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TEST AND EVALUATION OF IMPROVED AIRCREW RESTRAINT SYSTEMS

G. T. Singley III

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US Army aviation accident data shows that a majority of all injuries in attack helicopters could have been avoided if these aircraft had been equipped with crashworthy seat and restraint systems. The compactness of the cockpit and the close proximity of mission equipment to the aircrew in attack and scout helicopters pose serious crash impact hazards. Although not desirable from a crashworthiness standpoint, operational considerations may dictate that mission equipment and structure be located within the occupant's crash impact motion envelope, particularly for his head. The cockpit can be delethalized further when the improved restraint is complemented by

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padding potential strike surfaces in the cockpit; making contact surfaces frangible; and providing weapon system sights with frangibility, telescoping, and/or swing-away features. This report presents the results of an effort to test and compare the potential of several aircrew restraint systems to reduce the crash impact motion envelope of helicopter aircrewmen.

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PREFACE

The work described in this report was the result of the participation and cooperation of individuals from several Government and industrial organizations. Participating contractors were:

- Thiokol Corporation, Wasatch Division, Brigham City, Utah – provided the Inflatable Body and Head Restraint System (IBAHRS) test specimens under the terms of Naval Air Development Center Contract N 6229-77-C-0025, jointly funded by ATL and NADC.

- Pacific Scientific Company, Anaheim, California – provided the MIL-S-58095, MIL-R-XXXX, and power haul-back restraint system test specimens under the terms of ATL Contract DAAJ02-79-C-0006.

- Simula, Inc., Tempe, Arizona – instrumented two restraint systems for use in the Civil Aeromedical Institute testing under the terms of ATL Contract DAAJ02-79-C-0016.

Appreciation is extended to the following organizations and individuals for their contributions to this effort:

- Federal Aviation Administration, Civil Aeromedical Institute, Oklahoma City, Oklahoma – Mr. R. F. Chandler provided guidance in furnishing the test sled facility, rigid seat apparatus, and anthropomorphic dummy; conducting the sled crash impact testing; acquiring and reducing all test data; and providing photographic records.

- Aircrew Systems Branch, Naval Air Development Center (NADC), Warminster, Pennsylvania – Mr. J. R. McElhenney, Project Engineer, provided the crash impact sensor and test support for all IBAHRS tests.

- Royal Air Force Institute of Aviation Medicine (IAM), Farnborough, England, United Kingdom – Squadron Leader D. C. Reader provided the rotary-motion, single-point attachment/release buckle manufactured by GQ Ltd.

- US Army Natick Research and Development Command (NARADCOM), Natick, Massachusetts – Mr. T. Judge provided the aircrewman clothing, survival vest, and armor vest.

- Applied Technology Laboratory, US Army Research and Technology Laboratories (AVRADCOM), Fort Eustis, Virginia – Mr. J. Batista and Mr. M. Slye analyzed the high-speed motion picture test coverage and illustrated the occupant motion envelopes. Mr. Kent Smith of the Flight Safety Team of Safety and Survivability coordinated and prepared this report for publication upon the departure of the author from this laboratory.

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INTRODUCTION

BACKGROUND

Accident data from the US Army Safety Center involving 4550 helicopter occupants during the period 1971 through 1976 documents the frequency and severity of head injuries. Head injuries are the leading cause of major and fatal injuries (see Table 1) and account for 31.5 percent of fatalities in all helicopters (see Table 2). Figure 1 summarizes the data in Tables 1 and 2.

Current trends toward cockpit space limitation, pilot night vision and target acquisition displays, and armor panels have increased the potential for helicopter crewmember injury. The proximity of the crewmember to cockpit structure instruments, controls, sights, and armor panels is compounded by structural deformation during the crash impact sequence. The potential for major or fatal crash injury is increased in helicopters equipped with weapon sight systems with an eyepiece that requires the copilot/gunner (CPG) to look into it. Under nap-of-the-earth conditions, the CPG viewing through the sight eyepiece can expect little warning of any impending crash impact and a high likelihood of serious head/neck injury. The Army's "Crash Survival Design Guide" published in 1971[1] shows that the head of a crewmember restrained by a conventional aircrew restraint system (lap belt plus double-strap shoulder harness) will displace approximately 10 inches forward during a forward crash pulse as little as 4g (see Figure 2). The proximity of the upright crewmember's head to cockpit controls/sights/instruments (typically 15 inches or less), forward displacement of the occupant with respect to the seat in mild accidents, forward displacement of the seat, and cockpit structural deformation combine to pose a formidable challenge to the aircraft designer's attempts to provide the required level of crashworthiness.

MIL-STD-1290[2] is the Army's standard for the design and qualification of new light fixed- and rotary-wing aircraft crashworthiness. This standard requires that fatalities be prevented and injuries minimized in accidents as severe as the 95th percentile potentially survivable accident illustrated in Figure 3. The 95th percentile potentially survivable longitudinal velocity change of 50 feet per second can cause the seat occupant to experience peak longitudinal decelerations of 30g or higher. The latest edition of the "Aircraft Crash Survival Design Guide"[3] presents analytical techniques, concepts, and design test criteria for satisfying MIL-STD-1290; it includes seat, restraint system, protective padding, cockpit controls, and equipment considerations.

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[1] Turnbow, J. W., et al, *Crash Survival Design Guide*, Dynamic Science, The AvSer Facility, USAAMRDL TR 71-22, Eustis Directorate, US Army Air Mobility Research and Development Laboratory, Fort Eustis, Virginia, October 1971, AD 733358.

[2] Military Standard MIL-STD-1290 (AV), *Light Fixed- and Rotary-Wing Aircraft Crashworthiness*, Department of Defense, Washington, DC, 25 January 1974.

[3] *Aircraft Crash Survival Design Guide*, Simula Inc., USARTL TR 79-22 A-E, Applied Technology Laboratory, US Army Research and Technology Laboratories (AVRADCOM), Fort Eustis, Virginia:

Volume I – *Design Criteria and Checklists*, December 1980, AD A093784.
Volume II – *Aircraft Crash Environment and Human Tolerance*, January 1980, AD A082512.
Volume III – *Aircraft Structural Crashworthiness*, August 1980, AD A089104.
Volume IV – *Aircraft Seats, Restraints, Litters, and Padding*, June 1980, AD A088441.
Volume V – *Aircraft Postcrash Survival*, January 1980, AD A082513.

PROGRAM OBJECTIVE

Although crewmember strike hazards can be reduced by methods such as removing the contact surface from the strike envelope or using frangible structure/sights/controls, telescoping or collapsing sights and controls, air bags, or padding, there are several restraint stystem options available that offer improved restraint and strike envelope reduction. These include inertia reel systems as well as an inflatable body and head restraint system (IBAHRS). Aircraft designers and program managers lacked data detailing the relative crashworthiness benefits of these available restraint systems, however. For this reason a program was conducted to compare by dynamic crash impact testing the potential of seven types of restraint systems to reduce the probability of injury to helicopter crewmembers resulting from striking the cockpit interior and/or controls.

TECHNICAL APPROACH

The abilities of the seven candidate restraint systems to limit occupant motion during typical helicopter crash pulses were compared by subjecting an anthropomorphic dummy in a stiff, nonstroking seat to a series of crash input pulses using a horizontal sled impact facility. The testing was designed to investigate the effect that the following key variables had on the occupant strike envelope: crash pulse peak deceleration, rise time, and velocity change; anthropomorphic dummy clothing and equipment; restraint system concept; and seat orientation. Accelerometer, load cell, and high-speed photographic data were analyzed to compare the performance of the systems.

TABLE 1. MAJOR AND FATAL INJURIES AS PERCENTAGES OF TOTAL (US ARMY AIRCRAFT, 1971-1976) (FROM REFERENCE 3)

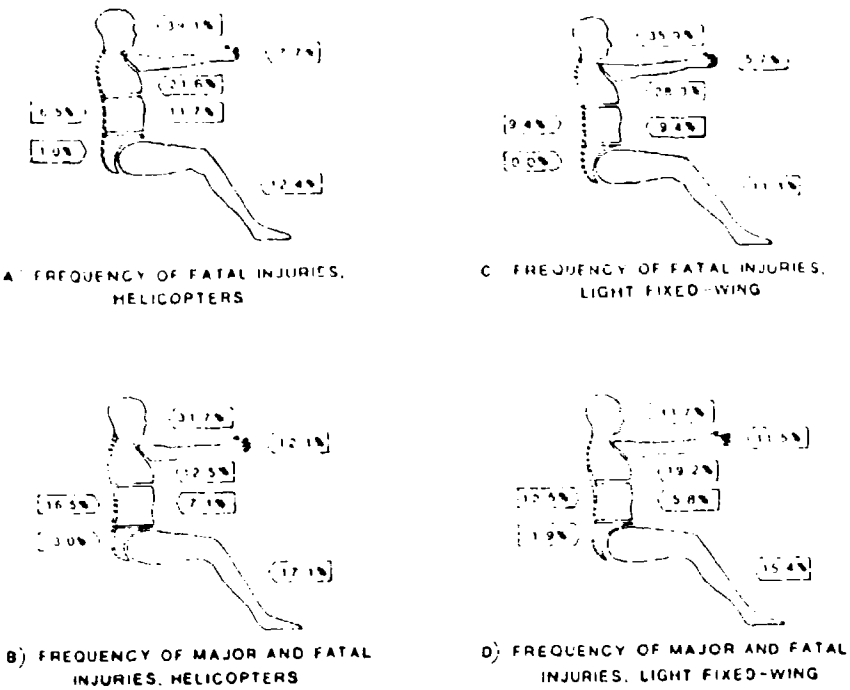
	Percentage of Injuries (Total Injuries in Parentheses)						
	Helicopters						
Body Part	UH (678)	OH (271)	CH (70)	AH (93)	All (1114)	FW (104)	All Aircraft (1218)
Head	19.6	18.5	22.9	21.5	19.7	19.2	19.6
Face	9.1	9.2	10.0	11.8	9.4	14.4	9.9
Neck	2.5	3.0	1.4	3.2	2.6	0.0	2.4
Upper Extremity	10.9	12.9	17.1	15.1	12.1	11.5	12.1
Thorax	13.7	12.2	7.1	8.6	12.5	19.2	13.0
Abdomen	7.8	5.9	10.0	3.2	7.1	5.8	7.0
Pelvis	3.8	2.6	0.0	1.1	3.0	1.9	2.9
Vertebrae	15.3	19.2	8.6	21.5	16.5	12.5	16.2
Lower Extremity	17.1	16.6	22.9	14.0	17.1	15.4	16.9

Legend: UH - Utility Helicopter
OH - Observation Helicopter
CH - Cargo Helicopter
AH - Attack Helicopter
FW - Fixed-Wing Aircraft

TABLE 2. FATAL INJURIES AS PERCENTAGES OF TOTAL (US ARMY AIRCRAFT, 1971-1976) (FROM REFERENCE 3)

	Percentage of Injuries (Total Injuries in Parentheses)						
	Helicopters						
Body Part	UH (262)	OH (75)	CH (34)	AH (32)	All (403)	FW (53)	All Aircraft (456)
Head	32.4	25.3	35.3	34.4	31.5	30.2	31.4
Face	4.6	4.0	8.8	6.3	5.0	5.7	5.0
Neck	1.9	6.7	0.0	3.1	2.7	0.0	2.4
Upper Extremity	7.3	6.7	8.8	12.5	7.7	5.7	7.4
Thorax	23.3	22.7	8.8	18.8	21.6	28.3	22.4
Abdomen	11.8	12.0	14.7	6.3	11.7	9.4	11.4
Pelvis	0.8	2.7	0.0	0.0	1.0	0.0	0.9
Vertebrae	7.3	6.7	5.9	0.0	6.5	9.4	6.8
Lower Extremity	10.7	13.3	17.6	18.8	12.4	11.3	12.3

Legend: UH - Utility Helicopter
OH - Observation Helicopter
CH - Cargo Helicopter
AH - Attack Helicopter
FW - Fixed-Wing Aircraft



A) FREQUENCY OF FATAL INJURIES, HELICOPTERS

C) FREQUENCY OF FATAL INJURIES, LIGHT FIXED-WING

B) FREQUENCY OF MAJOR AND FATAL INJURIES, HELICOPTERS

D) FREQUENCY OF MAJOR AND FATAL INJURIES, LIGHT FIXED-WING

Figure 1. Frequency of injuries to body parts in US Army aircraft accidents, 1971-1976 (from Reference 3).

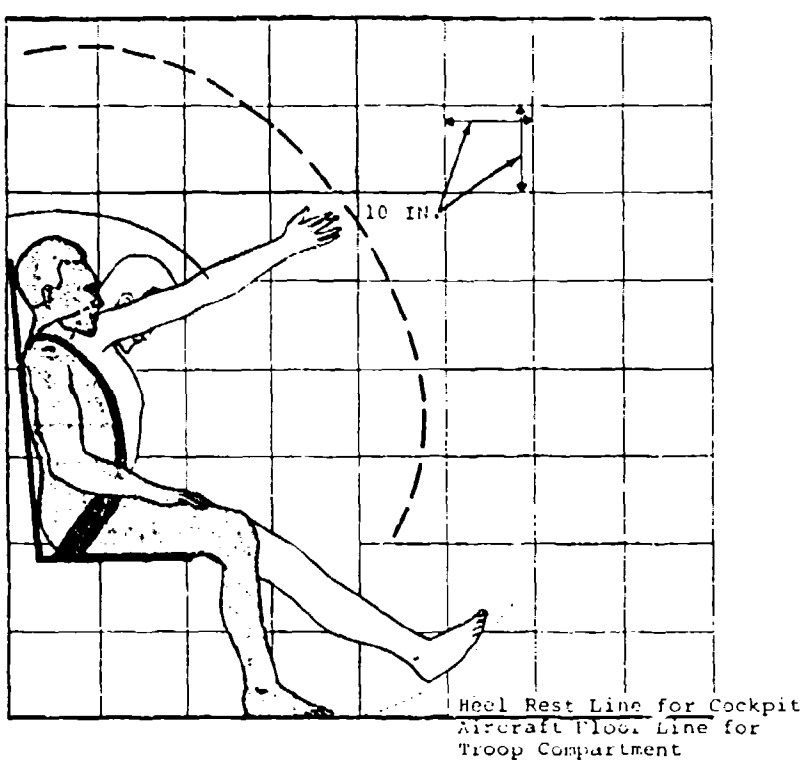


Figure 2. Double shoulder harness with lap belt restraint extremity strike envelope - side view (from Reference 1).

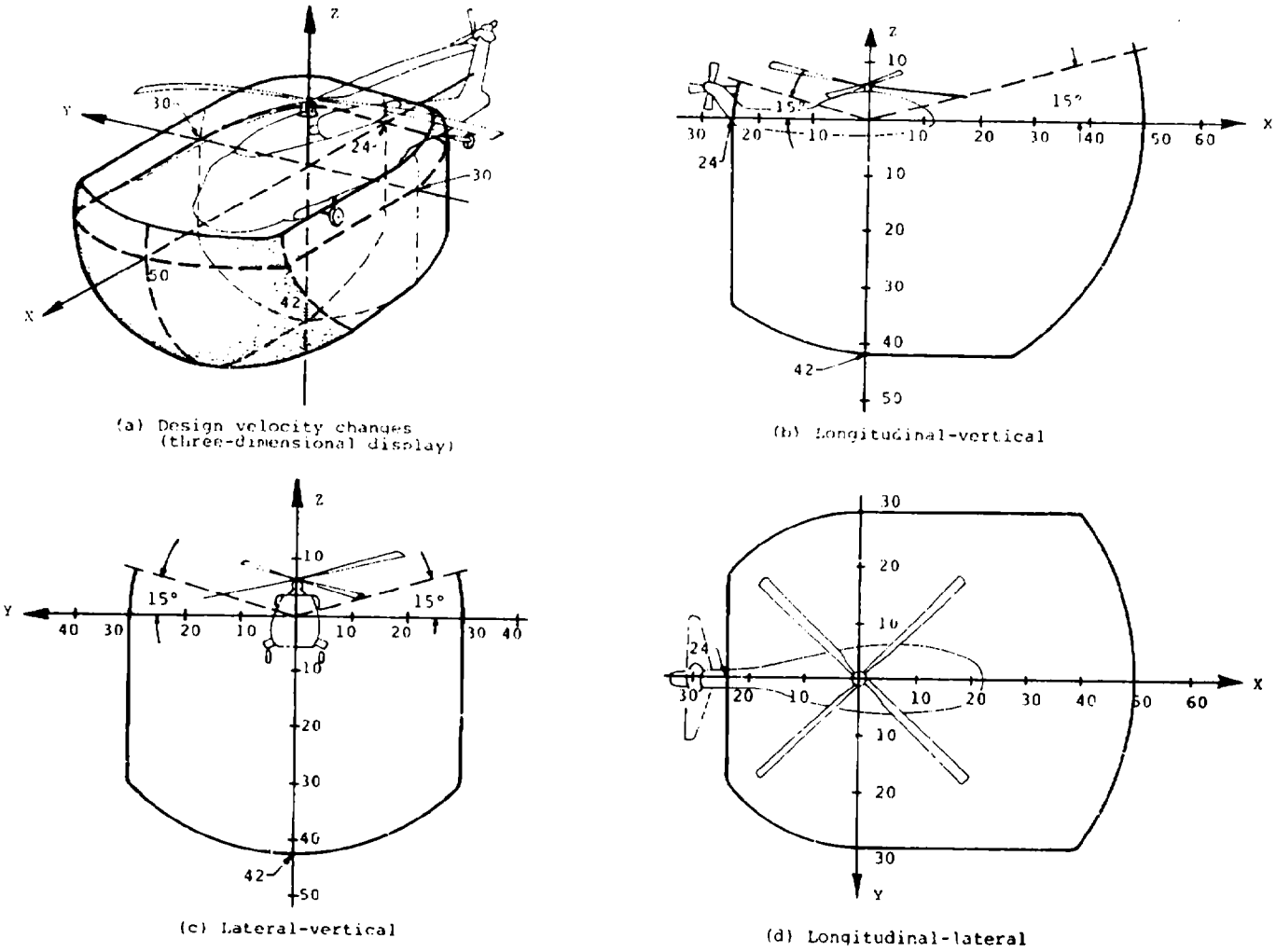


Figure 3. Design velocity change off-axis requirements.

TEST SPECIMENS

Seven types of pilot/copilot restraint systems were crash impact tested and evaluated:

Type 1 – MIL-S-58095[4] restraint system (see Figure 4) with MIL-R-8236C[5] inertia reel.

Type 2 – Type 1 with a single-strap power haul-back (PHB) reel instead of an inertia reel (see Figure 5).

Type 3 – Reflected strap shoulder harness restraint of the type proposed in USAAMRDL TR 75-2,[6] defined in the draft specification MIL-R-XXXX,[7] and shown in Figure 6.

Type 4 – Type 3 except with a dual-strap PHB reel in lieu of the two inertia reels (see Figure 7).

Type 5 – Experimental prototype inflatable body and head restraint system (IBAHRS) shown in Figures 8 and 9.

Type 6 – Type 5 except with a Type 3 restraint serving as the host restraint for the shoulder strap air bags (see Figure 10).

Type 7 – Type 1 except the single point attachment/release buckle was replaced with a rotary motion buckle (see Figure 11).

Webbing characteristics for all of the above restraint systems except Type 5 are presented in Table 3. The Type 5 host restraint system consisted of a MS1609-1[8] shoulder harness, Y-type, and a MS22033-4[9] aircraft safety lap belt.

---

[4] Military Specification MIL-S-58095, *Seat System, Crashworthy, Nonejection, Aircrew, General Specification For*, Department of Defense, Washington, DC, August 1971.

[5] Military Specification MIL-R-8236C, *Reel, Shoulder Harness, Inertia Lock*, Department of Defense, Washington, DC, 19 December 1975.

[6] Carr, R. W., and Desjardins, S. P., *Aircrew Restraint System - Design Criteria Evaluation*, Ultrasystems, Inc., USAAMRDL TR 75-2, Eustis Directorate, US Army Air Mobility Research and Development Laboratory, Fort Eustis, Virginis, February 1975, AD A009059.

[7] Proposed Draft Military Specification MIL-R-XXXX (AV), *Restraint System, Aircrew*, Applied Technology Laboratory, US Army Research and Technology Laboratories (AVRADCOM), Fort Eustis, Virginia, September 1974.

[8] Military Specification MS1609-1, *Shoulder Harness, Y-Type*, Department of Defense, Washington, DC.

[9] Military Specification MS22033-4, *Aircraft Safety Lap Belt*, Department of Defense, Washington, DC.

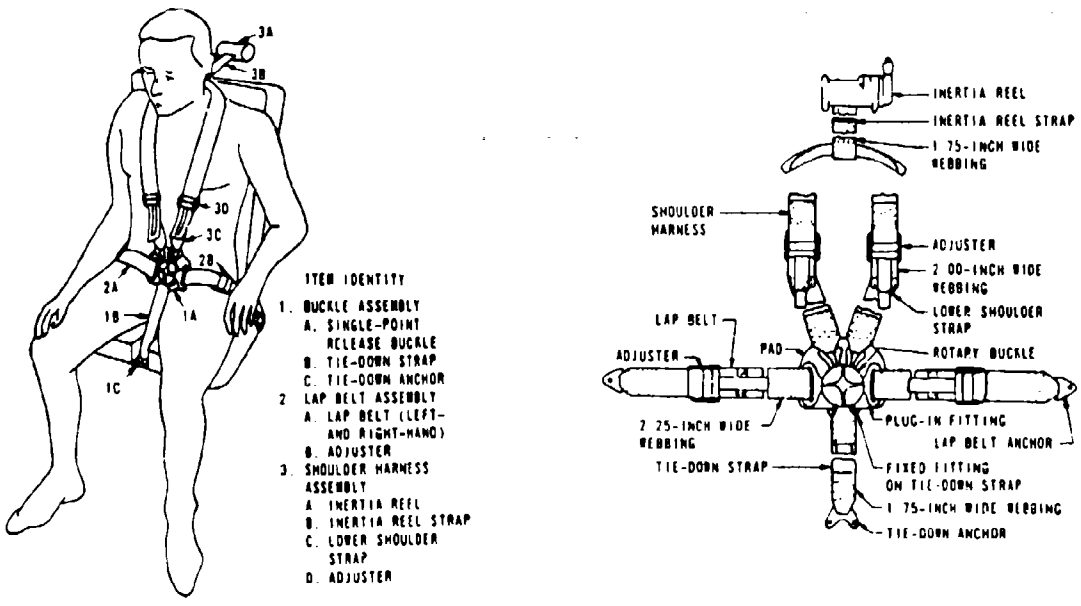


Figure 4. MIL-S-58095 aircrew restraint system.



a. Front view.

b. Rear view.

Figure 5. Type 2 restraint system.

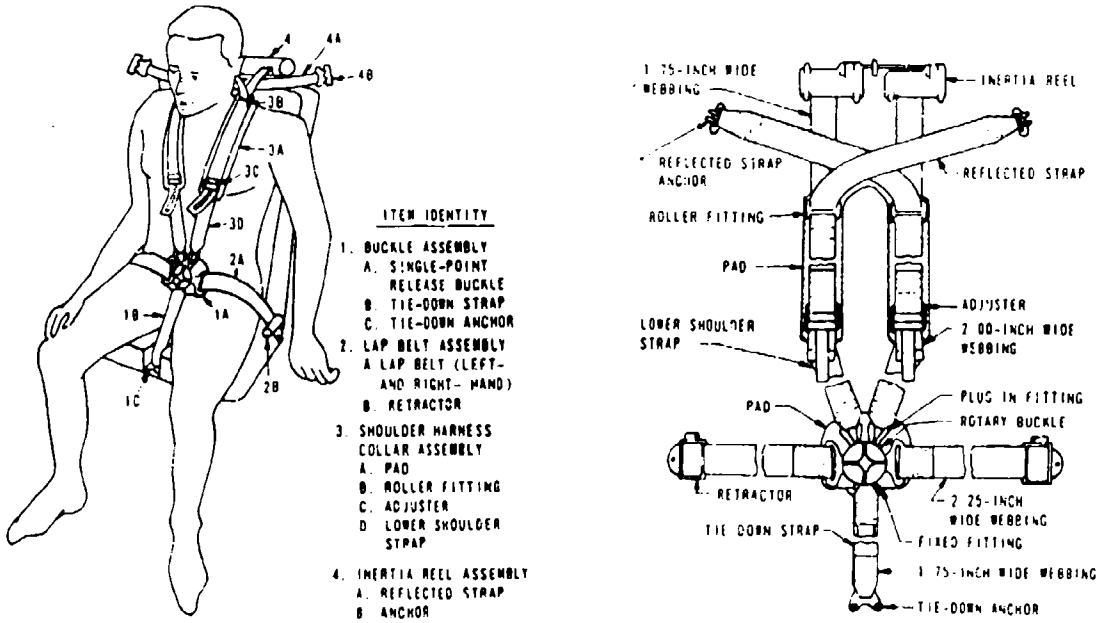
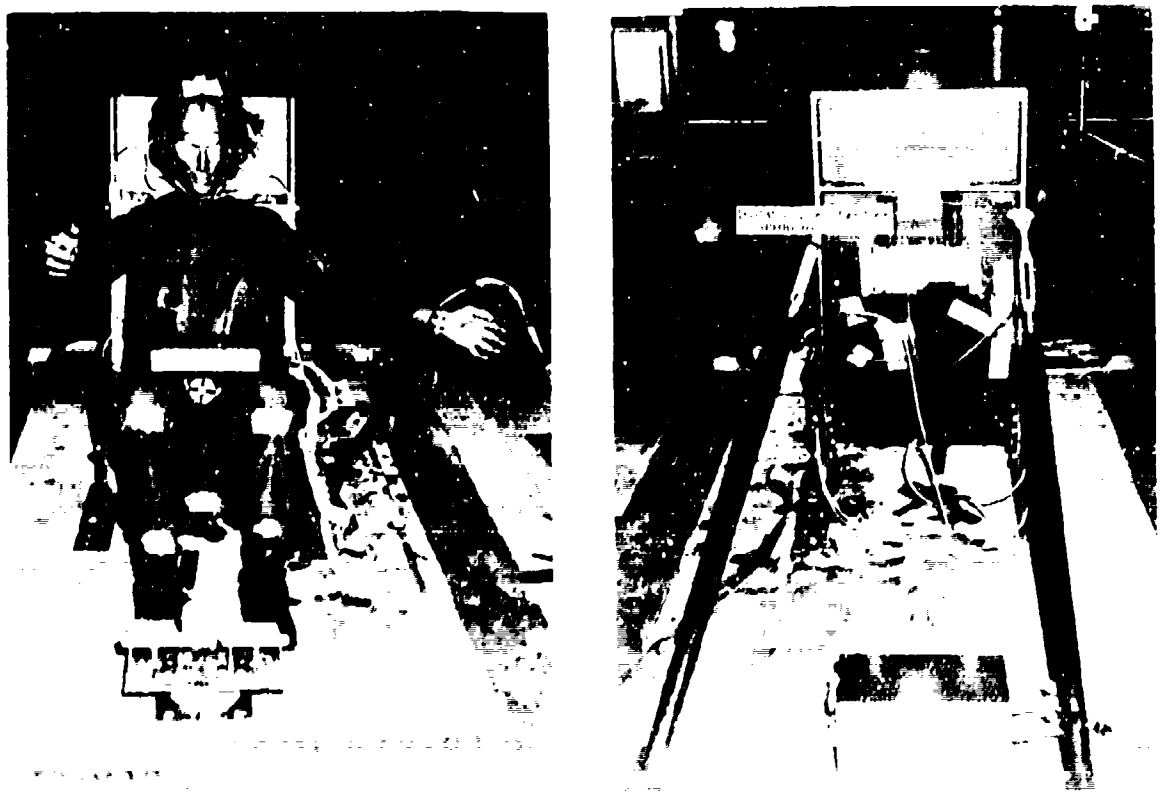


Figure 6. MIL-R-XXXX restraint system, including reflected shoulder straps.



a. Front view.

b. Rear view.

Figure 7. Type 4 restraint system.

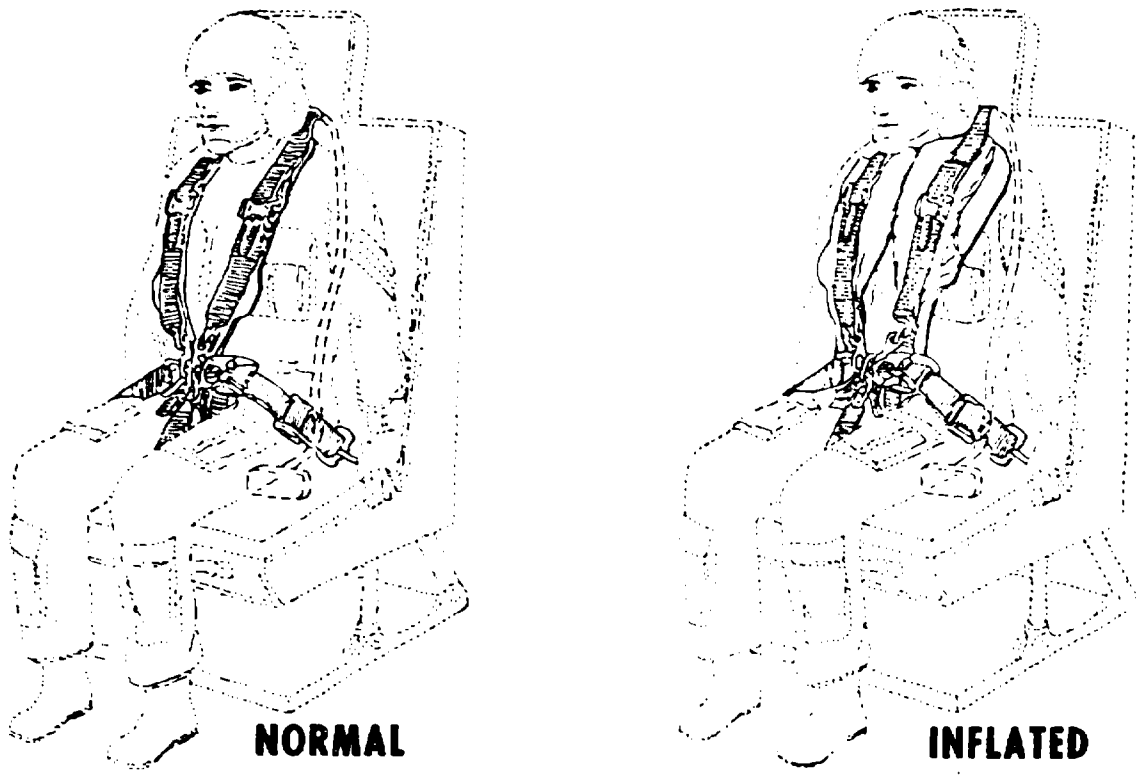


Figure 8. Inflatable body and head restraint.



a. IBAHRS.



b. Pretest.



c. Posttest.

Figure 9. Type 5 restraint system - IBAHRS.



Figure 10. Type 6 restraint system - IBAHRS with MIL-R-XXXX host restraint and air bags unstowed.



a. Back of buckle.



b. Restraint.

Figure 11. Type 7 restraint system - RAF, GQ Ltd system.

TABLE 3. WEBBING CHARACTERISTICS OF RESTRAINT SYSTEMS (except Type 6)

Tests (As Applicable)				Results	Specification Requirements
Width, in.				2-1/4	2-1/4 ± 1/16
Thickness, 1/1000 in. untreated				0.057	0.055 ± 0.010
Weave				Passed	Per specification
Yarn	Count or denier	Ply	Turns per in.		
Face and back warp	840	2	2.5	318	318
Binder warp I.D.	840	1	2.5	4	4
Filling picks/in.	1000	2	2.5	23	23
Breaking strength, original				8880	6000 min
Elongation, % at 4000 lb				7.5	7.5-10.0
Color fastness to light				Good	Good
Crocking – dry				8.5	8.5 min
Crocking – wet				8.5	8.5 min
Horizontal burn rate, in./min				0.5	2.5 max

Pacific Scientific Company provided all the restraint systems except the following: Thiokol Corporation provided the Type 5 restraint system and added the inflatable feature to the Type 3 restraint to create the Type 6 restraint; the Royal Air Force Institute of Aviation Medicine provided the Type 7 buckle that was manufactured by GQ Ltd. of the United Kingdom.

The Type 1 restraint is the minimum acceptable required by MIL-S-58095 for US Army forward-facing crewmembers. Type 3 provides improved lateral restraint due to the reflected shoulder straps. Types 2 and 4 were tested to evaluate the potential for reducing the strike envelope by manually activating a ballistic PHB reel. Automatic retraction of the crewmember by a PHB reel activated by crash sensor was rejected. These PHB reels were designed for prepositioning ejection seat crewmembers and have a retraction time of 0.3-0.4 second, considerably more than the 0.06-second retraction time required if the PHB reel is to be effective in most crashes. An investigation by the US Army Aeromedical Research Laboratory showed that to reduce this retraction time, the torso retraction velocity would have to significantly exceed the current 9-foot-per-second limit established by human tolerance considerations. The PHB reel's potential for this application is that it will be a manually activated tightening device for the CPG in a head-up position and will offer little benefit when the crewmember is in the head-down mode viewing through a sight.

The use of an air bag(s) for the CPG station has potential; however, air bags deflate immediately after inflation, thereby being effective for a single pulse. Also, their application in the cockpit would require considerable research and development. The IBAHRS of Figure 9, however, has more near-term potential. Based on automotive air bag technology, the IBAHRS is being jointly developed by the US Naval Air Development Center and the US Army's Applied Technology Laboratory. It provides increased crash protection when the air bag sewn on the underside of the shoulder strap by the crash impact sensor is inflated, thereby forcing the occupant against the seat back and reducing strike envelope, dynamic overshoot, concentration of strap

load on the body, and rotation and whiplash-induced trauma. Also, if the IBAHRS air bags malfunction, the crewmember still has the protection of the basic (or host) restraint system. One inflator is sewn into each bag and is wired to the crash impact sensor mounted to either the seat or the floor. The inflator is shown in Figure 12. The development of the IBAHRS concept is documented in Reference 10.

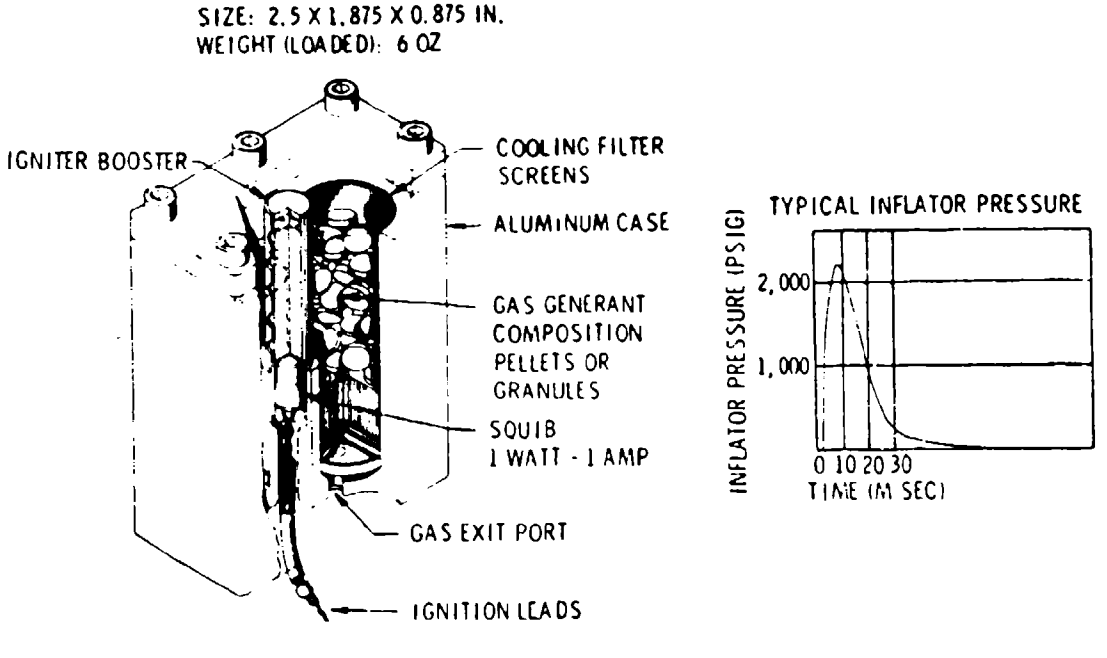


Figure 12. IBAHRS inflator.

[10]Schulman, M., and McElhenney, J., *Inflatable Body and Head Restraint*, NADC-77176-40, Naval Air Development Center, Naval Air Systems Command, Washington, DC, September 1977.

CRASH IMPACT SLED TESTING

PROCEDURE

Thirty three crash impact sled tests were performed on the candidate restraint systems at the Federal Aviation Administration's Civil Aeromedical Institute (CAMI). An Alderson Model VIP-95 95th percentile adult male anthropomorphic dummy was used for each test. Dummy clothing and equipment for all tests except numbers 27 and 34 of Table 4 included an APH-5 flight helmet, a flight suit, and boots. Tests 27 and 34 were performed with the addition of an armored vest. The rigid test seat, floor, and rudder pedal geometry is shown in Figure 13. This geometry and the seat pan and back cushions are representative of an attack helicopter. Test impact conditions are given in Table 4.

Data were obtained from accelerometers, webbing load cells, high-speed motion pictures, still photographs, and observation. Triaxial accelerometers were mounted on the head, chest, pelvis, and seat pan bottom surface. Accelerometers were also mounted along the longitudinal axis of the sled, and foot rest reaction loads were recorded. Prior to each test the dummy was positioned in the upright, design eye reference position. The dummy position and strap length were measured to ensure the same body position and restraint system slack prior to each test.

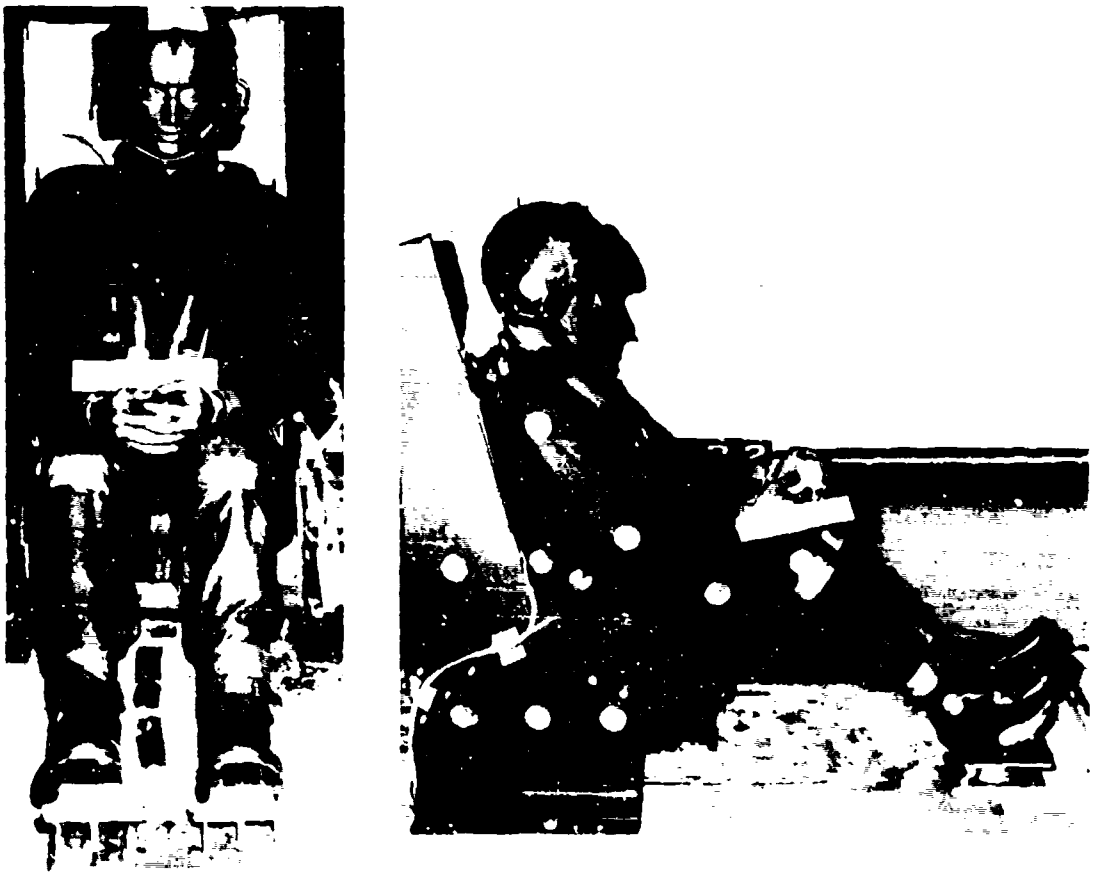


Figure 13. Pretest geometry.

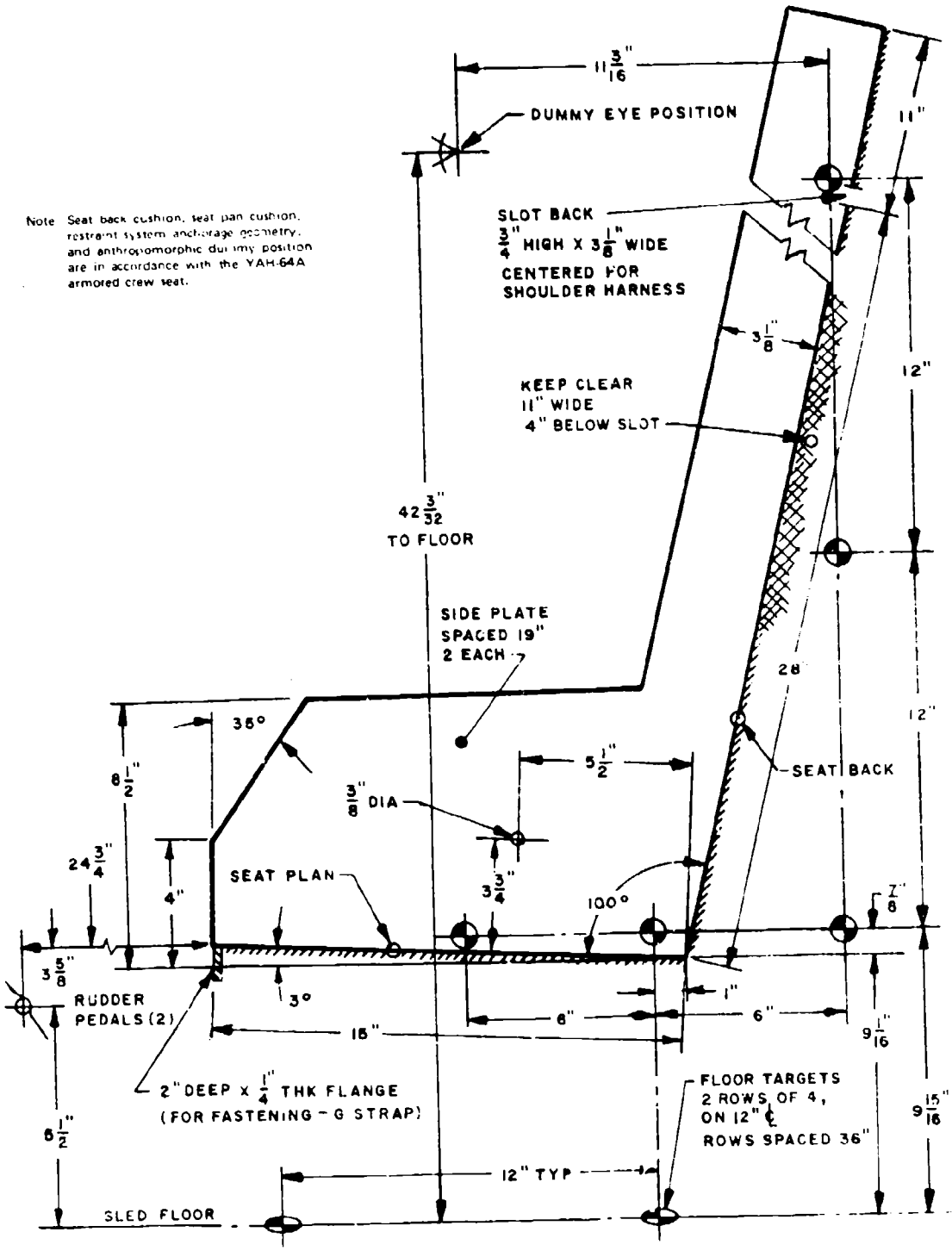


Figure 13. Continued.

TABLE 4. ATL/CAMI/NADC RESTRAINT SYSTEM TEST DATA

CAMI Test No. A79-	Restraint System Type	Restraint System Description	%	ΔV	G_{PK}	Seat Yaw Angle (deg)	Dummy Weight (lb)	Remarks
022	1	MIL-S-58095	50	23	5.4	0	227	
023	1	MIL-S-58095	85	39	16	0	227	
024	1	MIL-S-58095	95	50	30	0	227	
025	1	MIL-S-58095	95	50	30	0	227	Lap belt fitting failed in "cam-out" mode.
026	1	MIL-S-58095	95	50	30	0	227	
027	1	MIL-S-58095	95	50	30	0	244.25	
028	1	MIL-S-58095	95	50	30	30	227	Lap belt fitting failed by "cam-out".
029	2	MIL-S-58095/PHB	95	50	30	0	227	
030	4	MIL-R-XXXX/PHB	95	50	30	0	227	
031	4	MIL-R-XXXX/PHB	50	28	5.4	0	227	
032	4	MIL-R-XXXX/PHB	85	39	16	0	227	
033	4	MIL-R-XXXX/PHB	85	39	16	0	227	
034	4	MIL-R-XXXX/PHB	95	50	30	0	244.25	
035	3	MIL-R-XXXX	95	50	30	0	227	
036	1	MIL-S-58095	95	50	30	30	227	Lap belt fitting tongue failed.
037	4	MIL-R-XXXX/PHB	95	50	30	30	227	
038	2	MIL-S-58095/PHB	95	50	30	30	227	Inertia reel failed.
039	3	MIL-R-XXXX	95	50	30	30	227	
043	1	MIL-S-58095	95	50	30	30	227	
044	1	MIL-S-58095	95	50	30	30	227	
045	1	MIL-S-58095	95	50	30	30	227	
046	1	MIL-S-58095	95	50	30	30	227	Inertia reel strap failed.
047	7	MIL-S-58095/GQ	95	50	30	30	227	
048	5	IBAHRS	95	50	30	30	227	Inertia reel strap failed.
049	5	IBAHRS	95	50	30	0	227	
050	5	IBAHRS - pre-positioned	95	50	30	0	227	Inertia reel failed.
051	5	IBAHRS - pre-positioned	95	50	30	0	227	
052	5	IBAHRS	95	50	30	0	227	
053	5	IBAHRS - bags sewn	85	39	16	0	227	
054	5	IBAHRS - bags sewn	75	34	11	0	227	
055	5	IBAHRS - bags sewn	50	28	5.4	0	227	
056	6	MIL-R-XXXX/IBAHRS - bags sewn	85	39	16	0	227	
057	5	IBAHRS - slack	85	39	16	0	227	

% - percentile survivable pulse

ΔV - velocity change, ft/sec

G_{PK} - programmed pulse peak deceleration, g

RESULTS

Accelerometer and strap load cell data for selected tests are compared in Tables 5, 6, and 7 for the 50th, 85th, and 95th percentile potentially survivable impacts respectively. The significant reduction in occupant loading by the IBAHRS reported in Reference 10 and illustrated in Figures 14 and 15 was not noted in these tests and may be attributable to the snug fit of the restraint system used for the tests.

The main benefit of the IBAHRS demonstrated during these tests was the reduction in occupant upper torso, head, and neck motion compared to the other restraint systems (see Figures 16, 17, and 18). Although the occupant head strike envelope was only slightly better with the IBAHRS than with the MIL-R-XXXX/PHB restraint, the IBAHRS has the major advantage of being crash sensor activated. At the 95th percentile pulse level the difference in head strike envelopes of the different restraint systems was less than at the lower impact levels. The Type 7 restraint withstood the 95th percentile survivable pulse with the seat yawed 30 degrees (see test 047 of Table 4).

Malfunctions were experienced with some of the restraint system components. The rotary motion attachment/release buckle failed in a "cam-out" mode when subjected to the 95th percentile potentially survivable pulse when the seat was oriented with a 30-degree yaw. This buckle design had been qualified to MIL-S-58095 in production crashworthy armored crew seat static and dynamic tests and successfully withstood the 0-degree yaw testing. A typical failure is shown in Figure 19. The "cam-out" occurred in the 30-degree yaw tests because the fitting with a rectangular hole rotated both in and out of the plane of the buckle, creating a point load on the buckle dog which precipitated in local plastic deformation of the dog and fitting, permitting the lap belt fitting to slip up and over the dog. This was corrected by rounding the dog and fitting contact edge to allow rotation of the fitting in the plane of the buckle (see Figure 20).

Another problem experienced was the asymmetric deployment of the IBAHRS air bags shown in Figure 21. Although both bags inflated quickly, for the tests with the restraint worn with negligible slack, one of the bags inflated outboard of the strap instead of beneath the chin. In test 057 the IBAHRS was adjusted to allow for more slack, and both bags deployed correctly.

Complete time history plots of load cell and accelerometer data acquired for each test are presented in Appendix A. Dummy strike envelope plots are presented in Appendix B for all tests except -025, -038, and -054.

TABLE 5. ATL/CAMI/NADC RESTRAINT SYSTEM TEST RESULTS

50TH PERCENTILE SURVIVABLE PULSE		
ΔV = 28 fps	G_{PK} = 5.4g	Yaw = 0°
VIP-95 Dummy		227 lb

Test		Restraint System: MIL-S-58095, Test -022	MIL-R-XXXX/PHB, Test -031	IBAHRS,* Test -055
Input pulse:	$t_{peak}/\Delta t$	.93	.91	.74
	Sled G_x	5.8	5.5	6.1
	Seat pan G_x	5.8	5.7	6.0
Pelvis:	G_x	5.5	5.8	7.5
	G_z	-2.0	-2.2	0
Chest:	G_x	7.0	5.0	8.3
	G_z	1.5	0	3.4
Head:	G_{x1}	8.3	7.0	7.5
	G_{z1}	7.7	5.5	5.0
	G_{x2}	-10.0	-11.5	-13.0
	G_{z2}	0	-1.3	-2.5
Straps:	P_{RS}	300	90	330
	P_{LS}	330	160	300
	P_{RL}	180	250	300
	P_{LL}	210	180	280

*Bags sewn

Legend:
- G_x = peak longitudinal deceleration, g
- G_{x1} = first peak longitudinal deceleration, g
- G_{x2} = second peak longitudinal deceleration, g
- G_z = peak vertical deceleration, g
- G_{z1} = first peak vertical deceleration, g
- G_{z2} = second peak vertical deceleration, g
- P_{LS} = left shoulder strap peak load, lb
- P_{RS} = right shoulder strap peak load, lb
- P_{LL} = left lap belt strap peak load, lb
- P_{RL} = right lap belt strap peak load, lb

TABLE 6. ATL/CAMI/NADC RESTRAINT SYSTEM TEST RESULTS

85TH PERCENTILE SURVIVABLE PULSE		
ΔV = 39 fps	G_{PK} = 16g	Yaw = 0°
VIP-95 Dummy		227 lb

		Restraint System					
Test		MIL-S-58095, Test -023	MIL-R-XXXX/PHB Test -032	MIL-R-XXXX/PHB, Test -033	IBAHRS,* Test -057	IBAHRS,** Test -053	MIL-R-XXXX /IBARS,** Test -056
Input pulse:							
Sled	G_x	15.0	14.2	14.3	14.7	14.2	14.4
Seat pan	G_x	15.1	14.3	14.9	14.9	14.3	14.6
Pelvis:	G_x	20.0	17.0	19.3	20.0	13.9	15.5
	G_z	-8.7	-9.2	-8.9	-12.2	-7.1	-6.1
Chest:	G_x	17.0	15.5	16.2	17.5	15.4	15.4
	G_z	6.7	-8.2	-3.8	-3.9	-3.0	-3.9
Head:	G_{x1}	19.3	22.6	17.3	19.6	13.9	16.4
	G_{z1}	23.2	16.5	20.4	16.5	15.4	17.3
	G_{x2}	-41.8	-22.5	-20.4	-81.0	-58.9	-69.2
	G_{z2}	15.6	7.0	3.8	22.0	17.3	17.3
Straps:	P_{RS}	1076	330	412	950	937	Lost
	P_{LS}	847	628	678	680	508	Lost
	P_{RL}	692	549	821	1090	697	879
	P_{LL}	761	Lost	817	1170	678	854
P_L Loop		1459	Lost	1625	2277	1364	1723
P_S Sum		1859	943	843	1637	1662	Lost

*Slack with bags stowed

**Bags sewn

Legend: G_x = peak longitudinal deceleration, g
G_{x1} = first peak longitudinal deceleration, g
G_{x2} = second peak longitudinal deceleration, g
G_z = peak vertical deceleration, g
G_{z1} = first peak vertical deceleration, g
G_{z2} = second peak vertical deceleration, g
P_{LS} = left shoulder strap peak load, lb
P_{RS} = right shoulder strap peak load, lb
P_{LL} = left lap belt strap peak load, lb
P_{RL} = right lap belt strap peak load, lb

TABLE 7. ATL/CAMI/NADC RESTRAINT SYSTEM TEST RESULTS

95TH PERCENTILE SURVIVABLE PULSE		
ΔV = 50 fps	G_{PK} = 30g	Yaw = 0°
VIP-95 Dummy		227 lb

		Restraint System					
Test		MIL-S-58095, Test -024	MIL-S-58095/PHB, Test -029	MIL-R-XXXX Test -035	MIL-R-XXXX/PHB Test -030	IBAHRS,* Test -051	IBAHRS Test -052
Input pulse:							
Sled	G_x	27.5	29.2	29.7	29.8	29.0	28.2
Seat pan	G_x	28.0	29.4	30.0	30.0	28.6	Lost
Pelvis:	G_x	46.8	46.3	45.8	44.5	53.0	50.0
	G_z	-30.0	-31.8	-34.8	Lost	-30.0	-31.2
Chest	G_x	40.3	39.5	43.0	42.8	37.8	42.3
	G_z	15.4	14.0	-12.1	-20.0	-8.9	9.6
Head:	G_{x1}	44.8	43.8	32.0	32.5	31.8	29.0
	G_{z1}	45.8	46.5	40.5	48.0	46.1	50.6
	G_{x2}	-76.3	-112.5	-24.8	-83.3	-107.7	-104.2
	G_{z2}	28.3	44.5	12.0	33.8	43.2	39.0
Straps:	P_{RS}	1560	1815	846	900	2169	1855
	P_{LS}	1450	1528	733	886	1407	1305
	P_{RL}	2190	2302	2285	2336	2783	2076
	P_{LL}	2140	2093	2169	2093	2711	2031
P_L Loop		4312	4438	4485	4403	5498	4086
P_S Sum		2880	3188	1426	1748	3511	3176

*Bags pre-positioned and sewn

Legend: G_x = peak longitudinal deceleration, g
G_{x1} = first peak longitudinal deceleration, g
G_{x2} = second peak longitudinal deceleration, g
G_z = peak vertical deceleration, g
G_{z1} = first peak vertical deceleration, g
G_{z2} = second peak vertical deceleration, g
P_{LS} = left shoulder strap peak load, lb
P_{RS} = right shoulder strap peak load, lb
P_{LL} = left lap belt strap peak load, lb
P_{RL} = right lap belt strap peak load, lb

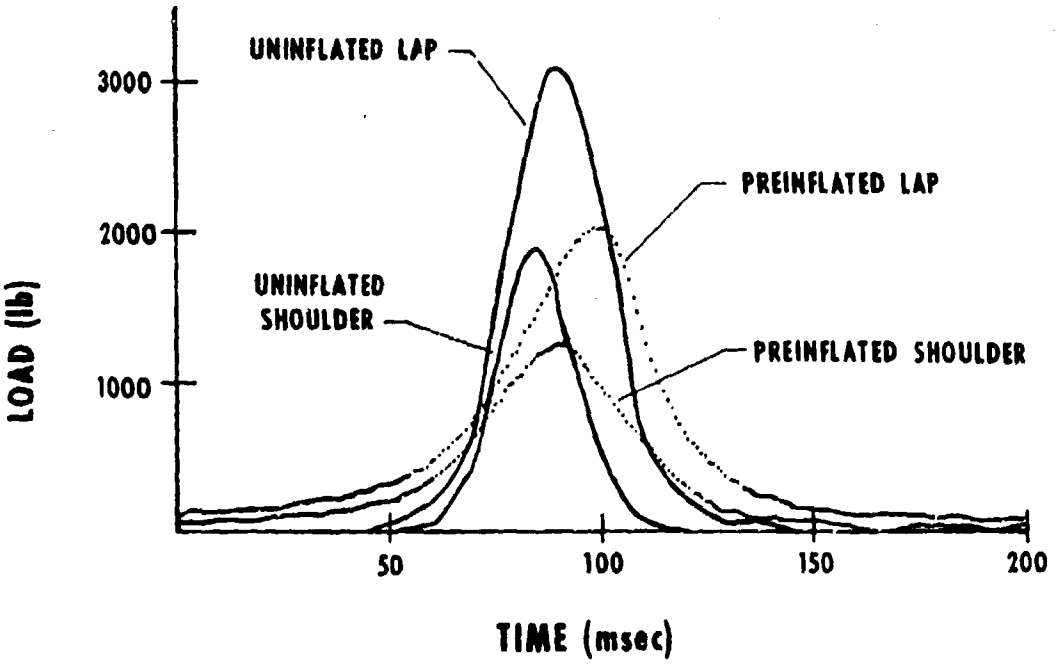


Figure 14. Uninflated versus preinflated restraint with 2-inch shoulder and 1-inch lap belt slack at 15g.

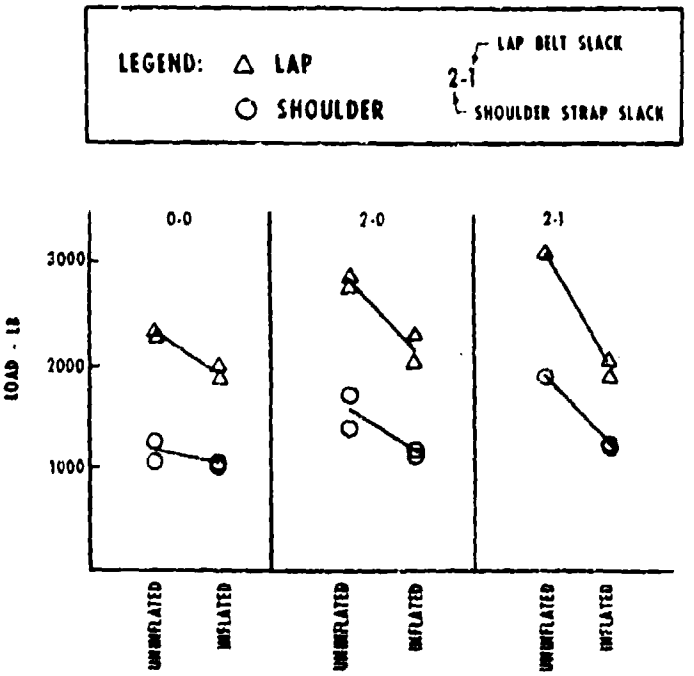


Figure 15. Reduction of restraint loads with inflation for three slack conditions.

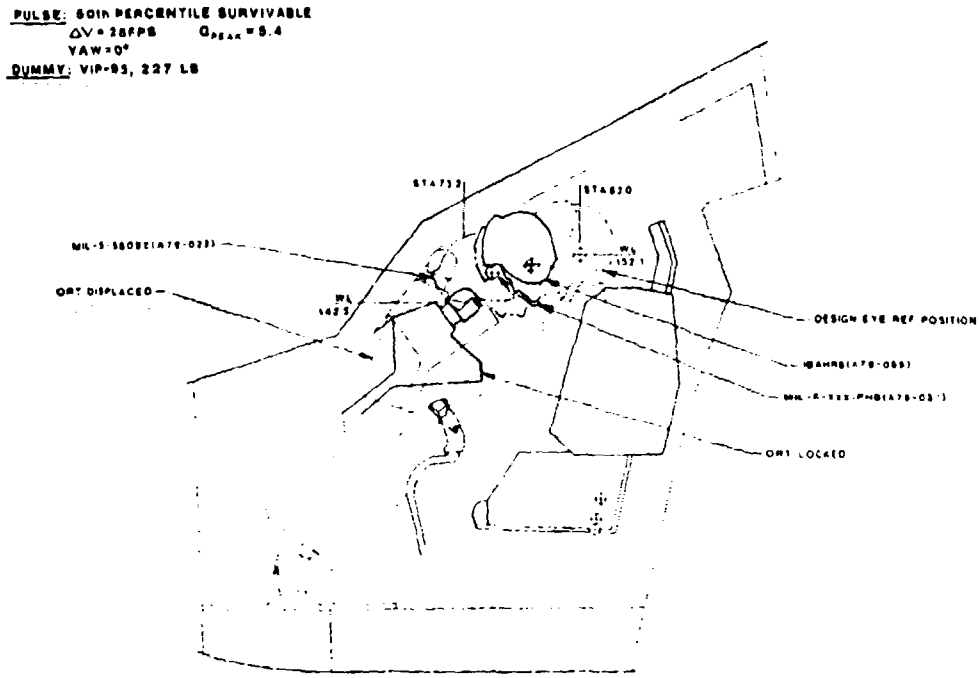


Figure 16. CPG strike envelope comparison (50th percentile survivable pulse).

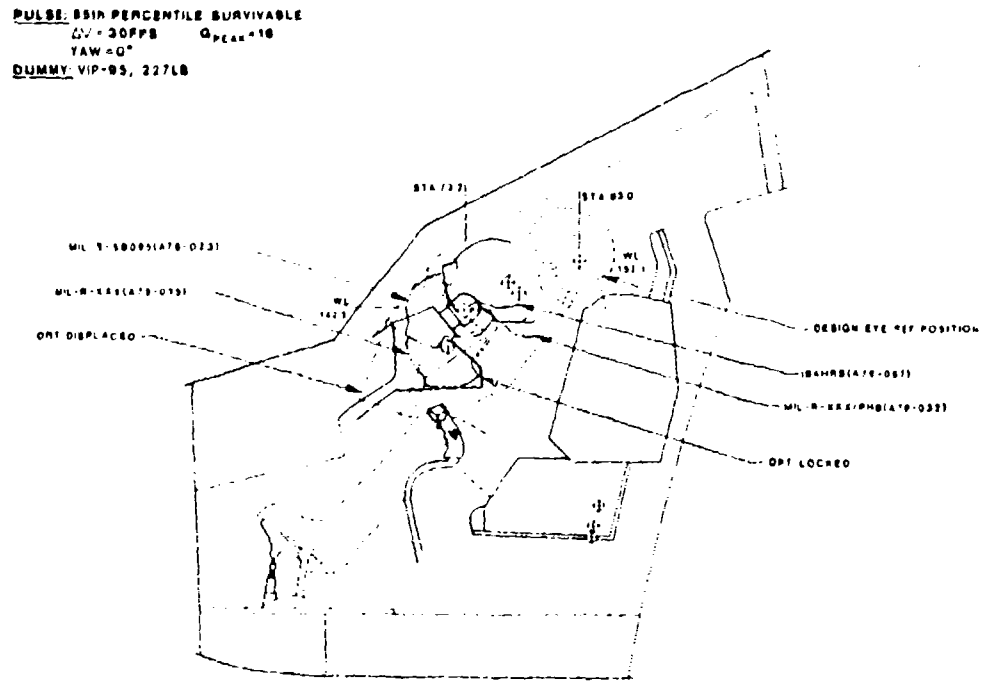


Figure 17. CPG strike envelope comparison (85th percentile survivable pulse).

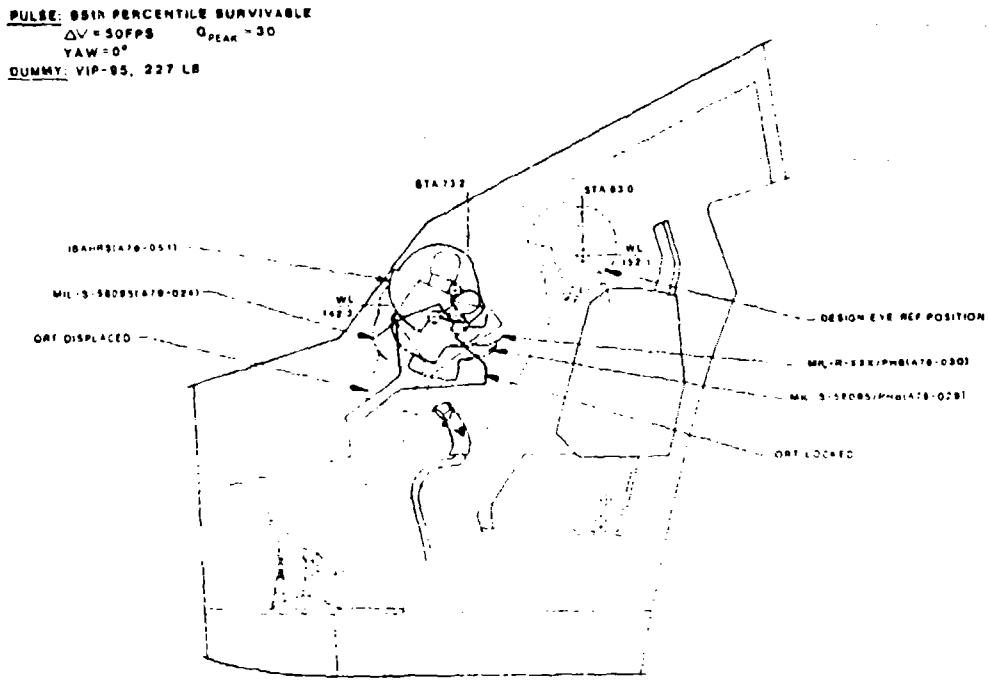


Figure 18. CPG strike envelope comparison (95th percentile survivable pulse).

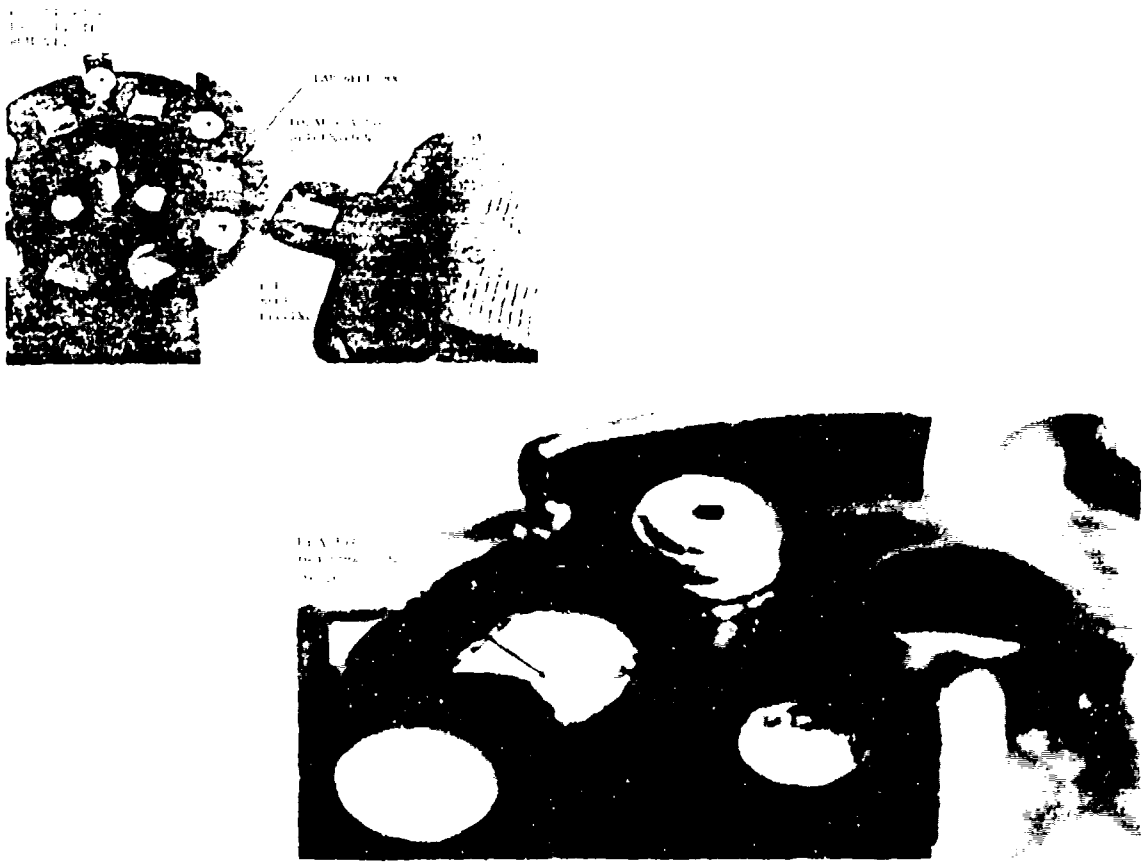
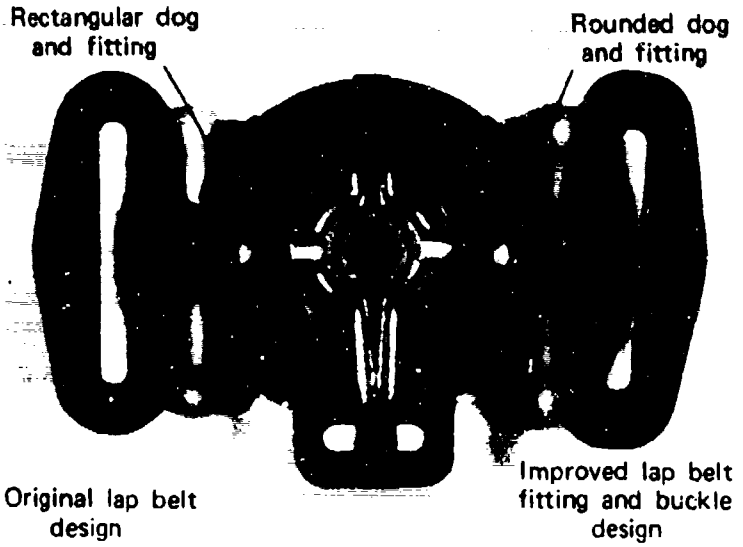


Figure 19. Buckle failure.



a. Buckle engaged.

b. Buckle unengaged.



Figure 20. Buckle modification.



Figure 21. IBAHRS asymmetric deployment.

CONCLUSIONS AND RECOMMENDATIONS

Both the IBAHRS and PHB reel features will decrease the occupant head motion envelope in crash impacts as severe as the 95th percentile potentially survivable helicopter accident pulse; however, because it is crash sensor activated, the IBAHRS is preferable. This level of protection is based on a rigid seat such as the one used in these tests. Seat forward displacement during a crash characteristic of crash force attenuating seats which stroke in the forward direction will compromise the potential protection of any restraint system.

The Army and Navy are continuing the development of the IBAHRS for potential application to attack and scout helicopters. Notwithstanding the benefits of the IBAHRS, future combat helicopters should be designed to remove the occupant strike hazard where operational considerations permit. In addition, any sights and/or cyclic sticks which must remain within the crewmember's strike envelope should be collapsible, crushable, or telescoping. The detailed cockpit delethalization design criteria of Volume IV of the "Aircraft Crash Survival Design Guide"[3] should be followed.

3
F

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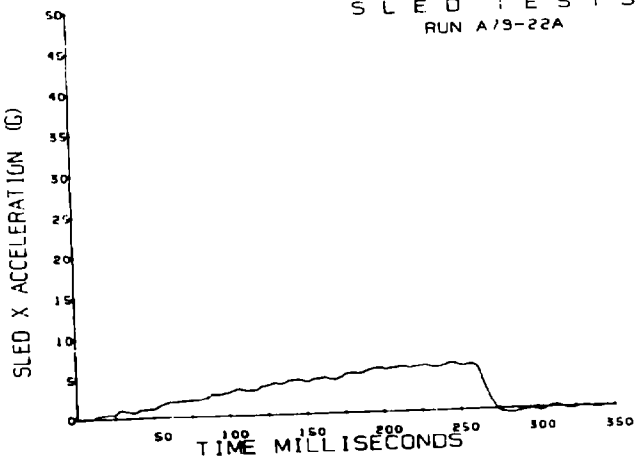
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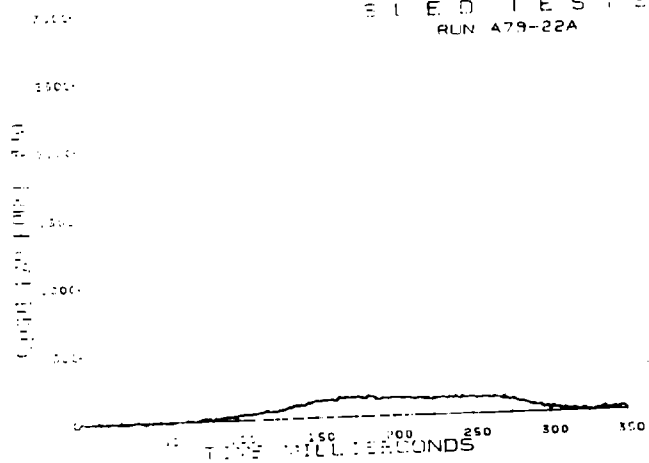
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APPENDIX A
ATL/CAMI/NADC RESTRAINT SYSTEM TEST DATA

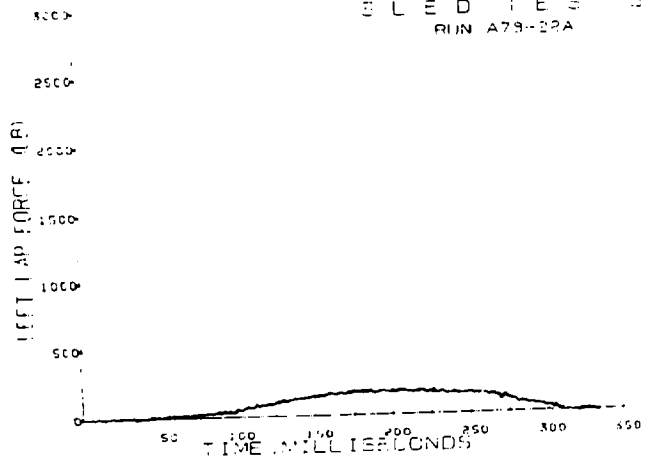
CAMI
SLED TESTS
RUN A79-22A



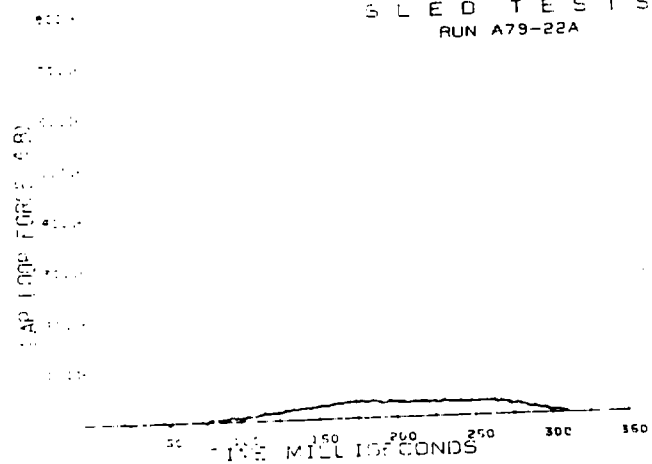
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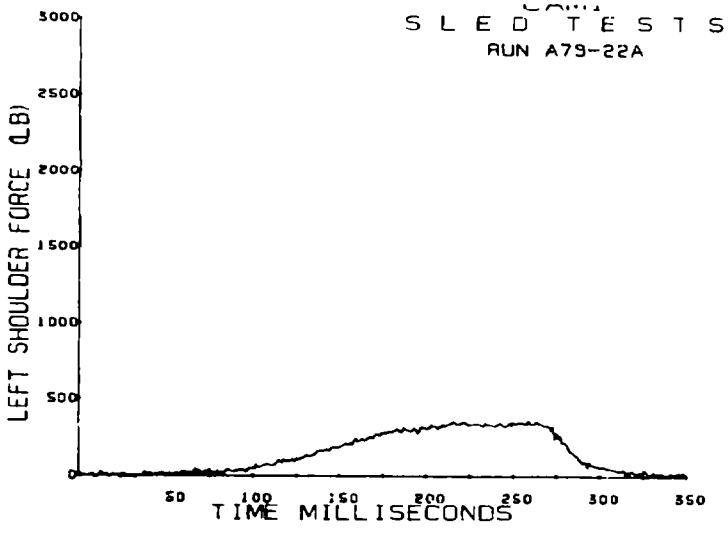


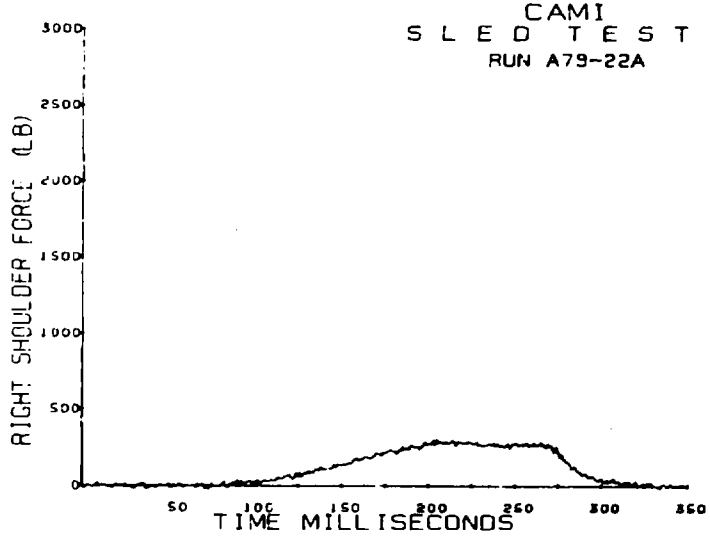
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RUN A79-22A

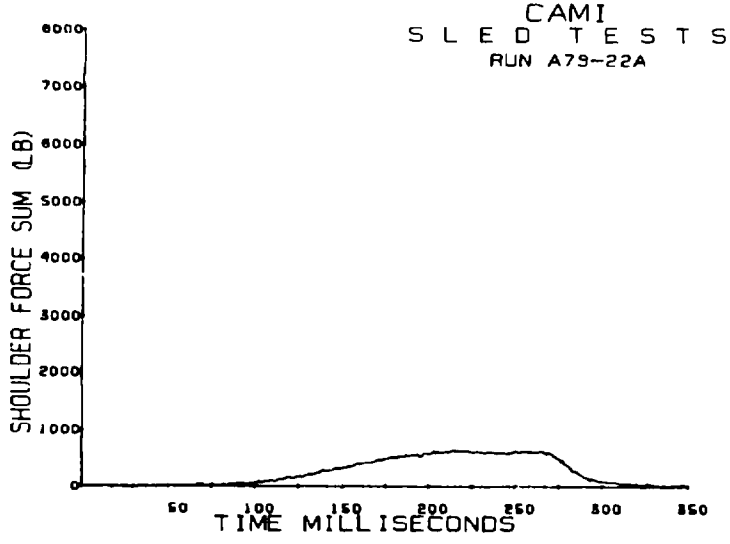


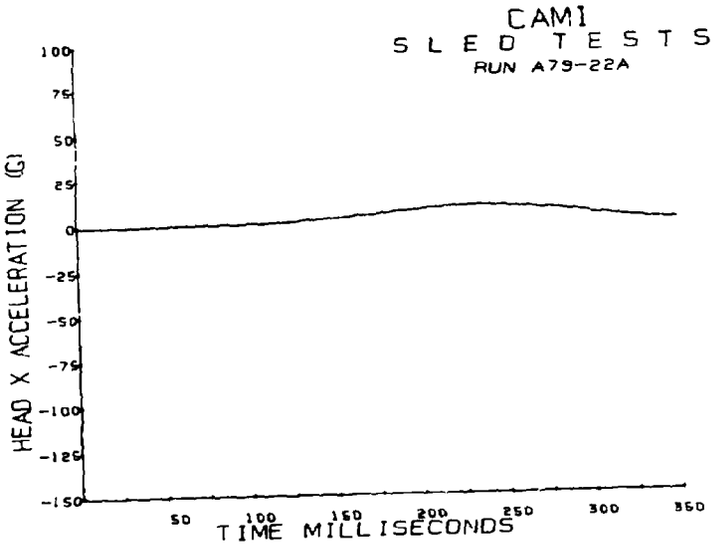
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SLED TESTS
RUN A79-22A

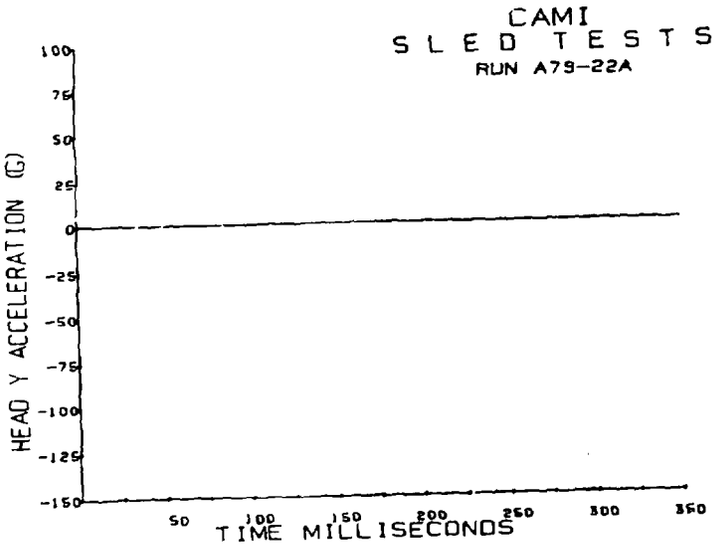


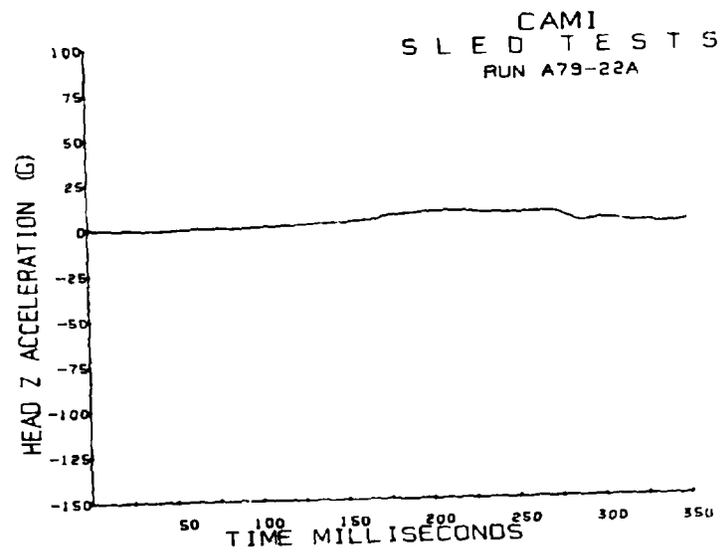

CAMI
S L E D T E S T S
RUN A79-22A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

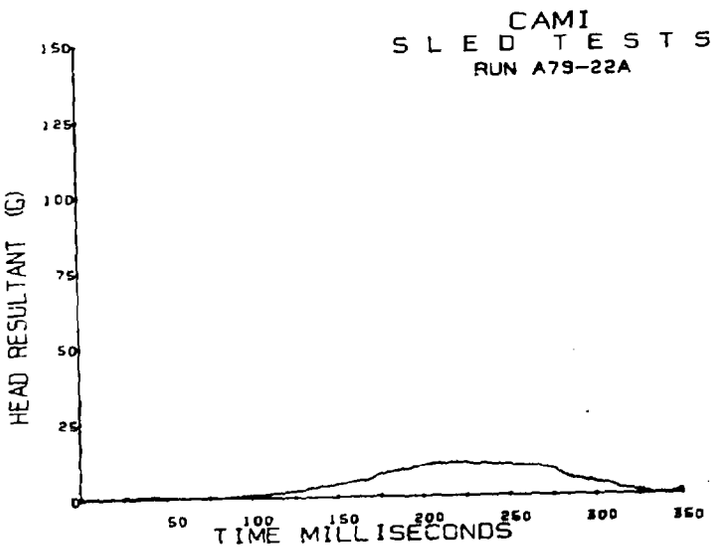

CAMI
S L E D T E S T
RUN A79-22A
RIGHT SHOULDER FORCE (LB)
3000
2500
1500
1000
500
0
50
100
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200
250
300
350
TIME MILLISECONDS

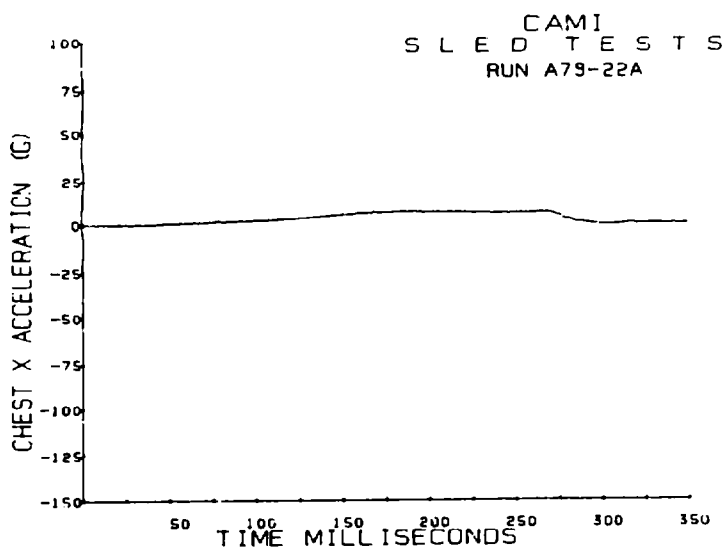

CAMI
S L E D T E S T S
RUN A79-22A
SHOULDER FORCE SUM (LB)
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7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

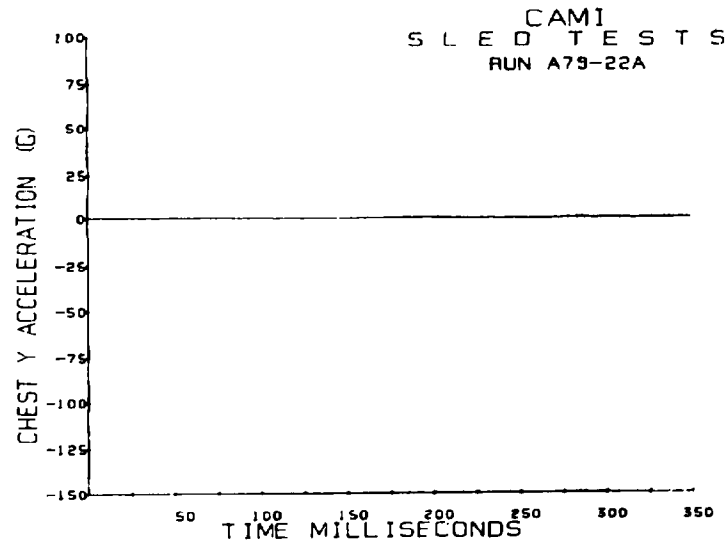

CAMI
SLED TESTS
RUN A79-22A
HEAD X ACCELERATION (G)
100
75
50
25
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-25
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-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

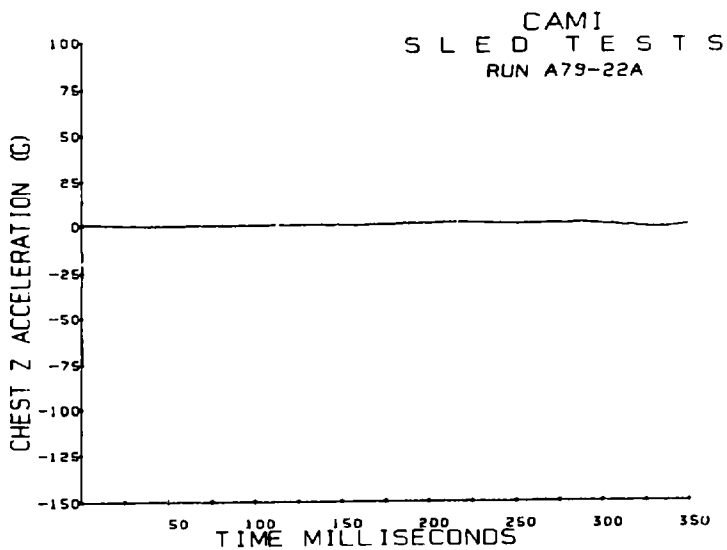

CAMI
SLED TESTS
RUN A79-22A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

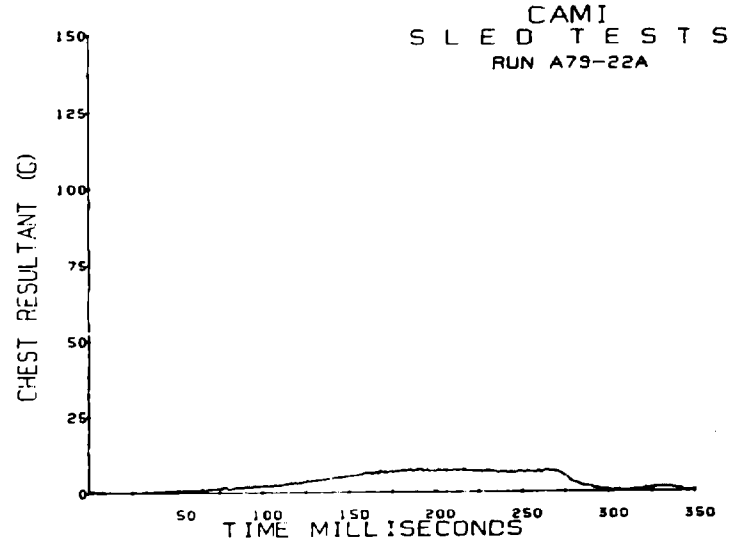

CAMI
SLED TESTS
RUN A79-22A
HEAD Z ACCELERATION (G)
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75
50
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-25
-50
-75
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-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

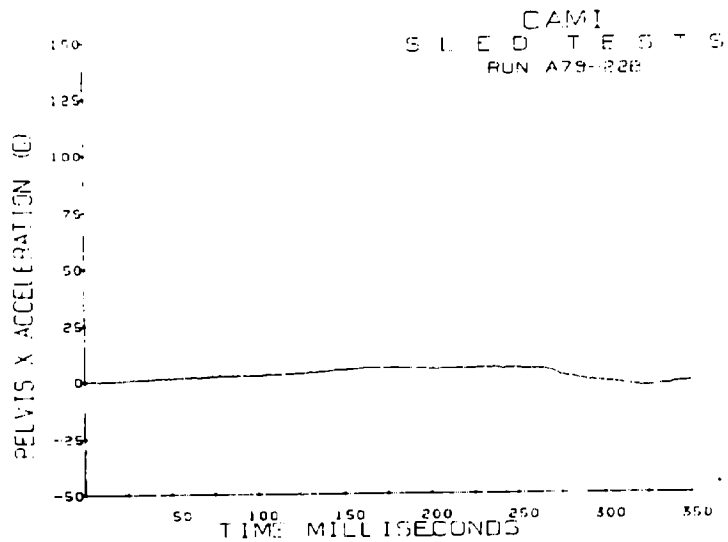

CAMI
SLED TESTS
RUN A79-22A
HEAD RESULTANT (G)
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100
75
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150
200
250
300
350
TIME MILLISECONDS

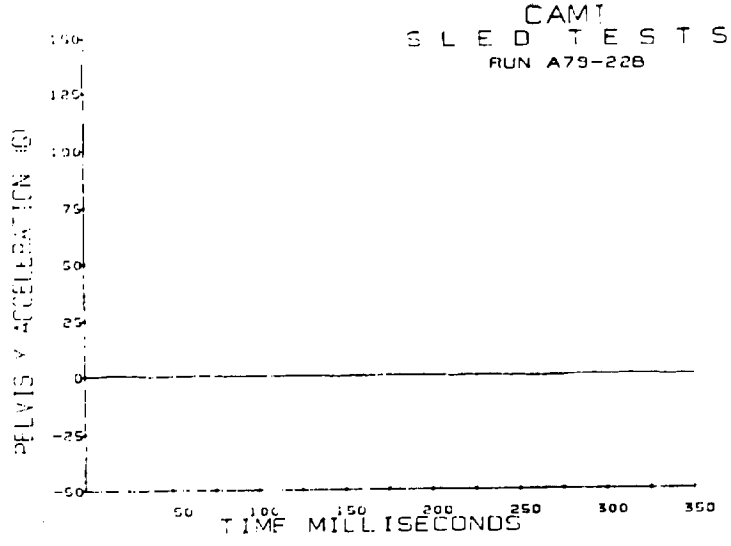

CAMI
S L E D T E S T S
RUN A79-22A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

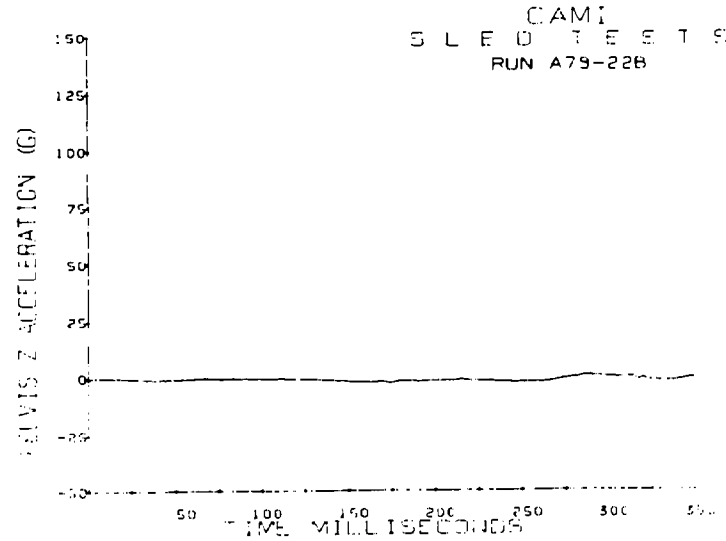

CAMI
S L E D T E S T S
RUN A79-22A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

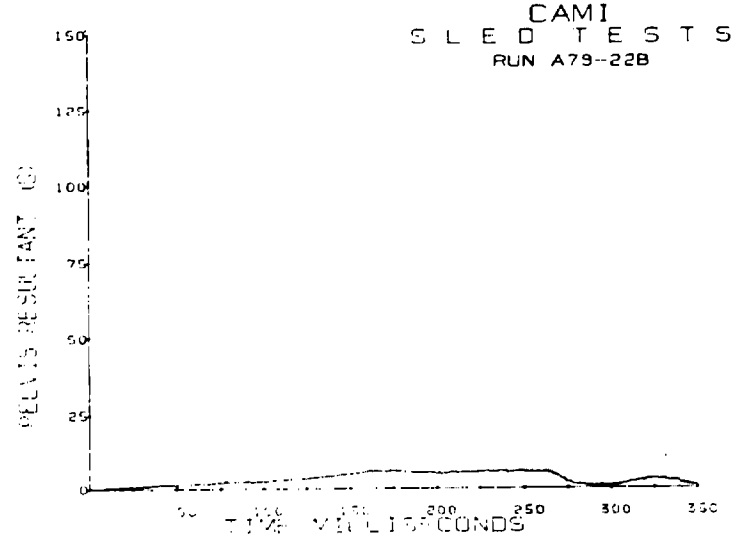

CAMI
S L E D T E S T S
RUN A79-22A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

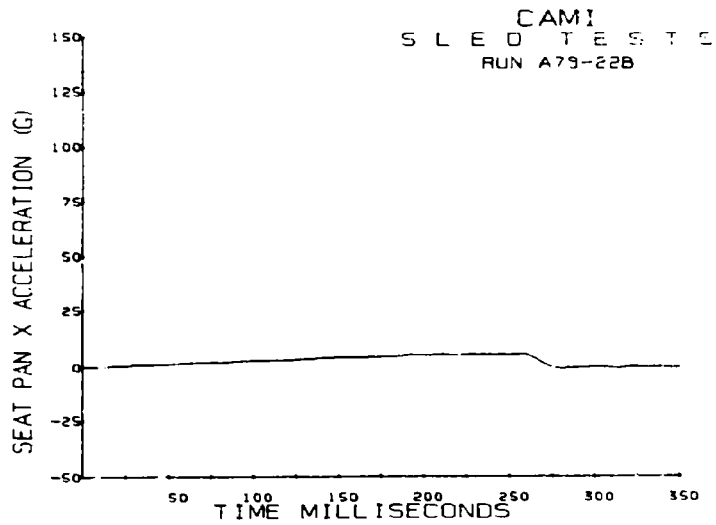

CAMI
S L E D T E S T S
RUN A79-22A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

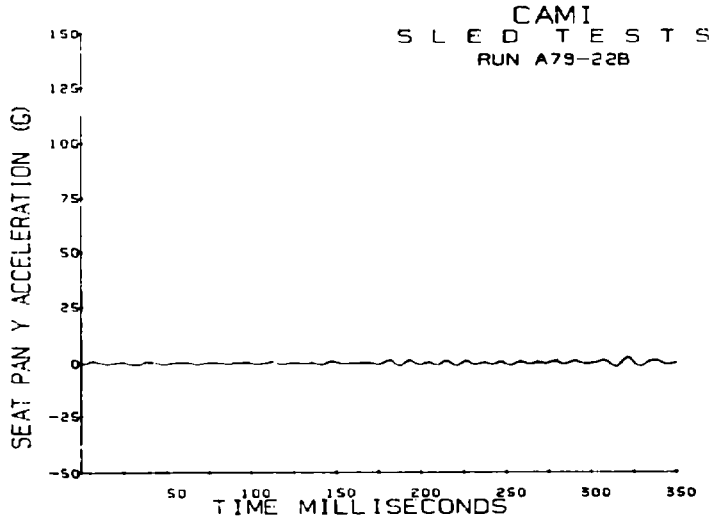

CAMI
SLED TESTS
RUN A79-22B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

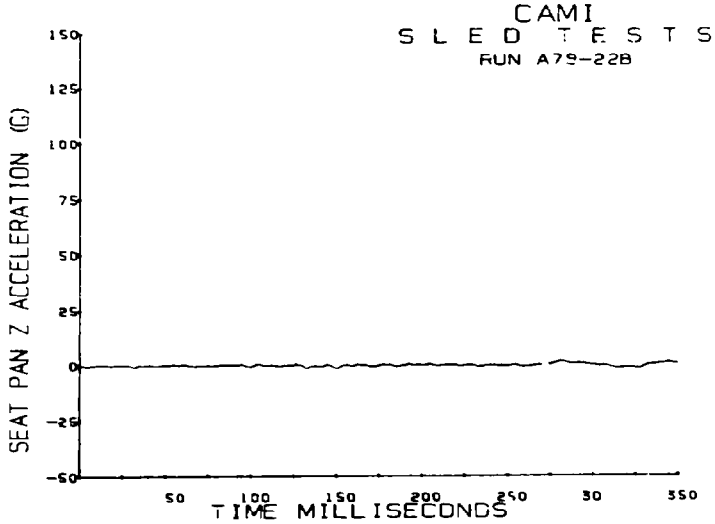

CAMI
SLED TESTS
RUN A79-22B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

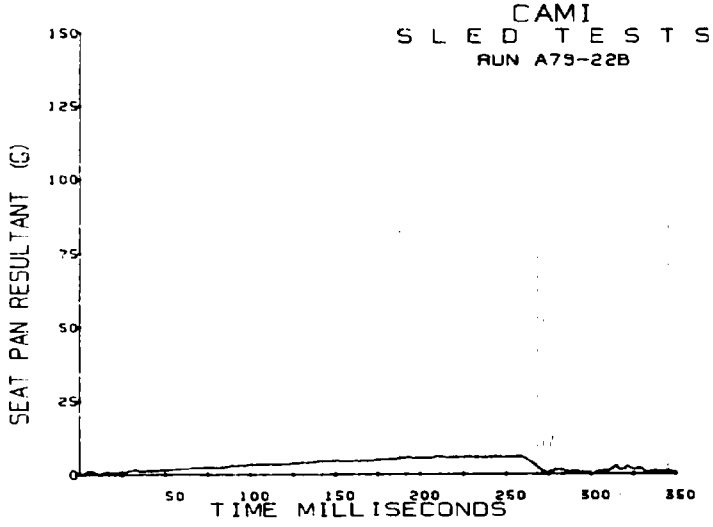

CAMI
SLED TESTS
RUN A79-22B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
TIME MILLISECONDS

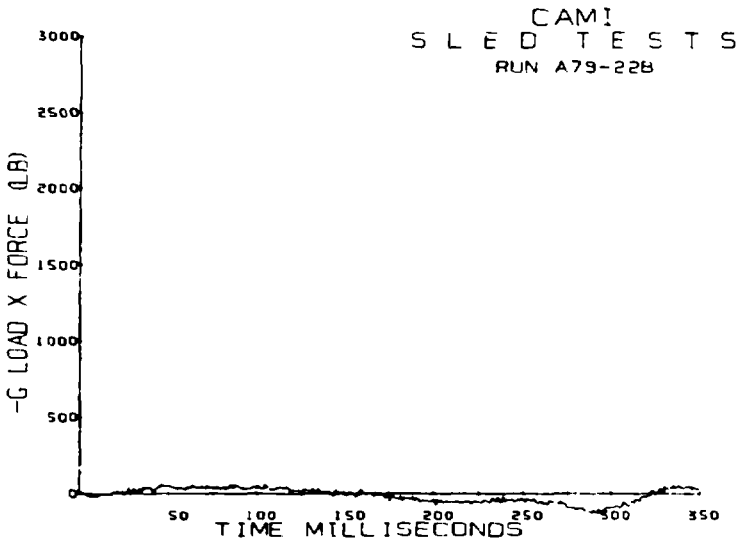

CAMI
SLED TESTS
RUN A79-22B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

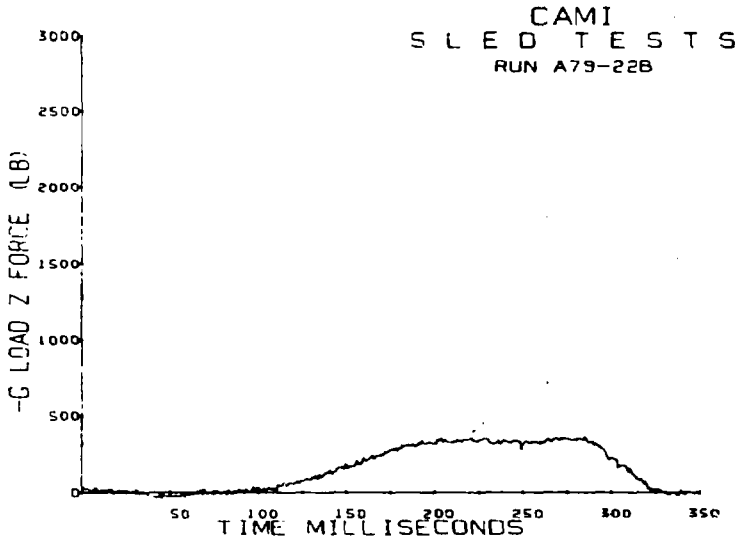

CAMI
SLED TESTS
RUN A79-22B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

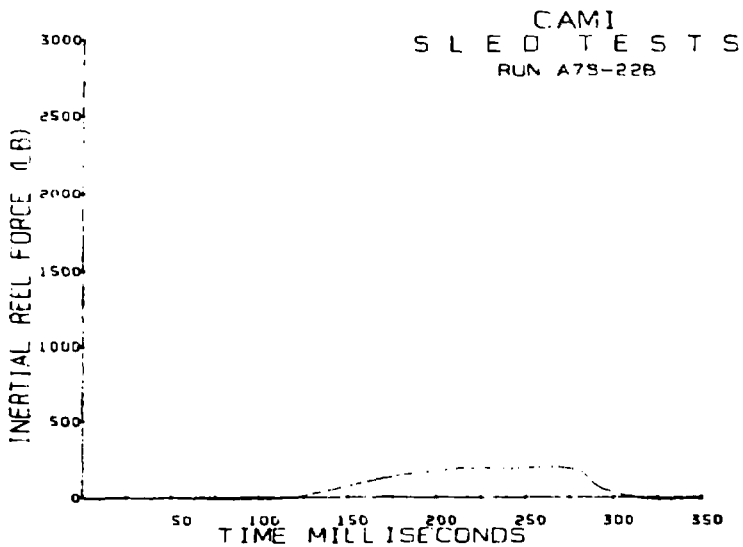

CAMI
SLED TESTS
RUN A79-22B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

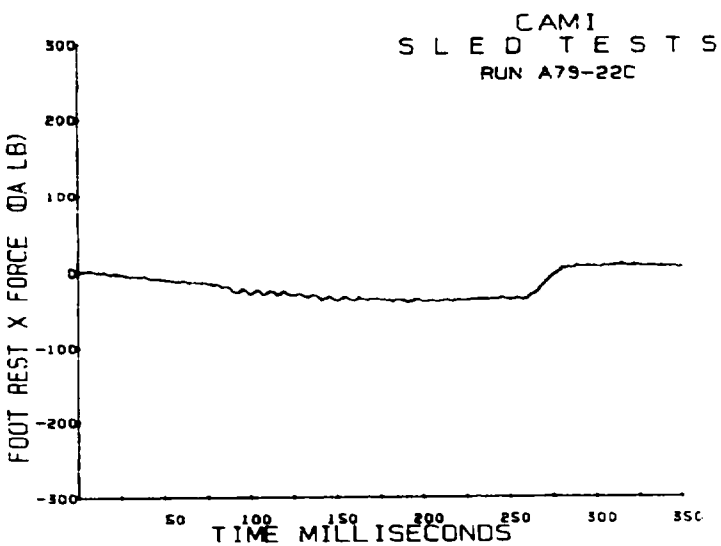

CAMI
SLED TESTS
RUN A79-22B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
30
350
TIME MILLISECONDS

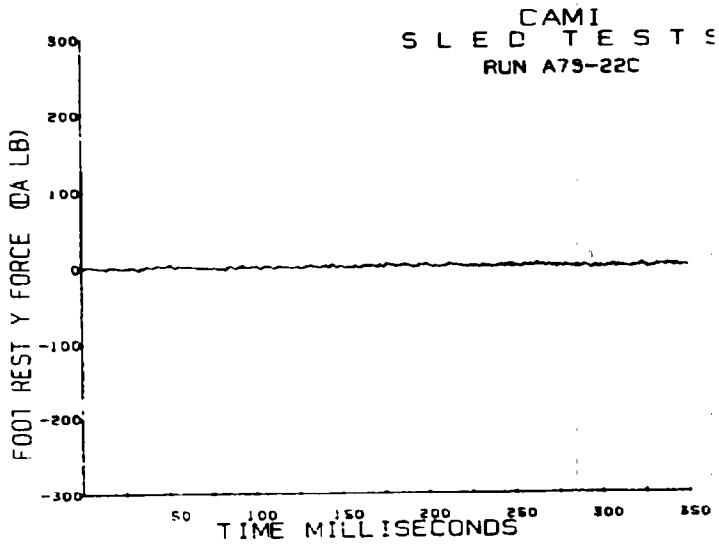

CAMI
SLED TESTS
RUN A79-22B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

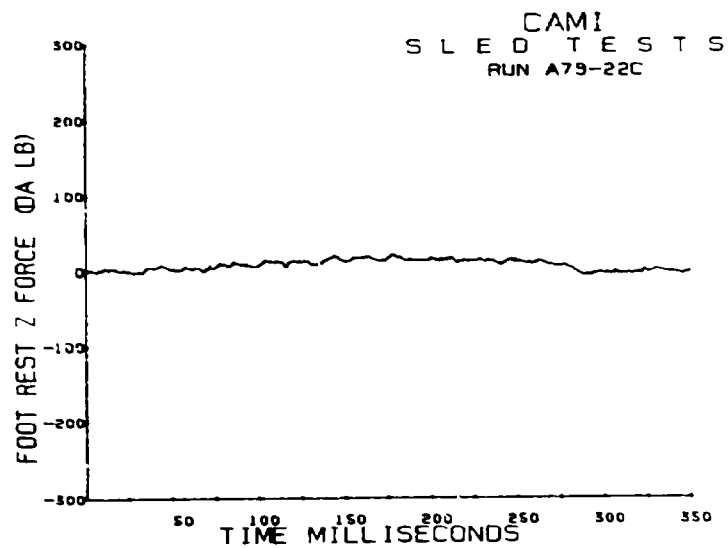

CAMI
SLED TESTS
RUN A79-22B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

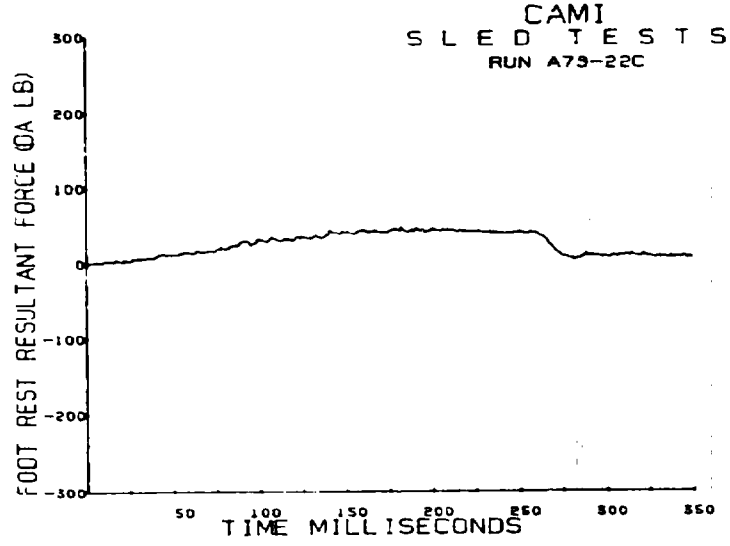

CAMI
SLED TESTS
RUN A79-22B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

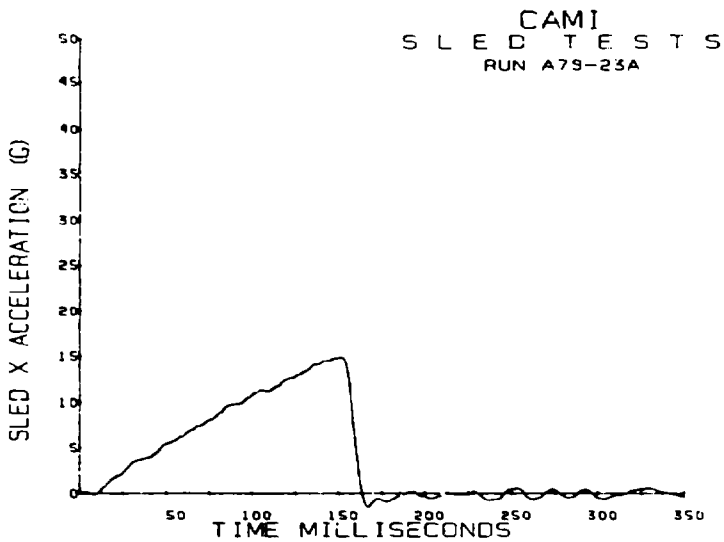

CAMI
SLED TESTS
RUN A79-22B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

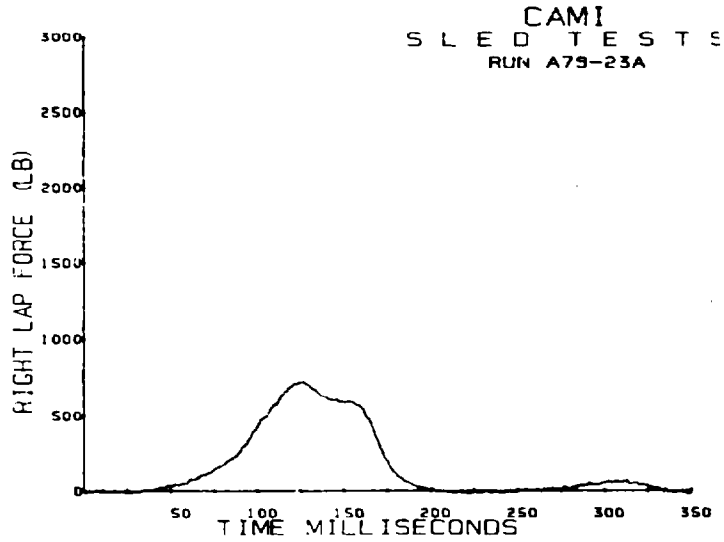

CAMI
SLED TESTS
RUN A79-22C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

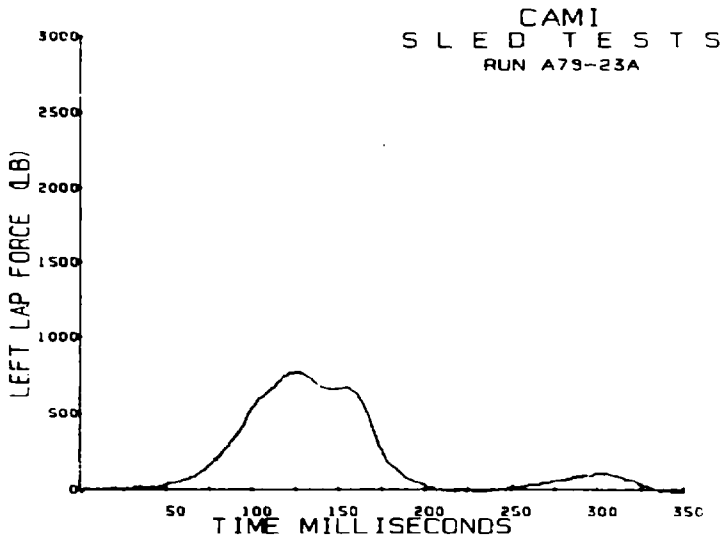

CAMI
SLED TESTS
RUN A79-22C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

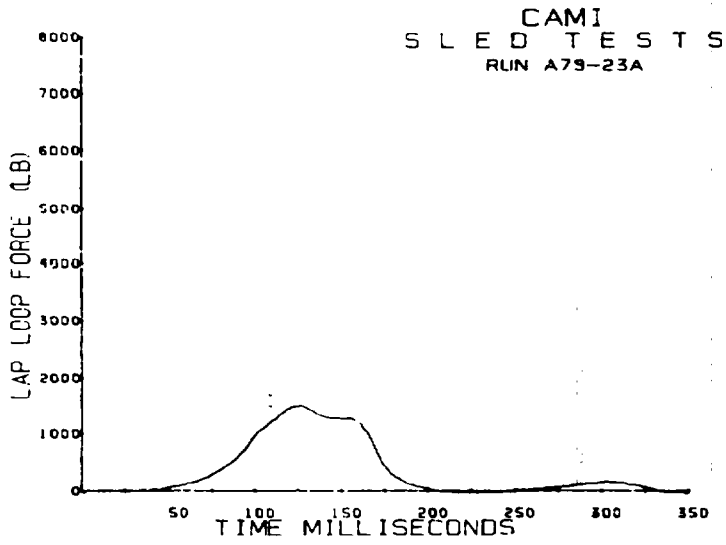

CAMI
SLED TESTS
RUN A79-22C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

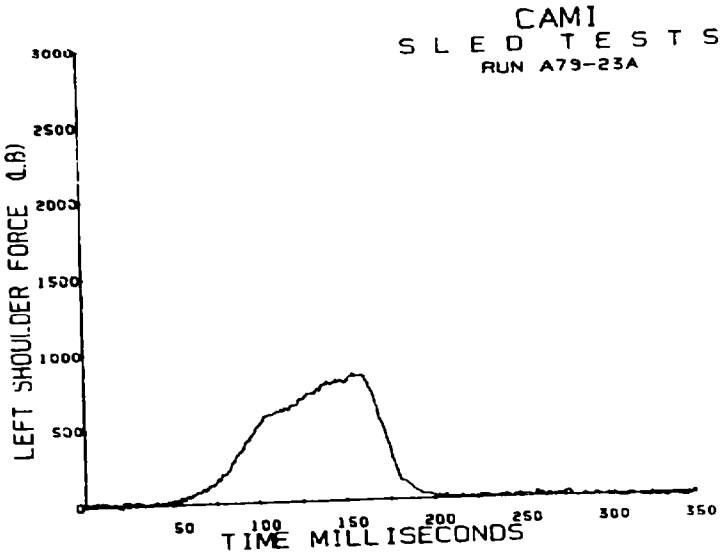

CAMI
SLED TESTS
RUN A79-22C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

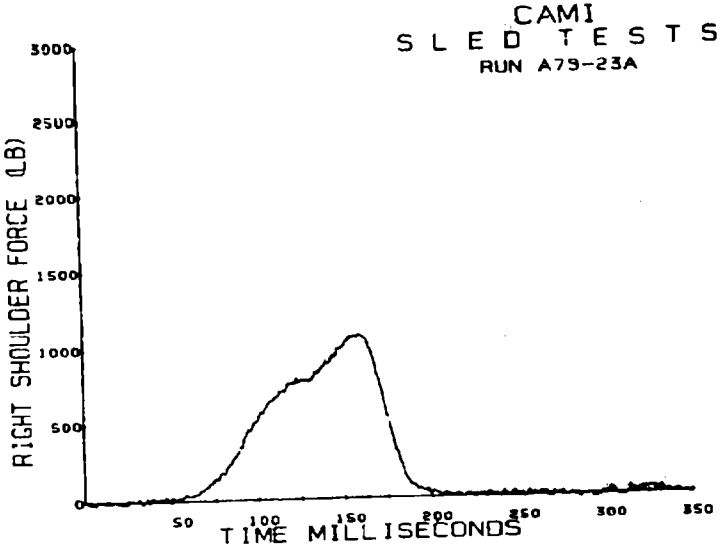

CAMI
SLED TESTS
RUN A79-23A
SLED X ACCELERATION (G)
TIME MILLISECONDS

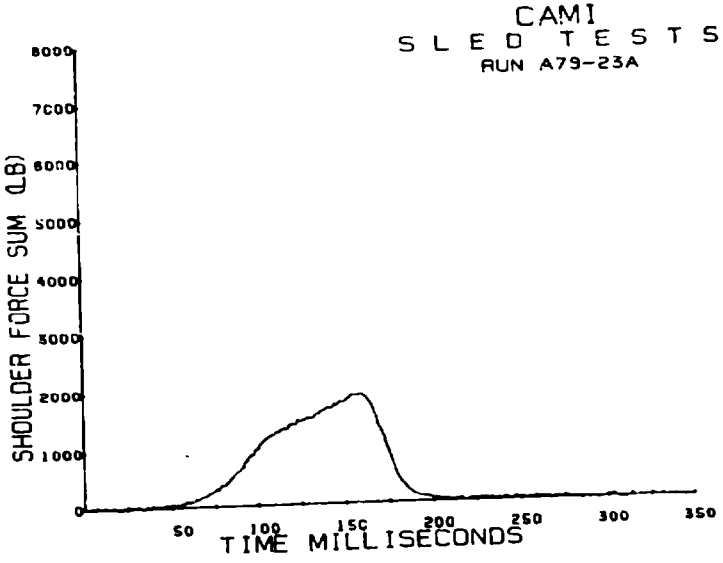

CAMI
SLED TESTS
RUN A79-23A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

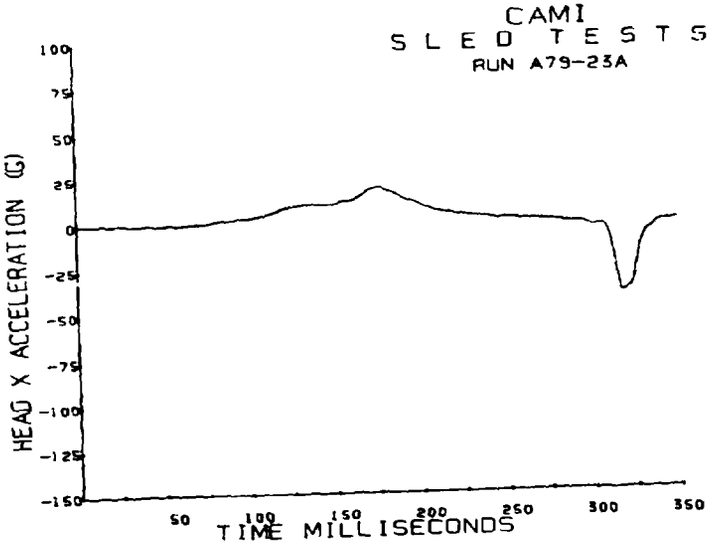

CAMI
SLED TESTS
RUN A79-23A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

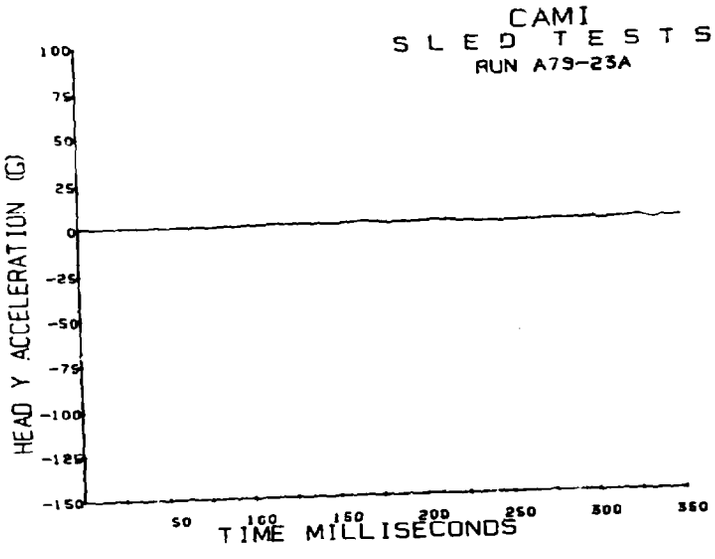

CAMI
SLED TESTS
RUN A79-23A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

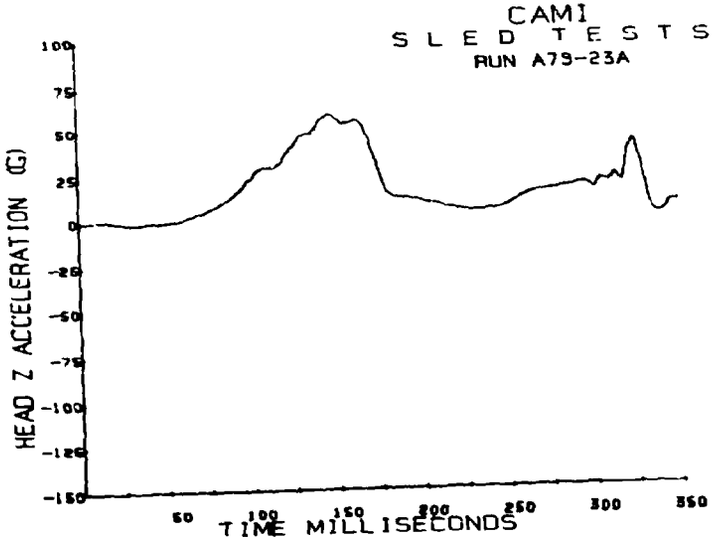

CAMI
SLED TESTS
RUN A79-23A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

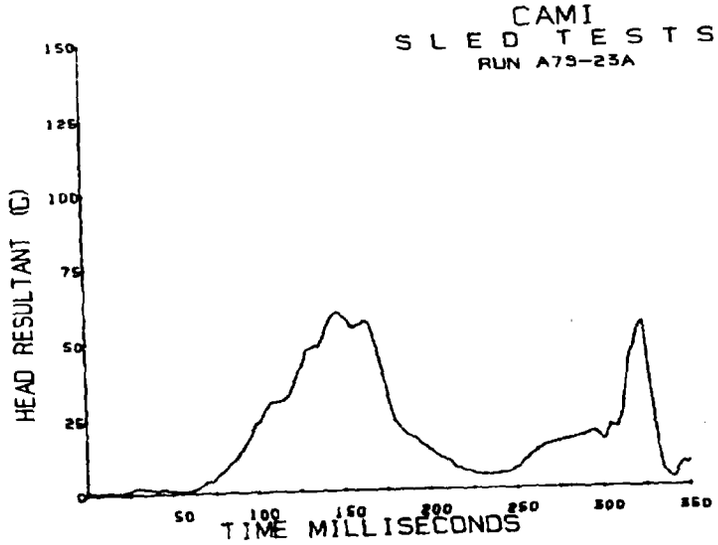

CAMI
SLED TESTS
RUN A79-23A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

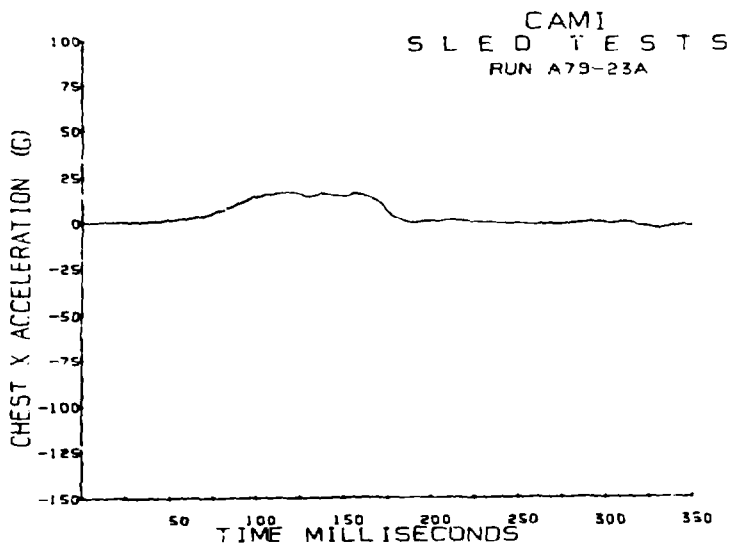

CAMI
SLED TESTS
RUN A79-23A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

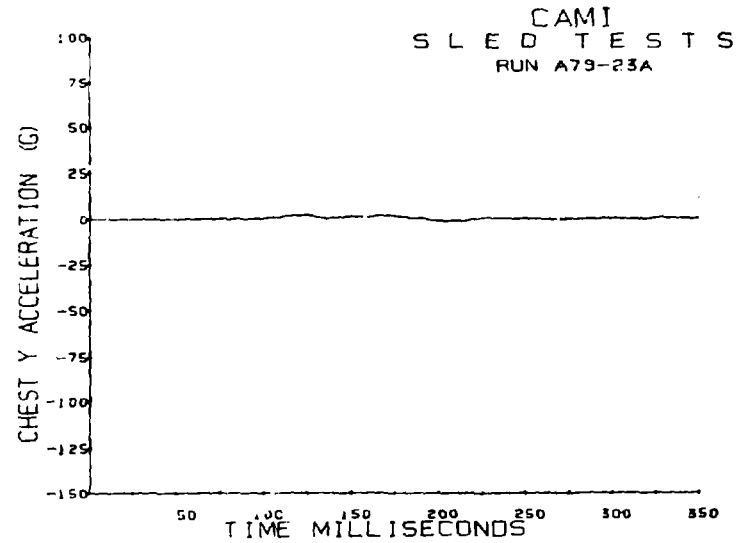

CAMI
SLED TESTS
RUN A79-23A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

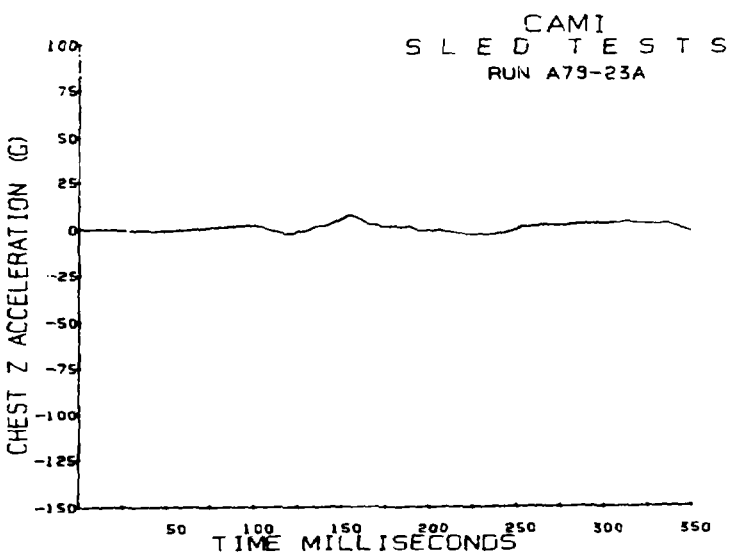

CAMI
SLED TESTS
RUN A79-23A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

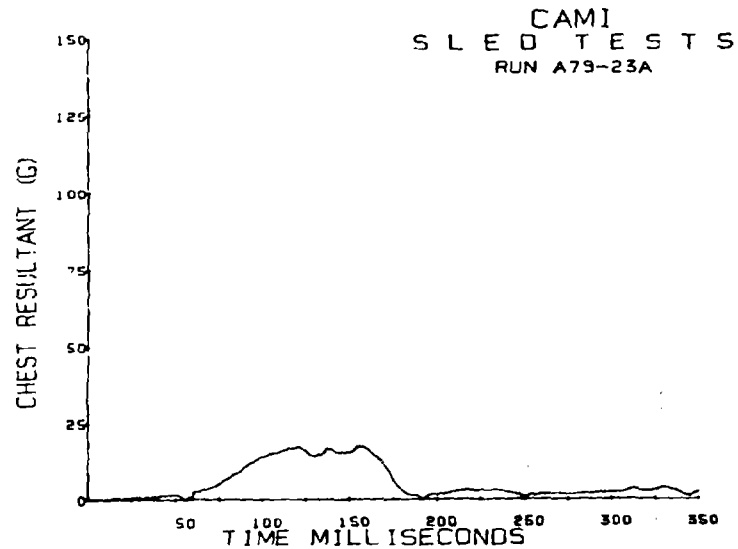

CAMI
SLED TESTS
RUN A79-23A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

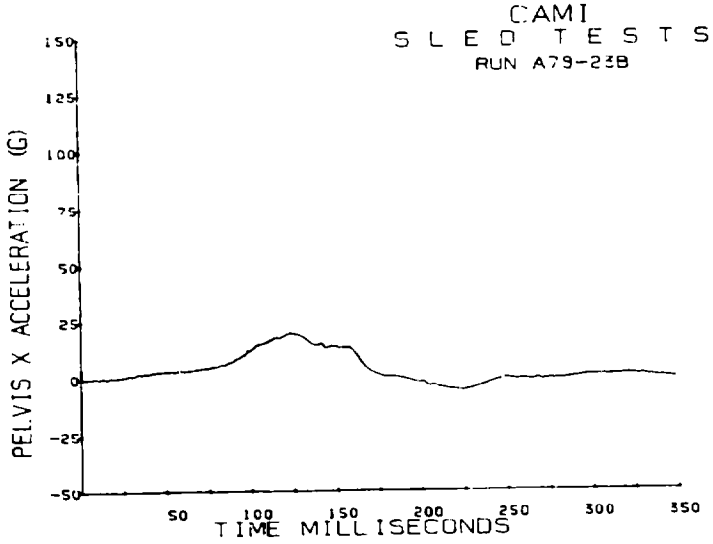

CAMI
SLED TESTS
RUN A79-23A
HEAD RESULTANT (G)
TIME MILLISECONDS

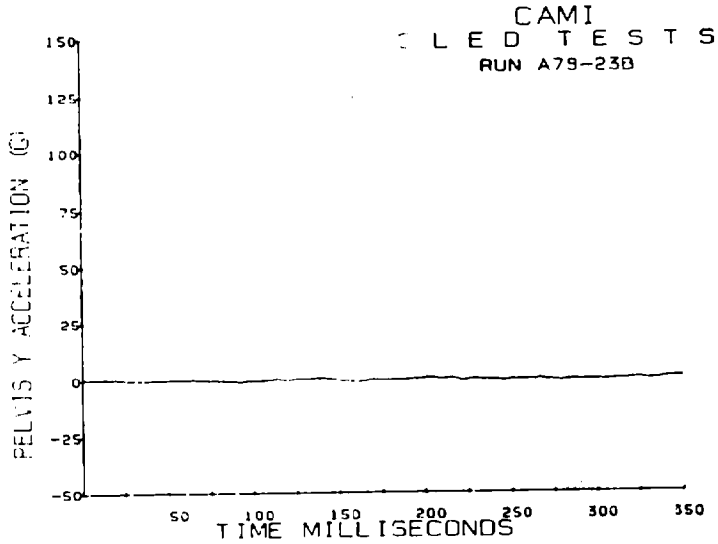

CAMI
S L E D T E S T S
RUN A79-23A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

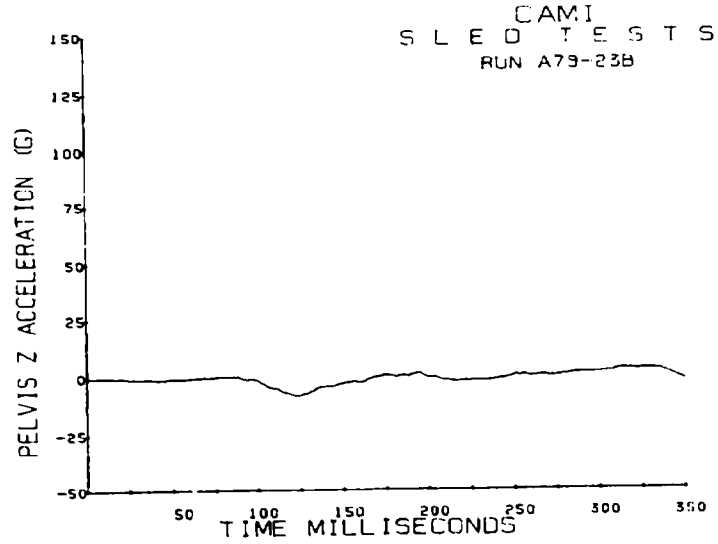

CAMI
S L E D T E S T S
RUN A79-23A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

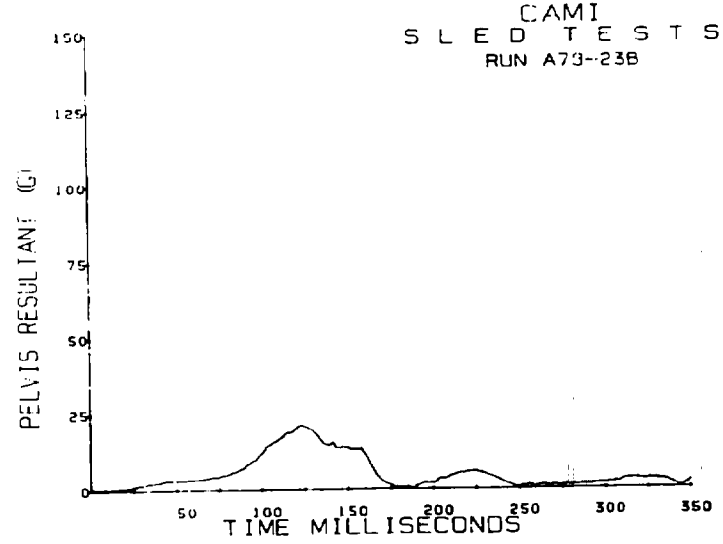

CAMI
S L E D T E S T S
RUN A79-23A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

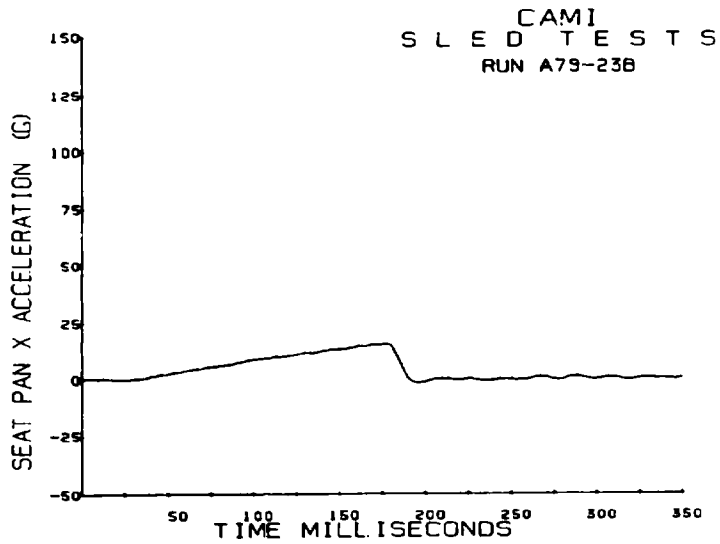

CAMI
S L E D T E S T S
RUN A79-23A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

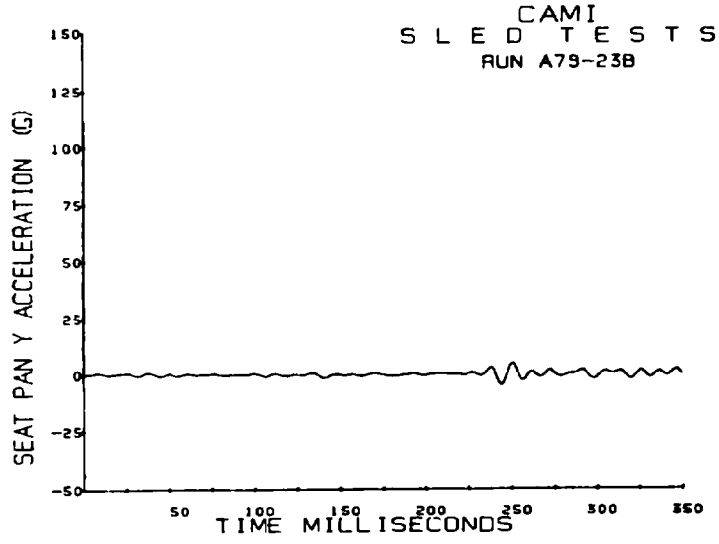

CAMI
SLED TESTS
RUN A79-23B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

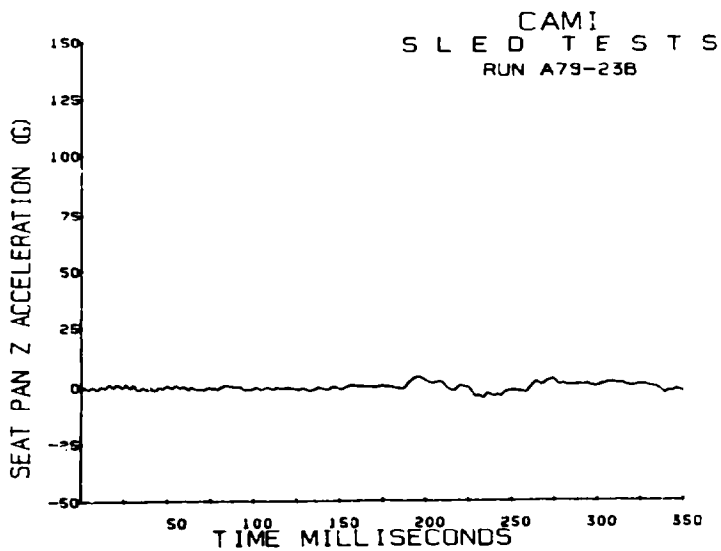

CAMI
SLED TESTS
RUN A79-23B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

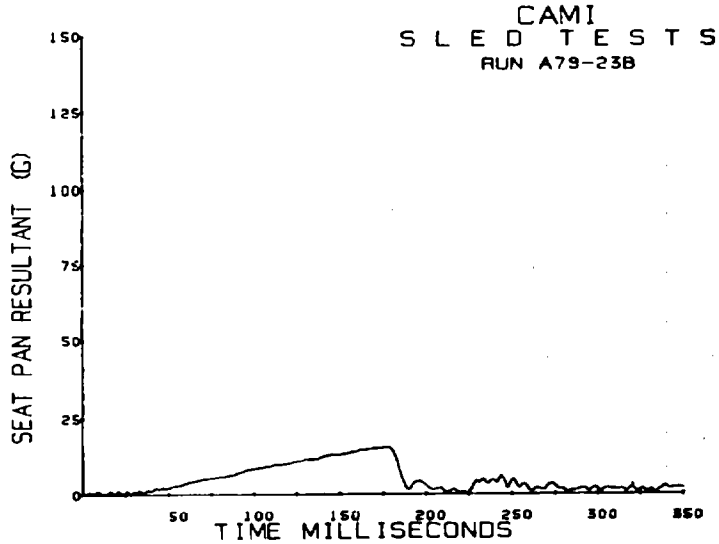

CAMI
SLED TESTS
RUN A79-23B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

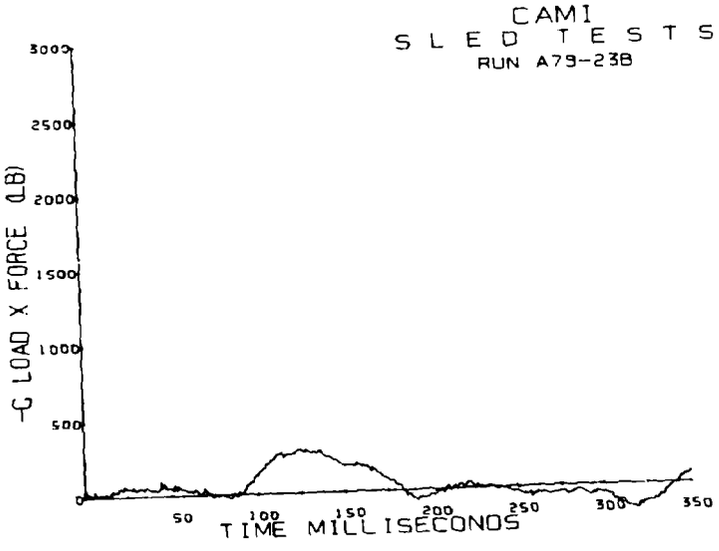

CAMI
SLED TESTS
RUN A79-23B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

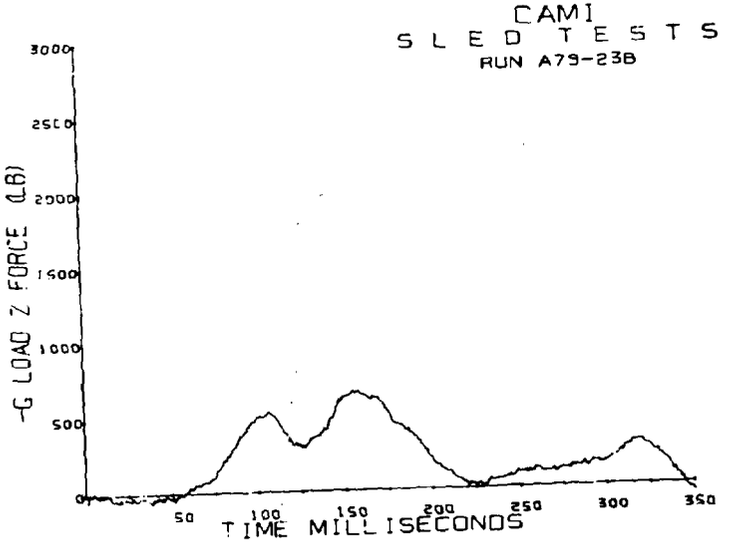

CAMI
S L E D T E S T S
RUN A79-23B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

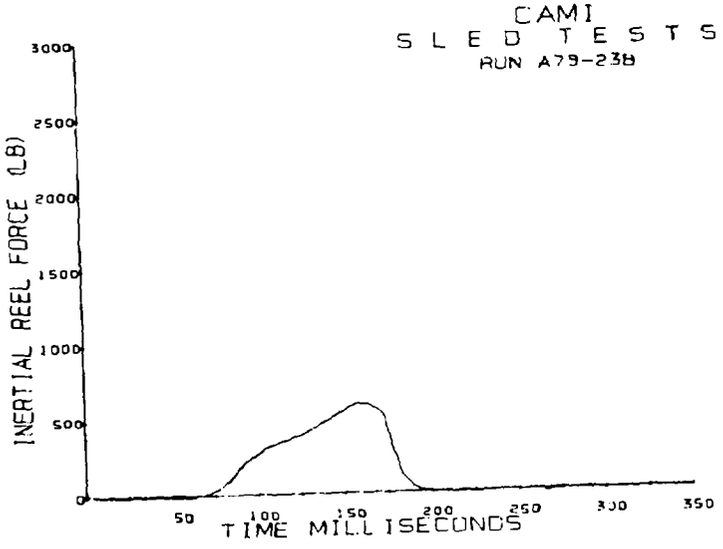

CAMI
S L E D T E S T S
RUN A79-23B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

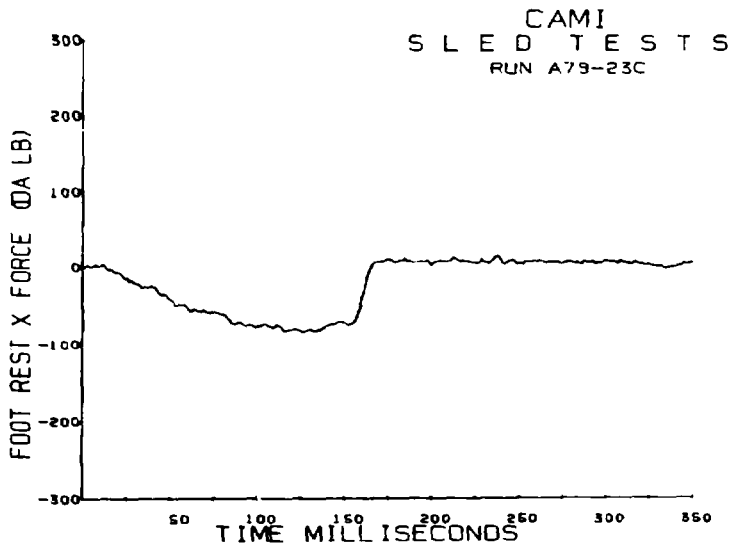

CAMI
S L E D T E S T S
RUN A79-23B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

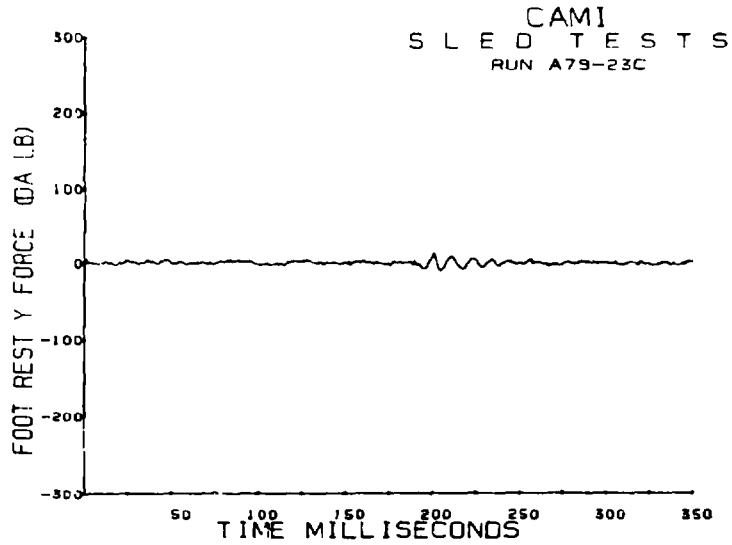

CAMI
S L E D T E S T S
RUN A79-23B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

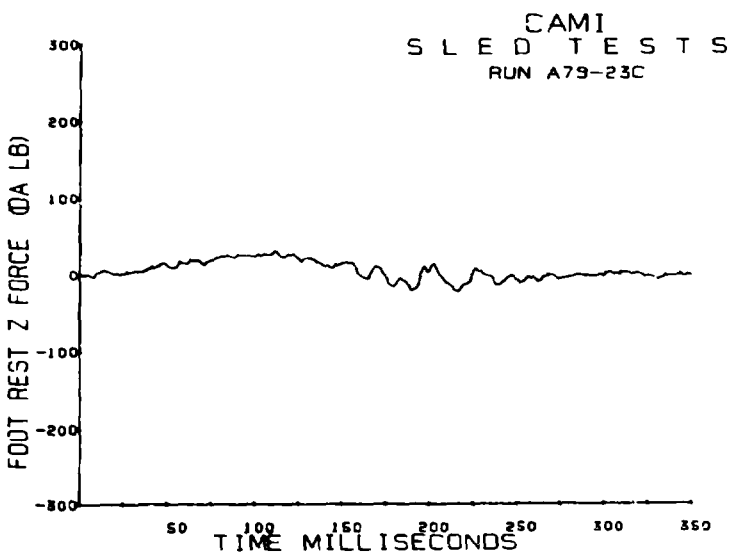

CAMI
S L E D T E S T S
RUN A79-23B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

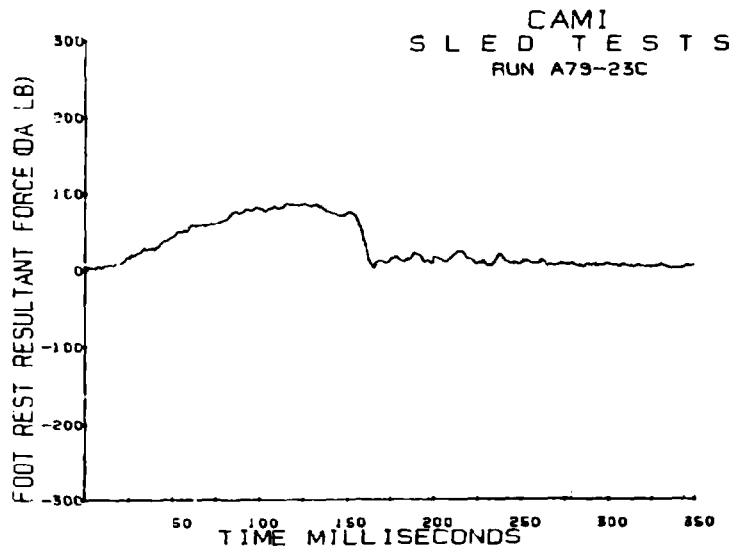

CAMI
S L E D T E S T S
RUN A79-23B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

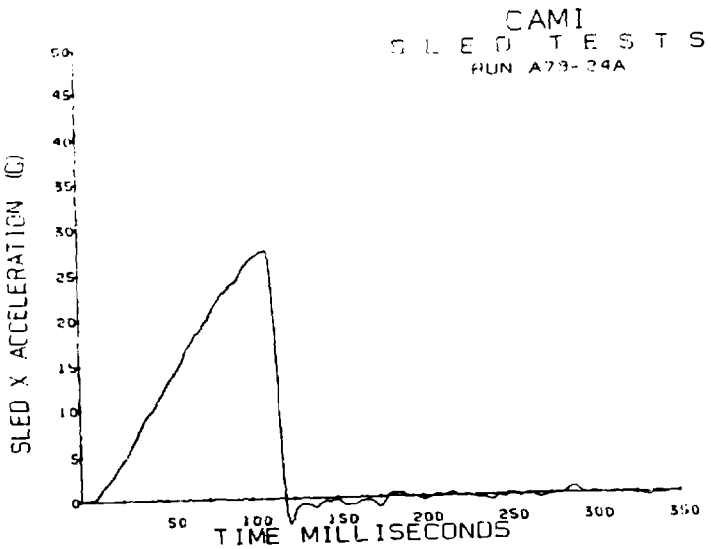

CAMI
S L E D T E S T S
RUN A79-23B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

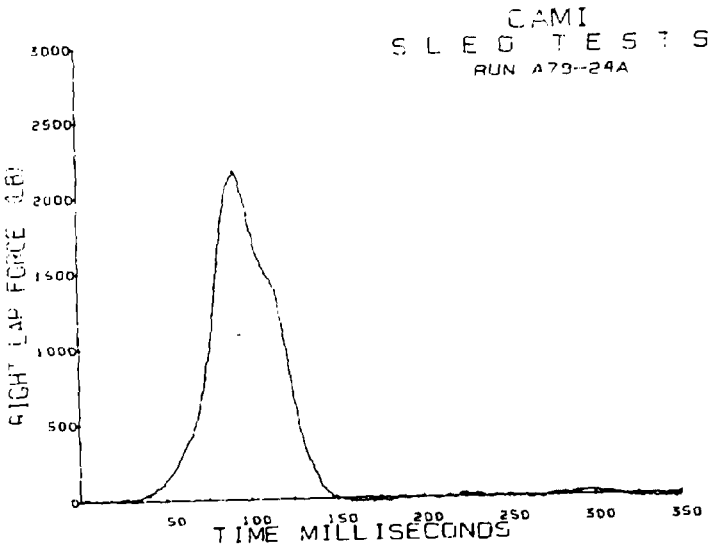

CAMI
S L E D T E S T S
RUN A79-23C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

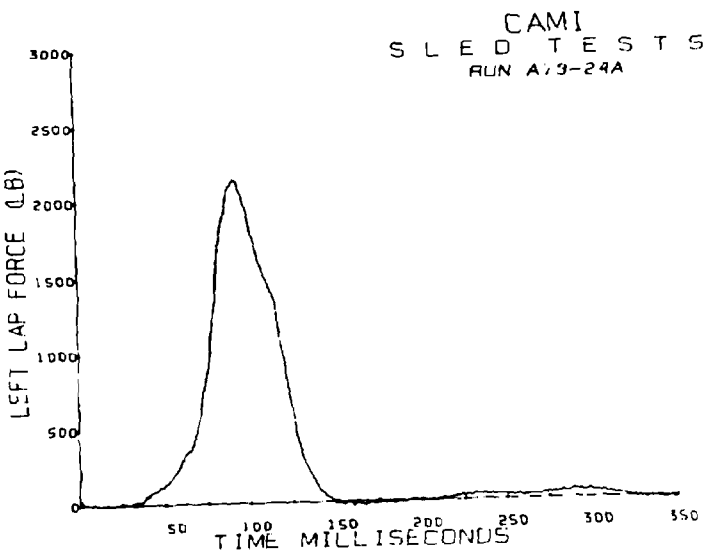

CAMI
S L E D T E S T S
RUN A79-23C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

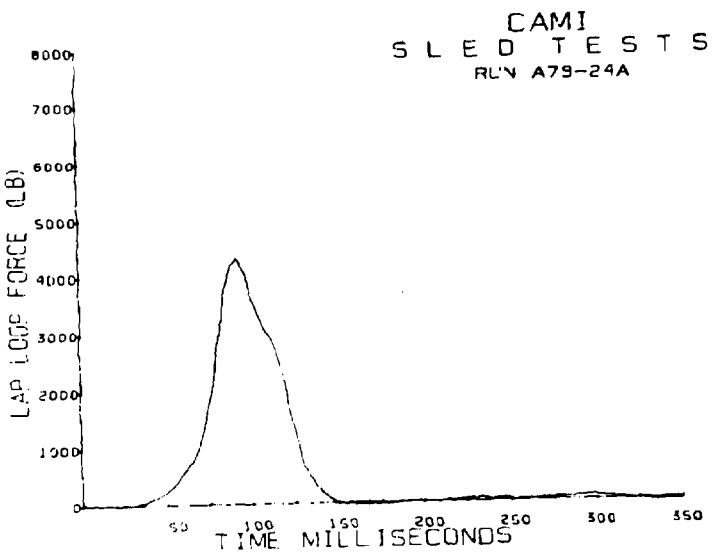

CAMI
S L E D T E S T S
RUN A79-23C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

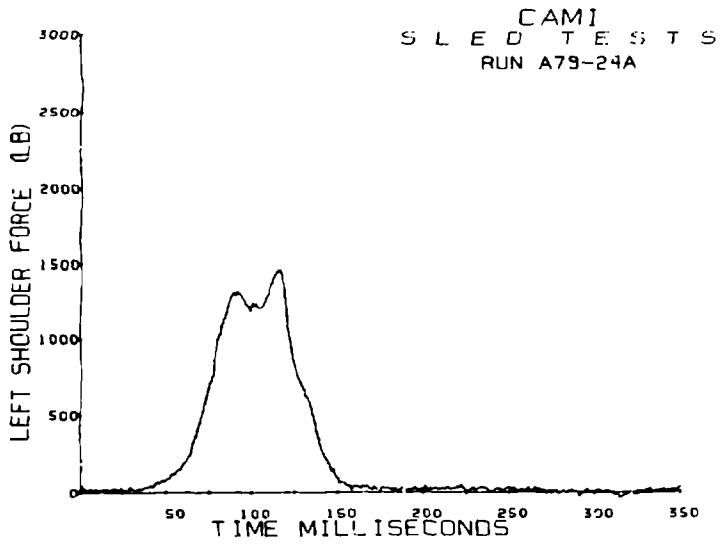

CAMI
S L E D T E S T S
RUN A79-23C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

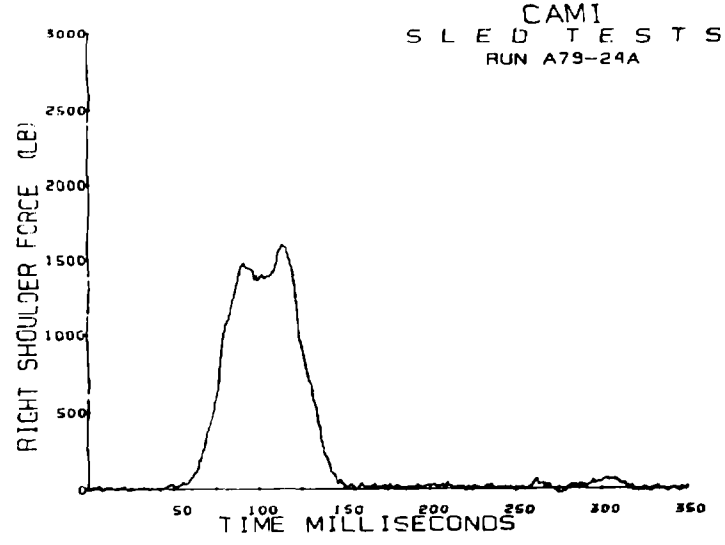

CAMI
S L E D T E S T S
RUN A79-24A
SLED X ACCELERATION (G)
TIME MILLISECONDS

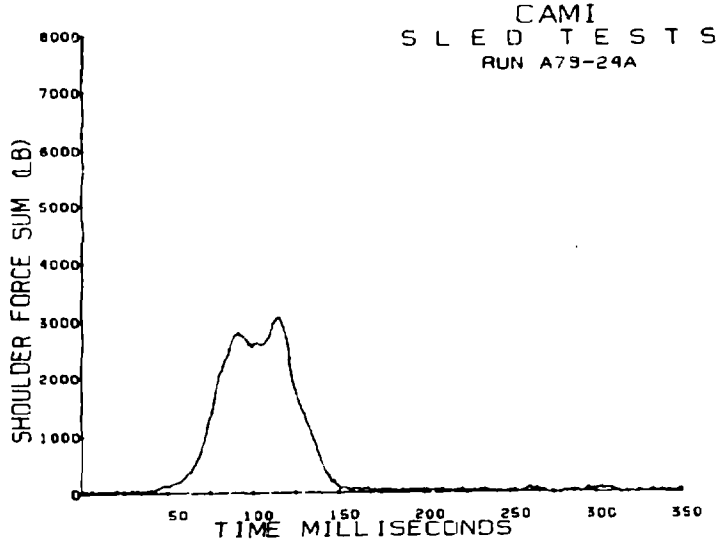

CAMI
S L E D T E S T S
RUN A79-24A
TIME MILLISECONDS

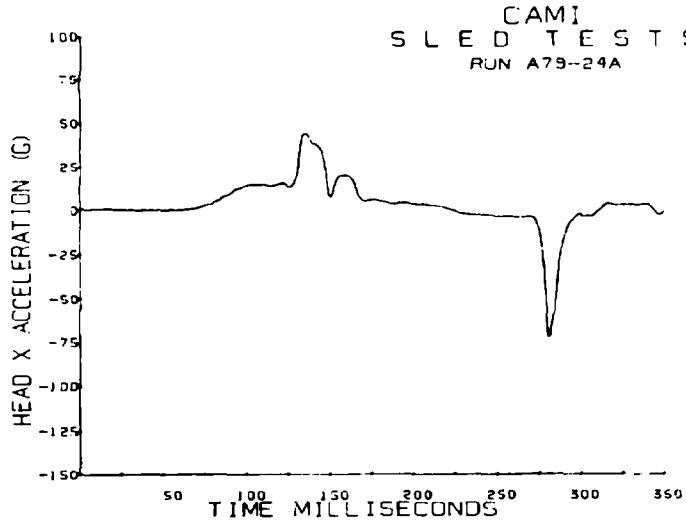

CAMI
S L E D T E S T S
RUN A79-24A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

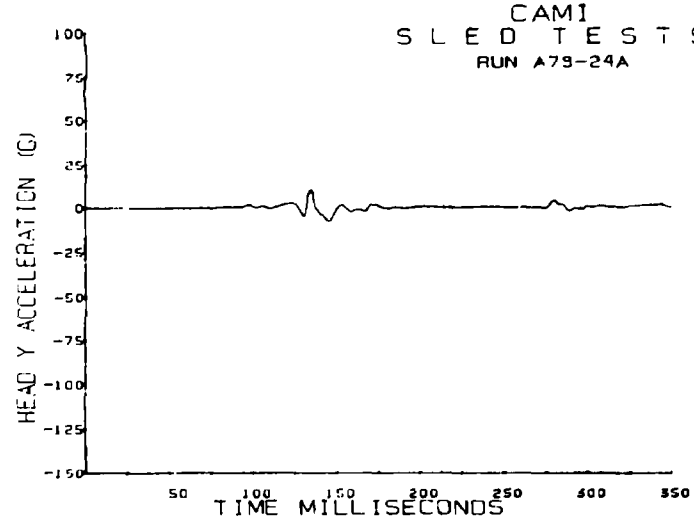

CAMI
S L E D T E S T S
RUN A79-24A
TIME MILLISECONDS

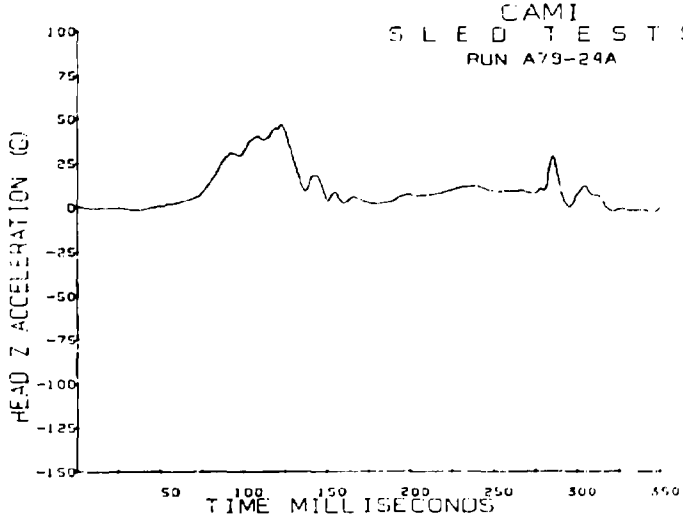

CAMI
SLED TESTS
RUN A79-24A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

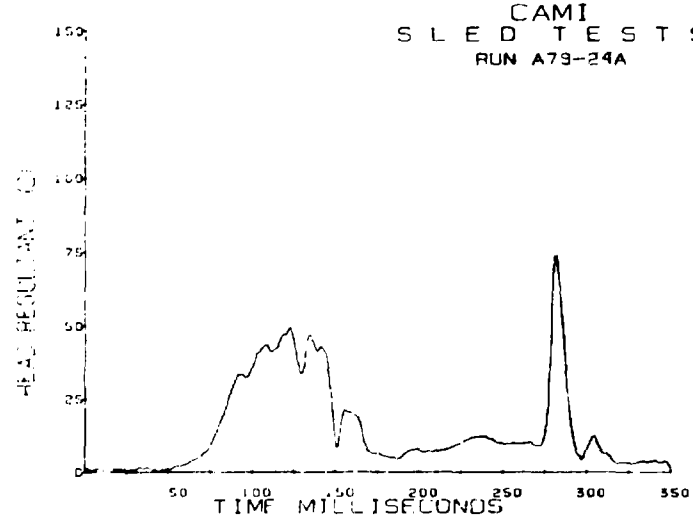

CAMI
SLED TESTS
RUN A79-24A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

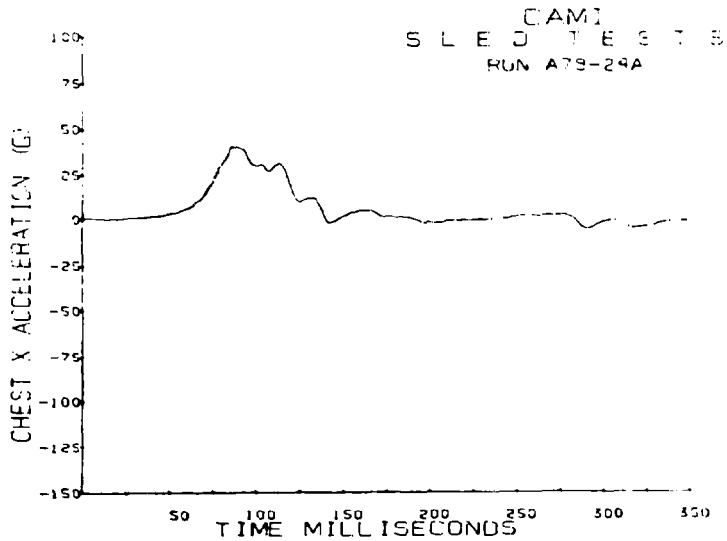

CAMI
SLED TESTS
RUN A79-24A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

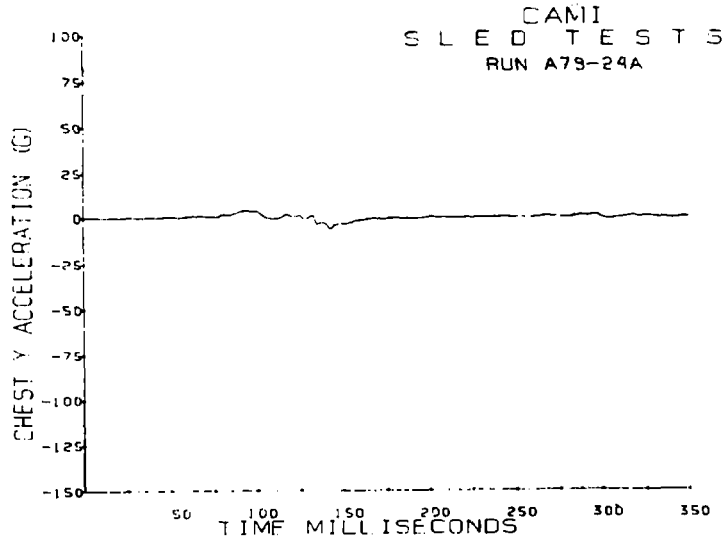

CAMI
SLED TESTS
RUN A79-24A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

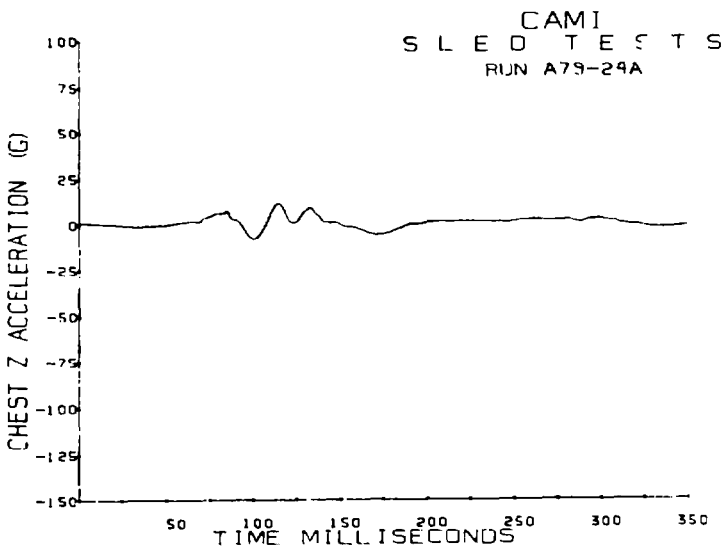

CAMI
SLED TESTS
RUN A79-24A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

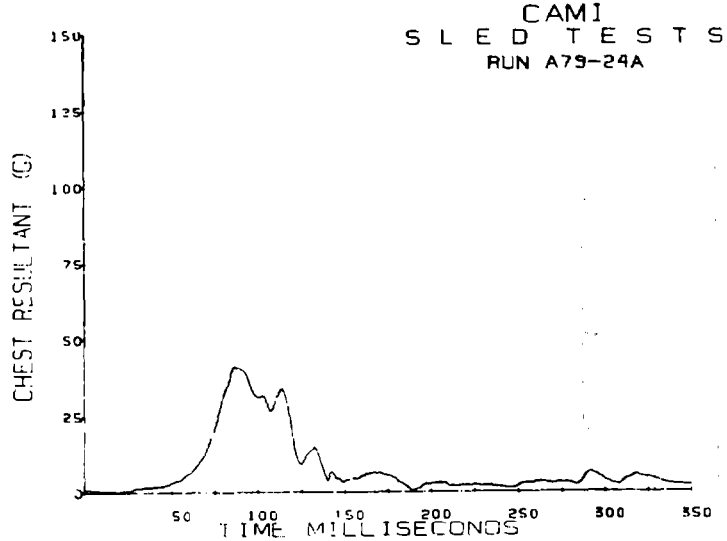

CAMI
SLED TESTS
RUN A79-24A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

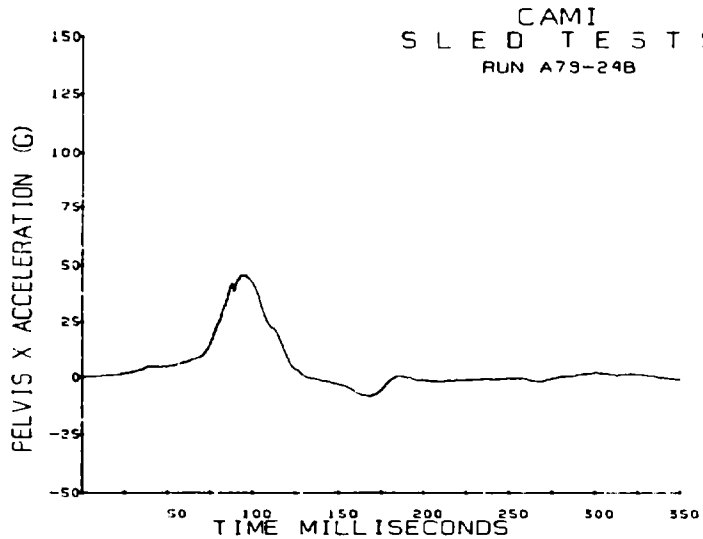

CAMI
SLED TESTS
RUN A79-24A
TIME MILLISECONDS

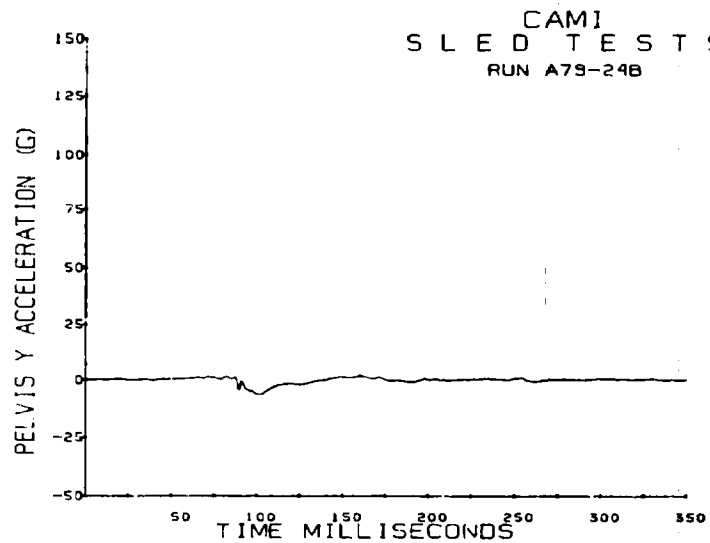

CAMI
SLED TESTS
RUN A79-24A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

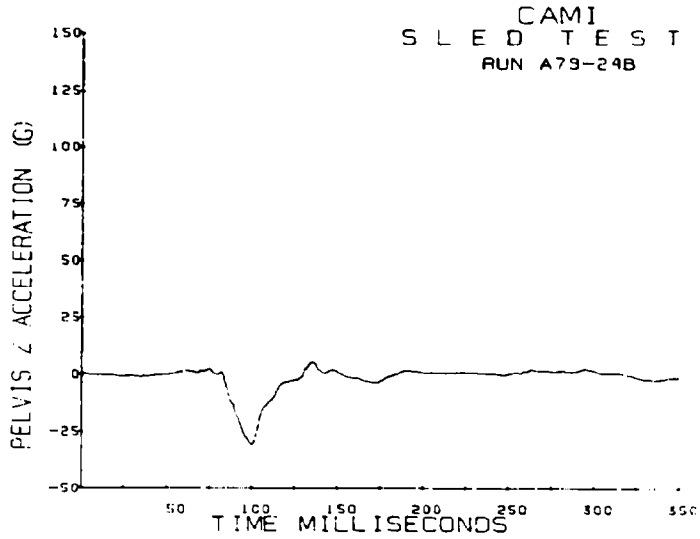

CAMI
SLED TESTS
RUN A79-24A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

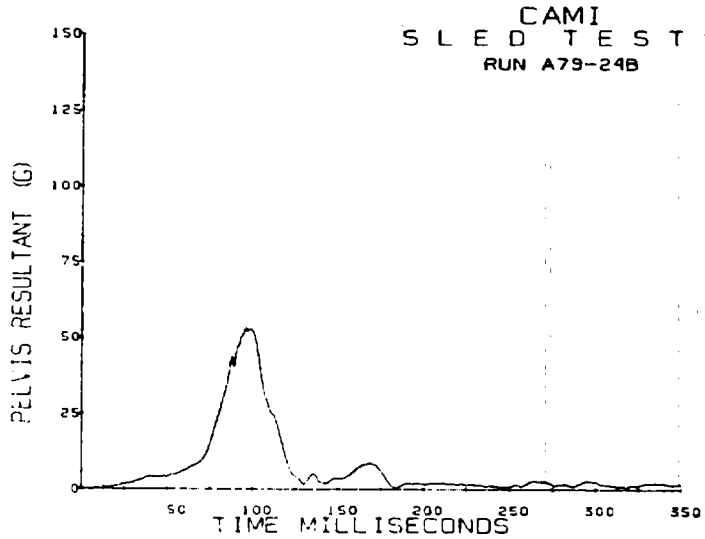

CAMI
SLED TESTS
RUN A79-24A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

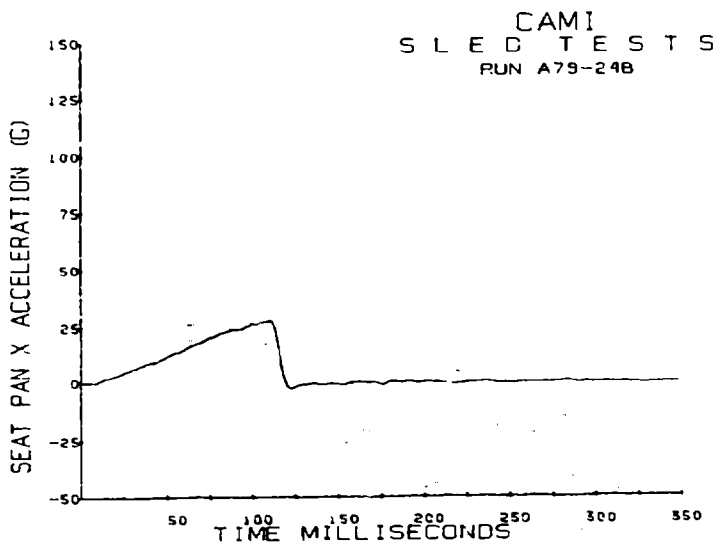

CAMI
SLED TESTS
RUN A79-24A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

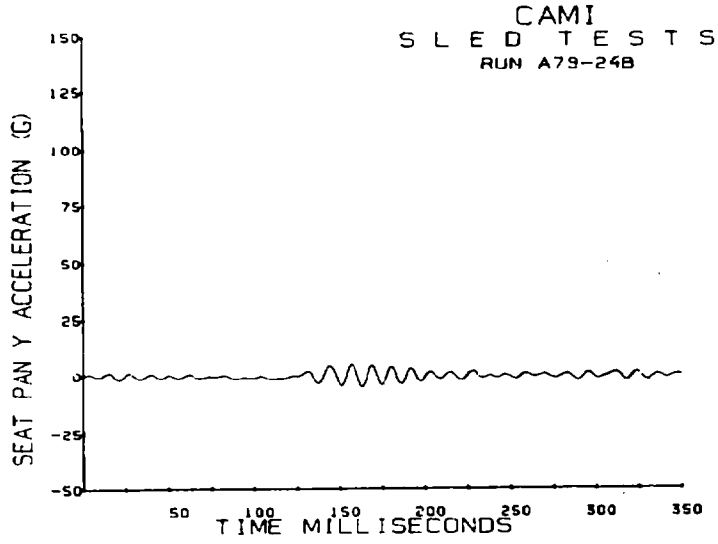

CAMI
SLED TESTS
RUN A79-24B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

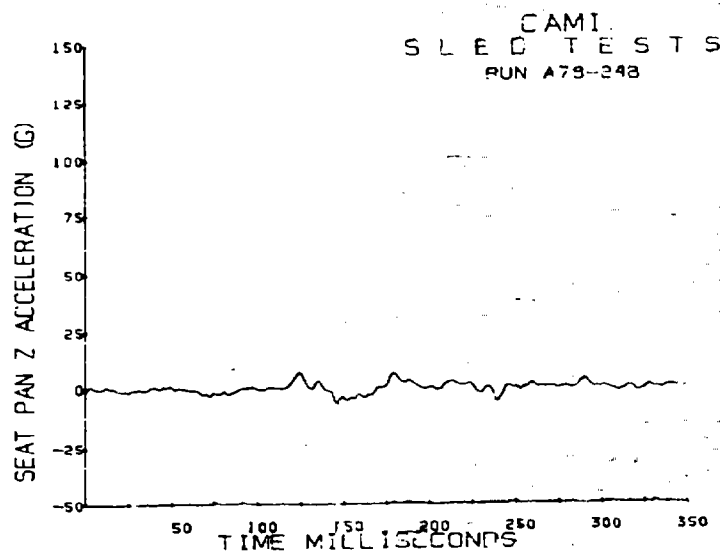

CAMI
SLED TESTS
RUN A79-24B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

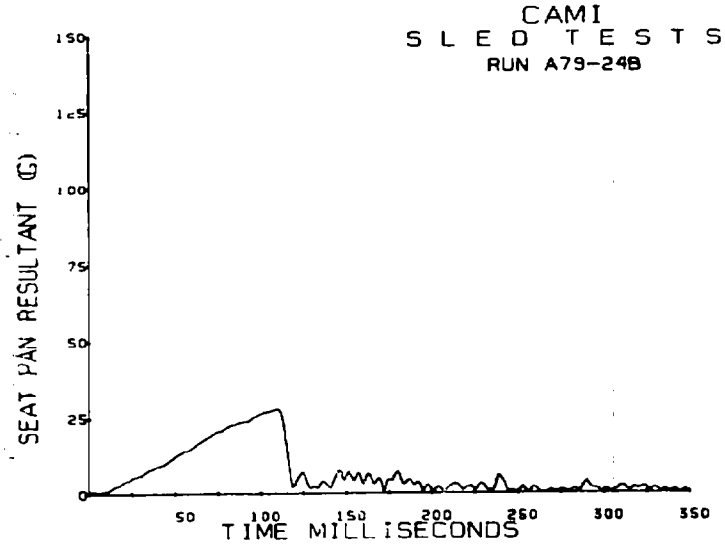

CAMI
SLED TESTS
RUN A79-24B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

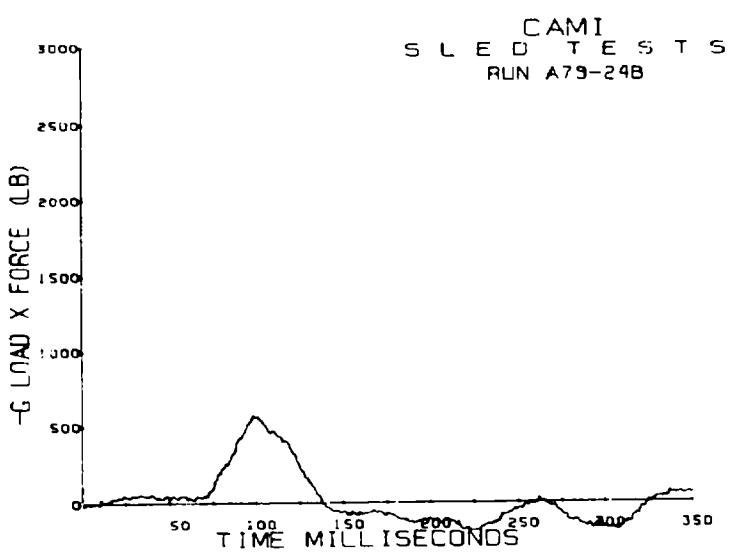

CAMI
SLED TESTS
RUN A79-24B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

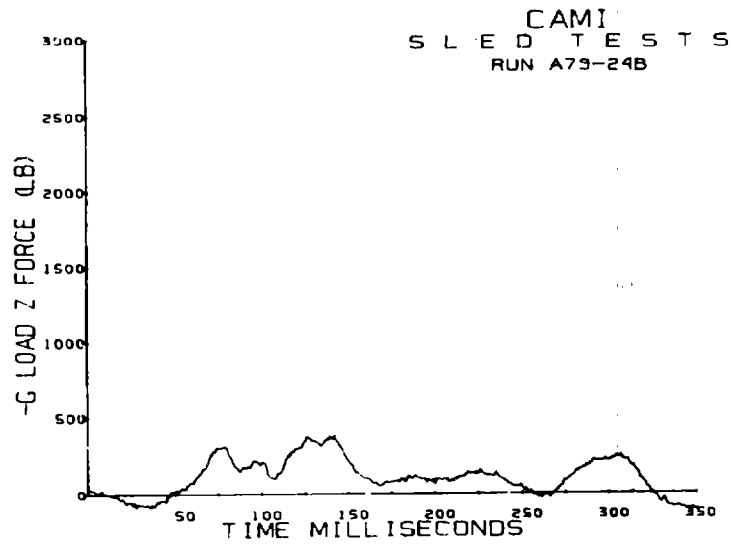

CAMI
SLED TESTS
RUN A79-24B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

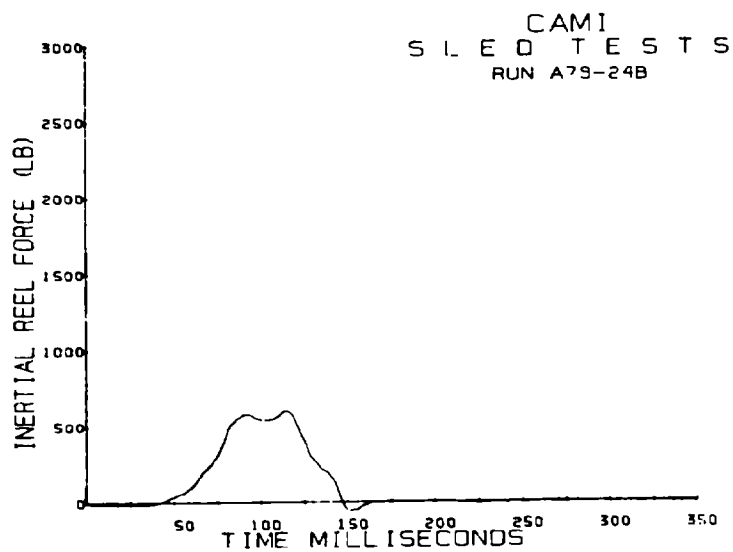

CAMI
SLED TESTS
RUN A79-24B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

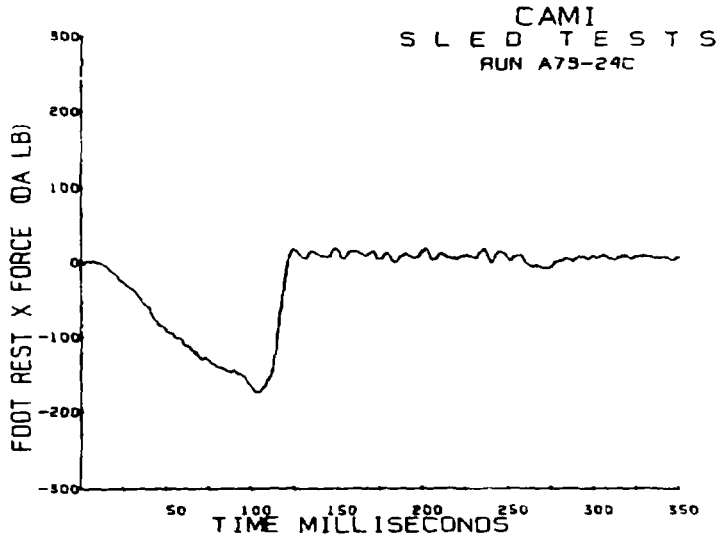

CAMI
SLED TESTS
RUN A79-24B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

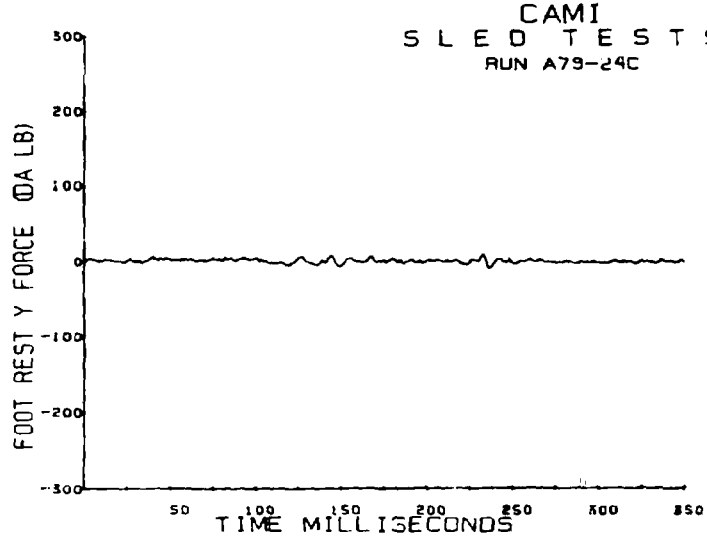

CAMI
SLED TESTS
RUN A79-24B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

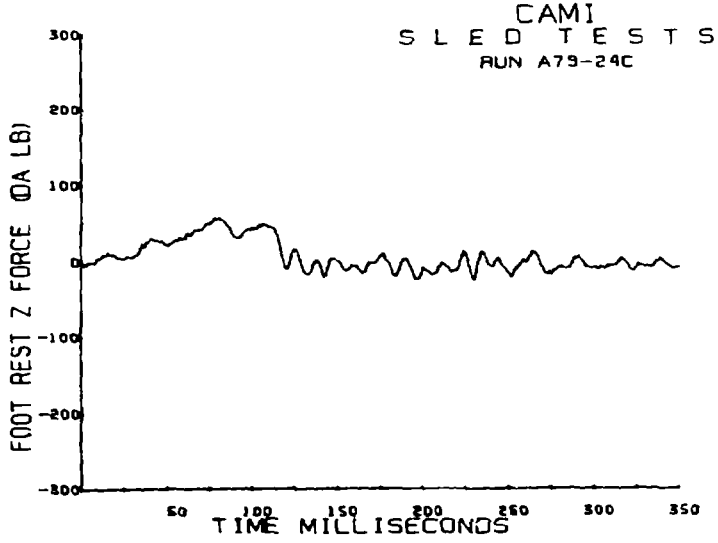

CAMI
SLED TESTS
RUN A79-24B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

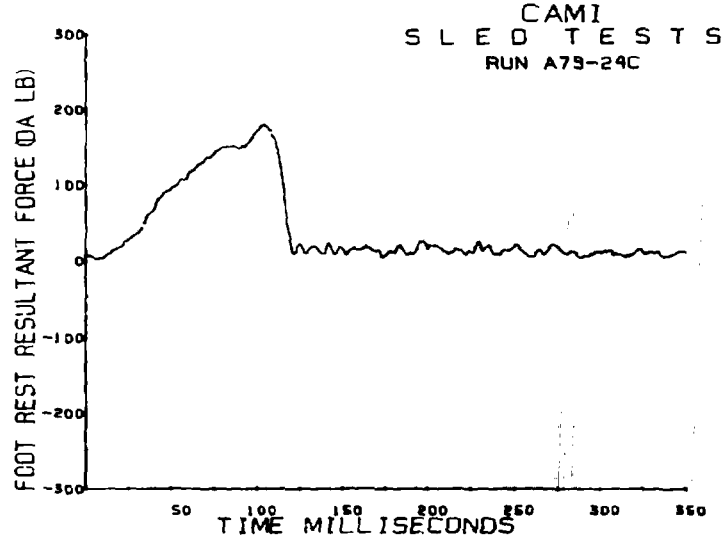

CAMI
SLED TESTS
RUN A79-24B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

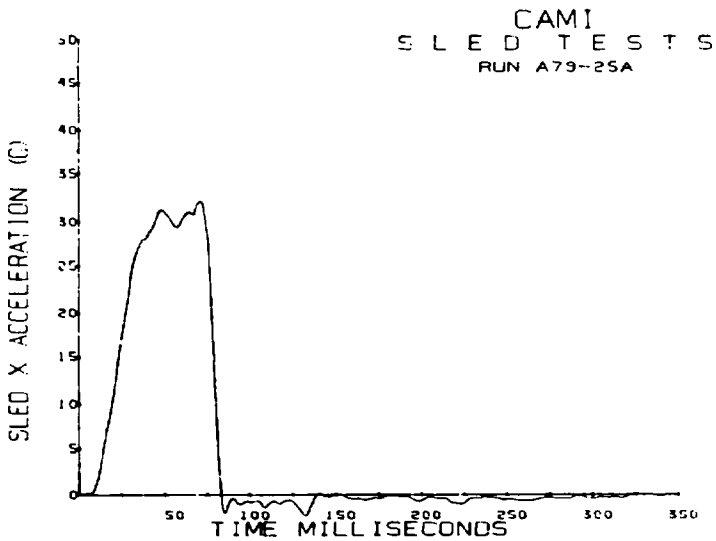

CAMI
SLED TESTS
RUN A79-24B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

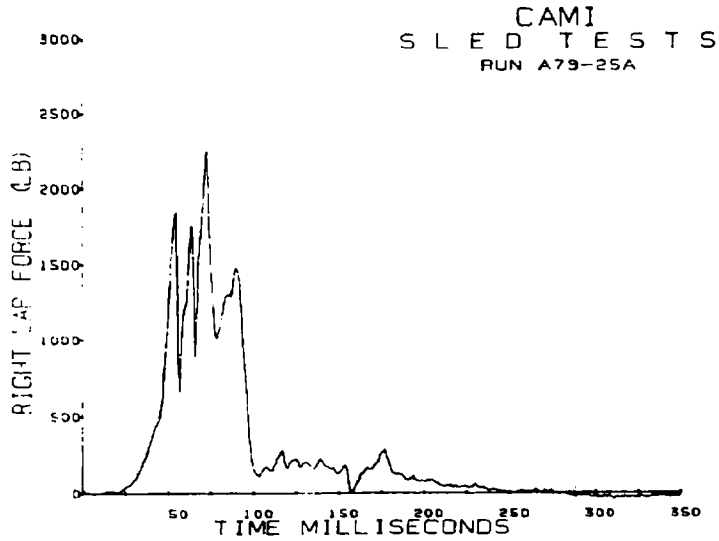

CAMI
S L E D T E S T S
RUN A79-24C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

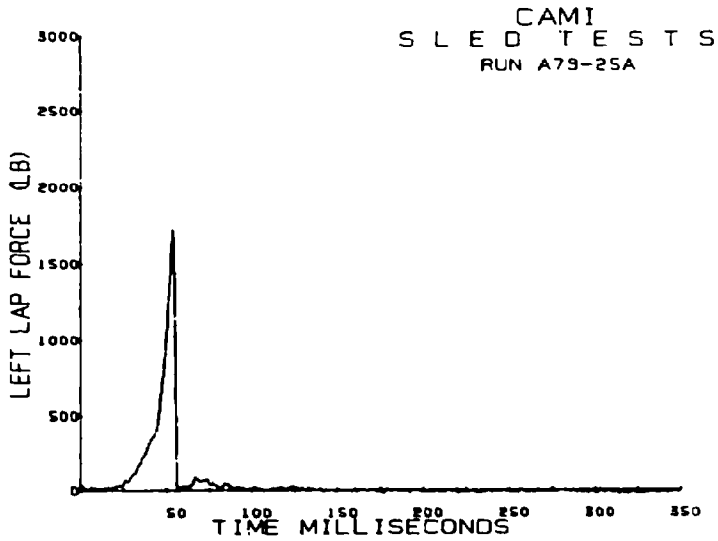

CAMI
S L E D T E S T S
RUN A79-24C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

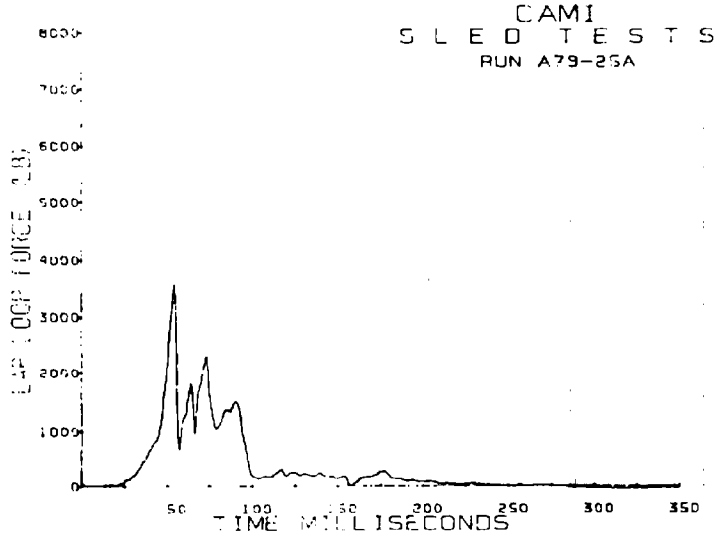

CAMI
S L E D T E S T S
RUN A79-24C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

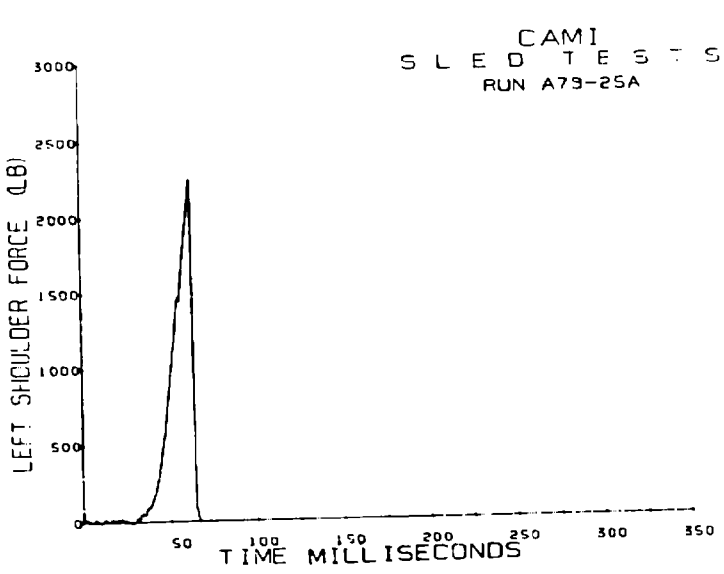

CAMI
S L E D T E S T S
RUN A79-24C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

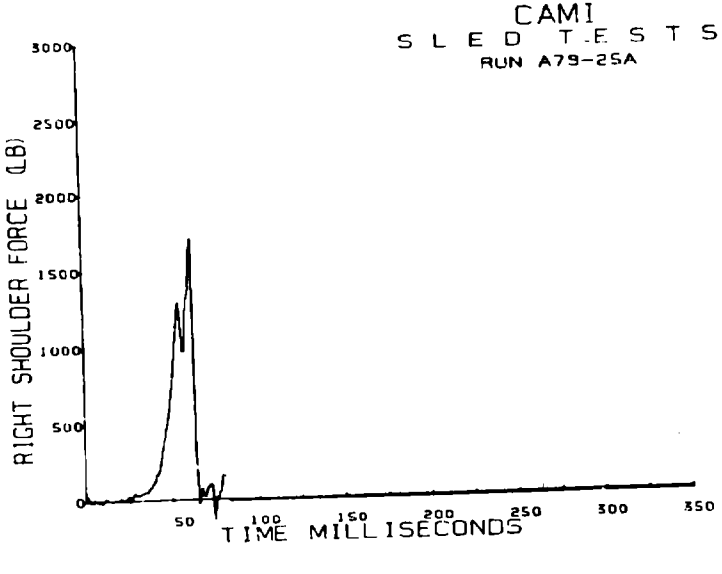

CAMI
SLED TESTS
RUN A79-25A
SLED X ACCELERATION (G)
TIME MILLISECONDS

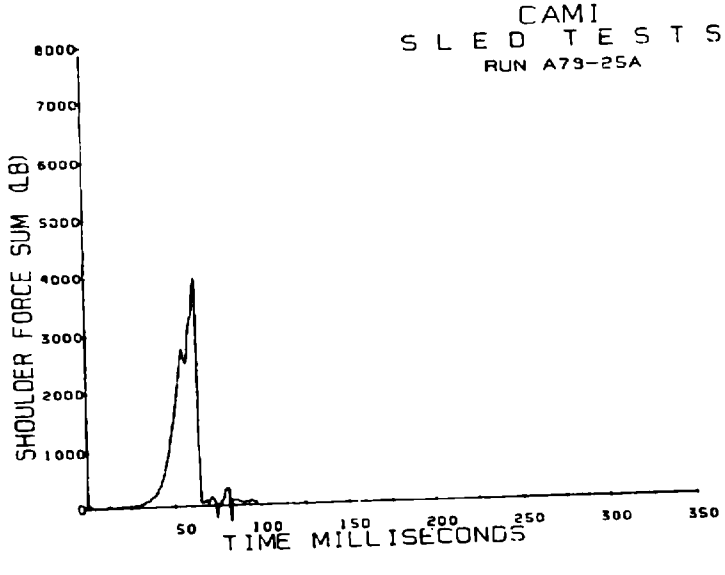

CAMI
SLED TESTS
RUN A79-25A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

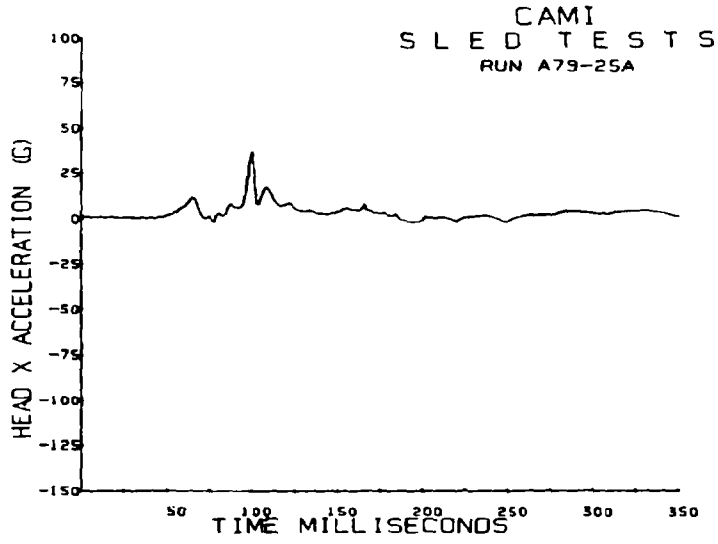

CAMI
SLED TESTS
RUN A79-25A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

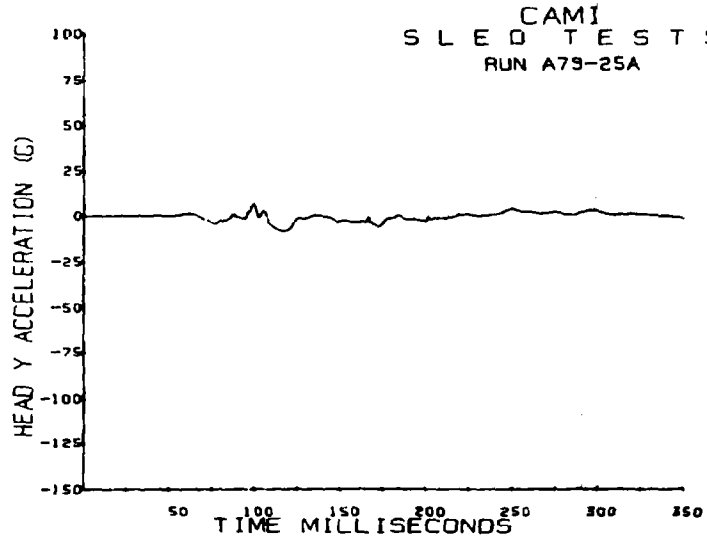

CAMI
SLED TESTS
RUN A79-25A
TIME MILLISECONDS

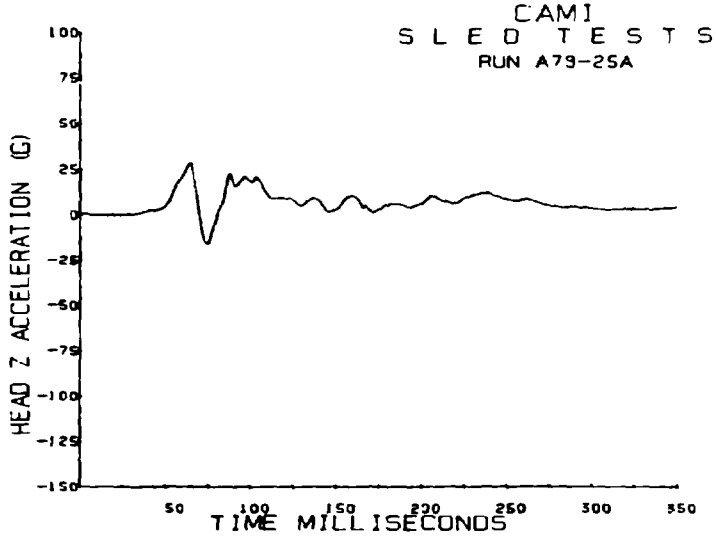

CAMI
SLED TESTS
RUN A79-25A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

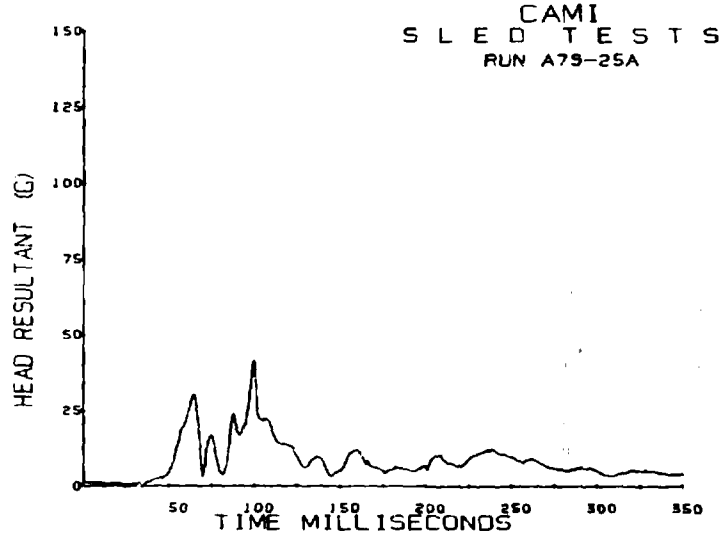

CAMI
SLED TESTS
RUN A79-25A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

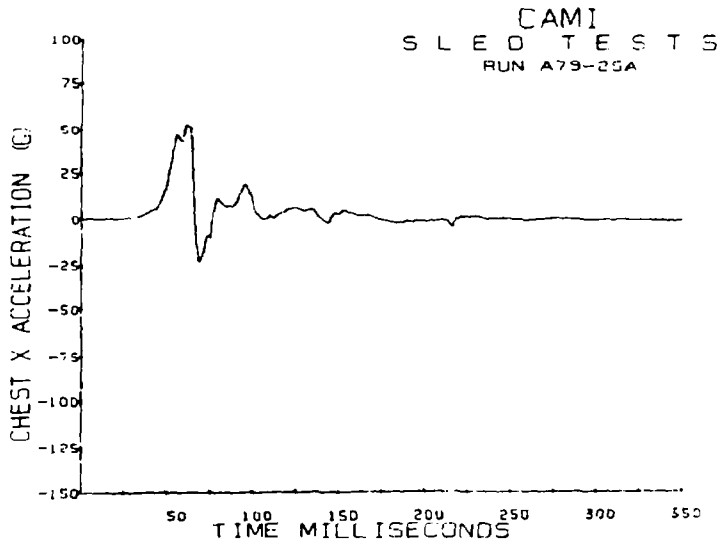

CAMI
SLED TESTS
RUN A79-25A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

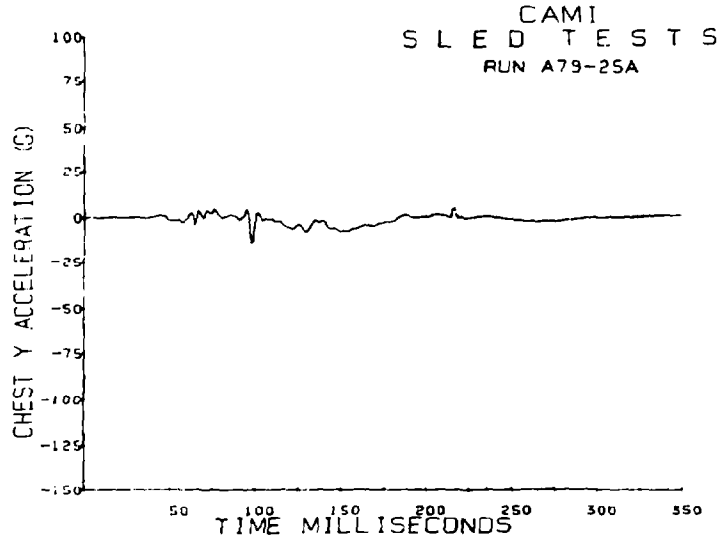

CAMI
SLED TESTS
RUN A79-25A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

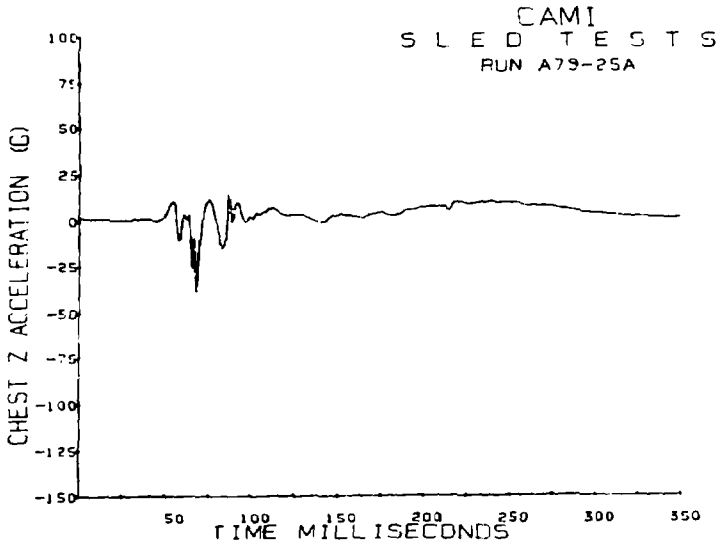

CAMI
SLED TESTS
RUN A79-25A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

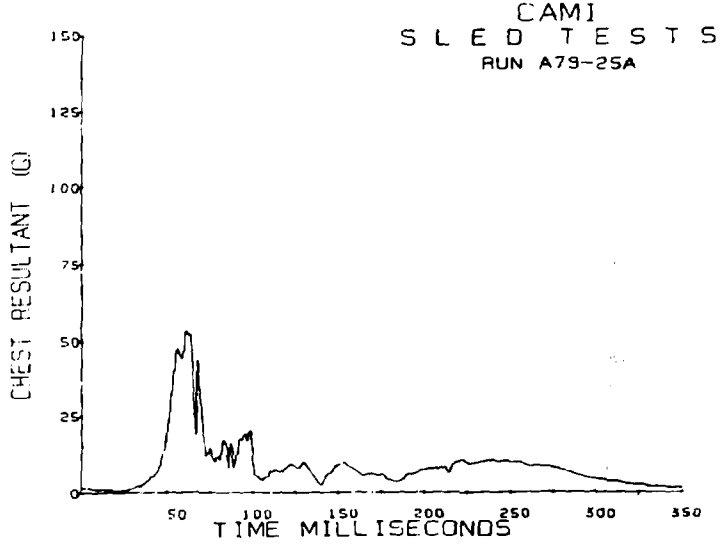

CAMI
SLED TESTS
RUN A79-25A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

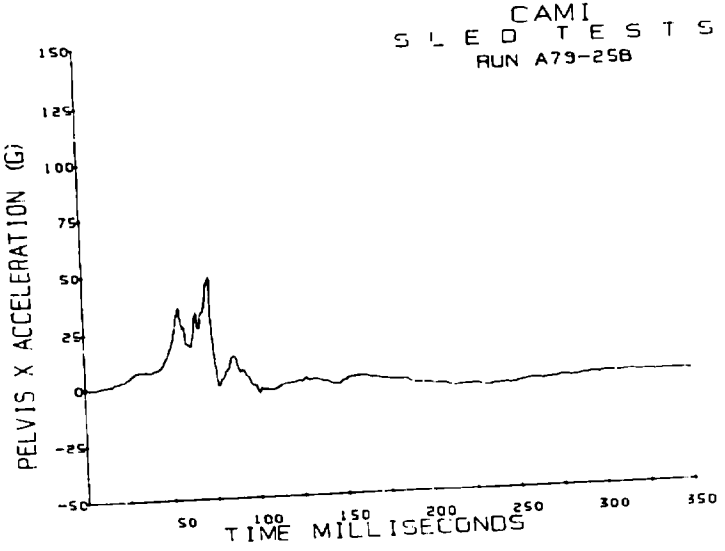

CAMI
SLED TESTS
RUN A79-25A
HEAD RESULTANT (G)
TIME MILLISECONDS

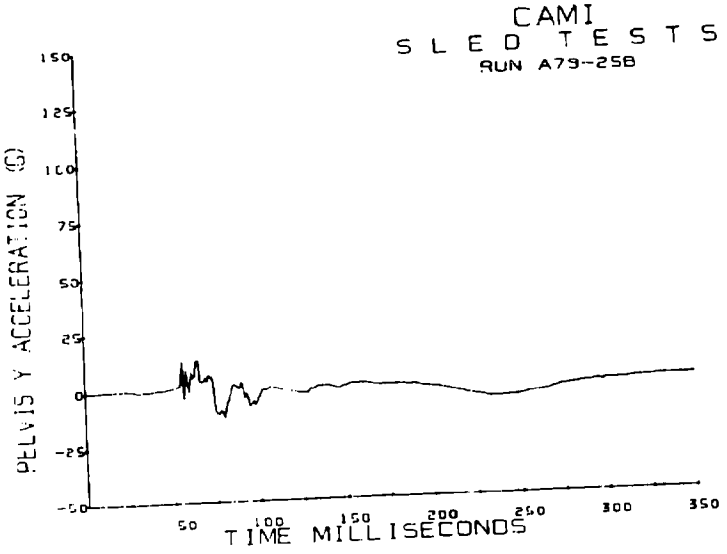

CAMI
SLED TESTS
RUN A79-25A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

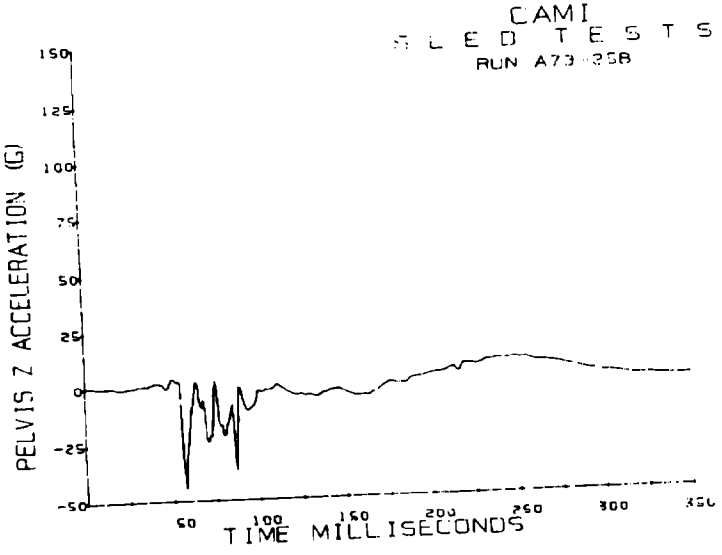

CAMI
SLED TESTS
RUN A79-25A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

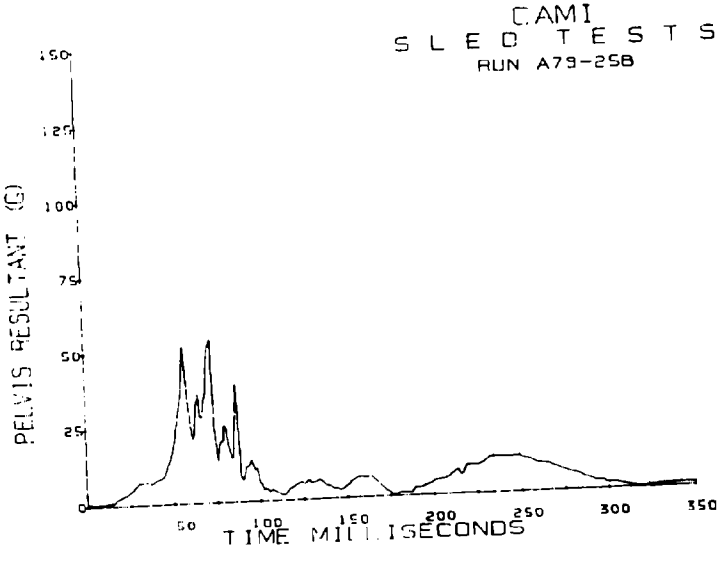

CAMI
SLED TESTS
RUN A79-25A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

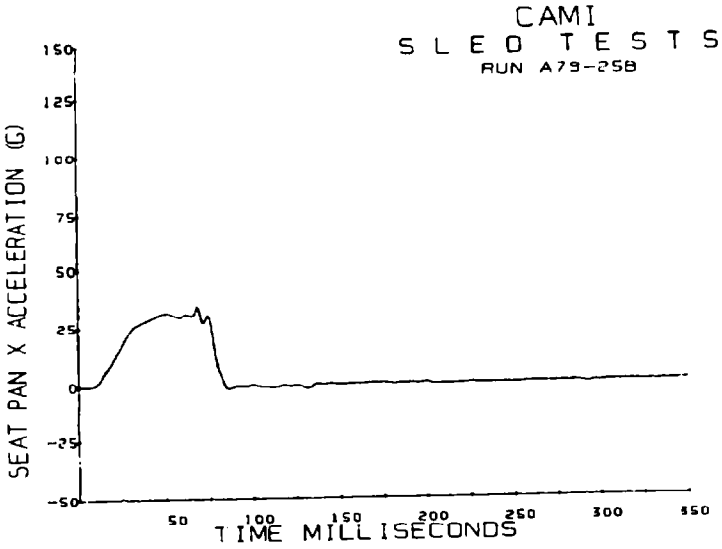

CAMI
SLED TESTS
RUN A79-25A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

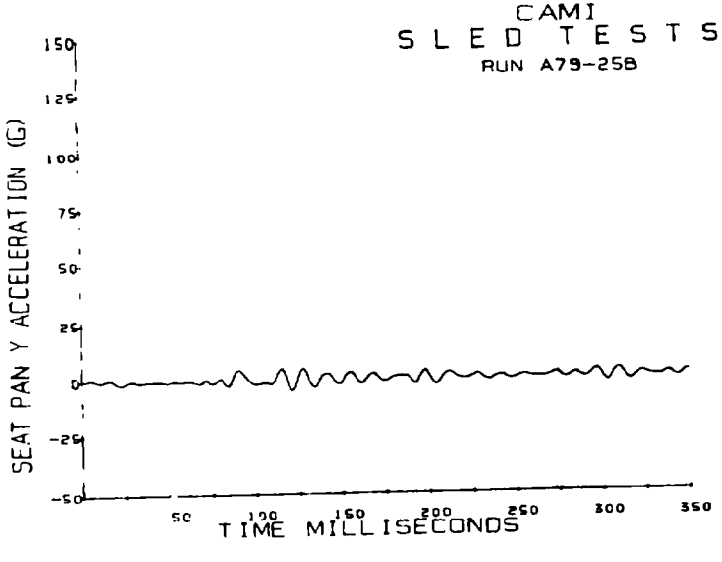

CAMI
S L E D T E S T S
RUN A79-25B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

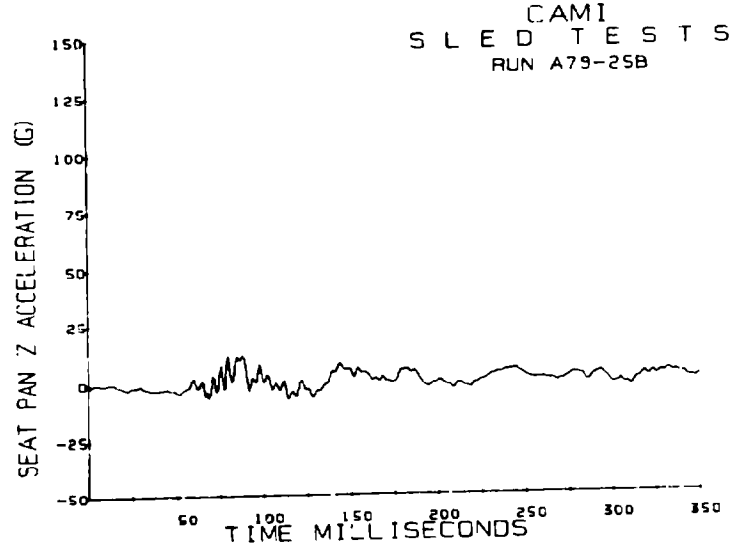

CAMI
S L E D T E S T S
RUN A79-25B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

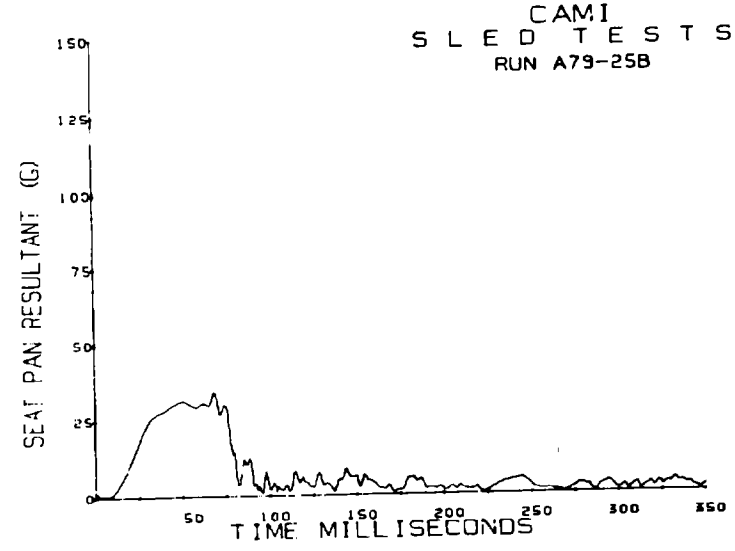

CAMI
S L E D T E S T S
RUN A79-25B
PELVIS Z ACCELERATION (G)
150
125
100
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

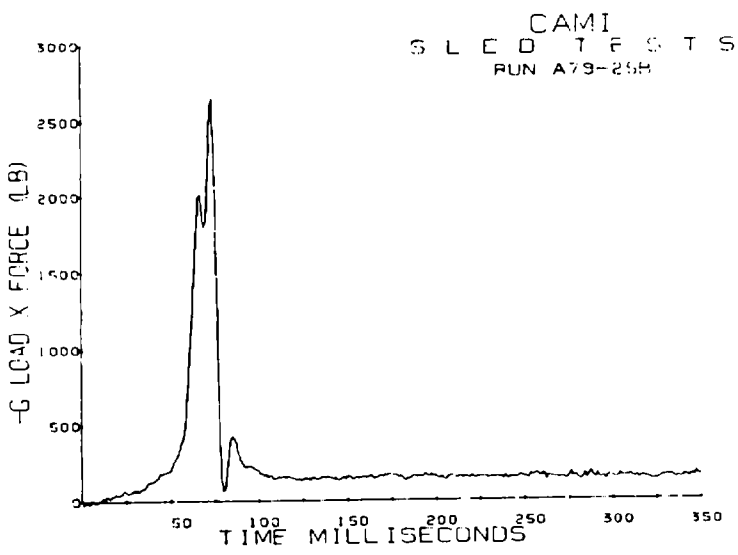

CAMI
S L E D T E S T S
RUN A79-25B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

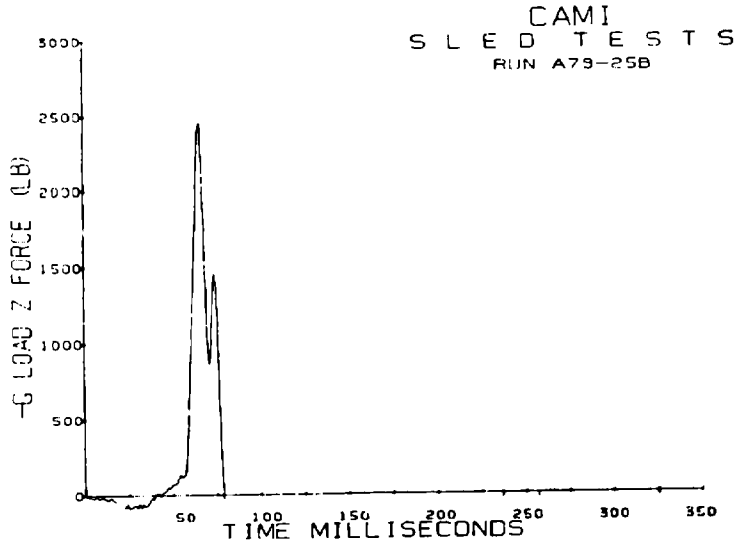

CAMI
SLED TESTS
RUN A79-25B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

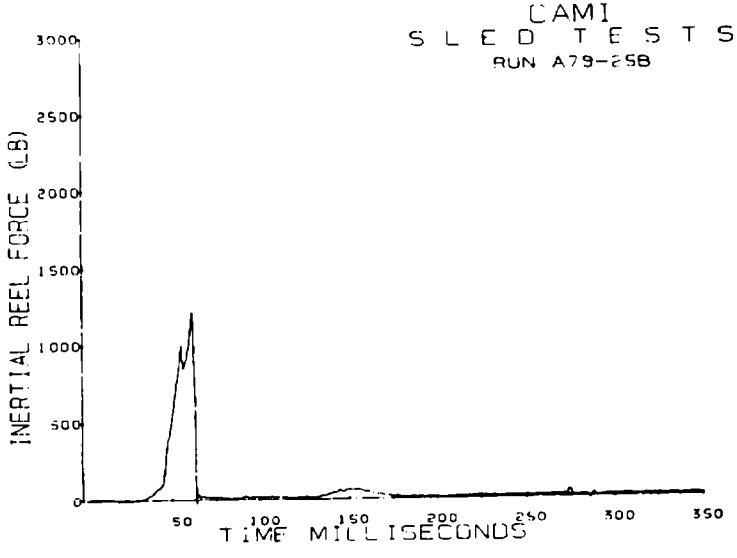

CAMI
SLED TESTS
RUN A79-25B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

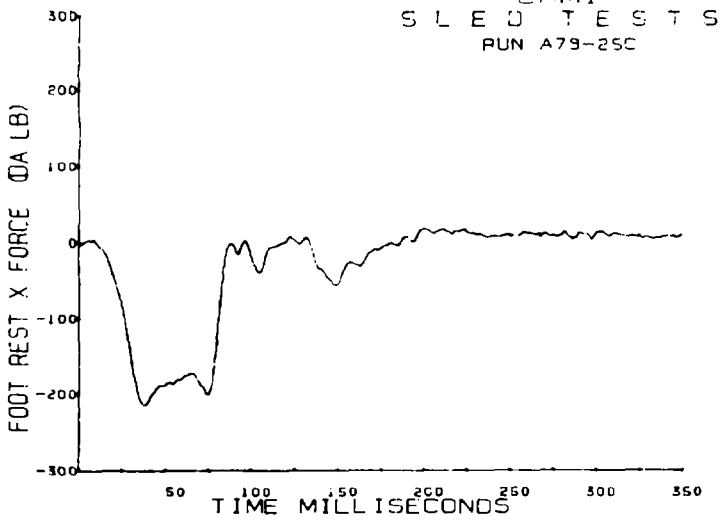

CAMI
SLED TESTS
RUN A79-25B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

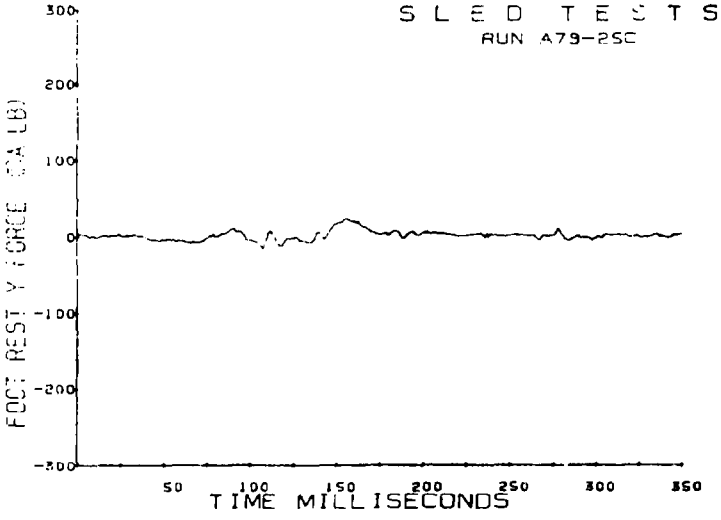

CAMI
SLED TESTS
RUN A79-25B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

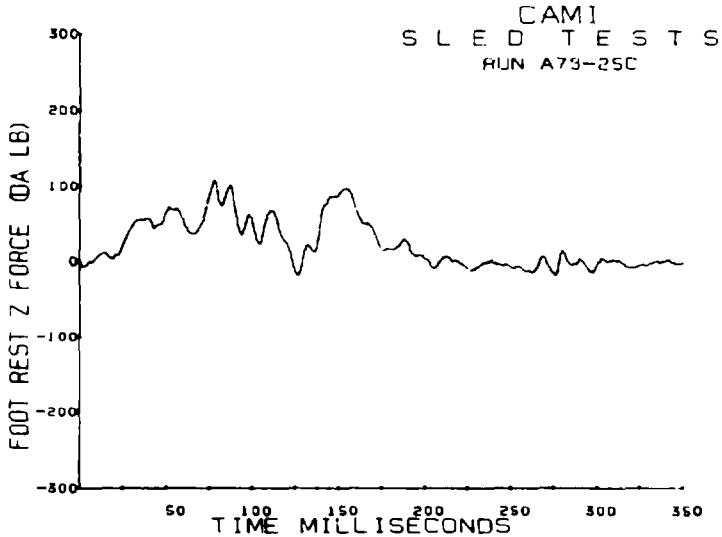

CAMI
SLED TESTS
RUN A79-25B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

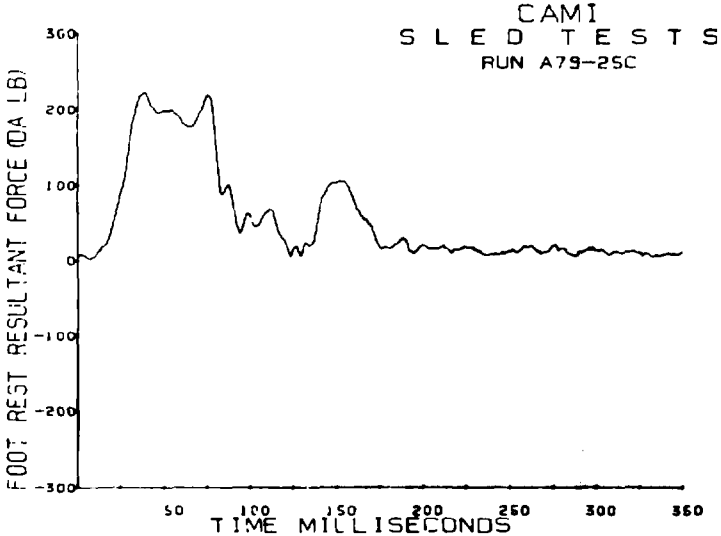

CAMI
SLED TESTS
RUN A79-25B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

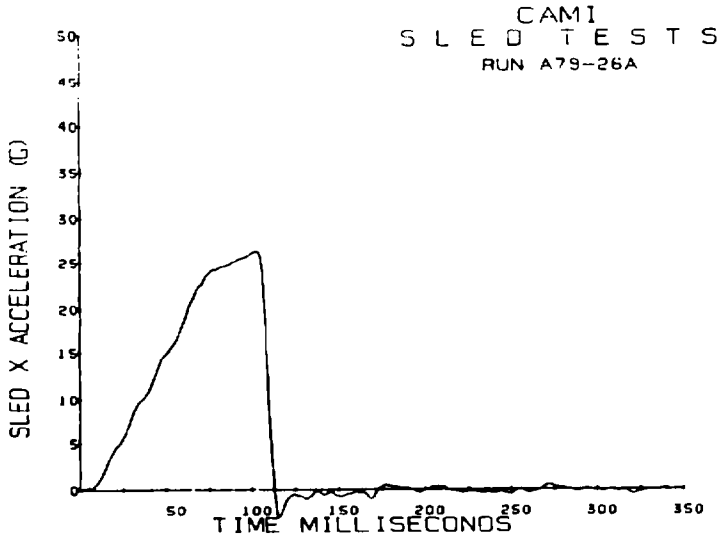

CAMI
SLED TESTS
RUN A79-25B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

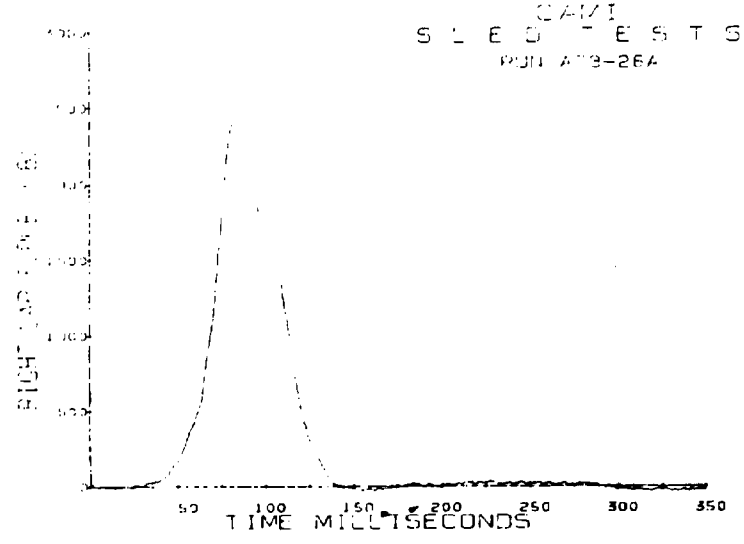

CAMI
SLED TESTS
RUN A79-25C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

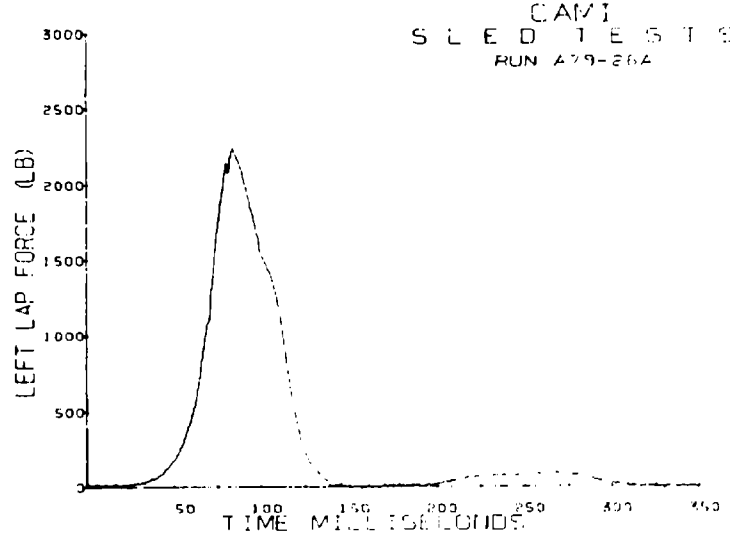

CAMI
SLED TESTS
RUN A79-25C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

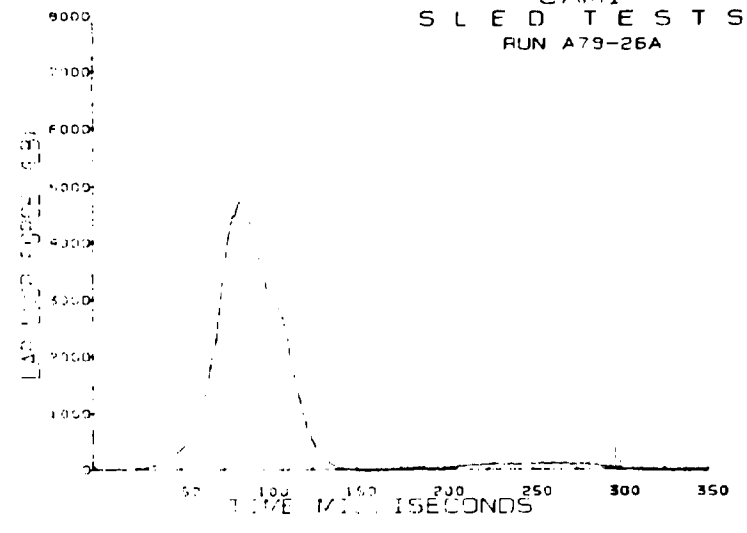

CAMI
SLED TESTS
RUN A79-25C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

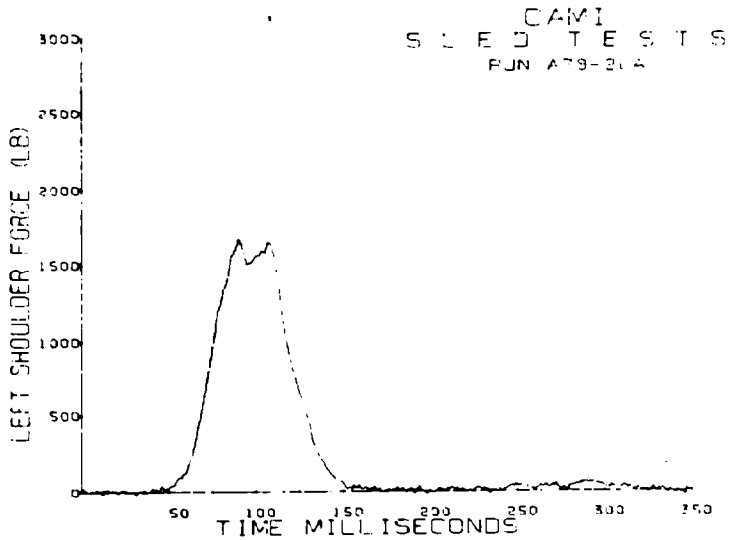

CAMI
SLED TESTS
RUN A79-25C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

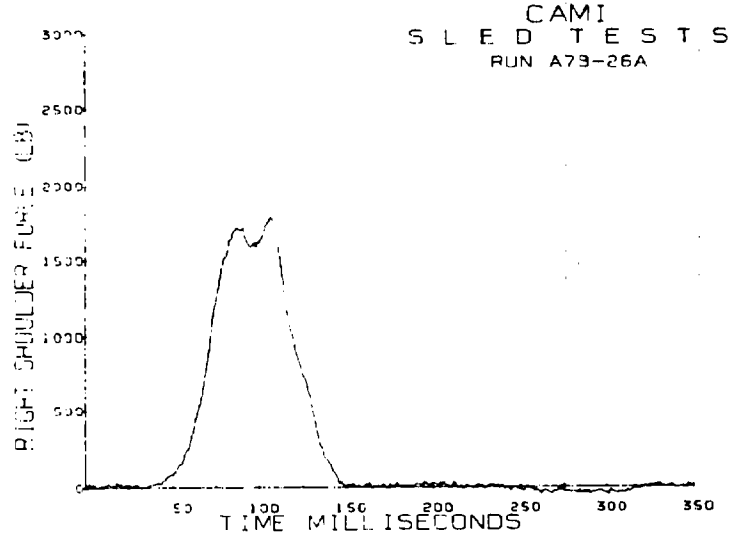

CAMI
SLED TESTS
RUN A79-26A
SLED X ACCELERATION (G)
TIME MILLISECONDS

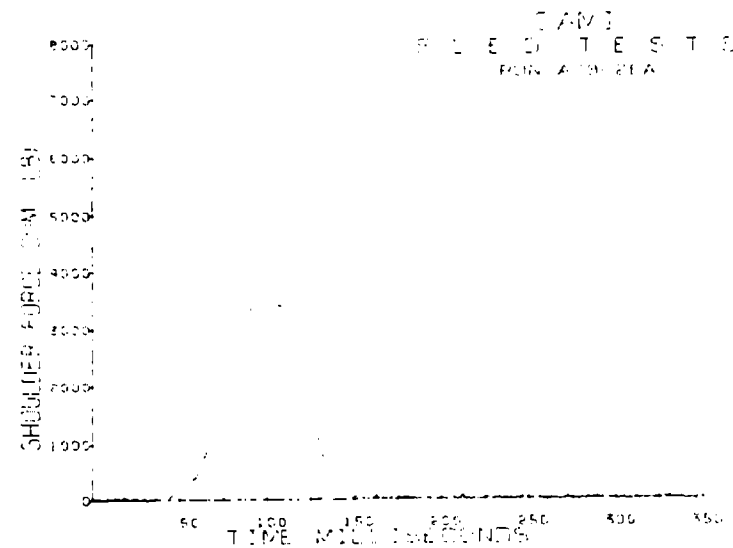

CAMI
SLED TESTS
RUN A79-26A
TIME MILLISECONDS

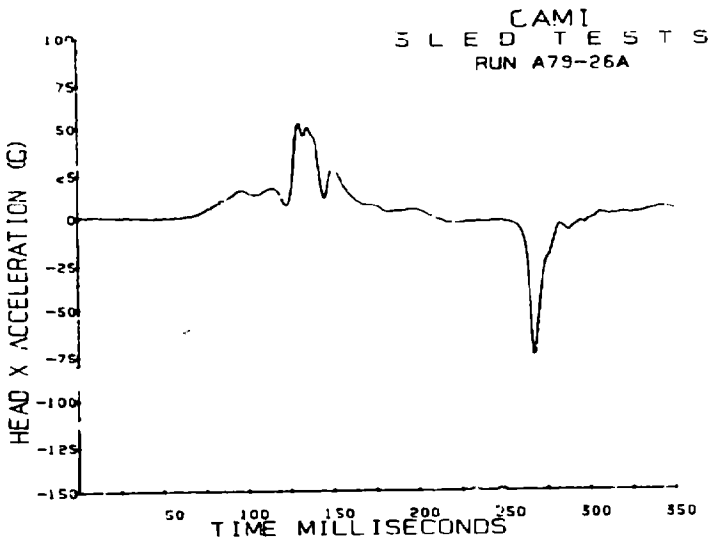

CAMI
SLED TESTS
RUN A79-26A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

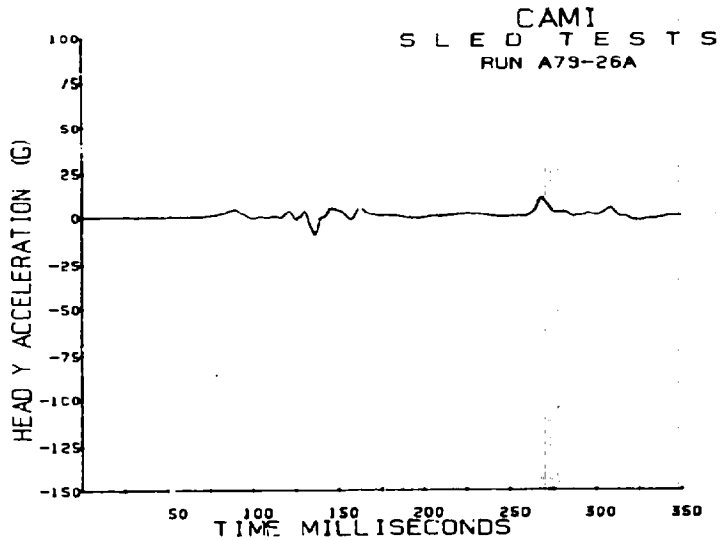

CAMI
SLED TESTS
RUN A79-26A
TIME MILLISECONDS

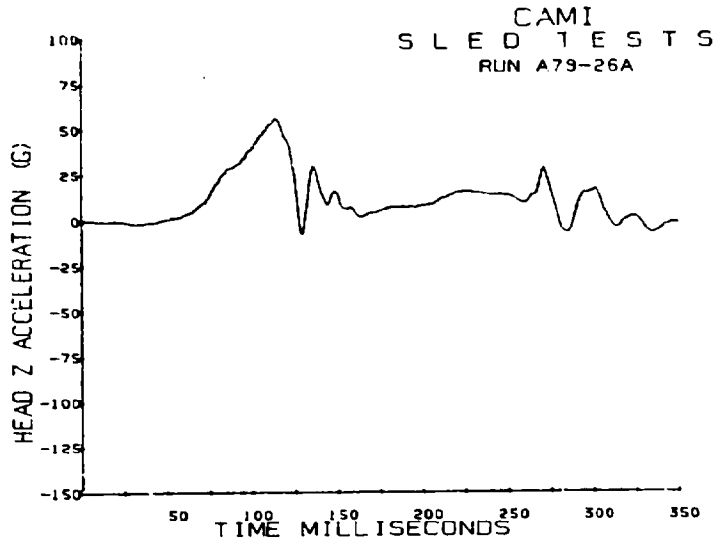

CAMI
S L E D T E S T S
RUN A79-21A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

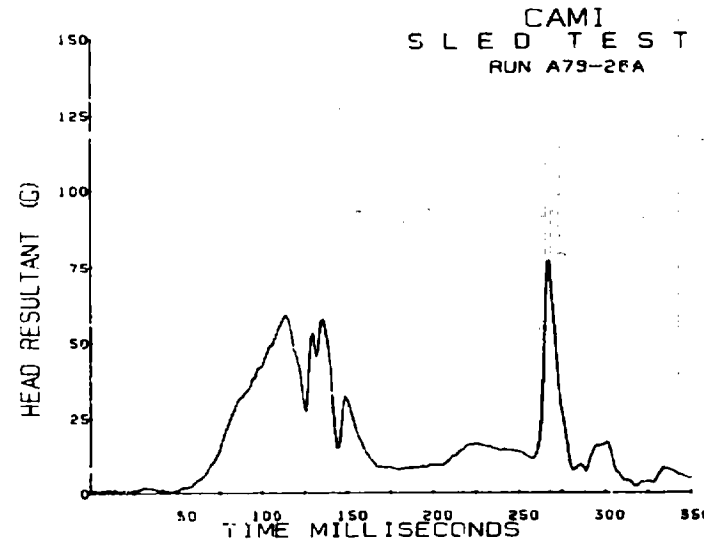

CAMI
S L E D T E S T S
RUN A79-26A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

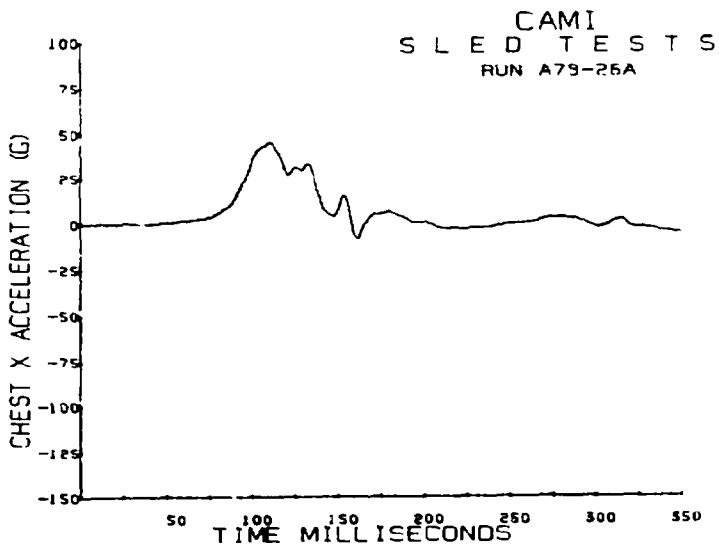

CAMI
S L E D T E S T S
RUN A79-21A
SHOULDER FORCE (LB)
TIME MILLISECONDS

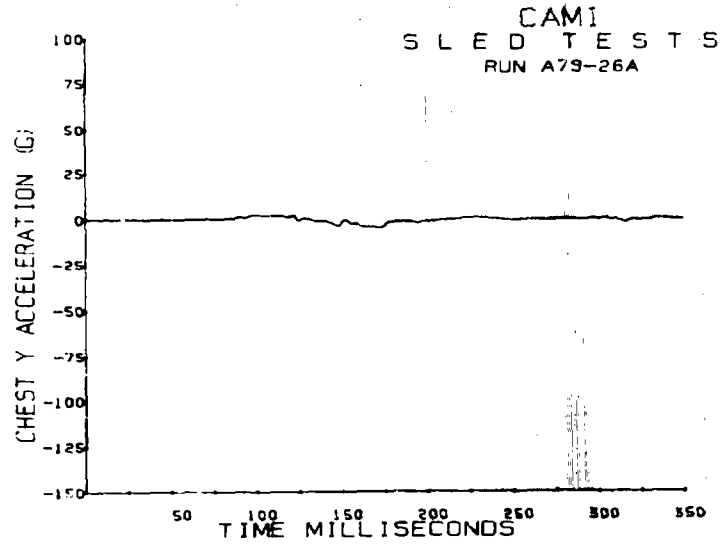

CAMI
SLED TESTS
RUN A79-26A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

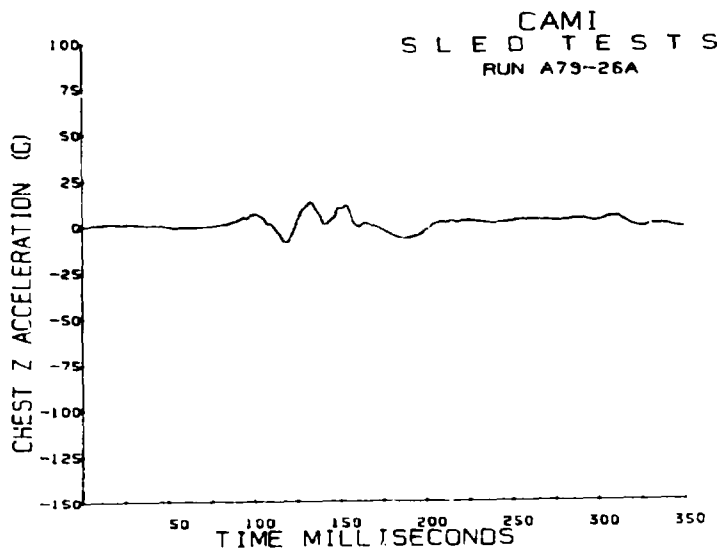

CAMI
SLED TESTS
RUN A79-26A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

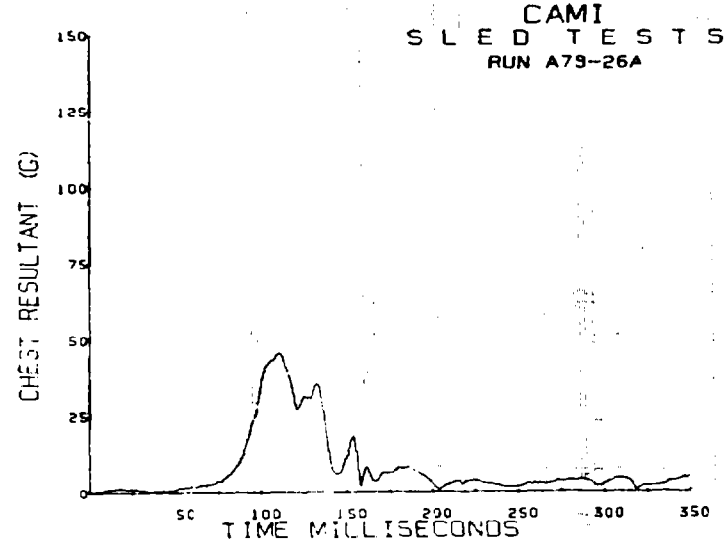

CAMI
SLED TESTS
RUN A79-26A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

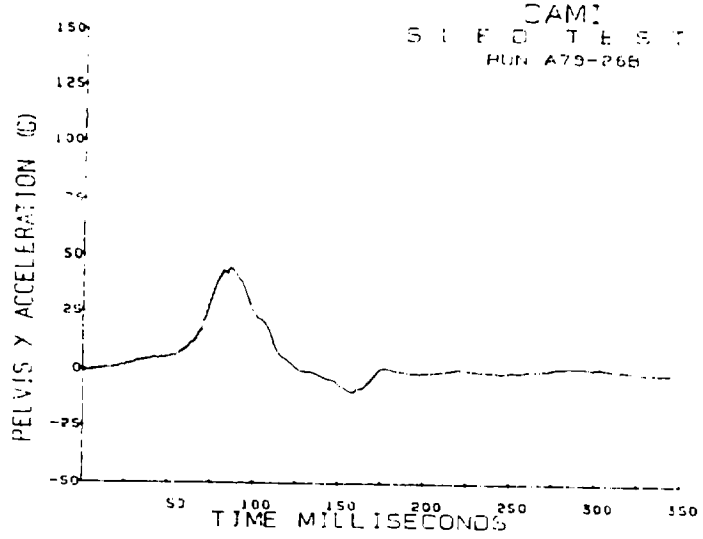

CAMI
SLED TESTS
RUN A79-26A
HEAD RESULTANT (G)
TIME MILLISECONDS

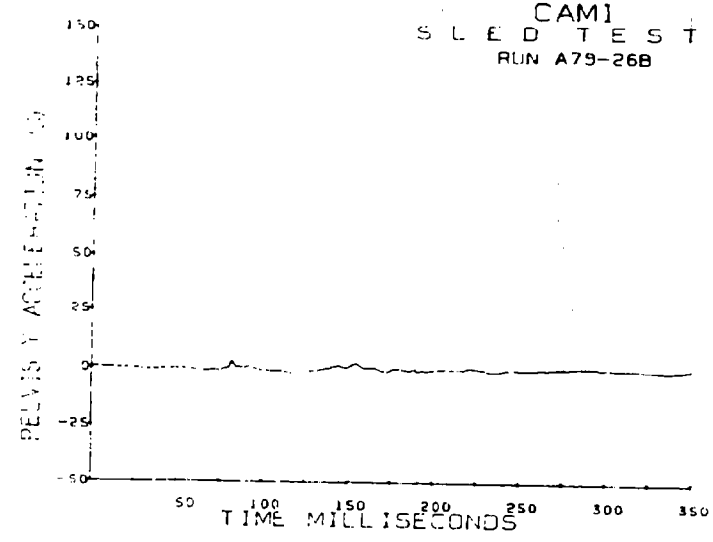

CAMI
SLED TESTS
RUN A79-26A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

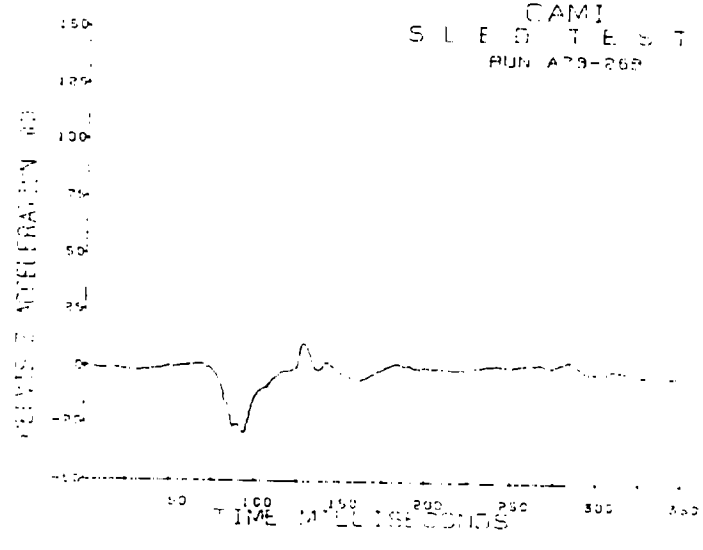

CAMI
SLED TESTS
RUN A79-26A
CHEST Y ACCELERATION (G)
TIME MILLISECONDS

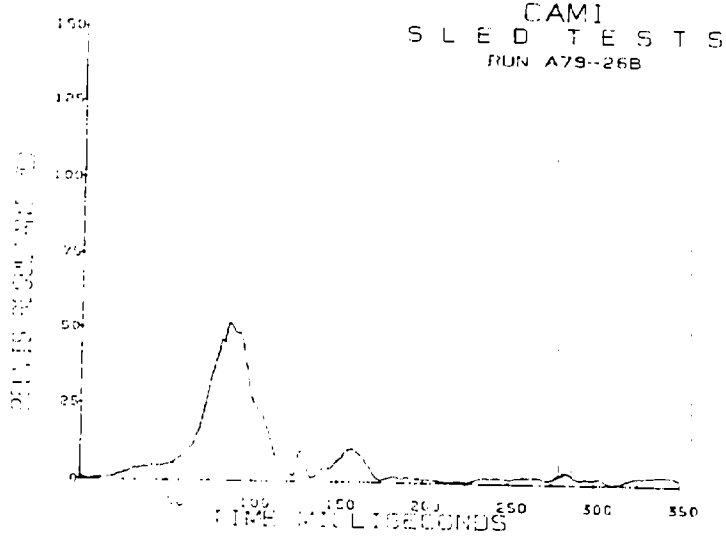

CAMI
SLED TESTS
RUN A79-26A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS

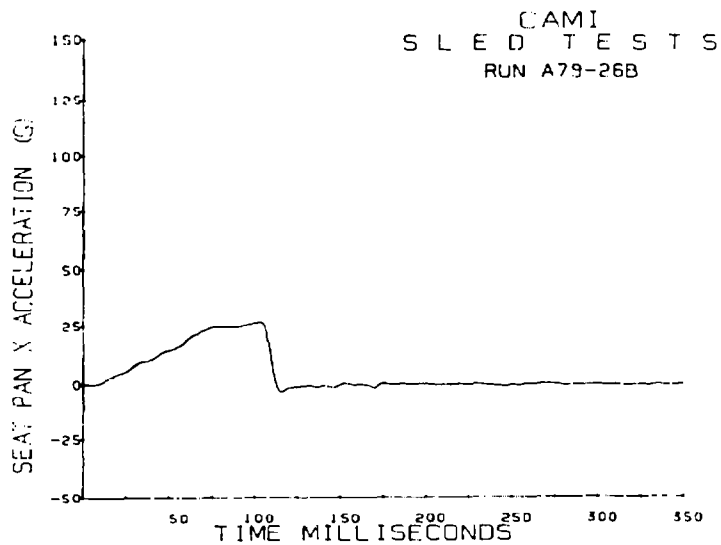

CAMI
SLED TESTS
RUN A79-26A
CHEST RESULTANT (G)
TIME MILLISECONDS

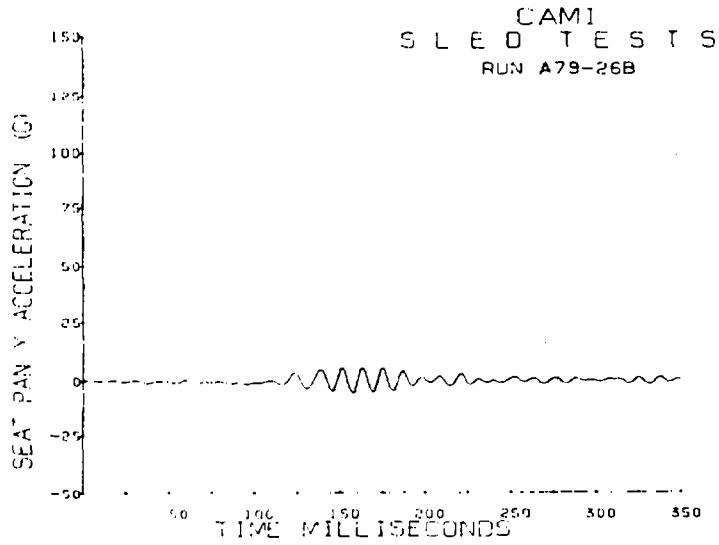

CAMI
SLED TESTS
RUN A79-26B
PELVIS X ACCELERATION (G)
150
125
100
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

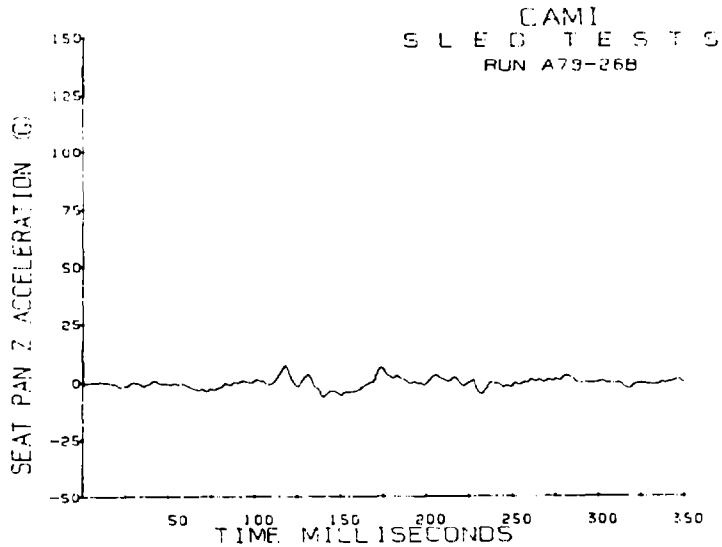

CAMI
SLED TESTS
RUN A79-26B
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

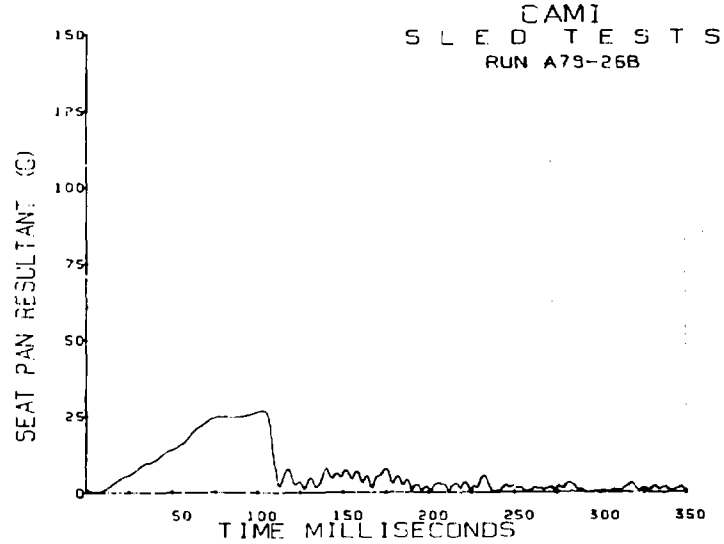

CAMI
SLED TESTS
RUN A79-26B
150
125
100
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

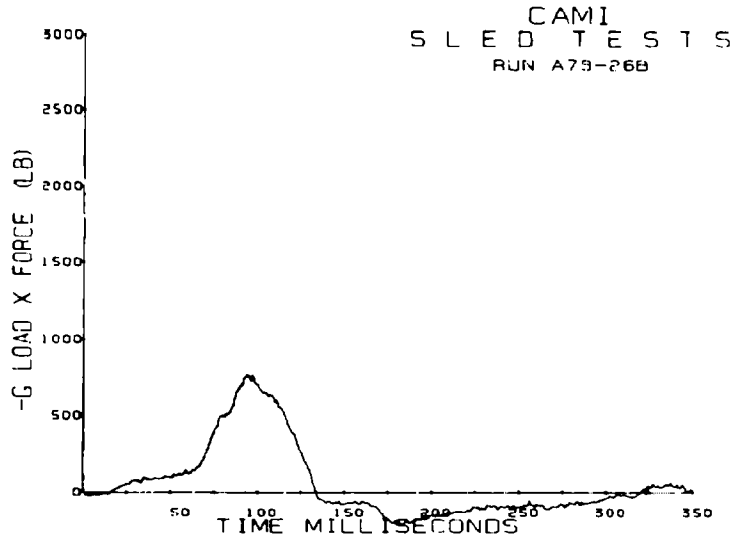

CAMI
SLED TESTS
RUN A79-26B
150
125
100
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

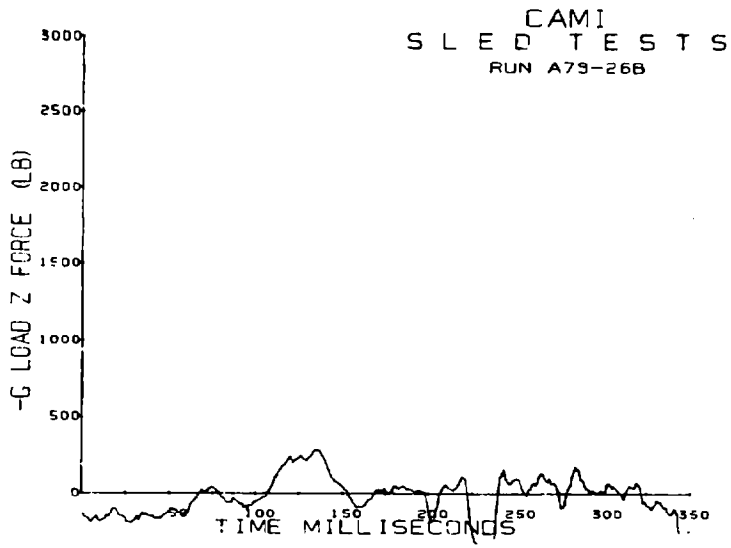

CAMI
SLED TESTS
RUN A79-26B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

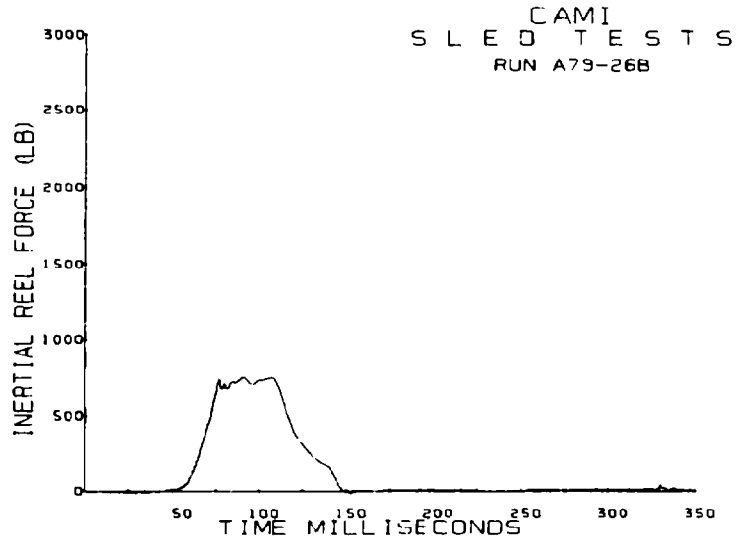

CAMI
SLED TESTS
RUN A79-26B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

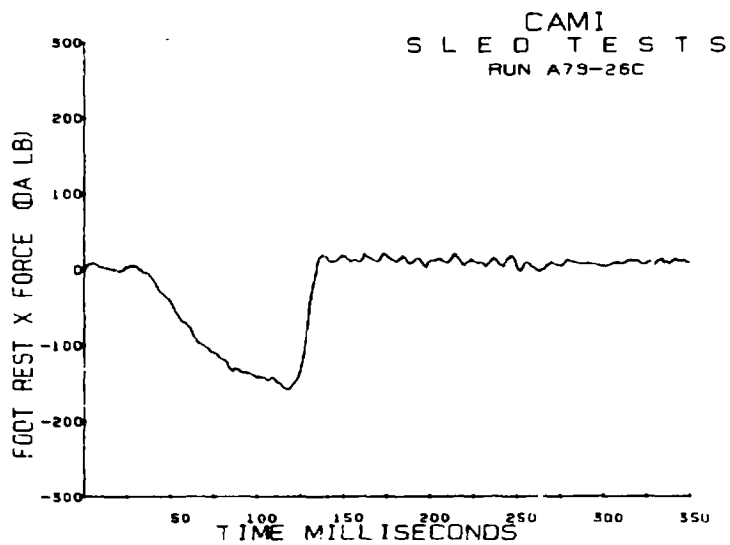

CAMI
SLED TESTS
RUN A79-26B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

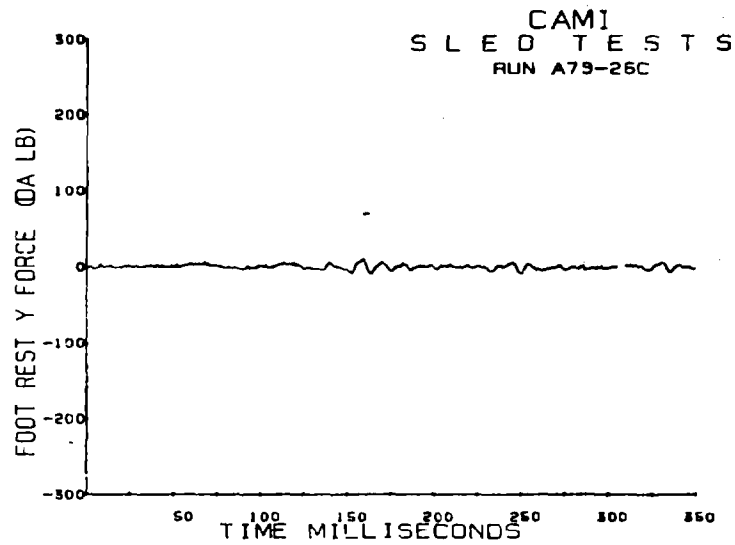

CAMI
SLED TESTS
RUN A79-26B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

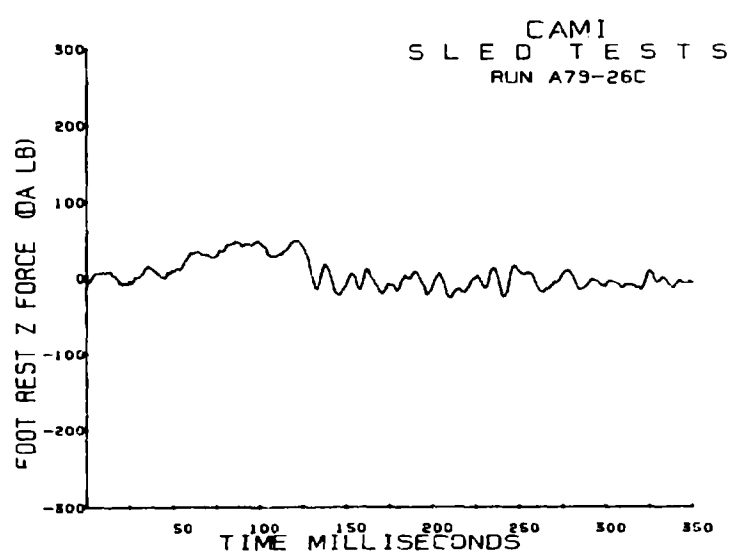

CAMI
S L E D T E S T S
RUN A79-26B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

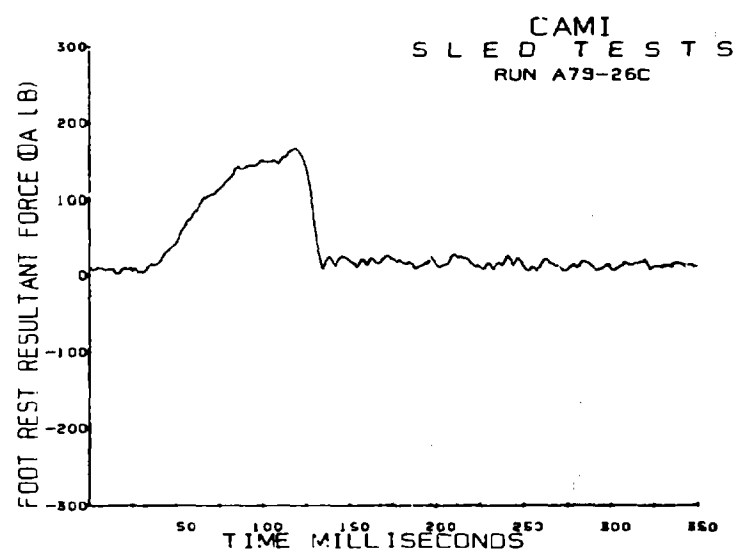

CAMI
S L E D T E S T S
RUN A79-26B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

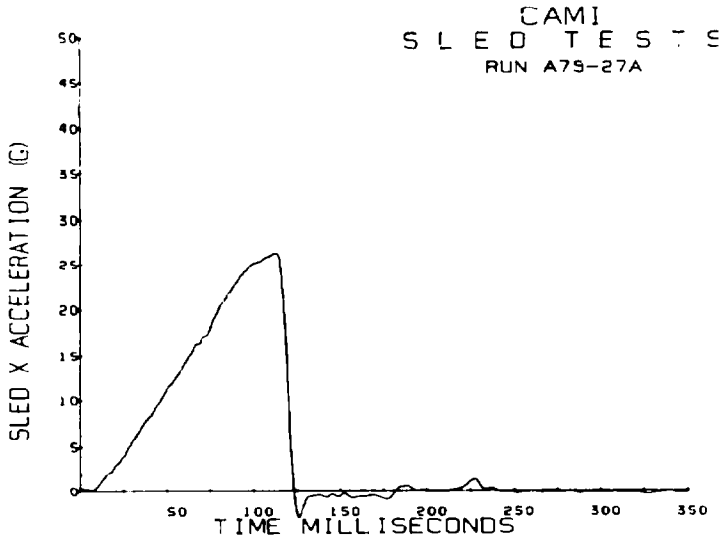

CAMI
S L E D T E S T S
RUN A79-26B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

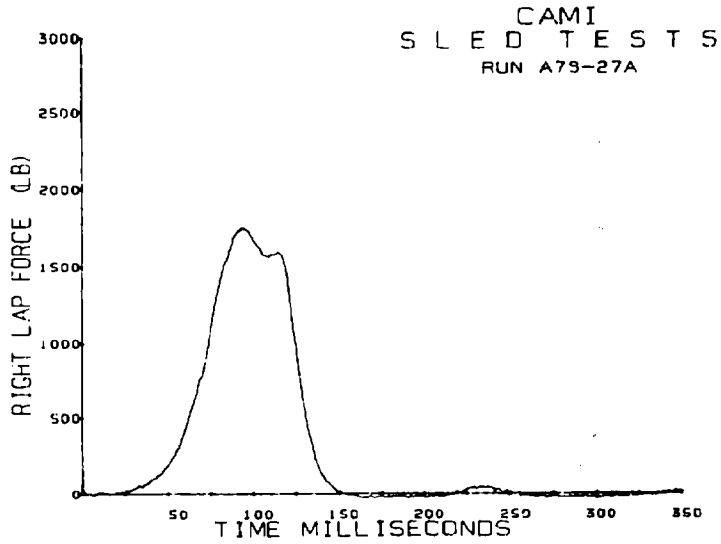

CAMI
S L E D T E S T S
RUN A79-26C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

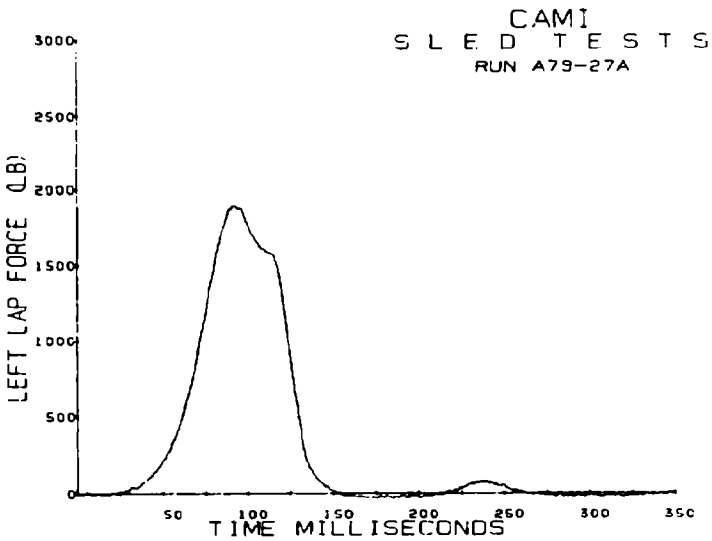

CAMI
S L E D T E S T S
RUN A79-26C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

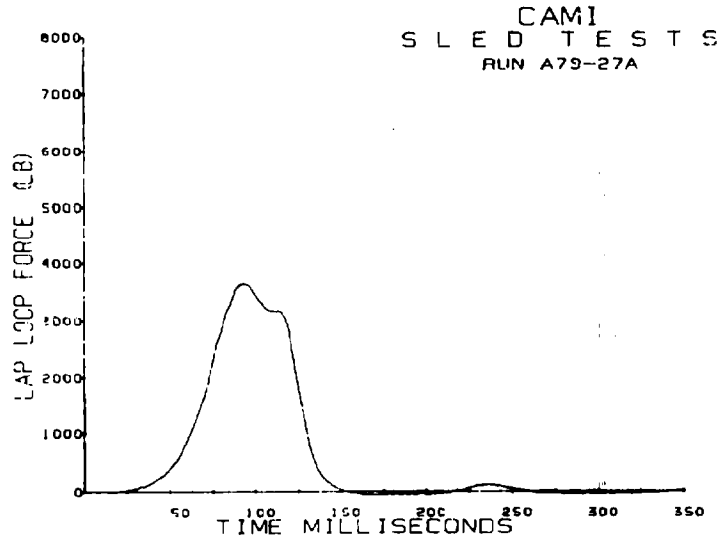

CAMI
S L E D T E S T S
RUN A79-26C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

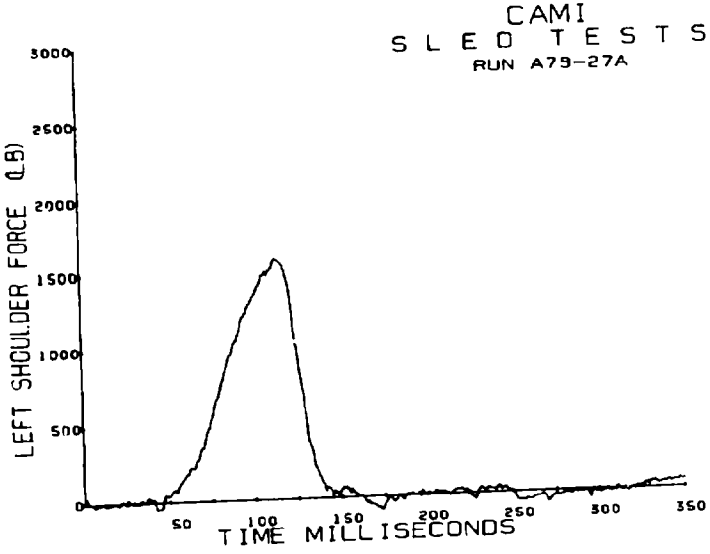

CAMI
S L E D T E S T S
RUN A79-26C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

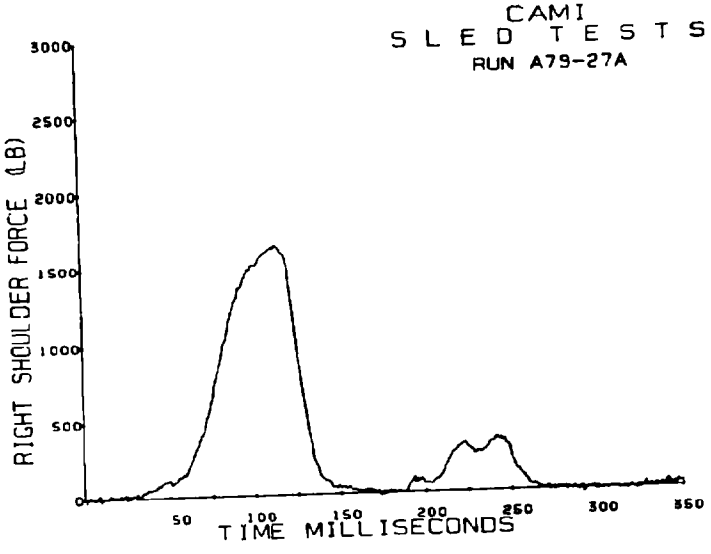

CAMI
SLED TESTS
RUN A79-27A
SLED X ACCELERATION (G)
TIME MILLISECONDS

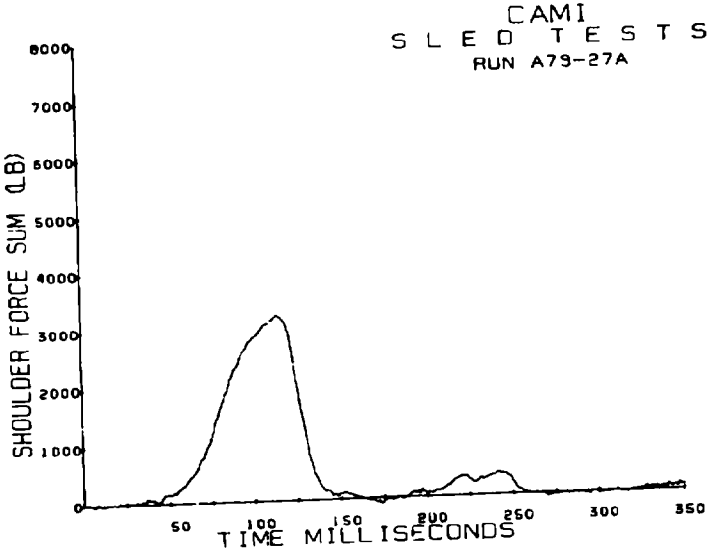

CAMI
SLED TESTS
RUN A79-27A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

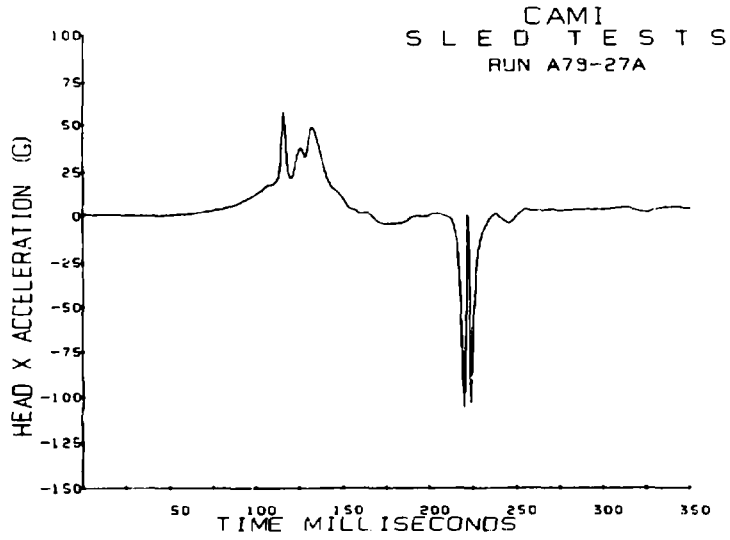

CAMI
SLED TESTS
RUN A79-27A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

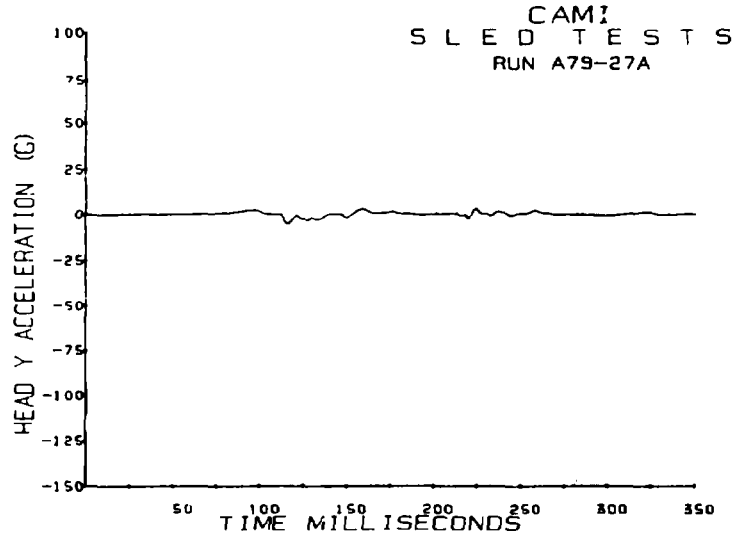

CAMI
SLED TESTS
RUN A79-27A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

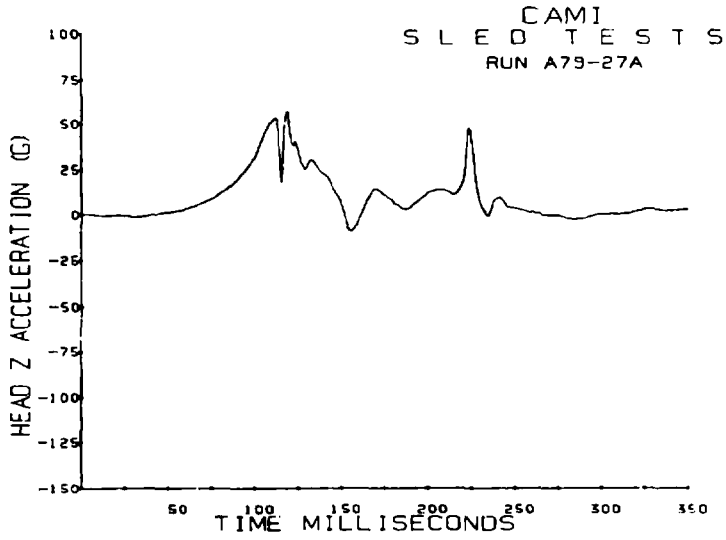

CAMI
SLED TESTS
RUN A79-27A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

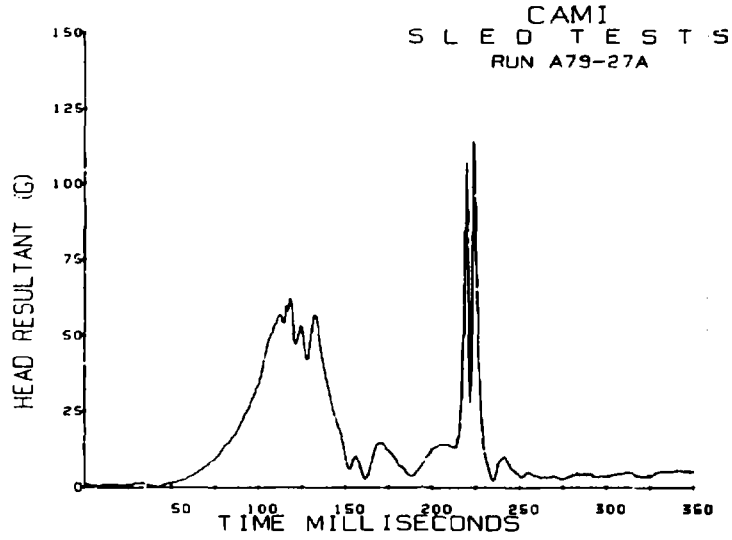

CAMI
SLED TESTS
RUN A79-27A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

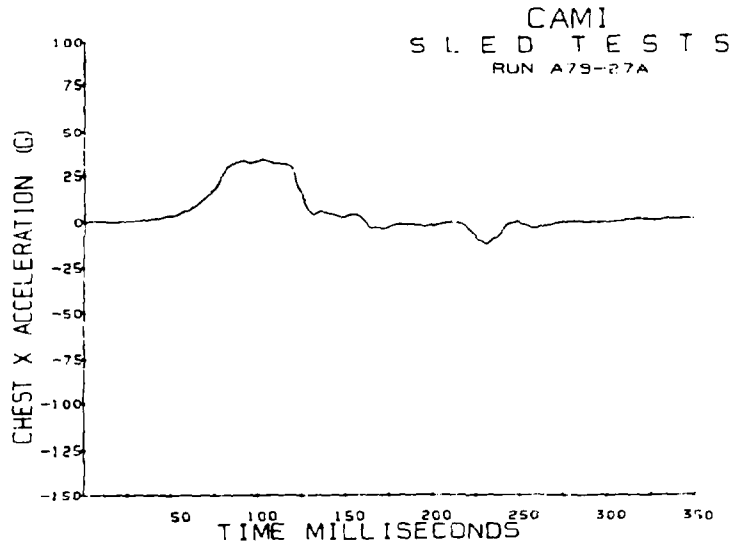

CAMI
SLED TESTS
RUN A79-27A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

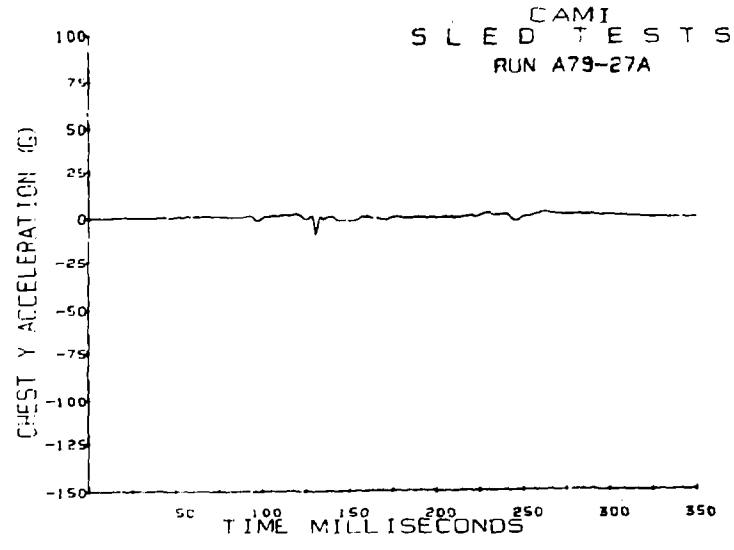

CAMI
SLED TESTS
RUN A79-27A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

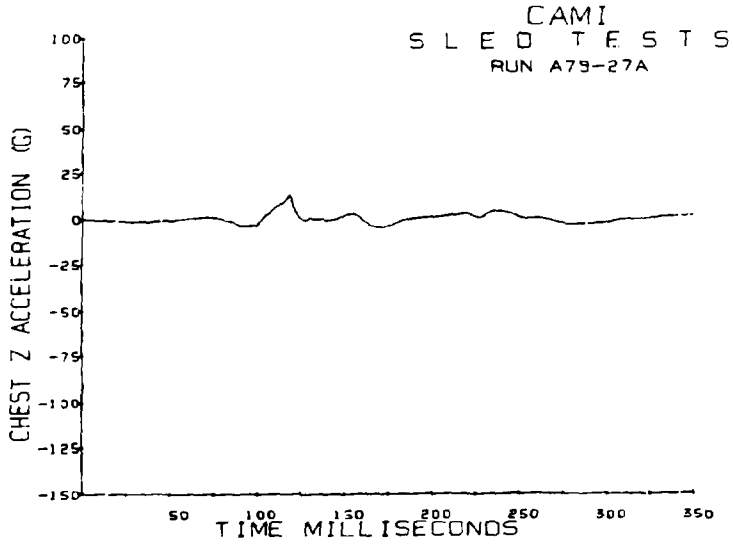

CAMI
SLED TESTS
RUN A79-27A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

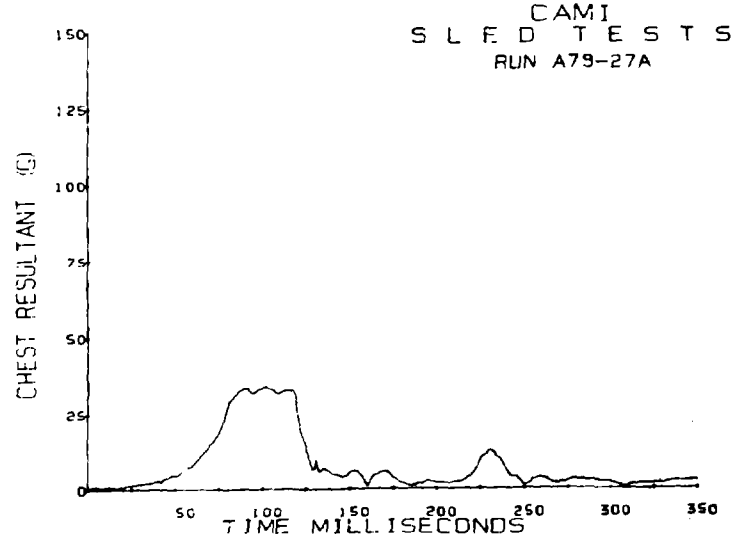

CAMI
SLED TESTS
RUN A79-27A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

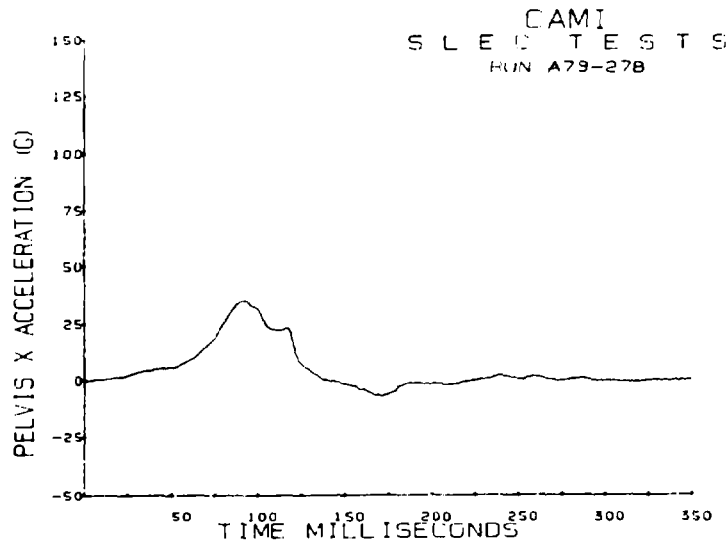

CAMI
SLED TESTS
RUN A79-27A
HEAD RESULTANT (G)
TIME MILLISECONDS

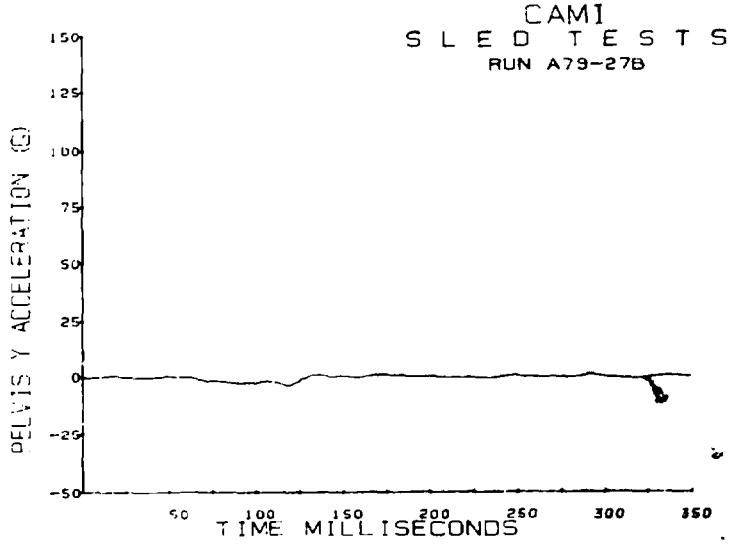

CAMI
SLED TESTS
RUN A79-27A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

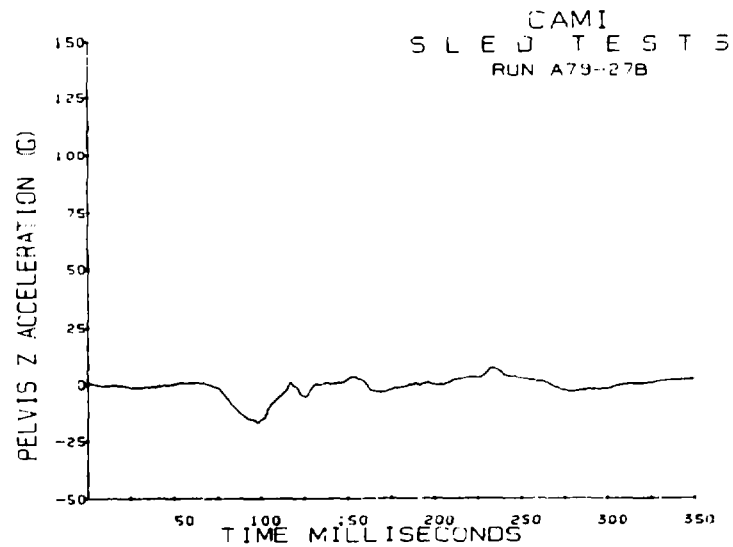

CAMI
SLED TESTS
RUN A79-27A
CHEST Y ACCELERATION (G)
100
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

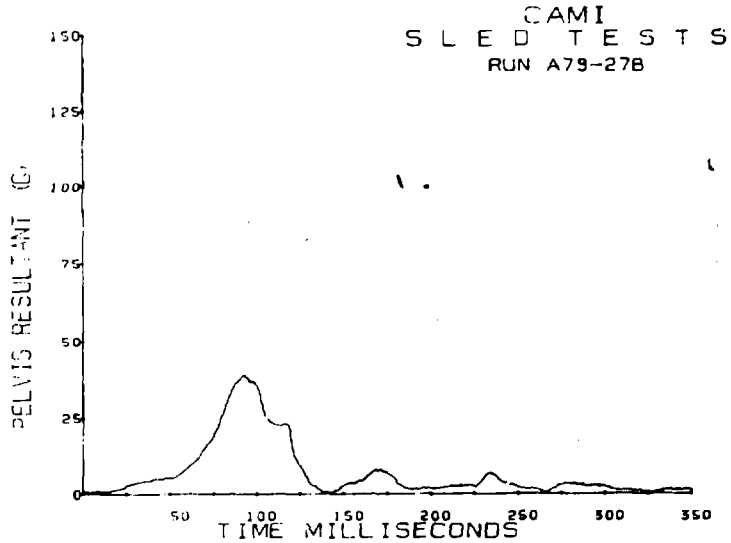

CAMI
SLED TESTS
RUN A79-27A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

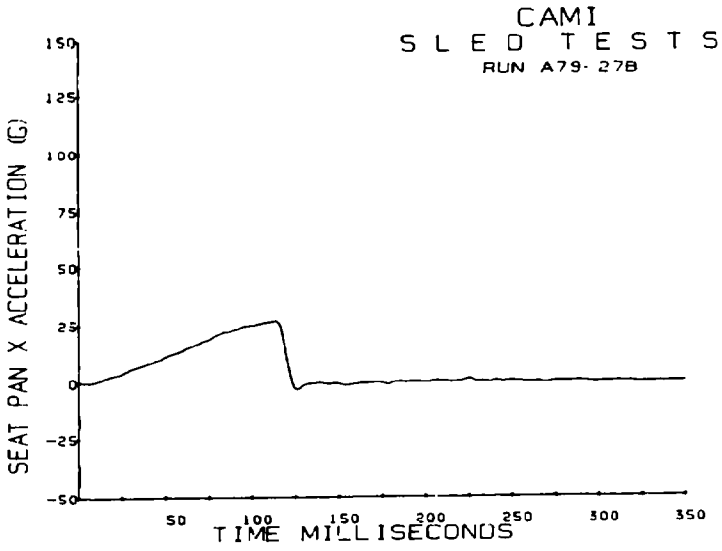

CAMI
SLED TESTS
RUN A79-27A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

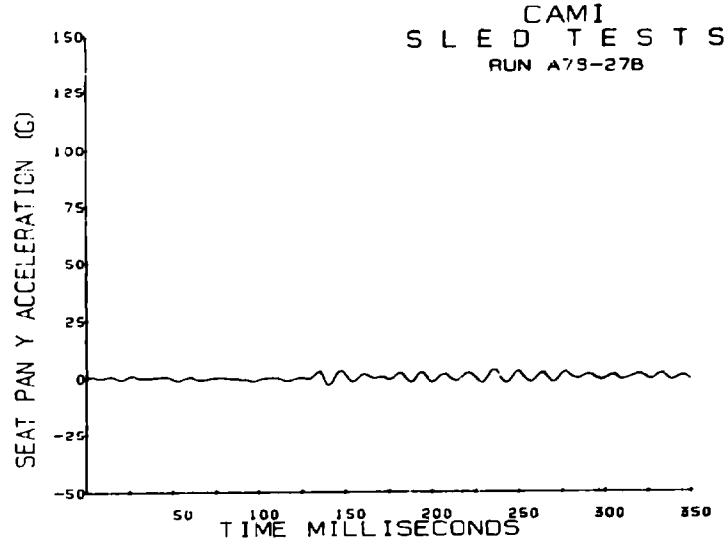

CAMI
SLED TESTS
RUN A79-27B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

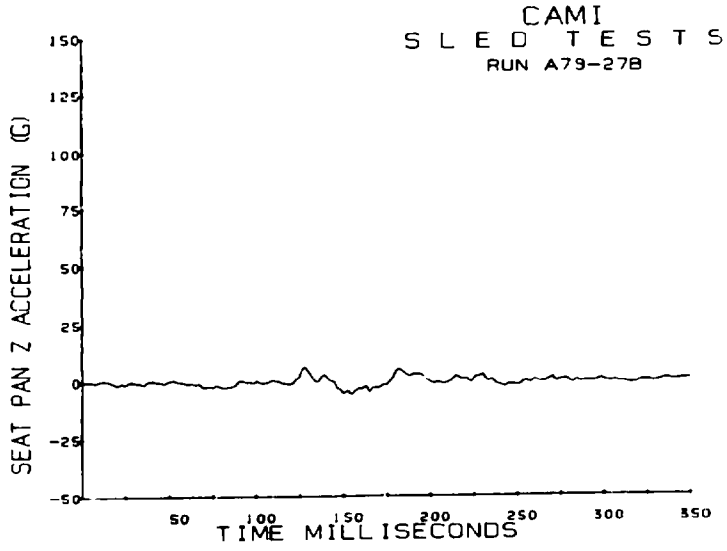

CAMI
SLED TESTS
RUN A79-27B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

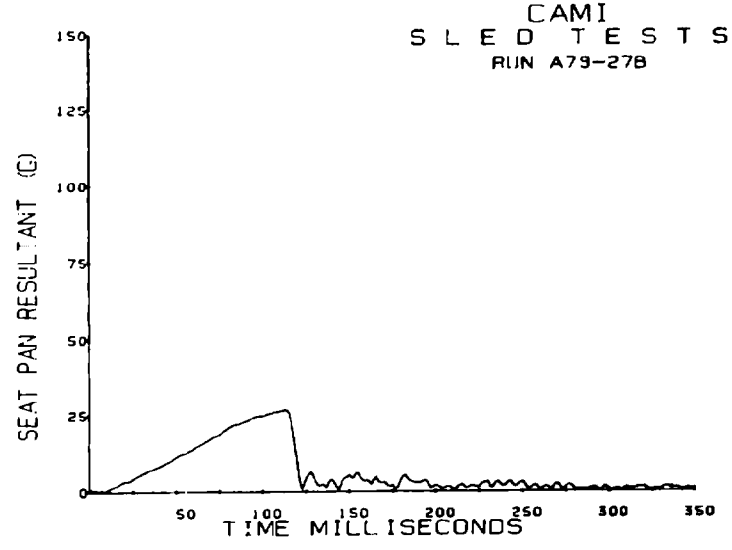

CAMI
SLED TESTS
RUN A79-27B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

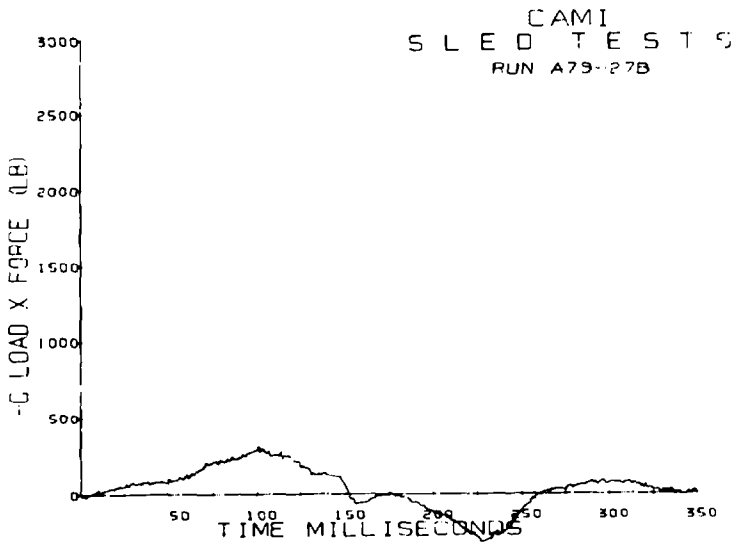

CAMI
SLED TESTS
RUN A79-27B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

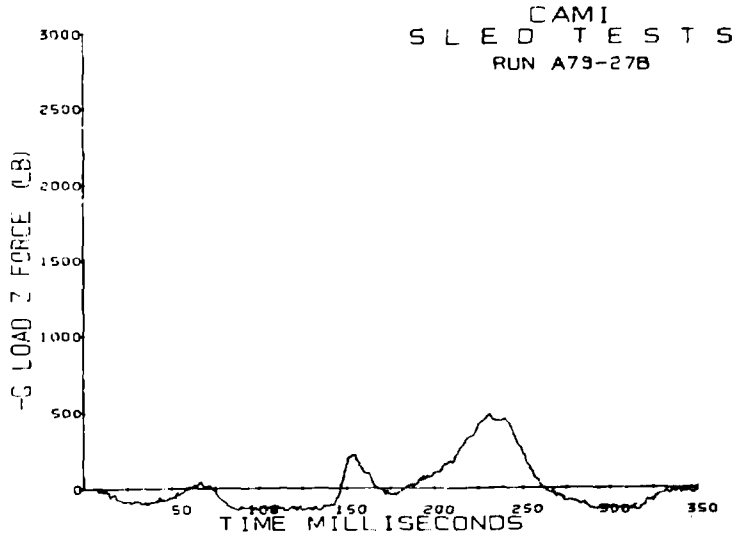

CAMI
SLED TESTS
RUN A79-27B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

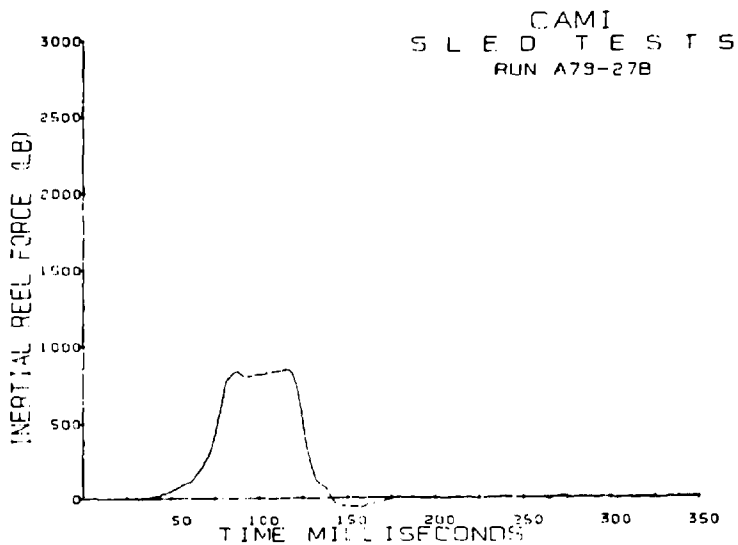

CAMI
SLED TESTS
RUN A79-27B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

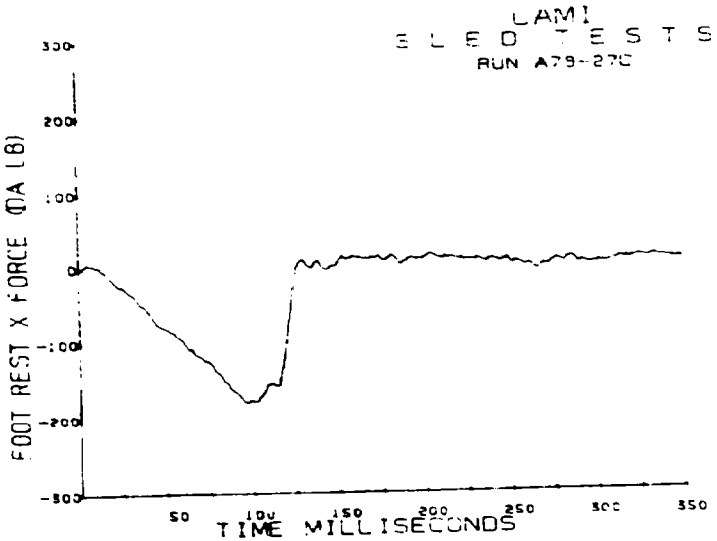

CAMI
SLED TESTS
RUN A79-27B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

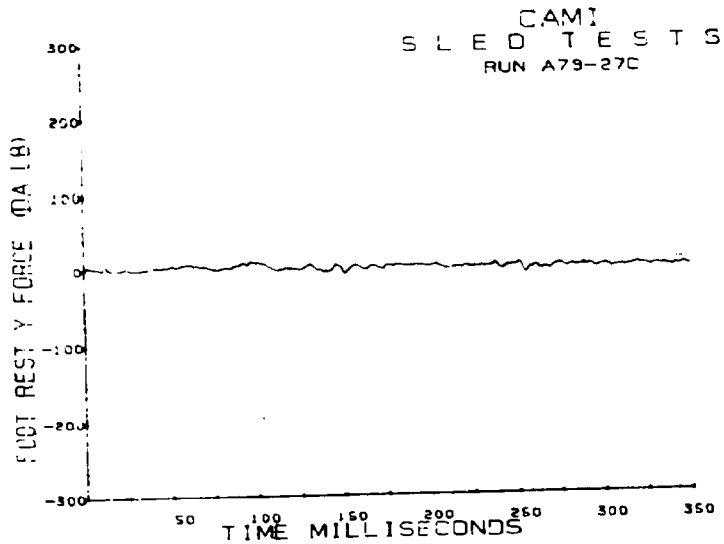

CAMI
SLED TESTS
RUN A79-27B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

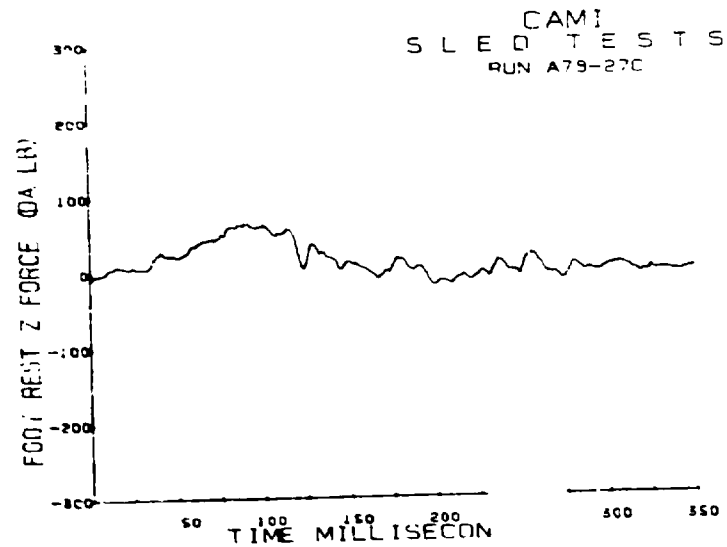

CAMI
SLED TESTS
RUN A79-27B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

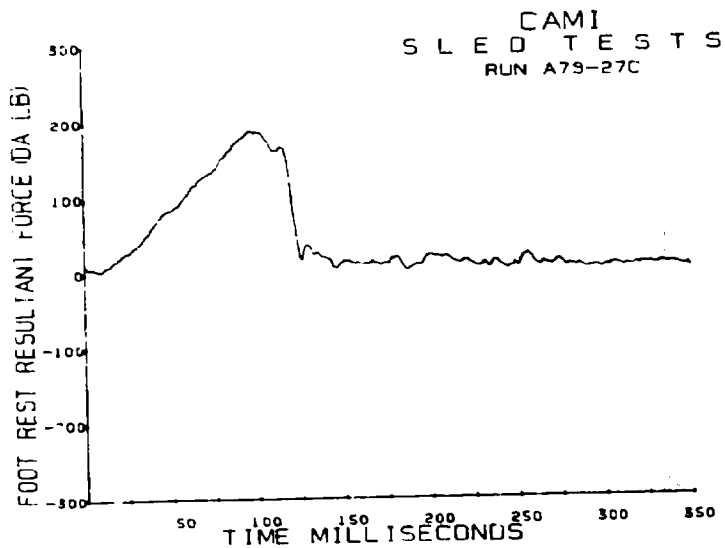

CAMI
SLED TESTS
RUN A79-27B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
150
200
250
350
TIME MILLISECONDS

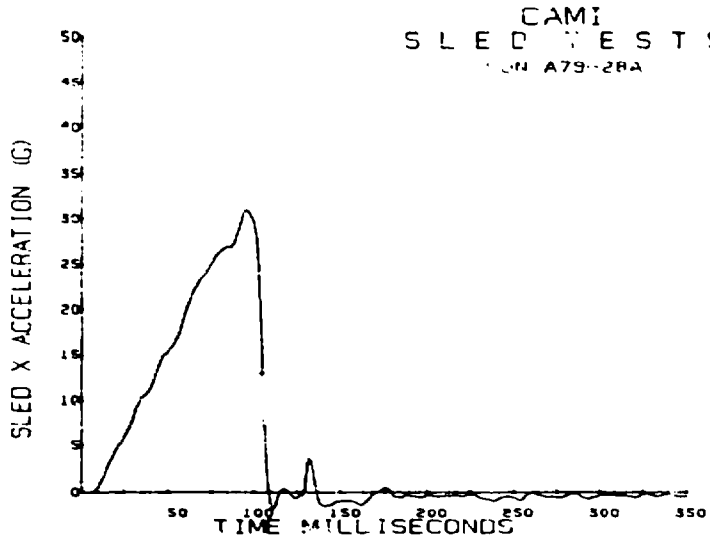

CAMI
SLED TESTS
RUN A79-27B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

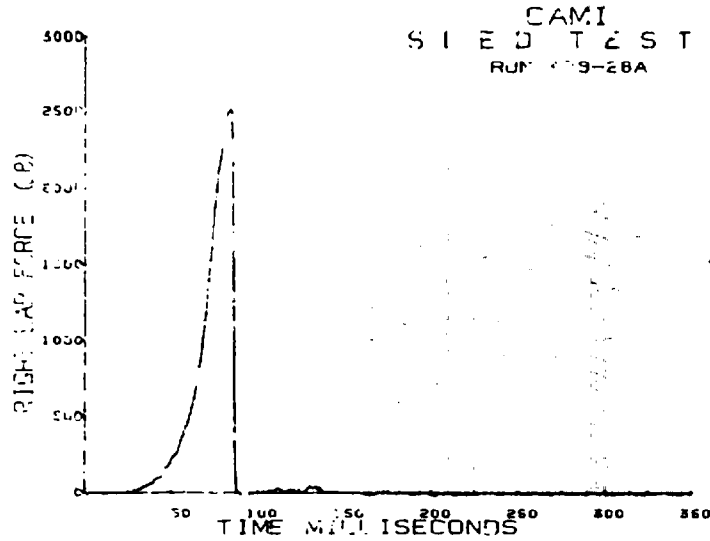

CAMI
SLED TESTS
RUN A79-27C
FOOT REST X FORCE (DA LB)
TIME MILLISECONDS

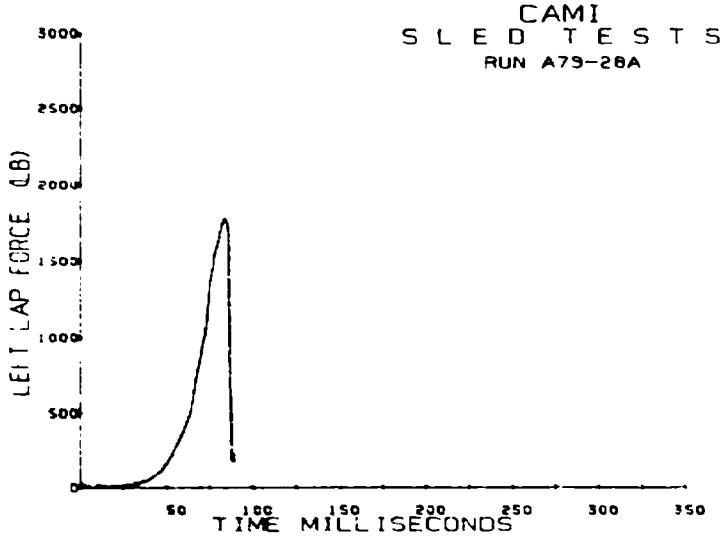

CAMI
SLED TESTS
RUN A79-27C
FOOT REST Y FORCE (DA LB)
TIME MILLISECONDS

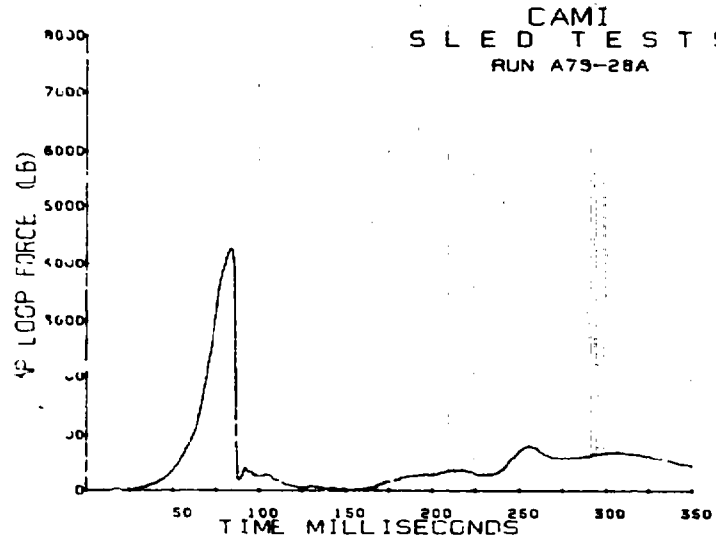

CAMI
SLED TESTS
RUN A79-27C
FOOT REST Z FORCE (DA LB)
TIME MILLISECON

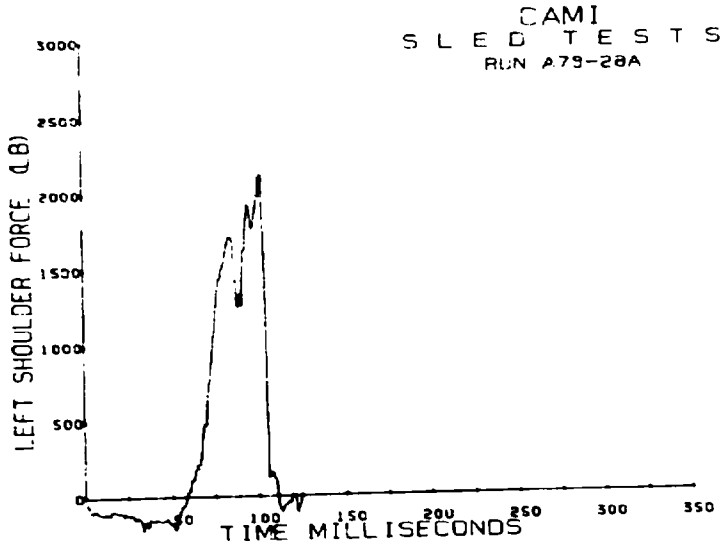

CAMI
SLED TESTS
RUN A79-27C
FOOT REST RESULTANT FORCE (DA LB)
TIME MILLISECONDS

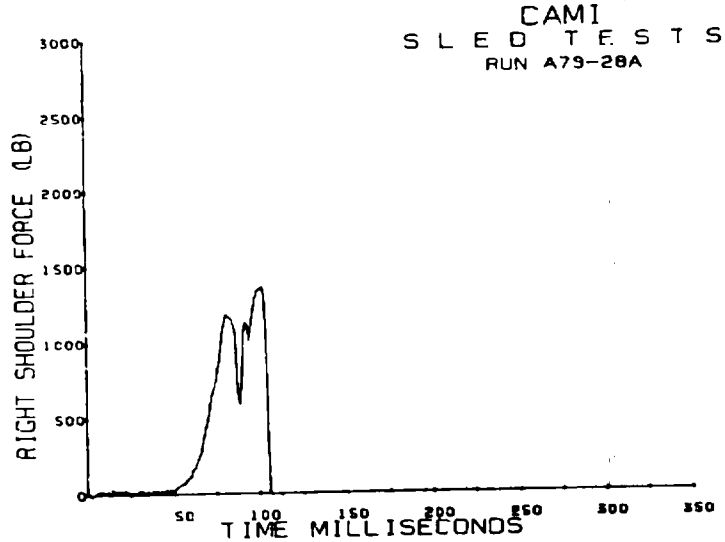

CAMI
SLED TESTS
RUN A79-28A
SLED X ACCELERATION (G)
TIME MILLISECONDS

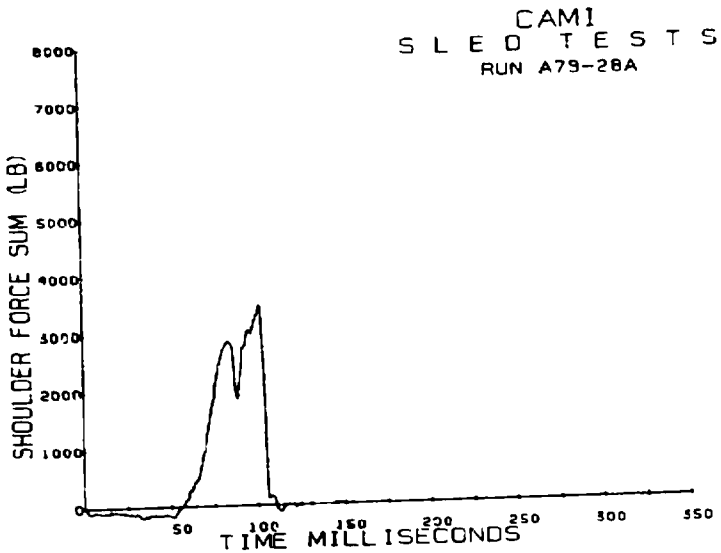

CAMI
SLED TESTS
TIME MILLISECONDS

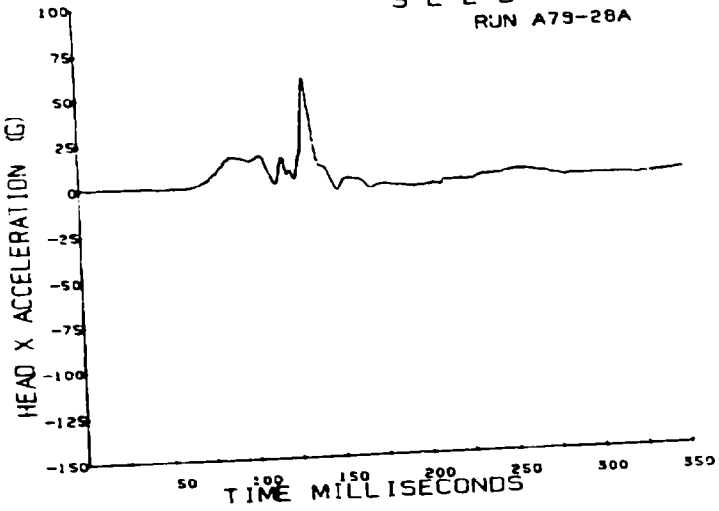

CAMI
SLED TESTS
RUN A79-28A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

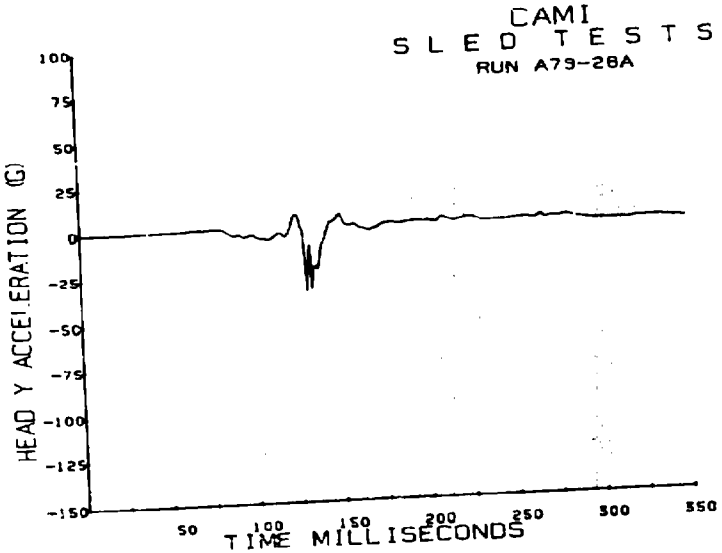

CAMI
SLED TESTS
RUN A79-28A
TIME MILLISECONDS

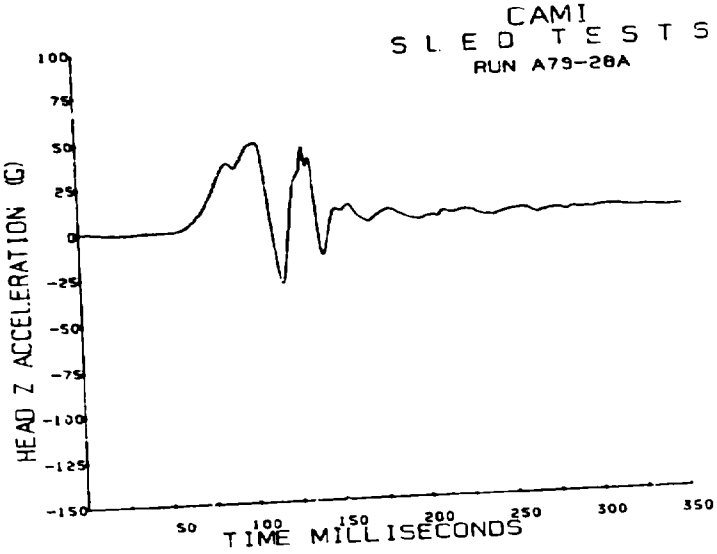

CAMI
SLED TESTS
RUN A79-28A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

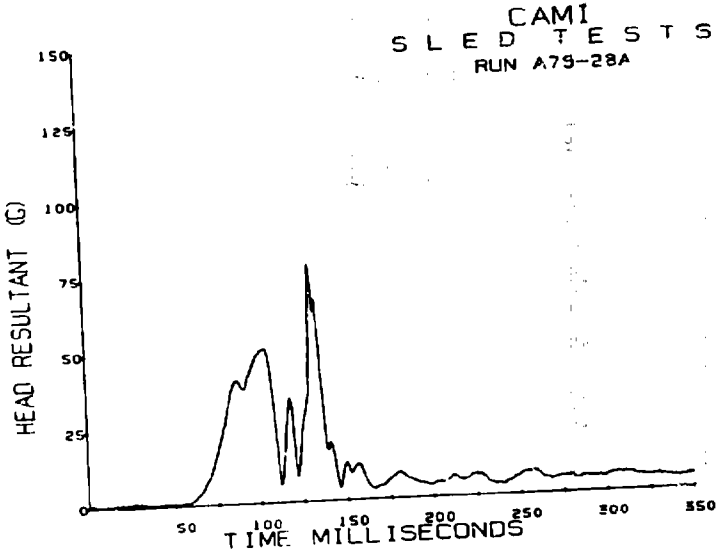

CAMI
SLED TESTS
RUN A79-28A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

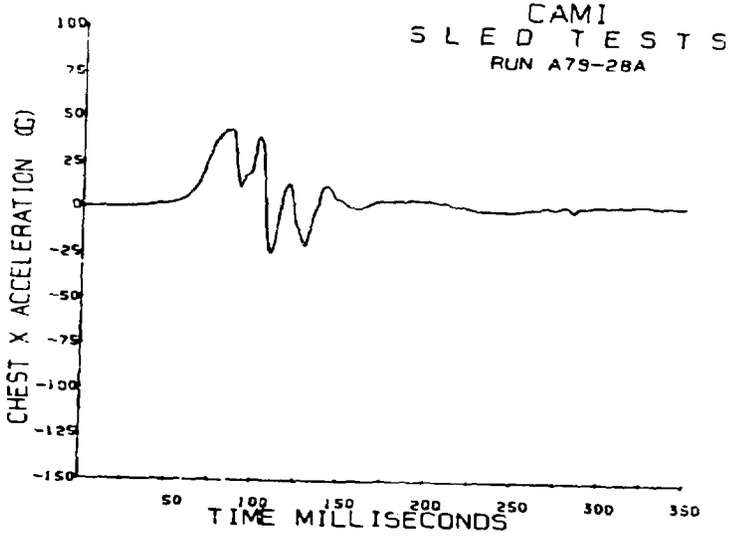

CAMI
SLED TESTS
RUN A79-28A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

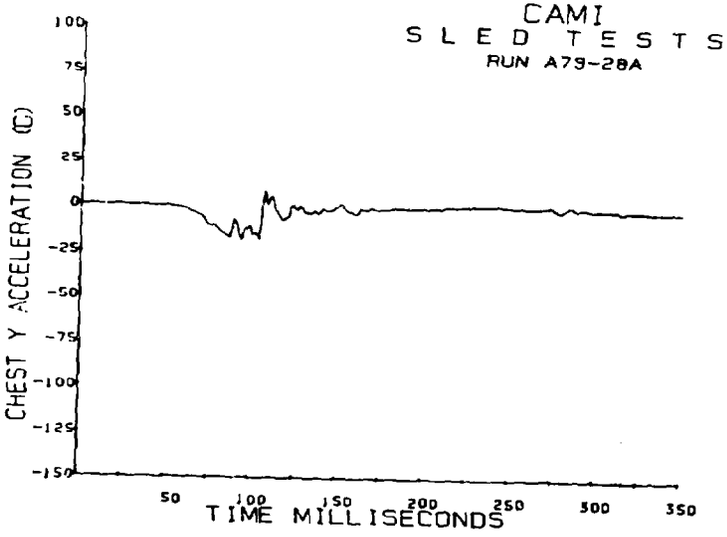

CAMI
SLED TESTS
RUN A79-28A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

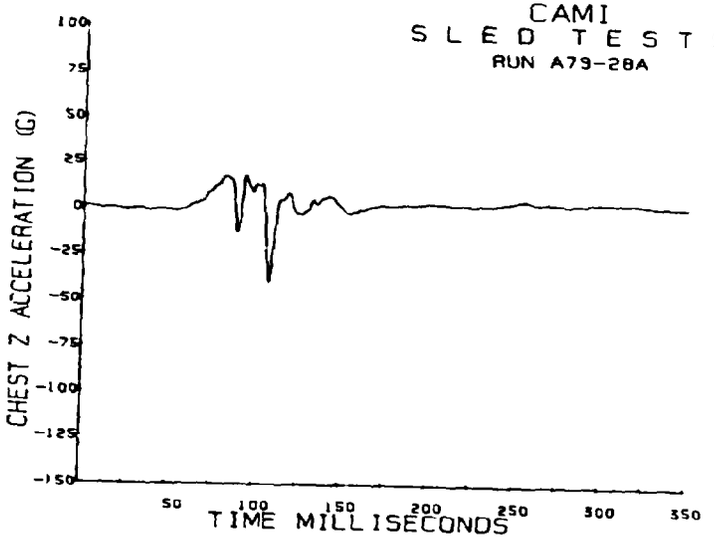

CAMI
SLED TESTS
RUN A79-28A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

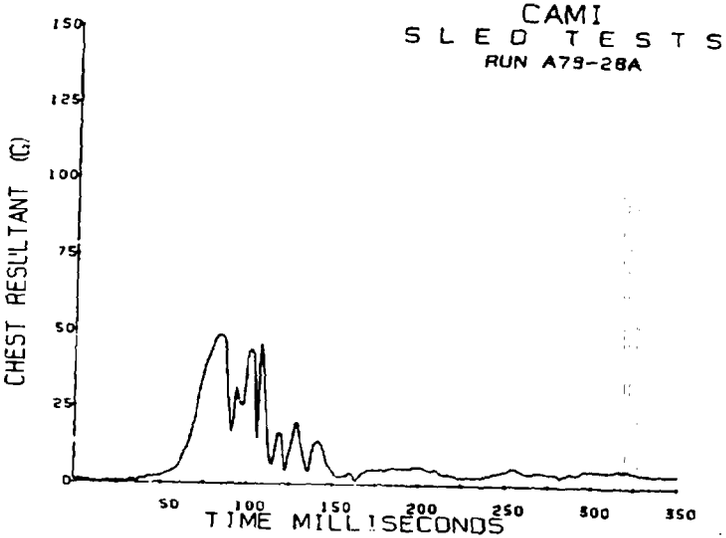

CAMI
SLED TESTS
RUN A79-28A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

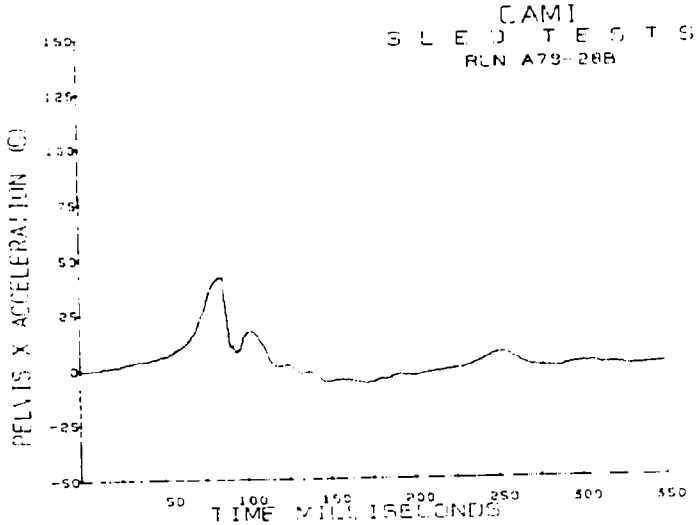

CAMI
SLED TESTS
RUN A79-28A
HEAD RESULTANT (G)
TIME MILLISECONDS

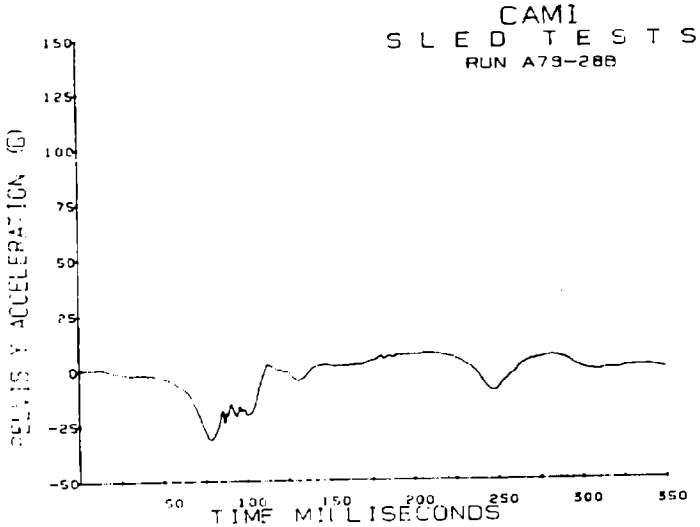

CAMI
SLED TESTS
RUN A79-28A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

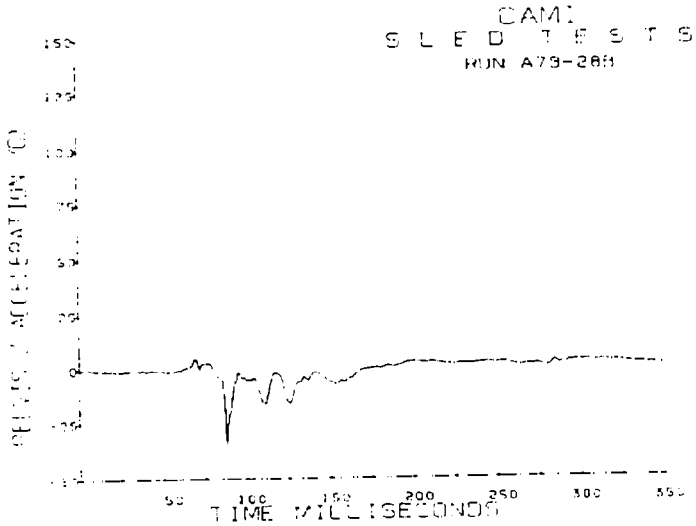

CAMI
SLED TESTS
RUN A79-28A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

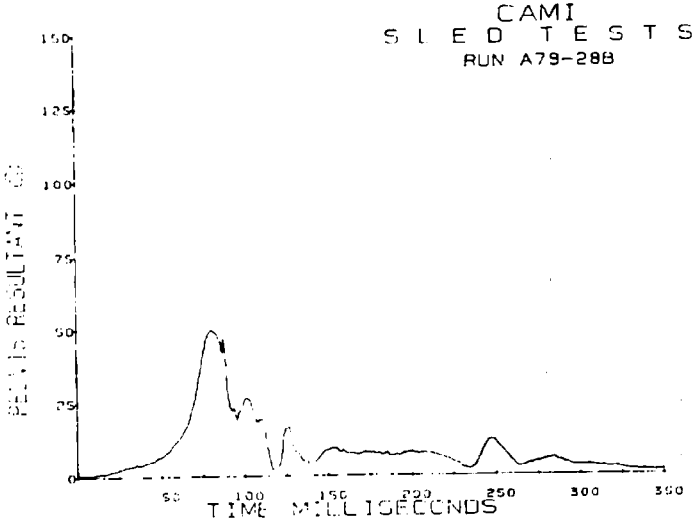

CAMI
SLED TESTS
RUN A79-28A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

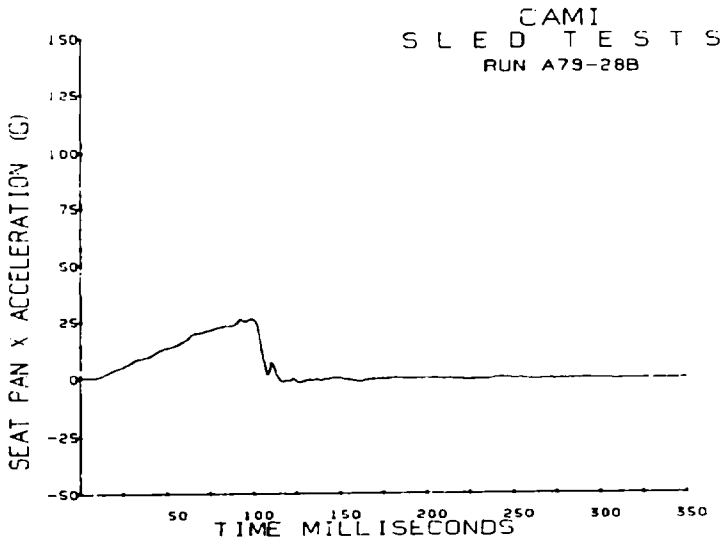

CAMI
SLED TESTS
RUN A79-28A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

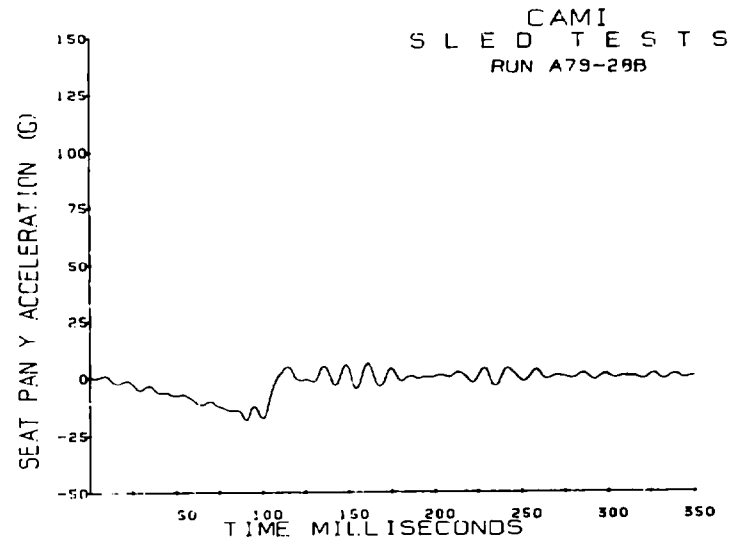

CAMI
SLED TESTS
RUN A79-28B
PELVIS X ACCELERATION (G)
TIME MILLISECONDS

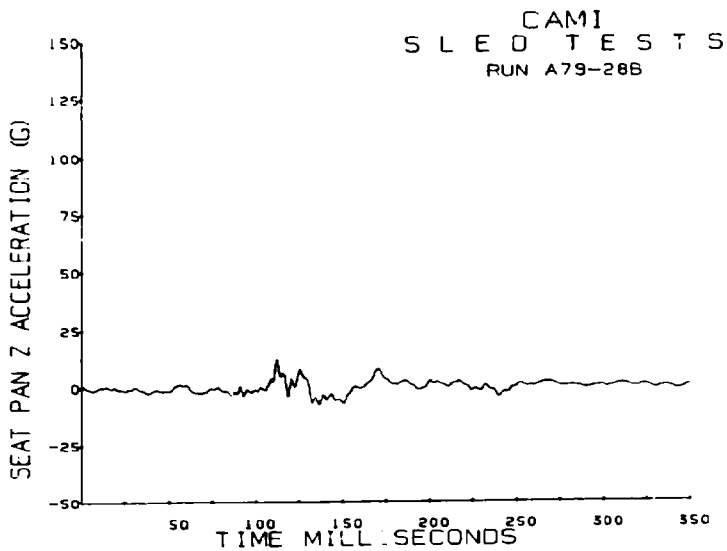

CAMI
SLED TESTS
RUN A79-28B
PELVIS Y ACCELERATION (G)
TIME MILLISECONDS

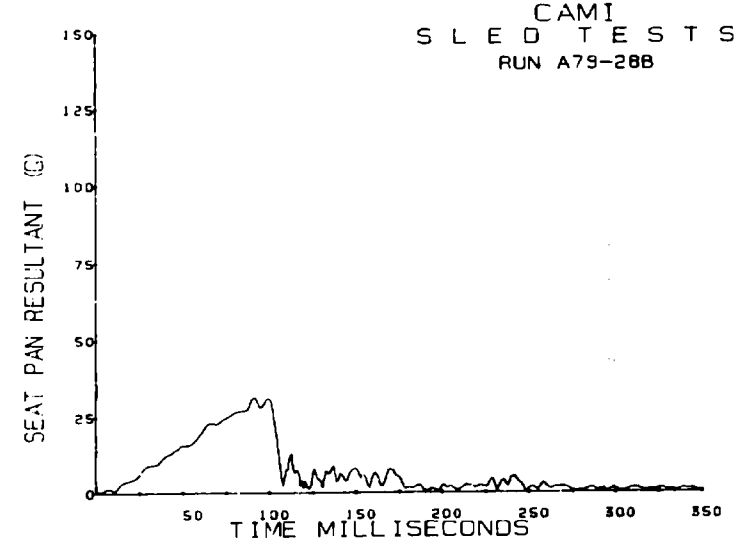

CAMI
SLED TESTS
RUN A79-28B
TIME MILLISECONDS

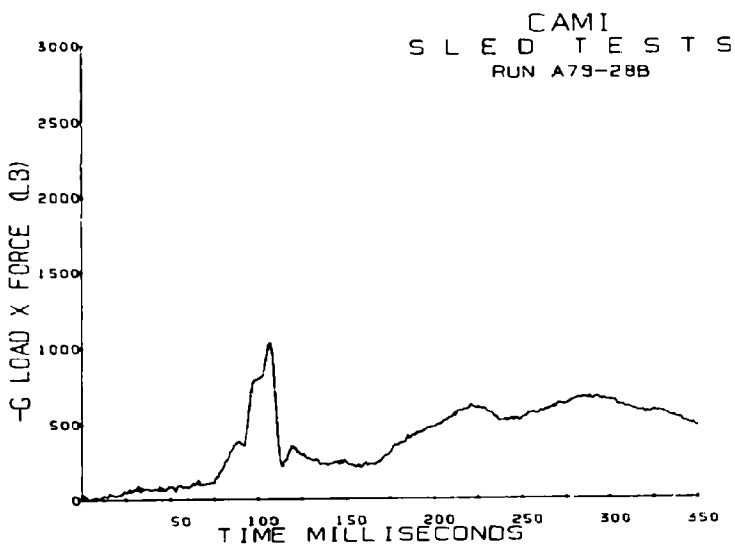

CAMI
SLED TESTS
RUN A79-28B
TIME MILLISECONDS

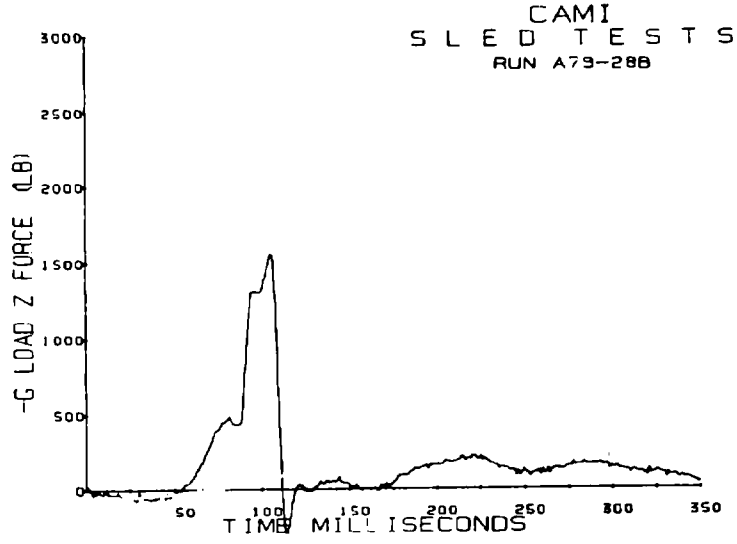

CAMI
SLED TESTS
RUN A79-28B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

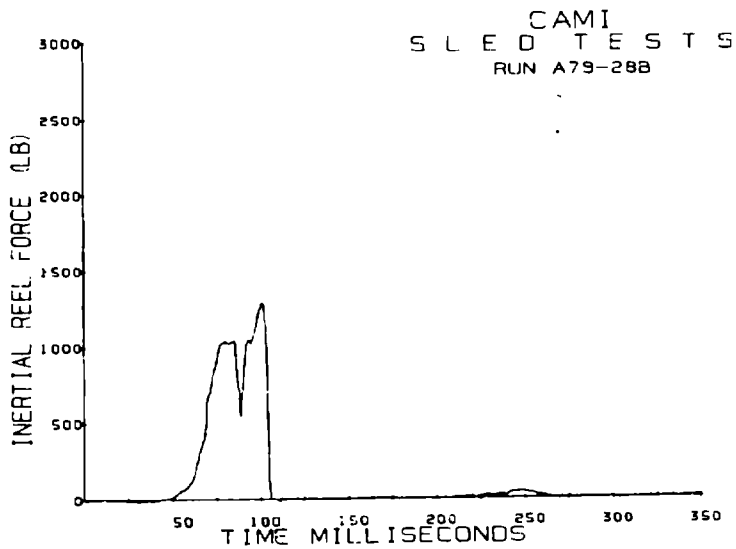

CAMI
SLED TESTS
RUN A79-28B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

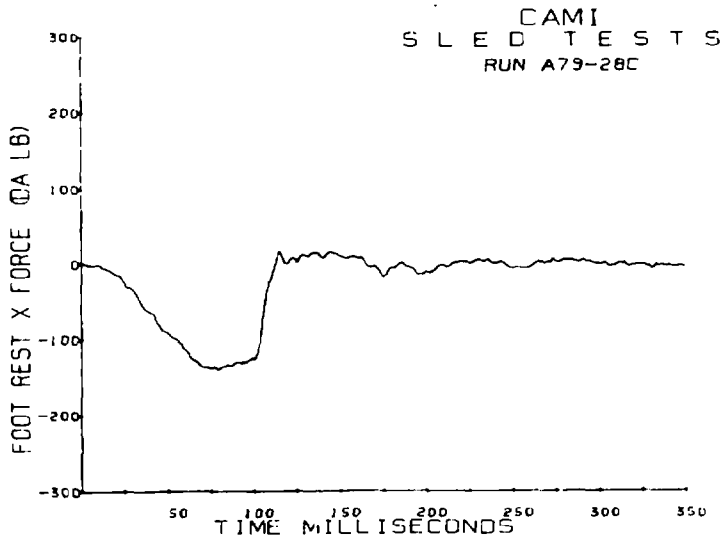

CAMI
SLED TESTS
RUN A79-28B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

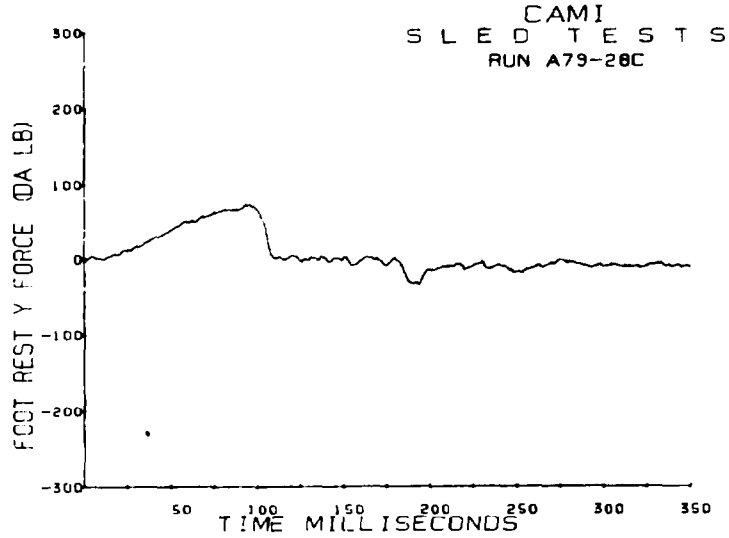

CAMI
SLED TESTS
RUN A79-28B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

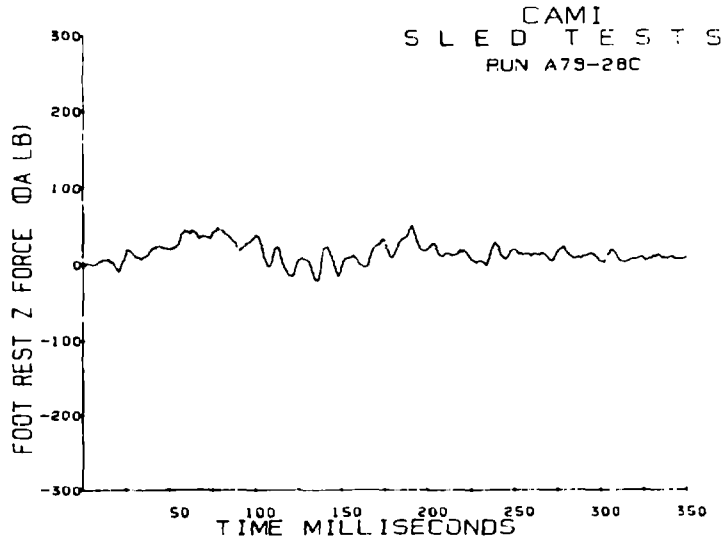

CAMI
SLED TESTS
RUN A79-28B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

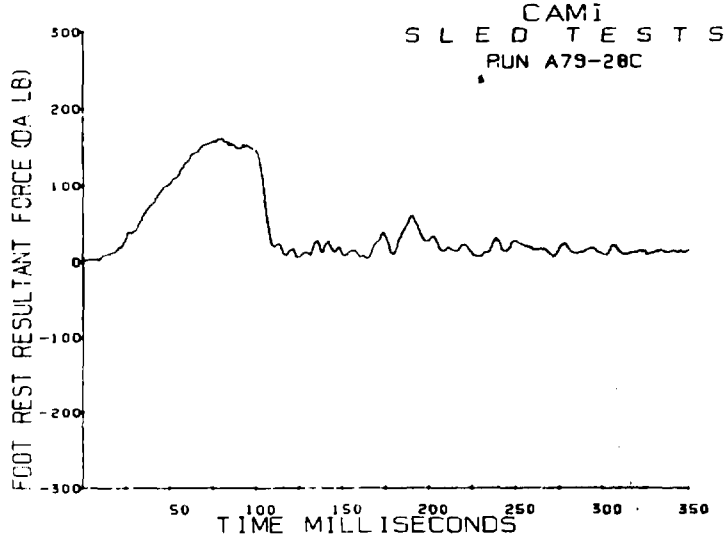

CAMI
SLED TESTS
RUN A79-28B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

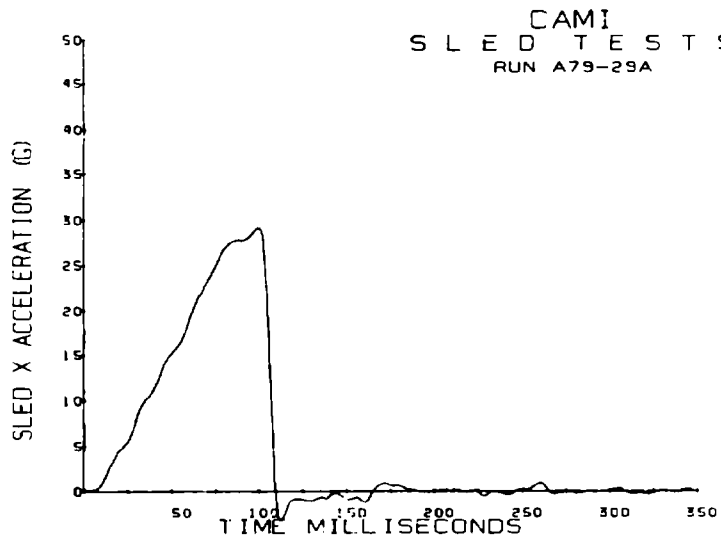

CAMI
SLED TESTS
RUN A79-28B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

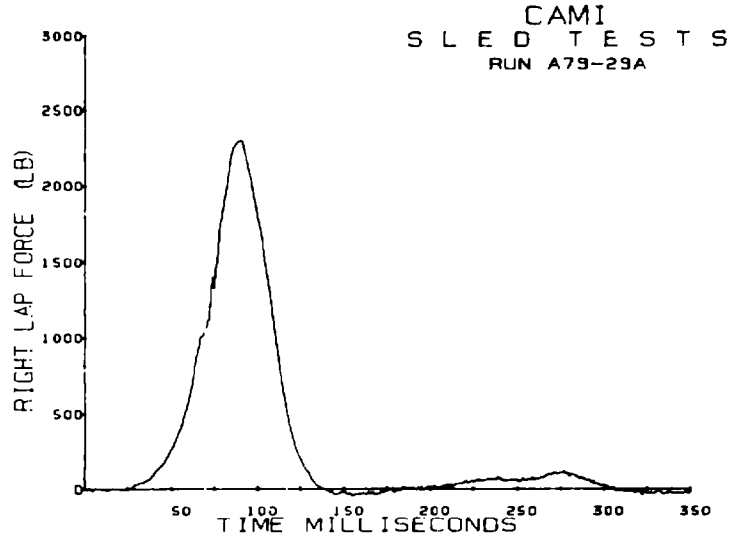

CAMI
SLED TESTS
RUN A79-28C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

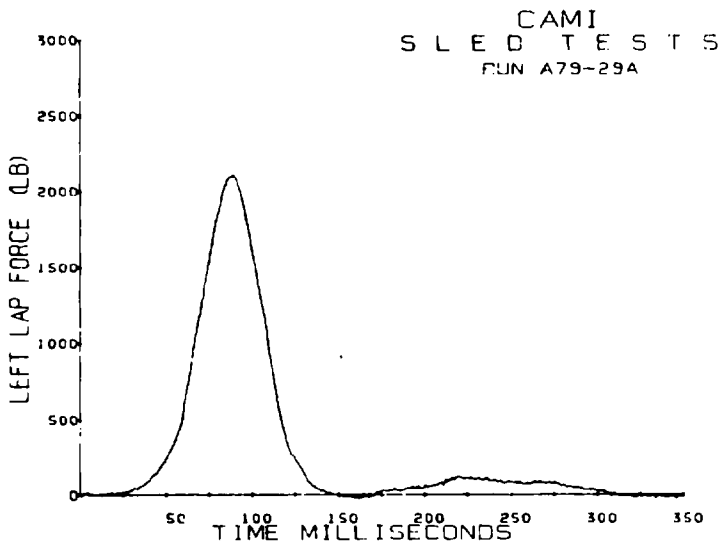

CAMI
SLED TESTS
RUN A79-28C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

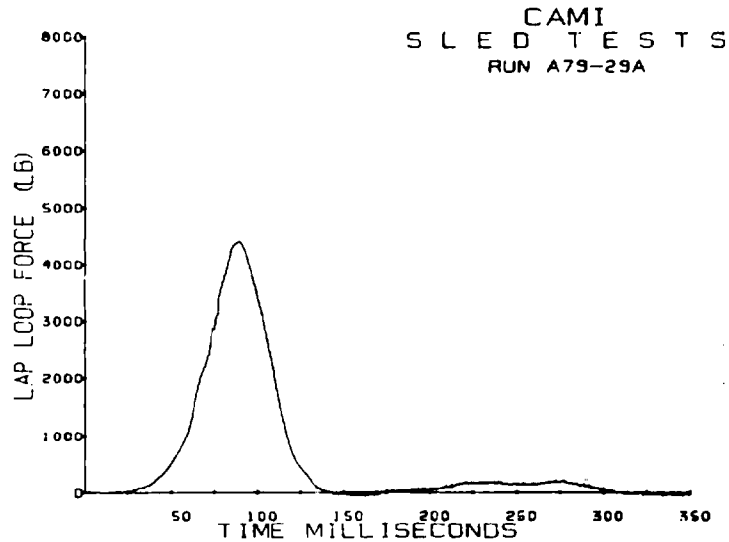

CAMI
SLED TESTS
RUN A79-28C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

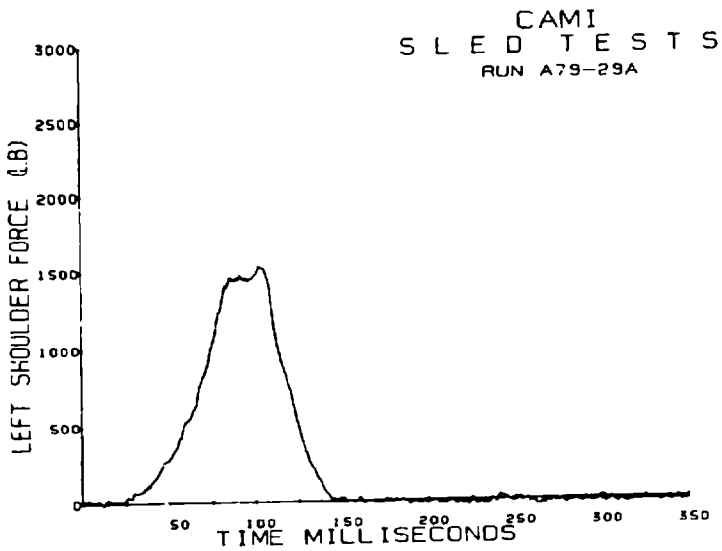

CAMI
SLED TESTS
RUN A79-28C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

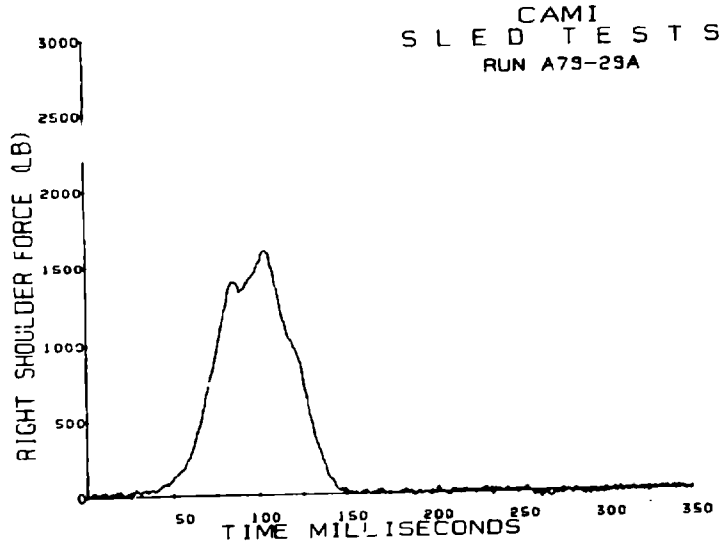

CAMI
S L E D T E S T S
RUN A79-29A
SLED X ACCELERATION (G)
TIME MILLISECONDS

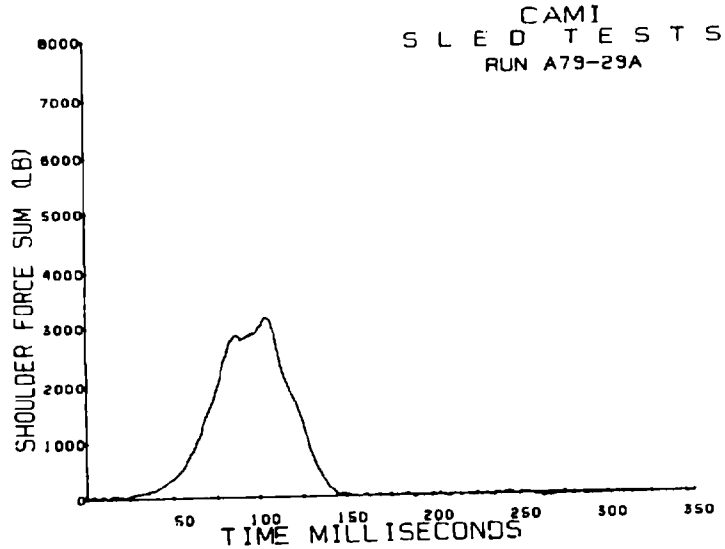

CAMI
S L E D T E S T S
RUN A79-29A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

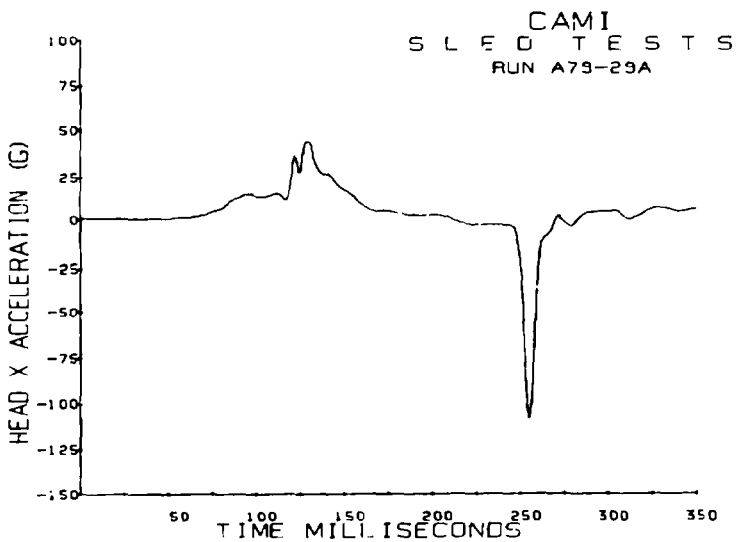

CAMI
S L E D T E S T S
RUN A79-29A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

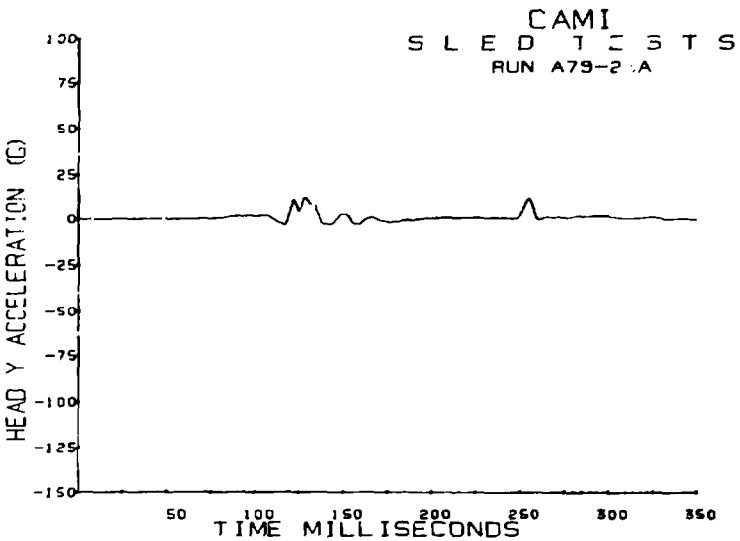

CAMI
S L E D T E S T S
RUN A79-29A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

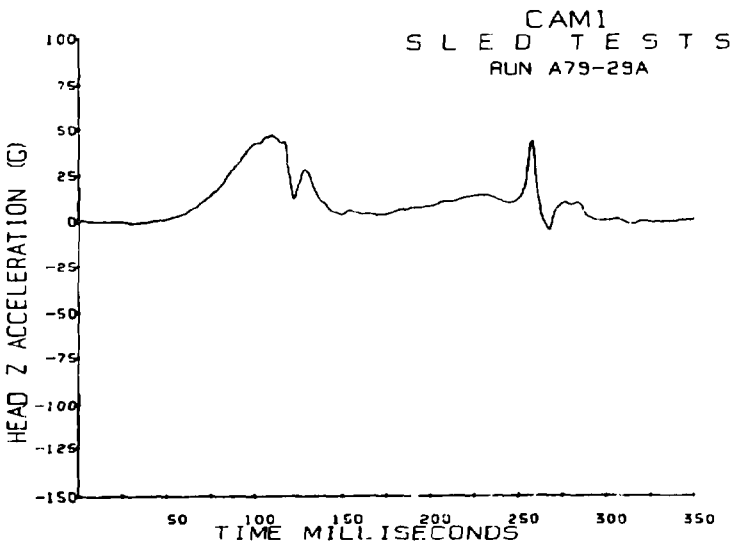

CAMI
SLED TESTS
RUN A79-29A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

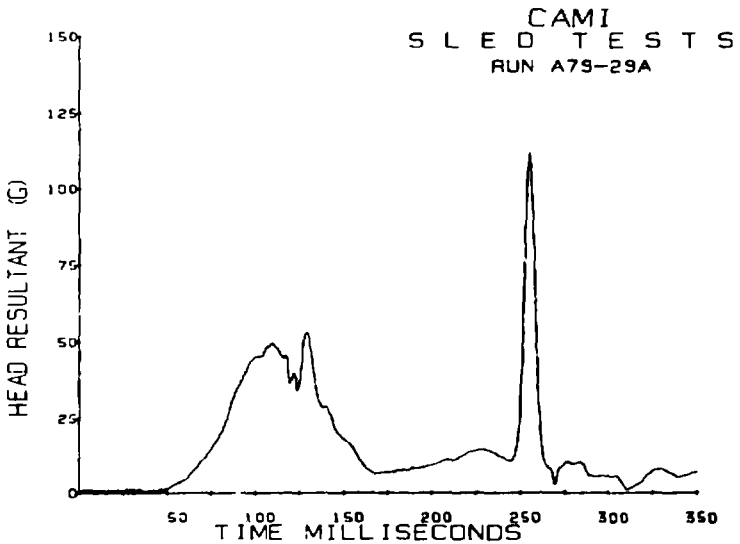

CAMI
SLED TESTS
RUN A79-29A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

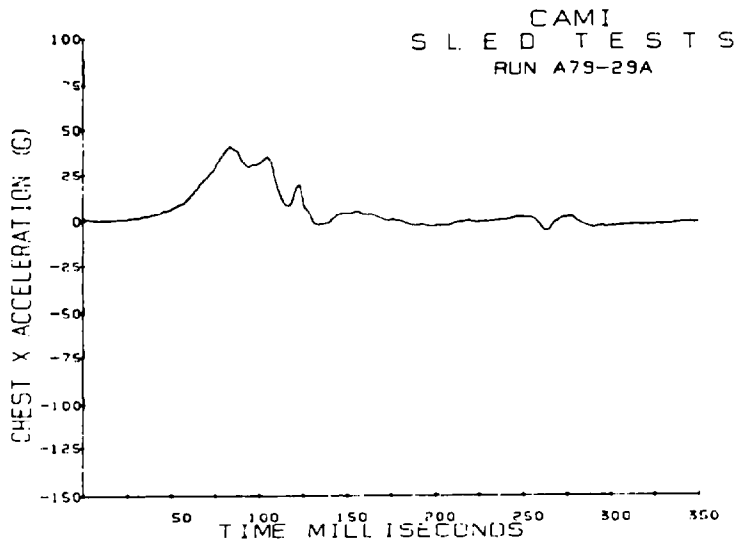

CAMI
SLED TESTS
RUN A79-29A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

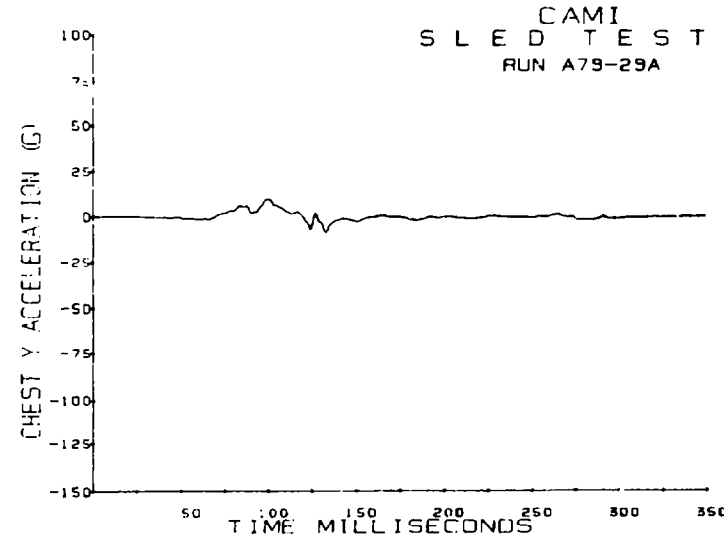

CAMI
S L E D T E S T S
RUN A79-29A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

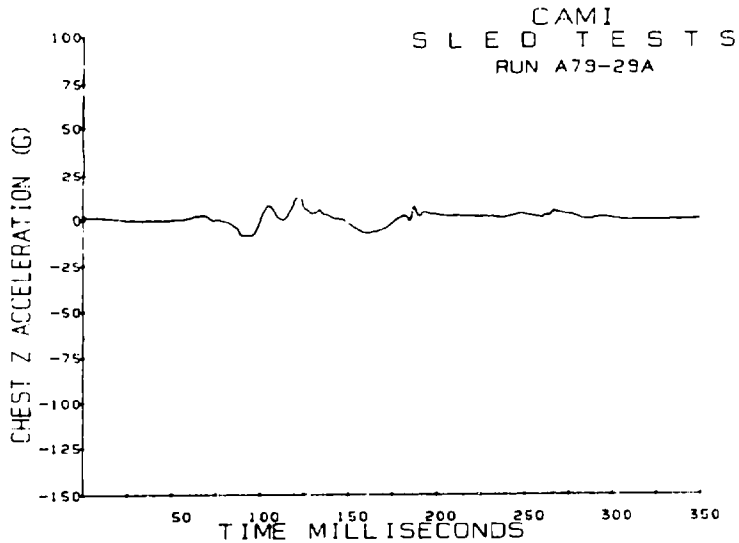

CAMI
S L E D T E S T S
RUN A79-29A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

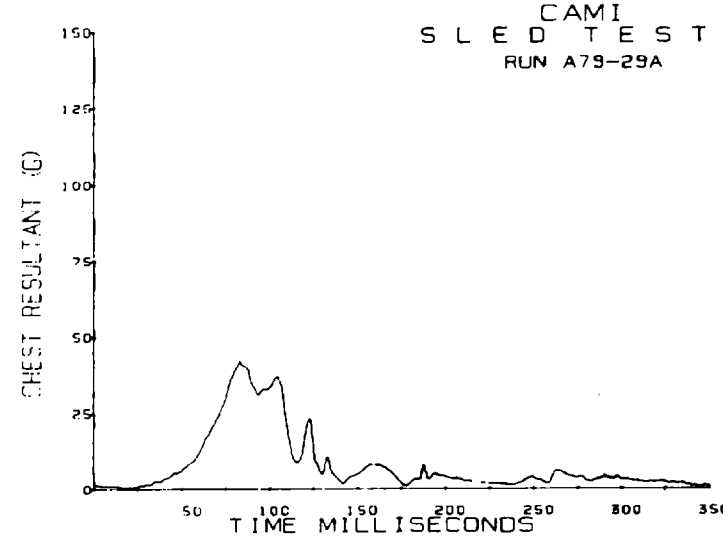

CAMI
S L E D T E S T S
RUN A79-29A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

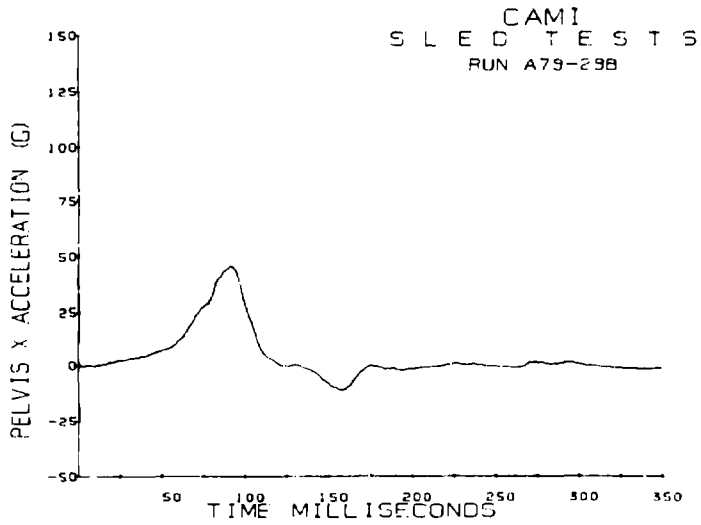

CAMI
S L E D T E S T S
RUN A79-29A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

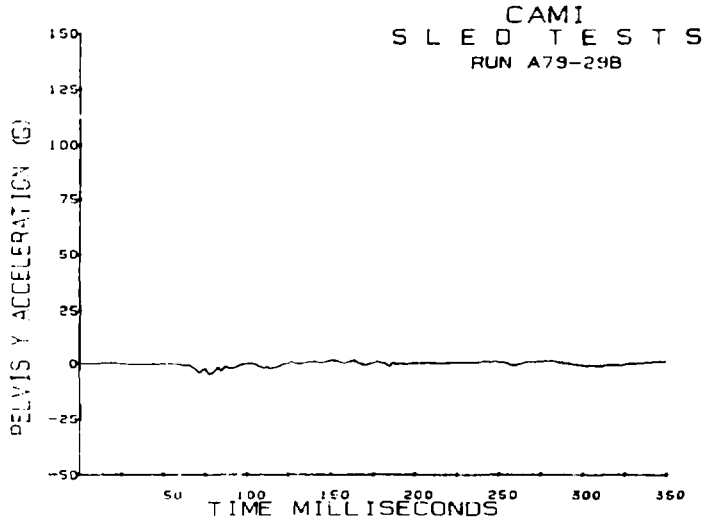

CAMI
SLED TESTS
RUN A79-29A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

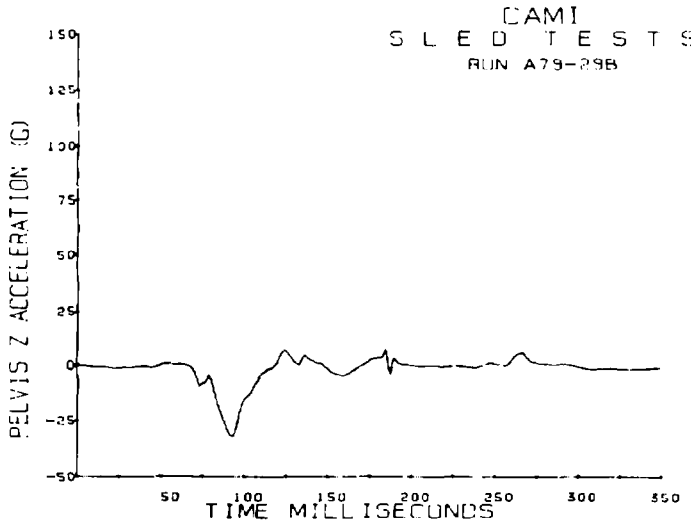

CAMI
SLED TESTS
RUN A79-29A
CHEST Y ACCELERATION (G)
100
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

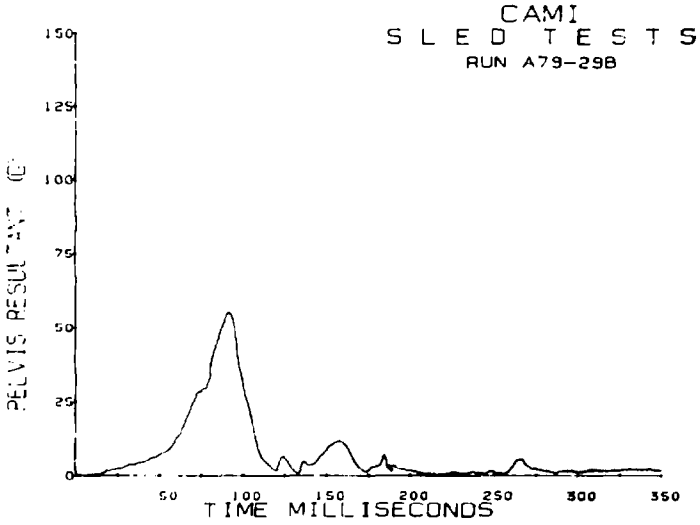

CAMI
SLED TESTS
RUN A79-29A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

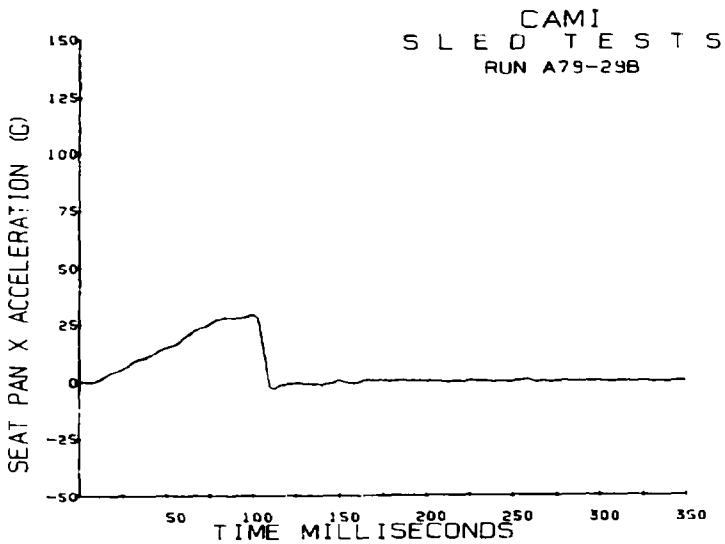

CAMI
SLED TESTS
RUN A79-29A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

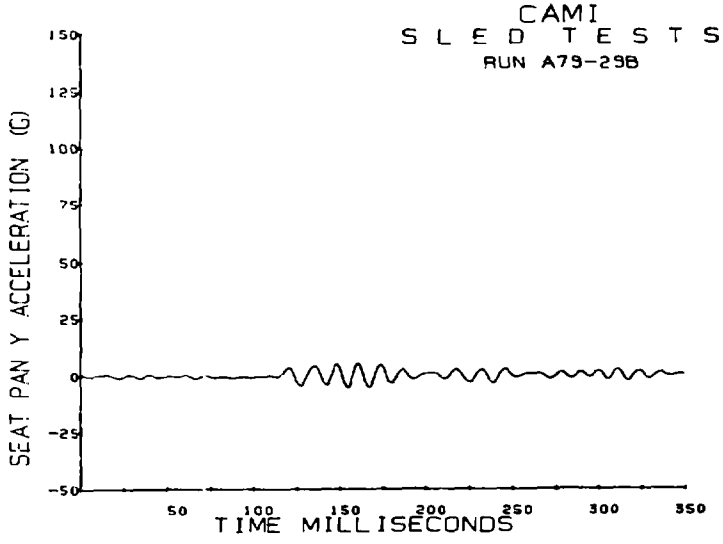

CAMI
S L E D T E S T S
RUN A79-29B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

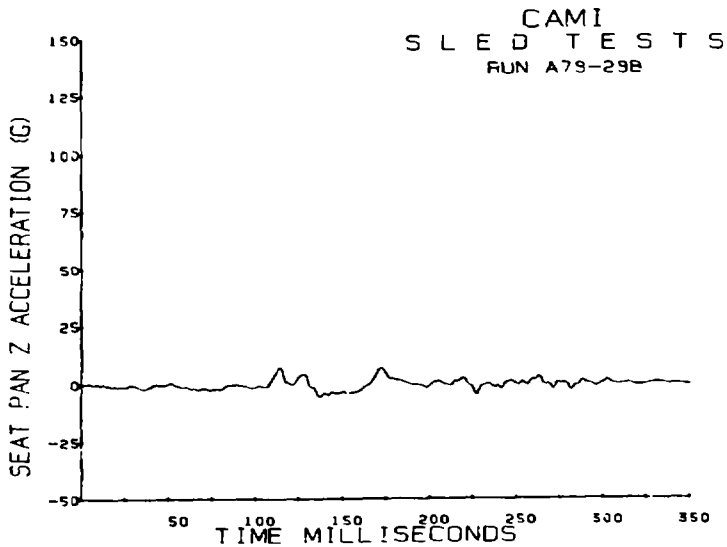

CAMI
S L E D T E S T S
RUN A79-29B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

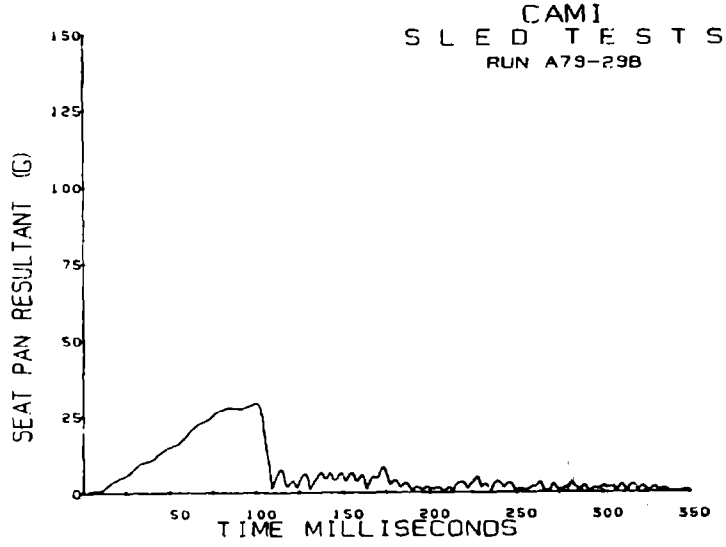

CAMI
S L E D T E S T S
RUN A79-29B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

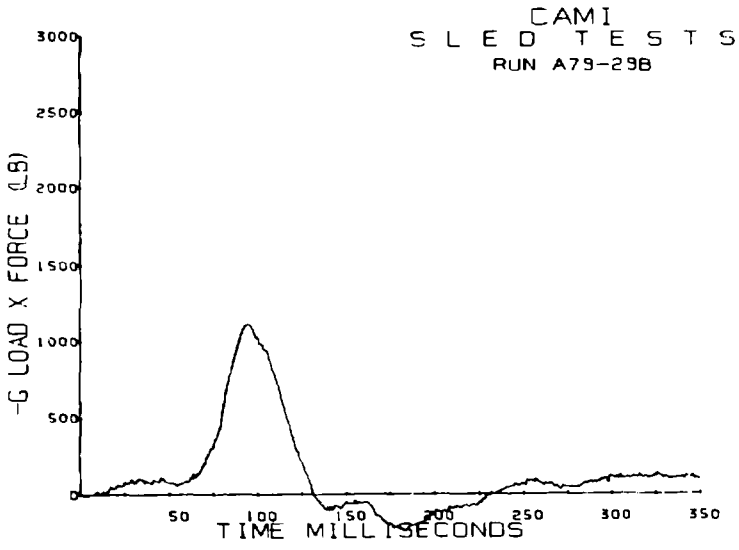

CAMI
S L E D T E S T S
RUN A79-29B
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

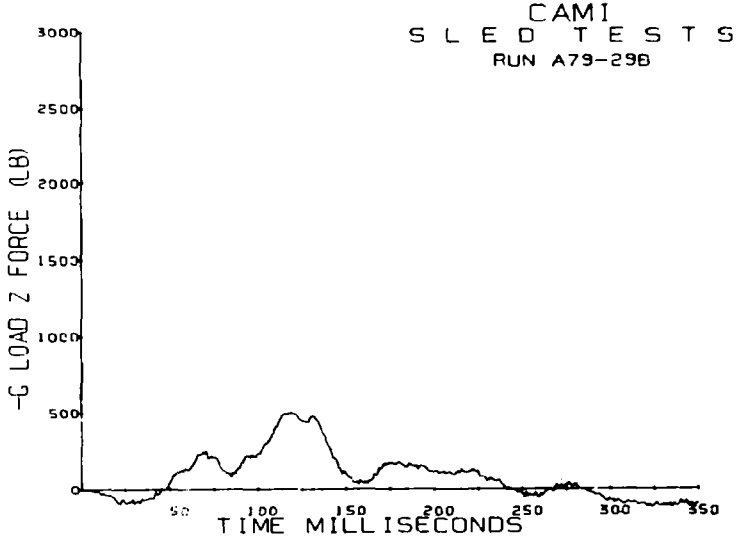

CAMI
S L E D T E S T S
RUN A79-29B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

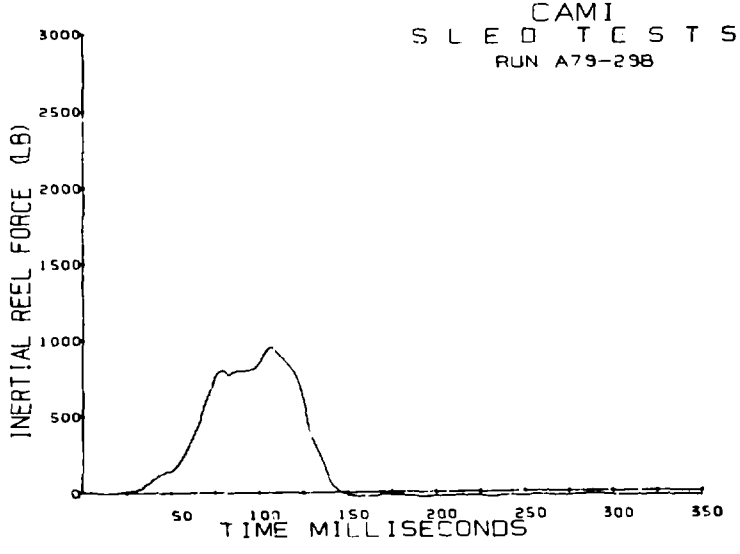

CAMI
S L E D T E S T S
RUN A79-29B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

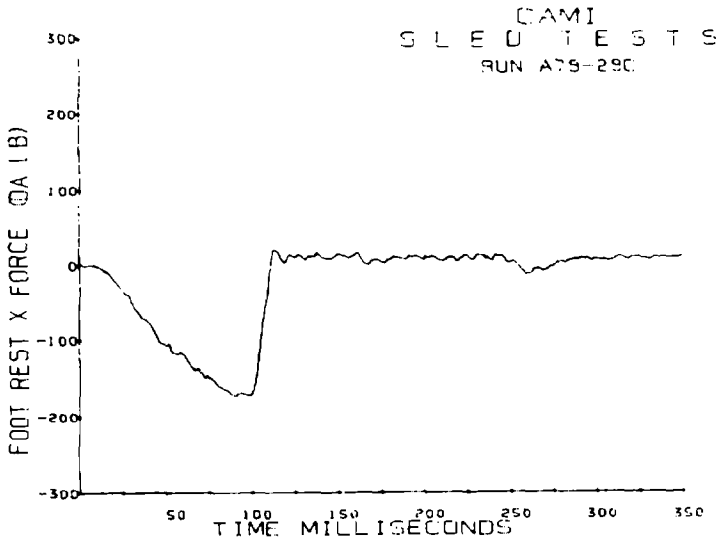

CAMI
S L E D T E S T S
RUN A79-29B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

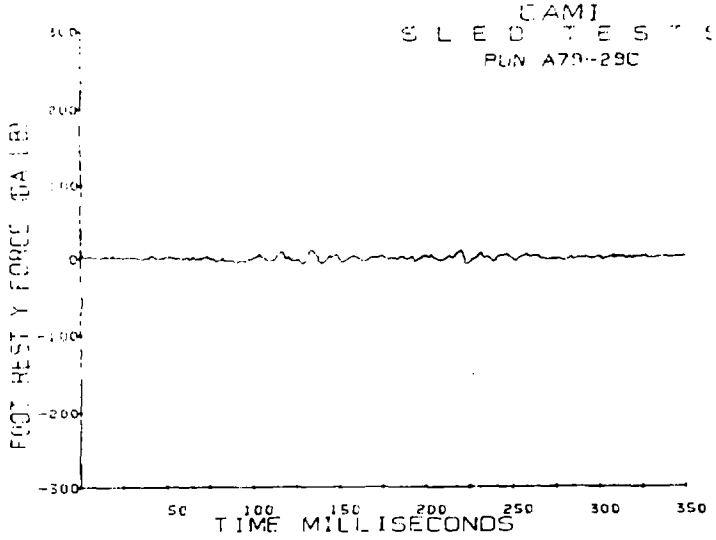

CAMI
S L E D T E S T S
RUN A79-29B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

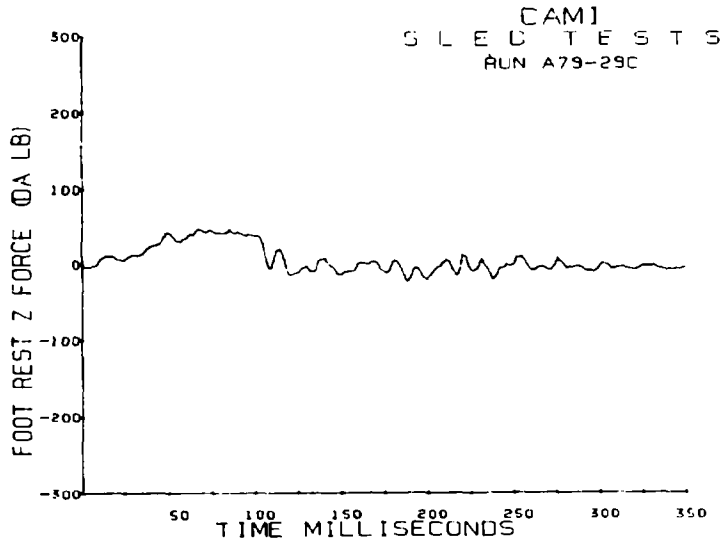

CAMI
SLED TESTS
RUN A79-29B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

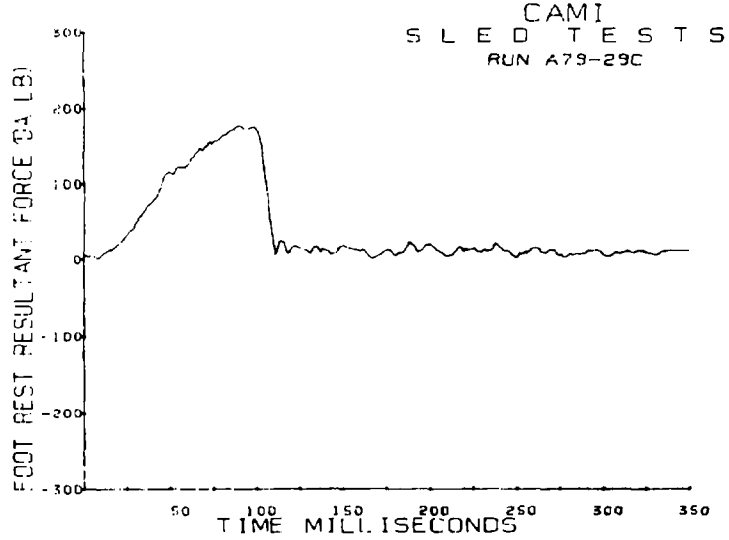

CAMI
SLED TESTS
RUN A79-29B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

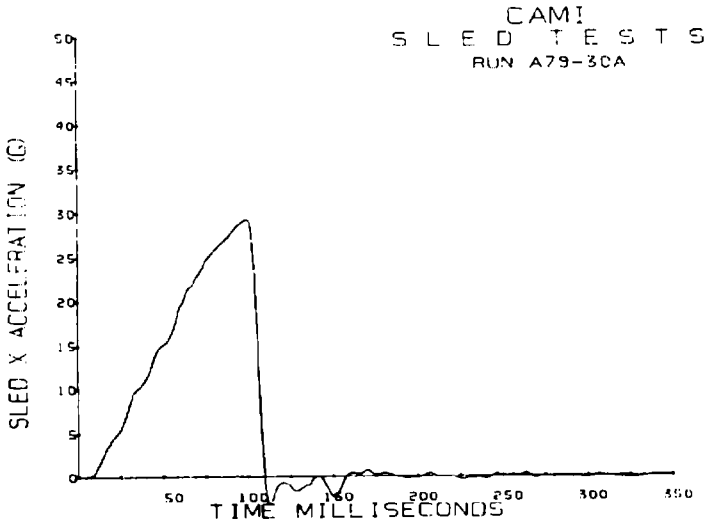

CAMI
SLED TESTS
RUN A79-29B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

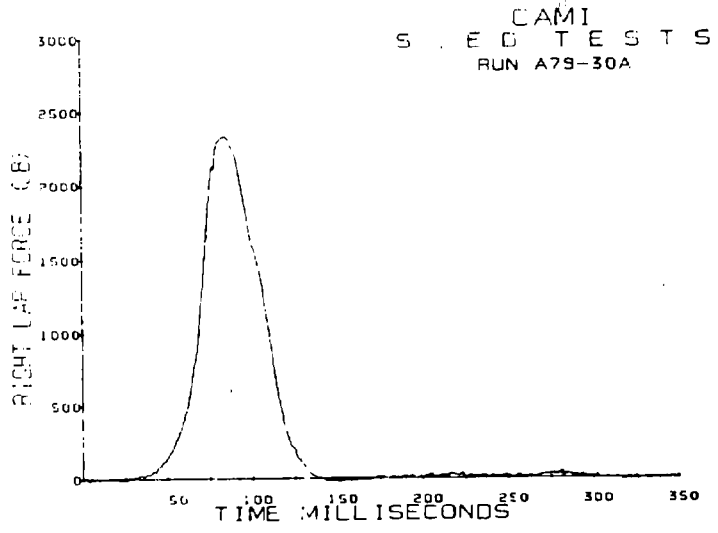

CAMI
SLED TESTS
RUN A79-29C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

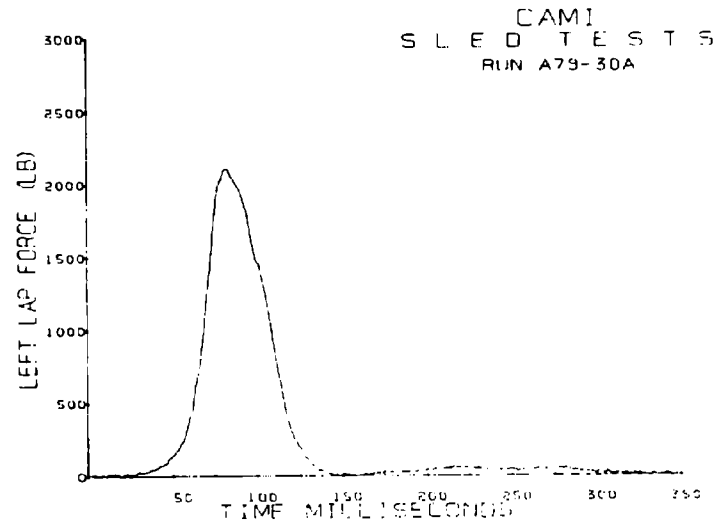

CAMI
SLED TESTS
RUN A79-29C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

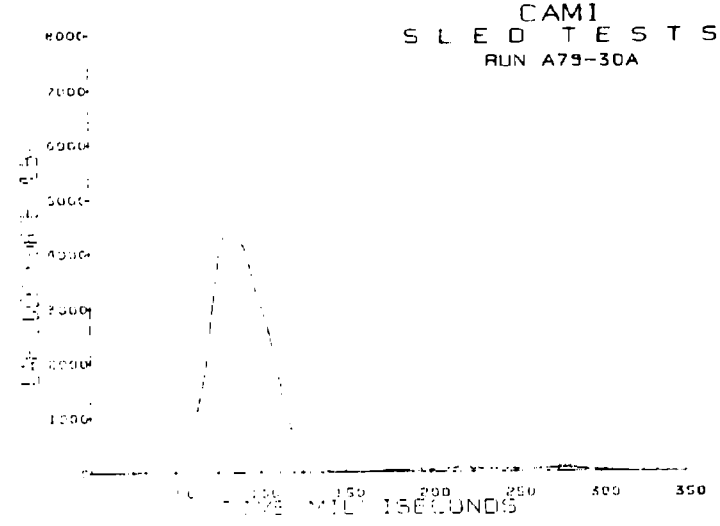

CAMI
SLED TESTS
RUN A79-29C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

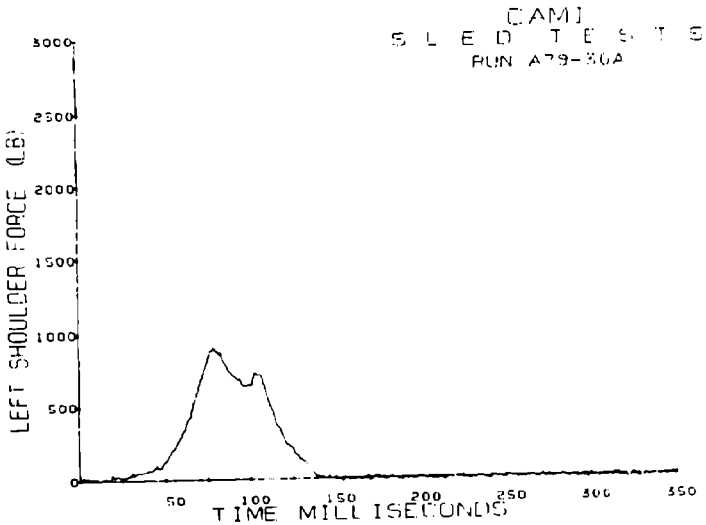

CAMI
SLED TESTS
RUN A79-29C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

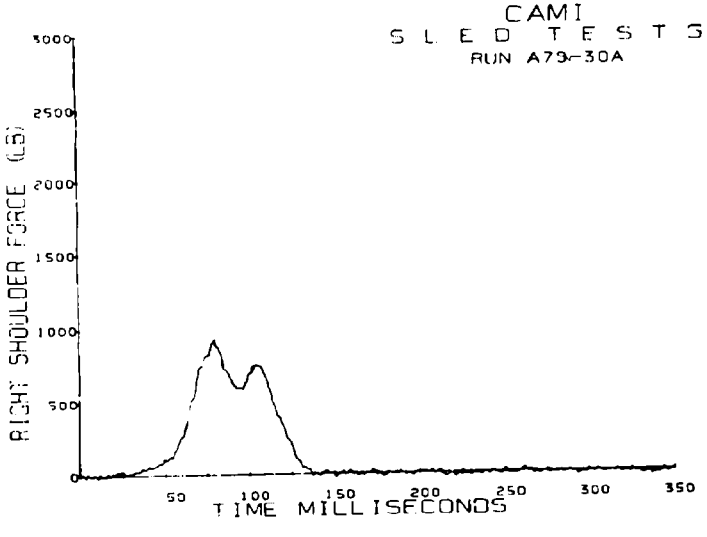

CAMI
S L E D T E S T S
RUN A79-30A
SLED X ACCELERATION (G)
TIME MILLISECONDS

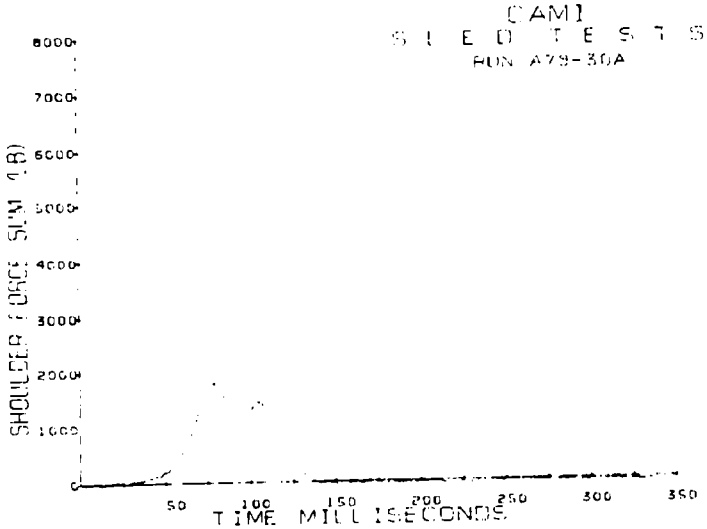

CAMI
S L E D T E S T S
RUN A79-30A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

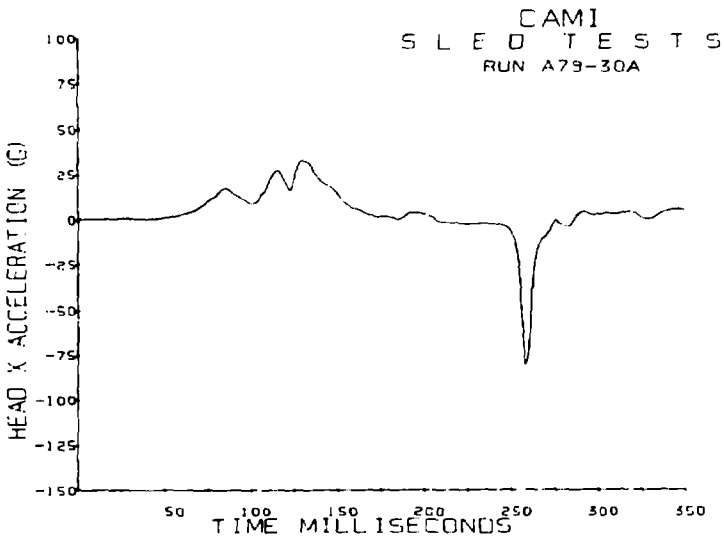

CAMI
S L E D T E S T S
RUN A79-30A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

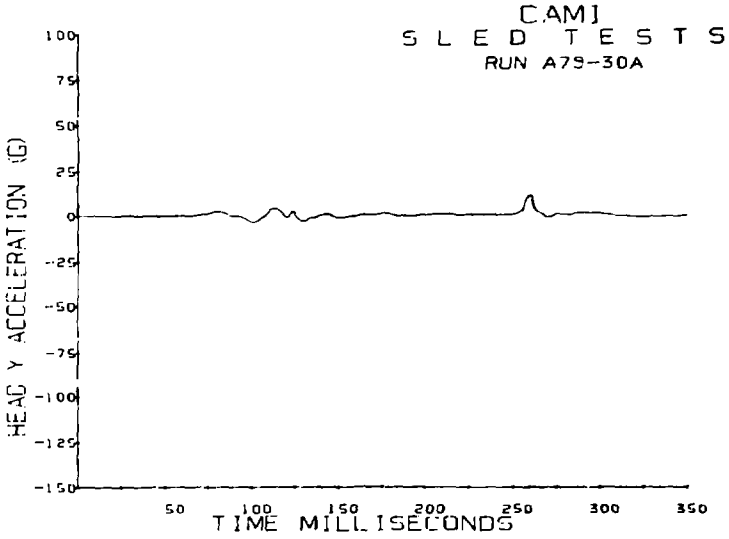

CAMI
S L E D T E S T S
RUN A79-30A

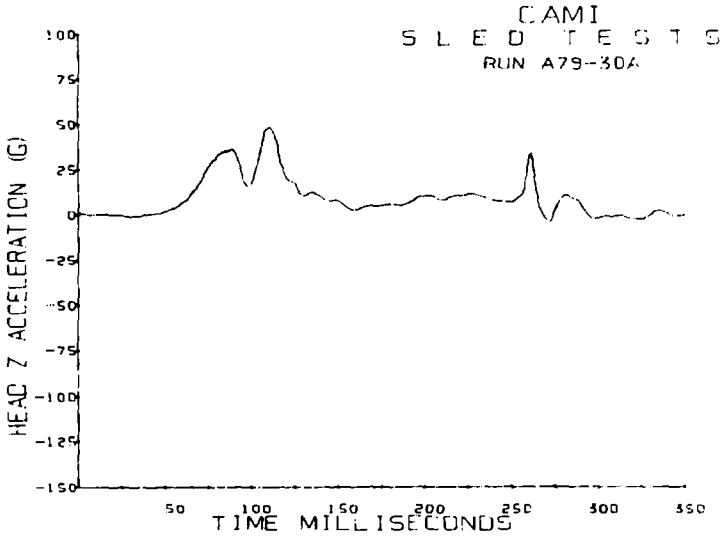

CAMI
SLED TESTS
RUN A79-30A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

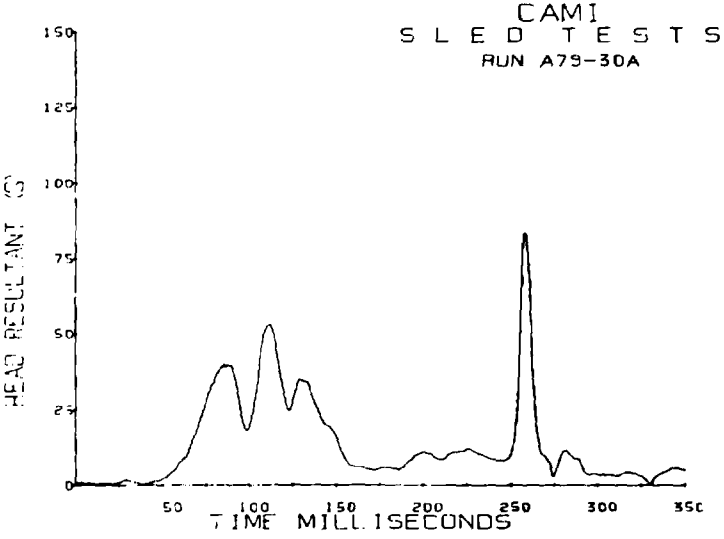

CAMI
SLED TESTS
RUN A79-30A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

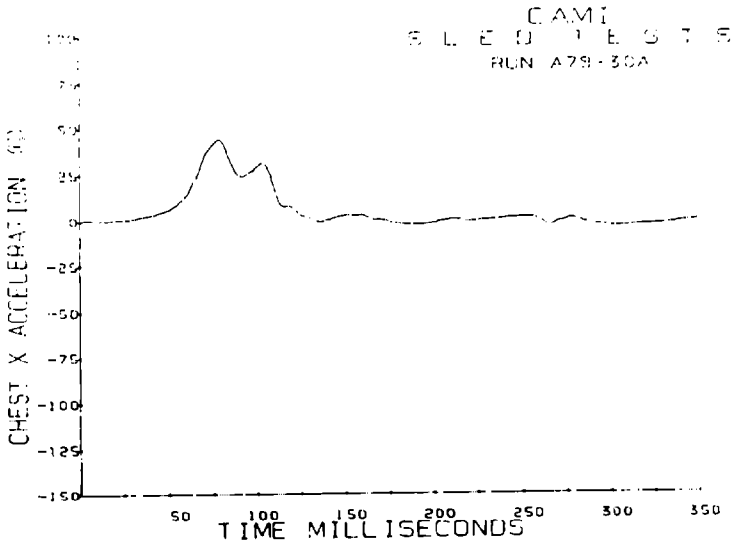

CAMI
SLED TESTS
RUN A79-30A
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

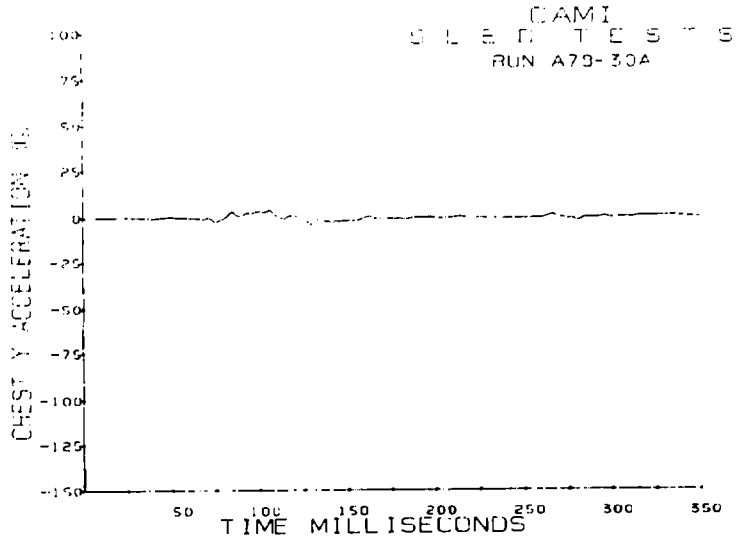

CAMI
SLED TESTS
RUN A79-30A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

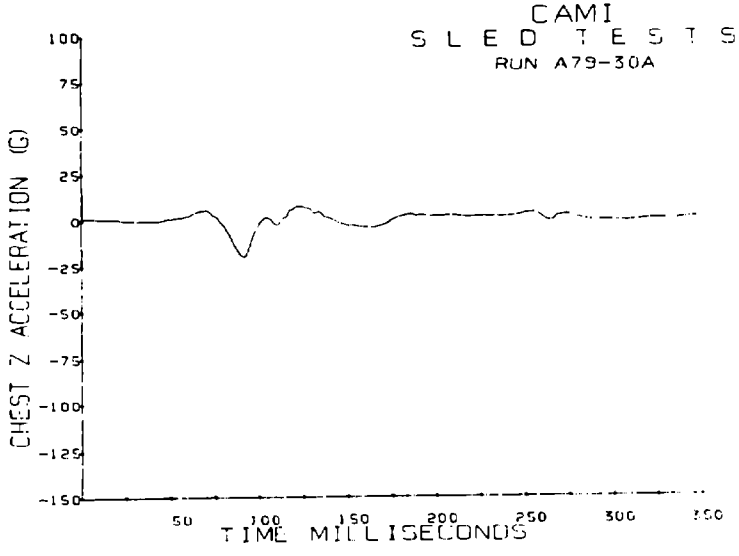

CAMI
SLED TESTS
RUN A79-30A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

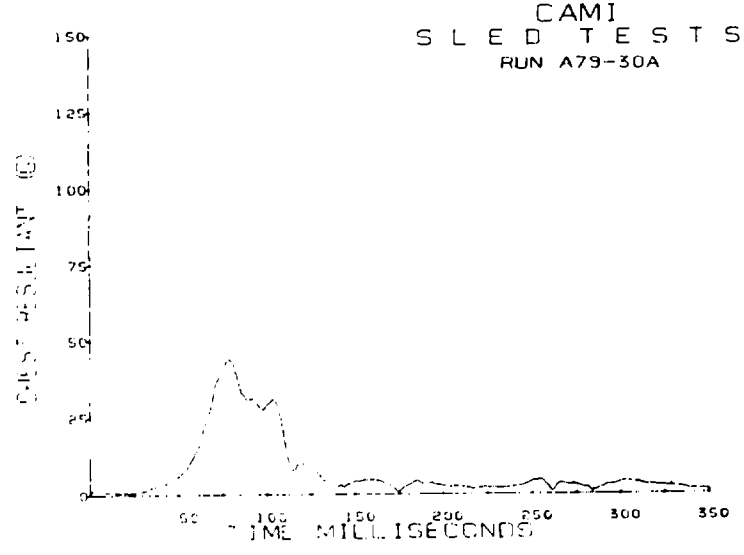

CAMI
SLED TESTS
RUN A79-30A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

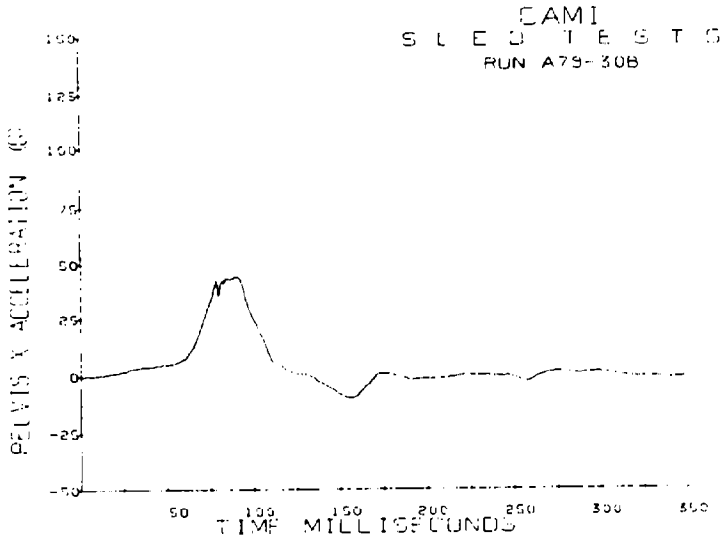

CAMI
SLED TESTS
RUN A79-30A
TIME MILLISECONDS

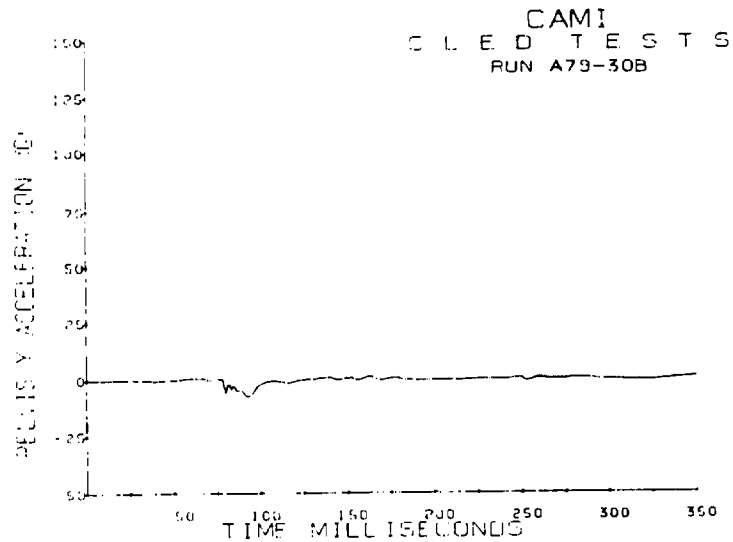

CAMI
SLED TESTS
RUN A79-30A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

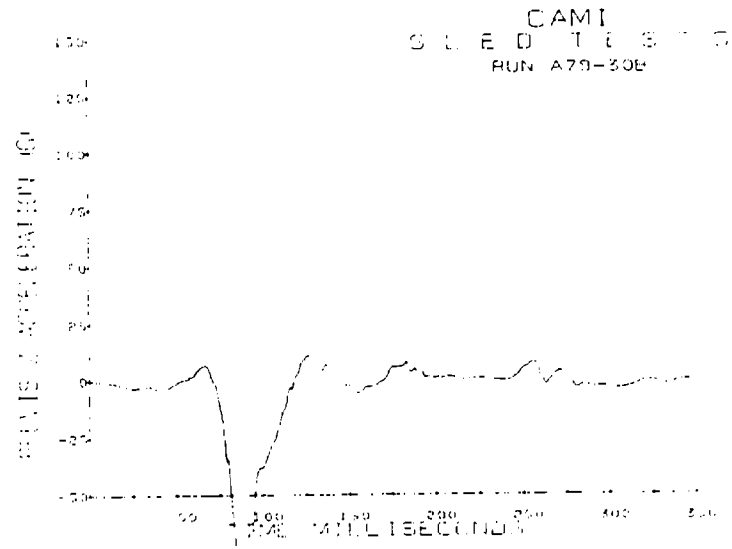

CAMI
SLED TESTS
RUN A79-30A
TIME MILLISECONDS

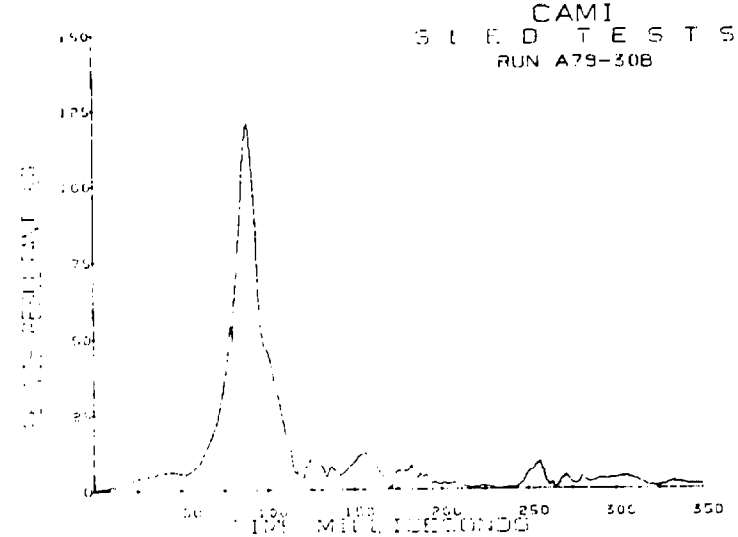

CAMI
SLED TESTS
RUN A79-30A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS

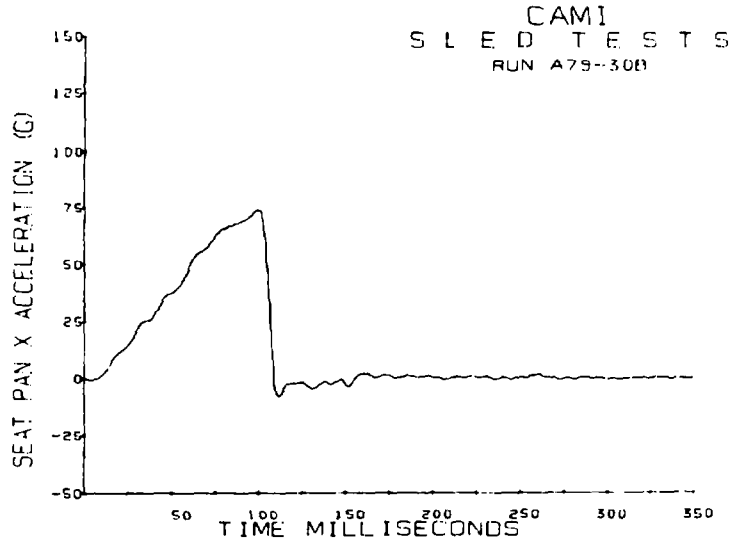

CAMI
SLED TESTS
RUN A79-30A
TIME MILLISECONDS

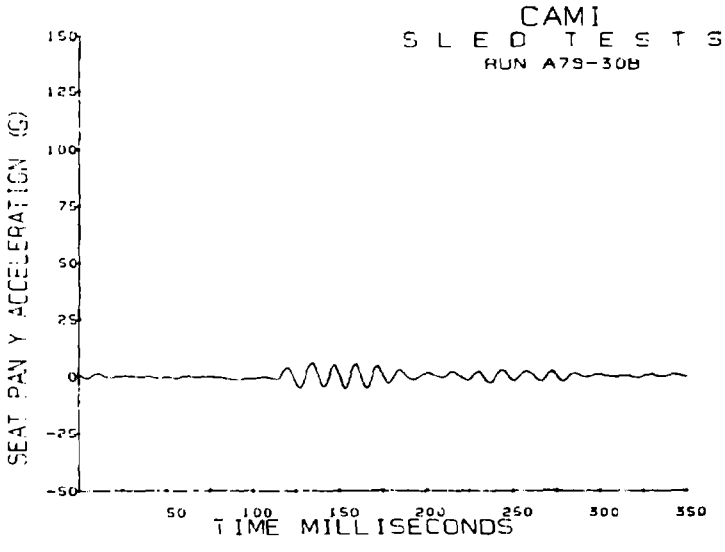

CAMI
S L E D T E S T S
RUN A79-30B
TIME MILLISECONDS

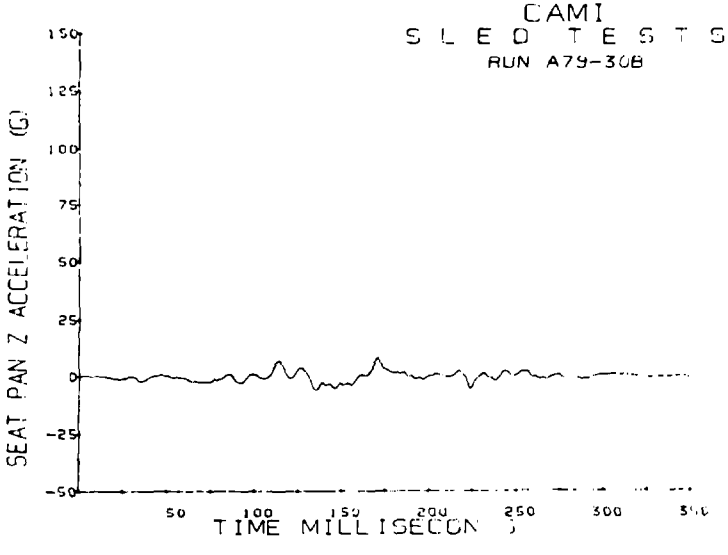

CAMI
S L E D T E S T S
RUN A79-30B
TIME MILLISECONDS

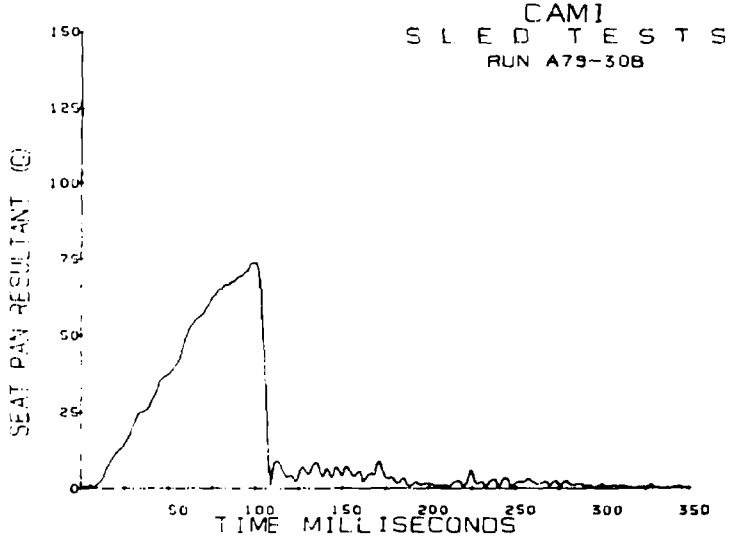

CAMI
S L E D T E S T S
RUN A79-30B

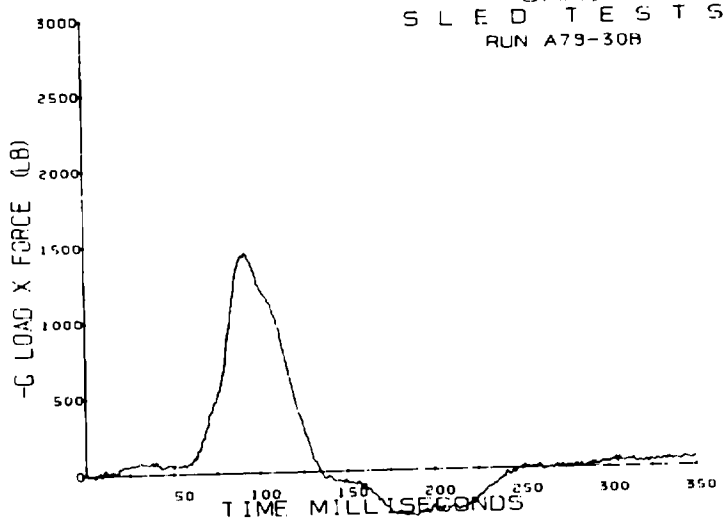

CAMI
S L E D T E S T S
RUN A79-30B

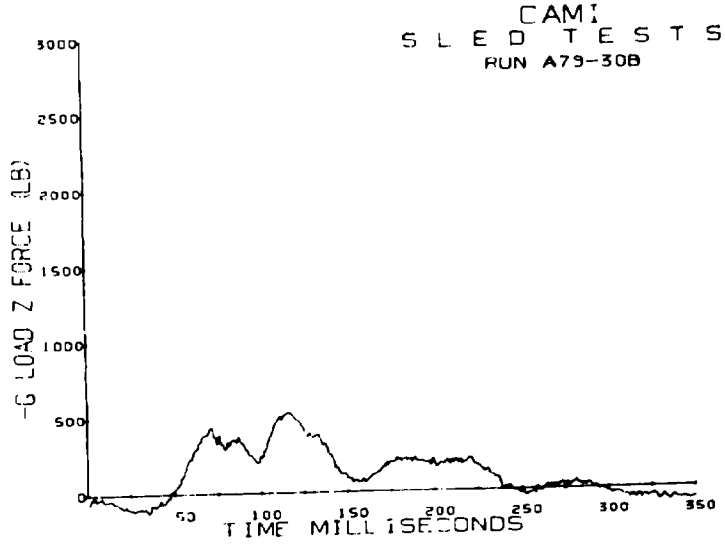

CAMI
S L E D T E S T S
RUN A79-30B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

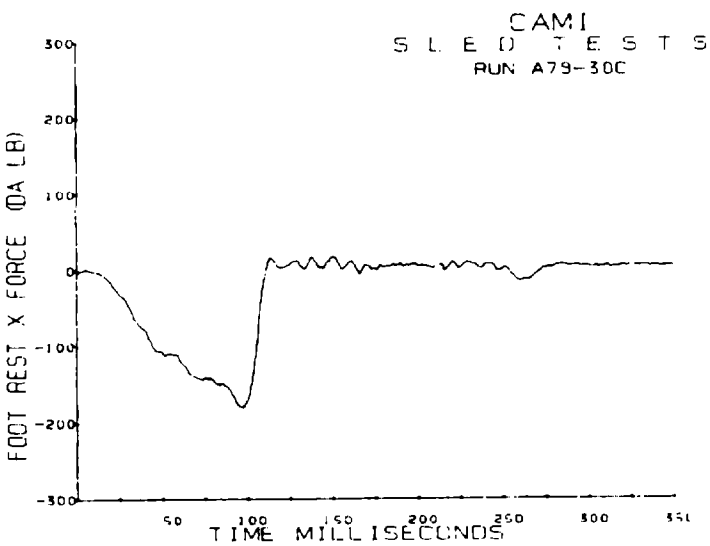

CAMI
S L E D T E S T S
RUN A79-30B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

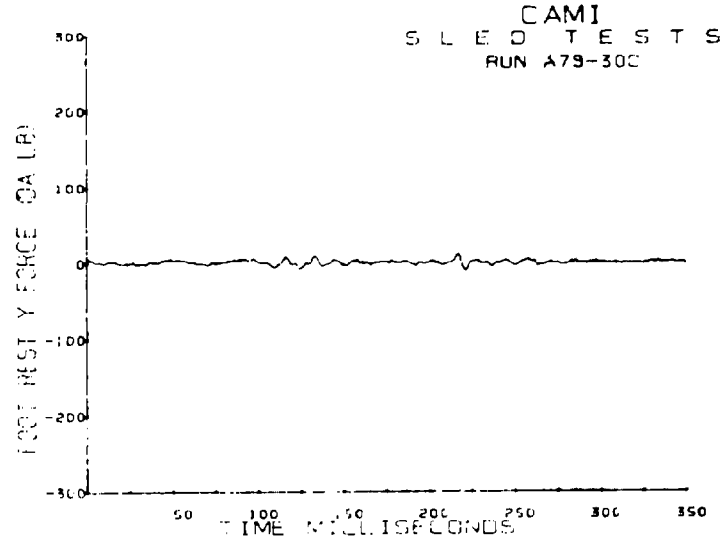

CAMI
S L E D T E S T S
RUN A79-30B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

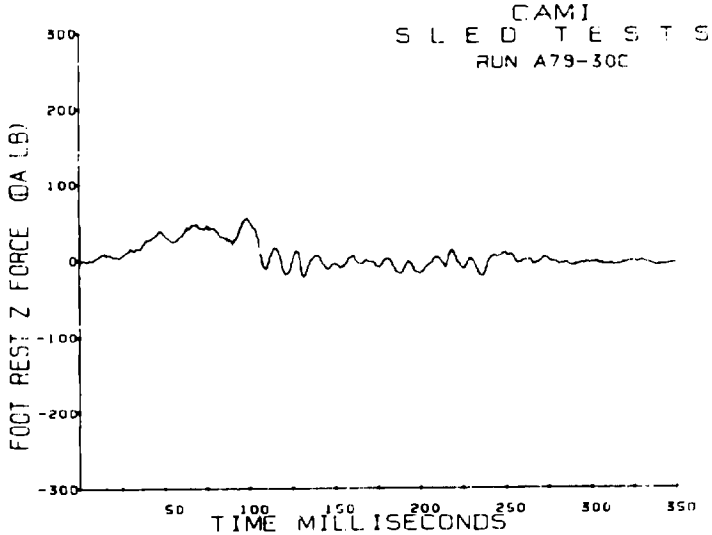

CAMI
S L E D T E S T S
RUN A79-30B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

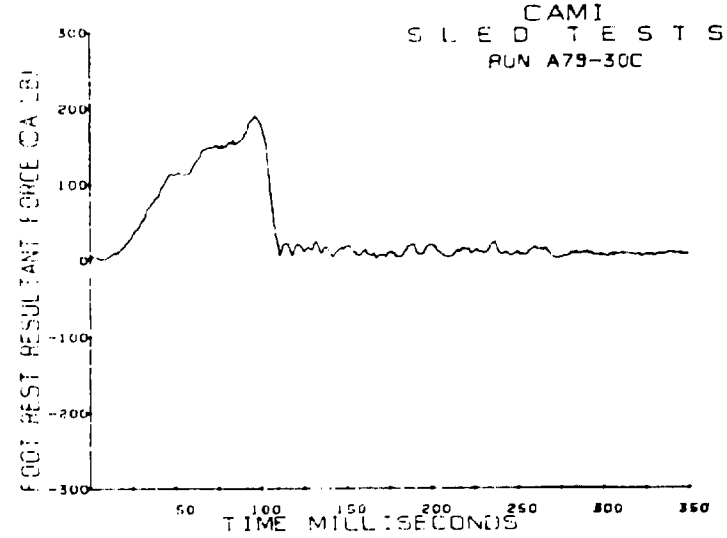

CAMI
S L E D T E S T S
RUN A79-30B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

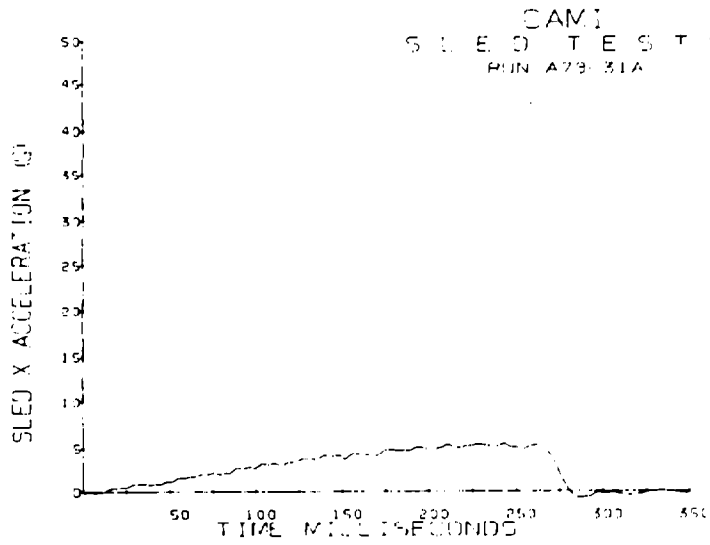

CAMI
S L E D T E S T S
RUN A79-30B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

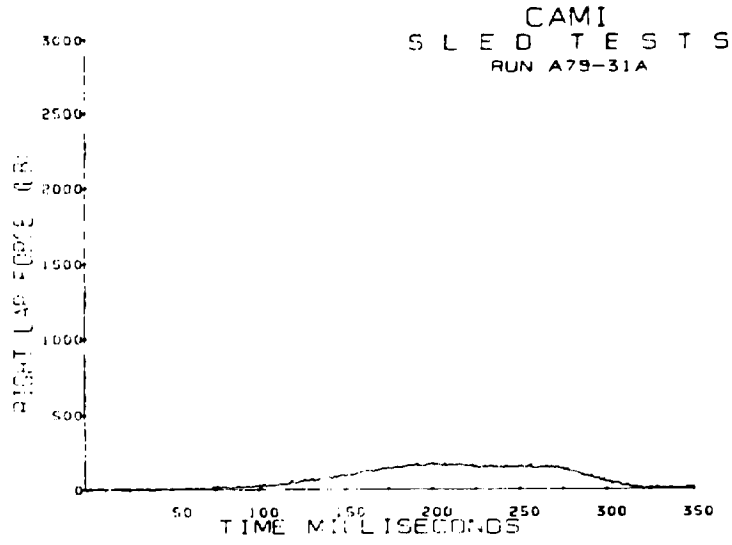

CAMI
S L E D T E S T S
RUN A79-30C
FOOT REST X FORCE (DA LB)
TIME MILLISECONDS

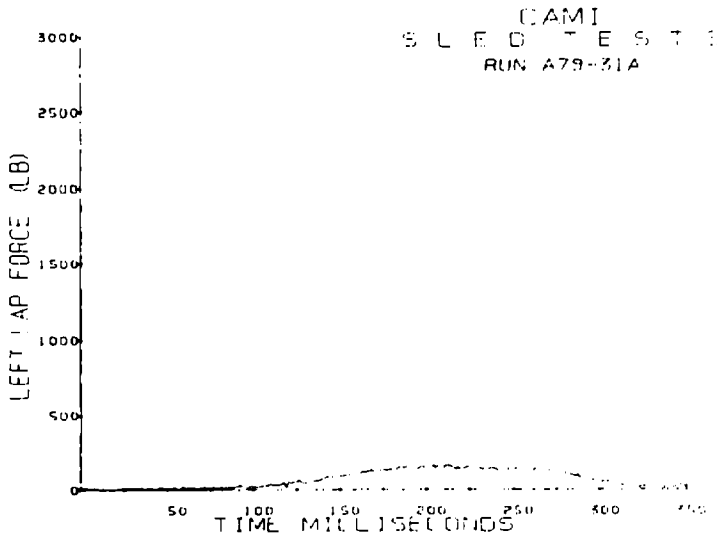

CAMI
S L E D T E S T S
RUN A79-30C
TIME MILLISECONDS

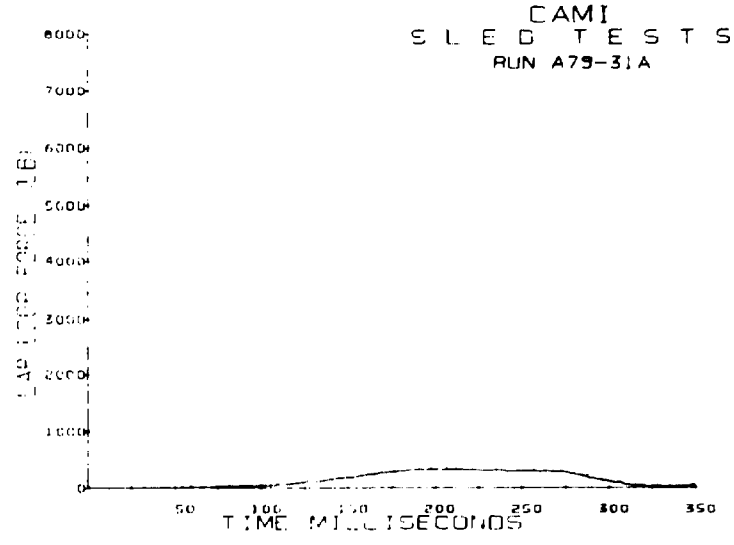

CAMI
S L E D T E S T S
RUN A79-30C
FOOT REST Z FORCE (DA LB)
TIME MILLISECONDS

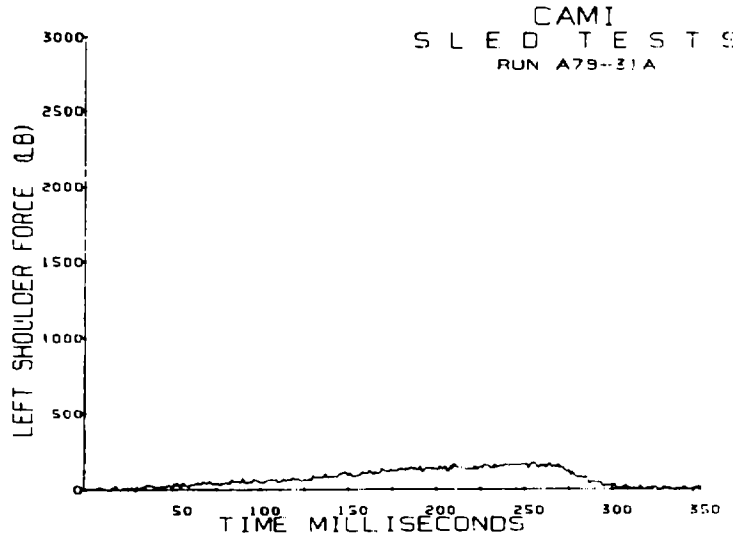

CAMI
S L E D T E S T S
RUN A79-30C
TIME MILLISECONDS

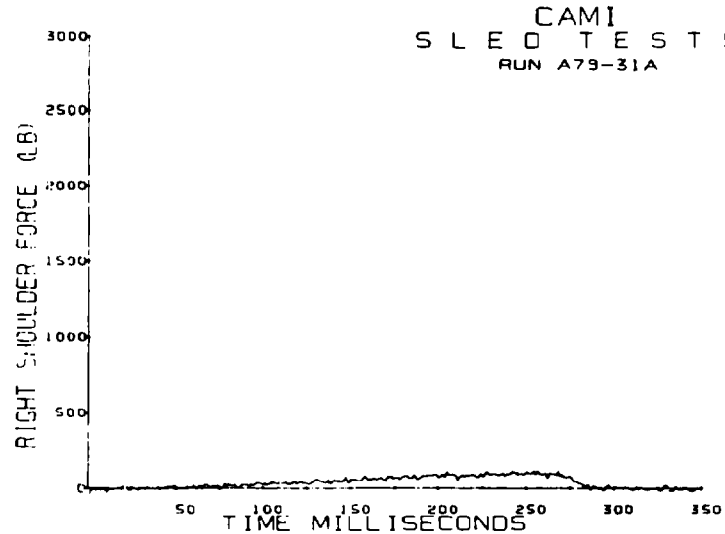

CAMI
S L E D T E S T S
RUN A79-31A
SLED X ACCELERATION (G)
TIME MILLISECONDS

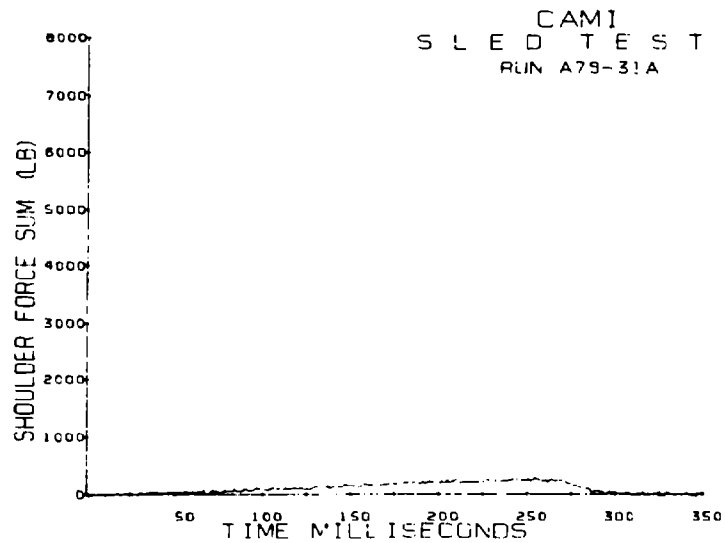

CAMI
S L E D T E S T S
RUN A79-31A
TIME MILLISECONDS

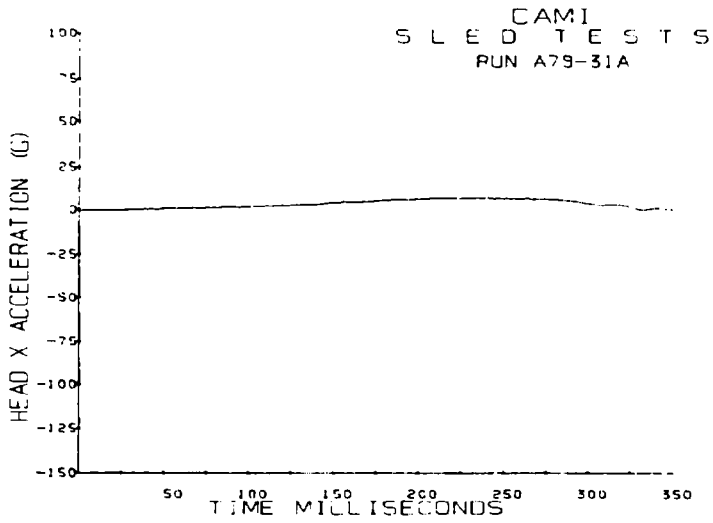

CAMI
S L E D T E S T S
RUN A79-31A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

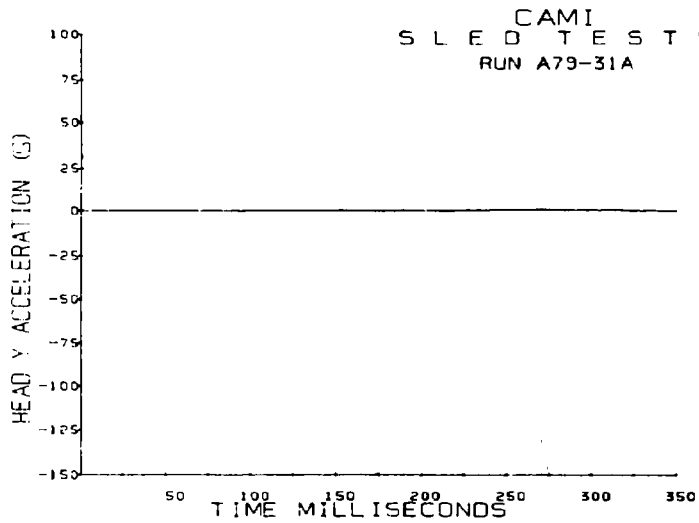

CAMI
S L E D T E S T S
RUN A79-31A
TIME MILLISECONDS

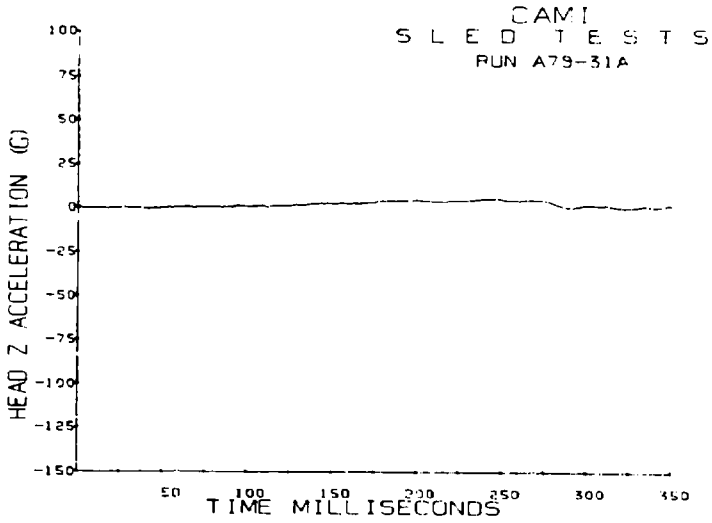

CAMI
SLED TESTS
RUN A79-31A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

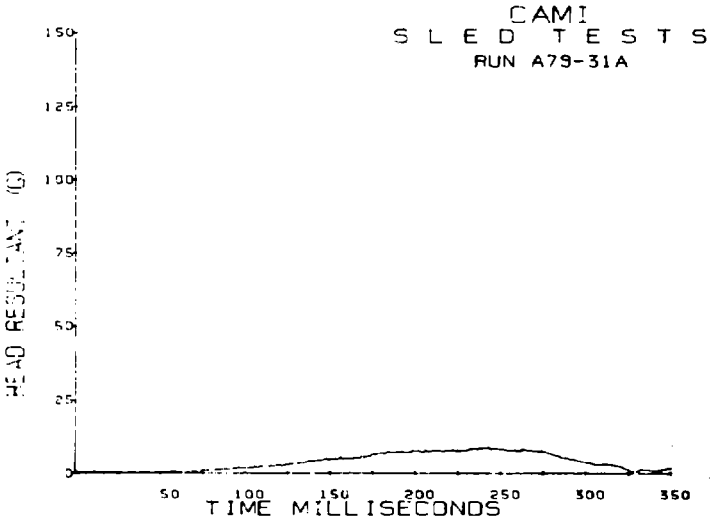

CAMI
SLED TESTS
RUN A79-31A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

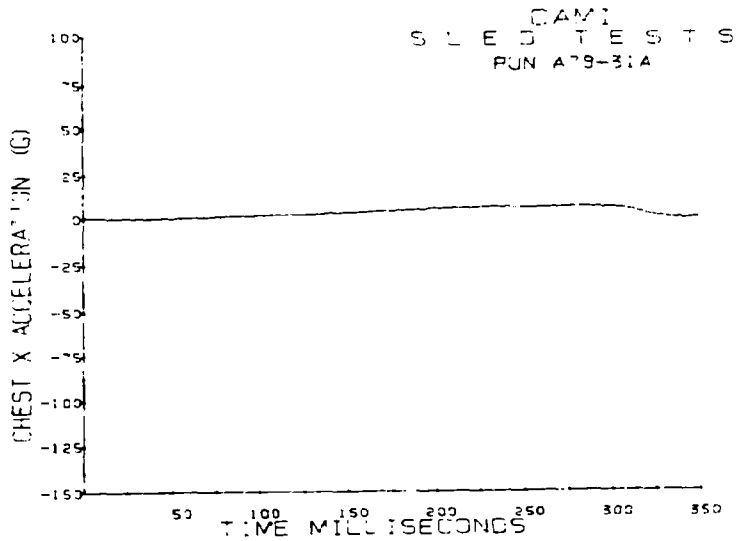

CAMI
SLED TESTS
RUN A79-31A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

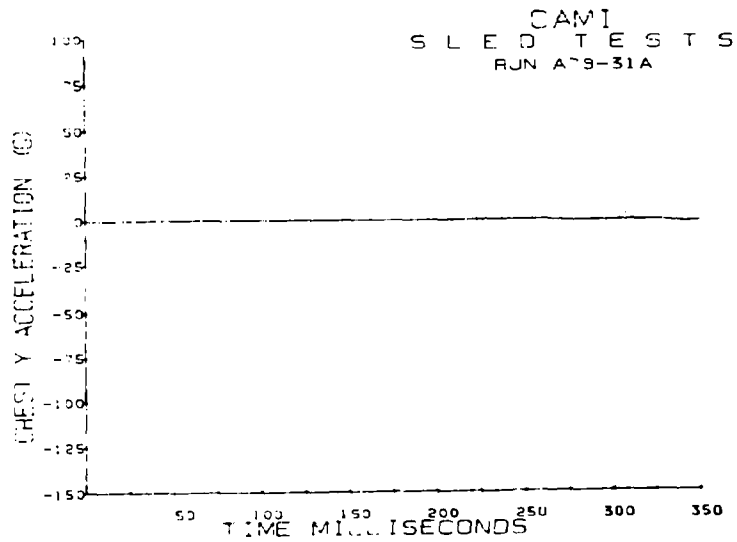

CAMI
SLED TESTS
RUN A79-31A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

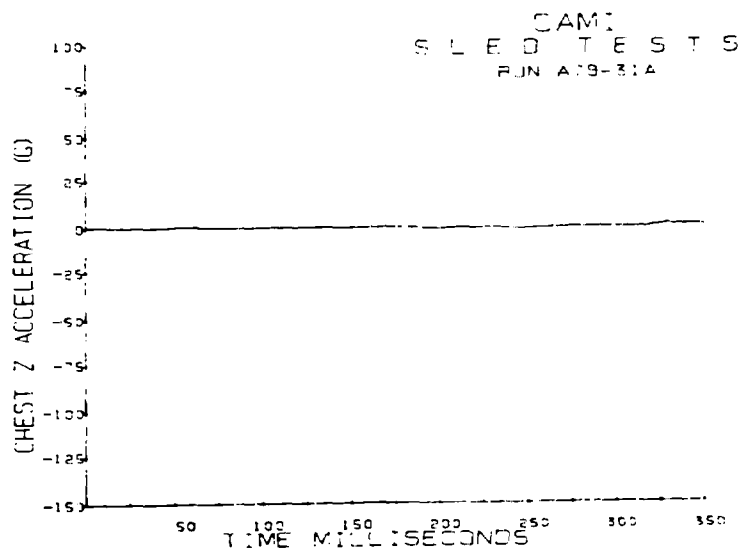

CAMI
SLED TESTS
RUN A79-31A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

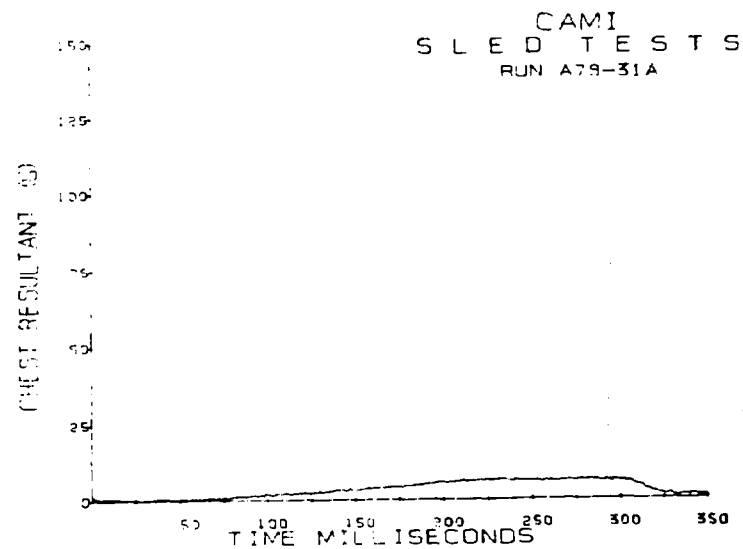

CAMI
SLED TESTS
RUN A79-31A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

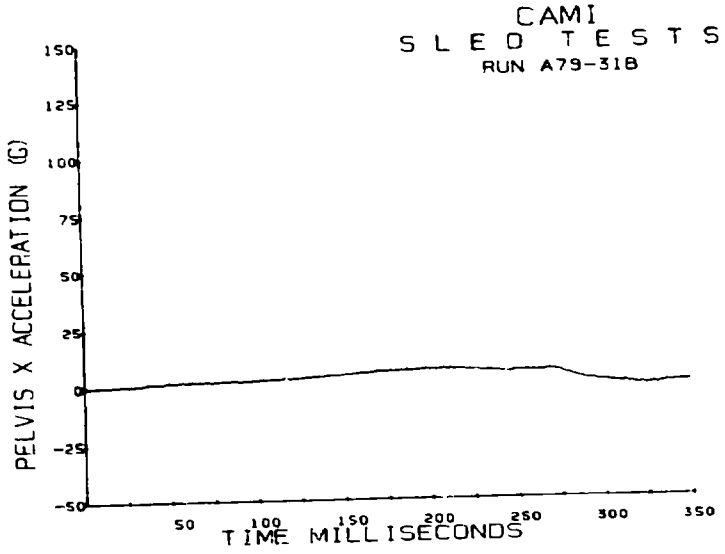

CAMI
SLED TESTS
RUN A79-31A
TIME MILLISECONDS

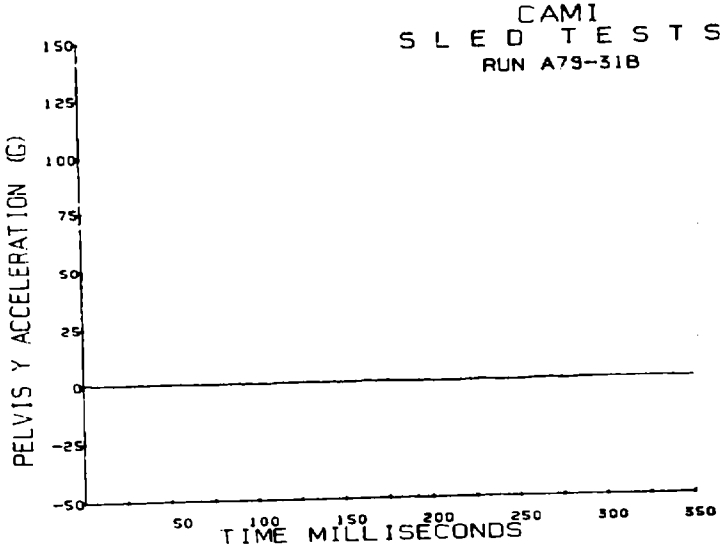

CAMI
S L E D T E S T S
RUN A79-31A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

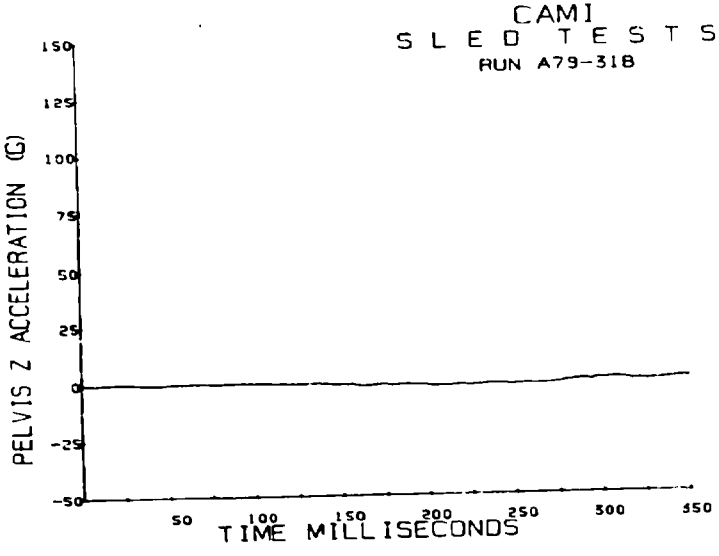

CAMI
S L E D T E S T S
RUN A79-31A
CHEST Y ACCELERATION (G)
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

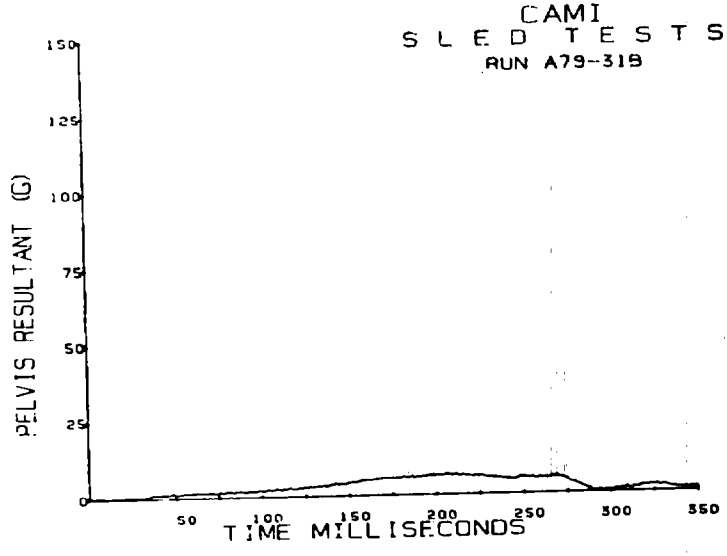

CAMI
S L E D T E S T S
RUN A79-31A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

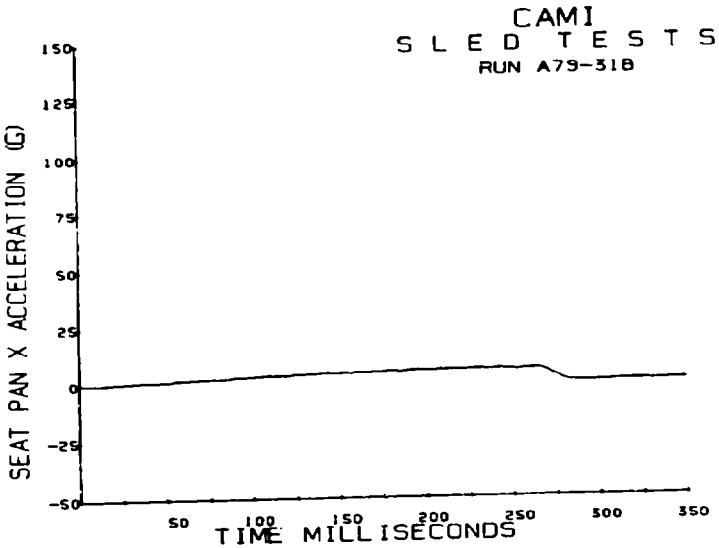

CAMI
S L E D T E S T S
RUN A79-31A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

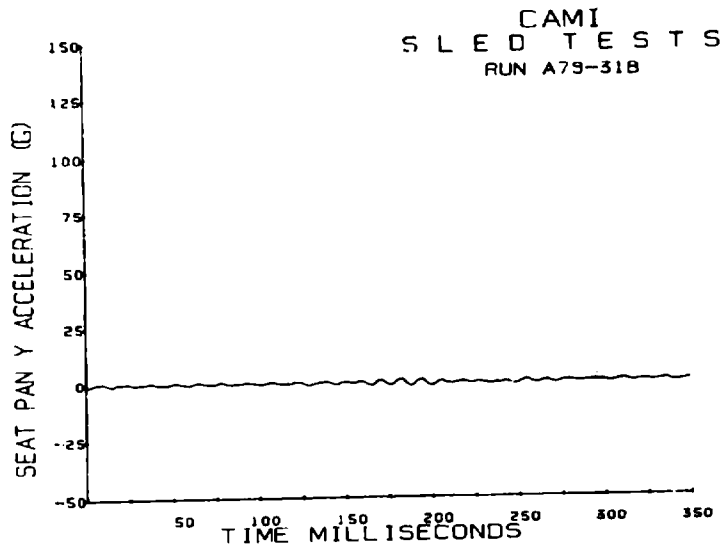

CAMI
S L E D T E S T S
RUN A79-31B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

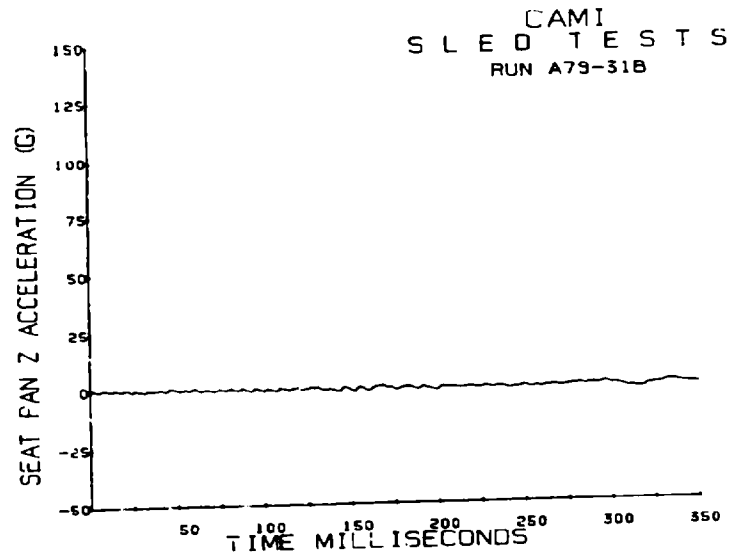

CAMI
S L E D T E S T S
RUN A79-31B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

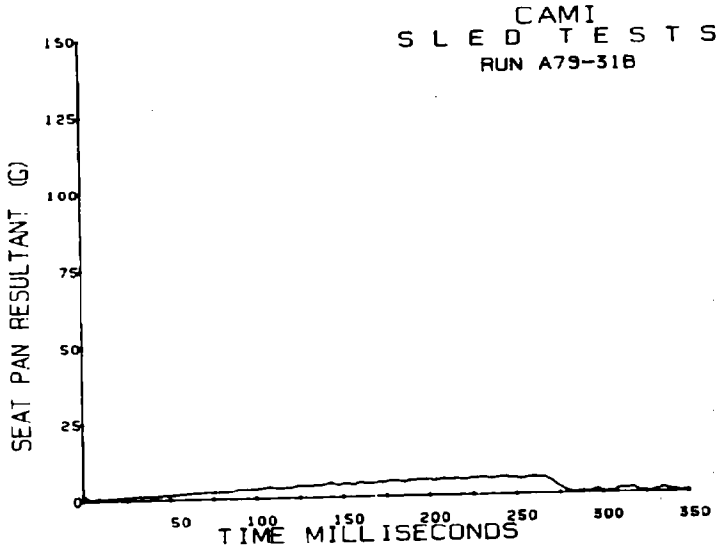

CAMI
S L E D T E S T S
RUN A79-31B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

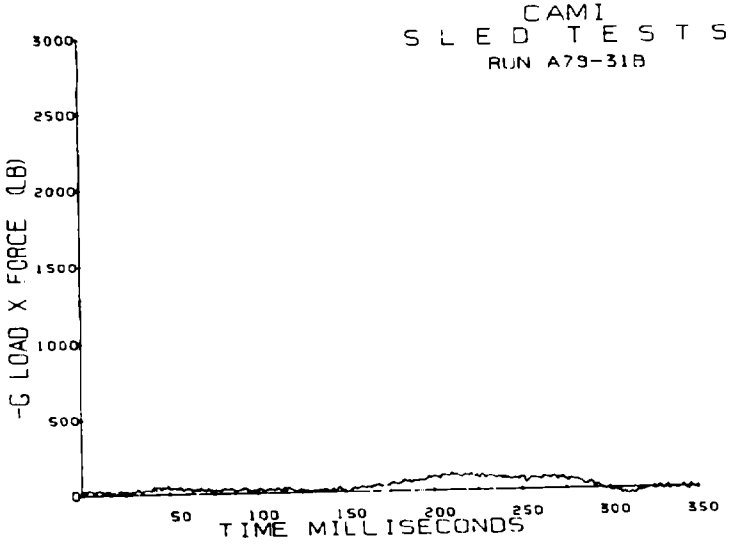

CAMI
S L E D T E S T S
RUN A79-31B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

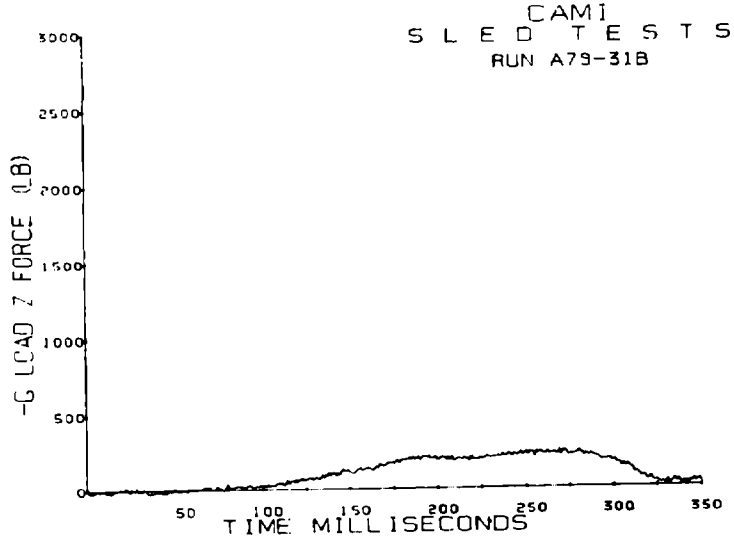

CAMI
S L E D T E S T S
RUN A79-31B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

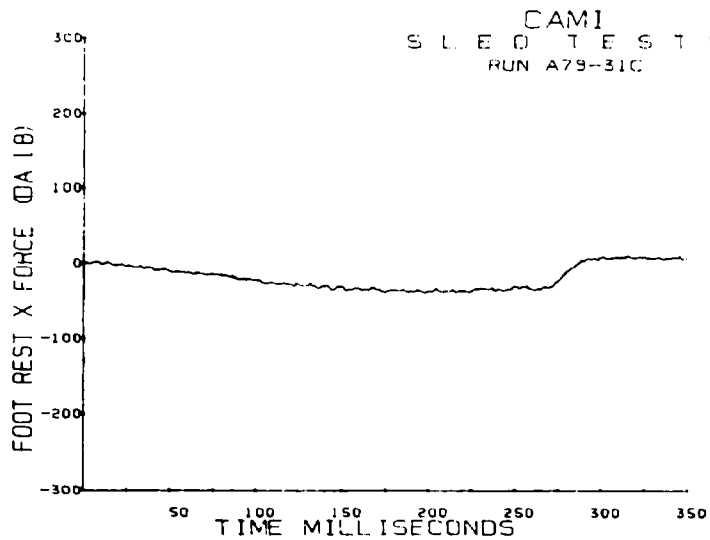

CAMI
S L E D T E S T S
RUN A79-31B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

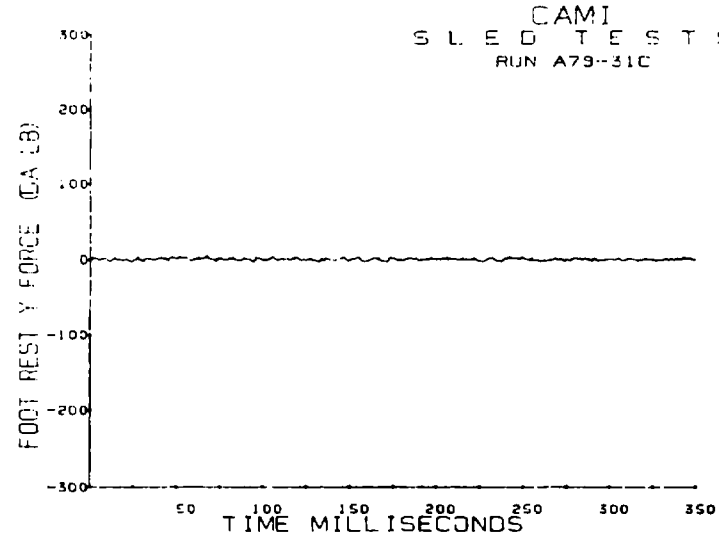

CAMI
S L E D T E S T S
RUN A79-31B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

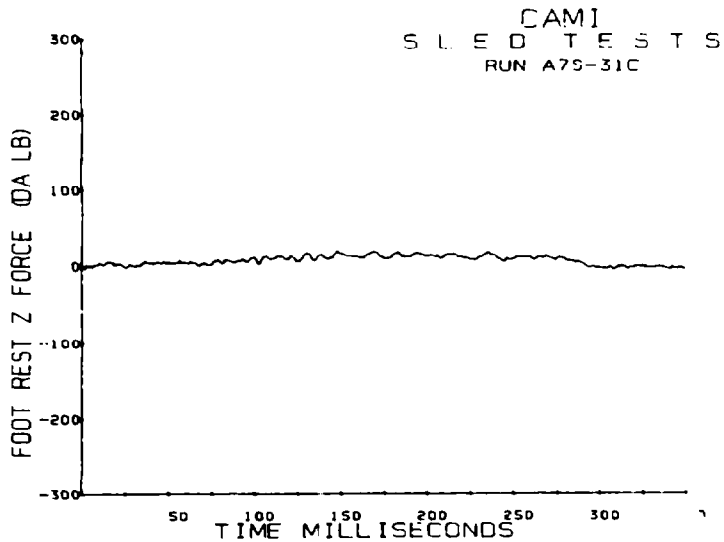

CAMI
S L E D T E S T S
RUN A79-31B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

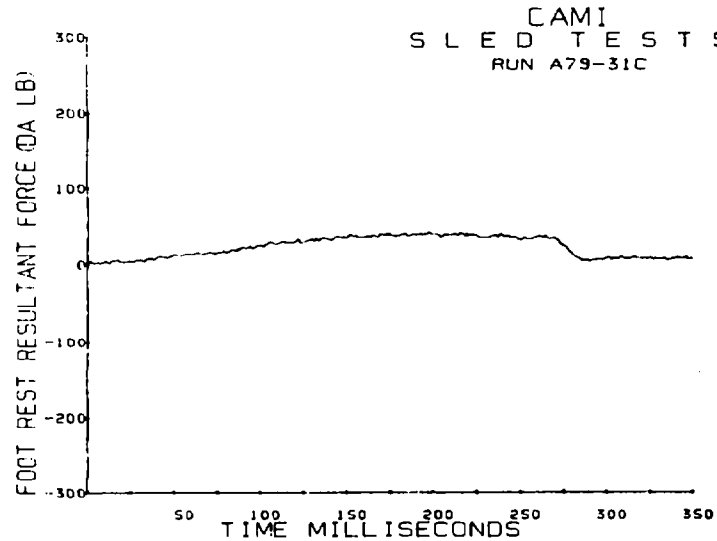

CAMI
SLED TESTS
RUN A79-31B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

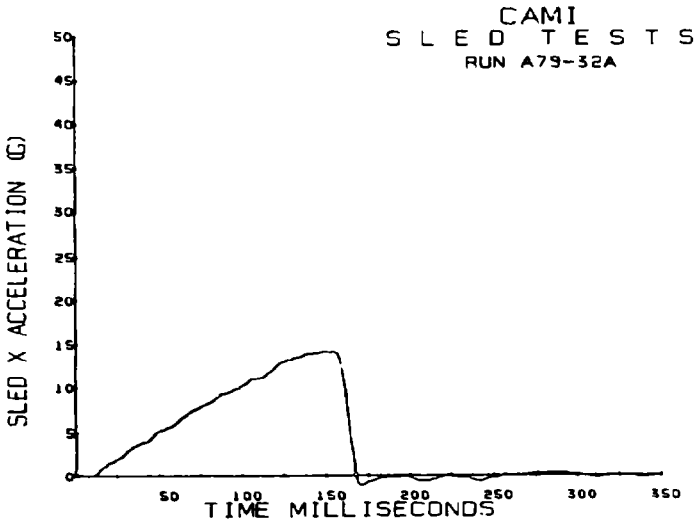

CAMI
SLED TESTS
RUN A79-31B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

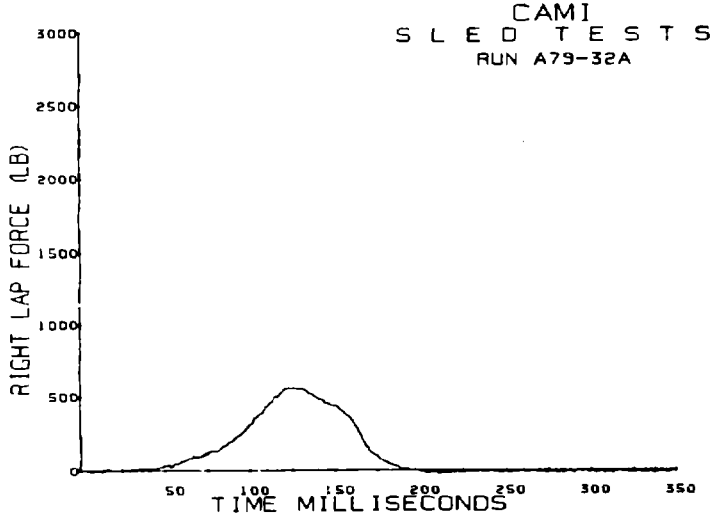

CAMI
S L E D T E S T S
RUN A79-31C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

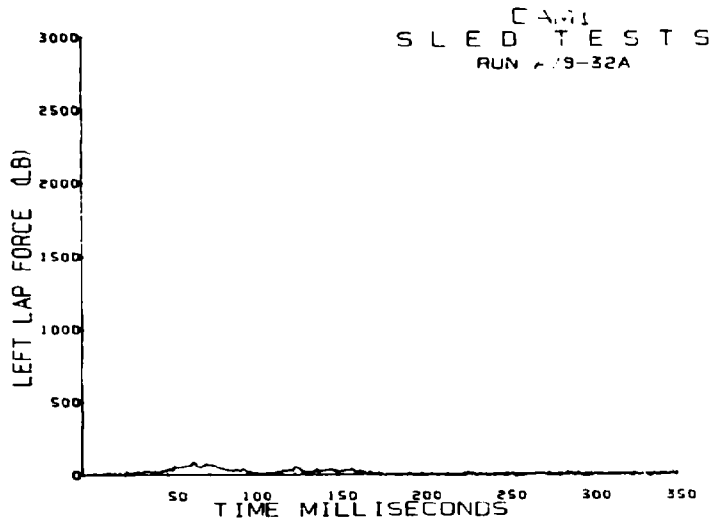

CAMI
S L E D T E S T S
RUN A79-31C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

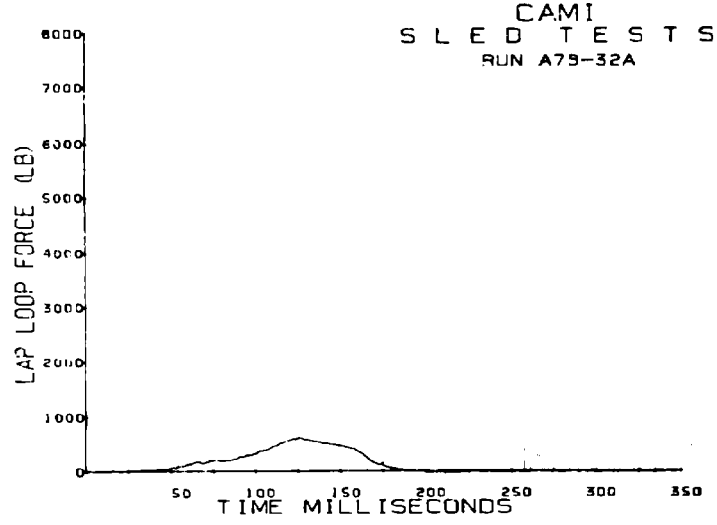

CAMI
S L E D T E S T S
RUN A79-31C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
TIME MILLISECONDS

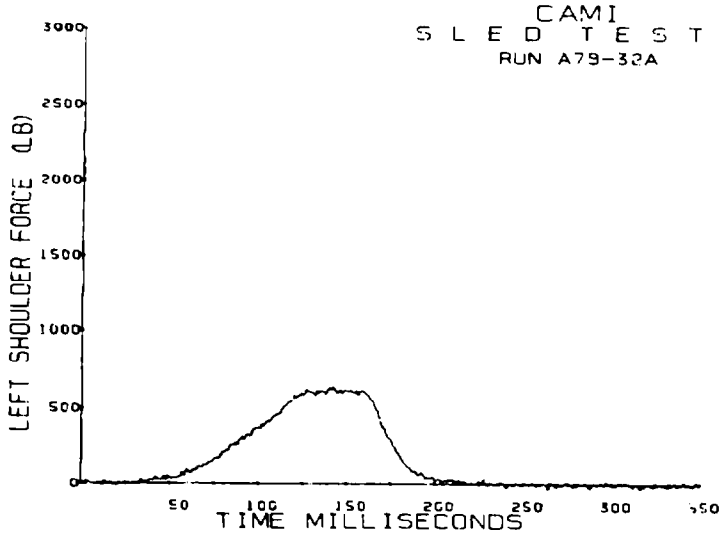

CAMI
S L E D T E S T S
RUN A79-31C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

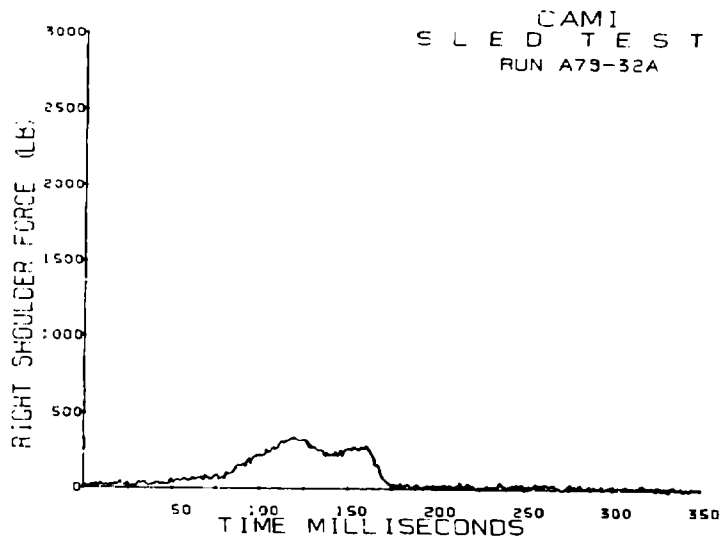

CAMI
SLED TESTS
RUN A79-32A
SLED X ACCELERATION (G)
TIME MILLISECONDS

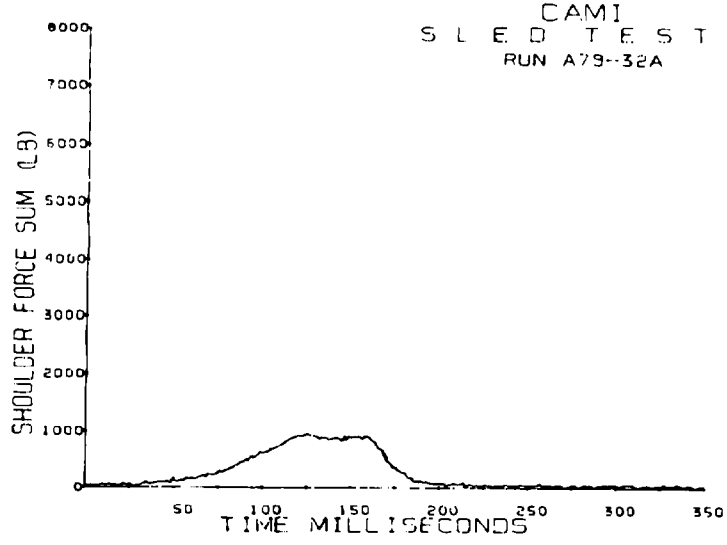

CAMI
SLED TESTS
RUN A79-32A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

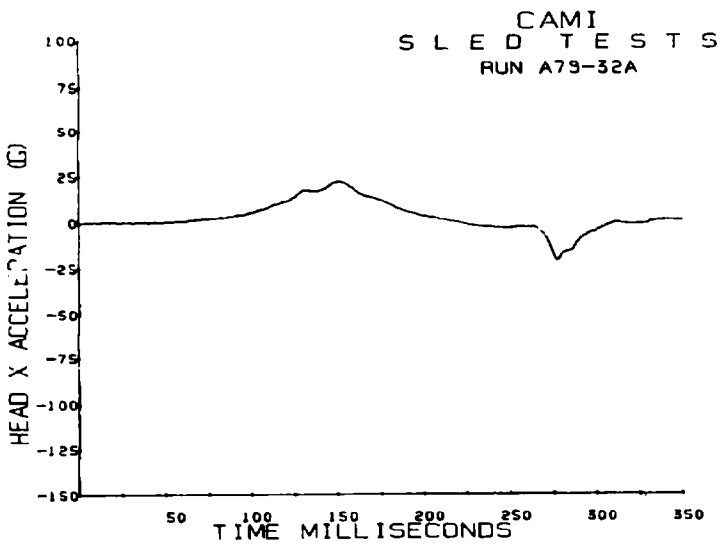

SLED TESTS
LEFT LAP FORCE (LB)
TIME MILLISECONDS

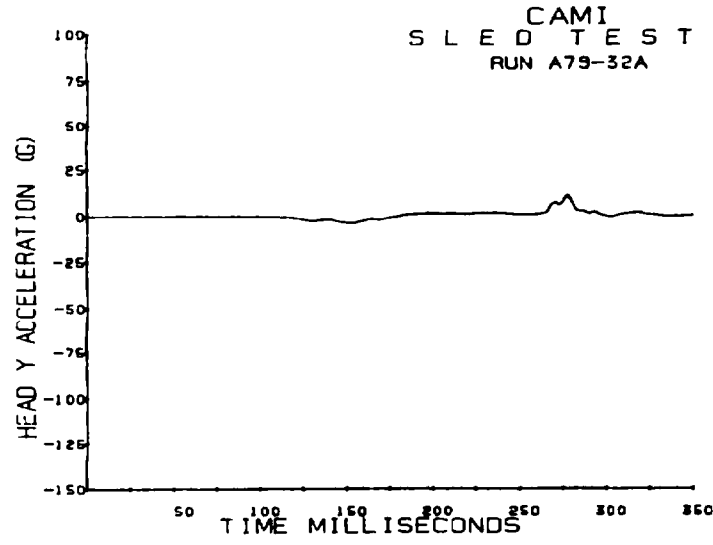

CAMI
SLED TESTS
RUN A79-32A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

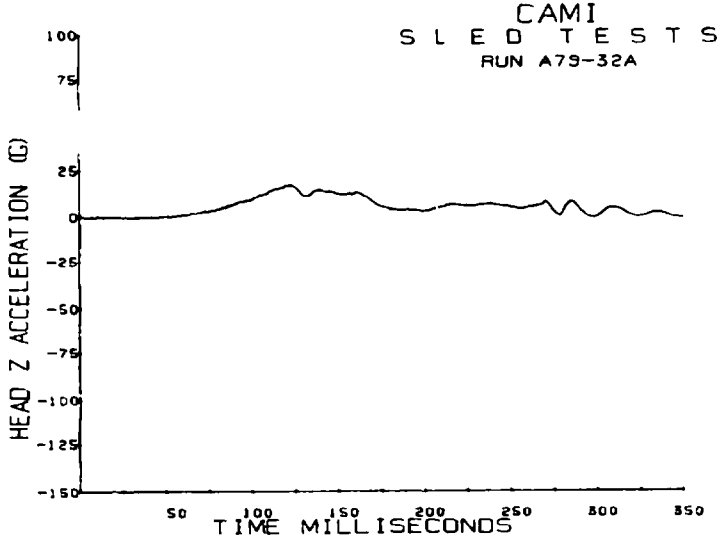

CAMI
SLED TESTS
RUN A79-32A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

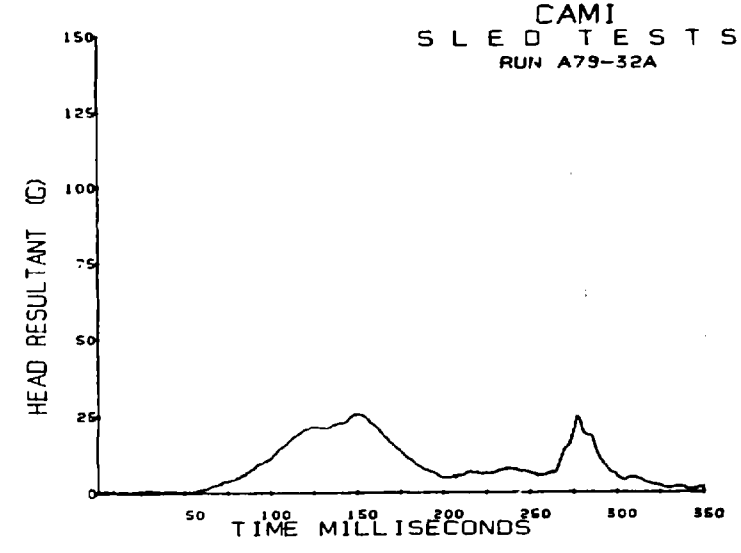

CAMI
SLED TESTS
RUN A79-32A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

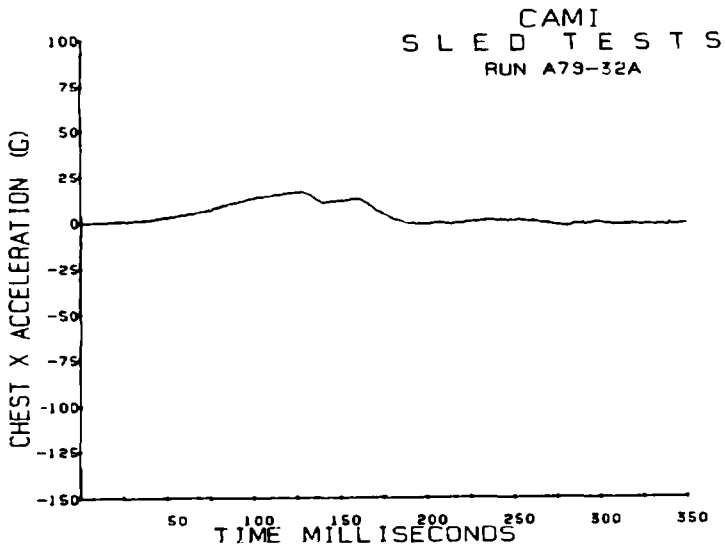

CAMI
SLED TESTS
RUN A79-32A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

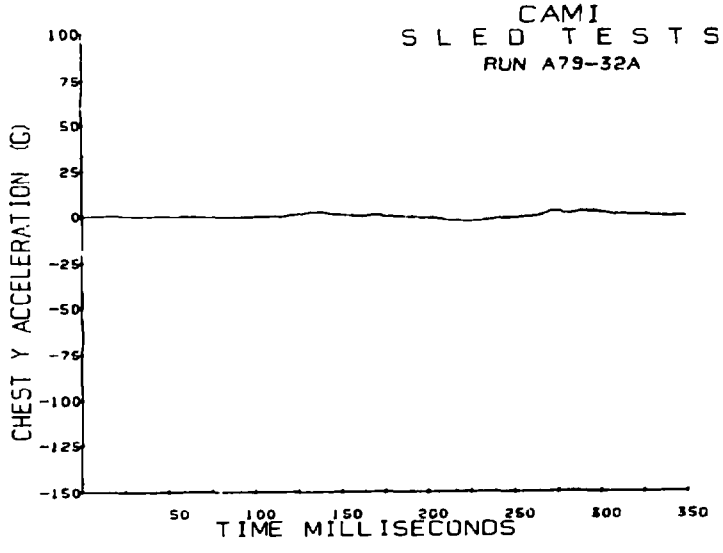

CAMI
SLED TESTS
RUN A79-32A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

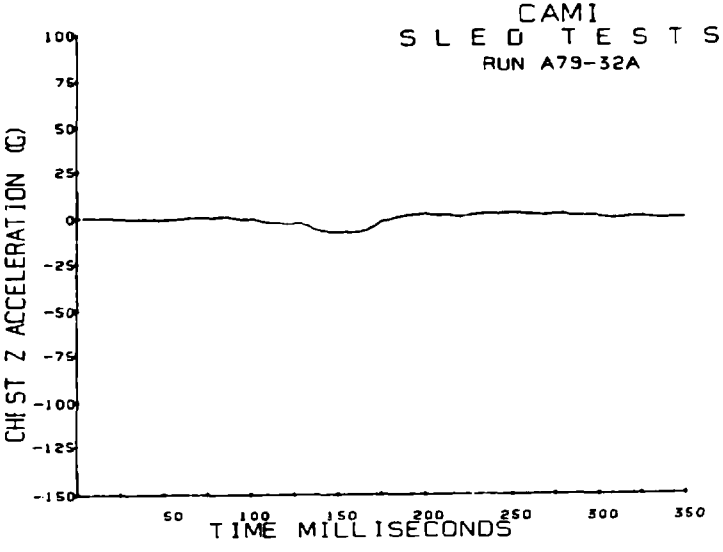

CAMI
SLED TESTS
RUN A79-32A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

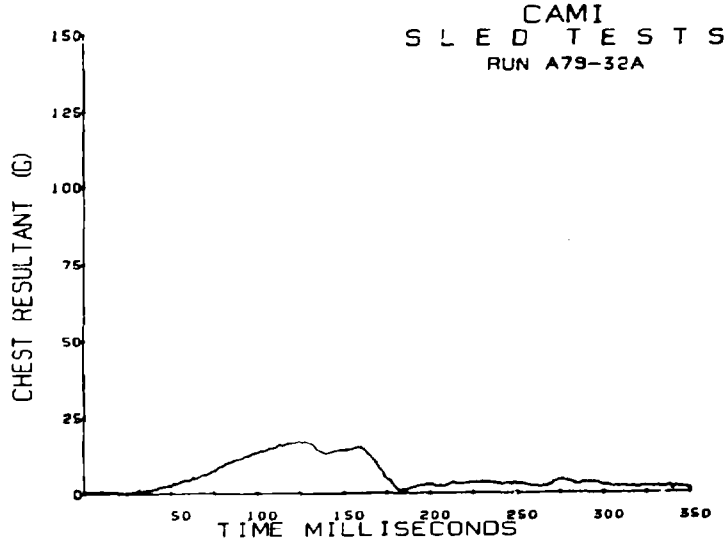

CAMI
SLED TESTS
RUN A79-32A
HEAD Z ACCELERATION (G)
100
75
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

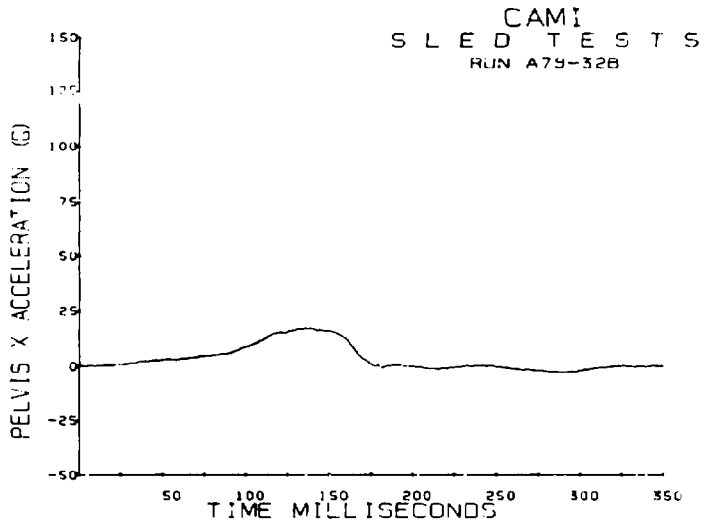

CAMI
SLED TESTS
RUN A79-32A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

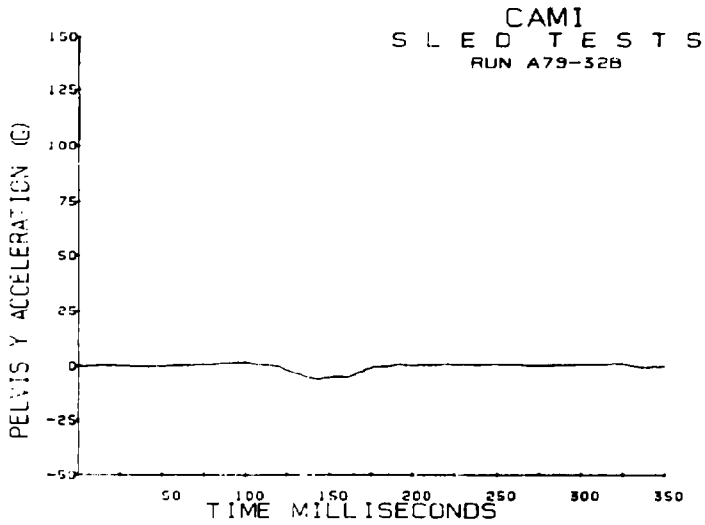

CAMI
SLED TESTS
RUN A79-32A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

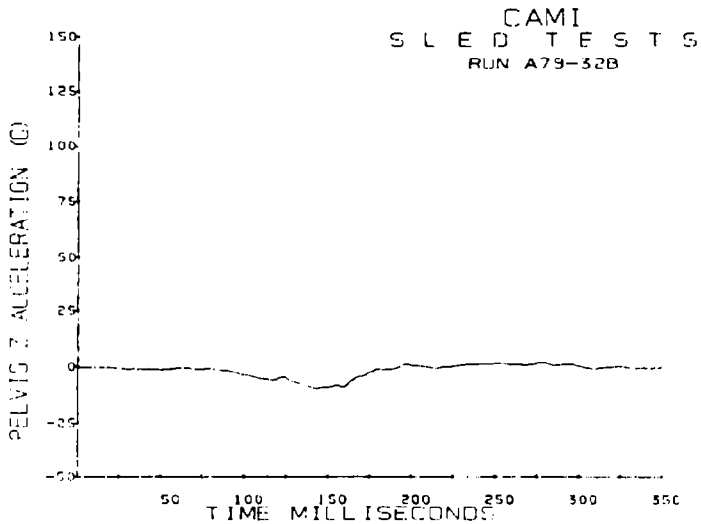

CAMI
SLED TESTS
RUN A79-32A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

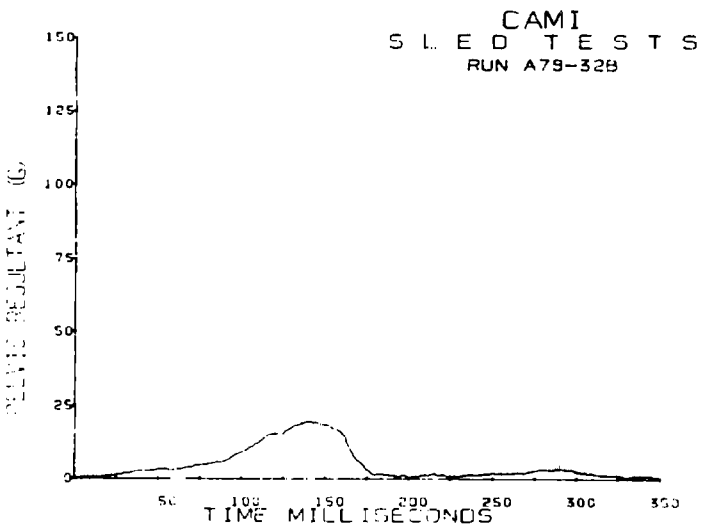

CAMI
SLED TESTS
RUN A79-32A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

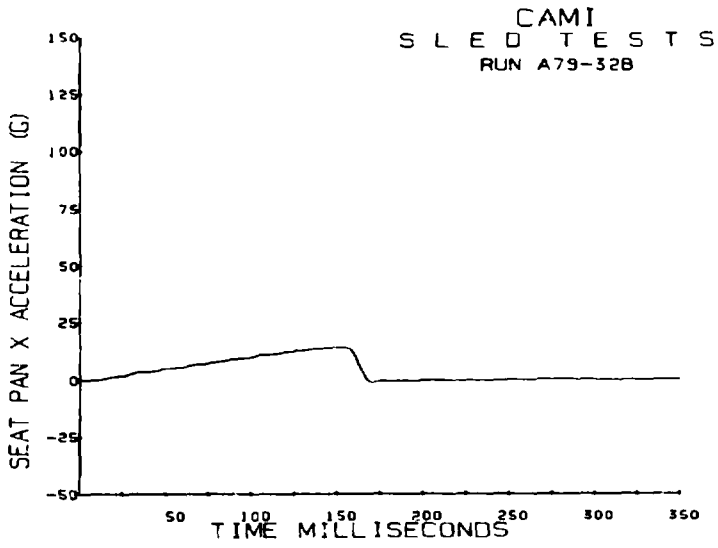

CAMI
SLED TESTS
RUN A79-32A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

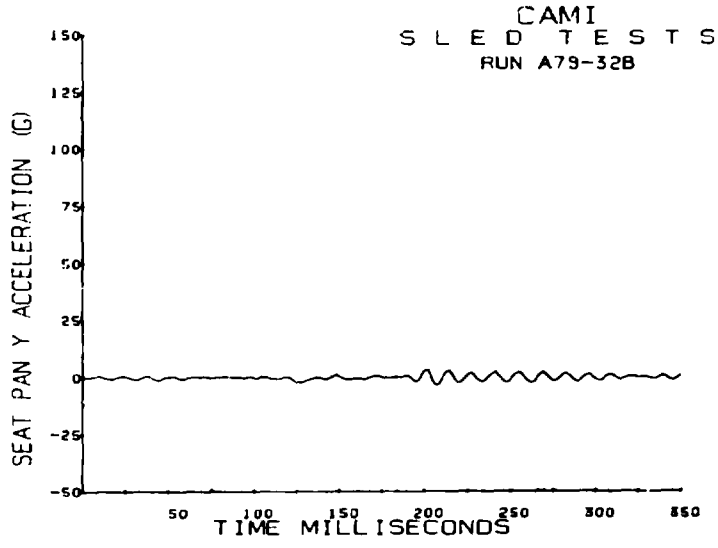

CAMI
S L E D T E S T S
RUN A79-32B
PELVIS X ACCELERATION (G)
150
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

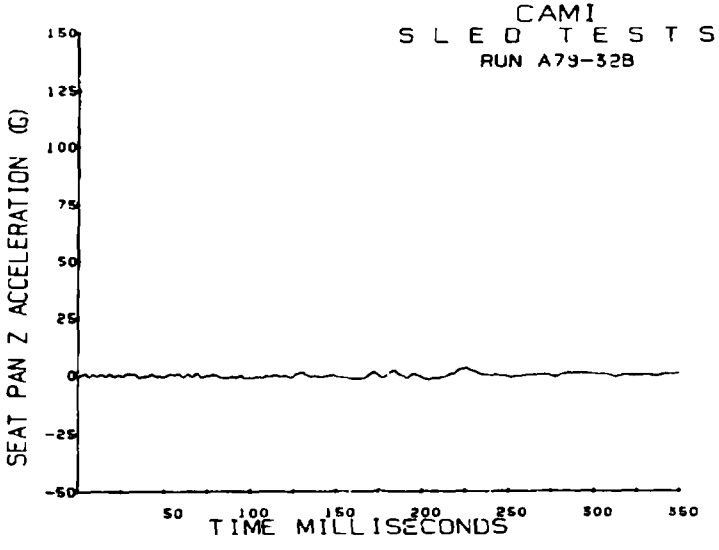

CAMI
S L E D T E S T S
RUN A79-32B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

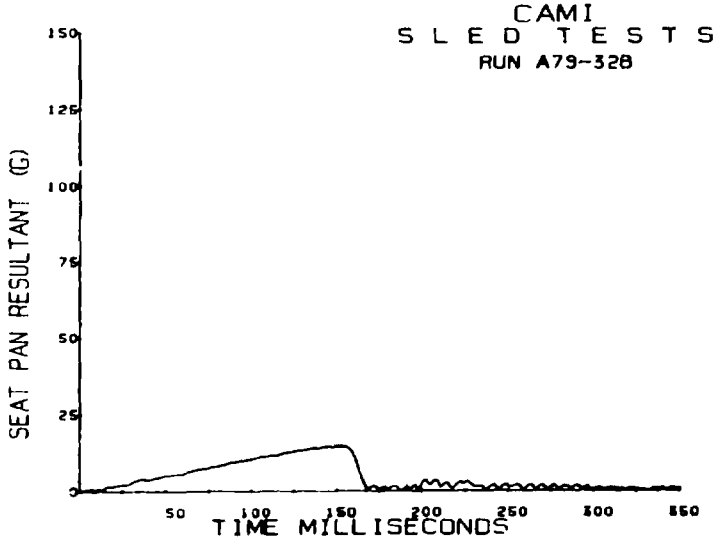

CAMI
S L E D T E S T S
RUN A79-32B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

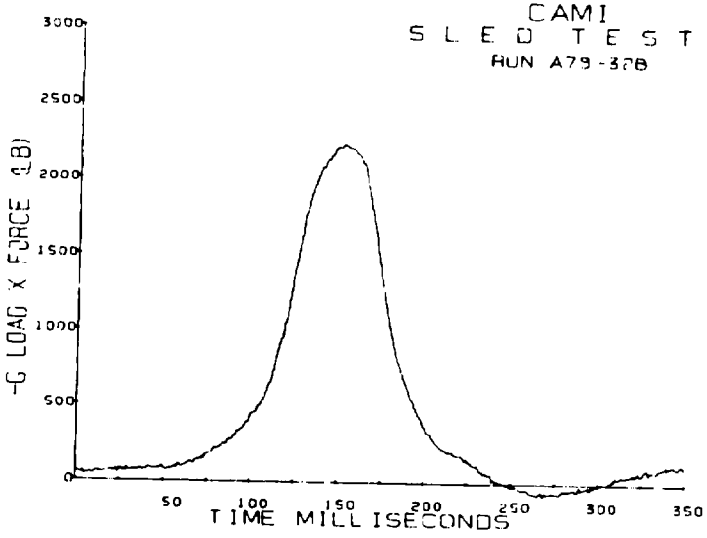

CAMI
S L E D T E S T S
RUN A79-32B
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

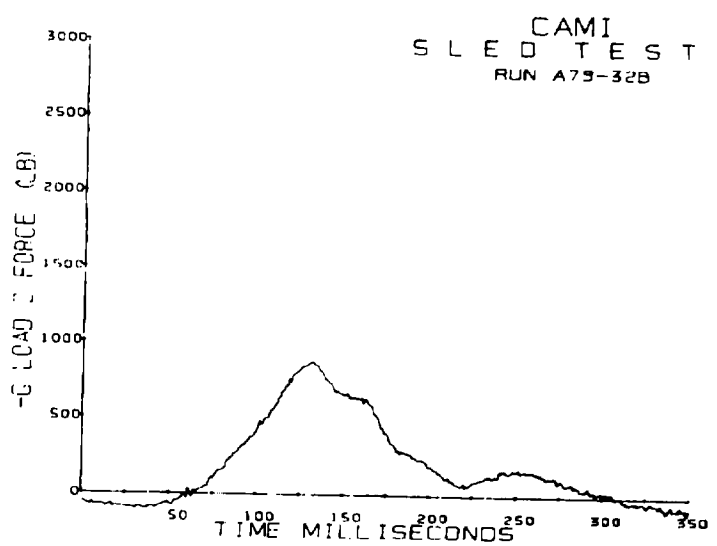

CAMI
SLED TESTS
RUN A79-32B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

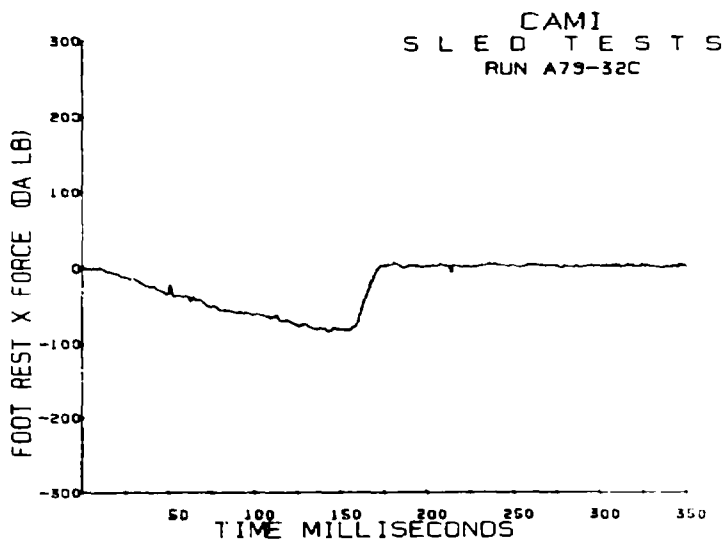

CAMI
SLED TESTS
RUN A79-32B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

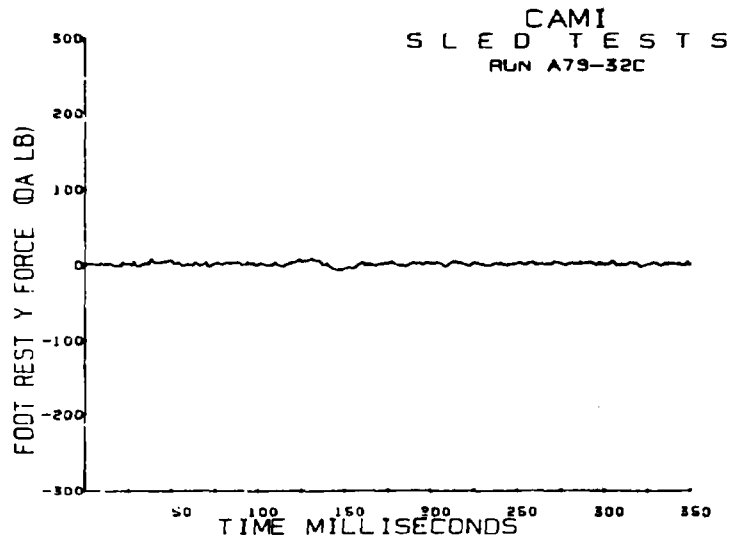

CAMI
SLED TESTS
RUN A79-32B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

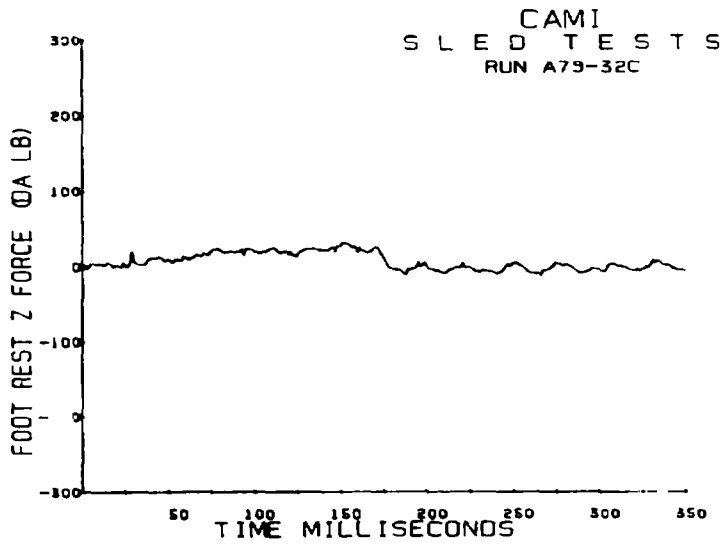

CAMI
SLED TESTS
RUN A79-32B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

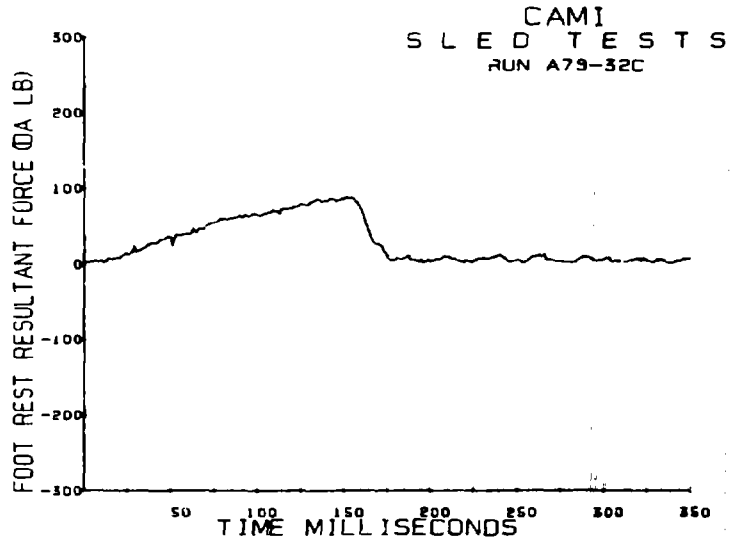

CAMI
SLED TESTS
RUN A79-32B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

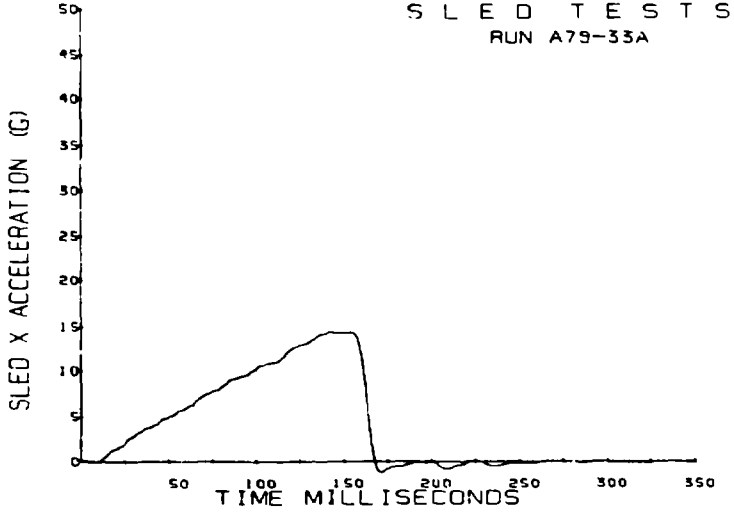

CAMI
SLED TESTS
RUN A79-32B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

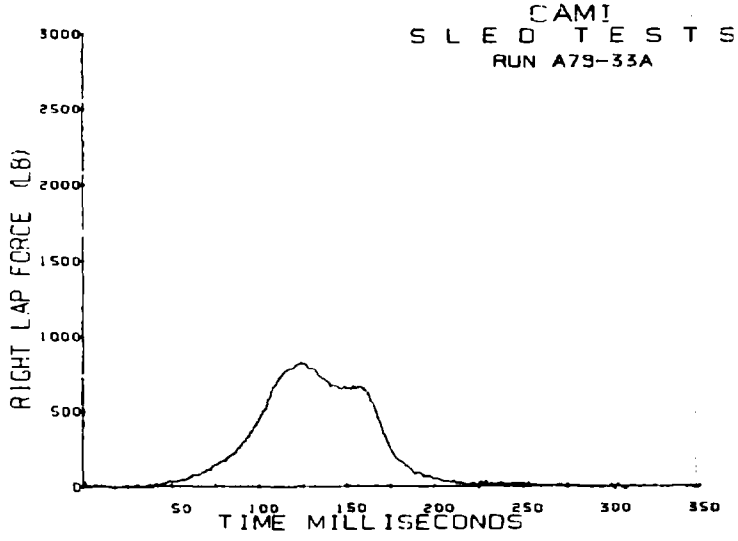

CAMI
S L E D T E S T S
RUN A79-32C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

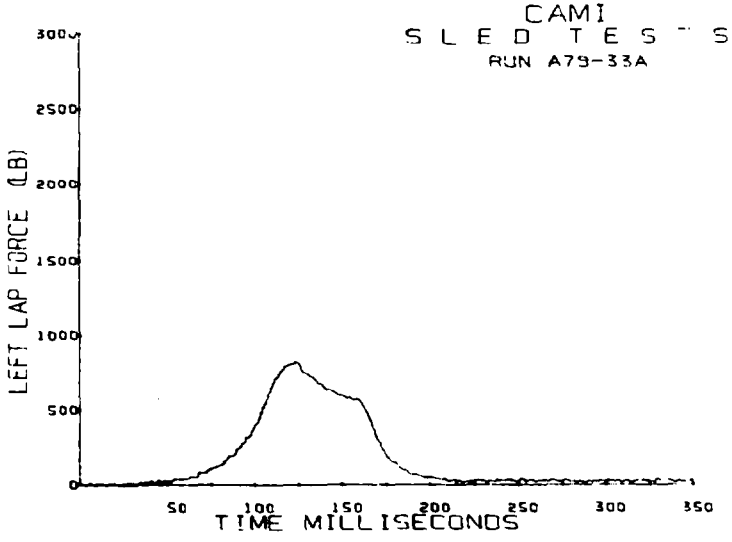

CAMI
S L E D T E S T S
RUN A79-32C
FOOT REST Y FORCE (DA LB)
500
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

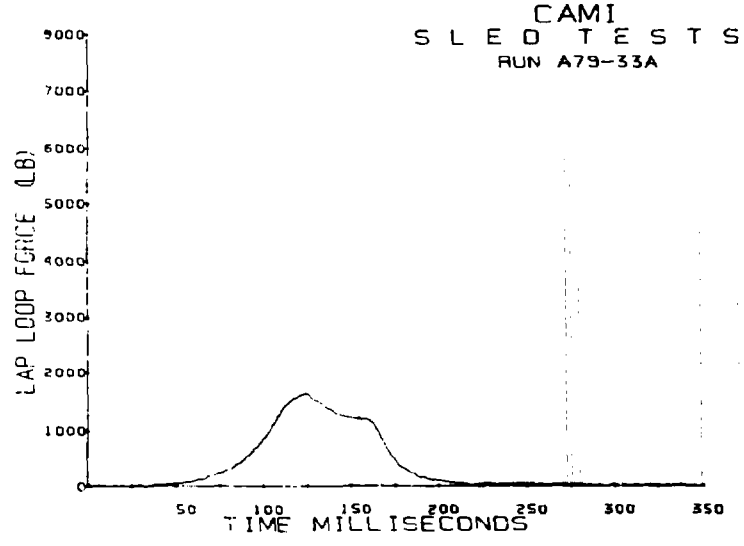

CAMI
S L E D T E S T S
RUN A79-32C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

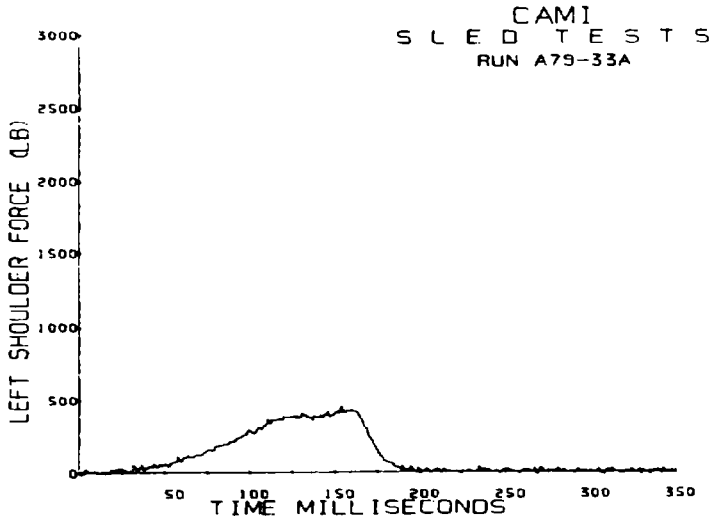

CAMI
S L E D T E S T S
RUN A79-32C
FOOT REST RESULTANT FORCE (DA LB)
500
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

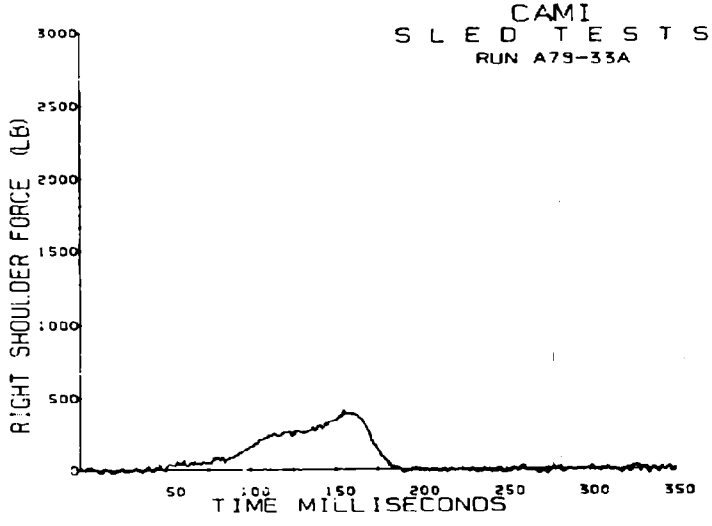

CAMI
S L E D T E S T S
RUN A79-33A
SLED X ACCELERATION (G)
TIME MILLISECONDS

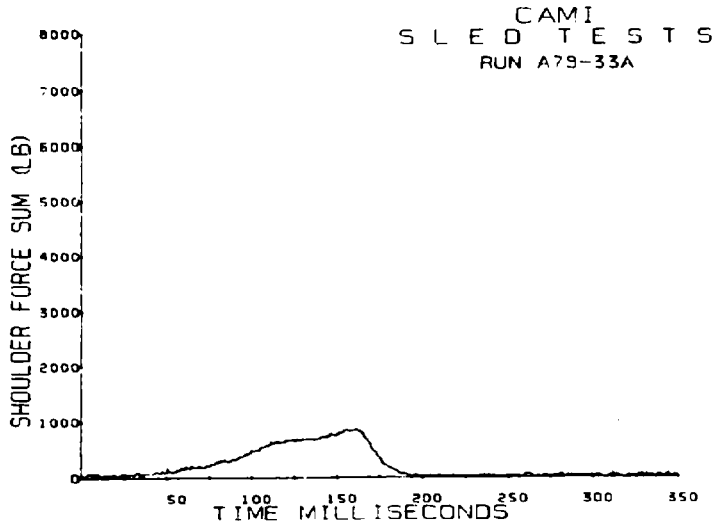

CAMI
S L E D T E S T S
RUN A79-33A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

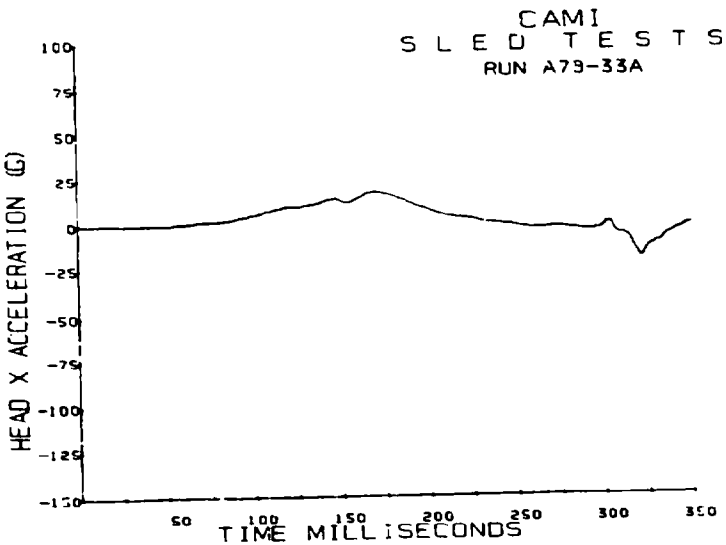

CAMI
S L E D T E S T S
RUN A79-33A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

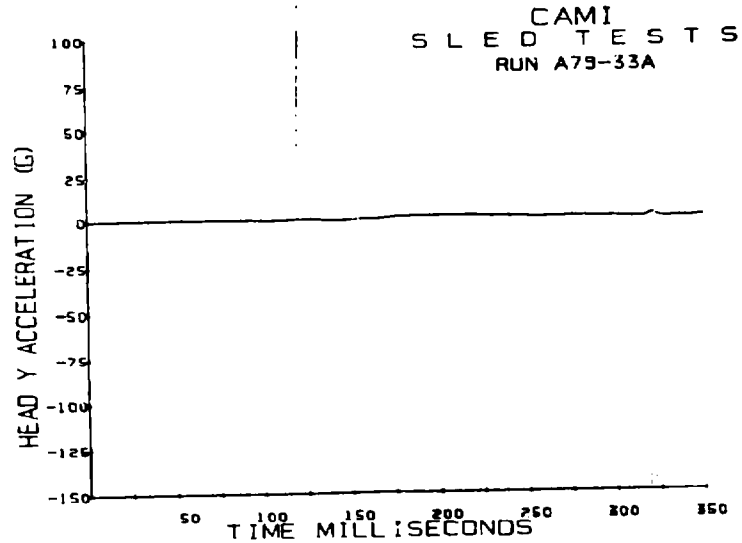

CAMI
S L E D T E S T S
RUN A79-33A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

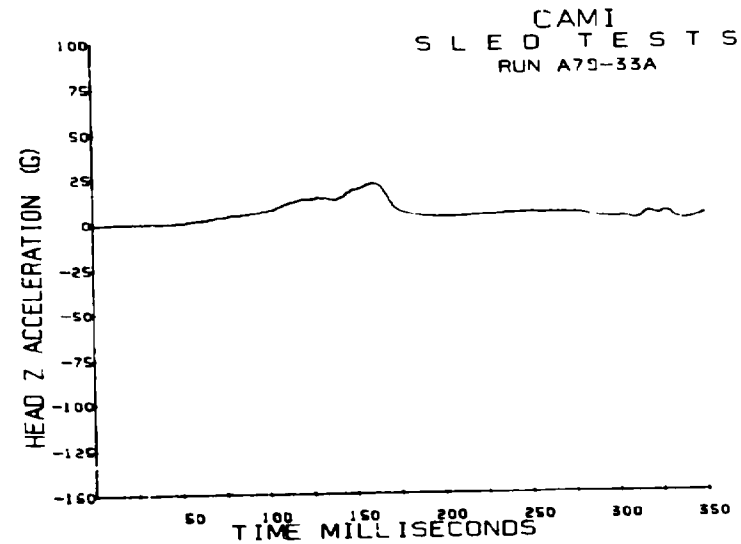

CAMI
SLED TESTS
RUN A79-33A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

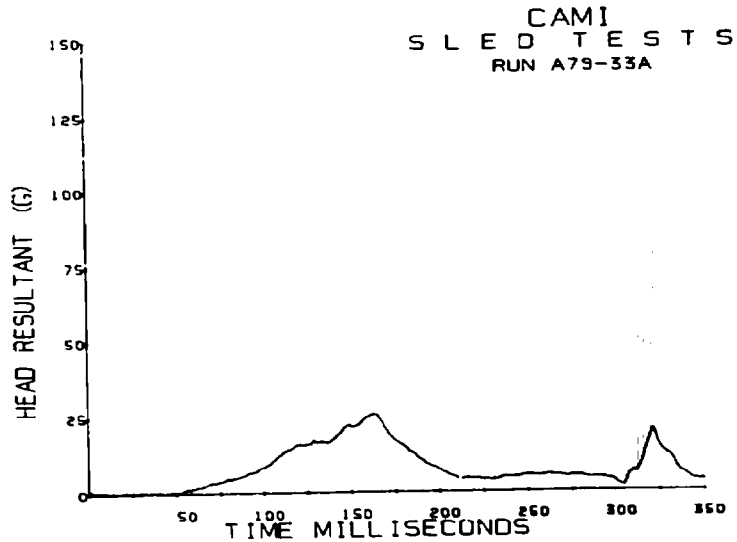

CAMI
SLED TESTS
RUN A79-33A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

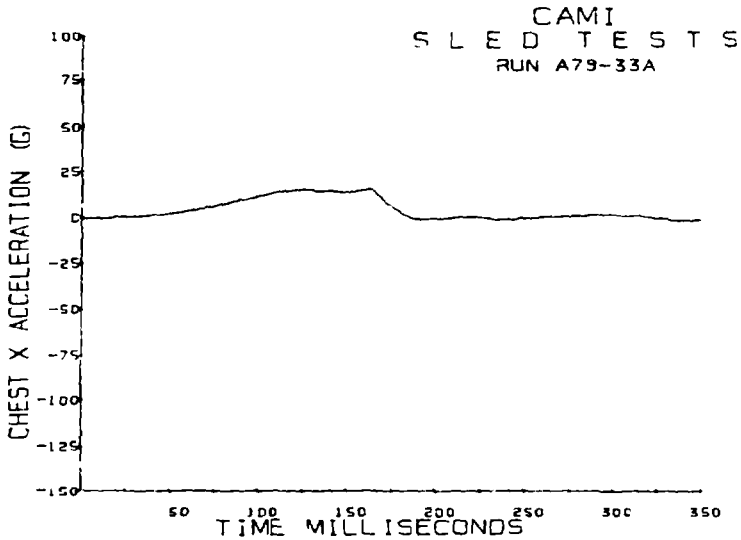

CAMI
SLED TESTS
RUN A79-33A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

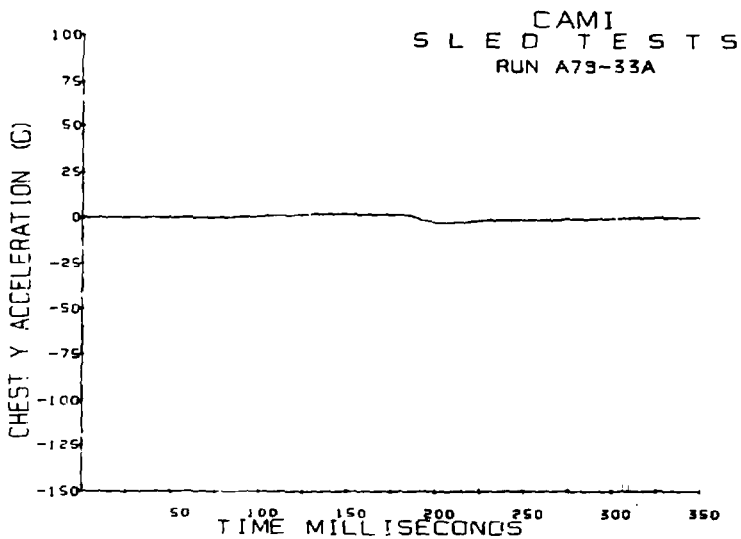

CAMI
S L E D T E S T S
RUN A79-33A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

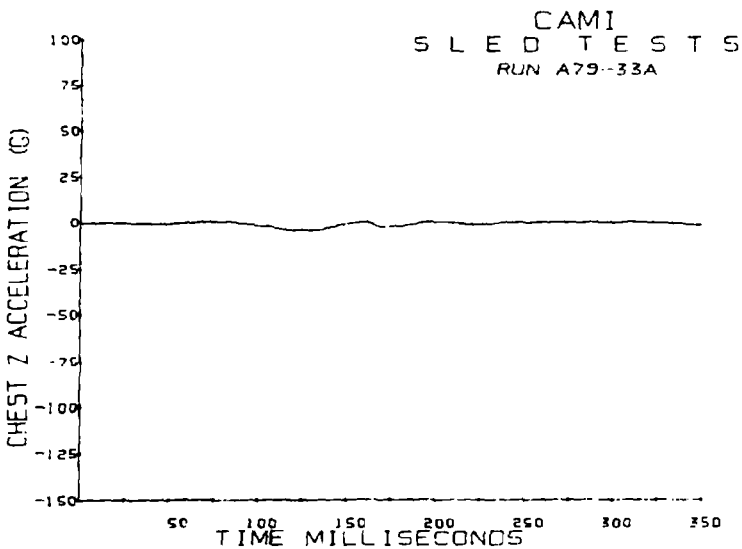

CAMI
S L E D T E S T S
RUN A79-33A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

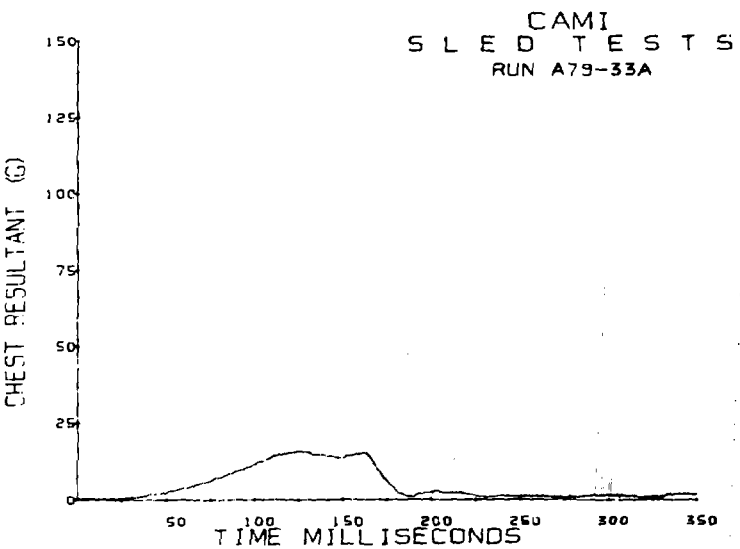

CAMI
S L E D T E S T S
RUN A79-33A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

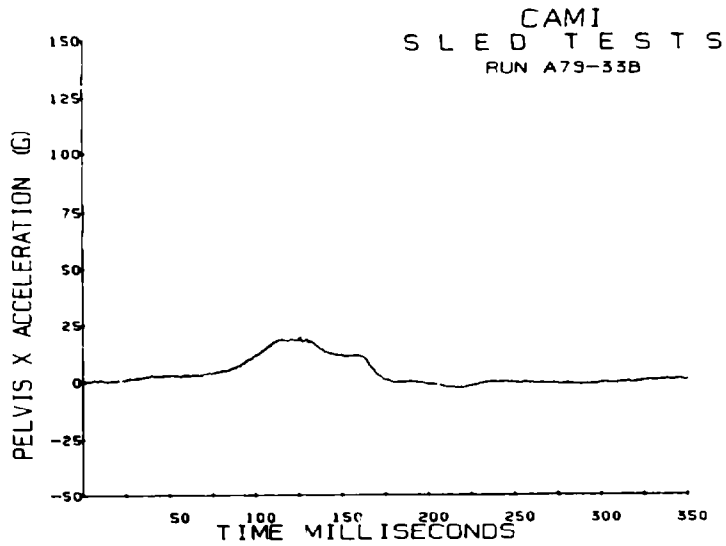

CAMI
S L E D T E S T S
RUN A79-33A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

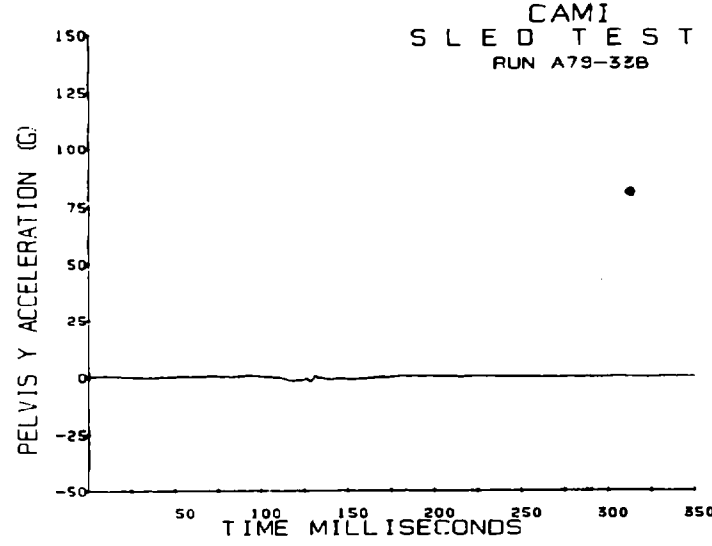

CAMI
SLED TESTS
RUN A79-33A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

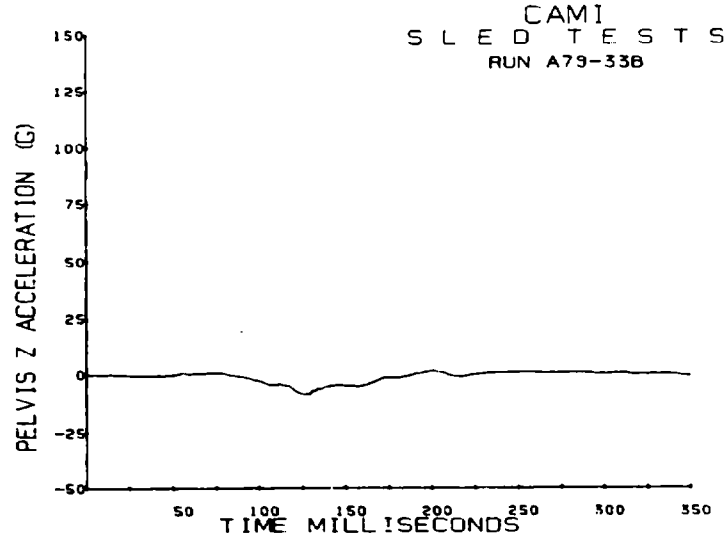

CAMI
SLED TESTS
RUN A79-33A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

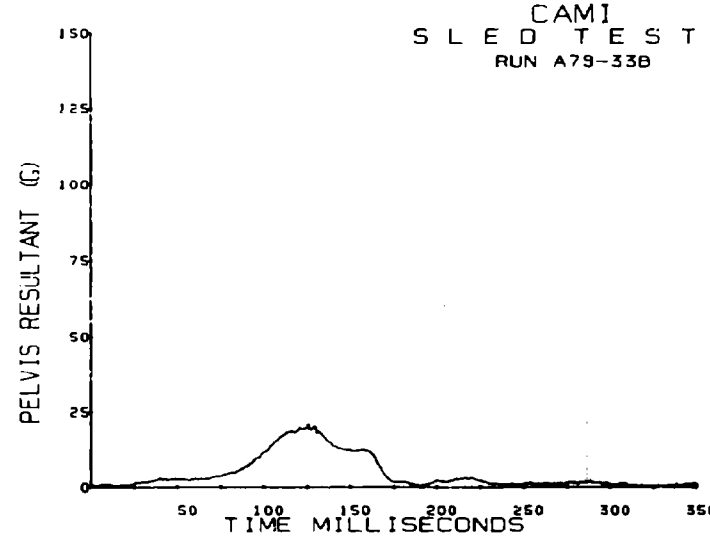

CAMI
SLED TESTS
RUN A79-33A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

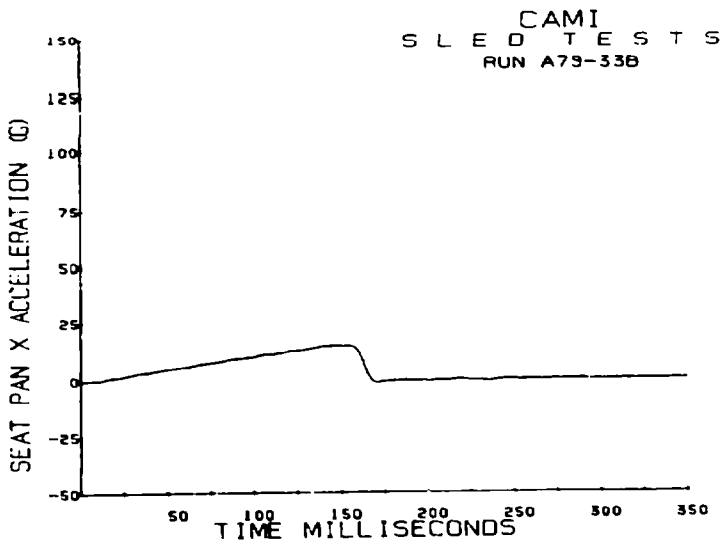

CAMI
SLED TESTS
RUN A79-33A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

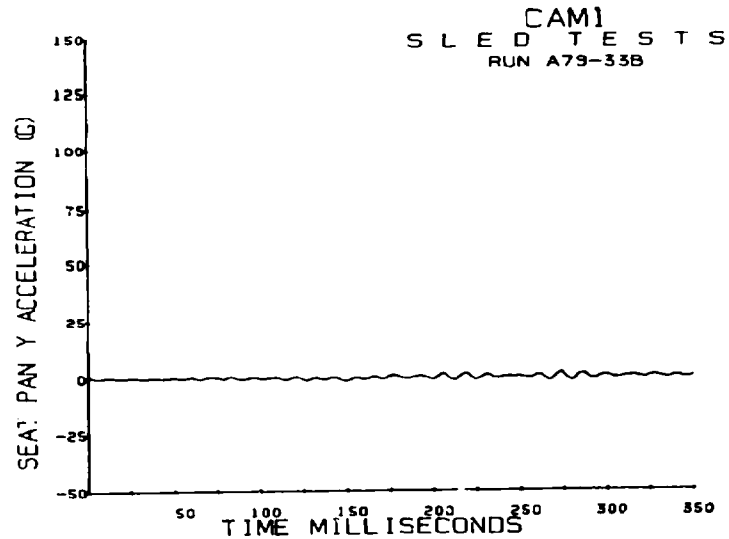

CAMI
SLED TESTS
RUN A79-33B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

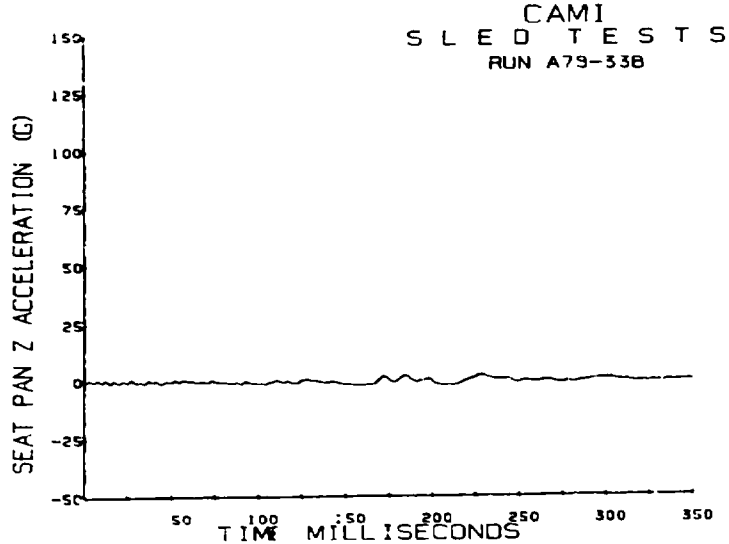

CAMI
SLED TESTS
RUN A79-33B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

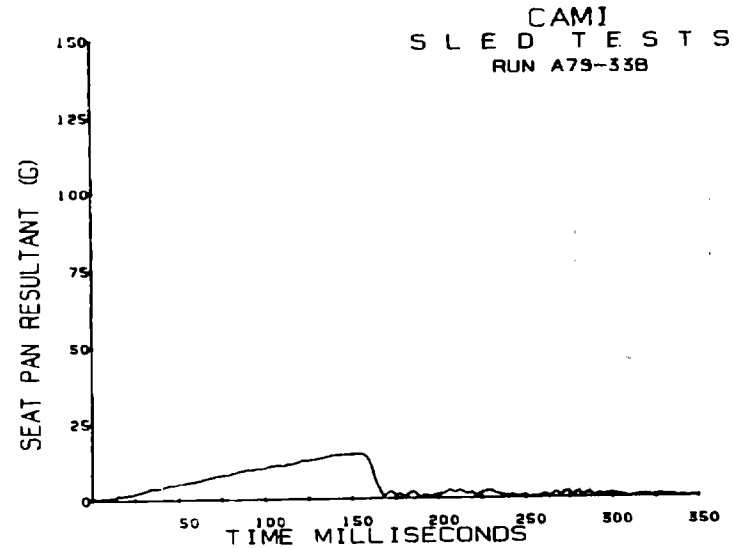

CAMI
SLED TESTS
RUN A79-33B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

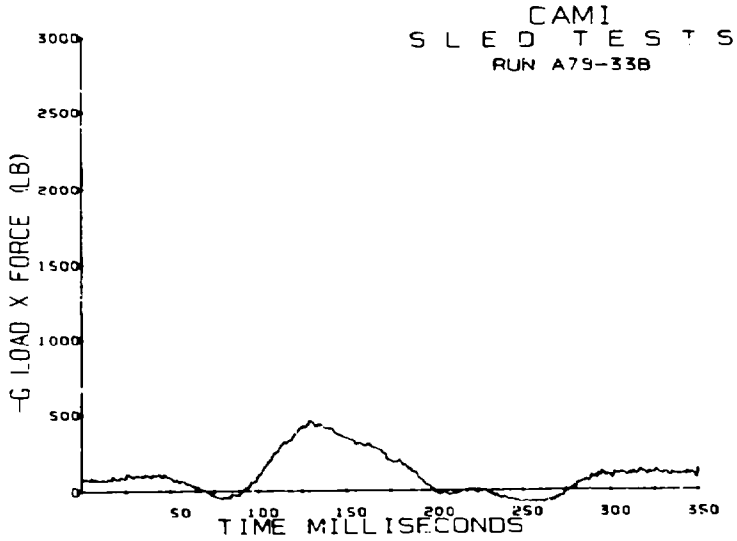

CAMI
SLED TESTS
RUN A79-33B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

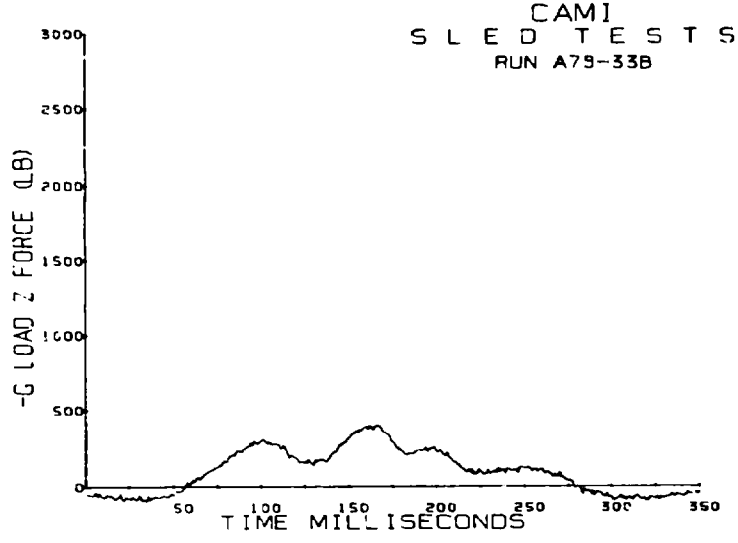

CAMI
SLED TESTS
RUN A79-33B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

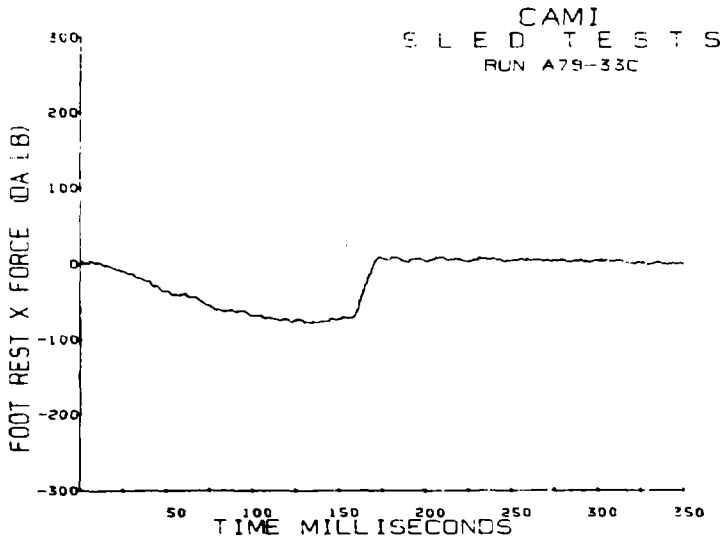

CAMI
SLED TESTS
RUN A79-33B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

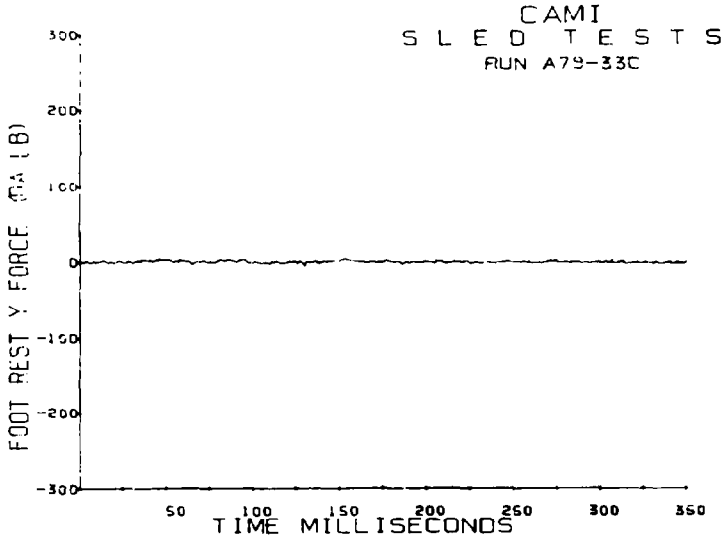

CAMI
SLED TESTS
RUN A79-33B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

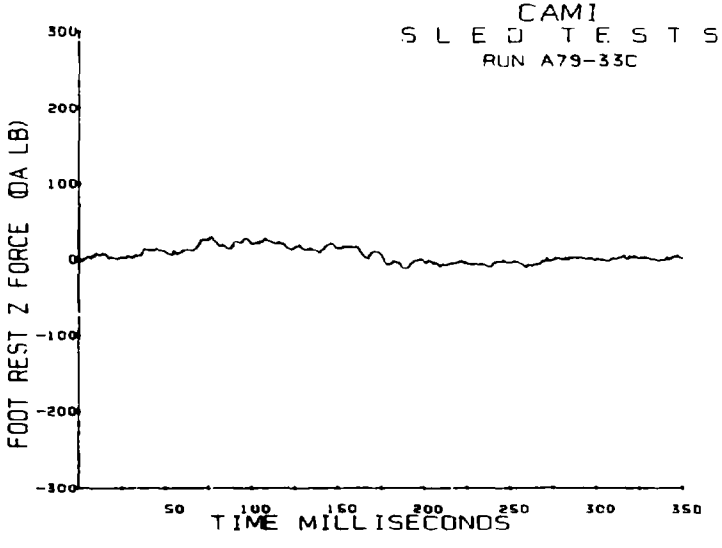

CAMI
SLED TESTS
RUN A79-33B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

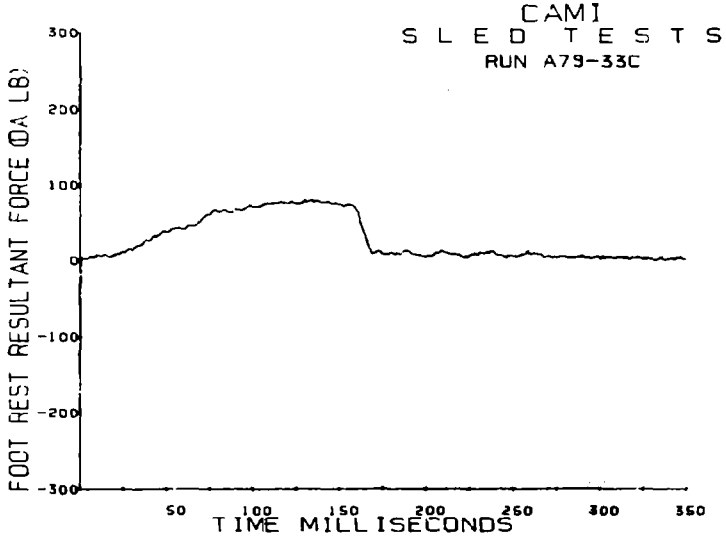

CAMI
SLED TESTS
RUN A79-33B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

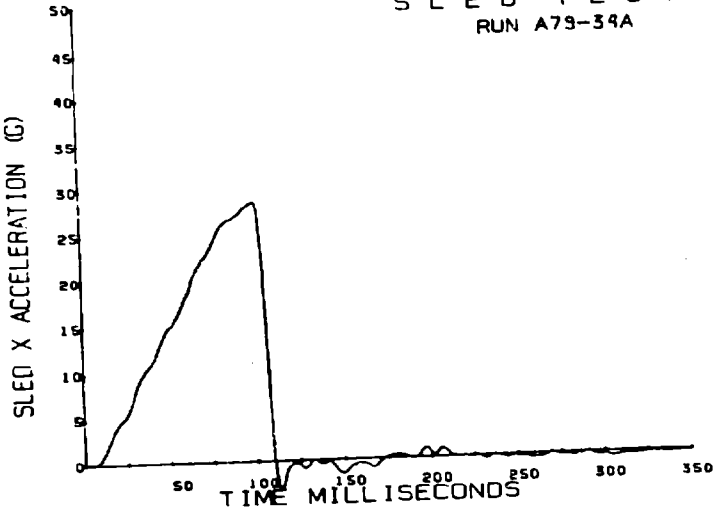

CAMI
SLED TESTS
RUN A79-33B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

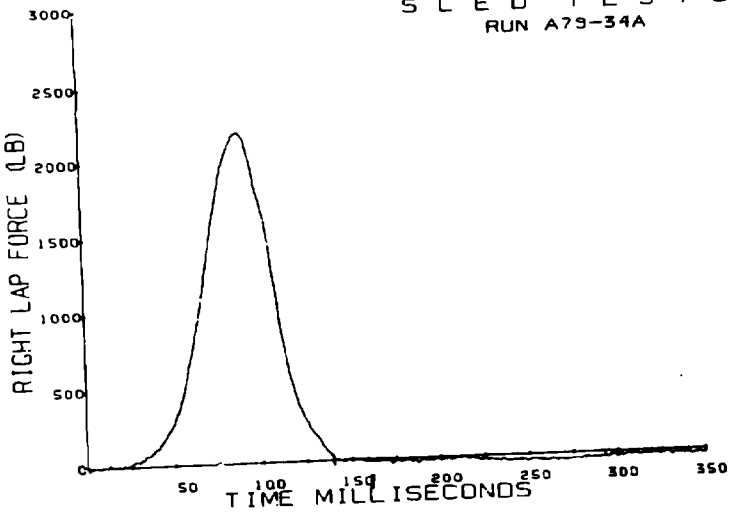

CAMI
SLED TESTS
RUN A79-33C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

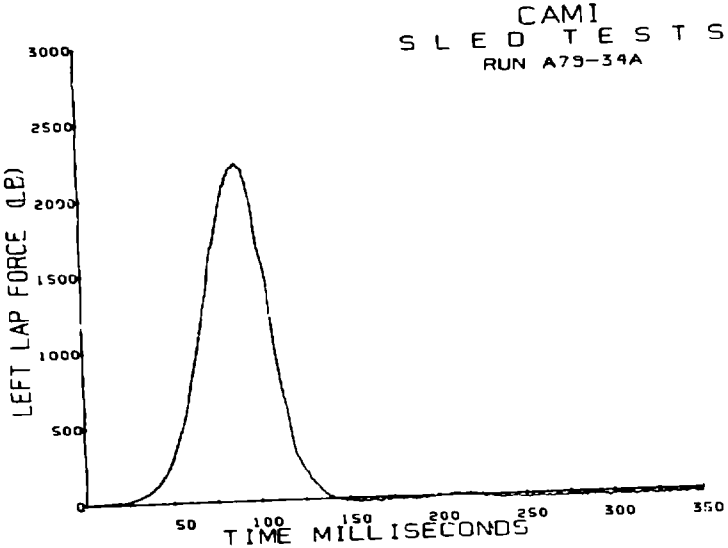

CAMI
SLED TESTS
RUN A79-33C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

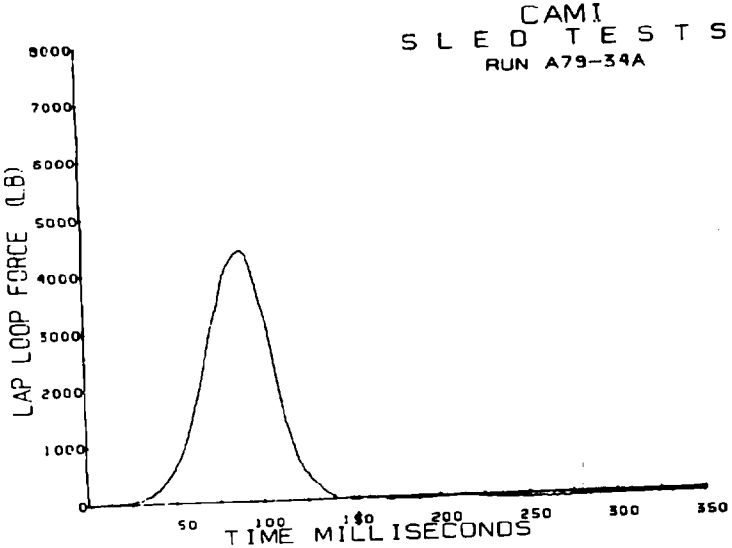

CAMI
SLED TESTS
RUN A79-33C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

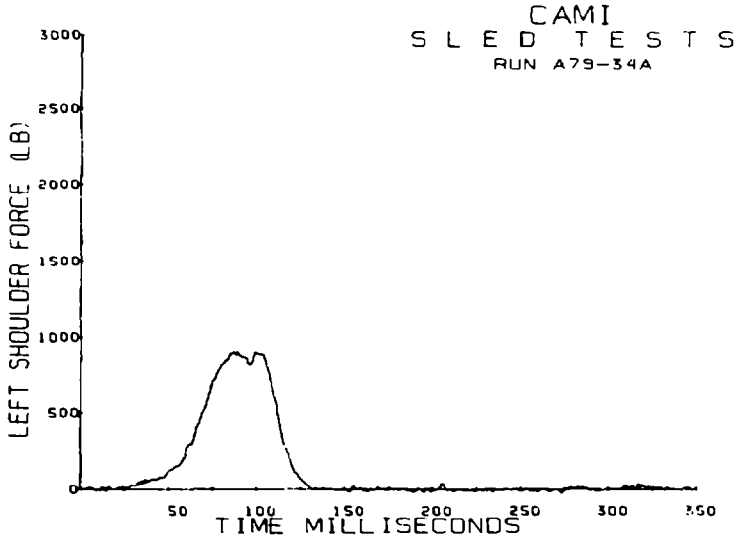

CAMI
SLED TESTS
RUN A79-33C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

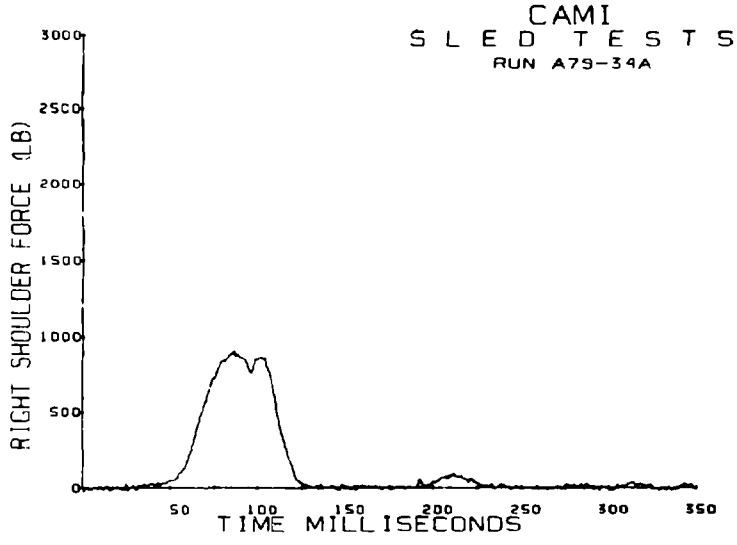

CAMI
SLED TESTS
RUN A79-34A
SLED X ACCELERATION (G)
TIME MILLISECONDS

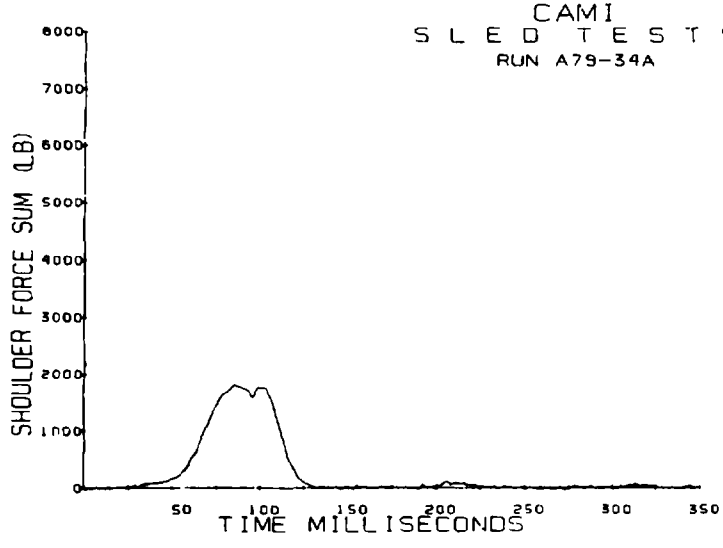

CAMI
SLED TESTS
RUN A79-34A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

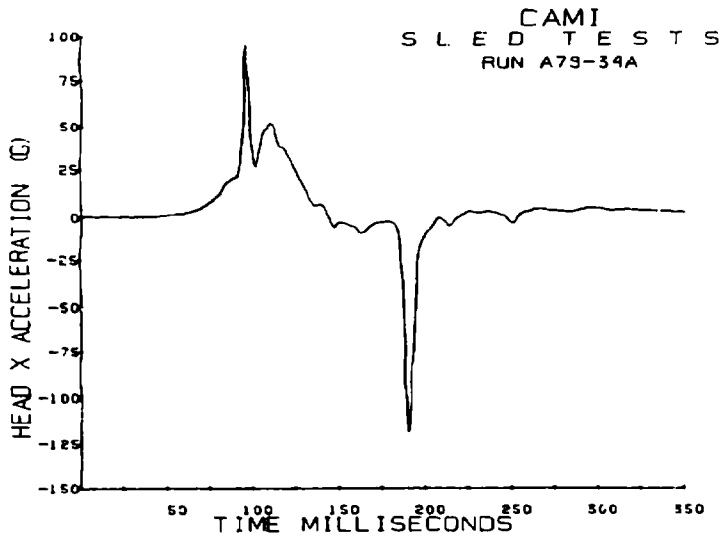

CAMI
SLED TESTS
RUN A79-34A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

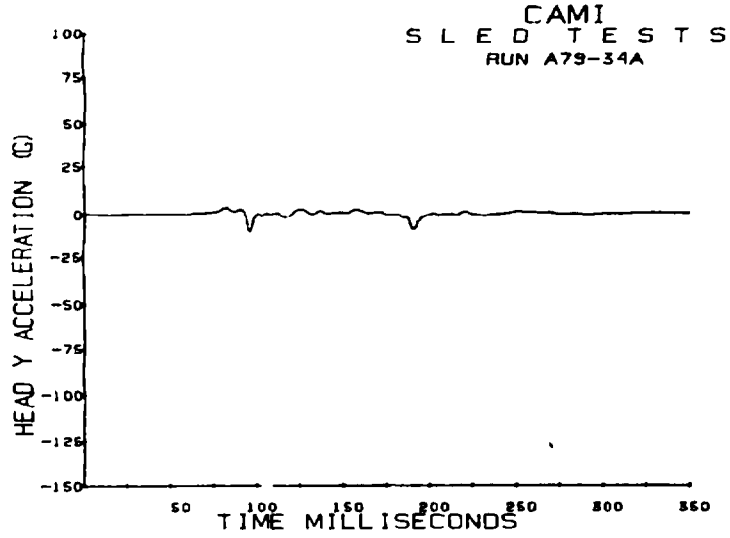

CAMI
SLED TESTS
RUN A79-34A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

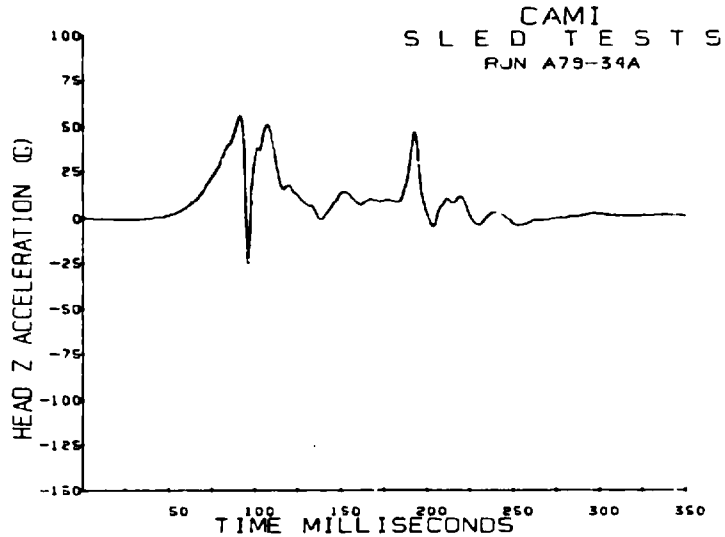

CAMI
SLED TESTS
RUN A79-34A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

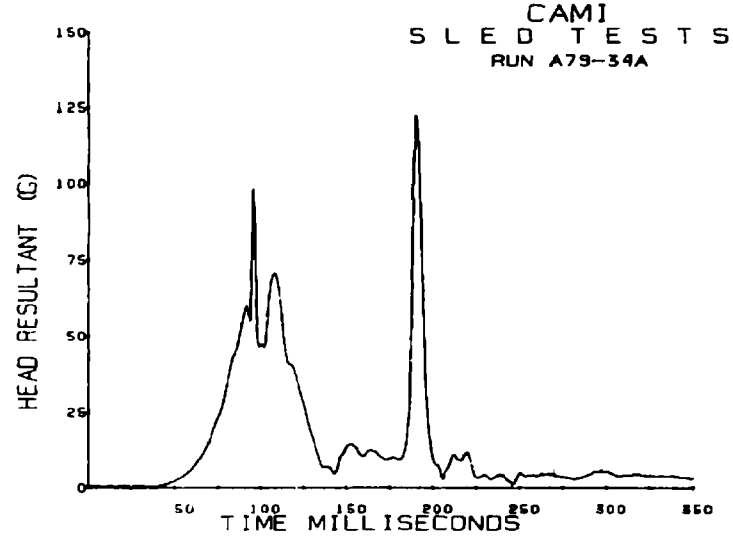

CAMI
SLED TESTS
RUN A79-34A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

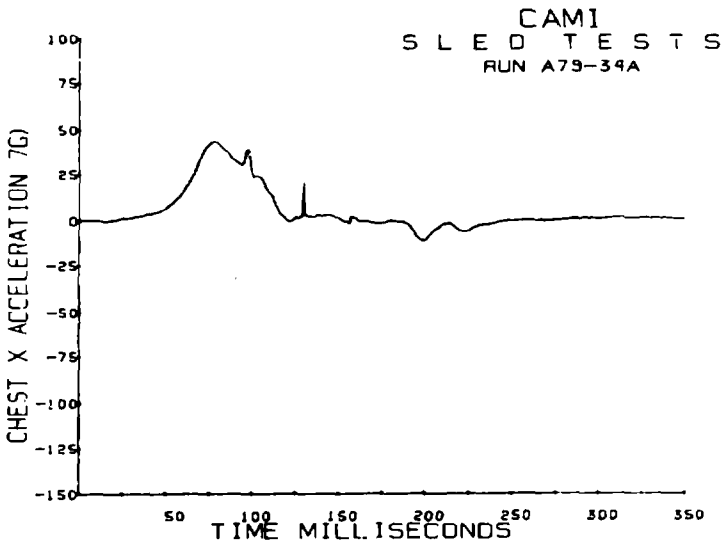

CAMI
SLED TESTS
RUN A79-34A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

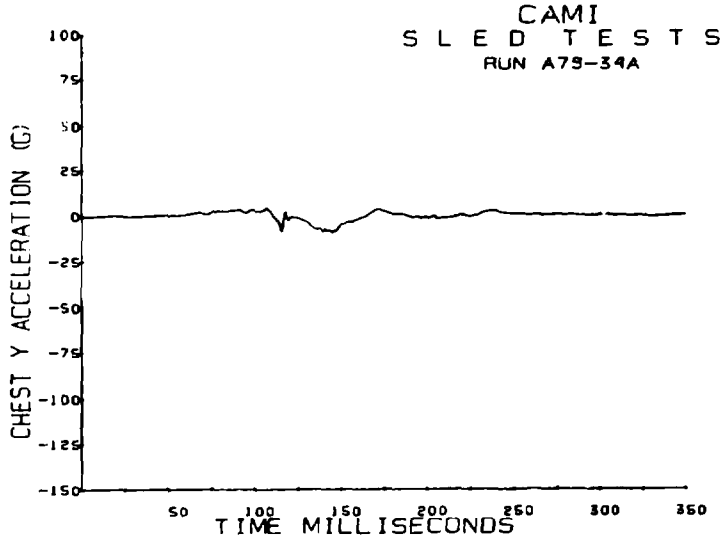

CAMI
SLED TESTS
RUN A79-34A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

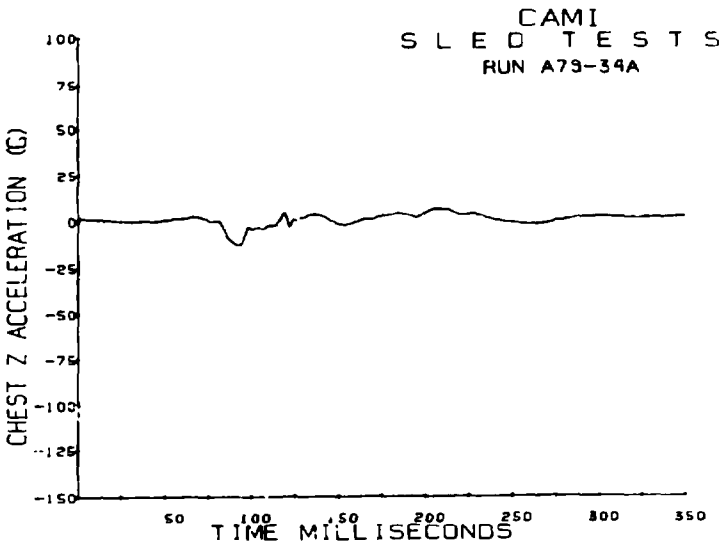

CAMI
SLED TESTS
RUN A79-34A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

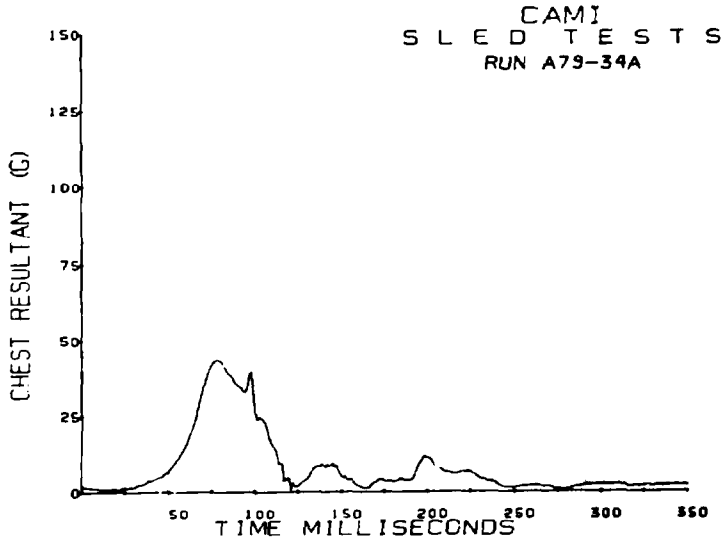

CAMI
SLED TESTS
RUN A79-34A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

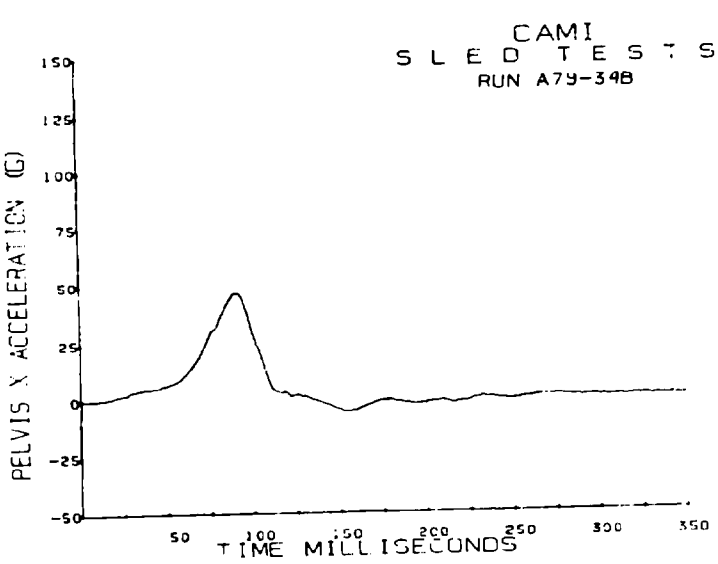

CAMI
SLED TESTS
RUN A79-34A
HEAD RESULTANT (G)
TIME MILLISECONDS

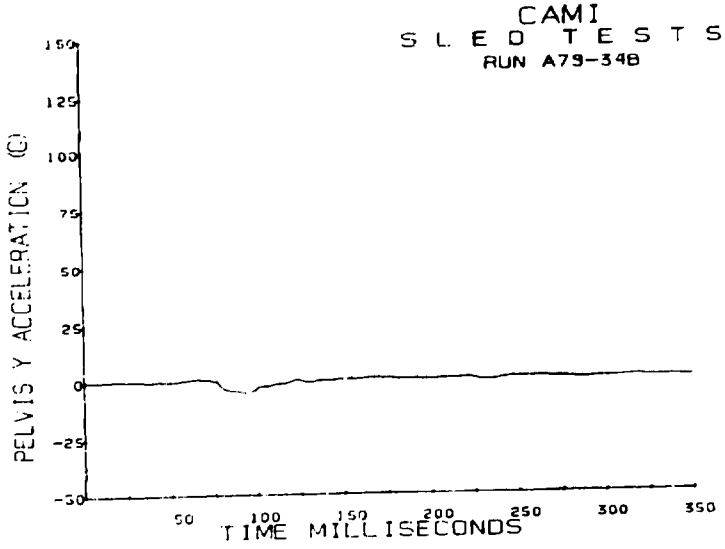

CAMI
S L E D T E S T S
RUN A79-34A
CHEST X ACCELERATION 7G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

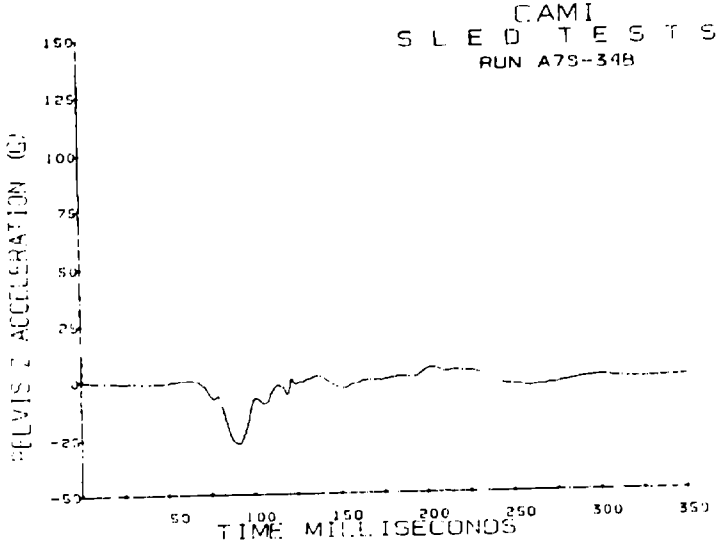

CAMI
S L E D T E S T S
RUN A79-34A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

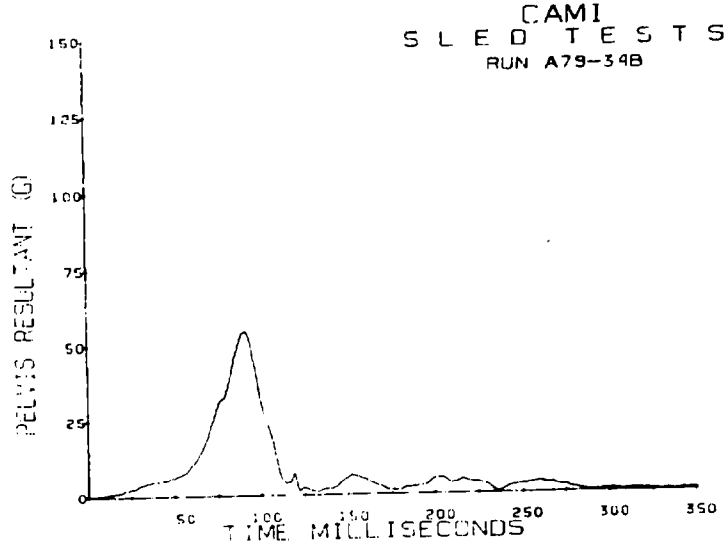

CAMI
S L E D T E S T S
RUN A79-34A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

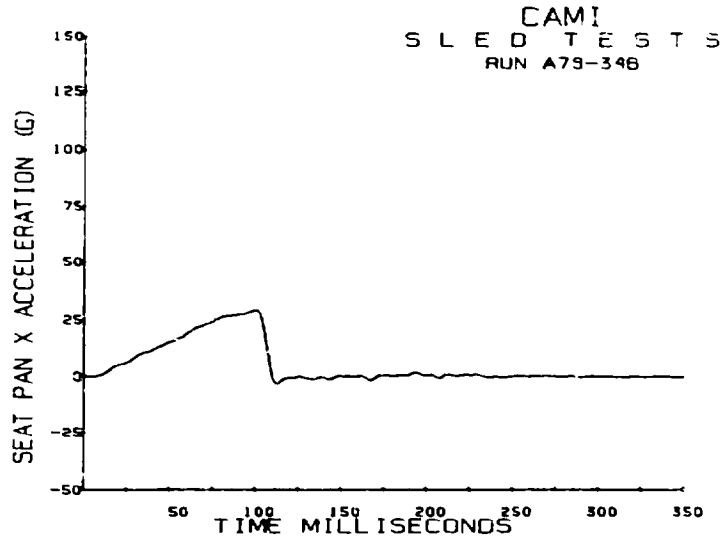

CAMI
S L E D T E S T S
RUN A79-34A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

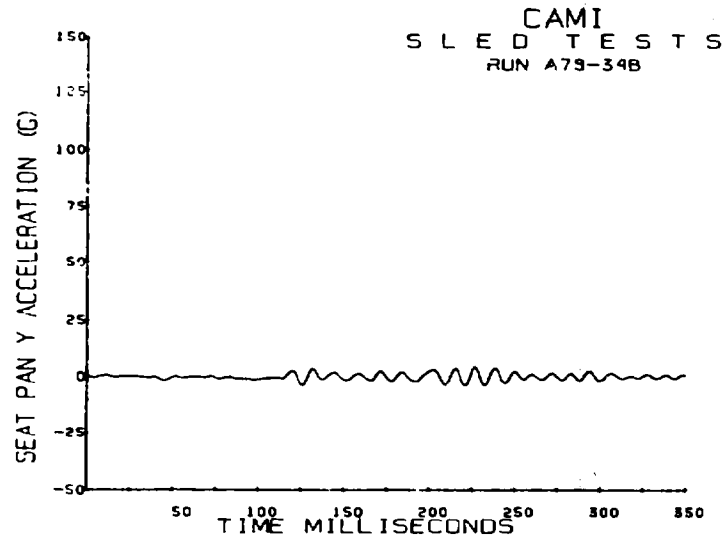

CAMI
S L E D T E S T S
RUN A79-34B
PELVIS X ACCELERATION (G)
TIME MILLISECONDS

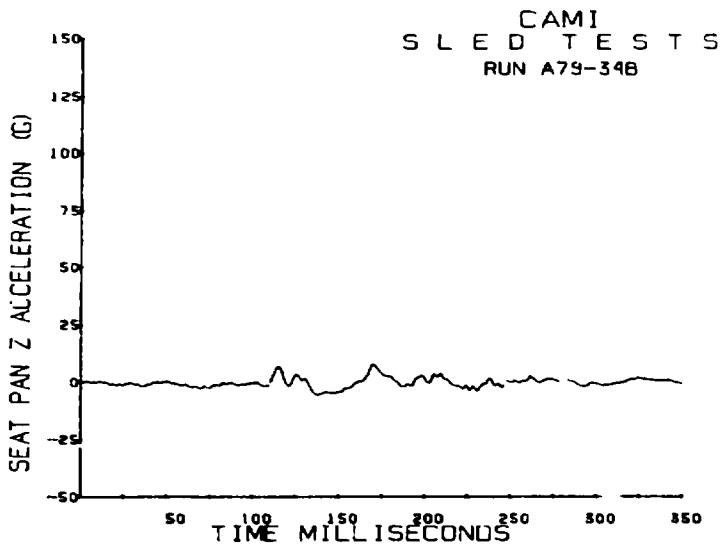

CAMI
S L E D T E S T S
RUN A79-34B
PELVIS Y ACCELERATION (G)
TIME MILLISECONDS

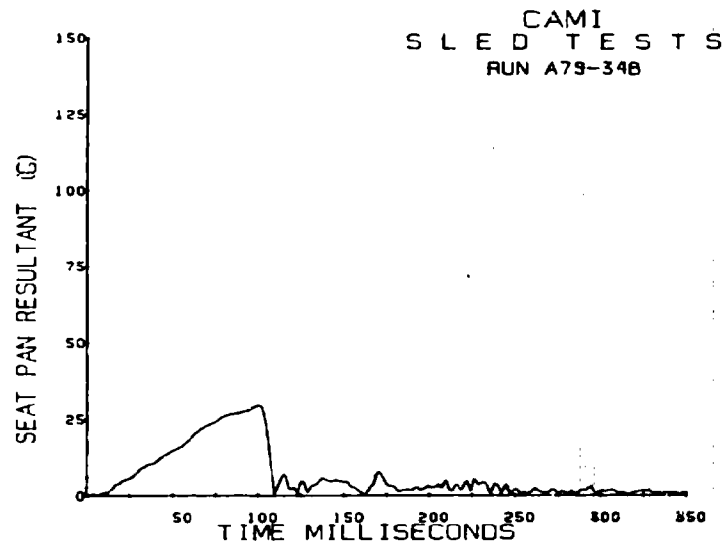

CAMI
S L E D T E S T S
RUN A79-34B
TIME MILLISECONDS

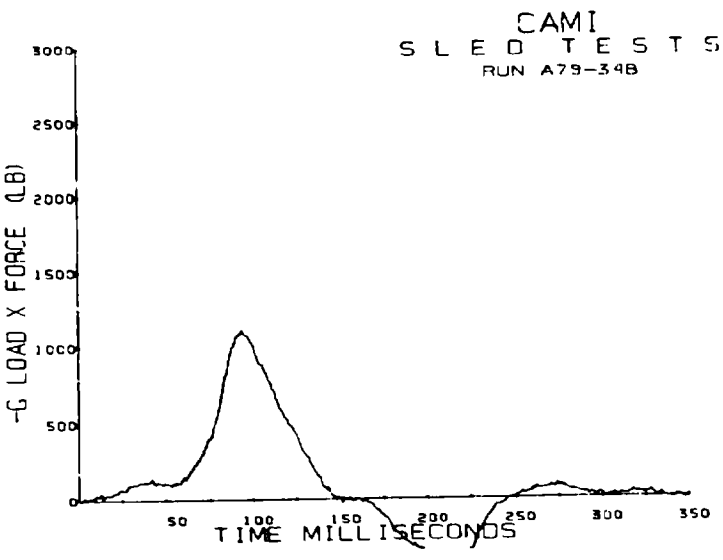

CAMI
S L E D T E S T S
RUN A79-34B
PELVIS RESULTANT (G)
TIME MILLISECONDS

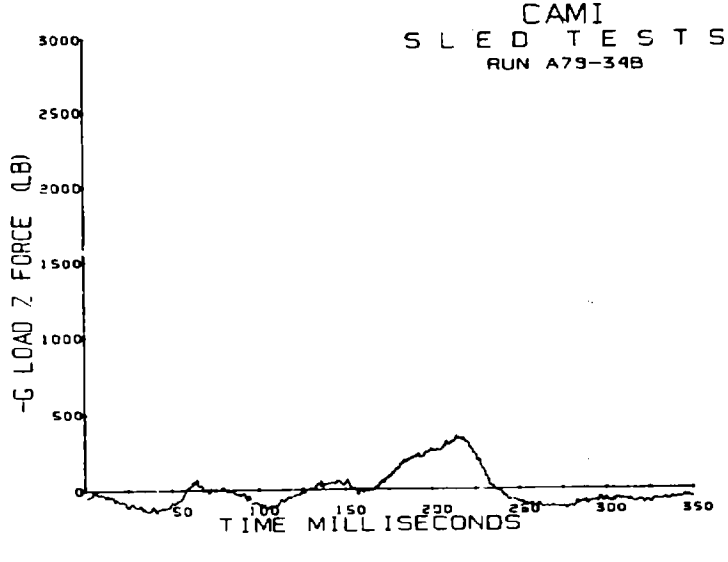

CAMI
SLED TESTS
RUN A79-348
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

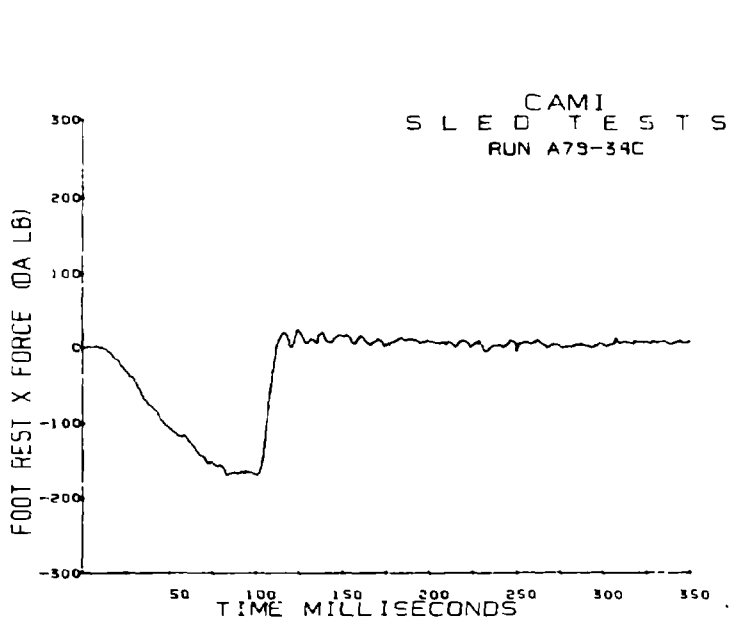

CAMI
SLED TESTS
RUN A79-348
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

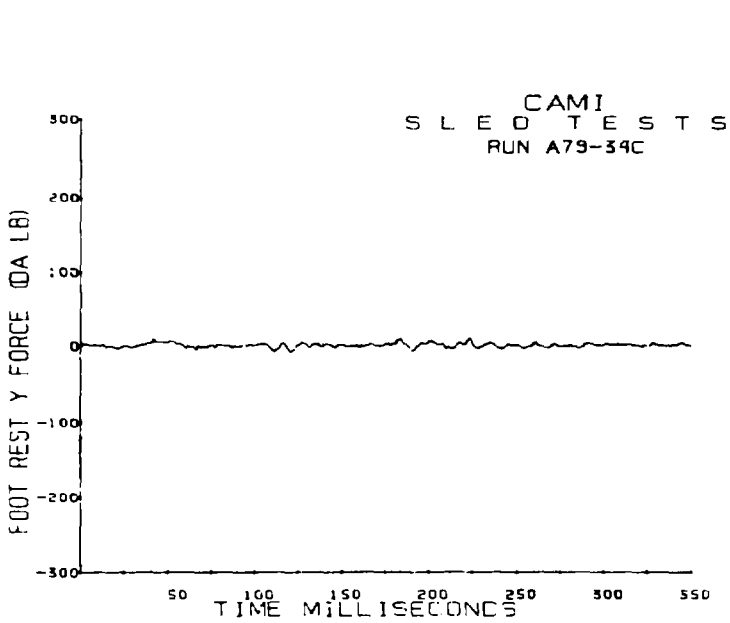

CAMI
SLED TESTS
RUN A79-348
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

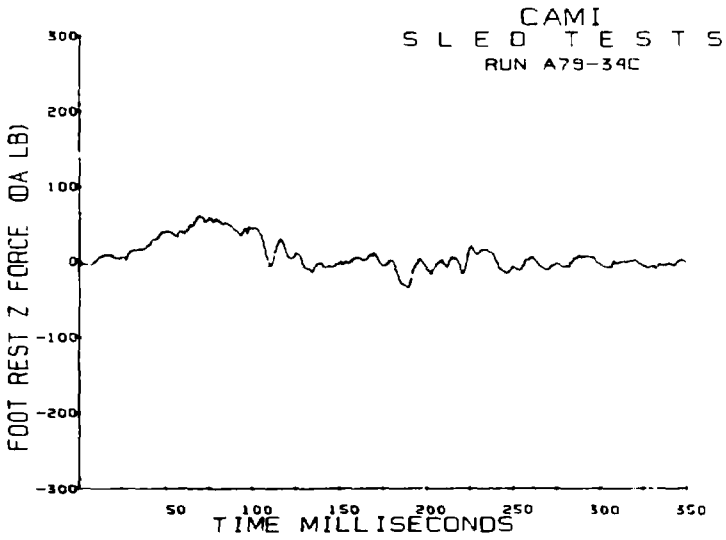

CAMI
SLED TESTS
RUN A79-348
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

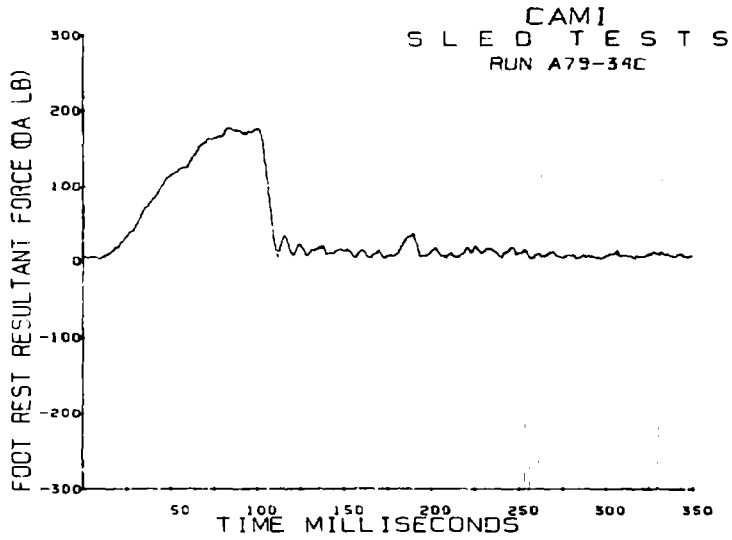

CAMI
SLED TESTS
RUN A79-34B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

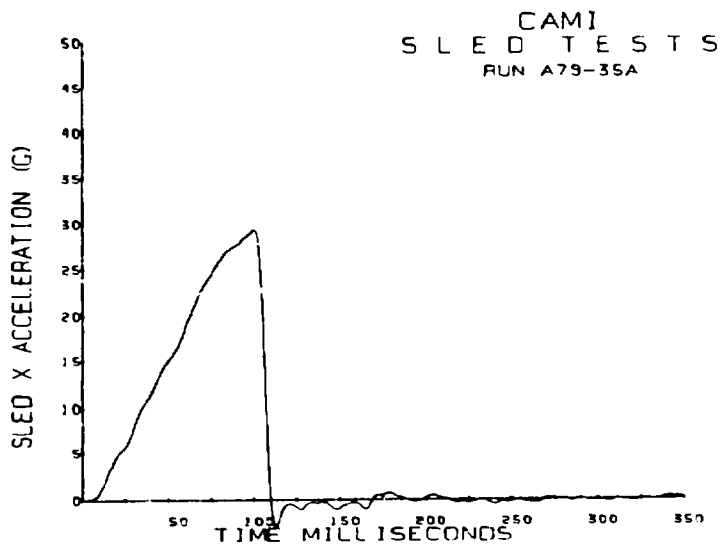

CAMI
SLED TESTS
RUN A79-34B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

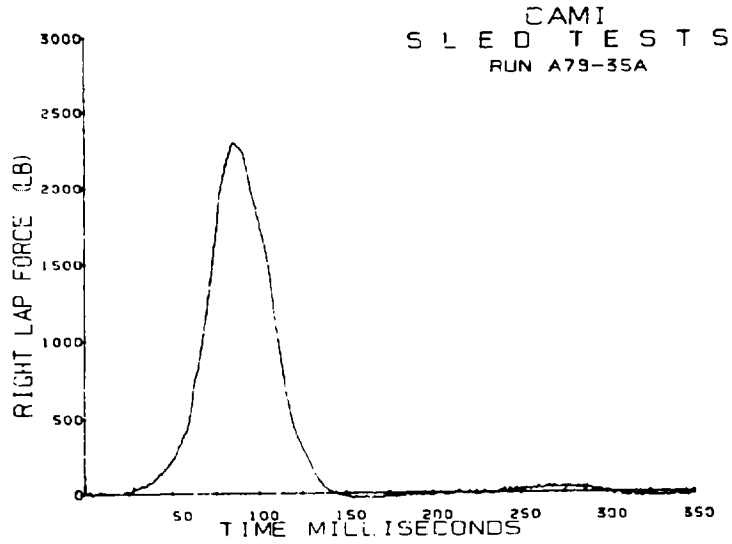

CAMI
SLED TESTS
RUN A79-34C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

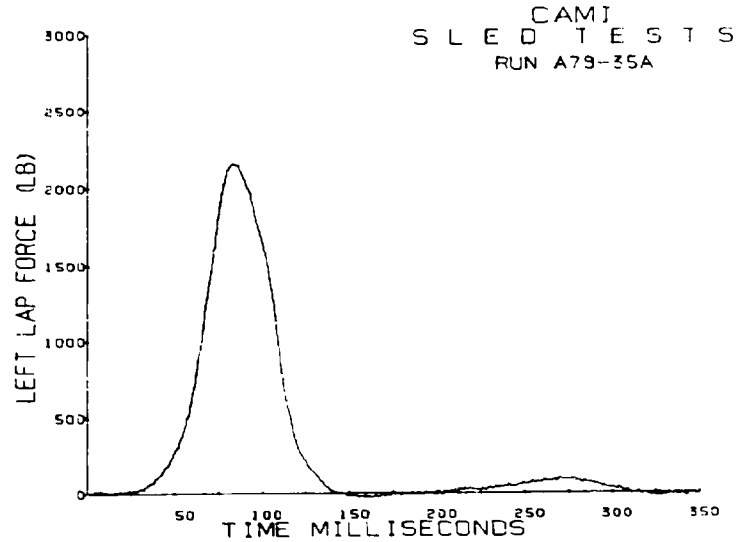

CAMI
SLED TESTS
RUN A79-34C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

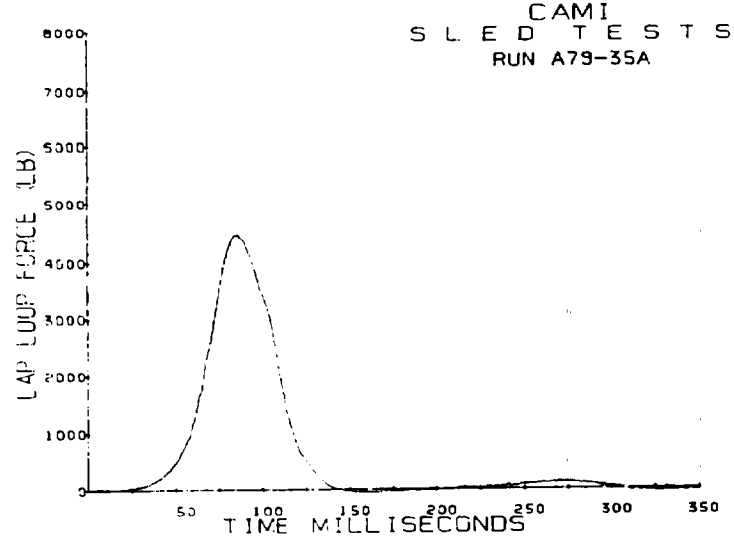

CAMI
SLED TESTS
RUN A79-34C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

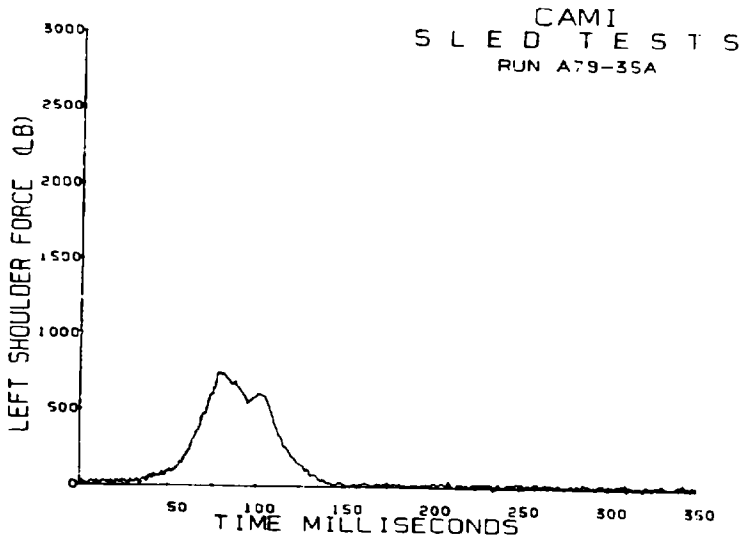

CAMI
SLED TESTS
RUN A79-34C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

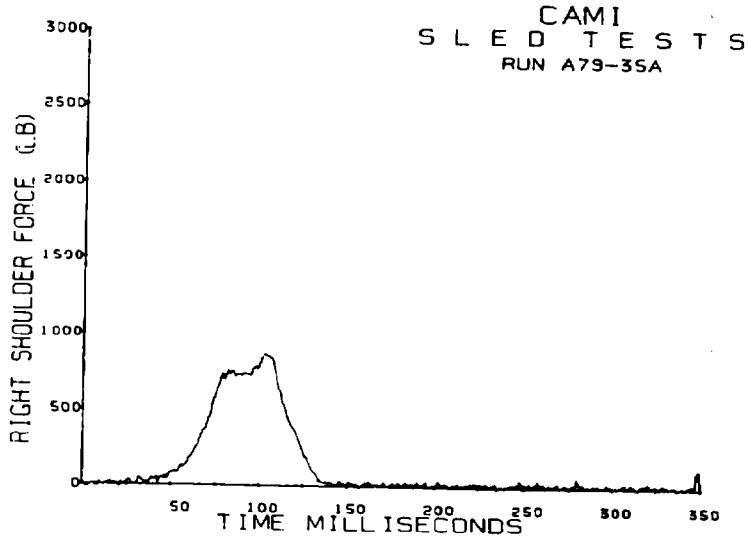

CAMI
S L E D T E S T S
RUN A79-35A
SLED X ACCELERATION (G)
TIME MILLISECONDS

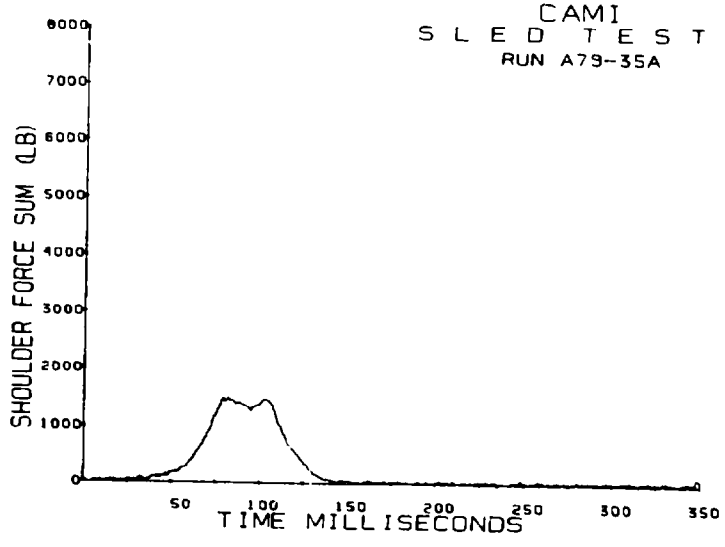

CAMI
S L E D T E S T S
RUN A79-35A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

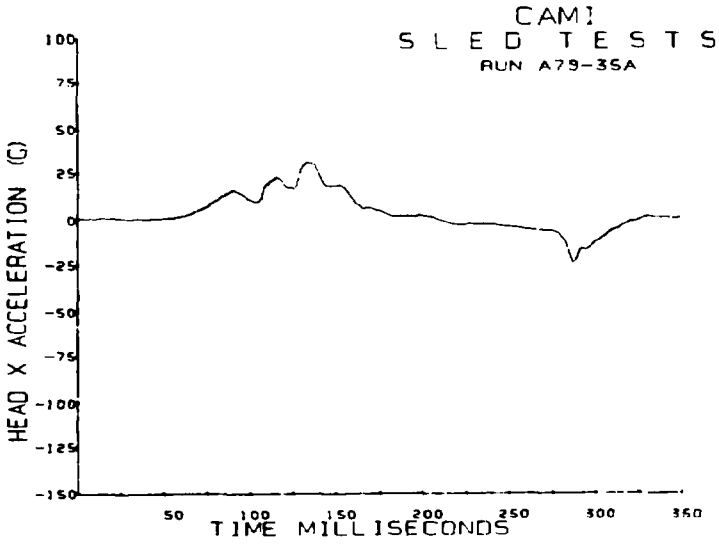

CAMI
S L E D T E S T S
RUN A79-35A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

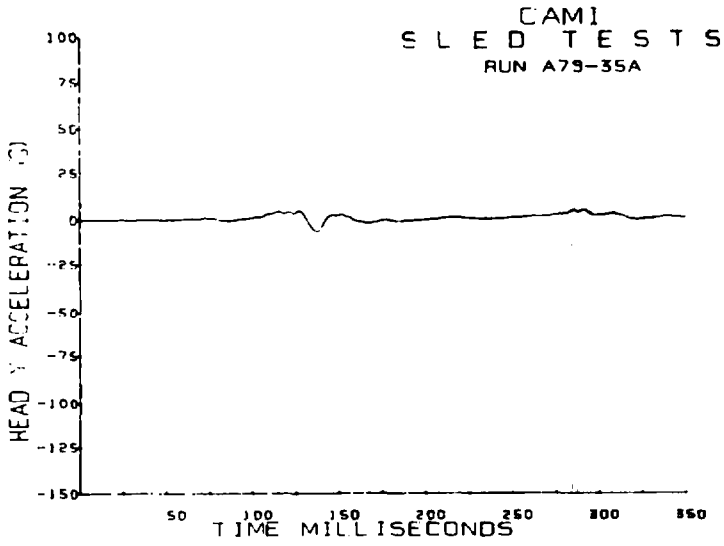

CAMI
S L E D T E S T S
RUN A79-35A
TIME MILLISECONDS

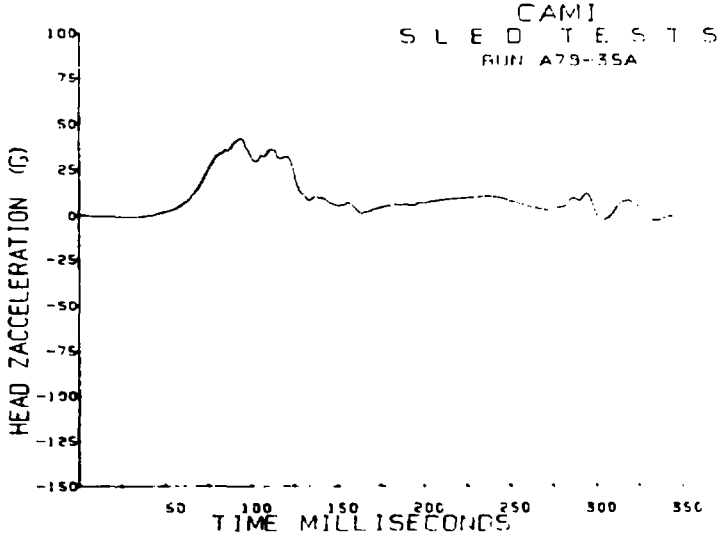

CAMI
SLED TESTS
RUN A79-35A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

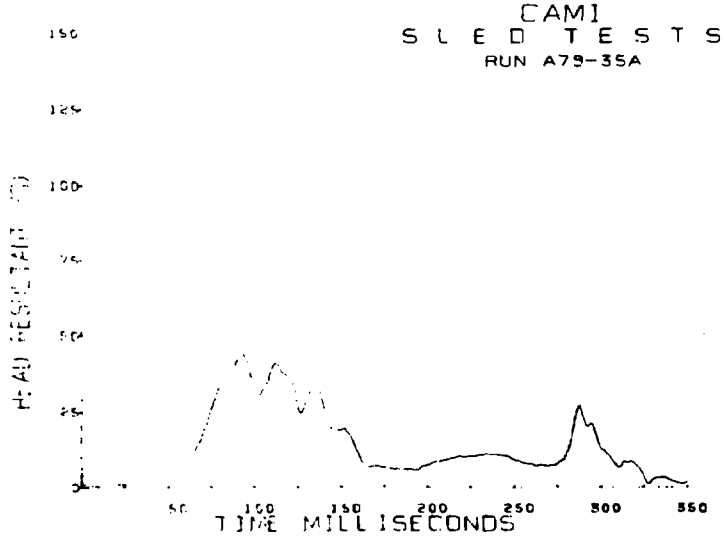

CAMI
SLED TESTS
RUN A79-35A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

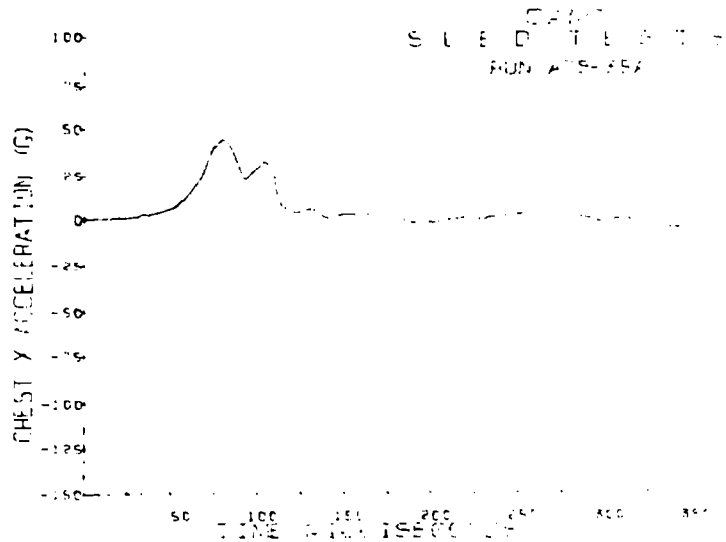

CAMI
SLED TESTS
RUN A79-35A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

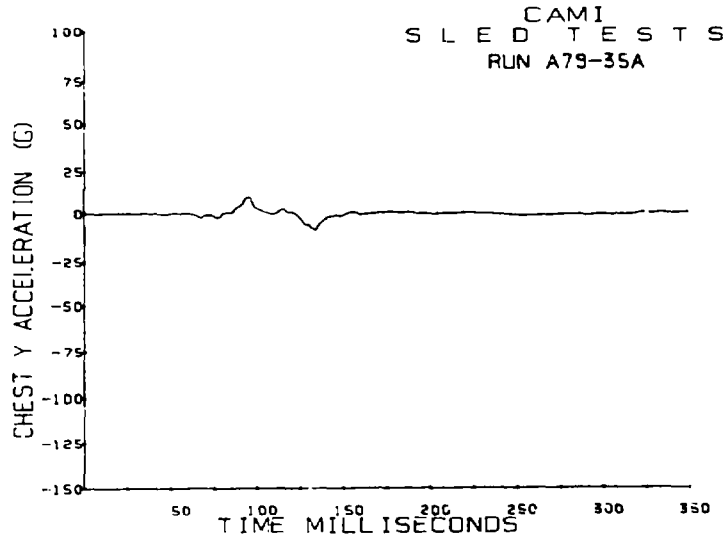

CAMI
SLED TESTS
RUN A79-35A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

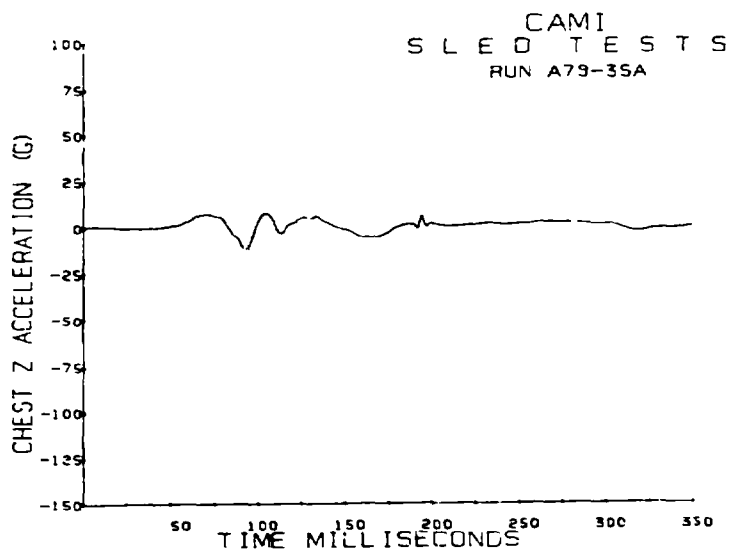

CAMI
SLED TESTS
RUN A79-35A
TIME MILLISECONDS

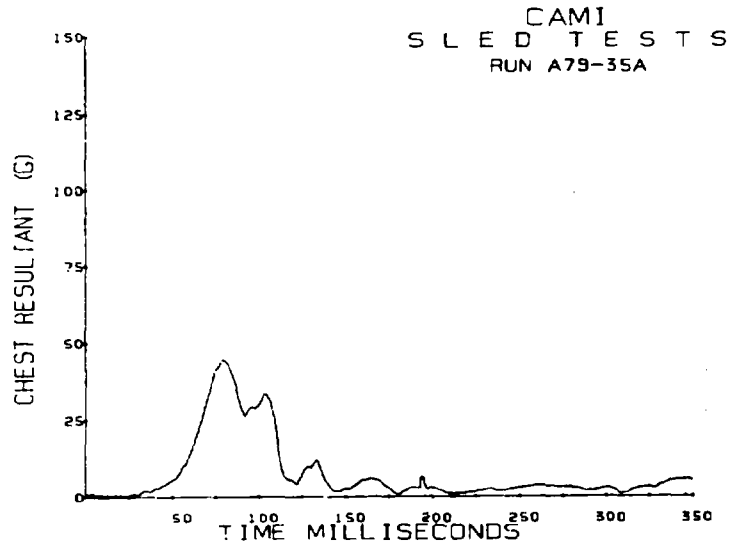

CAMI
SLED TESTS
RUN A79-35A
HEAD ZACCELERATION (G)
TIME MILLISECONDS

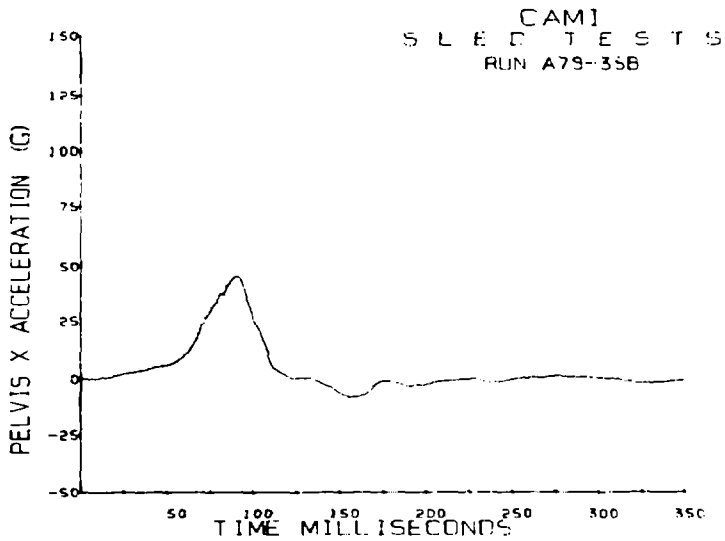

CAMI
SLED TESTS
RUN A79-35A
TIME MILLISECONDS

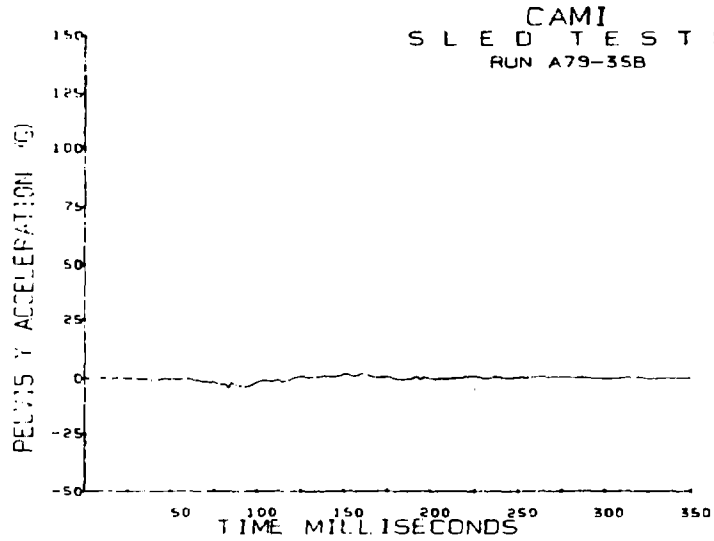

CHEST Y ACCELERATION (G)
100
50
0
-50
-100
-150
50
100
150
200
250
300
350

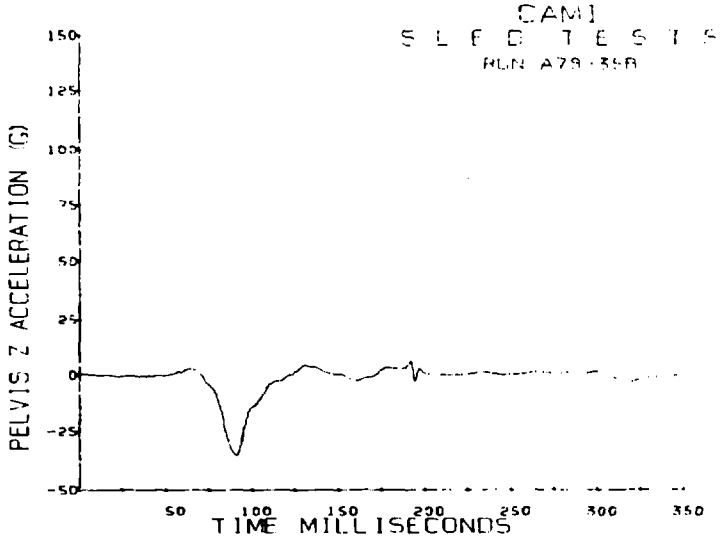

CAMI
S L E D T E S T S
RUN A79-35A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

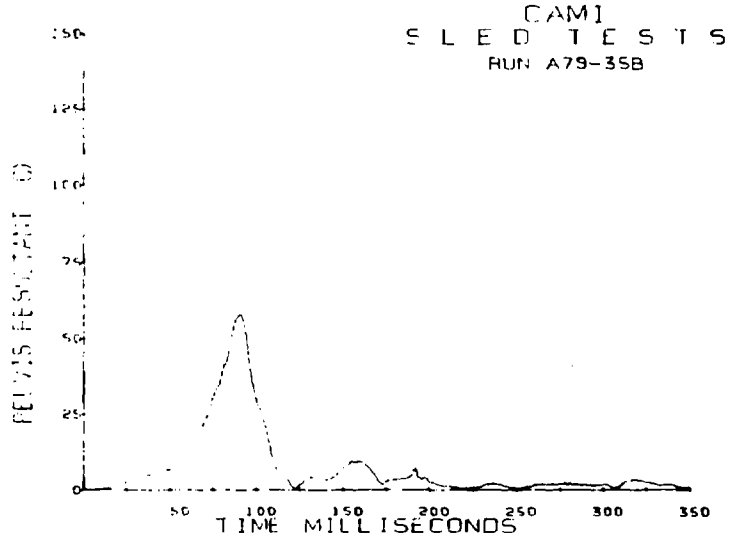

CAMI
S L E D T E S T S
RUN A79-35A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

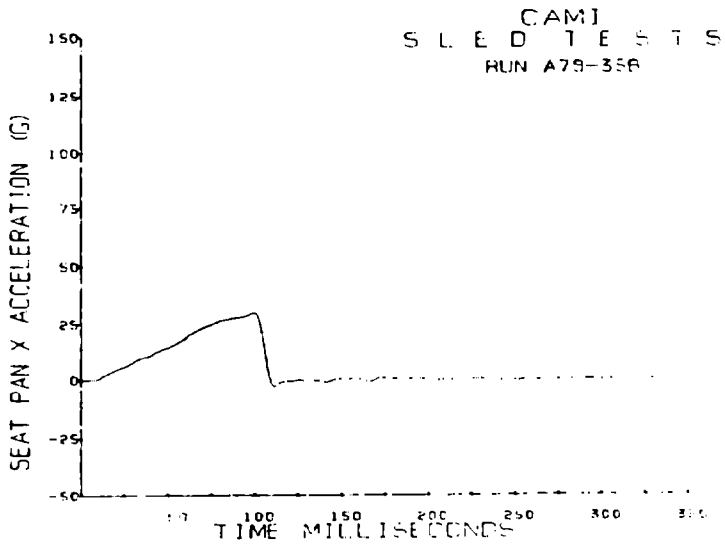

CAMI
S L E D T E S T S
RUN A79-35A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

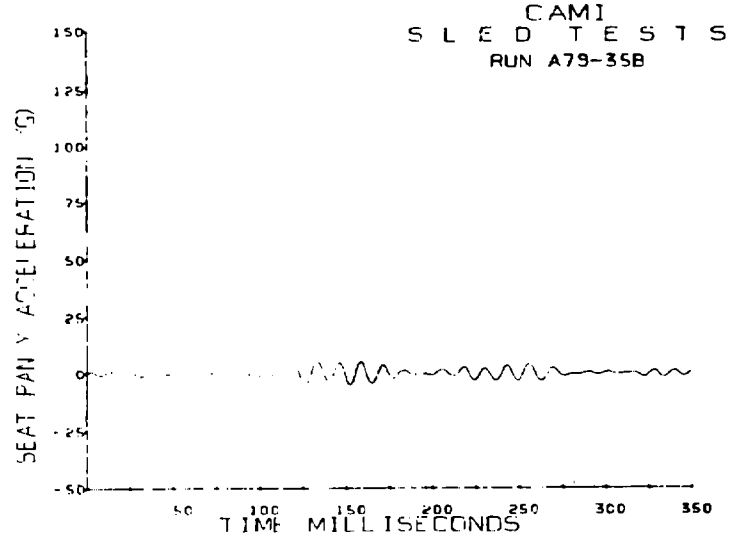

CAMI
SLED TESTS
RUN A79-35B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

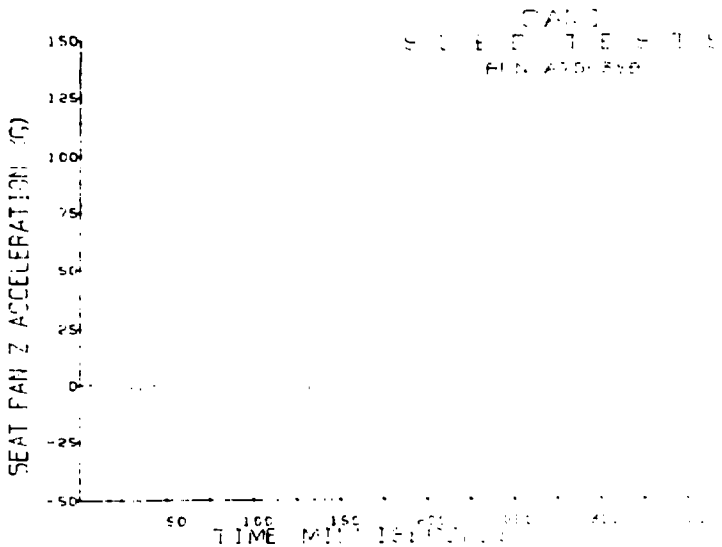

CAMI
SLED TESTS
RUN A79-35B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

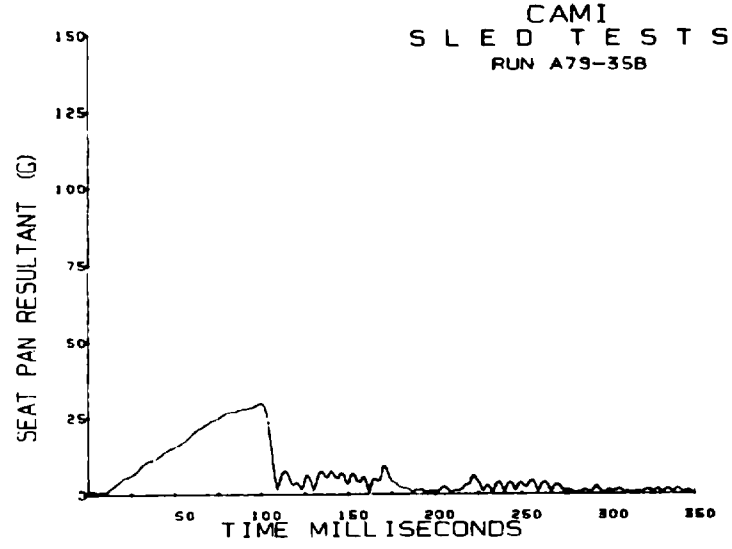

CAMI
SLED TESTS
RUN A79-35B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

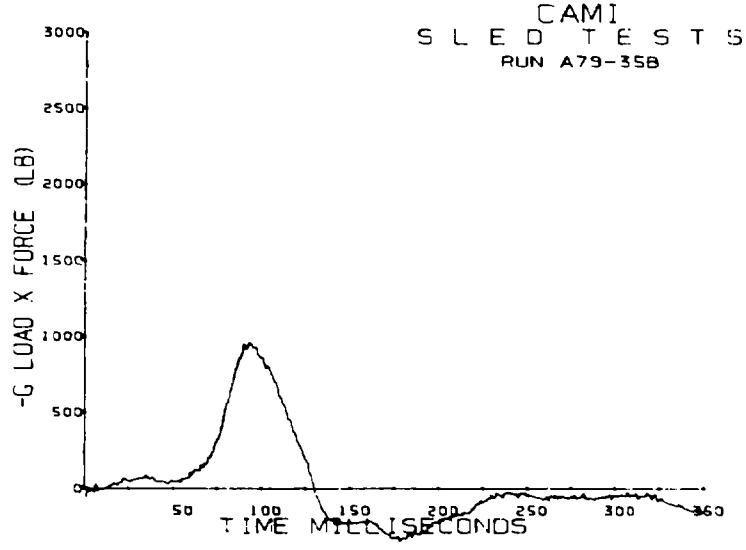

CAMI
SLED TESTS
RUN A79-35B
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

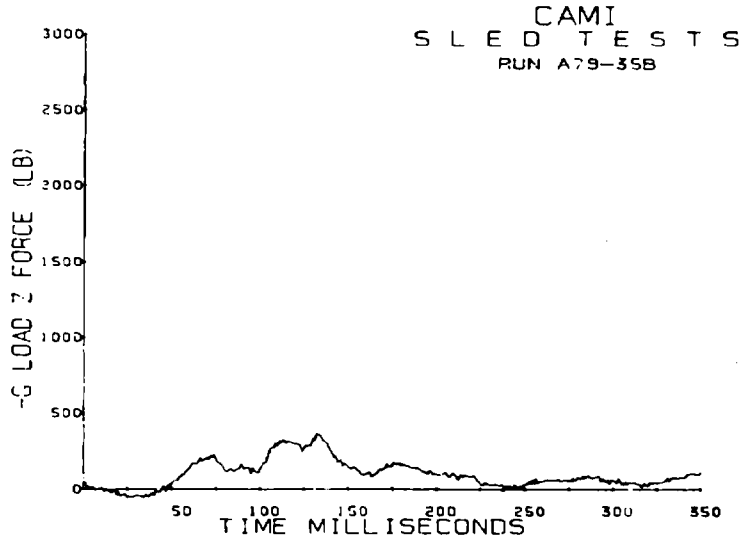

CAMI
SLED TESTS
RUN A79-35B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

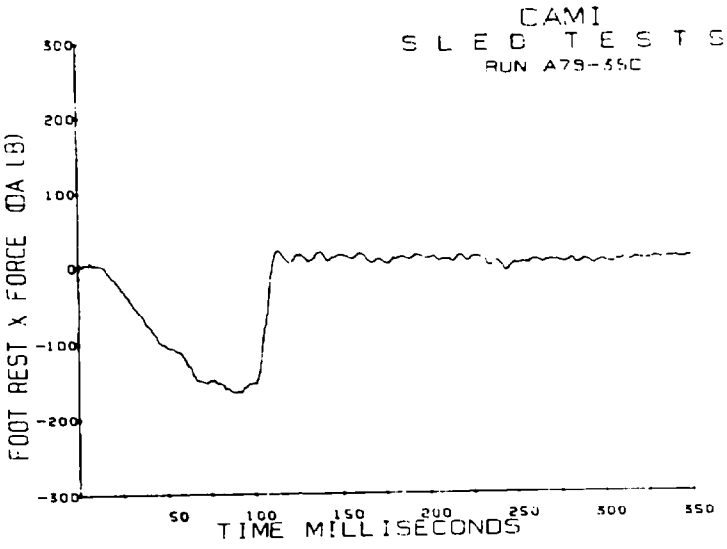

CAMI
SLED TESTS
RUN A79-35B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

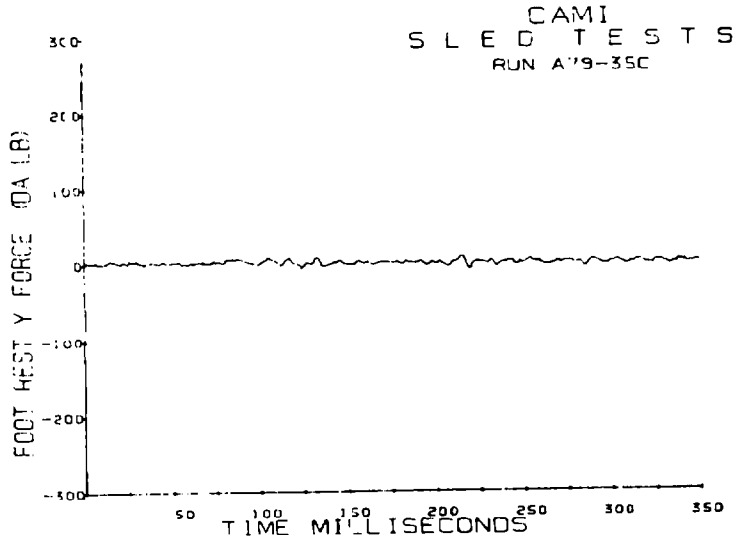

SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
TIME

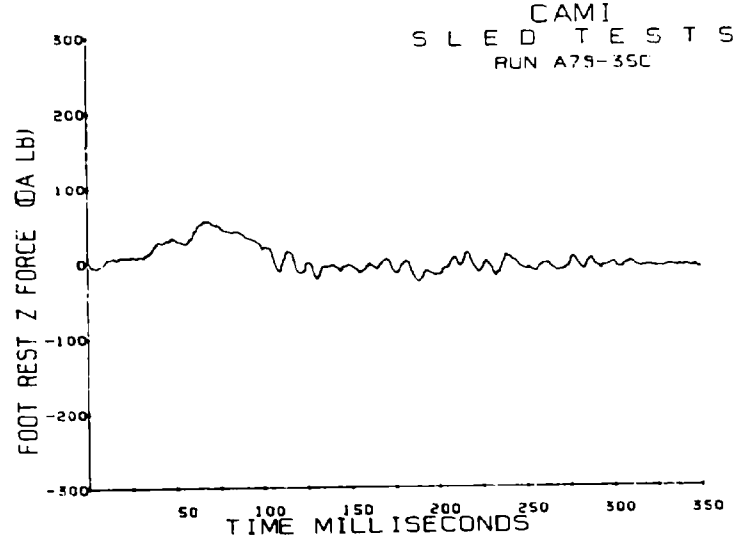

CAMI
SLED TESTS
RUN A79-35B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

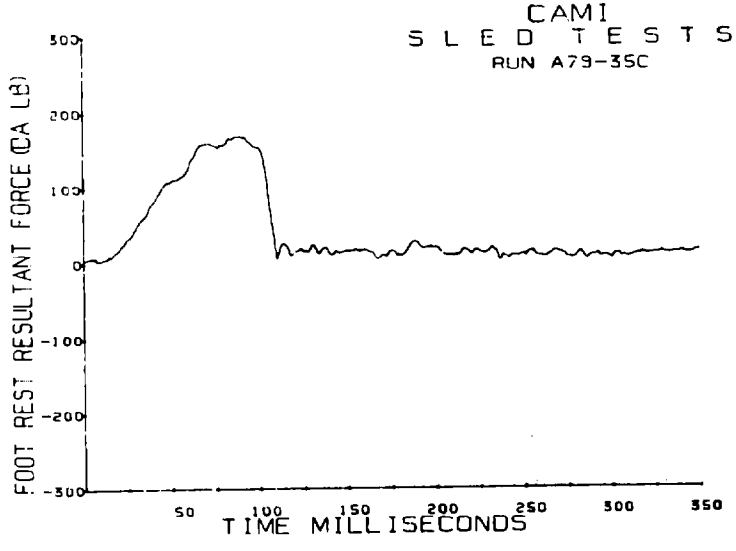

CAMI
SLED TESTS
RUN A79-35B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

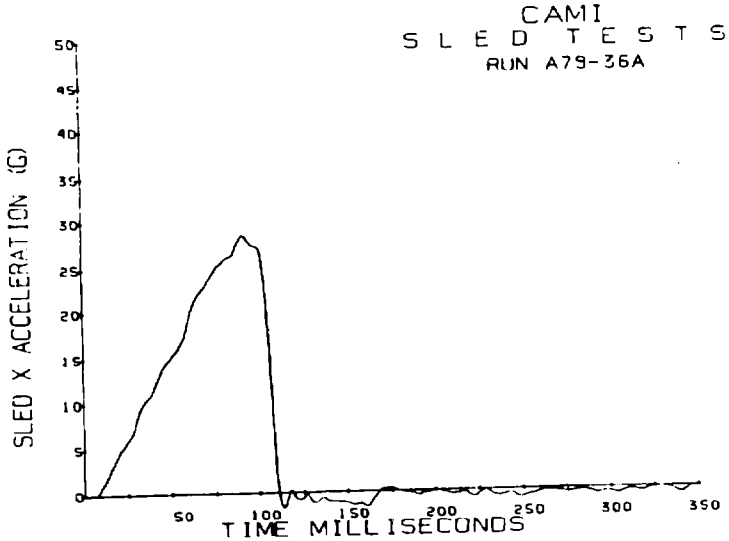

CAMI
SLED TESTS
RUN A79-35B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

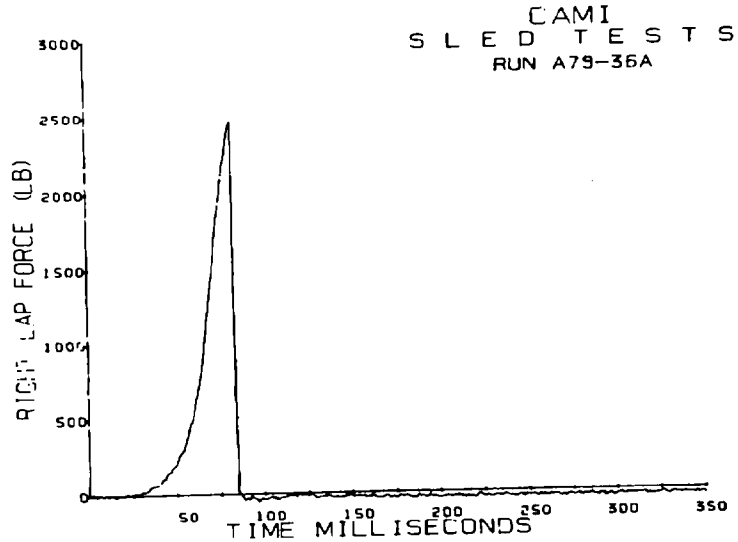

CAMI
SLED TESTS
RUN A79-35C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

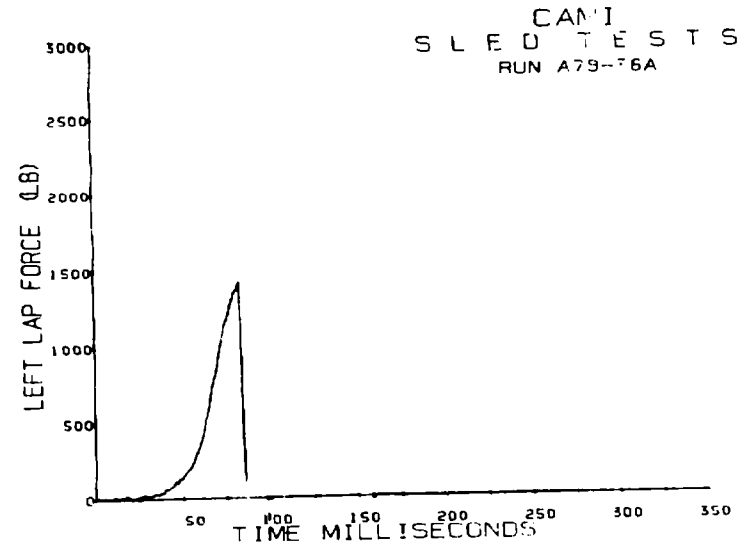

CAMI
SLED TESTS
RUN A79-35C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

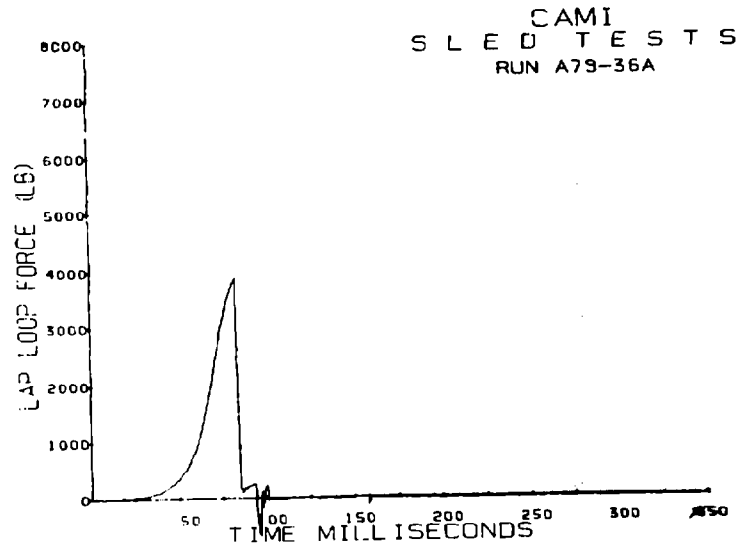

CAMI
SLED TESTS
RUN A79-35C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

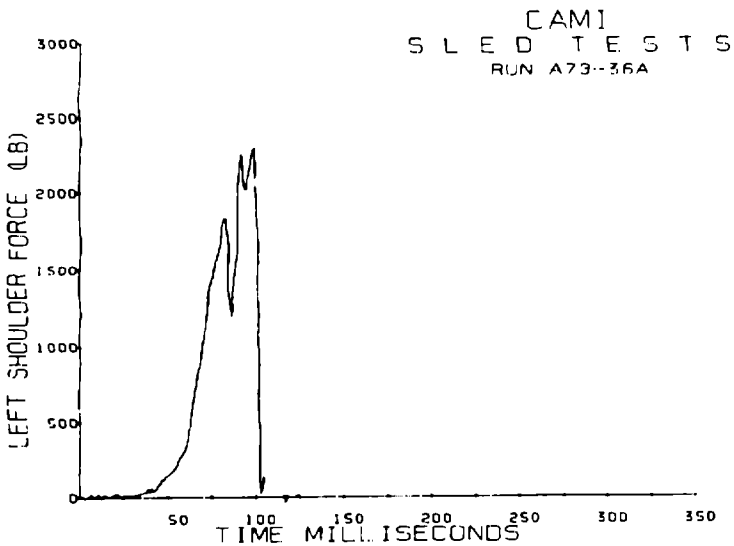

CAMI
SLED TESTS
RUN A79-35C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

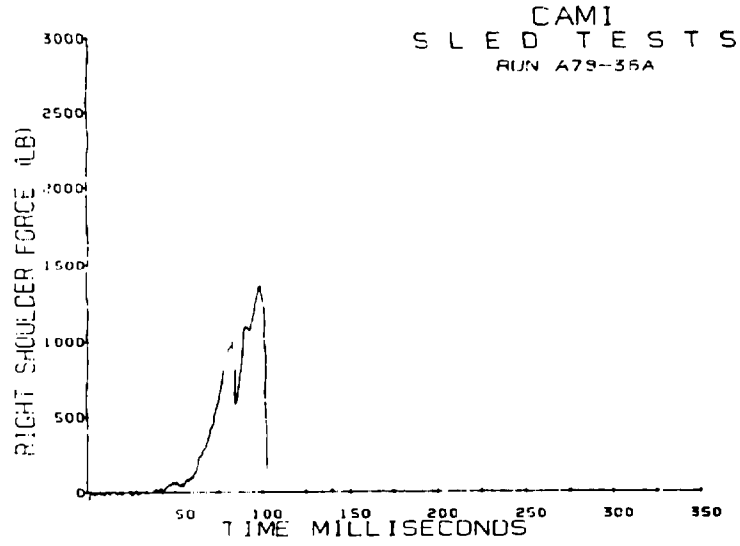

CAMI
S L E D T E S T S
RUN A79-36A
SLED X ACCELERATION (G)
50
45
40
35
30
25
20
15
10
5
0
50
100
150
200
250
300
350
TIME MILLISECONDS

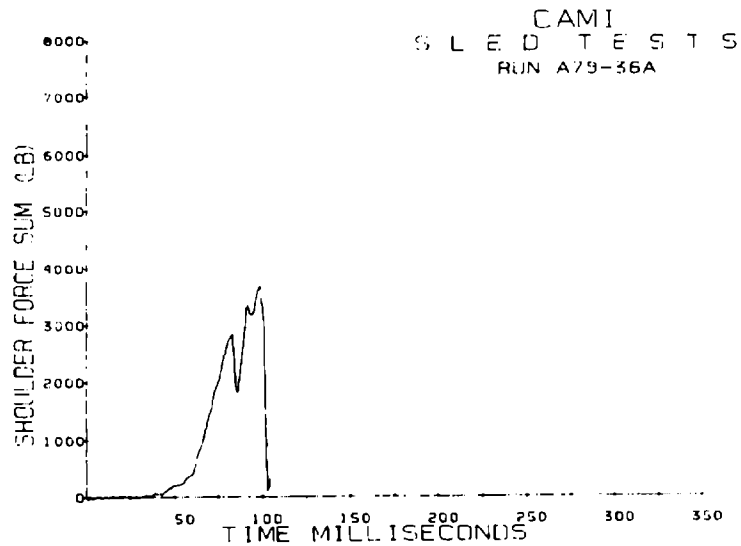

CAMI
S L E D T E S T S
RUN A79-36A
RIGHT LAP FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

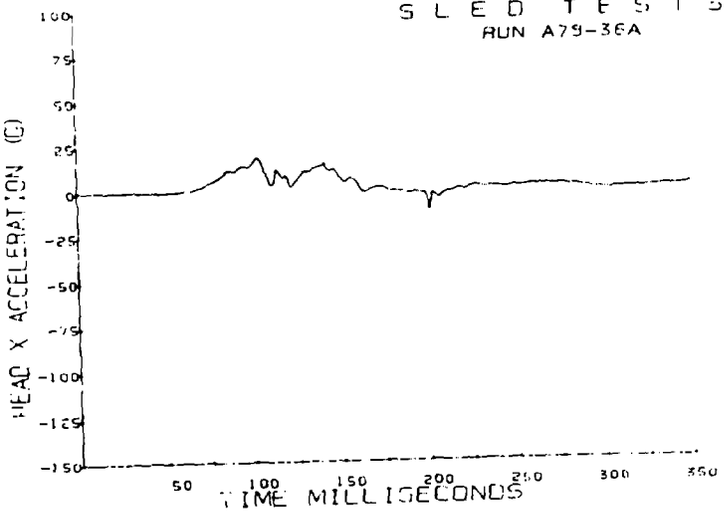

CAMI
S L E D T E S T S
RUN A79-36A
LEFT LAP FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

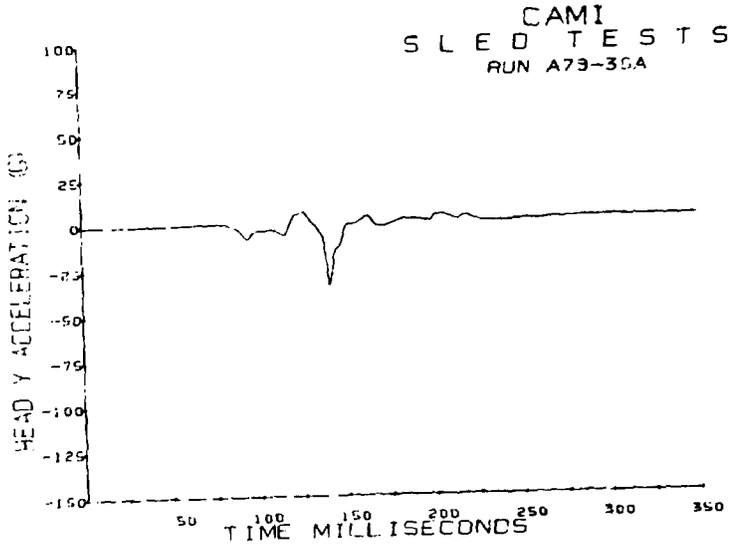

CAMI
S L E D T E S T S
RUN A79-36A
LAP LOOP FORCE (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

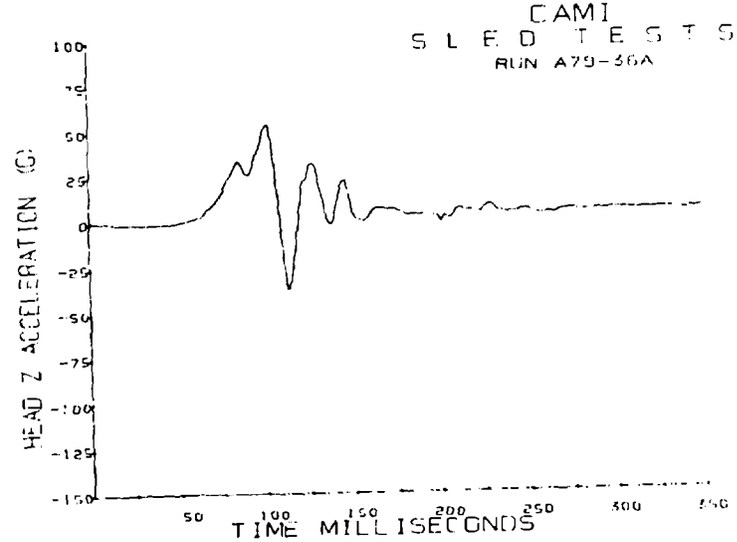

CAMI
S L E D T E S T S
RUN A79-36A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

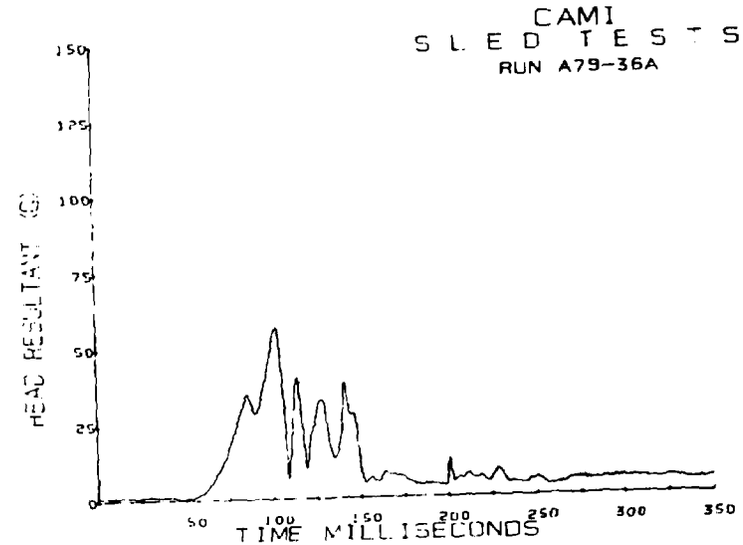

CAMI
S L E D T E S T S
RUN A79-36A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

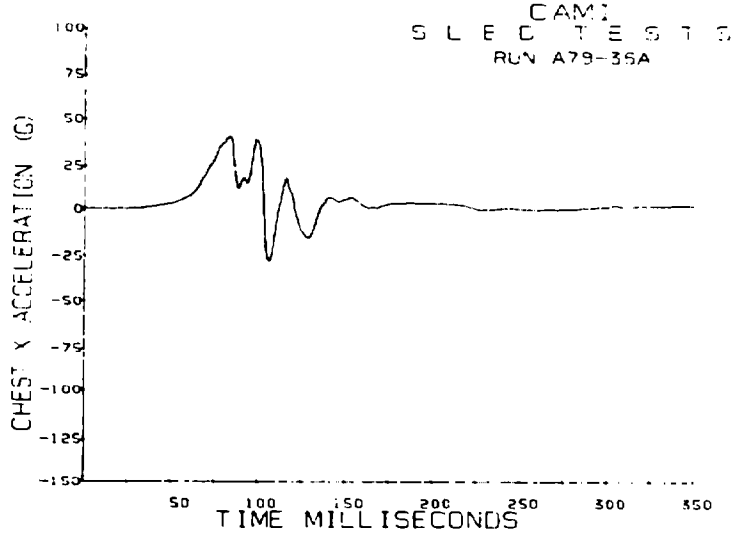

CAMI
S L E D T E S T S
RUN A79-36A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

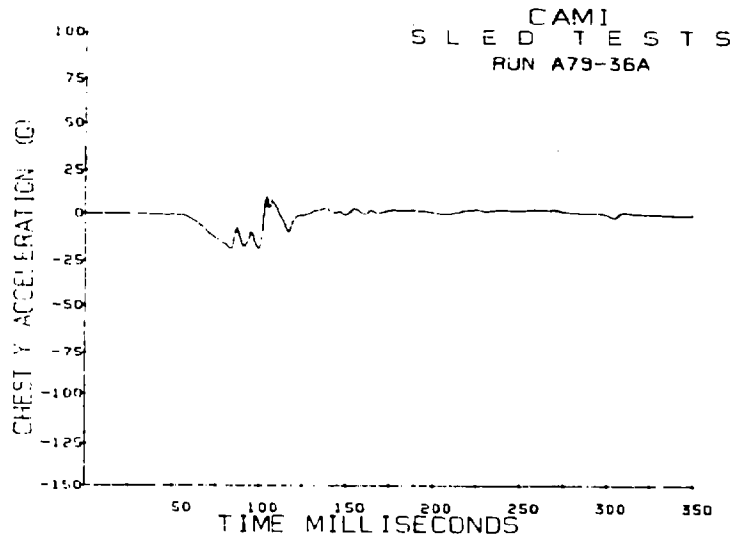

CAMI
S L E D T E S T S
RUN A79-36A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

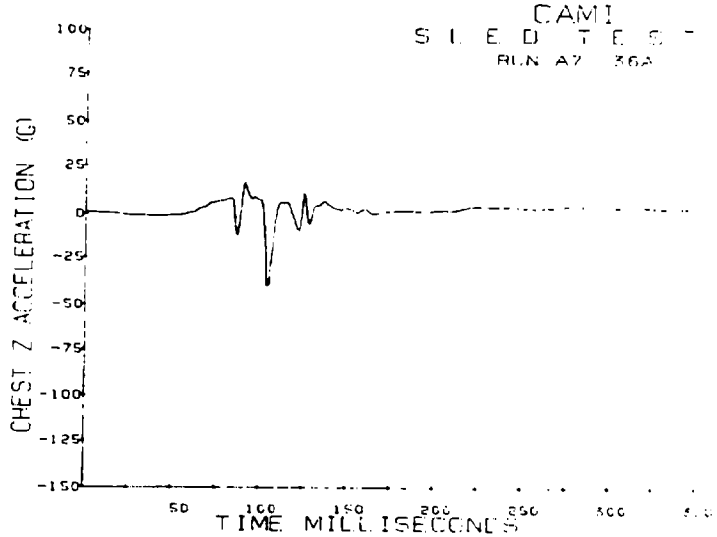

CAMI
S L E D T E S T S
RUN A79-36A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

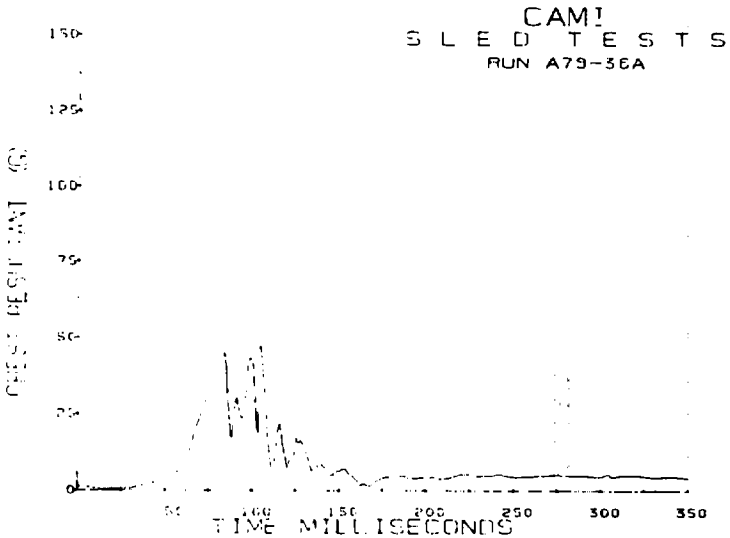

CAMI
S L E D T E S T S
RUN A79-36A
HEAD Z ACCELERATION (G)
100
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

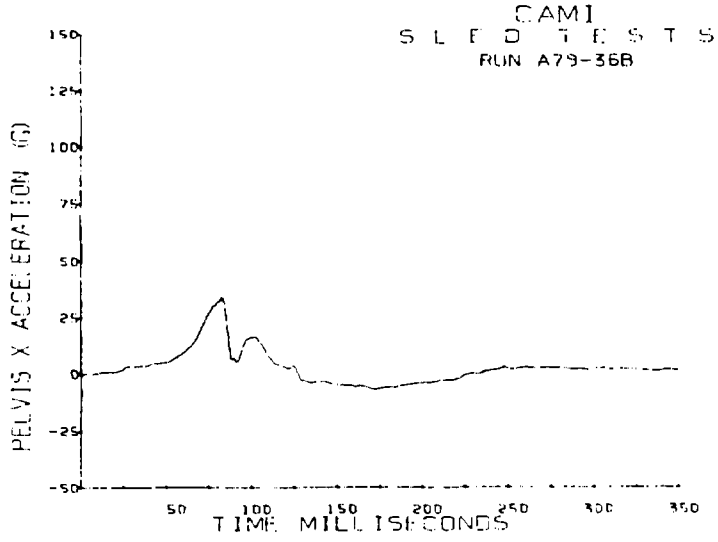

CAMI
S L E D T E S T S
RUN A79-36A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

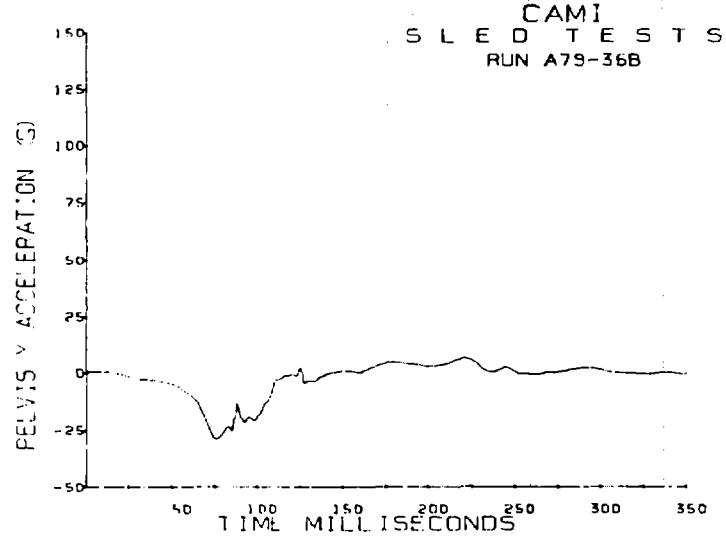

CAMI
SLED TESTS
RUN A79-36A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

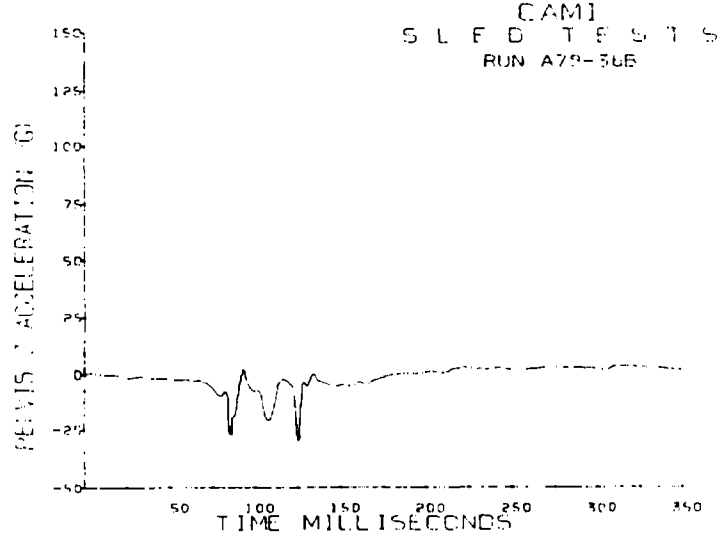

CAMI
SLED TESTS
RUN A79-36A
CHEST Y ACCELERATION (G)
TIME MILLISECONDS

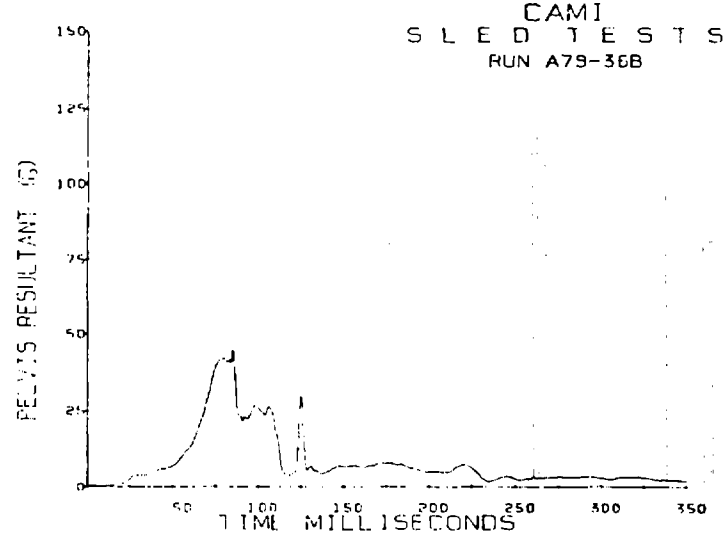

CAMI
SLED TESTS
RUN A79-36A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS

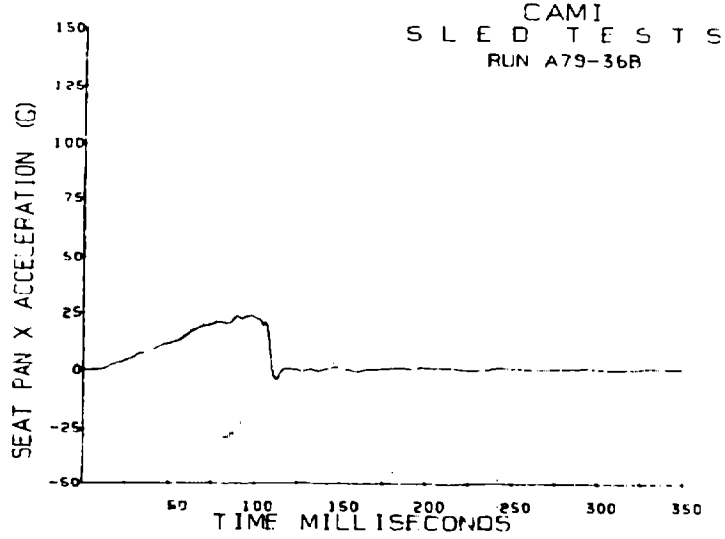

CAMI
SLED TESTS
RUN A79-36A
TIME MILLISECONDS

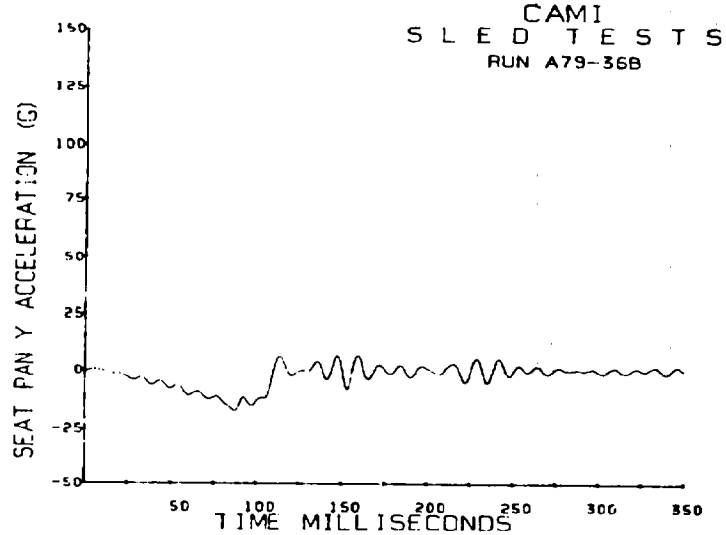

CAMI
S L E D T E S T S
RUN A79-36B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

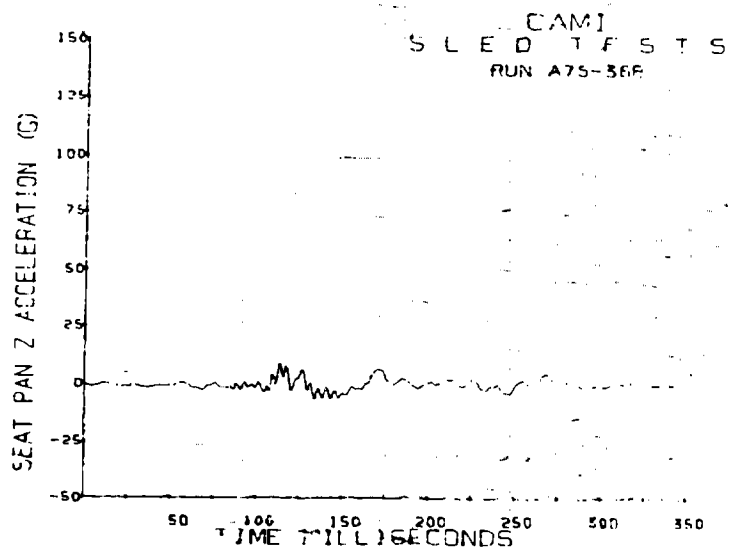

CAMI
S L E D T E S T S
RUN A79-36B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

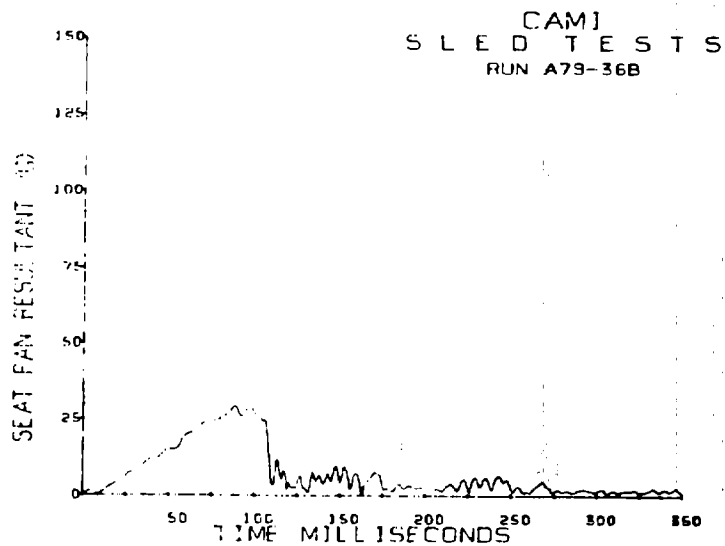

CAMI
S L E D T E S T S
RUN A79-36B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

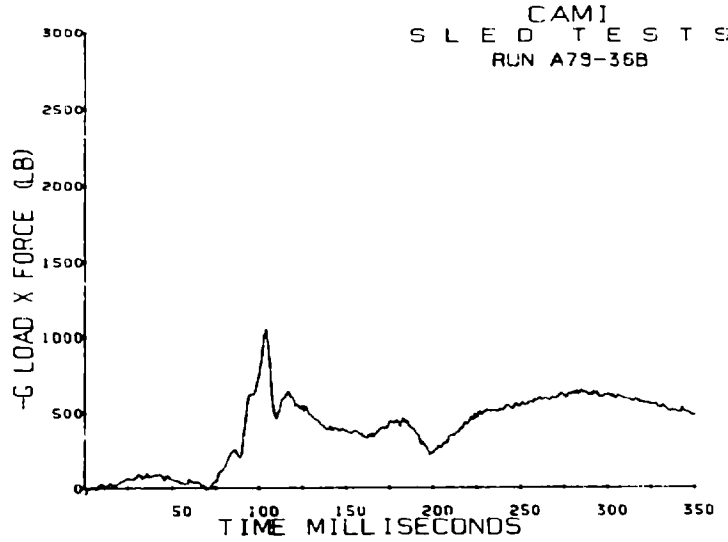

CAMI
S L E D T E S T S
RUN A79-36B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

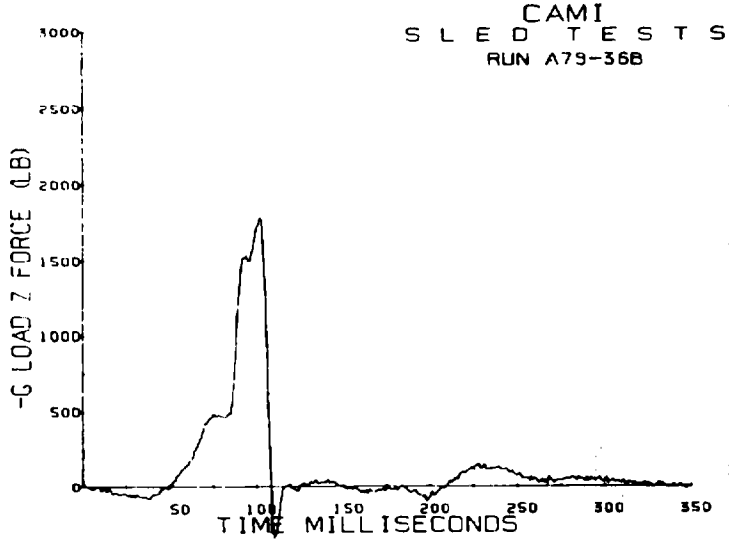

CAMI
S L E D T E S T S
RUN A79-36B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

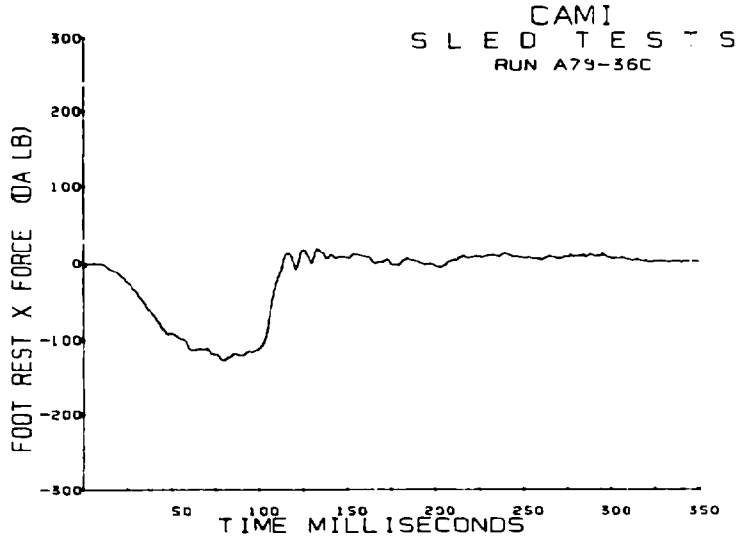

CAMI
S L E D T E S T S
RUN A79-36B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

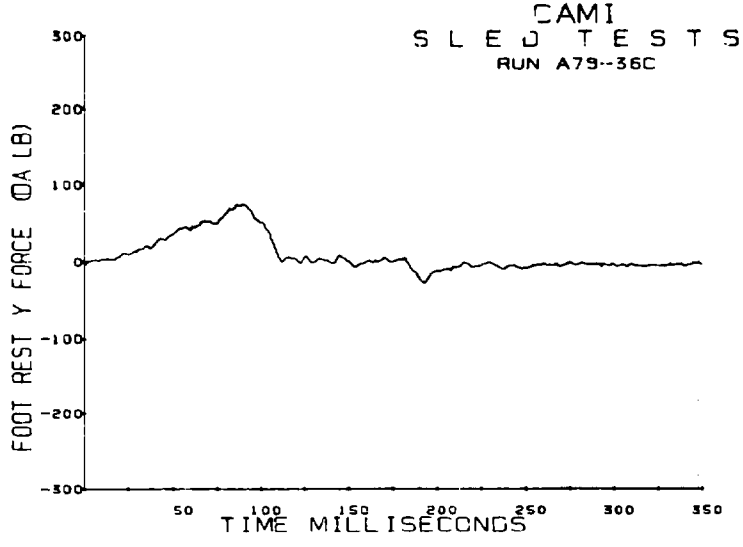

CAMI
S L E D T E S T S
RUN A79-36B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

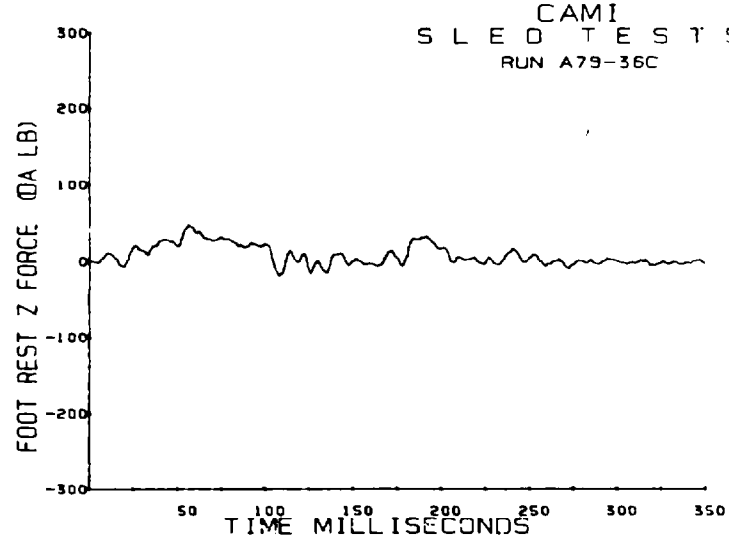

CAMI
S L E D T E S T S
RUN A79-36B
150
125
100
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

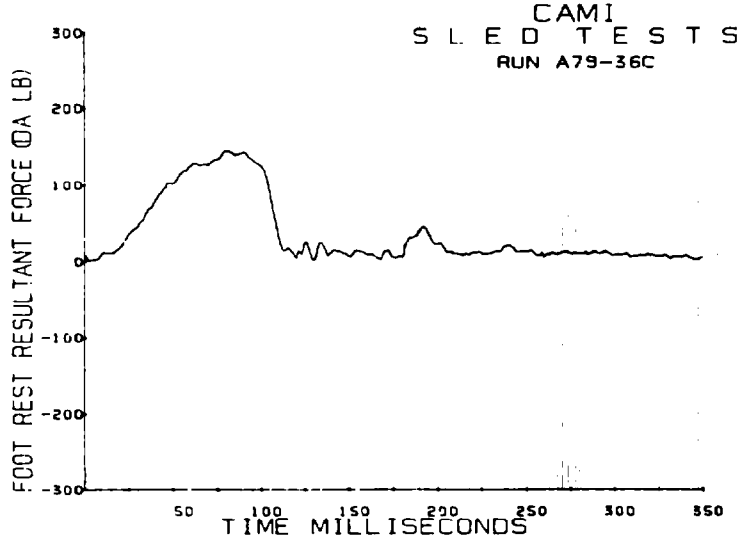

CAMI
S L E D T E S T S
RUN A79-36B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

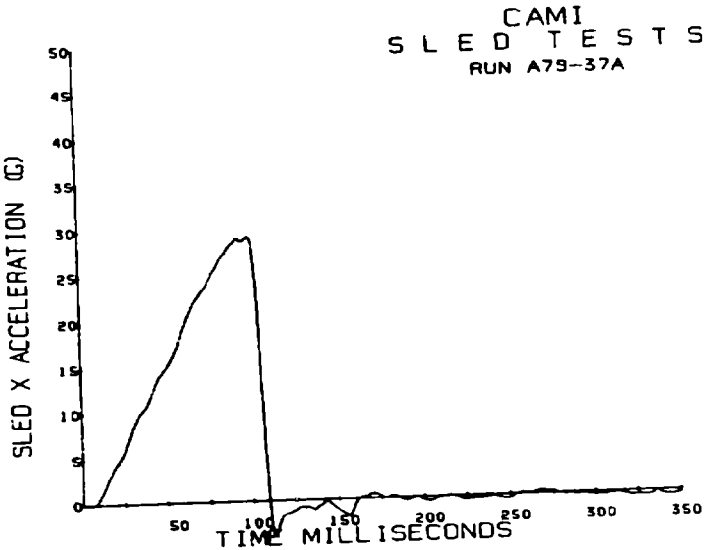

CAMI
S L E D T E S T S
RUN A79-36B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

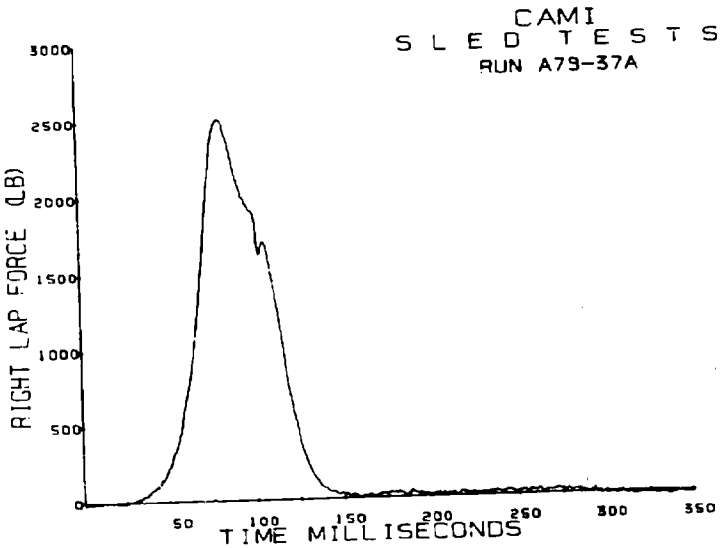

CAMI
SLED TESTS
RUN A79-36C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

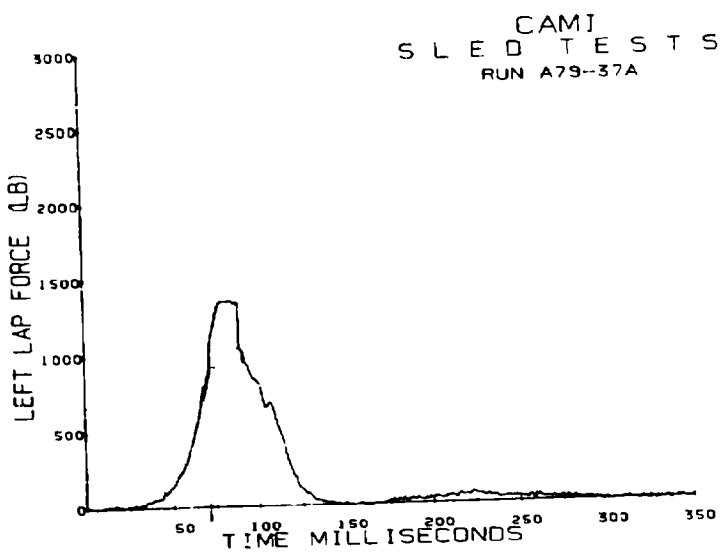

CAMI
SLED TESTS
RUN A79-36C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

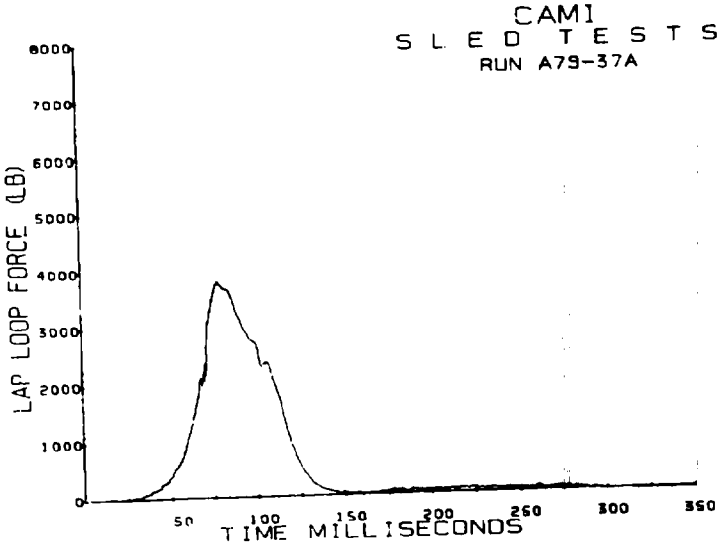

CAMI
SLED TESTS
RUN A79-36C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

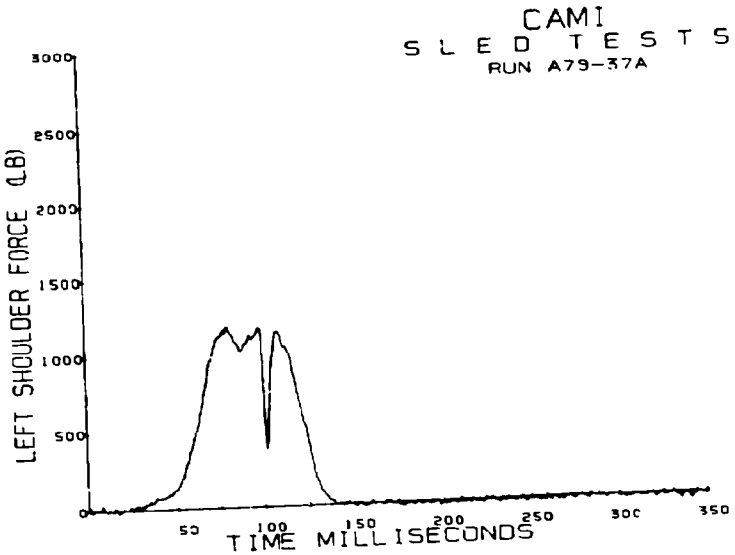

CAMI
SLED TESTS
RUN A79-36C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

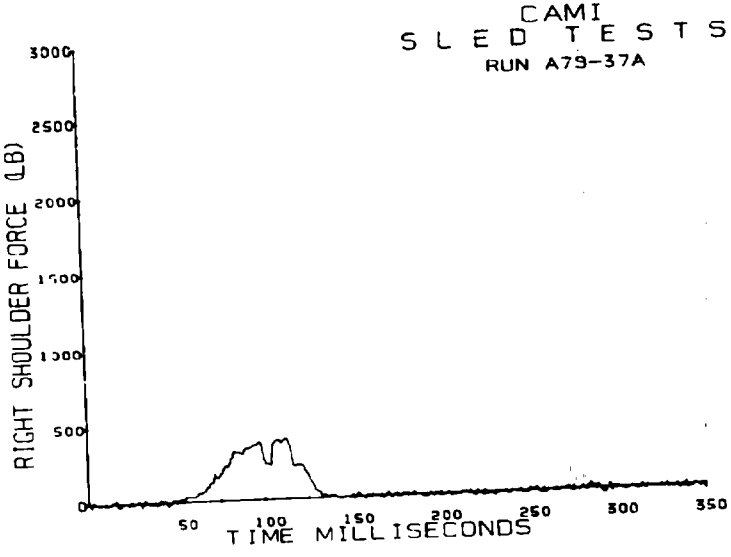

CAMI
SLED TESTS
RUN A79-37A
SLED X ACCELERATION (G)
TIME MILLISECONDS

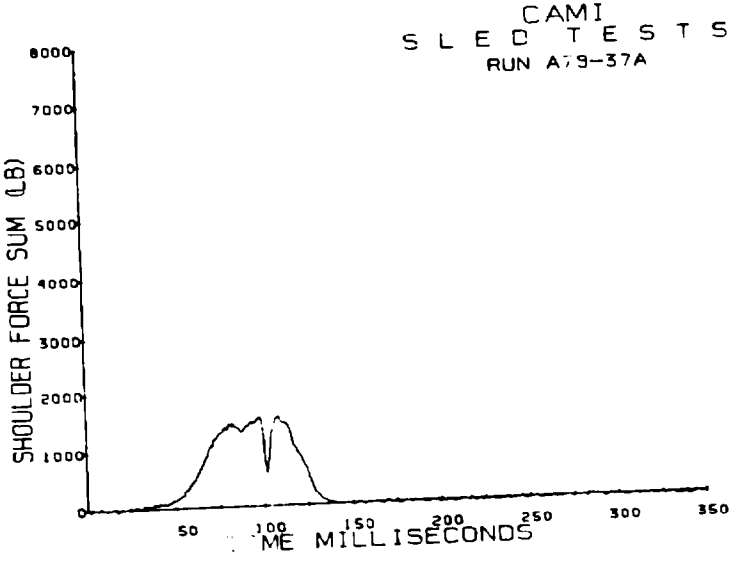

CAMI
SLED TESTS
RUN A79-37A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

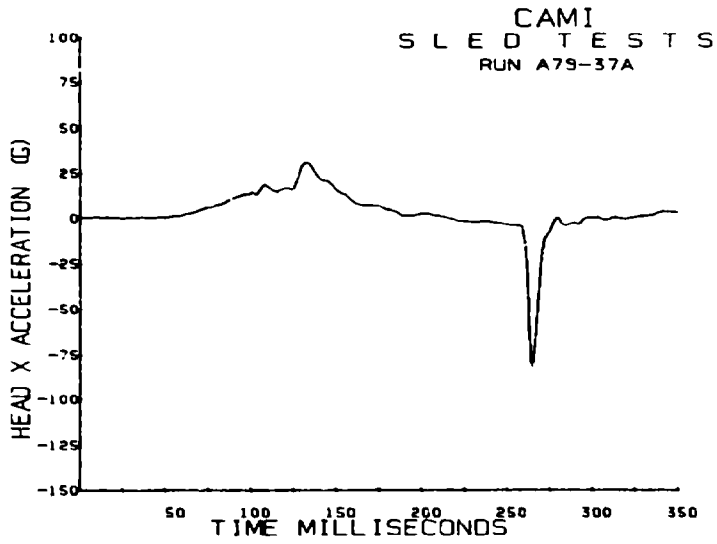

CAMI
SLED TESTS
RUN A79-37A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

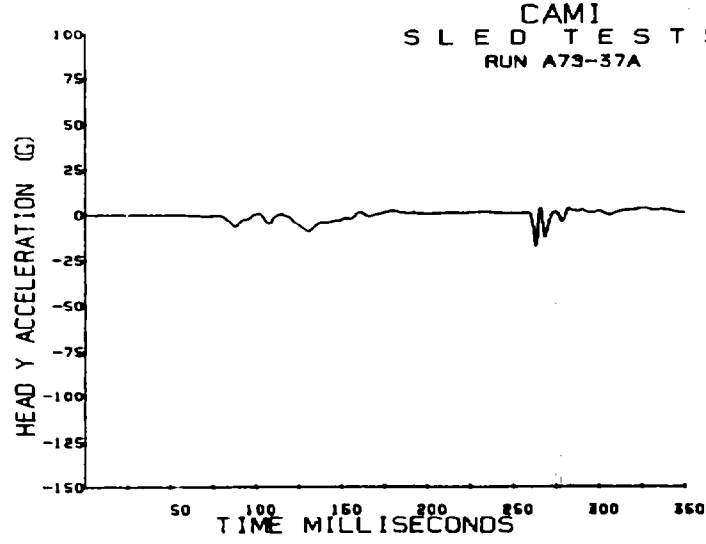

CAMI
SLED TESTS
RUN A79-37A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

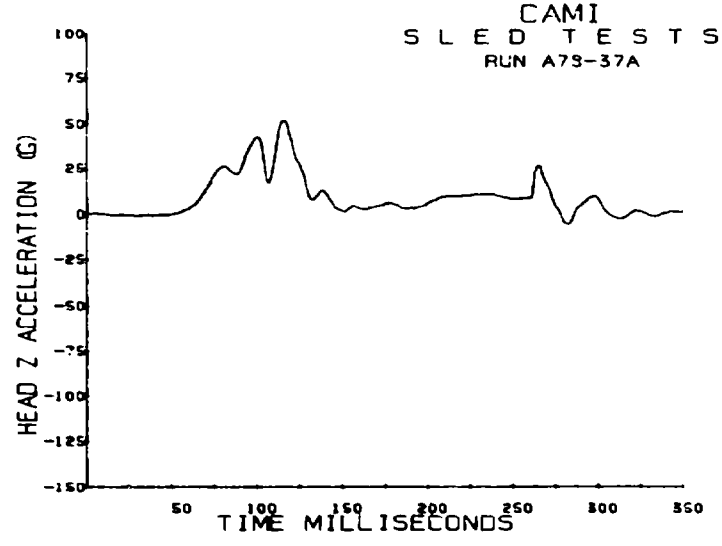

CAMI
SLED TESTS
RUN A79-37A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

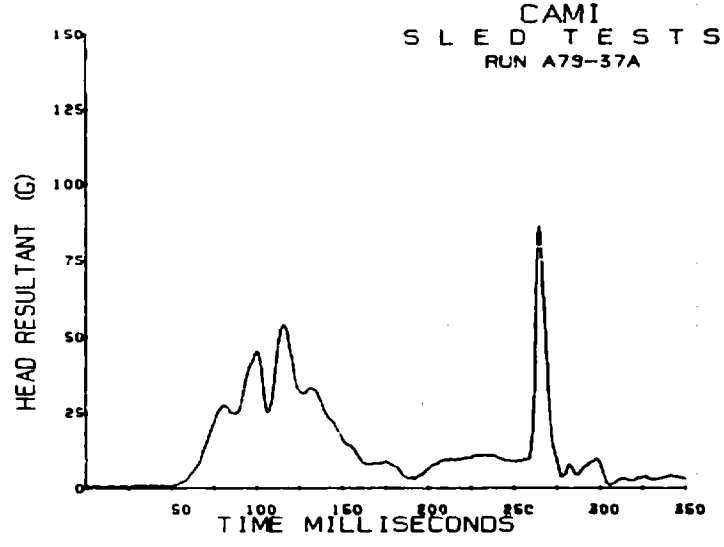

CAMI
SLED TESTS
RUN A79-37A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

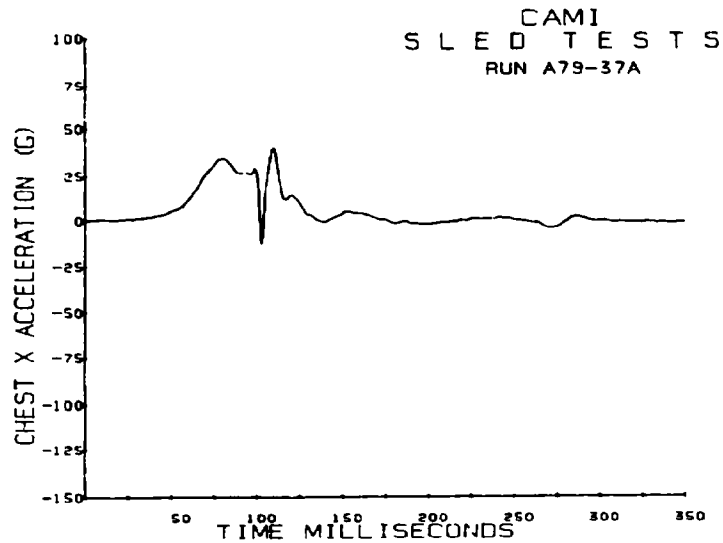

CAMI
SLED TESTS
RUN A79-37A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
50
100
150
200
250
300
350
ME MILLISECONDS

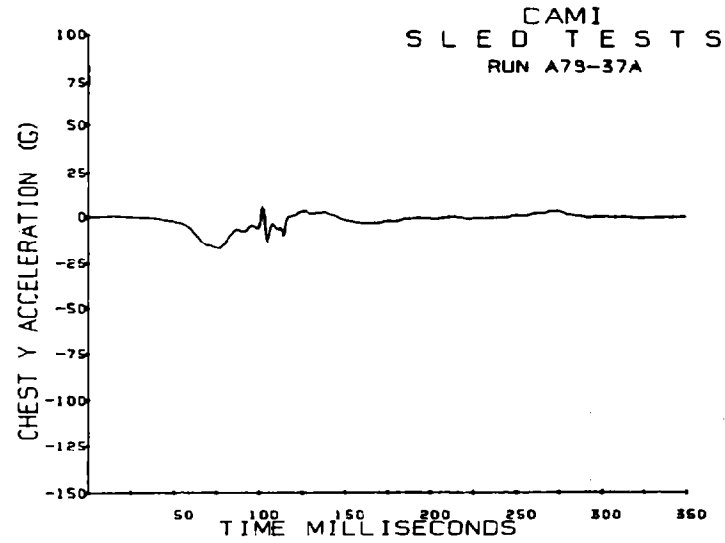

CAMI
SLED TESTS
RUN A79-37A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

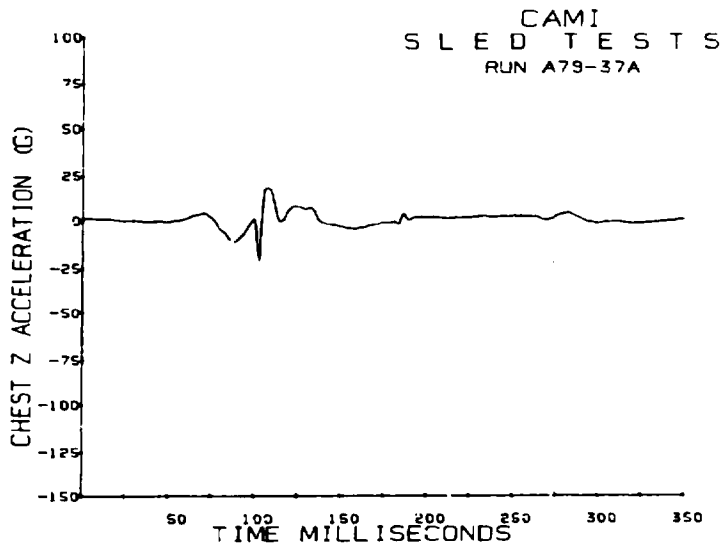

CAMI
SLED TESTS
RUN A79-37A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

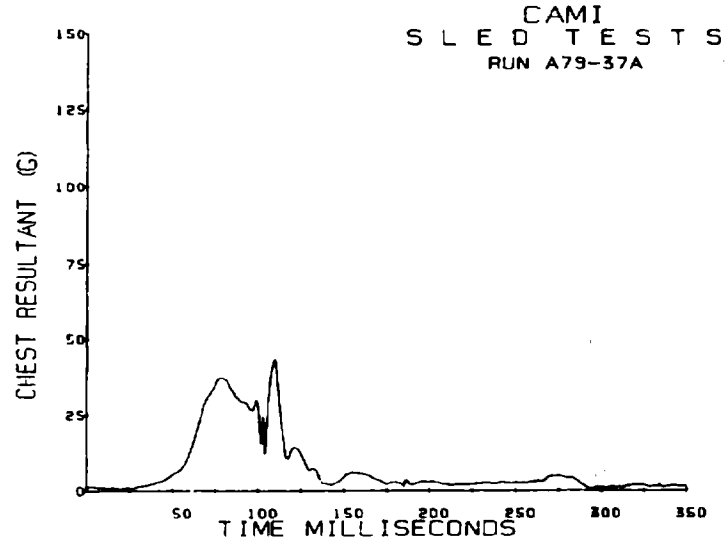

CAMI
SLED TESTS
RUN A79-37A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

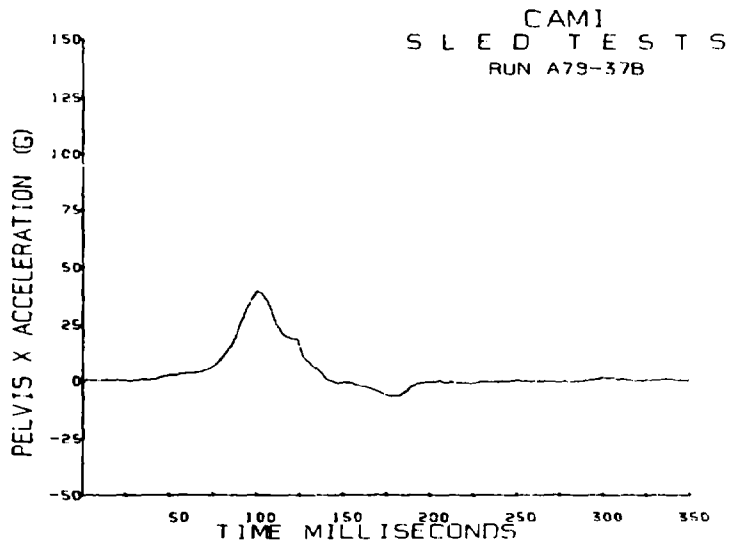

CAMI
SLED TESTS
RUN A79-37A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

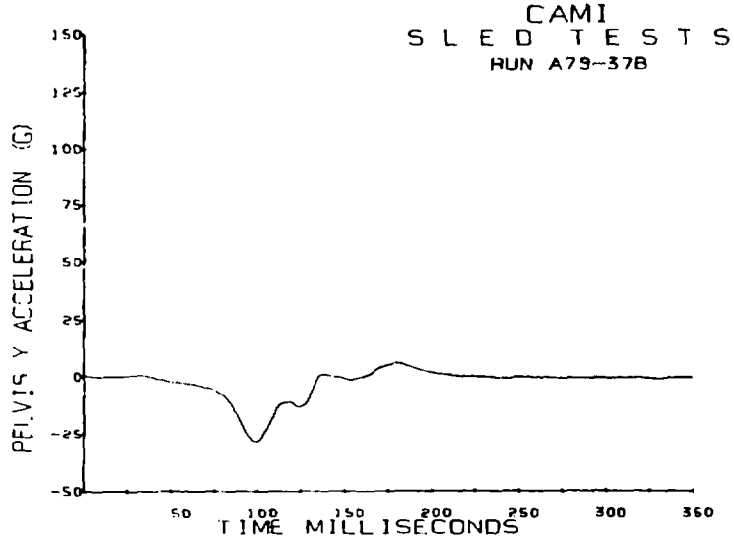

CAMI
SLED TESTS
RUN A79-37A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

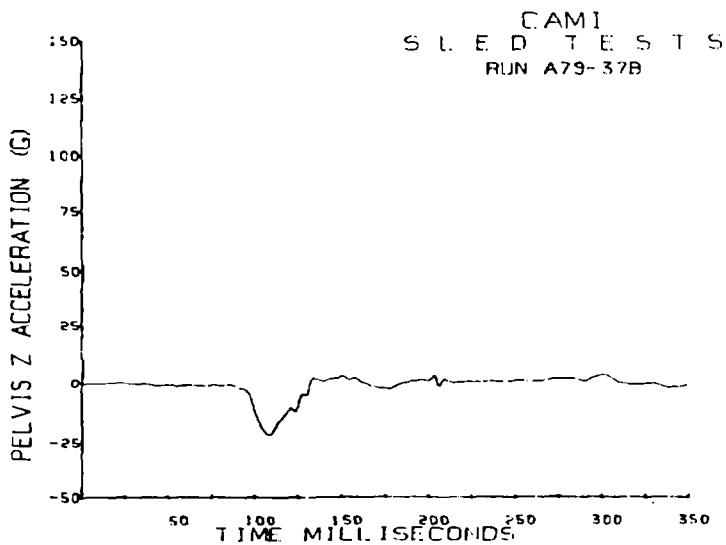

CAMI
SLED TESTS
RUN A79-37A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

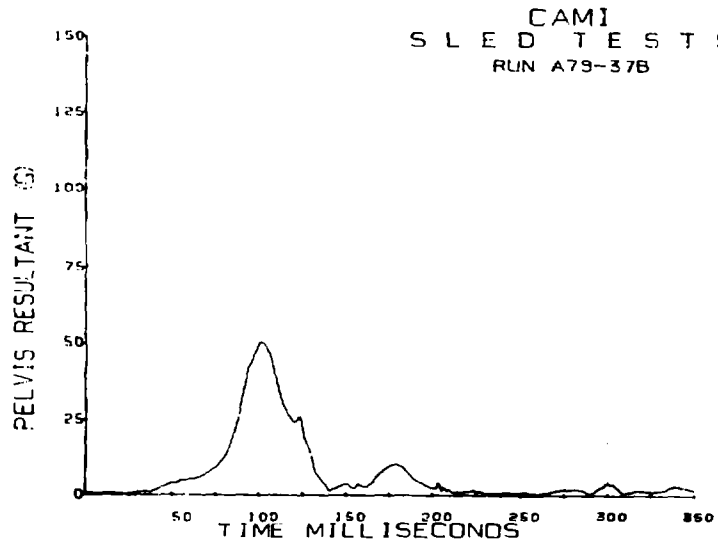

CAMI
SLED TESTS
RUN A79-37A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

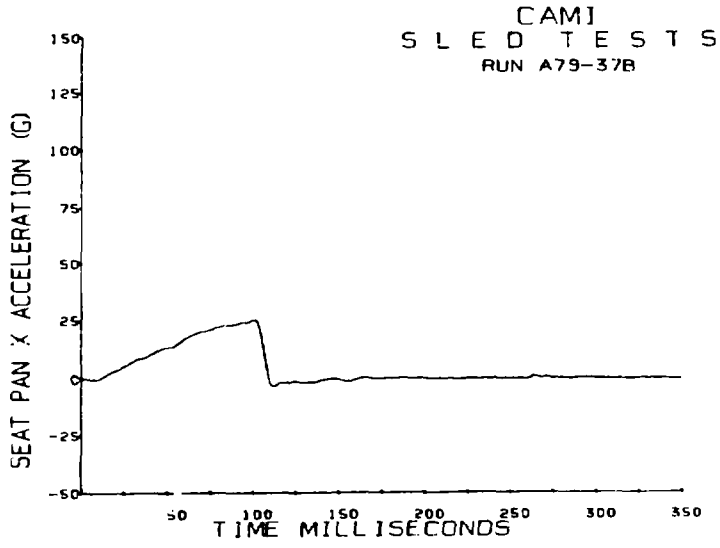

CAMI
SLED TESTS
RUN A79-37A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

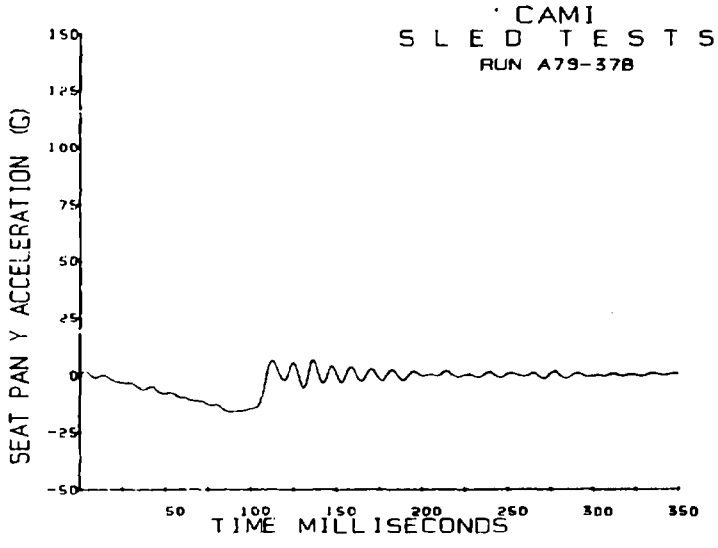

CAMI
S L E D T E S T S
RUN A79-37B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

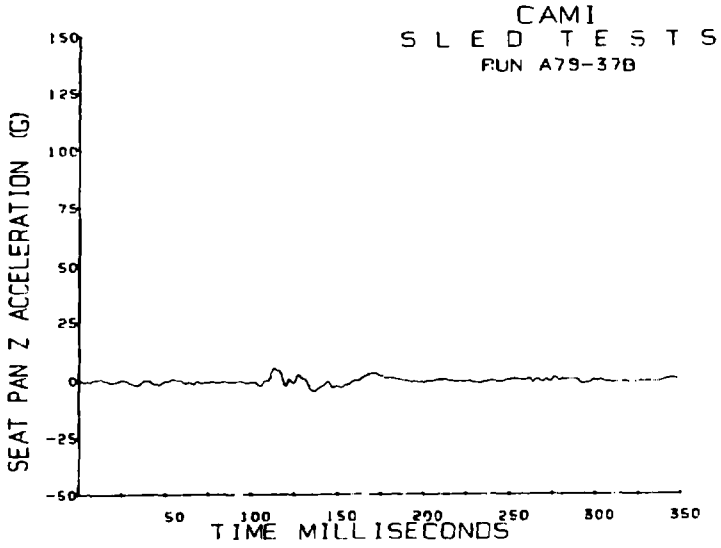

CAMI
S L E D T E S T S
RUN A79-37B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

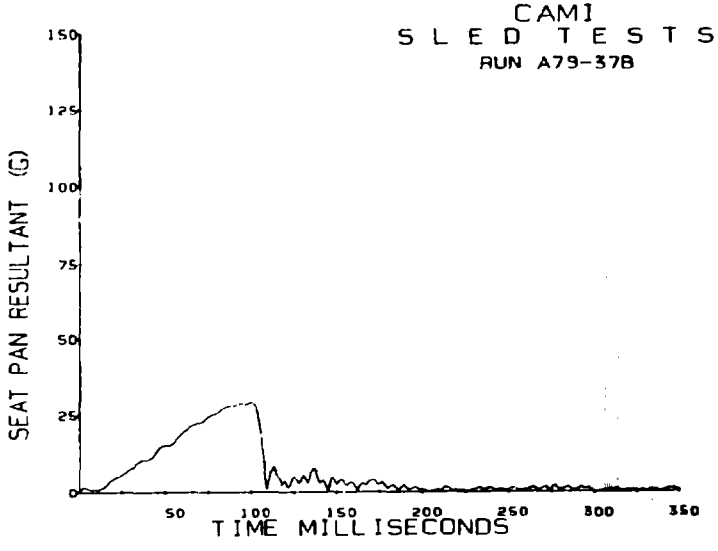

CAMI
S L E D T E S T S
RUN A79-37B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

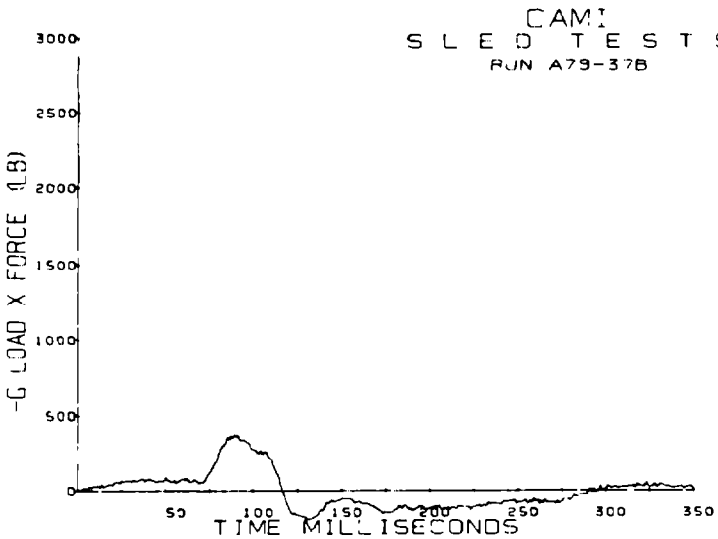

CAMI
S L E D T E S T S
RUN A79-37B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

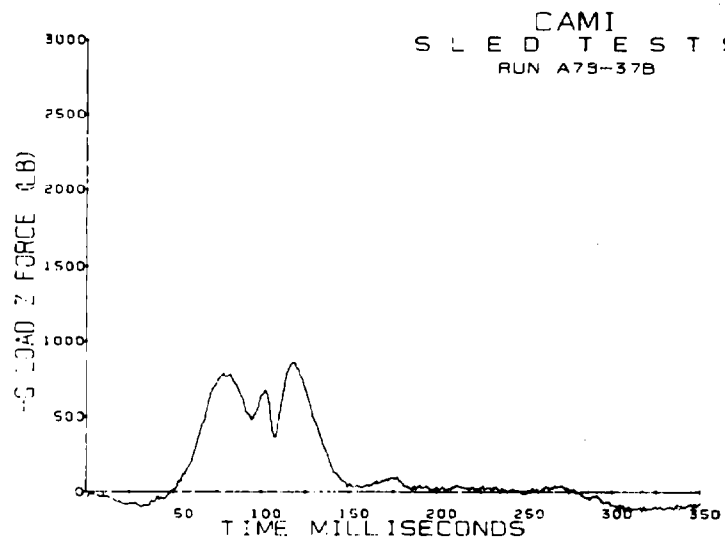

CAMI
SLED TESTS
RUN A79-37B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

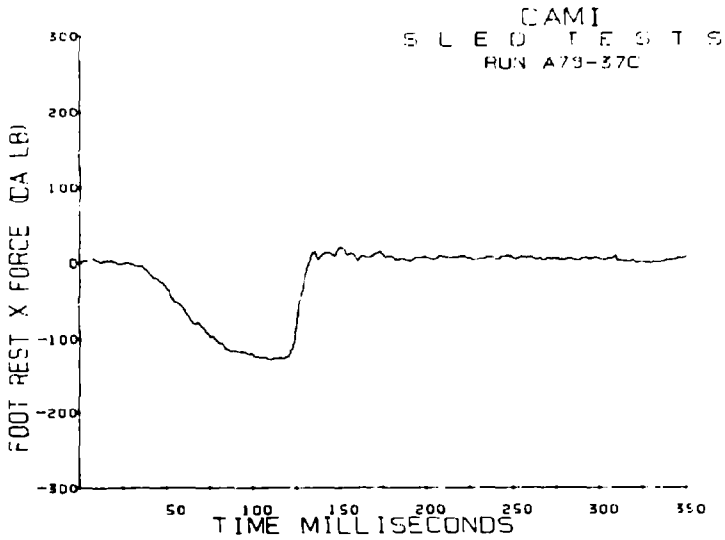

CAMI
SLED TESTS
RUN A79-37B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

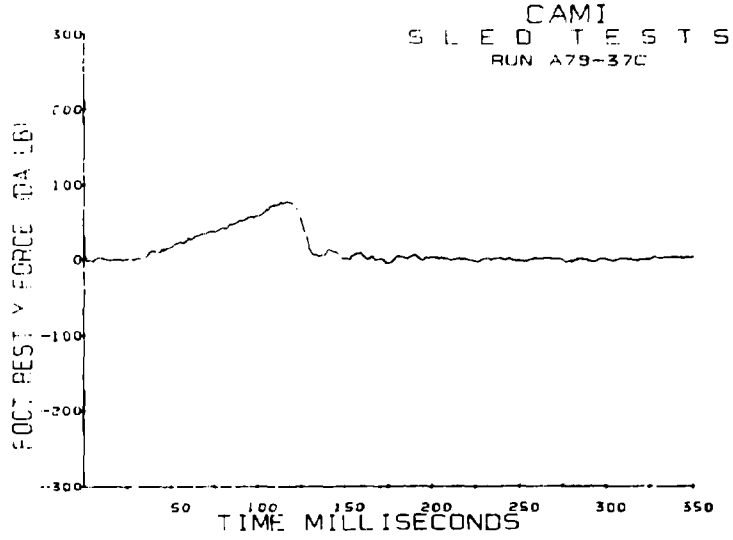

CAMI
SLED TESTS
RUN A79-37B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

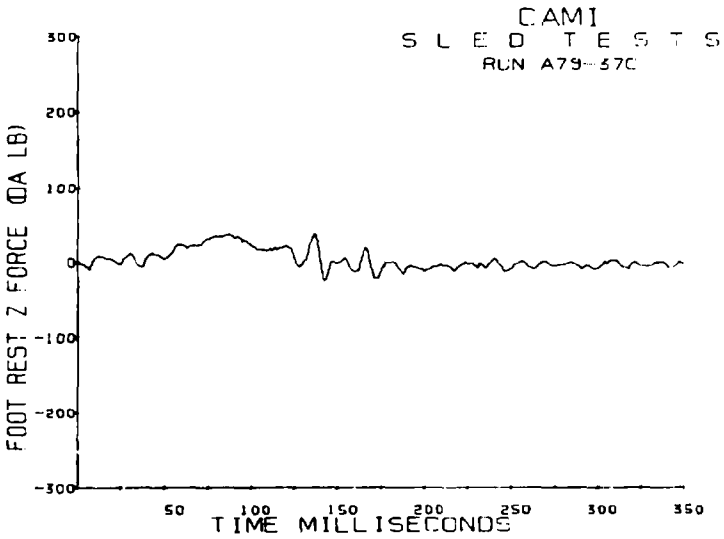

CAMI
SLED TESTS
RUN A79-37B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

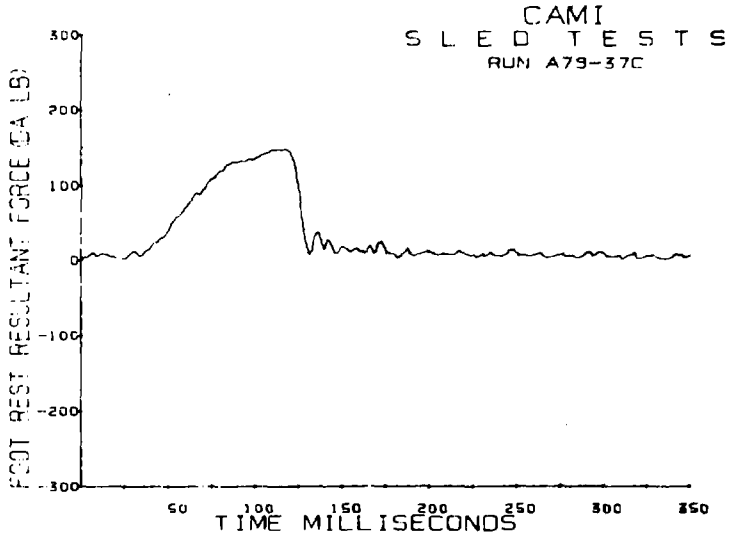

CAMI
SLED TESTS
RUN A79-37B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

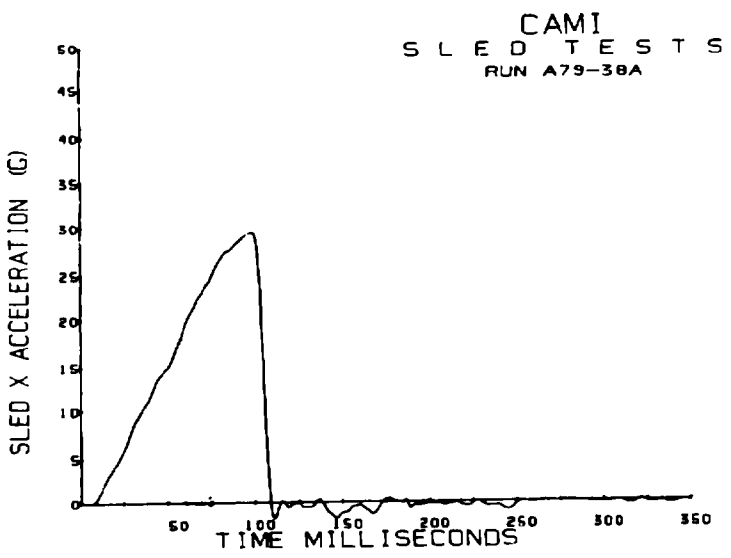

CAMI
SLED TESTS
RUN A79-37B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

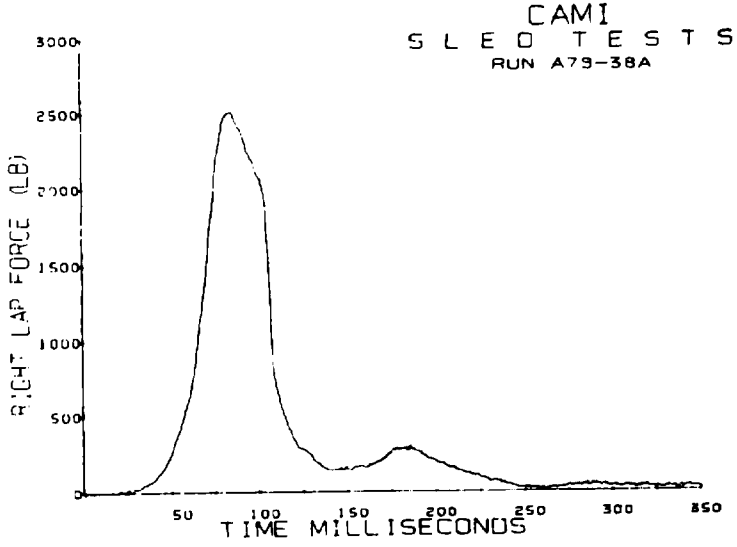

CAMI
S L E D T E S T S
RUN A79-37C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

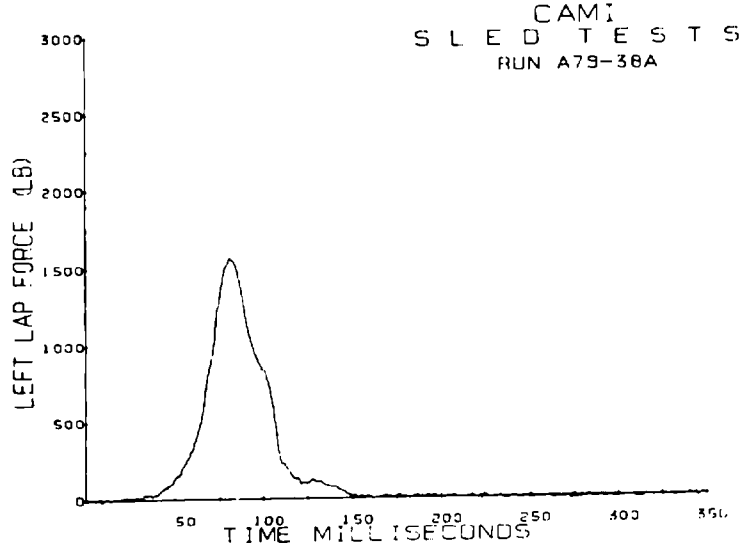

CAMI
S L E D T E S T S
RUN A79-37C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

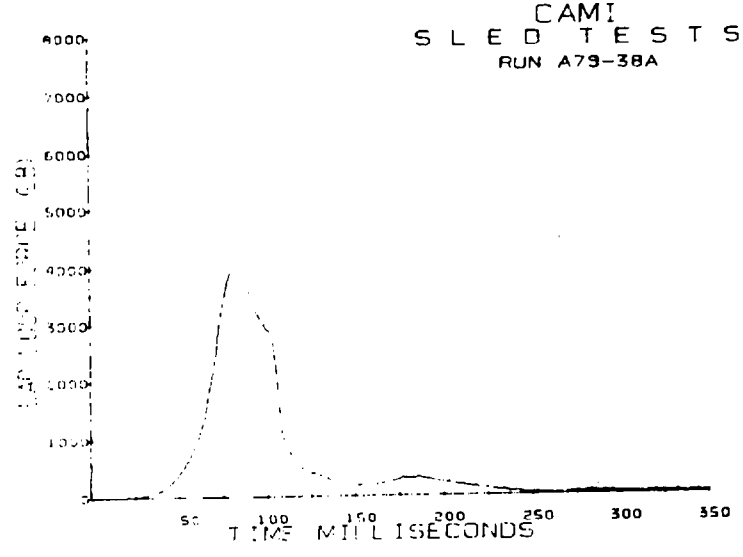

CAMI
S L E D T E S T S
RUN A79-37C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

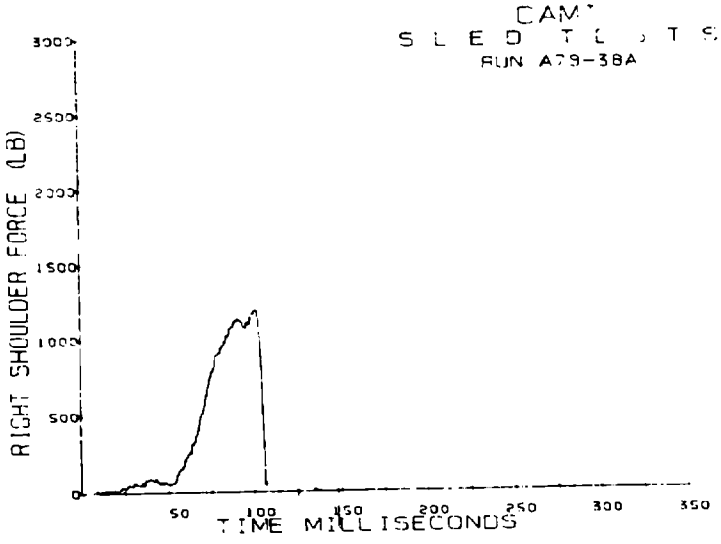

CAMI
S L E D T E S T S
RUN A79-37C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

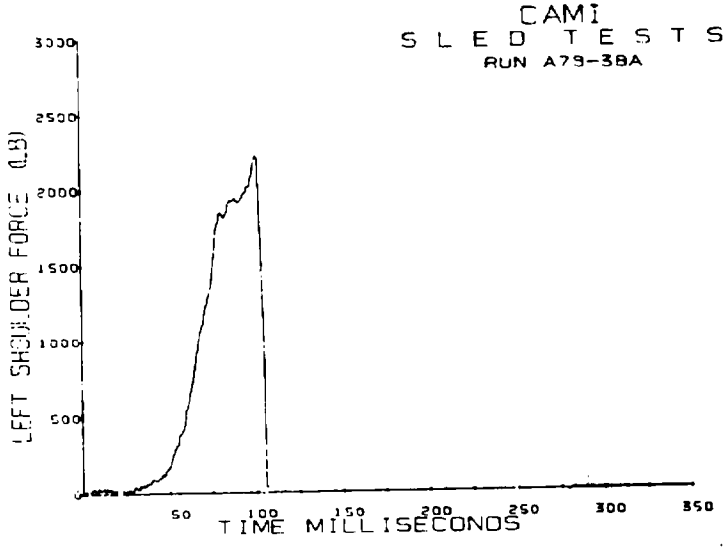

CAMI
S L E D T E S T S
RUN A79-38A
SLED X ACCELERATION (G)
TIME MILLISECONDS

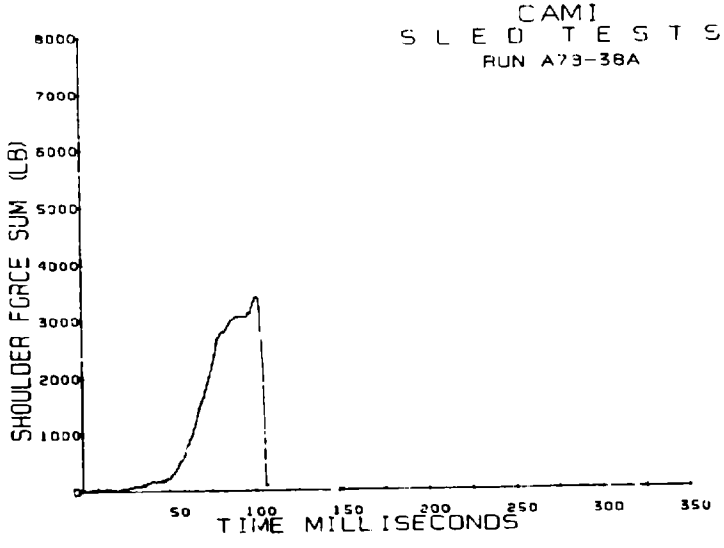

CAMI
S L E D T E S T S
RUN A79-38A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

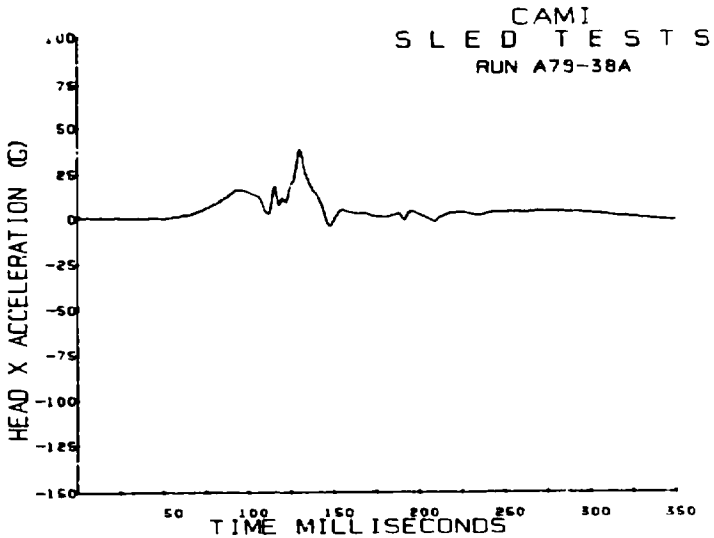

CAMI
S L E D T E S T S
RUN A79-38A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

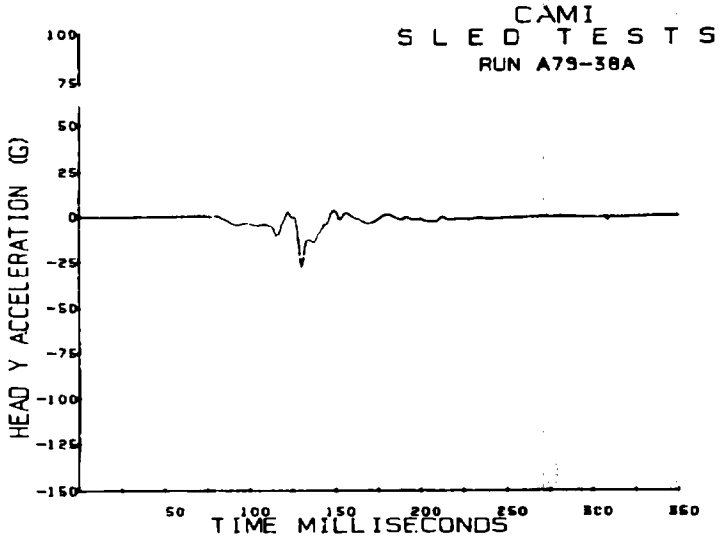

CAMI
S L E D T E S T S
RUN A79-38A
TIME MILLISECONDS

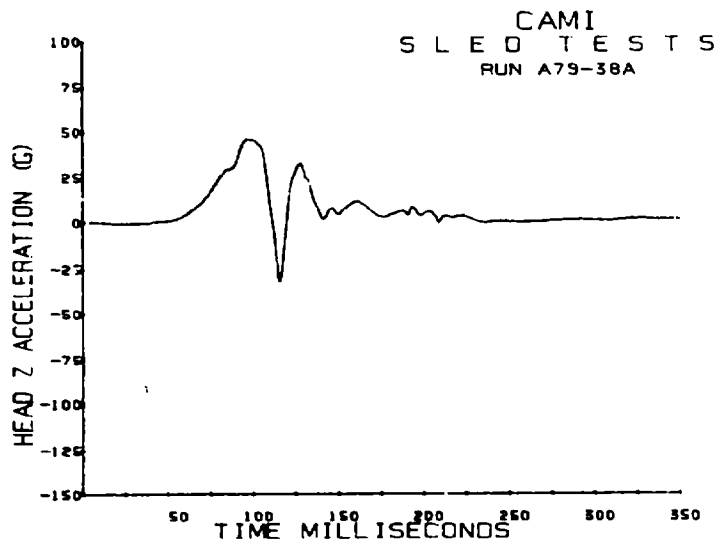

CAMI
SLED TESTS
RUN A79-38A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

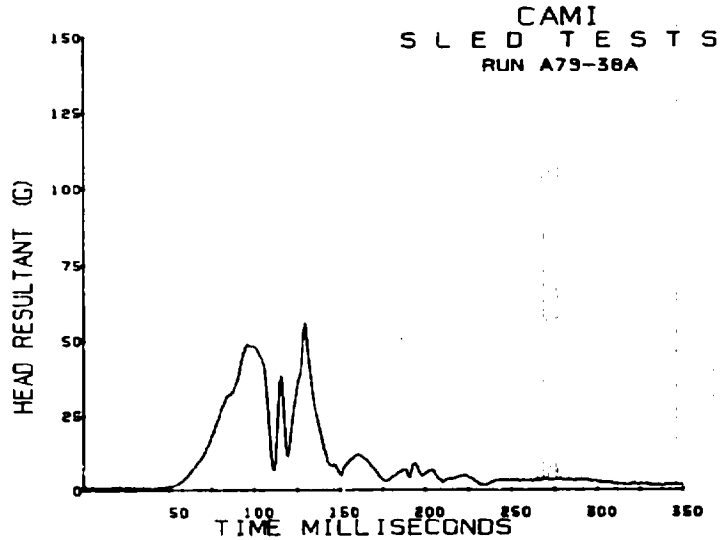

CAMI
SLED TESTS
RUN A79-38A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

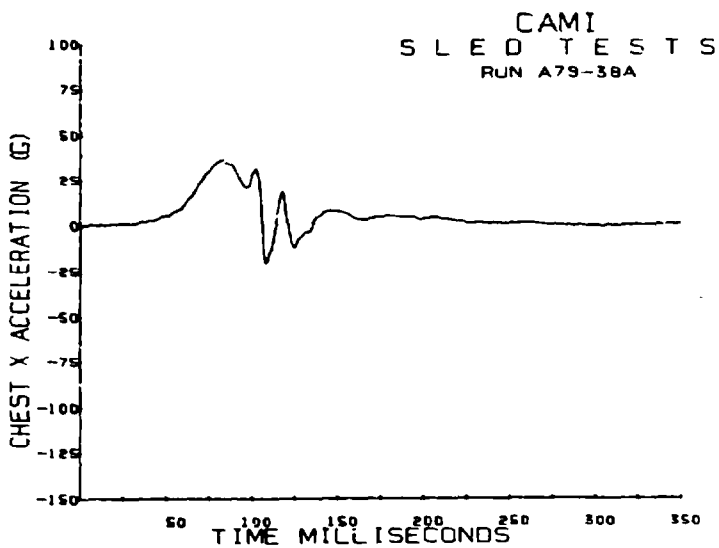

CAMI
SLED TESTS
RUN A79-38A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

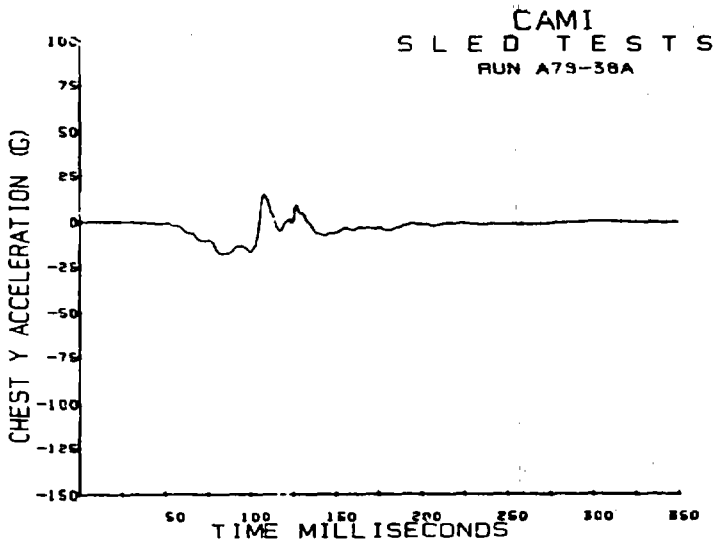

CAMI
SLED TESTS
RUN A79-38A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

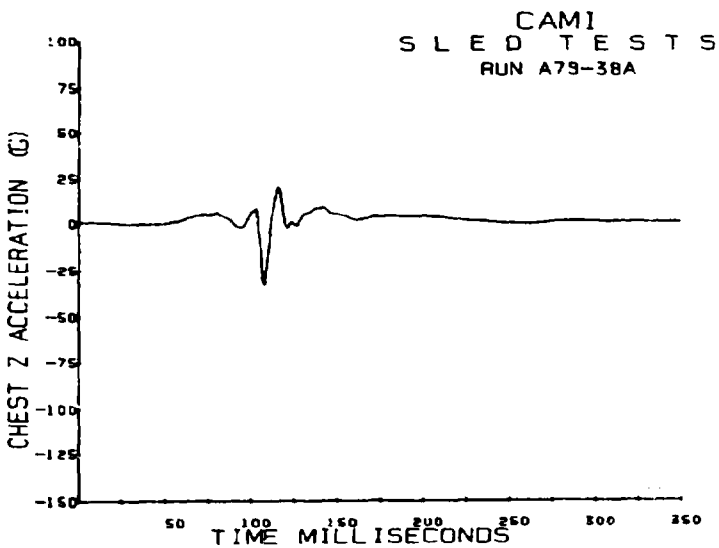

CAMI
SLED TESTS
RUN A79-38A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

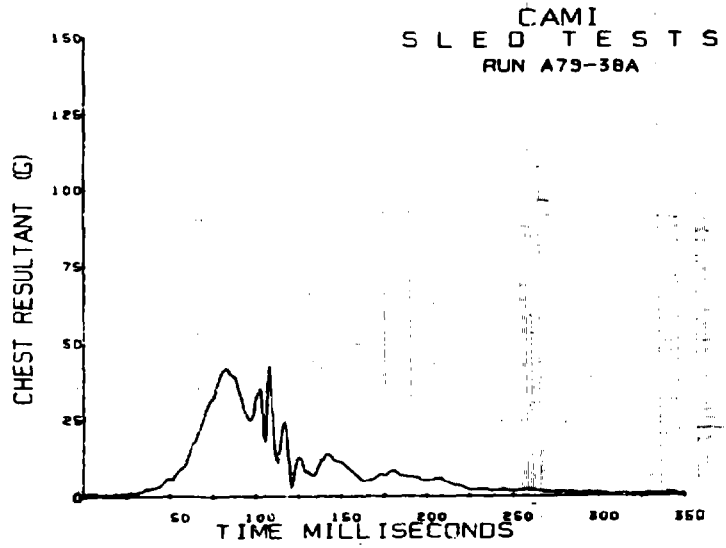

CAMI
SLED TESTS
RUN A79-38A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

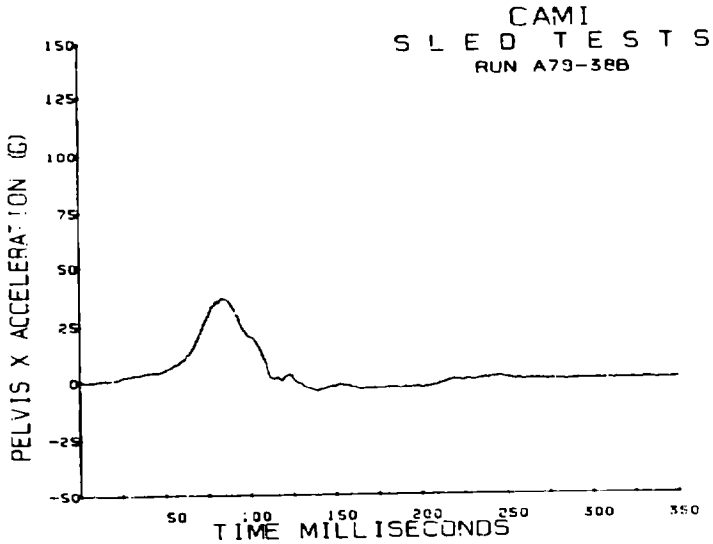

CAMI
SLED TESTS
RUN A79-38A
HEAD RESULTANT (G)
TIME MILLISECONDS

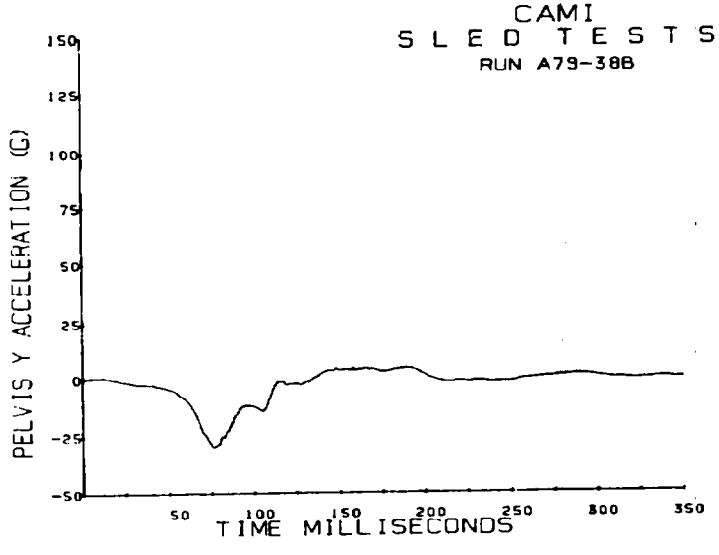

CAMI
SLED TESTS
RUN A79-38A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

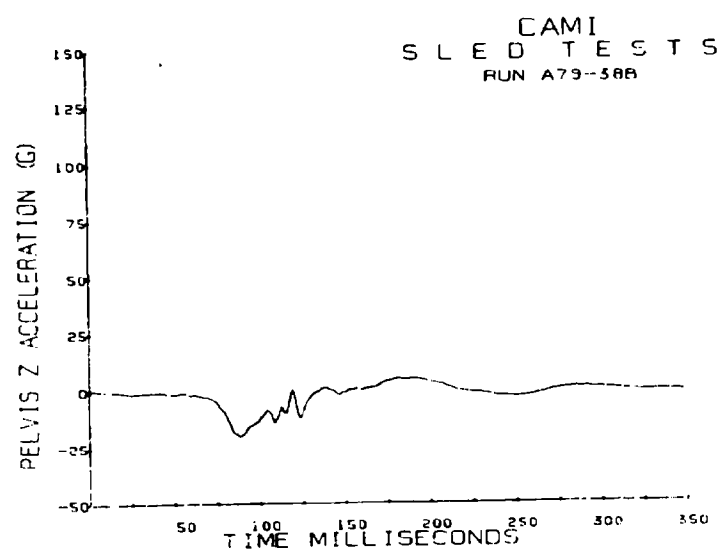

CAMI
SLED TESTS
RUN A79-38A
CHEST Y ACCELERATION (G)
TIME MILLISECONDS

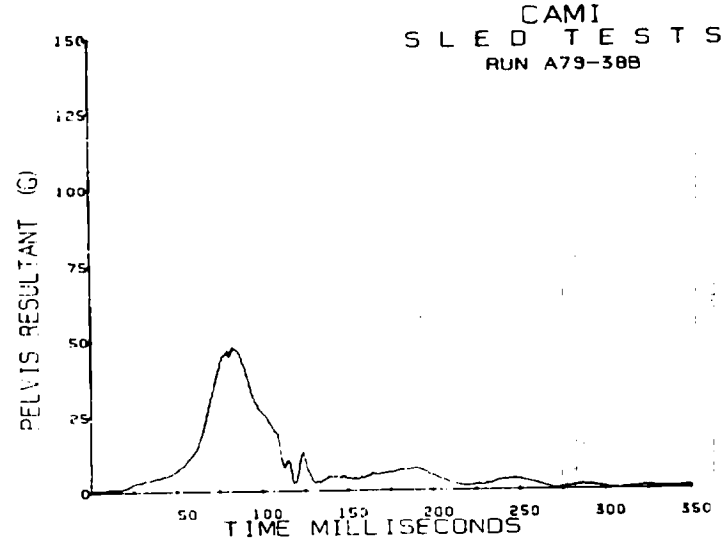

CAMI
SLED TESTS
RUN A79-38A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS

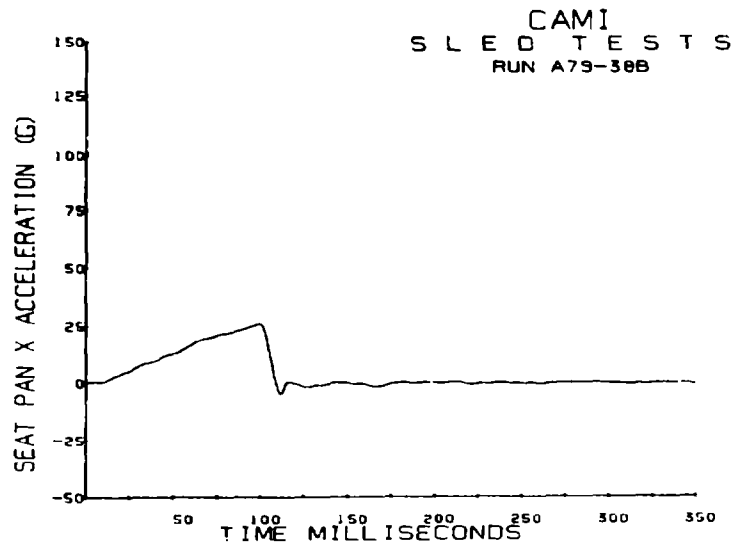

CAMI
SLED TESTS
RUN A79-38A
CHEST RESULTANT (G)
TIME MILLISECONDS

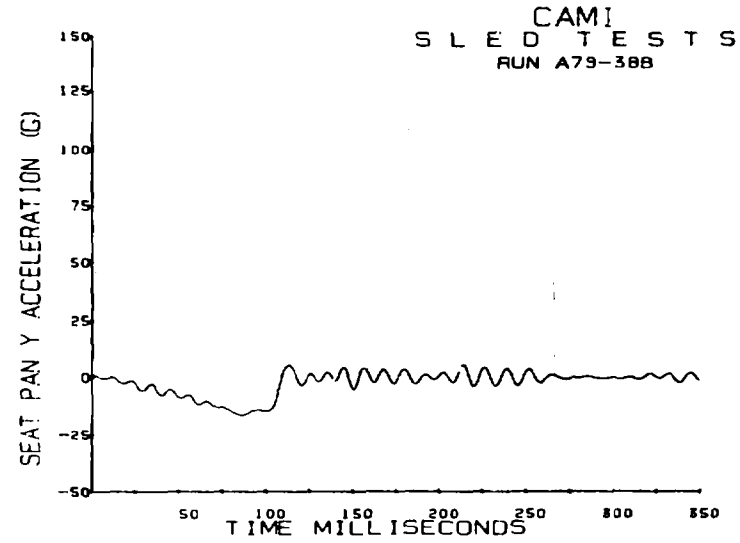

CAMI
S L E D T E S T S
RUN A79-38B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

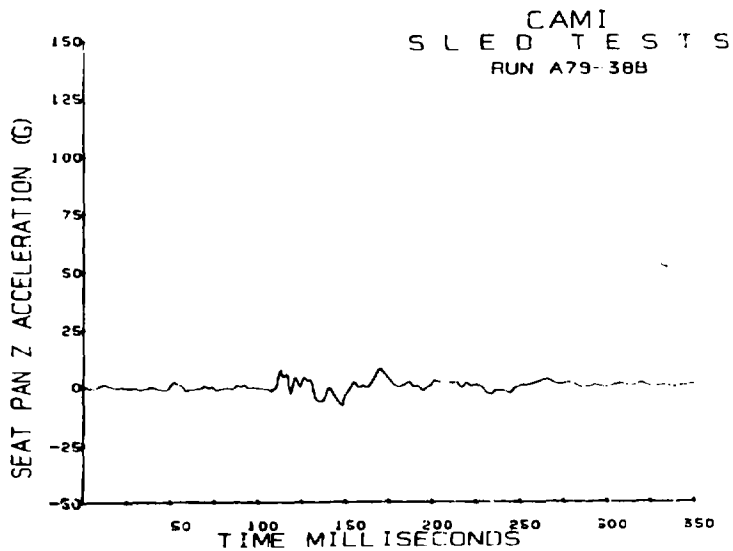

CAMI
S L E D T E S T S
RUN A79-38B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

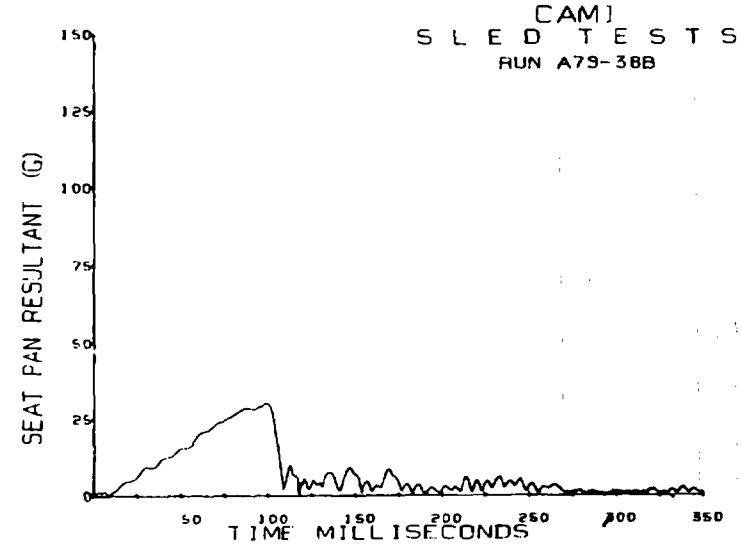

CAMI
S L E D T E S T S
RUN A79-38B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

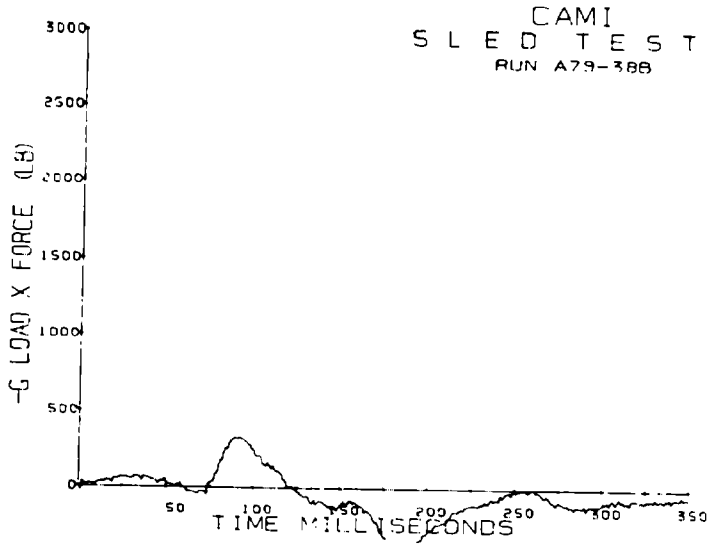

CAMI
S L E D T E S T S
RUN A79-38B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

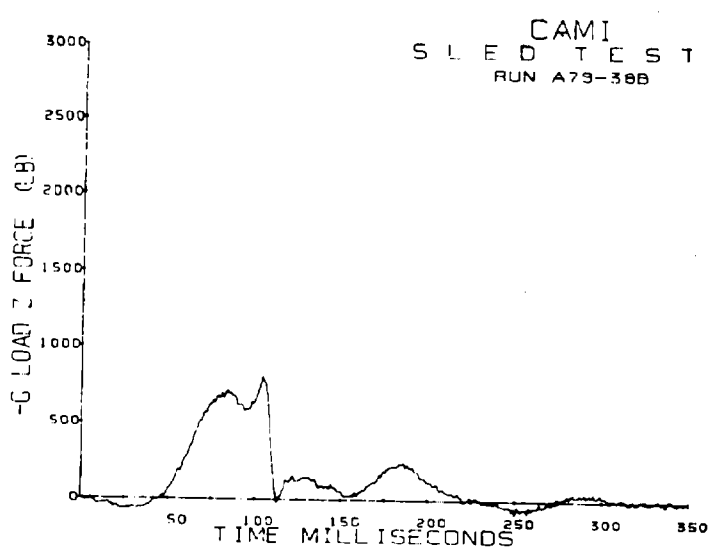

CAMI
SLED TESTS
RUN A79-38B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

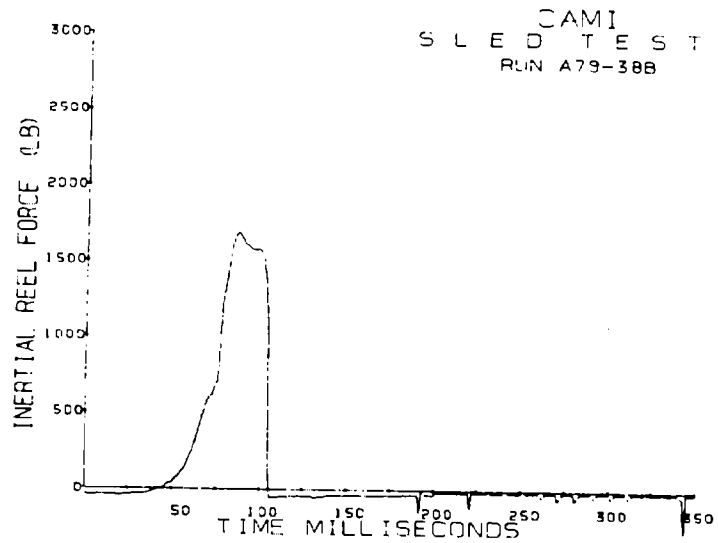

CAMI
SLED TESTS
RUN A79-38B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

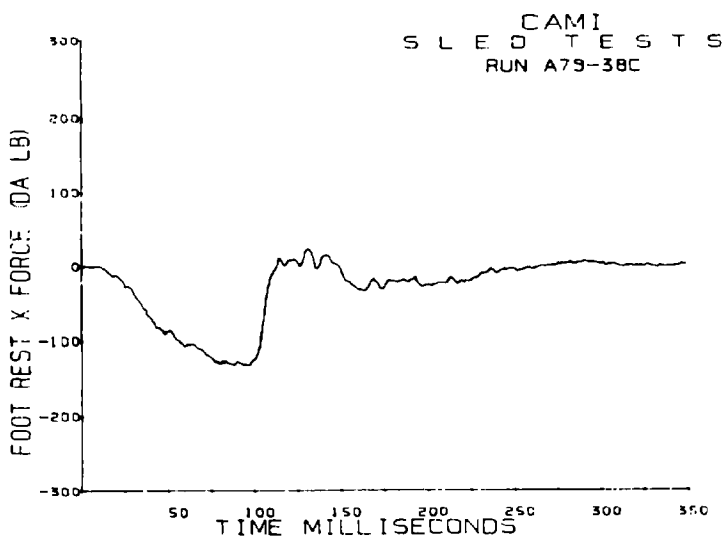

CAMI
SLED TESTS
RUN A79-38B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

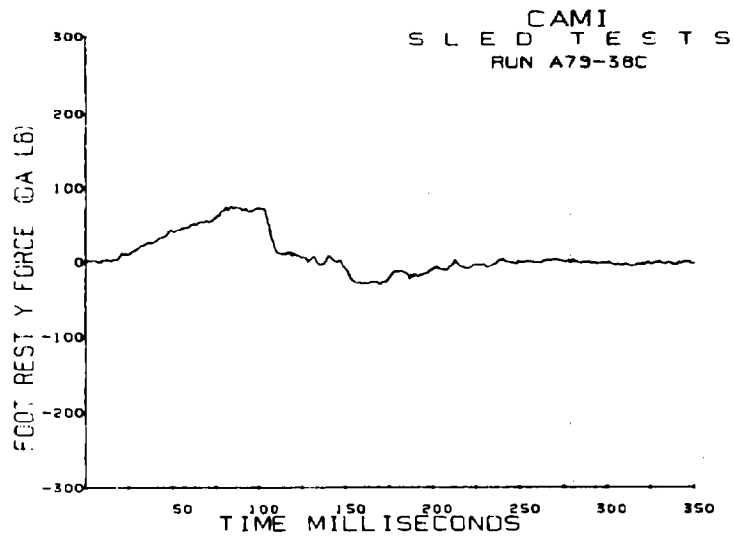

CAMI
SLED TESTS
RUN A79-38B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
50
100
150
200
250
300
350
TIME MILLISECONDS

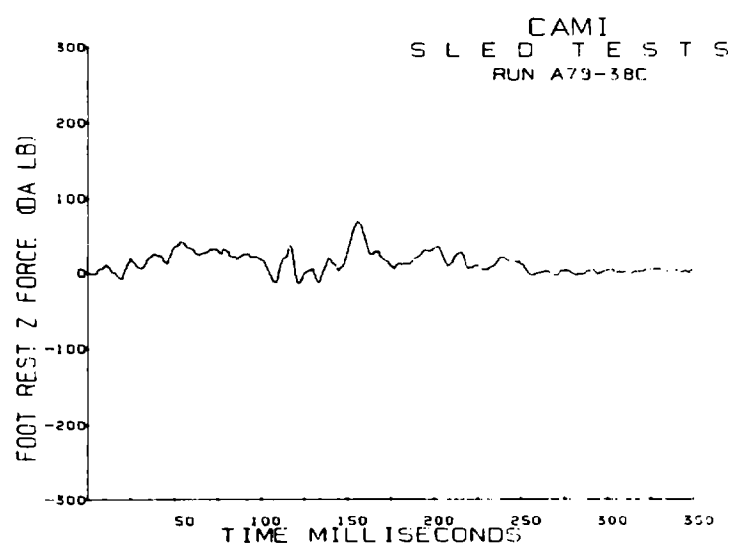

CAMI
S L E D T E S T S
RUN A79-38B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

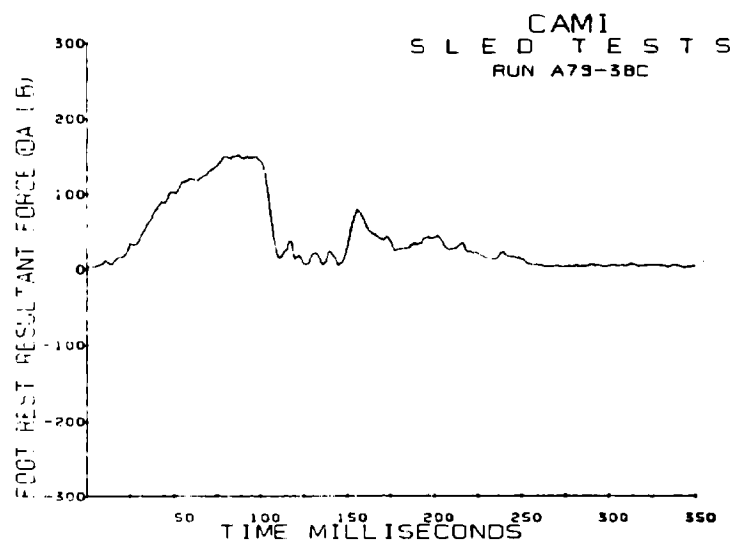

CAMI
S L E D T E S T S
RUN A79-38B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

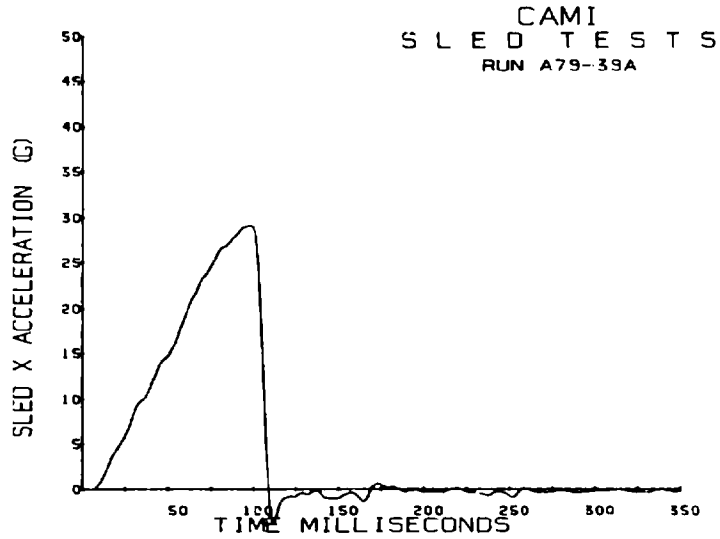

CAMI
S L E D T E S T S
RUN A79-38B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

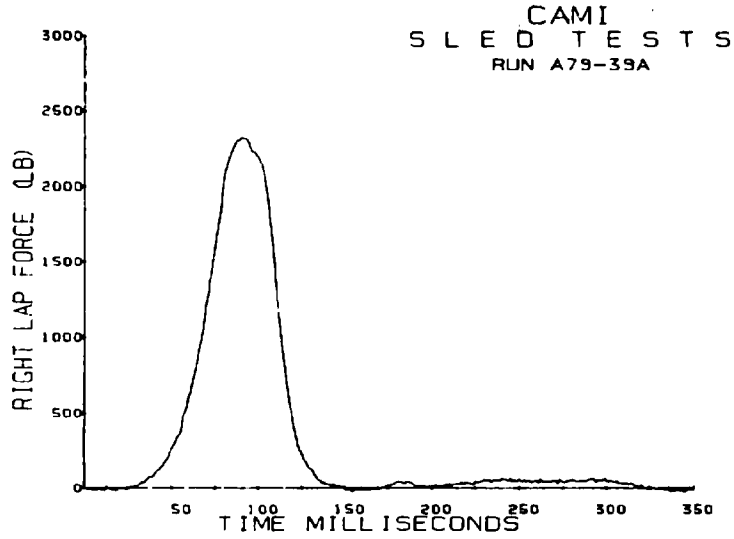

CAMI
S L E D T E S T S
RUN A79-38C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

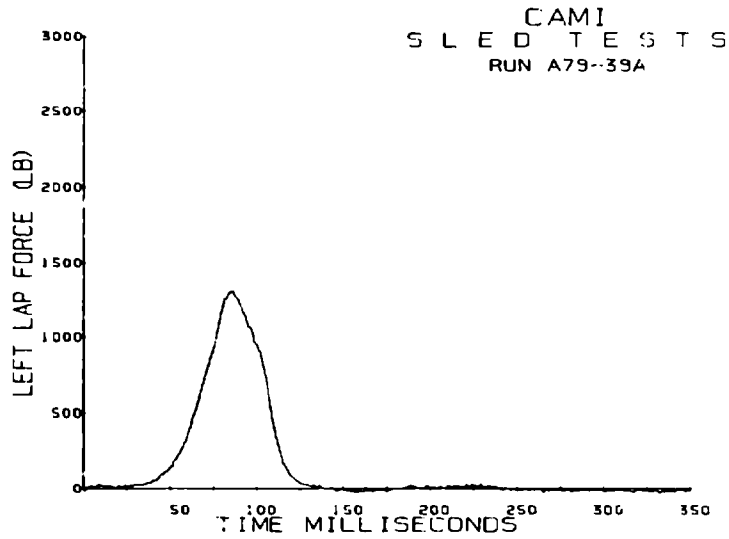

CAMI
S L E D T E S T S
RUN A79-38C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

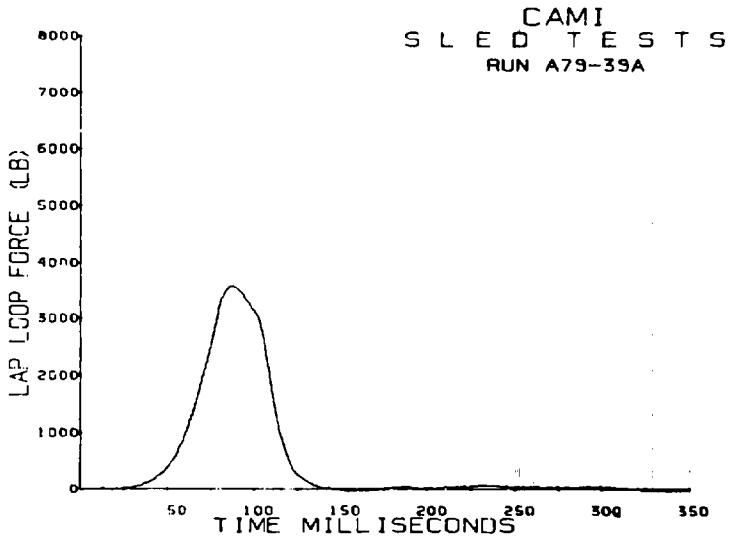

CAMI
S L E D T E S T S
RUN A79-38C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

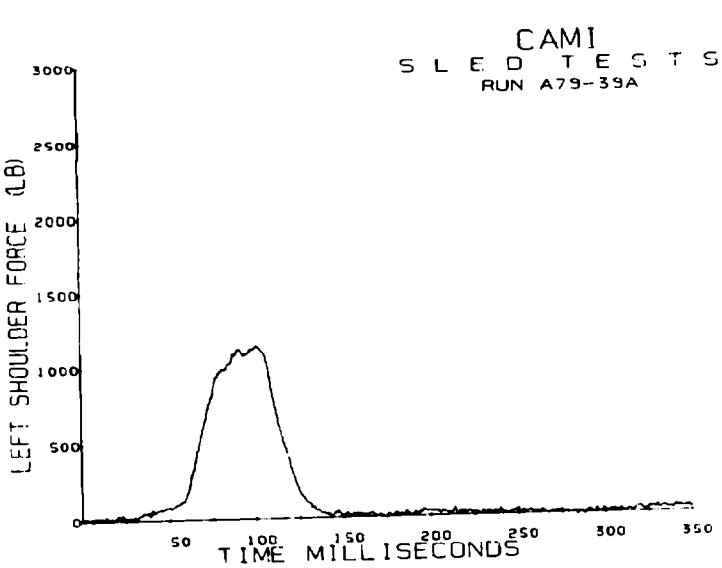

CAMI
S L E D T E S T S
RUN A79-38C
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

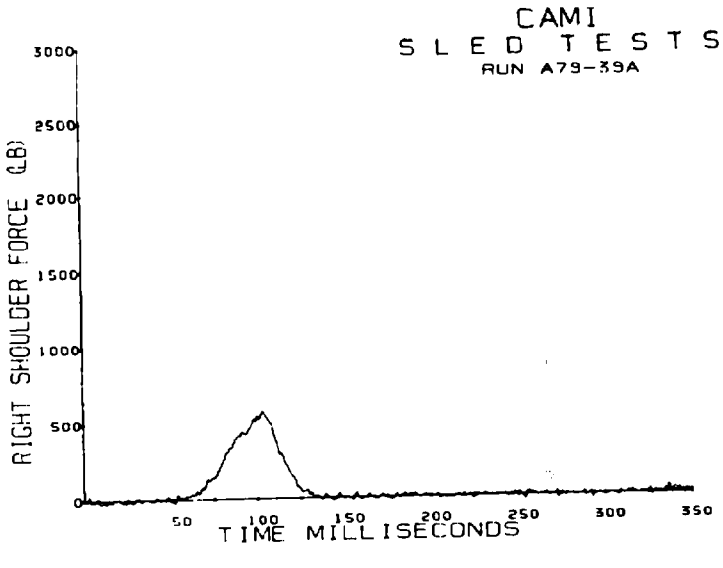

CAMI
SLED TESTS
RUN A79-39A
SLED X ACCELERATION (G)
TIME MILLISECONDS

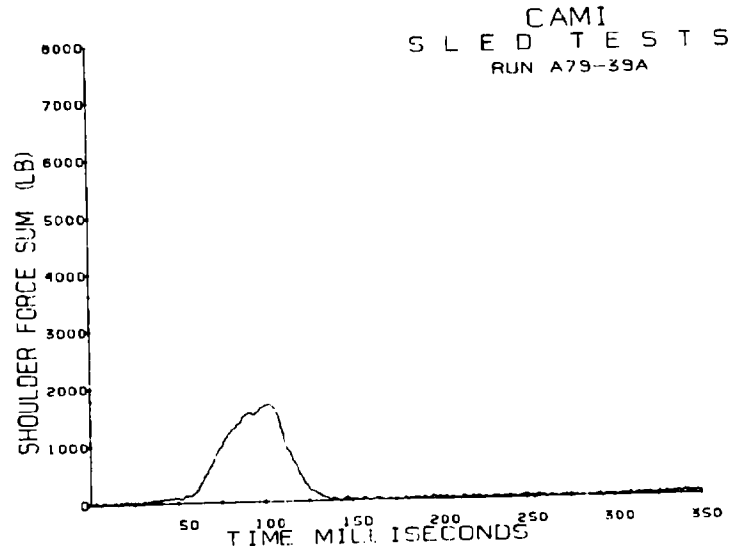

CAMI
SLED TESTS
RUN A79-39A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

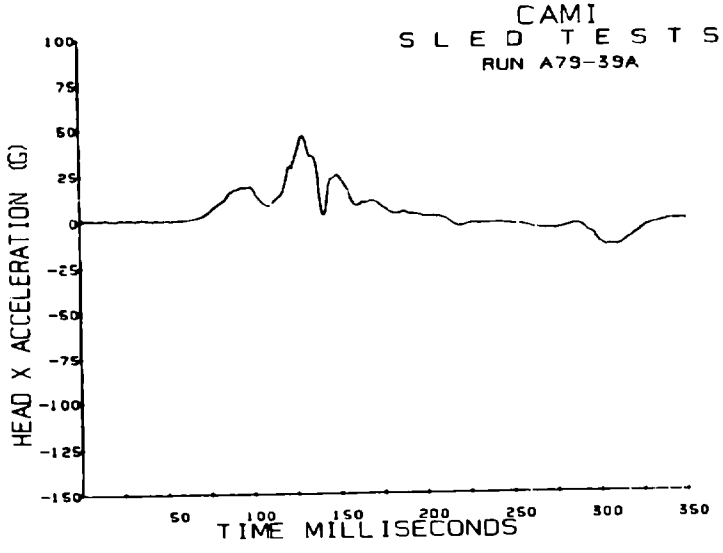

CAMI
SLED TESTS
RUN A79-39A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

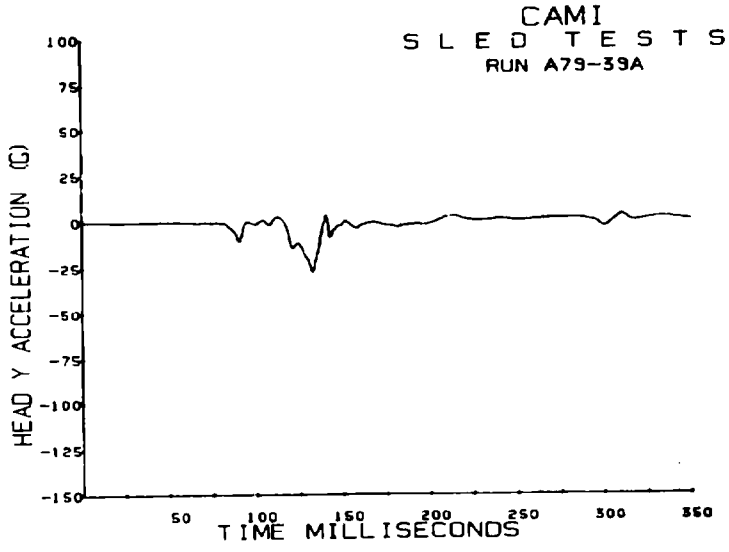

CAMI
SLED TESTS
RUN A79-39A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

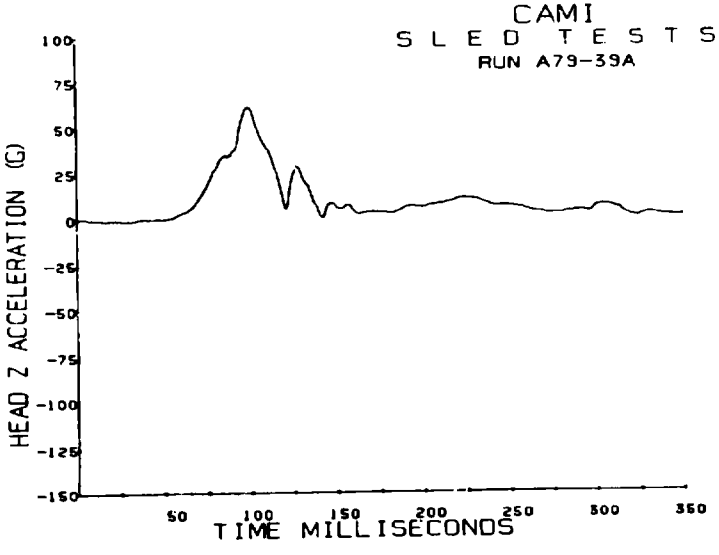

CAMI
SLED TESTS
RUN A79-39A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

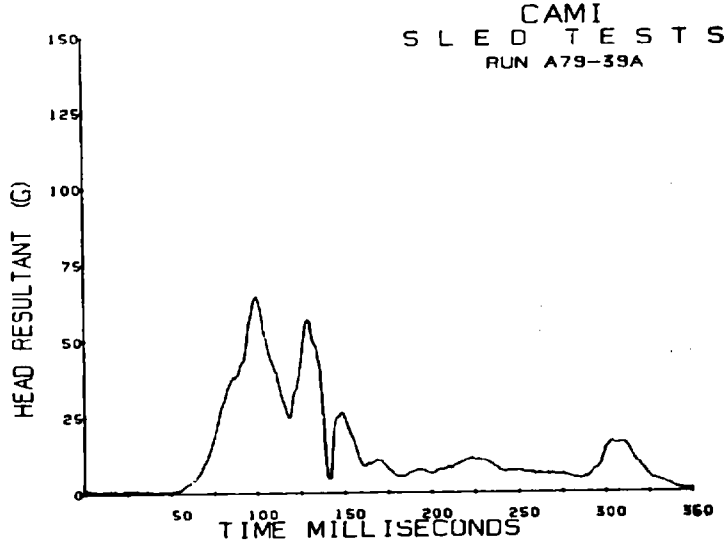

CAMI
SLED TESTS
RUN A79-39A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

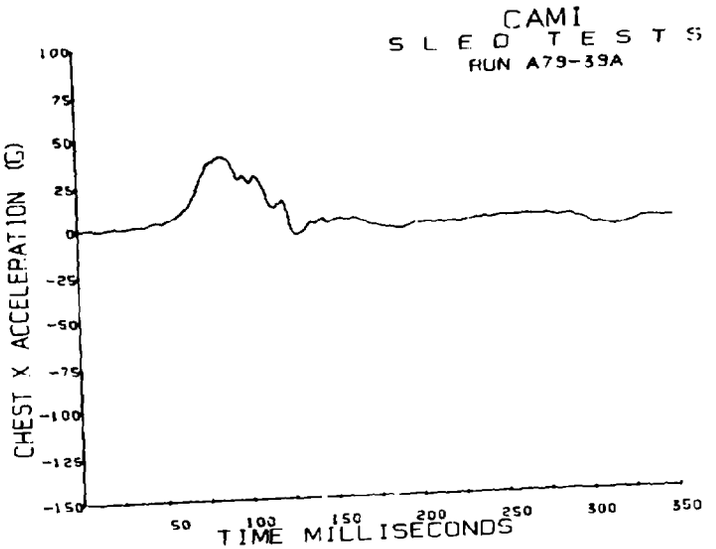

CAMI
SLED TESTS
RUN A79-39A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

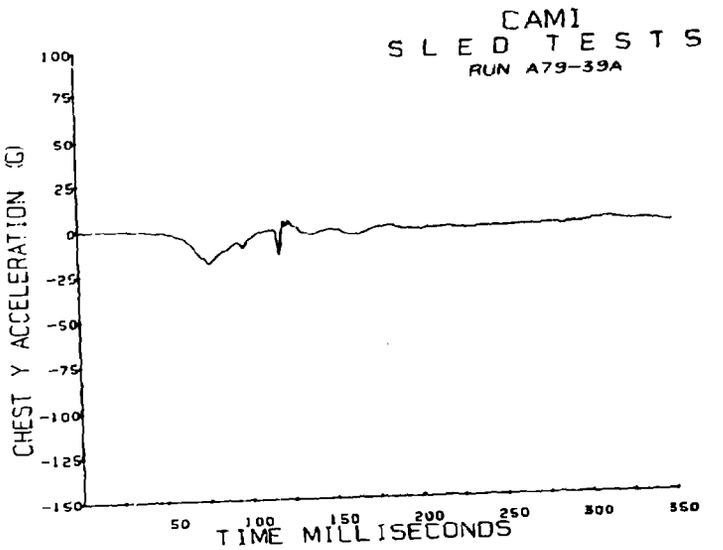

CAMI
SLED TESTS
RUN A79-39A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

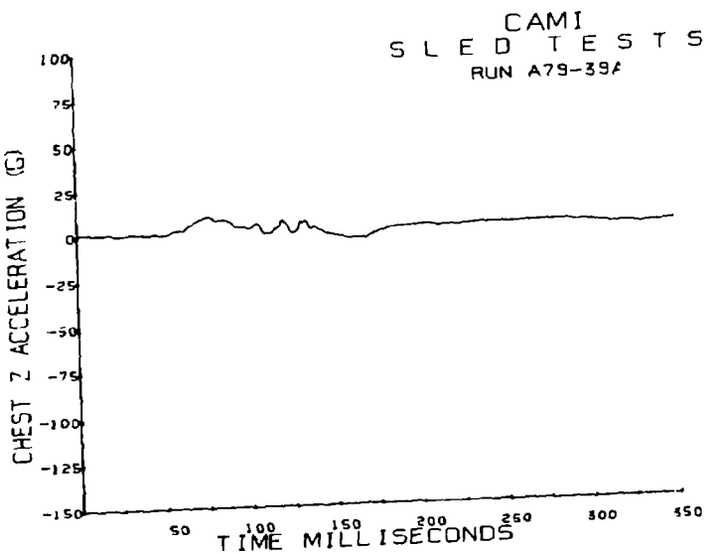

CAMI
SLED TESTS
RUN A79-39A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

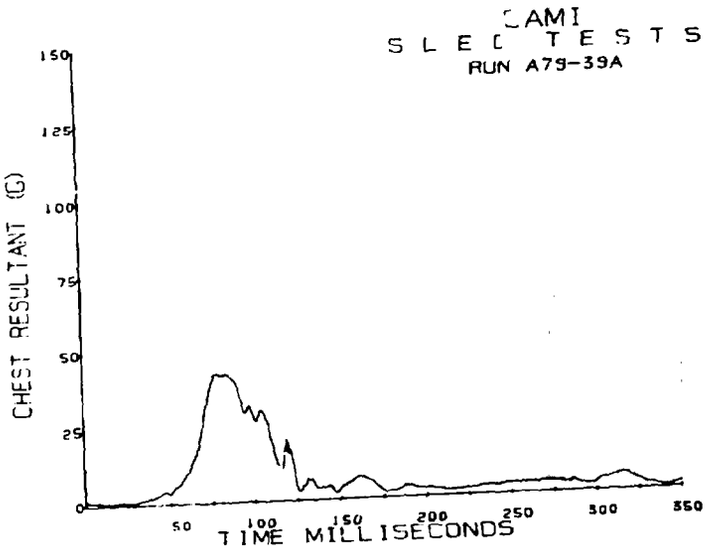

CAMI
SLED TESTS
RUN A79-39A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

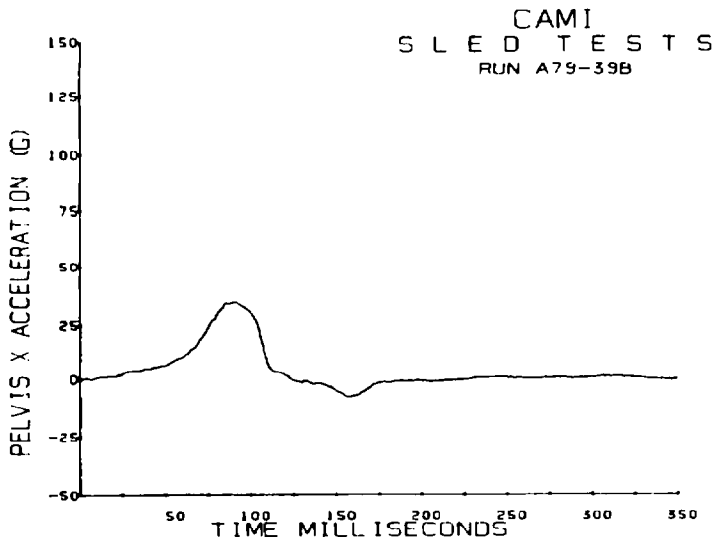

CAMI
SLED TESTS
RUN A79-39A
HEAD RESULTANT (G)
TIME MILLISECONDS

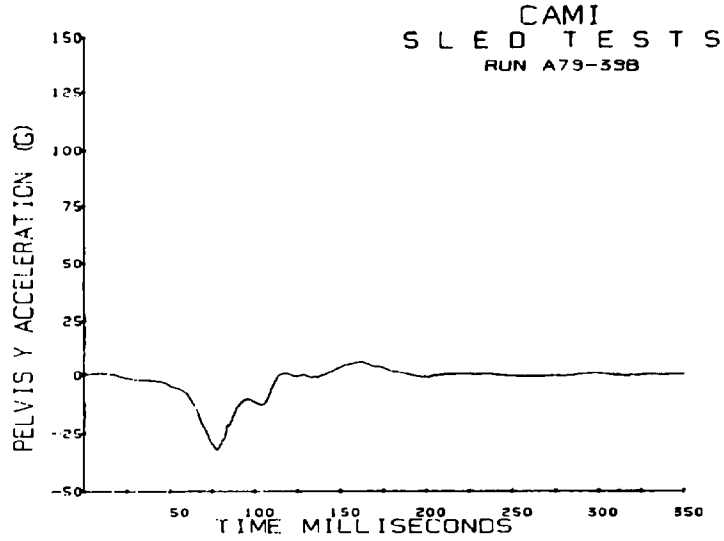

CAMI
SLED TESTS
RUN A79-39A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

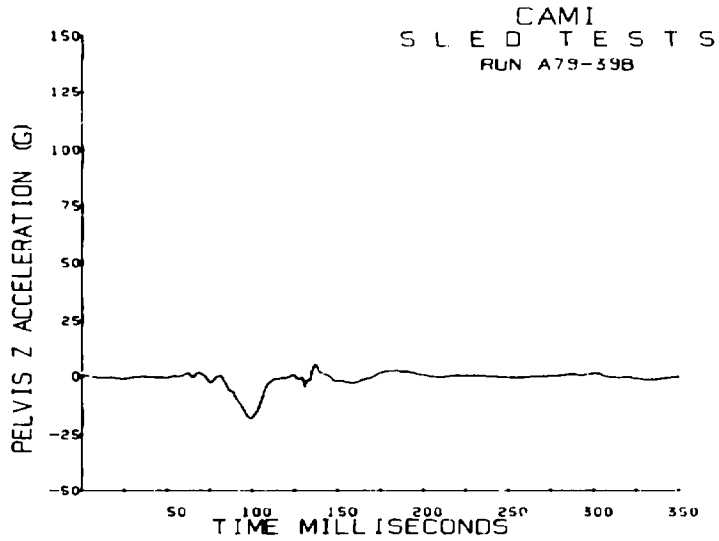

CAMI
SLED TESTS
RUN A79-39A
CHEST Y ACCELERATION (G)
TIME MILLISECONDS

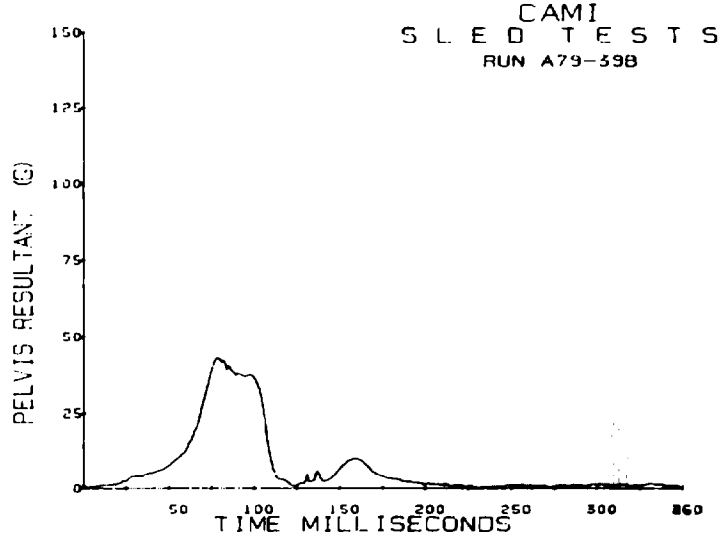

CAMI
SLED TESTS
RUN A79-39A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS

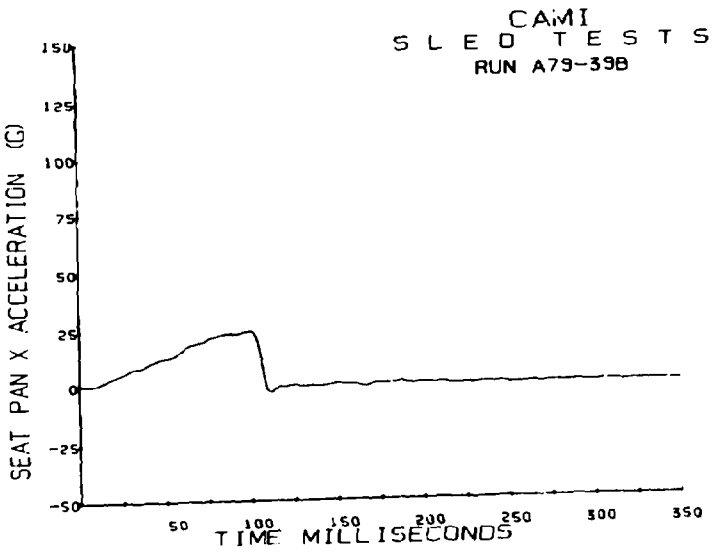

CAMI
SLED TESTS
RUN A79-39A
CHEST RESULTANT (G)
TIME MILLISECONDS

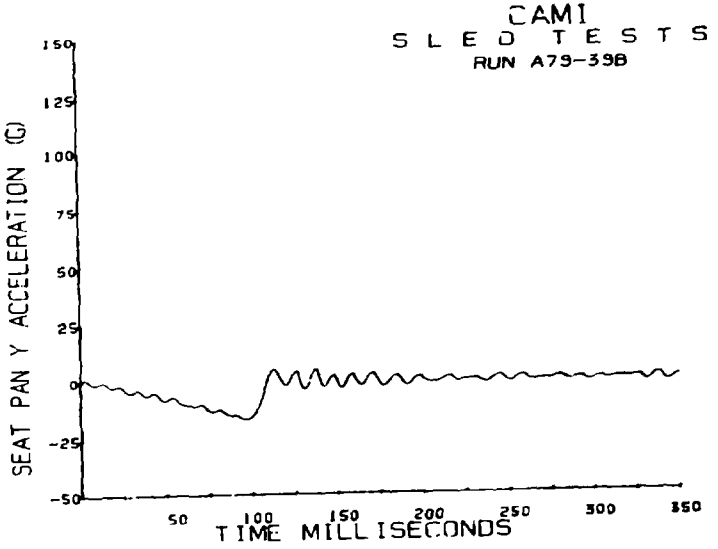

CAMI
S L E D T E S T S
RUN A79-39B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

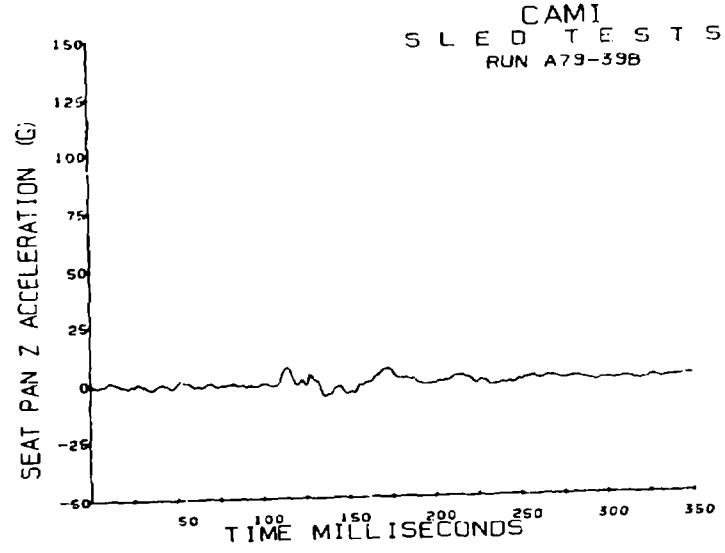

CAMI
S L E D T E S T S
RUN A79-39B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

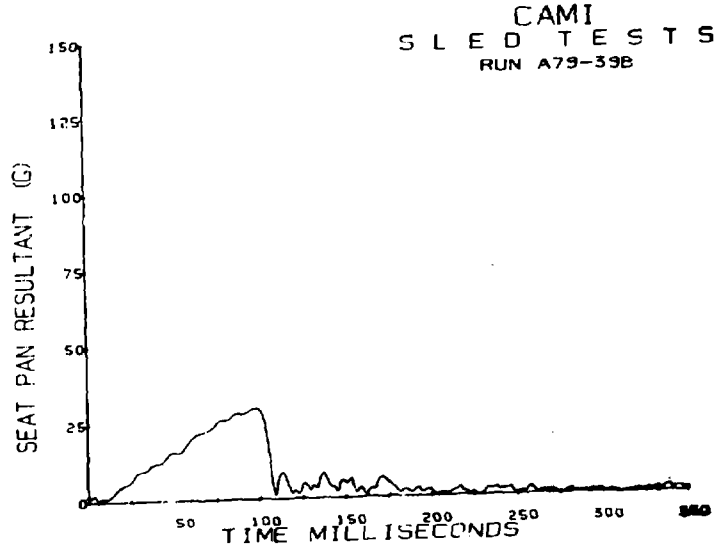

CAMI
S L E D T E S T S
RUN A79-39B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS


CAMI
S L E D T E S T S
RUN A79-39B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

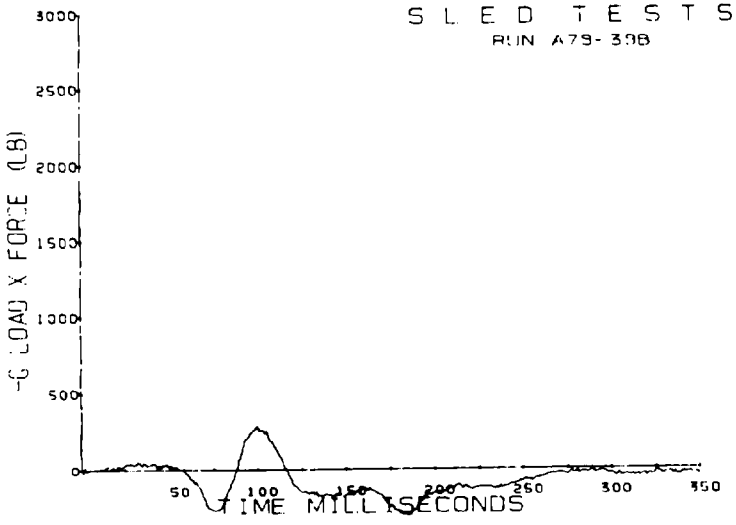

CAMI
SLED TESTS
RUN A79-39B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS


CAMI
SLED TESTS
RUN A79-39B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

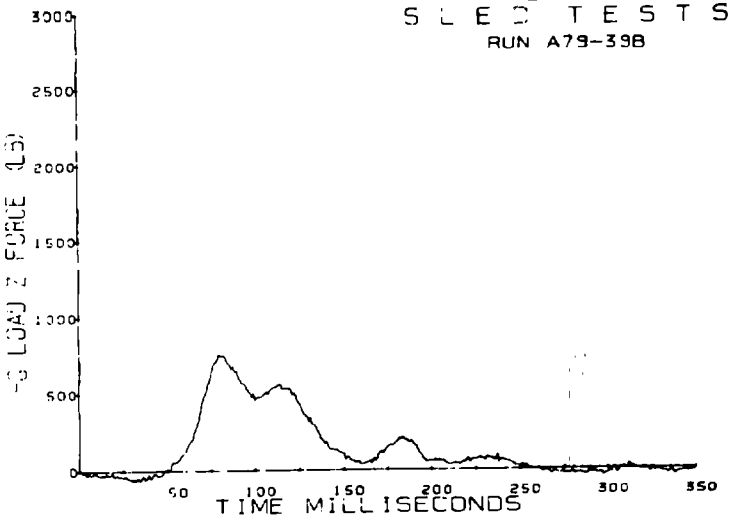

CAMI
SLED TESTS
RUN A79-39B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

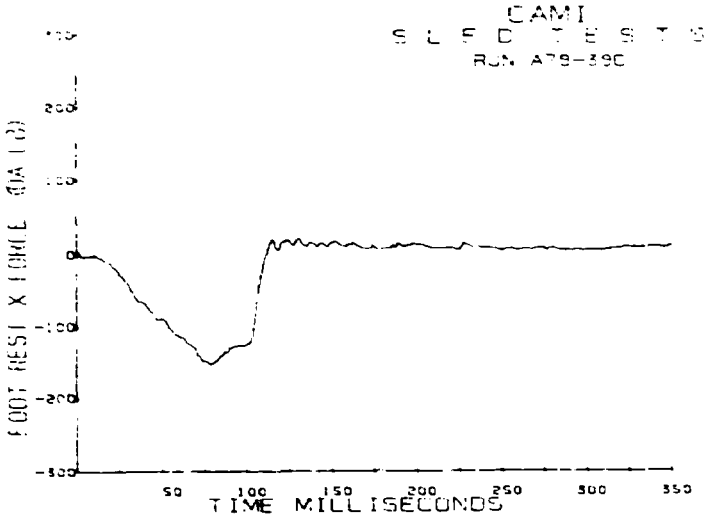

CAMI
SLED TESTS
RUN A79-39B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
50
100
150
200
250
300
350
TIME MILLISECONDS

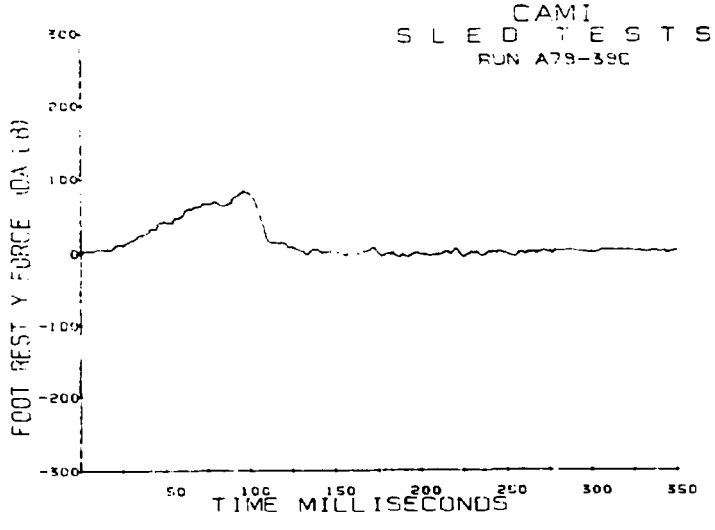
CAMI
SLED TESTS
RUN A79-39B

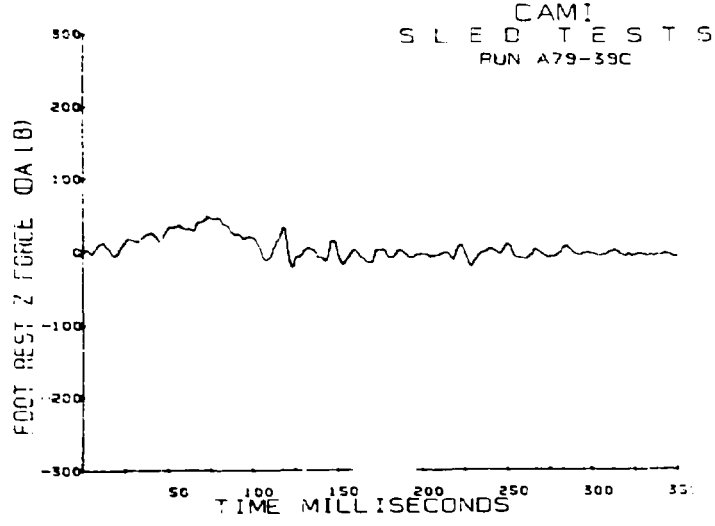


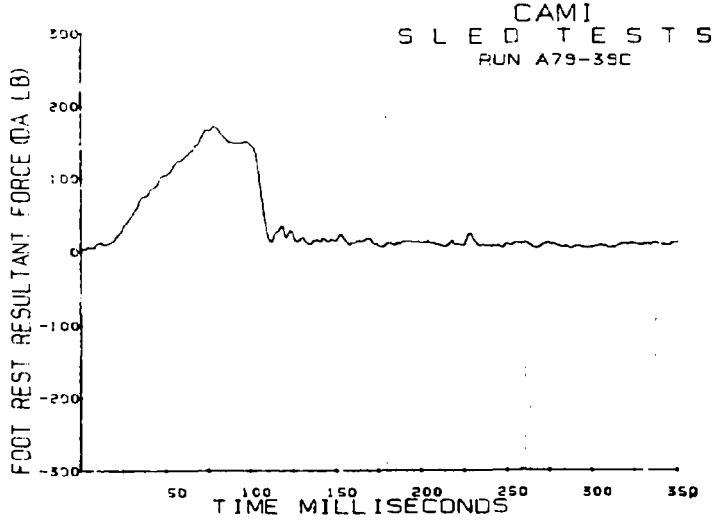
CAMI
SLED TESTS
RUN A79-39B



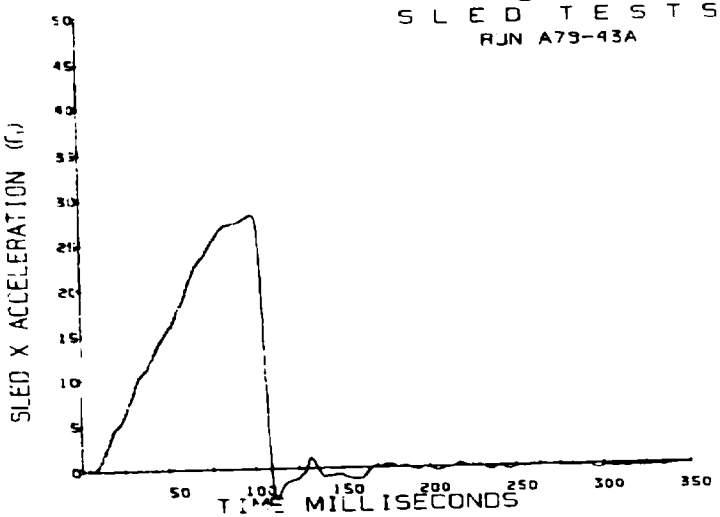

CAMI
S L E D T E S T S
RUN A79-39C
FOOT REST X FORCE (DA (B)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS


CAMI
S L E D T E S T S
RUN A79-39C
FOOT REST Y FORCE (DA (B)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

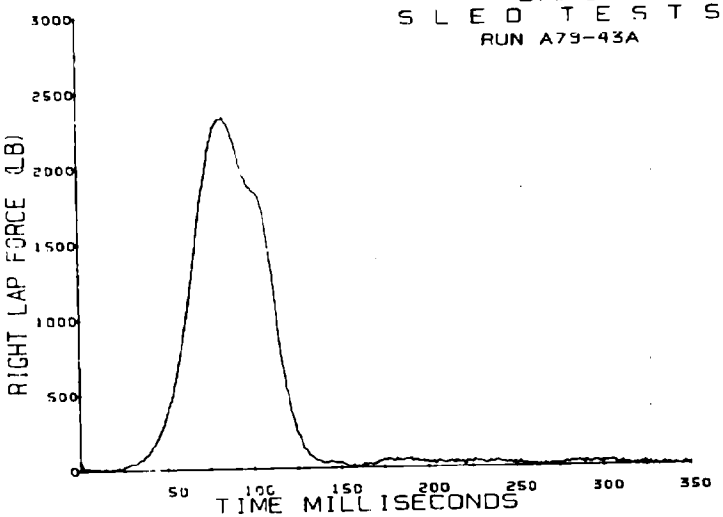

CAMI
S L E D T E S T S
RUN A79-39C
FOOT REST Z FORCE (DA (B)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
TIME MILLISECONDS


CAMI
S L E D T E S T S
RUN A79-39C
FOOT REST RESULTANT FORCE (DA (B)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

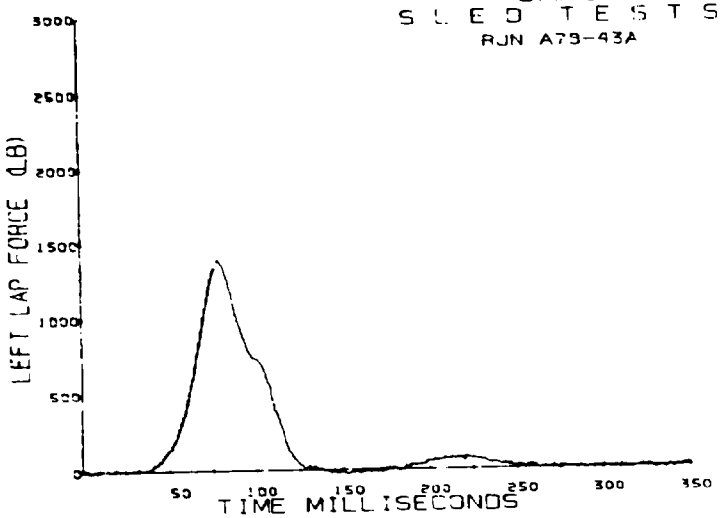
CAMI
SLED TESTS
RUN A79-43A



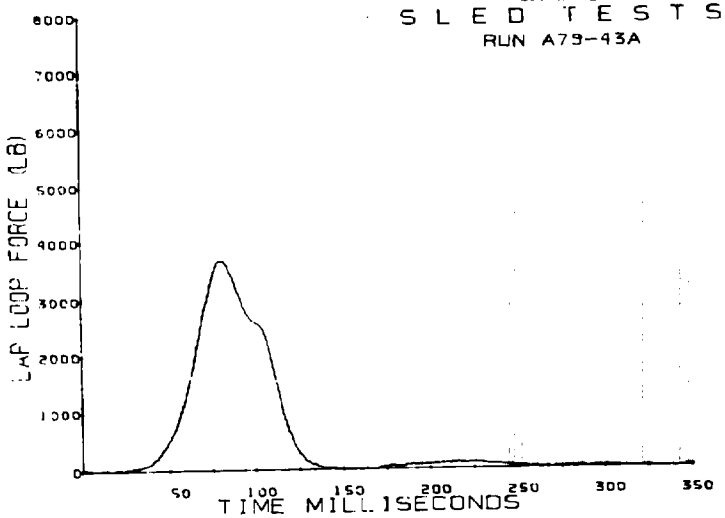
CAMI
SLED TESTS
RUN A79-43A

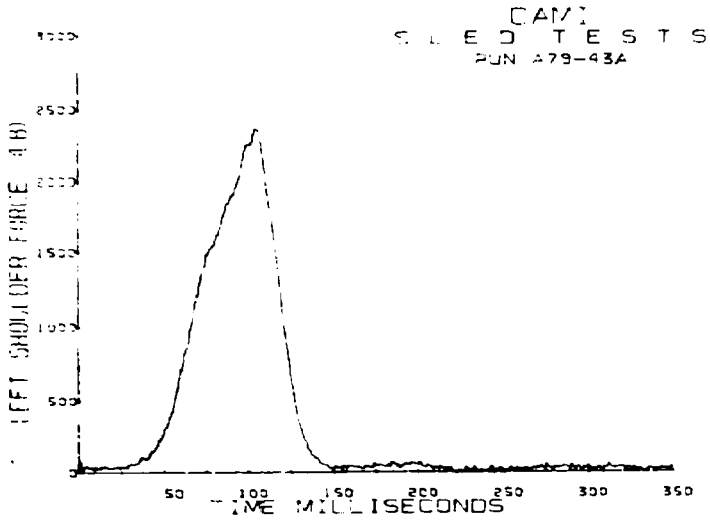


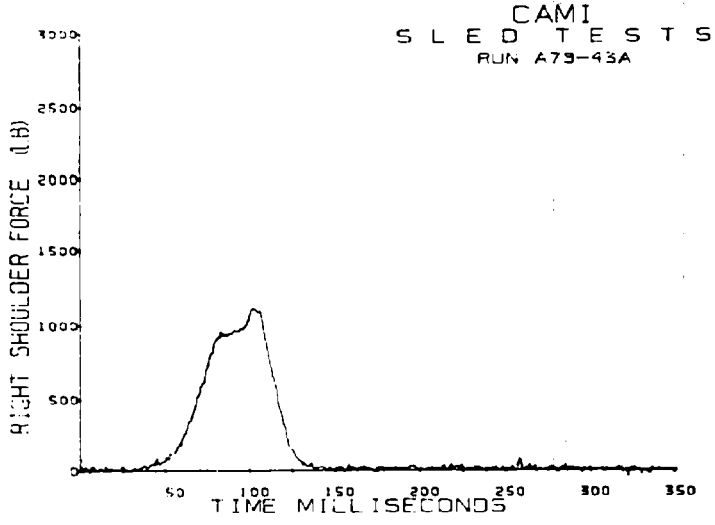
CAMI
SLED TESTS
RUN A79-43A

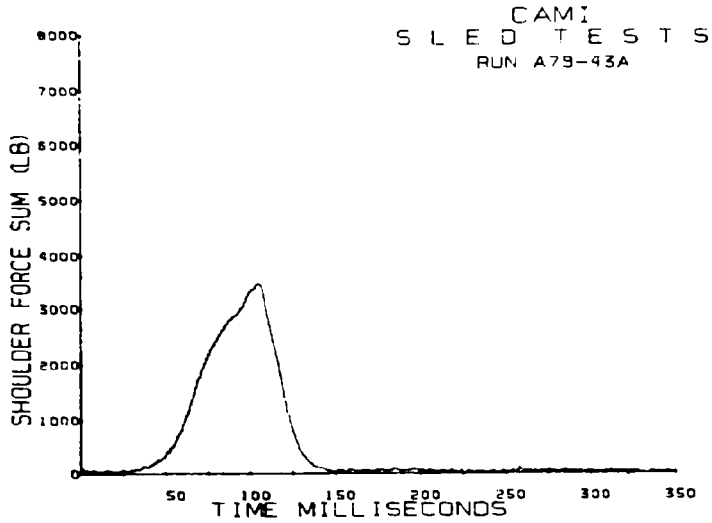


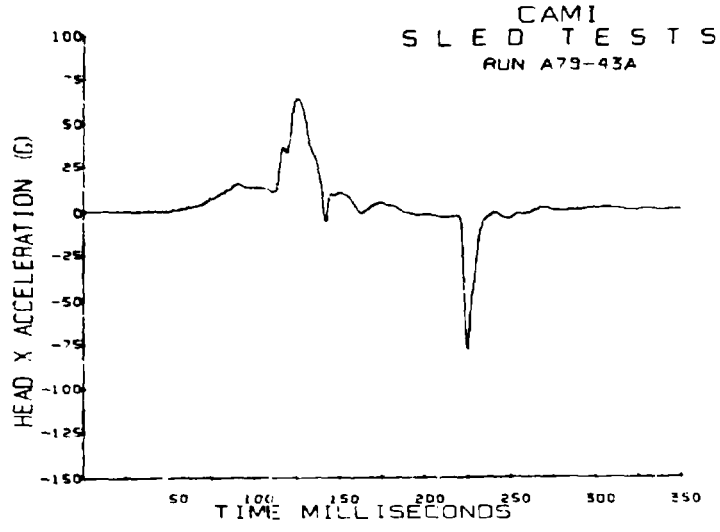
CAMI
SLED TESTS
RUN A79-43A

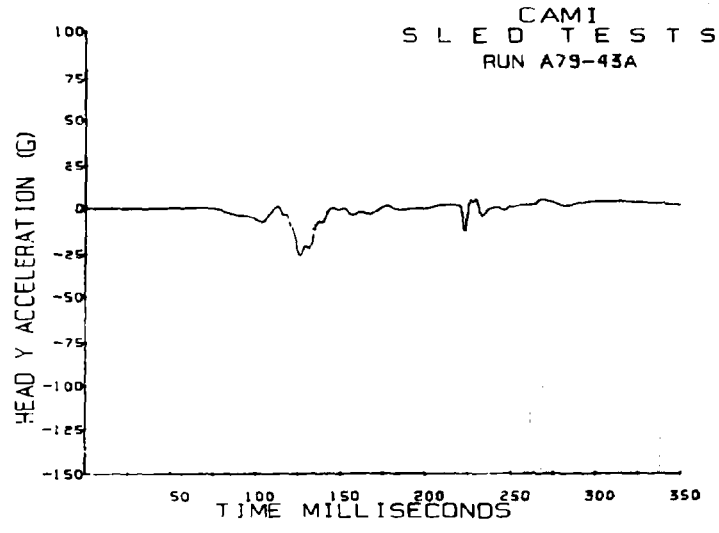


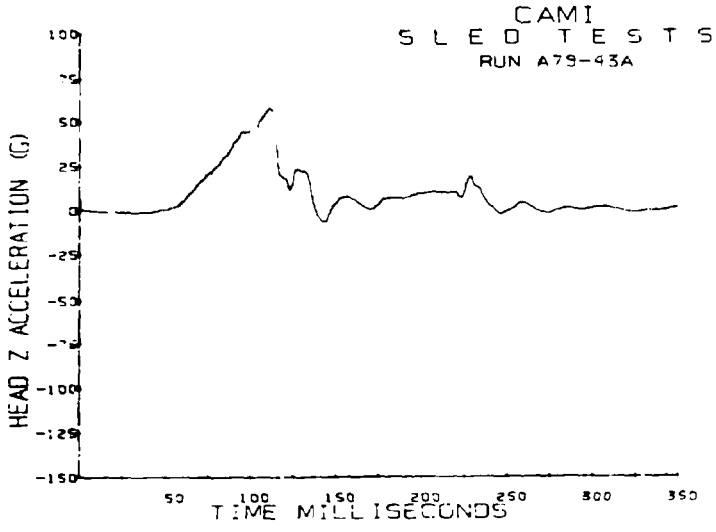

CAMI
SLED TESTS
RUN A79-43A
LEFT SHOULDER FORCE (LB)
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

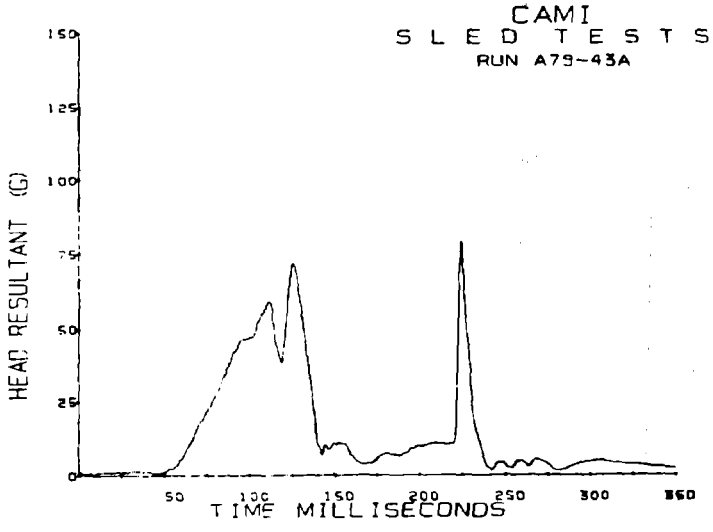

CAMI
SLED TESTS
RUN A79-43A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

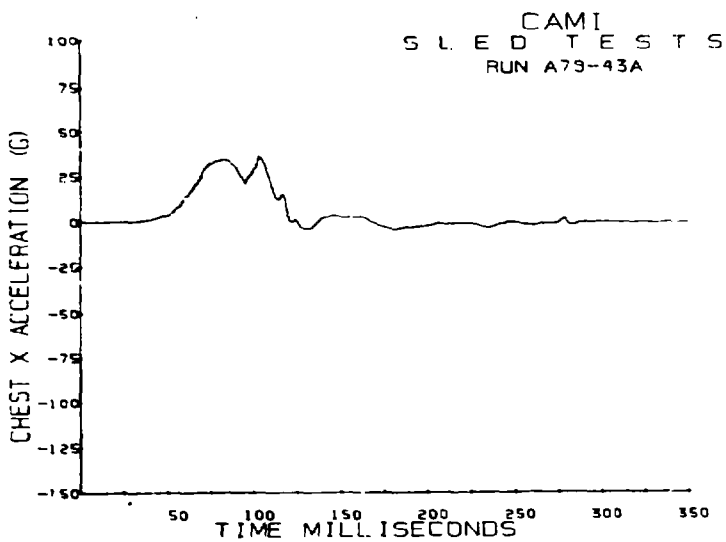

CAMI
SLED TESTS
RUN A79-43A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

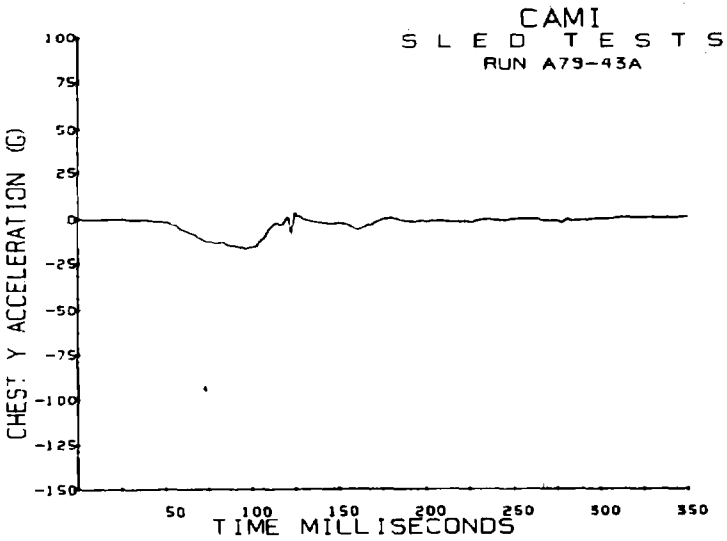

CAMI
S L E D T E S T S
RUN A79-43A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

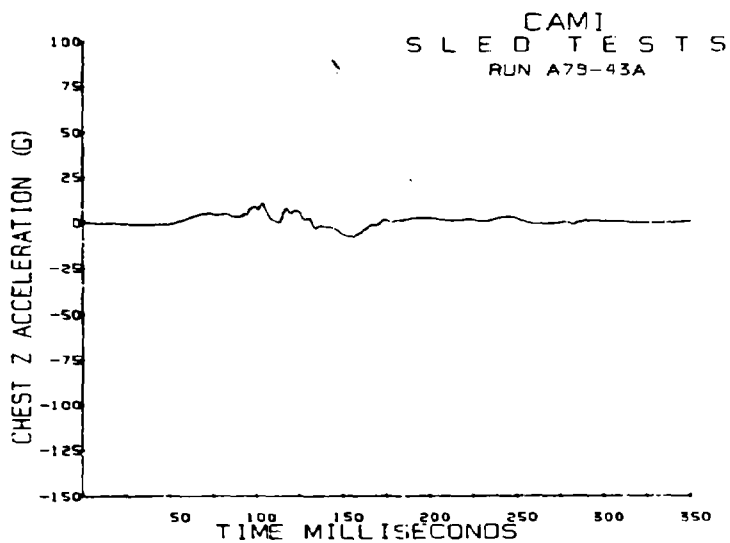

CAMI
S L E D T E S T S
RUN A79-43A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

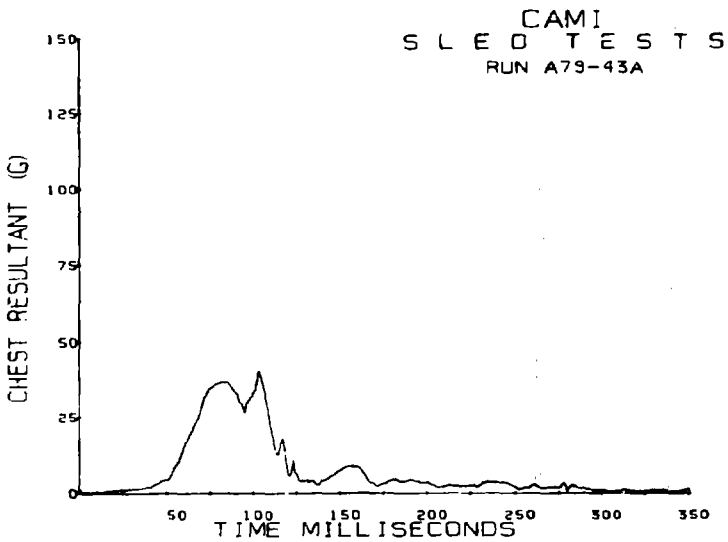

CAMI
S L E D T E S T S
RUN A79-43A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

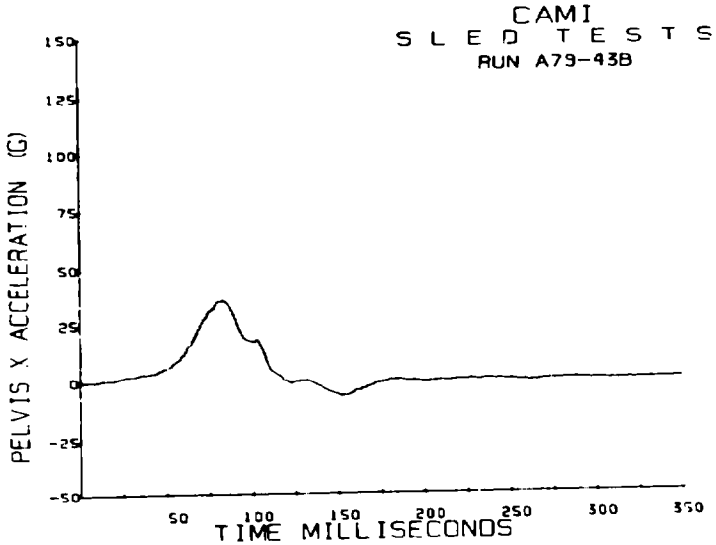

CAMI
S L E D T E S T S
RUN A79-43A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

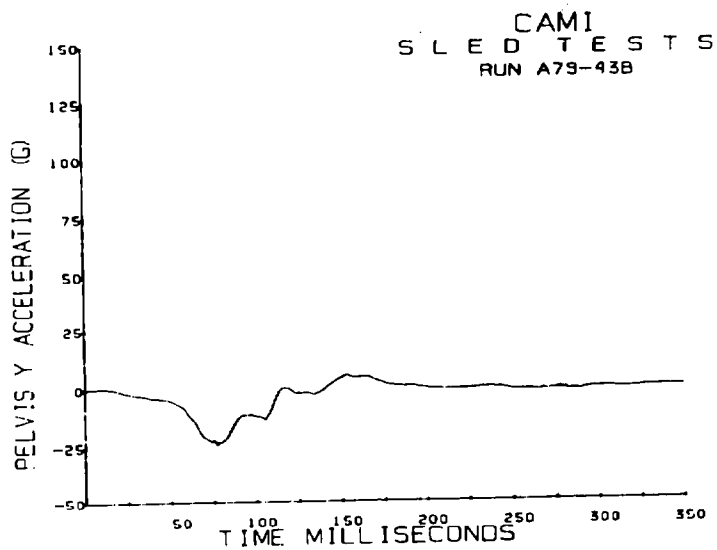

CAMI
SLED TESTS
RUN A79-43A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

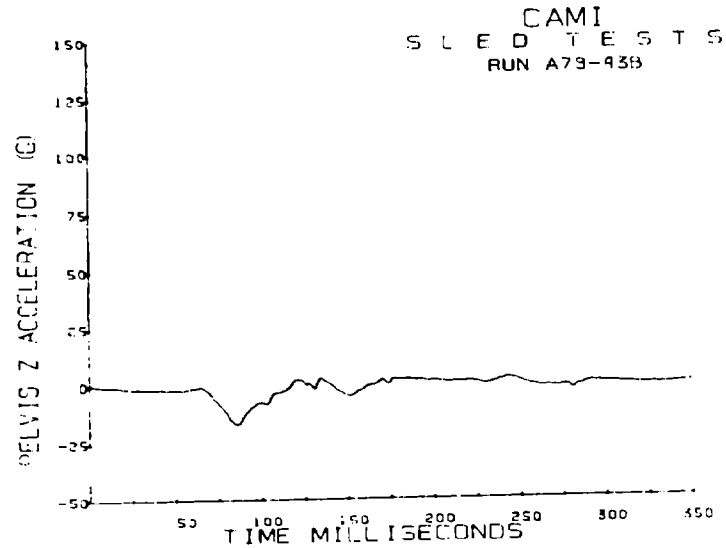

CAMI
SLED TESTS
RUN A79-43A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
500
350
TIME MILLISECONDS

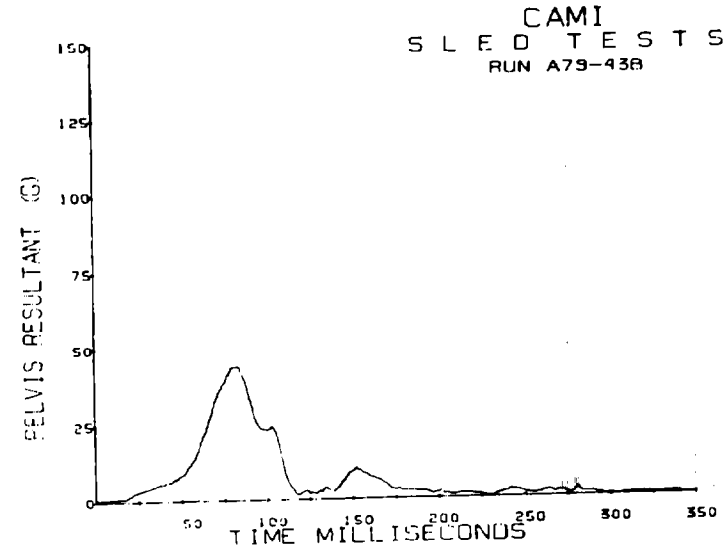

CAMI
SLED TESTS
RUN A79-43A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

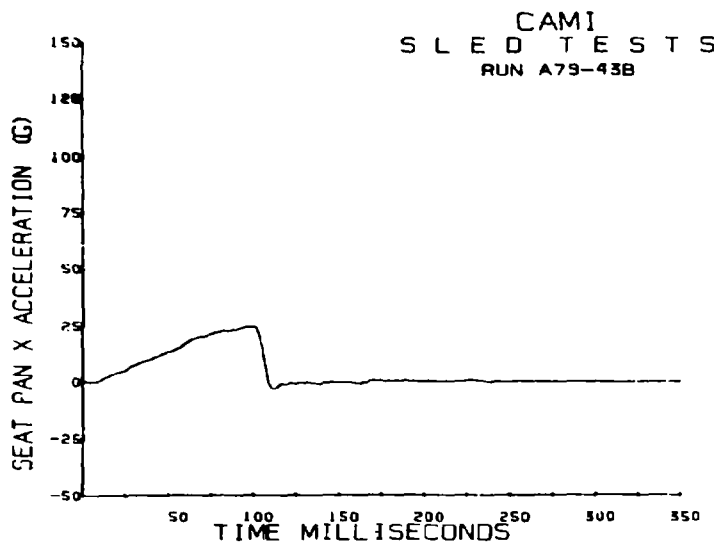

CAMI
SLED TESTS
RUN A79-43A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
500
350
TIME MILLISECONDS

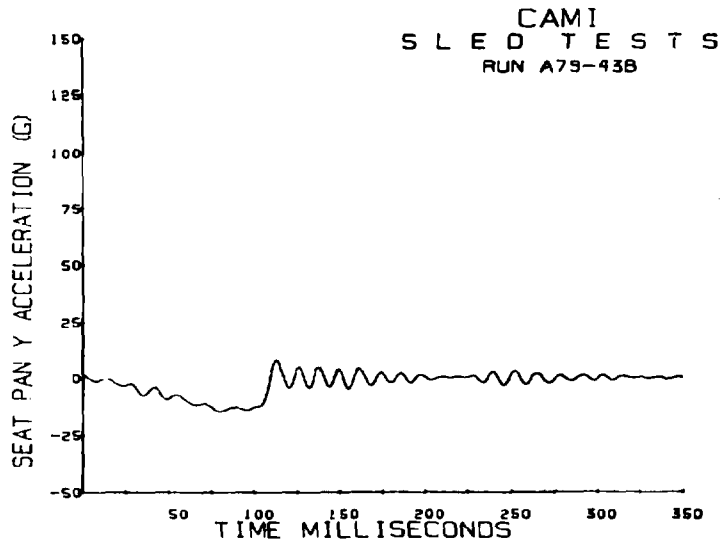

CAMI
S L E D T E S T S
RUN A79-43B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

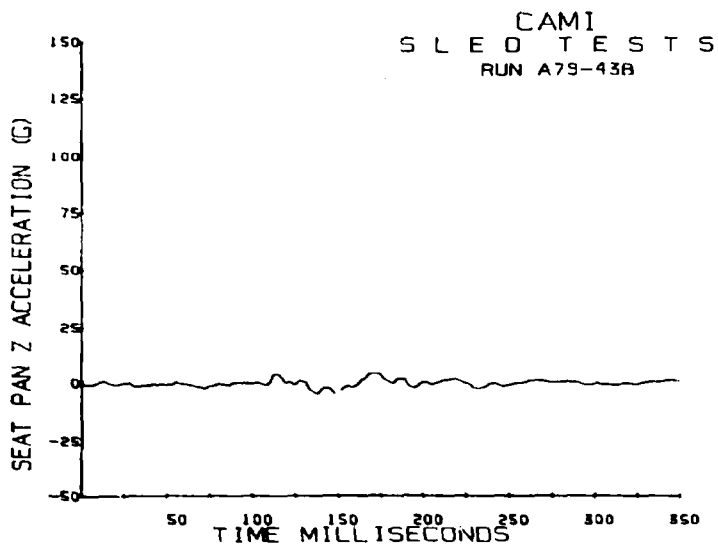

CAMI
S L E D T E S T S
RUN A79-43B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

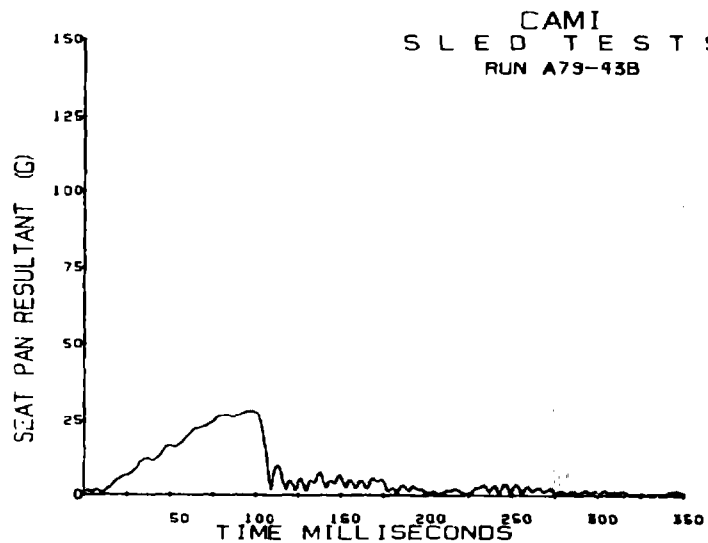

CAMI
S L E D T E S T S
RUN A79-43B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

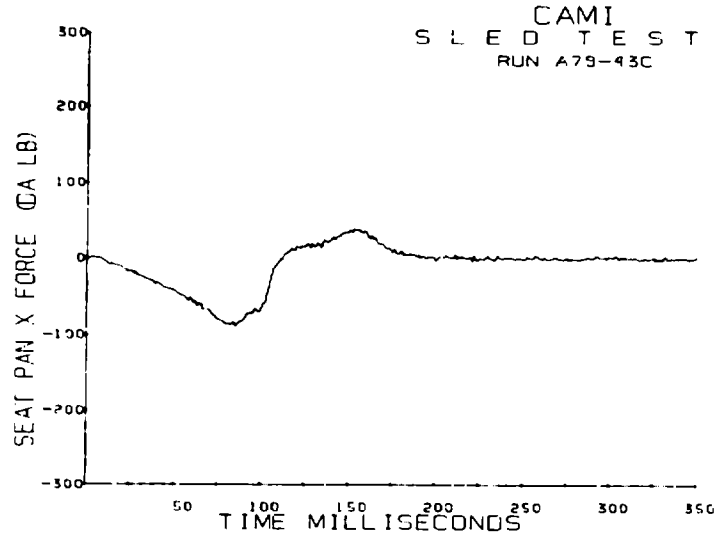

CAMI
S L E D T E S T S
RUN A79-43B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

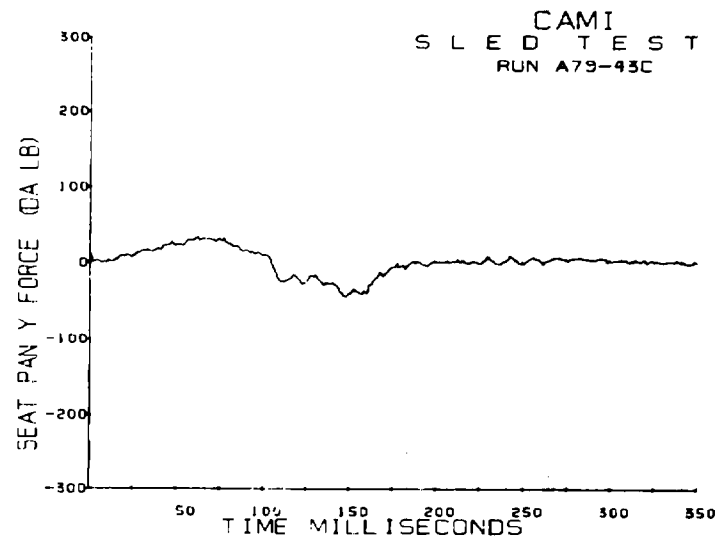

CAMI
S L E D T E S T S
RUN A79-43B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

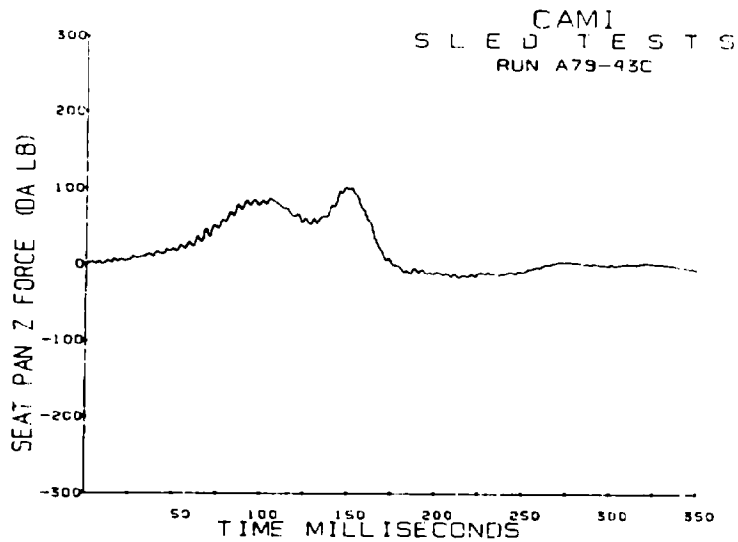

CAMI
S L E D T E S T S
RUN A79-43B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

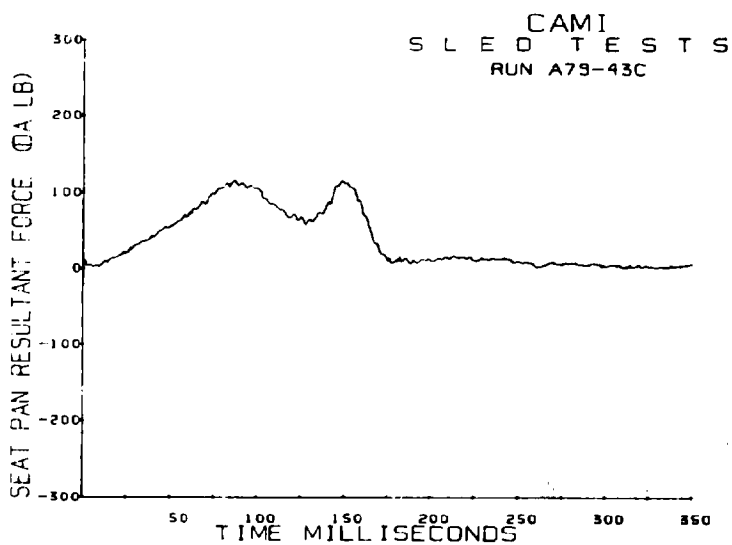

CAMI
S L E D T E S T S
RUN A79-43B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

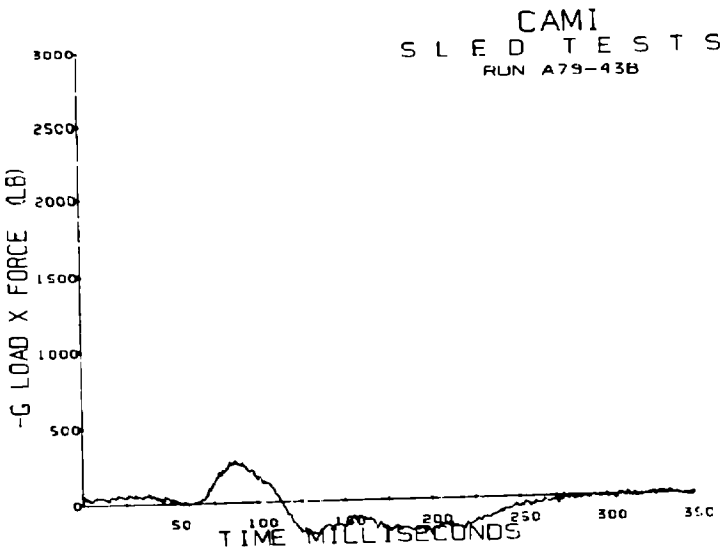

CAMI
S L E D T E S T S
RUN A79-43B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

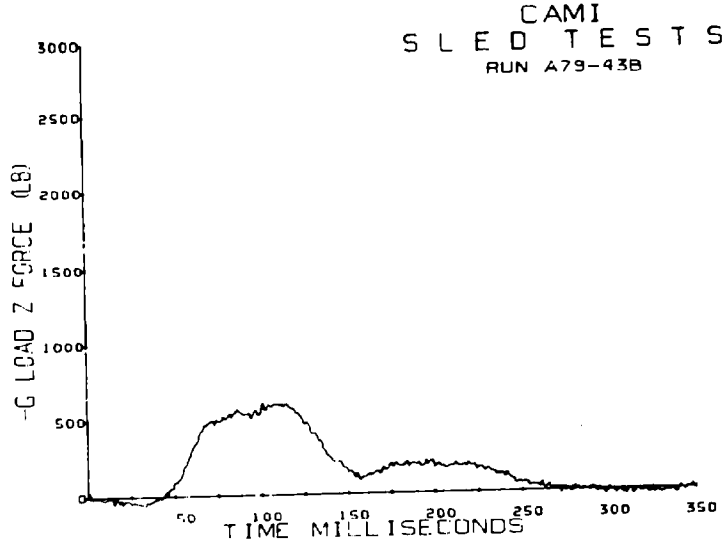

CAMI
S L E D T E S T S
RUN A79-43C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

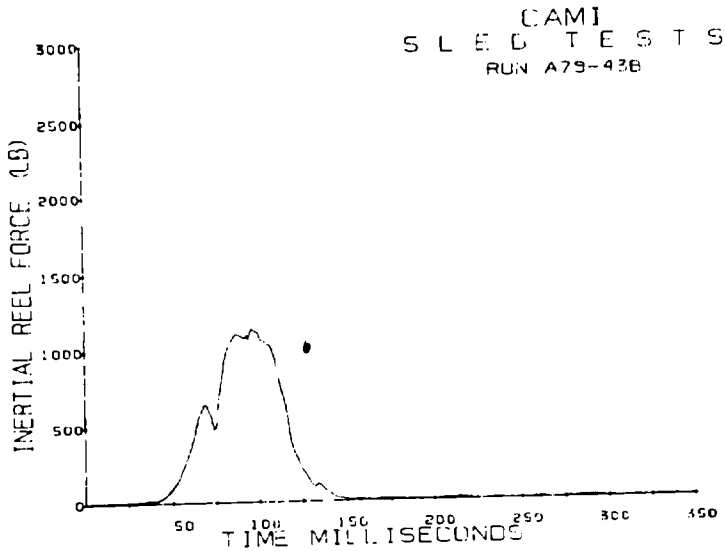

CAMI
S L E D T E S T S
RUN A79-43C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

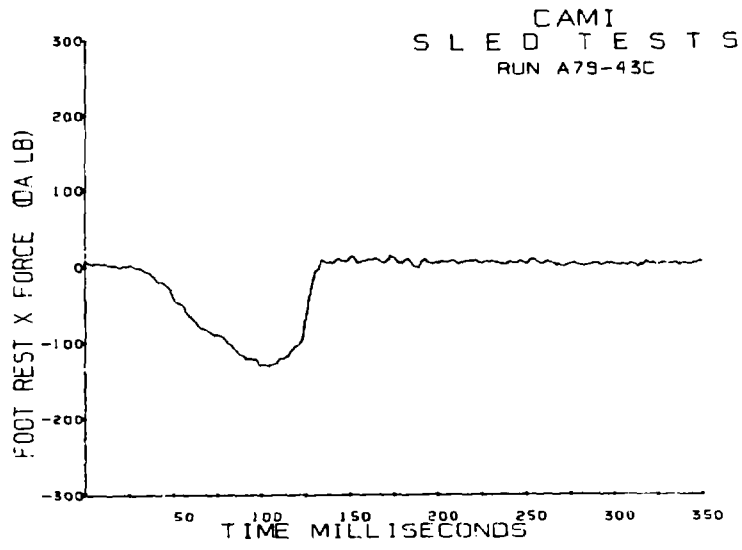

CAMI
S L E D T E S T S
RUN A79-43C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

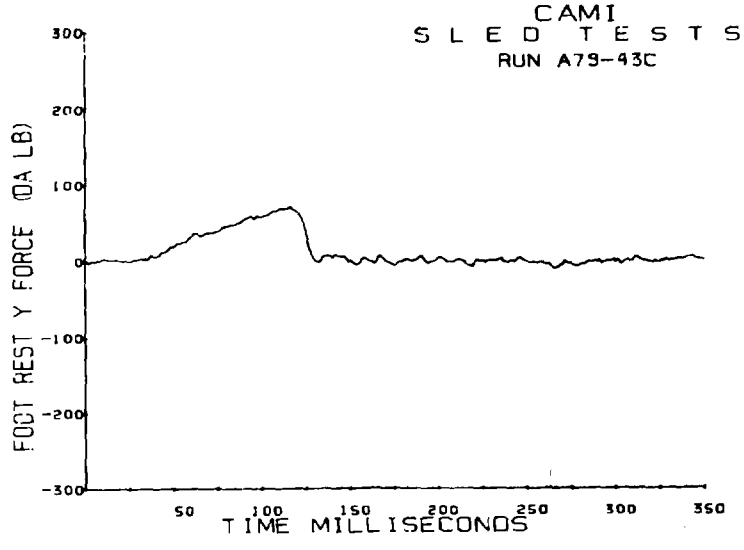

CAMI
S L E D T E S T S
RUN A79-43C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

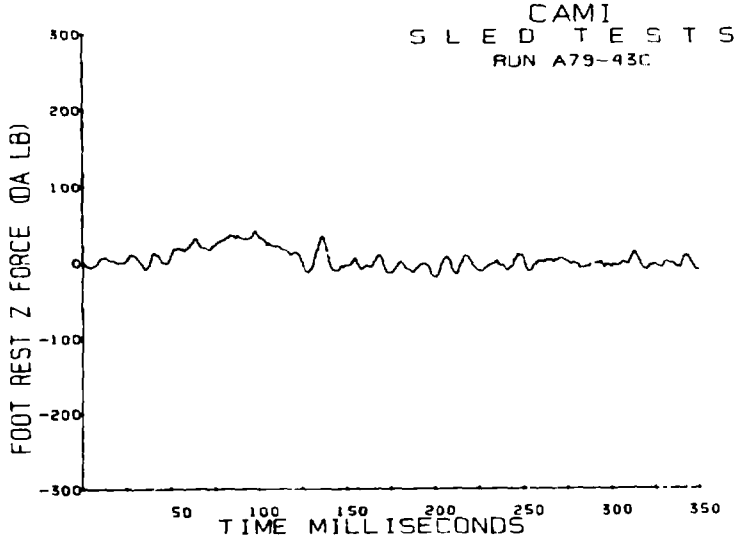

CAMI
S L E D T E S T S
RUN A79-43B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

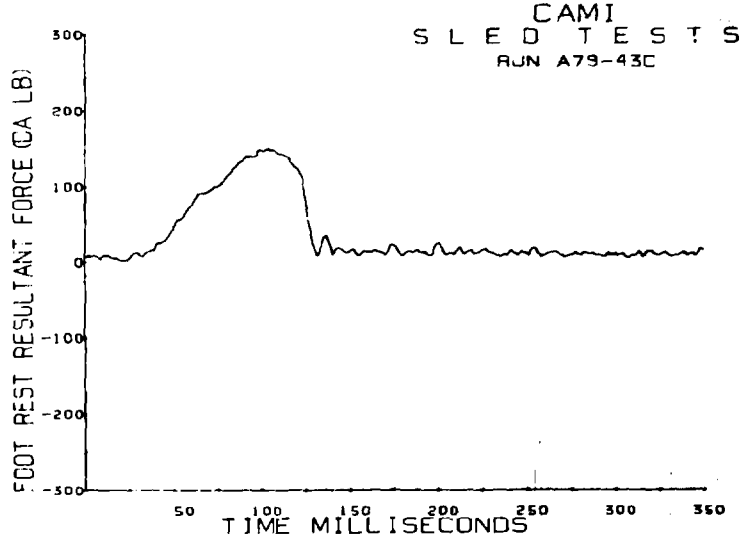

CAMI
S L E D T E S T S
RUN A79-43B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

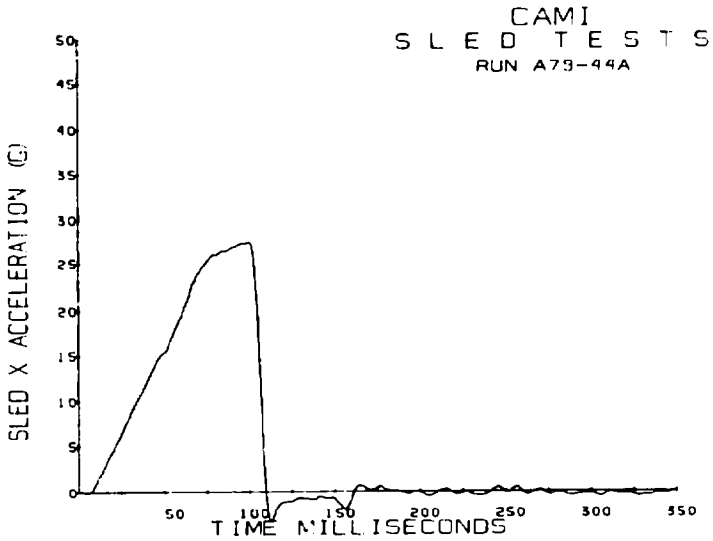

CAMI
S L E D T E S T S
RUN A79-43B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

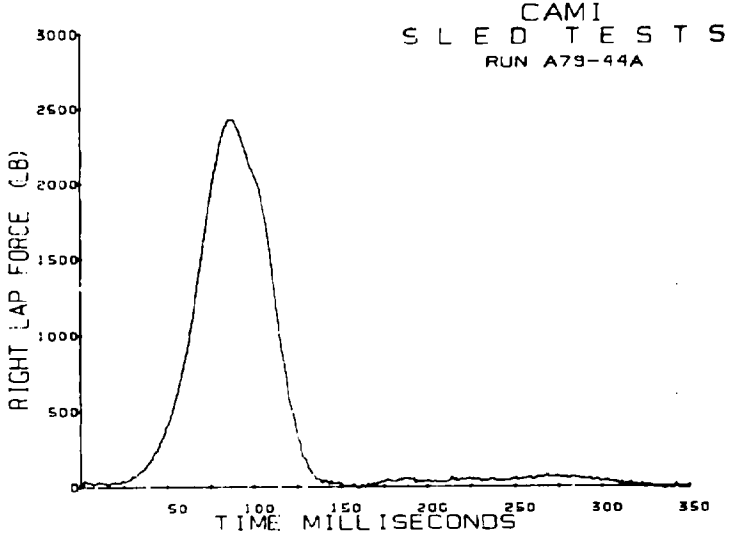

CAMI
SLED TESTS
RUN A79-43C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

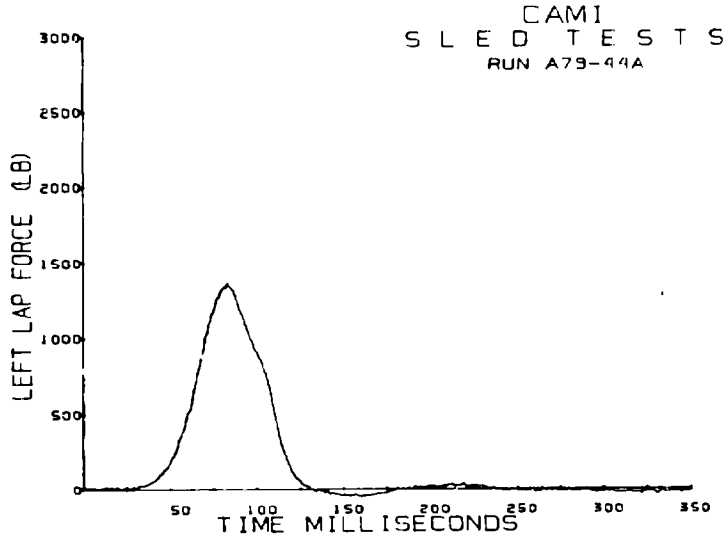

CAMI
SLED TESTS
RUN A79-43C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

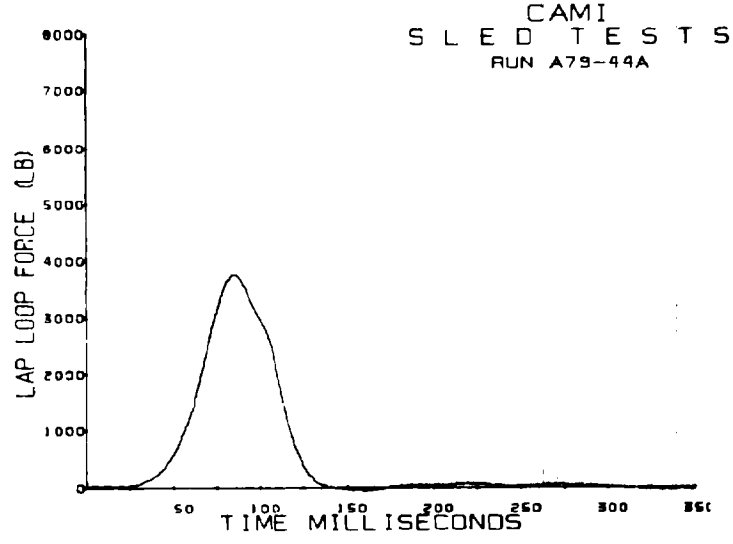

CAMI
SLED TESTS
RUN A79-43C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

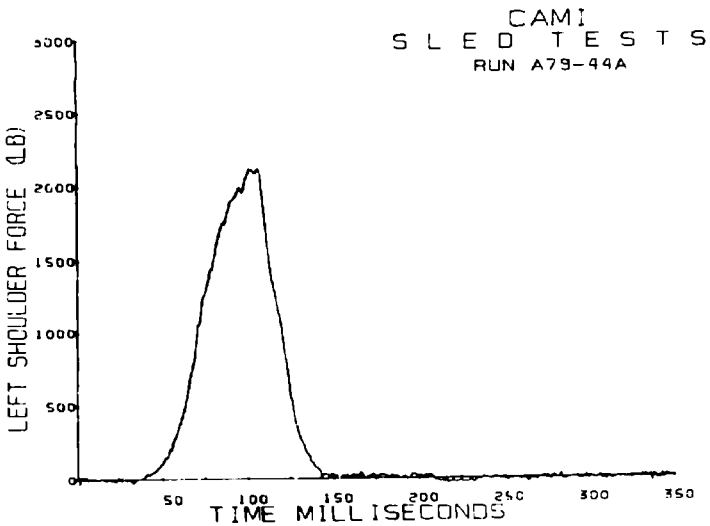

CAMI
SLED TESTS
RUN A79-43C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

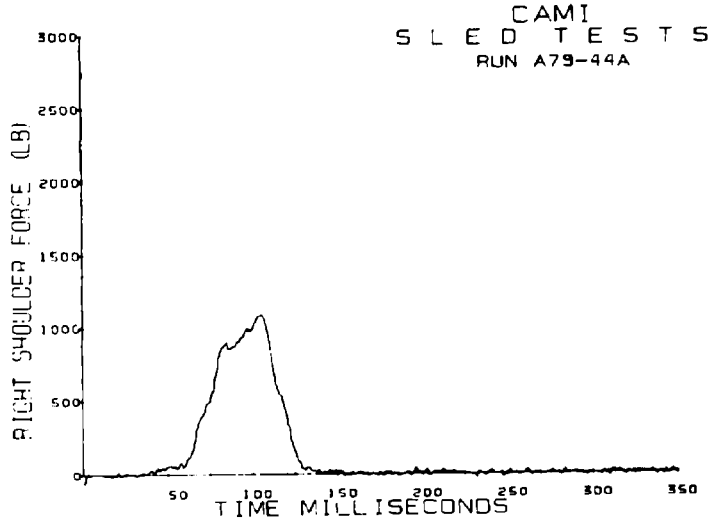

CAMI
SLED TESTS
RUN A79-44A
SLED X ACCELERATION (G)
TIME MILLISECONDS

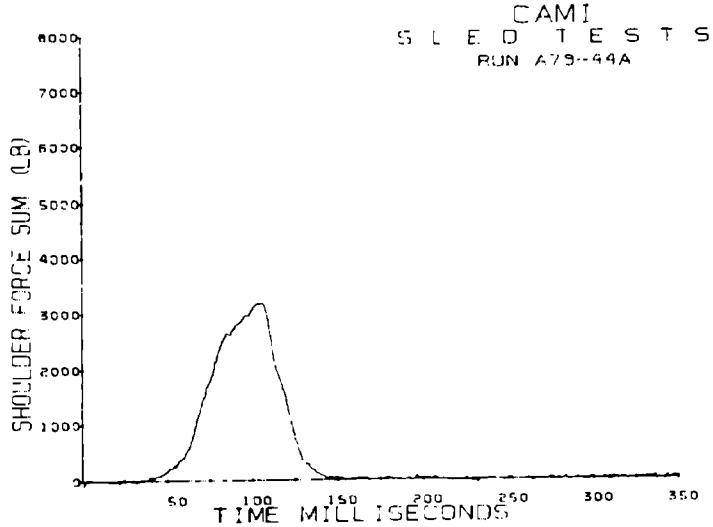

CAMI
SLED TESTS
RUN A79-44A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

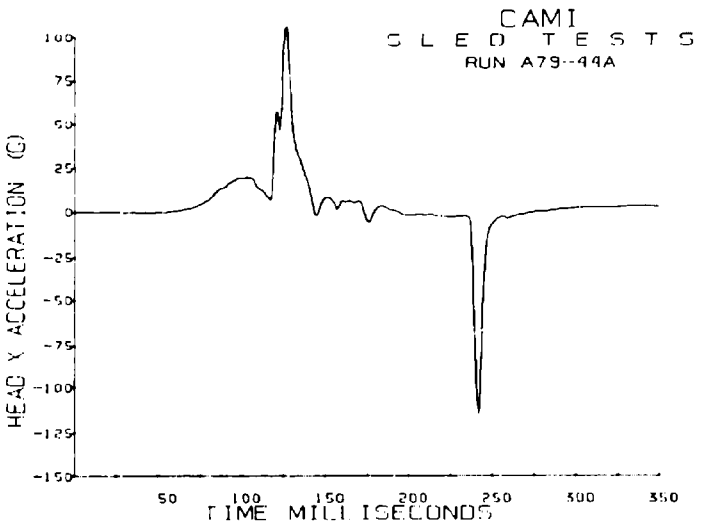

CAMI
SLED TESTS
RUN A79-44A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

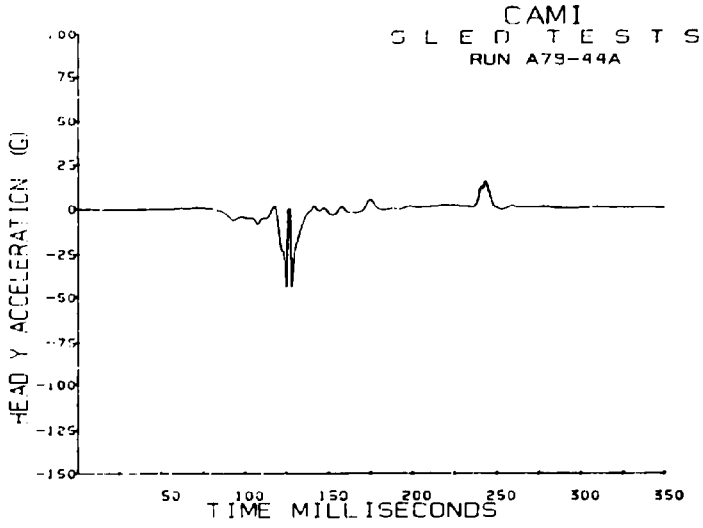

CAMI
SLED TESTS
RUN A79-44A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

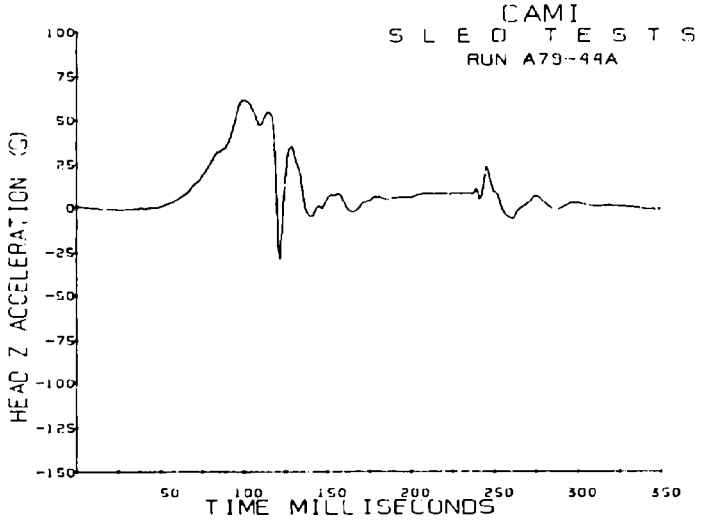

CAMI
S L E D T E S T S
RUN A79-44A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

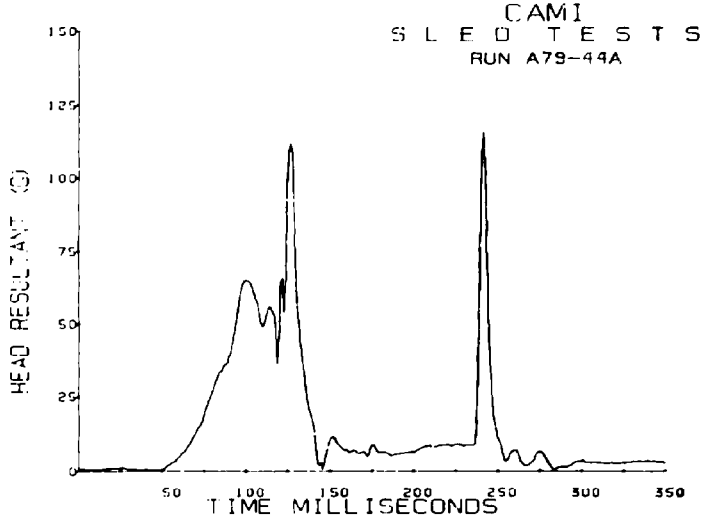

CAMI
S L E D T E S T S
RUN A79-44A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

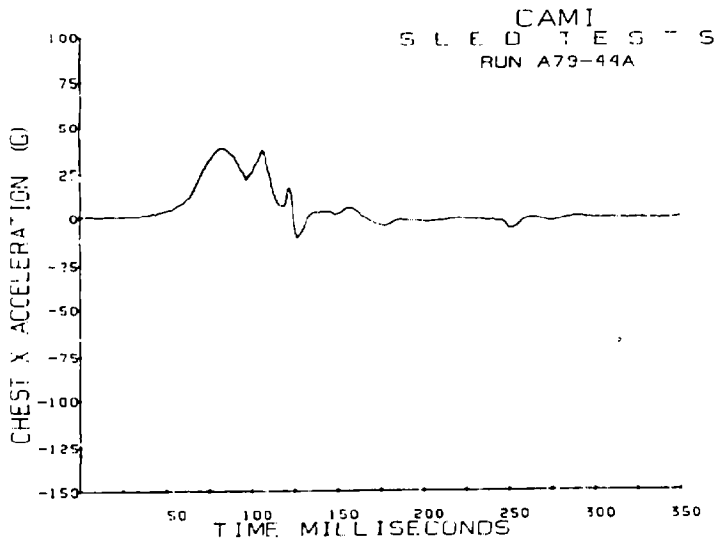

CAMI
S L E D T E S T S
RUN A79-44A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

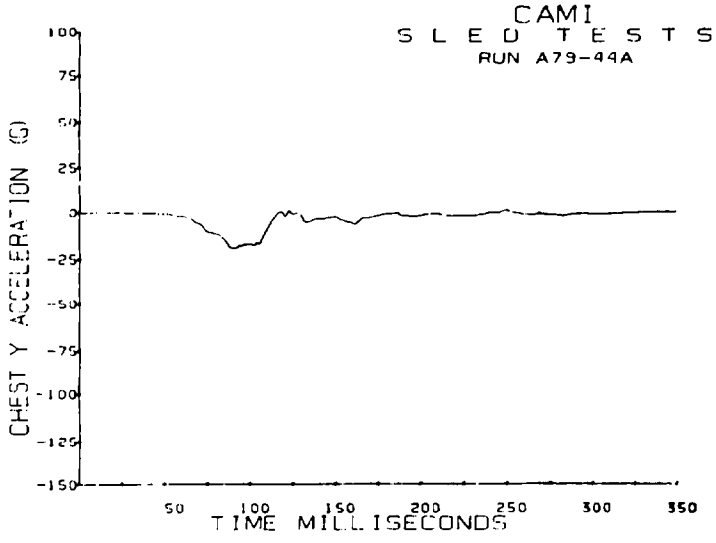

CAMI
S L E D T E S T S
RUN A79--44A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

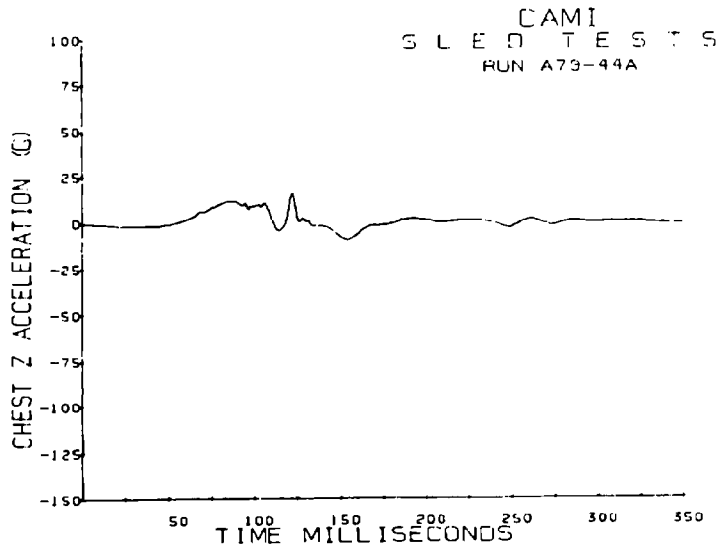

CAMI
S L E D T E S T S
RUN A79-44A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

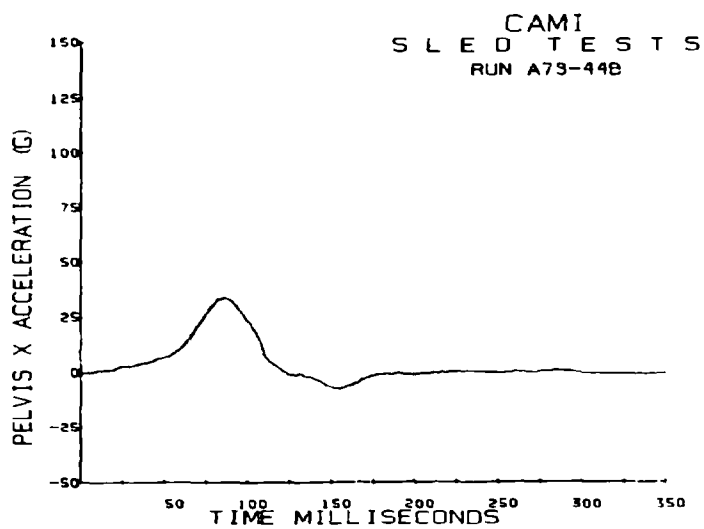

CAMI
S L E D T E S T S
RUN A79--44A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

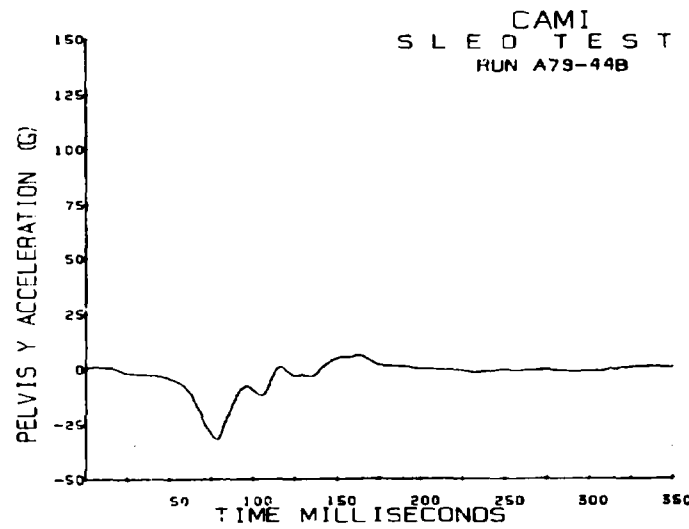

CAMI
S L E D T E S T S
RUN A79-44A
HEAD RESULTANT (G)
TIME MILLISECONDS

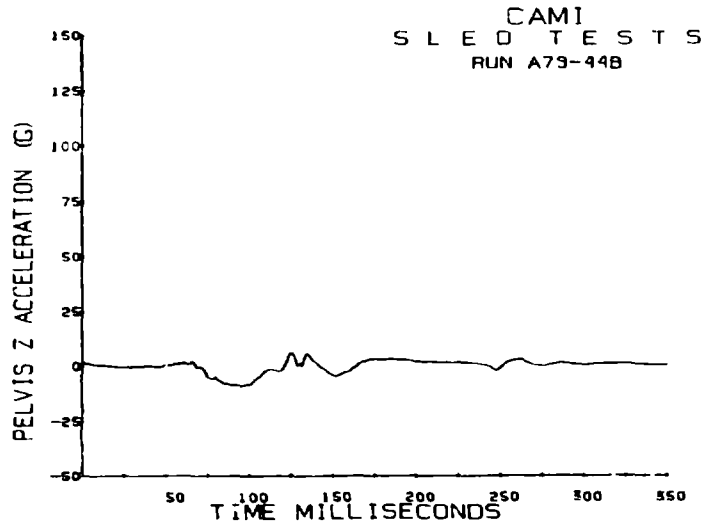

CAMI
SLED TESTS
RUN A79-44A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

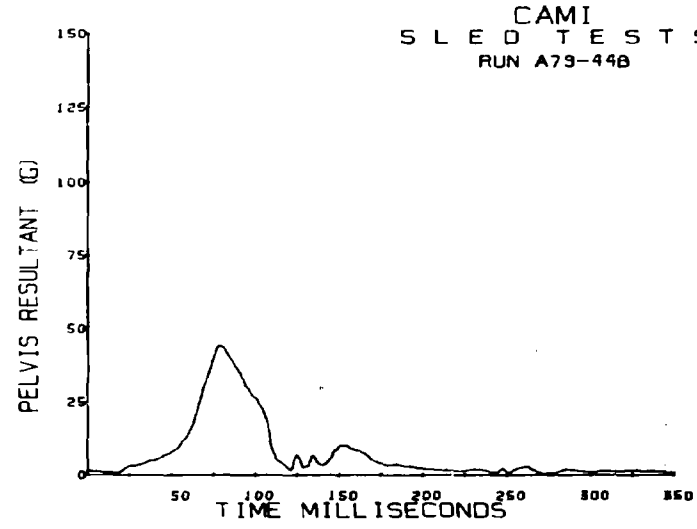

CAMI
SLED TESTS
RUN A79-44A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

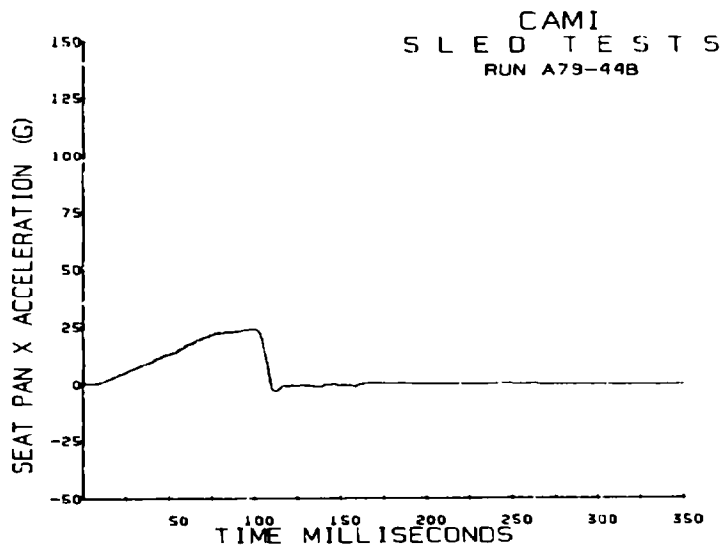

CAMI
SLED TESTS
RUN A79-44A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

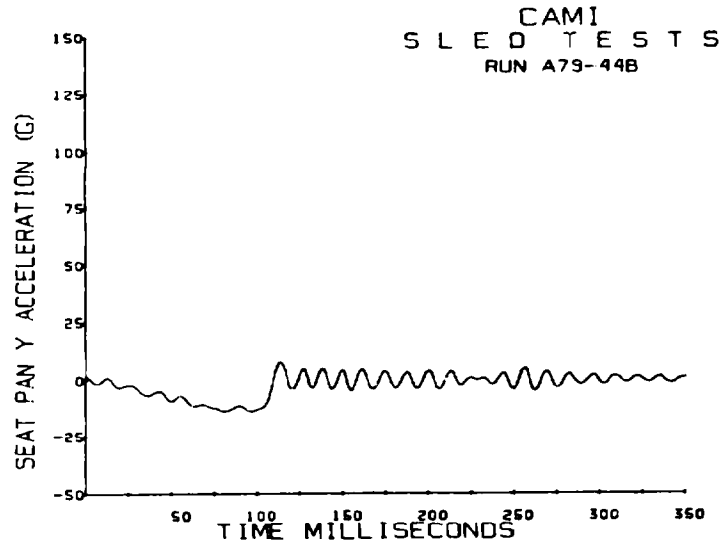

CAMI
S L E D T E S T S
RUN A79-44B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

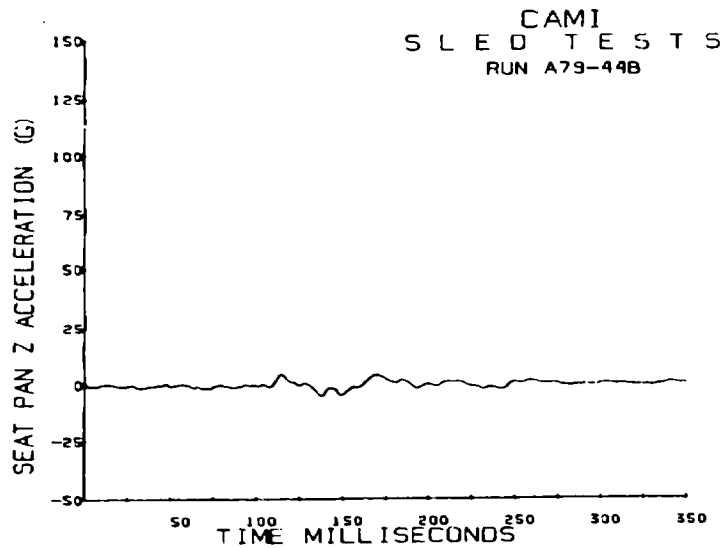

CAMI
S L E D T E S T S
RUN A79-44B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

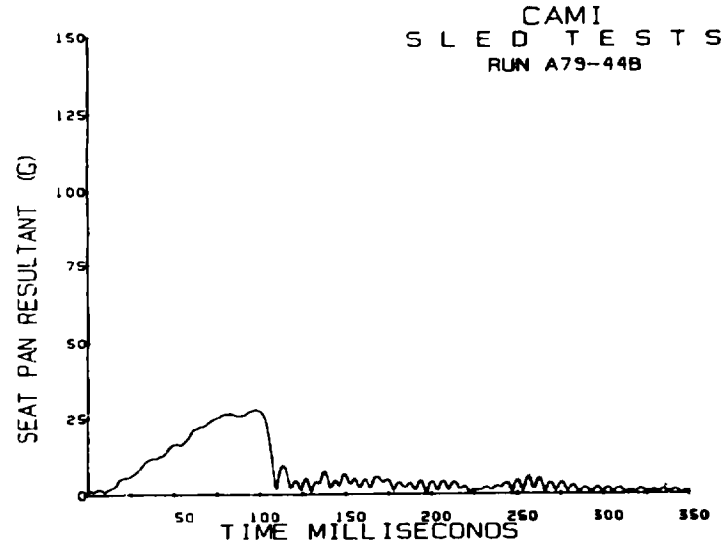

CAMI
S L E D T E S T S
RUN A79-44B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

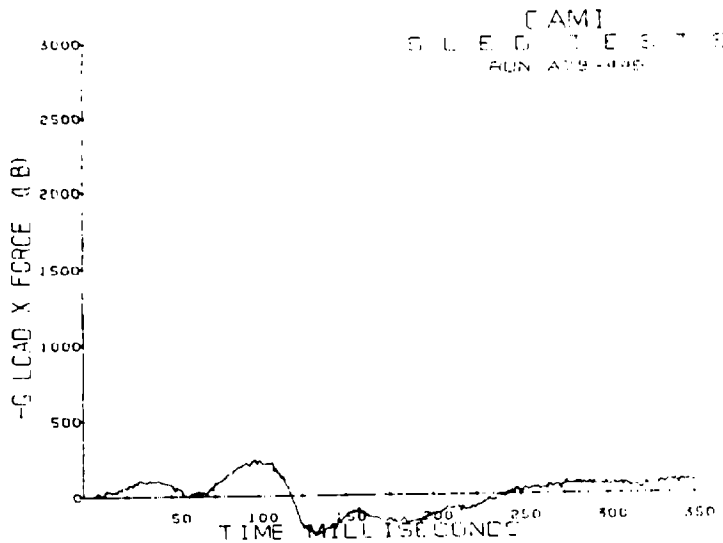

CAMI
S L E D T E S T S
RUN A79-44B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

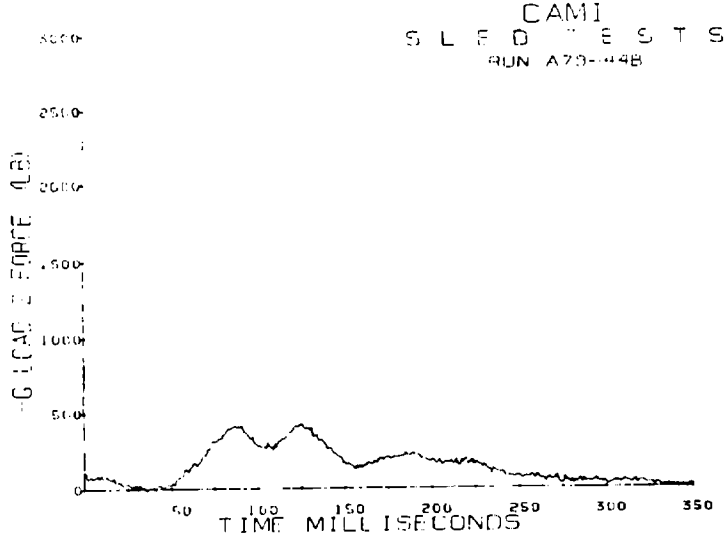

CAMI
SLED TESTS
RUN A79-44B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

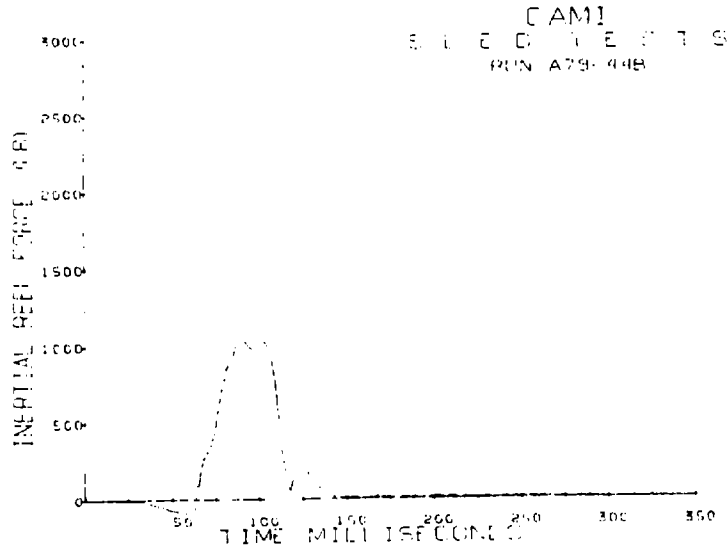

CAMI
SLED TESTS
RUN A79-44B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

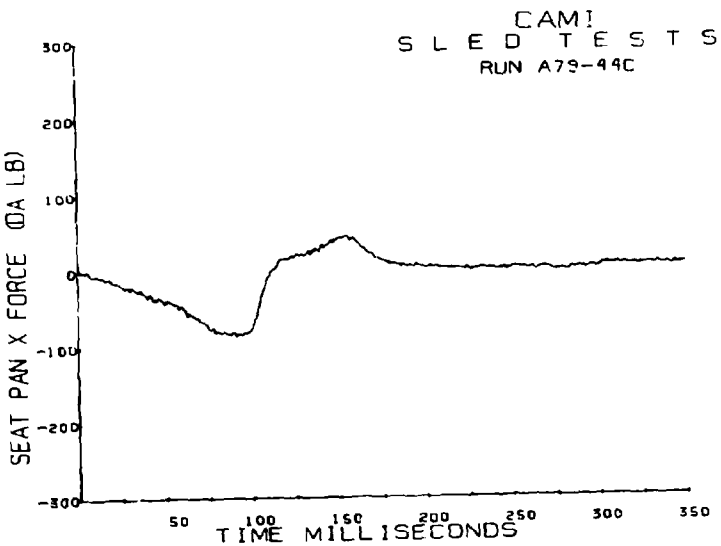

CAMI
SLED TESTS
RUN A79-44B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

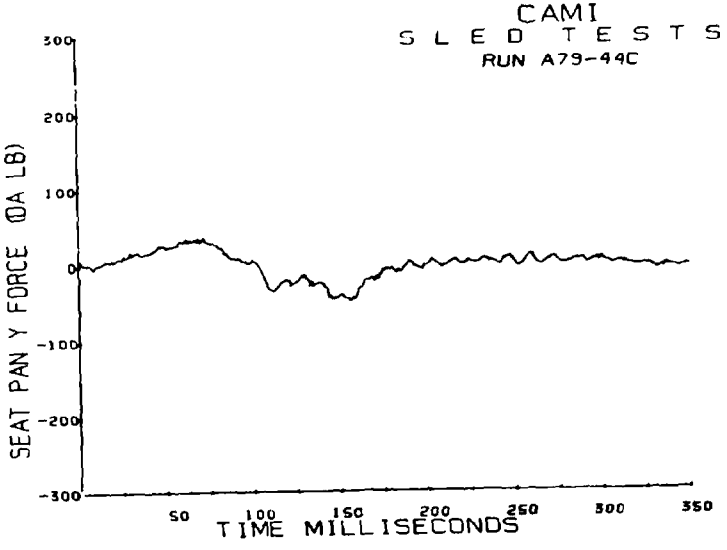

CAMI
SLED TESTS
RUN A79-44B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

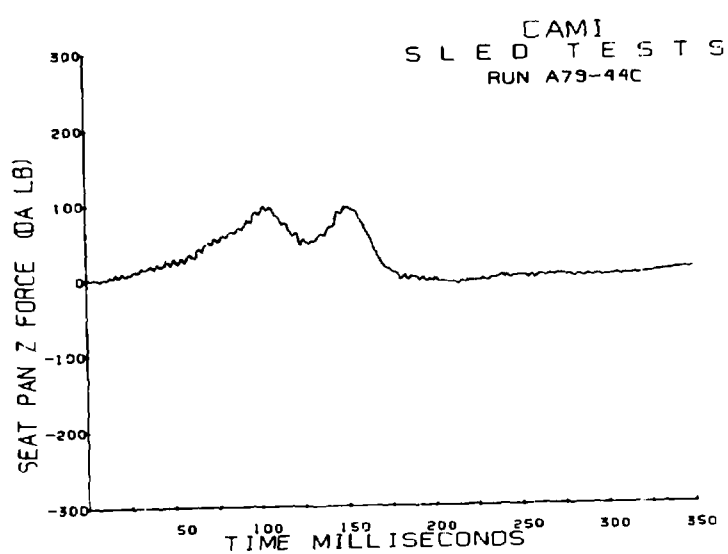

CAMI
SLED TESTS
RUN A79-44B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

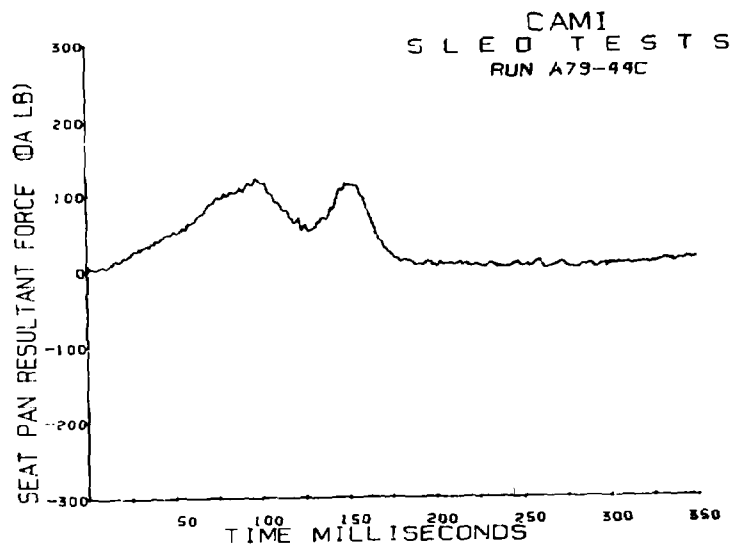

CAMI
SLED TESTS
RUN A79-44B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

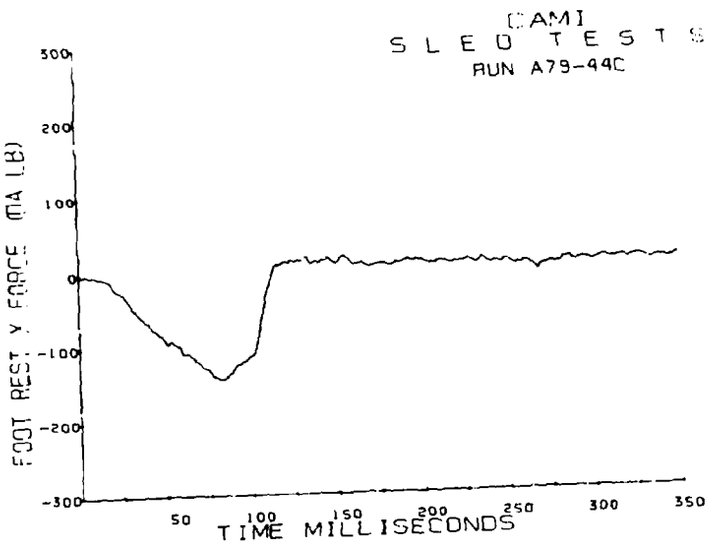

CAMI
SLED TESTS
RUN A79-44B
INERTIAL SEAT FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

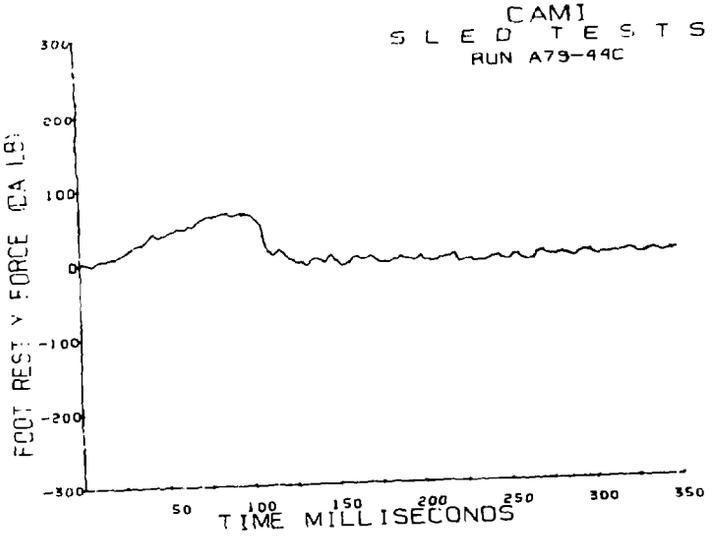

CAMI
SLED TESTS
RUN A79-44C
SEAT PAN X FORCE (0A LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

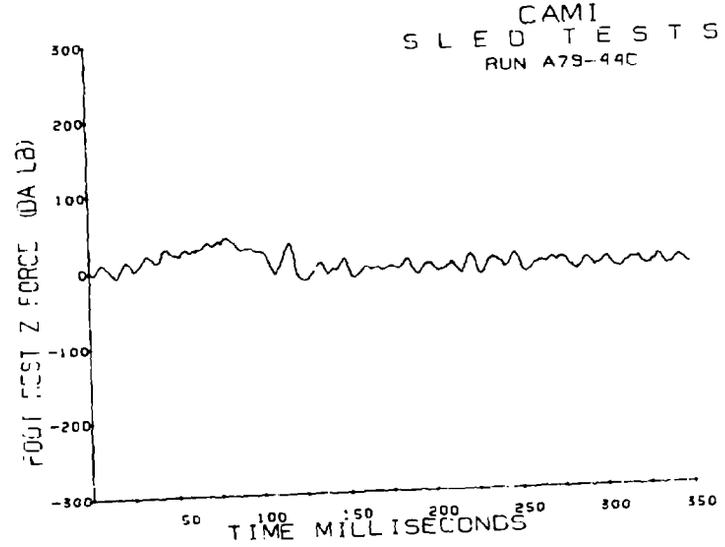

CAMI
SLED TESTS
RUN A79-44C
SEAT PAN Y FORCE (0A LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

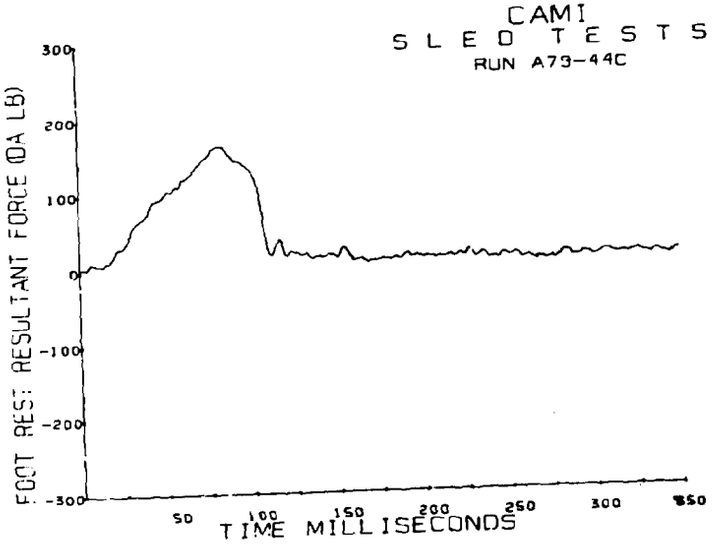

CAMI
SLED TESTS
RUN A79-44C
SEAT PAN Z FORCE (0A LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

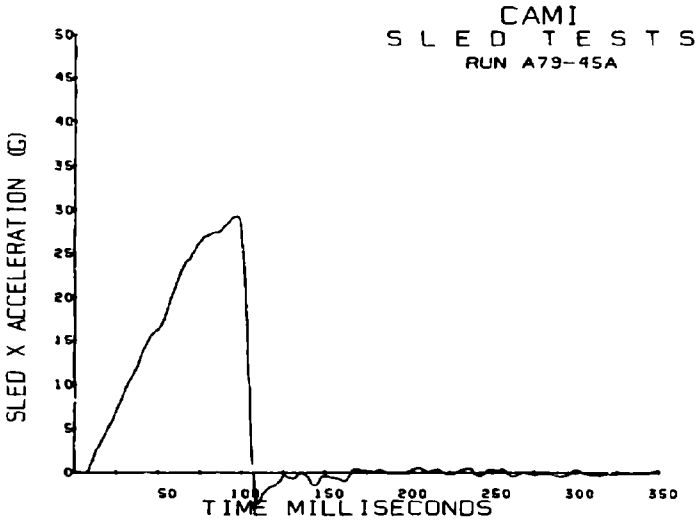

CAMI
SLED TESTS
RUN A79-44C
SEAT PAN RESULTANT FORCE (0A LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

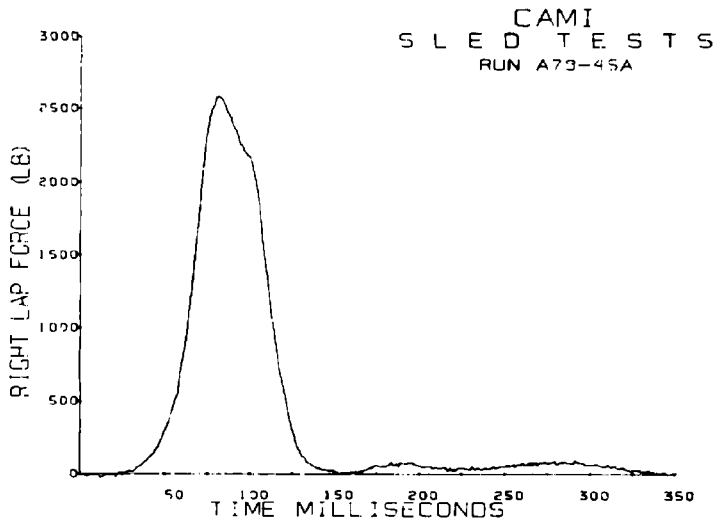

CAMI
SLED TESTS
RUN A79-44C
FOOT REST Y FORCE (DA LB)
TIME MILLISECONDS

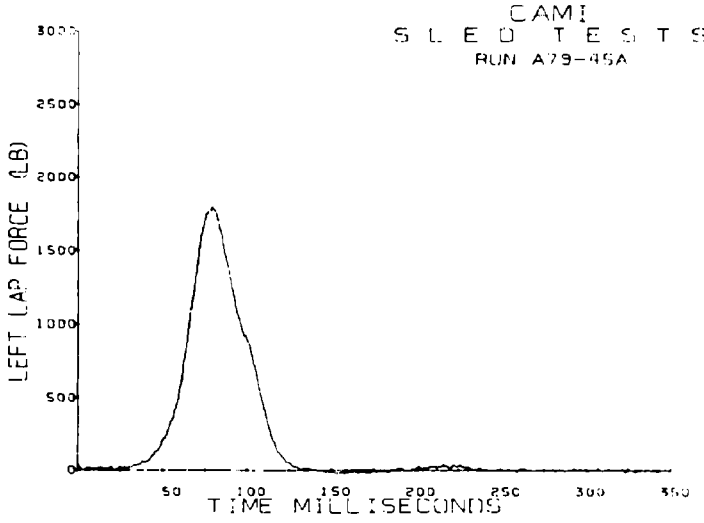

CAMI
SLED TESTS
RUN A79-44C
FOOT REST Y FORCE (DA LB)
TIME MILLISECONDS

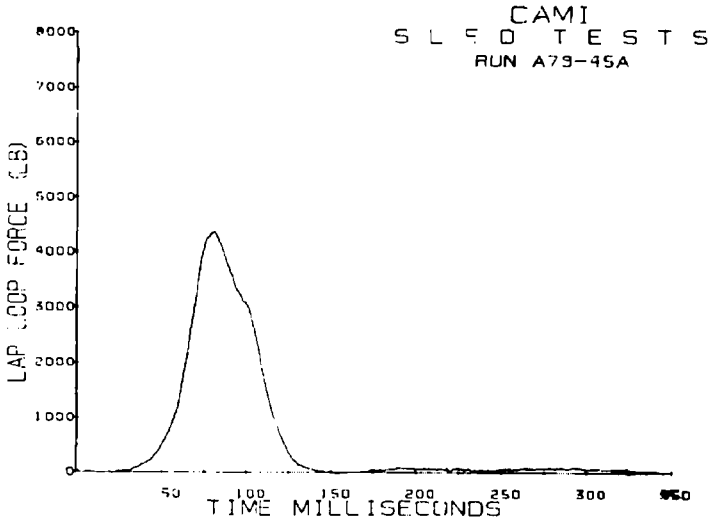

CAMI
SLED TESTS
RUN A79-44C
FOOT REST Z FORCE (DA LB)
TIME MILLISECONDS

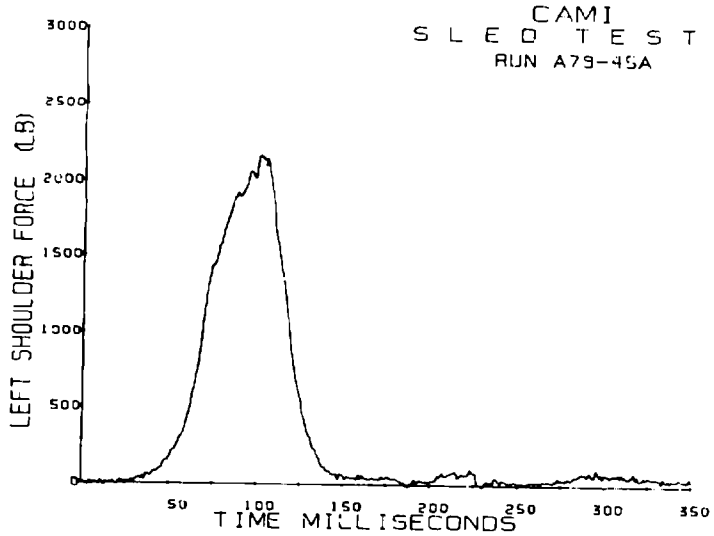

CAMI
SLED TESTS
RUN A79-44C
FOOT REST RESULTANT FORCE (DA LB)
TIME MILLISECONDS

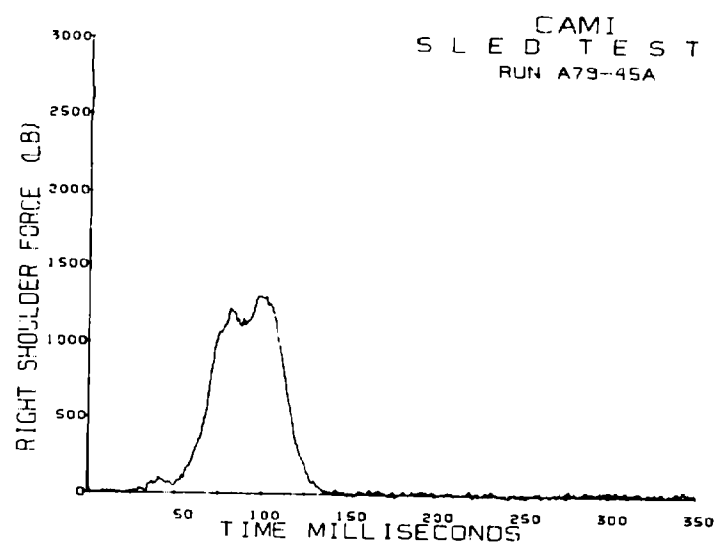

CAMI
S L E D T E S T S
RUN A79-45A
SLED X ACCELERATION (G)
TIME MILLISECONDS

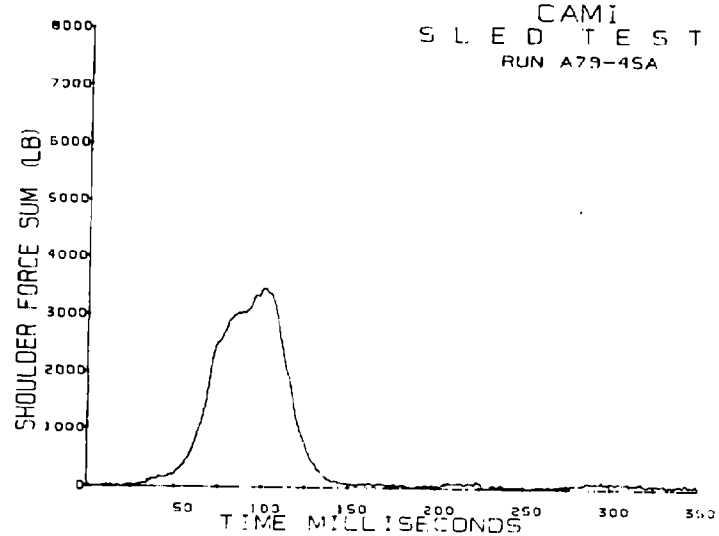

CAMI
S L E D T E S T S
RUN A79-45A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

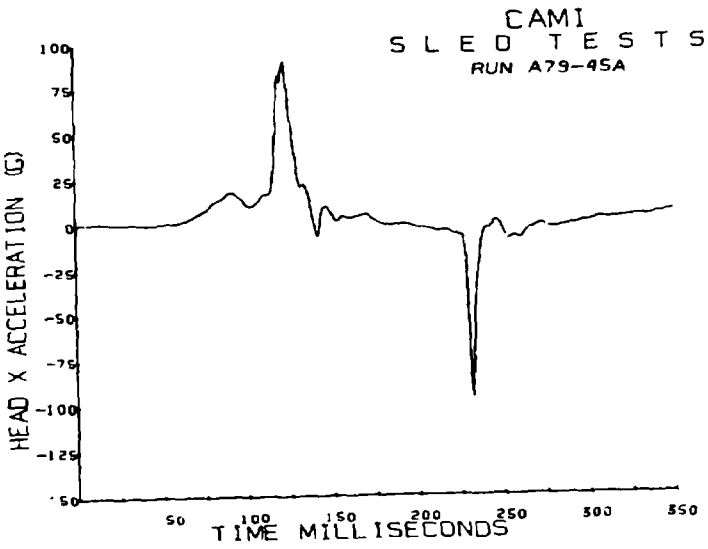

CAMI
S L E D T E S T S
RUN A79-45A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

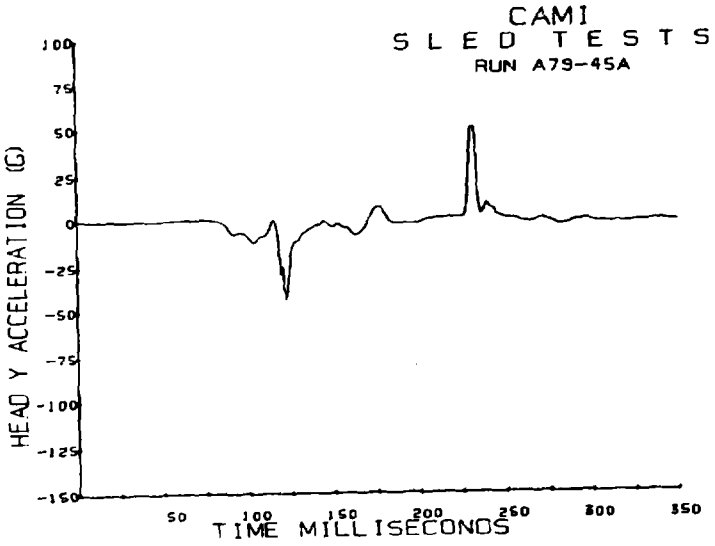

CAMI
S L E D T E S T S
RUN A79-45A
TIME MILLISECONDS

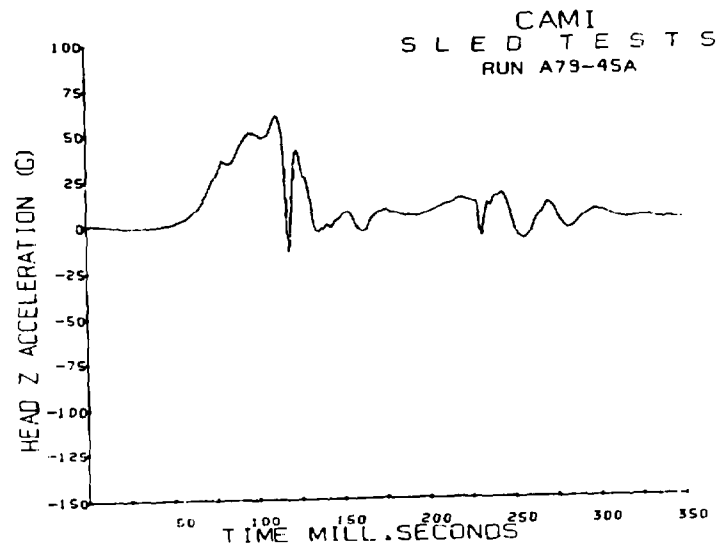

CAMI
S L E D T E S T S
RUN A79-45A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

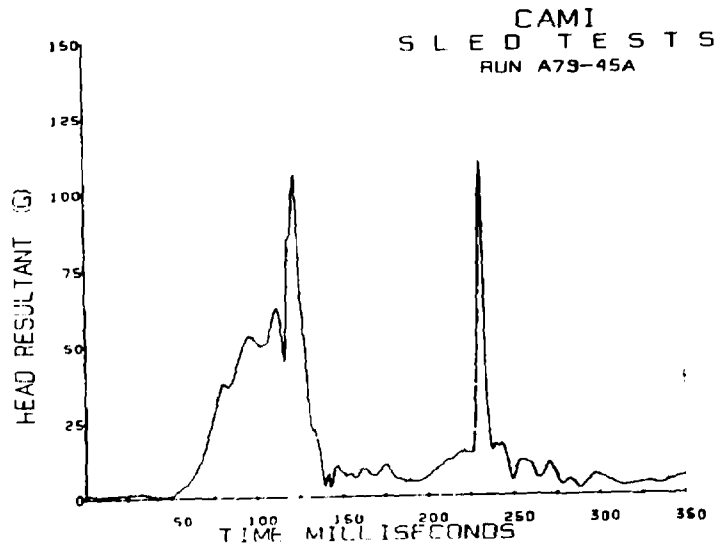

CAMI
S L E D T E S T S
RUN A79-45A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

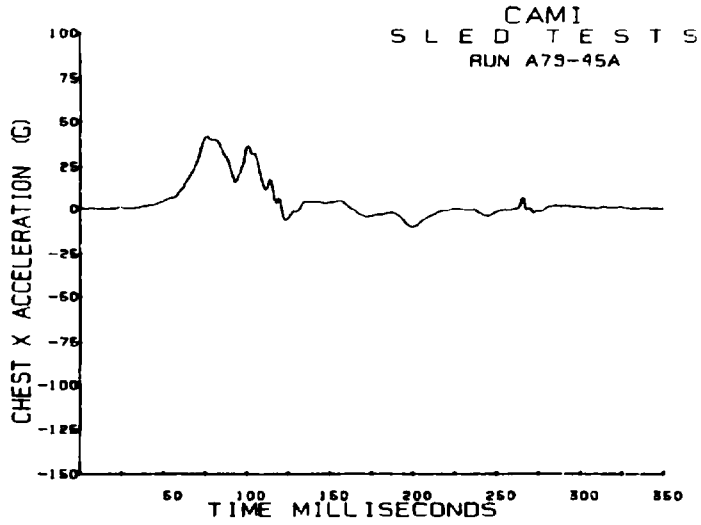

CAMI
S L E D T E S T S
RUN A79-45A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

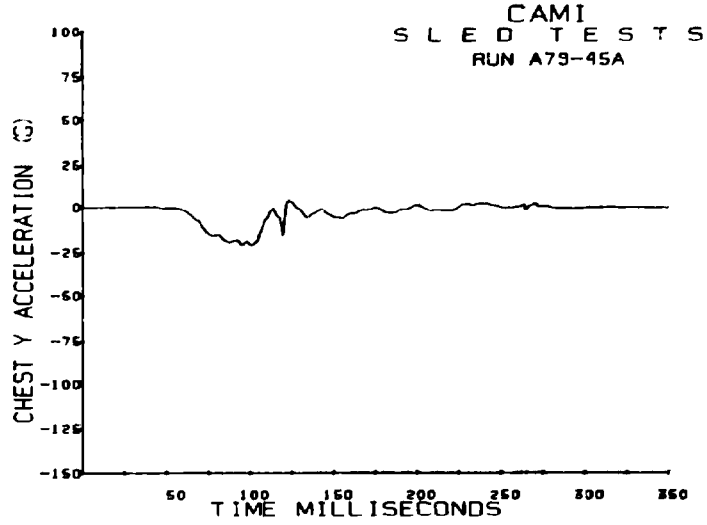

CAMI
SLED TESTS
RUN A79-45A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

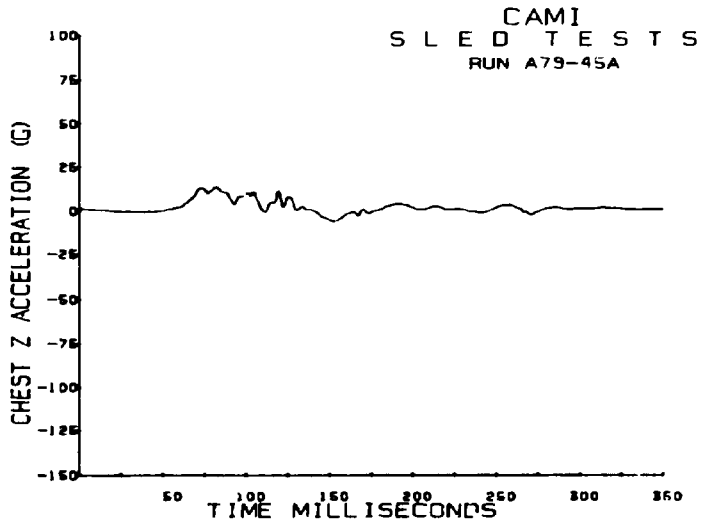

CAMI
SLED TESTS
RUN A79-45A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

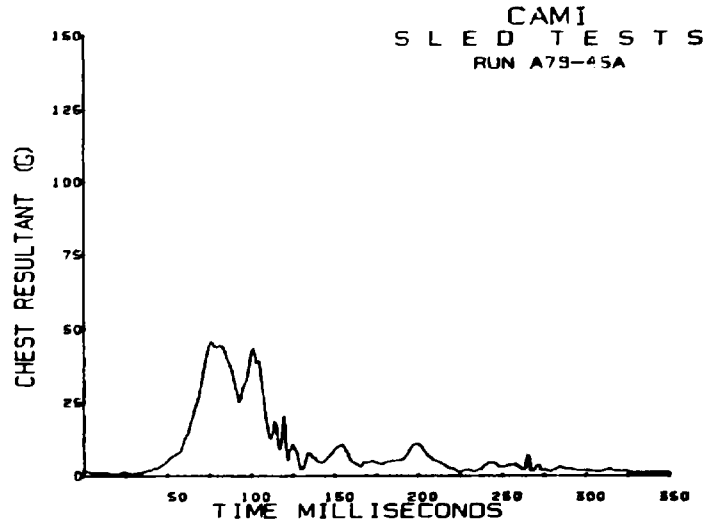

CAMI
SLED TESTS
RUN A79-45A
HEAD Z ACCELERATION (G)
TIME MILL.SECONDS

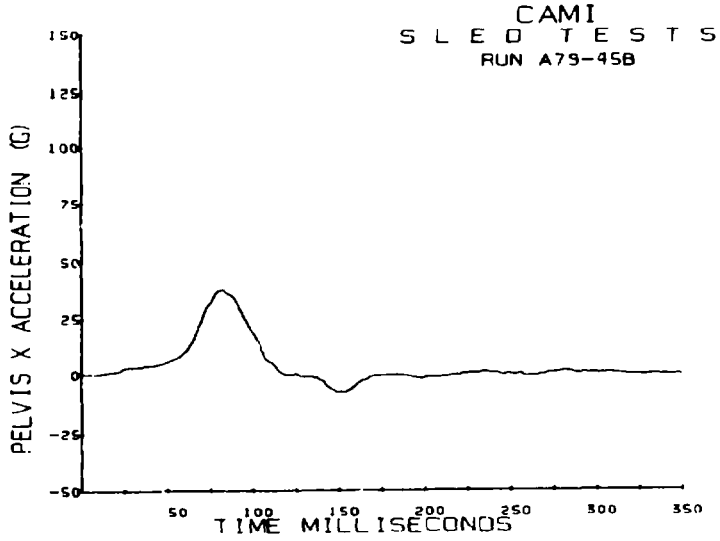

CAMI
SLED TESTS
RUN A79-45A
HEAD RESULTANT (G)
TIME MILLISECONDS

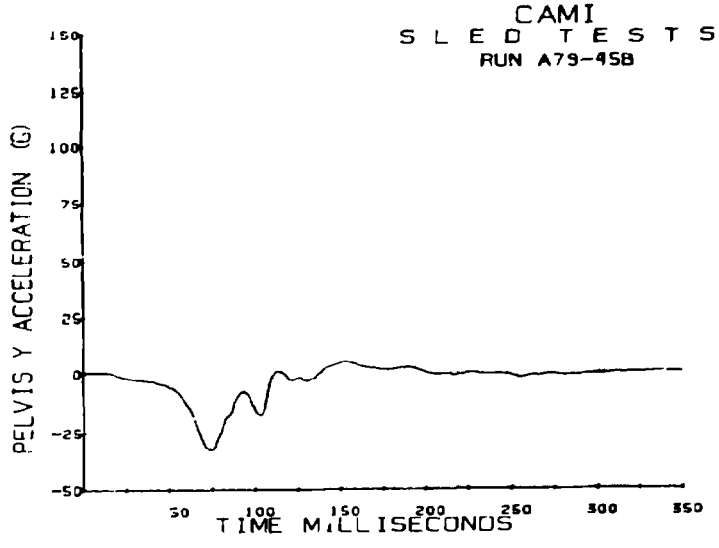

CAMI
S L E D T E S T S
RUN A79-45A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

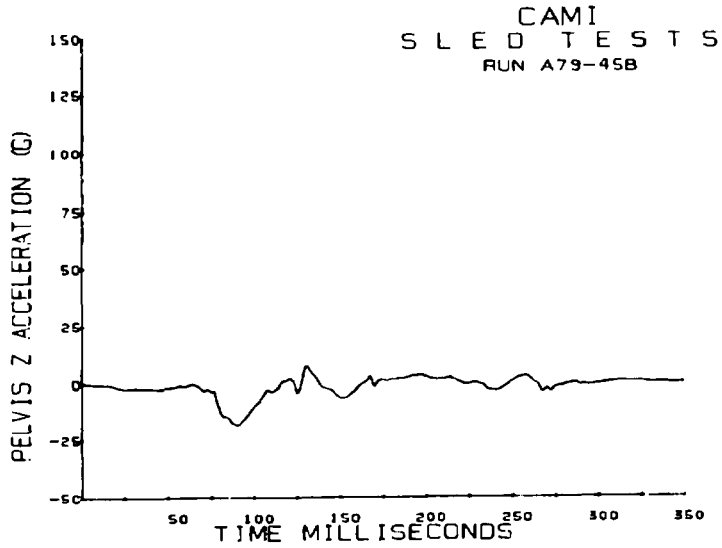

CAMI
S L E D T E S T S
RUN A79-45A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

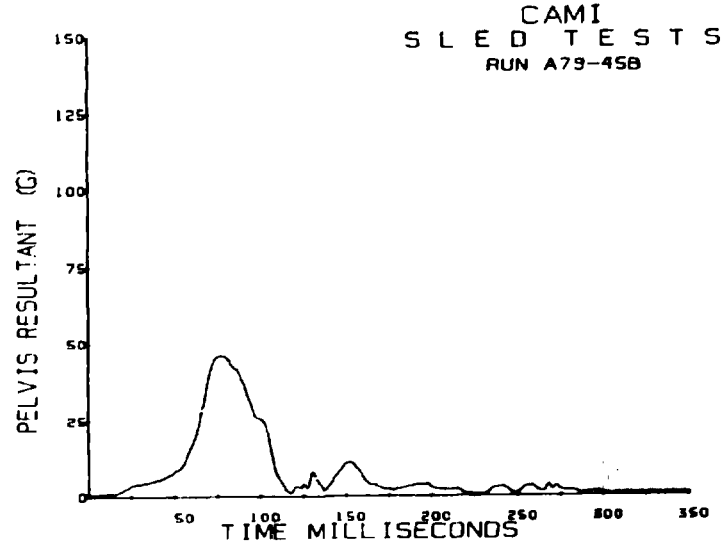

CAMI
S L E D T E S T S
RUN A79-45A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

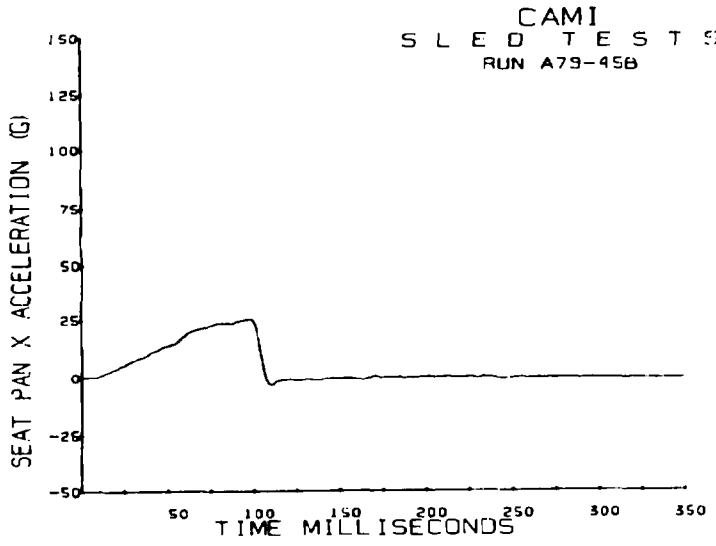

CAMI
S L E D T E S T S
RUN A79-45A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

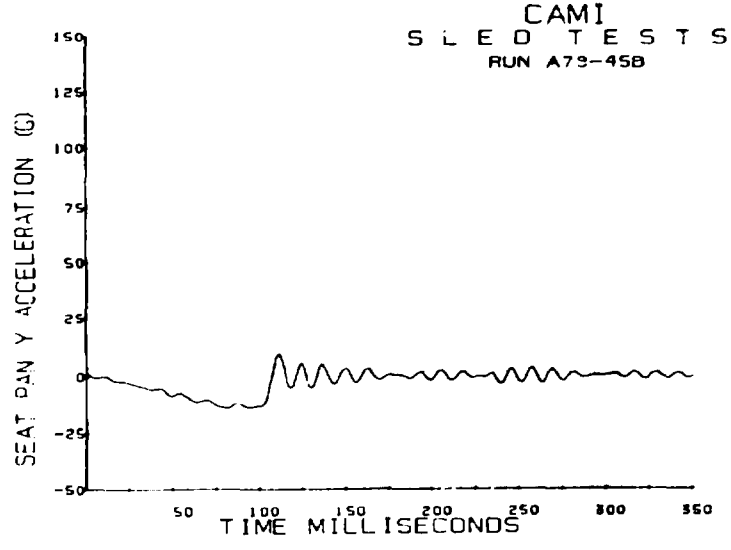

CAMI
S L E D T E S T S
RUN A79-45B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

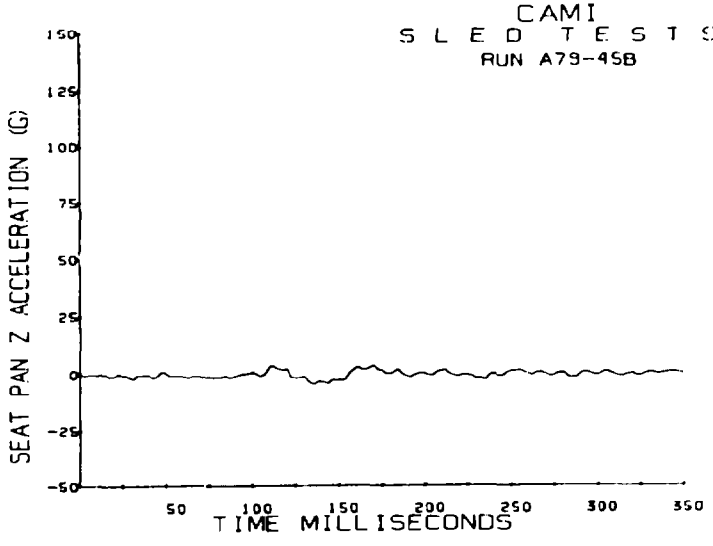

CAMI
S L E D T E S T S
RUN A79-45B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

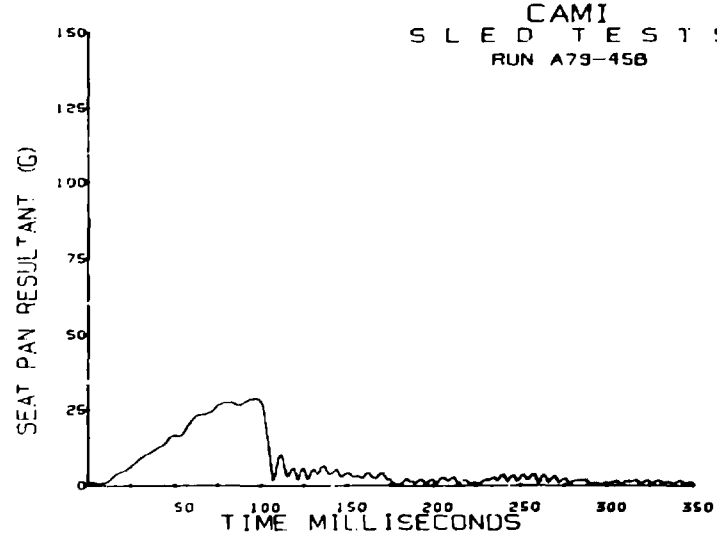

CAMI
S L E D T E S T S
RUN A79-45B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

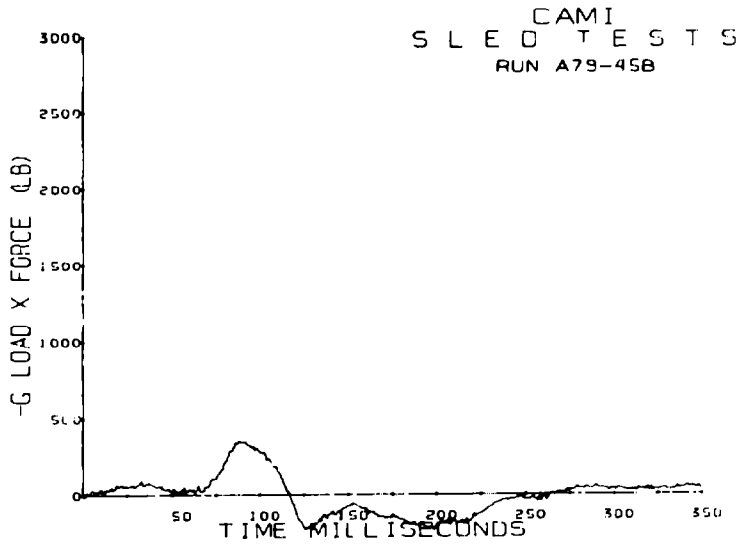

CAMI
S L E D T E S T S
RUN A79-45B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

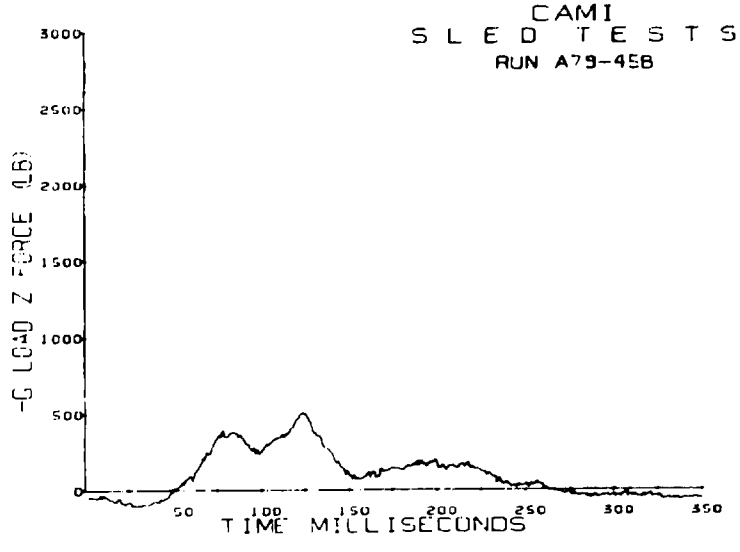

CAMI
S L E D T E S T S
RUN A79-45B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

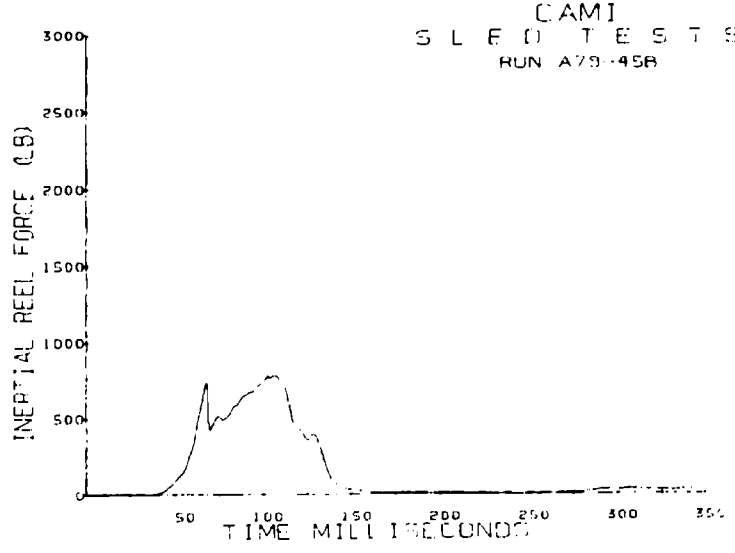

CAMI
S L E D T E S T S
RUN A79-45B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

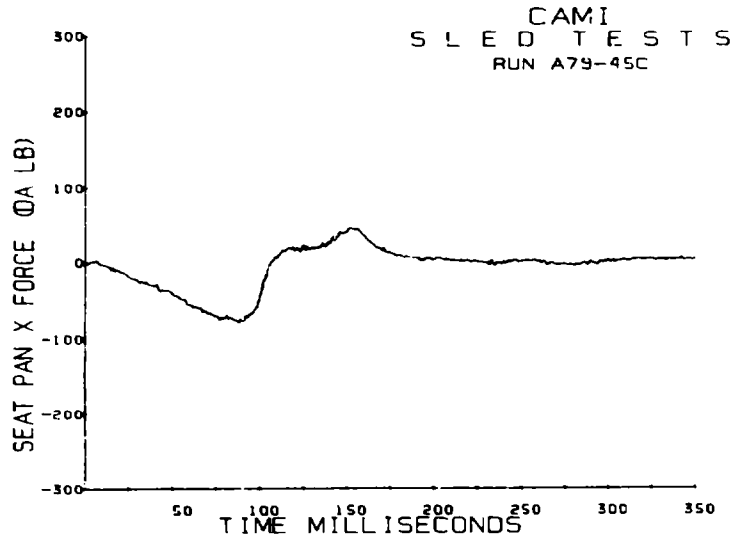

CAMI
S L E D T E S T S
RUN A79-45B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

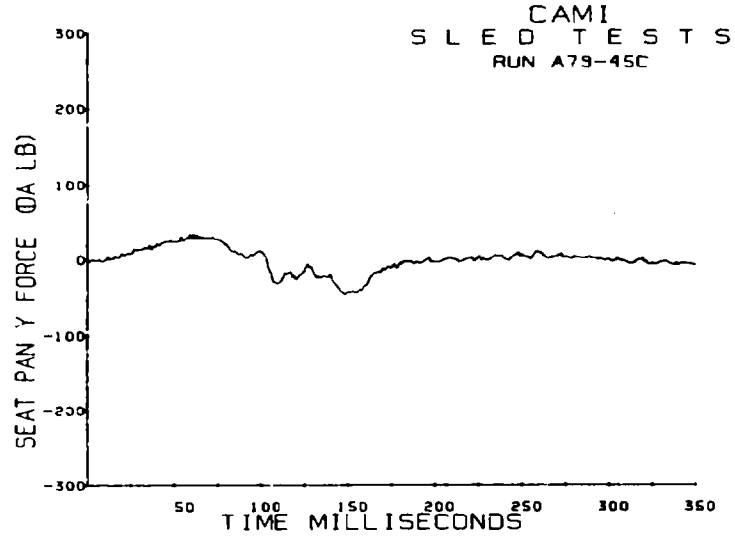

CAMI
S L E D T E S T S
RUN A79-45B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

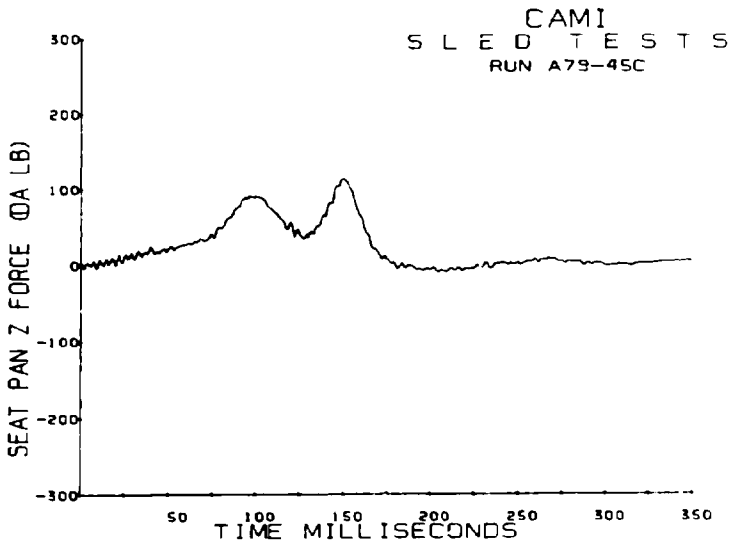

CAMI
SLED TESTS
RUN A79-45B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

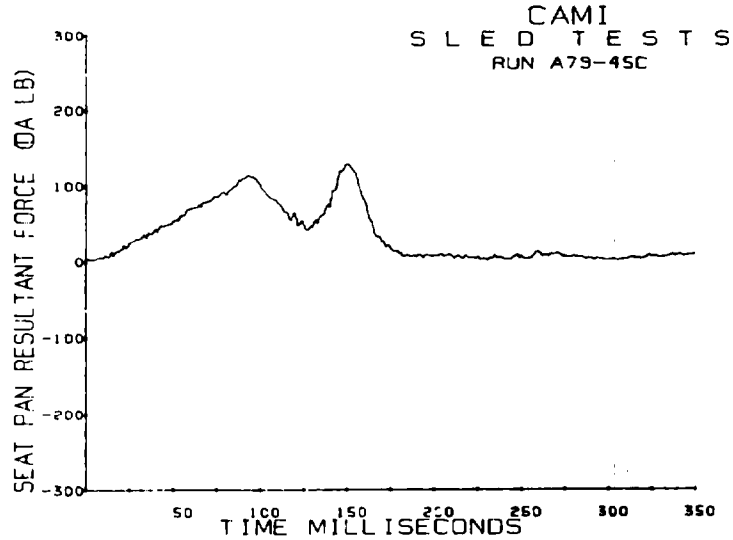

CAMI
SLED TESTS
RUN A79-45B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

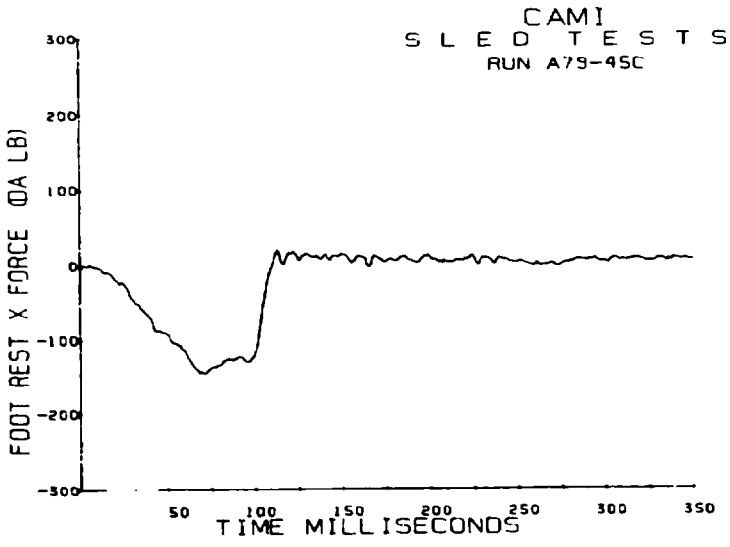

CAMI
SLED TESTS
RUN A79-45B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

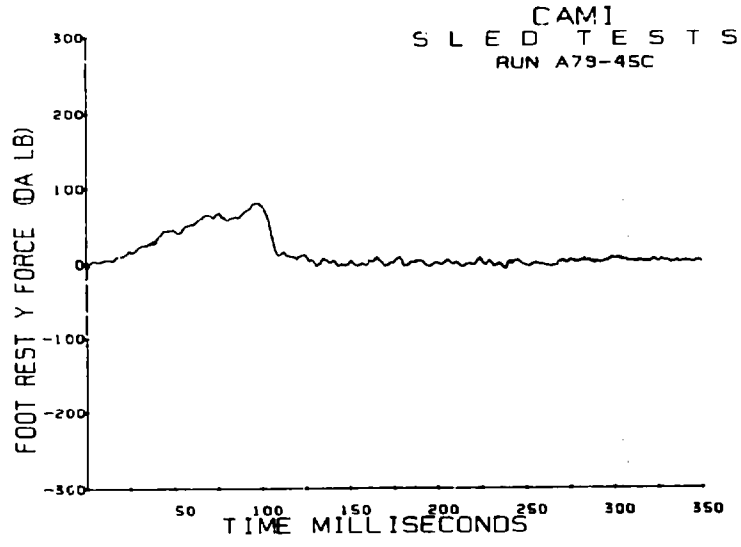

CAMI
SLED TESTS
RUN A79-45C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

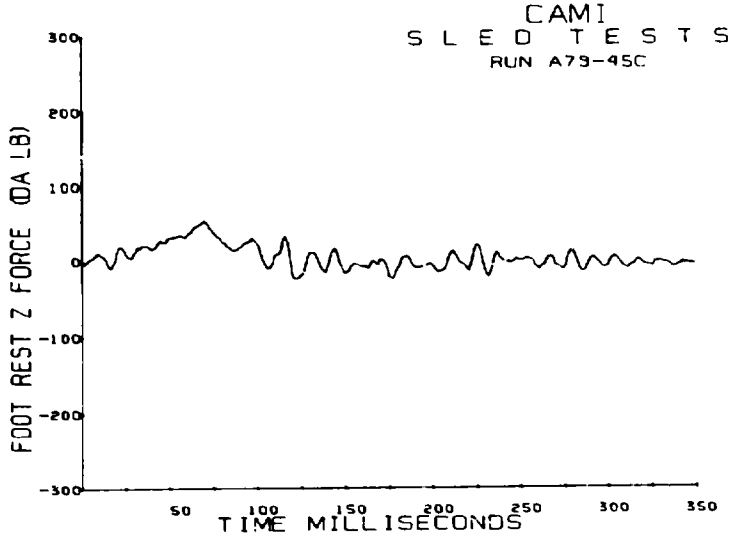

CAMI
SLED TESTS
RUN A79-45C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

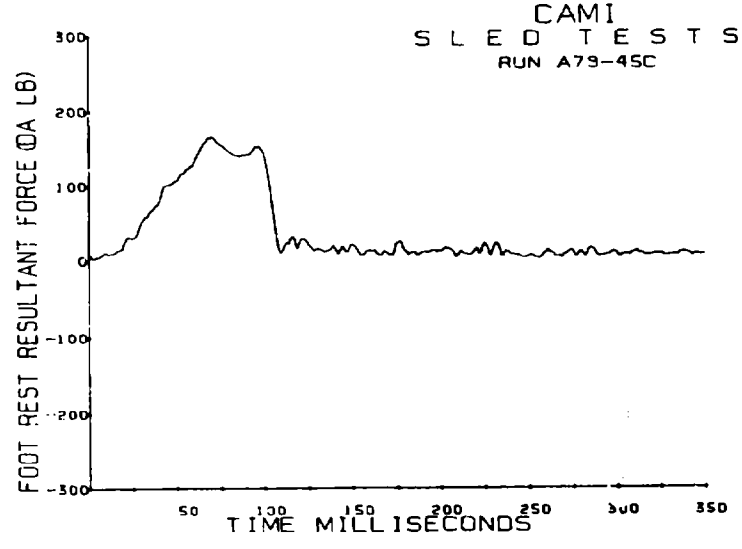

CAMI
SLED TESTS
RUN A79-45C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

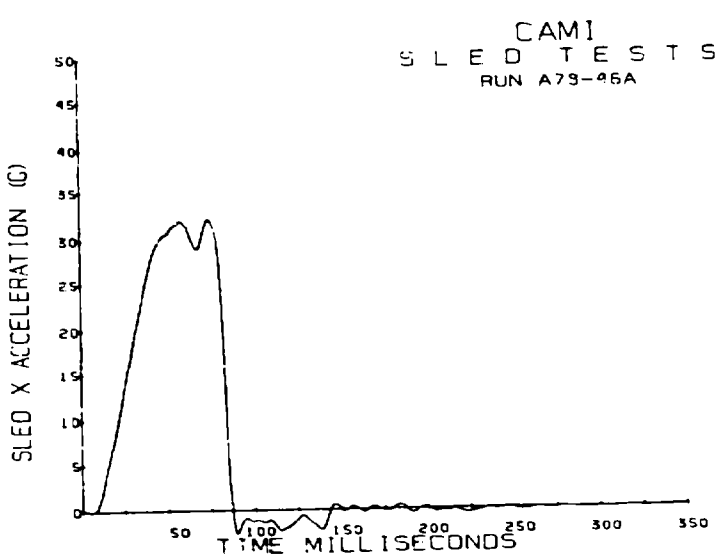

CAMI
SLED TESTS
RUN A79-45C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

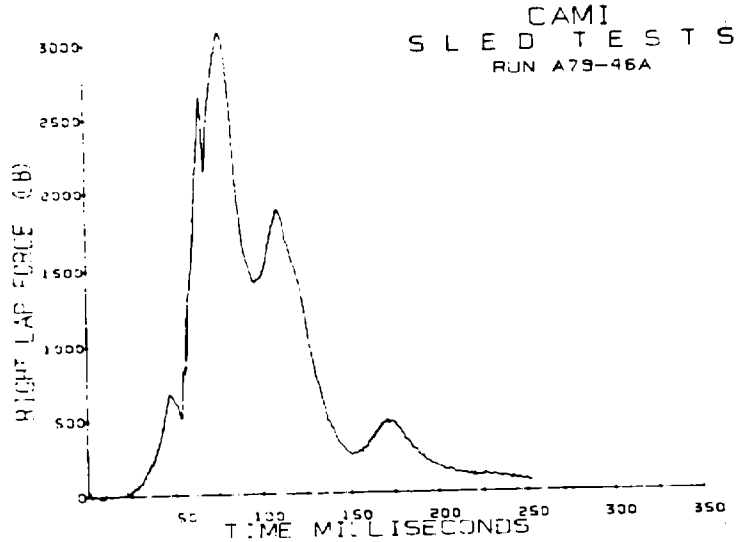

CAMI
SLED TESTS
RUN A79-45C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

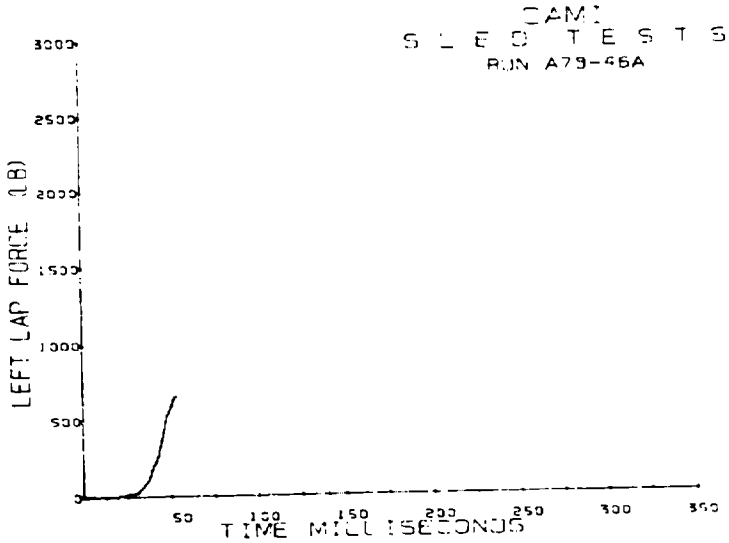

CAMI
SLED TESTS
RUN A79-45C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

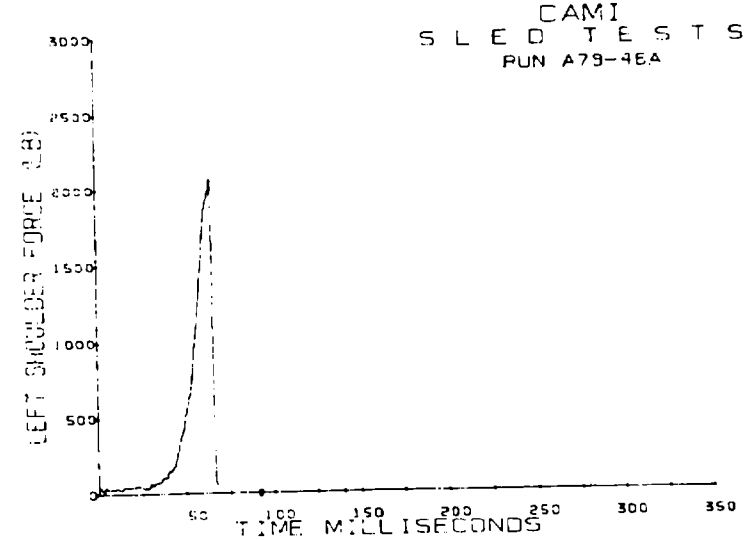

CAMI
SLED TESTS
RUN A79-45C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

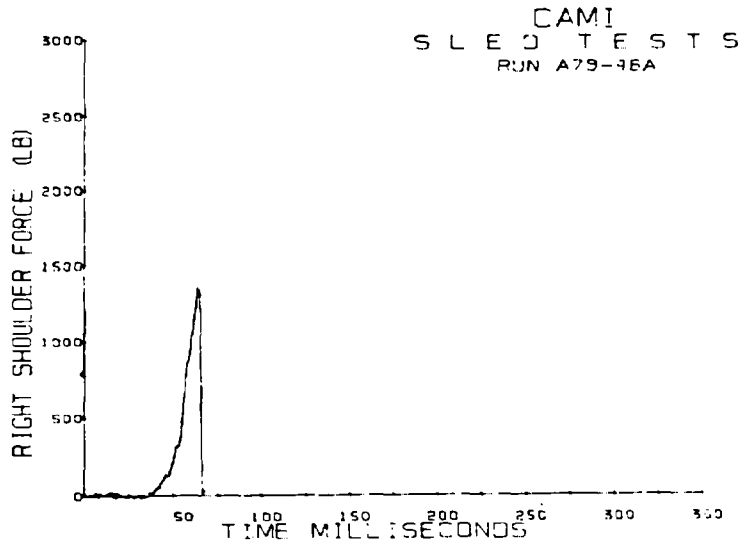

CAMI
SLED TESTS
RUN A79-45C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

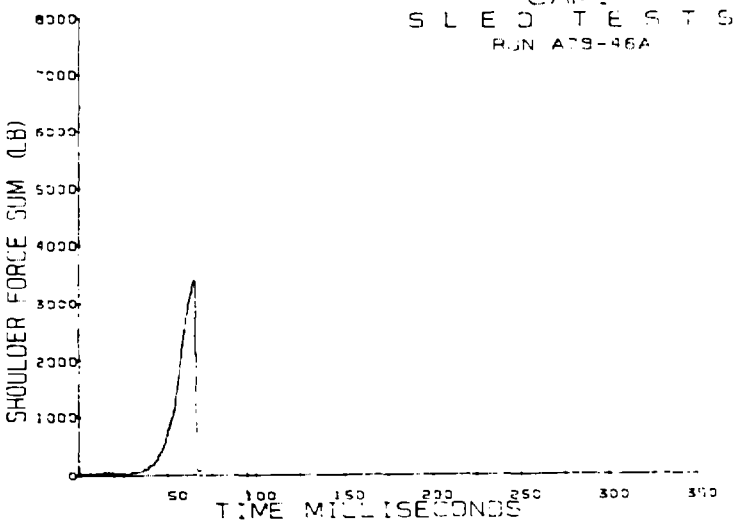

CAMI
S L E D T E S T S
RUN A79-46A
SLED X ACCELERATION (G)
TIME MILLISECONDS

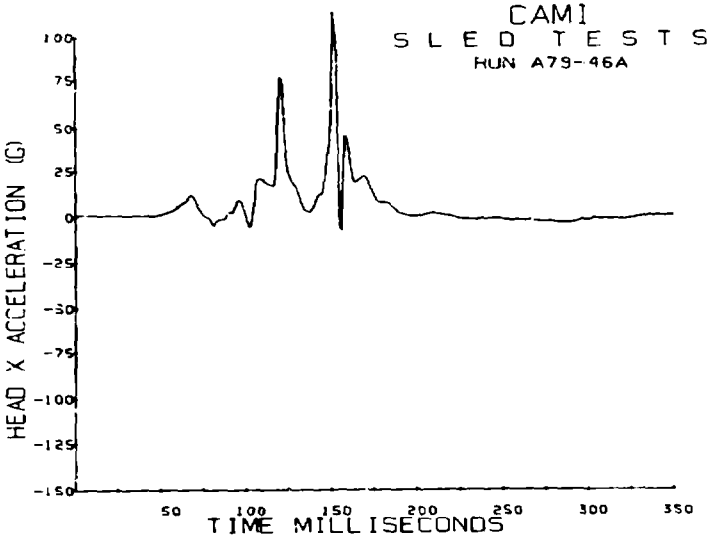

CAMI
S L E D T E S T S
RUN A79-46A
TIME MILLISECONDS

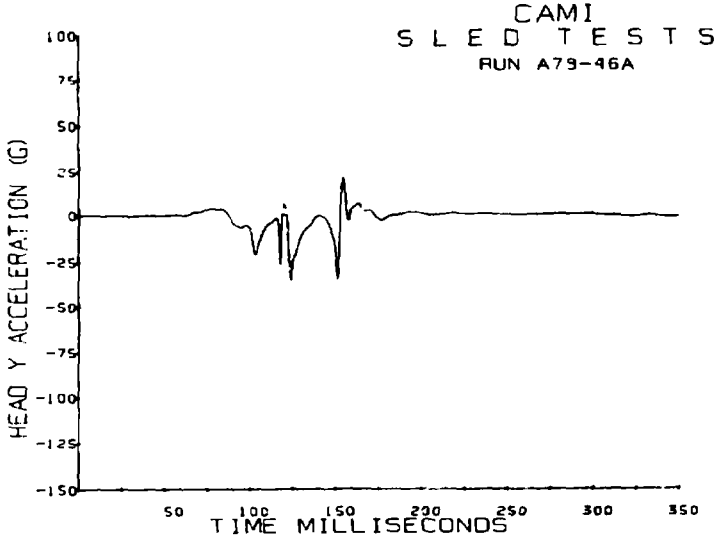

CAMI
S L E D T E S T S
RUN A79-46A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

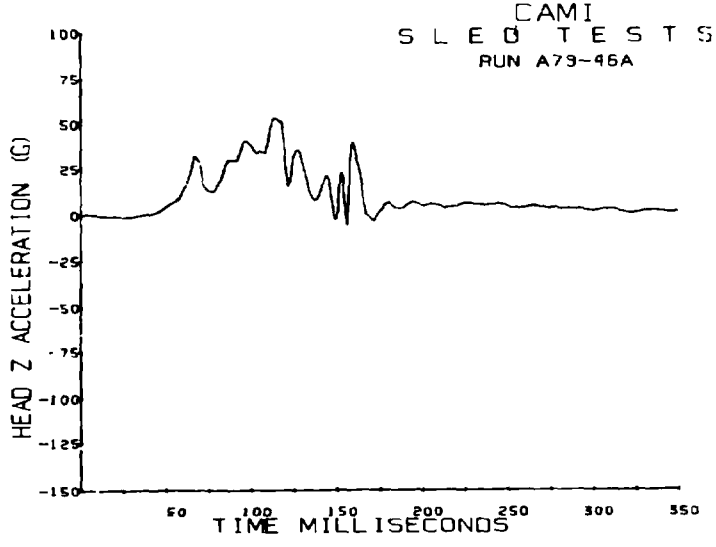

CAMI
S L E D T E S T S
RUN A79-46A
TIME MILLISECONDS

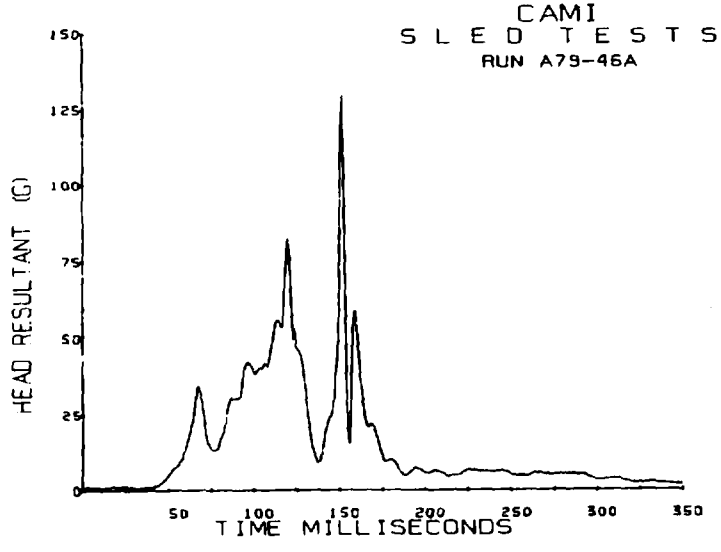

CAMI
S L E D T E S T S
RUN A79-46A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

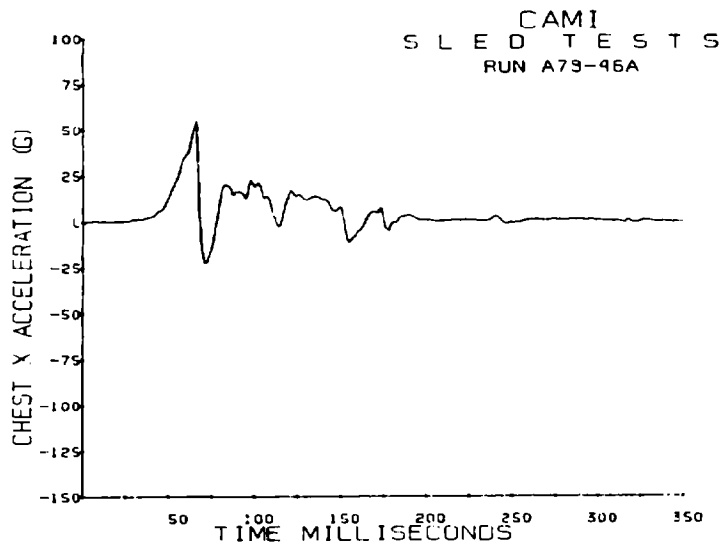

CAMI
S L E D T E S T S
RUN A79-46A
SHOULDER FORCE SUM (LB)
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

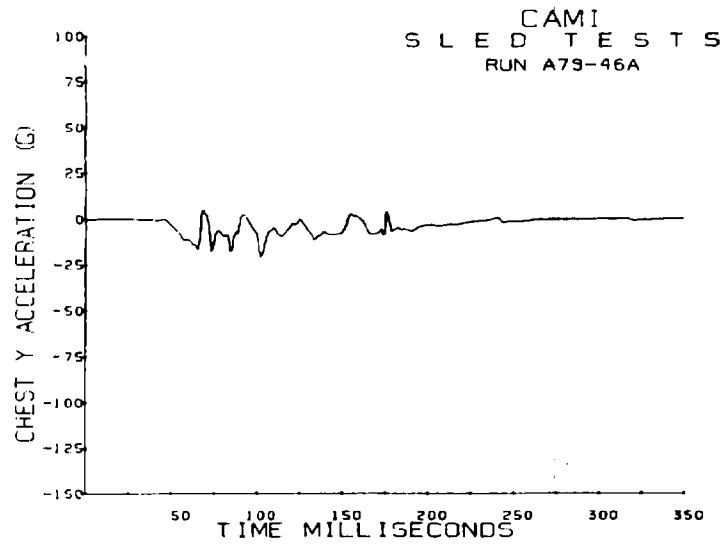

CAMI
SLED TESTS
RUN A79-46A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

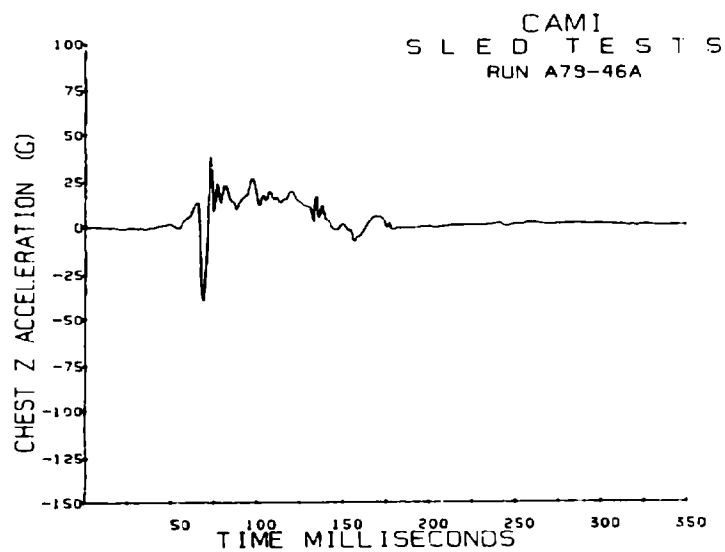

CAMI
SLED TESTS
RUN A79-46A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

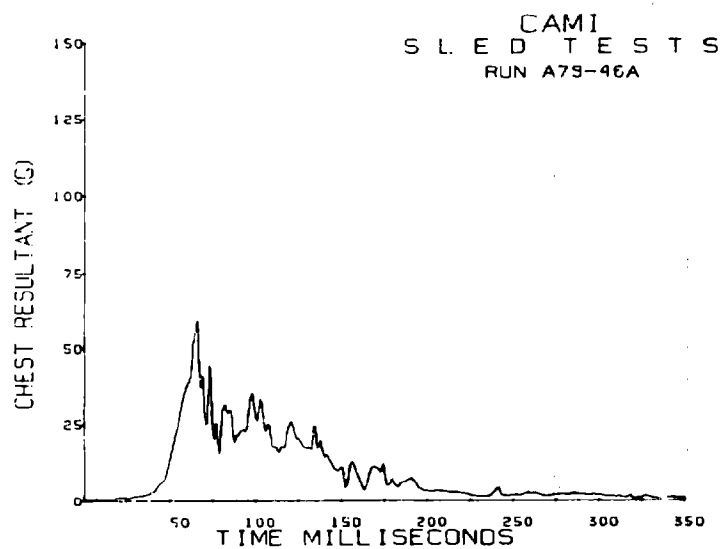

CAMI
SLED TESTS
RUN A79-46A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

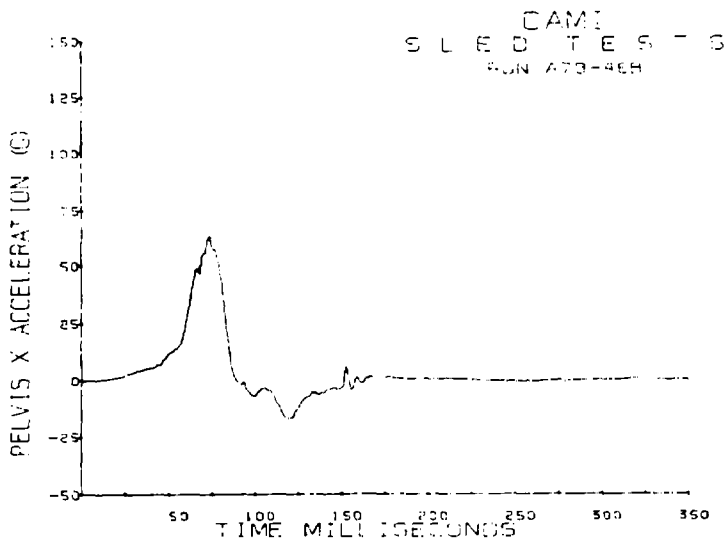

CAMI
SLED TESTS
RUN A79-46A
HEAD RESULTANT (G)
TIME MILLISECONDS

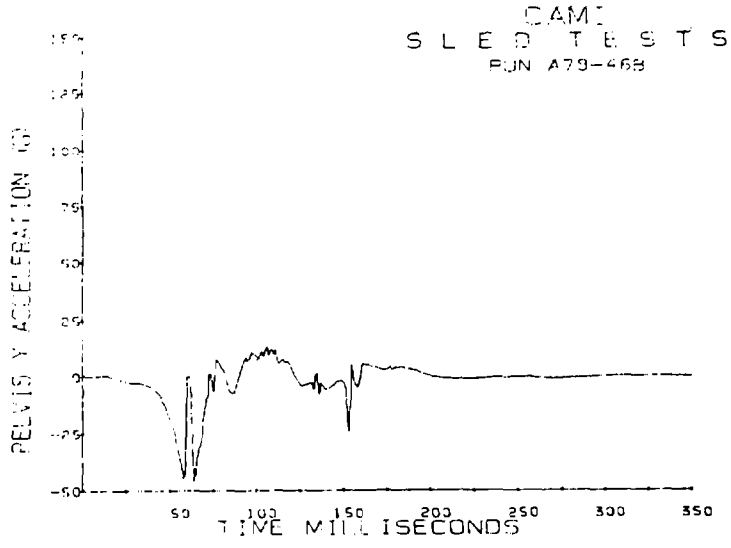

CAMI
S L E D T E S T S
RUN A79-46A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

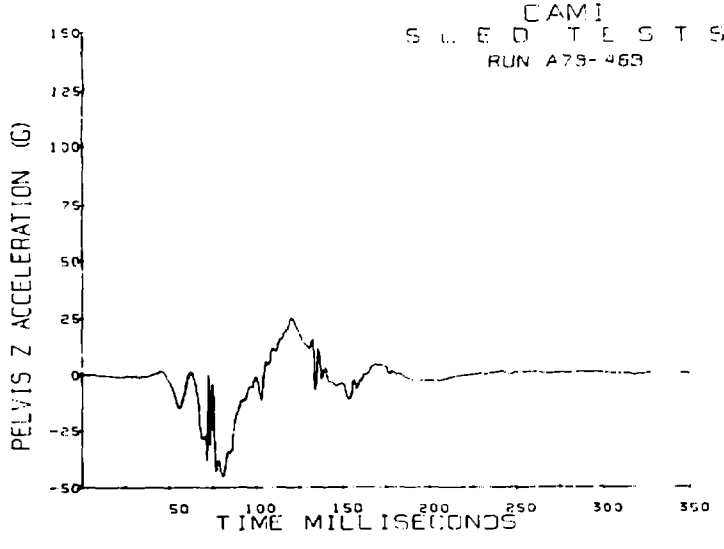

CAMI
S L E D T E S T S
RUN A79-46A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

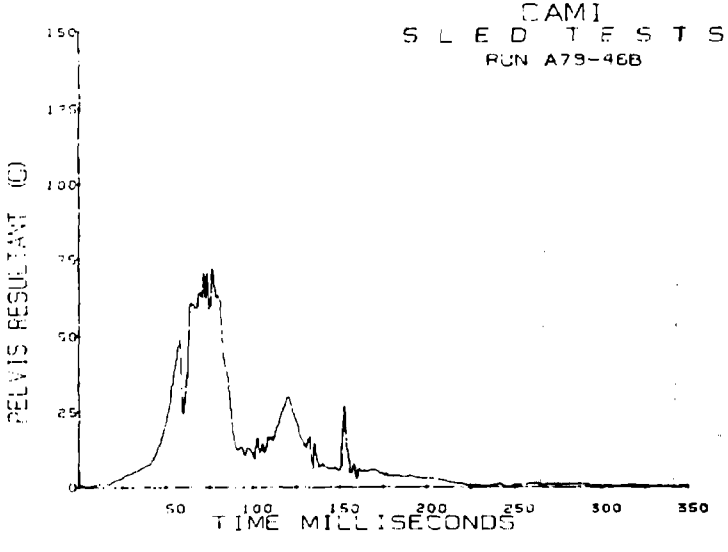

CAMI
S L E D T E S T S
RUN A79-46A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

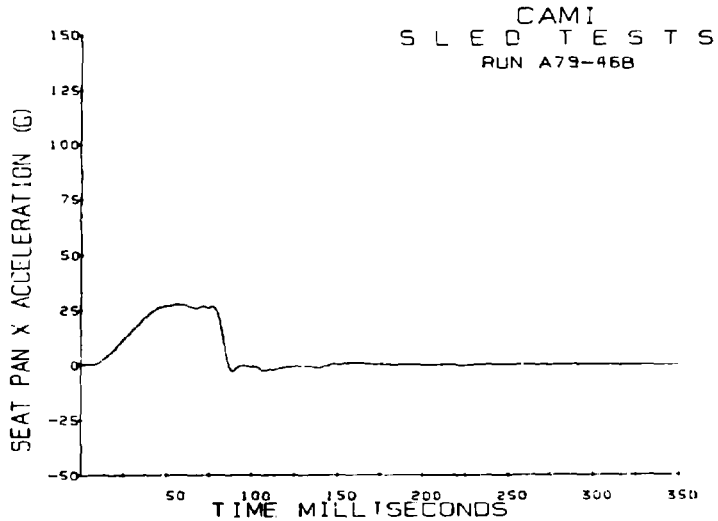

CAMI
S L E D T E S T S
RUN A79-46A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

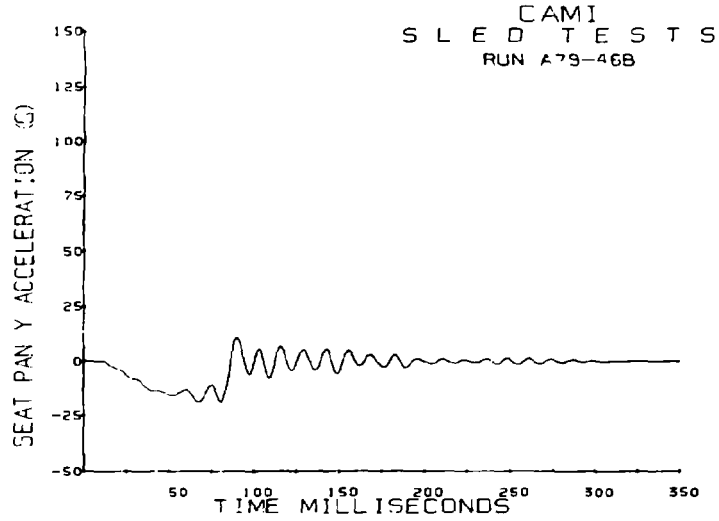

CAMI
S L E D T E S T S
RUN A79-46B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

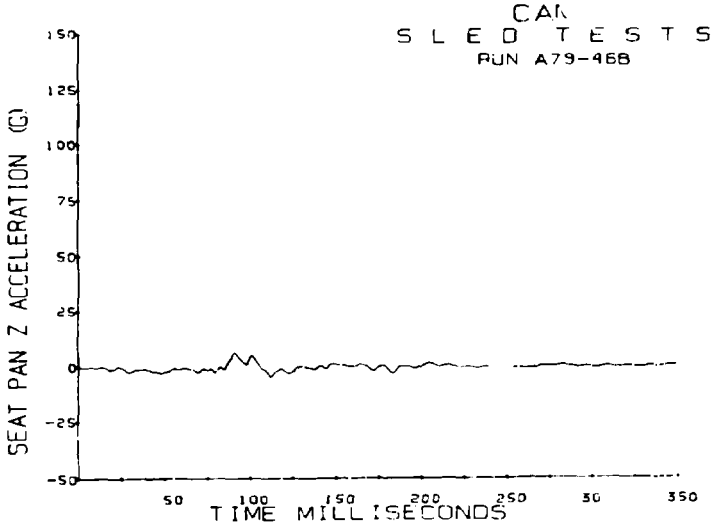

CAMI
S L E D T E S T S
RUN A79-46B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

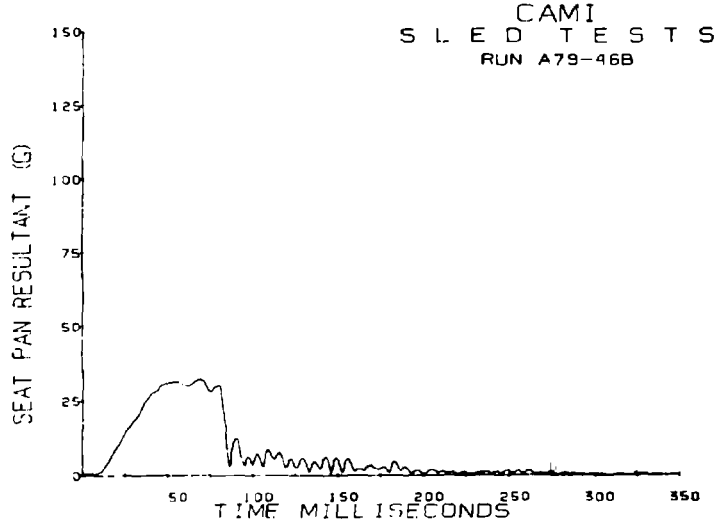

CAMI
S L E D T E S T S
RUN A79-46B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

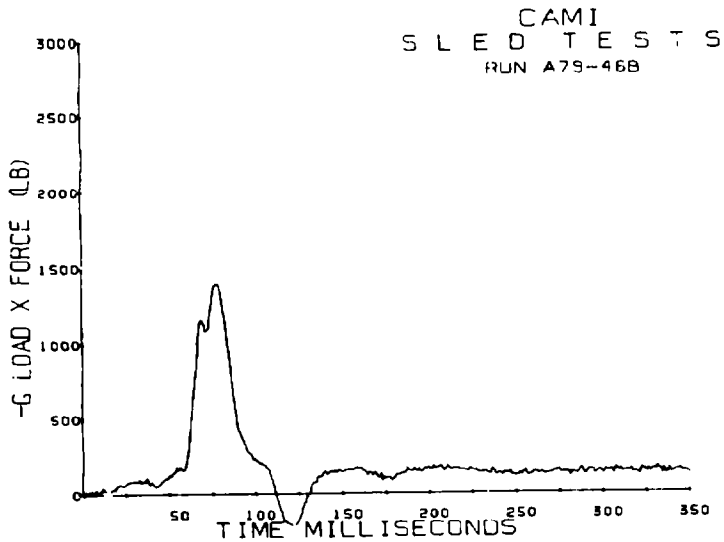

CAMI
S L E D T E S T S
RUN A79-46B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

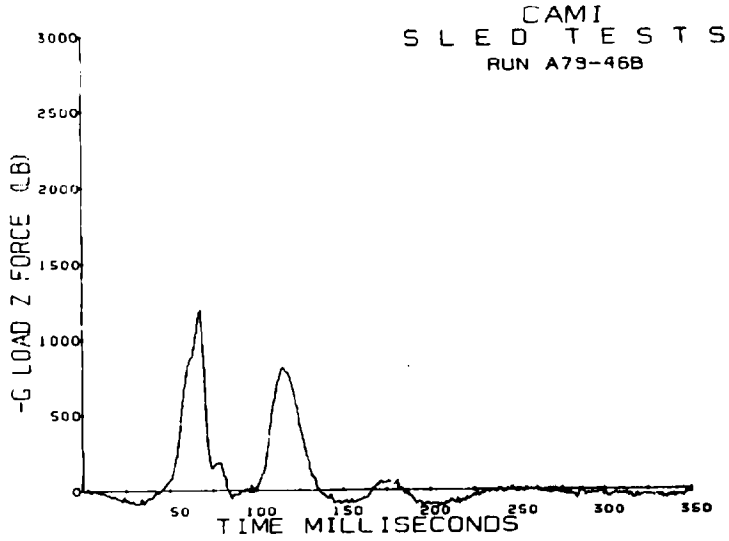

CAMI
S L E D T E S T S
RUN A79-46B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

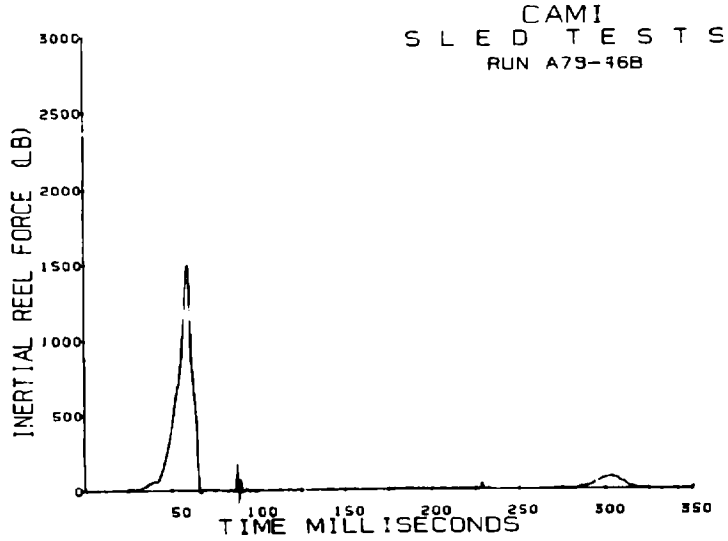

CAMI
S L E D T E S T S
RUN A79-46B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

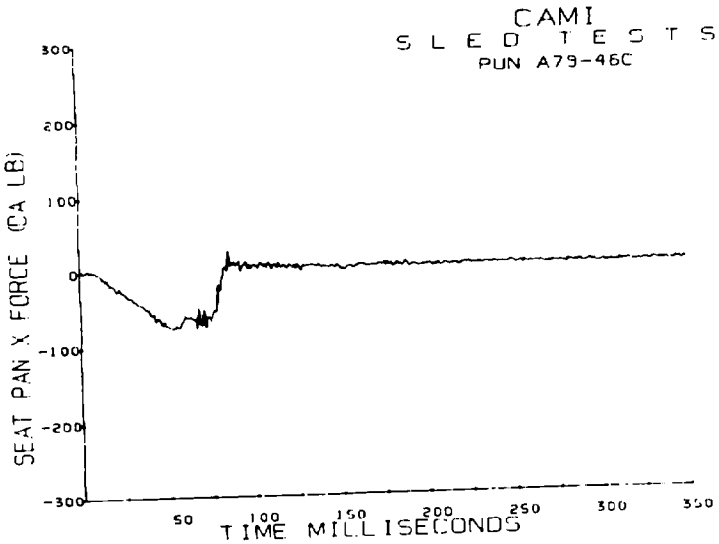

CAN
S L E D T E S T S
RUN A79-46B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

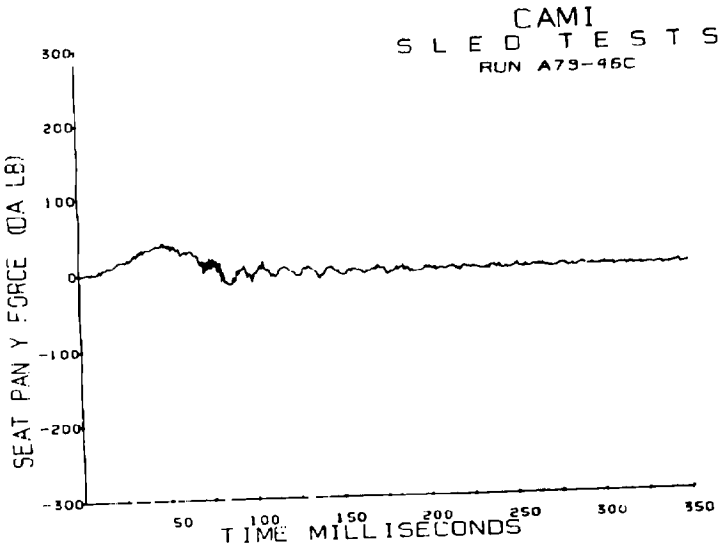

CAMI
S L E D T E S T S
RUN A79-46B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

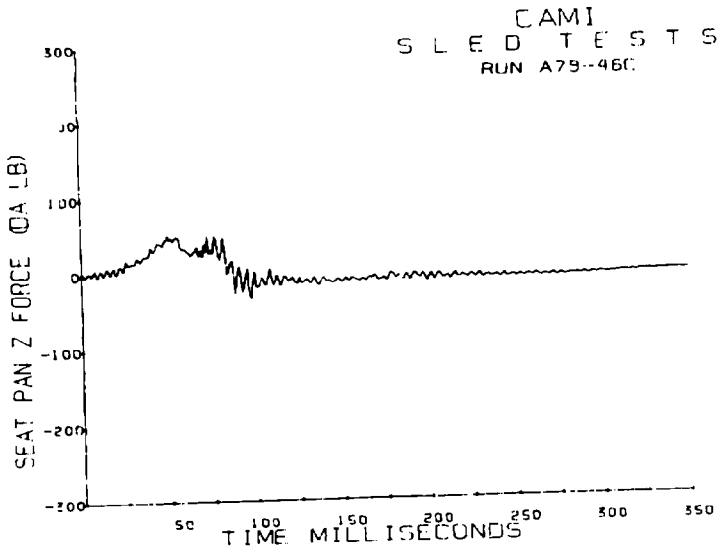

CAMI
S L E D T E S T S
RUN A79-46B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

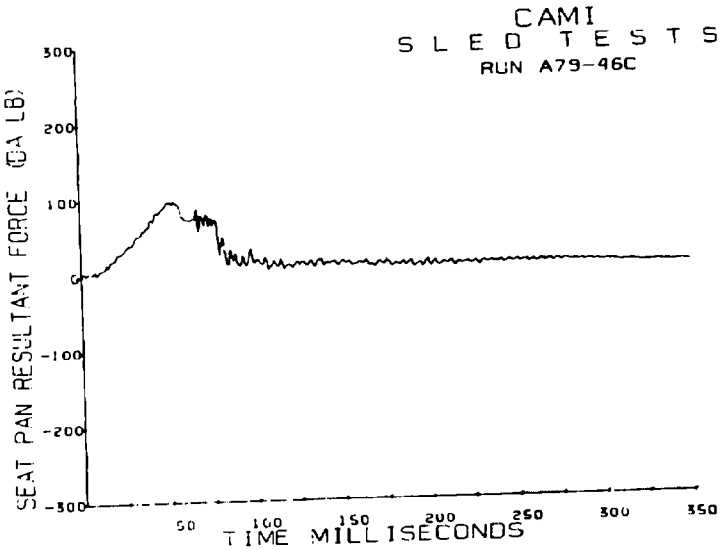

CAMI
S L E D T E S T S
RUN A79-46B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

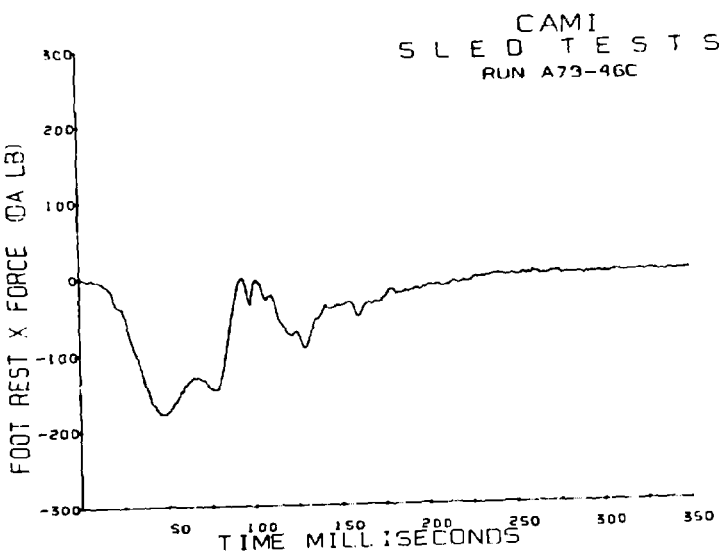

CAMI
S L E D T E S T S
RUN A79-46B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

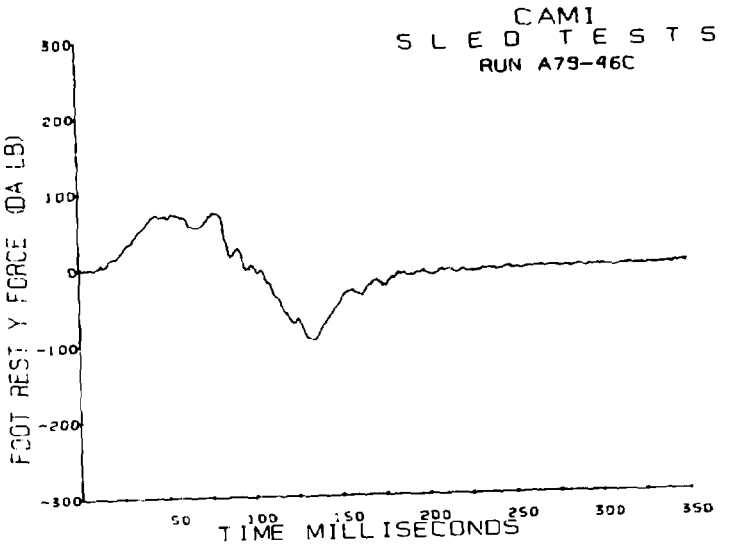

CAMI
S L E D T E S T S
RUN A79-46C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

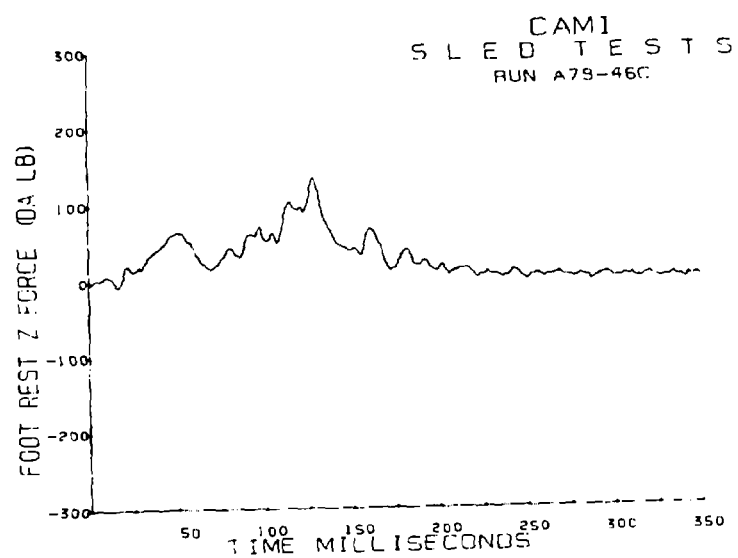

CAMI
S L E D T E S T S
RUN A79-46C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

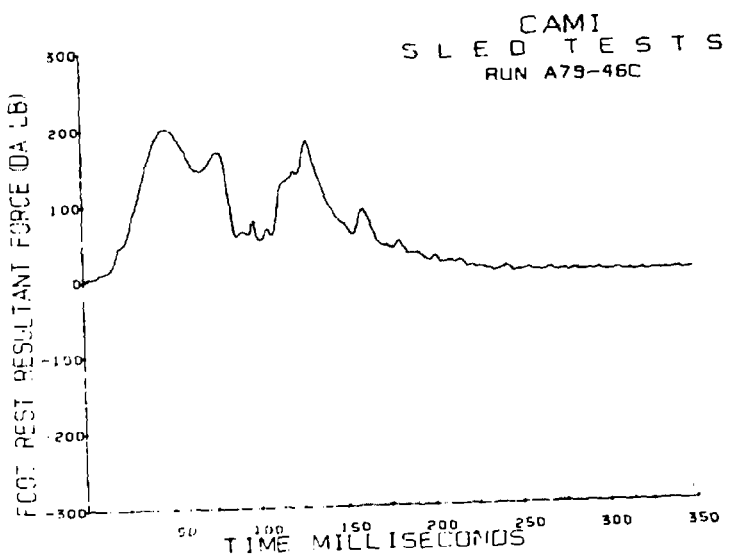

CAMI
S L E D T E S T S
RUN A79-46C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-200
50
100
150
200
250
300
350
TIME MILLISECONDS

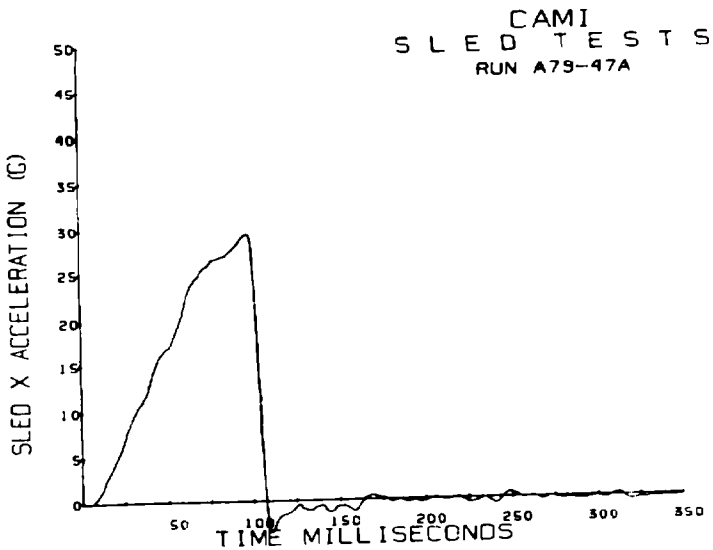

CAMI
S L E D T E S T S
RUN A79-46C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

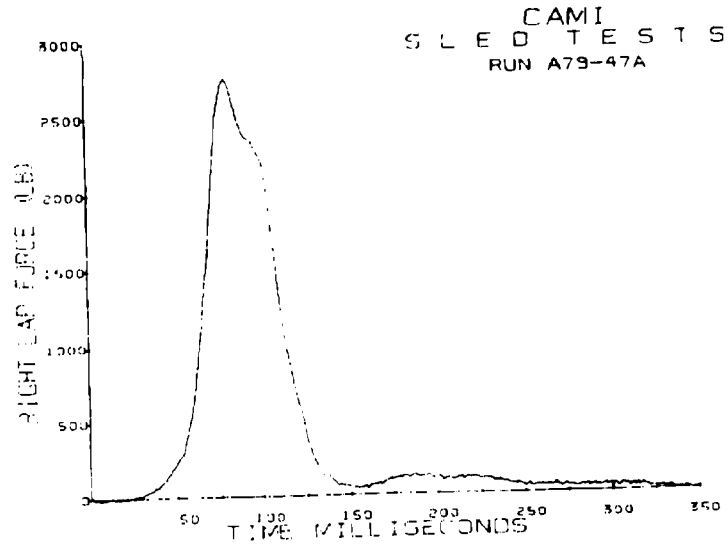

CAMI
S L E D T E S T S
RUN A79-46C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

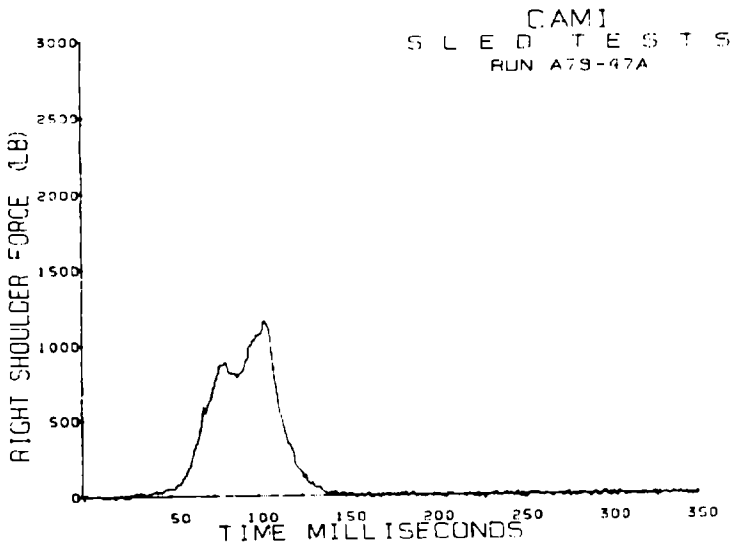

CAMI
S L E D T E S T S
RUN A79-46C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

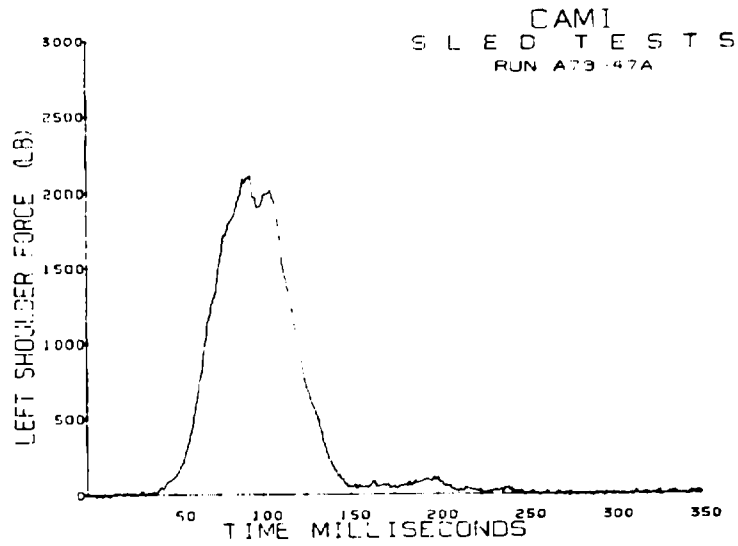

CAMI
S L E D T E S T S
RUN A79-46C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

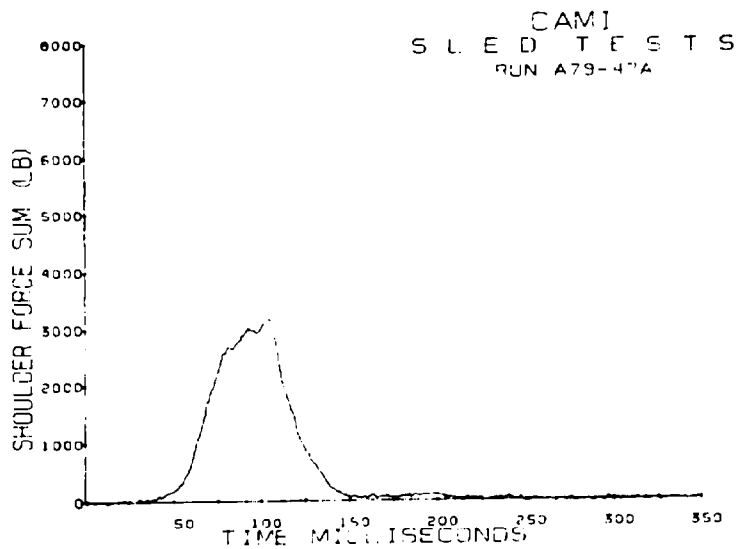

CAMI
S L E D T E S T S
RUN A79-46C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

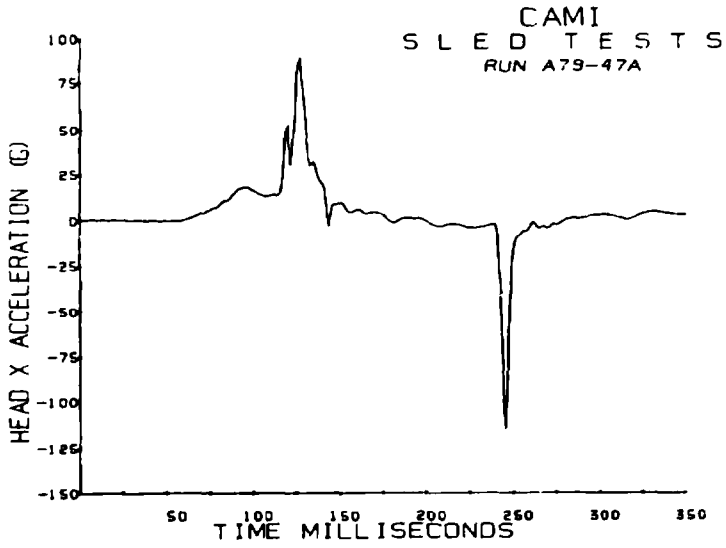

CAMI
SLED TESTS
RUN A79-47A
SLED X ACCELERATION (G)
50
45
40
35
30
25
20
15
10
5
0
50
100
150
200
250
300
350
TIME MILLISECONDS

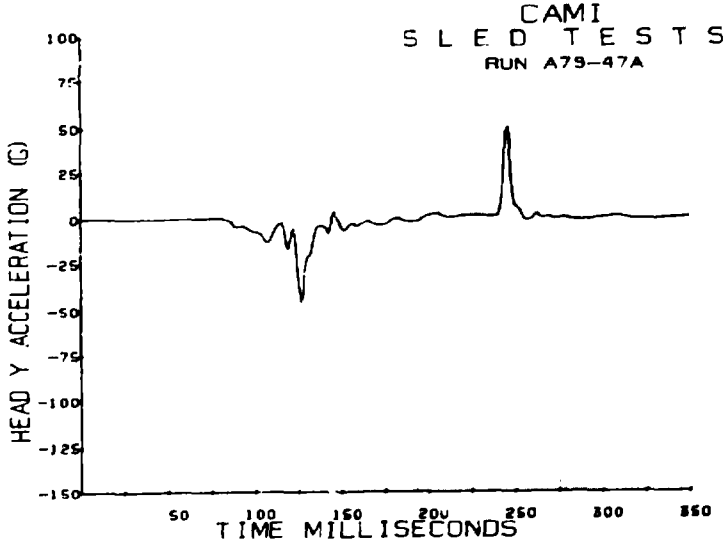

CAMI
SLED TESTS
RUN A79-47A
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

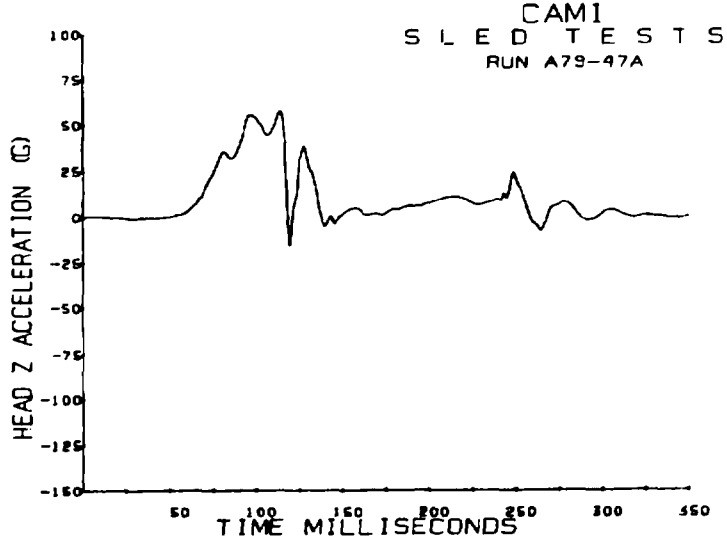

CAMI
S L E D T E S T S
RUN A79-47A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

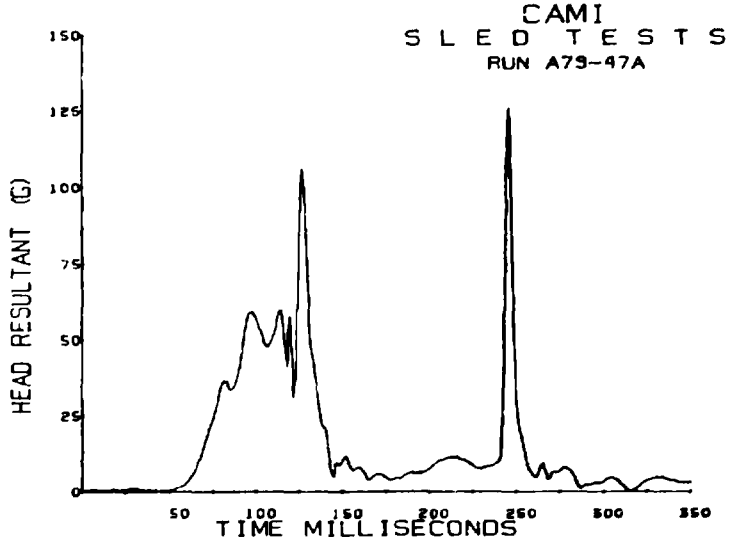

CAMI
S L E D T E S T S
RUN A79-47A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

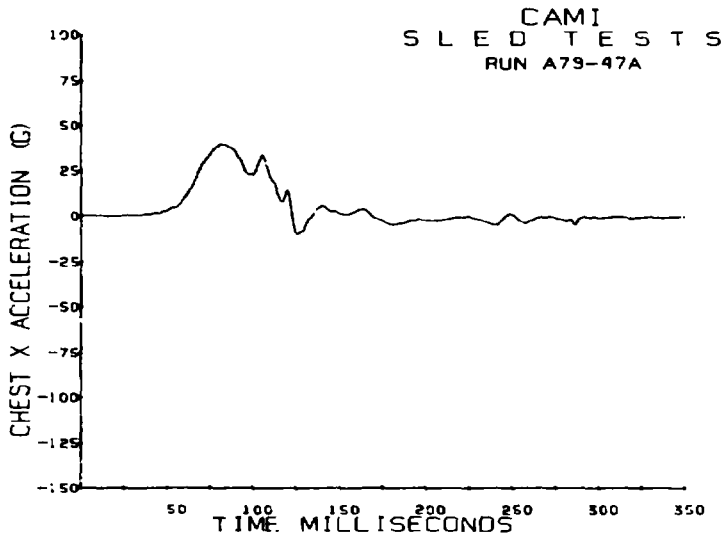

CAMI
S L E D T E S T S
RUN A79-47A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

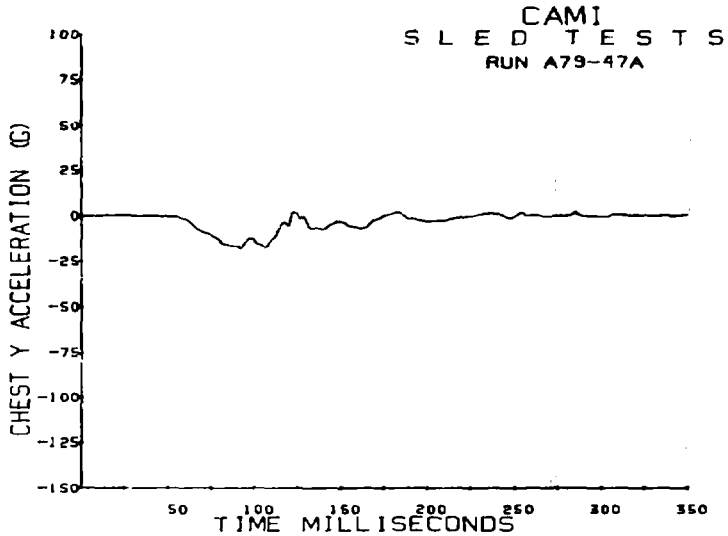

CAMI
SLED TESTS
RUN A79-47A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

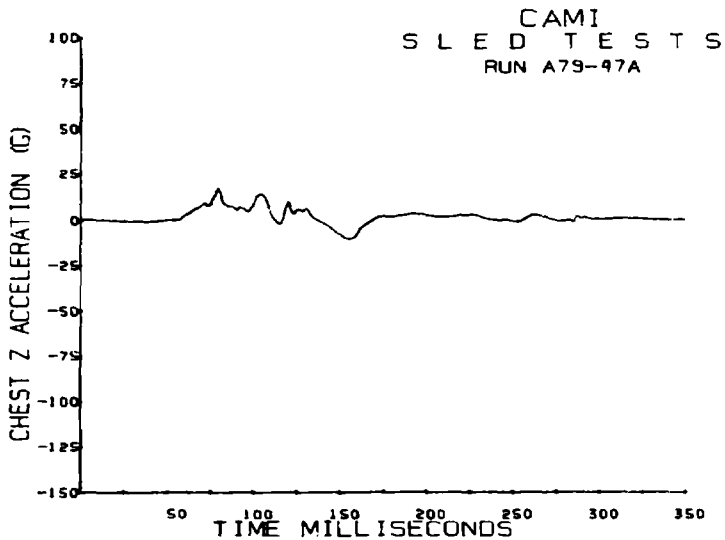

CAMI
SLED TESTS
RUN A79-47A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

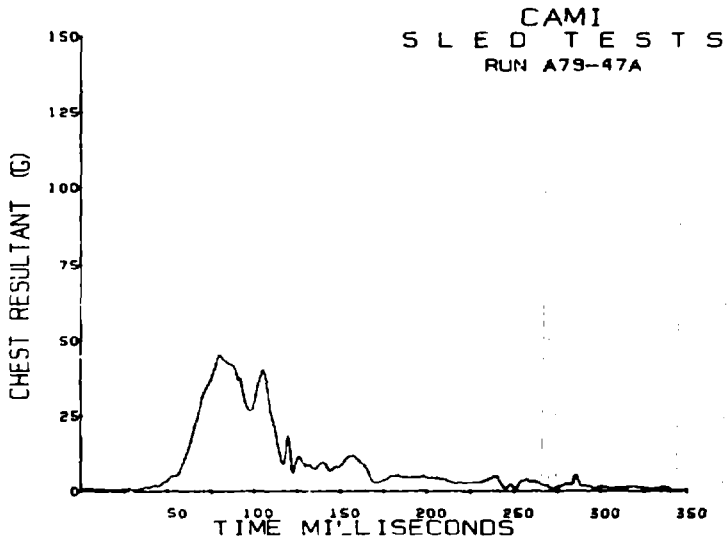

CAMI
SLED TESTS
RUN A79-47A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

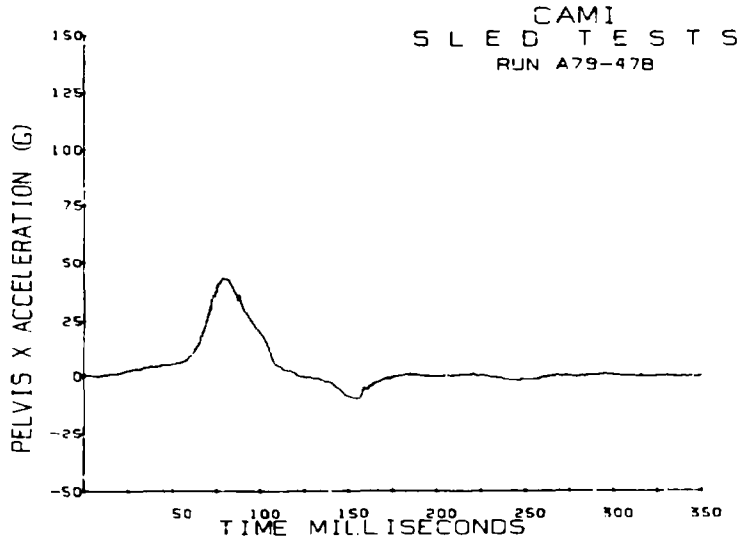

CAMI
SLED TESTS
RUN A79-47A
HEAD RESULTANT (G)
TIME MILLISECONDS

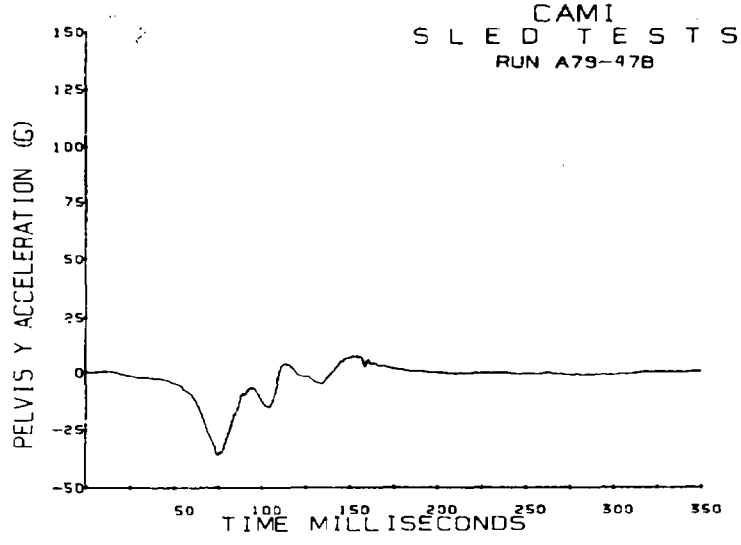

CAMI
S L E D T E S T S
RUN A79-47A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

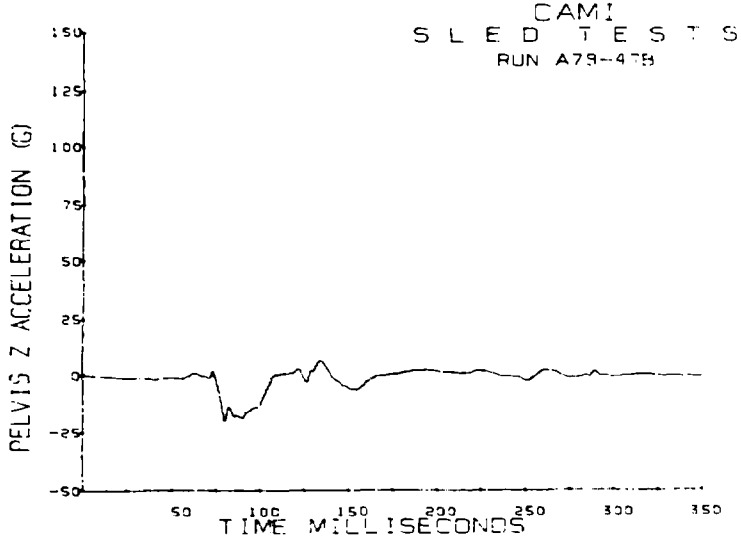

CAMI
S L E D T E S T S
RUN A79-47A
CHEST Y ACCELERATION (G)
TIME MILLISECONDS

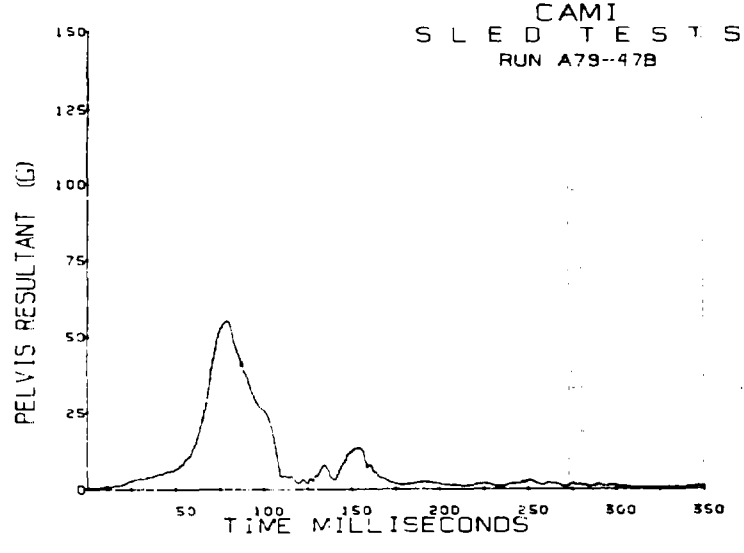

CAMI
S L E D T E S T S
RUN A79-47A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS

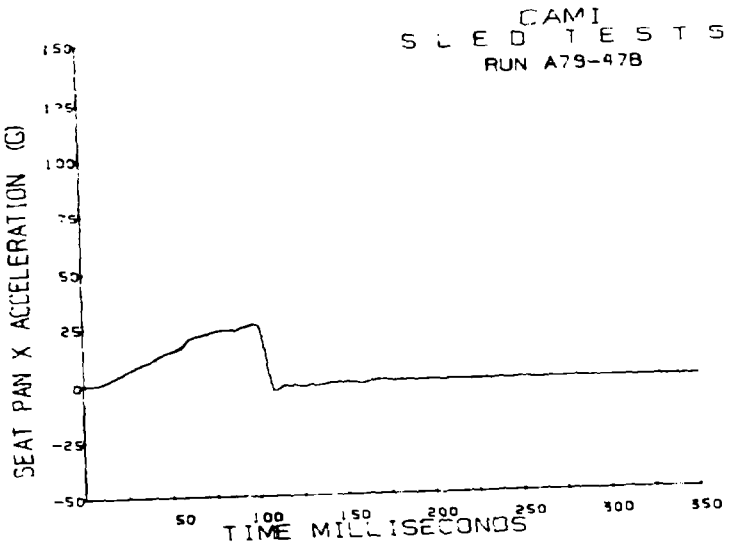

CAMI
S L E D T E S T S
RUN A79-47A
CHEST RESULTANT (G)
TIME MILLISECONDS

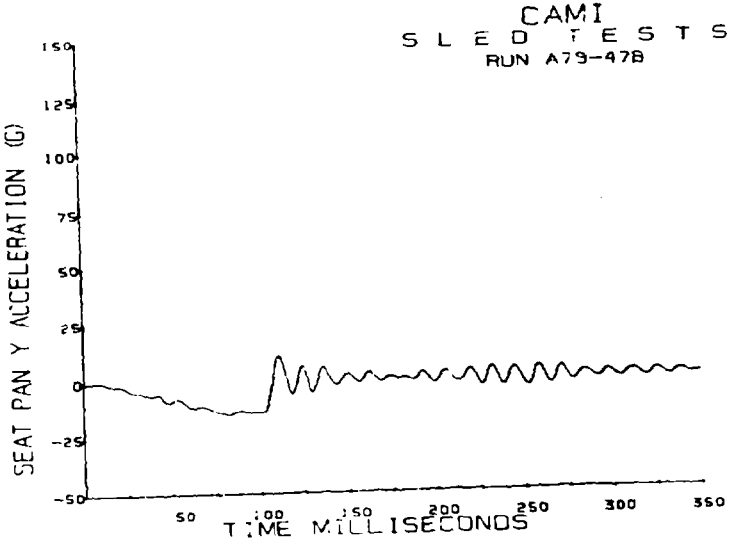

CAMI
S L E D T E S T S
RUN A79-47B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

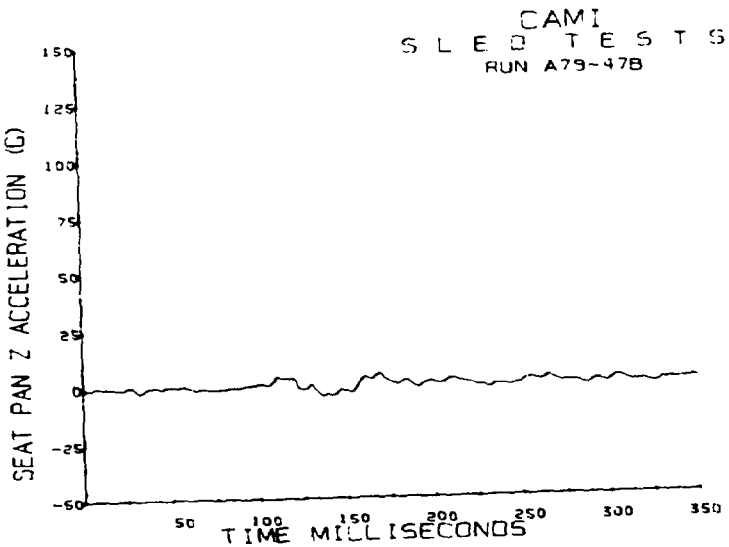

CAMI
S L E D T E S T S
RUN A79-47B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

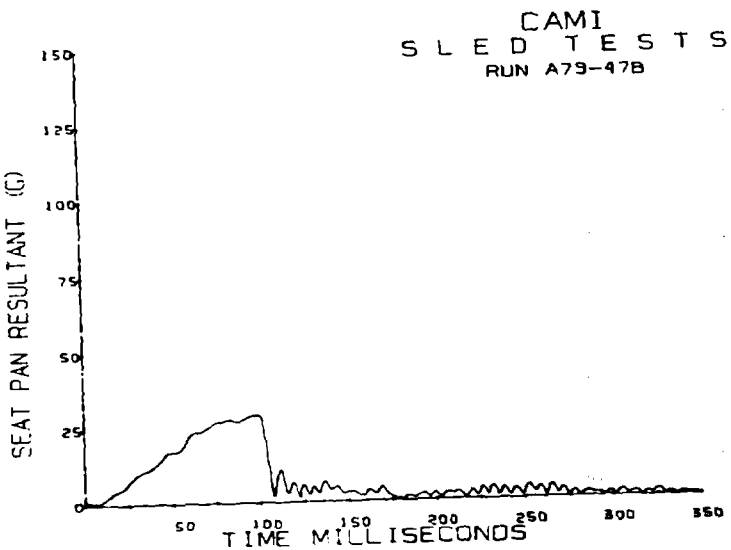

CAMI
S L E D T E S T S
RUN A79-47B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

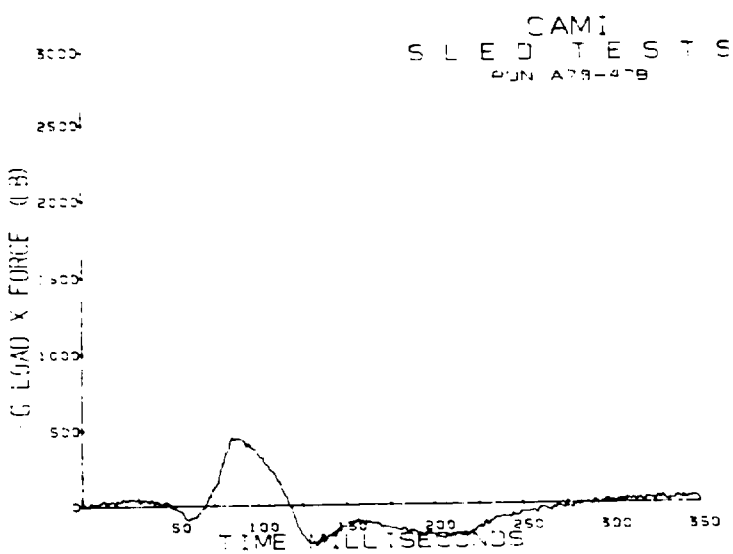

CAMI
S L E D T E S T S
RUN A79-47B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

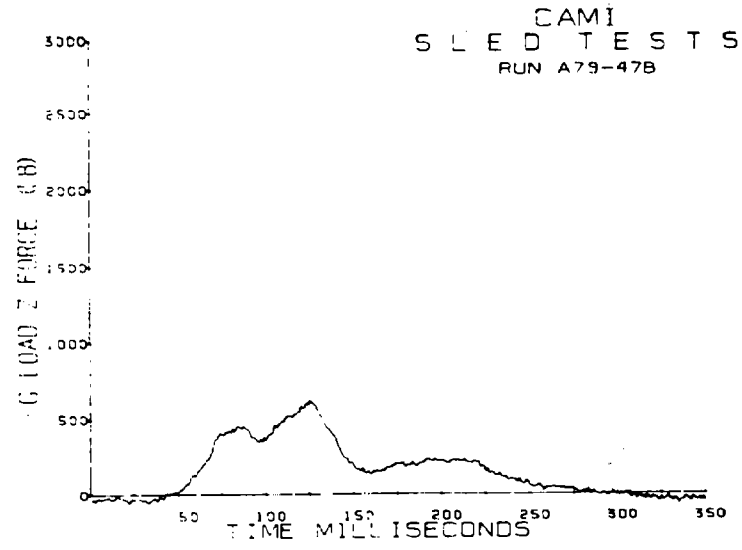

CAMI
S L E D T E S T S
RUN A79-47B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

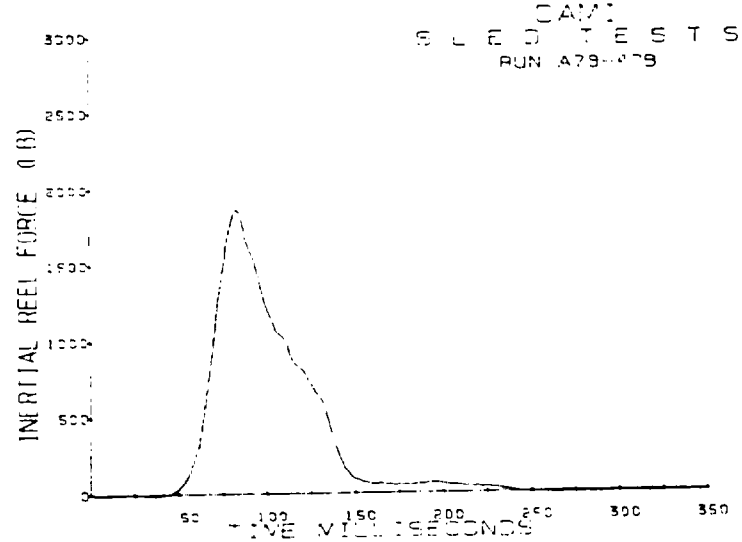

CAMI
S L E D T E S T S
RUN A79-47B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

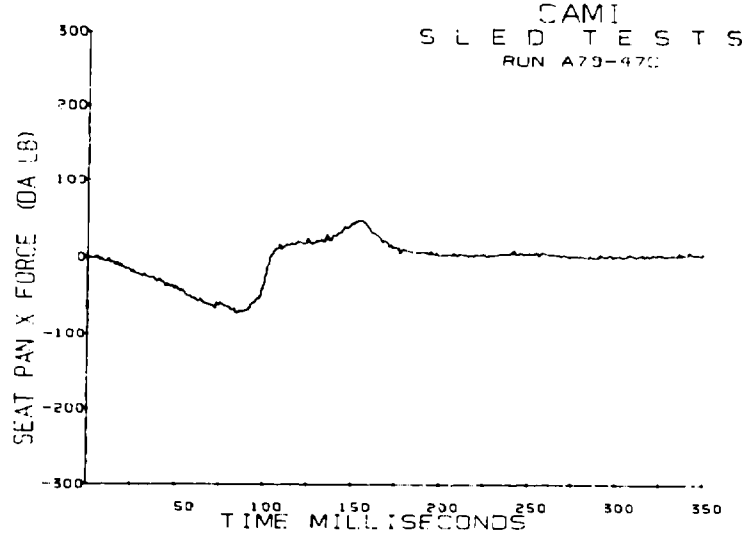

CAMI
S L E D T E S T S
RUN A79-47B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

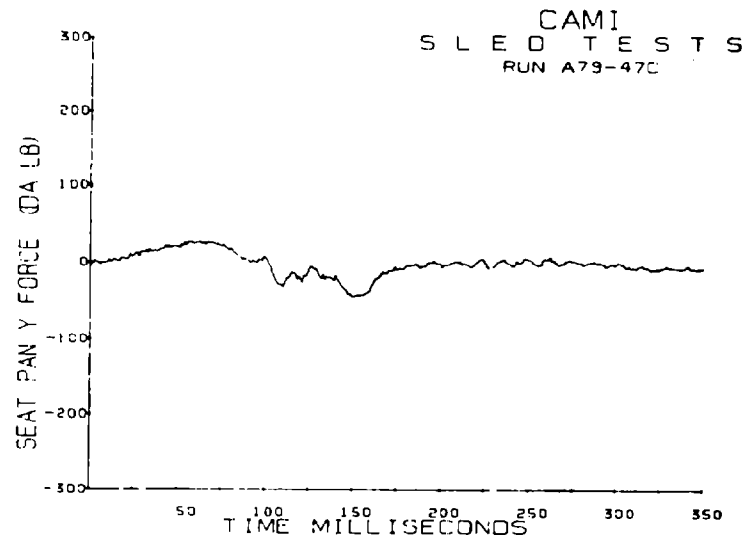

CAMI
S L E D T E S T S
RUN A79-47B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

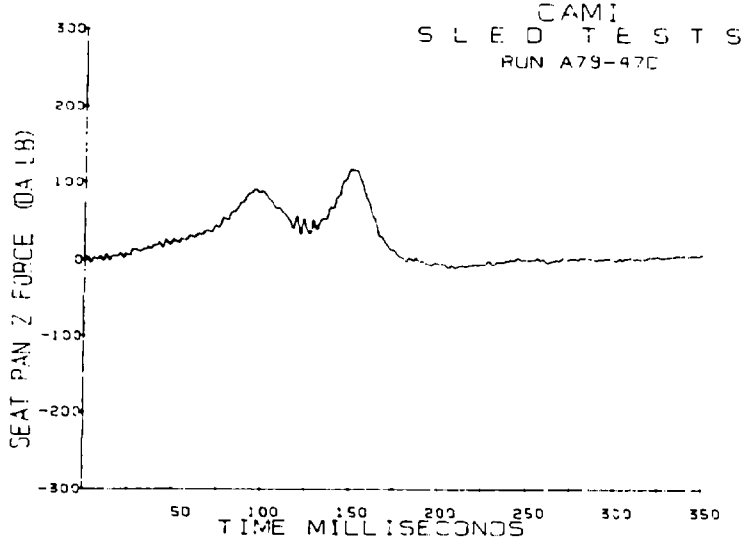

CAMI
SLED TESTS
RUN A79-47B
G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

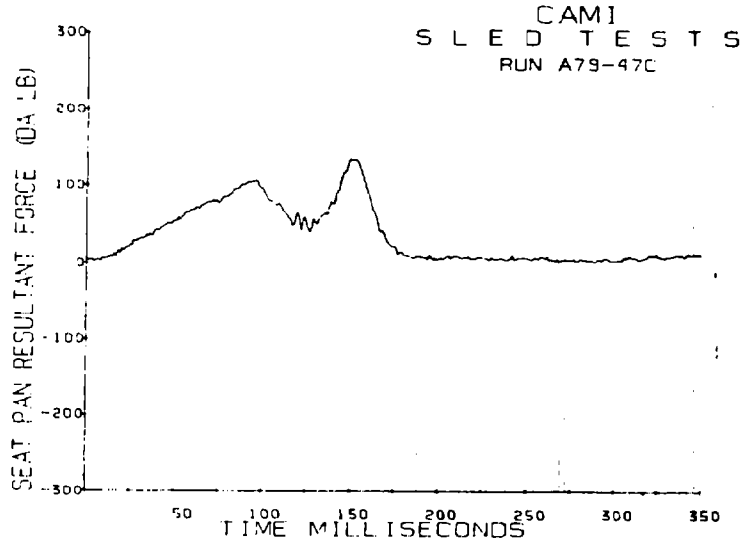

CAMI
SLED TESTS
RUN A79-47B
G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

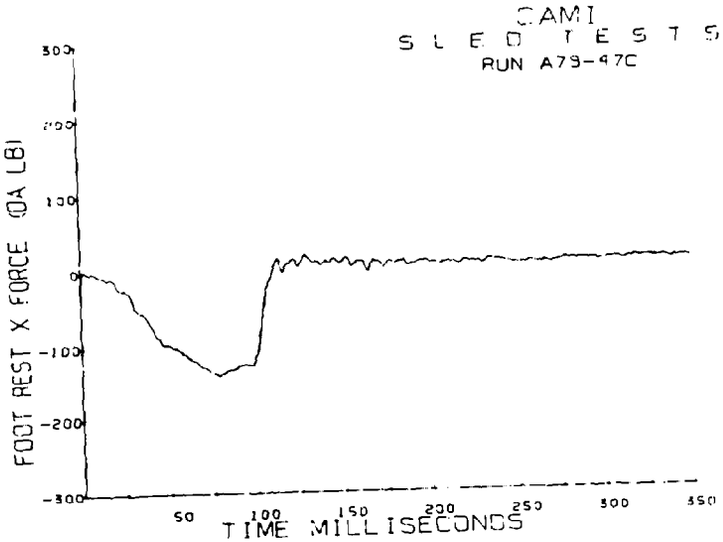

CAMI
SLED TESTS
RUN A79-47B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

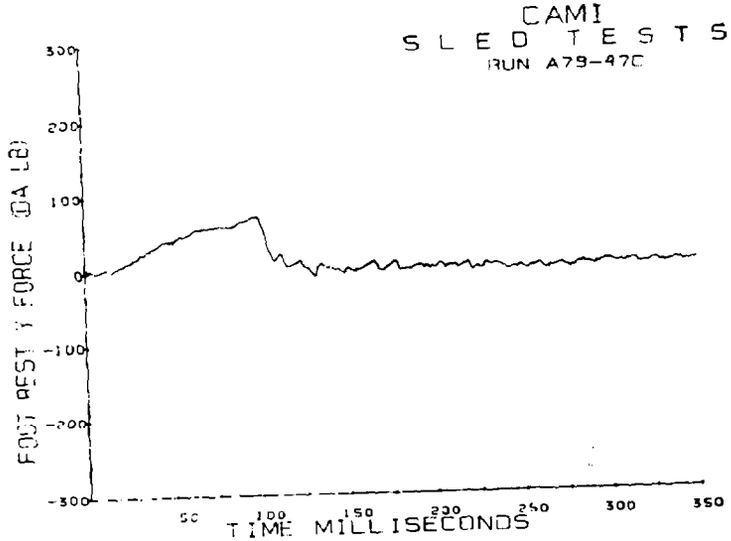

CAMI
S L E D T E S T S
RUN A79-47C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

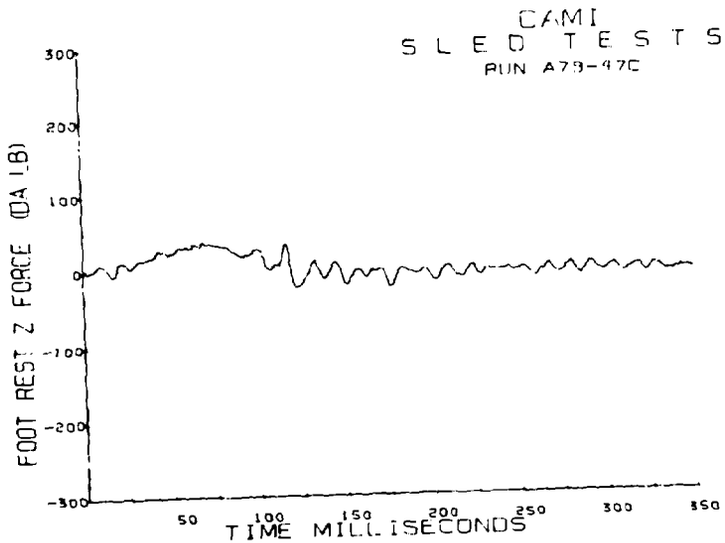

CAMI
S L E D T E S T S
RUN A79-47C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

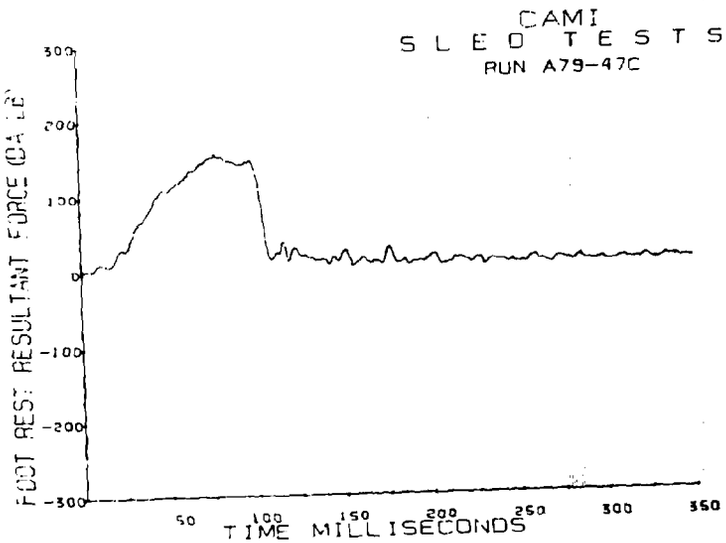

CAMI
S L E D T E S T S
RUN A79-47C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

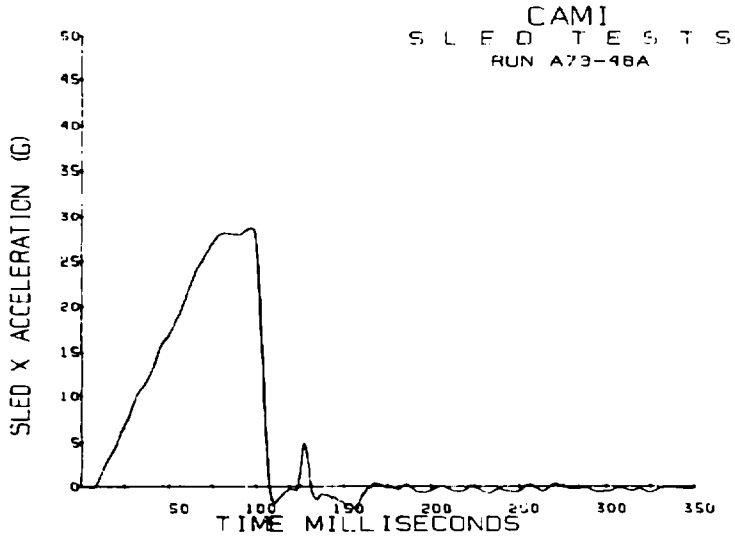

CAMI
S L E D T E S T S
RUN A79-47C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

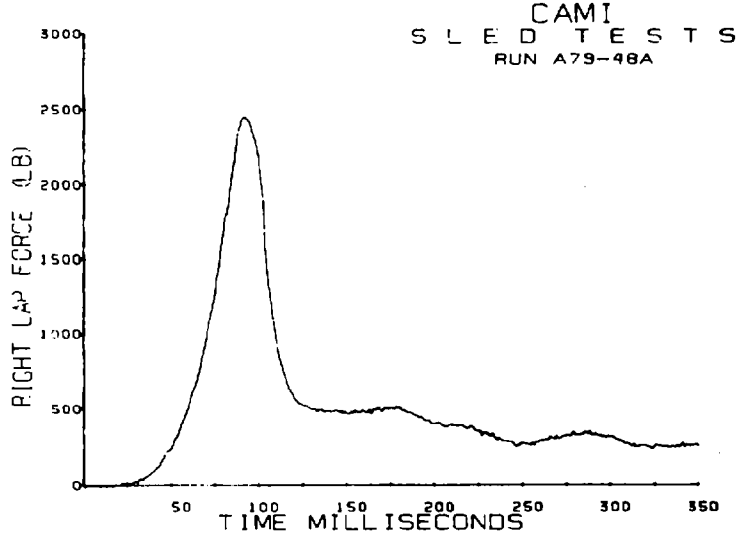

CAMI
SLED TESTS
RUN A79-47C
FOOT REST X FORCE (DA LB)
TIME MILLISECONDS

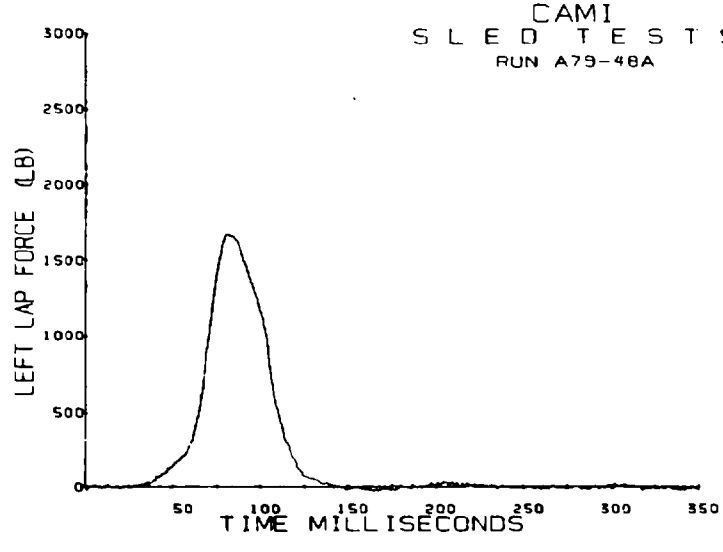

CAMI
SLED TESTS
RUN A79-47C
FOOT REST Y FORCE (DA LB)
TIME MILLISECONDS

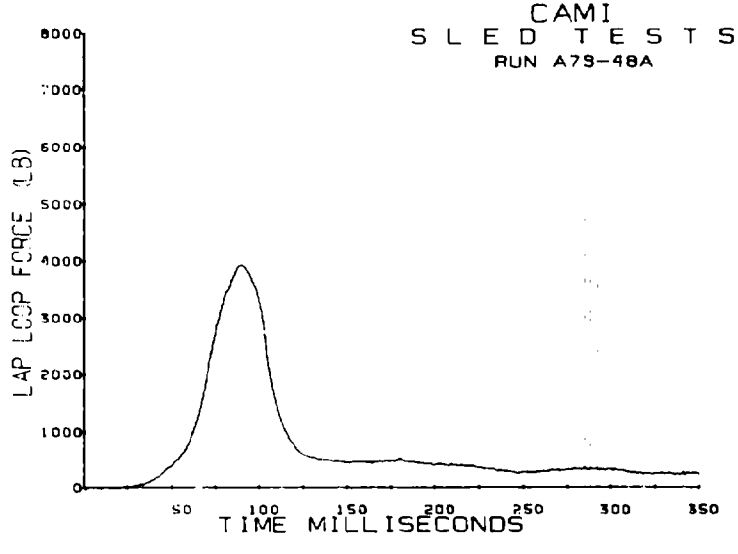

CAMI
SLED TESTS
RUN A79-47C
FOOT REST Z FORCE (DA LB)
TIME MILLISECONDS

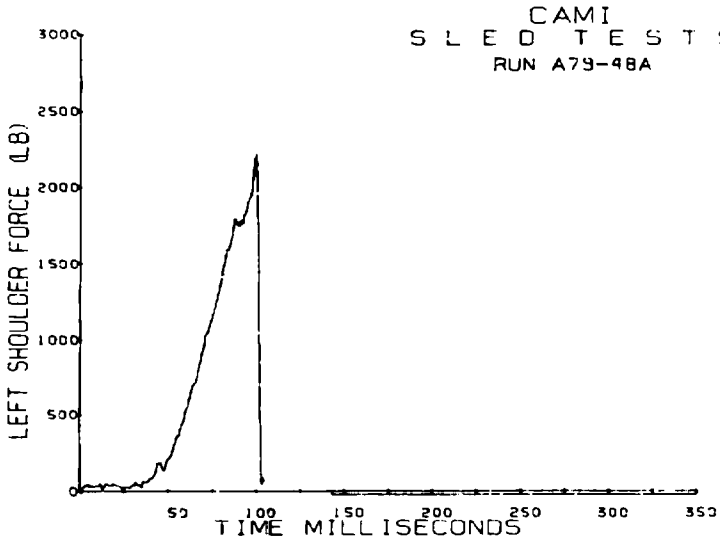

CAMI
SLED TESTS
RUN A79-47C
FOOT REST RESULTANT FORCE (DA LB)
TIME MILLISECONDS

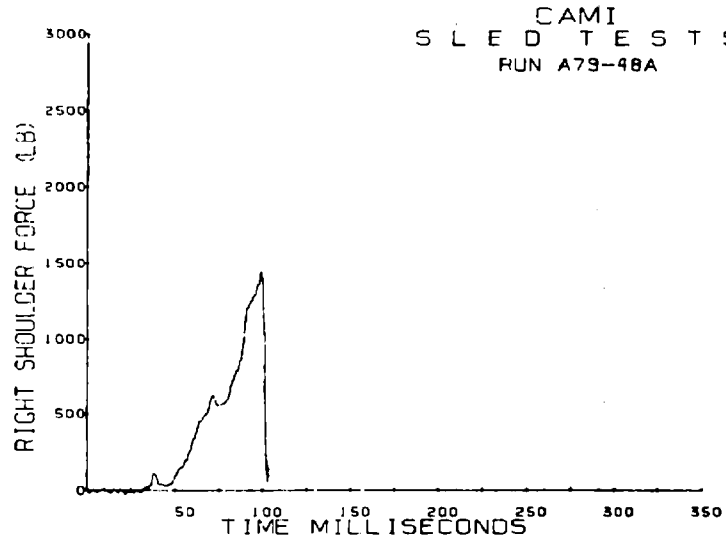

CAMI
S L E D T E S T S
RUN A79-48A
SLED X ACCELERATION (G)
TIME MILLISECONDS

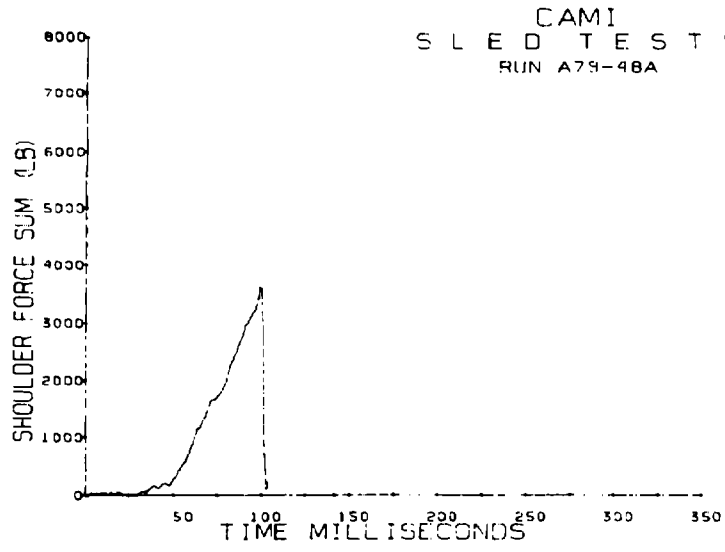

CAMI
S L E D T E S T S
RUN A79-48A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

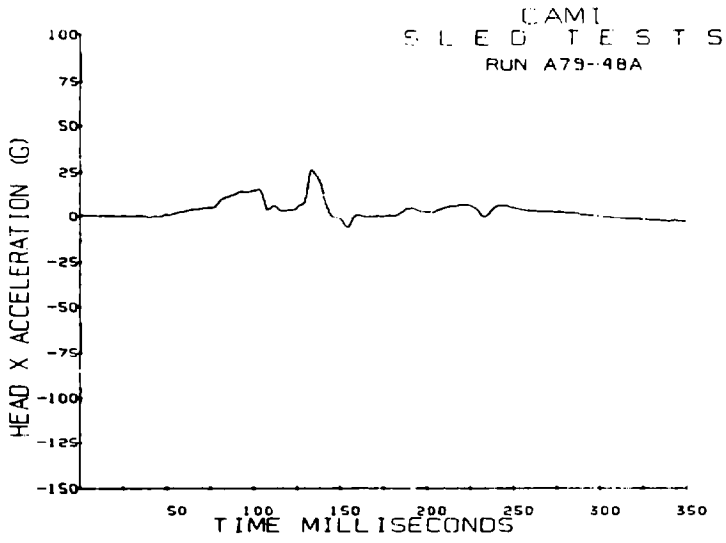

CAMI
S L E D T E S T S
RUN A79-48A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

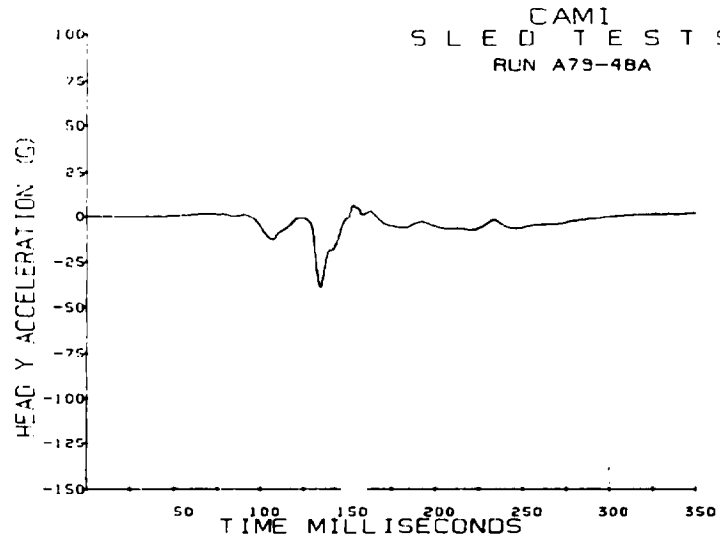

CAMI
S L E D T E S T S
RUN A79-48A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

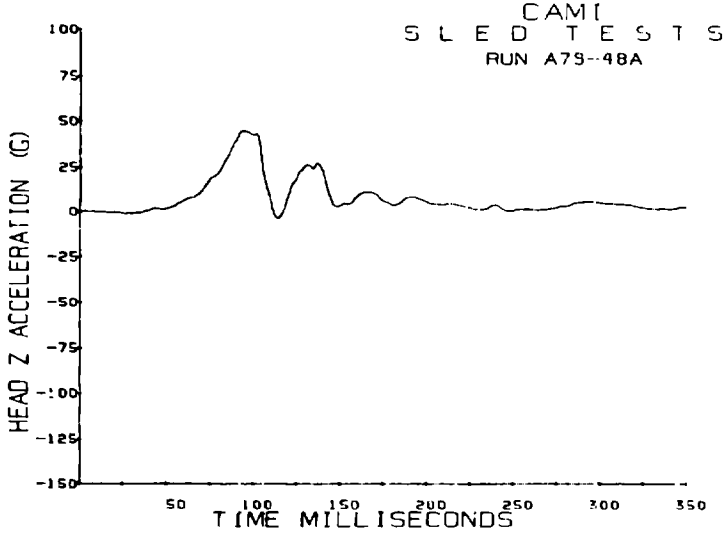

CAMI
S L E D T E S T S
RUN A79-48A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

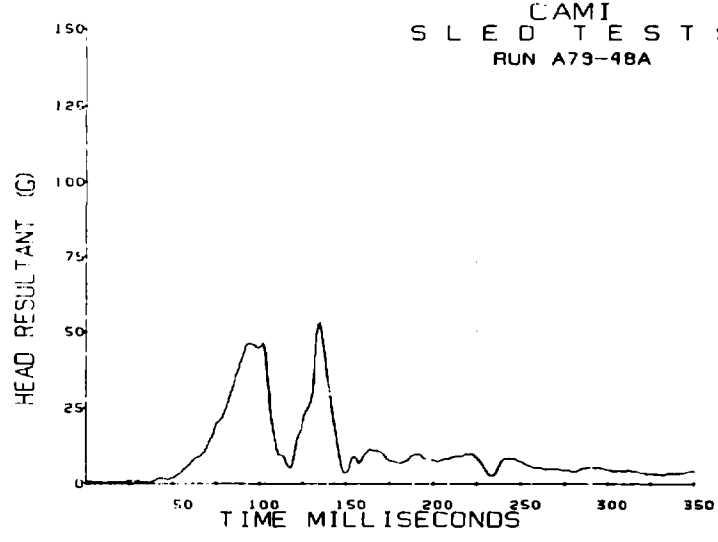

CAMI
S L E D T E S T S
RUN A79-48A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

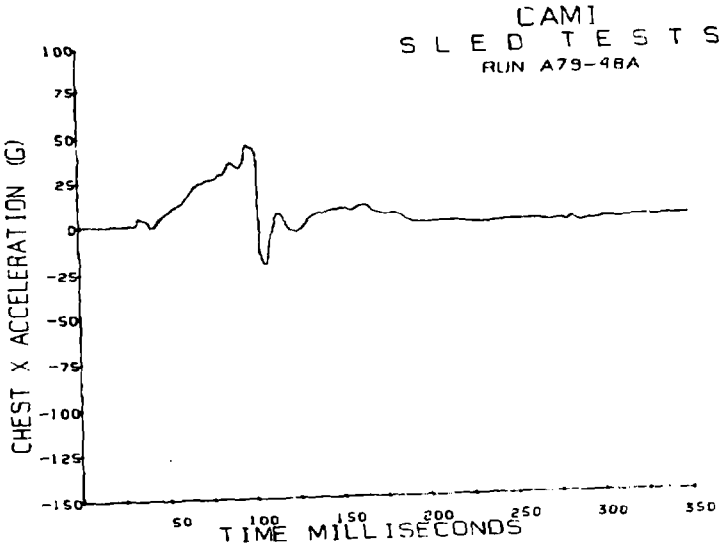

CAMI
S L E D T E S T S
RUN A79-48A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

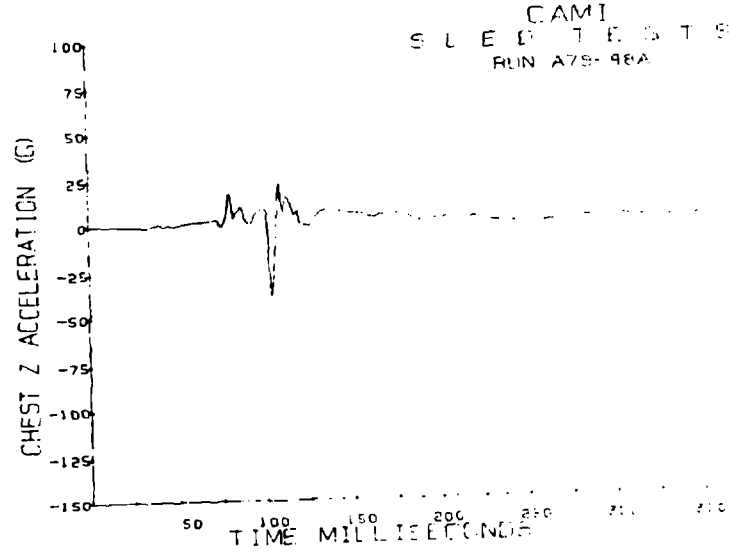

CAMI
SLED TESTS
RUN A79-48A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

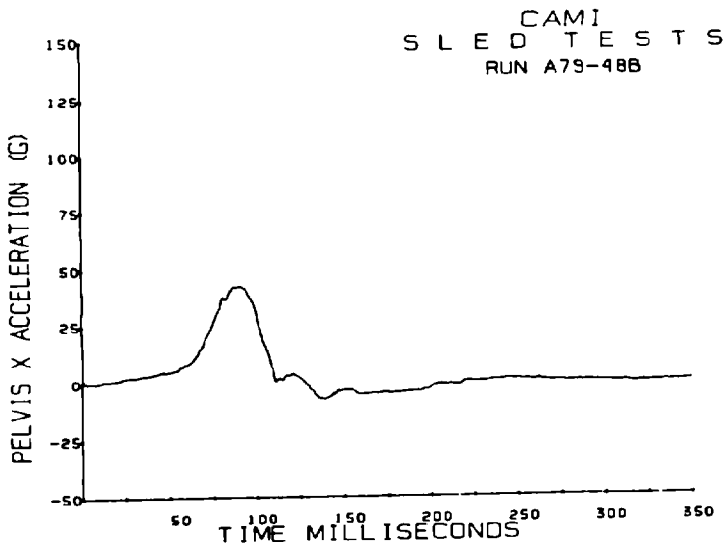

CAMI
SLED TESTS
RUN A79-48A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

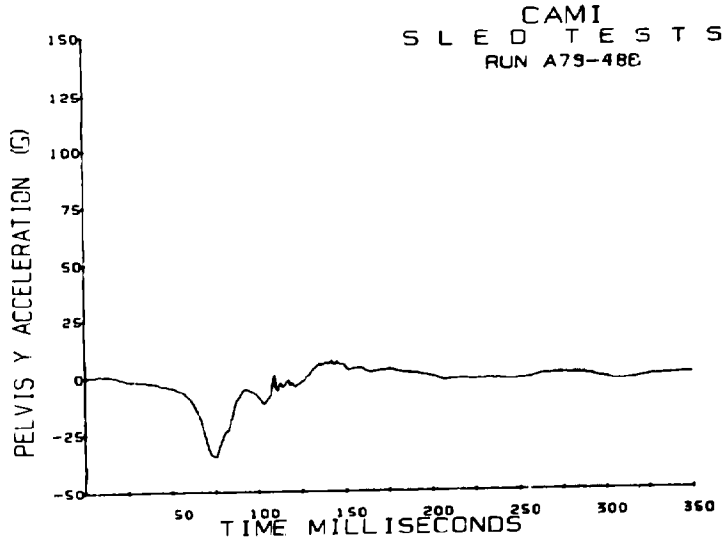

CAMI
SLED TESTS
RUN A79-48A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

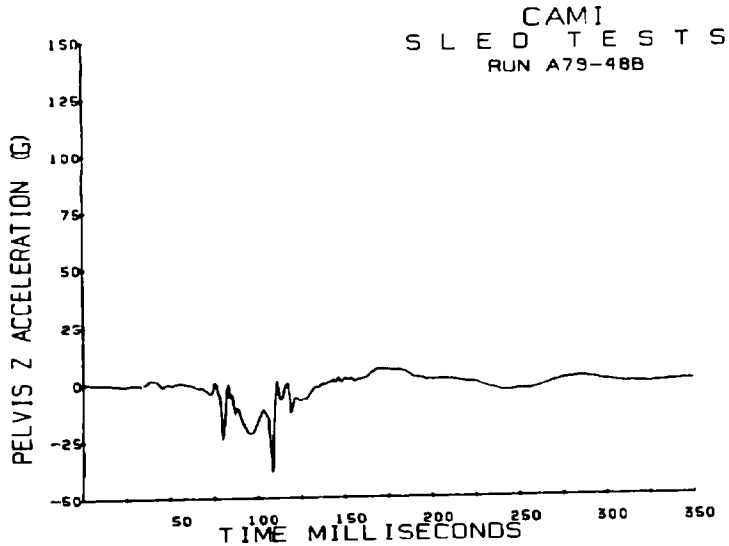

CAMI
SLED TESTS
RUN A79-48A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

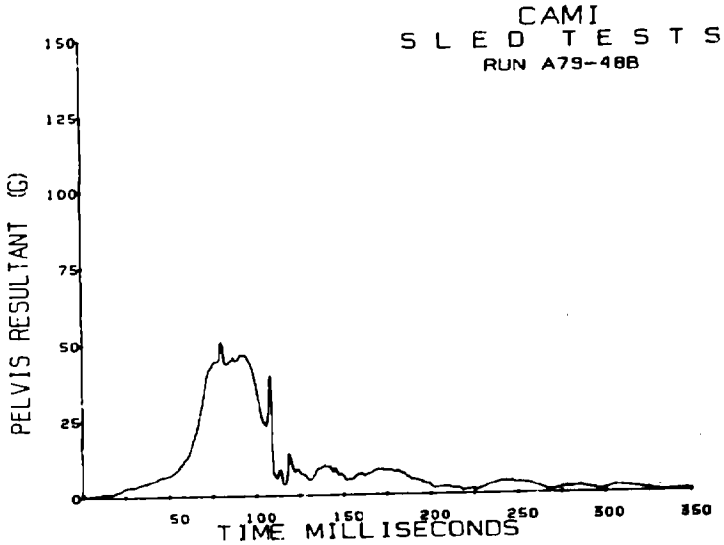

CAMI
S L E D T E S T S
RUN A79-48A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

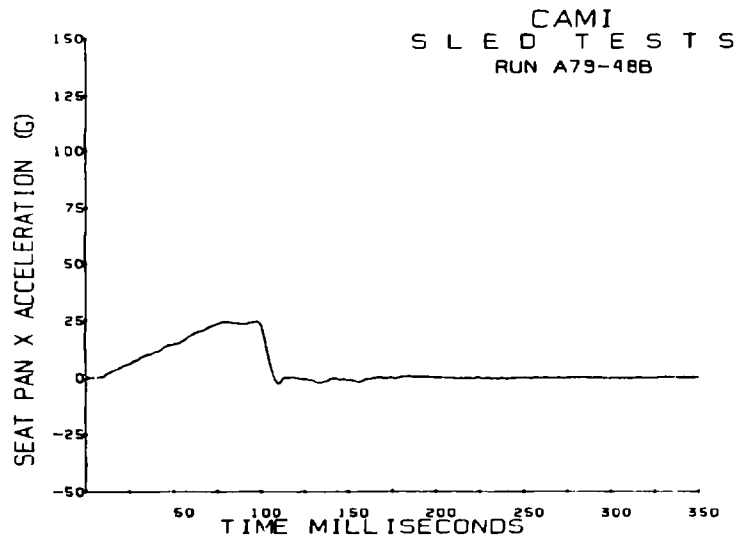

CAMI
S L E D T E S T S
RUN A79-48A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
TIME MILLISECONDS

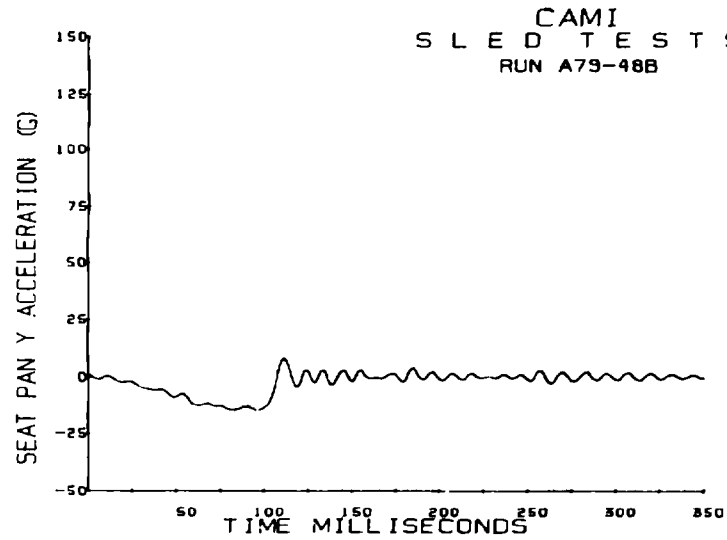

CAMI
S L E D T E S T S
RUN A79-48B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

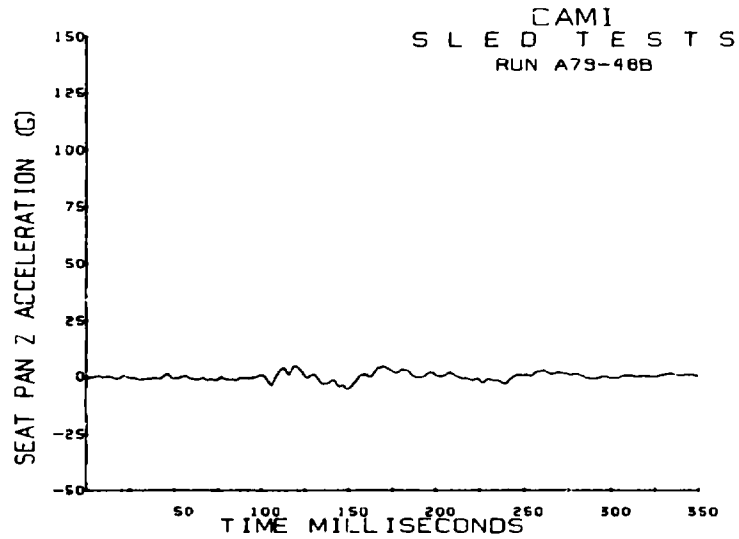

CAMI
S L E D T E S T S
RUN A79-48B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

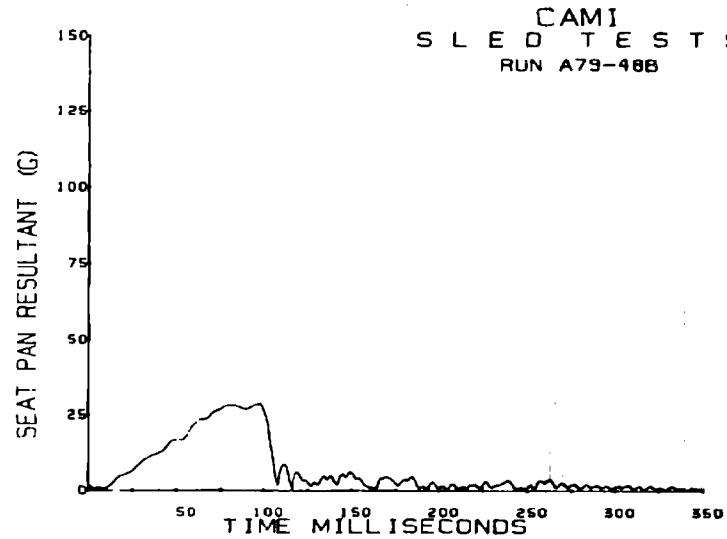

CAMI
S L E D T E S T S
RUN A79-48B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

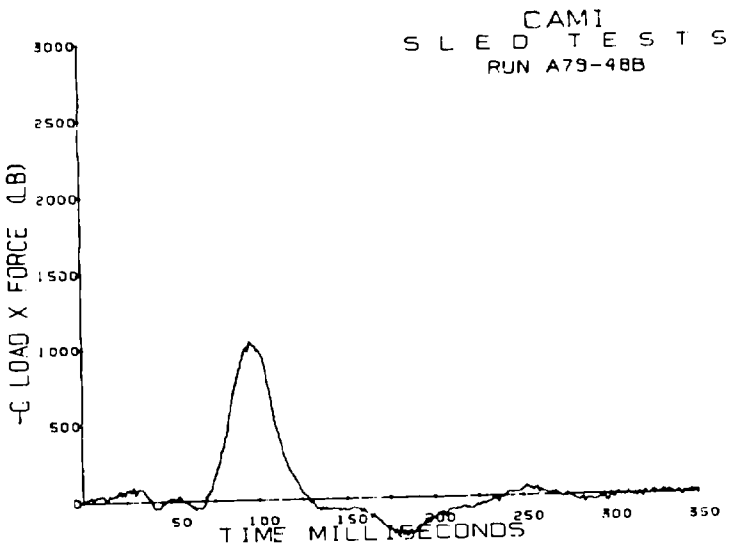

CAMI
S L E D T E S T S
RUN A79-48B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

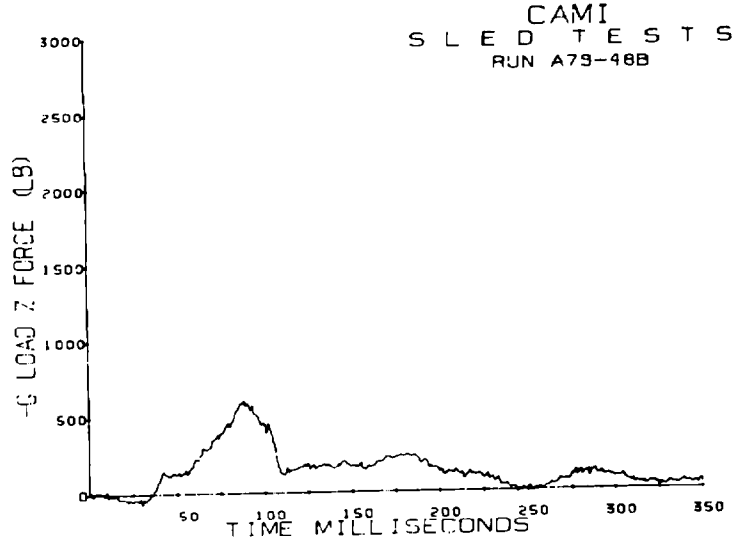

CAMI
S L E D T E S T S
RUN A79-48B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

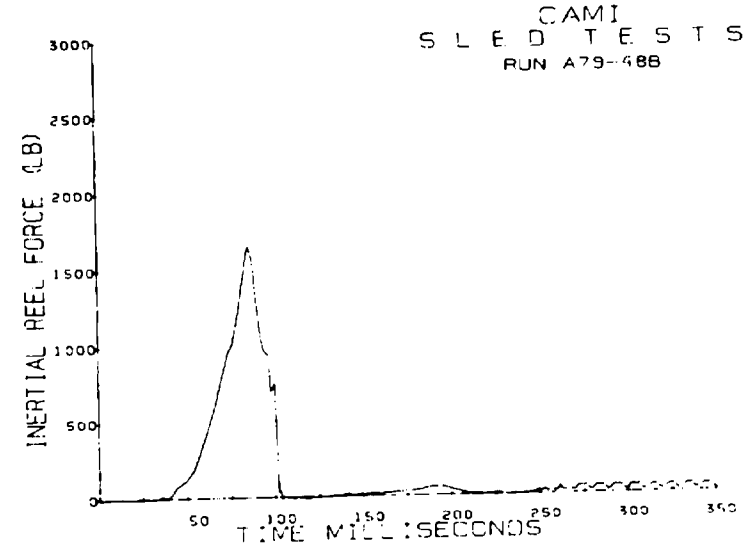

CAMI
S L E D T E S T S
RUN A79-48B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

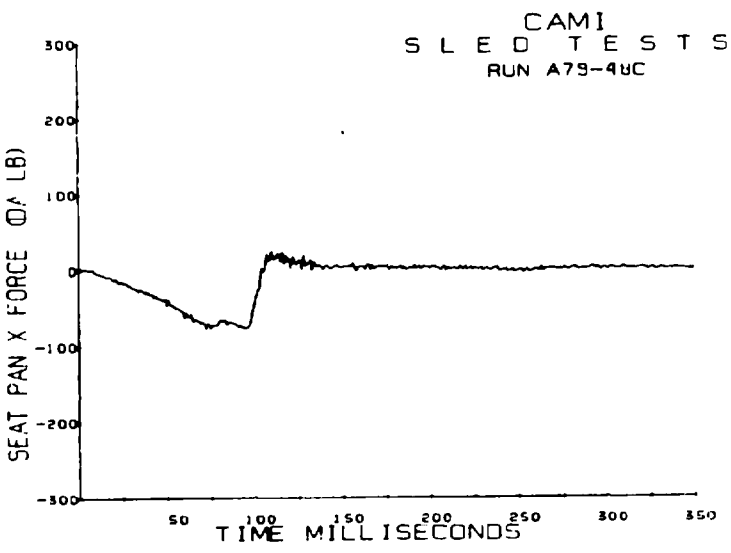

CAMI
S L E D T E S T S
RUN A79-48B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

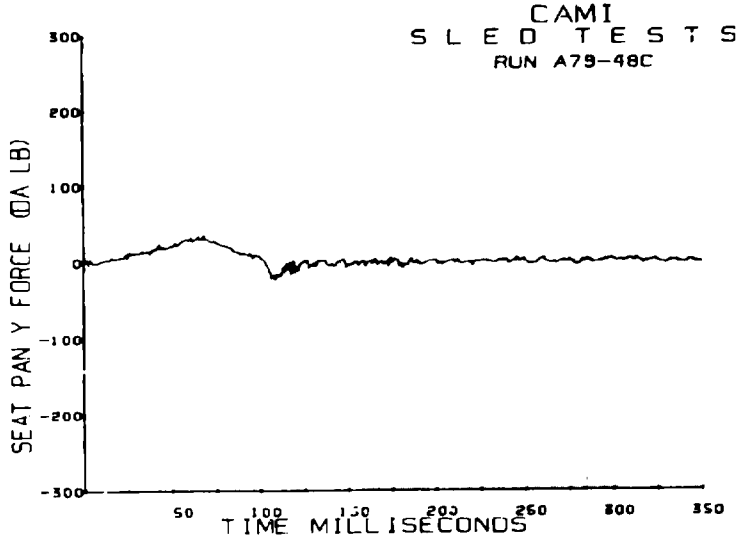

CAMI
S L E D T E S T S
RUN A79-48B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

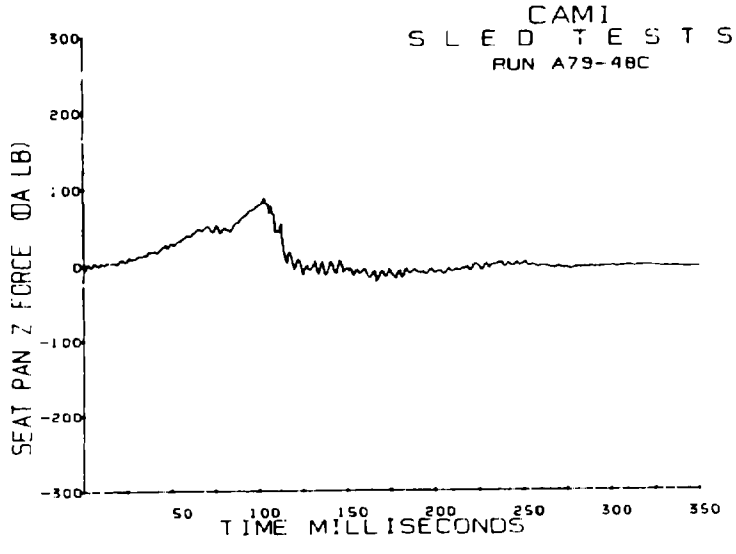

CAMI
SLED TESTS
RUN A79-48B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

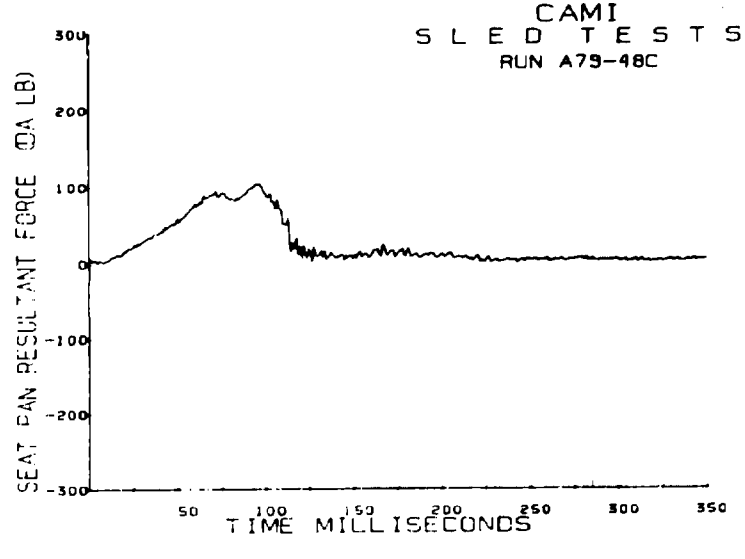

CAMI
SLED TESTS
RUN A79-48B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

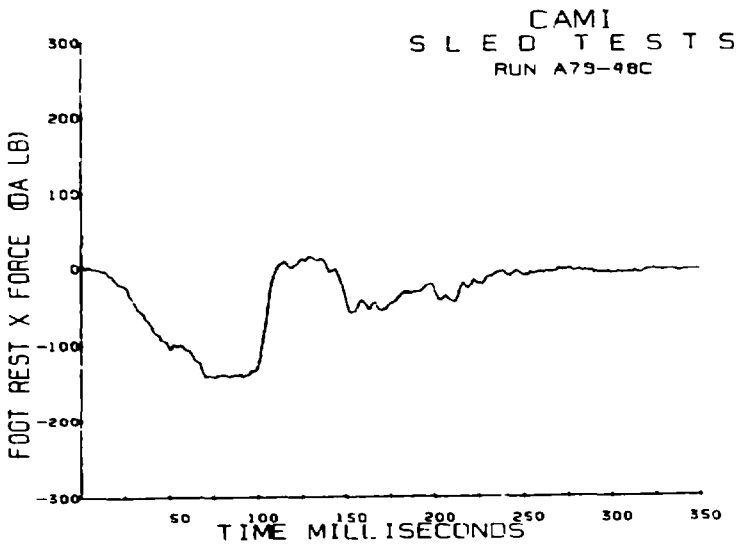

CAMI
SLED TESTS
RUN A79-48B
INERTIAL REEL FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

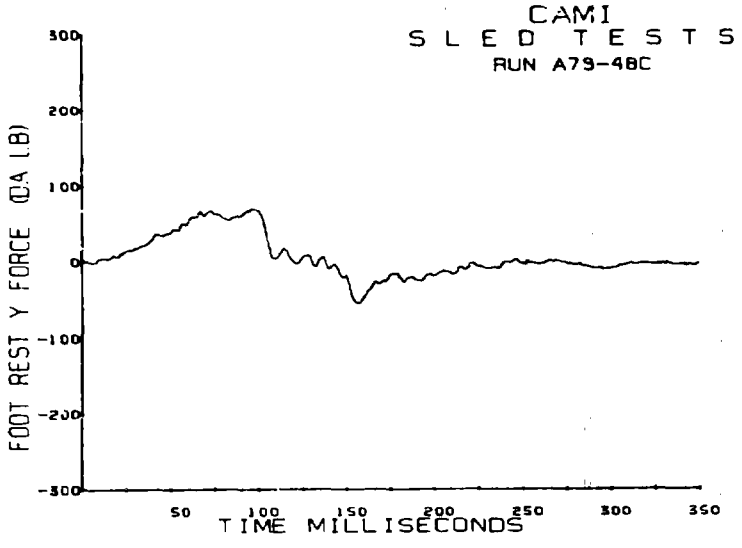

CAMI
SLED TESTS
RUN A79-48C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

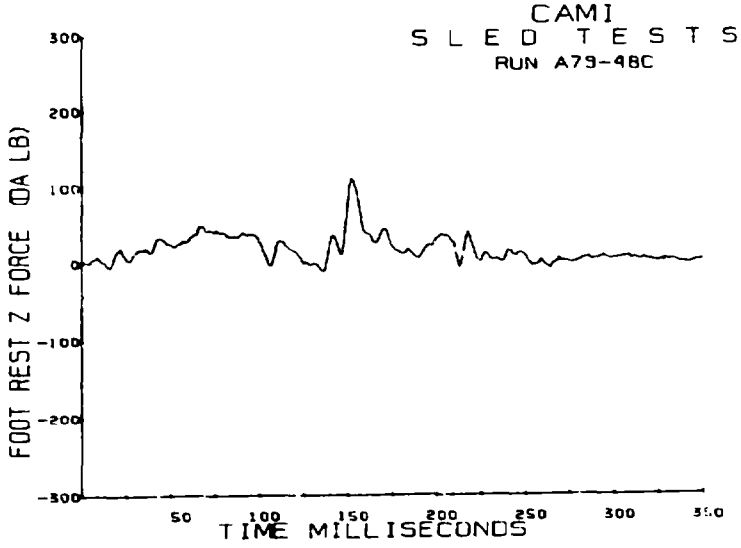

CAMI
SLED TESTS
RUN A79-48C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

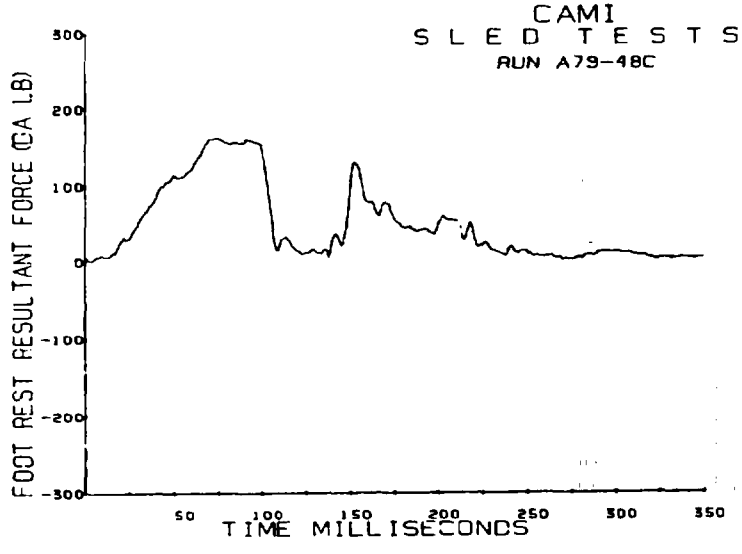

CAMI
SLED TESTS
RUN A79-48C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

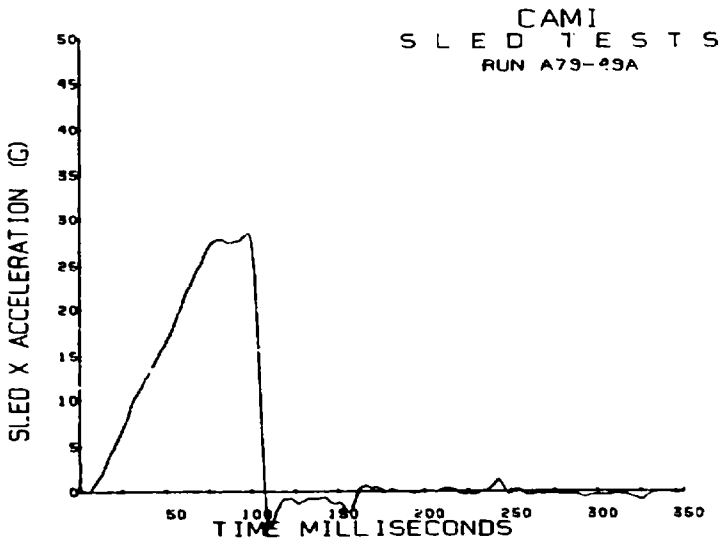

CAMI
SLED TESTS
RUN A79-48C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

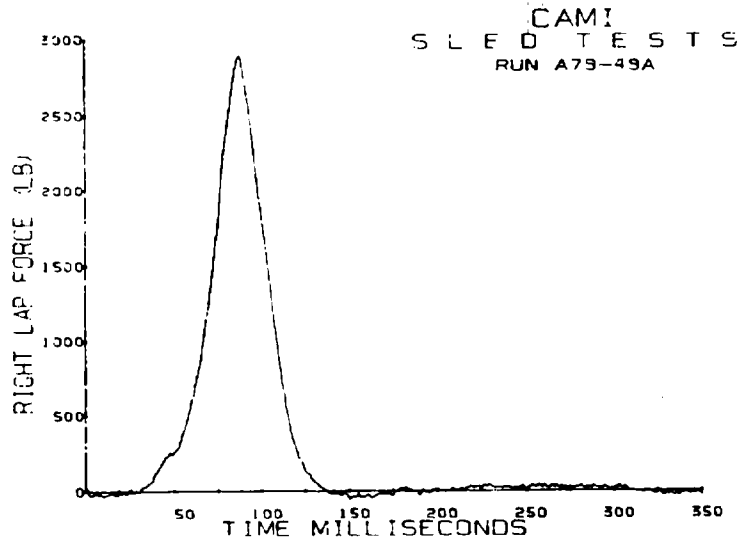

CAMI
SLED TESTS
RUN A79-48C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

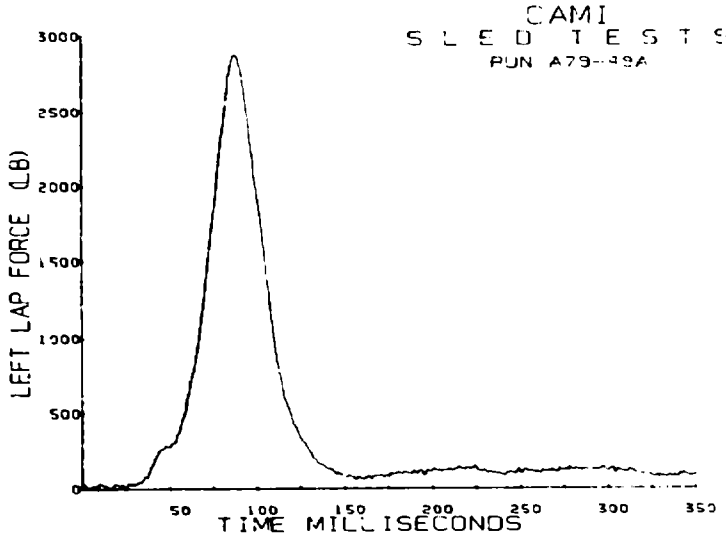

CAMI
SLED TESTS
RUN A79-48C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

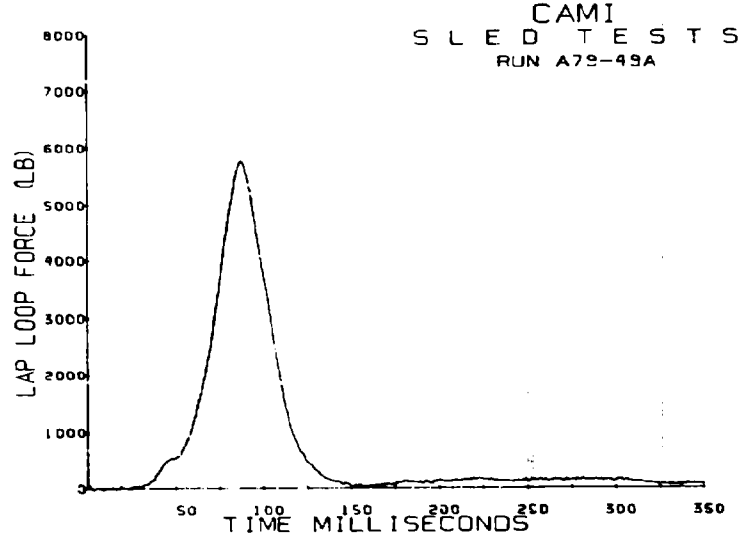

CAMI
SLED TESTS
RUN A79-48C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
TIME MILLISECONDS

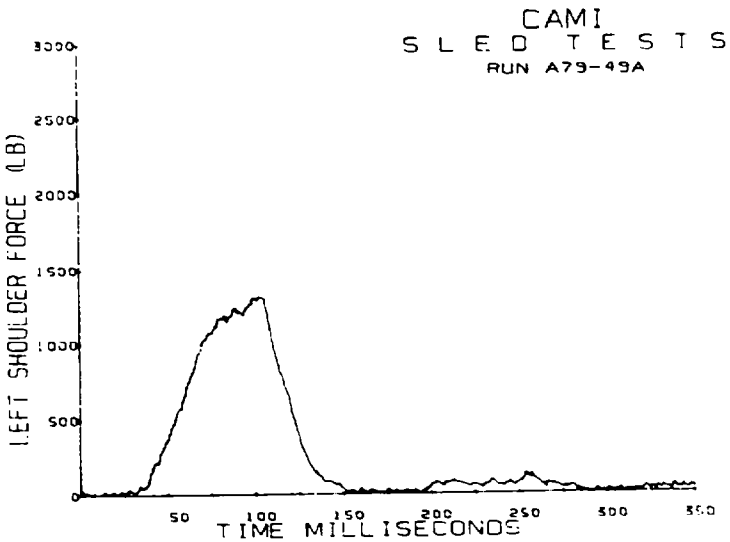

CAMI
SLED TESTS
RUN A79-48C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

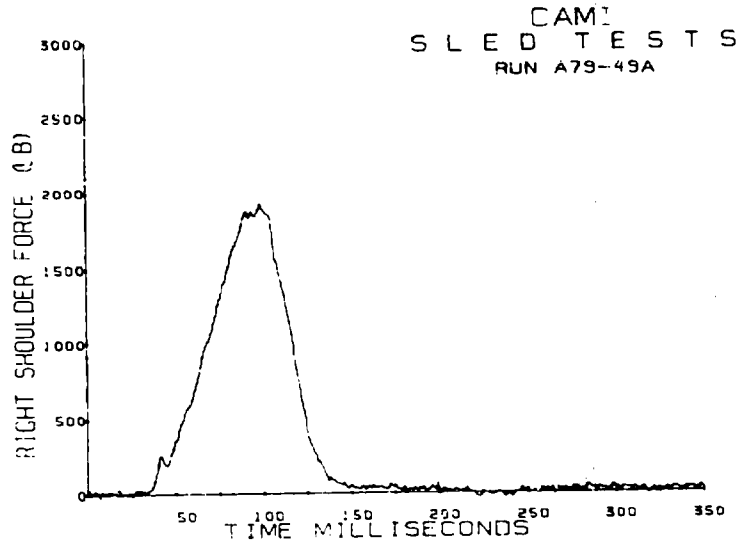

CAMI
SLED TESTS
RUN A79-49A
SLED X ACCELERATION (G)
TIME MILLISECONDS

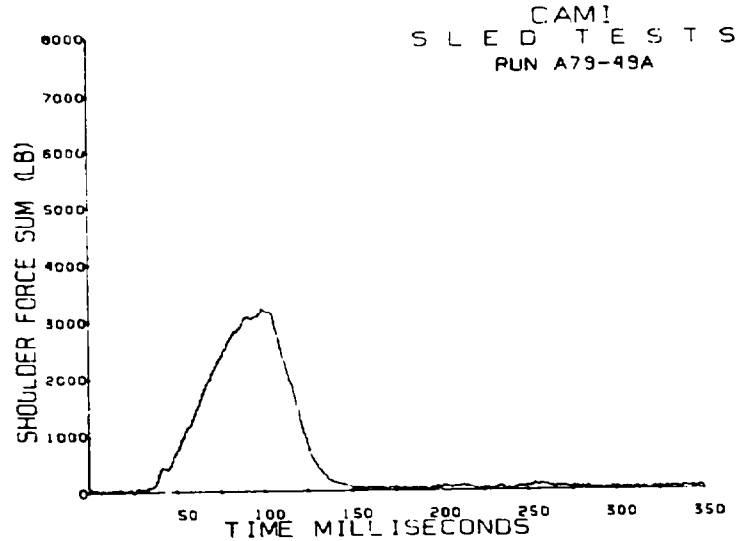

CAMI
SLED TESTS
RUN A79-49A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

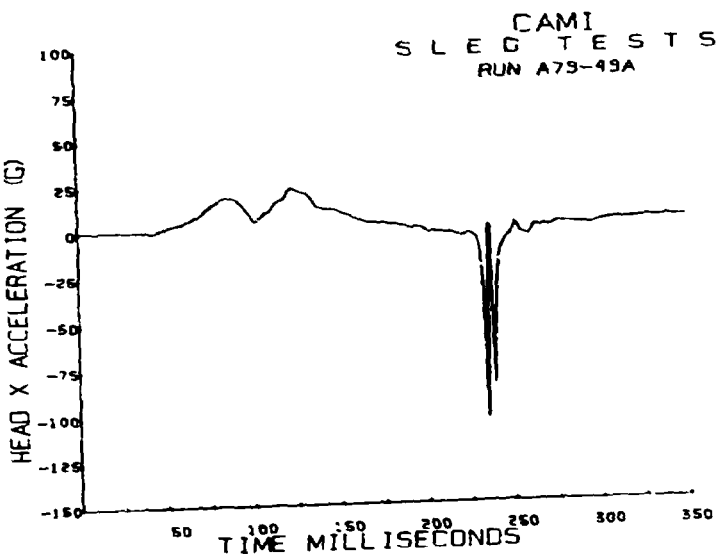

CAMI
SLED TESTS
RUN A79-49A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

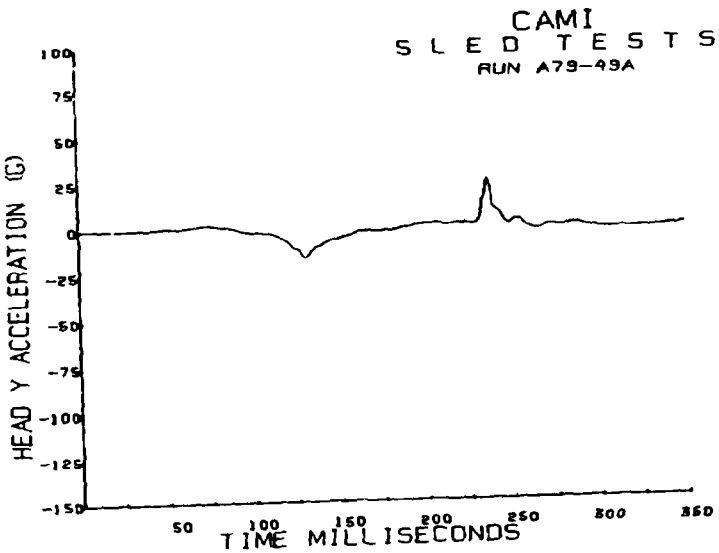

CAMI
SLED TESTS
RUN A79-49A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

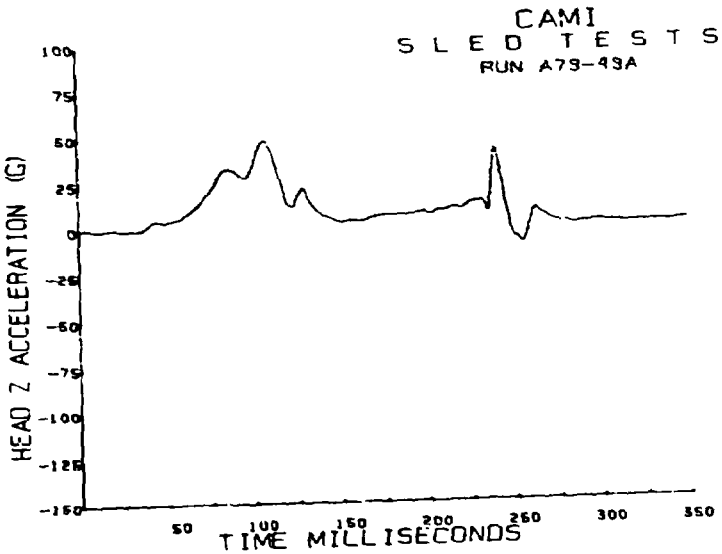

CAMI
SLED TESTS
RUN A79-49A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

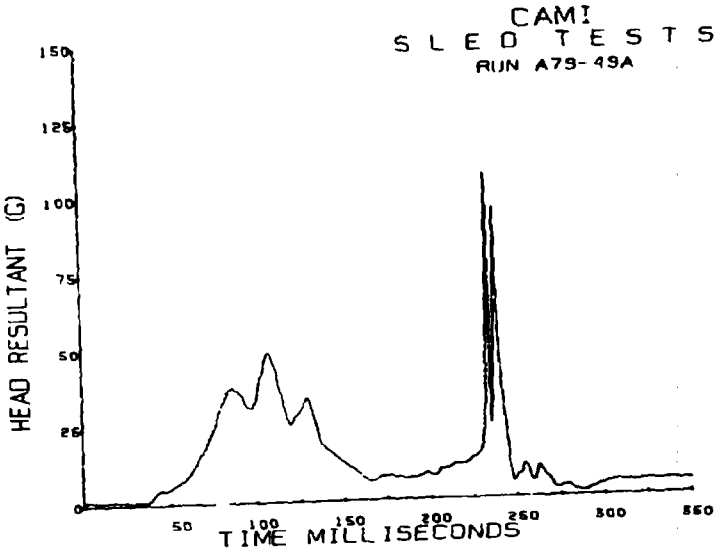

CAMI
SLED TESTS
RUN A79-49A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

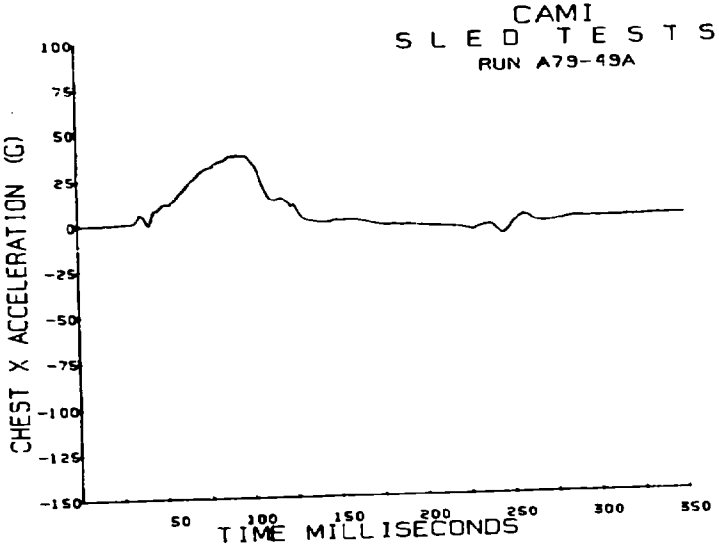

CAMI
SLED TESTS
RUN A79-49A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
50
100
150
200
250
300
350
TIME MILLISECONDS

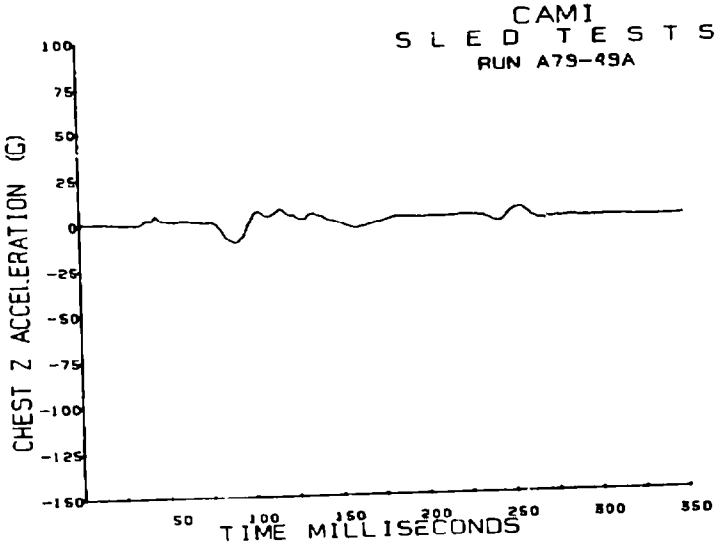

CAMI
SLED TESTS
RUN A79-49A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

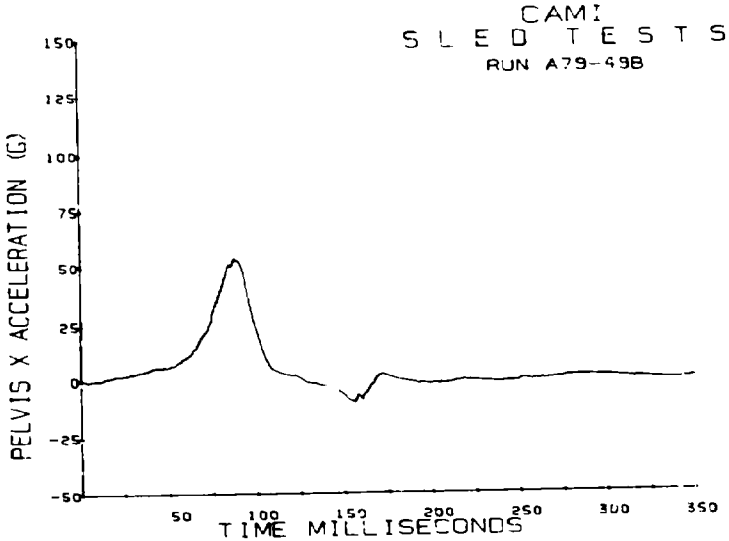

CAMI
SLED TESTS
RUN A79-49A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

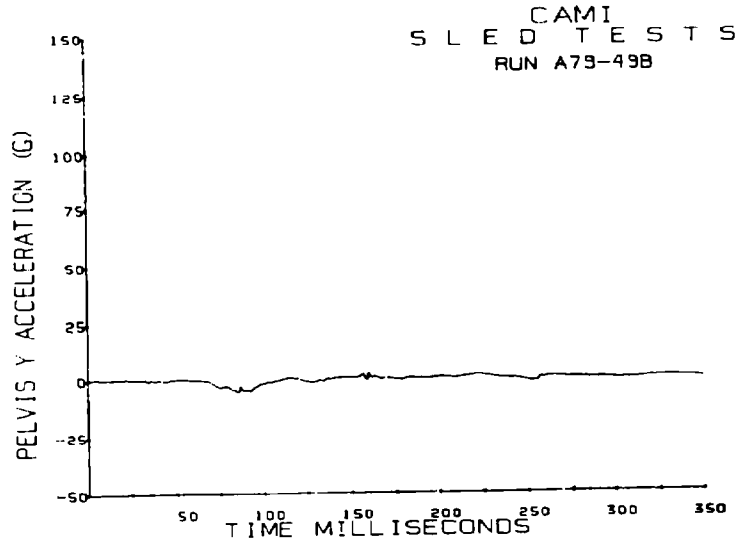

CAMI
SLED TESTS
RUN A79-49A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

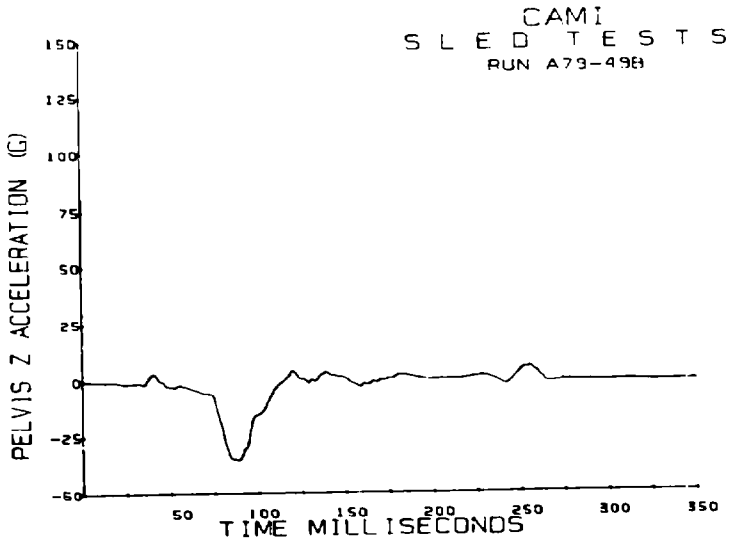

CAMI
SLED TESTS
RUN A79-49A
HEAD RESULTANT (G)
TIME MILLISECONDS

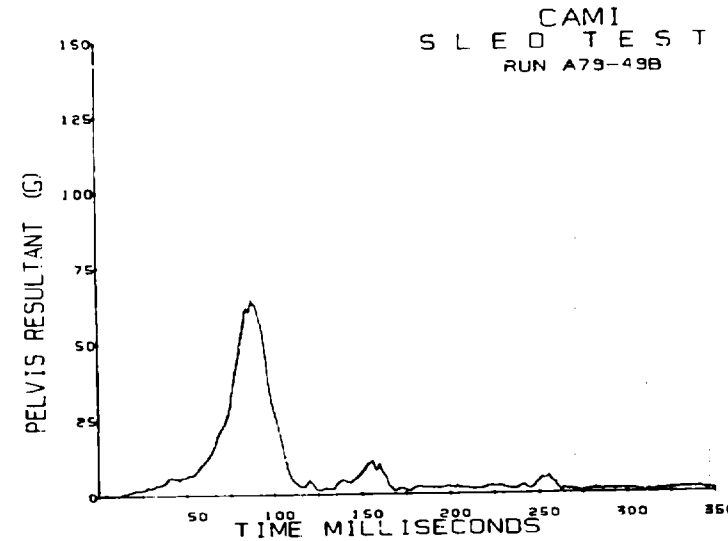

CAMI
SLED TESTS
RUN A79-49A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

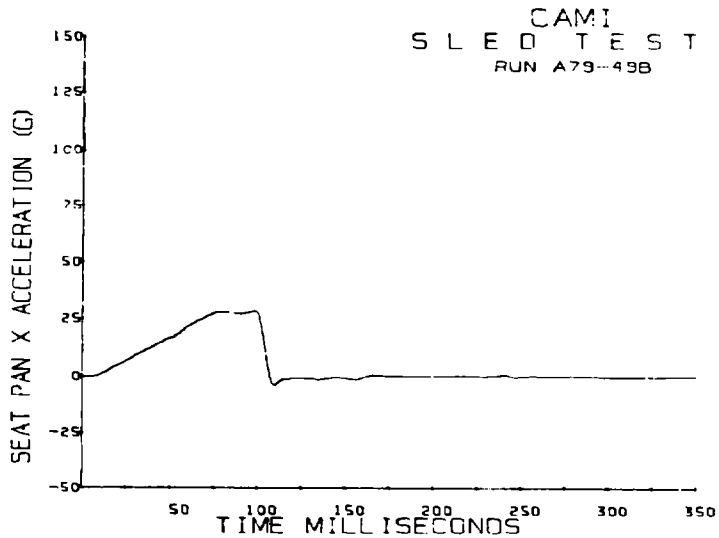

CAMI
SLED TESTS
RUN A79-49A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

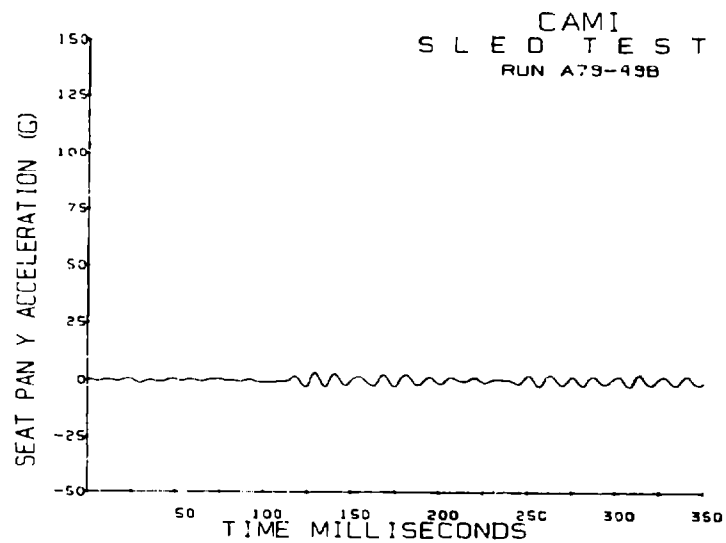

CAMI
S L E D T E S T S
RUN A79-49B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

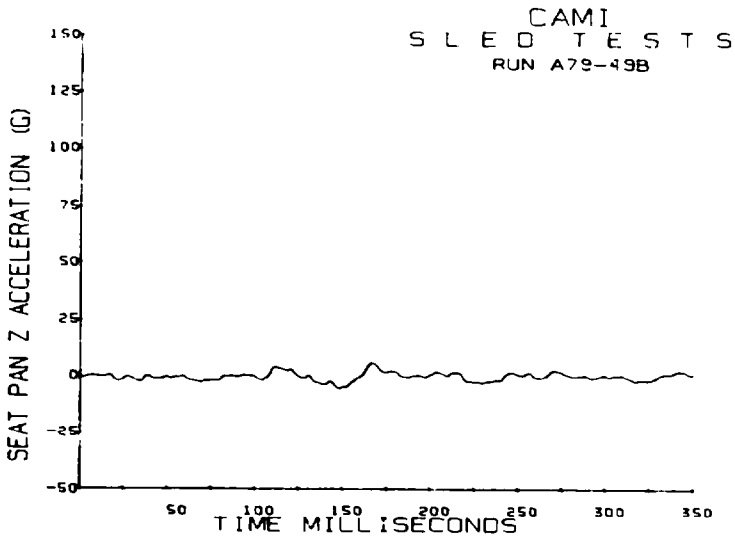

CAMI
S L E D T E S T S
RUN A79-49B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

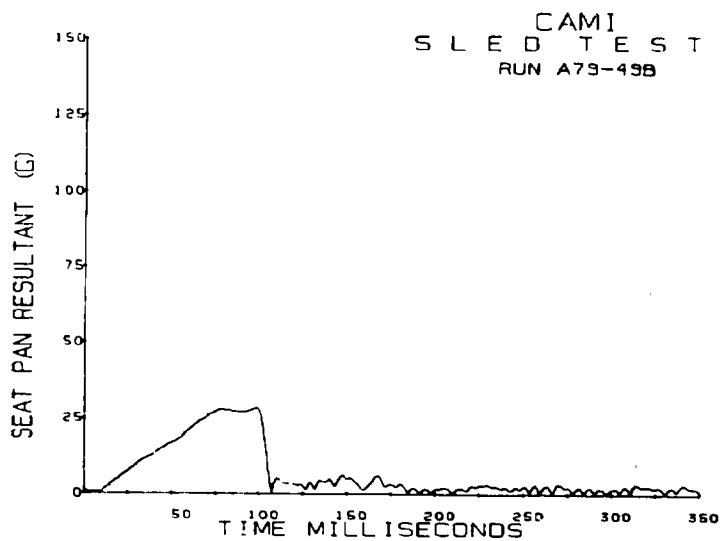

CAMI
S L E D T E S T S
RUN A79-49B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

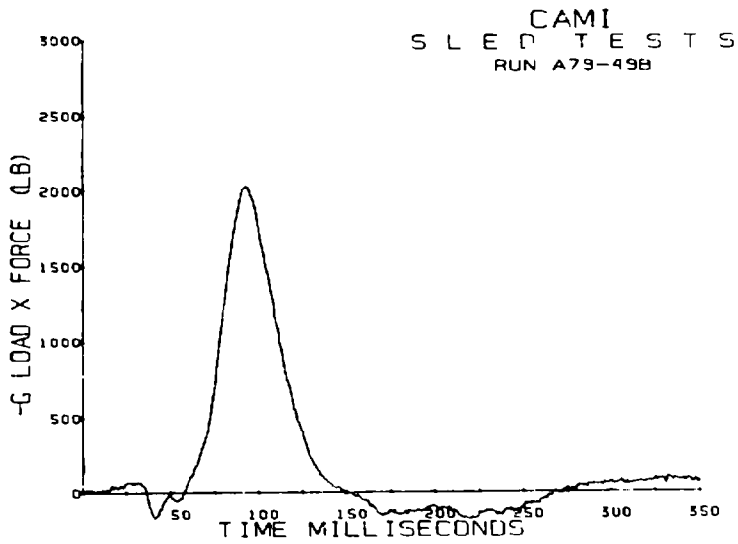

CAMI
S L E D T E S T S
RUN A79-49B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

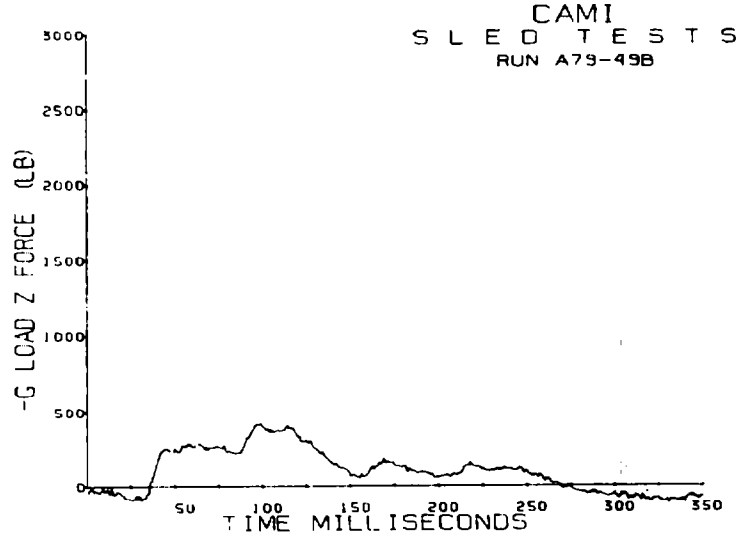

CAMI
S L E D T E S T S
RUN A79-49B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

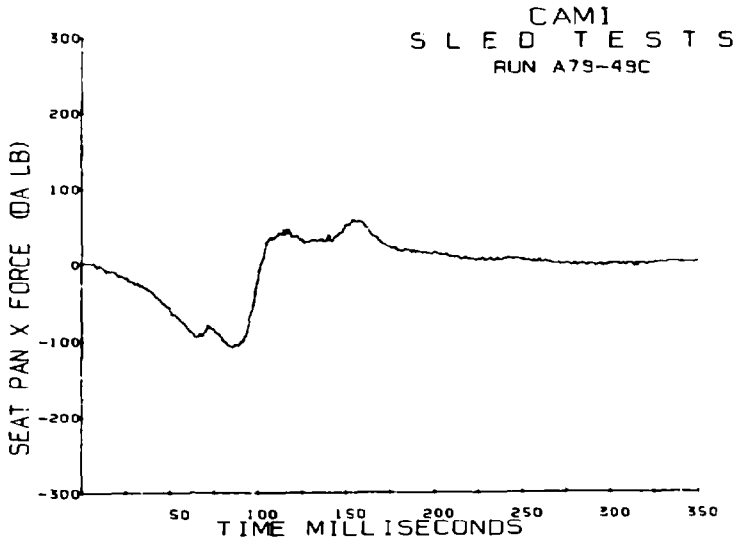

CAMI
S L E D T E S T S
RUN A79-49B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

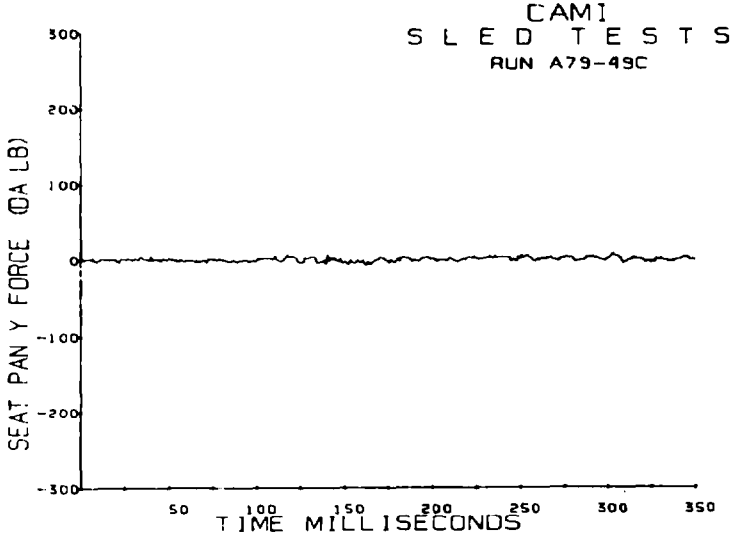

CAMI
S L E D T E S T S
RUN A79-49B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

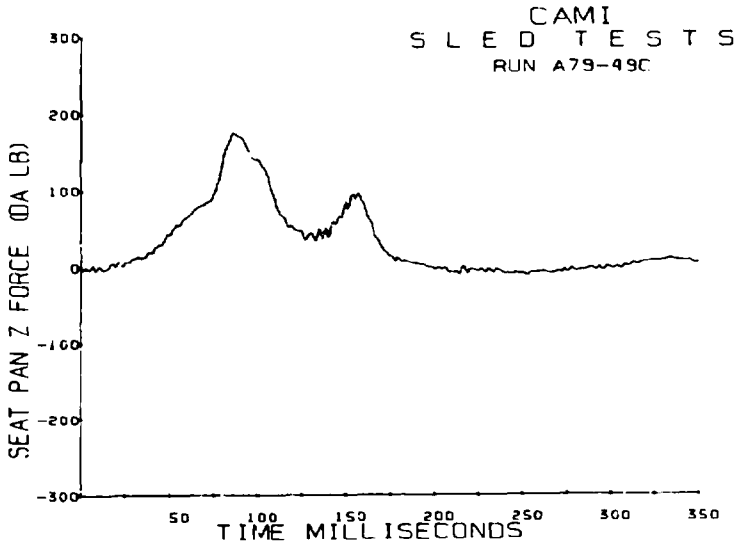

CAMI
S L E D T E S T S
RUN A79-49B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

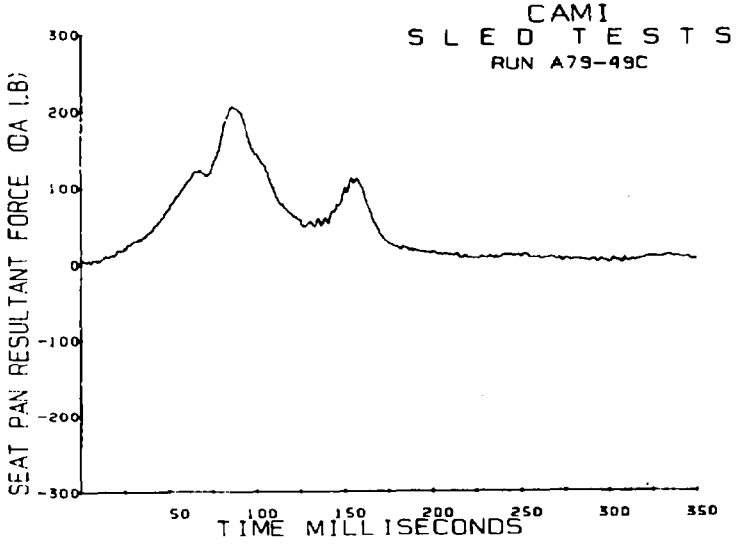

CAMI
SLED TESTS
RUN A79-49B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

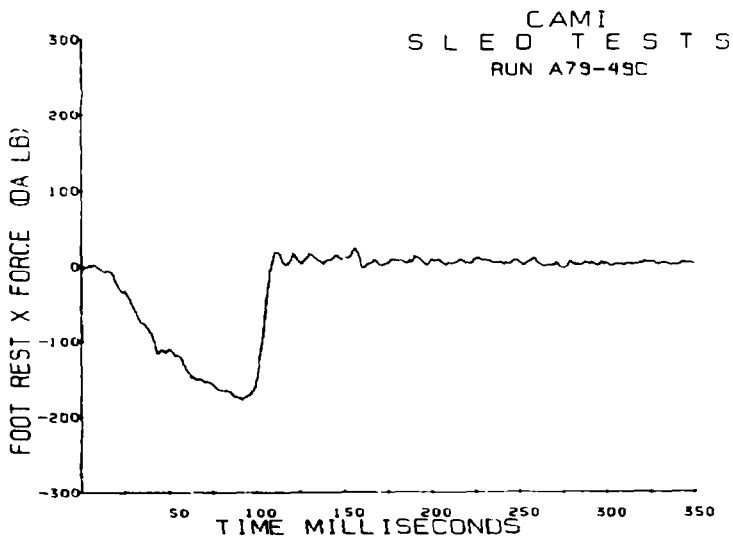

CAMI
SLED TESTS
RUN A79-49B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

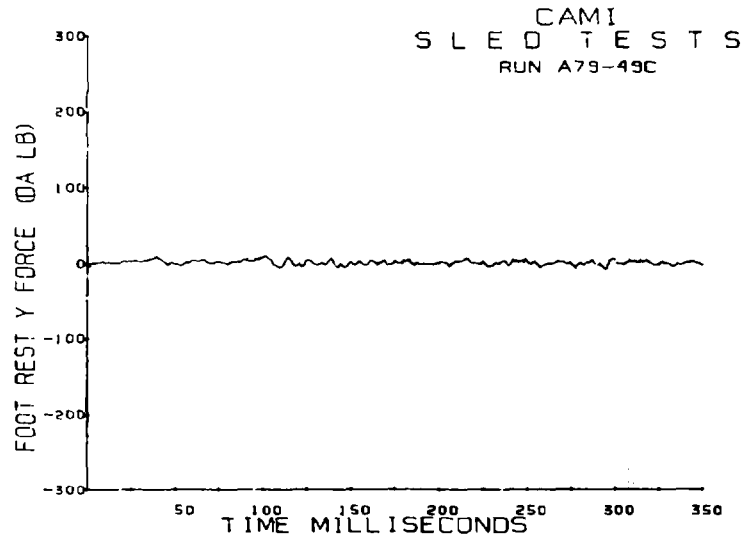

CAMI
SLED TESTS
RUN A79-49C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

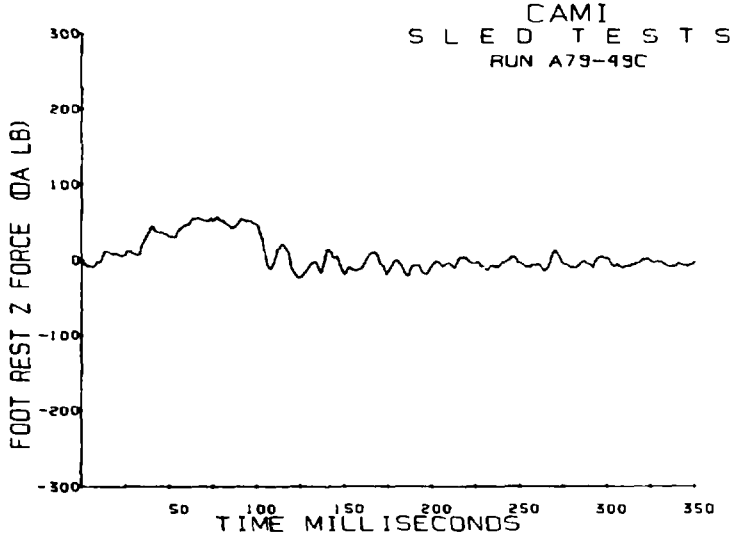

CAMI
SLED TESTS
RUN A79-49C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

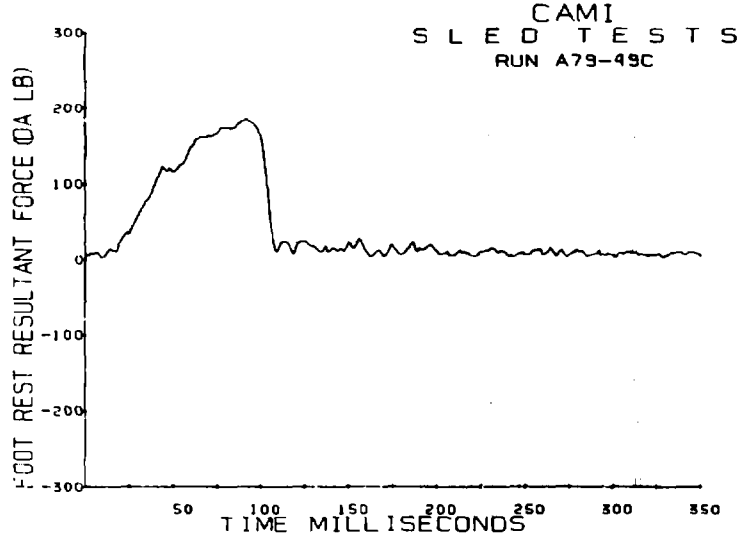

CAMI
SLED TESTS
RUN A79-49C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

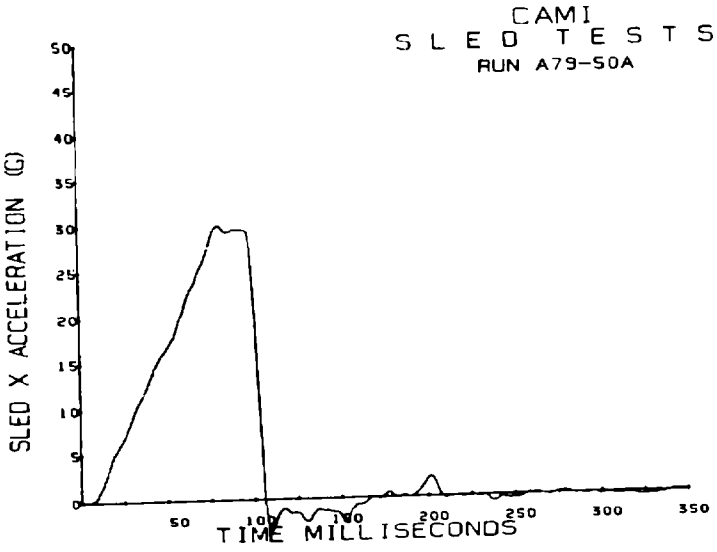

CAMI
SLED TESTS
RUN A79-49C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

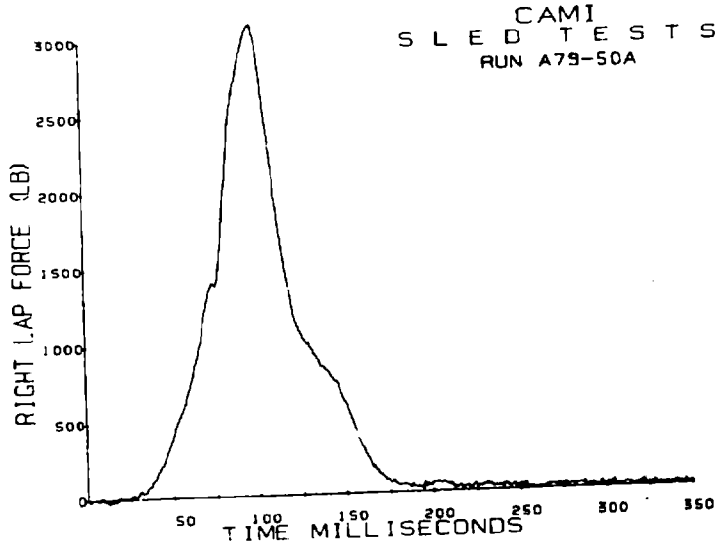

CAMI
S L E D T E S T S
RUN A79-49C
FOOT REST X FORCE (0A LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

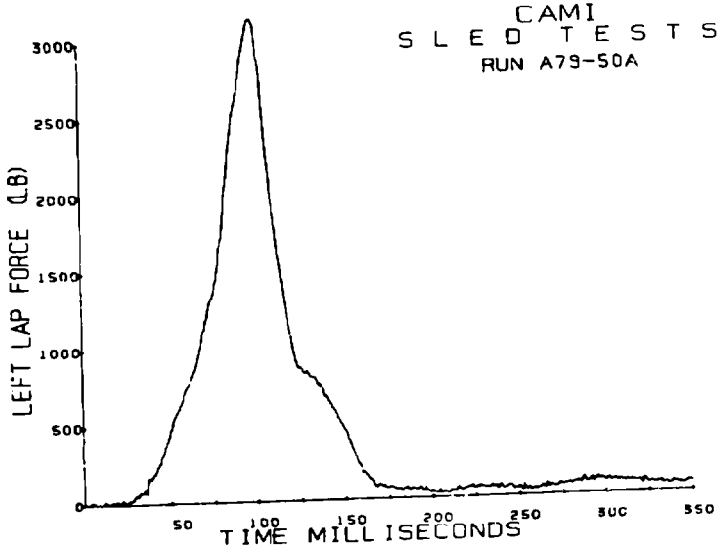

CAMI
S L E D T E S T S
RUN A79-49C
FOOT REST Y FORCE (0A LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

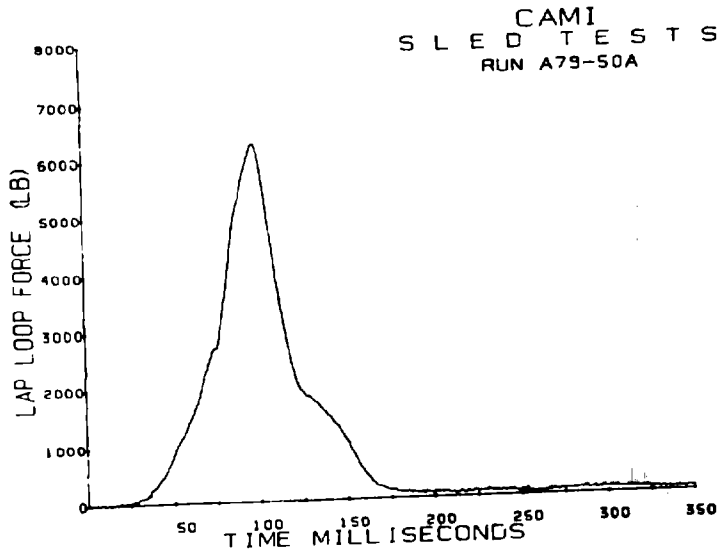

CAMI
S L E D T E S T S
RUN A79-49C
FOOT REST Z FORCE (0A LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

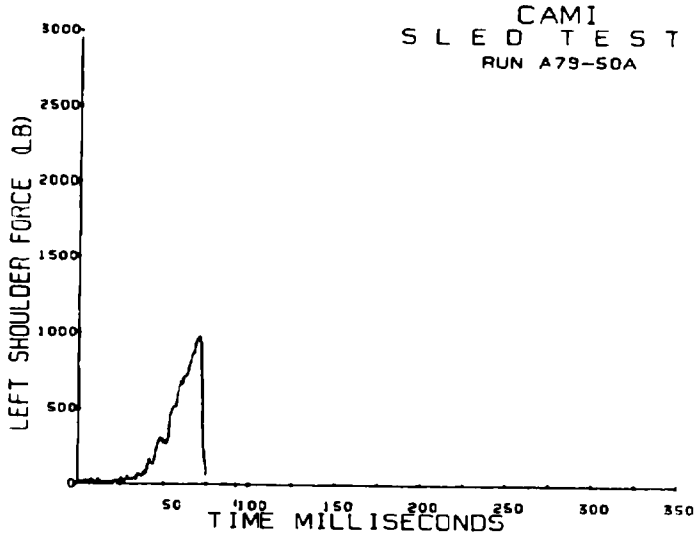

CAMI
S L E D T E S T S
RUN A79-49C
FOOT REST RESULTANT FORCE (0A LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

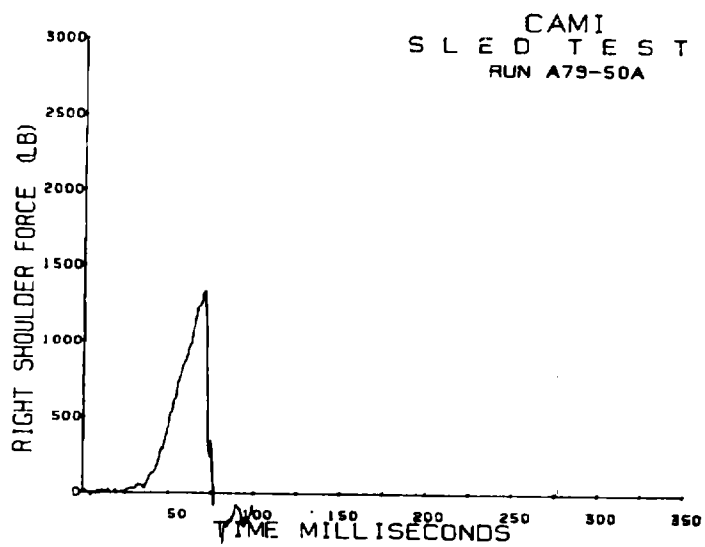

CAMI
SLED TESTS
RUN A79-50A
SLED X ACCELERATION (G)
TIME MILLISECONDS

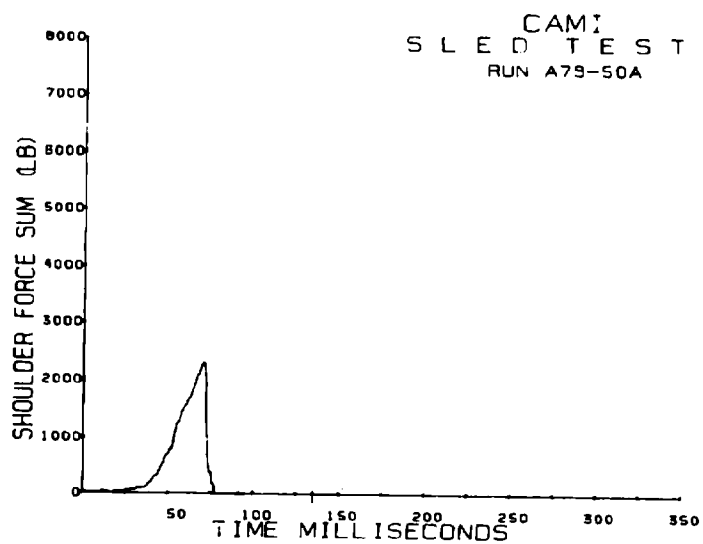

CAMI
SLED TESTS
RUN A79-50A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

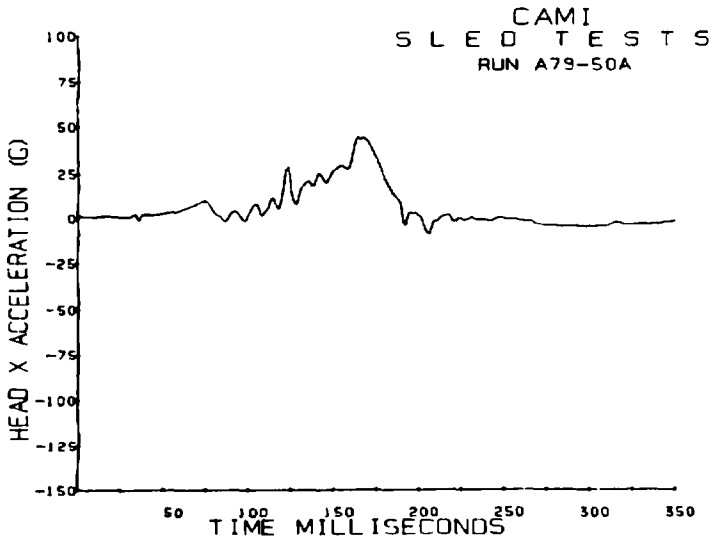

CAMI
SLED TESTS
RUN A79-50A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

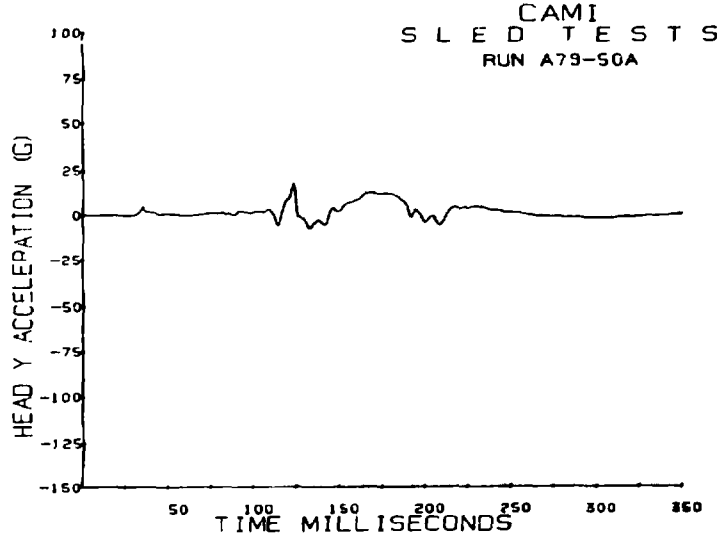

CAMI
SLED TESTS
RUN A79-50A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

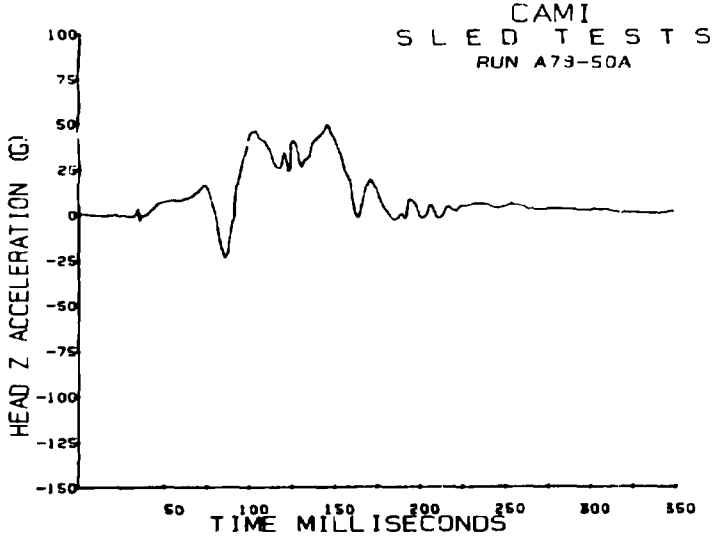

CAMI
SLED TESTS
RUN A79-50A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

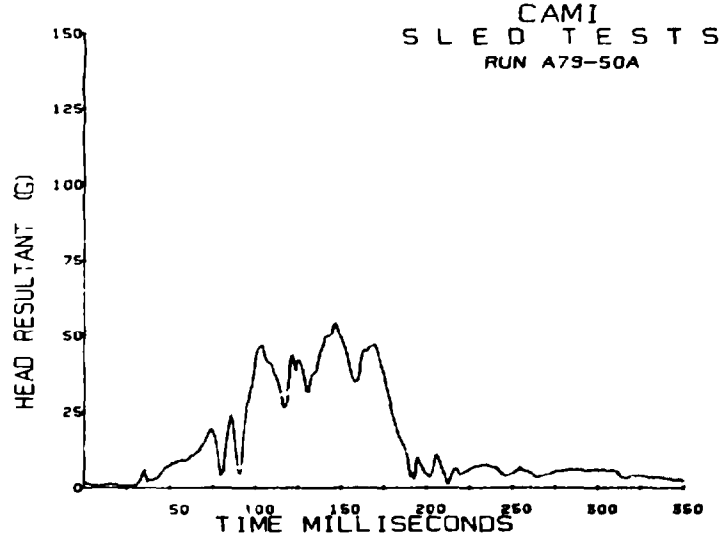

CAMI
SLED TESTS
RUN A79-50A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

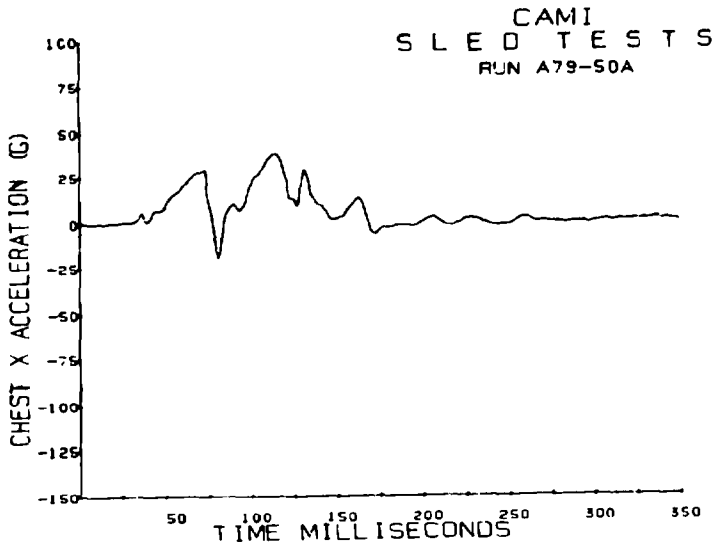

CAMI
SLED TESTS
RUN A79-50A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

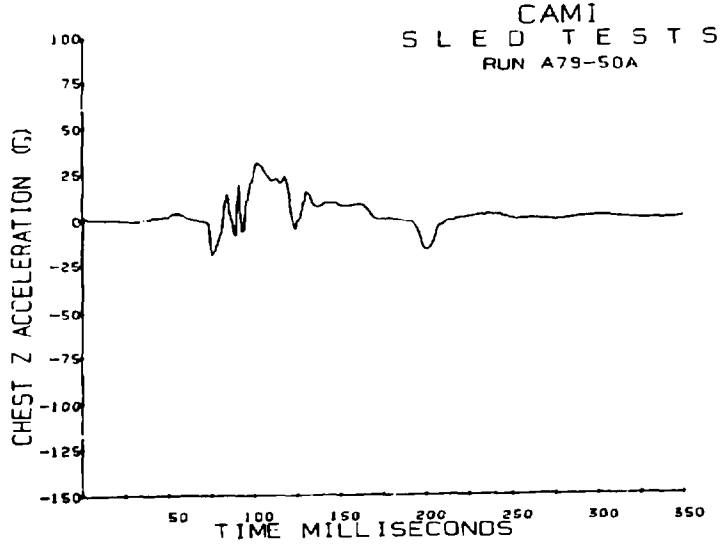

CAMI
SLED TESTS
RUN A79-50A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

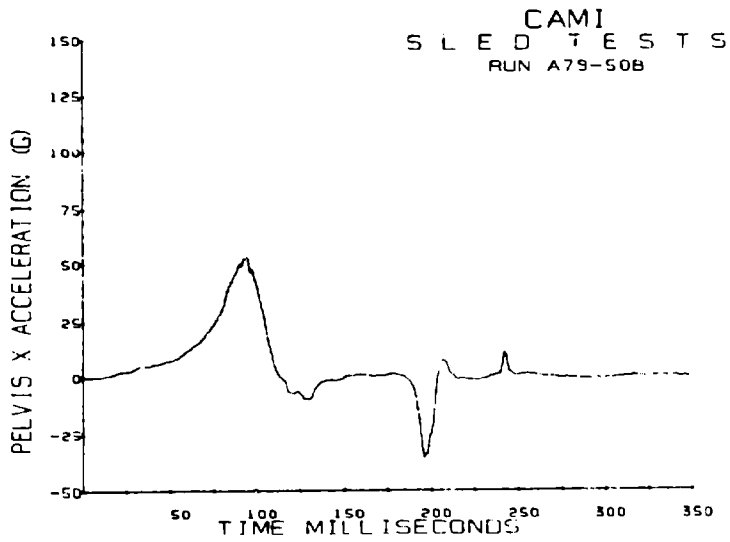

CAMI
SLED TESTS
RUN A79-50A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

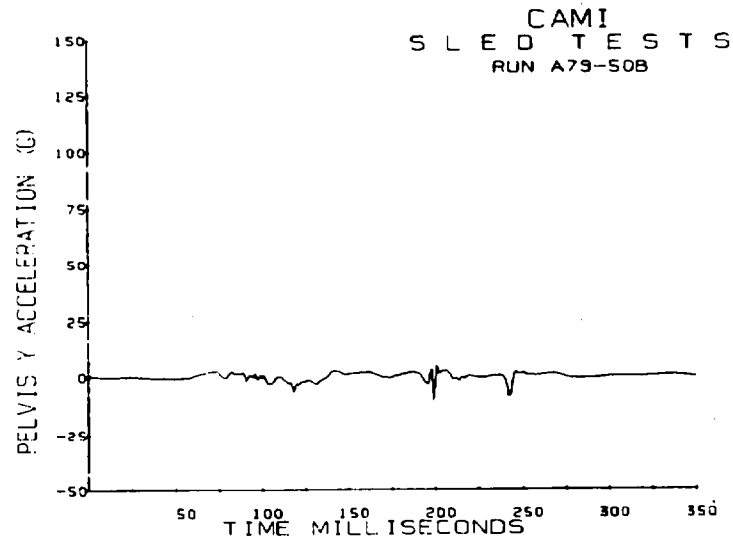

CAMI
SLED TESTS
RUN A79-50A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

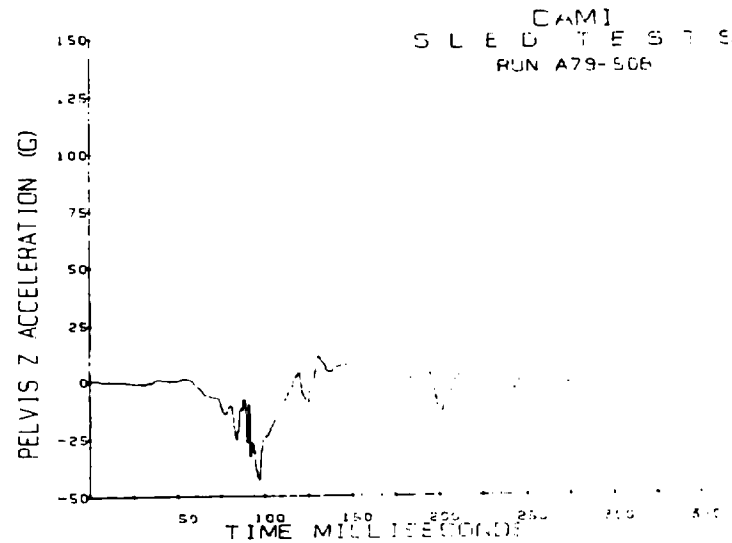

CAMI
SLED TESTS
RUN A79-50A
HEAD RESULTANT (G)
TIME MILLISECONDS

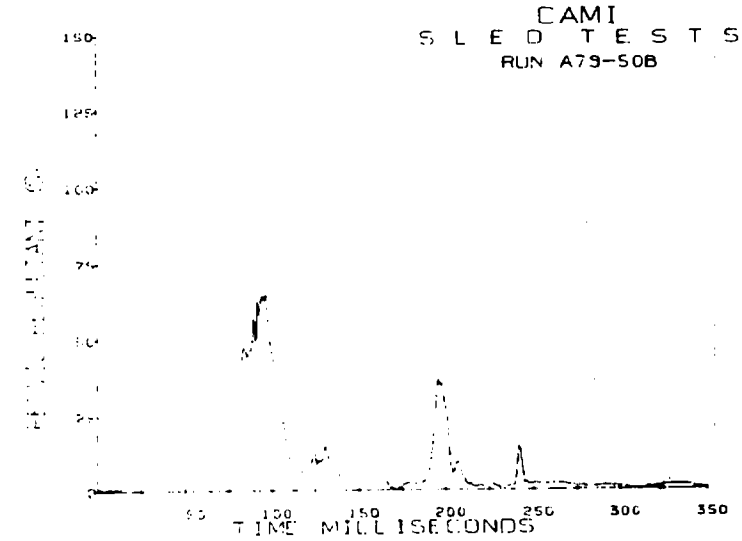

CAMI
S L E D T E S T S
RUN A79-50A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

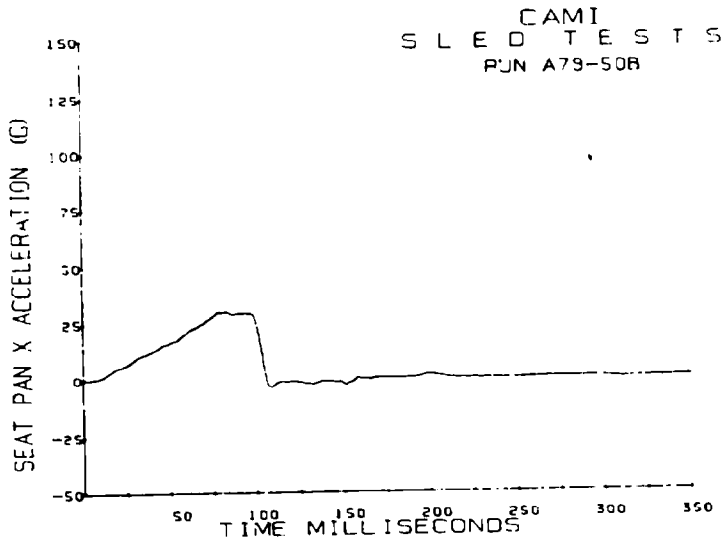

CAMI
S L E D T E S T S
RUN A79-50A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

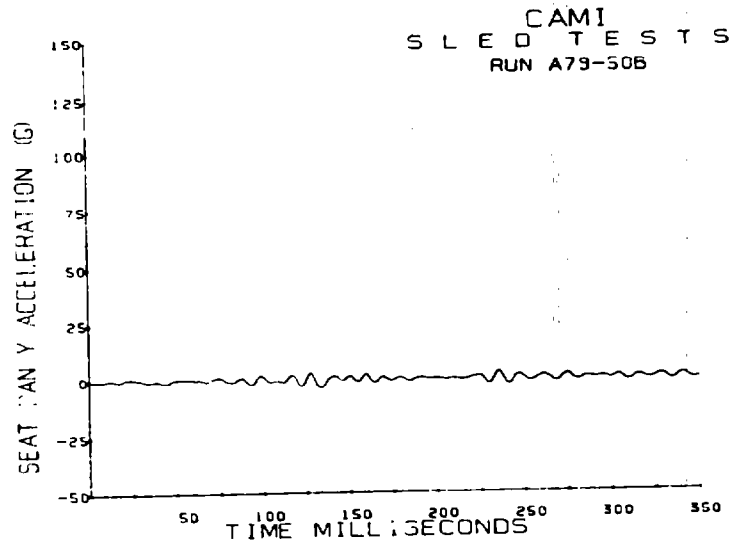

CAMI
SLED TESTS
RUN A79-S0B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

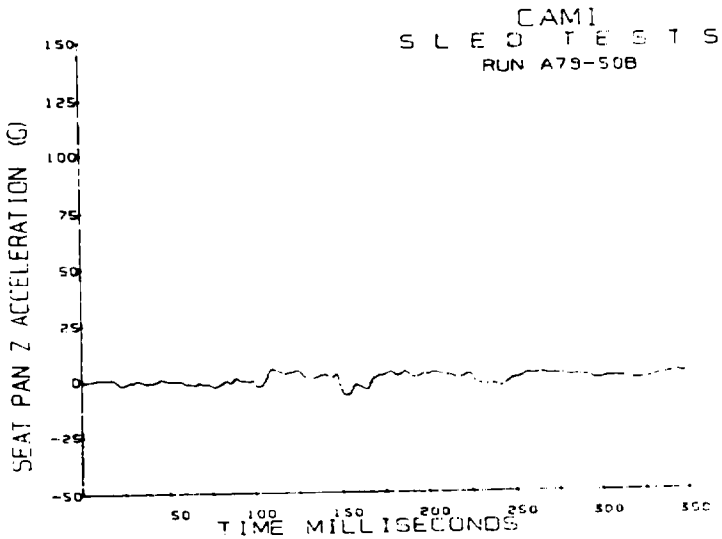

CAMI
SLED TESTS
RUN A79-S0B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

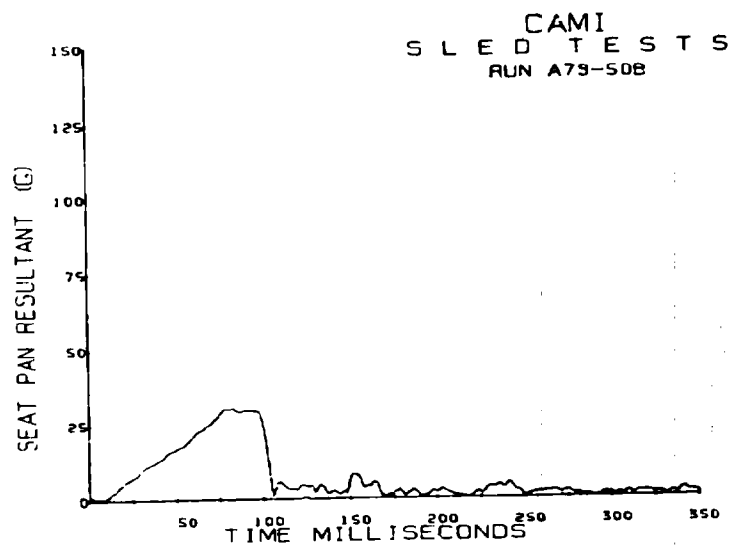

CAMI
SLED TESTS
RUN A79-S0B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

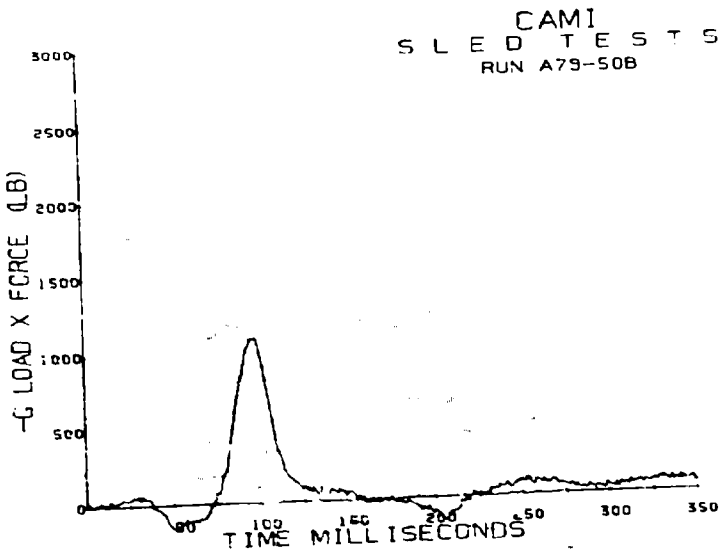

CAMI
SLED TESTS
RUN A79-S0B
150
125
100
75
50
25
50
100
150
200
250
300
350
TIME MILLISECONDS

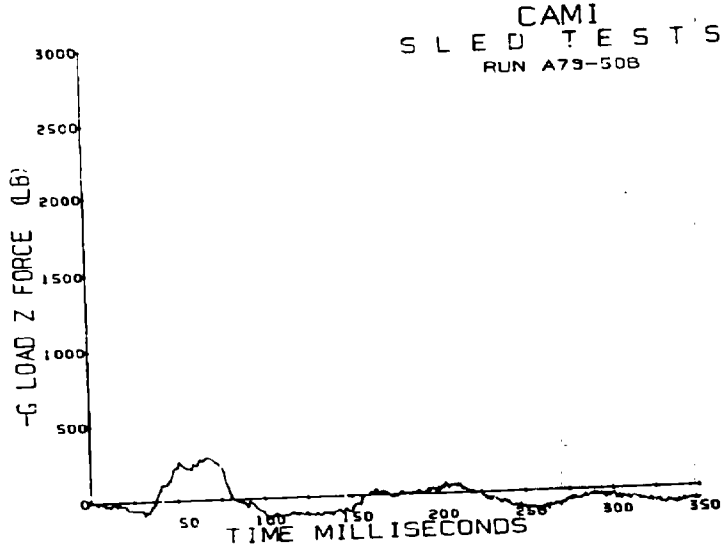

CAMI
S L E D T E S T S
RUN A79-50B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

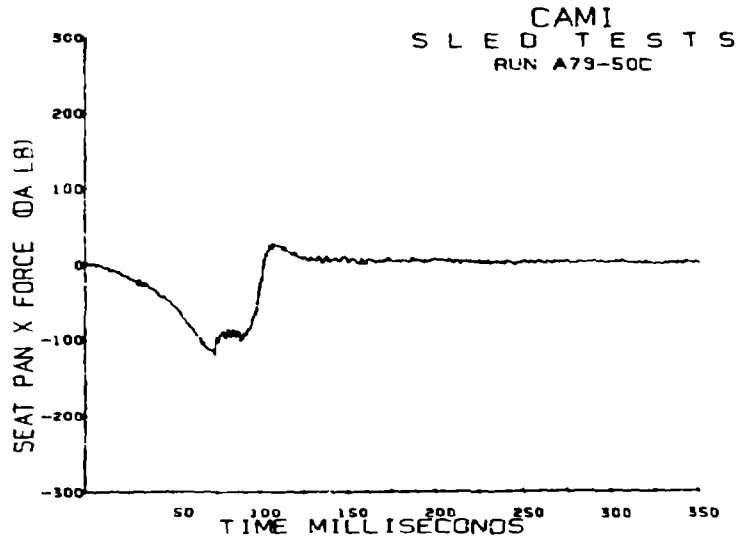

CAMI
S L E D T E S T S
RUN A79-50B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

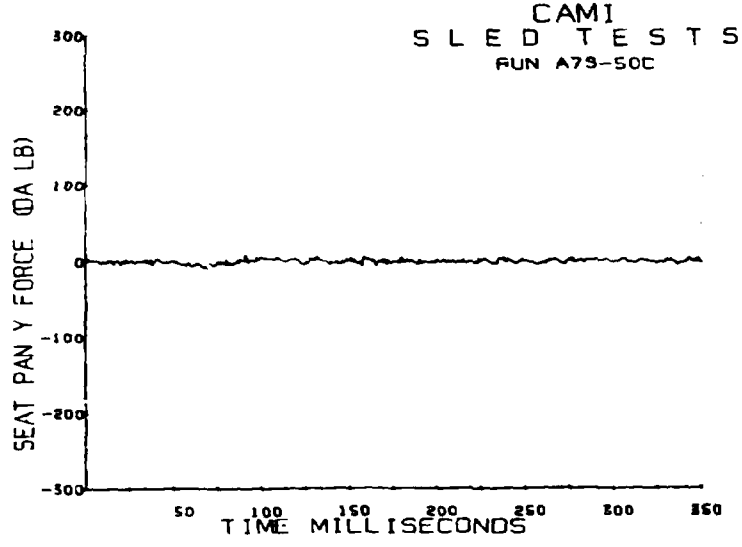

CAMI
S L E D T E S T S
RUN A79-50B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

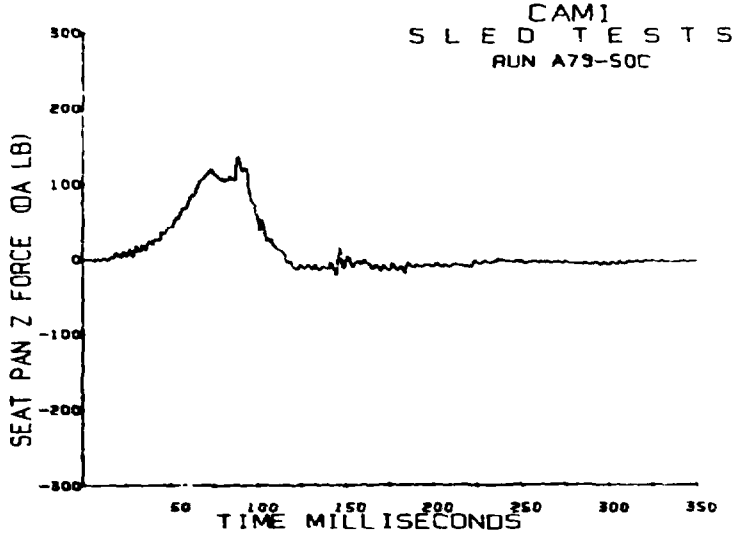

CAMI
S L E D T E S T S
RUN A79-50B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

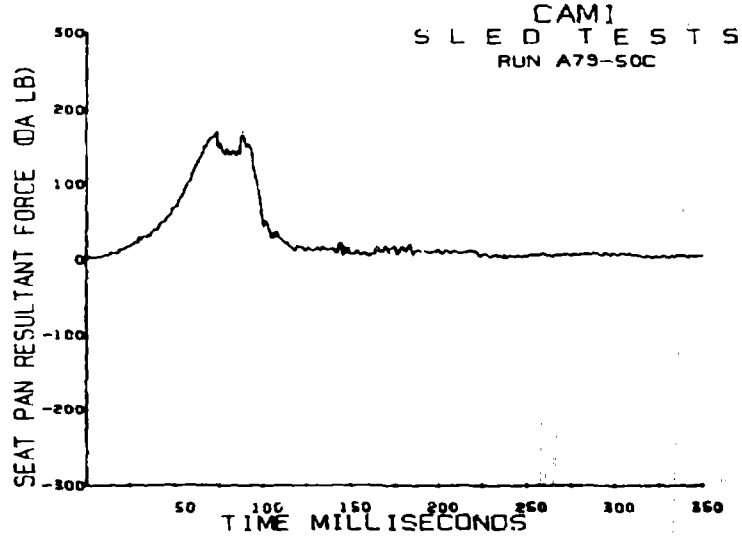

CAMI
SLED TESTS
RUN A79-50B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

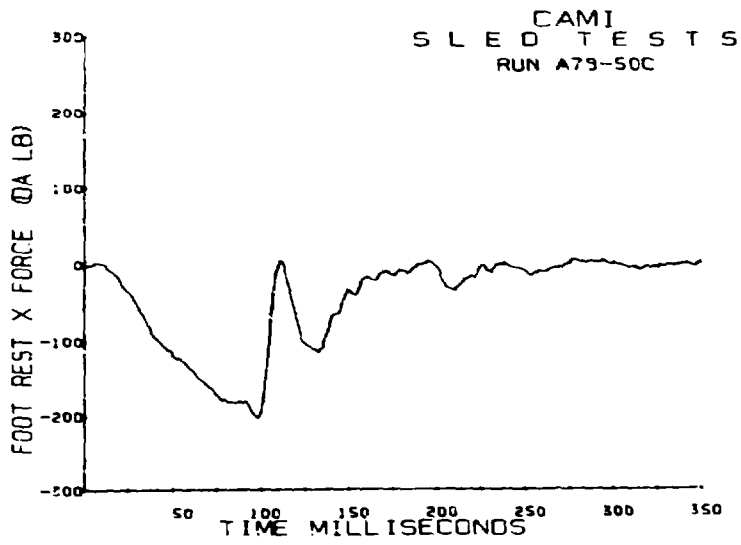

CAMI
SLED TESTS
RUN A79-50B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

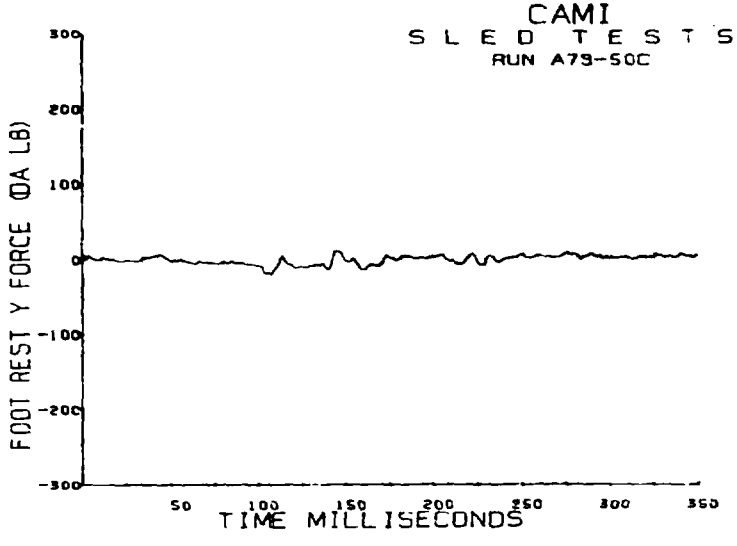

CAMI
S L E D T E S T S
RUN A79-50C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

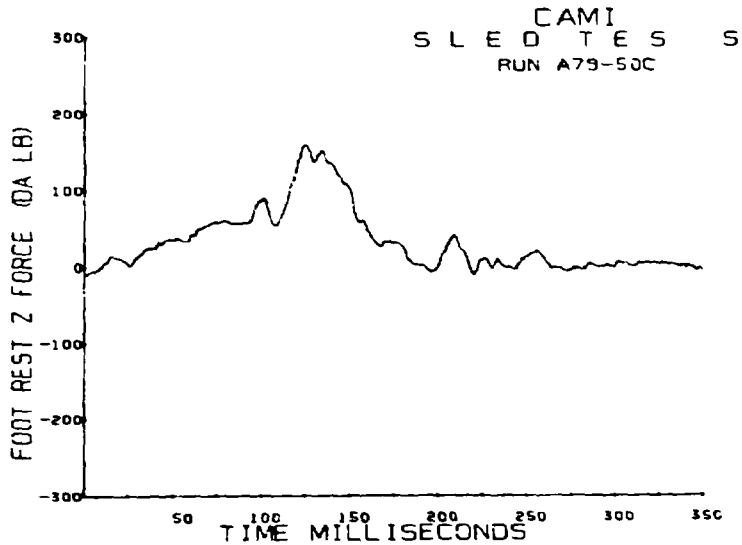

CAMI
S L E D T E S T S
RUN A79-50C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

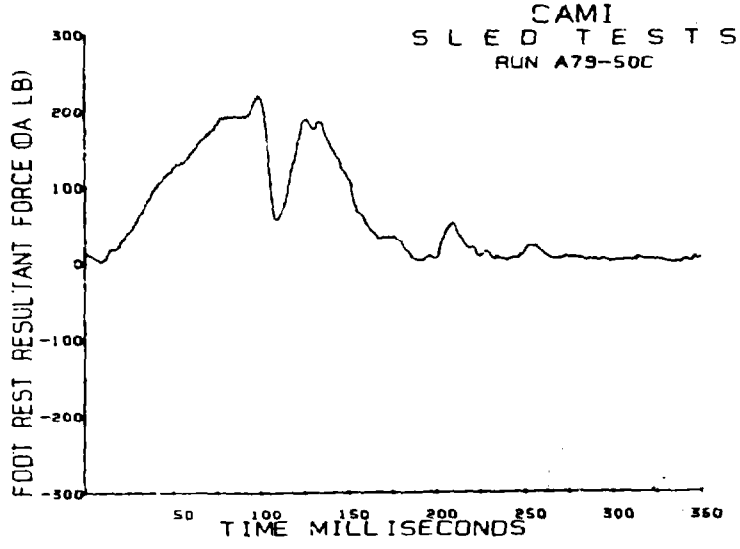

CAMI
S L E D T E S T S
RUN A79-50C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

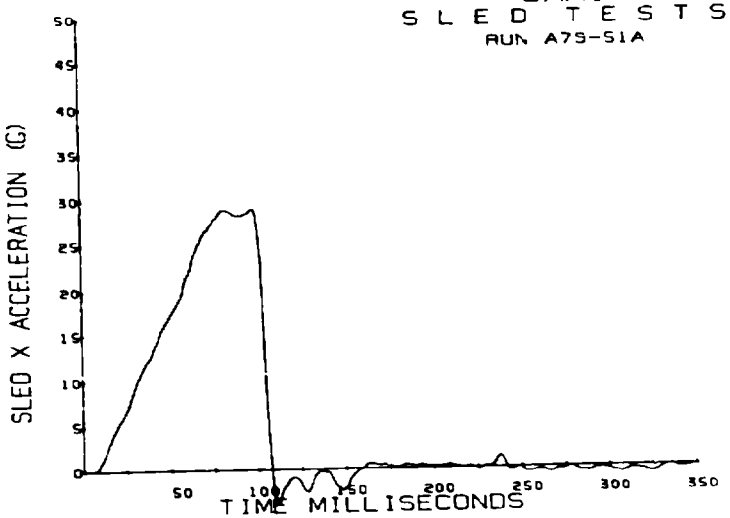

CAMI
S L E D T E S T S
RUN A79-50C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

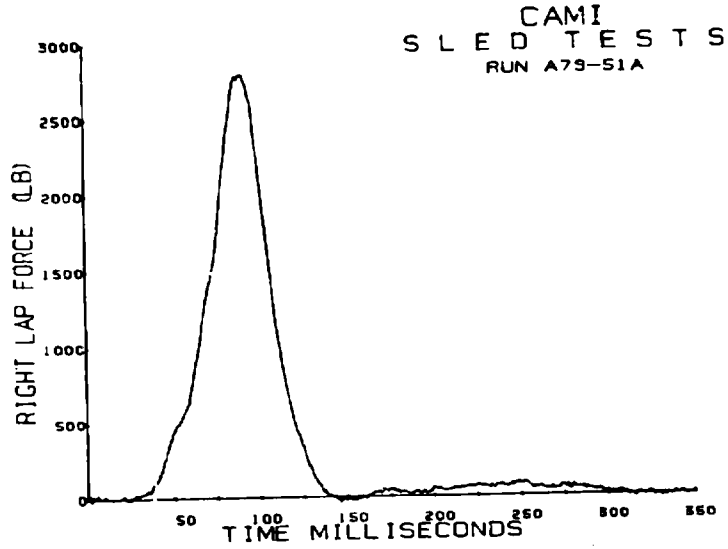

CAMI
SLED TESTS
RUN A79-50C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

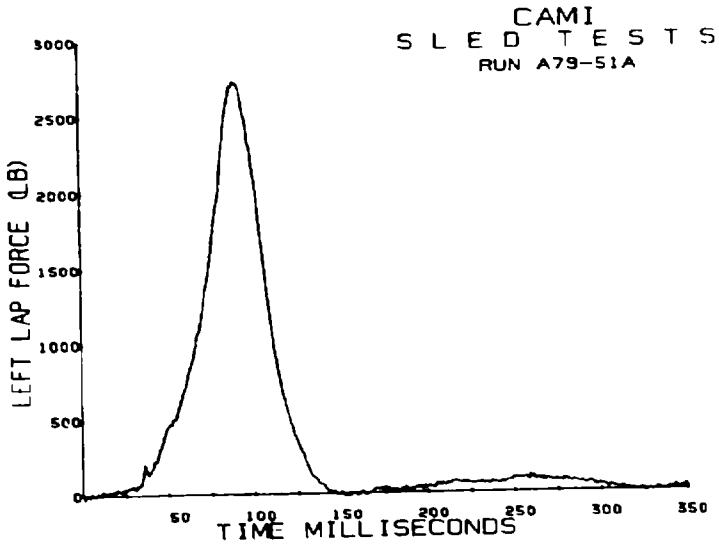

CAMI
SLED TESTS
RUN A79-50C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

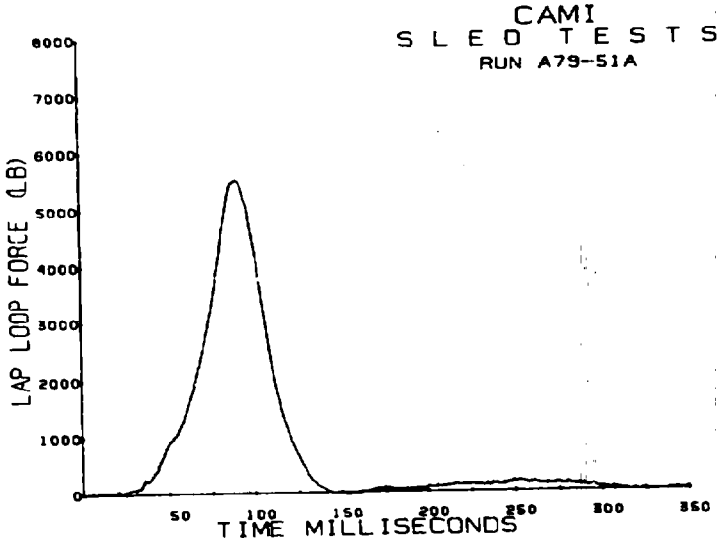

CAMI
SLED TESTS
RUN A79-50C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

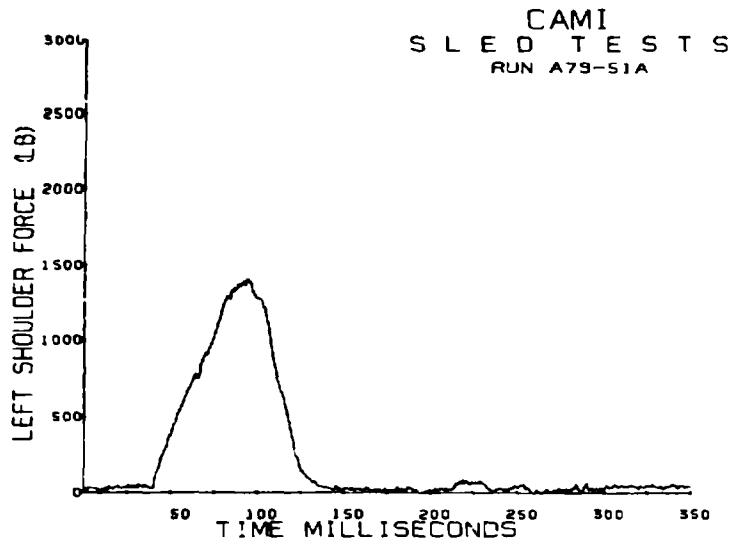

CAMI
SLED TESTS
RUN A79-50C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

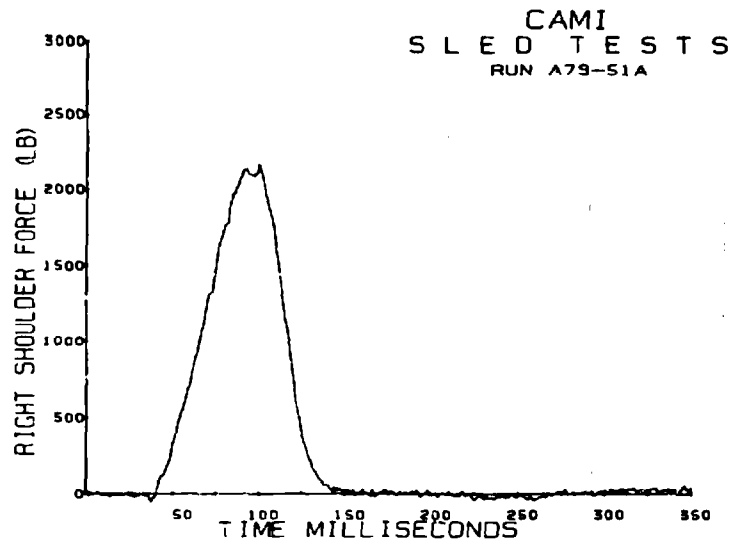

CAMI
SLED TESTS
RUN A79-51A
SLED X ACCELERATION (G)
TIME MILLISECONDS

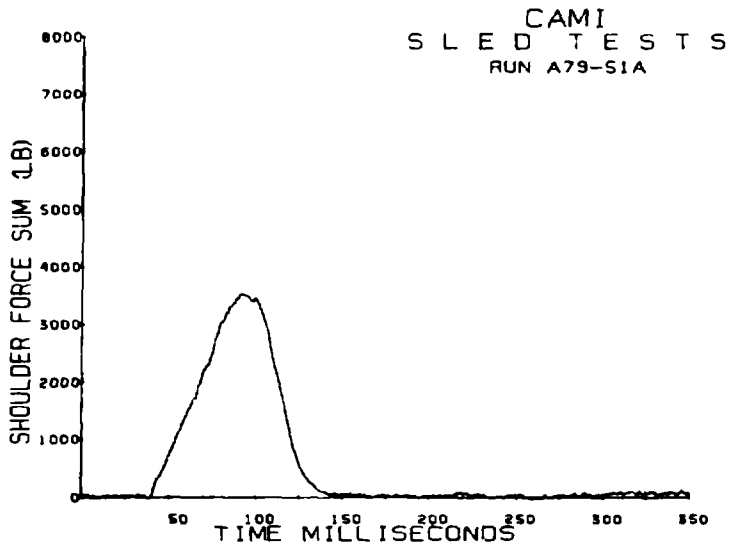

CAMI
SLED TESTS
RUN A79-51A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

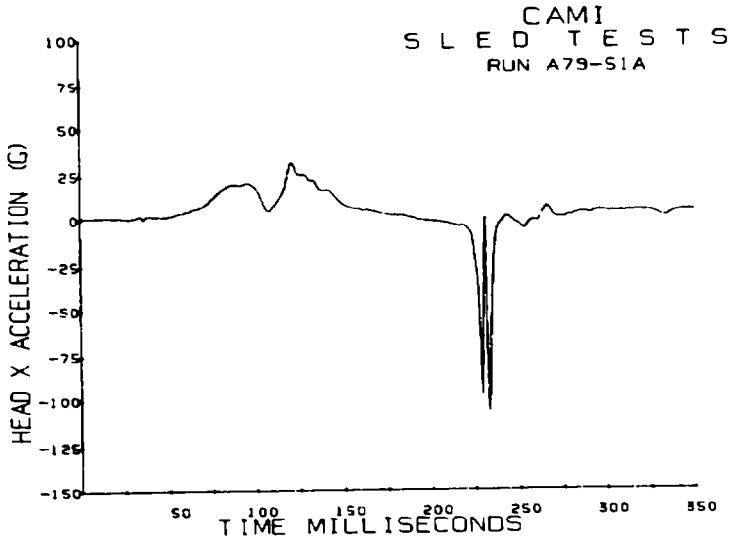

CAMI
SLED TESTS
RUN A79-51A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

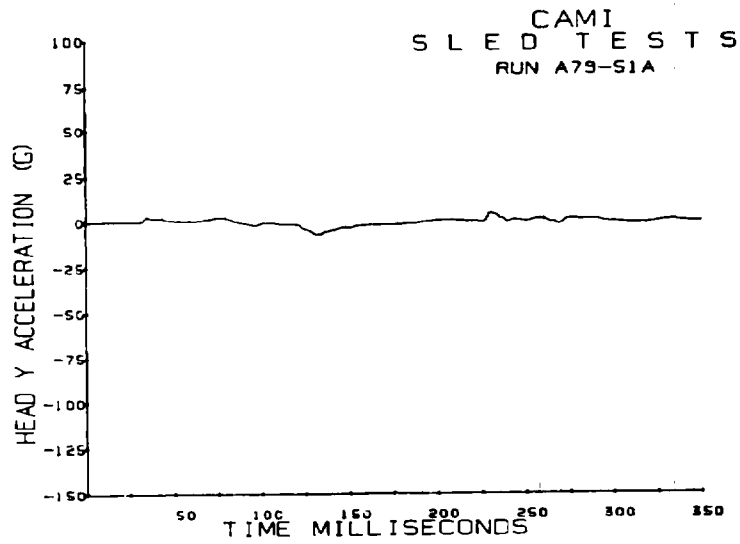

CAMI
SLED TESTS
RUN A79-51A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

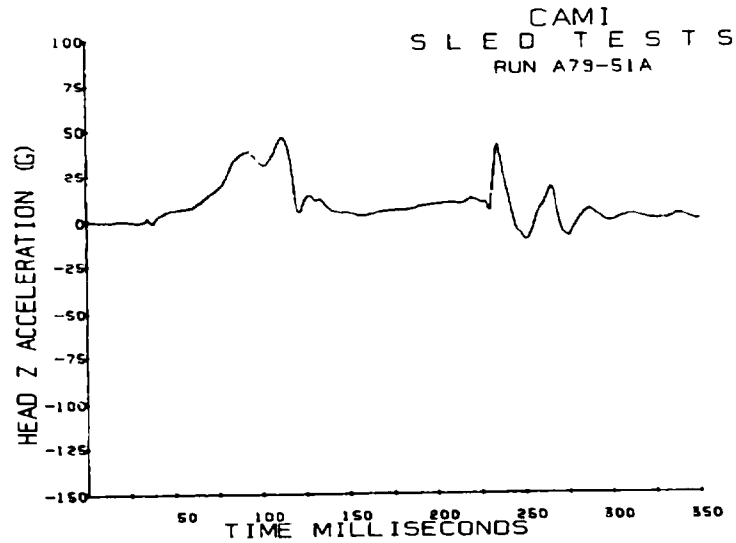

CAMI
SLED TESTS
RUN A79-51A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

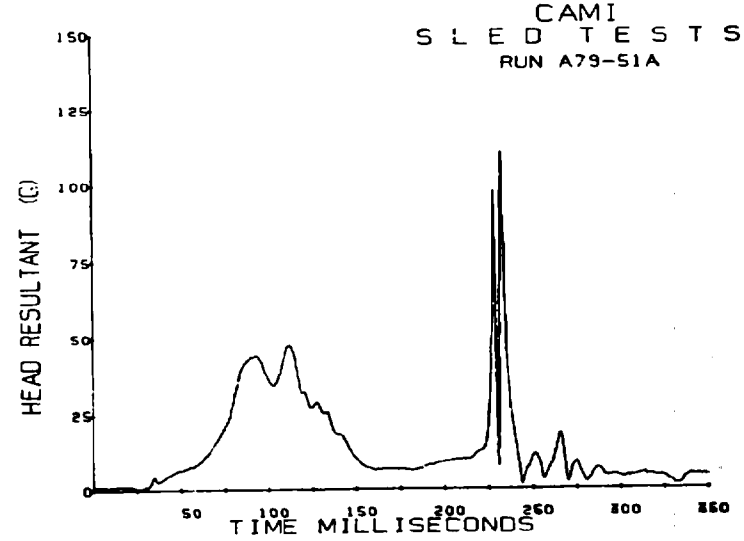

CAMI
SLED TESTS
RUN A79-51A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

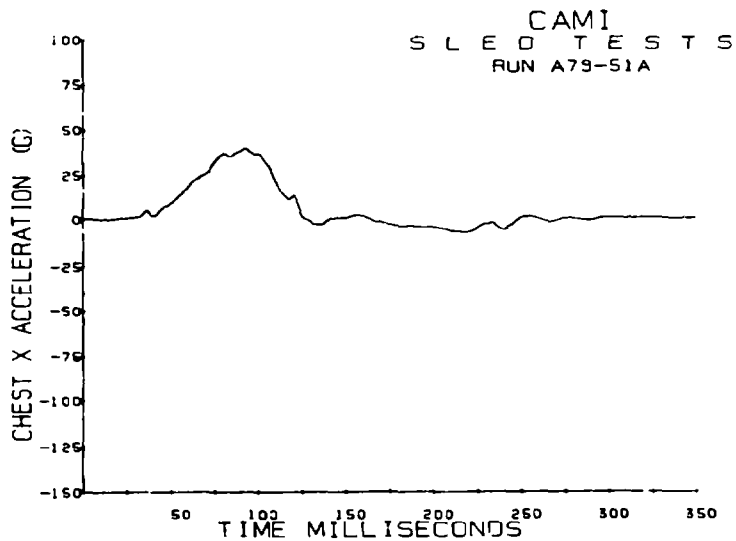

CAMI
SLED TESTS
RUN A79-51A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
50
100
150
200
250
300
350
TIME MILLISECONDS

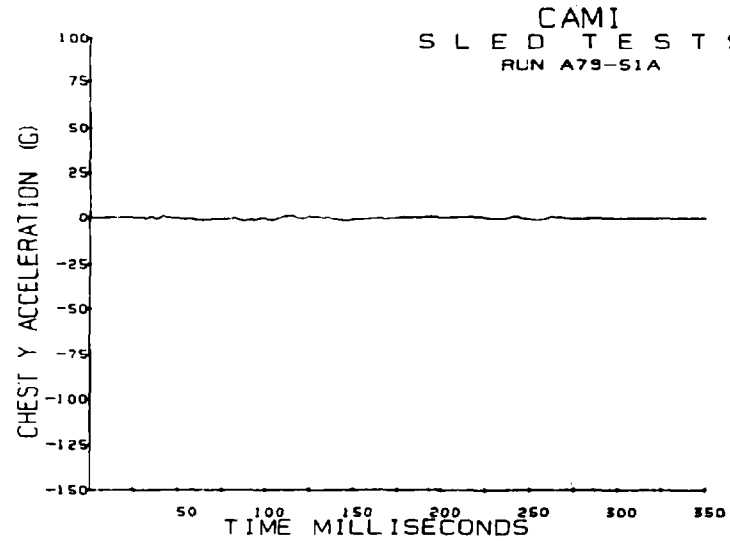

CAMI
S L E D T E S T S
RUN A79-S1A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

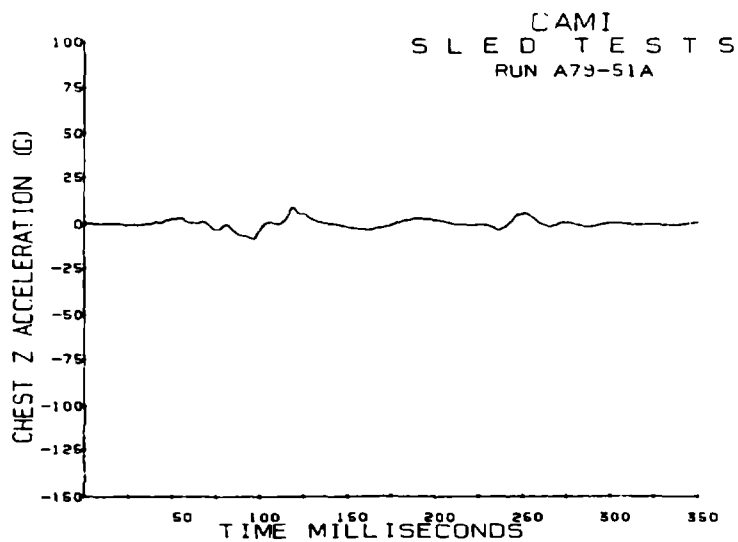

CAMI
S L E D T E S T S
RUN A79-S1A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

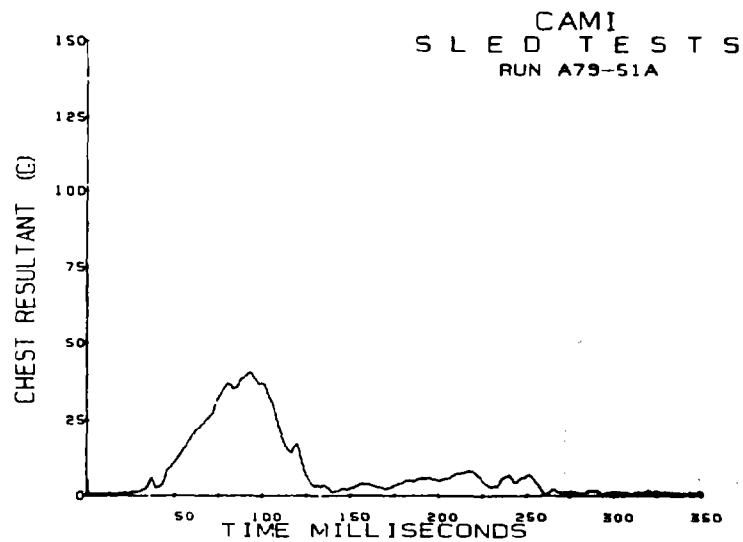

CAMI
S L E D T E S T S
RUN A79-S1A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

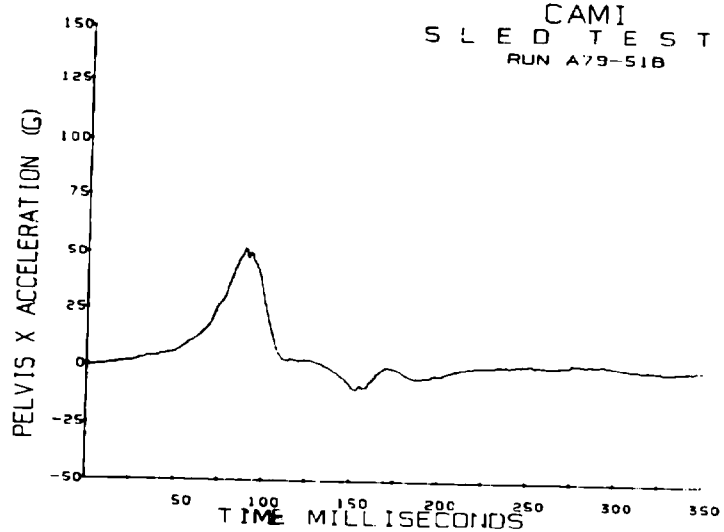

CAMI
S L E D T E S T S
RUN A79-S1A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

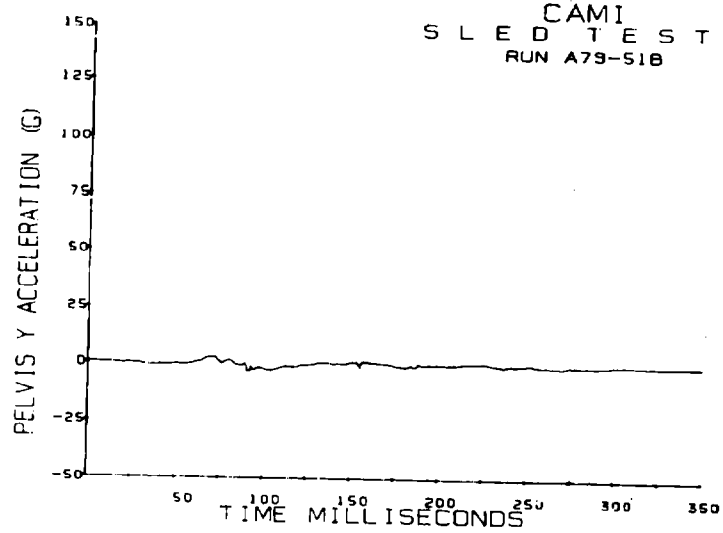

CAMI
S L E D T E S T S
RUN A79-51A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

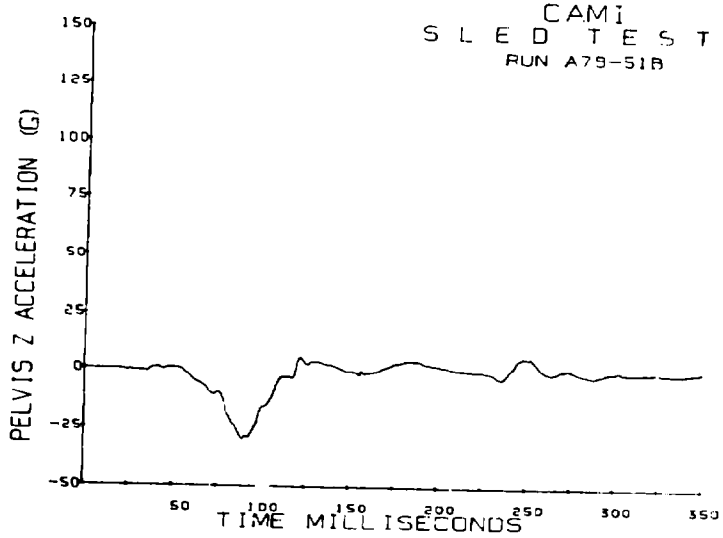

CAMI
S L E D T E S T S
RUN A79-51A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

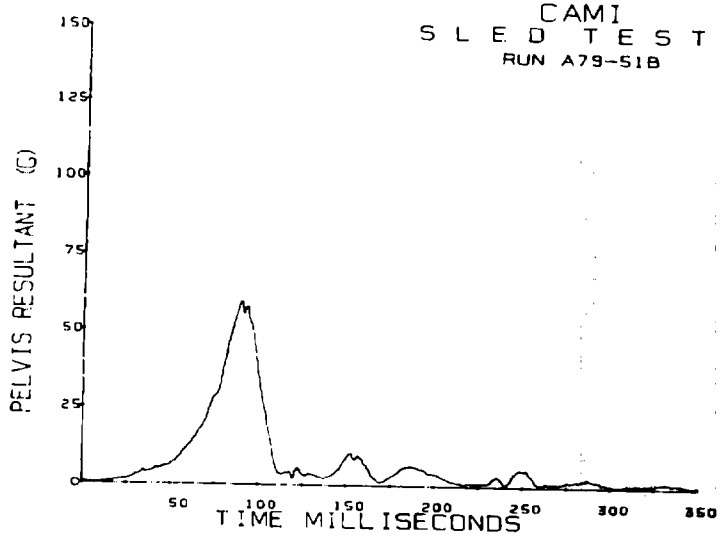

CAMI
S L E D T E S T S
RUN A79-51A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

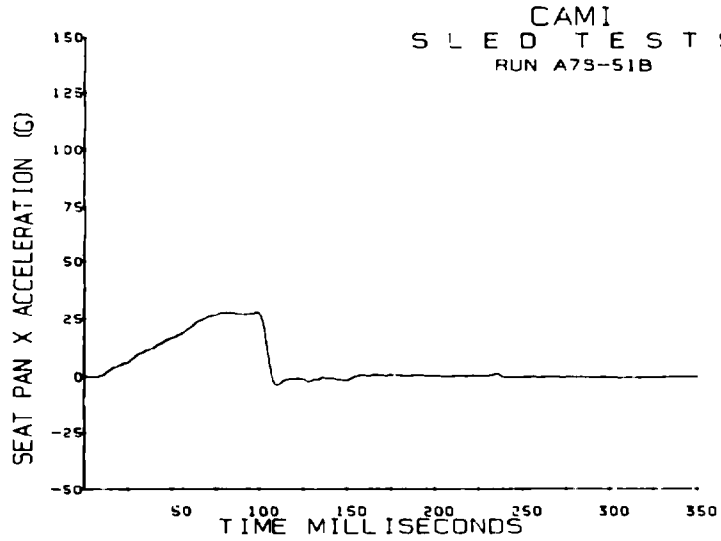

CAMI
S L E D T E S T S
RUN A79-51A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

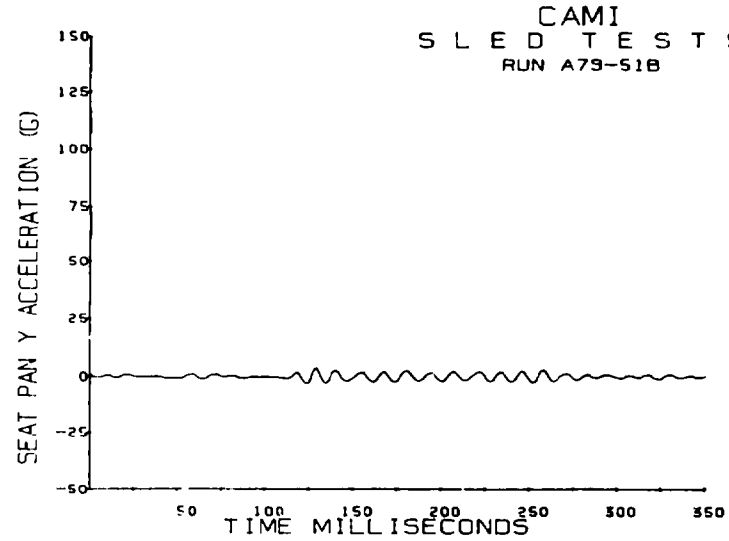

CAMI
S L E D T E S T S
RUN A79-51B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

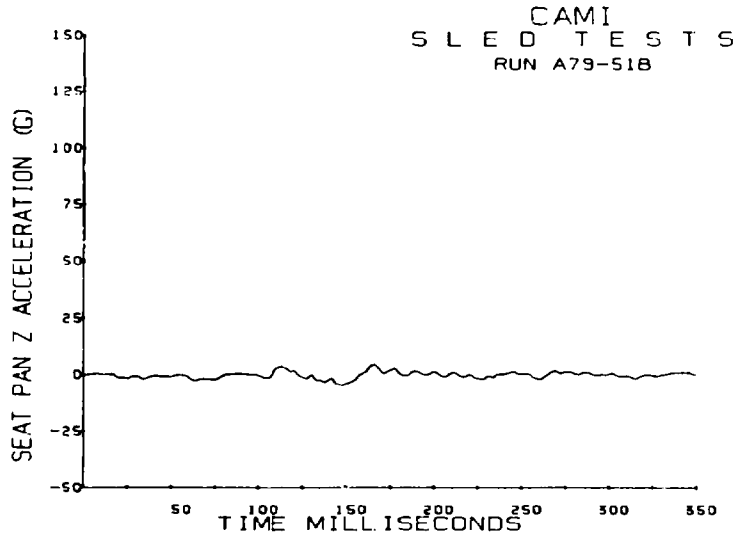

CAMI
S L E D T E S T S
RUN A79-51B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

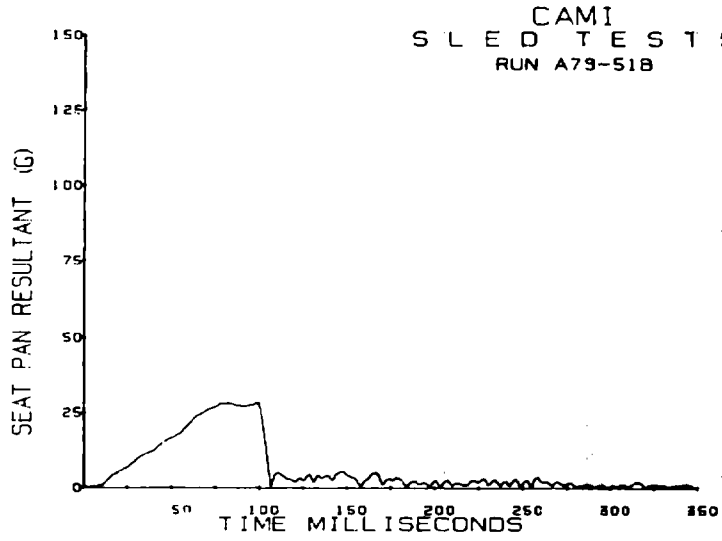

CAMI
S L E D T E S T S
RUN A79-51B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

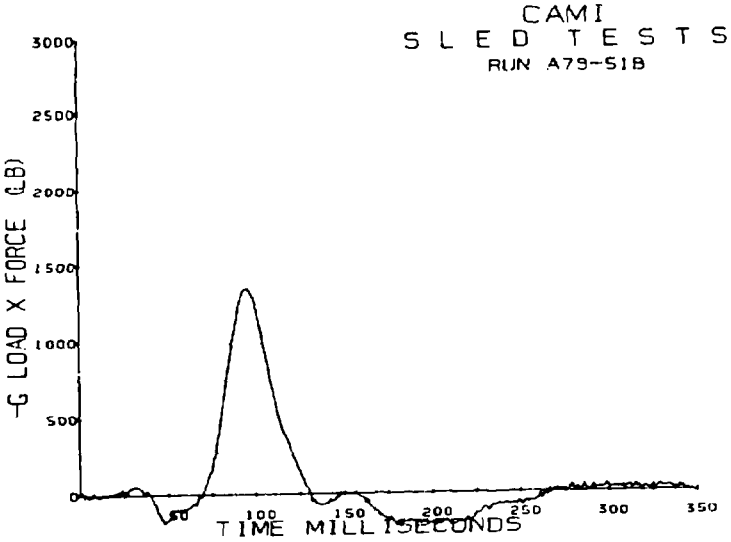

CAMI
S L E D T E S T S
RUN A79-51B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

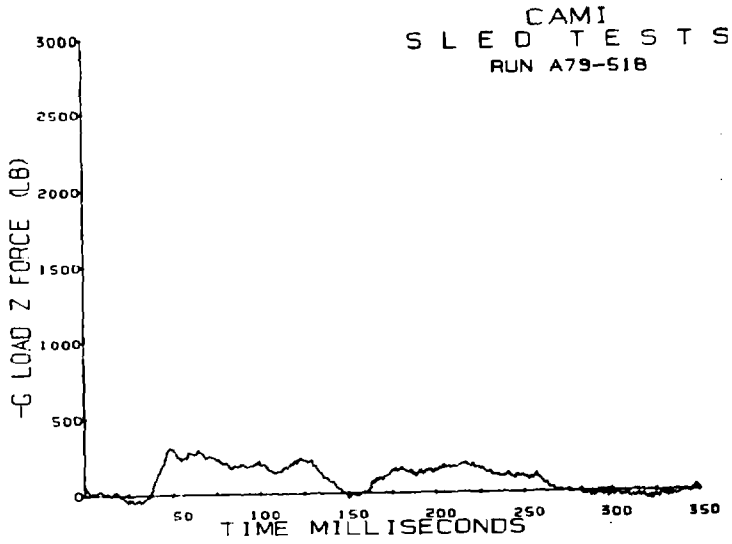

CAMI
SLED TESTS
RUN A79-51B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

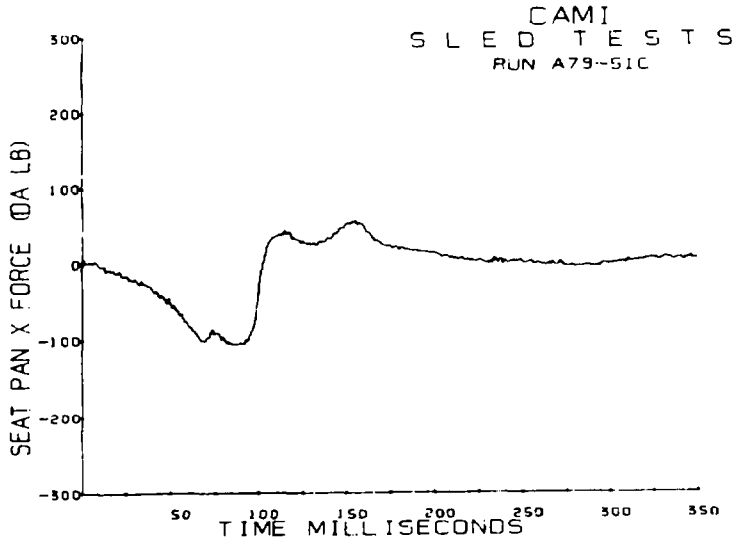

CAMI
SLED TESTS
RUN A79-51B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

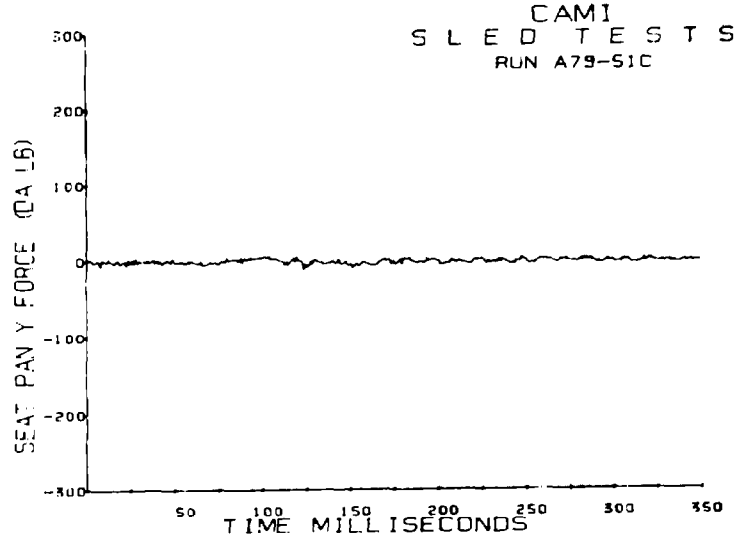

CAMI
SLED TESTS
RUN A79-51B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

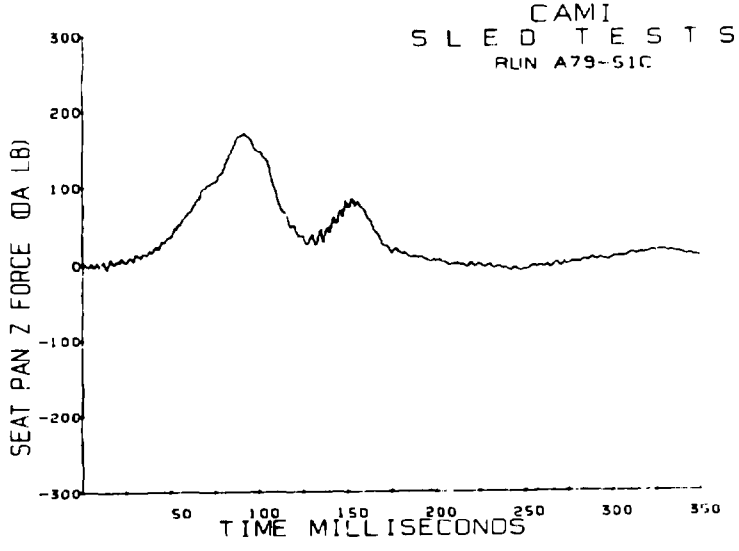

CAMI
SLED TESTS
RUN A79-51B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

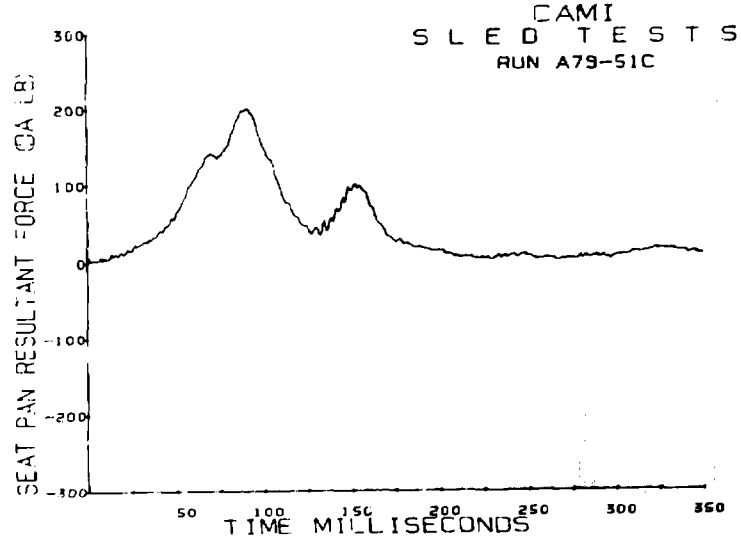

CAMI
SLED TESTS
RUN A79-51B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

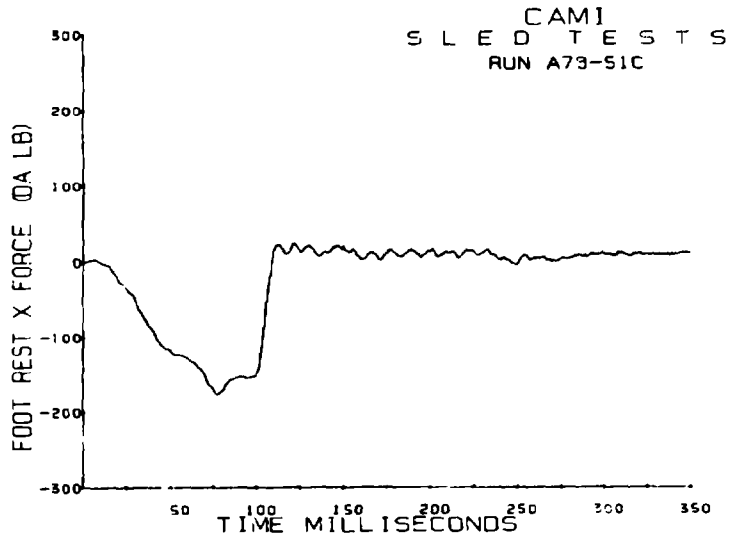

CAMI
SLED TESTS
RUN A79-51B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

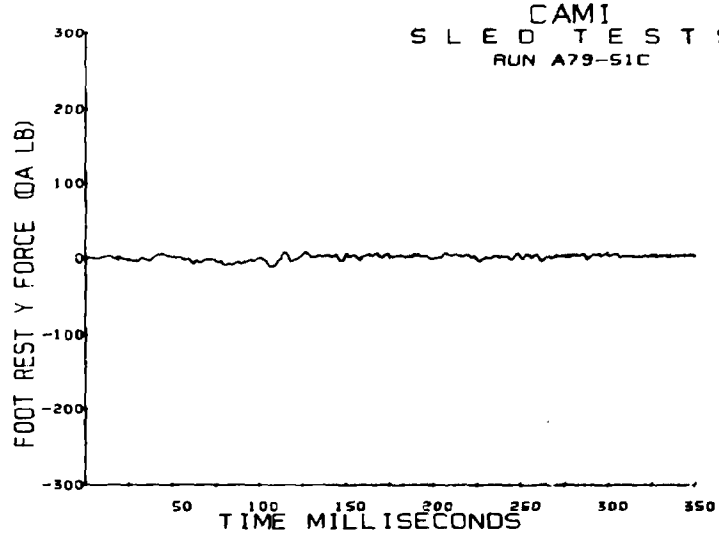

CAMI
SLED TESTS
RUN A79-51C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

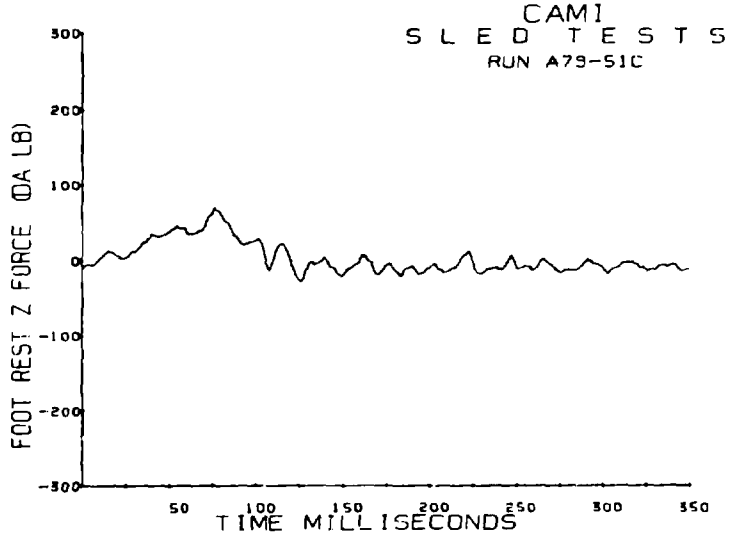

CAMI
SLED TESTS
RUN A79-51C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

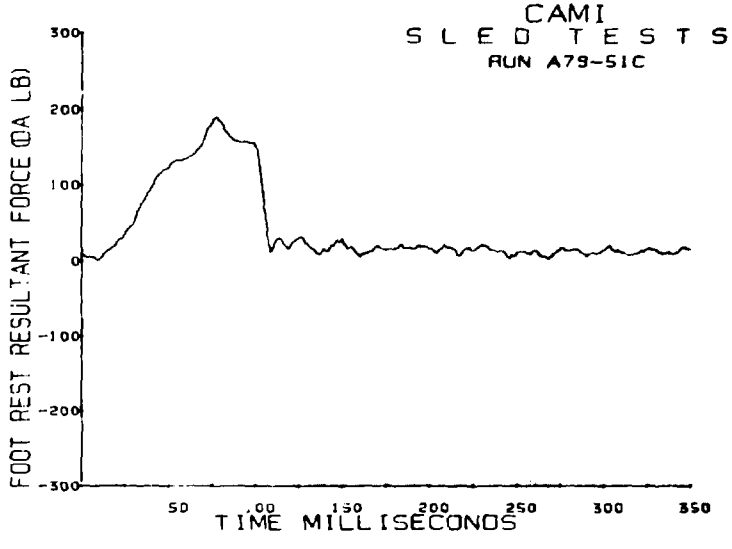

CAMI
SLED TESTS
RUN A79-51C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

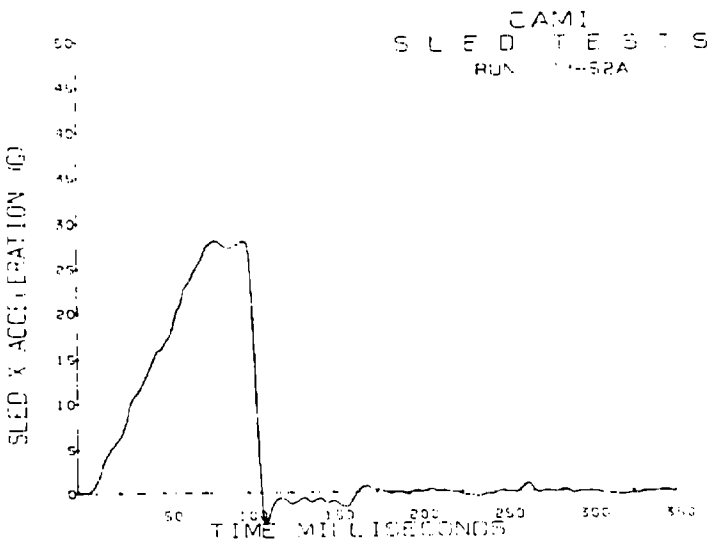

CAMI
SLED TESTS
RUN A79-51C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

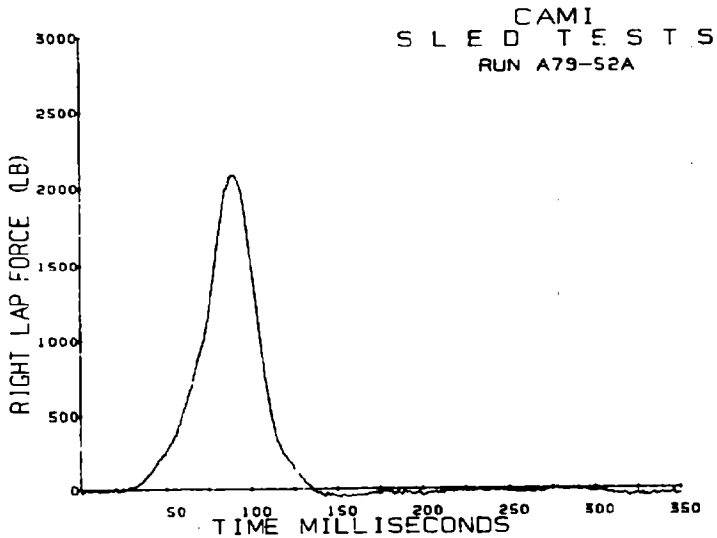

CAMI
SLED TESTS
RUN A79-51C
FOOT REST X FORCE (DA LB)
TIME MILLISECONDS

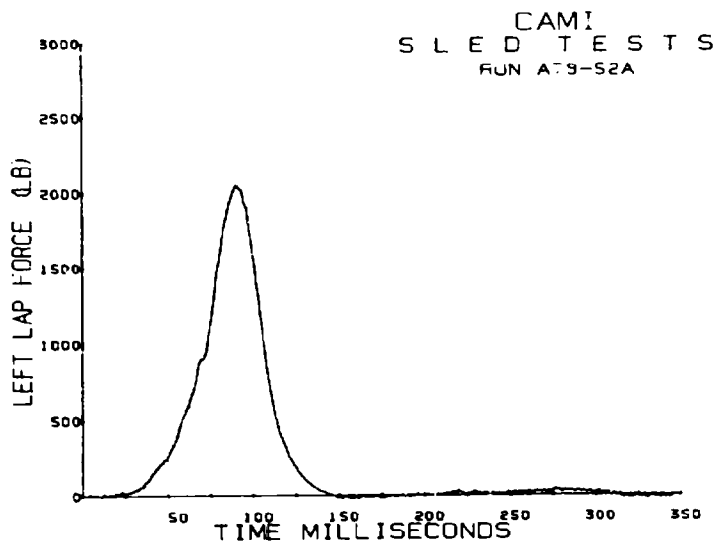

CAMI
SLED TESTS
RUN A79-51C
FOOT REST Y FORCE (DA LB)
TIME MILLISECONDS

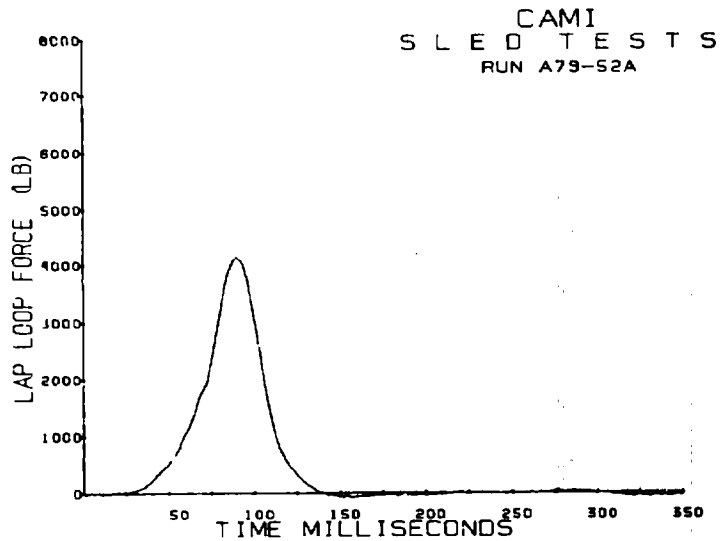

CAMI
SLED TESTS
RUN A79-51C
FOOT REST Z FORCE (DA LB)
TIME MILLISECONDS

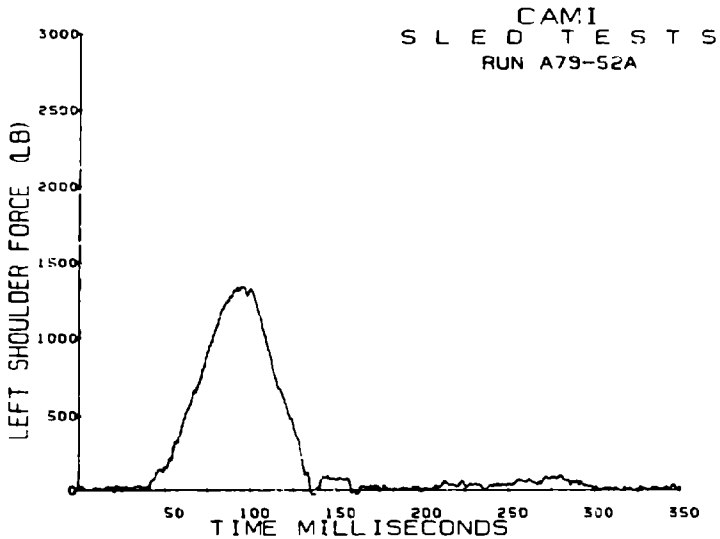

CAMI
SLED TESTS
RUN A79-51C
FOOT REST RESULTANT FORCE (DA LB)
TIME MILLISECONDS

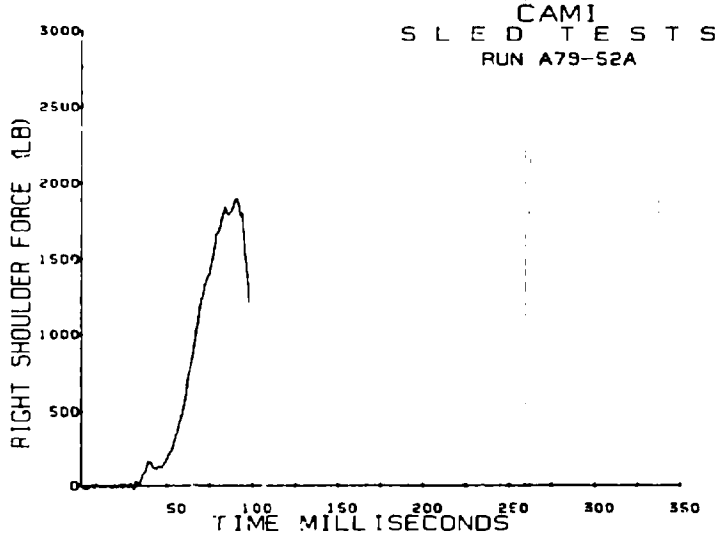

CAMI
S L E D T E S T S
SLED X ACCELERATION (G)
TIME MILLISECONDS

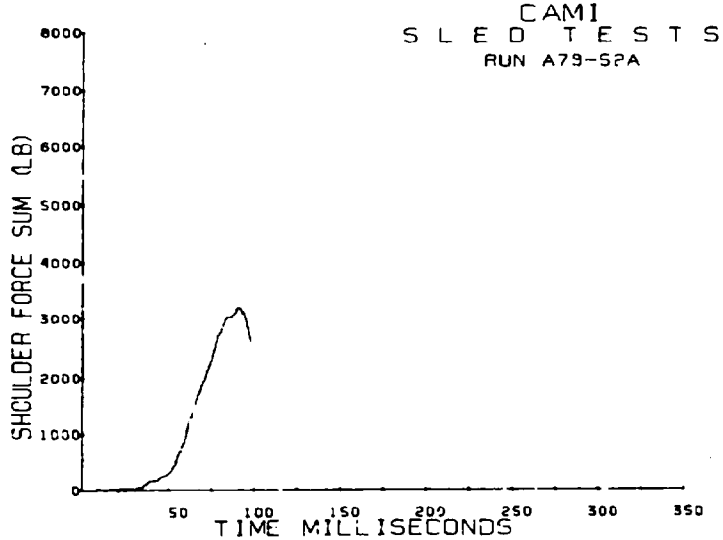

CAMI
S L E D T E S T S
RUN A79-S2A
RIGHT LAP FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

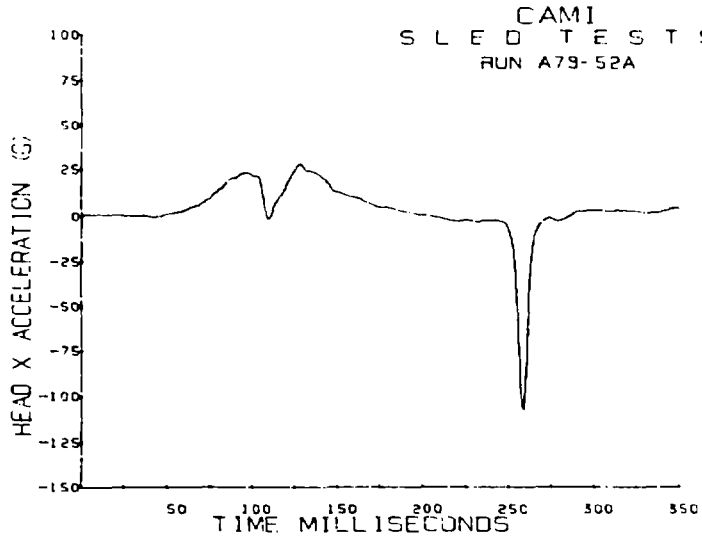

CAMI
S L E D T E S T S
RUN A79-S2A
LEFT LAP FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

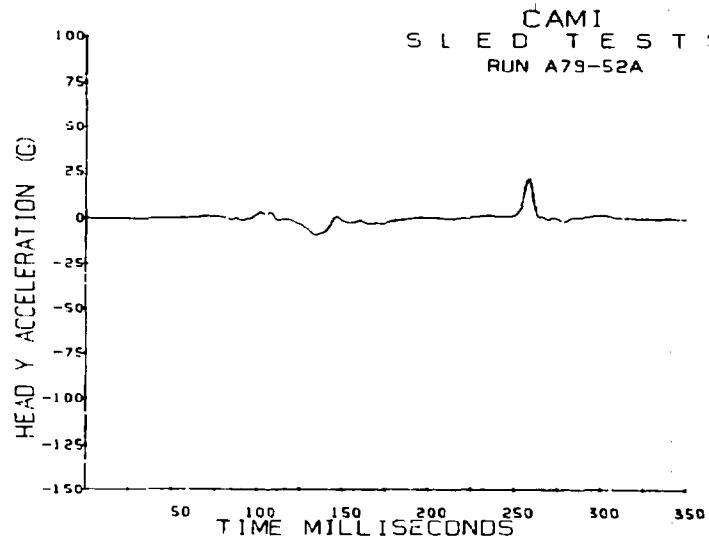

CAMI
S L E D T E S T S
RUN A79-S2A
LAP LOOP FORCE (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

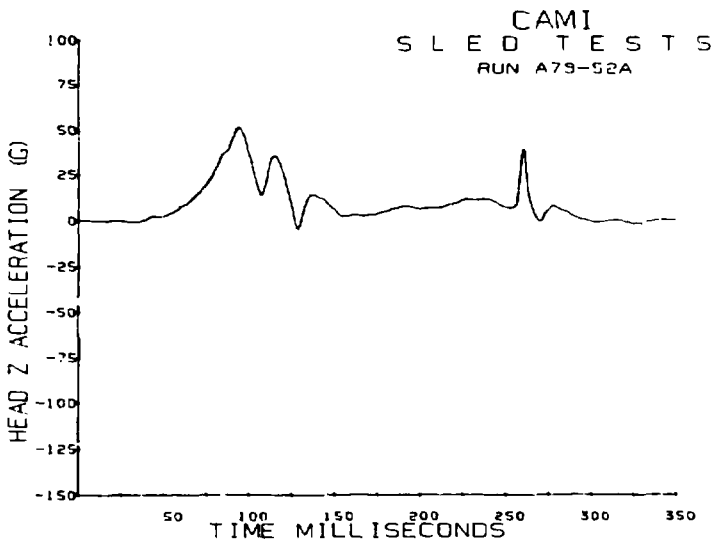

CAMI
SLED TESTS
RUN A79-52A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

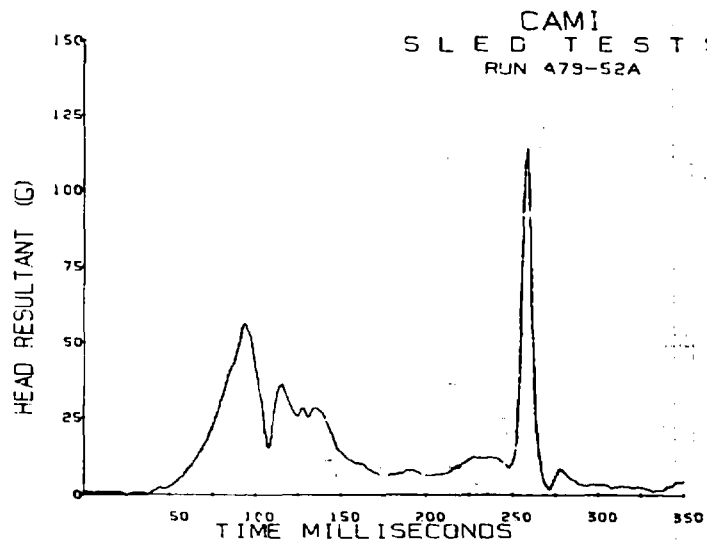

CAMI
SLED TESTS
RUN A79-52A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
50
100
150
200
250
300
350
TIME MILLISECONDS

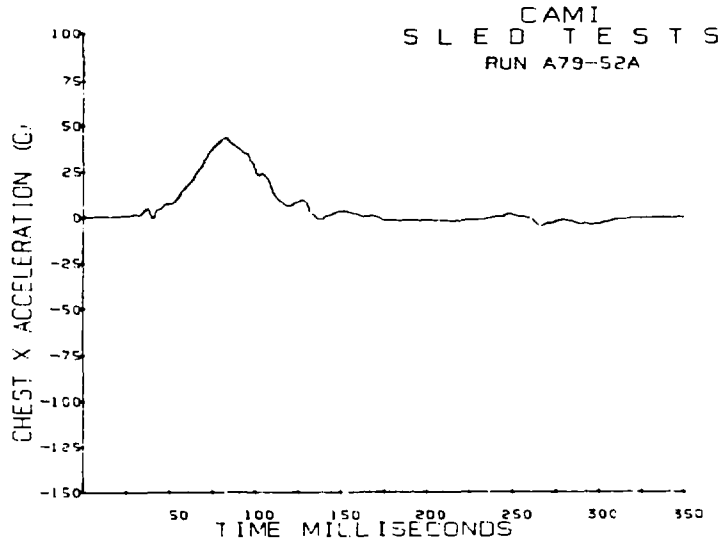

CAMI
SLED TESTS
RUN A79-52A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
50
100
150
200
250
300
350
TIME MILLISECONDS

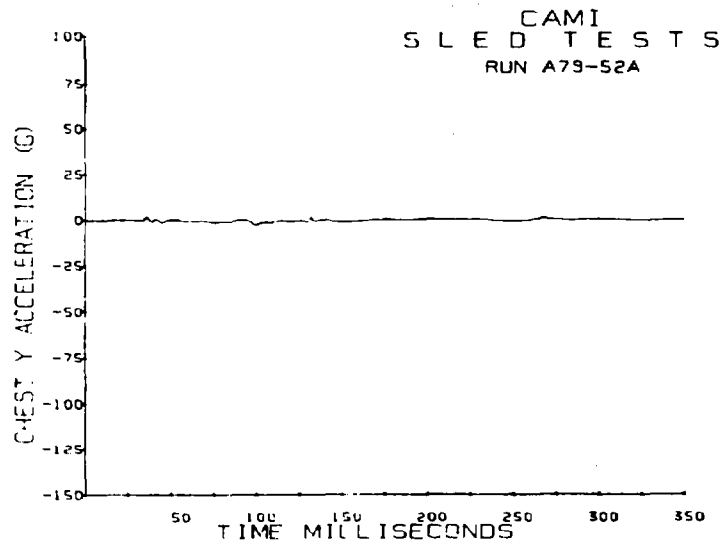

CAMI
S L E D T E S T S
RUN A79-52A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

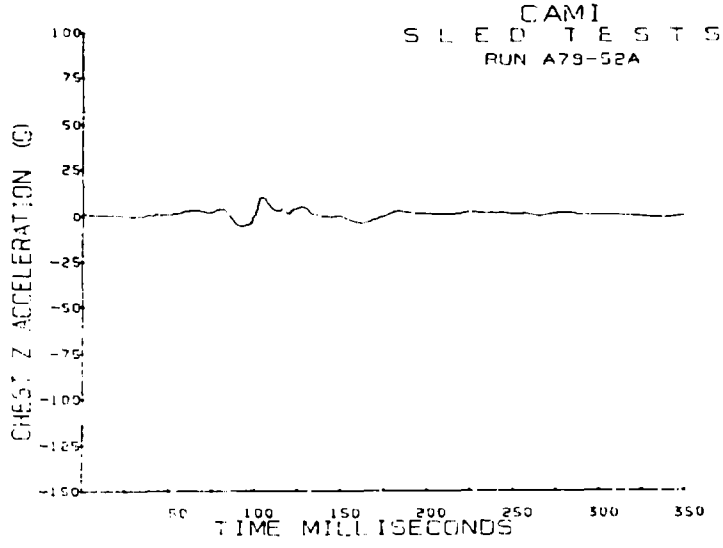

CAMI
S L E D T E S T S
RUN A79-52A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

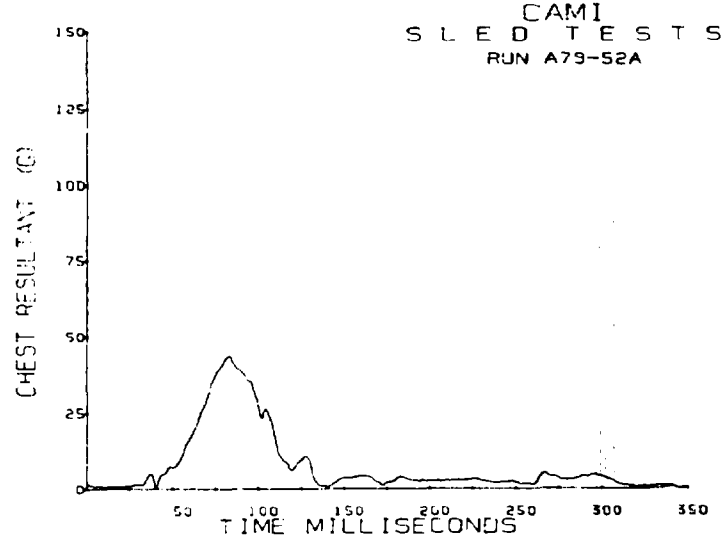

CAMI
S L E D T E S T S
RUN A79-52A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

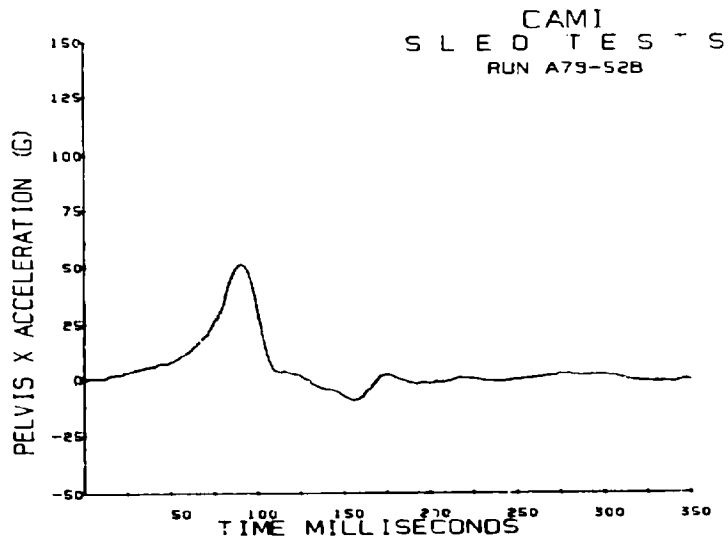

CAMI
S L E D T E S T S
RUN A79-52A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

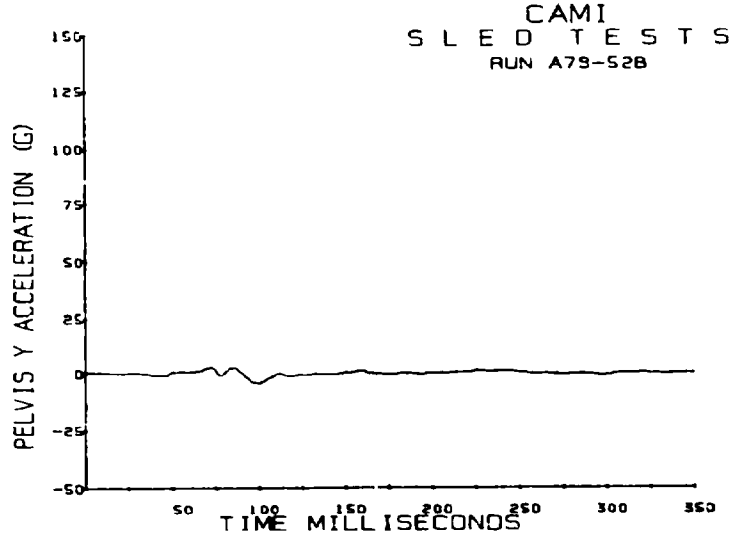

CAMI
S L E D T E S T S
RUN A79-52A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

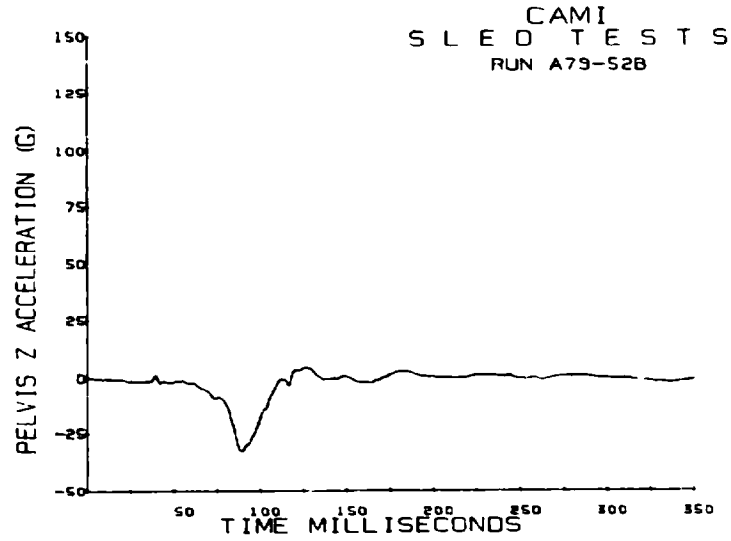

CAMI
S L E D T E S T S
RUN A79-52A
CHEST Y ACCELERATION (G)
TIME MILLISECONDS

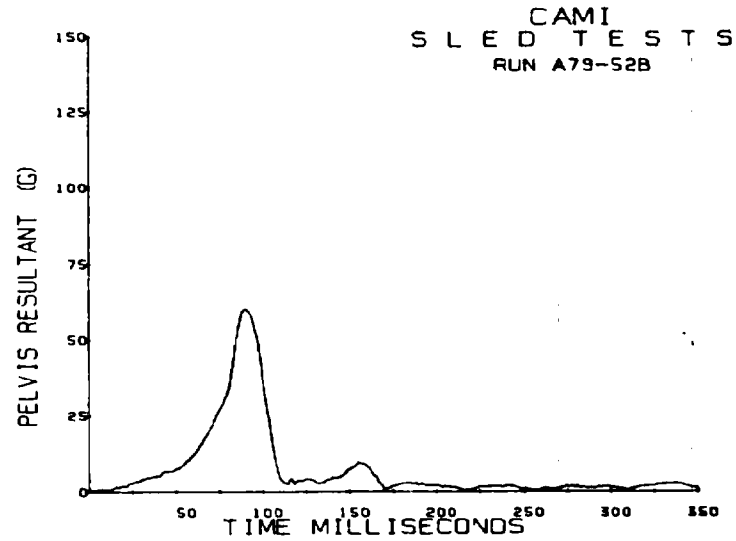

CAMI
S L E D T E S T S
RUN A79-52A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS

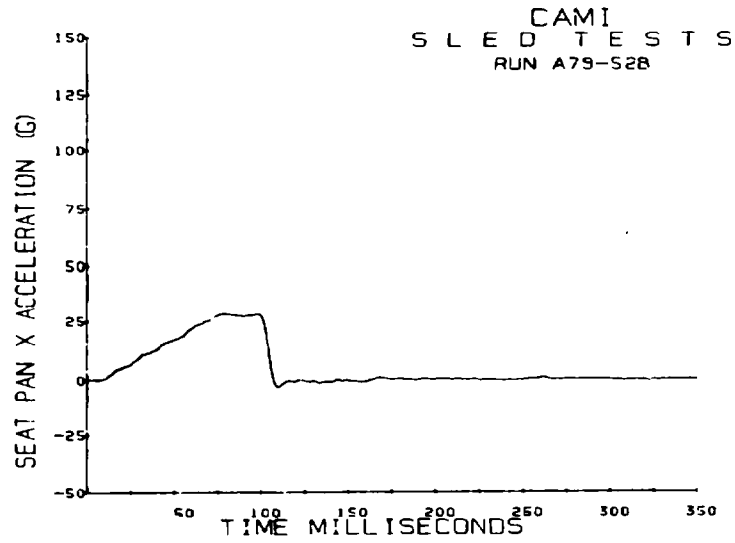

CAMI
S L E D T E S T S
RUN A79-52A
CHEST RESULTANT (G)
TIME MILLISECONDS

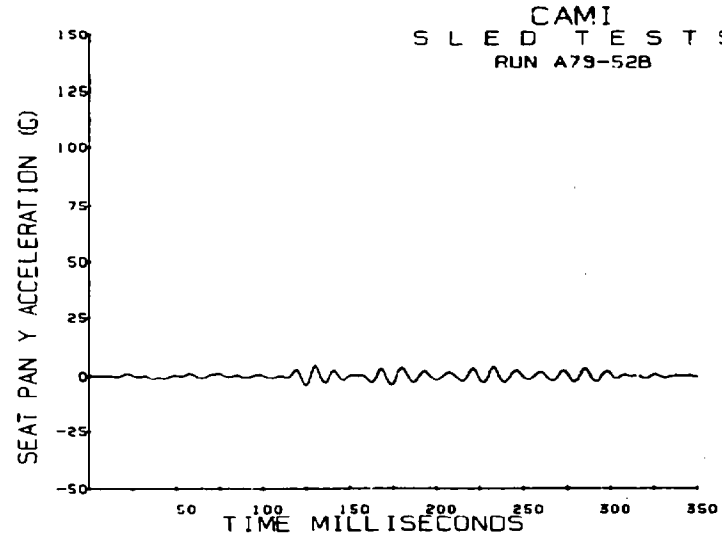

CAMI
SLED TESTS
RUN A79-52B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

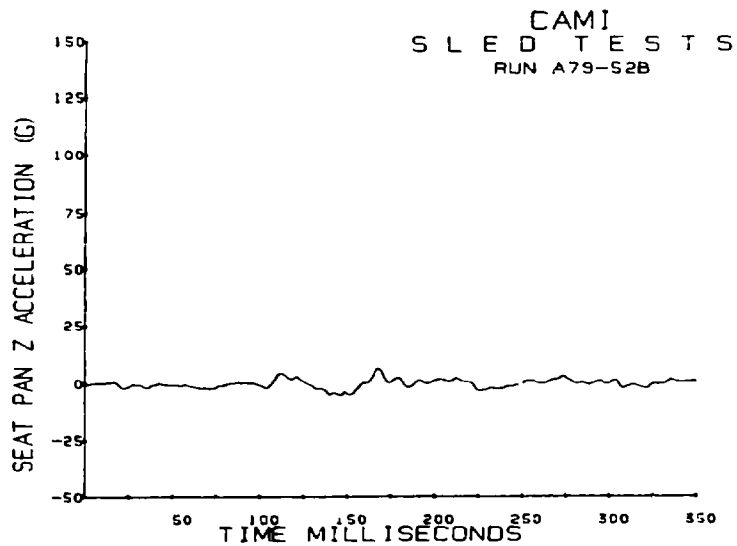

CAMI
SLED TESTS
RUN A79-52B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

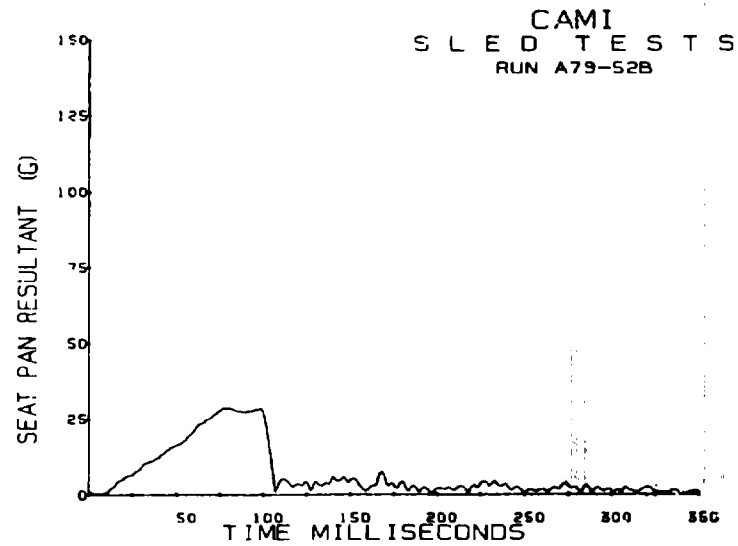

CAMI
SLED TESTS
RUN A79-52B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

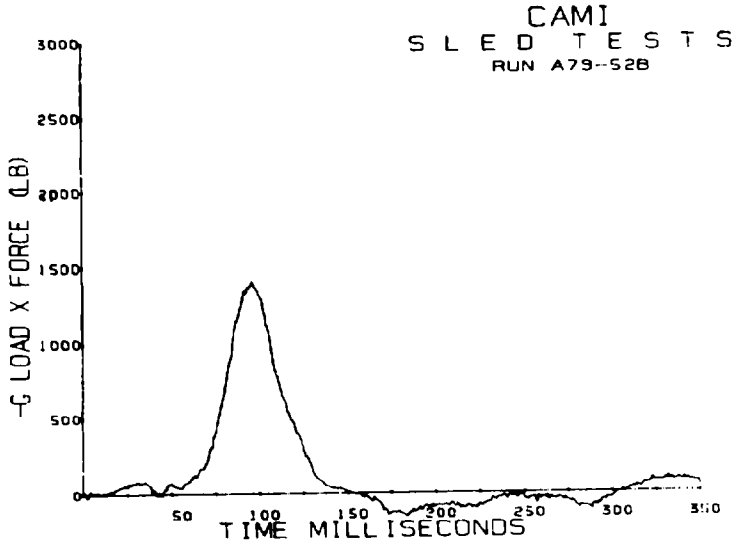

CAMI
SLED TESTS
RUN A79-52B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

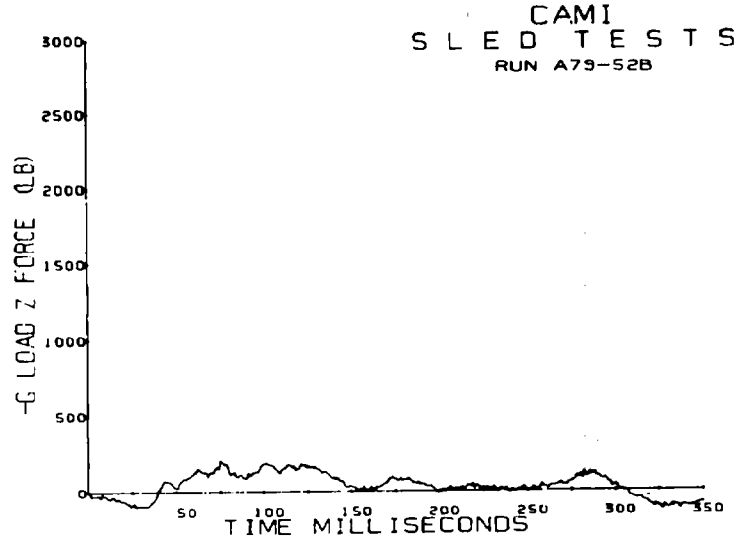

CAMI
S L E D T E S T S
RUN A79-S2B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

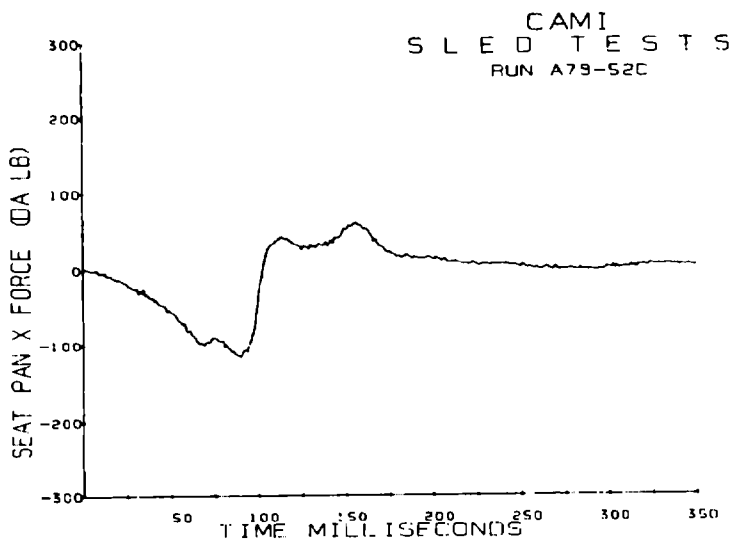

CAMI
S L E D T E S T S
RUN A79-S2B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

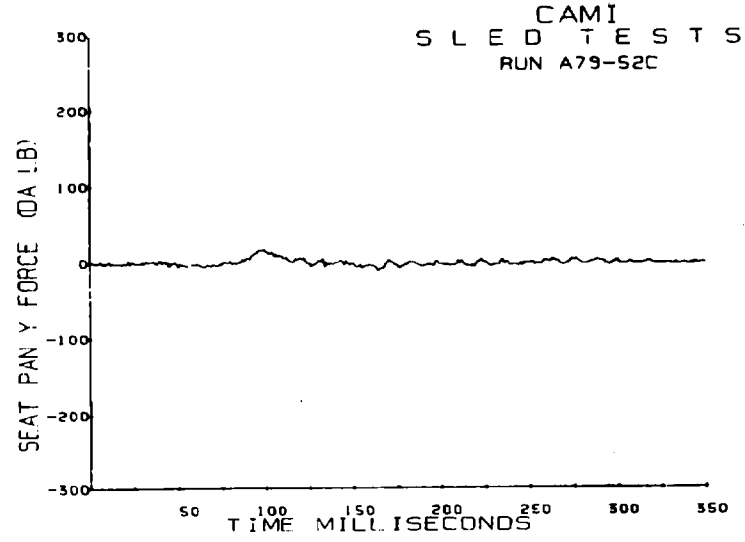

CAMI
S L E D T E S T S
RUN A79-S2B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

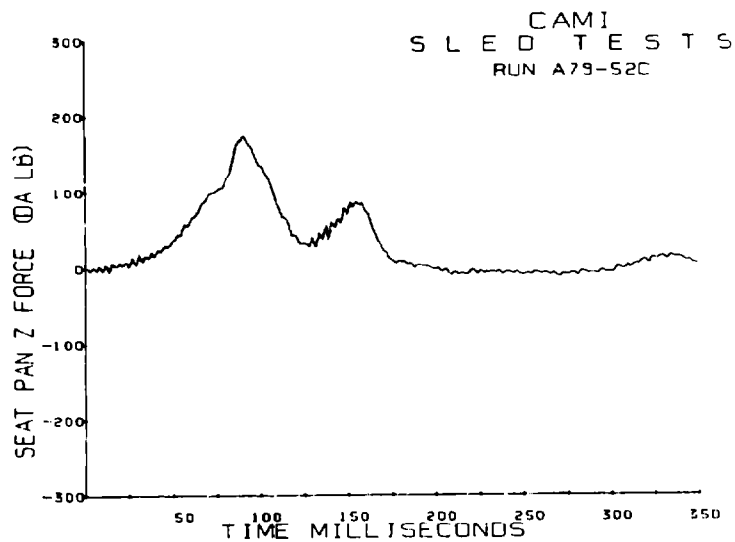

CAMI
S L E D T E S T S
RUN A79-S2B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

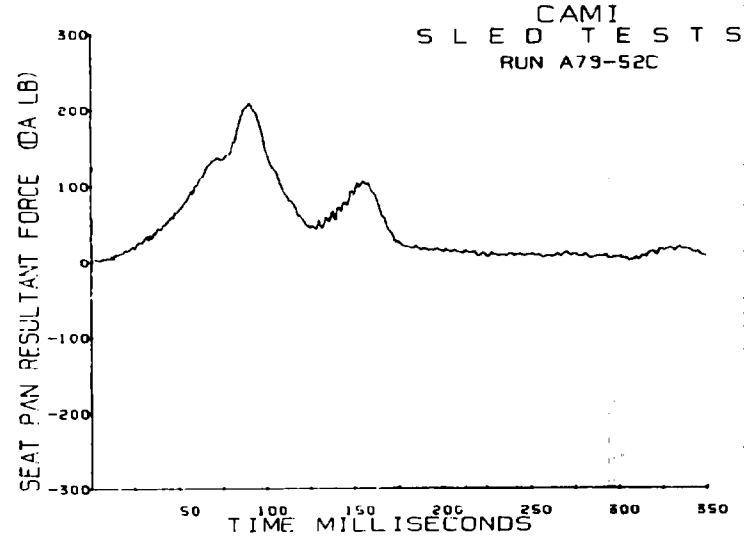

CAMI
SLED TESTS
RUN A79-52B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

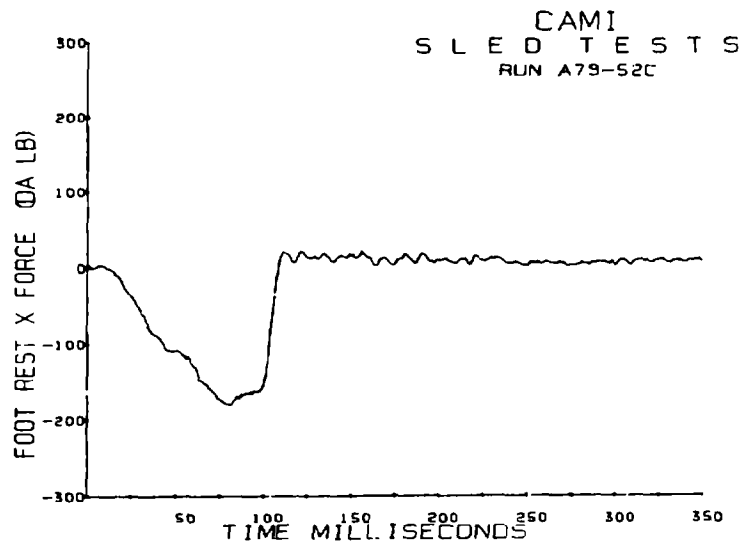

CAMI
SLED TESTS
RUN A79-52B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

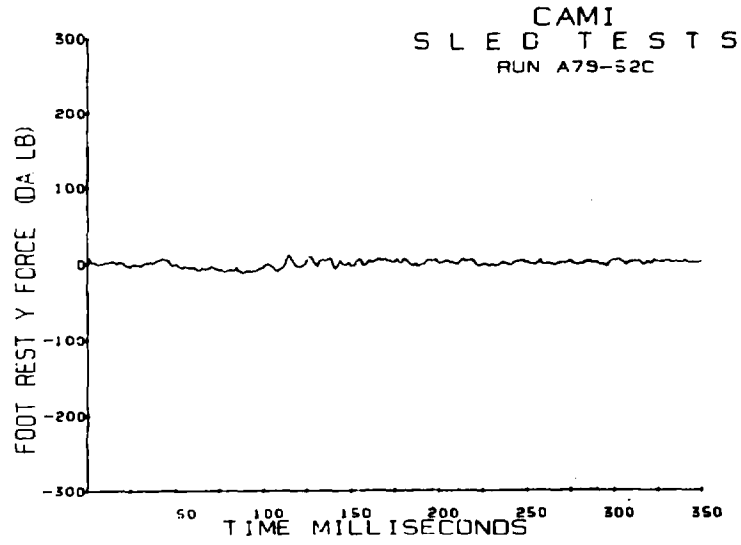

CAMI
SLED TESTS
RUN A79-52C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

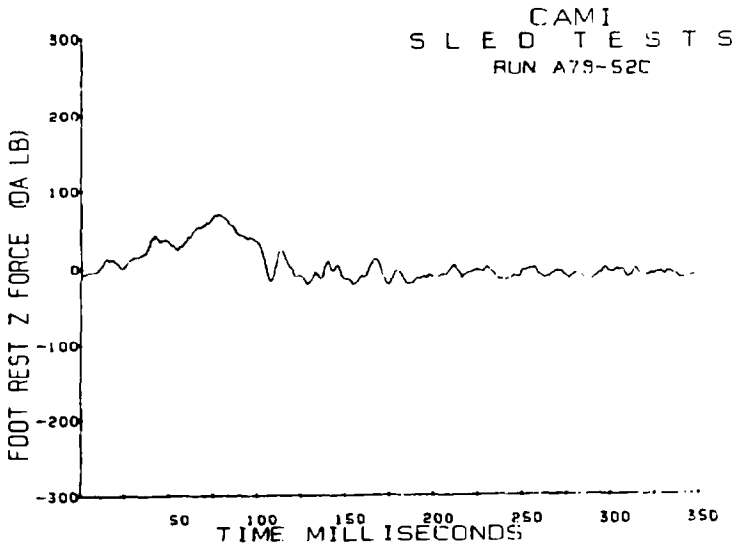

CAMI
SLED TESTS
RUN A79-52C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

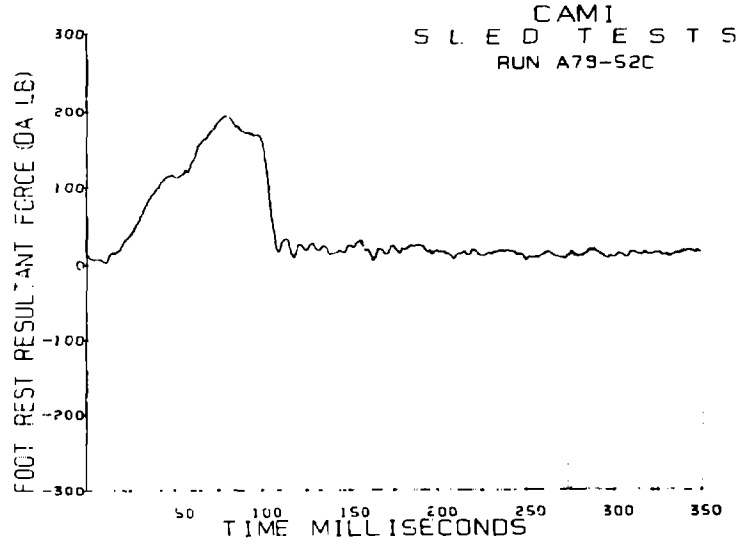

CAMI
SLED TESTS
RUN A79-52C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

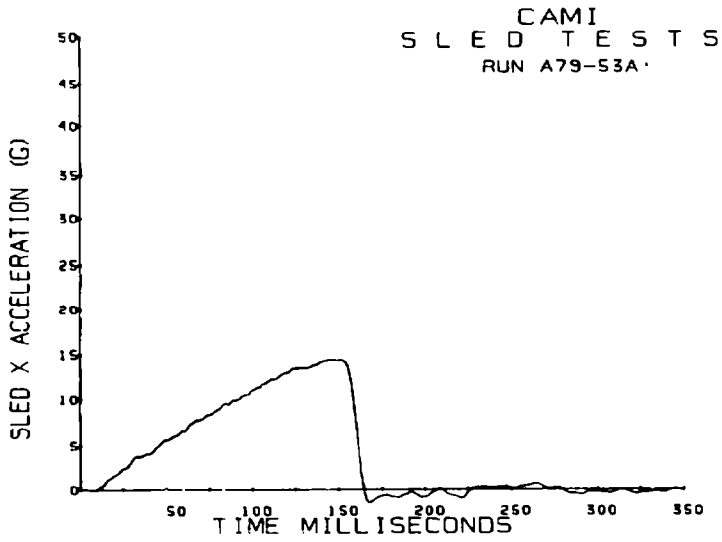

CAMI
SLED TESTS
RUN A79-52C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

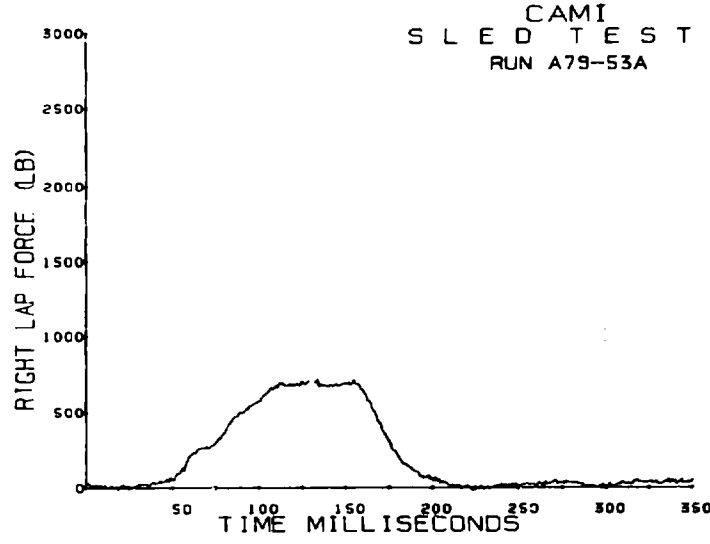

CAMI
S L E D T E S T S
RUN A79-52C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

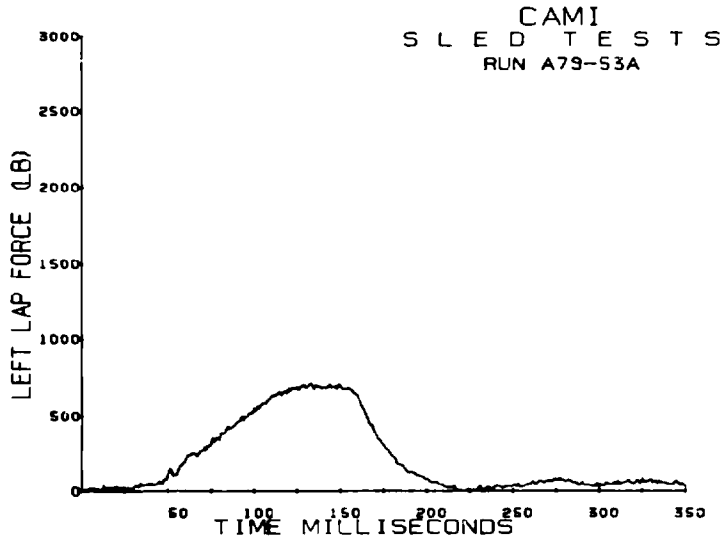

CAMI
S L E D T E S T S
RUN A79-52C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

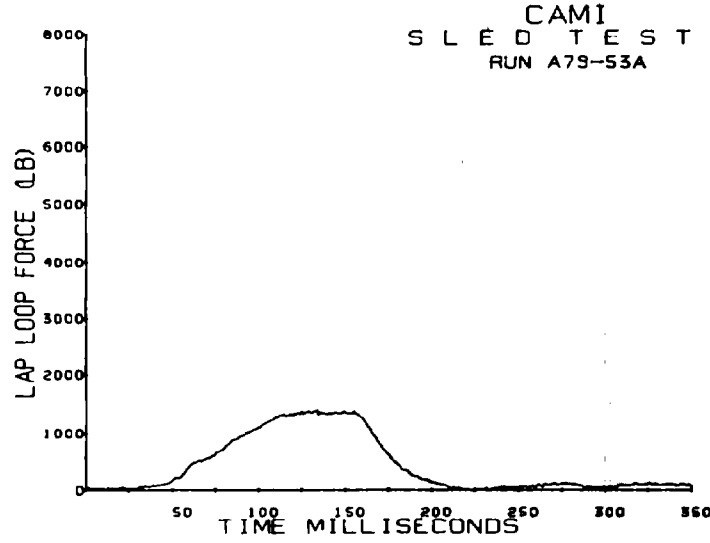

CAMI
S L E D T E S T S
RUN A79-52C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

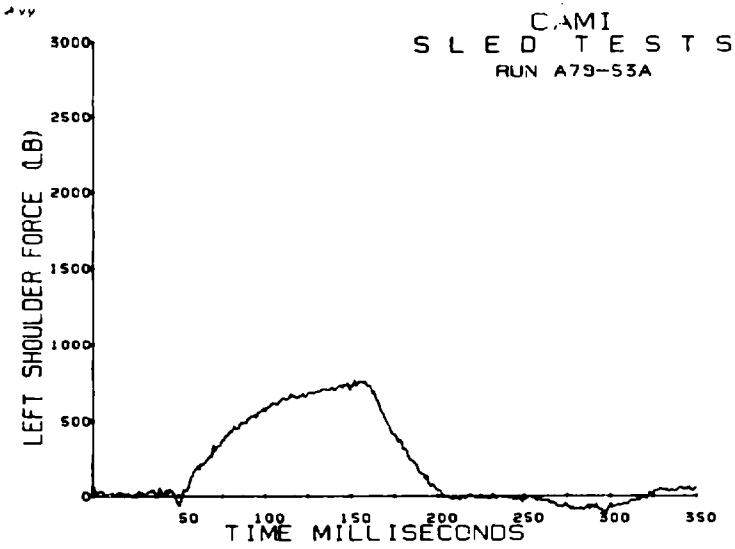

CAMI
S L E D T E S T S
RUN A79-52C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

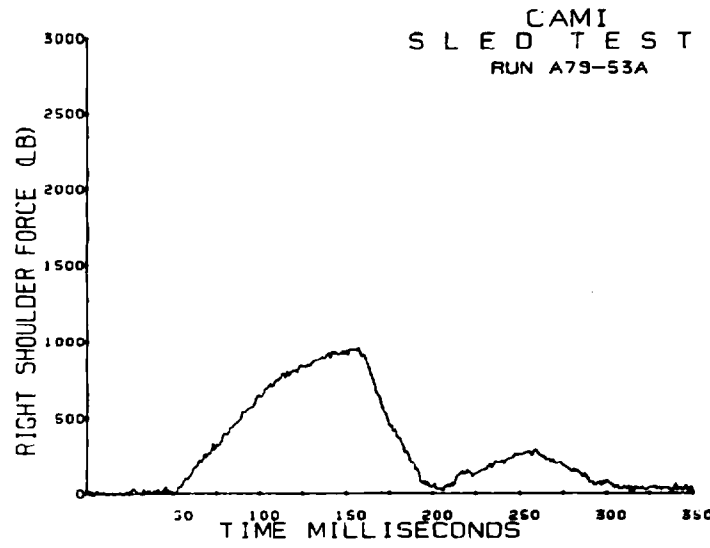

CAMI
S L E D T E S T S
RUN A79-53A
SLED X ACCELERATION (G)
50
45
40
35
30
25
20
15
10
5
0
50
100
150
200
250
300
350
TIME MILLISECONDS

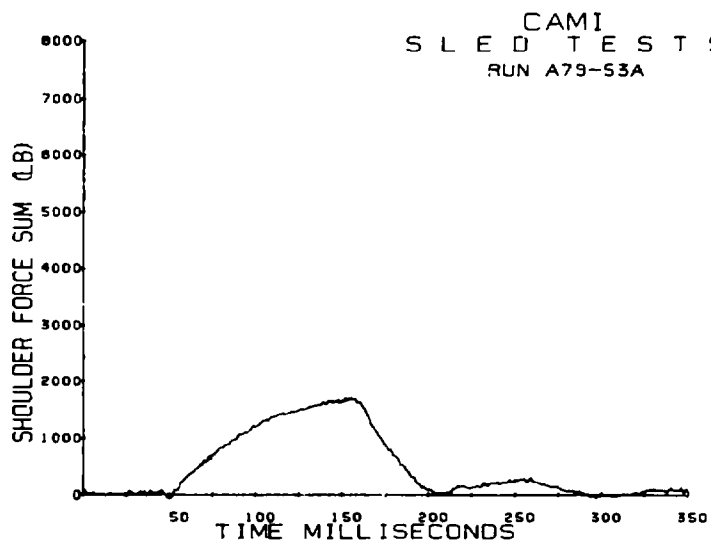

CAMI
S L E D T E S T S
RUN A79-53A
RIGHT LAP FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

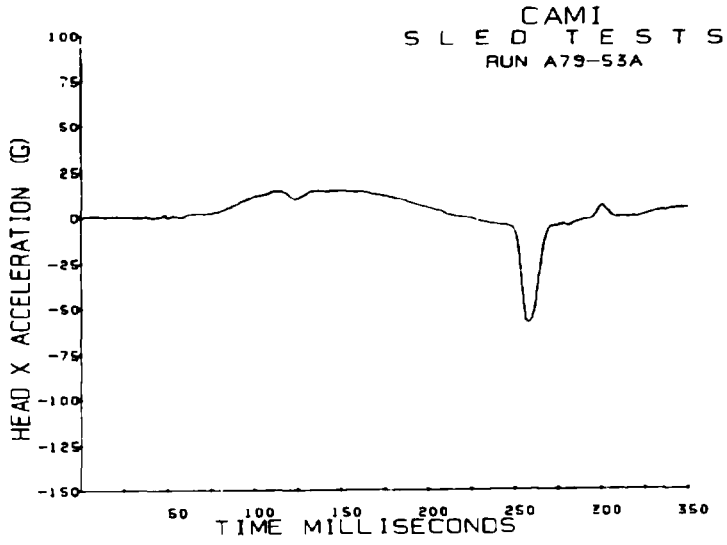

CAMI
S L E D T E S T S
RUN A79-53A
LEFT LAP FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

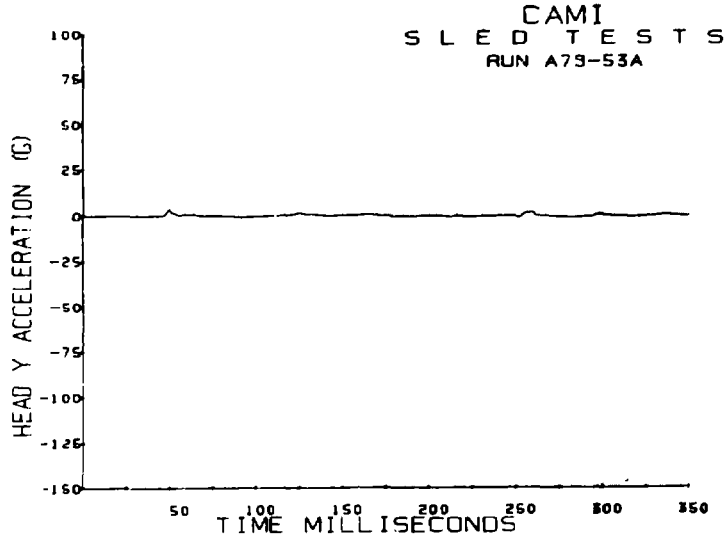

CAMI
S L E D T E S T S
RUN A79-53A
LAP LOOP FORCE (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

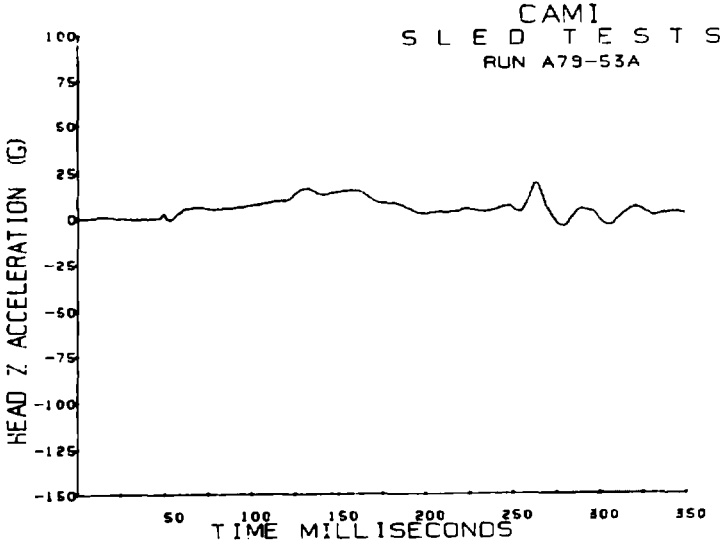

CAMI
S L E D T E S T S
RUN A79-53A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

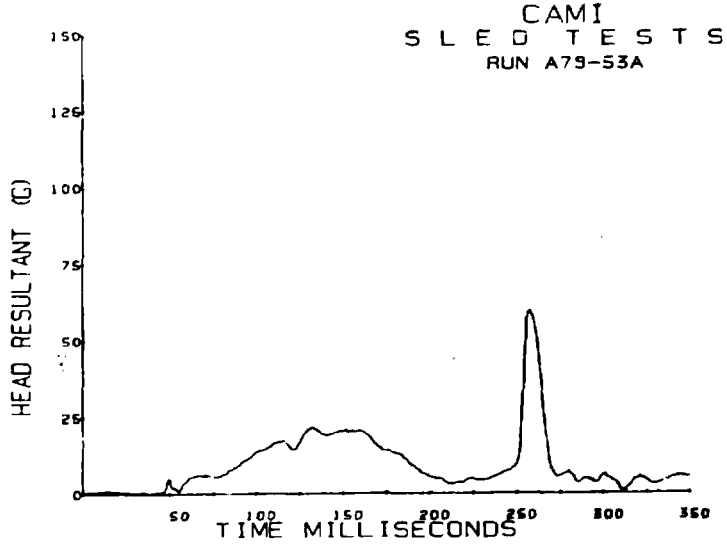

CAMI
S L E D T E S T S
RUN A79-53A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

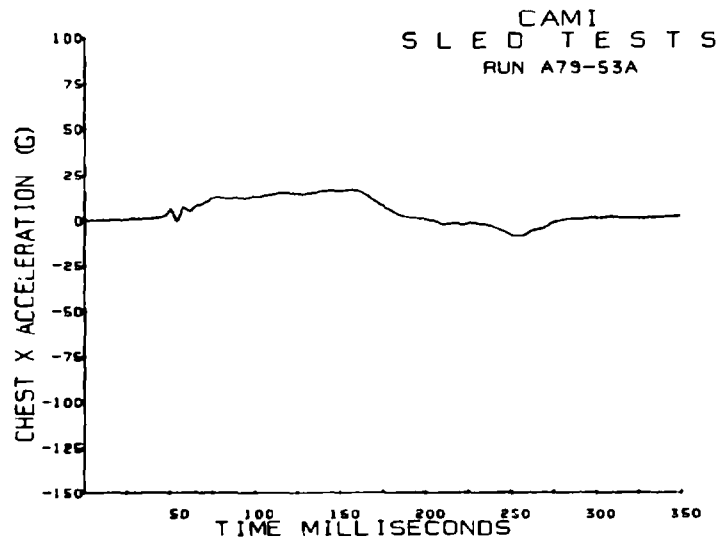

CAMI
S L E D T E S T S
RUN A79-53A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

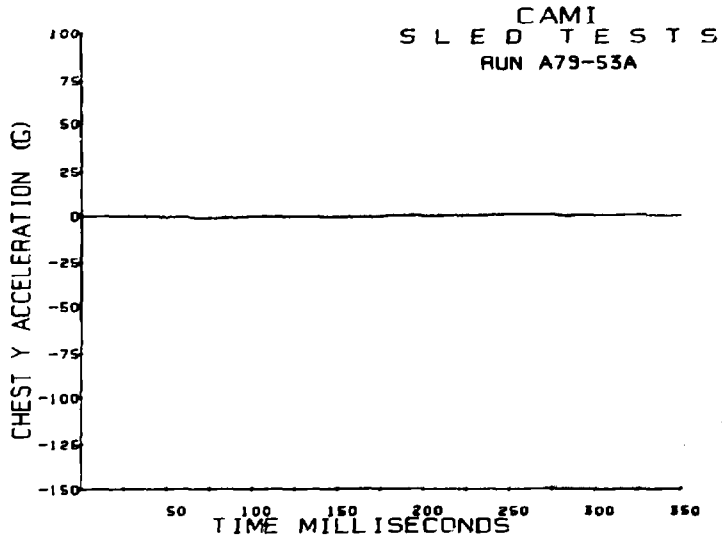

CAMI
SLED TESTS
RUN A79-53A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

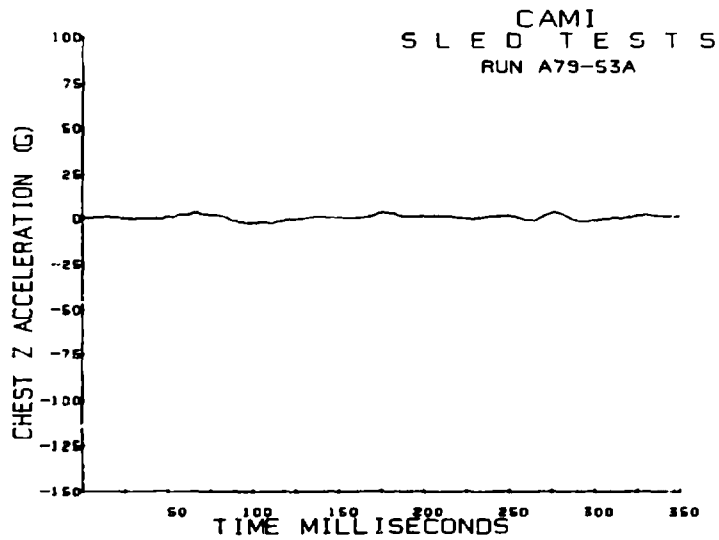

CAMI
SLED TESTS
RUN A79-53A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

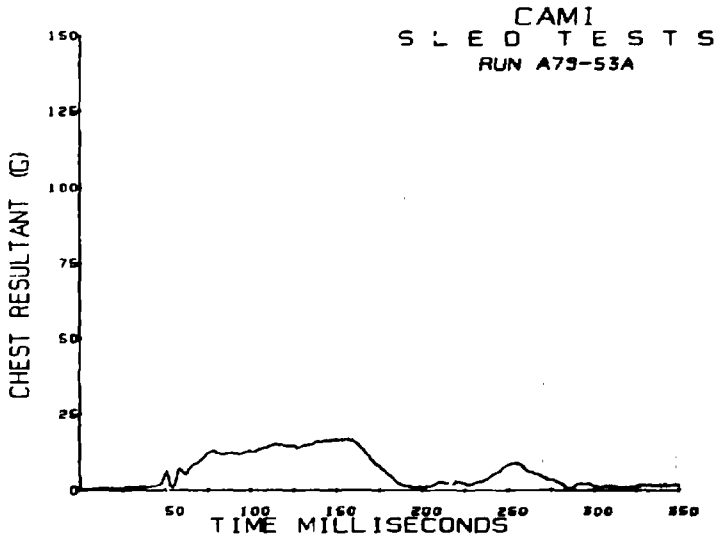

CAMI
SLED TESTS
RUN A79-53A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

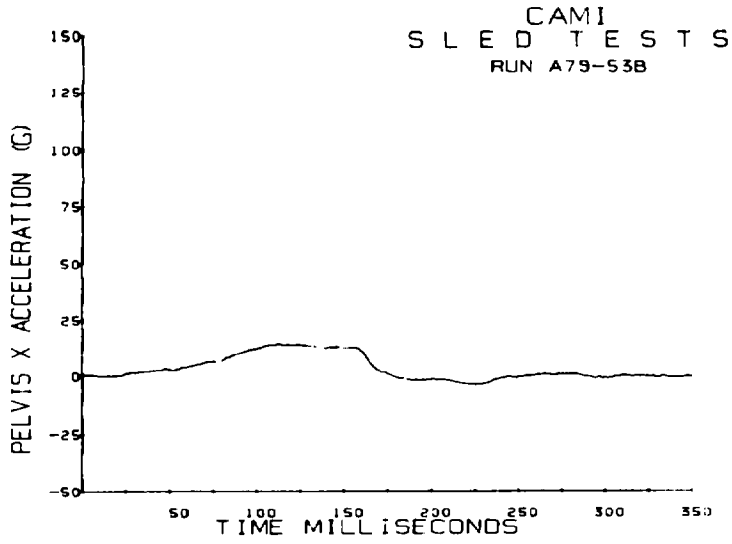

CAMI
SLED TESTS
RUN A79-53A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

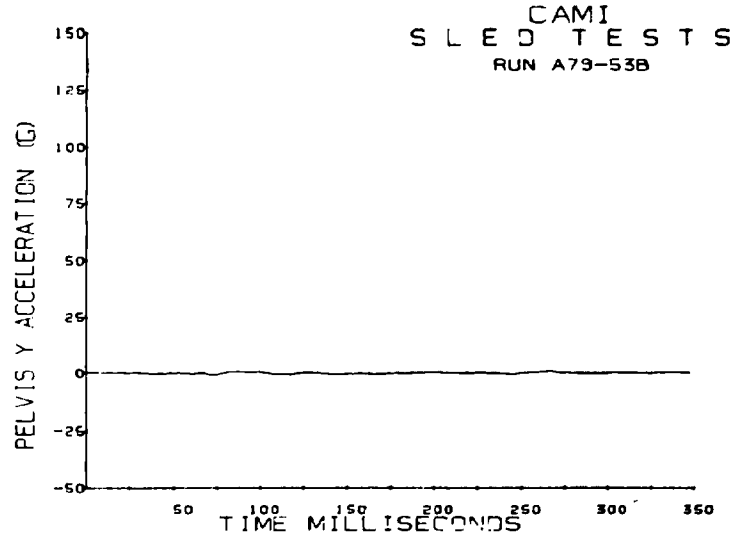

CAMI
SLED TESTS
RUN A79-53A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

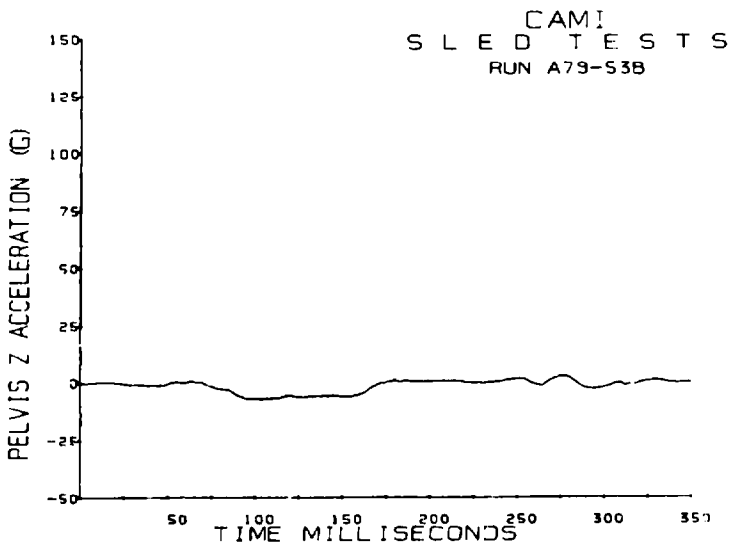

CAMI
SLED TESTS
RUN A79-53A
CHEST Y ACCELERATION (G)
TIME MILLISECONDS

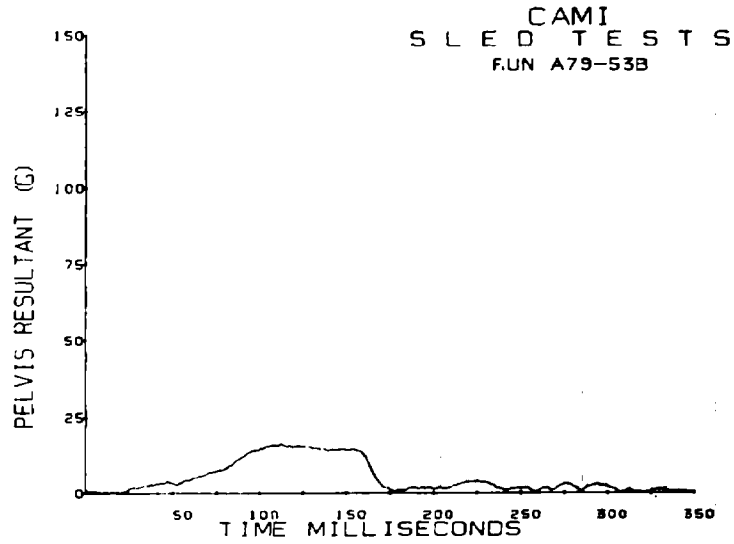

CAMI
SLED TESTS
RUN A79-53A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS

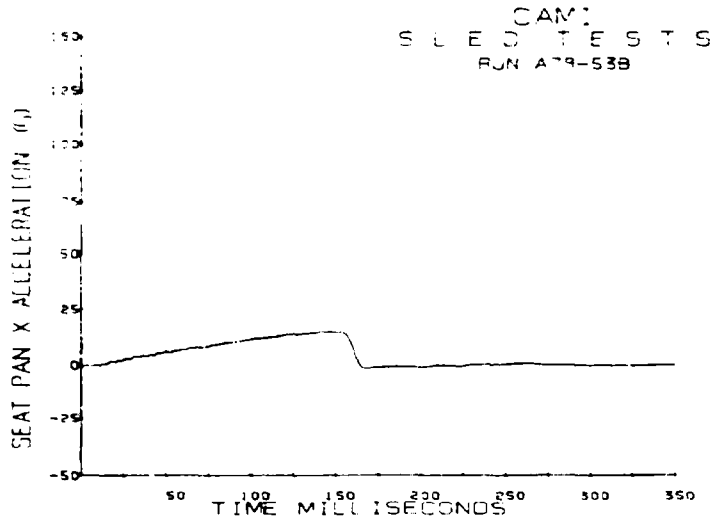

CAMI
SLED TESTS
RUN A79-53A
CHEST RESULTANT (G)
TIME MILLISECONDS

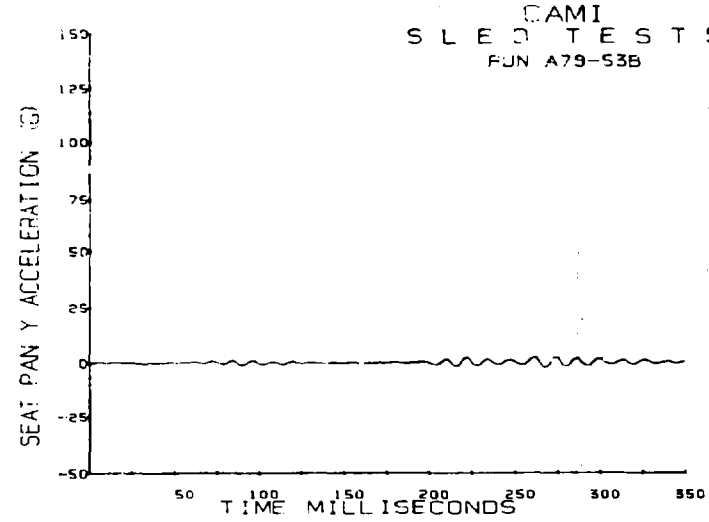

CAMI
SLED TESTS
RUN A79-53B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

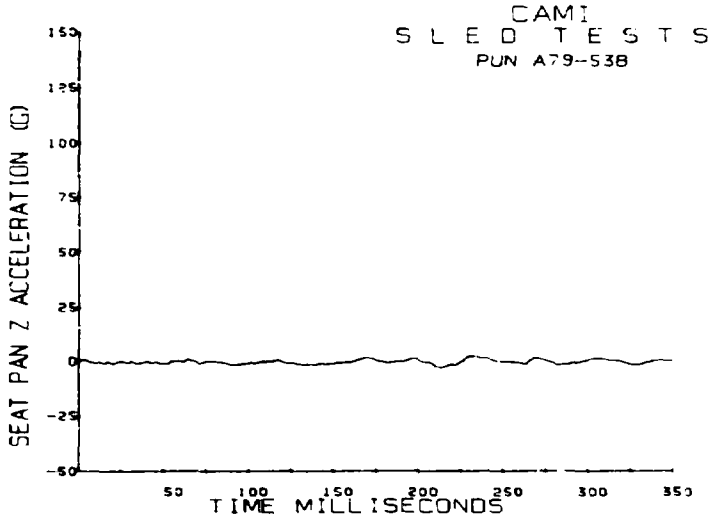

CAMI
SLED TESTS
RUN A79-53B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

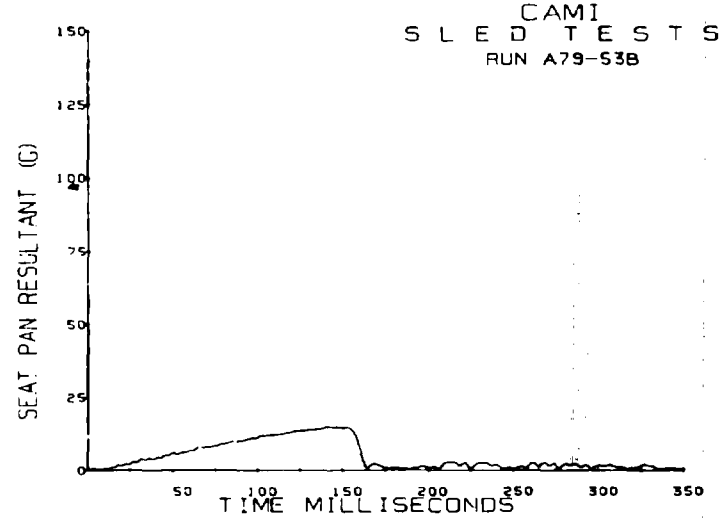

CAMI
SLED TESTS
RUN A79-53B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

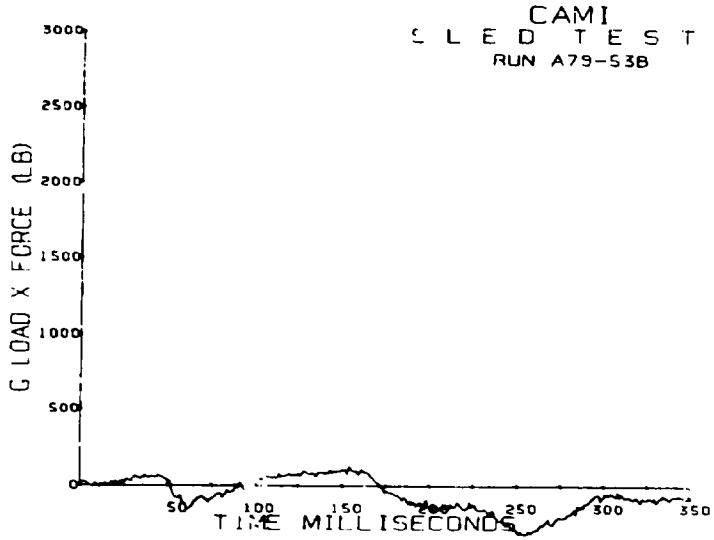

CAMI
SLED TESTS
RUN A79-53B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

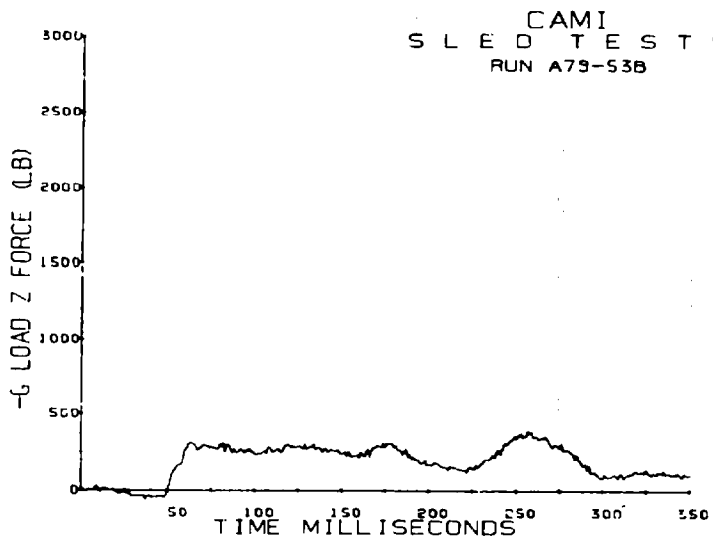

CAMI
SLED TESTS
RUN A79-53B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

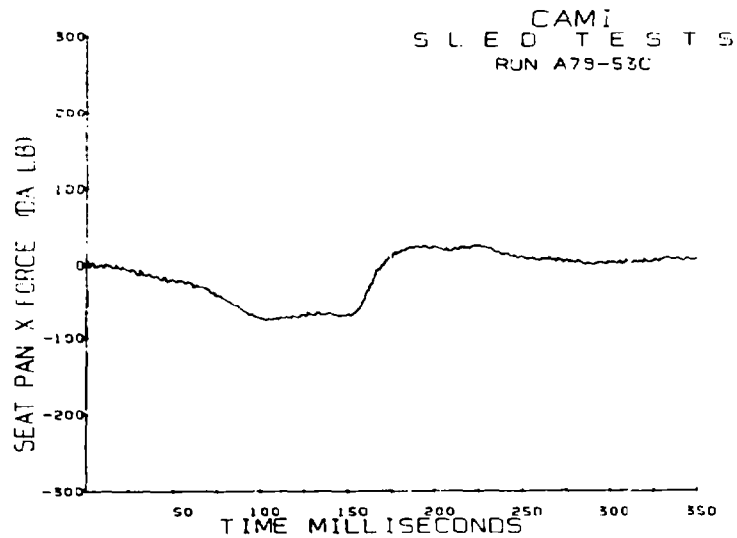

CAMI
SLED TESTS
RUN A79-53B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

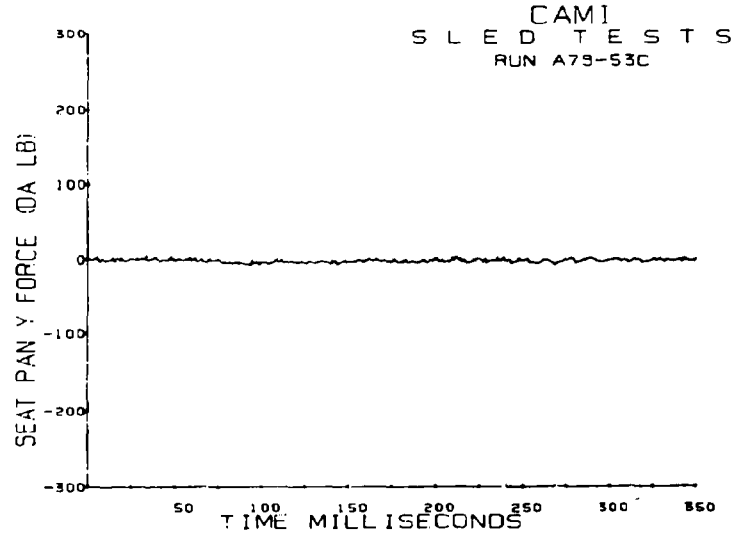

CAMI
SLED TESTS
RUN A79-53B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

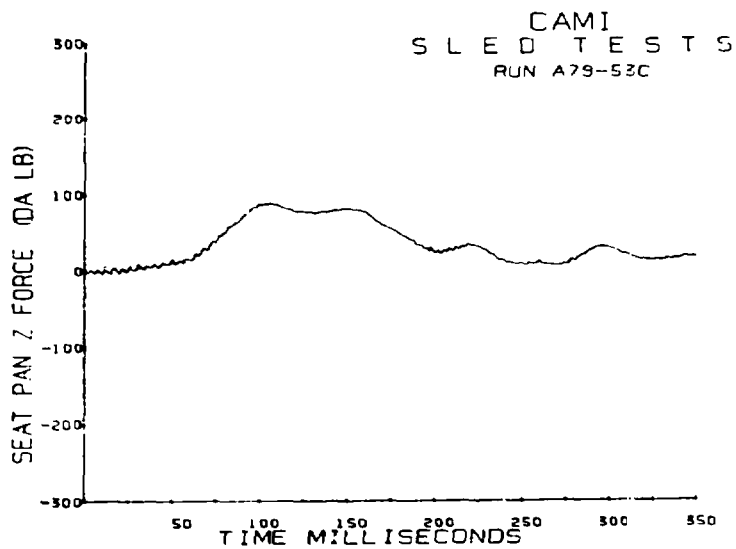

CAMI
SLED TESTS
RUN A79-53B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

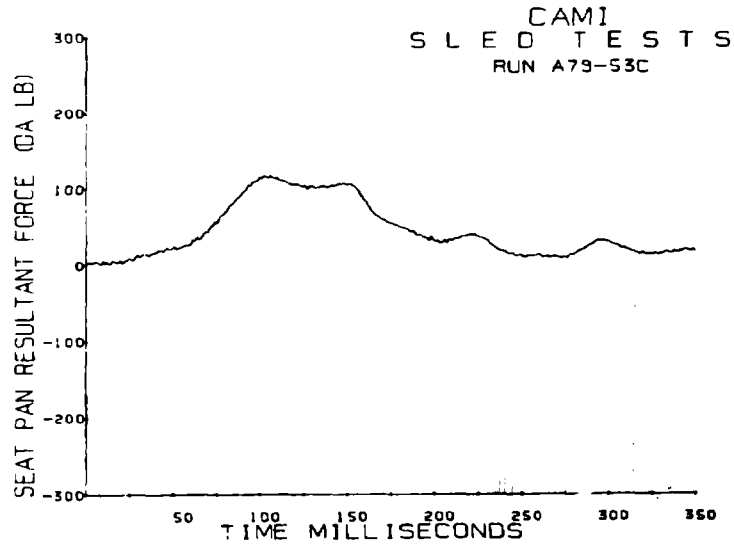

CAMI
SLED TESTS
RUN A79-S3B
G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

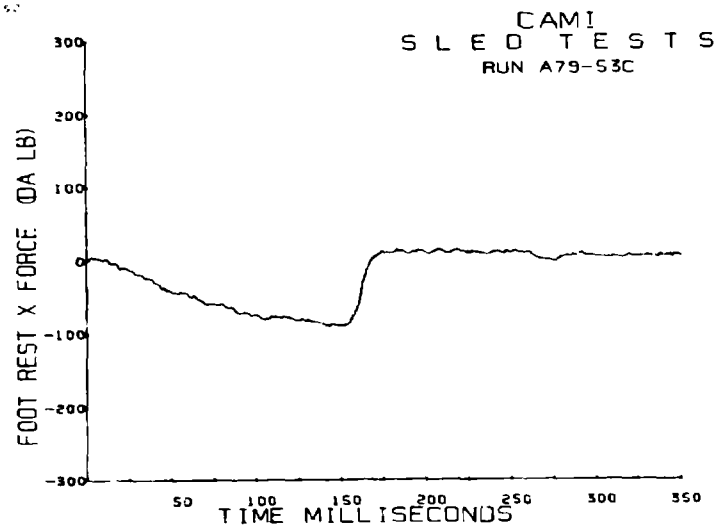

CAMI
SLED TESTS
RUN A79-S3B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

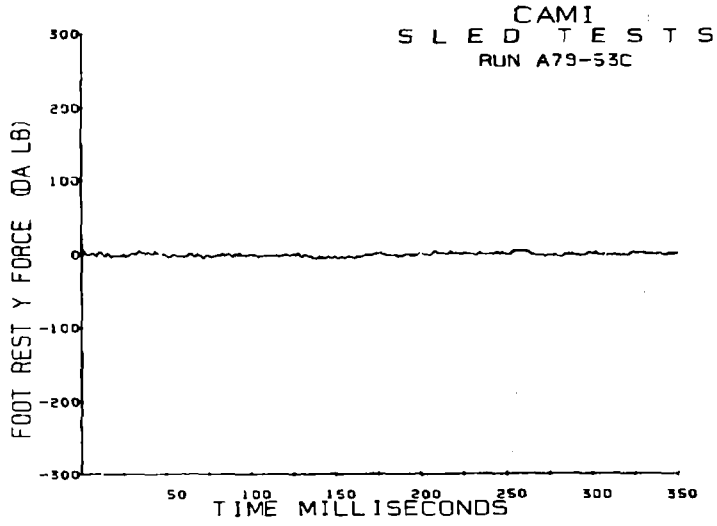

CAMI
SLED TESTS
RUN A79-53C
SEAT PAN X FORCE (DA LB)
TIME MILLISECONDS

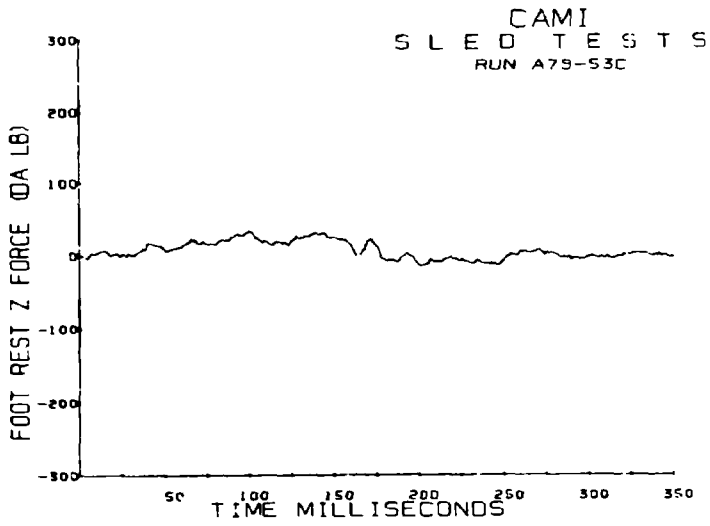

CAMI
SLED TESTS
RUN A79-53C
SEAT PAN Y FORCE (DA LB)
TIME MILLISECONDS

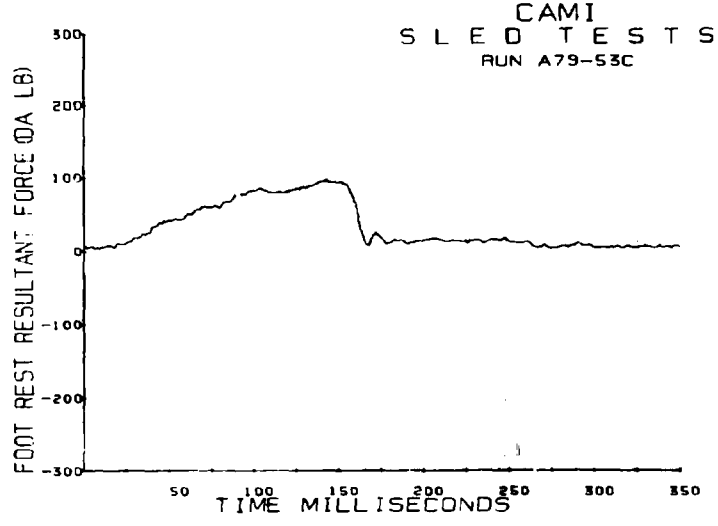

CAMI
SLED TESTS
RUN A79-53C
SEAT PAN Z FORCE (DA LB)
TIME MILLISECONDS

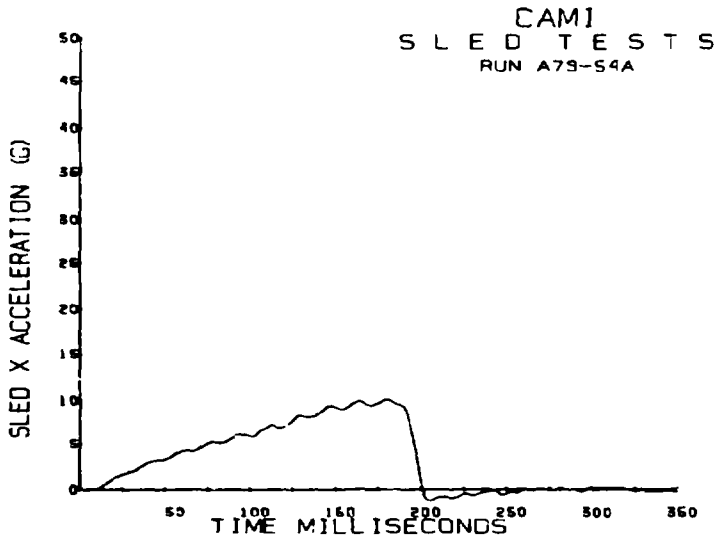

CAMI
SLED TESTS
RUN A79-53C
SEAT PAN RESULTANT FORCE (DA LB)
TIME MILLISECONDS

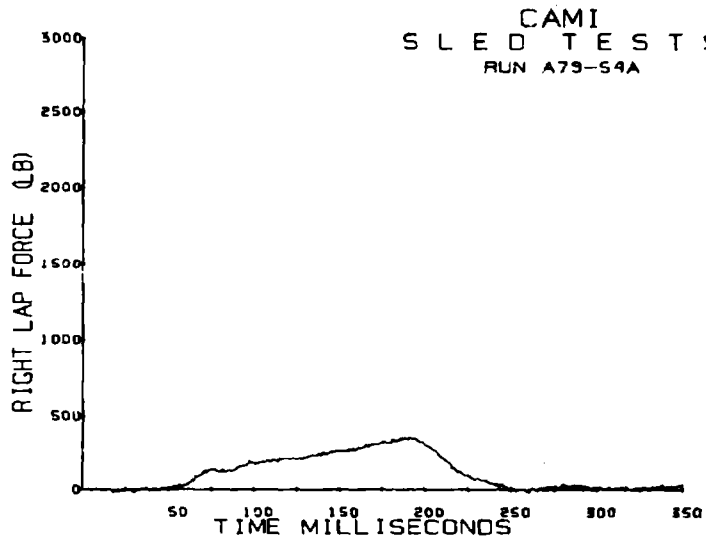

CAMI
S L E D T E S T S
RUN A79-53C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

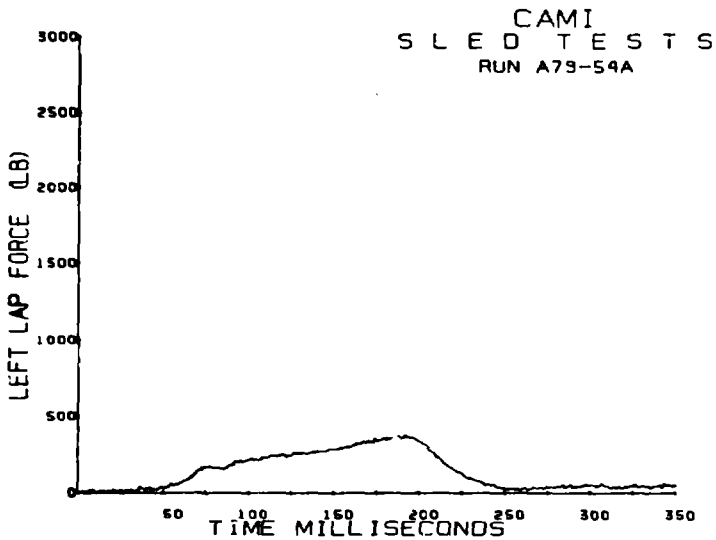

CAMI
S L E D T E S T S
RUN A79-53C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

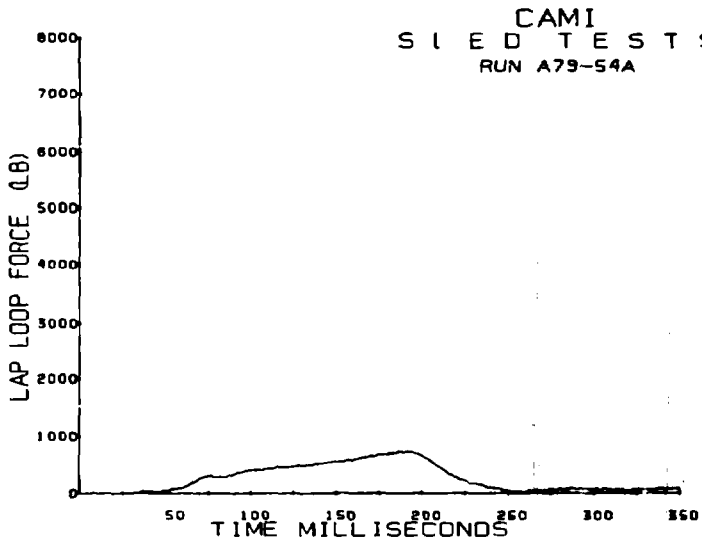

CAMI
S L E D T E S T S
RUN A79-53C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

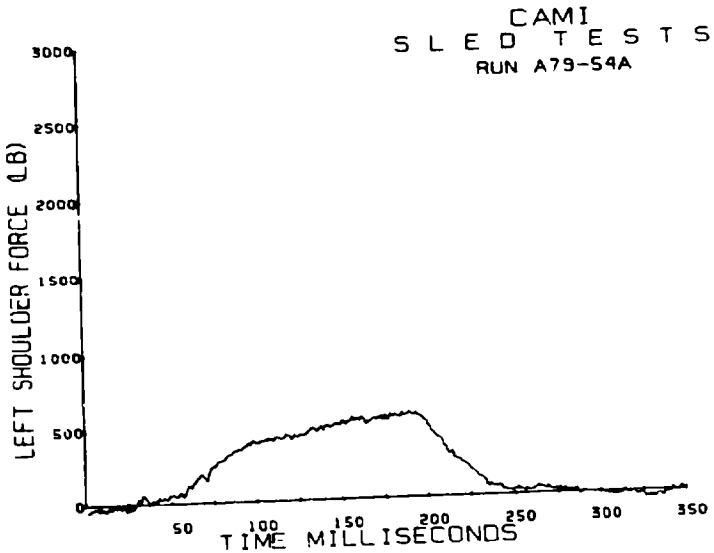

CAMI
S L E D T E S T S
RUN A79-53C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

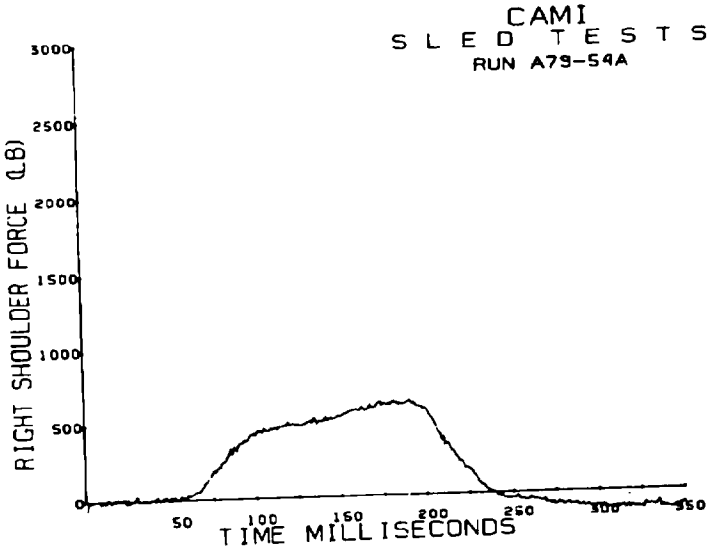

CAMI
SLED TESTS
RUN A79-54A
SLED X ACCELERATION (G)
TIME MILLISECONDS

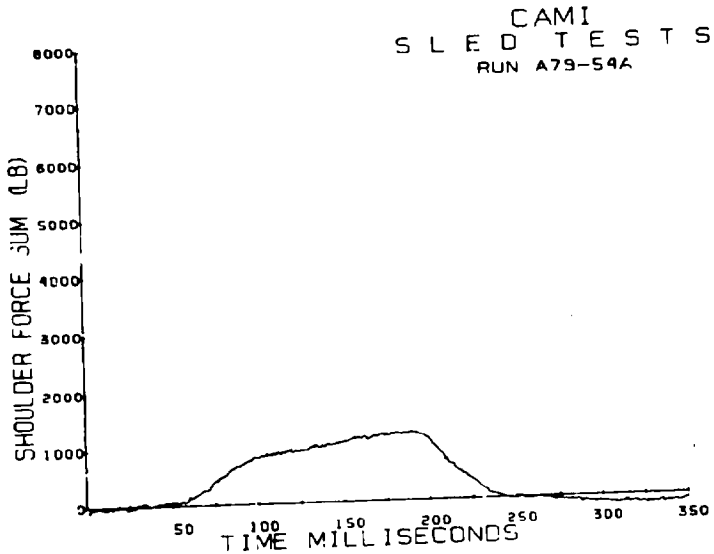

CAMI
SLED TESTS
RUN A79-54A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

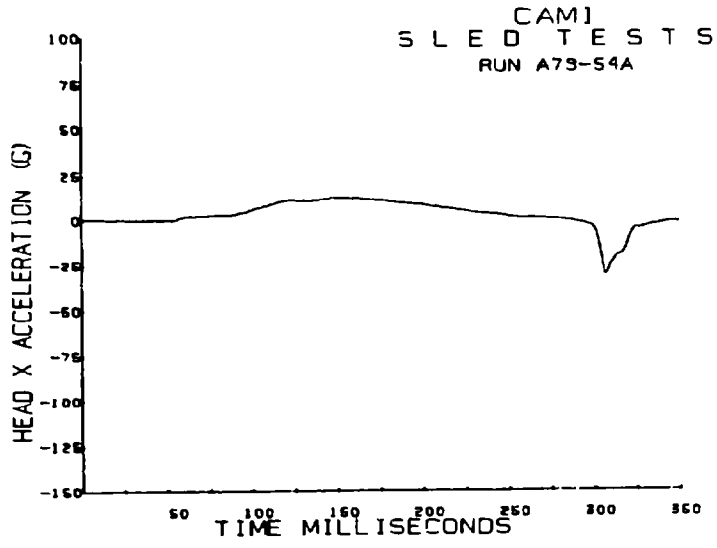

CAMI
SLED TESTS
RUN A79-54A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

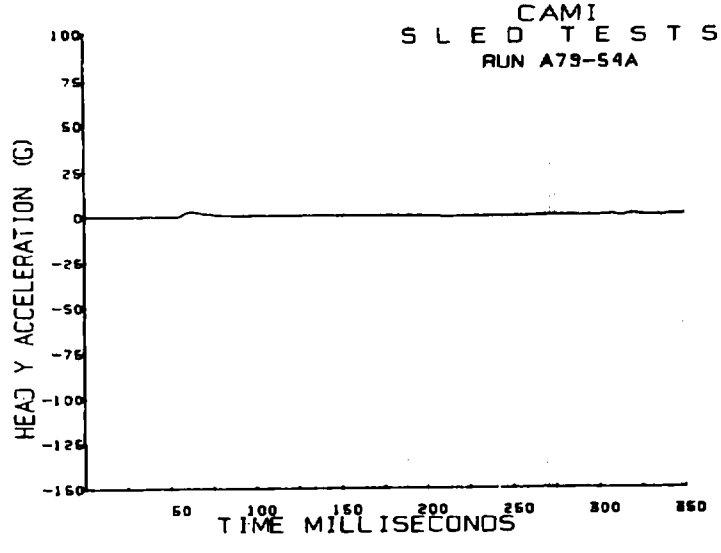

CAMI
SLED TESTS
RUN A79-54A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

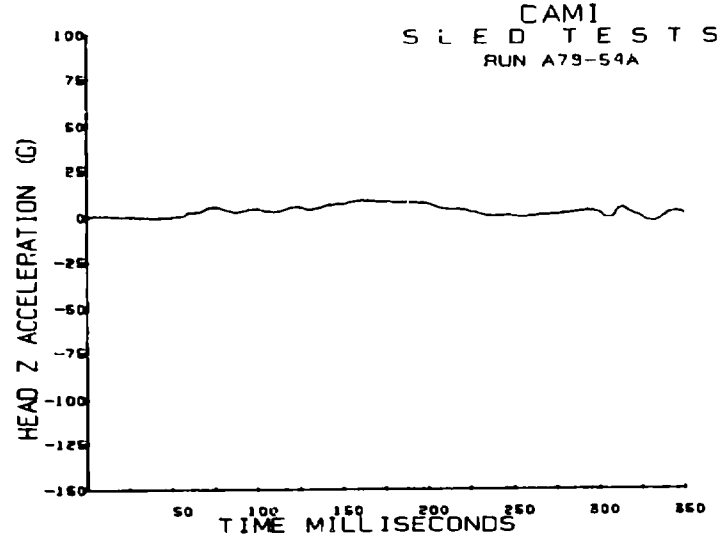

CAMI
SLED TESTS
RUN A79-54A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

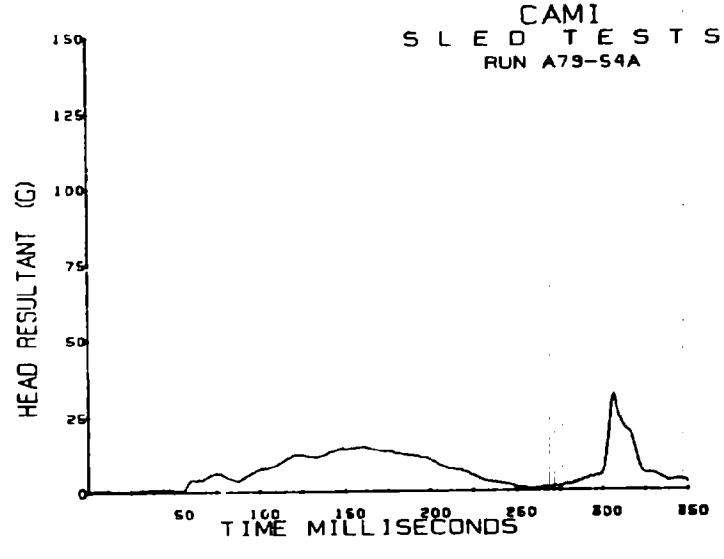

CAMI
SLED TESTS
RUN A79-54A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

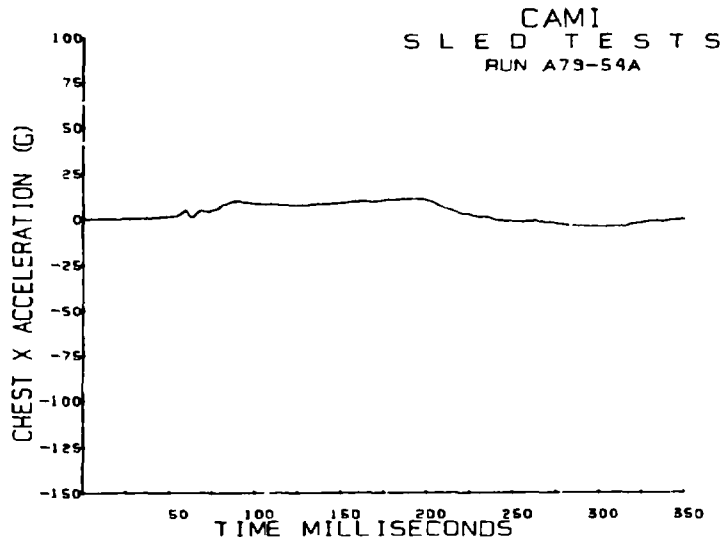

CAMI
SLED TESTS
RUN A79-54A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

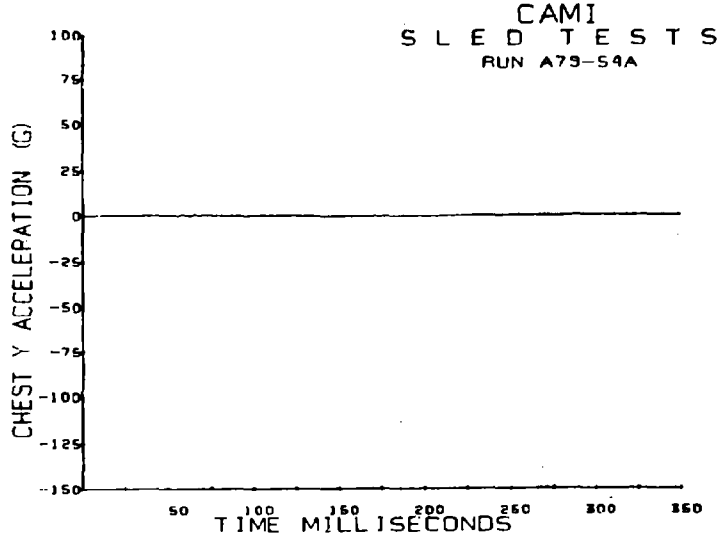

CAMI
SLED TESTS
RUN A79-54A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

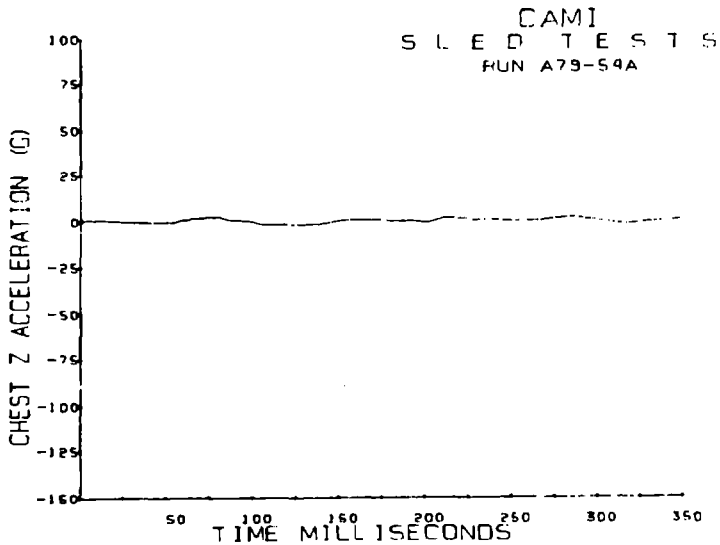

CAMI
SLED TESTS
RUN A79-54A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

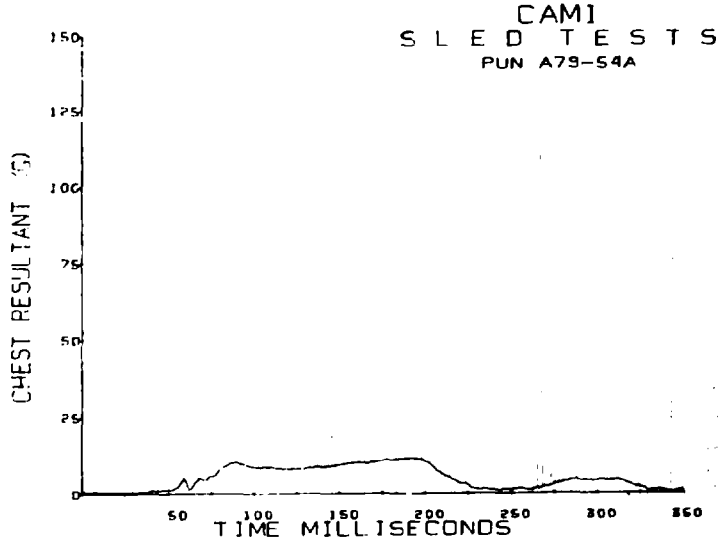

CAMI
SLED TESTS
RUN A79-54A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

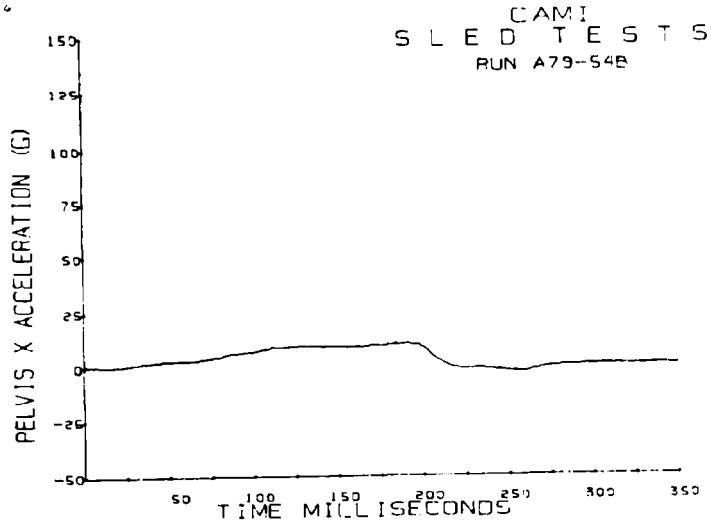

CAMI
SLED TESTS
RUN A79-54A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

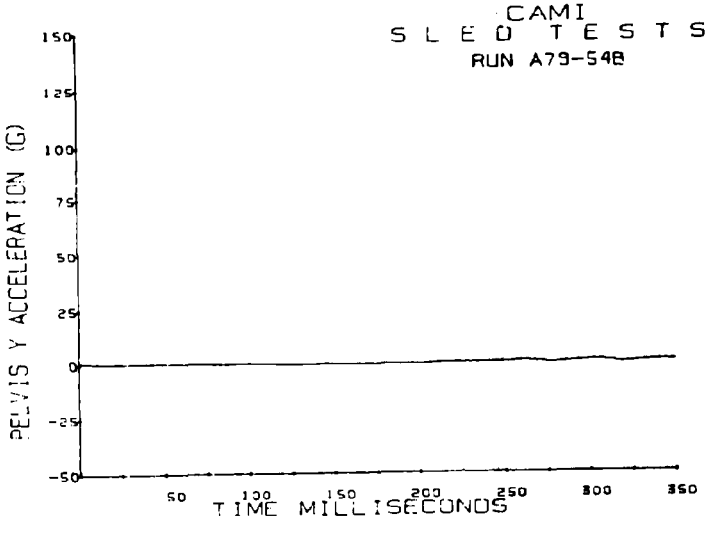

CAMI
SLED TESTS
RUN A79-S4A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

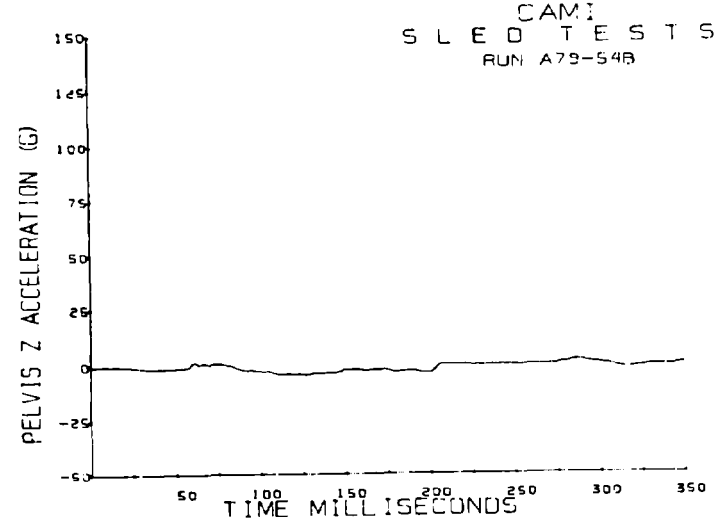

CAMI
SLED TESTS
RUN A79-S4A
CHEST Y ACCELEPATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

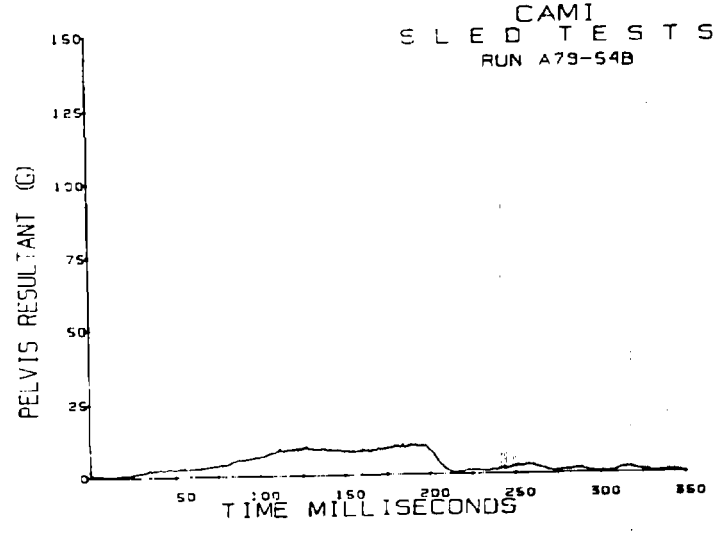

CAMI
SLED TESTS
RUN A79-S4A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

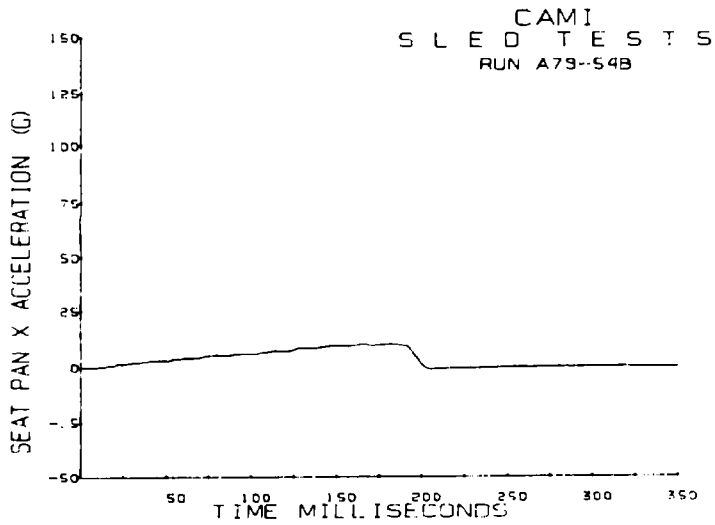

CAMI
SLED TESTS
PUN A79-S4A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

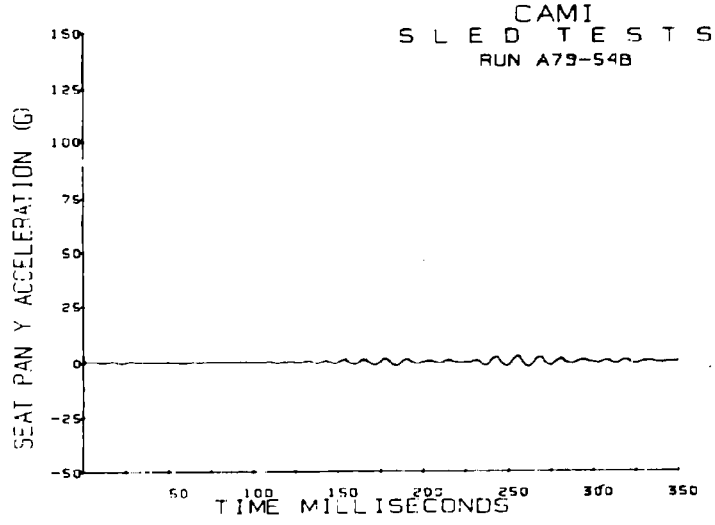

CAMI
SLED TESTS
RUN A79-54B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

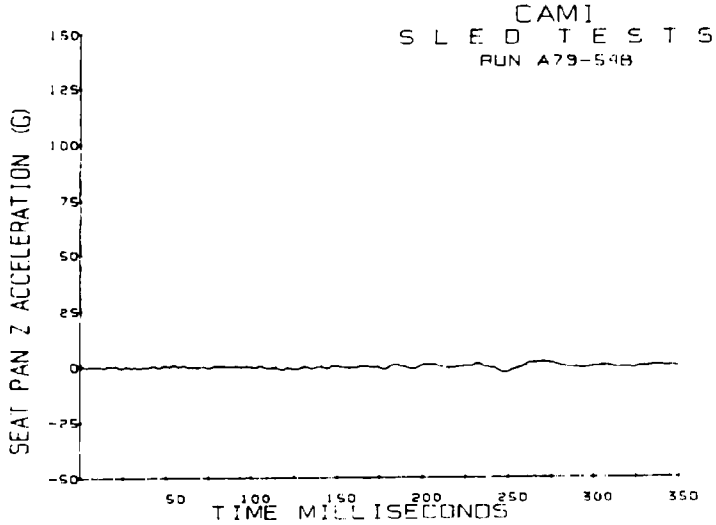

CAMI
SLED TESTS
RUN A79-54B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

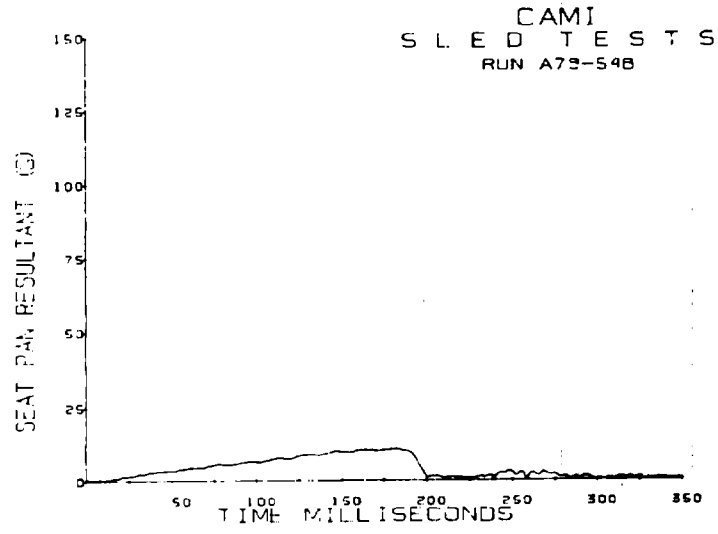

CAMI
SLED TESTS
RUN A79-54B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

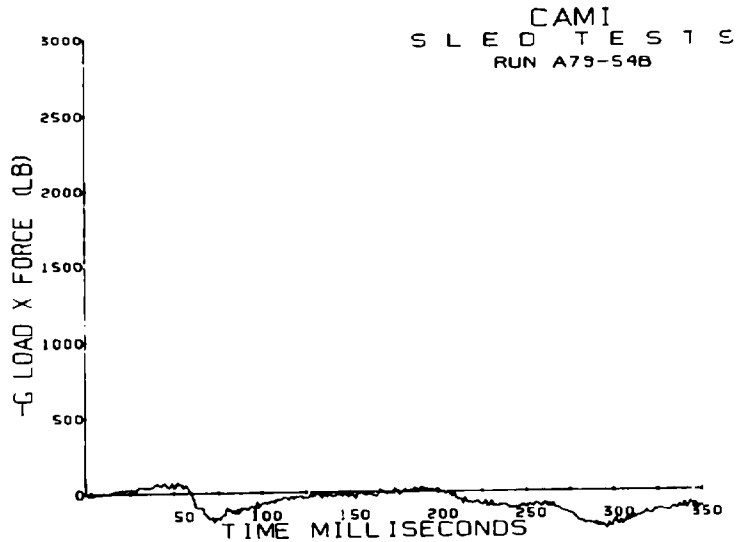

CAMI
SLED TESTS
RUN A79-54B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

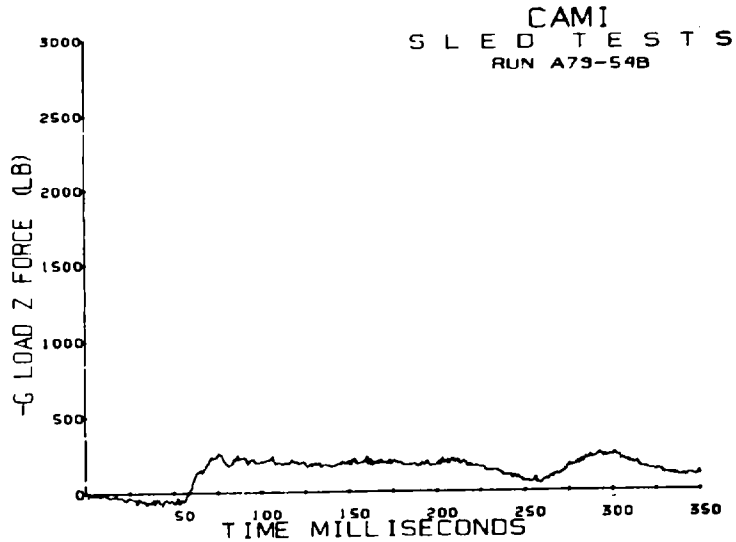

CAMI
S L E D T E S T S
RUN A79-54B
SEAT PAN X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

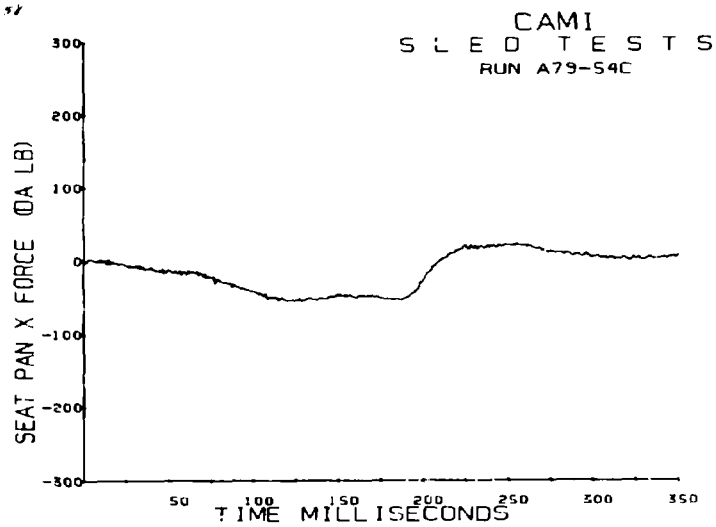

CAMI
S L E D T E S T S
RUN A79-54B
SEAT PAN Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

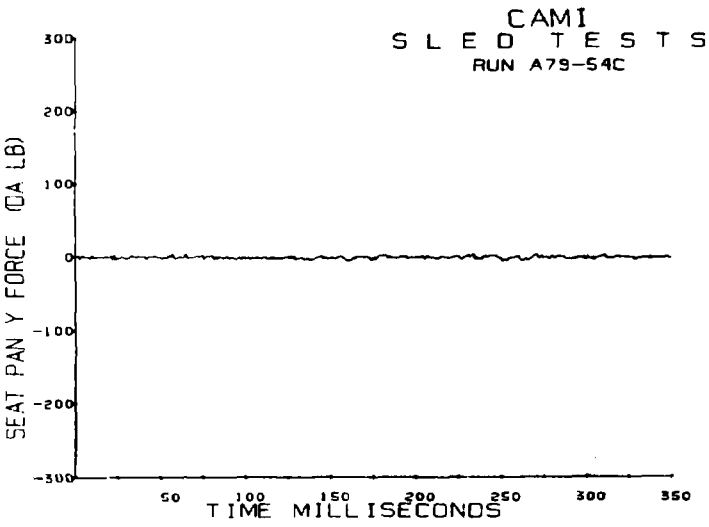

CAMI
S L E D T E S T S
RUN A79-54B
SEAT PAN Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

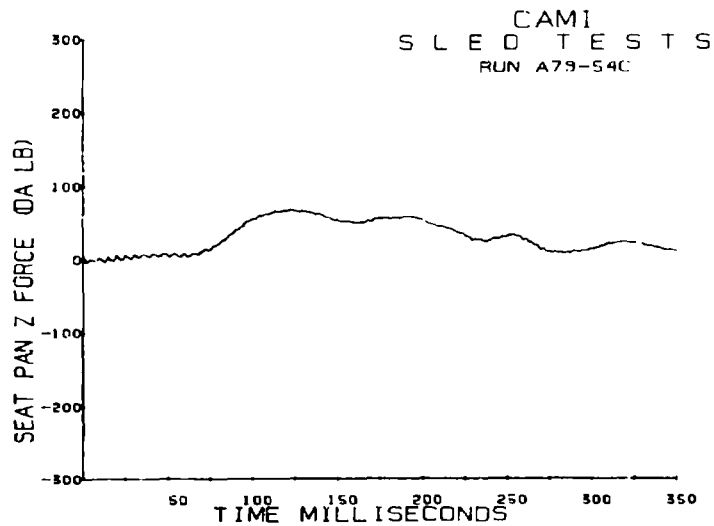

CAMI
S L E D T E S T S
RUN A79-54B
SEAT PAN RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

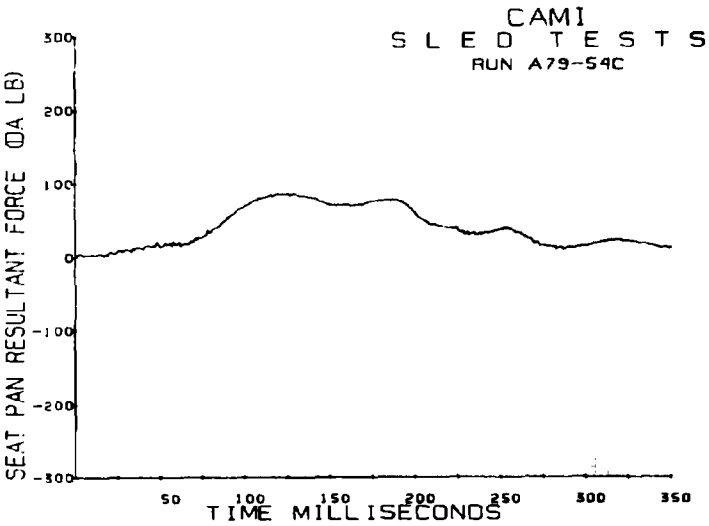

CAMI
SLED TESTS
RUN A79-54B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

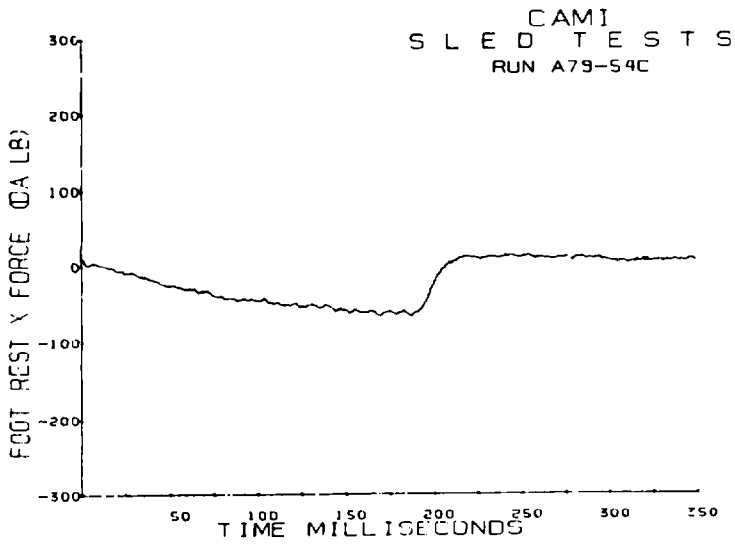

CAMI
SLED TESTS
RUN A79-54B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

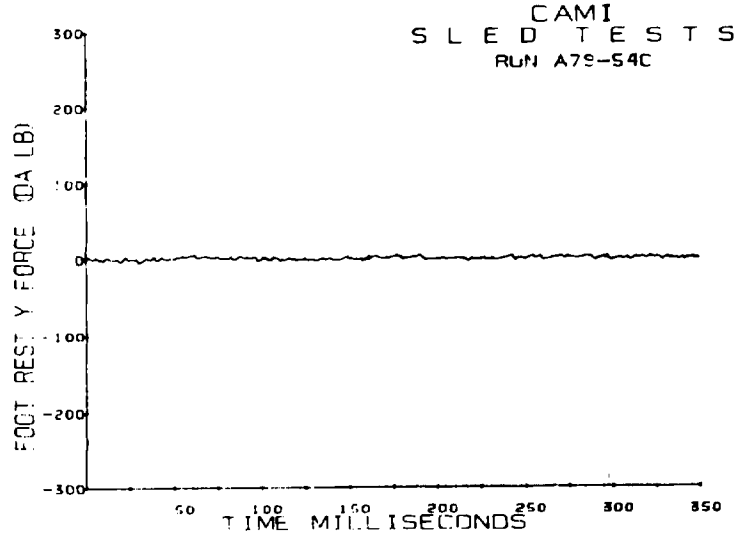

CAMI
SLED TESTS
RUN A79-54C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

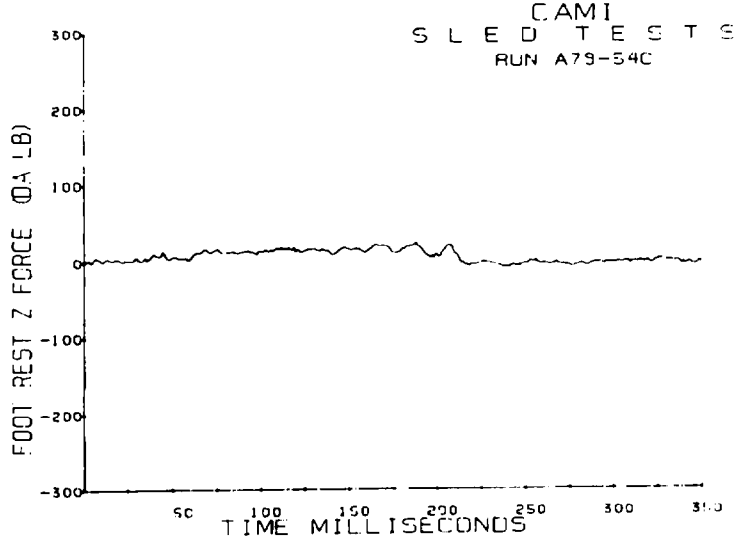

CAMI
SLED TESTS
RUN A79-54C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

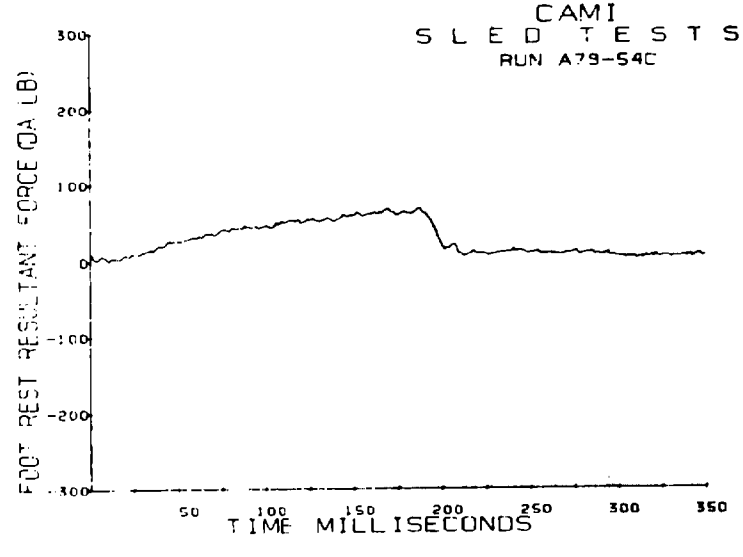

CAMI
SLED TESTS
RUN A79-54C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

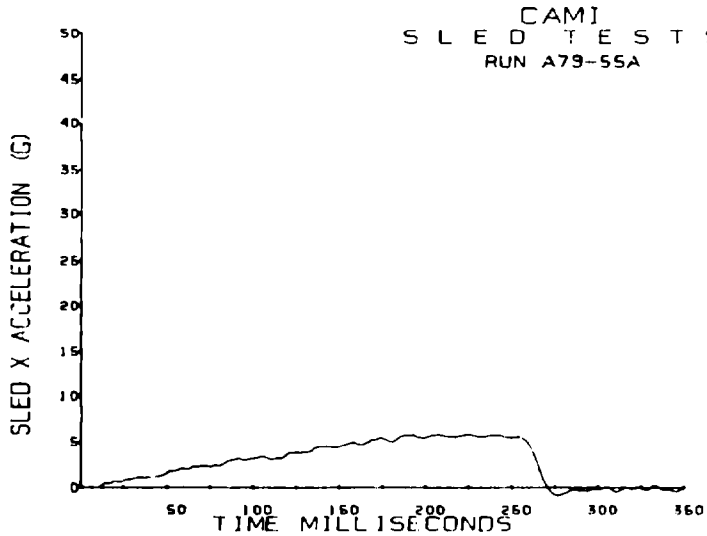

CAMI
SLED TESTS
RUN A79-54C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

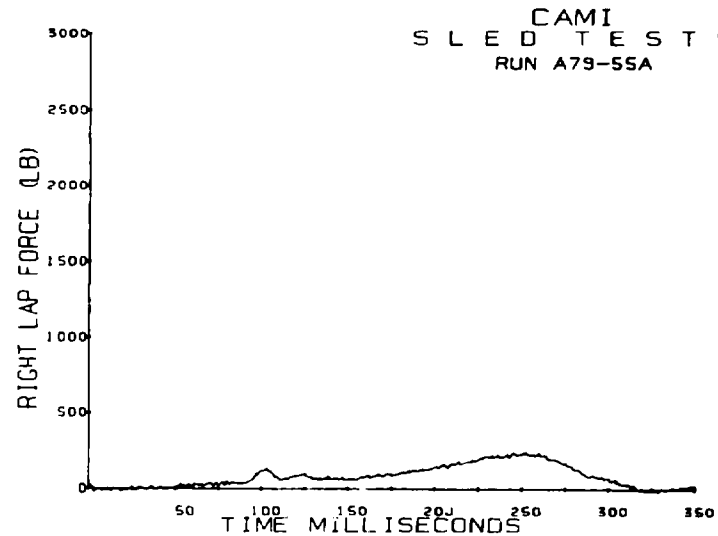

CAMI
S L E D T E S T S
RUN A79-54C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

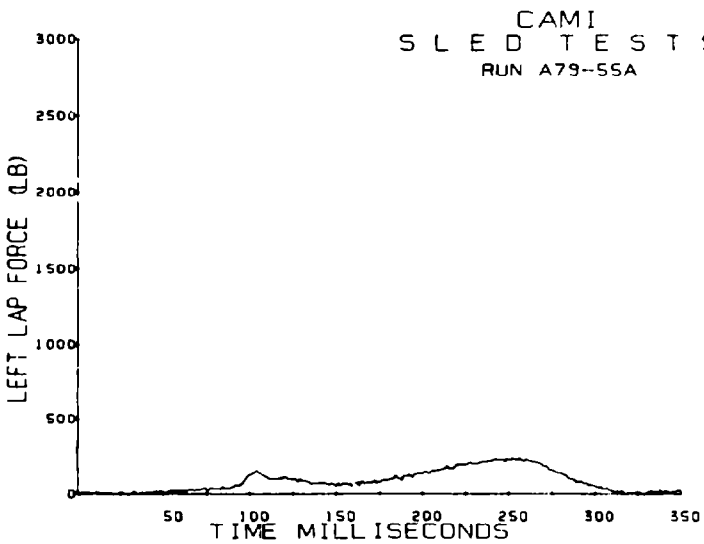

CAMI
S L E D T E S T S
RUN A79-54C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

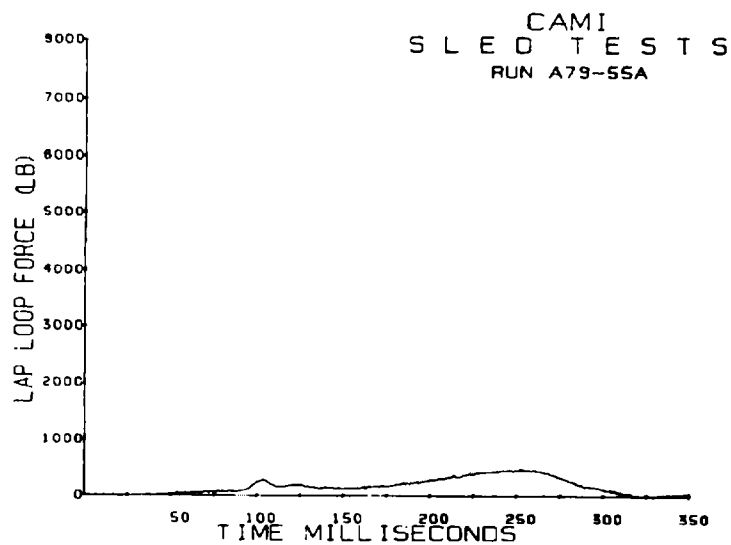

CAMI
S L E D T E S T S
RUN A79-54C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
TIME MILLISECONDS

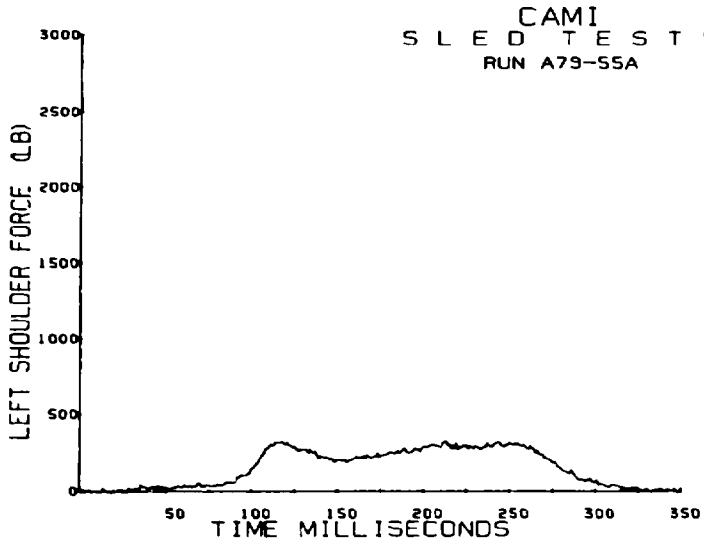

CAMI
S L E D T E S T S
RUN A79-54C
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

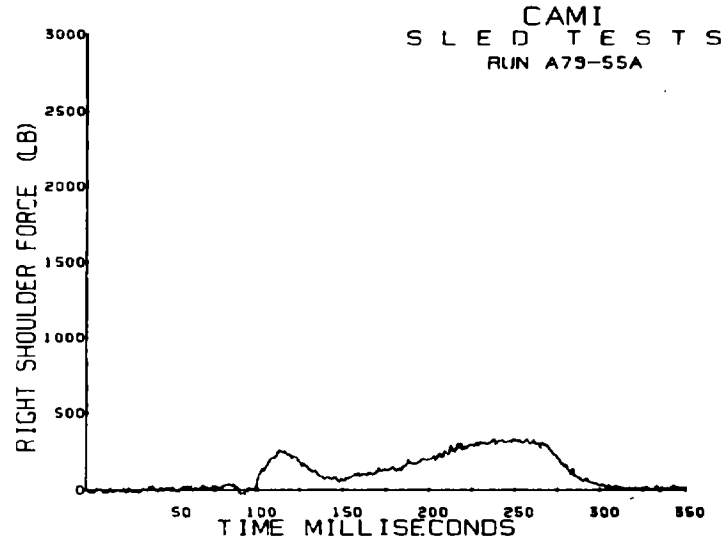

CAMI
S L E D T E S T S
RUN A79-5SA
SLED X ACCELERATION (G)
TIME MILLISECONDS

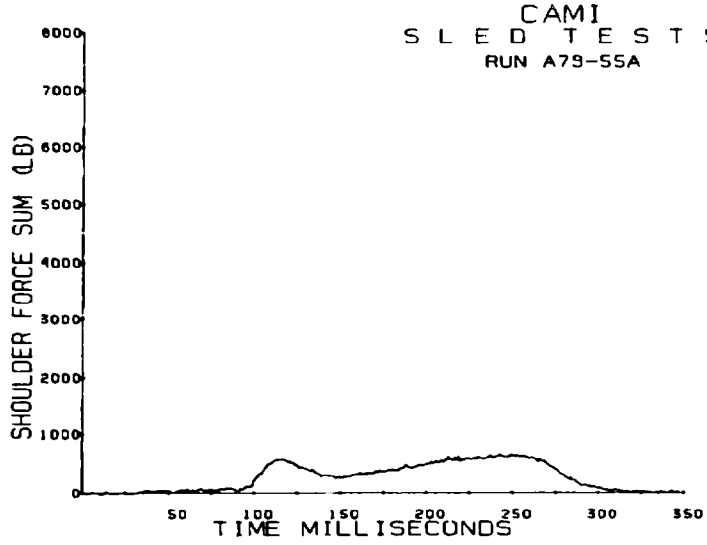

CAMI
S L E D T E S T S
RUN A79-5SA
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

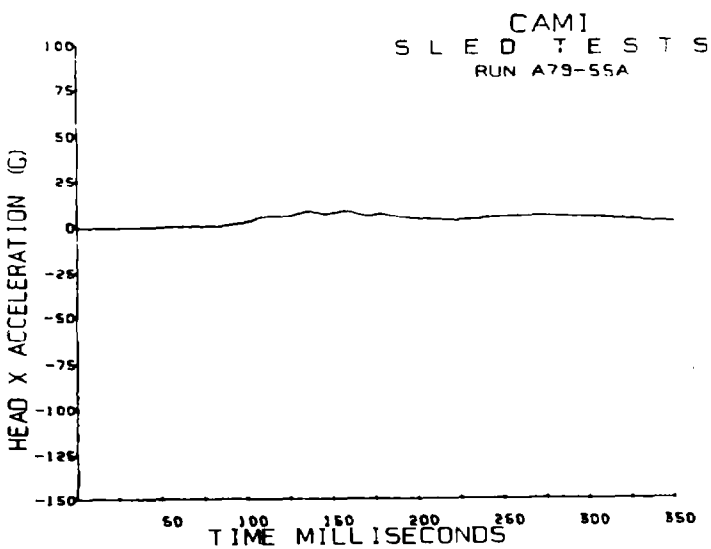

CAMI
S L E D T E S T S
RUN A79-5SA
LEFT LAP FORCE (LB)
TIME MILLISECONDS

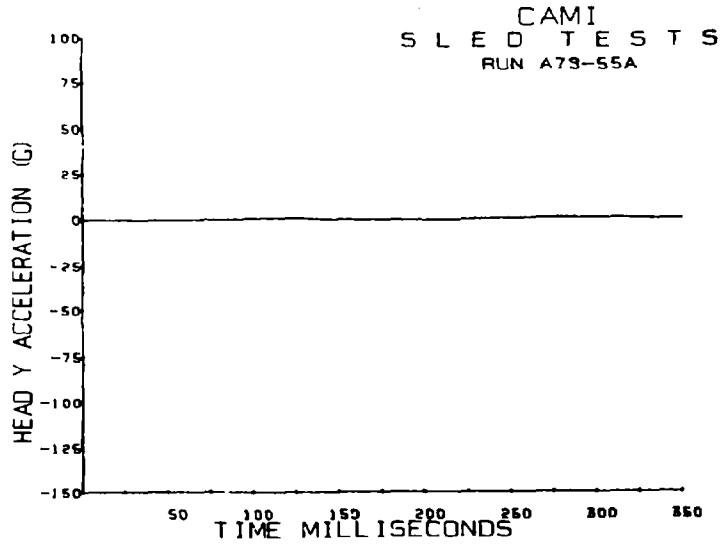

CAMI
S L E D T E S T S
RUN A79-5SA
LAP LOOP FORCE (LB)
TIME MILLISECONDS

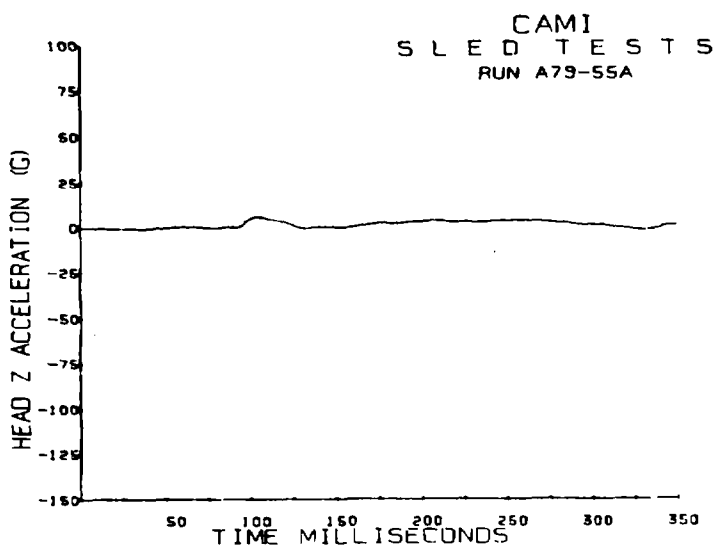

CAMI
SLED TESTS
RUN A79-55A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

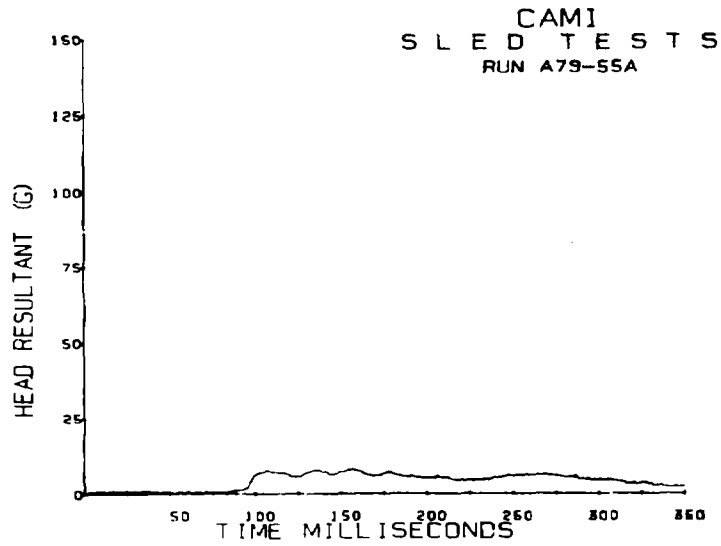

CAMI
SLED TESTS
RUN A79-55A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

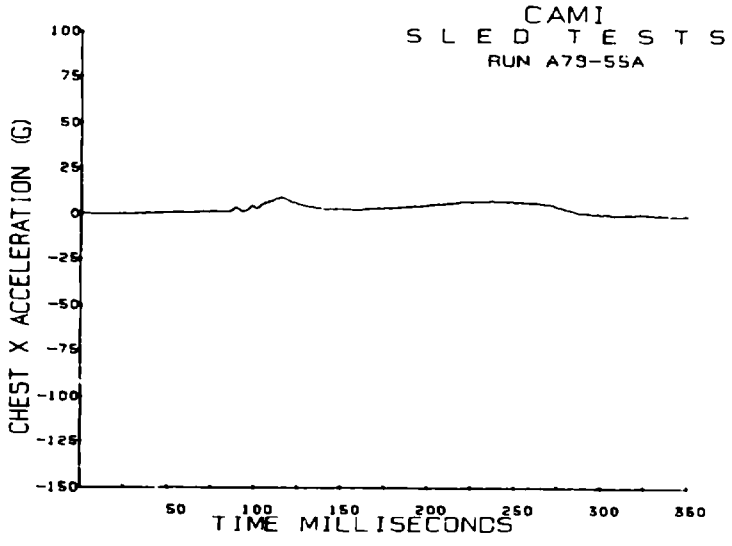

CAMI
SLED TESTS
RUN A79-55A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
0
50
100
150
200
250
300
350
TIME MILLISECONDS

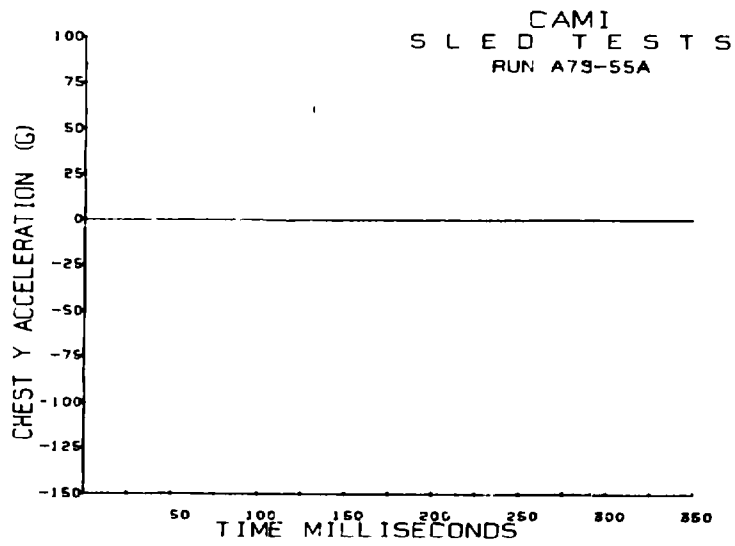

CAMI
SLED TESTS
RUN A79-55A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

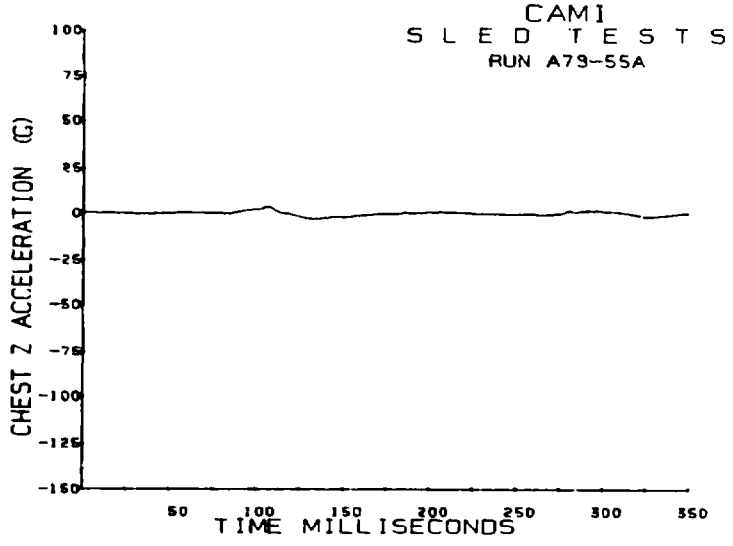

CAMI
SLED TESTS
RUN A79-55A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

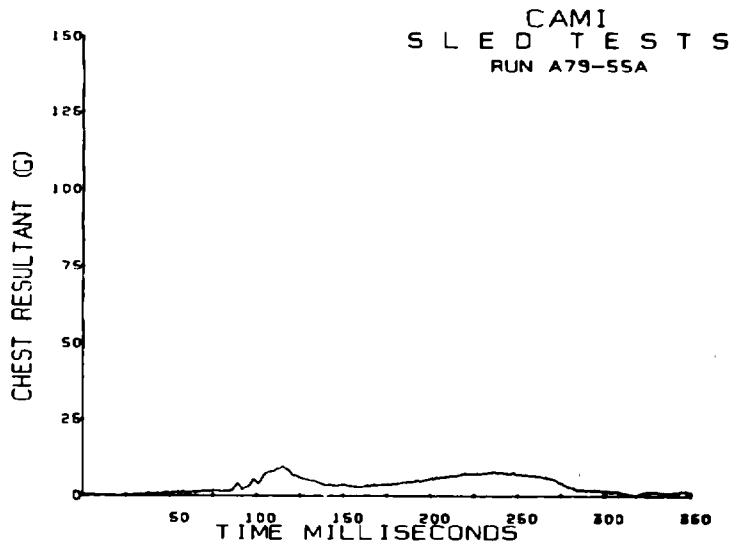

CAMI
SLED TESTS
RUN A79-55A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

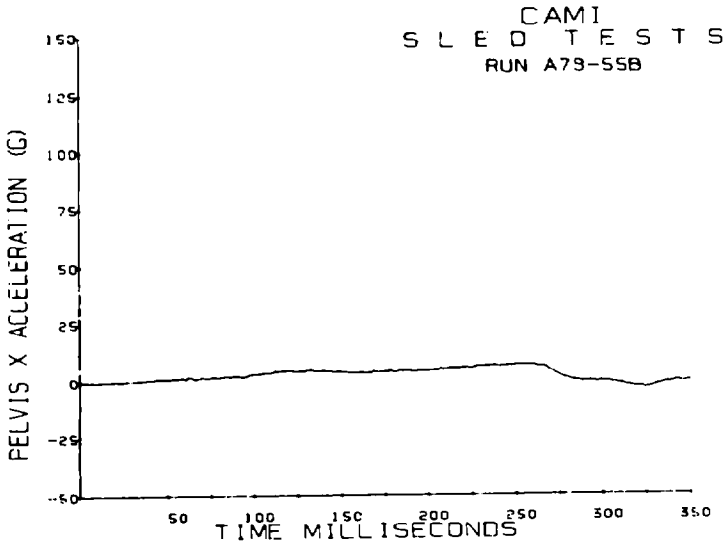

CAMI
SLED TESTS
RUN A79-55A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

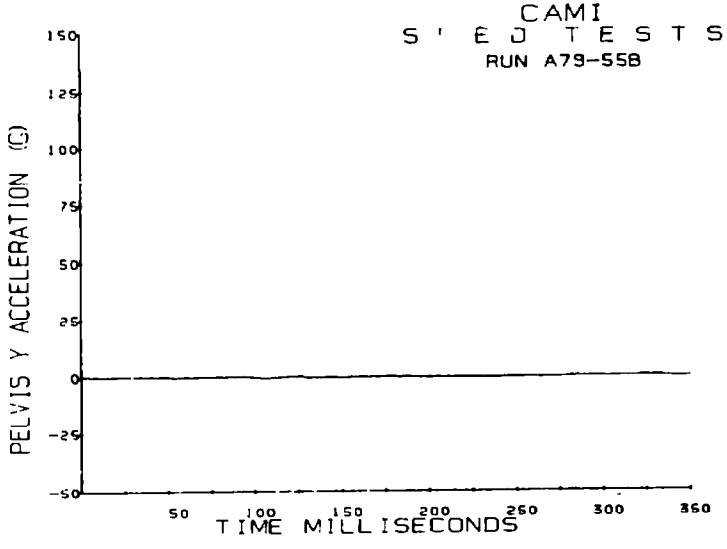

CAMI
S L E D T E S T S
RUN A79-55A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

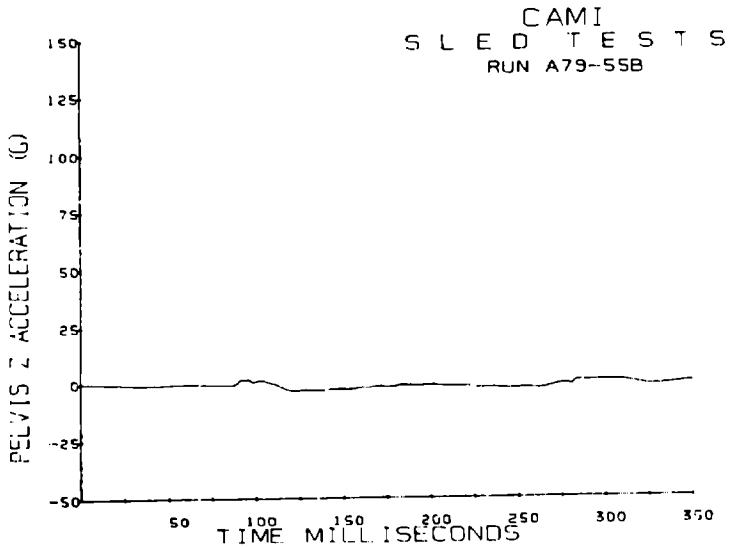

CAMI
S L E D T E S T S
RUN A79-55A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

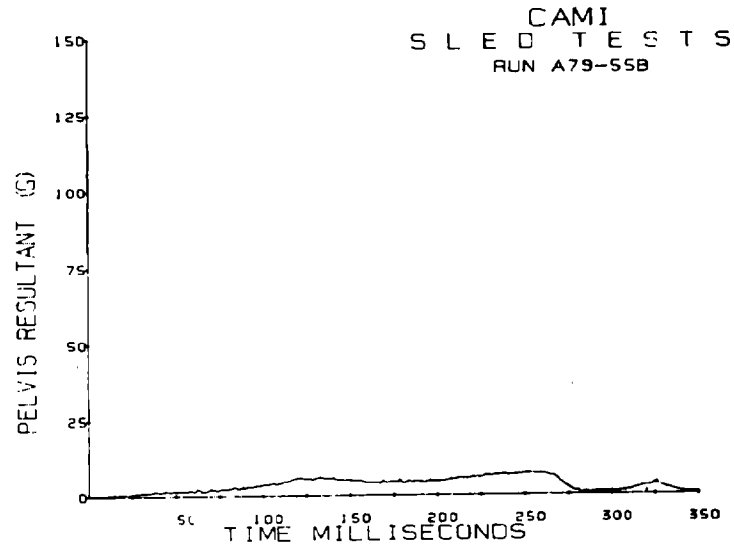

CAMI
S L E D T E S T S
RUN A79-55A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

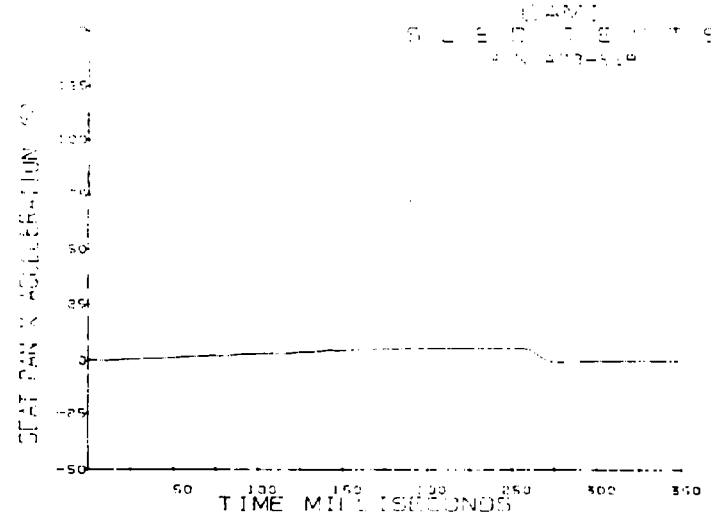

CAMI
S L E D T E S T S
RUN A79-55A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

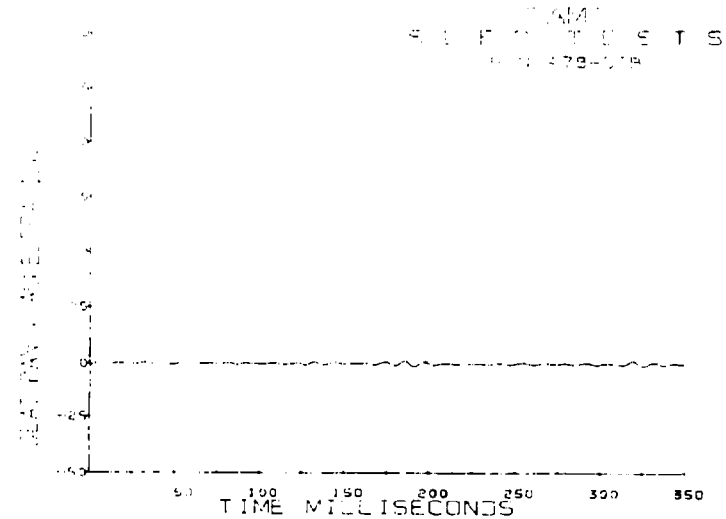

CAMI
S L E D T E S T S
RUN A79-55B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

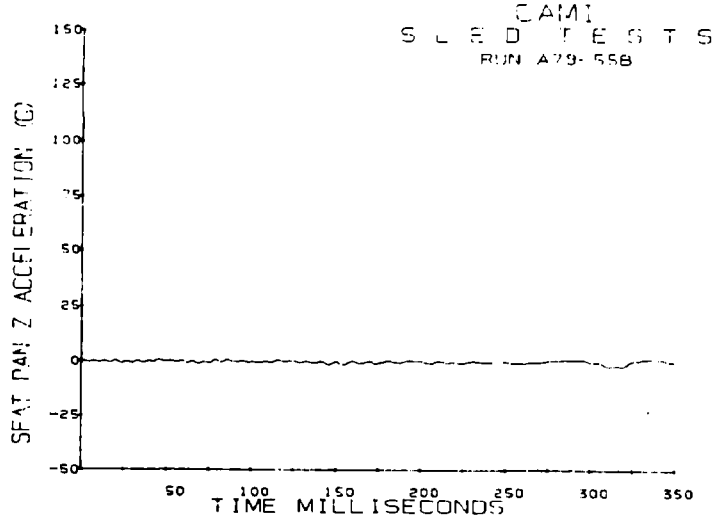

CAMI
S L E D T E S T S
RUN A79-55B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

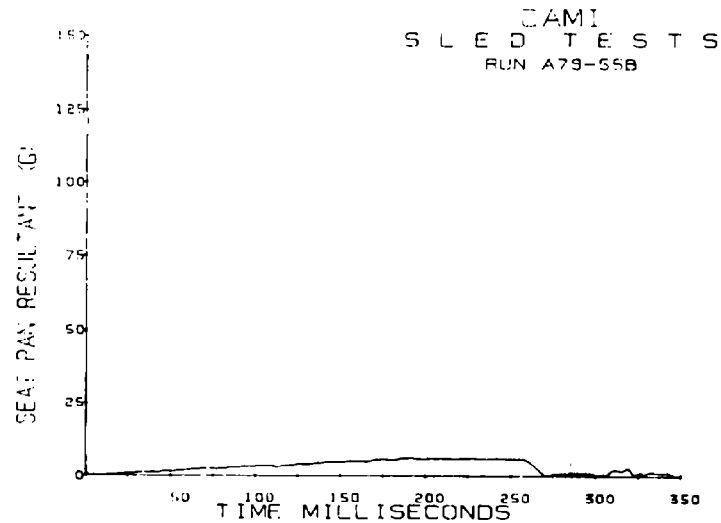

CAMI
S L E D T E S T S
RUN A79-55B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

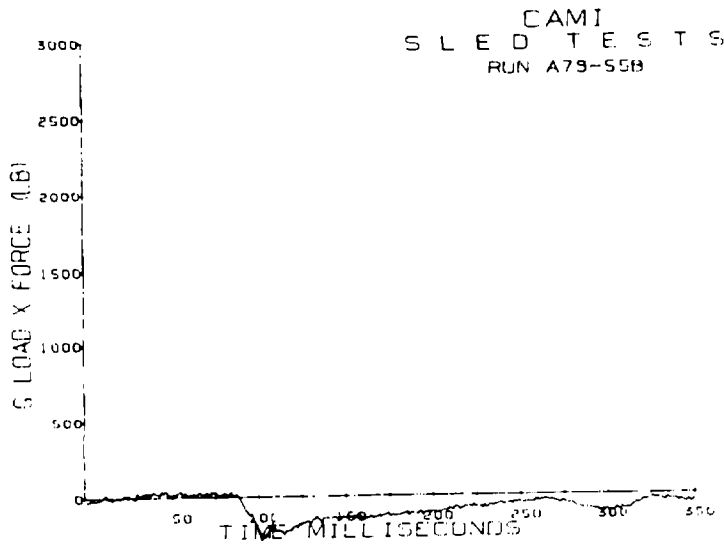

CAMI
S L E D T E S T S
RUN A79-55B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

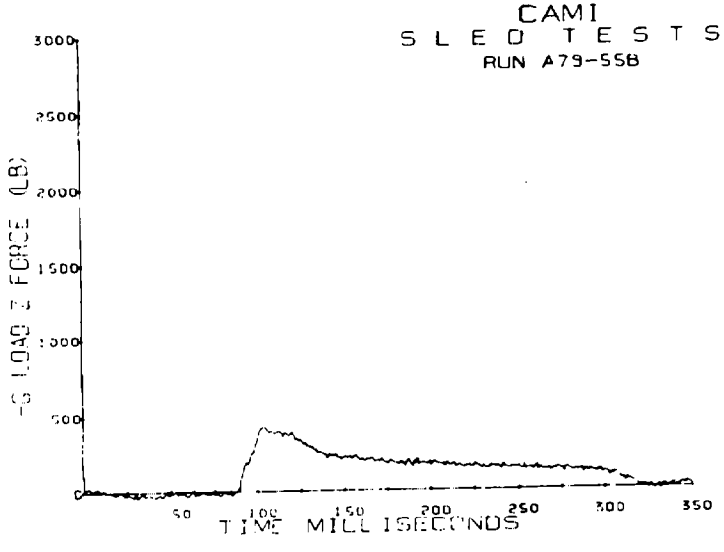

CAMI
S L E D T E S T S
RUN A79-55B
SEAT PAN X ACCELERATION (G)
TIME MILLISECONDS

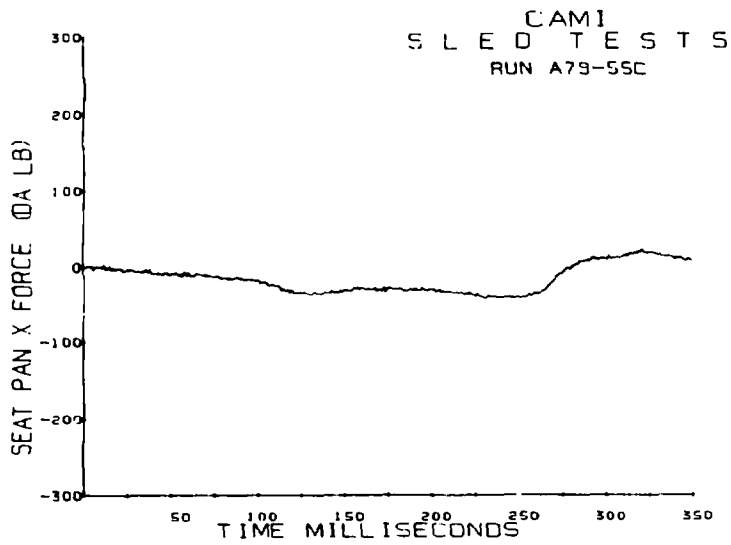

CAMI
S L E D T E S T S
RUN A79-55B
TIME MILLISECONDS

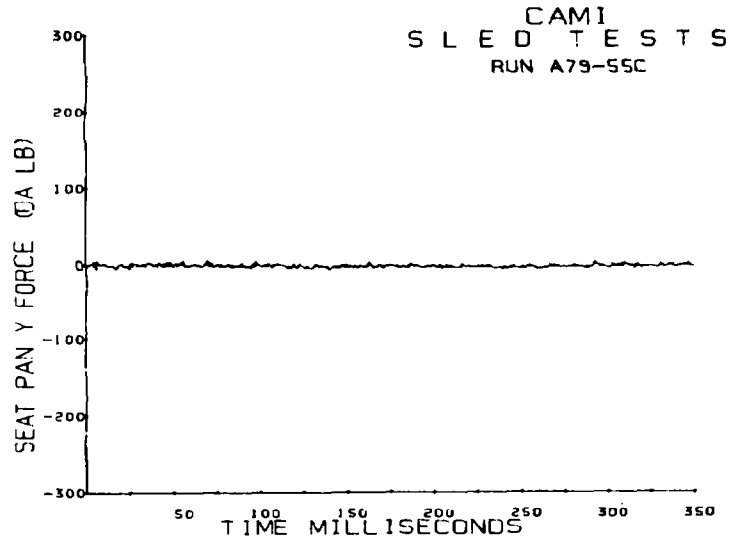

CAMI
S L E D T E S T S
RUN A79-55B
SEAT PAN Z ACCELERATION (G)
TIME MILLISECONDS

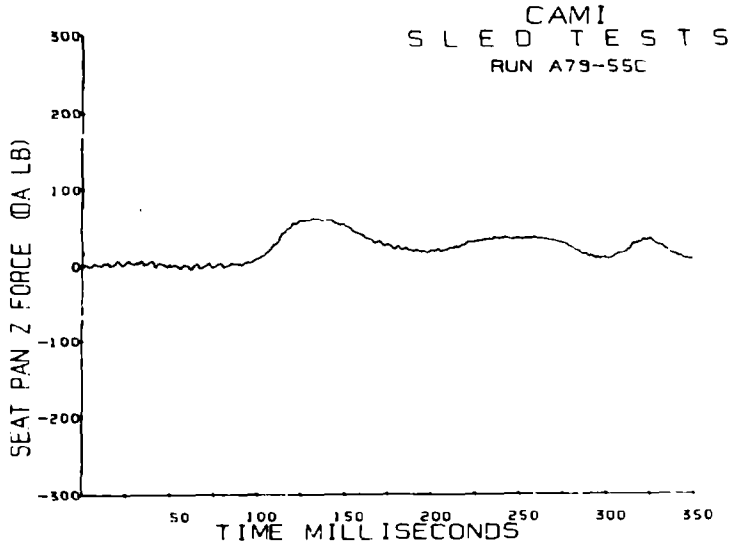

CAMI
S L E D T E S T S
RUN A79-55B
SEAT PAN RESULTANT (G)
TIME MILLISECONDS

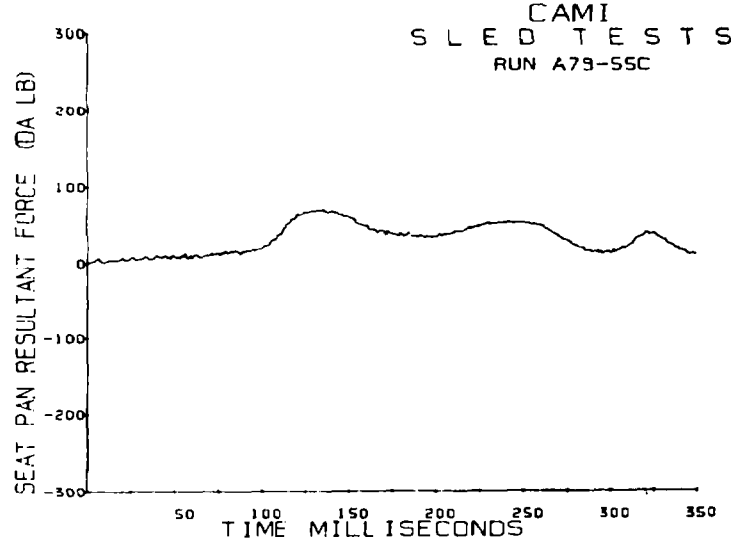

CAMI
SLED TESTS
RUN A79-55B
G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

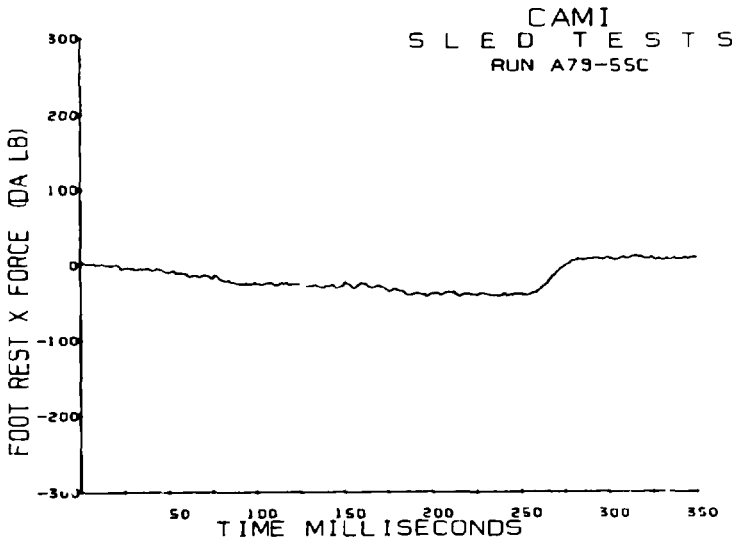

CAMI
SLED TESTS
RUN A79-55B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

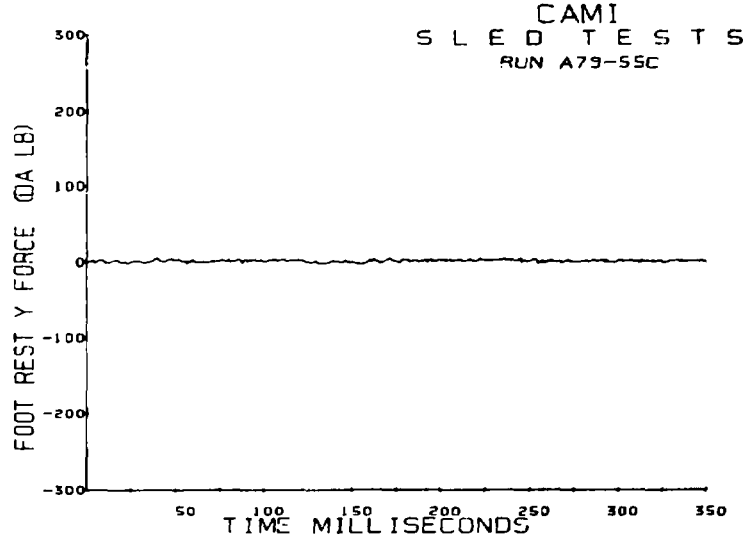

CAMI
SLED TESTS
RUN A79-55C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

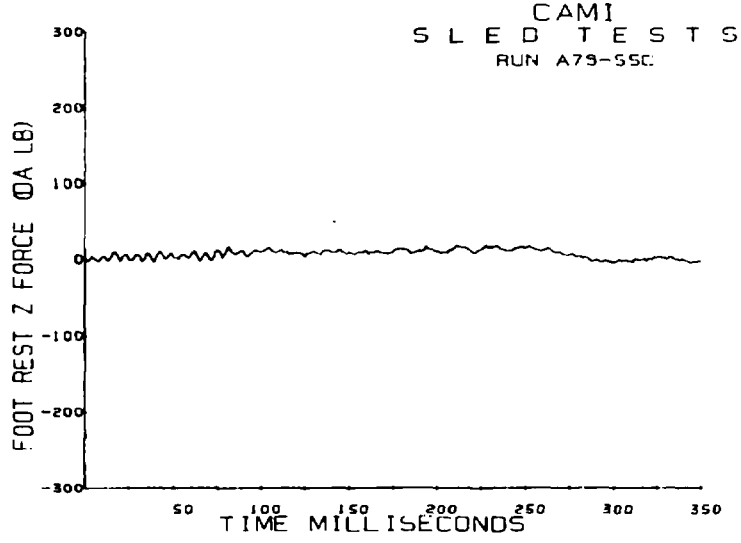

CAMI
SLED TESTS
RUN A79-55C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

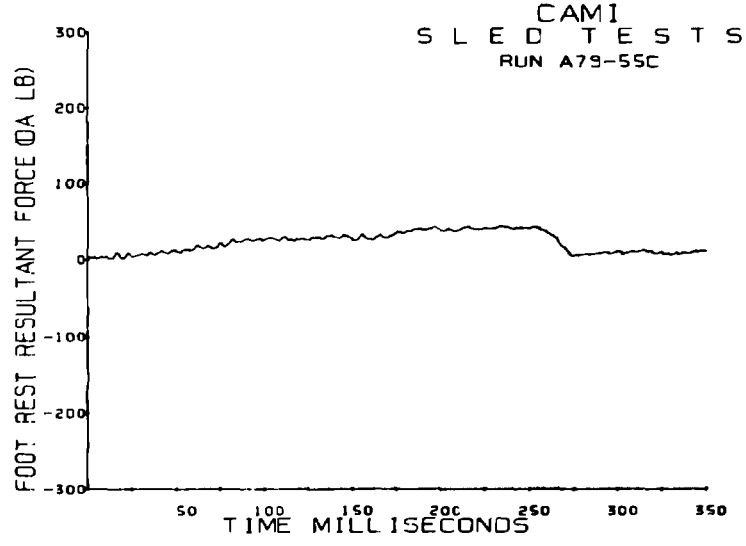

CAMI
SLED TESTS
RUN A79-55C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

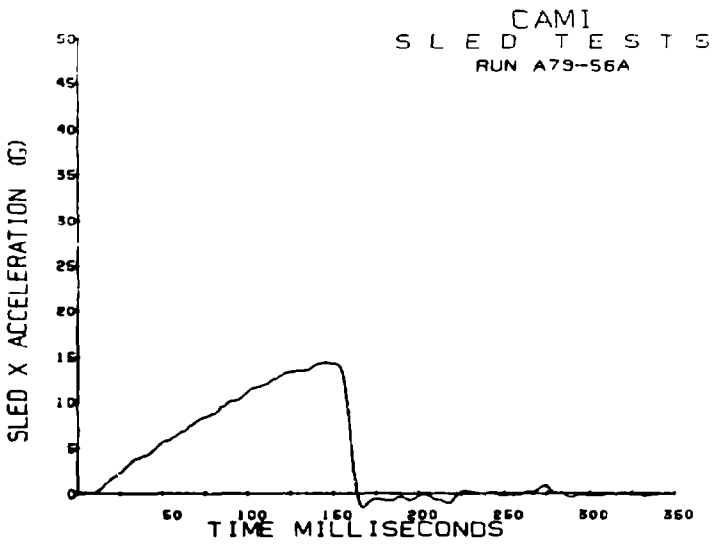

CAMI
SLED TESTS
RUN A79-55C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

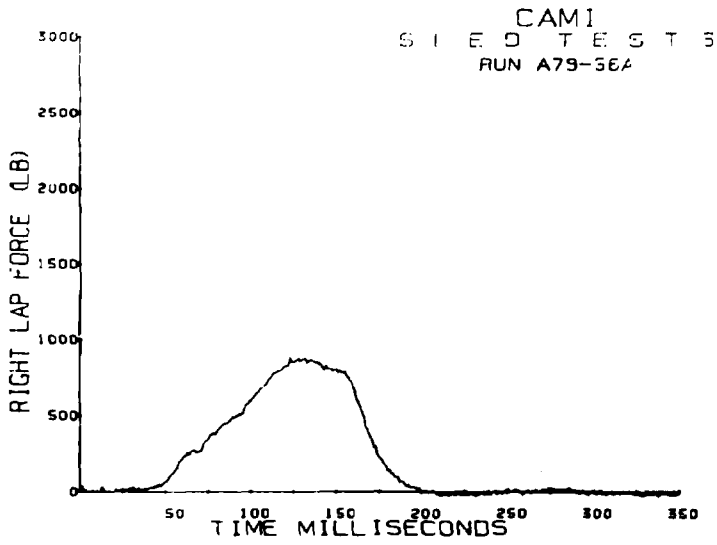

CAMI
S L E D T E S T S
RUN A79-55C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
50
100
150
200
250
300
350
TIME MILLISECONDS

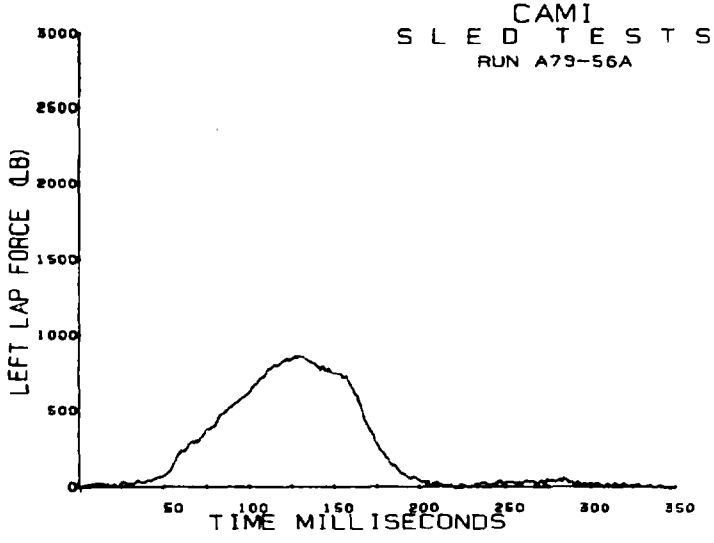

CAMI
S L E D T E S T S
RUN A79-55C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

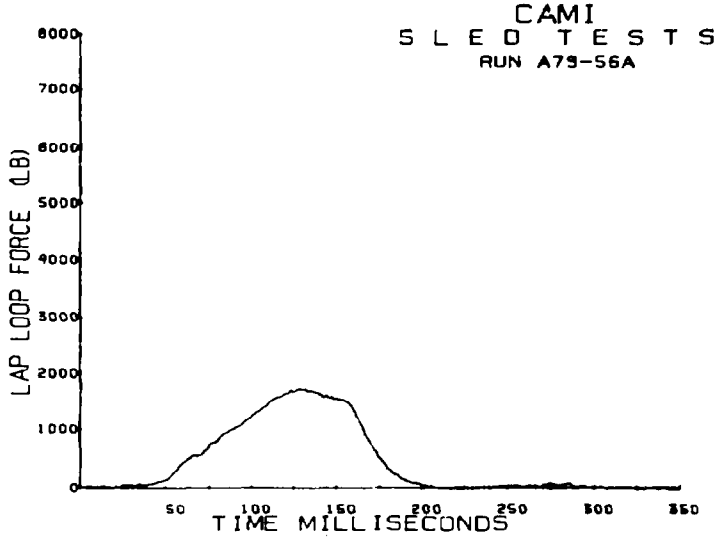

CAMI
S L E D T E S T S
RUN A79-55C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

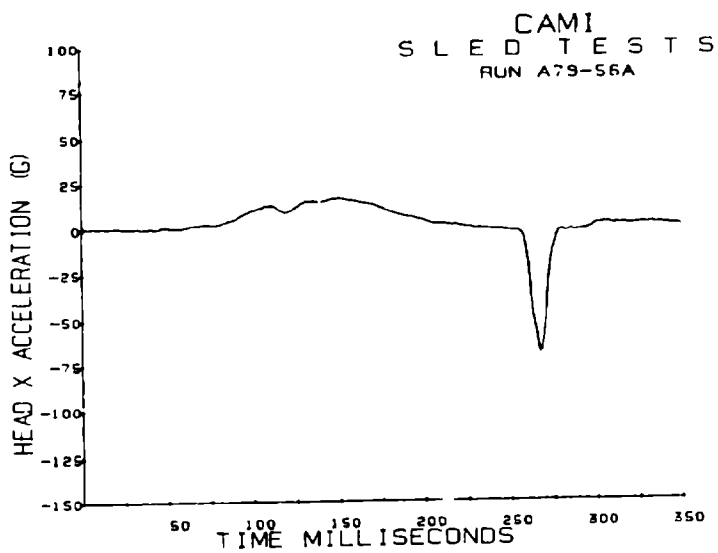

CAMI
S L E D T E S T S
RUN A79-55C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

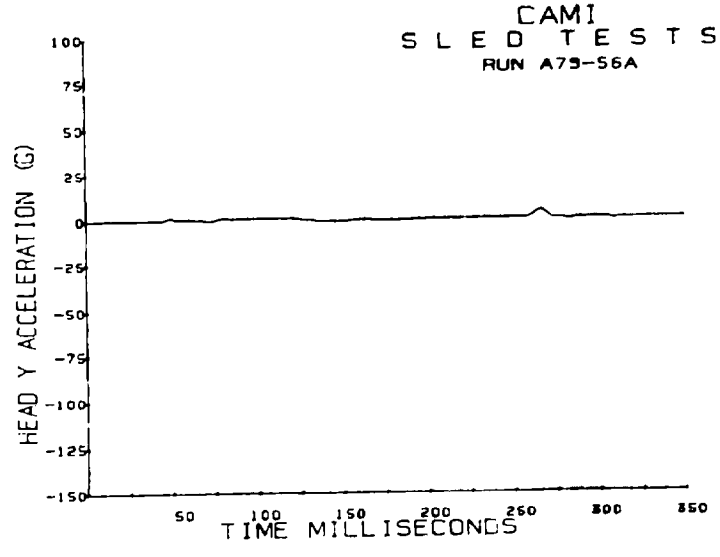

CAMI
SLED TESTS
RUN A79-56A
SLED X ACCELERATION (G)
TIME MILLISECONDS

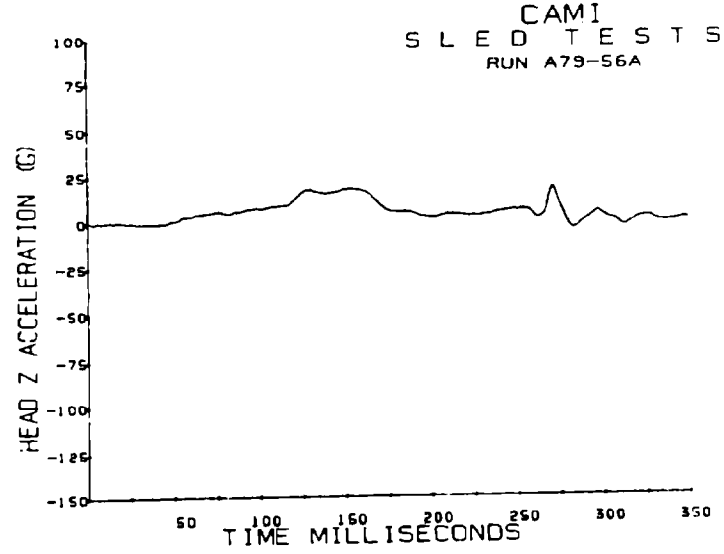

CAMI
SLED TESTS
RUN A79-56A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

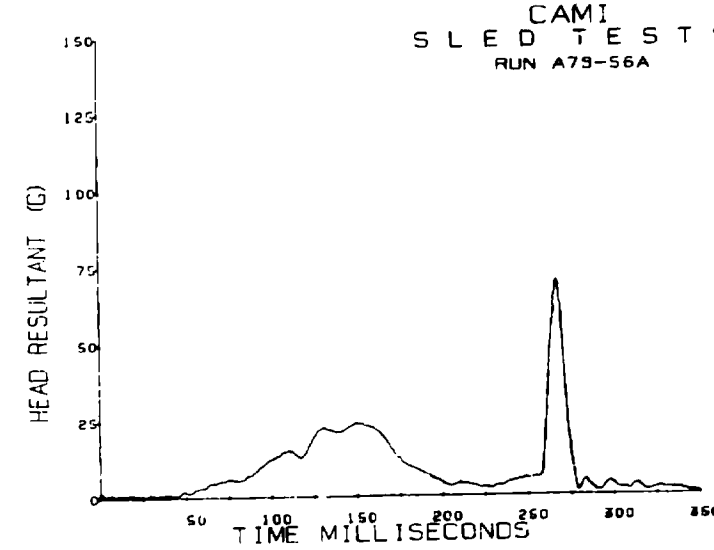

CAMI
SLED TESTS
RUN A79-56A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

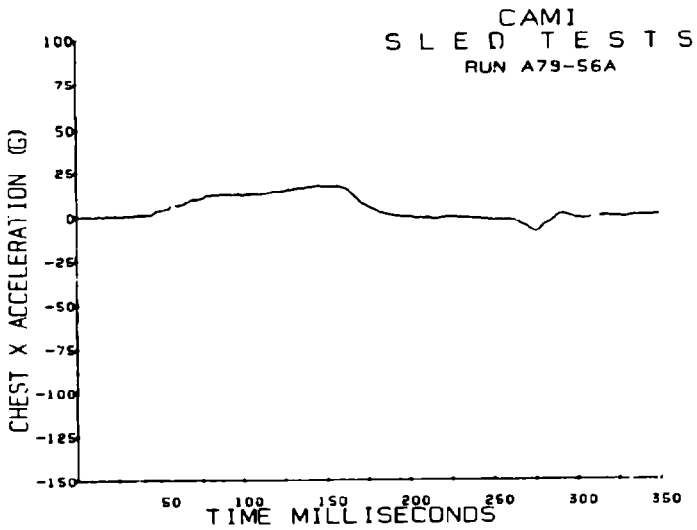

CAMI
SLED TESTS
RUN A79-56A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

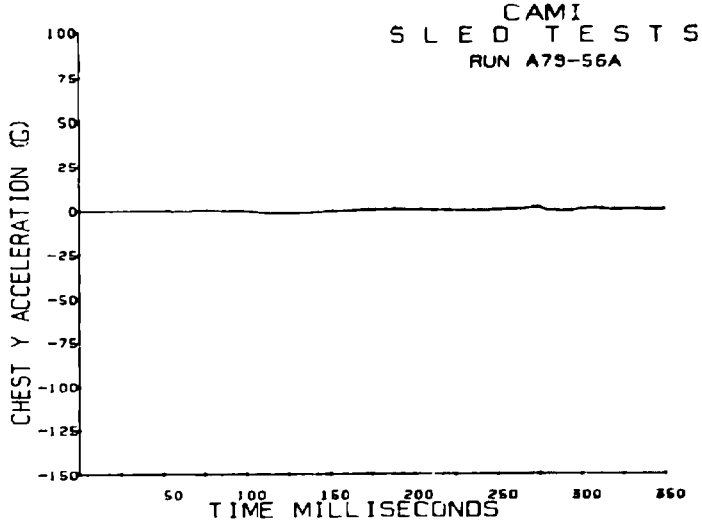

CAMI
SLED TESTS
RUN A79-56A
HEAD X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

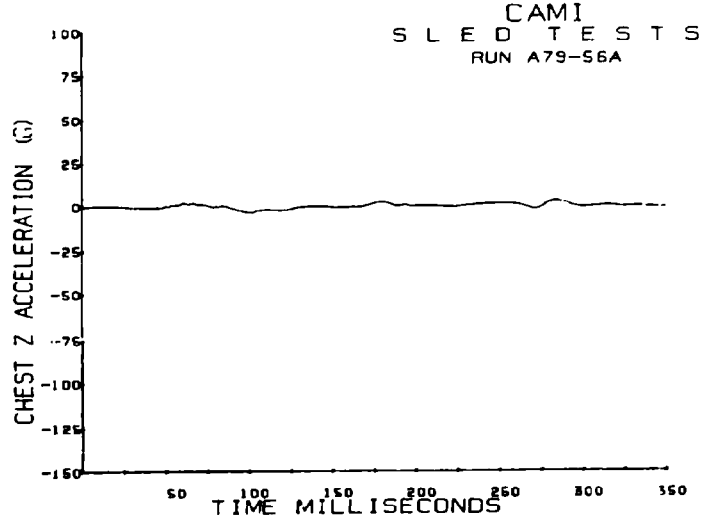

CAMI
SLED TESTS
RUN A79-56A
HEAD Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

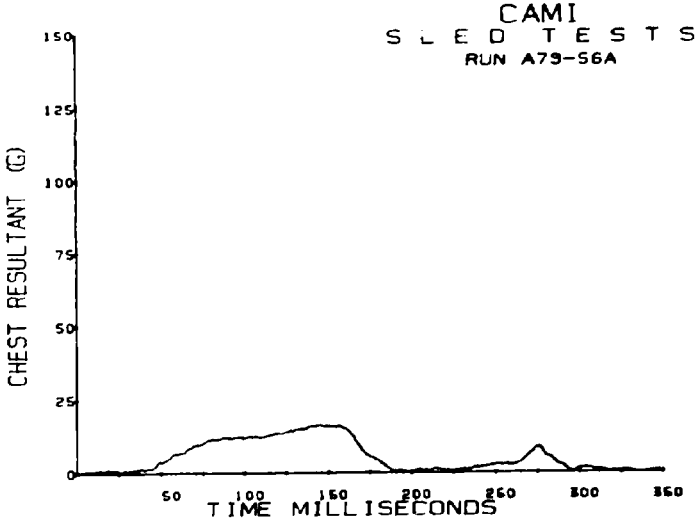

CAMI
SLED TESTS
RUN A79-56A
HEAD Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

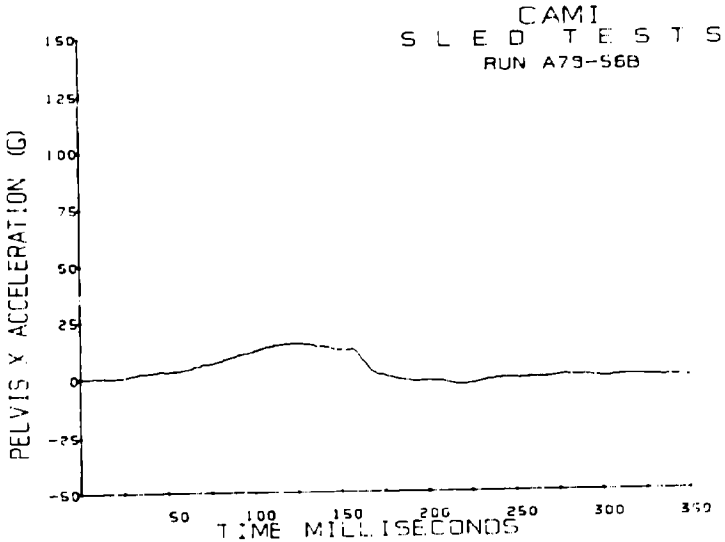

CAMI
SLED TESTS
RUN A79-56A
HEAD RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

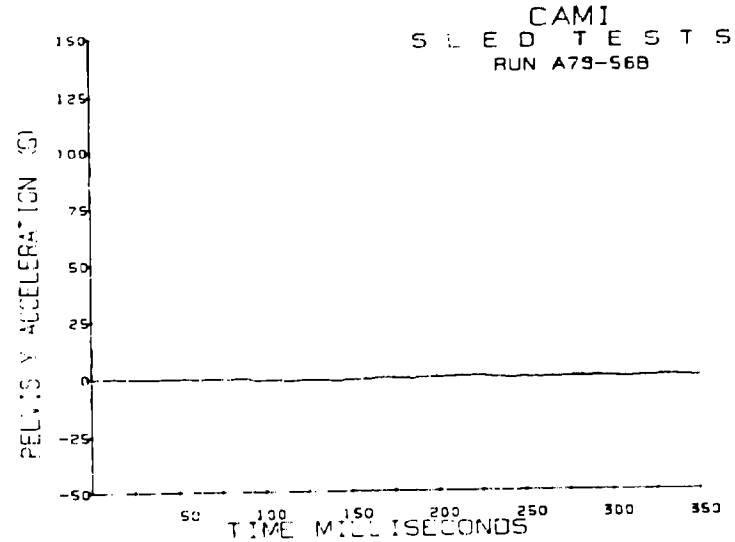

CAMI
SLED TESTS
RUN A79-S6A
CHEST X ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

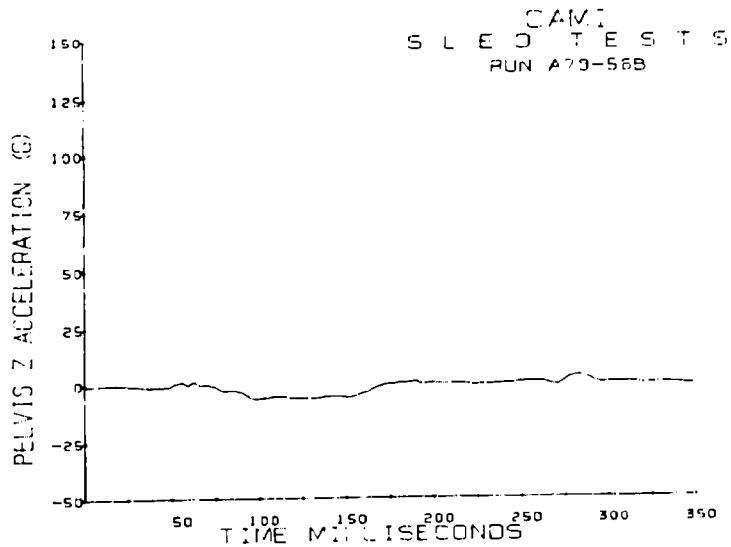

CAMI
SLED TESTS
RUN A79-S6A
CHEST Y ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

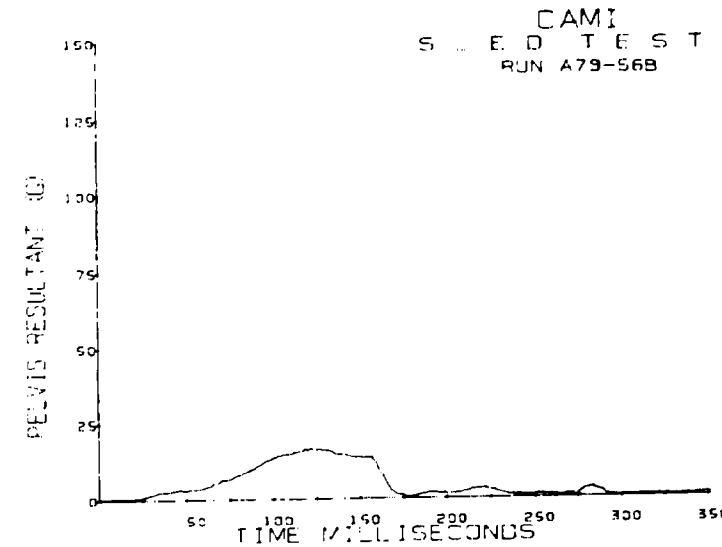

CAMI
SLED TESTS
RUN A79-S6A
CHEST Z ACCELERATION (G)
100
75
50
25
0
-25
-50
-75
-100
-125
-150
50
100
150
200
250
300
350
TIME MILLISECONDS

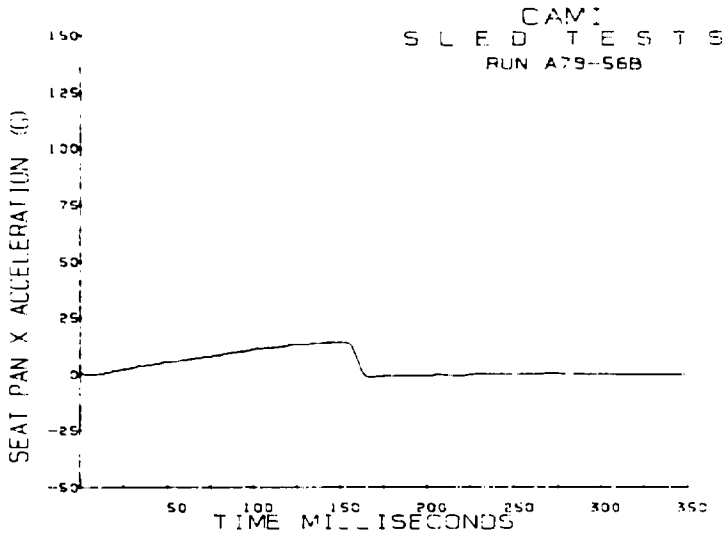

CAMI
SLED TESTS
RUN A79-S6A
CHEST RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

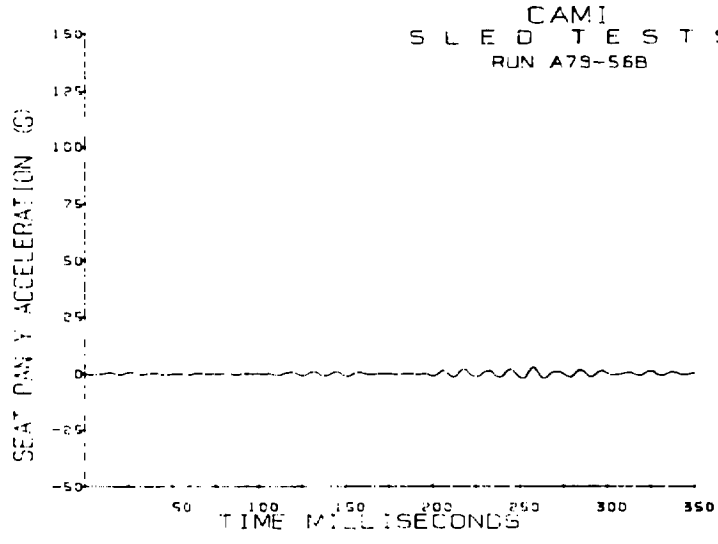

CAMI
S L E D T E S T S
RUN A79-S6B
PELVIS X ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

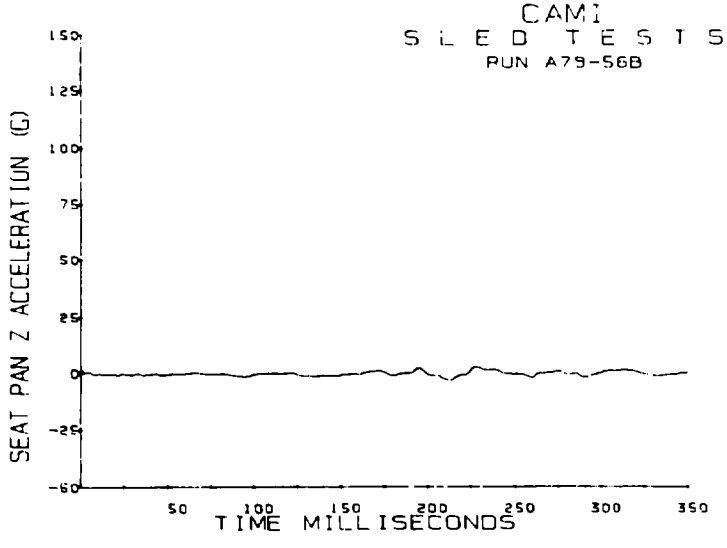

CAMI
S L E D T E S T S
RUN A79-S6B
PELVIS Y ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

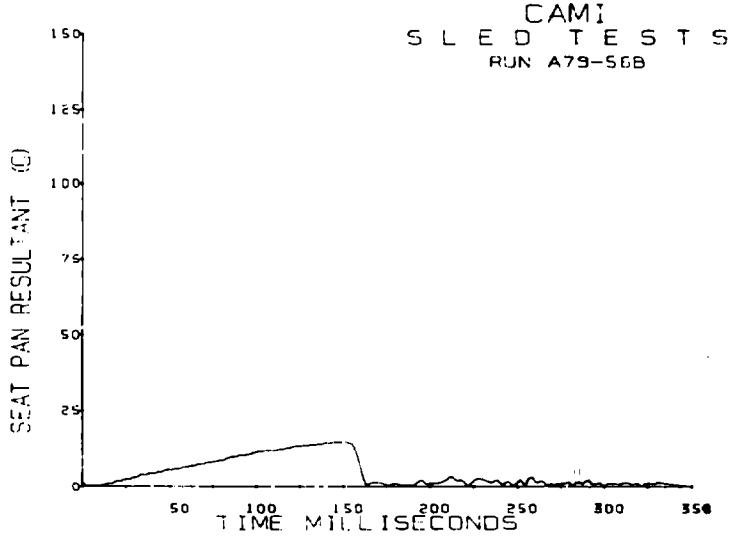

CAMI
S L E D T E S T S
RUN A79-S6B
PELVIS Z ACCELERATION (G)
150
125
100
75
50
25
0
-25
-50
50
100
150
200
250
300
350
TIME MILLISECONDS

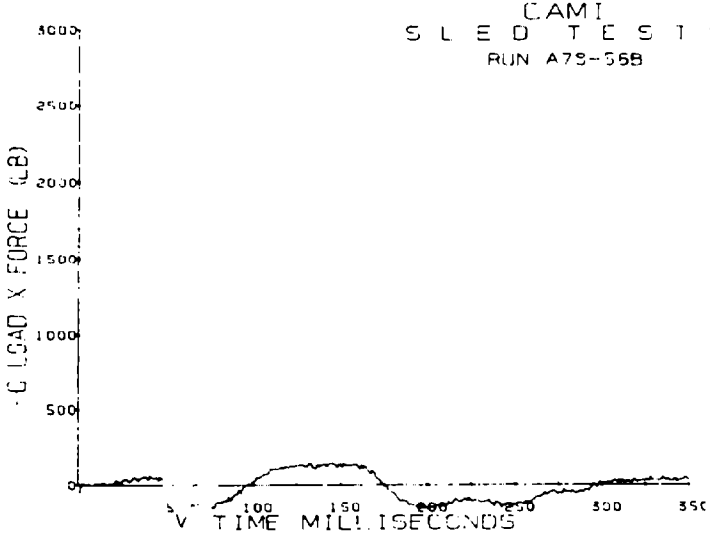

CAMI
S L E D T E S T S
RUN A79-S6B
PELVIS RESULTANT (G)
150
125
100
75
50
25
0
50
100
150
200
250
300
350
TIME MILLISECONDS

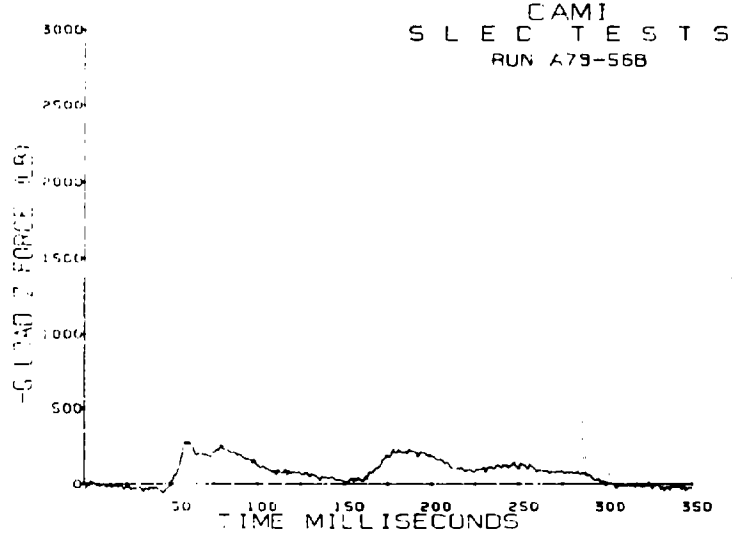

CAMI
SLED TESTS
RUN A79-56B
SEAT PAN X ACCELERATION (G)
TIME MILLISECONDS

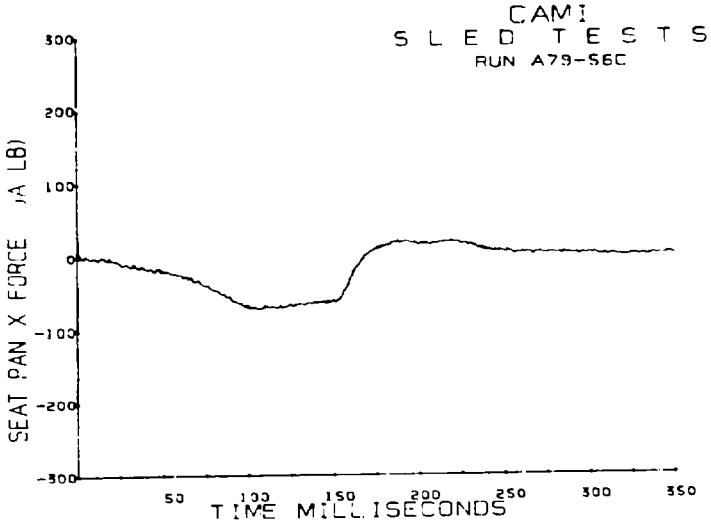

CAMI
SLED TESTS
RUN A79-56B
SEAT PAN Y ACCELERATION (G)
TIME MILLISECONDS

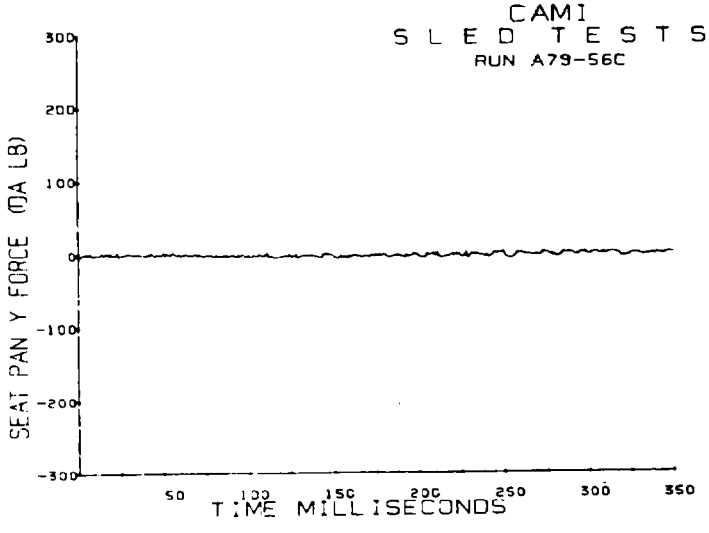

CAMI
SLED TESTS
RUN A79-56B
SEAT PAN Z ACCELERATION (G)
TIME MILLISECONDS

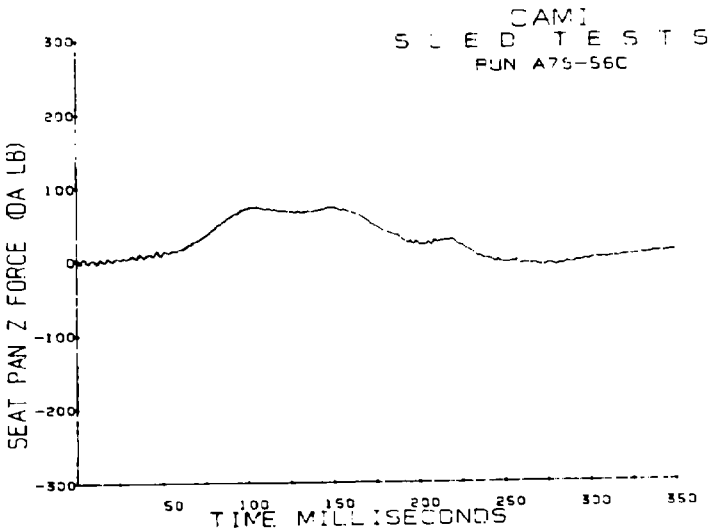

CAMI
SLED TESTS
RUN A79-56B
SEAT PAN RESULTANT (G)
TIME MILLISECONDS

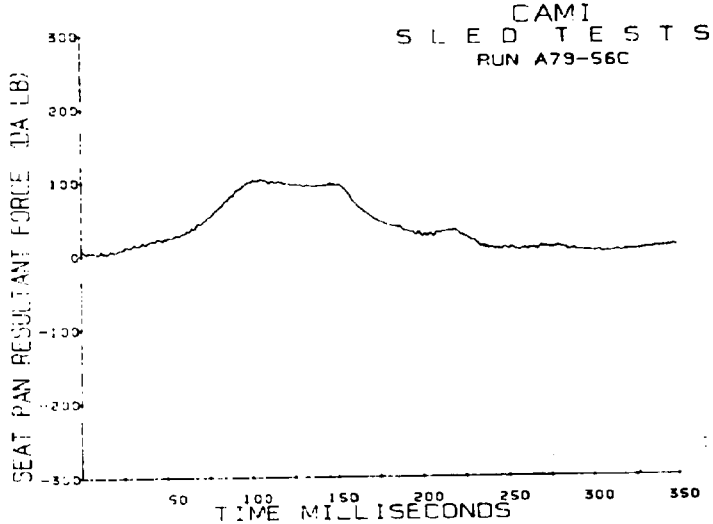

CAMI
SLED TESTS
RUN A79-568
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
100
150
200
250
300
350
TIME MILLISECONDS

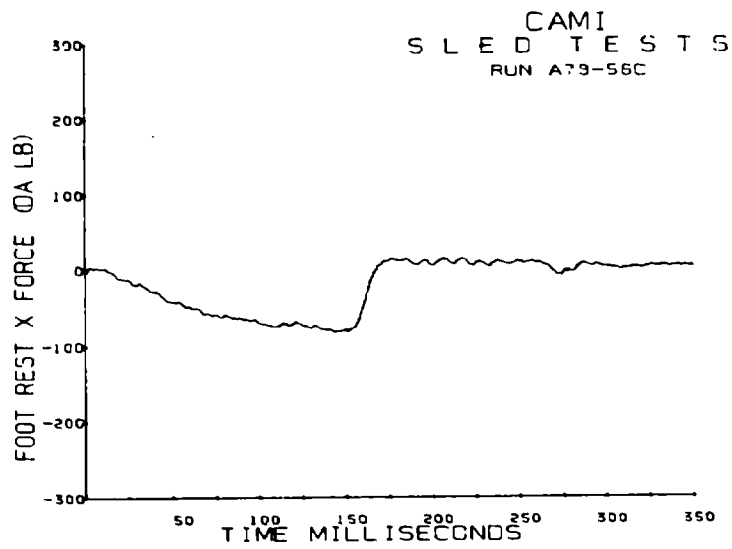

CAMI
SLED TESTS
RUN A79-568
3000
2500
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

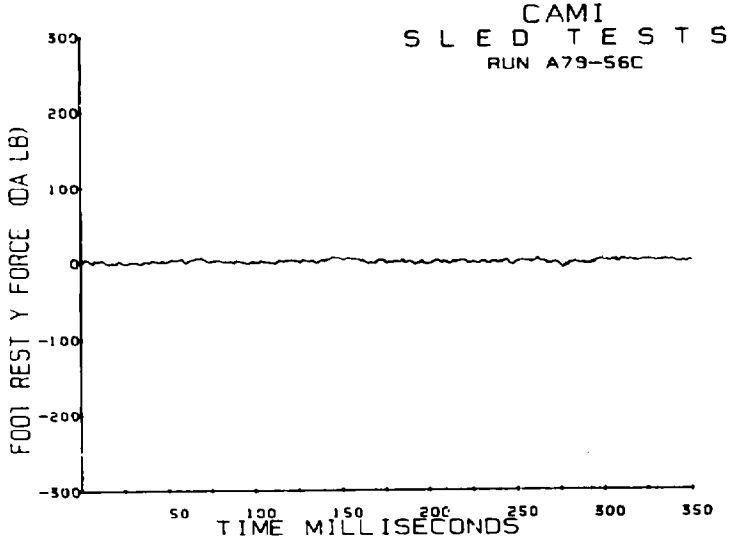

CAMI
S L E D T E S T S
RUN A79-S6C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

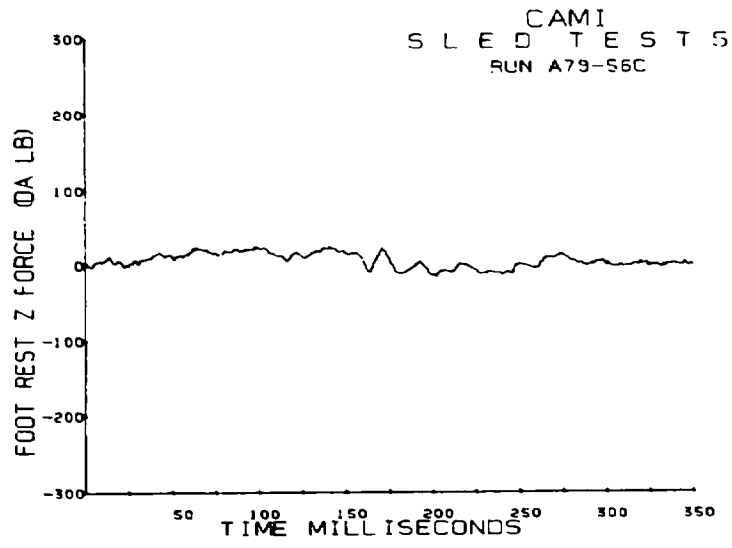

CAMI
S L E D T E S T S
RUN A79-S6C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

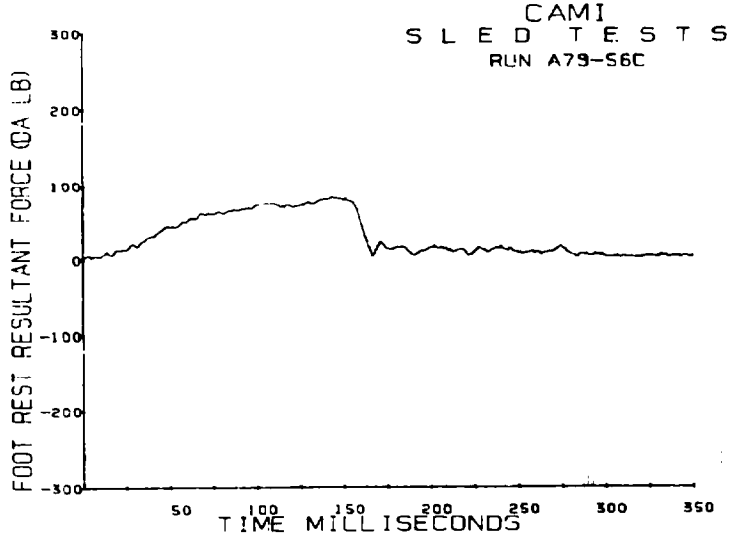

CAMI
S L E D T E S T S
RUN A79-S6C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

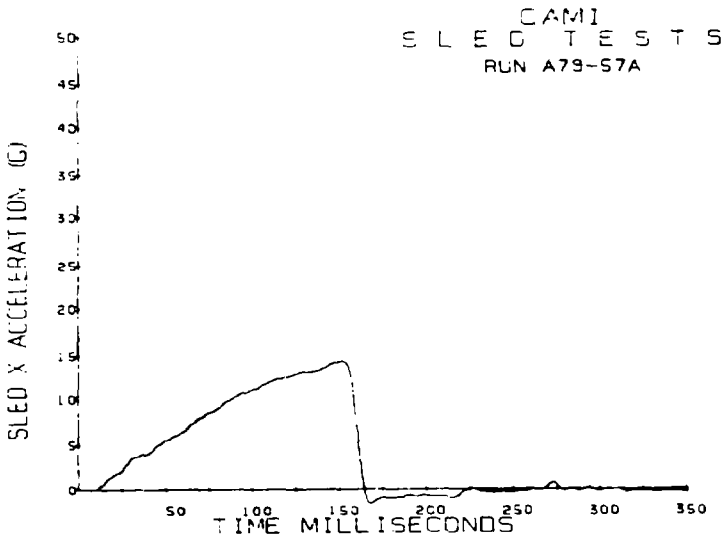

CAMI
S L E D T E S T S
RUN A79-S6C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

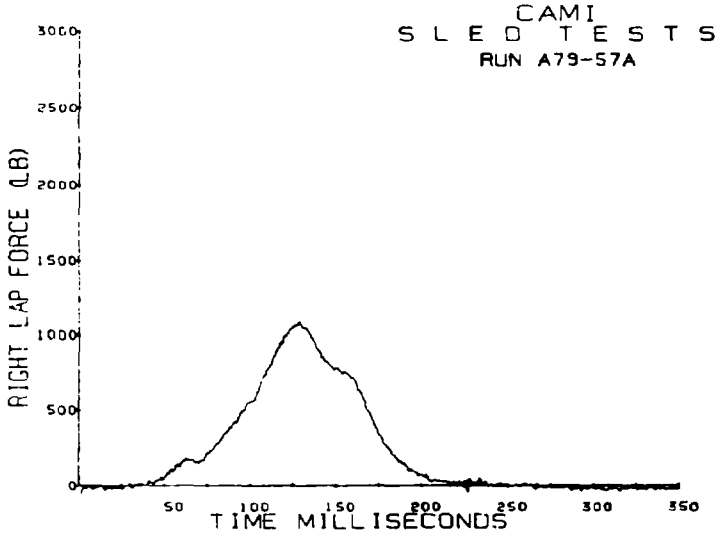

CAMI
S L E D T E S T S
RUN A79-S6C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

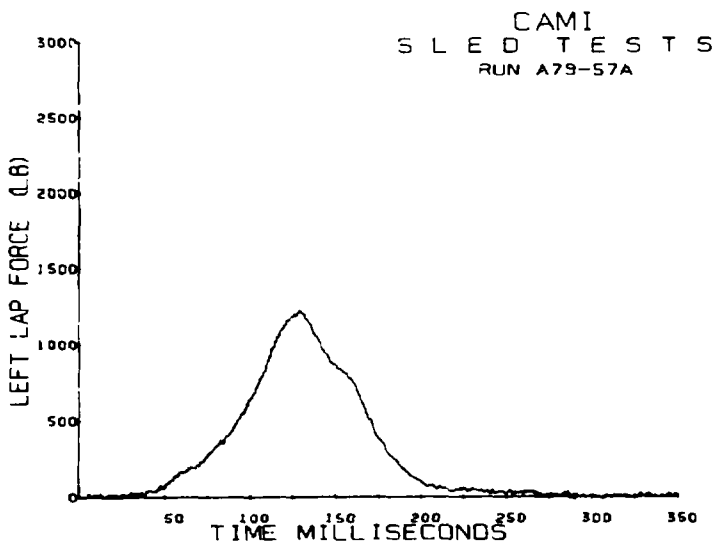

CAMI
S L E D T E S T S
RUN A79-S6C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

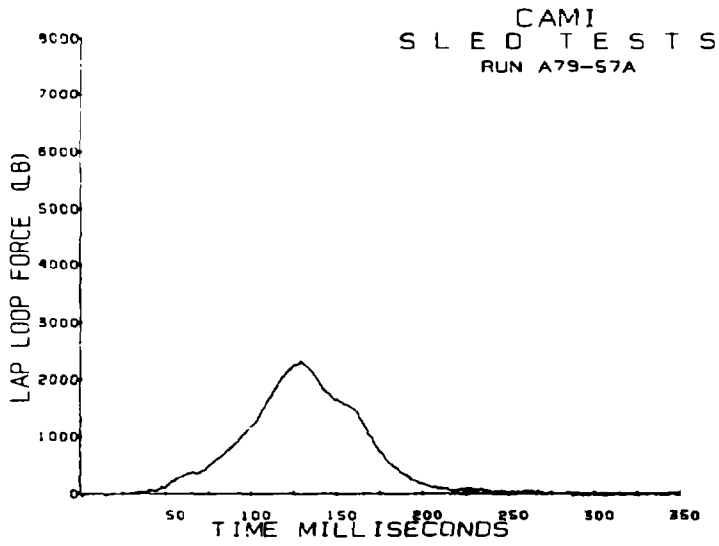

CAMI
S L E D T E S T S
RUN A79-S6C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

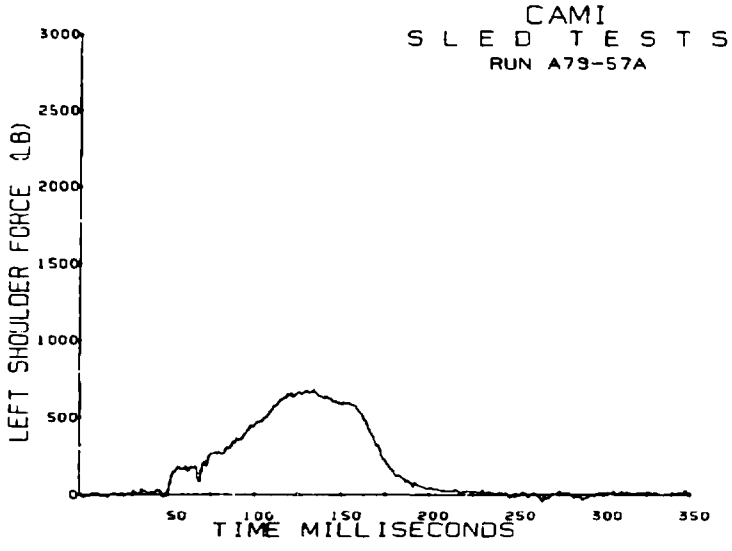

CAMI
S L E D T E S T S
RUN A79-S6C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

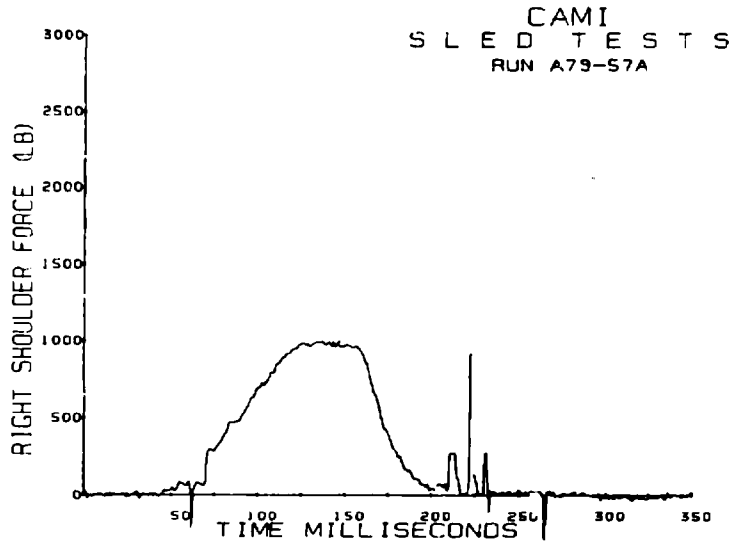

CAMI
SLED TESTS
RUN A79-57A
SLED X ACCELERATION (G)
TIME MILLISECONDS

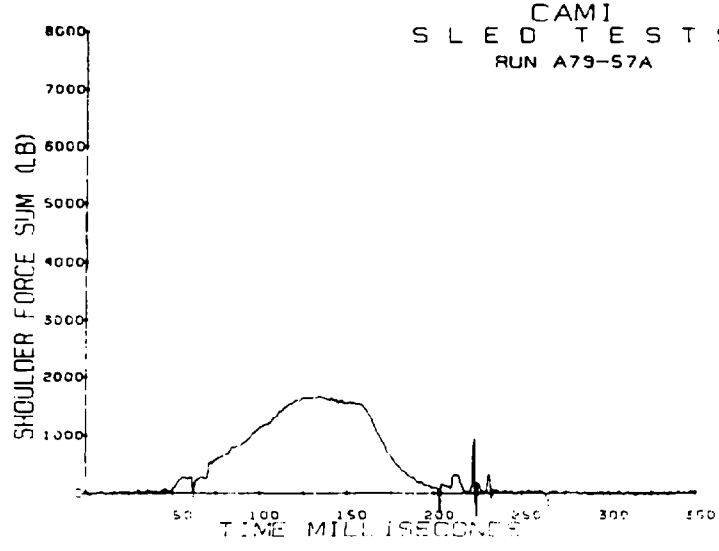

CAMI
SLED TESTS
RUN A79-57A
RIGHT LAP FORCE (LB)
TIME MILLISECONDS

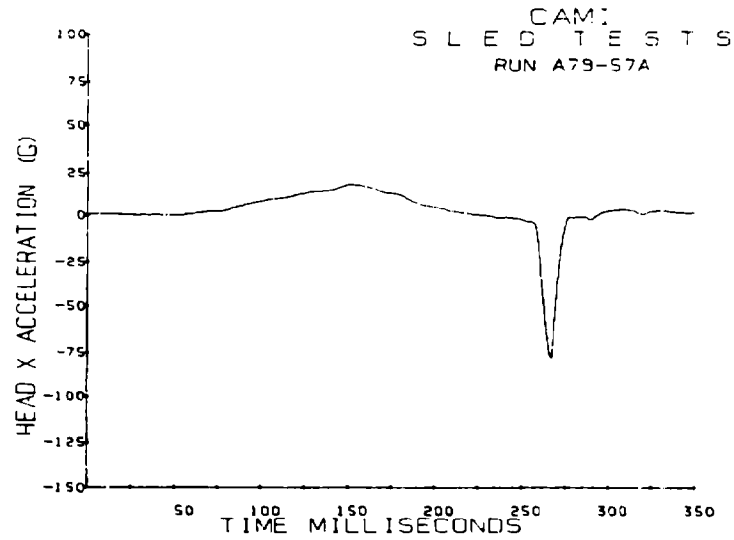

CAMI
SLED TESTS
RUN A79-57A
LEFT LAP FORCE (LB)
TIME MILLISECONDS

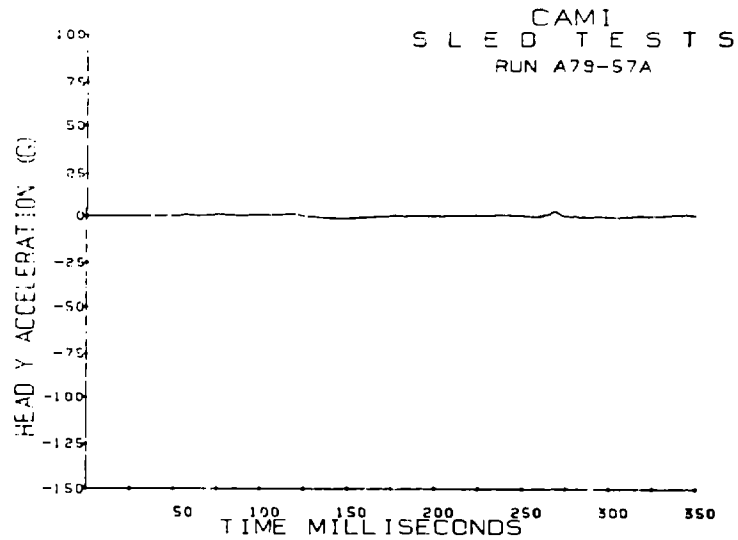

CAMI
SLED TESTS
RUN A79-57A
LAP LOOP FORCE (LB)
TIME MILLISECONDS

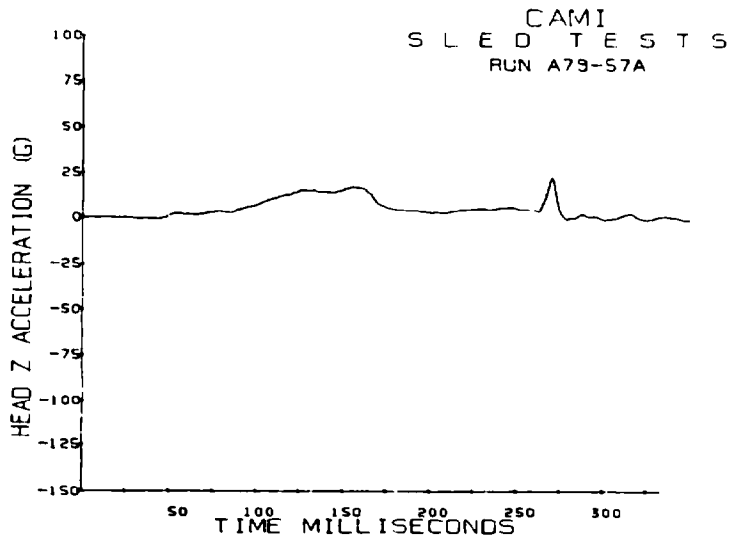

CAMI
SLED TESTS
RUN A79-57A
LEFT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

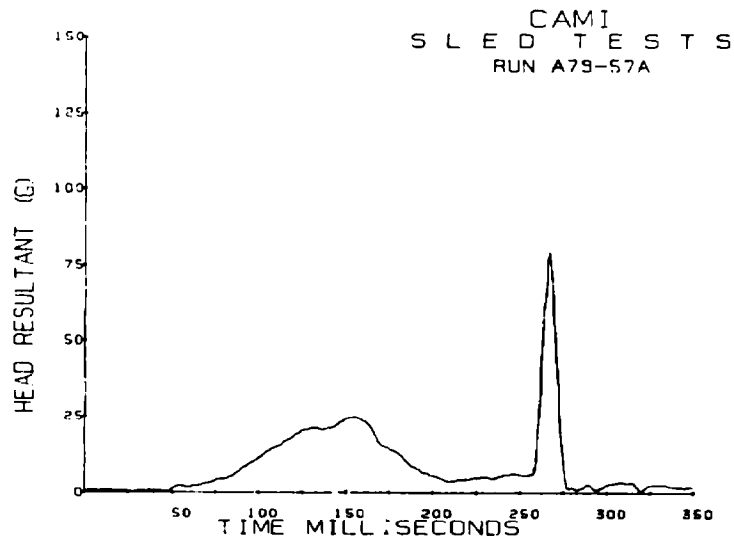

CAMI
SLED TESTS
RUN A79-57A
RIGHT SHOULDER FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

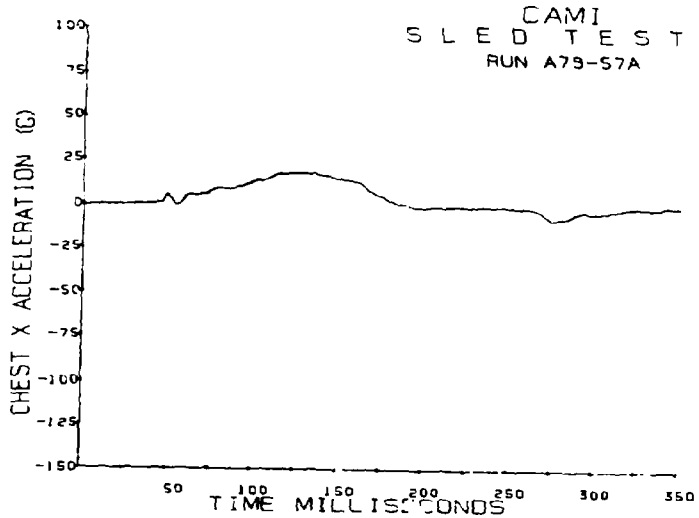

CAMI
SLED TESTS
RUN A79-57A
SHOULDER FORCE SUM (LB)
8000
7000
6000
5000
4000
3000
2000
1000
50
100
150
200
250
300
350
TIME MILLISECONDS

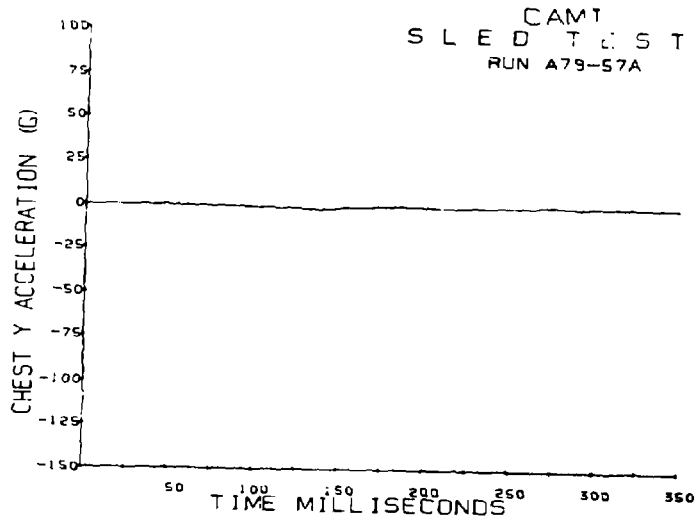

CAMI
SLED TESTS
RUN A79-57A
HEAD X ACCELERATION (G)
TIME MILLISECONDS

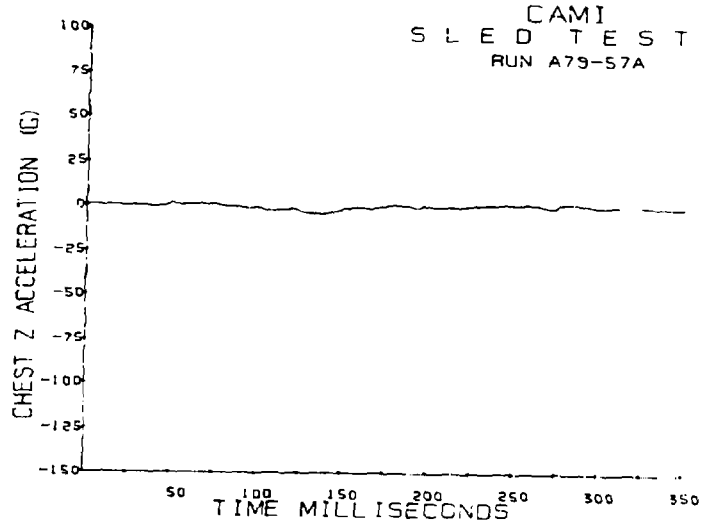

CAMI
SLED TESTS
RUN A79-57A
HEAD Y ACCELERATION (G)
TIME MILLISECONDS

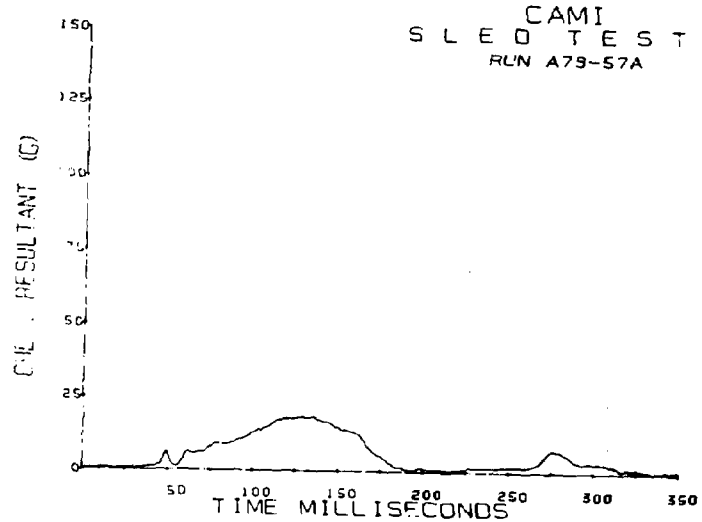

CAMI
SLED TESTS
RUN A79-57A
HEAD Z ACCELERATION (G)
TIME MILLISECONDS

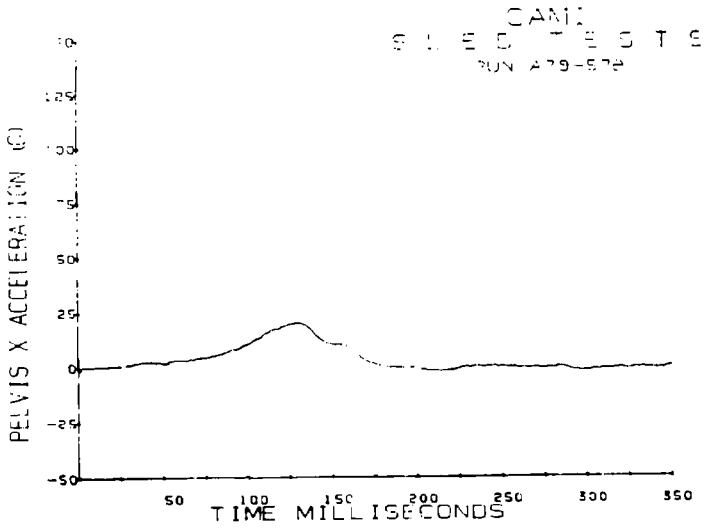

CAMI
SLED TESTS
RUN A79-57A
HEAD RESULTANT (G)
TIME MILLISECONDS

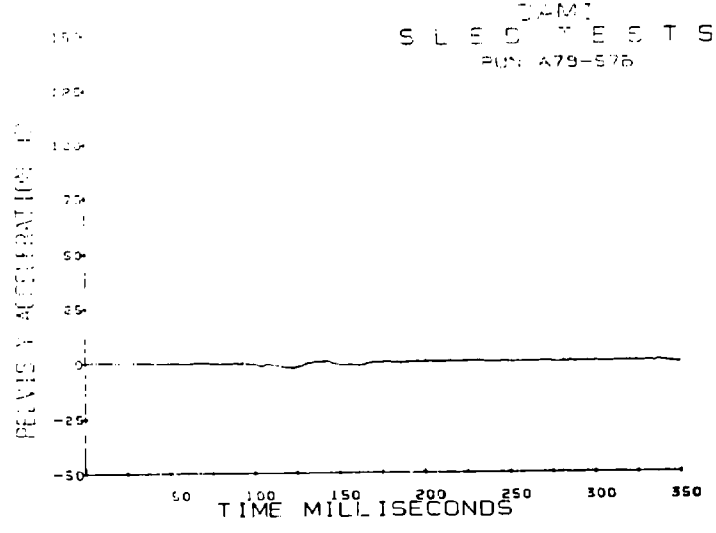

CAMI
SLED TESTS
RUN A79-57A
CHEST X ACCELERATION (G)
TIME MILLISECONDS

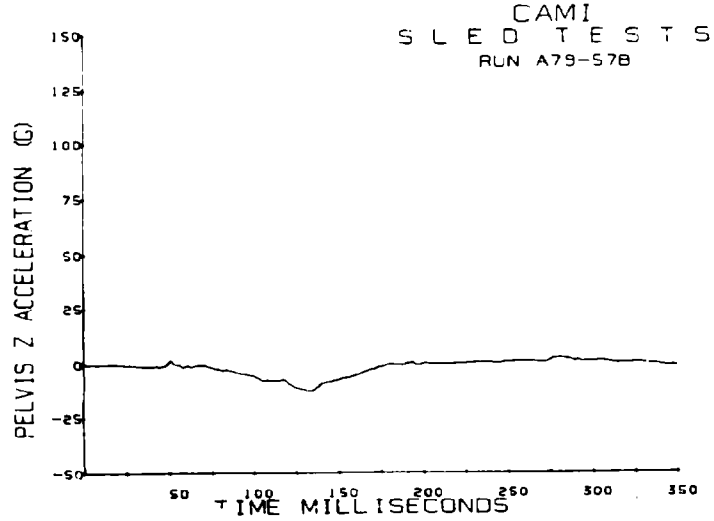

CAMI
SLED TESTS
RUN A79-57A
CHEST Y ACCELERATION (G)
TIME MILLISECONDS

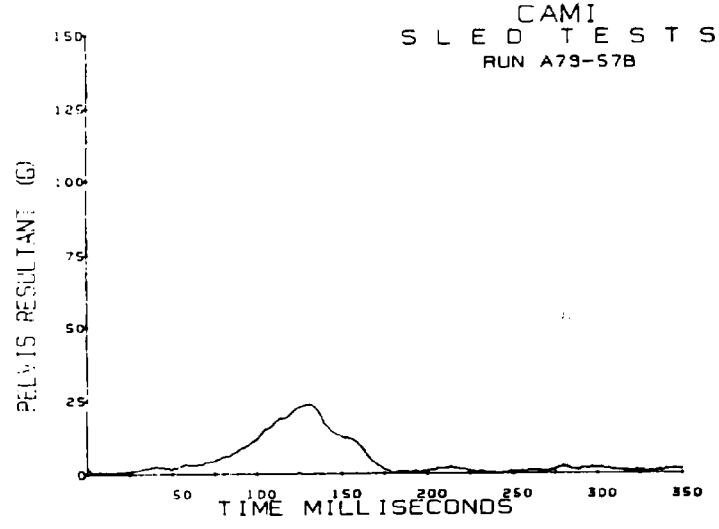

CAMI
SLED TESTS
RUN A79-57A
CHEST Z ACCELERATION (G)
TIME MILLISECONDS


CAMI
SLED TESTS
RUN A79-57A
TIME MILLISECONDS

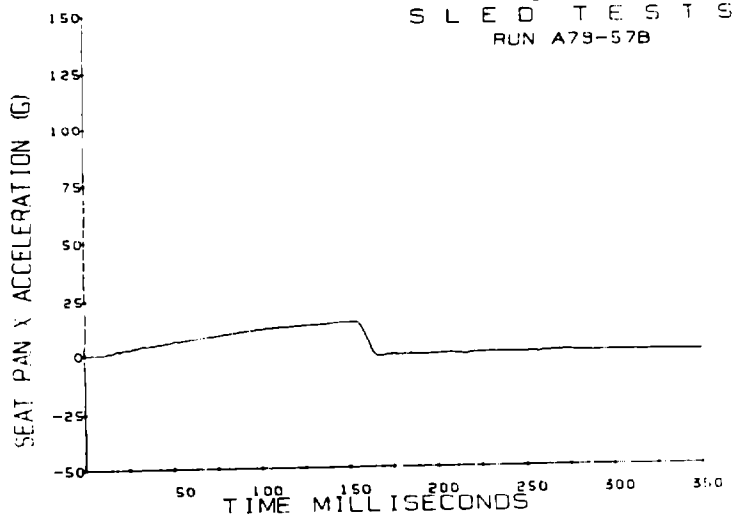

CAMI
SLED TESTS
RUN A79-S7B
PELVIS X ACCELERATION (G)
TIME MILLISECONDS


CAMI
SLED TESTS
RUN A79-S7B
TIME MILLISECONDS

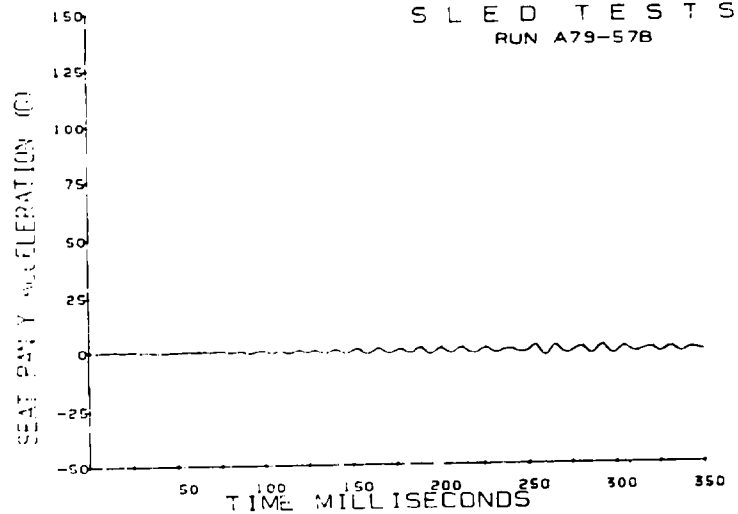

CAMI
SLED TESTS
RUN A79-S7B
PELVIS Z ACCELERATION (G)
TIME MILLISECONDS


CAMI
SLED TESTS
RUN A79-S7B
PELVIS RESULTANT (G)
TIME MILLISECONDS

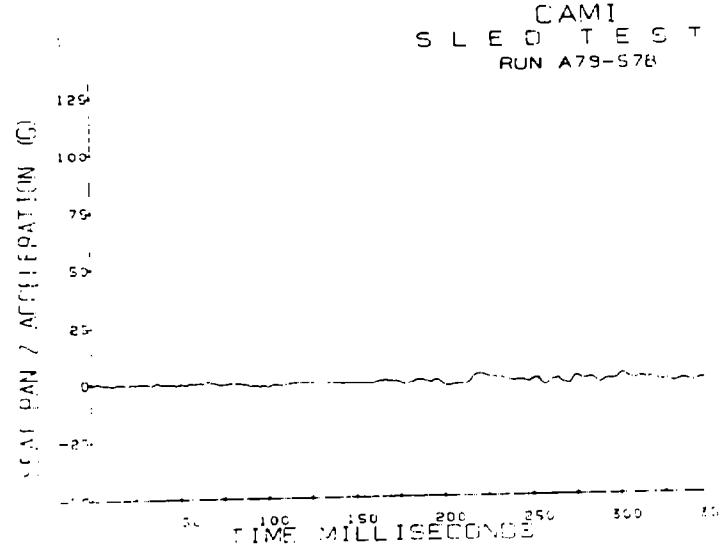
CAMI
S L E D T E S T S
RUN A79-57B



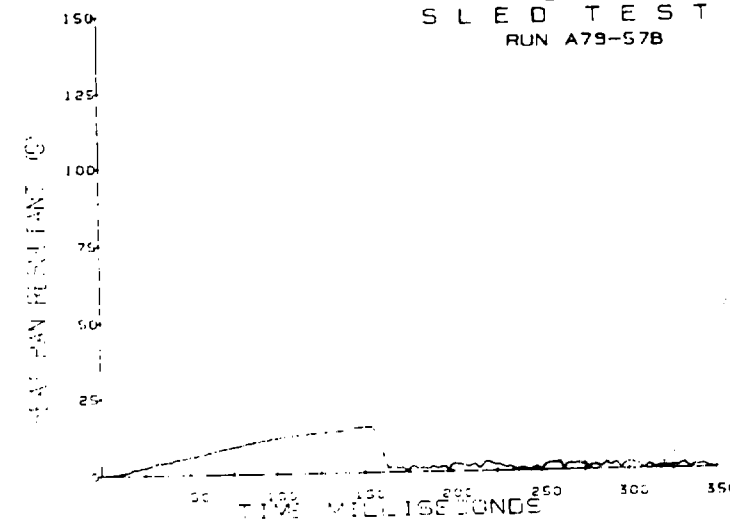
CAMI
S L E D T E S T S
RUN A79-57B

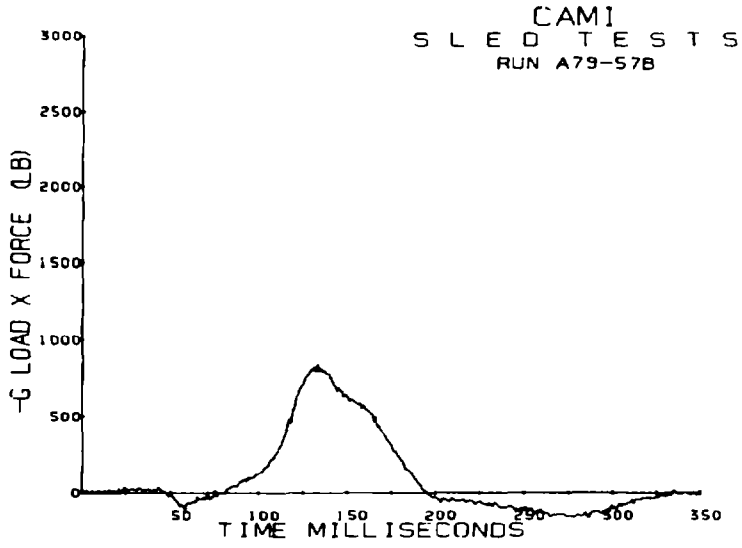


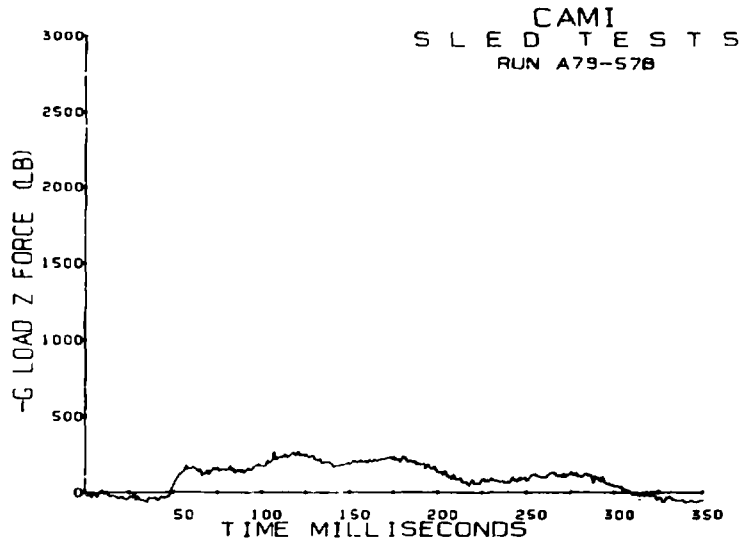
CAMI
S L E D T E S T S
RUN A79-57B

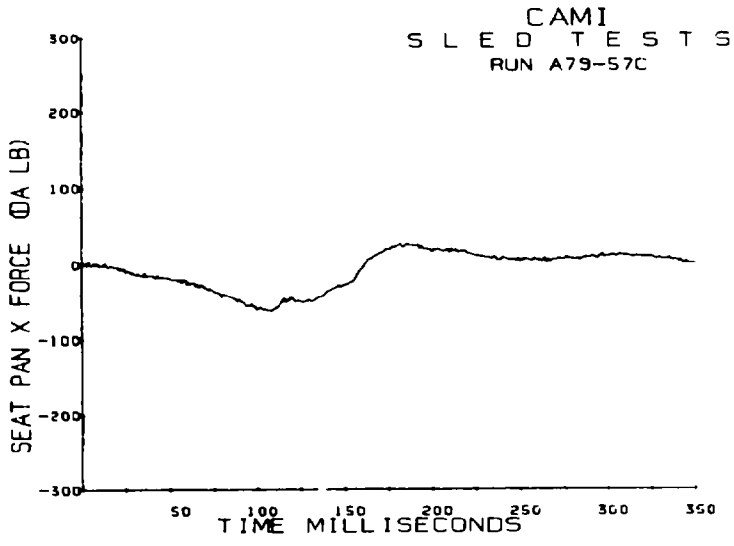


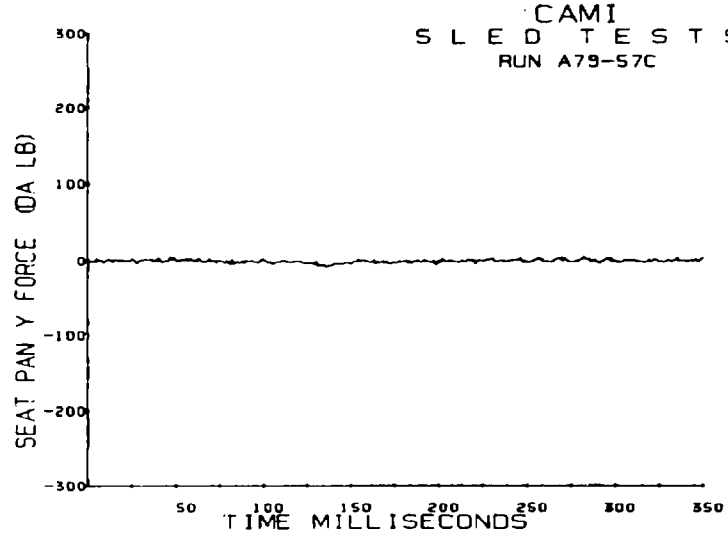
CAMI
S L E D T E S T S
RUN A79-57B

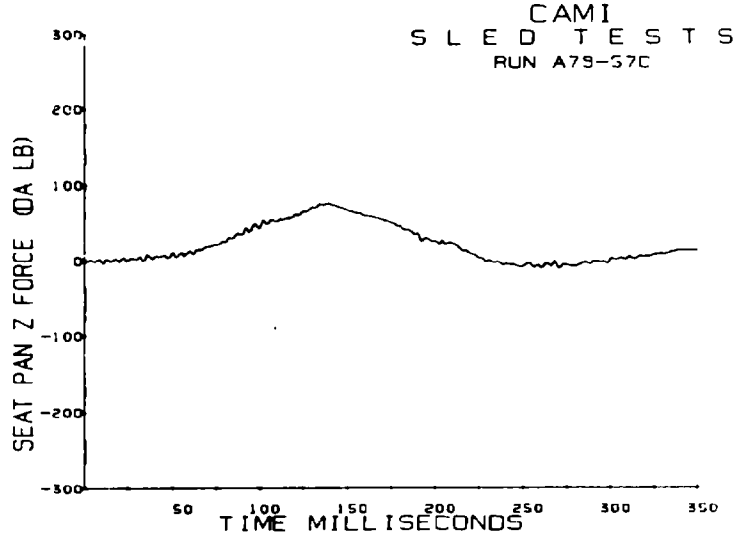


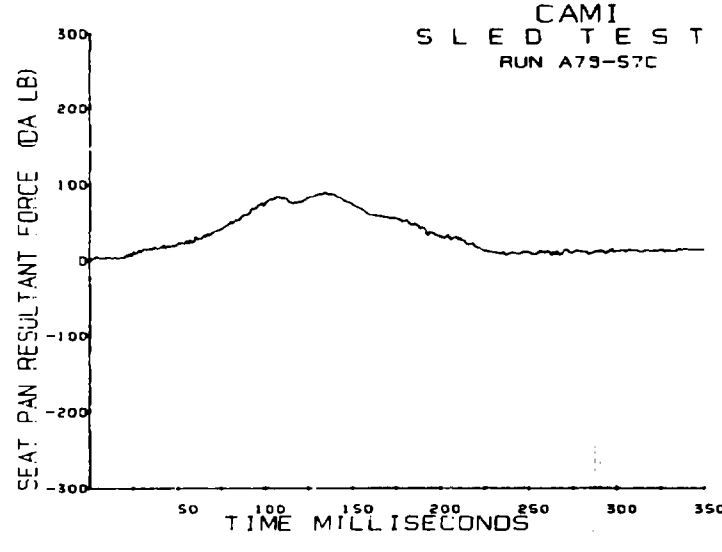

CAMI
SLED TESTS
RUN A79-S7B
-G LOAD X FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

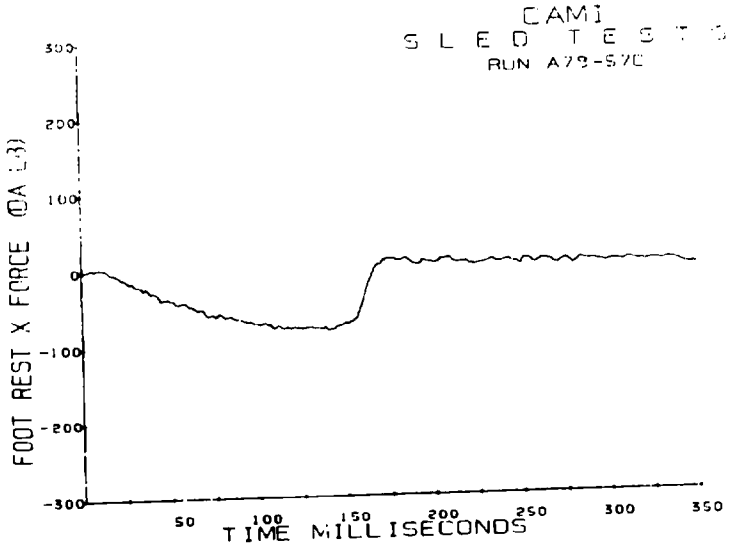

CAMI
SLED TESTS
RUN A79-S7B
-G LOAD Z FORCE (LB)
3000
2500
2000
1500
1000
500
0
50
100
150
200
250
300
350
TIME MILLISECONDS

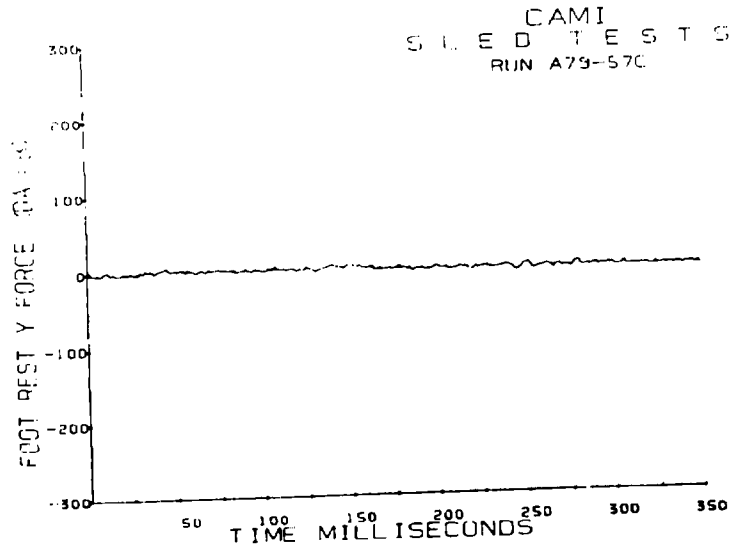

CAMI
S L E D T E S T S
RUN A79-57C
SEAT PAN X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

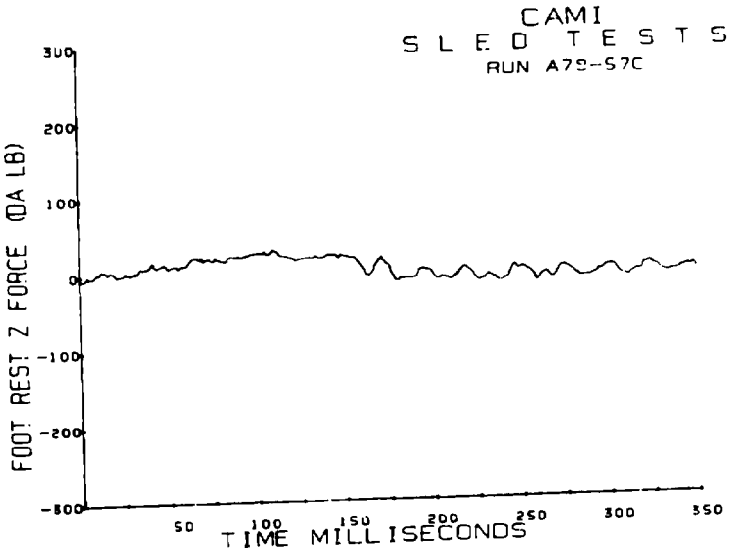

CAMI
S L E D T E S T S
RUN A79-57C
SEAT PAN Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

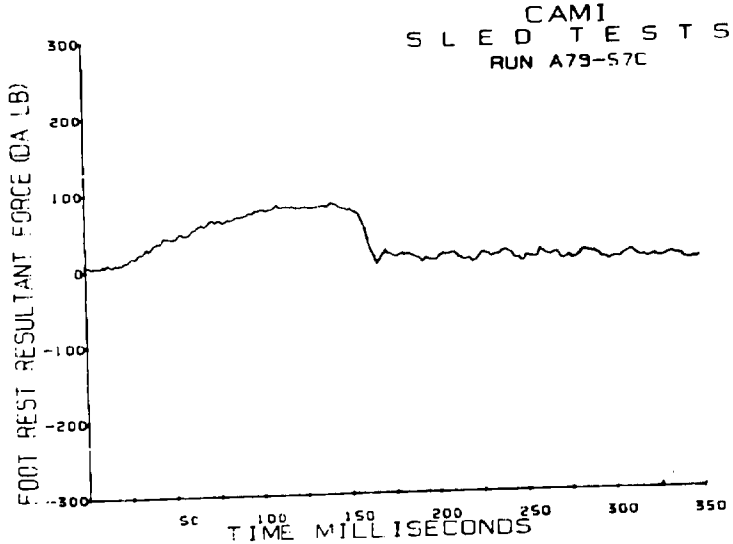

CAMI
S L E D T E S T S
RUN A79-57C
SEAT PAN Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS


CAMI
S L E D T E S T S
RUN A79-57C
SEAT PAN RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS


CAMI
SLED TESTS
RUN A79-57C
FOOT REST X FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS


CAMI
SLED TESTS
RUN A79-57C
FOOT REST Y FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS


CAMI
SLED TESTS
RUN A79-57C
FOOT REST Z FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS


CAMI
SLED TESTS
RUN A79-57C
FOOT REST RESULTANT FORCE (DA LB)
300
200
100
0
-100
-200
-300
50
100
150
200
250
300
350
TIME MILLISECONDS

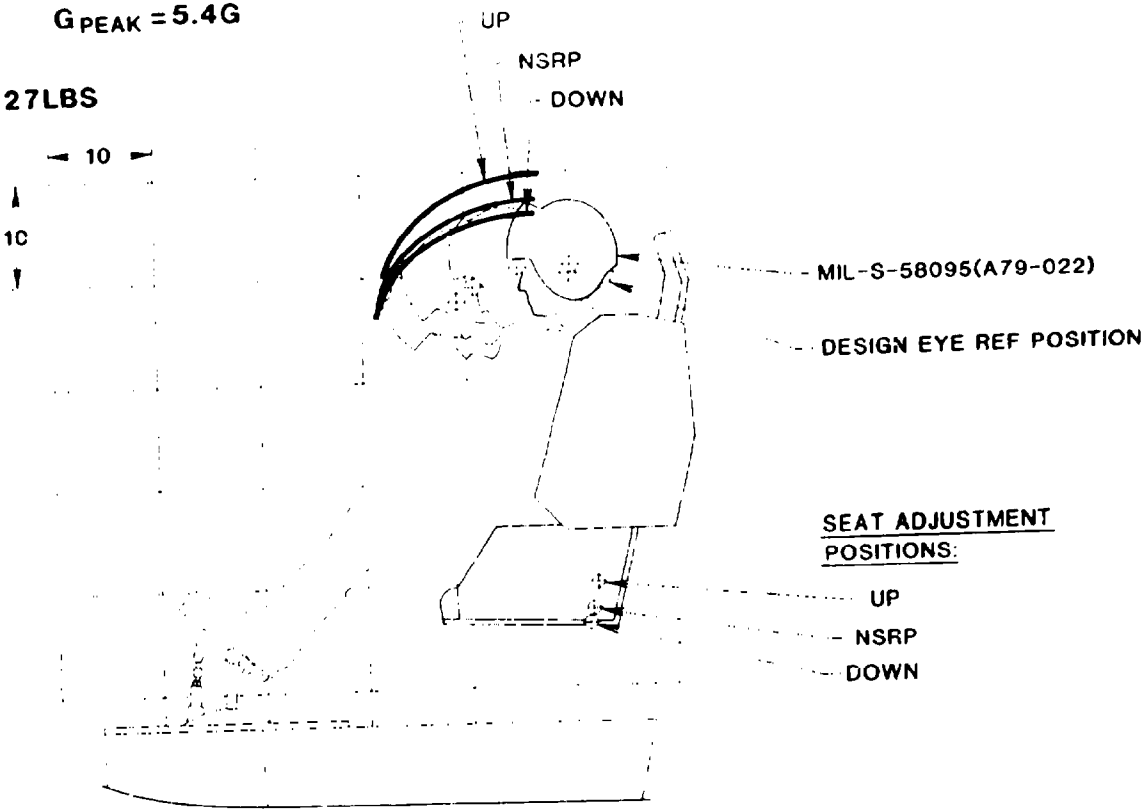
APPENDIX B
ANTHROPOMORPHIC DUMMY STRIKE ENVELOPES

PULSE: 50th PERCENTILE SURVIVABLE

ΔV = 28FPS G_{PEAK} = 5.4G

YAW = 0°

DUMMY: VIP-95, 227LBS



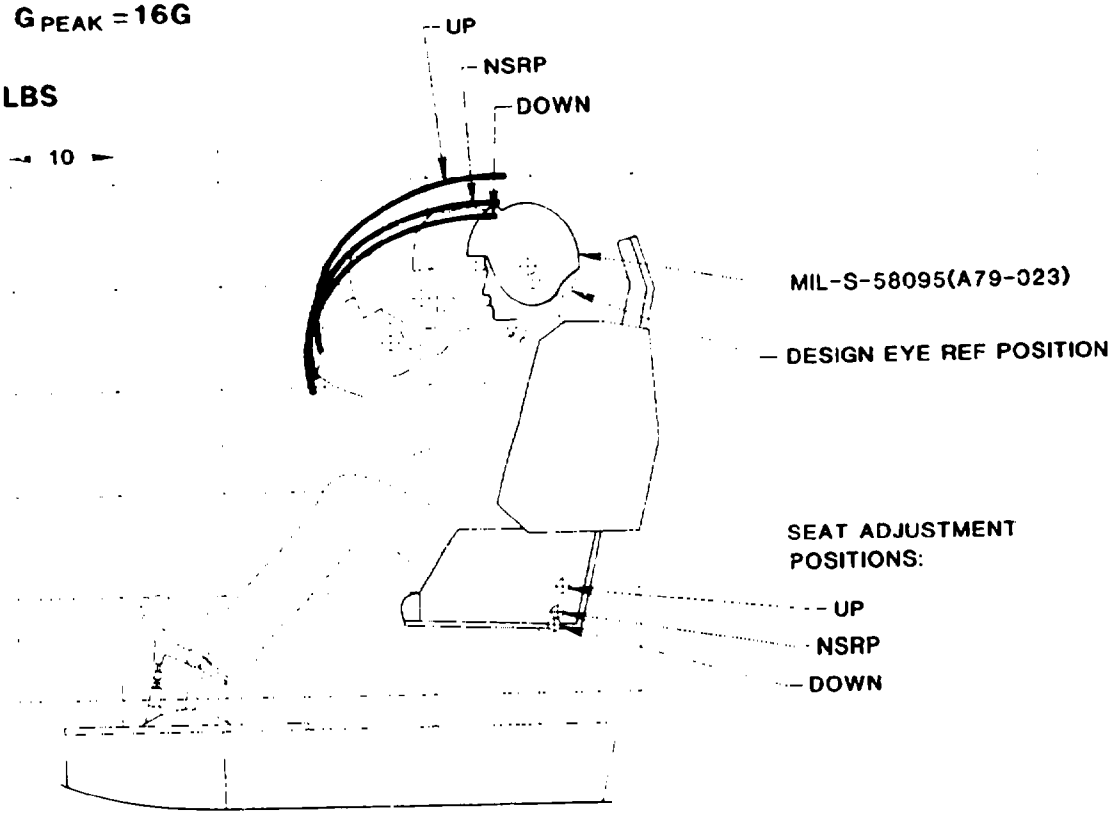
CPG STRIKE ENVELOPE

PULSE: 85th PERCENTILE SURVIVABLE

ΔV = 39FPS G_{PEAK} = 16G

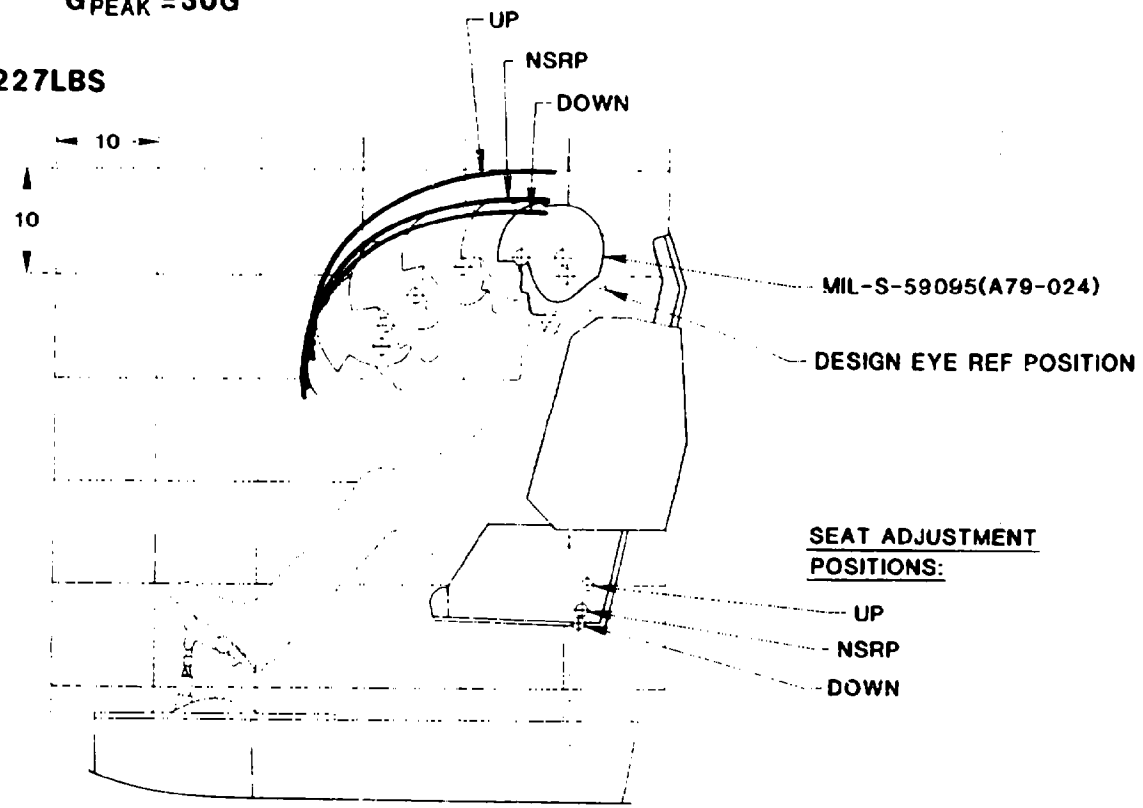
YAW = 0°

DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 0°
DUMMY: VIP-95, 227LBS



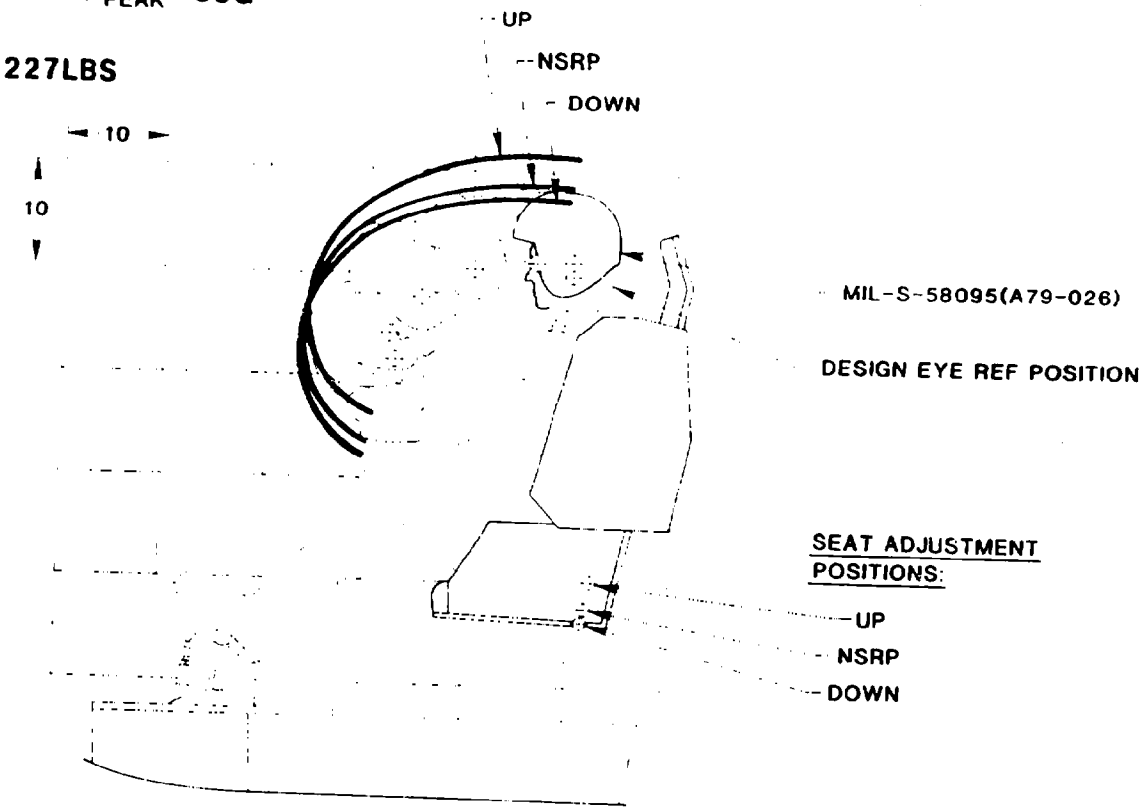
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

$\Delta V = 50$FPS $G_{PEAK} = 30G$

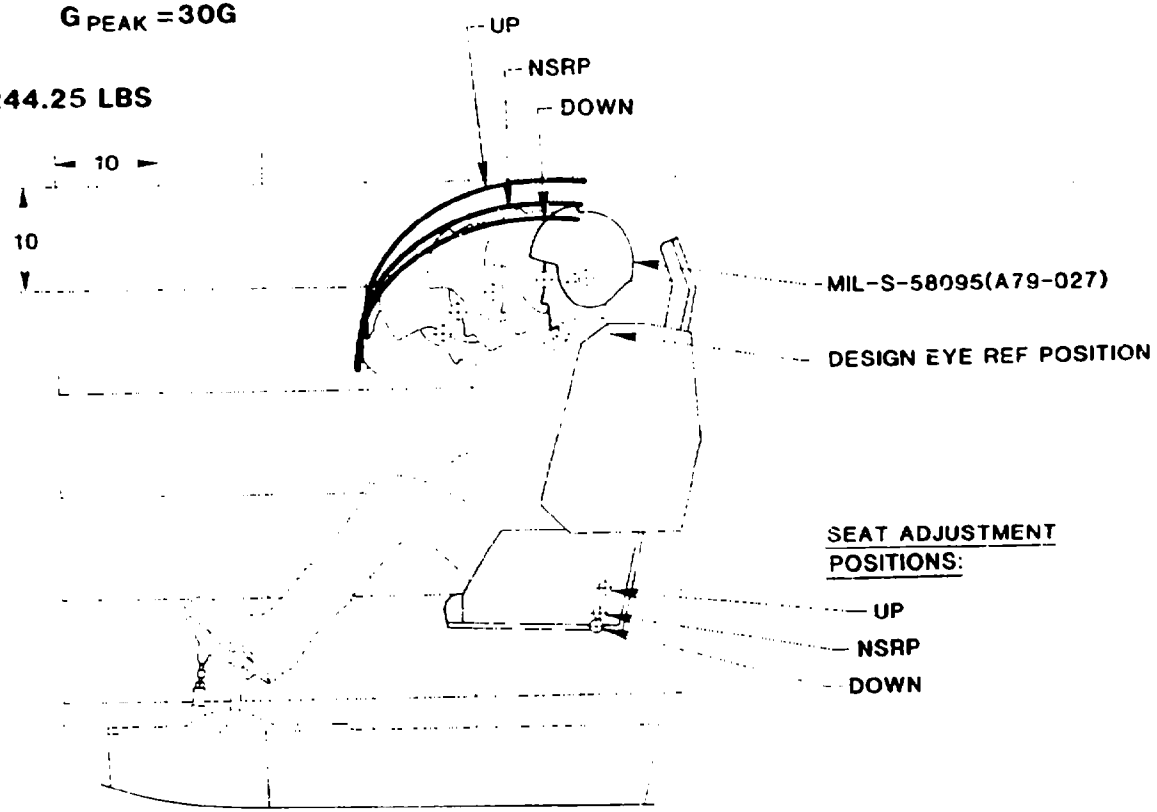
YAW = 0°

DUMMY: VIP-95, 227LBS



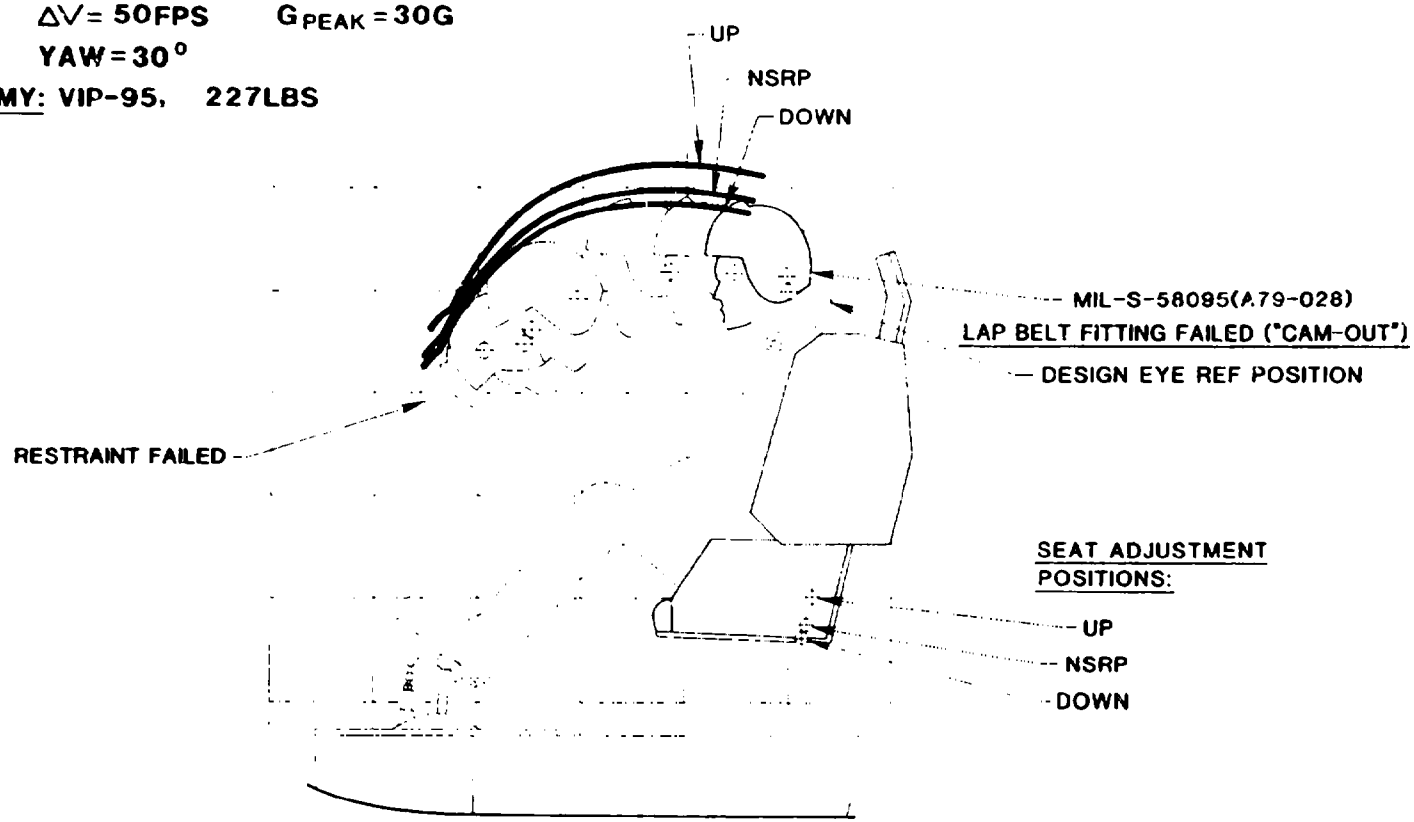
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 0°
DUMMY: VIP-95, 244.25 LBS



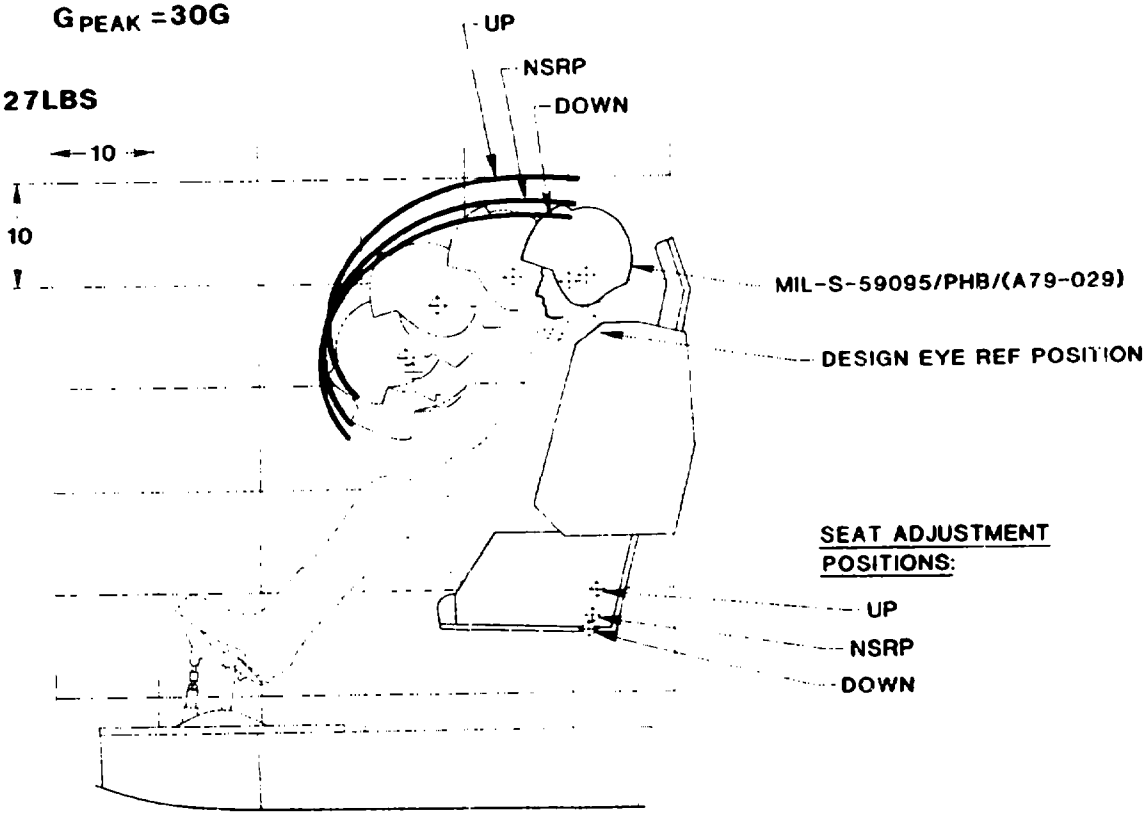
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50$FPS $G_{PEAK} = 30G$
YAW = 30°
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 0°
DUMMY: VIP-95, 227LBS



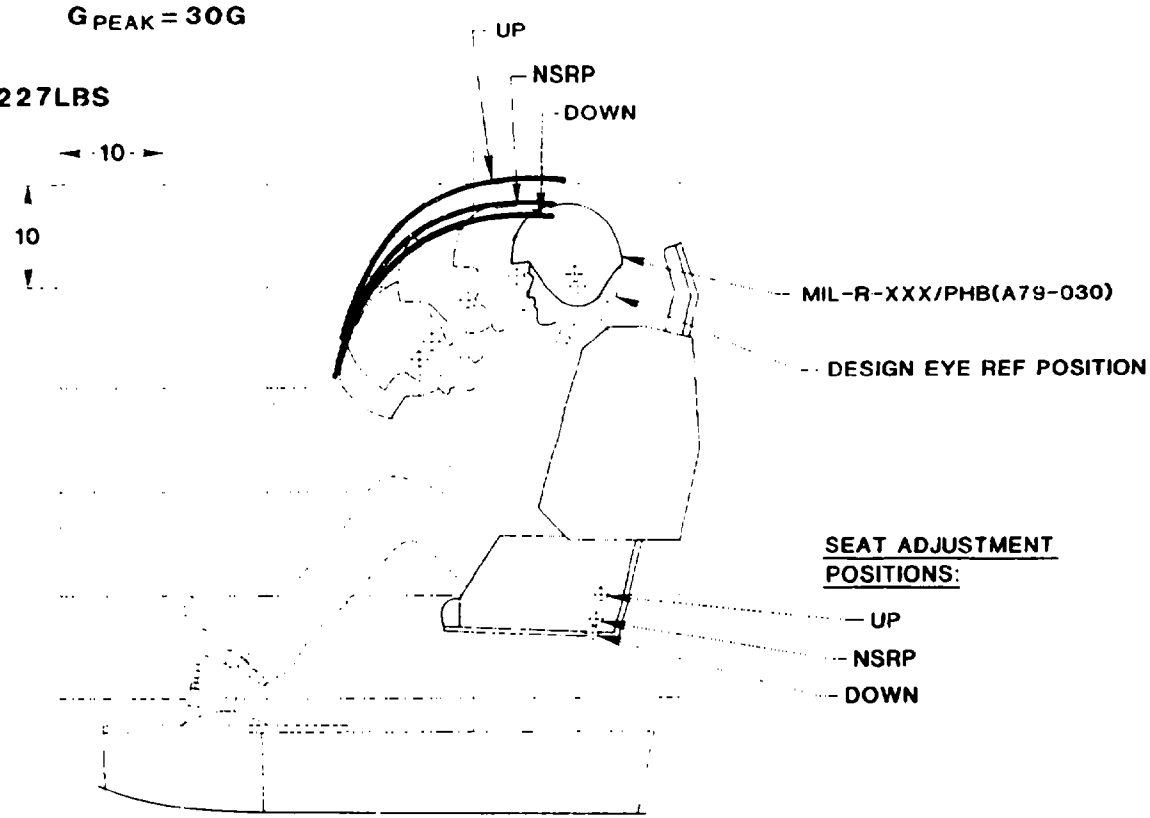
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

ΔV = 50FPS G_{PEAK} = 30G

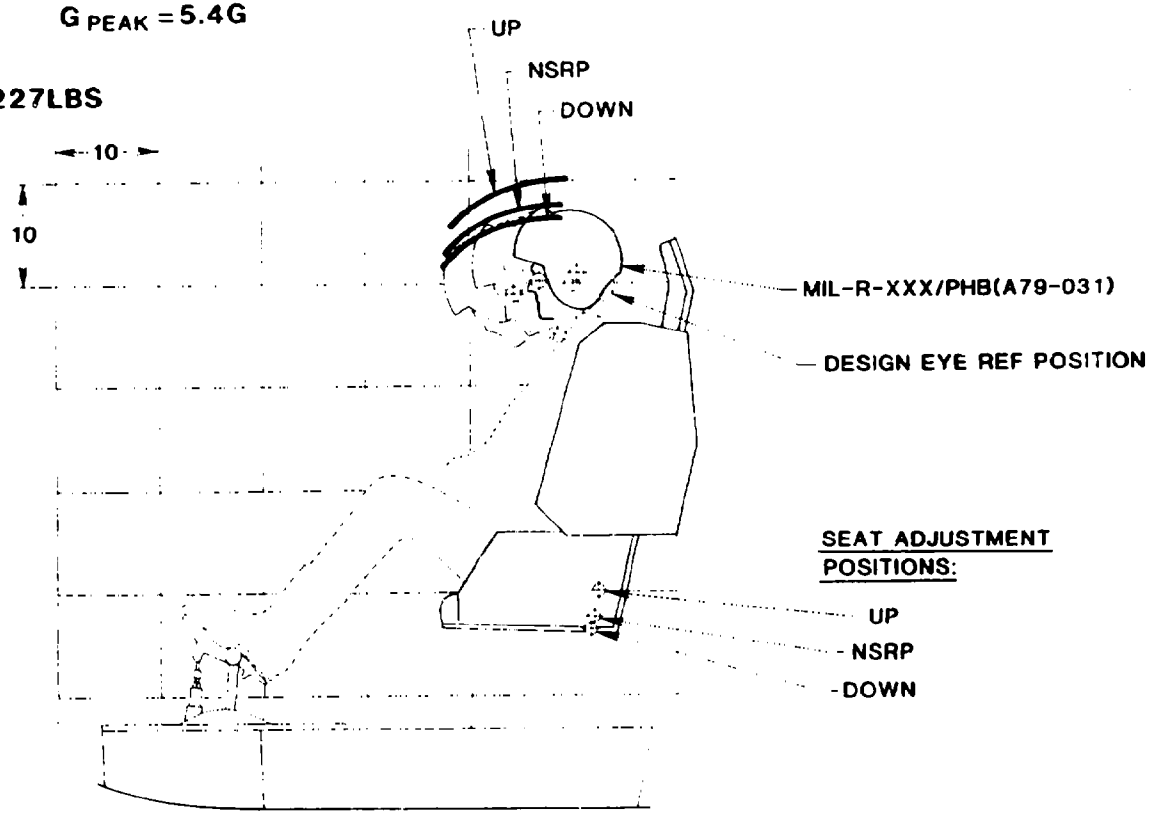
YAW = 0°

DUMMY: VIP-95, 227LBS



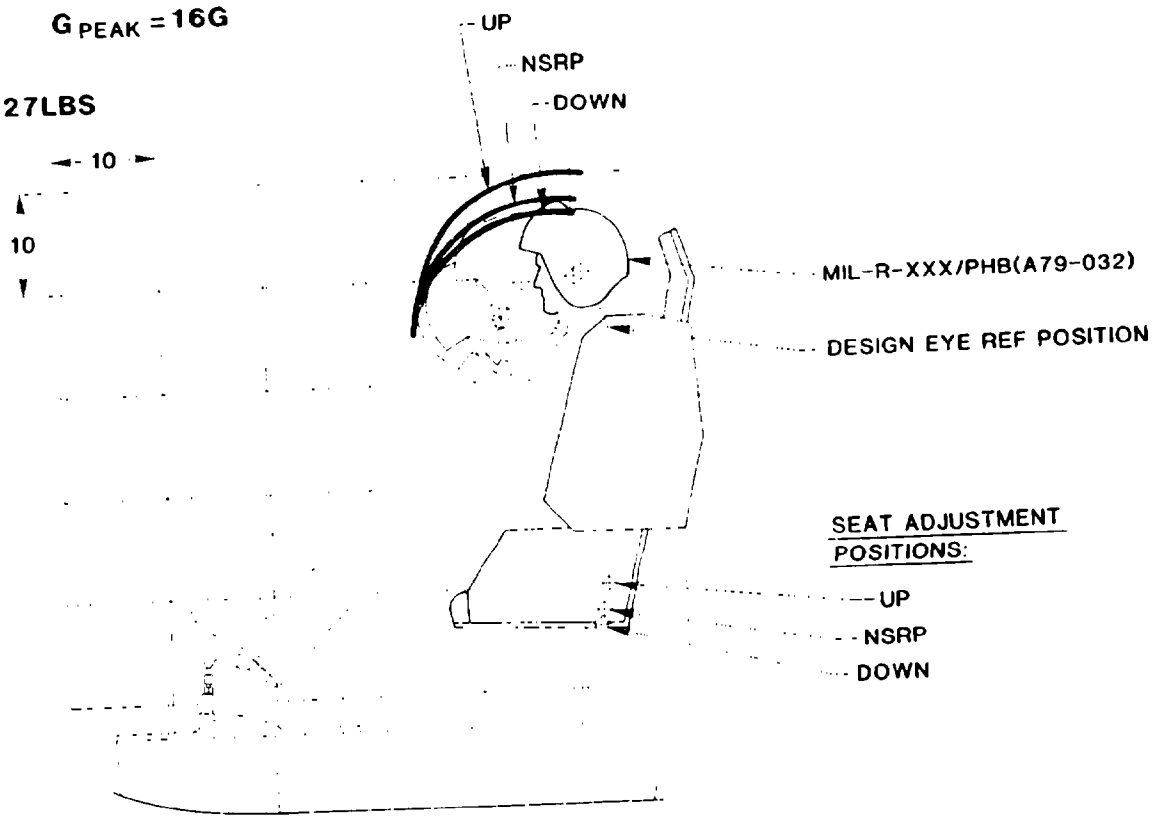
CPG STRIKE ENVELOPE

PULSE: 50th PERCENTILE SURVIVABLE
ΔV = 28FPS G_{PEAK} = 5.4G
YAW = 0°
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 85th PERCENTILE SURVIVABLE
ΔV = 39FPS G_{PEAK} = 16G
YAW = 0°
DUMMY: VIP-95, 227LBS



322

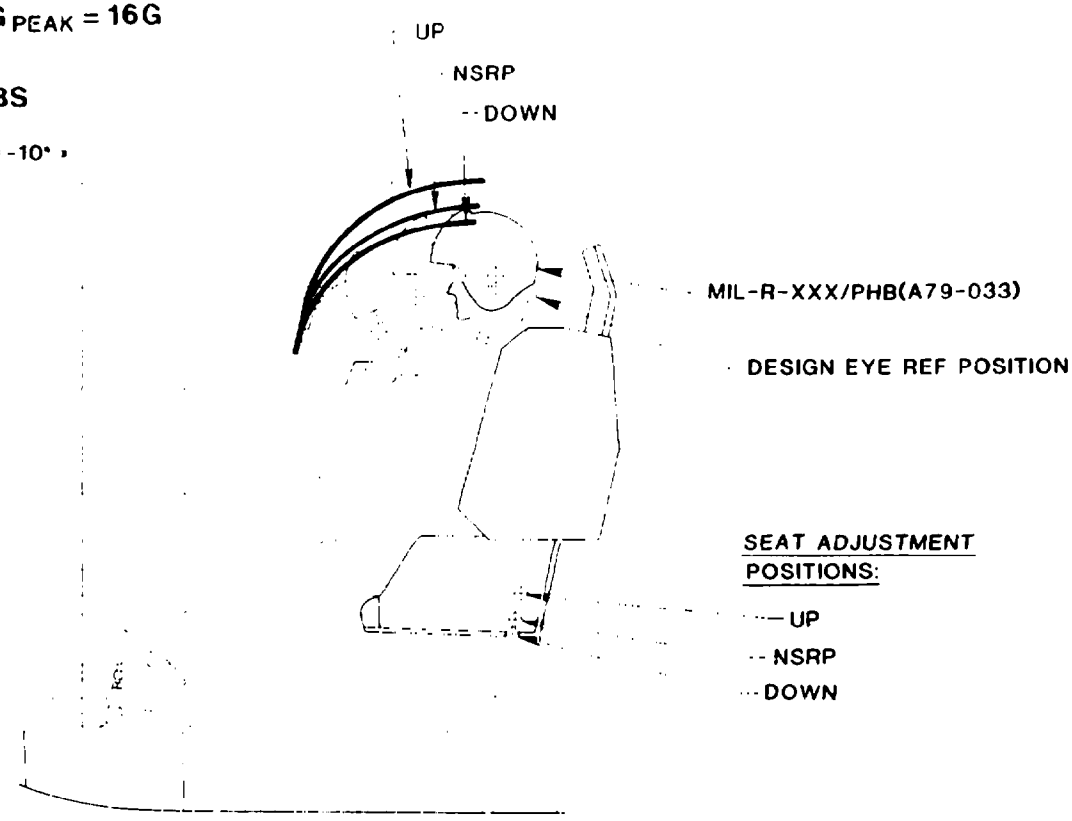
CPG STRIKE ENVELOPE

PULSE: 85th PERCENTILE SURVIVABLE

$\Delta V = 39$ FPS $G_{PEAK} = 16G$

YAW = 0°

DUMMY: VIP-95, 227LBS



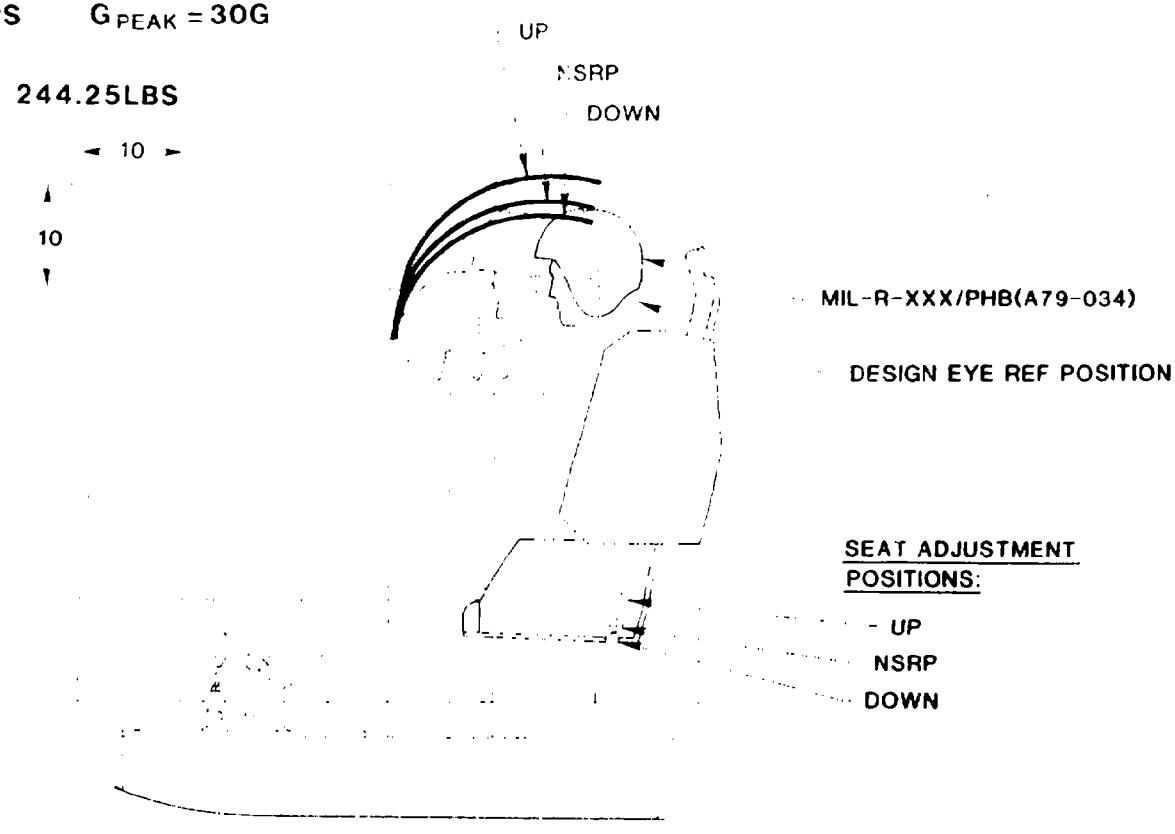
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

ΔV = 50FPS G_{PEAK} = 30G

YAW = 0°

DUMMY: VIP-95, 244.25LBS



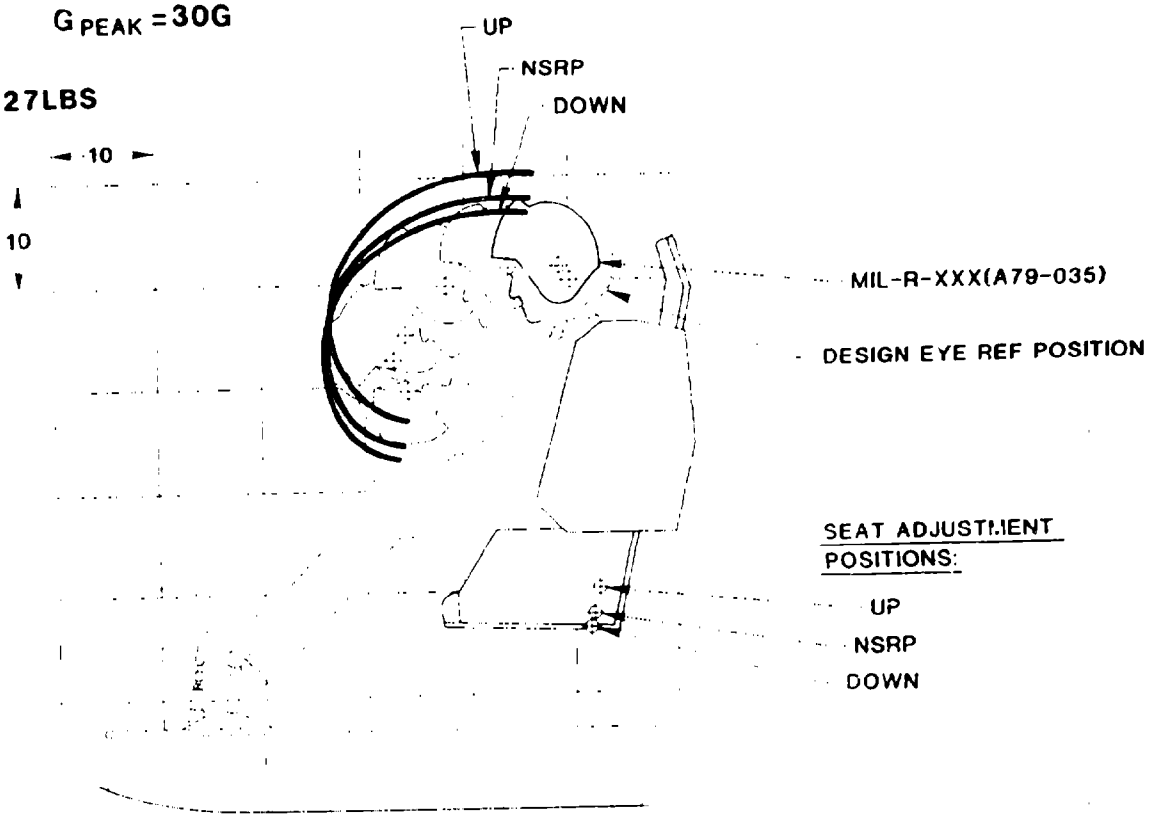
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

$\Delta V = 50FPS$ $G_{PEAK} = 30G$

YAW = 0°

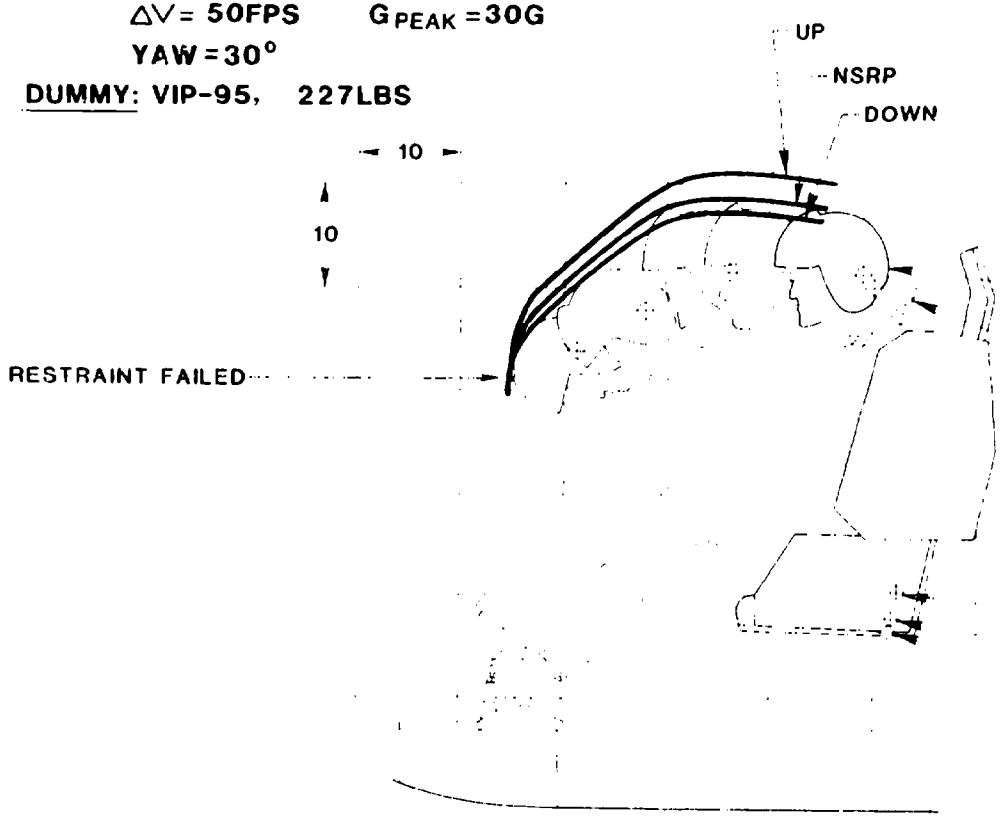
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 30°

DUMMY: VIP-95, 227LBS



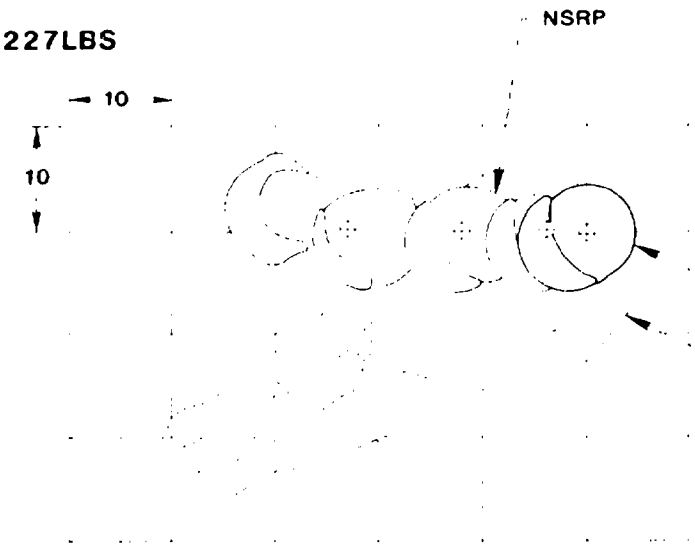
MIL-S-58095(A79-036)
FAILED
DESIGN EYE REF POSITION

SEAT ADJUSTMENT POSITIONS:

— UP
··· NSRP
DOWN

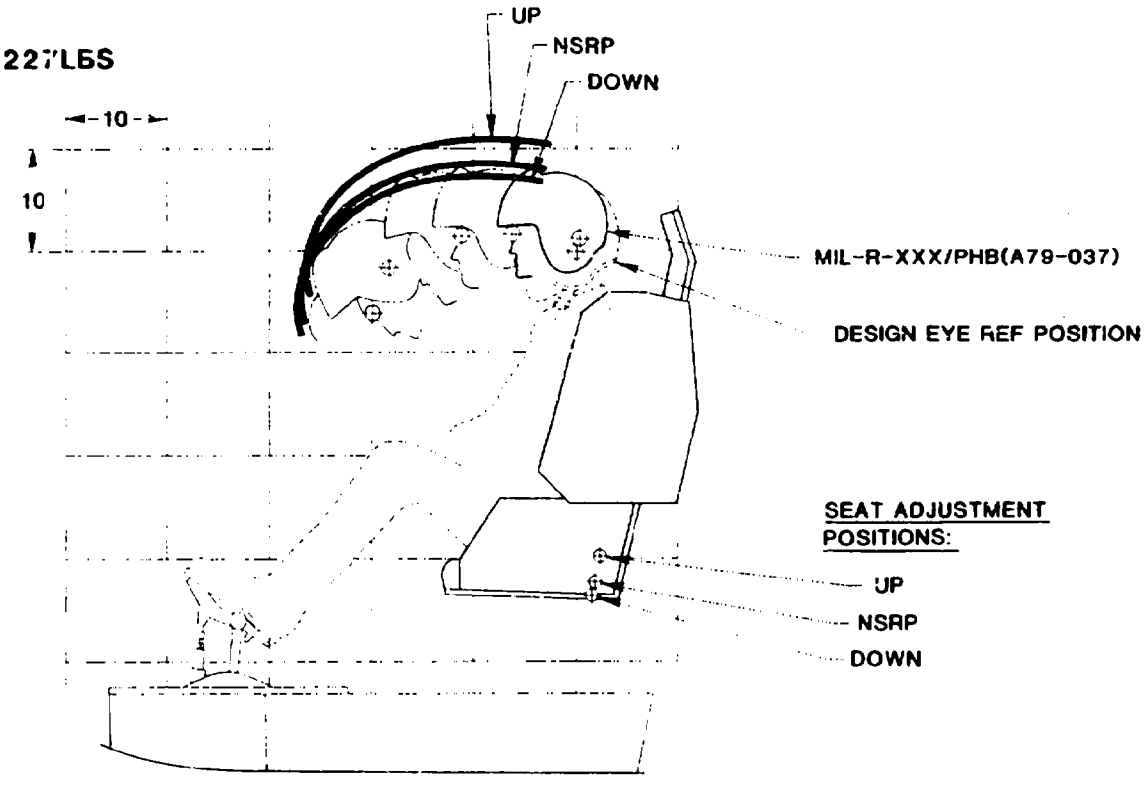
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 30°
DUMMY: VIP-95, 227LBS



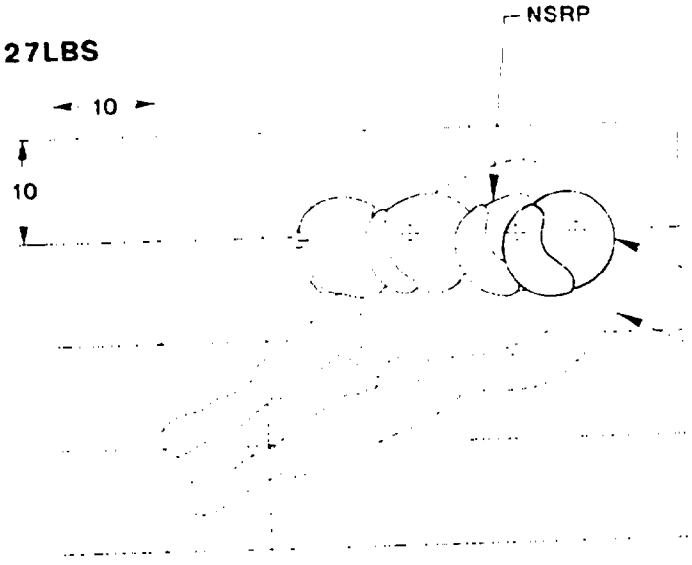
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50$FPS $G_{PEAK} = 30G$
YAW = 30°
DUMMY: VIP-95, 227LBS



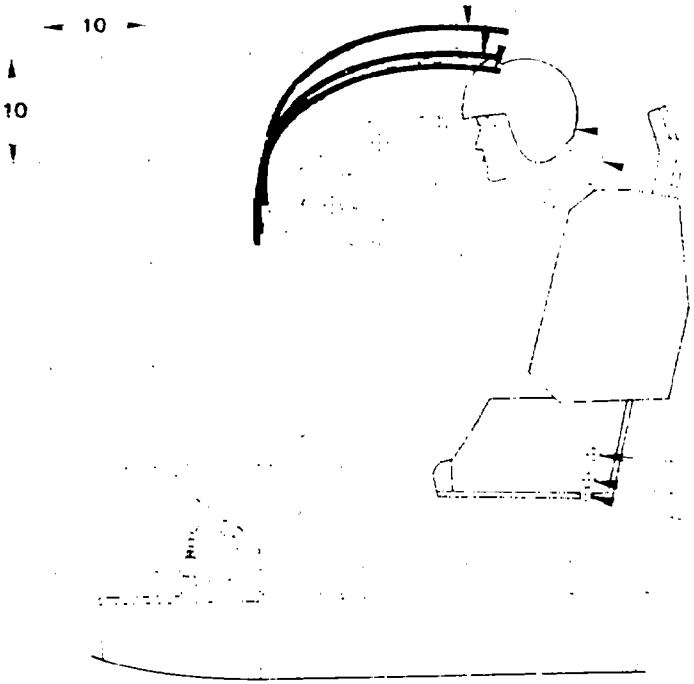
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50FPS$ $G_{PEAK} = 30G$
YAW = 30°
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 30°
DUMMY: VIP-95, 227LBS



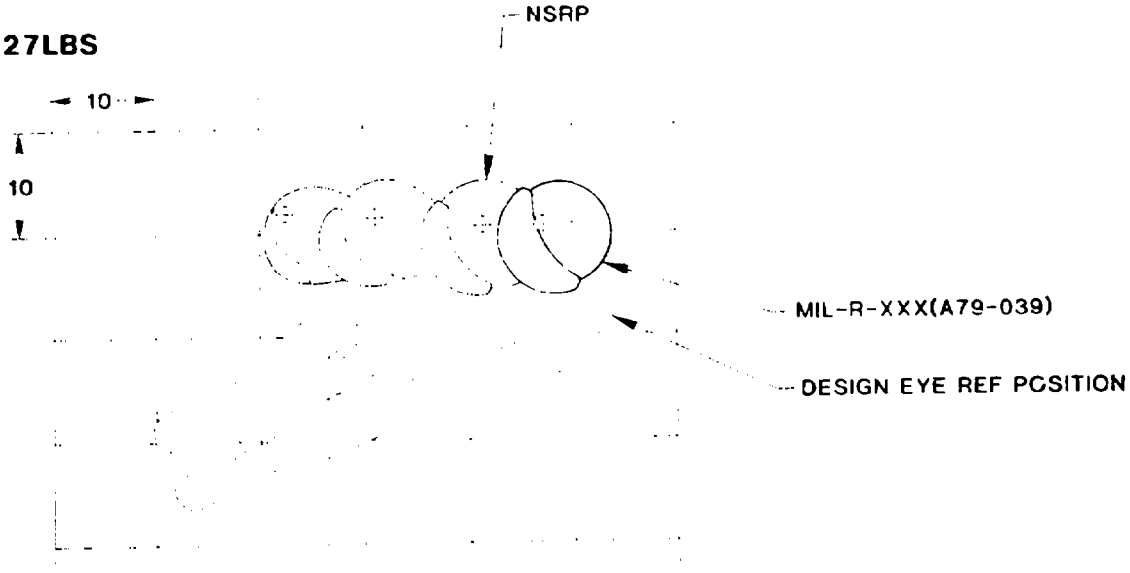
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

ΔV = 50FPS G_{PEAK} = 30G

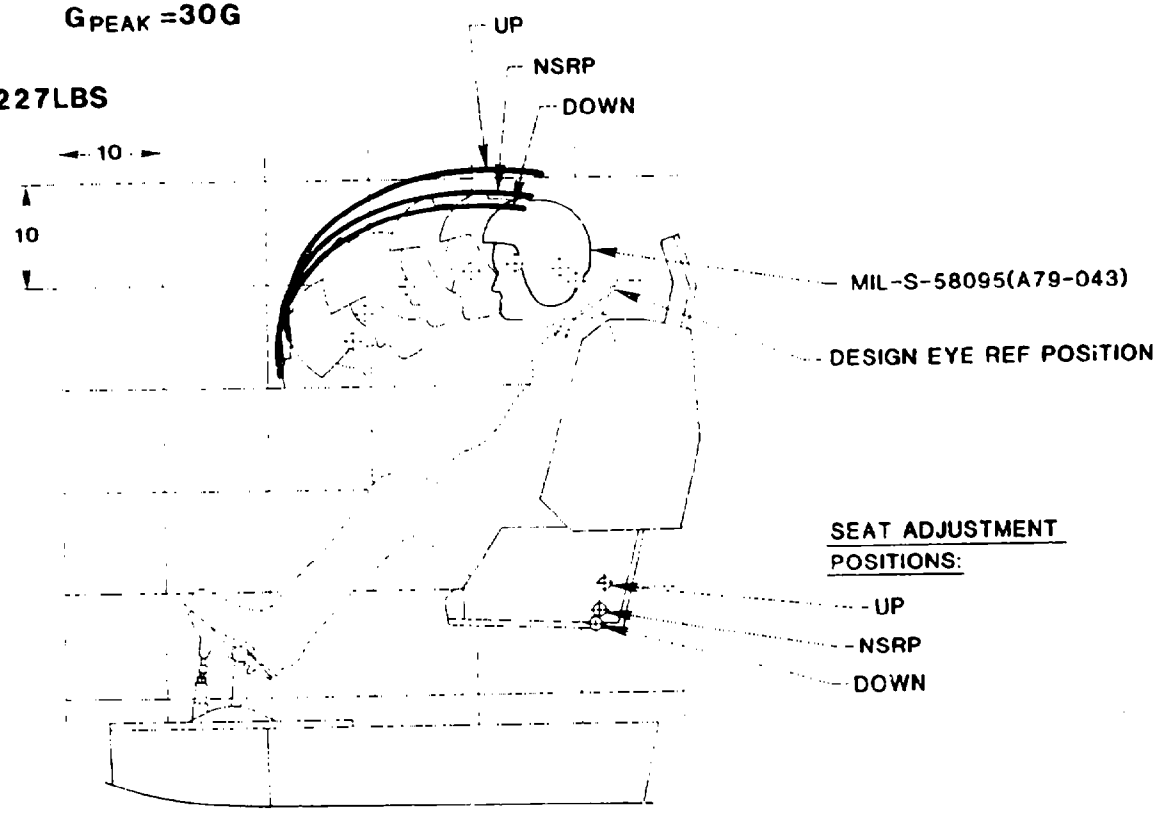
YAW = 30°

DUMMY: VIP-95, 227LBS



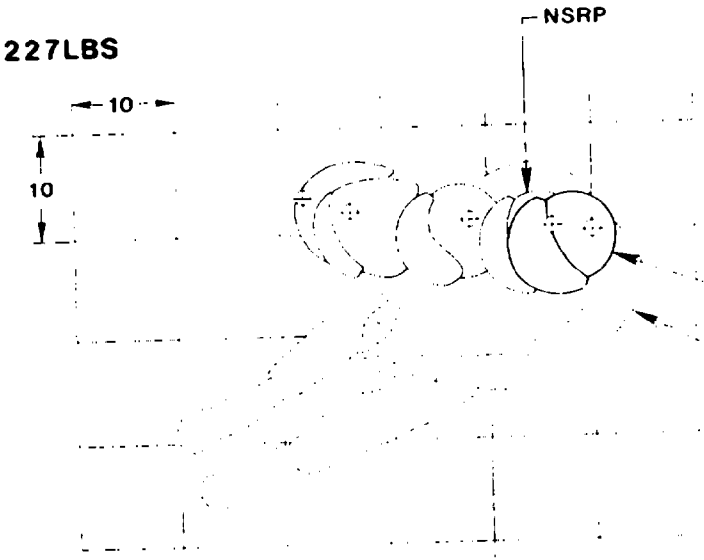
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50$ FPS $G_{PEAK} = 30G$
YAW = 30°
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50FPS$ $G_{PEAK} = 30G$
YAW = 30°
DUMMY: VIP-95, 227LBS



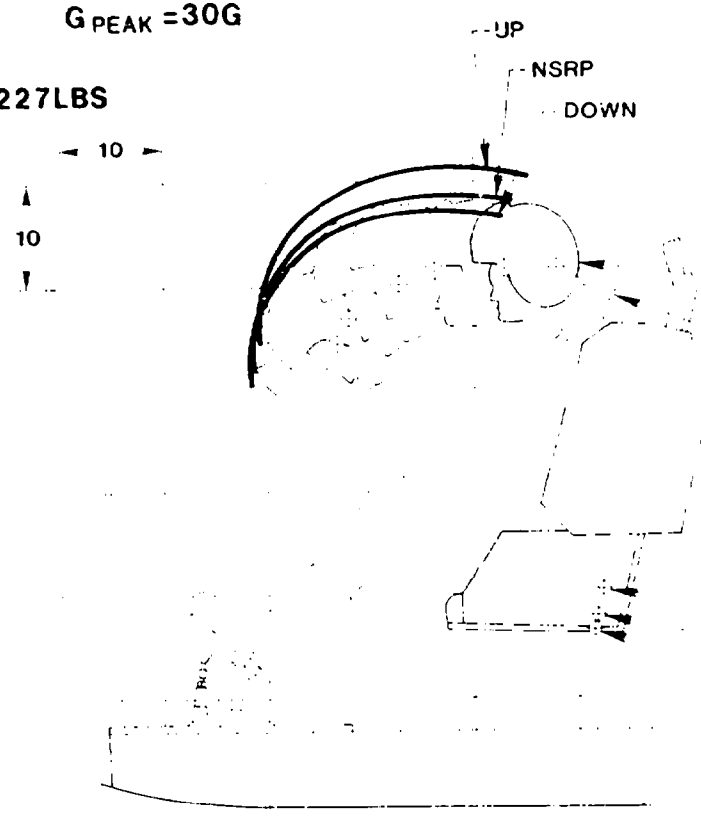
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

ΔV = 50FPS G_{PEAK} = 30G

YAW = 30°

DUMMY: VIP-95, 227LBS



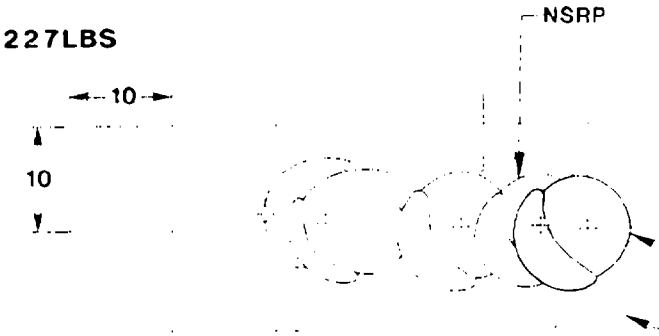
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

$\Delta V = 50$FPS $G_{PEAK} = 30G$

YAW = 30°

DUMMY: VIP-95, 227LBS



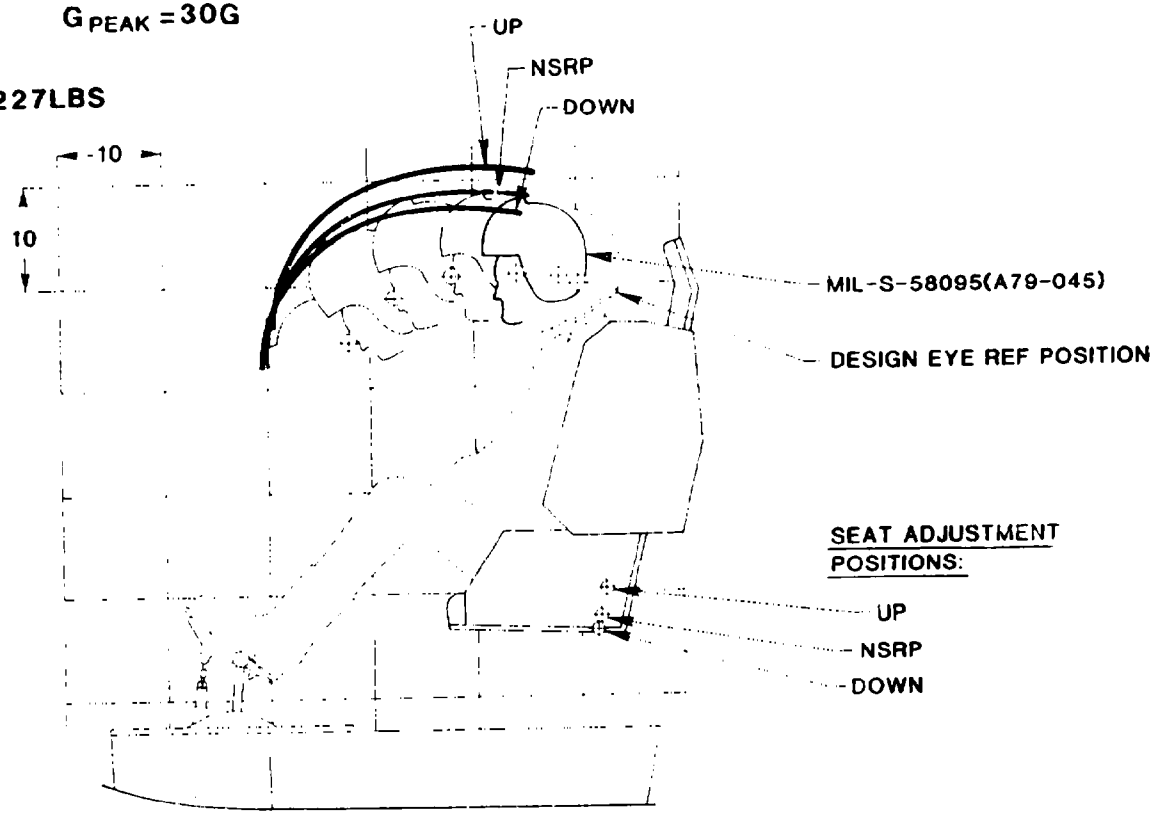
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

$\Delta V = 50$FPS $G_{PEAK} = 30G$

YAW = 30°

DUMMY: VIP-95, 227LBS



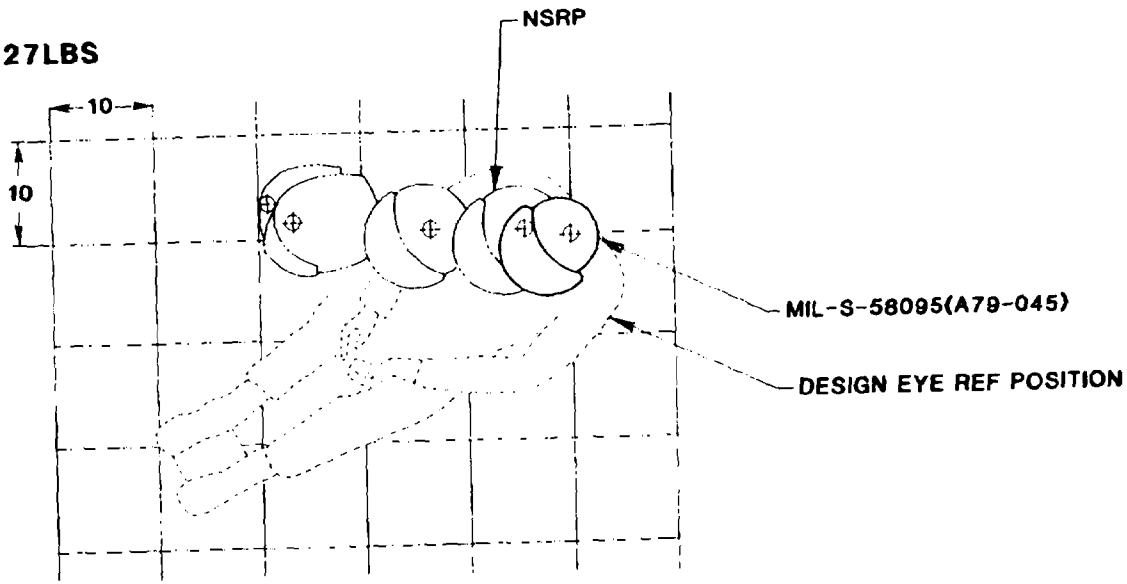
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

$\Delta V = 50$FPS $G_{PEAK} = 30G$

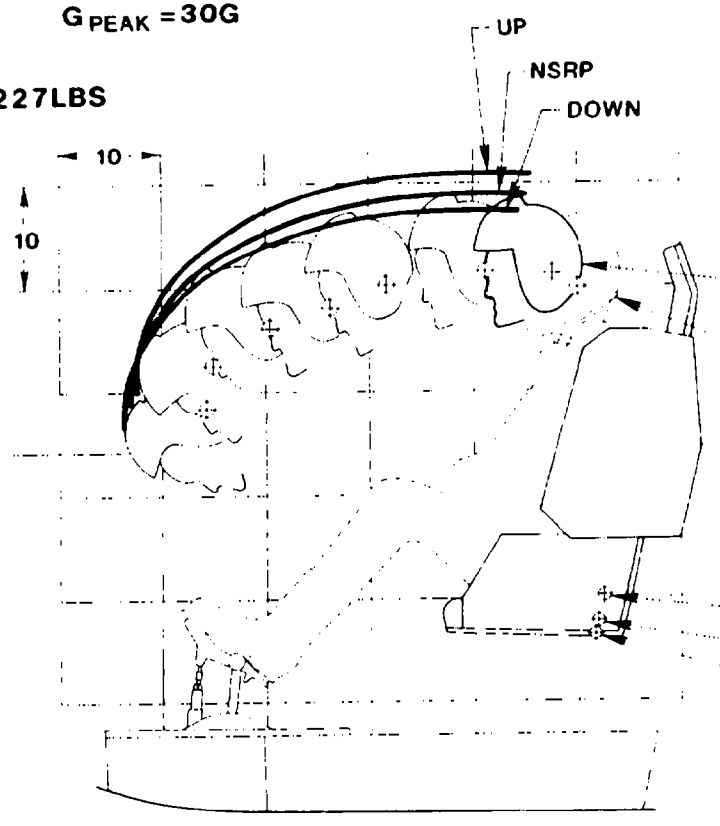
YAW = 30°

DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

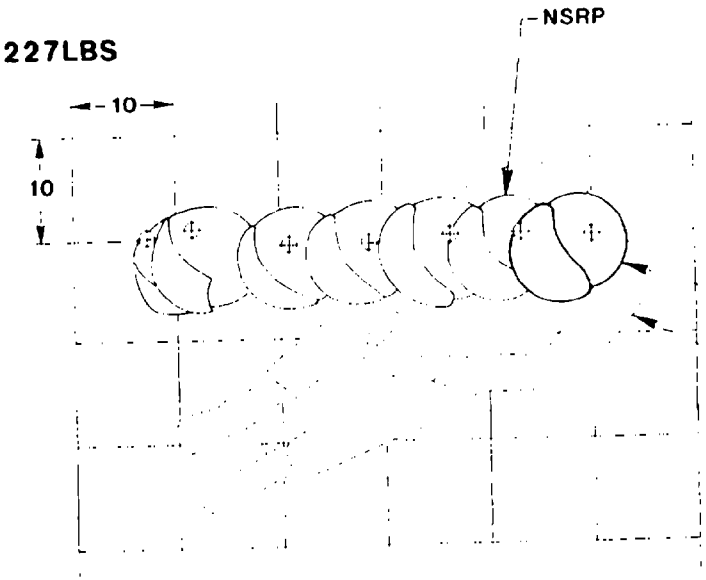
PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50$ FPS $G_{PEAK} = 30G$
YAW = 30°
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 30°

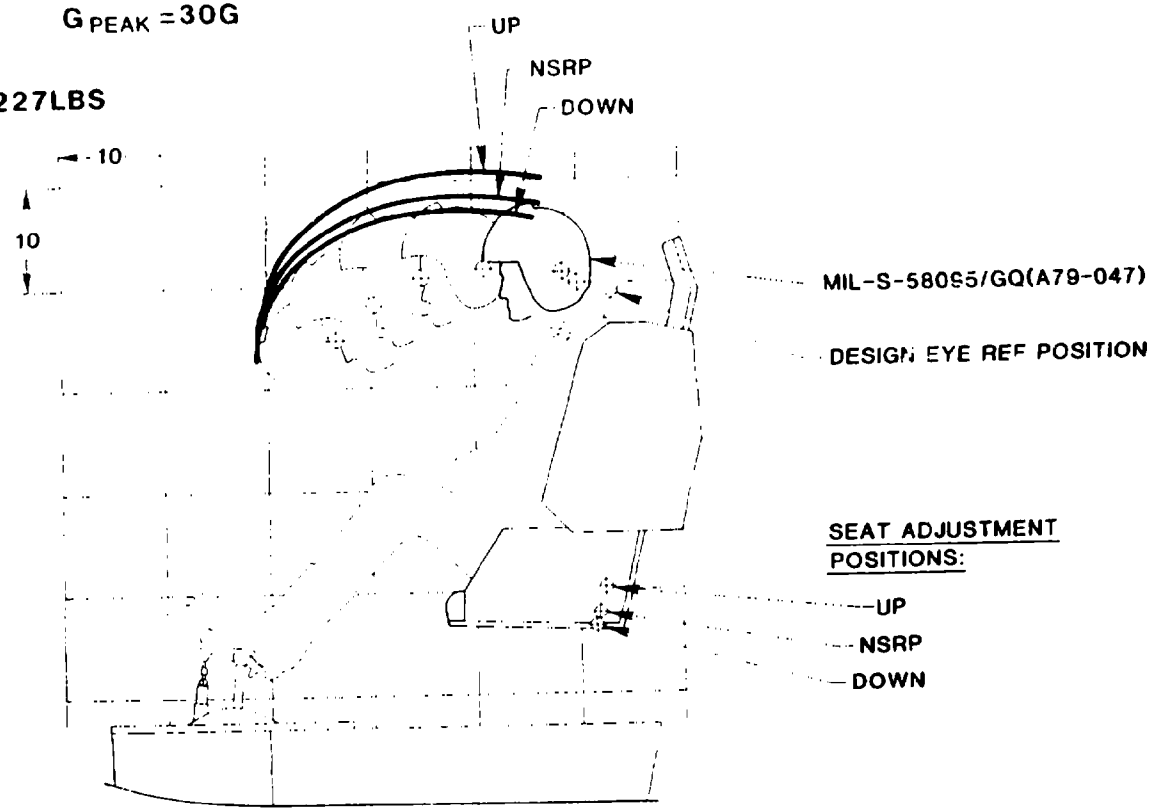
DUMMY: VIP-95, 227LBS



MIL-S-58095(A79-046)
FAILED
DESIGN EYE REF POSITION

CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50$FPS $G_{PEAK} = 30G$
YAW = 30°
DUMMY: VIP-95, 227LBS



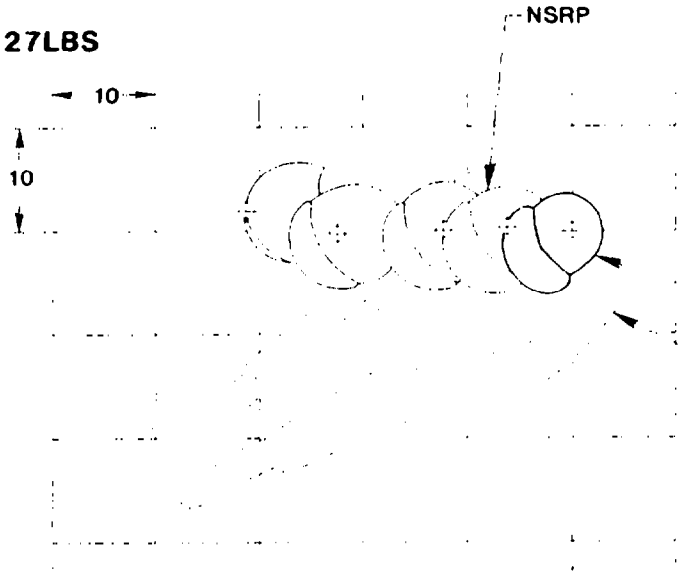
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

$\Delta V = 50$FPS $G_{PEAK} = 30G$

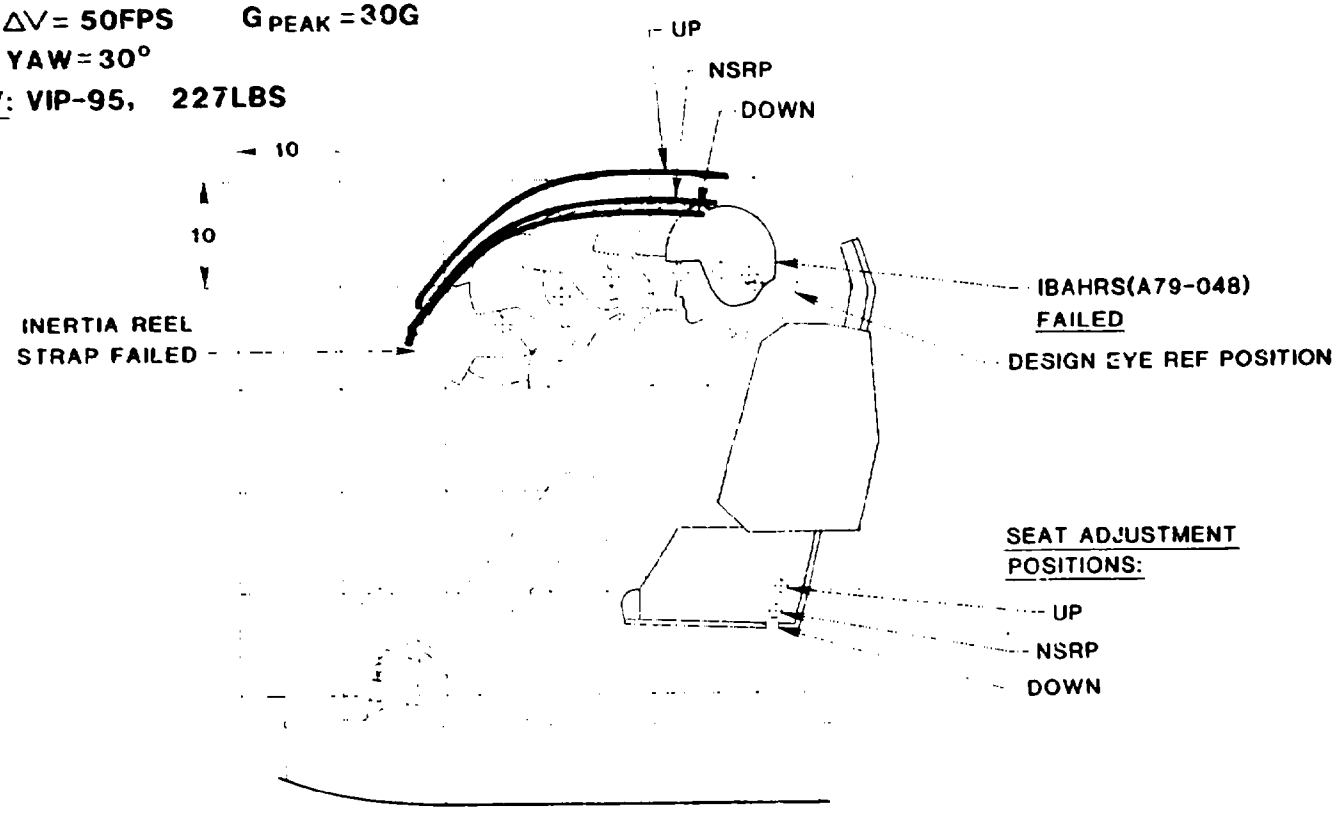
YAW = 30°

DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 30°
DUMMY: VIP-95, 227LBS



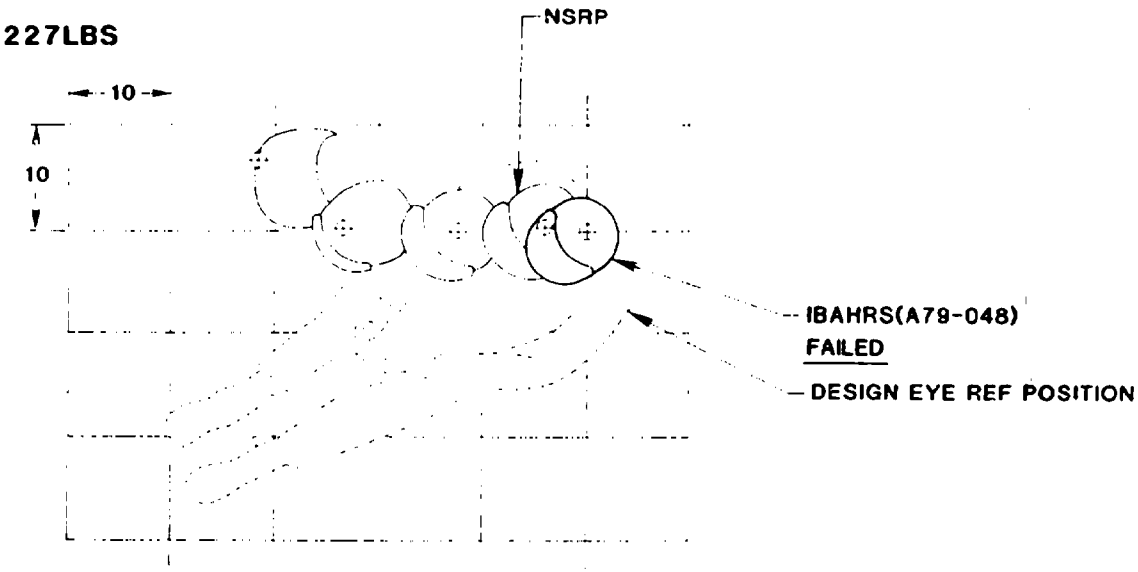
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE

$\Delta V = 50$FPS $G_{PEAK} = 30G$

YAW = 30°

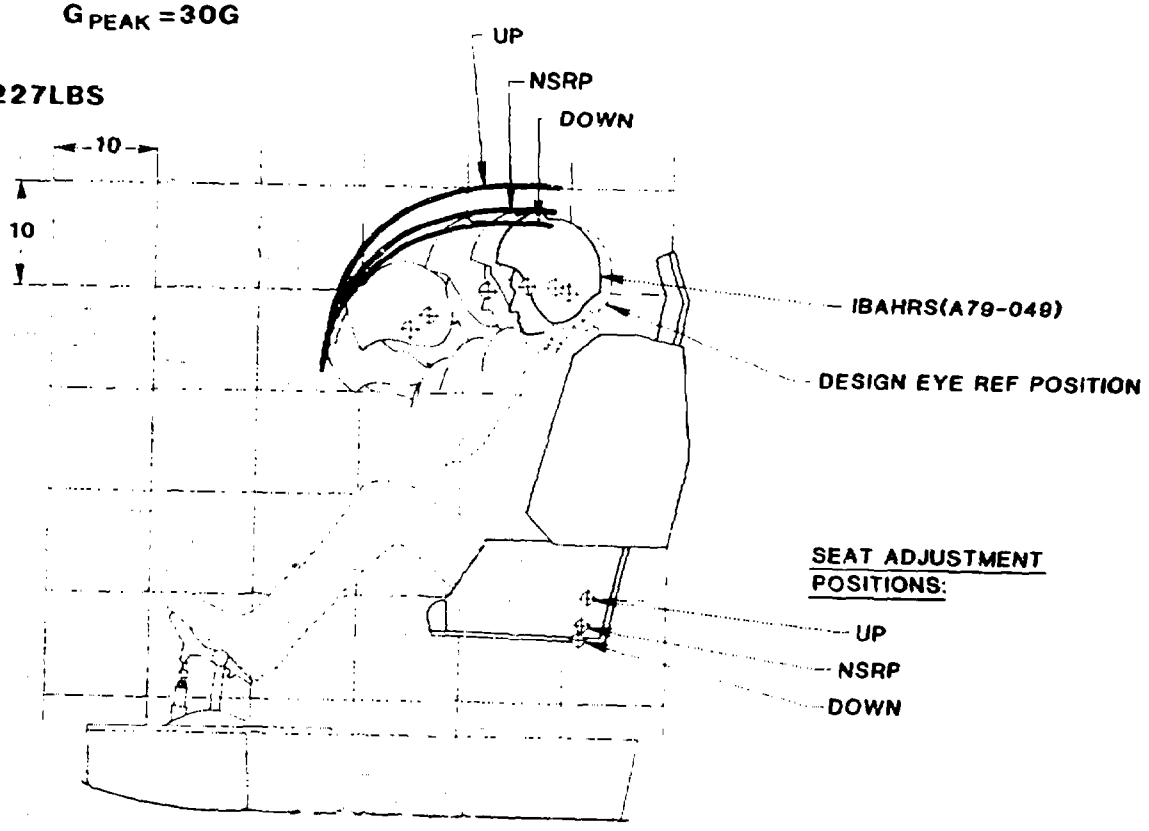
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

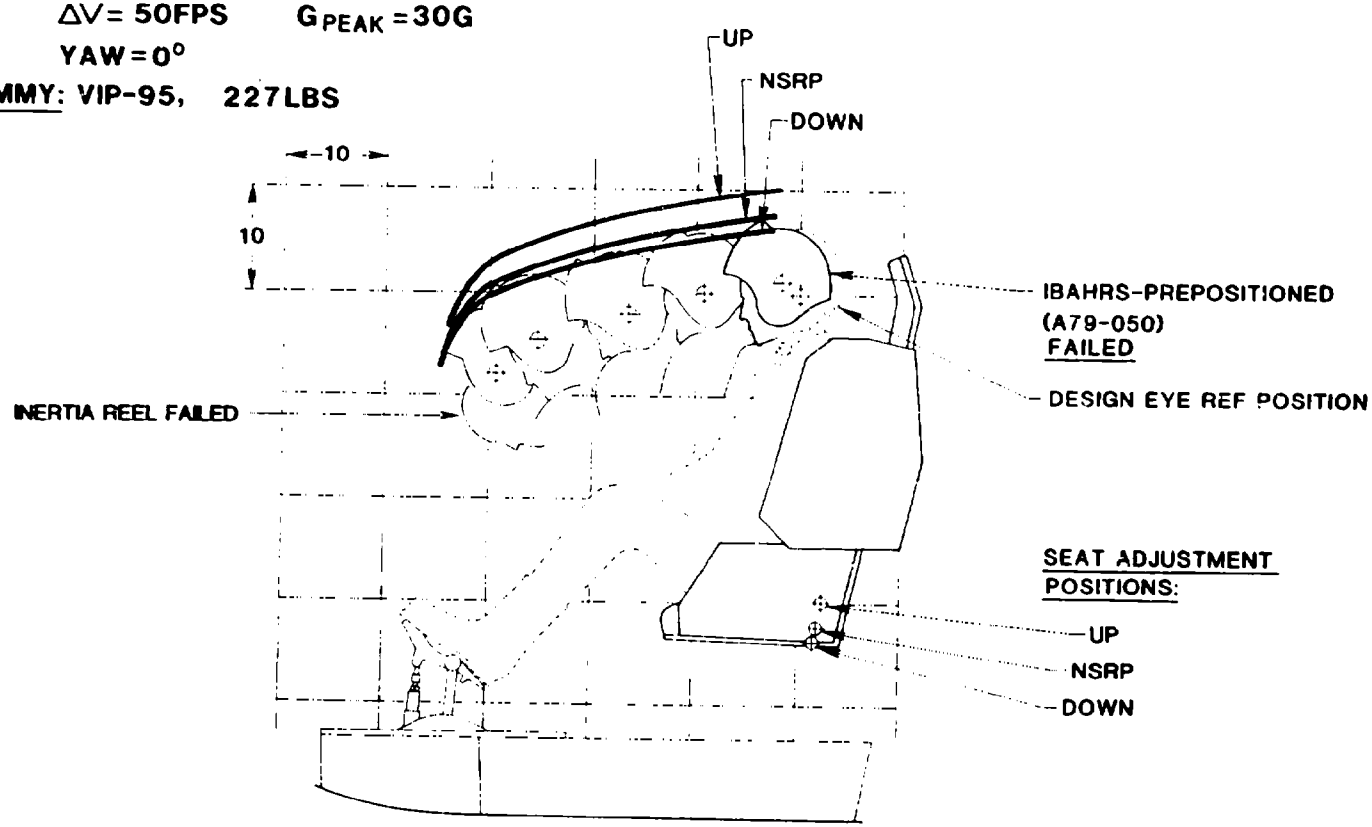
PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 0°

DUMMY: VIP-95, 227LBS



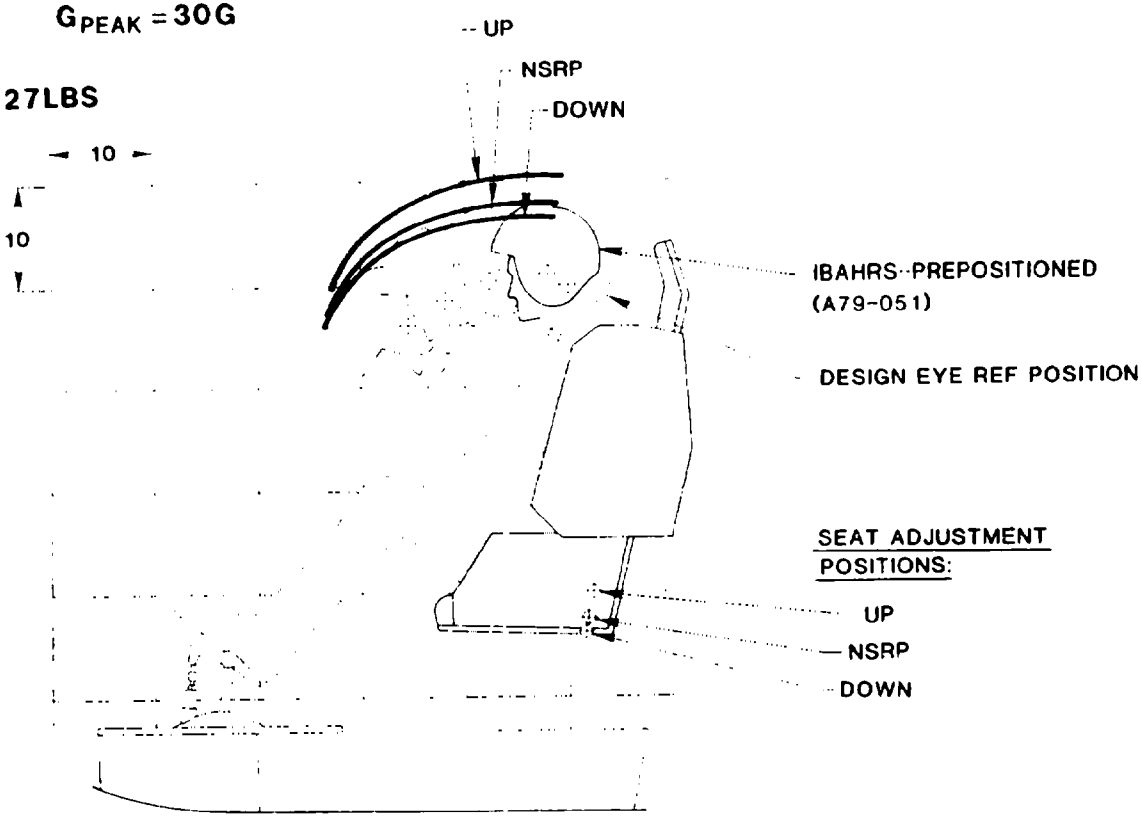
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
ΔV = 50FPS G_{PEAK} = 30G
YAW = 0°
DUMMY: VIP-95, 227LBS



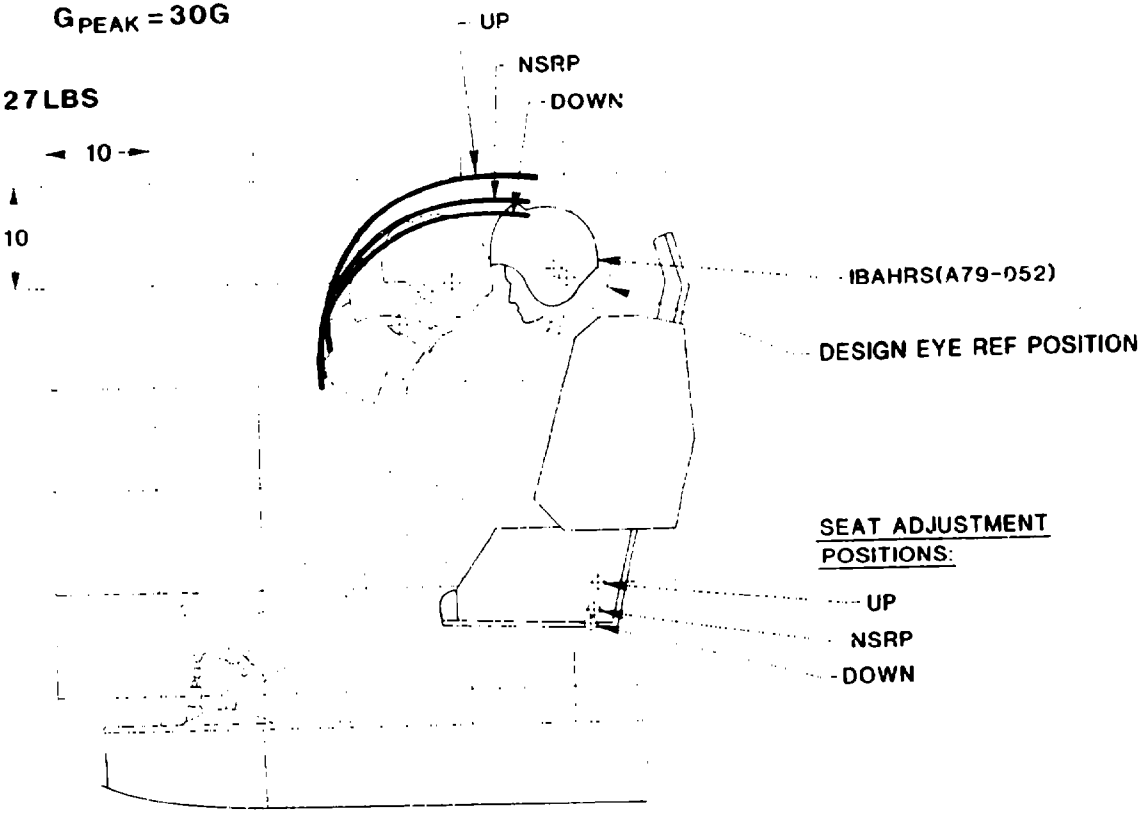
CPG STRIKE ENVELOPE

PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50$ FPS $G_{PEAK} = 30G$
YAW = 0°
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

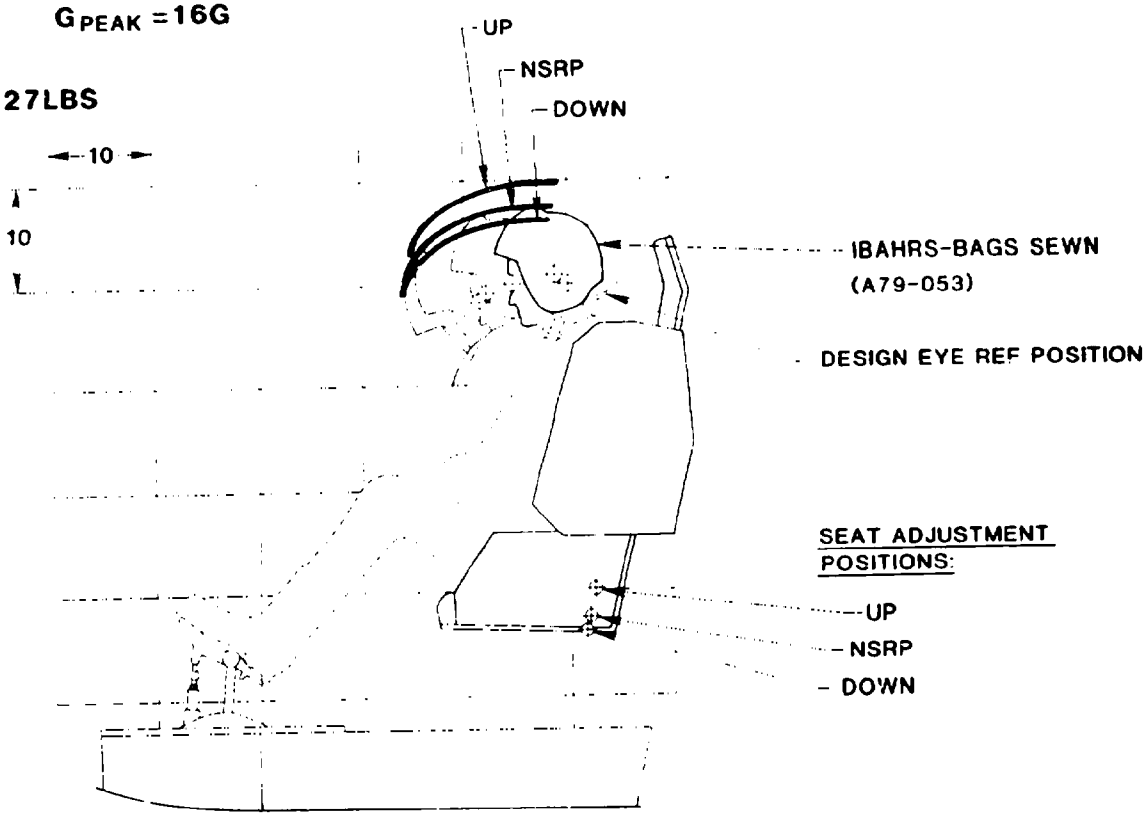
PULSE: 95th PERCENTILE SURVIVABLE
$\Delta V = 50$FPS $G_{PEAK} = 30G$
YAW = 0°
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 85th PERCENTILE SURVIVABLE
ΔV = 39FPS G_{PEAK} = 16G
YAW = 0°

DUMMY: VIP-95, 227LBS



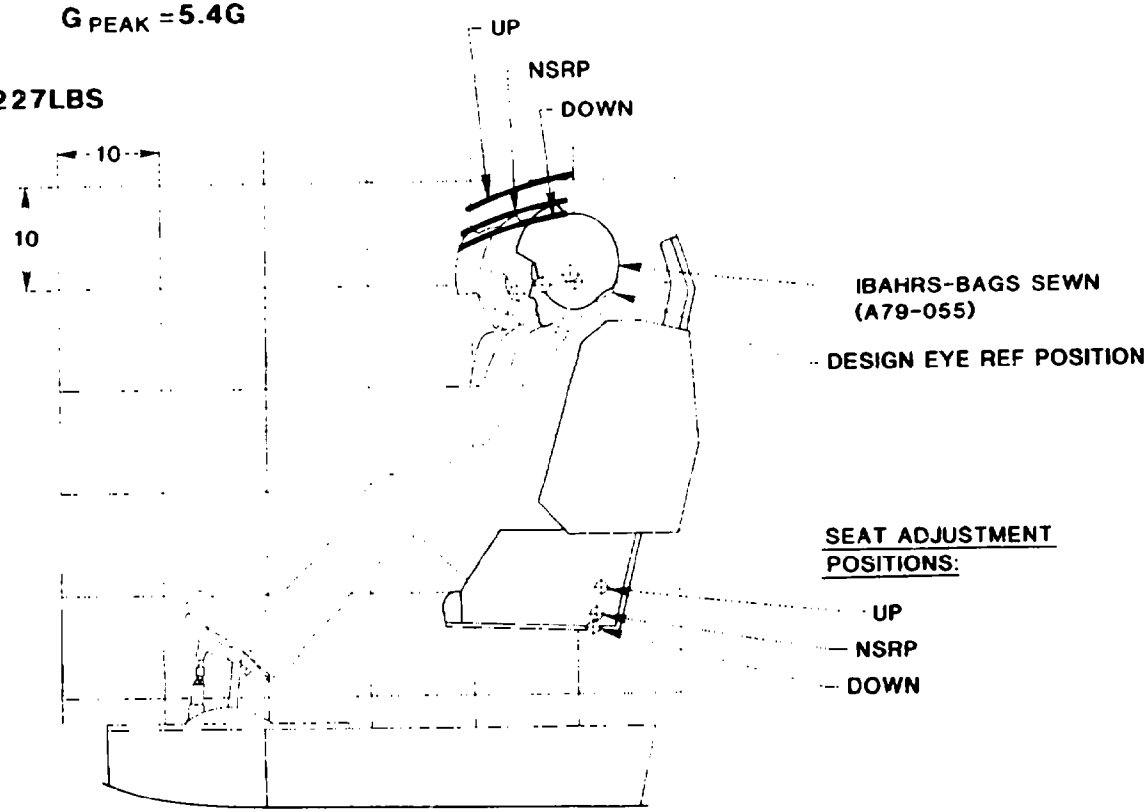
CPG STRIKE ENVELOPE

PULSE: 50th PERCENTILE SURVIVABLE

ΔV = 28FPS G_{PEAK} = 5.4G

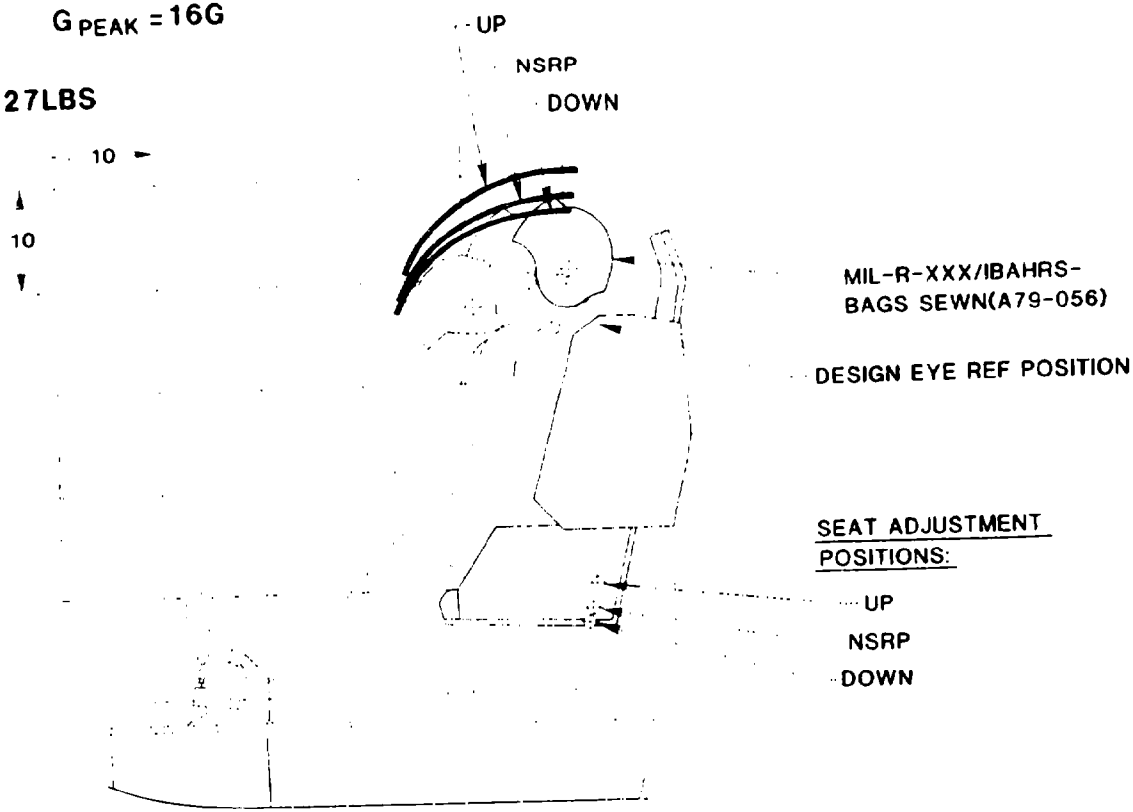
YAW = 0°

DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 85th PERCENTILE SURVIVABLE
ΔV = 39FPS G_{PEAK} = 16G
YAW = 0°
DUMMY: VIP-95, 227LBS



CPG STRIKE ENVELOPE

PULSE: 85th PERCENTILE SURVIVABLE
ΔV = 39FPS G_{PEAK} = 16G
YAW = 0°
DUMMY: VIP-95, 227LBS

