

**RAPPORT D'ESSAI - TEST REPORT
COLLISION FRONTALE DE RECHERCHE
RESEARCH FRONTAL IMPACT**

VÉHICULE D'ESSAI / TEST VEHICLE CHEVROLET AVEO 2005 TC # 05-215
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**ESSAIS DE RECHERCHE CONJOINTS TC/NHTSA SUR LES
SACS GONFLABLES FRONTAUX
JOINT TC/NHTSA FRONTAL AIRBAGS RESEARCH TESTS**

Préparé par :
PMG TECHNOLOGIES
CENTRE D'ESSAIS ET DE RECHERCHE
100, rue du Landais
Blainville (Québec) J7C 5C9

N° de contrat : **05-6008**
Rapport N°: **RR05-221**

Pour :
TRANSPORTS CANADA
SÉCURITÉ ET SÛRETÉ
Programmes de sécurité routière
Recherche et essais de véhicules
Ottawa (Ontario)

Prepared by :
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Les résultats des essais figurant dans ce compte-rendu ne représentent pas une décision officielle du Ministère des Transports quant à l'acceptation de la performance sécuritaire, de la consommation de carburant ou de la conformité d'un véhicule ou des composantes d'un véhicule aux normes de sécurité et d'antipollution. Le Ministère des Transports ne certifie, n'approuve ou n'endosse aucun produit de véhicule automobile.

The test results presented herein do not, in themselves, represent an official determination by the Department of Transport with fuel consumption or compliance with safety and emission standards of any motor vehicle or motor vehicle component. The Department of Transport does not certify, approve or endorse any motor vehicle product.

Date de collision Crash date	2005-03-04	Véhicule Vehicle	CHEVROLET AVEO 2005	T.C. N° T.C.No	05-215
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VÉHICULE D'ESSAI - TEST VEHICLE

Fabricant - Manufacturer GM DAEWOO AUTO & TECHNOLOGY COMPANY	Type de carrosserie - Body Style Hayon 5P / 5D Hatchback	Marque, modèle, Année - Make, model, Year CHEVROLET AVEO 2005
Classe de véhicule - Class of vehicle Tourisme / Passenger car	Boîte de vitesse - Transmission Type Man. 5 vitesses / 5 speed man.	Moteur - Engine 4 cyl. trans. avant / 4 cyl. trans. front
Date de fabrication - Date of Manufacture 09/04	Cylindres - Cylinders 1.6 Lit.	N° d'ident. du véhicule - Vehicle Ident. No. KL1TD62665B318312
Lecture de l'odomètre - Odometer Reading 51 km	Nombre de places assises désignées Number of Designated Seating Positions 5	Numéro d'ident. PMG - PMG Ident. Number UN5-216
PNBV - GVWR 1489 kg	PNBE (Avant) - GAWR (Front) 832 kg	PNBE (Arrière) - GAWR (Rear) 803 kg

CONFIGURATION D'ESSAI - TEST CONFIGURATION

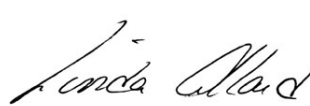
Type d'essai - Test type	Vitesse d'impact- Impact velocity		Angle d'impact Impact angle	Masse du véhicule d'essai Test vehicle mass
Véh. vs barrière - Veh. vs barrier	Prévu / Intended : 40.0 km/h	Obtenu / Obtained : 40.3 km/h	0 °	1439.2 kg
Description et position du mannequin (conducteur) Dummy description and position (driver) Description Hybrid III (5 %)	Position ** 0 mm	Description et position du mannequin (passager avant) Dummy description and position (front passenger) Description Hybrid III (5 %) Position ** - mm		
Description et position du mannequin (passager arrière gauche) Dummy description and position (left rear passenger) Description Hybrid III (6 ans / 6 years old)	Position ** N/A	Description et position du mannequin (passager arrière droit) Dummy description and position (right rear passenger) Description Hybrid III (6 ans / 6 years old) Position ** N/A		

RÉSULTATS GÉNÉRAUX - GENERAL RESULTS

Déploiement des sacs gonflables - Airbags deployment Coussins frontaux - Frontal airbags		Déploiement des sacs gonflables - Airbags deployment Coussins latéraux - Lateral airbags	
Conducteur / Driver	Passager / Passenger	Conducteur / Driver	Passager / Passenger
Déployé / Deployed 30.7ms	Déployé / Deployed 36.2ms	N/A 0.0	N/A 0.0
Rétrotracteurs de ceintures-prétensionneurs Seat belts retractors-pretensioners		Limiteur de charge des ceintures de sécurité Seat belts load limiter	
Conducteur / Driver	Passager / Passenger	Conducteur / Driver	Passager / Passenger
Déployé / Deployed	Déployé / Deployed	Non-équipé / Not equipped	Non-équipé / Not equipped

Essai réalisé selon la procédure de PMG : Collision frontale de recherche, version 3, révision 10 avril 2000.

Test performed according to PMG procedure: Research frontal impact, version 3, revised april 10, 2000.

Préparé par : Prepared by : 	Digitally signed by Pierre Beauchamp Date: 2005.09.14	Approuvé par : Approved by : 	Digitally signed by Alain Bussieres Date: 2005.09.16 10:32:44 -04'00'
Vérifié par : Verified by : 	Digitally signed by Linda Allard Date: 2005.09.14	Accepté par : Accepted by :	

* Tel qu'observé avec l'application d'une charge de 12V après l'essai.

* As observed by a 12V application after the test.

** Référence : 0 est la position la plus avancée. / ** Reference : 0 is the foremost position.

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DONNÉES DU VÉHICULE D'ESSAI / TEST VEHICLE DATA

Capacité du véhicule - Vehicle Capacity		Masse des bagages - Cargo Load		Type de sièges – Type of seats			Types de dossiers - Type of seat back		
390 kg					Avt - Frt	Arr - Rr		Avt - Frt	Arr - Rr
Nombre d'occupants (places assises désignées) Number of Occupants (Designated Seating Positions)				Banquette Bench		X	Dossier ajustable Adjustable Seat Back	X	
Avant – Front 2 Arrière – Rear 3 Total 5				Baquet Bucket	X		Dossier non-ajustable Non-adjustable Seat Back		X
Volume de carburant pour l'essai Fuel system test volume		Pression à froid - Cold Tire Pressure					Dimension - Size		
40.95 l		Avant - Front 210 kPa		Arrière - Rear 210 kPa		Secours - Spare 420 kPa		P185/60R14	

PREMIÈRE PESÉE : VÉHICULE TEL QUE LIVRÉ (AVEC LIQUIDES AU MAXIMUM)

FIRST WEIGHT : VEHICLE AS RECEIVED (WITH MAXIMUM FLUIDS)

Avant gauche - Left front	Avant droit - Right front	Masse avant totale - Total front weight
353.0 kg	338.1 kg	691.1 kg
Arrière gauche - Left rear	Arrière droit - Right rear	Masse arrière totale - Total rear weight
207.9 kg	208.6 kg	416.5 kg
Masse totale côté gauche - Total left side weight	Masse totale côté droit - Total right side weight	Masse totale - Total weight
560.9 kg	546.7 kg	1107.6 kg

TROISIÈME PESÉE : VÉHICULE PRÊT POUR L'ESSAI

THIRD WEIGHT : VEHICLE READY FOR TEST

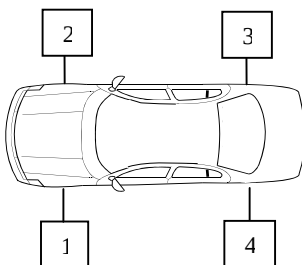
Avant gauche - Left front	Avant droit - Right front	Masse avant totale - Total front weight
397.0 kg	381.8 kg	778.8 kg
Arrière gauche - Left rear	Arrière droit - Right rear	Masse arrière totale - Total rear weight
336.4 kg	324.0 kg	660.4 kg
Masse totale côté gauche - Total left side weight	Masse totale côté droit - Total right side weight	Masse totale - Total weight
733.4 kg	705.8 kg	1439.2 kg

ATTITUDE DU VÉHICULE / VEHICLE ATTITUDE

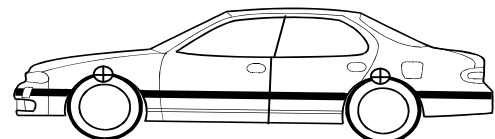
		Attitude tel que livré Attitude on delivery	Attitude tel que testé Attitude as tested
1	Roue avant gauche* Left front wheel*	654 mm	620 mm
2	Roue avant droite* Front right wheel*	657 mm	630 mm
3	Roue arrière droite* Rear right wheel*	631 mm	545 mm
4	Roue arrière gauche* Rear left wheel*	627 mm	555 mm

* Mesures prises aux puits de roues. // *Measurements taken at wheel openings.

Vue de plan / Plan view



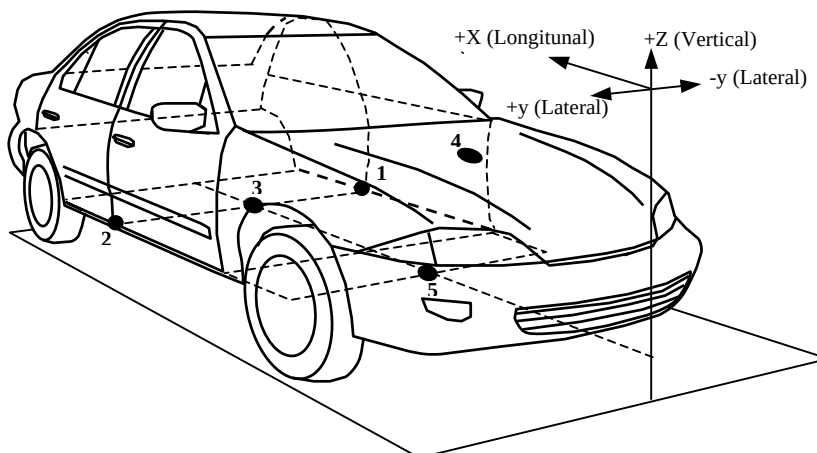
Vue de côté / Side view



⊕ Points de mesure / Measurement points

Date de collision Crash date	2005-03-04	Véhicule Vehicle	CHEVROLET AVEO 2005	T.C. N° T.C.No	05-215
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EMPLACEMENT DES ACCÉLÉROMÈTRES
ACCELEROMETER LOCATIONS

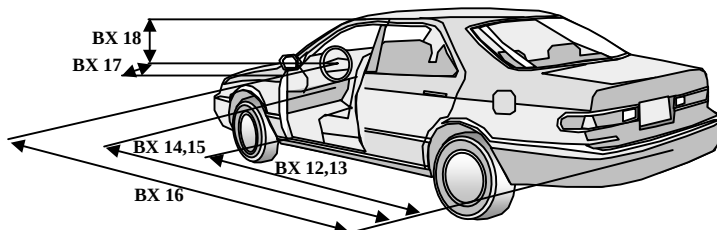
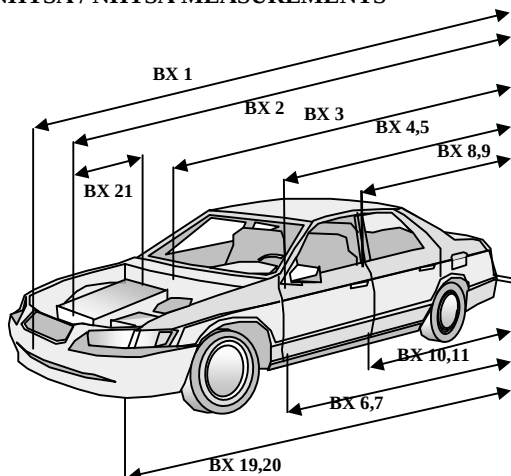


Point de référence : Centre transversal du véhicule, au point le plus avancé, au niveau du sol. Selon SAE J182a.
Reference point : Transversal center of the vehicle, at the foremost point and at ground level. As per SAE J182a.

EMPLACEMENT LOCATION	DESCRIPTIONS	COORDONNÉES / COORDINATES (mm)		
		X	Y	Z
#1	Seuil de la porte gauche @ pilier "B" Left door sill @ pillar "B"	2292	-579	258
#2	Seuil de la porte droite @ pilier "B" Right door sill @ pillar "B"	2300	587	258
#3	Centre de gravité Centre of gravity	2420	0	359
#4	Le dessus du moteur Top of engine	-	-	-
#5	Le dessous du moteur Bottom of engine	-	-	-

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MESURES NHTSA / NHTSA MEASUREMENTS



- 1 - Longueur totale du véhicule
Total length of vehicle
- 2 - Surface arrière à l'avant du bloc moteur
Rear surface at front of engine block
- 3 - Surface arrière à la cloison pare-feu
Rear surface at fire-wall
- 4 - Surface arrière à la partie supérieure avant porte avant droite
Rear surface of front superior part of right front door
- 5 - Surface arrière à la partie supérieure avant porte avant gauche
Rear surface of front superior part of left front door
- 6 - Surface arrière à la partie inférieure avant porte avant droite
Rear surface of front inferior part of right front door
- 7 - Surface arrière à la partie inférieure avant porte avant gauche
Rear surface of front inferior part of left front door
- 8 - Surface arrière à la partie supérieure arrière porte avant droite
Rear surface of rear superior part of right rear door
- 9 - Surface arrière à la partie supérieure arrière porte avant gauche
Rear surface of rear superior part of left rear door
- 10 - Surface arrière à la partie inférieure arrière porte avant droite
Rear surface of rear inferior part of right rear door
- 11 - Surface arrière à la partie inférieure arrière porte avant gauche
Rear surface of rear inferior part of left rear door
- 12 - Surface arrière à la partie inférieure du pilier "A" droit
Rear surface of rear inferior part of right pillar "A"
- 13 - Surface arrière à la partie inférieure du pilier "A" gauche
Rear surface of rear inferior part of left pillar "A"
- 14 - Surface arrière à la cloison pare-feu côté droit
Rear surface of right side of fire-wall
- 15 - Surface arrière à la cloison pare-feu côté gauche
Rear surface of left side of fire-wall
- 16 - Surface arrière à la colonne de direction
Rear surface of steering column
- 17 - Centre de la colonne de direction au pilier "A"
Centre of steering column to pillar "A"
- 18 - Centre de la colonne de direction au toit
Centre of steering column to roof
- 19 - Surface arrière du véhicule au coin droit du pare-choc avant
Rear surface of vehicle to right corner of front bumper
- 20 - Surface arrière du véhicule au coin gauche du pare-choc avant
Rear surface of vehicle to left corner of front bumper
- 21 - Longueur du bloc moteur
Length of engine block

	BX*	AX**	ΔX		BX*	AX**	ΔX
1	3881	3547	334	12	2607	2602	5
2	3418	3319	99	13	2603	2603	0
3	2988	2987	1	14	2831	2809	22
4	2644	2644	0	15	2851	2797	54
5	2637	2640	-3	16	2178	2187	-9
6	2608	2610	-2	17	399	405	-6
7	2612	2616	-4	18	473	461	12
8	1552	1551	1	19	3846	3589	257
9	1554	1557	-3	20	3842	3588	254
10	1583	1586	-3	21	340	343	-3
11	1584	1588	-4				

Mesures en mm / Measurements in mm

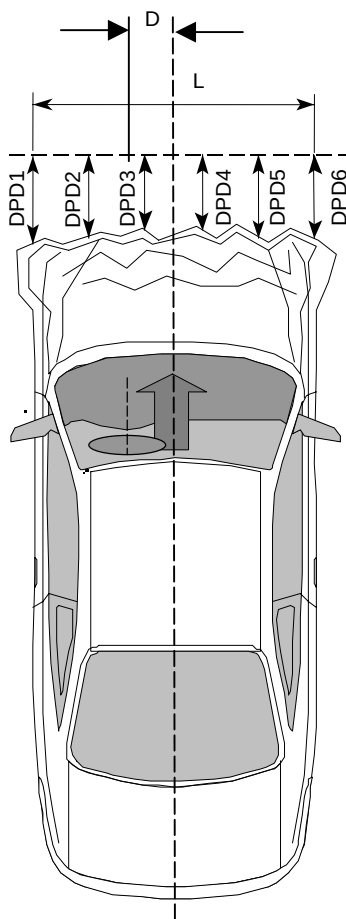
* BX : Mesures du véhicule avant-essai. / Pre-test vehicle measurements data.

** AX : Mesures du véhicule après-essai. / Post-test vehicle measurements data.

REMARQUES / COMMENTS : Aucune / None.

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MESURES DES DPD / DPD'S MEASUREMENTS



DPD 1:

DPD 2:

DPD 3:

DPD 4:

DPD 5:

DPD 6:

MESURE L:

MEASUREMENT L:

MESURE D:

MEASUREMENT D:

AVANT ESSAI PRE-TEST	APRÈS ESSAI POST-TEST	Δx
206	354	-148
36	277	-241
1	317	-316
0	349	-349
35	280	-245
198	364	-166
	1401	
	0	

Mesures en mm / Measurements in mm

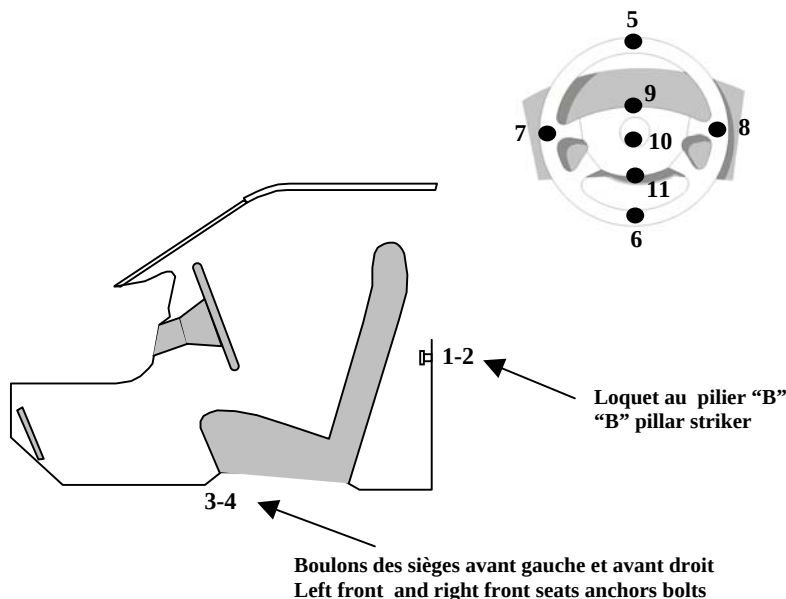
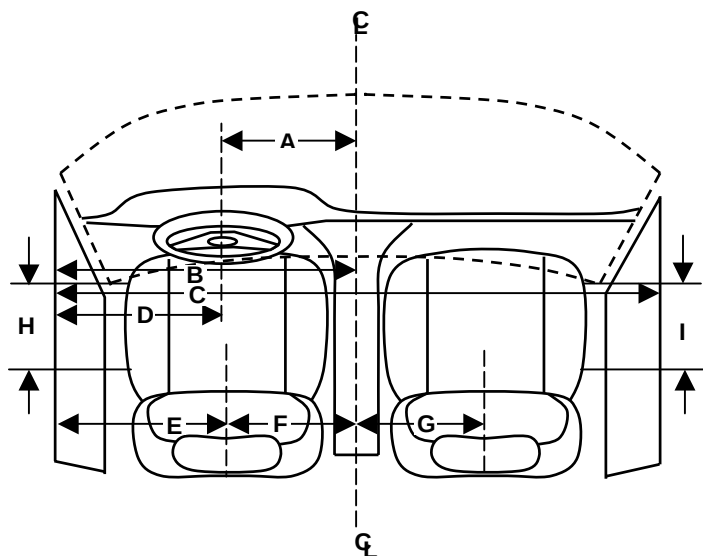
L : Longueur de la région endommagée
Length of damaged region

D : Distance du centre de déformation à la ligne de centre du véhicule
Midpoint of damage to Vehicle Longitudinal Centerline

REMARQUES / COMMENTS : Aucune / None.

Date de collision Crash date	2005-03-04	Véhicule Vehicle	CHEVROLET AVEO 2005	T.C. N° T.C.No	05-215
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MESURES DE VÉHICULE
VEHICLE MEASUREMENTS



Code	Description	mm
A	Centre du volant à la ligne de centre du véhicule Steering wheel center to center line of vehicle	321
B	Seuil de fenêtre à la ligne de centre du véhicule Window edge to center line of the vehicle	761
C	Fenêtre à fenêtre Window to window	1525
D	Centre du volant au seuil de la fenêtre Steering wheel center to window edge	440
E	Seuil de la fenêtre au centre du siège (conducteur) Window edge to seat midline (driver)	429
F	Centre du siège à la ligne de centre du véhicule (conducteur) Seat midline to center line of vehicle (driver)	332
G	Centre du siège à la ligne de centre du véhicule (passager) Seat midline to center line of vehicle (passenger)	337
H	Course du siège (conducteur) Seat travel (driver)	227
I	Course du siège (passager) Seat travel (passenger)	227
J	Ajustement du volant Steering wheel adjustment	45
K	Ajustement de la ceinture baudrier Upper torso belt adjustment	69

Code	Description	X(mm)	Y(mm)	Z(mm)
1	Loquet au pilier "B" (conducteur) "B" pillar striker (driver)	2242	-732	666
2	Loquet au pilier "B" (passager) "B" pillar striker (passenger)	2241	734	669
3	Boulon siège avant, extérieur (conducteur) Front seat bolt, outboard (driver)	1786	-563	314
4	Boulon siège avant, extérieur (passager) Front seat bolt, outboard (passenger)	1788	563	317
5	Jante du volant, centre haut Steering wheel rim, top centre	1618	-321	1097
6	Jante du volant, centre bas Steering wheel rim, bottom centre	1760	-321	745
7	Jante du volant, centre gauche Steering wheel rim, left centre	1687	-512	922
8	Jante du volant, centre droit Steering wheel rim, right centre	1697	-132	921
9	Moyeu du volant, centre haut Steering wheel hub, top centre	1668	-321	969
10	Moyeu du volant, centre Steering wheel hub, centre	1714	-321	899
11	Moyeu du volant, centre bas Steering wheel hub, bottom centre	1737	-321	830
12	Centre du volant Center of steering wheel	1703	-321	921

Point de référence : Centre transversal du véhicule, au point le plus avancé, au niveau du sol. Selon SAE J182a.
Reference point : Transversal center of the vehicle, at the foremost point and at ground level. As per SAE J182a.

Remarques - Comments: Aucune / None.

Date de collision Crash date	2005-03-04	Véhicule Vehicle	CHEVROLET AVEO 2005	T.C. N° T.C.No	05-215
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POSITIONNEMENT DES MANNEQUINS / MEASUREMENTS OF DUMMY POSITIONS

		MESURES / MEASUREMENTS :					
Conducteur/Driver :	Hybrid III (5 %)	Toutes les mesures sont en mm / All measurements are in mm					
Angle du pelvis - Pelvic angle :	19.5°						
Angle transversal - Transversal angle :	0.3°	Conducteur / Driver			Passager / Passenger		
Angle de la tête - Head angle :	0.0°	Ajustement du siège : Seat adjustment :			Ajustement du siège : Seat adjustment :		
Seuil de porte - Door sill :	0.0°	1 de 20 crans/notches			1 de 20 crans/notches		
Mouvement du lacet / Yaw movement :	3 mm	Angle du dossier : Seat back angle :			Angle du dossier : Seat back angle :		
Position de la rail du siège / Seat track position * :	0 mm	13.6 °			13.6 °		
Passager avant/Front Passenger:	Hybrid III (5 %)	X	Y	Z	X	Y	Z
Angle du pelvis - Pelvic angle :	19.6°						
Angle transversal - Transversal angle :	-0.1°						
Angle de la tête - Head angle :	0.0°						
Seuil de porte - Door sill :	0.0°						
Mouvement du lacet / Yaw movement :	0 mm						
Position de la rail du siège / Seat track position * :	1979 mm						
Cible de tête / Head target :		2064	-406	1124	2039	400	1122
Point-H / H-Point :		1915	-494	565	1906	500	559
Rotule / Knee joint :		1578	-460	623	1571	458	642

Remarques – Comments : Aucune / None.

* Référence : 0 est la position la plus avancée.

* Reference : 0 is the foremost position.

Selon la procédure de positionnement de mannequin 5^e percentile Hybrid III, 49 CFR 552, 571, 585 and 595, Docket No. NHTSA 00-7013; Notice 1, RIN 2127-AG70, Federal Motor Vehicle Safety Standards, Occupant Crash Protection (Paragraphe S16.3).

As per procedure for placement of a 5th percentile Hybrid III 49 CFR 552, 571, 585 and 595, Docket No. NHTSA 00-7013; Notice 1, RIN 2127-AG70, Federal Motor Vehicle Safety Standards, Occupant Crash Protection (Section S16.3).

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POSITIONNEMENT DES MANNEQUINS / MEASUREMENTS OF DUMMY POSITIONS

		<u>MESURES / MEASUREMENTS :</u>					
Passager arrière gauche : Rear left passenger : Hybrid III (6 ans / 6 years old)		Toutes les mesures sont en mm / All measurements are in mm					
Angle du pelvis - Pelvic angle : Angle transversal - Transversal angle : Angle de la tête - Head angle : Mouvement du lacet / Yaw movement :		Passager arrière gauche Rear left passenger			Passager arrière droit Rear right passenger		
		Ajustement du siège : Seat adjustment : N/A			Ajustement du siège : Seat adjustment : N/A		
		Ajustement du dossier : Seat back adjustment : N/A			Ajustement du dossier : Seat back adjustment : N/A		
Passager arrière droit : Rear right passenger : Hybrid III (6 ans / 6 years old)		X	Y	Z	X	Y	Z
Angle du pelvis - Pelvic angle : Angle transversal - Transversal angle : Angle de la tête - Head angle : Mouvement du lacet / Yaw movement :							
Cible de tête / Head target :		2064	-406	1124	2039	400	1122

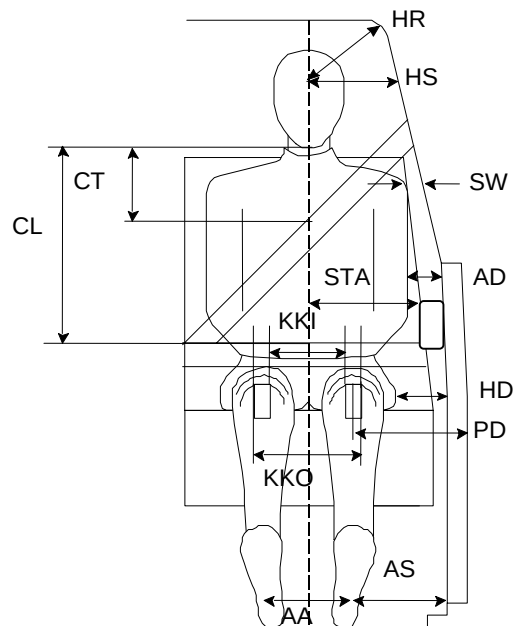
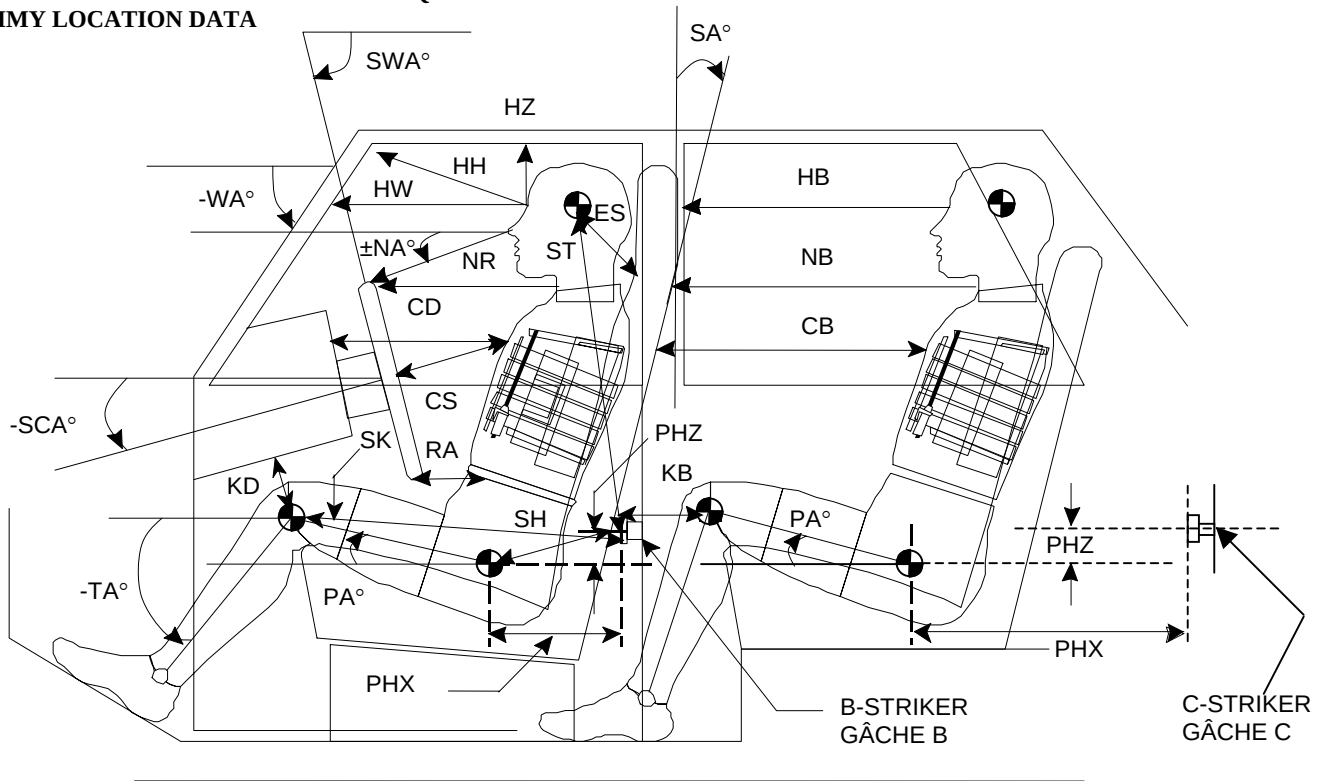
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Reference point : Transversal center of the vehicle, at the foremost point and at ground level. As per SAE J182a.

Passager arrière gauche : Rear left passenger :	Hybrid III (6 ans / 6 years old)	
	Méthodes d'attaches : Attachment methods:	Siège / Seat : ancrage sup. et système d'ancrage univ. / with tether and latc Enfant / Child : harnais / harness
	Manufacturier du siège : Seat manufacturer :	Graco Platinum Cargo
	Modèle du siège : Seat model :	8689FARCA
	No. de série du siège : Seat serial number :	N/A
	Date de fabrication du siège : Seat fabrication date :	2/1/2005

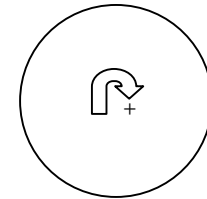
Passager arrière droit : Rear right passenger :	Hybrid III (6 ans / 6 years old)	
	Méthodes d'attaches : Attachment methods:	Siège / Seat : ancrage sup. et système d'ancrage univ. / with tether and latc Enfant / Child : harnais / harness
	Manufacturier du siège : Seat manufacturer :	Graco Platinum Cargo
	Modèle du siège : Seat model :	8689FARCA
	No. de série du siège : Seat serial number :	N/A
	Date de fabrication du siège : Seat fabrication date :	2/1/2005

Date de collision Crash date	2005-03-04	Véhicule Vehicle	CHEVROLET AVEO 2005	T.C. N° T.C.No	05-215
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COTES DE LOCALISATION DES MANNEQUINS
DUMMY LOCATION DATA



référence
reference :



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**COTES DE LOCALISATION DES MANNEQUINS (suite)
DUMMY LOCATION DATA (continued)**

(Mesures prises en mm / Measurements taken in mm)

DESCRIPTION	CODE	CONDUCTEUR DRIVER	PASSAGER Av. F. PASSENGER	PASSAGER Arr.G. L.R. PASSENGER	PASSAGER Arr.D. R.R. PASSENGER
De cheville à cheville (boulon extérieur) Ankle to ankle (exterior bolt)	AA	320	250		
Genou à genou (plaque) Intérieur / Interior Centre / Center Knee to knee (plate) Extérieur / Extérieur	KKI	100	95		
	KKC	170	165		
	KKO	240	235		
De la cheville jusqu'au seuil de porte (horizontalement) Ankle to door sill (horizontal)	AS	160	160		
Centre du genou au tableau de bord ou siège horizontalement (minimum) Knees centre to dash or seat back horizontal (minimum)	KDL	55	22		
	KDR	55	35		
Sternum au tableau de bord (horizontalement) Chest to dash (horizontal)	CD		400		
Milieu du sternum au centre du moyeu du volant ou siège avant Mid sternum to steering hub center or front seat	CS/CB	255			
Milieu du front jusqu'au pare-brise (horizontalement) Mid forehead to windshield (horizontal)	HW	700	712		
Milieu du front jusqu'au haut du pare-brise Mid forehead to windshield header	HH	366	350		
Nez à la jante du volant de direction (haut) ou siège avant Nose to steering wheel rim (top) or front seat	NR/HB	325			
Milieu du front jusqu'au début du toit Mid forehead to edge roof	HR	275	280		
Haut de l'oreille au haut du siège avant Ear top to front seat top	ES	245	265		
Menton au haut de la ceinture sous-abdominale (verticalement) Chin to lap belt upper edge (vertical)	CL	360	350		
Menton au haut de la ceinture baudrier (verticalement) Chin to thorax belt upper edge (vertical)	CT	115	115		
Milieu du front à la fenêtre latérale (horizontalement) Mid forehead to side window (horizontal)	HS	332	350		
La rotule à la porte (horizontalement) Patella to door (horizontal)	PD	221	230		
Du point-H à la porte (horizontalement) H-point to door (horizontal)	HD	190	192		
Du milieu du bras à la porte (horizontalement) Mid upper arm to door (horizontal)	AD	103	165		
Cou jusqu'au volant ou tableau de bord (horizontalement) ou siège avant Neck to steering wheel or dash board (horizontal) or front seat	NB	420	560		
Épaule à la fenêtre de côté Shoulder to side window	SW	158	180		
Abdomen à l'appui-bras Abdomen to armrest	STA	175	180		
Milieu du front au toit (verticalement) Mid forehead to roof (vertical)	HZ	250	250		
Tête au loquet (plan (x,z)) Striker to head ((x,z) plan)	ST	491	496		
Abdomen à la jante du volant de direction (bas) Steering wheel rim to abdomen (bottom)	RA	140			
Genou au loquet (plan (x,z)) Striker to knee ((x,z) plan)	SK	665	671		
Point-H au loquet (plan (x,z)) Striker to H-Point ((x,z) plan)	SH	342	353		
Point-H au loquet en X (horizontalement) Striker to H-Point in X (horizontal)	PHX	327	335		
Point-H au loquet en Z (verticalement) Striker to H-Point in Z (vertical)	PHZ	101	110		

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COTES DE LOCALISATION DES MANNEQUINS (suite)

DUMMY LOCATION DATA (continued)

(Mesures prises en deg. / Measurements taken in deg.)

DESCRIPTION	CODE	CONDUCTEUR DRIVER	PASSAGER Av. F. PASSENGER	PASSAGER Arr.G. L.R. PASSENGER	PASSAGER Arr.D. R.R. PASSENGER
Angle du volant Steering wheel angle	+SWA	66.2°			
Angle du pare-brise Windshield angle	-WA	-28.0°			
Angle de la colonne de direction Steering column angle	-SCA	-21.2°			
Angle du tibia gauche Left tibial angle	-TA	-27.4°	-24.0°		
Angle du tibia droit Right tibial angle	-TA	-29.0°	-22.0°		
Angle pelvis Pelvic angle	+PA	19.5°	19.6°		
Angle du nez à la jante de direction (haut) Nose to steering wheel rim (top) angle	±NA	-1.3°			
Angle du dossier Seat back angle	+SA	13.6°	13.6°		
Angle ST (horizontalement) ST angle (horizontal)	+ST-A	68.8°	66.0°		
Angle SK (horizontalement) SK angle (horizontal)	±SK-A	-3.7°	-2.3°		
Angle SH (horizontalement) SH angle (horizontal)	-SH-A	-17.2°	-18.2°		

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**MESURES DE MANNEQUIN DAE
TEST DUMMY MEASUREMENTS**

CONDUCTEUR / DRIVER

Description et emplacement du Mannequin
ATD description and location :

DESCRIPTION	X(mm)	Y(mm)	Z(mm)
Centre de gravité de la tête, extérieur - Head CG, outboard	2064	-406	1124
Base du nez - Glabella (root of nose)	1976	-342	1141
Menton - Chin (bottom)	1977	-342	1028
Jonction menton et cou - Chin / neck junction	2045	-343	1049
Thorax au niveau des côtes supérieures - Chest at upper rib level	1952	-340	870
Thorax au niveau des côtes inférieures - Chest at lower rib level	1922	-335	764
Boulon supérieur avant de l'épaule, ext. - Shoulder bolt, top front outboard	2095	-499	901
Boulon supérieur avant de l'épaule, int. - Shoulder bolt, top front inboard	2098	-180	905
Boulon du coude, extérieur - Elbow bolt, outboard	1913	-601	843
Boulon du coude, intérieur - Elbow bolt, inboard	1922	-47	882
Boulon du poignet, extérieur - Wrist bolt, outboard	1731	-542	942
Boulon du poignet, intérieur - Wrist bolt, inboard	1728	-97	965
Point d'articulation de la hanche, extérieur - Hip point, outboard	2001	-455	605
Boulon du genou gauche, extérieur - Knee bolt, left leg, outboard	1583	-460	639
Boulon de la cheville gauche, extérieur - Ankle bolt, left leg , outboard	1395	-458	351
Point du talon gauche - Heel point, left leg	1453	-470	242
Plante du pied gauche vs plancher - Ball of foot at toeboard contact, left leg	1320	-499	279
Boulon du genou droit, intérieur - Knee bolt, right leg , inboard	1581	-278	622
Boulon de la cheville droite, intérieur - Ankle bolt, right leg , inboard	1373	-215	364
Point du talon droit - Heel point, right leg	1388	-217	244
Plante du pied droit vs plancher - Ball of foot at toeboard contact, right leg	1276	-234	323

Remarques – Comments : Aucune / None.

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**MESURES DE MANNEQUIN DAE
TEST DUMMY MEASUREMENTS**

PASSAGER / PASSENGER

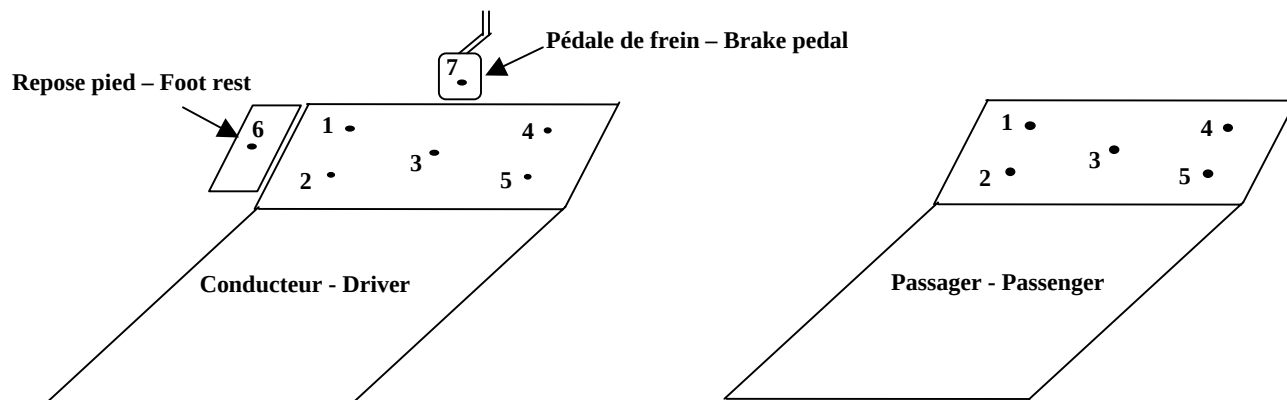
Description et emplacement du Mannequin
ATD description and location:

DESCRIPTION	X(mm)	Y(mm)	Z(mm)
Centre de gravité de la tête, extérieur - Head CG, outboard	2039	400	1122
Base du nez - Glabella (root of nose)	1950	332	1132
Menton - Chin (bottom)	1950	333	1026
Jonction menton et cou - Chin / neck junction	2018	332	1055
Thorax au niveau des côtes supérieures - Chest at upper rib level	1925	333	834
Thorax au niveau des côtes inférieures - Chest at lower rib level	1893	336	723
Boulon supérieur avant de l'épaule, ext. - Shoulder bolt, top front outboard	2064	488	886
Boulon supérieur avant de l'épaule, int. - Shoulder bolt, top front inboard	2057	176	892
Boulon du coude, extérieur - Elbow bolt, outboard	2004	543	676
Boulon du coude, intérieur - Elbow bolt, inboard	2003	128	685
Boulon du poignet, extérieur - Wrist bolt, outboard	1794	500	640
Boulon du poignet, intérieur - Wrist bolt, inboard	1793	155	641
Point d'articulation de la hanche, extérieur - Hip point, outboard	1990	453	599
Boulon du genou gauche, intérieur - Knee bolt, left leg, inboard	1565	295	632
Boulon de la cheville gauche, intérieur - Ankle bolt, left leg, inboard	1373	266	354
Point du talon gauche - Heel point, left leg	1441	276	244
Plante du pied gauche vs plancher - Ball of foot at toeboard contact, left leg	1308	303	269
Boulon du genou droit, extérieur - Knee bolt, right leg, outboard	1572	457	644
Boulon de la cheville droite, extérieur - Ankle bolt, right leg, outboard	1402	447	346
Point du talon droit - Heel point, right leg	1463	458	238
Plante du pied droit vs plancher - Ball of foot at toeboard contact, right leg	1334	499	270

Remarques – Comments : Aucune / None.

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MESURES PLANCHER / FOOTWELL MEASUREMENTS

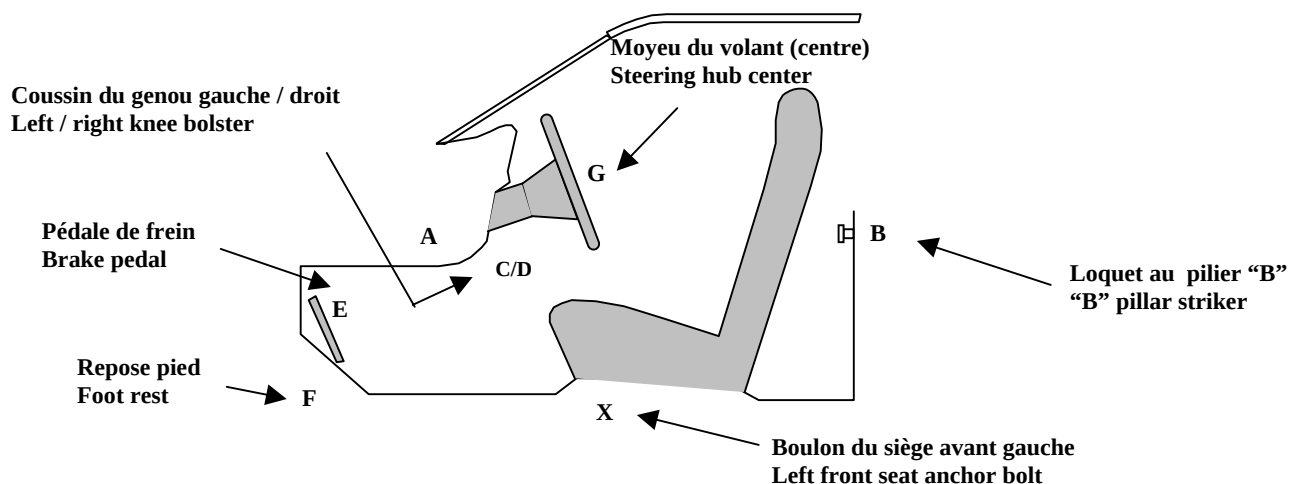


N° Cible	AVANT ESSAI	APRÈS ESSAI	
Target No.	PRE-TEST	POST-TEST	Δ mm
1	x	1097	1105
	y	-445	-442
	z	368	380
2	x	1190	1191
	y	-446	-445
	z	282	289
3	x	1146	1149
	y	-308	-305
	z	313	319
4	x	1099	1104
	y	-206	-203
	z	352	359
5	x	1188	1189
	y	-190	-188
	z	280	281
6	x	1251	1256
	y	-562	-559
	z	341	344
7	x	1257	1274
	y	-287	-288
	z	393	408

N° Cible	AVANT ESSAI	APRÈS ESSAI	
Target No.	PRE-TEST	POST-TEST	Δ mm
1	x	1075	1084
	y		
	z		
2	x	1215	1216
	y		
	z		
3	x	1141	1147
	y		
	z		
4	x	1077	1093
	y	411	408
	z	383	400
5	x	1211	1212
	y	422	422
	z	263	267

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PÉNÉTRATION DE L'HABITACLE DU CONDUCTEUR (Distances en mm)
DRIVER COMPARTMENT INTRUSION (Distances in mm)



Habitacle du conducteur
Driver's compartment

	DESCRIPTION	Avant essai / Pre-test			Après essai / Post-test		
		X	Y	Z	X	Y	Z
A	Ouverture de porte Door opening	1444	-751	936	1443	-760	939
B	Loquet au pilier "B" "B" pillar striker	2242	-732	666	2242	-733	667
C	Coussin du genou gauche Left knee bolster	1493	-401	694	1488	-398	694
D	Coussin du genou droit Right knee bolster	1493	-222	681	1488	-218	679
E	Pédale de frein Break pedal	1257	-287	393	1274	-288	408
F	Repose pied Foot rest	1251	-562	341	1256	-559	344
G	Moyeu du volant (centre) Steering hub (center)	1714	-321	899	1690	-318	934
X	Boulon du siège avant gauche Left front seat anchor bolt	1786	-563	314	1786	-563	314

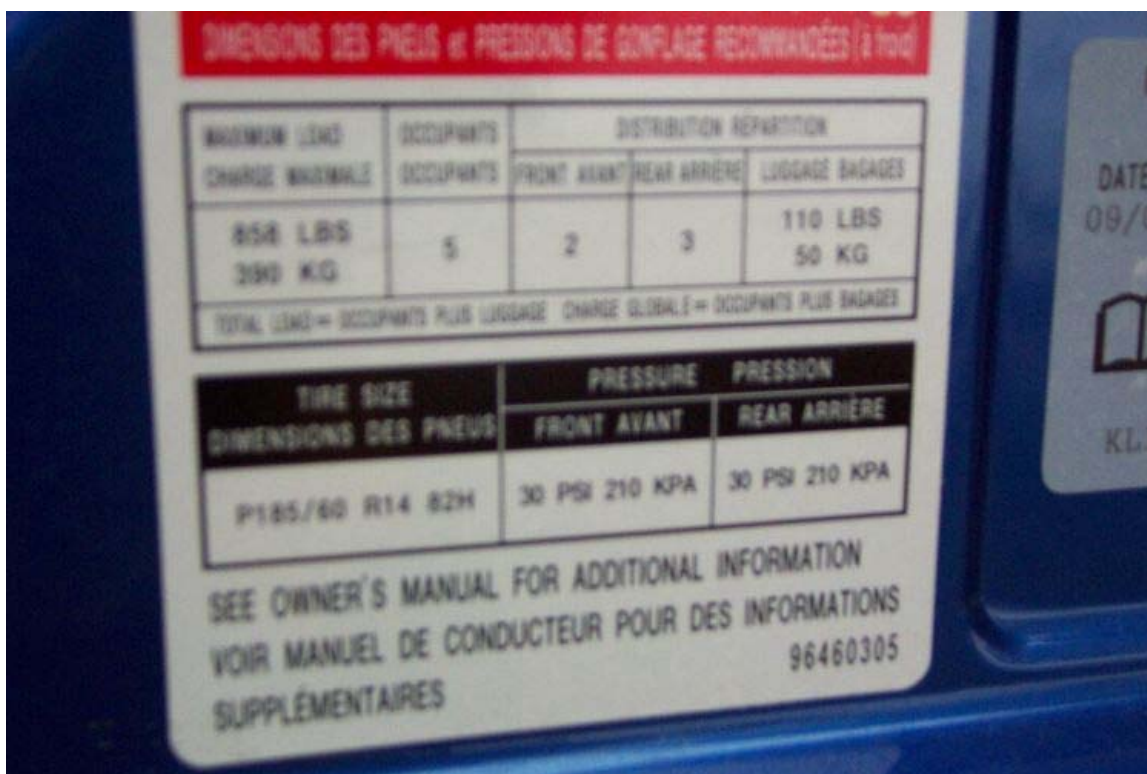
APPENDICE / APPENDIX A

**PHOTOGRAPHIES DE L'ESSAI
TEST PHOTOGRAPHS**

Date de collision Crash date	2005-03-04	Véhicule Vehicle	CHEVROLET AVEO 2005	T.C. N° T.C.No	05-215
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1. Étiquette de déclaration de conformité du véhicule d'essai.
Statement of compliance label of the test vehicle.



2. Étiquette d'information des pneus.
Tire information label.

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3. Vue $\frac{3}{4}$ avant du véhicule d'essai.
 $\frac{3}{4}$ front view of the test vehicle.



4. Vue $\frac{3}{4}$ arrière du véhicule d'essai.
 $\frac{3}{4}$ rear view of the test vehicle.

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5. Vue générale côté gauche du véhicule d'essai, avant essai.
Left side view of the test vehicle, pre-test.



6. Vue générale côté gauche du véhicule d'essai, après essai.
Left side view of the test vehicle, post-test.

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7. Vue arrière du véhicule d'essai, avant essai.
Rear view of the test vehicle, pre-test.



8. Vue arrière du véhicule d'essai, après essai.
Rear view of the test vehicle, post-test.

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9. Vue générale côté droit du véhicule d'essai, avant essai.
General right side view of the test vehicle, pre-test.



10. Vue générale côté droit du véhicule d'essai, après essai.
General right side view of the test vehicle, post-test.

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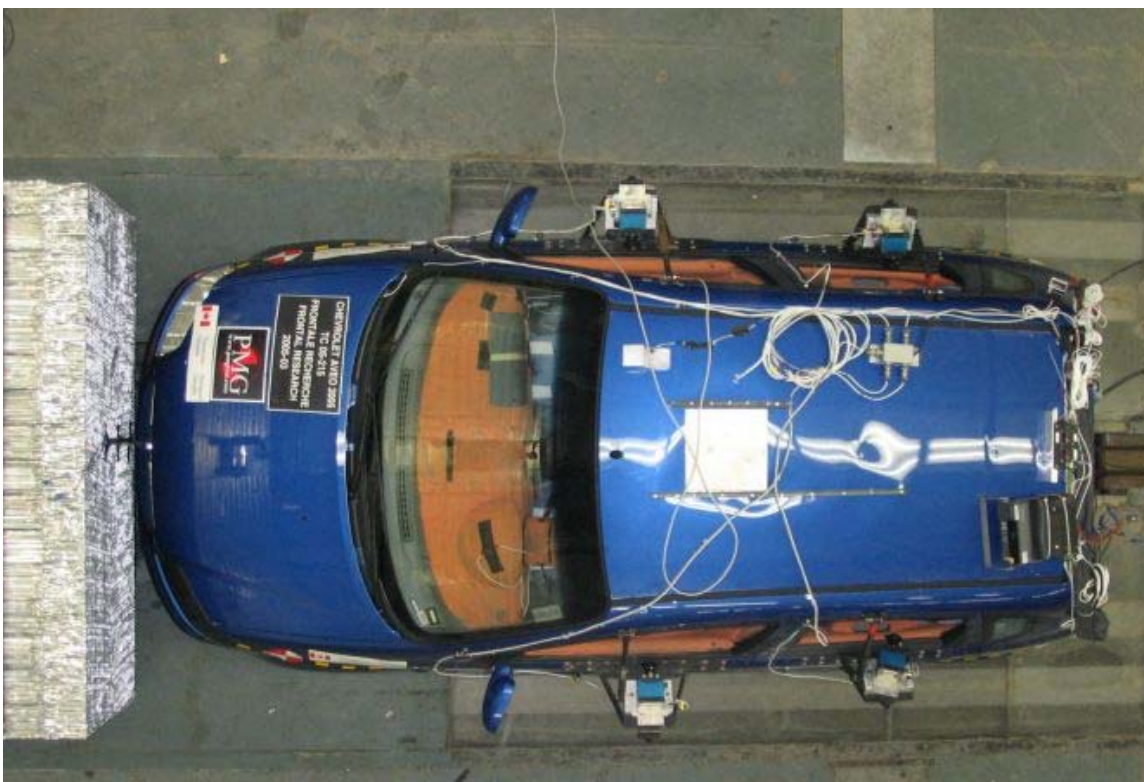


11. Vue avant du véhicule d'essai, avant essai.
Front view of the test vehicle, pre-test.

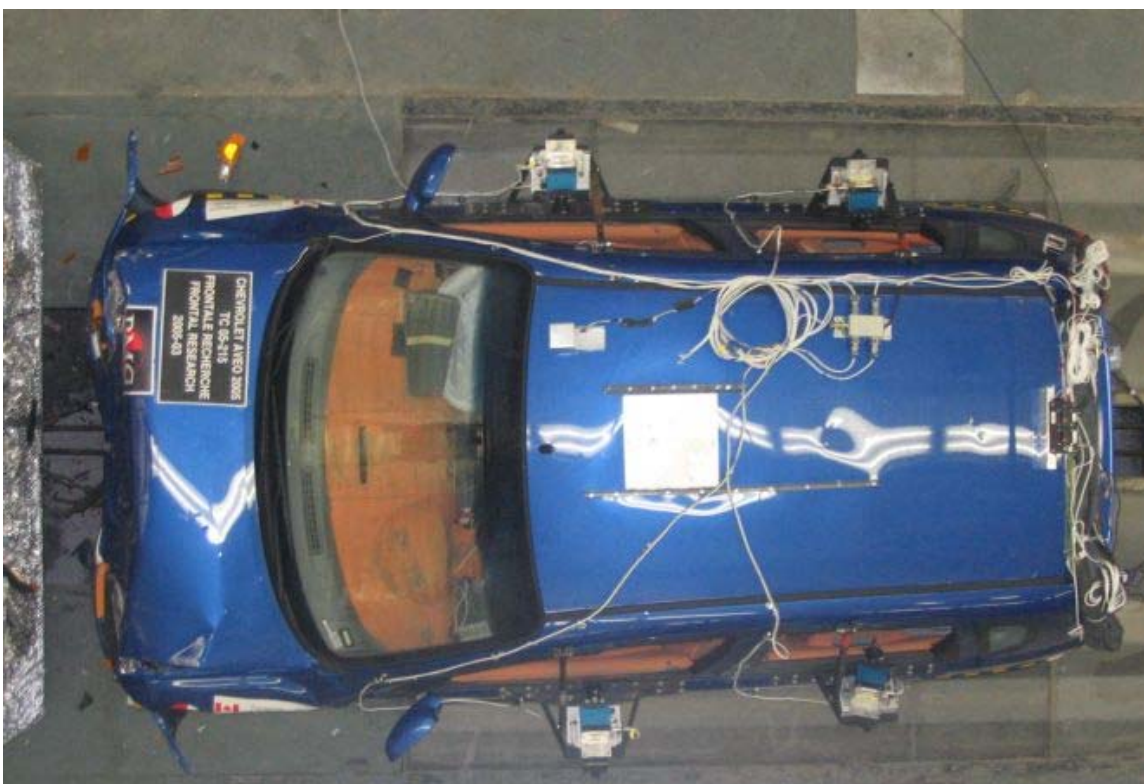


12. Vue avant du véhicule d'essai, après essai.
Front view of the test vehicle, post-test.

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13. Vue de plan du véhicule d'essai, avant essai.
Over view of the test vehicle, pre-test.

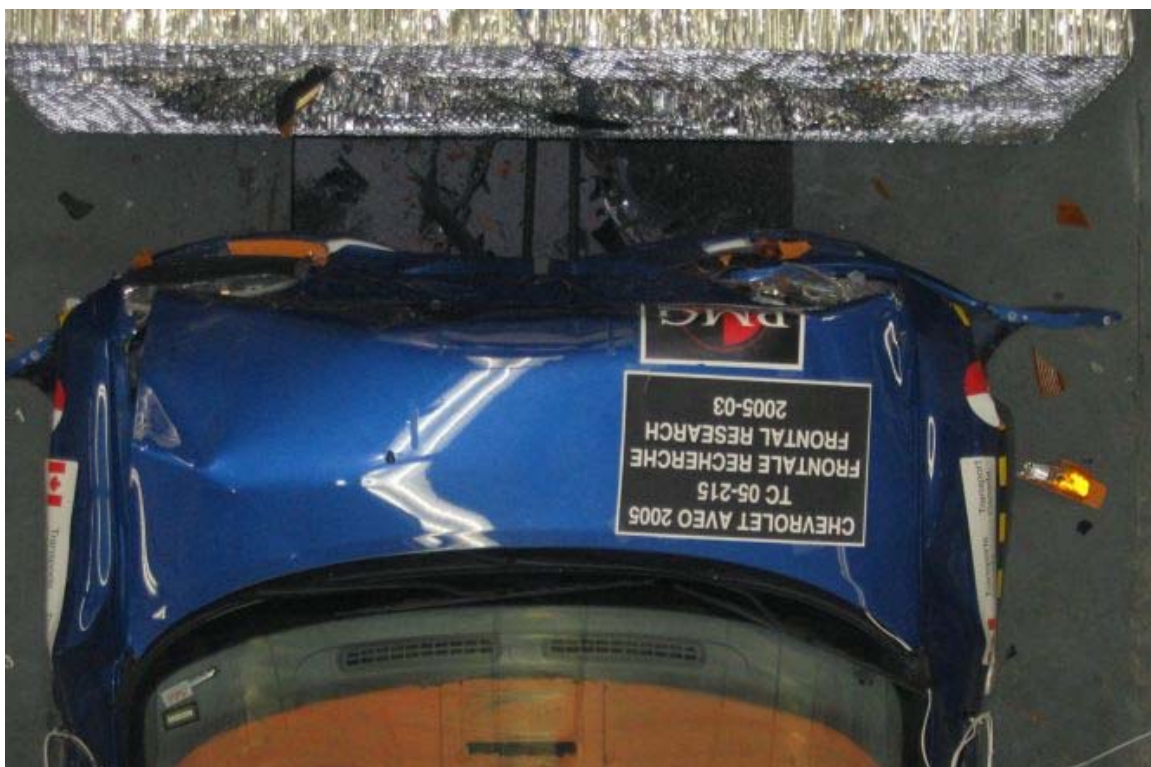


14. Vue de plan du véhicule d'essai, après essai.
Over view of the test vehicle, post-test.

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15. Vue de plan du devant du véhicule d'essai, avant essai.
Over view of the front part of the test vehicle, pre-test.



16. Vue de plan du devant du véhicule d'essai, après essai.
Over view of the front part of the test vehicle, post-test.

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17. Vue côté gauche de l'avant du véhicule d'essai, avant essai.
Left side view of front of test vehicle, pre-test.



18. Vue côté gauche de l'avant du véhicule d'essai, après essai.
Left side view of front of test vehicle, post-test.

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19. Vue côté droit de l'avant du véhicule d'essai, avant essai.
Right side view of front of test vehicle, pre-test.



20. Vue côté droit de l'avant du véhicule d'essai, après essai.
Right side view of front of test vehicle, post-test.

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21. Vue du compartiment moteur du véhicule d'essai, avant essai.
Engine compartment view of the vehicle, pre-test.



22. Vue du compartiment moteur du véhicule d'essai, après essai.
Engine compartment view of the vehicle, post-test.

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23. Vue du dessous du compartiment moteur, avant essai.
Under view of the engine compartment , pre-test.



24. Vue du dessous du compartiment moteur, après essai.
Under view of the engine compartment , post-test.

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25. Position du conducteur, avant essai.
Driver's position, pre-test.

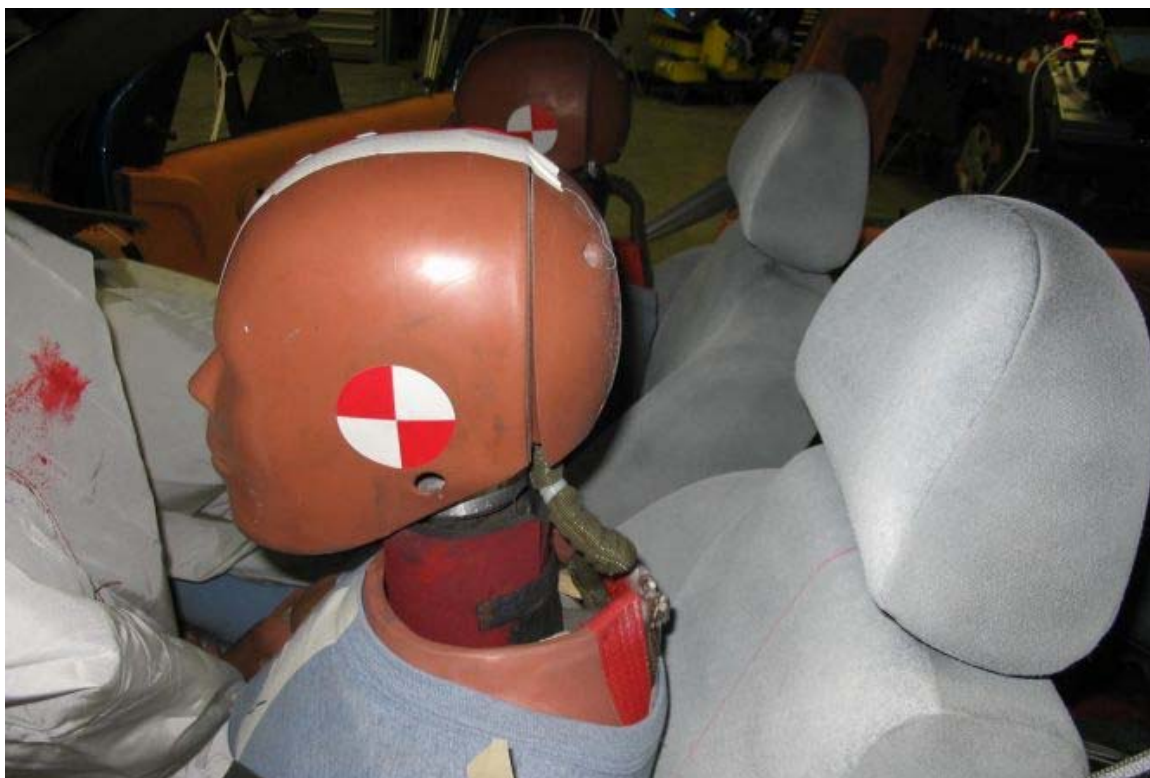


26. Position du conducteur, après essai.
Driver's position, post-test.

Date de collision Crash date	2005-03-04	Véhicule Vehicle	CHEVROLET AVEO 2005	T.C. N° T.C.No	05-215
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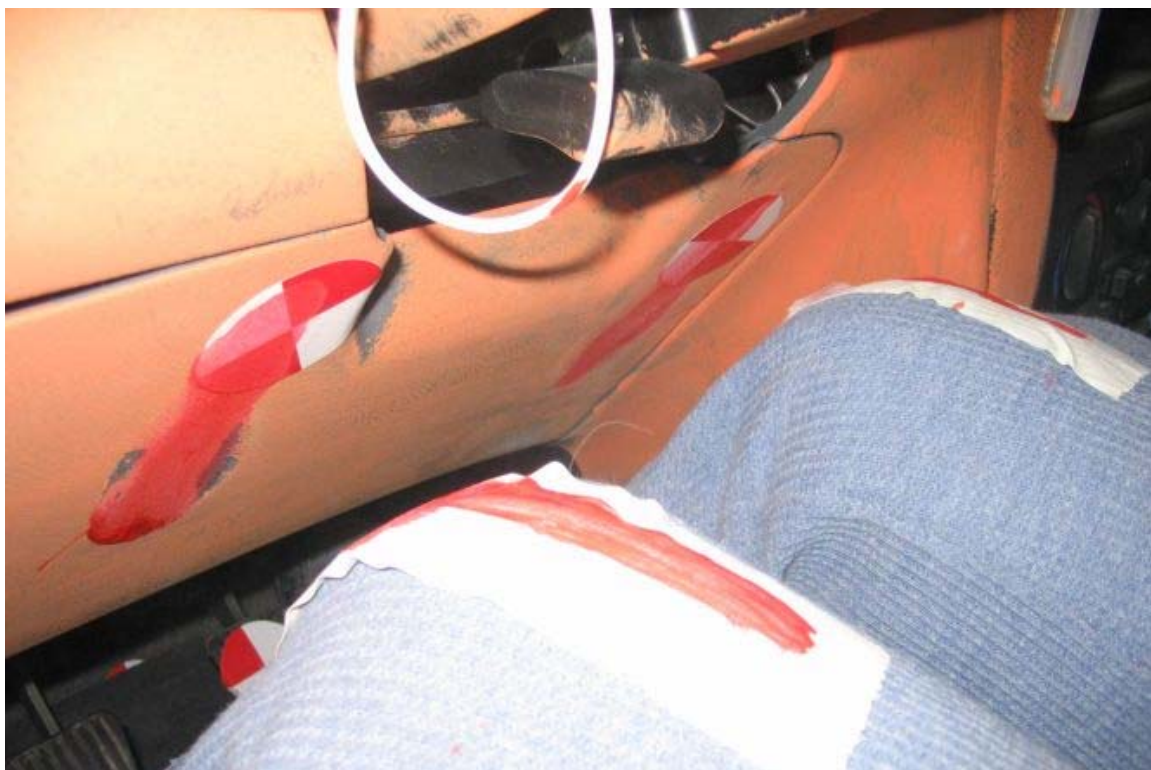


27. Point de contact de tête du conducteur, après essai.
Driver's head contact point, post-test.



28. Point de contact de tête du conducteur, après essai.
Driver's head contact point, post-test.

Date de collision Crash date	2005-03-04	Véhicule Vehicle	CHEVROLET AVEO 2005	T.C. N° T.C.No	05-215
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29. Point de contact des genoux du conducteur, après essai.
Driver's knees contact point, post-test.



30. Contact du volant sur l'abdomen du conducteur, après essai.
Steering wheel's contact point with driver's abdomen.

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31. Position du passager, avant essai.
Passenger's position, pre-test.



32. Position du passager, après essai.
Passenger's position, post-test.

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33. Point de contact de tête du passager, après essai.
Passenger's head contact point, post-test.



34. Point de contact de tête du passager, après essai.
Passenger's head contact point, post-test.

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35. Point de contact des genoux du passager, après essai.
Passenger's knees contact point, post-test.

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36. Position du passager arrière droit, avant essai.
Rear right passenger's position, pre-test.



37. Position du passager arrière droit, après essai.
Rear right passenger's position, post-test.

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38. Position du passager arrière gauche, avant essai.
Rear left passenger's position, pre-test.



39. Position du passager arrière gauche, après essai.
Rear left passenger's position, post-test.

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40. Affichage du lecteur de vitesse.
Speed trap reading.

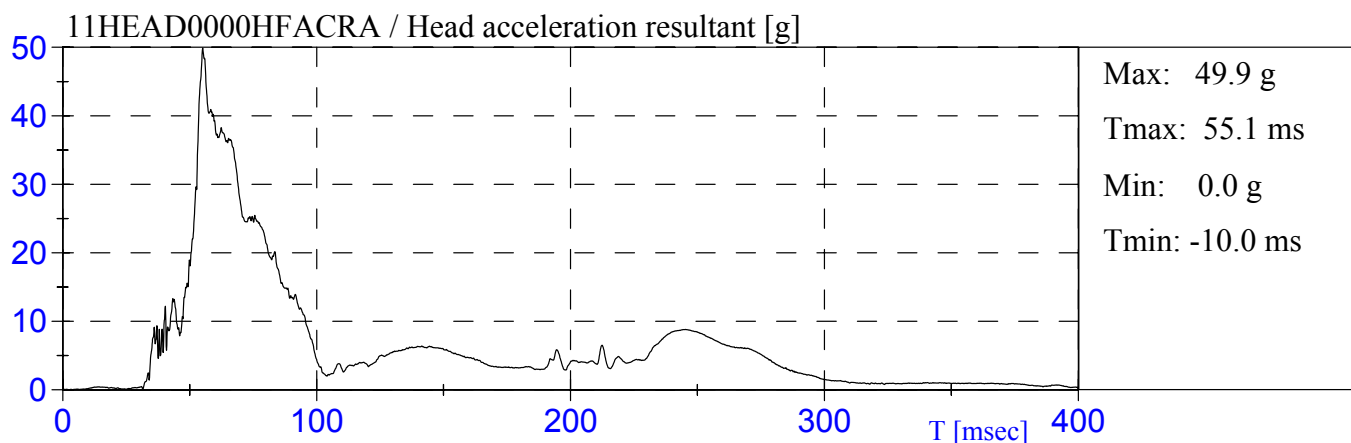
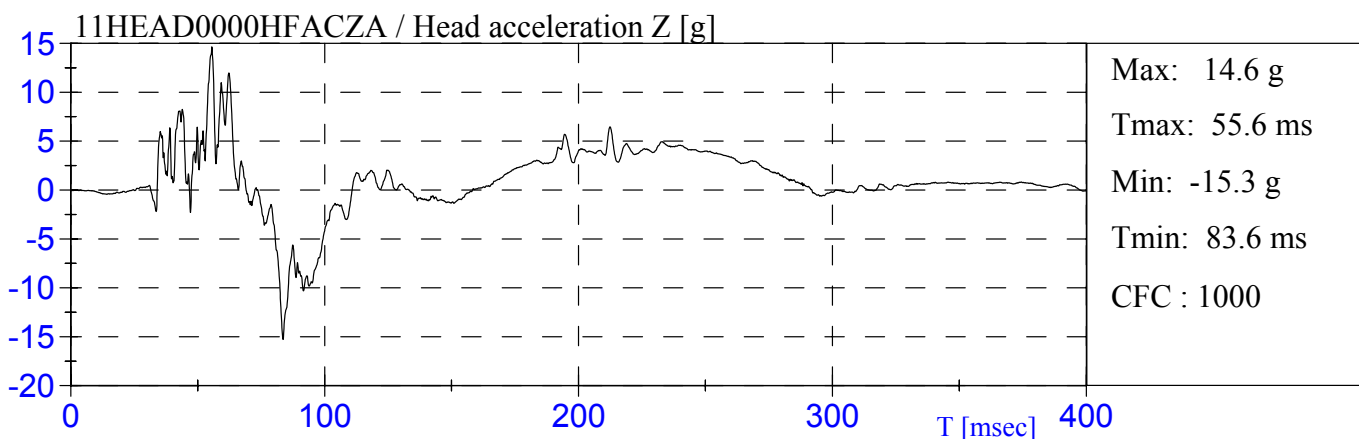
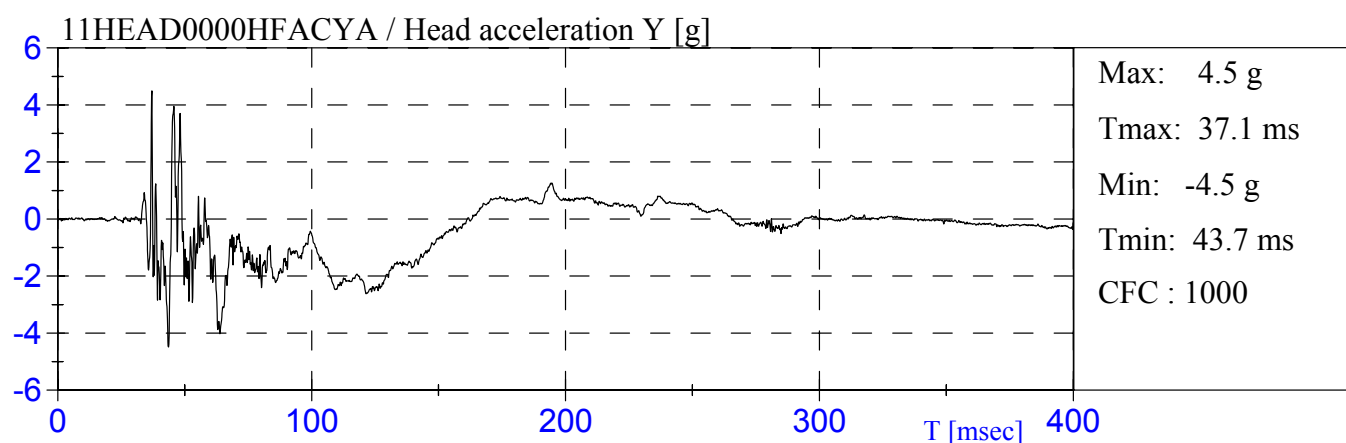
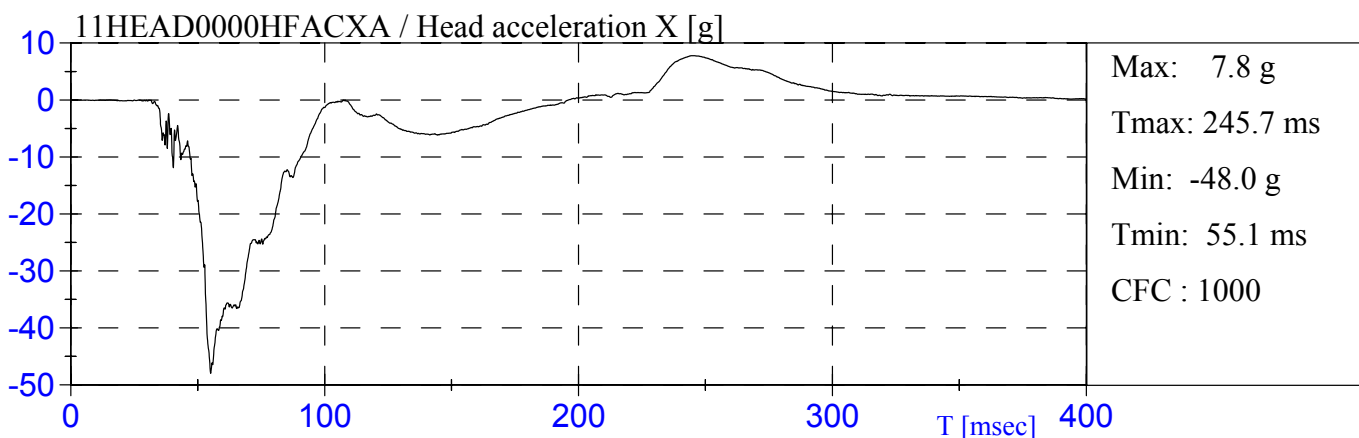
APPENDICE / APPENDIX B

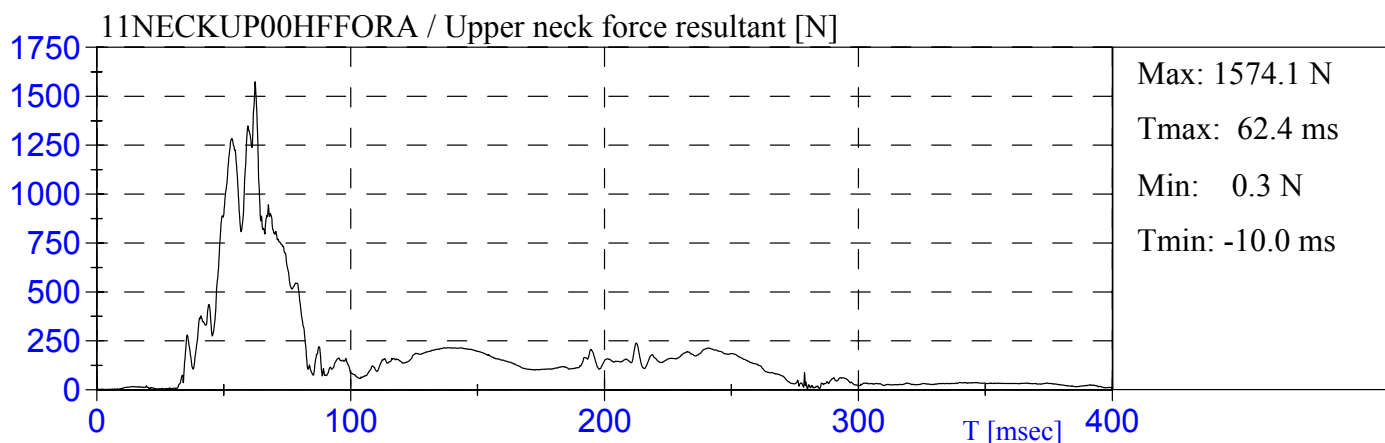
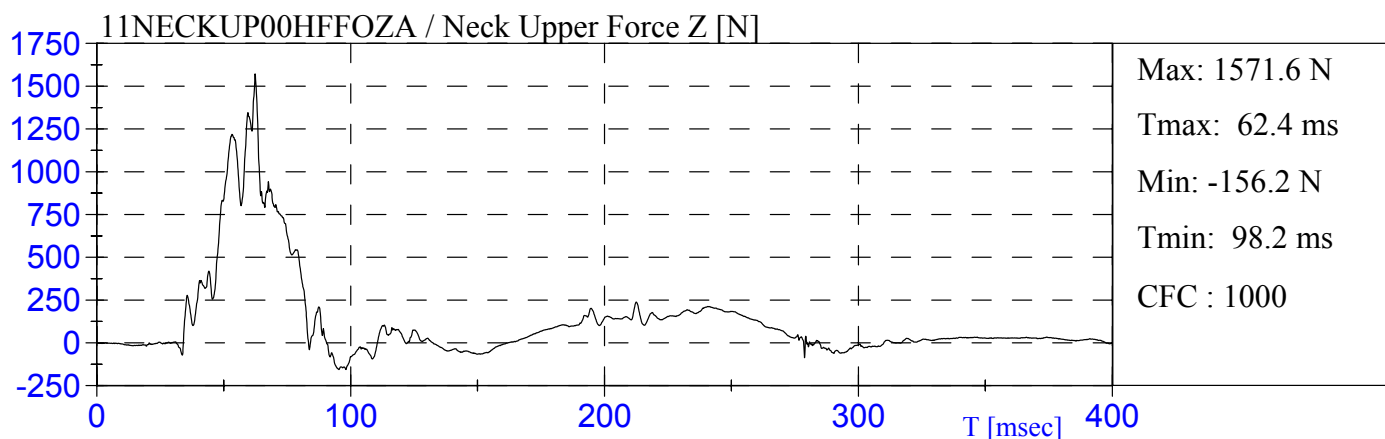
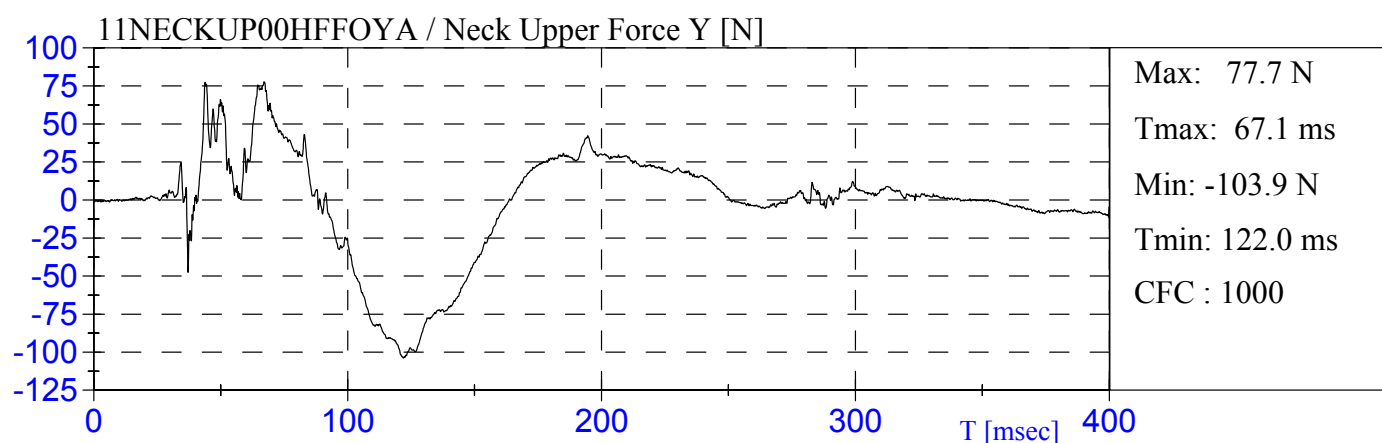
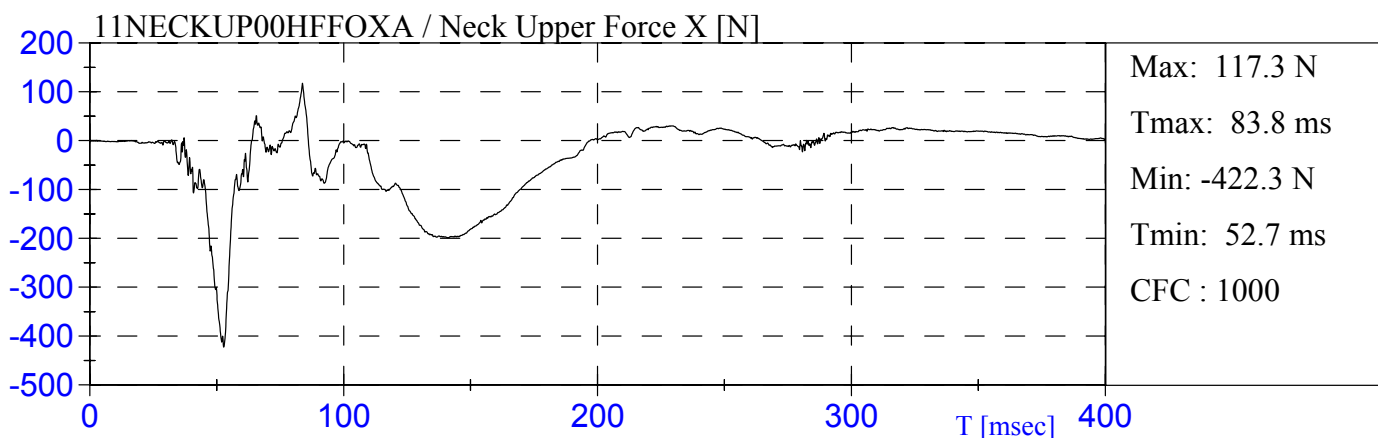
**DONNÉES GRAPHIQUES
GRAPHICAL DATA**

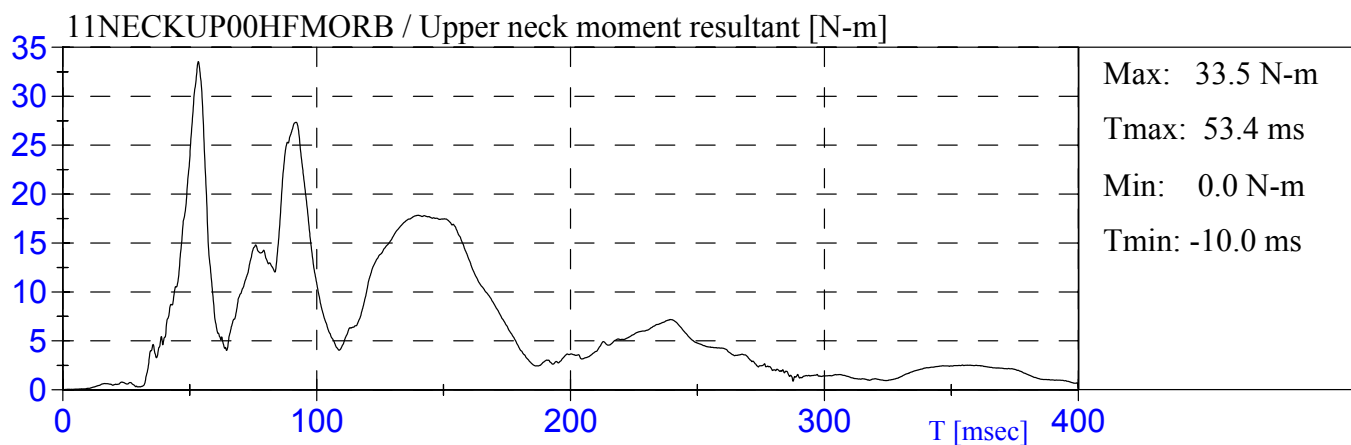
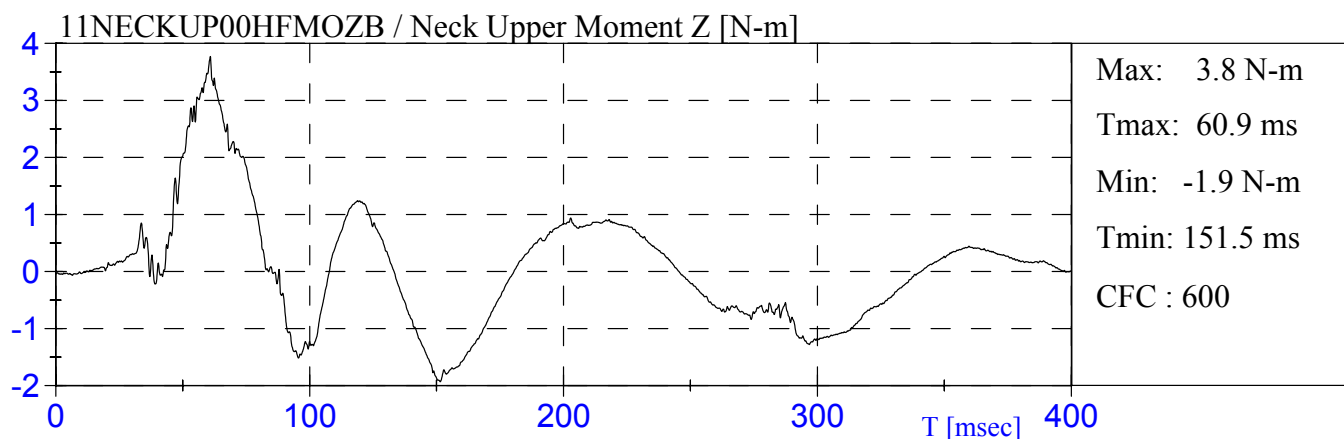
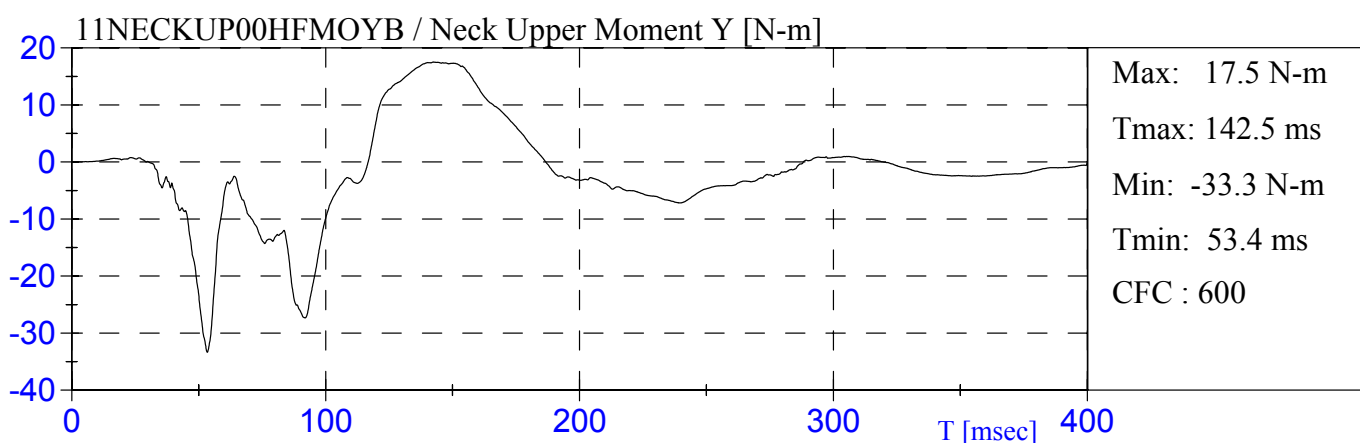
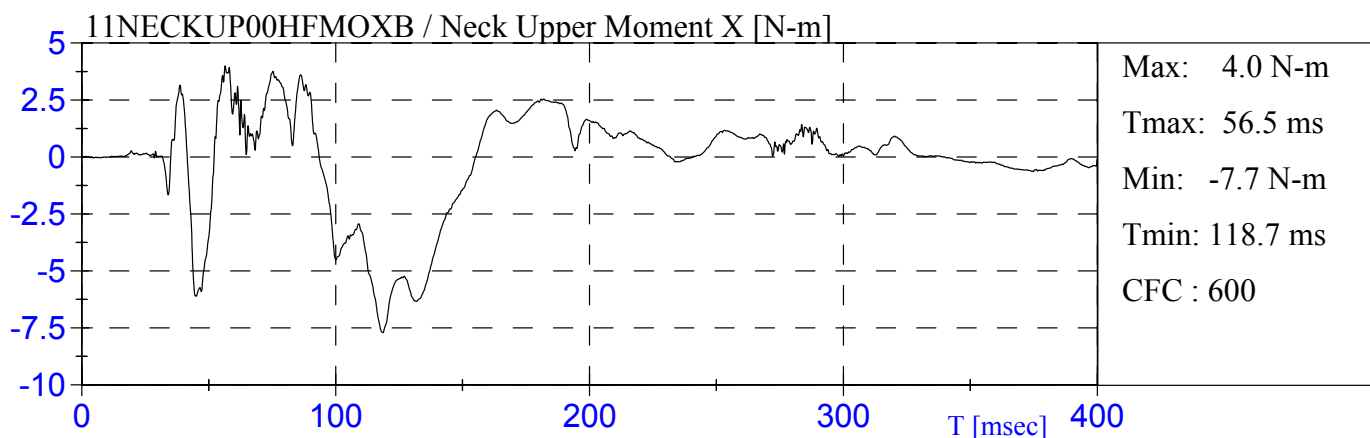


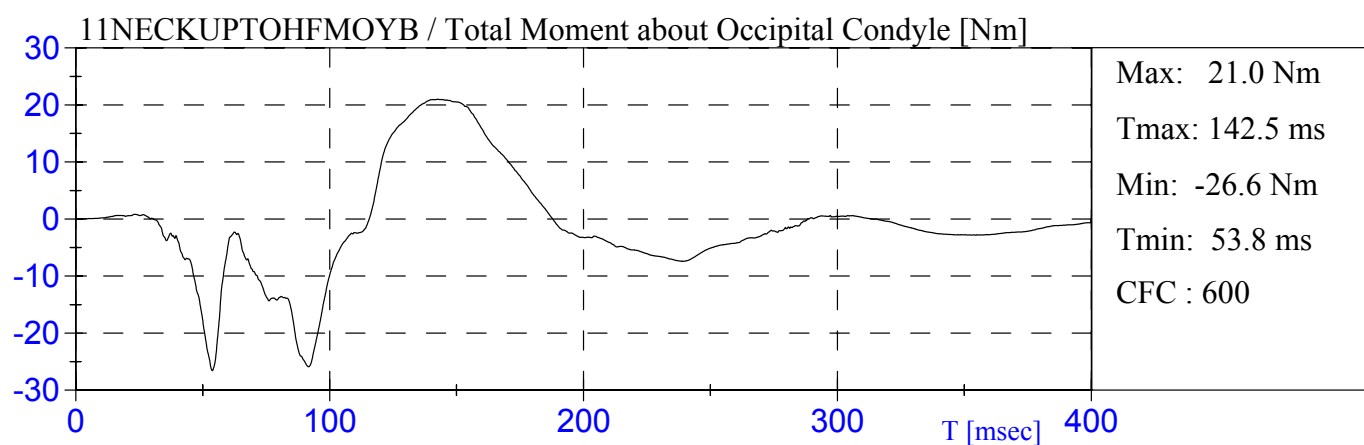
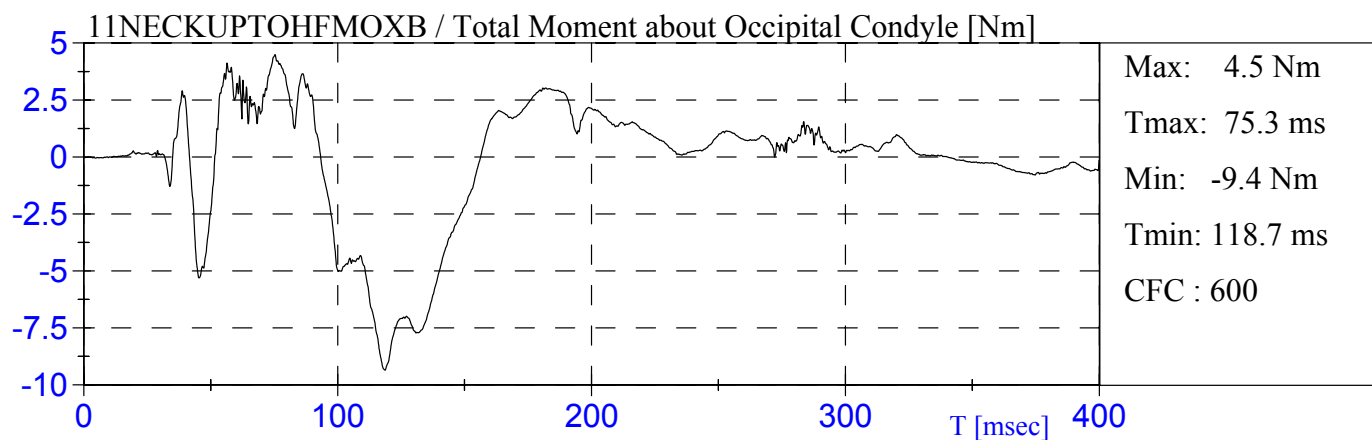
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Type de véhicule Type of Vehicle	CHEVROLET AVEO 2005
Numéro de TC Tc Number	TC05-215
Numéro de contrat Contract No	05-5001
Acquisition de données selon Data Acquisition according to	SAE J211/1 MAR 95
Date de l'essai Test date	2005-03-04
Titre du projet Project Title	COLLISION DE RECHERCHE COLLISION FRONTALE RESEARCH COLLISION TEST FRONTAL CRASH
MANNEQUIN / DUMMY	

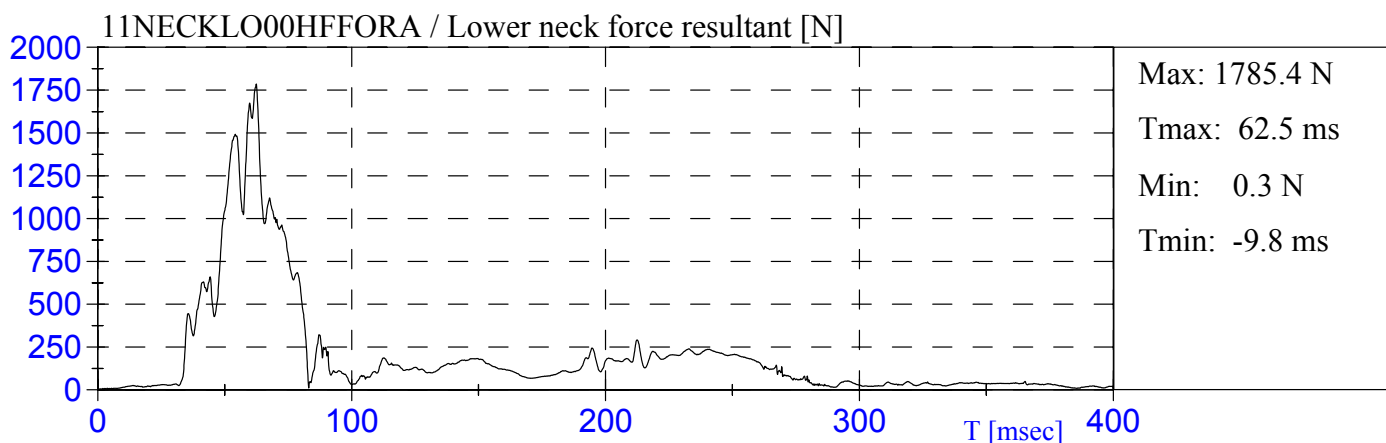
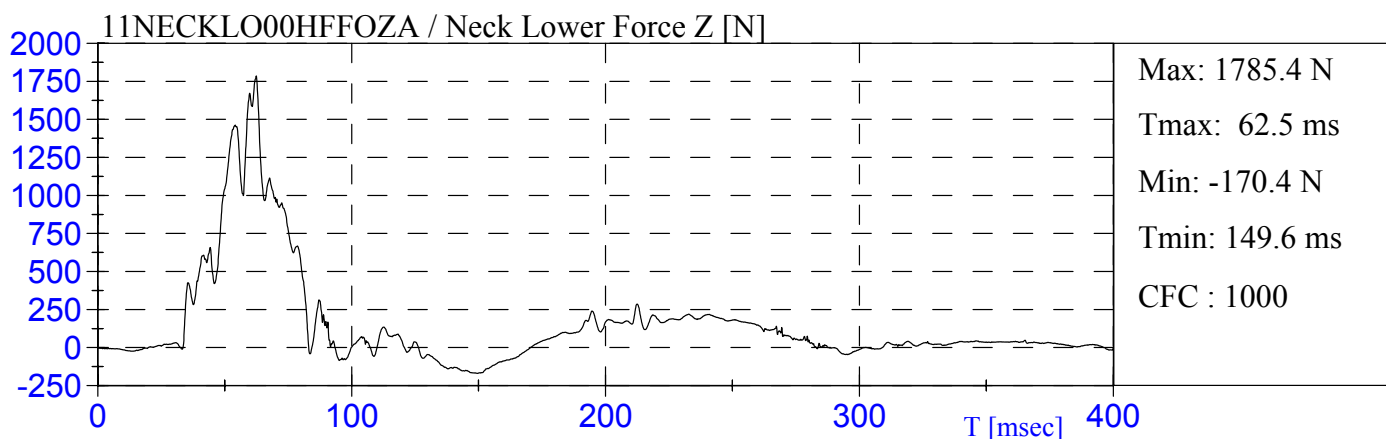
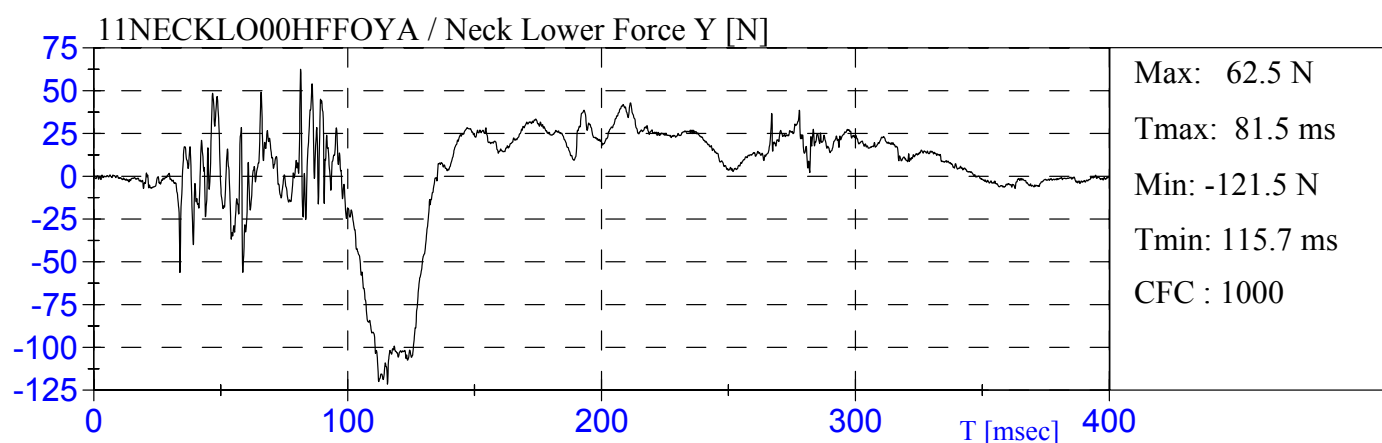
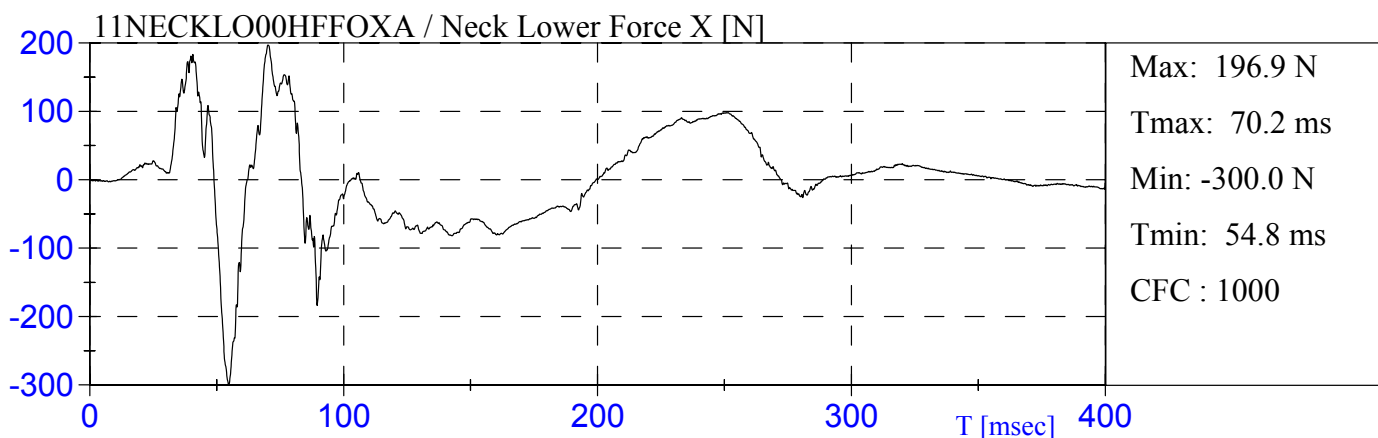
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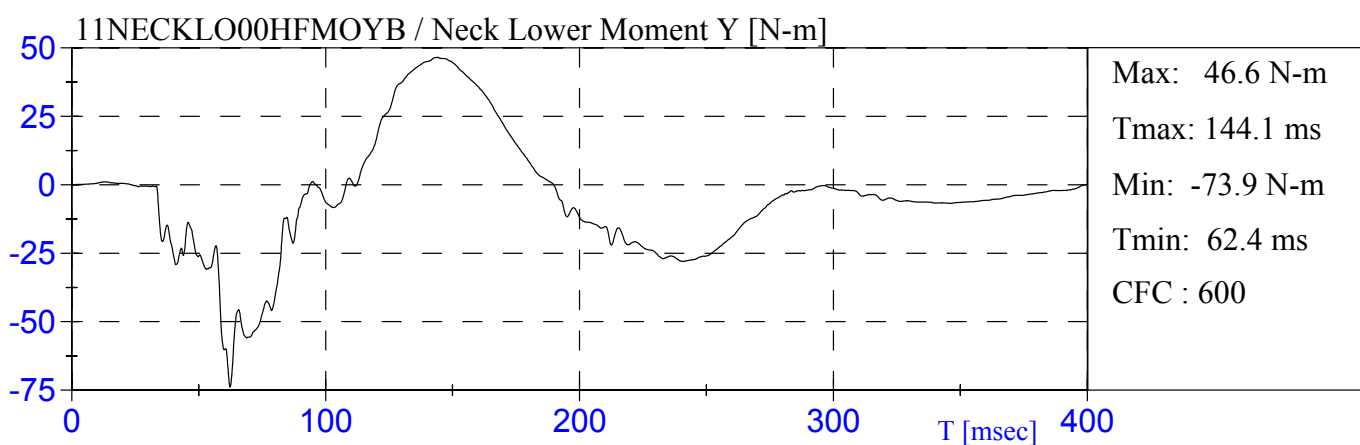
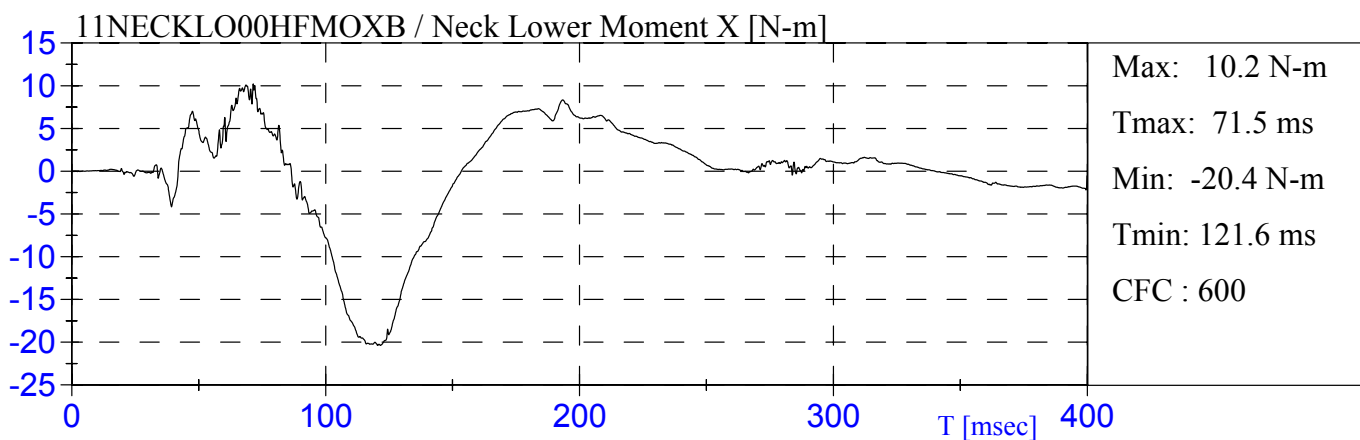


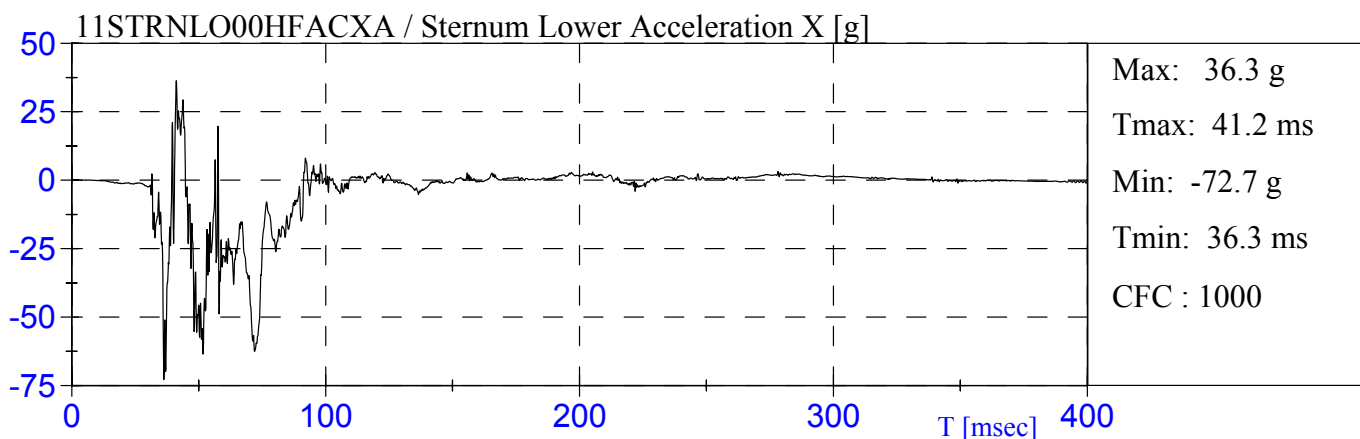
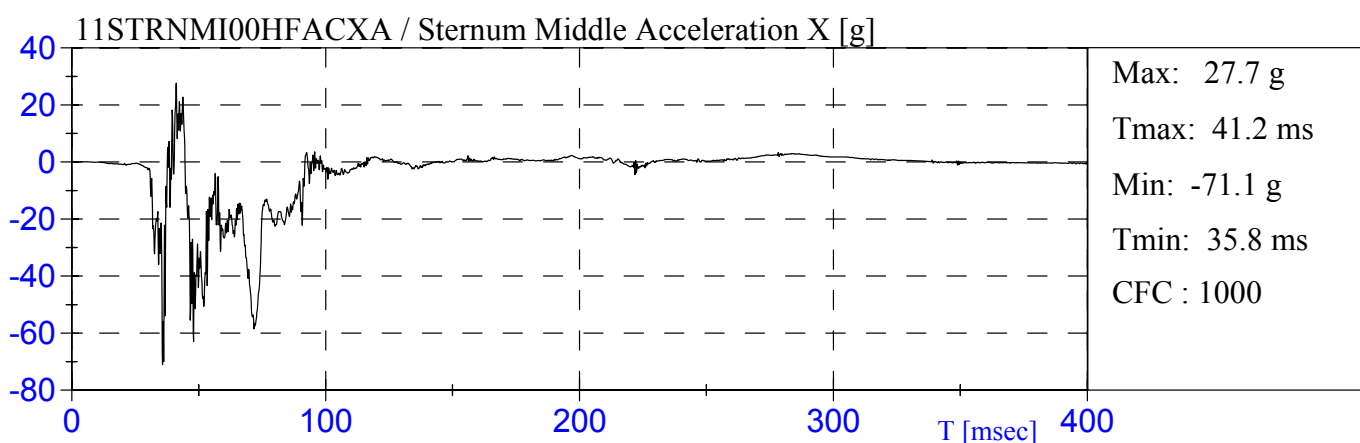
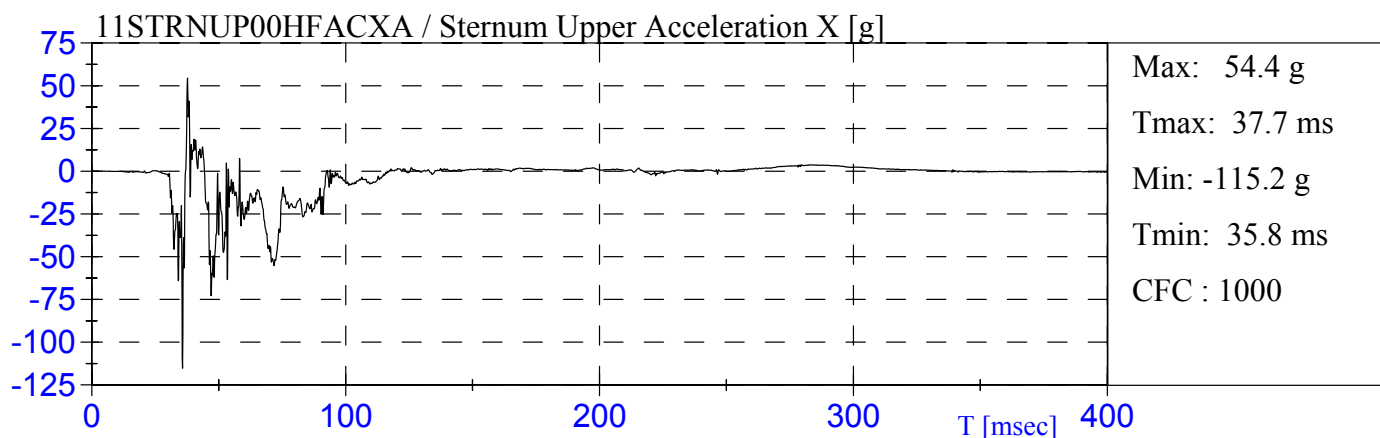


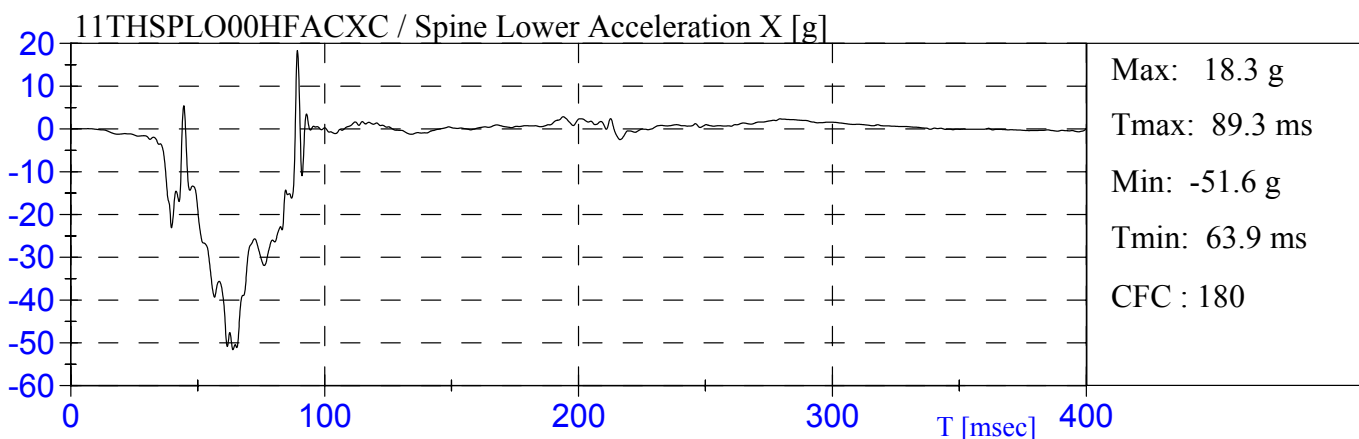
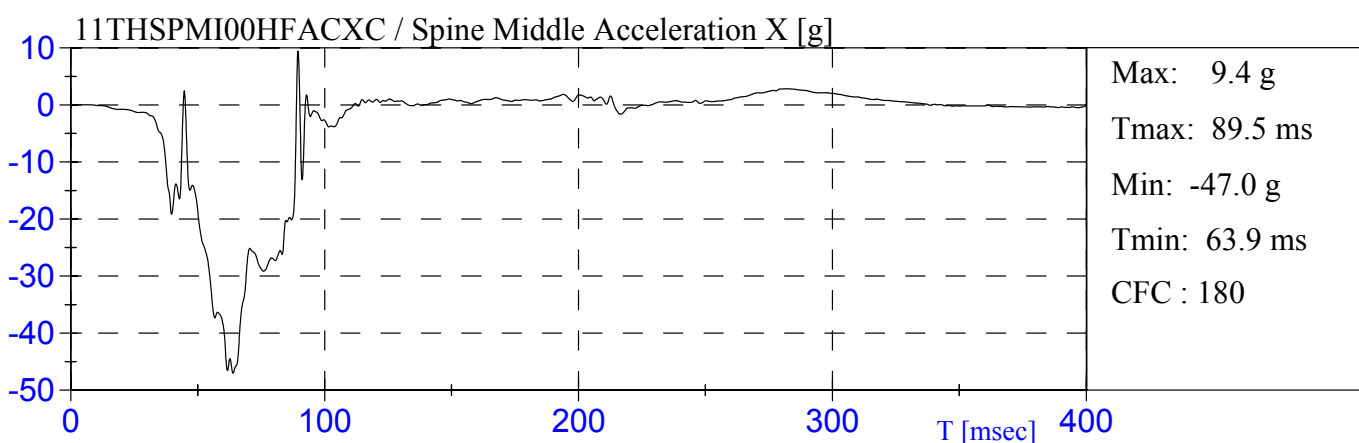
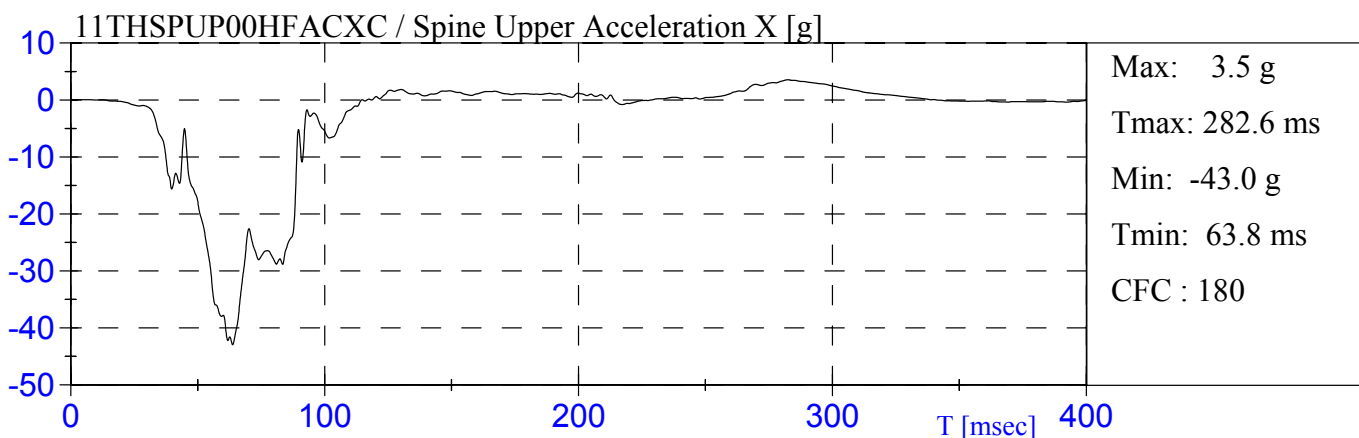


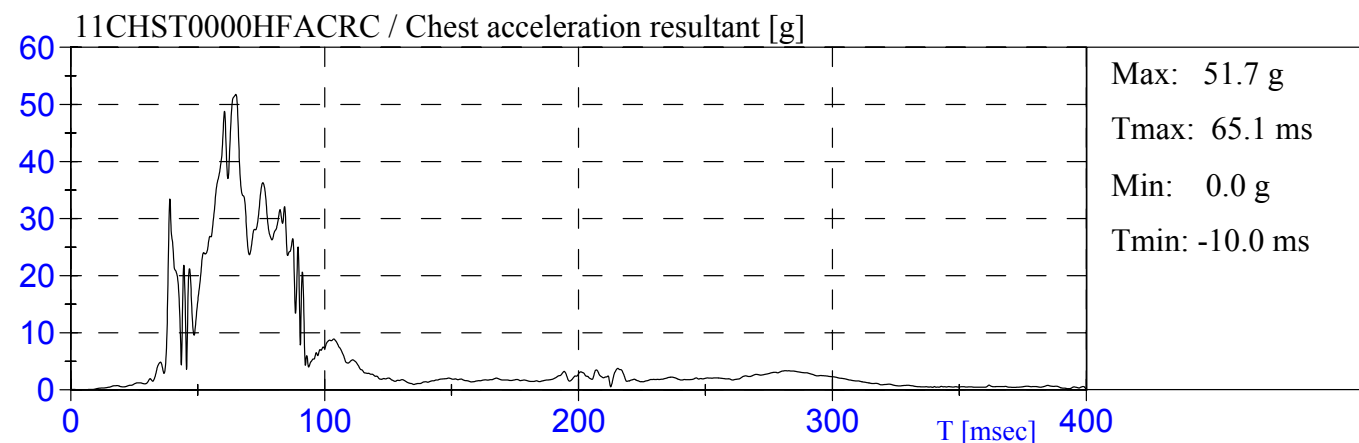
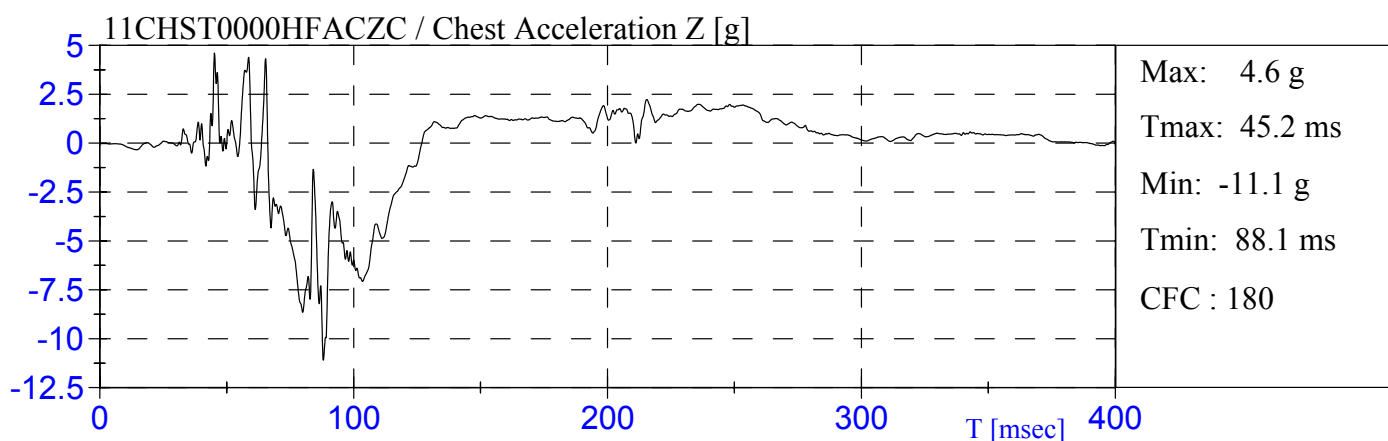
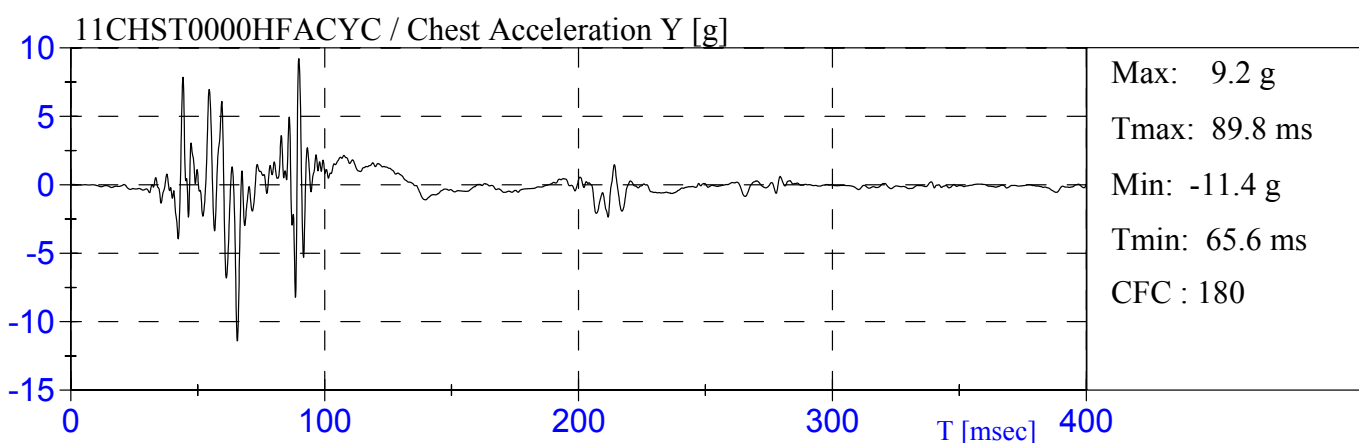
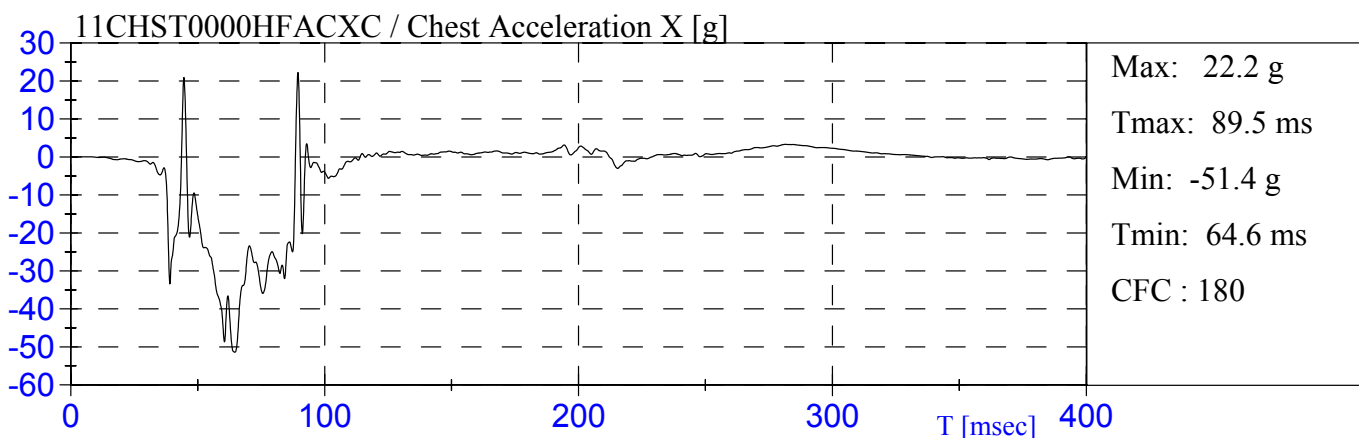


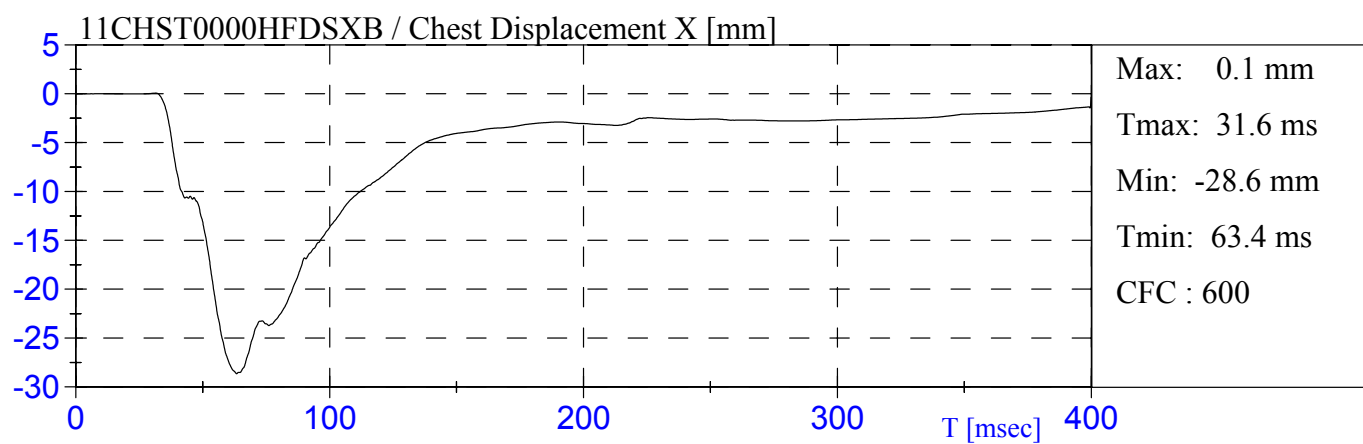


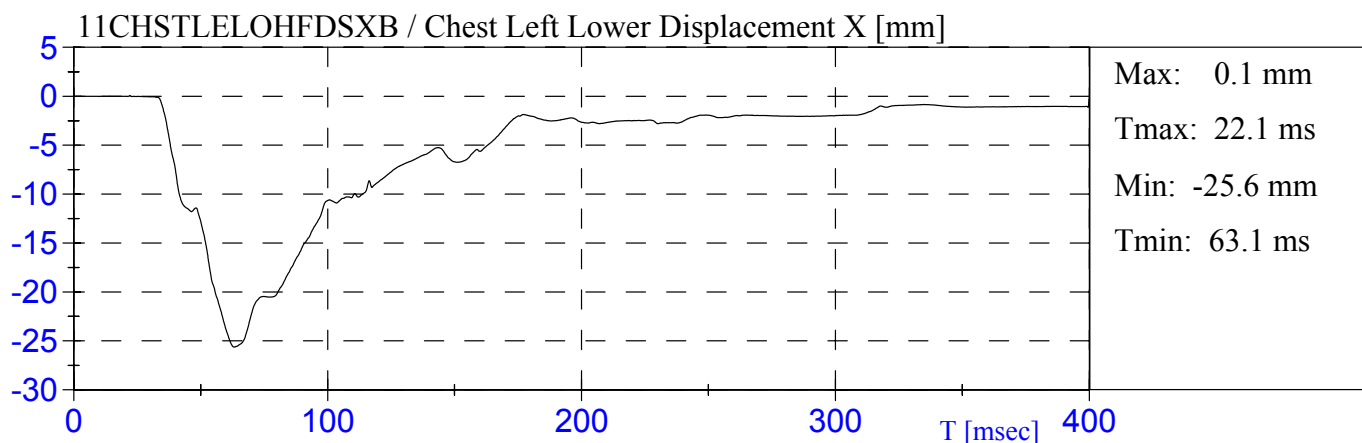
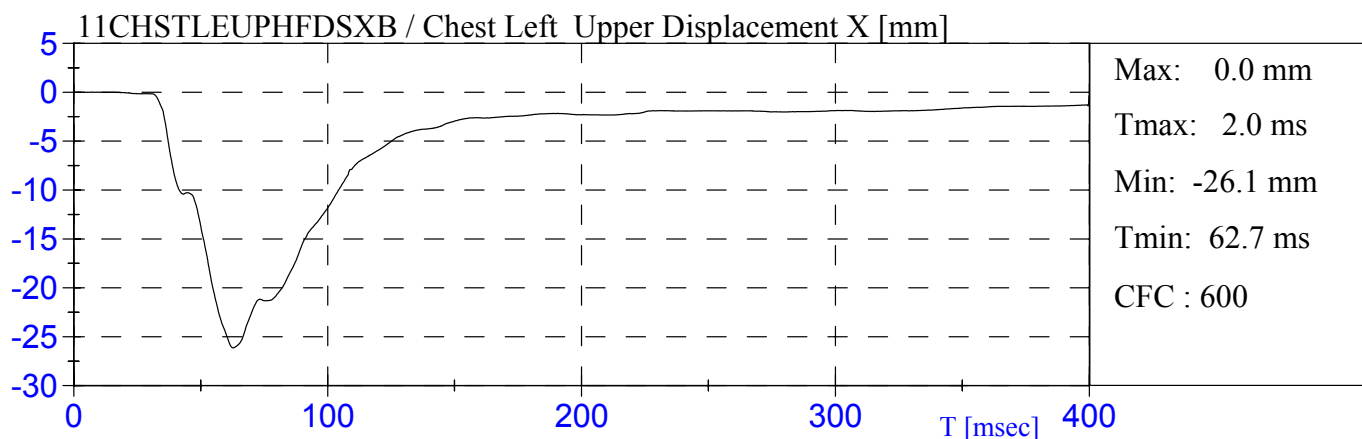
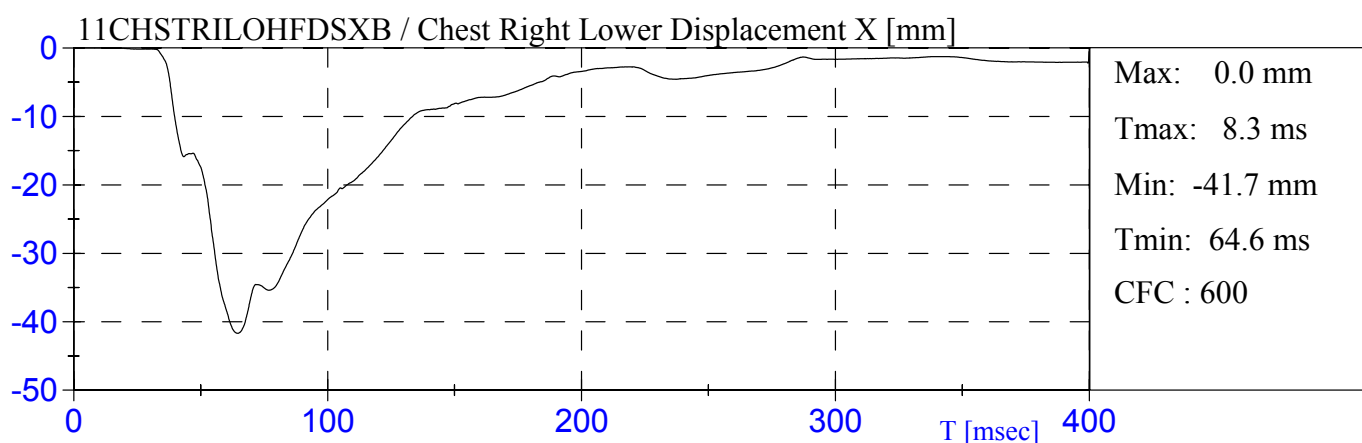
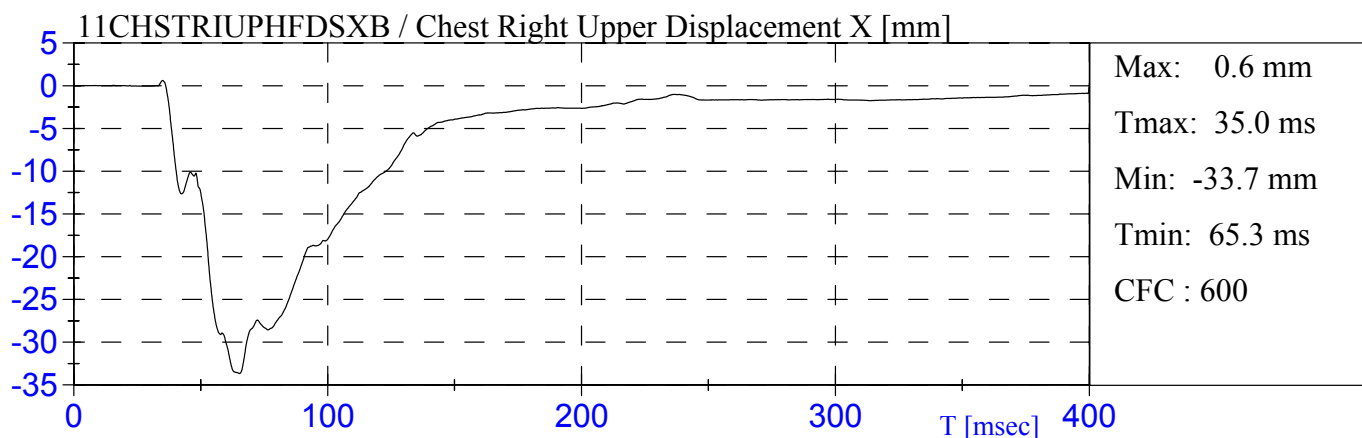


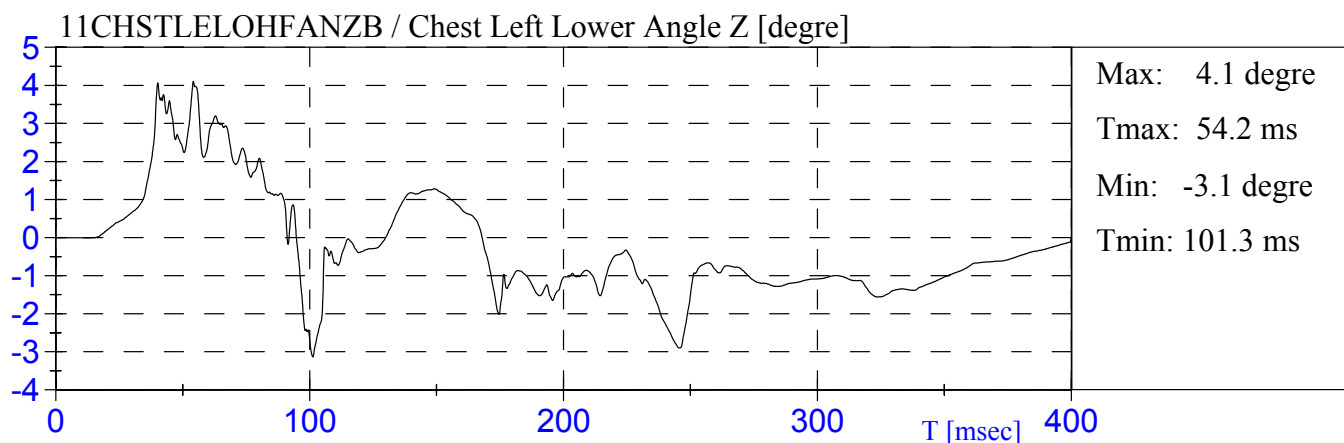
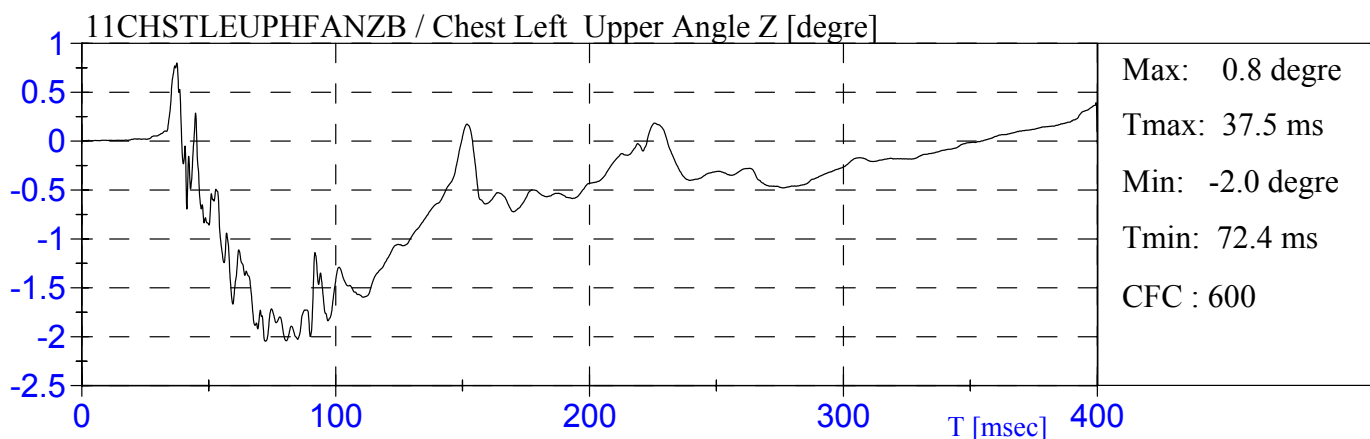
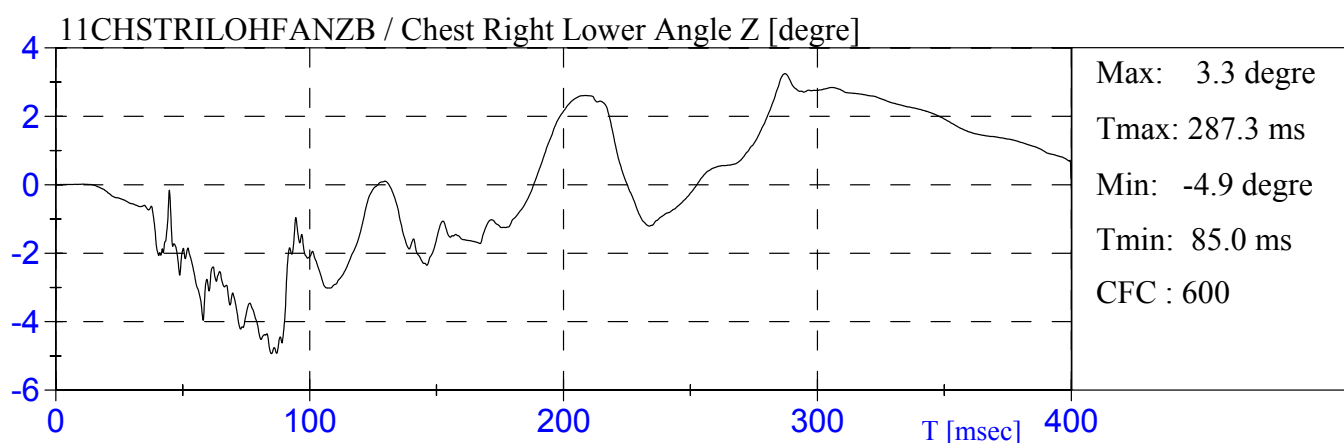
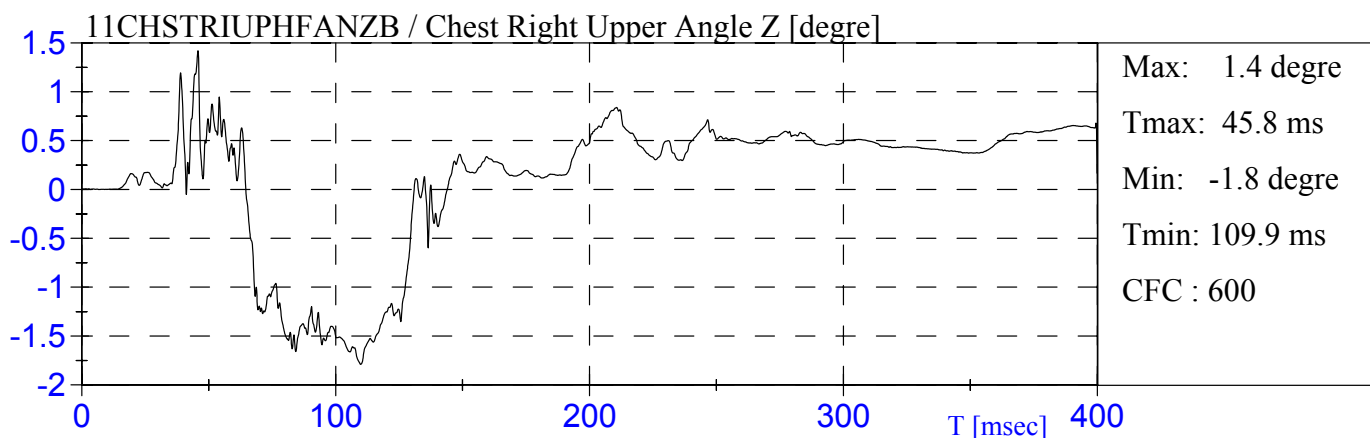


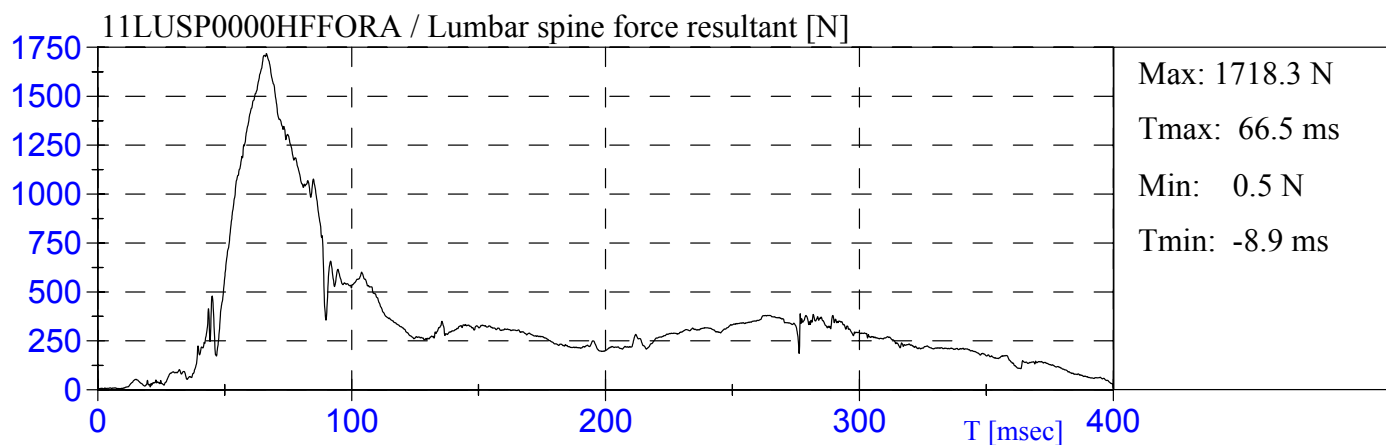
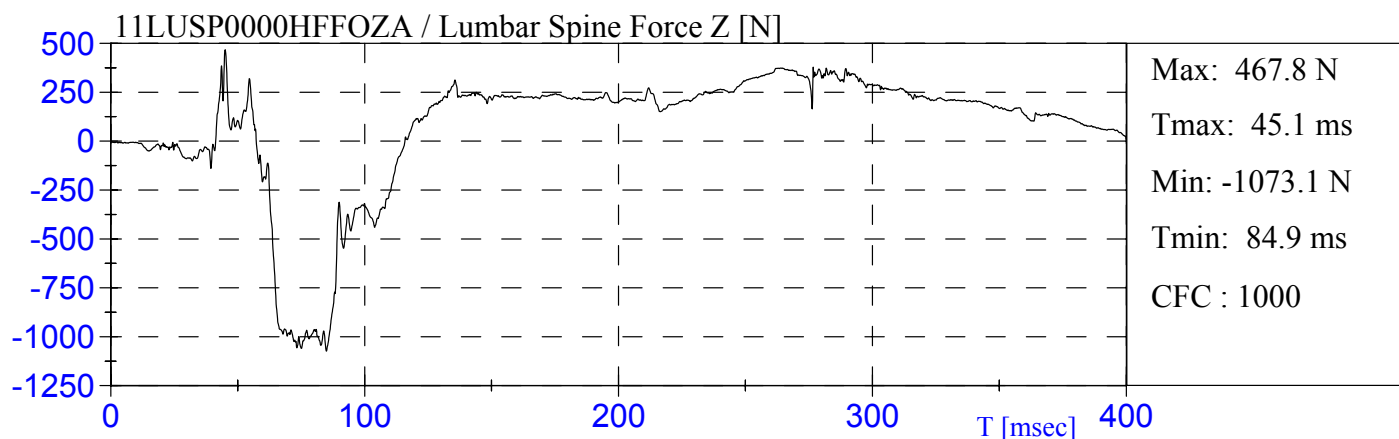
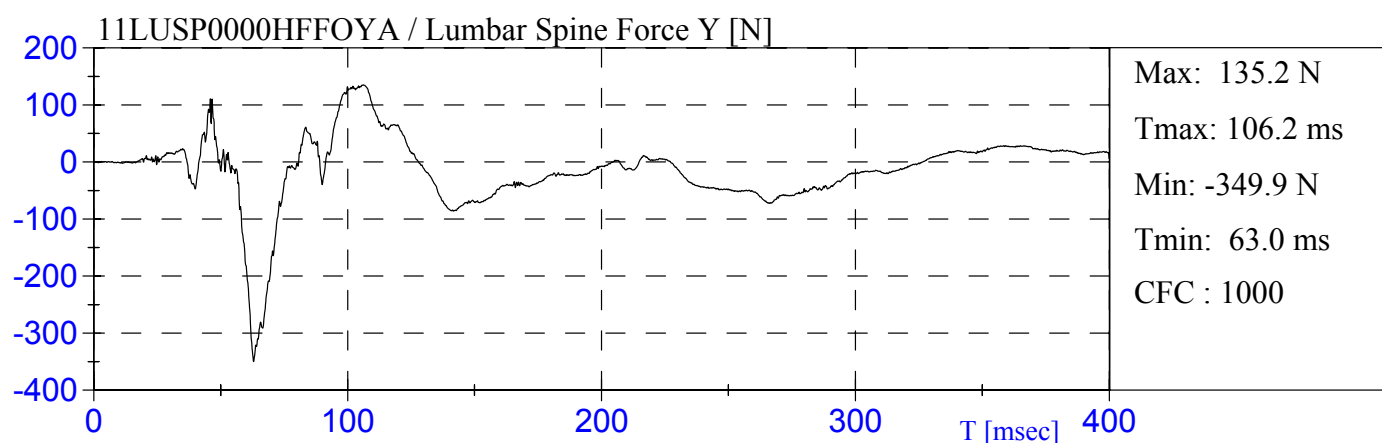
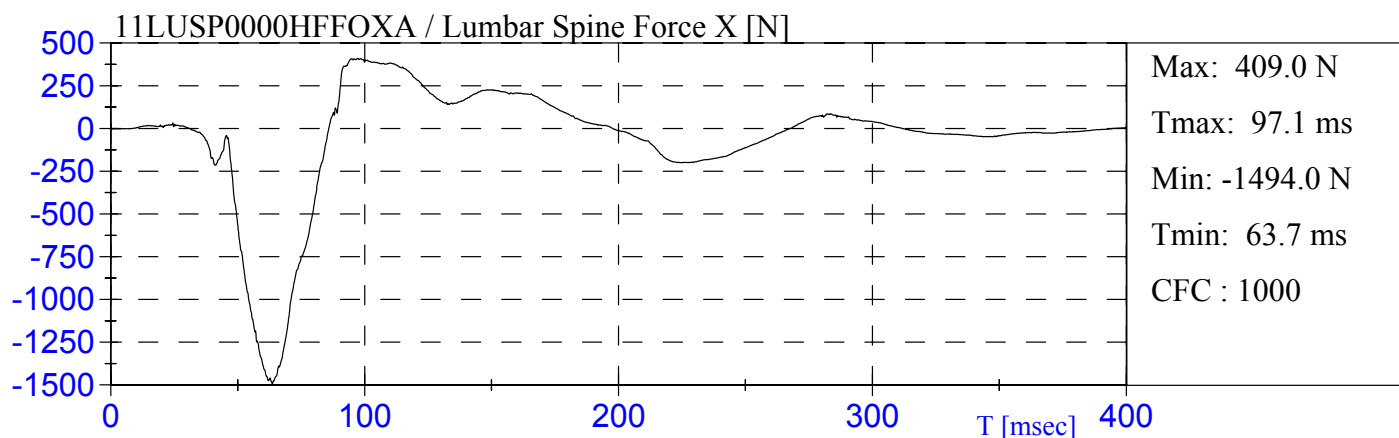


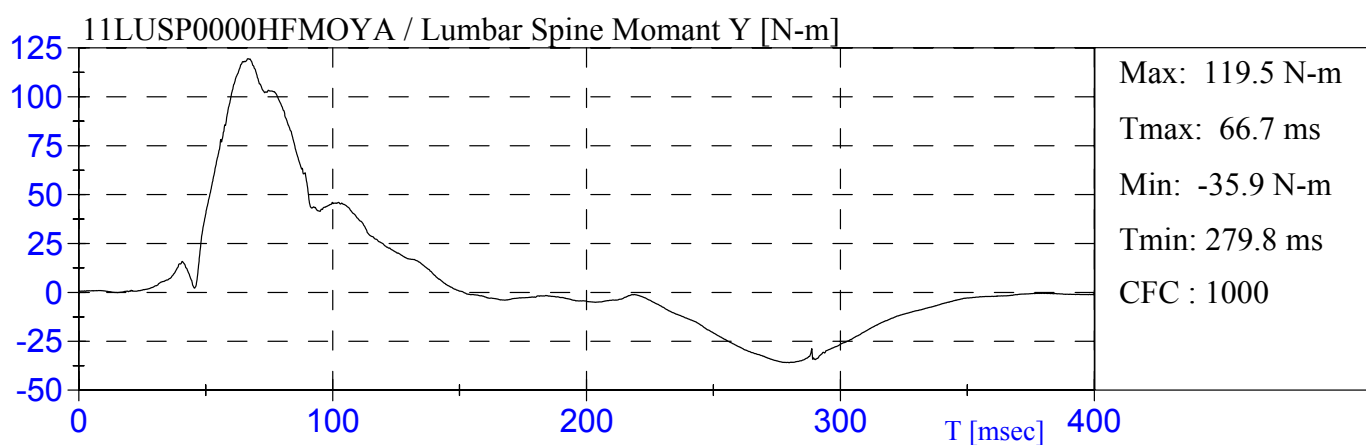
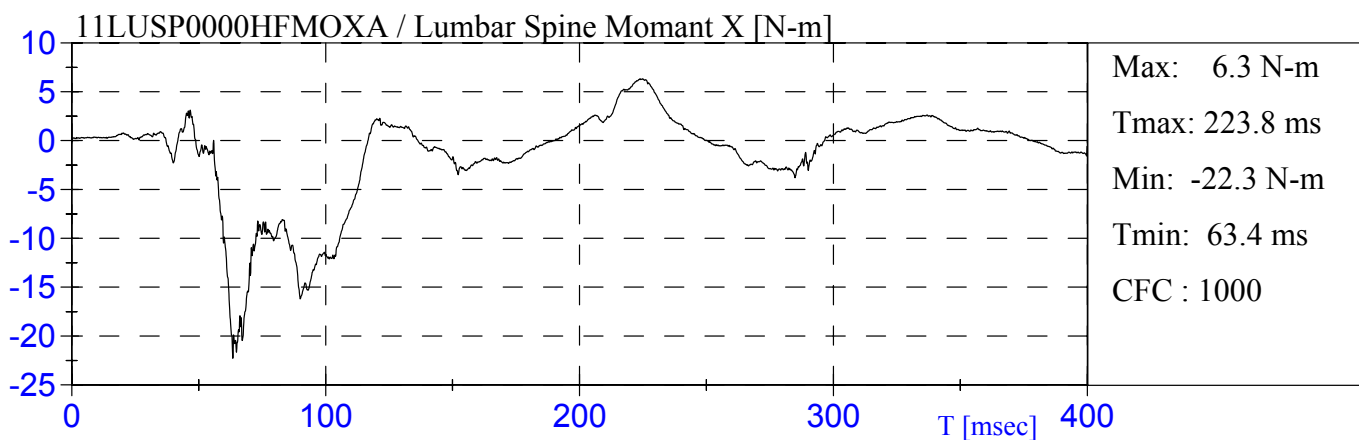


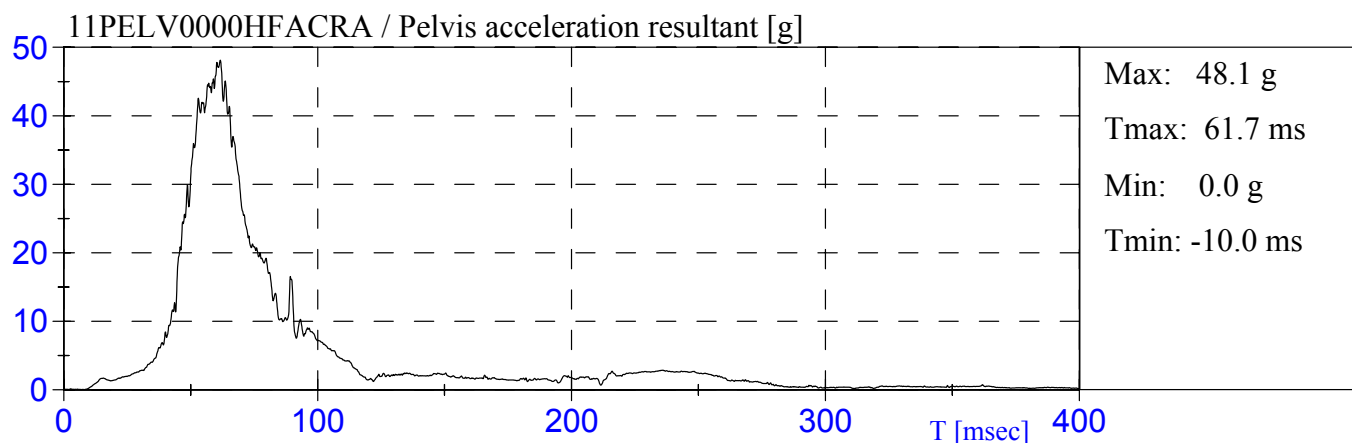
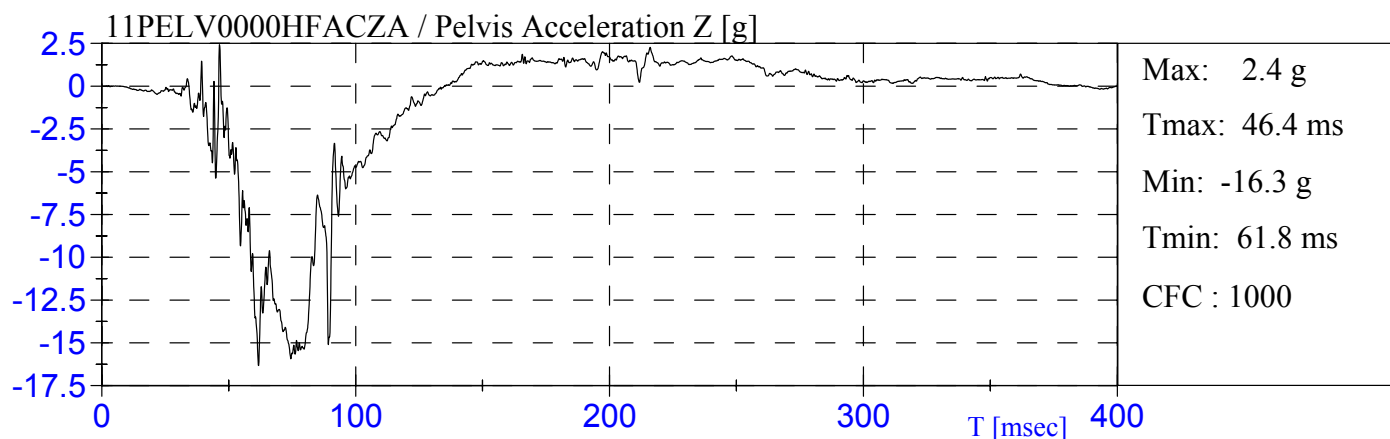
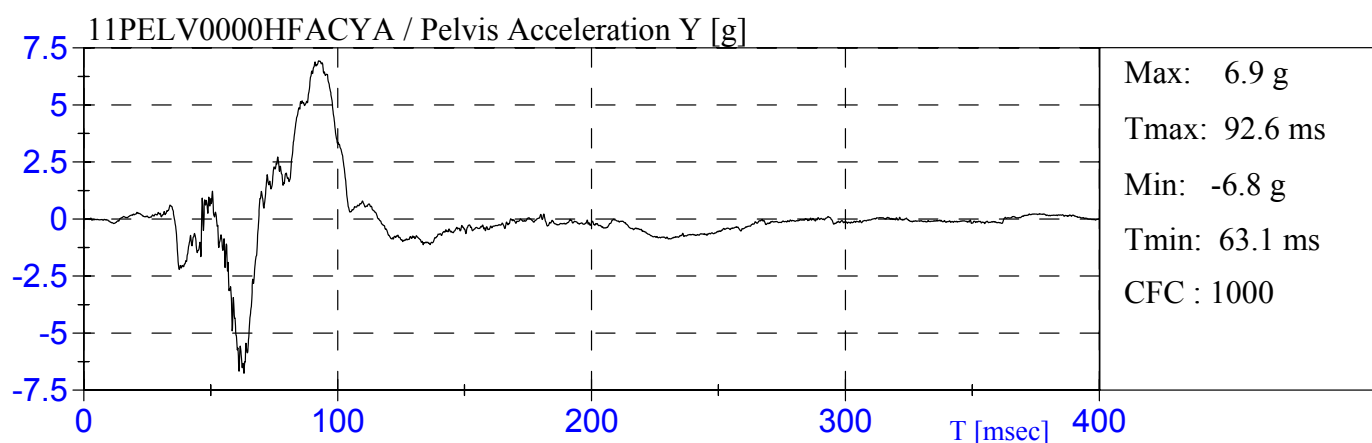
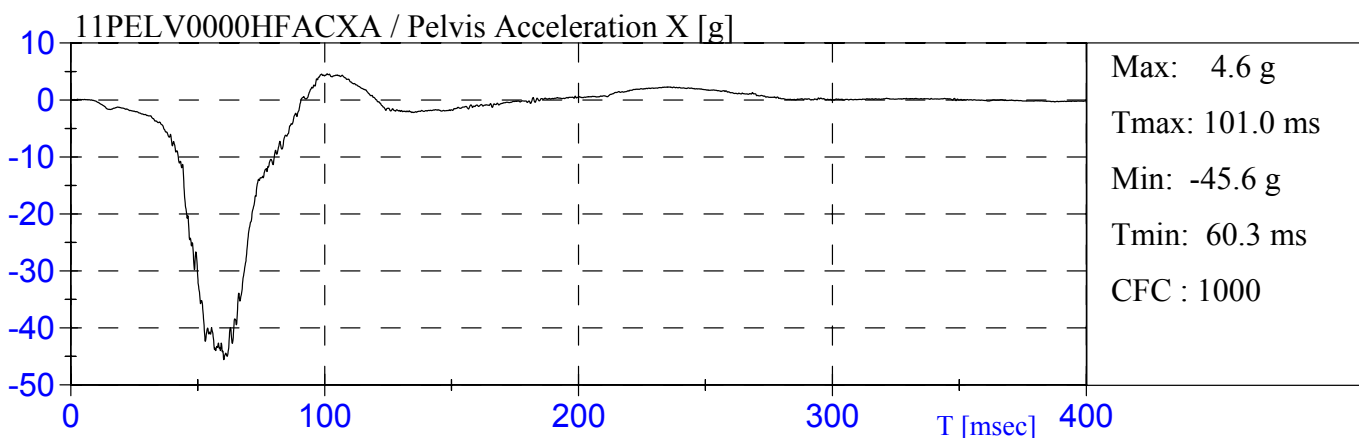


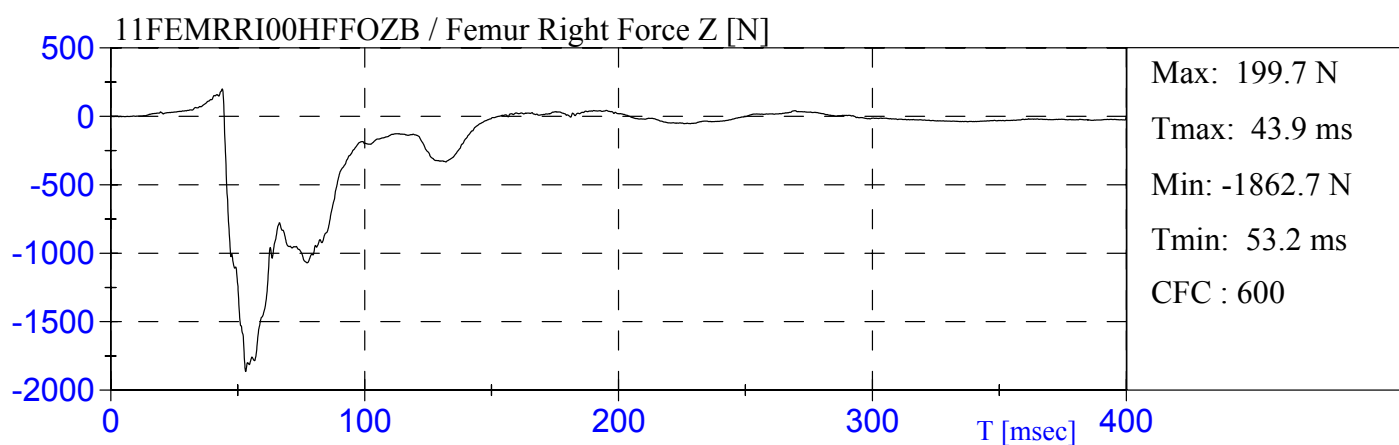
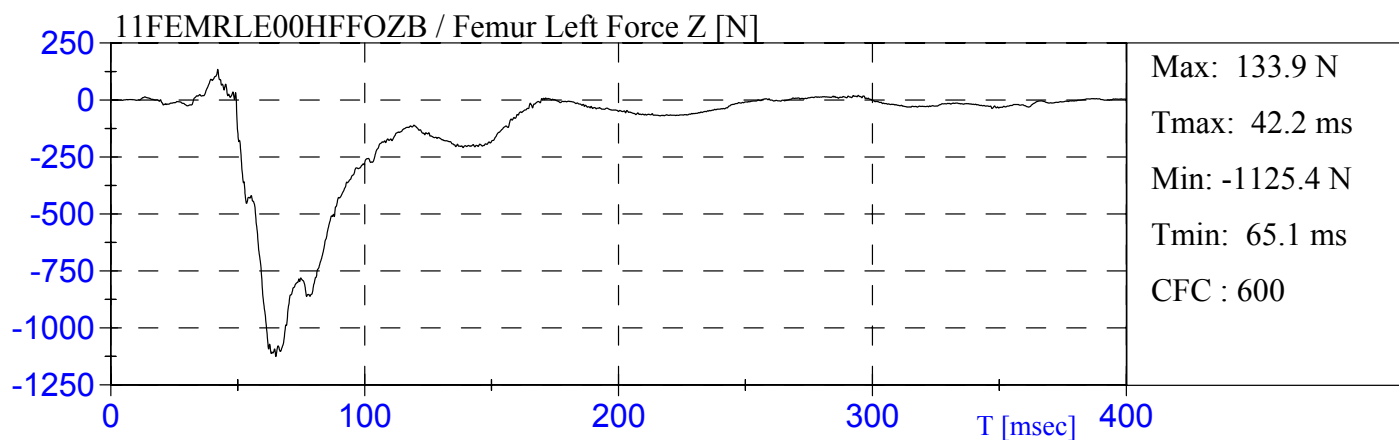


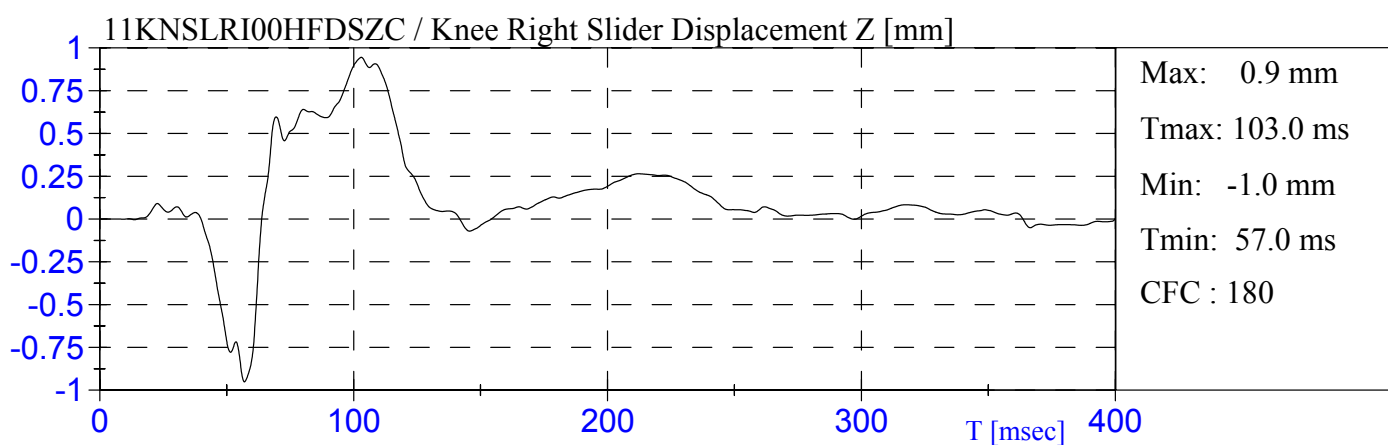
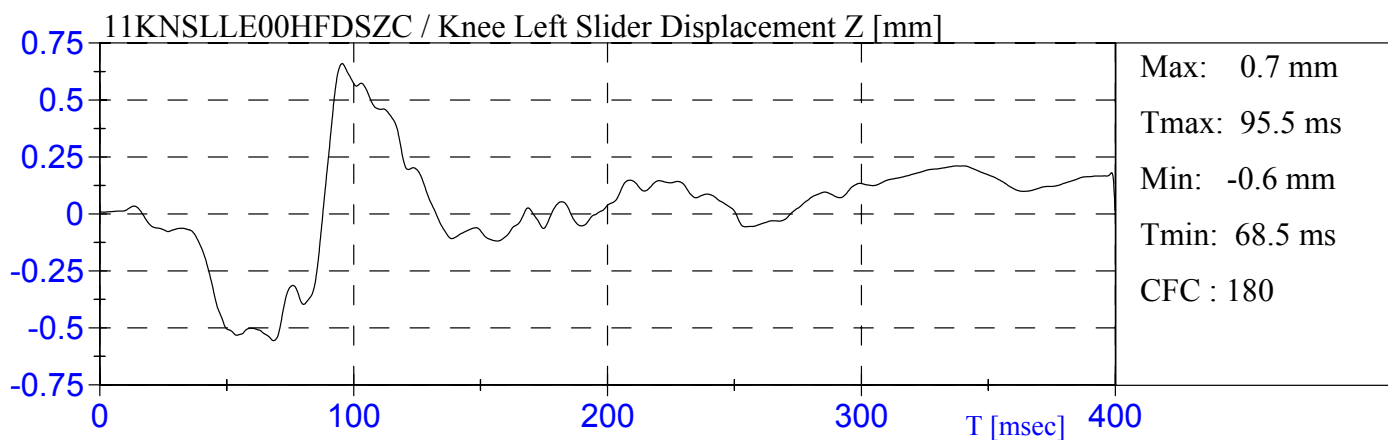


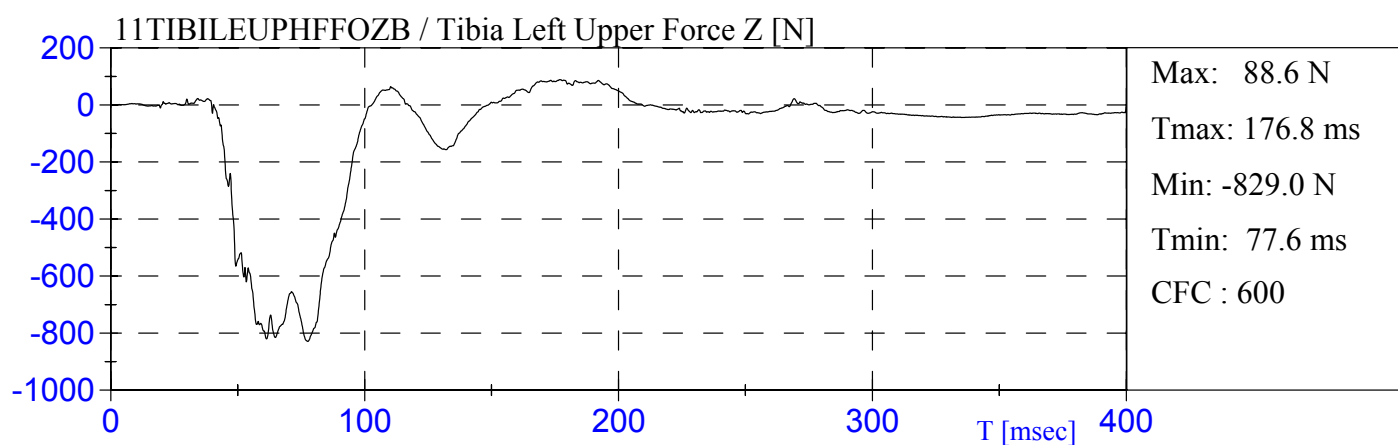
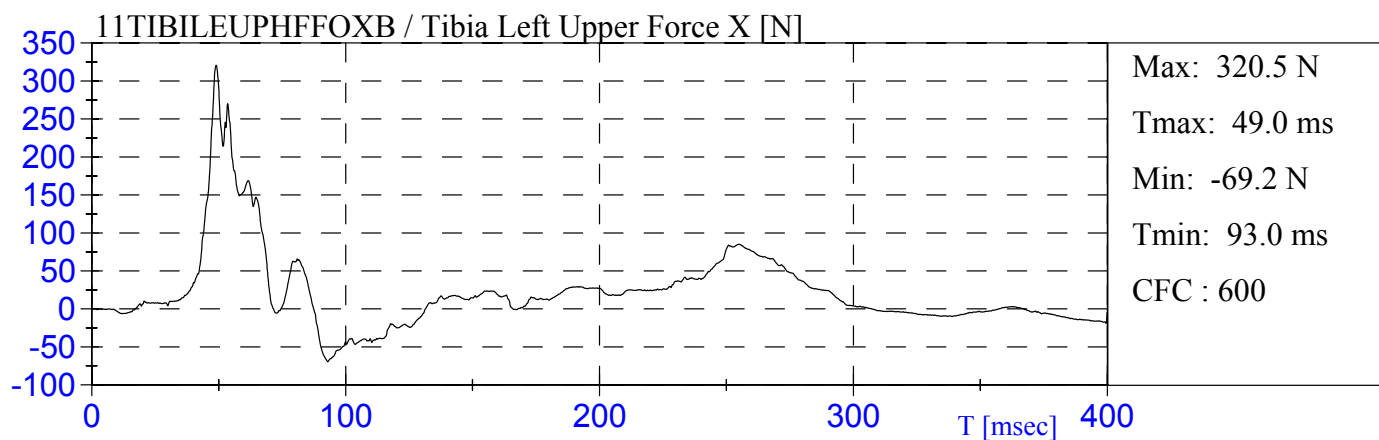


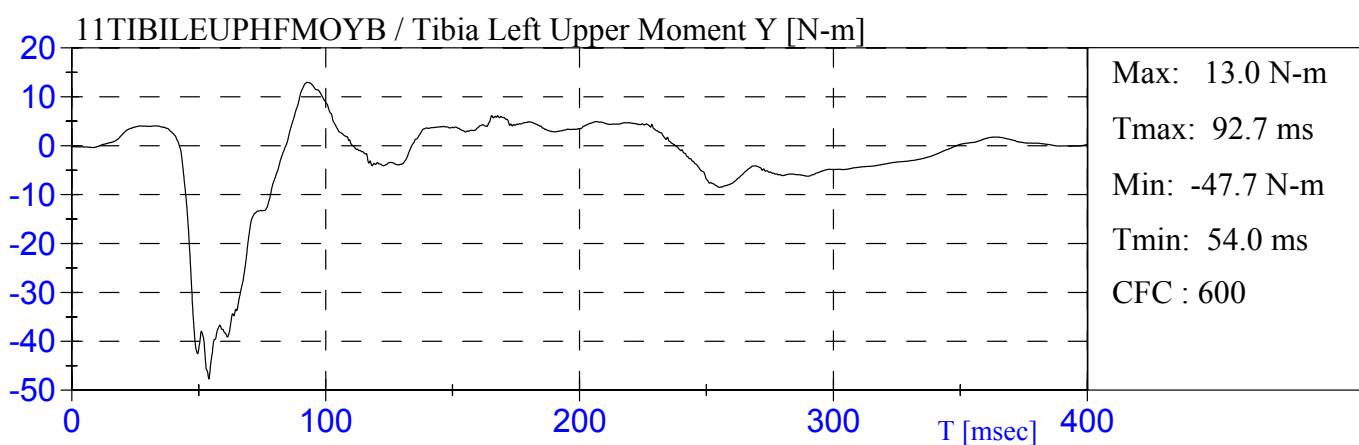
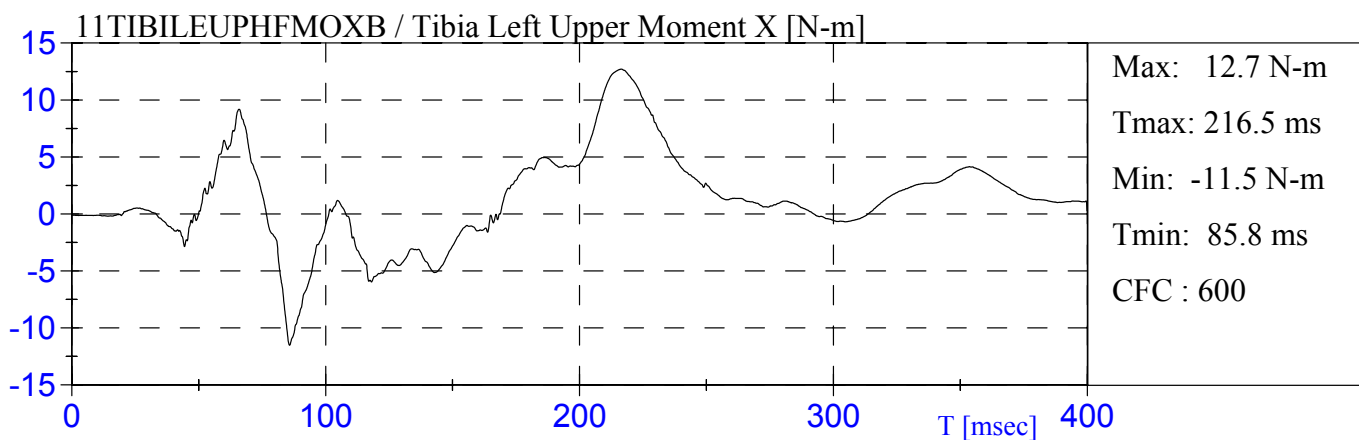


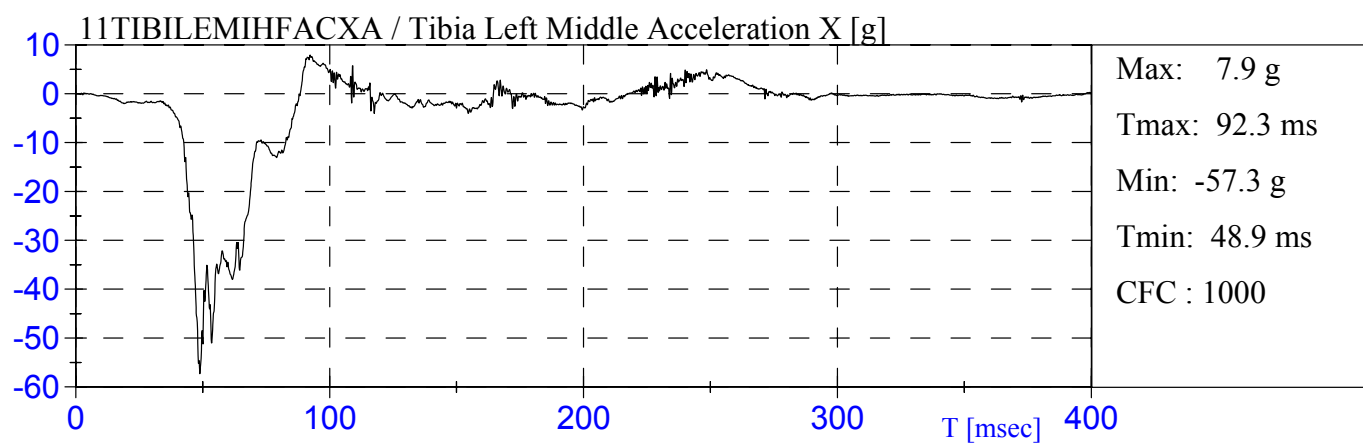


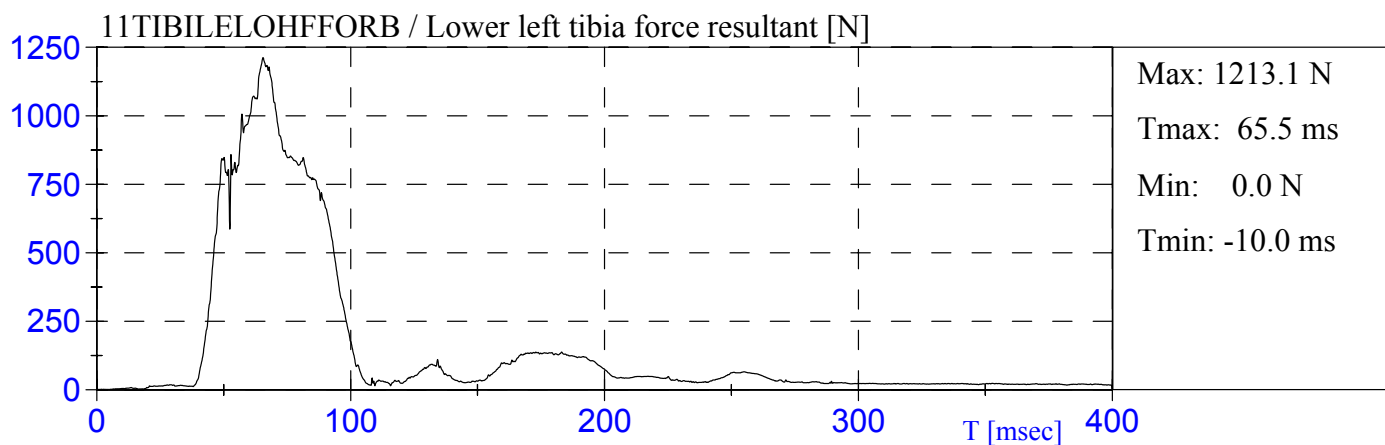
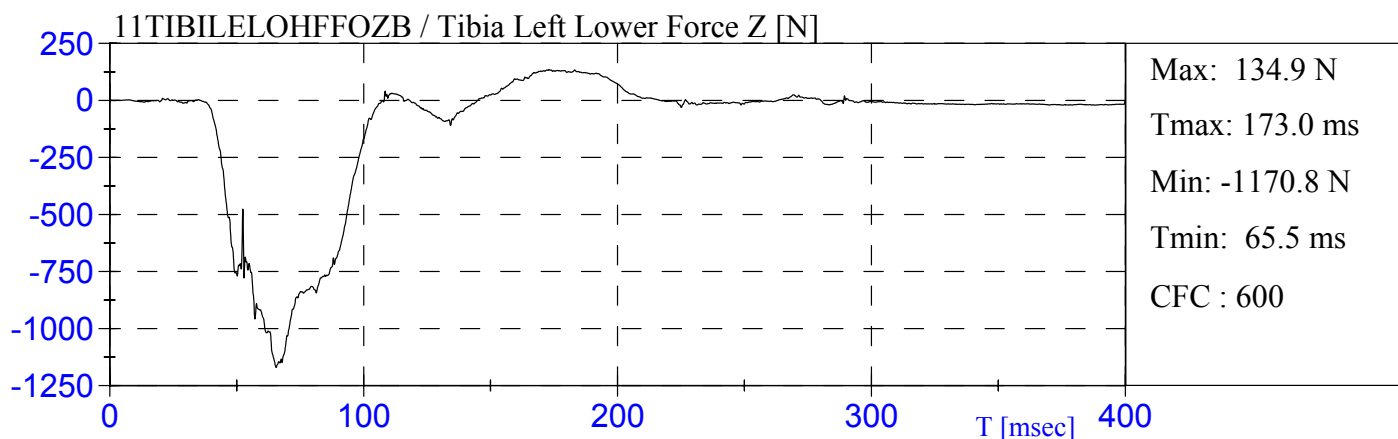
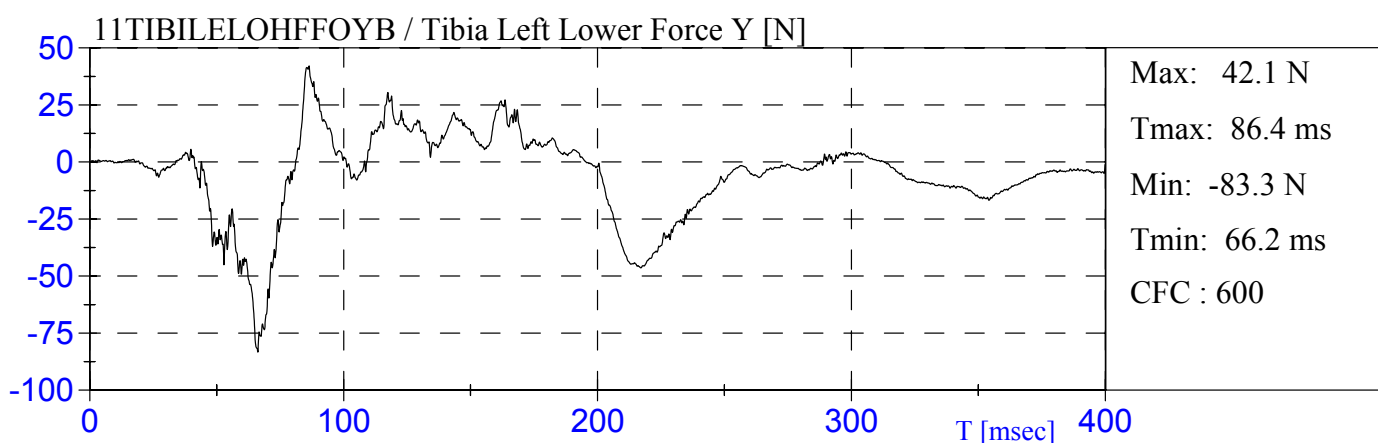
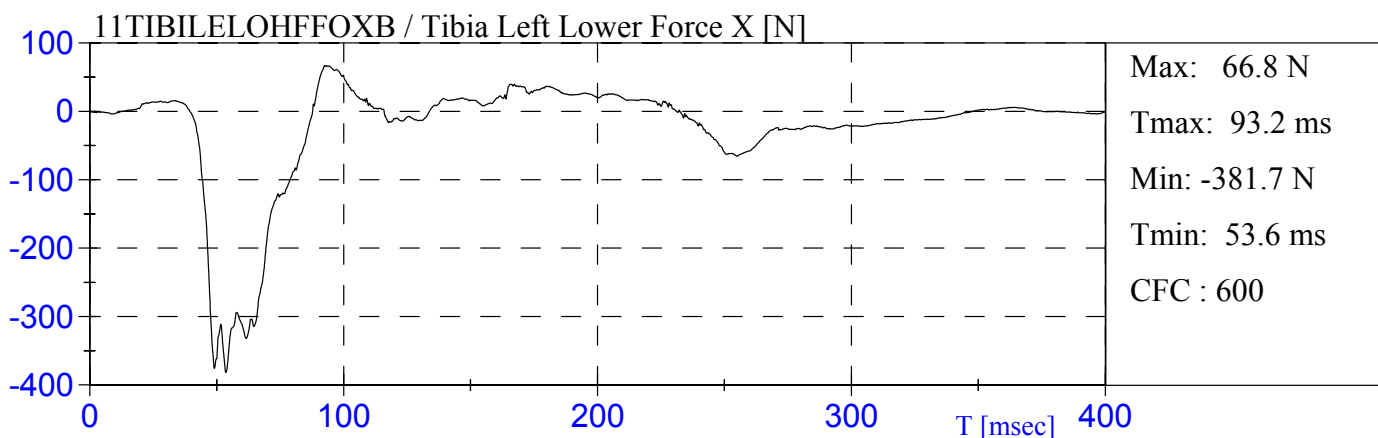


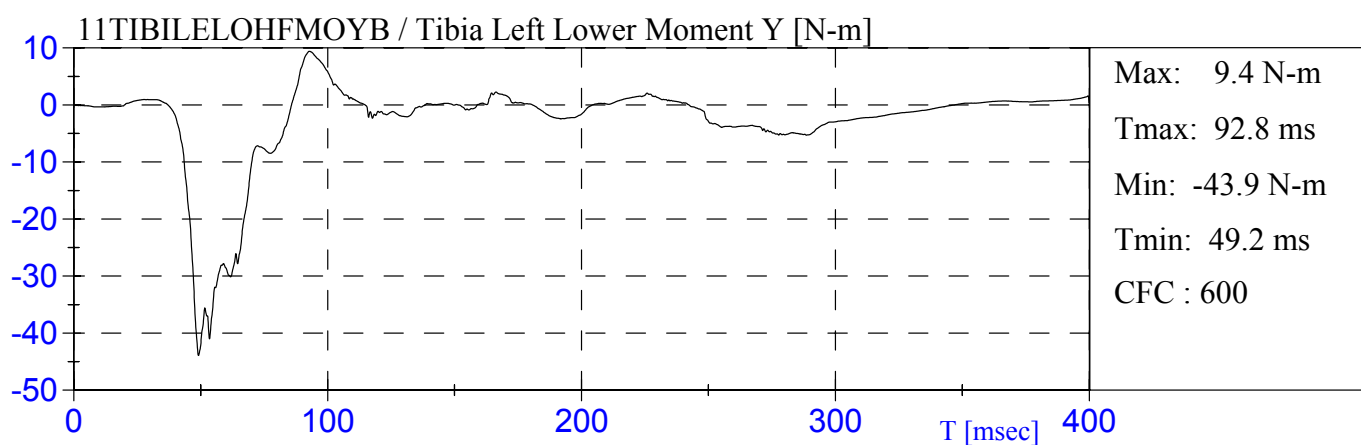
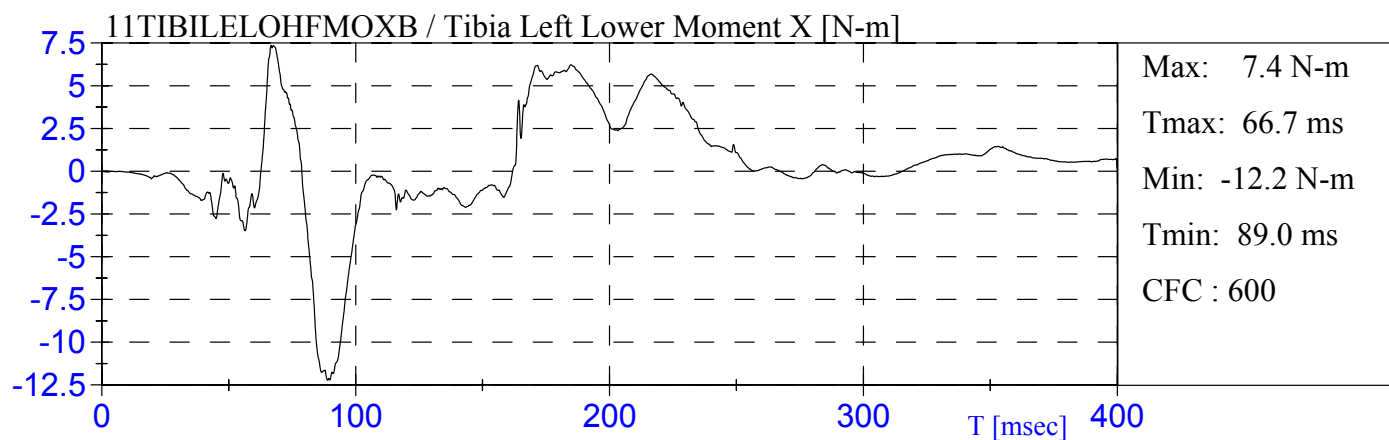


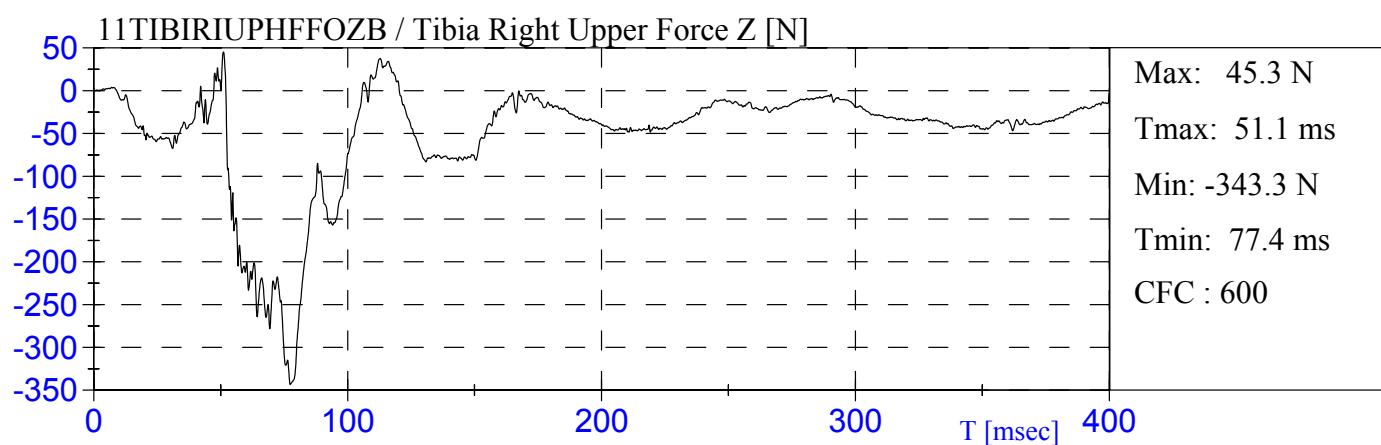
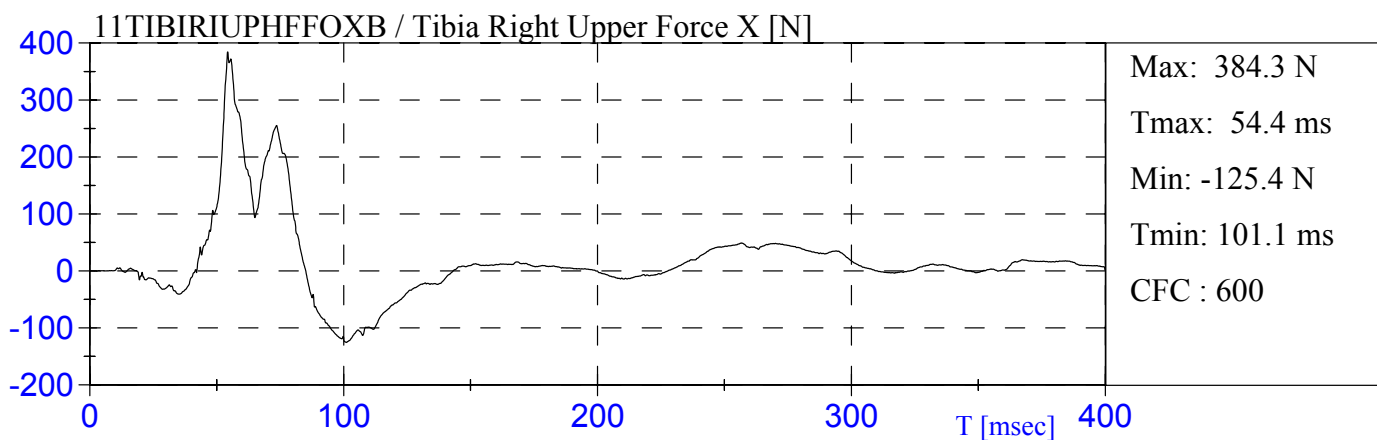


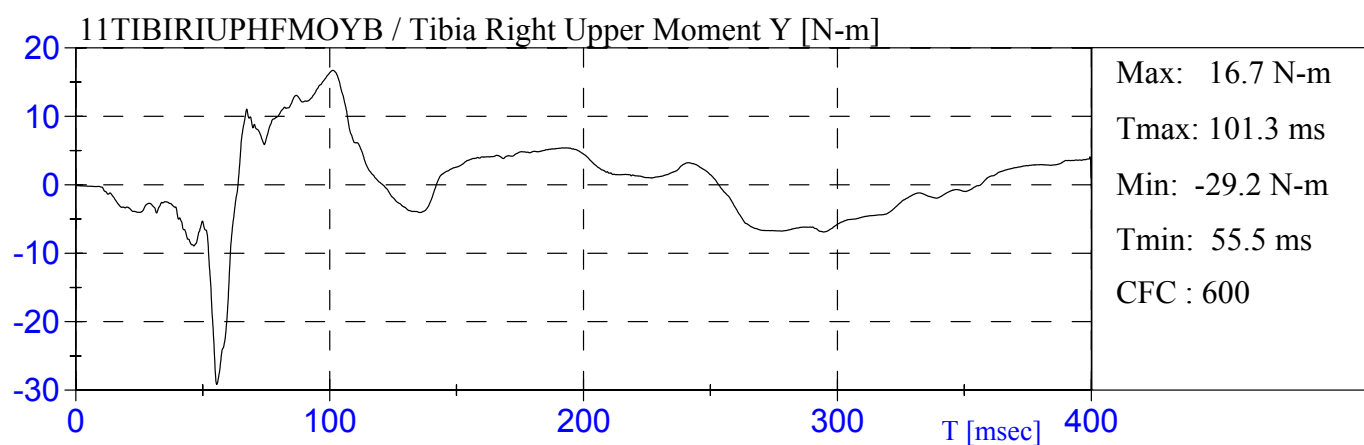
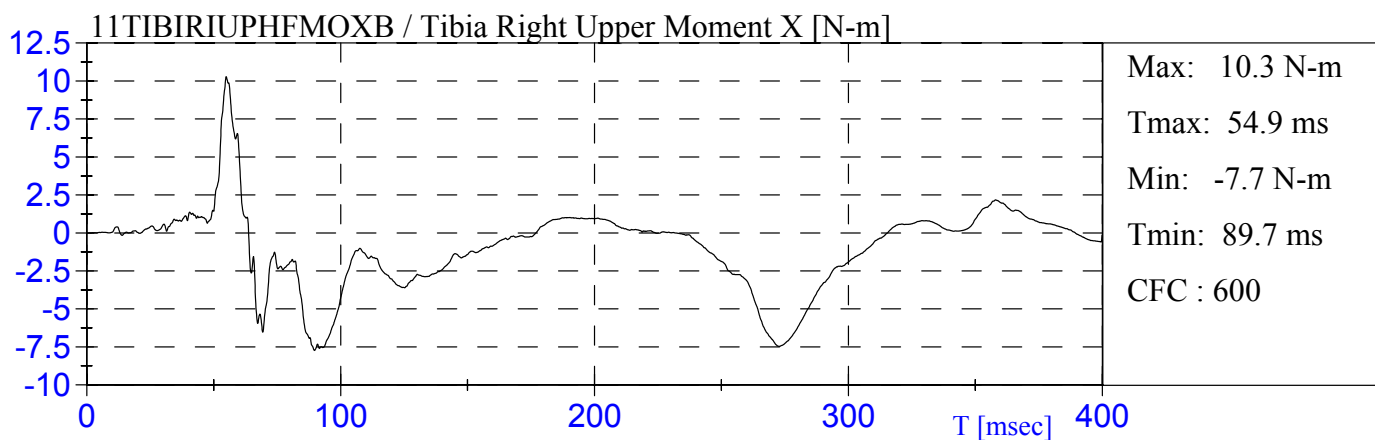


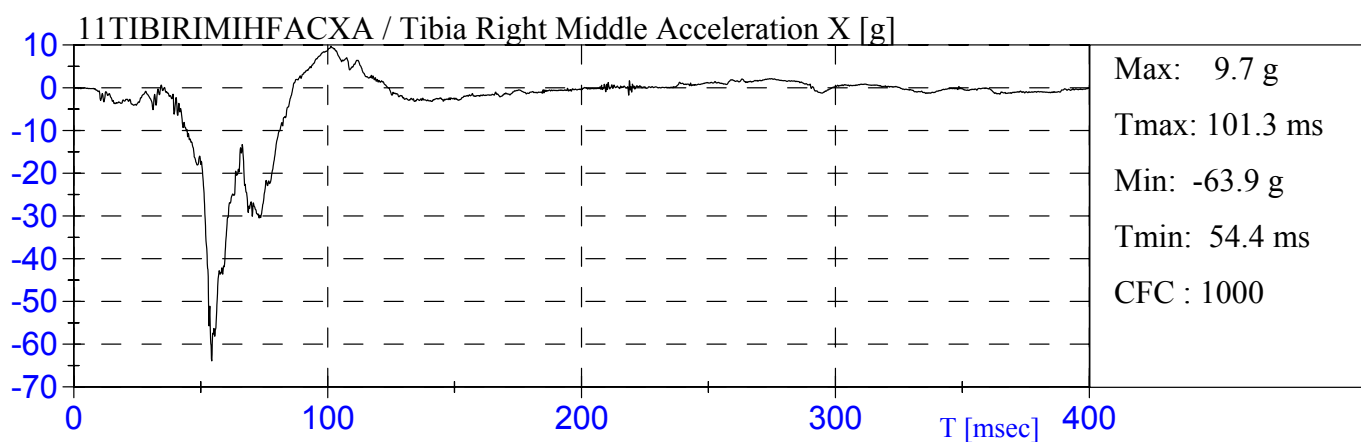


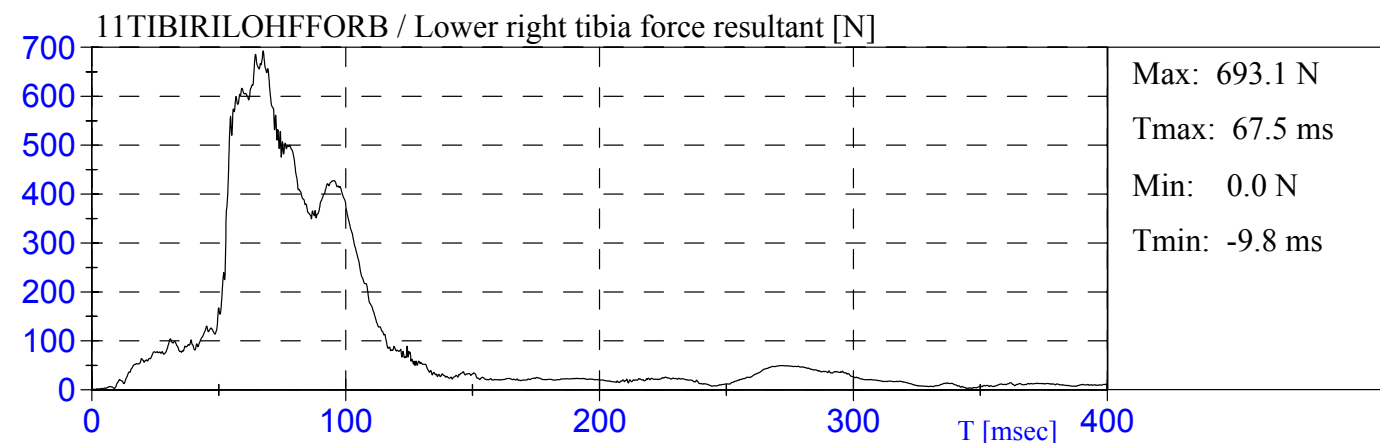
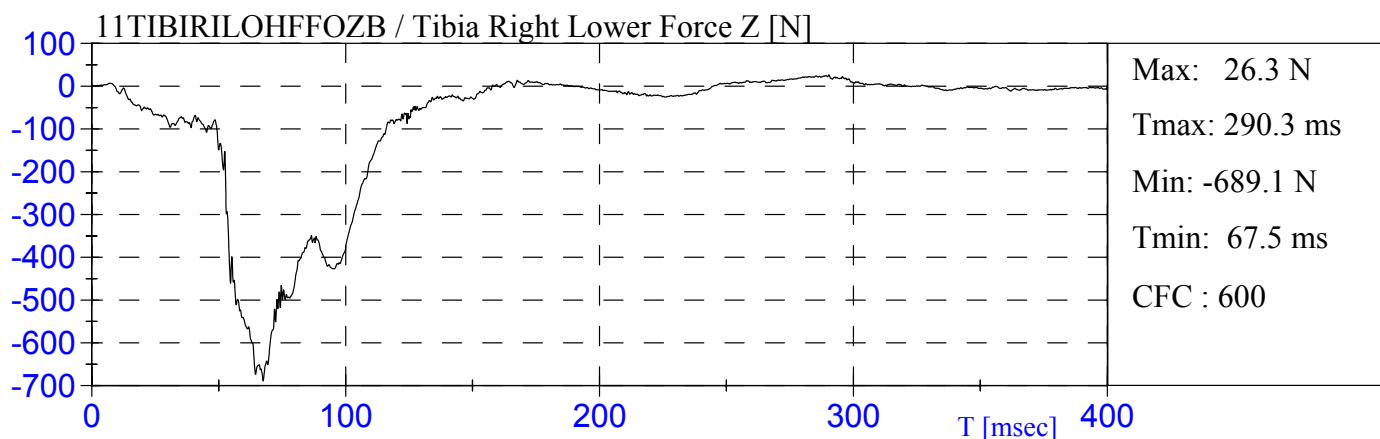
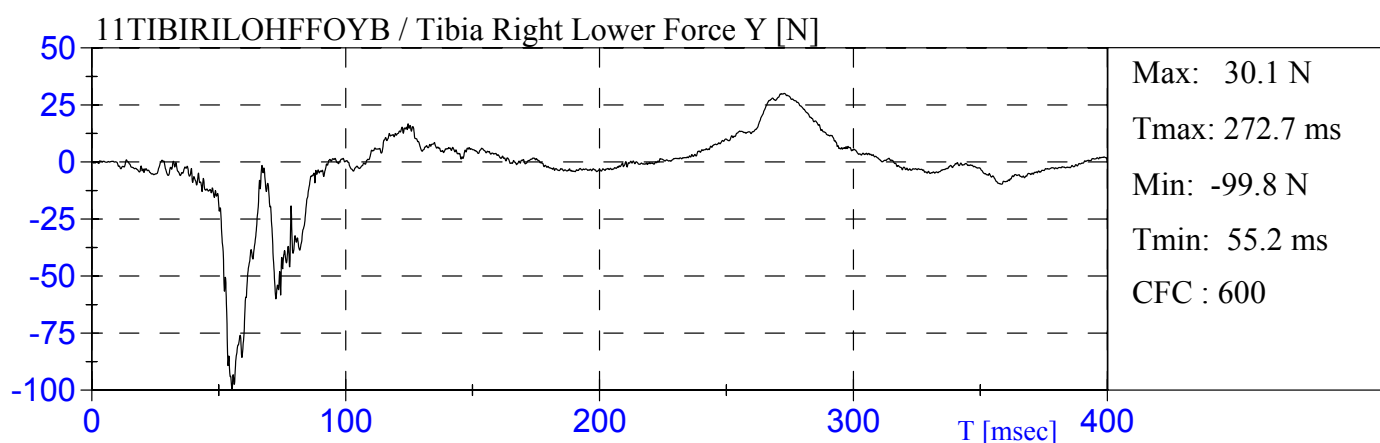
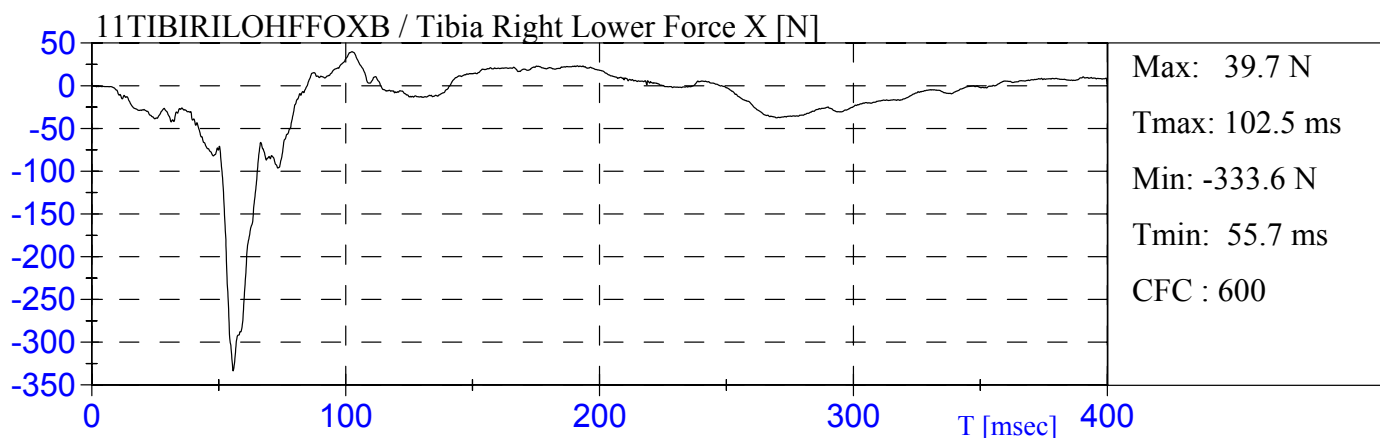


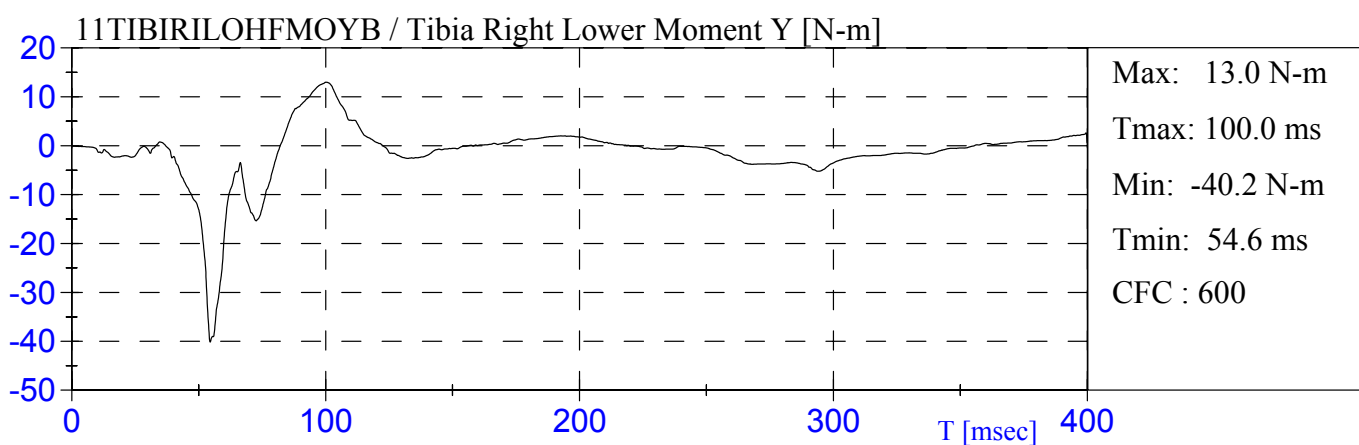
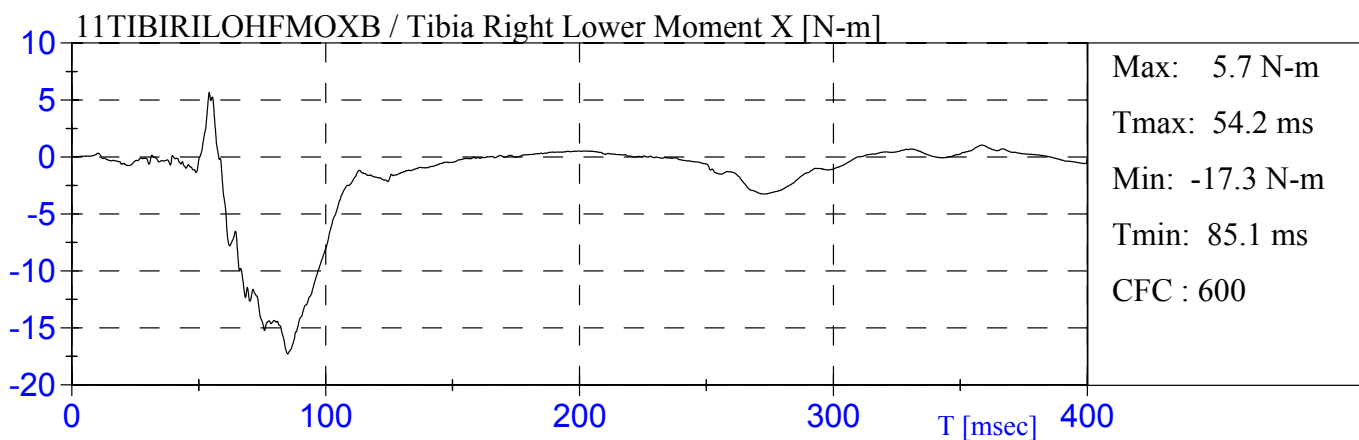


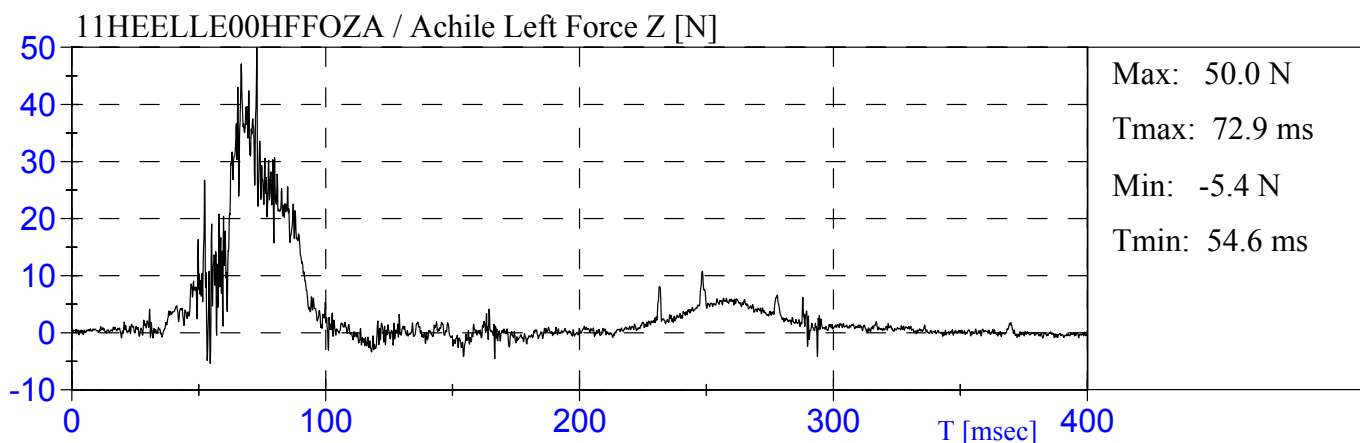
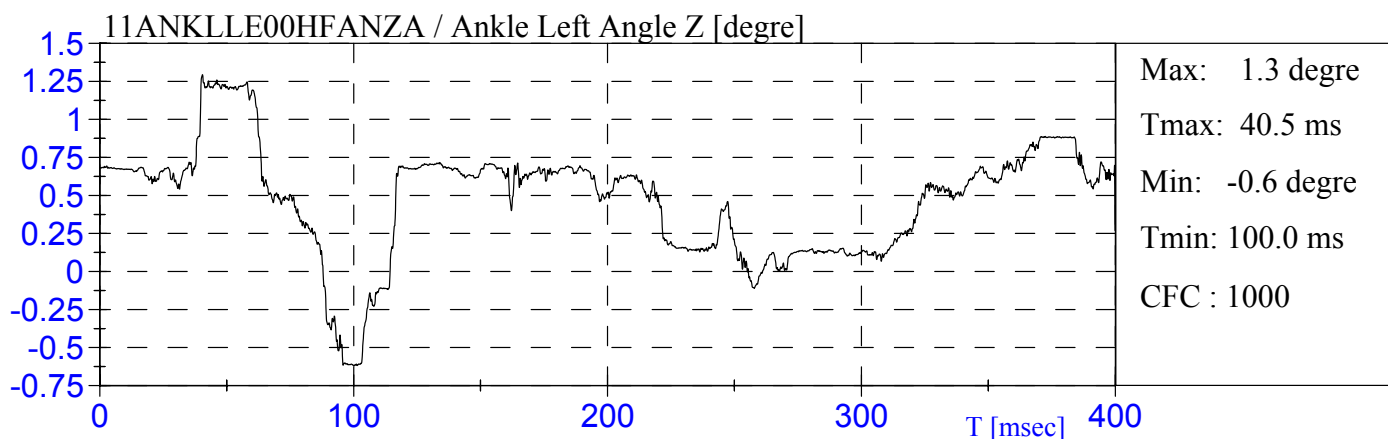
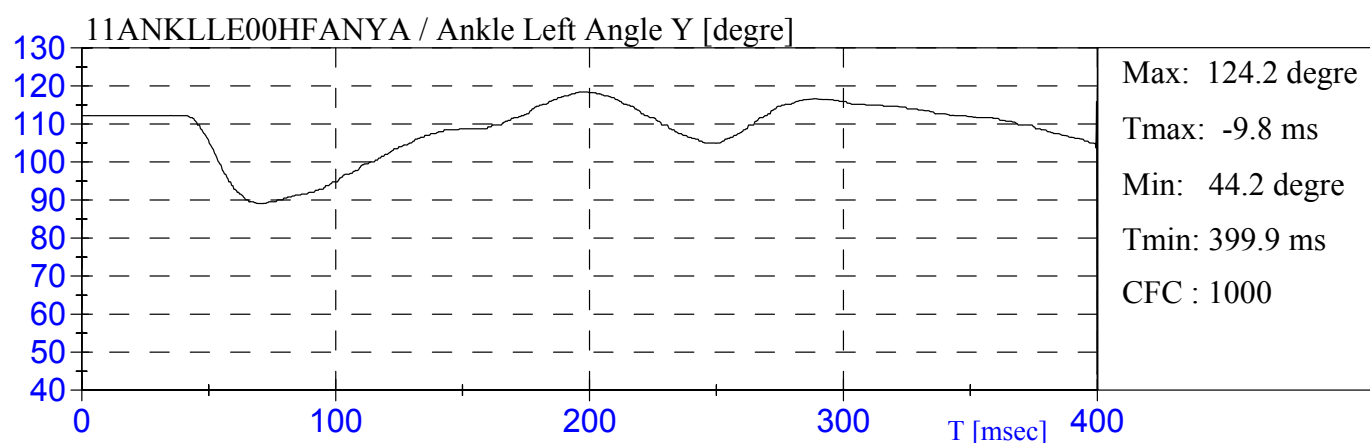
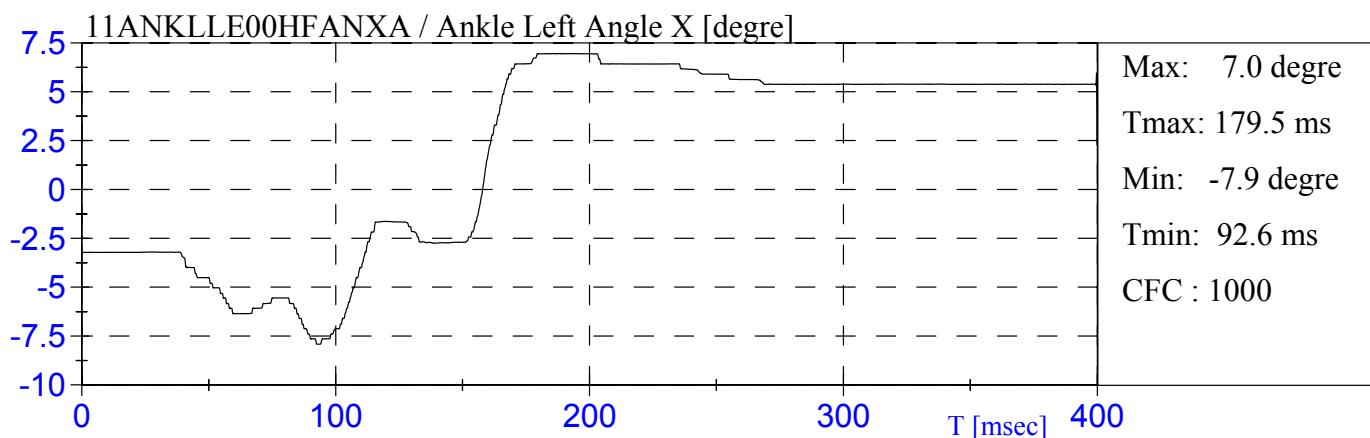


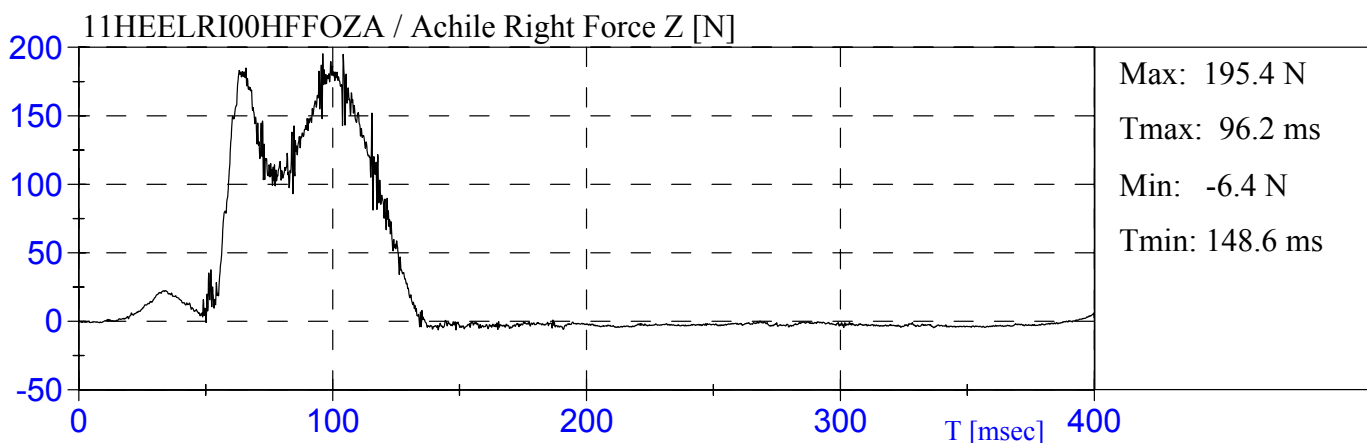
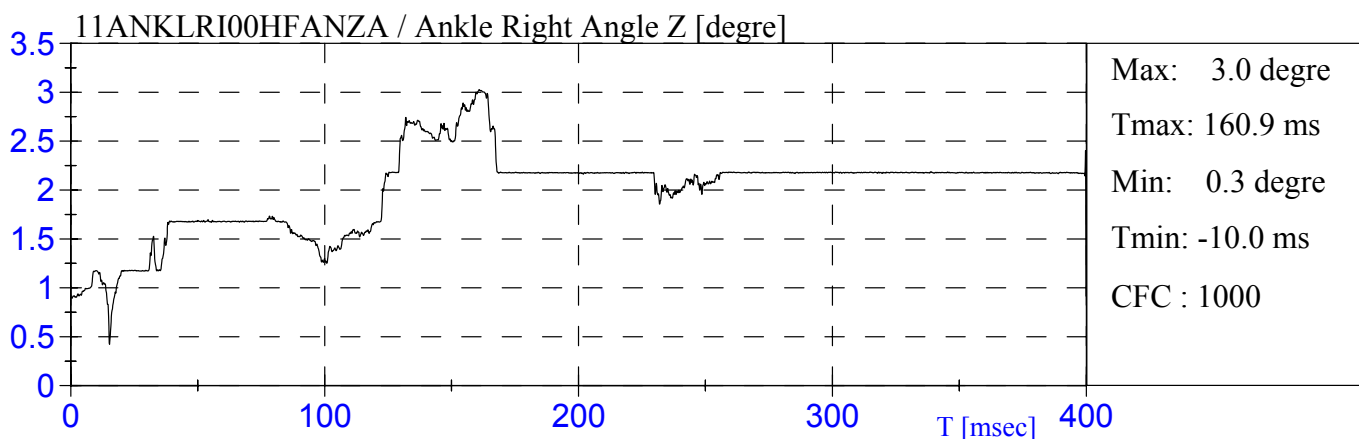
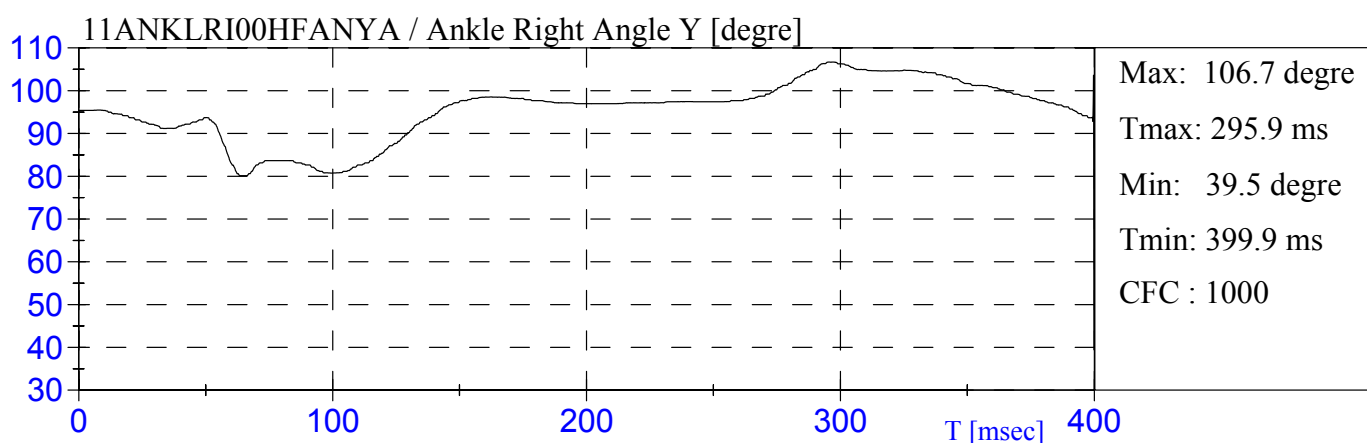
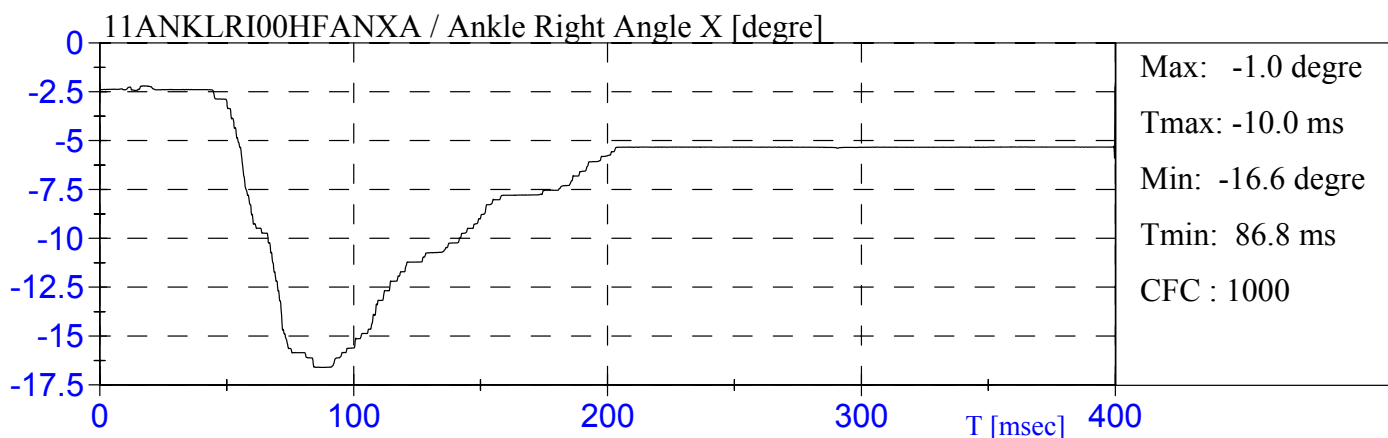


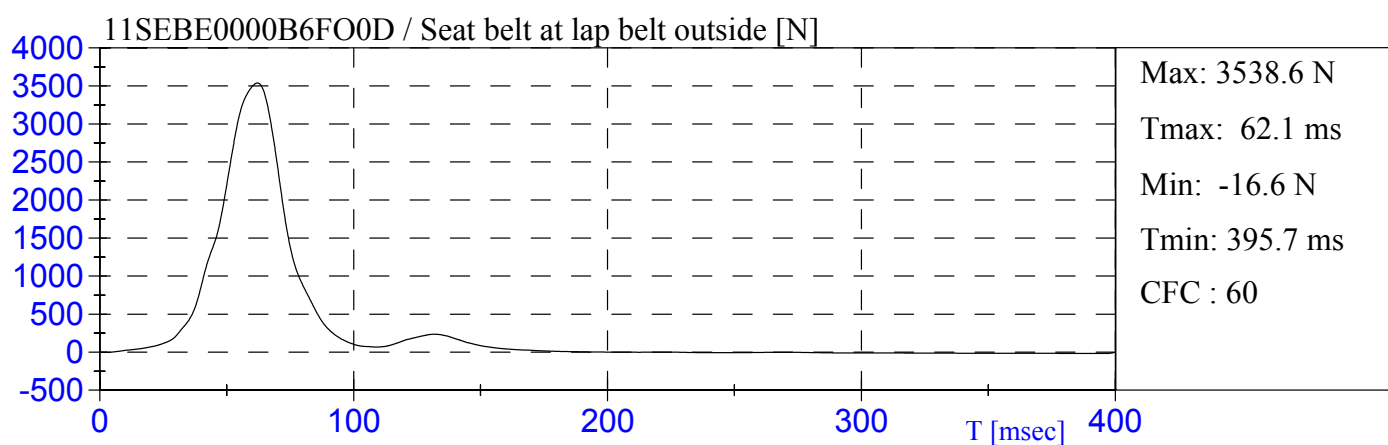
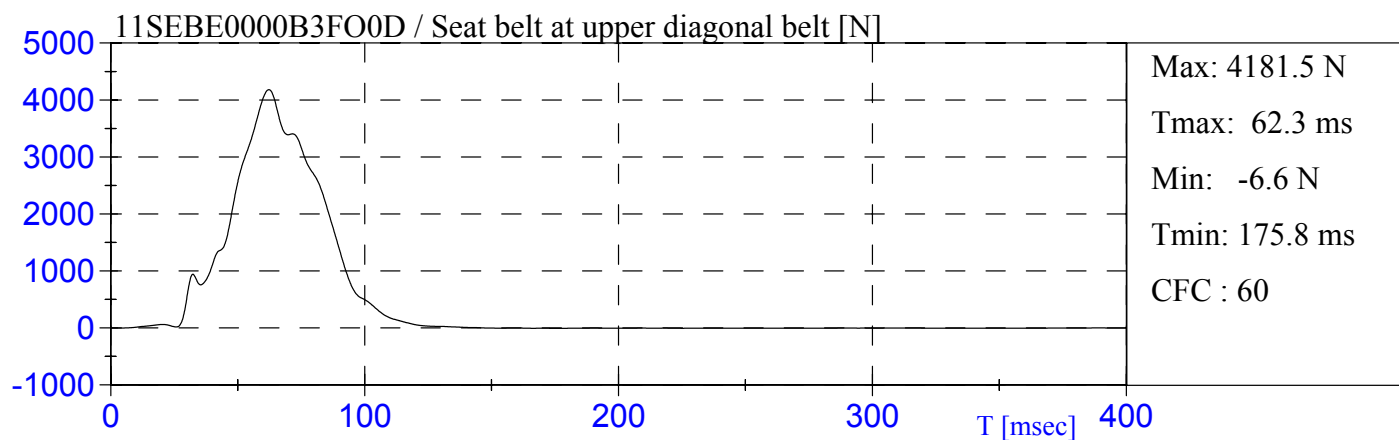


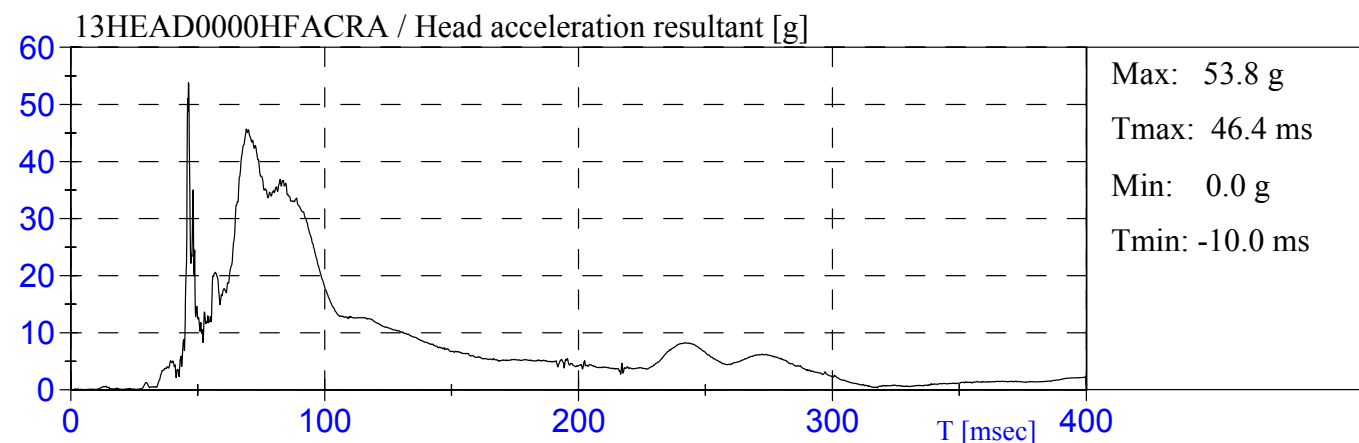
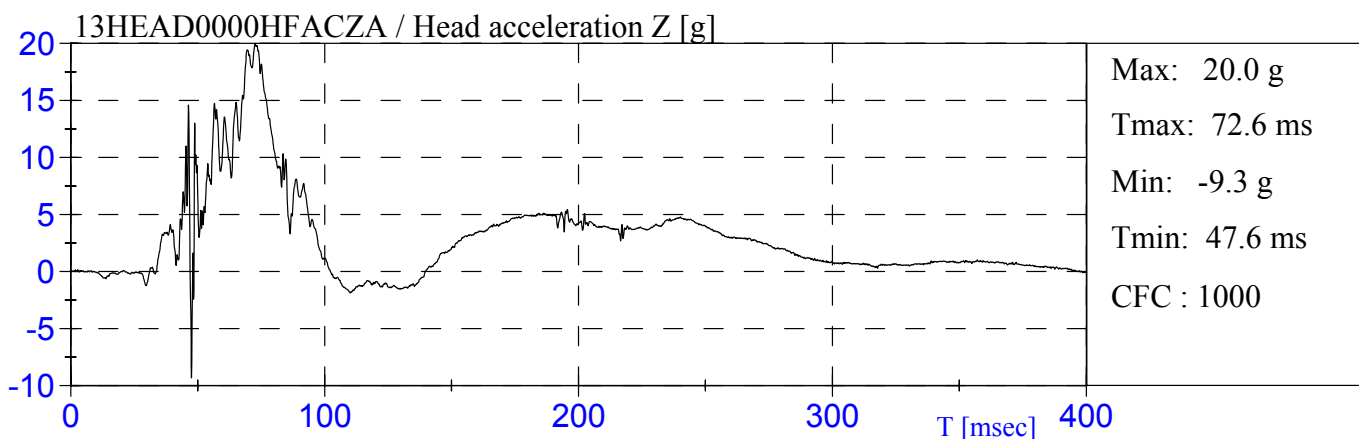
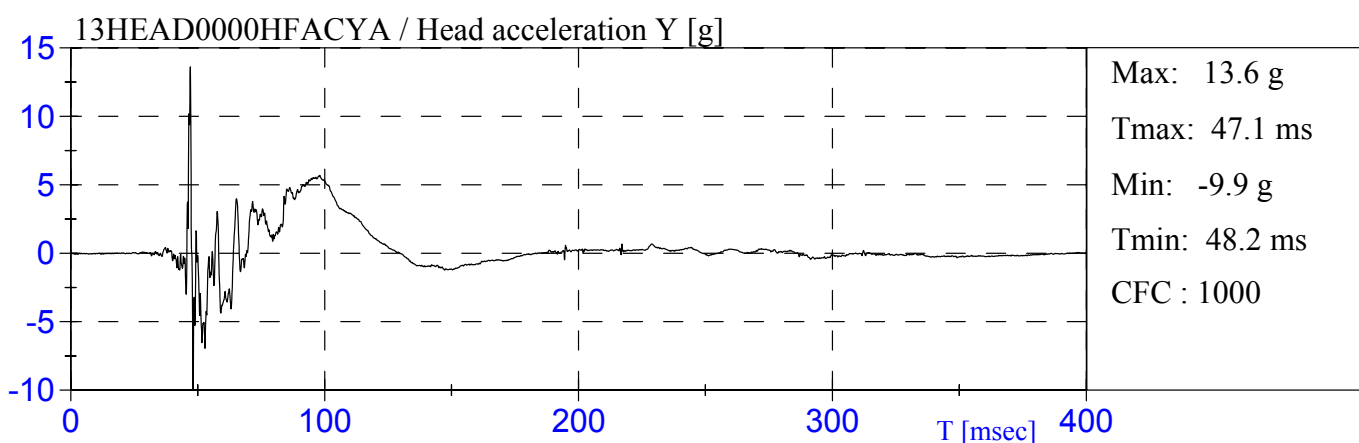
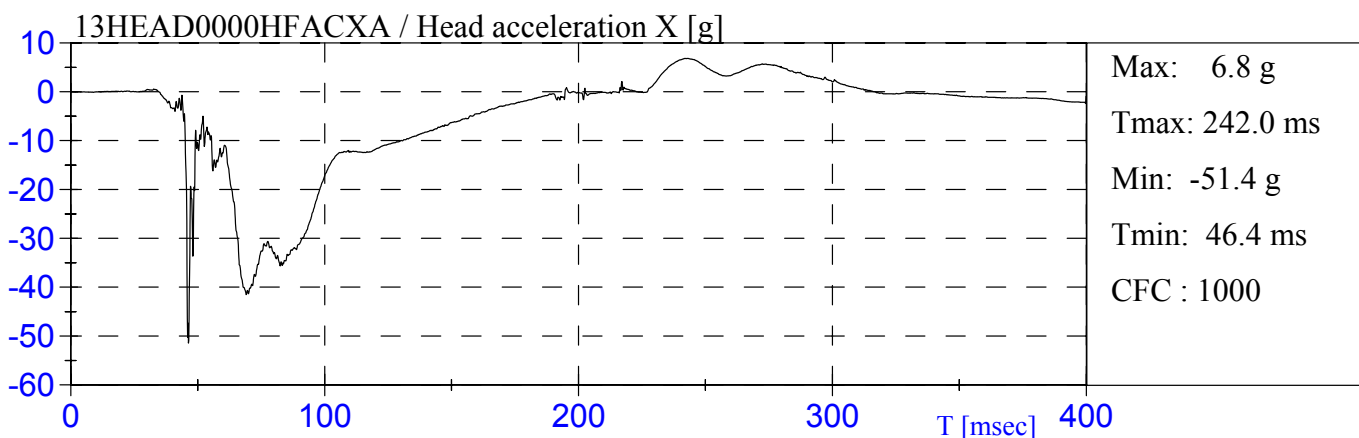


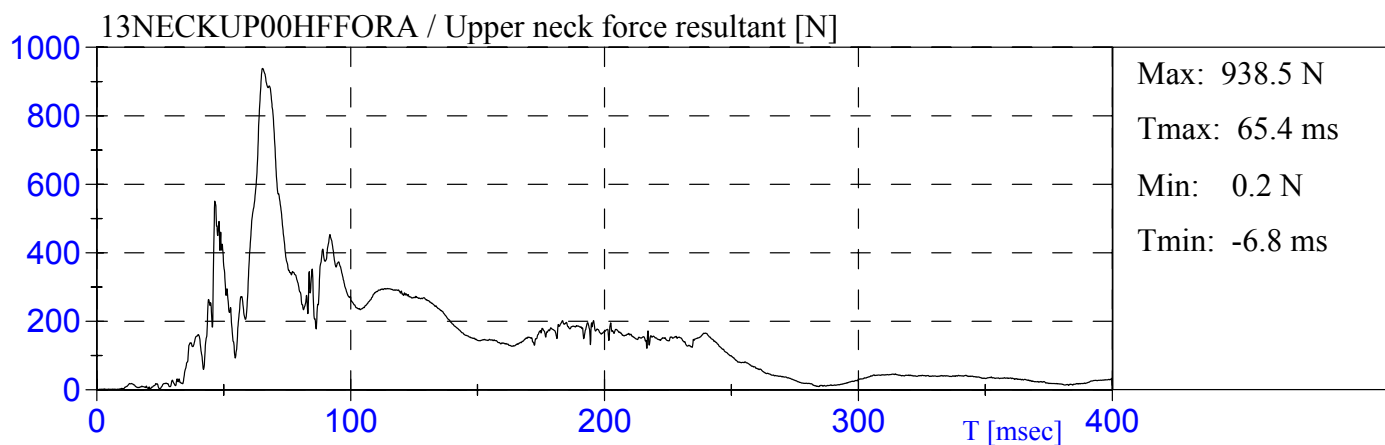
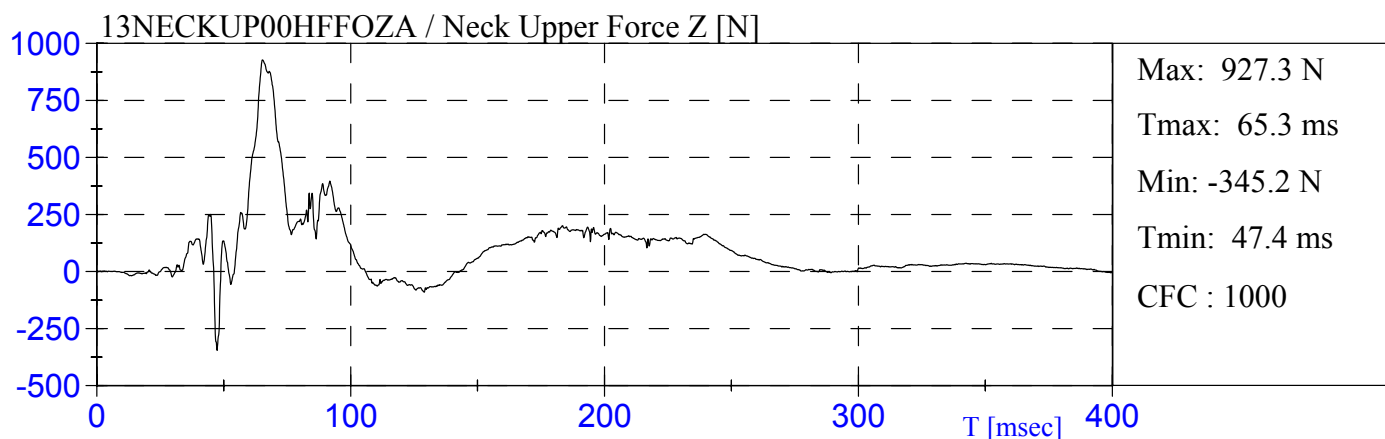
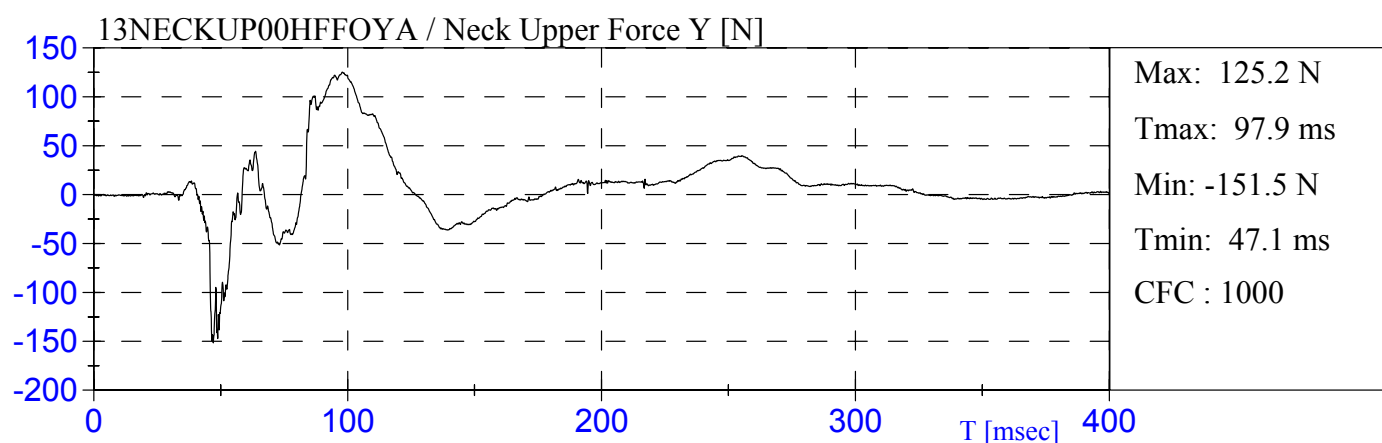
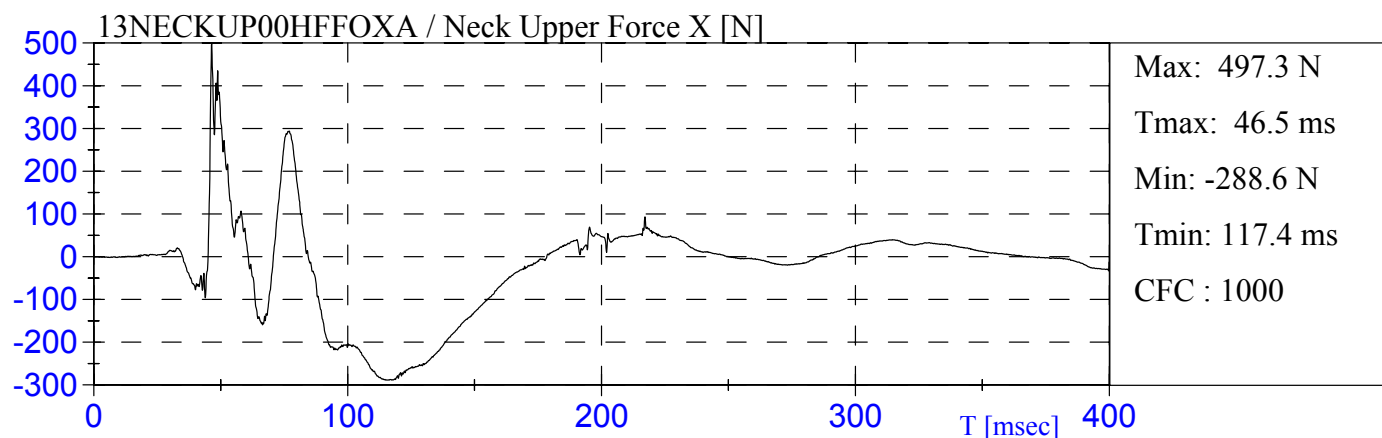


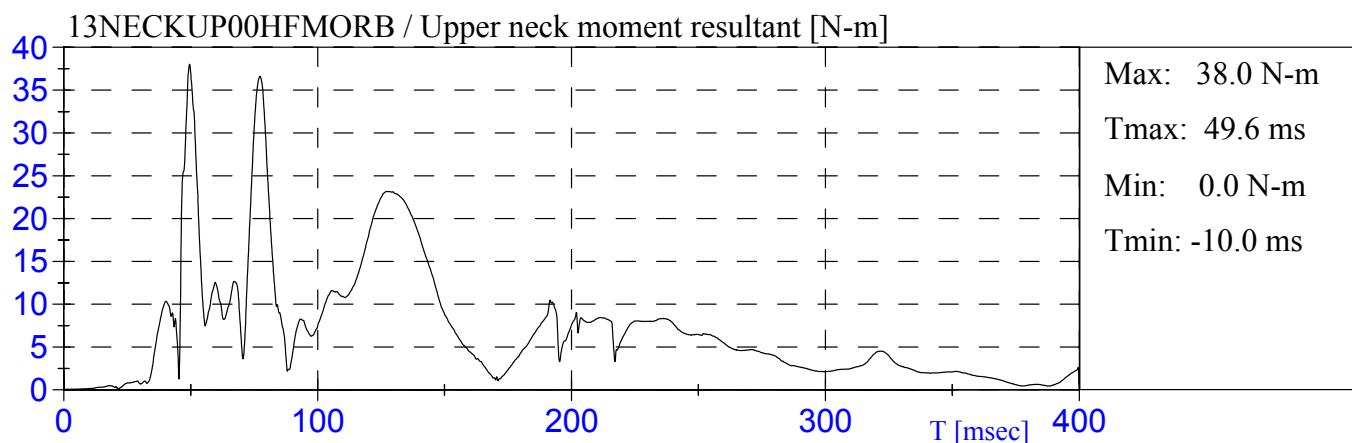
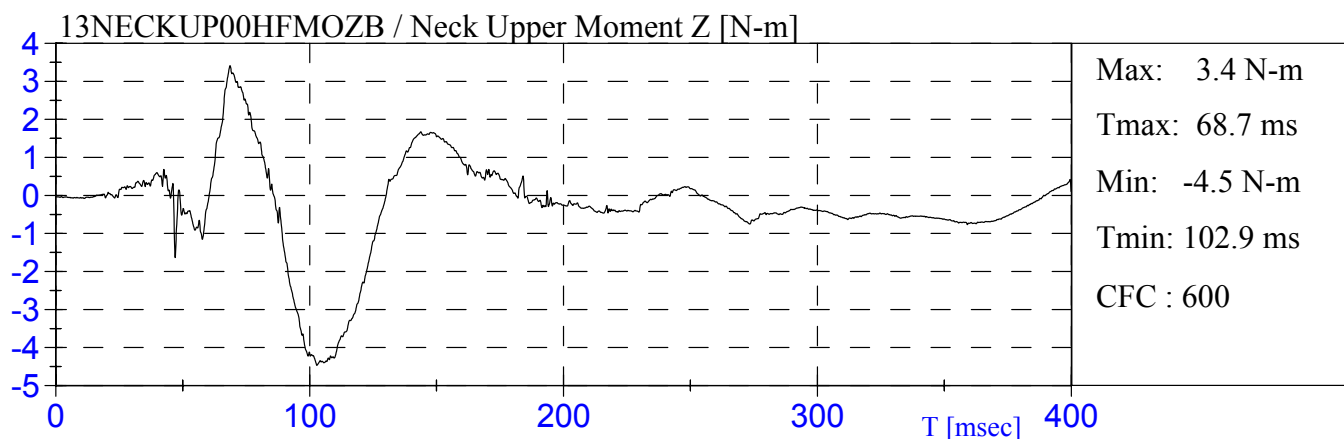
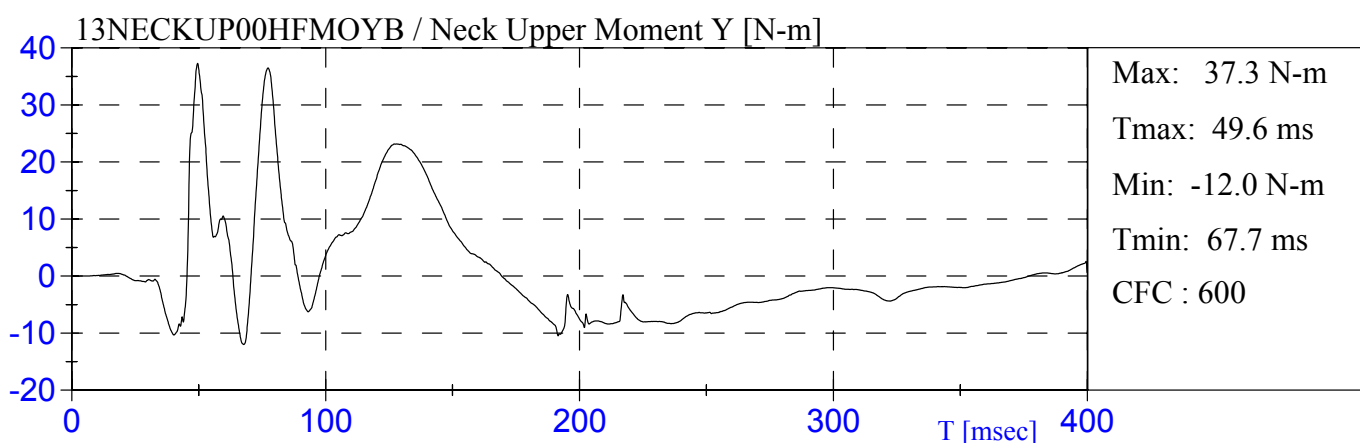
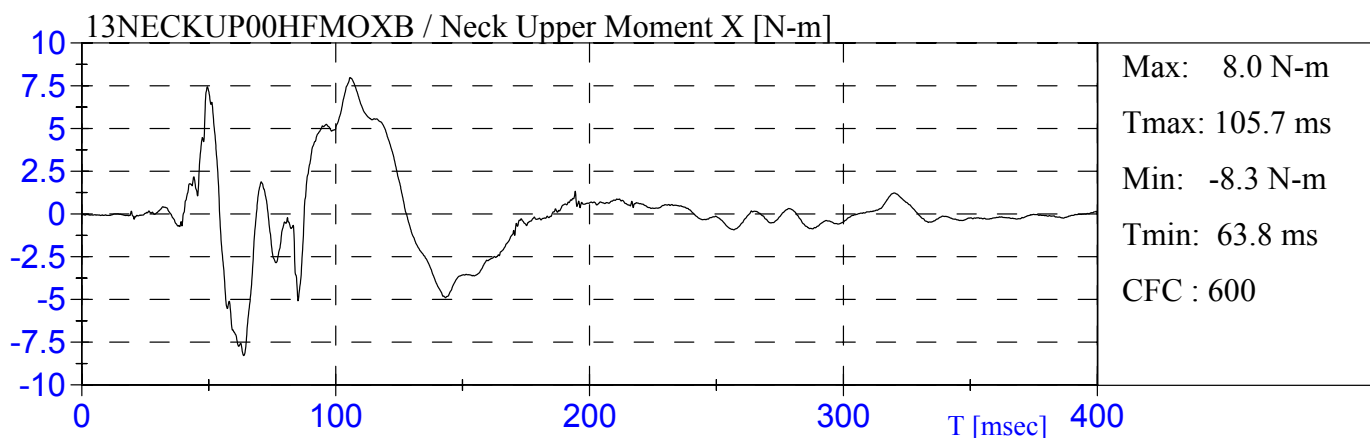


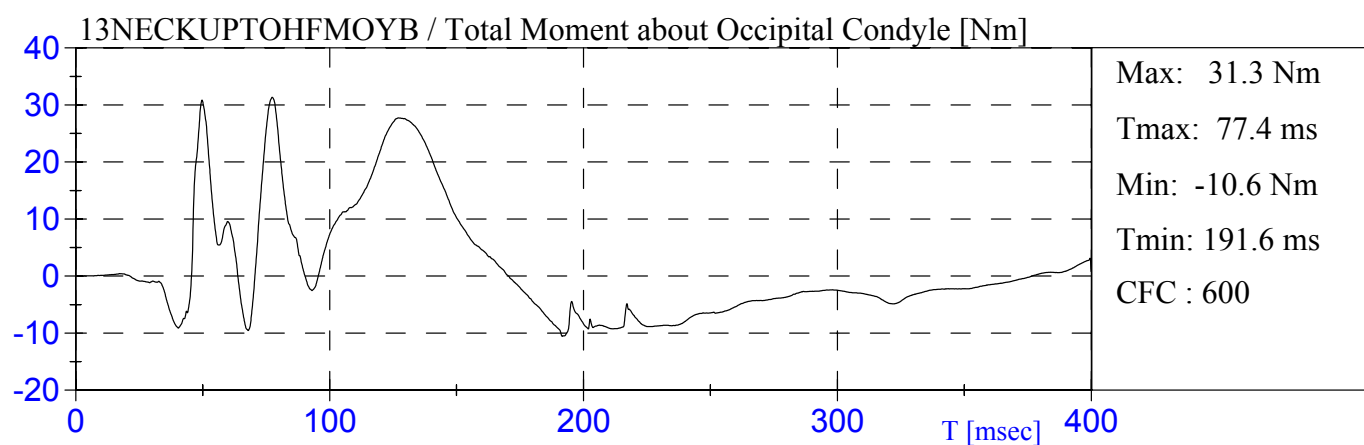
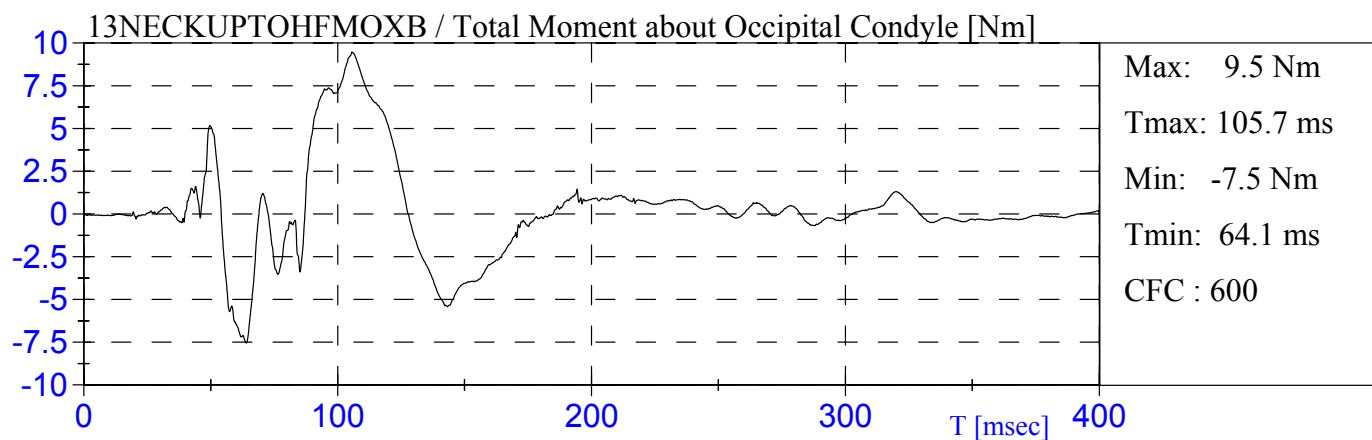


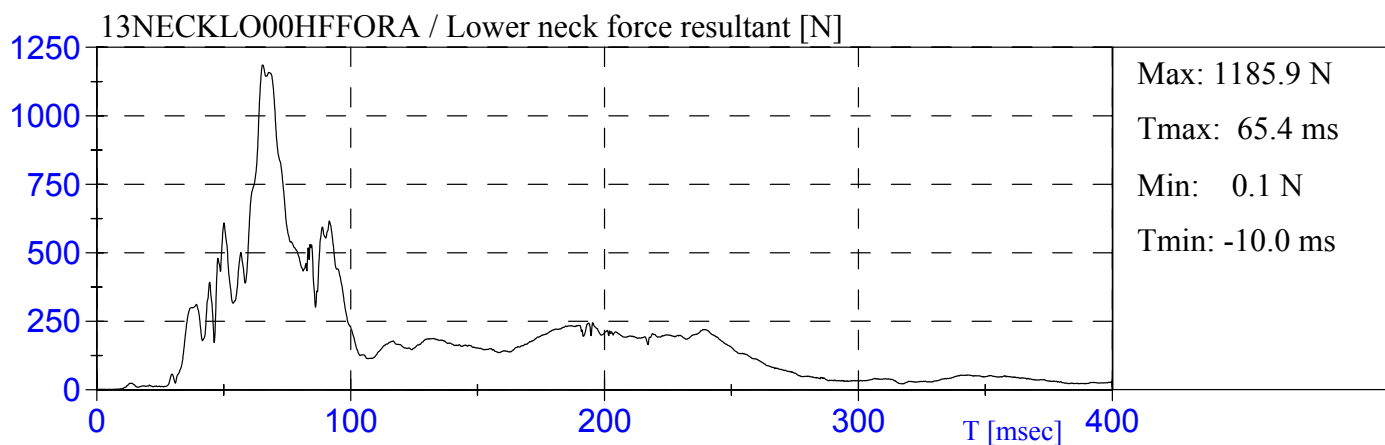
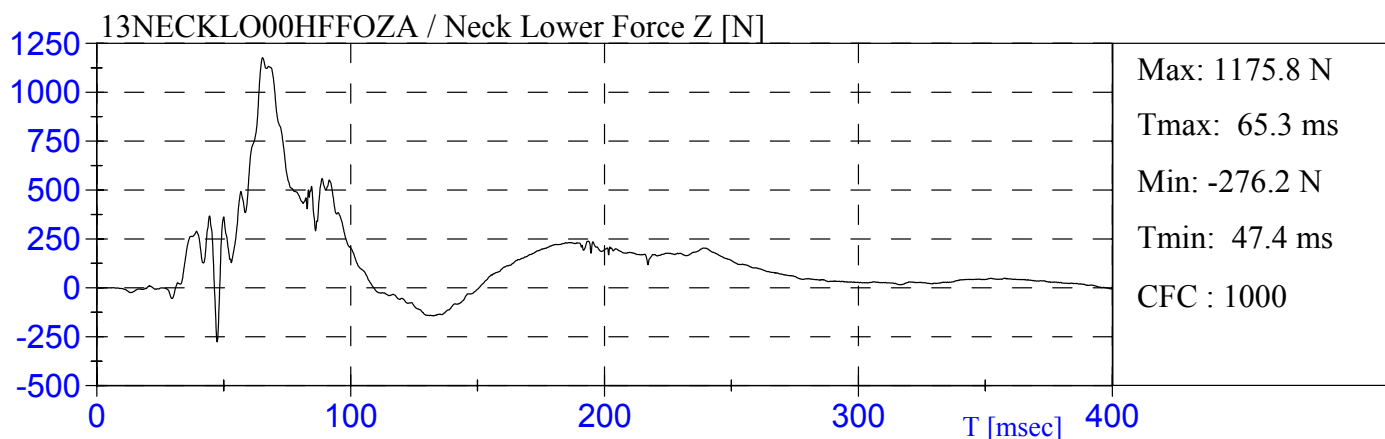
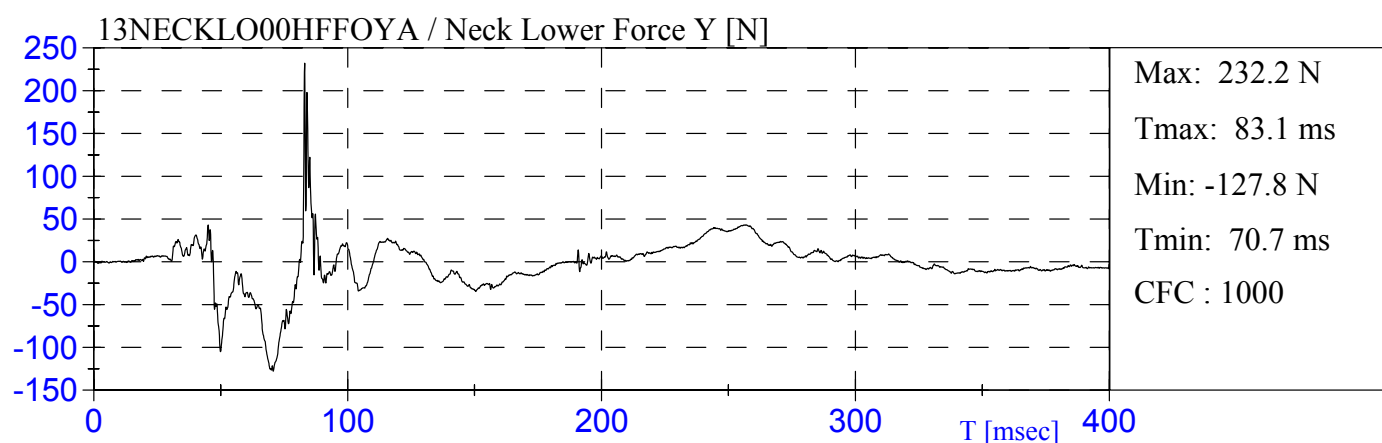
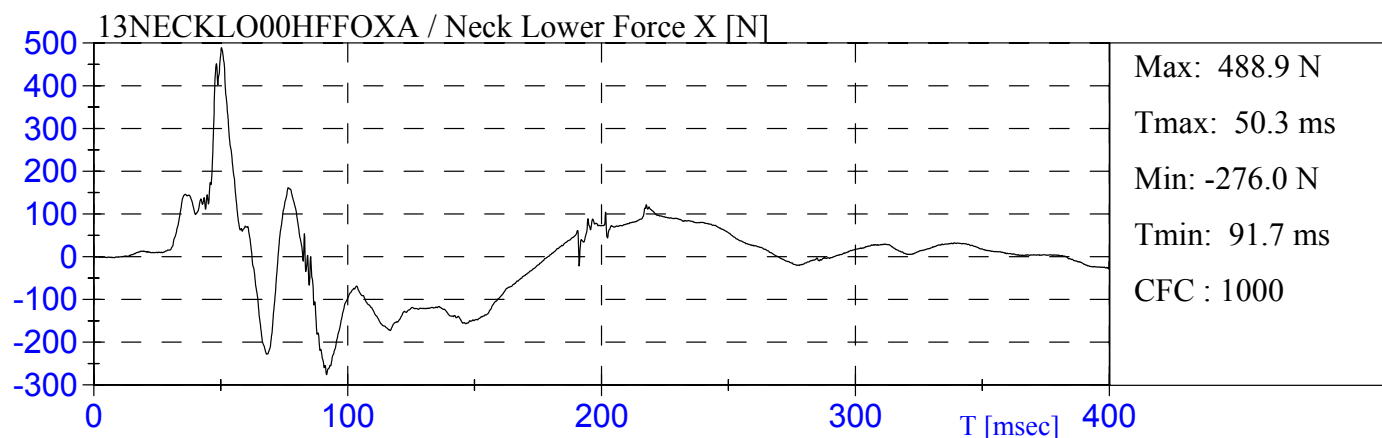


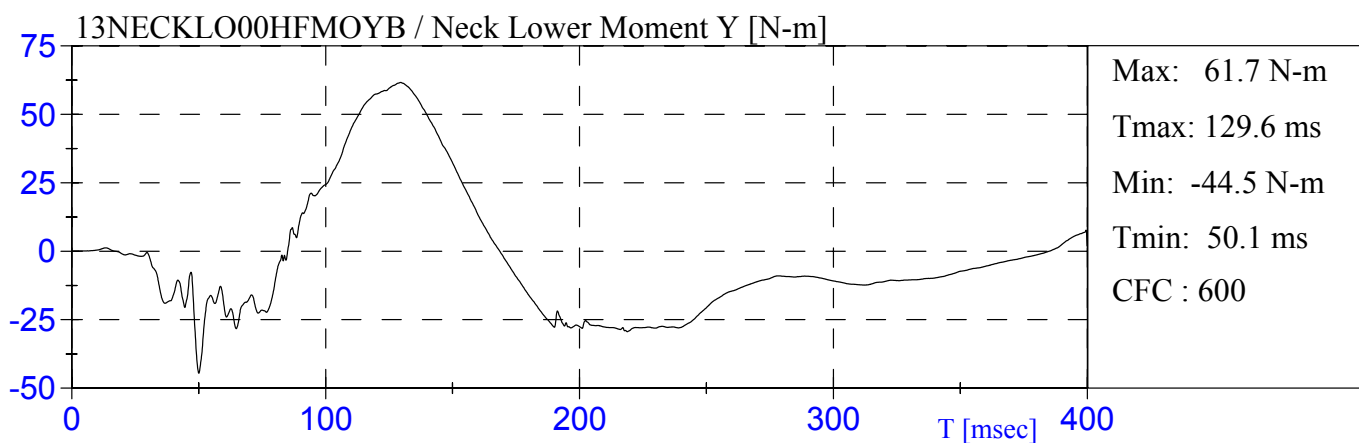
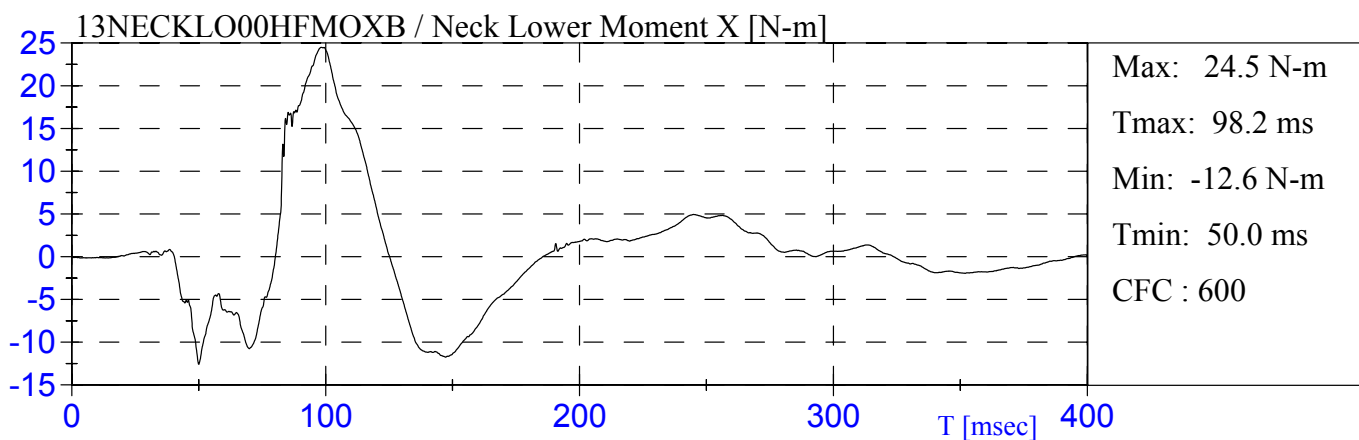


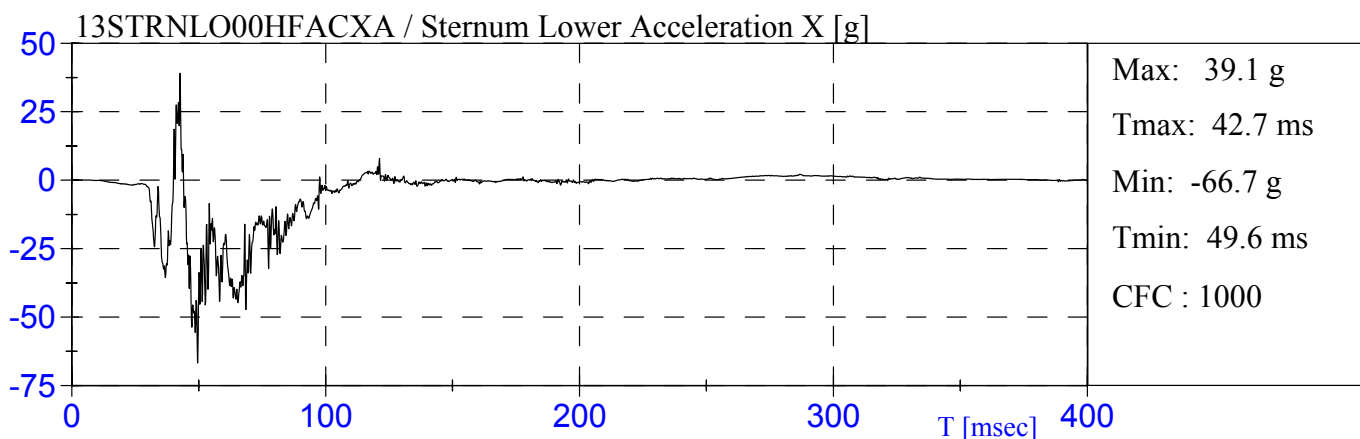
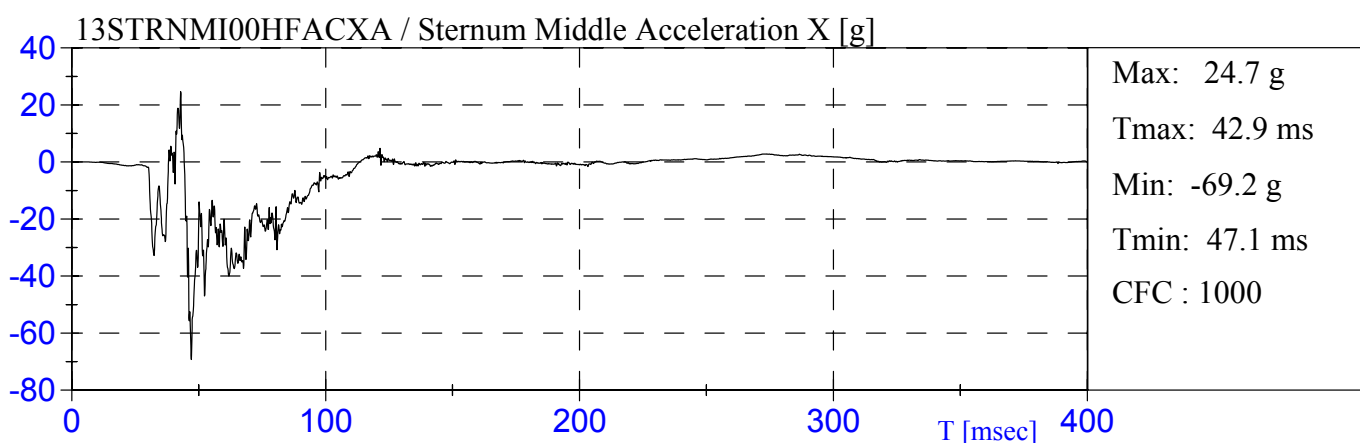
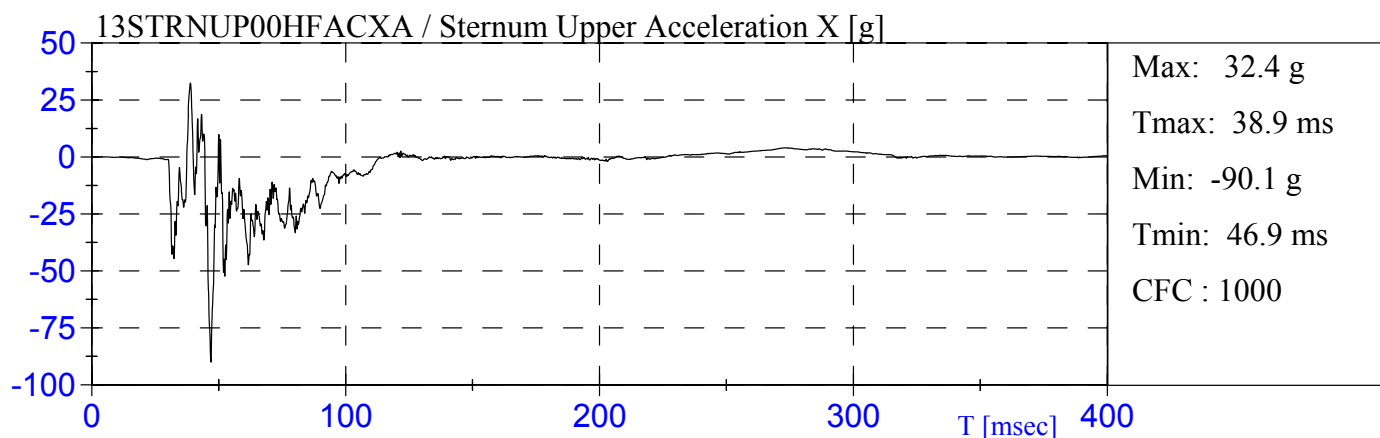


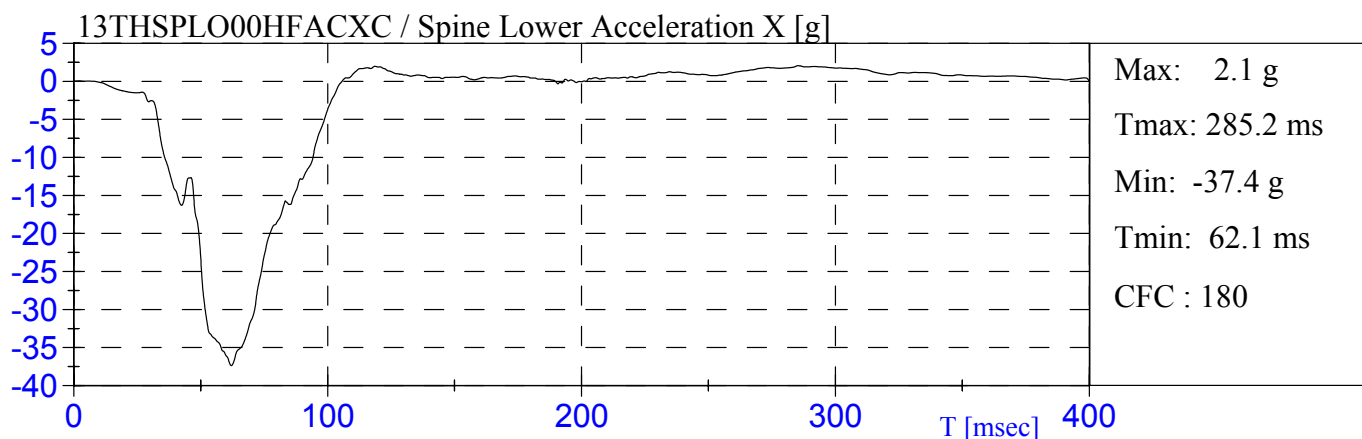
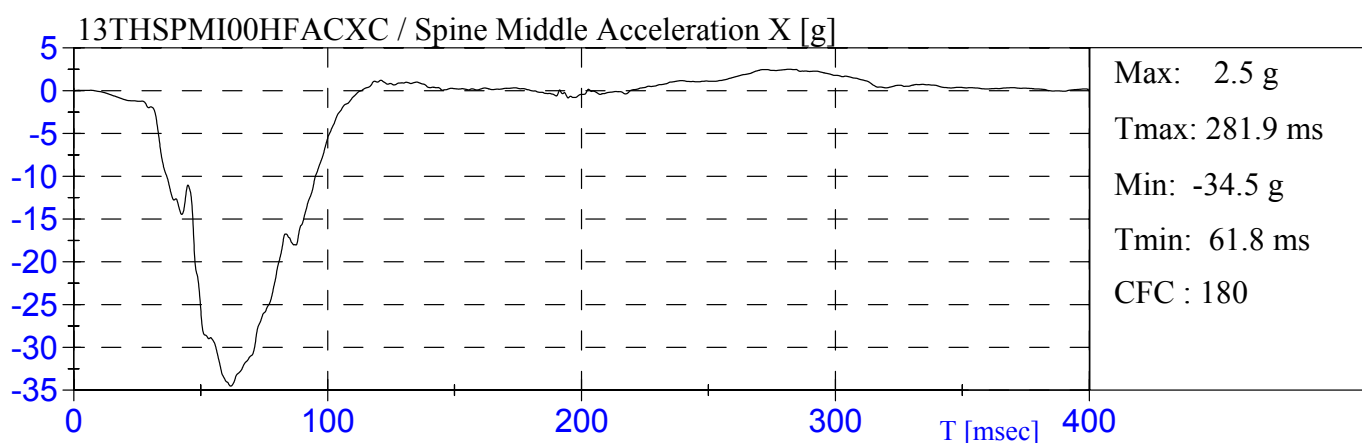
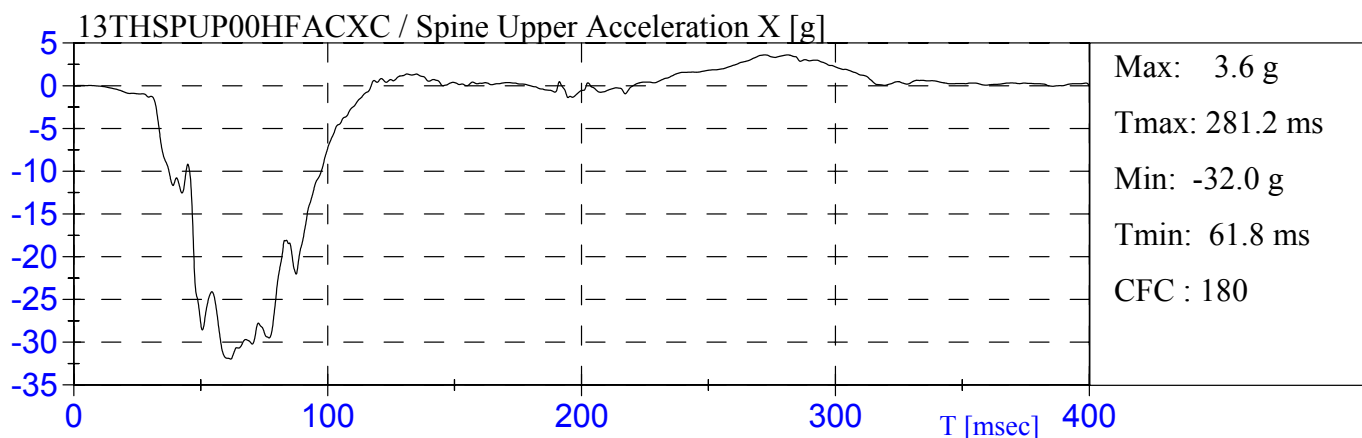


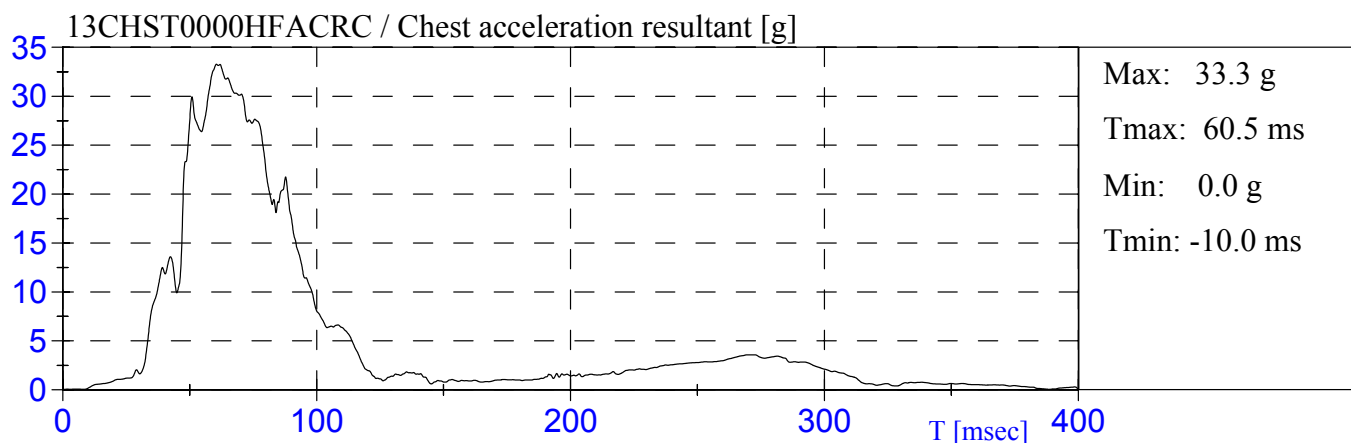
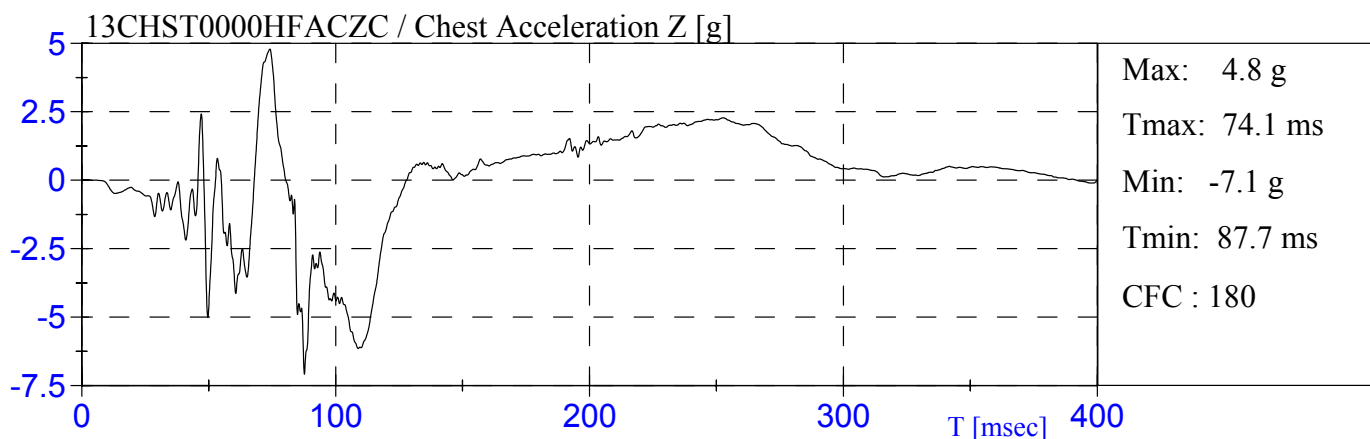
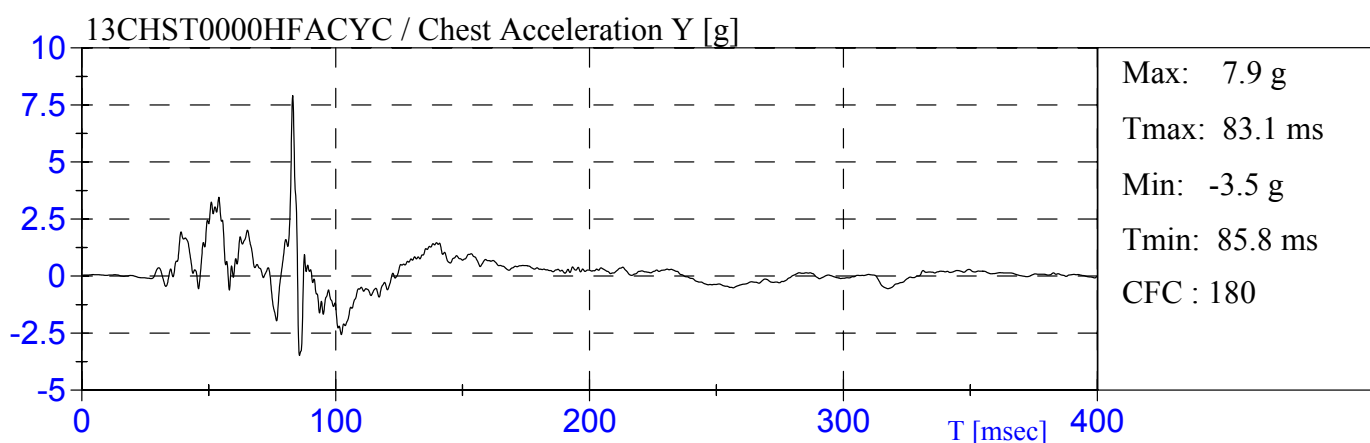
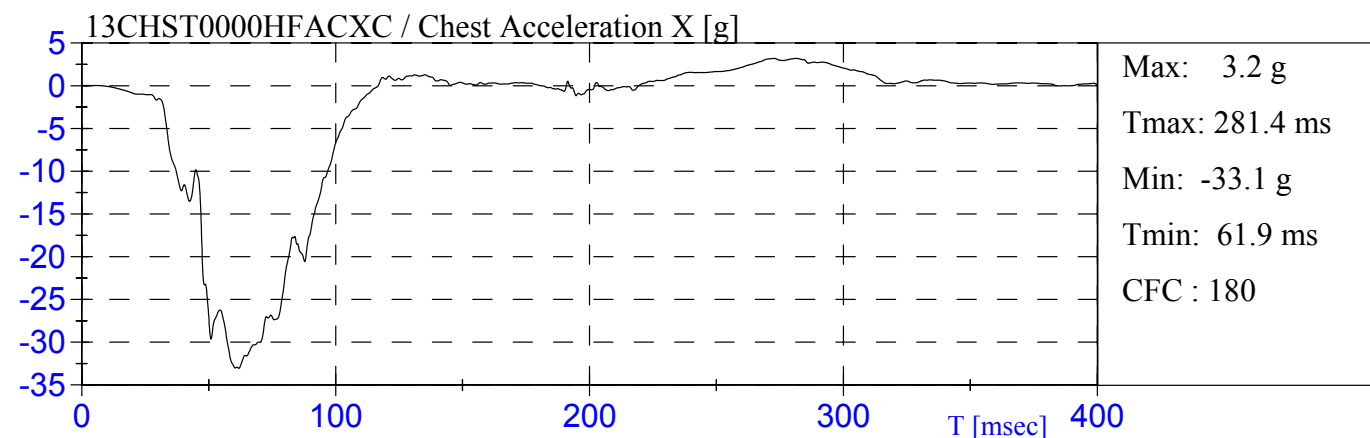


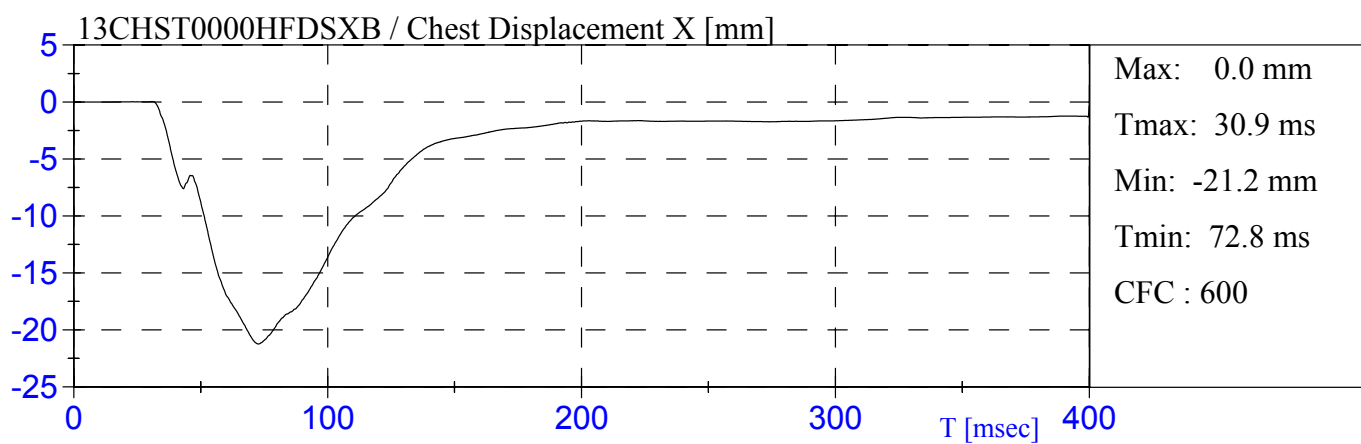


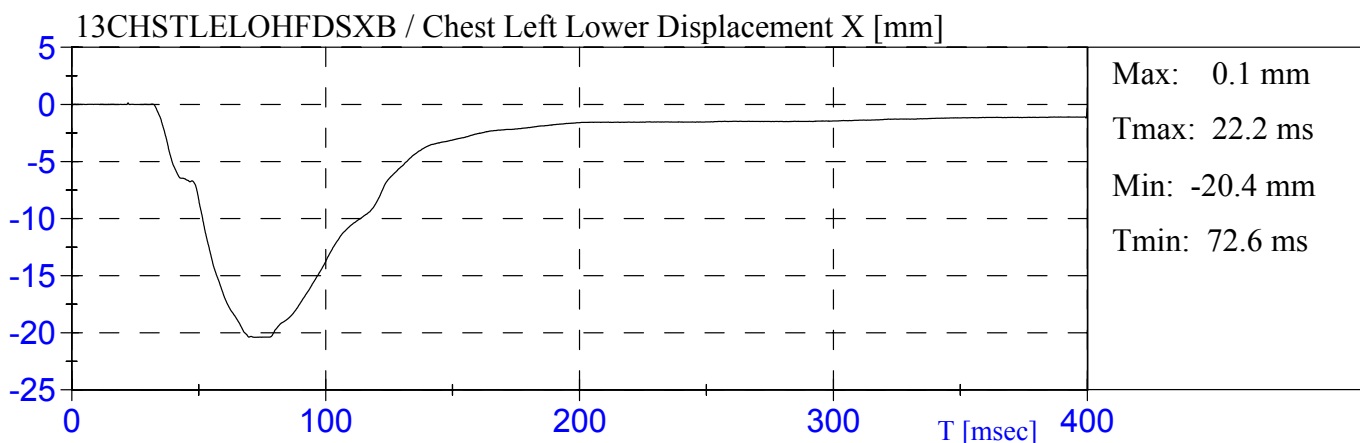
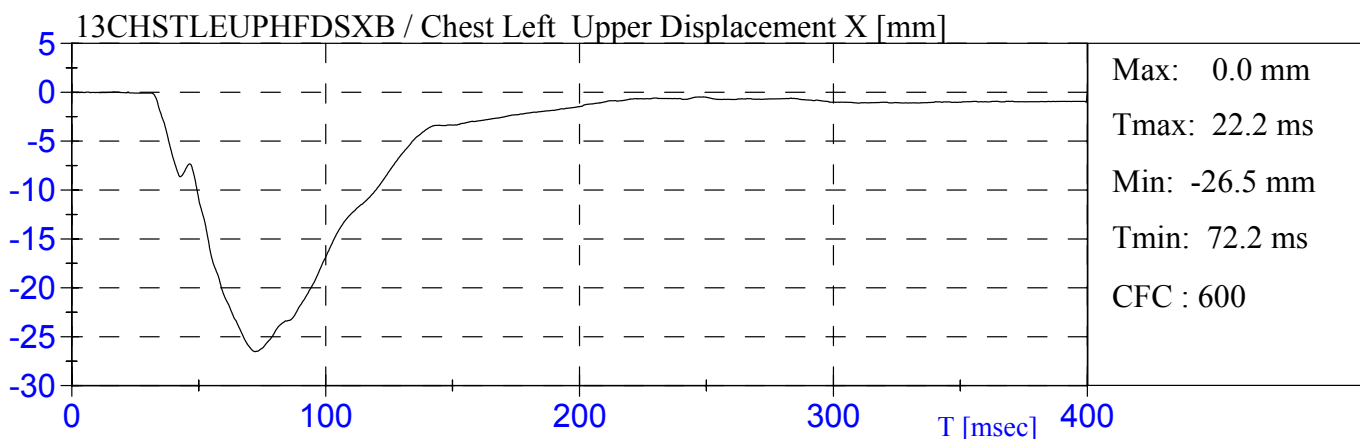
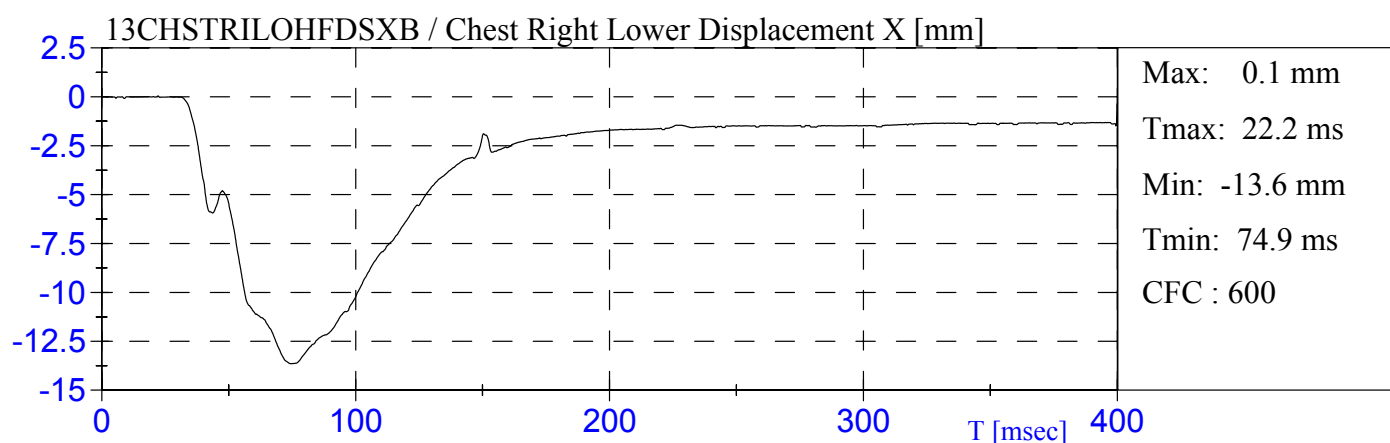
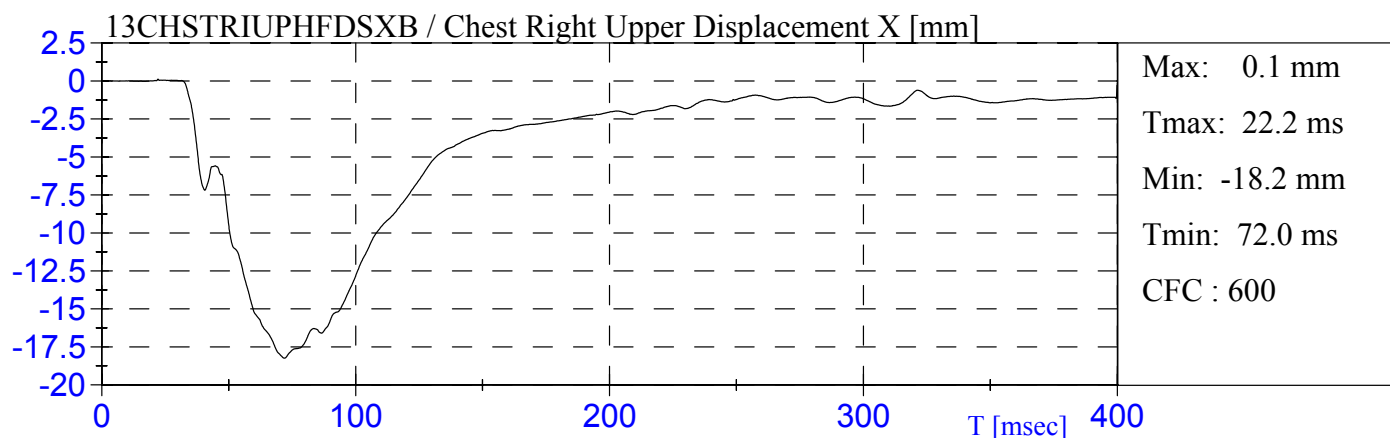


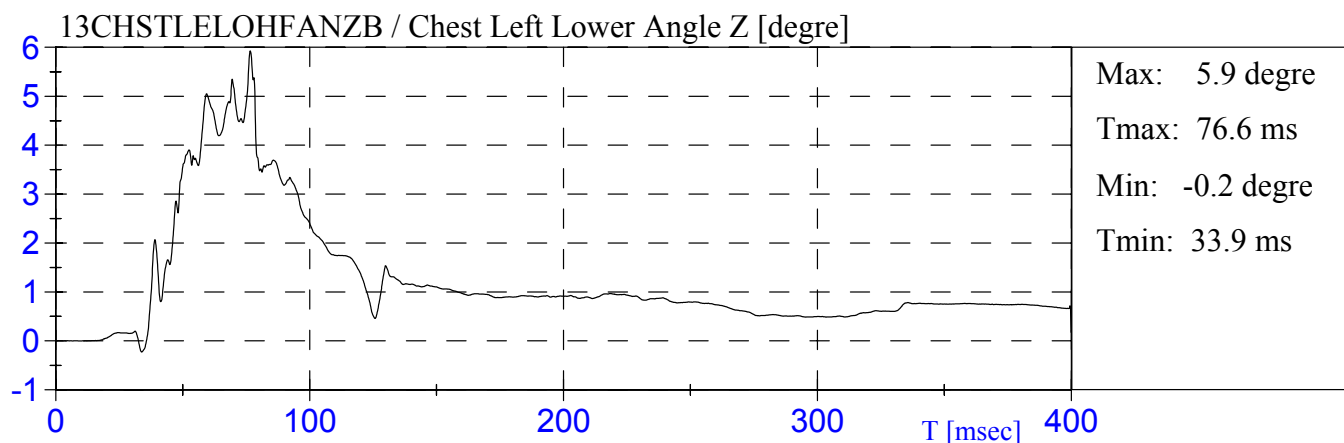
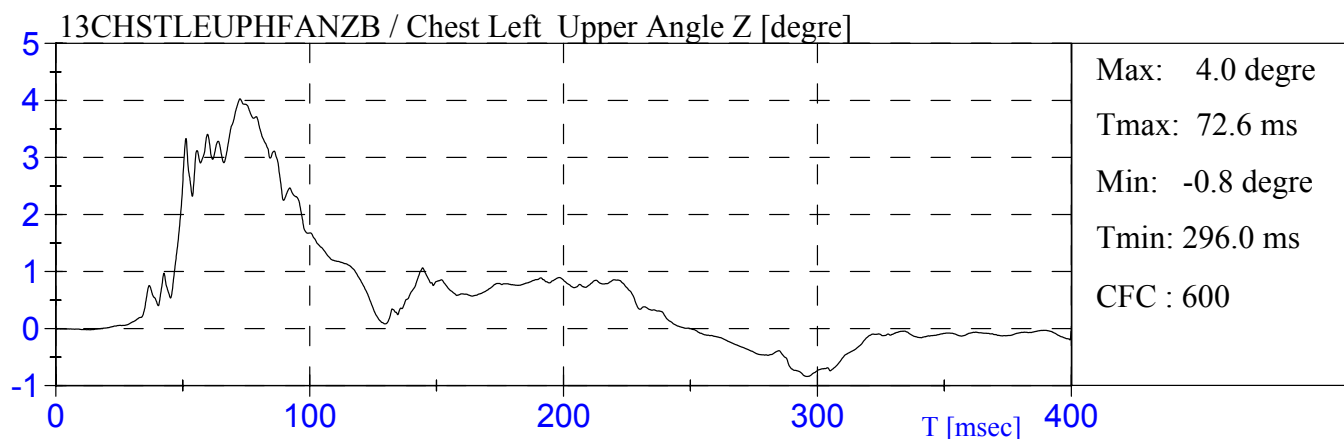
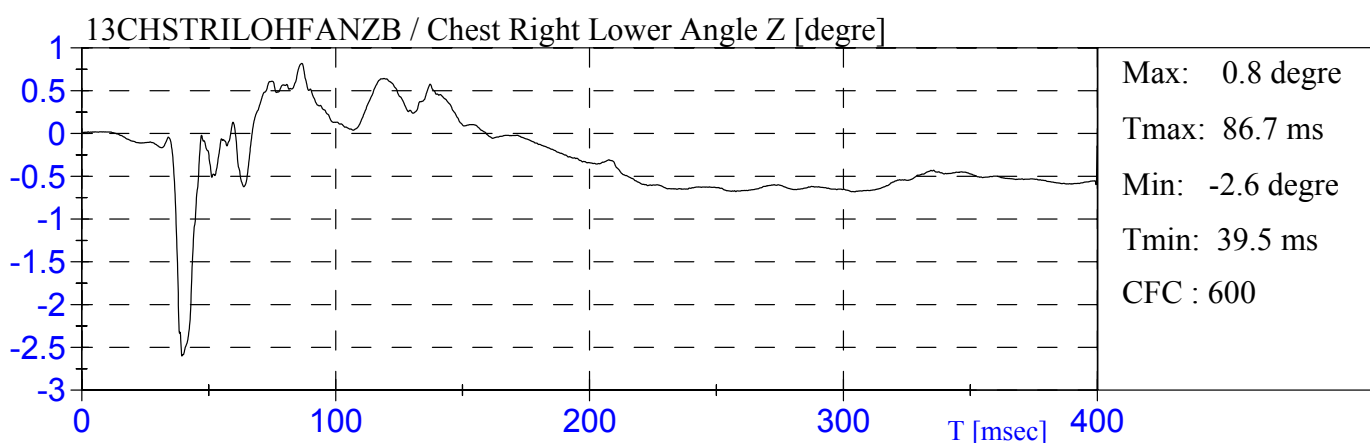
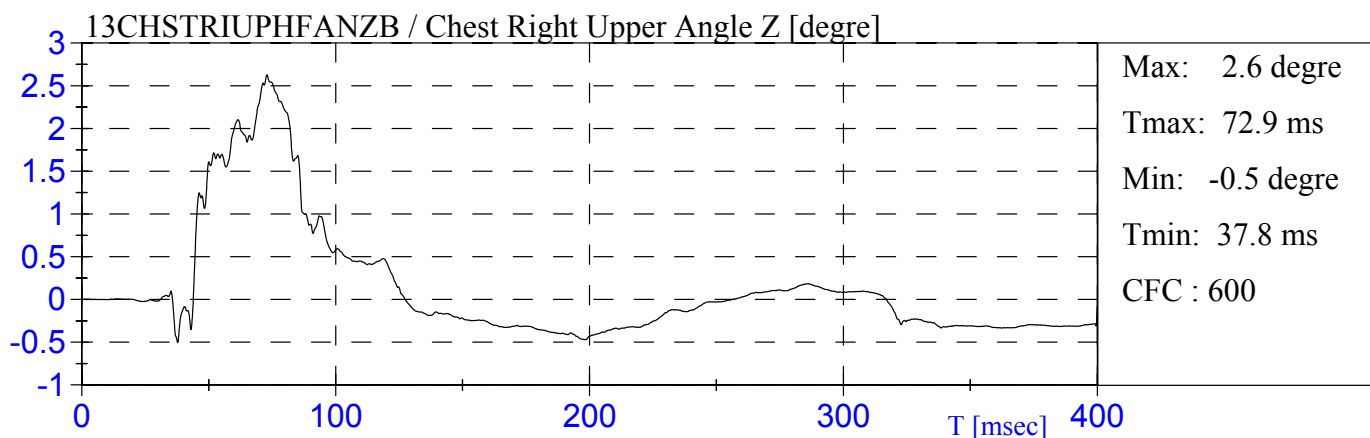


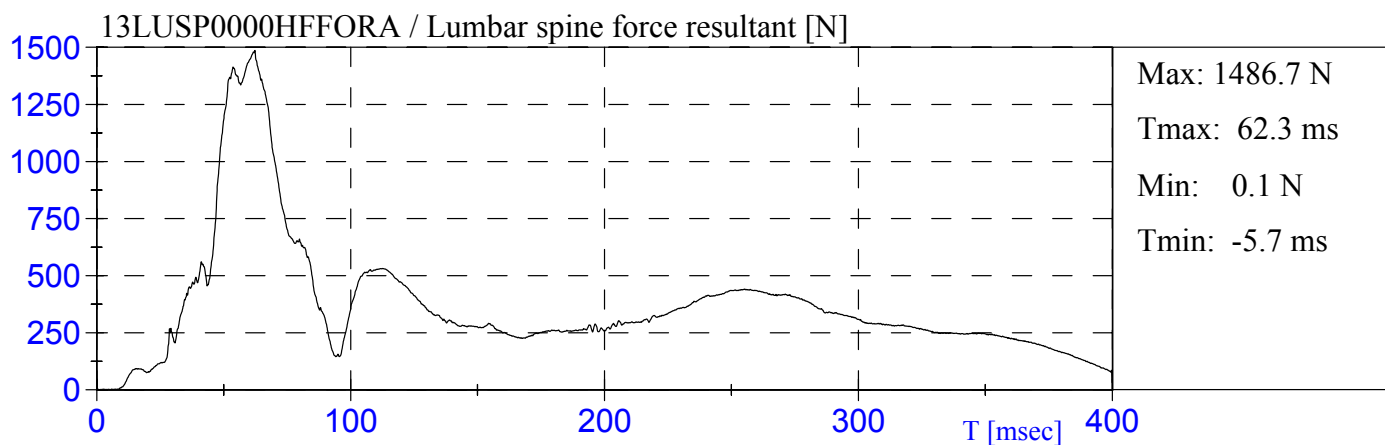
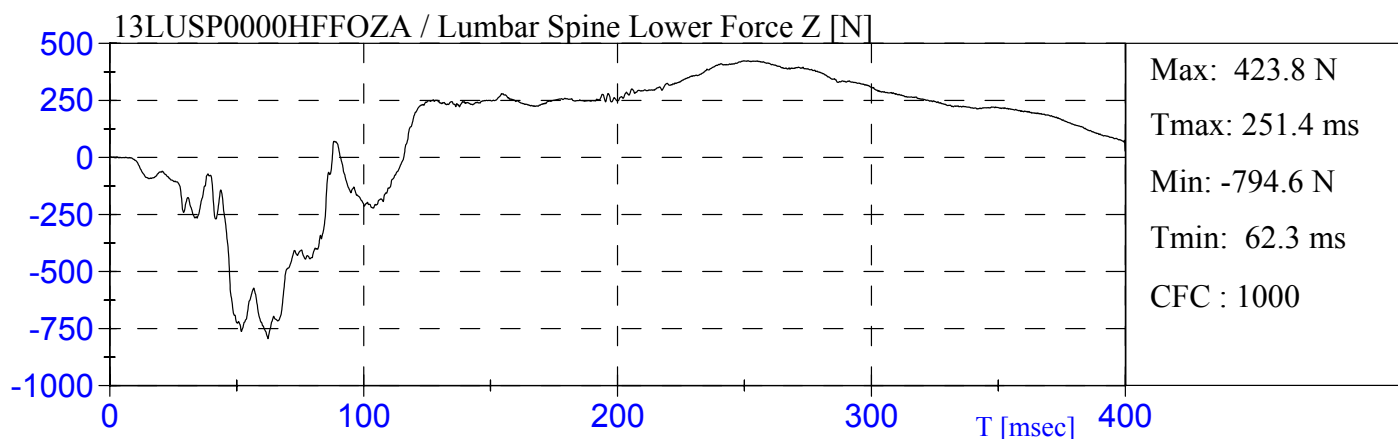
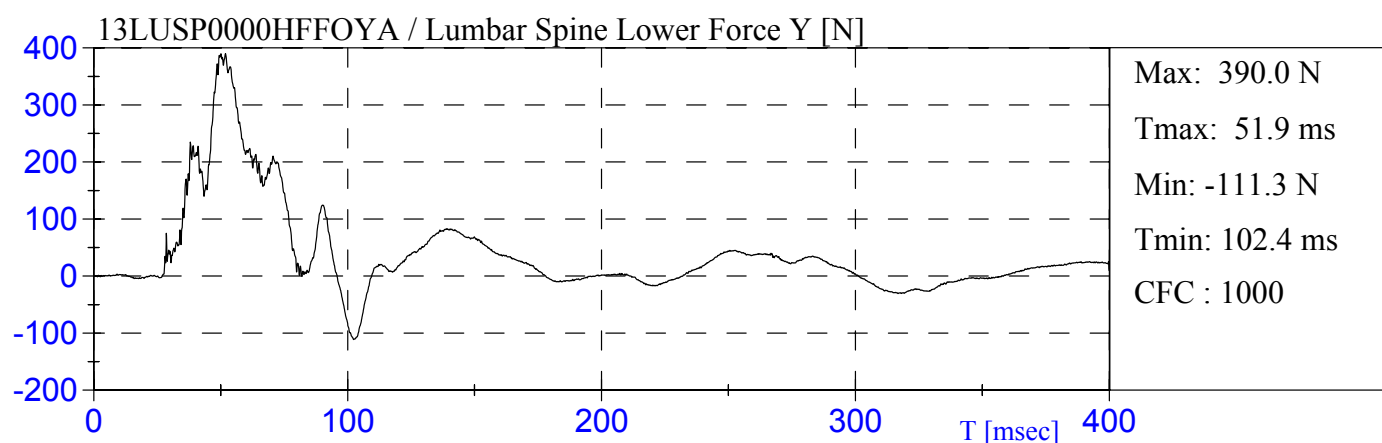
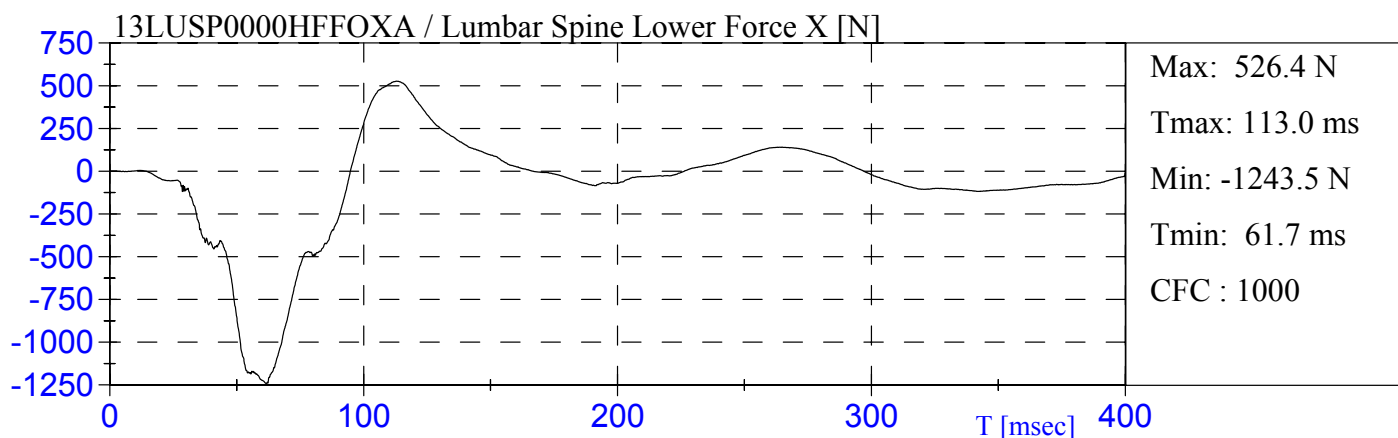


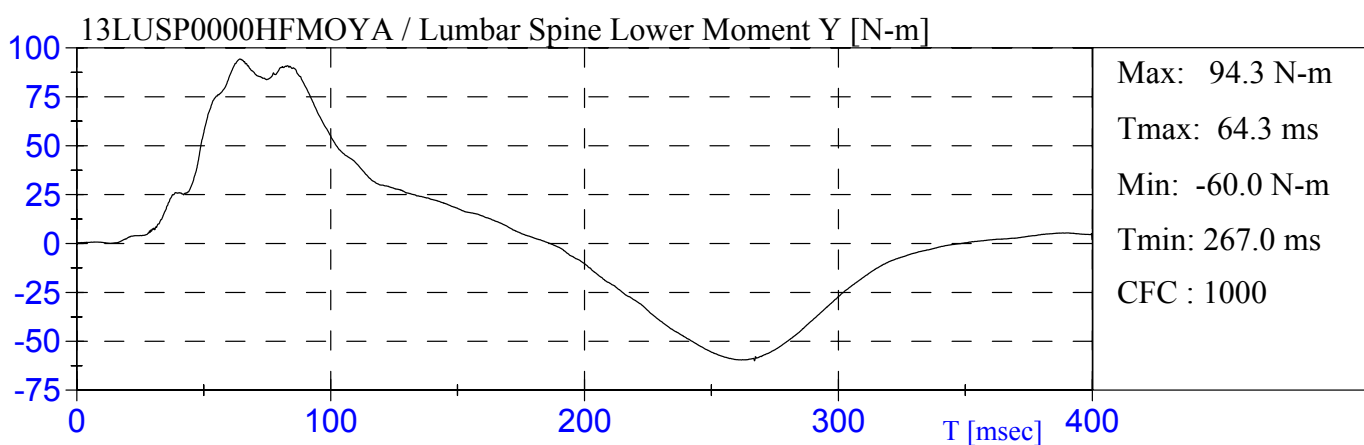
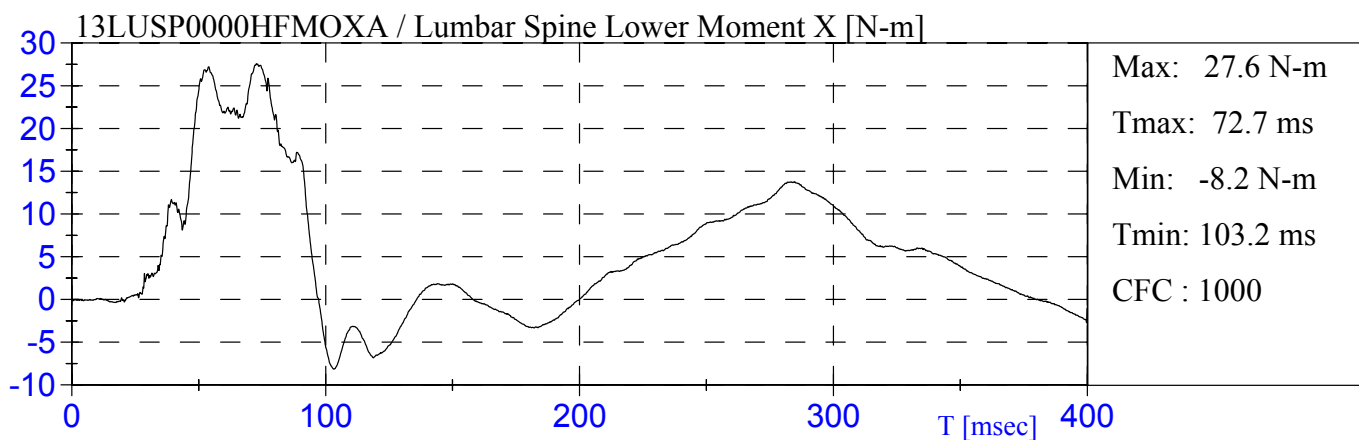


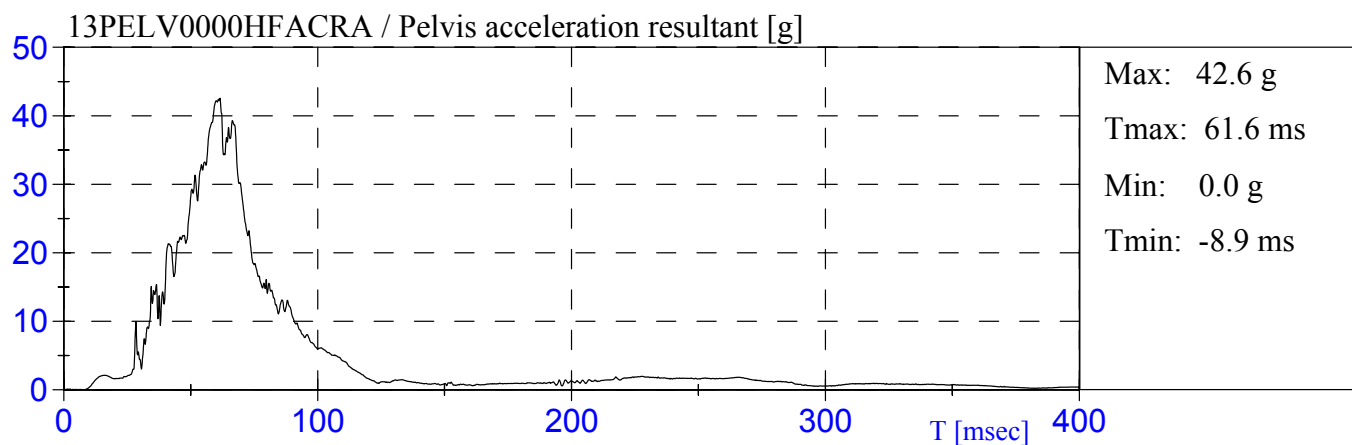
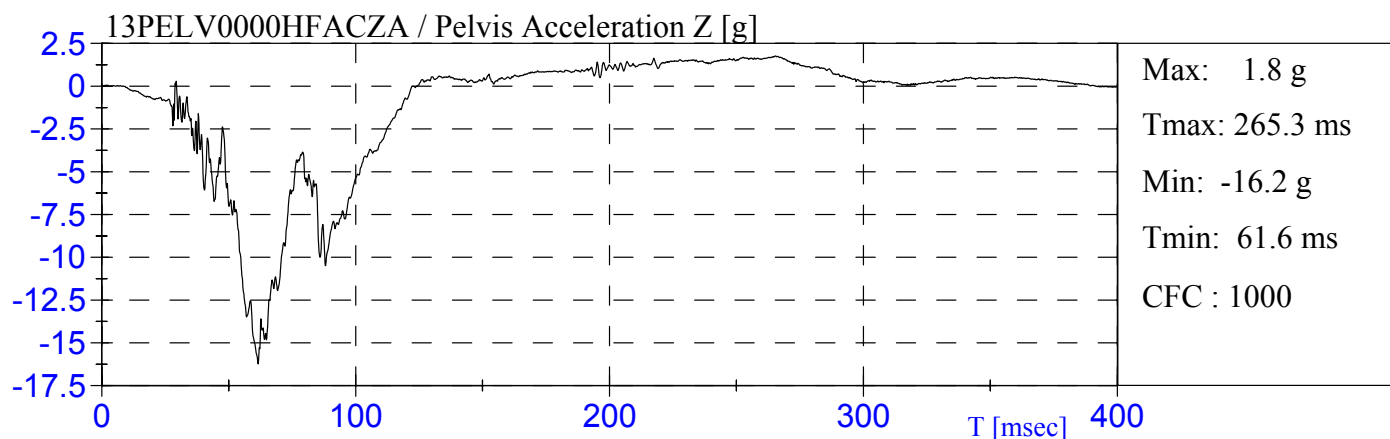
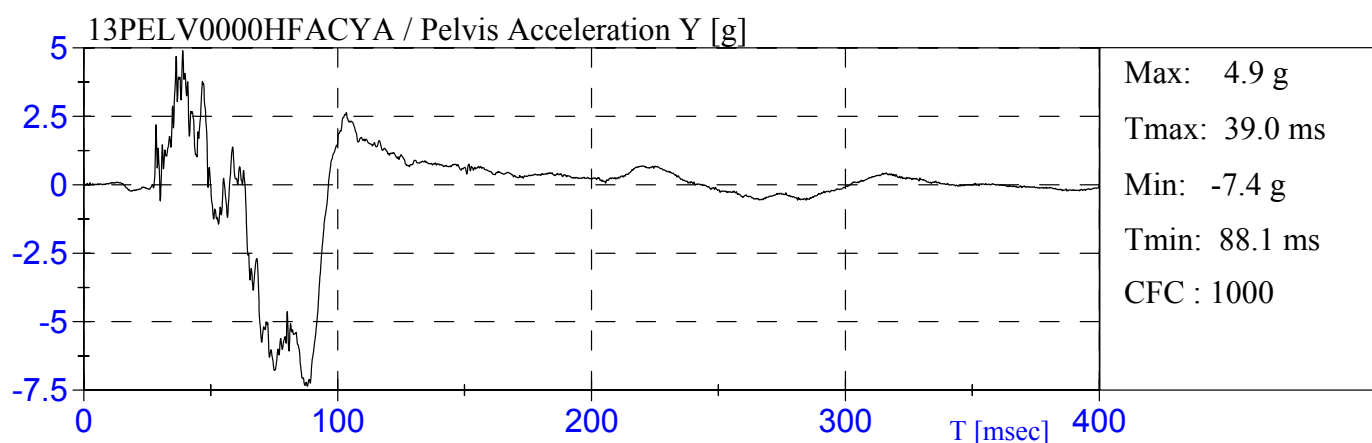
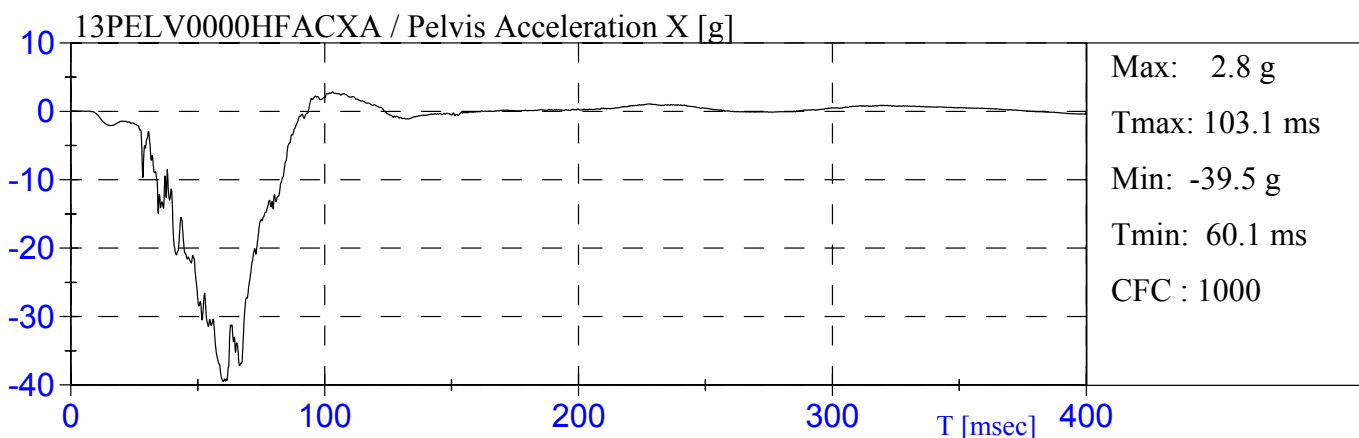


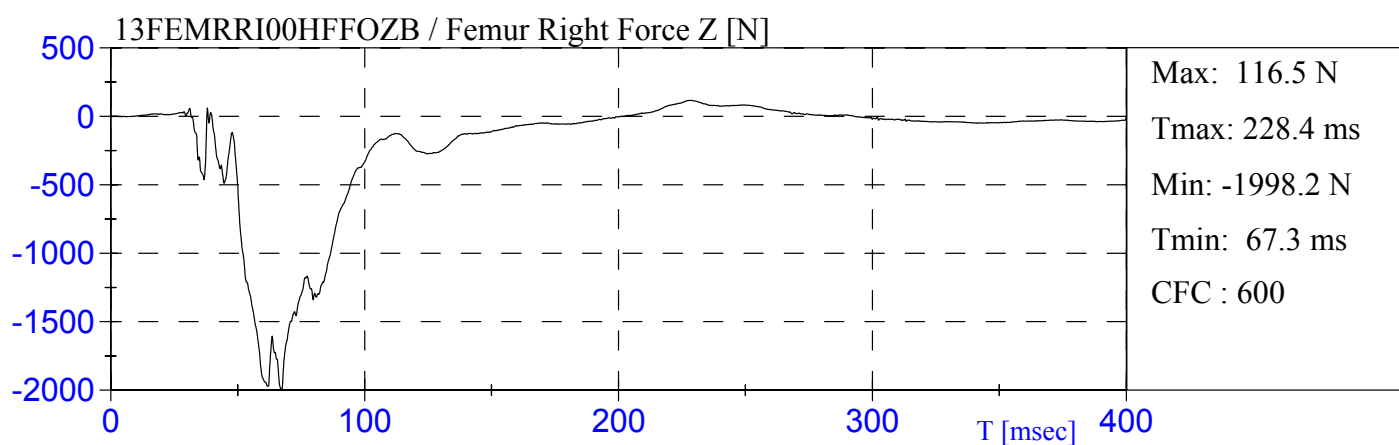
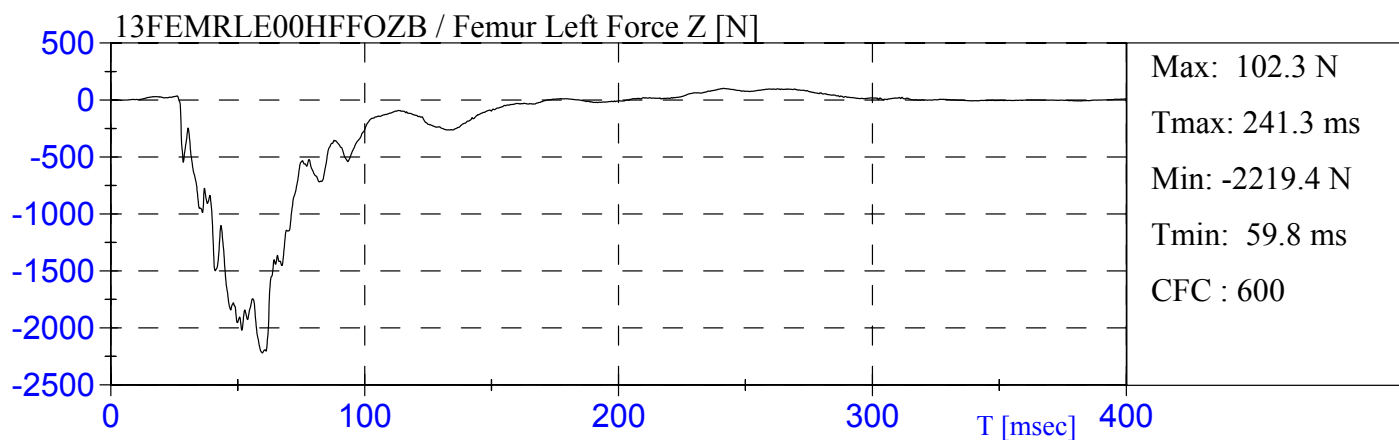


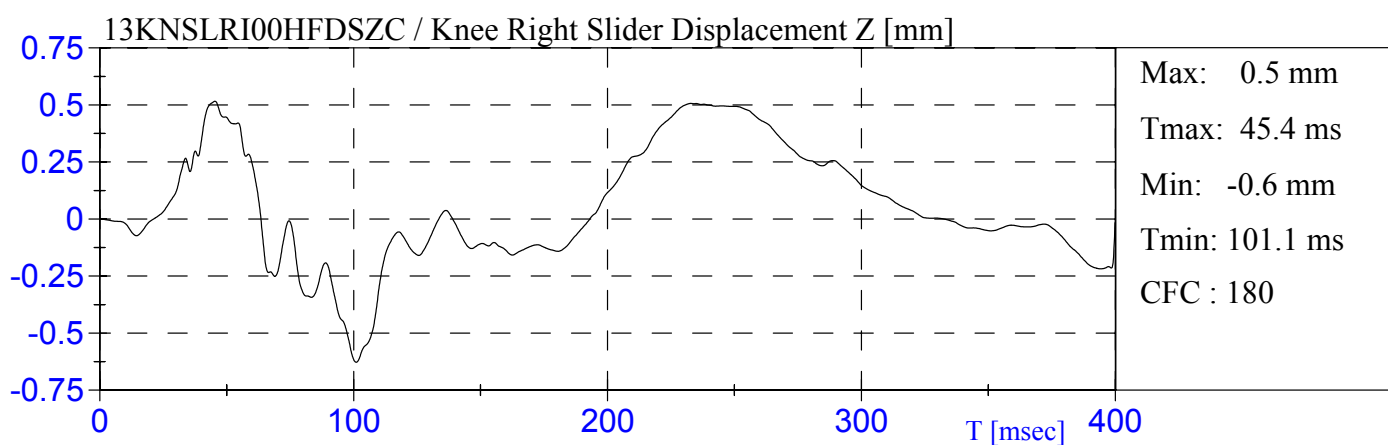
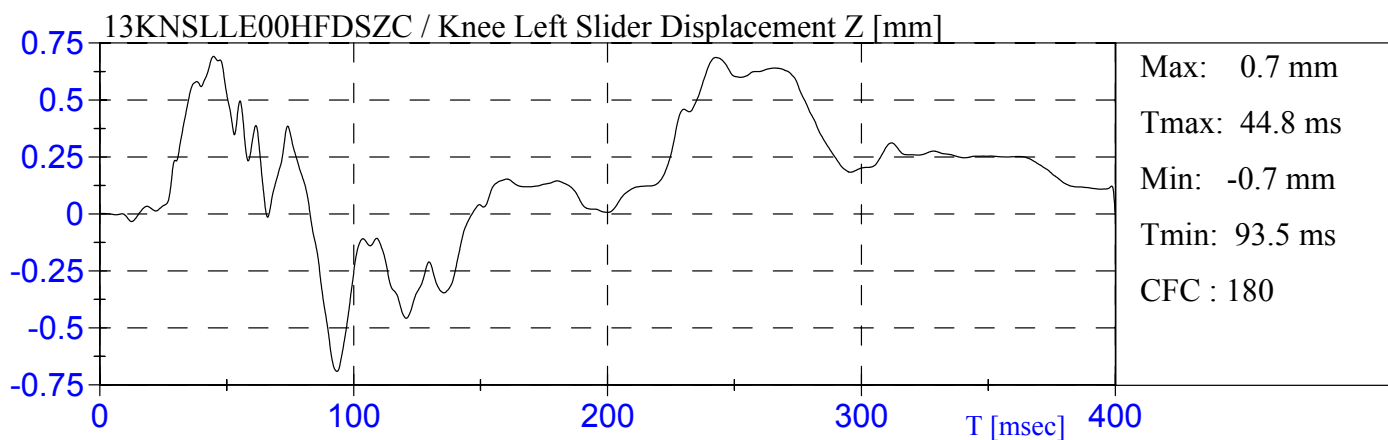


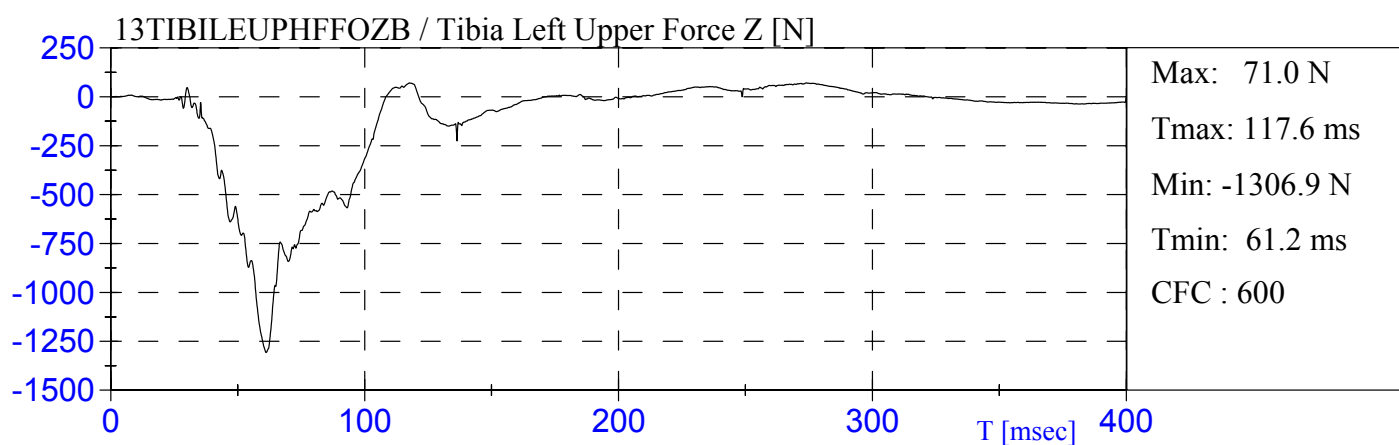
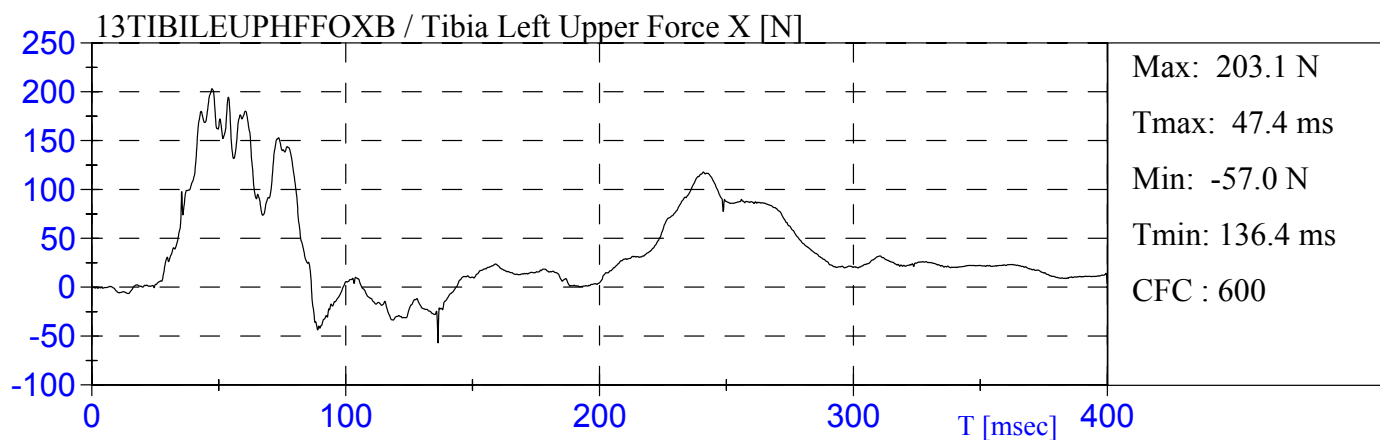


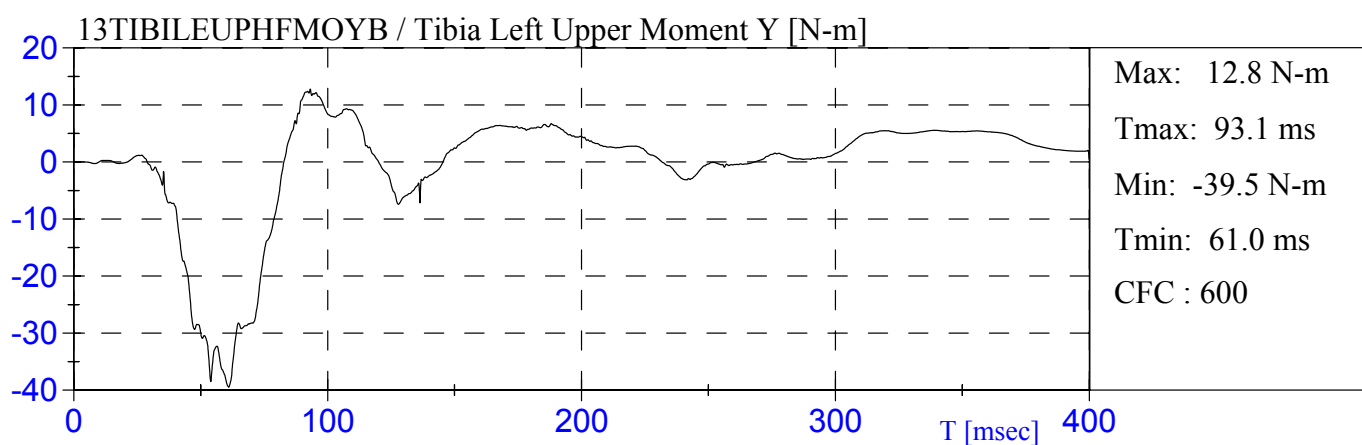
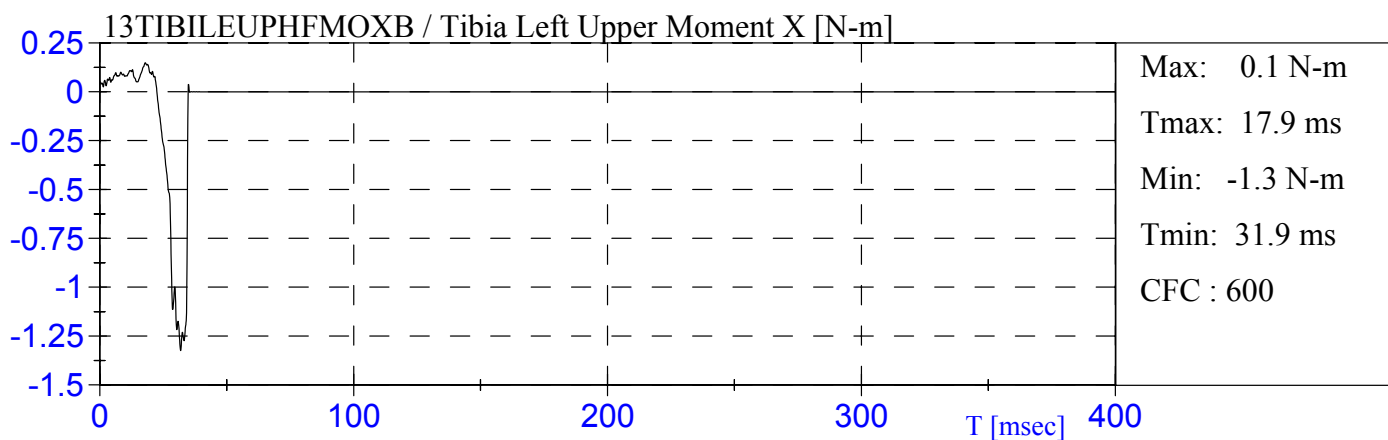


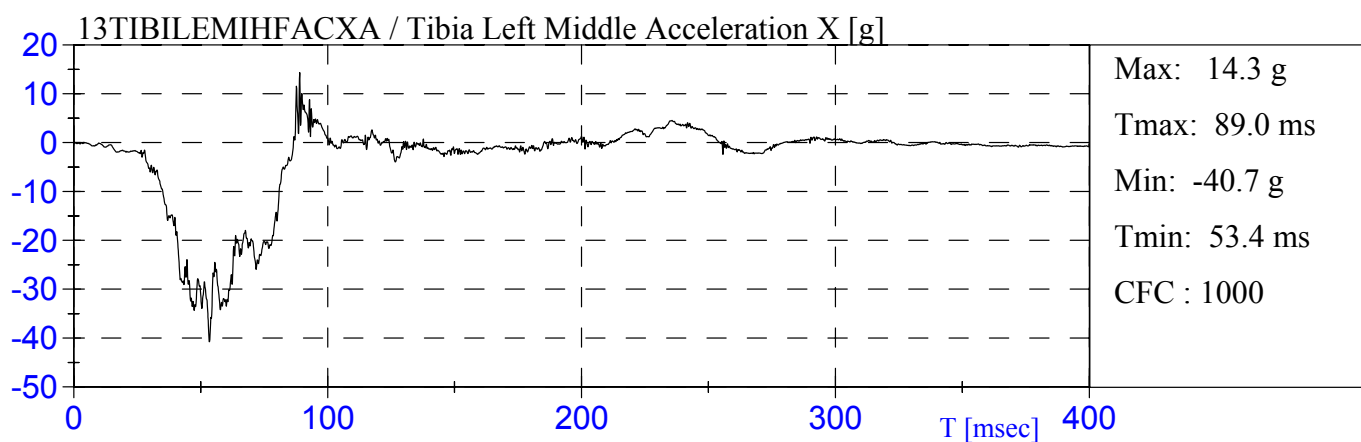


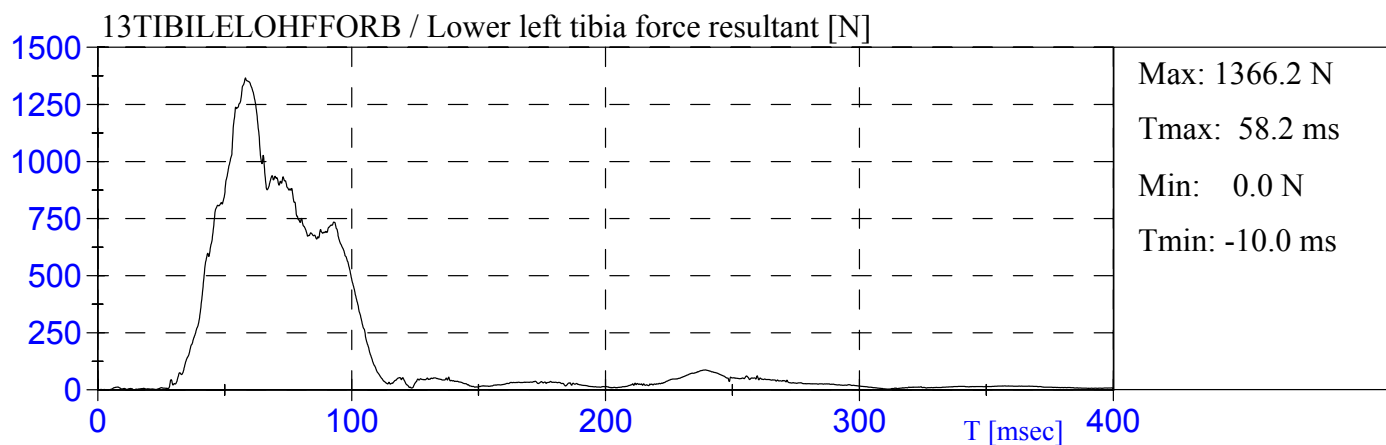
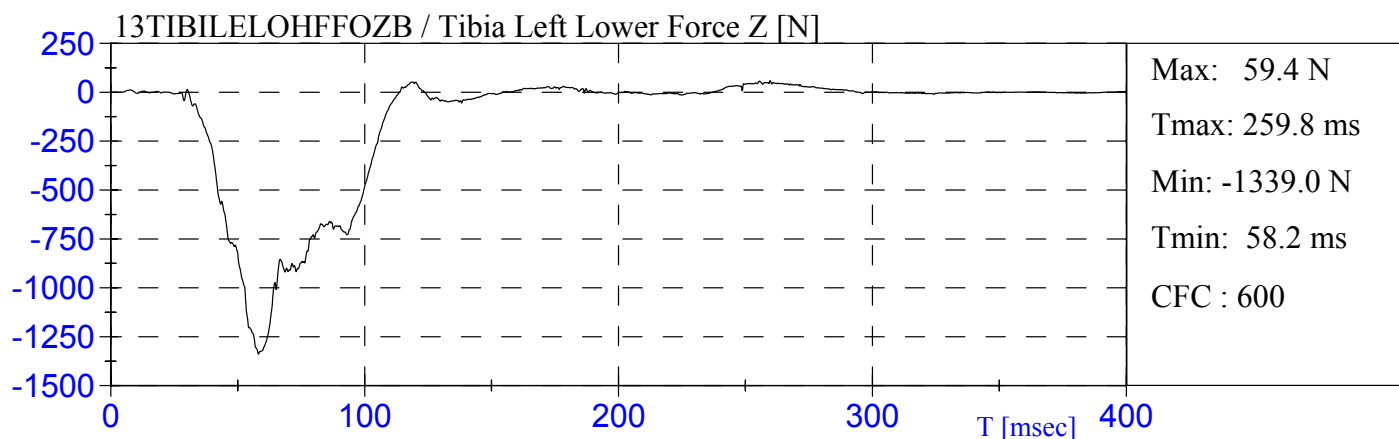
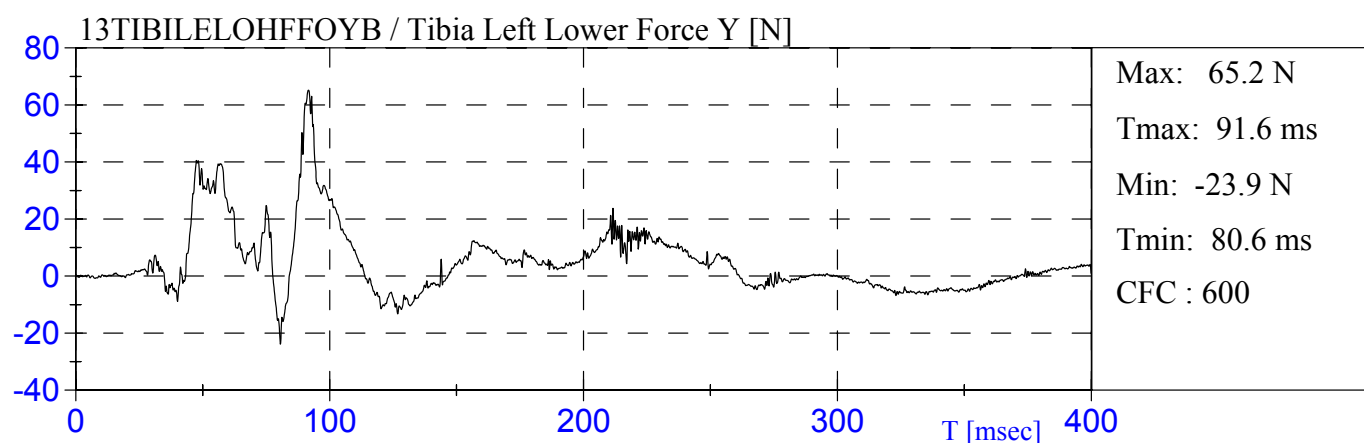
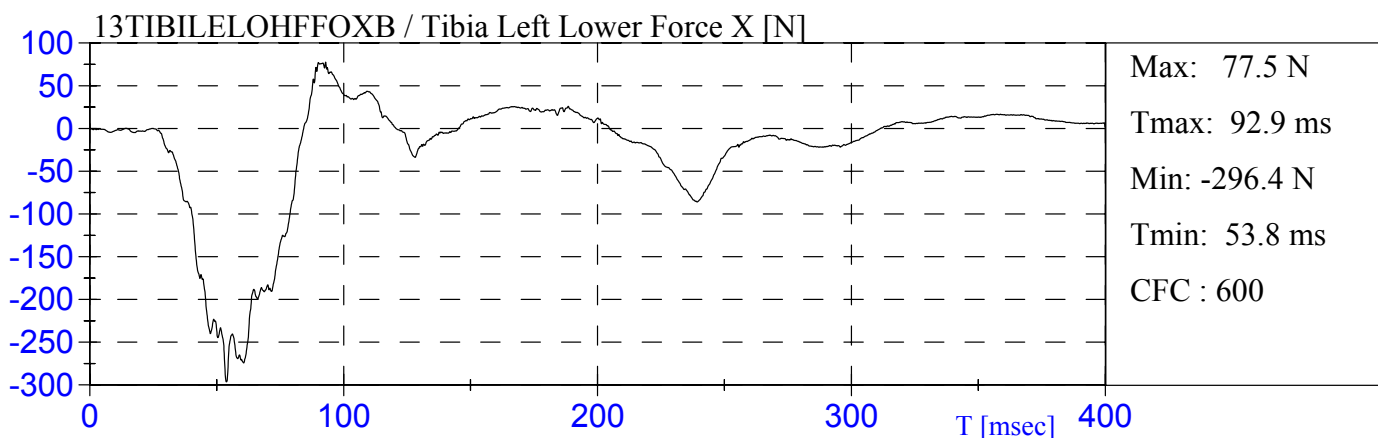


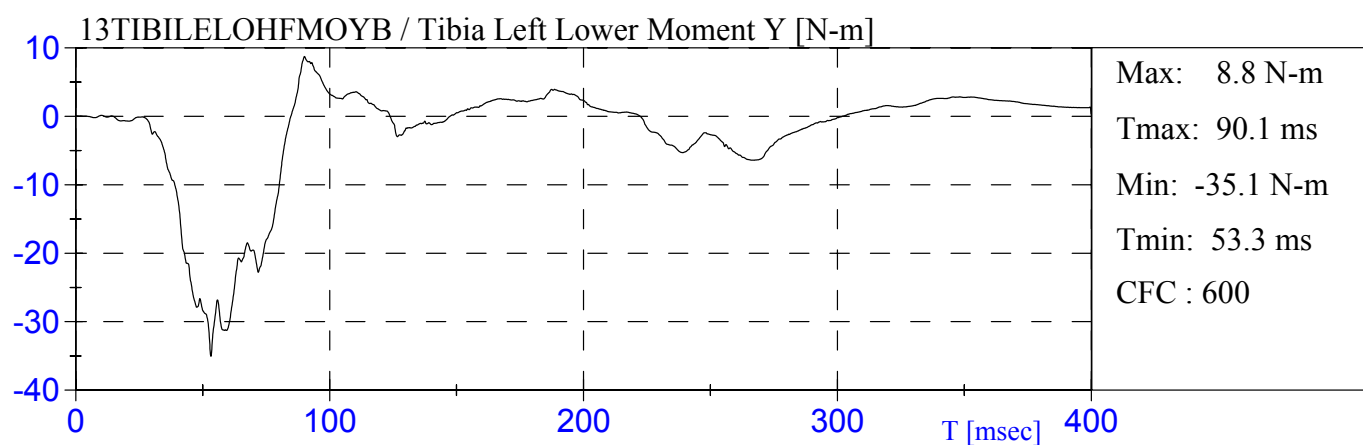
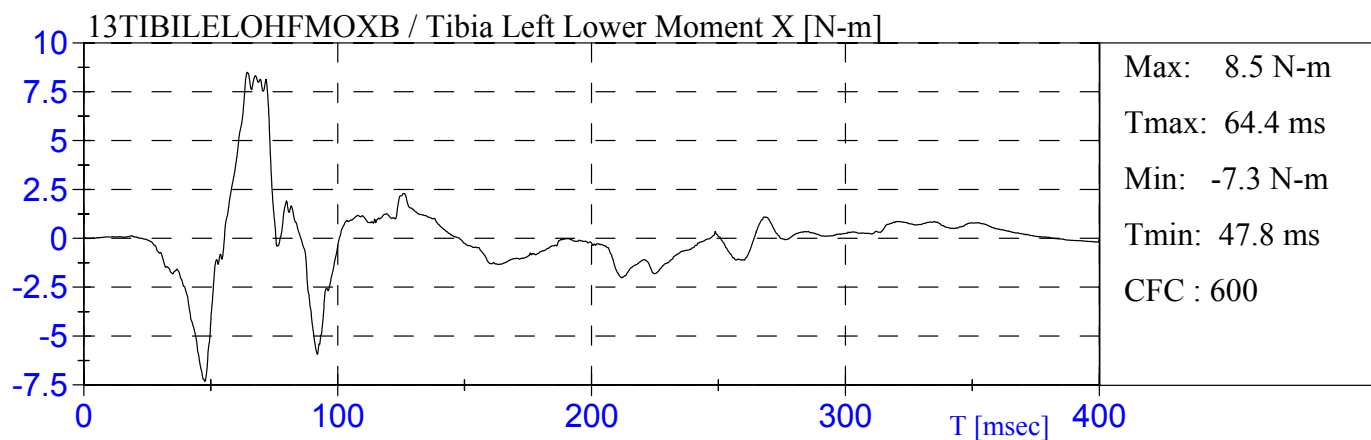


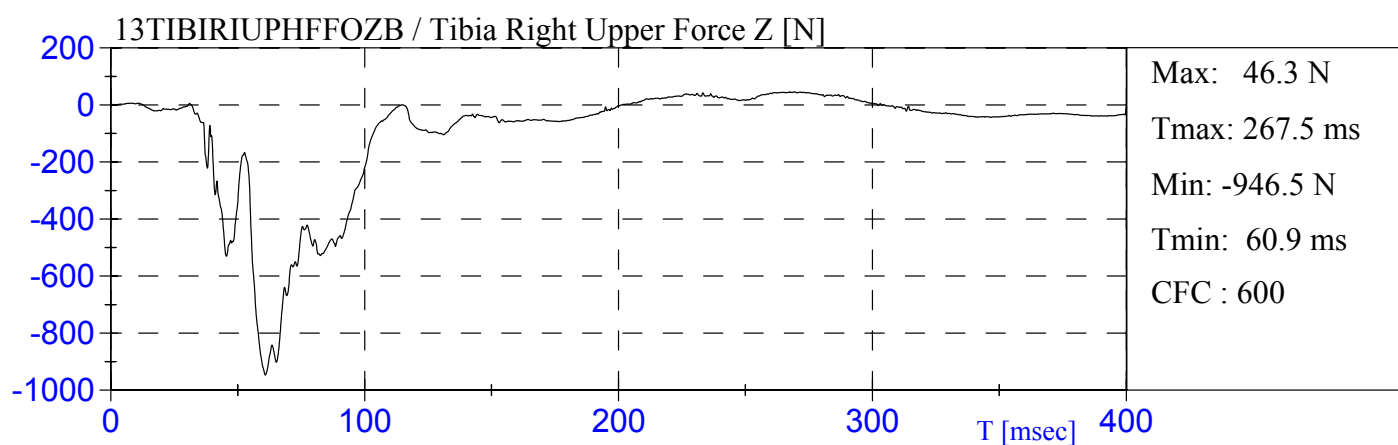
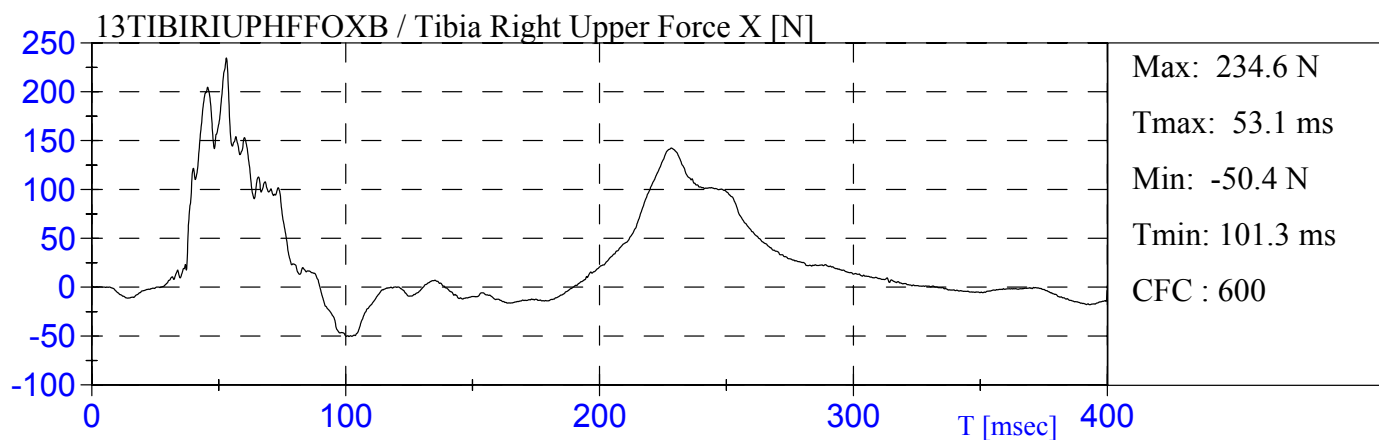


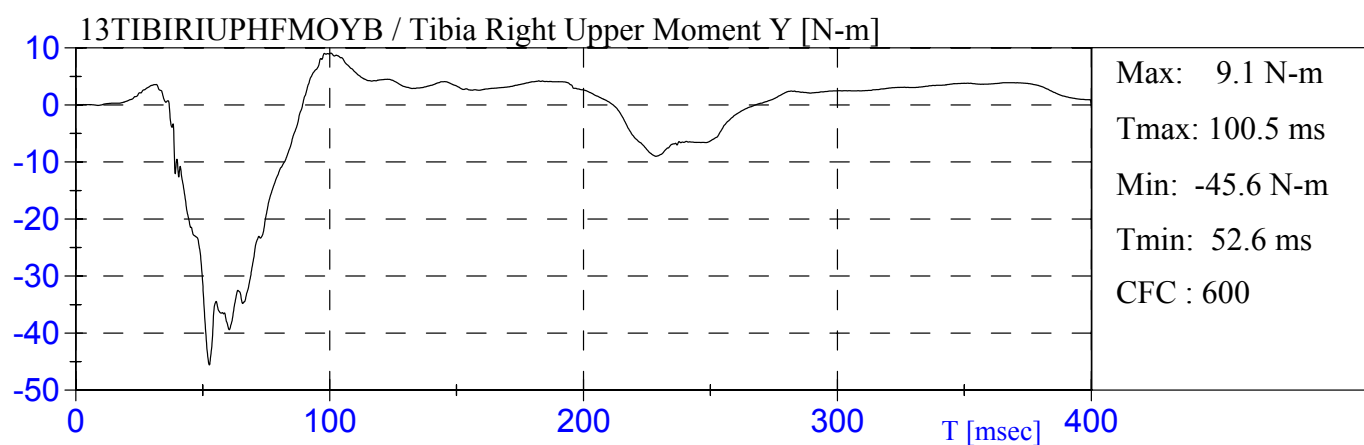
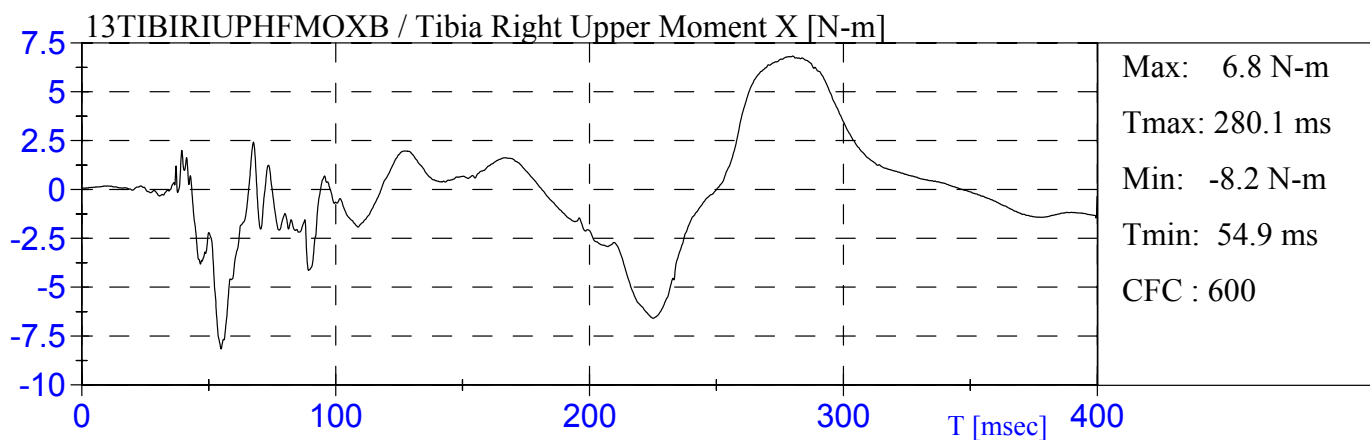


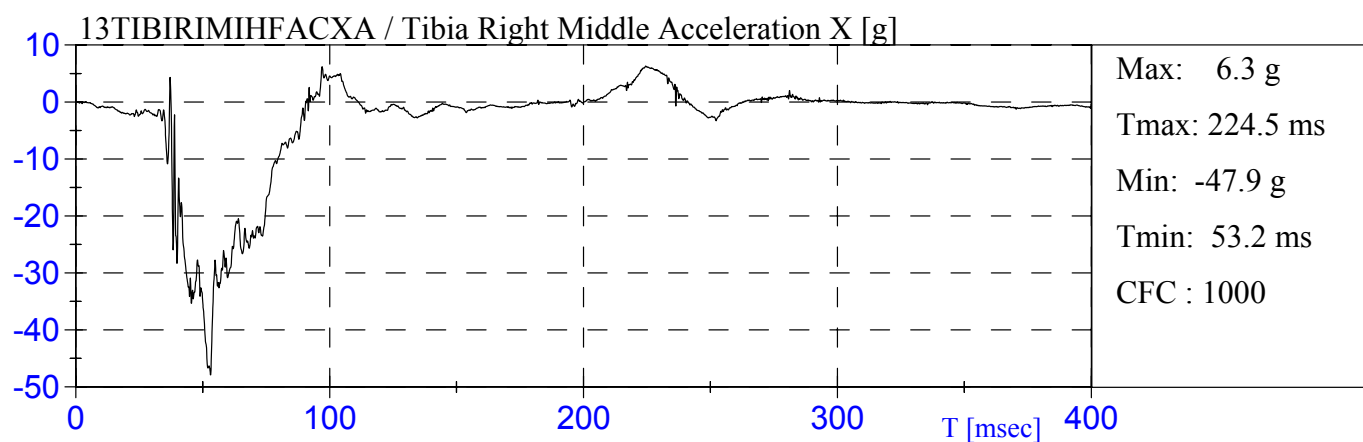


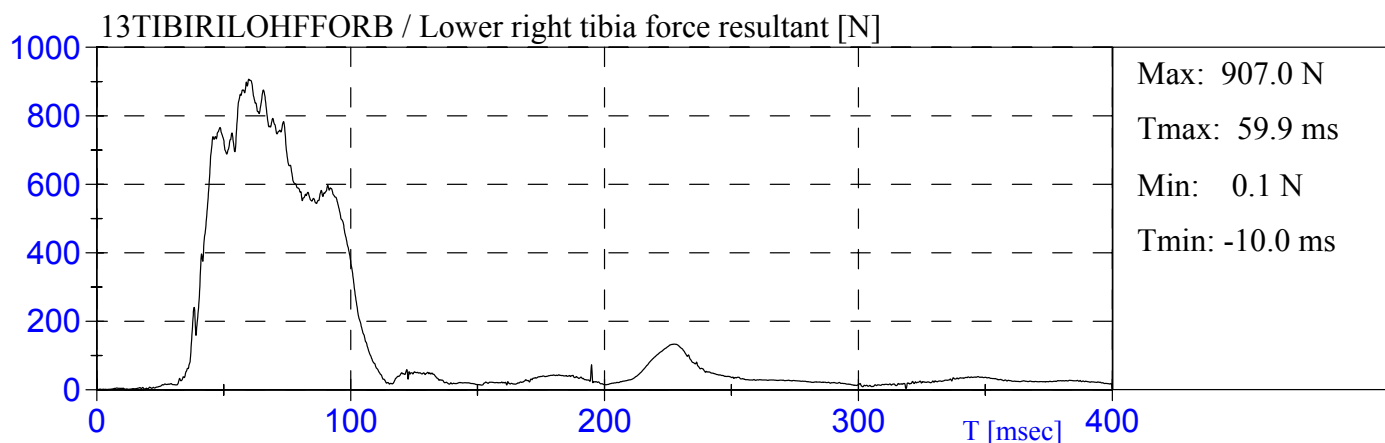
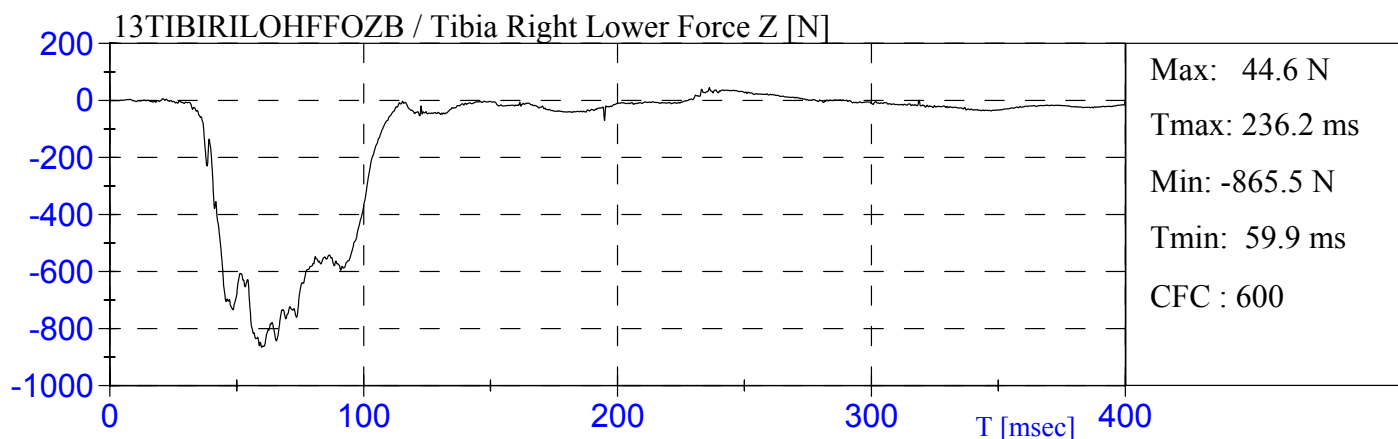
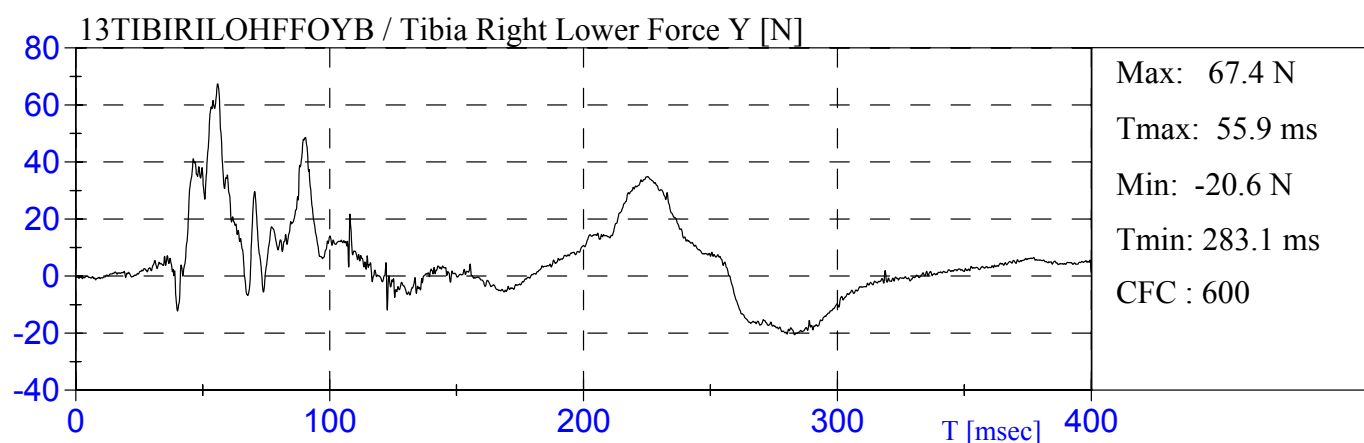
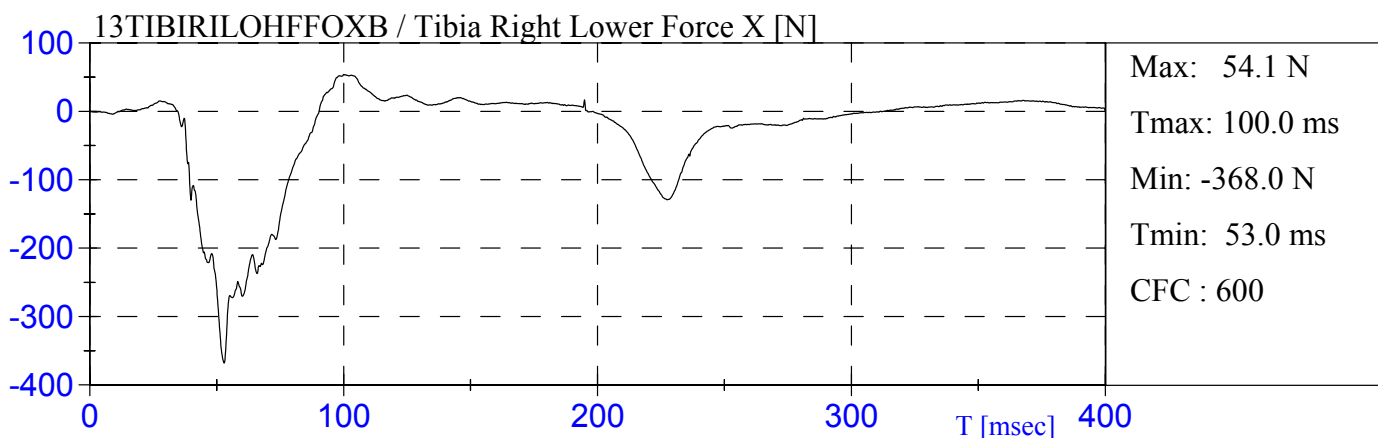


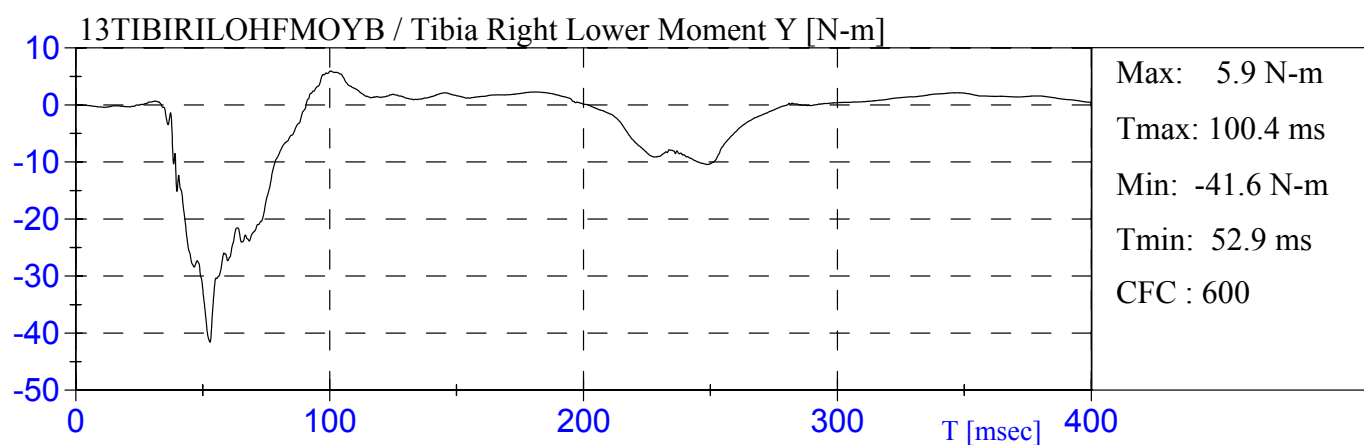
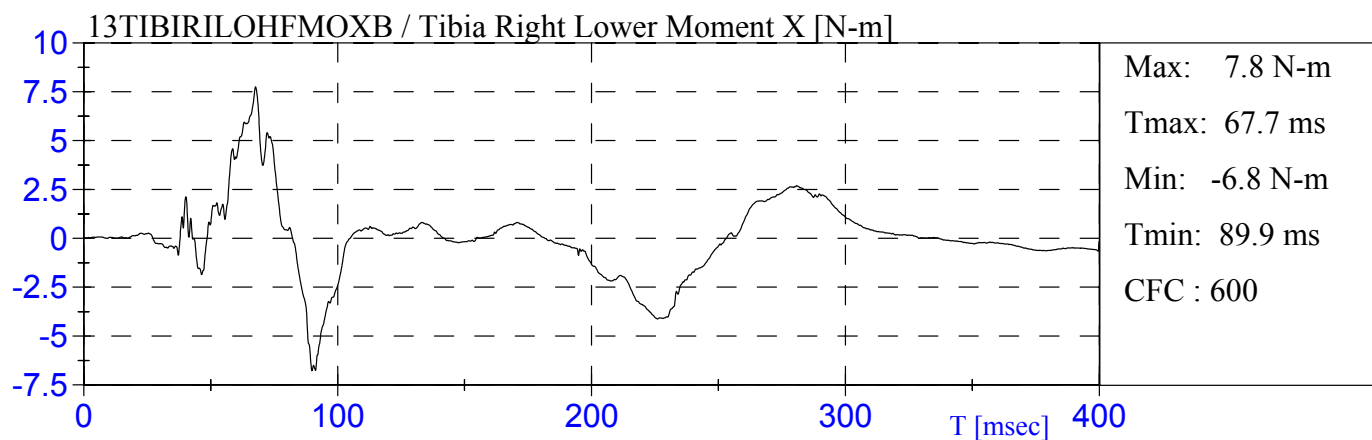




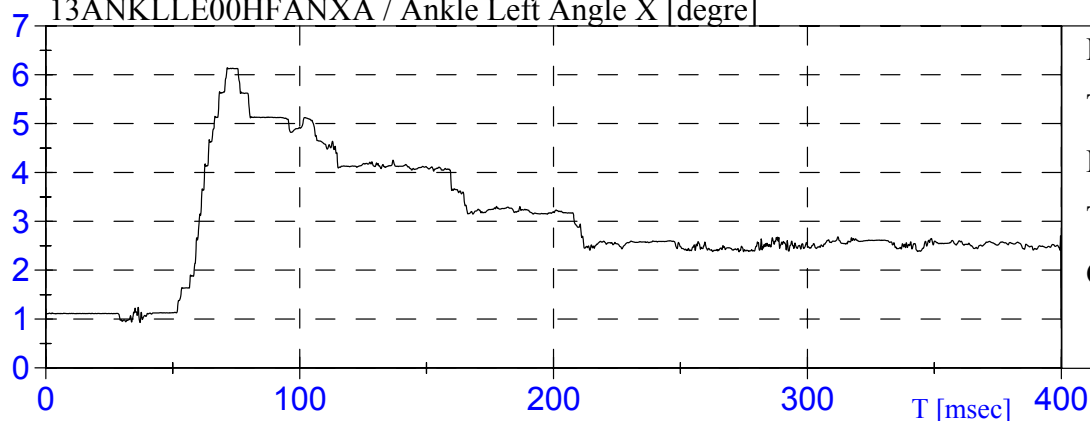




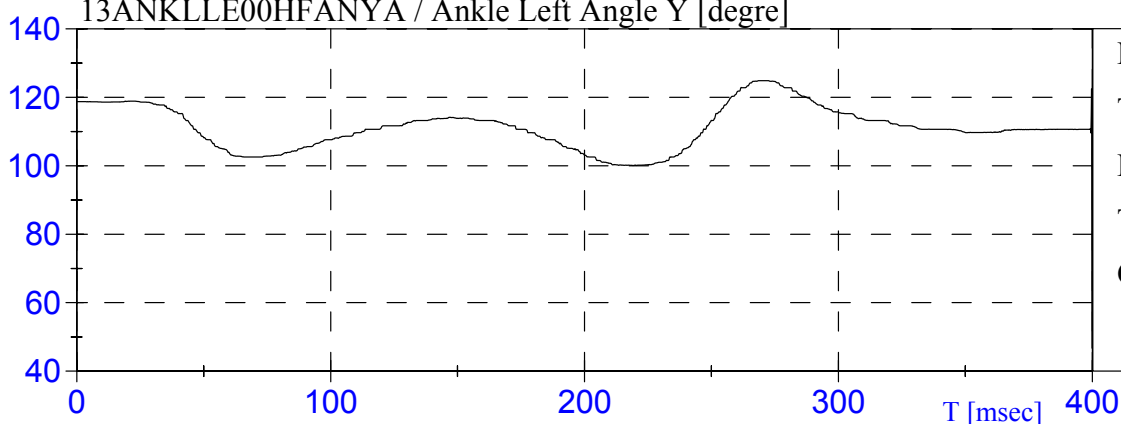




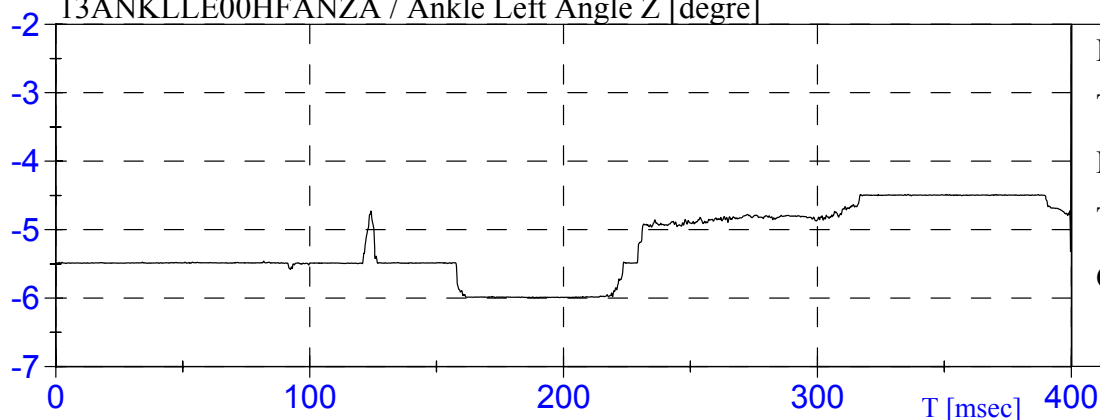
13ANKLLE00HFANXA / Ankle Left Angle X [degree]



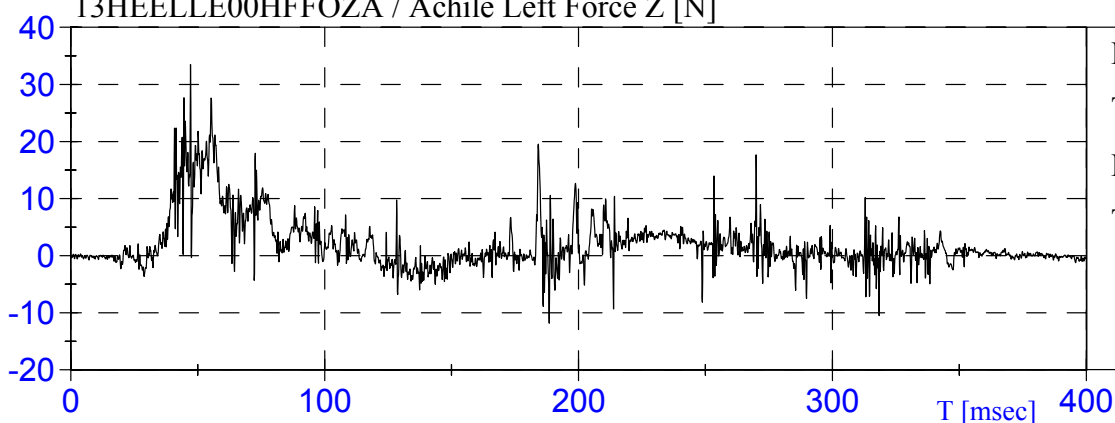
13ANKLLE00HFANYA / Ankle Left Angle Y [degree]

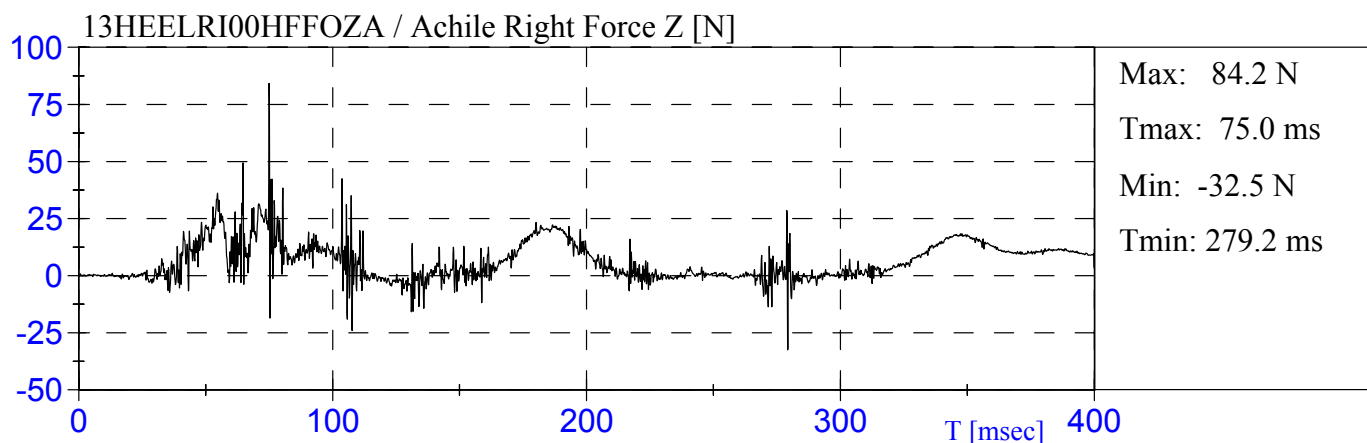
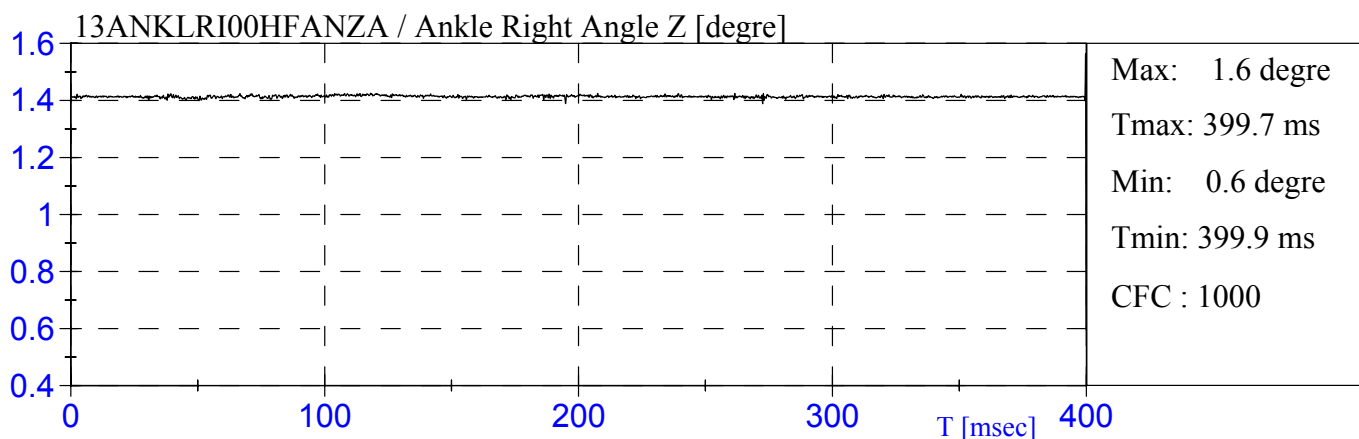
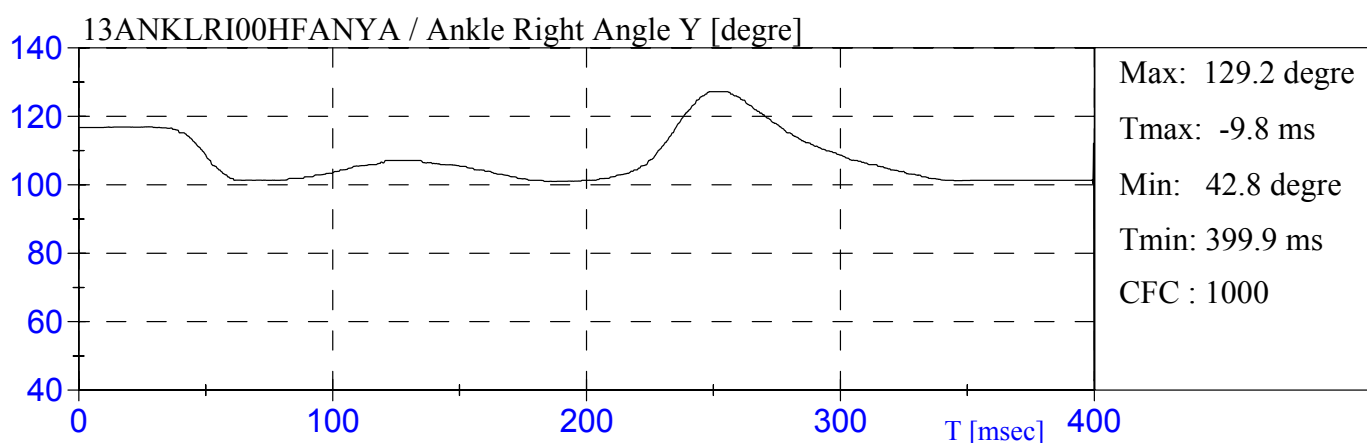
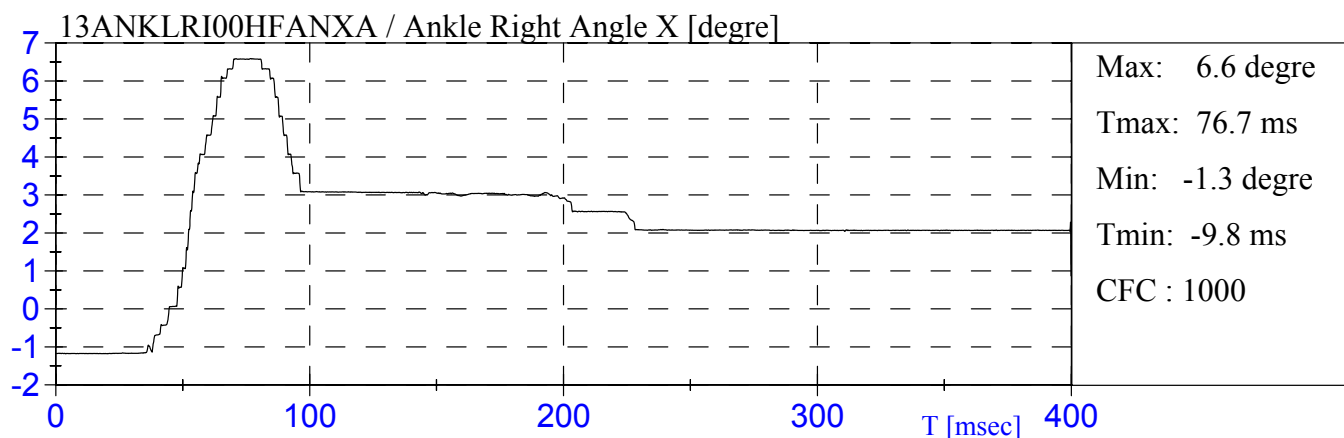


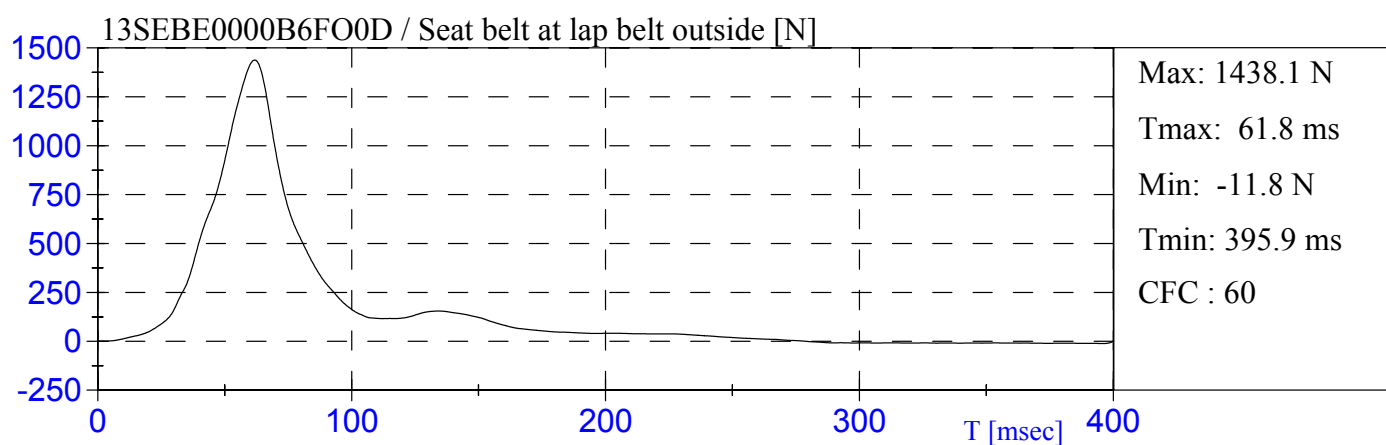
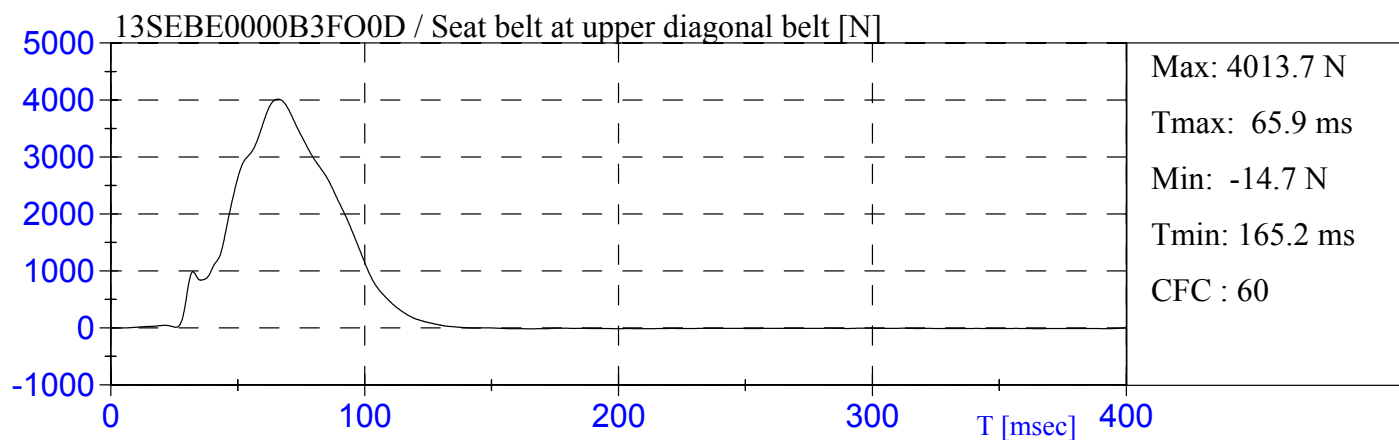
13ANKLLE00HFANZA / Ankle Left Angle Z [degree]

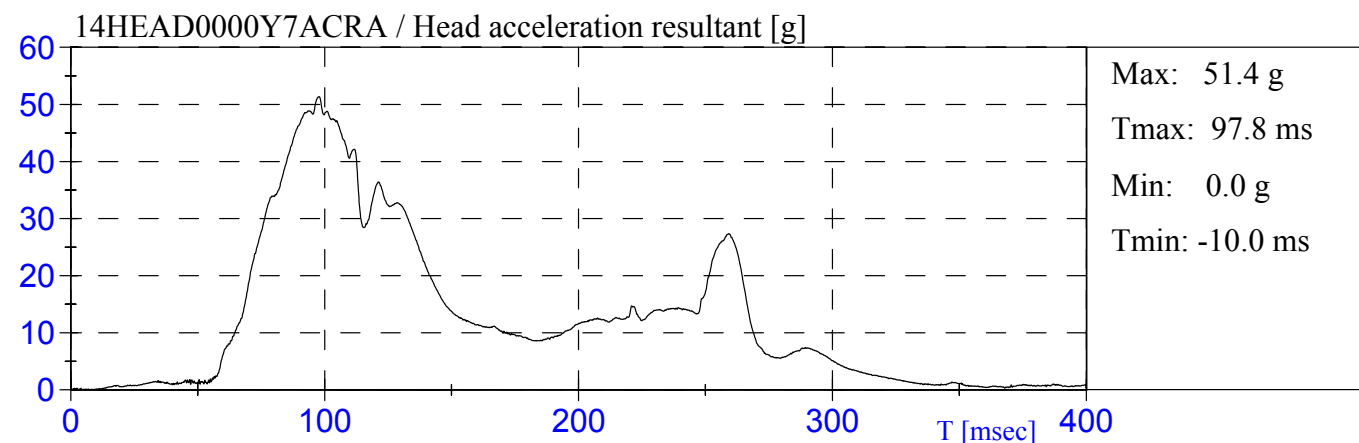
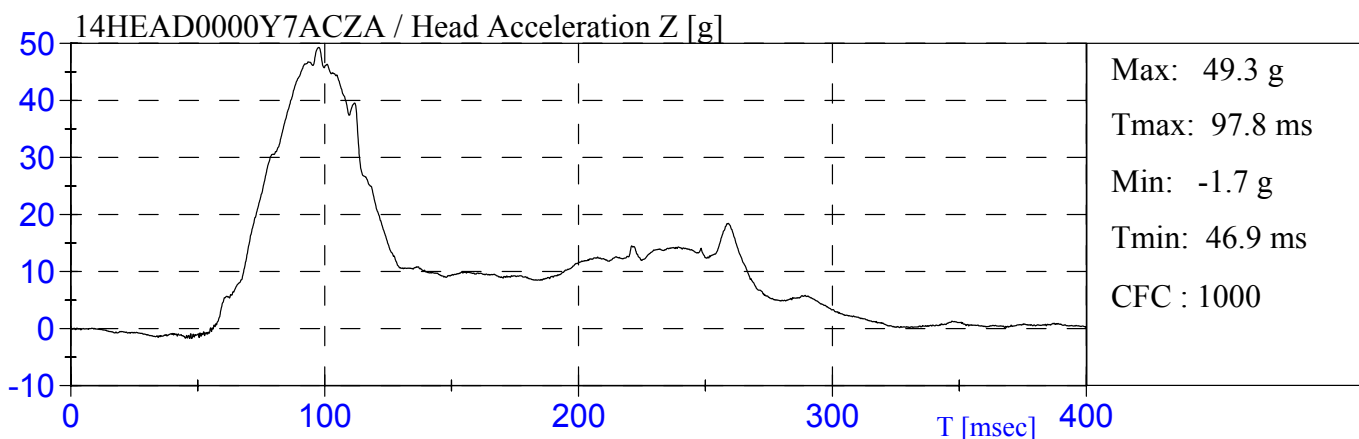
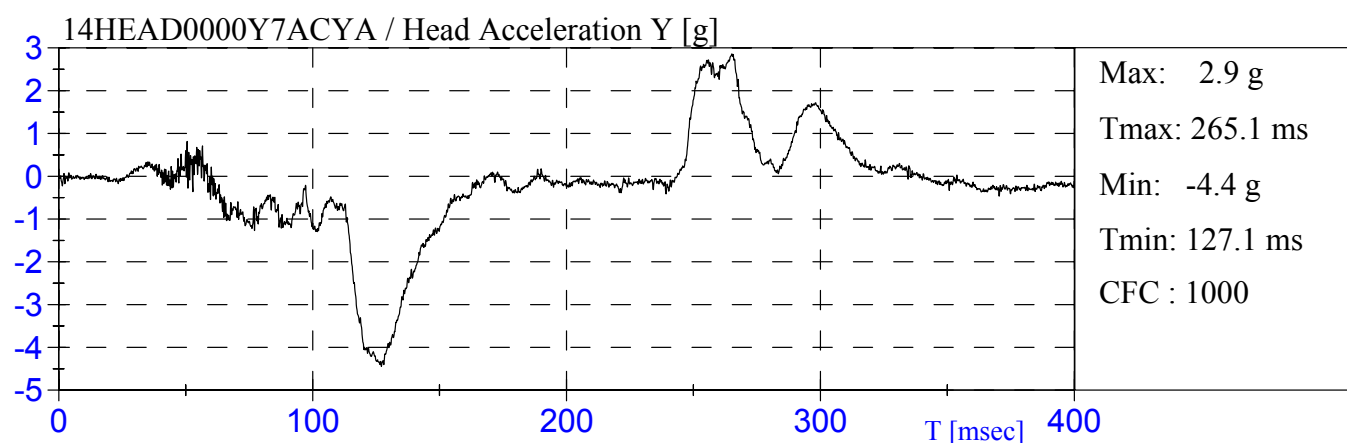
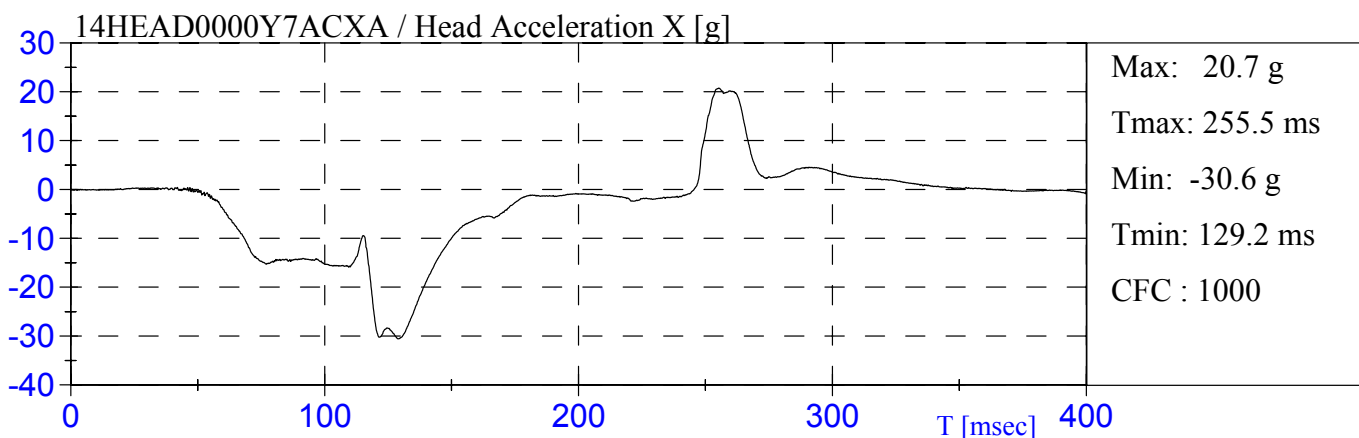


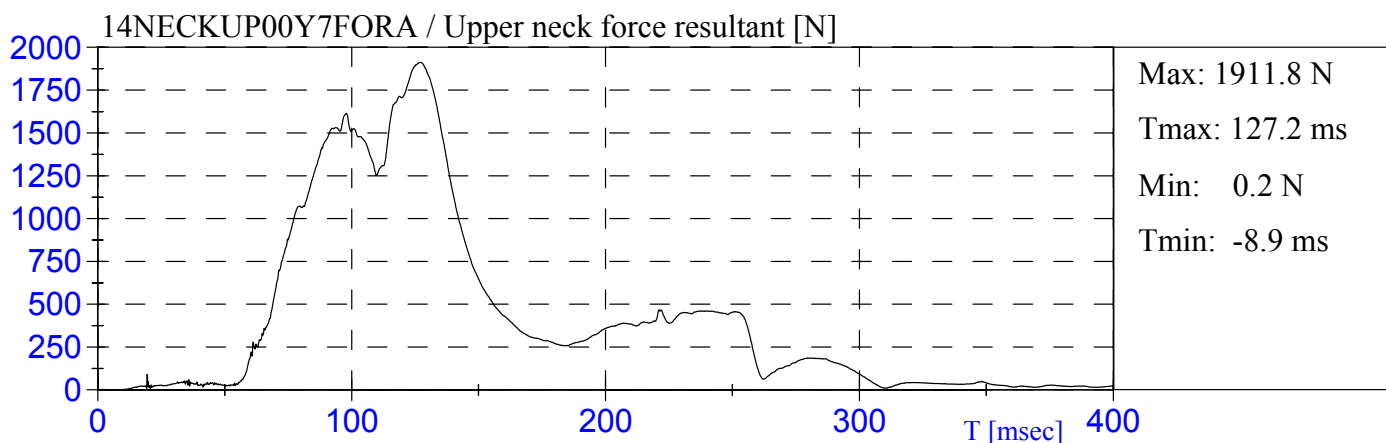
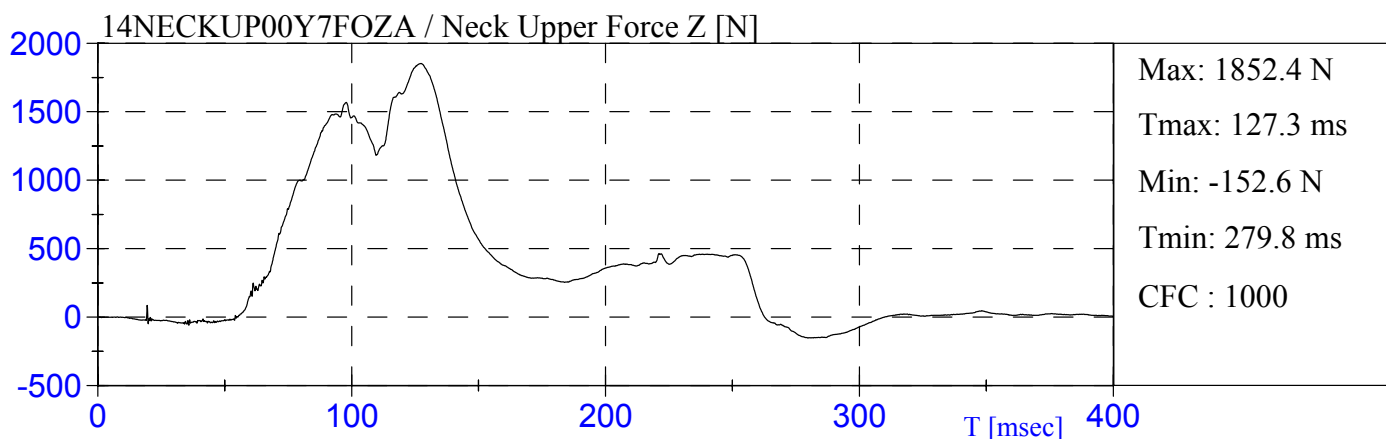
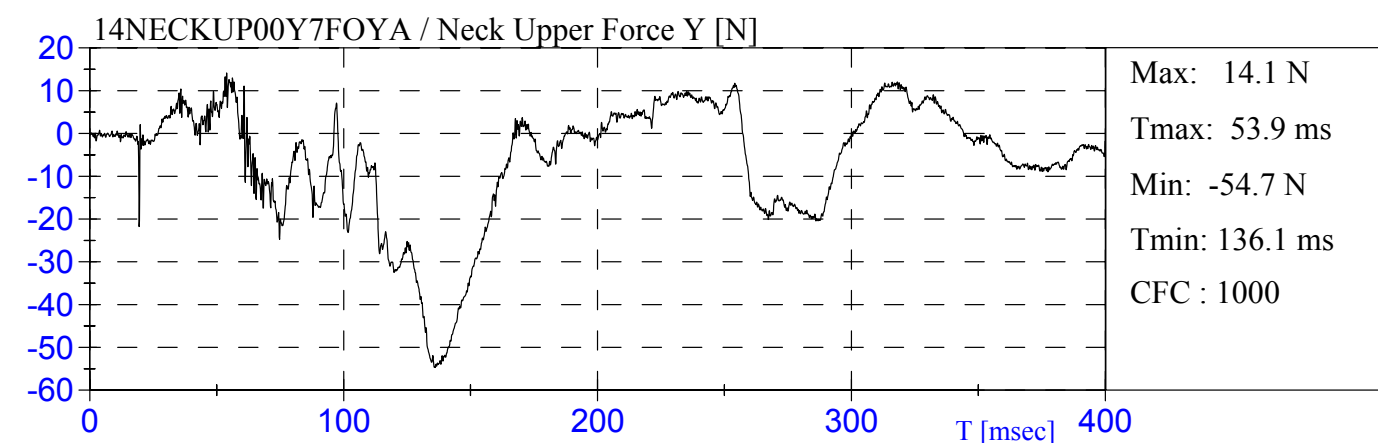
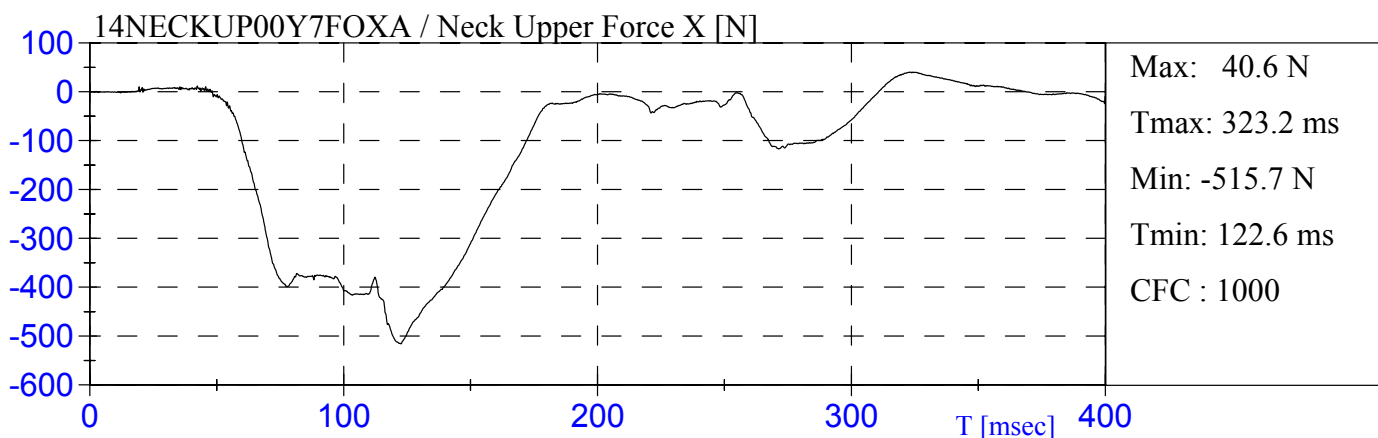
13HEELLE00HFFOZA / Achile Left Force Z [N]

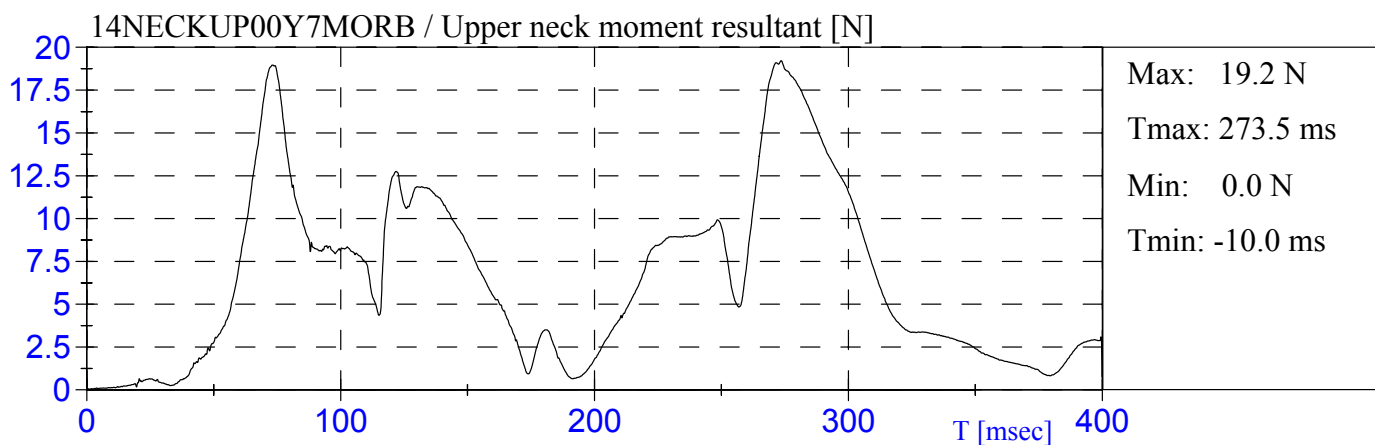
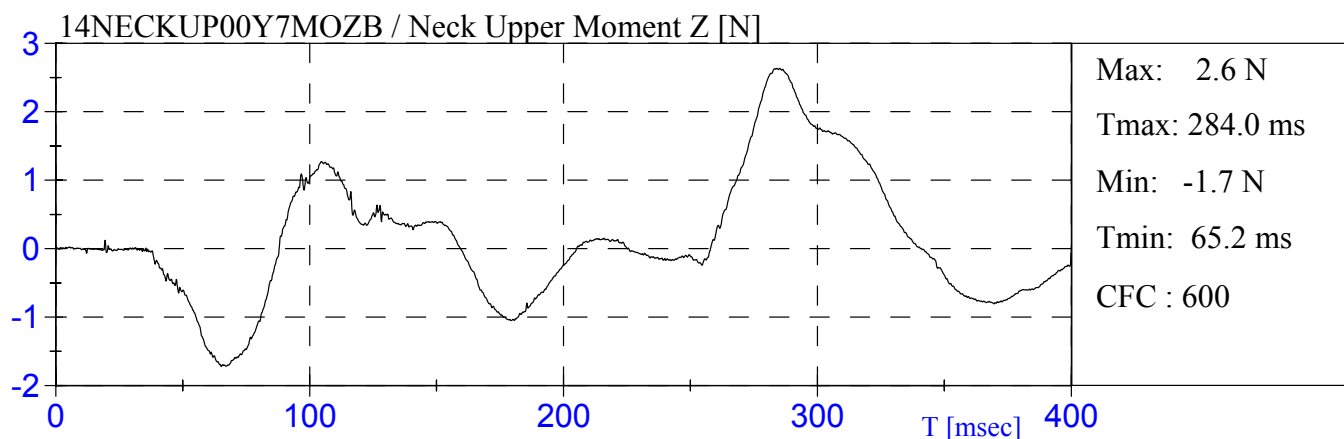
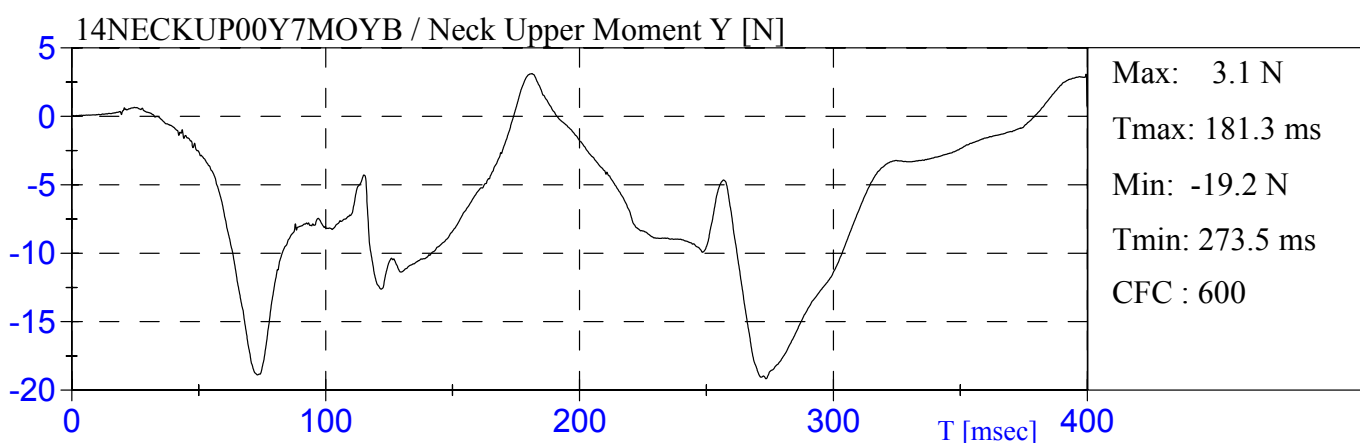
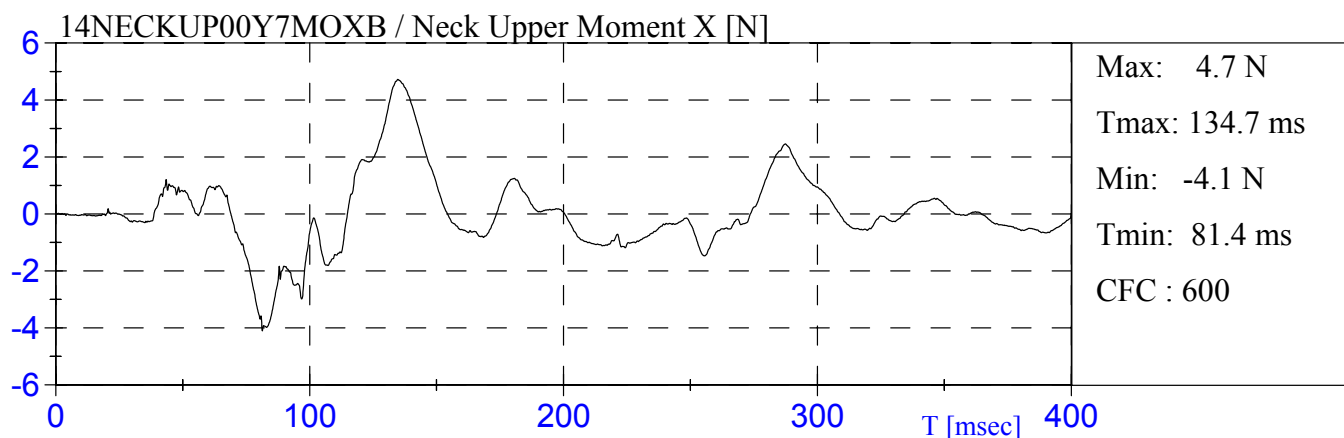


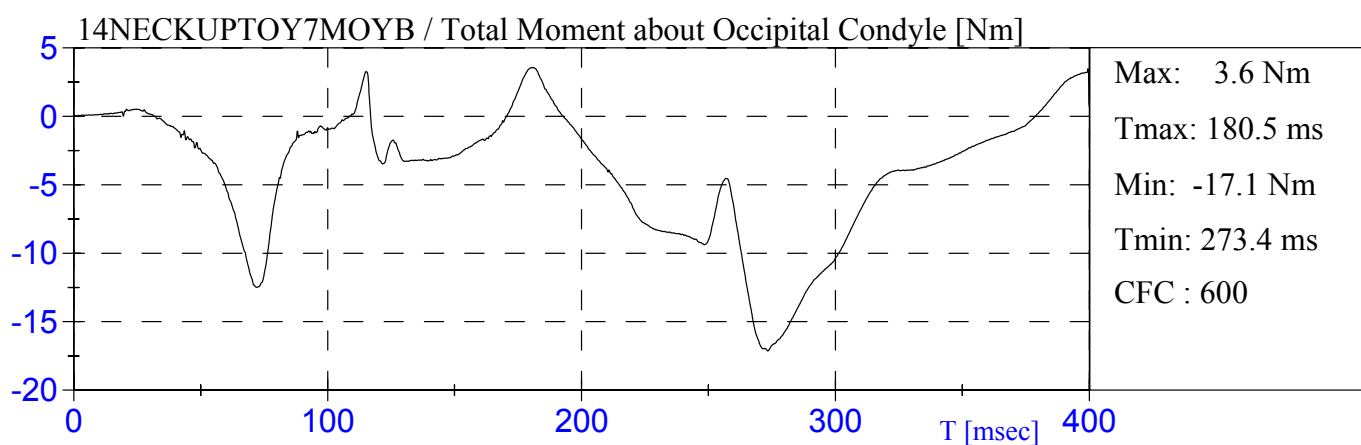
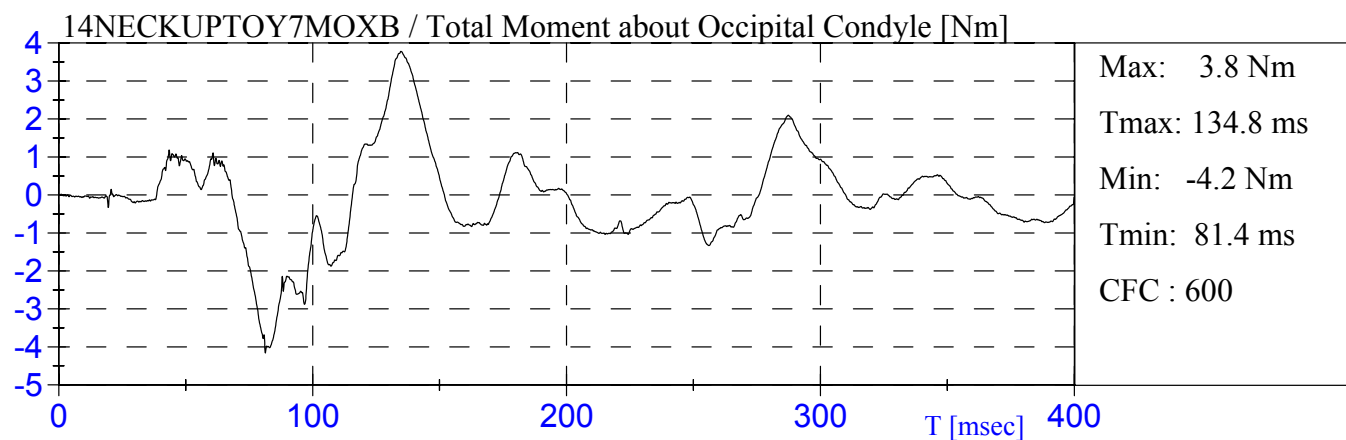


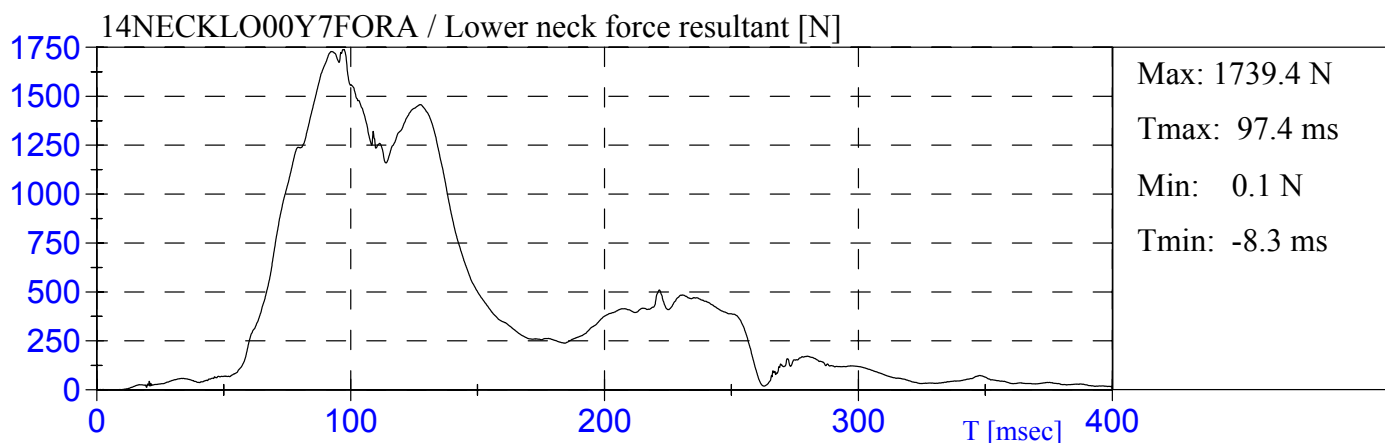
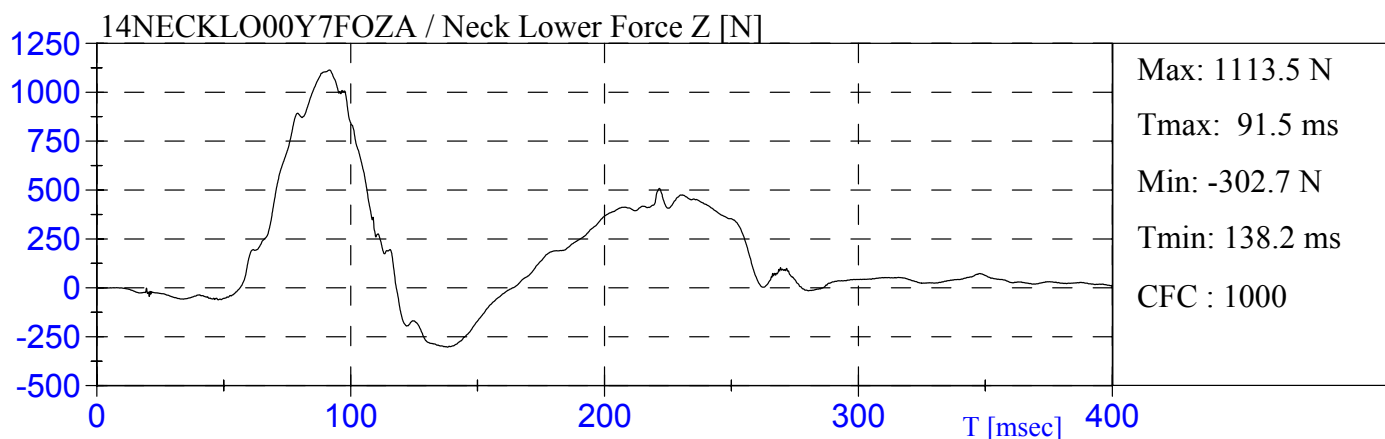
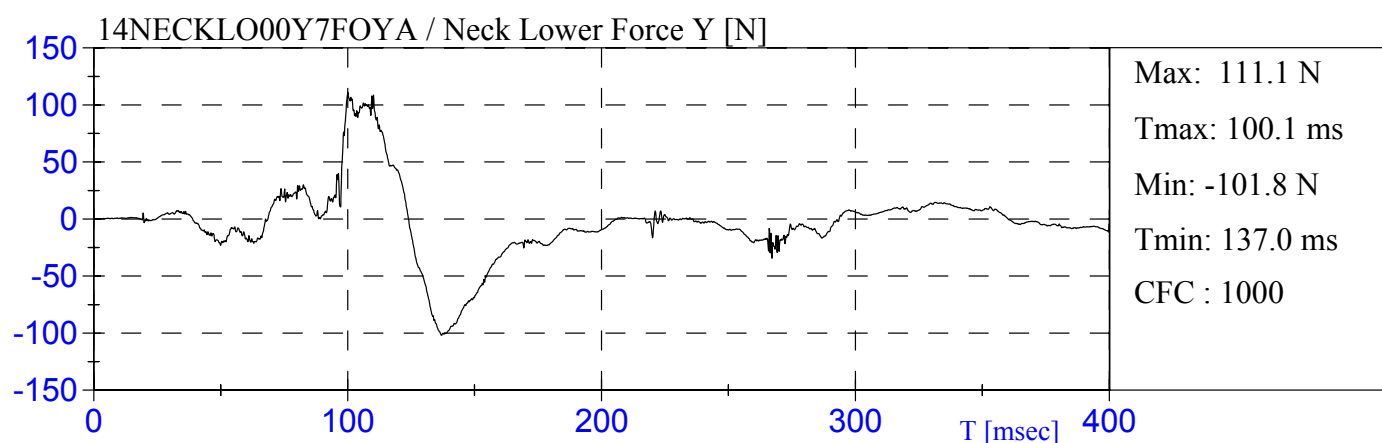
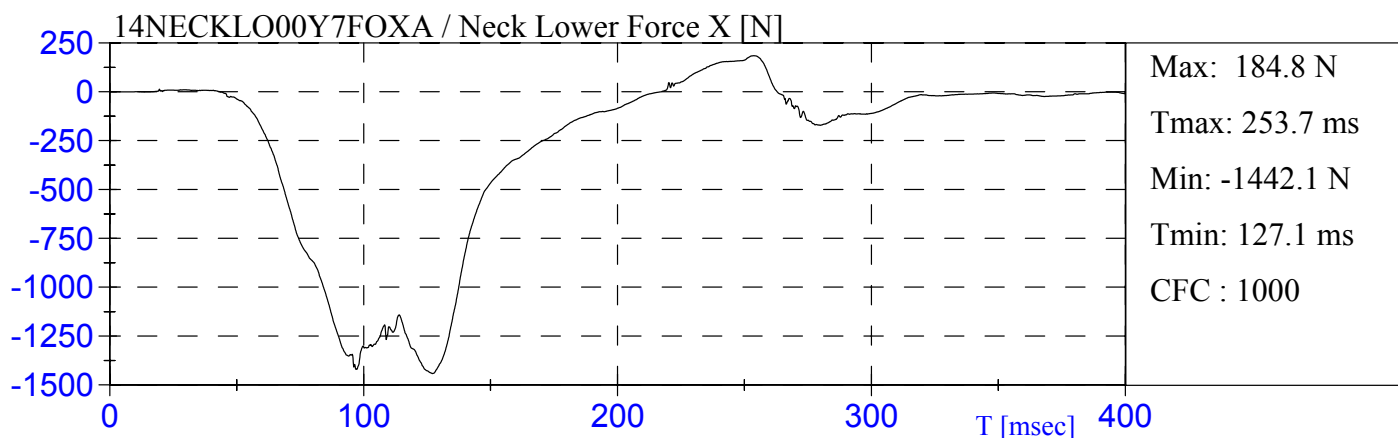


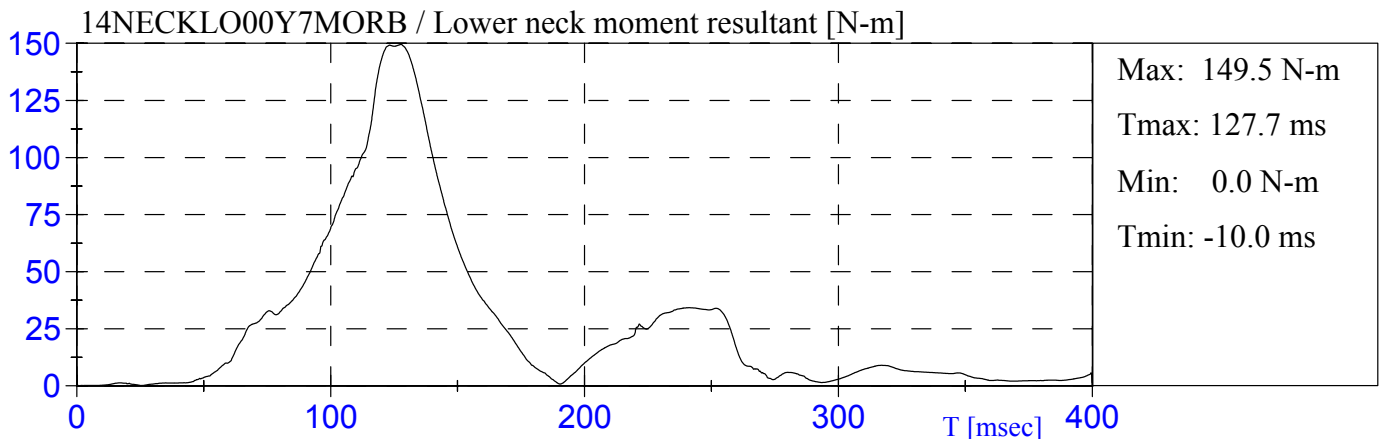
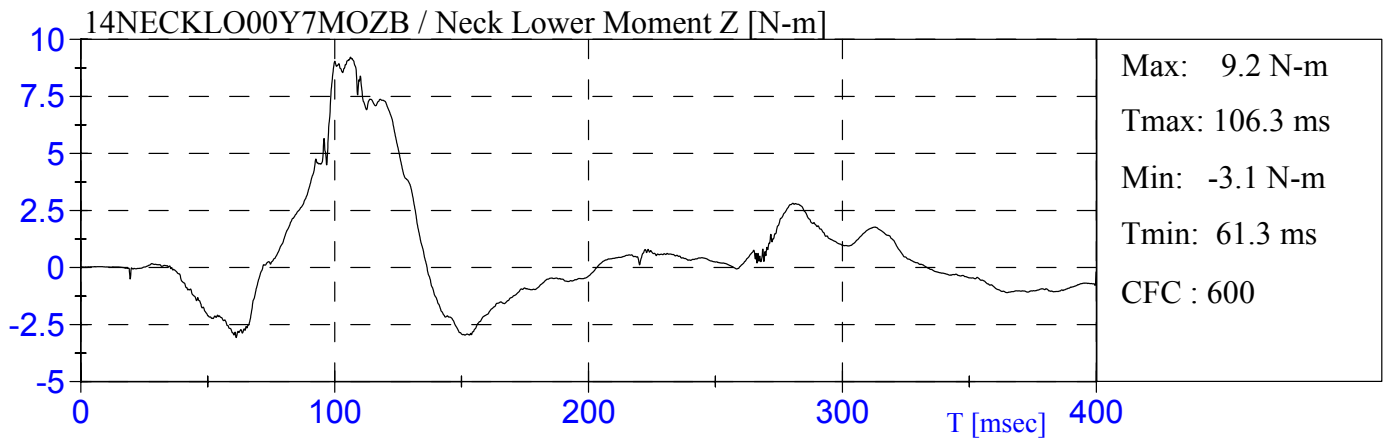
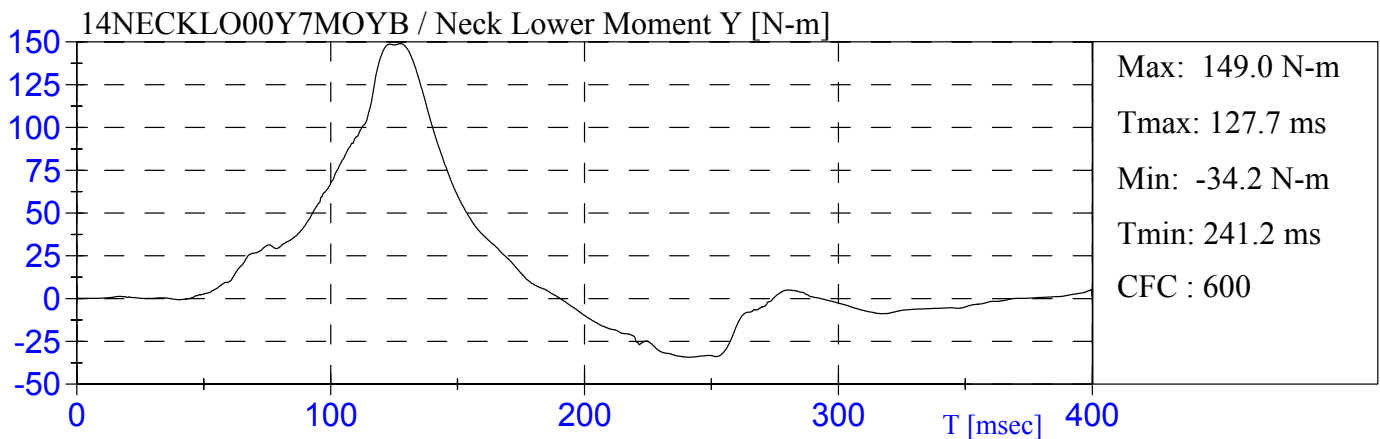
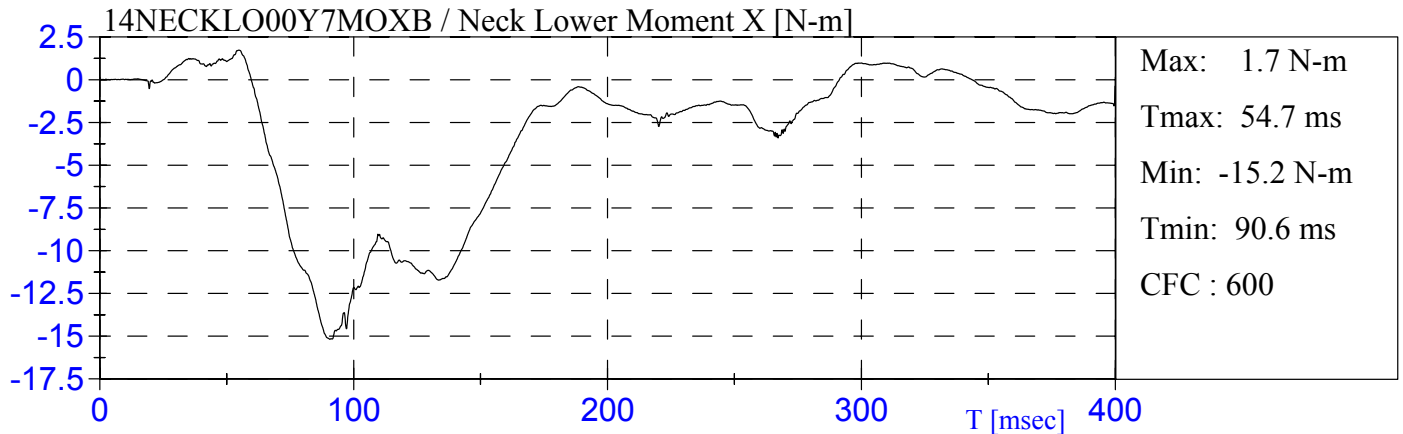


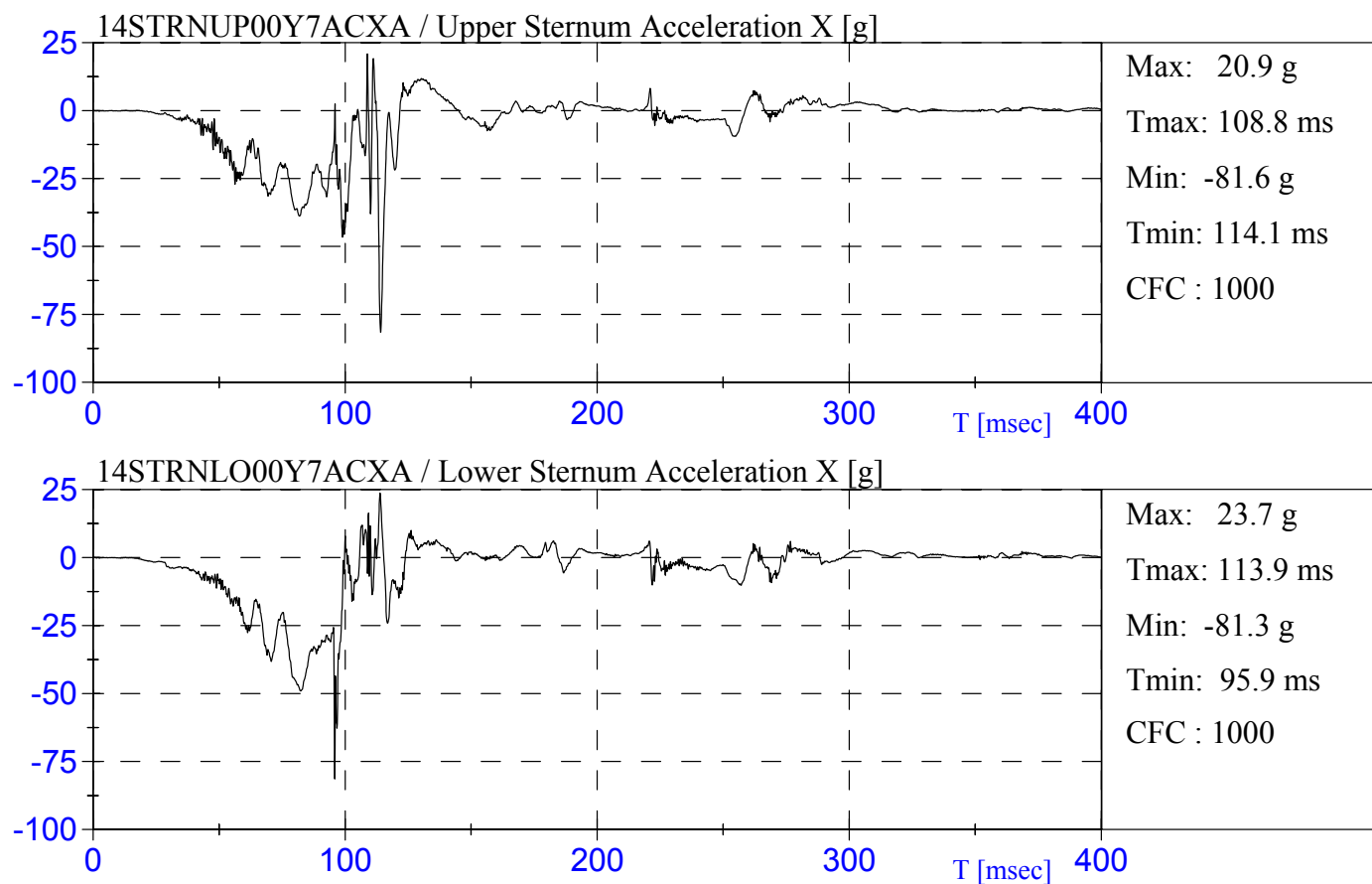


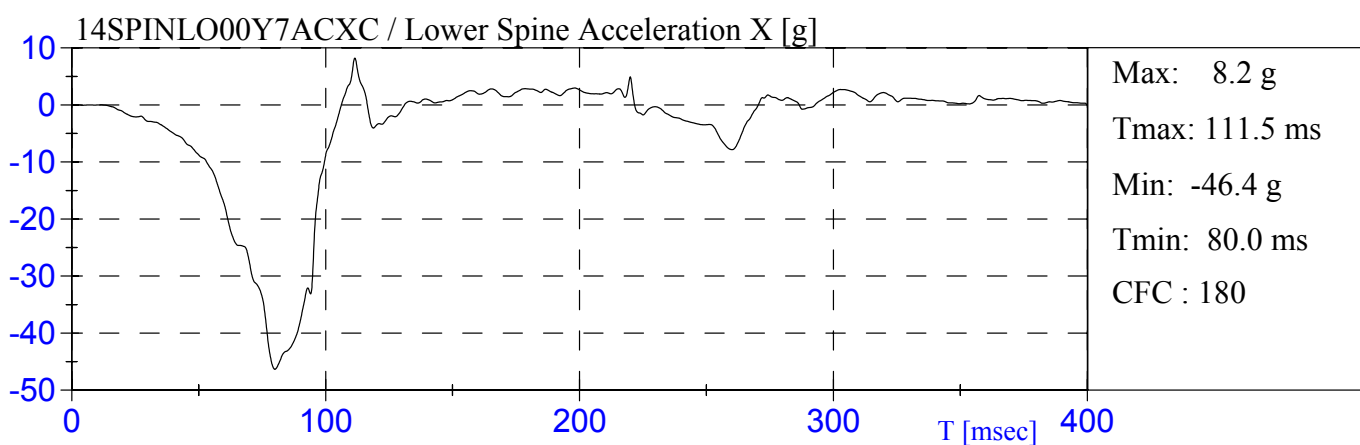
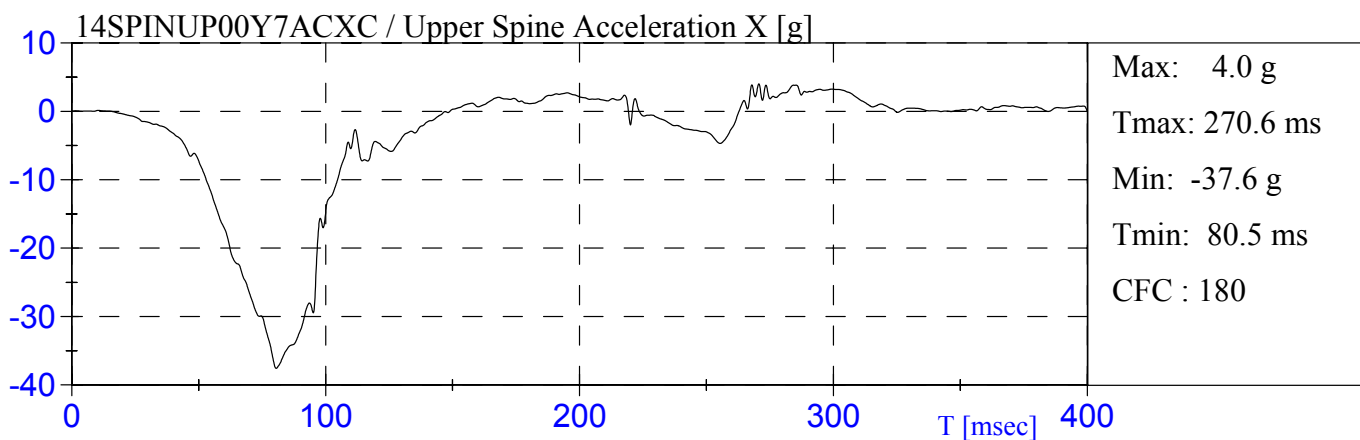


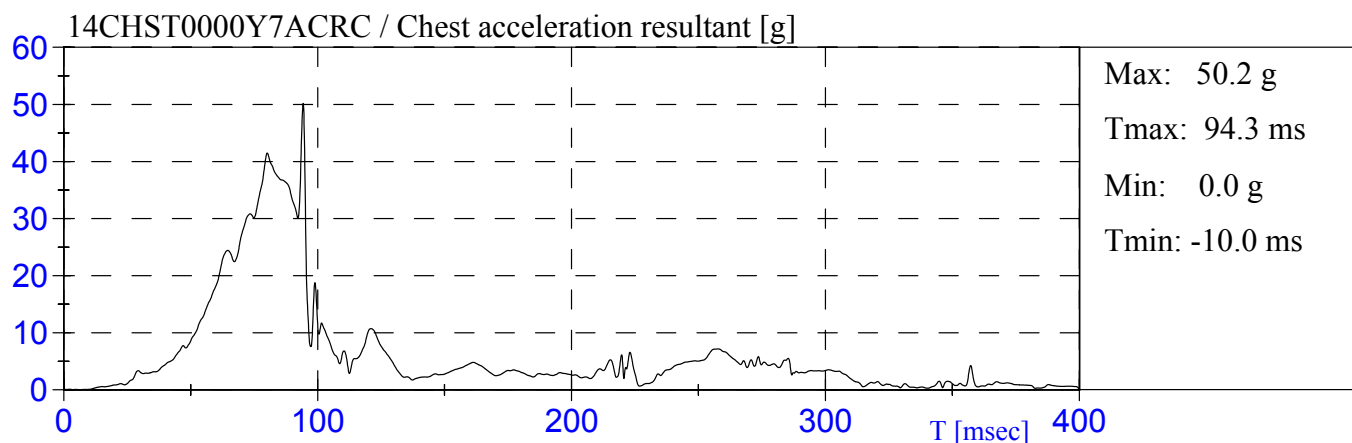
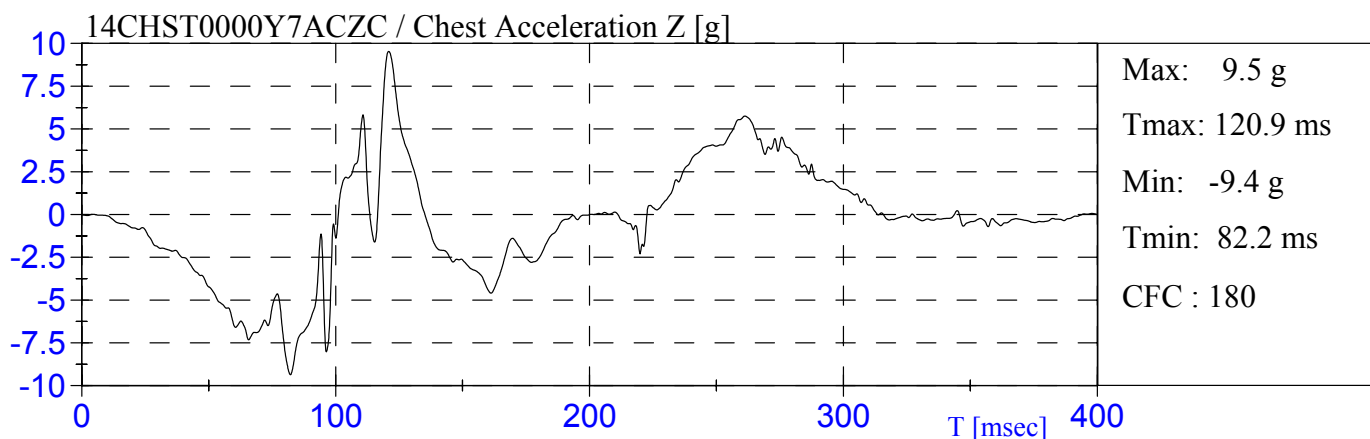
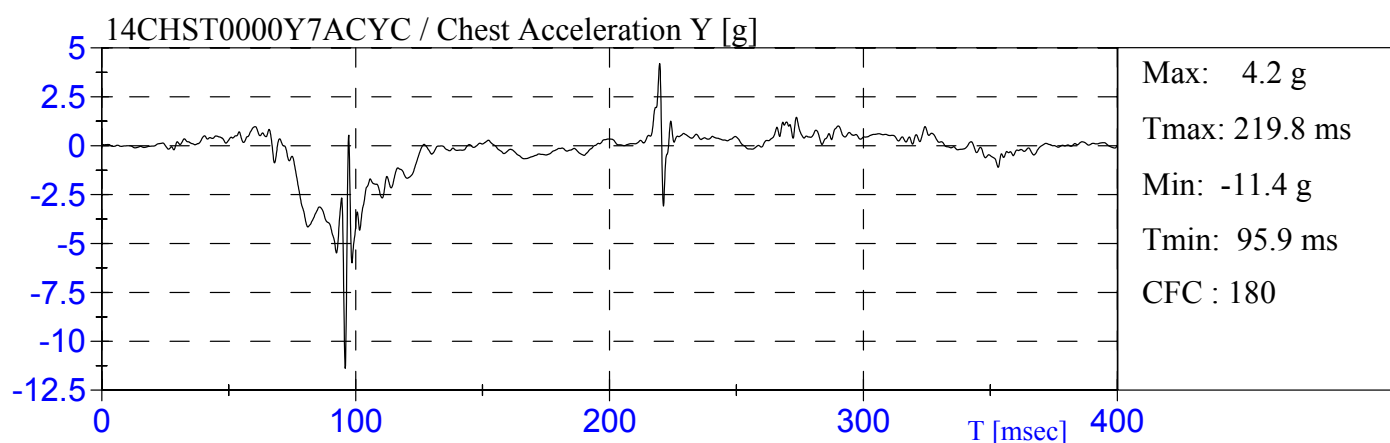
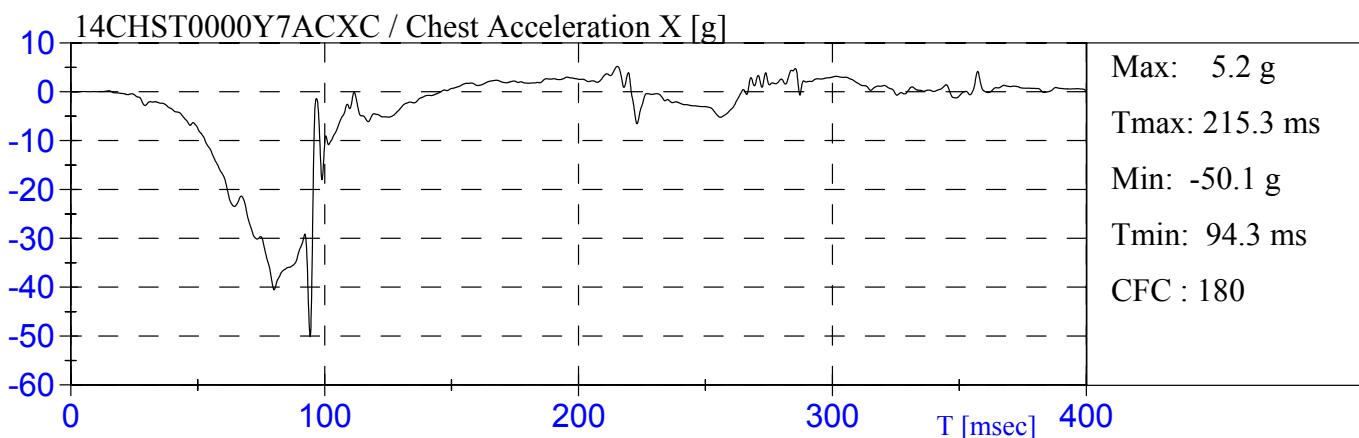


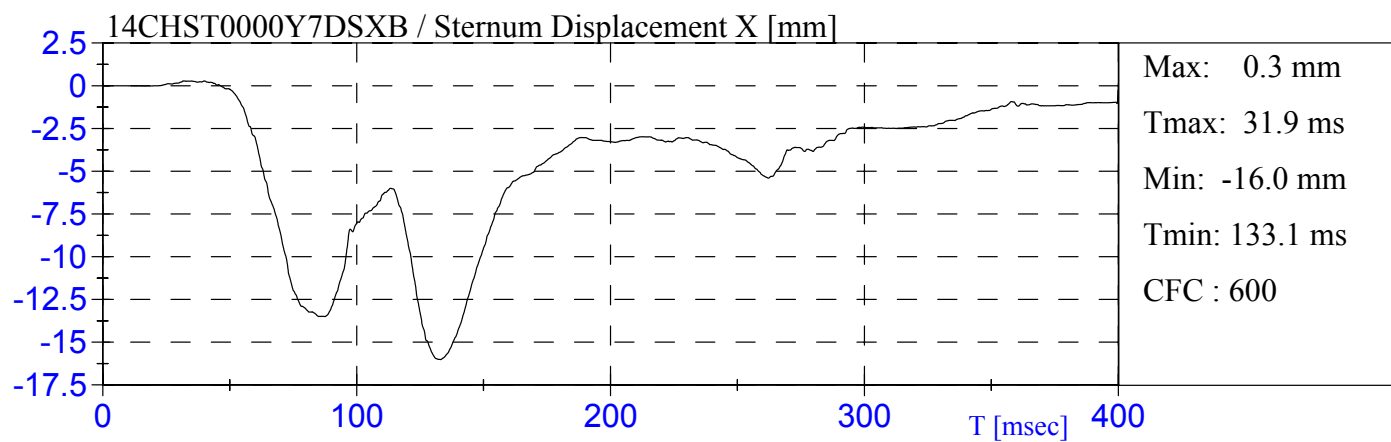


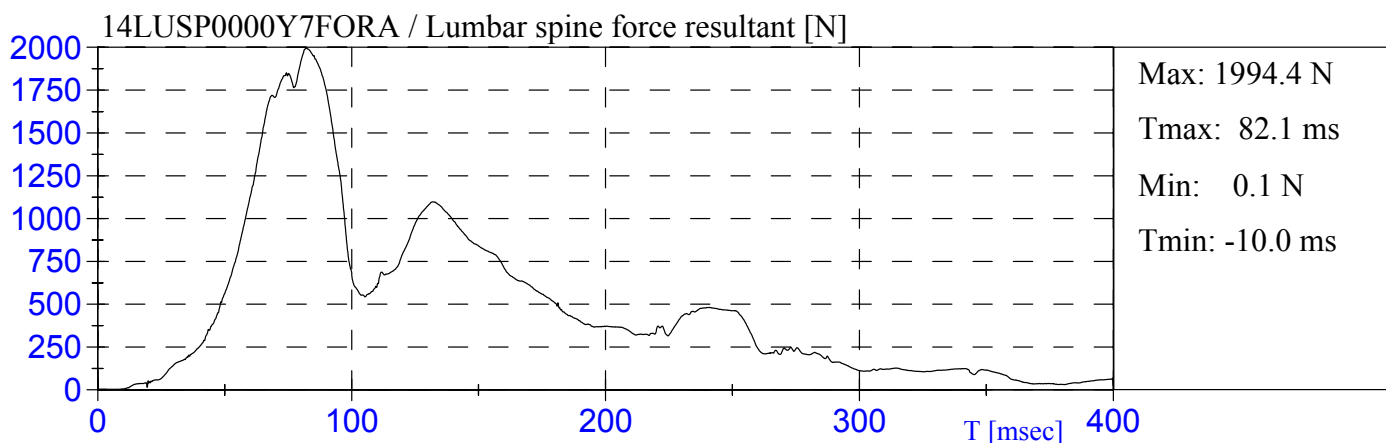
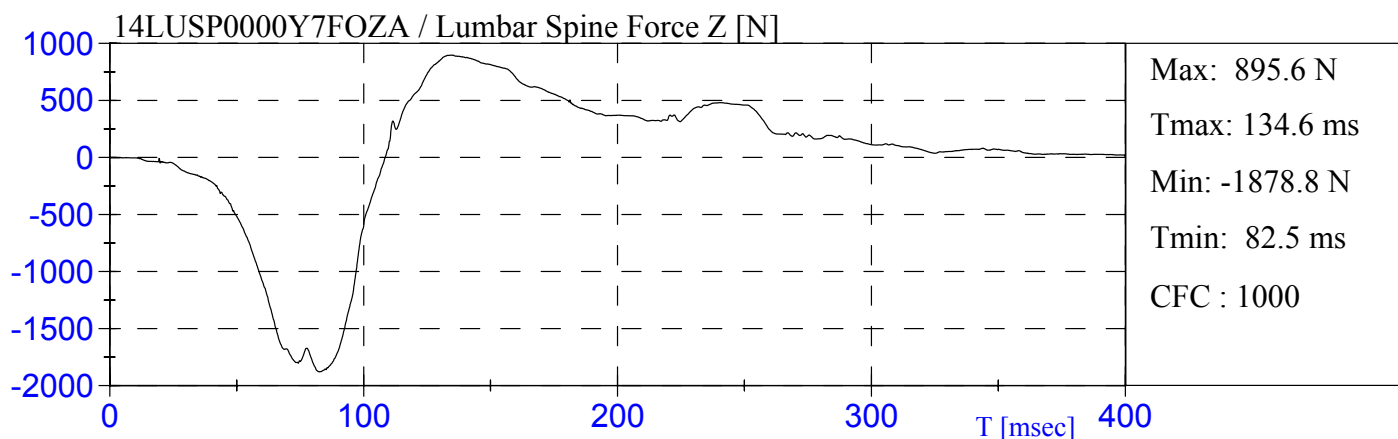
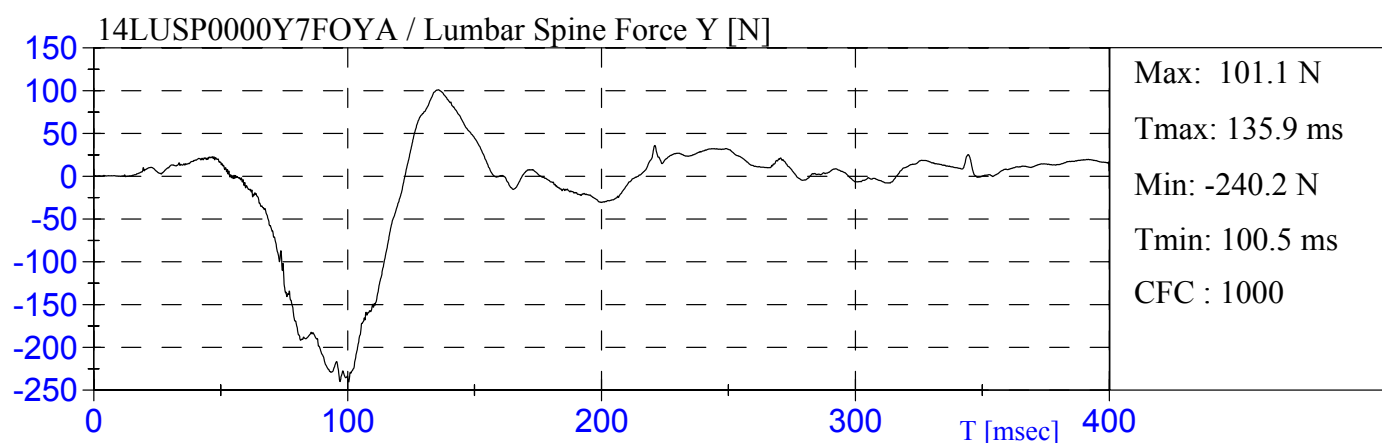
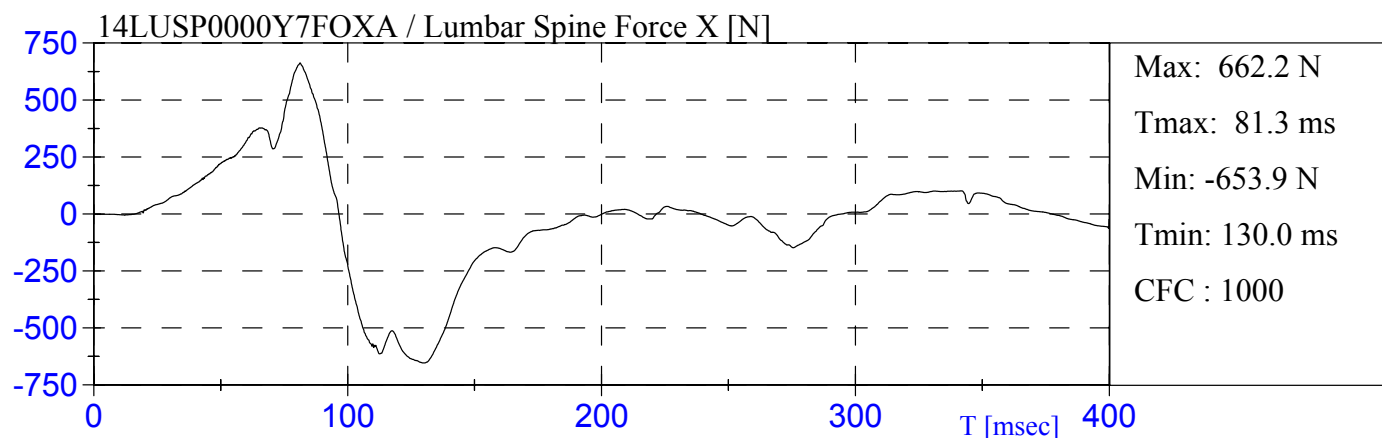


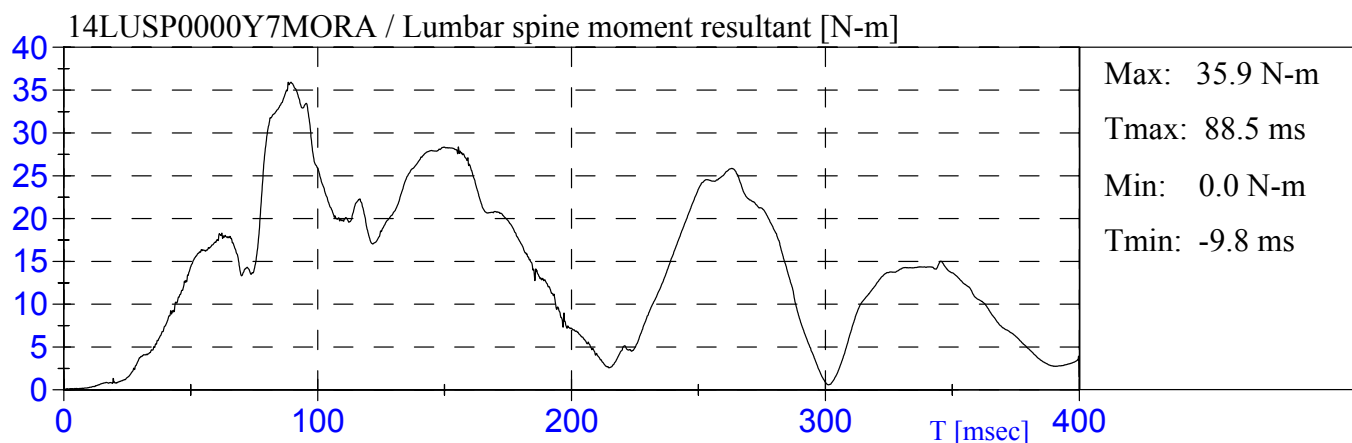
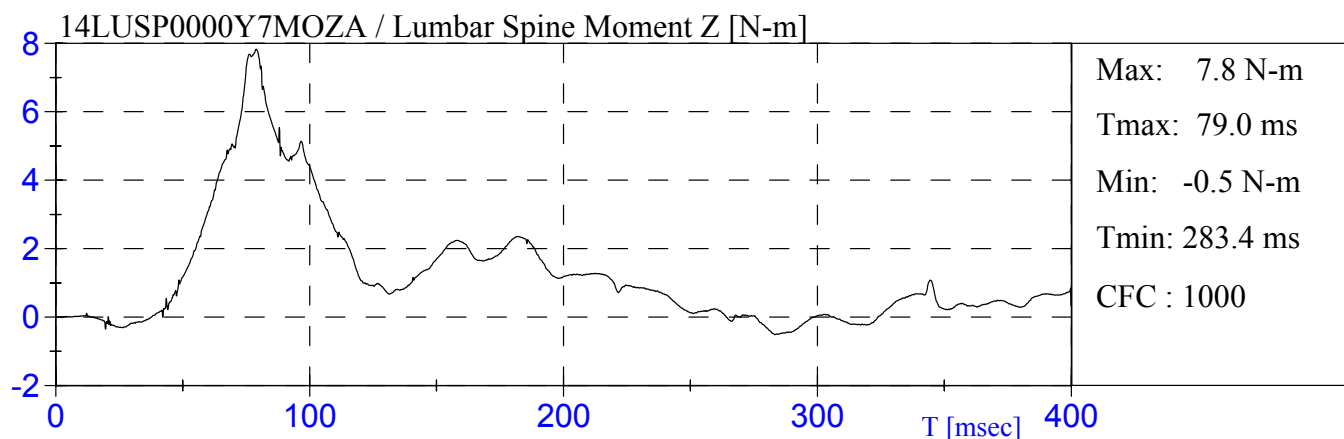
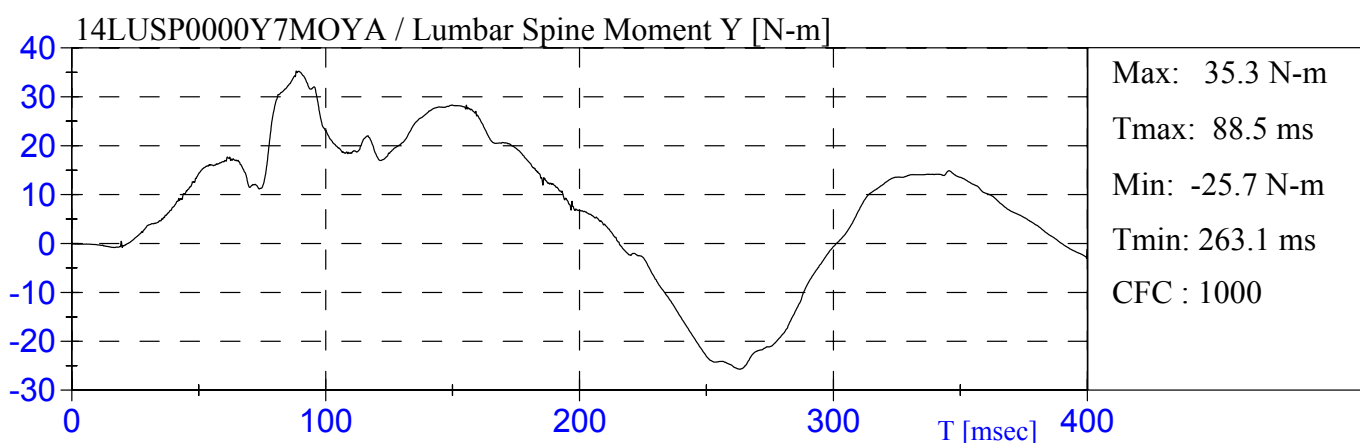
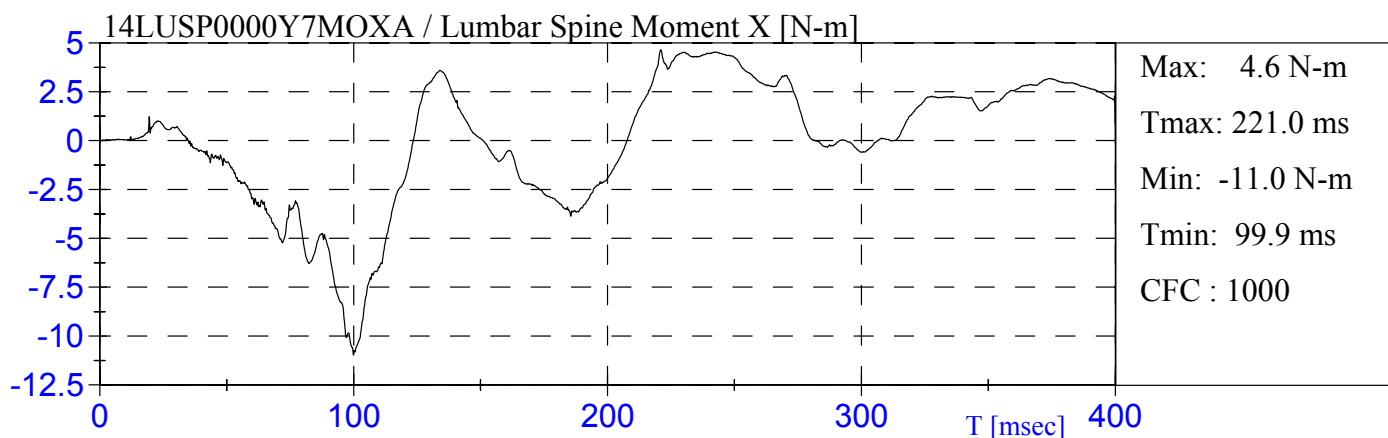


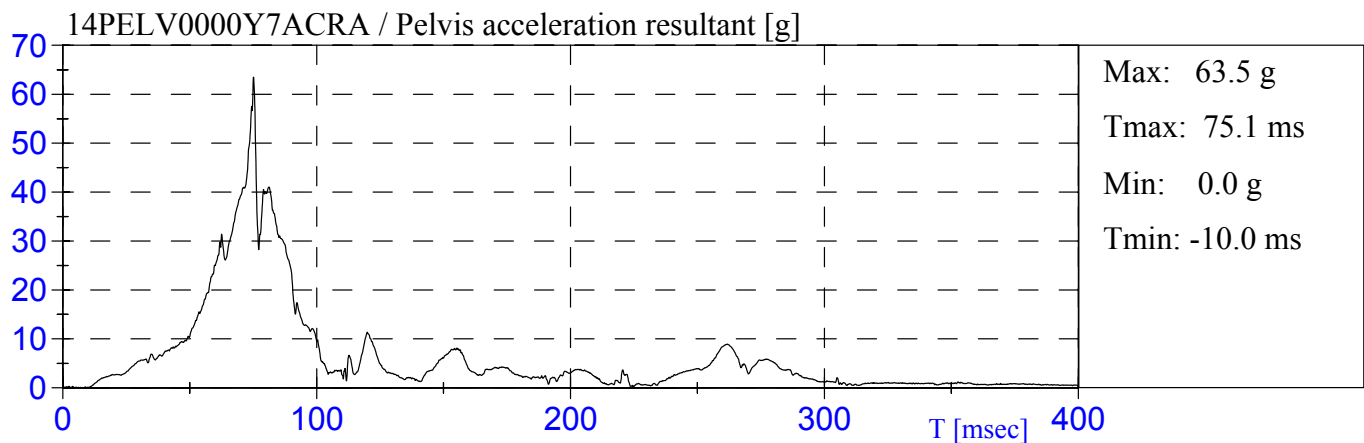
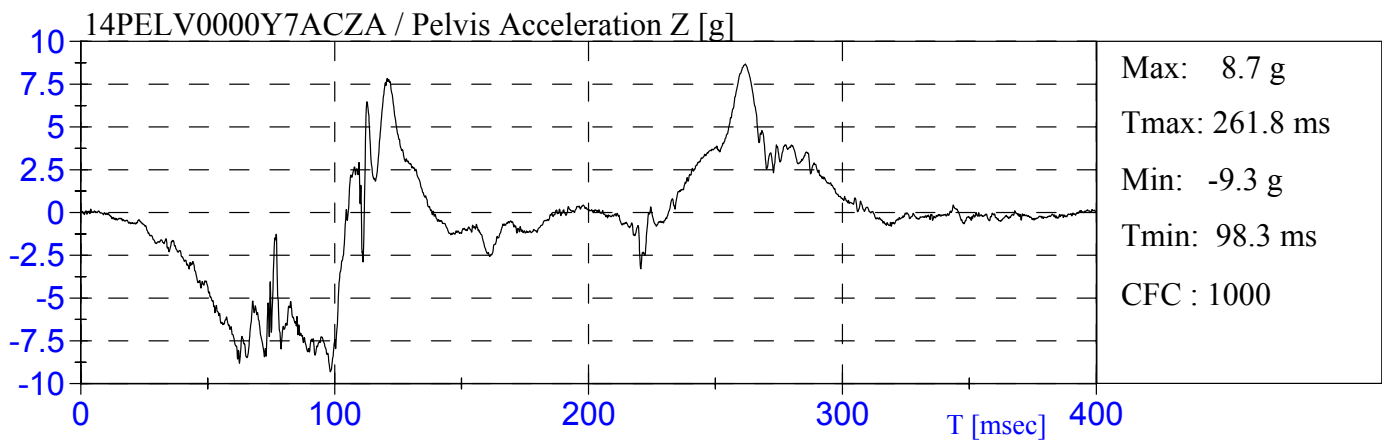
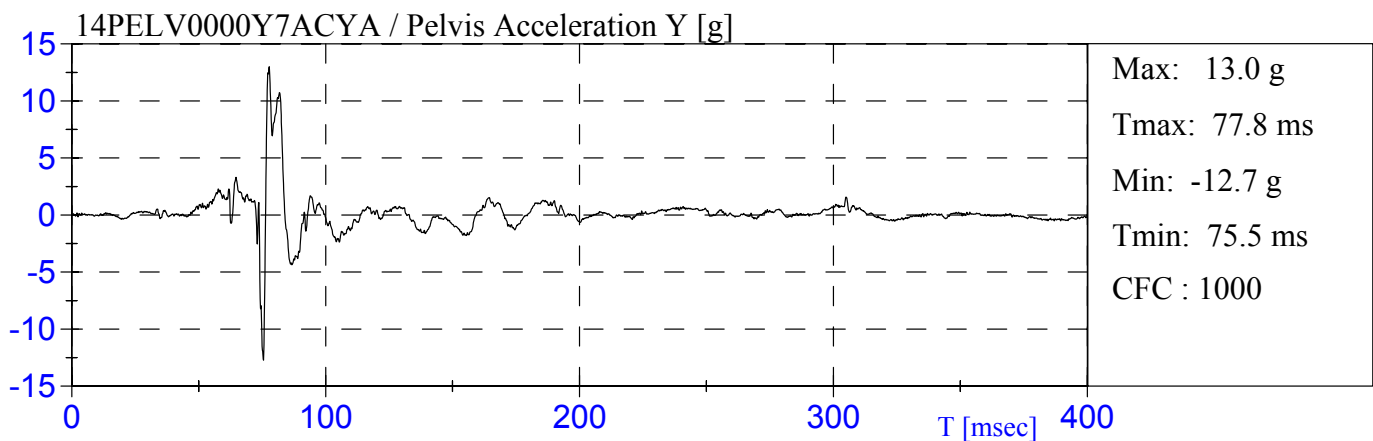
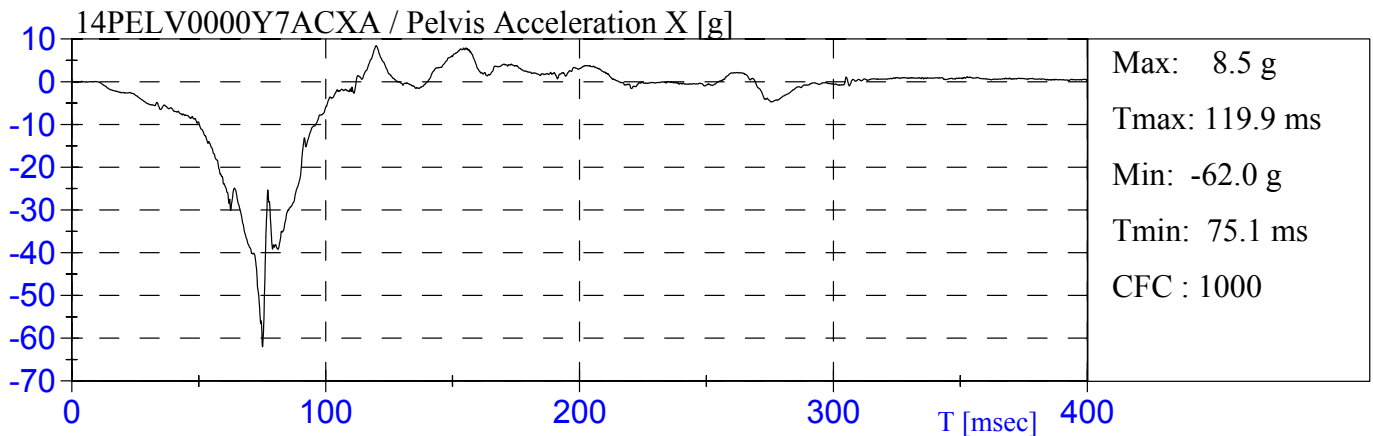


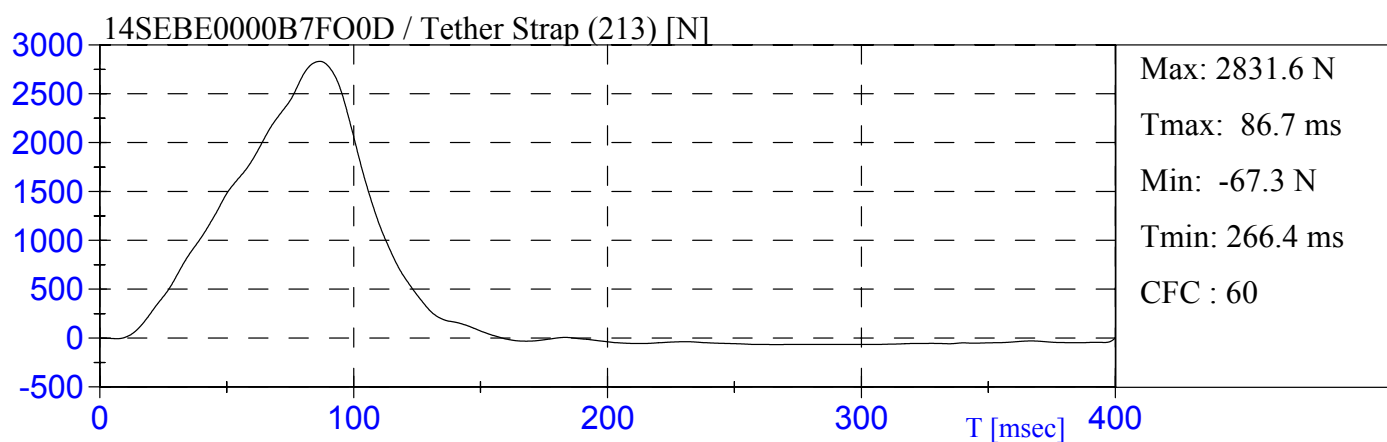


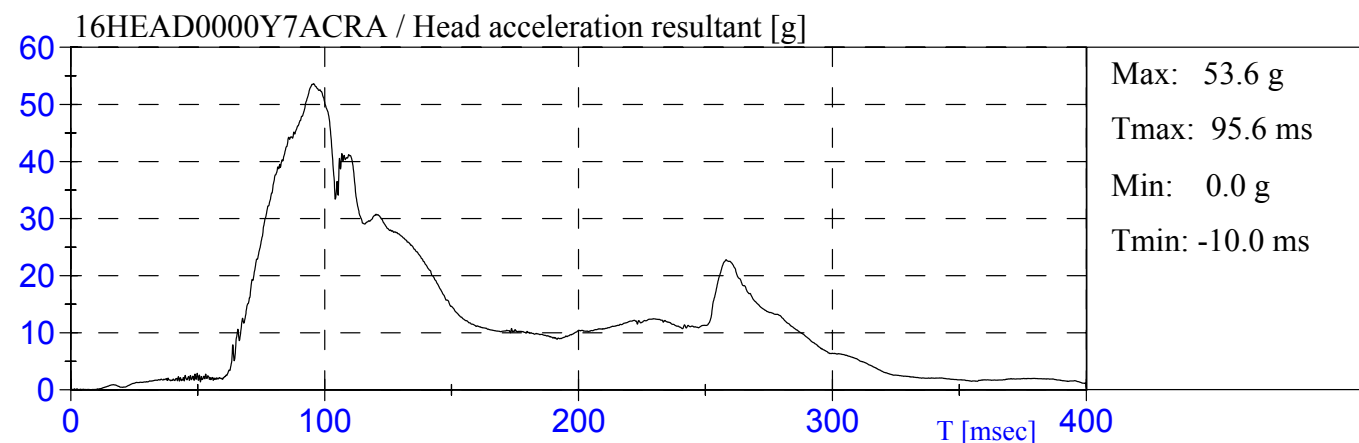
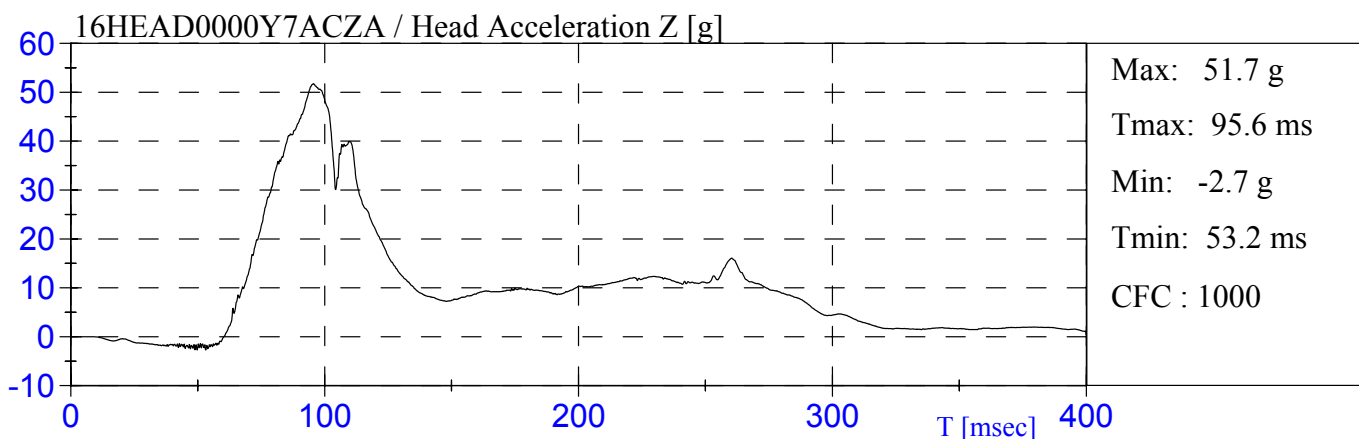
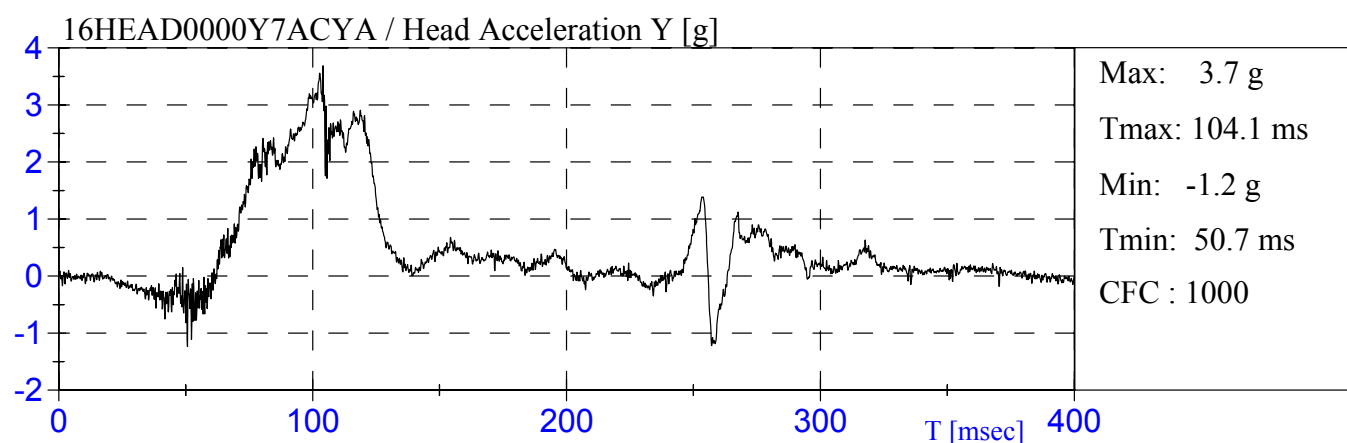
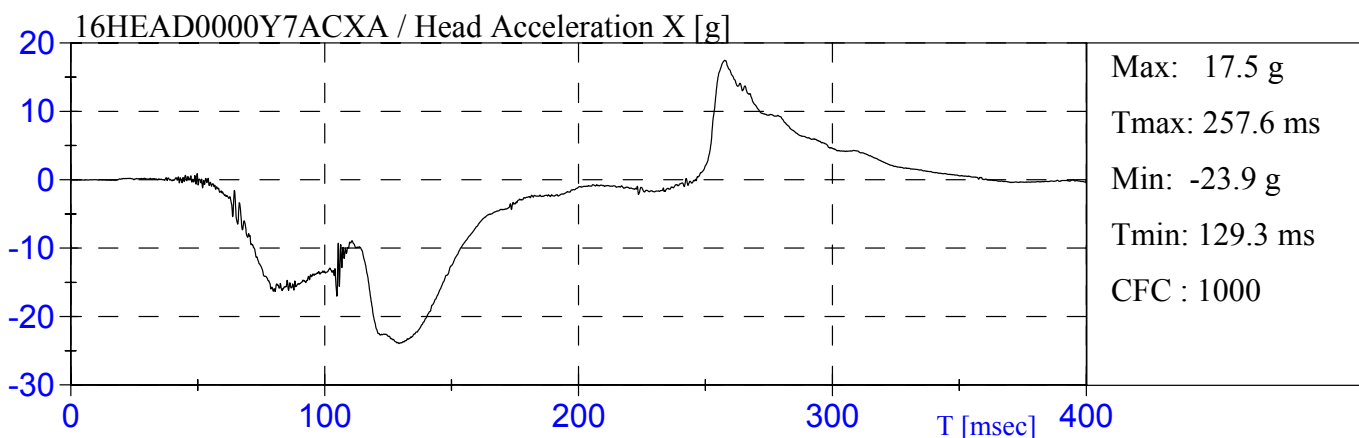


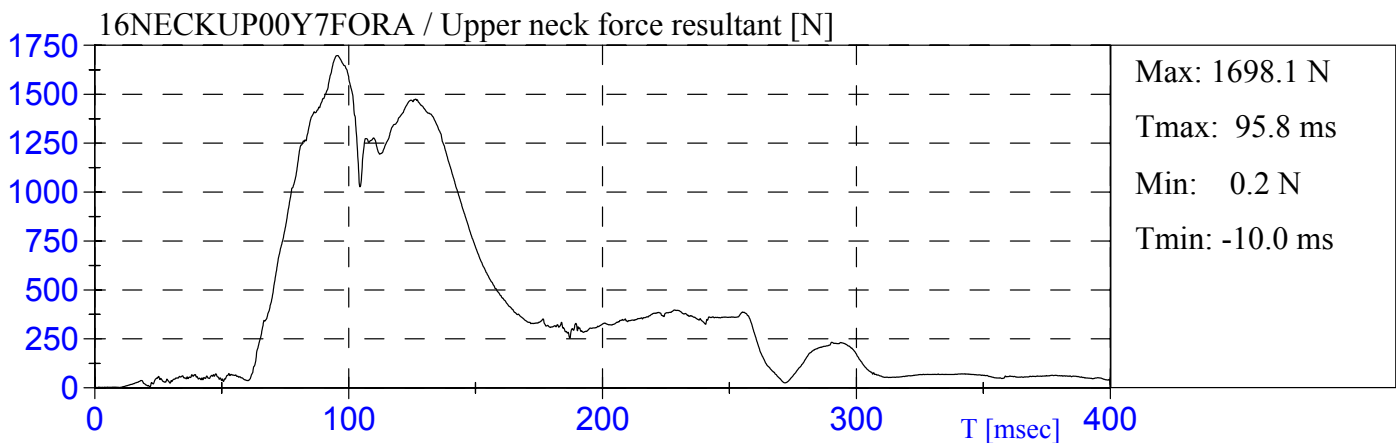
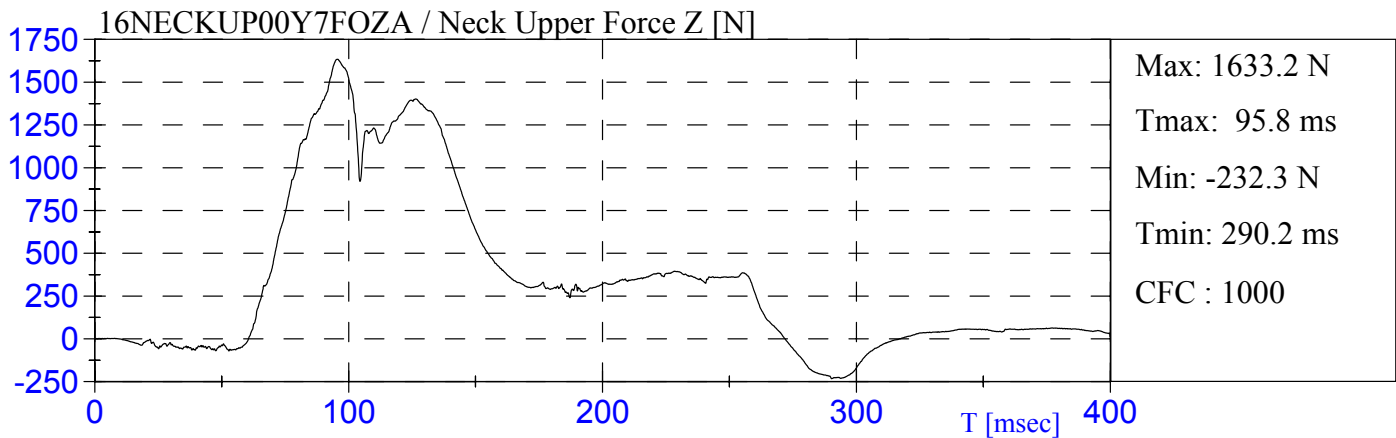
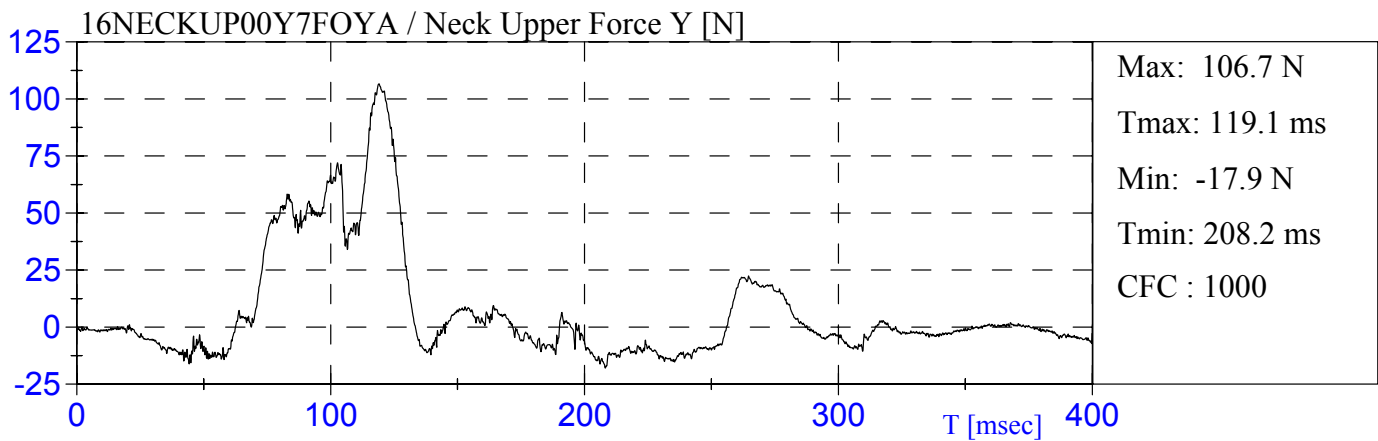
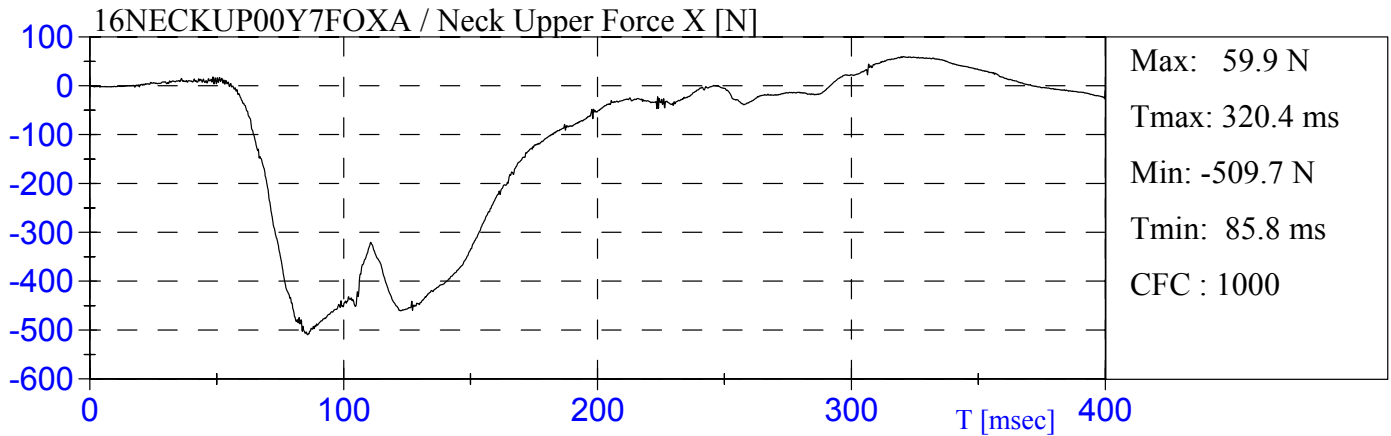


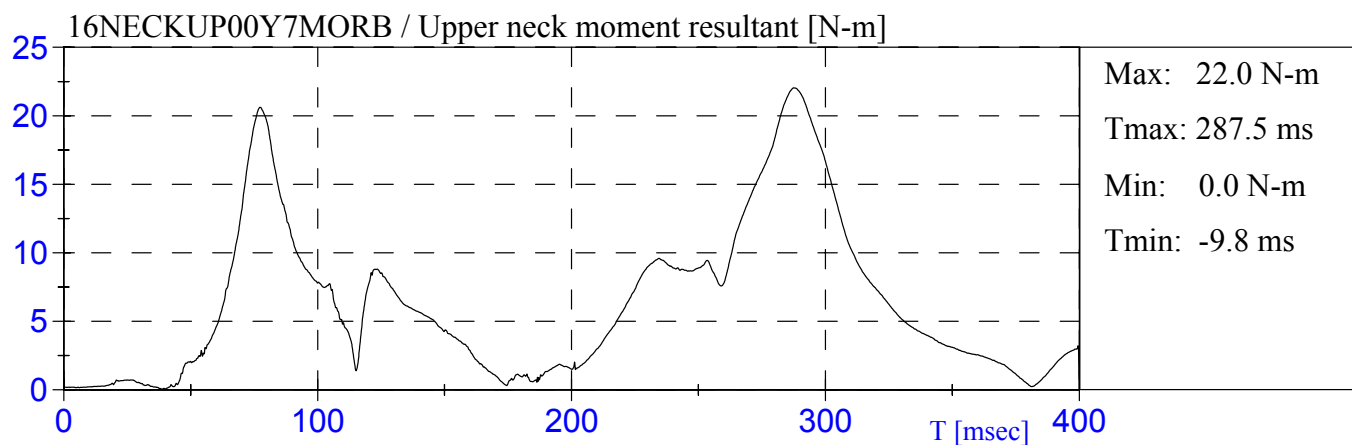
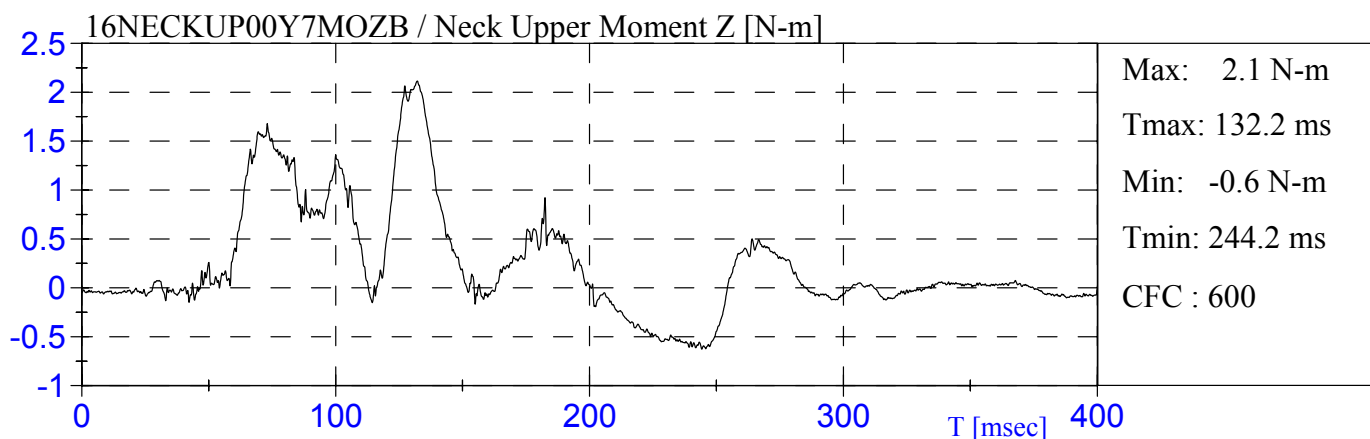
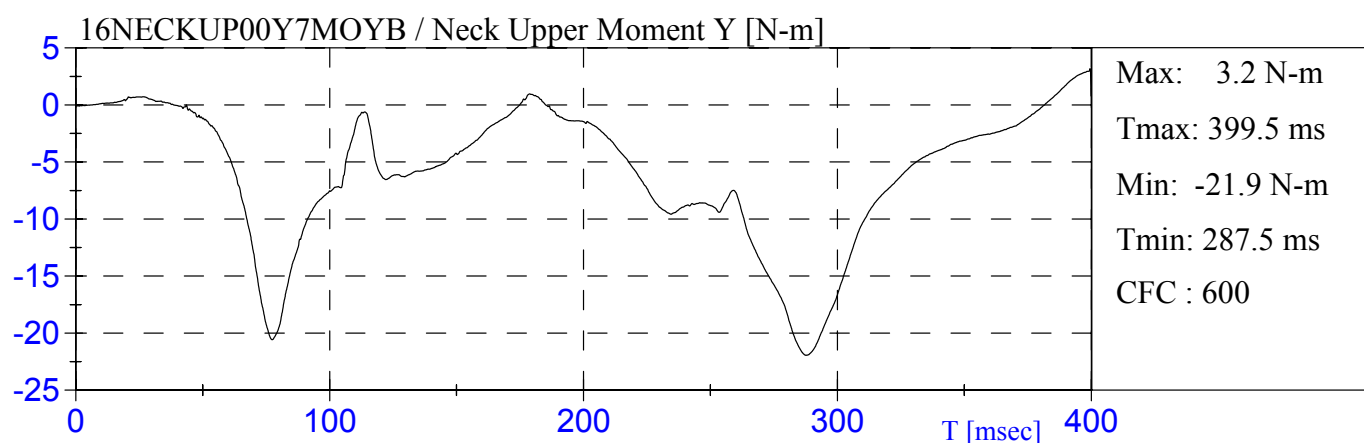
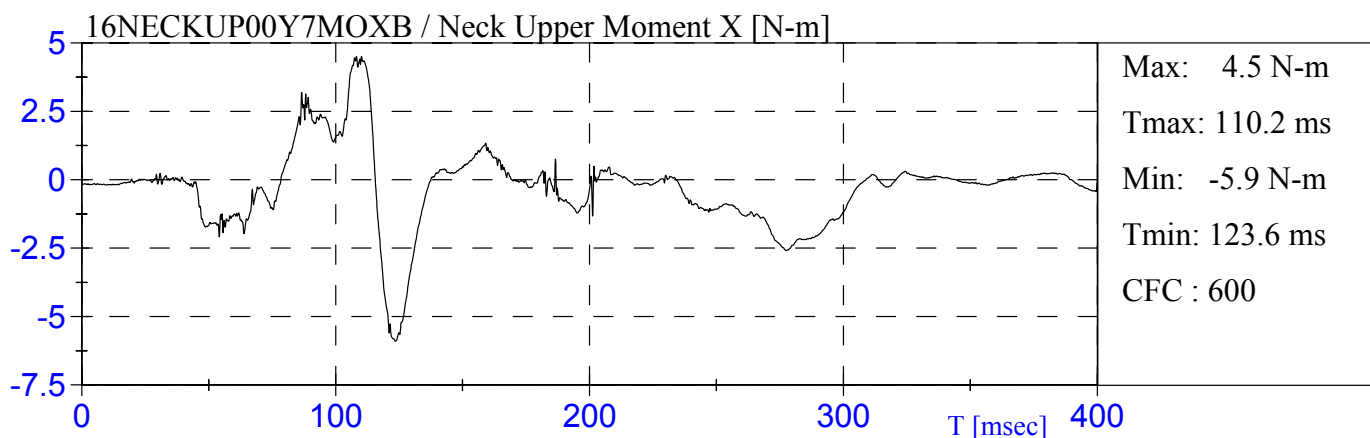


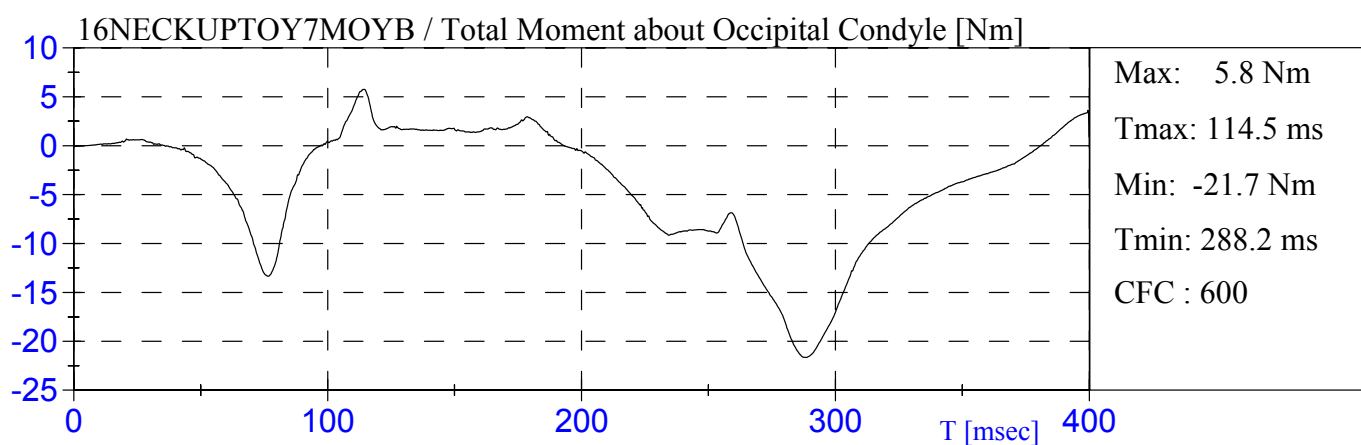
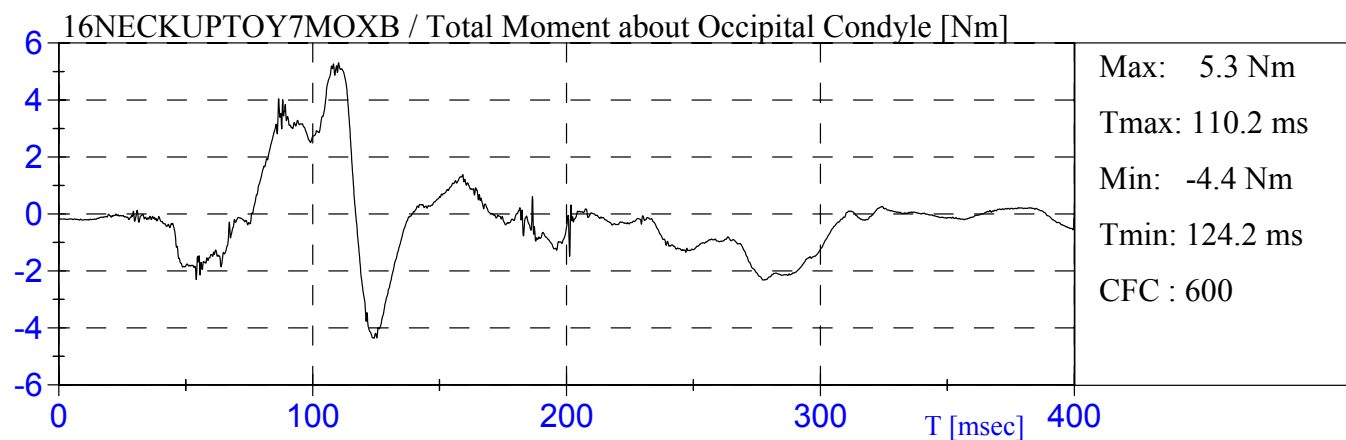


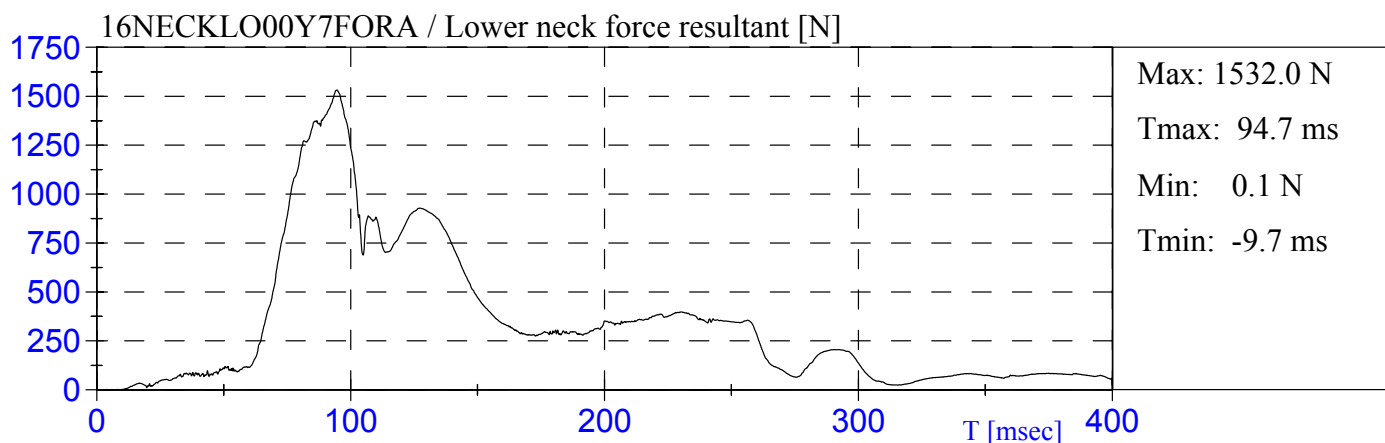
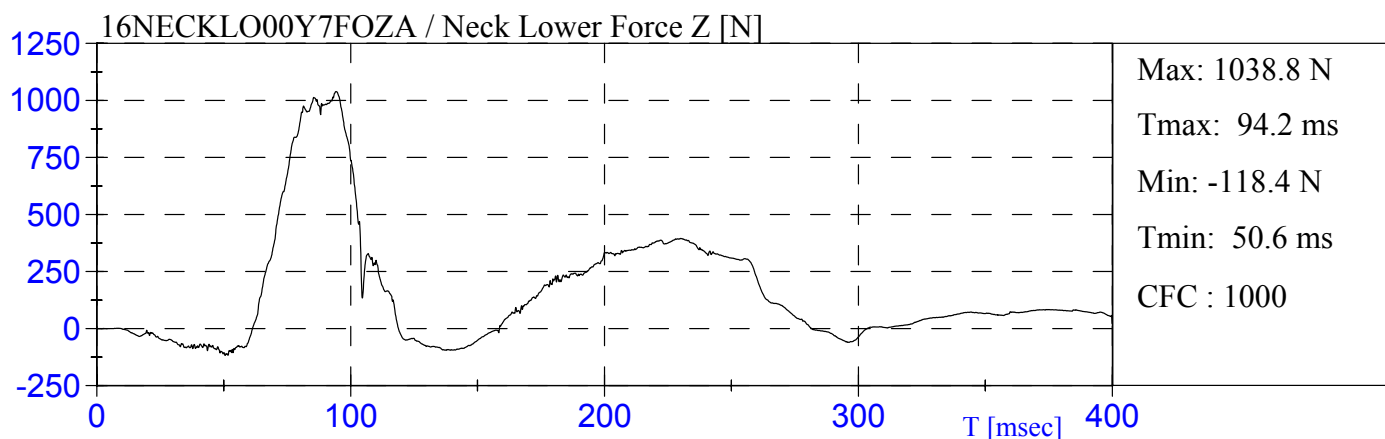
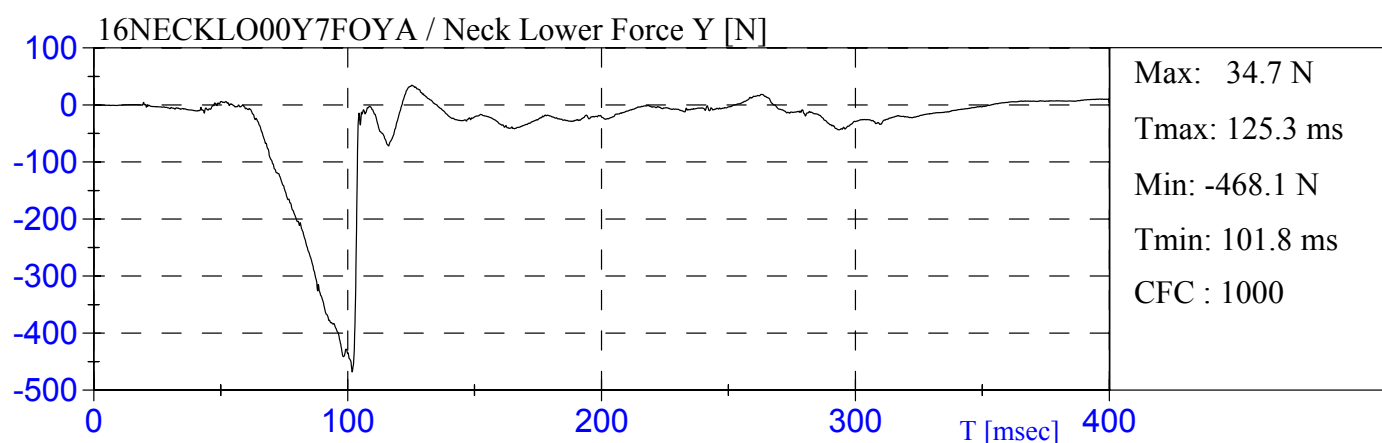
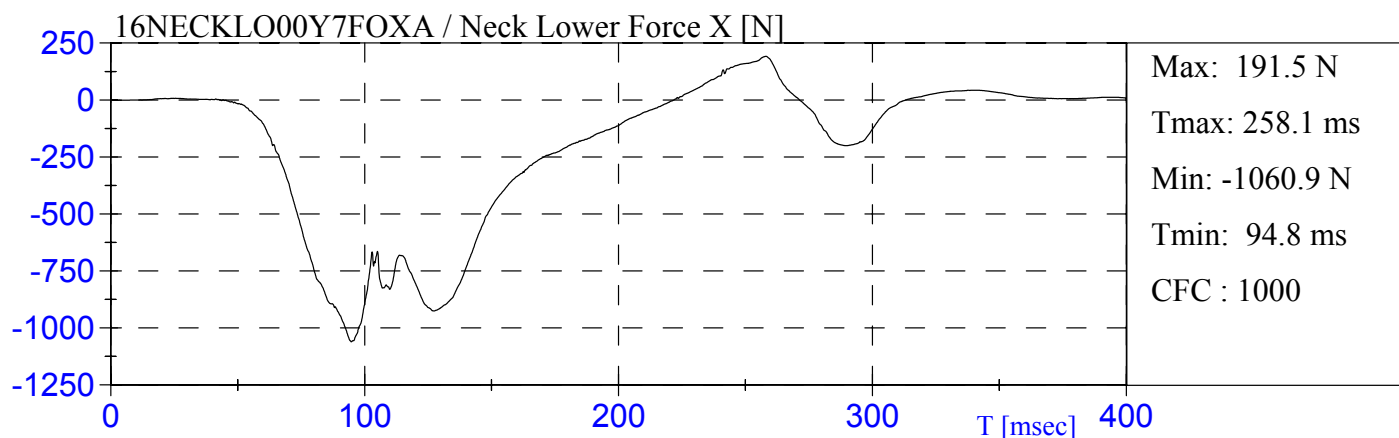


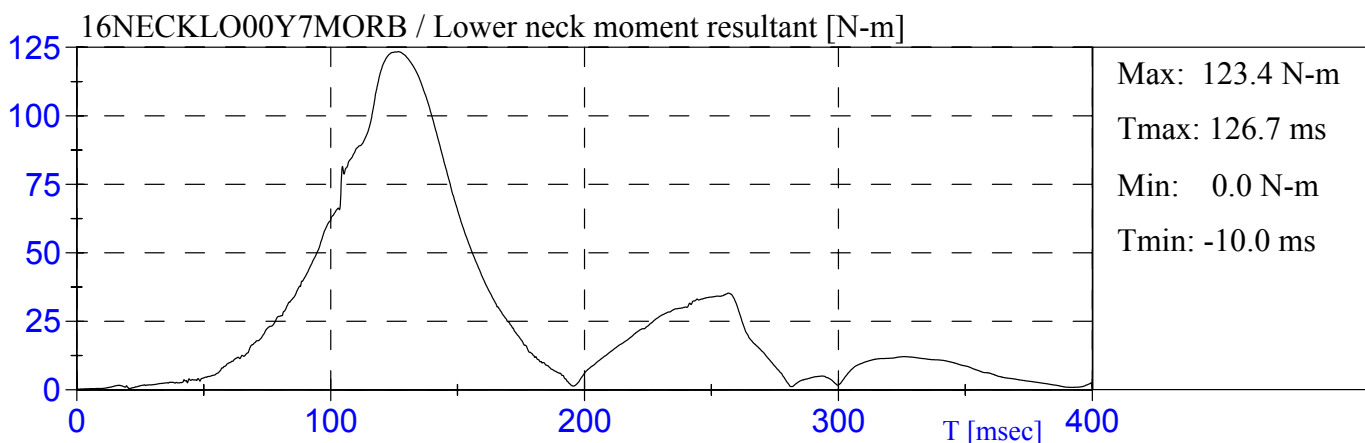
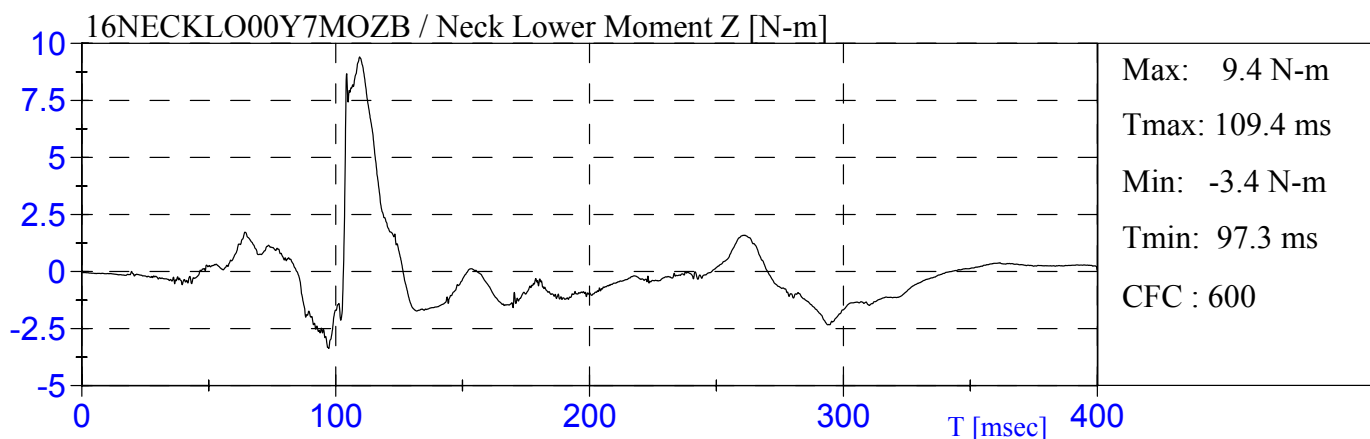
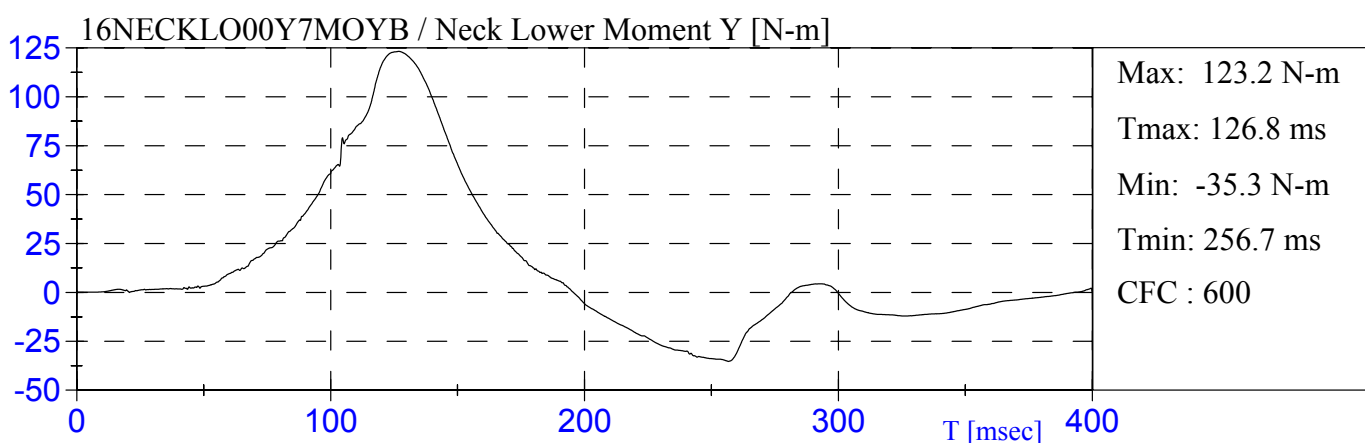
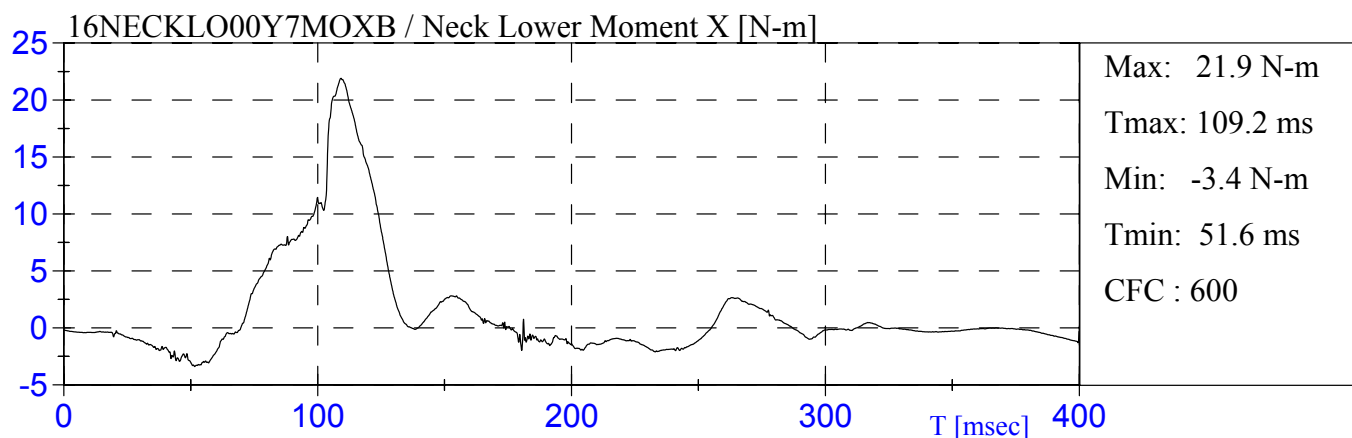


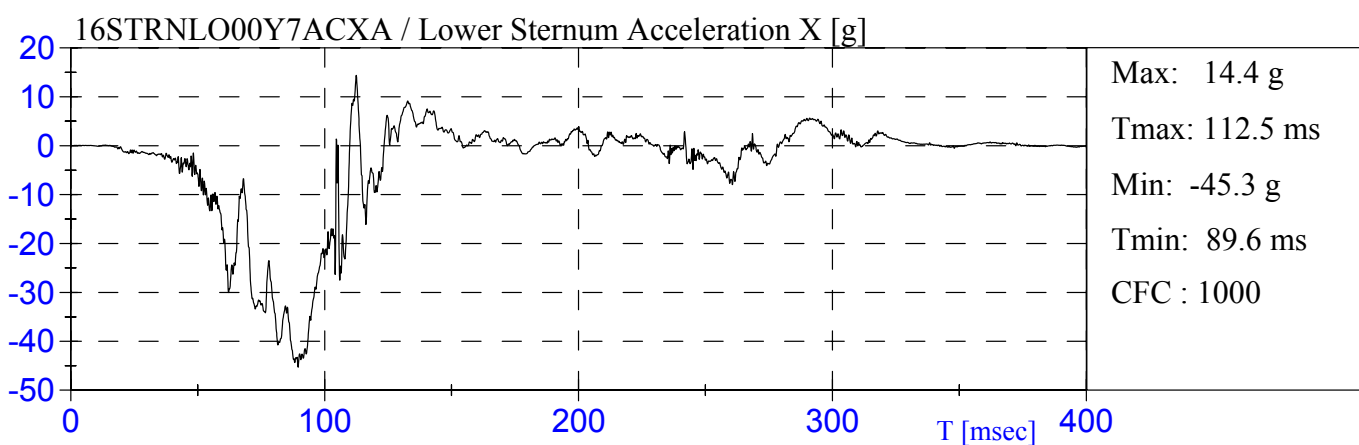
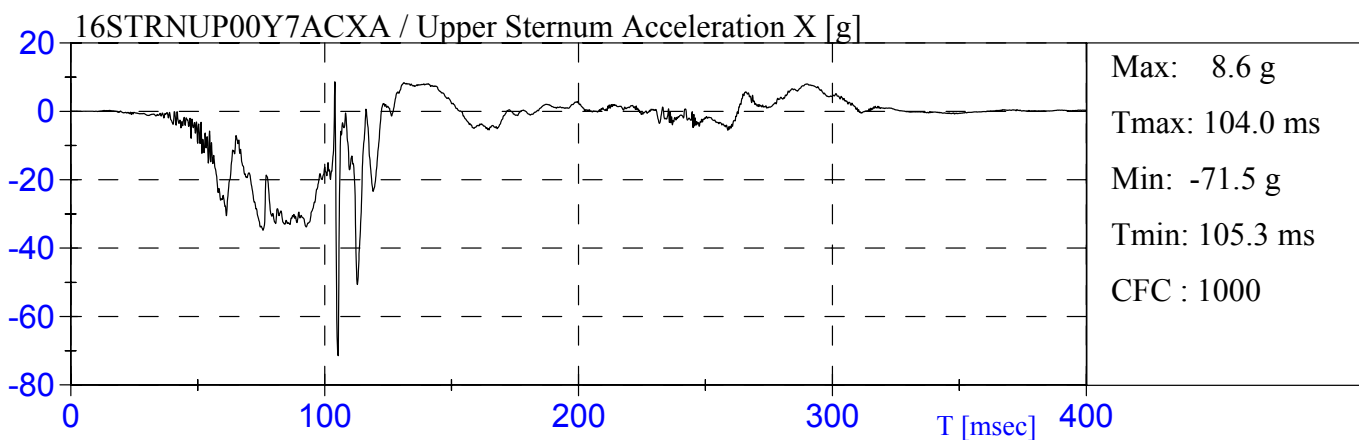


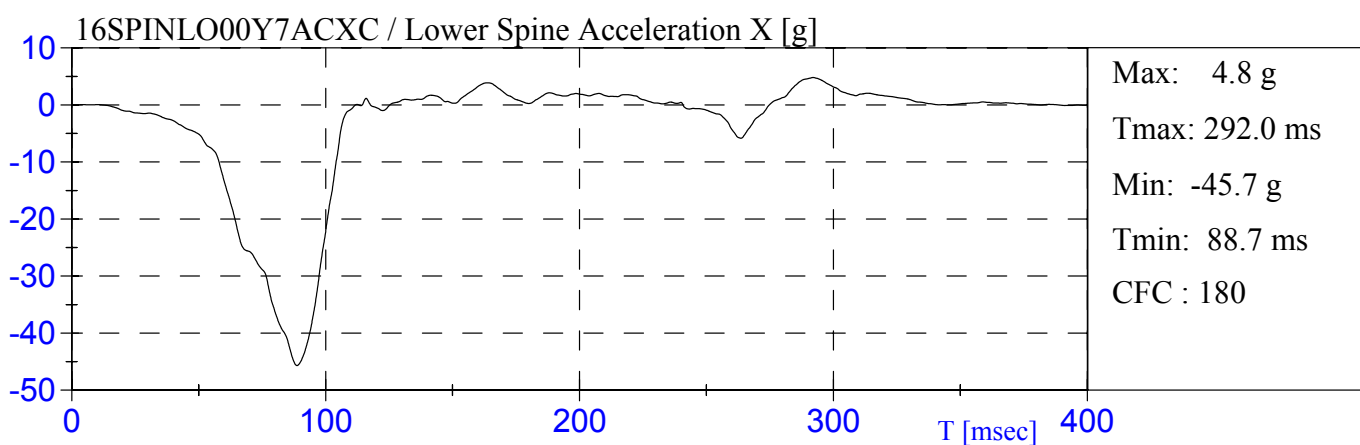
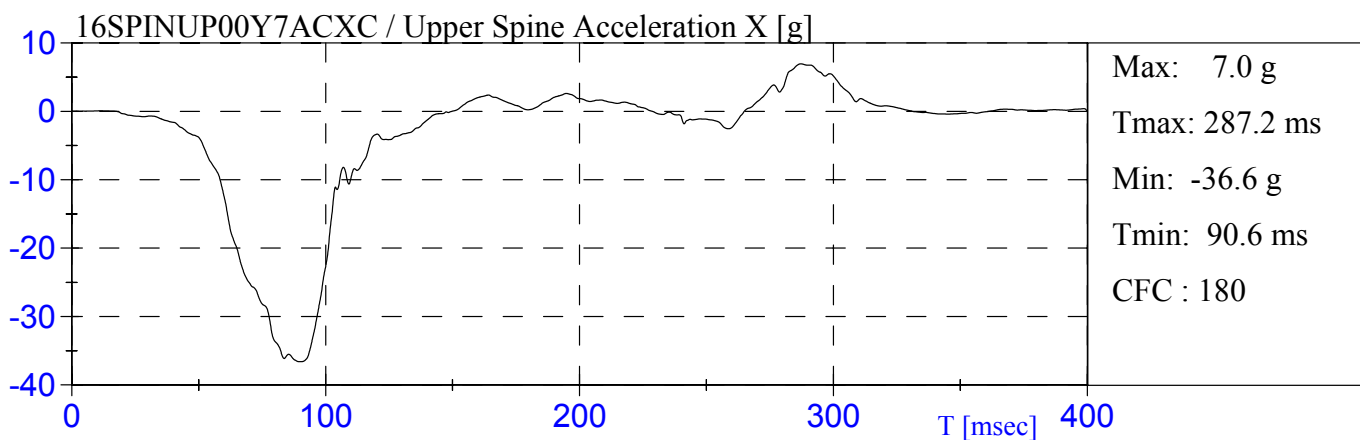


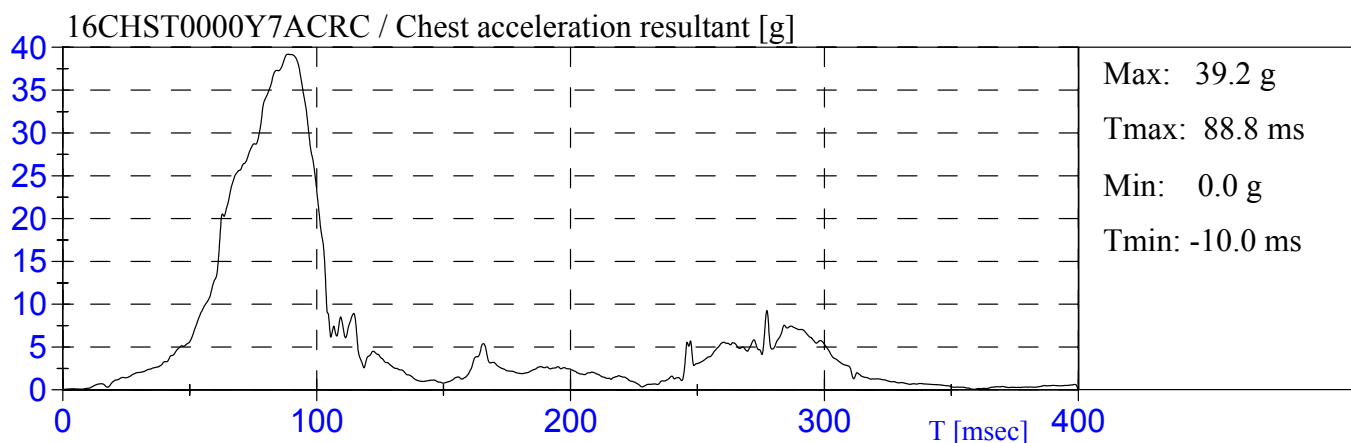
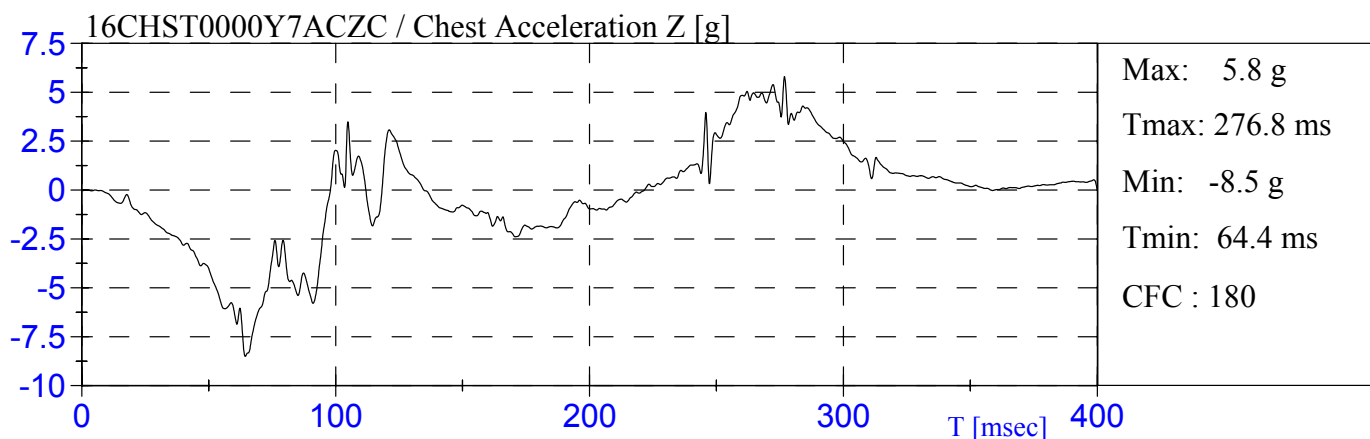
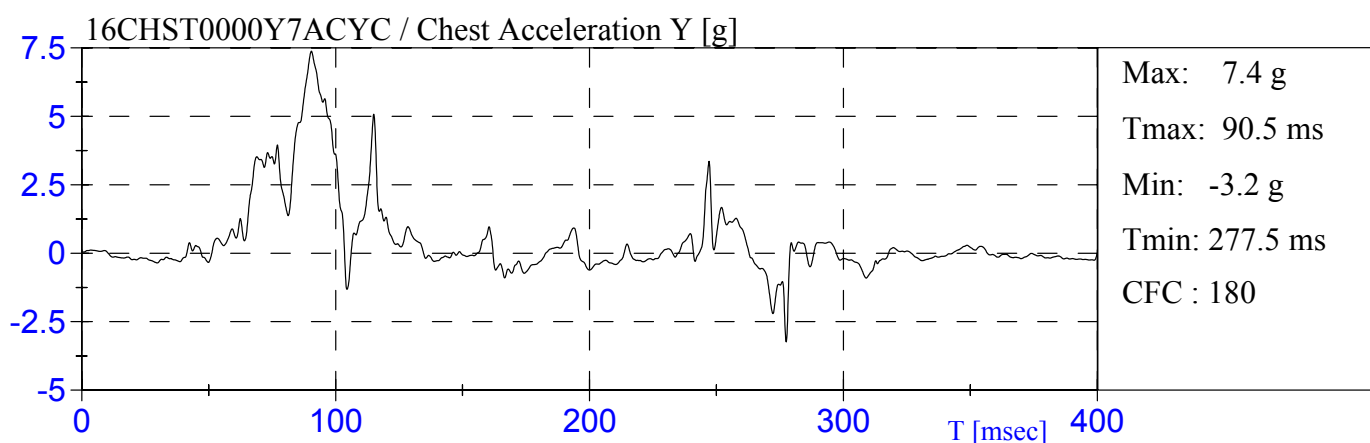
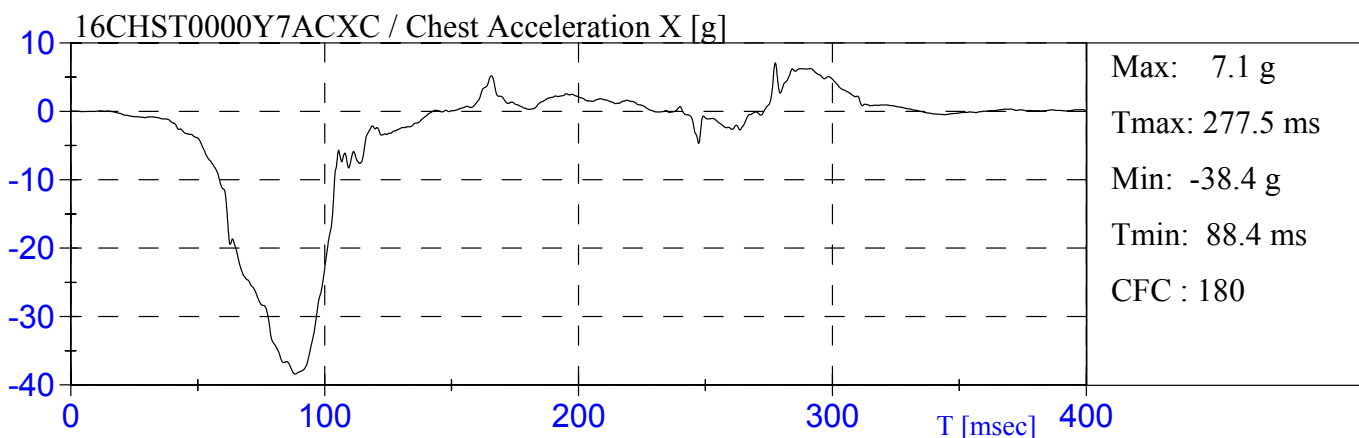


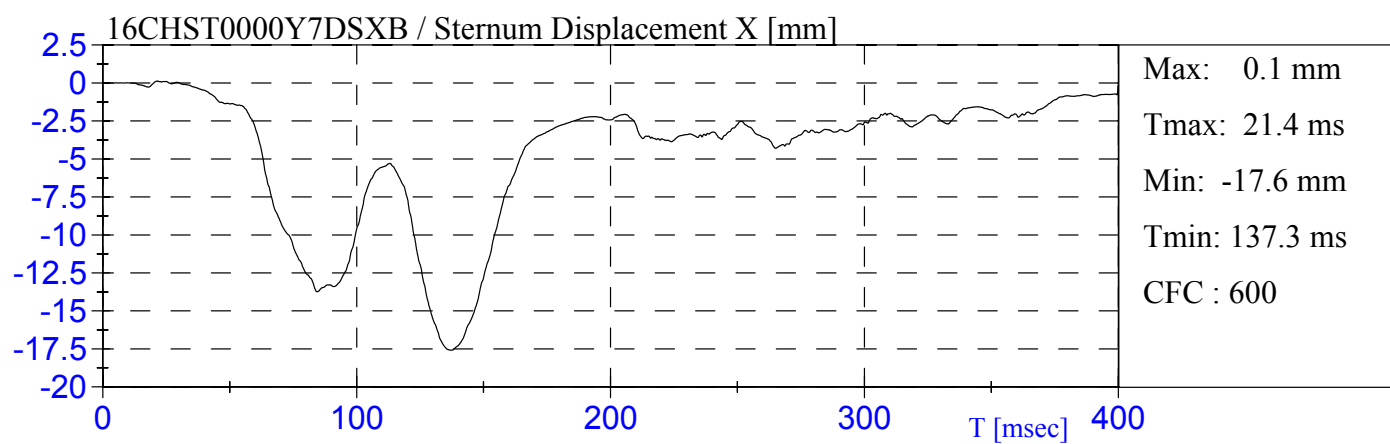


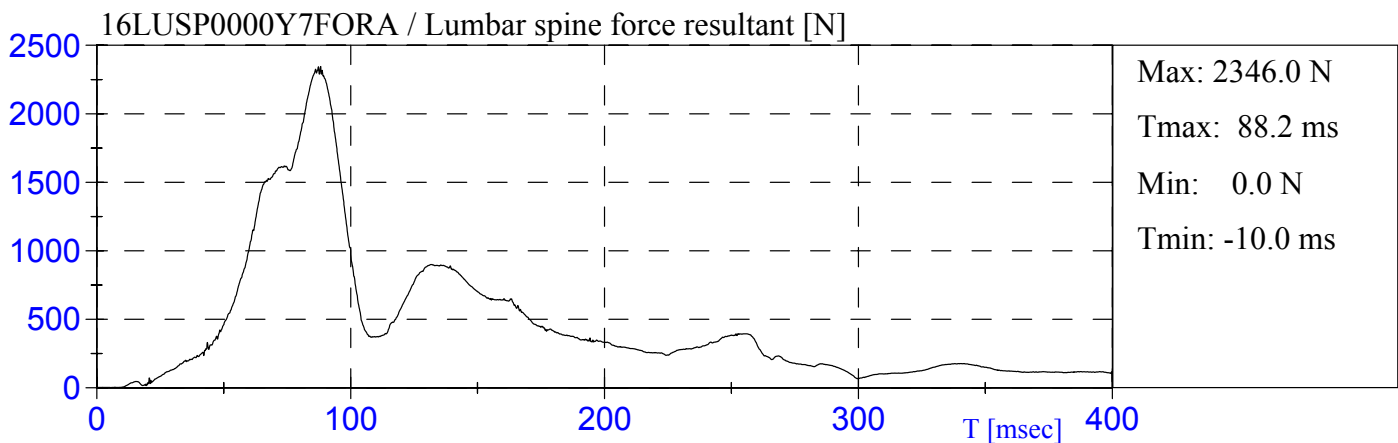
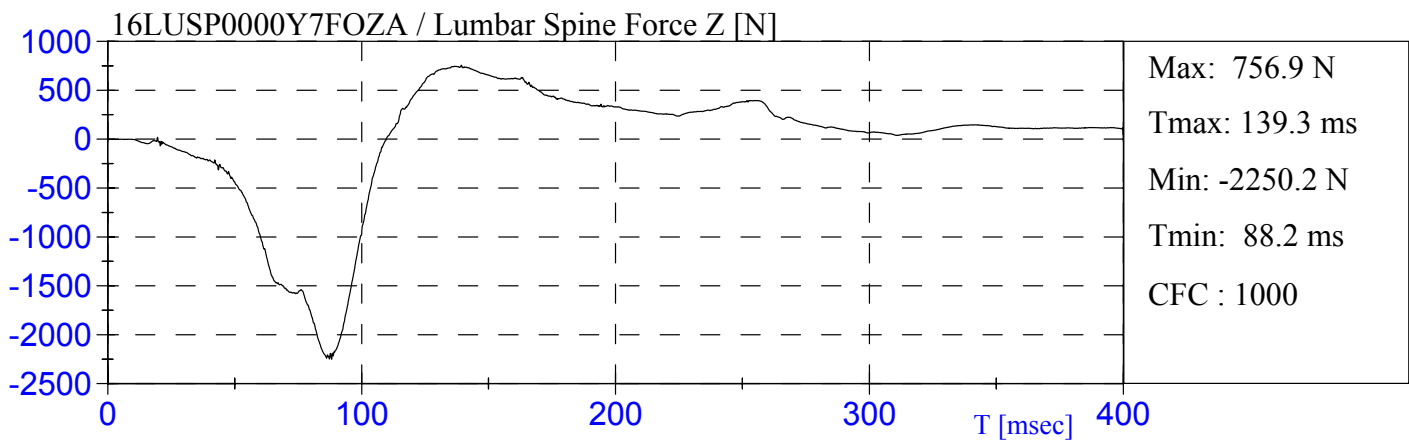
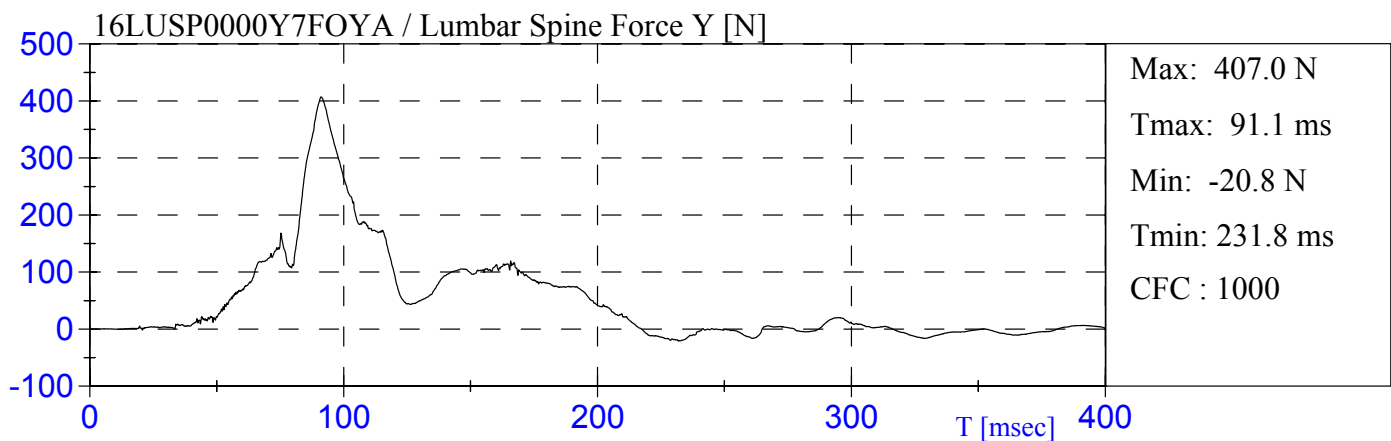
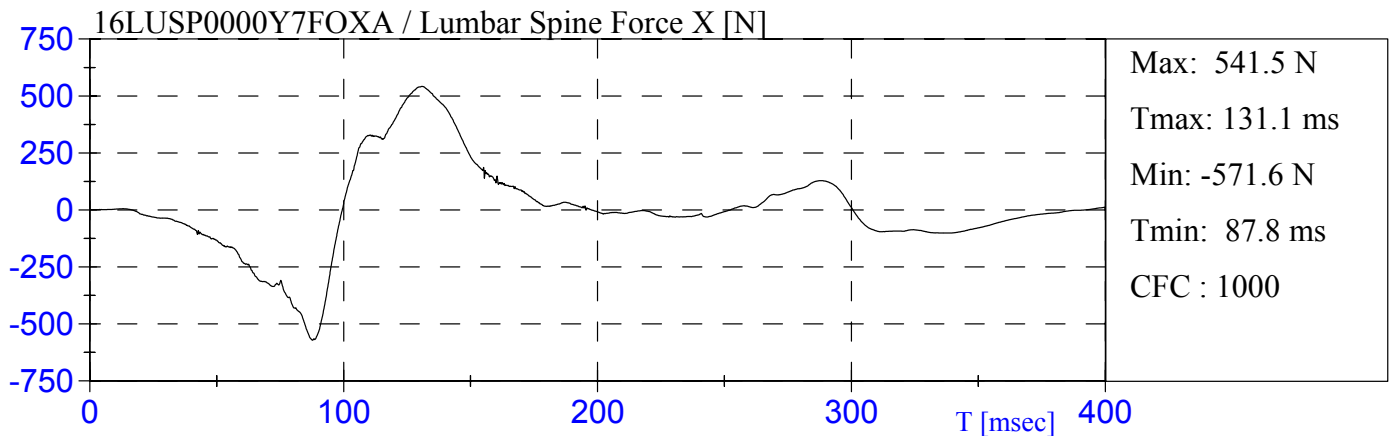


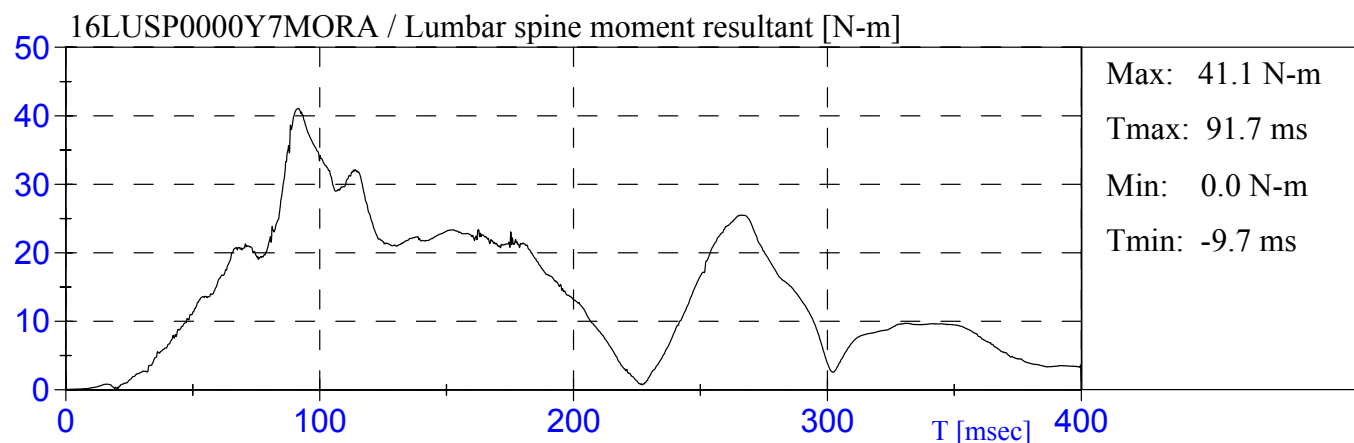
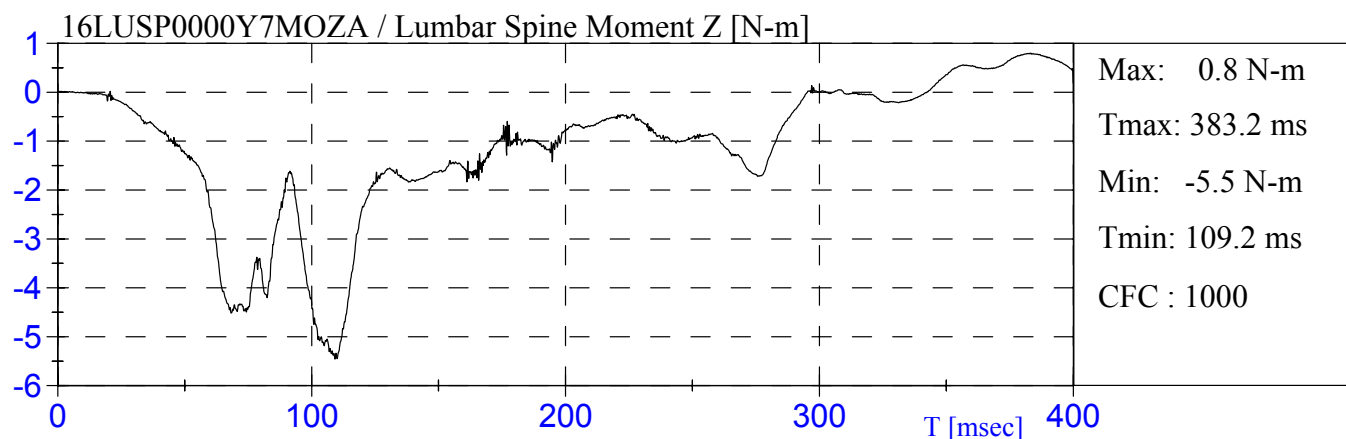
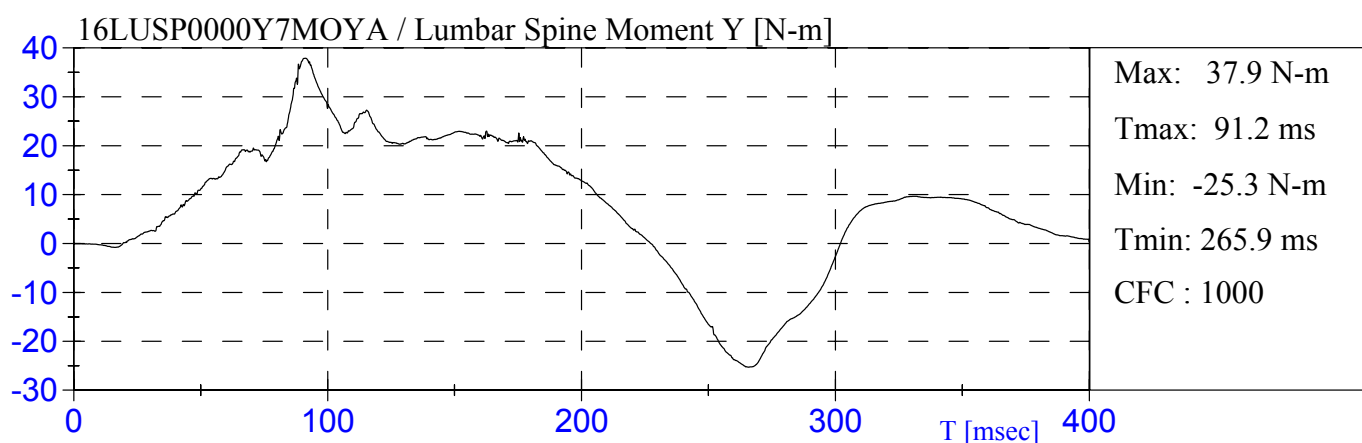
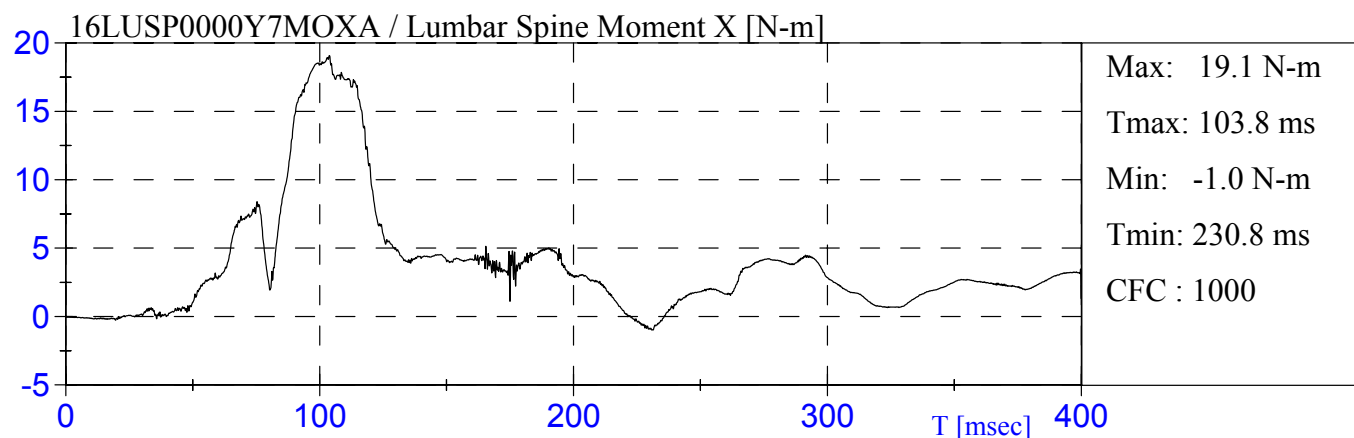


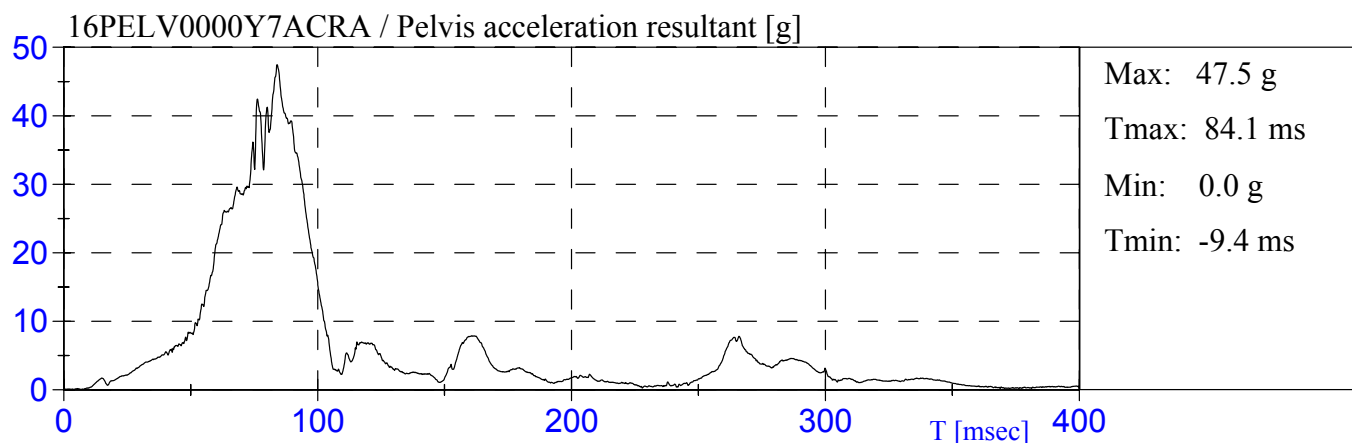
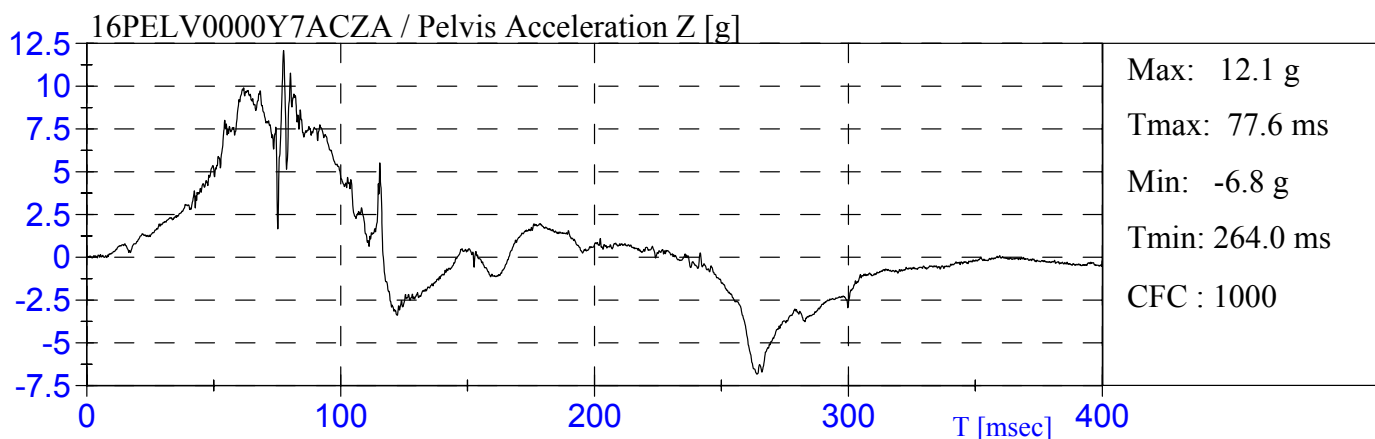
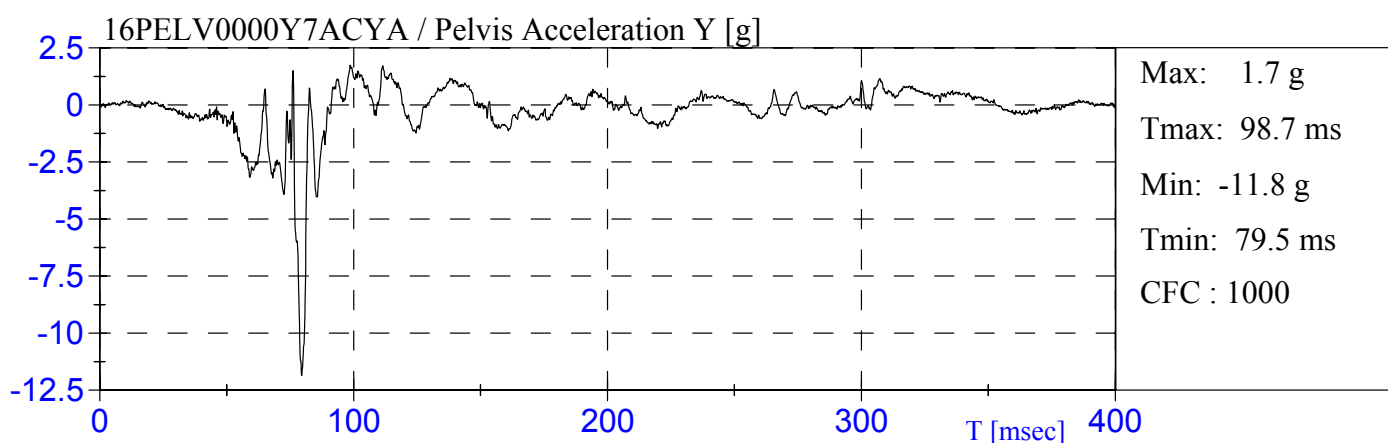
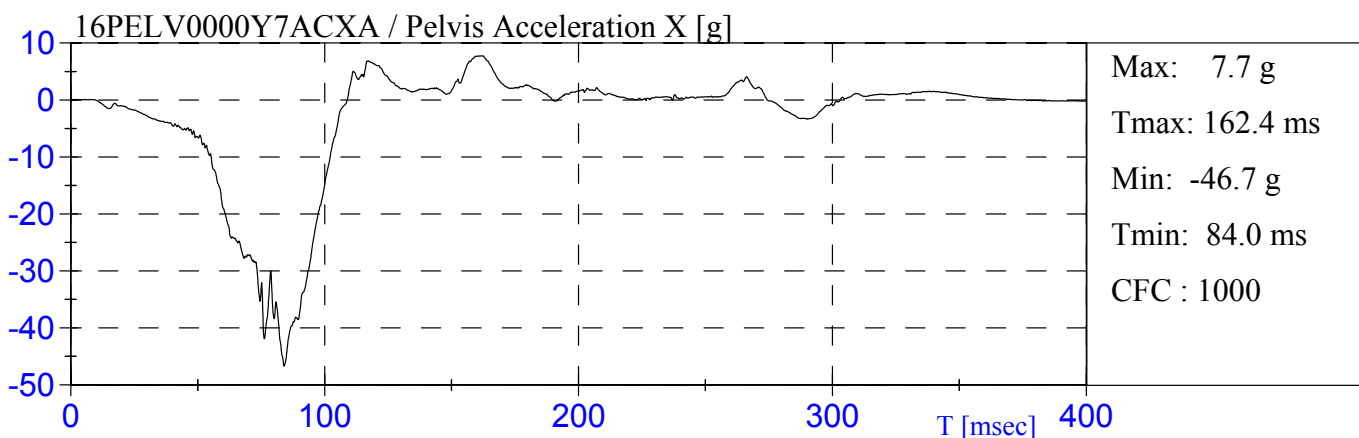


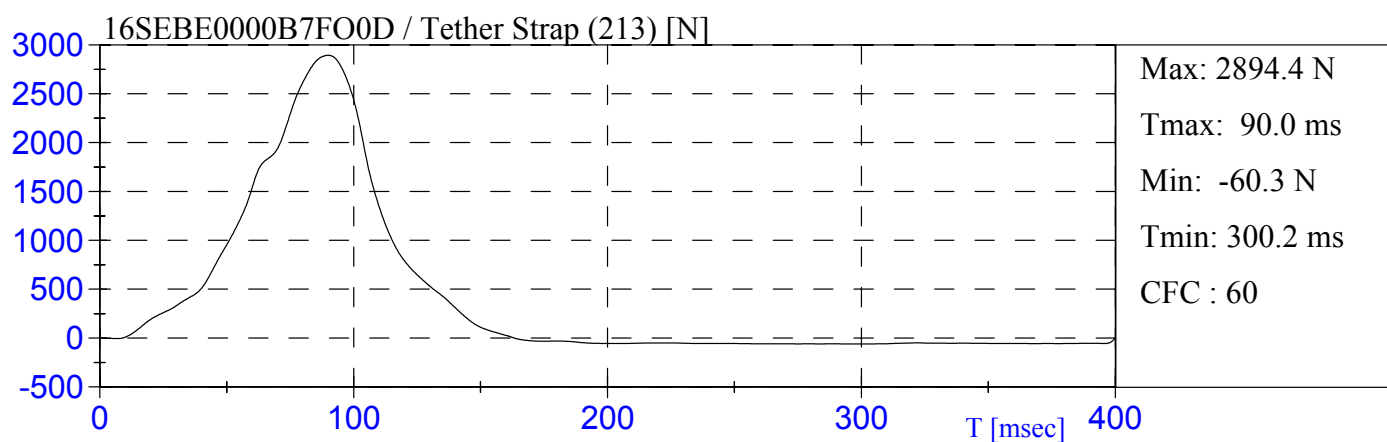


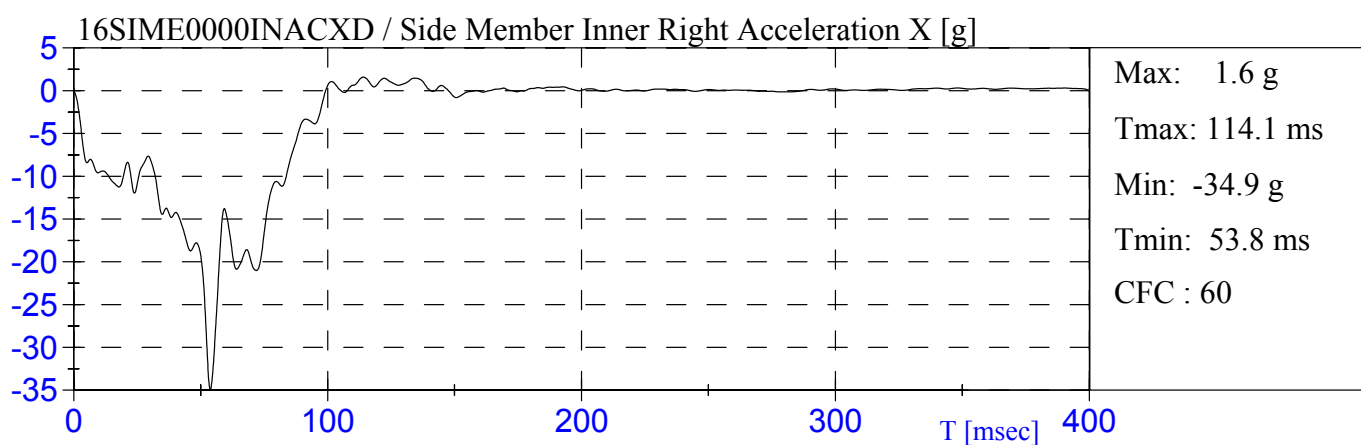
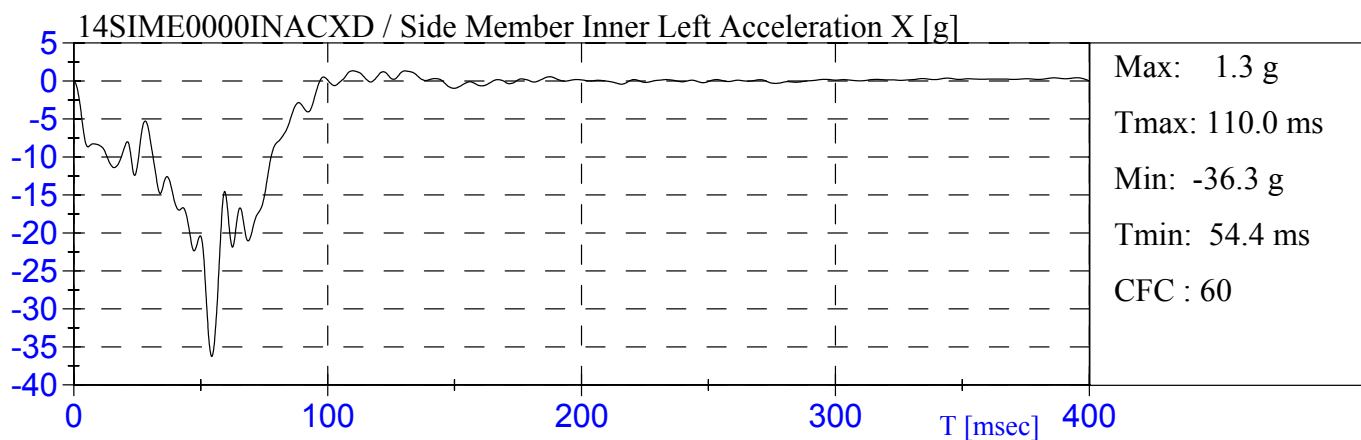


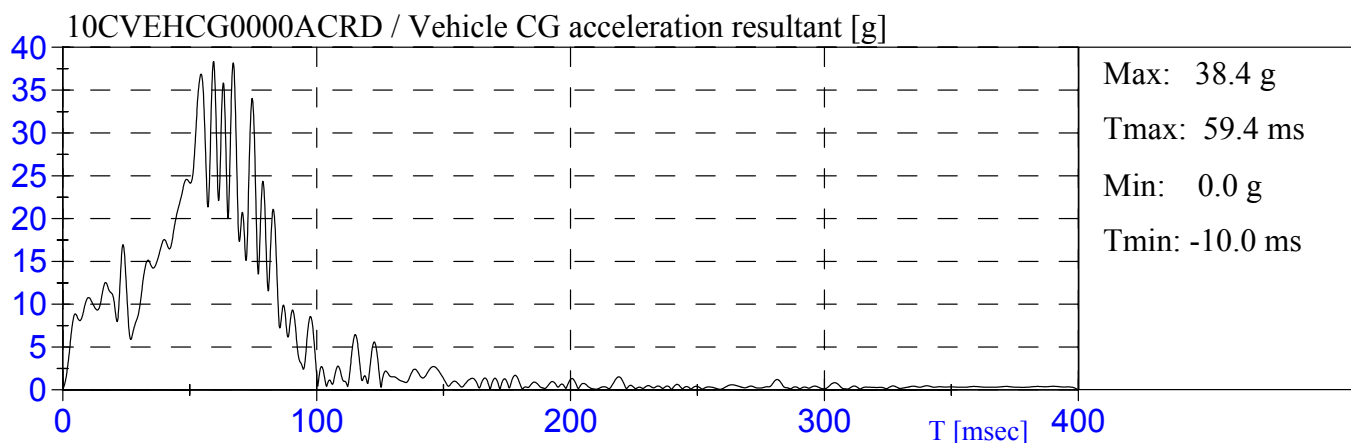
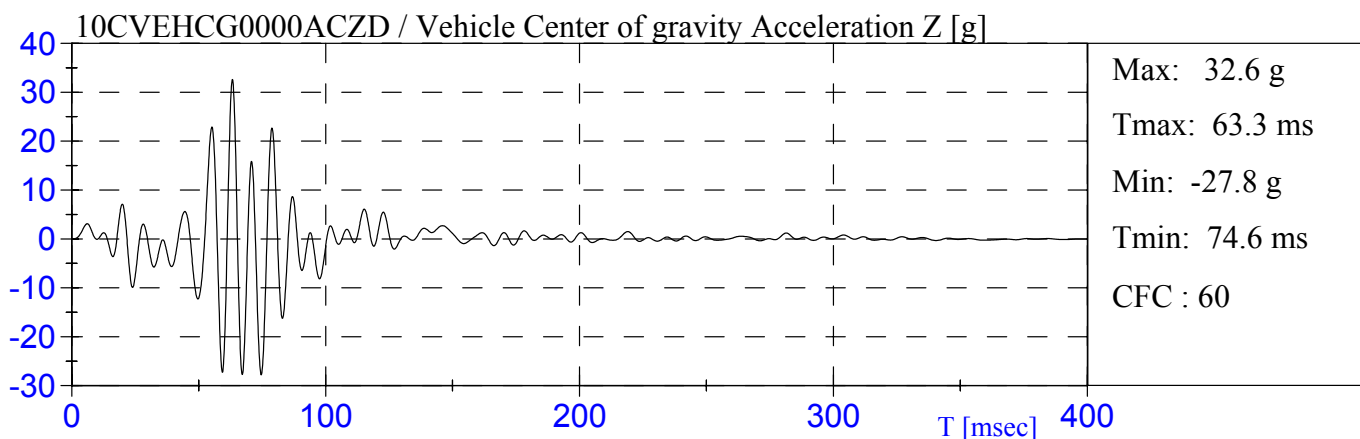
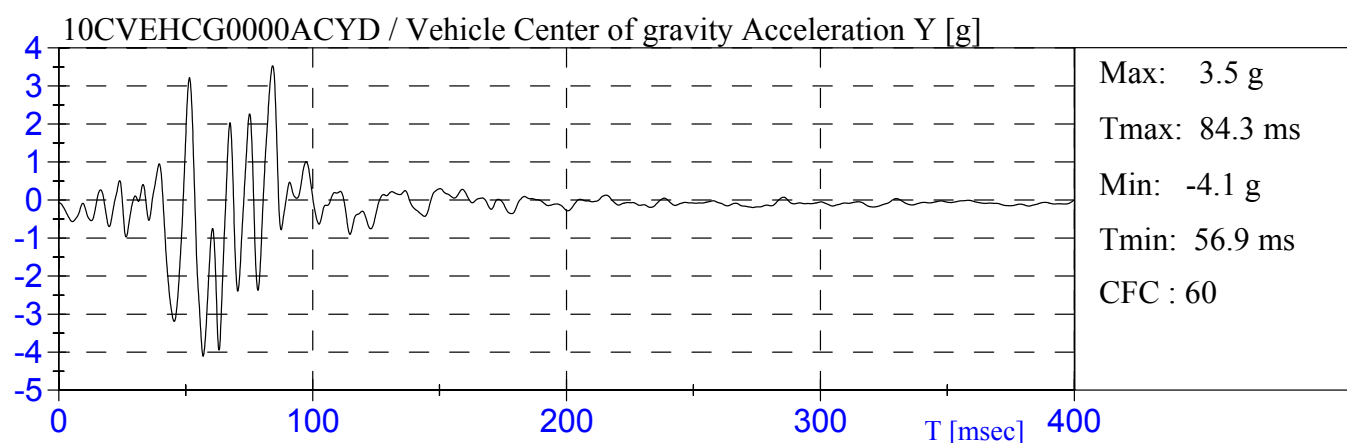
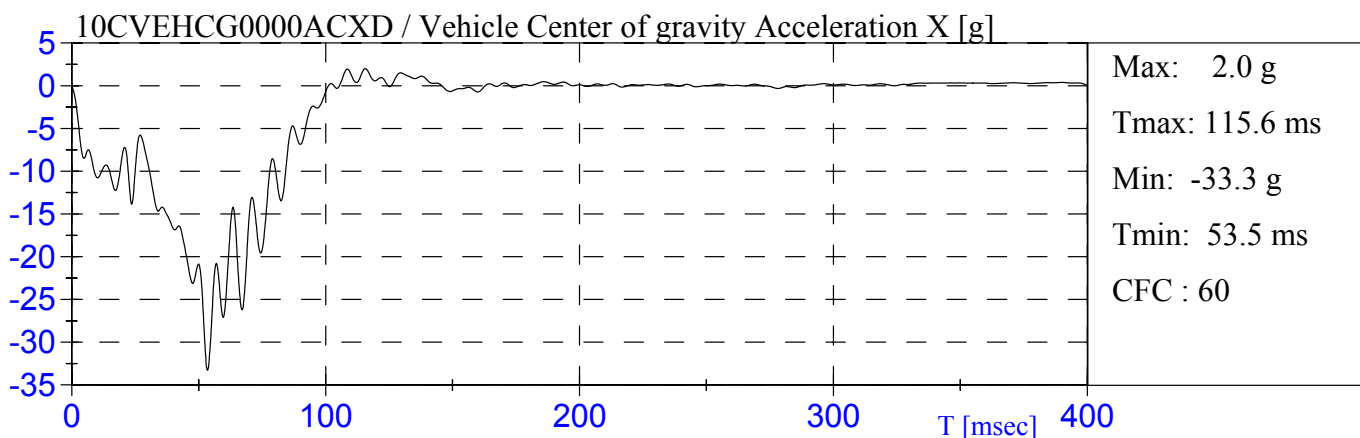


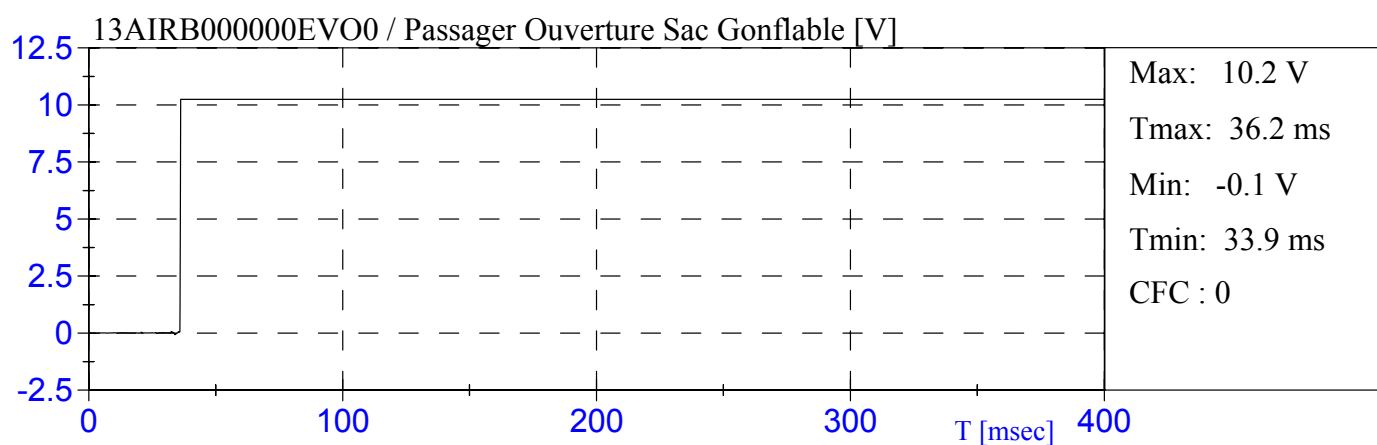
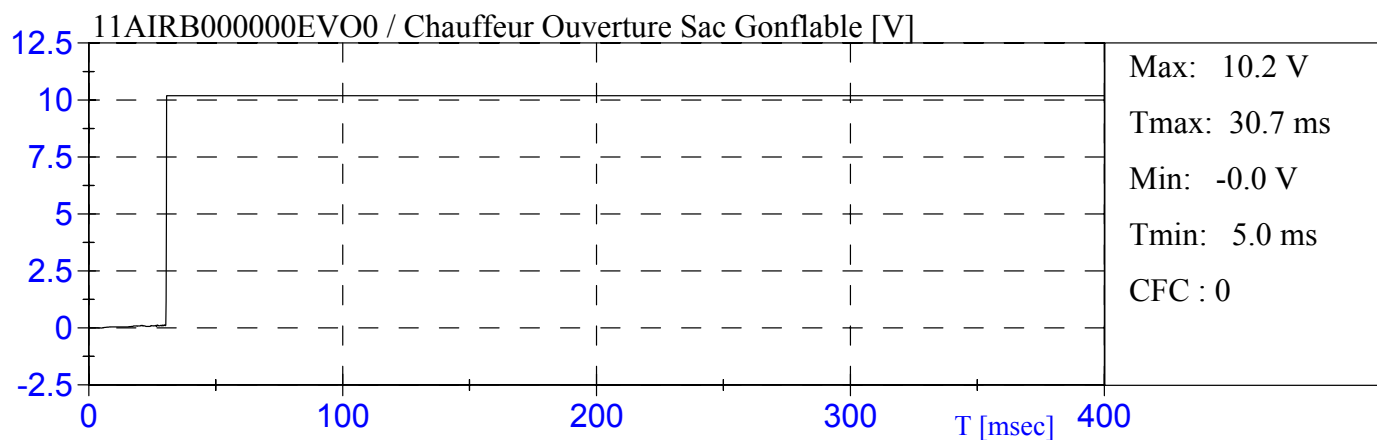


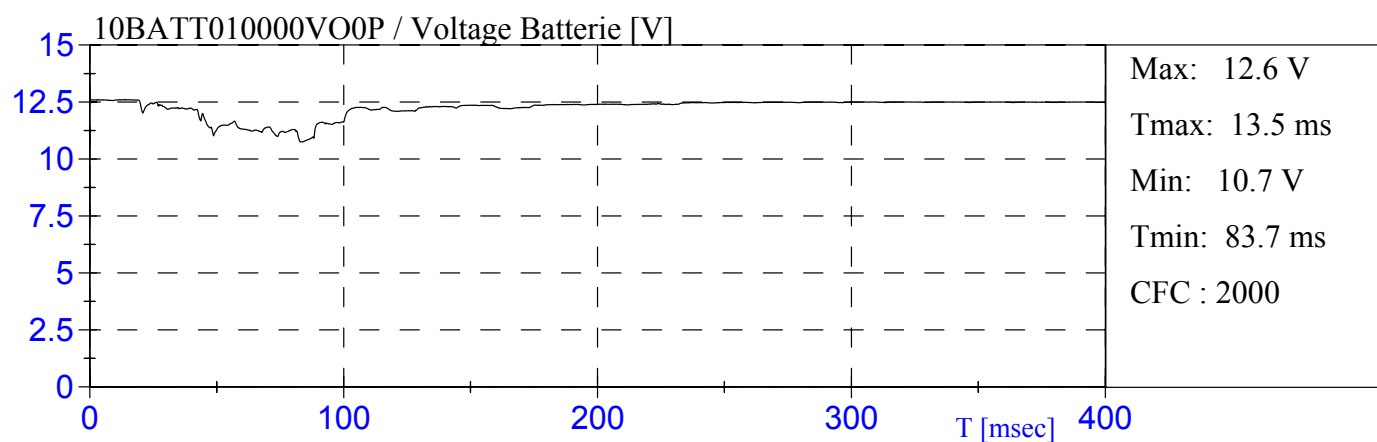


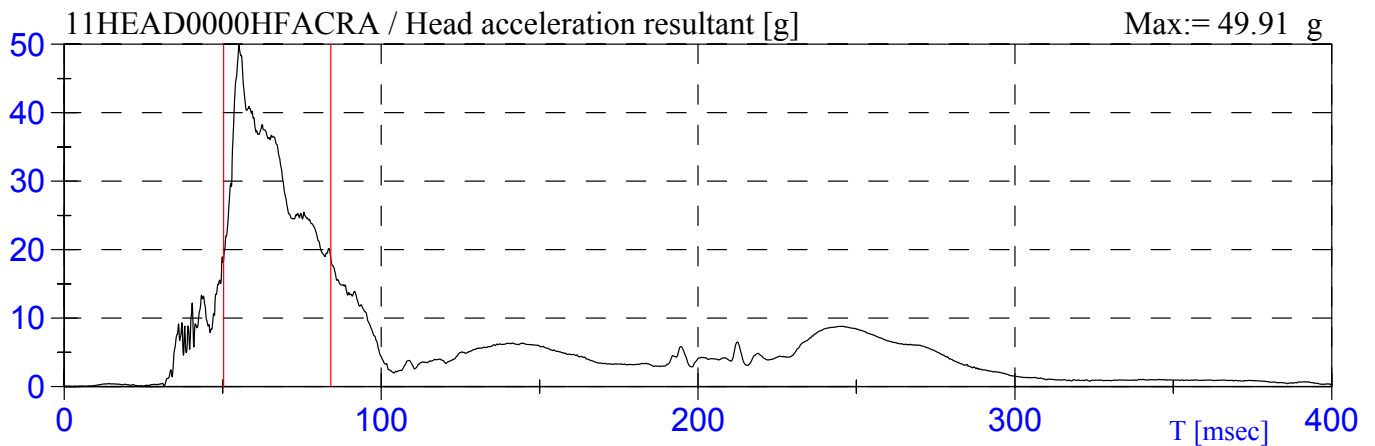










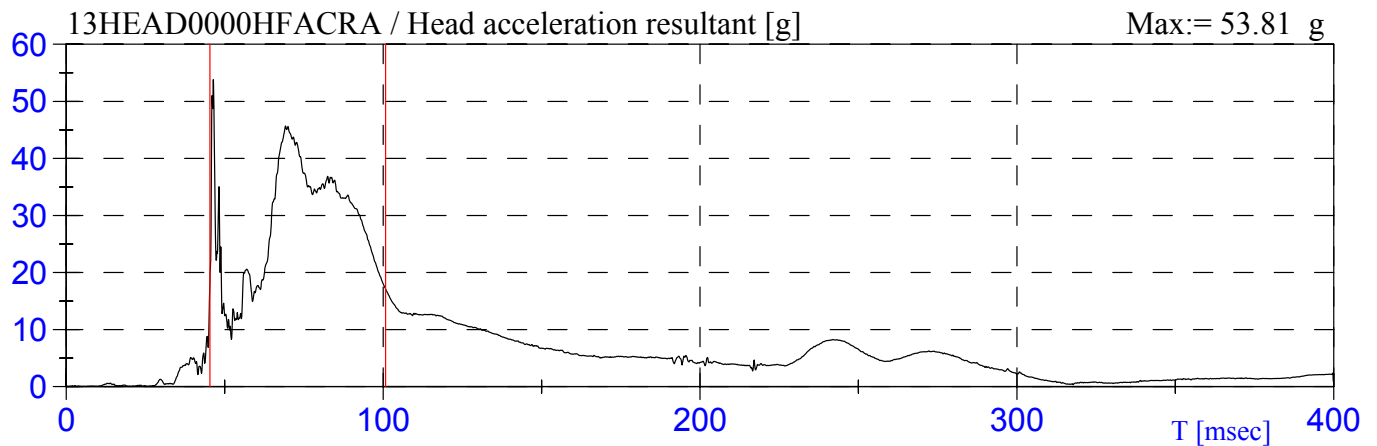


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 180	HIC(36ms):= 180	HIC(15ms):= 147
T1:= 50.3 ms	T1:= 50.3 ms	T1:= 53.0 ms
T2:= 84.1 ms	T2:= 84.1 ms	T2:= 68.0 ms

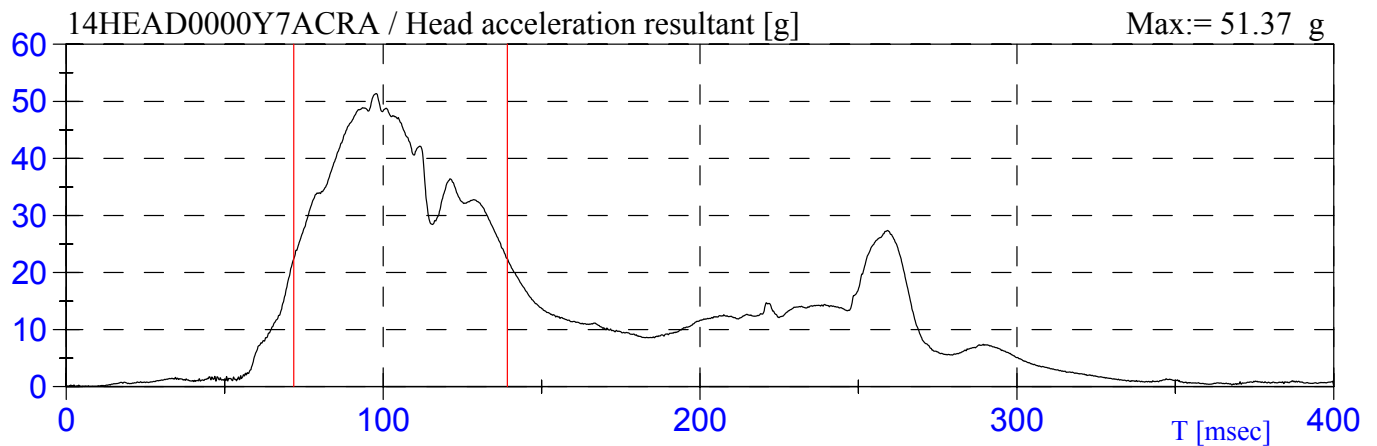
* Selon / According To: SAE J1727 96-08



HEAD INJURY CRITERIA (HIC) *
CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 242	HIC(36ms):= 241	HIC(15ms):= 144
T1:= 45.3 ms	T1:= 62.6 ms	T1:= 66.2 ms
T2:= 100.8 ms	T2:= 98.3 ms	T2:= 81.2 ms

* Selon / According To: SAE J1727 96-08

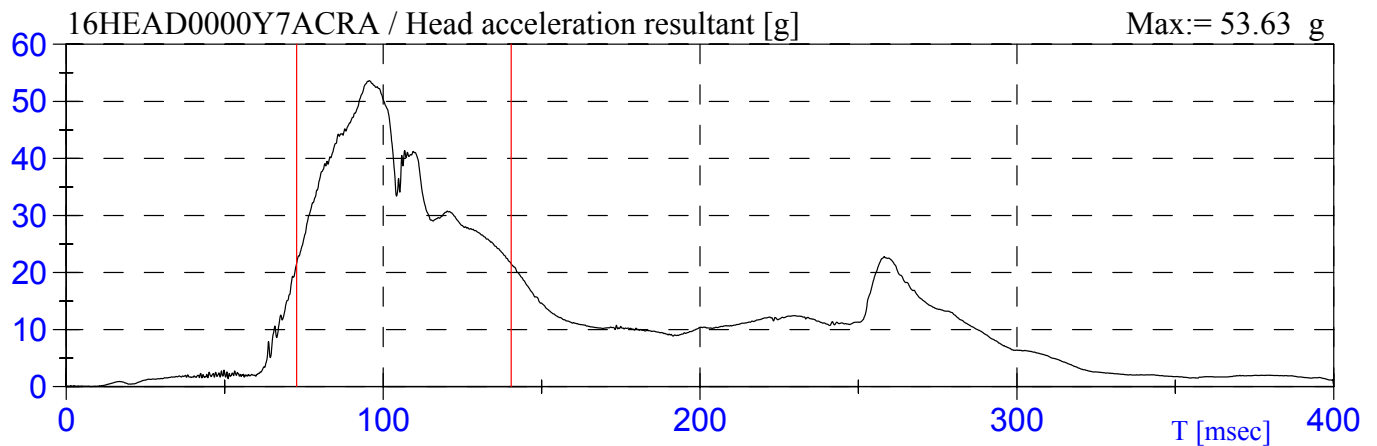


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 575	HIC(36ms):= 453	HIC(15ms):= 247
T1:= 71.8 ms	T1:= 77.7 ms	T1:= 90.2 ms
T2:= 139.2 ms	T2:= 113.7 ms	T2:= 105.2 ms

* Selon / According To: SAE J1727 96-08



HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 519	HIC(36ms):= 446	HIC(15ms):= 263
T1:= 72.7 ms	T1:= 77.4 ms	T1:= 87.5 ms
T2:= 140.4 ms	T2:= 113.4 ms	T2:= 102.5 ms

* Selon / According To: SAE J1727 96-08

Neck Injury Criteria: 11NIJCIP000000YX

$N_{ij}^* = 0.68$

Valeurs critiques
Criticals Values

N _{tf}	N _{te}	N _{cf}	N _{ce}	Tc	4287
				Cc	3880
0.12	0.68	0.15	0.41	Fc	155
				Ec	67

* Selon / According To: Federal Register 5/2000

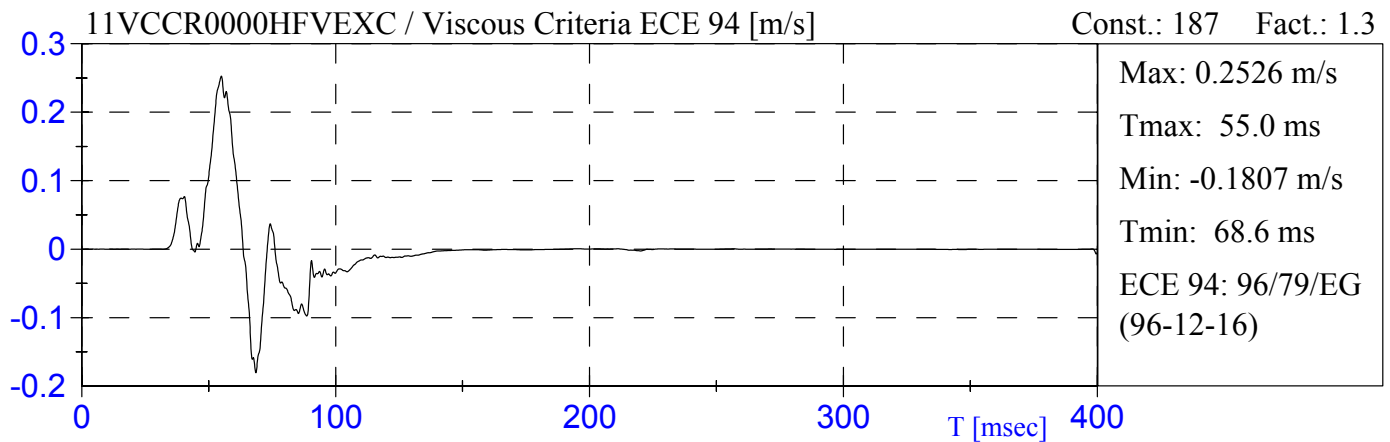
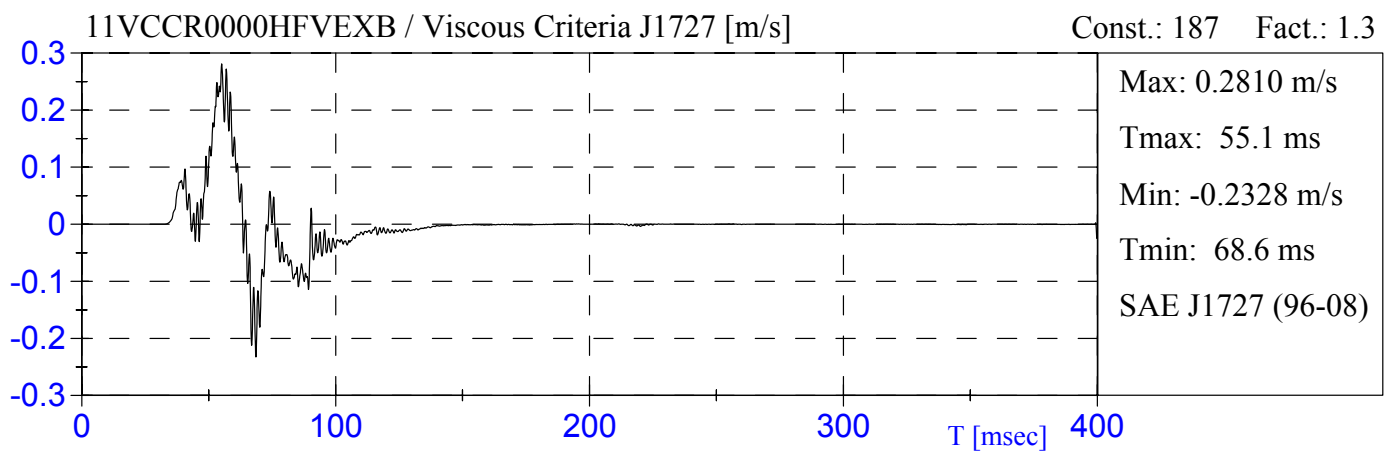
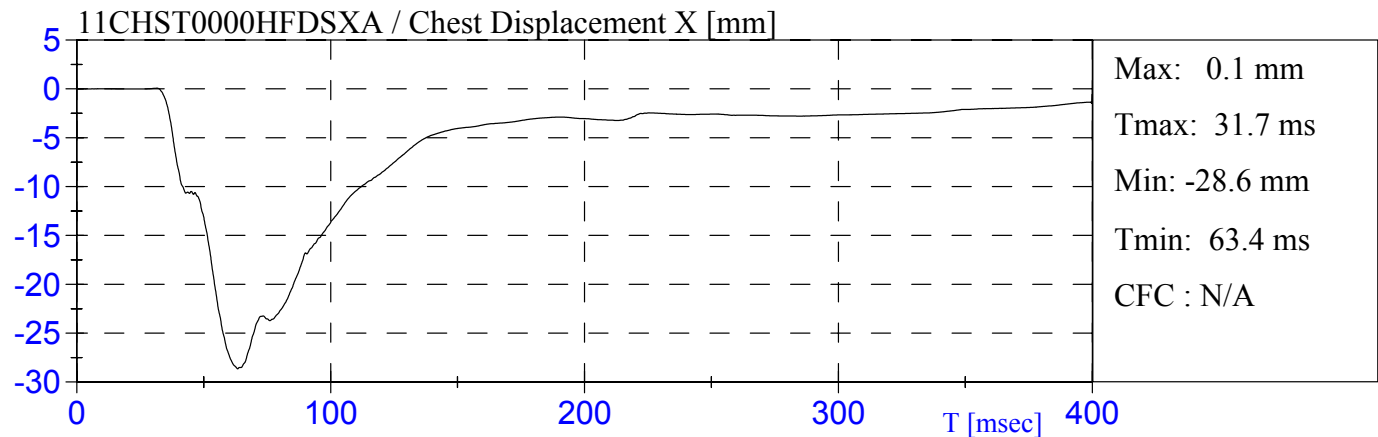
Neck Injury Criteria: 13NIJCIP000000YX

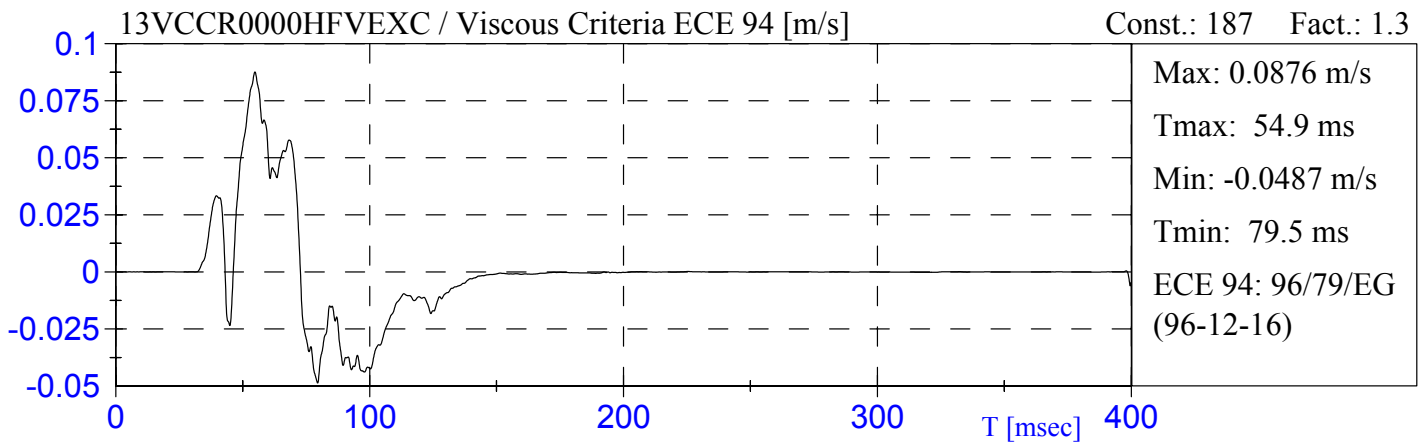
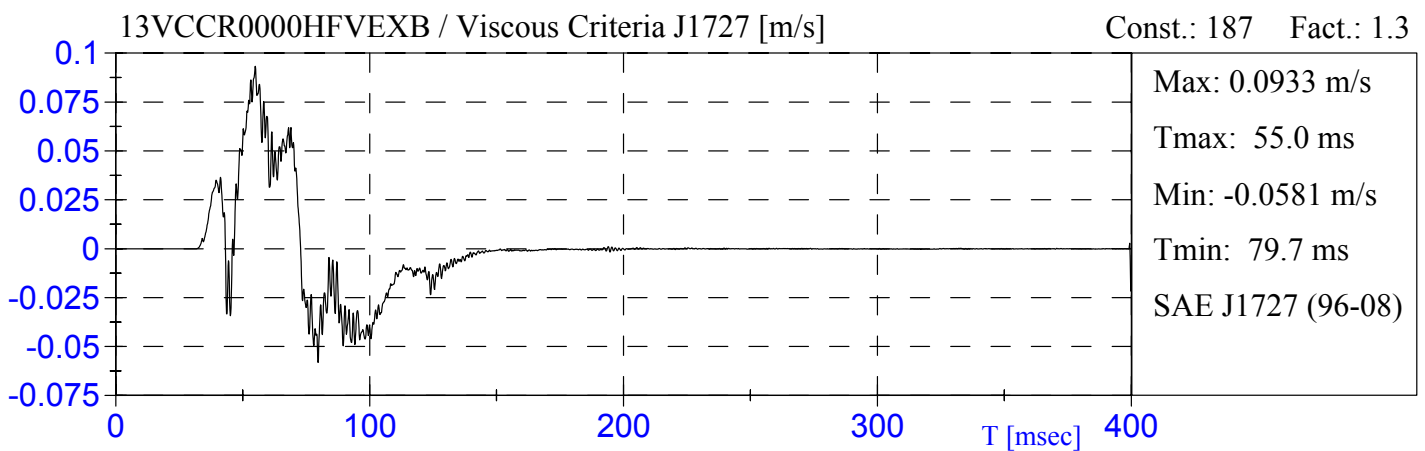
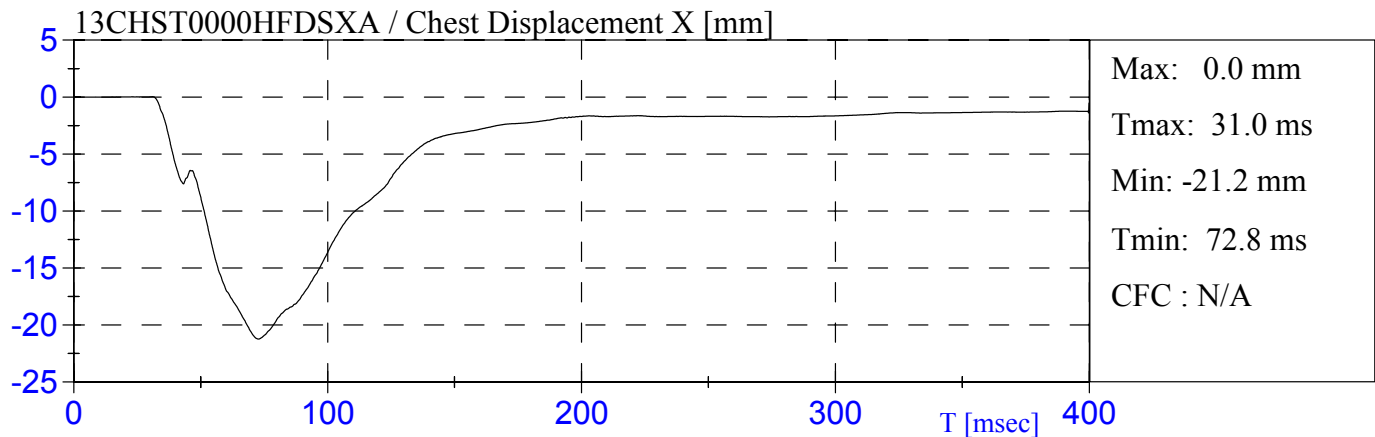
$N_{ij}^* = 0.35$

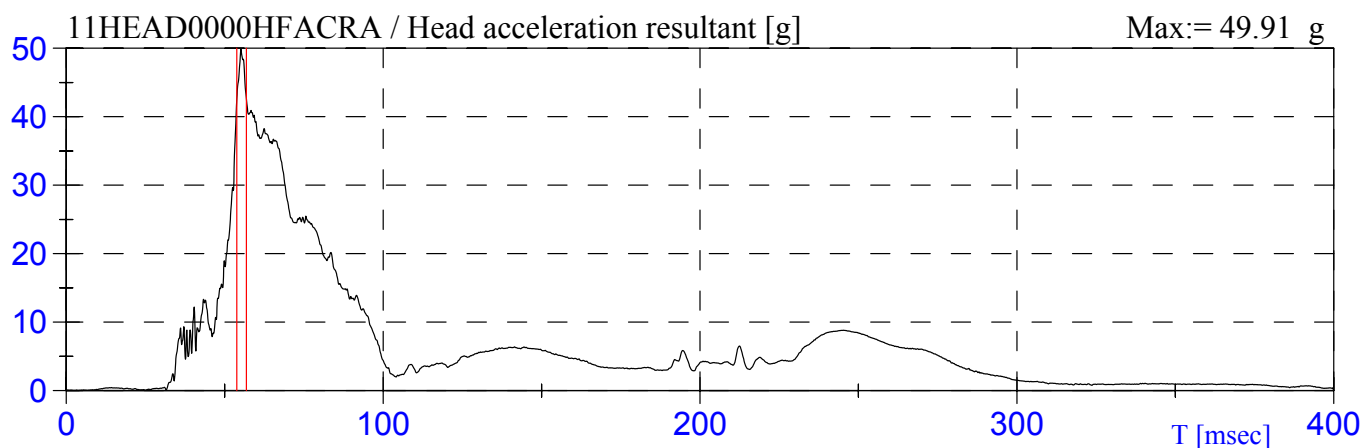
Valeurs critiques
Criticals Values

N _{tf}	N _{te}	N _{cf}	N _{ce}	Tc	4287
				Cc	3880
0.24	0.35	0.22	0.05	Fc	155
				Ec	67

* Selon / According To: Federal Register 5/2000

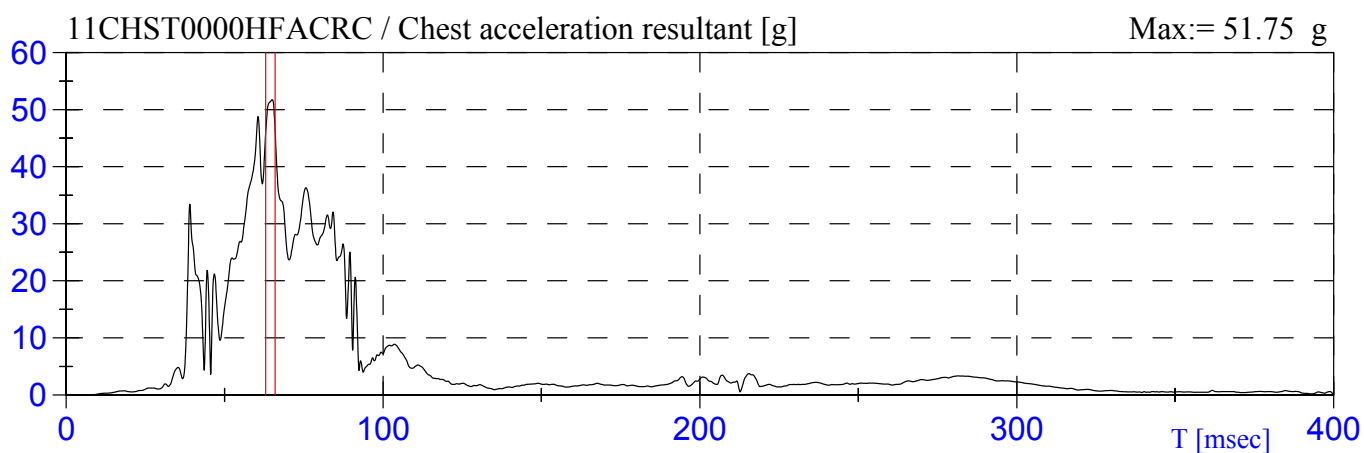






CLIP 3ms *

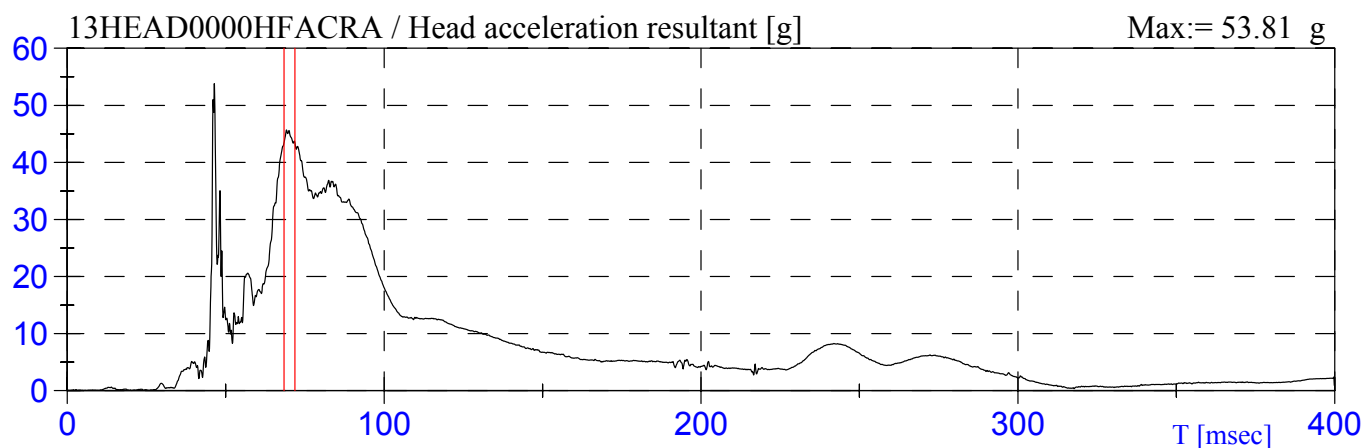
Acc. := 42.75 g	T1:= 53.8 ms	T2:= 56.8 ms
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CLIP 3ms *

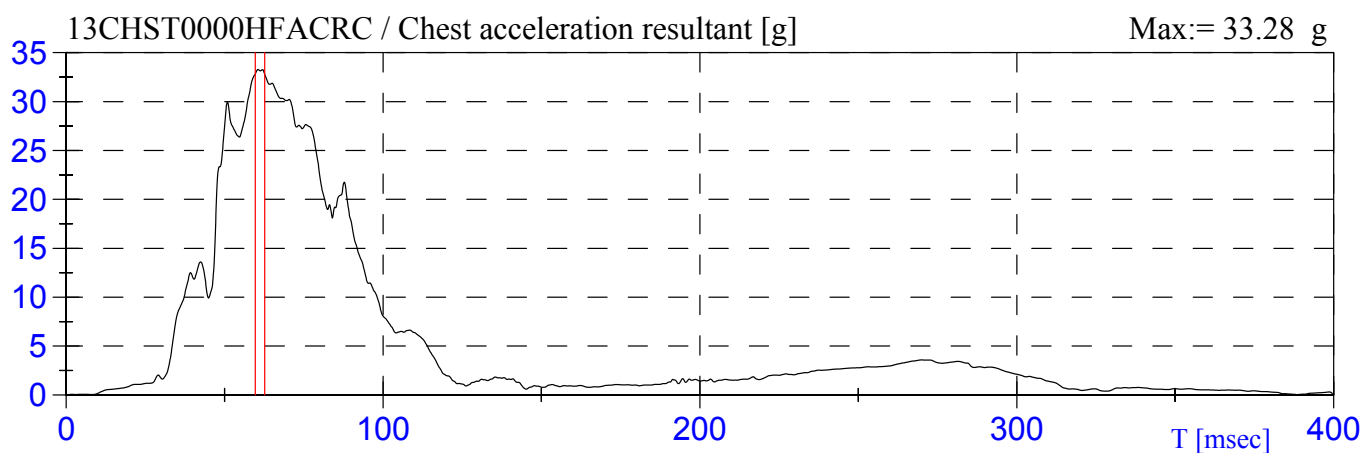
Acc. := 45.89 g	T1:= 63.0 ms	T2:= 66.0 ms
-----------------	--------------	--------------

* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

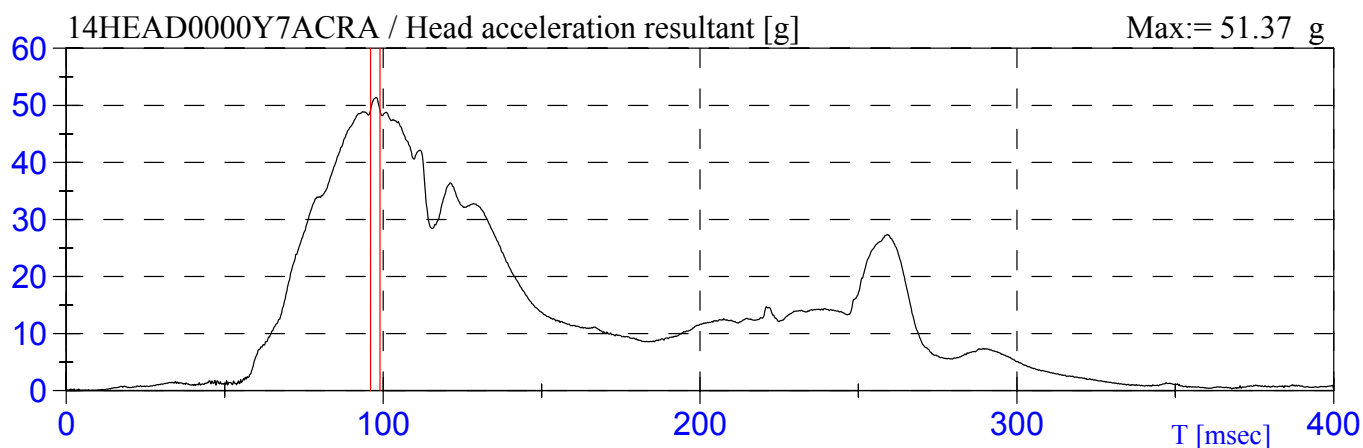
Acc. := 43.38 g	T1:= 68.4 ms	T2:= 71.9 ms
-----------------	--------------	--------------



CLIP 3ms *

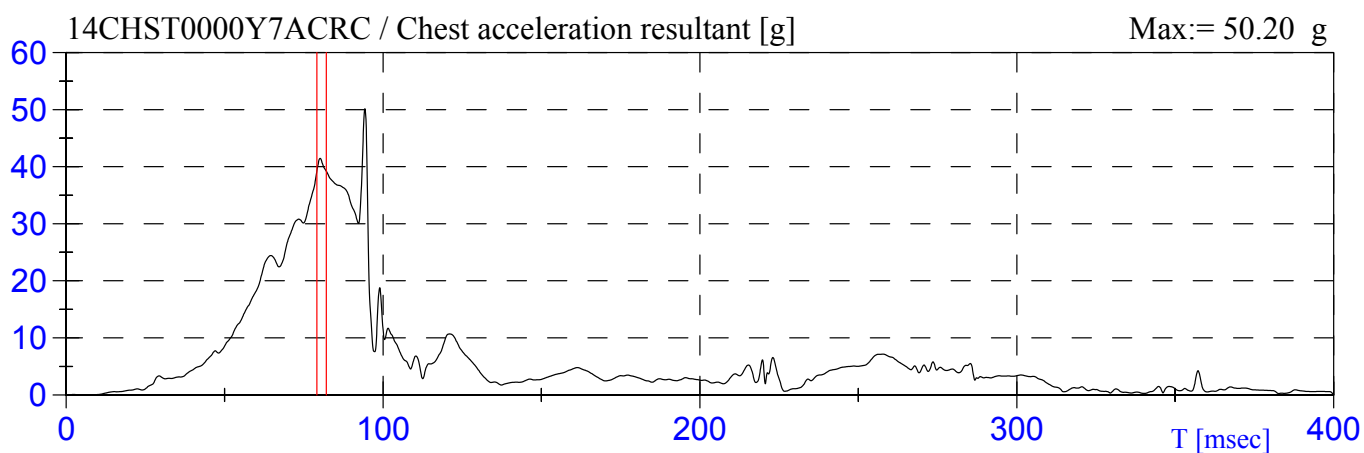
Acc. := 32.81 g	T1:= 59.7 ms	T2:= 62.7 ms
-----------------	--------------	--------------

* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

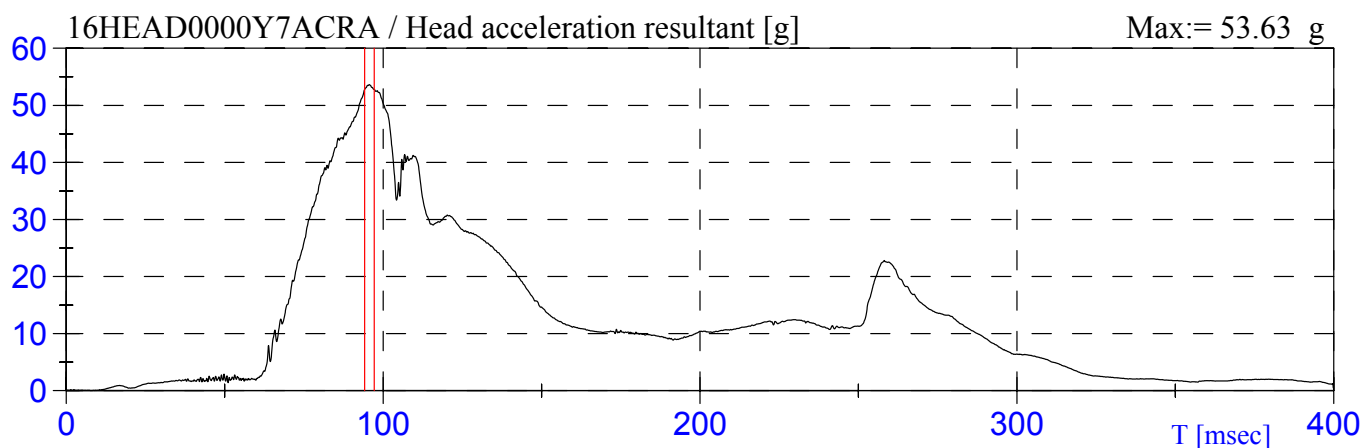
Acc. := 49.13 g	T1:= 96.0 ms	T2:= 99.0 ms
-----------------	--------------	--------------



CLIP 3ms *

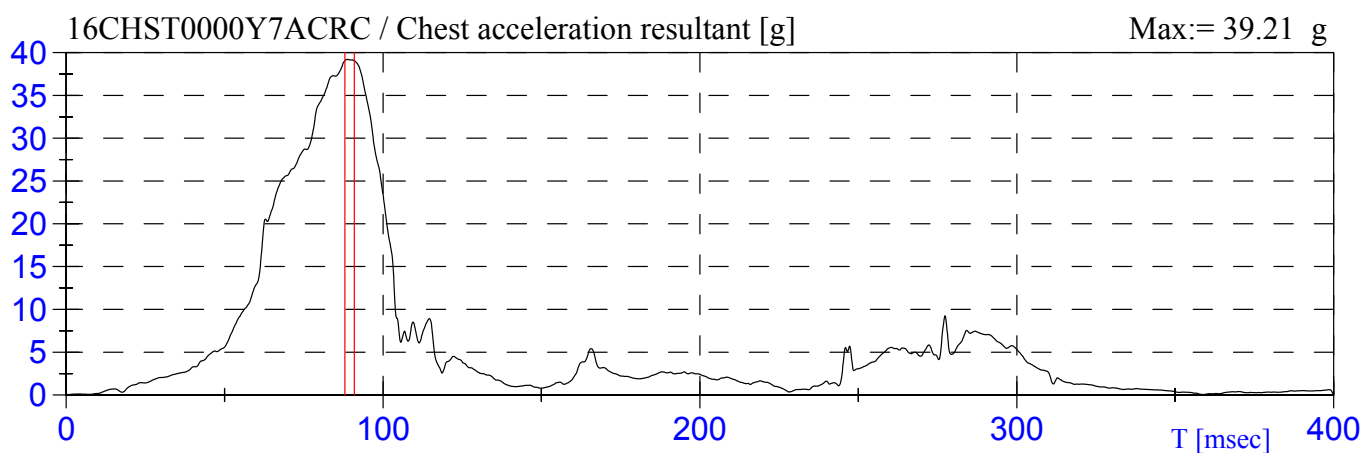
Acc. := 39.21 g	T1:= 79.1 ms	T2:= 82.1 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

Acc. := 52.80 g	T1:= 94.2 ms	T2:= 97.2 ms
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CLIP 3ms *

Acc. := 39.07 g	T1:= 88.0 ms	T2:= 91.0 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



COMMENTAIRES / COMMENTS

13TIBILEUPHFMOXB: N'est pas valide à partir de 33.9 ms.
Is not valid from 33.9 ms.

APPENDICE /APPENDIX C

**DONNÉES DES TEMPÉRATURES
TEMPERATURE DATA**

Temperature TC05-215

