Insurance Institute for Highway Safety
Crashworthiness Evaluation

Crash Test Report
2003 Lincoln Town Car (CEF0301)

Vehicle identification number: 1LNHM82W23Y602391
Body style: Large 4-door sedan
Engine/transmission: Longitudinal 4.6-liter V8, 4-speed automatic transmission, rear-wheel drive

Standard crashworthiness features:

Driver and right front passenger dual-stage front airbags with variable inflator output depending on crash severity, belt use, driver seat adjustment, and weight of right front passenger
Driver and right front passenger front airbags also have separate deployment thresholds for belted and unbelted occupants
Driver and right front passenger seat-mounted side airbags (designed to protect head and thorax)
Dual-locking shoulder belts (front outboard and all rear seating positions)
Shoulder belt height adjusters (front outboard seating positions only)
Seat belt crash tensioners (pyrotechnic, front outboard seating positions only)
Seat belt force-limiting mechanisms (front outboard seating positions only)
Rear center lap/shoulder belt
Right front and all rear shoulder belt retractors are convertible from emergency to automatic locking for ease of child restraint use
LATCH system (rigid lower anchorages and top tether attachments) for child restraints (rear outboard seating positions)

Other standard safety features:

4-wheel antilock brakes

Vehicle specifications (provided by manufacturer):

Wheelbase:	299 cm
Overall length:	547 cm
Overall width:	198 cm
Curb weight:	1,968 kg

Vehicle specifications (measured):

Front bumper to firewall:	150 cm
Curb weight:	1,968 kg
Test weight:	2,074 kg (53% front, 47% rear)
Overall width:	199 cm

Nominal test parameters:

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

Crash test date:

January 9, 2003

Figure 1
Precrash and Postcrash Side Views — 2003 Lincoln Town Car

Summary

A 2003 Lincoln Town Car was crash tested on January 9, 2003 into a fixed deformable barrier at 39.8 mi/h (64.1 km/h) and a 40 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 1-2 cm. Resultant intrusion in the driver footwell measured 10 cm in the area where a footrest typically would be located and 10-11 cm at other places on the toepan. All doors remained closed during the crash. After the crash, the driver door and left rear door required slight additional effort but no tools to open. The right front and right rear doors opened with ease. Deformation of the floor under the driver seat caused the seat to tip outboard and pitch forward.

The driver dummy was restrained by a three-point lap/shoulder belt and an airbag. During the crash, the belt crash tensioner activated and retracted 12 cm of shoulder belt webbing. The force-limiting mechanism allowed 3 cm of webbing to spool off the retractor from the tensioner-retracted position. During the crash, the dummy loaded the fully inflated airbag and then, during rebound, the back of the head contacted the B-pillar. After rebounding from the B-pillar, the top right part of the head contacted the top of the window frame. After the crash, the upper end of the steering column had moved upward 2 cm but not forward or rearward.

The head contact with the B-pillar resulted in a HIC-15 of 761 and a maximum resultant head acceleration of 180 g. The peak resultant acceleration from the window frame contact was 21 g. The maximum left upper tibia A-P moment was –184 Nm, significantly contributing to the left upper tibia index of 0.91.

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 pole. 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 IX). 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 in the area where a footrest typically would be located.

Seat back, shoulder belt upper anchorage, steering column, and foot pedal adjustments (where applicable) 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, steering column, and foot pedal 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 55 cm behind its center of gravity (197 cm behind the front axle). The vehicle speed recorded just prior to impact was 39.8 mi/h (64.1 km/h), and the actual overlap was 40 percent.

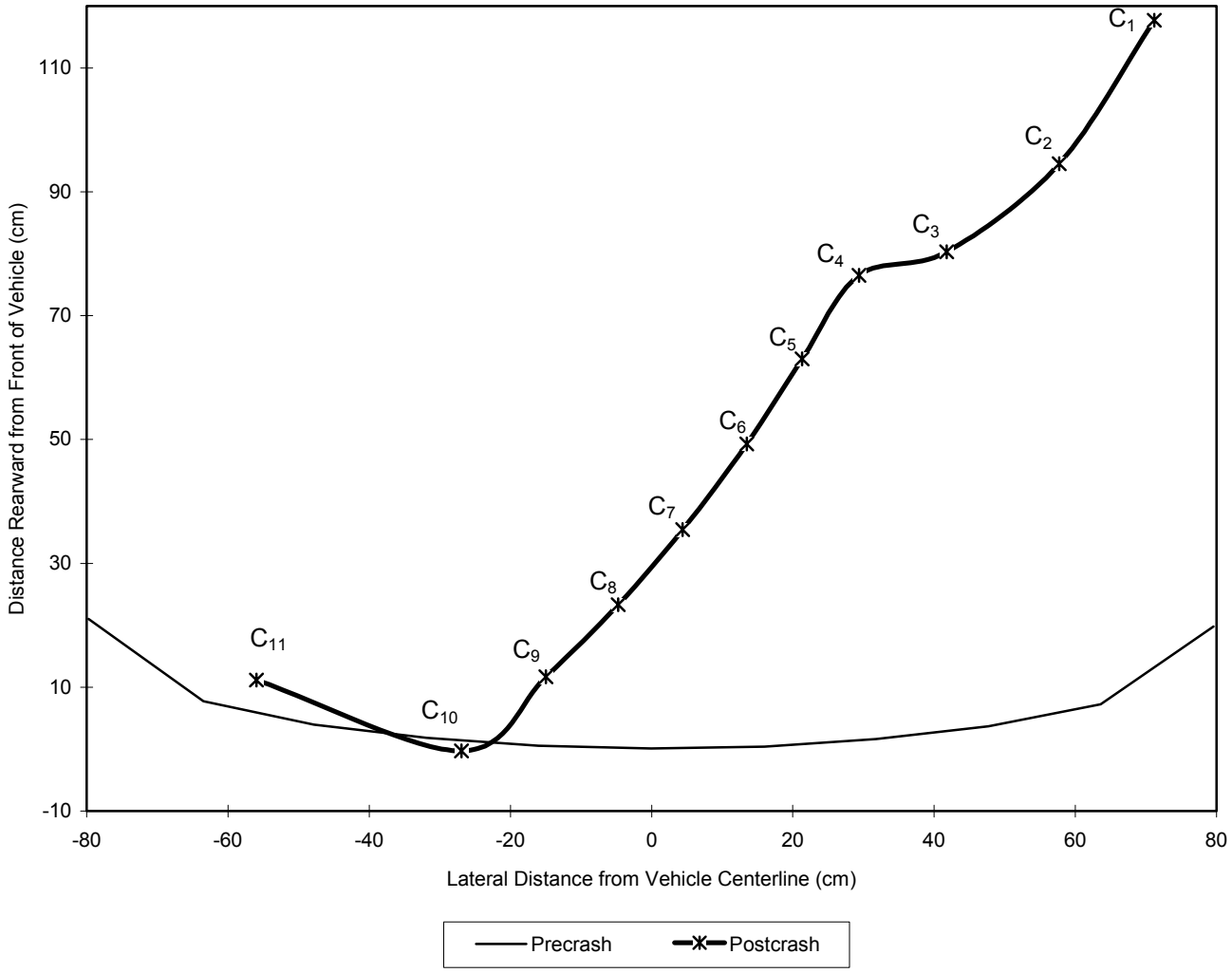
Structural Performance

All doors remained closed during the crash. After the crash, the driver door and left rear door required additional effort but no tools to open. The right front and right rear doors opened with ease. The driver door aperture shortened 4 cm, as measured at the lower edge of the window.

No fuel system leaks were observed after the crash.

Figure 2 illustrates the precrash and postcrash contour measures of the front bumper cover profile and the resulting permanent crush.

Figure 2
Front Bumper Cover Crush Contour — 2003 Lincoln Town Car



	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)	118	95	80	76	63	49	35	23	12	0	11
Precrash Contour (cm)	20	7	4	2	0	0	1	2	4	8	21
Resulting Crush (cm)	98	88	76	74	63	49	34	21	8	–8	–10

The bumper cover was torn almost completely off the vehicle during the crash. The postcrash contour represents the best attempt to fit the cover back onto the vehicle. The length of the reference line was 159 cm precrash and 127 cm postcrash.

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 IX). 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 — 2003 Lincoln Town Car

Selected Locations*	Longitudinal	Lateral	Vertical	Resultant
Steering column (cm)	0	–1	2	3
Left lower instrument panel (cm)	–2	–2	0	3
Right lower instrument panel (cm)	–1	–2	1	3
Brake pedal (cm)	–5	–2	–3	6
Left toepan (cm)	–10	–4	–3	11
Center toepan (cm)	–10	–3	–2	11
Right toepan (cm)	–10	–3	–2	10
Footrest (cm)	–9	–4	–4	10
Average displacement of the four seat-attachment bolts relative to reference system (cm)	–2	0	–3	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 57 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 position E indicated the airbag deployed at 32 ms into the crash and appeared to be fully inflated at 72 ms. The seat-mounted side airbag did not deploy during the crash

Passenger: The mid-mounted passenger airbag did not deploy during the crash. A weight-based occupant sensor in the passenger seat controls deployment. The side airbag also did not deploy during the crash.

Seat Belts

The inboard lower anchorage points for the driver and right front passenger seat belts are attached to and move with the seats. The front outboard lower anchorage points are bolted to the sills at the base of the B-pillars. The center front position has only a lap belt. During the crash, 12 cm of the driver's seat belt webbing was pulled by the belt crash tensioner into the retractor through the D-ring, as measured by a pull-string mounted between the webbing and B-pillar trim just above the D-ring. The total amount of spool-out from the retractor from the tensioner-retracted position was no more than 12 cm, as measured by a second pull-string mounted between the retractor housing and the webbing beyond the retractor. Postcrash investigation of the force-limiting torsion bar within the retractor spool indicated it was twisted about 72 degrees from its precrash orientation. This measure, combined with the estimated diameter of the retractor spool and stowed webbing (47 mm), suggested that 3 cm of webbing spooled off the retractor from the force-limiting mechanism.

Seat

Postcrash examination of the driver seat rails indicated no discernible movement of the seat in its tracks during the crash. Deformation of the floor under the driver seat caused the seat to tip outboard and pitch forward, leaving the head restraint in contact with the B-pillar.

Steering Column

The upper end of the steering column moved upward 2 cm but not forward or rearward.

Dummy Kinematics

Head, Neck, and Torso

Analysis of the high-speed film taken from camera position E indicated the dummy began to load the airbag at 84 ms, 12 ms after the airbag was fully deployed. Paint transferred from the dummy's face indicated the nose loaded the airbag 11 cm above and 2 cm to the left of its center. When the dummy's head was close to the steering wheel, the resultant head acceleration indicated an increase of 16 g over a duration of 16 ms, beginning at 125 ms. It is possible that this peak resulted from deployment of the second stage of the airbag, which is reported by Ford to deploy about 100 ms after the first stage deploys in a crash of this type, rather than from contact with the steering wheel. After loading the airbag, the dummy's head rebounded, moving outboard and partway past the precrash plane of the side window. The rear of the dummy's head then contacted the B-pillar at 246 ms, according to the head acceleration data. After contacting the B-pillar, the head moved slightly forward and the top right of the head contacted the top edge of the window frame at 297 ms. The dummy then moved inboard and faced forward. Table 2 provides the timing of these events.

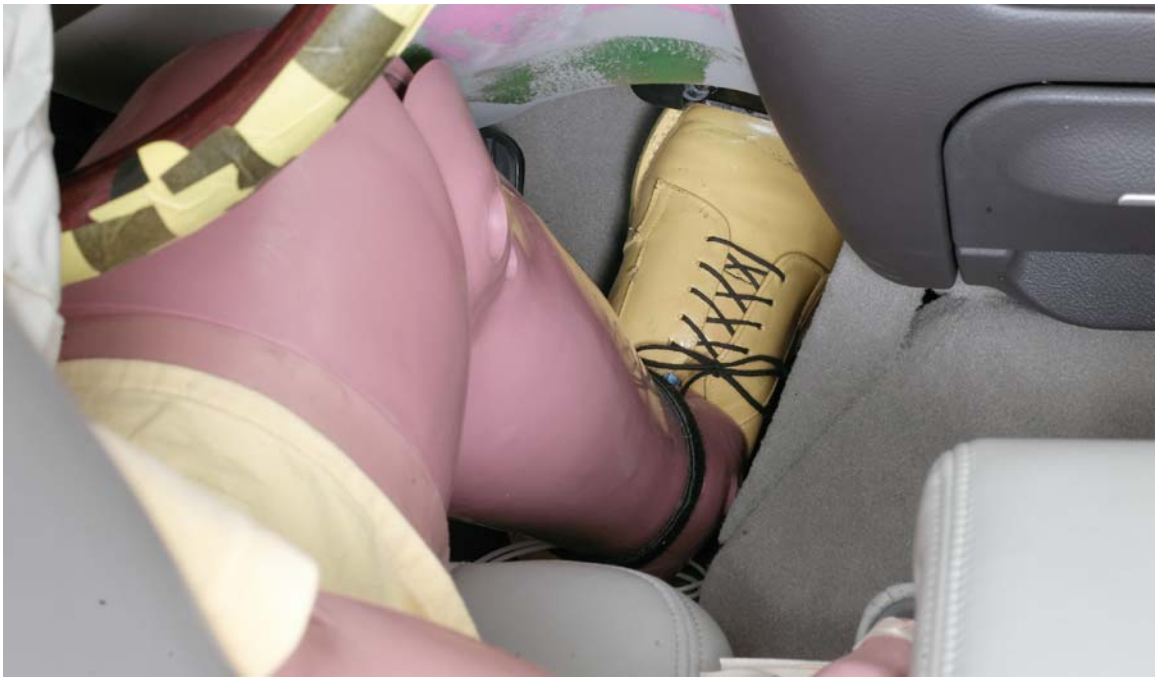
Table 2 Restraint System Performance and Dummy Kinematics — 2003 Lincoln Town Car	
Event	**Time (ms)**
Deployment of driver front airbag	32
Airbag fully inflated	72
Face begins to load airbag	84
Rear of dummy's head contacts B-pillar	246
Top right of dummy 's head contacts window frame	297

Figure 3
Dummy and Vehicle Interior, Postcrash — 2003 Lincoln Town Car

Figure 4
Dummy Left Knee/Shin Contacts, Postcrash — 2003 Lincoln Town Car

Figure 5
Dummy Right Knee/Shin Contacts, Postcrash — 2003 Lincoln Town Car

Figure 6
Dummy Feet Positions, Postcrash — 2003 Lincoln Town Car



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 contact with the B-pillar. The HIC-15 was 761 during this period (247-250 ms), and the maximum resultant head acceleration was 180 g at 249 ms. The HIC-15 when the dummy's head moved forward into the airbag was 294 (126-141 ms). The peak resultant acceleration from the window frame contact was 21 g at 302 ms. Table 3 provides a summary of the maximum head injury measurements recorded during the crash.

Table 3
Head Injury Measurements — 2003 Lincoln Town Car

Measure	Published Tolerance Threshold	Result	Time (ms)
Vector resultant acceleration (g)	80	180	249
Vector resultant acceleration — 3 ms clip (g)	80	85	247-250
Head injury criterion (HIC), during airbag loading	1000	568	107-143
Head injury criterion — 15 ms interval (HIC-15), during airbag loading	700	294	126-141
Head injury criterion (HIC), during B-pillar contact	1000	761	247-250
Head injury criterion — 15 ms interval (HIC-15), during B-pillar contact	700	761	247-250

Neck

Table 4 provides a summary of the maximum neck injury measurements recorded during the crash. None of the recorded neck force measures exceeded the magnitude-duration injury criteria (Figures A-13 to A-16).

Table 4
Neck Injury Measurements — 2003 Lincoln Town Car

Measure	Published Tolerance Threshold	Result	Time (ms)
A-P shear force (kN)	±3.1	–1.0	250
Axial compression force (kN)	4.0	0.4	149
Axial tension force (kN)	3.3	1.4	118
N_{ij} tension-extension	1.00	0.46	251
N_{ij} tension-flexion	1.00	0.30	116
N_{ij} compression-extension	1.00	0.34	257
N_{ij} compression-flexion	1.00	0.20	149
Flexion bending moment (Nm)		43	150
Extension bending moment (Nm)		46	257

Chest

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

Table 5
Chest Injury Measurements — 2003 Lincoln Town Car

Measure	Published Tolerance Threshold	Result	Time (ms)
Vector resultant spine acceleration — 3 ms clip (g)	60	42	131-134
Rib compression (mm)	–50	–31	134
Viscous criteria (m/s)	1.0	0.1	129
Sternum deflection rate (m/s)	–8.2	–0.6	127

Legs and Feet

Left leg and foot: The maximum left upper tibia A-P moment was –184 Nm at 74 ms, significantly contributing to the left upper tibia index of 0.91 at 74 ms.

Right leg and foot: None of the injury measures exceeded published threshold values.

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

Table 6
Leg and Foot Injury Measurements — 2003 Lincoln Town Car

Measure	Published Tolerance Threshold	Left		Right	
		Result	Time (ms)	Result	Time (ms)
Femur axial force (kN)	–9.1*	–6.0	118	–2.3	121
Tibia-femur displacement (mm)	–15	–6	120	0	258
Upper Tibia					
L-M moment (Nm)	±225	–74	105	41	83
A-P moment (Nm)	±225	–184	74	–152	80
Vector resultant moment (Nm)	225	184	74	157	80
Index	1.00	0.91	74	0.77	80
Lower Tibia					
L-M moment (Nm)	±225**	–21	104	–33	102
A-P moment (Nm)	±225**	24	79	64	135
Vector resultant moment (Nm)	225**	24	82	68	137
Axial force (kN)	–8.0**	3.2	74	2.8	80
Index	1.00	0.17	77	0.35	137
Foot					
A-P acceleration (g)	±150	–71	73	–56	109
I-S acceleration (g)	±150	–46	74	–45	78
Vector resultant acceleration (g)	150	84	73	65	109

* 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

2003 Lincoln Town Car Four-Door Sedan: 5 mi/h Front into Angle Barrier

Test number: LA02020
VIN: 1LNHM82W23Y602391
Mileage: 280
Features: Driver and passenger front airbags, driver and front passenger seat-mounted side impact airbags, four-wheel antilock brakes, traction control, air conditioning, automatic transmission, heated power mirrors, keyless entry system, power door locks, power windows, power driver and passenger seats, heated back glass, tilt steering wheel, cruise control, rear proximity sensors, two-stage paint.

	Part		Labor	
Description	**Mfg. No**	**Price**	**Operation**	**Hours**
Bumper cover, front	3W1Z17D57AA	$462.50	Replace*	1.6
Bumper cover, front			Refinish*	4.0
Cover rub molding, right front	3W1Z17C829AA	26.40	Replace*	
Plastic absorber, front	3W1Z17C882AA	50.87	Replace*	
Bumper reinforcement, front	3W1Z17757AA	215.63	Replace*	0.8
Bumper mounting bracket, right front	3W1Z17752AA	35.95	Replace*	0.2
Crossmember, front			Pull*	1.0
Crossmember, front			Refinish	0.2
Headlamp housing, right			Repair	0.5
Headlamp lens, right			Polish	0.2
Headlamp mounting panel	3W1Z8A284AA	211.07	Replace*	2.2
Headlamps			Aim	0.5
Radiator support, upper			Align*	1.0
Fender, right front			Repair/Align*	1.5
Fender, right front			Refinish	2.8
Fender, left front			Align	0.5
Paint and materials		140.00		
Total Parts		$1,142.42		
Total Labor		629.00		17.0
Grand Total		$1,771.42		

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

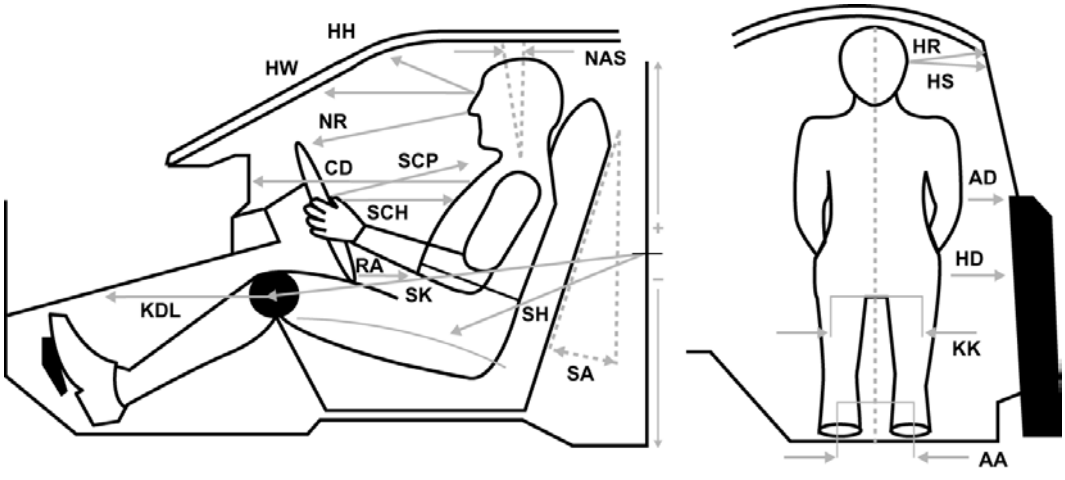
Dummy Clearance Measurements

Test Number: CEF0301
Vehicle Make/Model: Lincoln Town Car
Vehicle Model Year: 2003
Seat Type: Electrically adjusted bucket seat (fore/aft, height, and seat back angle)

Manufacturer's Specifications
Seat Back Information: Reclined to 29° relative to a perpendicular to the rocker sill, as measured on outboard rear frame of seat back.
Upper Belt Anchorage: Set to 3rd of 5 positions (from top)
Steering Column Adjustment: Set to midpoint of tilt adjustment range (3rd of 5 tilt positions from top)
Foot Pedal Adjustment Set to fully forward position of fore/aft range

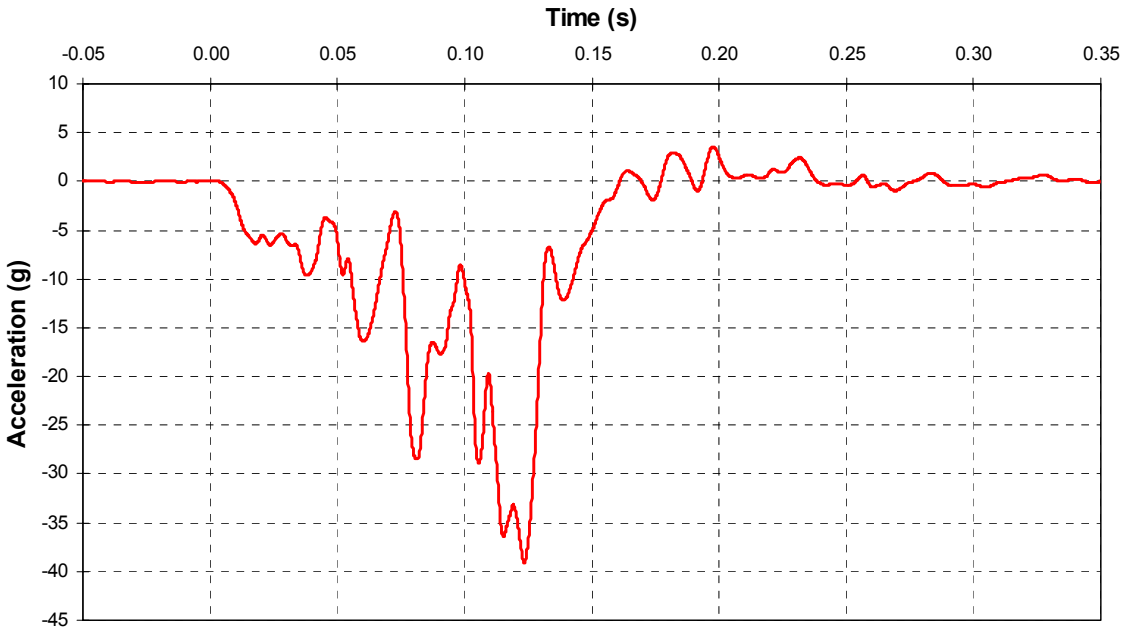
Location	Code	Measure	Location	Code	Measure
Head to header	HH	374	Neck angle, torso 90	NAT90	21.1°
Head to windshield	HW	567	Neck angle, seated	NAS	6.7°
Nose to rim	NR	388	Torso angle (NAT90 – NAS)	TA	14.4°
Chest to dash	CD	654	Striker to knee**	SK	530
Rim to abdomen	RA	188	Striker to knee angle**	SKA	0.4°
Knee to dash, left	KDL	236	Striker to H-point, horizontal	SHH	147
Knee to dash, right	KDR	213	Striker to H-point, vertical	SHV	–104
Steering wheel to chest, horizontal	SCH	295	Ankle to ankle	AA	336
Steering wheel to chest, perpendicular	SCP	379	Knee to knee	KK	332
Steering wheel to chest, reference	SCR	373	Arm to door	AD	17
Hub to chest, minimum	HCM	237	H-point to door	HD	168
Pelvic angle	PA	24.6°	Head to A-pillar	HA	500
Seat back angle*	SA	20.1°	Head to roof	HR	158
			Head to side window	HS	234

All distance measurements are in millimeters (mm).
* Indicated value is from vertical, as measured on the head restraint post.
**These measurements were made in a vertical plane containing the striker and parallel to the driver door sill.

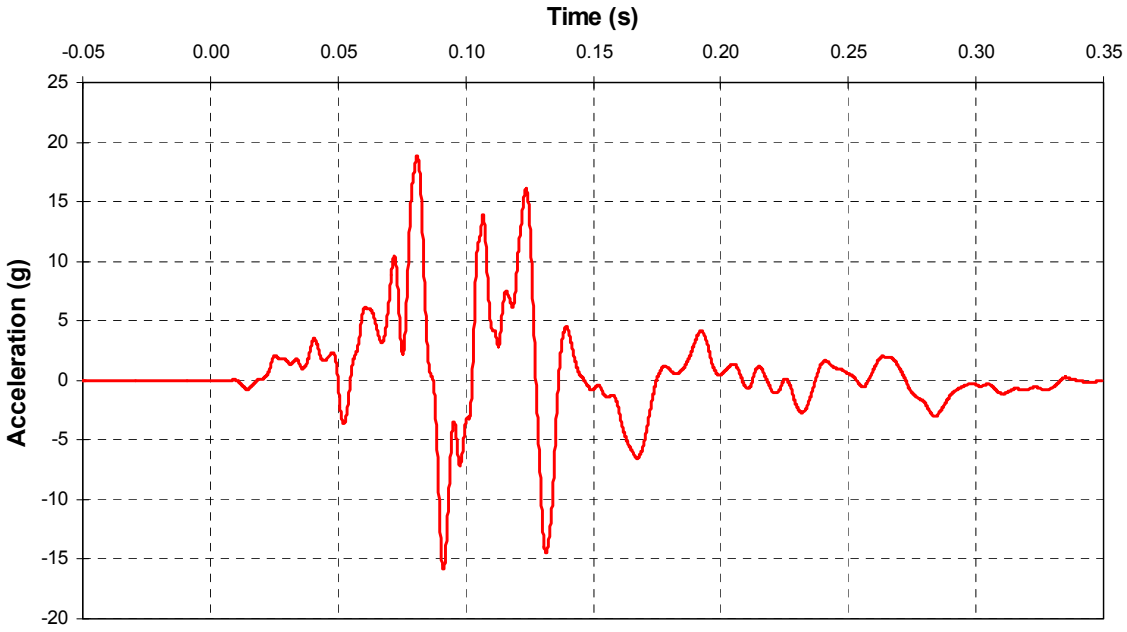


Graph Index

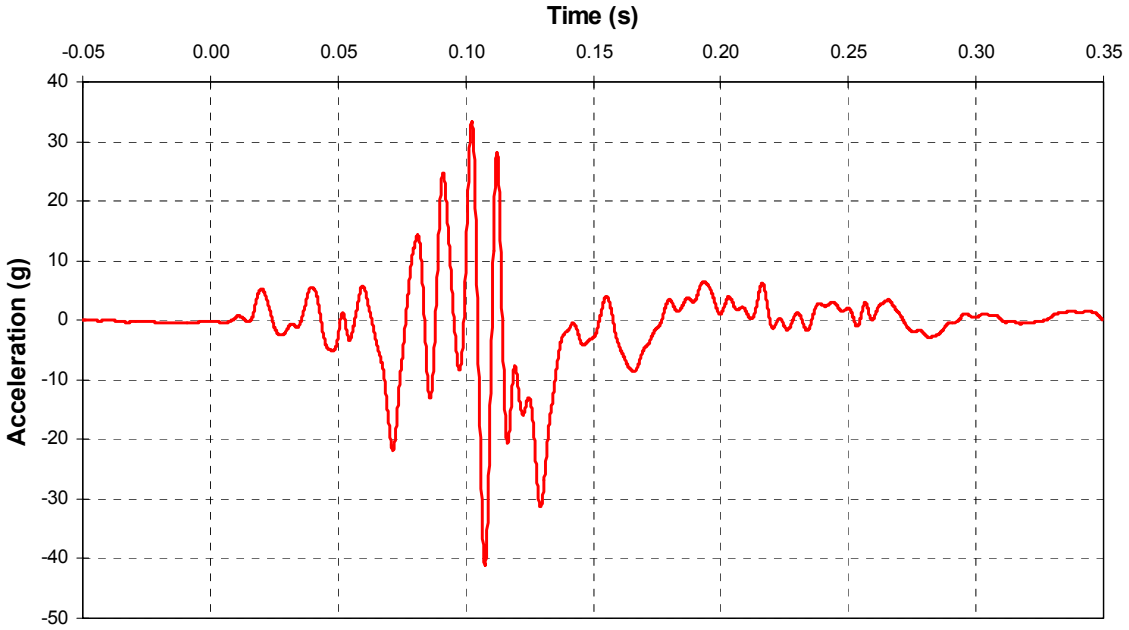
A- 1 CEF0301 2003 Lincoln Town Car Vehicle Longitudinal Acceleration



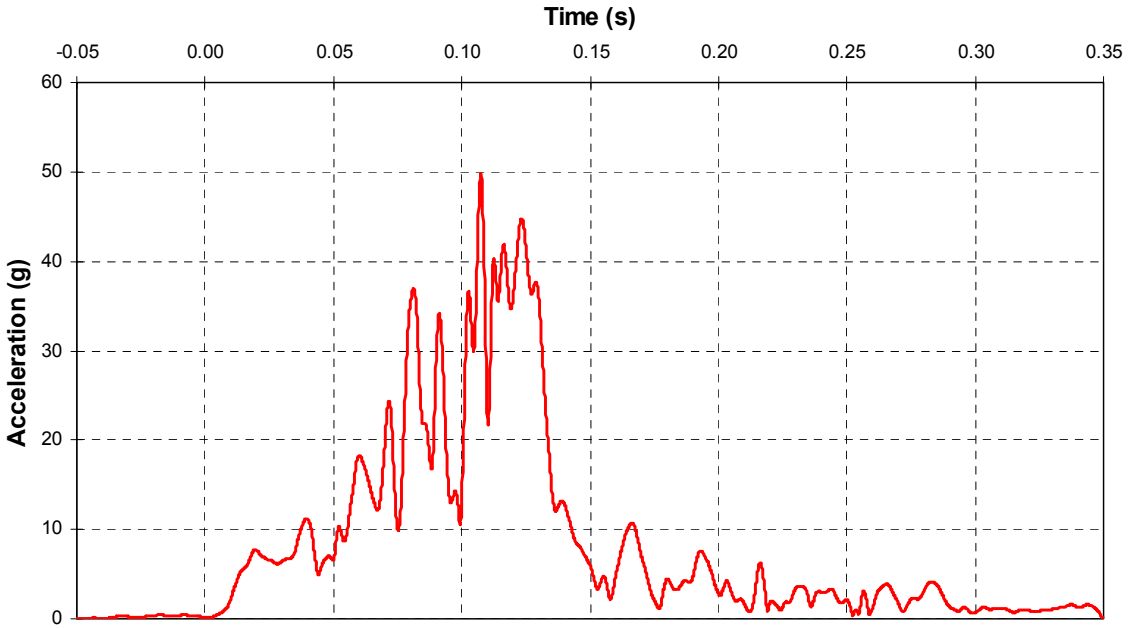
A- 2 CEF0301 2003 Lincoln Town Car Vehicle Lateral Acceleration



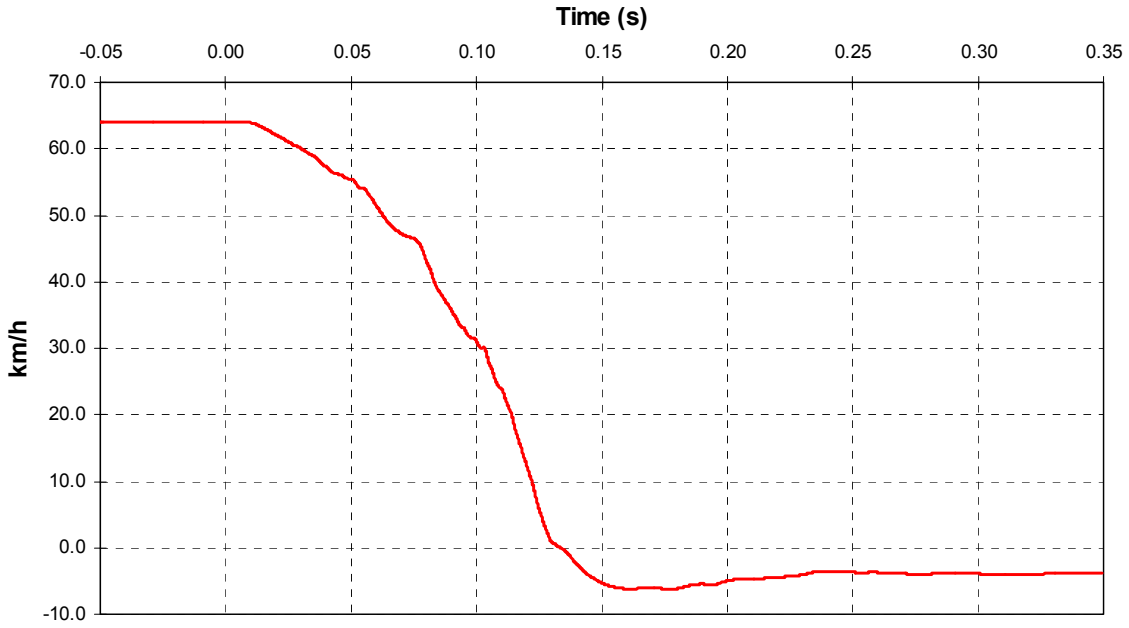
A- 3 CEF0301 2003 Lincoln Town Car Vehicle Vertical Acceleration



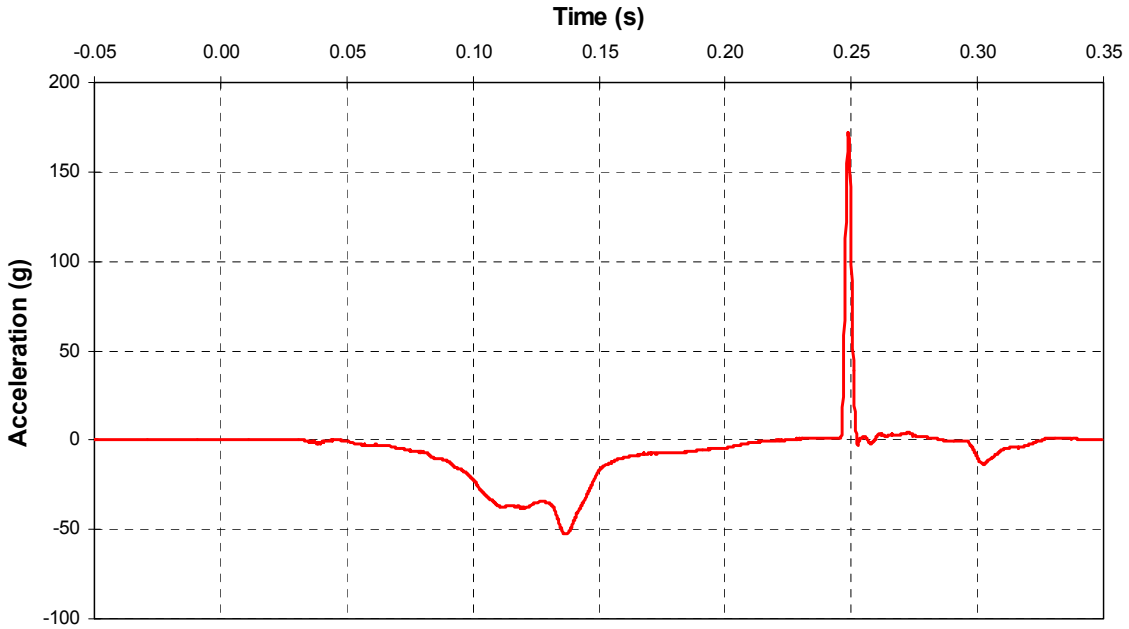
A- 4 CEF0301 2003 Lincoln Town Car Vehicle Vector Resultant Acceleration



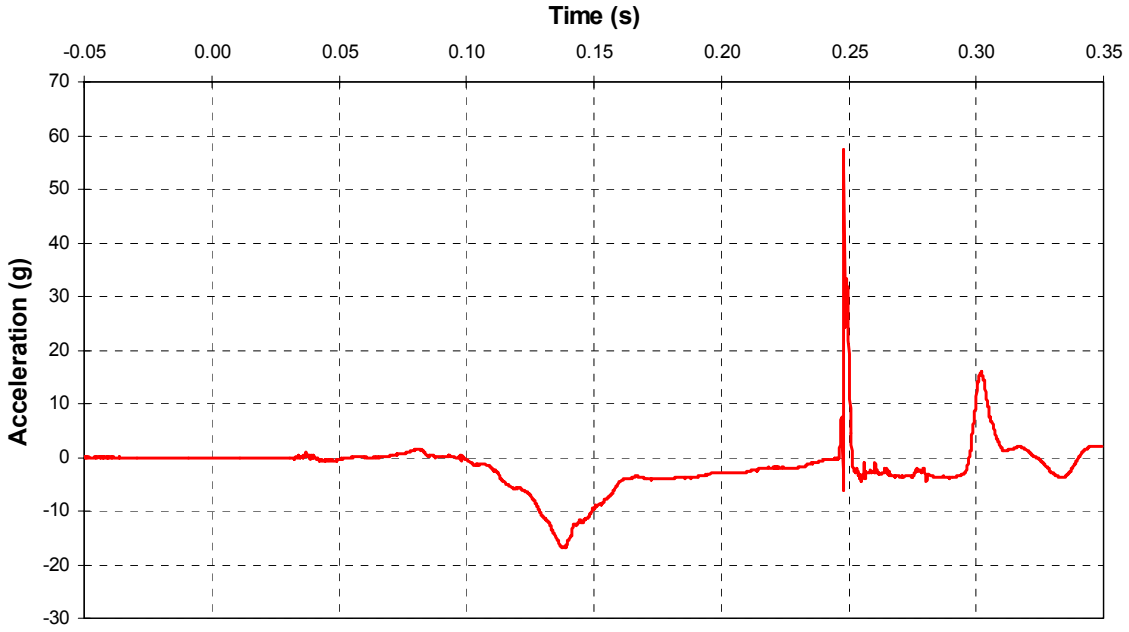
A- 5 CEF0301 2003 Lincoln Town Car Integration of Vehicle Longitudinal Acceleration



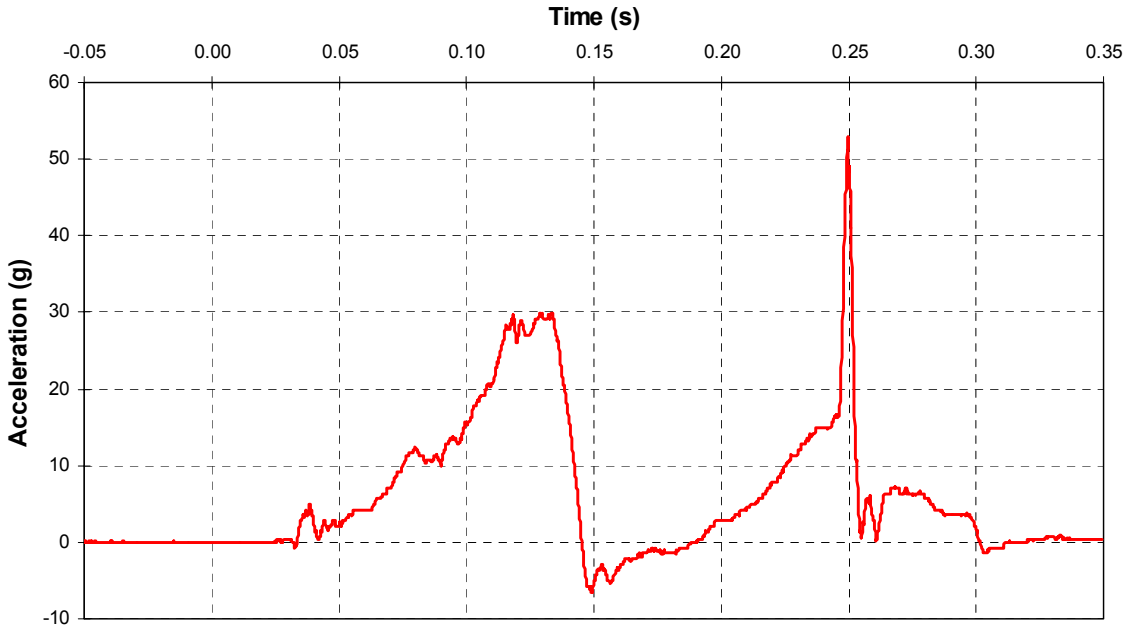
A- 6 CEF0301 2003 Lincoln Town Car Head A-P Acceleration



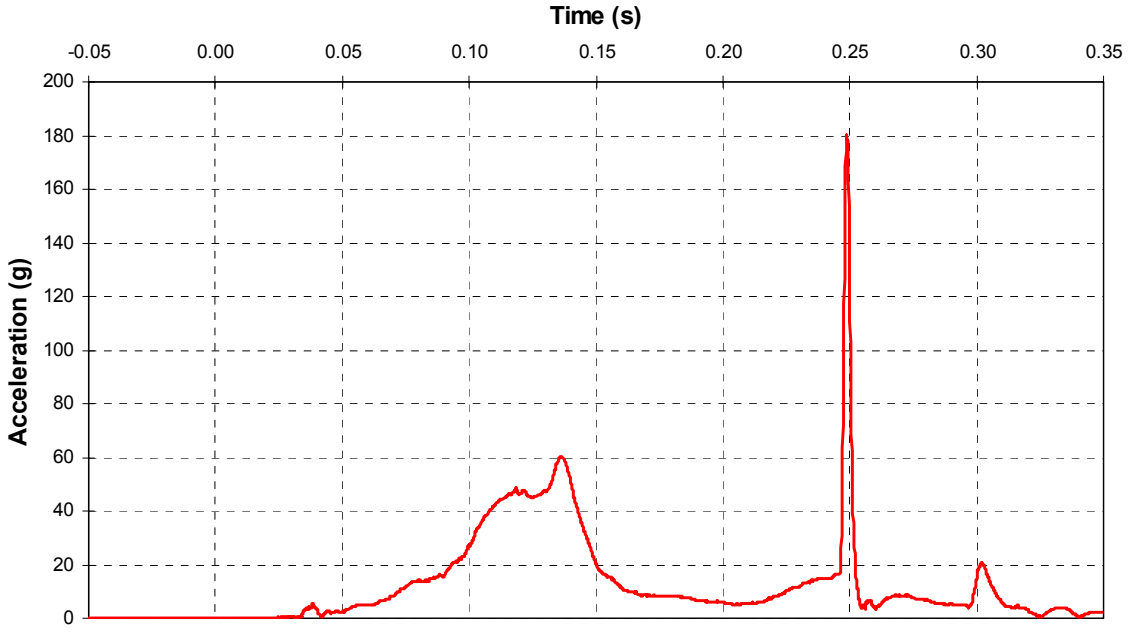
A- 7 CEF0301 2003 Lincoln Town Car Head L-M Acceleration



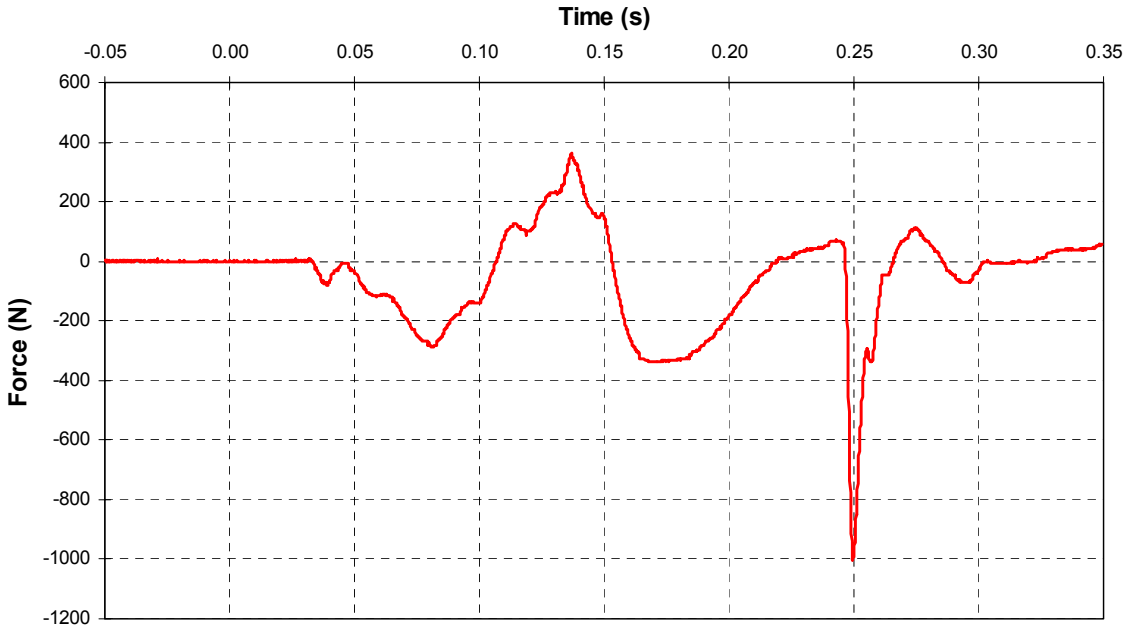
A- 8 CEF0301 2003 Lincoln Town Car Head I-S Acceleration



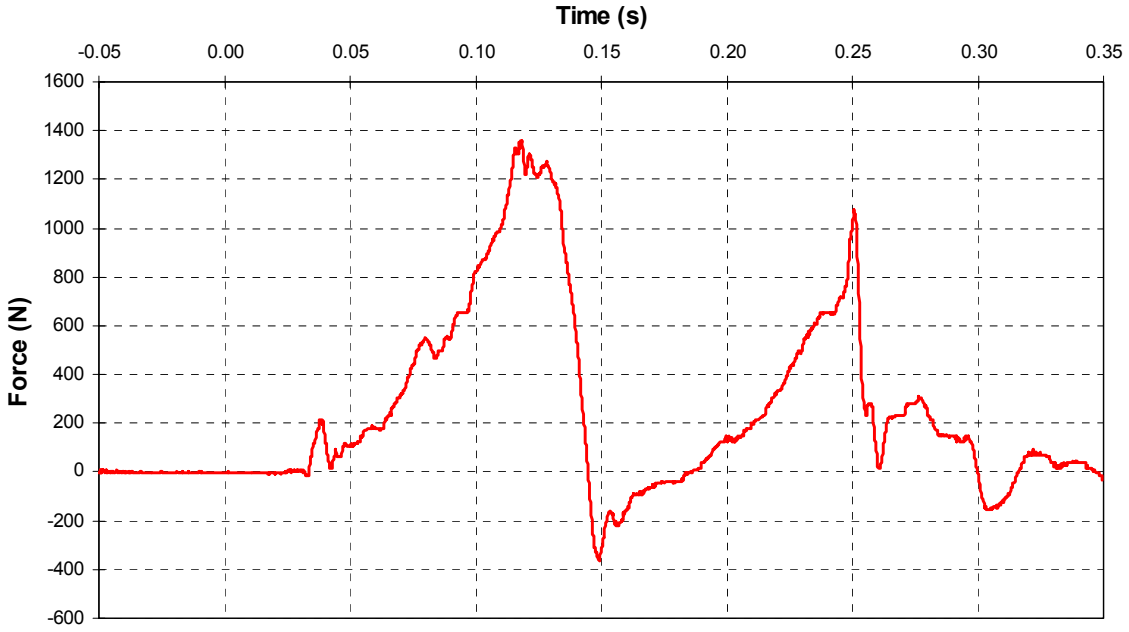
A- 9 CEF0301 2003 Lincoln Town Car Head Vector Resultant Acceleration



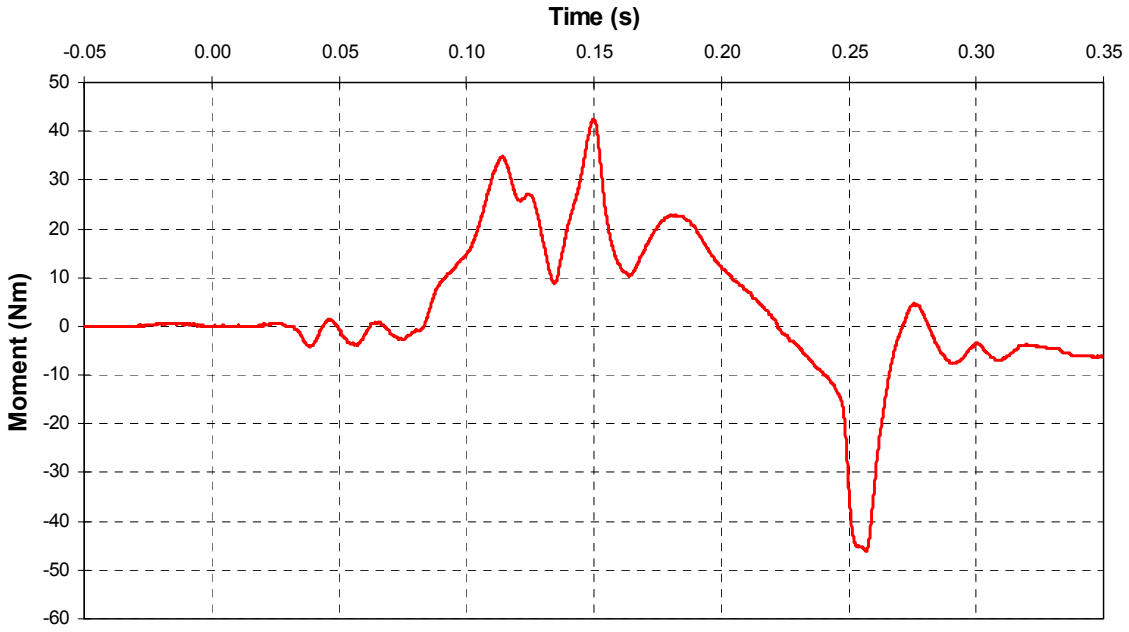
A- 10 CEF0301 2003 Lincoln Town Car Neck A-P Shear Force



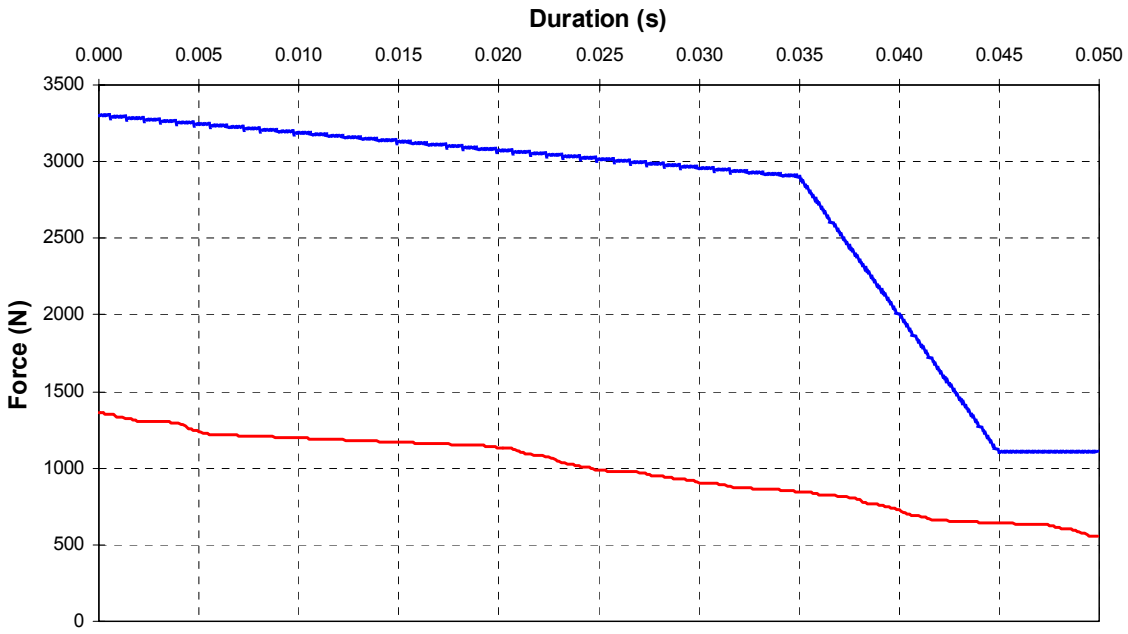
A- 11 CEF0301 2003 Lincoln Town Car Neck Axial Force



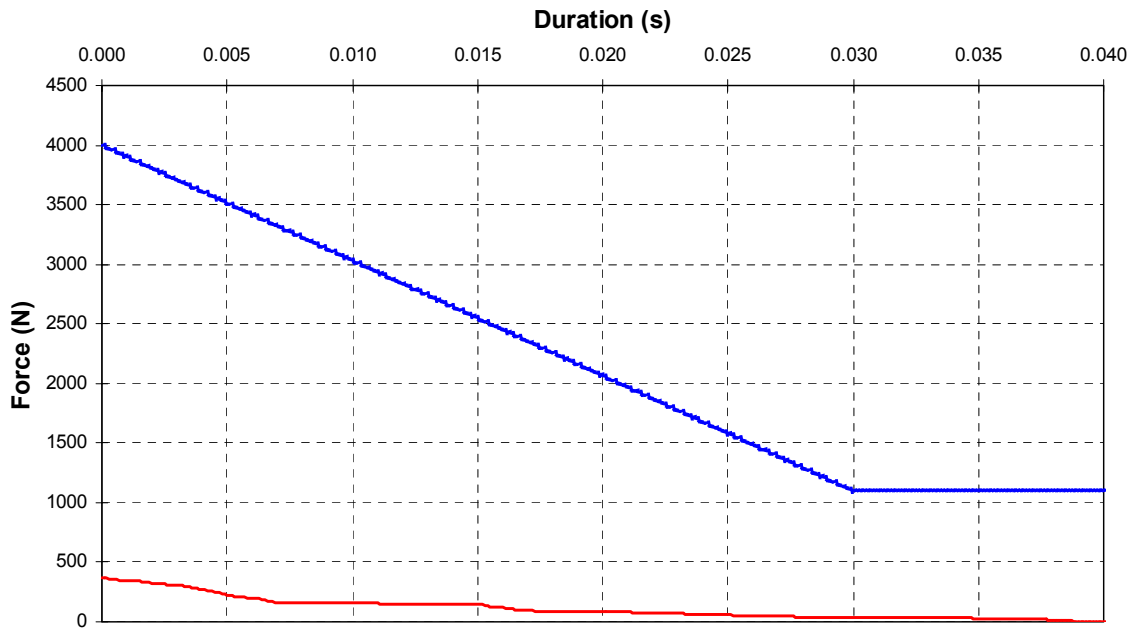
A- 12 CEF0301 2003 Lincoln Town Car Neck Occipital A-P Moment



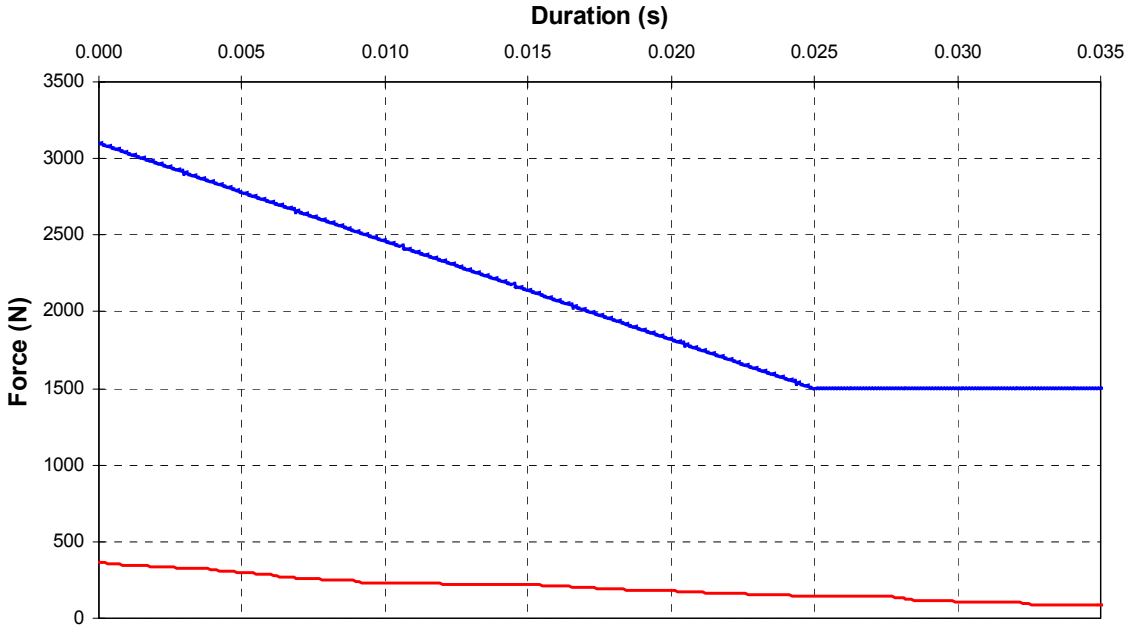
A- 13 CEF0301 2003 Lincoln Town Car Neck Tension Analysis



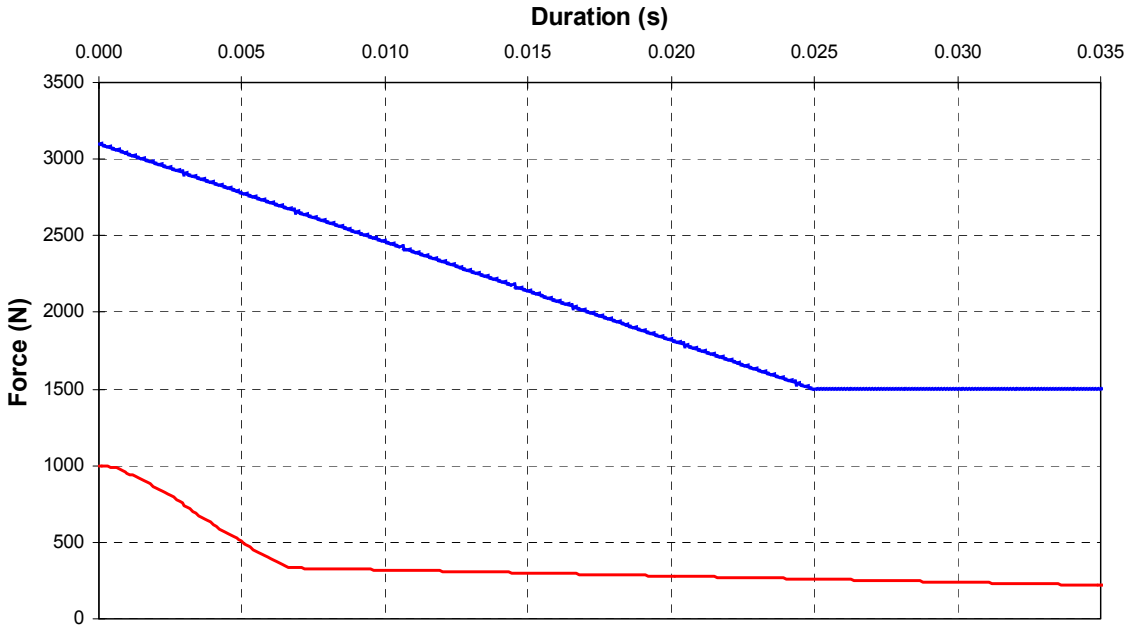
A- 14 CEF0301 2003 Lincoln Town Car Neck Compression Analysis



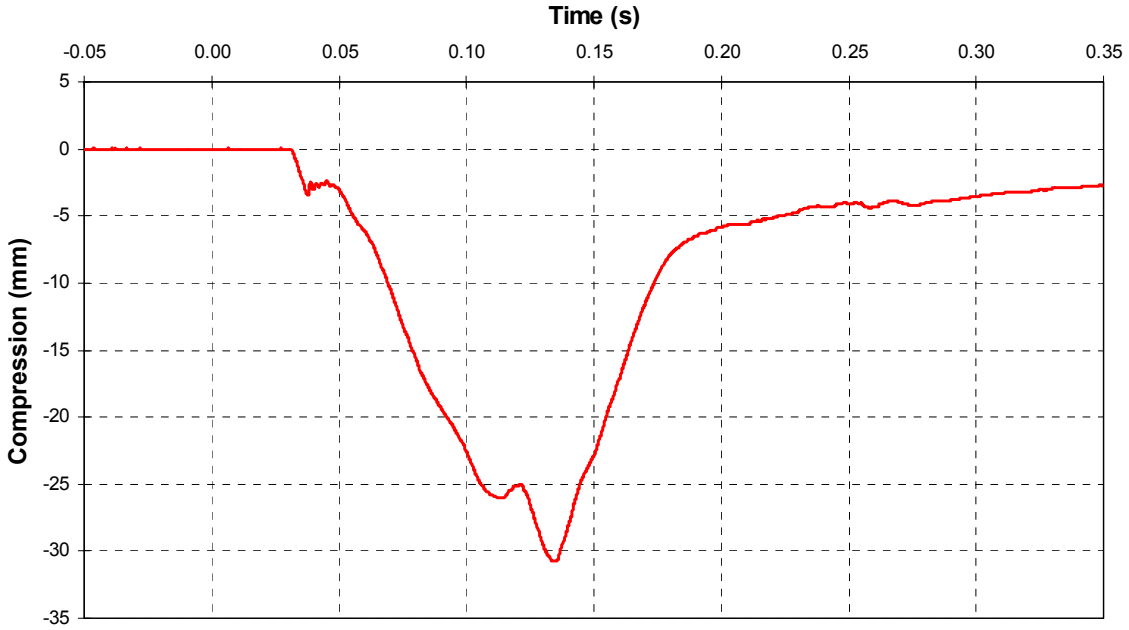
A- 15 CEF0301 2003 Lincoln Town Car Neck A-P Shear (Positive) Analysis



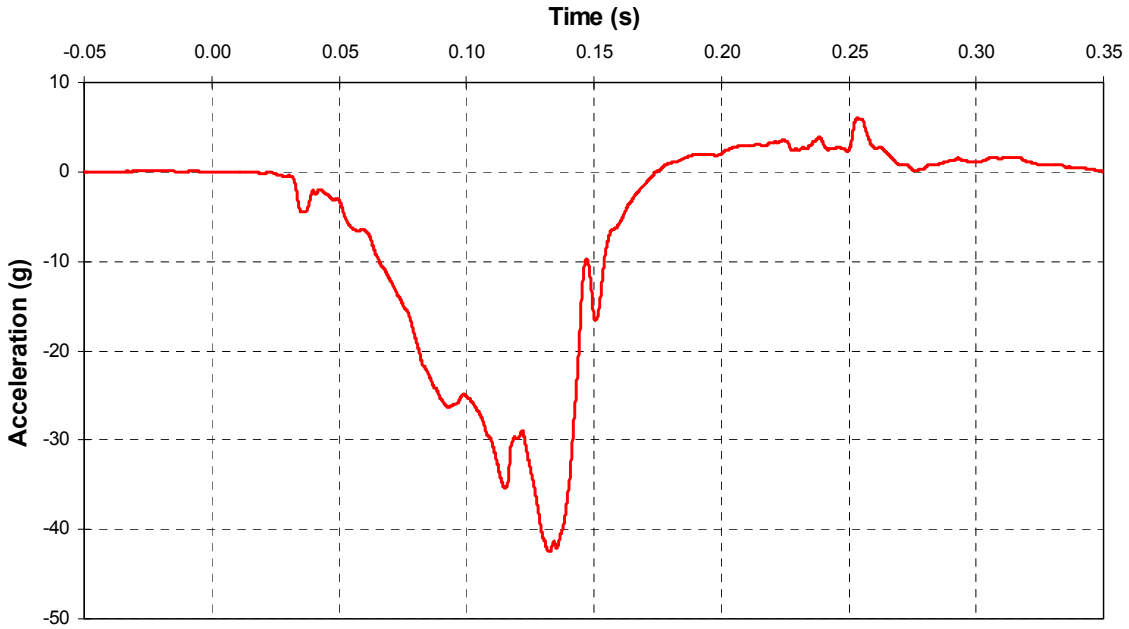
A- 16 CEF0301 2003 Lincoln Town Car Neck A-P Shear (Negative) Analysis



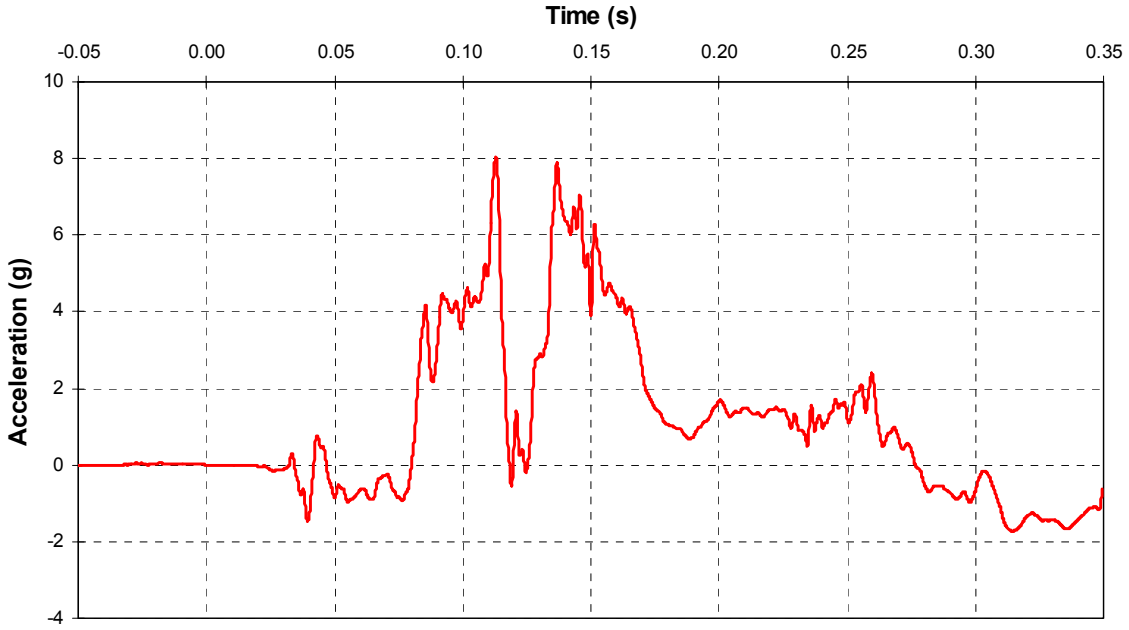
A- 17 CEF0301 2003 Lincoln Town Car Chest Compression



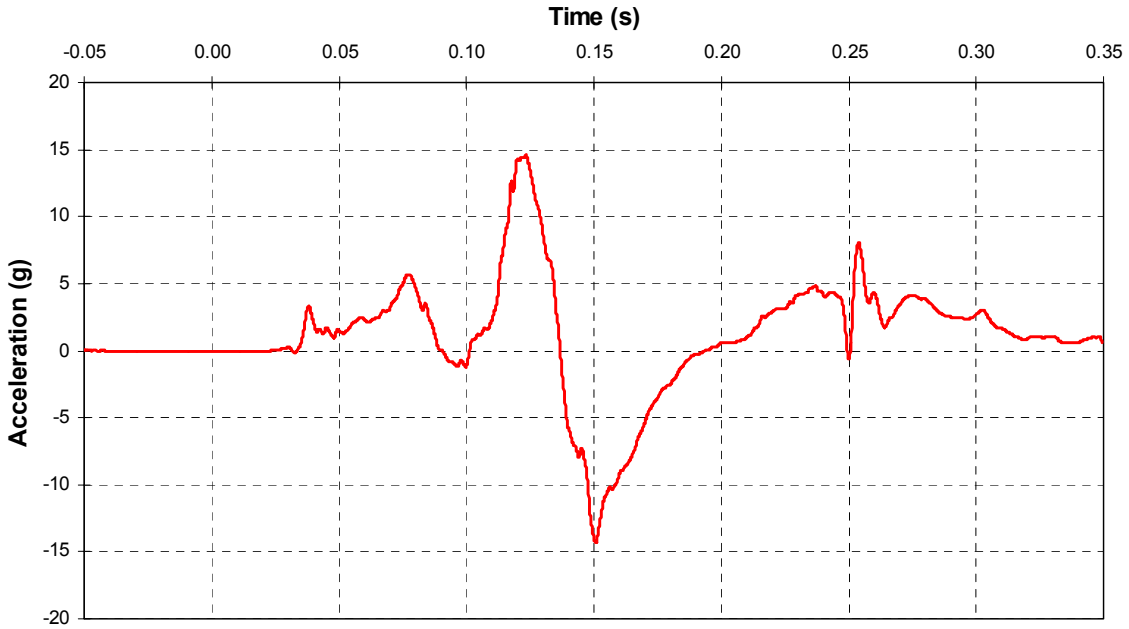
A- 18 CEF0301 2003 Lincoln Town Car Chest A-P Acceleration



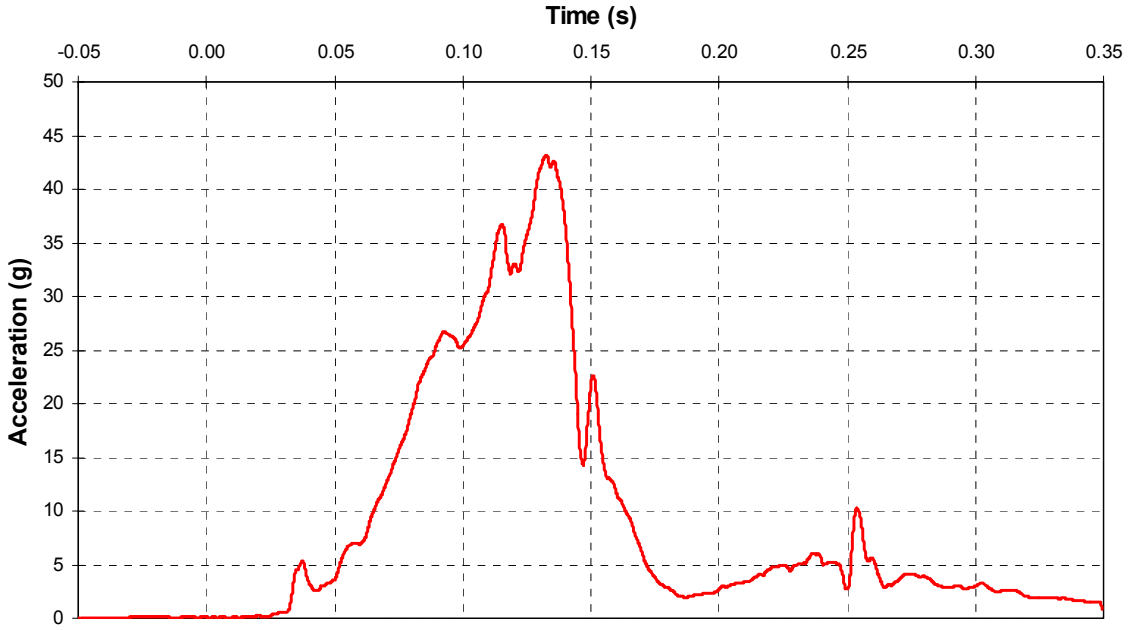
A- 19 CEF0301 2003 Lincoln Town Car Chest L-M Acceleration



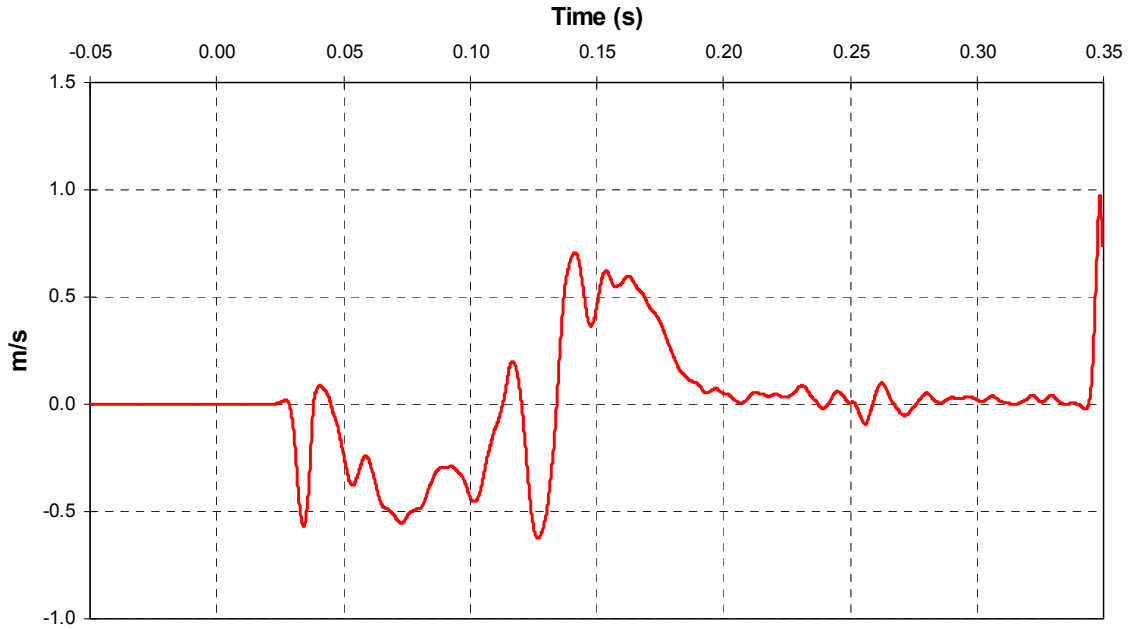
A- 20 CEF0301 2003 Lincoln Town Car Chest I-S Acceleration



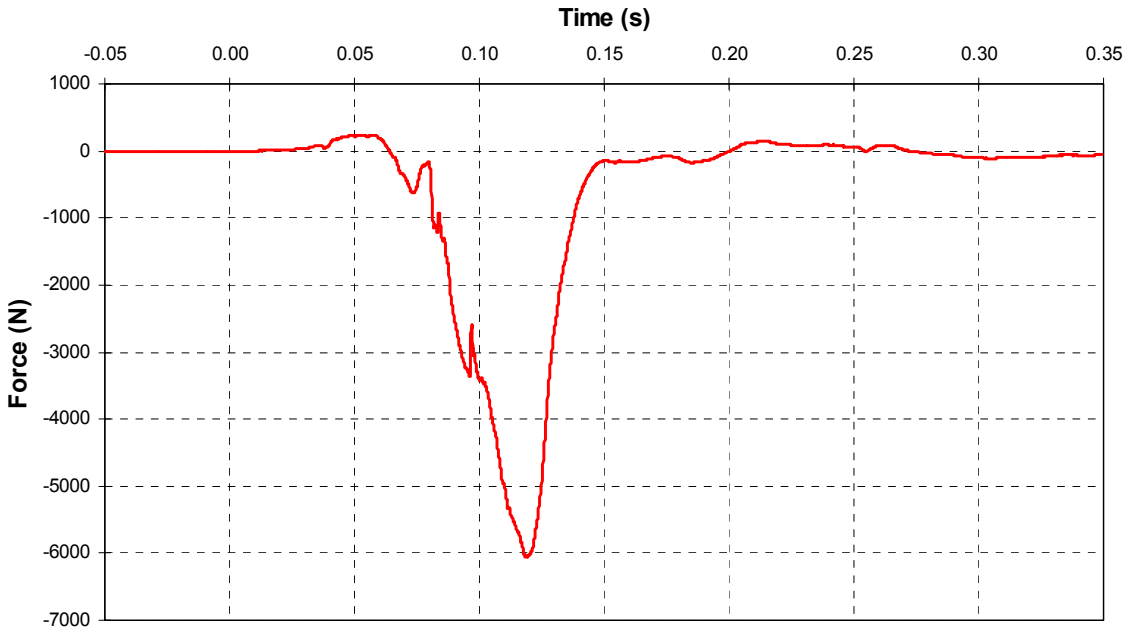
A- 21 CEF0301 2003 Lincoln Town Car Chest Vector Resultant Acceleration



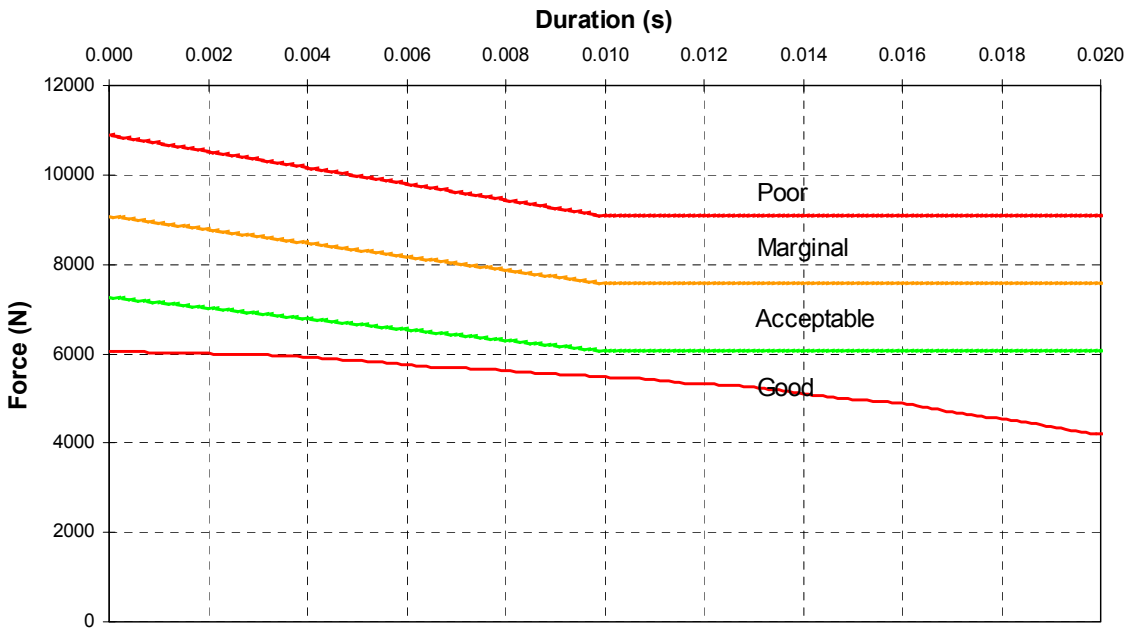
A- 22 CEF0301 2003 Lincoln Town Car Sternum Deflection Rate



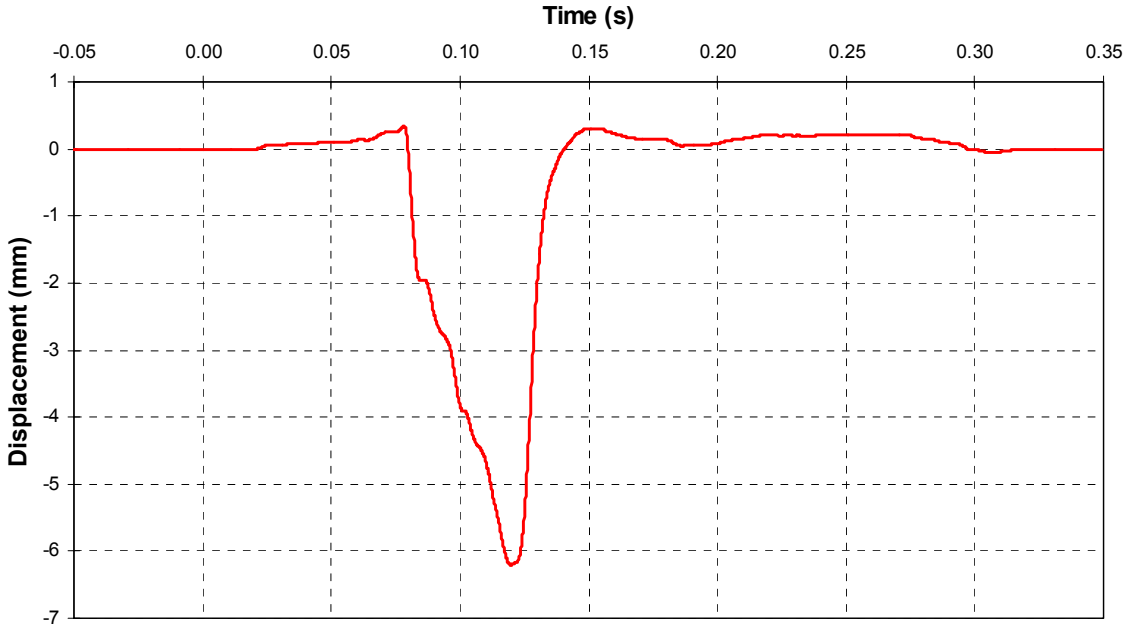
A- 23 CEF0301 2003 Lincoln Town Car Left Femur Axial Force



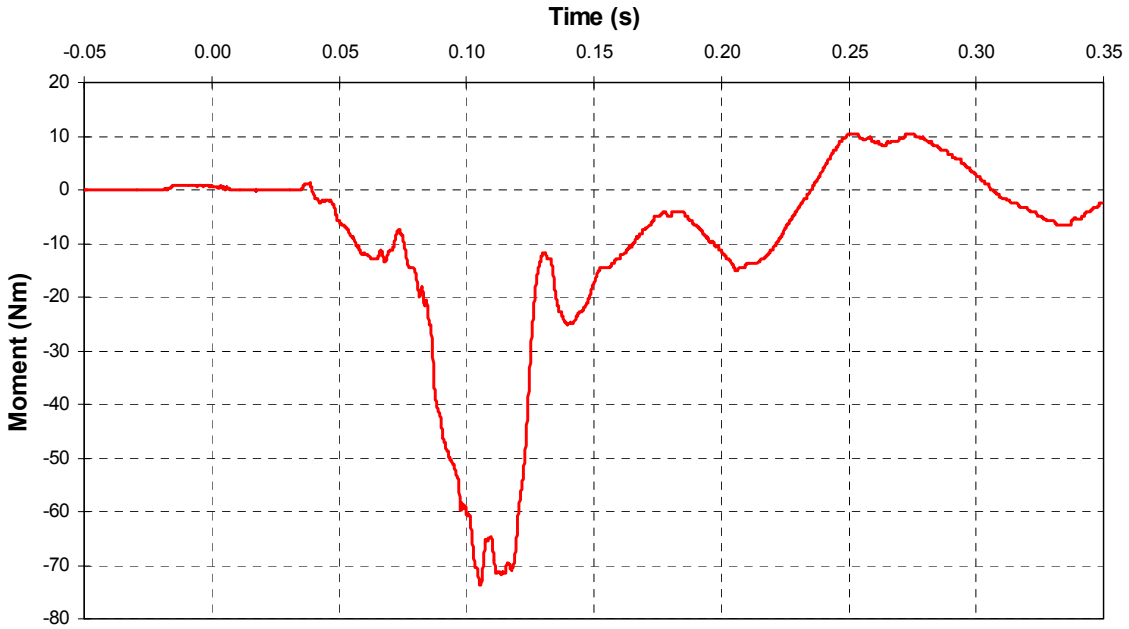
A- 24 CEF0301 2003 Lincoln Town Car Left Femur Axial Force Analysis



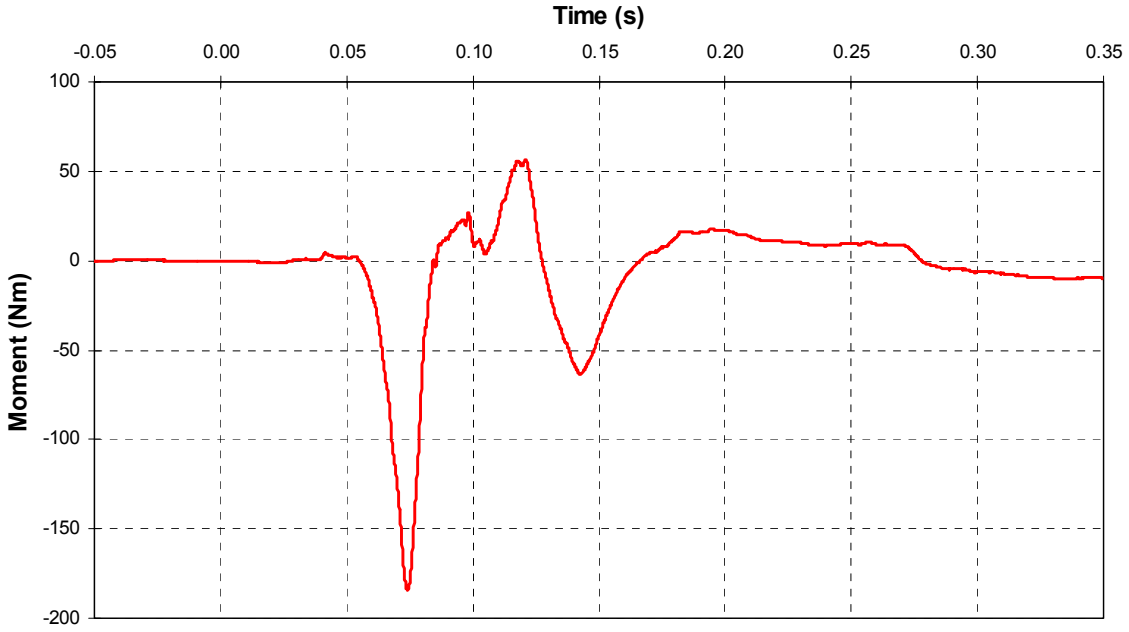
A- 25 CEF0301 2003 Lincoln Town Car Left Tibia-Femur Displacement



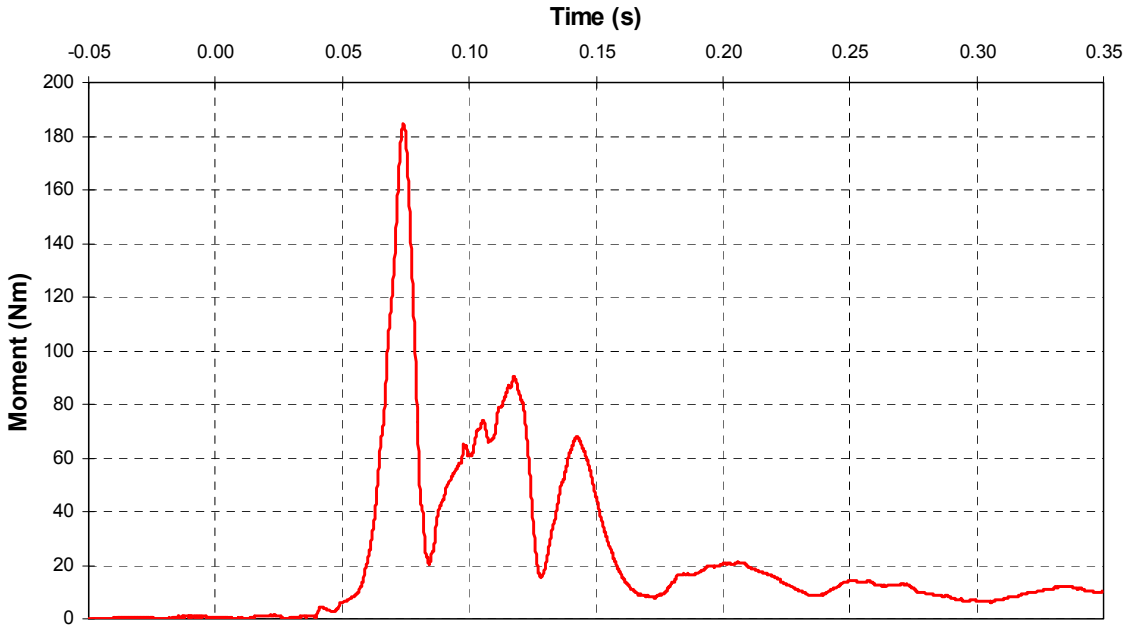
A- 26 CEF0301 2003 Lincoln Town Car Left Upper Tibia L-M Moment



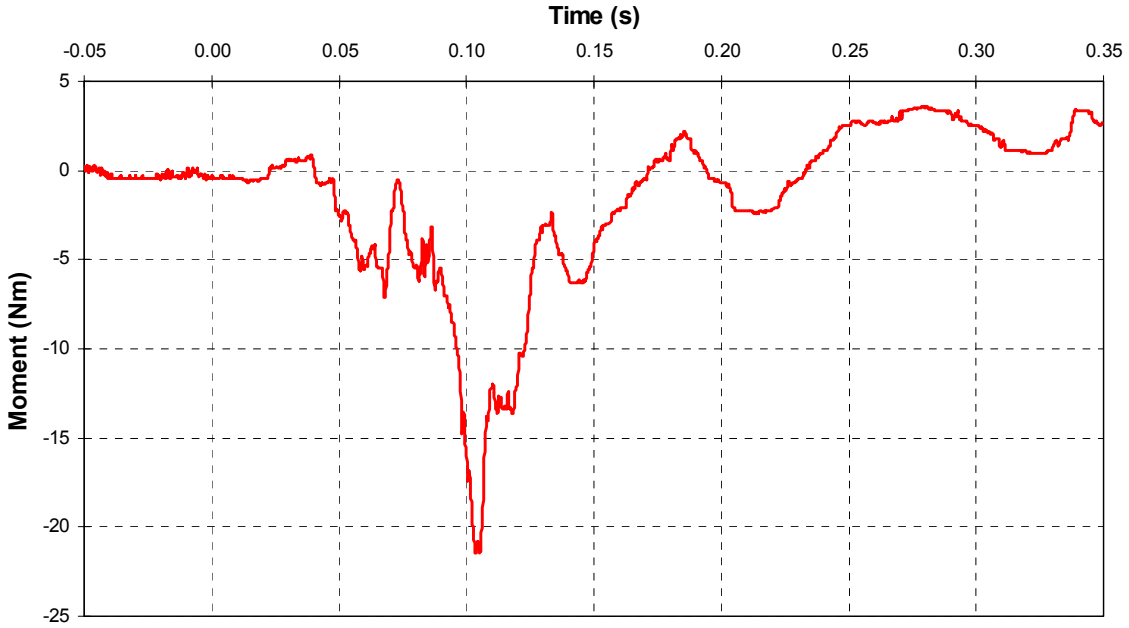
A- 27 CEF0301 2003 Lincoln Town Car Left Upper Tibia A-P Moment



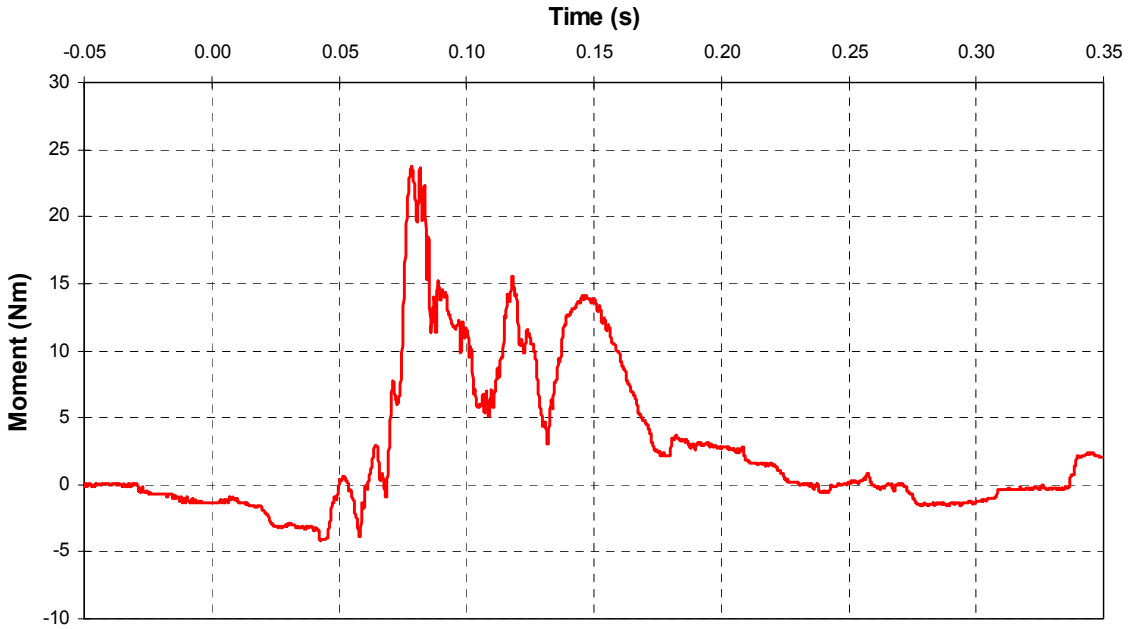
A- 28 CEF0301 2003 Lincoln Town Car Left Upper Tibia Vector Resultant Moment



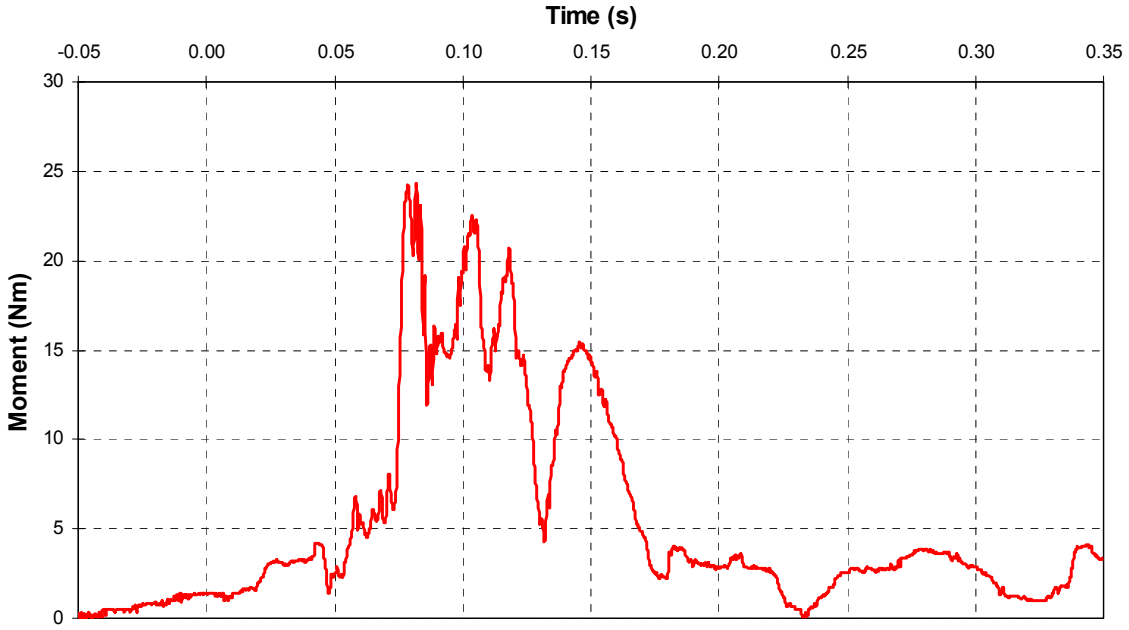
A- 29 CEF0301 2003 Lincoln Town Car Left Lower Tibia L-M Moment



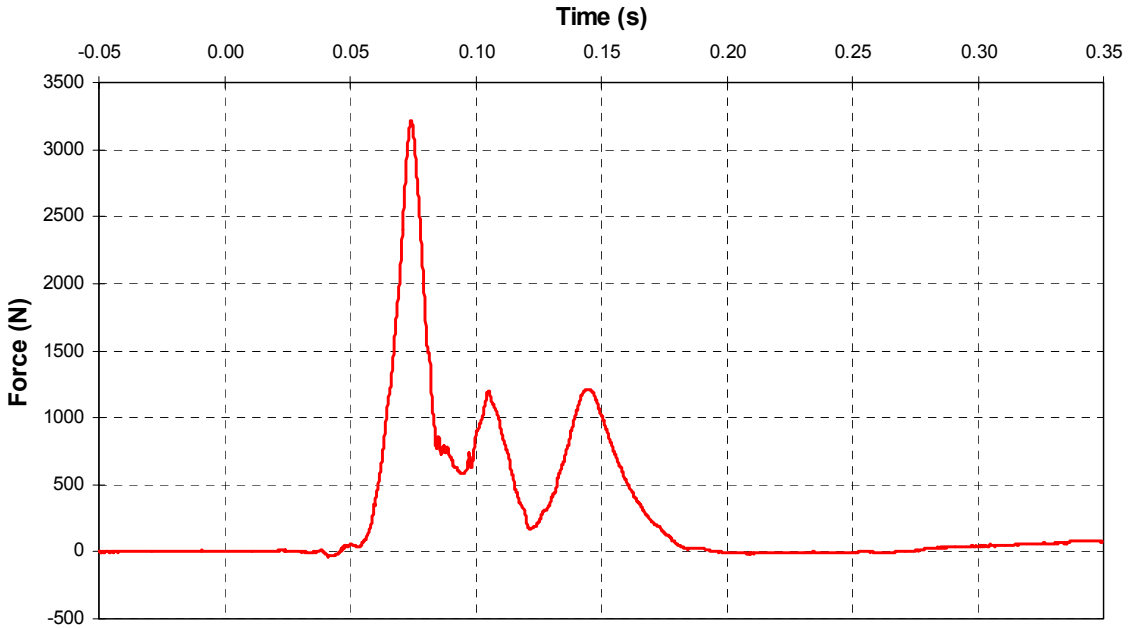
A- 30 CEF0301 2003 Lincoln Town Car Left Lower Tibia A-P Moment



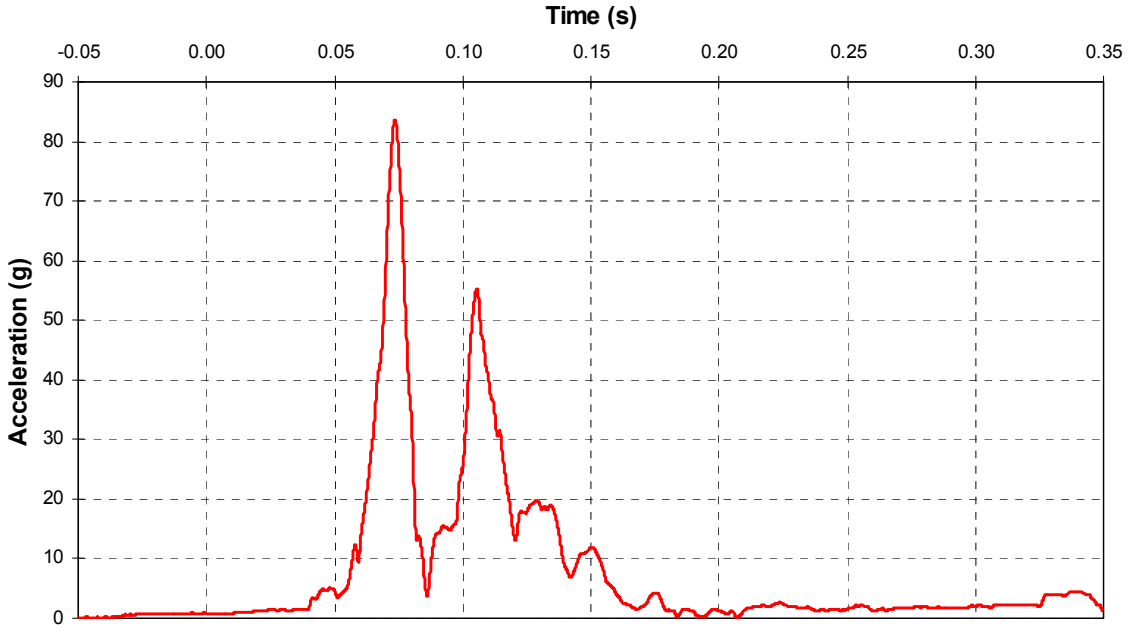
A- 31 CEF0301 2003 Lincoln Town Car Left Lower Tibia Vector Resultant Moment



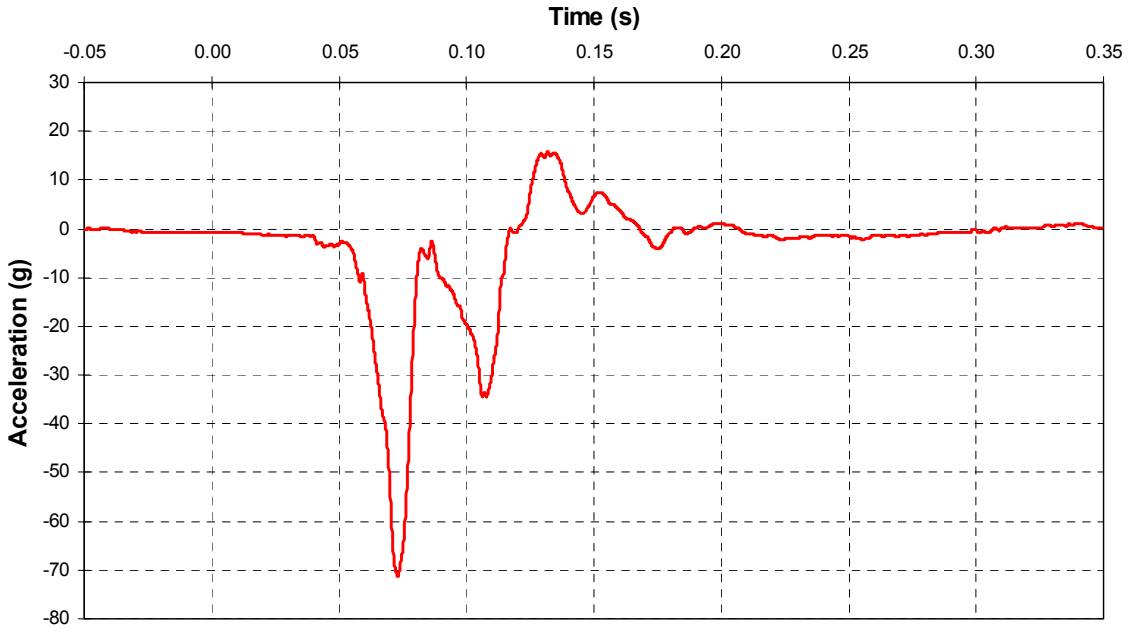
A- 32 CEF0301 2003 Lincoln Town Car Left Lower Tibia Axial Force



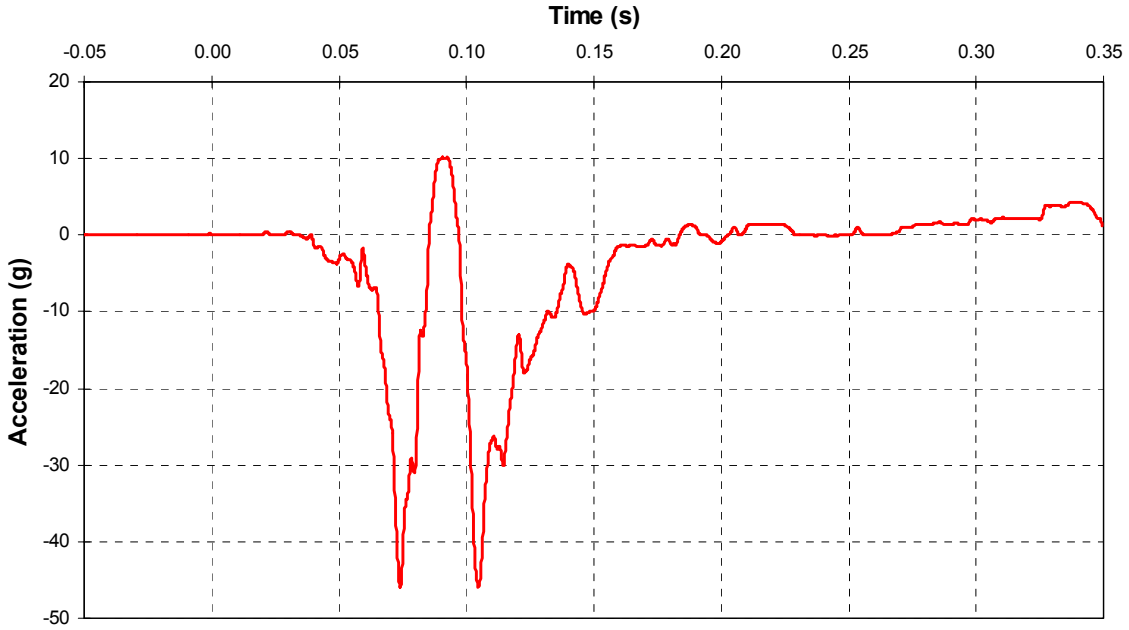
A- 33 CEF0301 2003 Lincoln Town Car Left Foot Vector Resultant Acceleration



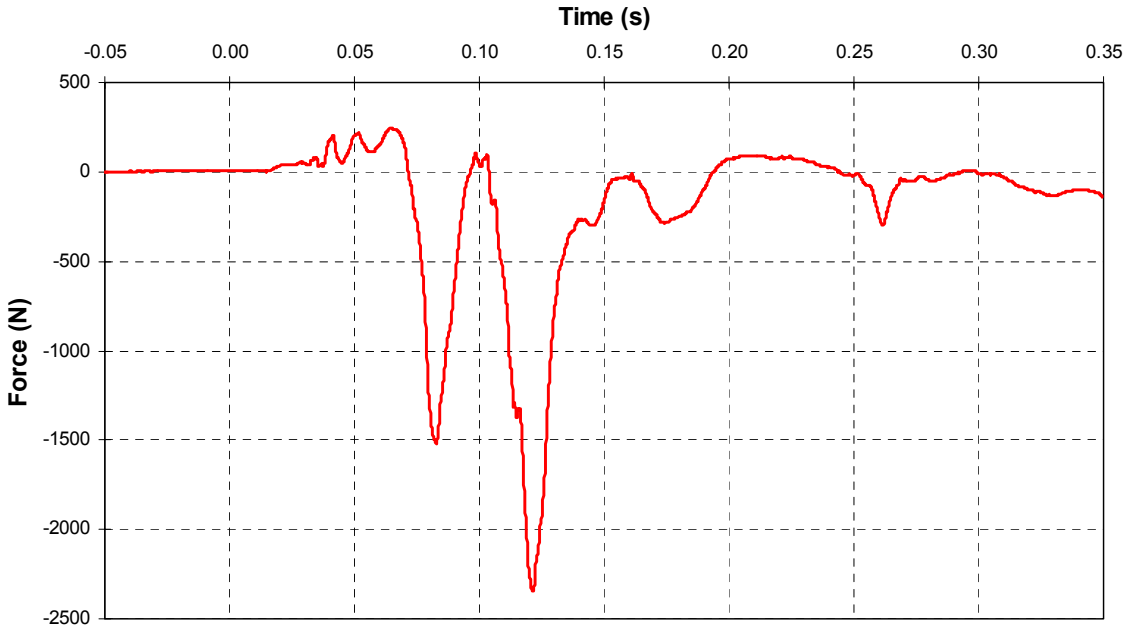
A- 34 CEF0301 2003 Lincoln Town Car Left Foot A-P Acceleration



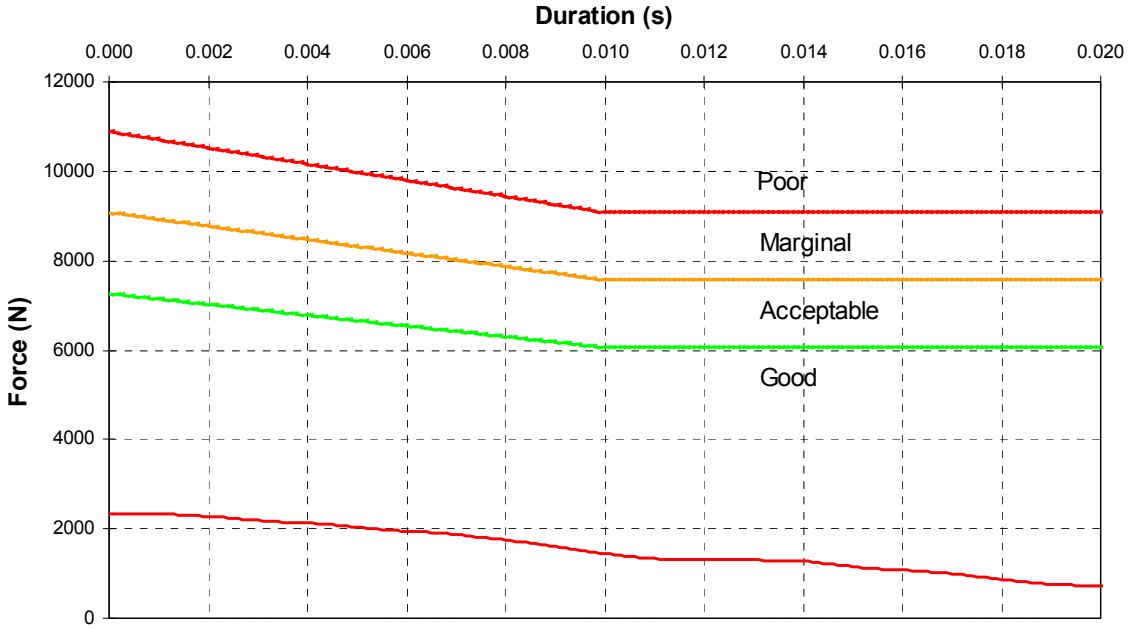
A- 35 CEF0301 2003 Lincoln Town Car Left Foot I-S Acceleration



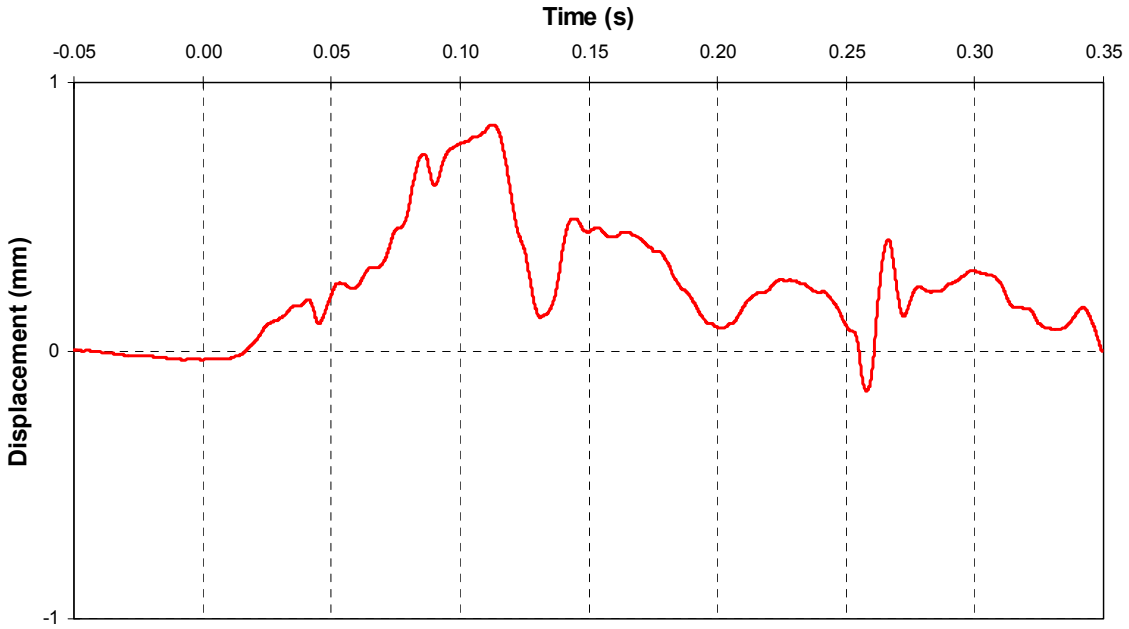
A- 36 CEF0301 2003 Lincoln Town Car Right Femur Axial Force



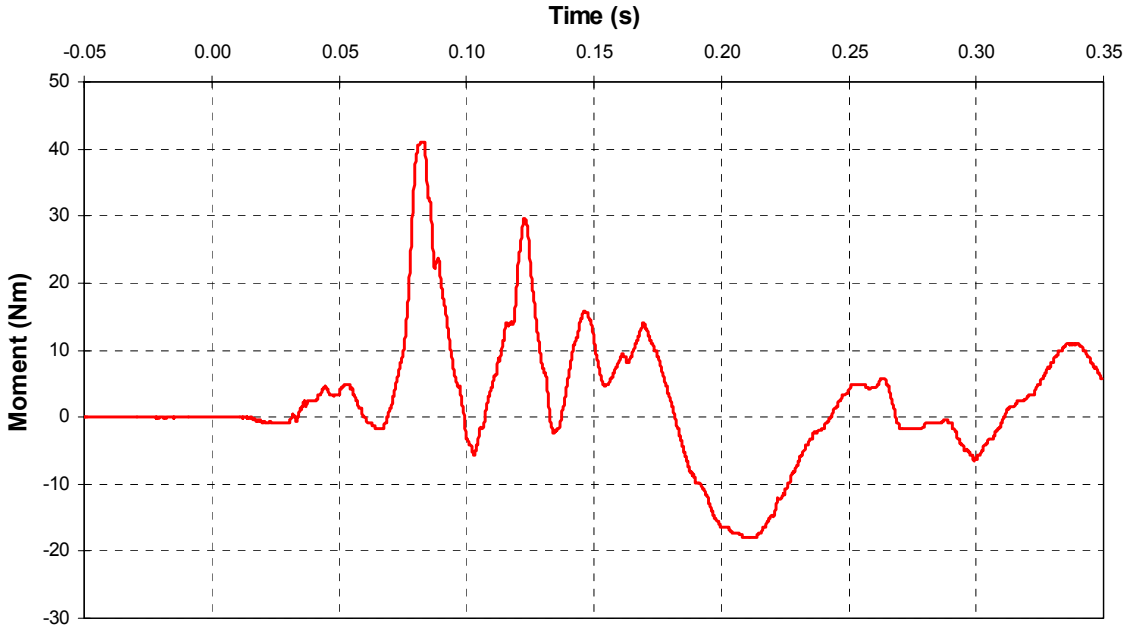
A- 37 CEF0301 2003 Lincoln Town Car Right Femur Axial Force Analysis



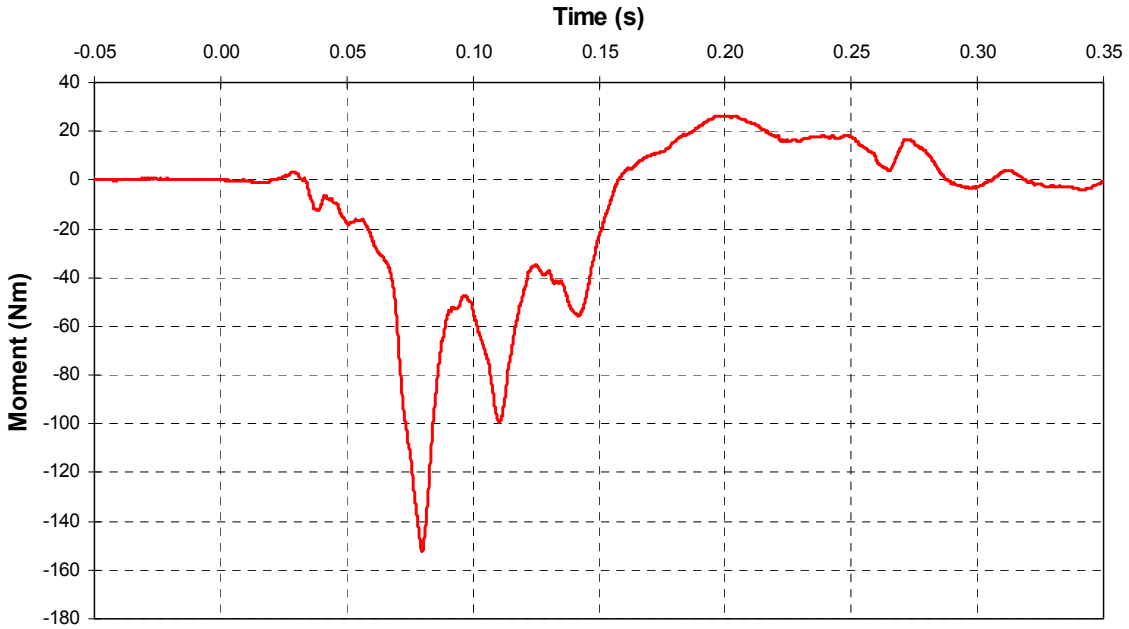
A- 38 CEF0301 2003 Lincoln Town Car Right Tibia-Femur Displacement



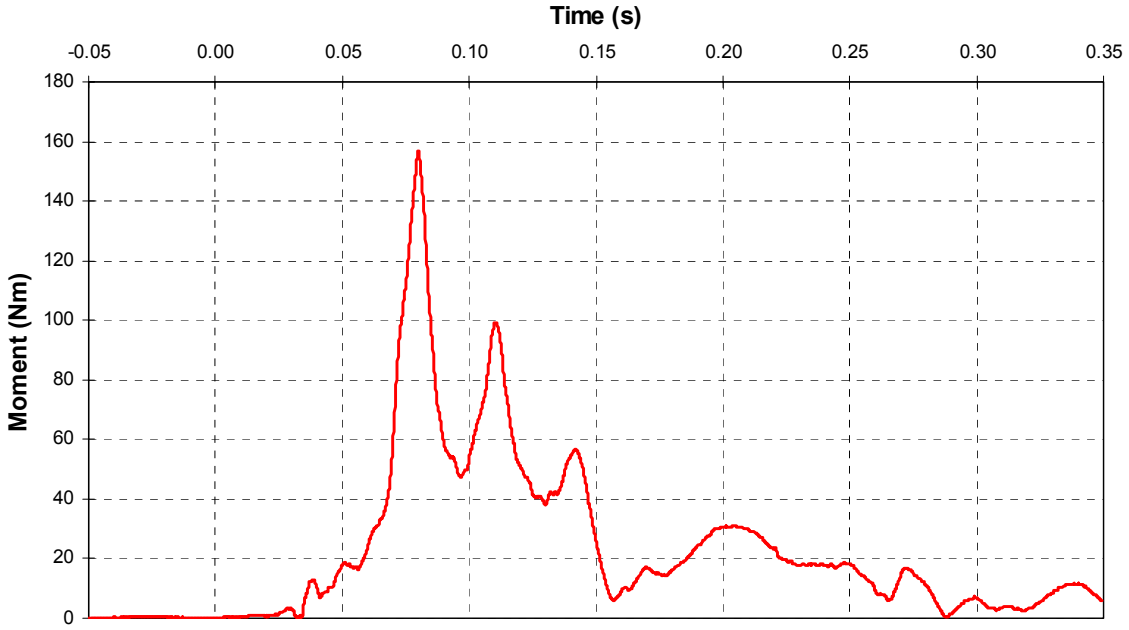
A- 39 CEF0301 2003 Lincoln Town Car Right Upper Tibia L-M Moment



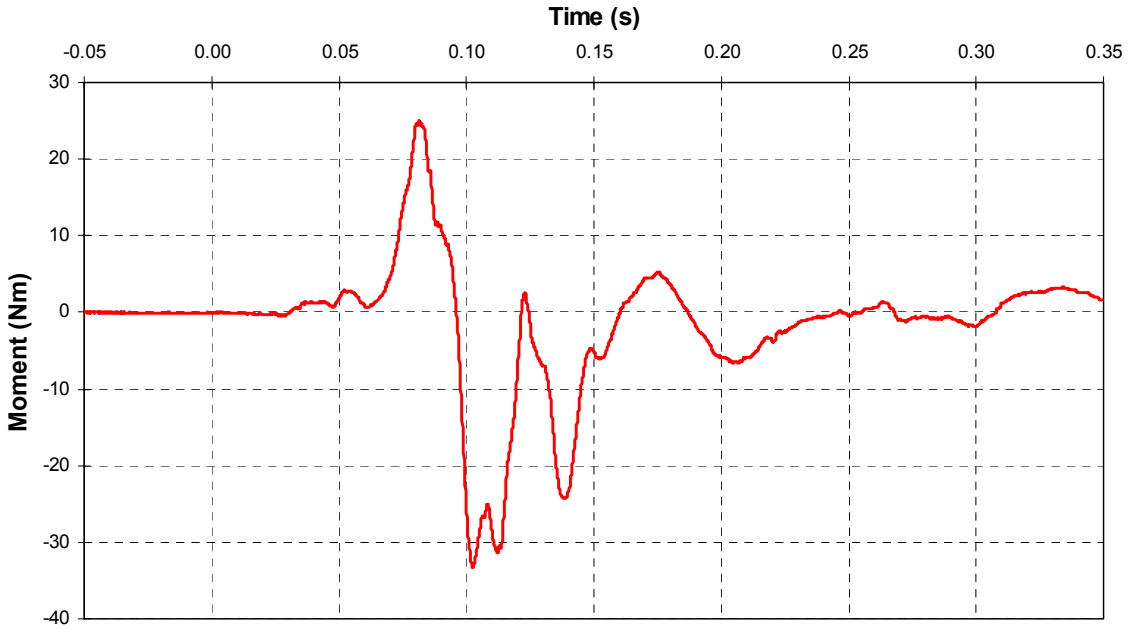
A- 40 CEF0301 2003 Lincoln Town Car Right Upper Tibia A-P Moment



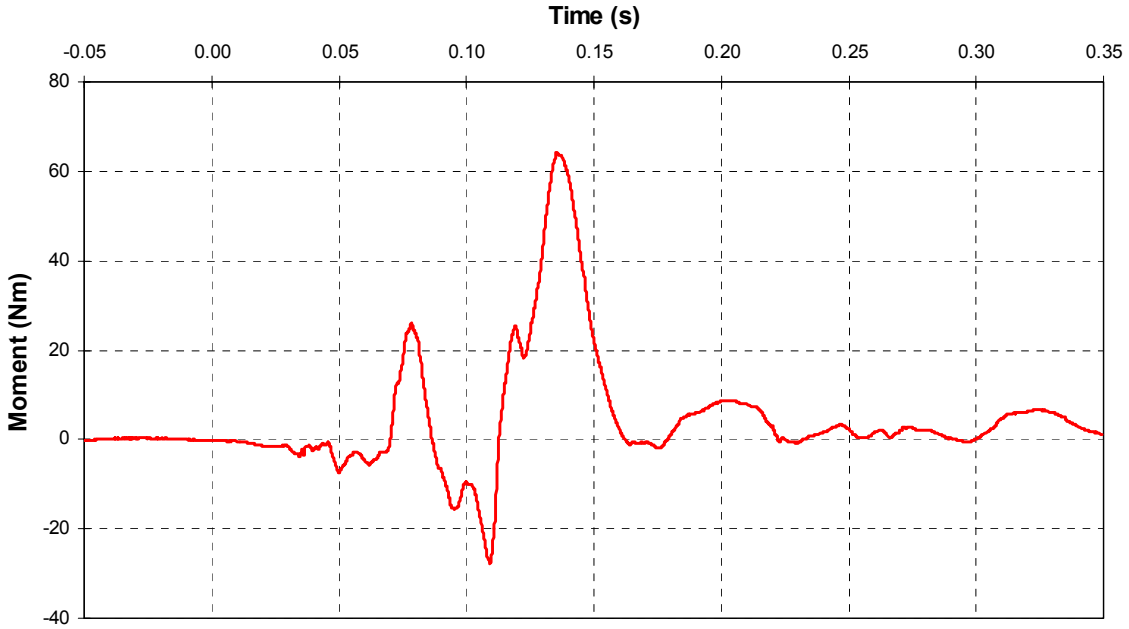
A- 41 CEF0301 2003 Lincoln Town Car Right Upper Tibia Vector Resultant Moment



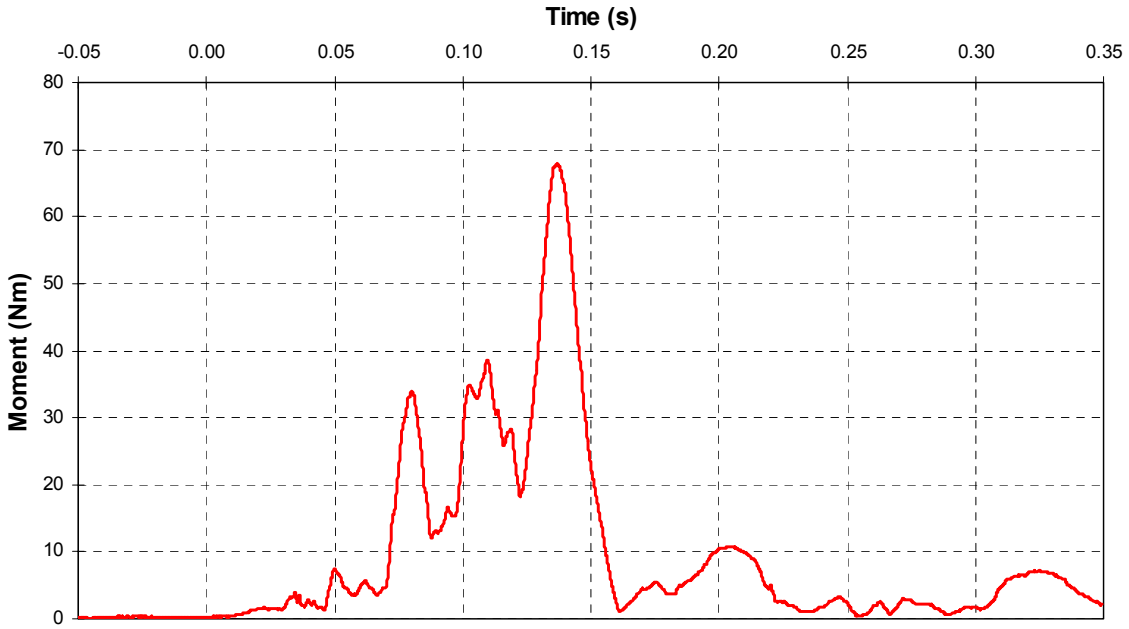
A- 42 CEF0301 2003 Lincoln Town Car Right Lower Tibia L-M Moment



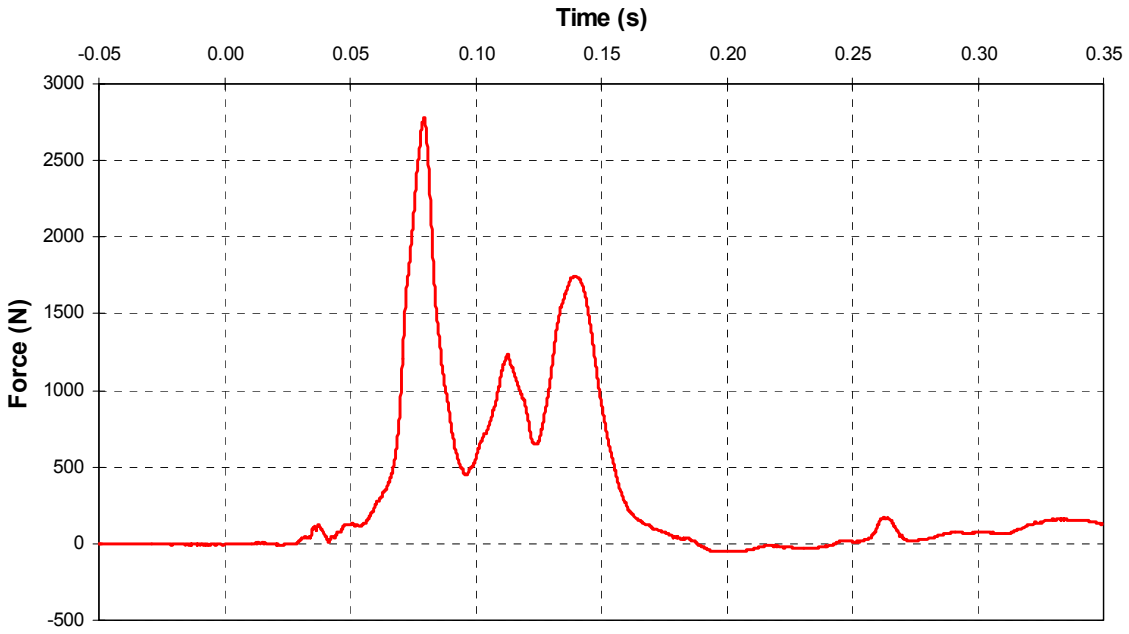
A- 43 CEF0301 2003 Lincoln Town Car Right Lower Tibia A-P Moment



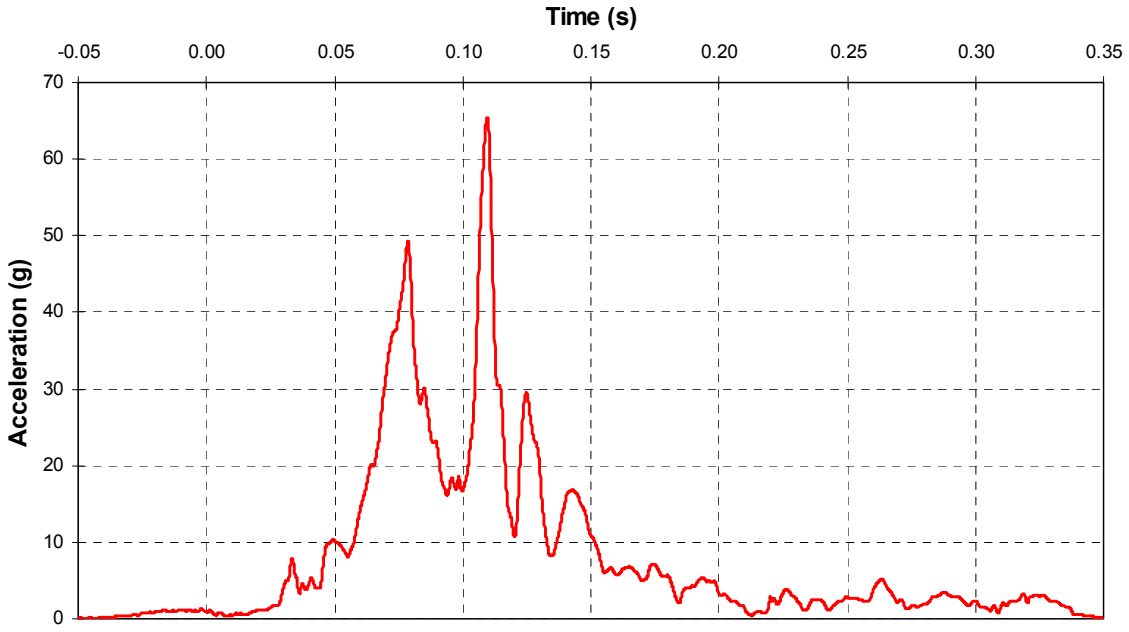
A- 44 CEF0301 2003 Lincoln Town Car Right Lower Tibia Vector Resultant Moment



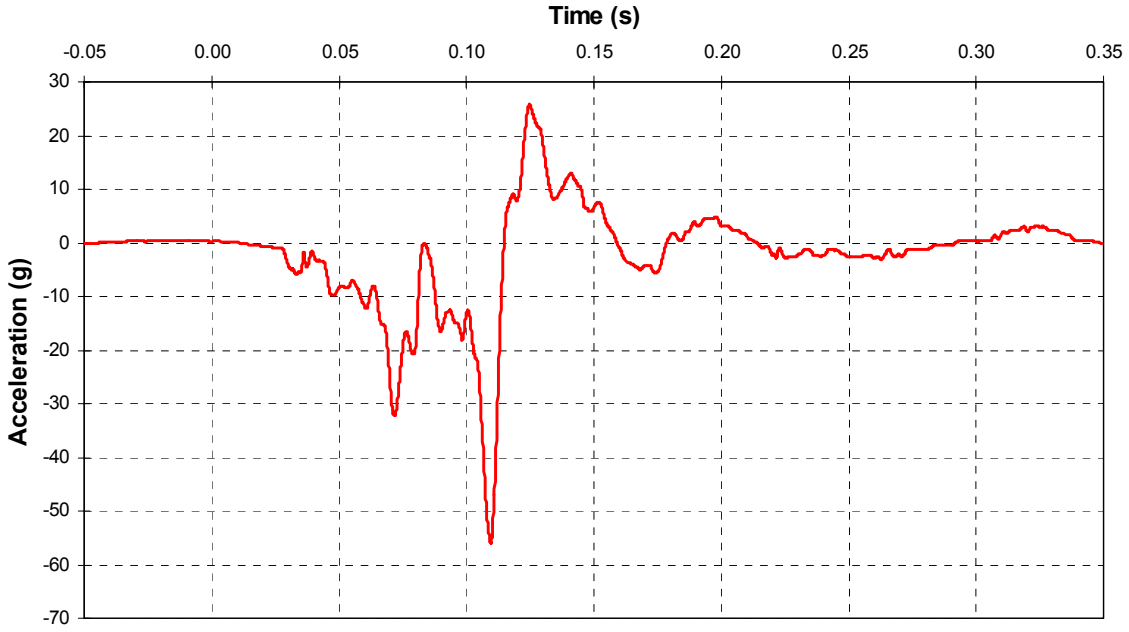
A- 45 CEF0301 2003 Lincoln Town Car Right Lower Tibia Axial Force



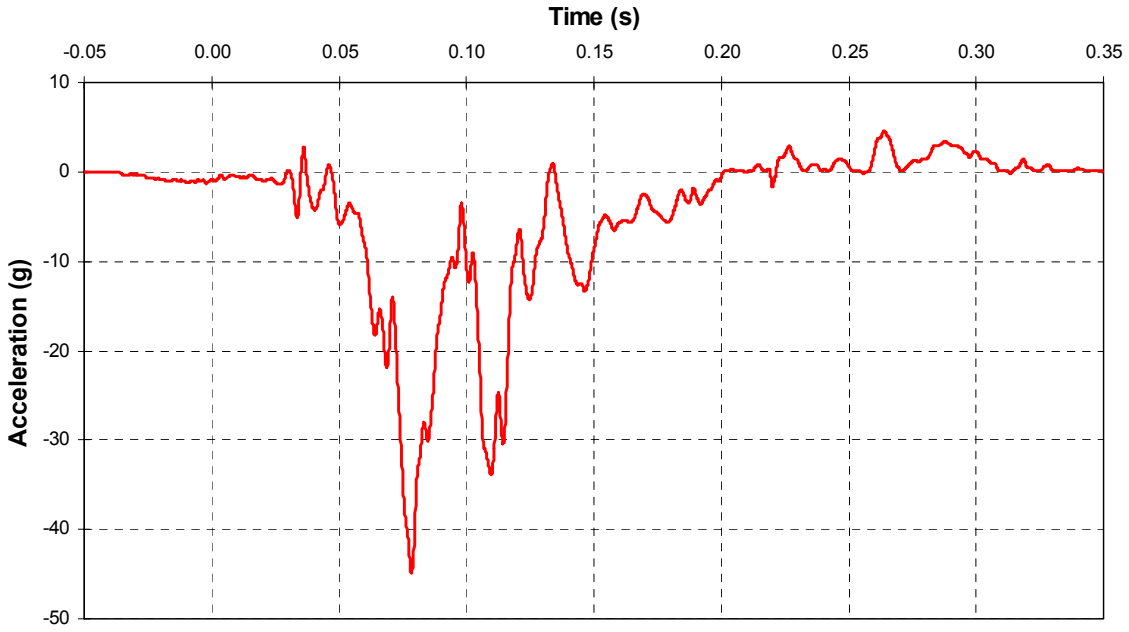
A- 46 CEF0301 2003 Lincoln Town Car Right Foot Vector Resultant Acceleration



A- 47 CEF0301 2003 Lincoln Town Car Right Foot A-P Acceleration



A- 48 CEF0301 2003 Lincoln Town Car Right Foot I-S Acceleration



LINCOLN

lincoln.com

VEHICLE DESCRIPTION

TOWN CAR

2003 SIGNATURE 4-DOOR
6-PASSENGER LUXURY
4.6L EFI V8 ENGINE
ELECTRONIC AUTO O/D TRANS

VIN 1LNHM82W23Y **602391**

EXTERIOR
CHARCOAL GREY CLEARCOAT MET
INTERIOR
EXPRESSO/MED. LT. STONE LTH

STANDARD EQUIPMENT **INCLUDED AT NO EXTRA CHARGE**

SAFETY/SECURITY
- DRIVER & PASS FRONT AND SIDE SRS AIR BAGS
- 4-WL DISC ANTI-LOCK BRAKES
- SIDE DOOR INTRUSION BEAM
- PERIMETER ANTI-THEFT SYS
- SECURILOCK ANTI-THEFT SYS
- RAIN-SENSING WIPERS
- REMOTE KEYLESS/ILLUMINATED ENTRY SYSTEM W/KEYPAD

FUNCTIONAL
- RACK & PINION STEERING
- REAR AIR SUSPENSION
- ALL-SPEED TRACTION CONTROL
- DUAL-ZONE CLIMATE CONTROL
- EXTENDED REAR PARK ASST
- STEERING WHEEL W/AUDIO & CLIMATE CONTROLS
- DUAL EXHAUST SYSTEM
- 100,000 MILE TUNE UP INTVL

EXTERIOR
- HALOGEN HEADLAMPS
- SOLAR TINTED GLASS
- 17" ALUMINUM WHEELS
- HEATED PWR MIRRORS W/MEMOR
- POWER TRUNK PULLDOWN
- CONCEALED ANTENNA
- CHRM GRILLE & BODY MOLDING

INTERIOR
- ALPINE AUDIO AM/FM/CD/CASS
- DIGITAL & ANALOG SPEEDOMTR
- MEMORY SEATS, PEDALS, MIRR
- EASY ENTRY/EXIT DRV SEAT
- PREM LEATHER SEAT SURFACES
- HEATED FRONT SEATS
- 40/20/40 FRONT SEATS
- OVERHEAD CONSOLE W/COMPASS
- 3YR/36K MI.COMPLMNTRY MAIN
- 24 HR. ROADSIDE ASSIST
- 4 YR/50,000 MI WARRANTY

PRICE INFORMATION

Manufacturer's Suggested Retail Price

STANDARD VEHICLE PRICE **$42,730.00**

KEY STANDARD EQUIPMENT
ORDER CODE 200A
TRACTION CONTROL

OPTIONAL EQUIPMENT

P225/60R17 ALL SEASON WSW	105.00
FRONT LICENSE PLATE BRACKET	NO CHARGE
ALPINE AUDIO SYSTEM	NO CHARGE
TOTAL VEHICLE & OPTIONS	42,835.00
DESTINATION & DELIVERY	770.00

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

CITY MPG

17

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
14 and **20** mpg in the city
and between
21 and **29** mpg on the highway.

Fuel Economy Information

DOE EPA

For more information see WWW.FUELECONOMY.GOV

2003 TOWN CAR, 4.6L ENGINE
8 CYLINDERS,
(F.F.S.) FUEL INJECTION,
CATALYST,
ELECTRONIC 4-SPEED AUTOMATIC
TRANSMISSION

Estimated Annual Fuel Cost: $1125

A RANGE OF FUEL ECONOMY VALUES FOR OTHER VEHICLES CLASSIFIED AS LARGE IS NOT AVAILABLE AT THIS TIME.

HIGHWAY MPG

25

For Comparison Shopping
all vehicles classified as
SEE NOTE BELOW
have been issued mileage ratings ranging from to mpg city and to mpg highway.

The LINCOLN COMMITMENT℠ is a comprehensive owner benefits package designed to provide you with services to support your every driving need. It includes: 24-hour Roadside Service Assistance, Service Loaners, a Customer Assistance Center, Travel Planning, and much more.

TOTAL MSRP **$43,605.00**

1LNHM82W23Y602391

EXTENDED SERVICE PLAN

Lincoln Extended Service Plan is the ONLY service contract backed by Ford and honored by over 5,100 Ford and Lincoln-Mercury Dealers. Ask your dealer for prices and additional details or see our website at www.Ford-ESP.com.

SOLD TO
Whitten Lincoln-Mercury
10920 Midlothian Pike
Richmond VA 23235

SHIP TO (IF OTHER THAN SOLD TO)

SHIP THROUGH

ITEM#: 28-1175 O/T 2

VEHICLE IDENTIFICATION NO.	DEALER NO.	FINAL ASSEMBLY POINT	METHOD OF TRANSP.	ONE	TWO
1LNHM82W23Y602391	28C 661	WIXOM	RAIL	RD03	

THIS LABEL IS AFFIXED PURSUANT TO FEDERAL AUTOMOBILE INFORMATION DISCLOSURE ACT. GASOLINE, LICENSE AND TITLE FEES, STATE AND LOCAL TAXES AND DEALER INSTALLED OPTIONS ARE NOT INCLUDED.

2D031 N RD 2X 315 000424 04 03 02