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301-CAL-93-12

VEHICLE SAFETY COMPLIANCE TESTING FOR OCCUPANT CRASH PROTECTION,
WINDSHIELD MOUNTING, WINDSHIELD ZONE INTRUSION (PARTIAL)
AND FUEL SYSTEM INTEGRITY

HONDA MOTOR CO., LTD.
1993 ACURA LEGEND
4-DOOR SEDAN

NHTSA NUMBER: CP5305

NHTSA No. is actually
CP5307 not CP5305

CALSPAN TEST NUMBER: 8056-13

FEBRUARY 18, 1993

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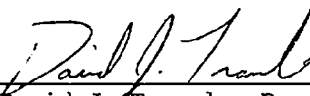
FINAL REPORT

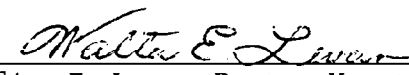
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National Highway Traffic Safety Administration
ENFORCEMENT
Office of Vehicle Safety Compliance
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Washington, DC 20590

*Rec'd
3/22/93*

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16. Abstract A 30 mph vehicle safety compliance test was conducted on a 1993 Acura Legend 4-Door Sedan. This test was performed at the Calspan Advanced Technology Center in Buffalo, New York on February 18, 1993. The purpose of this test was to determine compliance with the performance requirements of the following Federal Motor Vehicle Safety Standards: 1. FMVSS No. 208, "Occupant Crash Protection" 2. FMVSS No. 212, "Windshield Mounting" 3. FMVSS No. 219 (partial), "Windshield Zone Intrusion" 4. FMVSS No. 301, "Fuel System Integrity" The test mode was perpendicular (0°) and the impact velocity was 29.7 mph. The ambient temperature at the impact face was 15°F. The subject test vehicle appears to comply with the requirements of FMVSS Nos. 208, 212, 219 (partial) and 301. <u>Type of Restraint System:</u> The test vehicle was equipped with driver and right front passenger air bags. The manual 3-point continuous belt was not used for this test.					
17. Key Words 30 mph Vehicle Safety Compliance Testing FMVSS 208, "Occupant Crash Protection" FMVSS 212, "Windshield Mounting" FMVSS 219, "Windshield Zone Intrusion" FMVSS 301, "Fuel System Integrity" Frontal Impact			18. Distribution Statement Copies of this report are available from: Technical Reference Division National Highway Traffic Safety Admin. Nassif Building, Room 5108 (NAD-52) 400 Seventh St., S.W., Washington, DC 20590		
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Section 1

PURPOSE AND TEST PROCEDURE

This 30 mph frontal barrier impact test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 208, 212, 219 (partial) and 301 compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by Calspan Advanced Technology Center under Contract No. DTNH22-90-C-01003. The purpose of this test was to determine if the subject vehicle, a 1993 Acura Legend 4-Door Sedan, meets the performance requirements of FMVSS 208, "Occupant Crash Protection"; FMVSS No. 212, "Windshield Mounting"; FMVSS No. 219 (partial), "Windshield Zone Intrusion"; and FMVSS No. 301, "Fuel System Integrity". This compliance test was conducted using the requirements found in the OVSC Laboratory Test Procedure No. TP-208-08, dated September 8, 1989.

Section 2

SUMMARY OF TEST NUMBER CP5305

A frontal barrier was impacted by a 1993 Acura Legend 4-Door Sedan at a velocity of 29.7 mph. The test was performed at the Calspan Corporation Advanced Technology Center on February 18, 1993. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The frontal barrier impact event was documented by one real-time camera and 14 high-speed cameras. Camera locations and other pertinent camera information can be found in this report.

Two Part 572B, 50th percentile male anthropomorphic test devices (ATDs), were placed in the driver and right front passenger seating positions according to dummy placement instructions specified in the OVSC Laboratory Test Procedure.

Both ATDs were fully instrumented with head and chest triaxial accelerometers, and left/right femur load cells. These ATDs had been certified prior to the test.

The 23 channels of data were recorded on PC based data acquisition system. Appendix B contains the vehicle and dummy response data traces.

The driver's HIC was 443. The maximum chest deceleration over 3 milliseconds was 56.0 g's. The maximum force on the driver's left femur was 1500 pounds and 1950 pounds on the right femur.

The right front passenger's HIC was 521. The maximum chest deceleration over 3 milliseconds was 45.9 g's. Loads of 1329 and 1745 were recorded on the left and right femurs respectively.

Table 1
CRASH TEST SUMMARY

Vehicle NHTSA No.: CP5305 Test Mode: 30 mph Frontal Barrier

Test Date: February 18, 1993 Time: 11:40 Temperature: 15 °F

Vehicle Make/Model/Body Style: 1993 Acura Legend 4-Door Sedan

Vehicle Test Weight: 3810 lbs.

Vehicle/Barrier Impact Angle: 0°

Impact Velocity: 29.7 mph

Maximum Static Crush: 15.7 inches

Vehicle Rebound: 13.6 inches

DUMMIES:

	<u>DRIVER</u>	<u>PASSENGER</u>
Type:	<u>Part 572B</u>	<u>Part 572B</u>
Restraint System:	<u>Air bag*</u>	<u>Air bag*</u>

Number of Data Channels: 23

Number of Cameras: 1 Real Time

14 High Speed

DOOR OPENING DATA: Closed-operable - Left Front

Closed-operable - Right Front

Front Seat(s) Data:

	<u>DRIVER</u>	<u>PASSENGER</u>
Seat Track Failure:	<u>0.0</u>	<u>0.0</u>
	inches of shift	
Seat Back Failure:	<u>None</u>	<u>None</u>

VISIBLE DUMMY CONTACT POINTS:

	<u>DRIVER</u>	<u>PASSENGER</u>
Head:	<u>Face with airbag. Top head with roof. Rear of head with headrest.</u>	<u>Face with airbag. Top of head with airbag and sunvisor. Rear of head with headrest.</u>
Abdomen:	<u>Lower steering wheel rim</u>	<u>No contact</u>
Chest:	<u>Air bag</u>	<u>Air bag</u>
Knees:	<u>Lower dash panel</u>	<u>Glove box door</u>

* - manual belts not used for this test.

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 1993 Acura Legend 4-Door Sedan
 NHTSA No.: CP5305; VIN: JH4KA7530PC001013; Color: White
 Engine Data: 6 cylinders; 196 CID; - Liters; - cc
 Placement: X Longitudinal or In-Line; - Transverse or Lateral
 Transmission Data: 5 speeds; X Manual; - Automatic; - Overdrive
 Final Drive: - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel Drive
 Major Options: X A/C; X Pwr.Strg.; X Pwr.Brakes
X Pwr.Windows; X Pwr.Door Locks; X Tilt Wheel
 Date Received: 1/22/93; Odometer Reading 211 miles
 Selling Dealer: Miller Motorcars of Syracuse, Inc.
 & Address 2601 Erie Blvd. Syracuse, NY 13224

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Honda Motor Co.
 Date of Manufacture: 9/92
 GVWR: 4500 lbs.; GAWR: 2415 lbs. FRONT; 2105 lbs. REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load: 32 psi FRONT
30 psi REAR

Recommended Tire Size: 205/60R15 91V

* Recommended Cold Tire Pressure: 32 psi FRONT; 30 psi REAR

Size of Tires on Test Vehicle: 205/60R15; Manufacturer: Bridgestone

Vehicle Capacity Data:

Type of Front Seats: - Bench; X Bucket; - Split Bench
 Number of Occupants: 2 Front; 3 Rear; 5 Total
 Vehicle Capacity Weight (VCW) = 850 lbs.
 No. of Occupants x 150 lbs. = 750 lbs.
 Rated Cargo/Luggage Weight (RCLW) = 100 lbs. (Difference)

*Tire pressure used for test

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATA (cont.)

WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER (WITH MAXIMUM FLUIDS) = UDW:

Right Front = 1030 lbs. Right Rear = 650 lbs.
 Left Front = 1050 lbs. Left Rear = 670 lbs.
 TOTAL FRONT = 2080 lbs. TOTAL REAR = 1320 lbs.
 % of Total Vehicle Weight = 61.2 % of Total Weight = 38.8 %
 TOTAL DELIVERED WEIGHT = 3400 lbs.

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight = 3400 lbs.
 Rated Cargo/Luggage Weight (RCLW) = 100 lbs.
 Weight of 2 P.572 Dummies @ 164 ea. = 328 lbs.
 TARGET TEST WEIGHT = 3828 lbs. (sum)

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 0 POUNDS OF CARGO WEIGHT:

Right Front = 1110 lbs. Right Rear = 790 lbs.
 Left Front = 1120 lbs. Left Rear = 790 lbs.
 TOTAL FRONT = 2230 lbs. TOTAL REAR = 1580 lbs.
 % of Total Weight = 58.5 % % of Total Weight = 41.5 %
 TOTAL TEST WEIGHT = 3810 lbs.

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

Vehicle Components Removed for Weight Reduction: None

VEHICLE ATTITUDE (all dimensions in inches):

AS DELIVERED:	RF <u>27.1</u>	LF <u>27.2</u>	RR <u>26.5</u>	LR <u>26.6</u>
FULLY LOADED:	RF <u>26.2</u>	LF <u>26.2</u>	RR <u>24.3</u>	LR <u>24.2</u>
AS TESTED:	RF <u>27.0</u>	LF <u>26.8</u>	RR <u>25.0</u>	LR <u>24.9</u>

Vehicle's Wheel Base: 114.7 in.

Location of Vehicle's C.G.: 47.6 inches rearward of front wheel center

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 18.0 gallons
 Usable Capacity Figure Furnished by COTR = 17.5 gallons
 Test Volume Range (92 to 94% of Usable Capacity) = 16.1 to 16.5 gallons
 ACTUAL TEST VOLUME = 16.2 gallons (with entire fuel system filled)

Table 3
POST IMPACT DATA

TYPE OF TEST:

Type of Test: Frontal Barrier Impact Angle: 0°
 Test Date: February 18, 1993 Time: 11:40 Temperature: 15°F
 Vehicle NHTSA No.: CP5305
 Required Impact Velocity Range: 28.9 to 29.9 mph

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

Trap No. 1 = 29.7 mph; Trap No. 2 = 29.7 mph
 Distance from vehicle to barrier: (1) entering trap = 52 inches
 (2) exiting trap = 12 inches

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

Vehicle Length:

Pre-Test Right = 189.5; C/L = 194.7; Left = 189.2
 Post-Test Right = 175.5; C/L = 179.0; Left = 178.2
 Crush Right = 14.0; C/L = 15.7; Left = 11.0
 AVERAGE = 13.6 inches

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point:
 Right = 7.7; C/L = 5.1; Left = 6.2
 AVERAGE = 6.3 inches

DOOR OPENING:

	Left	Right
Front	<u>Operable</u>	<u>Operable</u>
Rear	<u>Operable</u>	<u>Operable</u>

SEAT MOVEMENT:

	Seat Back Failure	Seat Shift
Front	<u>None</u>	<u>0.0</u>
Rear	<u>-</u>	<u>-</u>

Table 3

POST IMPACT DATA (cont.)

GLAZING DAMAGE: Windshield cracked throughout.

OTHER NOTABLE IMPACT FEATURES: Steering column stroked.

Section 3
OCCUPANT AND VEHICLE DATA

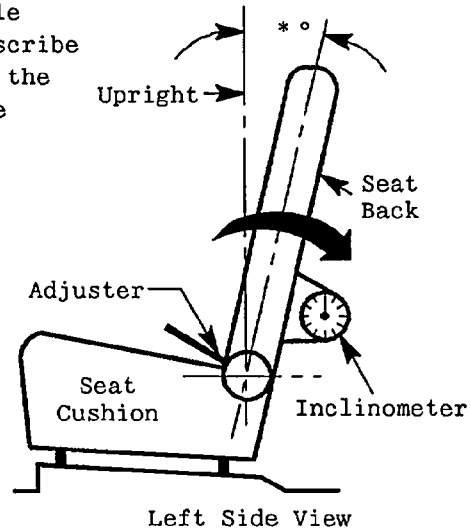
Figure 1
TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year: 1993 Vehicle Model: Acura Legend Body Style: 4-door sedan

1. Nominal Design Riding Position for adjustable driver and passenger seat backs. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent, if applicable.

* Seat back was positioned according to manufacturer's specifications.



Seat back angle for driver's seat: * °

Measurement instructions: Power seat back was placed in full position, then reclined to 20° from full-up position.

Seat back angle for passenger's seat: * °

Measurement instructions: Manual seat back was placed in 5th notch back from full up position which is designated as position zero.

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Move seat 120mm from the front most position.

Positioning of the passenger's seat (if applicable): Place seat in 13th detent (mid-position) from a total of 25 detents.

3. Fuel Tank Capacity Data

A. "Usable Capacity" of the standard equipment fuel tank is 17.5 gallons

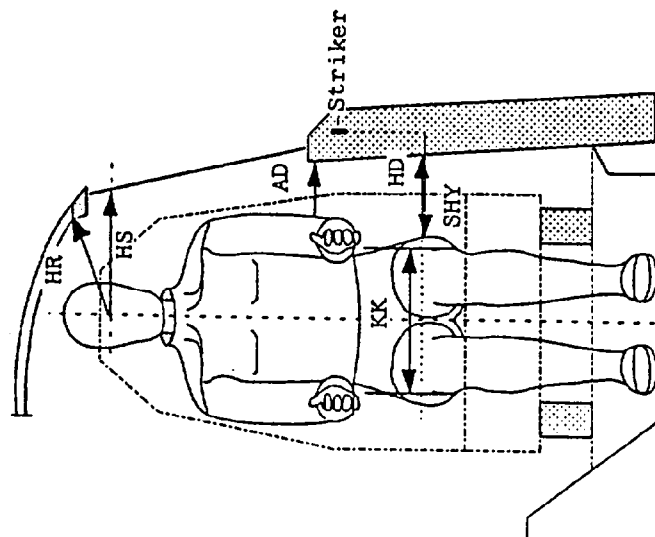
B. "Usable Capacity" of the optional equipment fuel tank is --- gallons

4. Steering Column Position: Telescopic steering column was placed in center position after moving through its full range.

5. Other: -

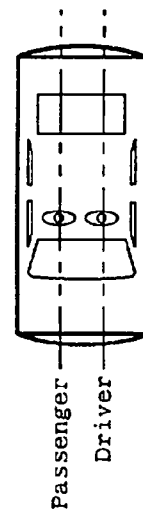
Figure 2

PART 572 DUMMY IN-VEHICLE POSITION

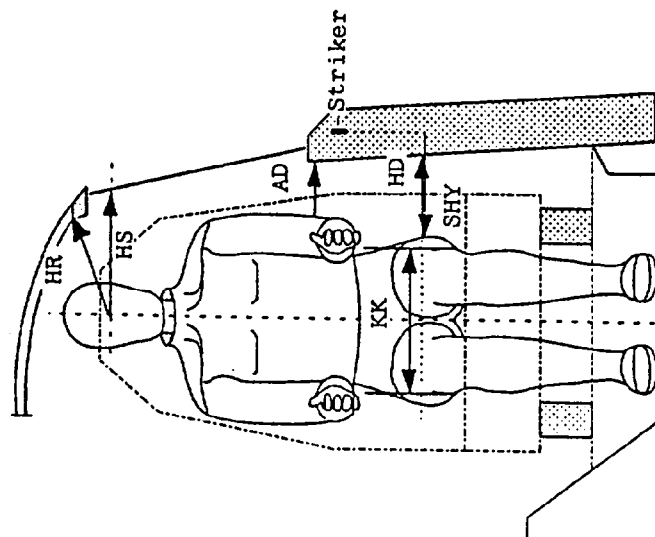


- HH - Head to Header
 HW - Head to Windshield
 HZ - Head to Roof
 NR - Nose to Rim
 CS - Chest to Dash
 CD - Chest to DASH
 RA - Rime to Abdomen
 KDL/KDR - Knee to Dash
 KDA - Knee to Dash Angle
 SH - Striker to H-Point
- SK - Striker to Knee
 ST - Striker to Head
 NA - Nose to Rim Angle
 TA - Tibial Angle
 PA - Pelvic Angle
 SA - Seat Back Angle
 SCA - Steering Column Angle
 SWA - Steering Wheel Angle
 WA - Windshield Angle

Vertical Longitudinal Planes



Passenger
 Driver



- HR - Head to Side Header
 HS - Head to Side Window
 AD - Arm to Door
 HD - H-Point to Door
 SHY - Striker to H-Point (Y Dir.)
 KK - Knee to Knee

Vertical Transverse Plane

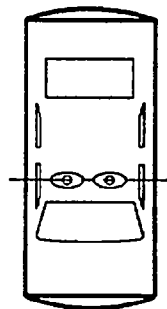


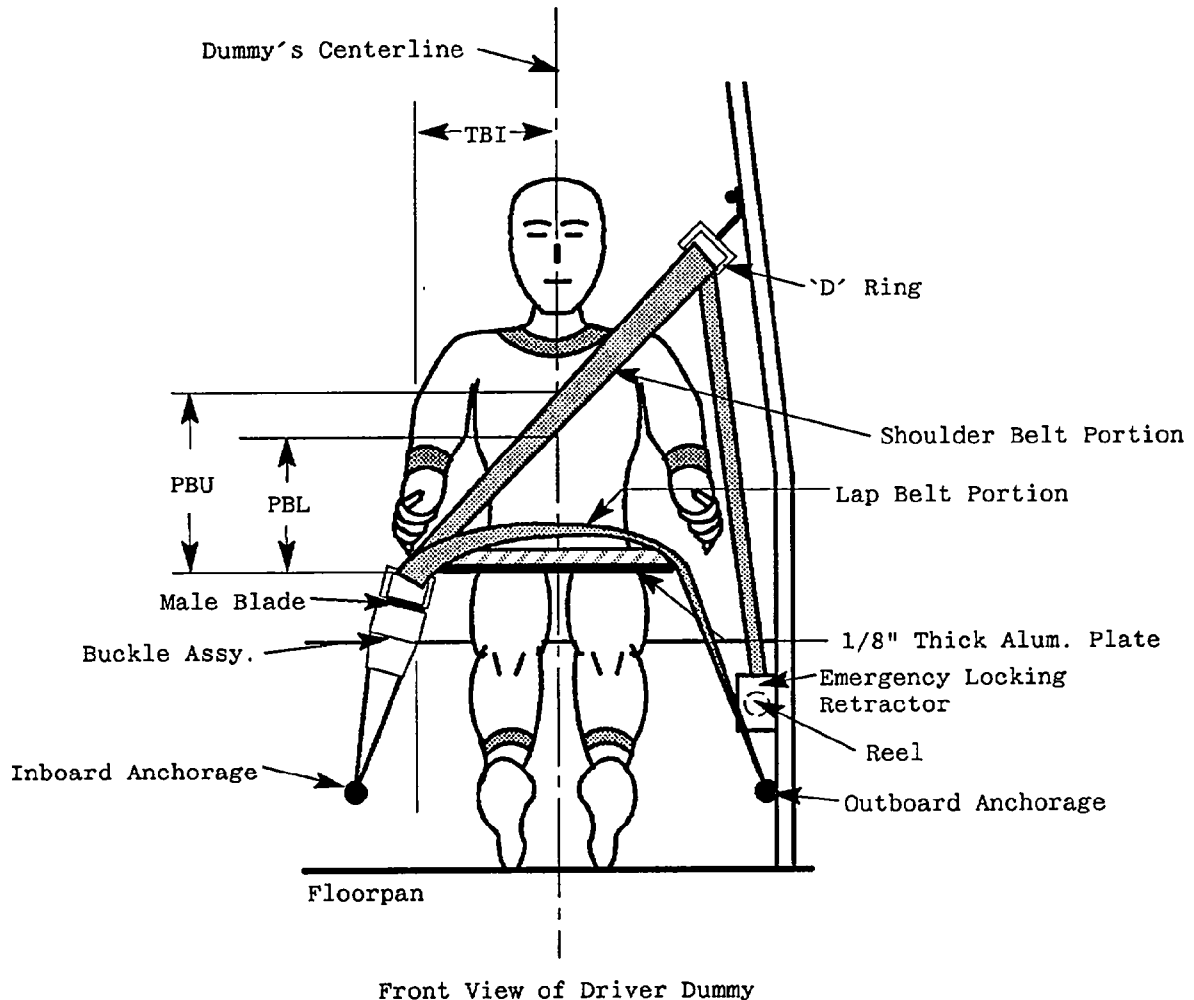
Table 4

FRONT SEAT OCCUPANT MEASUREMENTS

(all dimensions in inches unless otherwise specified)

	DRIVER (Serial #1020)	PASS (Serial #1021)
WA°	29°	—
SWA°	66°	—
SCA°	24°	—
SA°	as specified by manufacturer	as specified by manufacturer
HZ	5.6	6.1
HH	17.1	17.3
HW	22.5	24.0
HR	7.1	6.9
NR	21.1 Angle (NA) 16°	—
CD	24.7	27.4
CS	14.2	—
RA	8.3	—
KDL	10.4 Angle (KDA) 34°	10.9
KDR	8.8	10.8 Angle (KDA) 29°
FA°	14°	14°
TA°	29°	25°
KK	13.8	11.4
ST	18.7 Angle -8°	19.1 Angle -9°
SK	20.5 Angle 107°	20.5 Angle 109°
SH	8.2 Angle 144°	8.1 Angle 146°
SHY	9.5	9.5
HS	9.3	9.0
HD	5.3	5.6
AD	4.1	4.7

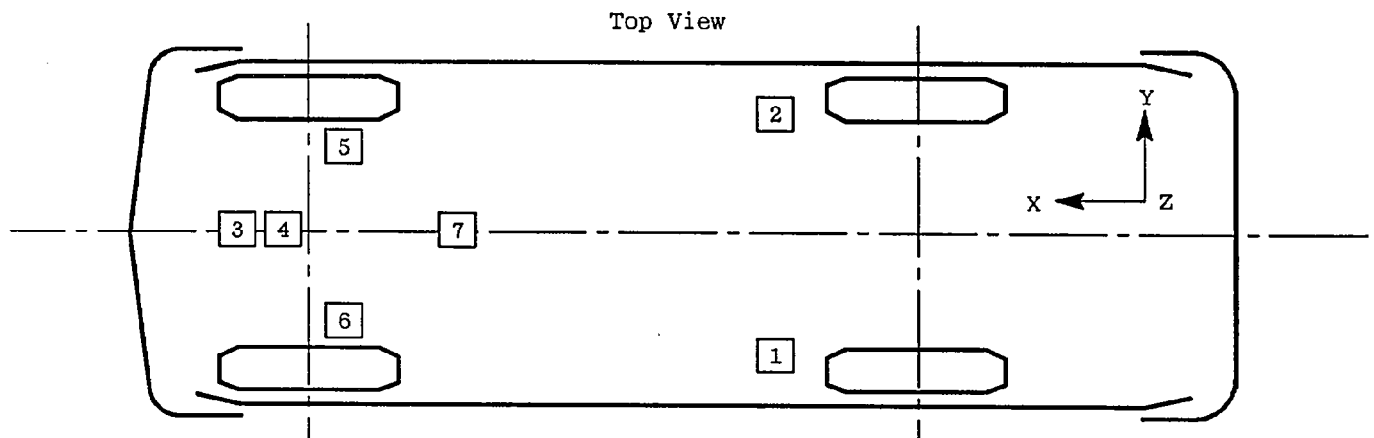
Figure 3
SEAT BELT POSITIONING DATA



	DRIVER DUMMY (inches)	PASSENGER DUMMY (inches)
<u>PBU</u> -- Top surface of alum. plate to upper edge	*	*
<u>PBL</u> -- Top surface of alum. plate to belt lower edge	*	*
<u>TBI</u> -- Distance from torso centerline to buckle	*	*

* The vehicle contained driver and right-front passenger airbags, therefore the manual 3-point continuous belts were not used for this test.

Figure 4
VEHICLE ACCELEROMETER LOCATIONS



ACCELEROMETER NUMBER*	ACCELEROMETER LOCATION	DIRECTION		
		X	Y	Z
1	Left Rear Seat Crossmember	X		
2	Right Rear Seat Crossmember	X		
3	Top of Engine	X		
4	Bottom of Engine	X		
5	Right Disc Brake Caliper	X		
6	Left Disc Brake Caliper	X		
7	Instrument Panel	X		

*The accelerometer pack number can be correlated with the vehicle response data traces found in Appendix B.

Table 5
VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

NO.	LOCATION		X*	Y*	Z*	POSITIVE DIRECTION**		NEGATIVE DIRECTION**	
						MAX (g)	TIME (msec)	MAX (g)	TIME (msec)
1	REAR SEAT X-MEMBER AT LEFT SIDE	PRE:	77.9	20.1	16.1				
		POST:	77.9	20.1	15.3				
	LONGITUDINAL ACCELERATION					8	98	-39	58
2	REAR SEAT X-MEMBER AT RIGHT SIDE	PRE:	77.9	-20.1	15.7				
		POST:	77.9	-20.1	15.5				
	LONGITUDINAL ACCELERATION					9	95	-39	56
3	TOP OF ENGINE BLOCK	PRE:	167.2	-0.4	32.8				
		POST:	163.3	-0.1	32.5				
	LONGITUDINAL ACCELERATION					45	51	-92	39
4	BOTTOM OF ENGINE	PRE:	142.7	1.2	5.6				
		POST:	138.5	1.2	5.3				
	LONGITUDINAL ACCELERATION					15	48	-80	37
5	BRAKE CALIPER AT RIGHT SIDE	PRE:	158.0	-21.5	18.2				
		POST:	154.9	-21.4	18.1				
	LONGITUDINAL ACCELERATION					17	62	-44	37
6	BRAKE CALIPER AT LEFT SIDE	PRE:	158.7	21.5	18.6				
		POST:	155.1	21.3	18.4				
	LONGITUDINAL ACCELERATION					9	62	-51	34
7	DASH PANEL	PRE:	120.5	-2.6	23.5				
		POST:	120.4	-2.1	23.1				
	LONGITUDINAL ACCELERATION					18	80	-48	56

*X + Forward from rear bumper Y + Left from vehicle centerline Z + Up from ground	**	LONGITUDINAL: LATERAL: VERTICAL:	<u>POSITIVE</u> FORWARD LEFTWARD UPWARD	<u>NEGATIVE</u> REARWARD RIGHTWARD DOWNWARD
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DISTANCE MEASUREMENTS IN INCHES

Figure 5
CAMERA POSITIONS FOR FRONTAL IMPACTS

NOTE: Camera Information Shown on Table 5.

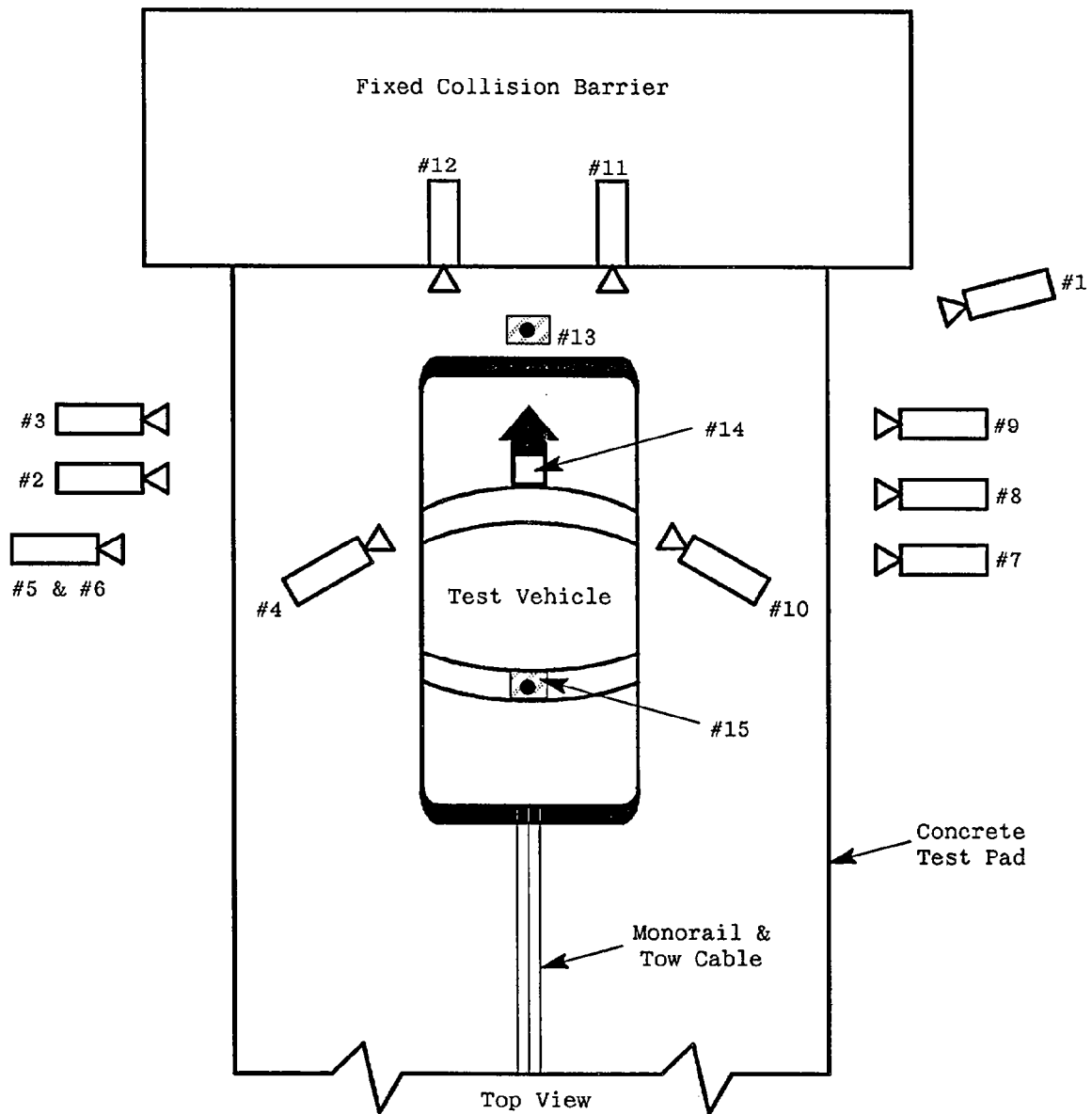


Table 6

HIGH-SPEED CAMERA LOCATIONS

Test No. CP5305 Vehicle: 1993 Acura Legend 4-Door Sedan

CAMERA NO.	VIEW	CAMERA POSITIONS (in)*			ANGLE** (deg)	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Real-Time Camera	-	-	-	-	-	-	24
2	Overall Left Side	240	63	42	-5	222	13	550
3	Left Side View	312	36	41	-4	294	25	620
4	Driver and Interior View	110	113	65	-16	-	13	575
5	Steering Column (Bottom)	280	76	46	-4	262	25	770
6	Steering Column (Top)	280	76	70	-10	262	25	770
7	Overall Right Side	239	70	42	-5	221	13	530
8	Right Side View	303	49	41	-2	285	25	575
9	Right Passenger View	282	71	56	-4	264	35	525
10	Passenger and Interior View	107	107	65	-16	-	13	575
11	Passenger Front View	23	20	74	-40	-	13	590
12	Driver Front View	23	20	74	-40	-	13	600
13	Windshield View	0	0	130	-54	-	13	605
14	Pit View of Engine	0	32	-78	90	-	13	595
15	Pit View of Fuel Tank	0	106	-78	90	-	13	800

*X = film plane to monorail centerline

Y = film plane to impact location

Z = film plane to ground

** = referenced to horizontal plane

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840.

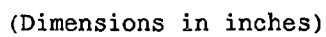


Figure 7
TEST VEHICLE MEASUREMENTS

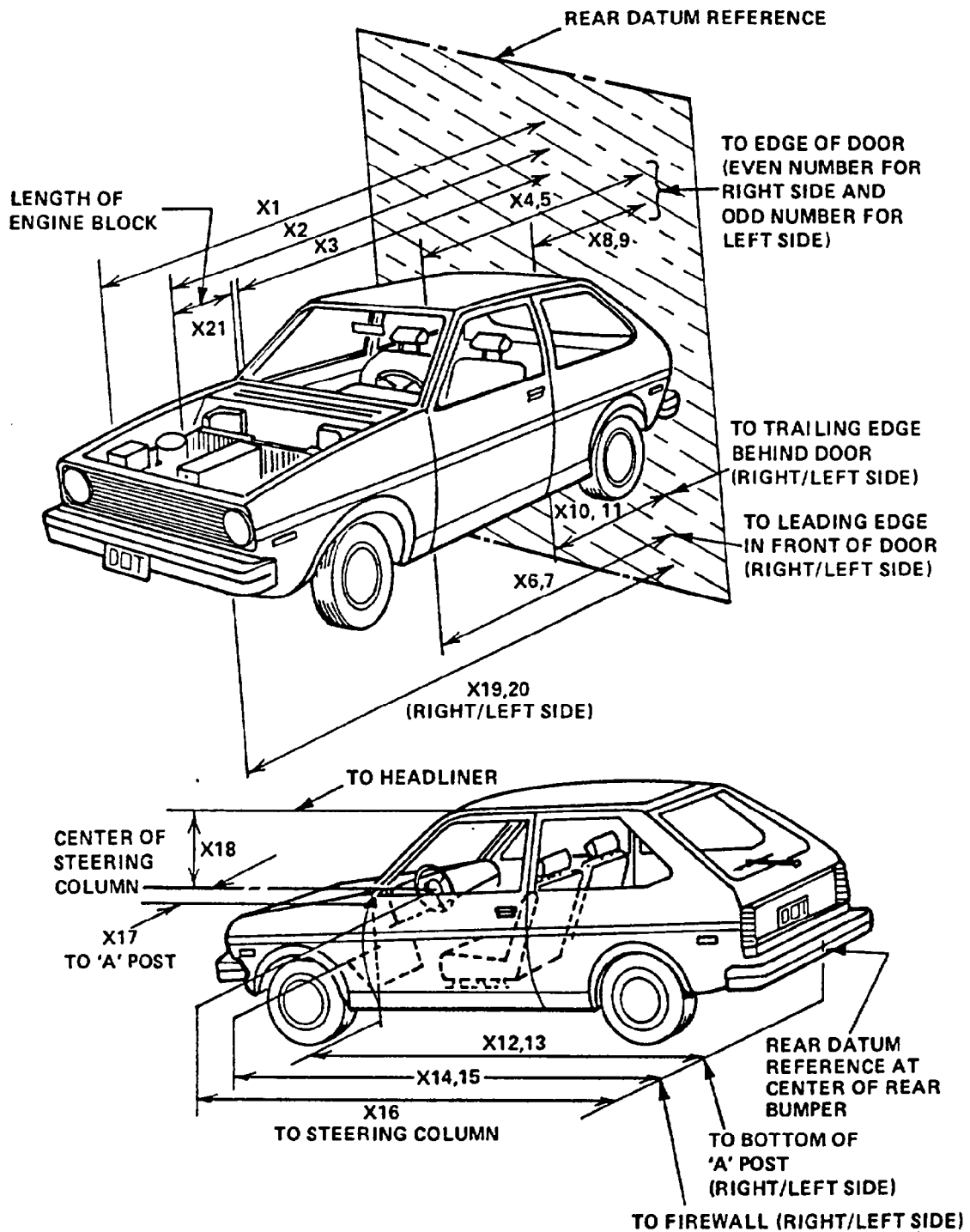


Table 7
VEHICLE MEASUREMENTS

| No. | | All Dimensions in Inches | | |
|-----|--|--------------------------|-----------|-------------|
| | | Pre-Test | Post-Test | Differences |
| X1 | Total Length of Vehicle at Centerline | 194.7 | 179.0 | 15.7 |
| X2 | Rear Surface of Vehicle to Front of Engine | 170.7 | 166.0 | 4.7 |
| X3 | Rear Surface of Vehicle to Firewall | 147.6 | 145.0 | 2.6 |
| X4 | Rear Surface of Vehicle to Upper Leading Edge of Right Door | 133.0 | 133.0 | 0.0 |
| X5 | Rear Surface of Vehicle to Upper Leading Edge of Left Door | 133.2 | 133.0 | 0.2 |
| X6 | Rear Surface of Vehicle to Lower Leading Edge of Right Door | 134.1 | 134.3 | -0.2 |
| X7 | Rear Surface of Vehicle to Lower Leading Edge of Left Door | 134.4 | 134.5 | -0.1 |
| X8 | Rear Surface of Vehicle to Upper Trailing Edge of Right Door | 92.9 | 92.6 | 0.3 |
| X9 | Rear Surface of Vehicle to Upper Trailing Edge of Left Door | 93.0 | 92.9 | 0.1 |
| X10 | Rear Surface of Vehicle to Lower Trailing Edge of Right Door | 93.8 | 93.6 | 0.2 |
| X11 | Rear Surface of Vehicle to Lower Trailing Edge of Left Door | 93.9 | 94.0 | -0.1 |
| X12 | Rear Surface of Vehicle to Bottom of "A" Post of Right Side | 132.3 | 132.4 | -0.1 |
| X13 | Rear Surface of Vehicle to Bottom of "A" Post of Left Side | 132.4 | 132.8 | -0.4 |
| X14 | Rear Surface of Vehicle to Firewall, Right Side | 147.6 | 145.5 | 2.1 |
| X15 | Rear Surface of Vehicle to Firewall, Left Side | 144.7 | 144.6 | 0.1 |
| X16 | Rear Surface of Vehicle to Steering Column | 115.5 | 118.0 | -2.5 |
| X17 | Center of Steering Column to "A" Post | 15.0 | 15.6 | -0.6 |
| X18 | Center of Steering Column to Headliner | 17.4 | 17.0 | 0.4 |
| X19 | Rear Surface of Vehicle to Right Side of Front Bumper | 189.5 | 175.5 | 14.0 |
| X20 | Rear Surface of Vehicle to Left Side of Front Bumper | 189.2 | 178.2 | 11.0 |
| X21 | Length of Engine Block | 19.5 | 19.5 | 0.0 |

Section 4

SUMMARY OF RESULTS OF FMVSS NOS. 208, 212, 219 AND 301-75

- "Occupant Crash Protection," FMVSS No. 208 Data
- "Windshield Mounting," FMVSS No. 212 Data
- "Windshield Zone Intrusion," FMVSS No. 219 (Partial) Data
- "Fuel System Integrity," FMVSS No. 301-75

Table 8

DUMMY INJURY CRITERIA VALUESNHTSA No.: CP5305 Vehicle: 1993 Acura Legend 4-Door Sedan

| | MAXIMUM ACCELERATION (g's) | | | | | | | | |
|-----------|----------------------------|-----|-----|-----|-------|----|-----|------|--------------|
| | HEAD | | | | CHEST | | | | |
| | X | Y | Z | R | X | Y | Z | R* | Displacement |
| Dummy (1) | -63 | -87 | -54 | 103 | -56 | -5 | -24 | 56.0 | N/A |
| Dummy (2) | -45 | -34 | 38 | 62 | -46 | -6 | 40 | 45.9 | N/A |

| | MAXIMUM FORCE - FEMUR LOAD (lbs.) | |
|-----------|-----------------------------------|-------------|
| | LEFT FEMUR | RIGHT FEMUR |
| Dummy (1) | 1500 | 1950 |
| Dummy (2) | 1329 | 1745 |

| | HEAD INJURY CRITERIA** | | | |
|-----------|------------------------|------------------------|-----------------------|---|
| | HIC | 36 millisecond Maximum | | Avg. Acc. (g)
t ₁ TO t ₂ |
| | | t ₁ (msec) | t ₂ (msec) | |
| Dummy (1) | 442.80 | 77.760 | 112.080 | 44.08 |
| Dummy (2) | 520.96 | 77.760 | 113.640 | 46.21 |

* Defined as exceeding 0.003 sec. duration

**As defined in FMVSS No. 208

Table 9

FMVSS NO. 208 - SEAT BELT WARNING SYSTEM CHECK

With occupant in driver's position, the lap belt in stowed position, and ignition switch placed in "Start/On" position:

Log time duration of audible warning signal = 6.0 sec.

Log time duration of reminder light operation = * sec.

With occupant in driver's position, lap belt in use, and the ignition switch placed in "Start/On" position:

Log time duration of audible warning signal = 0 sec.
(audible warning should not operate)

Log time duration of reminder light operation = 0 sec.

Note wording of visual warning:

Fasten Seat Belt -

Fasten Belt -

Symbol 101-80 X

* Owner's manual states: "If you do not fasten your seat belt, the beeper will stop after a few seconds but the light stays on until you do. Both the light and the beeper stay off if you fasten your seat belt before turning on the ignition."

Table 10

FMVSS NO. 208 - LABELING AND DRIVER'S MANUAL INFORMATION

Locate label which describes manufacturers maintenance or replacement schedule for crash-deployed occupant protection system.

Describe location:

Located inside console box.

The manufacturers recommended schedule is to "... be inspected ten years after it is installed."

Were appropriate instructions concerning maintenance and/or replacement of this system provided?

YES X NO -

Was a description of the functional operation of the system provided?

YES X NO -

Is there a reference to the instructions and description of the system on the label?

YES X NO -

Was an owner's manual provided?

YES X NO -

Did the owner's manual contain appropriate information concerning maintenance and/or replacement and a description of the functional operation of the systems?

YES X NO -

Table 11

FMVSS NO. 208 - READINESS INDICATOR

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement.

Is the system totally mechanical? YES - NO X

Describe the location of the readiness indicator:

Upper Middle of instrument cluster.

Is the readiness indicator clearly visible to the driver?
YES X NO -

Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided?
YES X NO -

Table 12

FMVSS NO. 208 - COMFORT AND CONVENIENCE TEST SUMMARY

| | |
|------------------------------------|---------------------------------------|
| Test Vehicle NHTSA No.: | <u>CP5305</u> |
| Make/Model: | <u>1993 Acura Legend 4-Door Sedan</u> |
| Date of Comfort/Convenience Check: | <u>2/17/93</u> |
| Technician Performing Check: | <u>VMP</u> |
| GVWR: | <u>4,500 lbs.</u> |

Seat belt comfort and convenience requirements cover vehicles manufactured on or after September 1, 1986, which have a gross vehicle weight rating of 10,000 pounds or less. Exemptions to this rule are belts installed in a walk-in, van-type vehicle and manual Type 2 belt systems installed in the front outboard seating positions of passenger automobiles. On or after September 1, 1989, the exemption of the type 2 manual seat belts installed in the front outboard seating positions of passenger automobiles will change depending on the states' enactment of mandatory usage laws.

Was vehicle built after or on September 1, 1986, and is it equipped with:

1. Automatic seat belts YES - NO X

If yes, go to requirements D1, D2 and D3

2. Manual seat belts* YES X** NO -

a. The seat belts, other than Type 2 lap/shoulder belts, are located in the front outboard seating positions of a passenger automobile.

YES - NO X

(Go to requirements D3, D4, D5, and D6)

b. The seat belt system is Type 2 lap/shoulder belt in the front outboard seating positions or the seat belts are located in a walk-in van.

STOP

* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

**Vehicle equipped with front air bags. Manual belts not used for barrier crash test.

Table 12 (cont.)

D1

CONVENIENCE HOOKS

A convenience hook or other device is provided to stow seat belt webbing to facilitate entering or exiting the vehicle.

YES - NO X

Check the option which applies to this test vehicle:

1. A convenience hook or other device automatically releases the webbing when the automatic belt system is operational and remains in the released mode as long as the vehicle's ignition switch is moved to the "on" or "start" position and the vehicle's drivetrain is engaged.

YES N/A NO N/A

2. A convenience hook or other device automatically releases the webbing when the automatic belt system is operational and remains in the released mode as long as the vehicle's ignition switch is moved to the "on" or "start" position and the vehicle's parking brake is in the released mode (nonengaged).

YES N/A NO N/A

D2

WEBBING TENSION - RELIEVING DEVICE

The seat belt assembly installed in the outboard designated seating position has either manual or automatic tension relieving devices permitting the introduction of slack in the webbing of the shoulder belt ("comfort clips" or "window shade" devices).

YES - NO X

Check the owner's manual and determine the maximum amount of slack recommended by the manufacturer in inches. The recommended slack is - inches. Introduce this slack into the shoulder belt before testing the vehicle to comply with the requirements of FMVSS 208 S5.1. A warning is included in the owner's manual that introducing slack beyond the amount specified can significantly reduce the effectiveness of the shoulder belt.

YES N/A NO N/A

(If NO, provide explanation.)

Check the option which applies to this test vehicle:

1. This vehicle is equipped with automatic seat belts and the tension relieving device is canceled each time the adjacent door is opened.

YES N/A NO N/A

(If NO, provide explanation.)

Table 12 (cont.)

2. This vehicle is equipped with manual belts, required to meet FMVSS 208 S4.6, and the tension relieving device is canceled each time one of the following options occurs:
- a. The adjacent door is opened. YES N/A NO N/A
- b. The latch plate is released from the buckle. YES N/A NO N/A
3. This is an open-body vehicle, without doors. Does the manual mean to cancel any shoulder belt slack introduced by a tension relieving device to operate properly?
- YES N/A NO N/A

(If NO, provide explanation.)

D3

BELT CONTACT FORCE

1. Do not measure the belt contact force if the manual or automatic seat belt assemblies in this vehicle incorporate a webbing tension relieving device. Does the vehicle incorporate a tension relieving device?
- YES - NO X
2. Seats are adjusted according to instructions in Appendix B.
- YES X NO -
3. The test dummies are positioned according to dummy position placement instructions in Appendix B and Appendix C.
- YES X NO -
4. Close the vehicle's adjacent door, pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest, then fasten the latch. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point, pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. Measure the contact force exerted by the belt webbing on the dummy's chest. The contact force is 0.3 pounds. Contact the COTR if the contact force exceeds 0.7 pounds.

Table 12 (cont.)

D4

LATCHPLATE ACCESSIBILITY

1. Position the test dummy in the driver's seat or passenger's seat in its forward most adjustment position.
YES X NO -
2. Attach the inboard and outboard reach string. YES X NO -
3. Extend each line backward and outboard to generate arcs of the reach envelope of the test dummy's arms. With the latchplate in the normal stowed position, check to assure that the latchplates are within the reach envelope.
YES X NO -
4. Using the clearance test block, determine if there is sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latchplate or buckle.
YES X NO -

D5

RETRACTION

1. Seats and seat backs are adjusted according to instructions in Appendix B "General Test Conditions" in TP-208-8.
YES X NO -
2. Use anthropomorphic test dummies whose arms have been removed and position the dummies in the front outboard designated seating positions according to instructions in Appendix B and restrain the dummies, using the belt systems for the positions being tested.
YES X NO -
3. Outboard armrests which are capable of being stowed on vehicle seats shall be placed in their stowed positions.
YES X NO -
4. Check the option which applies to this test vehicle:
 - a. The torso and lap belt webbing of the seat belt system automatically retract to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released.
YES X NO -

Table 12 (cont.)

- b. The torso and lap belt webbing of the seat belt system automatically retract when the seat belt latch plate is released.

YES X NO -

5. With the webbing and hardware in the stowed position, close the door to assure that the webbing and hardware are prevented from being pinched.

YES X NO -

6. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, check to assure that the belt system fully retracts when the tension-relief device is manually deactivated.

YES N/A NO N/A

D6

ACCESSIBILITY

The requirements for accessibility do not apply to:

1. Seats whose seat cushions are removable so that the seat back serves a function other than seating;
2. Seats which are removable;
3. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, then determine if:

1. Each manual seat belt assembly whose webbing is designed to pass through the seat cushion or between the seat cushion and seat back has one of the following three parts (the seat belt latchplate, the buckle, or the seat belt webbing) on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant).

YES X NO -

2. The remaining two seat belt parts are accessible under normal conditions.

YES X NO -

Table 12 (cont.)

3. The buckle and latchplate pass through the guides or conduits provided and do not fall behind the seat when the following events occur in order:
- a. The belt is completely retracted or, if the belt is nonretractable, the belt is unattached.
YES X NO -
- b. The seat is moved to any position to which it is designed to be adjusted.
YES X NO -
- c. The seat back, if foldable, is folded forward as far as possible and then moved backward into positions.
YES X NO -
4. Is the inboard receptacle end of the seat belt assembly which is installed in the outboard designated seating position accessible with the center arm rest in any position to which it can be adjusted without moving the armrest?
YES X NO -

D7

LATCH MECHANISM

A seat belt assembly installed in a passenger car, except an automatic belt assembly, shall have a latch mechanism:

1. Whose components are accessible to a seated occupant in both the stowed and operational positions.
YES X NO -
2. That releases both the upper torso restraint and the lap belt simultaneously, if the assembly has a lap belt and an upper torso restraint that require unlatching for release of the occupant.
YES X NO -
3. That releases at a single point by a push button action.
YES X NO -

Figure 8

FMVSS NO. 212 - "WINDSHIELD MOUNTING" DATA SHEET

DETAILS OF WINDSHIELD MOUNTING SUCH AS RETENTION METHOD, TRIM TYPE, ETC.:

Windshield is bonded in place with 9/16" soft rubber and 3/16" rubber/metal trim along top of windshield. The sides of windshield have 5/8" rubber/metal trim along with 1/8" soft rubber trim. The bottom of windshield is covered by a plastic shroud.

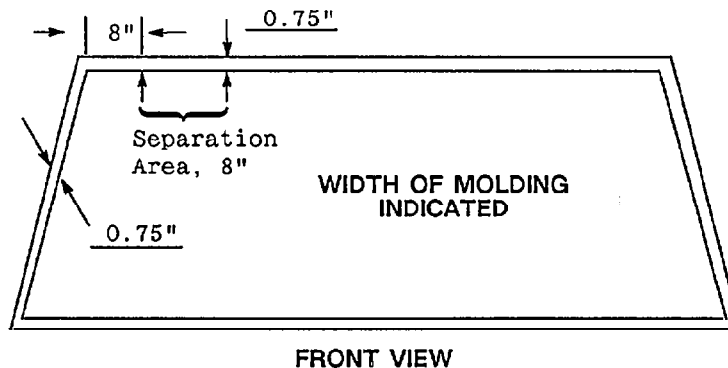
FMVSS 212 REQUIREMENTS:

The Post-Test periphery retention amount must be at least 75% of the Pre-Test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

FMVSS 212 TEST DATA:

| | WINDSHIELD PERIPHERY | | PERCENT RETENTION |
|------------|----------------------|-----------------|-------------------|
| | PRE-TEST (in.) | POST-TEST (in.) | |
| RIGHT SIDE | 87.8 | 79.8 | 90.8% |
| LEFT SIDE | 87.8 | 87.8 | 100% |
| TOTAL | 175.6 | 167.6 | 95.4% |

AREA OF RETENTION FAILURE:



FAILURE DETAILS:

Windshield did not retain at approximately 8 inches from upper passenger side corner of windshield; total length of separation is 8 inches.

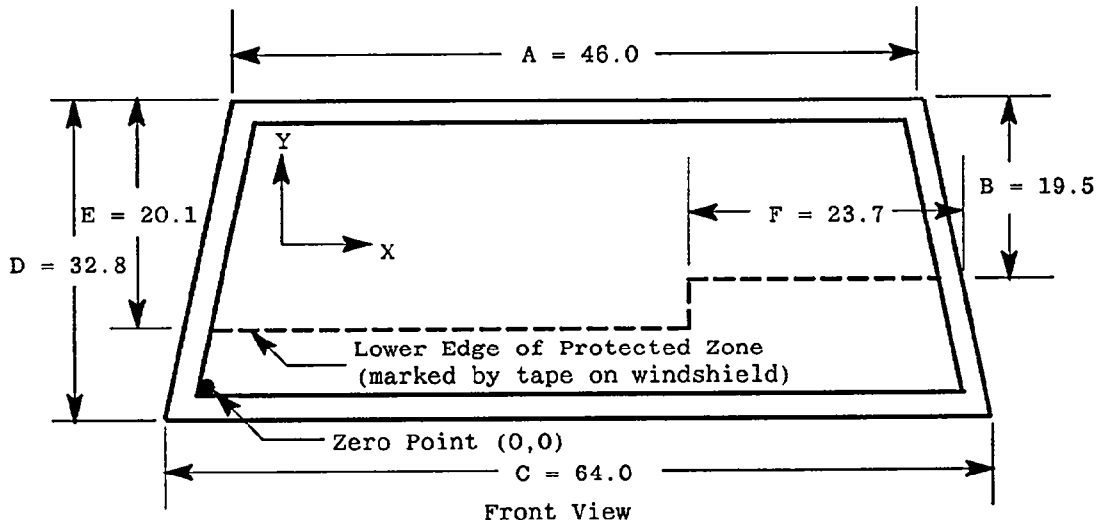
Figure 9

FMVSS NO. 219 (PARTIAL) - "WINDSHIELD ZONE INTRUSION" DATA SHEET

PROTECTED ZONE LOWER EDGE REQUIREMENT:

The lower edge of the protected zone is determined by placing a 6.5" dia. rigid sphere weighing 15 pounds in a position such that it simultaneously contacts the inner surface of the windshield and the top surface of the instrument panel including padding. The locus of points is drawn on the inner surface of the windshield contacted by the sphere across the width of the instrument panel. From the outermost contactable points, extend the locus line horizontally to the edges of the windshield, and then draw a line on the inner surface of the windshield below and 1/2" distant from the locus line. The LOWER EDGE OF THE PROTECTED ZONE is the longitudinal projection of this line onto the outer surface of the windshield.

FMVSS 219 TEST DATA: (Dimensions in inches.)



DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 1/4":

(Show location of penetration on above sketch)

NONE

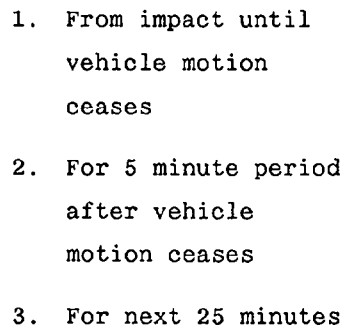
| | COORDINATES | |
|----|-------------|---|
| | X | Y |
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |

FMVSS NO. 301

TEST DATE: 2/18/93

Test vehicle fuel tank filled to 92% to 94% of manufacturer's "usable" capacity and with electric fuel pump operating (if it will operate without engine operation). Part 572 test dummies located at each front designated seating position.

FUEL SPILLAGE MEASUREMENT:



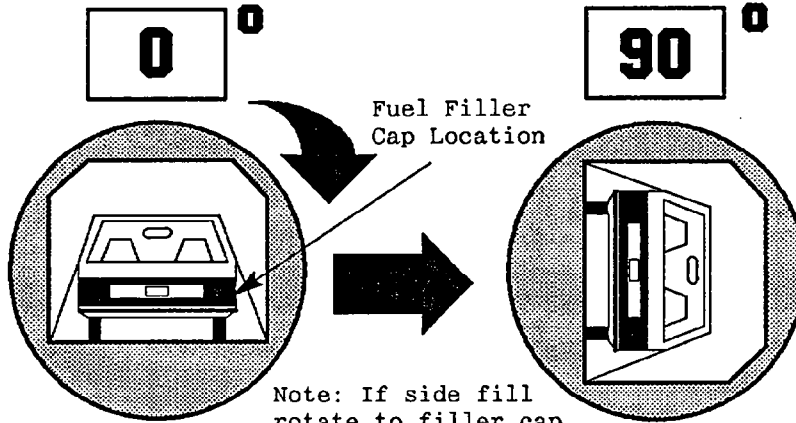
| ACTUAL | MAX ALLOWED |
|--------|--------------|
| 0 | 1 oz. |
| 0 | 5 oz. |
| 0 | 1 oz./1 min. |

None

Table 14
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE:

Vehicle NHTSA ID No.:



CP5305

I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes) 2 minutes 10 seconds

FMVSS 301 Position Hold Time + 5 minutes 00 seconds

TOTAL 7 minutes 10 seconds

Next whole minute interval 8 minutes

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

| | | | |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
|---|---|---|---|

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

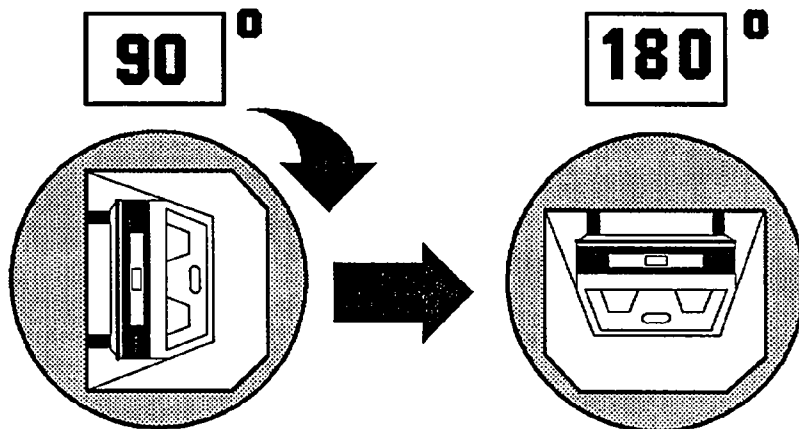
IV. SOLVENT SPILLAGE LOCATION(S):

None

Table 13
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE:

Vehicle NHTSA ID No.:



CP5305

I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

| | |
|--|--|
| Rollover Fixture 90° Rotation Time
(Spec. Range = 1 to 3 minutes) | _____ 1 _____ minutes _____ 55 _____ seconds |
| FMVSS 301 Position Hold Time + | _____ 5 _____ minutes _____ 00 _____ seconds |
| TOTAL | _____ 6 _____ minutes _____ 55 _____ seconds |
| Next whole minute interval | _____ 7 _____ minutes |

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

| | | | |
|---|---|---|-----|
| 0 | 0 | 0 | N/A |
|---|---|---|-----|

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

IV. SOLVENT SPILLAGE LOCATION(S):

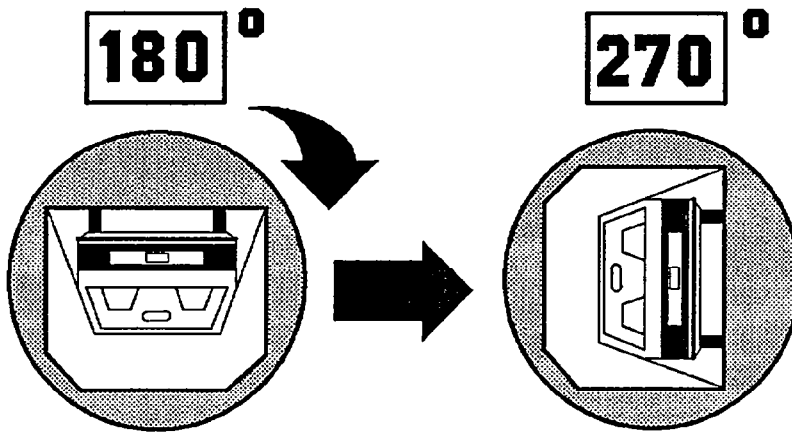
None

Table 13
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE:

Vehicle NHTSA ID No.:

CP5305



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

| | | | | |
|--|---|---------|----|---------|
| Rollover Fixture 90° Rotation Time
(Spec. Range = 1 to 3 minutes) | 1 | minutes | 50 | seconds |
| FMVSS 301 Position Hold Time + | 5 | minutes | 00 | seconds |
| TOTAL | 6 | minutes | 50 | seconds |
| Next whole minute interval | 7 | minutes | | |

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

| | | | |
|---|---|---|-----|
| 0 | 0 | 0 | N/A |
|---|---|---|-----|

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

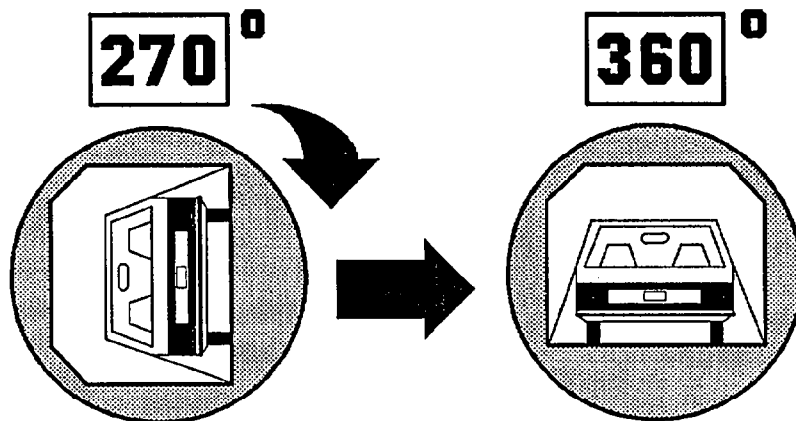
IV. SOLVENT SPILLAGE LOCATION(S):

None

Table 13
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE:

Vehicle NHTSA ID No.:



CP5305

I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time _____ 2 _____ minutes _____ 05 _____ seconds
(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + _____ 5 _____ minutes _____ 00 _____ seconds

TOTAL _____ 7 _____ minutes _____ 05 _____ seconds

Next whole minute interval _____ 8 _____ minutes

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

| | | | |
|---|---|---|-----|
| 0 | 0 | 0 | N/A |
|---|---|---|-----|

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

IV. SOLVENT SPILLAGE LOCATION(S):

None

Table 15

TEST VEHICLE NONCOMPLIANCE NOTICE

NHTSA Contract Lab: Calspan Advanced Technology Center
Lab Project Manager & Telephone No.: Walter E. Levan (716) 632-7500
Date of Test: February 18, 1993 Vehicle NHTSA No.: CP5305
Vehicle Manufacturer: Honda Motor Company
Model Year: 1993 VIN: JH4KA7530PC001013
Model: Acura Legend Body Style: 4-door sedan Build Date: 9/92
Dummy Stabilized Temperature at Time of Test: 70 °F (Spec. = 66-78°F)
Impact Velocity: 29.7 mph Time of Test: 11:40
Type of Automatic Restraint System: Driver and right-front passenger air bags.

Failure Details:

The vehicle as tested appears to meet the requirements of
FMVSS Nos. 208, 212, 219 (Partial), and 301.

Appendix A

PHOTOGRAPHS5

LIST OF PHOTOGRAPHS

| <u>Figure</u> | <u>Photograph Title</u> | <u>Page No.</u> |
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| A-2 | POST-TEST FRONT VIEW | A-4 |
| A-3 | PRE-TEST LEFT SIDE VIEW | A-5 |
| A-4 | POST-TEST LEFT SIDE VIEW | A-6 |
| A-5 | PRE-TEST RIGHT SIDE VIEW | A-7 |
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| A-11 | POST-TEST TOP VIEW | A-13 |
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| A-14 | PRE-TEST ENGINE COMPARTMENT VIEW | A-16 |
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| A-17 | POST-TEST FUEL FILLER CAP PHOTO (NOT AVAILABLE) | A-19 |
| A-18 | PRE-TEST FRONT UNDERBODY VIEW | A-20 |
| A-19 | POST-TEST FRONT UNDERBODY VIEW | A-21 |
| A-20 | PRE-TEST FRONT SIDE UNDERBODY VIEW | A-22 |
| A-21 | POST-TEST FRONT SIDE UNDERBODY VIEW | A-23 |
| A-22 | PRE-TEST REAR UNDERBODY VIEW | A-24 |
| A-23 | POST-TEST REAR UNDERBODY VIEW | A-25 |
| A-24 | CERTIFICATION LABEL | A-26 |
| A-25 | TIRE PLACARD | A-27 |
| A-26 | PRE-TEST DRIVER DUMMY POSITION | A-28 |
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| A-34 | POST-TEST DRIVER AIRBAG VIEW | A-36 |
| A-36 | POST-TEST PASSENGER AIRBAG VIEW | A-37 |
| A-36 | VEHICLE IMPACT | A-38 |
| A-37 | WINDSHIELD SEPARATION PHOTO | A-39 |

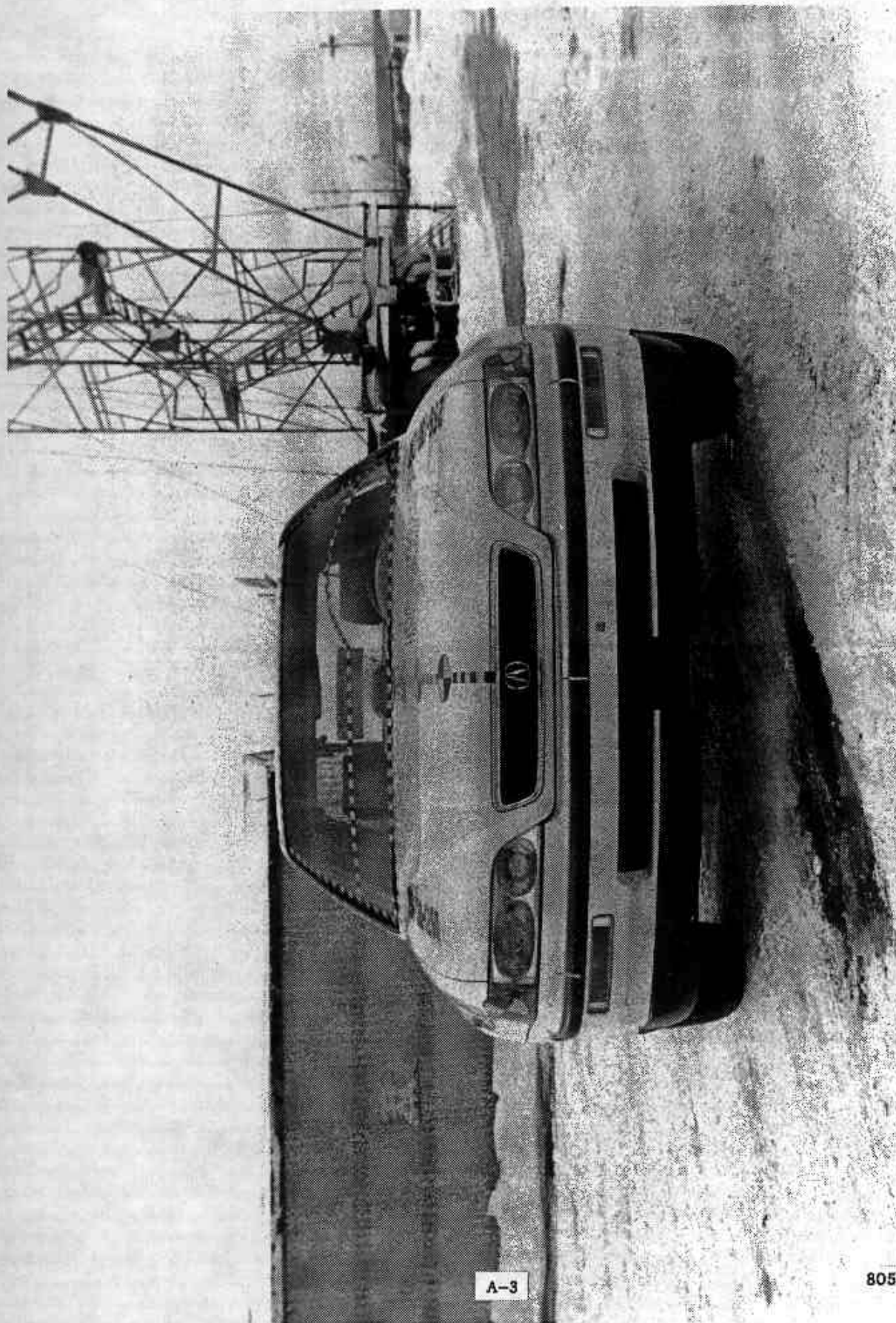


Figure A-1 PRE-TEST FRONT VIEW

A-3

8056-13

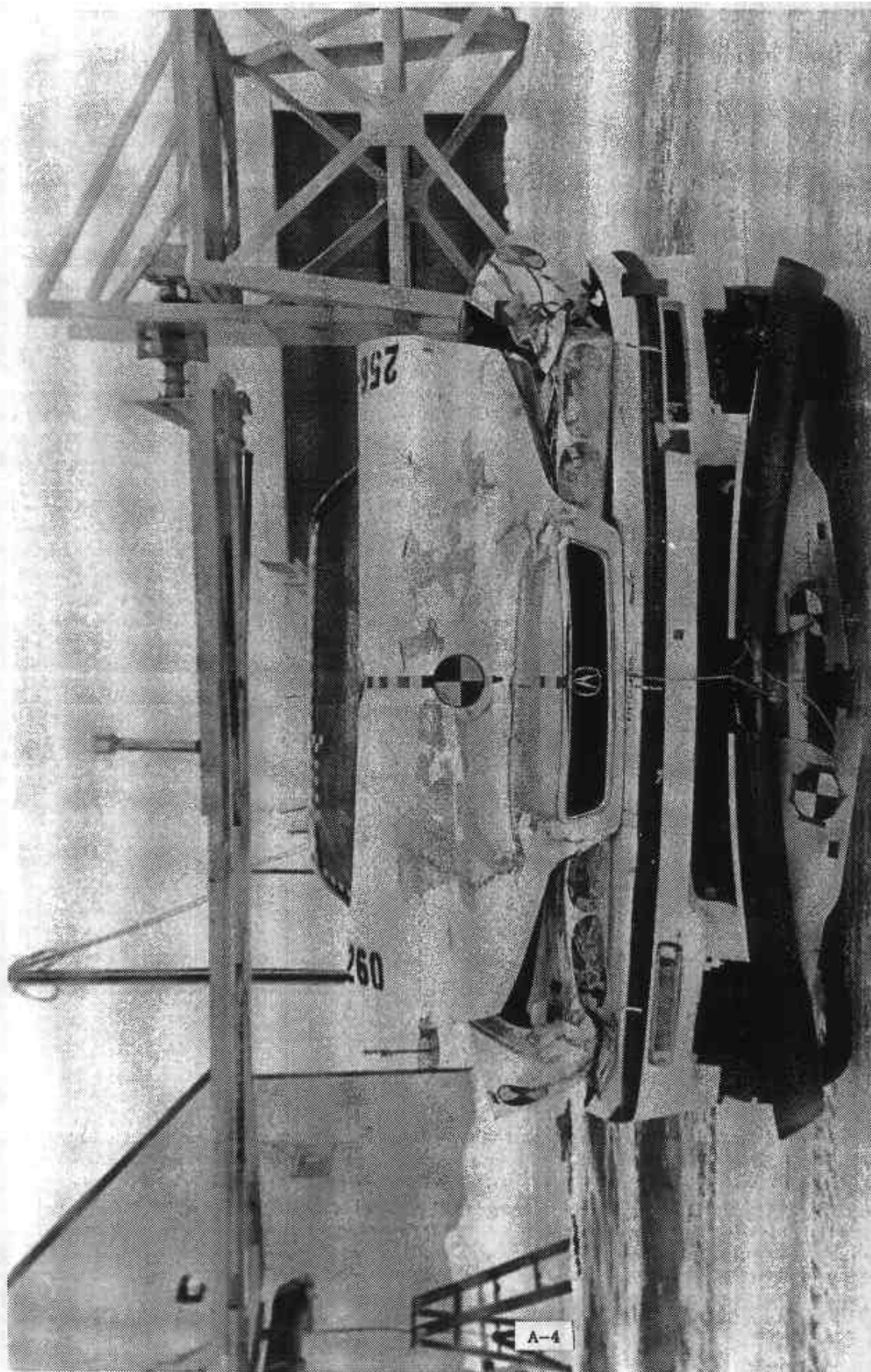


Figure A-2 POST-TEST FRONT VIEW

A-4

8056-13

8056-13

A-8

Figure A-4 POST-TEST LEFT SIDE VIEW

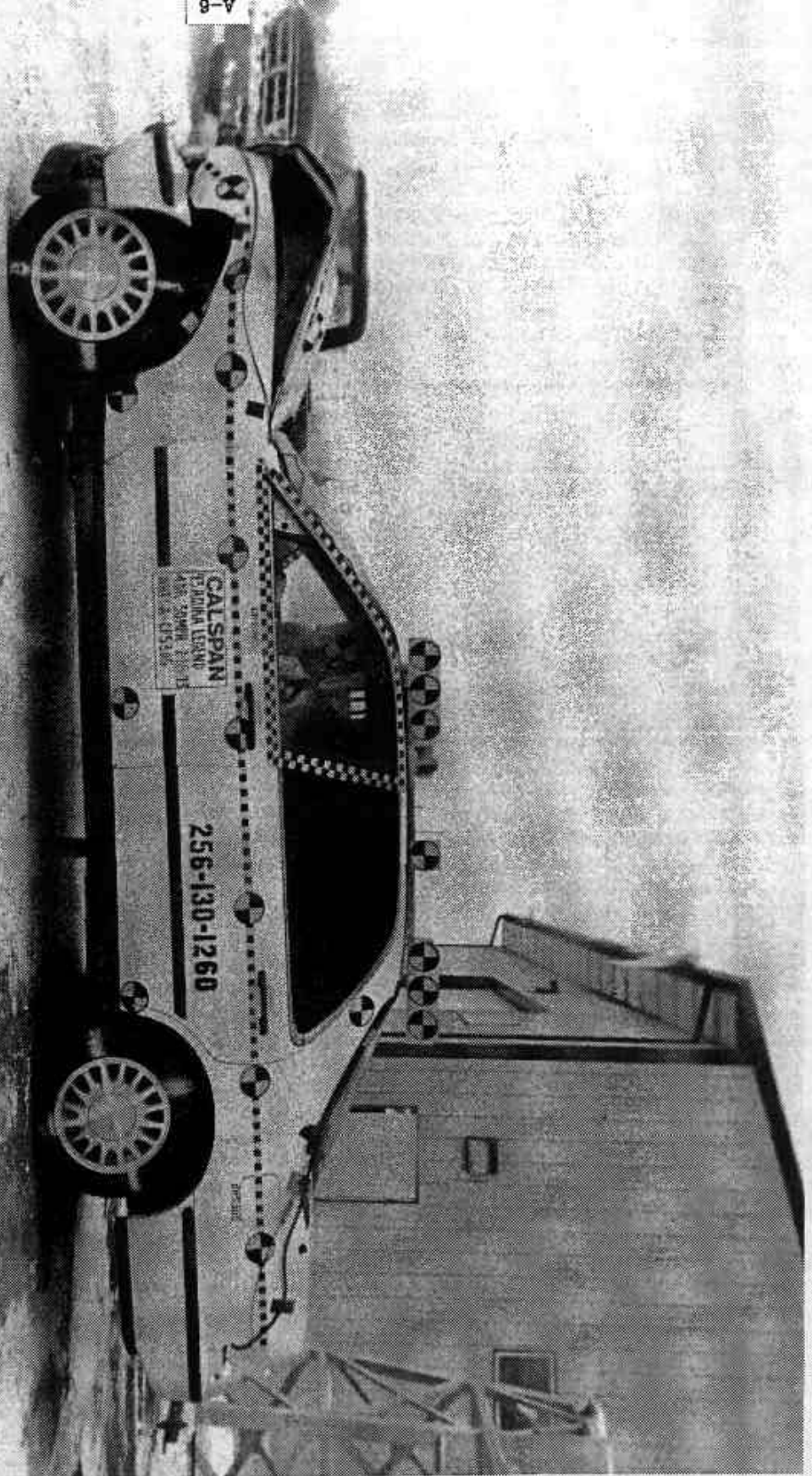




Figure A-3 PRE-TEST LEFT SIDE VIEW

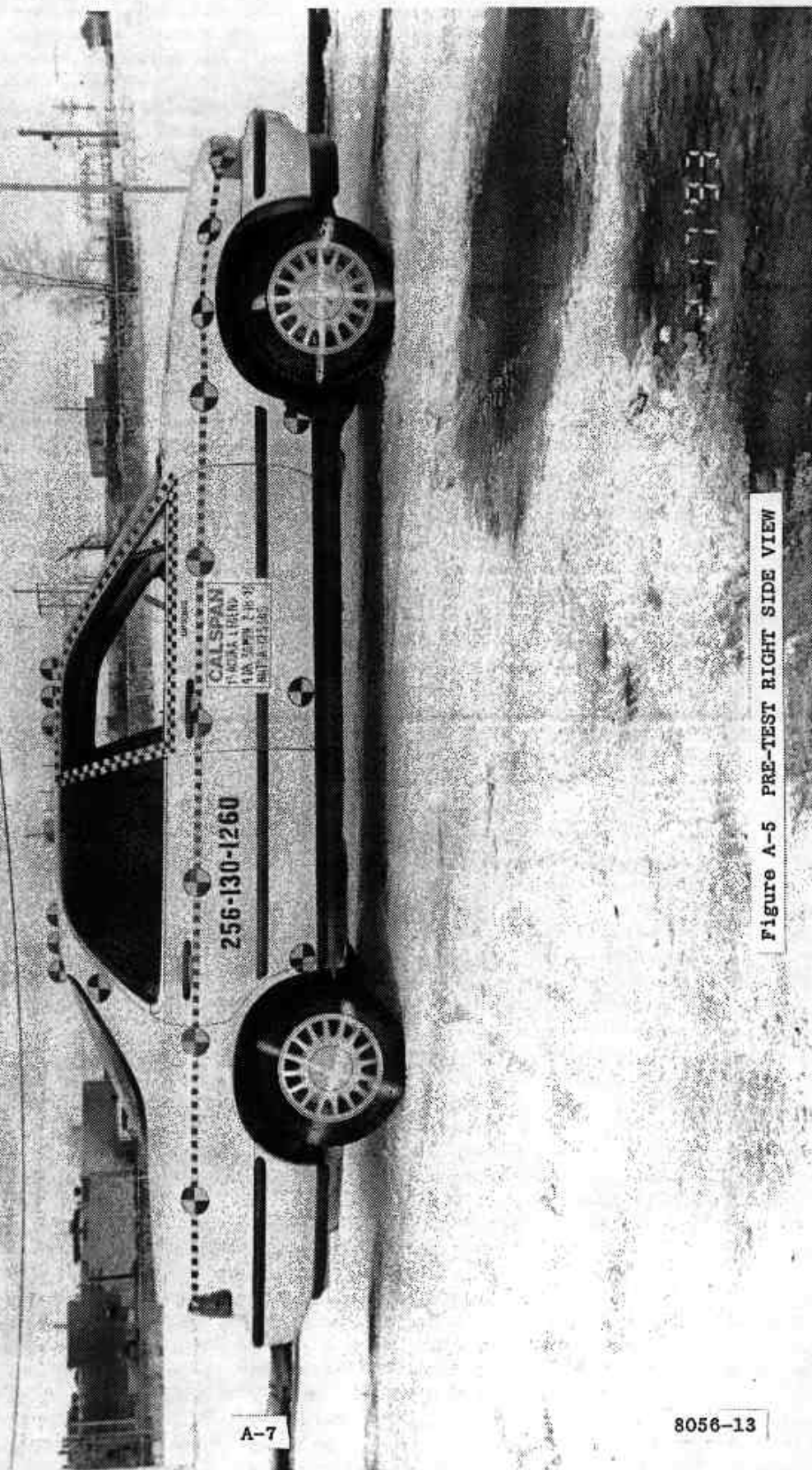


Figure A-5 PRE-TEST RIGHT SIDE VIEW

A-7

8056-13

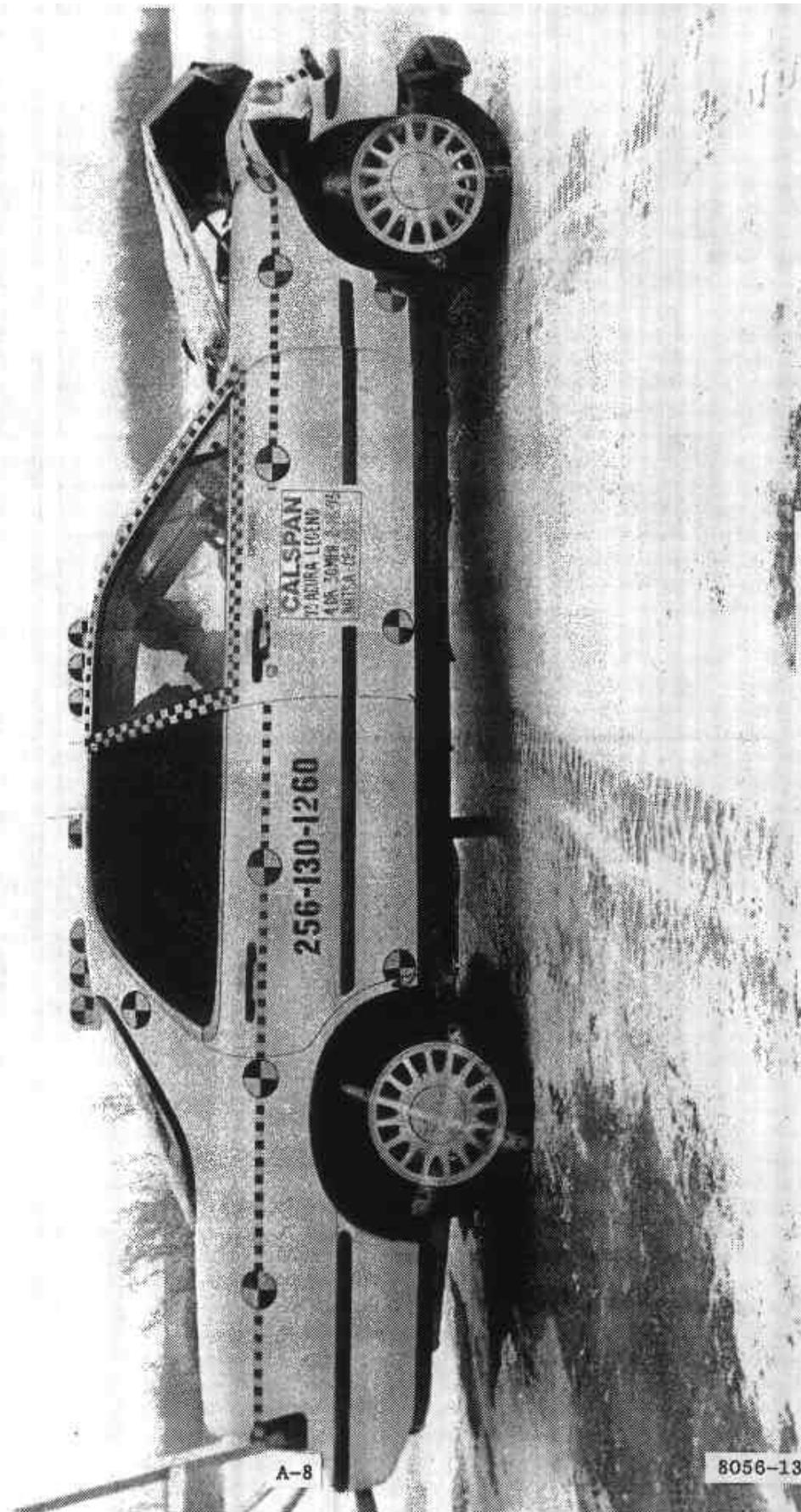


Figure A-8 POST-TEST RIGHT SIDE VIEW

A-8

8056-13

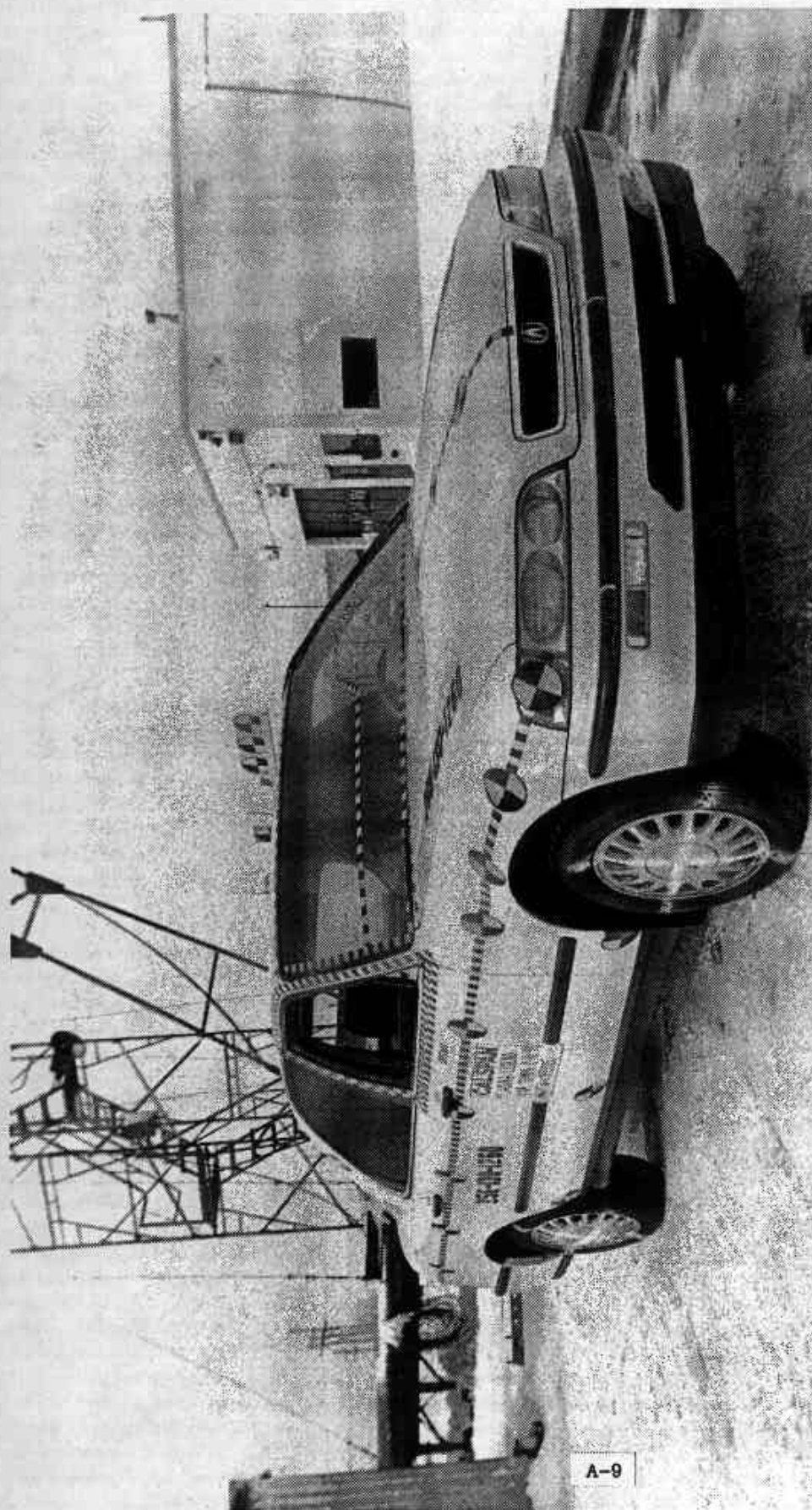


Figure A-7 PRE-TEST RIGHT FRONT THREE-QUARTER VIEW

A-9

8056-13

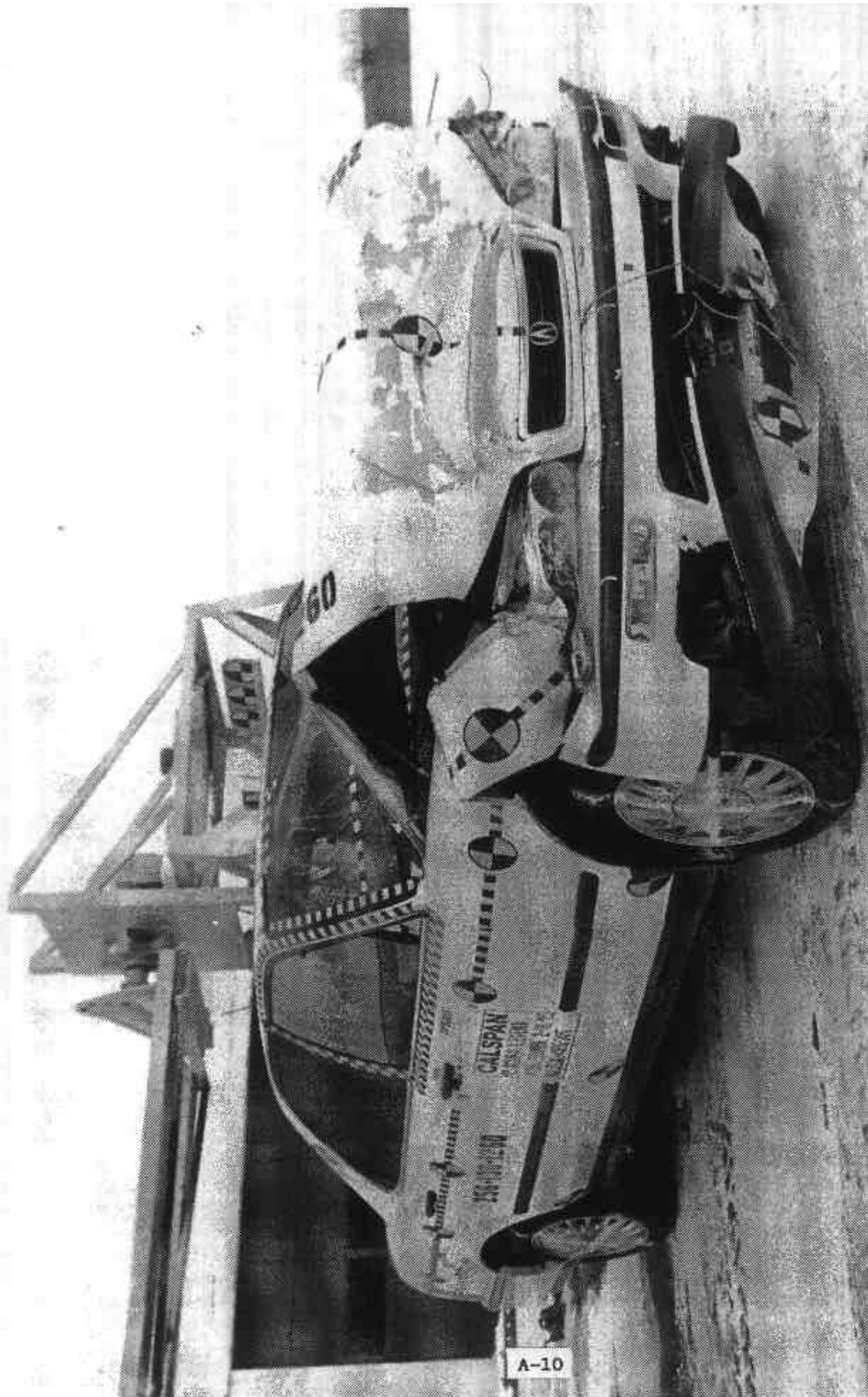
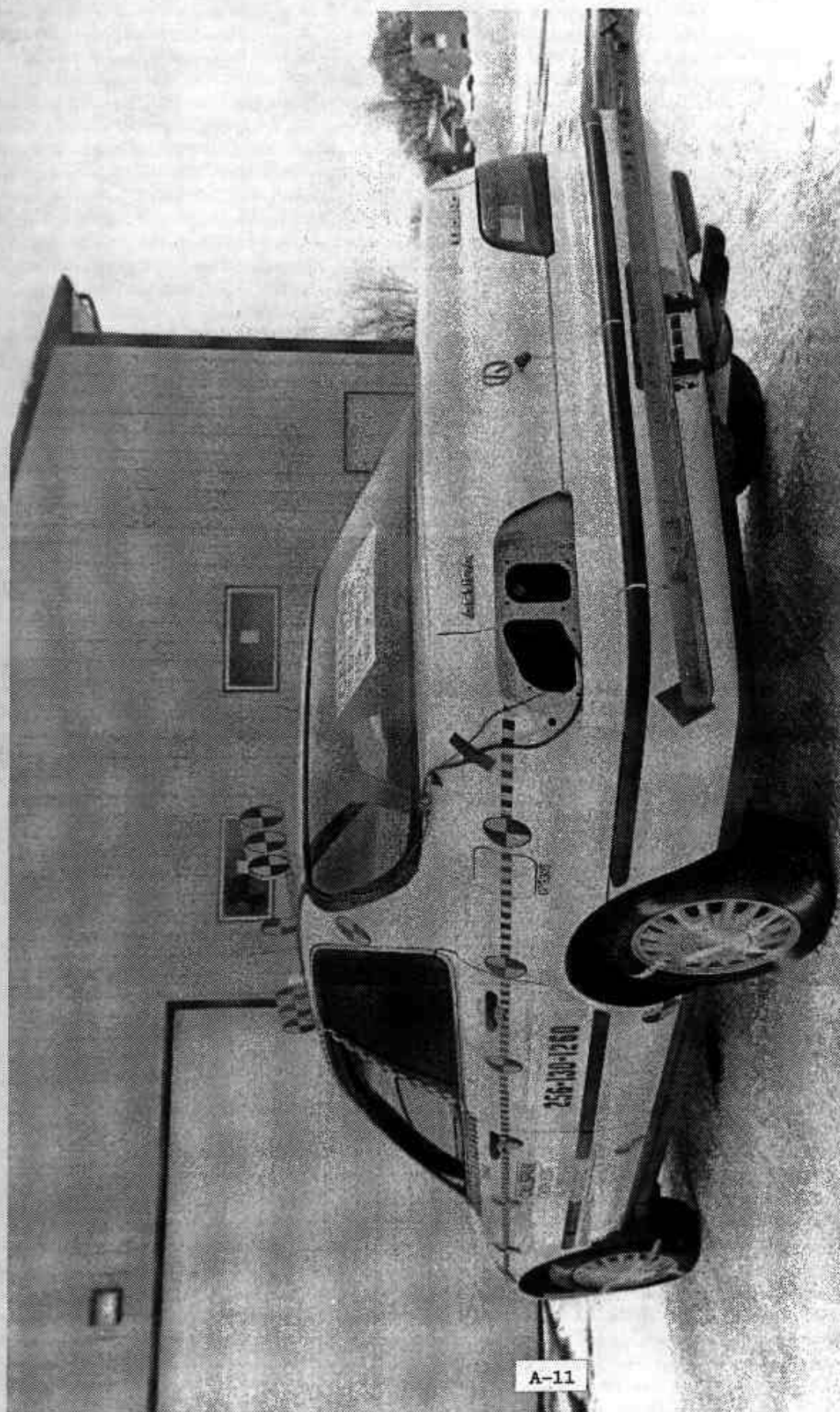


Figure A-8 POST-TEST RIGHT FRONT THREE-QUARTER VIEW

A-10

8056-13



A-11

8056-13

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



A-12

8056-13

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

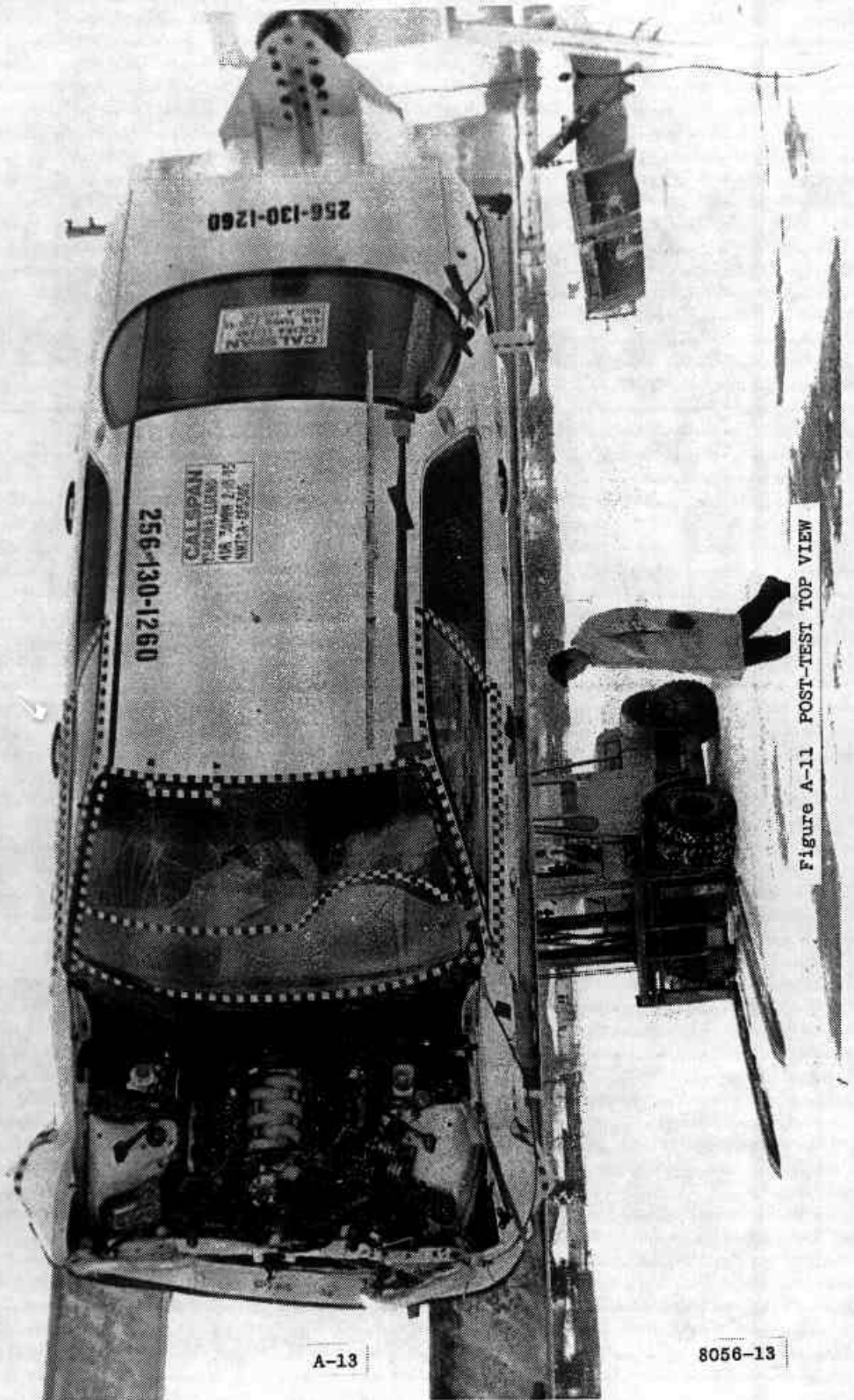
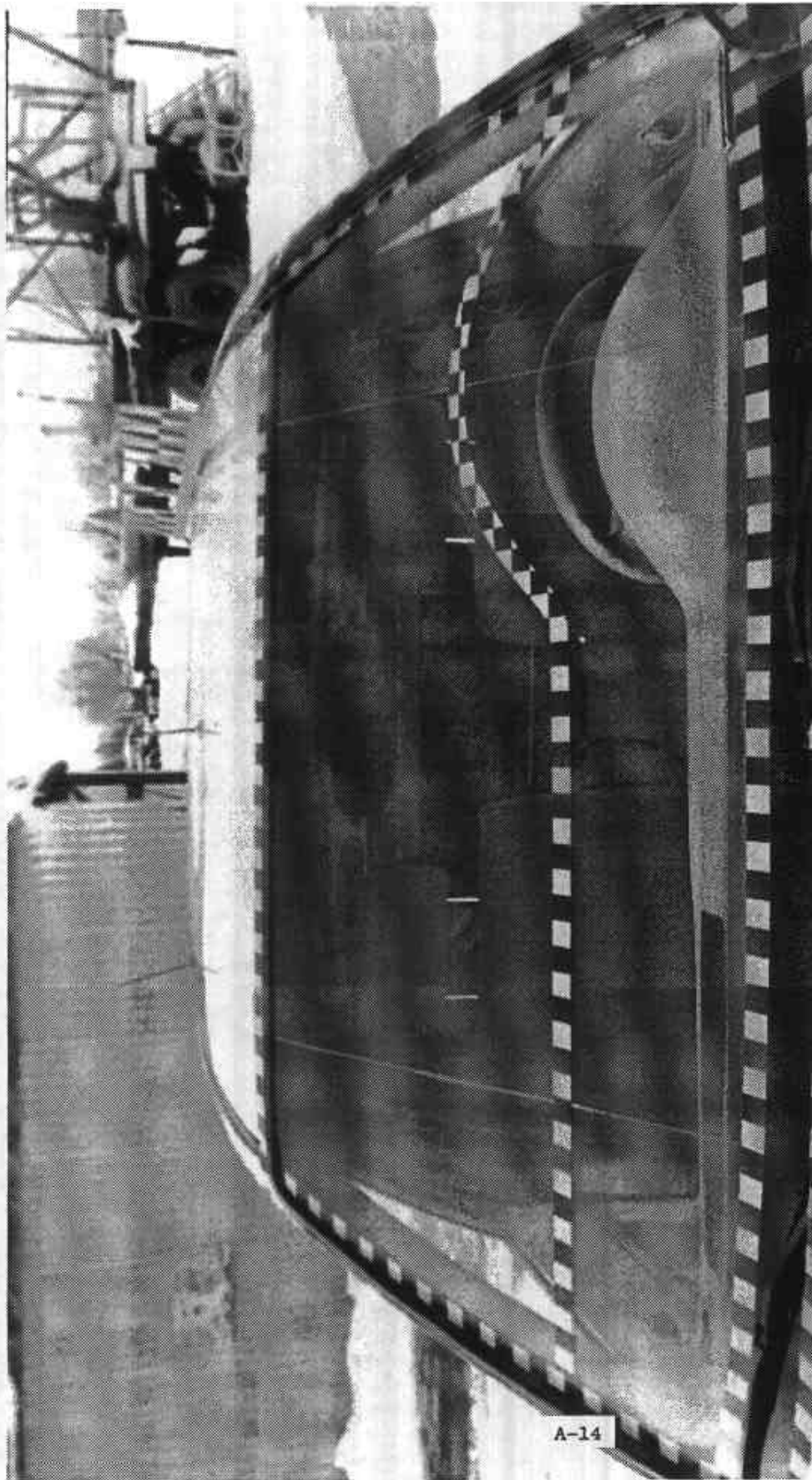


Figure A-11 POST-TEST TOP VIEW

A-13

8056-13



A-14

CP 5305

CP 5305

Figure A-12 PRE-TEST WINDSHIELD VIEW

8056-13

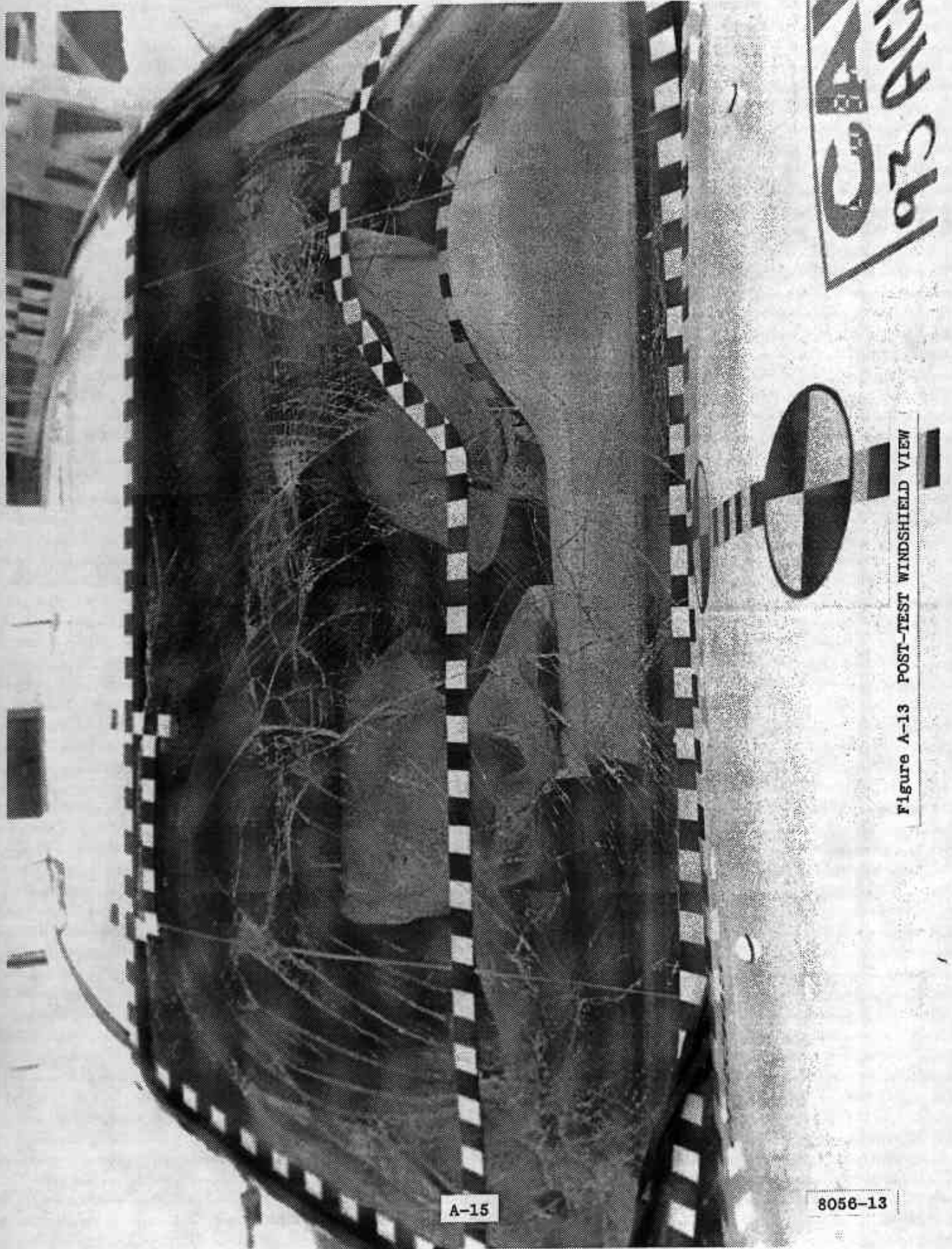


Figure A-13 POST-TEST WINDSHIELD VIEW

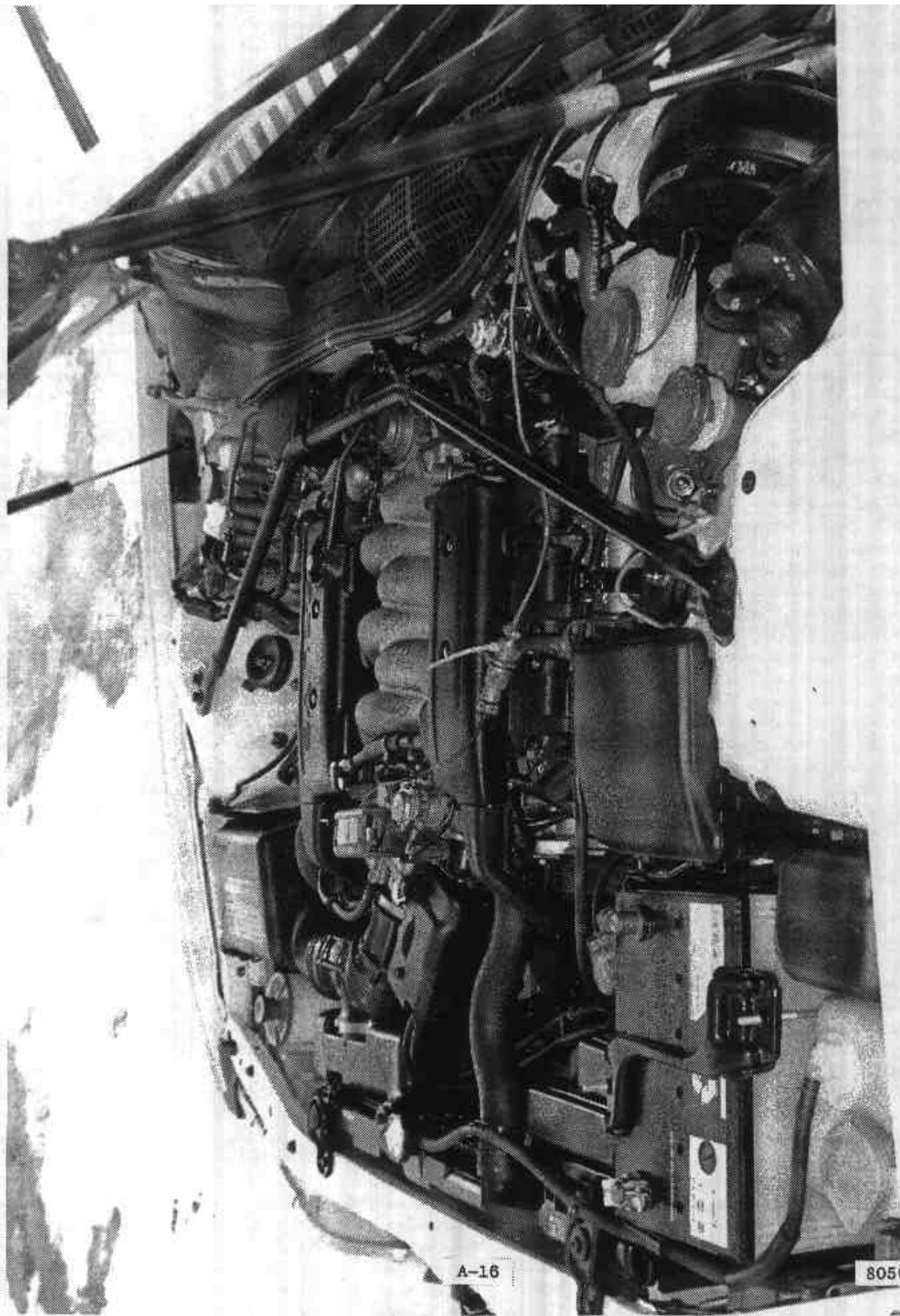


Figure A-14 PRE-TEST ENGINE COMPARTMENT VIEW

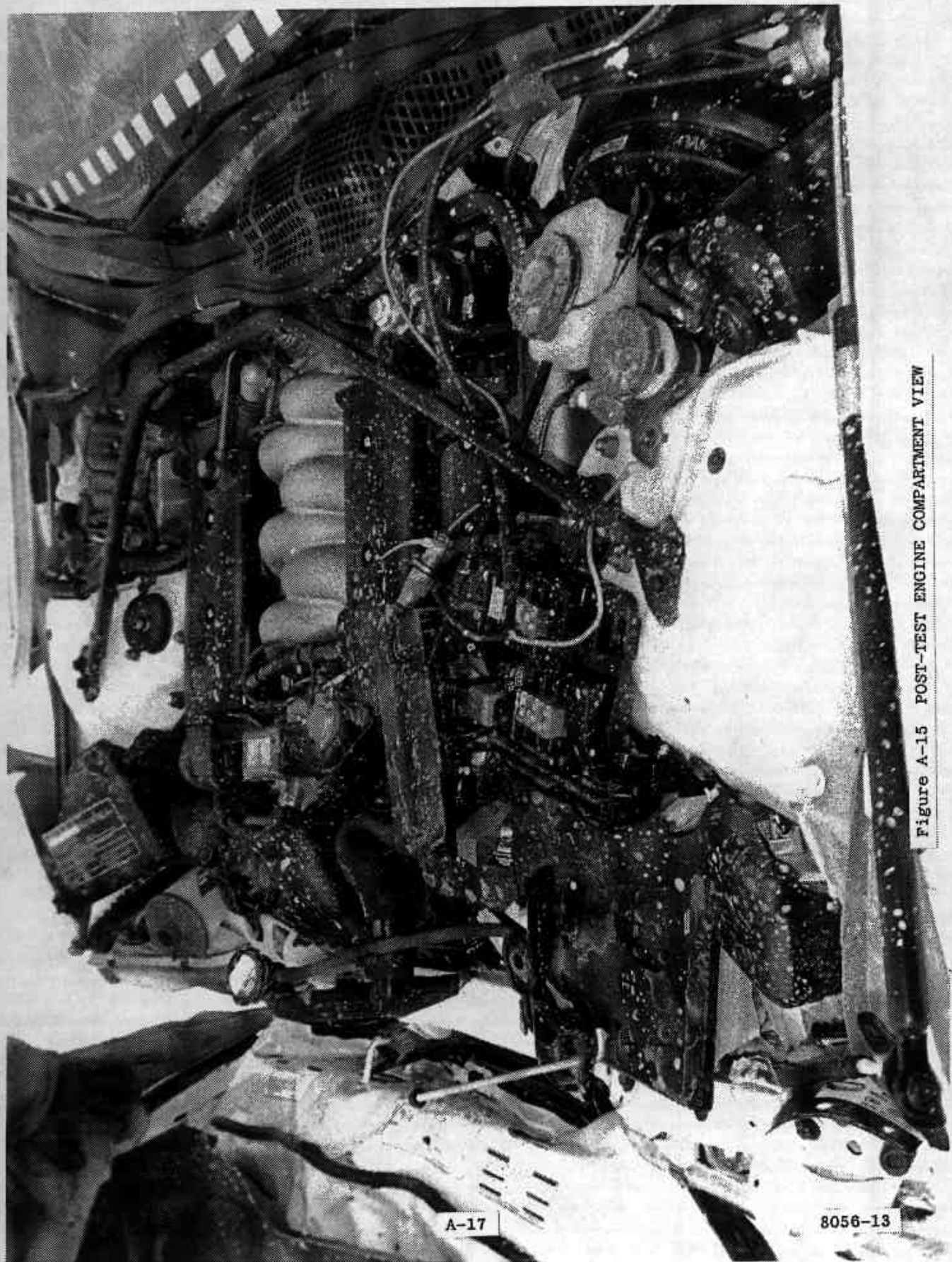


Figure A-15 POST-TEST ENGINE COMPARTMENT VIEW

A-17

8056-13

Figure A-16

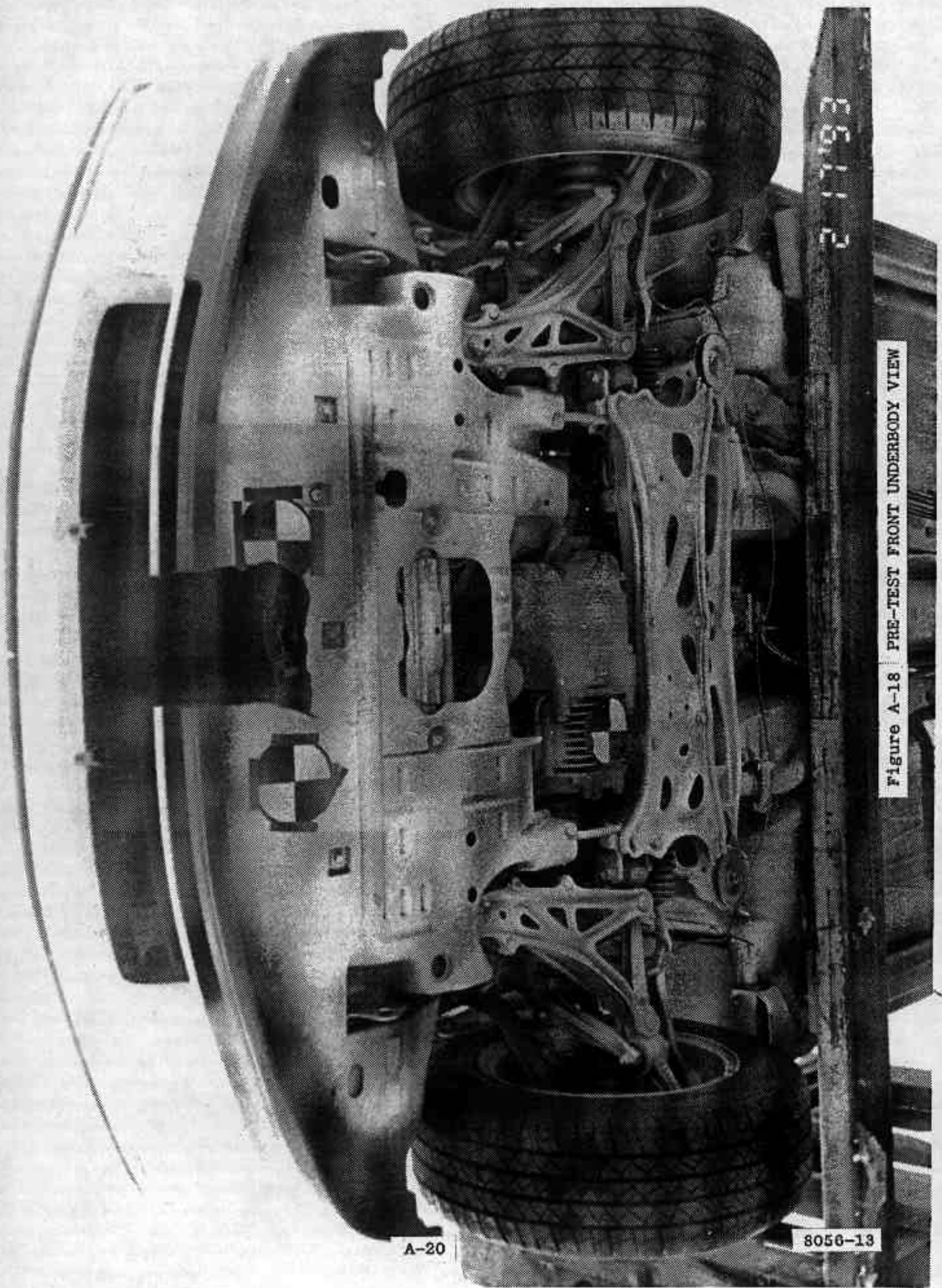
PRE-TEST FUEL FILLER CAP PHOTO

Photograph is not available.

Figure A-17

POST-TEST FUEL FILLER CAP PHOTO

Photograph is not available.



A-20

8050-13

Figure A-18 PRE-TEST FRONT UNDERBODY VIEW

2-17-93

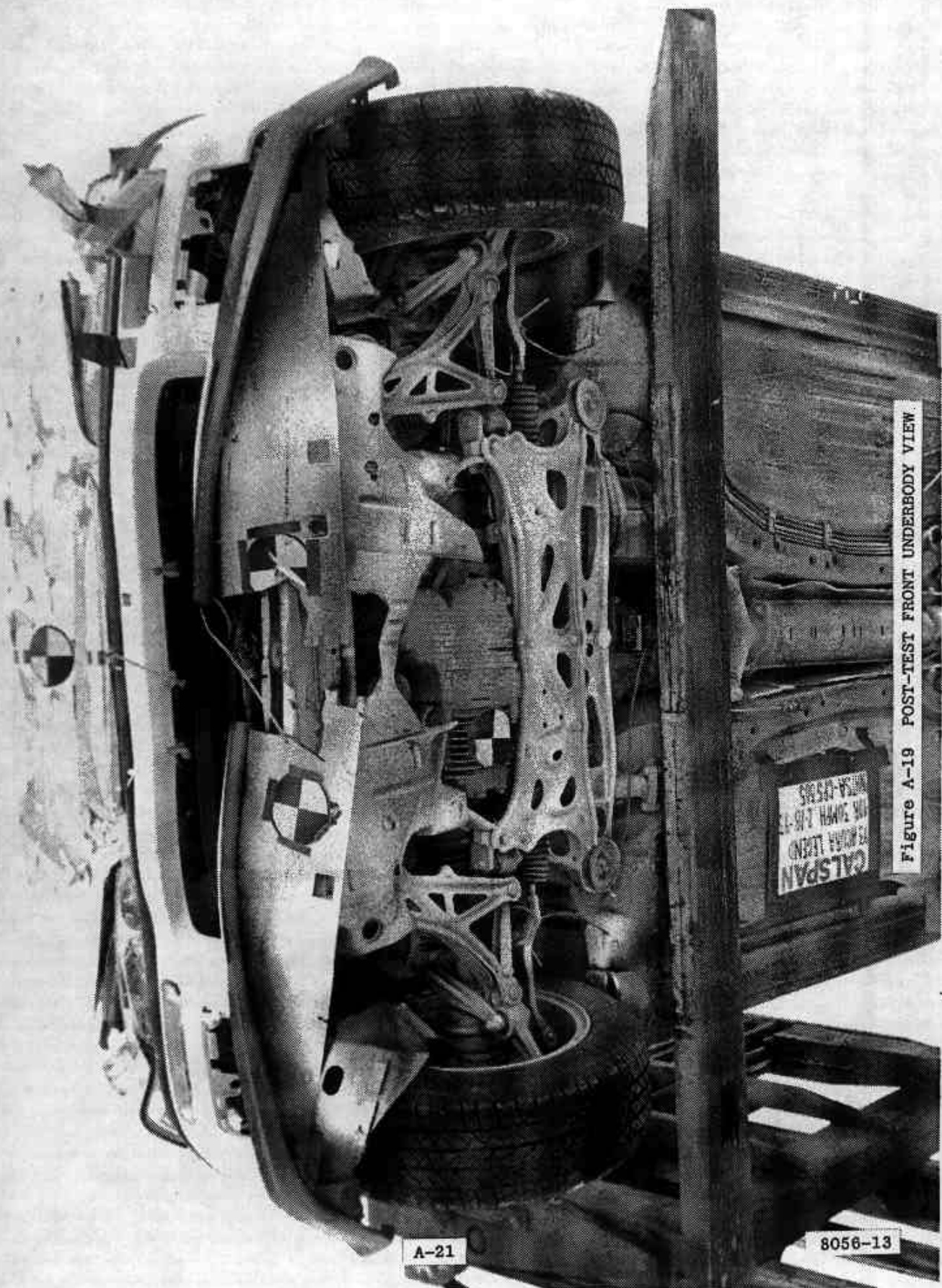


Figure A-19 POST-TEST FRONT UNDERBODY VIEW

A-21

8056-13

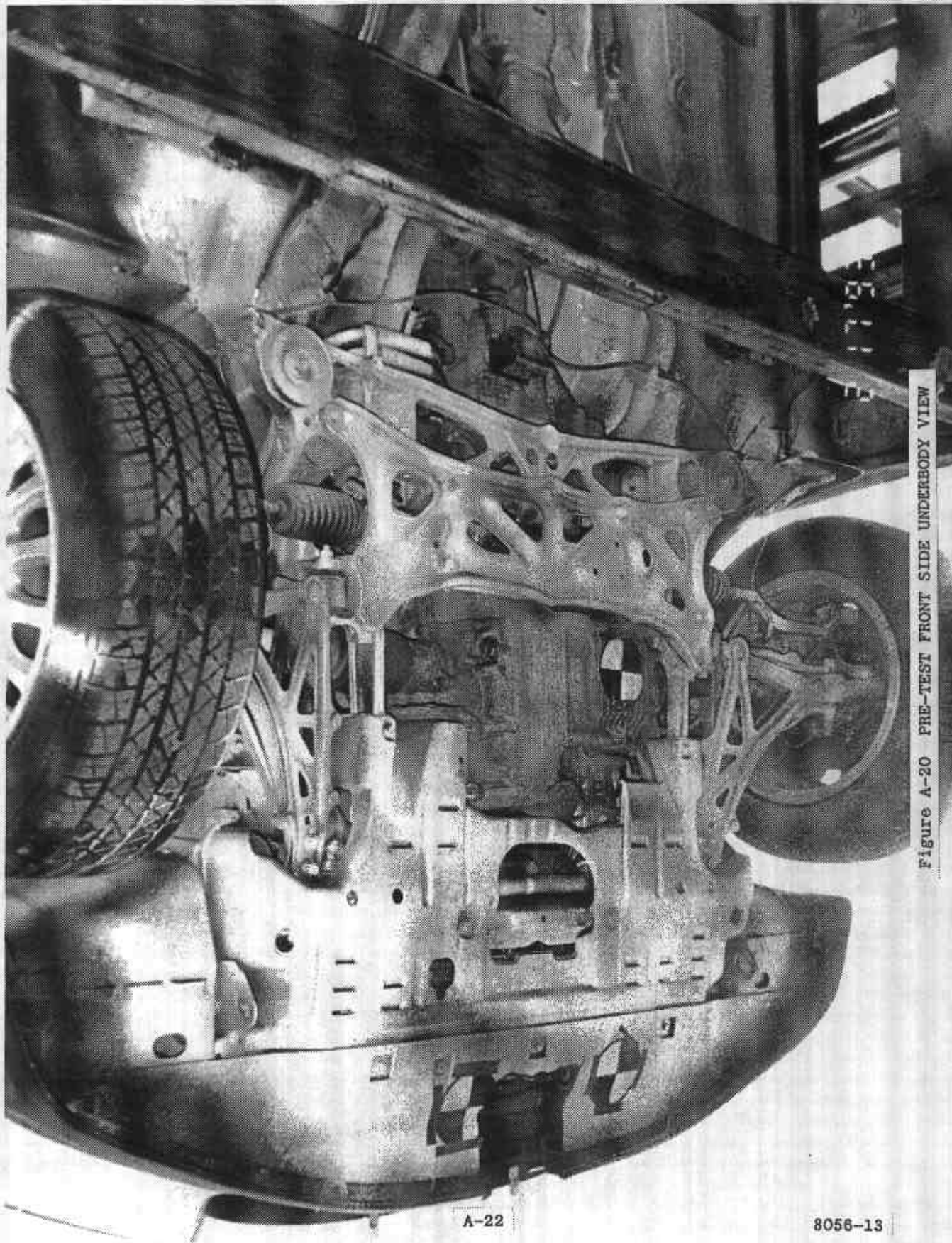


Figure A-20 PRE-TEST FRONT SIDE UNDERBODY VIEW

A-22

8056-13

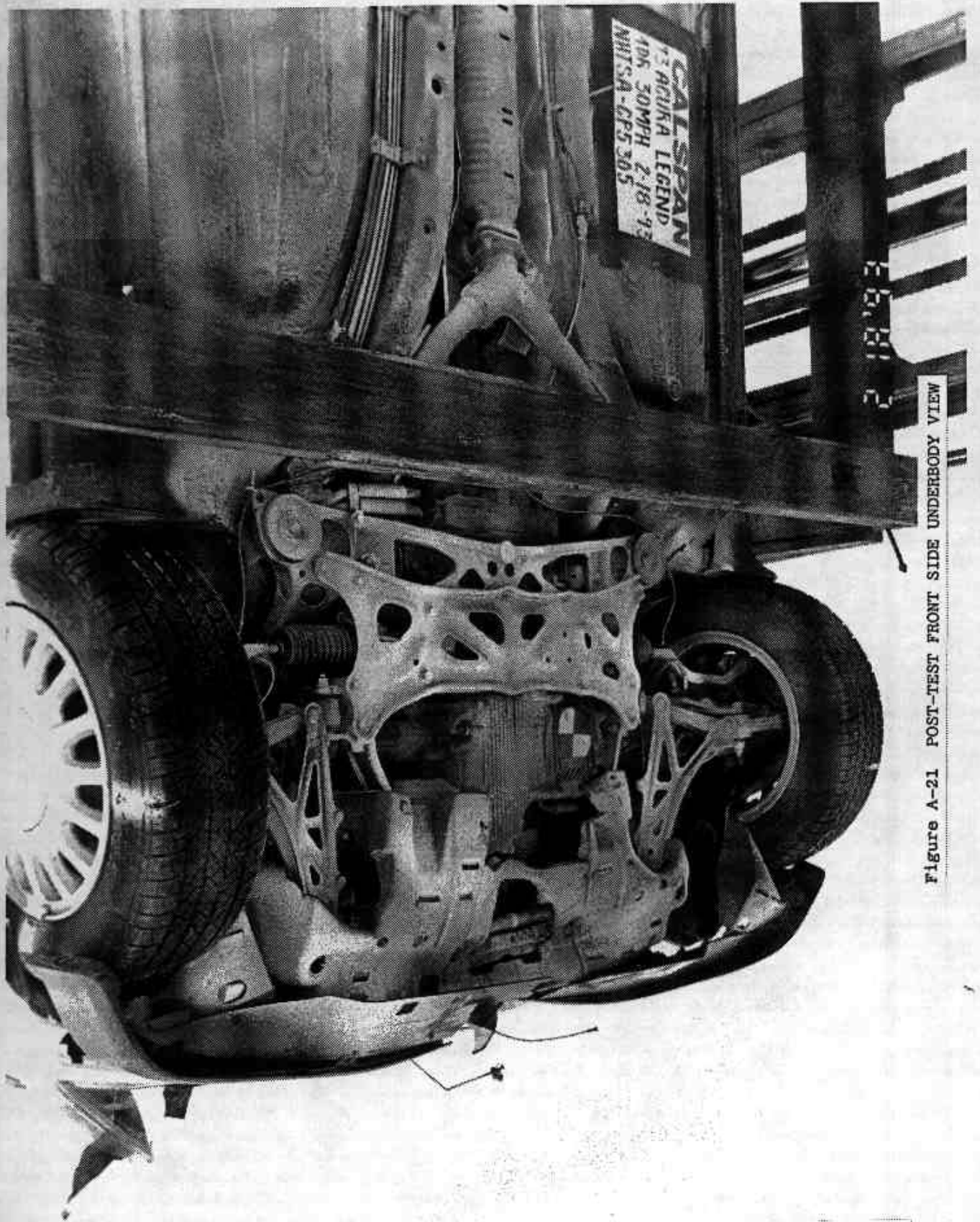


Figure A-21 POST-TEST FRONT SIDE UNDERBODY VIEW

A-23

8056-13

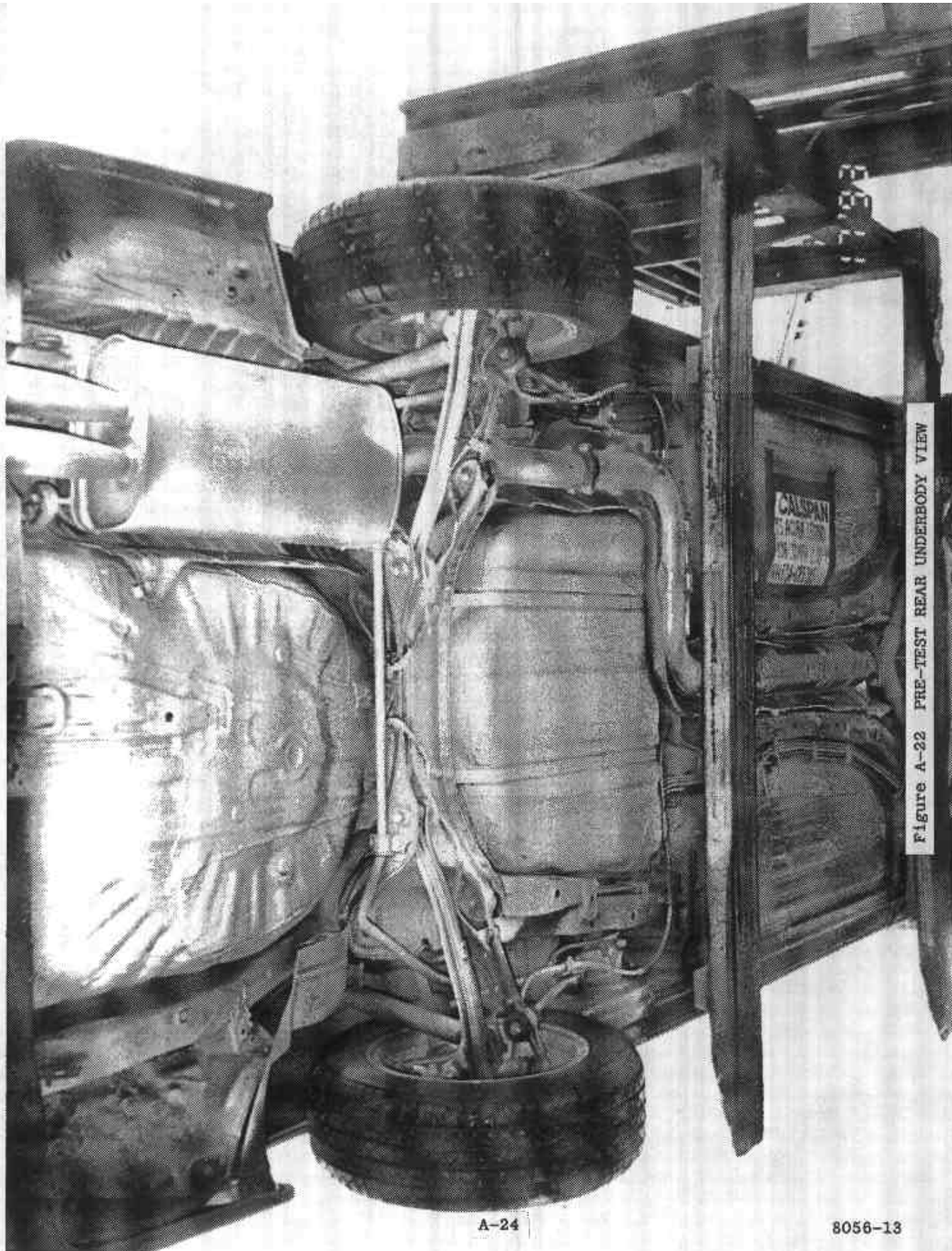


Figure A-22. PRE-TEST REAR UNDERBODY VIEW

A-24

8056-13

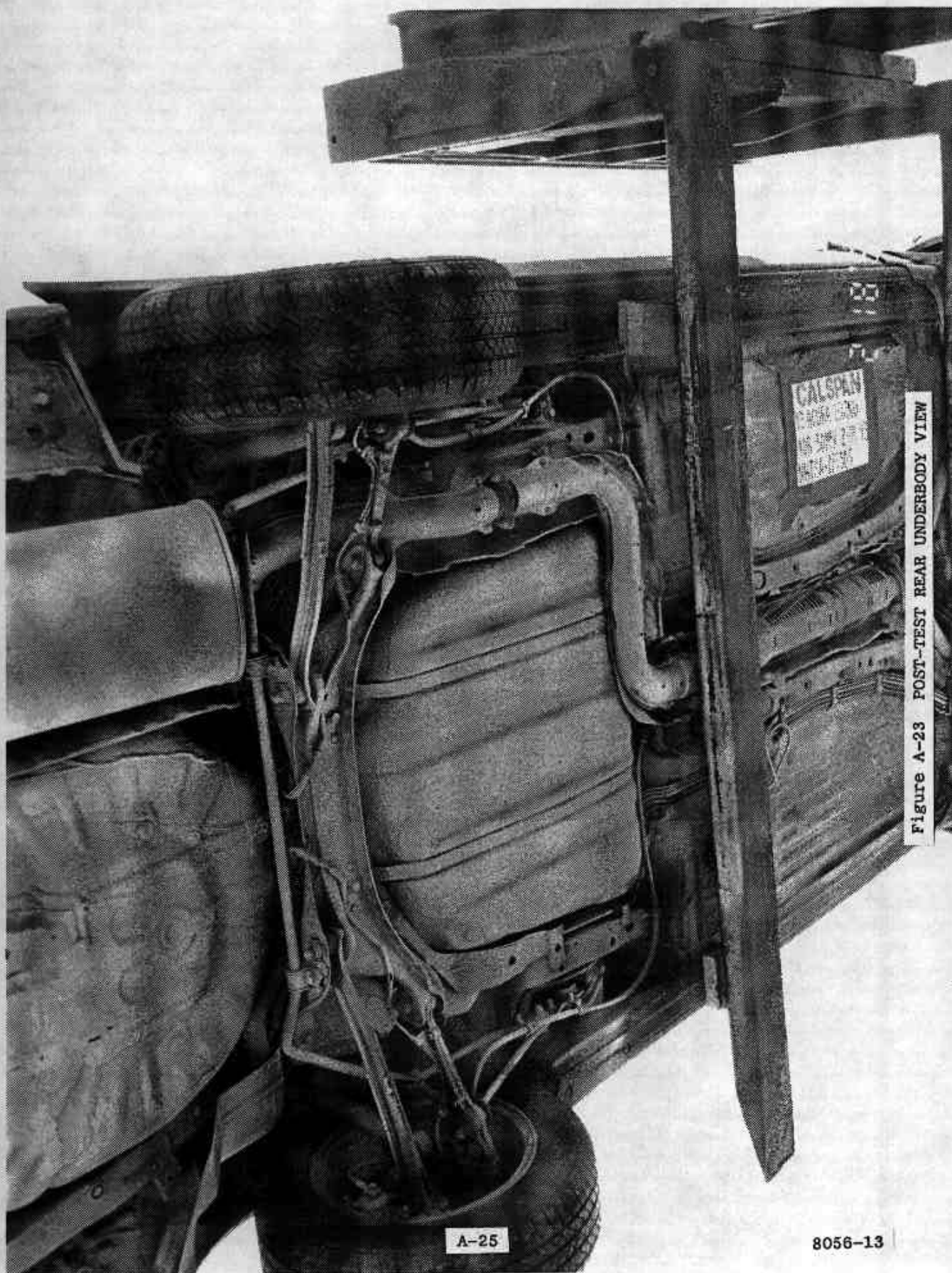


Figure A-23 POST-TEST REAR UNDERBODY VIEW

A-25

8056-13

INT. COLOR
TYPE E

MFD. IN JAPAN BY HONDA MOTOR CO., LTD. 9/'92
GVWR 4500LBS GAWR F 2415LBS R 2105LBS
THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY, BUMPER,
AND THEFT PREVENTION STANDARDS IN EFFECT
ON THE DATE OF MANUFACTURE SHOWN ABOVE:
V.I.N. JH4KA7530PC001013



PASSENGER CAR

AIRBAG

Figure A-24 CERTIFICATION LABEL

TIRE INFORMATION

| | | |
|--|-------------------------------|--------------------------------------|
| VEHICLE CAPACITY WEIGHT : 8501bs | | |
| SEATING CAPACITY : TOTAL 5 FRONT 2 REAR 3 | | |
| RECOMMENDED TIRE SIZE | | |
| 205/60R15 91V | COLD TIRE INFLATION PRESSURE. | |
| COMPACT SPARE TIRE
T135/80D16 | FRONT | REAR |
| | 220kPa, 32psi | 210kPa, 30psi |
| INFLATION PRESSURE | | UP TO VEHICLE
CAPACITY WEIGHT. |
| 415kPa, 60psi | | DO NOT INSTALL
ON OTHER VEHICLES. |
| SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION. SPOY-10 | | |

Figure A-25 TIRE PLACARD

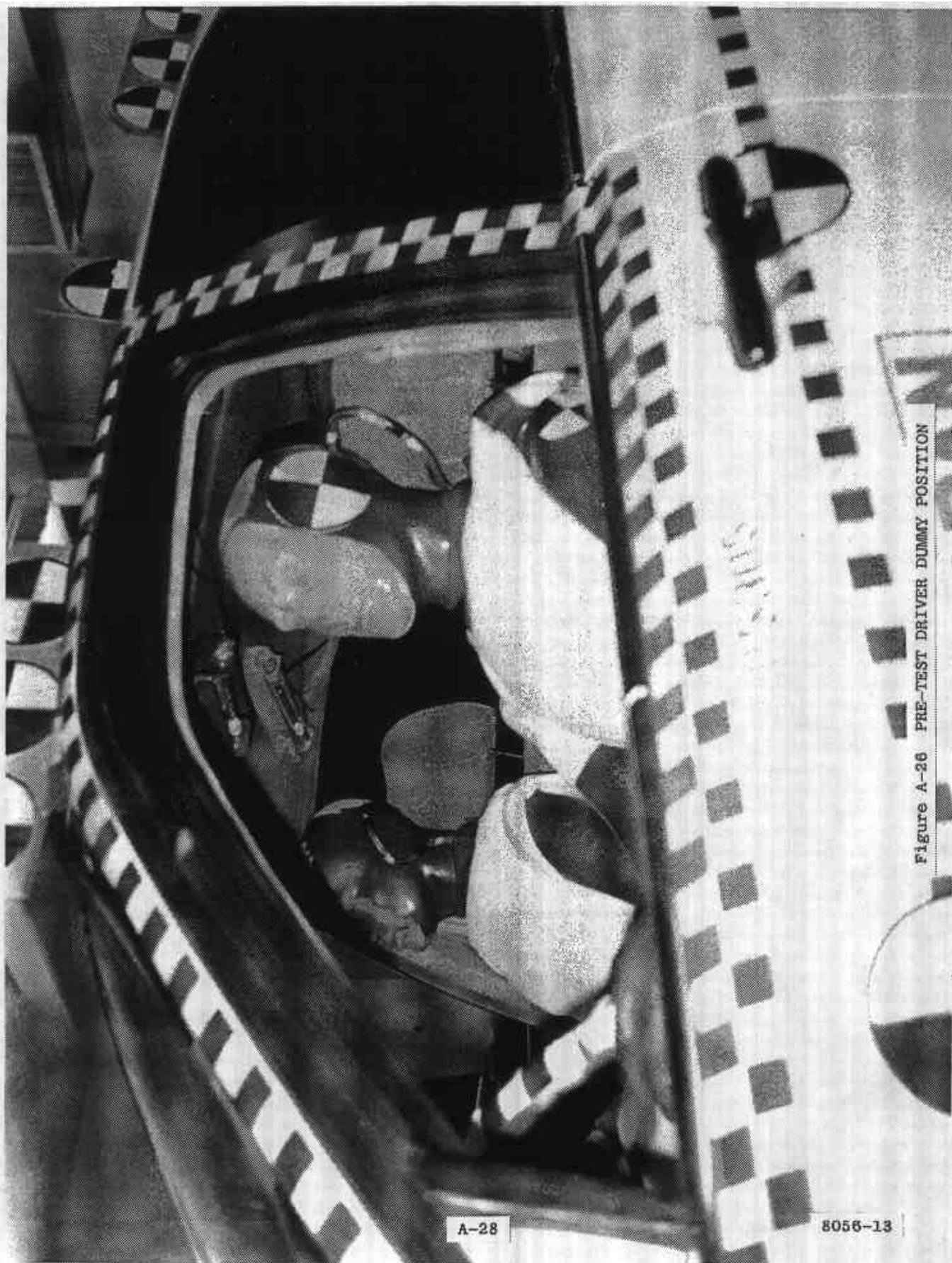


Figure A-26 PRE-TEST DRIVER DUMMY POSITION

A-28

8056-13



Figure A-27 POST-TEST DRIVER DUMMY POSITION

A-29

8056-13



Figure A-28 PRE-TEST PASSENGER DUMMY POSITION

A-30

8056-13

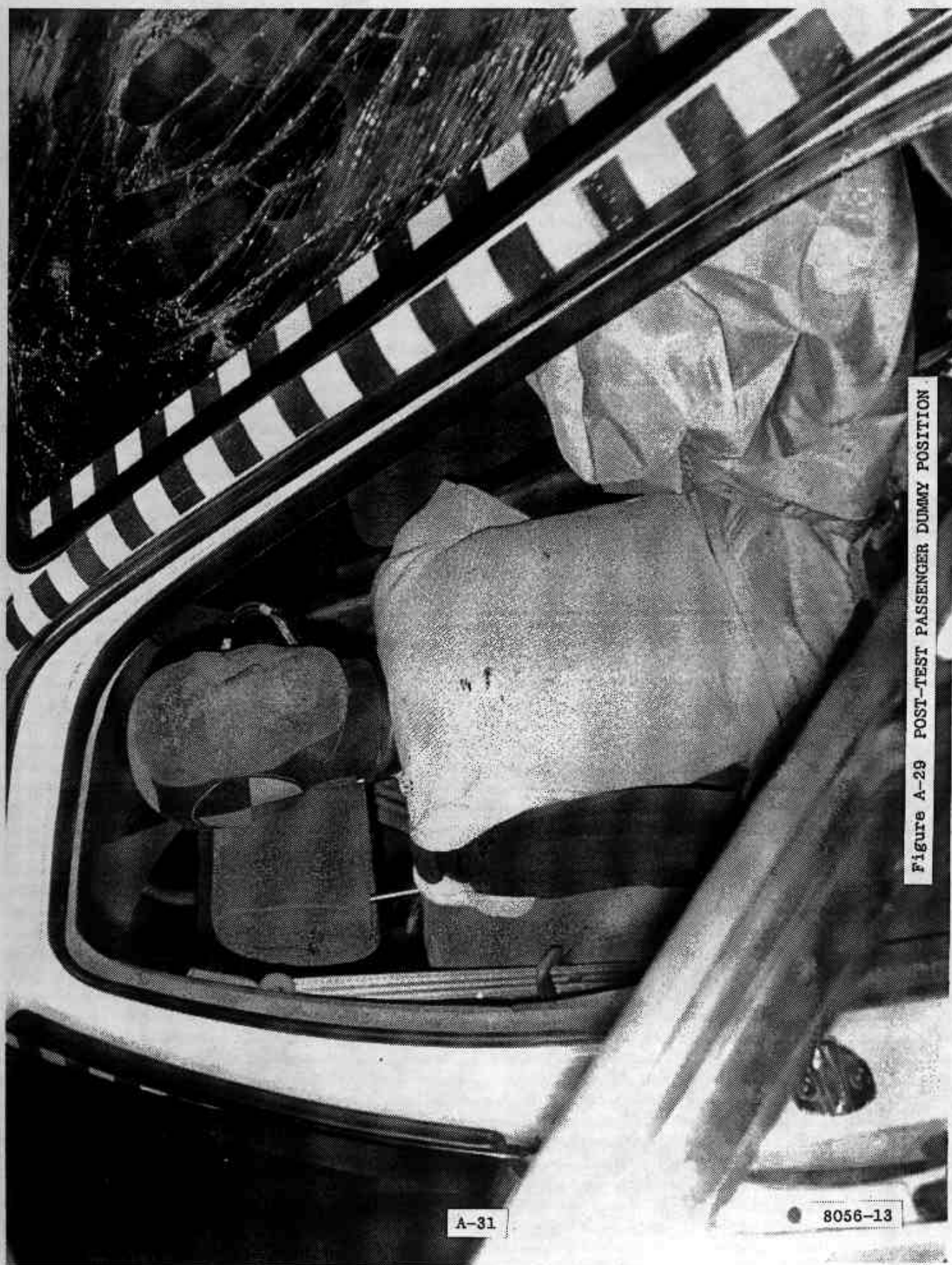


Figure A-29 POST-TEST PASSENGER DUMMY POSITION

A-31

8056-13

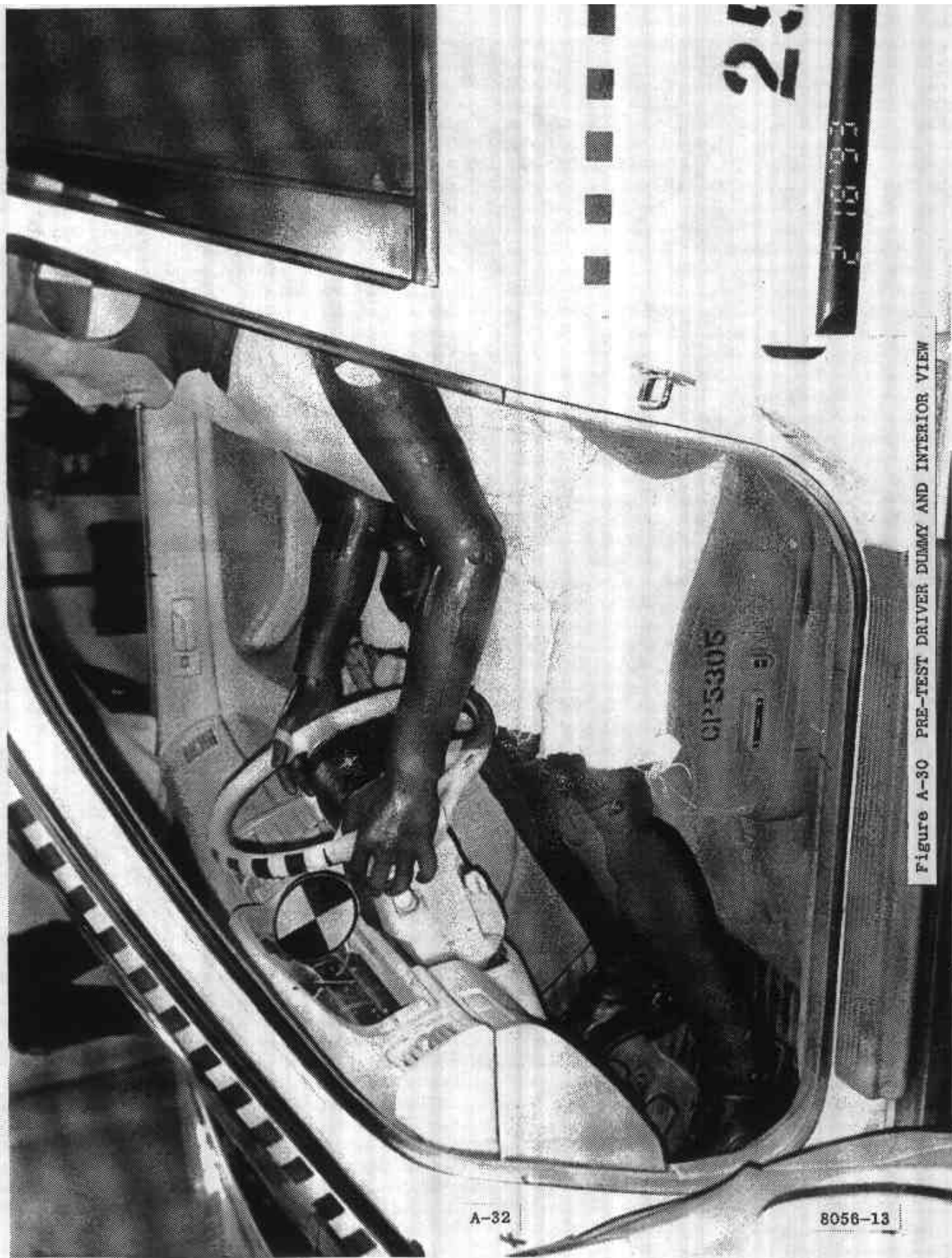


Figure A-30 PRE-TEST DRIVER DUMMY AND INTERIOR VIEW

A-32

8056-13



Figure A-31 POST-TEST DRIVER DUMMY AND INTERIOR VIEW

A-33

8056-13



Figure A-32 PRE-TEST PASSENGER DUMMY AND INTERIOR VIEW

A-34

8056-13



Figure A-33 POST-TEST PASSENGER DUMMY AND INTERIOR VIEW

A-35

8056-13



Figure A-34 POST-TEST DRIVER AIRBAG VIEW

A-36

8056-13



Figure A-35 POST-TEST PASSENGER AIRBAG VIEW

A-37

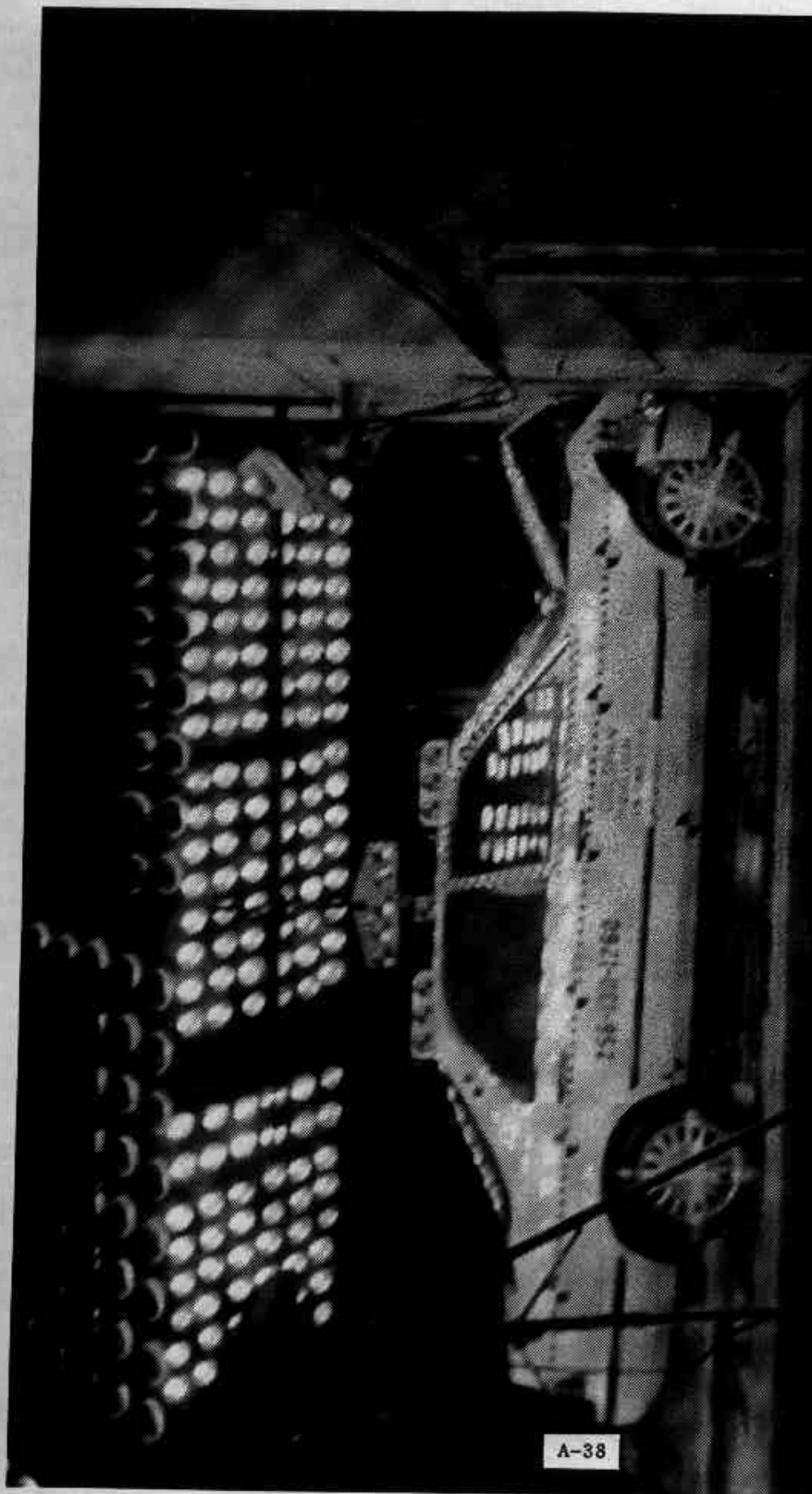
8056-13

2 18 '93

Figure A-38 VEHICLE IMPACT

A-38

8058-13



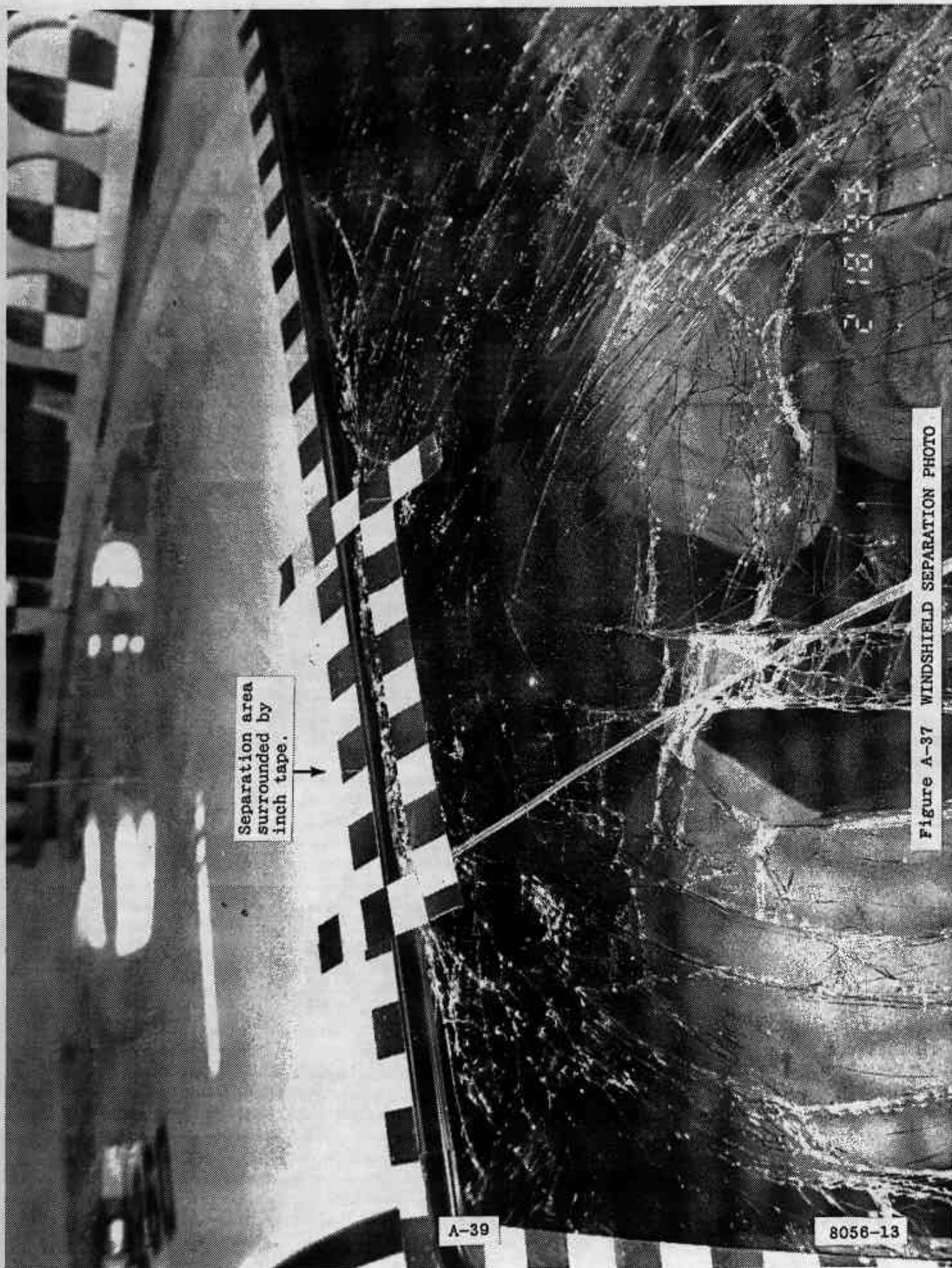


Figure A-37 WINDSHIELD SEPARATION PHOTO

A-39

8056-13

Appendix B

VEHICLE AND DUMMY RESPONSE DATA

TEST NO. CP5305

VEHICLE DATA

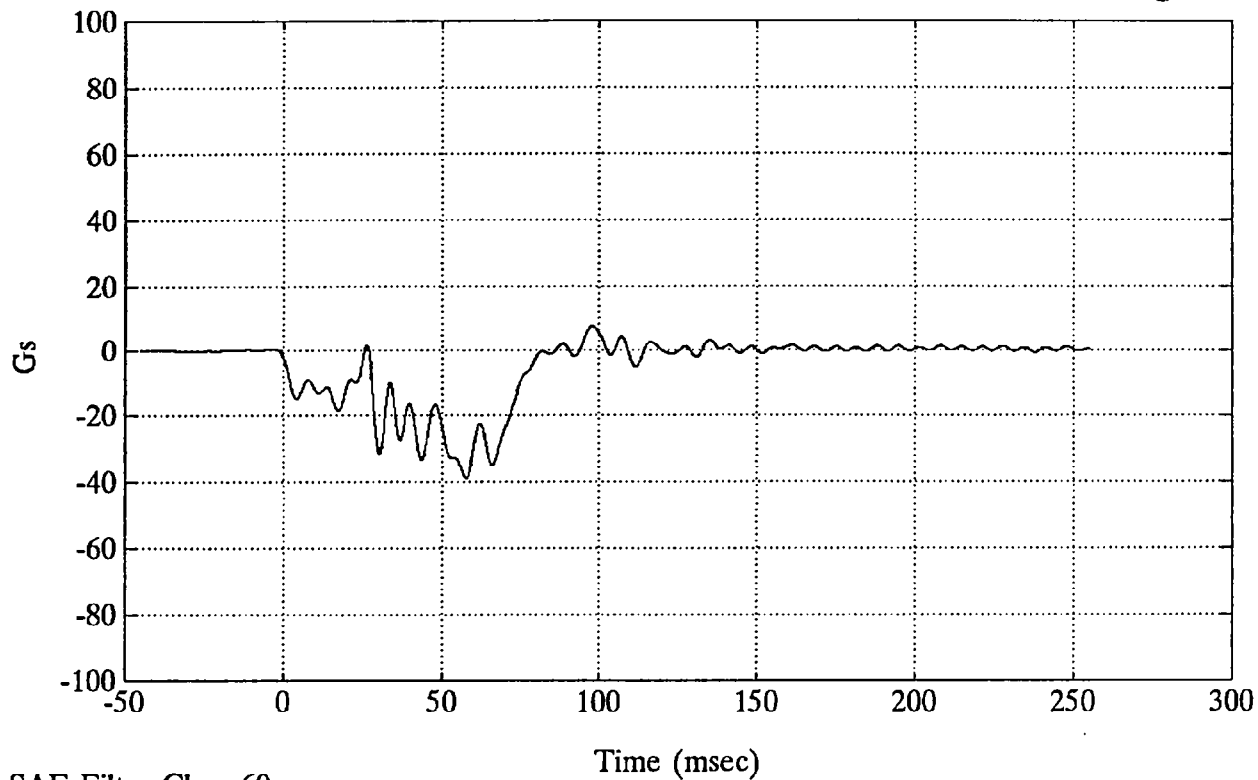
SAE FILTER CHANNEL CLASS

60

FMVSS 208 - 1993 ACURA LEGEND

L. Rear Crossmember X (#1)

Max = 7.73 Gs @ 97.80 msec
Min = -39.01 Gs @ 57.84 msec

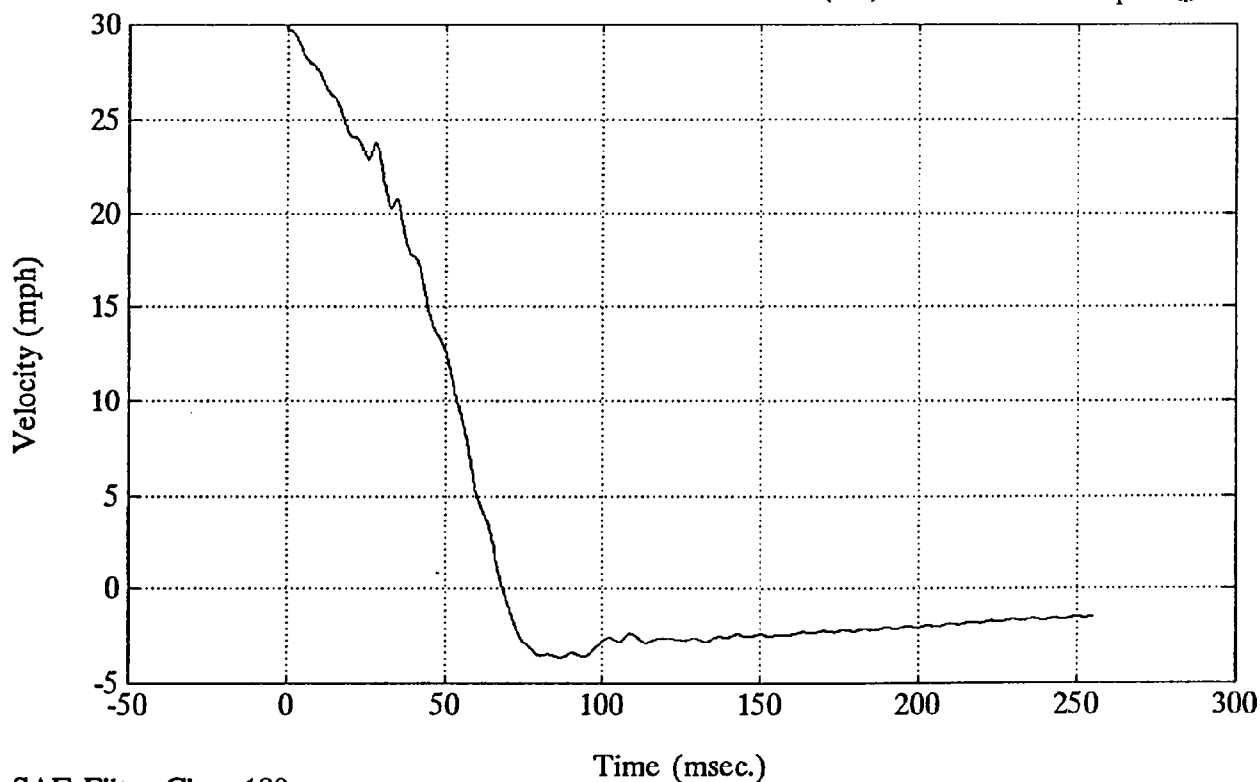


SAE Filter Class 60

FMVSS 208 - 1993 ACURA LEGEND

L. Rear Crossmember X (#1)

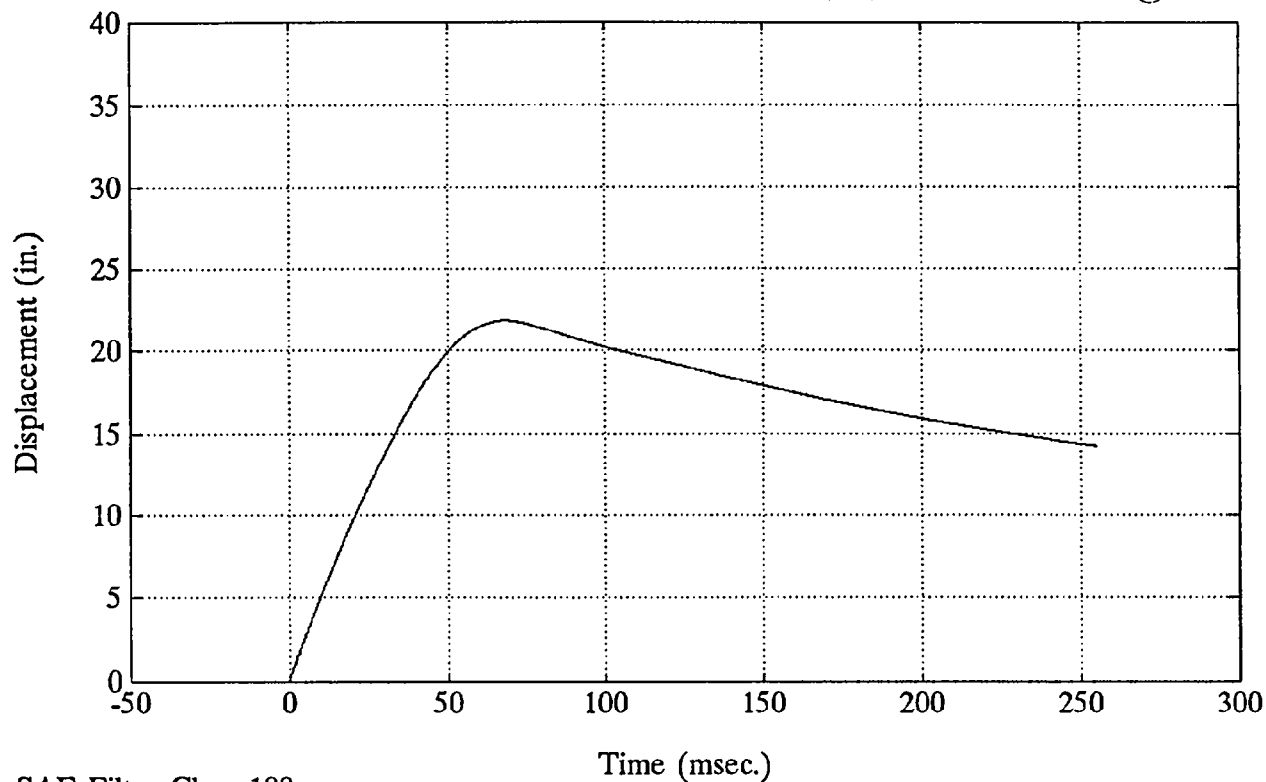
Max = 29.70 mph @ 0.48 msec
Min = -3.64 mph @ 86.64 msec



SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

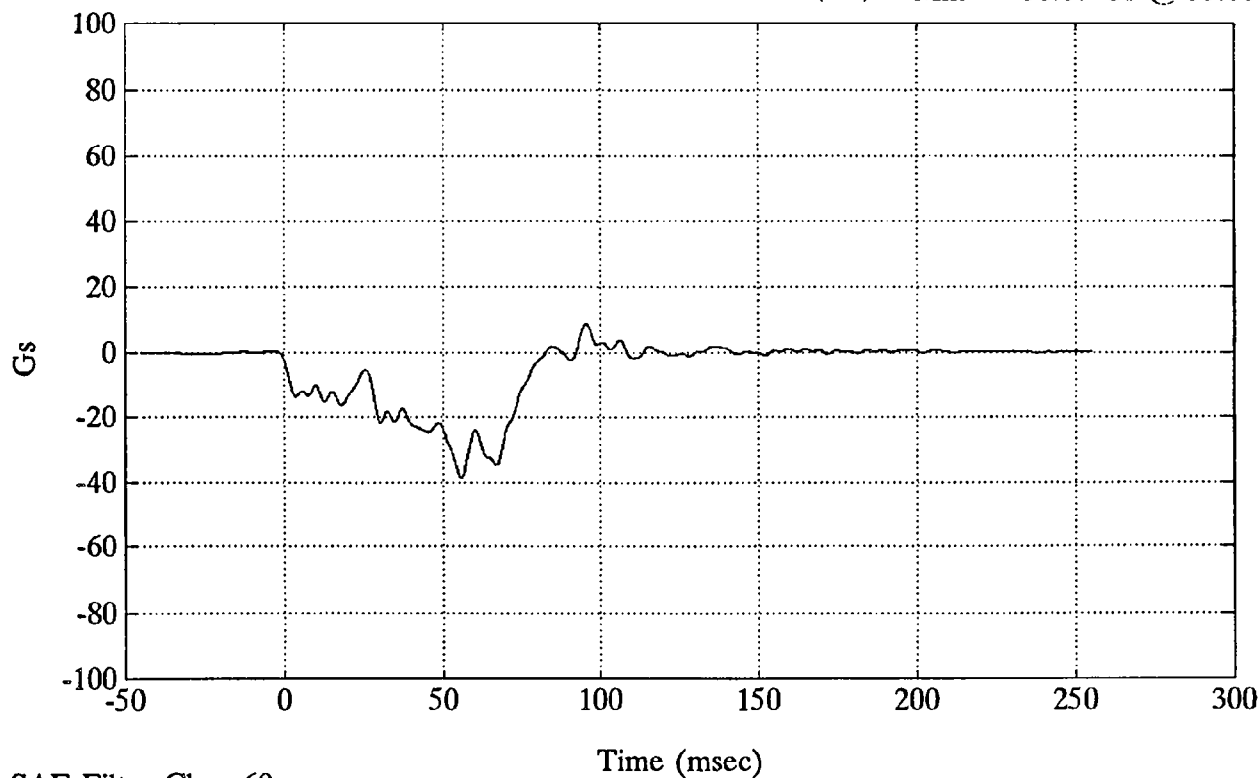
L. Rear Crossmember X (#1) Max = 21.90 in. @ 68.40 msec
Min = 0.00 in. @ -0.00 msec



SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

R. Rear Crossmember X (#2) Max = 8.77 Gs @ 95.40 msec
Min = -38.67 Gs @ 55.80 msec

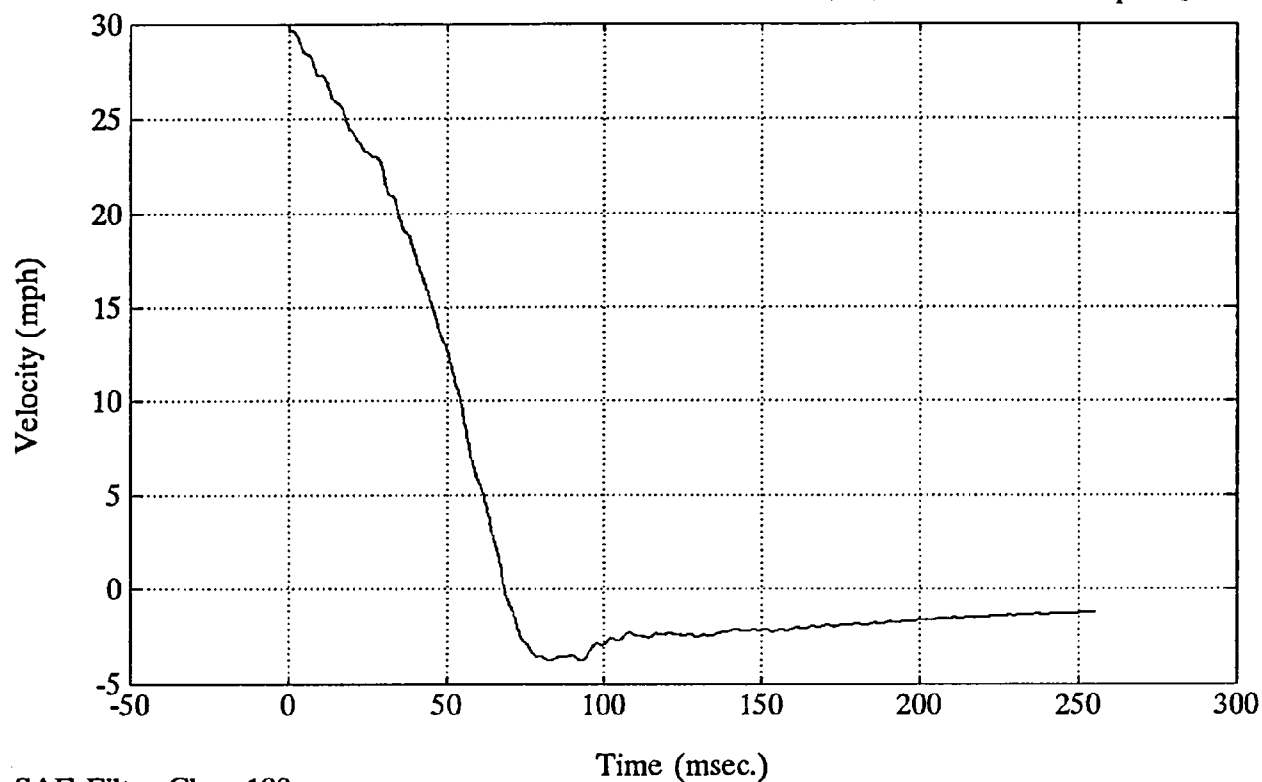


SAE Filter Class 60

FMVSS 208 - 1993 ACURA LEGEND

R. Rear Crossmember X (#2)

Max = 29.70 mph @ 0.48 msec
Min = -3.75 mph @ 92.64 msec

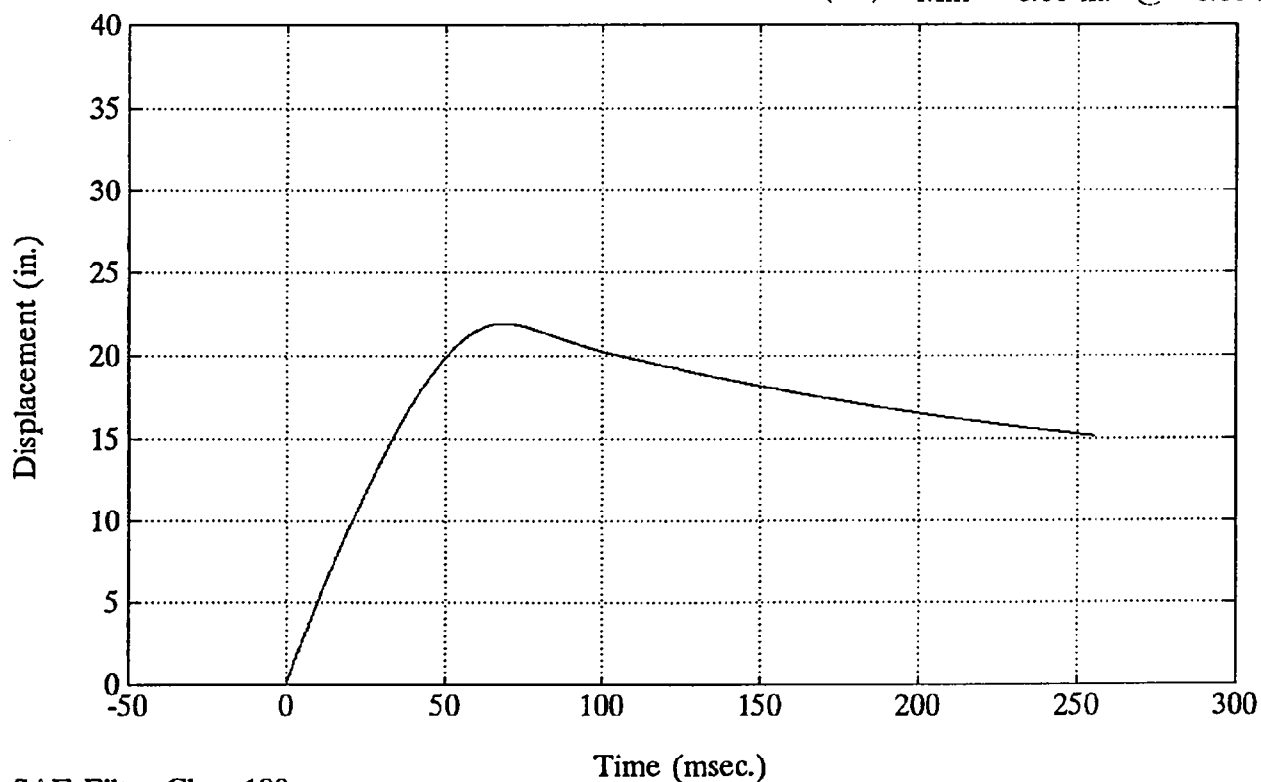


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

R. Rear Crossmember X (#2)

Max = 21.96 in. @ 69.12 msec
Min = 0.00 in. @ -0.00 msec

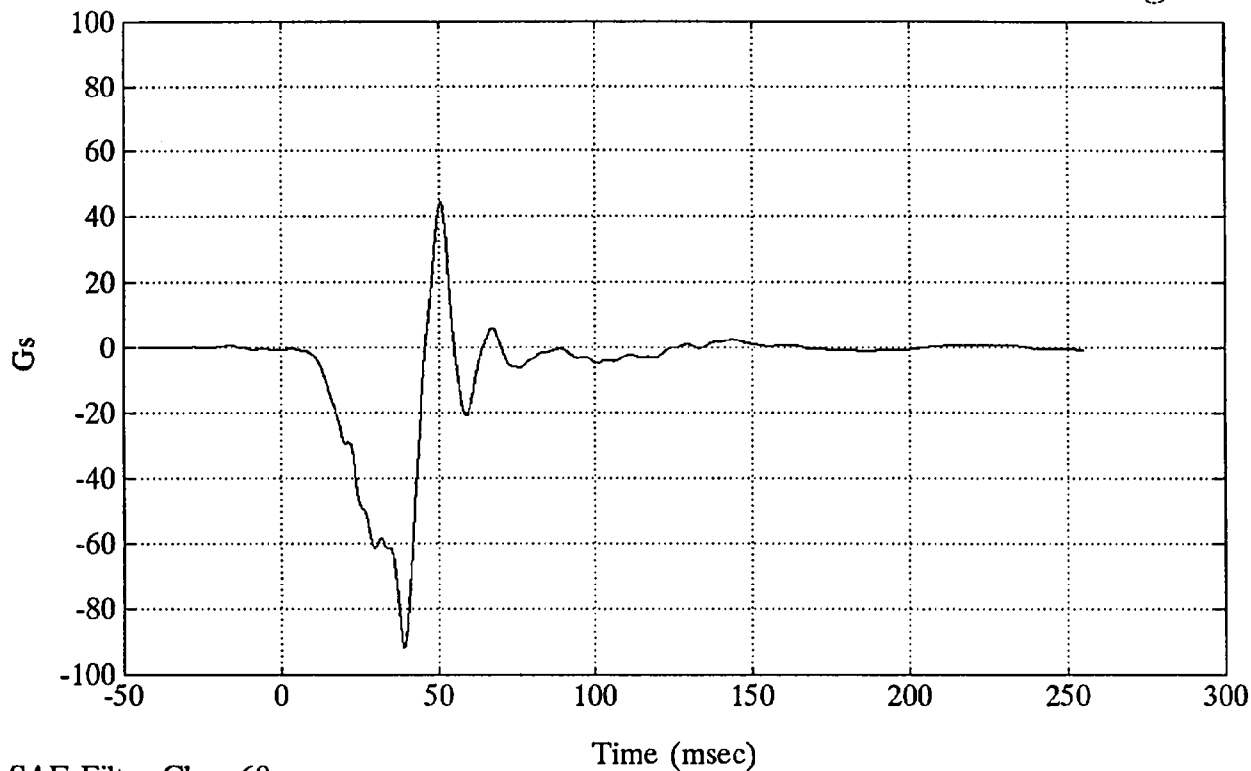


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Engine Top X (#3)

Max = 44.64 Gs @ 50.64 msec
Min = -92.06 Gs @ 39.12 msec

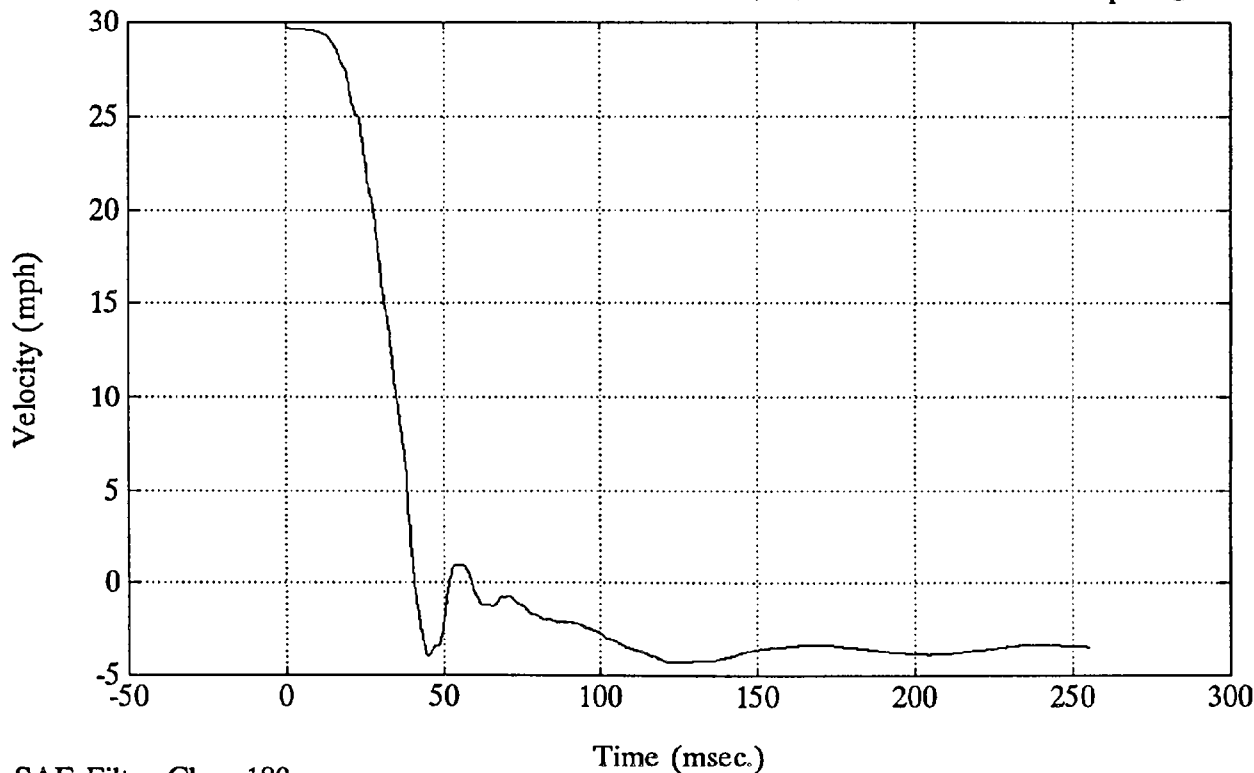


SAE Filter Class 60

FMVSS 208 - 1993 ACURA LEGEND

Engine Top X (#3)

Max = 29.70 mph @ 0.24 msec
Min = -4.32 mph @ 127.20 msec

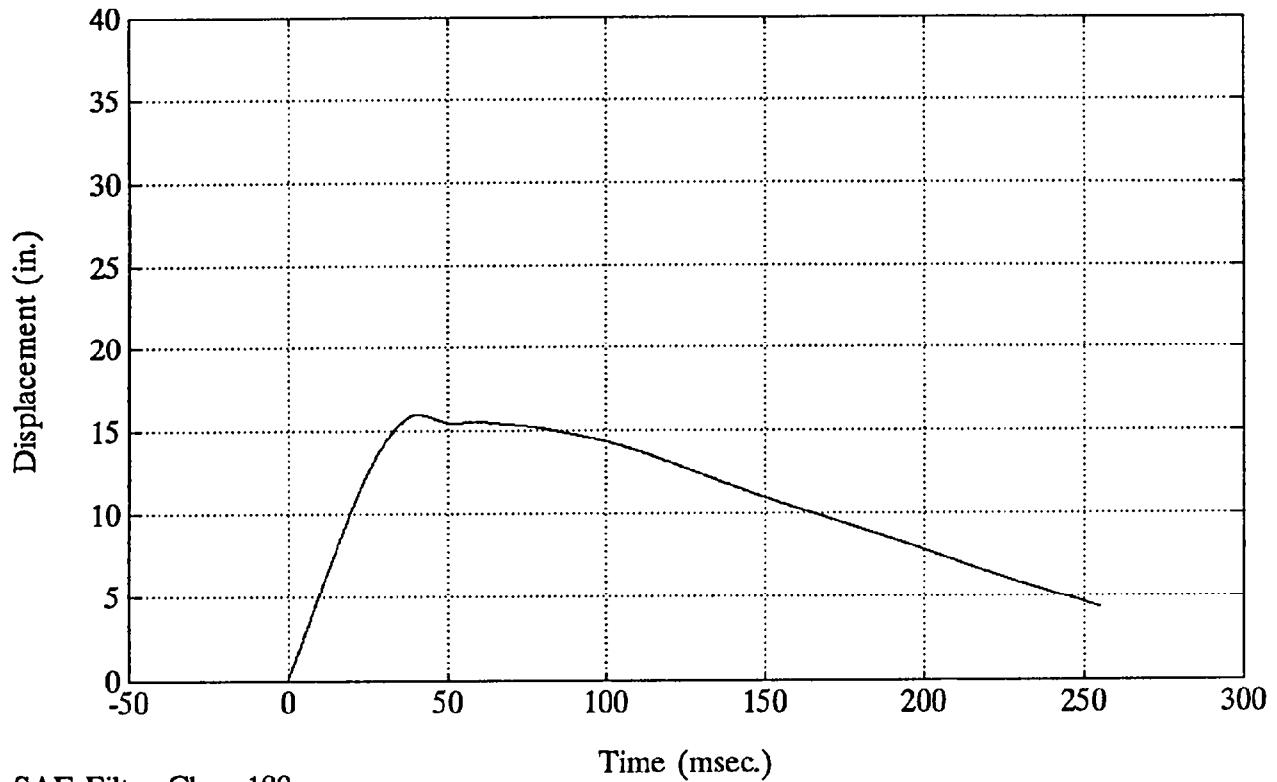


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Engine Top X (#3)

Max = 15.96 in. @ 41.04 msec
Min = 0.00 in. @ -0.00 msec

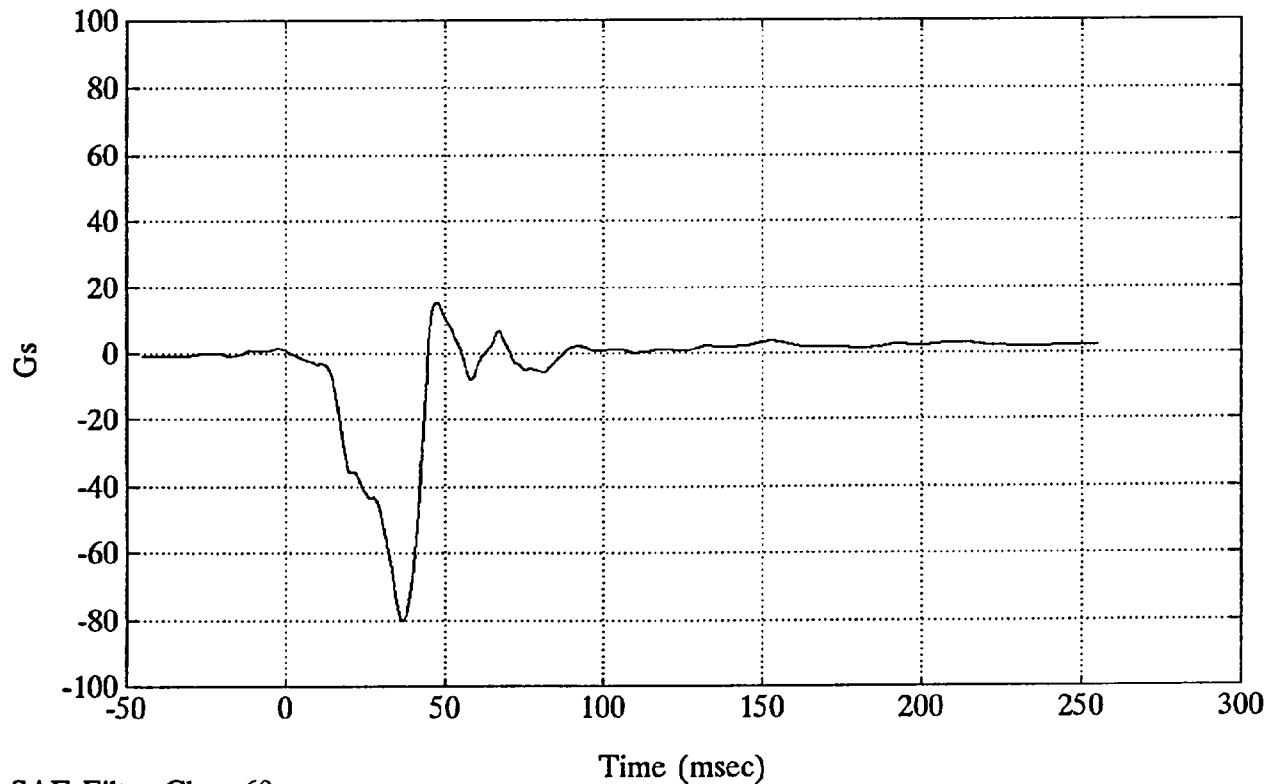


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Engine Bottom X (#4)

Max = 15.24 Gs @ 47.52 msec
Min = -80.30 Gs @ 36.84 msec

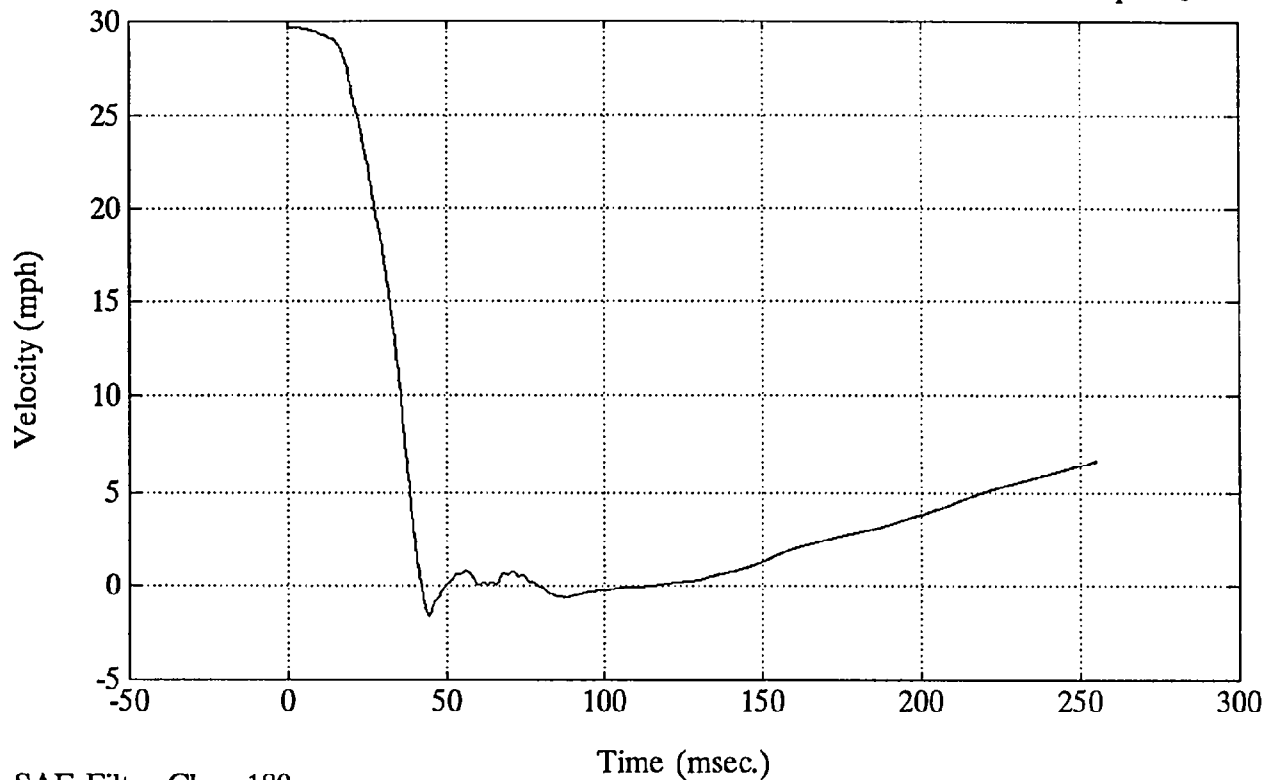


SAE Filter Class 60

FMVSS 208 - 1993 ACURA LEGEND

Engine Bottom X (#4)

Max = 29.71 mph @ 0.72 msec
Min = -1.64 mph @ 44.40 msec

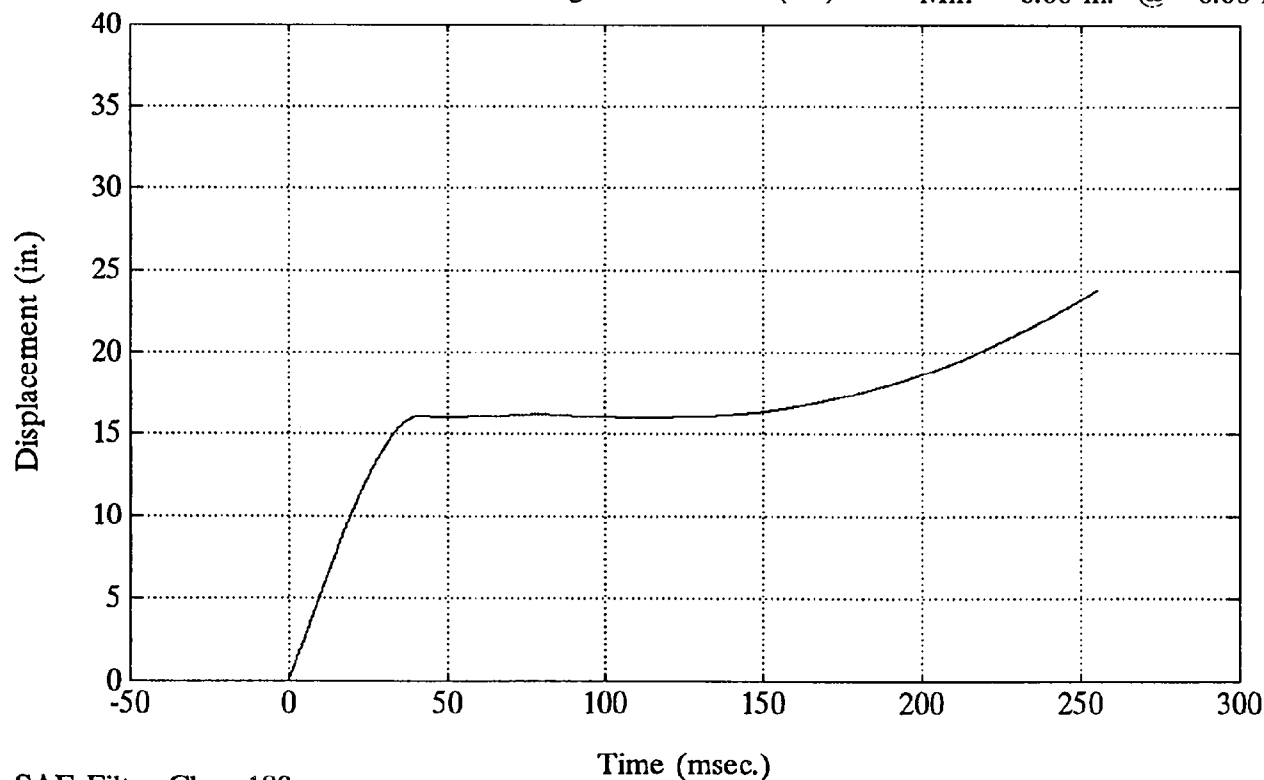


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Engine Bottom X (#4)

Max = 23.80 in. @ 254.88 msec
Min = 0.00 in. @ -0.00 msec

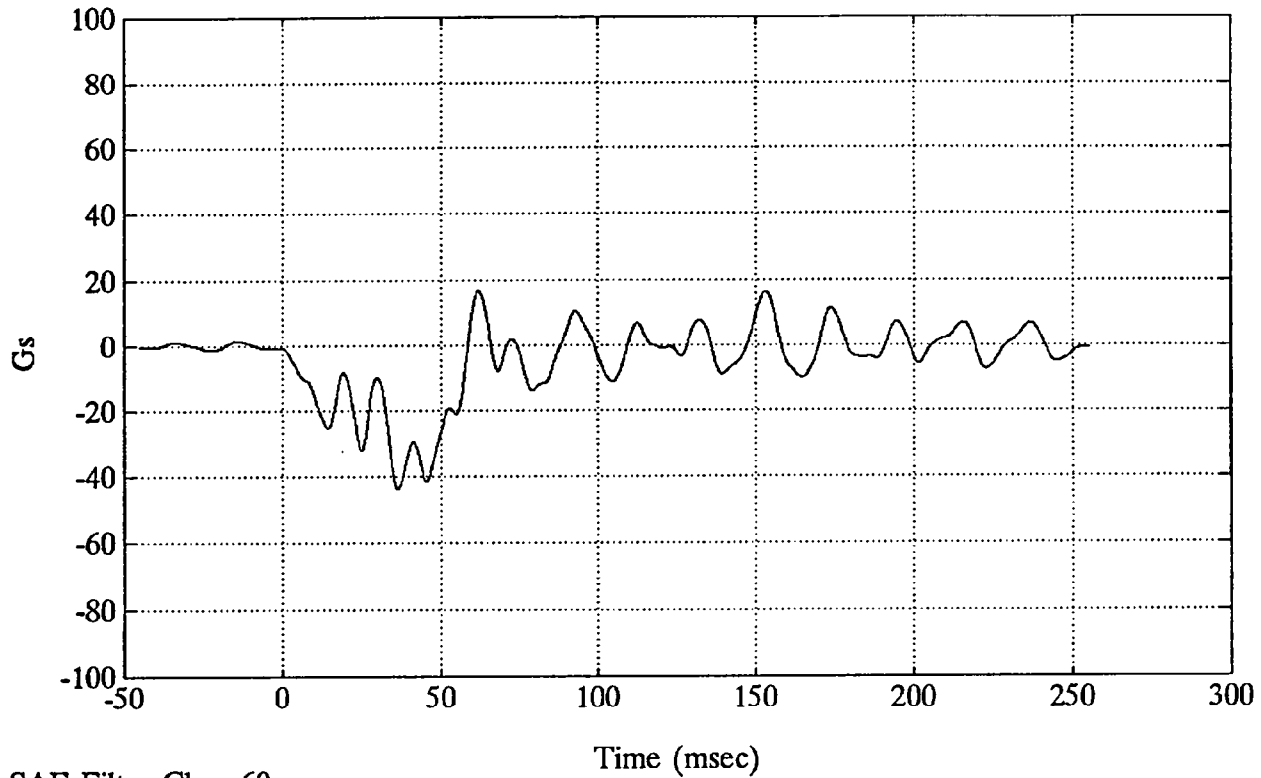


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

R. Brake Caliper X (#5)

Max = 16.82 Gs @ 61.92 msec
Min = -43.82 Gs @ 36.48 msec

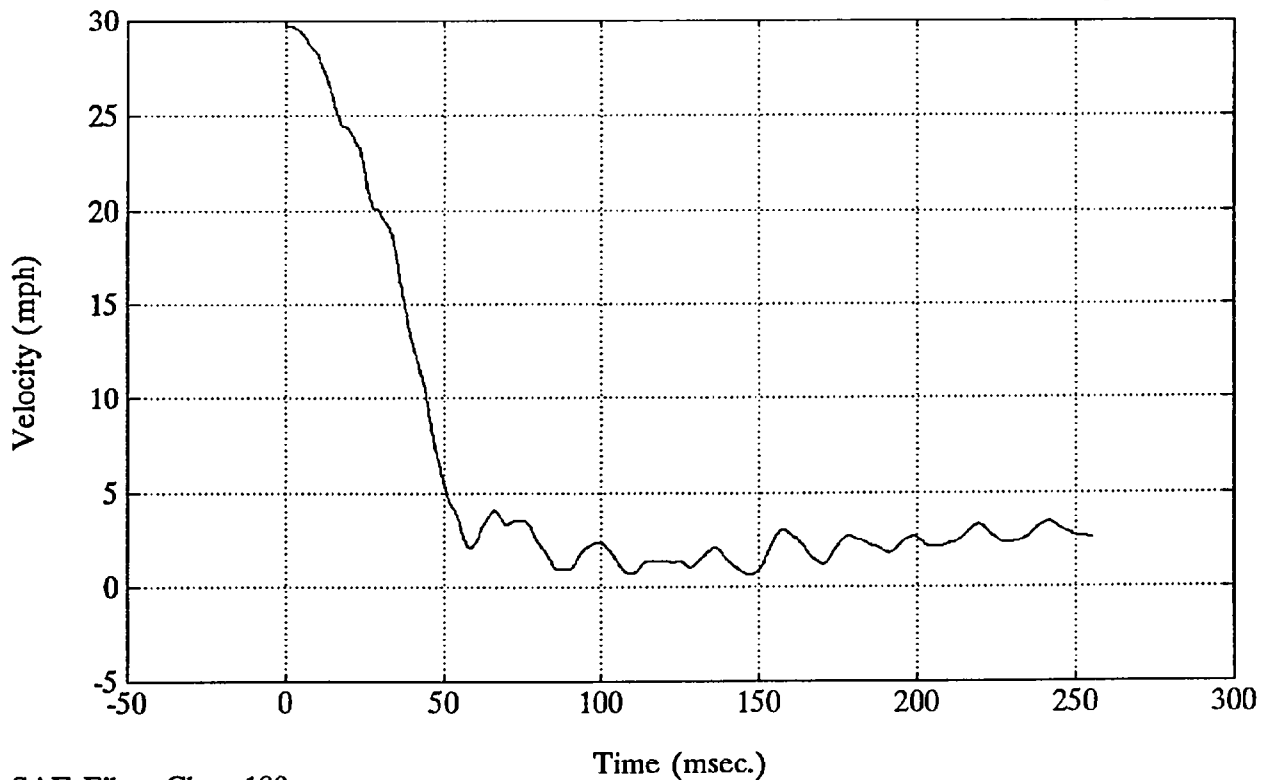


SAE Filter Class 60

FMVSS 208 - 1993 ACURA LEGEND

R. Brake Caliper X (#5)

Max = 29.70 mph @ 1.68 msec
Min = 0.65 mph @ 146.88 msec

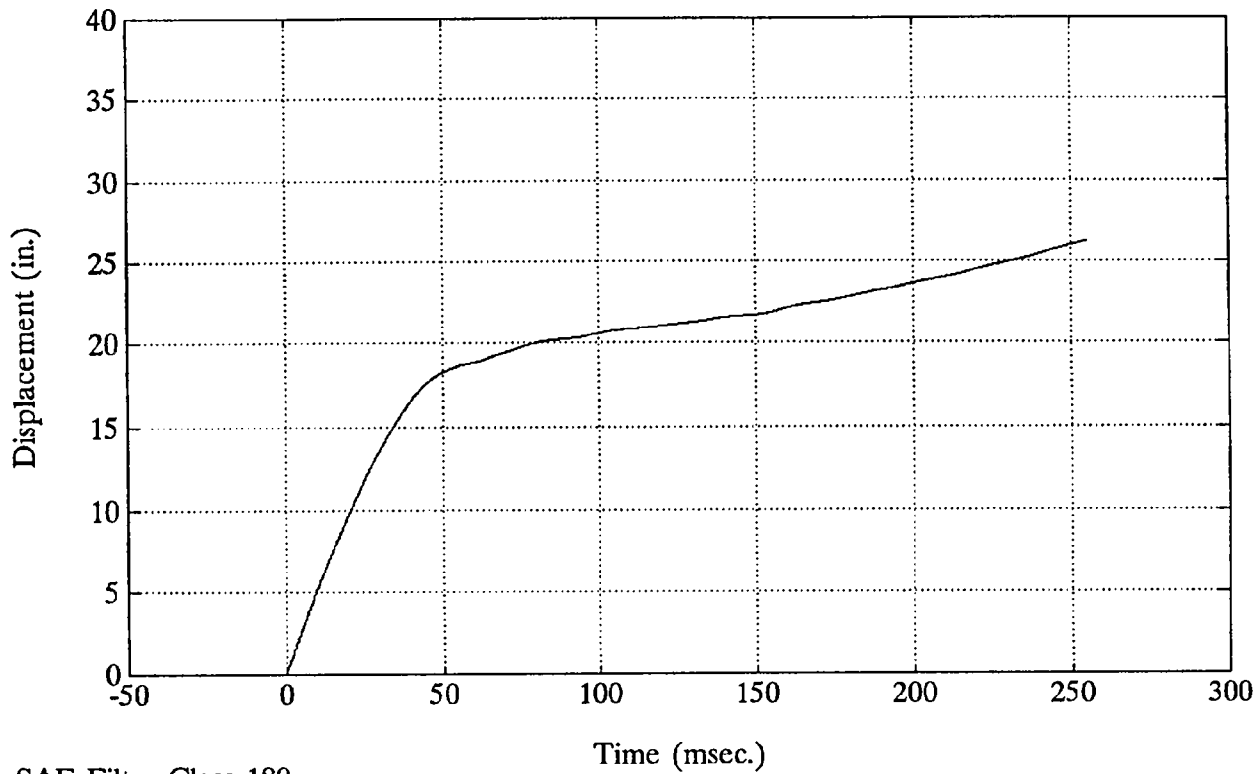


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

R. Brake Caliper X (#5)

Max = 26.22 in. @ 254.88 msec
Min = 0.00 in. @ -0.00 msec

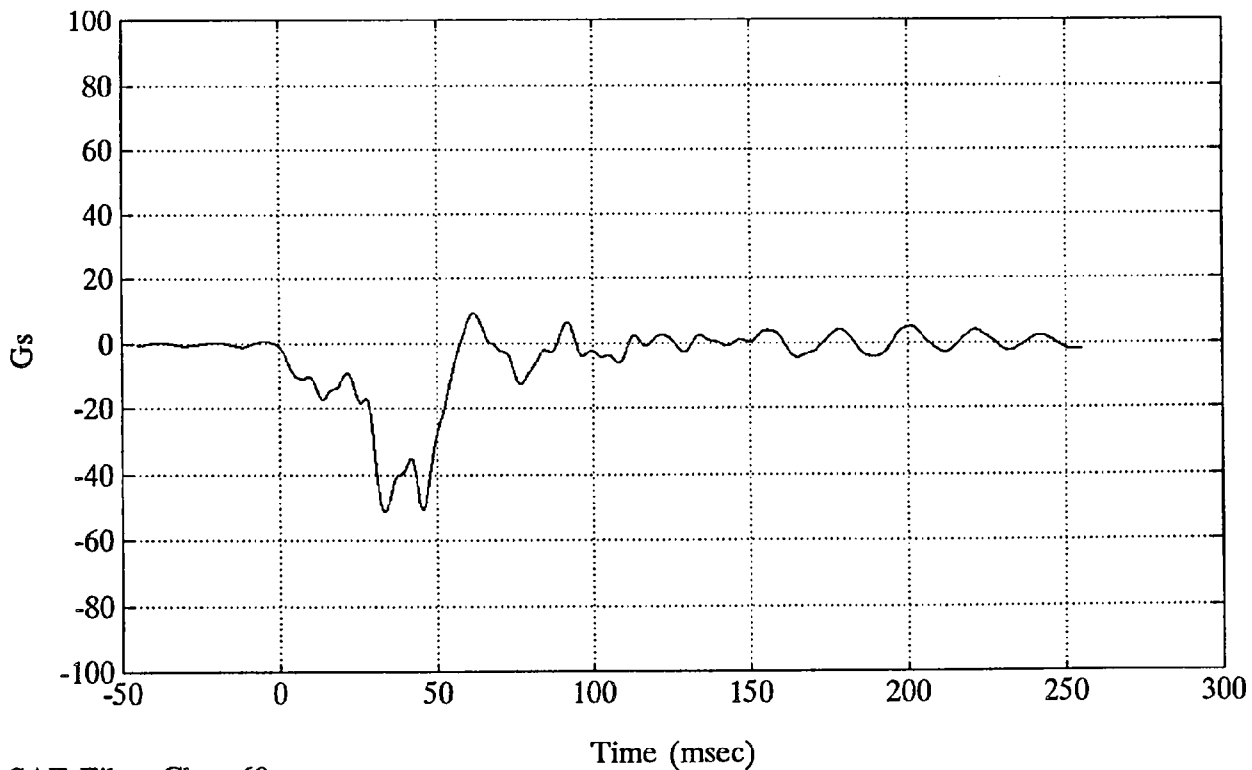


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

L. Brake Caliper X (#6)

Max = 9.34 Gs @ 61.68 msec
Min = -51.24 Gs @ 33.48 msec

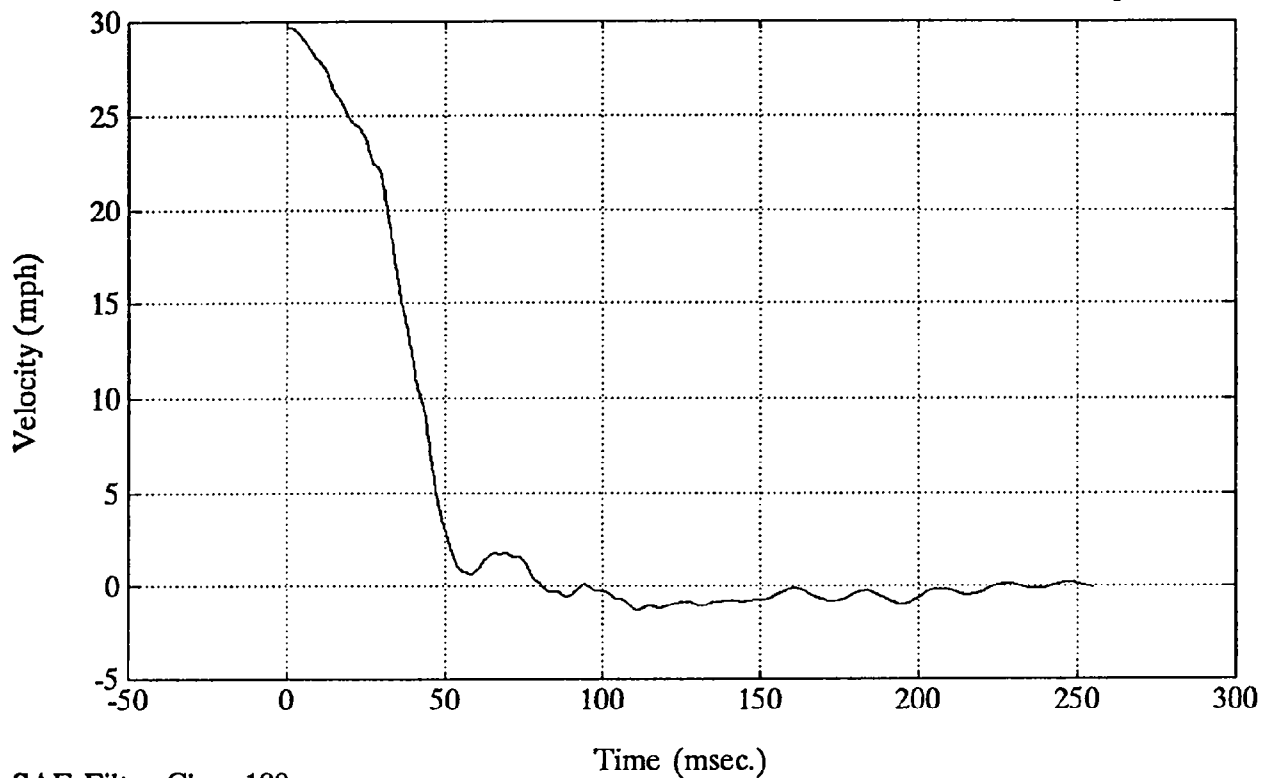


SAE Filter Class 60

FMVSS 208 - 1993 ACURA LEGEND

L. Brake Caliper X (#6)

Max = 29.70 mph @ 0.24 msec
Min = -1.32 mph @ 111.12 msec

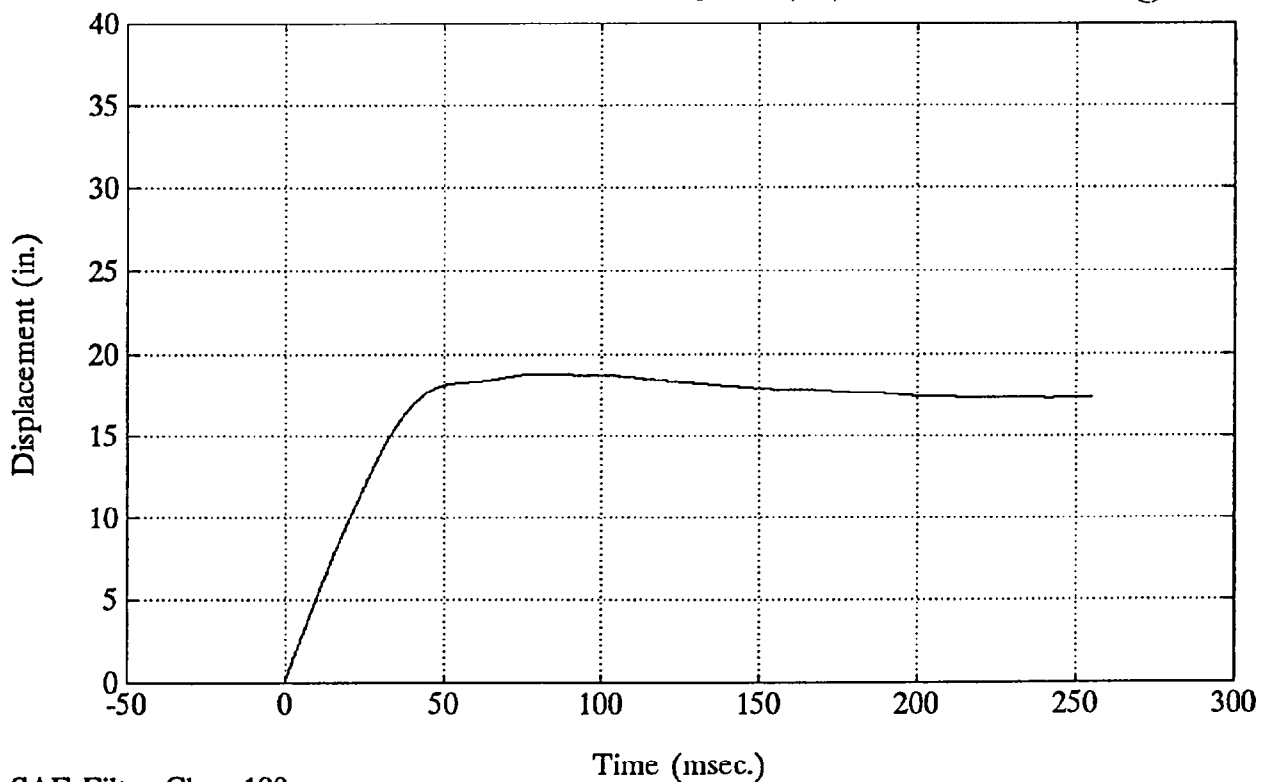


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

L. Brake Caliper X (#6)

Max = 18.86 in. @ 82.56 msec
Min = 0.00 in. @ -0.00 msec

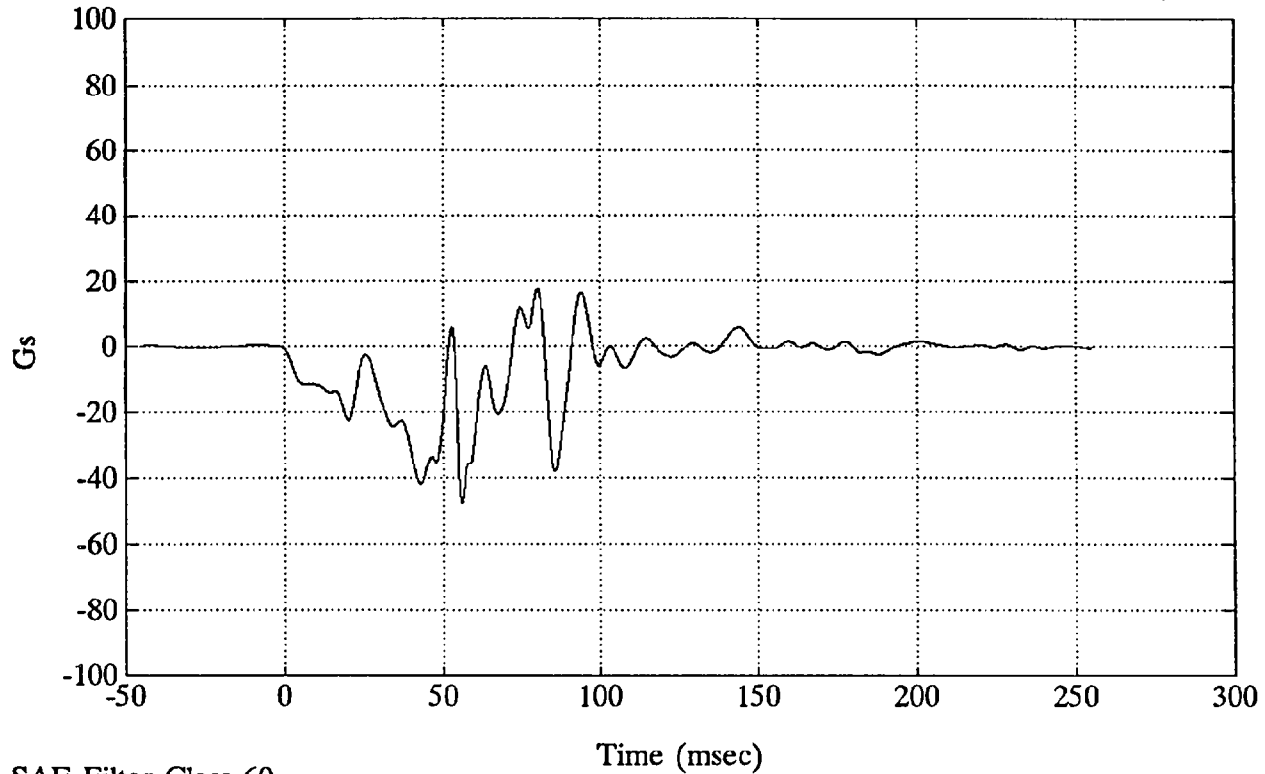


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Instrument Panel X (#7)

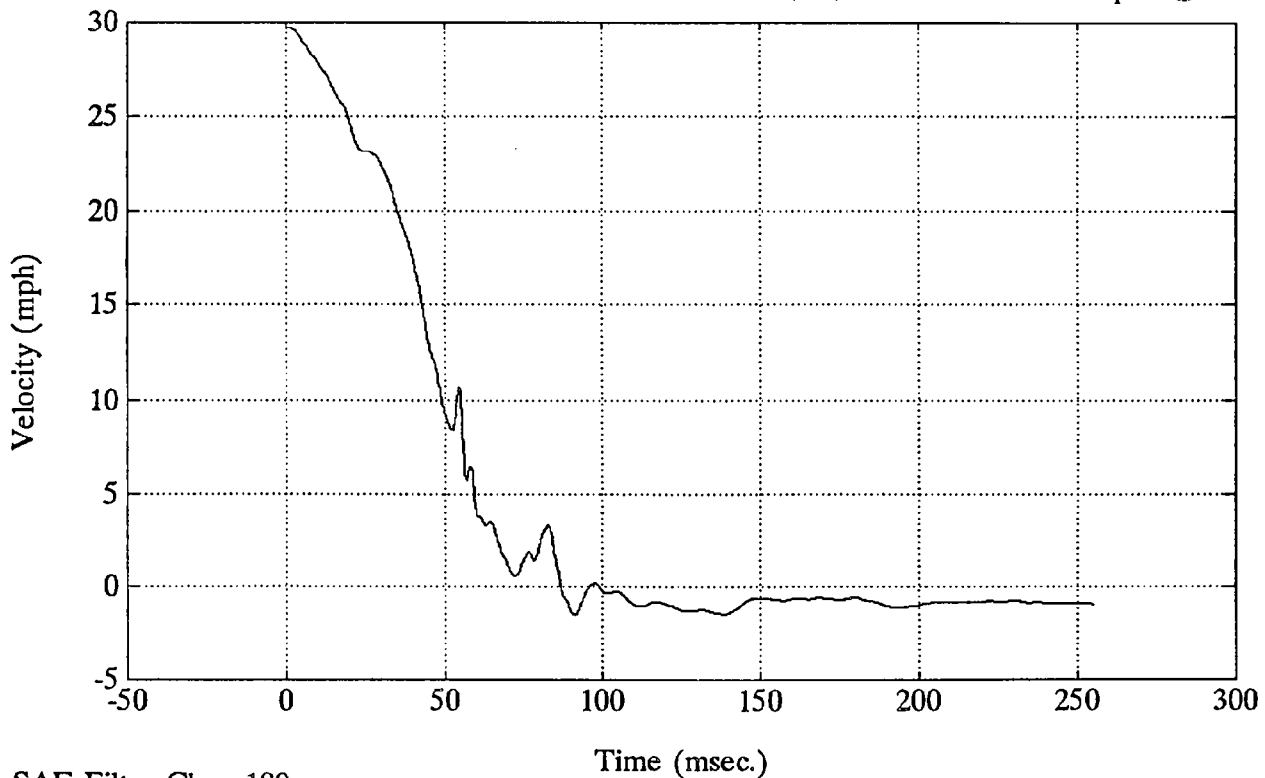
Max = 17.49 Gs @ 80.04 msec
Min = -47.45 Gs @ 56.16 msec



FMVSS 208 - 1993 ACURA LEGEND

Instrument Panel X (#7)

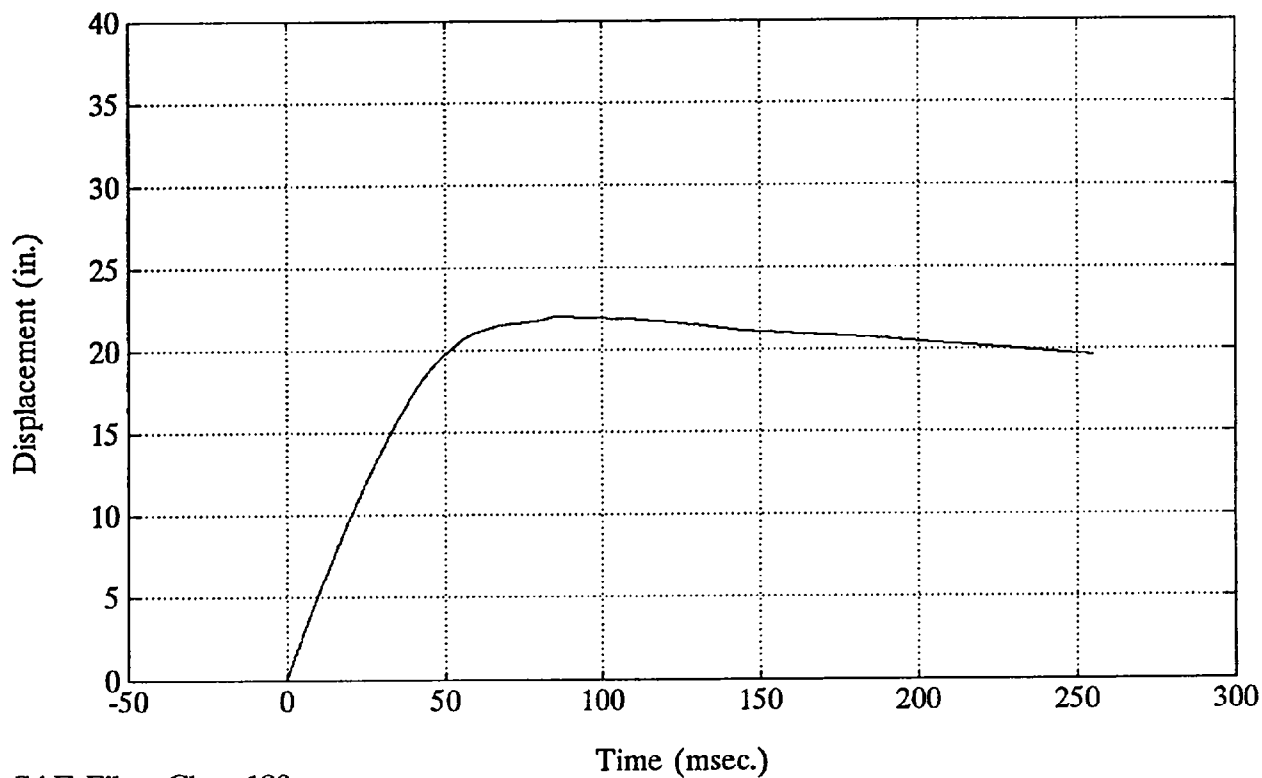
Max = 29.70 mph @ 0.72 msec
Min = -1.48 mph @ 91.20 msec



FMVSS 208 - 1993 ACURA LEGEND

Instrument Panel X (#7)

Max = 22.10 in. @ 87.60 msec
Min = 0.00 in. @ -0.00 msec



SAE Filter Class 180

TEST NO. CP5305

| DUMMY DATA | SAE FILTER CHANNEL CLASS |
|---------------------|--------------------------|
| Head Accelerations | 1000 |
| Chest Accelerations | 180 |
| Femur Forces | 600 |

FACILITY: TRACK
RUN #: 1260
SERIES #: 13

TEST DATE: 18 Feb 1993

TITLE: NHTSA "208" TEST #13 - 1993 ACURA LEGEND

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

hic: 442.80
t1 = 77.760 msec
t2 = 112.080 msec
Average G's Over Hic Duration = 44.08

36 ms Fixed Duration HIC SUMMARY: Pos. 2 Head Resultant

hic: 520.96
t1 = 77.760 msec
t2 = 113.640 msec
Average G's Over Hic Duration = 46.21

CLIP SUMMARY: Pos. 1 Chest Resultant

Peak Resultant (3 ms CLIPPED DURATION) = 55.962 G's
Tstart = 81.3600 ms
Tend = 84.4800 ms
CSI = 390.855

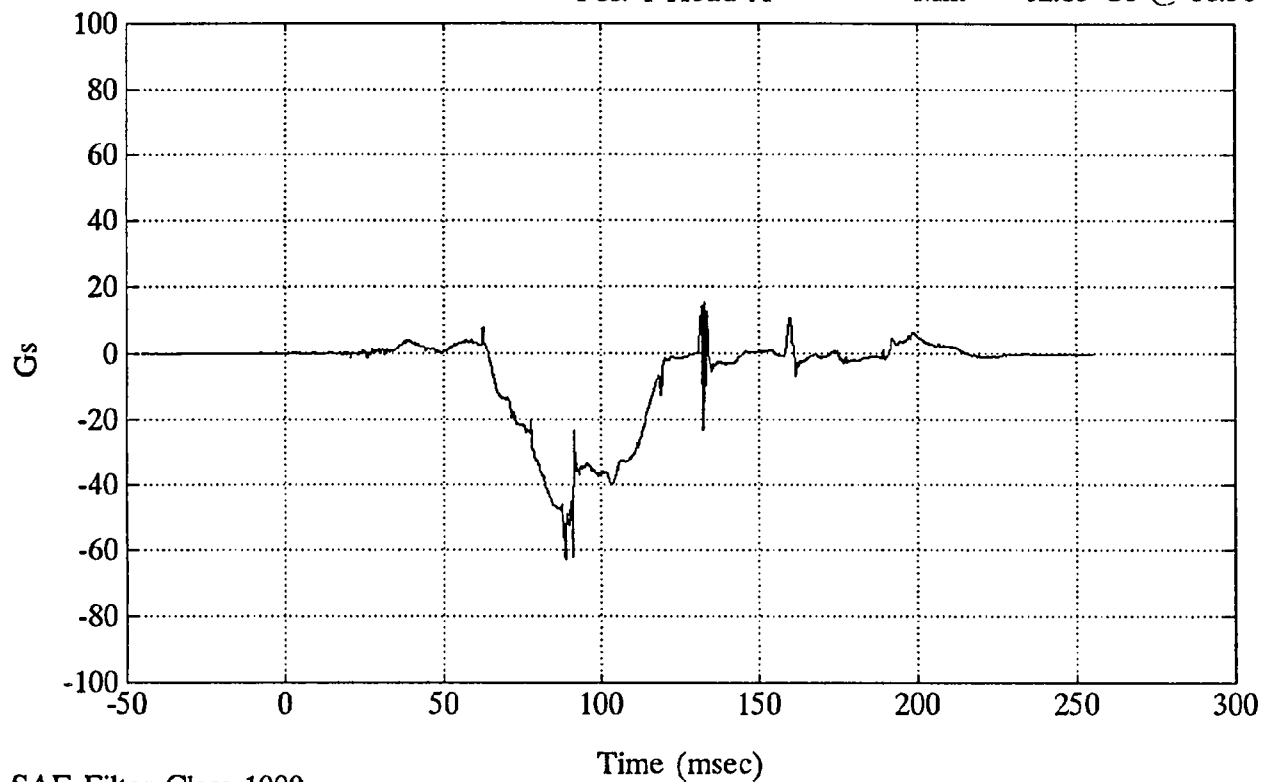
CLIP SUMMARY: Pos. 2 Chest Resultant

Peak Resultant (3 ms CLIPPED DURATION) = 45.914 G's
Tstart = 85.2000 ms
Tend = 88.3200 ms
CSI = 483.629

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Head X

Max = 15.26 Gs @ 132.72 msec
Min = -62.83 Gs @ 88.56 msec

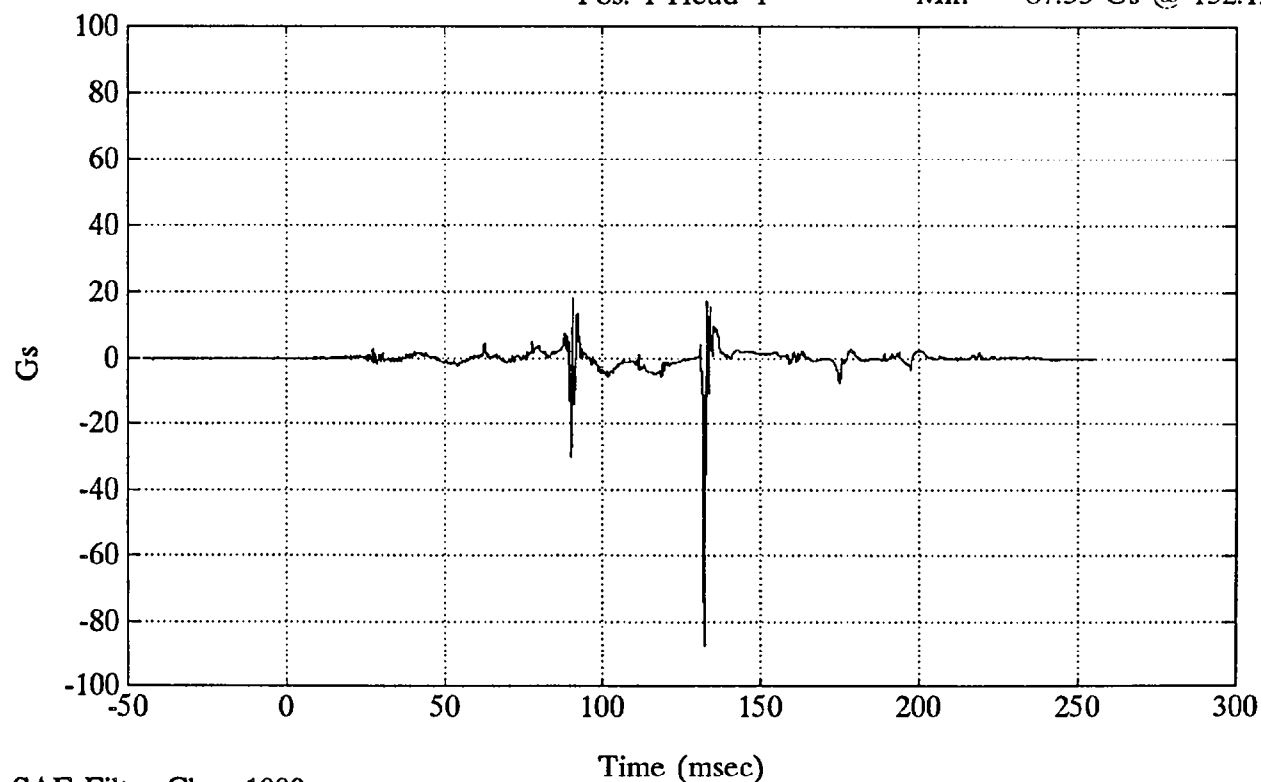


SAE Filter Class 1000

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Head Y

Max = 18.18 Gs @ 90.60 msec
Min = -87.33 Gs @ 132.12 msec

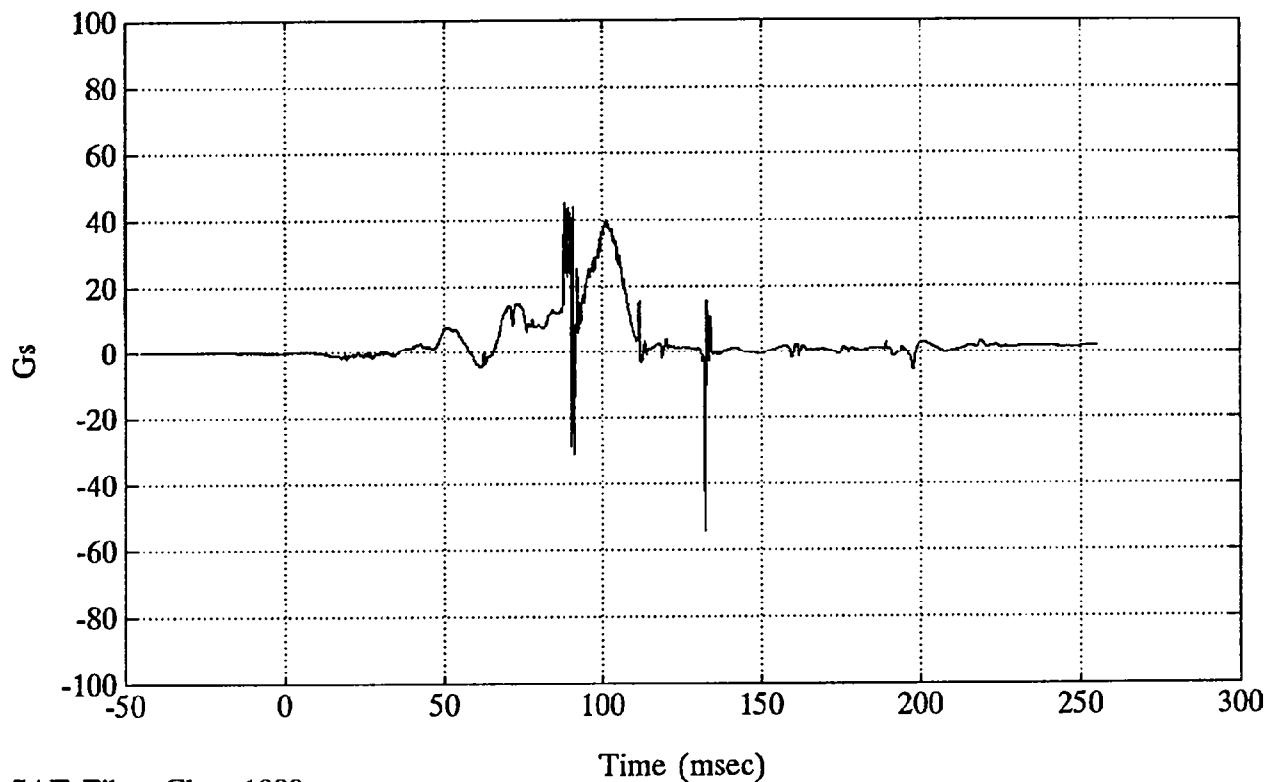


SAE Filter Class 1000

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Head Z

Max = 45.21 Gs @ 88.08 msec
Min = -54.34 Gs @ 132.12 msec

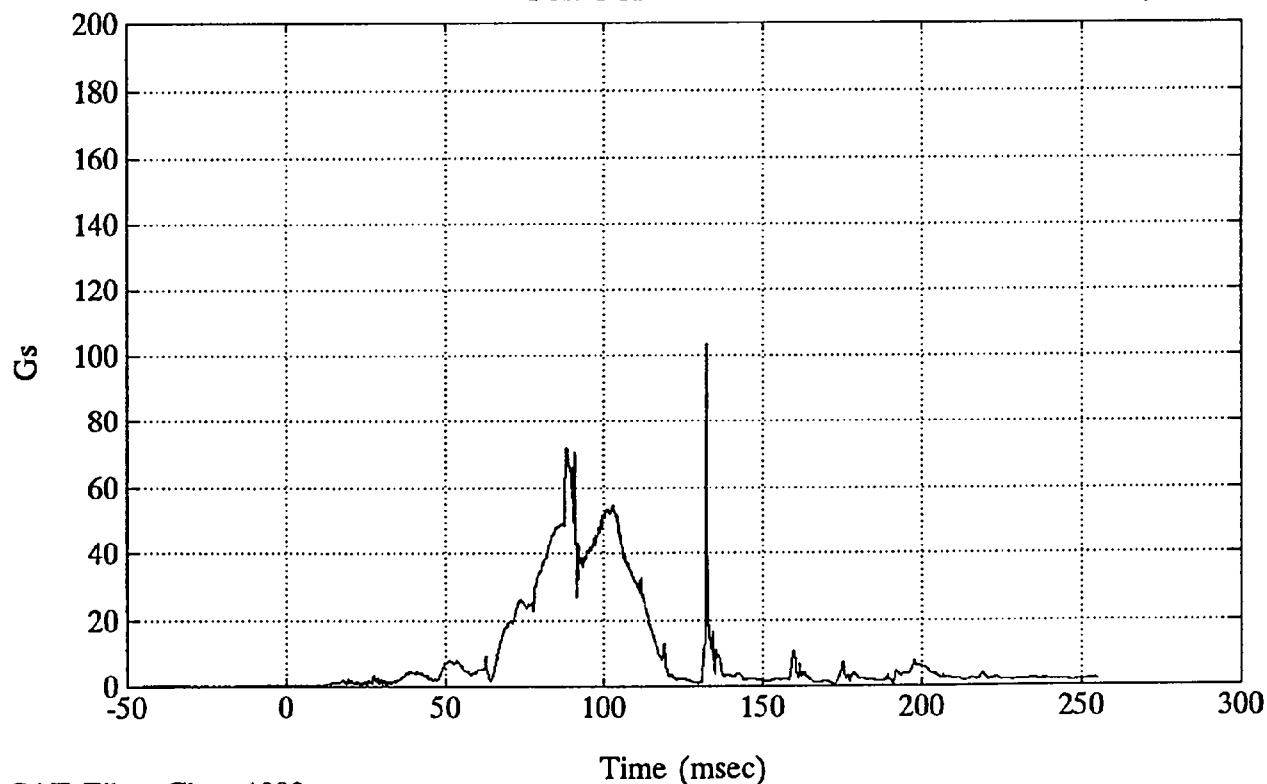


SAE Filter Class 1000

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Head Resultant

Max = 103.33 Gs @ 132.12 msec
Min = 0.06 Gs @ 7.92 msec

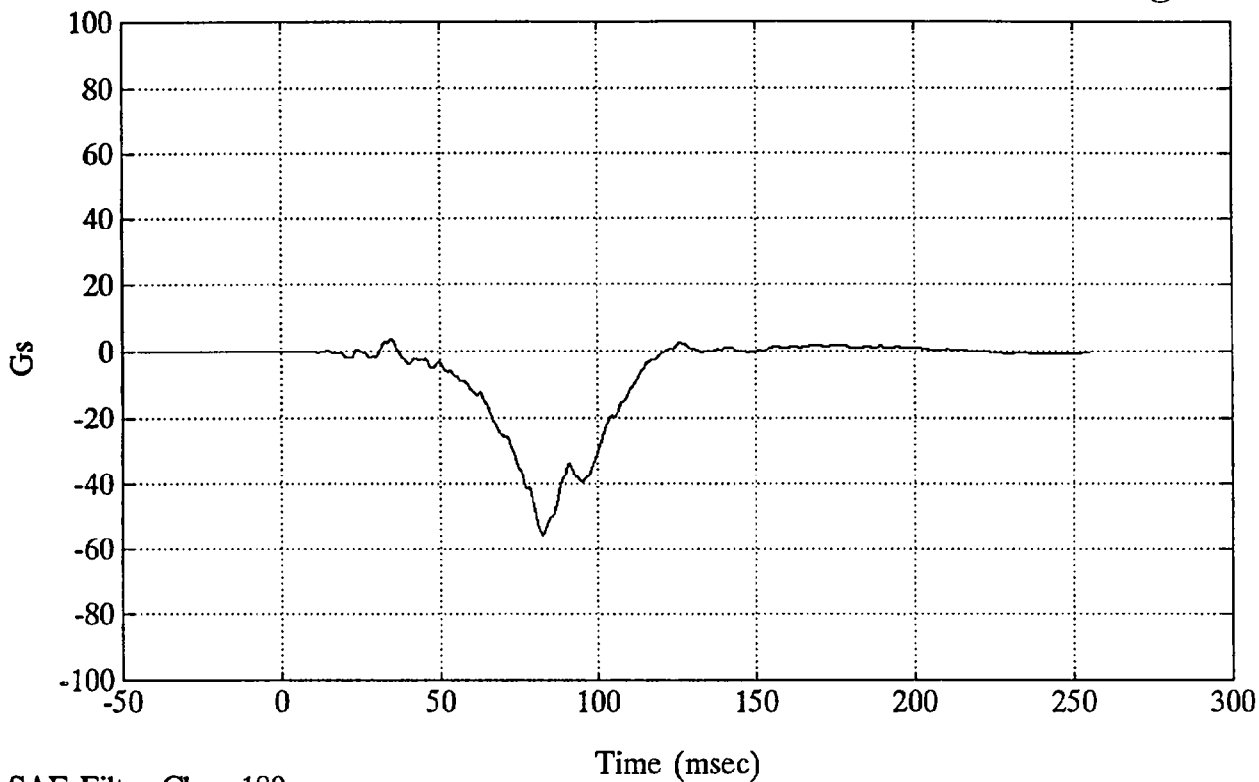


SAE Filter Class 1000

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Chest X

Max = 3.60 Gs @ 34.92 msec
Min = -55.73 Gs @ 82.44 msec

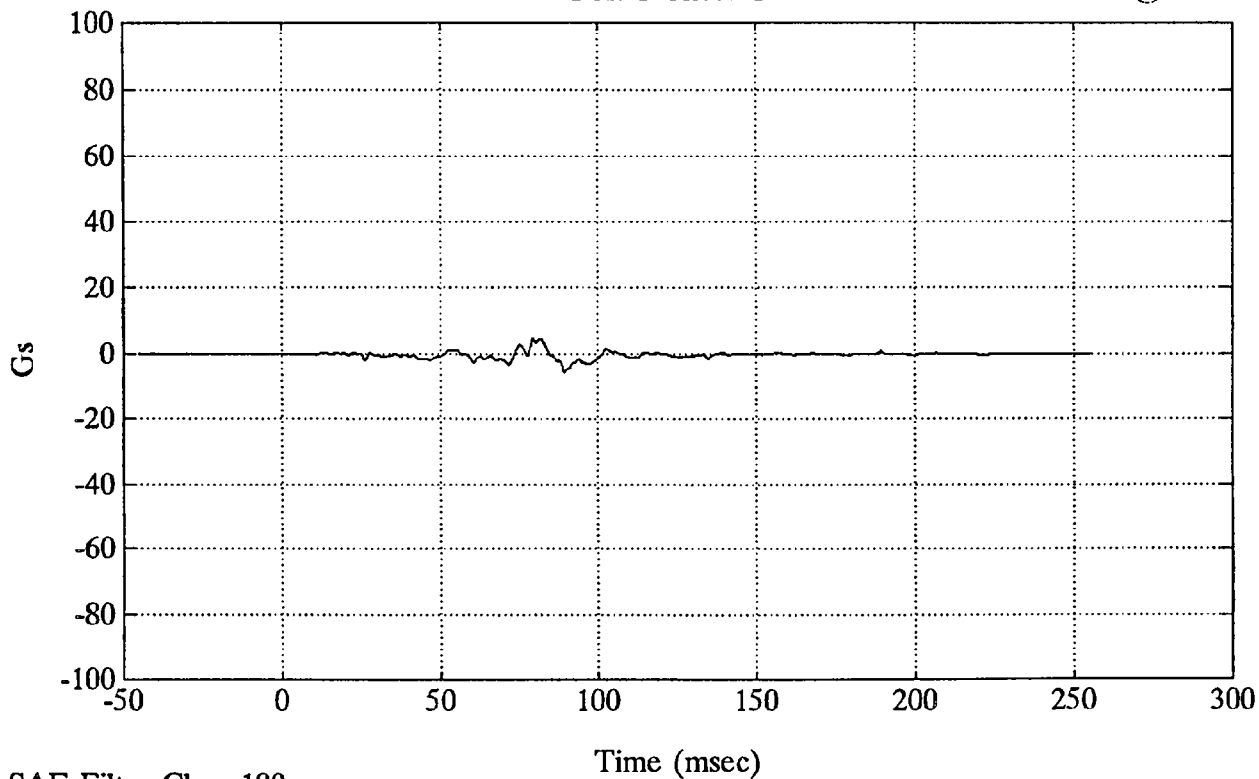


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Chest Y

Max = 4.76 Gs @ 79.44 msec
Min = -5.43 Gs @ 89.40 msec

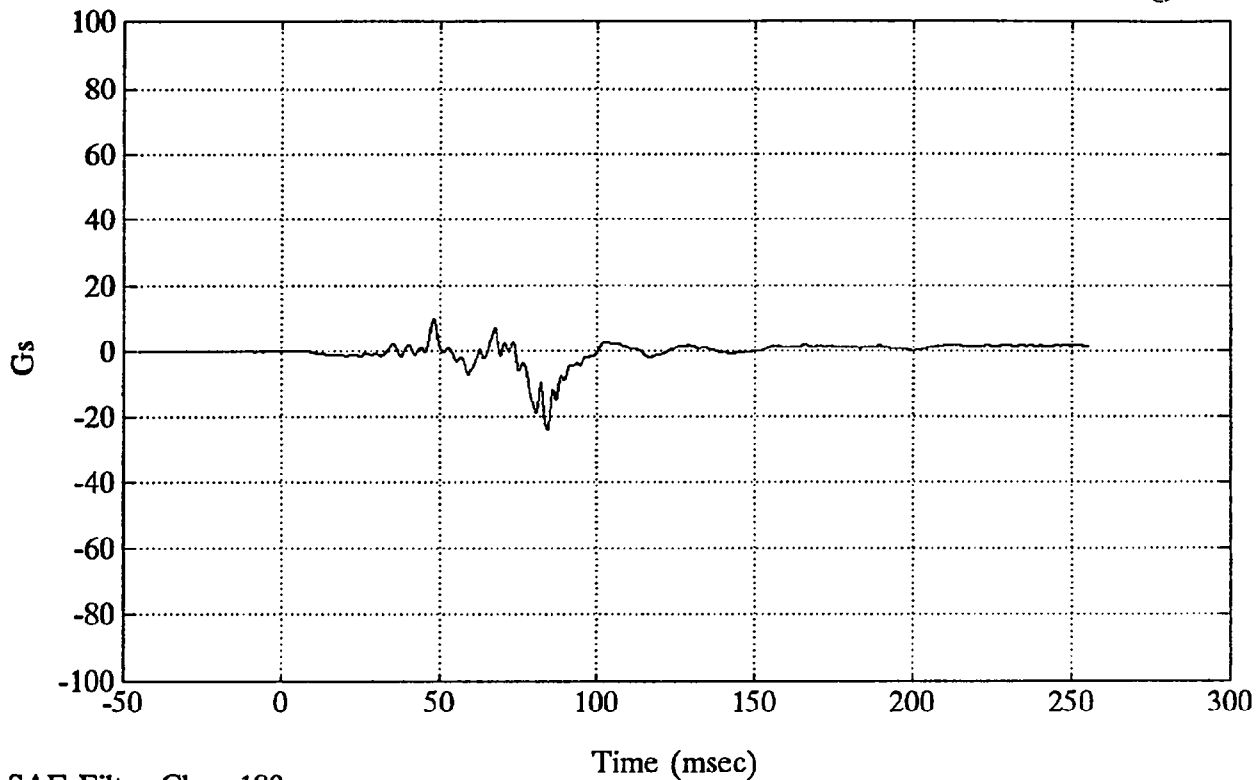


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Chest Z

Max = 10.12 Gs @ 48.24 msec
Min = -23.78 Gs @ 84.12 msec

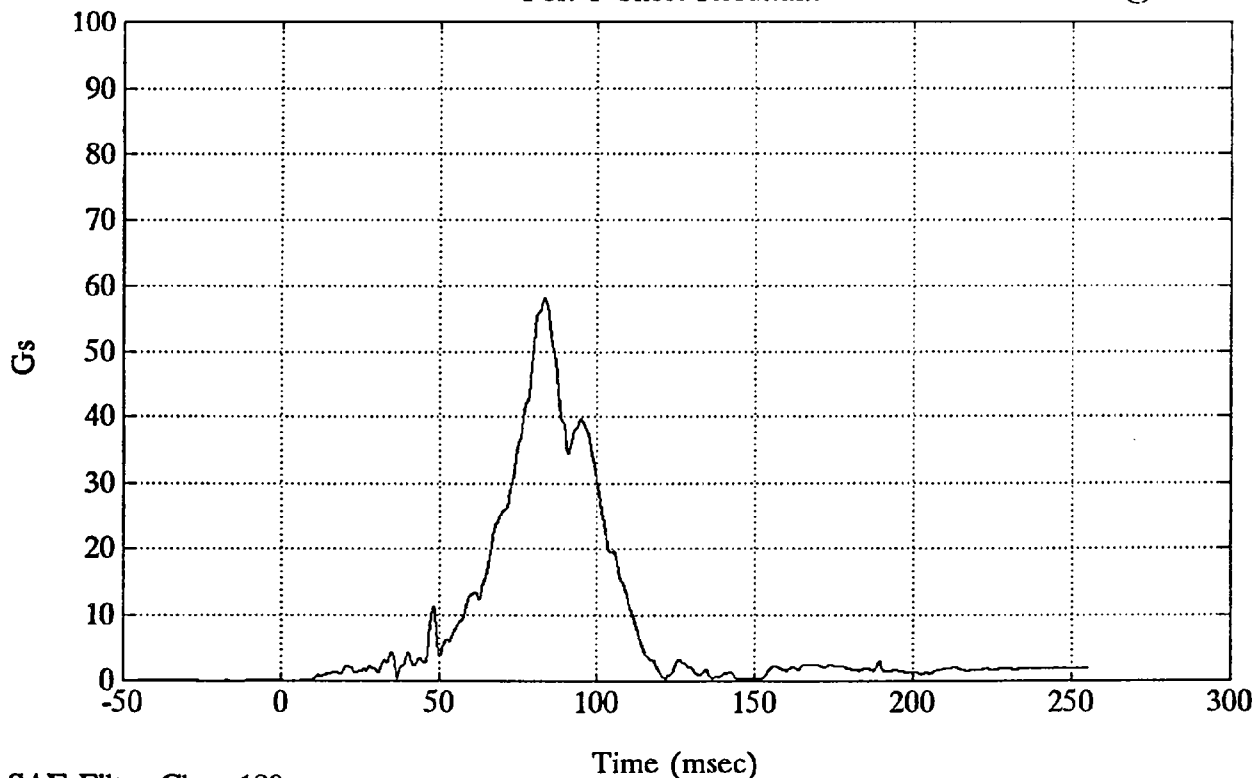


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Chest Resultant

Max = 58.12 Gs @ 83.28 msec
Min = 0.01 Gs @ 4.44 msec

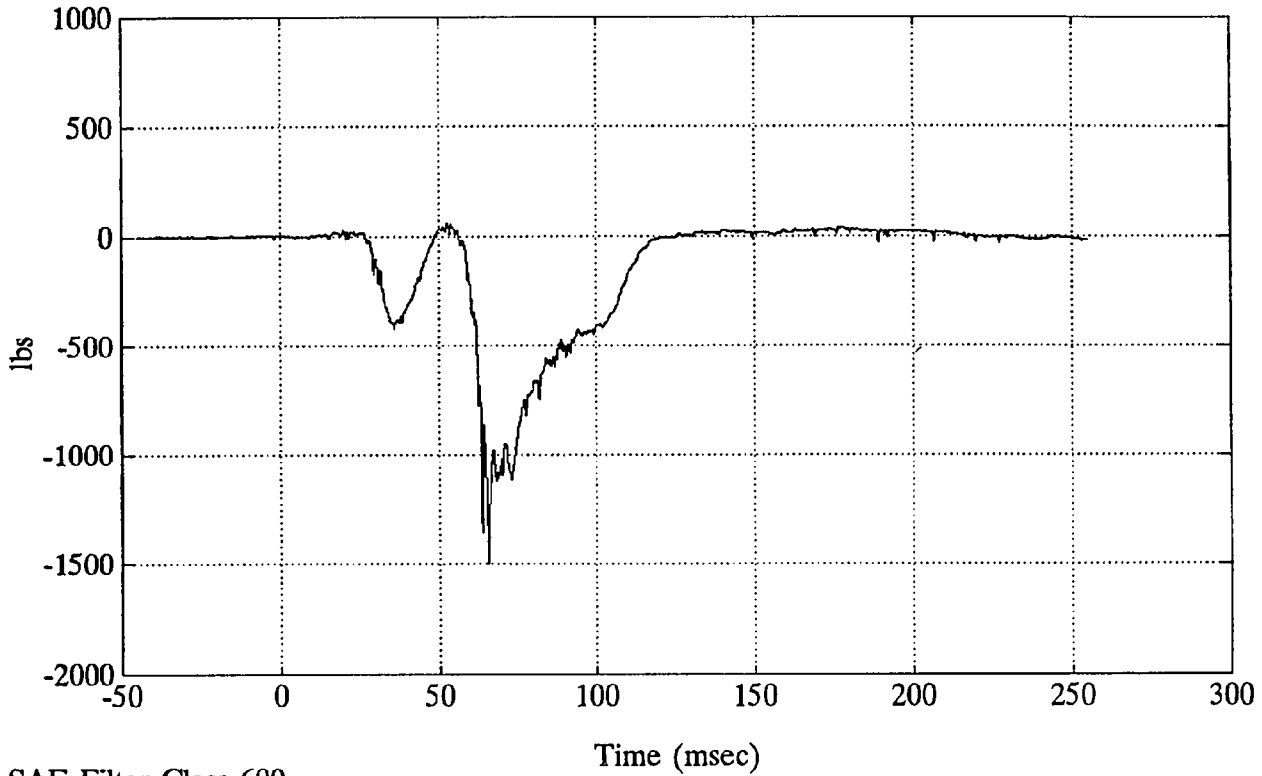


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Left Femur

Max = 60.03 lbs @ 52.68 msec
Min = -1500.20 lbs @ 65.52 msec

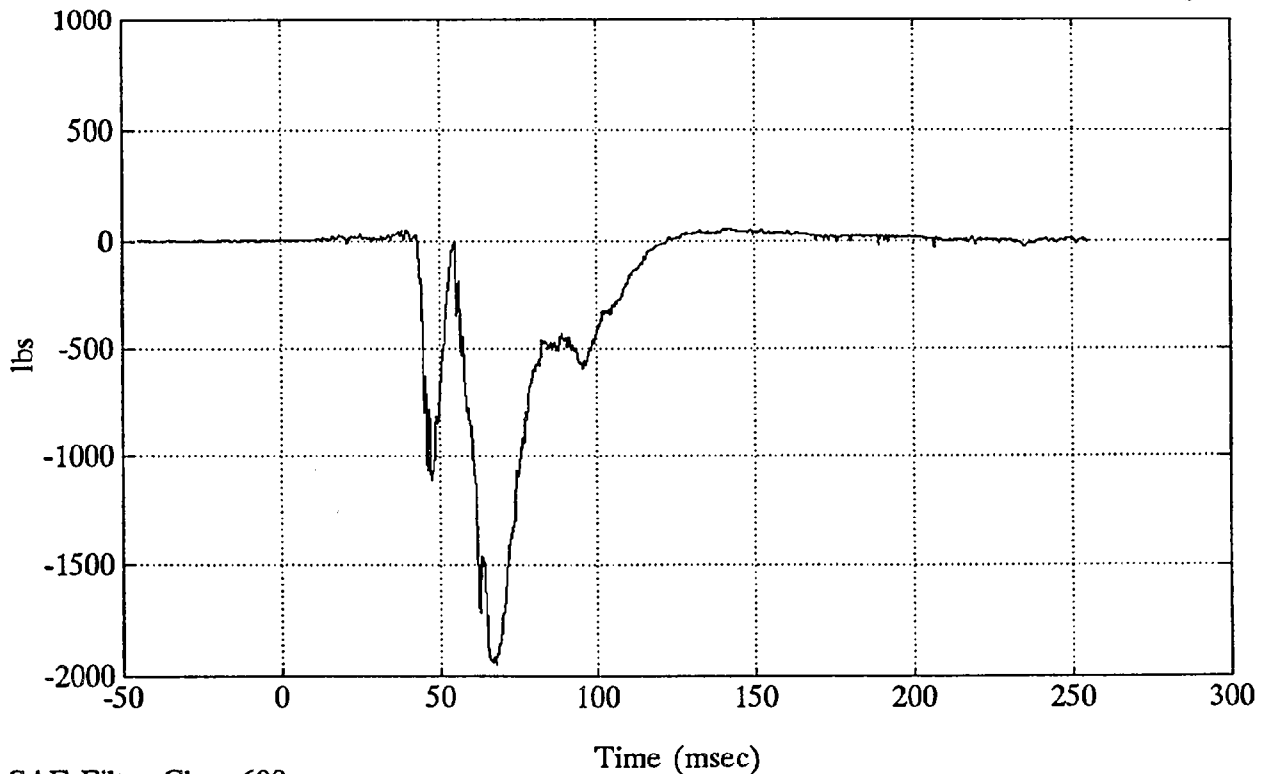


SAE Filter Class 600

FMVSS 208 - 1993 ACURA LEGEND

Pos. 1 Right Femur

Max = 54.11 lbs @ 141.84 msec
Min = -1949.80 lbs @ 67.68 msec

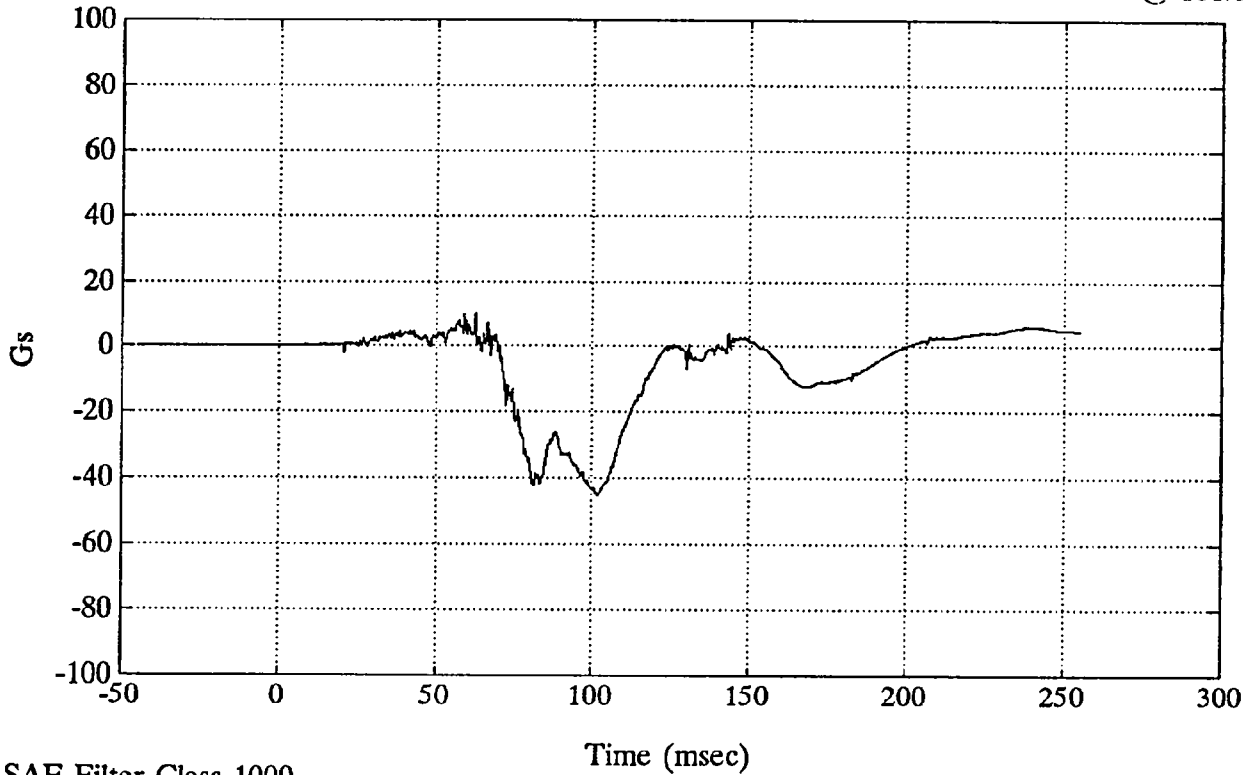


SAE Filter Class 600

FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Head X

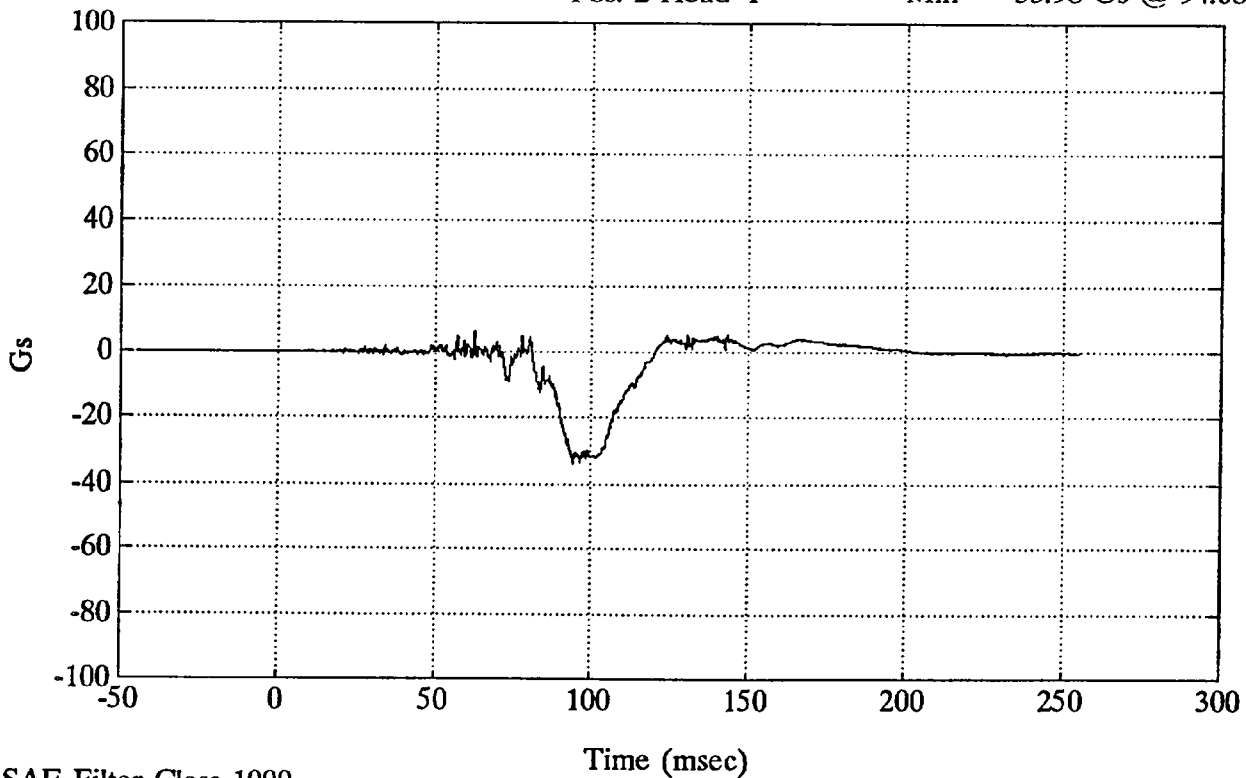
Max = 10.35 Gs @ 62.64 msec
Min = -45.34 Gs @ 101.64 msec



FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Head Y

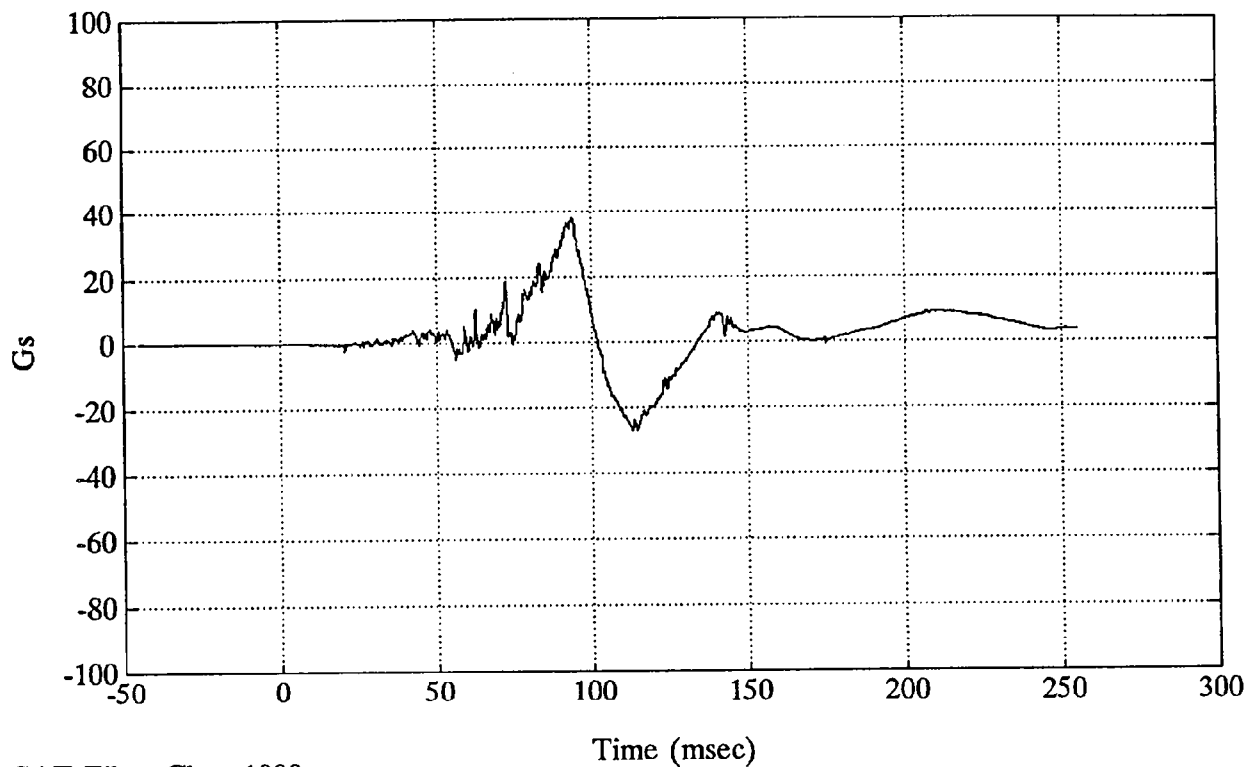
Max = 6.31 Gs @ 62.64 msec
Min = -33.98 Gs @ 94.08 msec



FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Head Z

Max = 37.94 Gs @ 93.84 msec
Min = -26.81 Gs @ 114.36 msec

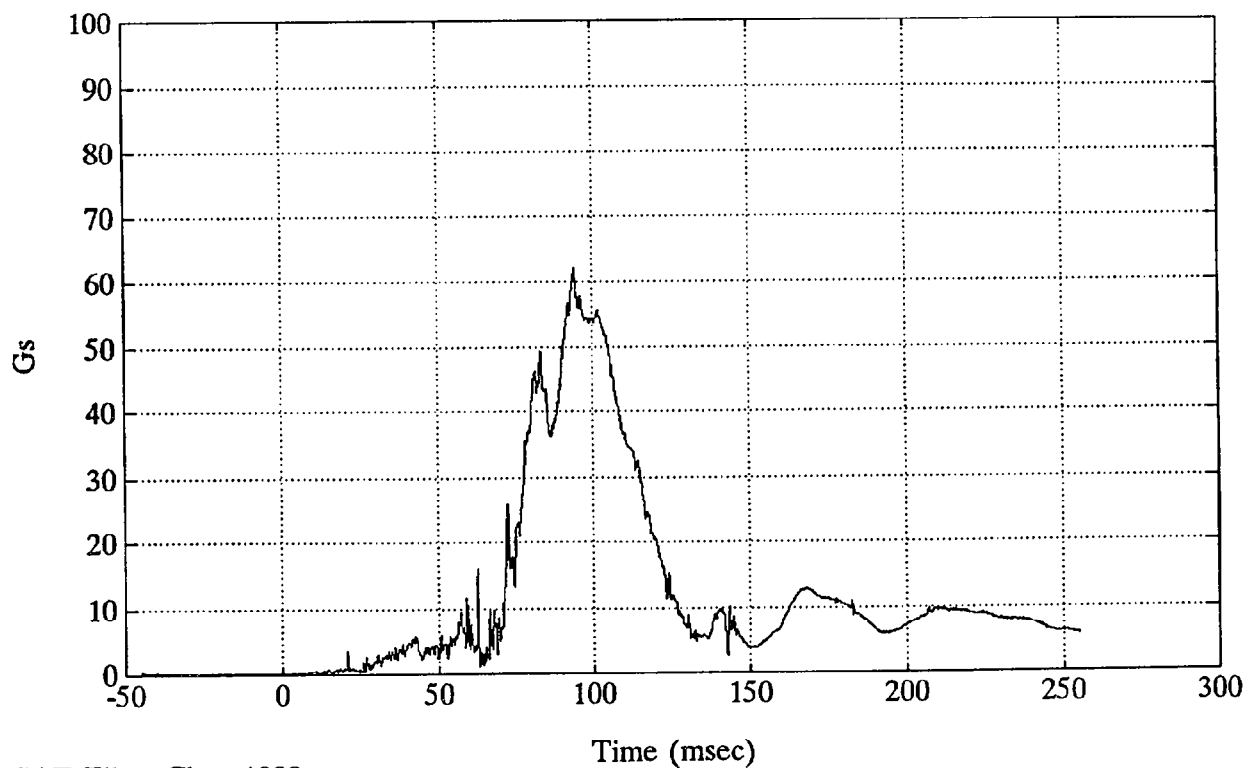


SAE Filter Class 1000

FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Head Resultant

Max = 62.07 Gs @ 94.08 msec
Min = 0.02 Gs @ 7.92 msec

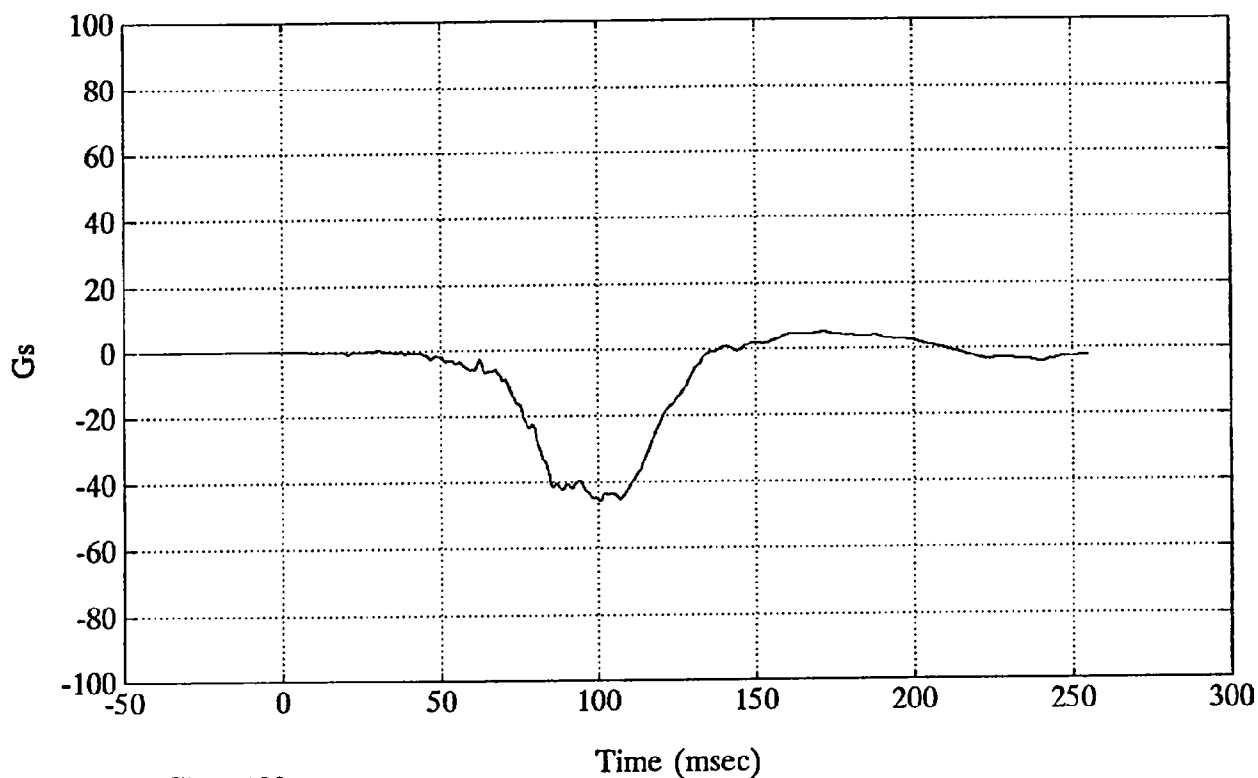


SAE Filter Class 1000

FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Chest X

Max = 5.56 Gs @ 171.24 msec
Min = -45.73 Gs @ 100.44 msec

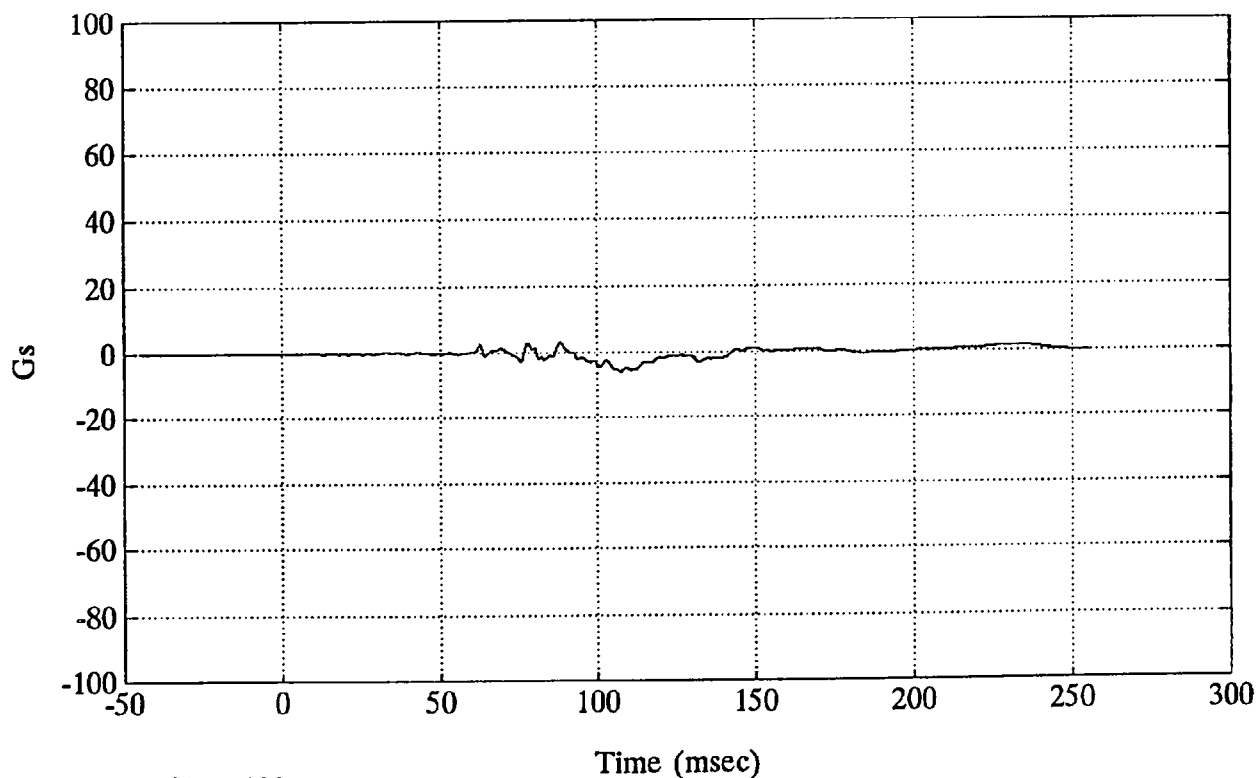


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Chest Y

Max = 3.26 Gs @ 87.96 msec
Min = -5.71 Gs @ 107.16 msec

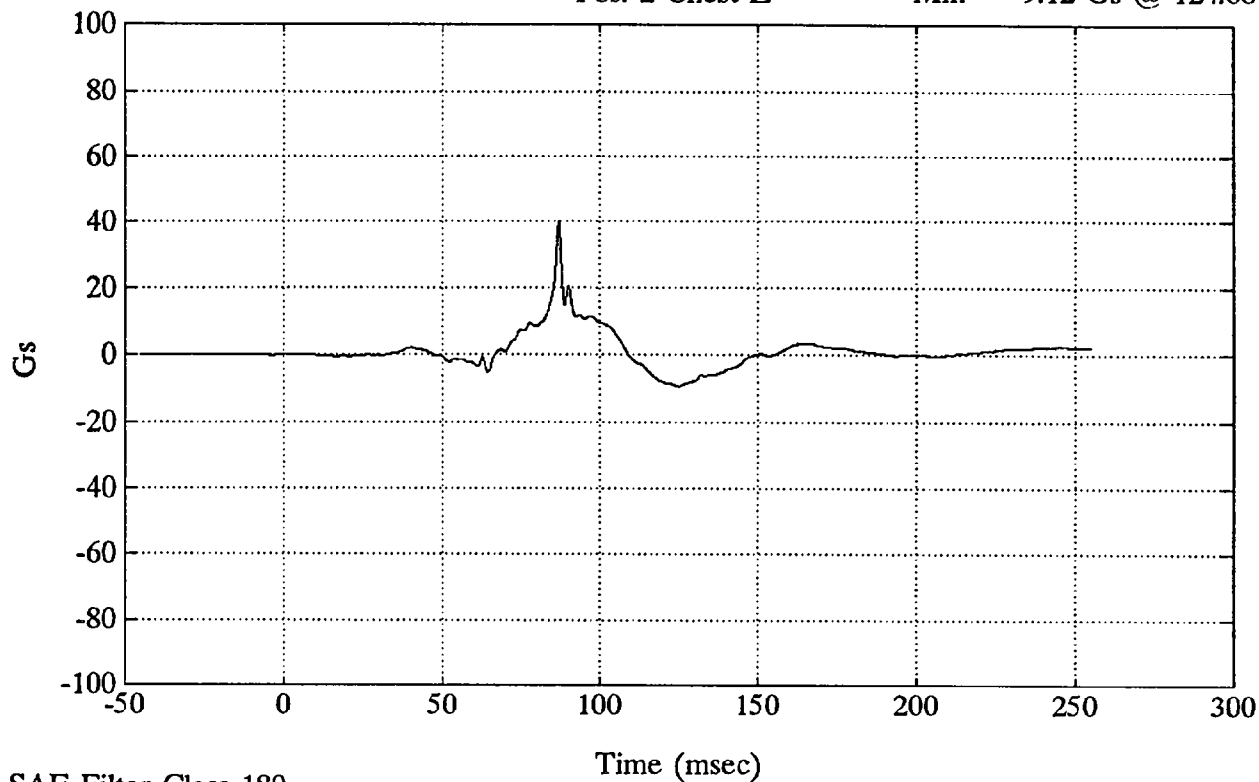


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Chest Z

Max = 40.20 Gs @ 86.88 msec
Min = -9.12 Gs @ 124.68 msec

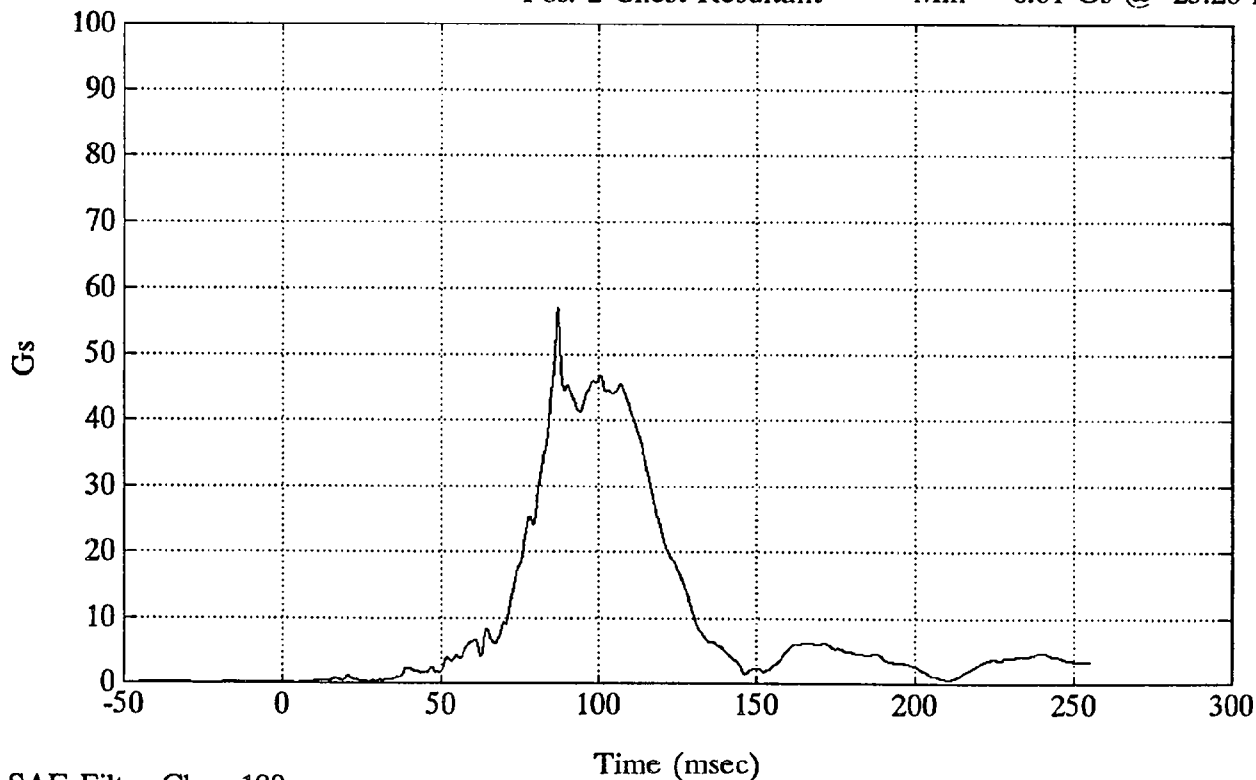


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Chest Resultant

Max = 57.07 Gs @ 87.00 msec
Min = 0.01 Gs @ -25.20 msec

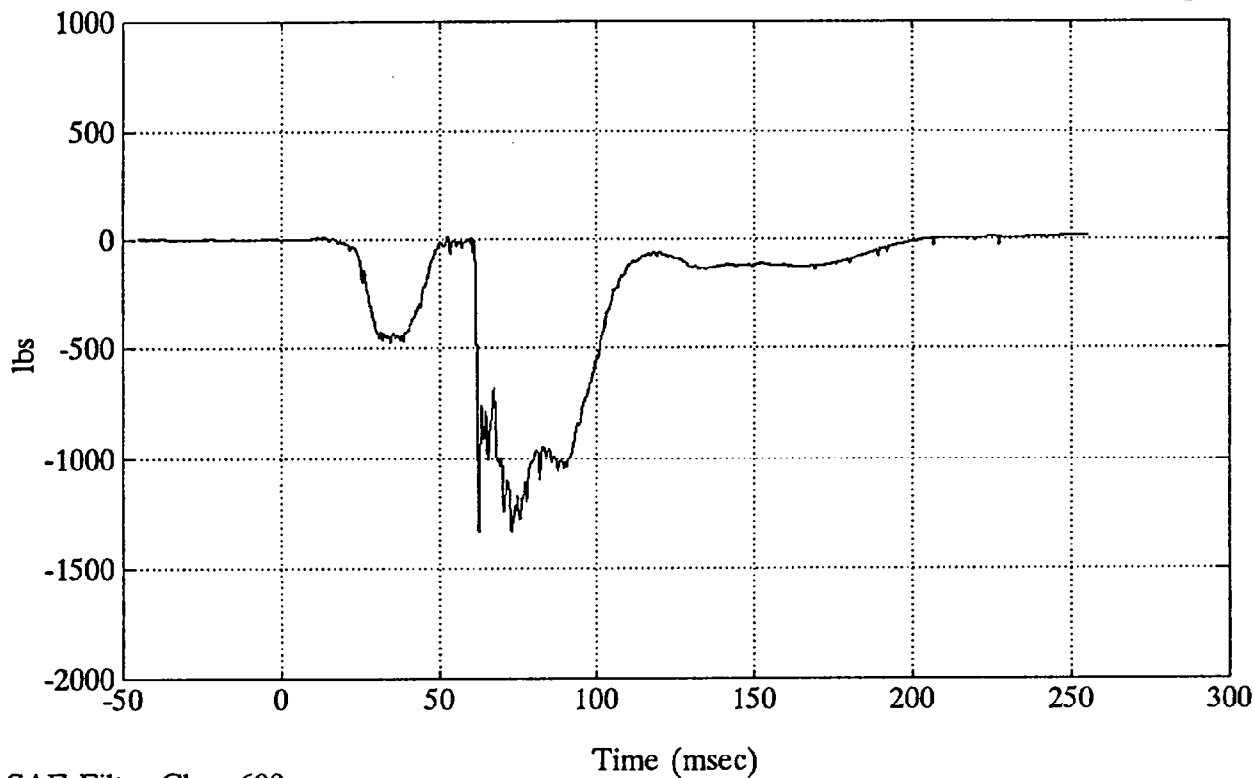


SAE Filter Class 180

FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Left Femur

Max = 15.26 lbs @ 253.68 msec
Min = -1329.30 lbs @ 72.96 msec

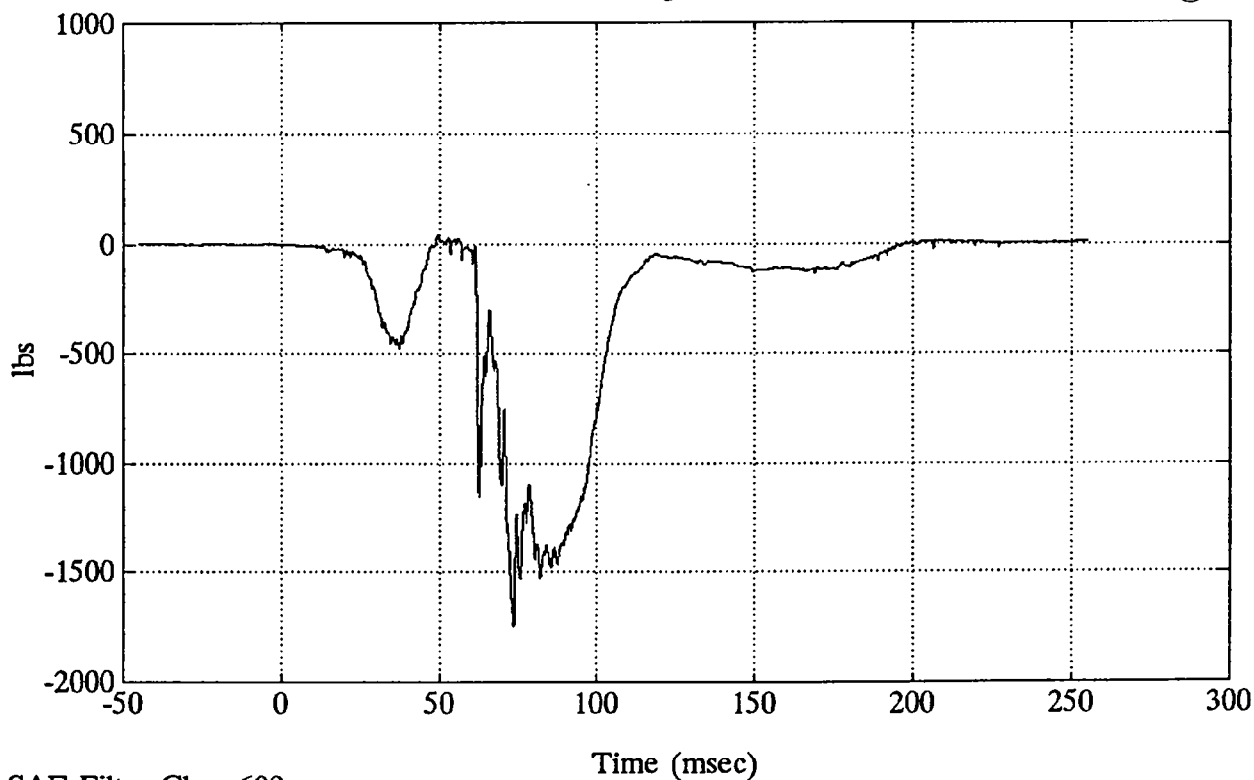


SAE Filter Class 600

FMVSS 208 - 1993 ACURA LEGEND

Pos. 2 Right Femur

Max = 43.80 lbs @ 49.44 msec
Min = -1745.00 lbs @ 73.56 msec



SAE Filter Class 600

Appendix C

VEHICLE OWNERS MANUAL OCCUPANT RESTRAINT SYSTEM INSTRUCTIONS

Your Occupant Protection System

Your Legend is equipped with seat belts and other features that work together to protect you and your passengers during a crash.

Seat belts are the most important part of your occupant protection system. When worn properly, seat belts can reduce the chance of serious injury or death in a crash.

For added protection during a severe frontal collision, your Legend has a Supplemental Restraint System (SRS) with a driver's airbag, passenger's airbag and automatic seat belt tensioners on the front seat belts.

Two indicator lights are also part of your safety system. One reminds you to make sure you and your passengers wear your seat belts. The other alerts you to a possible problem with your supplemental restraint system (see page 14).

The seats, head restraints, and door locks also play a role in occupant safety. For example, reclining the seat-back can decrease the effectiveness of your seat belt. Head restraints can help protect your neck and head, especially during rear-end impacts. Door locks help keep your doors from being accidentally opened during a crash.

To get the maximum protection from your occupant protection system, check the following before you drive away:

- Everyone in the car is wearing a seat belt properly (see page 7).
- Infants and small children are properly secured in child safety seats.
- All doors are closed and locked (see page 17).

- Seat-backs are upright and head restraints are properly adjusted (see pages 16 and 56).
- There are no loose items that could be thrown around and hurt someone during a crash or sudden stop (see page 17).

By following these guidelines, you can reduce injuries to yourself and your passengers in many crash situations. Remember, however, that no safety system can prevent all injuries or deaths that can occur in severe crashes.

4 Driver and Passenger Safety

The Seat Belt System and How It Works

Why Wear Seat Belts

Wearing seat belts, and wearing them properly, is fundamental to your safety and the safety of your passengers.

During a crash or emergency stop, seat belts can help keep you from being thrown against the inside of the car, against other occupants, or out of the car.

Of course, seat belts cannot completely protect you in every crash. But, in most cases, seat belts reduce your chance of serious injury. They can even save your life. That is why many states and all Canadian provinces require you to wear seat belts.

Not wearing a seat belt increases the chance of being killed or seriously hurt in a crash.

Be sure you and your passengers always wear seat belts and wear them properly.

Important Safety Reminders

Seat belts are designed for adults and larger children. All infants and small children must be properly restrained in child safety seats (see page 18).

A pregnant woman needs to wear a seat belt to protect herself and her unborn child (see page 10).

Two people should never use the same seat belt. If they do, they could be very seriously injured in a crash.

Do not place the shoulder portion of a lap/shoulder belt under your arm or behind your back. This could increase the chance of serious injuries in a crash.

Do not put shoulder belt pads or other accessories on seat belts. They can reduce the effectiveness of the belts and increase the chance of injury.

CONTINUED

The Seat Belt System and How It Works

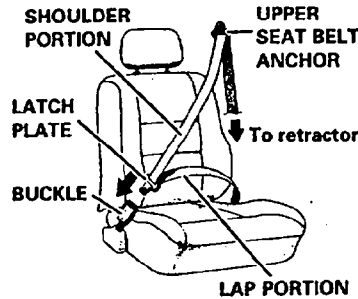
Seat Belt System Components

Your Legend has seat belts in all five seating positions. The front seats and the outside positions of the rear seat have lap/shoulder belts. The center position of the rear seat has a lap belt.

Your seat belt system also includes a light on the instrument panel to remind you to fasten your seat belt, and to make sure your passengers fasten theirs. This light comes on when you turn on the ignition if you have not fastened your seat belt. A beeper also sounds for several seconds (see page 32).

The following pages cover more about the seat belt components and how they work.

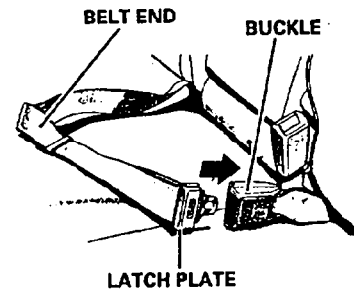
Lap/Shoulder Belt



This style of seat belt has a single belt that goes over your shoulder, across your chest, and across your hips.

Each lap/shoulder belt has an emergency locking retractor. In normal driving, the retractor lets you move freely in your seat while it keeps some tension on the belt. During a collision or sudden stop, the retractor automatically locks the belt to help restrain your body.

Lap Belt



The lap belt has one manually-adjusted belt that fits across the hips. It is similar to safety belts used in airplanes.

6 Driver and Passenger Safety

The Seat Belt System and How It Works

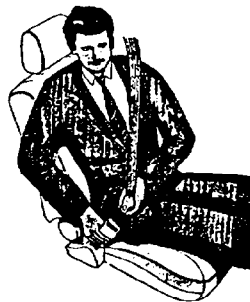
Wearing Seat Belts Properly

You can increase the effectiveness of your seat belts if you take a little time to read the following pages and make sure you know how to wear seat belts properly.

Not wearing a seat belt properly increases the chance of serious injury or death in a crash.

Be sure you and your passengers always wear seat belts and wear them properly.

Wearing A Lap/Shoulder Belt



Before putting on a front seat belt, be sure your seat is adjusted forward or backward to a good driving or riding position and the back of your seat is upright (see page 16).

1. Pull the latch plate across your body and insert it into the buckle. Tug on the belt to make sure the latch is securely locked.
2. Check that the belt is not twisted.



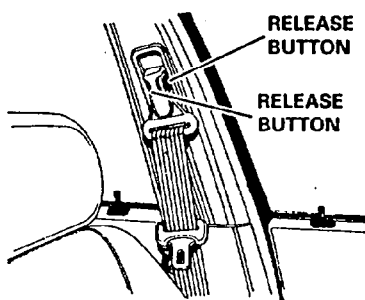
3. Position the lap portion of the belt as low as possible across your hips, not across your stomach. This lets your strong pelvic bones take the force of a crash.

CONTINUED

The Seat Belt System and How It Works



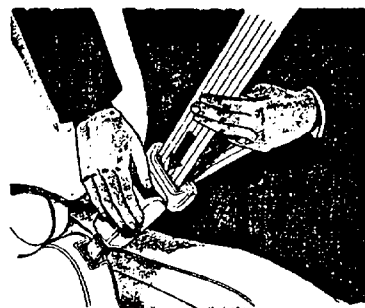
4. Pull up on the shoulder part of the belt to remove any slack. Make sure the belt goes over your collarbone and across your chest.



5. If the belt crosses your neck, you need to adjust the belt anchor height or your seating position.

Front seats: Adjust the belt anchor by squeezing the two buttons and sliding the anchor downward (it has four positions).

Rear seat: Move toward the center of the seat until the belt fits over your collarbone.

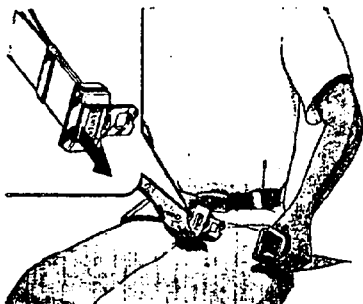


To unlatch the seat belt, push the red PRESS button on the buckle. Guide the belt across your body to the door pillar. If the belt doesn't retract easily, pull it out and check for twists or kinks.

8 Driver and Passenger Safety

The Seat Belt System and How It Works

Wearing the Lap Belt

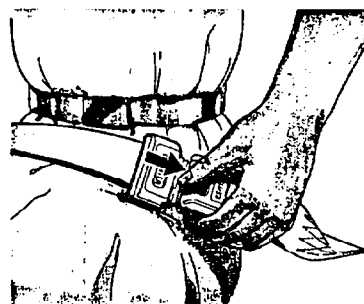


1. Pull the latch plate across your hips and insert it into the buckle marked CENTER.

If the belt is too short, hold the latch plate at a right angle and pull to extend the belt. Insert the latch plate into the buckle.



2. Position the belt as low as possible across your hips and pelvic bones, not across your stomach. Pull the loose end of the belt to adjust for a snug but comfortable fit.

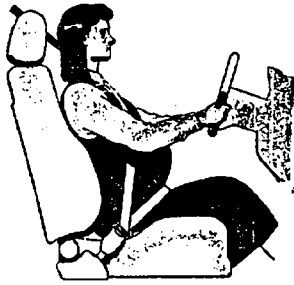


To unlatch the belt, push the red PRESS button on the buckle.

CONTINUED

The Seat Belt System and How It Works

Advice for Pregnant Women



Protecting the mother is the best way to protect her unborn child. Therefore, a pregnant woman should wear a properly-positioned seat belt whenever she drives or rides in a car.

If possible, use the lap/shoulder seat belt, remembering to keep the lap portion as low as possible (see page 7).

Each time you have a check-up, ask your doctor if it's okay for you to drive and how you should position a lap/shoulder seat belt.

Seat Belt Maintenance

For safety, you should check the condition of your seat belts regularly.

Pull out each belt fully and look for frays, cuts, burns, and wear. Check that the latches work smoothly and the lap/shoulder belts retract easily. Any belt not in good condition or not working properly should be replaced.

If a seat belt is worn during a crash, have your dealer replace the belt and inspect the anchors for damage.

For information on how to clean your seat belts, see page 195.

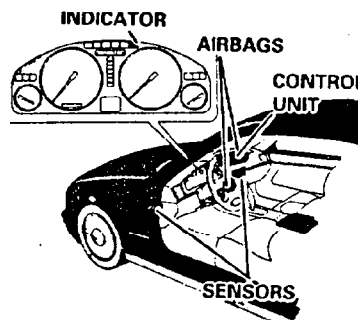
10 Driver and Passenger Safety

Supplemental Restraint Systems

Your Legend is equipped with a Supplemental Restraint System (SRS) to help protect your head and chest during a severe frontal collision. This system does not replace your seat belt. It supplements, or adds to, the protection offered by your seat belt.

Not wearing a seat belt increases the chance of serious injury or death in a crash, even if you have airbags.

Be sure you and your passengers always wear seat belts and wear them properly.



The main components in your SRS are:

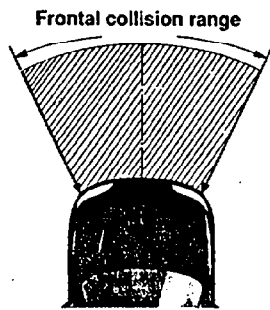
- One airbag in the steering wheel for the driver and another in the dashboard for the passenger.
- Automatic seat belt tensioners that tighten the front seat belts during a severe frontal collision.

- A diagnostic system that, when the ignition is ON (II), continually monitors the sensors, control unit, airbag activator, and all related wiring.
- An indicator light to warn you of a possible problem with the system.
- Emergency power backup in case your car's electrical system is disconnected in a crash.

CONTINUED

Supplemental Restraint Systems

Important Safety Reminder

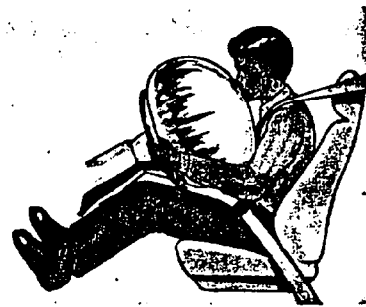


Even with airbags, you need to wear a seat belt. The reasons are:

- Airbags only inflate in severe frontal collisions. They offer no protection in rear impacts, side impacts, rollovers, or moderate frontal collisions.

- An airbag inflates and deflates very quickly. It cannot protect you during any additional impacts that can occur during a crash.
- A seat belt helps keep you in the proper position when an airbag inflates. An airbag opens with considerable force and can hurt you if you are not in the proper position.

How the Driver's Airbag Works



If you ever have a severe frontal collision, your airbag will instantly inflate to help protect your head and chest.

When the airbag inflates, you may hear a fairly loud noise and you might see smoke and powder. This is normal; it is caused by the inflation of the airbag.

12 Driver and Passenger Safety

Supplemental Restraint System

To do its job, the airbag inflates with considerable force. So, while it can reduce serious injuries and even save your life, the airbag might cause some facial or other abrasions.



After the bag completely inflates, it immediately starts deflating so it won't interfere with your visibility, ability to steer, or ability to operate other controls.

The driver's airbag is stored in the center of the steering wheel. For safety, do not attach any items to the steering wheel. They could interfere with the proper operation of the airbag. Or, if the airbag inflates, they could be propelled inside the car and hurt someone.

How the Passenger's Airbag Works



If you have a severe frontal collision, the passenger's airbag will inflate at the same time as the driver's airbag.

This airbag is quite large and inflates with considerable force. It can seriously hurt an adult who is not in the proper position and wearing the seat belt properly. The bag's force could also hurt a small child who is not properly restrained in a child seat.

CONTINUED

Driver and Passenger Safety 13

Supplemental Restraint System

Because of the airbag, we strongly recommend that you do not put an infant seat in the front passenger's seat. If the airbag inflates, it can dislodge the infant seat and seriously injure the infant.

The passenger's airbag is stored near the top of the dashboard, under a lid marked SRS (see page 11). Do not place any objects on top of this lid. If the airbag inflates, those objects can be propelled inside the car and possibly hurt someone.

How the Automatic Seat Belt Tensioners Works



Your Legend has automatic seat belt tensioners for added protection during a severe frontal collision.

If your airbags inflate, the tensioners immediately tighten the front seat belts. You may feel this slight tightening. The belts will remain tight until you unbuckle them in the normal way.

How the SRS Indicator Light Works

The purpose of the SRS light on your instrument panel is to alert you of a potential problem with your supplemental restraint system.

Have the system checked if:

- The light does not come on when you turn the ignition ON (II).
- The light stays on after the engine starts.
- The light comes on or flashes while you are driving.

14 Driver and Passenger Safety

Supplemental Restraint System

System Service

Your supplemental restraint system is virtually maintenance-free. There are no parts you can safely service. You must have the system serviced by an authorized Acura dealer:

- If your airbags ever inflate. The bags and seat belt tensioners must be replaced. Do not try to remove or discard the airbags by yourself. This must be done by an Acura dealer.
- If the SRS indicator light alerts you of a problem. Have the supplemental restraint system checked as soon as possible. Otherwise, your airbag might not inflate when you need it.
- When the car is ten years old. Have the dealer inspect the system. The production date is on the driver's door jamb for your convenience.

System Service Precautions

Do not modify your steering wheel or any other part of the supplemental restraint system. Modifications could make the system ineffective.

Do not tamper with the system's components or wiring. This could cause the airbag to inflate inadvertently, possibly injuring someone very seriously.

Tell anyone who works on your car that you have a supplemental restraint system. Failure to follow the procedures and precautions in the official Acura service manual could result in personal injury or damage to the system.

Scrapping an entire car that has uninflated airbags can be dangerous. Get assistance from an Acura dealer if your car must be scrapped.

If you sell your car, please be sure to tell the new owner that the car has a supplemental restraint system. Alert them to the information and precautions in this part of the owner's manual.