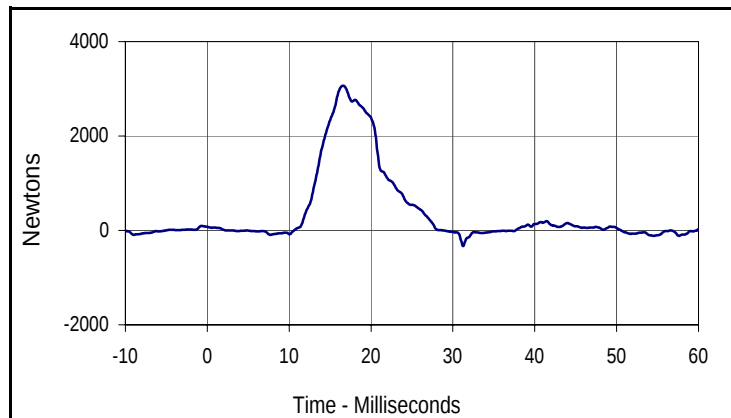


Test Program: Thor-LX Dynamic Heel of Foot Impact Test
 Serial No.: G110

Test Date: 1/4/10
 Test I.D.: Heel05



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	3.90 to 4.10	3.96	Pass
Peak Lower Tibia Compressive Force	Newton	2738 to 3346	3067	Pass
Overall Test Results				Pass



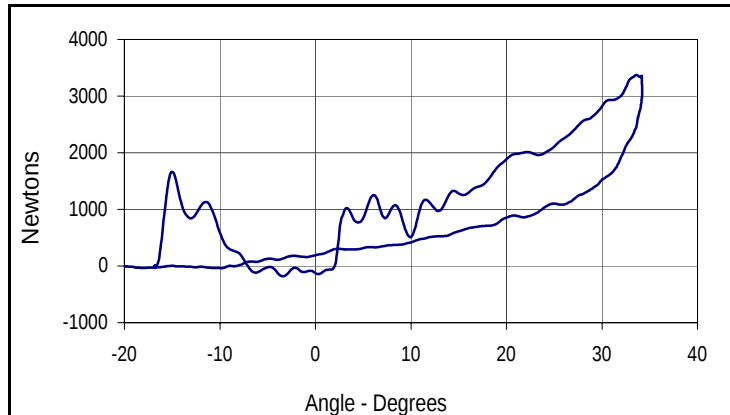
Curve Description			
Peak Lower Tibia Compressive Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newton
Max	Time	Min	Time
3066.5	16.6	-327.3	31.2

Test Program: Thor-LX Dynamic Ball of Foot Impact Test
 Serial No.: G110

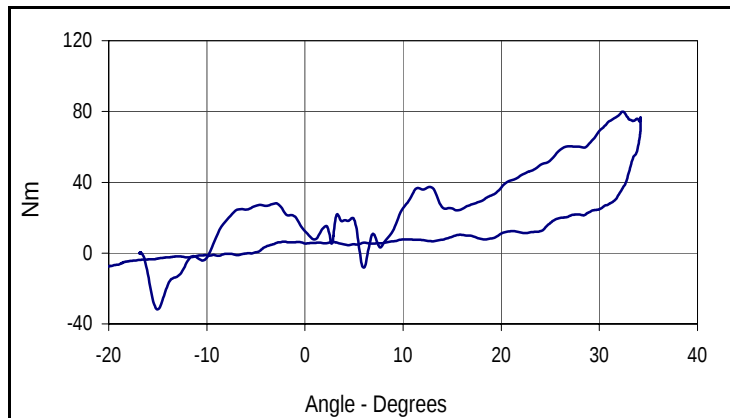
Test Date: 1/4/10
 Test I.D.: Ball005



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.90 to 5.10	5.03	Pass
Peak Lower Tibia Compressive Force	Newtons	2956 to 3613	3373	Pass
Peak Ankle Y Axis Rotation	Deg	32.7 to 39.9	34.2	Pass
Peak Ankle Resistive Moment	Nm	77.1 to 94.2	79.9	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
3372.5	33.6	-183.5	-3.4



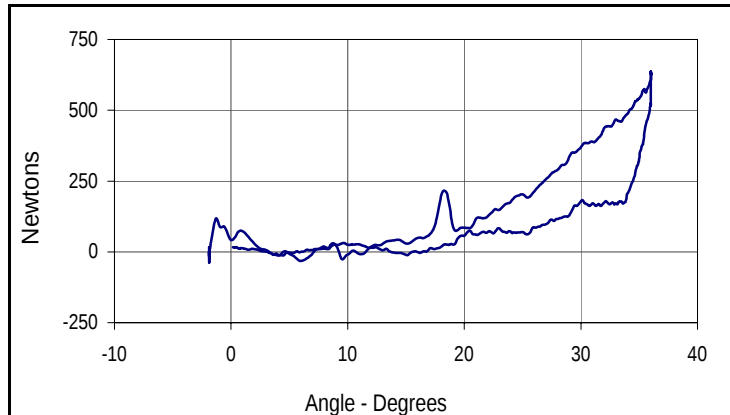
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
79.9	32.4	-31.7	-15.1

Test Program: Thor-LX Dynamic Inversion Impact Test
 Serial No.: G110

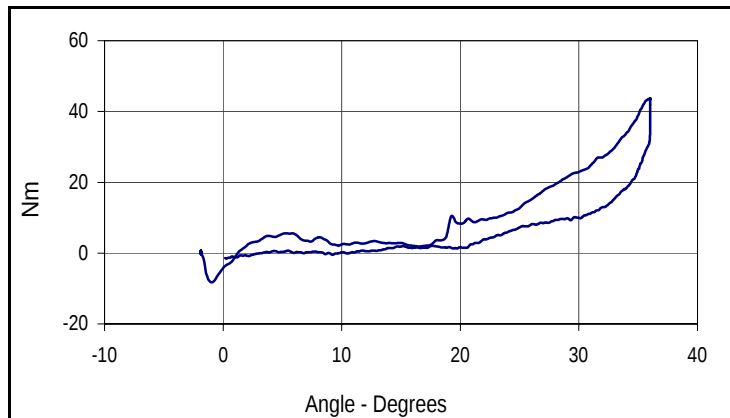
Test Date: 1/4/10
 Test I.D.: INV005



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.93	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	637	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.0	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	43.7	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
637.3	36.0	-37.4	-1.9



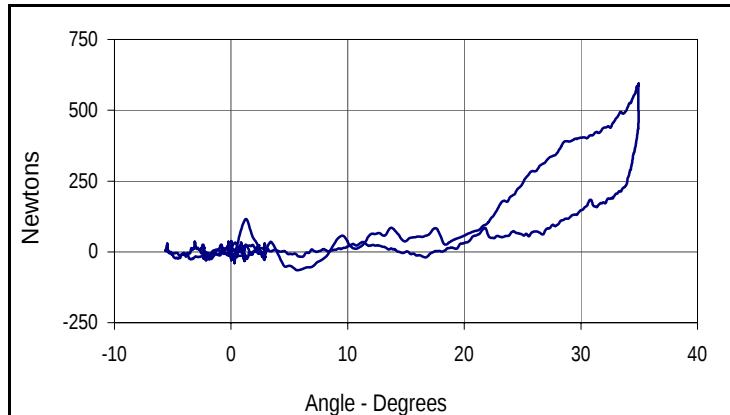
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
43.7	36.0	-8.3	-0.9

Test Program: Thor-LX Dynamic Eversion Impact Test
 Serial No.: G110

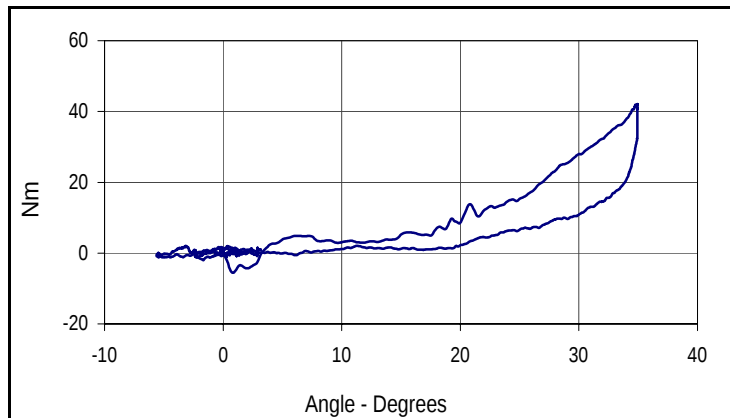
Test Date: 1/5/10
 Test I.D.: EV005



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.99	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	594	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	34.9	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	42.1	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
593.6	34.9	-65.1	5.8



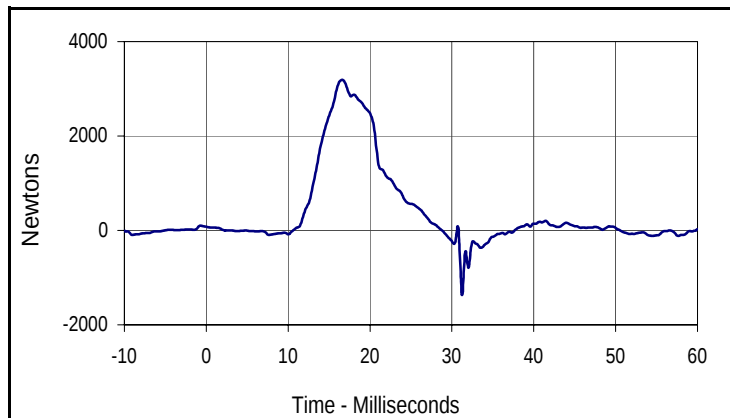
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
42.1	34.9	-5.6	0.8

Test Program: Thor-LX Dynamic Heel of Foot Impact Test
 Serial No.: G109

Test Date: 1/4/10
 Test I.D.: Heel06



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	3.90 to 4.10	3.96	Pass
Peak Lower Tibia Compressive Force	Newton	2738 to 3346	3190	Pass
Overall Test Results				Pass



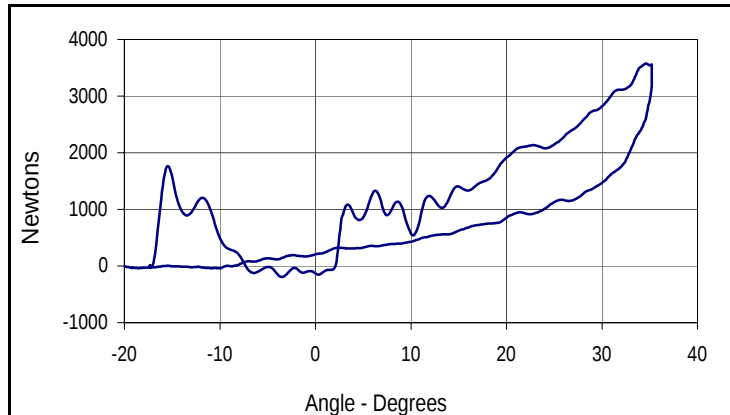
Curve Description			
Peak Lower Tibia Compressive Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newton
Max	Time	Min	Time
3190.3	16.6	-1362.2	31.2

Test Program: Thor-LX Dynamic Ball of Foot Impact Test
 Serial No.: G109

Test Date: 1/4/10
 Test I.D.: Ball006



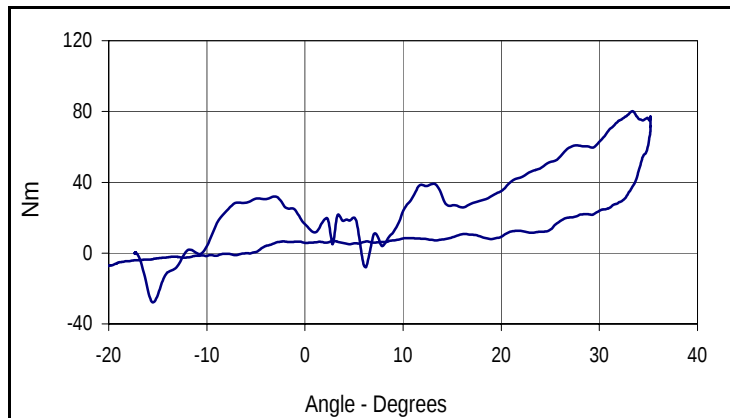
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.90 to 5.10	4.95	Pass
Peak Lower Tibia Compressive Force	Newtons	2956 to 3613	3578	Pass
Peak Ankle Y Axis Rotation	Deg	32.7 to 39.9	35.2	Pass
Peak Ankle Resistive Moment	Nm	77.1 to 94.2	80.2	Pass
Overall Test Results			Pass	



Curve Description

Peak Lower Tibia Compressive Force vs. Angle

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
3577.9	34.6	-194.6	-3.5



Curve Description

Peak Ankle Resistive Moment vs. Angle

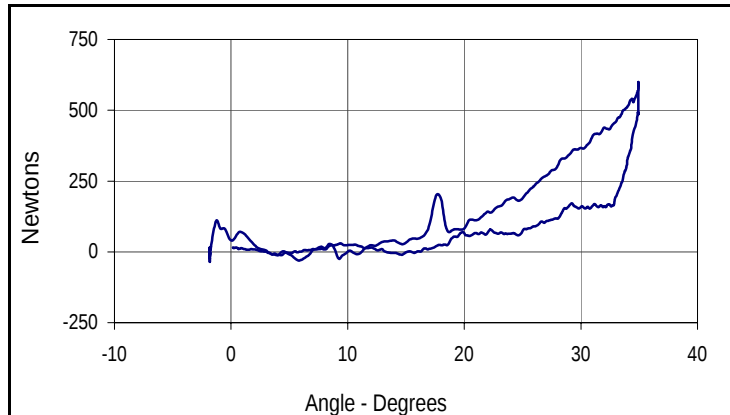
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
80.2	33.4	-27.7	-15.6

Test Program: Thor-LX Dynamic Inversion Impact Test
 Serial No.: G109

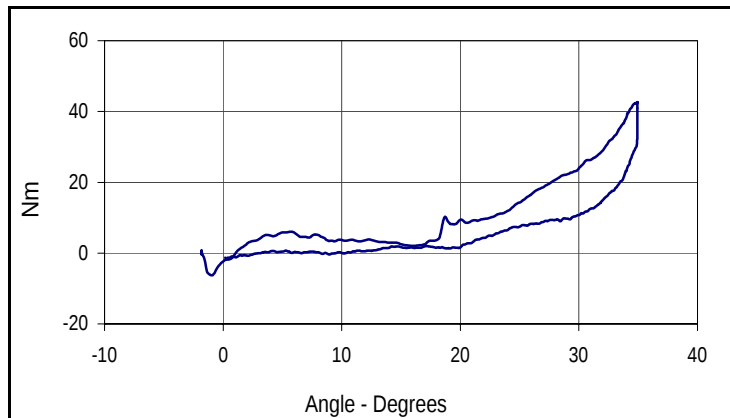
Test Date: 1/4/10
 Test I.D.: INV006



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	2.05	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	600	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	34.9	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	42.6	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
599.6	34.9	-35.2	-1.8



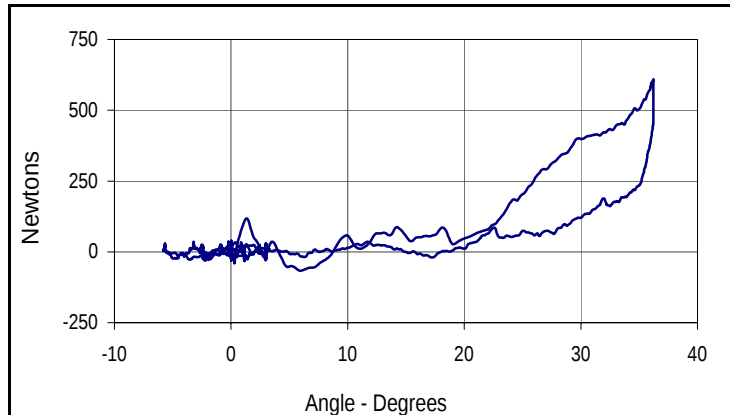
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
42.6	34.9	-6.3	-1.0

Test Program: Thor-LX Dynamic Eversion Impact Test
 Serial No.: G109

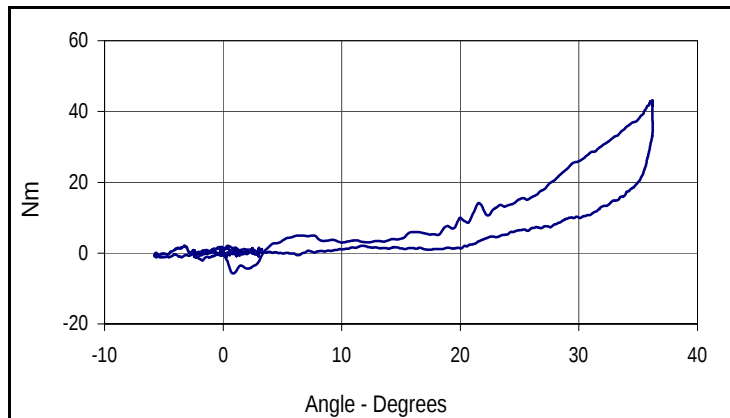
Test Date: 1/5/10
 Test I.D.: EV006



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.94	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	608	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.2	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	43.1	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
608.1	36.2	-66.9	6.0



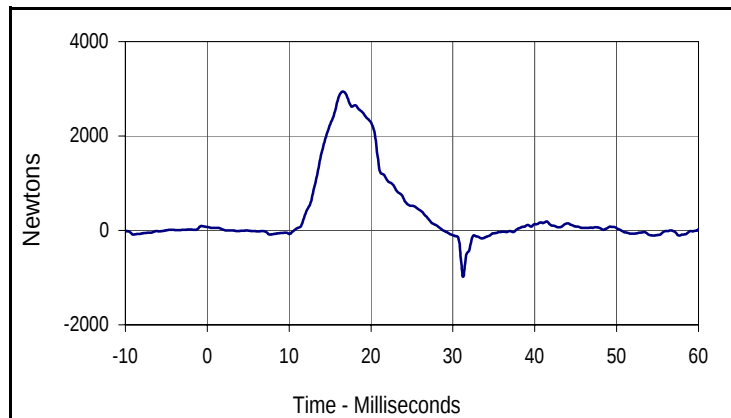
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
43.1	36.2	-5.7	0.8

Test Program: Thor-LX Dynamic Heel of Foot Impact Test
 Serial No.: G038

Test Date: 1/4/10
 Test I.D.: Heel07



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	3.90 to 4.10	3.96	Pass
Peak Lower Tibia Compressive Force	Newton	2738 to 3346	2943	Pass
Overall Test Results				Pass



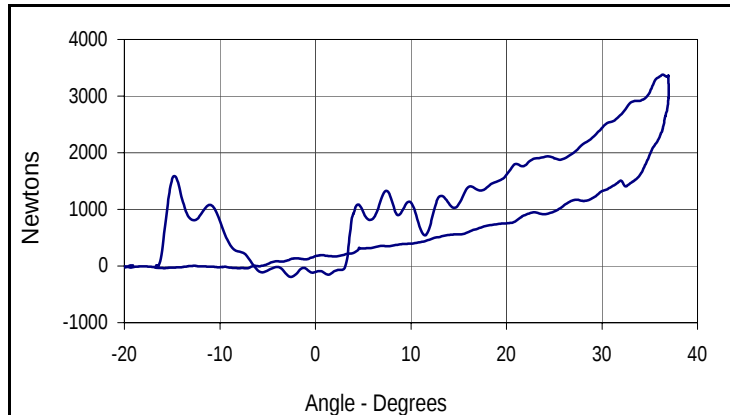
Curve Description			
Peak Lower Tibia Compressive Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newton
Max	Time	Min	Time
2942.6	16.6	-978.7	31.2

Test Program: Thor-LX Dynamic Ball of Foot Impact Test
 Serial No.: G038

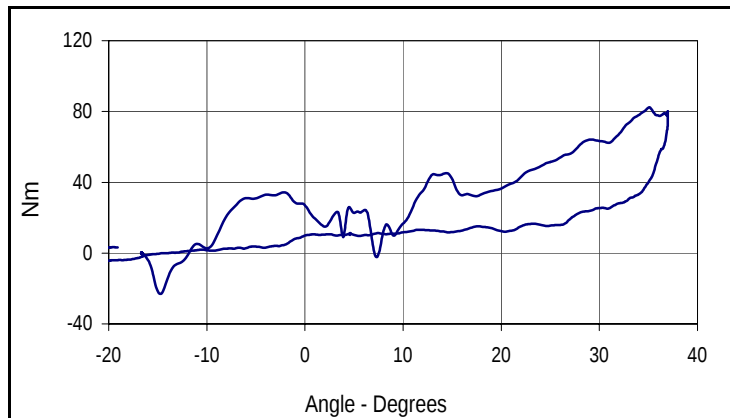
Test Date: 1/4/10
 Test I.D.: Ball007



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.90 to 5.10	5.04	Pass
Peak Lower Tibia Compressive Force	Newtons	2956 to 3613	3378	Pass
Peak Ankle Y Axis Rotation	Deg	32.7 to 39.9	37.0	Pass
Peak Ankle Resistive Moment	Nm	77.1 to 94.2	82.3	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
3377.9	36.4	-194.6	-2.5



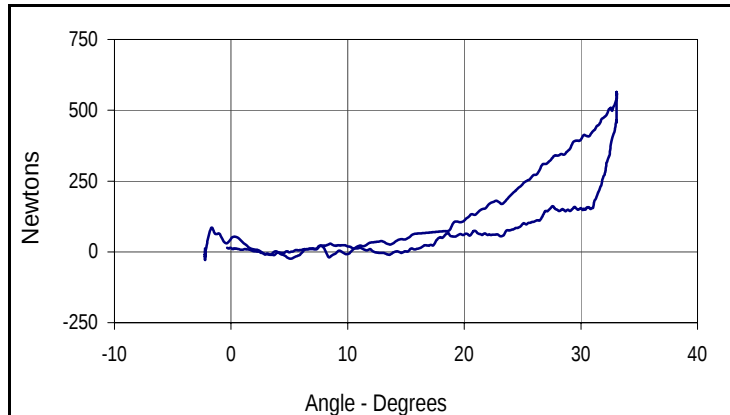
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
82.3	35.1	-22.9	-14.9

Test Program: Thor-LX Dynamic Inversion Impact Test
 Serial No.: G038

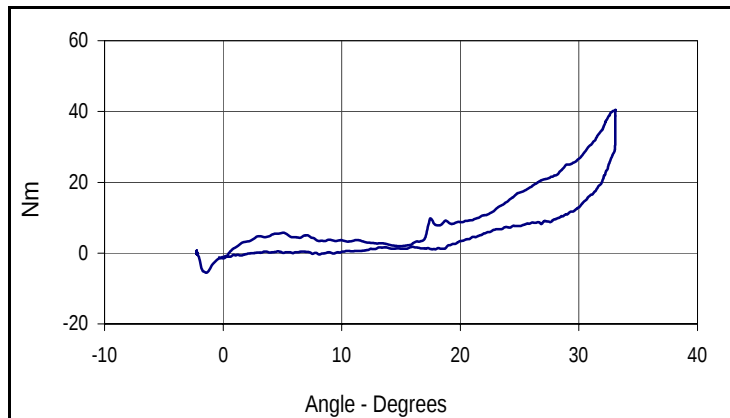
Test Date: 1/4/10
 Test I.D.: INV007



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.99	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	565	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	33.1	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	40.5	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
564.5	33.1	-28.0	-2.2



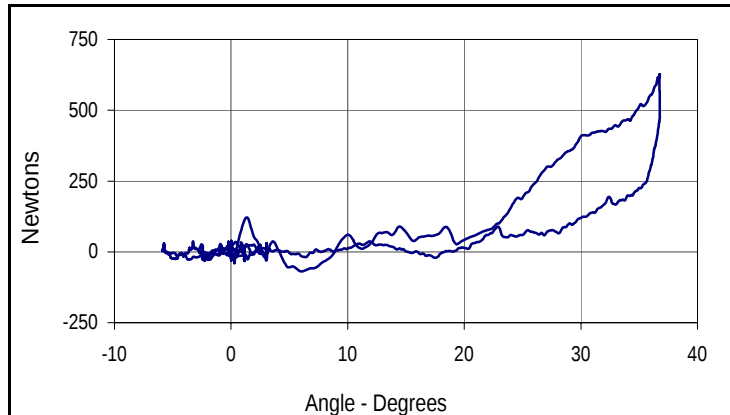
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
40.5	33.1	-5.5	-1.4

Test Program: Thor-LX Dynamic Eversion Impact Test
 Serial No.: G038

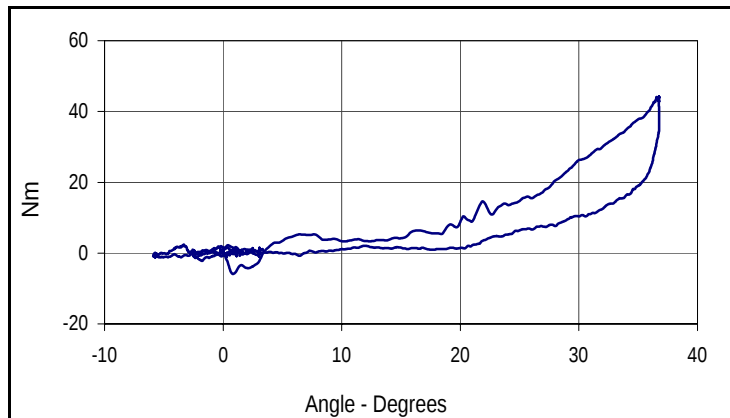
Test Date: 1/5/10
 Test I.D.: EV007



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.95	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	626	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	36.8	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	44.2	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
626.3	36.8	-68.7	6.0



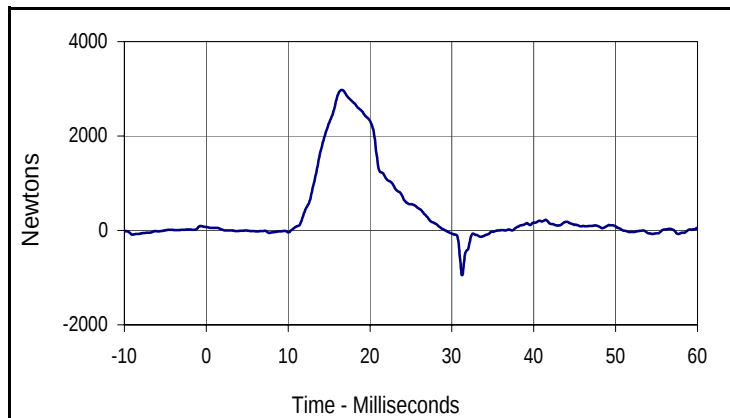
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
44.2	36.7	-5.9	0.9

Test Program: Thor-LX Dynamic Heel of Foot Impact Test
 Serial No.: G039

Test Date: 1/4/10
 Test I.D.: Heel08



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	3.90 to 4.10	4.04	Pass
Peak Lower Tibia Compressive Force	Newton	2738 to 3346	2977	Pass
Overall Test Results				Pass



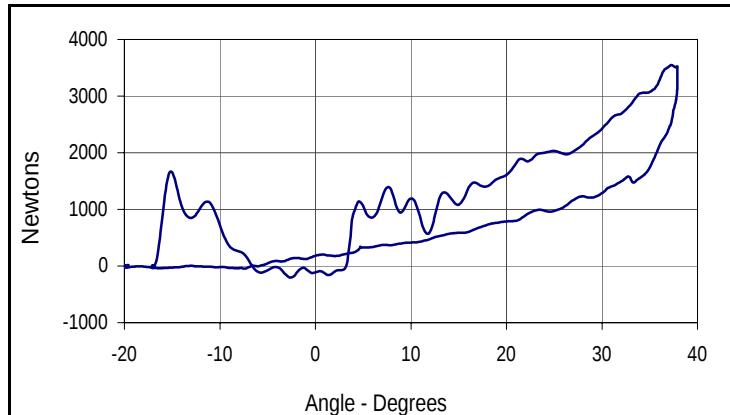
Curve Description			
Peak Lower Tibia Compressive Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newton
Max	Time	Min	Time
2977.1	16.6	-943.7	31.2

Test Program: Thor-LX Dynamic Ball of Foot Impact Test
 Serial No.: G039

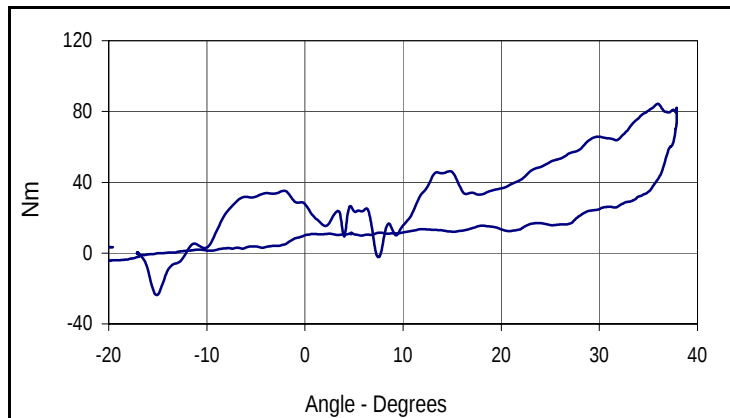
Test Date: 1/4/10
 Test I.D.: Ball008



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.90 to 5.10	4.95	Pass
Peak Lower Tibia Compressive Force	Newtons	2956 to 3613	3547	Pass
Peak Ankle Y Axis Rotation	Deg	32.7 to 39.9	37.9	Pass
Peak Ankle Resistive Moment	Nm	77.1 to 94.2	84.4	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
3547.5	37.3	-204.3	-2.6



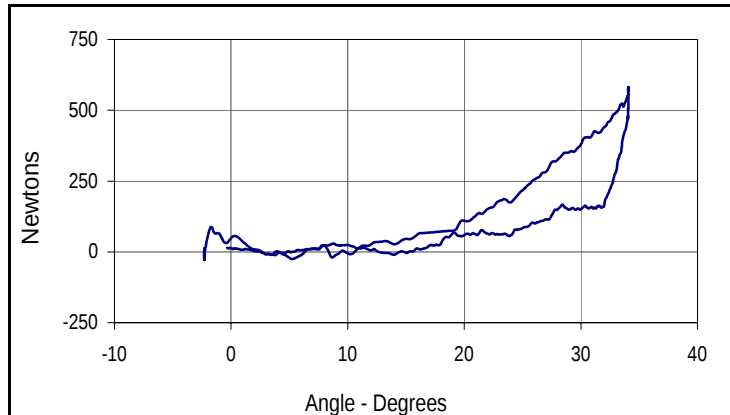
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
84.4	36.0	-23.5	-15.2

Test Program: Thor-LX Dynamic Inversion Impact Test
 Serial No.: G039

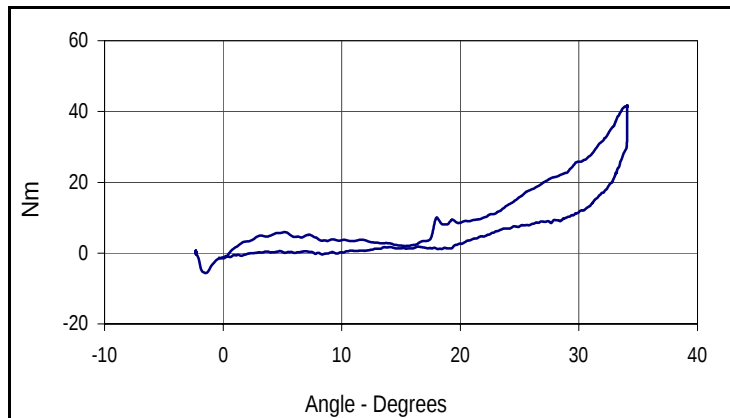
Test Date: 1/4/10
 Test I.D.: INV008



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.93	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	582	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	34.1	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	41.7	Pass
Overall Test Results			Pass	



Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
581.8	34.1	-29.0	-2.3



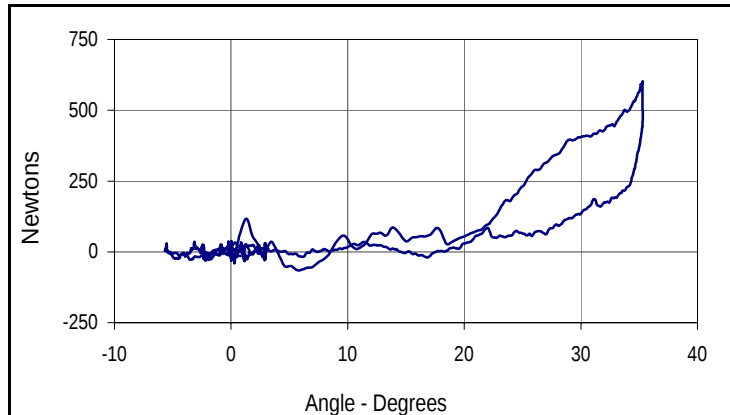
Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
41.7	34.1	-5.7	-1.5

Test Program: Thor-LX Dynamic Eversion Impact Test
 Serial No.: G039

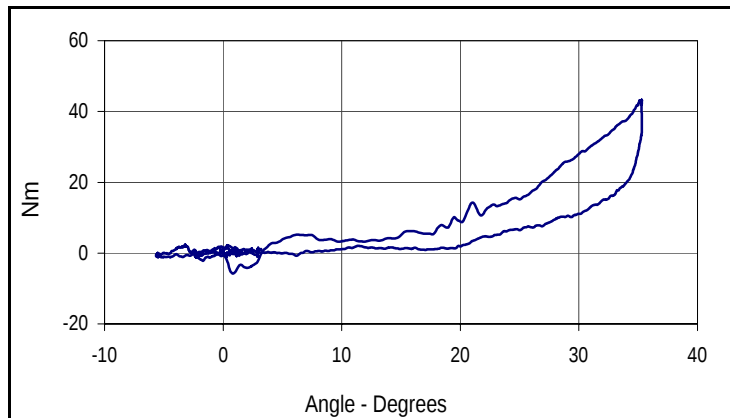
Test Date: 1/5/10
 Test I.D.: EV008



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	1.90 to 2.10	1.96	Pass
Peak Lower Tibia Compressive Force	Newtons	552 to 675	601	Pass
Peak Ankle X Axis Rotation	Deg	30.3 to 37.0	35.3	Pass
Peak Ankle Resistive Moment	Nm	36.3 to 44.4	43.3	Pass
Overall Test Results			Pass	



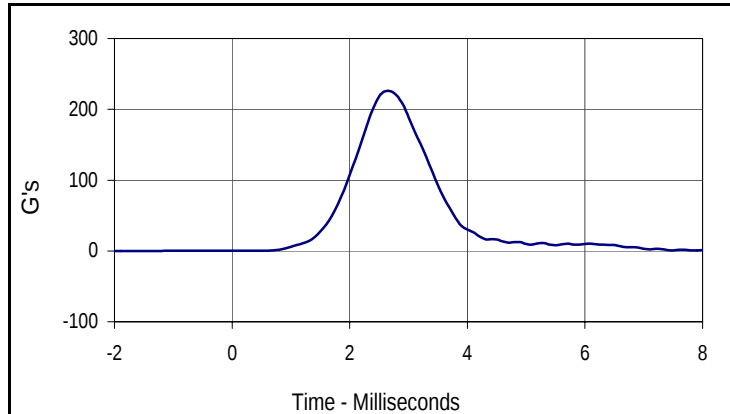
Curve Description			
Peak Lower Tibia Compressive Force vs. Angle			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Angle	Min	Angle
601.4	35.3	-66.0	5.8



Curve Description			
Peak Ankle Resistive Moment vs. Angle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Angle	Min	Angle
43.3	35.3	-5.8	0.8

Test Program: Hybrid III 50th Percentile Male Head Drop TestTest Date: 1/4/10ATD Serial No.: 055Test I.D.: HD01A

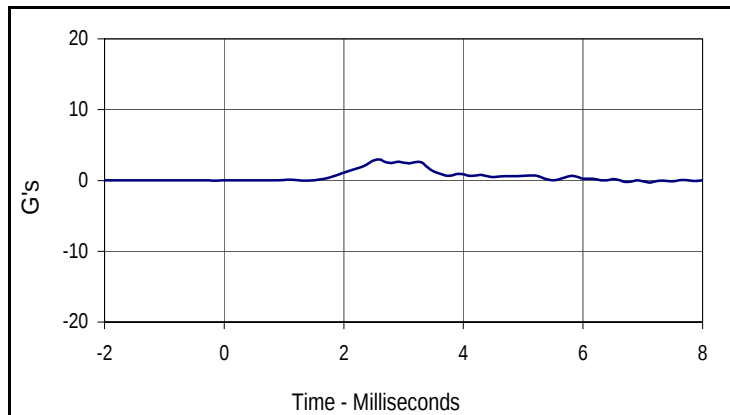
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	225.3	Pass
Peak Lateral Acceleration	G's	≤15.0	3.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Curve Description

Head Resultant

CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
225.3	2.7	0.0	-1.9



Curve Description

Head Y

CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
3.0	2.6	0.0	1.4

Test Program: Hybrid III 50th Percentile Male Thorax Impact Test

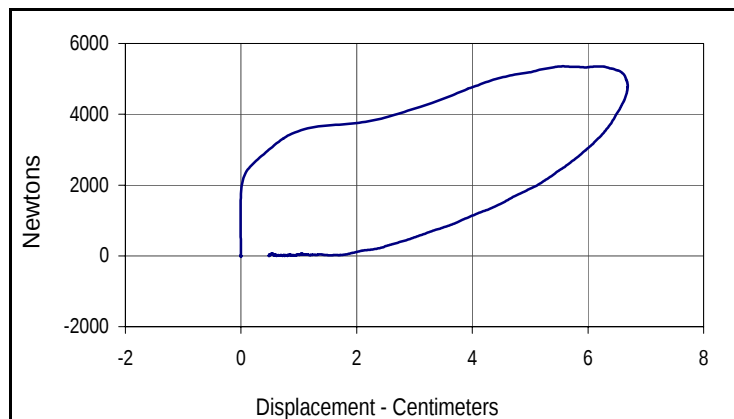
Test Date: 1/4/10

ATD Serial No.: 055

Test I.D.: CH01A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.58 to 6.82	6.70	Pass
Peak Probe Force	Newtons	5159 to 5893	5354	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.69	Pass
Internal Hysteresis	%	69 to 85	73.7	Pass
Overall Test Results				Pass



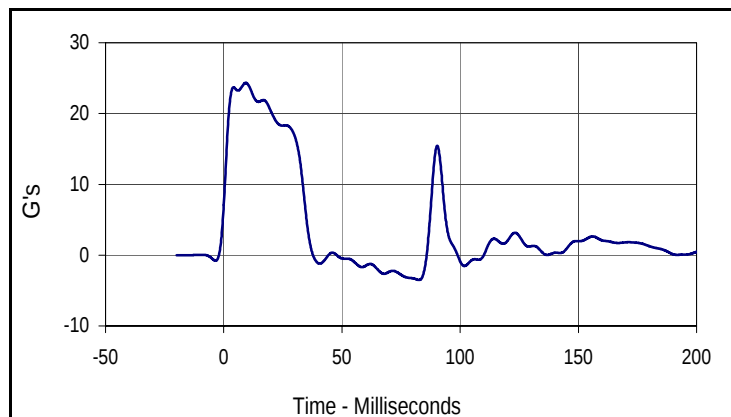
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	73.7
Peak Probe Force		Peak Chest Deflection	
5354		6.69	

Test Program: Hybrid III 50th Percentile Male Neck Flexion Test
 ATD Serial No.: 055

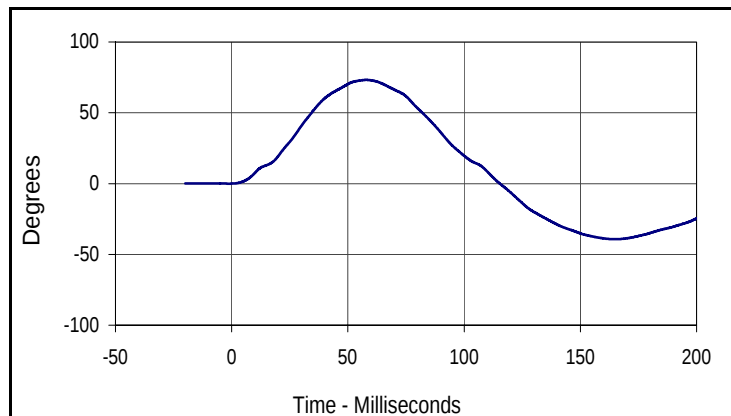
Test Date: 1/4/10
 Test I.D.: NF01A



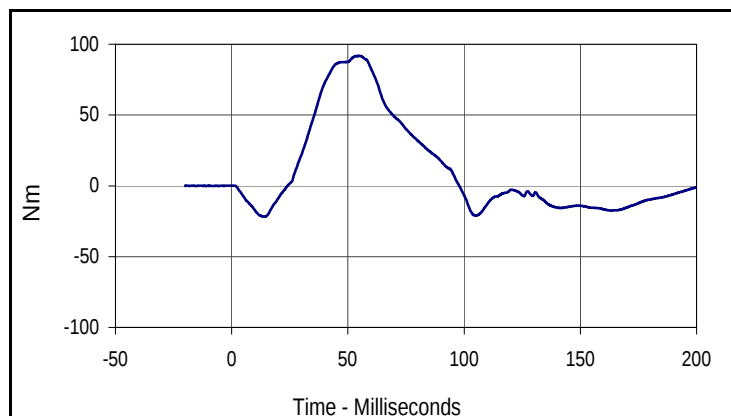
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.01	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	24.2	Pass
	20 Msec.	G's	17.6 to 22.6	20.3	Pass
	30 Msec.	G's	12.5 to 18.5	16.8	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	16.8	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	35.1	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	73.2	Pass
	Time	Msec.	57.0 to 64.0	57.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	115.4	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	91.8	Pass
	Time	Msec.	47.0 to 58.0	54.5	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	98.0	Pass
Overall Test Results					Pass



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
24.3	9.3	-3.5	82.6



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
73.2	57.9	-39.3	164.8



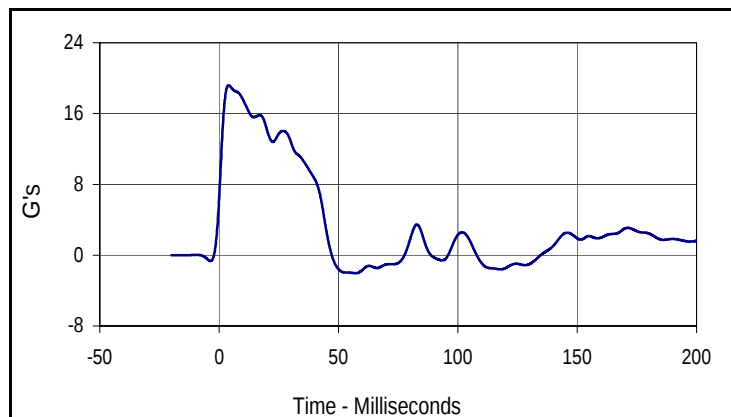
Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
91.8	54.5	-21.8	13.8

Test Program: Hybrid III 50th Percentile Male Neck Extension Test
 ATD Serial No.: 055

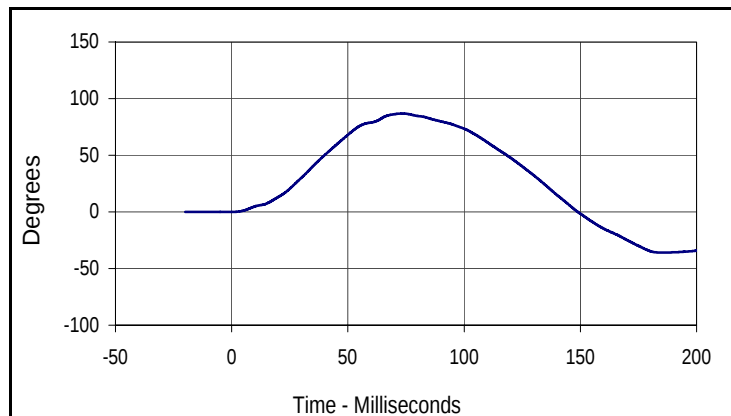
Test Date: 1/4/10
 Test I.D.: NE01A



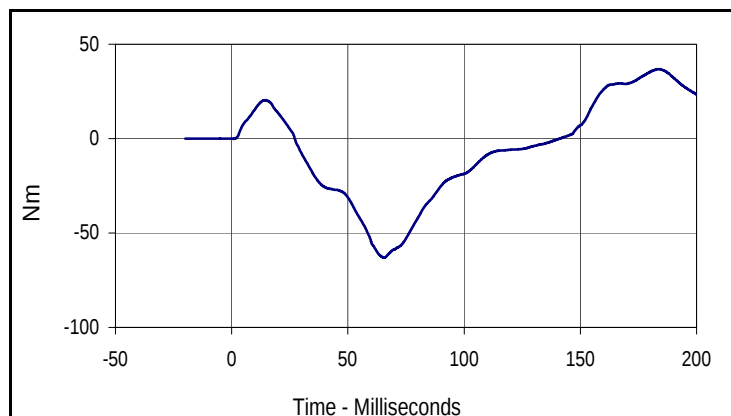
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.08	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.6	Pass
	20 Msec.	G's	14.0 to 19.0	14.2	Pass
	30 Msec.	G's	11.0 to 16.0	12.8	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	12.8	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	43.6	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	86.9	Pass
	Time	Msec.	72.0 to 82.0	73.3	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	148.9	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-63.1	Pass
	Time	Msec.	65.0 to 79.0	65.5	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	141.2	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
19.2	3.9	-2.0	57.1



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
86.9	73.3	-35.9	185.5



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
36.8	183.4	-63.1	65.5

Test Program: Hybrid III 50th Percentile Male Knee Impact Test

Test Date: 1/4/10

ATD Serial No.: 055

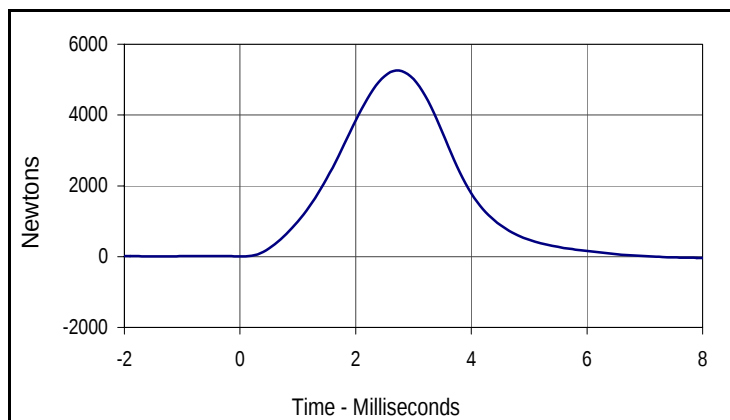
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**Left Knee**

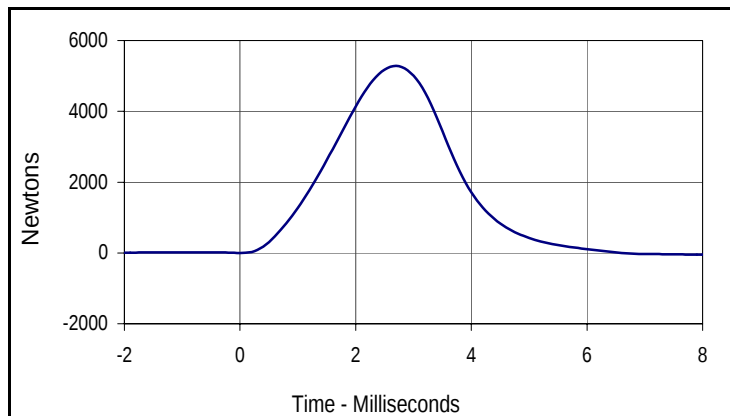
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	4715 to 5782	5259	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force	Newtons	4715 to 5782	5284	Pass
Overall Test Results				Pass

**Curve Description****Left Knee Probe Force**

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5259.3	2.7	-41.1	8.1

**Curve Description****Right Knee Probe Force**

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5284.2	2.7	-49.9	7.9

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 1/4/10

ATD Serial No.: 055

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	879 to 889	885	Pass
B - Shoulder pivot height	mm	505 to 521	506	Pass
C - "H" point height	mm	84 to 89	87	Pass
D - "H" point from seat back	mm	135 to 140	139	Pass
E - Shoulder pivot from back	mm	84 to 94	89	Pass
F - Thigh clearance	mm	140 to 155	150	Pass
G - Elbow back to wrist pivot	mm	290 to 305	300	Pass
H - Skull cap to back line	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	335	Pass
J - Elbow rest height	mm	190 to 211	209	Pass
K - Buttock to knee length	mm	579 to 604	591	Pass
L - Popliteal length	mm	429 to 455	447	Pass
M - Knee pivot height	mm	485 to 500	492	Pass
N - Buttock popliteal length	mm	452 to 477	475	Pass
O - Chest depth	mm	213 to 229	221	Pass
P - Foot length	mm	251 to 267	254	Pass
V - Shoulder breadth	mm	422 to 437	425	Pass
W - Foot breadth	mm	91 to 107	102	Pass
Y - Chest circumference	mm	970 to 1001	992	Pass
Z - Waist circumference	mm	836 to 866	864	Pass
AA - Location for chest circumference	mm	429 to 434	430	Pass
BB - Location for waist circumference	mm	226 to 231	229	Pass
Overall Test Results				Pass

Test Program: Hybrid III 5th Percentile Female Head Drop TestTest Date: 1/5/10ATD Serial No.: 630Test I.D.: HD01B

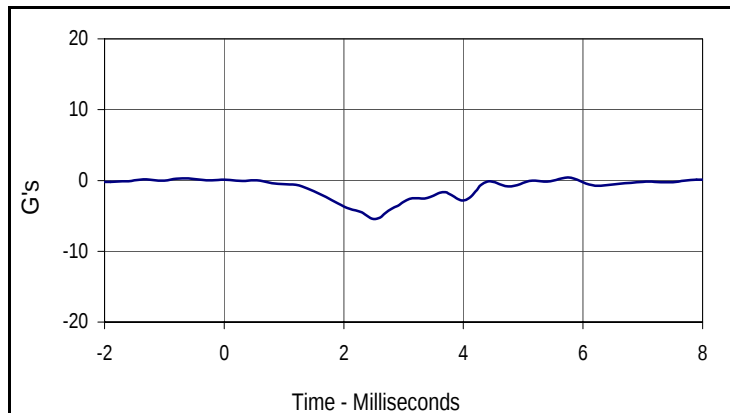
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	250.0 to 300.0	271.8	Pass
Peak Lateral Acceleration	G's	≤15.0	5.5	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Curve Description

Head Resultant

CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
271.8	2.5	0.5	0.0



Curve Description

Head Y

CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.4	5.7	-5.5	2.5

Test Program: Hybrid III 5th Percentile Female Thorax Impact Test

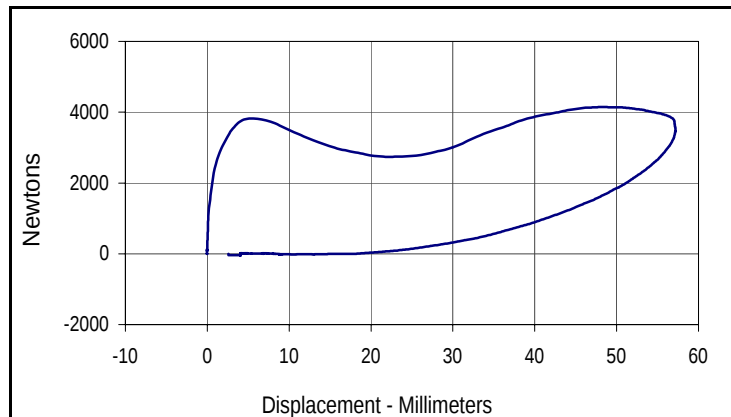
Test Date: 1/5/10

ATD Serial No.: 630

Test I.D.: CH01B



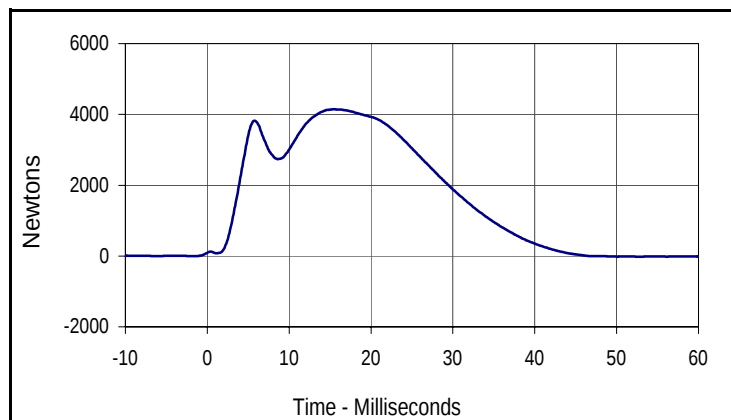
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.59 to 6.83	6.74	Pass
Peak Chest Deflection	MM	50.0 to 58.0	57.2	Pass
Peak Force Between 50 and 58 MM	Newtons	3900 to 4400	4146	Pass
Peak Force Between 18 and 50 MM	Newtons	≤4600	4139	Pass
Internal Hysteresis	%	69 to 85	80.5	Pass
Overall Test Results			Pass	



Curve Description

Probe Force vs. Chest Deflection

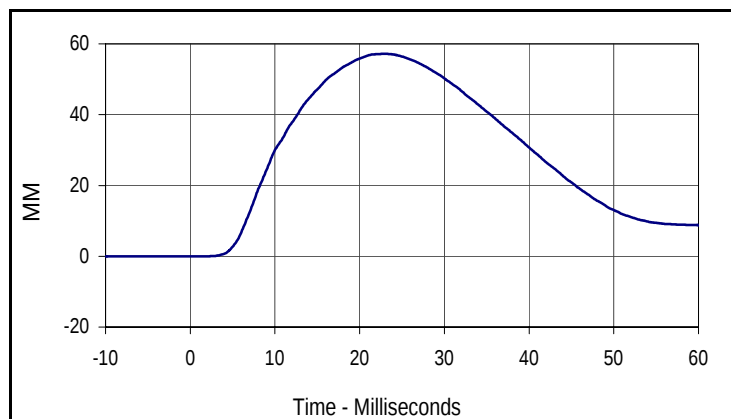
CURNO	Type	SAE Class	Hysteresis
003	FIL	180	80.5
Peak Probe Force		Peak Chest Displ.	
4145.6		57.2	



Curve Description

Probe Force

CURNO	Type	SAE Class	Units
002	FIL	180	Newtons
Max	Time	Min	Time
4145.6	15.4	-52.9	187.8



Curve Description

Chest Deflection

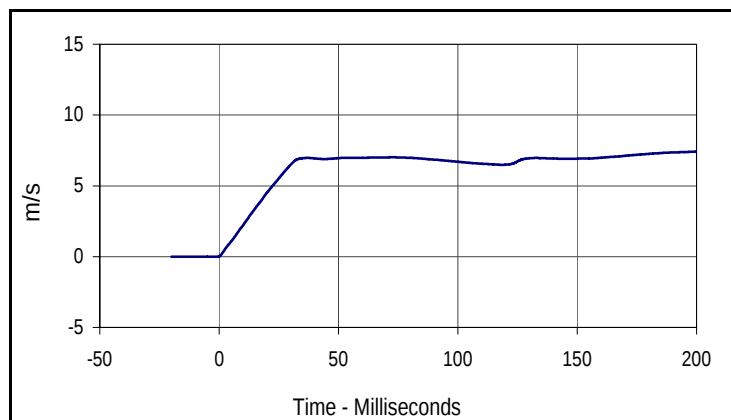
CURNO	Type	SAE Class	Units
001	FIL	180	MM
Max	Time	Min	Time
57.2	22.9	0.0	-8.5

Test Program: Hybrid III 5th Percentile Female Neck Flexion Test
 ATD Serial No.: 630

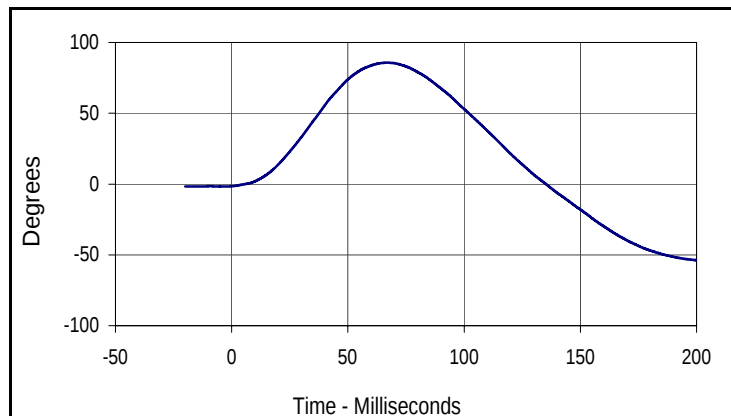
Test Date: 1/5/10
 Test I.D.: NF01B



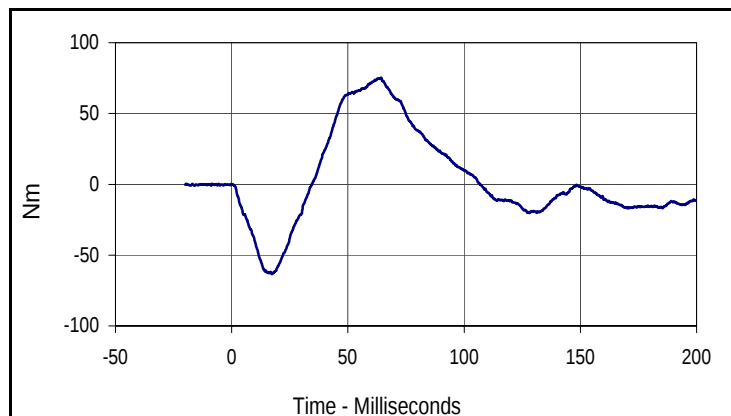
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	6.94	Pass
Pendulum Deceleration	10 Msec.	m/s	2.1 to 2.5	2.2	Pass
	20 Msec.	m/s	4.0 to 5.0	4.5	Pass
	30 Msec.	m/s	5.8 to 7.0	6.5	Pass
"D" Plane Rotation	Max	Degrees	77.0 to 91.0	85.7	Pass
Peak Moment in Rotation	Max	Nm	69.0 to 83.0	75.4	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	80.0 to 100.0	98.6	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
7.4	200.0	0.0	-0.7



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
85.7	66.9	-53.7	200.0



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
75.4	64.2	-63.3	17.3

Test Program: Hybrid III 5th Percentile Female Neck Extension Test

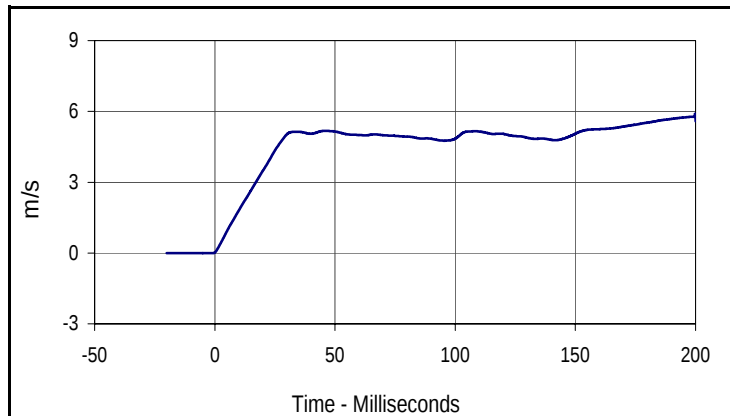
Test Date: 1/5/10

ATD Serial No.: 630

Test I.D.: NE01B



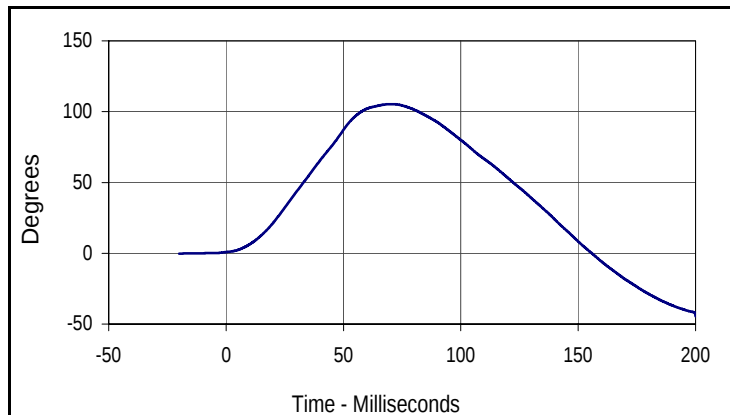
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.95 to 6.19	5.96	Pass
Pendulum Deceleration	10 Msec.	m/s	1.5 to 1.9	1.8	Pass
	20 Msec.	m/s	3.1 to 3.9	3.5	Pass
	30 Msec.	m/s	4.6 to 5.6	5.0	Pass
"D" Plane Rotation	Max	Degrees	99.0 to 114.0	105.3	Pass
Peak Moment in Rotation	Max	Nm	-53.0 to -65.0	-63.8	Pass
Positive Moment Decay, Time To -10 Nm		Msec.	94.0 to 114.0	95.2	Pass
			Overall Test Results		Pass



Curve Description

Pendulum Velocity

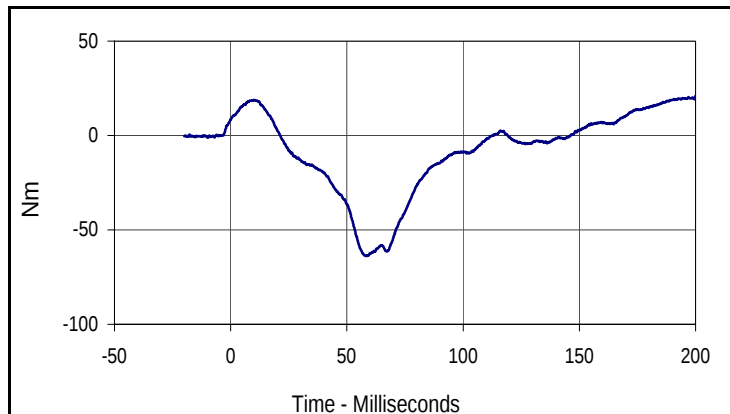
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
5.9	199.9	0.0	-0.9



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
105.3	69.9	-44.5	200.0



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
21.1	200.0	-64.9	58.4

Test Program: Hybrid III 5th Percentile Female Knee Impact Test
 ATD Serial No.: 630

Test Date: 1/5/10
 Test I.D.: LK01C , RK01D

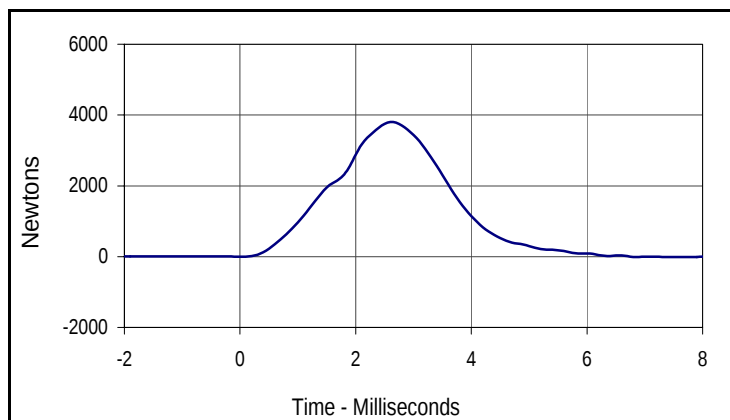


Left Knee

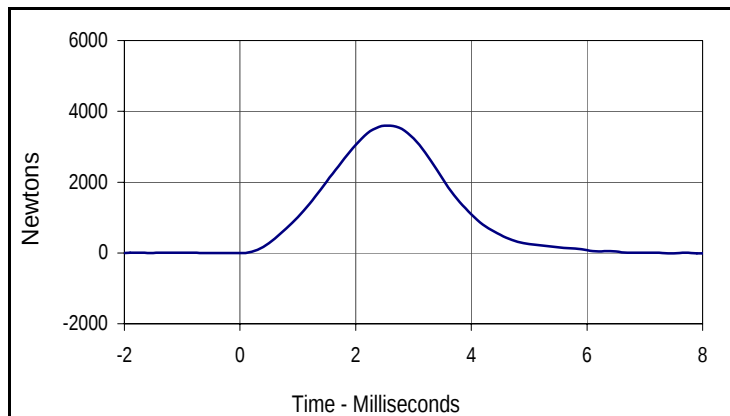
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.11	Pass
Peak Probe Force	Newtons	3450 to 4060	3804	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	3450 to 4060	3598	Pass
Overall Test Results				Pass



Curve Description			
Left Knee Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
3803.8	2.6	-15.6	7.6



Curve Description			
Right Knee Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
3597.8	2.6	-16.0	8.3

Test Program: Hybrid III 5th Percentile Female Torso Flexion Test

Test Date: 1/5/10

ATD Serial No.: 630

Test I.D.: TF01B



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Initial reference plane angle	Degrees	≤20.0	3.5	Pass
Peak Force at 45 +/-0.5 degrees	Newtons	320.0 to 390.0	354.3	Pass
Torso rotation rate	deg/sec	0.5 to 1.5	1.5	Pass
Final reference plane angle	Degrees	+/-8	2.8	Pass
Overall Test Results				Pass

Test Program: Hybrid III 5th Percentile Female External Measurements

Test Date: 1/5/10

ATD Serial No.: 630

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory relative humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	774.7 to 800.1	780	Pass
B - Shoulder pivot height	mm	431.8 to 457.2	445	Pass
C - "H" point height (Reference)	mm	81.3 to 86.3	85	Pass
D - "H" point from seat back (Ref.)	mm	144.8 to 149.8	145	Pass
E - Shoulder pivot from backline	mm	68.6 to 83.8	83	Pass
F - Thigh clearance	mm	119.4 to 134.6	130	Pass
G - Back of elbow to wrist pivot	mm	243.9 to 259.1	250	Pass
H - Head to back line	mm	40.7 to 45.7	45	Pass
I - Shoulder to elbow length	mm	276.8 to 297.2	291	Pass
J - Elbow rest height	mm	182.8 to 203.2	202	Pass
K - Buttock to knee length	mm	520.7 to 546.1	543	Pass
L - Popliteal height	mm	355.6 to 376.0	357	Pass
M - Knee pivot height	mm	393.7 to 419.1	416	Pass
N - Buttock popliteal length	mm	414.0 to 439.4	423	Pass
O - Chest depth without jacket	mm	175.3 to 190.5	187	Pass
P - Foot length	mm	218.5 to 233.7	231	Pass
R - Buttock to knee pivot length	mm	457.2 to 482.6	476	Pass
S - Head breadth	mm	137.1 to 147.3	145	Pass
T - Head depth	mm	177.8 to 188.0	185	Pass
U - Hip breadth	mm	299.7 to 314.9	300	Pass
V - Shoulder breadth	mm	350.5 to 365.7	364	Pass
W - Foot breadth	mm	78.8 to 94.0	90	Pass
X - Head circumference	mm	528.3 to 548.7	543	Pass
Y - Chest circumference with jacket	mm	850.8 to 881.3	865	Pass
Z - Waist circumference	mm	759.5 to 789.9	773	Pass
AA - Location for chest circumference	mm	299.7 to 309.9	300	Pass
BB - Location for waist circumference	mm	160.1 to 170.2	164	Pass
Overall Test Results				Pass