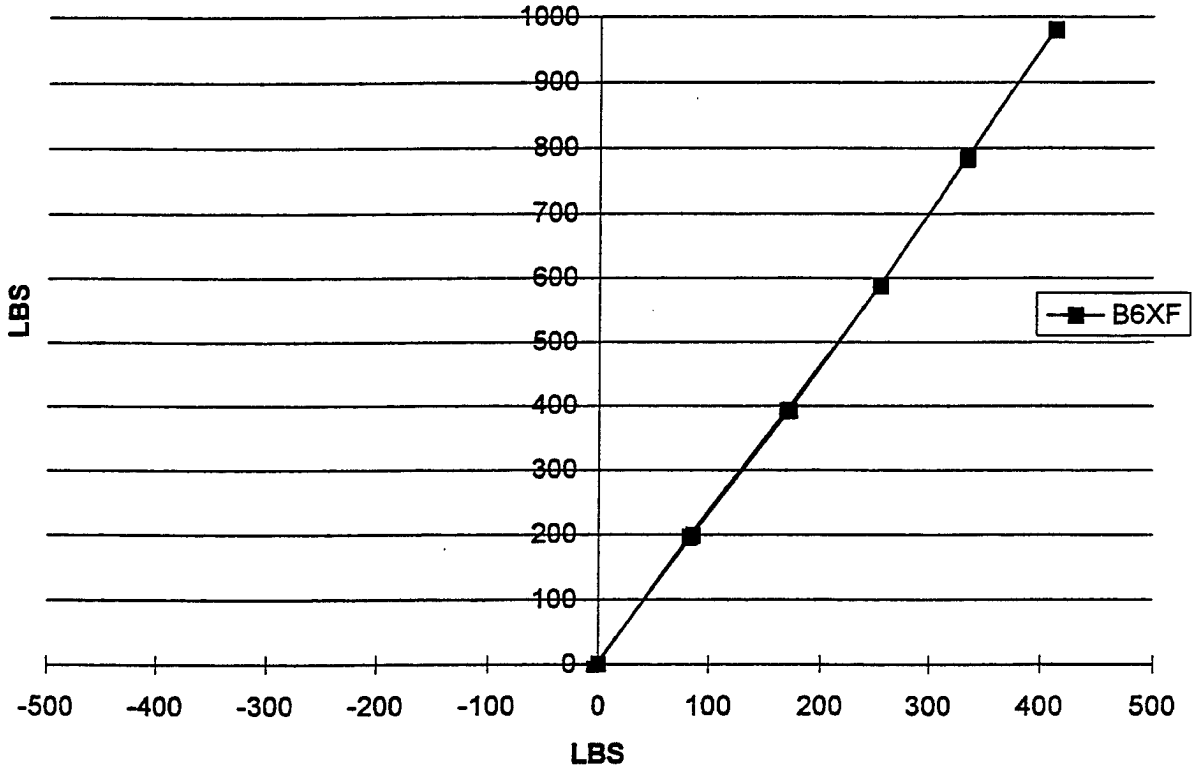
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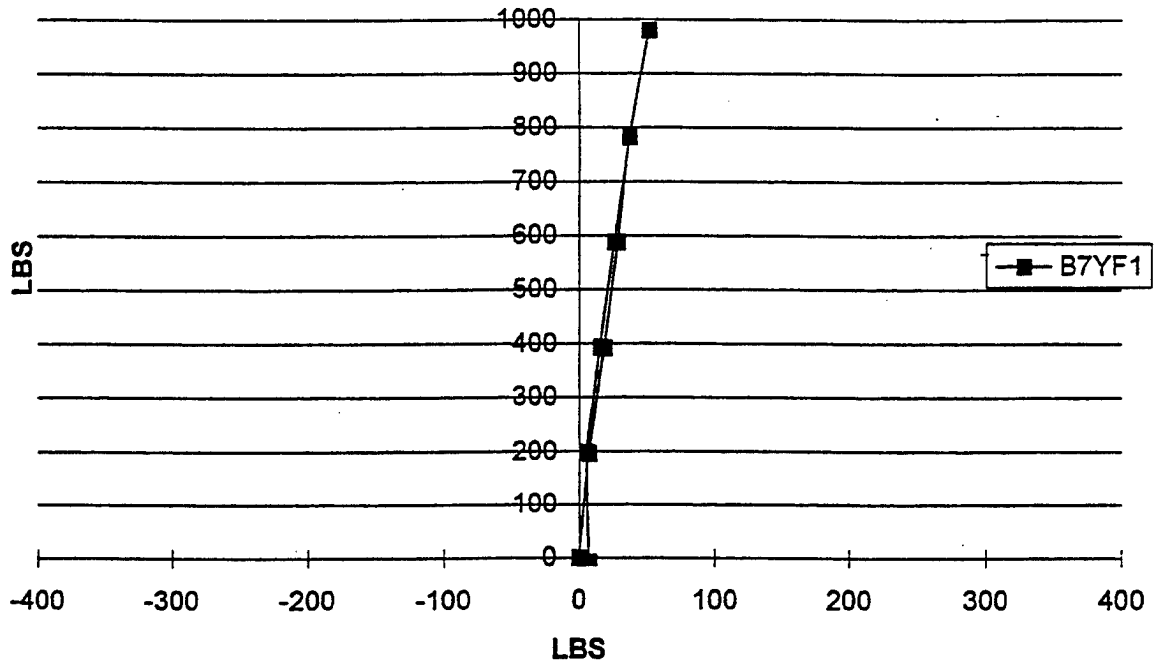
BIN B / CAL 2 HPD5 70060-159 / PLATE SUPPORT 5 / LONGITUDINAL FORCE



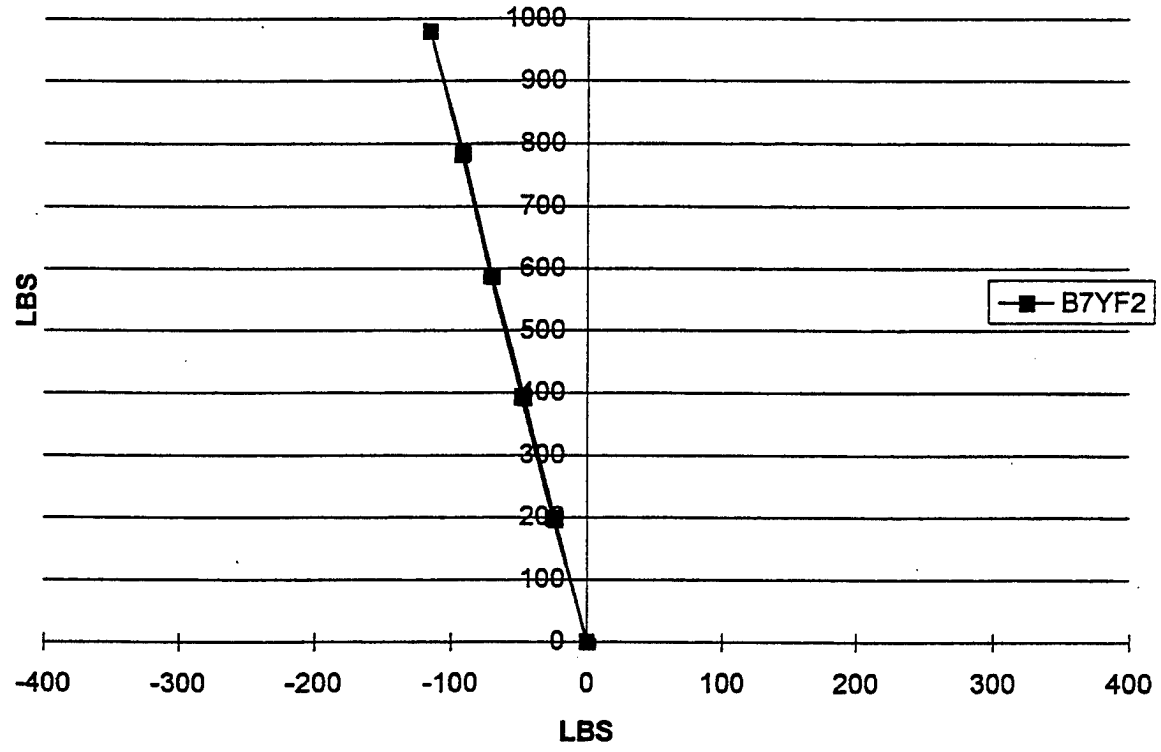
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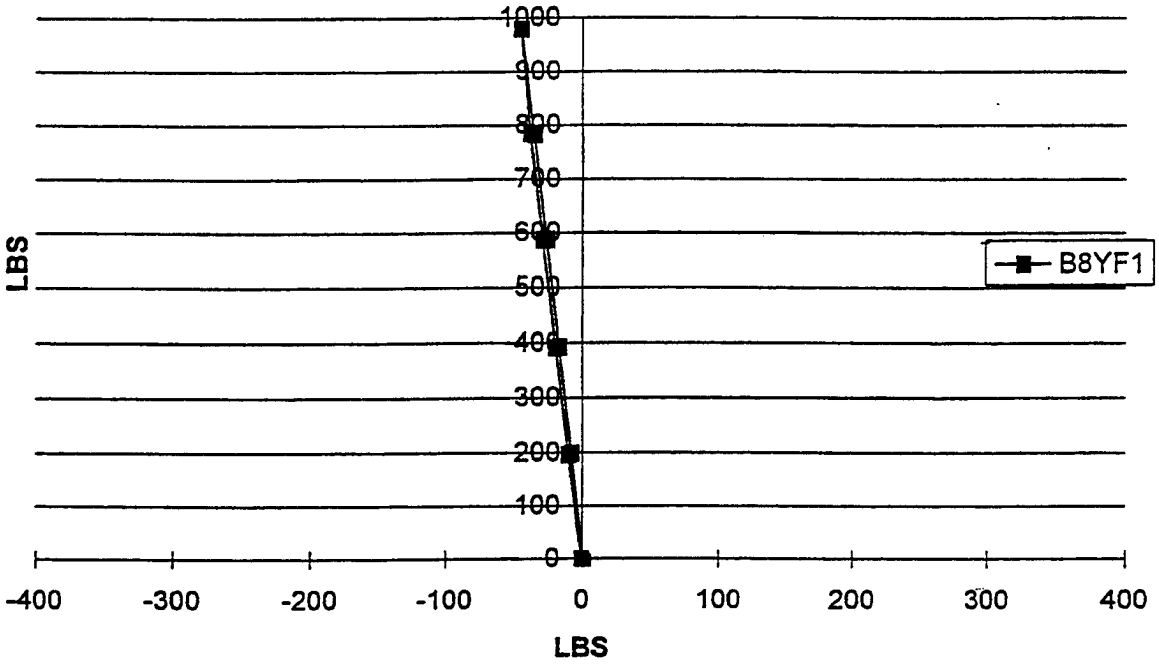
BIN B / CAL 2 HPD5 70041-46 / L SUPPORT 7 / GAGE 1 (LOWER) / LATERAL FORCE



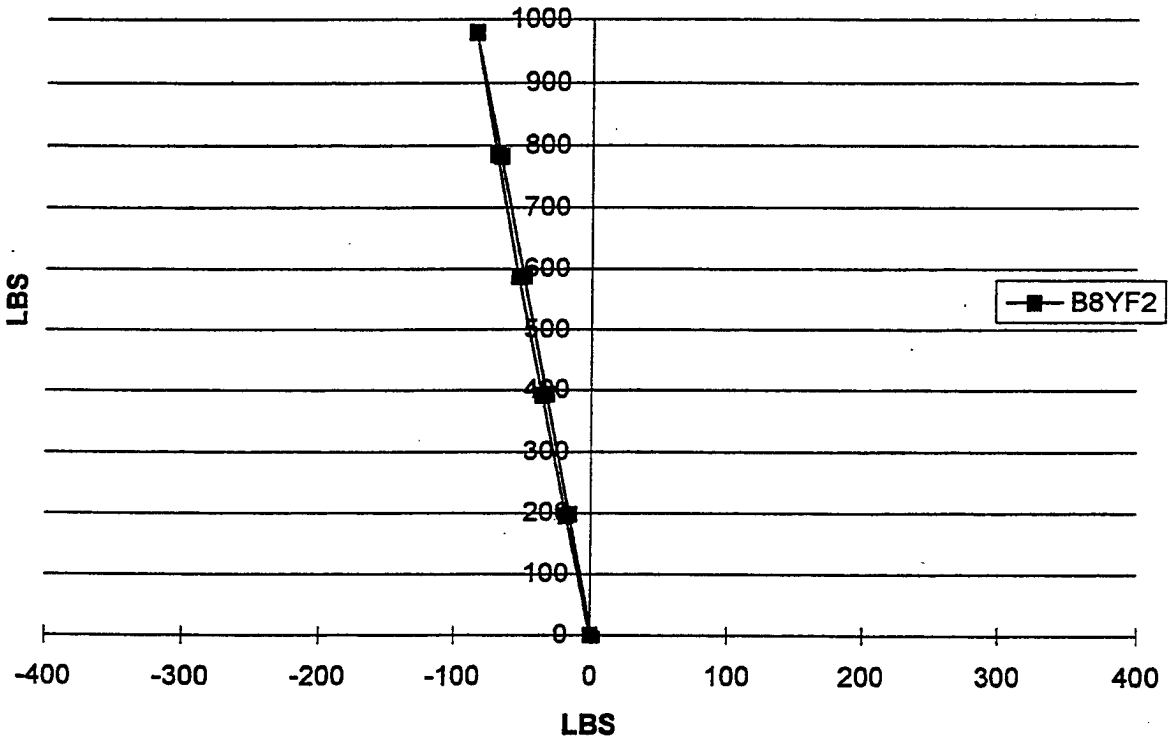
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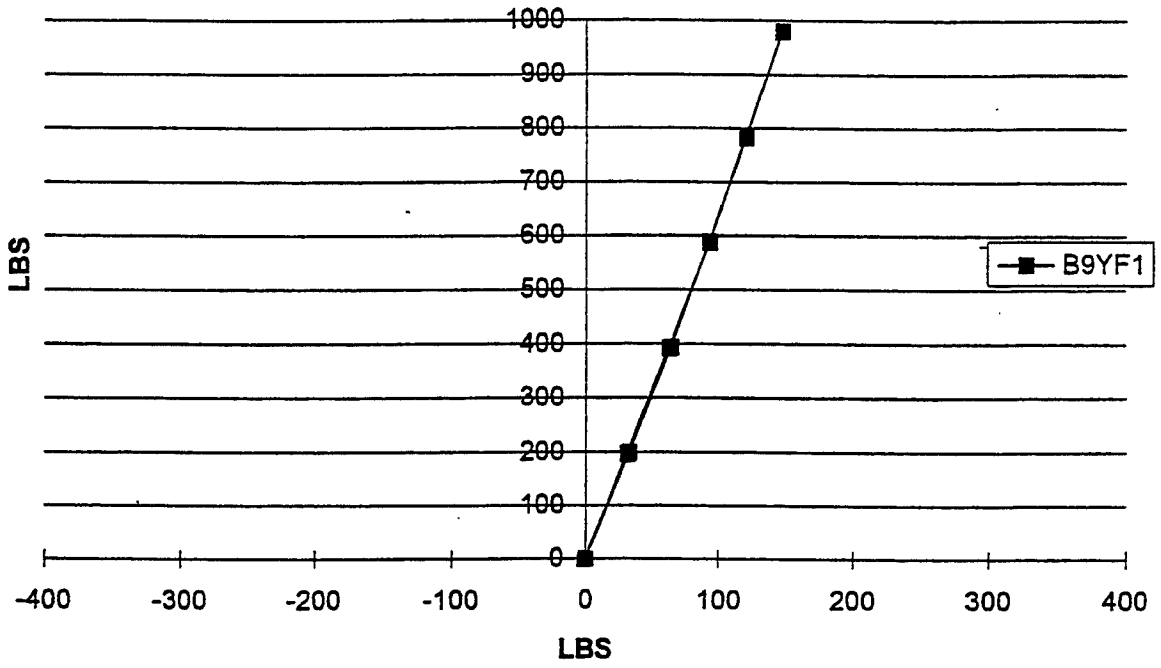
BIN B / CAL 2 HPD5 70041-46 / L SUPPORT 8 / GAGE 1 (LOWER) / LATERAL FORCE



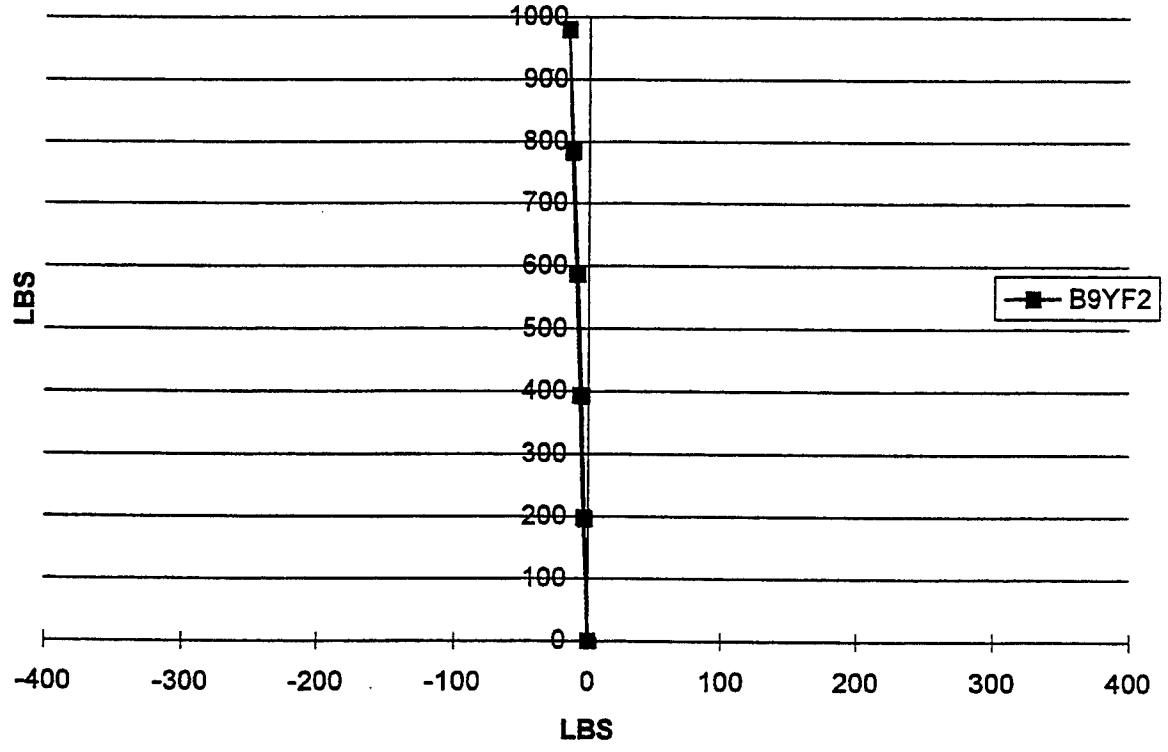
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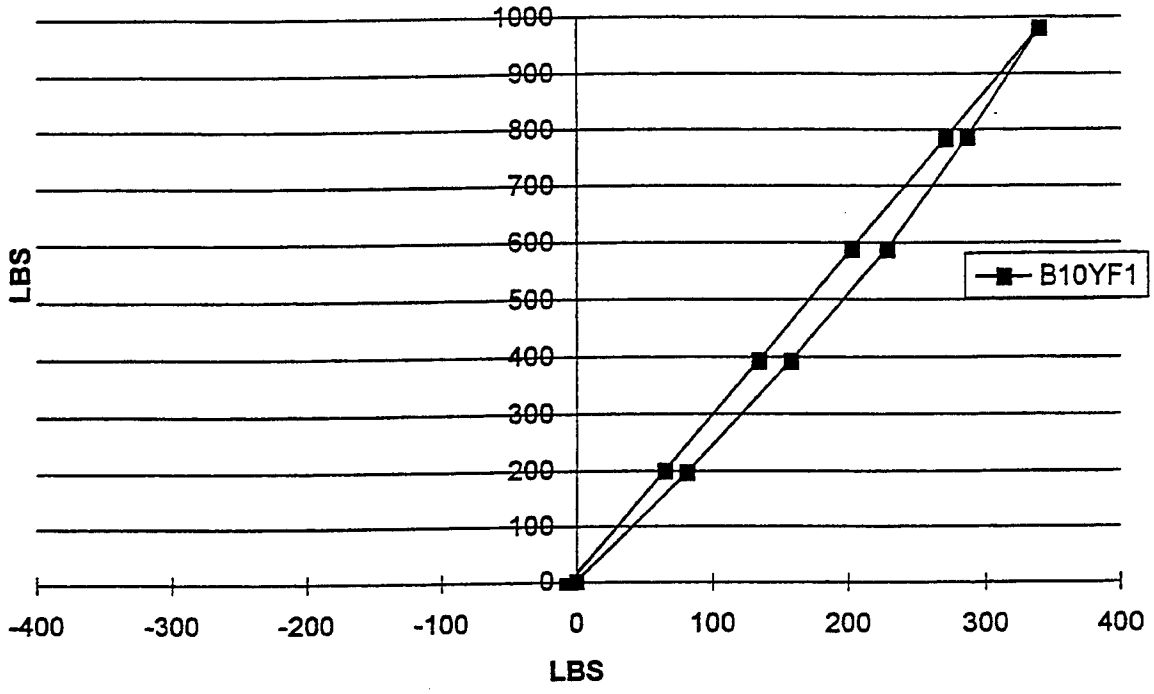
BIN B / CAL 2 HPD5 70041-46 / L SUPPORT 9 / GAGE 1 (LOWER) / LATERAL FORCE



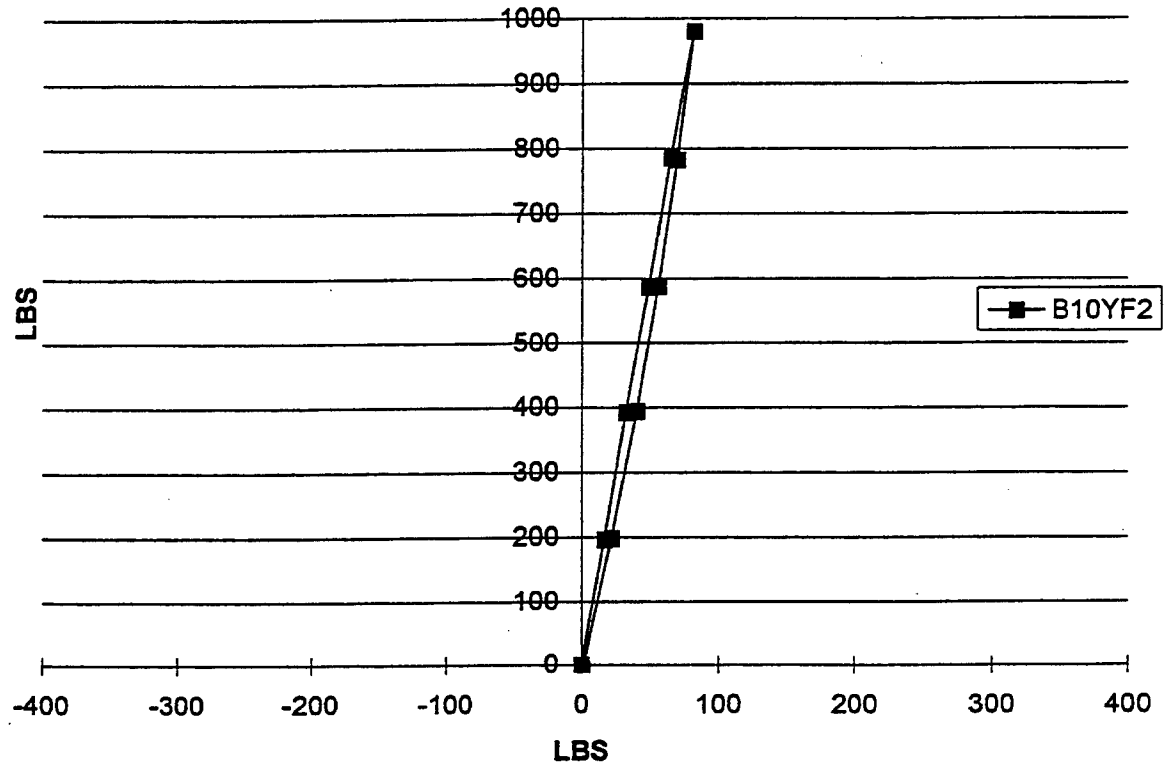
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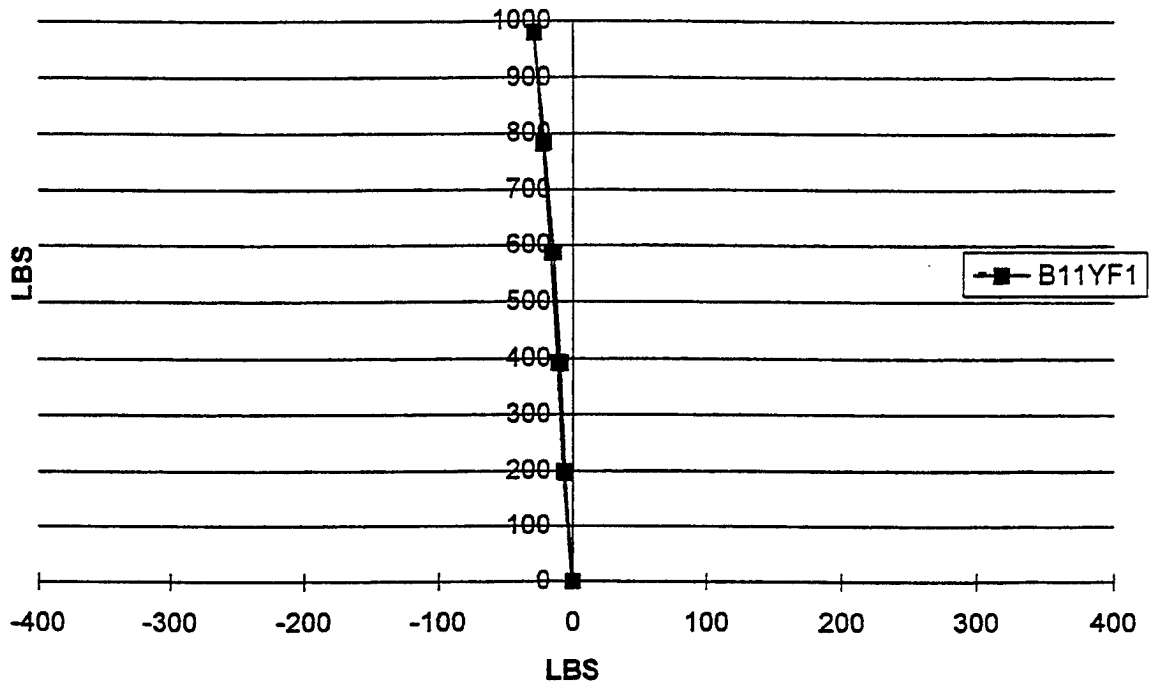
BIN B / CAL 2 HPD5 70041-46 / FWD L SUPPORT 10 / GAGE 1 (LOWER) / LATERAL FORCE



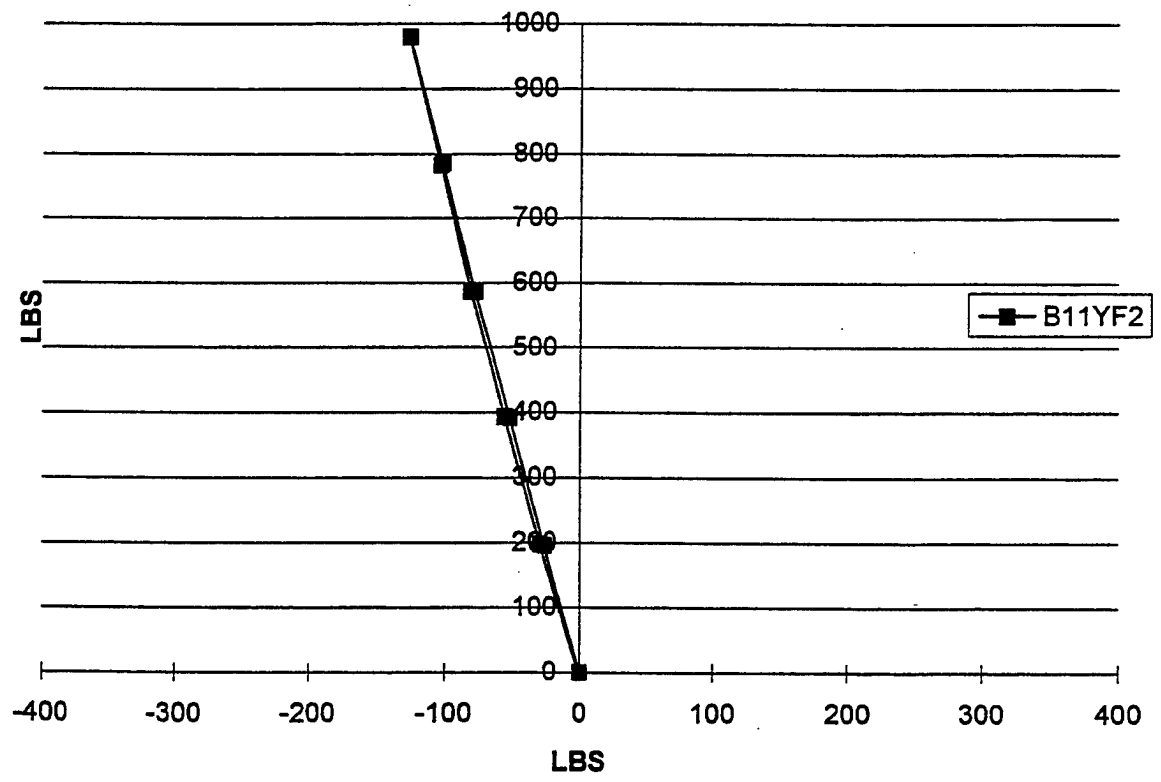
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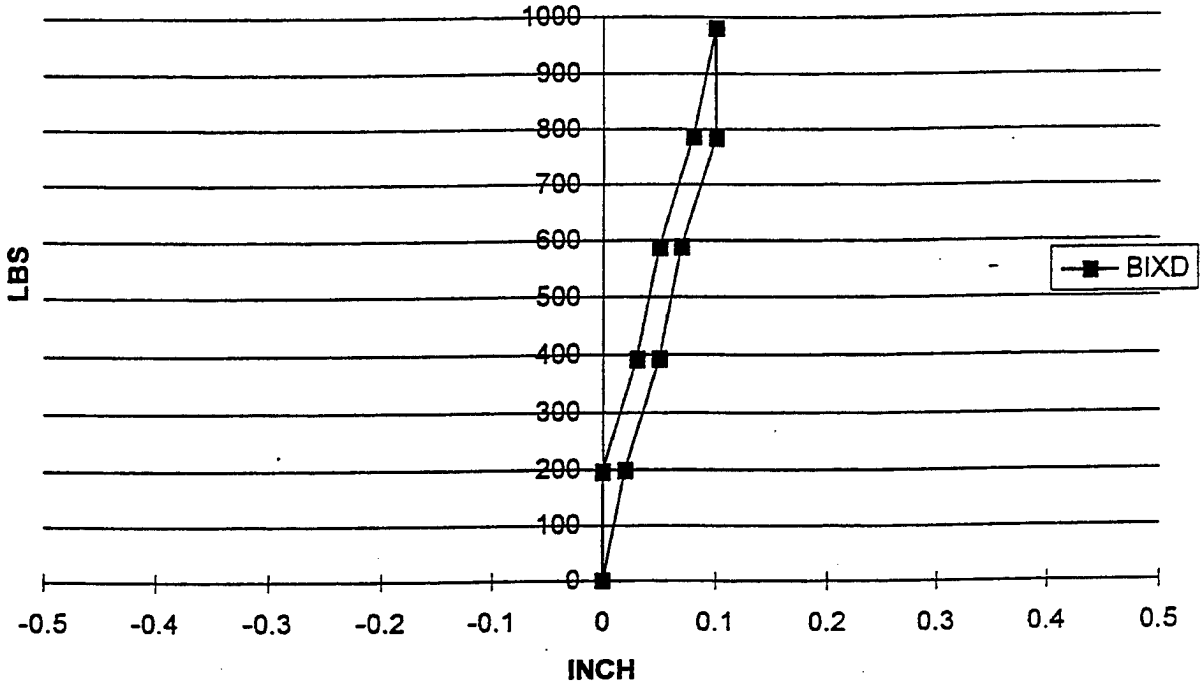
BIN B / CAL 2 HPD5 70041-46 / AFT L SUPPORT 11 / GAGE 1 (LOWER) / LATERAL FORCE



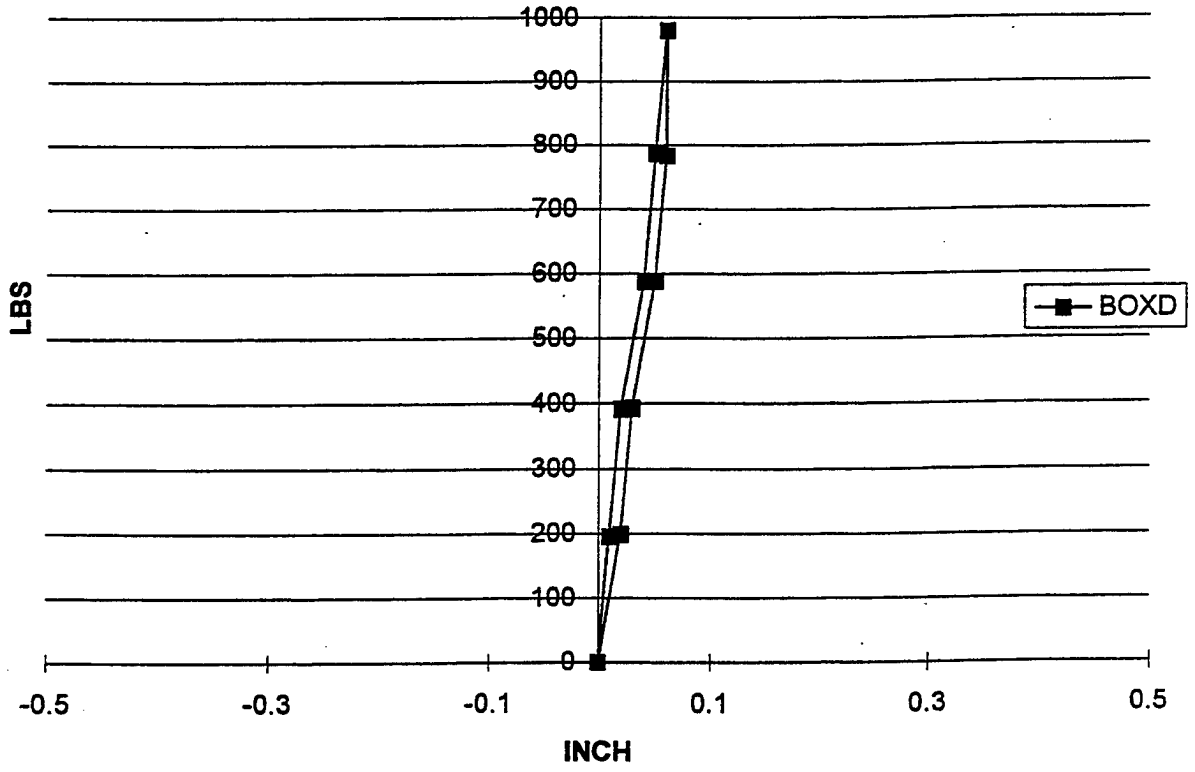
BIN B / CAL 2 HPD5 70041-46 / AFT L SUPPORT 11 / GAGE 2 (UPPER) / LATERAL FORCE



BIN B / CAL 2 INNER LONGITUDINAL DISPLACEMENT



BIN B / CAL 2 OUTER LONGITUDINAL DISPLACEMENT



APPENDIX D—MISCELLANEOUS DATA

Filtering Data

SAE J211 MAR95

Sled and Airframe:

Sled Acceleration Class 60

Fuselage Acceleration Class 60

Overhead Stowage Bin Acceleration Class 60

Auxiliary Fuel Tank Acceleration Class 60

Potentiometer Filter Class 60

Overhead Stowage Bin Load Cell Filter Class 60 (For Impact Tests)

Overhead Stowage Bin Load Cell Filter Class 1000 (For Static Calibration Pull Tests)

Miscellaneous Strain Gage Filter Class 60 (Bin A Upper Supports C & D)

Integration Filter Class 180

Strain gage Class 60

	Positive Data Direction
Accelerations	
Longitudinal	Forward
Lateral	Leftward
Vertical	Upward
Stowage Bin Displacement	Forward
Auxiliary Fuel Tank Displacement	Forward