Insurance Institute for Highway Safety
Crashworthiness Evaluation

Crash Test Report
2000 Isuzu Rodeo (CF00014)

Vehicle identification number: 4S2DM58W2Y4320411
Body style: Midsize utility vehicle
Engine/transmission: Longitudinal 3.2-liter V6, 4-speed automatic, 4-wheel drive

Standard crashworthiness features:

Driver and right front passenger airbags
Dual-locking shoulder belts (front and rear outboard seating positions)
Shoulder belt upper anchorage height adjusters (front and rear outboard seating positions)
Seat belt force-limiting mechanisms (front seating positions only)
Right front and both rear shoulder belt retractors are convertible from emergency to automatic locking for ease of child restraint use
Rear seat head restraints (outboard seating positions)

Other standard safety features:

Four-wheel antilock brakes

Vehicle specifications (provided by manufacturer):

Wheelbase:	270 cm
Overall length:	451 cm
Overall width:	178 cm
Curb weight:	1,862 kg

Vehicle specifications (measured):

Front bumper to firewall:	107 cm
Curb weight:	1,819 kg
Test weight:	1,946 kg (51% front, 49% rear)
Overall width:	179 cm

Nominal test parameters:

40.0 mi/h (64.4 km/h), 40% overlap, deformable barrier face with slotted bumper

Crash test date:

April 25, 2000

Figure 1
Precrash and Postcrash Side Views — 2000 Isuzu Rodeo

Summary

A 2000 Isuzu Rodeo was crash tested on April 25, 2000 into a fixed deformable barrier at 40.0 mi/h (64.4 km/h) and a 41 percent overlap on the driver side. A Hybrid III 50th percentile male dummy was positioned in the driver seat with the lap/shoulder belt fastened.

Measures of intrusion taken after the crash indicated the lower instrument panel in front of the dummy moved rearward 1 cm. Resultant intrusion in the driver footwell measured 14 cm at the footrest and 9-12 cm at other places on the toepan. All doors remained closed during the crash. After the crash, the driver door and right front door required additional effort but no tools to open, the left rear door required tools to open, and the right rear door opened with ease. Extensive floorpan buckling underneath and behind the driver seat caused the seat to pitch forward and to tip outward against the B-pillar.

The driver dummy was restrained by a three-point lap/shoulder belt and an airbag. During the crash, at least 3 cm of webbing spooled off the retractor (about 3 cm from the force-limiting mechanism alone). The airbag contacted the dummy's face during deployment. During rebound from the airbag, the dummy's head moved downward toward the window sill and outward past the precrash plane of the window. The head then moved upward and inward until the top center of the head contacted the roof side rail. After the crash, the upper end of the steering column had moved upward 9 cm and forward 4 cm.

The HIC-15 was 884, the maximum resultant head acceleration was 87 g, and the maximum neck tension was 2.7 kN, all of which occurred as the dummy's head loaded the airbag. The peak resultant head acceleration from the roof rail contact was 8 g. The maximum resultant left foot acceleration was 327 g, and the maximum resultant right foot acceleration was 157 g.

Test Conditions

This vehicle had been tested previously in the Institute's Low-Speed Crash Test Program and subjected to an impact on the front corner of the passenger side at 5 mi/h (8 km/h) into a 30 degree angle barrier and a rear impact at 5 mi/h (8 km/h) into a flat barrier. All structural damage on the front was repaired prior to this test (see Appendix, Low-Speed Crash Test Damage Repair Estimate).

This test was conducted according to the procedures specified in the IIHS Offset Barrier Crash Test Protocol (Version VII). The Hybrid III dummy positioned in the driver seat was equipped with instrumented lower legs that included feet modified to include two accelerometers and to have a 45 degree dorsiflexion range with soft stops at all extremes of foot-ankle motion. All dummy seating parameters were set according to the procedures specified for Federal Motor Vehicle Safety Standard 208 compliance testing (49 *CFR* Part 571.208 § 11). The dummy's left foot was placed on the footrest.

Seat back, shoulder belt upper anchorage, and steering column adjustments were set according to the manufacturer's specifications for government crash testing. Other adjustments were set

according to the procedure specified for Federal Motor Vehicle Safety Standard 208 compliance testing (49 *CFR* Part 571.208 § 7 and 8). After final positioning of the dummy, measurements from various parts of the dummy to a number of vehicle interior points were made. These measurements and the seat back, shoulder belt upper anchorage, and steering column adjustments are described in the Appendix, Dummy Clearance Measurements.

Vehicle acceleration measurements were made by a triaxial arrangement of accelerometers mounted on the vehicle's longitudinal centerline and 47 cm behind its center of gravity (179 cm behind the front axle). The vehicle speed recorded just prior to impact was 40.0 mi/h (64.4 km/h), and the actual overlap was 41 percent.

Structural Performance

All doors remained closed during the crash. The driver door aperture shortened 1 cm, as measured at the lower edge of the window. After the crash, the driver door and right front door required additional effort but no tools to open, the left rear door required tools to open, and the right rear door opened with ease.

No fuel system leaks were observed after the crash. In addition, no fuel system leaks were observed when the vehicle was rotated onto its right side to allow postcrash photography.

Extensive floorpan buckling underneath and behind the driver seat caused the seat to pitch forward and to tip outward against the B-pillar.

Figure 2 shows the overhead view of the crash deformation. Figure 3 illustrates the precrash and postcrash contour measures of the front bumper cover profile and the resulting permanent crush. Figure 4 shows the precrash and postcrash views from below. Figure 5 illustrates the deformation of the frame rails, door sills, and crossmembers, which are visible in Figure 4.

Figure 2
Overhead View of Crash Deformation — 2000 Isuzu Rodeo

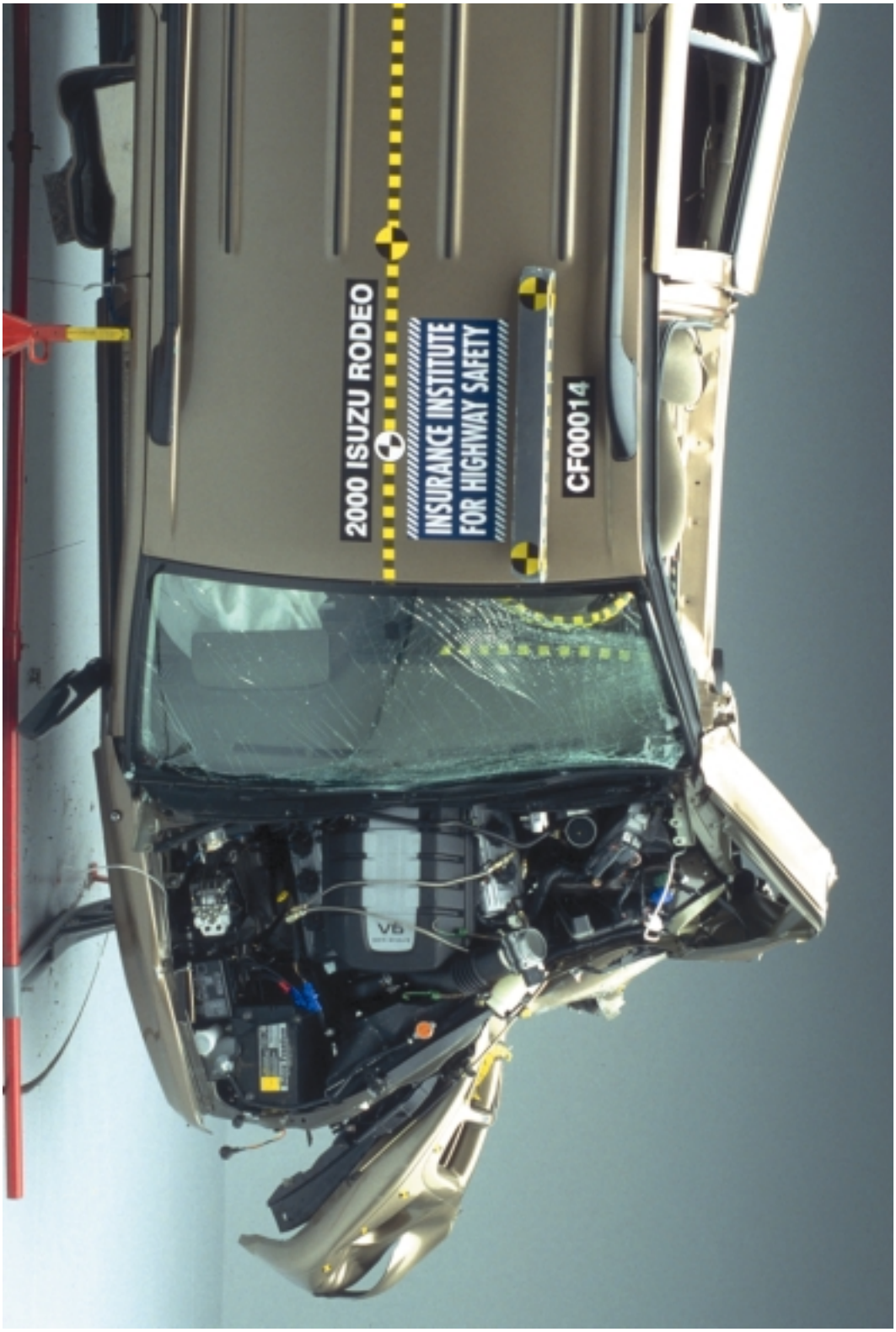
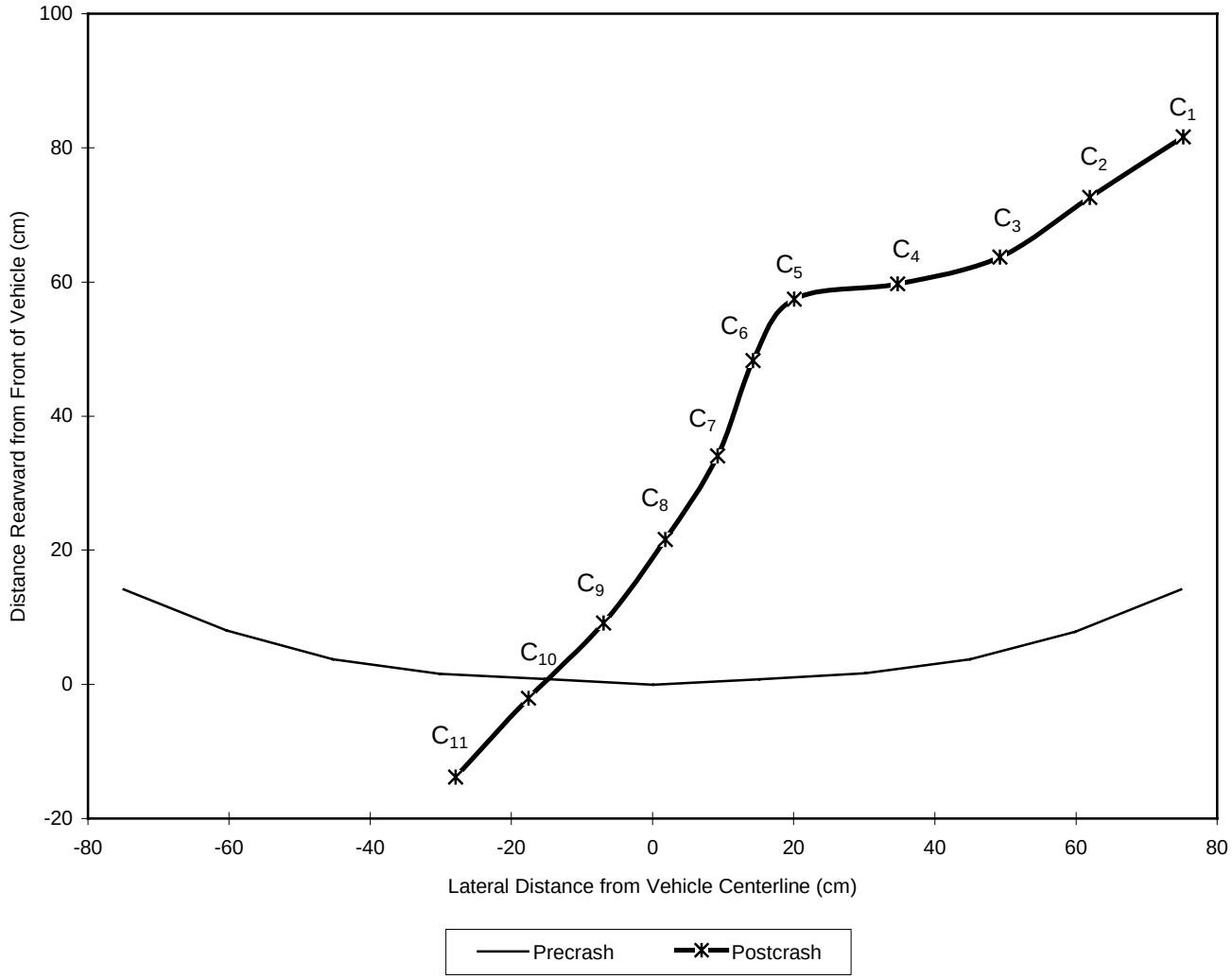


Figure 3
Front Bumper Cover Crush Contour — 2000 Isuzu Rodeo



	C_1	C_2	C_3	C_4	C_5	C_6	C_7	C_8	C_9	C_{10}	C_{11}
Postcrash Contour (cm)	82	73	64	60	57	48	34	22	9	–2	–14
Precrash Contour (cm)	14	8	4	2	1	0	1	2	4	8	14
Resulting Crush (cm)	68	65	60	58	56	48	33	20	5	–10	–28

The length of the reference line was 150 cm precrash and 103 cm postcrash.

Figure 4
Precrash and Postcrash Views from Below — 2000 Isuzu Rodeo

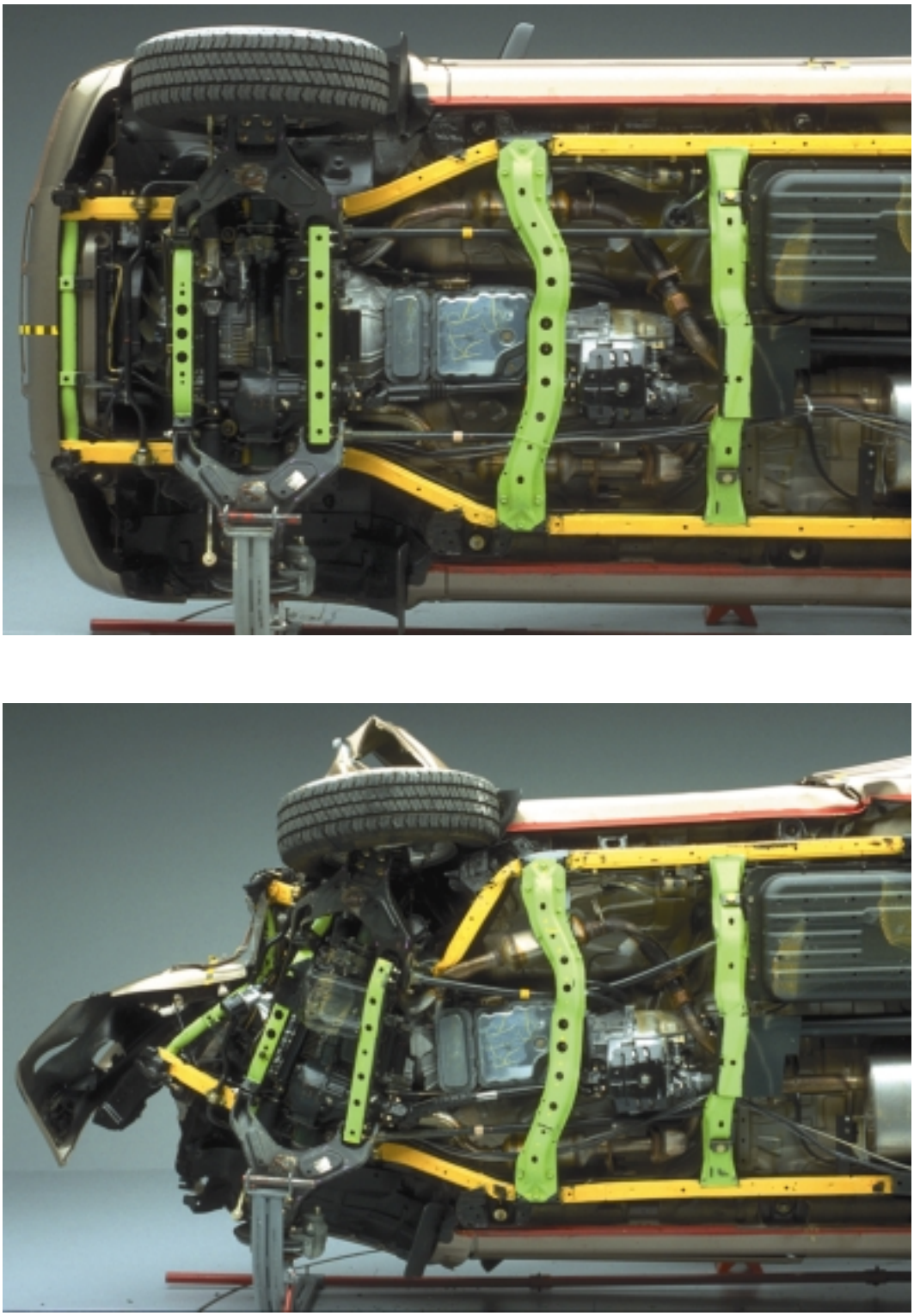
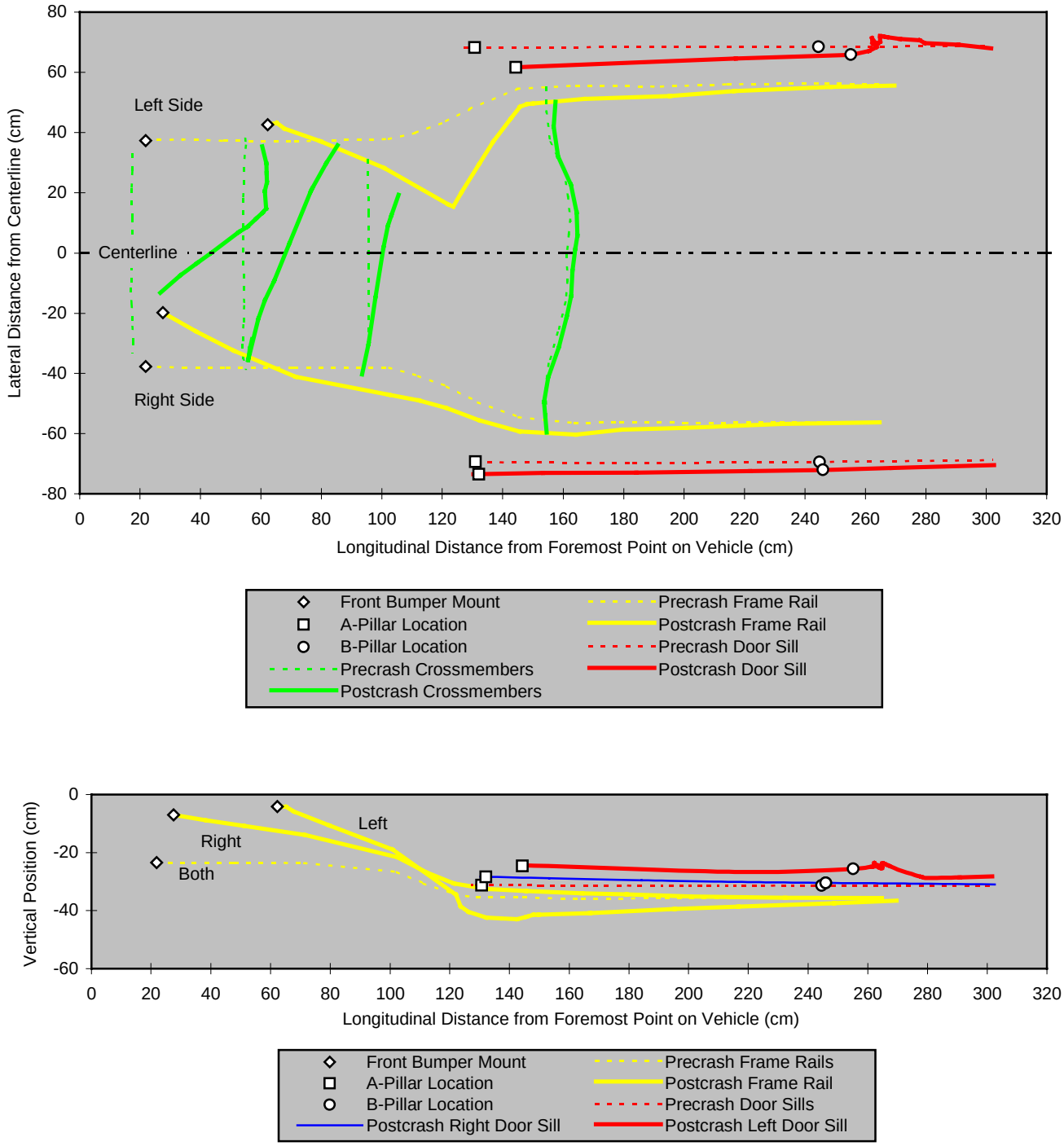


Figure 5
Structural Deformation, Views from Below and Side — 2000 Isuzu Rodeo



Various measures of intrusion were made after the crash. These residual measures of intrusion typically are less than the maximum deformation that occurs during the crash. The coordinate reference system for these measures is described in the IIHS Offset Barrier Crash Test Protocol (Version VII). The measures of deformation shown in Table 1 have been adjusted to better reflect the displacement of the various target locations relative to the driver, based on the locations of the four driver seat-attachment bolts. The average displacement of the seat-attachment bolts relative to the reference system also is shown in Table 1.

Table 1
Residual Measurements of Intrusion Relative to Driver Seat — 2000 Isuzu Rodeo

Selected Locations*	Longitudinal	Lateral	Vertical	Resultant
Steering column (cm)	4	2	9	10
Left lower instrument panel (cm)	–1	0	2	2
Right lower instrument panel (cm)	–1	0	0	1
Brake pedal (cm)	–15	–1	3	15
Left toepan (cm)	–11	–5	–1	12
Center toepan (cm)	–8	–2	–4	9
Right toepan (cm)	–8	–1	–3	9
Footrest (cm)	–13	–6	0	14
Average displacement of the four seat-attachment bolts relative to reference system (cm)	–7	0	2	n/a

* All measurements taken on driver side. From the driver's position, positive is forward, left, and up.

Restraint System Performance

Airbags

Driver: The uninflated driver airbag is approximately 64 cm in diameter, and the excursion of its center when inflated is limited by four tethers. The airbag is vented by two holes located at positions corresponding to 10 and 2 o'clock on the forward-facing surface of the airbag. Analysis of the high-speed film taken from camera positions C and E indicated the airbag deployed at 56 ms into the crash and appeared to be fully inflated at 76 ms.

Passenger: The corner-mounted passenger airbag deployed rearward and is untethered. The cylinder-shaped airbag is vented by two holes located at the lateral ends. The airbag did not contribute to windshield damage during deployment.

Seat Belts

This vehicle is equipped with dual-locking lap/shoulder belts with sliding latch plates and adjustable upper anchorage points at the front and rear outboard seating positions. The front belts also are equipped with mechanical force-limiting mechanisms. The front inboard lower anchorage points are attached to and move with the seats. The front outboard lower anchorage points are bolted to the lower B-pillars. The usual measurement of webbing pulled from the retractor could not be made because the pull-string attached between the shoulder belt webbing and the B-pillar trim was severed from the webbing. Postcrash investigation of the force-limiting torsion bar within the retractor spool indicated it was twisted about 45 degrees from its precrash orientation. This measure, combined with the estimated diameter of the retractor spool and stowed webbing (65 mm), suggested the force limiter contributed about 3 cm of webbing to the total amount pulled though the D-ring.

Seat

Postcrash examination of the driver seat rails indicated no discernible movement of the seat in its tracks during the crash. Extensive deformation of the floor underneath the inboard seat rail and behind the seat caused the seat to pitch forward and to tip outward into contact with the B-pillar.

Steering Column

The upper end of the steering column moved upward 9 cm and forward 4 cm relative to the driver seat.

Dummy Kinematics

Head, Neck, and Torso

Analysis of the high-speed film taken from camera position E indicated the deploying airbag contacted the dummy's face at 64 ms into the crash. The face remained in contact with the airbag as it inflated; full inflation occurred by 76 ms. Paint transferred from the dummy's face indicated the nose began to load the almost fully inflated airbag 7 cm directly above its center. During rebound from the airbag, the dummy's head rotated to the right and moved downward toward the window sill and outward past the precrash plane of the window. The head then moved upward and inward until the top center of the head contacted the outer portion of the roof side rail ahead of the B-pillar. Head acceleration and neck force measurements indicated this contact occurred at 304 ms. As the head continued to move back through the door aperture, the right rear side of the head contacted the upper outboard portion of the head restraint. Table 2 provides the timing of these events.

Table 2 Restraint System Performance and Dummy Kinematics — 2000 Isuzu Rodeo	
Event	**Time (ms)**
Deployment of airbag	56
Airbag contacts face during deployment	64
Face begins to load airbag	72
Airbag fully inflated	76
Left rear portion of head closest to window sill	174
Top center of head contacts roof rail	304

Figure 6
Dummy and Vehicle Interior, Postcrash — 2000 Isuzu Rodeo

Legs and Feet

Left leg and foot: Paint transferred from the dummy's left knee indicated the knee primarily contacted the knee bolster at the left instrument panel intrusion reference point. The knee then moved to the right and was found just below the left underside of the steering column trim, where a smaller paint transfer mark was noted. Paint transferred from the dummy's left shin indicated the shin contacted the bolster below the knee impact location on the bolster and then moved to the right and contacted the left edge of the bolster's protrusion around the steering column. The left foot was found slightly dorsiflexed, fully everted, and internally rotated about 40 degrees. The medial toe was resting against the accelerator pedal arm, and the medial back of the heel was on the flat floormat/carpeting on the floorpan. The sole of the forefoot was suspended behind and above the intruded toepan to the right of the footrest.

Right leg and foot: Paint transferred from the dummy's right knee indicated the knee contacted the knee bolster 2 cm below and 3 cm to the left of the right instrument panel intrusion reference point. Paint transferred from the dummy's right shin indicated the shin contacted the bolster directly below the knee impact location. There was also a small transfer mark from the shin on the right edge of the bolster's protrusion around the steering column. The right foot was found slightly dorsiflexed and somewhat inverted, with the back of the heel resting on the floormat/carpeting on the floorpan and the sole of the forefoot suspended behind and above the accelerator pedal.

Dummy Injury Measures

Head

The maximum vector resultant head accelerations were recorded and the HICs were calculated during an interval that corresponds with the dummy's head excursion into the airbag. The HIC-15 was 884 during the interval 86-101 ms, and the maximum resultant head acceleration was 87 g at 95 ms. The peak resultant head acceleration from the roof rail contact was 8 g at 315 ms. Table 3 provides a summary of the maximum head injury measurements recorded during the crash.

Table 3
Head Injury Measurements — 2000 Isuzu Rodeo

Measure	Published Tolerance Threshold	Result	Time (ms)
Vector resultant acceleration (g)	80	87	95
Vector resultant acceleration — 3 ms clip (g)	80	85	93-96
Head Injury Criterion (HIC)	1000	1166	80-109
Head Injury Criterion — 15 ms interval (HIC-15)*	700	884	86-101

* Canadian Motor Vehicle Safety Regulations (Standard 208) allow the resultant head acceleration to exceed 80 g in airbag-equipped vehicles if HIC-15 is less than 700 (Transport Canada, 1998).

Neck

Table 4 provides a summary of the maximum neck injury measurements recorded during the crash. The maximum neck axial tension was 2.7 kN at 86 ms. None of the recorded neck force measures exceeded the magnitude-duration injury criteria (Figures A-13 to A-16).

Table 4
Neck Injury Measurements — 2000 Isuzu Rodeo

Measure	Published Tolerance Threshold	Result	Time (ms)
A-P shear force (kN)	±3.1	0.6	90
Axial compression force (kN)	4.0	0.7	328
Axial tension force (kN)	3.3	2.7	86
Flexion bending moment (Nm)	310	11	91
Extension bending moment (Nm)	122	31	162

Chest

Table 5 provides a summary of the maximum chest injury measurements recorded during the crash.

Table 5
Chest Injury Measurements — 2000 Isuzu Rodeo

Measure	Published Tolerance Threshold	Result	Time (ms)
Vector resultant spine acceleration — 3 ms clip (g)	60	51	90-93
Rib compression (mm)	–50	–39	98
Sternum deflection rate (m/s)	–8.2	–1.5	82

Legs and Feet

Left leg and foot: The maximum left foot I-S acceleration was –304 g at 58 ms, and the maximum resultant left foot acceleration was 327 g at 58 ms.

Right leg and foot: The maximum resultant right foot acceleration was 157 g at 66 ms.

Table 6 provides a summary of the maximum leg and foot injury measurements recorded during the crash.

Table 6
Leg and Foot Injury Measurements — 2000 Isuzu Rodeo

Measure	Published Tolerance Threshold	Left		Right	
		Result	Time (ms)	Result	Time (ms)
Femur axial force (kN)	–9.1*	–2.7	66	–3.7	68
Tibia-femur displacement (mm)	–15	–4	67	–10	69
Upper Tibia					
L-M moment (Nm)	±225	–70	60	51	75
A-P moment (Nm)	±225	–111	59	73	66
Vector resultant moment (Nm)	225	111	59	79	66
Index	1.00	0.54	59	0.42	69
Lower Tibia					
L-M moment (Nm)	±225**	85	59	–31	71
A-P moment (Nm)	±225**	105	68	45	68
Vector resultant moment (Nm)	225**	125	68	52	68
Axial force (kN)	–8.0**	–1.8	59	–3.9	70
Index	1.00	0.57	68	0.34	68
Foot					
A-P acceleration (g)	±150	–132	60	–139	66
I-S acceleration (g)	±150	–304	58	–123	70
Vector resultant acceleration (g)	150	327	58	157	66

* This critical value is for instantaneous loading. Femur loads are compared with magnitude-duration injury criteria in Figures A-24 and A-37.

** These published thresholds are for fractures of the tibia. Ankle and foot injuries have been associated with bending moments as low as 50-100 Nm, and heel fractures have been associated with axial forces as low as –6.0 kN.

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Appendix

Low-Speed Crash Test Damage Repair Estimate

Dummy Clearance Measurements

Graph Index — index to graphs of time plots of dummy and vehicle data

Manufacturer's window sticker

Low-Speed Crash Test Damage Repair Estimate

2000 Isuzu Rodeo Midsize Four-Door Utility Vehicle: 5 mi/h Front into Angle Barrier

Test Number: LA00009
VIN: 4S2DM58W2Y4320411
Mileage: 37
Features: Driver and passenger airbags, four-wheel antilock brakes, air conditioning, automatic transmission, keyless entry system, power door locks, power windows, heated back glass, rear wiper, tilt steering wheel, cruise control, full-size spare tire, luggage rack, and two-stage paint.

	Part		Labor	
Description	**Mfg. No**	**Price**	**Operation**	**Hours**
Bumper cover, front	8972216230	$212.84	Replace	
Bumper cover, front			Refinish	3.7
Bumper reinforcement bar, front	8972146900	106.44	Replace*	1.8
Bumper mounting bracket, right front	8972090851	31.82	Replace*	
Bumper cover retainer bracket, right front	8971355390	17.15	Replace*	0.2
Grille assembly			Repair	1.0
Grille assembly			Refinish	1.2
Grille assembly			Remove/reinstall	0.3
ISUZU nameplate, grille			Remove/reinstall	0.2
Headlamp assembly, right	8972084260	129.45	Replace	
Headlamps			Aim	0.5
Parking lamp and turn signal assembly, right front	8972084300	29.05	Replace*	
Hood			Repair*	4.0
Hood			Refinish	3.4
Hood vertical hood latch support			Remove/reinstall	0.3
Radiator support			Repair*	4.0
Radiator support			Refinish	0.5
Radiator			Repair	0.3
Battery tray			Repair	0.5
Air conditioning condenser			Loosen/retighten	0.1
Inner fender panel, right front			Repair*	1.5
Inner fender panel, right front			Refinish	0.2
Fender, right front			Repair*	5.0
Fender, right front			Refinish	2.3
Fender, right front			Remove/reinstall	3.0
V6 nameplate, fender, right front	8971490290	3.88	Replace	0.2
Fender skirt, right front	8972239080	15.45	Replace	
Windshield washer reservoir	8971789230	29.17	Replace	0.4
Radiator support/inner fender panel			Set up*	1.0
Radiator support/inner fender panel			Pull/align*	2.0
Battery/fuse block/coolant recovery tank			Remove/reinstall	0.5
Windshield washer nozzles, hood			Remove/reinstall	0.4
Hood latch			Loosen/retighten	0.1
Nut plate, right front rail end			Repair*	0.5
Nut plate, right front rail end			Refinish	0.1
Horn protector	8971692741	14.60	Replace	
Paint and materials		205.20		
Total Parts		$795.05		
Total Labor		1,332.80		39.2
Grand Total		$2,127.85		

* This item was repaired or replaced as indicated before the 40 mi/h frontal offset test.

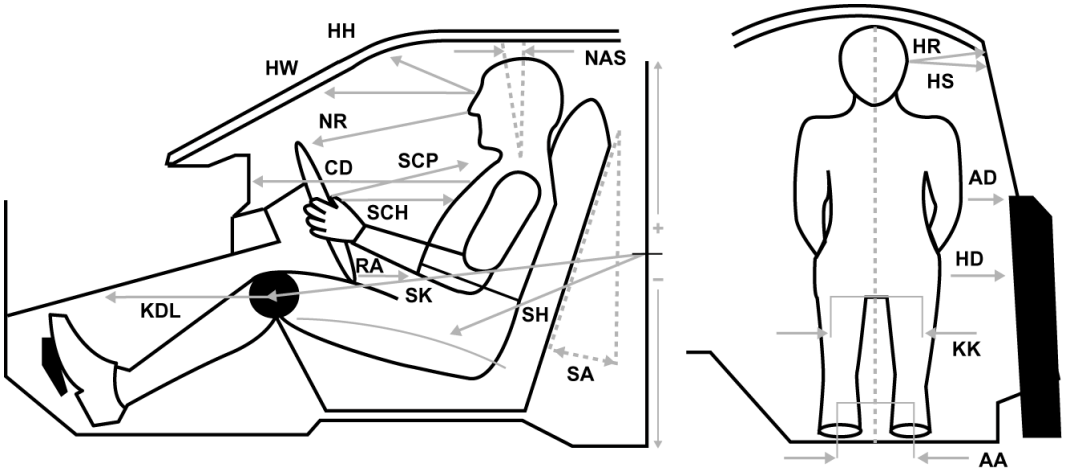
Dummy Clearance Measurements

Test Number: CF00014
Vehicle Make/Model: Isuzu Rodeo
Vehicle Model Year: 2000
Seat Type: Manually adjusted bucket seat (fore/aft and seat back angle)

Manufacturer's Specifications
Seat Back Information: Reclined to 5th position from most upright
Upper Belt Anchorage: Set to midpoint of 5 positions
Steering Column Adjustment: Set to 4th from top of 6 tilt positions

Location	Code	Measure	Location	Code	Measure
Head to header	HH	360	Neck angle, torso 90	NAT90	20.1°
Head to windshield	HW	539	Neck angle, seated*	NAS	5.3°
Nose to rim	NR	400	Torso angle (NAT90 – NAS)	TA	14.8°
Chest to dash	CD	578	Striker to knee**	SK	650
Rim to abdomen	RA	183	Striker to knee angle**	SKA	2.2°
Knee to dash, left	KDL	209	Striker to H-point, horizontal	SHH	265
Knee to dash, right	KDR	179	Striker to H-point, vertical	SHV	70
Steering wheel to chest, horizontal	SCH	302	Ankle to ankle	AA	335
Steering wheel to chest, perpendicular	SCP	400	Knee to knee	KK	345
Steering wheel to chest, reference	SCR	389	Arm to door	AD	92
Hub to chest, minimum	HCM	241	H-point to door	HD	140
Pelvic angle	PA	24.9°	Head to A-pillar	HA	532
Seat back angle	SA	22.6°	Head to roof	HR	220
			Head to side window	HS	258

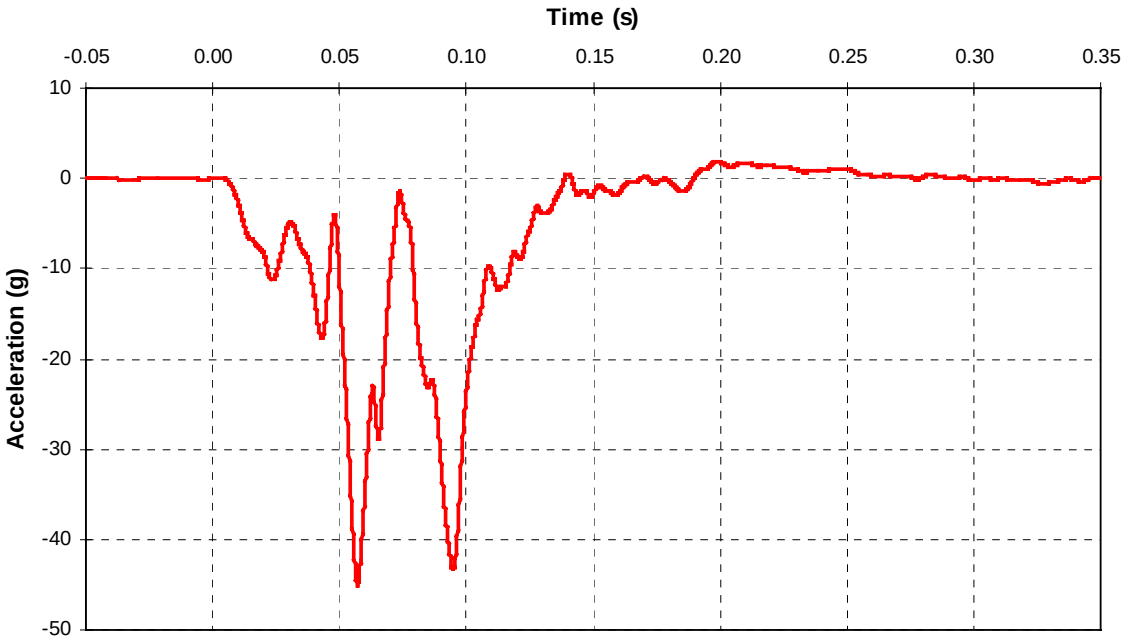
All distance measurements are in millimeters (mm).
* Dummy's neck bracket was adjusted to –3.5° to achieve a level instrumentation plane.
** These measurements were made in a vertical plane containing the striker and parallel to the driver door sill.



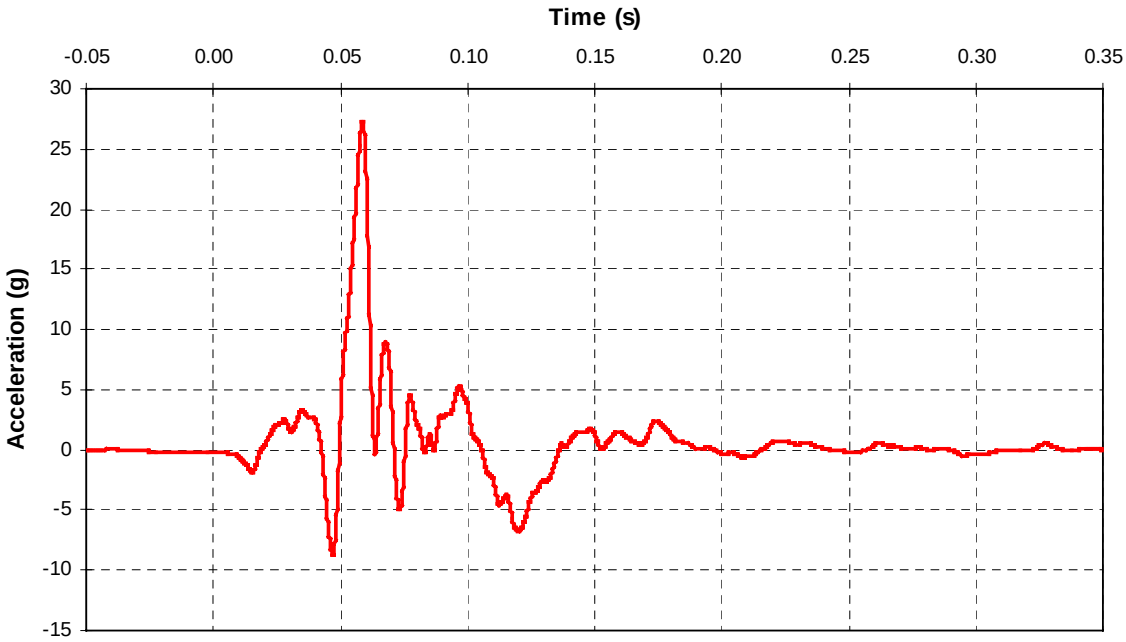
Graph Index

A-47 Right foot A-P acceleration
A-48 Right foot I-S acceleration

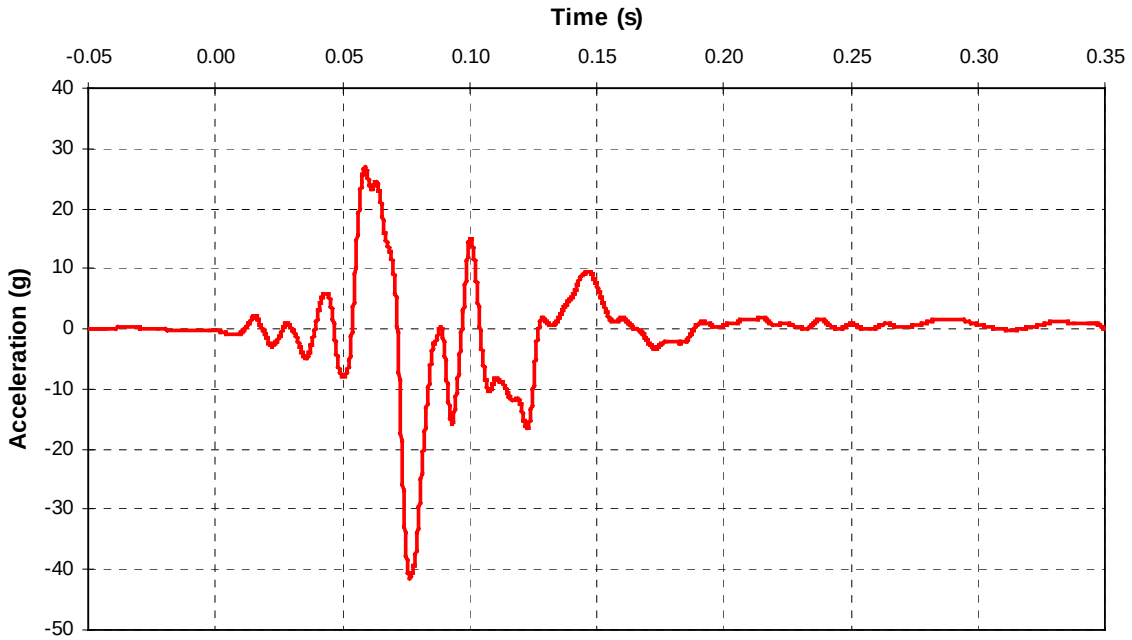
A- 1 CF00014 2000 Isuzu Rodeo Vehicle Longitudinal Acceleration



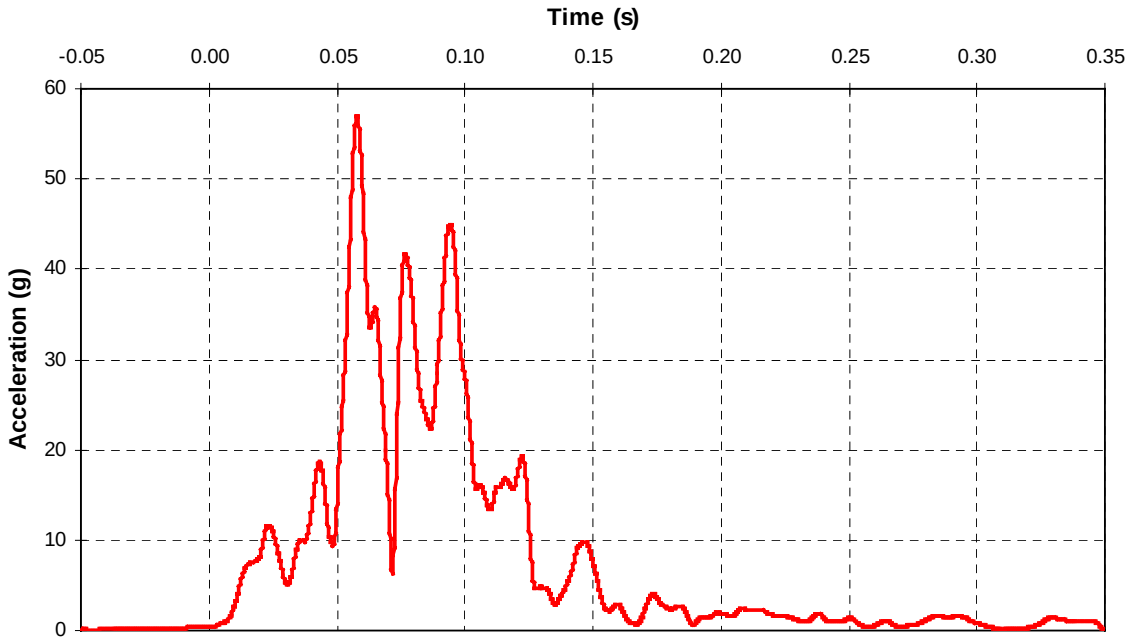
A- 2 CF00014 2000 Isuzu Rodeo Vehicle Lateral Acceleration



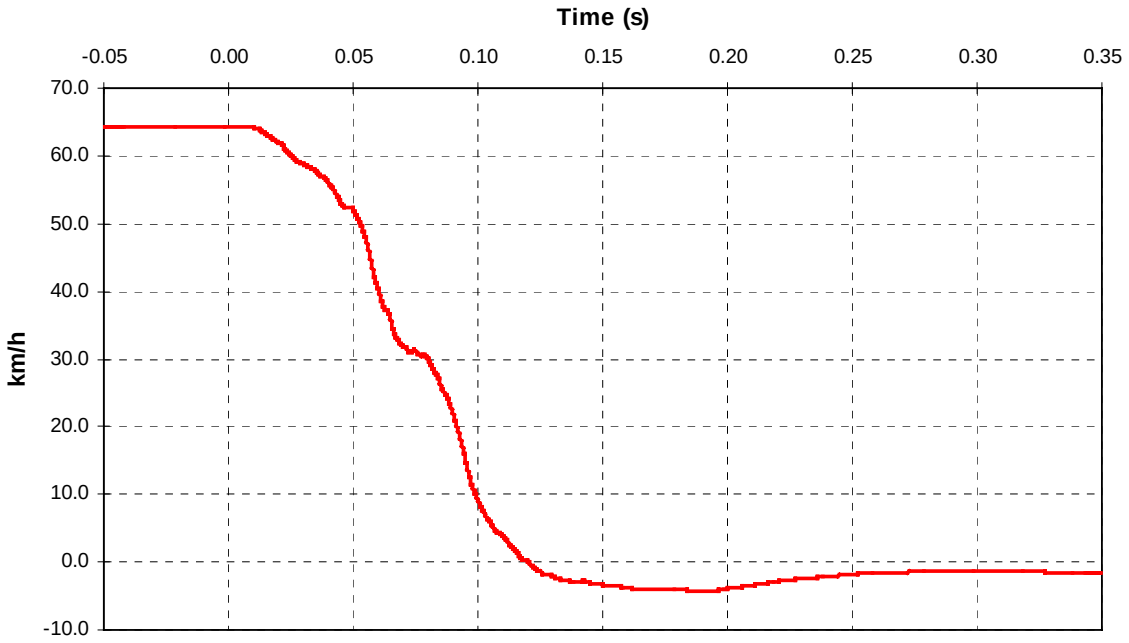
A- 3 CF00014 2000 Isuzu Rodeo Vehicle Vertical Acceleration



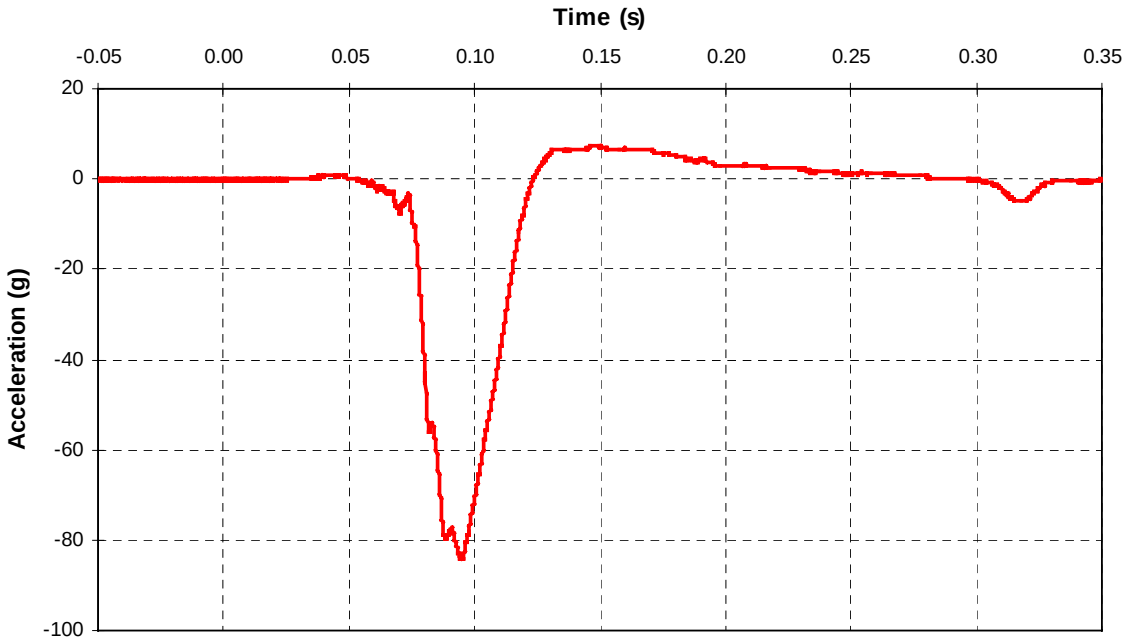
A- 4 CF00014 2000 Isuzu Rodeo Vehicle Vector Resultant Acceleration



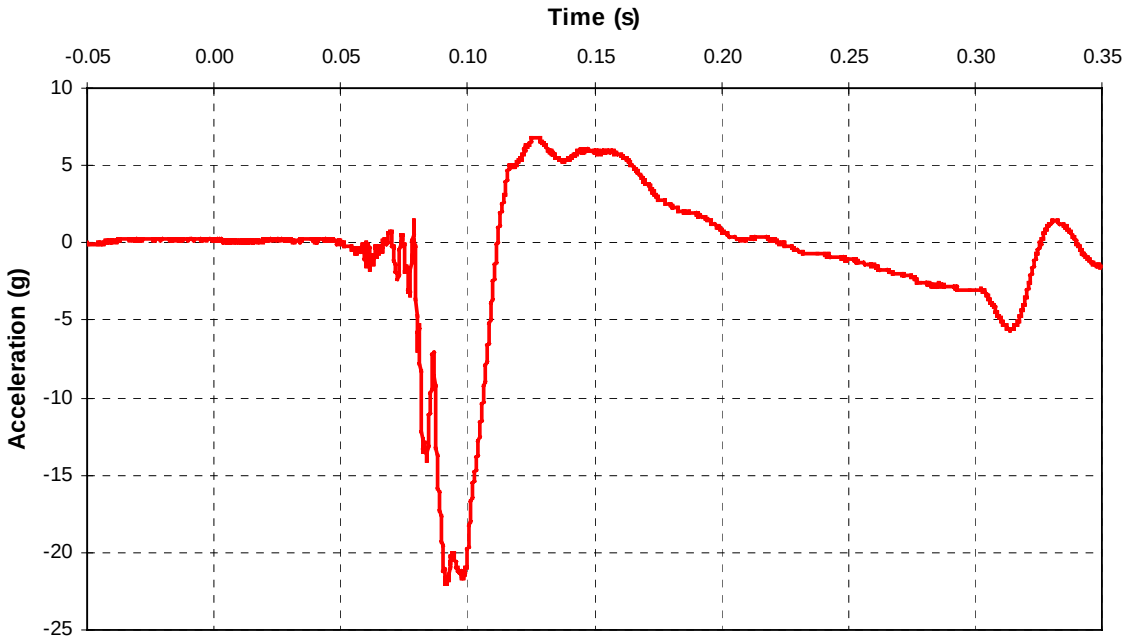
A- 5 CF00014 2000 Isuzu Rodeo Integration of Vehicle Longitudinal Acceleration



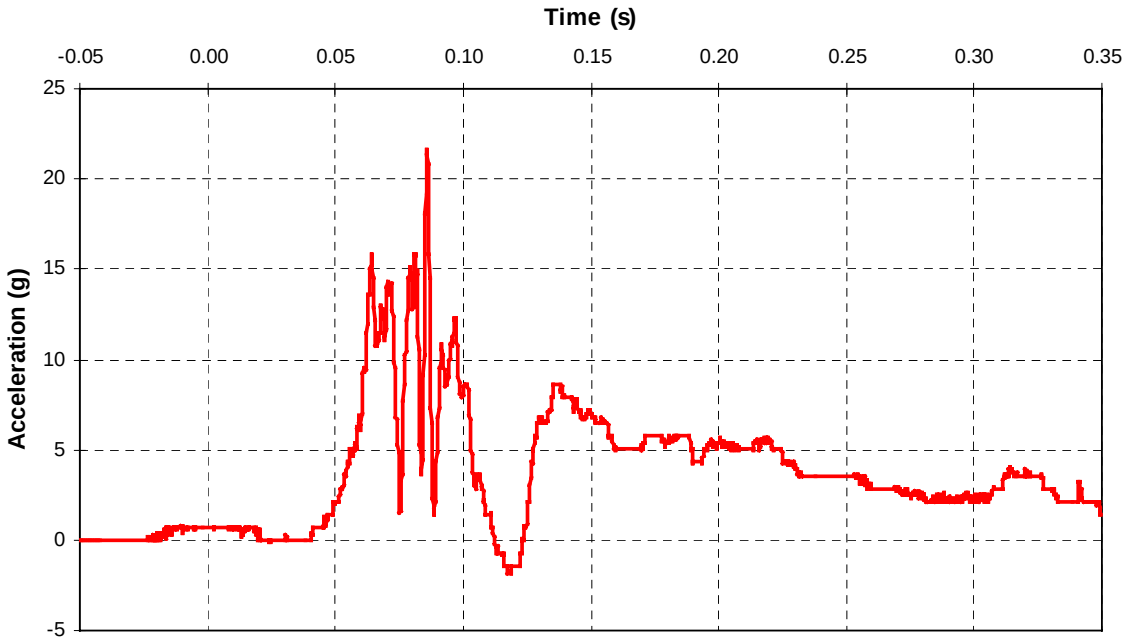
A- 6 CF00014 2000 Isuzu Rodeo Head A-P Acceleration



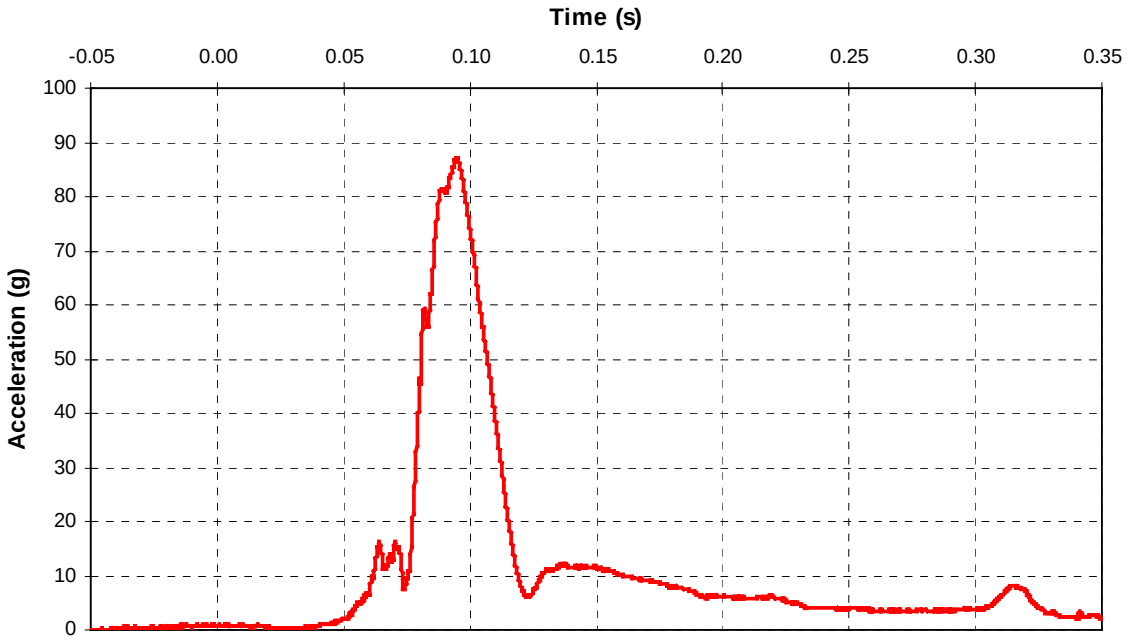
A- 7 CF00014 2000 Isuzu Rodeo Head L-M Acceleration



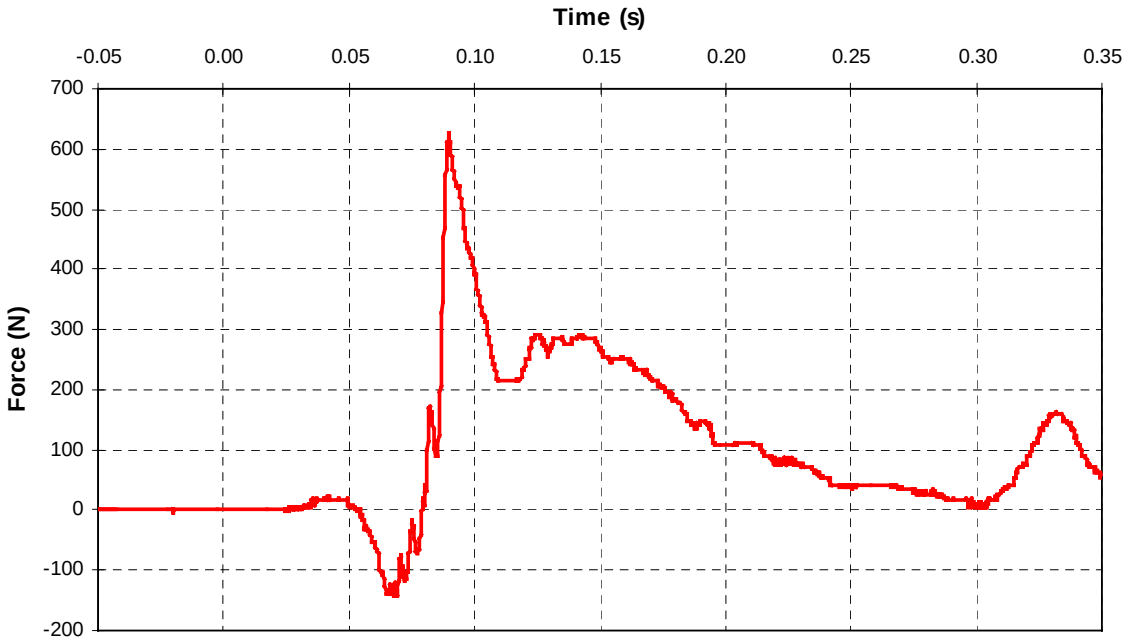
A- 8 CF00014 2000 Isuzu Rodeo Head I-S Acceleration



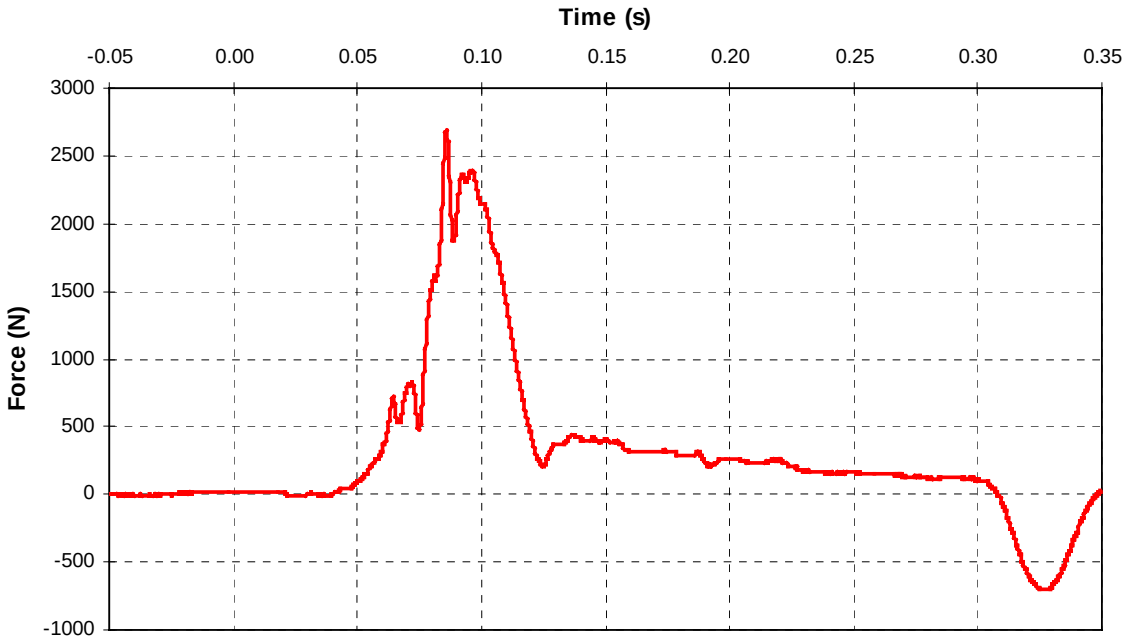
A- 9 CF00014 2000 Isuzu Rodeo Head Vector Resultant Acceleration



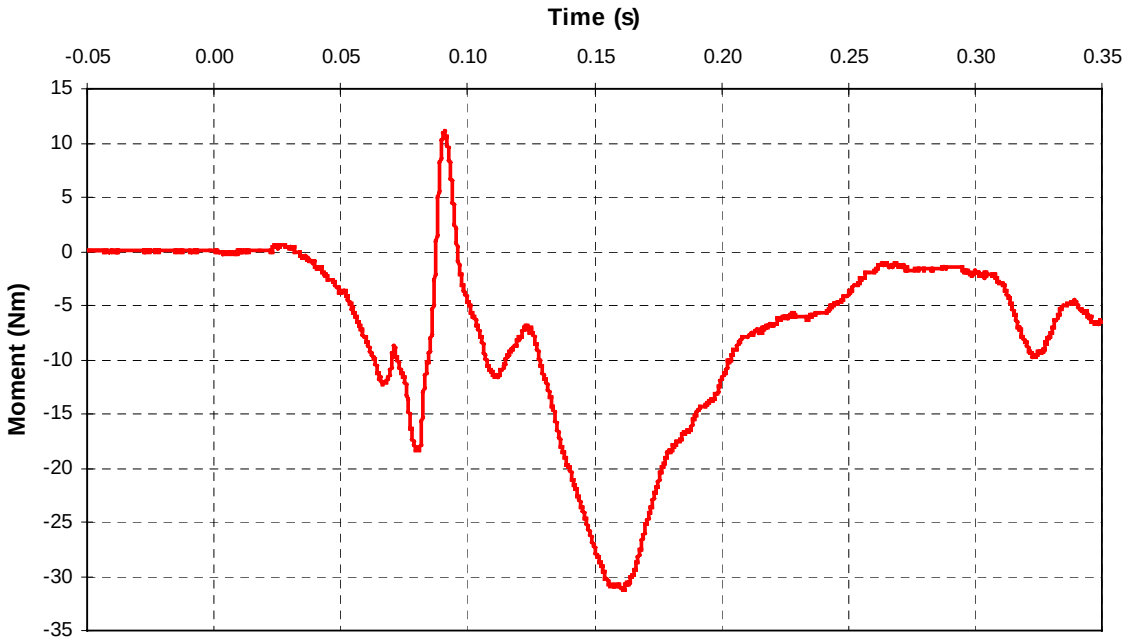
A- 10 CF00014 2000 Isuzu Rodeo Neck A-P Shear Force



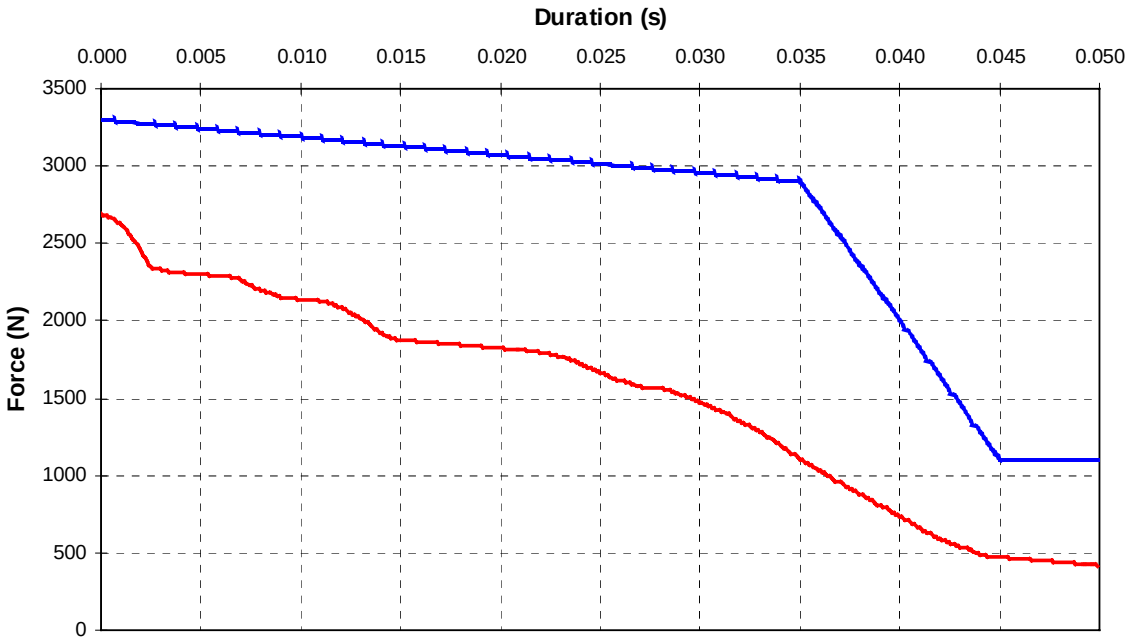
A- 11 CF00014 2000 Isuzu Rodeo Neck Axial Force



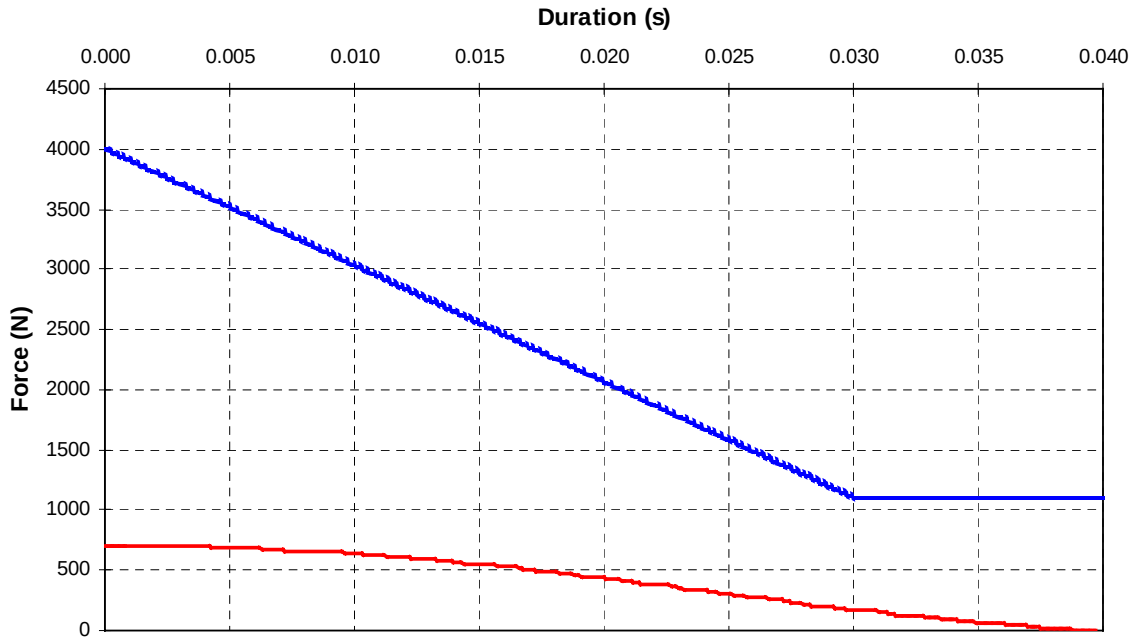
A- 12 CF00014 2000 Isuzu Rodeo Neck Occipital A-P Moment



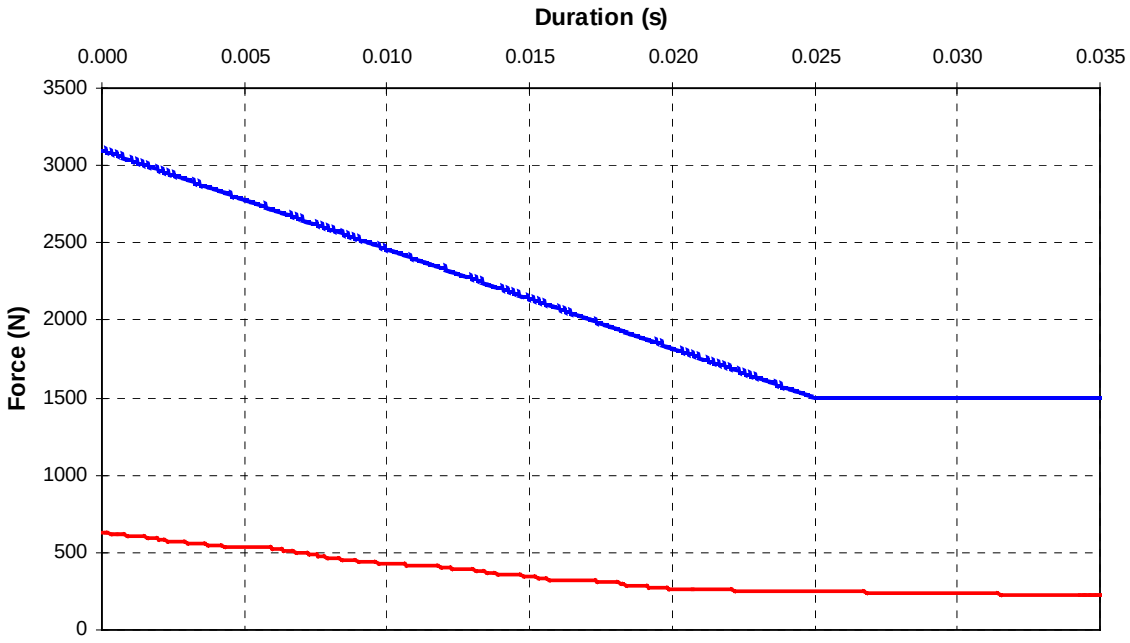
A- 13 CF00014 2000 Isuzu Rodeo Neck Tension Analysis



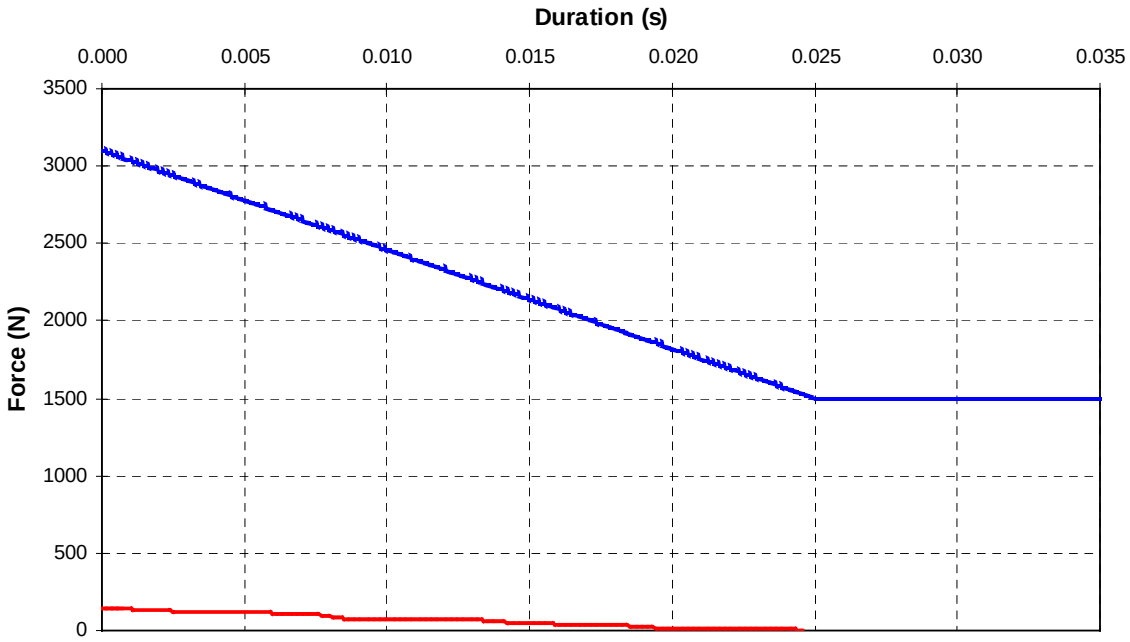
A- 14 CF00014 2000 Isuzu Rodeo Neck Compression Analysis



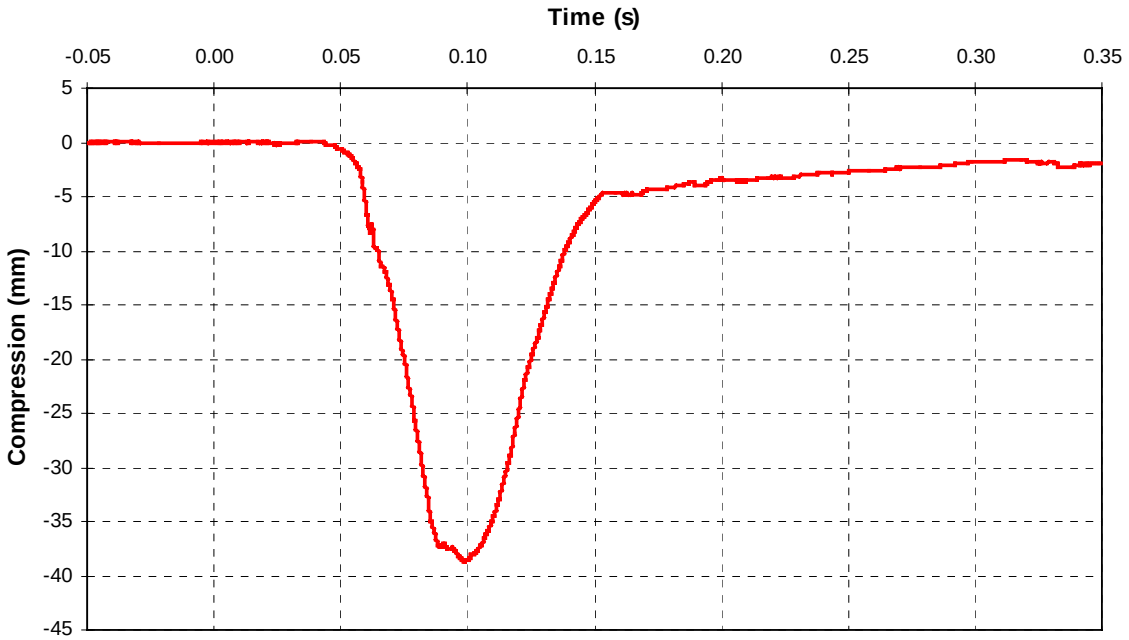
A- 15 CF00014 2000 Isuzu Rodeo Neck A-P Shear (Positive) Analysis



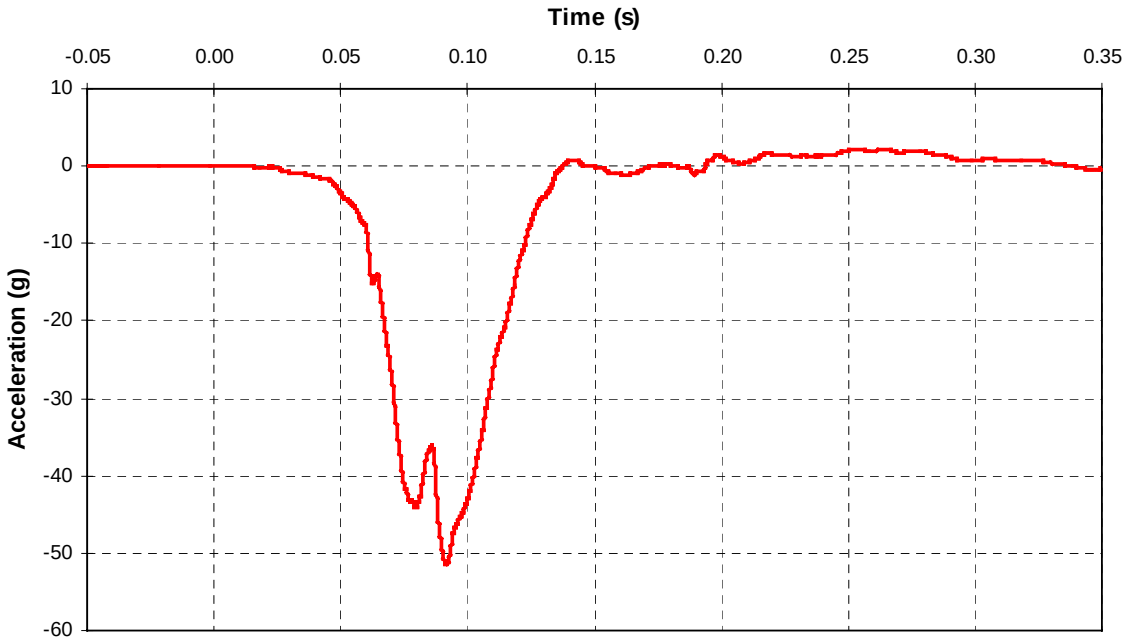
A- 16 CF00014 2000 Isuzu Rodeo Neck A-P Shear (Negative) Analysis



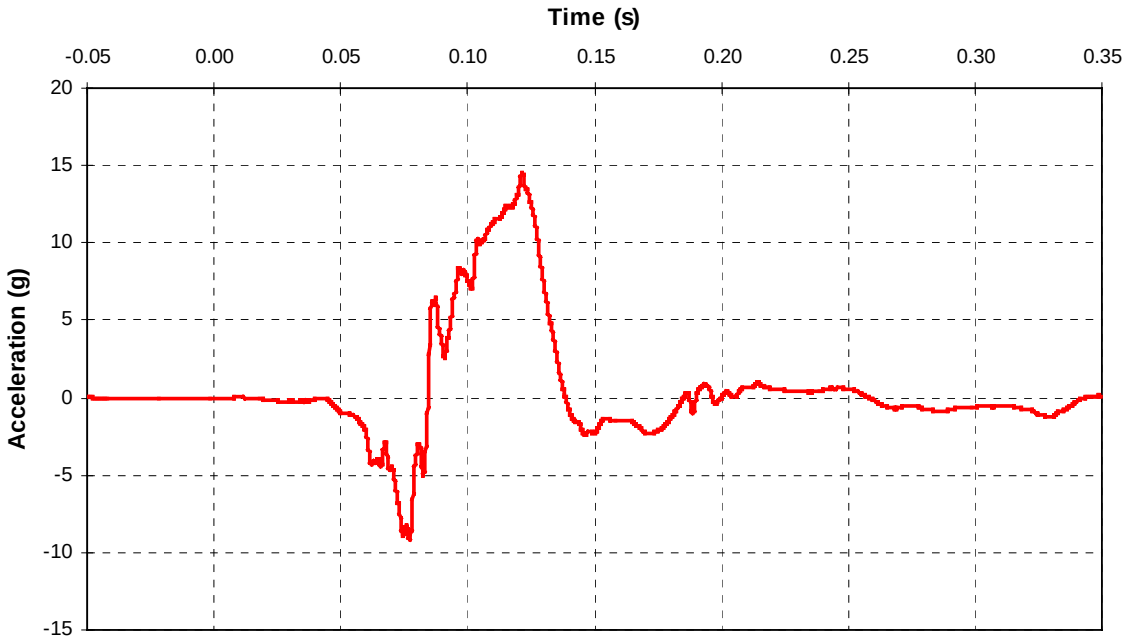
A- 17 CF00014 2000 Isuzu Rodeo Chest Compression



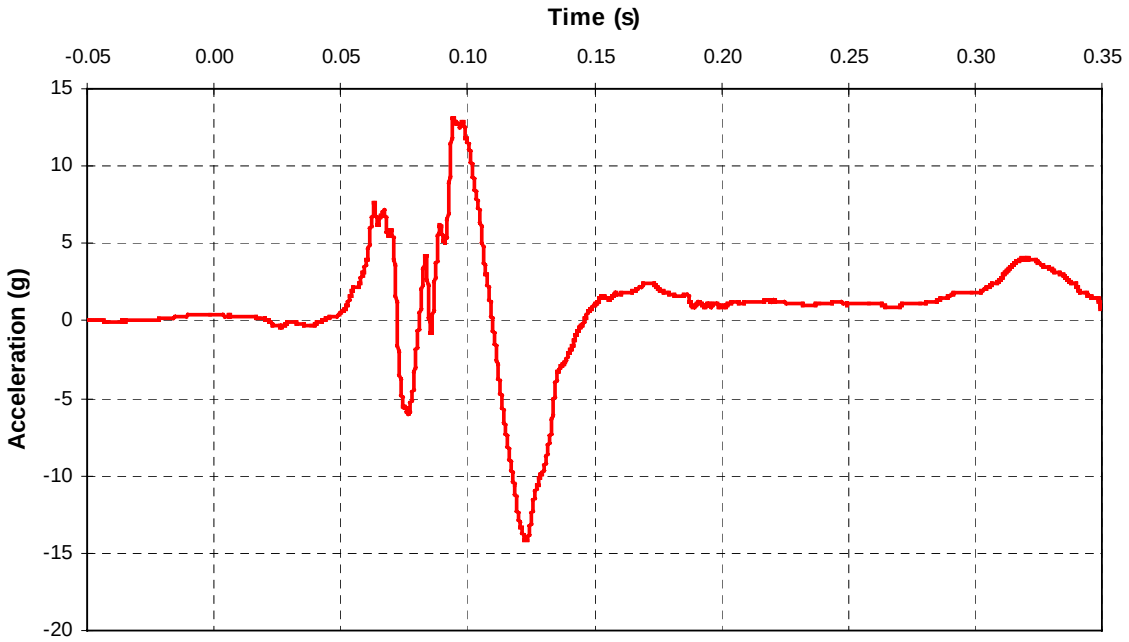
A- 18 CF00014 2000 Isuzu Rodeo Chest A-P Acceleration



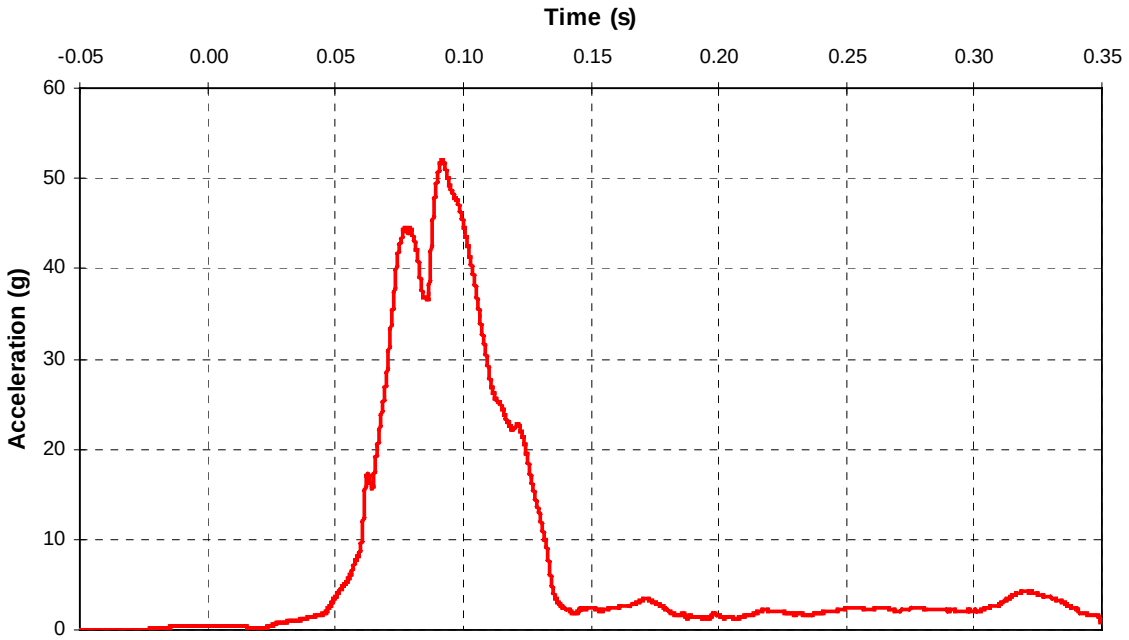
A- 19 CF00014 2000 Isuzu Rodeo Chest L-M Acceleration



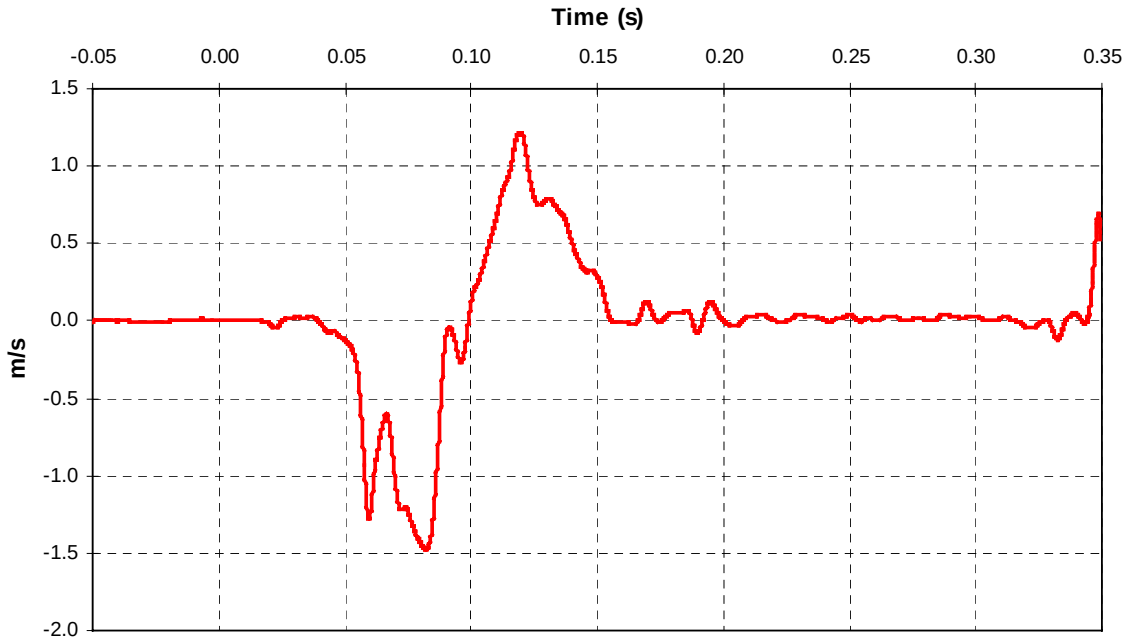
A- 20 CF00014 2000 Isuzu Rodeo Chest I-S Acceleration



A- 21 CF00014 2000 Isuzu Rodeo Chest Vector Resultant Acceleration

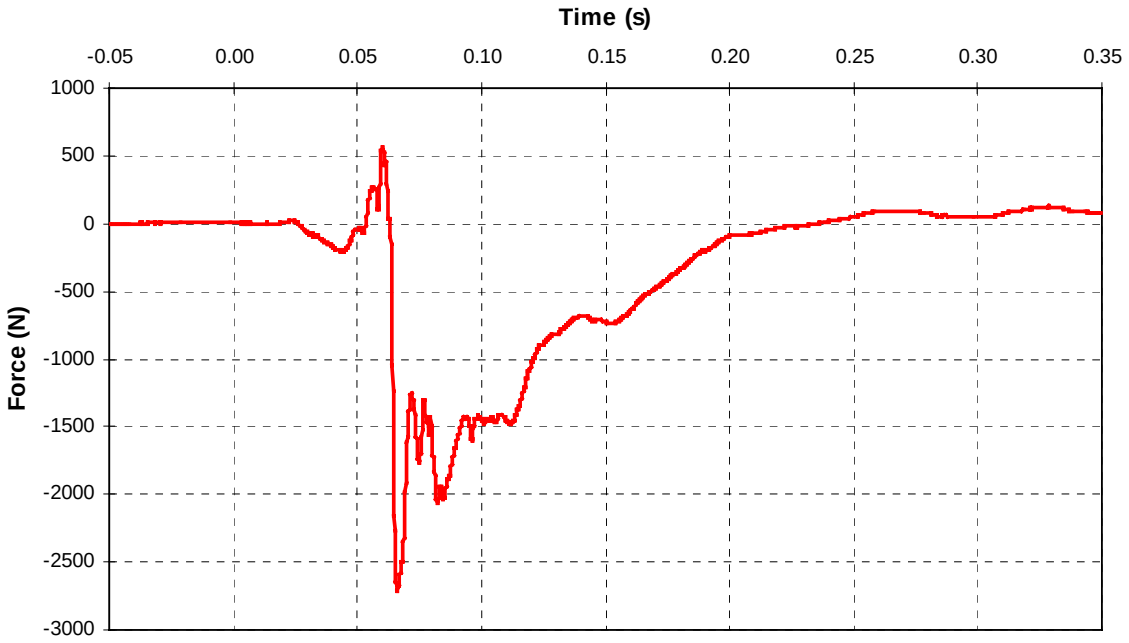


A- 22 CF00014 2000 Isuzu Rodeo Sternum Deflection Rate

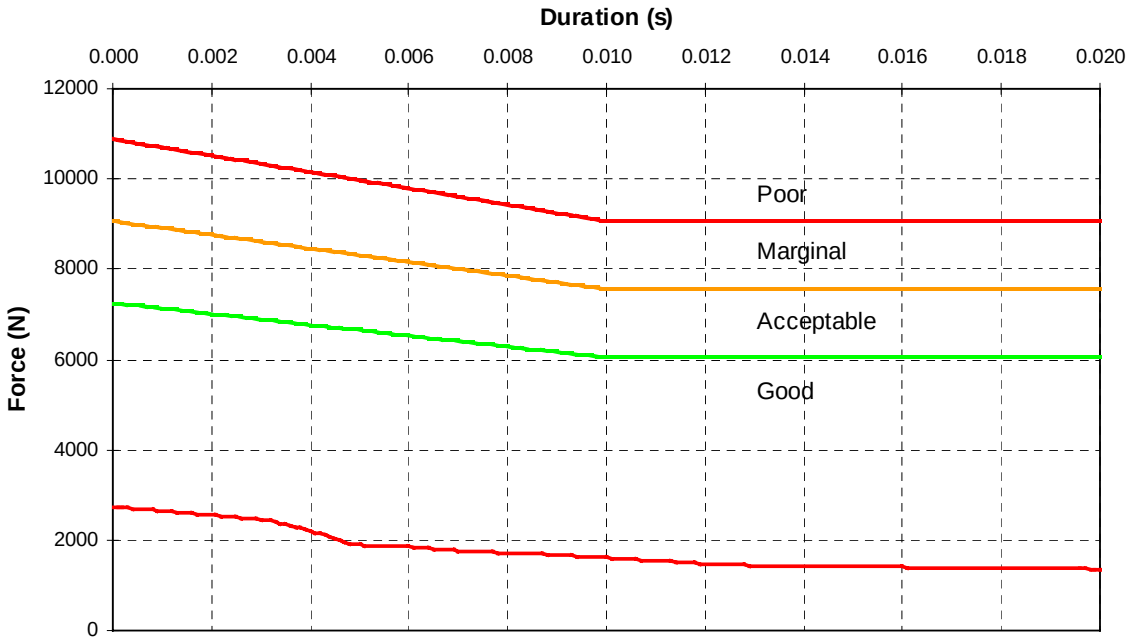


Sternum deflection rate is calculated from the sternum deflection filtered to CFC 60

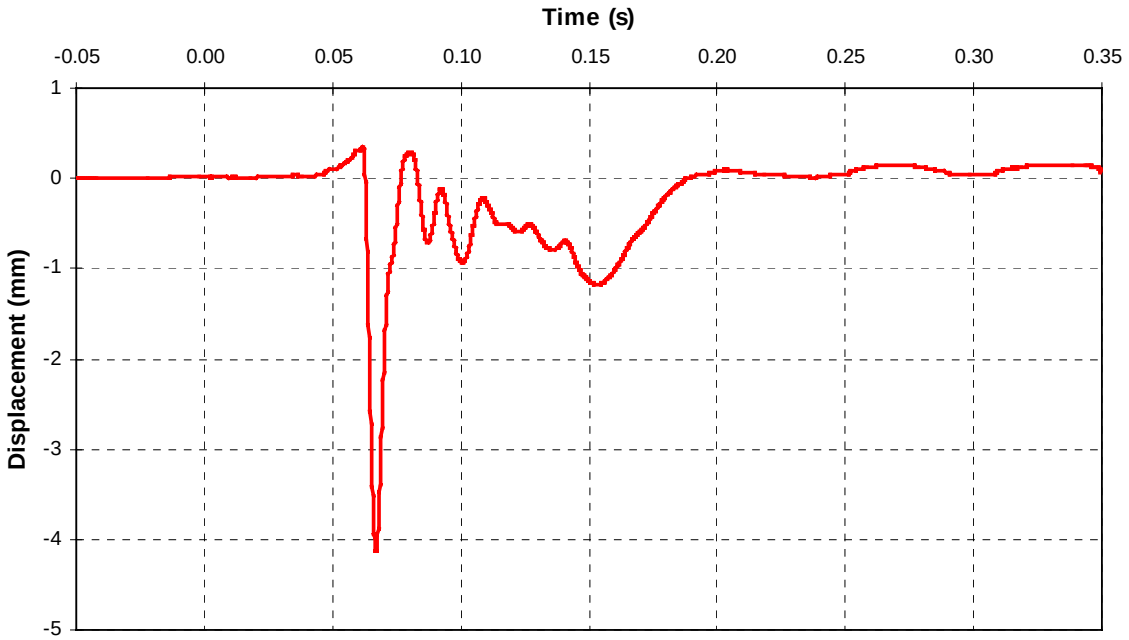
A- 23 CF00014 2000 Isuzu Rodeo Left Femur Axial Force



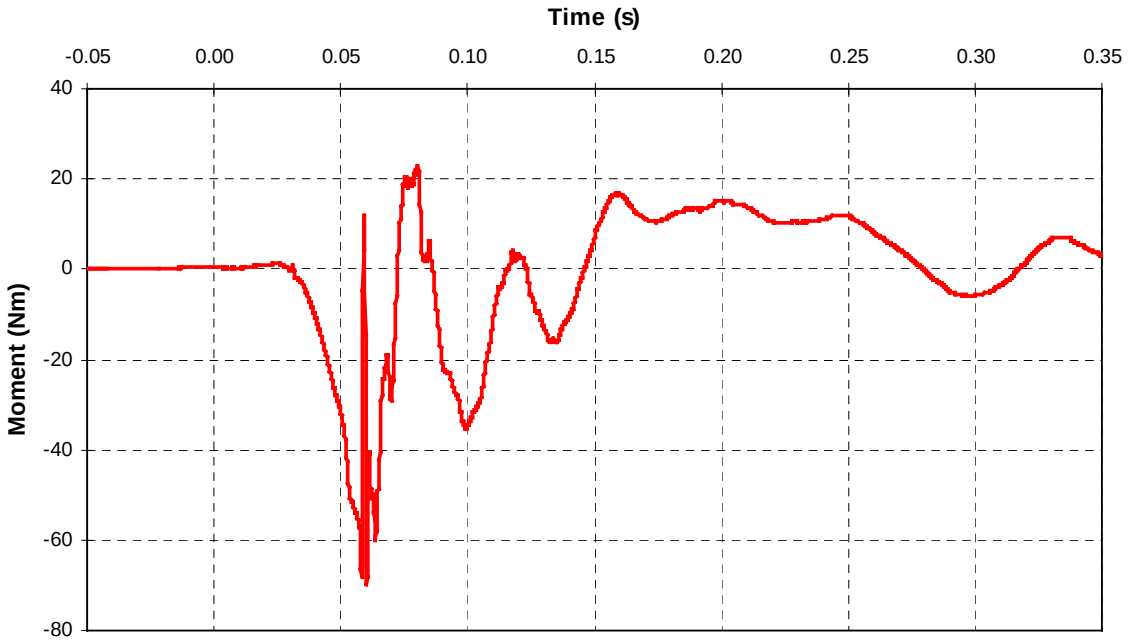
A- 24 CF00014 2000 Isuzu Rodeo Left Femur Axial Force Analysis



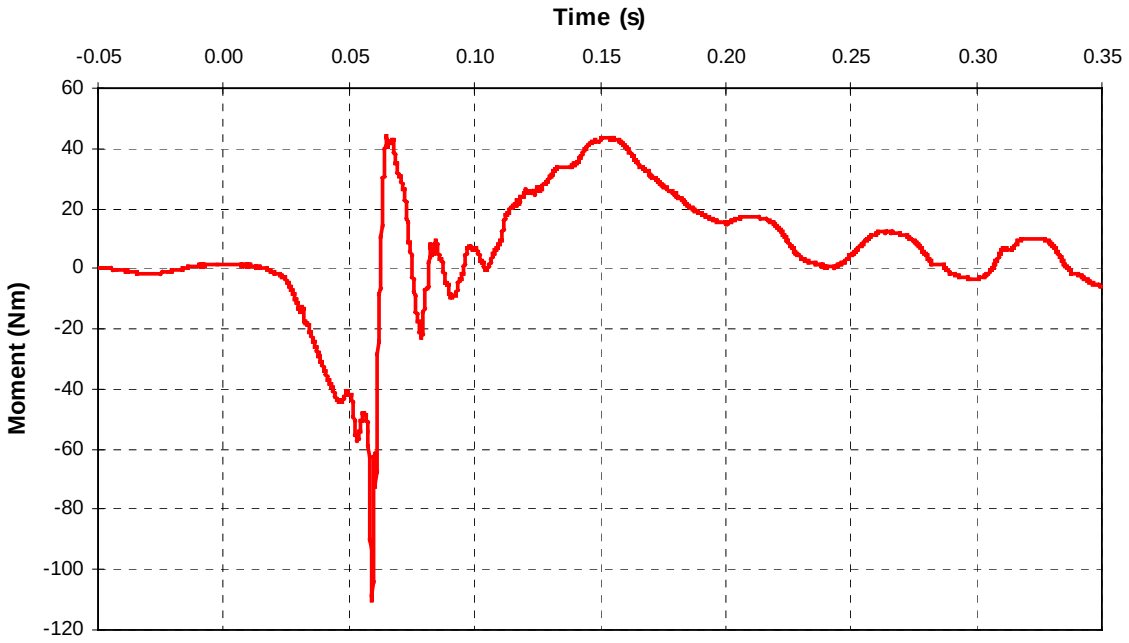
A- 25 CF00014 2000 Isuzu Rodeo Left Tibia-Femur Displacement



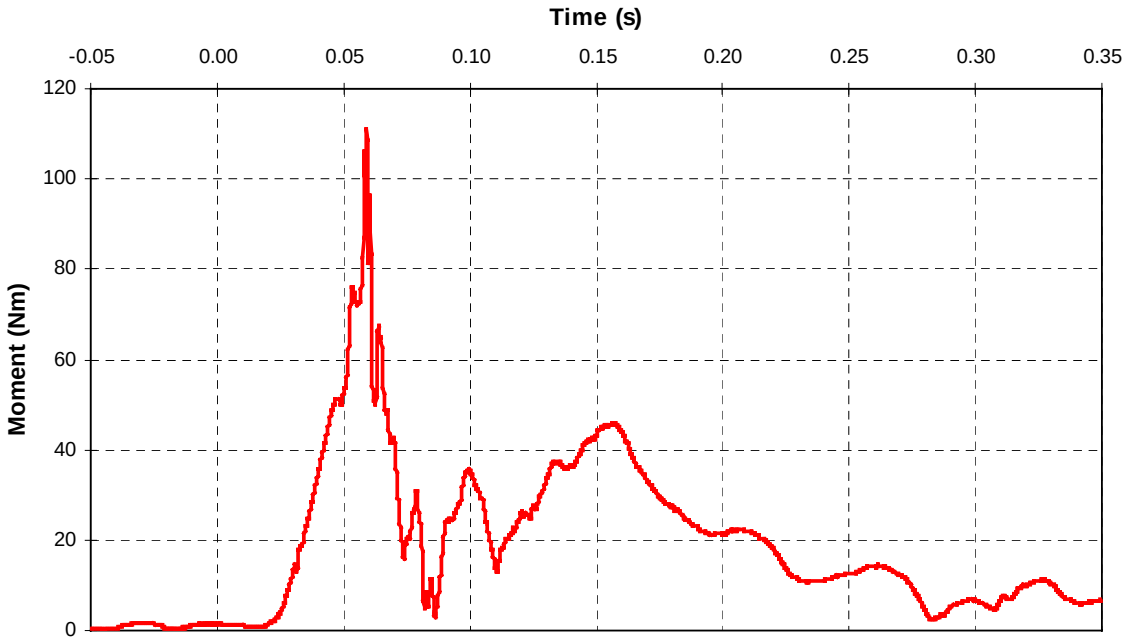
A- 26 CF00014 2000 Isuzu Rodeo Left Upper Tibia L-M Moment



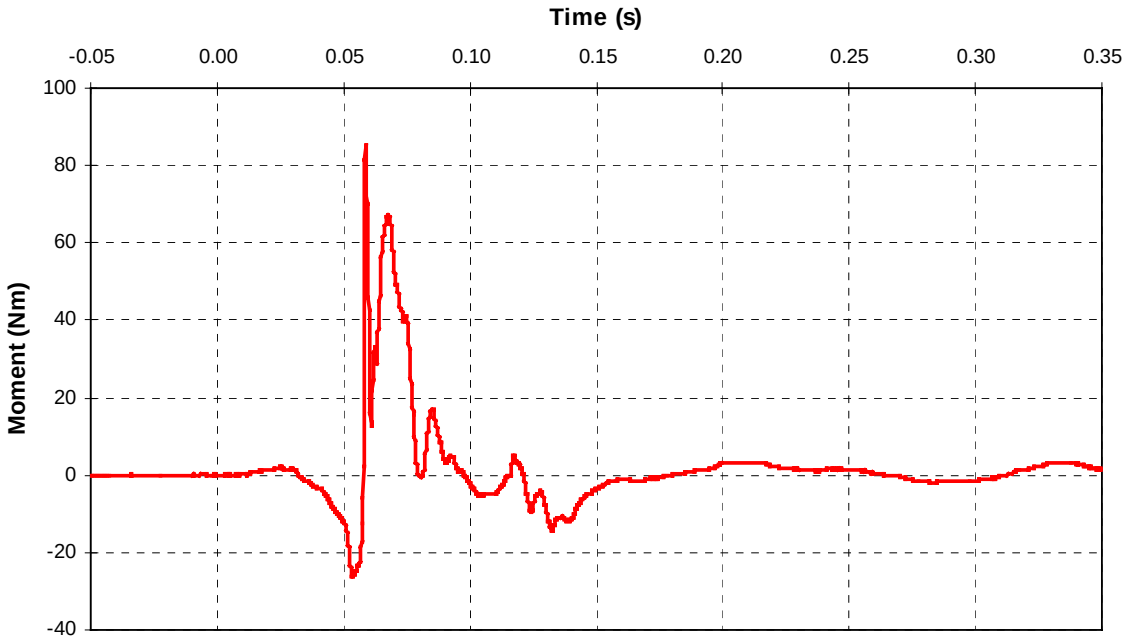
A- 27 CF00014 2000 Isuzu Rodeo Left Upper Tibia A-P Moment



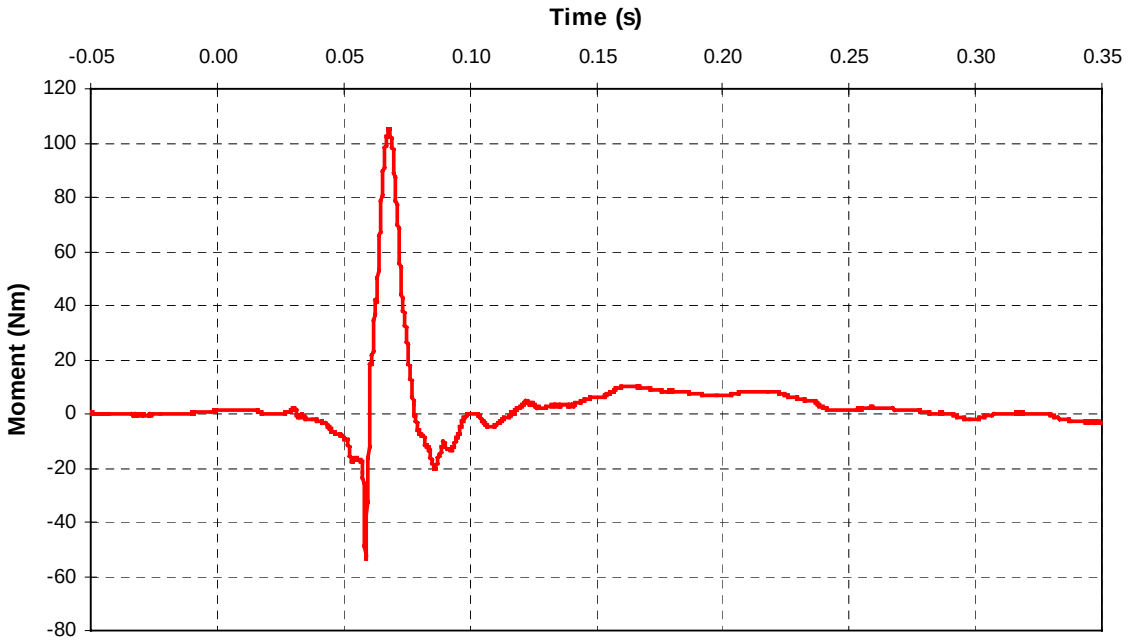
A- 28 CF00014 2000 Isuzu Rodeo Left Upper Tibia Vector Resultant Moment



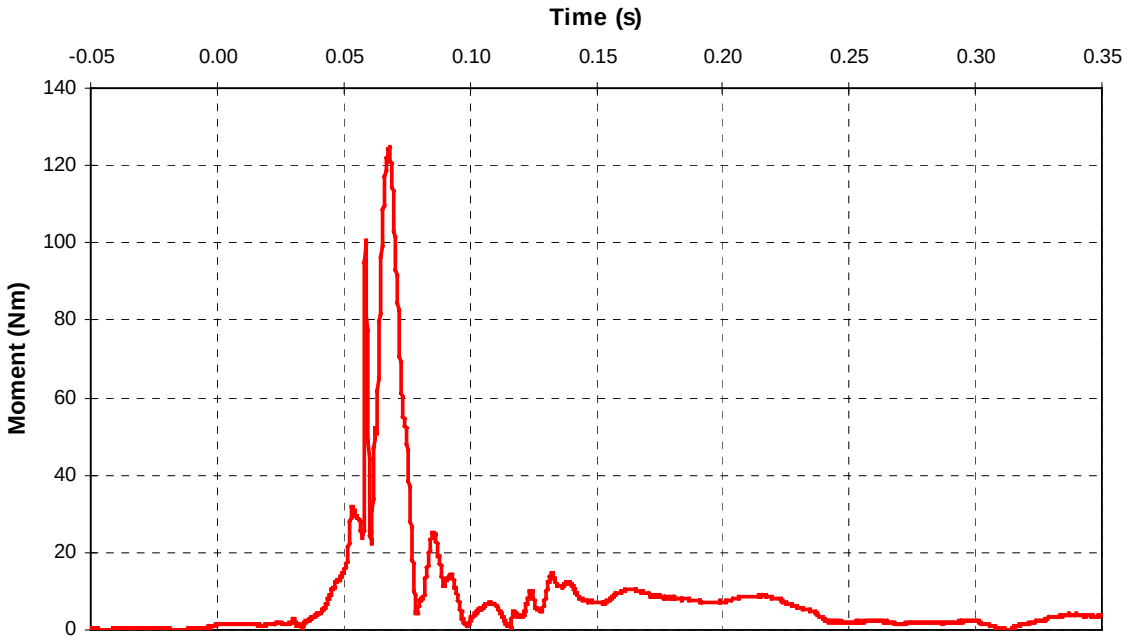
A- 29 CF00014 2000 Isuzu Rodeo Left Lower Tibia L-M Moment



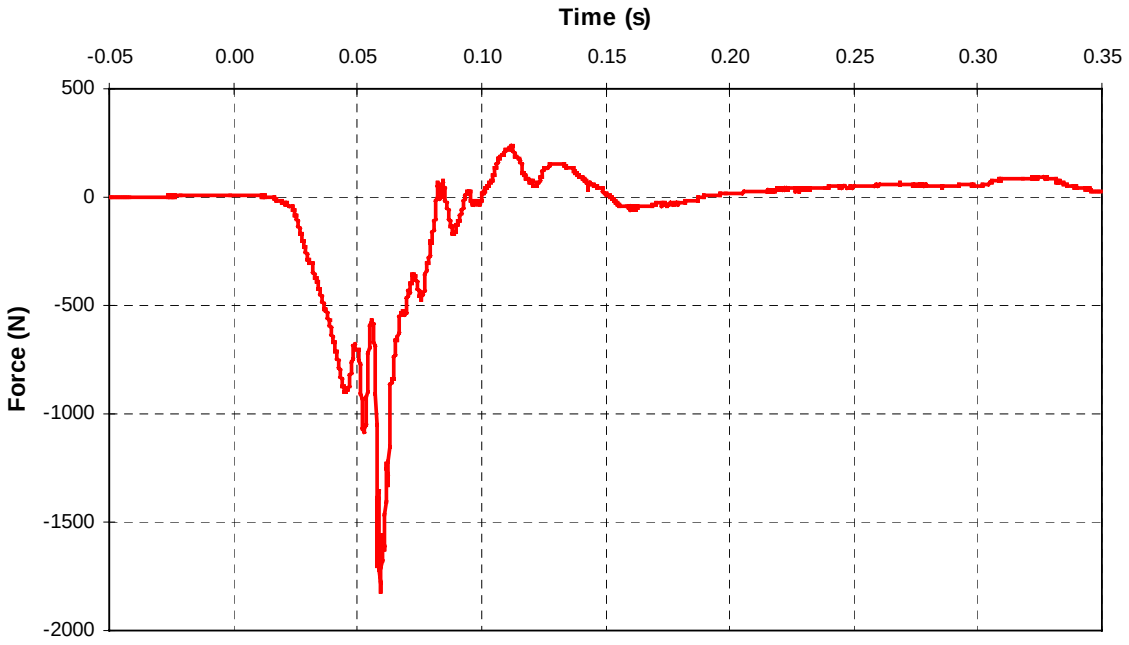
A- 30 CF00014 2000 Isuzu Rodeo Left Lower Tibia A-P Moment



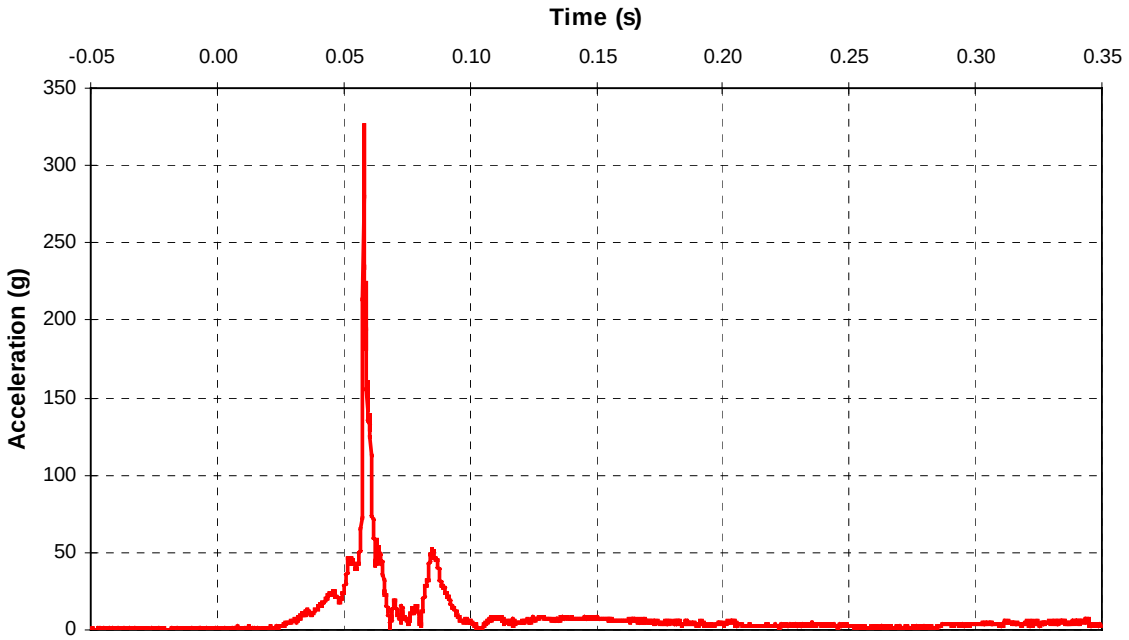
A- 31 CF00014 2000 Isuzu Rodeo Left Lower Tibia Vector Resultant Moment



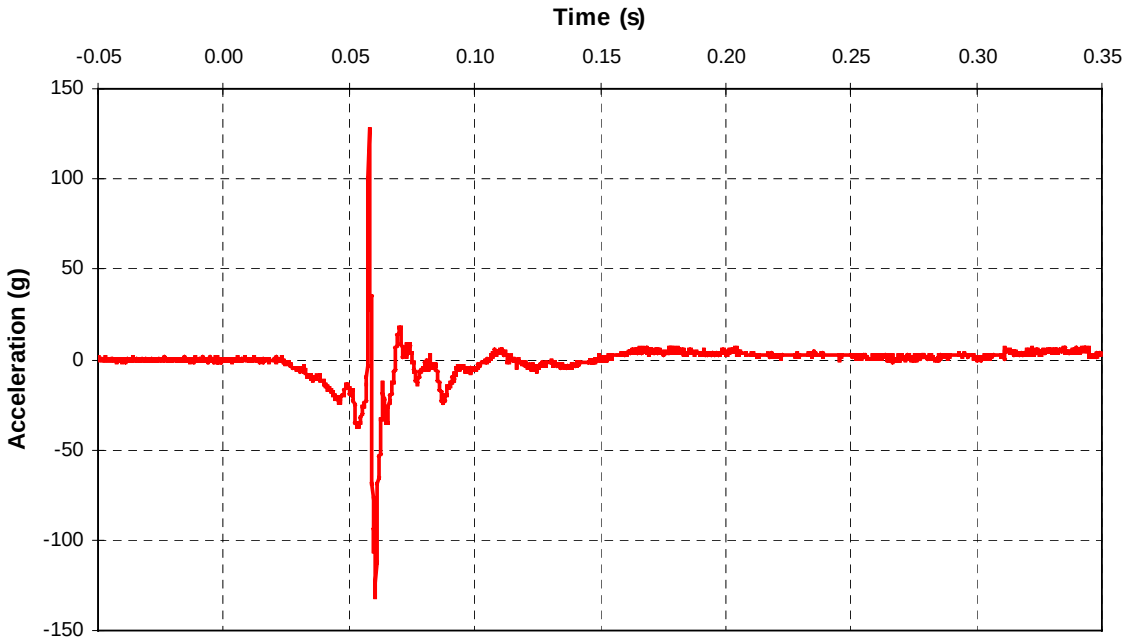
A- 32 CF00014 2000 Isuzu Rodeo Left Lower Tibia Axial Force



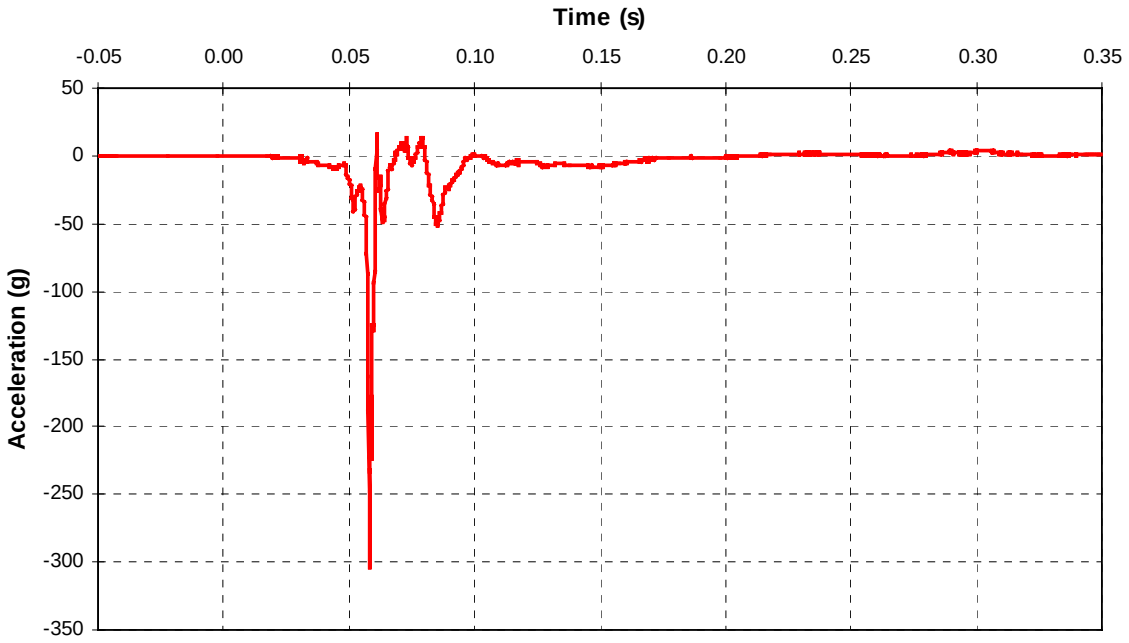
A- 33 CF00014 2000 Isuzu Rodeo Left Foot Vector Resultant Acceleration



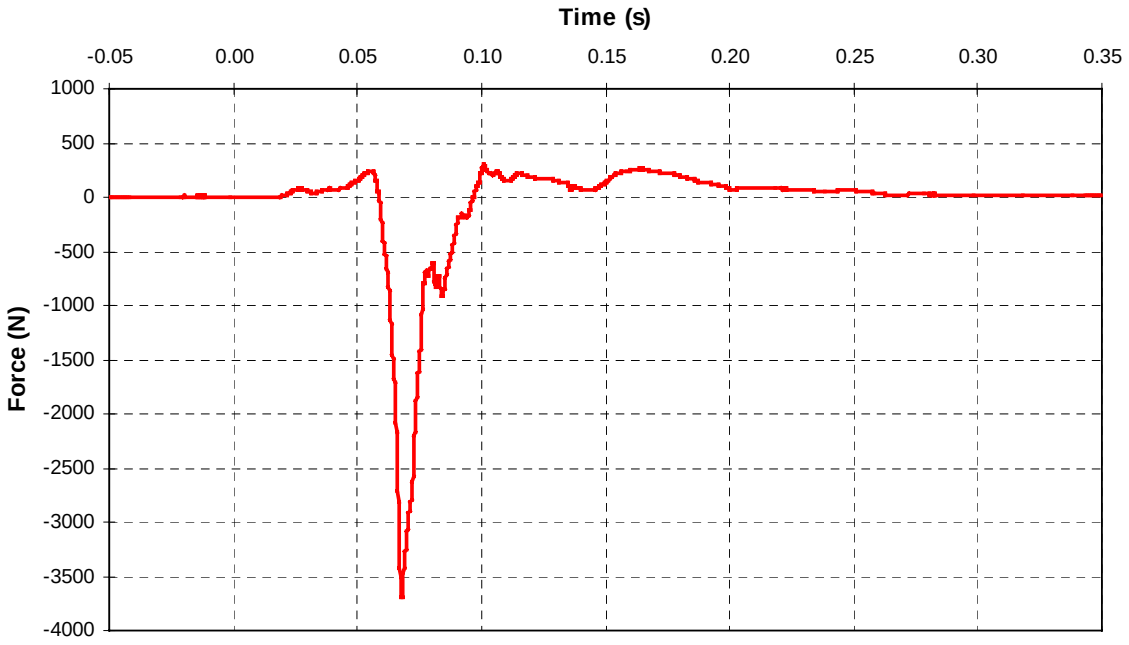
A- 34 CF00014 2000 Isuzu Rodeo Left Foot A-P Acceleration



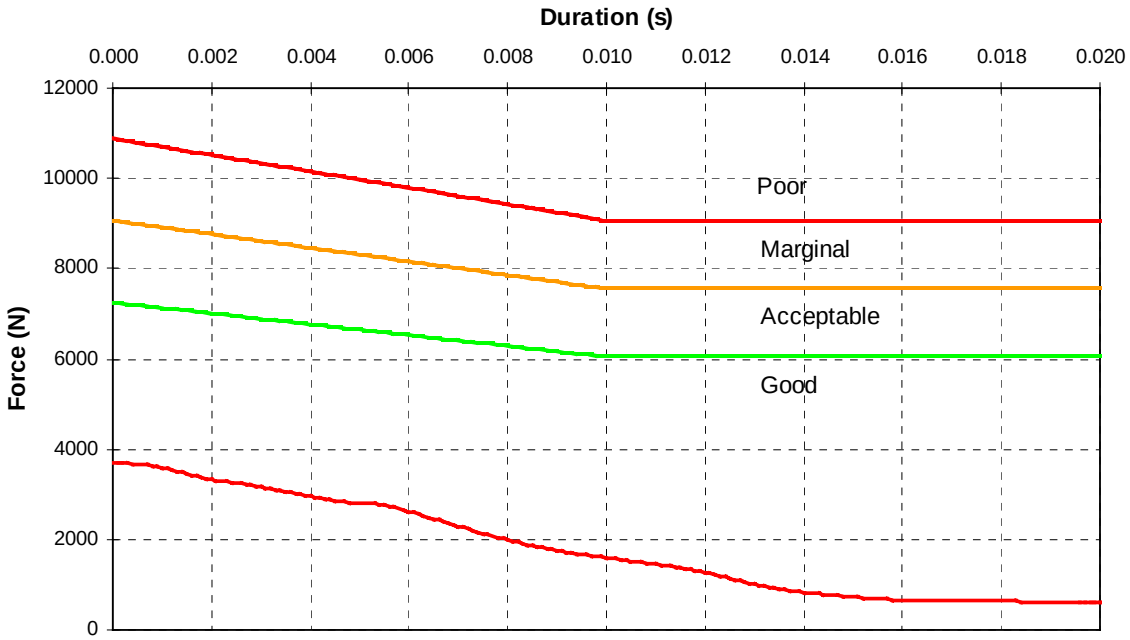
A- 35 CF00014 2000 Isuzu Rodeo Left Foot I-S Acceleration



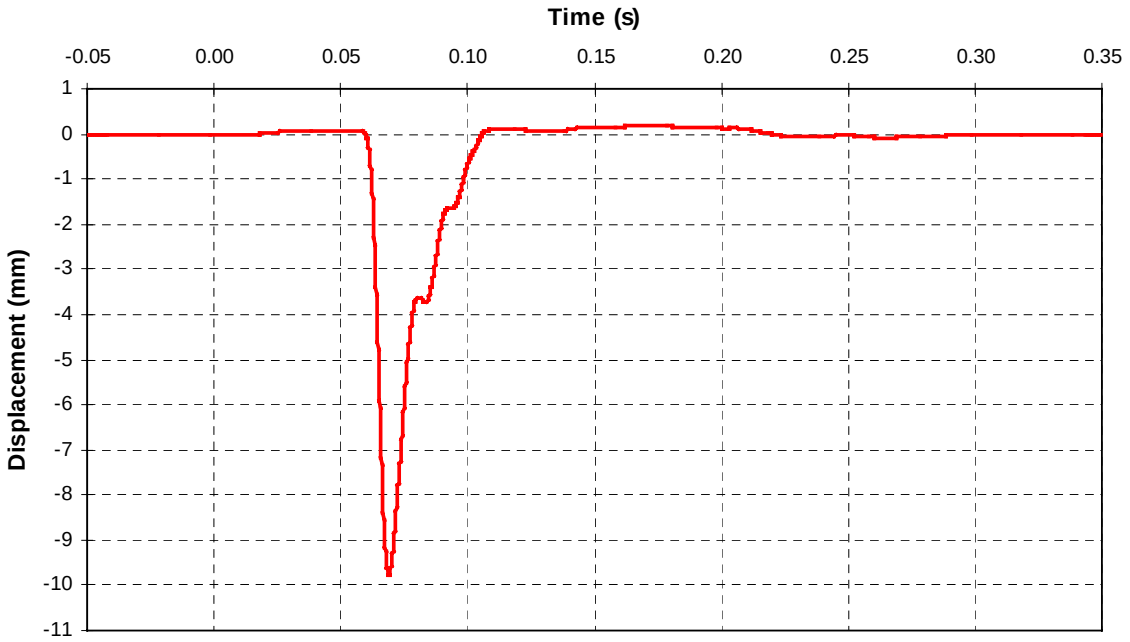
A- 36 CF00014 2000 Isuzu Rodeo Right Femur Axial Force



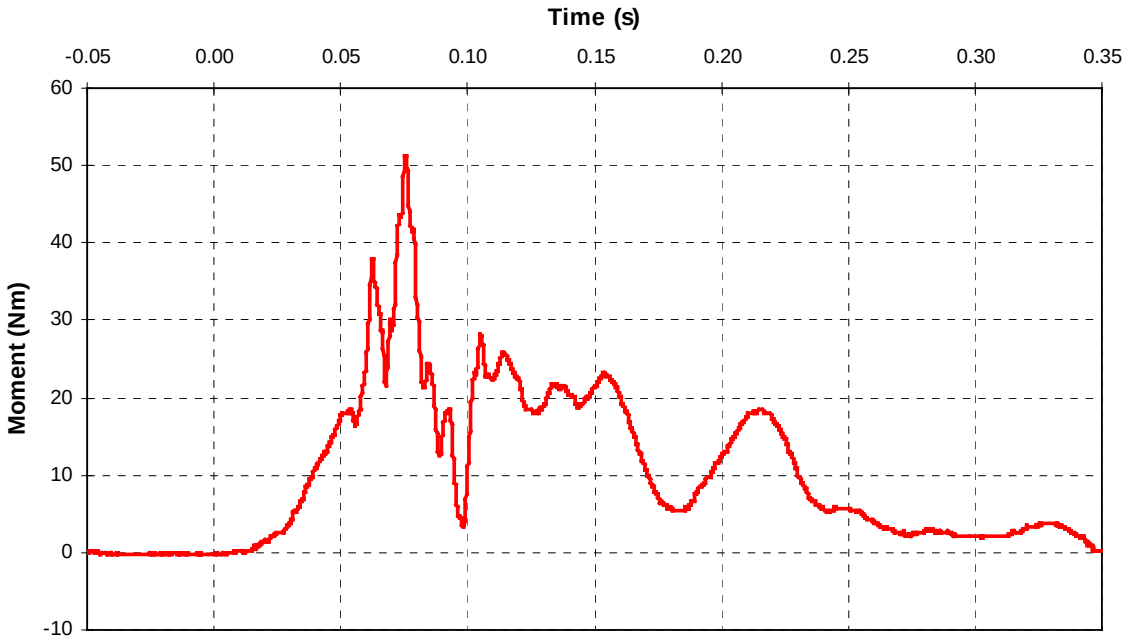
A- 37 CF00014 2000 Isuzu Rodeo Right Femur Axial Force Analysis



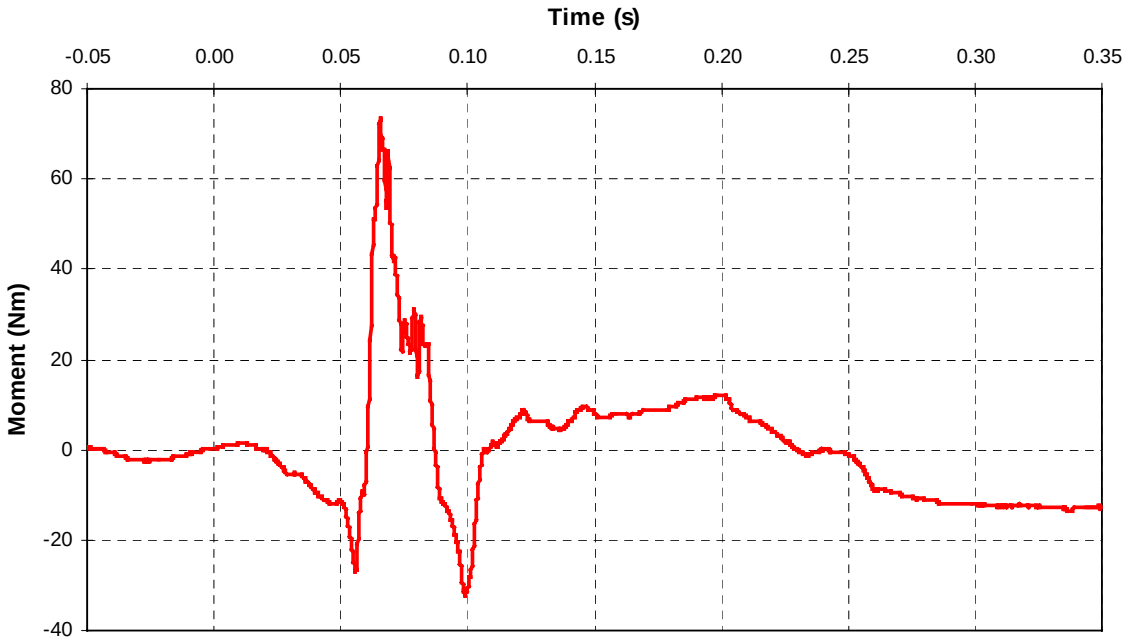
A- 38 CF00014 2000 Isuzu Rodeo Right Tibia-Femur Displacement



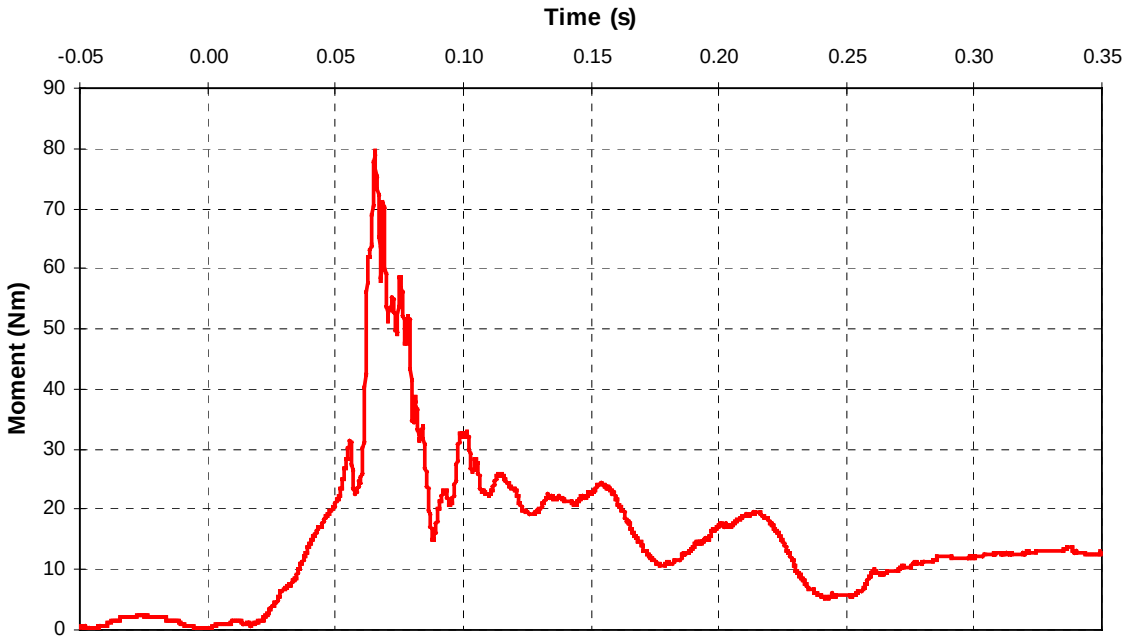
A- 39 CF00014 2000 Isuzu Rodeo Right Upper Tibia L-M Moment



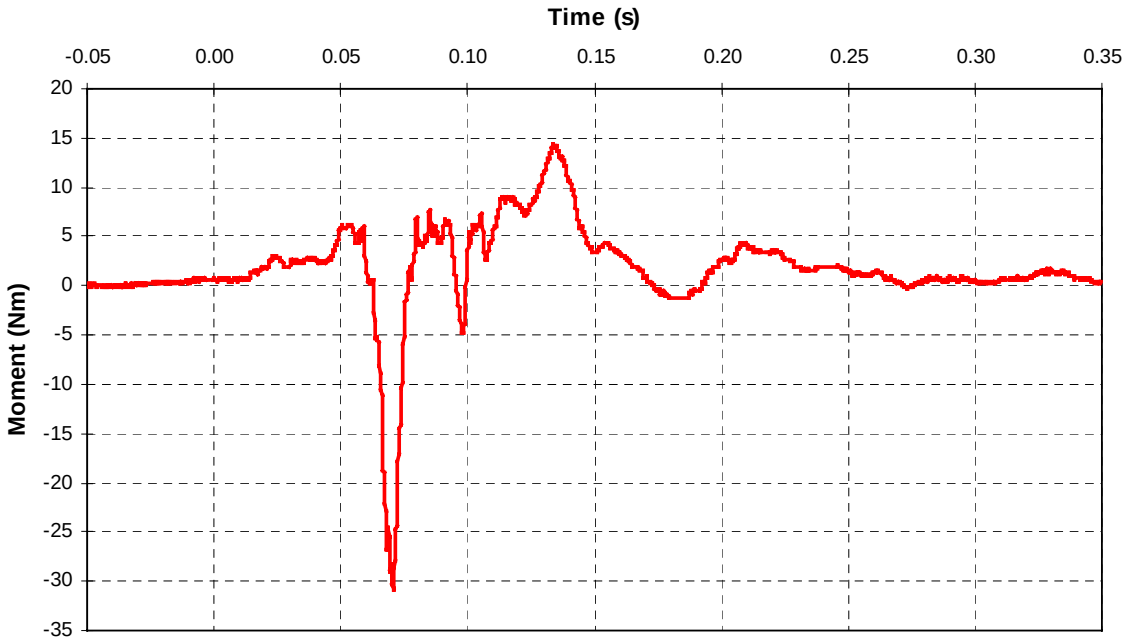
A- 40 CF00014 2000 Isuzu Rodeo Right Upper Tibia A-P Moment



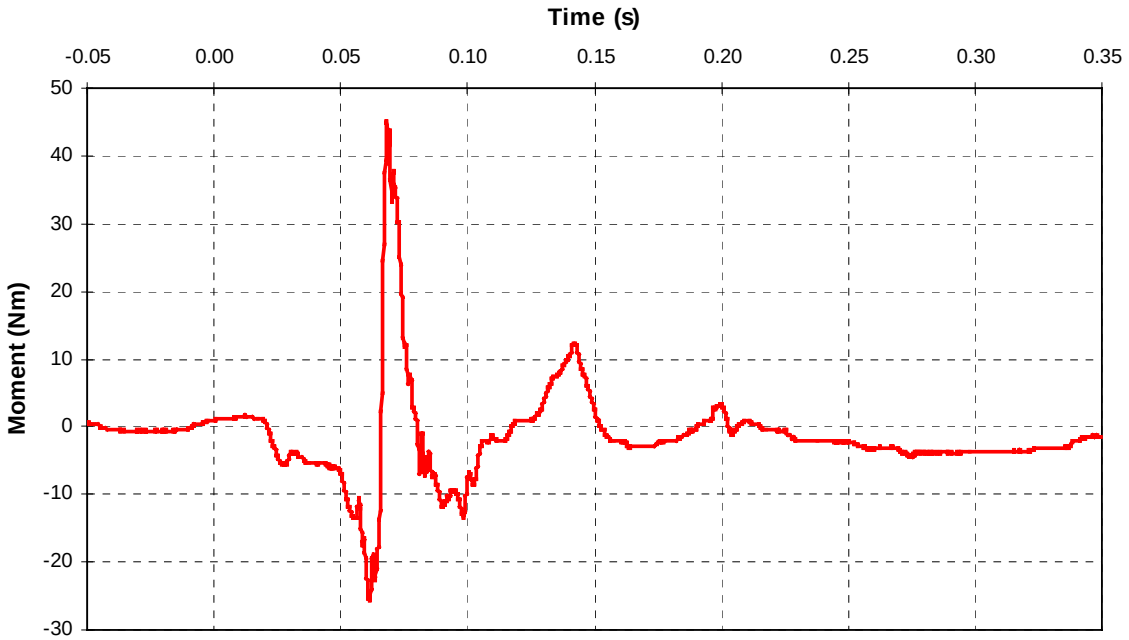
A- 41 CF00014 2000 Isuzu Rodeo Right Upper Tibia Vector Resultant Moment



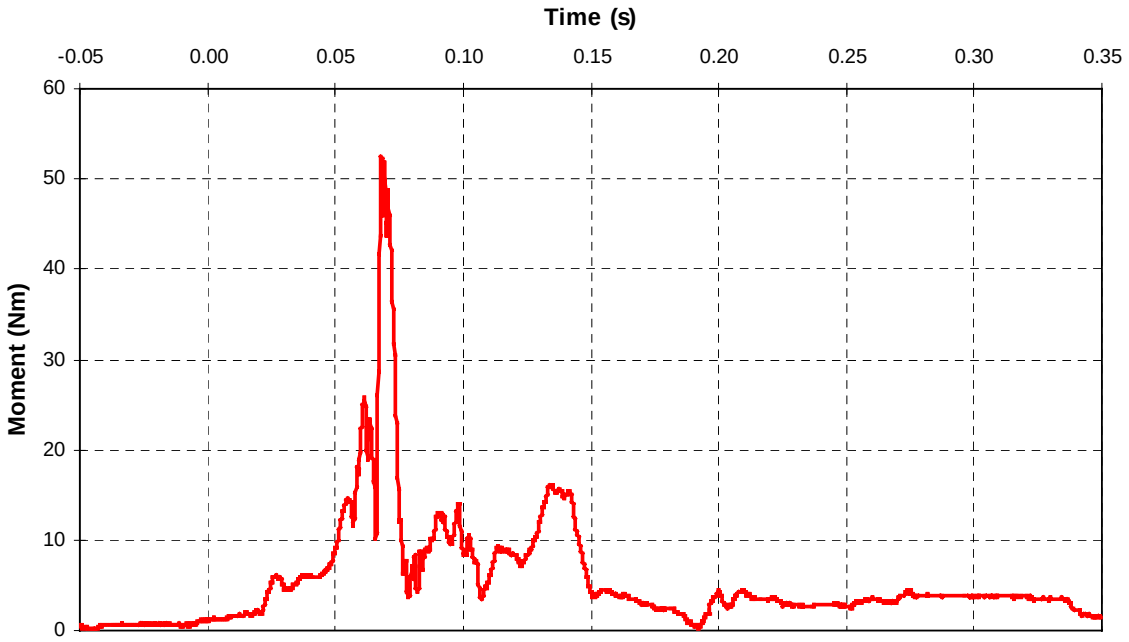
A- 42 CF00014 2000 Isuzu Rodeo Right Lower Tibia L-M Moment



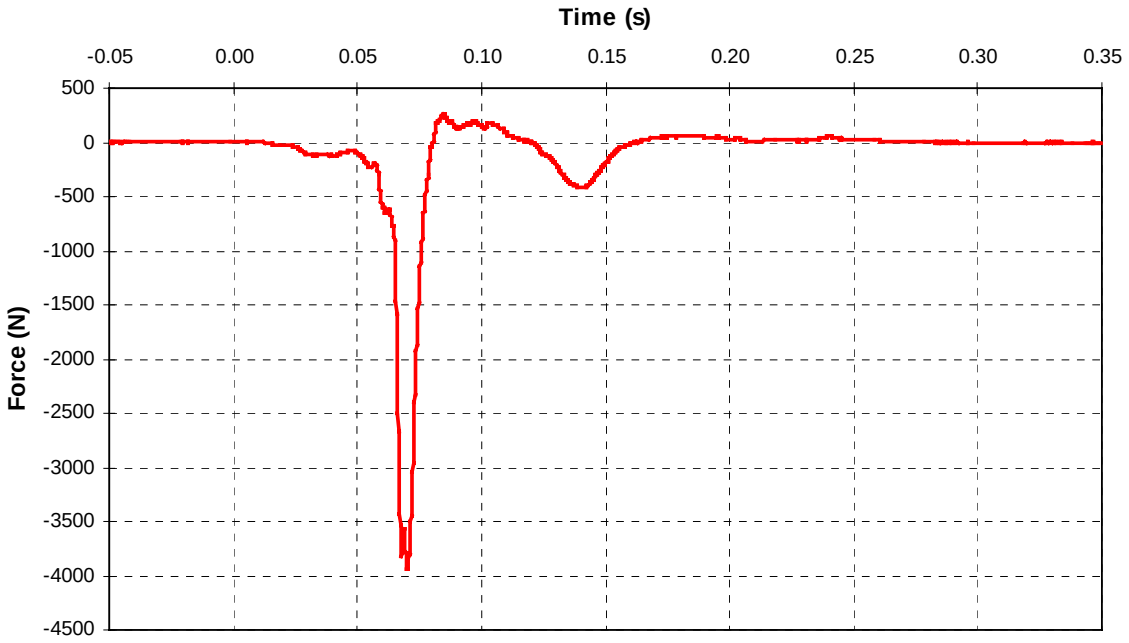
A- 43 CF00014 2000 Isuzu Rodeo Right Lower Tibia A-P Moment



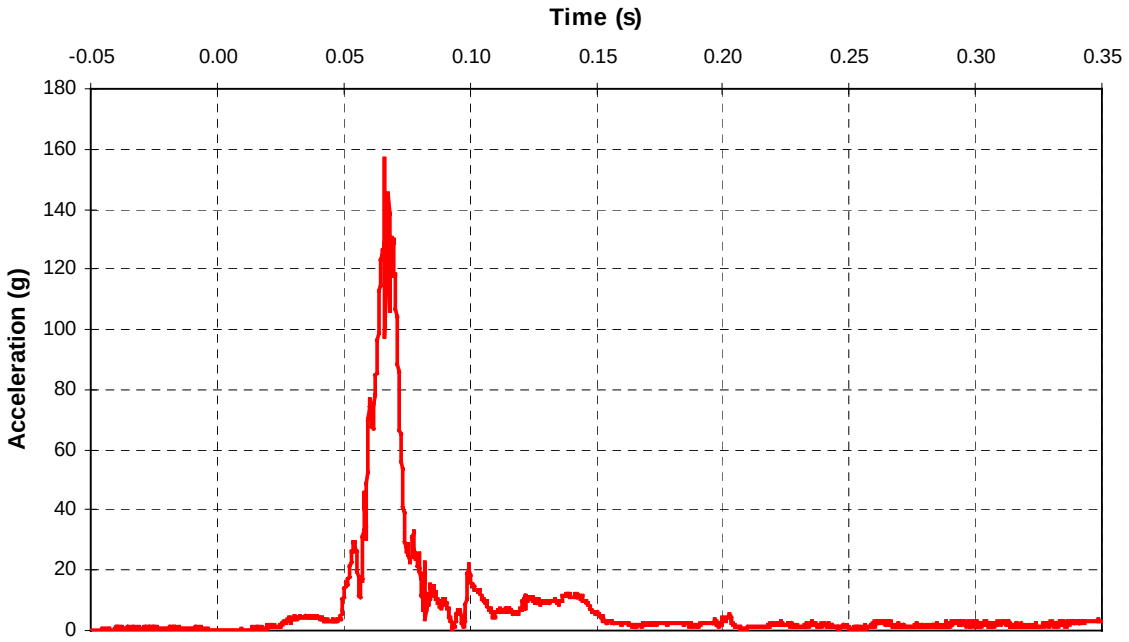
A- 44 CF00014 2000 Isuzu Rodeo Right Lower Tibia Vector Resultant Moment



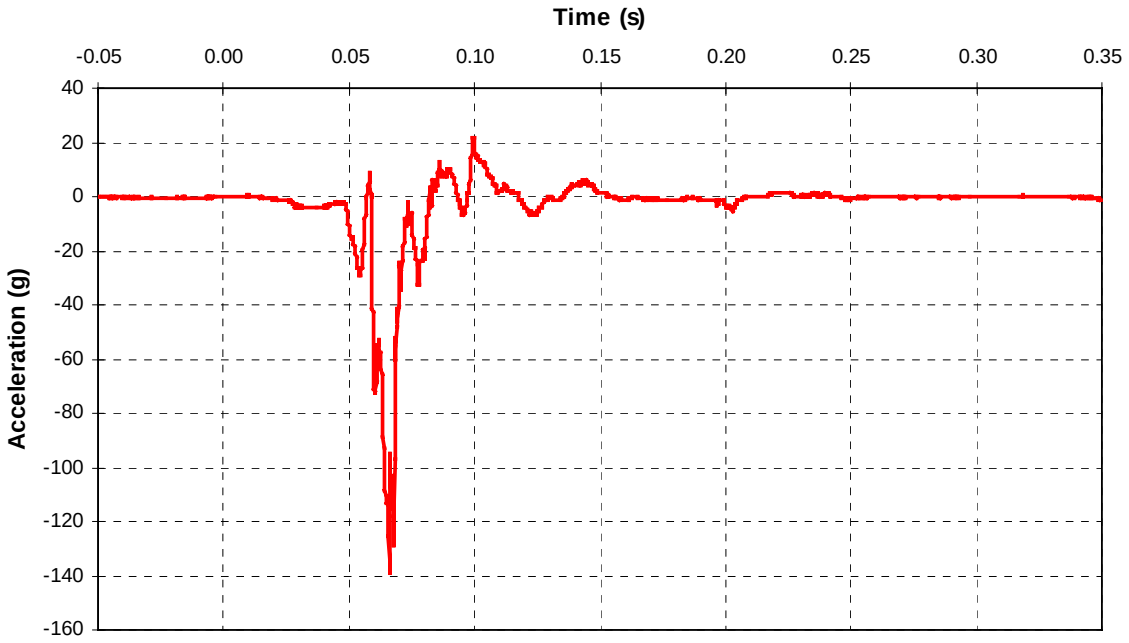
A- 45 CF00014 2000 Isuzu Rodeo Right Lower Tibia Axial Force



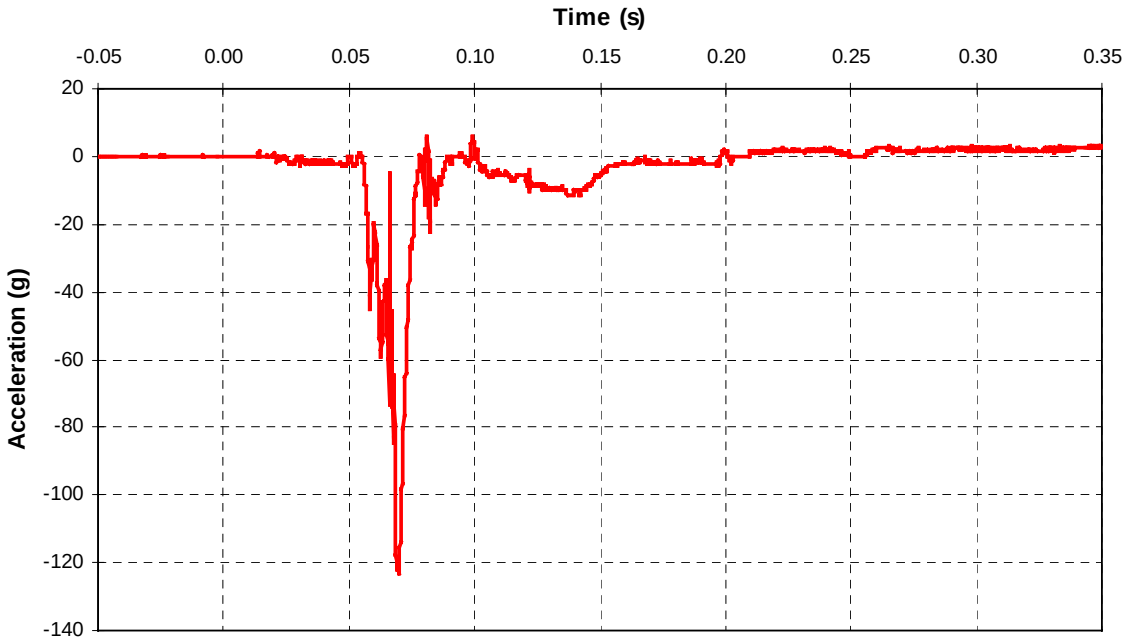
A- 46 CF00014 2000 Isuzu Rodeo Right Foot Vector Resultant Acceleration



A- 47 CF00014 2000 Isuzu Rodeo Right Foot A-P Acceleration



A- 48 CF00014 2000 Isuzu Rodeo Right Foot I-S Acceleration



ISUZU

Go farther.

YEAR: '00 MODEL DESCRIPTION: RODEO

'00 RODEO

4-WHEEL DRIVE, LS, 4-SPD AUTOMATIC TRANS

EXTERIOR COLOR	INTERIOR COLOR	MODEL	ENGINE TYPE
ROMAN BRONZE	BEIGE	V54	3.2LDOHC

STANDARD EQUIPMENT

MECHANICAL/FUNCTIONAL

- 3.2L DOHC 24V 205 HP Aluminum Engine
- 4-Speed Automatic Transmission w/Overdrive
- Winter Start & Power Auto. Trans. Modes
- Push-Button Shift-On-The-Fly 4WD
- Power-Assisted Front & Rear Disc Brakes
- Limited Slip Differential
- Variable Intake Manifold
- Rack&Pinion Variable-Assist Power Steering
- Cruise Control
- 5-Link Coil/Shock Rear Suspension
- Stainless Steel Exhaust
- 4500 LB Towing Capacity
- 21.1-Gallon Fuel Tank
- Complimentary Tank of Fuel

SAFETY

- Driver & Front Passenger Air Bags
- 4-Wheel Anti-Lock Brakes
- Audible Front Brake Pad Wear Indicators
- Side-Guard Door Beams
- Collapsible Steering Column
- Child-Safe Rear Door Locks
- Ft. & Rr. Adjustable Seat Belt Anchors
- Auto-Retract Belts for Childseat
- Underbody Skid Plates
- Variable Intermittent Wndshld Wipers/Wsher
- Rear Intermittent Wiper Washer
- Rear & Side Window Defoggers
- Roadside Assistance 60 Mo./60,000 Mi.

INTERIOR

- Reclining Fr. Bucket Seats w/Adj Headrests
- 3-Position Reclining Rear Seat,60/40 Split
- Tailgate & Side Door Pockets
- Front & Rear Cup Holders
- Driver & Passenger Seatback Pocket
- LCD Odometer & Twin Tripmeter
- Tachometer/Tilt Steering Column
- Dual Illuminated Visor Vanity Mirrors
- Day/Night Rearview Mirror w/Map Lamps
- Cargo Area & In Dash Power Points
- Dome & Cargo Area Lamps
- Cargo Area Tie-Down Hooks
- Passenger Assist Grips/Driver's Footrest
- Beige Moquette Velour Upholstery

EXTERIOR

- Swingout Tailgate w/Glass Hatch
- Tinted Windows/Mud Flaps/Color-Keyed Bmprs
- Full Size Spare Tire

WARRANTY

- 36 Mo./50,000 Mi. Limited Basic
- 10 YR./120,000 MI. LIMITED POWERTRAIN*
- 72 Mo./100,000 Mi. Limited Anti-Corrosion
- SEE WARRANTY INFORMATION BOOK FOR DETAILS

10 YEARS 120,000 MILES POWERTRAIN LIMITED WARRANTY

MANUFACTURER'S SUGGESTED RETAIL PRICE	$27,120

OPTIONAL INSTALLED EQUIPMENT

LS EQUIPMENT	N/C
Air Conditioning (CFC)	
Power Windows and Door Locks	
Black Power O.S.R.V. Mirrors	
Cntr Armrst Pad/Aero Roof Rails	
Courtesy Lamps	
6-Speaker AM/FM Cassette	
Convenience Net/Cargo Cover	
Fr & Rr Heathered Floormats	
Keyless Remote Entry/Alarm	
Audio Upgrade w/6-CD Changer	353
Cargo Mat	60
16" Aluminum Wheels/Locks	400
Body Side Molding	104
NAT'L LOW EMISSION VEH STANDARD	N/C
Destination and Handling	495
TOTAL VEHICLE PRICE	$28,532

Compare this vehicle to others in the FREE FUEL ECONOMY GUIDE available at the dealer.

CITY MPG

16

ACTUAL MILEAGE will vary with options, driving conditions, driving habits and vehicle's condition. Results reported to EPA indicate that the majority of vehicles with these estimates will achieve between

13 and 19 mpg in the city and between

17 and 23 mpg on the highway

2000 4WD RODEO, 3165 CC ENGINE, 6 CYLINDERS, DOHC MULTI-POINT FUEL INJECTION, 4-SPEED AUTOMATIC TRANSMISSION, CATALYST

Estimated Annual Fuel Cost $1,058

HIGHWAY MPG

20

FOR COMPARISON SHOPPING, all vehicles classified as SPECIAL PURPOSE have been issued mileage ratings ranging from

12 and 25 mpg in the city and between

15 and 29 mpg on the highway

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE
U.S./CANADIAN PARTS CONTENT: 60%
MAJOR SOURCES OF FOREIGN PARTS CONTENT:
JAPAN 30%

FOR THIS VEHICLE
FINAL ASSEMBLY POINT: LAFAYETTE,IN USA
COUNTRY OF ORIGIN:
ENGINE PARTS: JAPAN
TRANSMISSION: FRANCE

NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.

Gasoline, License And Title Fees State And Local Taxes And Dealer Installed Options And Accessories Are Not Included In The Manufacturer's Suggested Retail Price.

Manufacturer's Suggested Retail Price Includes Manufacturer's Recommended Predelivery Inspection.

This Label Has Been Affixed To This Vehicle Pursuant To The Requirements of U.S.C. 15. #1231 Et Seq. Which Prohibits Its Removal Or Alteration Prior To Delivery To The Ultimate Purchaser.

* Excludes Fleet or Commercial Vehicles. Transferable to Immediate Family Only.

DEALER NAME:
PRICE ISUZU
2150 SEMINOLE TRAIL
CHARLOTTESVILLE VA 22901

PORT/PLANT: LAFAYETTE

DEALER CODE: 44036 048266

SHIPPED TO: (SAME UNLESS OTHERWISE INDICATED)

VIN NO. 4S2DM58W2Y4320411