

V3076

RAPPORT D'ESSAI - TEST REPORT

**COLLISION FRONTALE DÉCALÉE DE RECHERCHE
RESEARCH OFFSET FRONTAL IMPACT**

**VEHICULE D'ESSAI / TEST VEHICLE
FORD TAURUS 1999 TC# 99-203**

**FACE DÉFORMABLE / DEFORMABLE FACE
ÉTUDE DE BLESSURES AVEC COUSSINS GONFLABLES
AIR BAG AGGRESSIVENESS STUDY
PHASE II**

Préparé par :
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100, rue du Landais
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N° de contrat : **99-5001**
Rapport N°: **RR 99-146**

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

Prepared by :
PMG TECHNOLOGIES
TEST AND RESEARCH CENTRE
100, rue du Landais
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SAFETY AND SECURITY
Research Engineering and
Vehicle Testing
Ottawa (Ontario)

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	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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VÉHICULE D'ESSAI - TEST VEHICLE

Année du modèle - Model Year 1999	Fabricant - Manufacturer FORD MOTOR CO. USA	Modèle - Model Taurus
Type de carrosserie - Body Style Berline 4 P/4D Sedan	Boîte de vitesse - Transmission Type Automatique/Automatic	Moteur - Engine 3.0 l
Date de fabrication - Date of Manufacture 11/98	Cylindres - Cylinders 6 cyl.	N° d'ident. du véhicule - Vehicle Ident. No. 1FAPP53U4XG16J481
Lecture de l'odomètre - Odometer Reading 27 km	Nombre de places assises désignées Number of Designated Seating Positions 5	Numéro d'ident. PMG - PMG Ident. Number UN9-647
PNBV - GVWR 2125 kg	PNBE (Avant) - GAWR (Front) 1200 kg	PNBE (Arrière) - GAWR (Rear) 936 kg

CONFIGURATION D'ESSAI - TEST CONFIGURATION

Type d'essai - Test type Véh. vs barrière - Veh. vs barrier	Vitesse d'impact** Impact velocity** 33.5 km/h	Angle d'impact Impact angle 0 °	Masse du véhicule d'essai Test vehicle mass 1689.2 kg	Pourcentage d'impact sur véhicule d'essai Impact percentage on test vehicle 42 %
Cousins gonflables (Frontaux) - Air bags (Frontal) *** Activés-Activated <input checked="" type="checkbox"/> Désactivés-Deactivated <input type="checkbox"/> Normal <input type="checkbox"/> Puiss. réduite-Depowered <input type="checkbox"/> Second or New Generation - Seconde ou Nouvelle Génération <input type="checkbox"/> Autre (spécifier) - Other (specify) _____ <input type="checkbox"/>		Cousins gonflables (Latéraux) - Air bags (Lateral) Activés-Activated <input type="checkbox"/> Désactivés-Deactivated <input type="checkbox"/> Normal <input type="checkbox"/> Puiss. réduite-Depowered <input type="checkbox"/> Second or New Generation - Seconde ou Nouvelle Génération <input type="checkbox"/> Autre (spécifier) - Other (specify) N/A <input checked="" type="checkbox"/>		
Description et position du mannequin (Conducteur) Dummy description and position (Driver) DESCRIPTION POSITION <input type="checkbox"/> 50% <input checked="" type="checkbox"/> avancée / near <input checked="" type="checkbox"/> 5% <input type="checkbox"/> mi-course / mid-travel <input type="checkbox"/> autre / other <input type="checkbox"/> autre / other		Description et position du mannequin (Passager avant) Dummy description and position (Front Passenger) DESCRIPTION POSITION <input type="checkbox"/> 50% <input checked="" type="checkbox"/> avancée / near <input checked="" type="checkbox"/> 5% <input type="checkbox"/> mi-course / mid-travel <input type="checkbox"/> autre / other <input type="checkbox"/> autre / other		
Description du mannequin (Passager arrière gauche) Dummy description (Left Rear Passenger) <input type="checkbox"/> 50% <input checked="" type="checkbox"/> 18 mois <input type="checkbox"/> 5% <input type="checkbox"/> 3 ans <input type="checkbox"/> 9 mois <input type="checkbox"/> 6 ans		Description du mannequin (Passager arrière droit) Dummy description (Right Rear Passenger) <input type="checkbox"/> 50% <input type="checkbox"/> 18 mois <input type="checkbox"/> 5% <input checked="" type="checkbox"/> 3 ans <input type="checkbox"/> 9 mois <input type="checkbox"/> 6 ans		

** Tel que mesuré durant les derniers 3.7 mètres de trajet. / ** As measured over final 3.7 meters of travel.

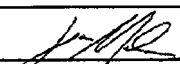
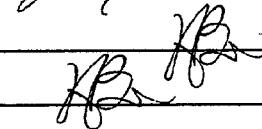
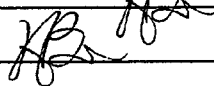
*** Les coussins gonflables ne se sont pas déployés lors de l'impact. *** Air bages did not deploy on impact.

DONNÉES DU VÉHICULE D'ESSAI / TEST VEHICLE DATA

Capacité du véhicule - Vehicle Capacity 499 kg	Masse des bagages - Cargo Load 91 kg	Type de sièges - Type of seats		Types de dossiers - Type of seat back			
			Avt - Frt	Arr - Rr		Avt - Frt	Arr - Rr
Nombre d'occupants (places assises désignées) Number of Occupants (Designated Seating Positions) Avant - Front 2 Arrière - Rear 3 Total 5		Banquette Bench	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dossier ajustable Adjustable Seat Back	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		Baquet Bucket	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dossier non-ajustable Non-adjustable Seat Back	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pression à froid - Cold Tire Pressure Avant - Front 227 kPa Arrière - Rear 227 kPa Secours - Spare N/A kPa					Dimension - Size P205/65/TR15		

Essai réalisé selon la procédure de PMG: Collision frontale décalée de recherche, version 2, révision 21 décembre 1998.

Test performed according to PMG procedure: Research offset frontal impact, version 2, revised December 21st, 1998.

Préparé par : Prepared by : Jean Melançon		Date : 25-02-99
Vérifié par : Verified by : Alain Bussièrès		Date : 25-02-99
Rapport approuvé par : Report approved by : Alain Bussièrès		Date : 25-02-99
Rapport accepté par le client : Report accepted by the client :		Date :

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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PREMIÈRE PESÉE : VÉHICULE TEL QUE LIVRÉ (AVEC LIQUIDES AU MAXIMUM)
FIRST WEIGHT : VEHICLE AS RECEIVED (WITH MAXIMUM FLUIDS)

Avant gauche - Left front 486.3 kg	Avant droit - Right front 488.3 kg	Masse avant totale - Total front weight 974.6 kg
Arrière gauche - Left rear 261.7 kg	Arrière droit - Right rear 249.5 kg	Masse arrière totale - Total rear weight 511.2 kg
Masse totale côté gauche - Total left side weight 748.0 kg	Masse totale côté droit - Total right side weight 737.8 kg	Masse totale - Total weight 1485.8 kg

TROISIÈME PESÉE : VÉHICULE PRÊT POUR L'ESSAI
THIRD WEIGHT : VEHICLE READY FOR TEST

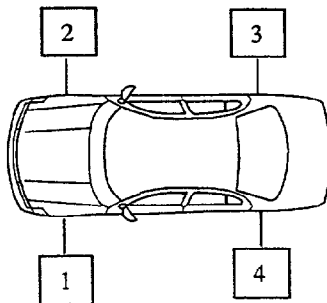
Avant gauche - Left front 523.1 kg	Avant droit - Right front 511.5 kg	Masse avant totale - Total front weight 1034.6 kg
Arrière gauche - Left rear 335.9 kg	Arrière droit - Right rear 318.7 kg	Masse arrière totale - Total rear weight 654.6 kg
Masse totale côté gauche - Total left side weight 859.0 kg	Masse totale côté droit - Total right side weight 830.2 kg	Masse totale - Total weight 1689.2 kg

ATTITUDE DU VÉHICULE / VEHICLE ATTITUDE

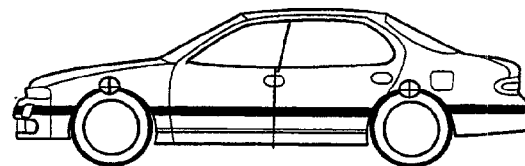
		Attitude tel que livré Attitude as delivered	Attitude chargé Attitude loaded	Attitude tel que testé Attitude as tested
1	Roue avant gauche* Left front wheel*	703mm	693mm	692 mm
2	Roue avant droite* Front right wheel*	705mm	703mm	704 mm
3	Roue arrière droite* Rear right wheel*	696mm	651mm	662 mm
4	Roue arrière gauche* Rear left wheel*	690mm	646mm	654 mm

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

Vue de plan / Plan view



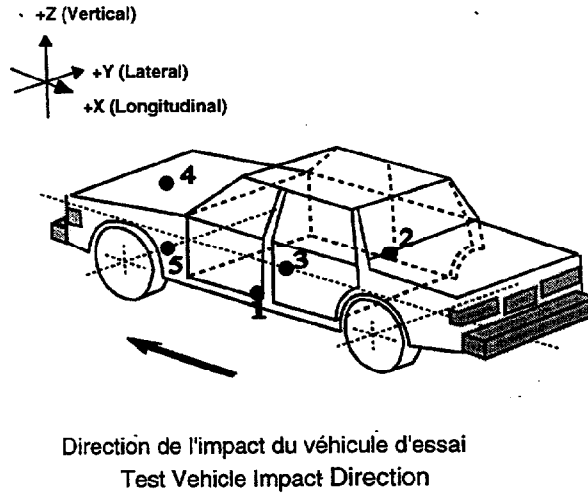
Vue de côté / Side view



⊕ Points de mesure / Mesure points

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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EMPLACEMENT DES ACCÉLÉROMÈTRES
ACCELEROMETER LOCATIONS

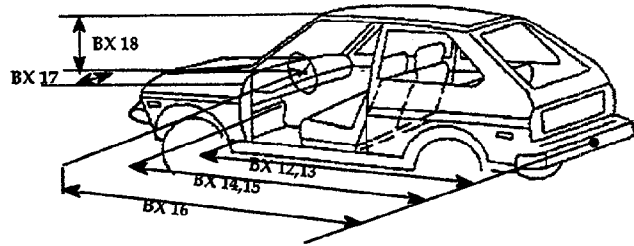
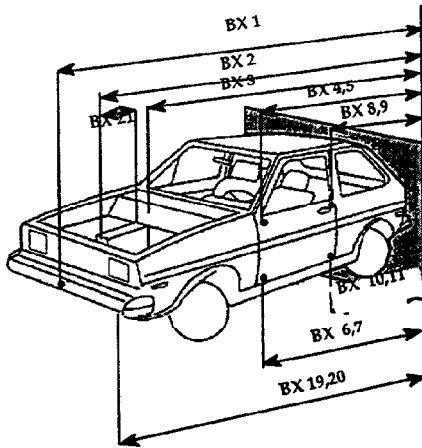


Point de référence : Centre transversal du véhicule, au point le plus avancé, au niveau du sol. Selon SAE J182a.
Reference point : Transversal center of the vehicle, at the foremost point and at ground level. As per SAE J182a.

EMPLACEMENT LOCATION	DESCRIPTIONS	COORDONNÉES / COORDINATES		
		X	Y	Z
#1	Seuil de la porte gauche @ pilier "B" Left door sill @ pillar "B"	2796	-580	241
#2	Seuil de la porte droite @ pilier "B" Right door sill @ pillar "B"	2797	566	244
#3	Centre de gravité Centre of gravity	2130	-17	353
#4	Le dessus du moteur Top of engine	889	109	862
#5	Le dessous du moteur Bottom of engine	740	12	216

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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 supérieur avant porte avant droite
Rear surface of front superior part of right front door
- 5 - Surface arrière à la partie supérieur avant porte avant gauche
Rear surface of front superior part of left front door
- 6 - Surface arrière à la partie inférieur avant porte avant droite
Rear surface of front inferior part of right front door
- 7 - Surface arrière à la partie inférieur avant porte avant gauche
Rear surface of front inferior part of left front door
- 8 - Surface arrière à la partie supérieur arrière porte avant droite
Rear surface of rear superior part of right rear door
- 9 - Surface arrière à la partie supérieur arrière porte avant gauche
Rear surface of rear superior part of left rear door
- 10 - Surface arrière à la partie inférieur arrière porte avant droite
Rear surface of rear inferior part of right rear door
- 11 - Surface arrière à la partie inférieur arrière porte avant gauche
Rear surface of rear inferior part of left rear door
- 12 - Surface arrière à la partie inférieur du pilier "A" droit
Rear surface of rear inferior part of right pillar "A"
- 13 - Surface arrière à la partie inférieur 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

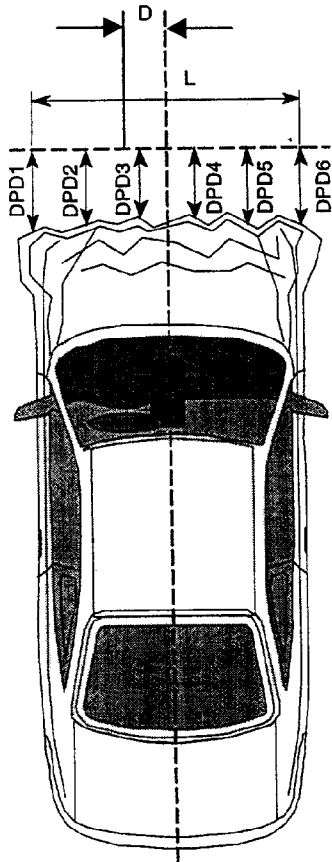
	BX*	AX**		BX*	AX**
1	5023	4949	12	3422	3418
2	4449	4435	13	3411	3403
3	3874	3866	14	3685	3687
4	3431	3420	15	3665	3647
5	3433	3429	16	2978	2983
6	3402	3396	17	420	409
7	3407	3403	18	475	476
8	2416	2407	19	4904	4892
9	2421	2418	20	4893	4757
10	2382	2380	21	384	380
11	2387	2386			

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

REMARQUES / COMMENTS :

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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MESURES DES DPD / DPP'S MEASUREMENTS



DPD 1:
DPD 2:
DPD 3:
DPD 4:
DPD 5:
DPD 6:
MESURE L:
MESURE D:

	AVANT ESSAI PRE-TEST	APRÈS ESSAI POST-TEST
DPD 1:	218	308
DPD 2:	51	159
DPD 3:	11	88
DPD 4:	13	65
DPD 5:	56	93
DPD 6:	229	284
MESURE L:		1451
MESURE D:		0

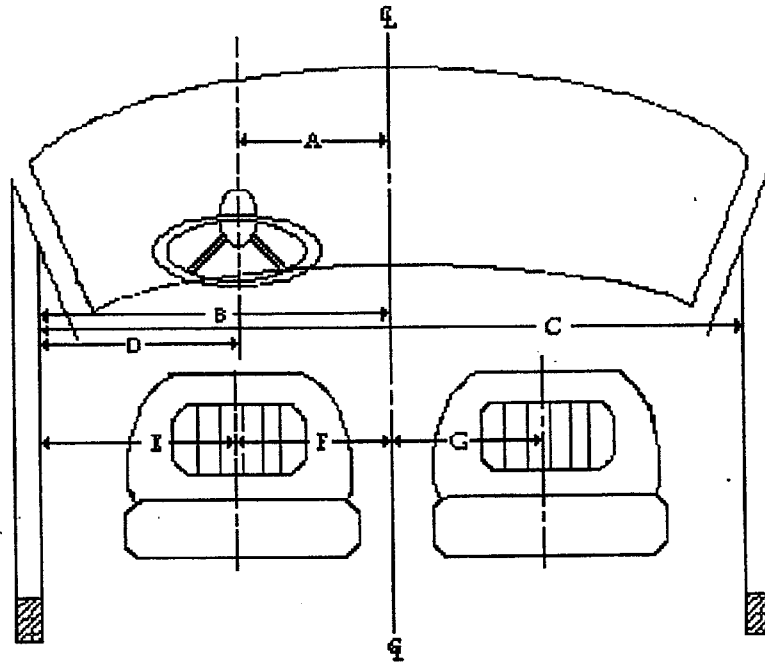
L : Longueur de la région endommagée
Length of damaged region

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

REMARQUES / COMMENTS :

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**POSITION DES SIÈGES AVANT
FRONT SEAT POSITION**



Code	Description	mm	Code	Description	mm
A	Centre du volant à la ligne de centre du véhicule Steering wheel center to center line of car	369	E	Seuil de la fenêtre au centre du siège (conducteur) Window edge to seat midline (driver)	480
B	Seuil de fenêtre à la ligne de centre du véhicule Window edge to center line of the vehicle	853	F	Centre du siège à la ligne de centre du véhicule (conducteur) Seat midline to center line of vehicle (driver)	373
C	Fenêtre à fenêtre Window to window	1691	G	Centre du siège à la ligne de centre du véhicule (passager) Seat midline to center line of vehicle (passenger)	360
D	Centre du volant au seuil de la fenêtre Steering wheel center to window edge	484			

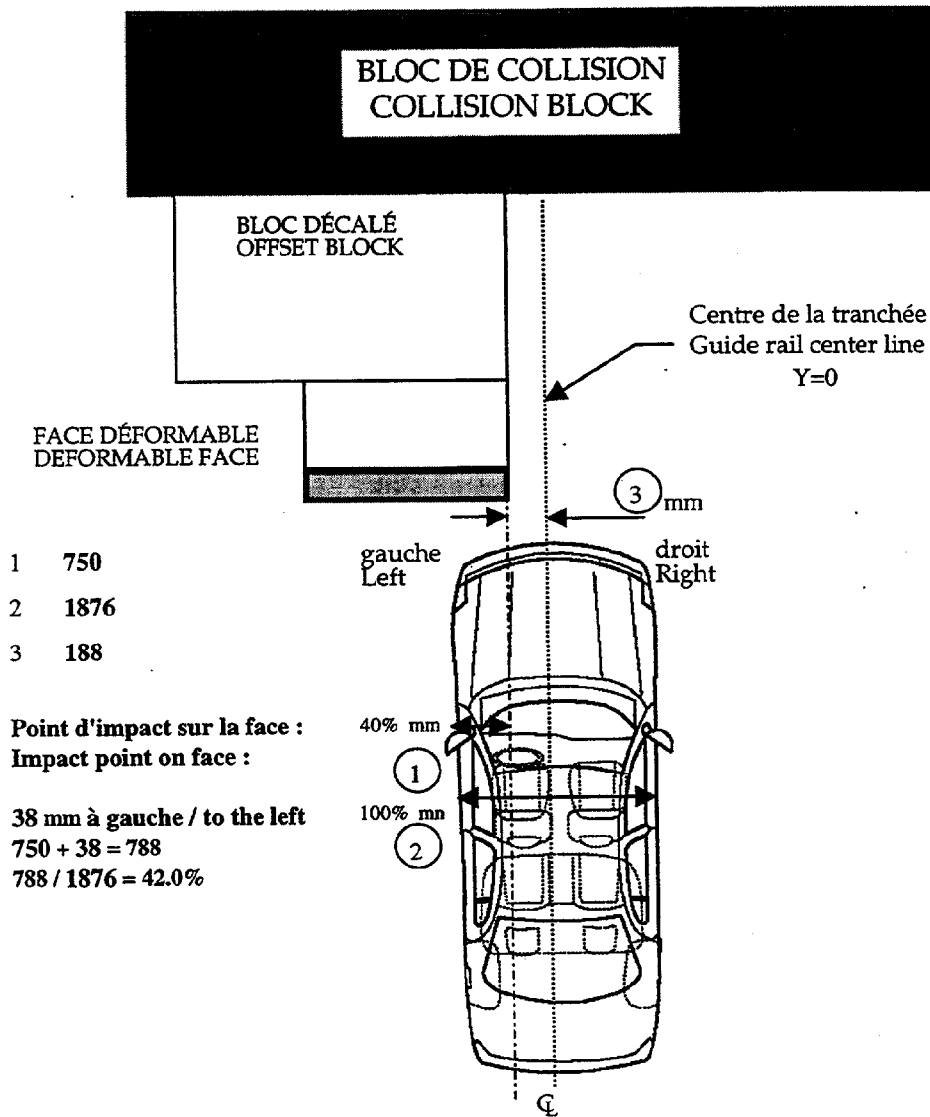
Point de référence : Centre transversal du véhicule, au point le plus avancé, au niveau du sol. Selon SAE J182a.
Reference point : Transversal center of the vehicle, at the foremost point and at ground level. As per SAE J182a.

Remarques - Comments: Sièges avec ajustement avant/arrière conventionnel. Dossier ajustable. Volant ajustable. Ceinture baudrier ajustable 5 positions. Appuie-tête ajustable. Pas d'ajustement de hauteur du coussin de siège et de lombaire.

Seats with conventionnal fore/aft adjustment. Seat back adjustable. Steering adjustable. Upper torso belt adjustable 5 settings. Headrest adjustable. No seat cushion height and lumbar adjustment.

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POSITION INITIALE VÉHICULE/FACE DÉFORMABLE - VEHICLE INITIAL POSITION/DEFORMABLE FACE

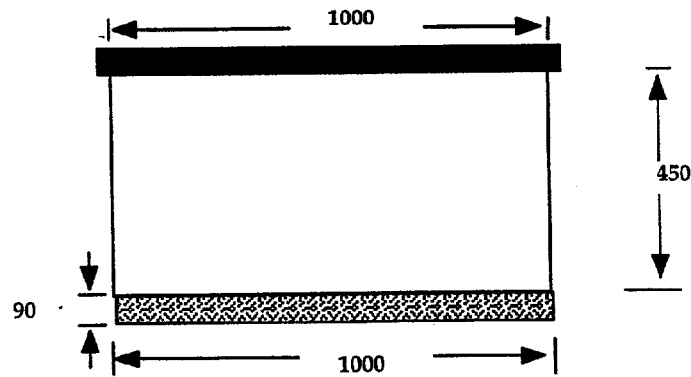
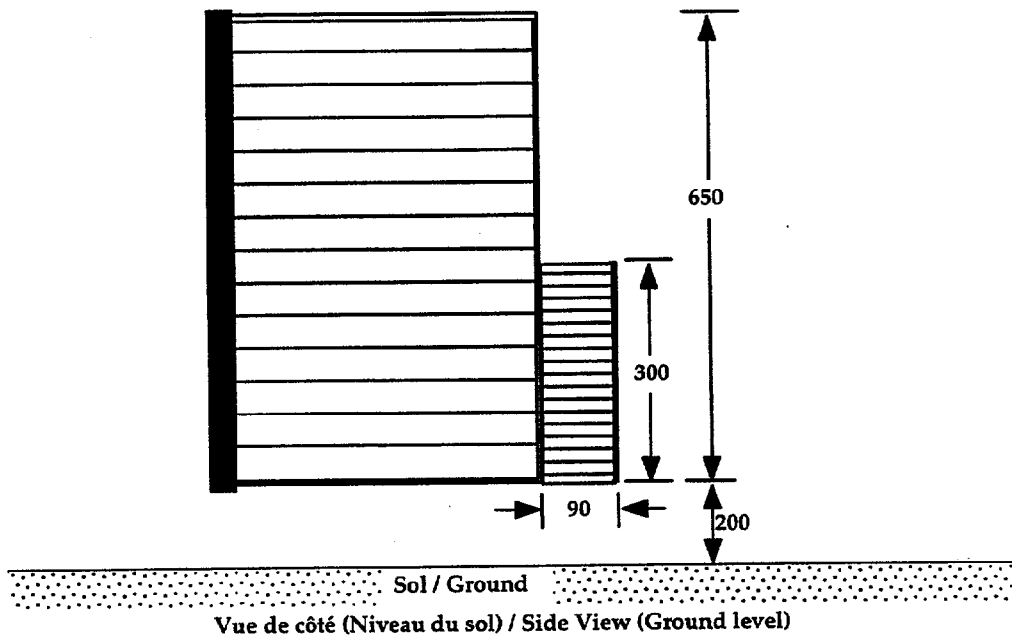


NOTE: La largeur maximale du véhicule est mesurée au pilier "B".
NOTE: The maximum width of the vehicle is measured at the "B" pillar.

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DIMENSIONS DE LA FACE DÉFORMABLE - DEFORMABLE FACE DIMENSIONS

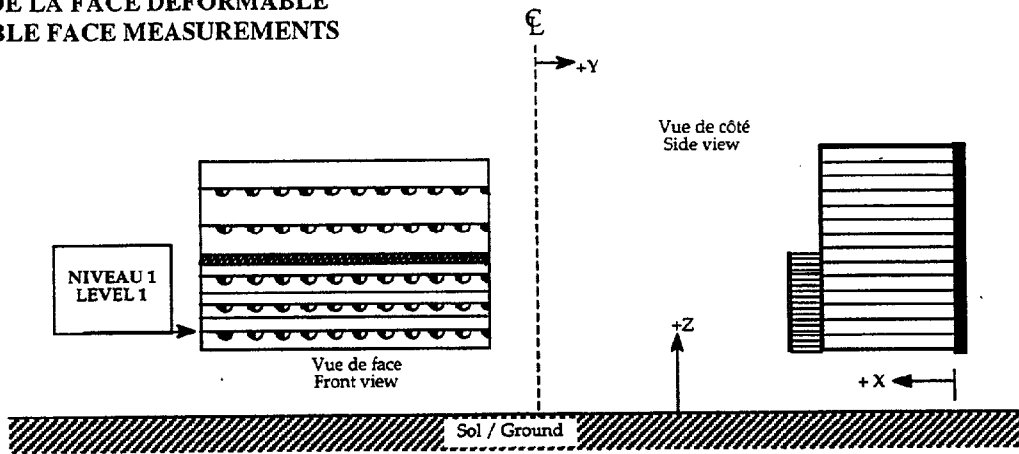
(Toutes les mesures sont en mm / All measurements are in mm)



Vue de dessus / Top View

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MESURES DE LA FACE DÉFORMABLE
DEFORMABLE FACE MEASUREMENTS

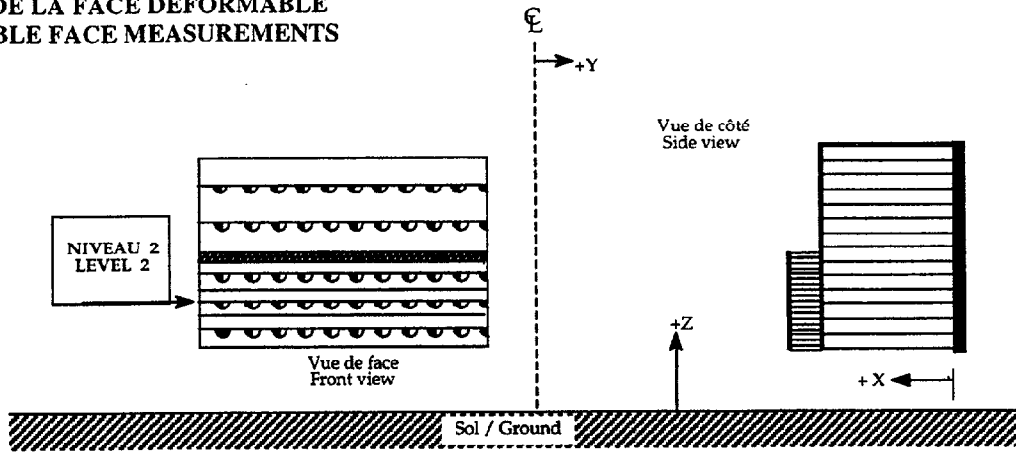


PRE-TEST			POST-TEST			Δ DIFFERENCE		
X	Y	Z	X	Y	Z	X	Y	Z
547	-1144	242	722	-1144	242	-175	0	0
547	-1045	242	706	-1045	243	-159	0	-1
547	-944	242	614	-945	242	-67	1	0
546	-844	242	529	-844	243	17	0	-1
547	-744	243	434	-744	242	113	0	1
547	-646	242	423	-643	242	124	-3	0
546	-546	243	403	-544	243	143	-2	0
546	-445	243	382	-446	243	164	1	0
546	-346	243	358	-346	244	188	0	-1
547	-245	244	341	-246	246	206	1	-2

Point (0,0,0): Plan vertical avant du support de face en X, centre latéral du système de guidage ou centre du véhicule en Y et niveau du sol en Z.
Front vertical plane of face holder in X axis, lateral center of the guiding system or vehicle longitudinal centreline in the Y axis and ground level in the Z axis.

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MESURES DE LA FACE DÉFORMABLE
DEFORMABLE FACE MEASUREMENTS

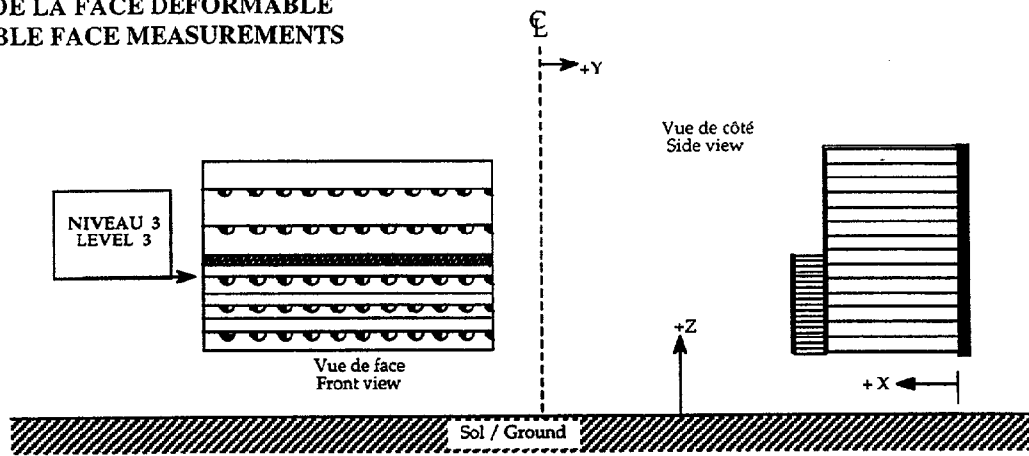


PRE-TEST			POST-TEST			Δ DIFFERENCE		
X	Y	Z	X	Y	Z	X	Y	Z
546	-1144	353	680	-1148	355	-134	4	-2
547	-1044	354	662	-1045	353	-115	1	1
546	-942	353	596	-942	354	-50	0	-1
547	-844	354	552	-843	352	-5	-1	2
546	-744	355	484	-743	355	62	-1	0
546	-644	354	402	-643	355	144	-1	-1
546	-546	354	376	-544	354	170	-2	0
546	-446	354	357	-445	353	189	-1	1
546	-347	355	338	-345	355	208	-2	0
546	-245	355	283	-246	356	263	1	-1

Point (0,0,0): Plan vertical avant du support de face en X, centre latéral du système de guidage ou centre du véhicule en Y et niveau du sol en Z.
Front vertical plane of face holder in X axis, lateral center of the guiding system or vehicle longitudinal centreline in the Y axis and ground level in the Z axis.

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MESURES DE LA FACE DÉFORMABLE
DEFORMABLE FACE MEASUREMENTS

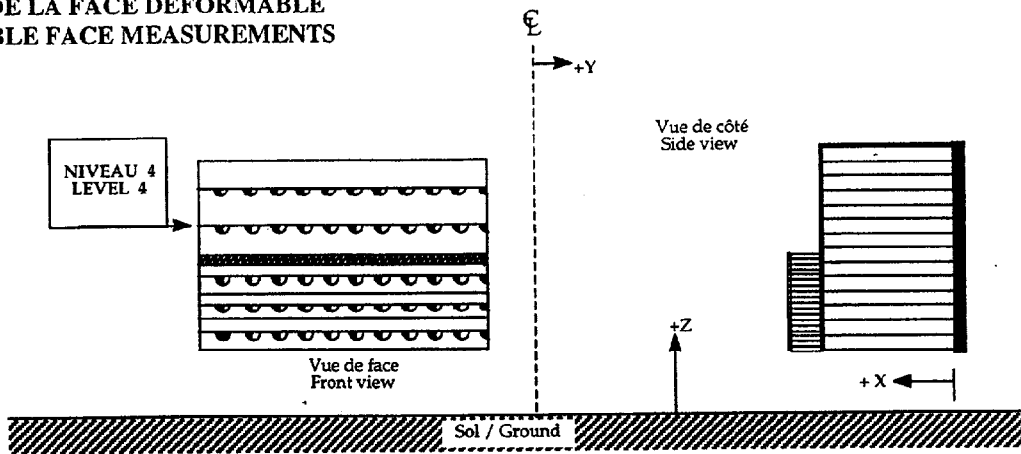


PRE-TEST			POST-TEST			Δ DIFFERENCE		
X	Y	Z	X	Y	Z	X	Y	Z
546	-1144	466	682	-1145	467	-136	1	-1
546	-1044	465	595	-1043	465	-49	-1	0
546	-944	466	532	-944	466	14	0	0
546	-844	466	432	-846	465	114	2	1
546	-744	467	264	-746	466	282	2	1
546	-646	467	235	-646	465	311	0	2
546	-545	467	180	-546	466	366	1	1
546	-446	467	139	-447	467	407	1	0
546	-344	466	77	-345	465	469	1	1
547	-245	467	27	-246	467	520	1	0

Point (0,0,0): Plan vertical avant du support de face en X, centre latéral du système de guidage ou centre du véhicule en Y et niveau du sol en Z.
Front vertical plane of face holder in X axis, lateral center of the guiding system or vehicle longitudinal centreline in the Y axis and ground level in the Z axis.

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MESURES DE LA FACE DÉFORMABLE
DEFORMABLE FACE MEASUREMENTS

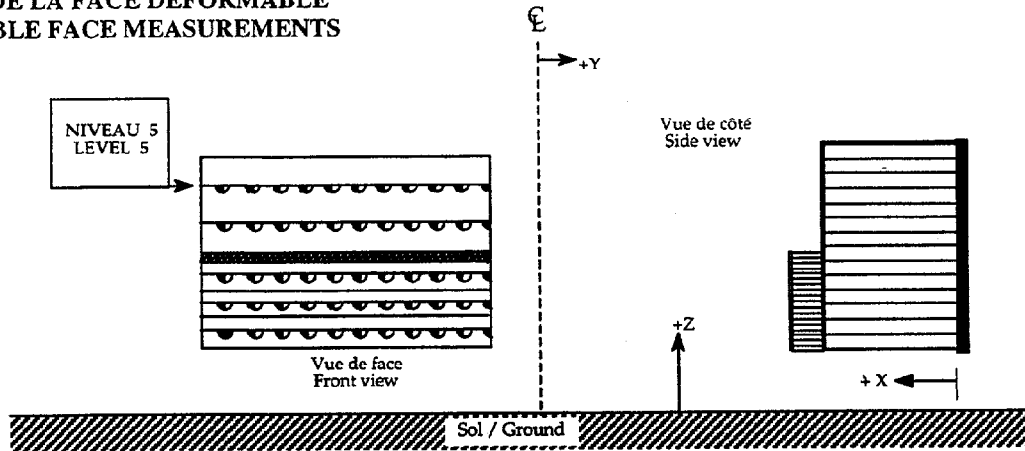


PRE-TEST			POST-TEST			Δ DIFFERENCE		
X	Y	Z	X	Y	Z	X	Y	Z
455	-1144	627	555	-1144	628	-100	0	-1
455	-1043	626	509	-1043	625	-54	0	1
455	-943	626	461	-944	625	-6	1	1
455	-844	626	353	-843	625	102	-1	1
455	-744	626	261	-744	624	194	0	2
455	-644	626	223	-644	624	232	0	2
457	-543	625	192	-545	624	265	2	1
456	-443	624	195	-443	624	261	0	0
457	-343	626	146	-343	627	311	0	-1
456	-243	625	71	-245	625	385	2	0

Point (0,0,0): Plan vertical avant du support de face en X, centre latéral du système de guidage ou centre du véhicule en Y et niveau du sol en Z.
Front vertical plane of face holder in X axis, lateral center of the guiding system or vehicle longitudinal centreline in the Y axis and ground level in the Z axis.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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MESURES DE LA FACE DÉFORMABLE
DEFORMABLE FACE MEASUREMENTS



PRE-TEST			POST-TEST			Δ DIFFERENCE		
X	Y	Z	X	Y	Z	X	Y	Z
454	-1141	734	485	-1140	733	-31	-1	1
454	-1041	734	464	-1041	734	-10	0	0
455	-941	735	447	-940	734	8	-1	1
455	-841	734	411	-842	734	44	1	0
455	-742	735	376	-740	734	79	-2	1
455	-642	734	290	-642	733	165	0	1
455	-542	734	260	-543	734	195	1	0
456	-442	734	236	-442	733	220	0	1
456	-342	733	195	-343	733	261	1	0
456	-243	734	166	-243	735	290	0	-1

Point (0,0,0): Plan vertical avant du support de face en X, centre latéral du système de guidage ou centre du véhicule en Y et niveau du sol en Z.
Front vertical plane of face holder in X axis, lateral center of the guiding system or vehicle longitudinal centreline in the Y axis and ground level in the Z axis.

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**POINTS DE MESURES DES CEINTURES DE SÉCURITÉ EN UTILISANT L'APPAREIL (BTD)
PASSENGER CAR BELT FIT MEASUREMENTS USING THE BELT DEPLOYMENT TEST DEVICE (BTD)**

Type de siège baquet / bucket banquette / bench banquette 60-40 / bench 60-40
Seat type

Type de ceinture 3 points passive active automatique / automatic motorisée / motorised
Belt system

Localisation du siège Av-G / F-L Av-D / F-R Arr-G / R-L Arr-D / R-R
Seat location

Espacement du genou gauche Espacement du genou droit
Left knee spacing 102 mm Right knee spacing 102 mm

Essai no: / Trial no:	1	2	3
Angle du dossier BTD Back pan angle	24.0 deg.	24.4 deg.	24.2 deg.
Angle de la cuvette BTD Seat pan angle	16.0 deg.	16.6 deg.	17.6 deg.
Angle du pied Foot angle	gauche / left	126 deg.	126 deg.
	droit / right	129 deg.	129 deg.
Angle du genou Knee angle	gauche / left	118 deg.	118 deg.
	droit / right	120 deg.	119 deg.
Mesure sous-abdominale Lap belt score	gauche / left	36 mm / 0 mm	36 mm / 0 mm
	droit / right	47 mm / 3 mm	48 mm / 3 mm
Ceinture en contact Belt in contact	gauche / left	oui/yes	oui/yes
	droit / right	oui/yes	oui/yes
Mesure ceinture baudrier Upper torso belt score	Sternum	186 mm / - *	183 mm / - *
	Clavicule	139 mm / 0 mm	135 mm / 0 mm
Ceinture en contact Belt in contact	Clavicule	oui/yes	oui/yes

Mesure / Score	Jeu / Slack
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* Mesure ceinture baudrier (jeu sternum) : (-) signifie un jeu causé par l'appareil BTD. Impossible à éliminer.
* Upper torso belt score (sternum slack) : (-) means a slack impossible to eliminate due to BTD machine.

Remarques - Comments : Selon le manuel d'opérations pour mesures géométriques des ceintures de sécurité, ébauche, Transports Canada, janvier 1993. As per the operational manual for the belt deployment test device, draft, Transport Canada, January 1993.

Siège à la position la plus reculée. Ceinture baudrier à la mi-hauteur.
Seat at mid-travel position. Upper torso belt at mid-height position.

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**POINTS DE MESURES DES CEINTURES DE SÉCURITÉ EN UTILISANT L'APPAREIL (BTD)
PASSENGER CAR BELT FIT MEASUREMENTS USING THE BELT DEPLOYMENT TEST DEVICE (BTD)**

Type de siège / Seat type: baquet / bucket banquette / bench banquette 60-40 / bench 60-40

Type de ceinture / Belt system: 3 points passive active automatique / automatic motorisée / motorised

Localisation du siège / Seat location: Av-G / F-L Av-D / F-R Arr-G / R-L Arr-D / R-R

Espacement du genou gauche / Left knee spacing: 104 mm Espacement du genou droit / Right knee spacing: 103 mm

Essai no: / Trial no:	1	2	3
Angle du dossier BTD Back pan angle	23.5 deg.	23.2 deg.	23.2 deg.
Angle de la cuvette BTD Seat pan angle	16.5 deg.	16.7 deg.	16.4 deg.
Angle du pied Foot angle	gauche / left: 123 deg.	123 deg.	123 deg.
	droit / right: 125 deg.	125 deg.	125 deg.
Angle du genou Knee angle	gauche / left: 117 deg.	118 deg.	118 deg.
	droit / right: 117 deg.	119 deg.	119 deg.
Mesure sous-abdominale Lap belt score	gauche / left: 48 mm / 1 mm	48 mm / 1 mm	48 mm / 1 mm
	droit / right: 39 mm / 0 mm	38 mm / 0 mm	39 mm / 0 mm
Ceinture en contact Belt in contact	gauche / left: oui/yes	oui/yes	oui/yes
	droit / right: oui/yes	oui/yes	oui/yes
Mesure ceinture baudrier Upper torso belt score	Sternum: 180 mm / - *	180 mm / - *	183 mm / - *
	Clavicule: 128 mm / 0 mm	127 mm / 0 mm	129 mm / 0 mm
Ceinture en contact Belt in contact	Clavicule: oui/yes	oui/yes	oui/yes

Mesure / Score	Jeu / Slack
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* Mesure ceinture baudrier (jeu sternum) : (-) signifie un jeu causé par l'appareil BTD. Impossible à éliminer.
* Upper torso belt score (sternum slack) : (-) means a slack impossible to eliminate due to BTD machine.

Remarques - Comments : Selon le manuel d'opérations pour mesures géométriques des ceintures de sécurité, ébauche, Transports Canada, janvier 1993. As per the operational manual for the belt deployment test device, draft, Transport Canada, January 1993.

Siège à la position la plus reculée. Ceinture baudrier à la mi-hauteur.
Seat at mid-travel position. Upper torso belt at mid-height position.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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DÉTERMINATION DU POINT "H" AVEC LE MANNEQUIN "3-D", MESURES PROVENANT DU BRAS ARTICULÉ MÉCANIQUE
SEAT "H" POINT DETERMINED WITH THE H-POINT MACHINE, MEASURES FROM AN ARTICULATED MECHANICAL ARM

DESCRIPTION / DESCRIPTION	CONDUCTEUR / DRIVER			PASSAGER / PASSENGER			PASSAGER ARRIÈRE REAR PASSENGER		
Type de siège / Seat type	BAQUET/BUCKET			BAQUET/BUCKET					
Nombre de crans d'ajustement du siège * Number of notches for adjustable seat *	13 de/of 13 crans/notches			13 de/of 13 crans/notches			N/A crans/notches		
Nombre de crans d'ajustement du dossier * Number of notches for adjustable seat back *	13ème/13th crans/notches			13ème/13th crans/notches			N/A crans/notches		
Axes	X	Y	Z	X	Y	Z	X	Y	Z
Loquet de porte / Door latch	2555	-825	634	2557	816	637			
Point-H / H-Point	2458	-450	499	2453	455	505			
Rotule / Knee joint	2013	-593	613	2008	586	618			
PRS / SRP	2458	-450	499	2453	455	505			

* La position la plus avancée est au 1^{er} cran / * The foremost position is at the 1st notch.

Ajustement du 3D / 3D adjustment

MESURES DE RÉFÉRENCE DU MANNEQUIN "3-D"
REFERENCE MEASUREMENTS OF "3-D" MACHINE

95 %

95 %

DESCRIPTION / DESCRIPTION	CONDUCTEUR / DRIVER	PASSAGER / PASSENGER	PASSAGER ARRIÈRE REAR PASSENGER
Espacement du genou gauche Left knee spacing	100 mm	159 mm	
Espacement du genou droit Right knee spacing	215 mm	90 mm	
Cheville à cheville (c-c) Ankle to ankle (a-a)	275 mm	239 mm	
Angle du dossier du "3-D" Back pan angle	24.8 deg	24.6 deg	
Angle de la cuvette de siège du "3-D" Seat pan angle	15.0 deg	13.5 deg	
Angle du genou gauche Left knee angle	129 deg	132 deg	
Angle du genou droit Right knee angle	131 deg	131 deg	
Angle de la cheville gauche Left ankle angle	133 deg	129 deg	
Angle de la cheville droite Right ankle angle	98 deg	128 deg	

Remarques – Comments : Sièges du conducteur et du passager à la position la plus reculée.
Driver and passenger seats at the rearmost position.

Le mannequin 3D a été installé selon la procédure suivante :
"Anthropomorphic test dummy seating procedure for frontal impact test"
version 3, 10/23/85.
The 3D machine was installed as per the following procedure :
"Anthropomorphic test dummy seating procedure for frontal impact test"
version 3, 10/23/85.

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POSITIONNEMENT DES MANNEQUINS / MEASUREMENTS OF DUMMY POSITIONS

		MESURES / MEASUREMENTS :					
Conducteur/Driver : HYBRID III 5% Femelle/Female		Toutes les mesures sont en mm / All measurements are in mm					
Angle du pelvis - Pelvic angle :	21.5°						
Angle transversal - Transversal angle :	0.2°	Conducteur / Driver			Passager / Passenger		
Angle de la tête - Head angle :	0°	Ajustement du siège : Seat adjustment :			Ajustement du siège : Seat adjustment :		
Seuil de porte - Door sill :	1.0°	1 de 13 crans/notches			1 de 13 crans/notches		
Angle du coussin - Skew angle :	0.8°	Ajustement du dossier : Seat back adjustment :			Ajustement du dossier : Seat back adjustment :		
Passager avant/Front Passenger: HYBRID III 5% Femelle/Female		- crans/notches			- crans/notches		
Angle du pelvis - Pelvic angle :	18.0°	X	Y	Z	X	Y	Z
Angle transversal - Transversal angle :	0.04°						
Angle de la tête - Head angle :	0.2°						
Seuil de porte - Door sill :	0.2°						
Angle du coussin - Skew angle :	2.5°						
Fenêtre à fenêtre / Window to window :			1691			1691	
Centre du véhicule / Vehicle center :			0			0	
Seuil de la portière au centre du loquet / Door sill to latch center :				276			279
Centre du volant / Steering wheel center :		2045	-369	874			
Mouvement du lacet / Yaw movement :		0.8			1.5		
Cible de tête / Head target :		2309	-445	1095	2319	433	1105
Point-H / H-Point :		2210	-524	530	2221	511	531
Rotule / Knee joint :		1874	-495	586	1882	465	589

Remarques – Comments : Les sièges du conducteur et du passager sont à la position la plus avancée.
The driver and the passenger seats are at the foremost position.

Selon la procédure de positionnement de mannequin 5^e percentile Hybrid III côté conducteur, Biokinetics, 29/11/98, rapport n° D98-15 et côté passager, Biokinetics, 20/11/98, rapport n°D98-17.

As per procedure for placement of a 5th percentile Hybrid III ATD driver's side, Biokinetics, 29/11/98, report no D98-15 and passenger's side, Biokinetics, 20/11/98, report no D98-17.

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.

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POSITIONNEMENT DES MANNEQUINS / MEASUREMENTS OF DUMMY POSITIONS

		MESURES / MEASUREMENTS :					
Passager arrière gauche : Rear left passenger :		Toutes les mesures sont en mm / All measurements are in mm					
Angle du pelvis - Pelvic angle : N/A°		Passager arrière gauche Rear left passenger			Passager arrière droit Rear right passenger		
Angle transversal - Transversal angle : N/A°		Ajustement du siège : Seat adjustment :			Ajustement du siège : Seat adjustment :		
Angle de la tête - Head angle : N/A°		N/A crans/notches			N/A crans/notches		
Angle du coussin - Skew angle : N/A°		Ajustement du dossier : Seat back adjustment :			Ajustement du dossier : Seat back adjustment :		
Passager arrière droit : Rear right passenger :		N/A crans/notches			N/A crans/notches		
Angle du pelvis - Pelvic angle : N/A°		X	Y	Z	X	Y	Z
Angle transversal - Transversal angle : N/A°							
Angle de la tête - Head angle : N/A°							
Angle du coussin - Skew angle : N/A°							
Mouvement du lacet / Yaw movement :							
Cible de tête / Head target :		3456	-410	952	3480	409	1038
Point-H / H-Point :							
Rotule / Knee joint :							

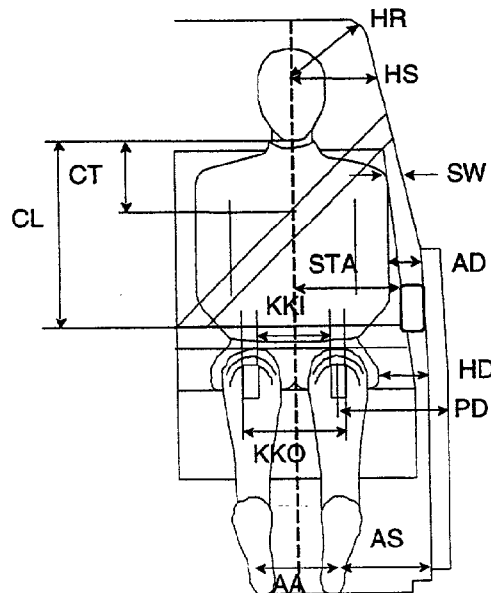
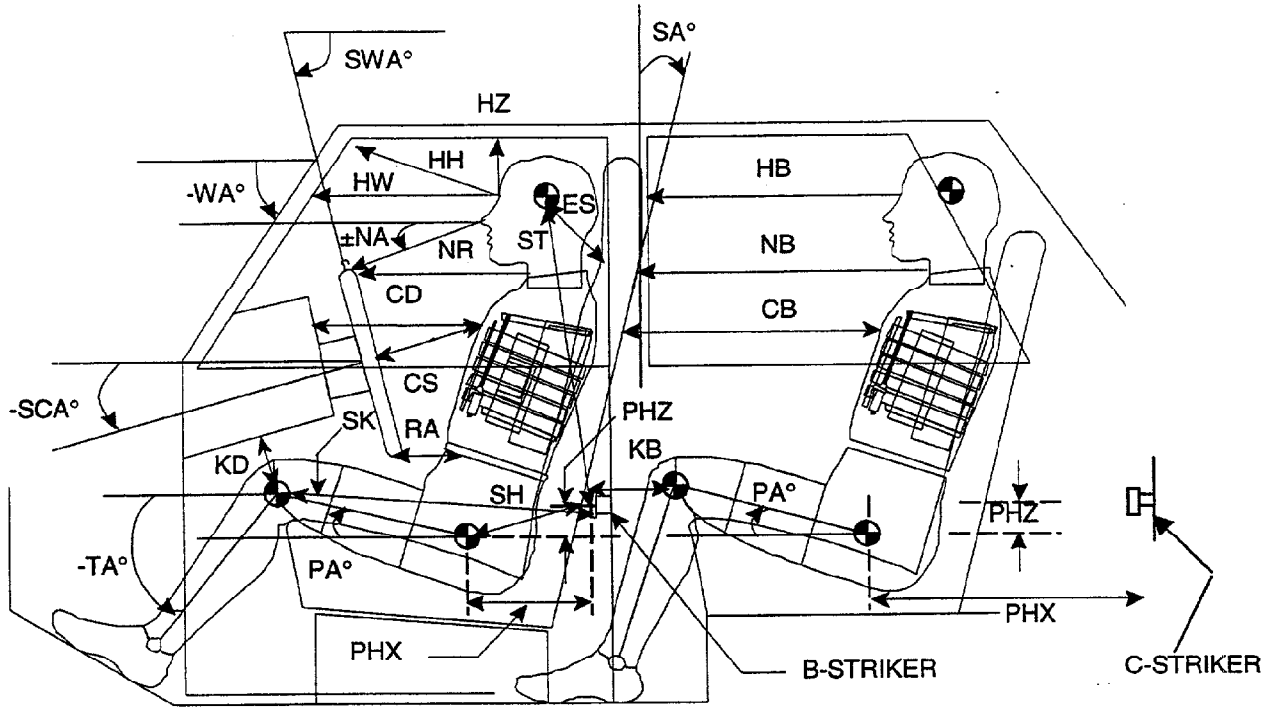
Point de référence : Centre transversal du véhicule, au point le plus avancé, au niveau du sol. Selon SAE J182a.
Reference point : Transversal center of the vehicle, at the foremost point and at ground level. As per SAE J182a.

Passager arrière gauche : Rear left passenger :	Hybrid III 18 mois, assis dans un siège pour enfant faisant face vers l'avant. Hybrid III 18 month, seated in a child's car seat facing front.	
	Manufacturier du siège : Seat manufacturer :	Evenflo
	Modèle du siège : Seat model :	Champion
	No. de série du siège : Seat serial number :	225146C P1
	Date de fabrication du siège : Seat fabrication date :	98-10-16

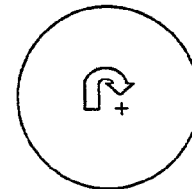
Passager arrière droit : Rear right passenger :	Hybrid III 3 ans, assis dans un siège pour enfant faisant face vers l'avant. Hybrid III 3 years, seated in a child's car seat facing front.	
	Manufacturier du siège : Seat manufacturer :	Cosco Inc.
	Modèle du siège : Seat model :	Regal Ride
	No. de série du siège : Seat serial number :	02C32CHA
	Date de fabrication du siège : Seat fabrication date :	98-09-30

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COTES DE LOCALISATION DES MANNEQUINS
DUMMY LOCATION DATA



référence :



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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	215	216		
Genou à genou (plaque) Intérieur / Interior Knee to knee (plate) Extérieur / Exterior	KKI	162	95		
	KKO	302	235		
De la cheville jusqu'au seuil de porte (horizontalement) Ankle to door sill (horizontal)	AS	210	230		
Centre du genou au tableau de bord ou siège horizontalement (minimum) Knees centre to dash or seat back horizontal (minimum)	KDL	35	50		
	KDR	42	61		
Sternum au tableau de bord (horizontalement) Chest to dash (horizontal)	CD		335		
Milieu du sternum au centre du moyeu du volant ou siège avant Mid sternum to steering hub center or front seat	CS/CB	77			
Milieu du front jusqu'au pare-brise (horizontalement) Mid forehead to windshield (horizontal)	HW	605	600		
Milieu du front jusqu'au haut du pare-brise Mid forehead to windshield header	HH	265	255		
Nez à la jante du volant de direction (haut) ou siège avant Nose to steering wheel rim (top) or front seat	NR/HB	230			
Milieu du front jusqu'au début du toit Mid forehead to edge roof	HR	255	240		
Haut de l'oreille au haut du siège avant Ear top to front seat top	ES	231	230		
Menton au haut de la ceinture sous-abdominale (verticalement) Chin to lap belt upper edge (vertical)	CL	355	348		
Menton au haut de la ceinture baudrier (verticalement) Chin to thorax belt upper edge (vertical)	CT	125	128		
Milieu du front à la fenêtre latérale (horizontalement) Mid forehead to side window (horizontal)	HS	364	335		
La rotule à la porte (horizontalement) Patella to door (horizontal)	PD	230	260		
Du point-H à la porte (horizontalement) H-point to door (horizontal)	HD	180	185		
Du milieu du bras à la porte (horizontalement) Mid upper arm to door (horizontal)	AD	160	168		
Cou jusqu'au volant ou tableau de bord (horizontalement) ou siège avant Neck to steering wheel or dash board (horizontal) or front seat	NB	328	446		
Épaule à la fenêtre de côté Shoulder to side window	SW	176	185		
Abdomen à l'appui-bras Abdomen to armrest	STA	149	158		
Milieu du front au toit (verticalement) Mid forehead to roof (vertical)	HZ	185	210		
Tête au loquet (plan (x,z)) Striker to head ((x,z) plan)	ST	522	525		
Abdomen à la jante du volant de direction (bas) Steering wheel rim to abdomen (bottom)	RA	93			
Genou au loquet (plan (x,z)) Striker to knee ((x,z) plan)	SK	682	677		
Point-H au loquet (plan (x,z)) Striker to H-Point ((x,z) plan)	SH	360	352		
Point-H au loquet en X (horizontalement) Striker to H-Point in X (horizontal)	PHX	345	336		
Point-H au loquet en Z (verticalement) Striker to H-Point in Z (vertical)	PHZ	104	106		

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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	70.0°			
Angle du pare-brise Windshield angle	-WA	-24.7°			
Angle de la colonne de direction Steering column angle	-SCA	-20.0°			
Angle du tibia gauche Left tibial angle	-TA	-38.0°	-43.0°		
Angle du tibia droit Right tibial angle	-TA	-38.0	-39.0		
Angle pelvis Pelvic angle	+PA	21.5°	18.0°		
Angle du nez à la jante de direction (haut) Nose to steering wheel rim (top) angle	±NA	-1.5°			
Angle du dossier Seat back angle	+SA	19.3°	17.8°		
Angle ST (horizontalement) ST angle (horizontal)	+ST-A	61.9°	63.4°		
Angle SK (horizontalement) SK angle (horizontal)	±SK-A	-4.0°	-4.1°		
Angle SH (horizontalement) SH angle (horizontal)	-SH-A	-16.8°	-17.5°		

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**MESURES DU VÉHICULE, POINT "H" (MANNEQUIN 3D) ET MANNEQUIN
 DAE**
VEHICLE, H-POINT MANIKIN AND TEST DUMMY MEASUREMENTS

Mannequin 3D Point "H" - H-Point Manikin

Conducteur / Driver 95%

DESCRIPTION	X(mm)	Y(mm)	Z(mm)
Point "H" extérieur mesure initiale - H-Point, outboard initial measurement	2458	-450	499
Point "H" extérieur mesure finale - H-Point, outboard final measurement	2458	-450	499
Rotule, extérieure - Knee pivot, outboard	2013	-593	613
Cheville, extérieure - Ankle pivot, outboard	1644	-442	343
Talon du pied en contact avec sol - Accomodation heel point (AHP)	1689	-436	220
Plante du pied en contact avec sol - Accomodation ball of foot point (ABFP)	1485	-471	282
Ligne médiane du véhicule - Vehicle centreline		0	
Centre du moyeu latéral - Lateral hub centre location (W20)		369	
Support poids du sternum, extérieur - Torso weigh hanger, outboard	2607	-540	822
PRS / SRP	2458	-450	499
Ligne médiane du coussin du siège (avant/milieu/arr.) - Seat cushion centreline (front/mid/rear)		-370 / -373 / -376	
Ligne médiane du dossier du siège (avant/milieu/arr.) - Seat back centreline (front/mid/rear)		-378 / -376 / -373	
Hauteur Point "H" - H-Point height ($H30 = Z_{H-POINT} - Z_{AHP}$)		279	
Position du siège vs sa position la plus reculée - Seat position vs its rearmost position		0	
Angle dossier du siège - Seat back angle (deg) (L40)		25°	
Angle du coussin du siège - Skew angle		0.81°	
Diamètre extérieur du volant - Steering wheel dia., outside (W9)		376	

Véhicule et Mannequin - Vehicle and Dummy

Femelle 5^e percentile conducteur / 5th percentile female driver

DESCRIPTION	X(mm)	Y(mm)	Z(mm)
Boulon siège avant, extérieur - Front seat bolt, outboard	2117	-576	263
Jante du volant, centre haut - Steering wheel rim, top centre	1970	-380	1052
Jante du volant, centre bas - Steering wheel rim, bottom centre	2106	-360	696
Jante du volant, centre gauche - Steering wheel rim, left centre	2033	-558	872
Jante du volant, centre droit - Steering wheel rim, right centre	2038	-182	890
Moyeu du volant, centre haut - Steering wheel hub, top centre	1993	-373	924
Moyeu du volant, centre - Steering wheel hub, centre	2060	-367	845
Moyeu du volant, centre bas - Steering wheel hub, bottom centre	2036	-365	766
Position du siège vs sa position la plus reculée - Seat position vs its rearmost position		225	
Angle de dossier du siège - Seat back angle (deg)		19.3°	
Genou au tableau de bord, minimum - Knee to dash, minimum		G/L : 35	D/R : 42
Menton au haut du moyeu du volant - Chin to steering wheel hub top		264	

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MESURES DU VÉHICULE, POINT "H" (MANNEQUIN 3D) ET MANNEQUIN DAE (suite)
VEHICLE, H-POINT MANIKIN AND TEST DUMMY MEASUREMENTS (cont'd)

Description et emplacement du Mannequin
ATD description and location :

Femelle 5^e percentile conducteur / 5th percentile female driver

DESCRIPTION	X(mm)	Y(mm)	Z(mm)
Centre de gravité de la tête, extérieur - Head CG, outboard	2309	-445	1095
Base du nez - Glabella (root of nose)	2232	-372	1099
Menton - Chin (bottom)	2228	-376	995
Jonction menton et cou - Chin / neck junction	2296	-379	997
Thorax au niveau des côtes supérieures - Chest at upper rib level	2223	-383	833
Thorax au niveau des côtes inférieures - Chest at lower rib level	2200	-385	722
Boulon supérieur avant de l'épaule, ext. - Shoulder bolt, top front outboard	2350	-538	868
Boulon supérieur avant de l'épaule, int. - Shoulder bolt, top front inboard	2354	-227	859
Boulon du coude, extérieur - Elbow bolt, outboard	2238	-574	682
Boulon du coude, intérieur - Elbow bolt, inboard	2250	-158	678
Boulon du poignet, extérieur - Wrist bolt, outboard	2084	-591	832
Boulon du poignet, intérieur - Wrist bolt, inboard	2103	-174	839
Point d'articulation de la hanche, extérieur - Hip point, outboard	2295	-507	570
Boulon du genou gauche, côté gauche - Knee bolt, left leg, left side	1876	-495	586
Boulon de la cheville gauche, côté gauche - Ankle bolt, left leg, left side	1683	-453	411
Point du talon gauche - Heel point, left leg	1698	-460	219
Plante du pied gauche vs plancher - Ball of foot at toeboard contact, left leg	1570	-498	266
Boulon du genou droit, côté gauche - Knee bolt, right leg, left side	1875	-259	587
Boulon de la cheville droite, côté gauche - Ankle bolt, right leg, left side	1689	-189	412
Point du talon droit - Heel point, right leg	1655	-197	227
Plante du pied droit vs plancher - Ball of foot at toeboard contact, right leg	1552	-212	322
Espacement de genoux (centre) - Knee spacing (centre)		232	
Ajustement du support de cou - Neck bracket ajustement (deg.)			

Remarques - Comments :

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MESURES DU VÉHICULE, POINT "H" (MANNEQUIN 3D) ET MANNEQUIN DAE
VEHICLE, H-POINT MANIKIN AND TEST DUMMY MEASUREMENTS

Mannequin 3D Point "H" - H-Point

Passager avant /Front passenger 95%

DESCRIPTION	X(mm)	Y(mm)	Z(mm)
Point "H" extérieur mesure initiale - H-Point, outboard initial measurement	2453	455	505
Point "H" extérieur mesure finale - H-Point, outboard final measurement	2453	455	505
Rotule, extérieure - Knee pivot, outboard	2008	586	618
Chevillon, extérieure - Ankle pivot, outboard	1636	436	351
Talon du pied en contact avec sol - Accomodation heel point (AHP)	1665	436	219
Plante du pied en contact avec sol - Accomodation ball of foot point (ABFP)	1466	468	307
Ligne médiane du véhicule - Vehicle centreline		0	
Support poids du sternum, extérieur - Torso weigh hanger, outboard	2603	533	829
PRS / SRP	2453	455	505
Ligne médiane du coussin du siège (avant/milieu/arr.) - Seat cushion centreline (front/mid/rear)		352 / 360 / 372	
Ligne médiane du dossier du siège (avant/milieu/arr.) - Seat back centreline (front/mid/rear)		373 / 371 / 369	
Hauteur Point "H" - H-Point height ($H_{30} = Z_{H-POINT} - Z_{AHP}$)		286	
Position du siège vs sa position la plus reculée - Seat position vs its rearmost position		0	
Angle dossier du siège - Seat back angle (deg) (L40)		25°	
Angle du coussin du siège - Skew angle		-2.8°	

Véhicule et Mannequin - Vehicle and Dummy

Femelle 5e percentile passager avant / 5th percentile female front passenger

DESCRIPTION	X(mm)	Y(mm)	Z(mm)
Boulon siège avant, extérieur - Front seat bolt, outboard	2116	567	266
Position du siège vs sa position la plus reculée - Seat position vs its rearmost position		225	
Angle dossier du siège - Seat back angle		17.8°	
Genou au tableau de bord, minimum - Knee to dash, minimum	G/L : 50		D/R : 61
Menton au tableau de bord - Chin to dash		385	

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MESURES DU VÉHICULE, POINT "H" (MANNEQUIN 3D) ET MANNEQUIN DAE (suite)
VEHICLE, H-POINT MANIKIN AND TEST DUMMY MEASUREMENTS (cont'd)

Description et emplacement du Mannequin
ATD description and location:

Femelle 5^e percentile passager avant / 5th percentile female front passenger

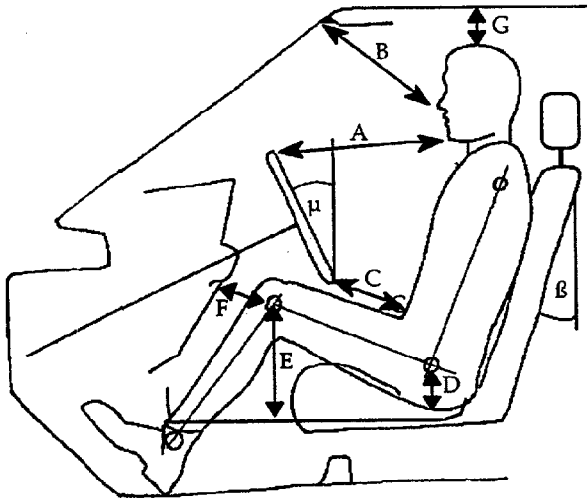
DESCRIPTION	X(mm)	Y(mm)	Z(mm)
Centre de gravité de la tête, extérieur - Head CG, outboard	2319	433	1105
Base du nez - Glabella (root of nose)	2232	366	1109
Menton - Chin (bottom)	2227	365	1000
Jonction menton et cou - Chin / neck junction	2297	367	1005
Thorax au niveau des côtes supérieures - Chest at upper rib level	2224	366	834
Thorax au niveau des côtes inférieures - Chest at lower rib level	2202	365	726
Boulon supérieur avant de l'épaule, ext. - Shoulder bolt, top front outboard	2348	523	870
Boulon supérieur avant de l'épaule, int. - Shoulder bolt, top front inboard	2362	211	872
Boulon du coude, extérieur - Elbow bolt, outboard	2235	580	686
Boulon du coude, intérieur - Elbow bolt, inboard	2255	166	686
Boulon du poignet, extérieur - Wrist bolt, outboard	2035	518	626
Boulon du poignet, intérieur - Wrist bolt, inboard	2054	196	617
Point d'articulation de la hanche, extérieur - Hip point, outboard	2305	492	576
Boulon du genou gauche, intérieur - Knee bolt, left leg, right side	1882	465	586
Boulon de la cheville gauche, intérieur - Ankle bolt, left leg, right side	1691	422	417
Point du talon gauche - Heel point, left leg	1703	440	224
Plante du pied gauche vs plancher - Ball of foot at toeboard contact, left leg	1574	477	271
Boulon du genou droit, intérieur - Knee bolt, right leg, right side	1956	361	620
Boulon de la cheville droite, intérieur - Ankle bolt, right leg, right side	1694	268	408
Point du talon droit - Heel point, right leg	1700	292	221
Plante du pied droit vs plancher - Ball of foot at toeboard contact, right leg	1584	316	279
Espacement de genoux (centre) - Knee spacing (centre)		165	
Ajustement du support de cou - Neck bracket adjustment (deg.)			

Remarques - Comments :

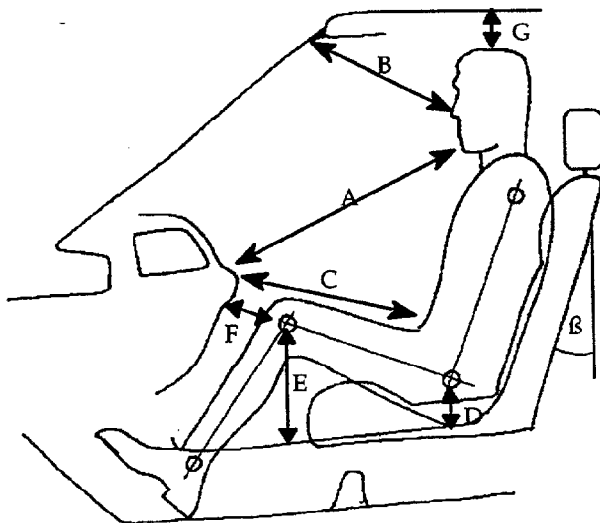
Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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EUROPEAN EXPERIMENTAL VEHICLES COMMITTEE:

MESURES DE POSITIONNEMENT DES MANNEQUINS /
DUMMY POSITIONING MEASUREMENTS



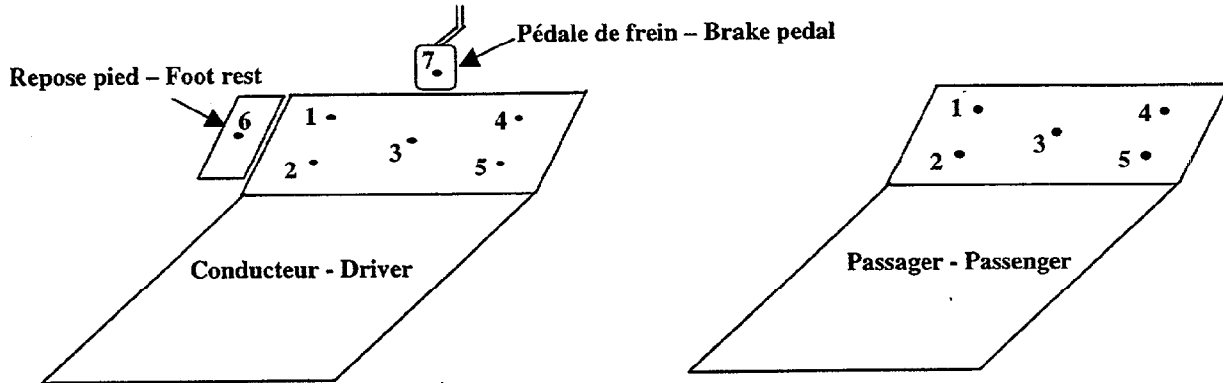
CONDUCTEUR DRIVER	mm
A	250
B	280
C	150
D	254
E	310
F	38
G	144
β	5.5°
μ	20.0°



PASSAGER PASSENGER	mm
A	385
B	270
C	324
D	252
E	310
F	56
G	140
β	6.8°

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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MESURES PLANCHER / FOOTWELL MEASUREMENTS

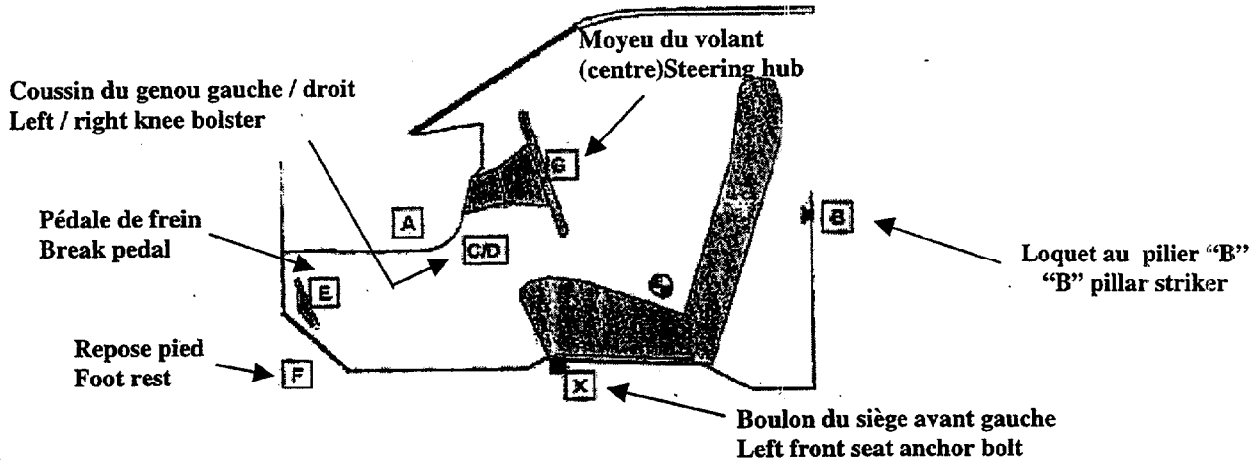


N° Cible		AVANT ESSAI	APRÈS ESSAI	
Target No.		PRE-TEST	POST-TEST	Δ mm
1	x	1379	1386	-7
	y	-406	-408	2
	z	332	341	-9
2	x	1502	1500	2
	y	-434	-439	5
	z	236	240	-4
3	x	1450	1447	3
	y	-303	-307	4
	z	282	287	-5
4	x	1401	1397	4
	y	-178	-180	2
	z	316	318	-2
5	x	1501	1497	4
	y	-152	-156	4
	z	239	244	-5
6	x	1528	1533	-5
	y	-578	-588	10
	z	395	397	-2
7	x	1533	1566	-33
	y	-323	-323	0
	z	420	435	-15

N° Cible		AVANT ESSAI	APRÈS ESSAI	
Target No.		PRE-TEST	POST-TEST	Δ mm
1	x	1417	1416	1
	y	200	203	-3
	z	324	324	0
2	x	1544	1542	2
	y	202	204	-2
	z	232	232	0
3	x	1461	1460	1
	y	347	350	-3
	z	291	290	1
4	x	1399	1397	2
	y	452	456	-4
	z	330	330	0
5	x	1524	1524	0
	y	503	506	-3
	z	244	243	1

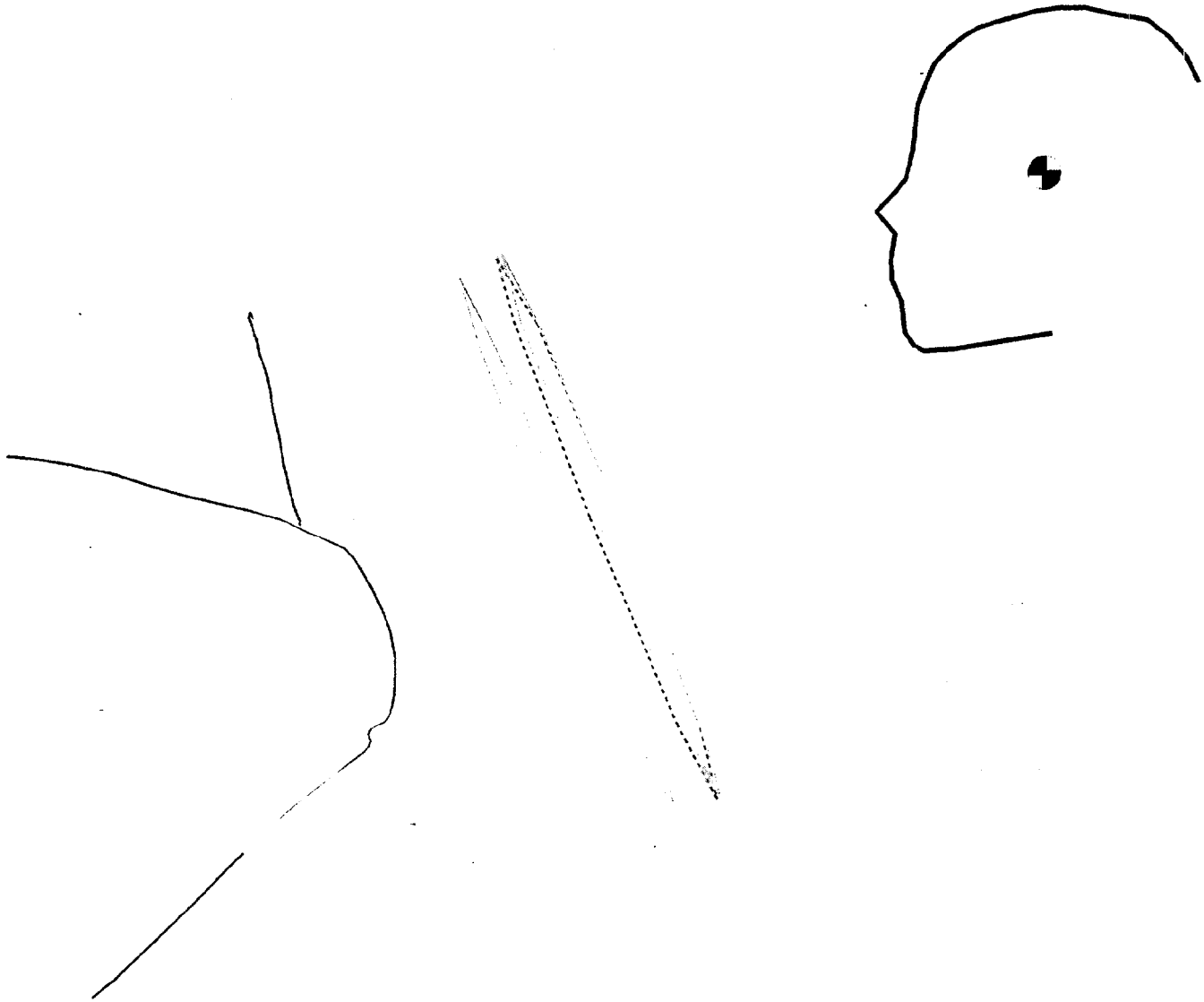
Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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PÉNÉTRATION DE L'HABITACLE DU CONDUCTEUR (Distances en mm)
DRIVER COMPARTMENT INTRUSION (Distances in mm)



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	1791	-813	929	1794	-808	930
B Loquet au pilier "B" "B" pillar striker	2555	-825	634	2557	-826	633
C Coussin du genou gauche Left knee bolster	1796	-456	649	1799	-451	649
D Coussin du genou droit Right knee bolster	1794	-207	637	1796	-205	638
E Pédale de frein Break pedal	1533	-323	420	1566	-323	435
F Repose pied Foot rest	1528	-578	395	1533	-588	397
G Moyeu du volant (centre) Steering hub (centre)	2060	-367	845	2059	-374	845
X Boulon du siège avant gauche Left front seat anchor bolt	2117	-576	263	2118	-573	264



DASHBOARD / TABLEAU DE BORD
 MODULE
 STEERING WHEEL / VOLANT
 AIRBAG / COUSSIN GONFLABLE

PRE-TEST POST-TEST

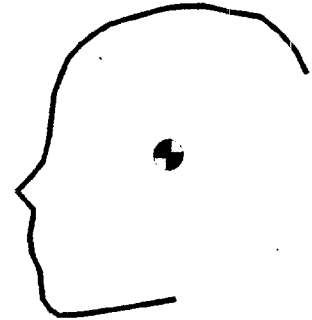
_____	_____
_____	_____
_____	_____
_____	_____

No. TC . : 99-203

Taurus

DRIVER'S SIDE / COTÉ CONDUCTEUR

Project / Projet : 99-5001



DASHBOARD / TABLEAU DE BORD
MODULE
STEERING WHEEL / VOLANT
AIRBAG / COUSSIN GONFLABLE

PRE-TEST POST-TEST

_____	_____
_____	_____
_____	_____
_____	_____

No. TC. : 99-203

Taurus

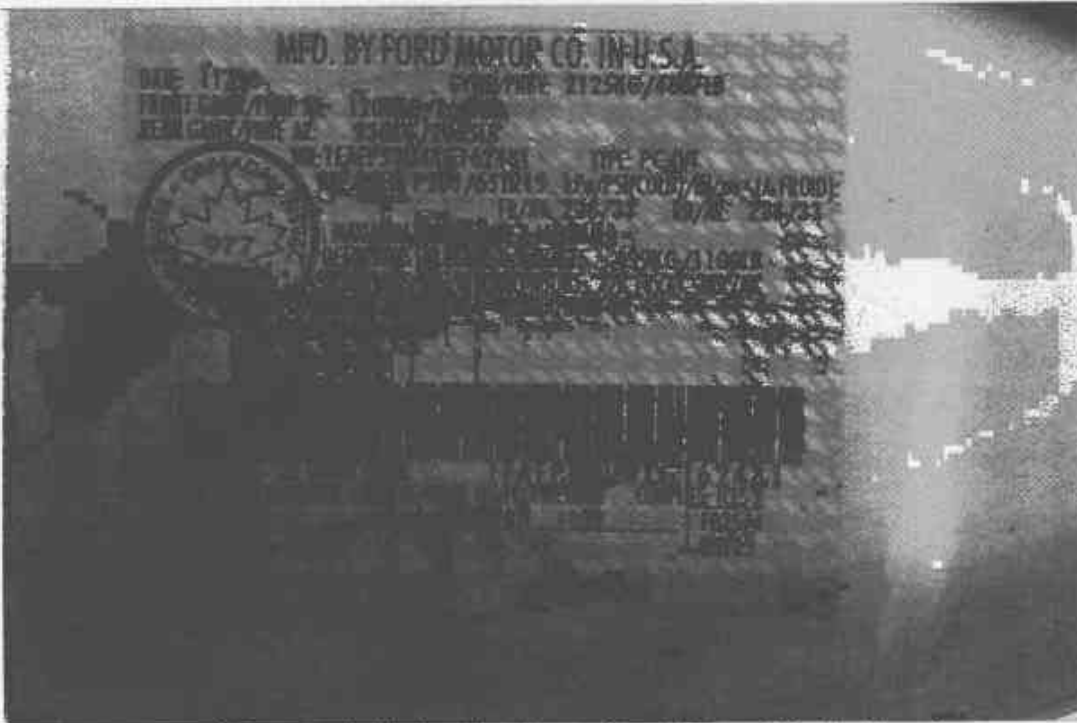
PASSENGER'S SIDE / COTÉ PASSAGER

Project / Projet : 99-5001

APPENDICE / APPENDIX A

**PHOTOGRAPHIES DE L'ESSAI
TEST PHOTOGRAPHS**

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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1. Étiquette de déclaration de conformité du véhicule d'essai.
Statement of compliance label of the test vehicle.

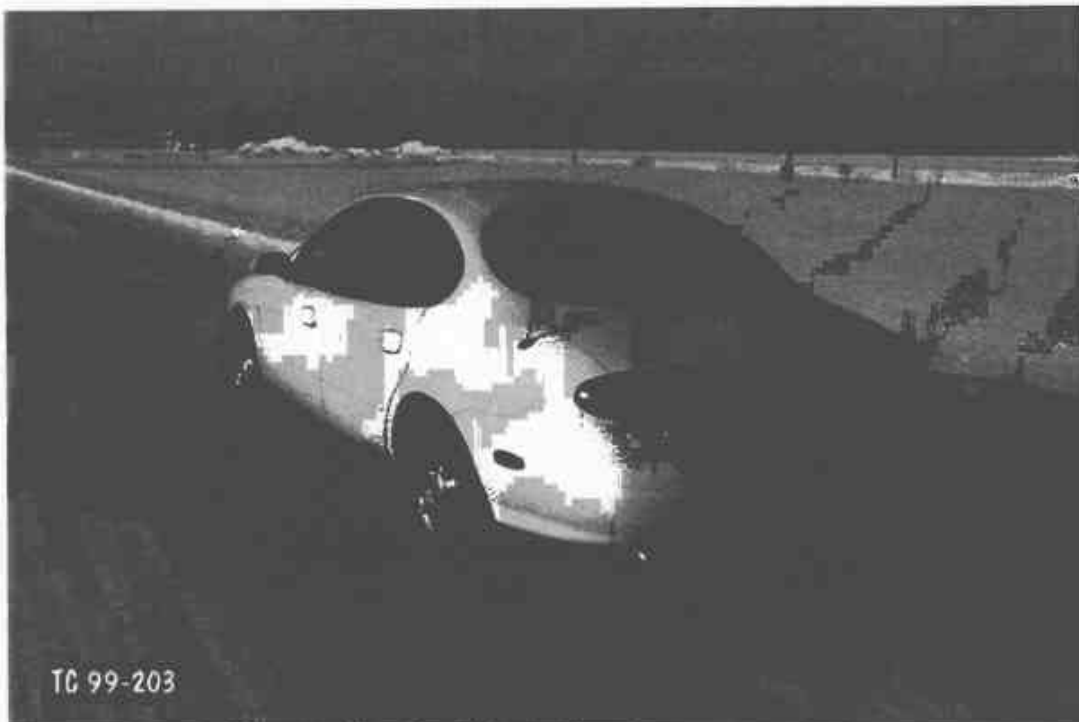
Identique à la photographie No 1
Identical to picture No 1

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

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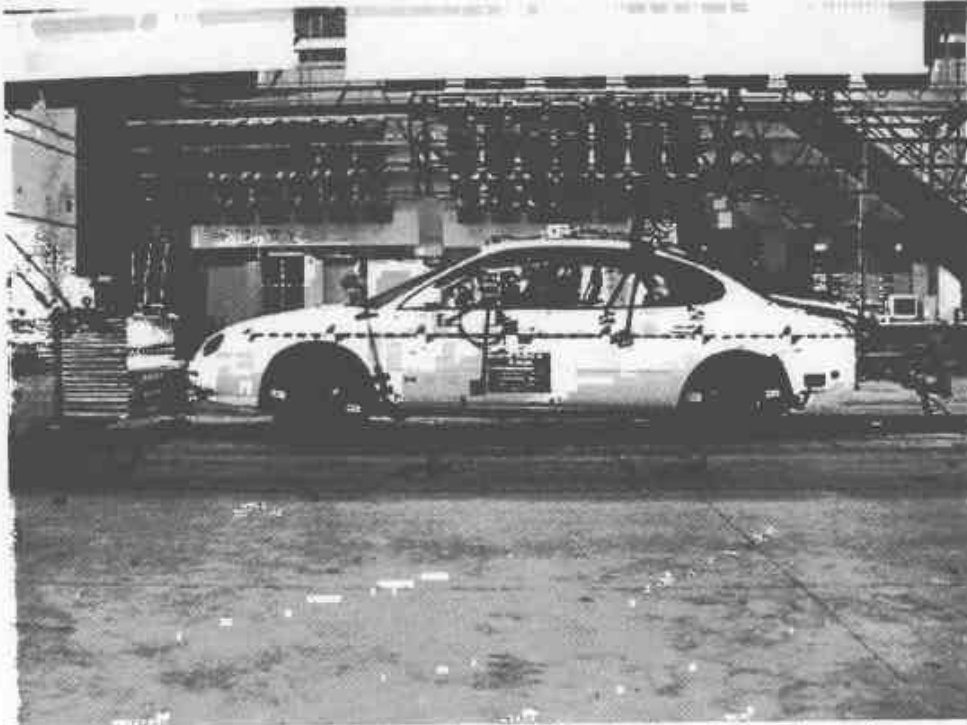


3. Vue $\frac{3}{4}$ avant du véhicule d'essai.
 $\frac{3}{4}$ front view of the test vehicle.

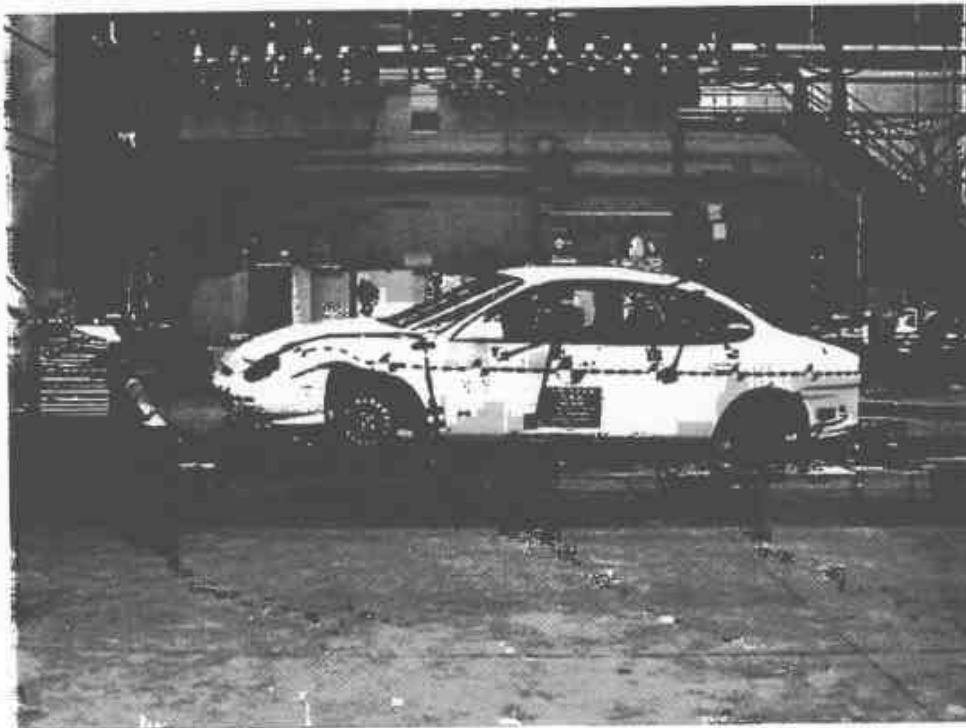


4. Vue $\frac{3}{4}$ arrière du véhicule d'essai.
 $\frac{3}{4}$ rear view of the test vehicle.

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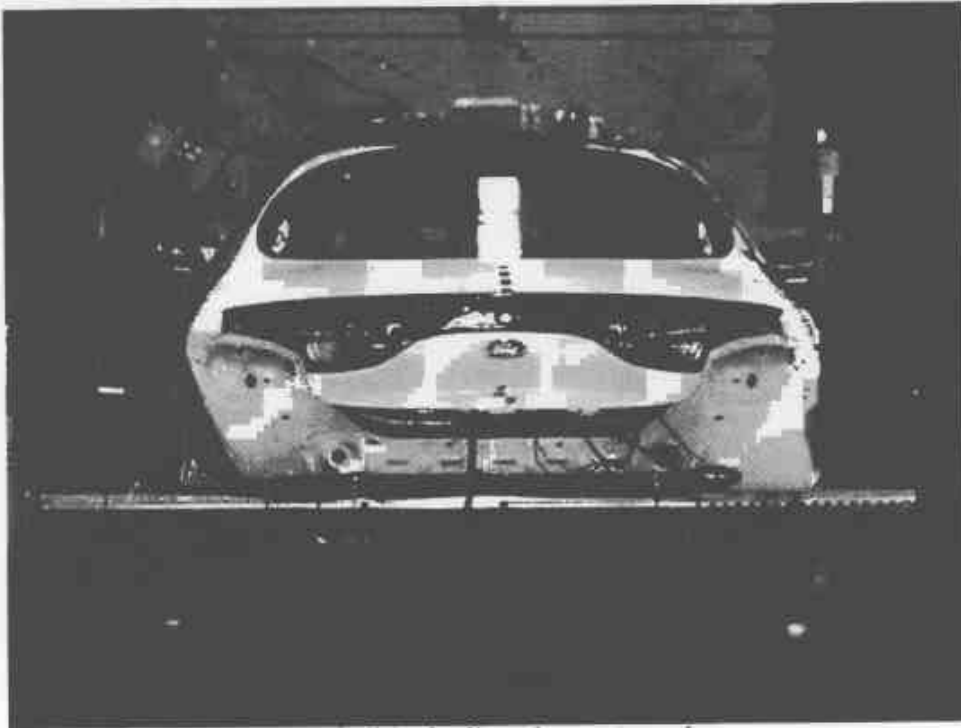


5. Vue générale côté gauche du véhicule d'essai, avant essai.
Left side view of the test vehicle, pre-test.

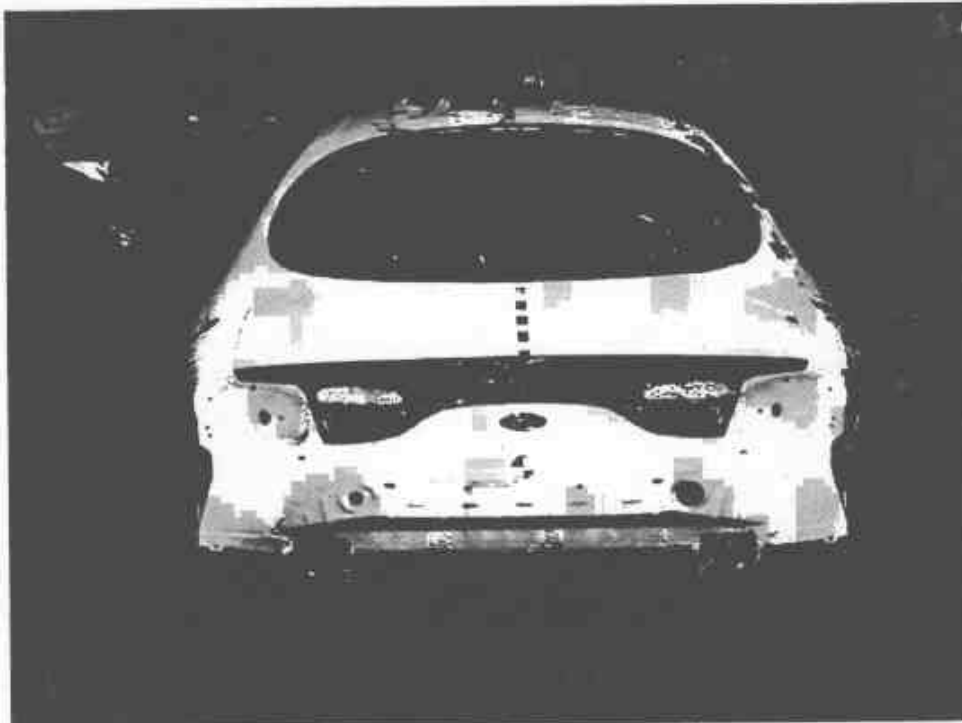


6. Vue générale côté gauche du véhicule d'essai, après essai.
Left side view of the test vehicle, post-test.

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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.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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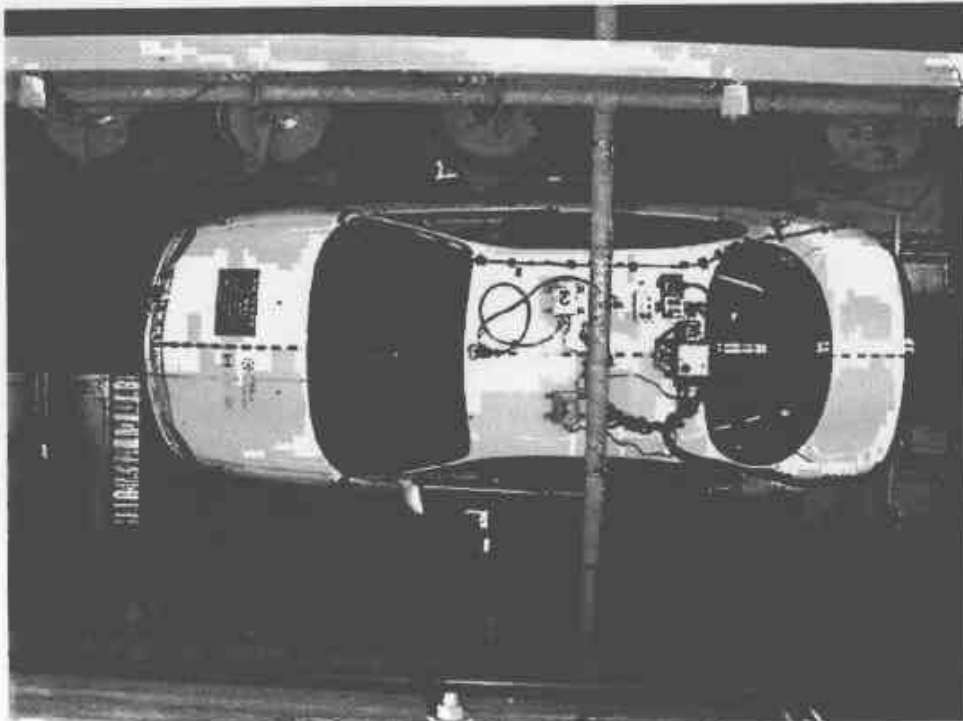


9. Vue générale côté droit du véhicule d'essai, avant essai.
General right side view of the test vehicle, pre-test.

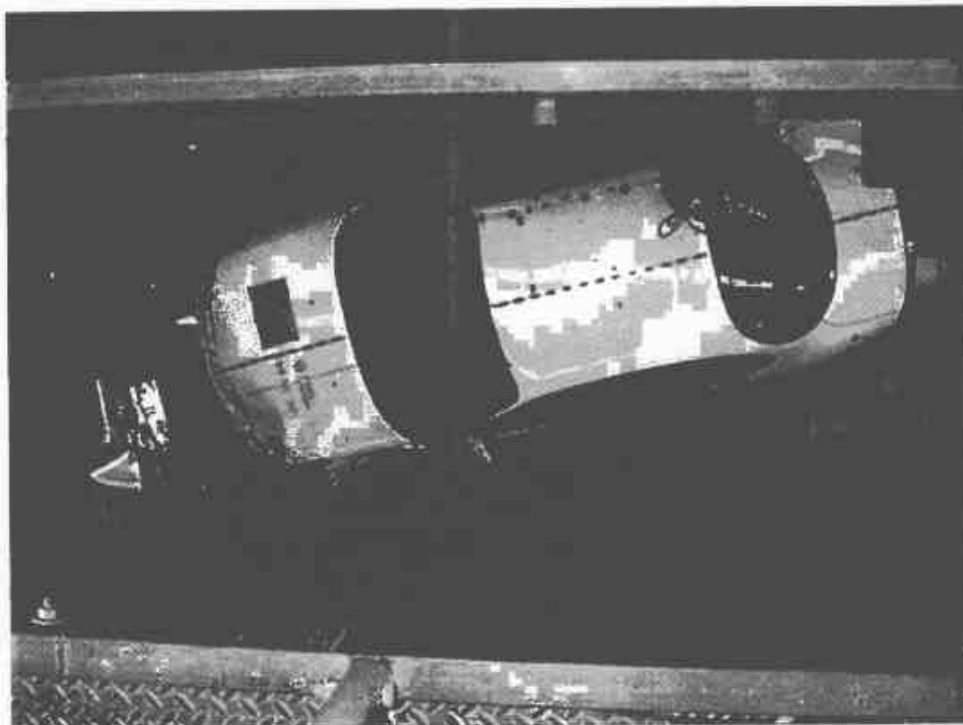


10. Vue générale côté droit du véhicule d'essai, après essai.
General right side view of the test vehicle, post-test.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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11. Vue de plan du véhicule d'essai, avant essai.
Over view of the test vehicle, pre-test.

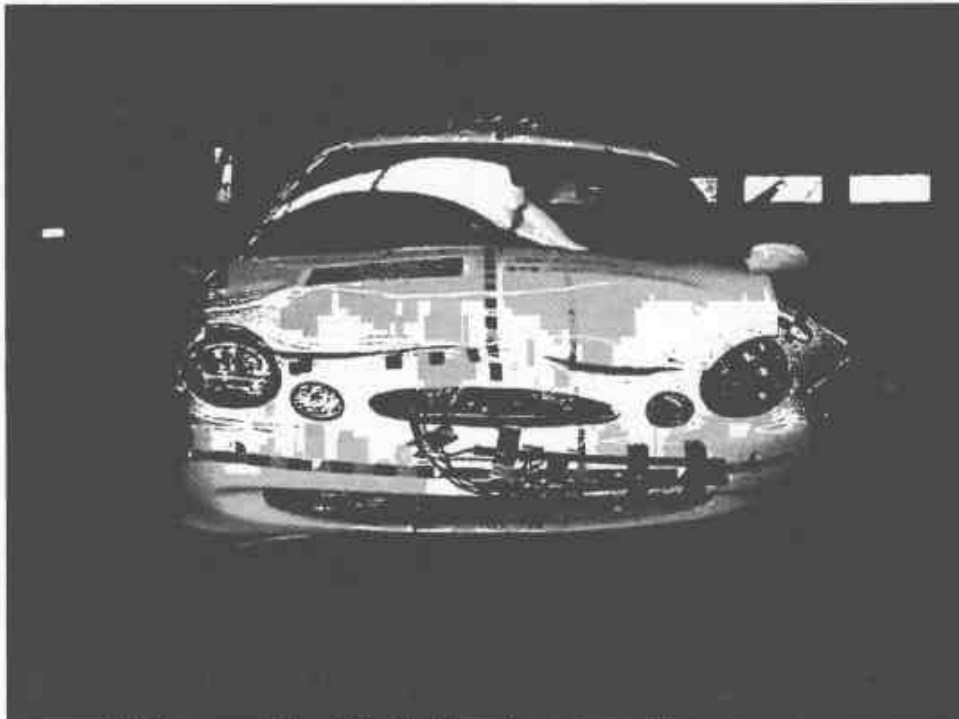


12. Vue de plan du véhicule d'essai, après essai.
Over view of the test vehicle, post-test.

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



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

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



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

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C.N° T.C.No	99-203
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17. Vue côté droit de l'avant du véhicule d'essai, avant essai.
Right side view of front of test vehicle, pre-test.

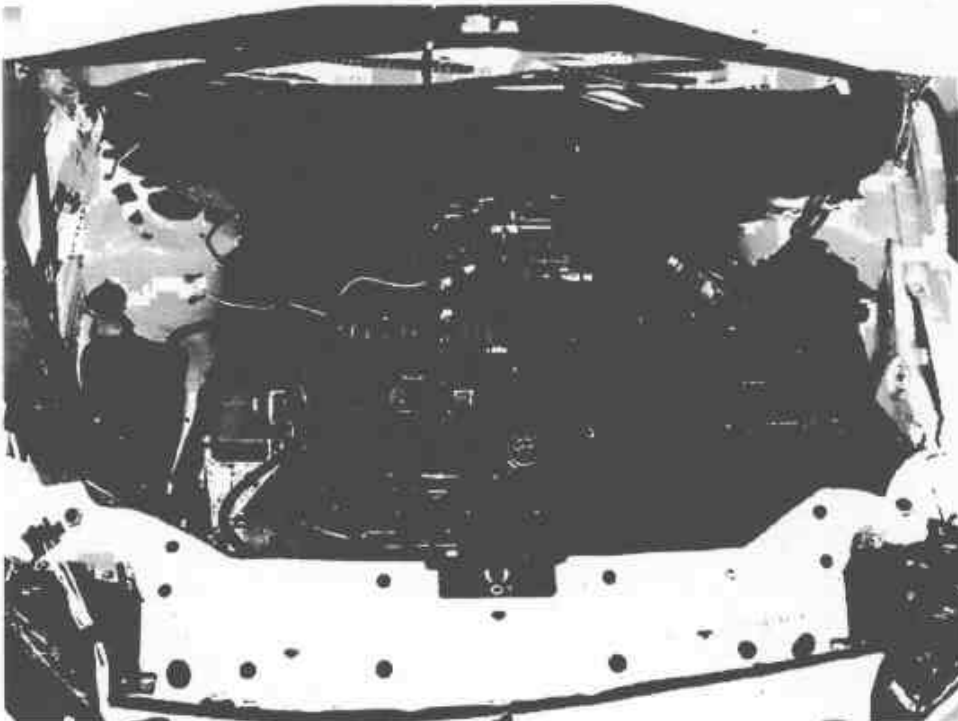


18. Vue côté droit de l'avant du véhicule d'essai, après essai.
Right side view of front of test vehicle, post-test.

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



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

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	I.C. N° T.C.No	99-203
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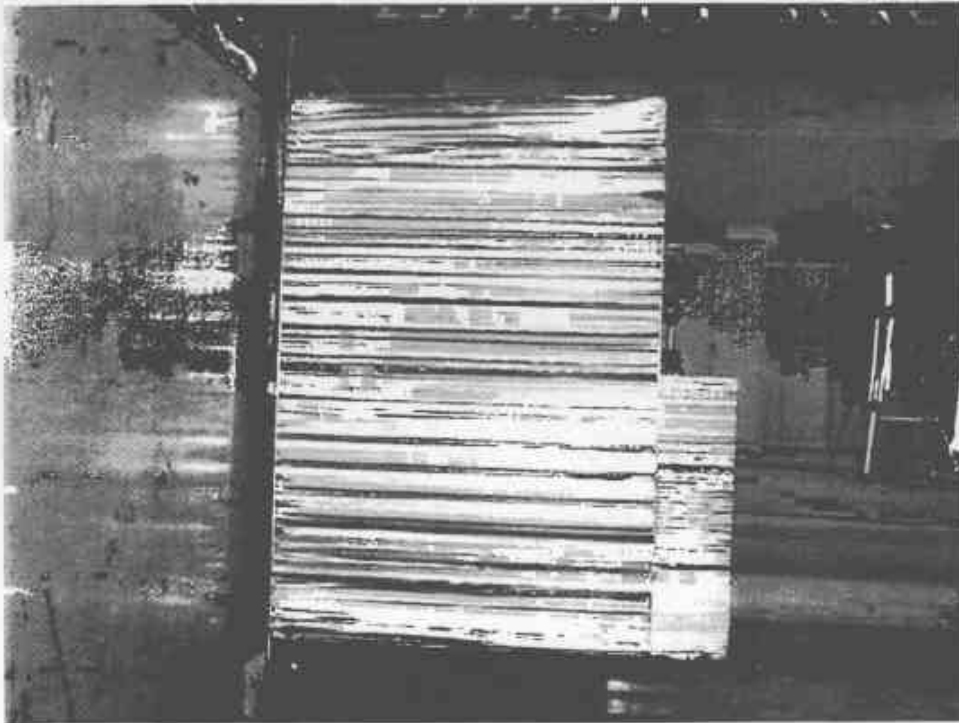


21. Vue du dessous du compartiment moteur, avant essai.
Front underbody view of the test vehicle, pre-test.

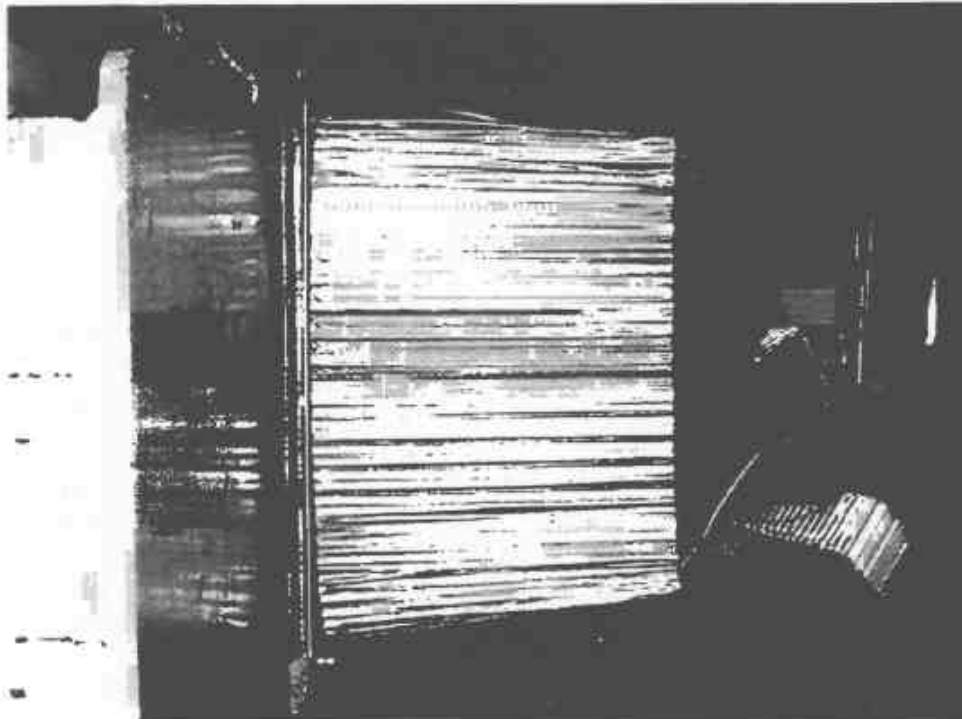


22. Vue du dessous du compartiment moteur, après essai.
Front underbody view of the test vehicle, post-test.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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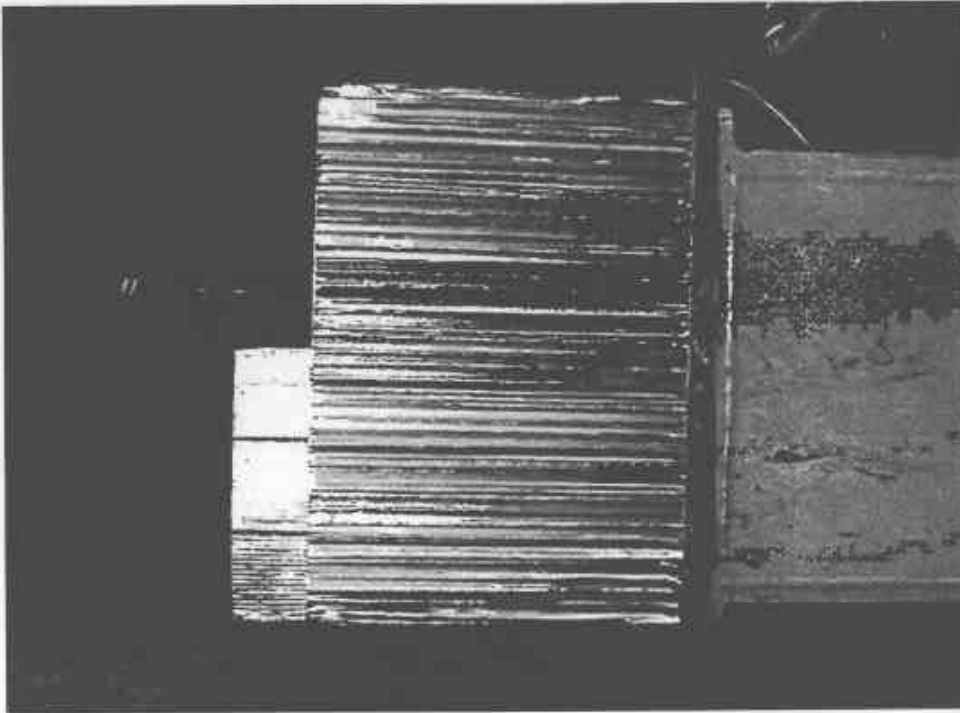


23. Vue du côté gauche de la face déformable, avant essai.
Left side view of the deformable face, pre-test.

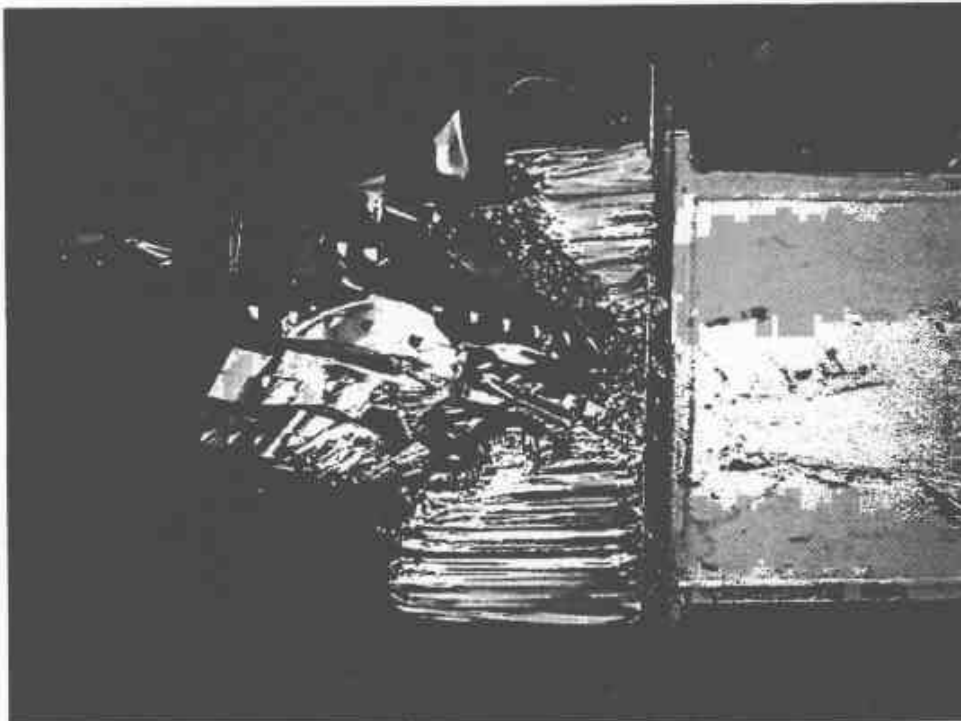


24. Vue du côté gauche de la face déformable, après essai.
Left side view of the deformable face, post-test.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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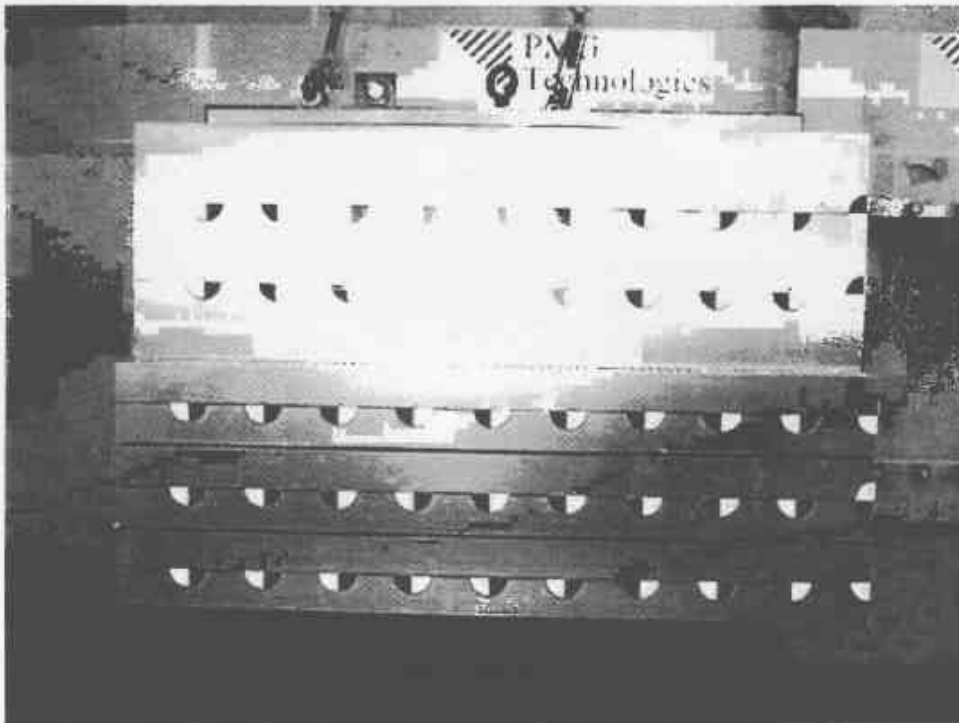


25. Vue du côté droit de la face déformable, avant essai.
Right side view of the deformable face, pre-test.



26. Vue du côté droit de la face déformable, après essai.
Right side view of the deformable face, post-test.

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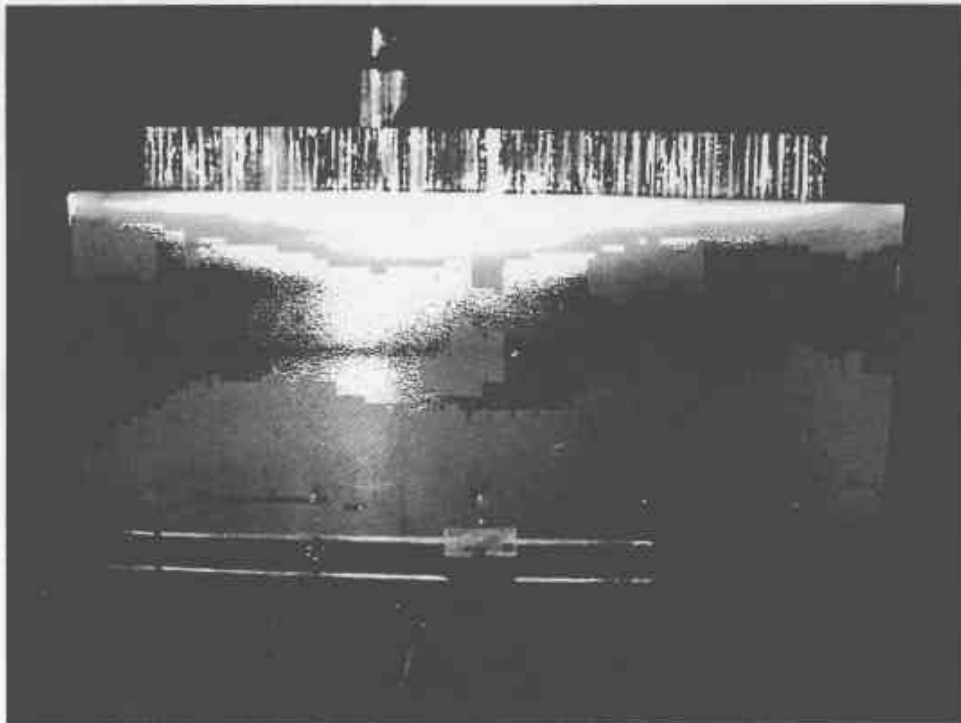


27. Vue de face de la face déformable, avant essai.
Front view of the deformable face, pre-test.

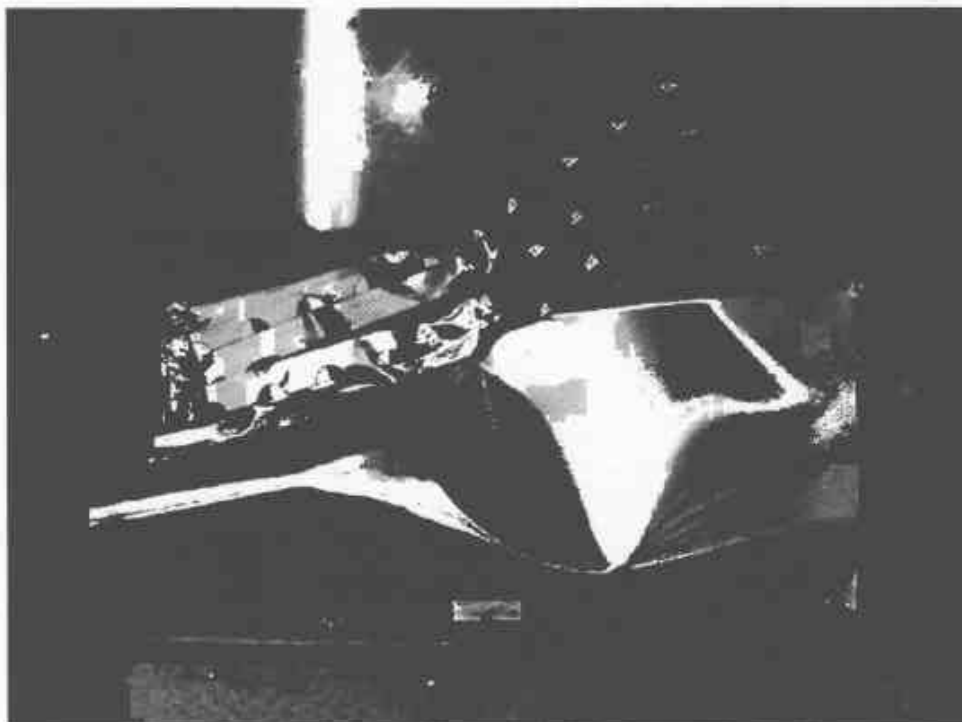


28. Vue de face de la face déformable, après essai.
Front view of the deformable face, post-test.

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29. Vue de plan de la face déformable, avant essai.
Plan view of the deformable face, pre-test.



30. Vue de plan de la face déformable, après essai.
Plan view of the deformable face, post-test.

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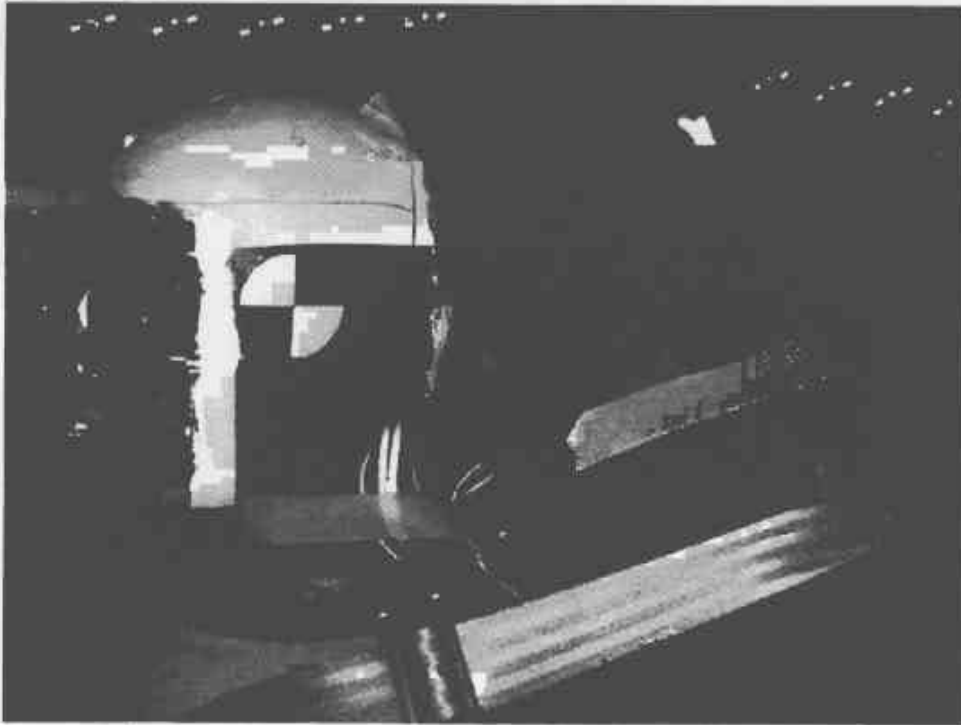


31. Position du conducteur, avant essai.
Driver's position, pre-test.



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

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

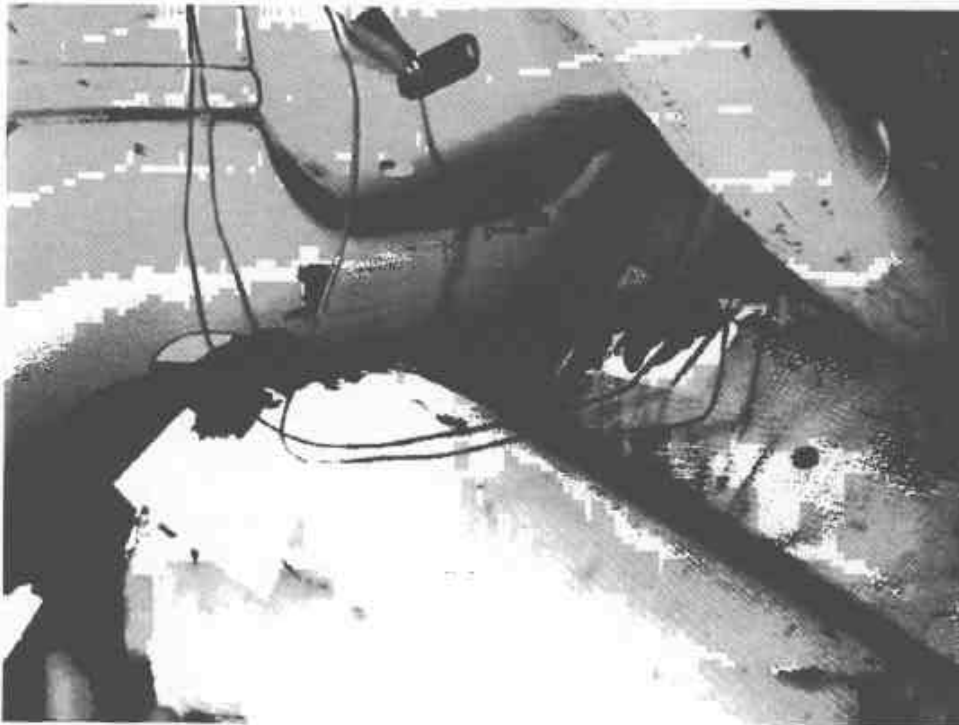


34. Point de contact de tête du conducteur, après essai.
Driver's head contact point, post-test.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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35. Point de contact du genou gauche du conducteur, après essai.
Driver's left knee contact point, post-test.



36. Point de contact du genou droit du conducteur, après essai.
Driver's right knee contact point, post-test.

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

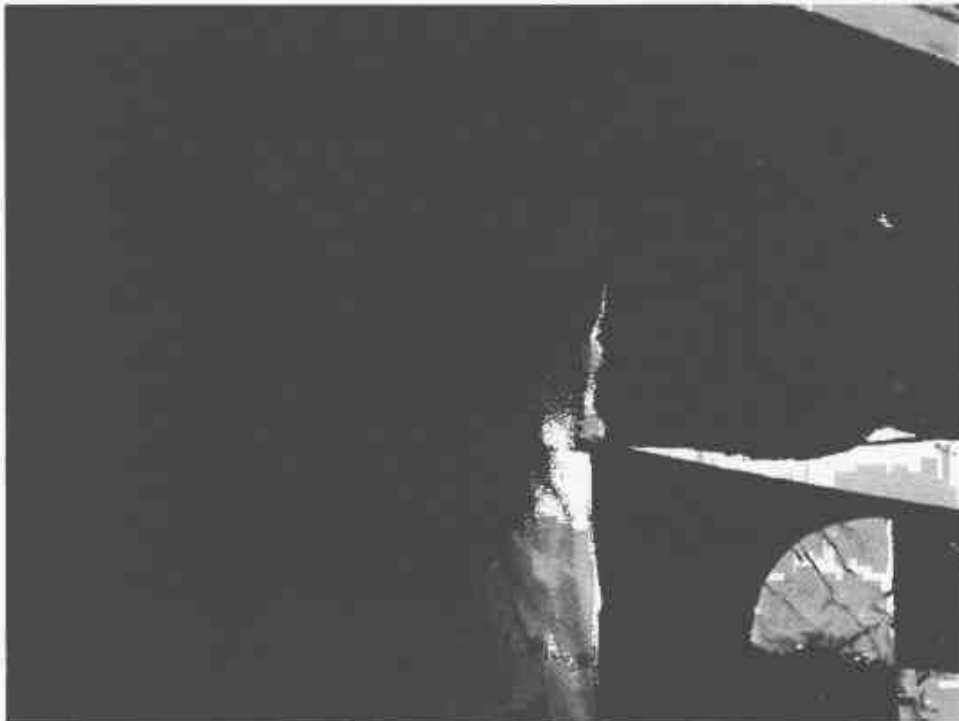


38. Position du passager, après essai.
Passenger's position, post-test.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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39. Point de contact de tête du passager, après essai.
Passenger's head contact point, post-test.



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

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C N° T.C.No	99-203
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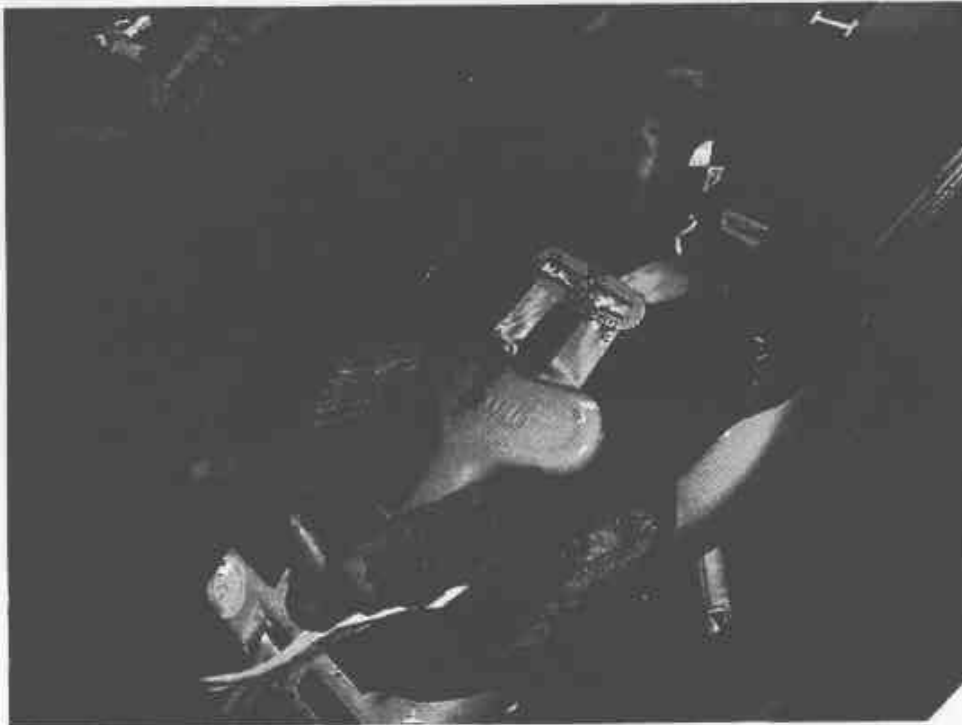


41. Point de contact du genou gauche du passager, après essai.
Passenger's left knee contact point, post-test.



42. Point de contact du genou droit du passager, après essai.
Passenger's right knee contact point, post-test.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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43. Position du passager arrière gauche, avant essai.
Left rear passenger's position, pre-test.



44. Position du passager arrière gauche, après essai.
Left rear passenger's position, post-test.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	T.C. N° T.C.No	99-203
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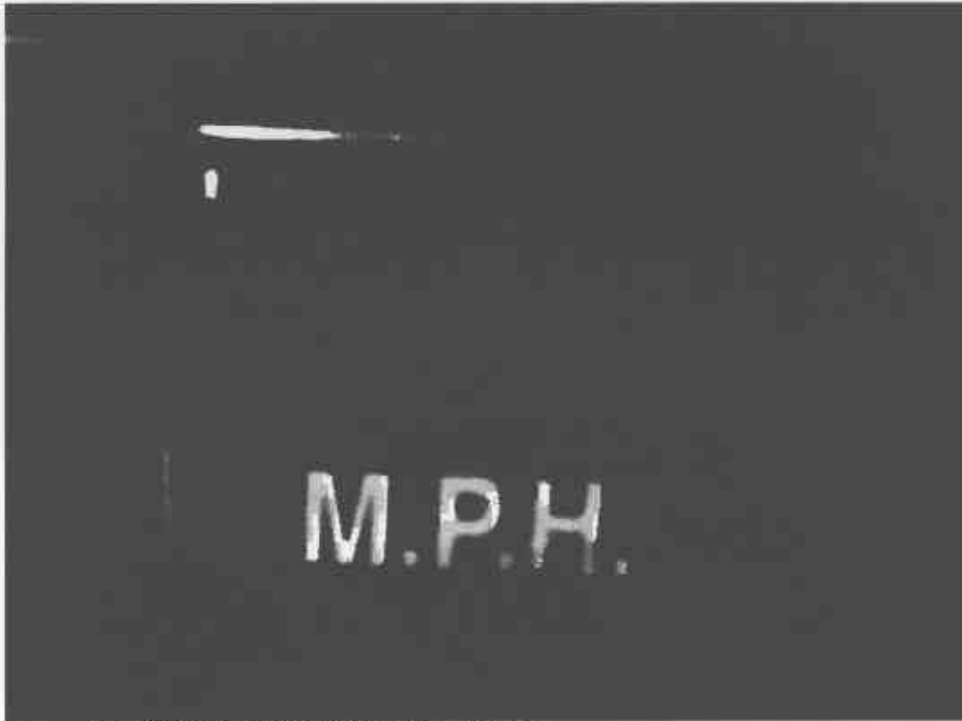


45. Position du passager arrière droit, avant essai.
Right rear passenger's position, pre-test.



46. Position du passager arrière droit, après essai.
Right rear passenger's position, post-test.

Date de collision Crash date	1999-01-27	Véhicule Vehicle	FORD TAURUS 1999	I.C. N° I.C.No.	99-203
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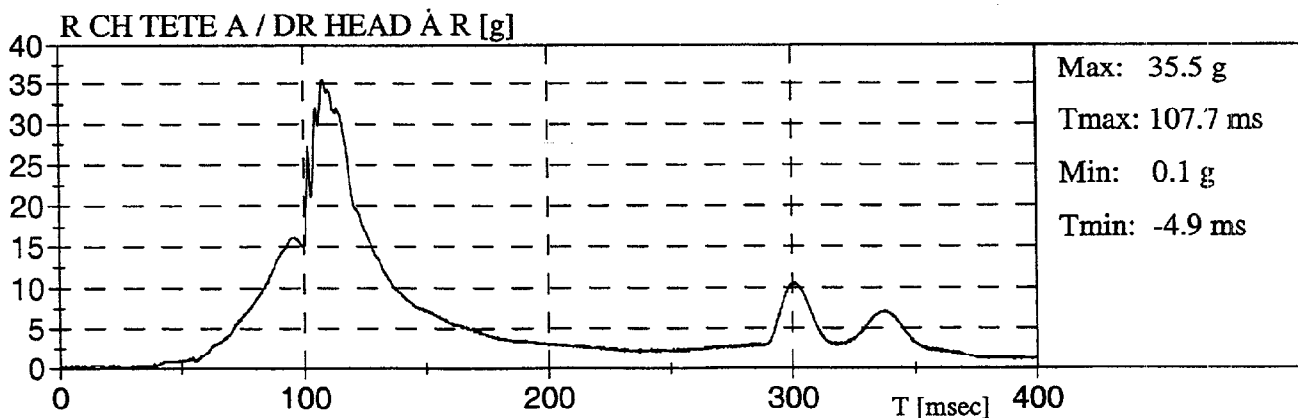
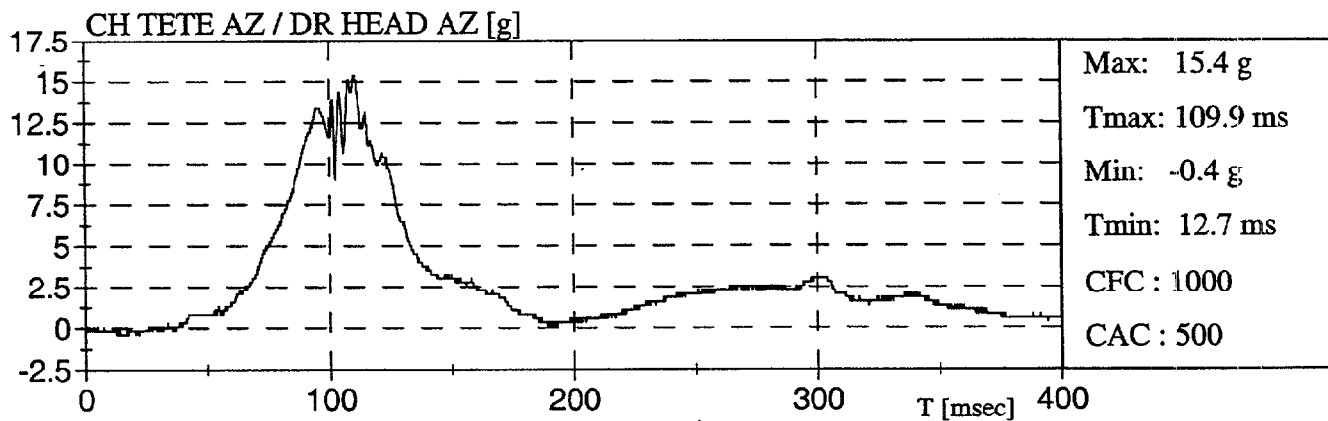
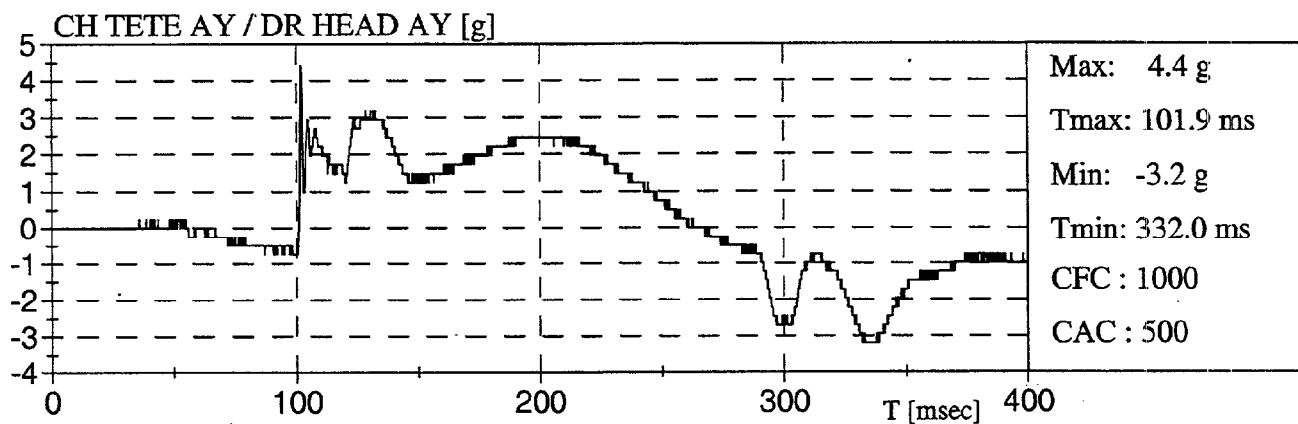
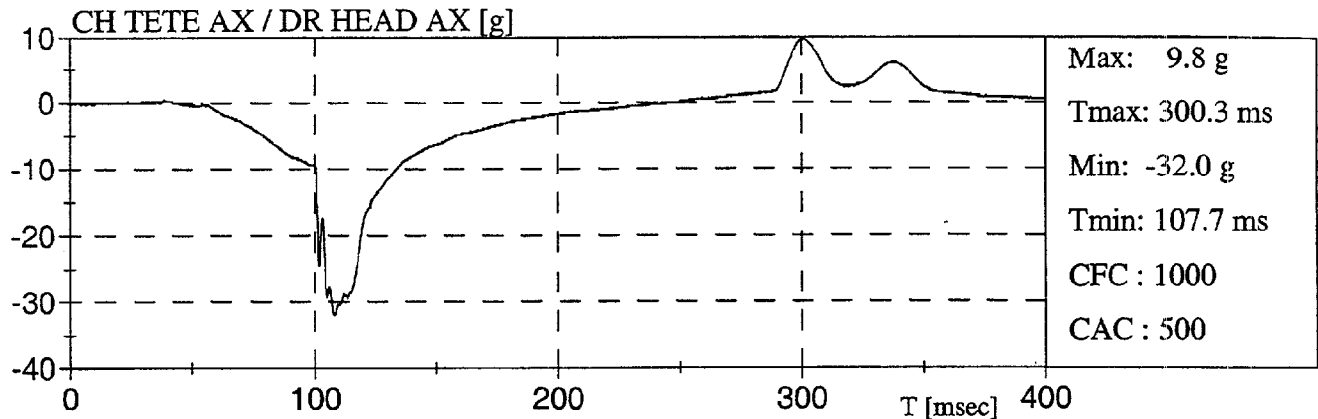


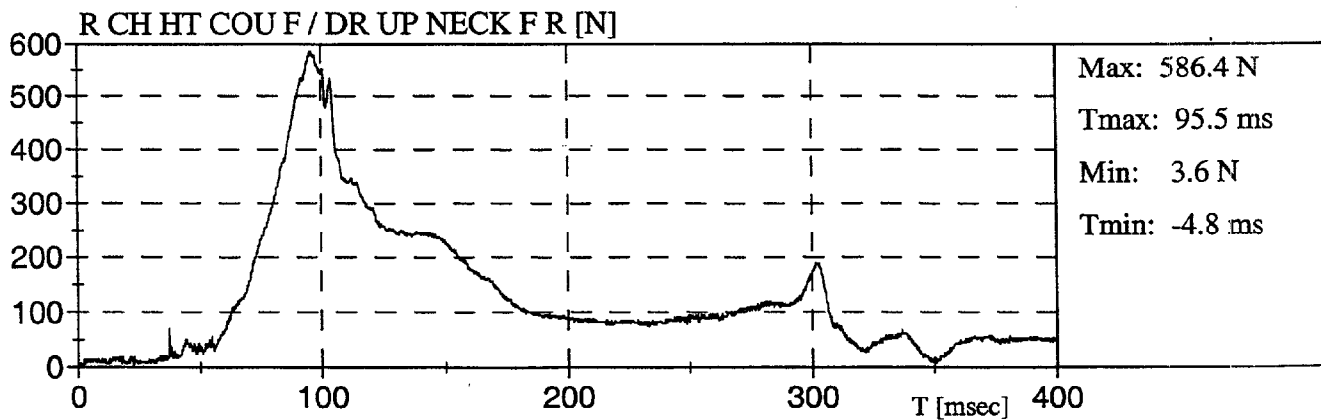
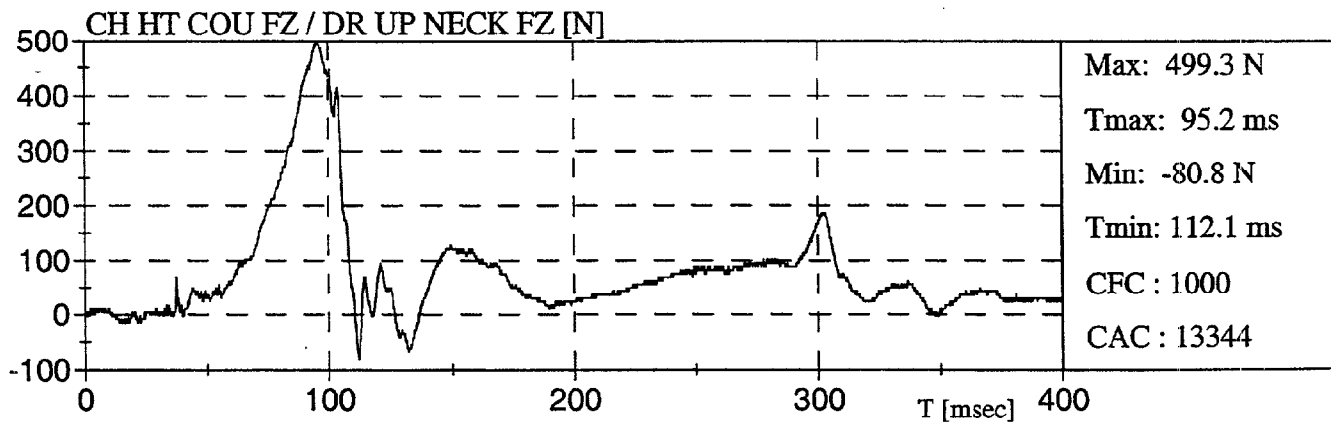
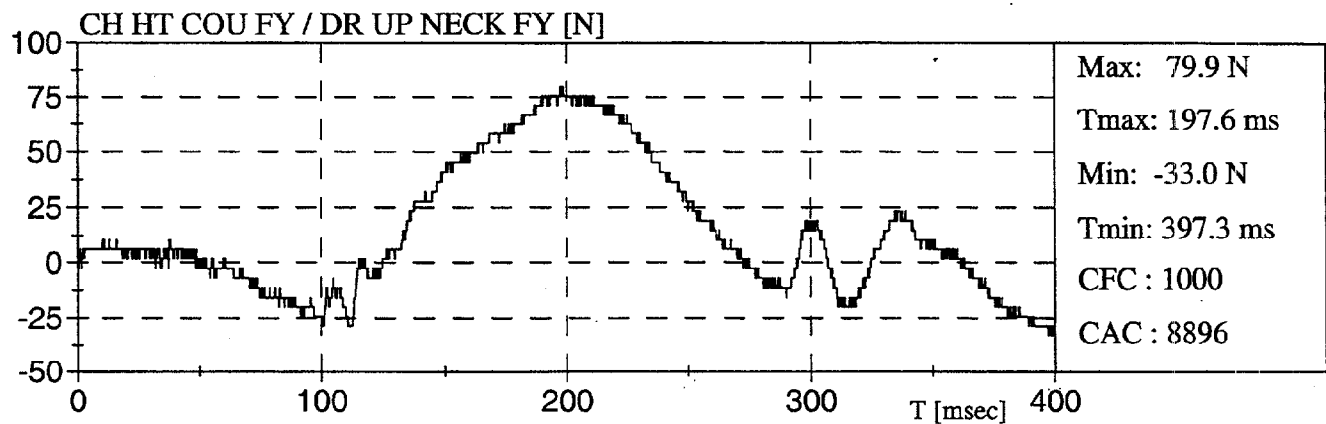
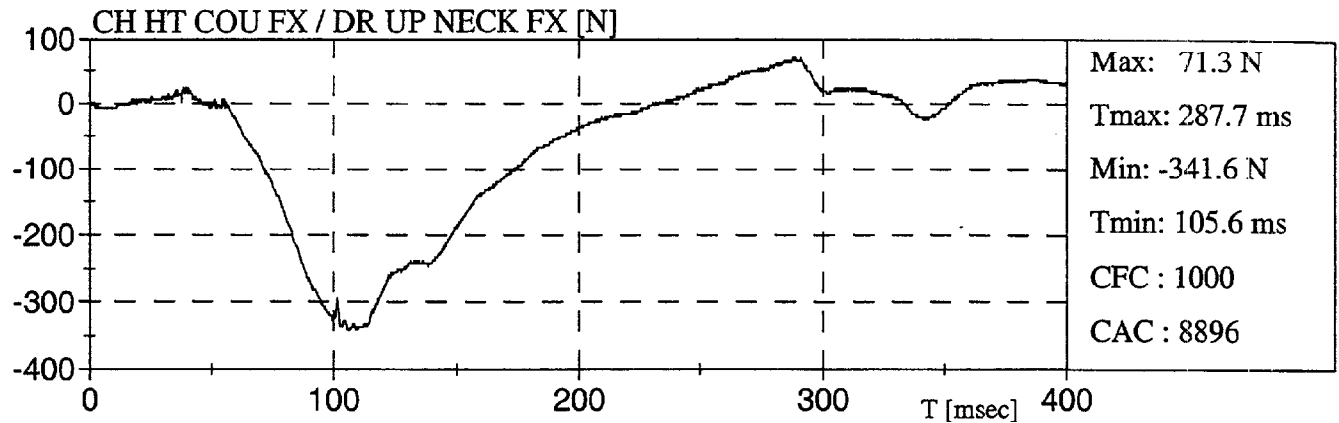
47. Affichage du lecteur de vitesse.
Speed trap reading.

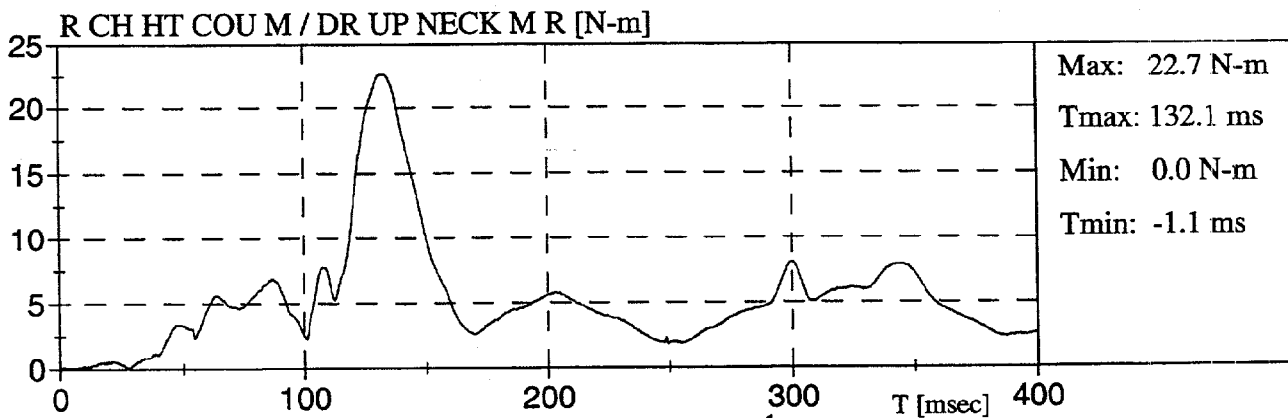
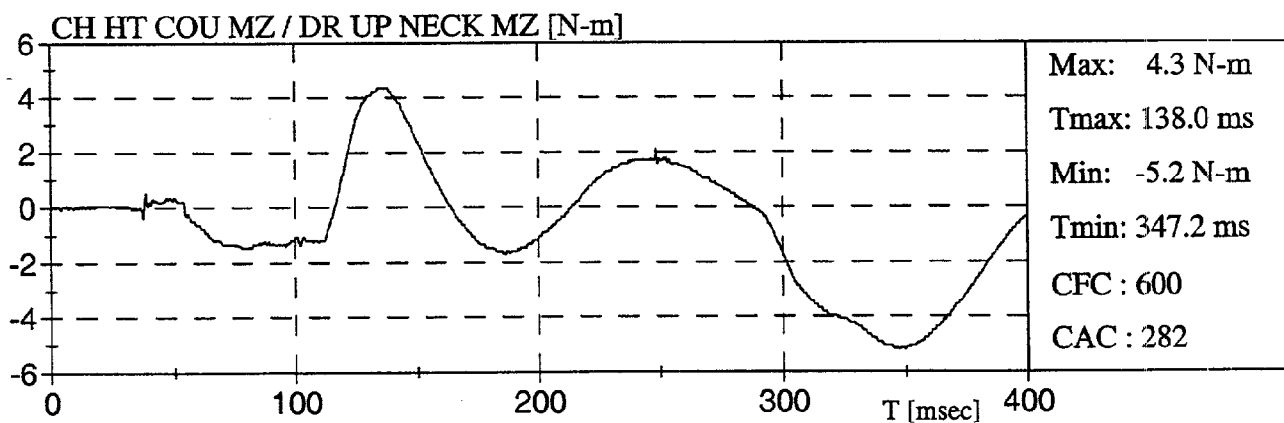
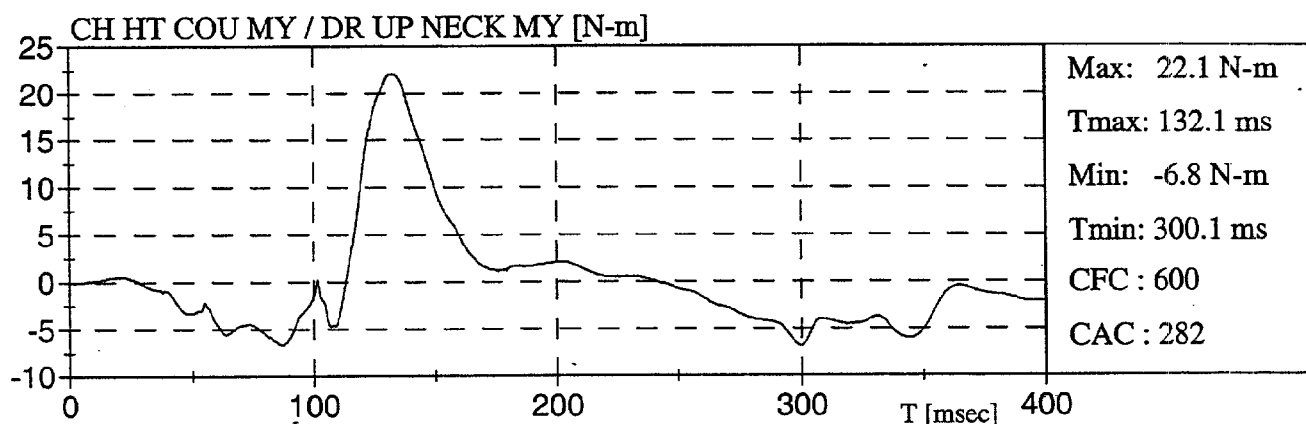
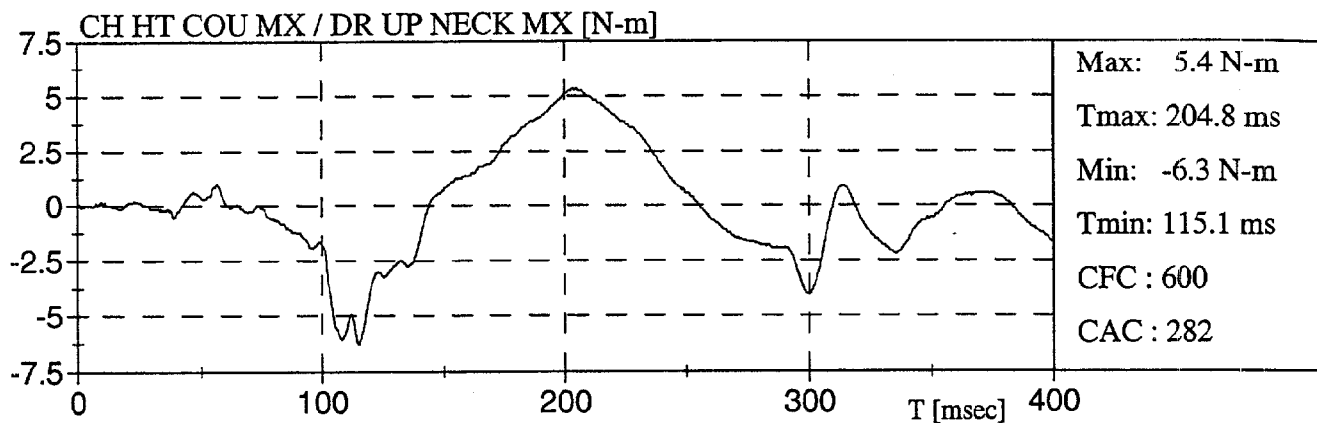
APPENDICE / APPENDIX B

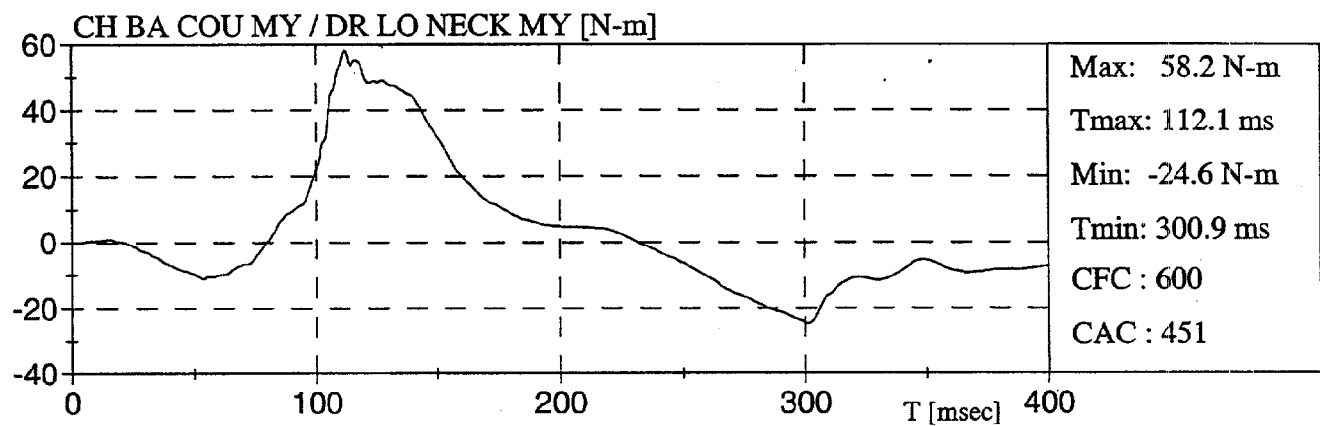
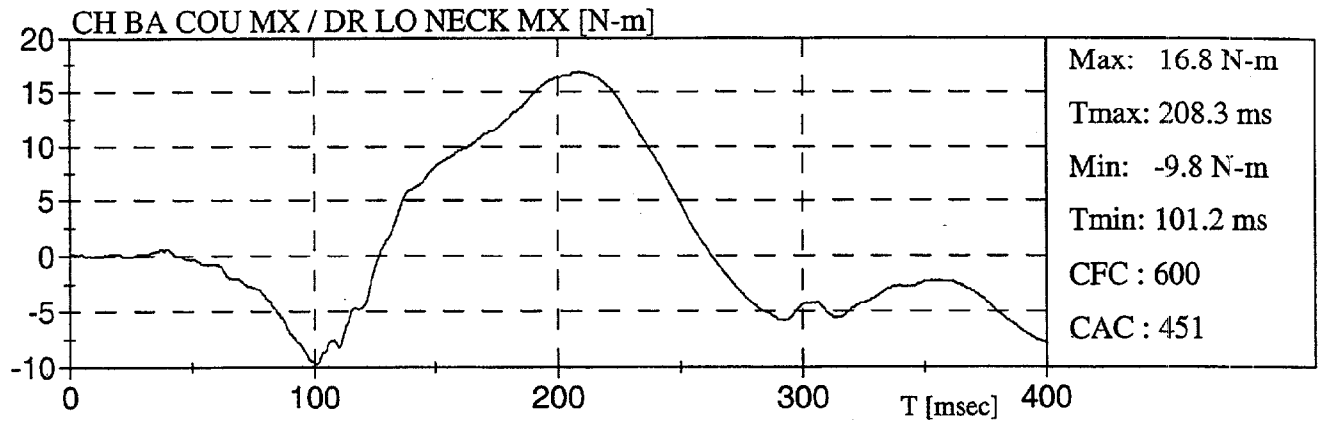
**DONNÉES GRAPHIQUES
GRAPHICAL DATA**

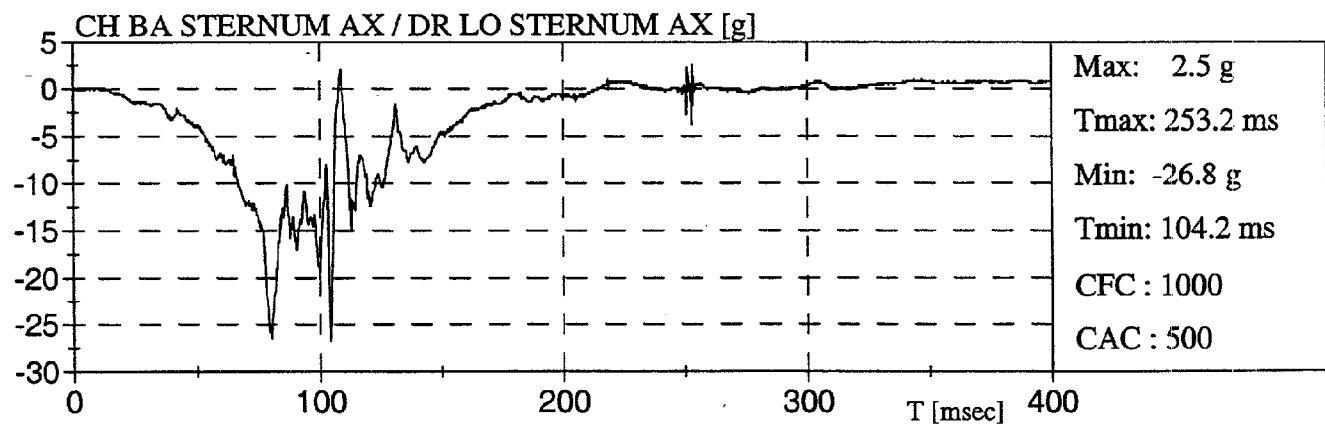
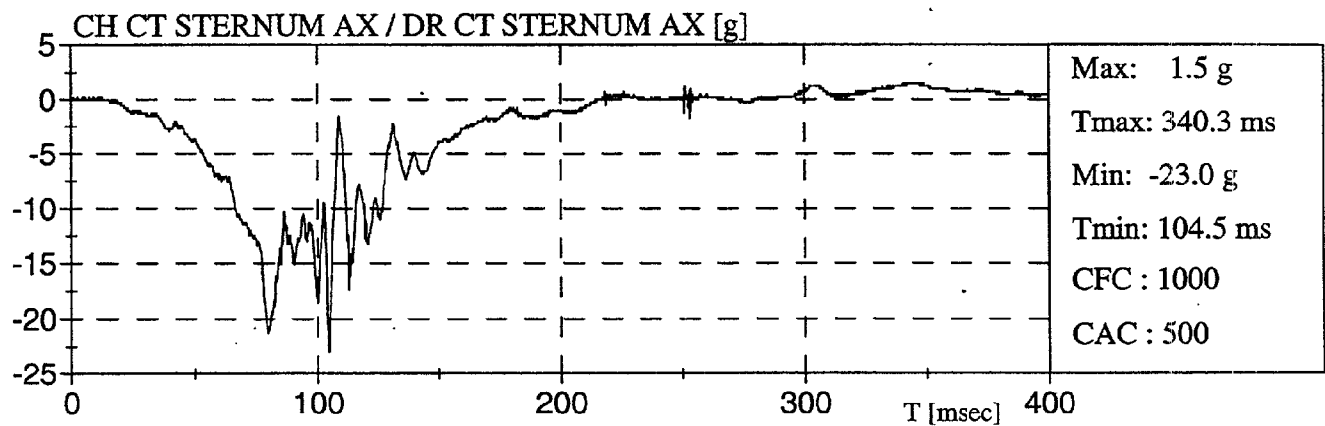
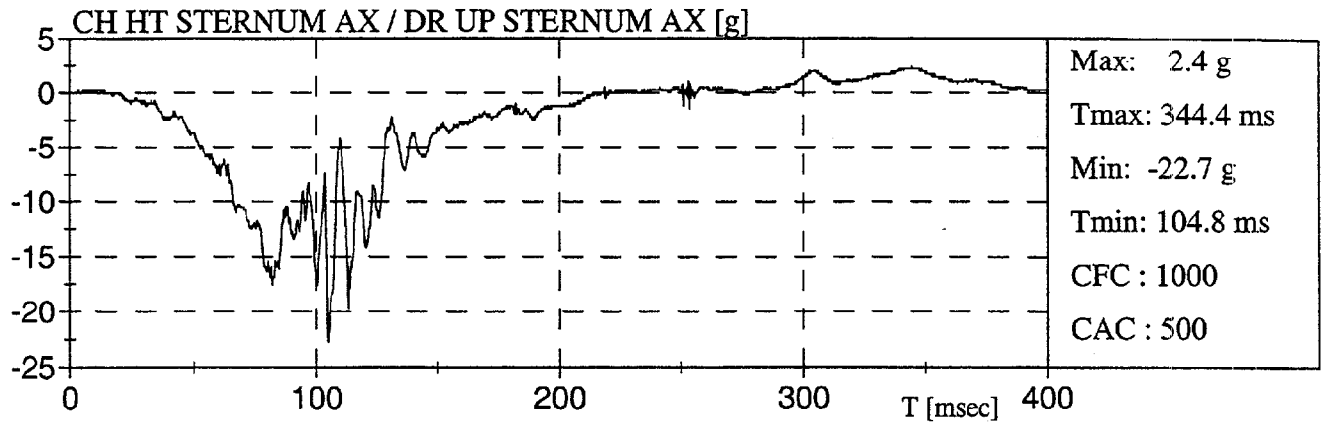
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Type de véhicule Type of Vehicle	FORD TAURUS 99
Numéro de TC Tc Number	TC99-203
Numéro de contrat Contract No	99-5001
Acquisition de données selon Data Acquisition according to	SAE J211/1 MAR 95
Date de l'essai Test date	1999-01-27
Titre du projet Project Title	COLLISIONS DE RECHERCHE CONJOINTE TC/NHTSA 98/99 FRONTALE DÉCALÉE 34 KM/H - 40% GAUCHE 98/99 TC/NHTSA JOINT RESEARCH COLLISION TESTS OFFSET FRONTAL 34 KM/H - 40% LEFT
MANNEQUIN / DUMMY	
Chauffeur Driver	HYBRID III 5% Femelle / Female
Passager Passenger	HYBRID III 5% Femelle / Female
Passager 1 (arrière gauche) Passenger 1 (rear left)	HYBRID III 18M
Passager 2 (arrière droit) Passenger 2 (rear right)	HYBRID III 3Y

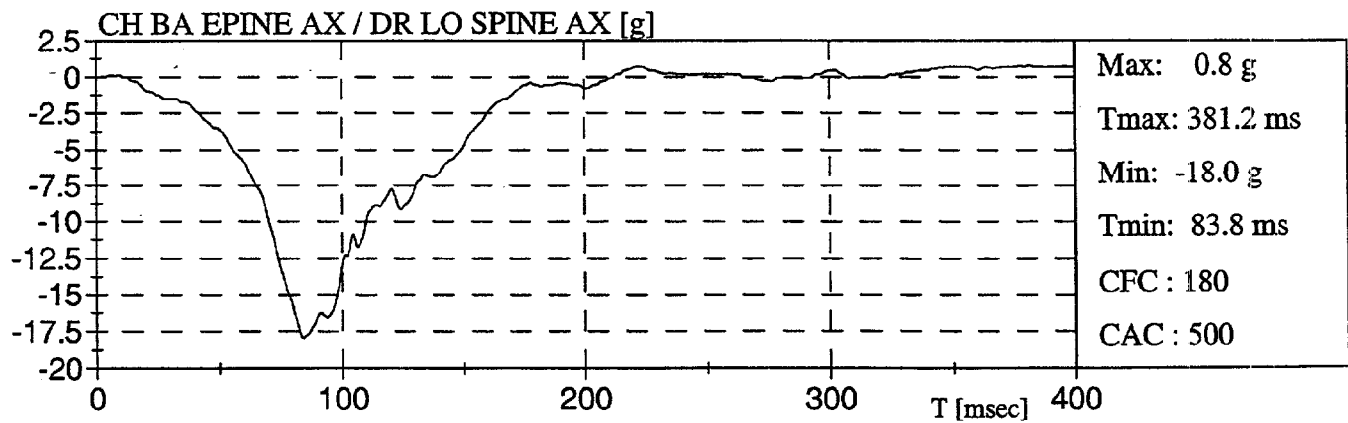
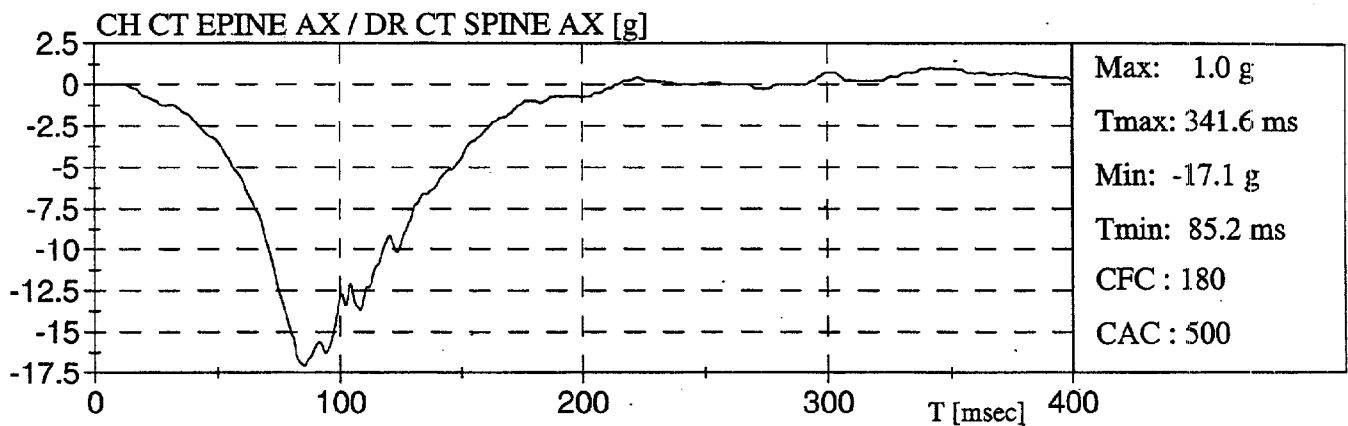
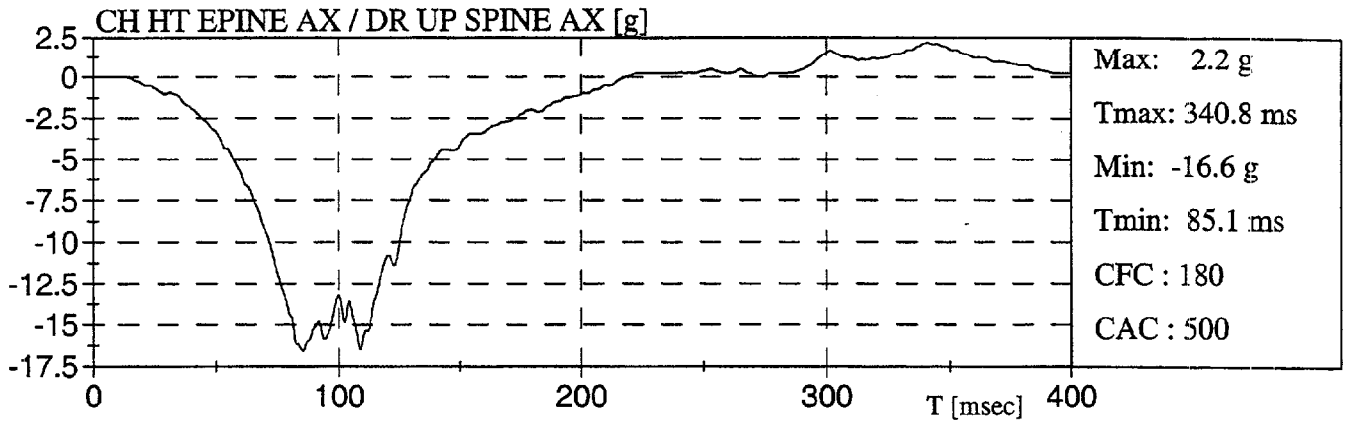


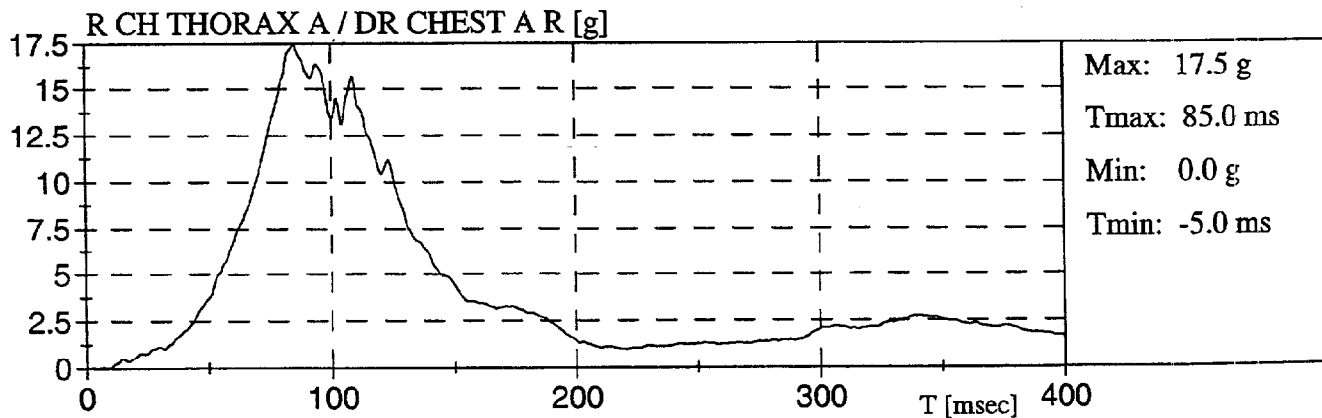
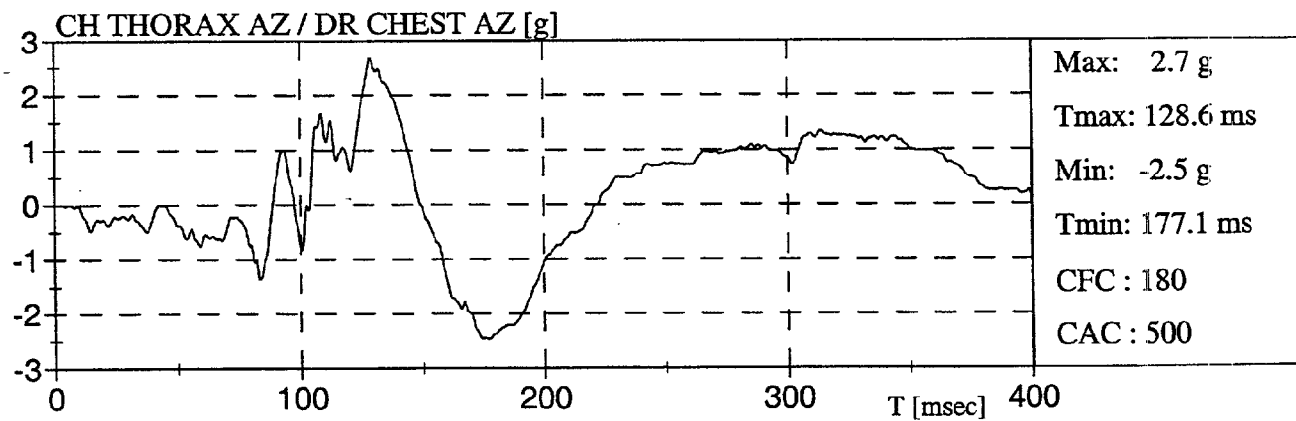
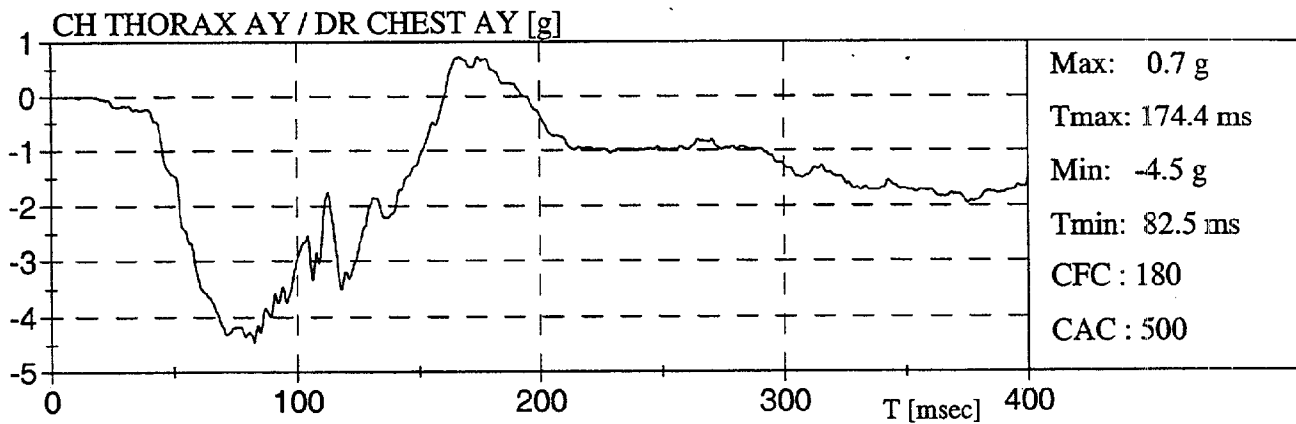
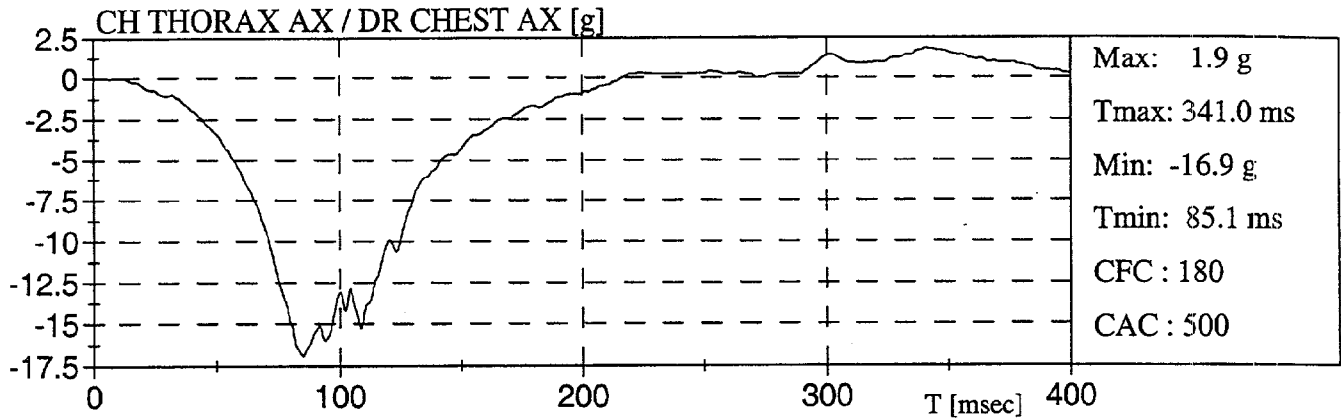


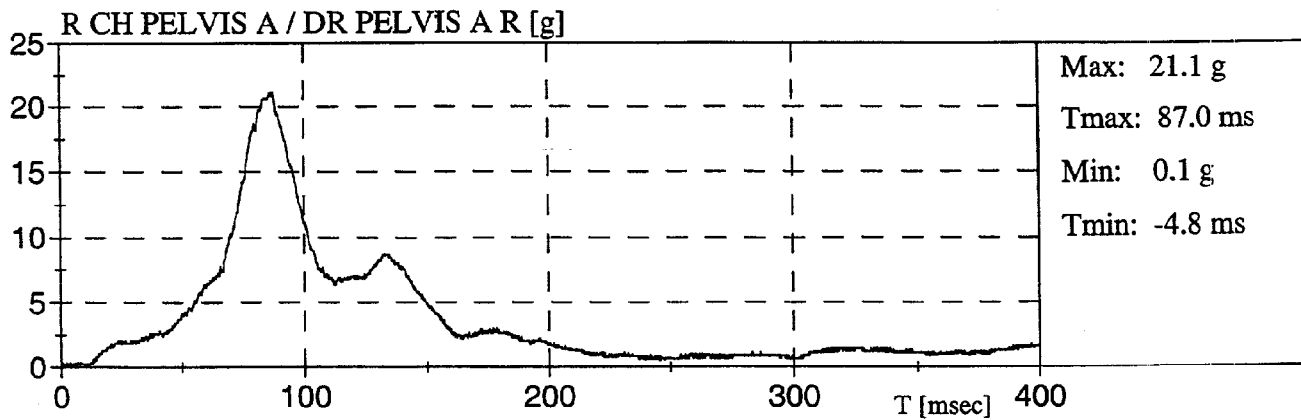
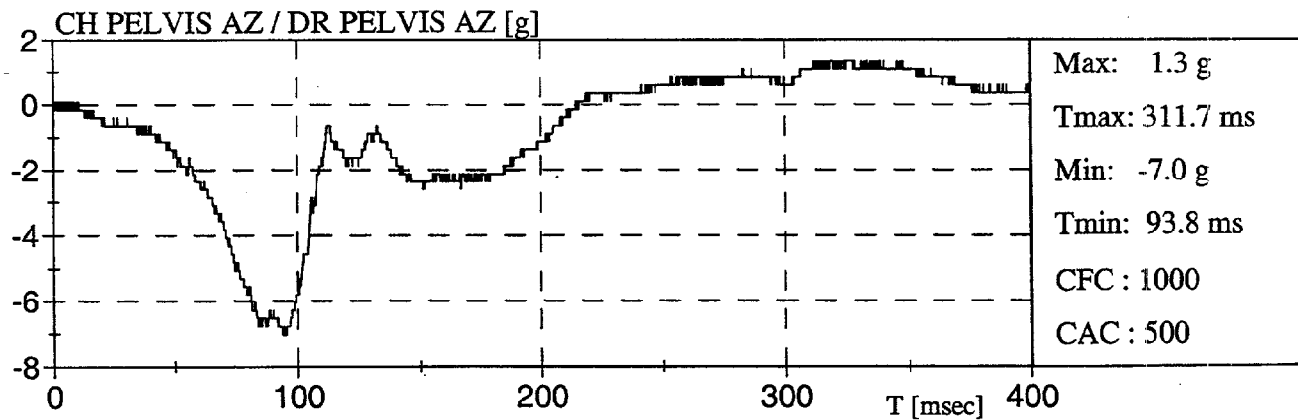
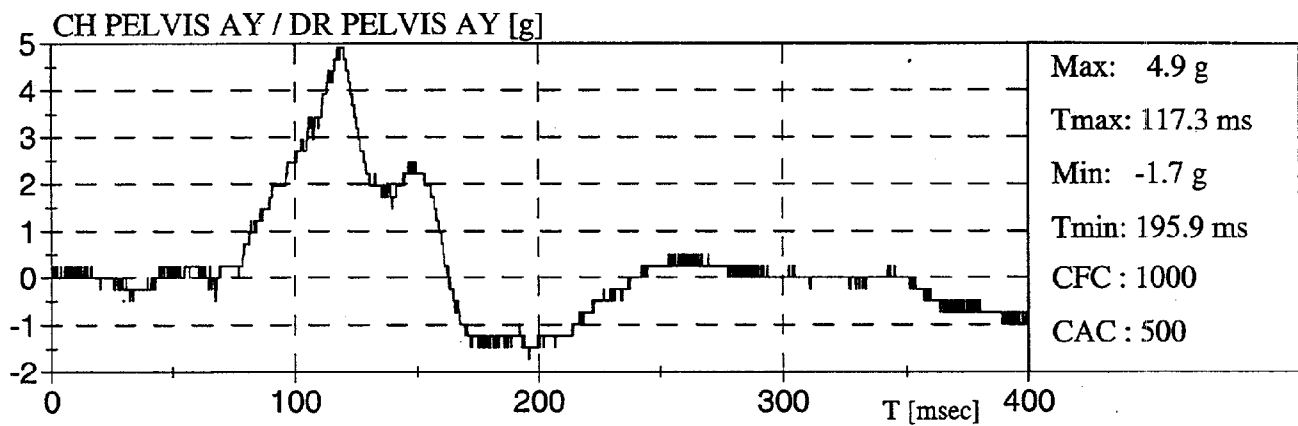
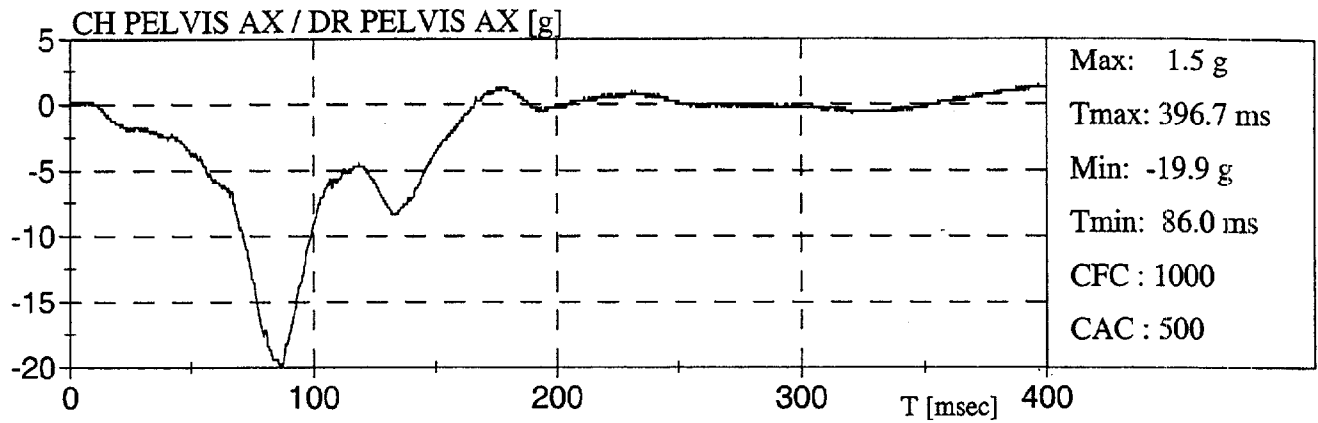


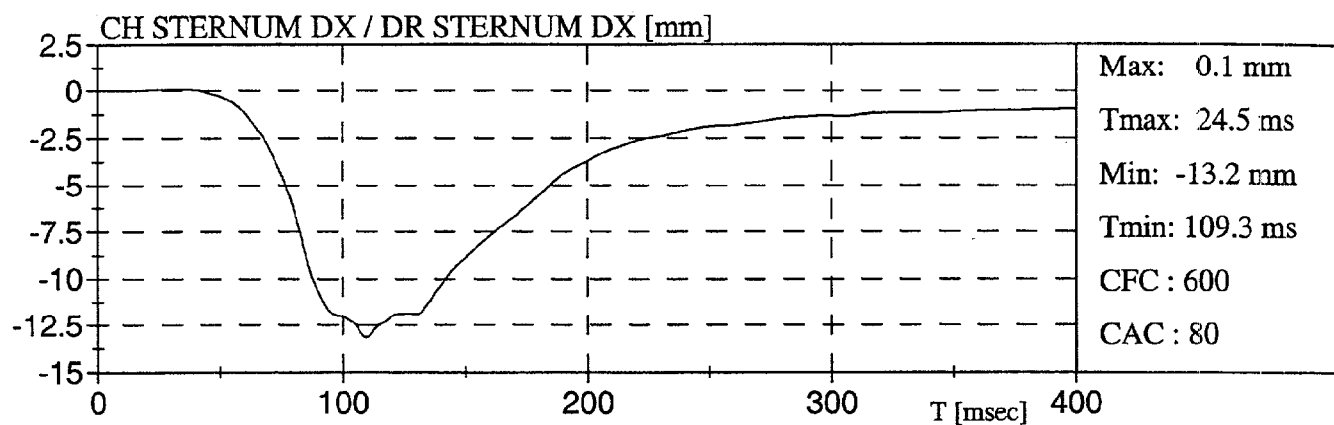


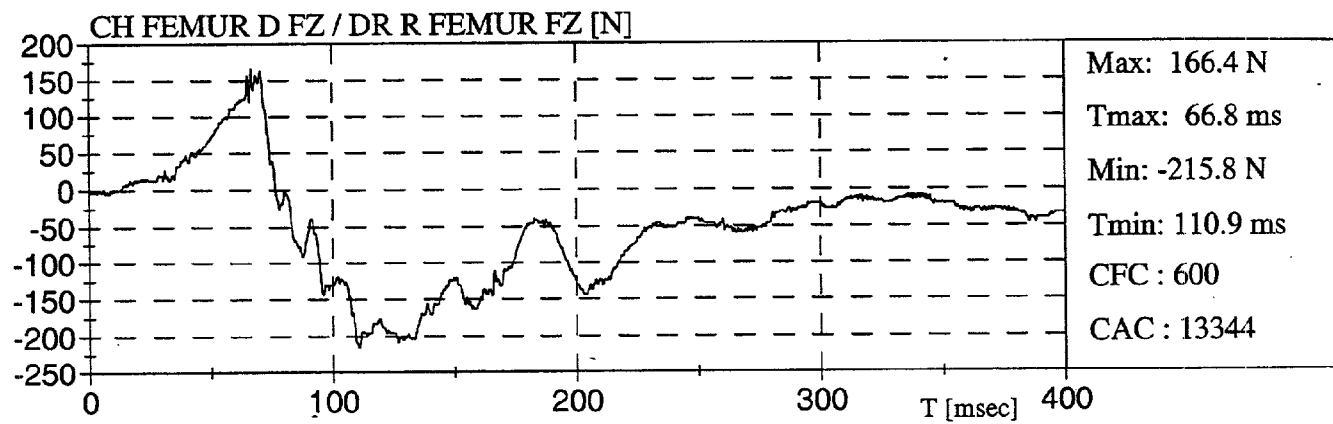
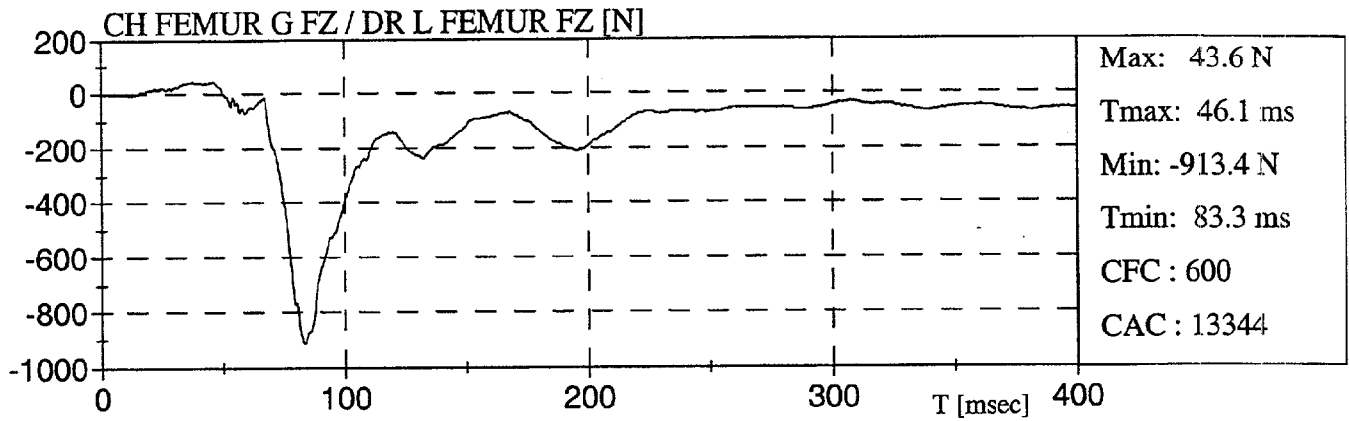


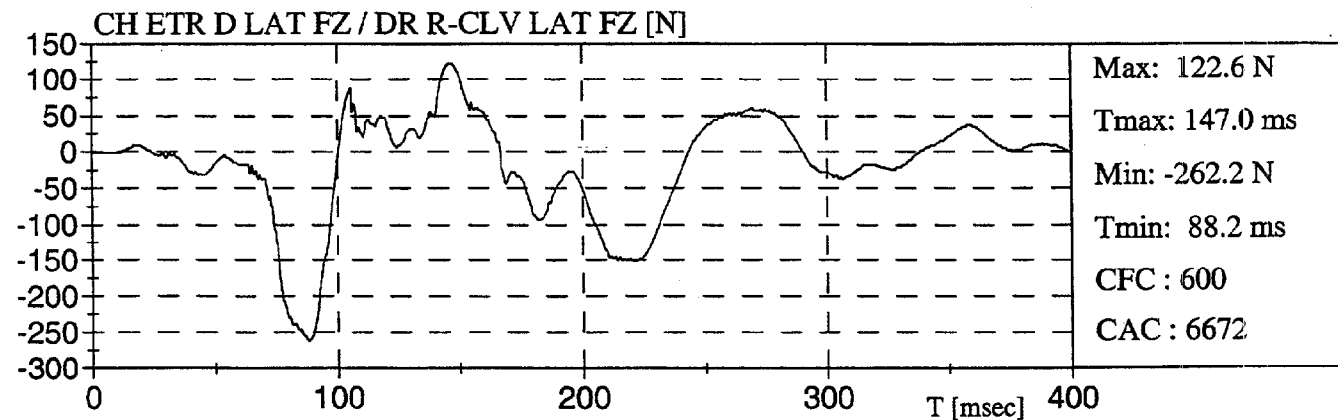
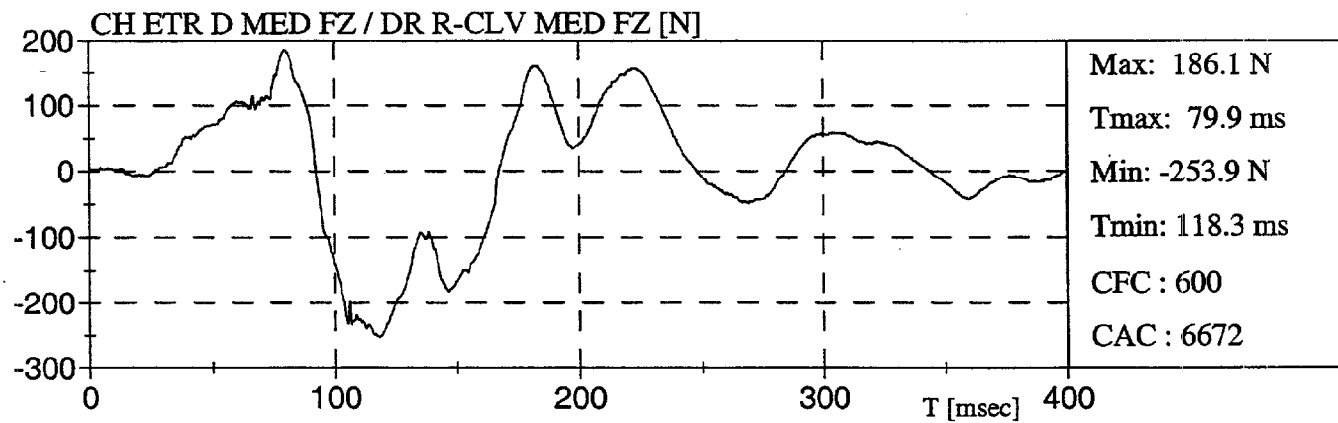
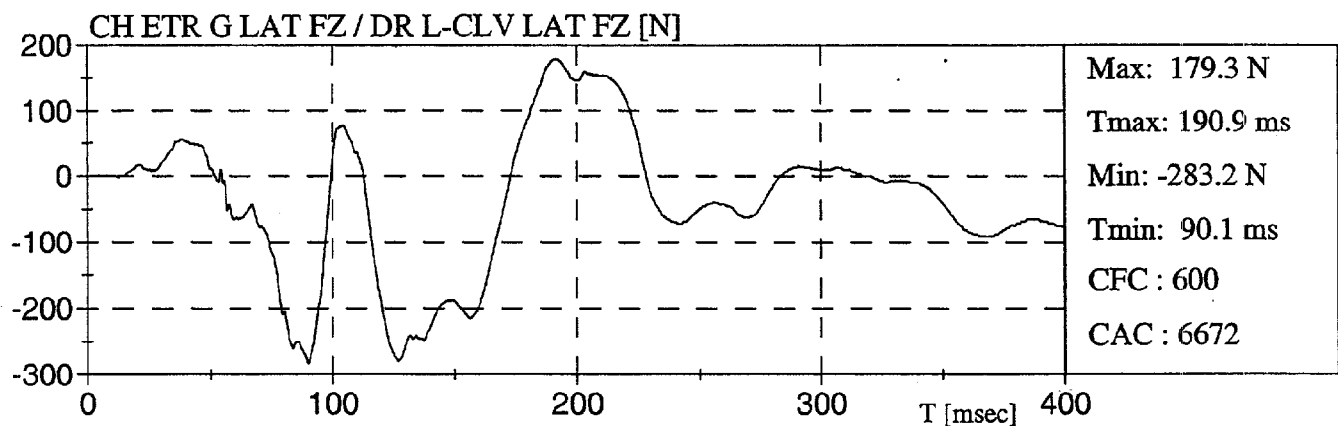
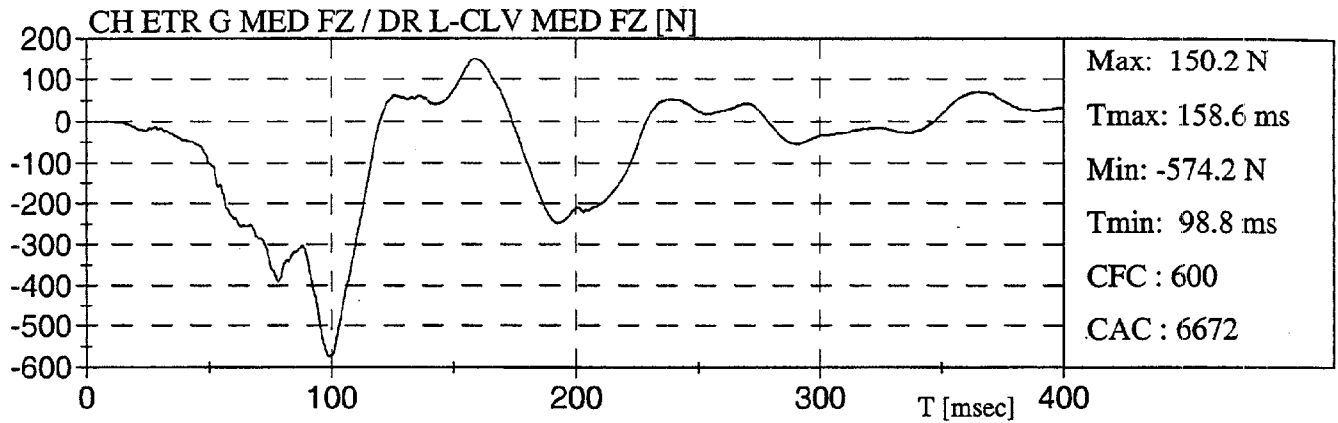


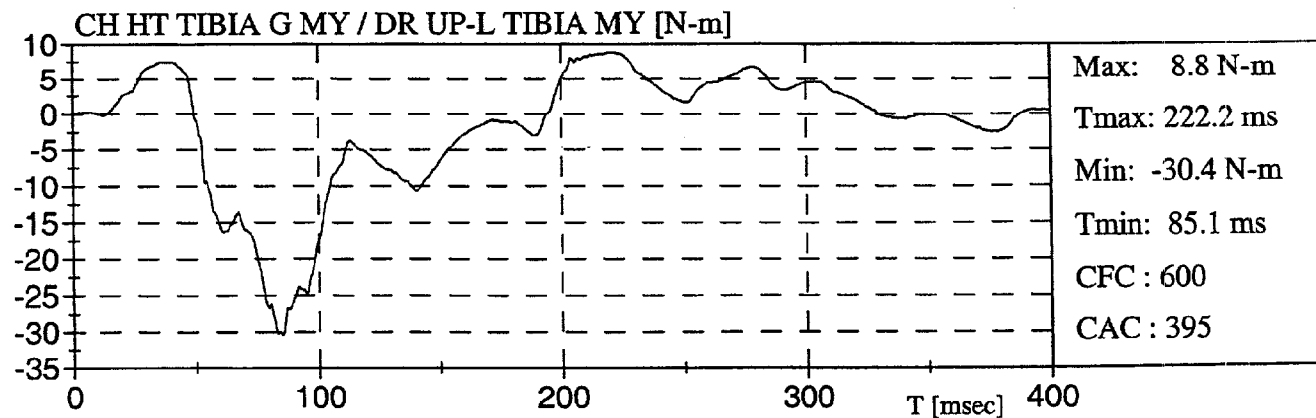
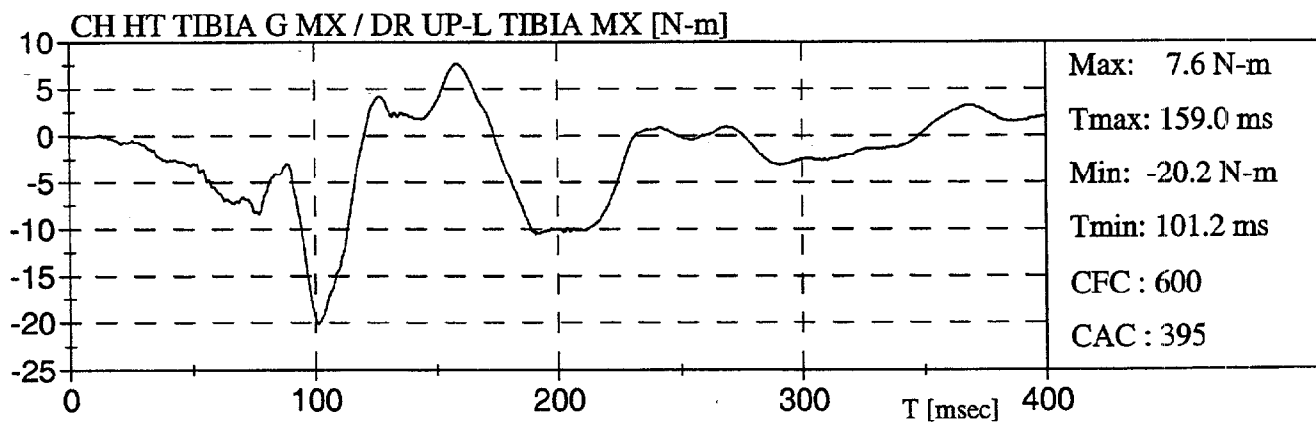
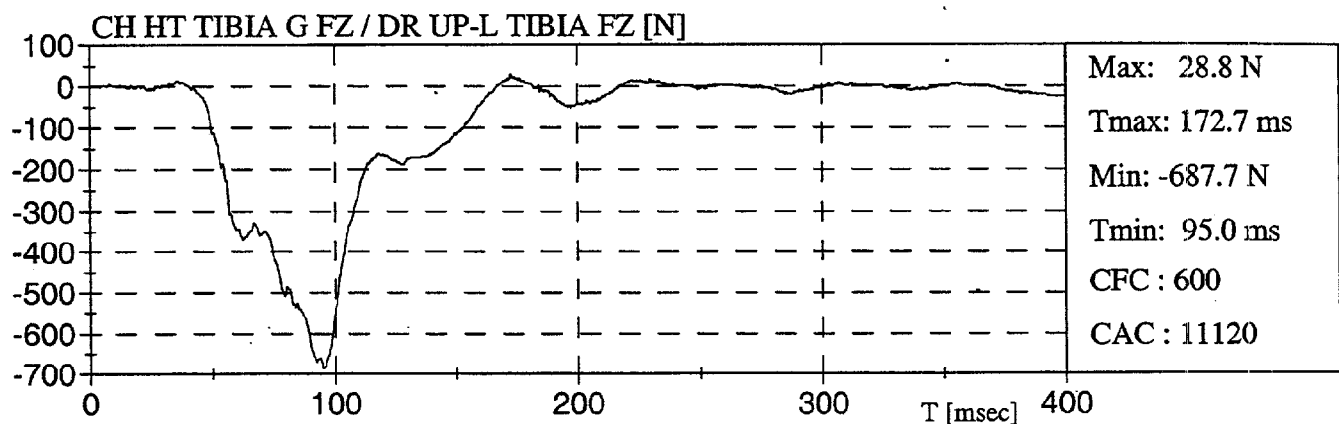
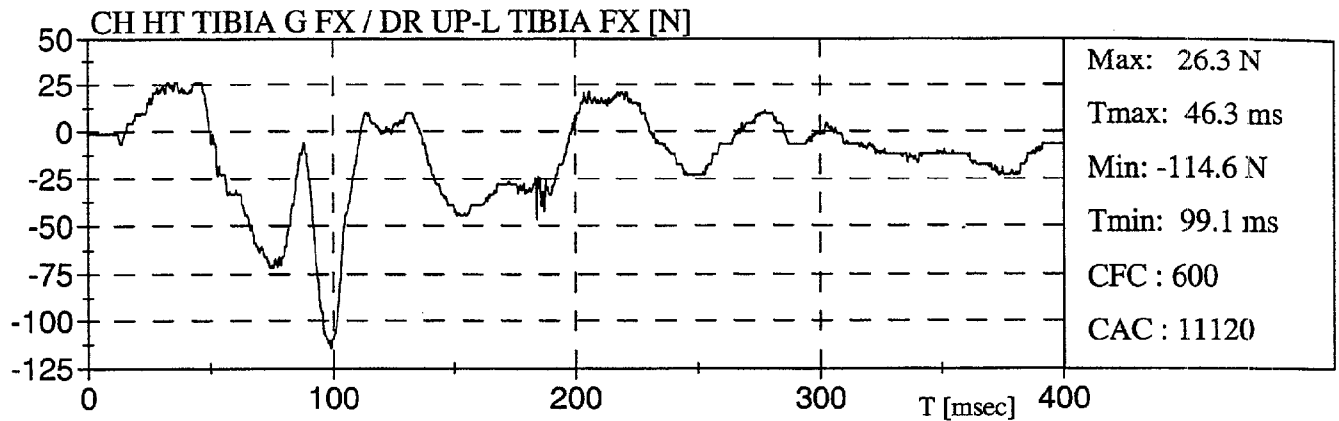


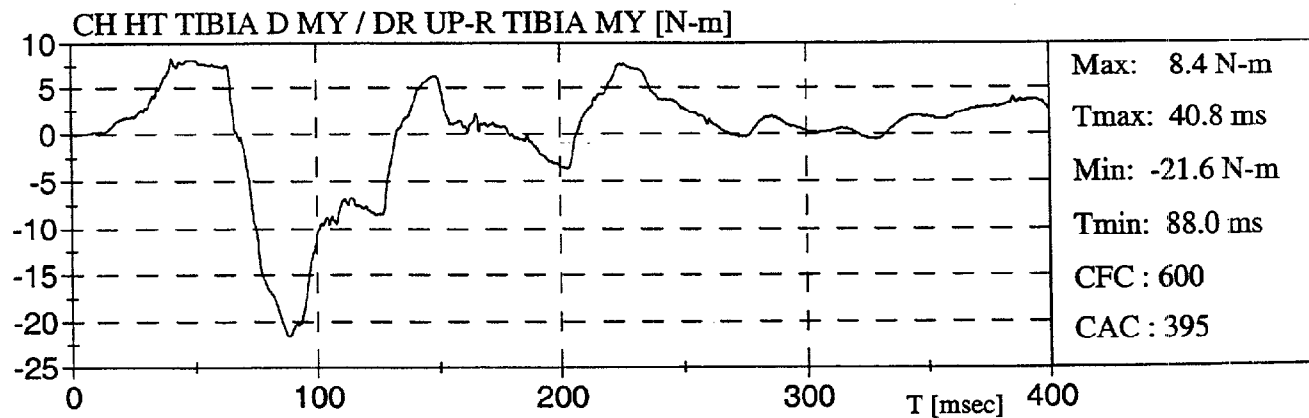
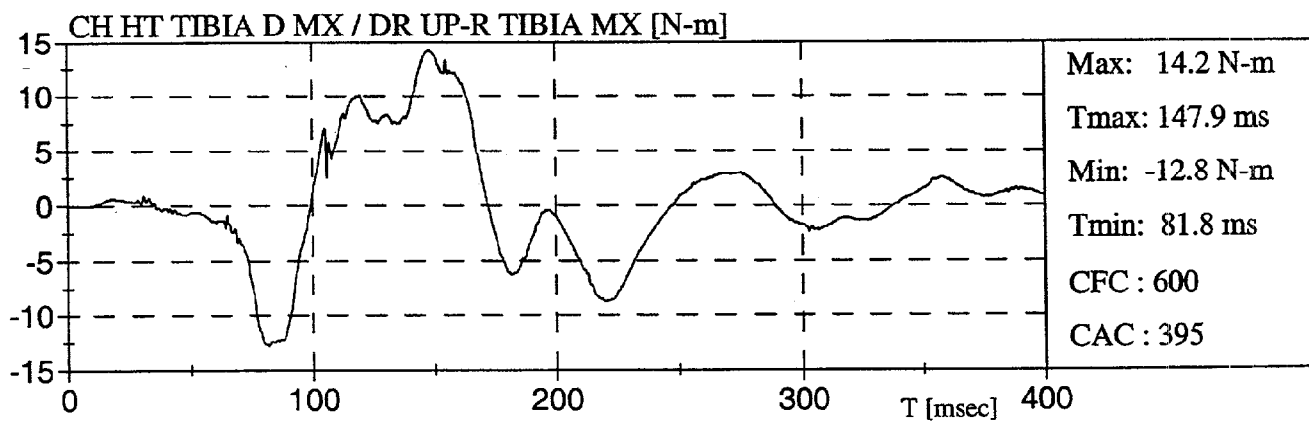
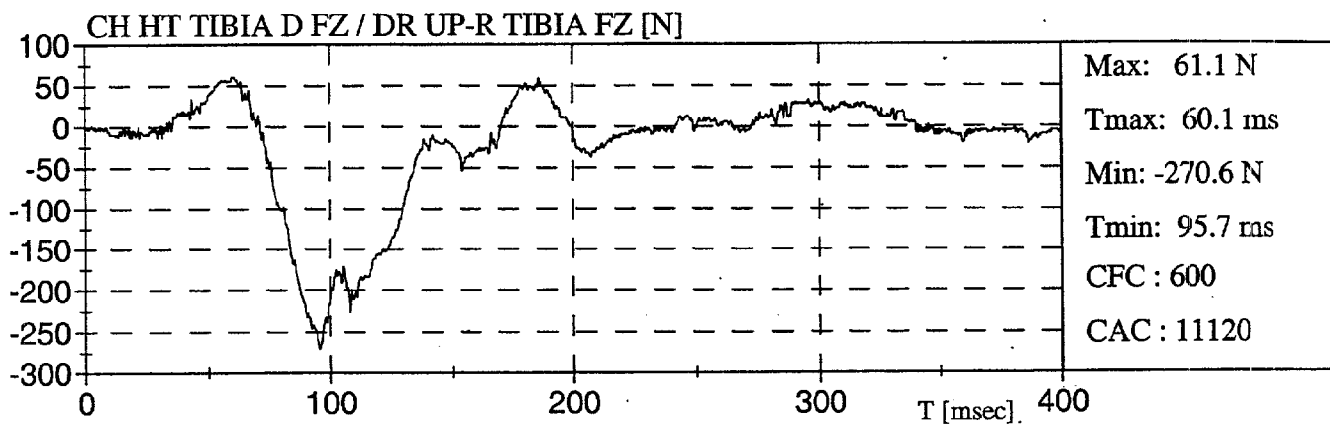
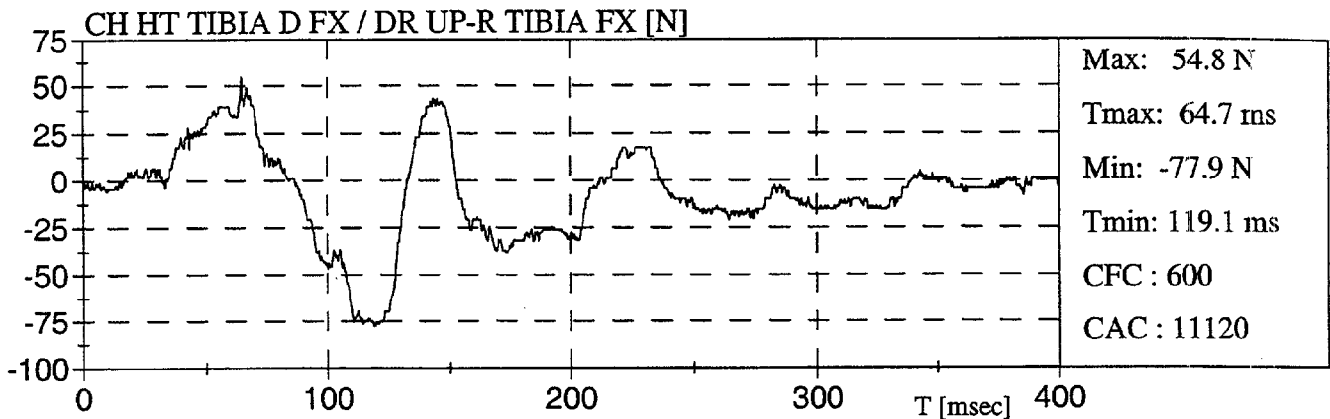


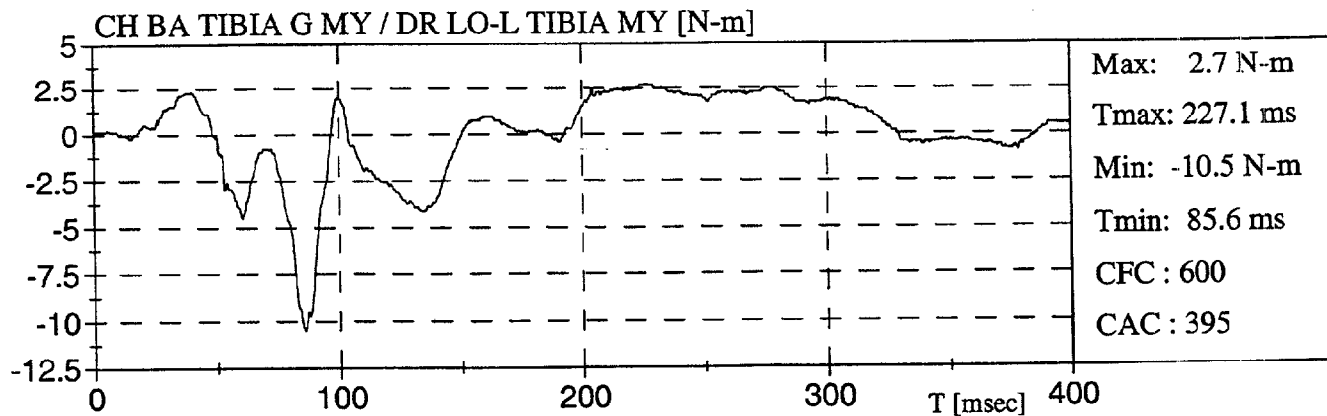
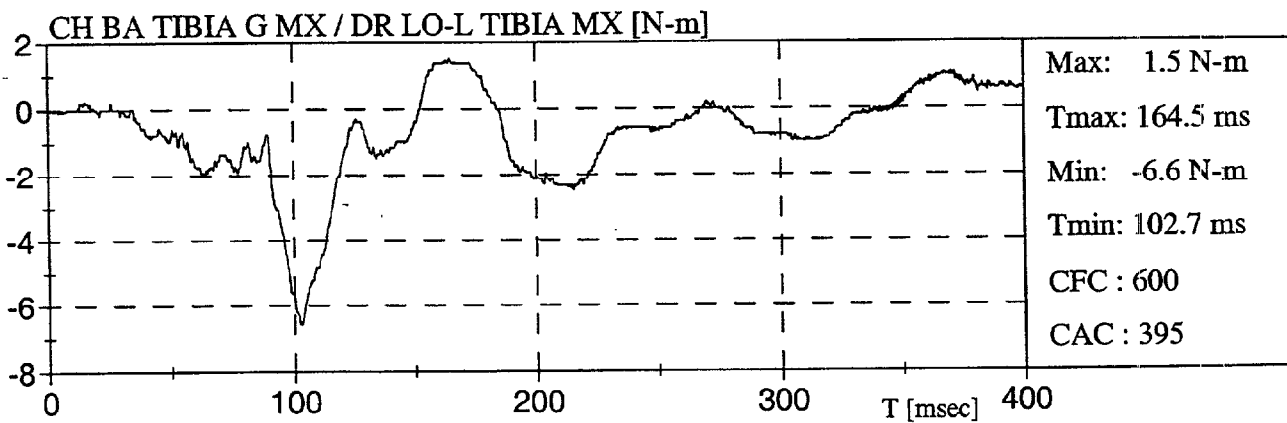
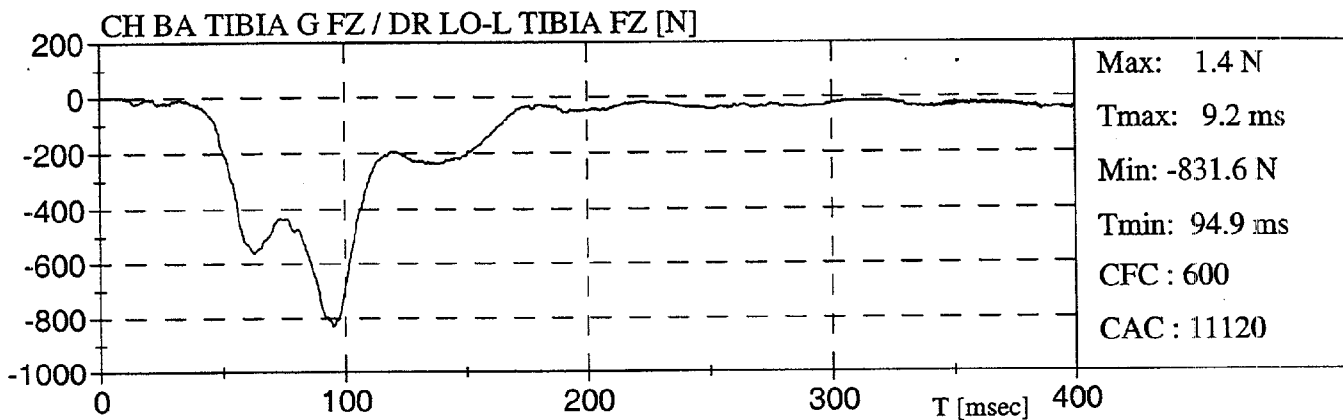
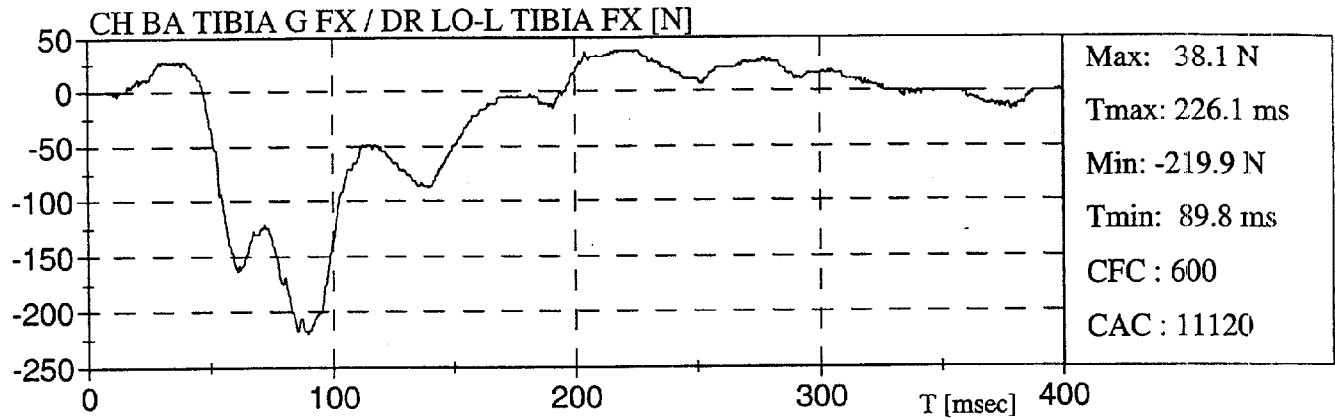


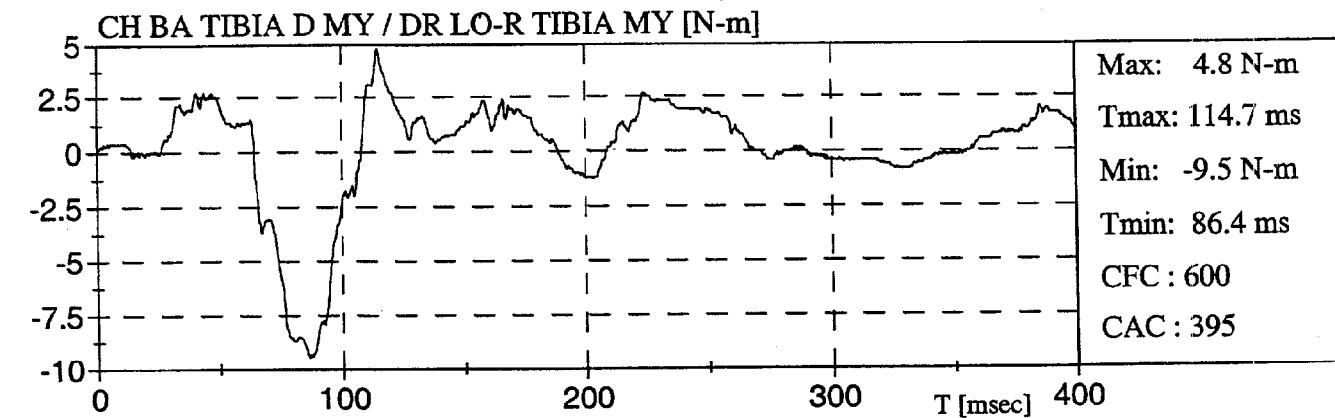
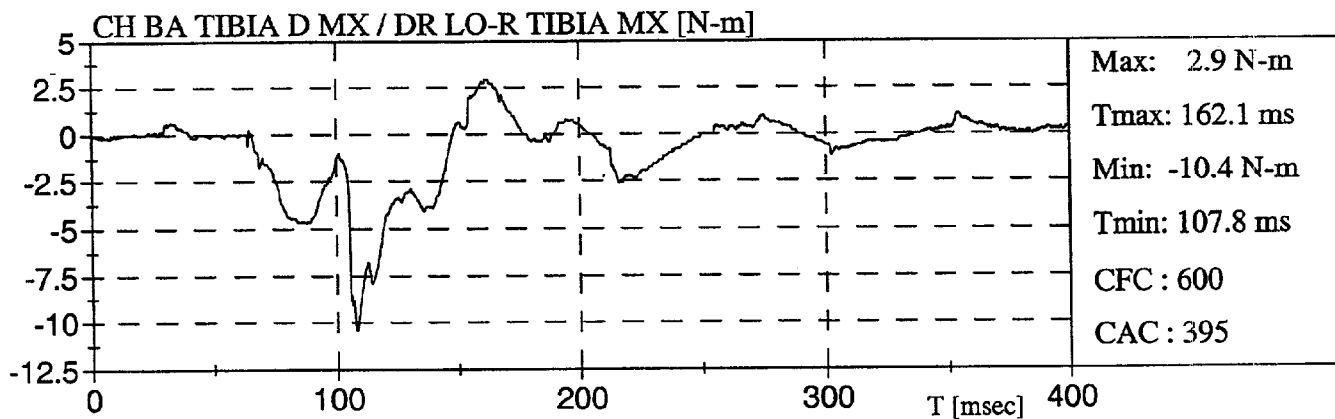
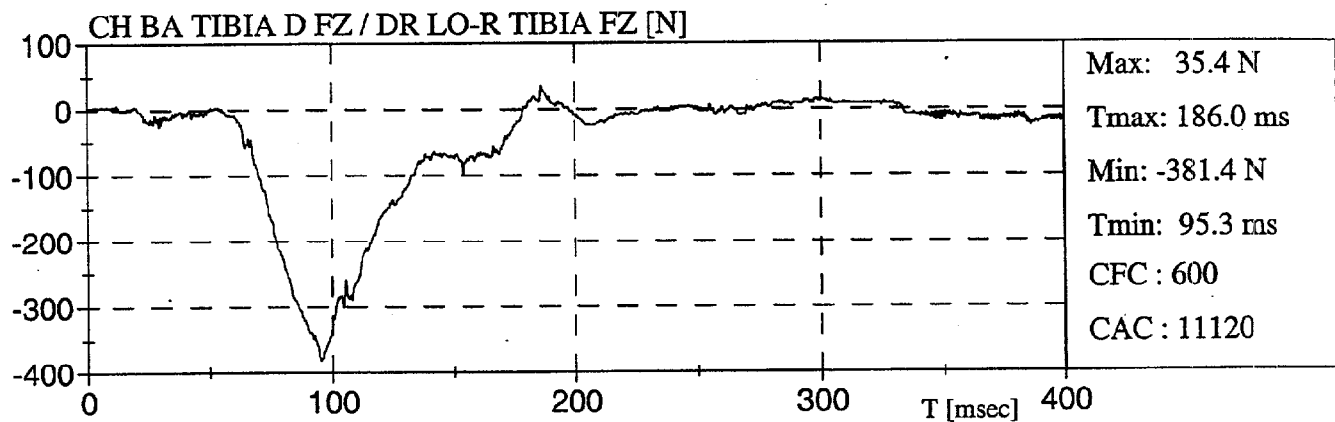
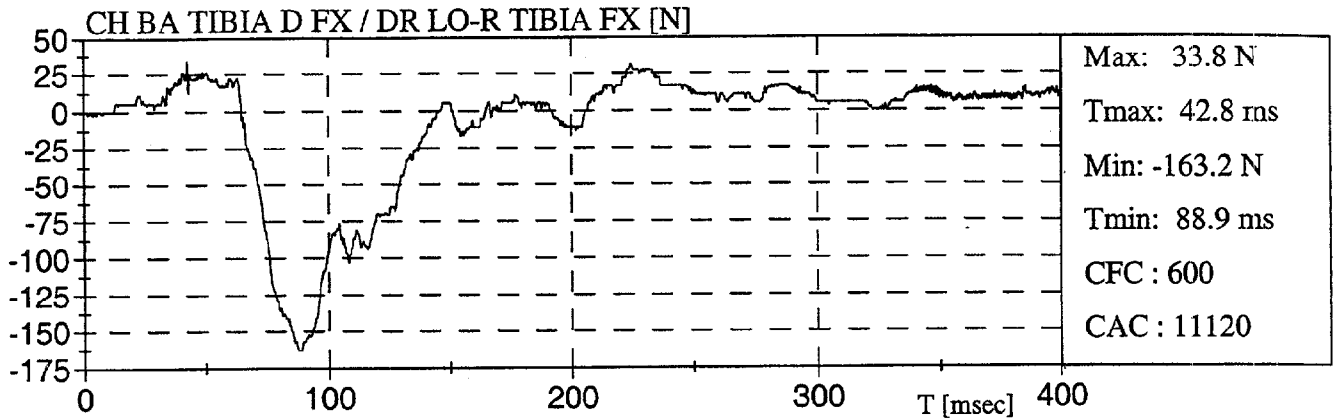


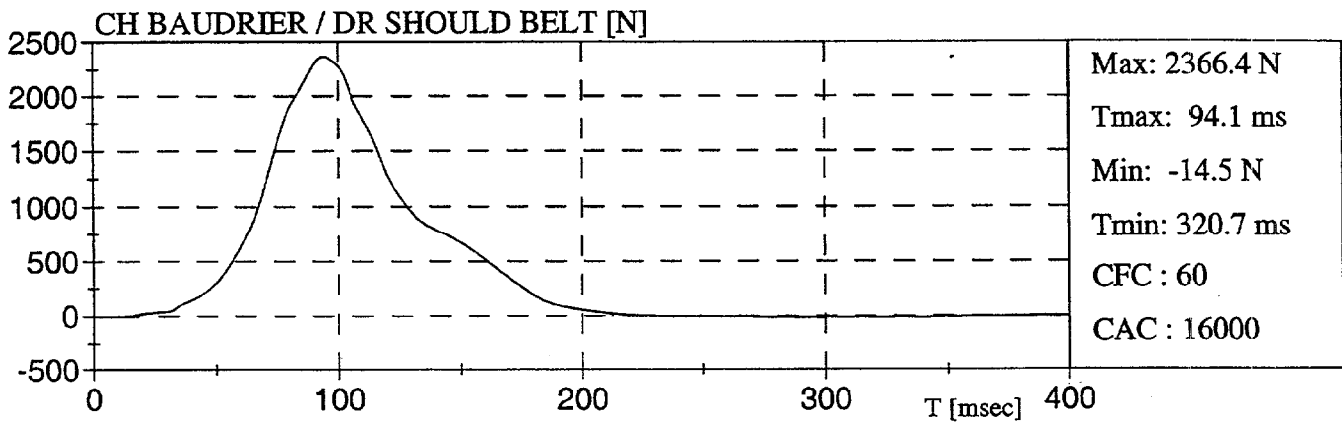
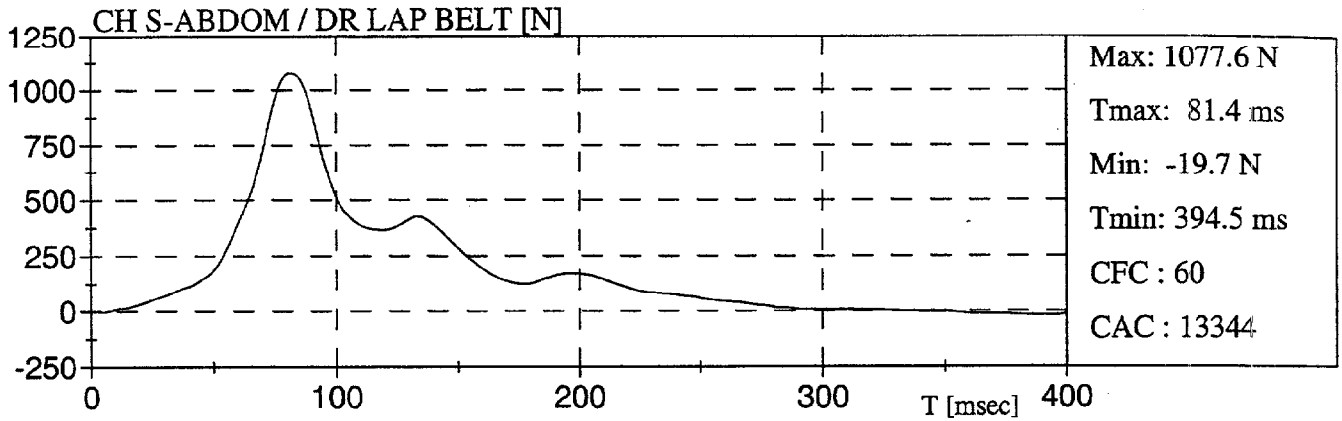


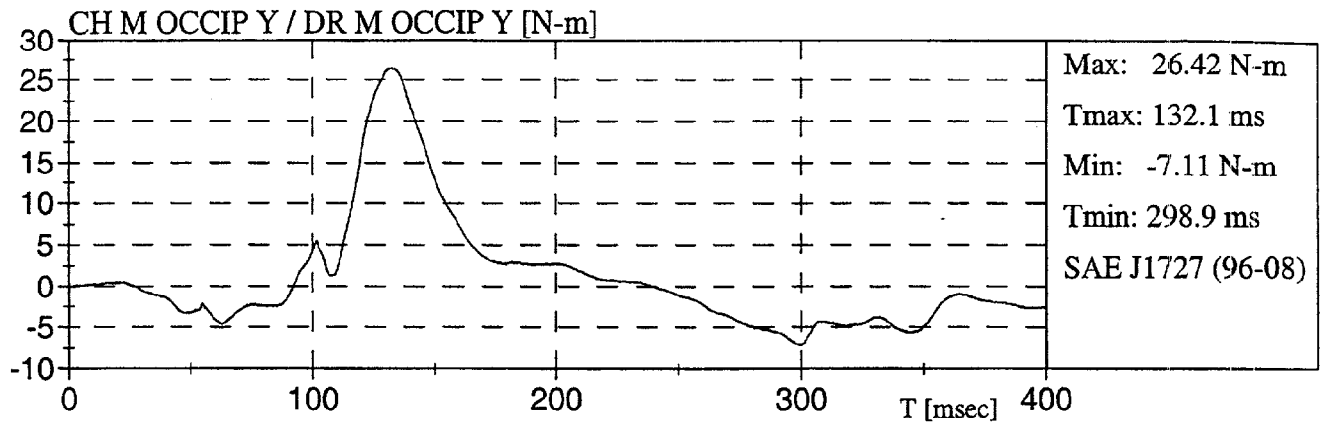


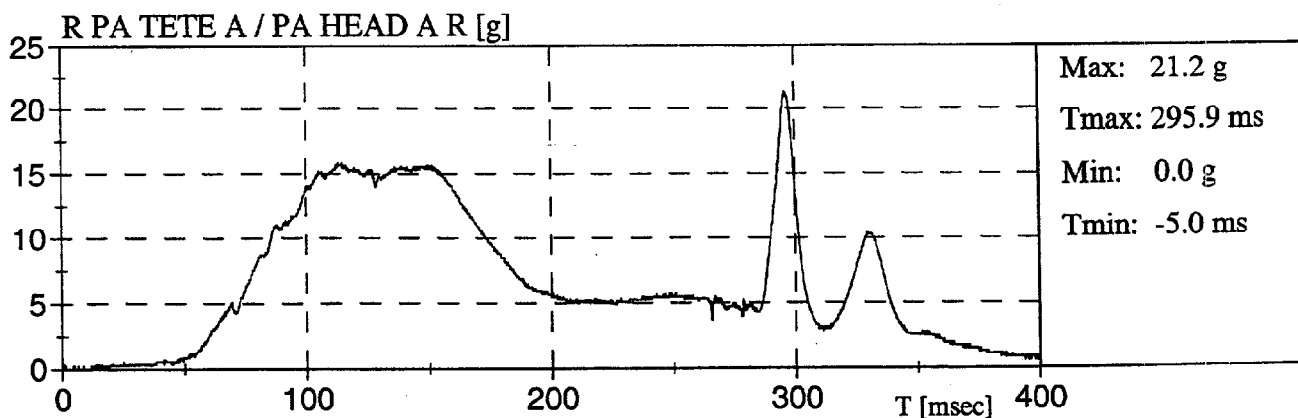
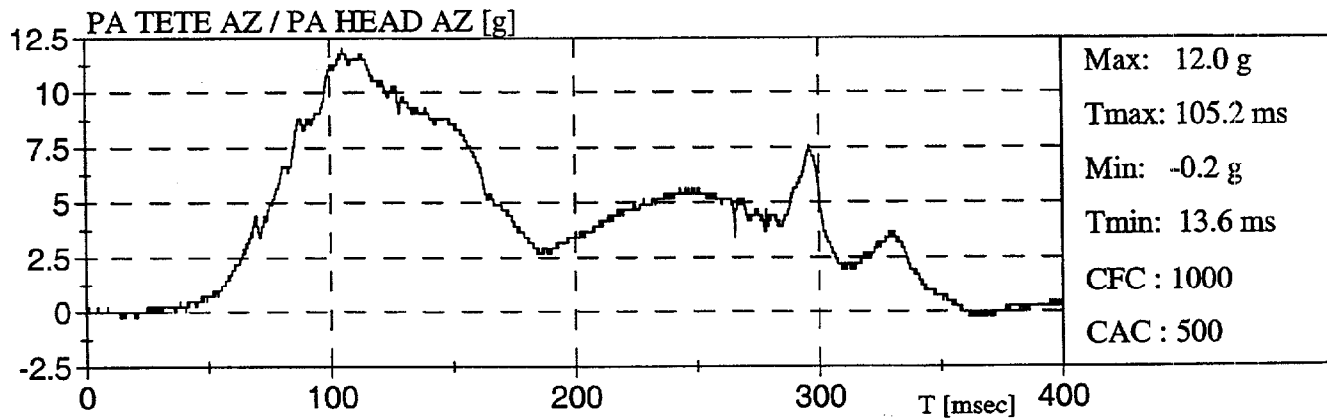
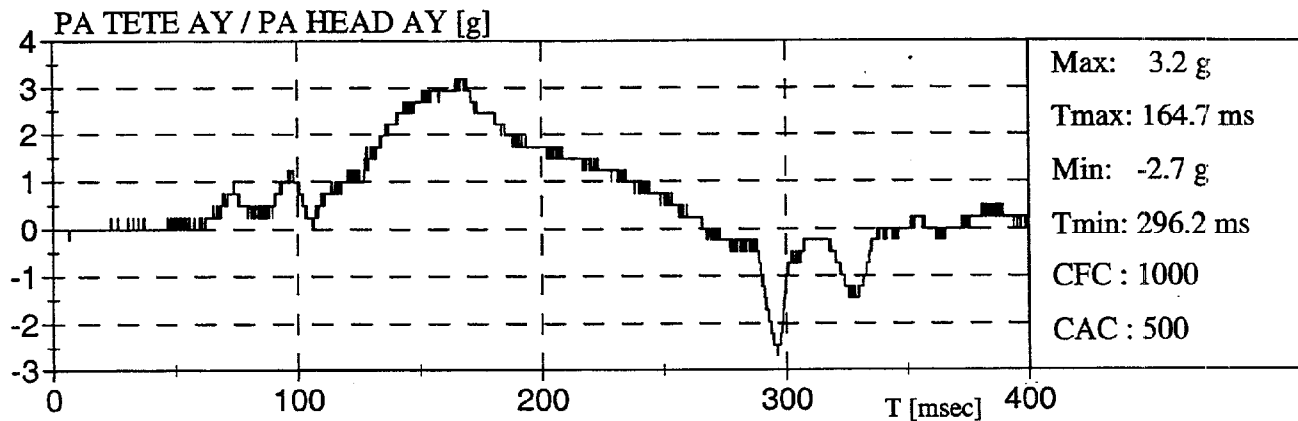
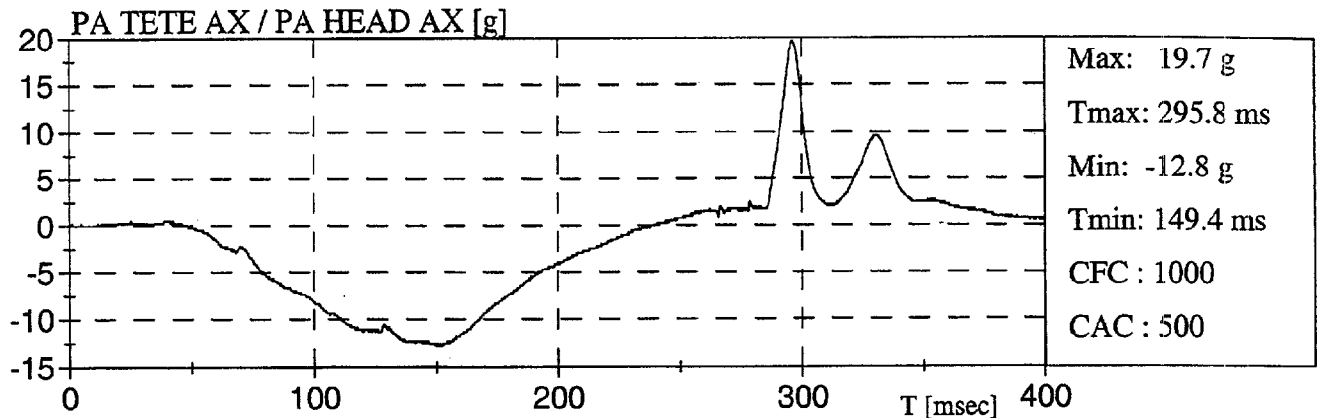


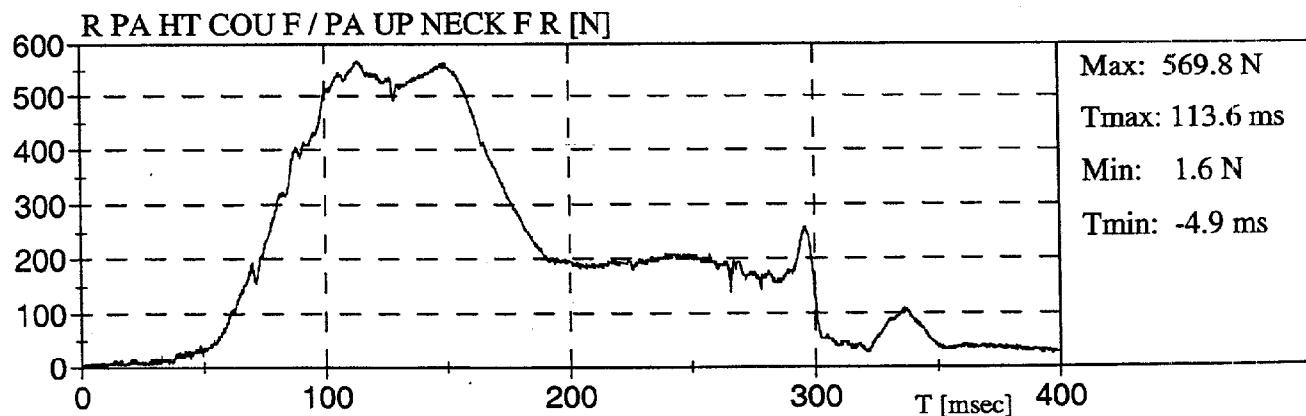
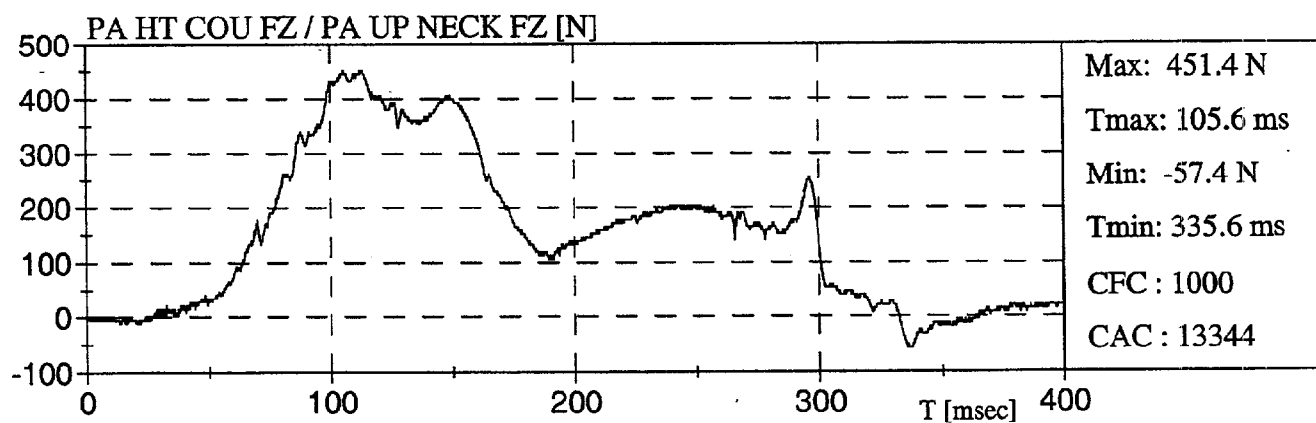
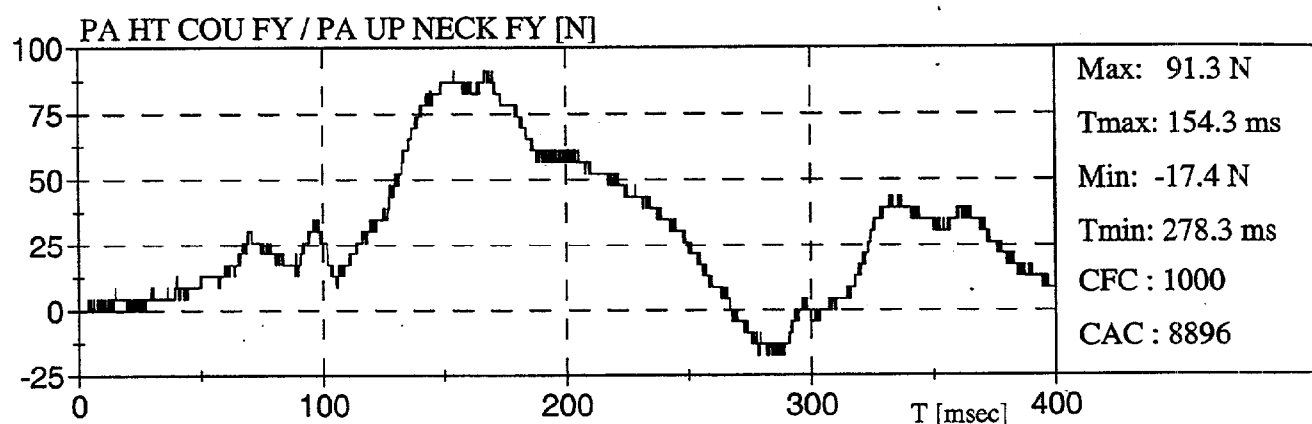
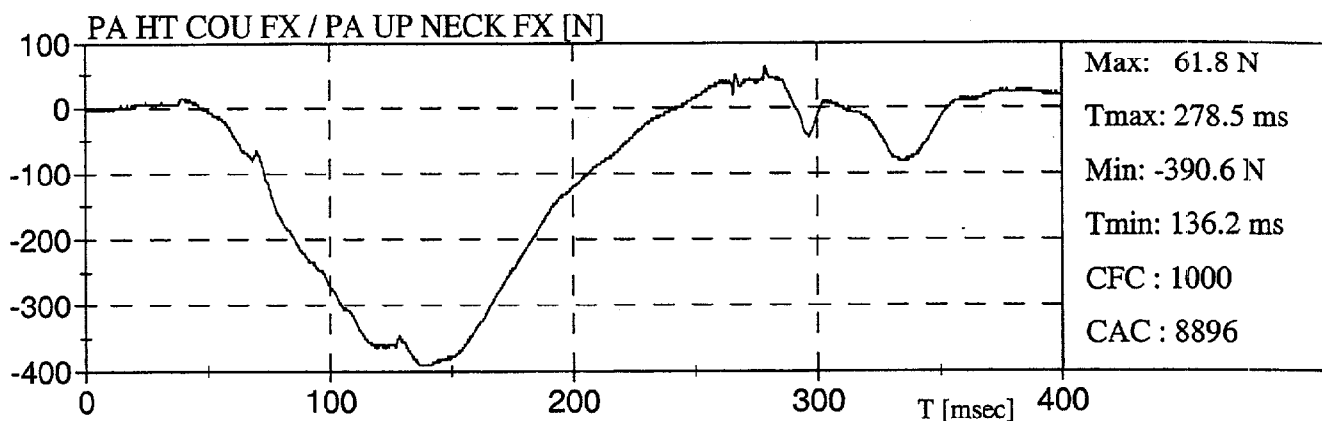


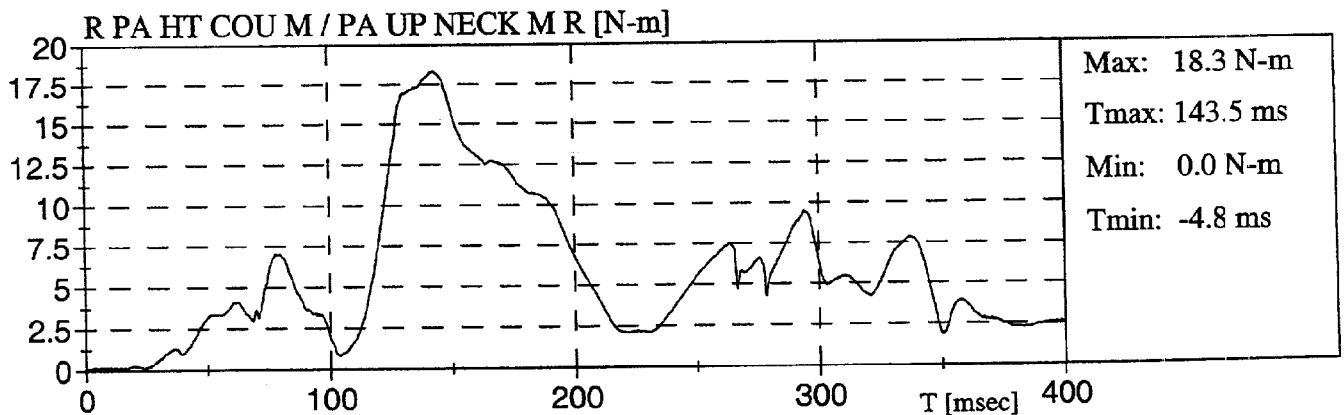
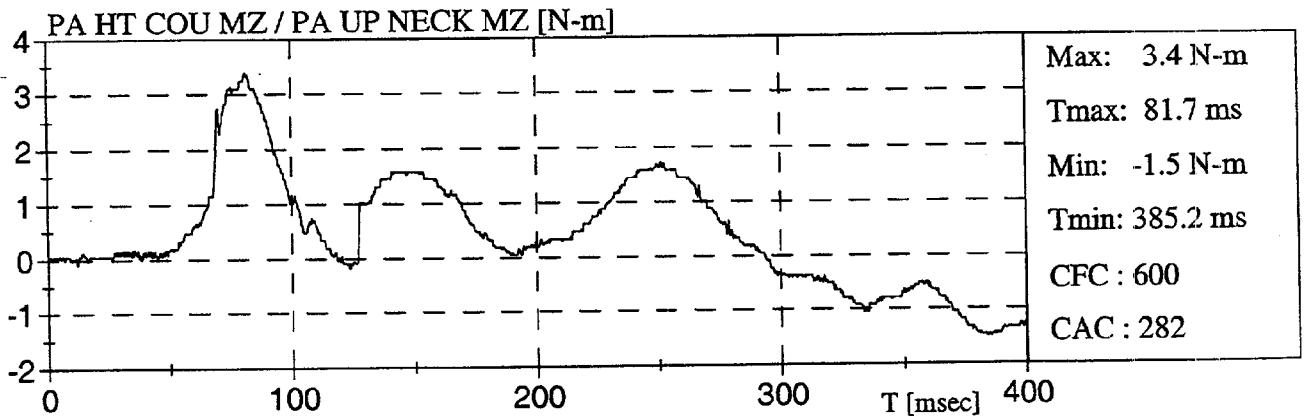
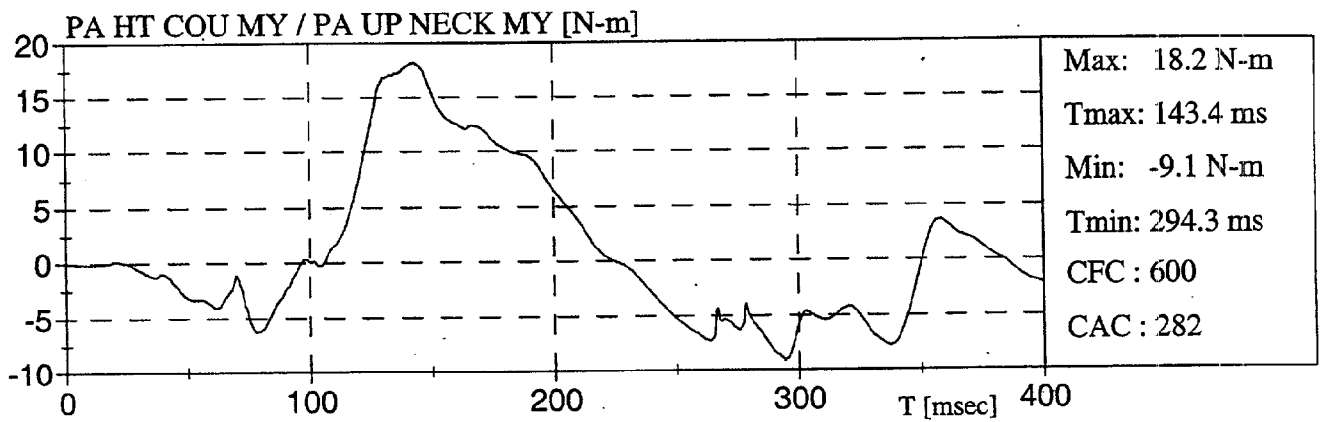
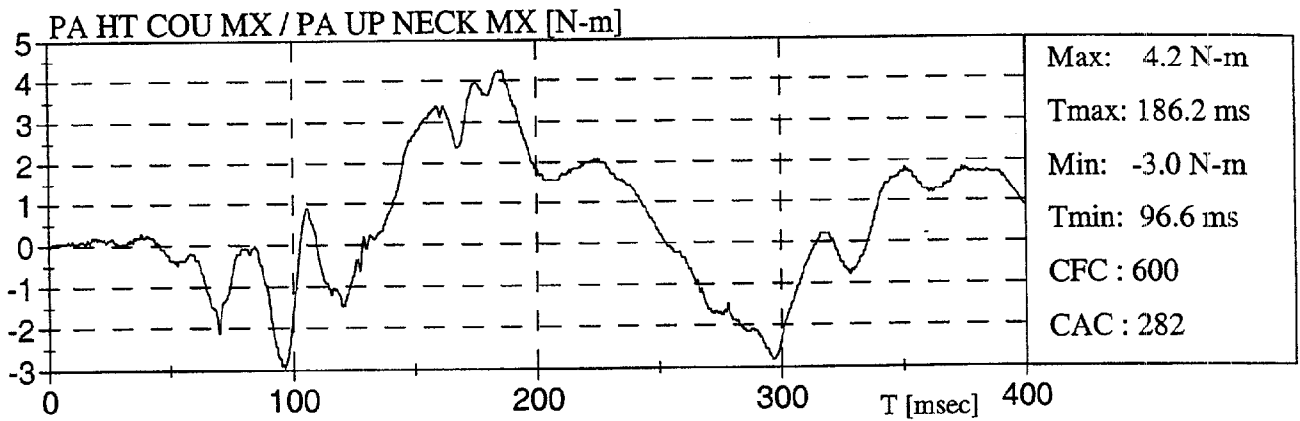


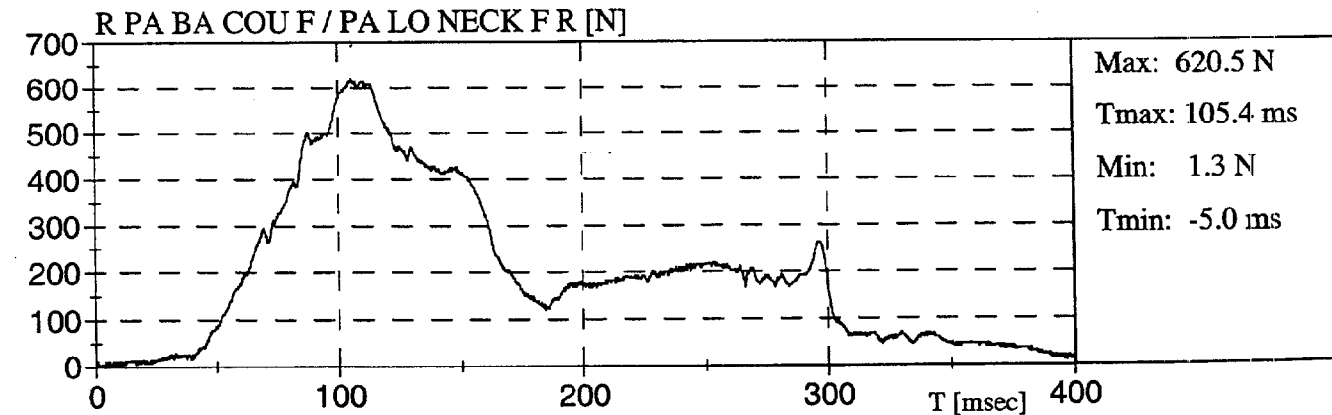
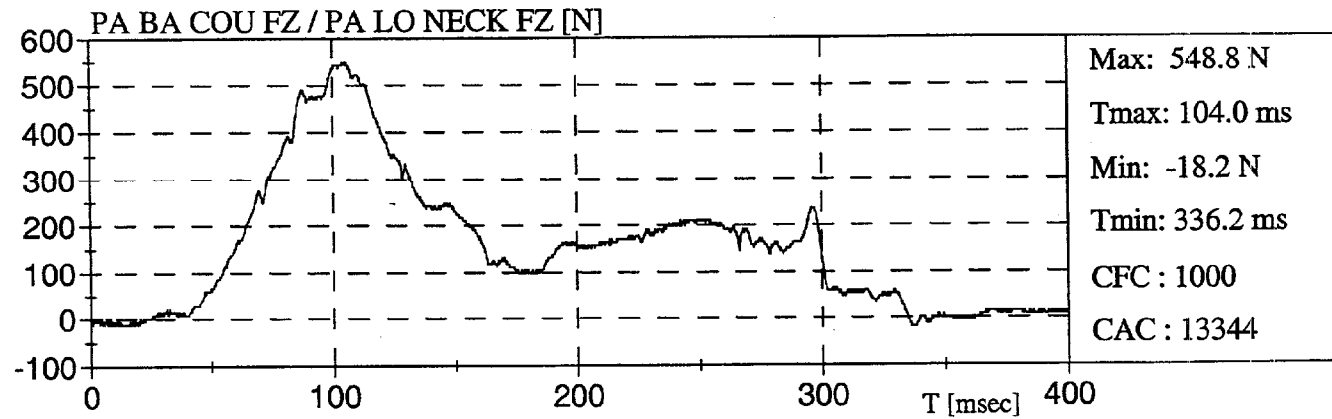
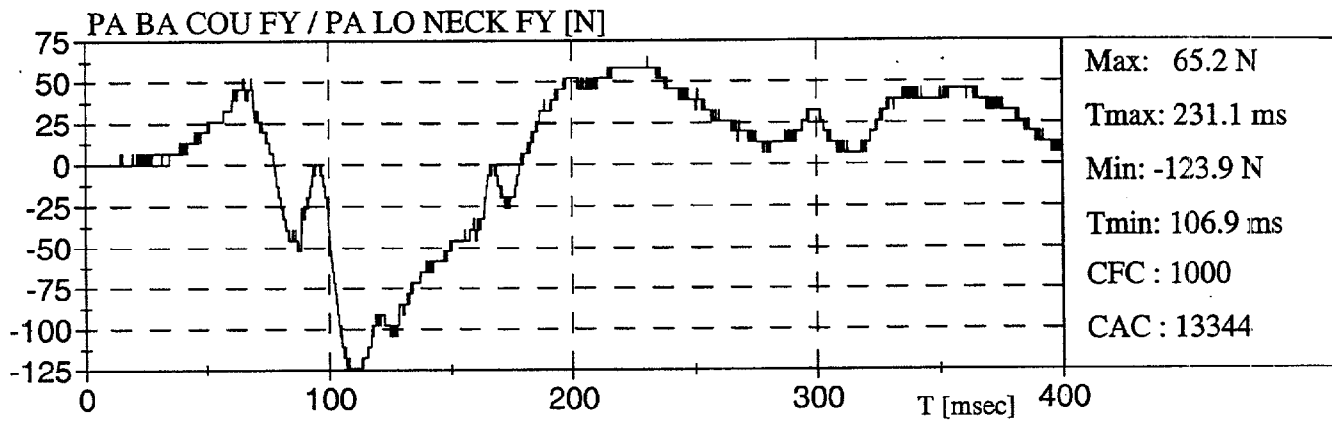
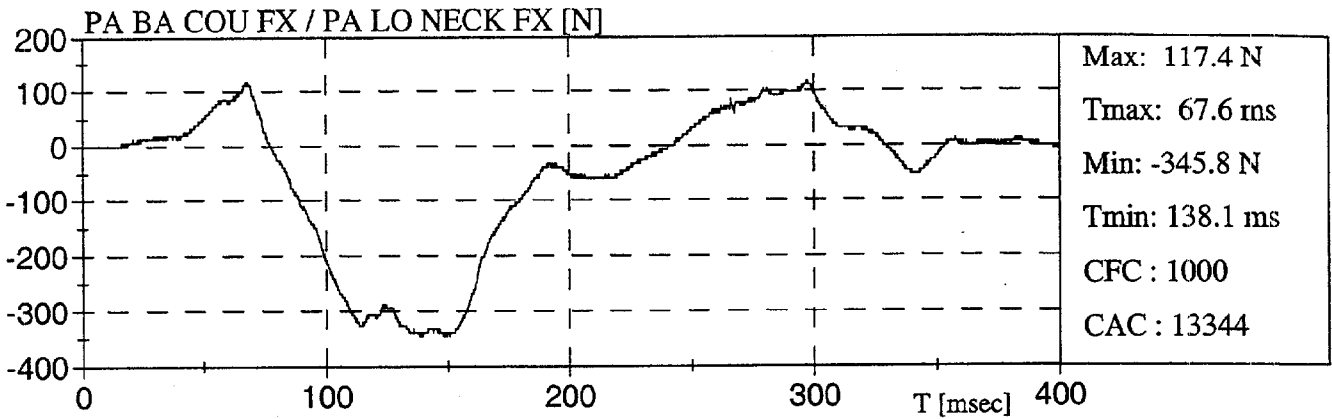


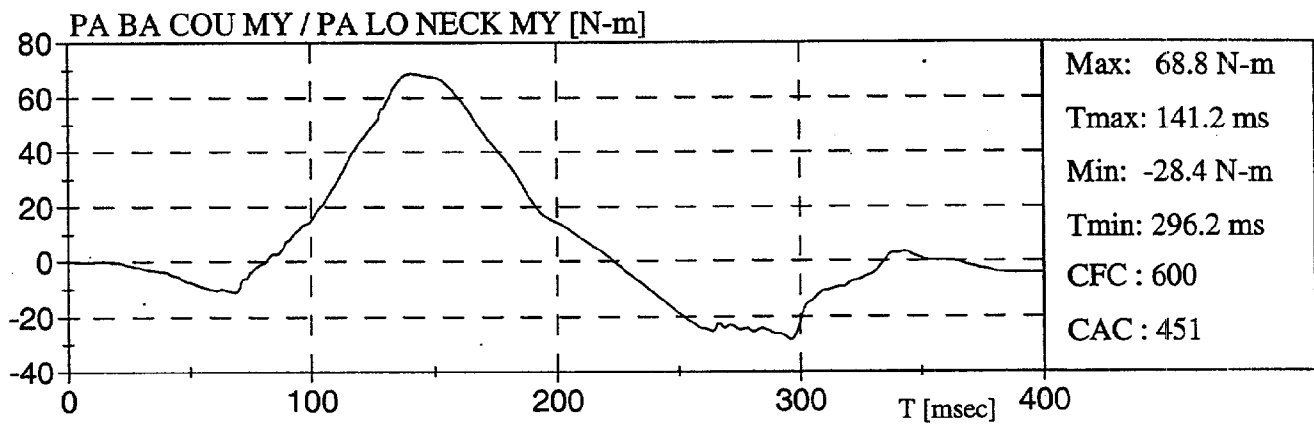
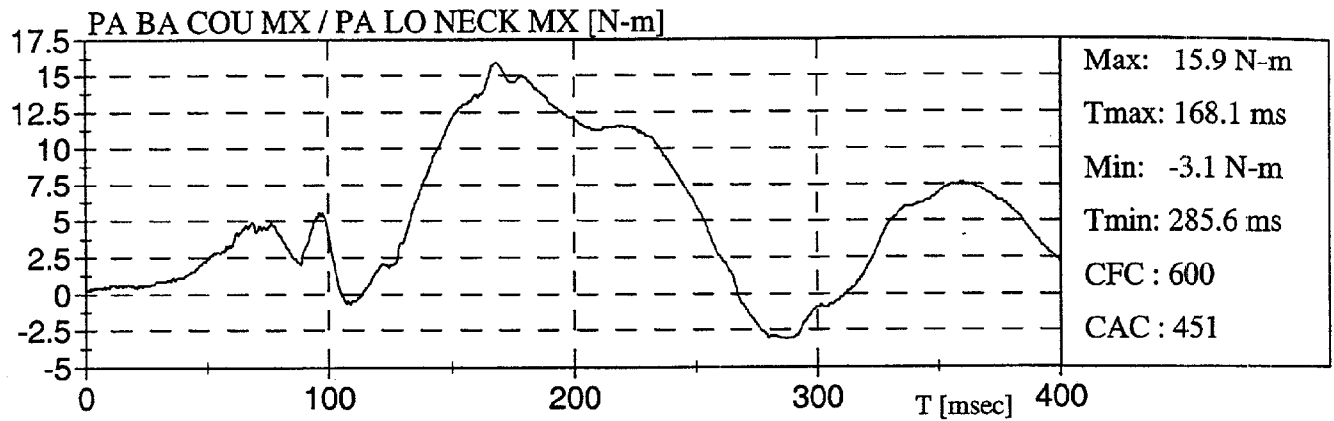


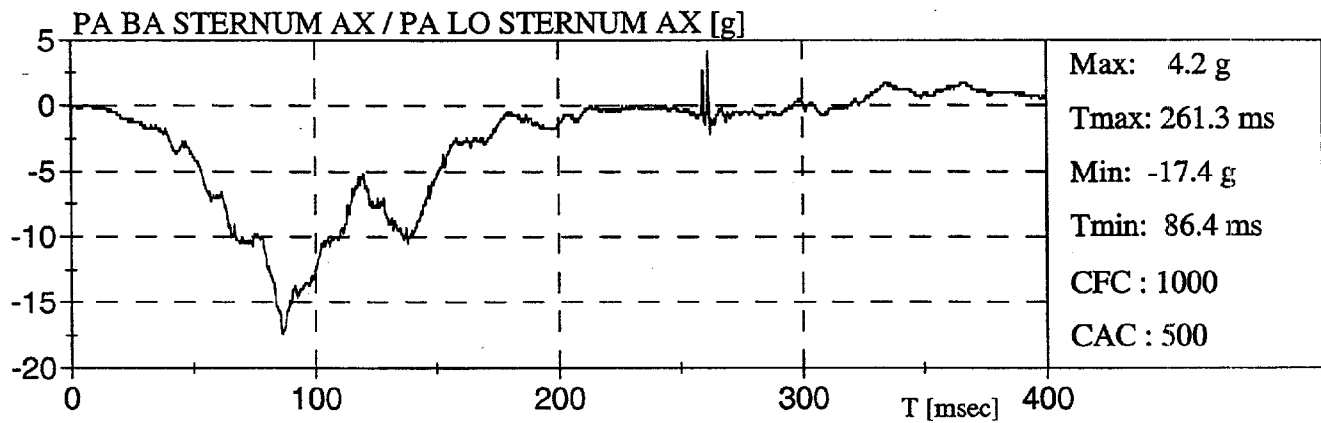
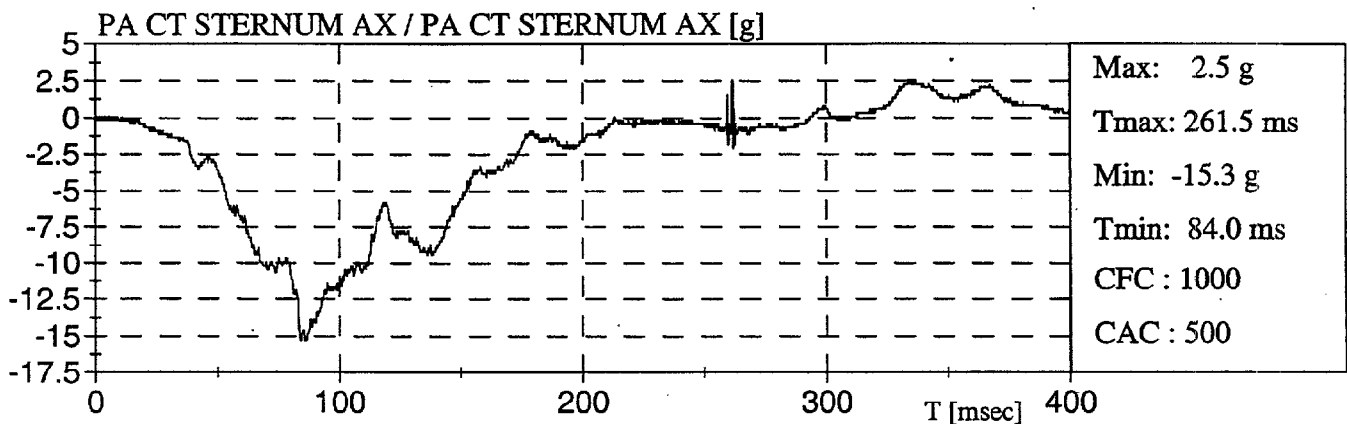
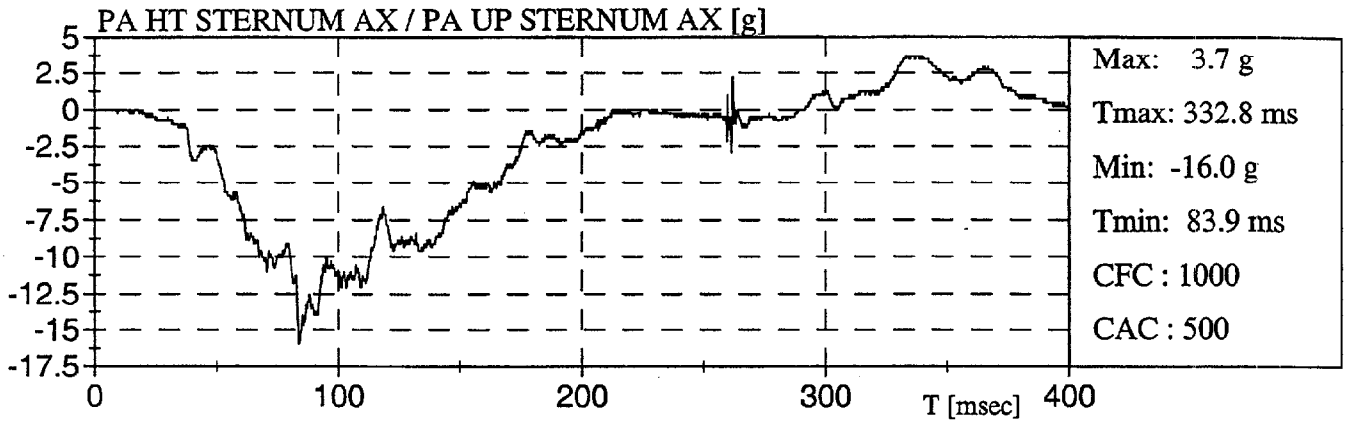


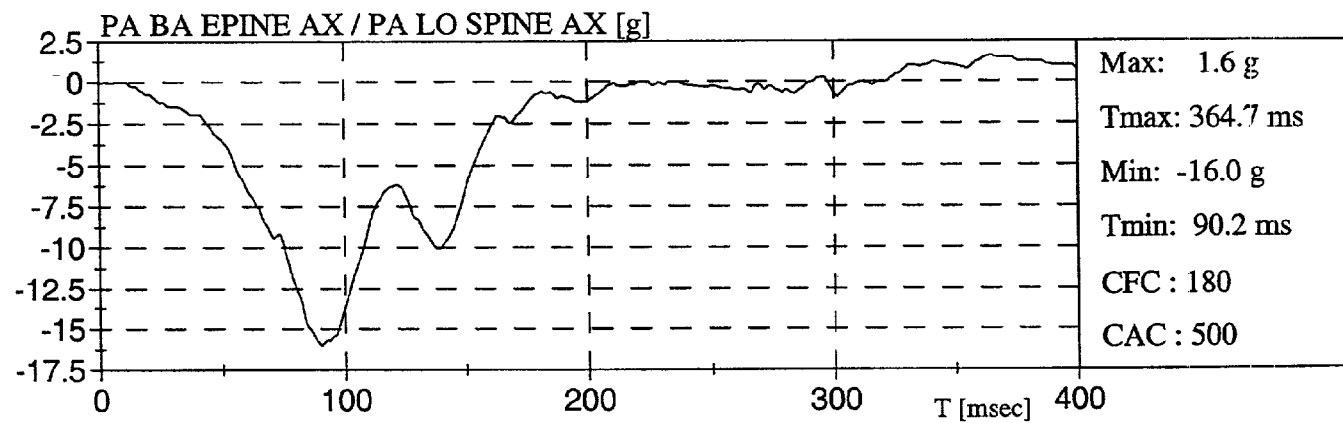
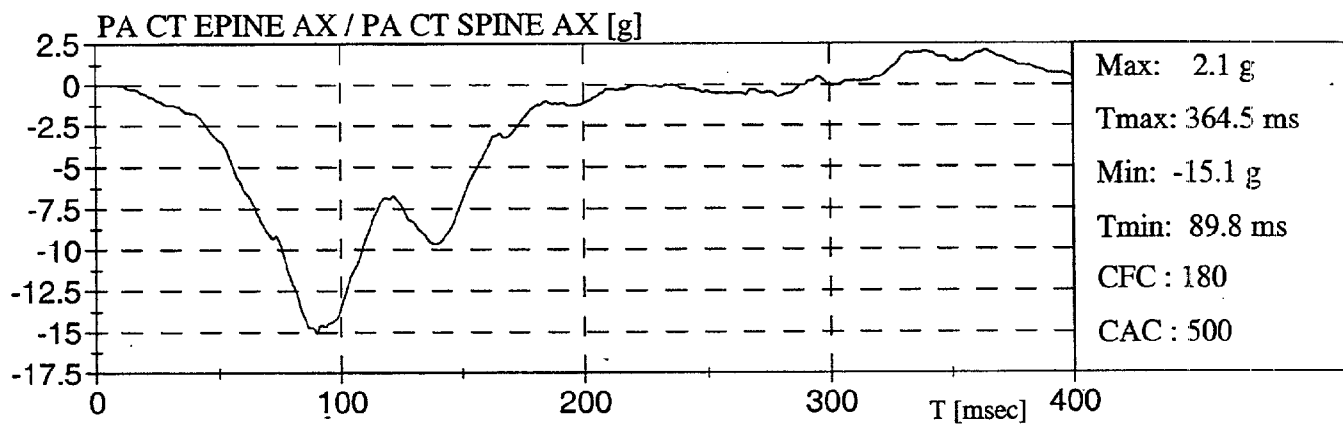
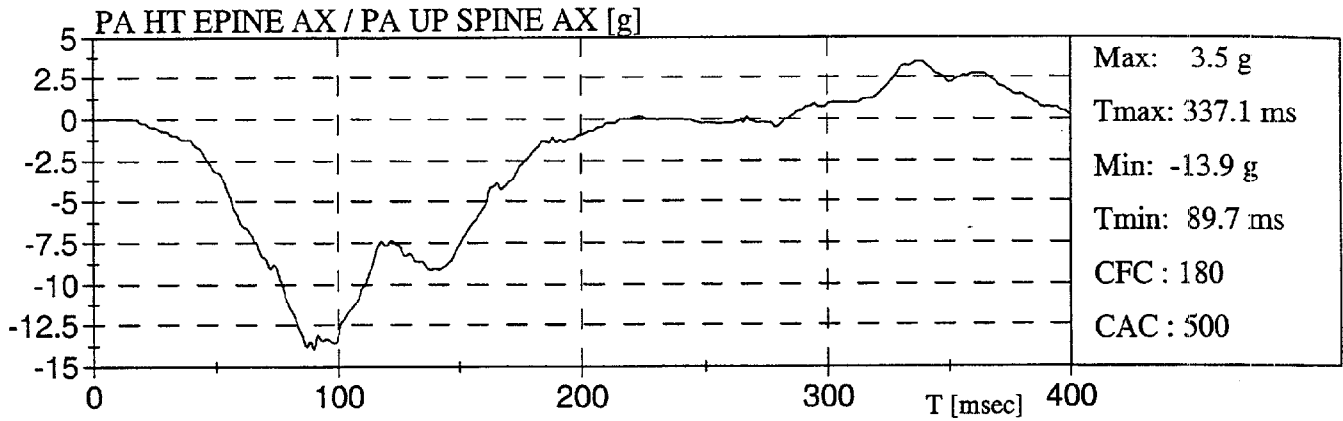


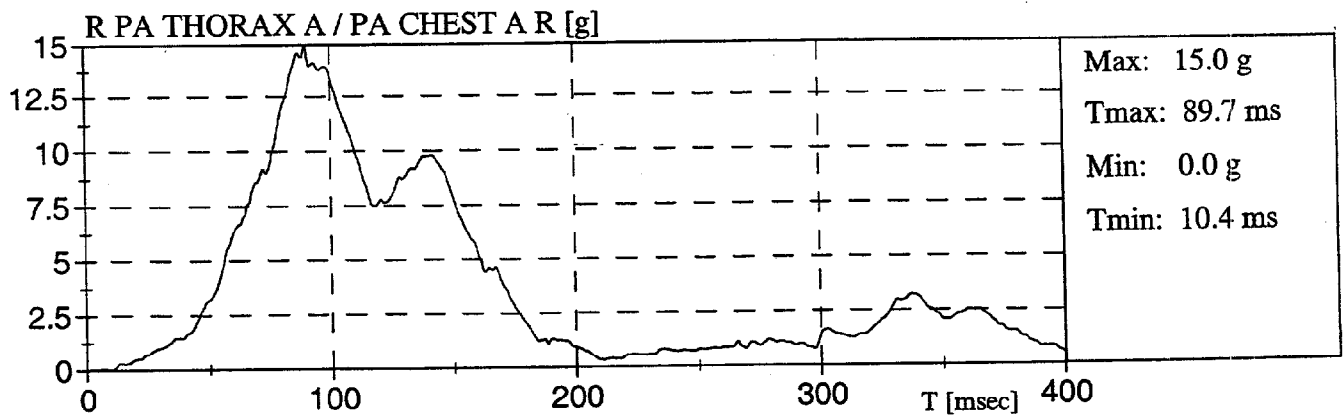
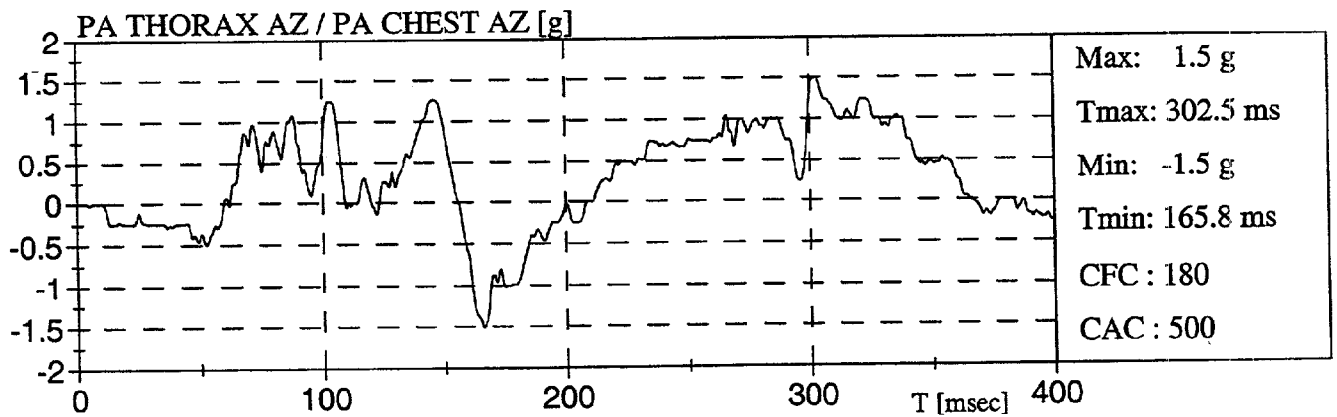
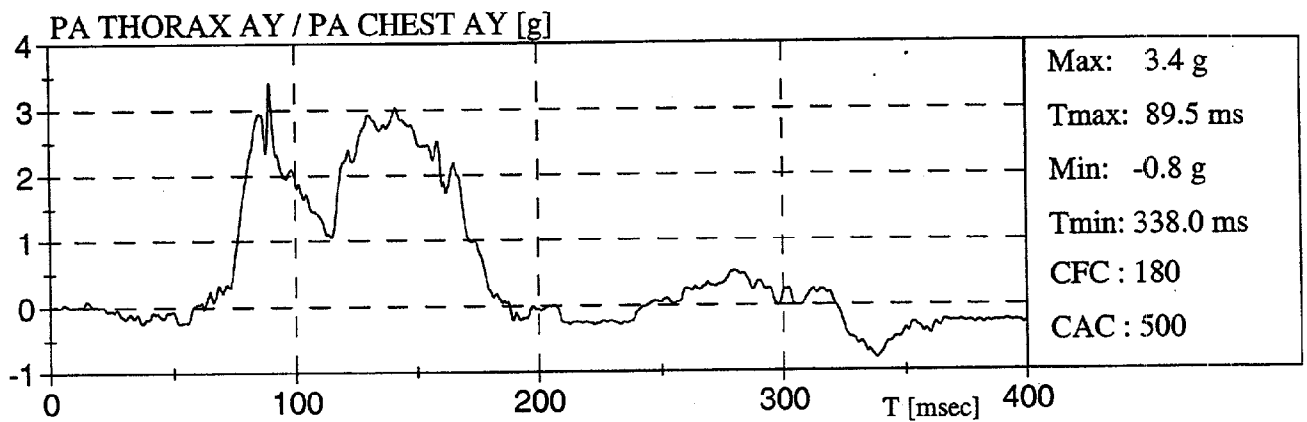
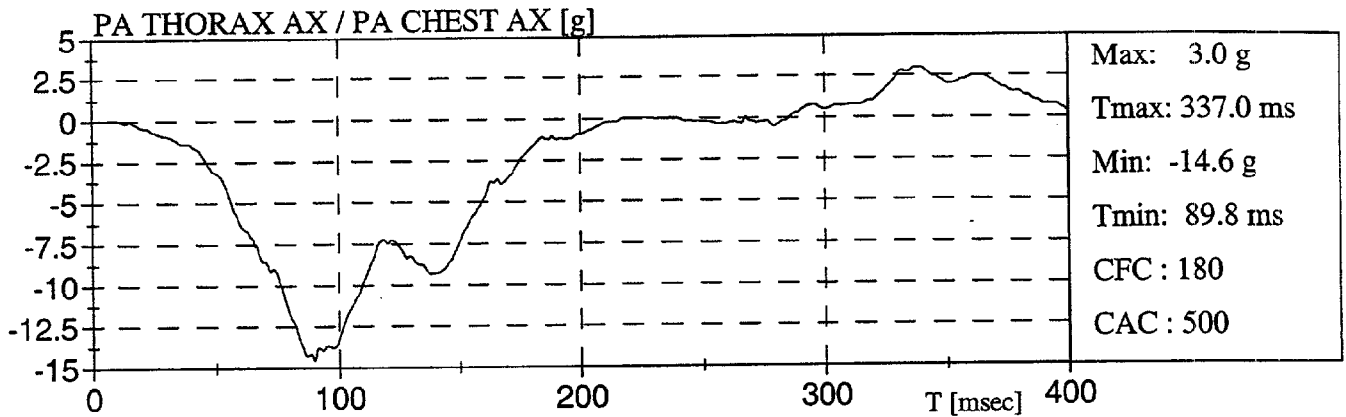


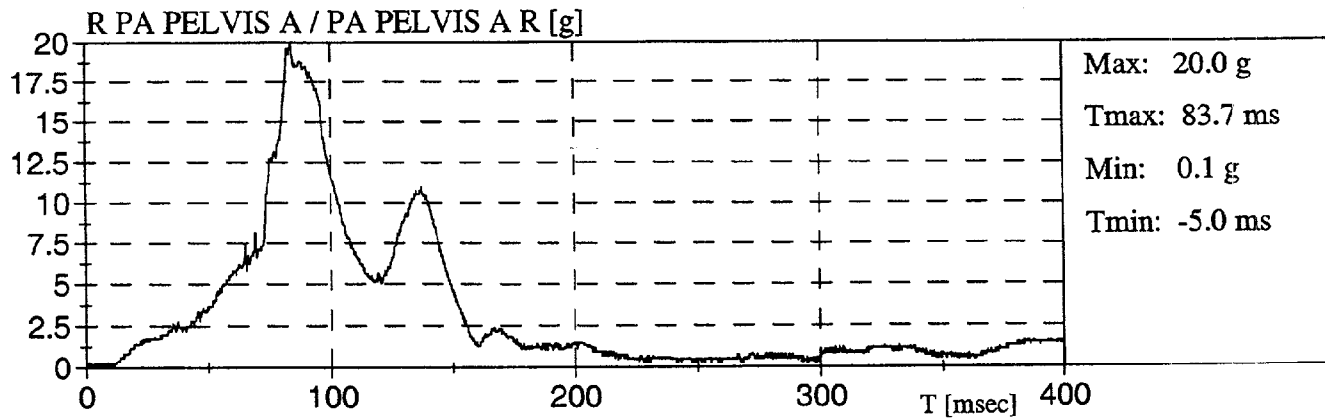
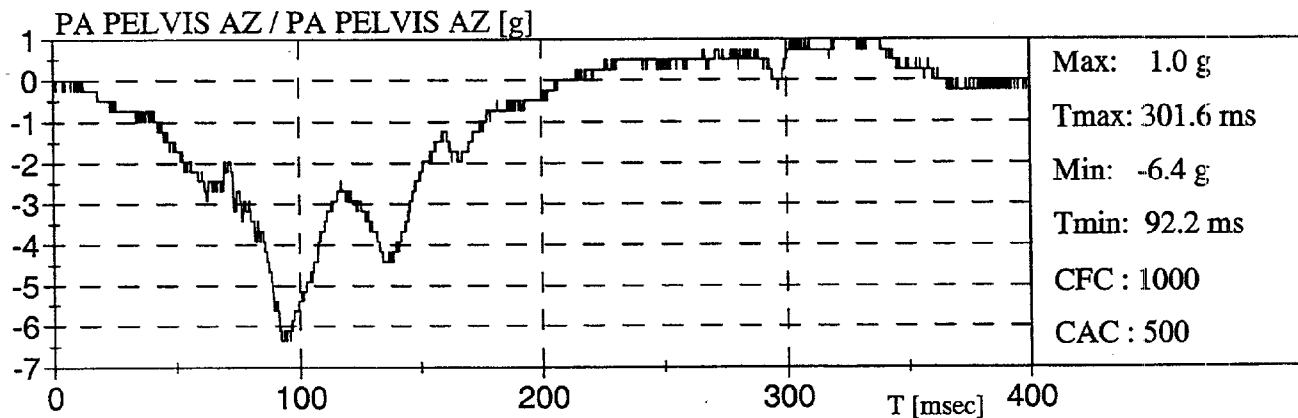
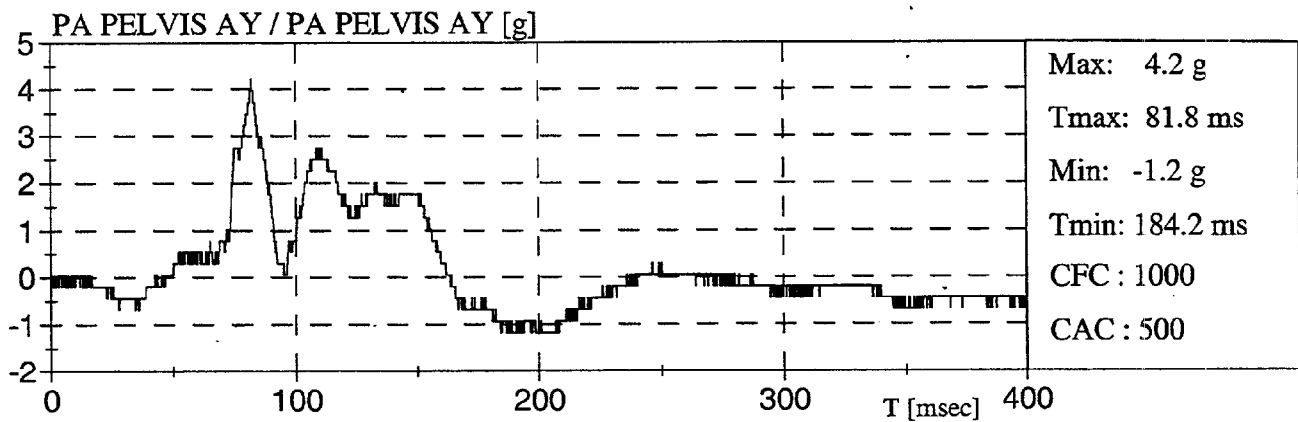
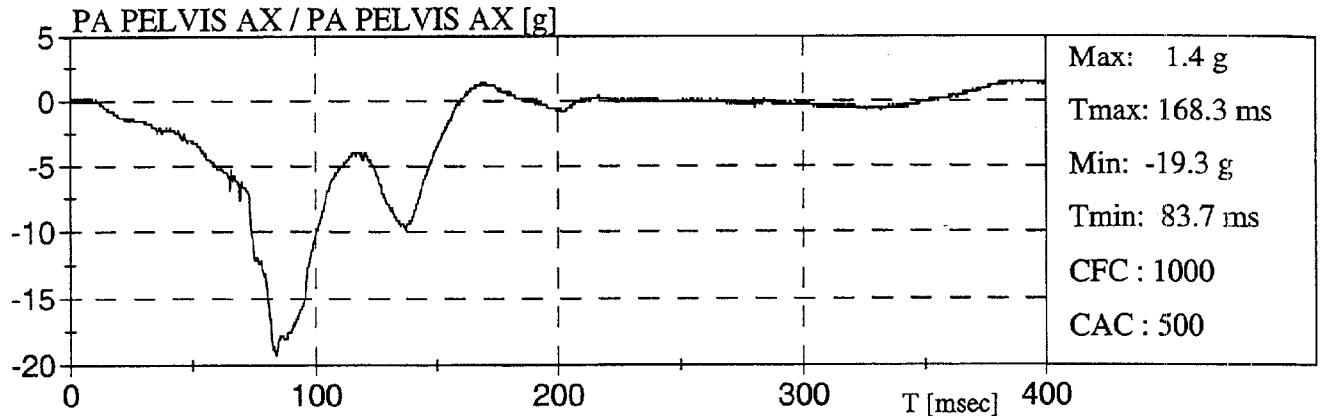


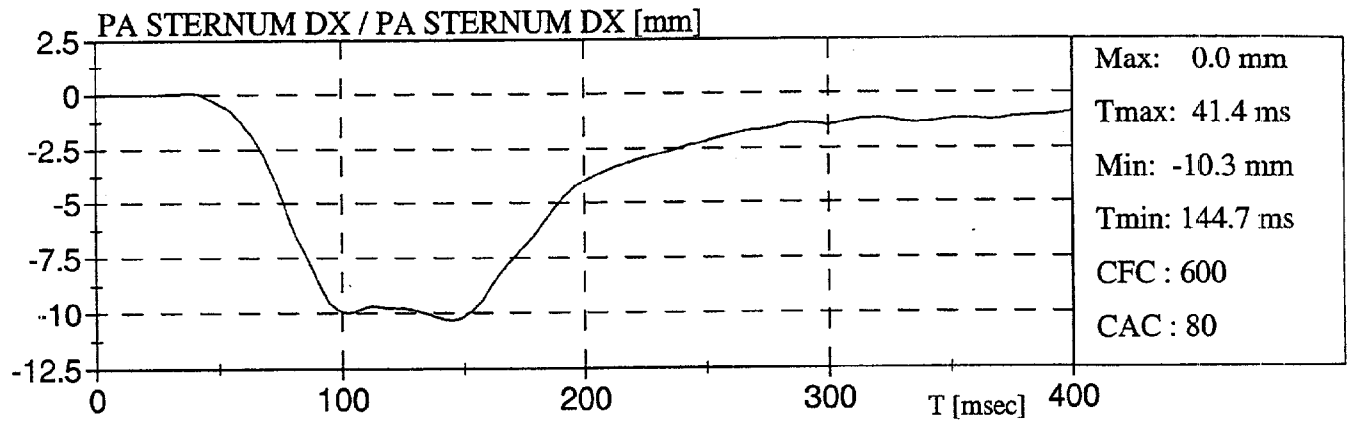


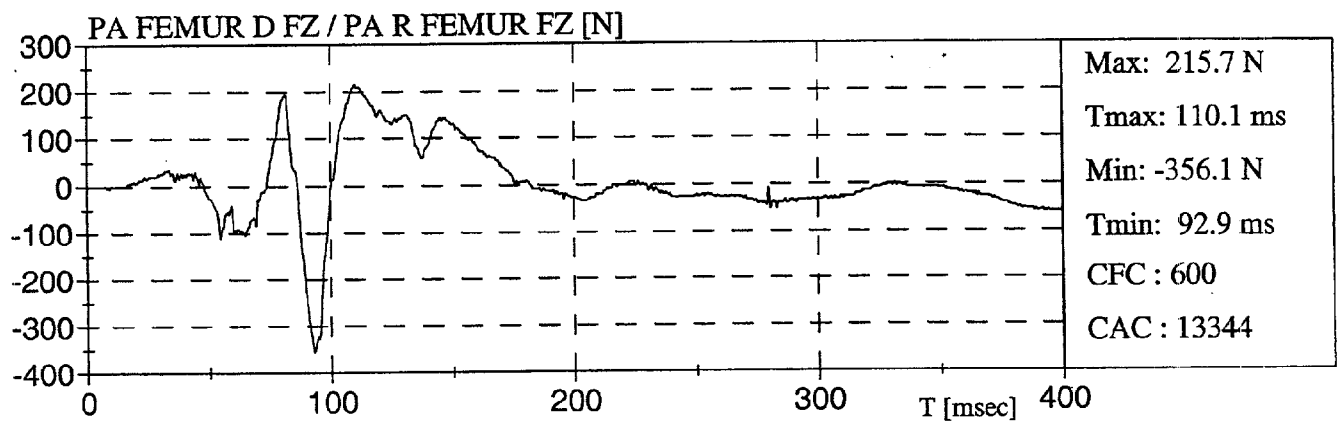
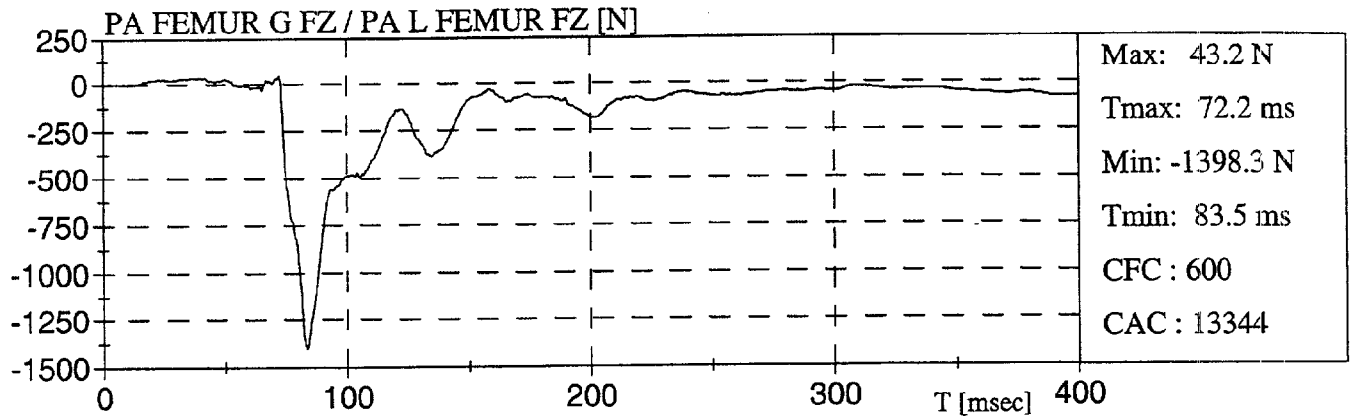


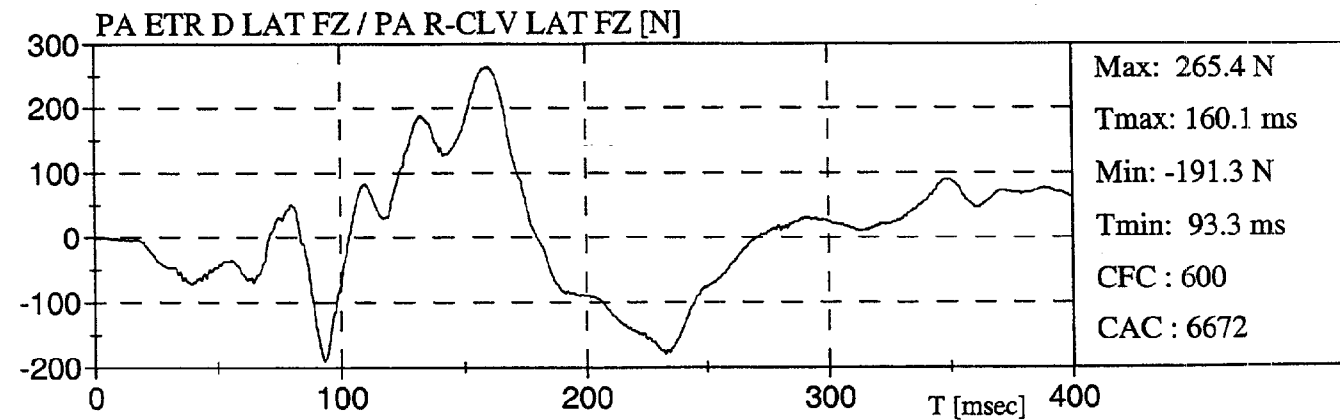
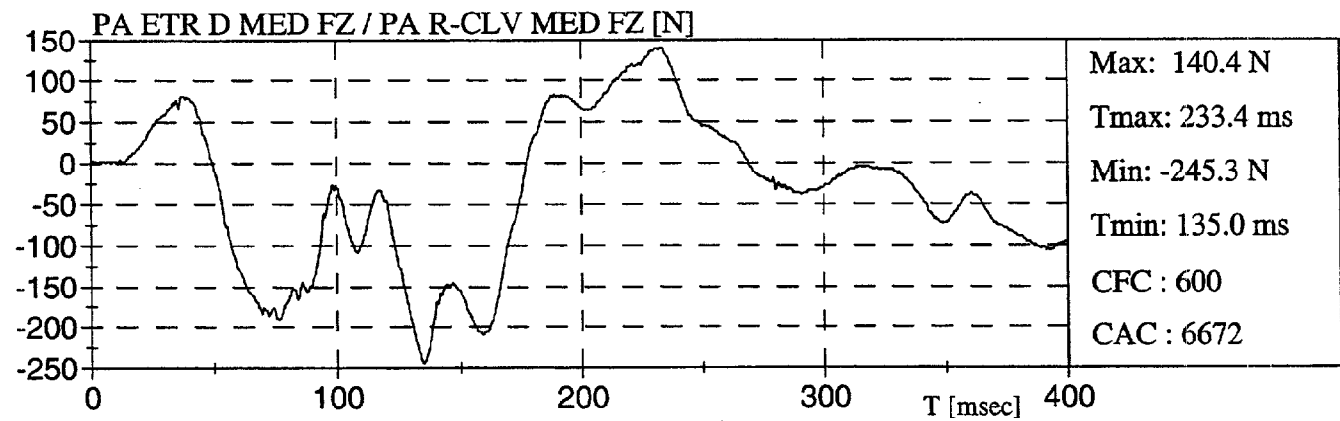
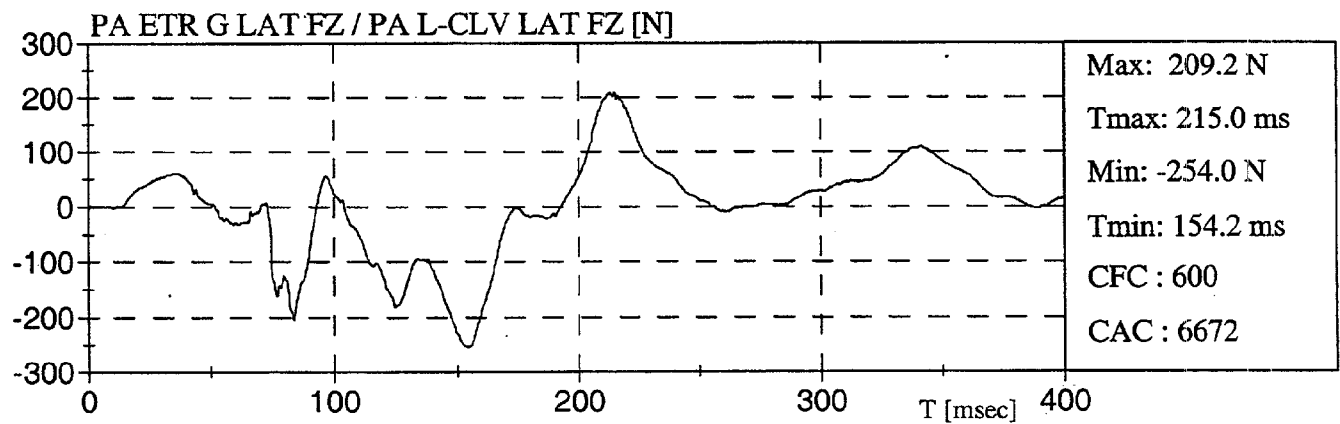
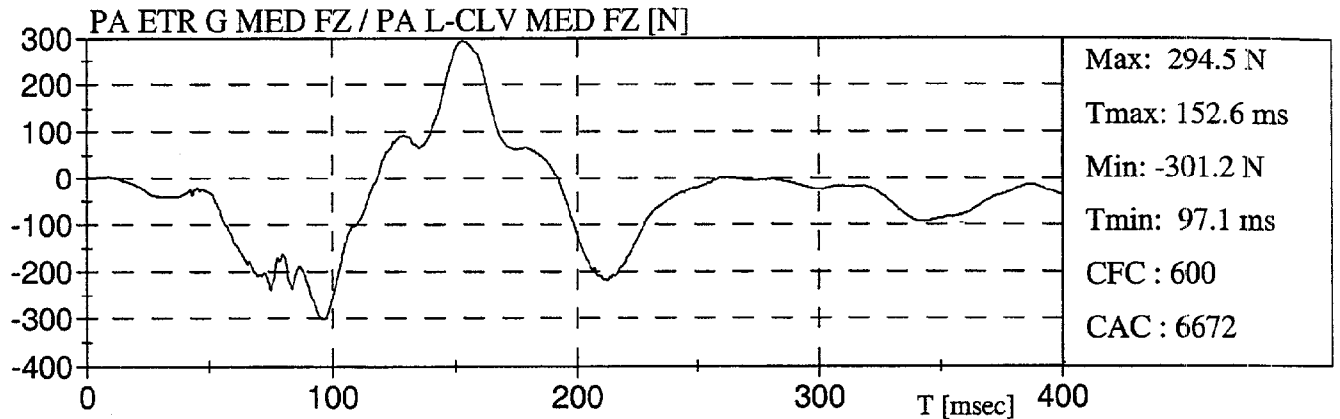


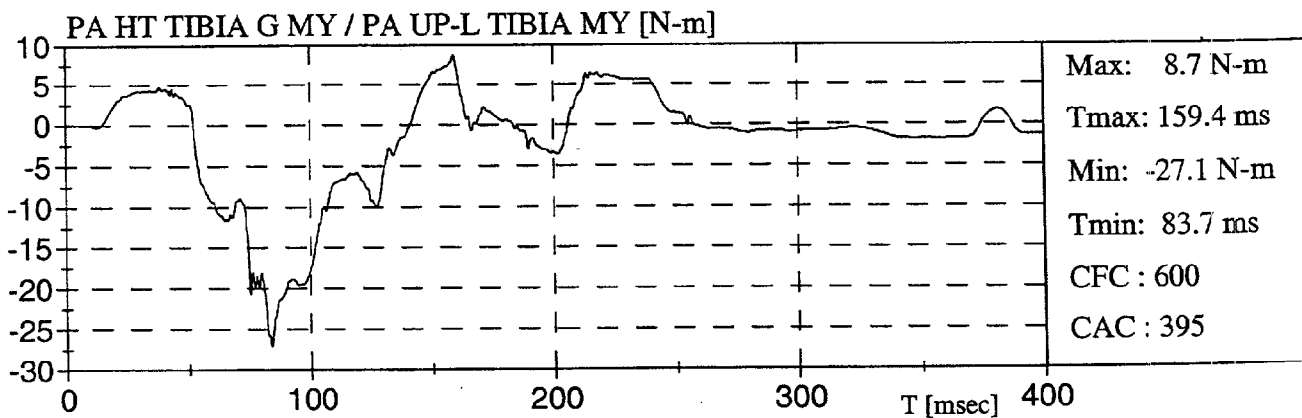
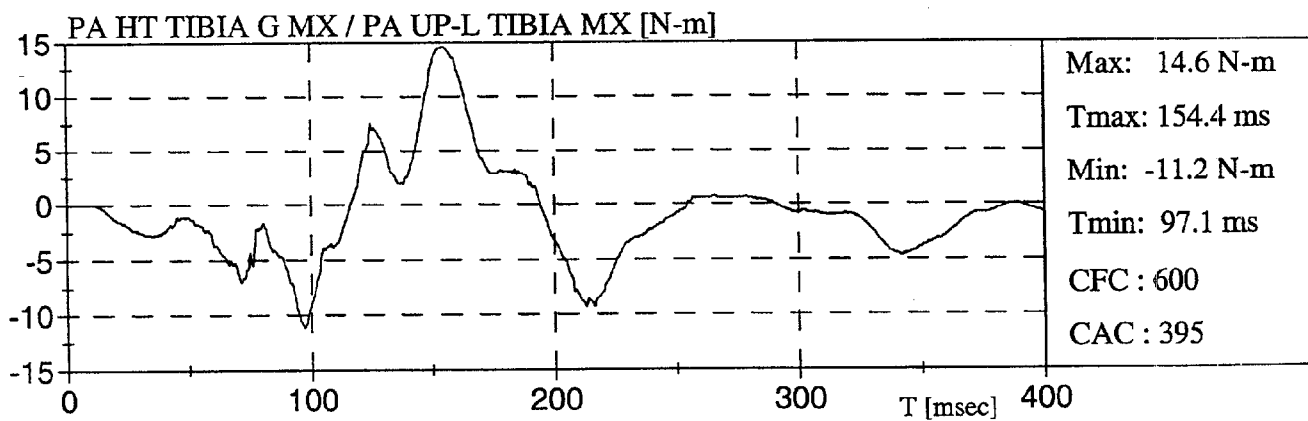
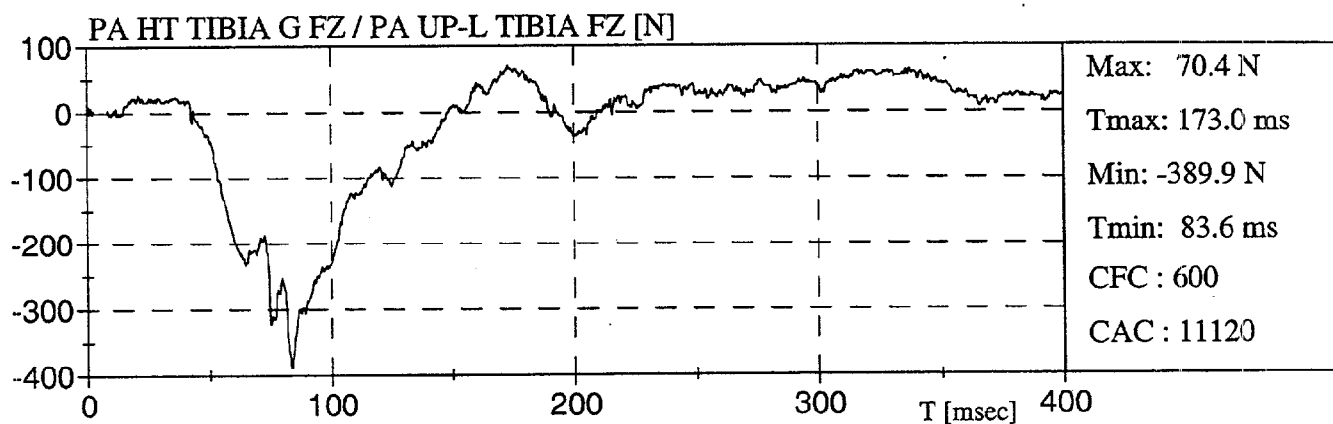
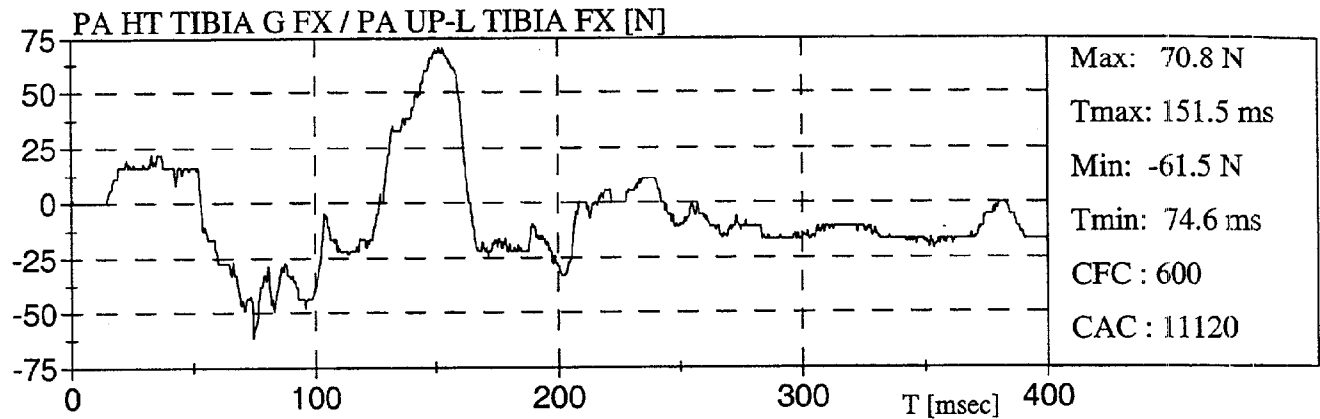


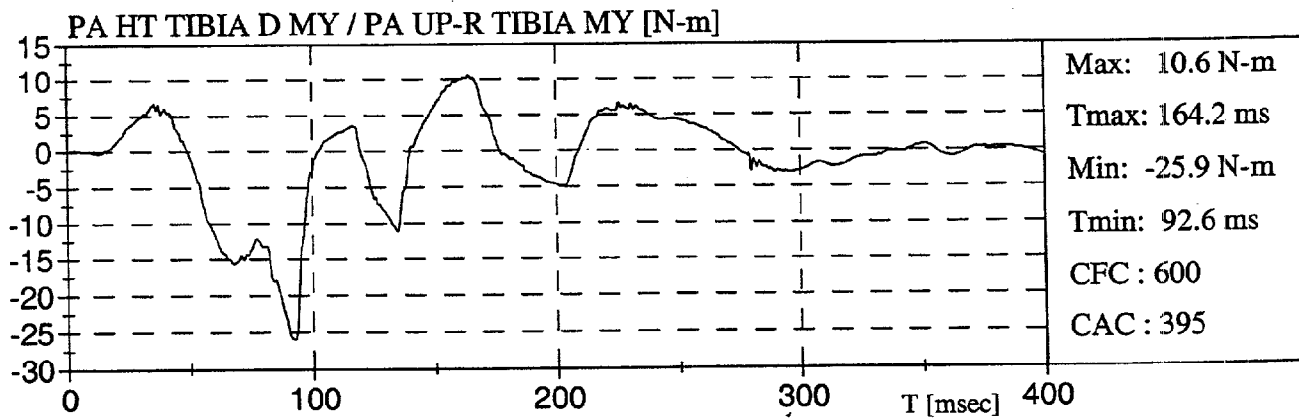
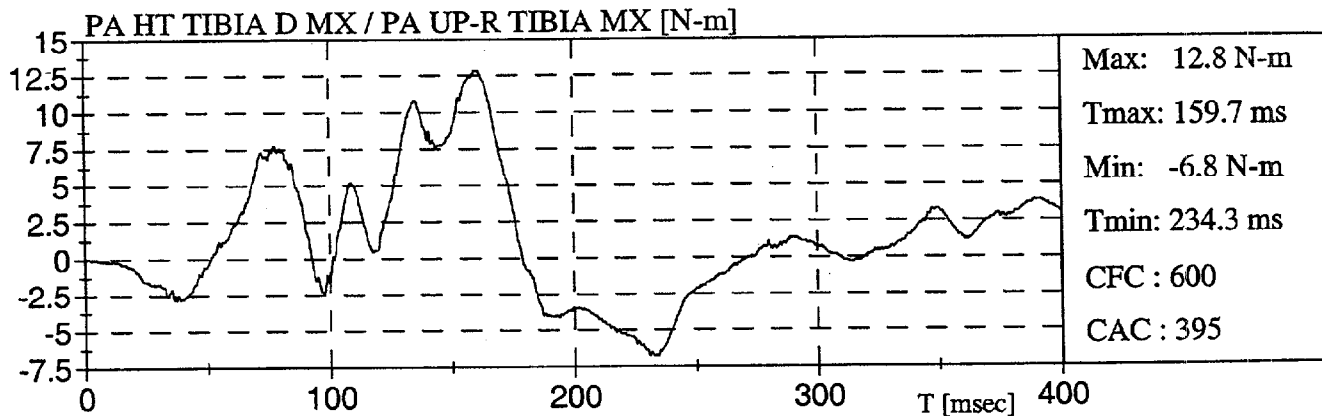
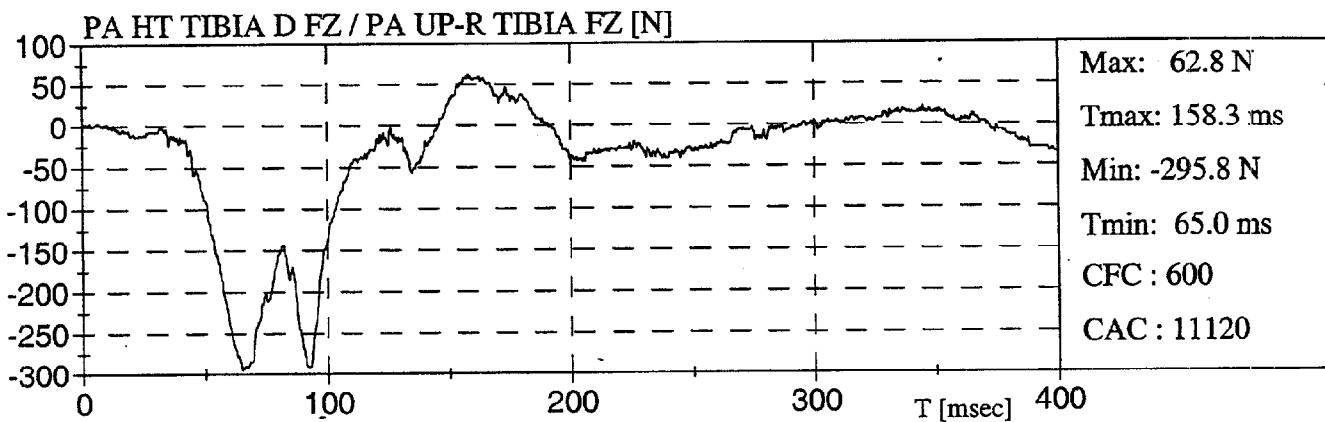
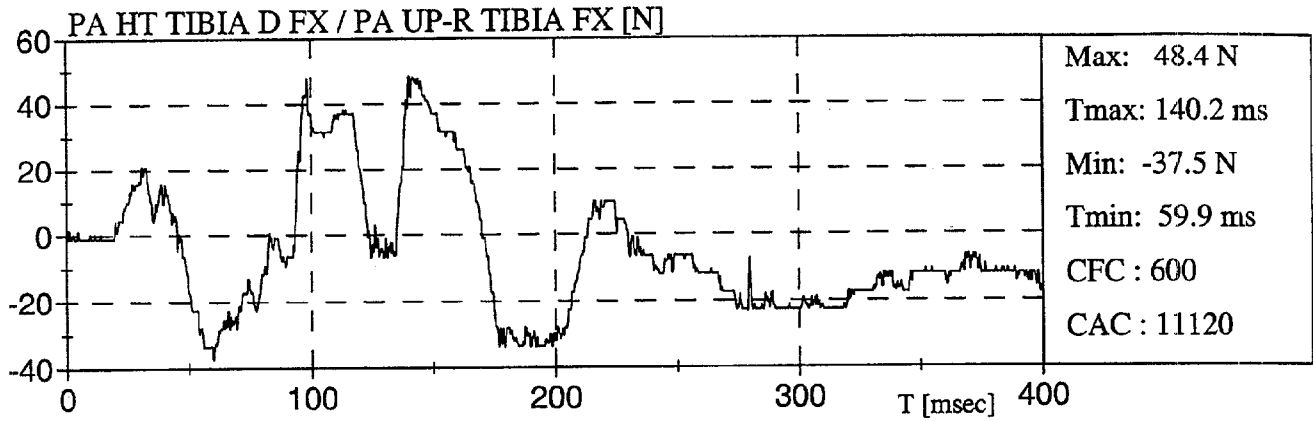


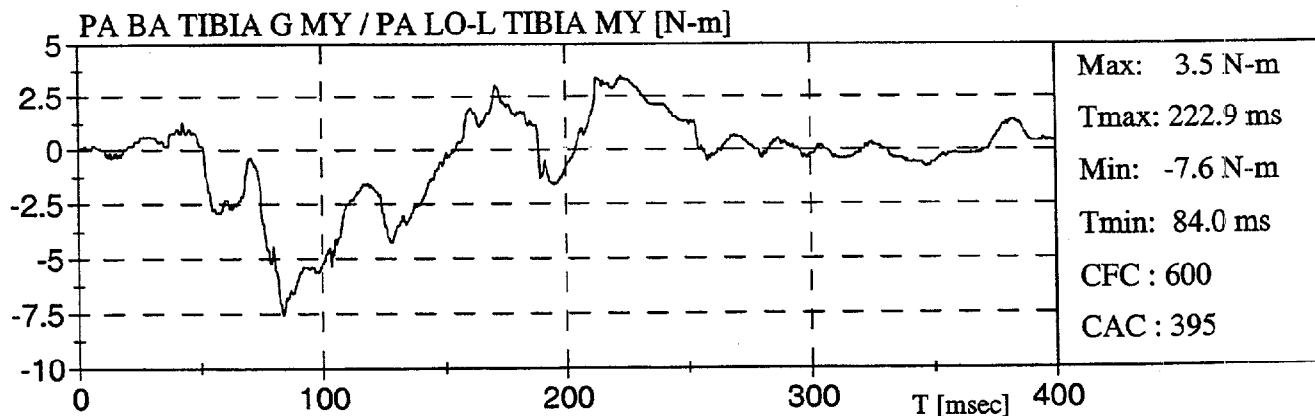
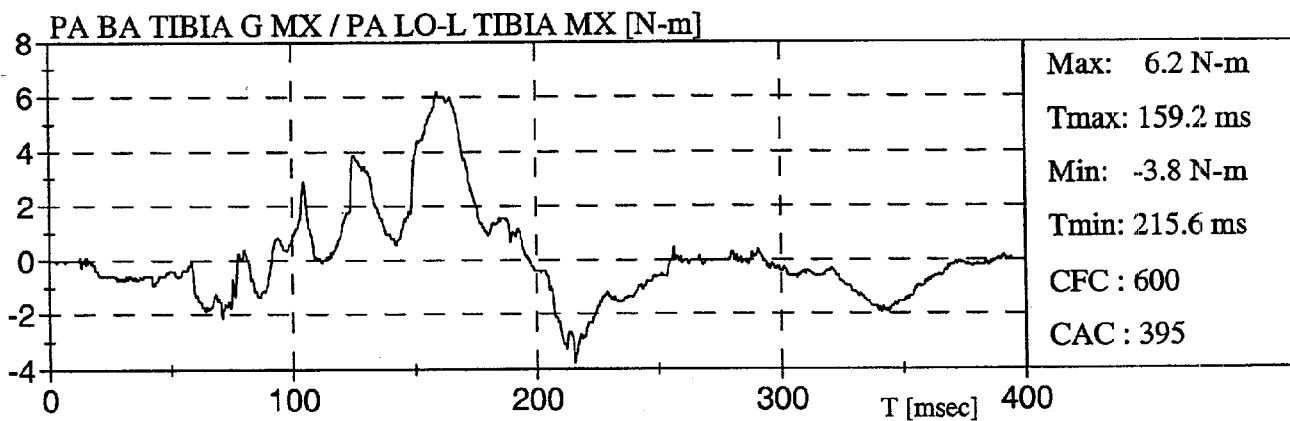
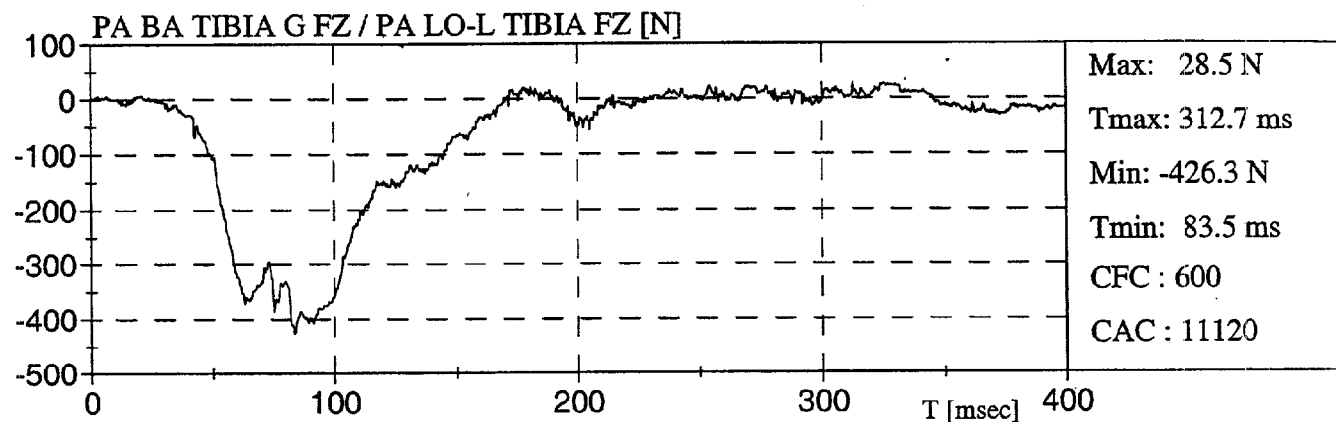
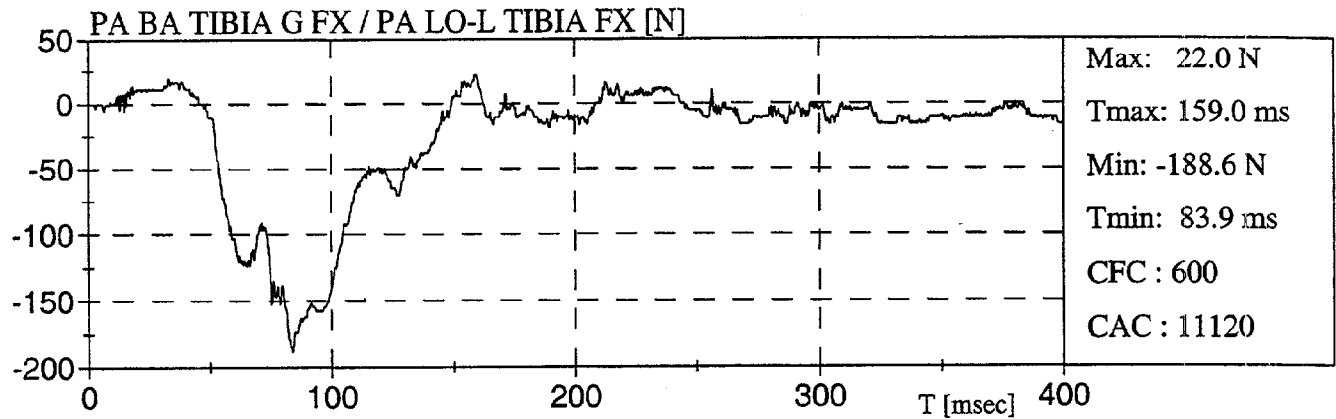


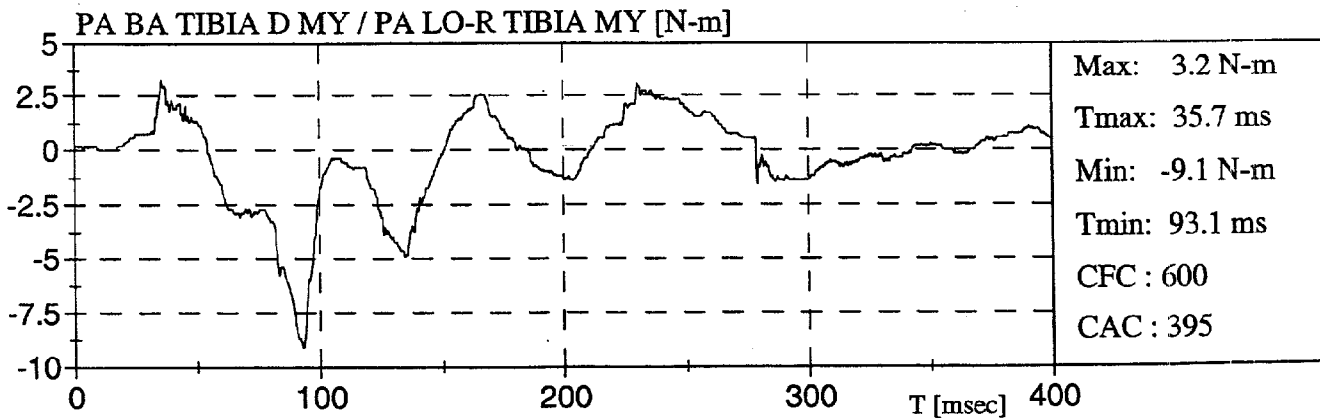
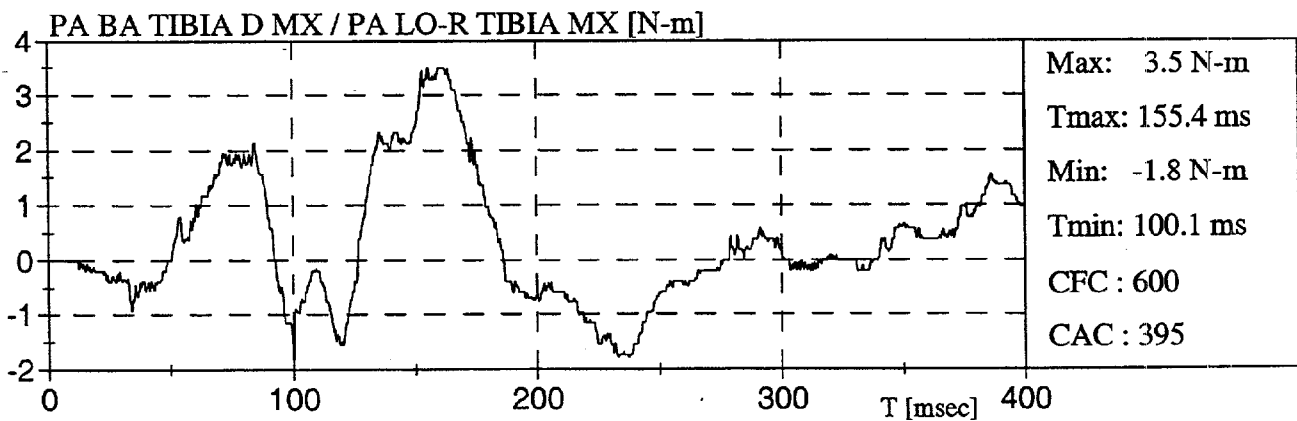
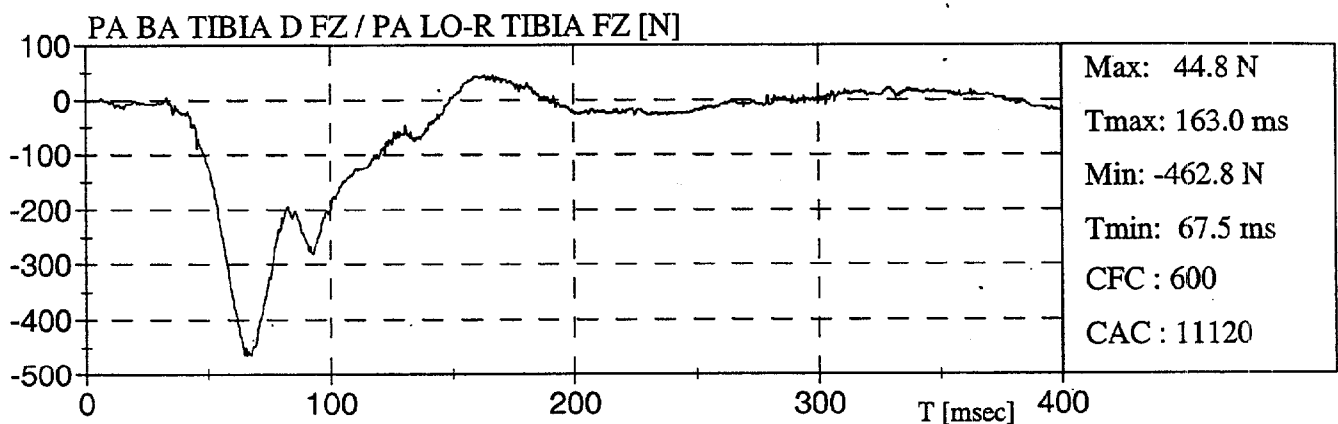
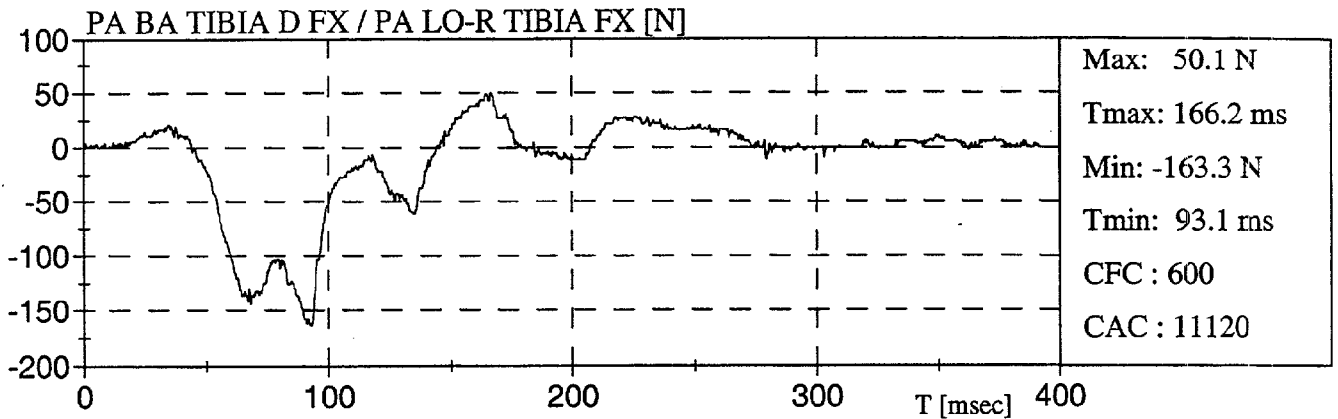


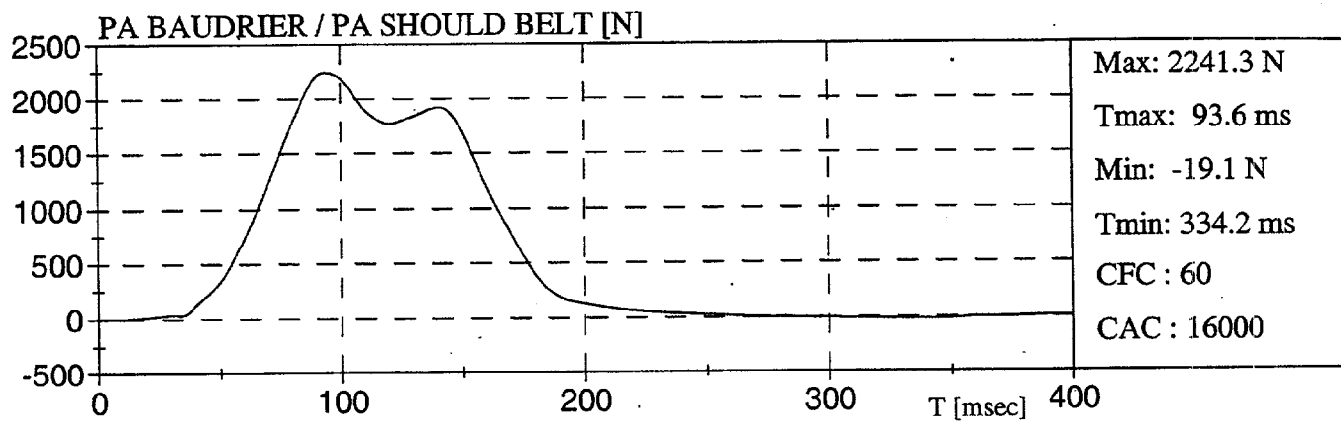
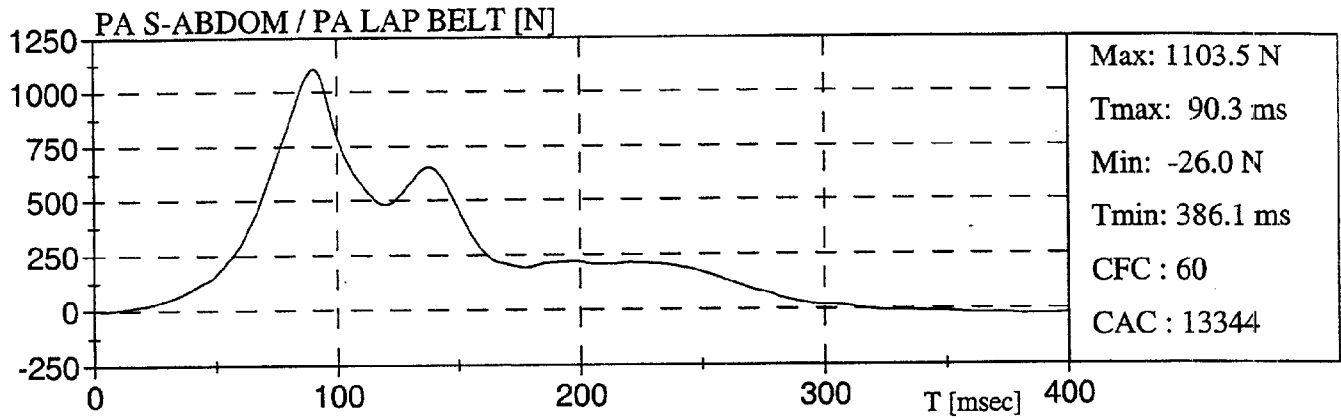


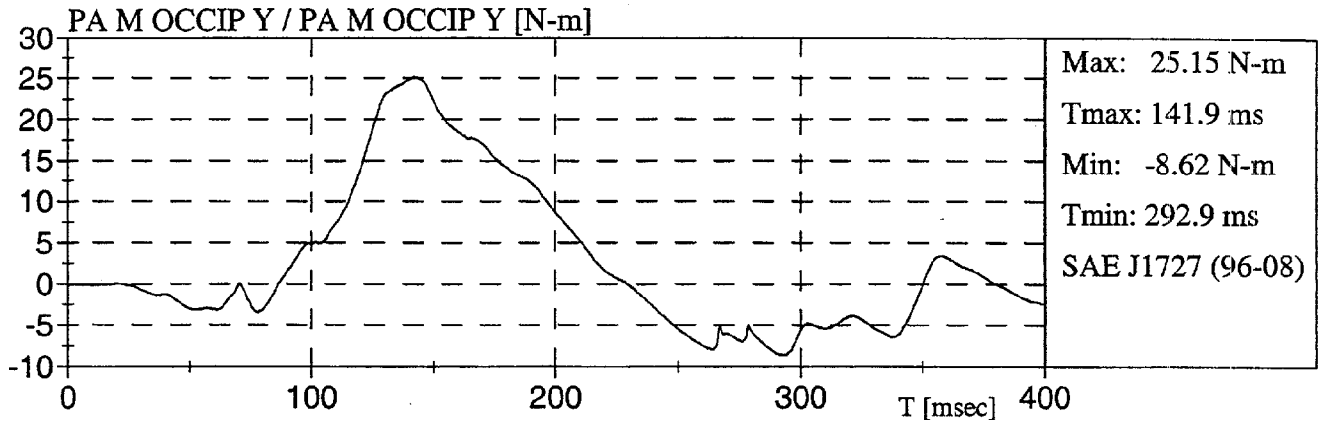


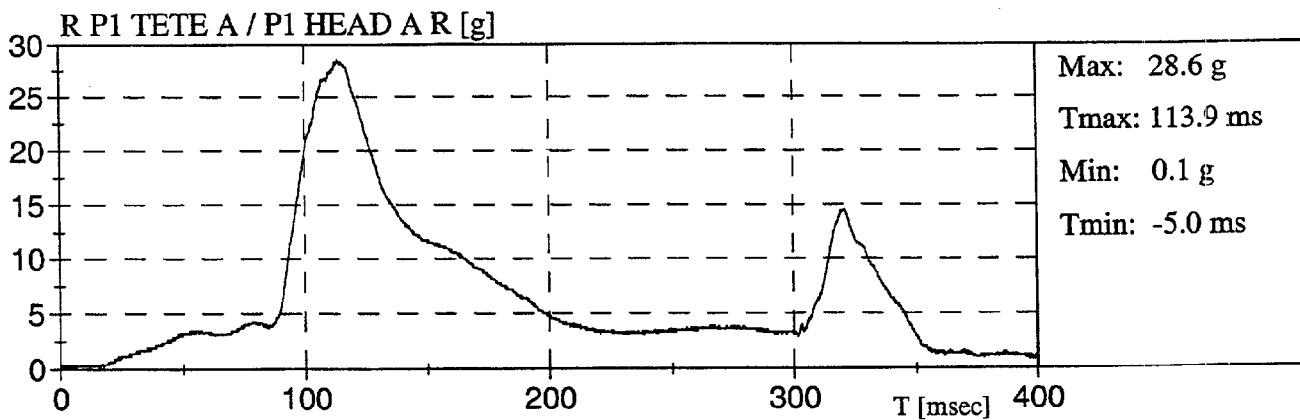
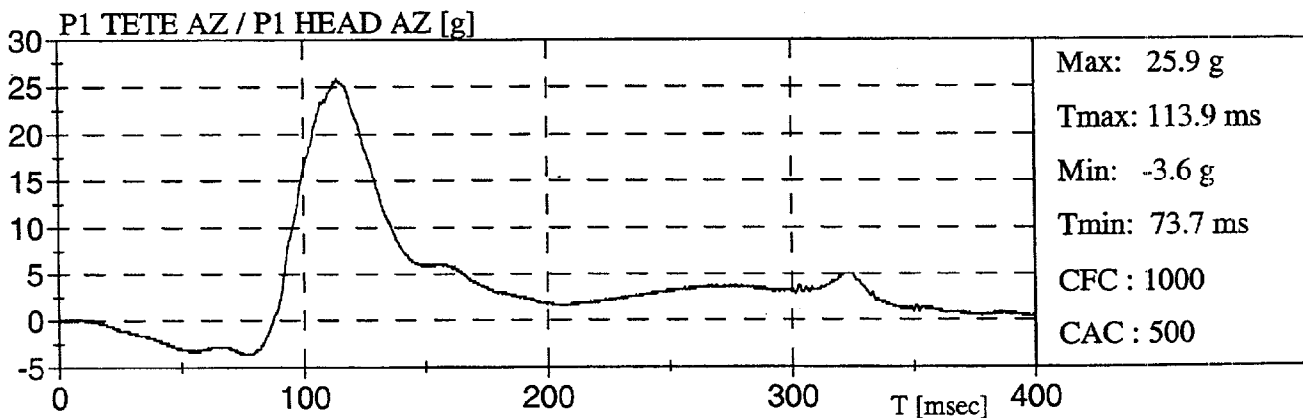
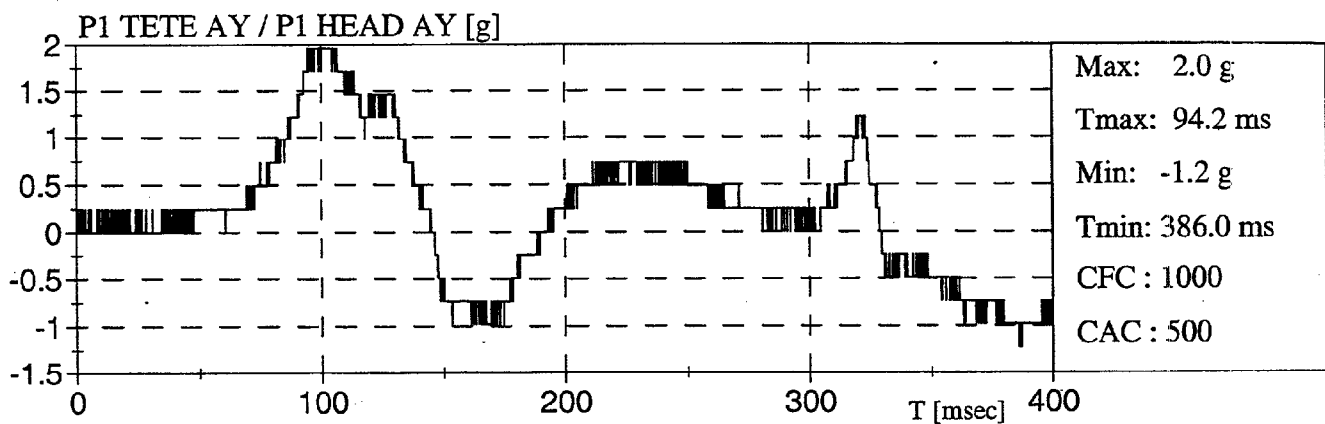
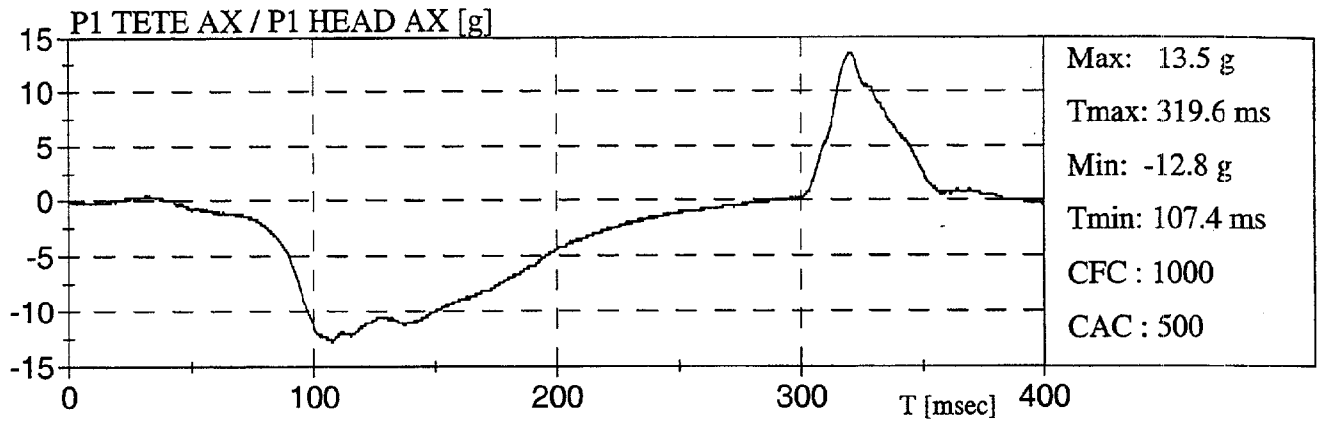


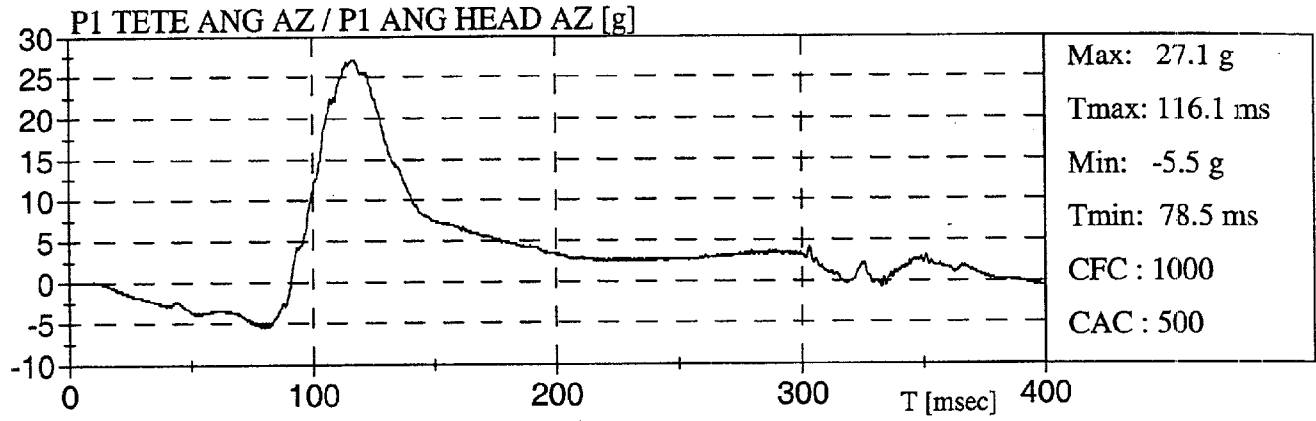


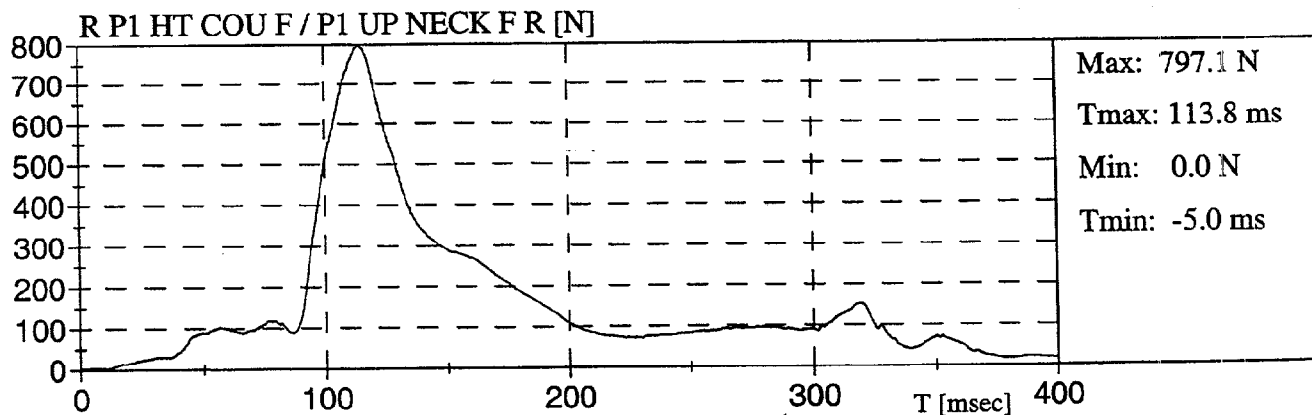
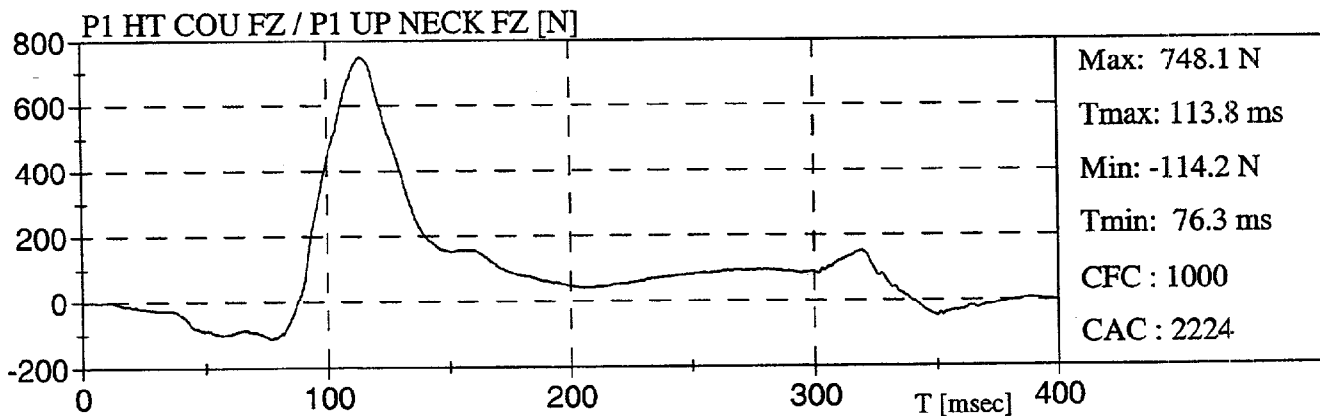
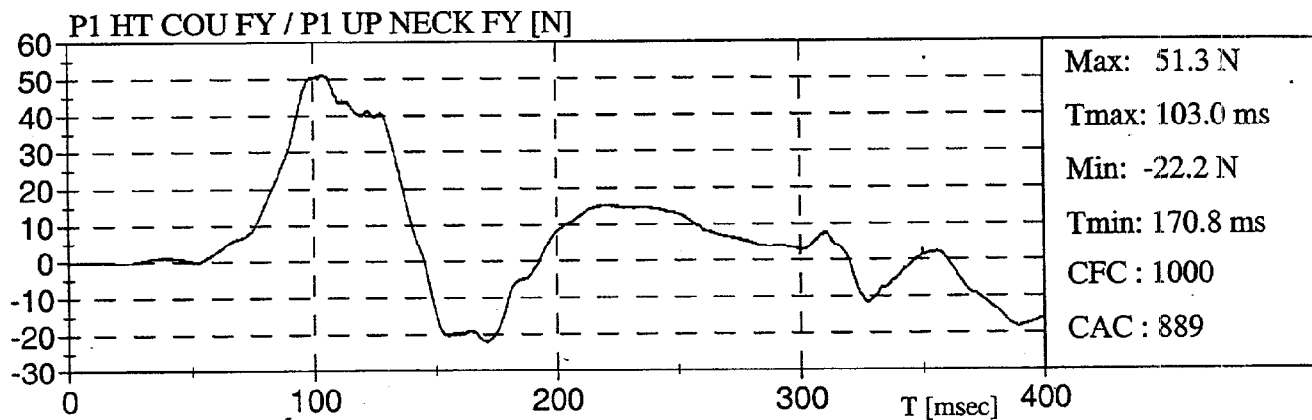
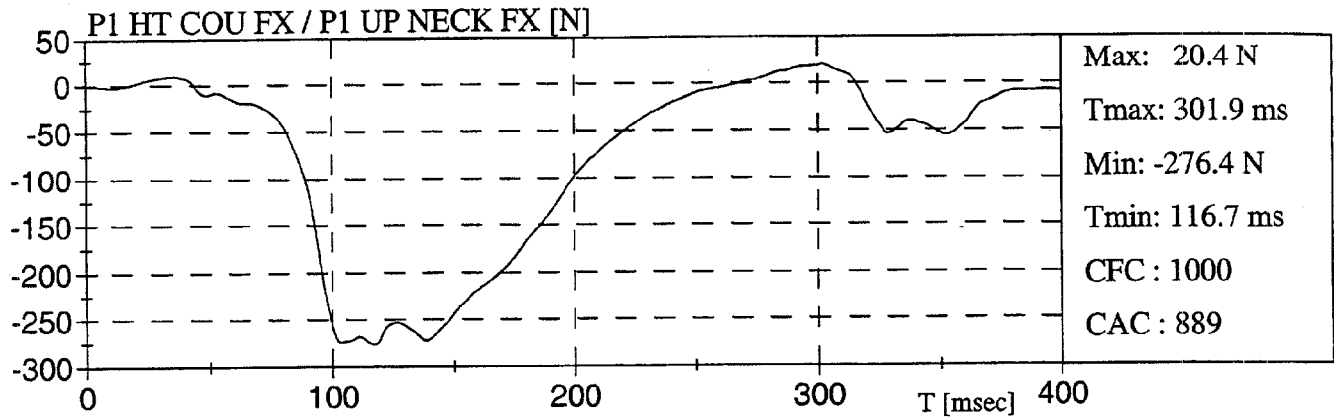


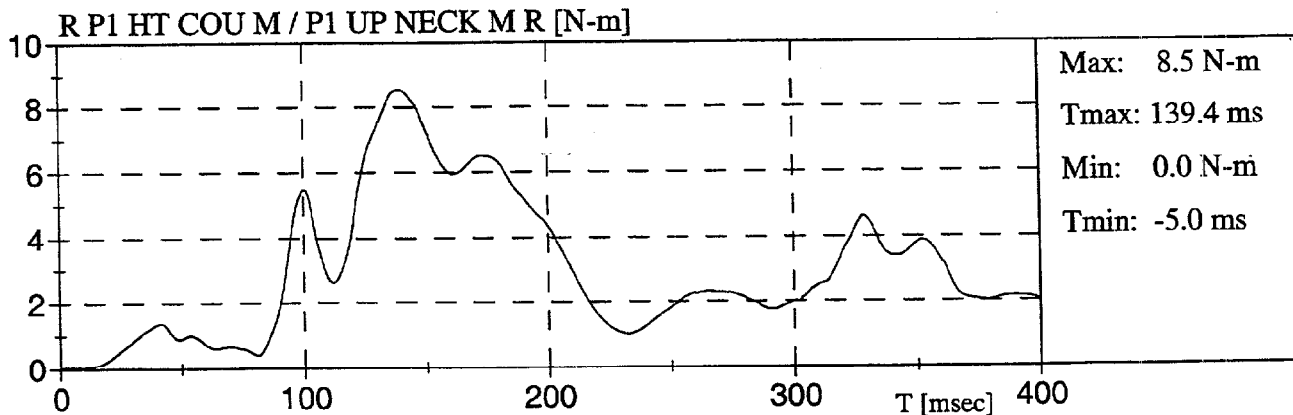
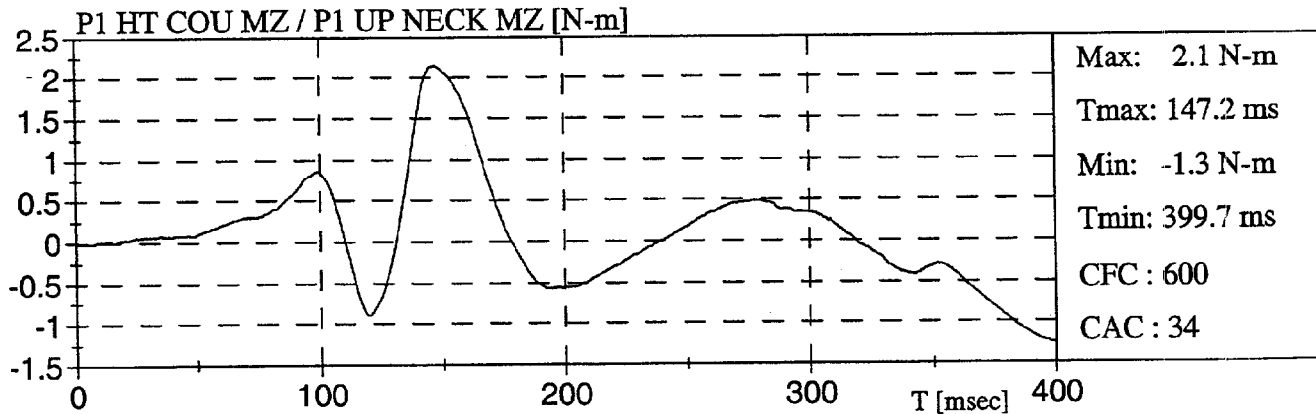
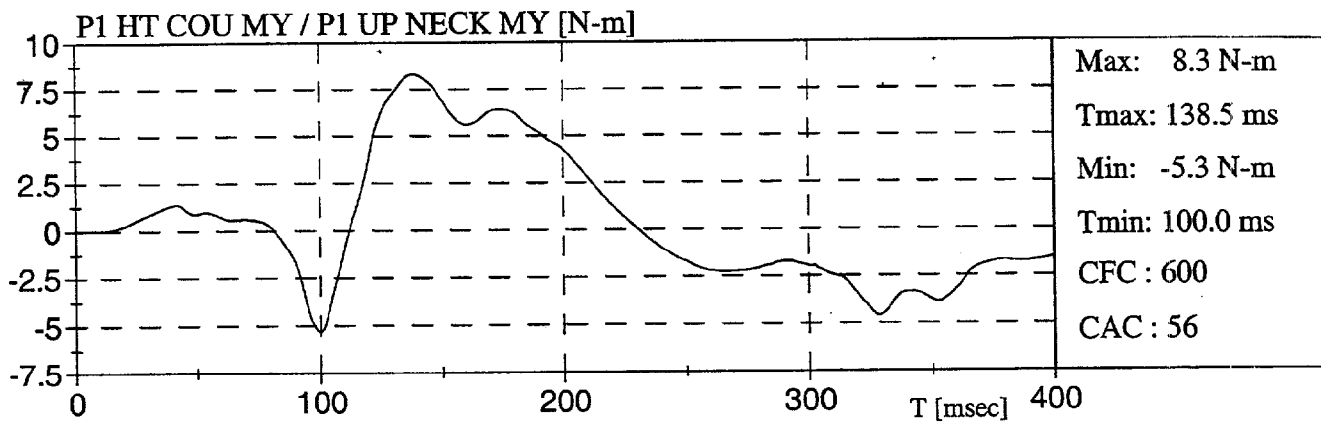
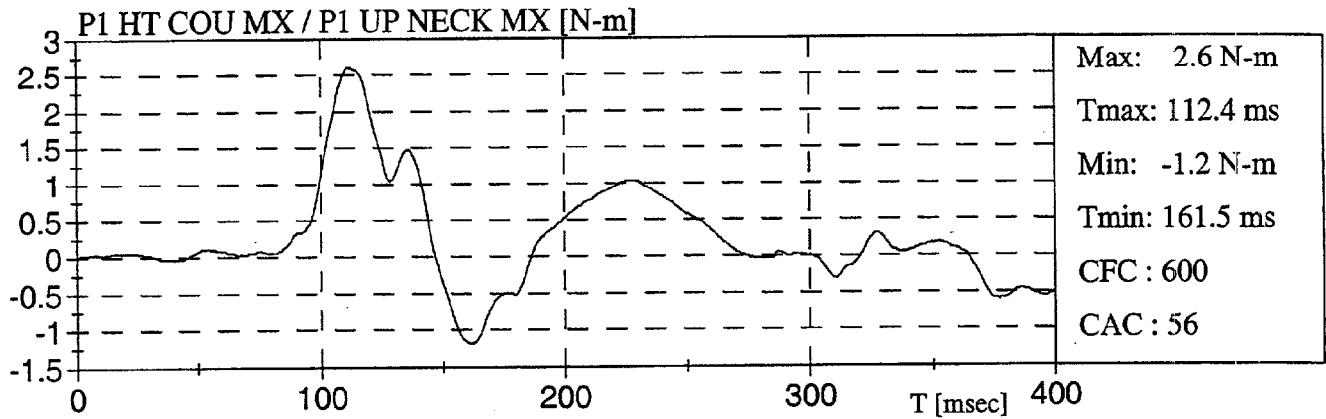


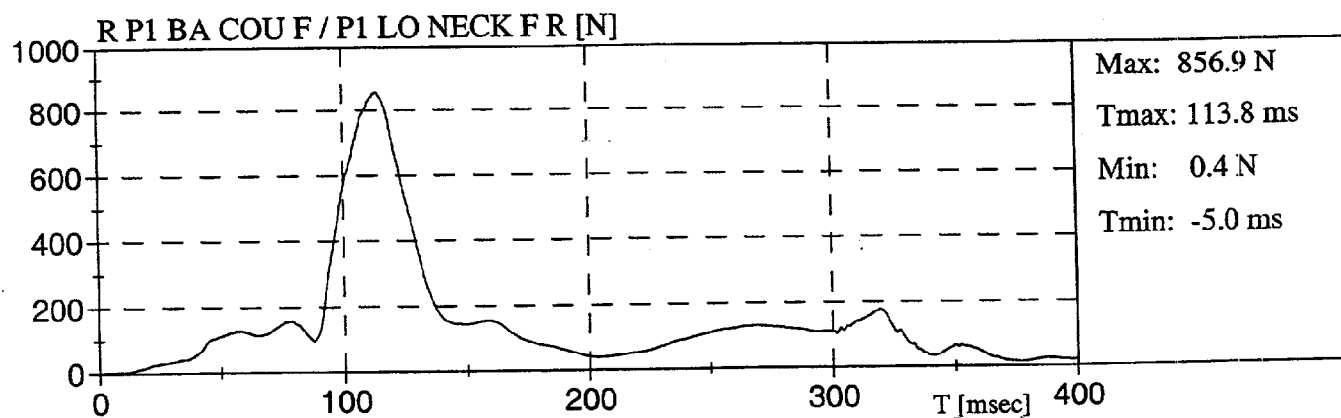
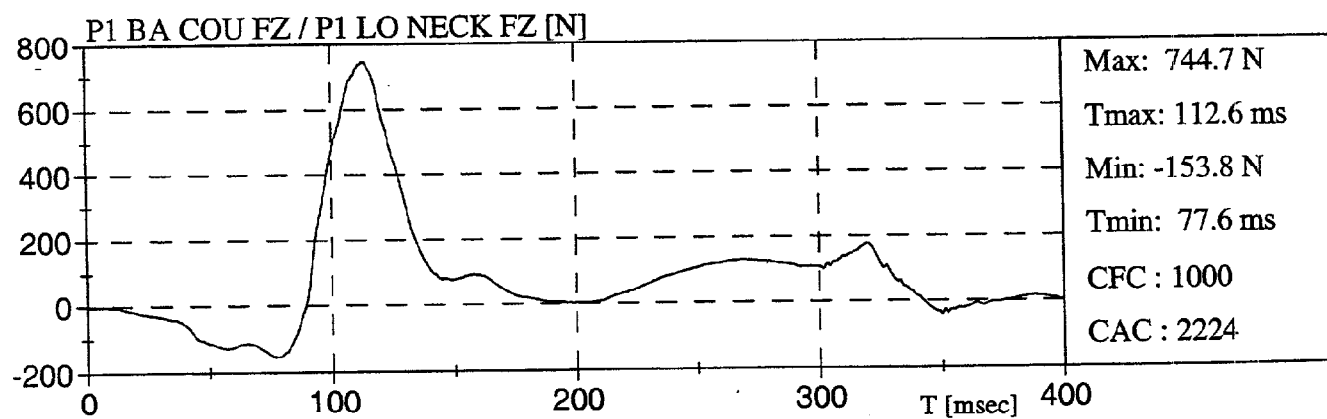
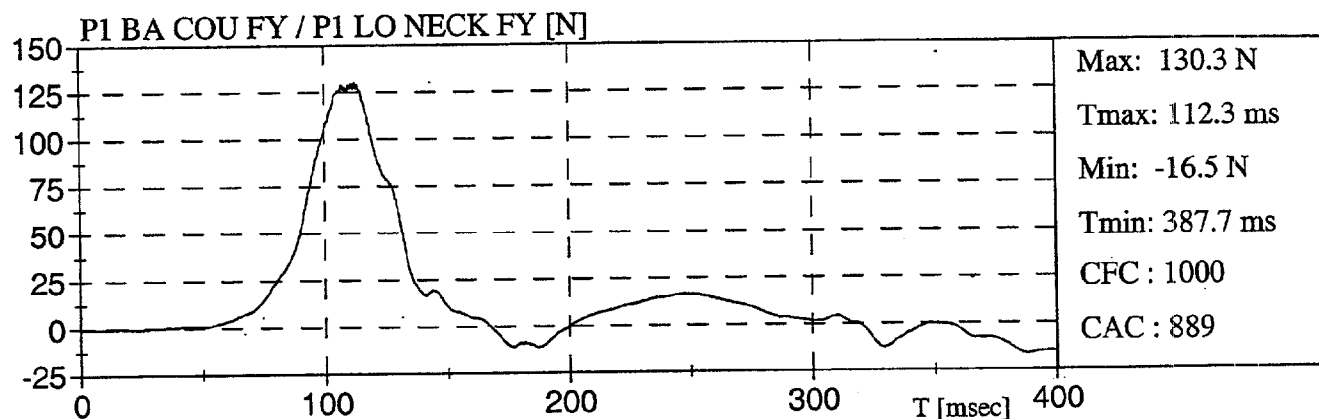
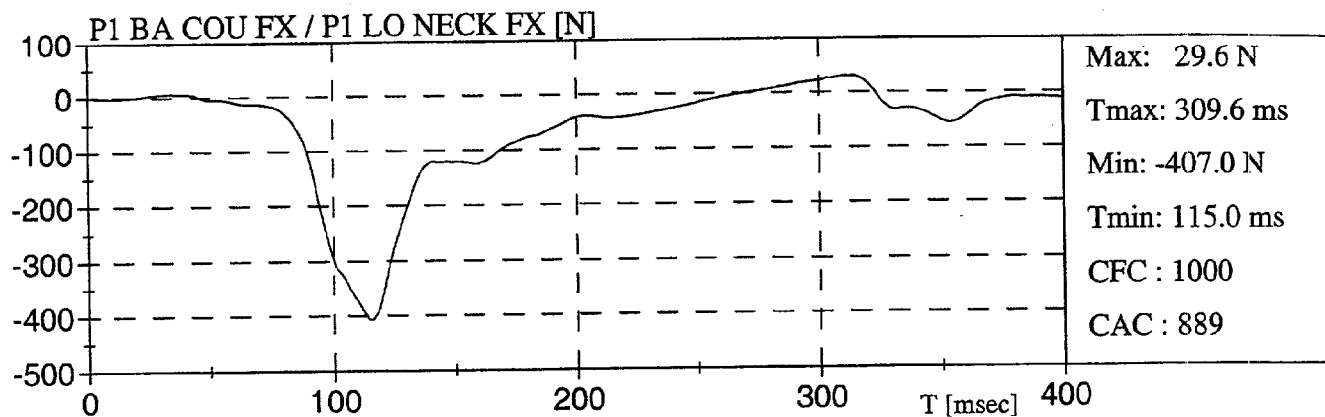


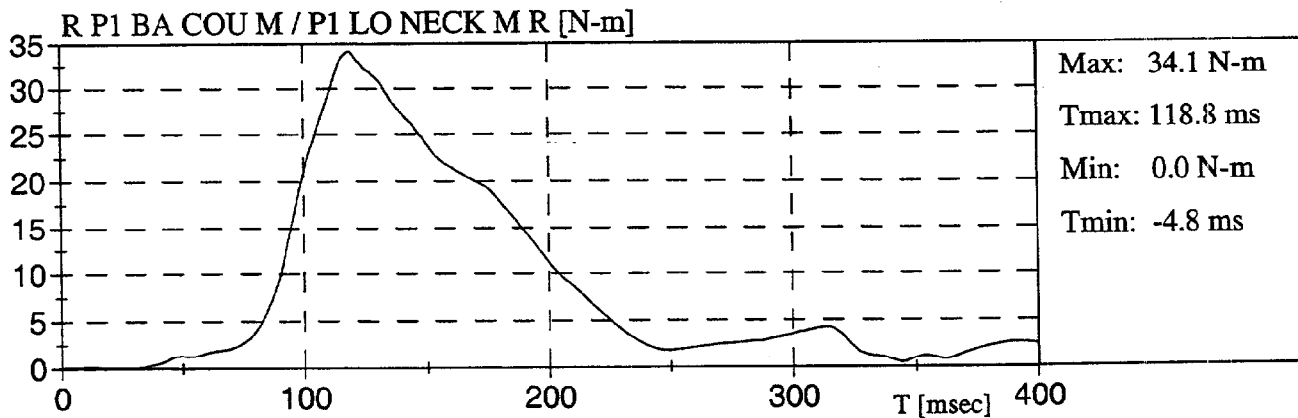
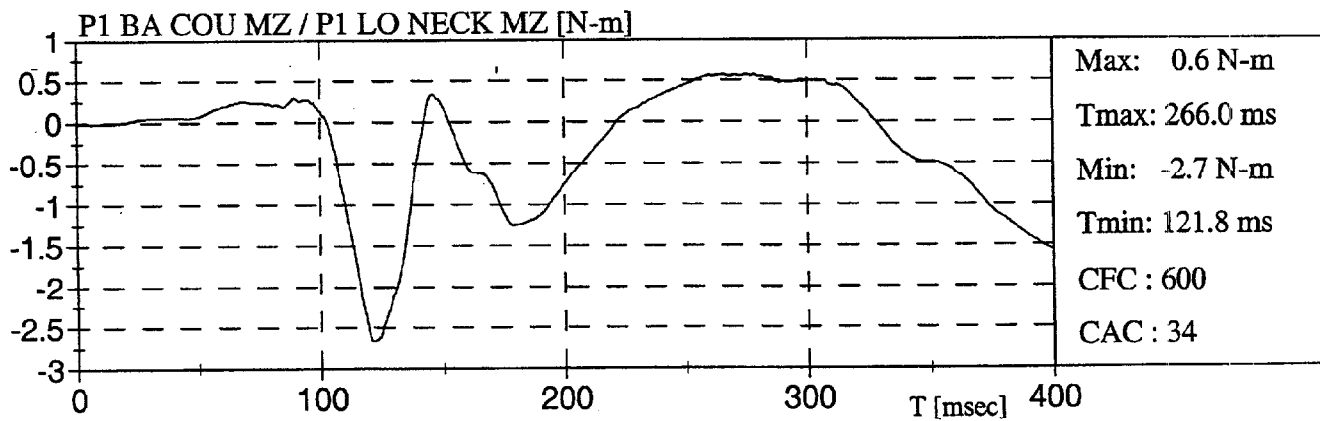
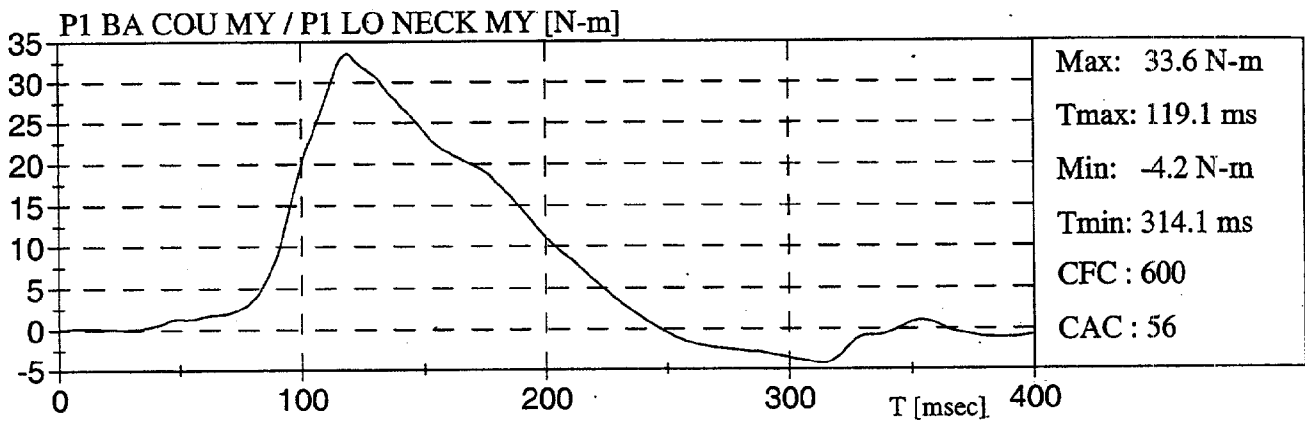
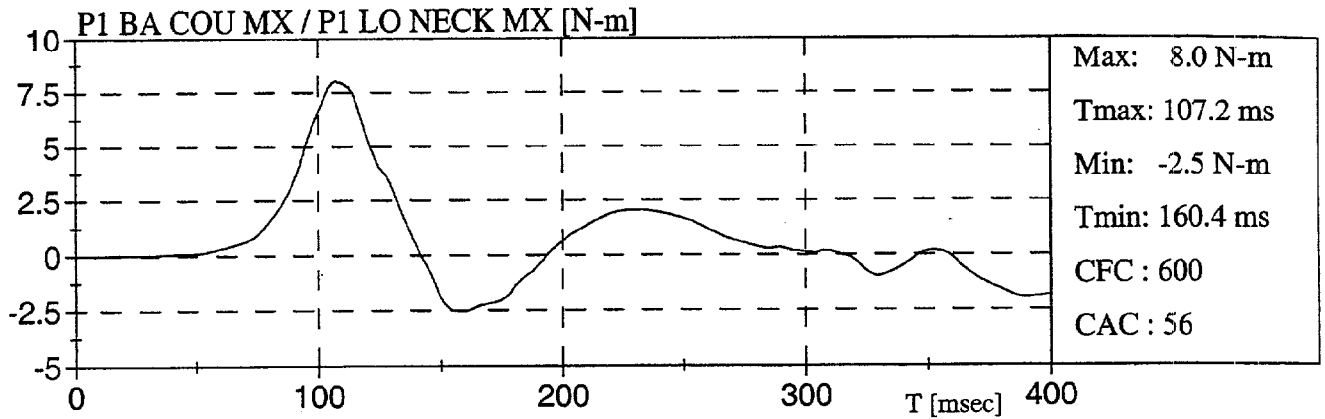


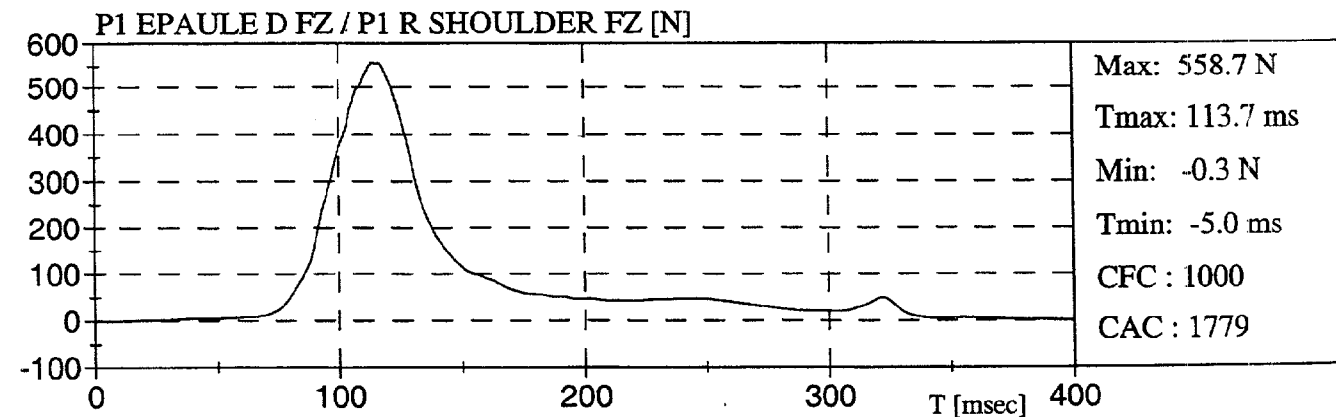
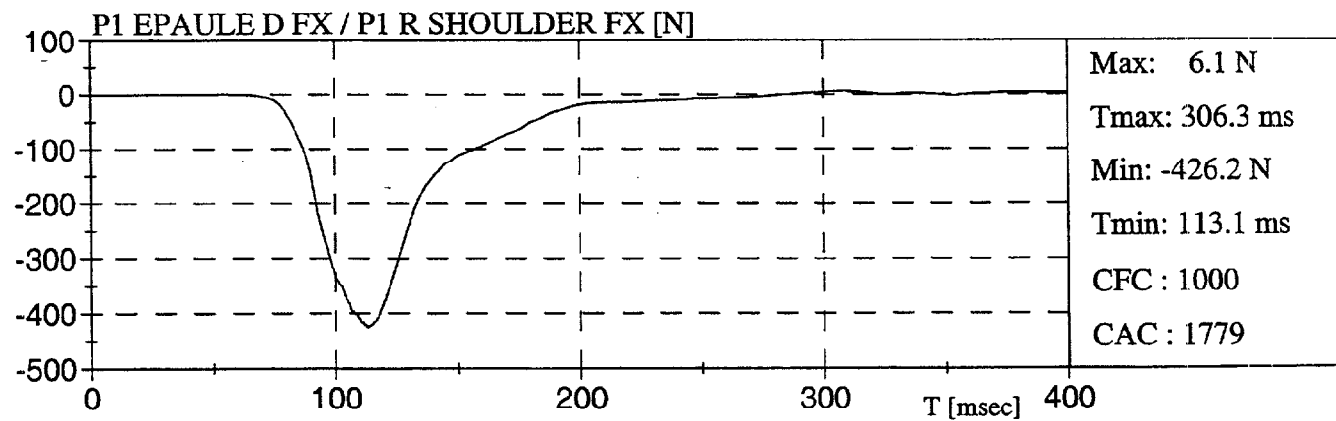
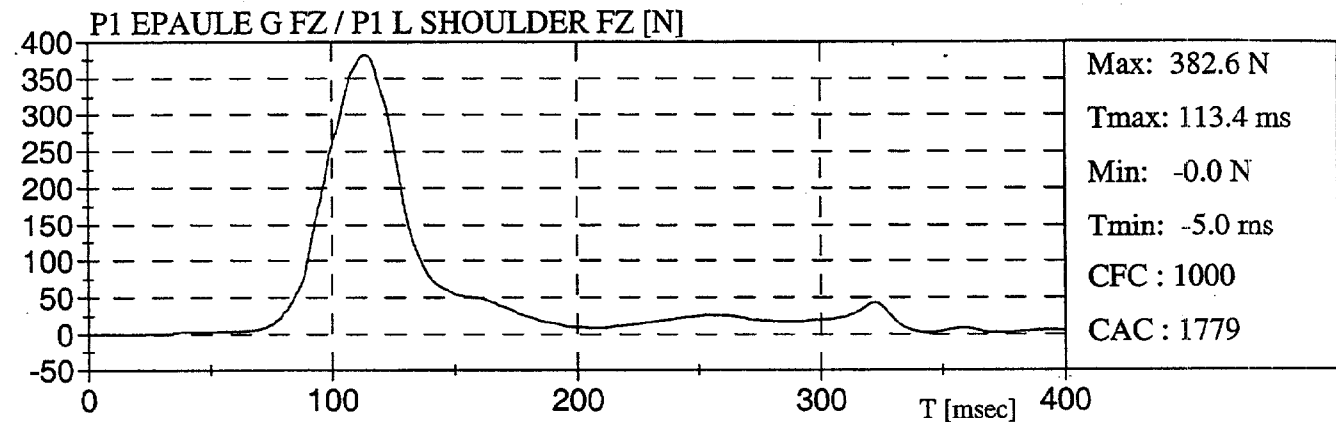
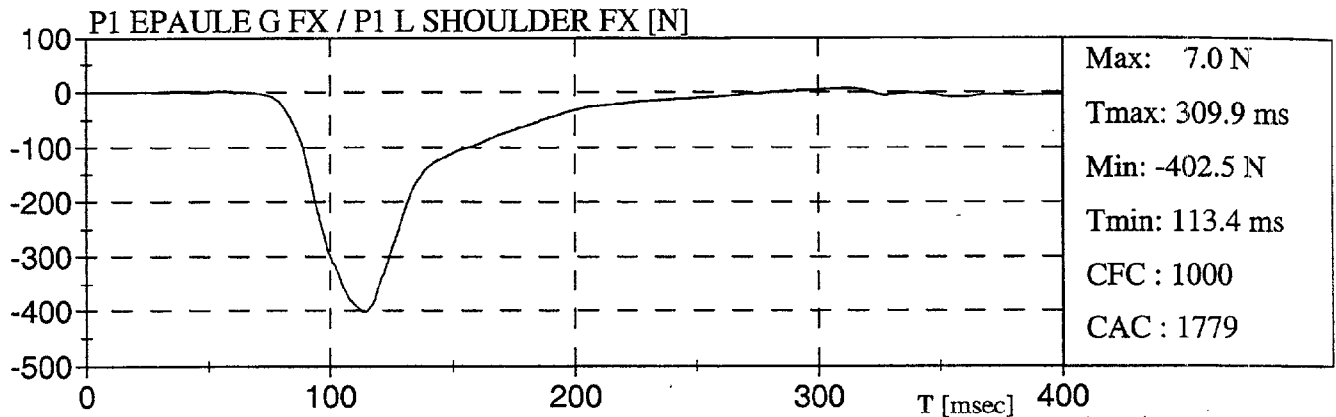


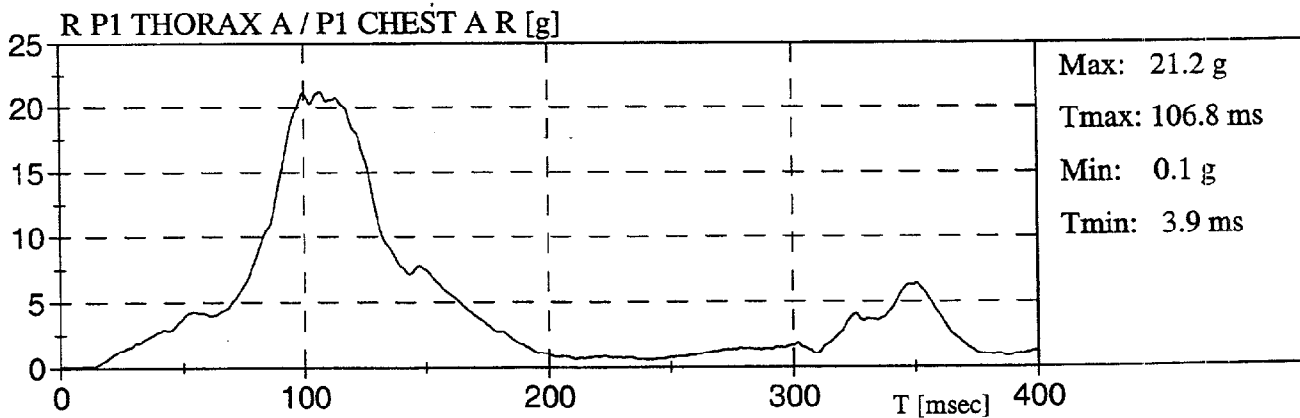
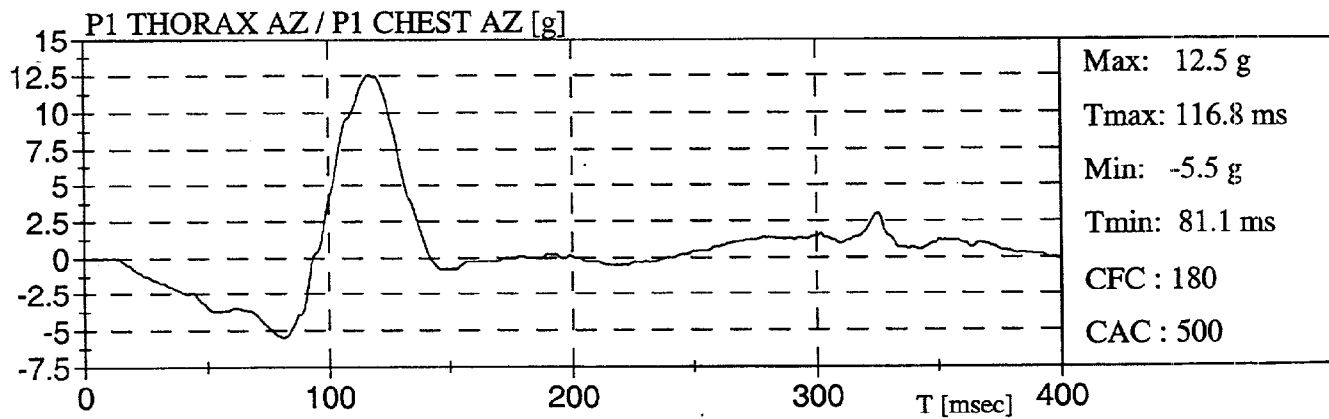
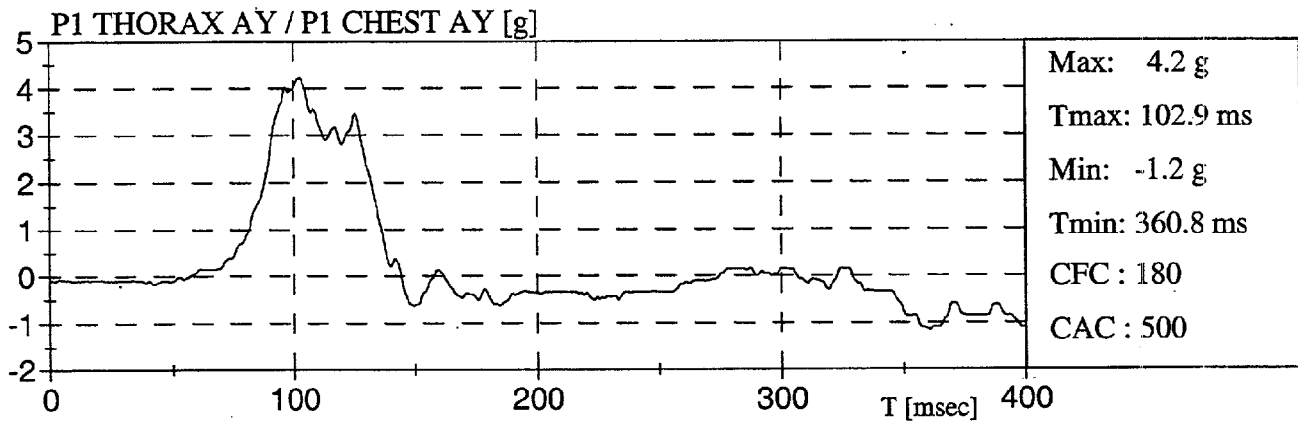
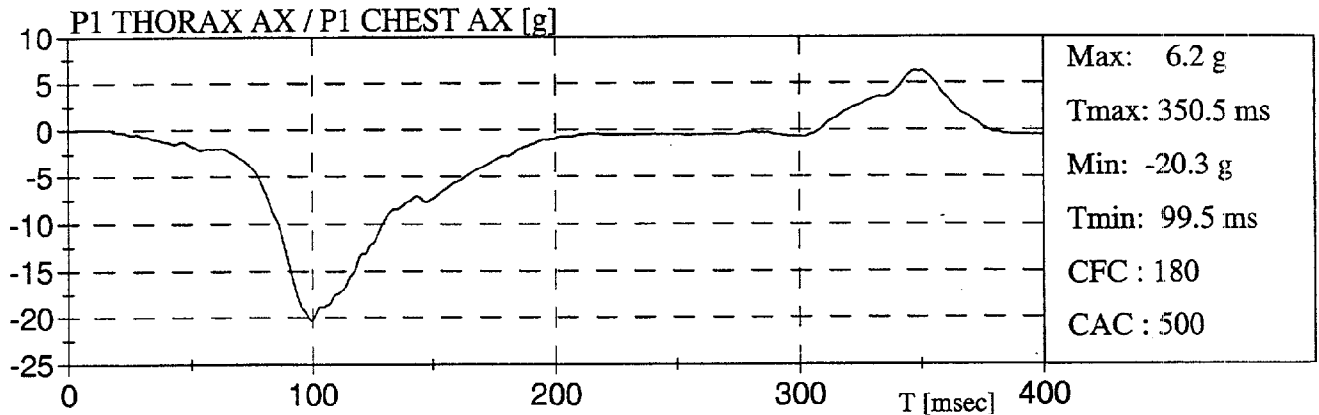


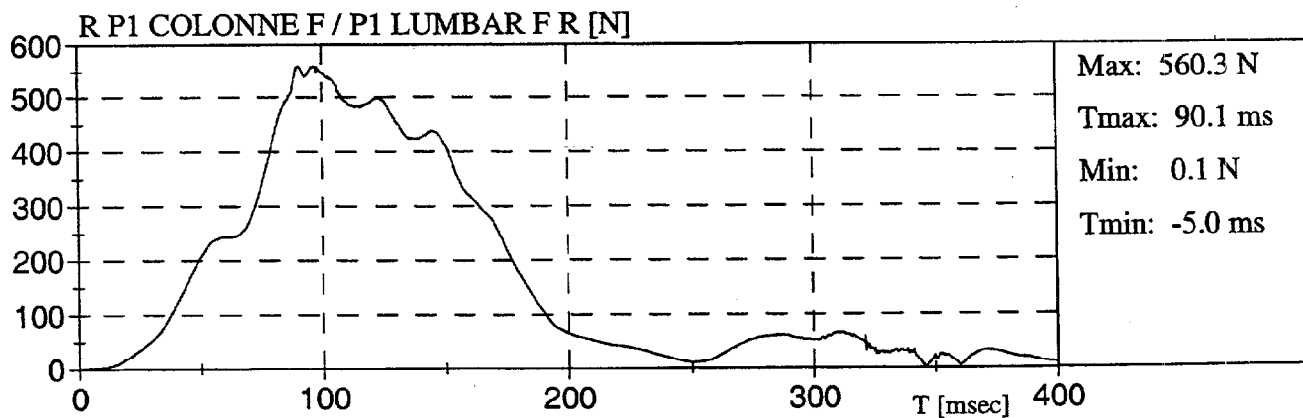
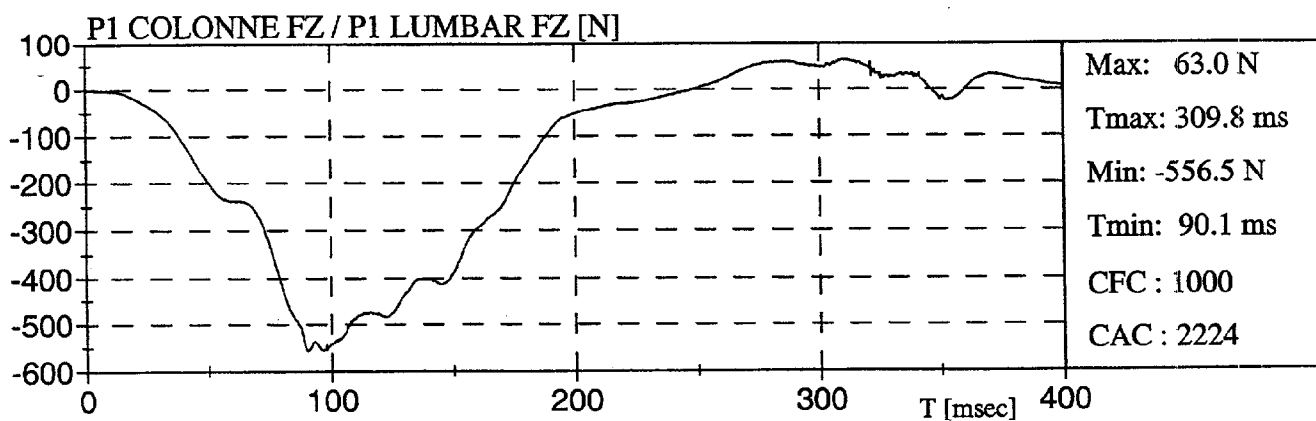
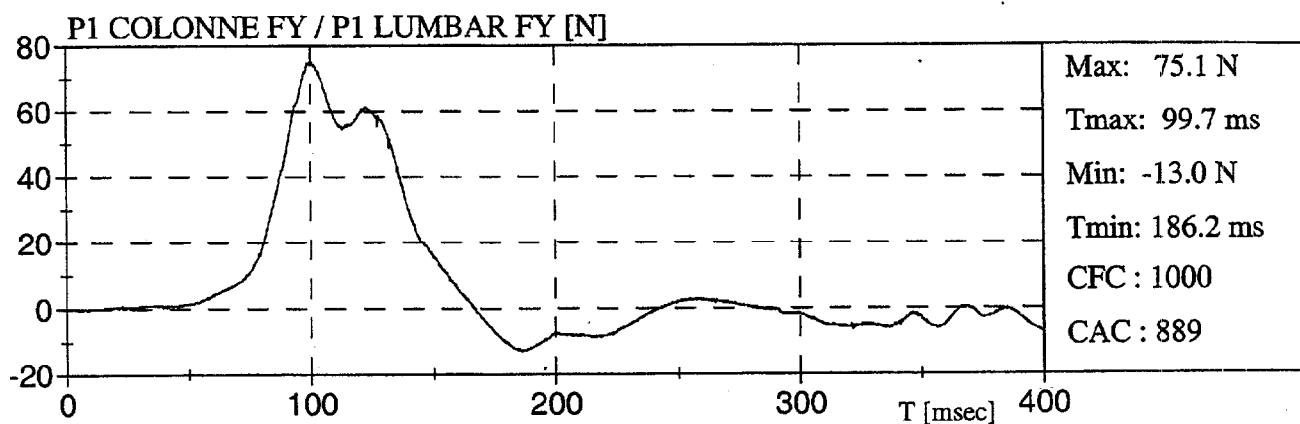
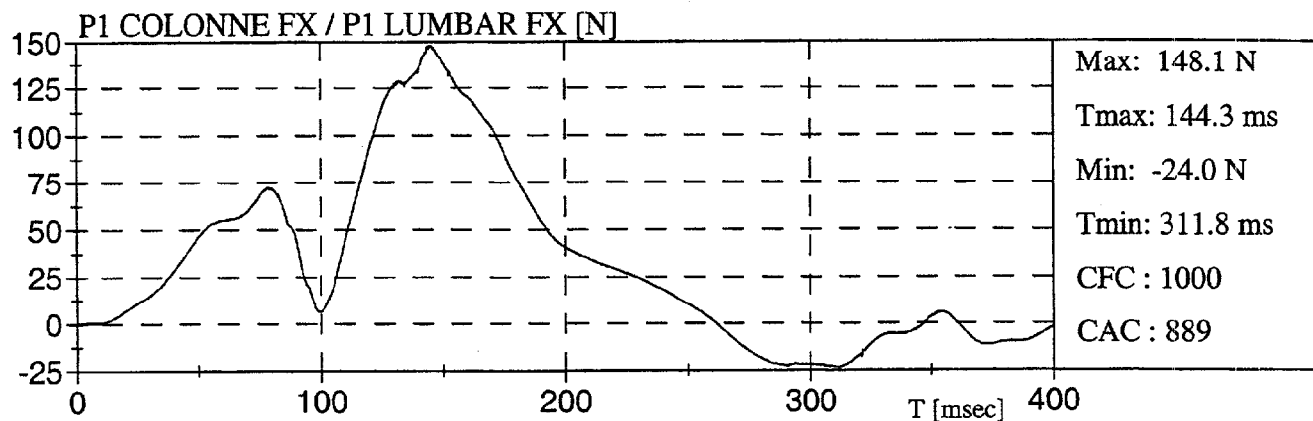


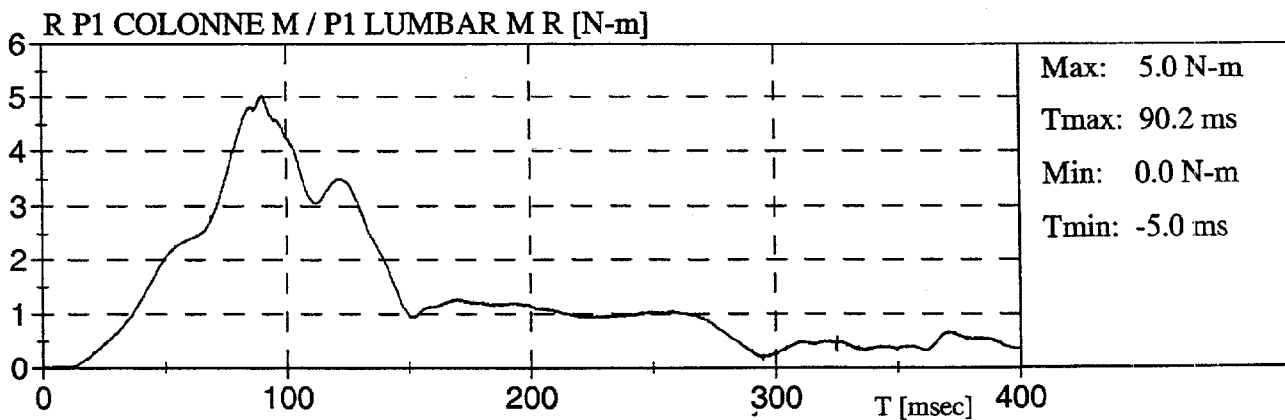
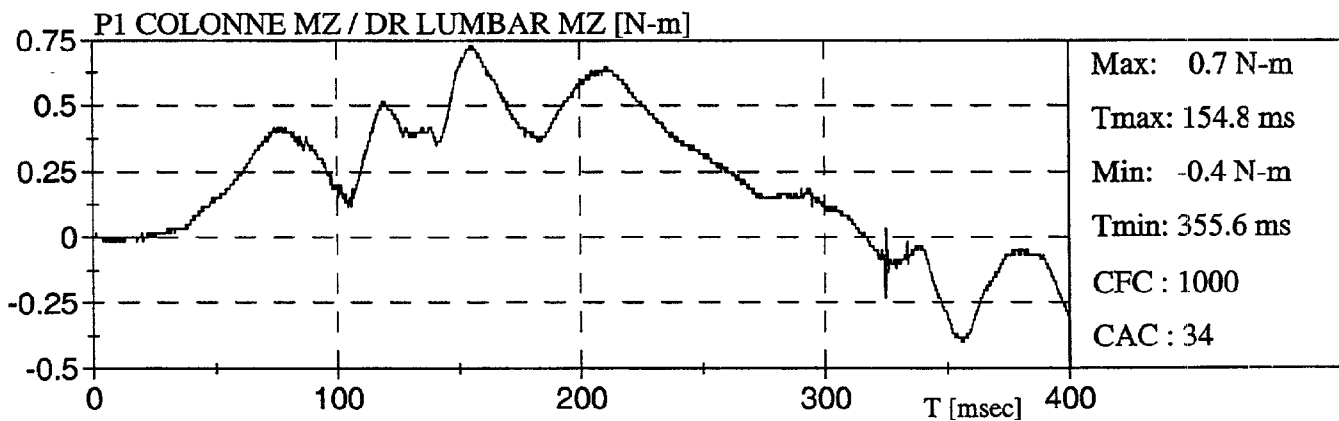
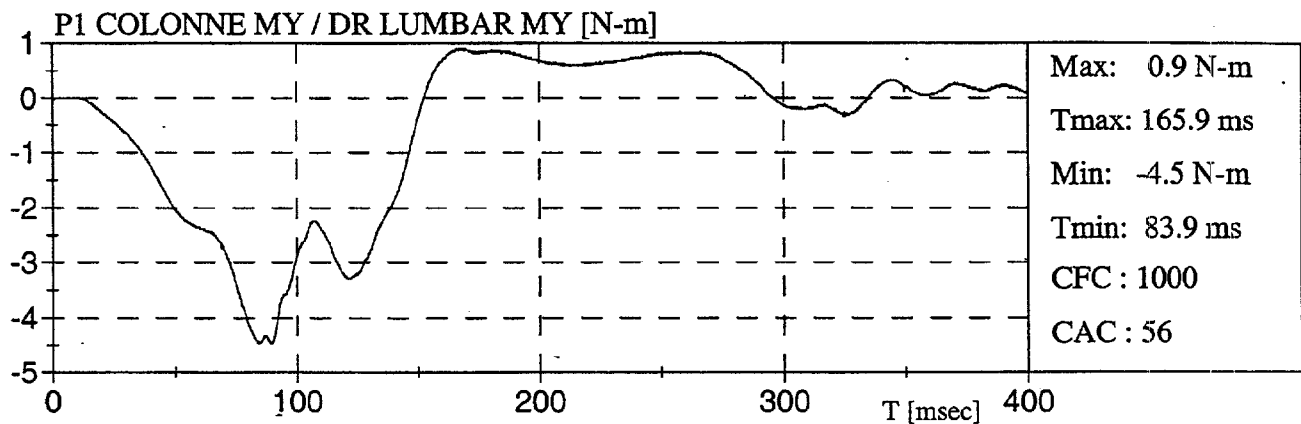
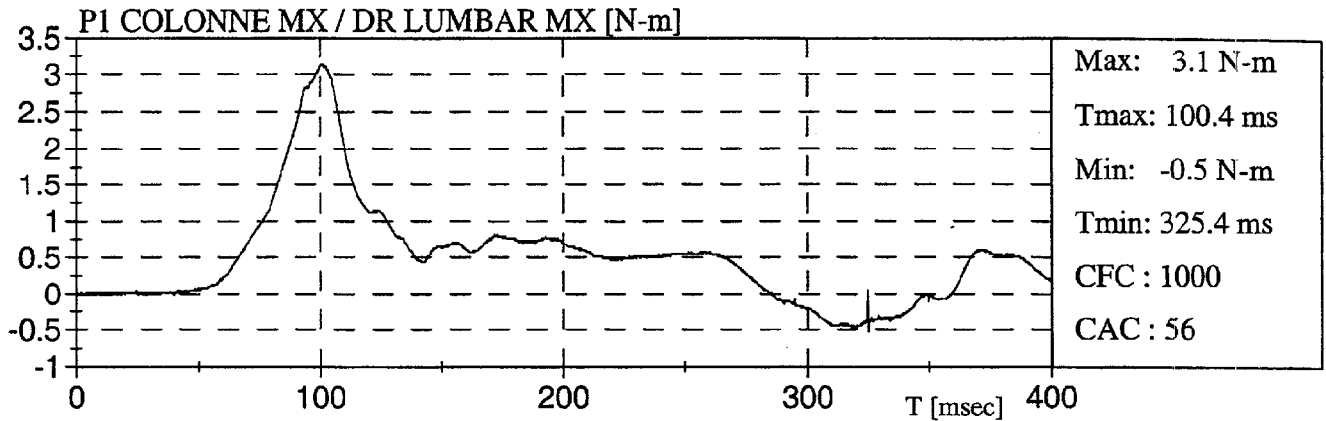


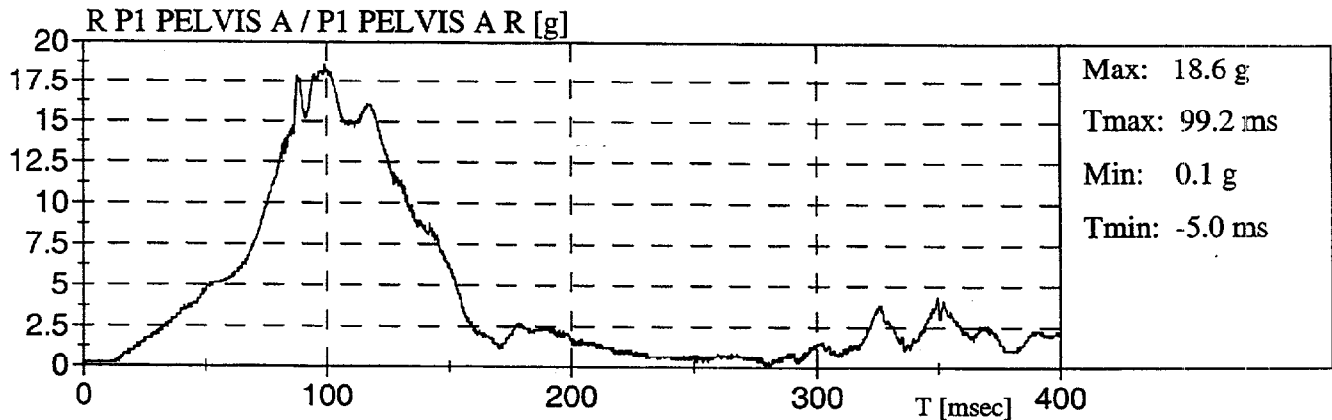
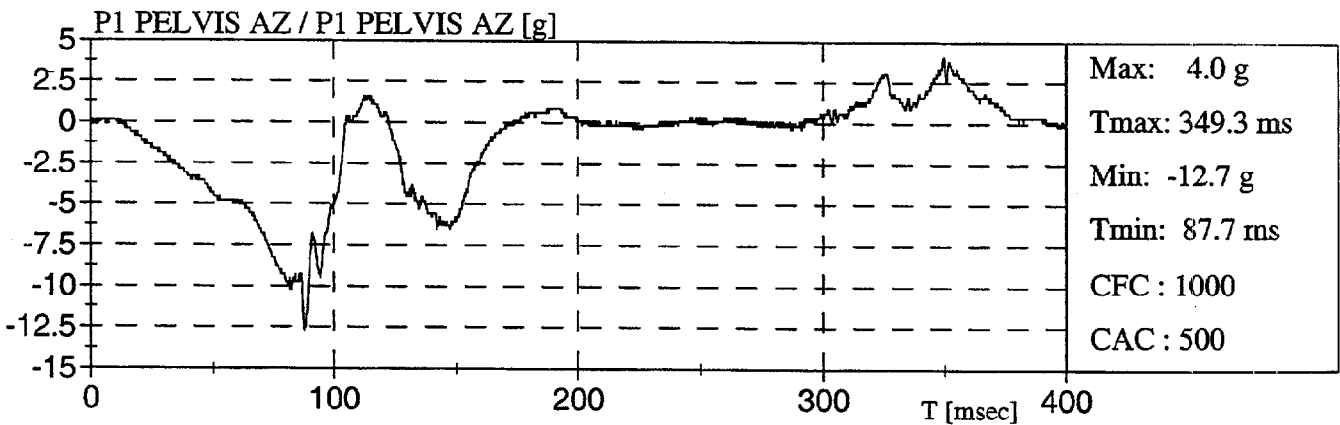
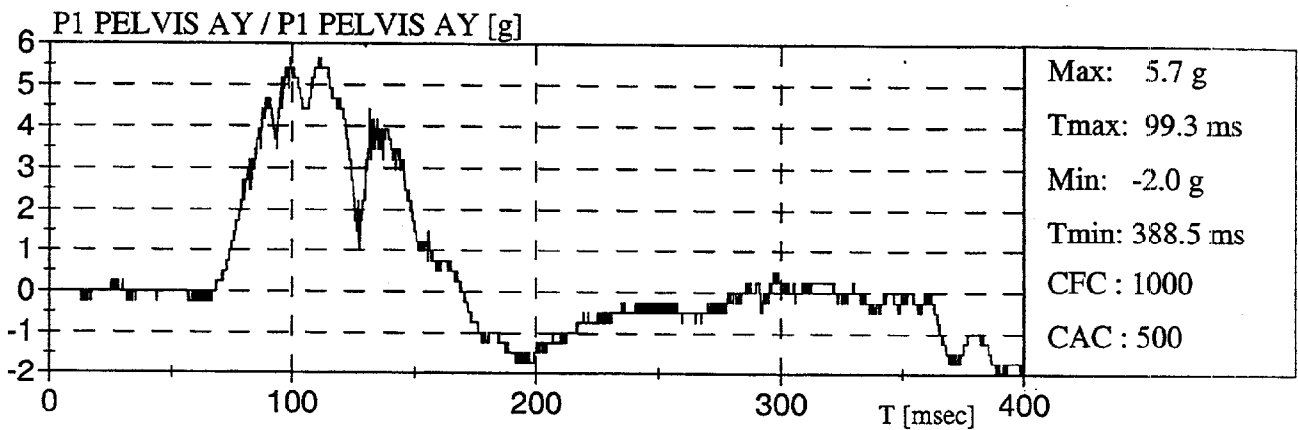
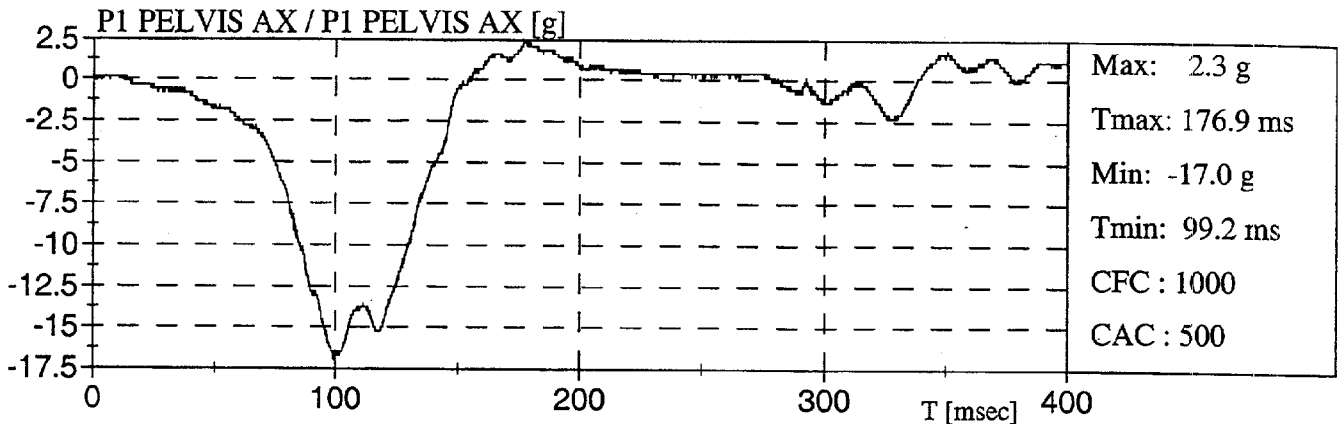


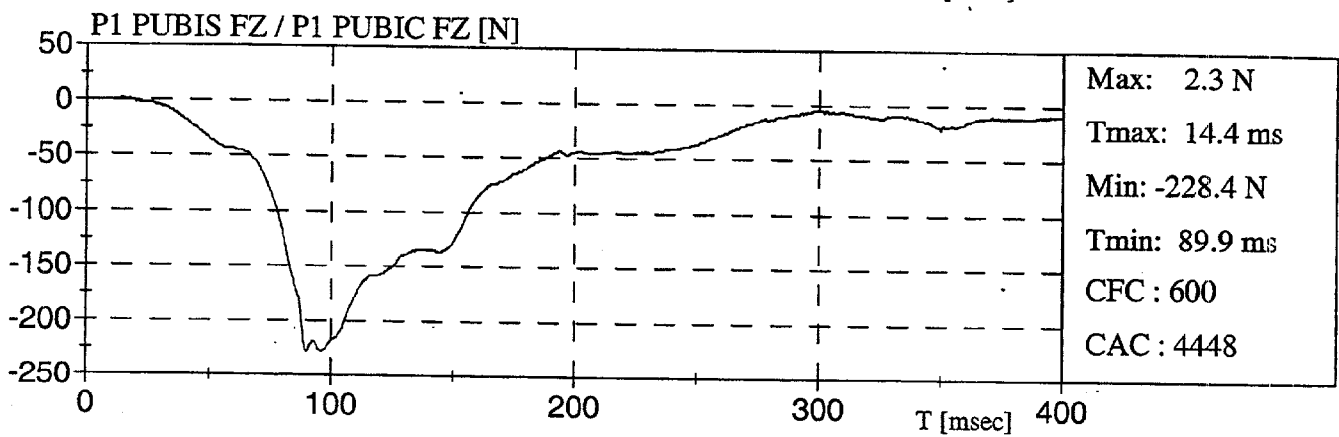
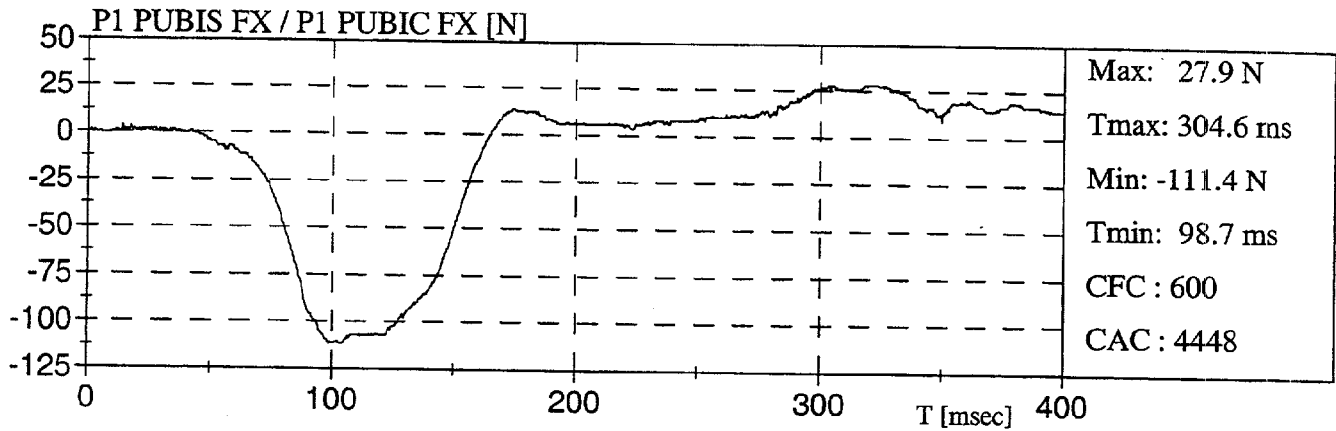


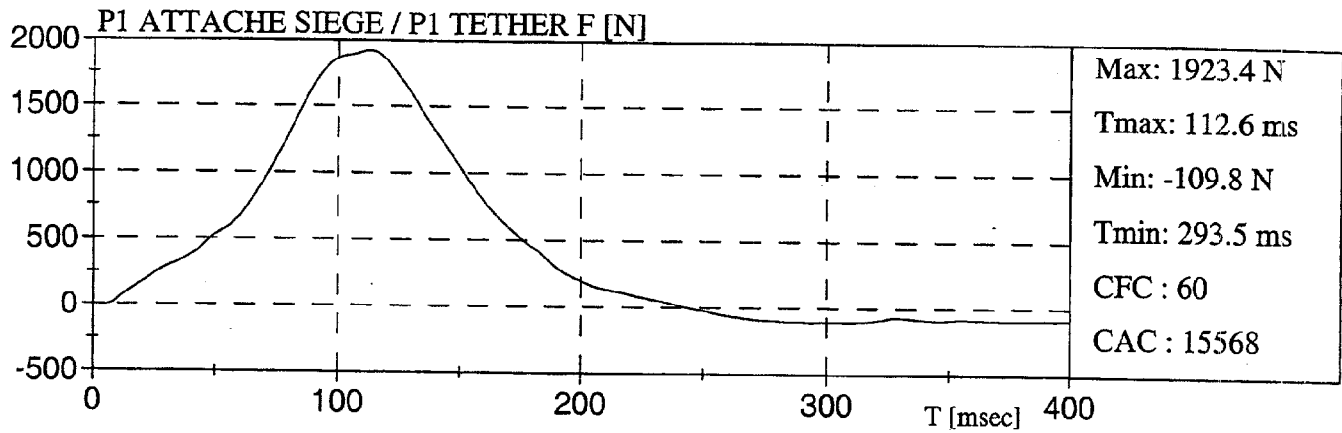


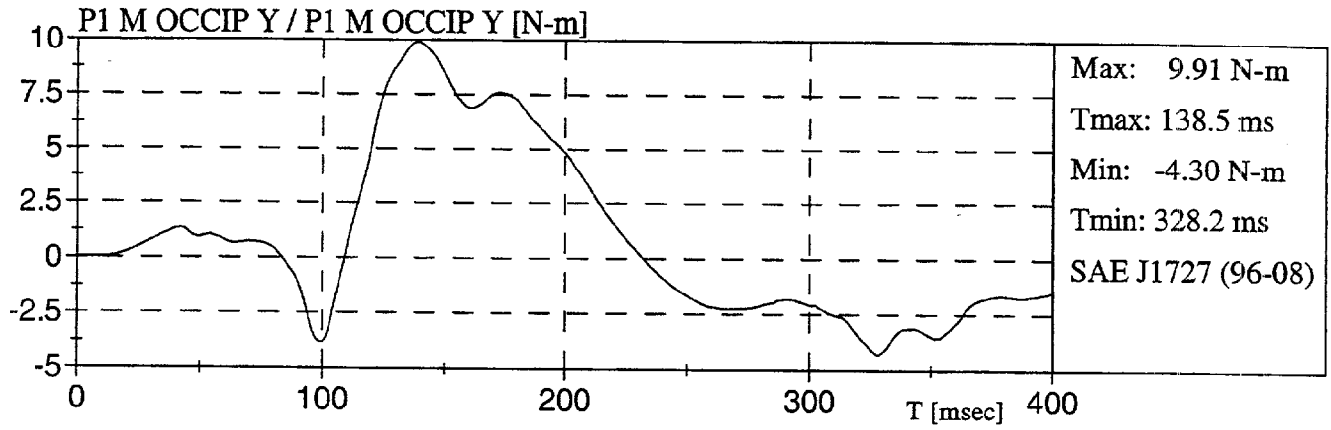


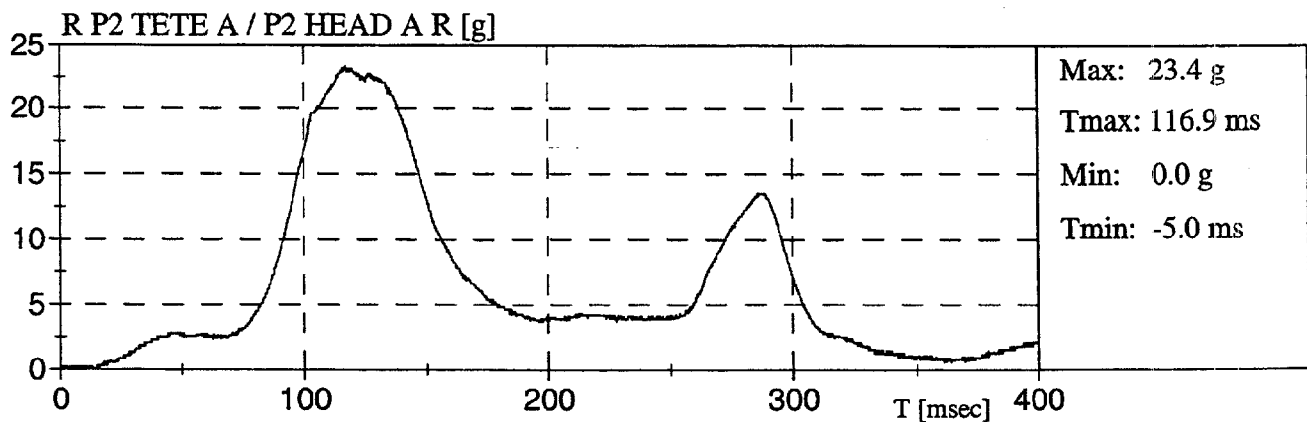
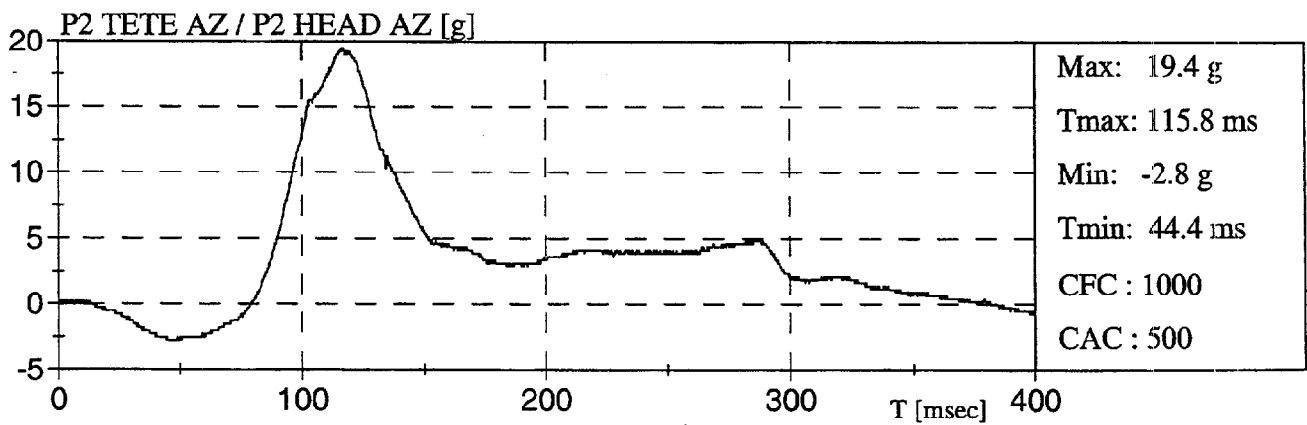
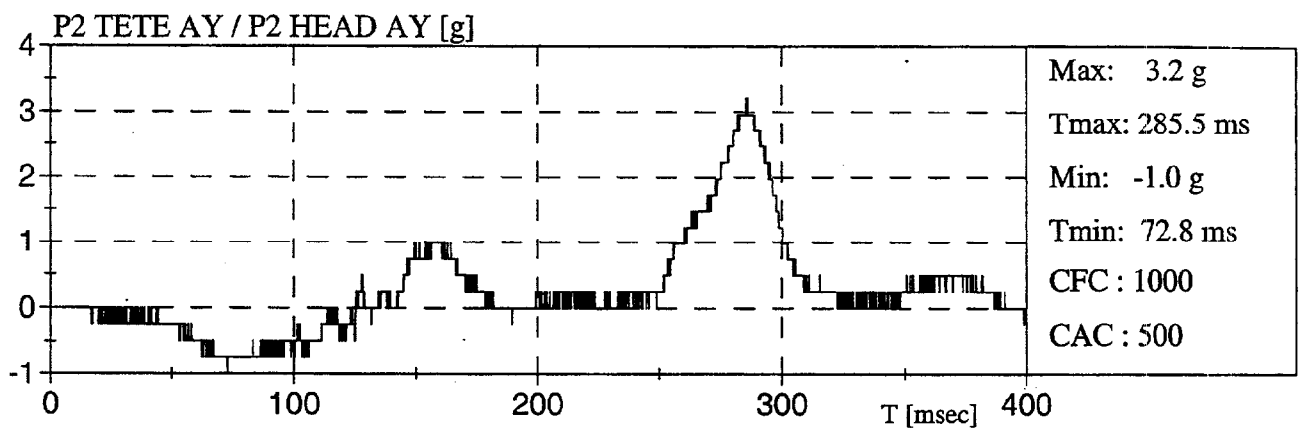
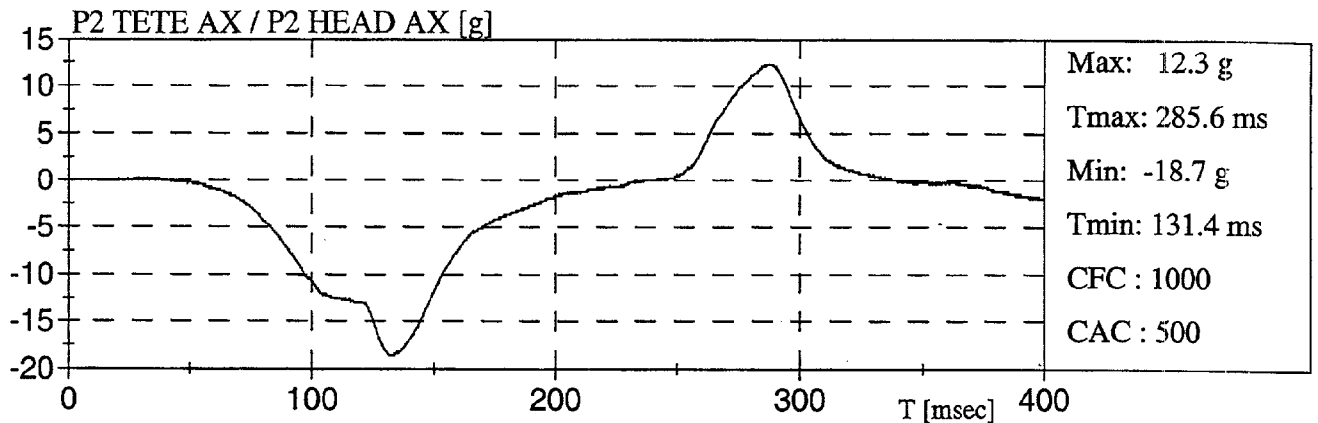














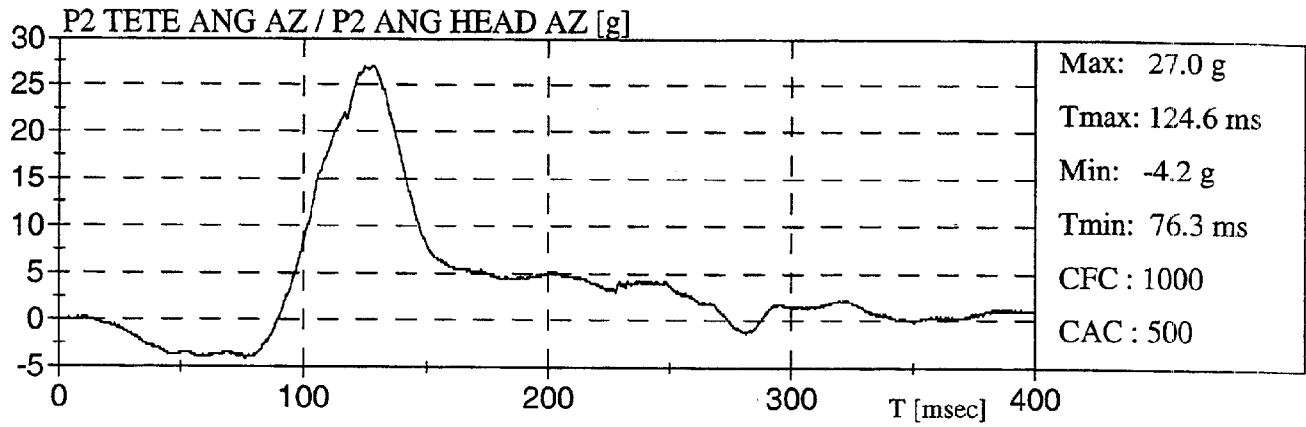
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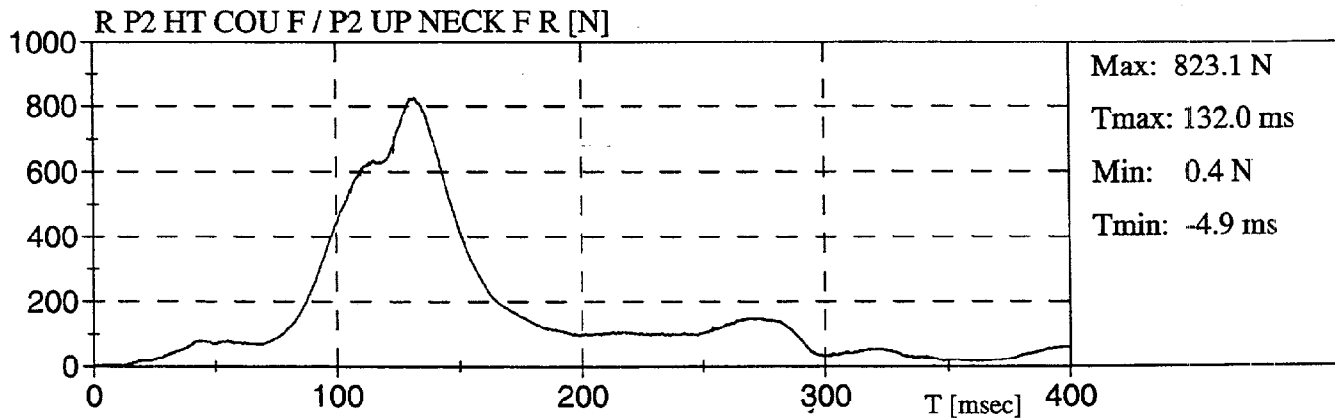
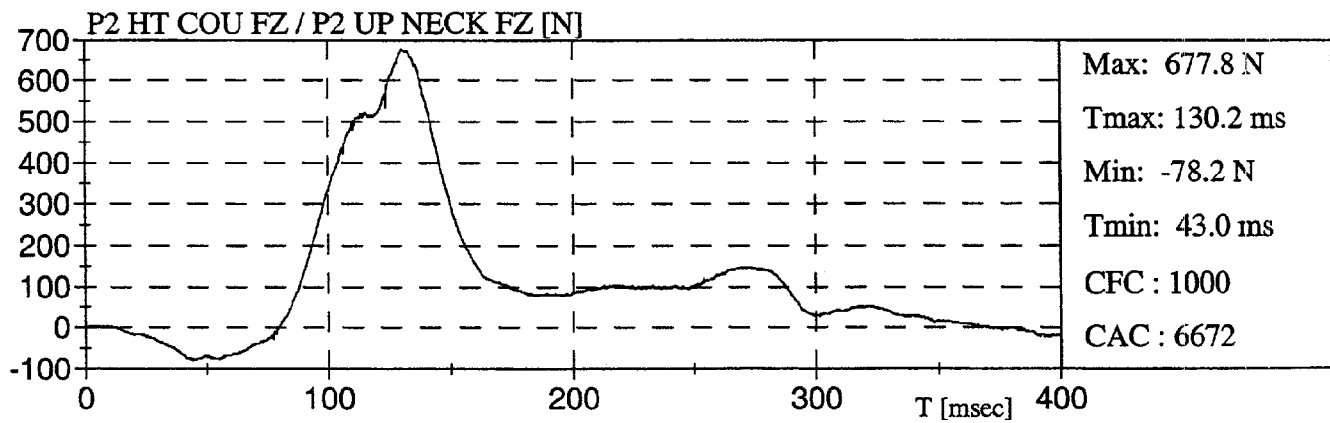
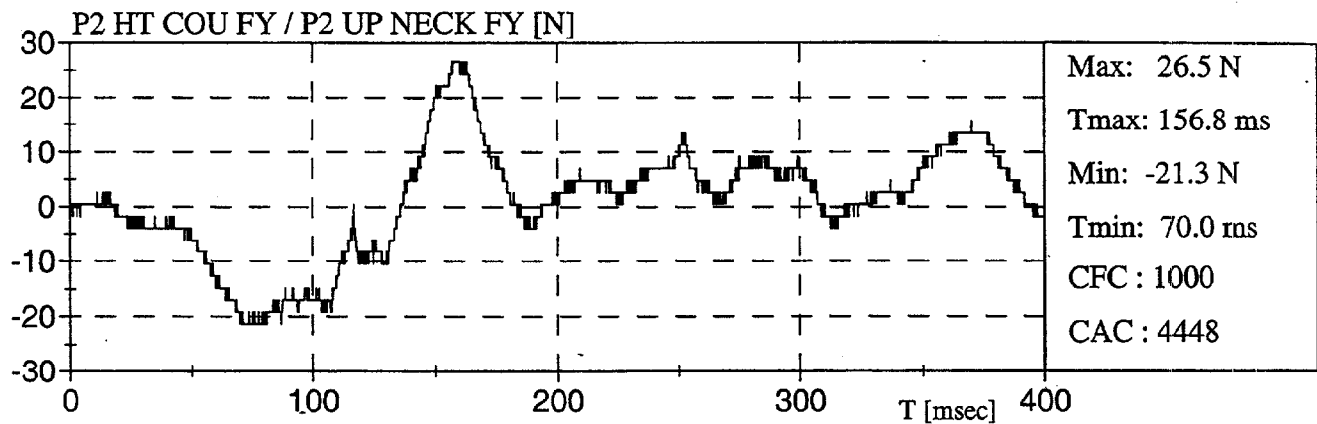
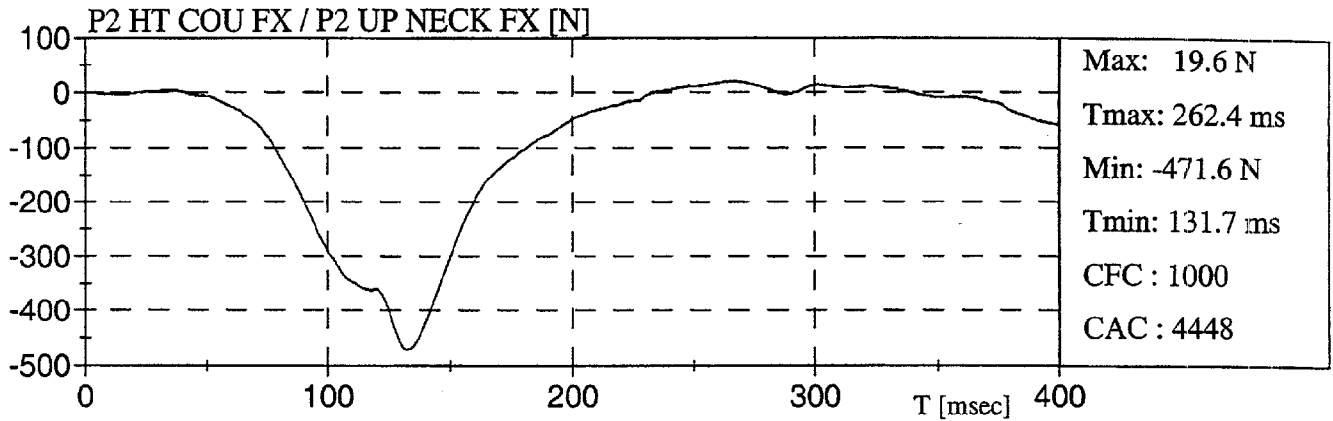
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OFFSET FRONTAL 34 KM/H - 40% LEFT

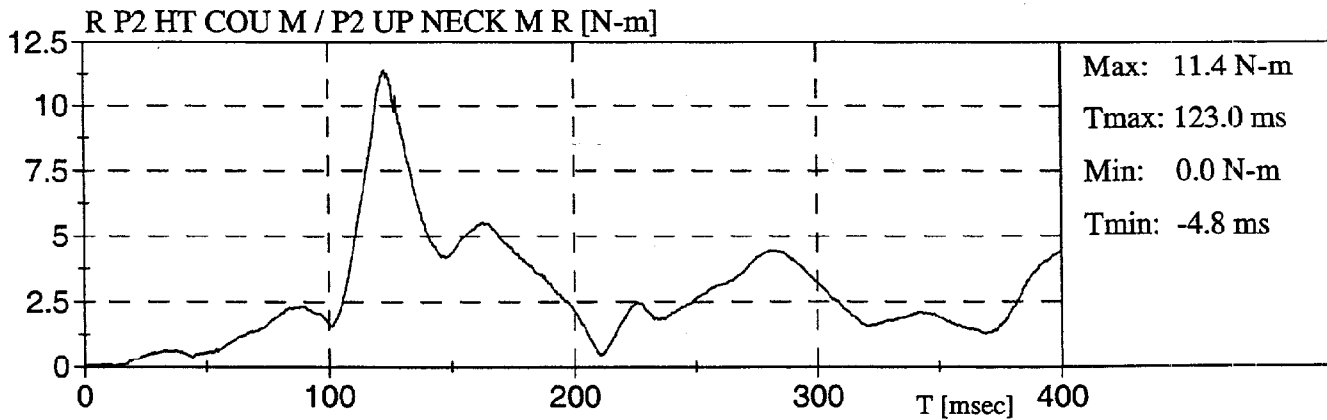
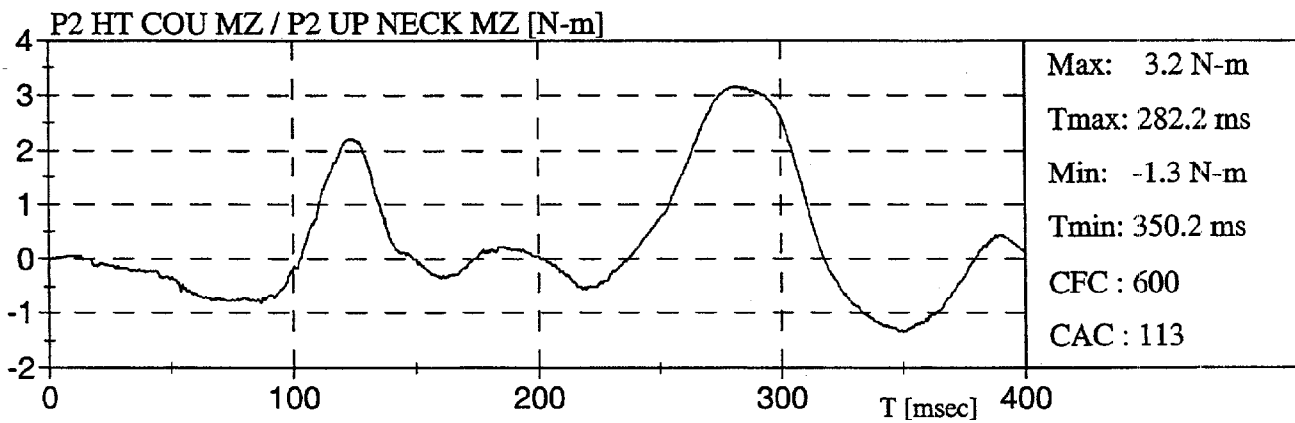
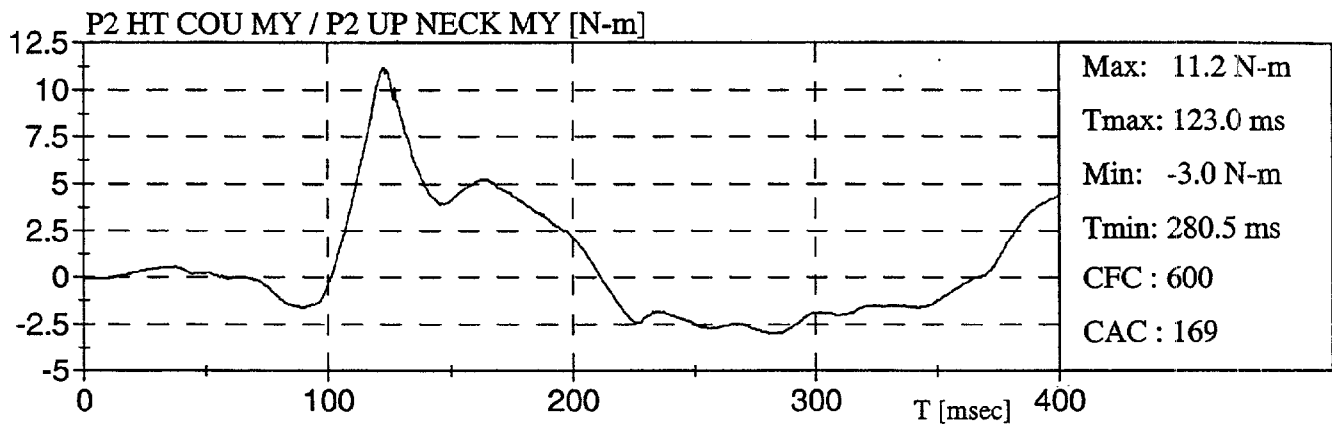
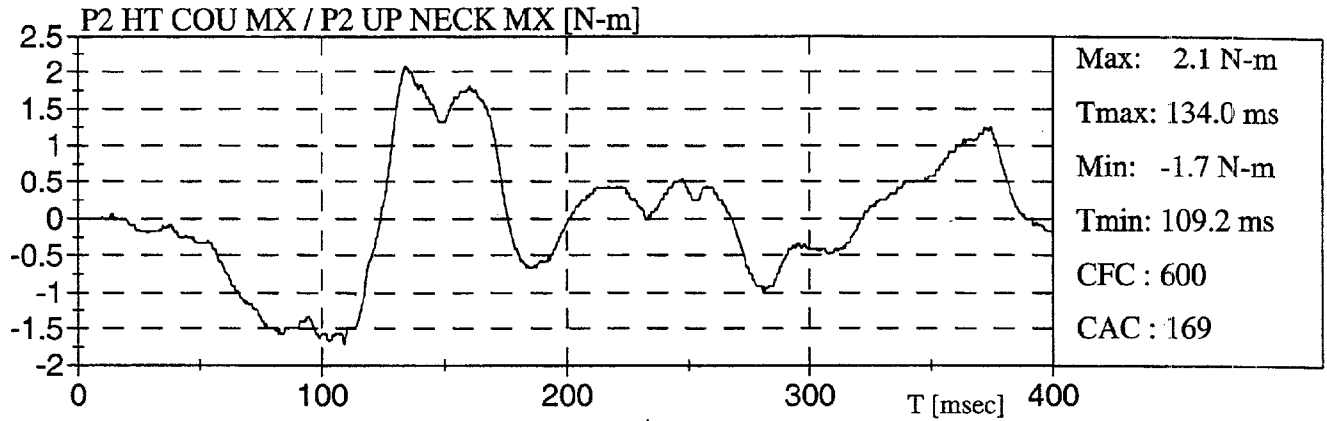
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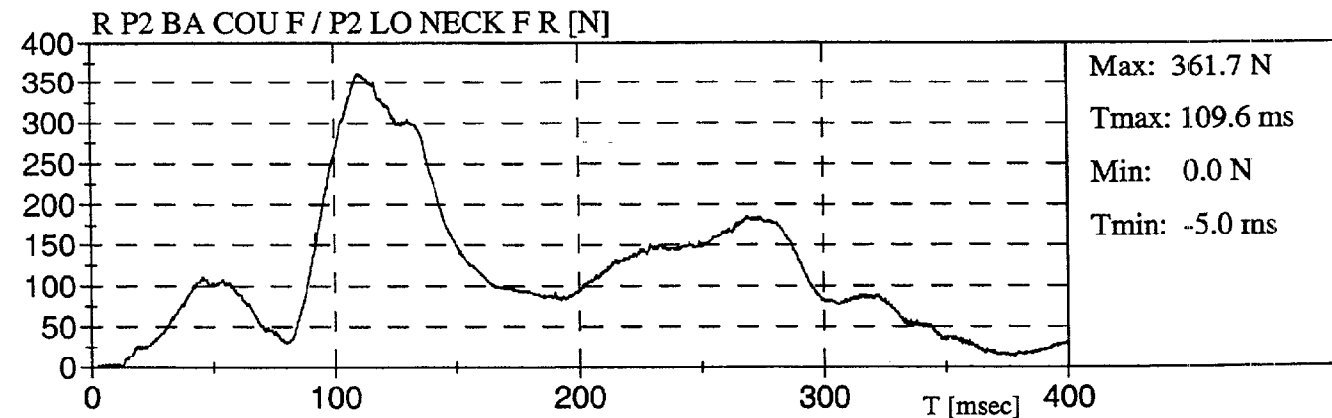
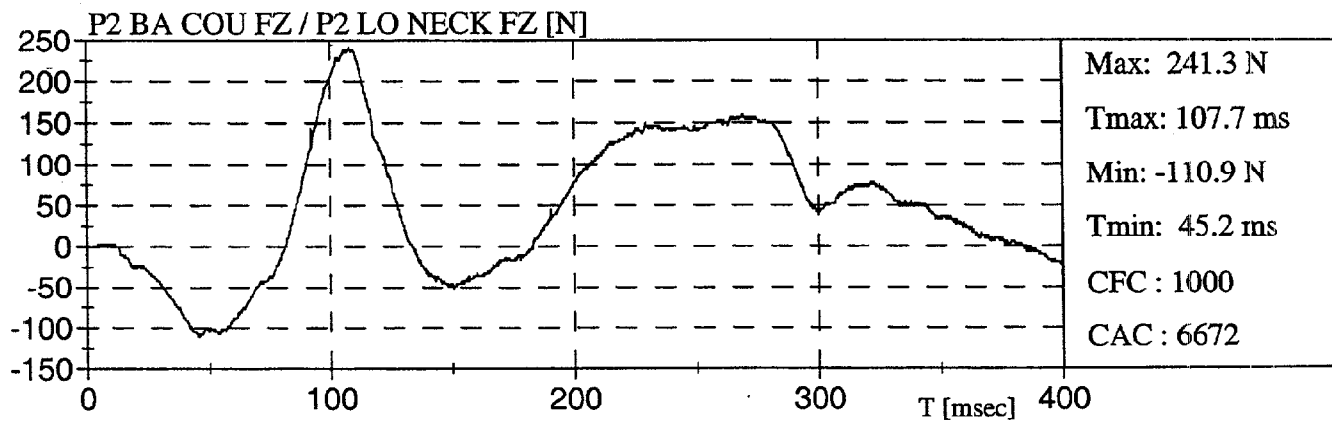
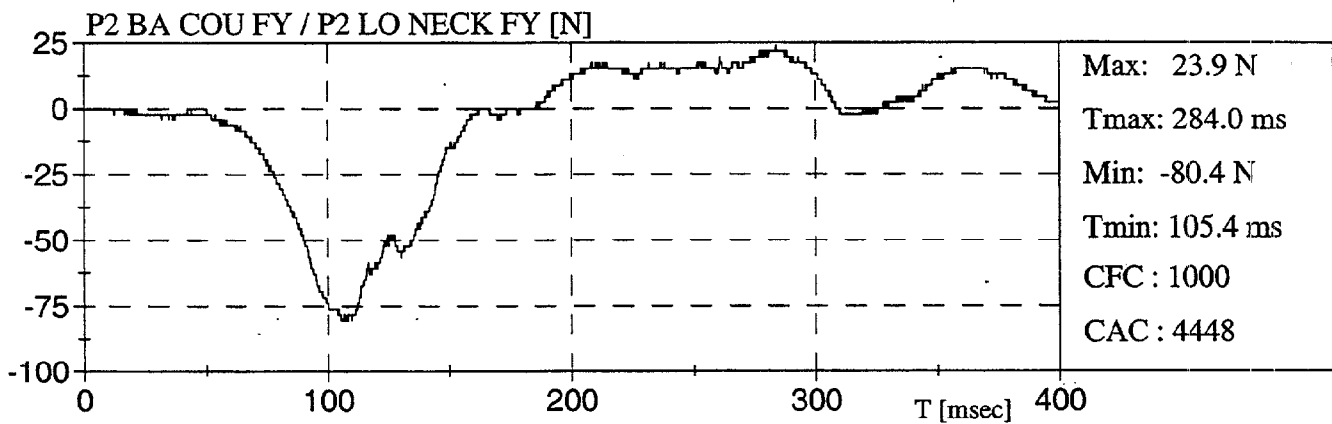
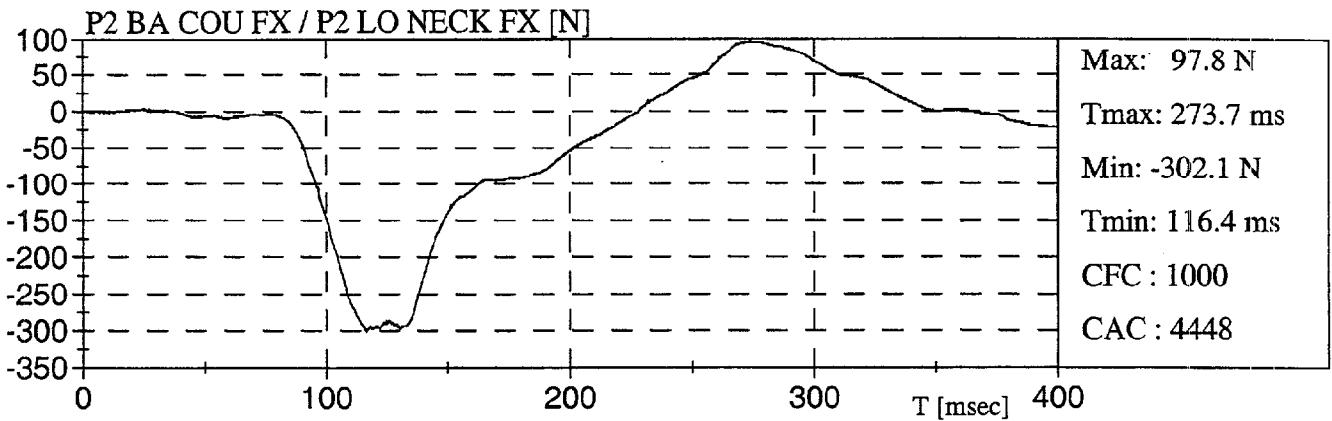
FORD TAURUS 99

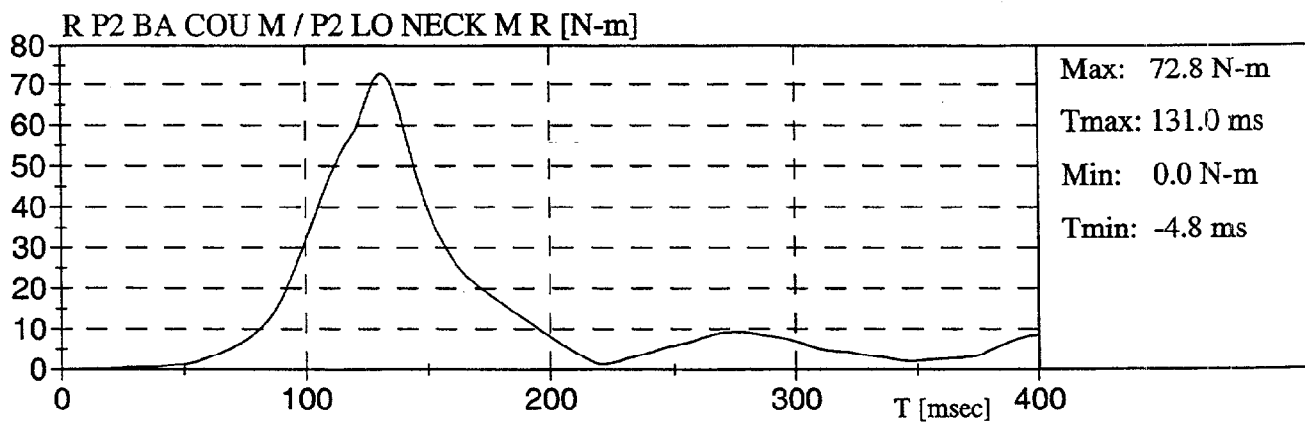
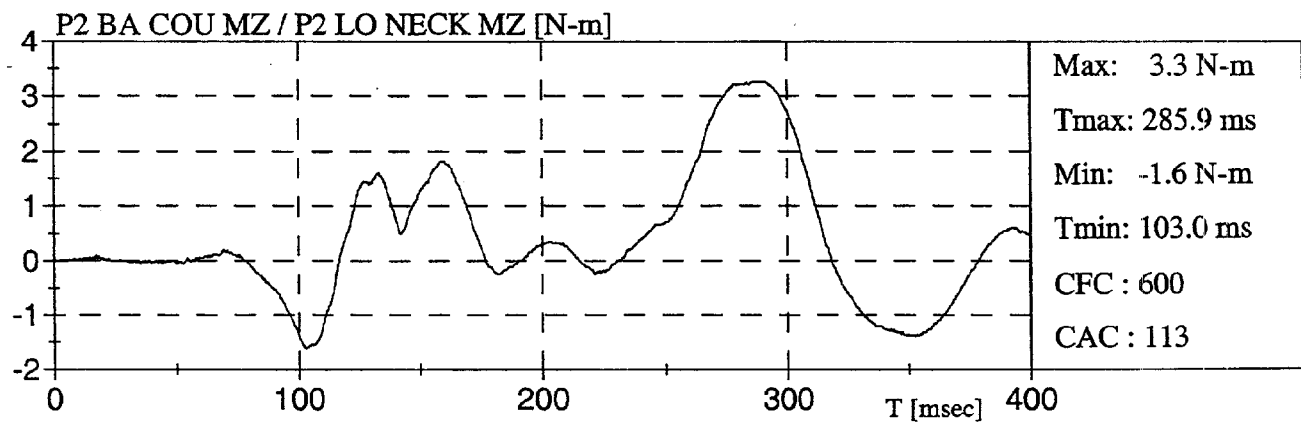
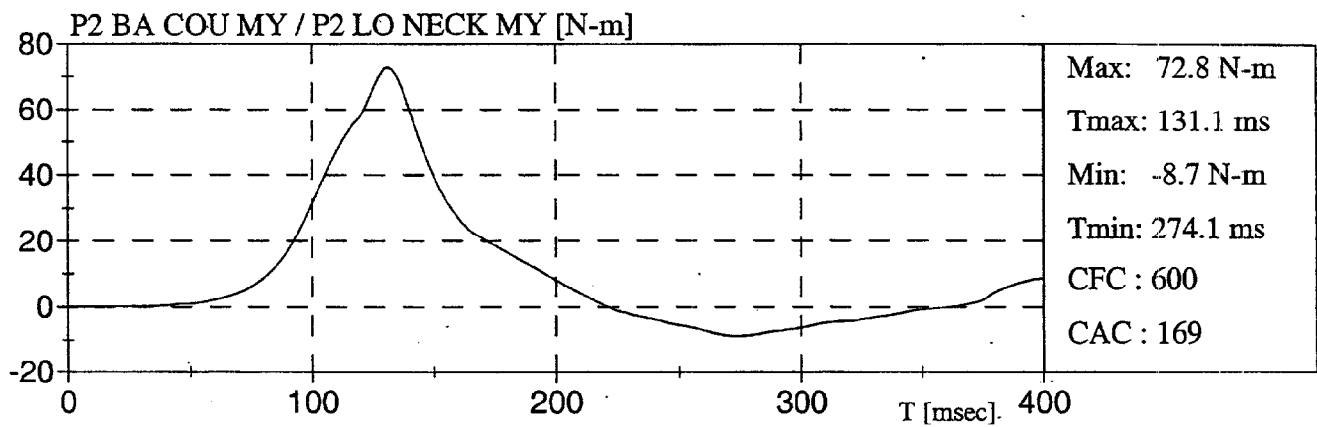
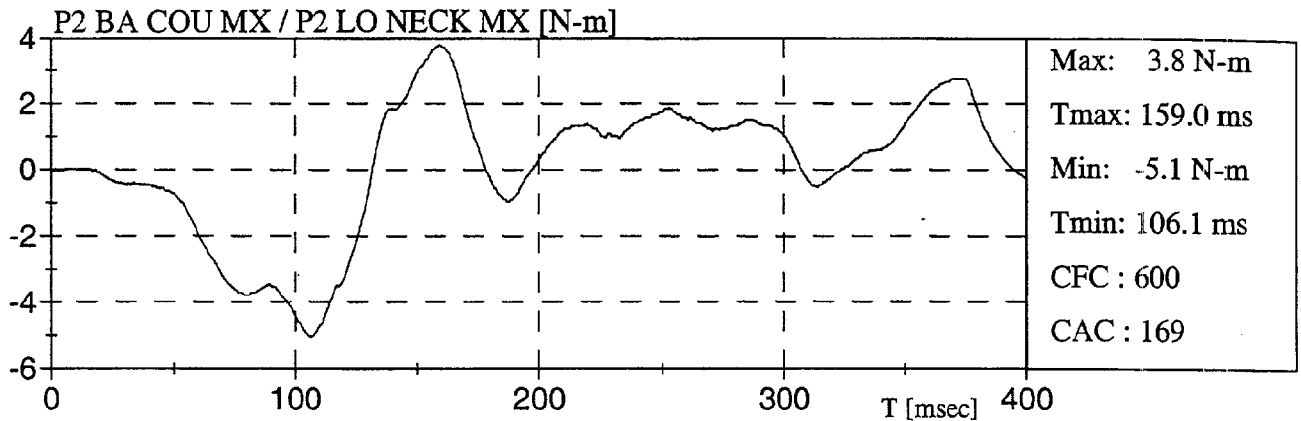
N° TC / TC No.: TC99-203

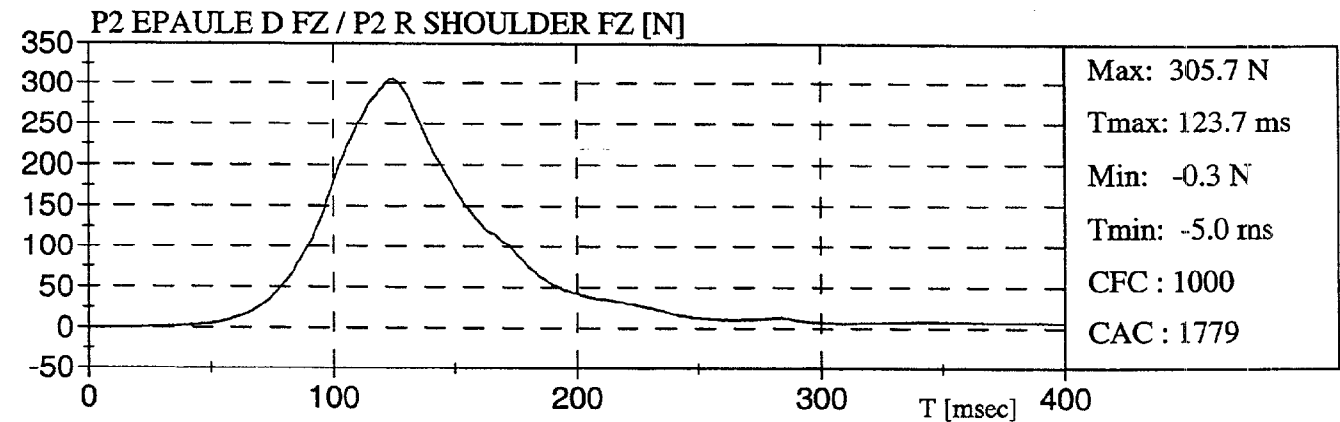
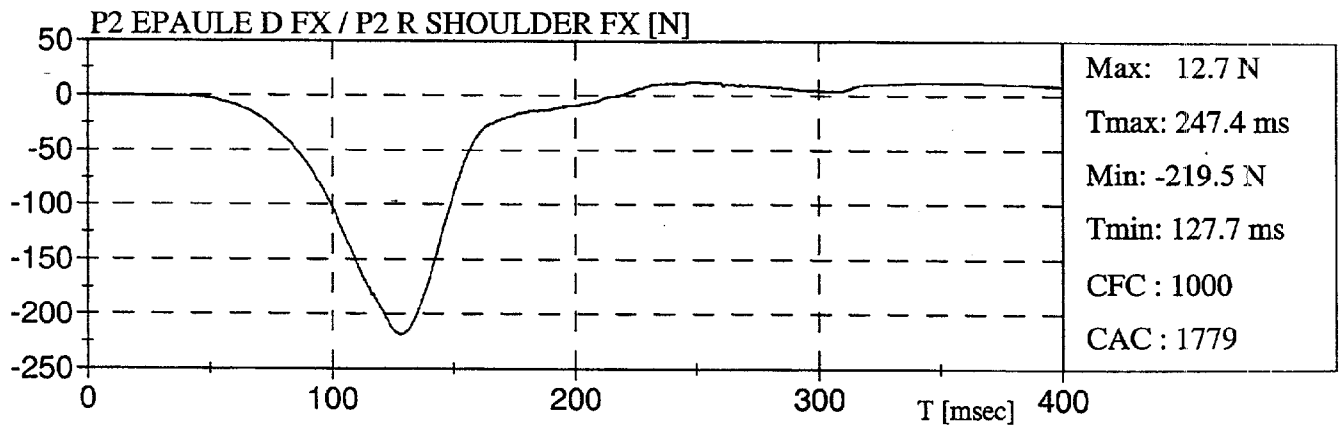
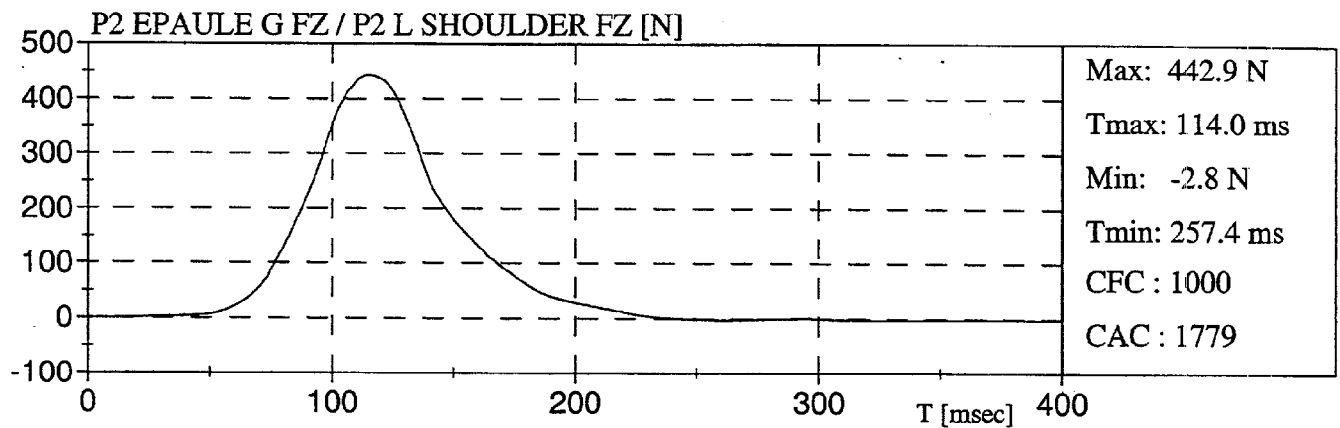
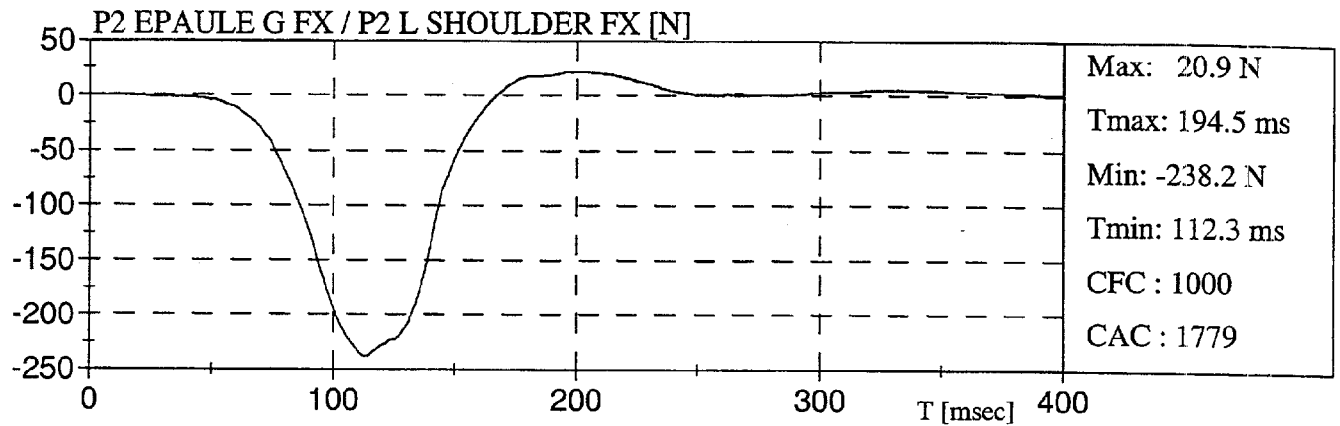


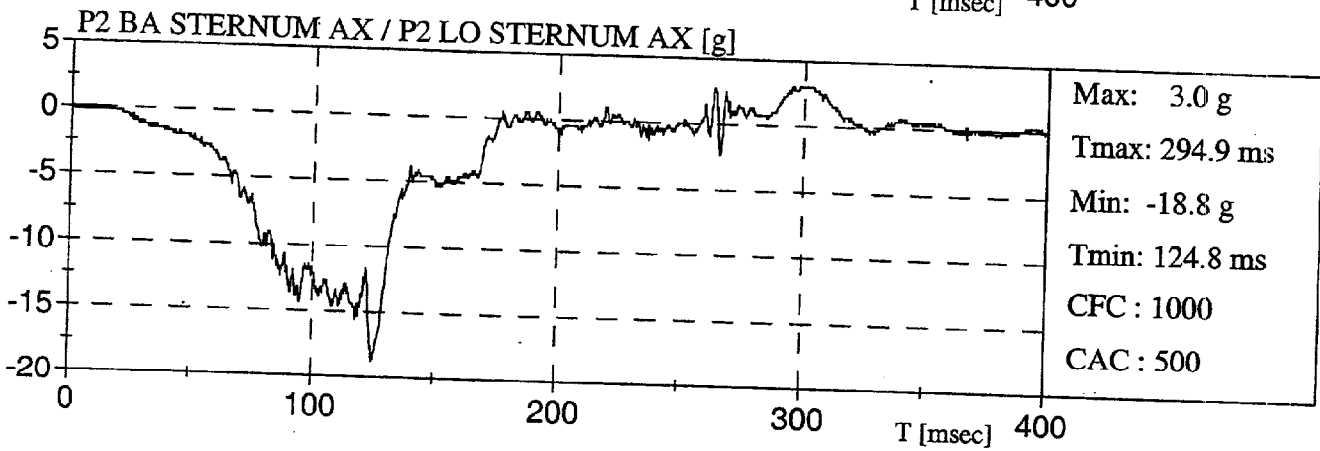
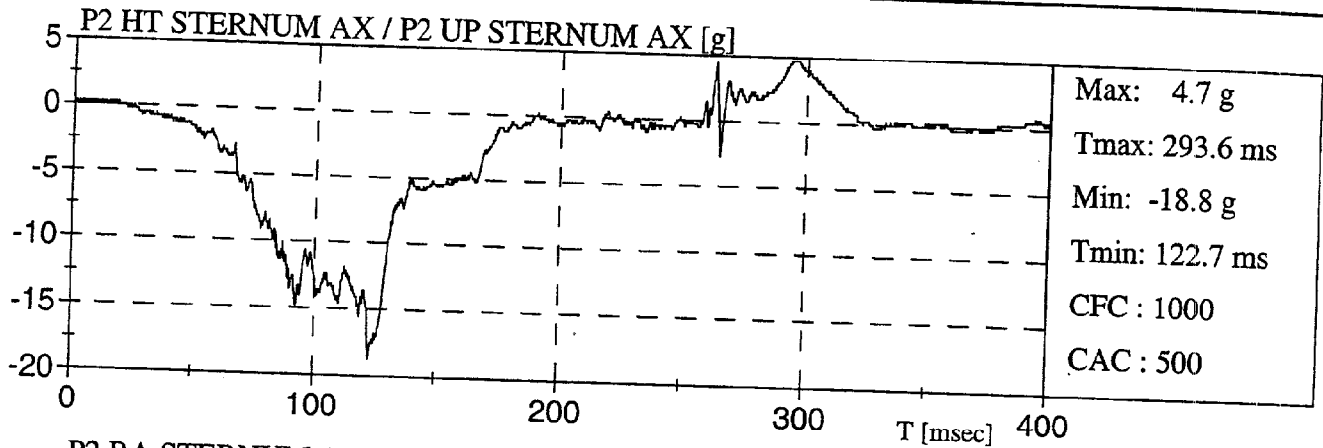


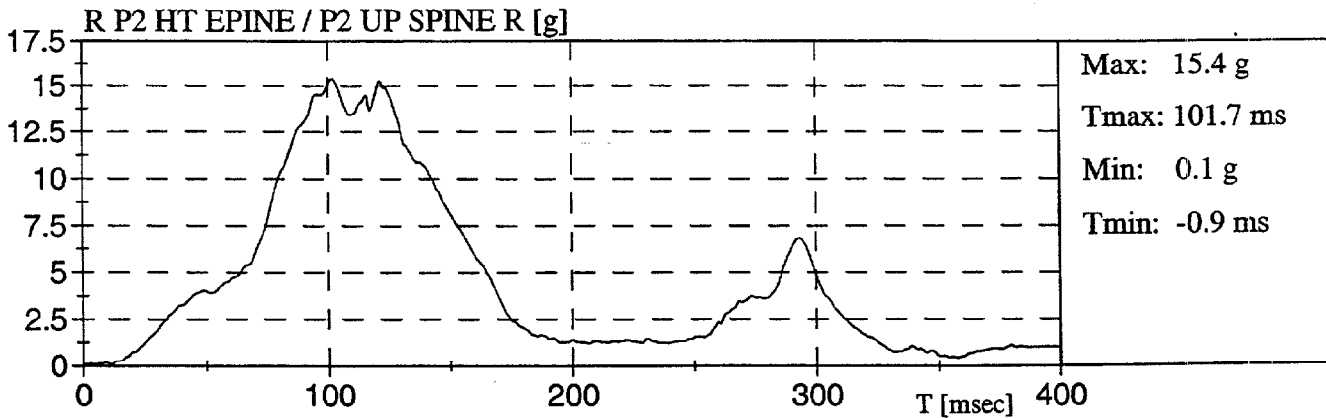
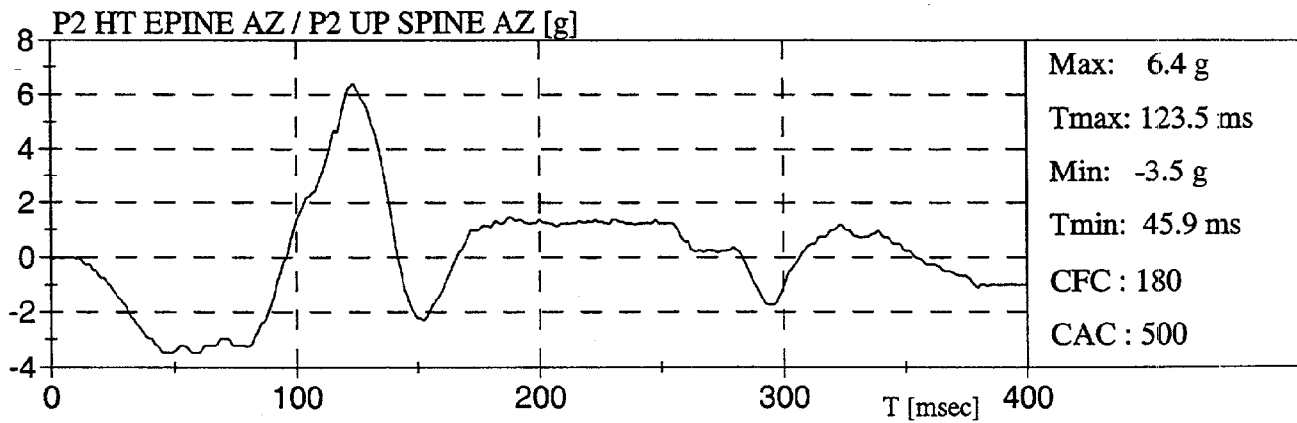
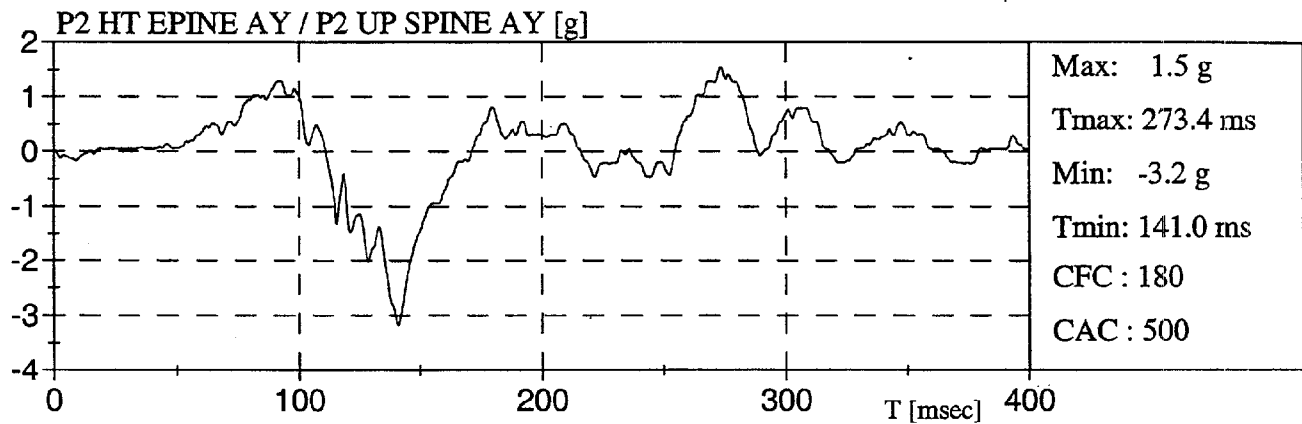
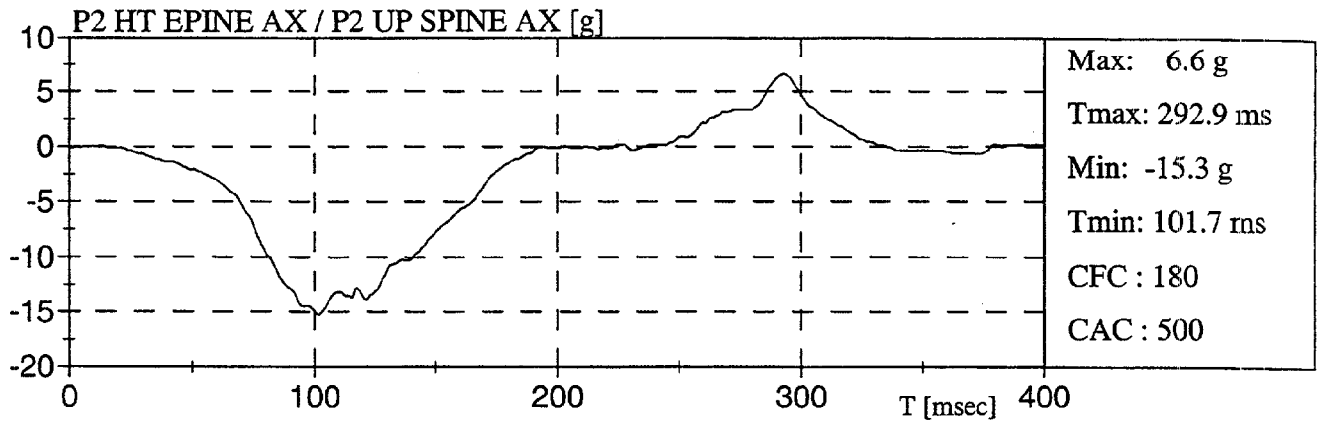


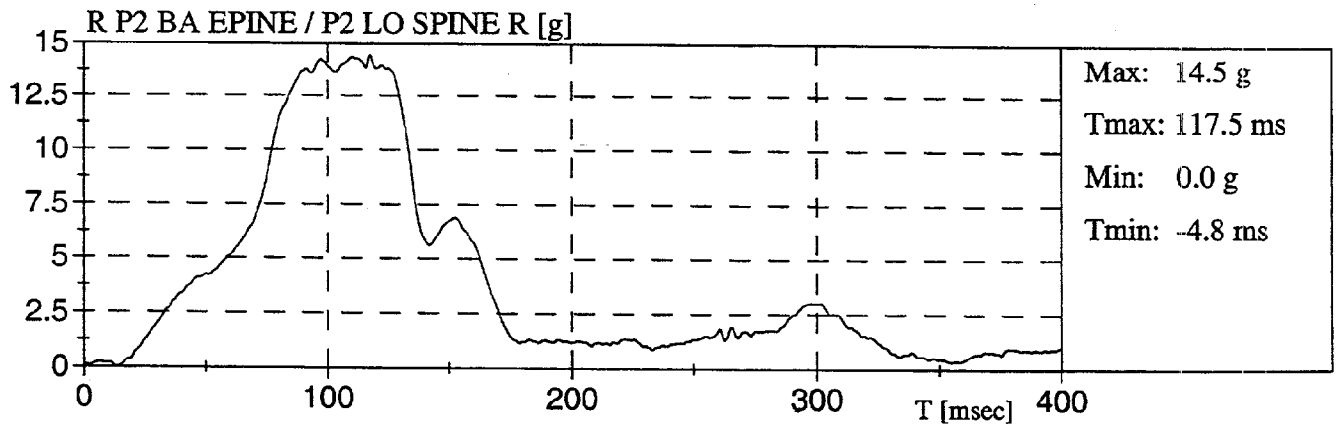
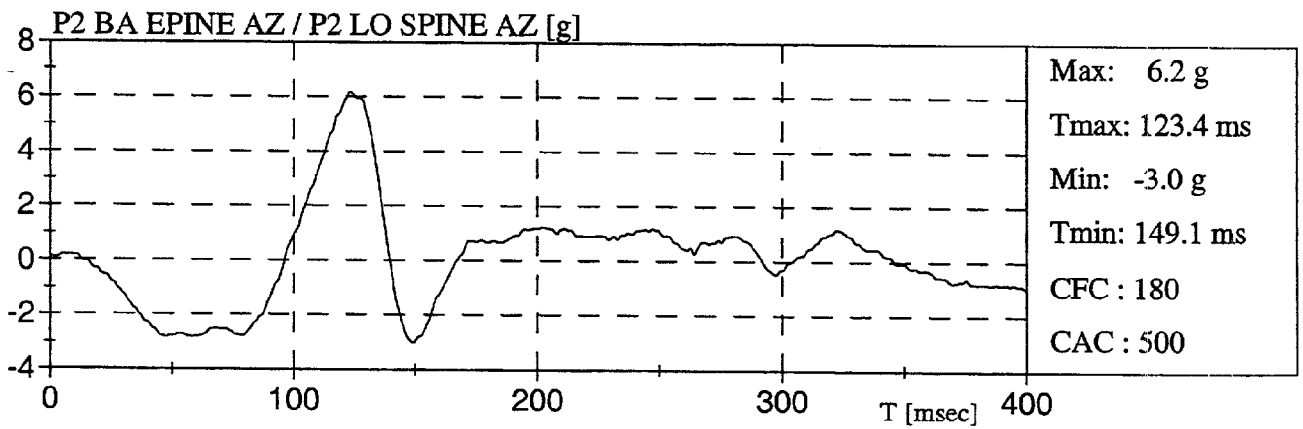
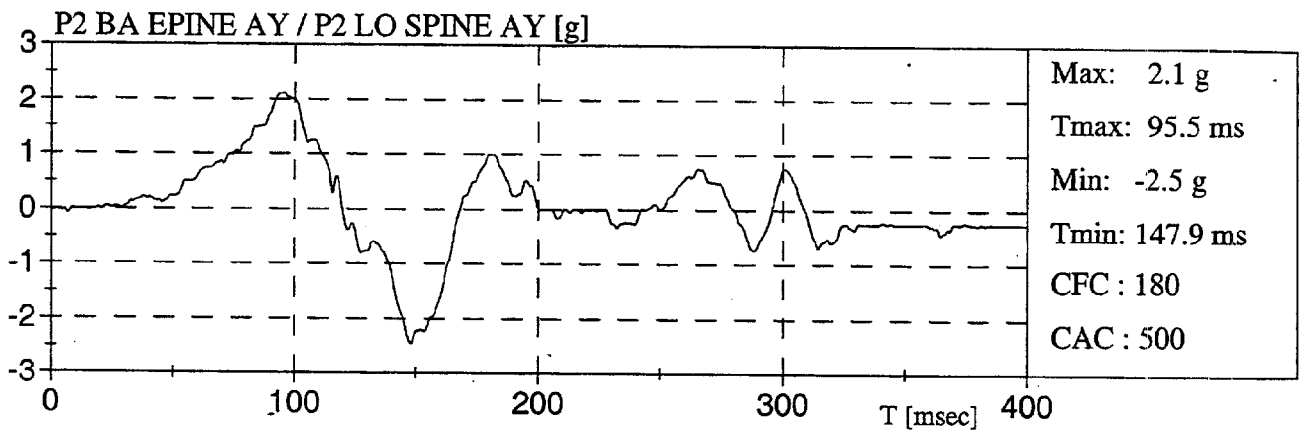
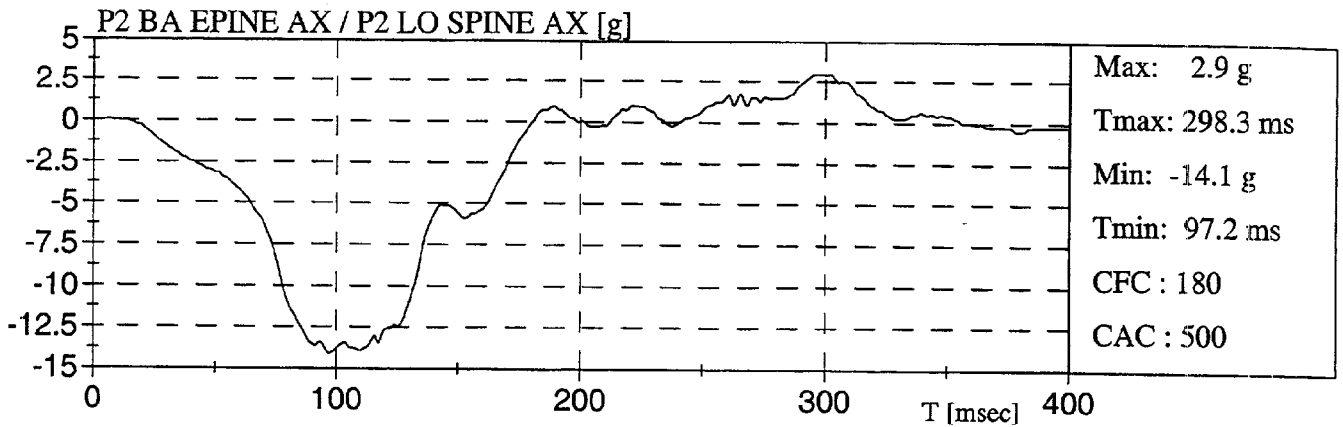


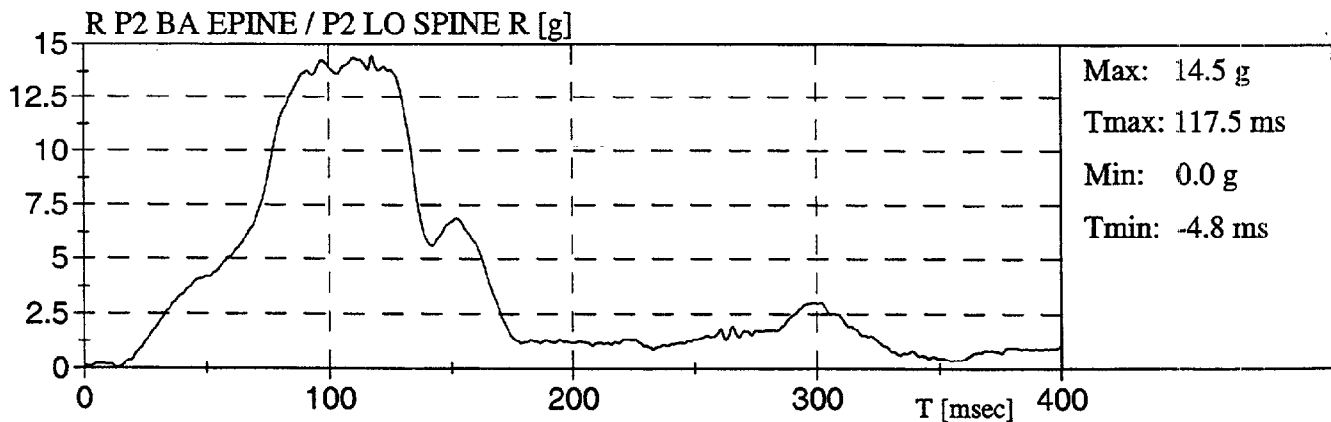
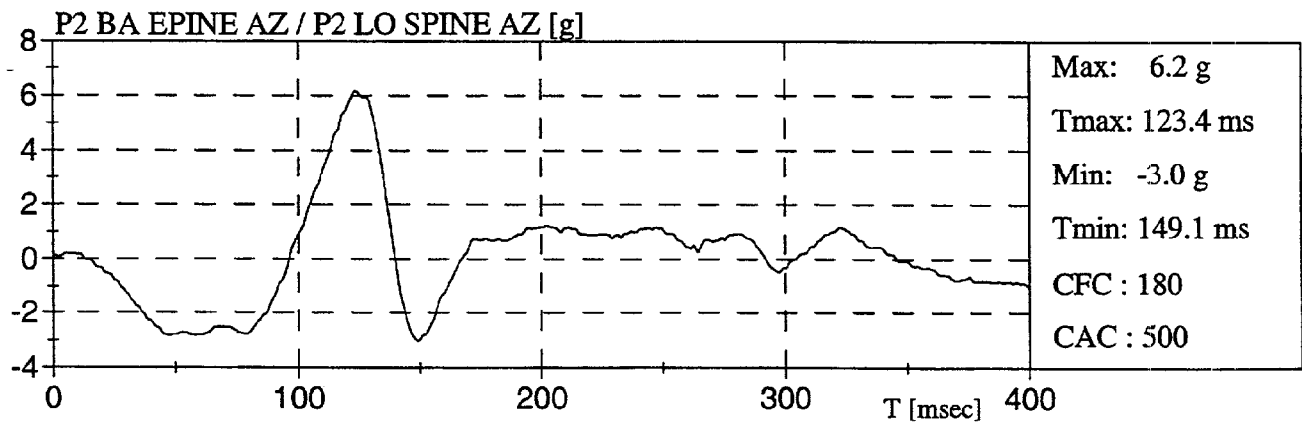
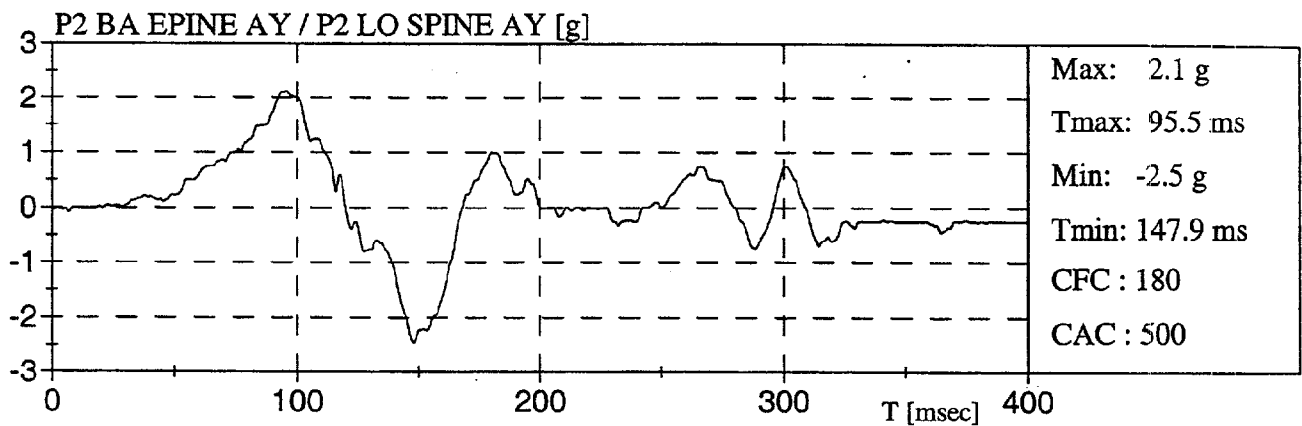
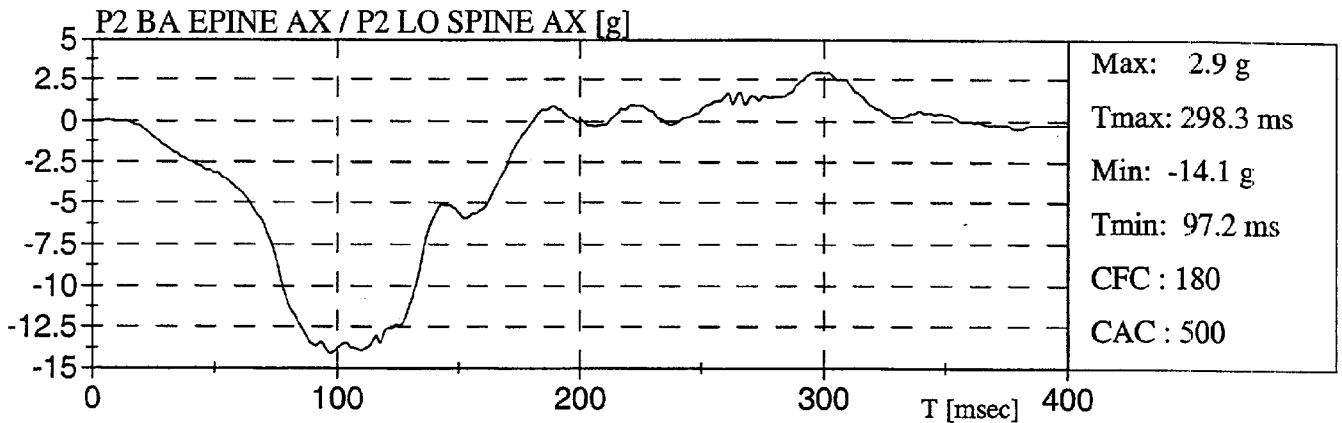


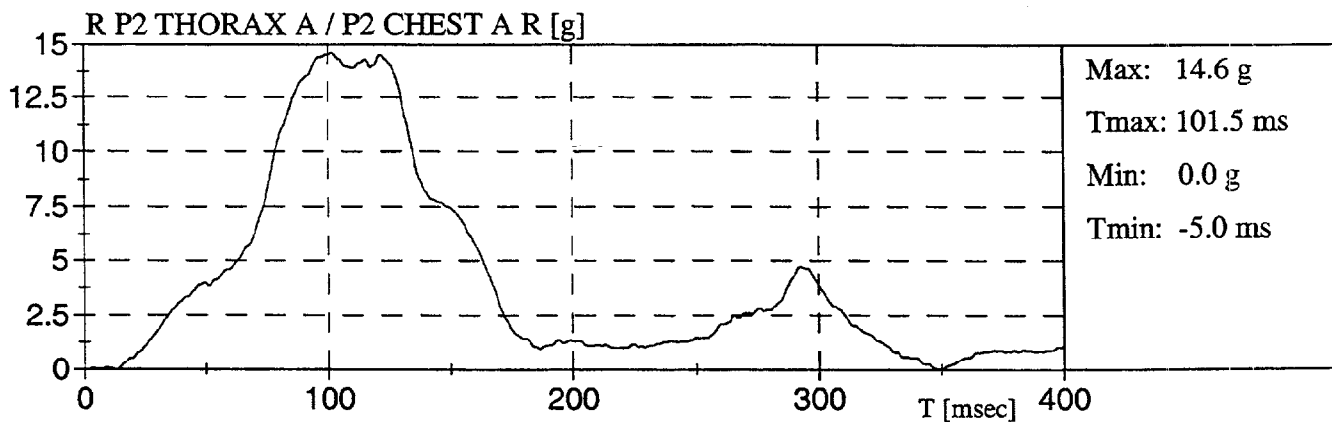
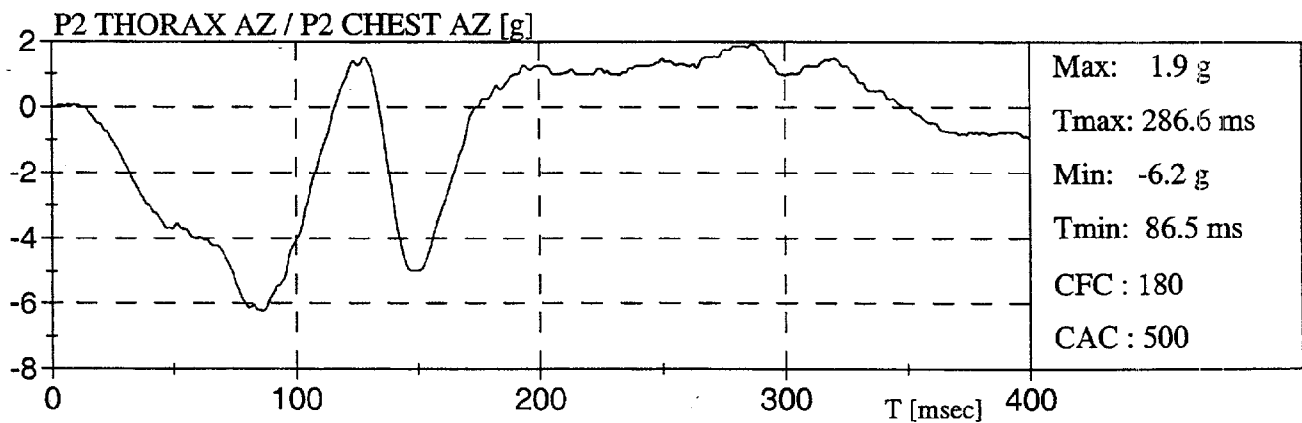
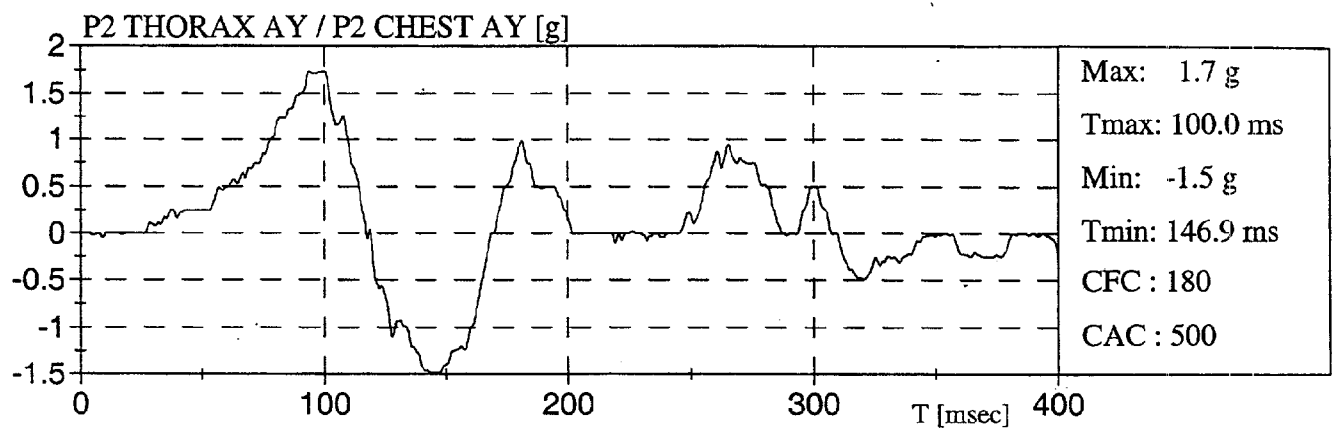
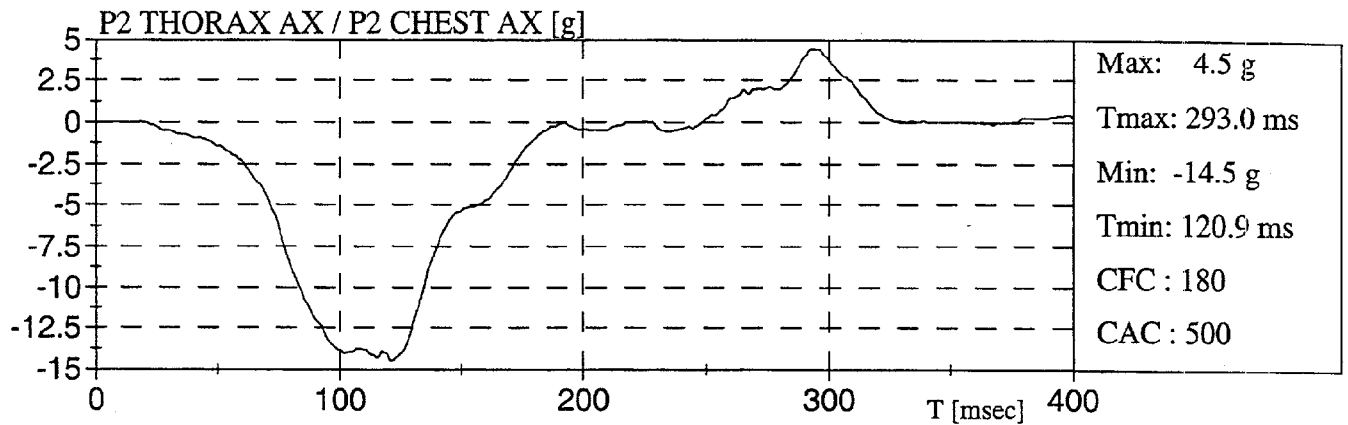














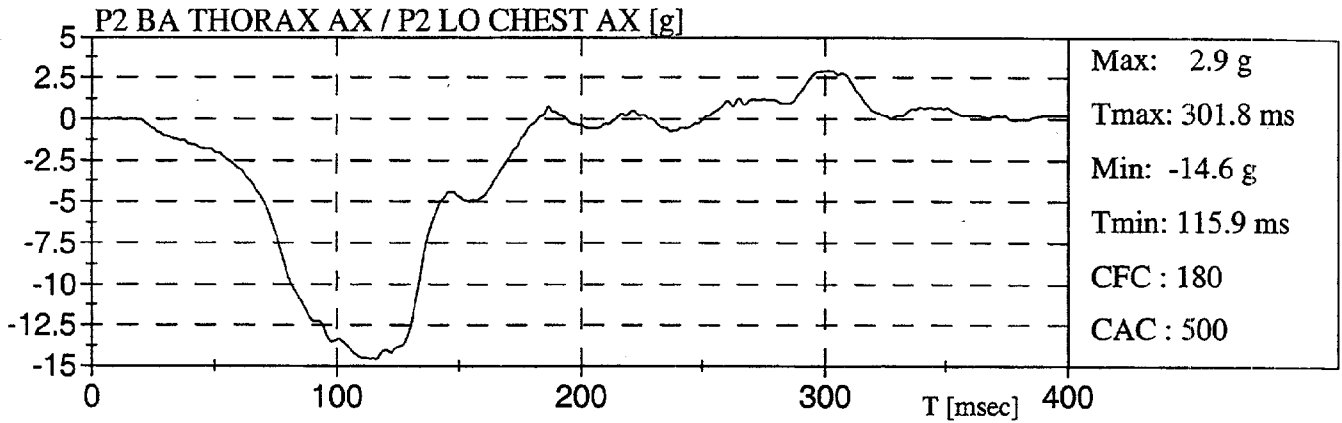
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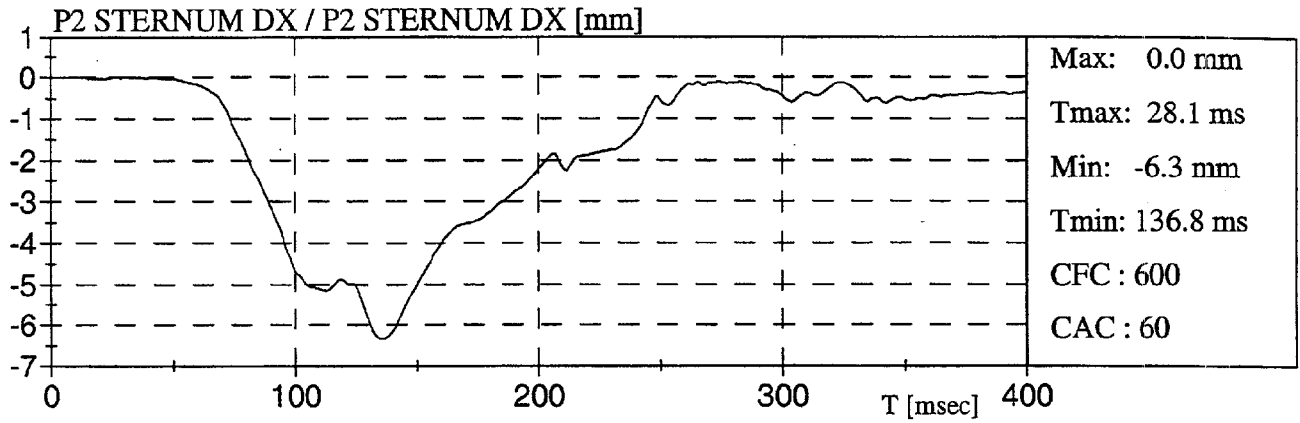
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OFFSET FRONTAL 34 KM/H - 40% LEFT

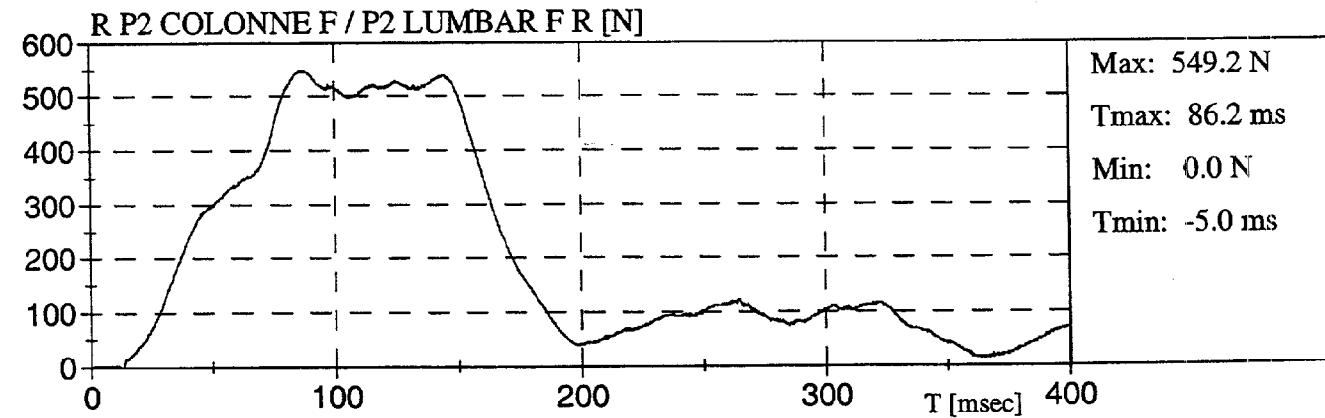
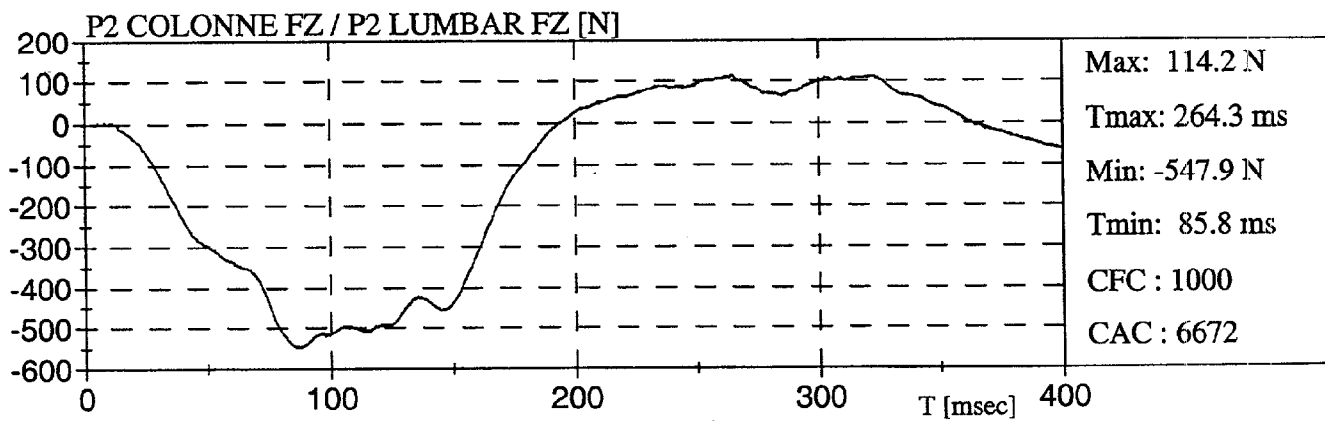
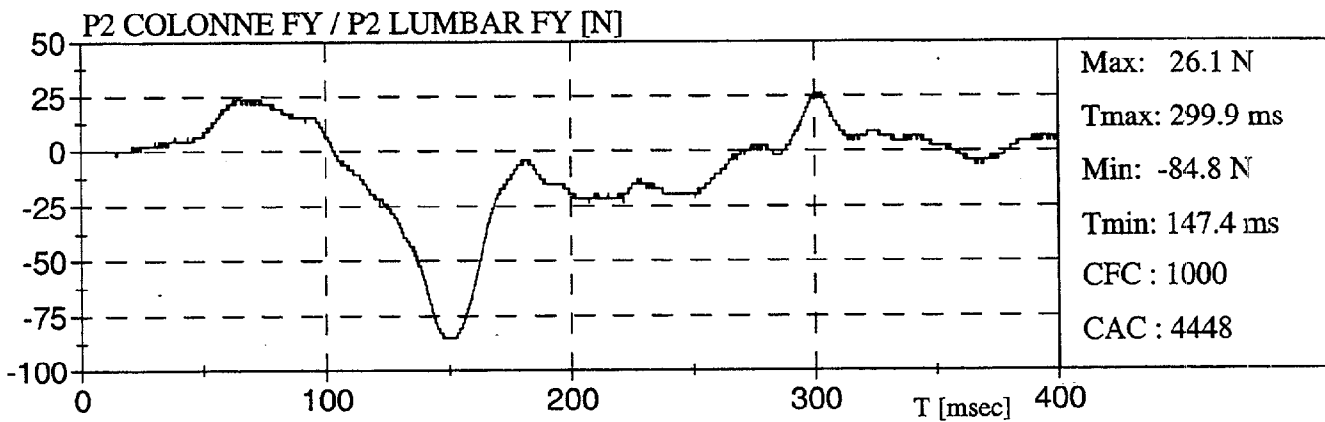
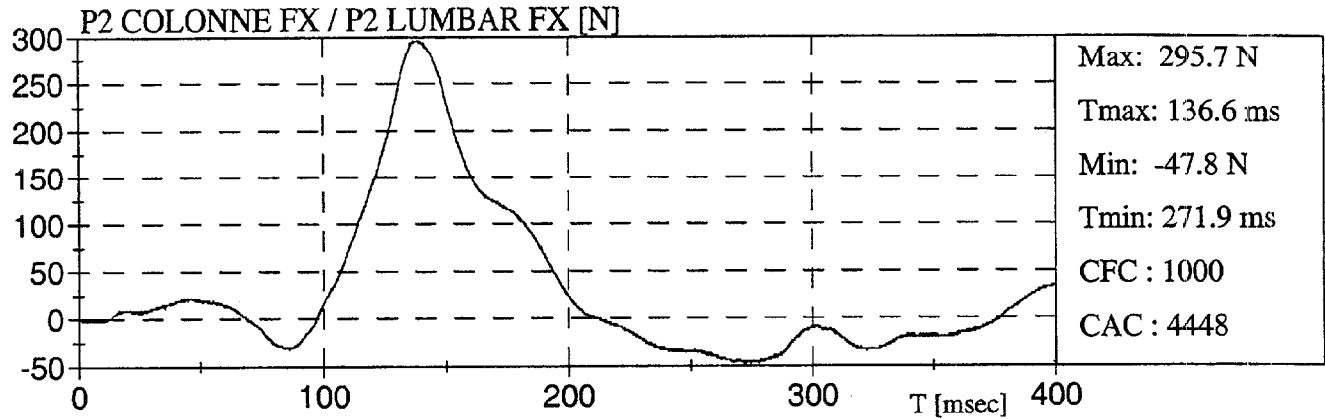
Date: 1999-01-27

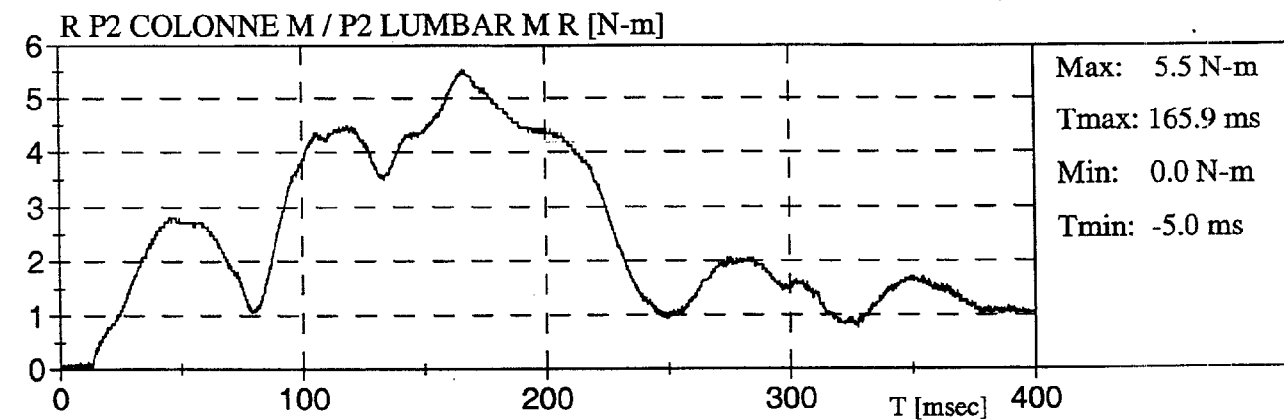
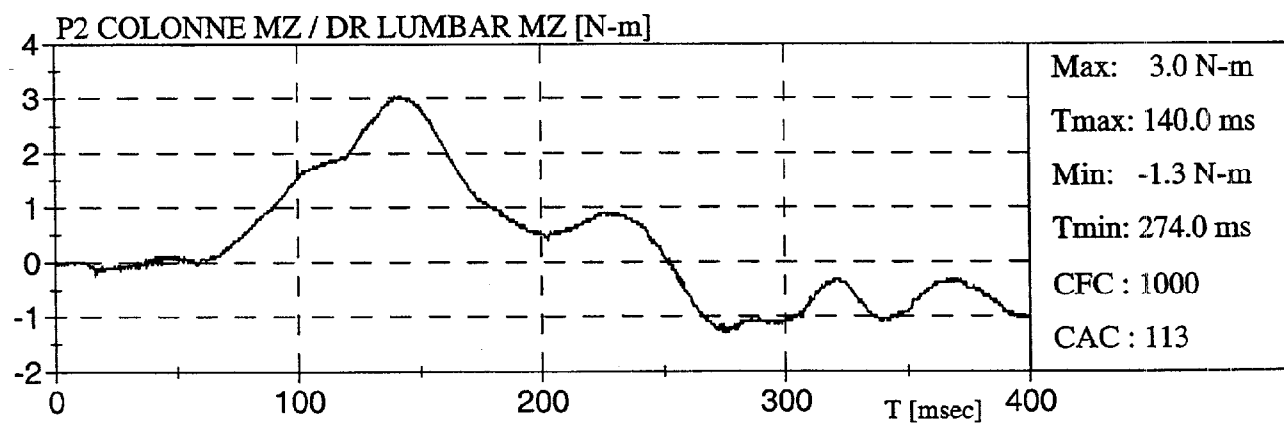
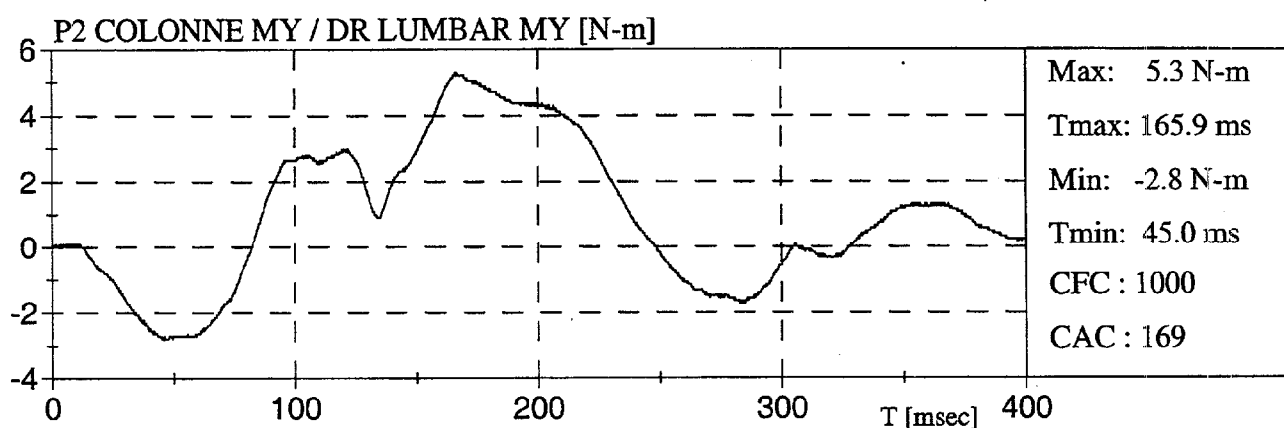
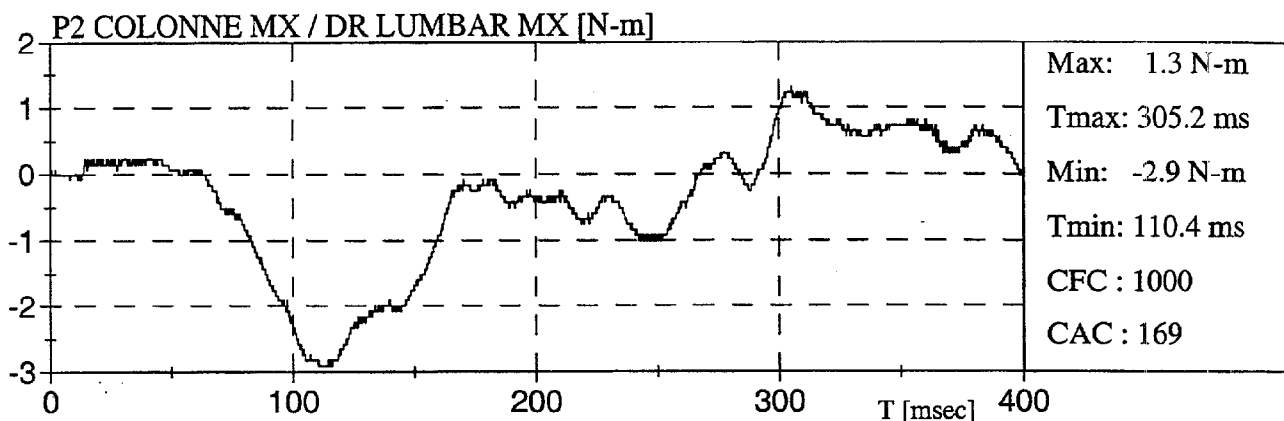
FORD TAURUS 99

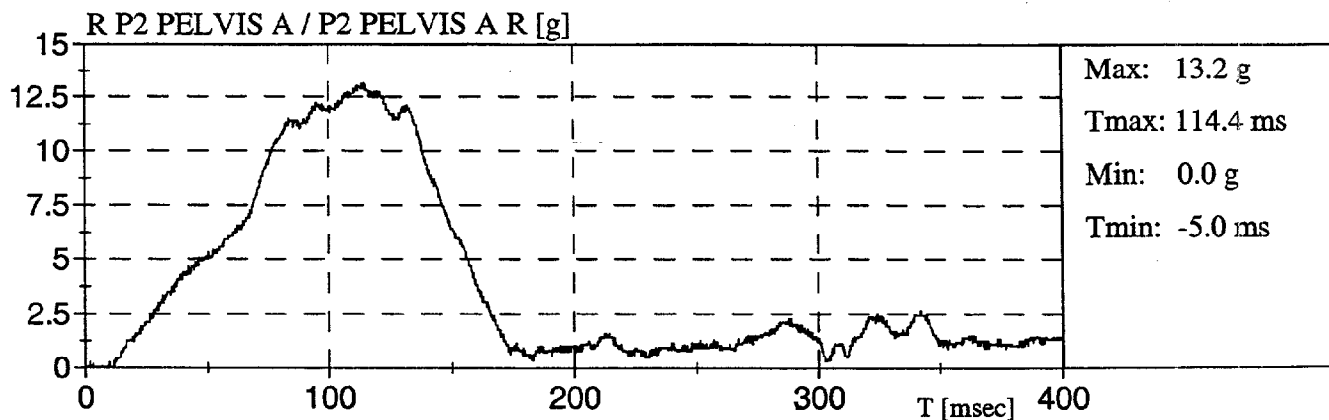
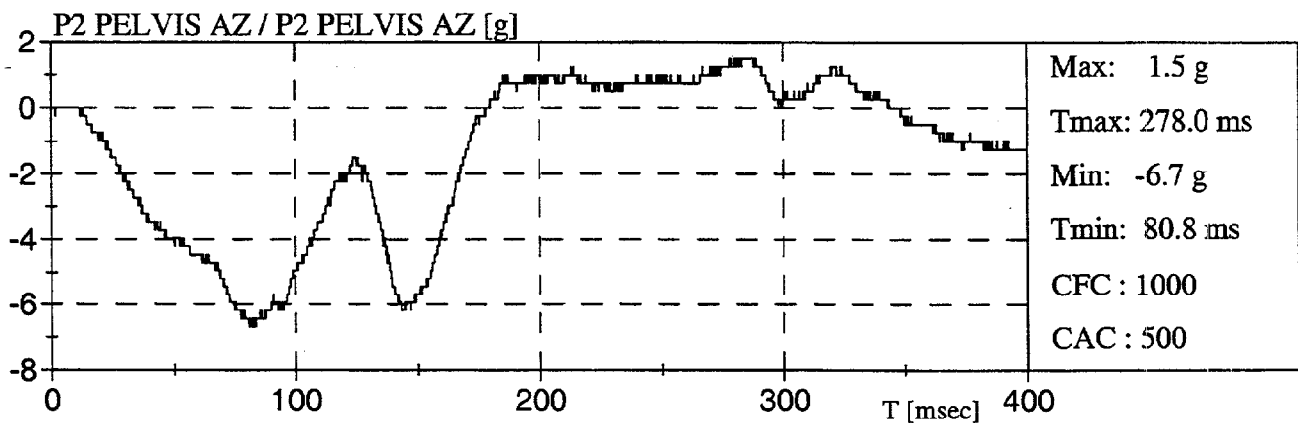
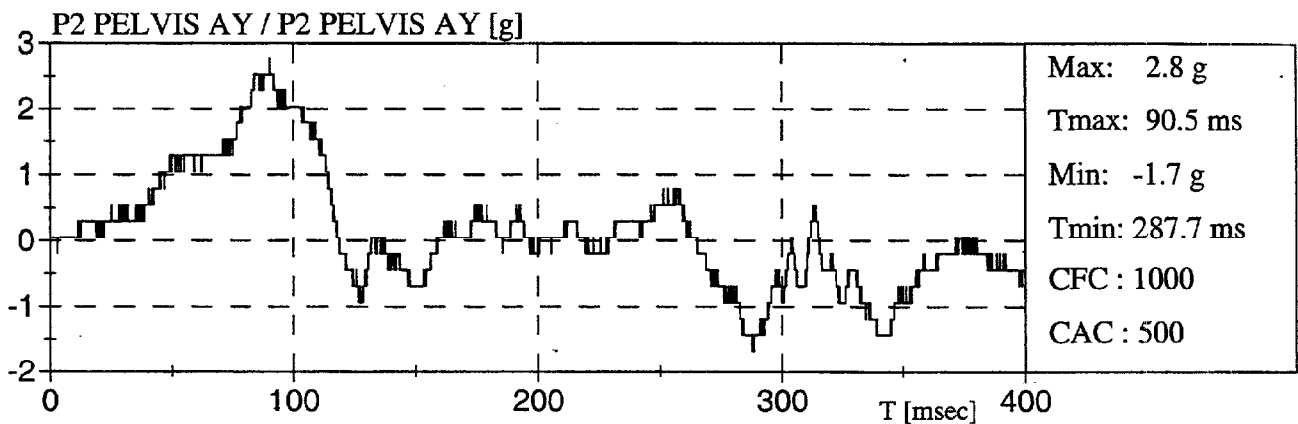
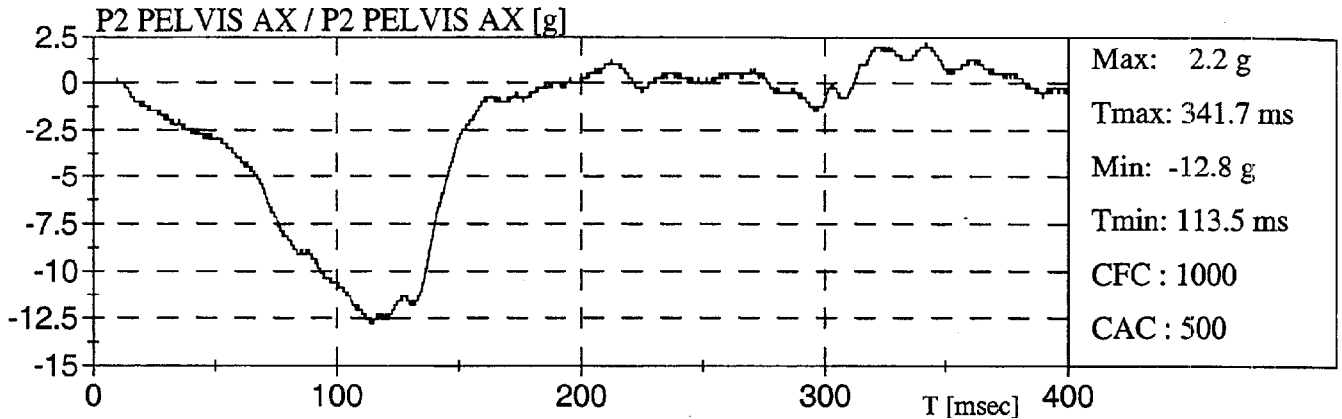
N° TC / TC No.: TC99-203

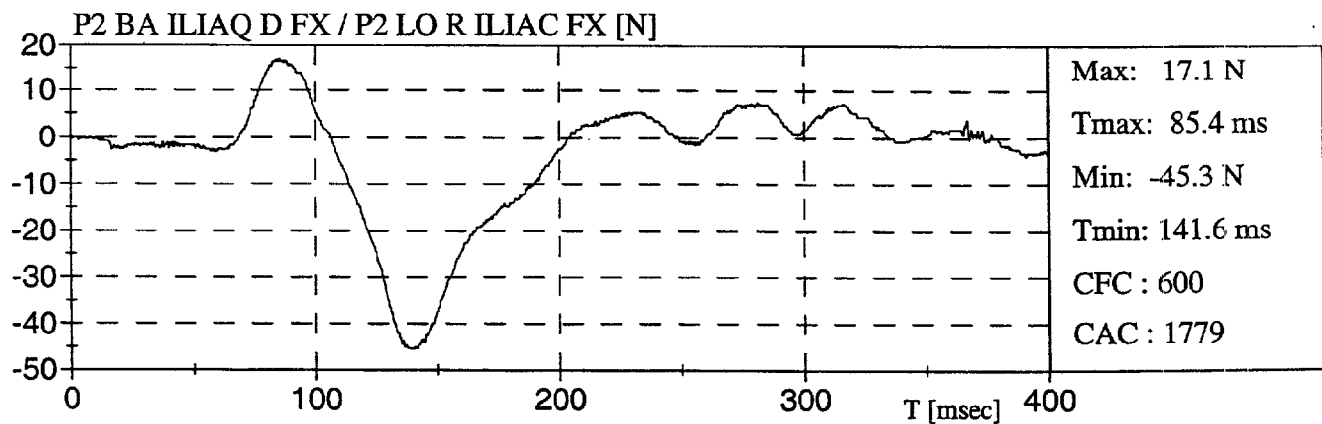
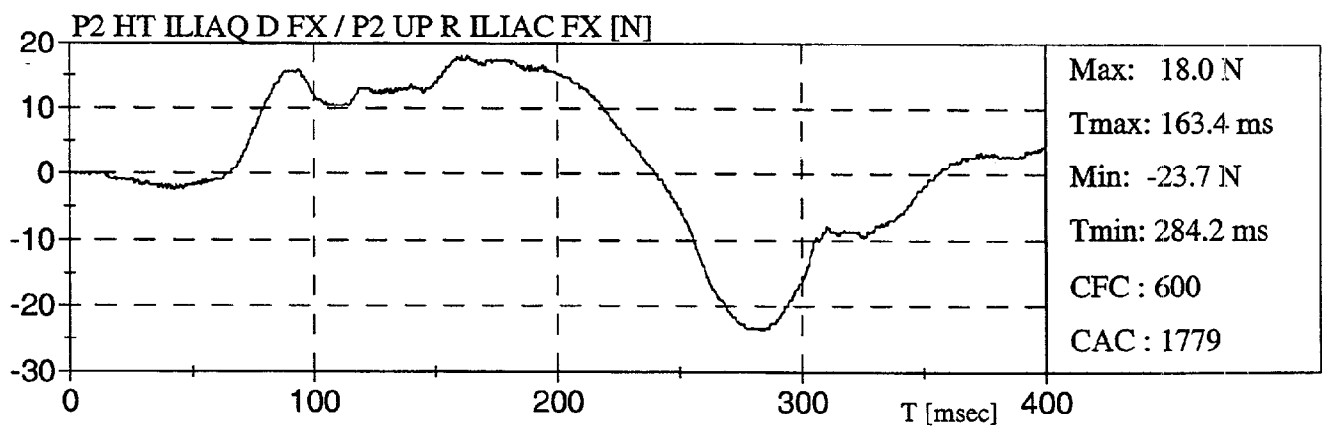
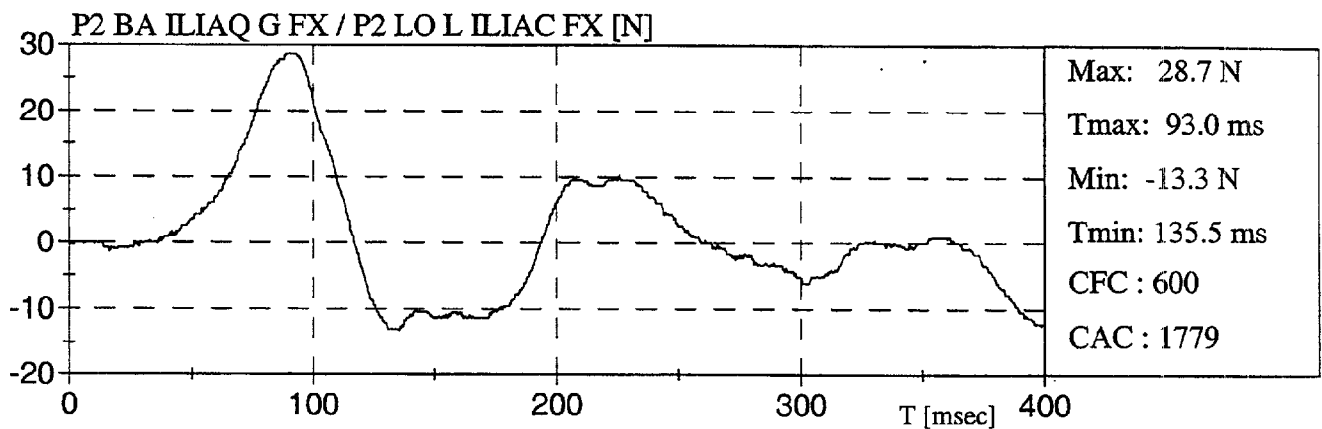
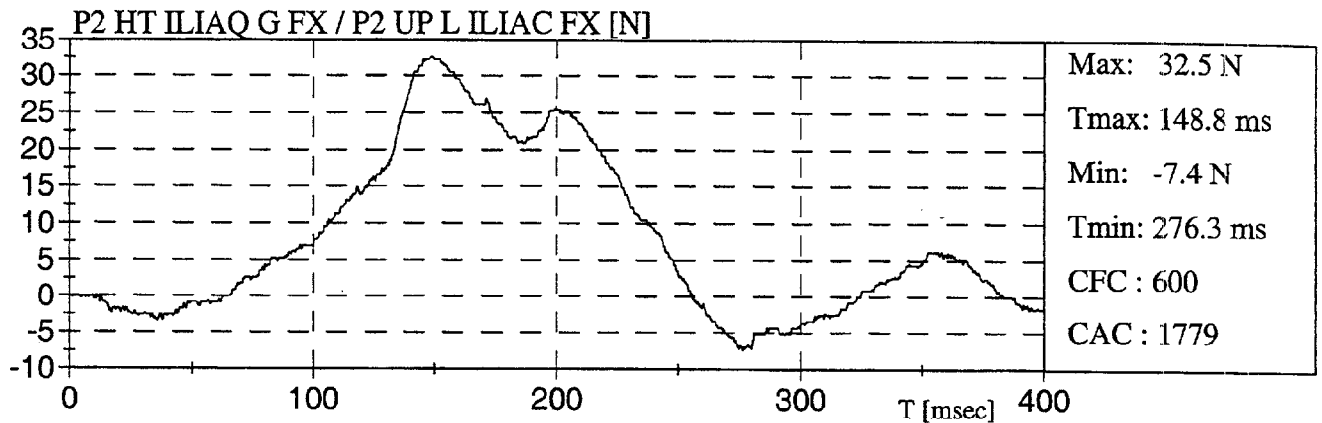


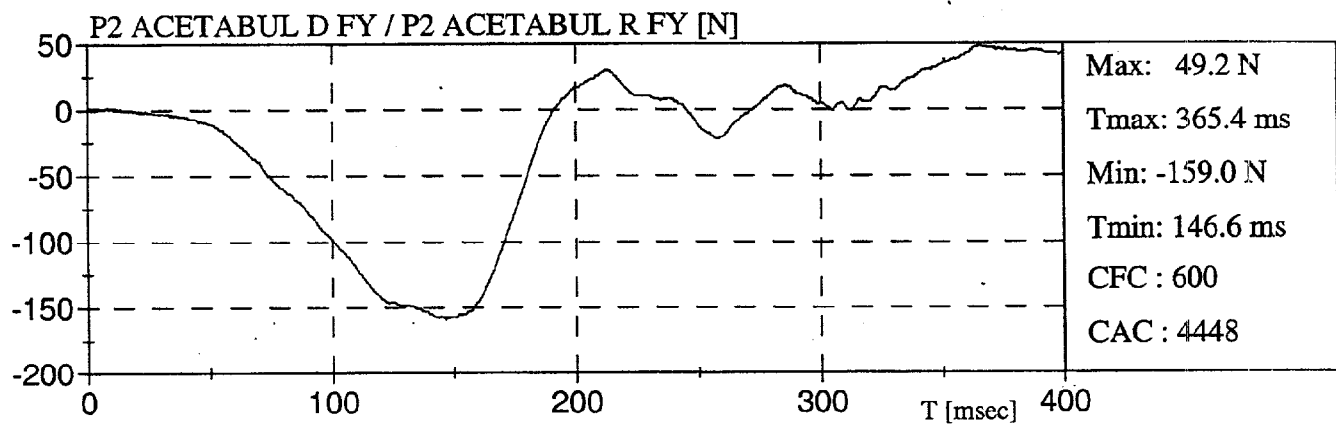
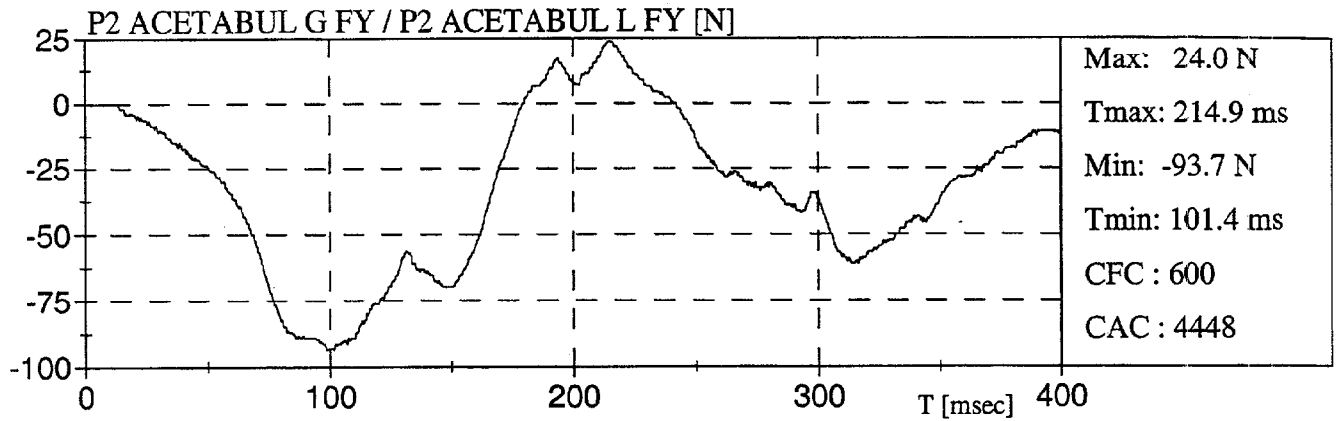


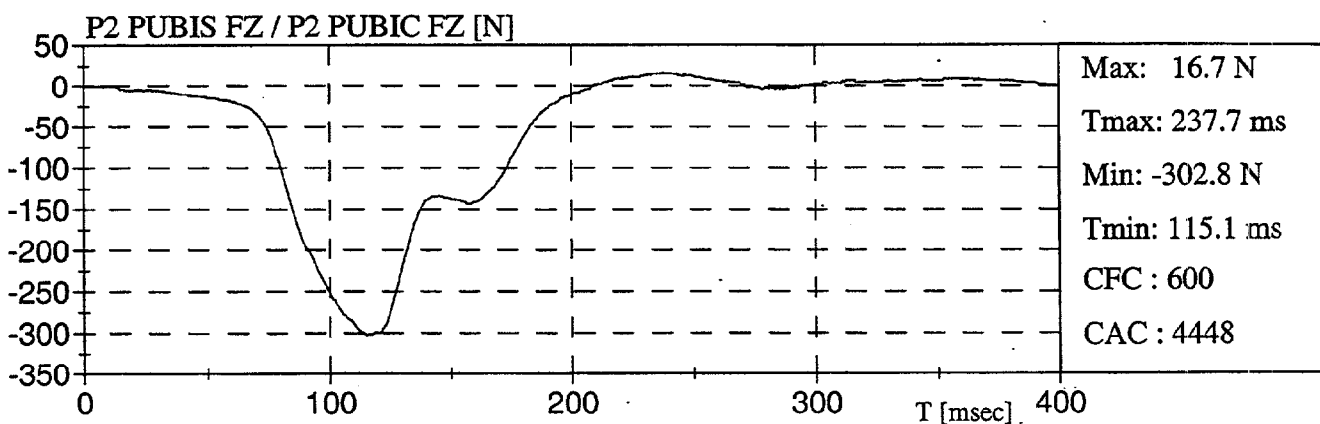
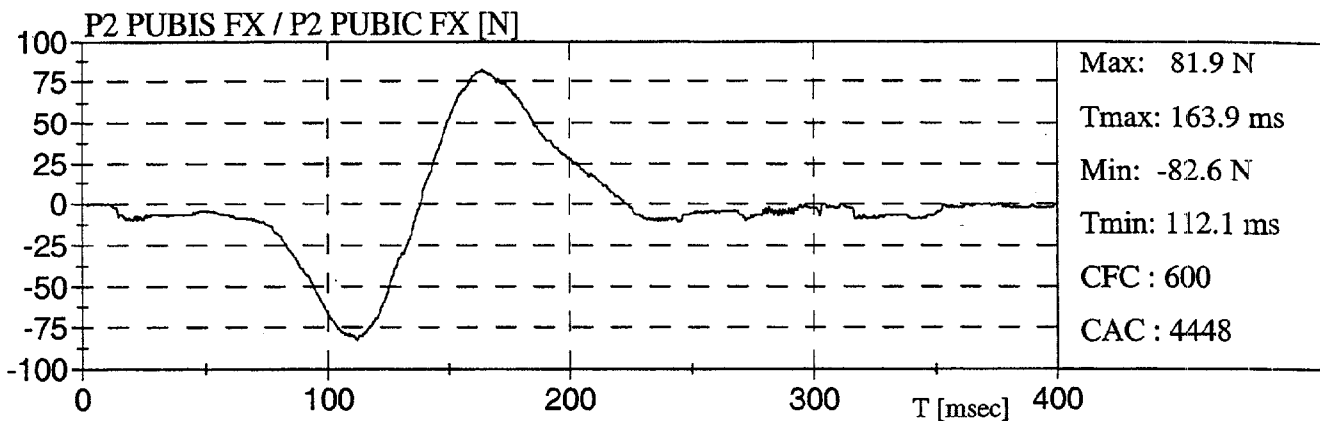


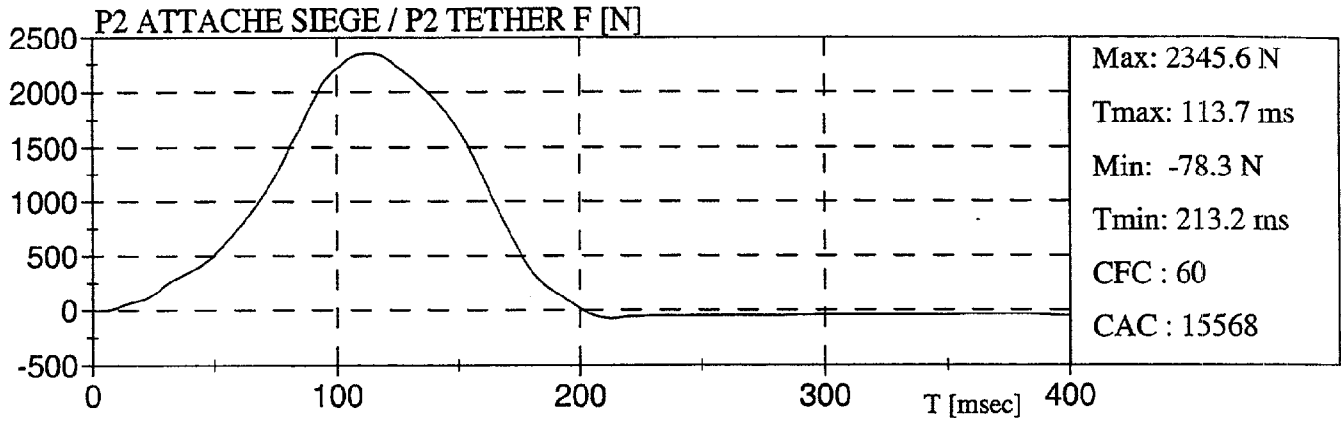


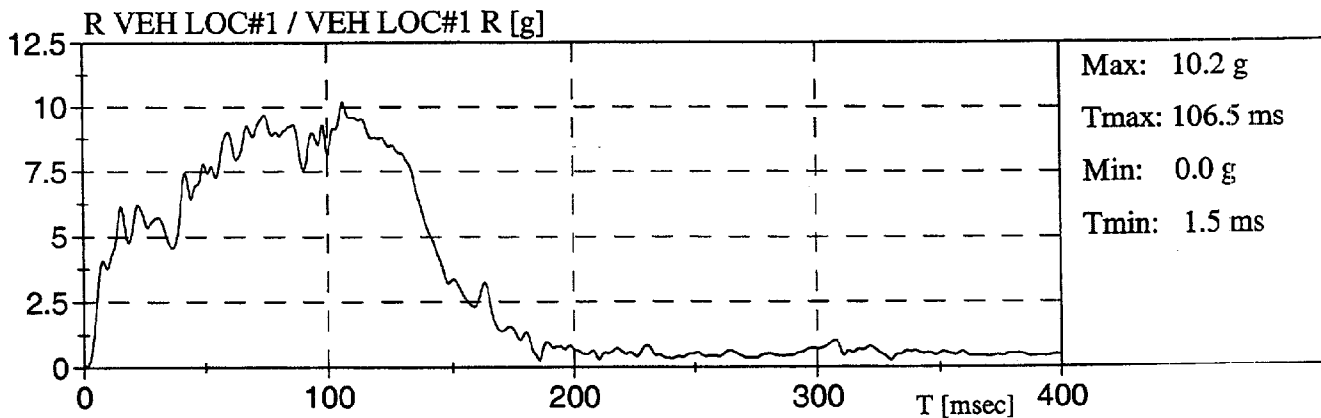
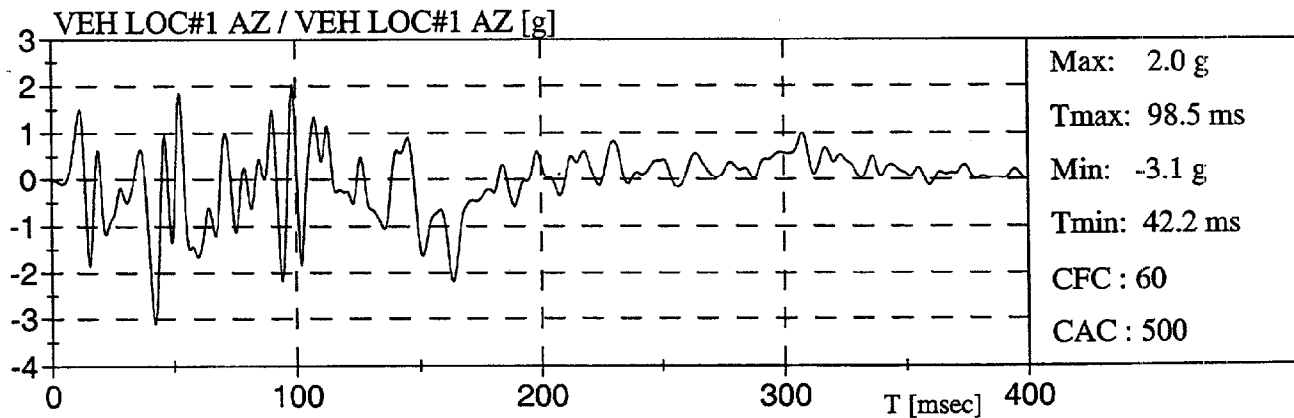
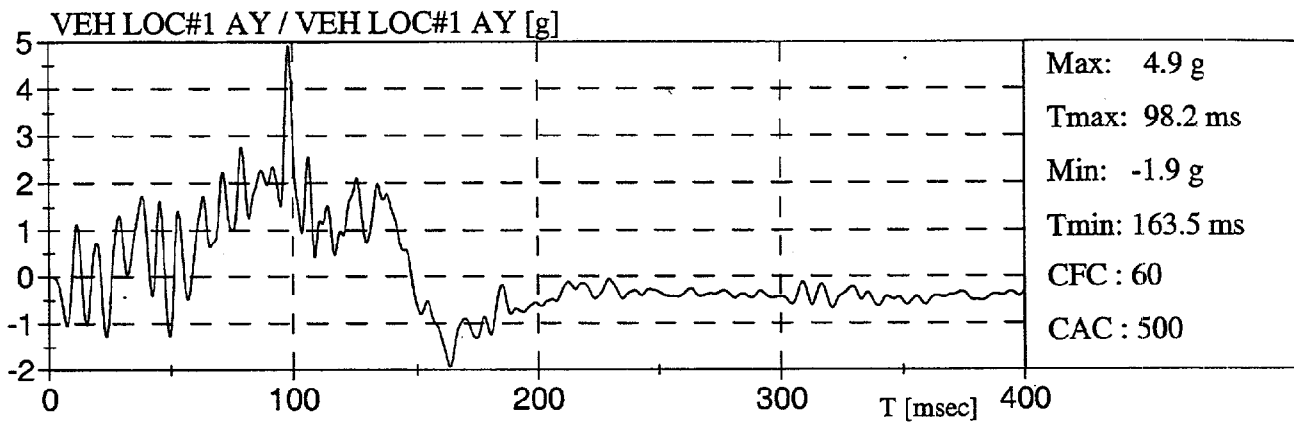
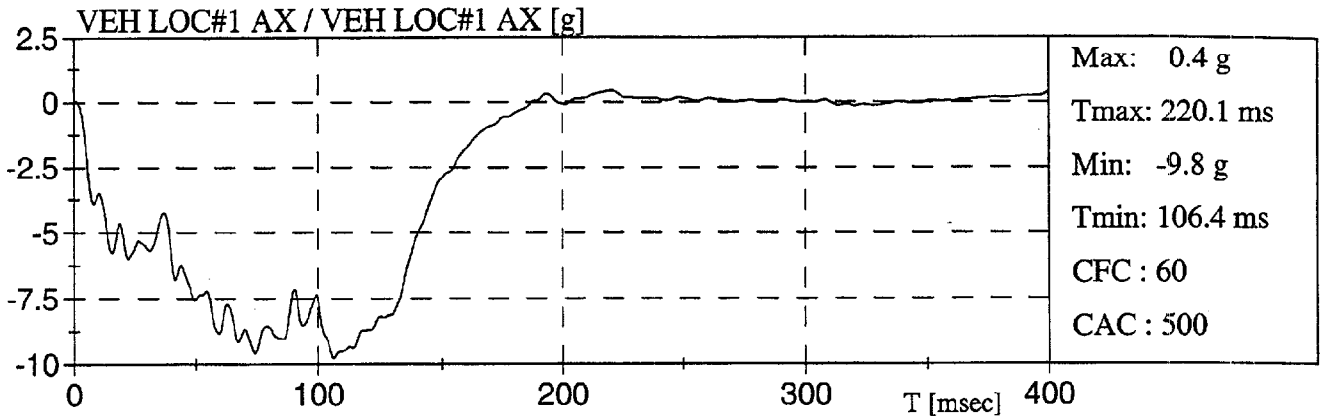


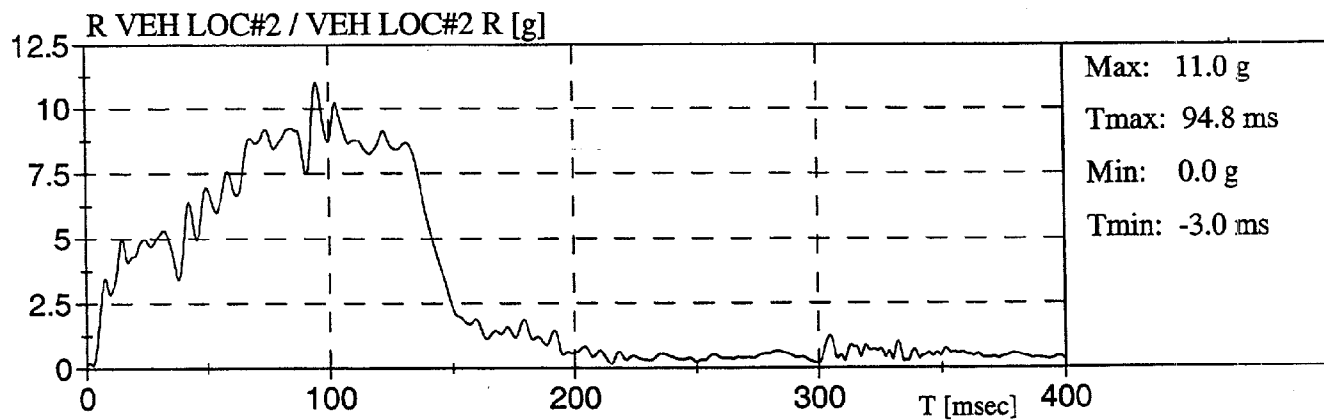
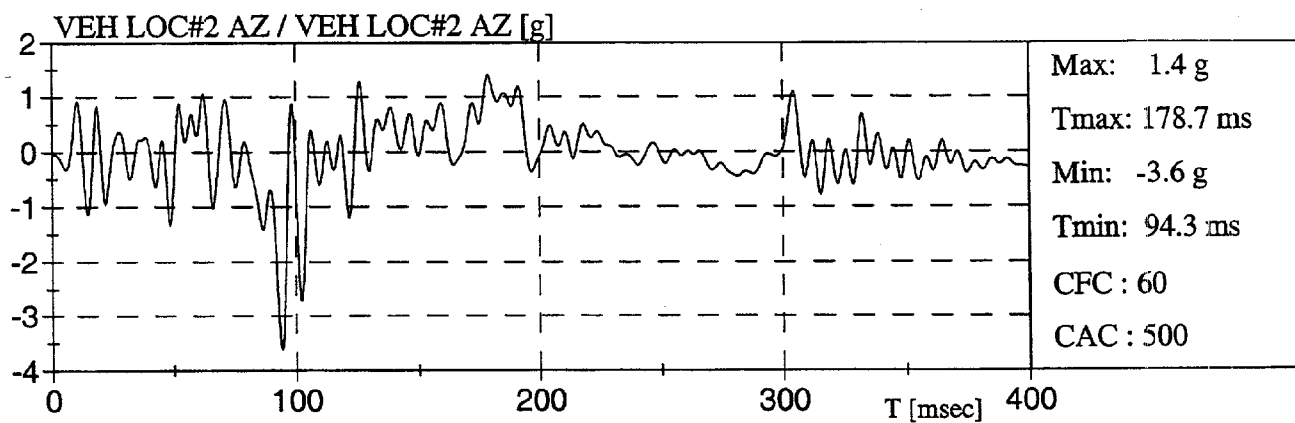
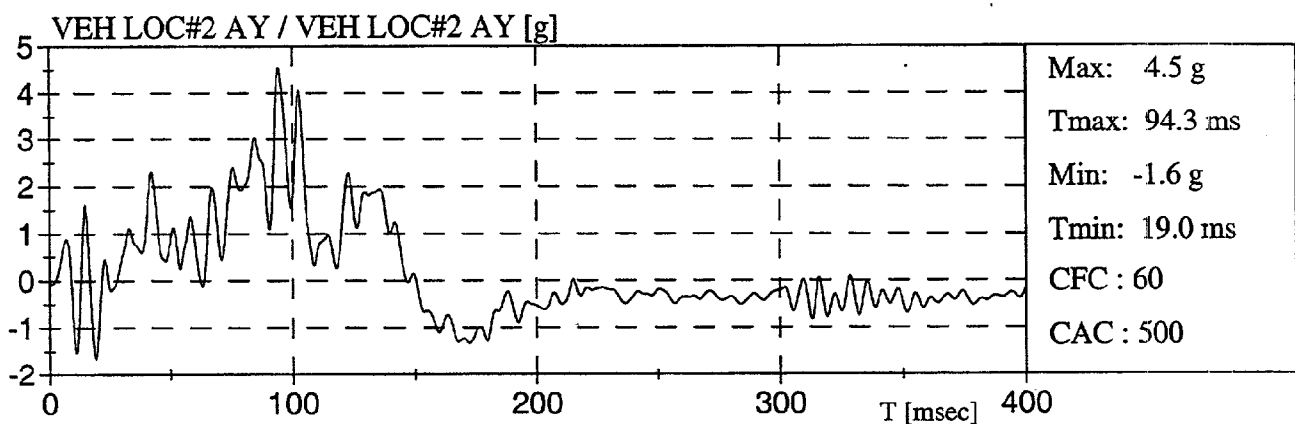
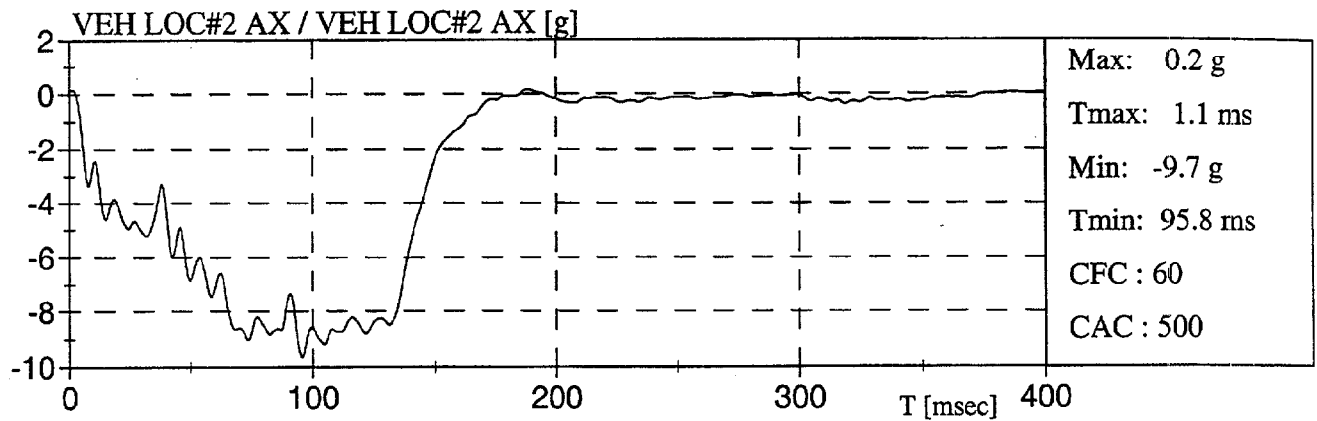


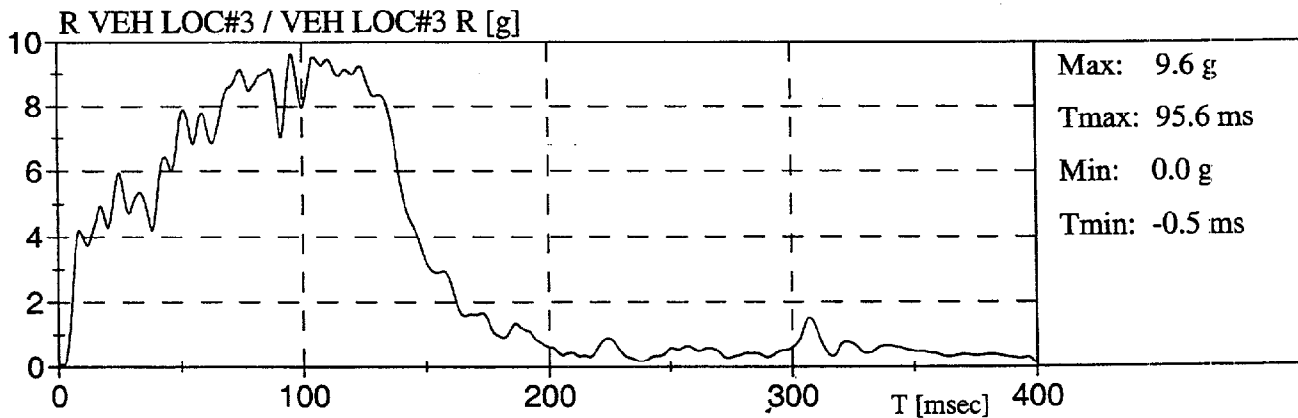
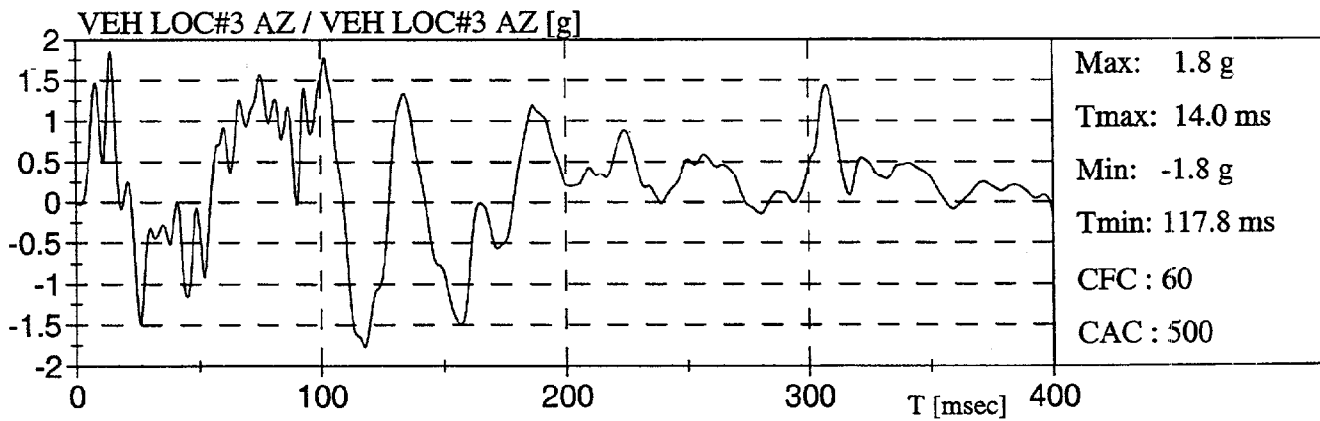
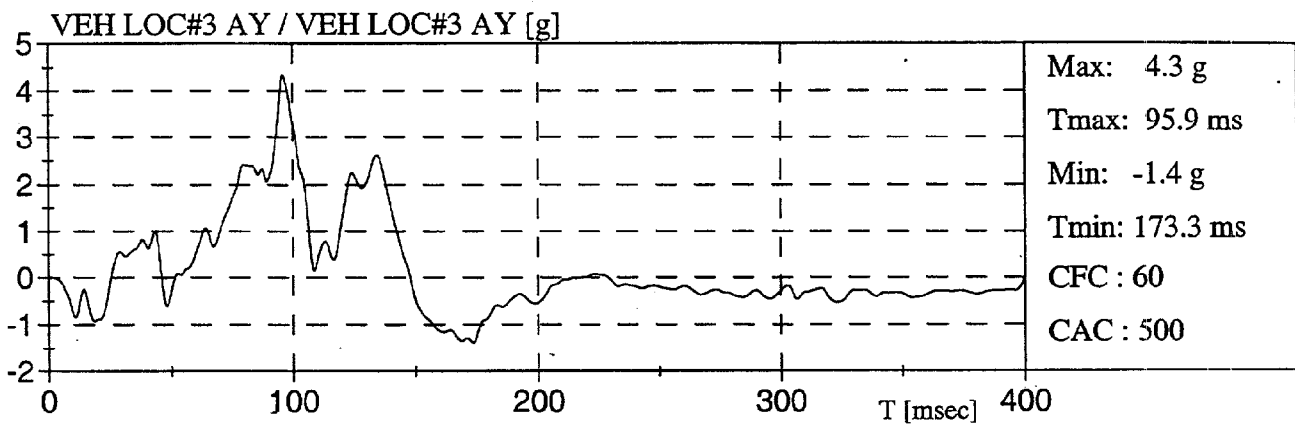
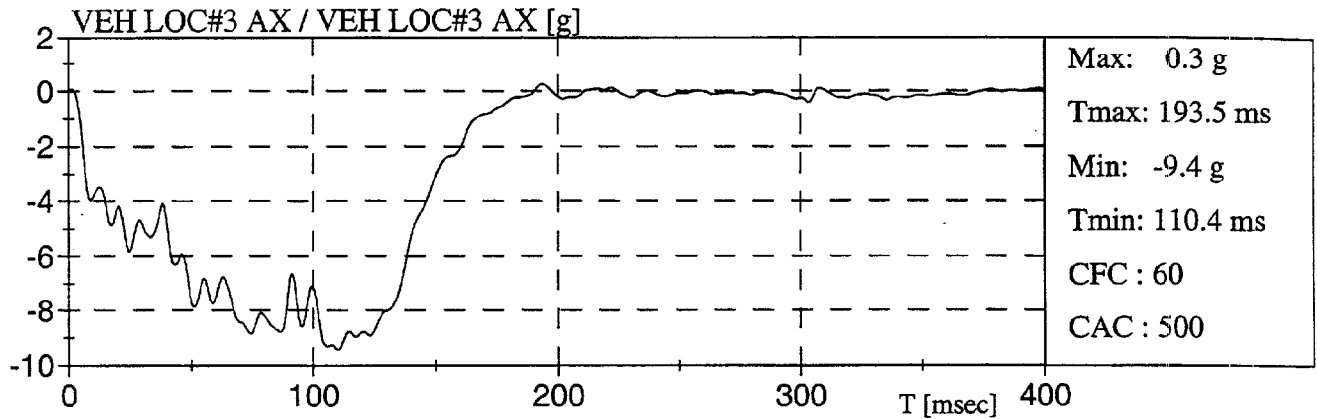


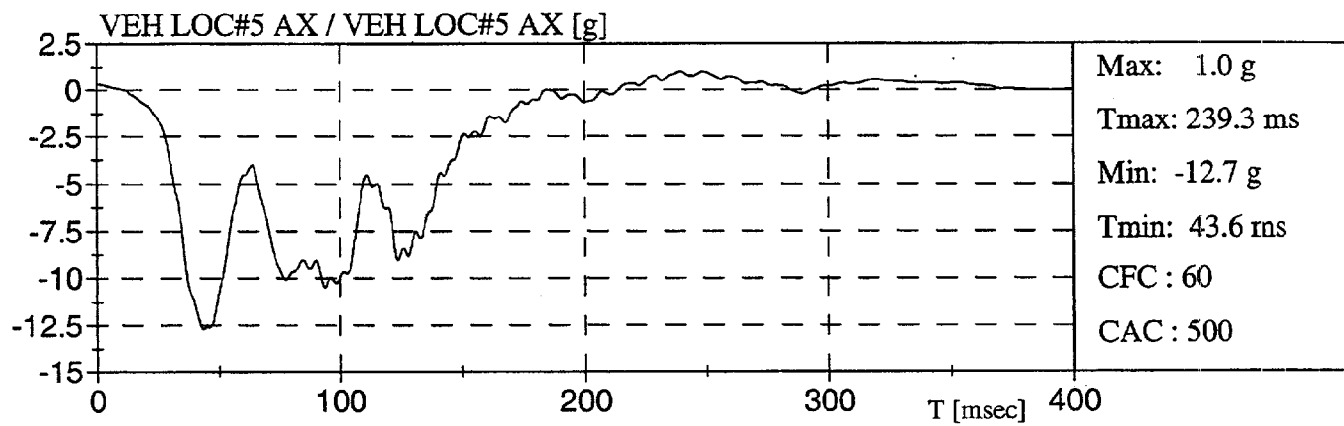
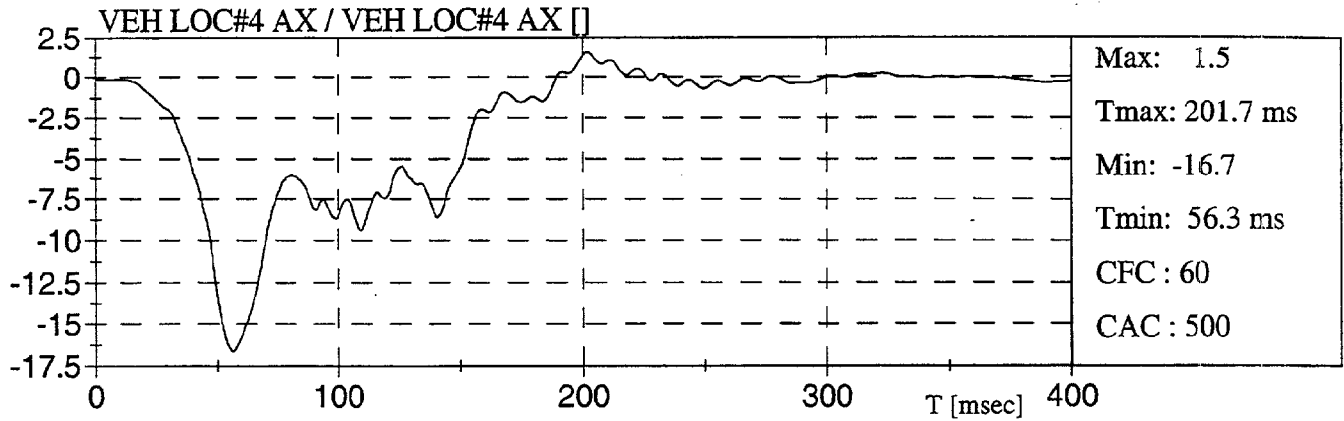


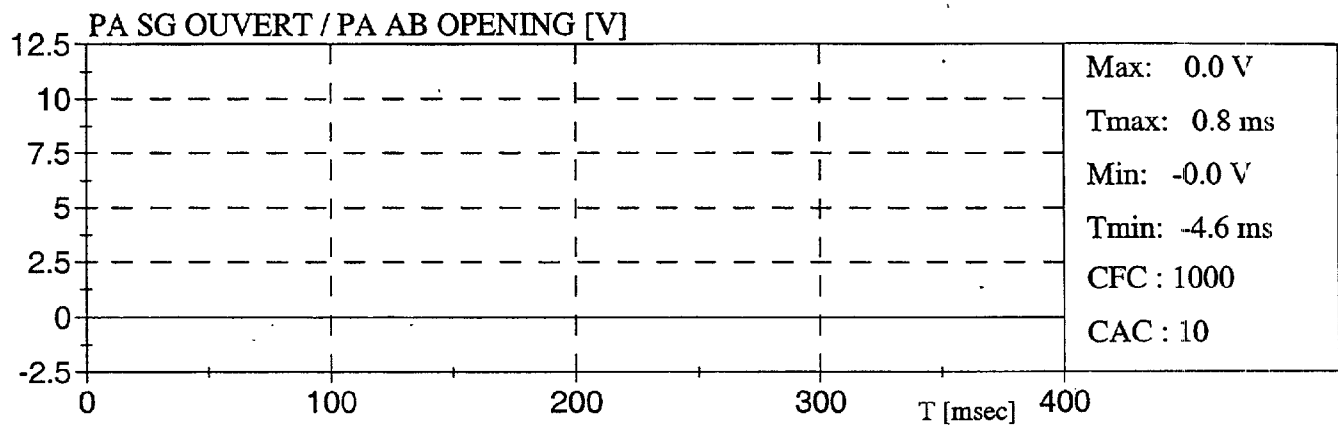
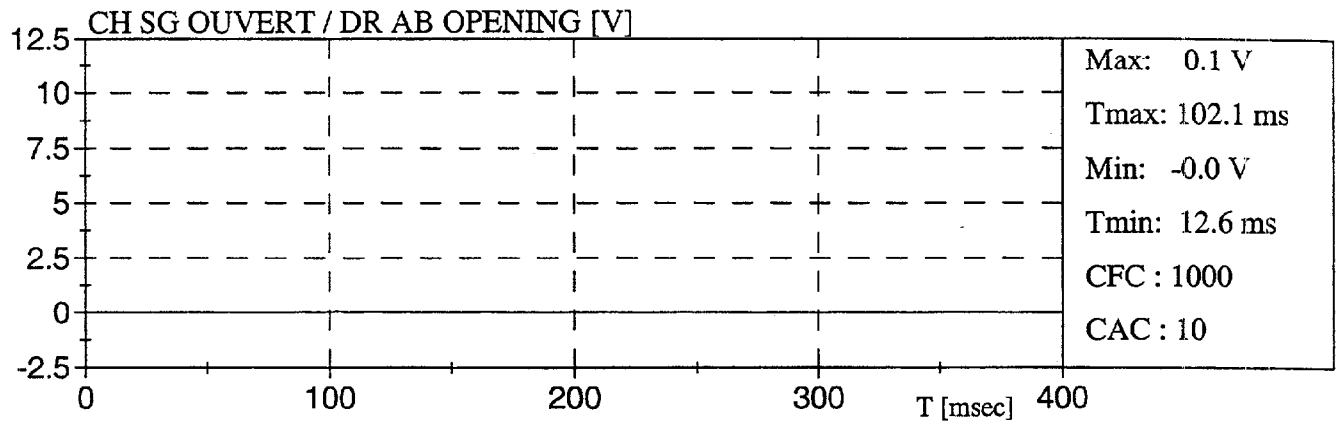














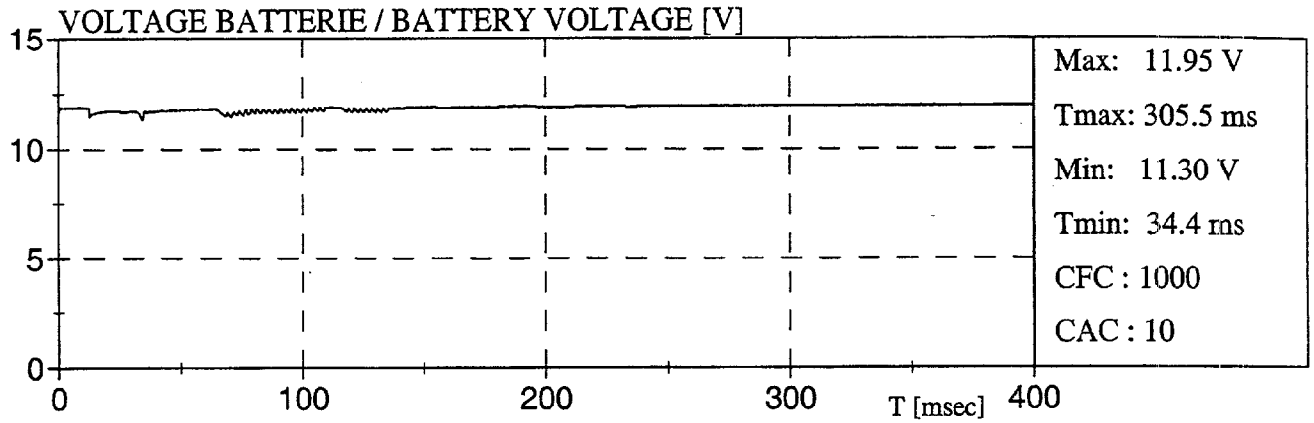
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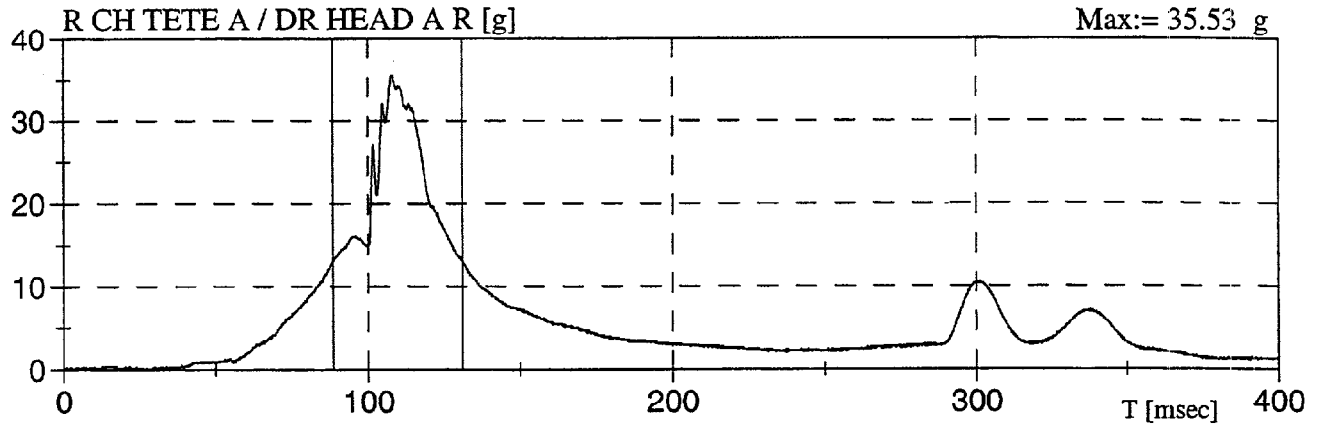
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OFFSET FRONTAL 34 KM/H - 40% LEFT

Date: 1999-01-27

FORD TAURUS 99

N° TC / TC No.: TC99-203

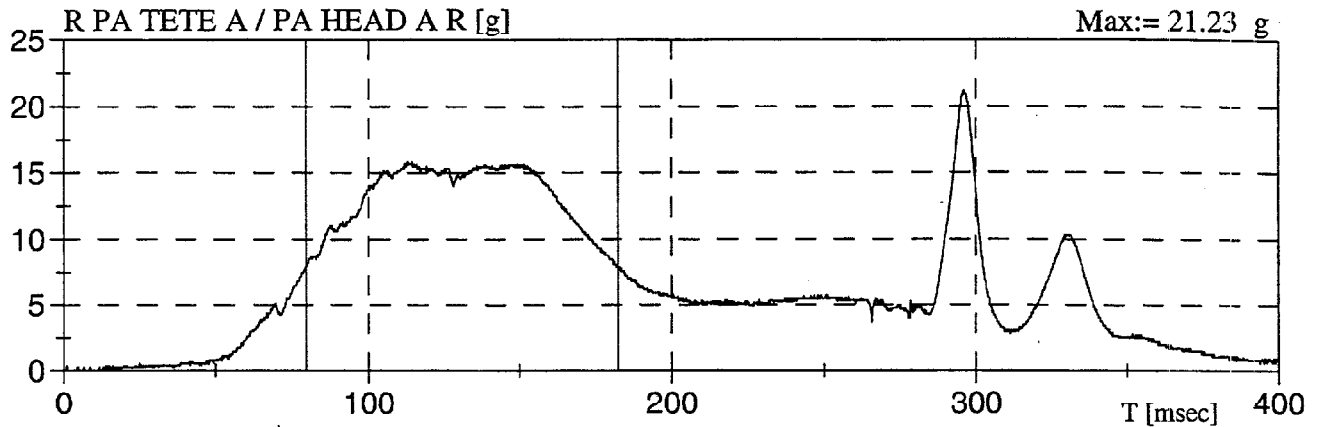




HEAD INJURY CRITERIA (HIC) *
CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 95	HIC(36ms):= 95	HIC(15ms):= 81
T1:= 88.6 ms	T1:= 92.1 ms	T1:= 103.6 ms
T2:= 131.0 ms	T2:= 128.1 ms	T2:= 118.6 ms

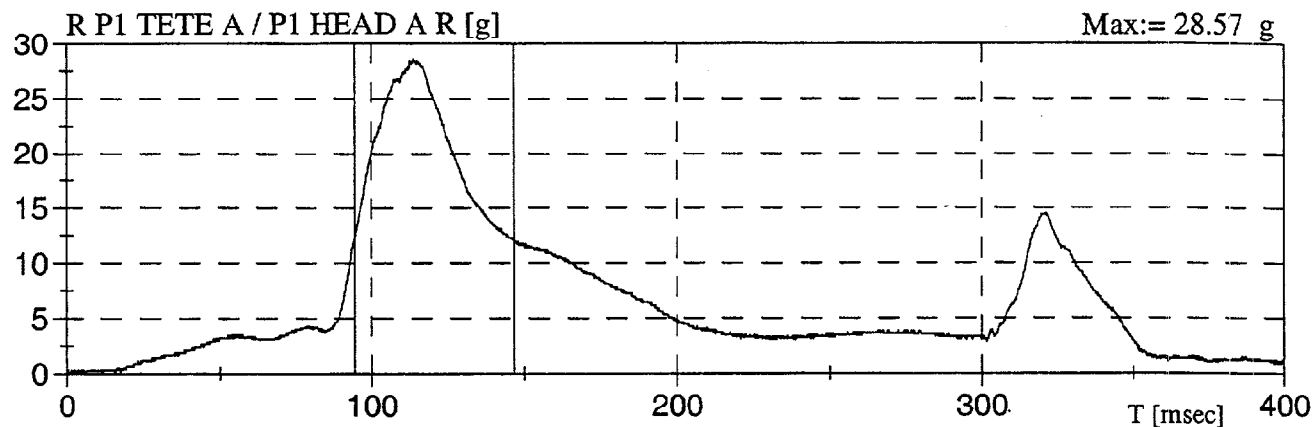
* Selon / According To: SAE J1727 96-08



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

HIC:= 66	HIC(36ms):= 33	HIC(15ms):= 14
T1:= 79.4 ms	T1:= 112.1 ms	T1:= 137.4 ms
T2:= 182.4 ms	T2:= 148.1 ms	T2:= 152.4 ms

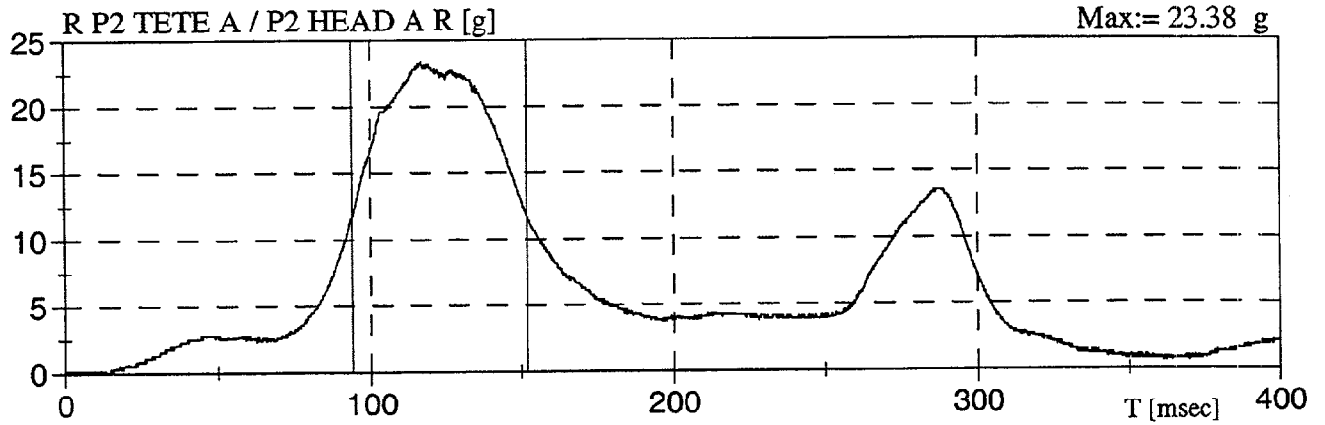
* Selon / According To: SAE J1727 96-08



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

HIC:= 97	HIC(36ms):= 94	HIC(15ms):= 57
T1:= 94.5 ms	T1:= 97.3 ms	T1:= 105.4 ms
T2:= 146.7 ms	T2:= 133.3 ms	T2:= 120.4 ms

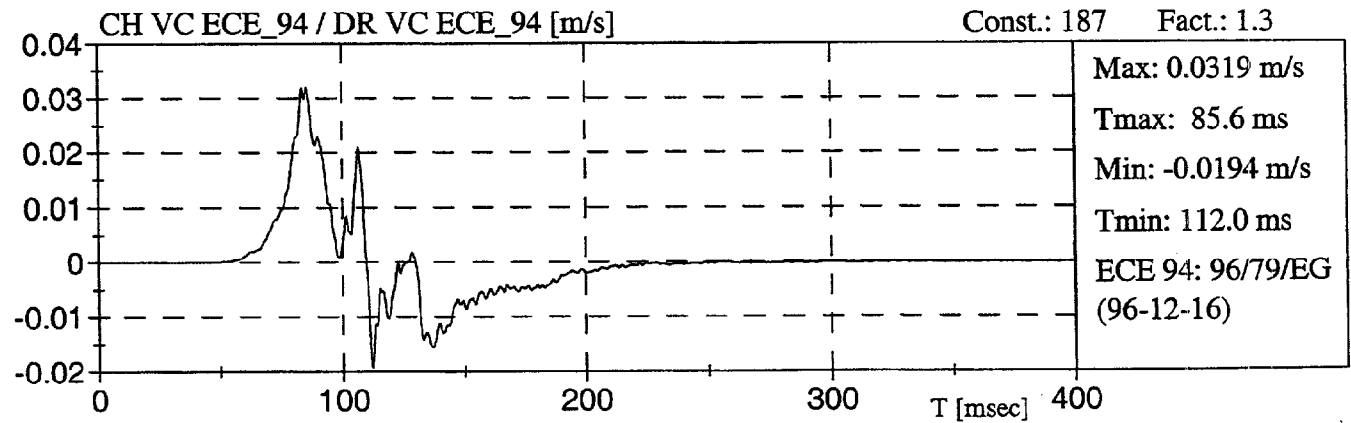
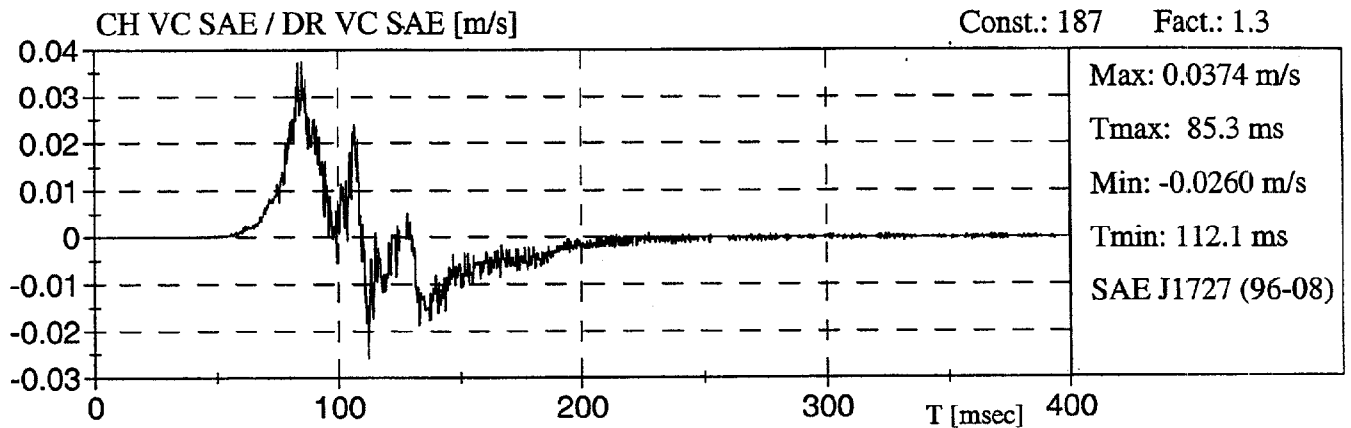
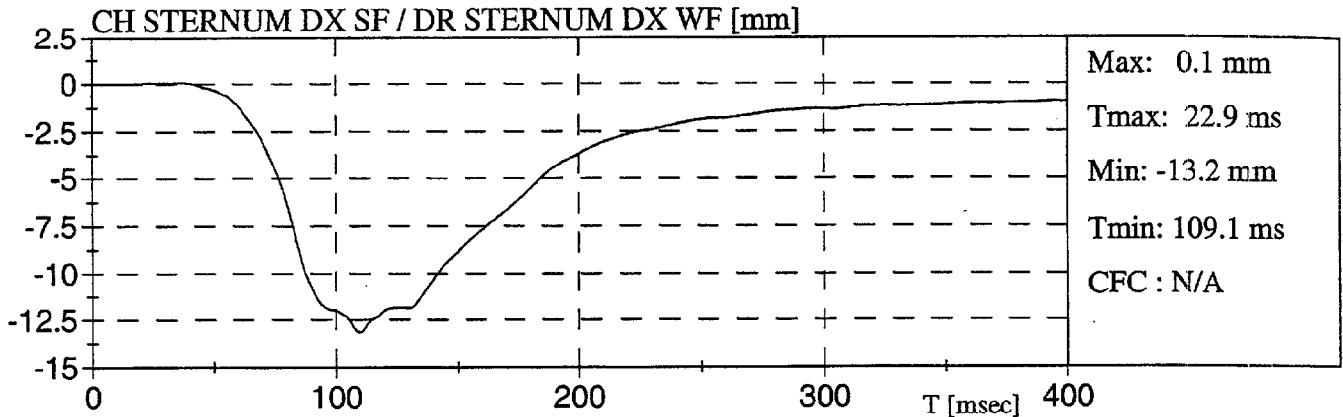
* Selon / According To: SAE J1727 96-08

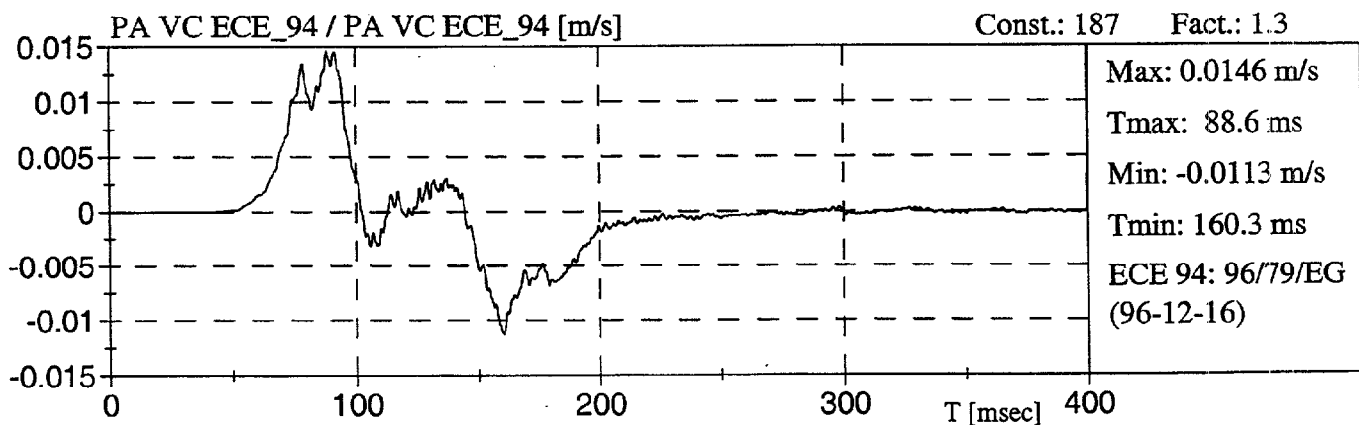
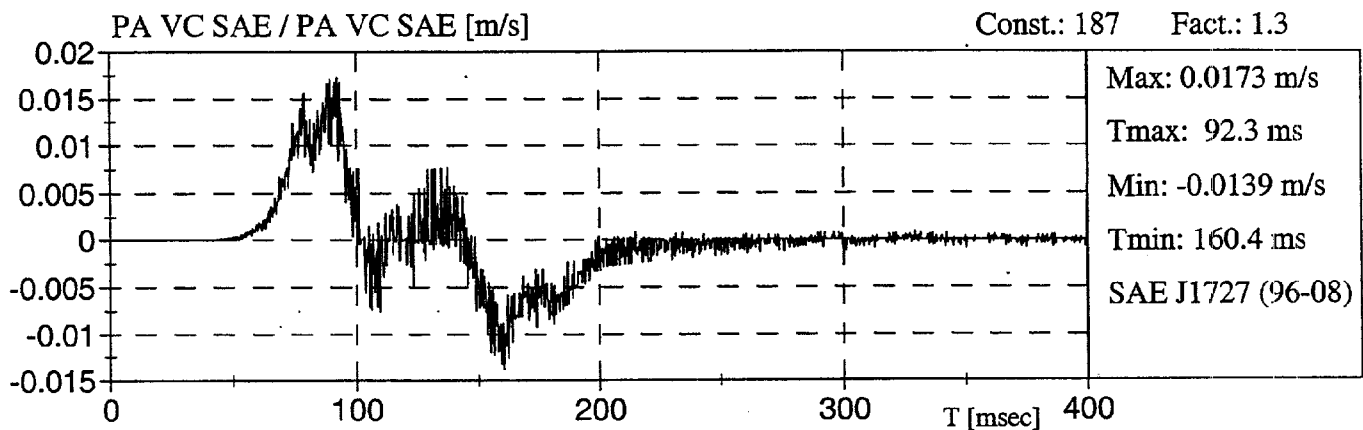
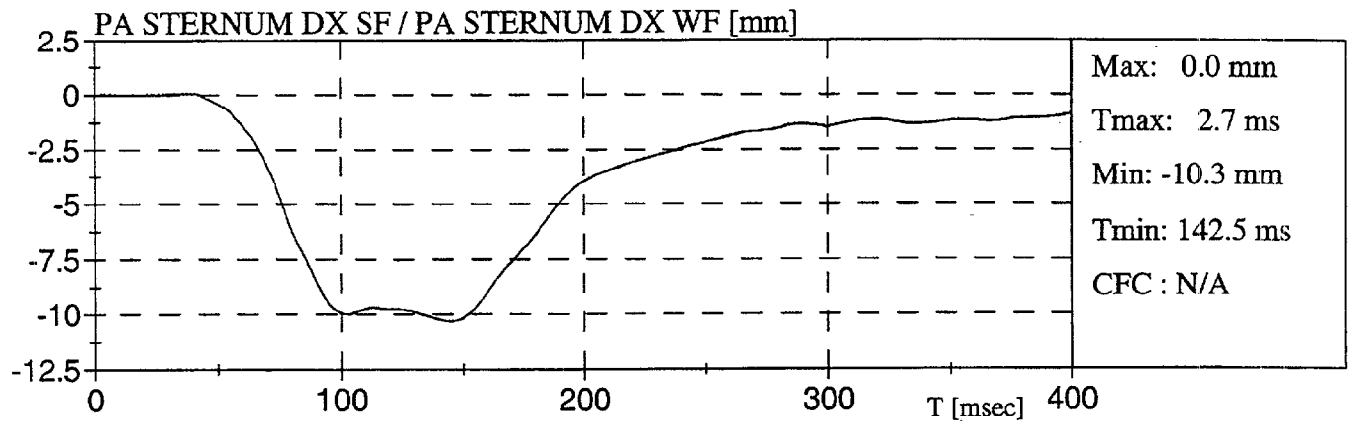


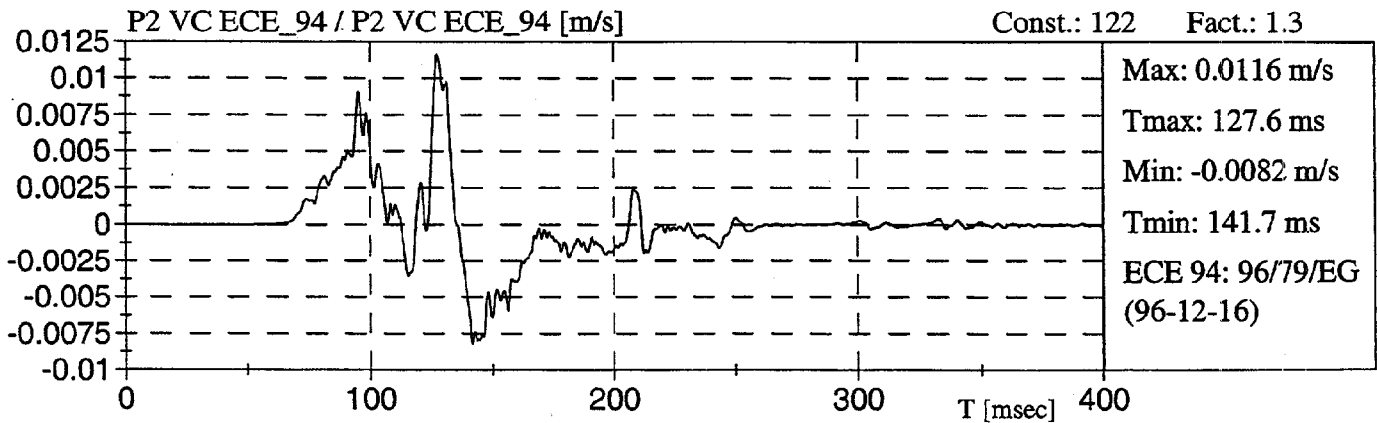
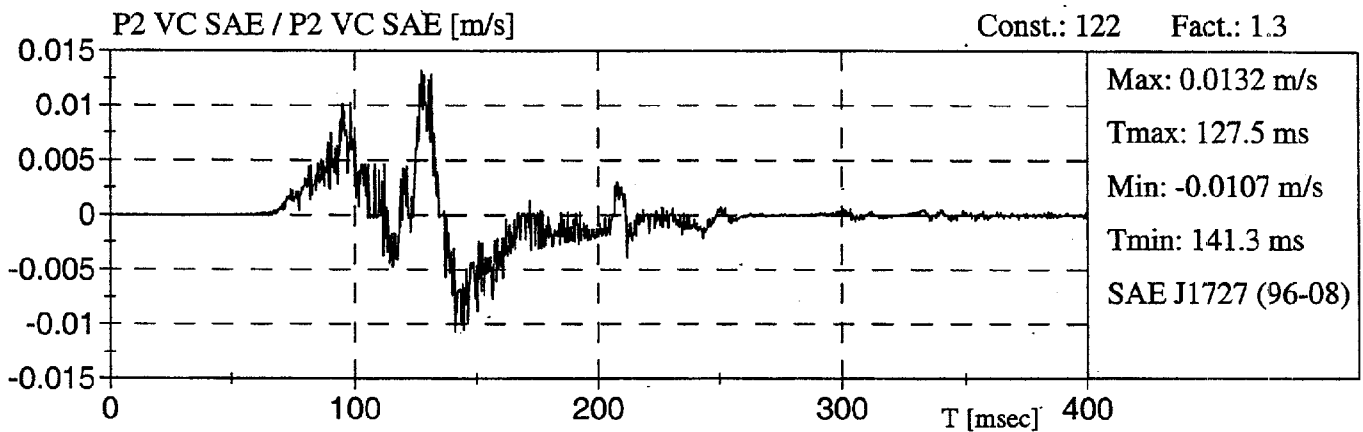
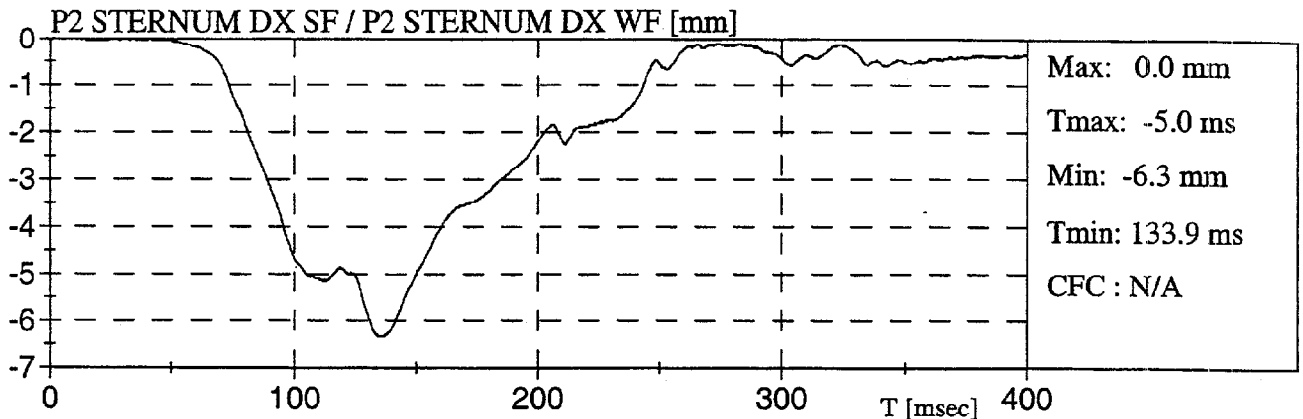
HEAD INJURY CRITERIA (HIC) *
CRITÈRE DE BLESSURE DE LA TÊTE

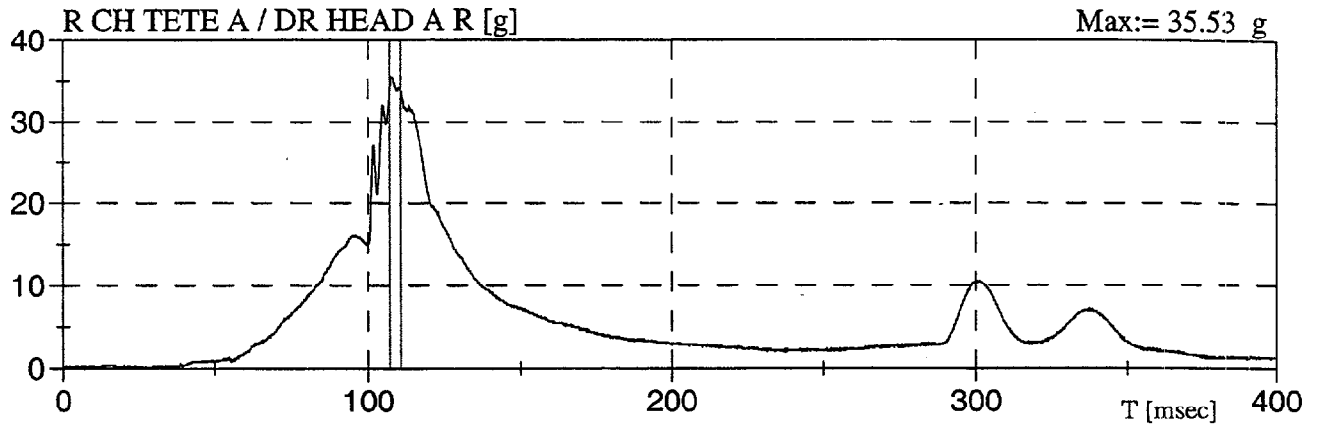
HIC:= 98	HIC(36ms):= 80	HIC(15ms):= 37
T1:= 93.9 ms	T1:= 103.1 ms	T1:= 113.2 ms
T2:= 152.0 ms	T2:= 139.1 ms	T2:= 128.2 ms

* Selon / According To: SAE J1727 96-08



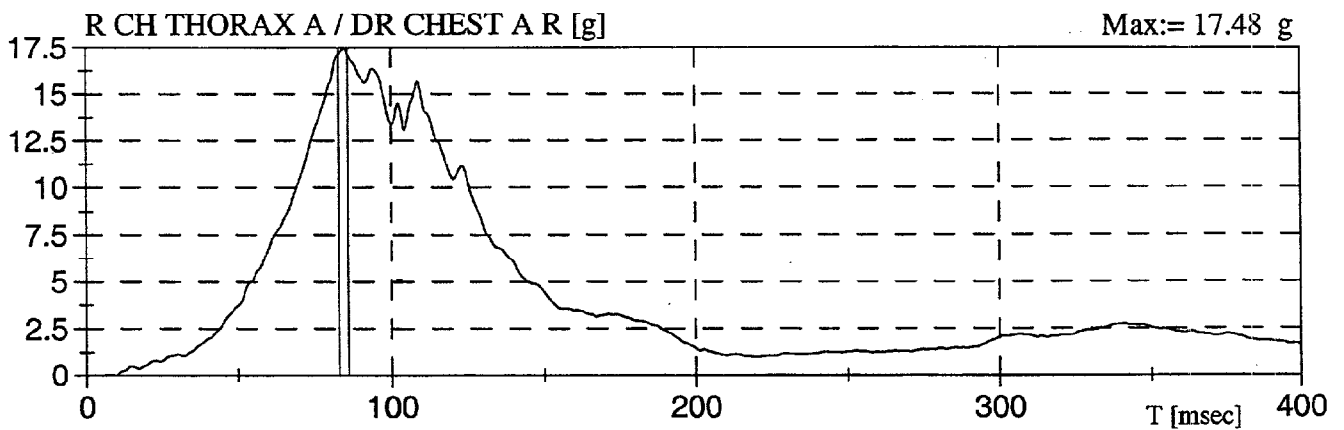






CLIP 3ms *

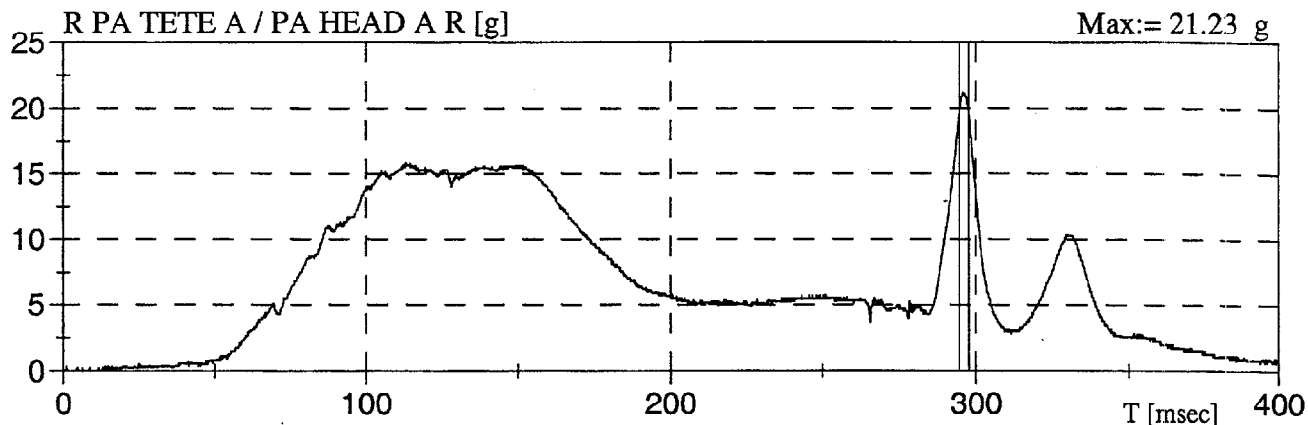
Acc. := 33.85 g	T1:= 107.1 ms	T2:= 110.7 ms
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CLIP 3ms *

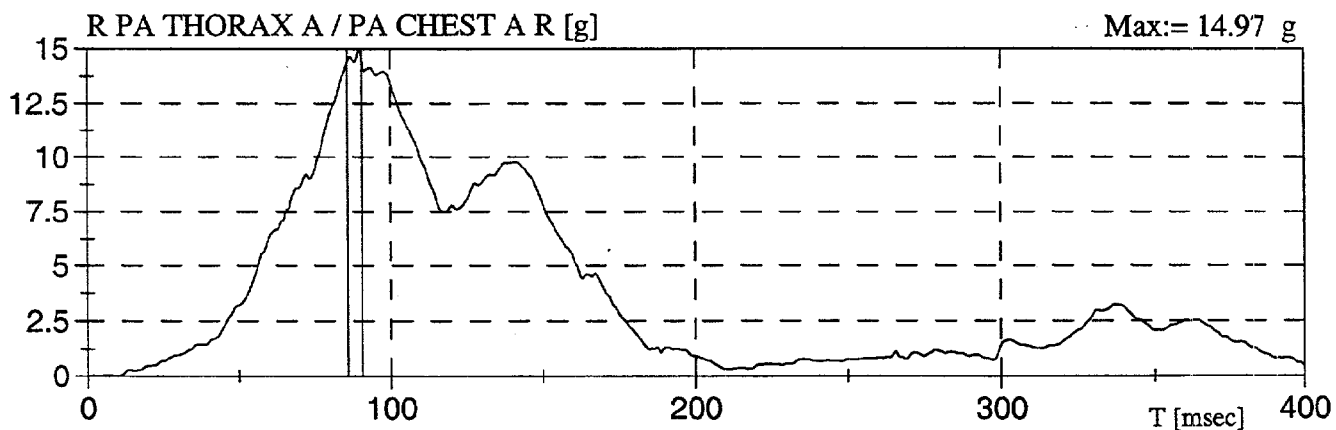
Acc. := 17.12 g	T1:= 83.1 ms	T2:= 86.1 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

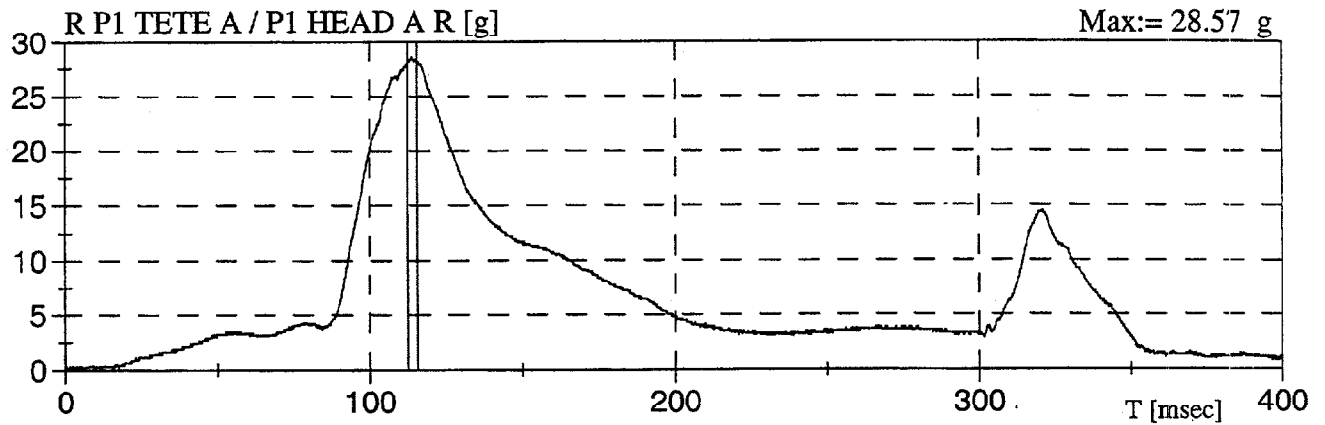
Acc. := 19.79 g	T1:= 294.7 ms	T2:= 297.7 ms
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CLIP 3ms *

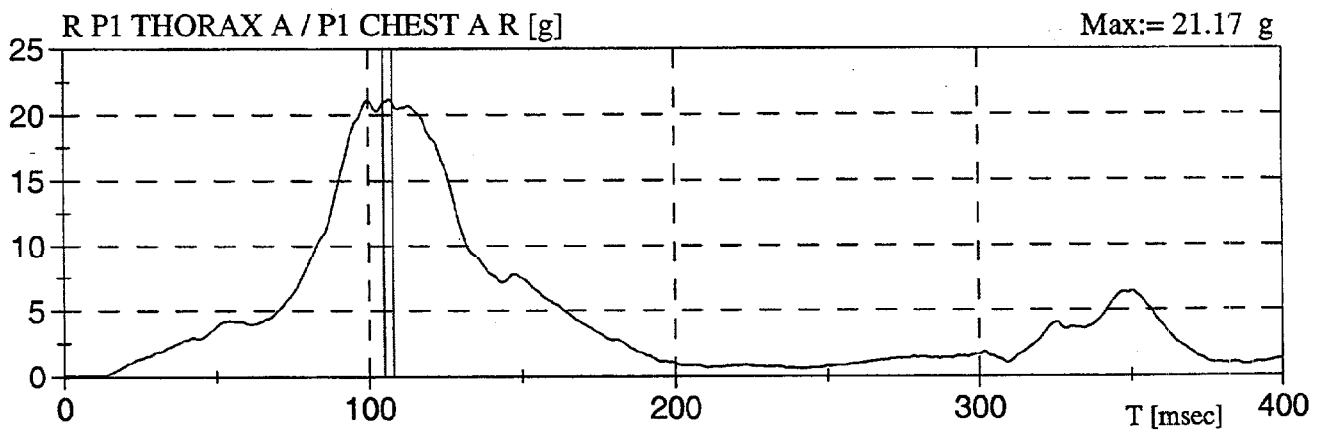
Acc. := 14.41 g	T1:= 85.8 ms	T2:= 90.6 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

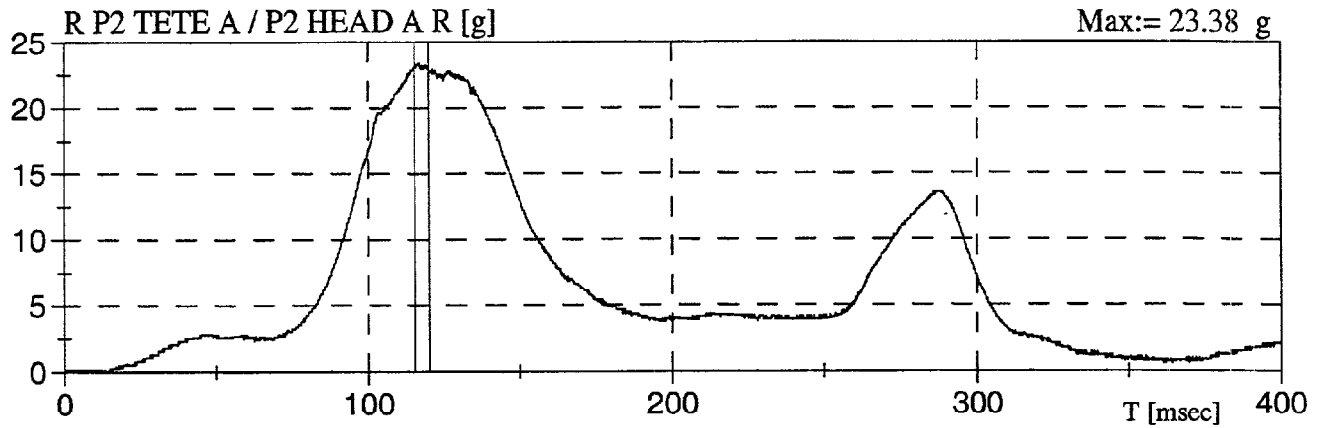
Acc. := 28.12 g	T1:= 112.5 ms	T2:= 115.7 ms
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CLIP 3ms *

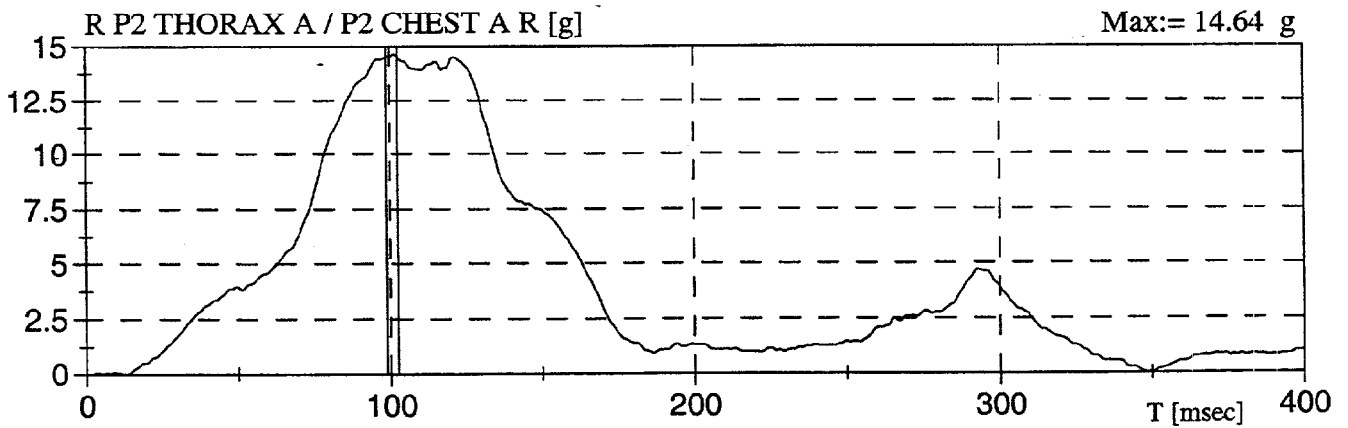
Acc. := 20.96 g	T1:= 104.9 ms	T2:= 107.9 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

Acc. := 22.97 g	T1:= 115.5 ms	T2:= 120.3 ms
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CLIP 3ms *

Acc. := 14.53 g	T1:= 98.9 ms	T2:= 102.6 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95

INDEX DU TIBIA *
TIBIA INDEX *
TI Chauffeur / Driver $M_c := 115 \text{ N-m}$ $F_c := 22.9 \text{ kN}$

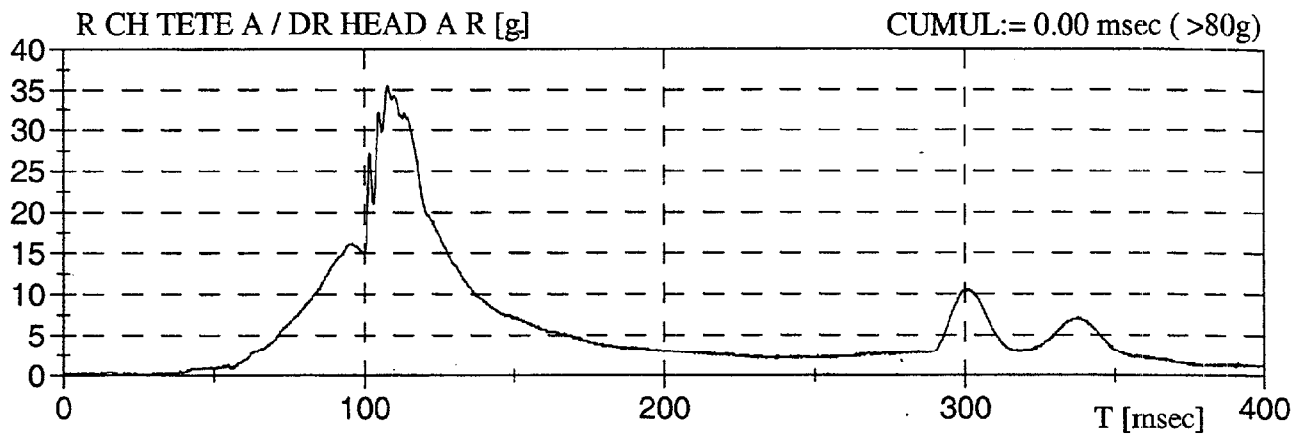
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	0.290	0.225
BAS / LOWER	0.118	0.105

TI Passager / Passenger $M_c := 115 \text{ N-m}$ $F_c := 22.9 \text{ kN}$

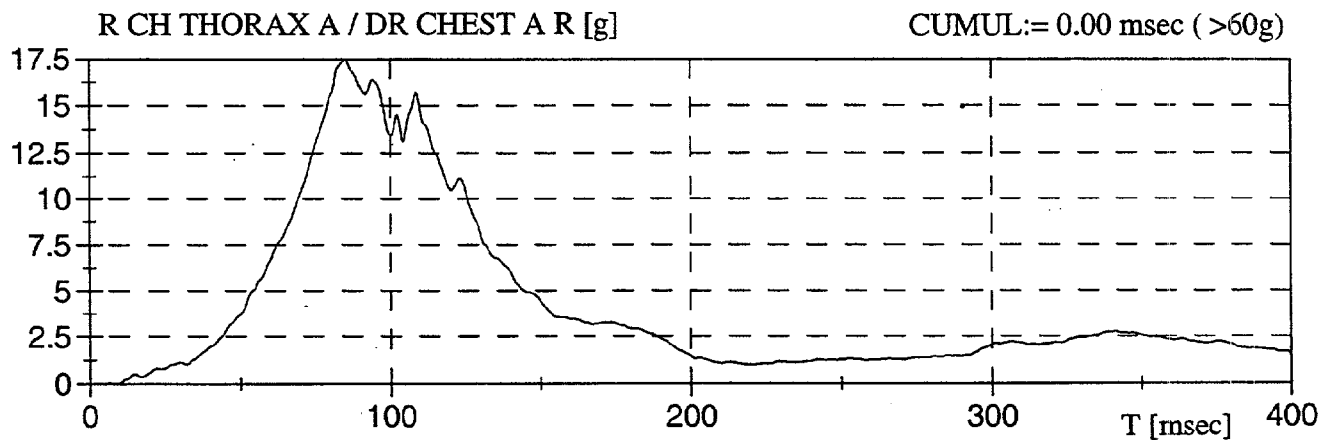
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	0.255	0.238
BAS / LOWER	0.085	0.091

* Selon / According To: SAE J1727 AUG 96

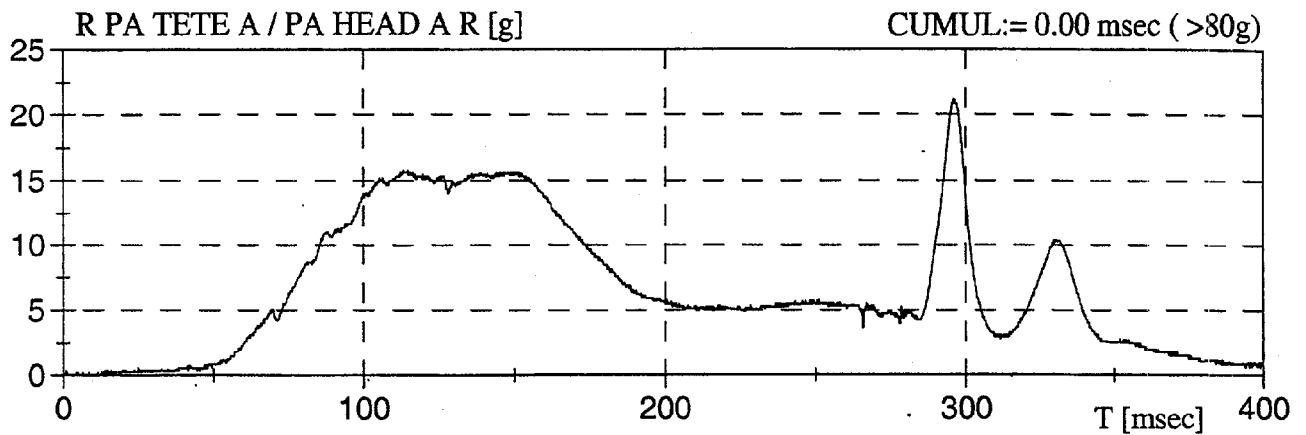
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



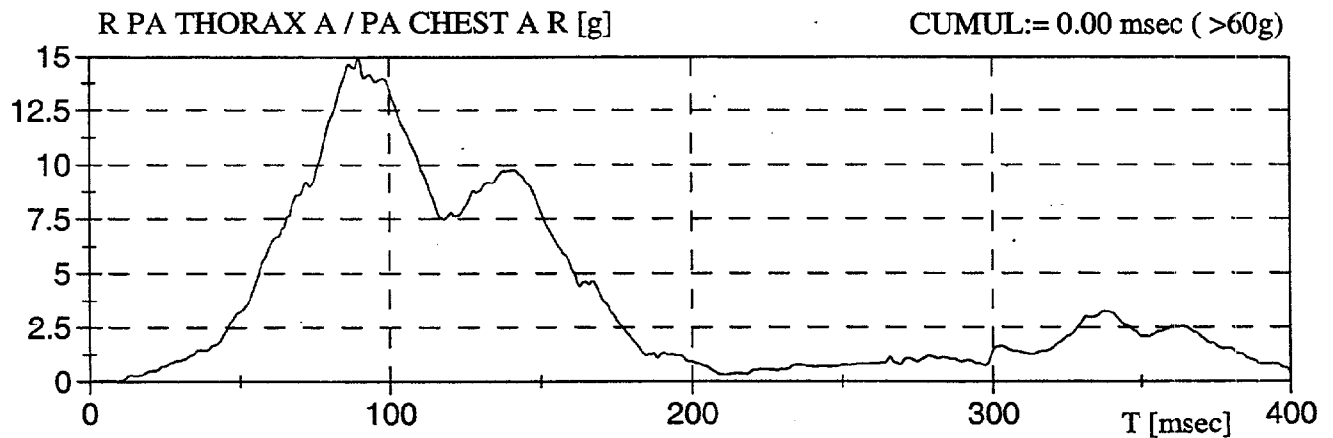
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



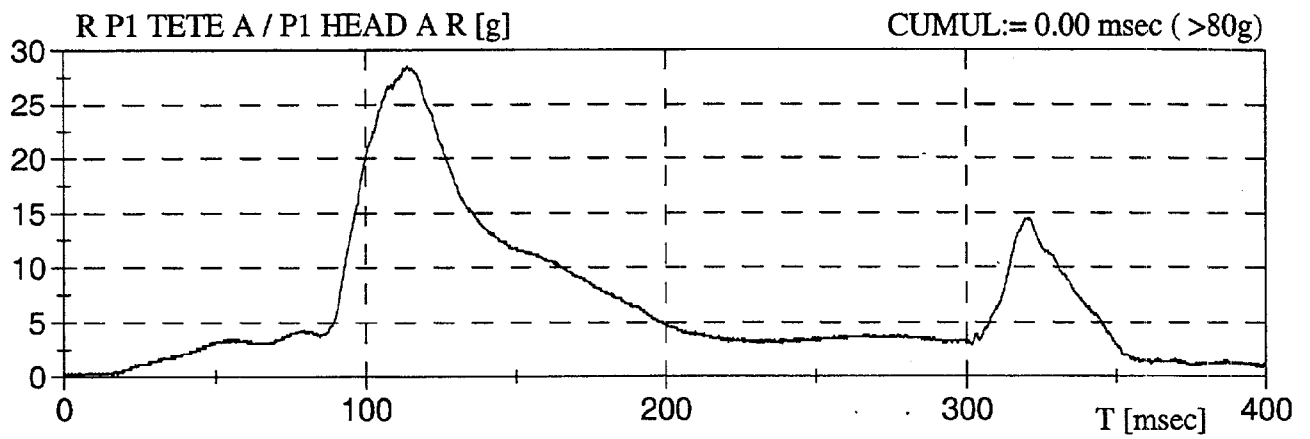
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



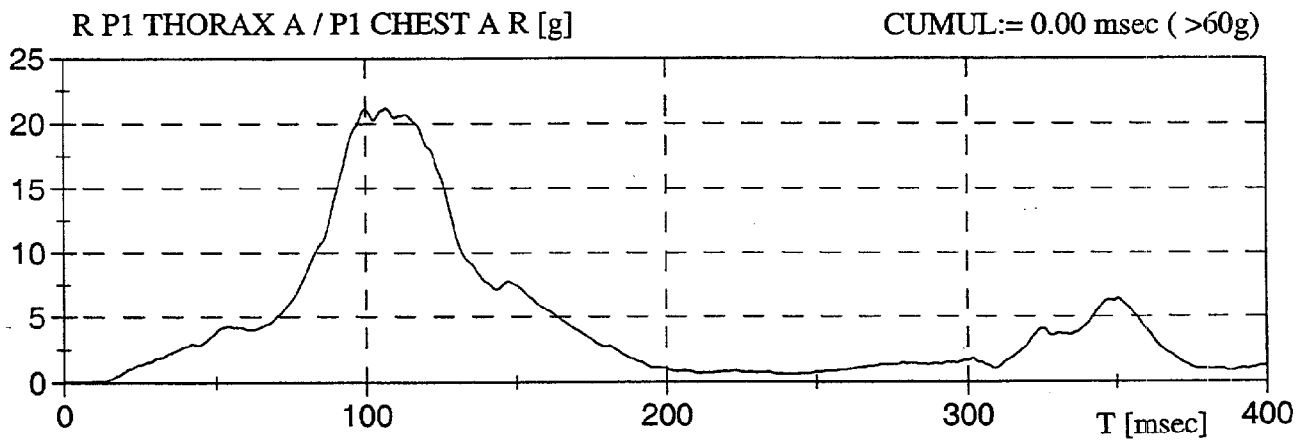
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



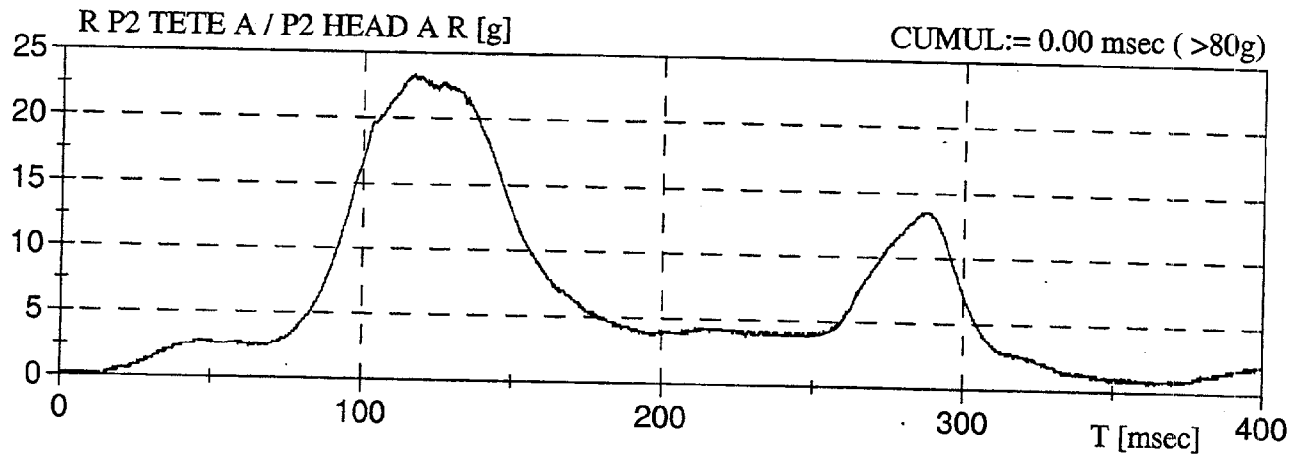
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



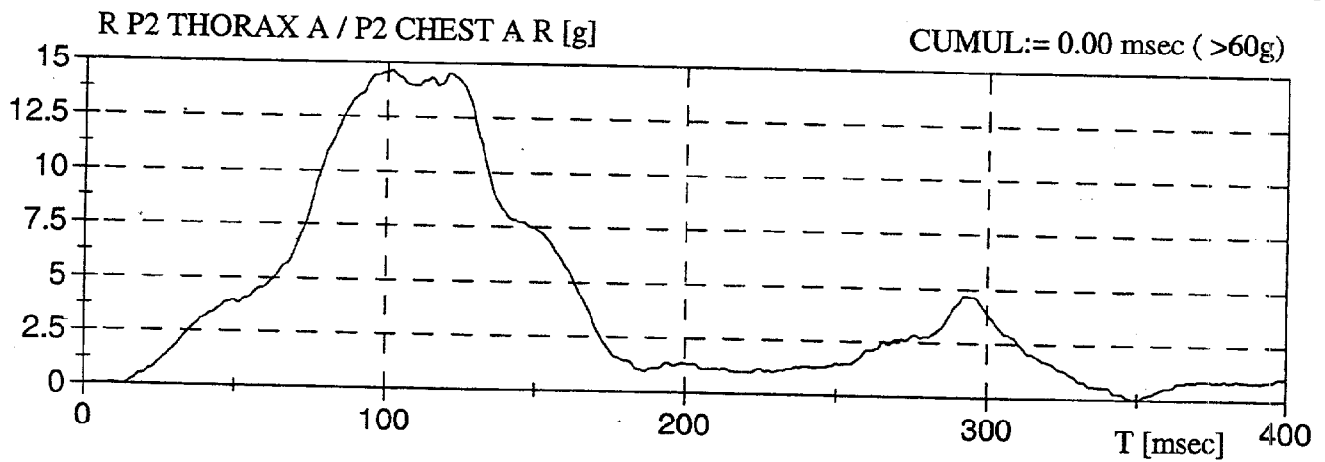
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



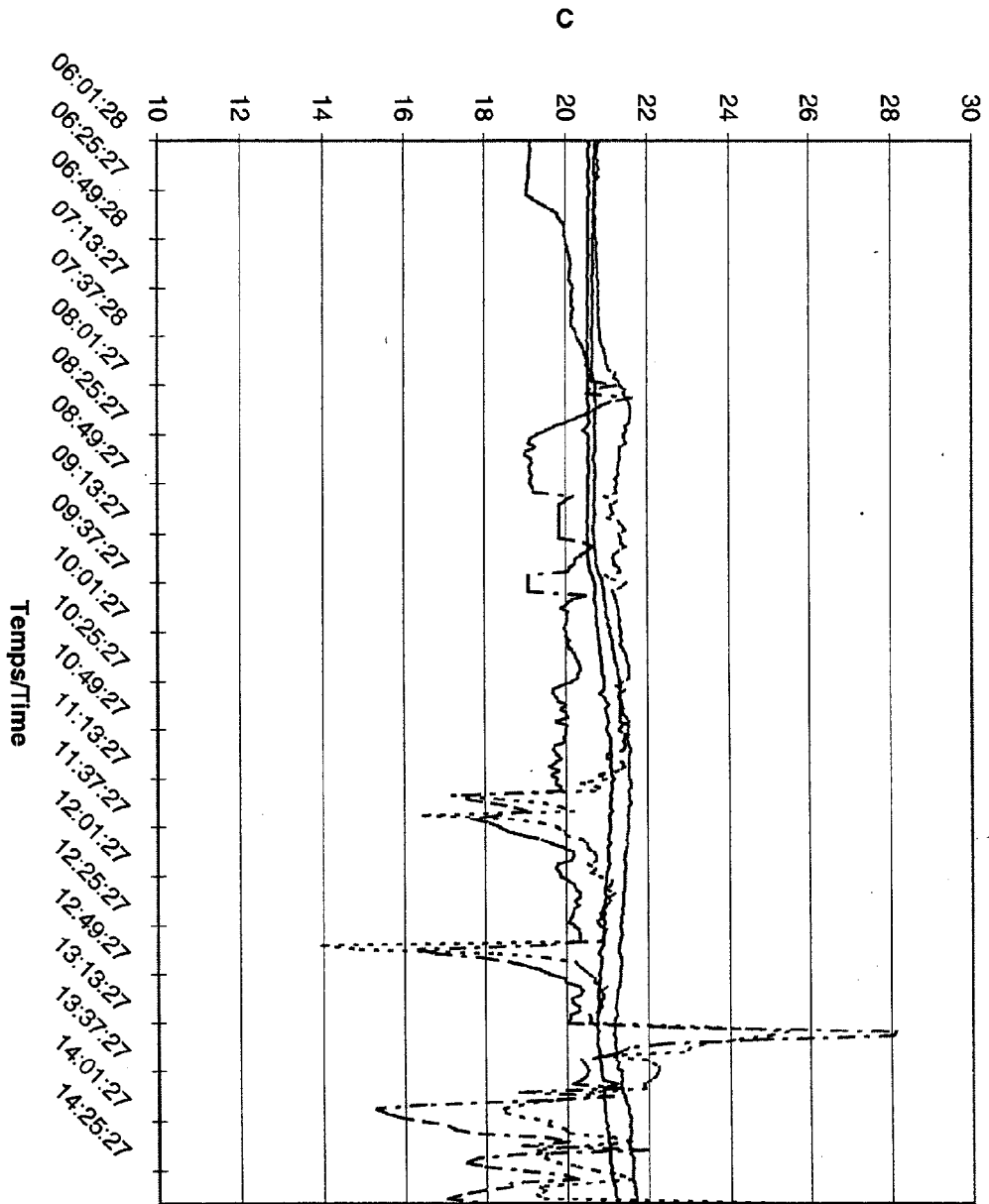
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



Temperature TC99-203



Temps/Time

- Chauffeur/Driver
- - - Passenger/Passenger
- · - · Interieur/Inside
- · - · Extérieur/Outside

99-01-27