PMG Technologies

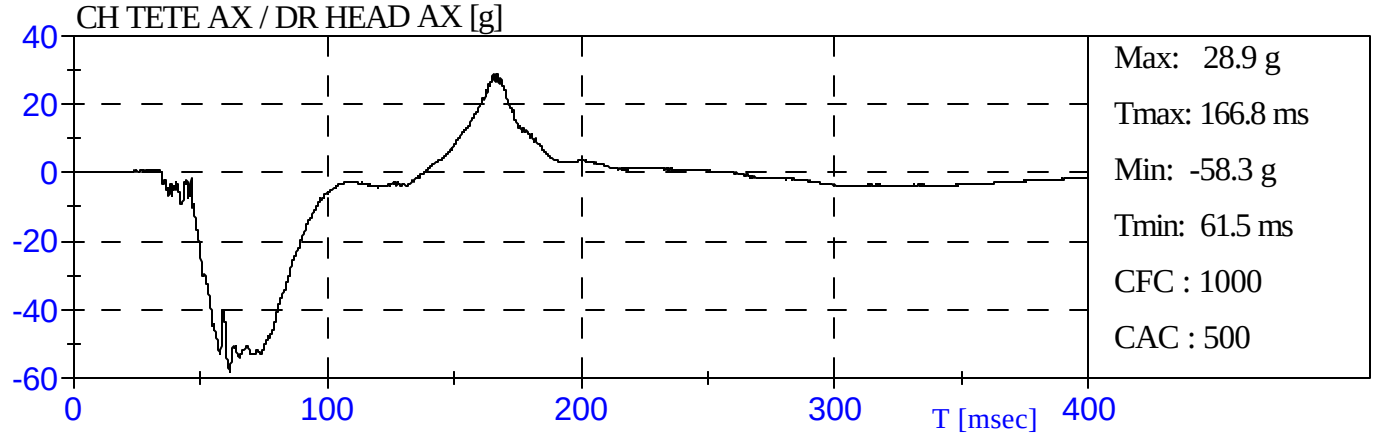
Nom du client **Client Name**	**TRANSPORT CANADA.**
Type de véhicule **Type of Vehicle**	**DODGE DAKOTA 2003**
Numéro de TC **Tc Number**	**TC03-215**
Numéro de contrat **Contract No**	**03-6008**
Acquisition de données selon **Data Acquisition according to**	**SAE J211/1 MAR 95**
Date de l'essai **Test date**	**2003-03-11**
Titre du projet	**COLLISION DE RECHERCHE** **COLLISION FRONTALE**
Project Title	**RESEARCH COLLISION TEST** **FRONTAL CRASH**

MANNEQUIN / DUMMY

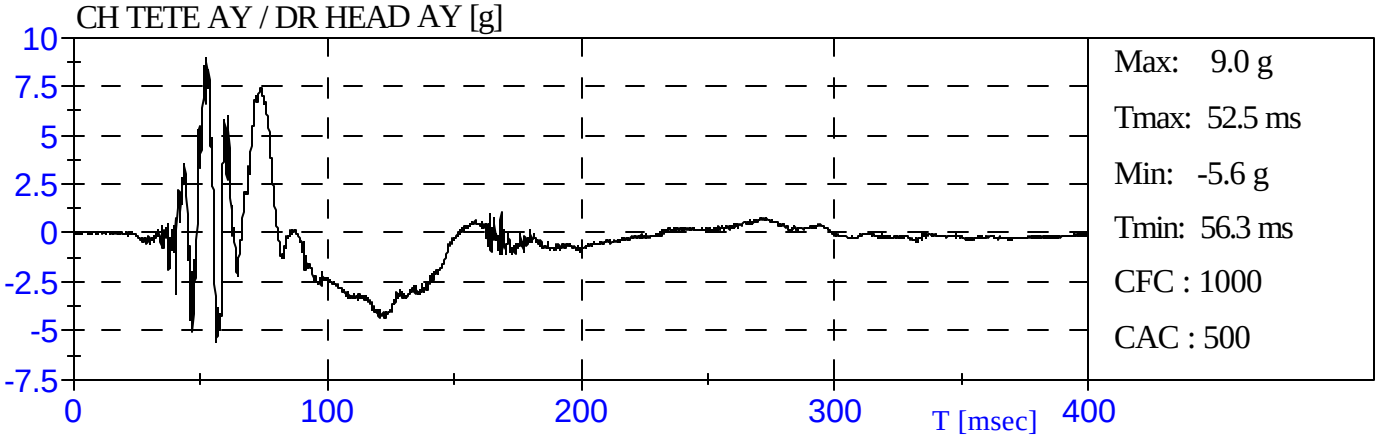
Chauffeur **Driver**	**HYBRID III 5% F IR**
Passager **Passenger**	**HYBRID III 5% F IR**

DODGE DAKOTA 2003

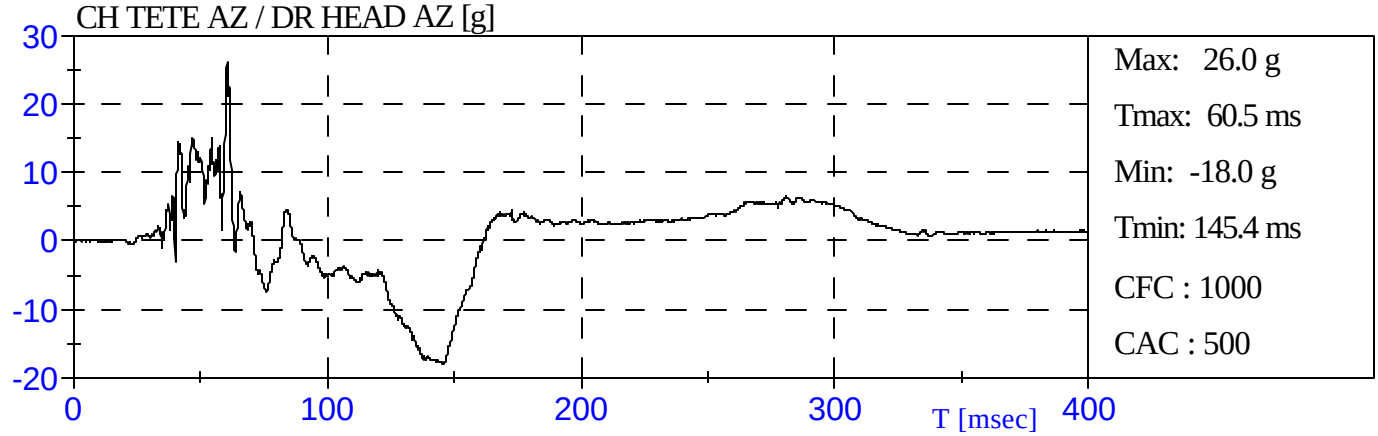
CH TETE AX / DR HEAD AX [g]



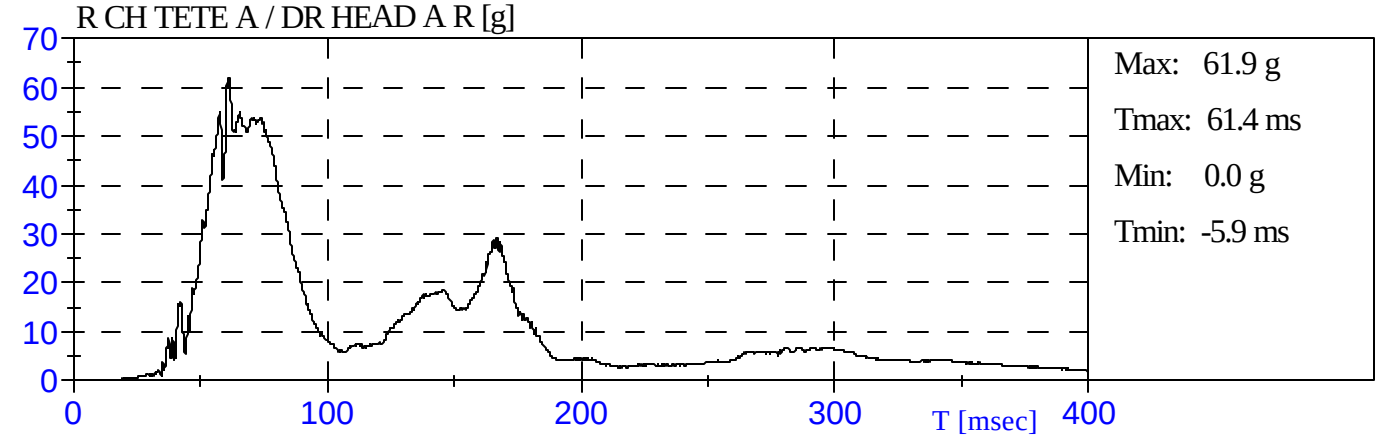
CH TETE AY / DR HEAD AY [g]



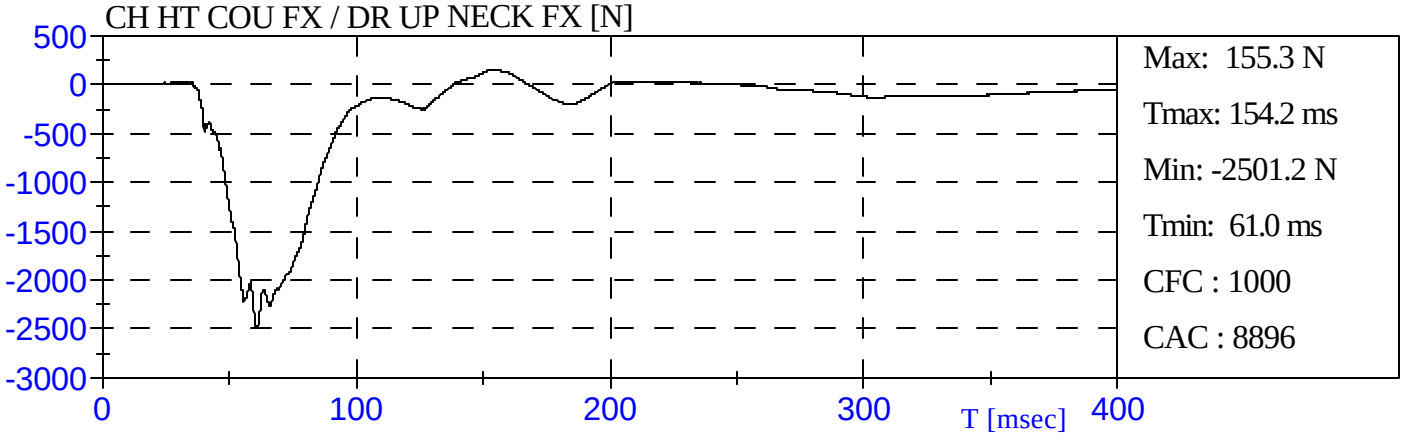
CH TETE AZ / DR HEAD AZ [g]



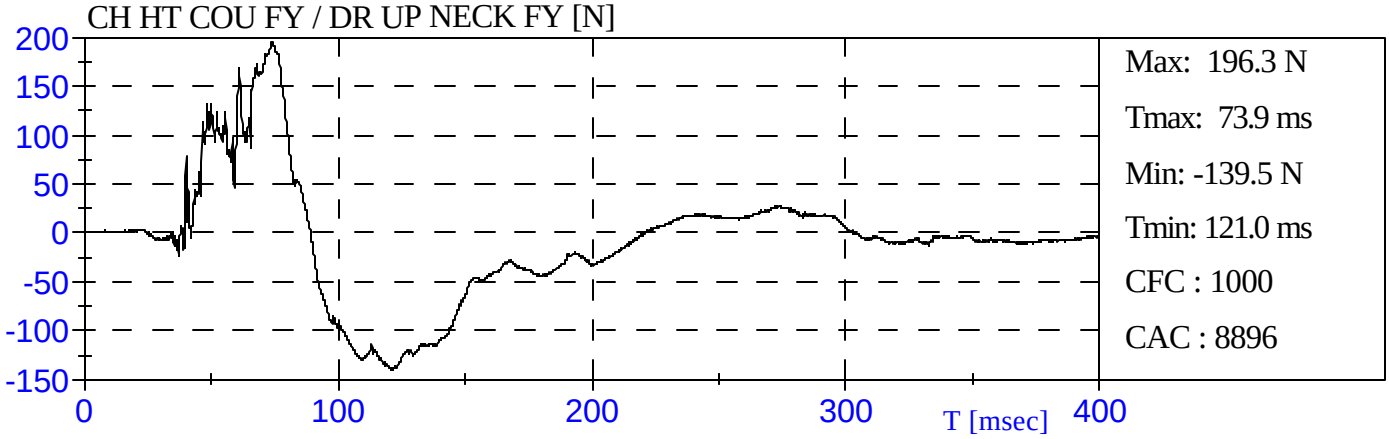
R CH TETE A / DR HEAD A R [g]



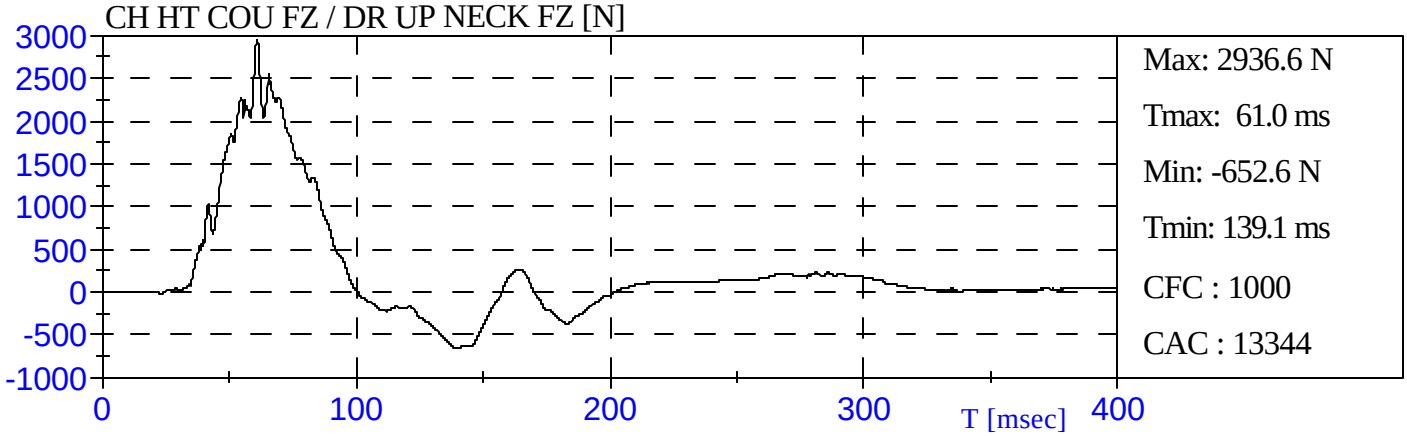
CH HT COU FX / DR UP NECK FX [N]



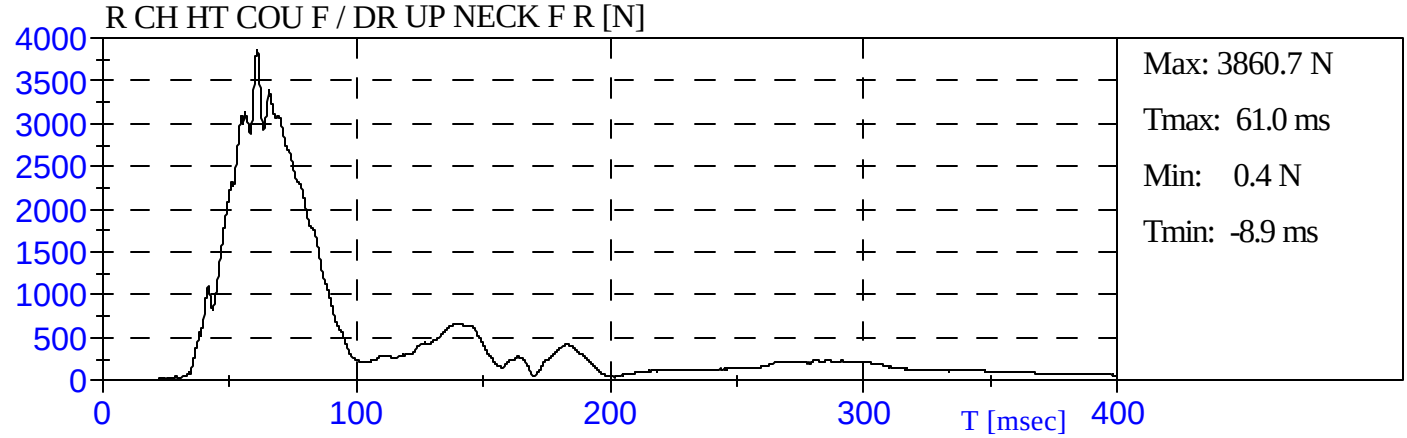
CH HT COU FY / DR UP NECK FY [N]



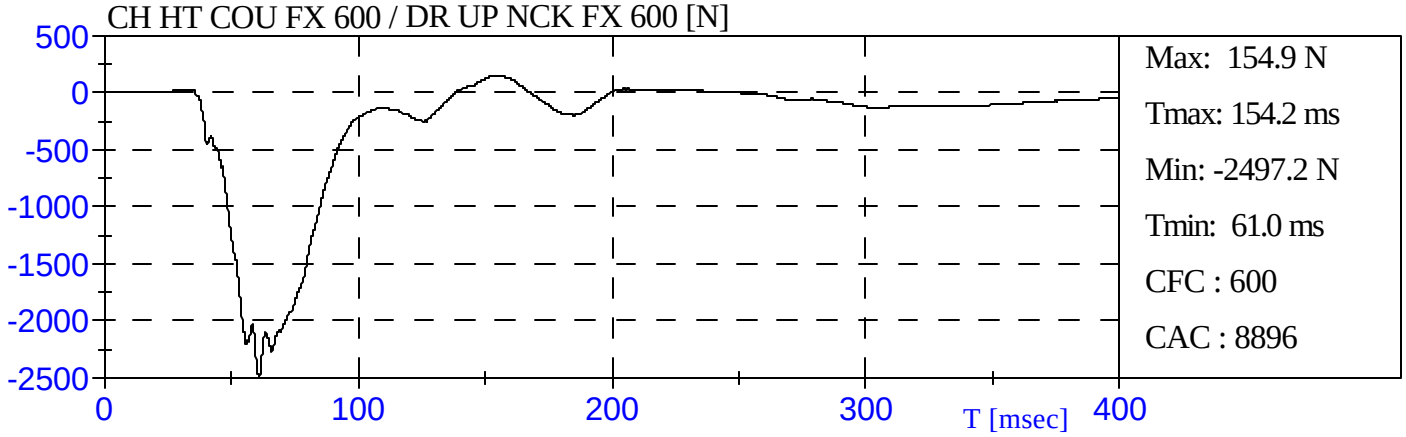
CH HT COU FZ / DR UP NECK FZ [N]



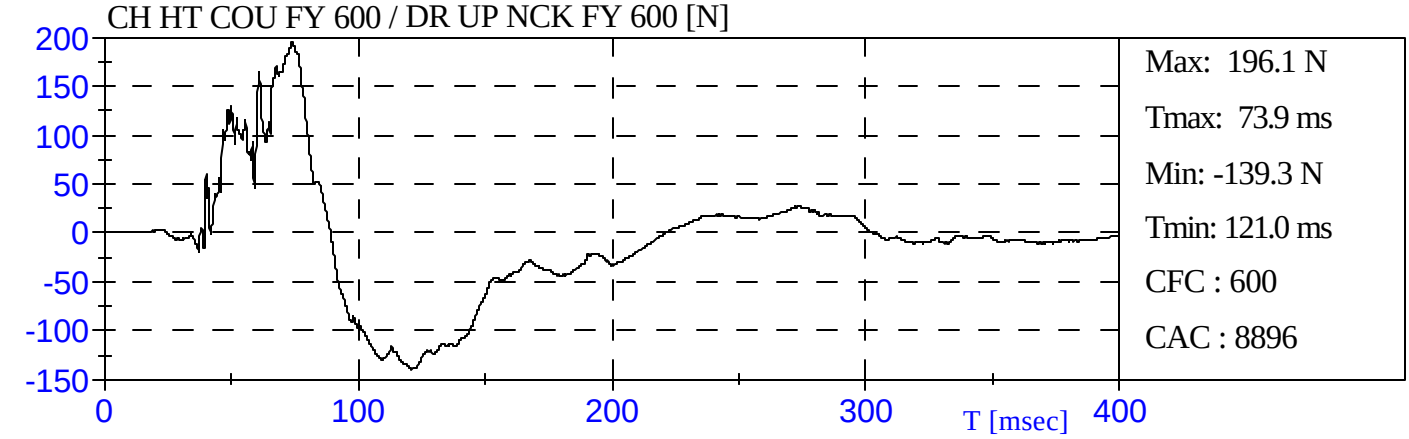
R CH HT COU F / DR UP NECK F R [N]



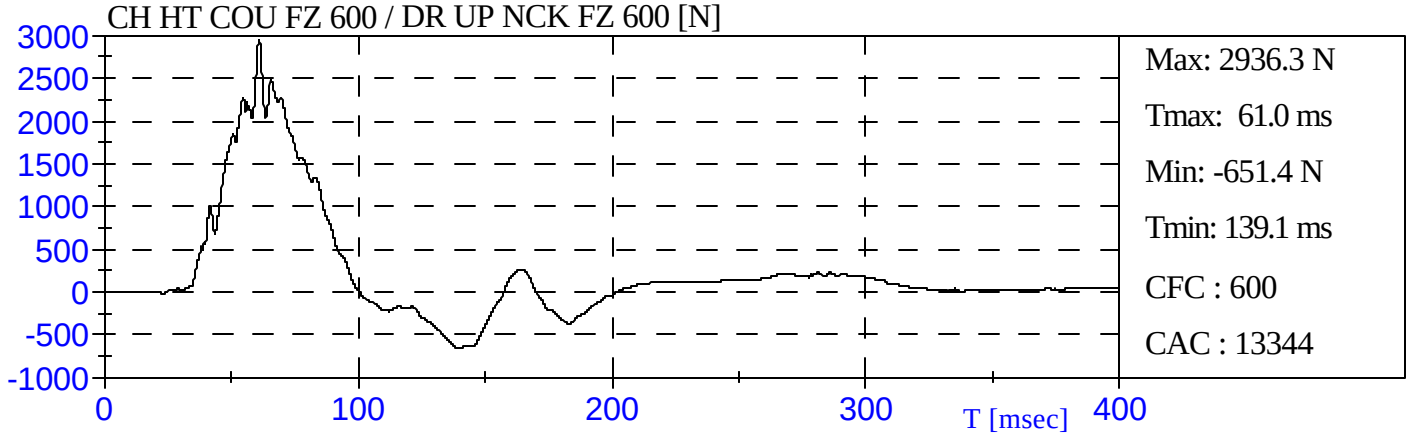
CH HT COU FX 600 / DR UP NCK FX 600 [N]



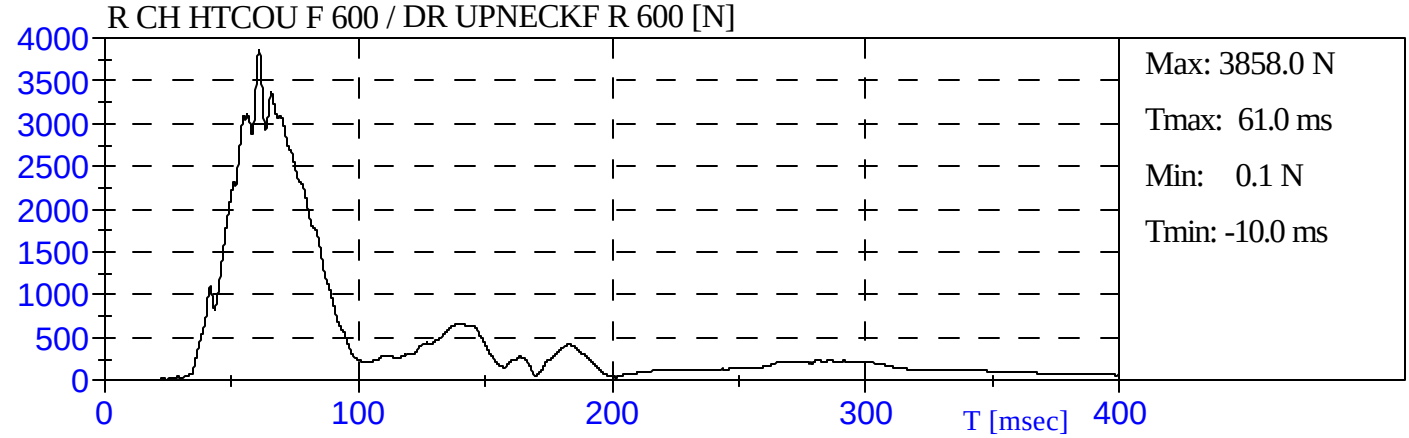
CH HT COU FY 600 / DR UP NCK FY 600 [N]



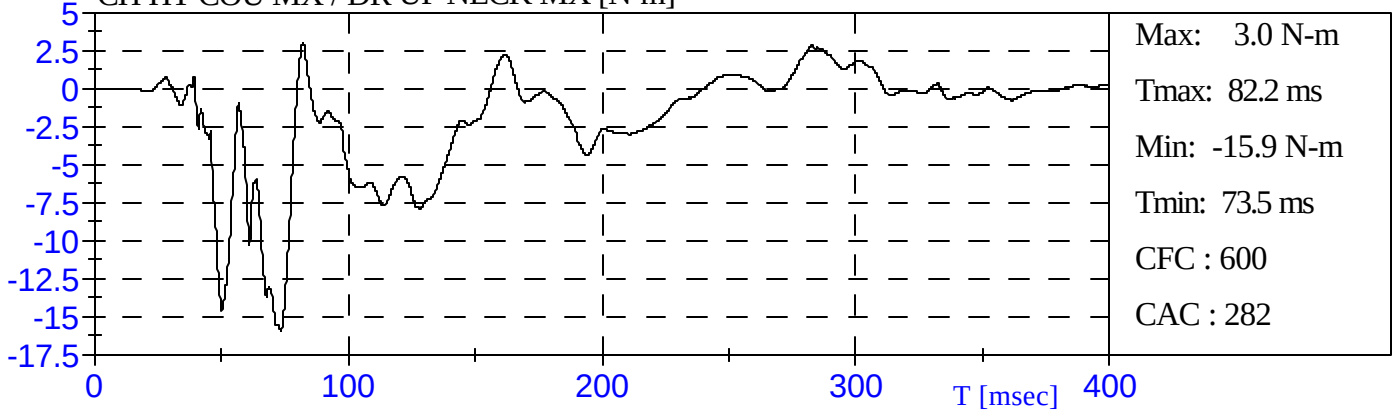
CH HT COU FZ 600 / DR UP NCK FZ 600 [N]



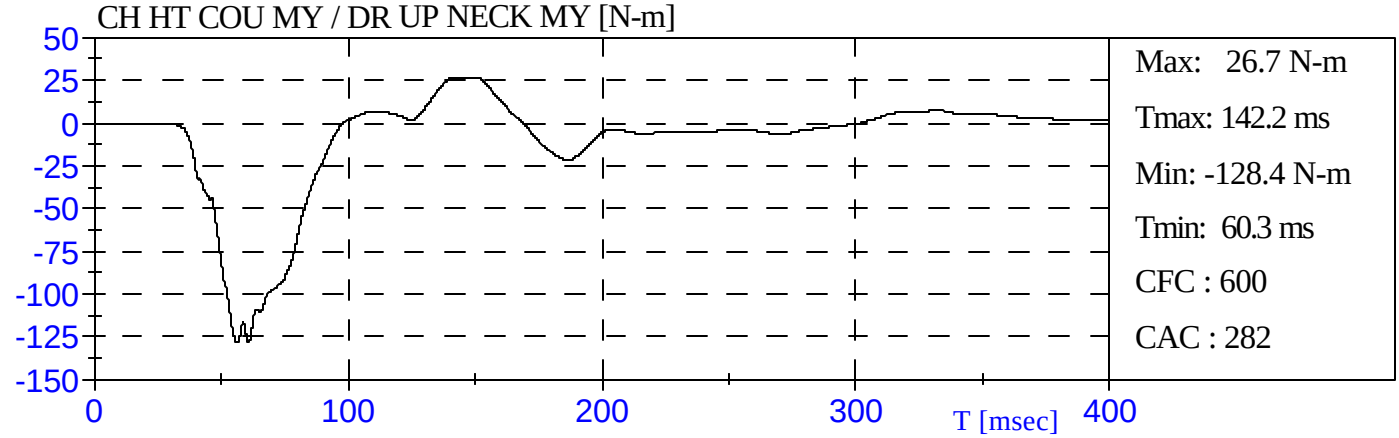
R CH HTCOU F 600 / DR UPNECKF R 600 [N]



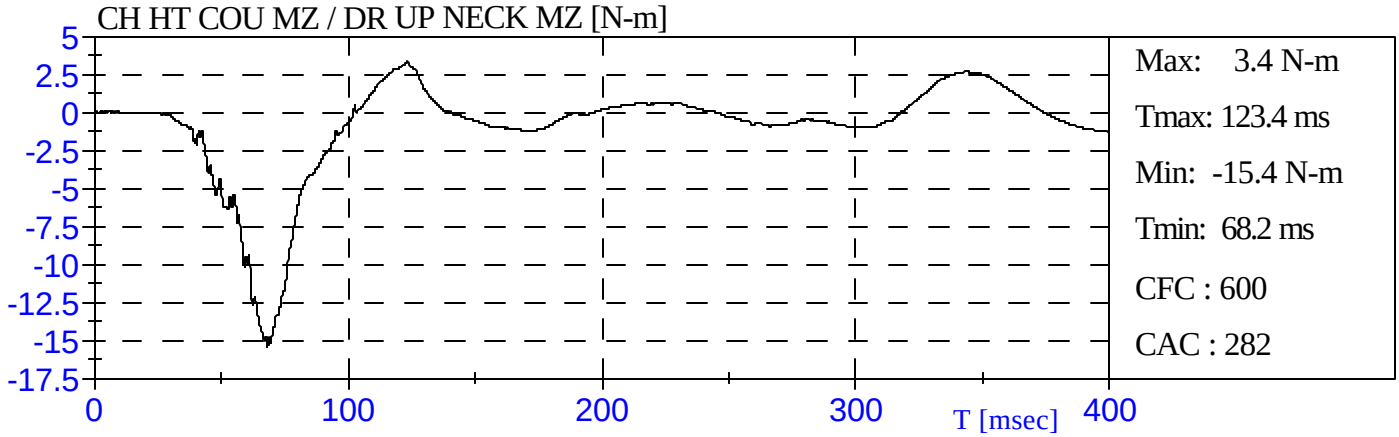
CH HT COU MX / DR UP NECK MX [N-m]



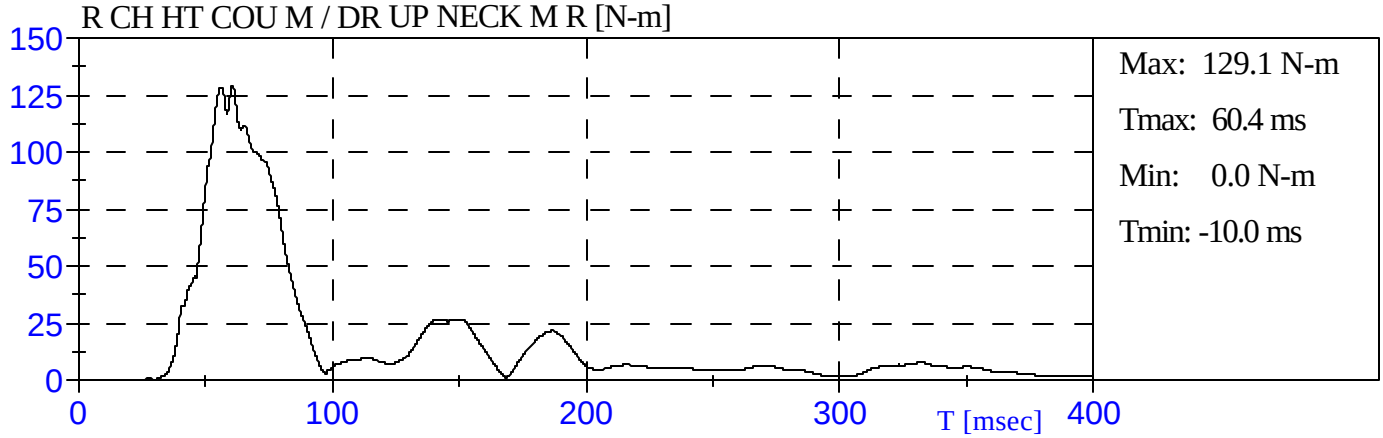
CH HT COU MY / DR UP NECK MY [N-m]



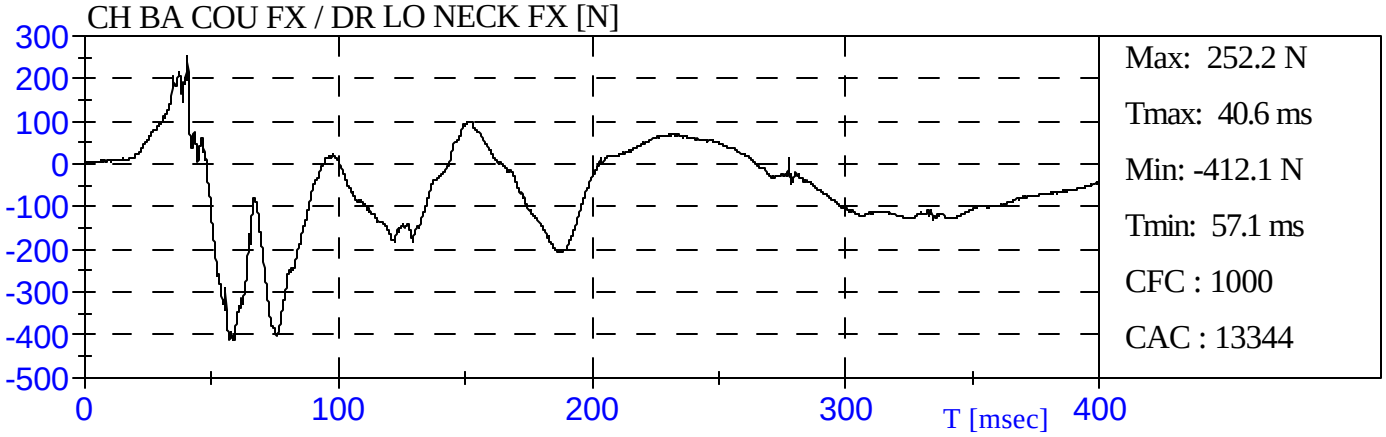
CH HT COU MZ / DR UP NECK MZ [N-m]



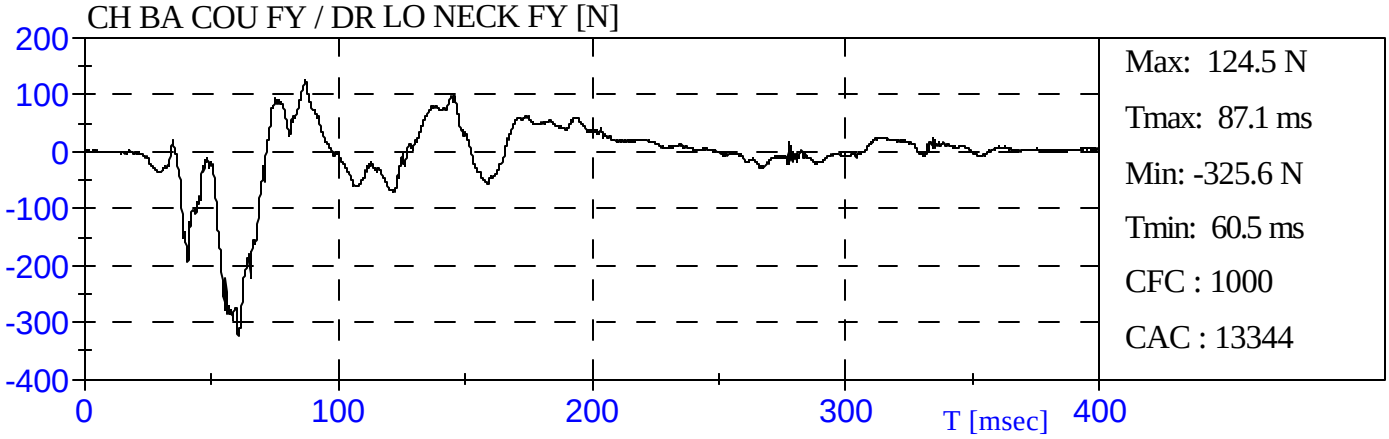
R CH HT COU M / DR UP NECK M R [N-m]



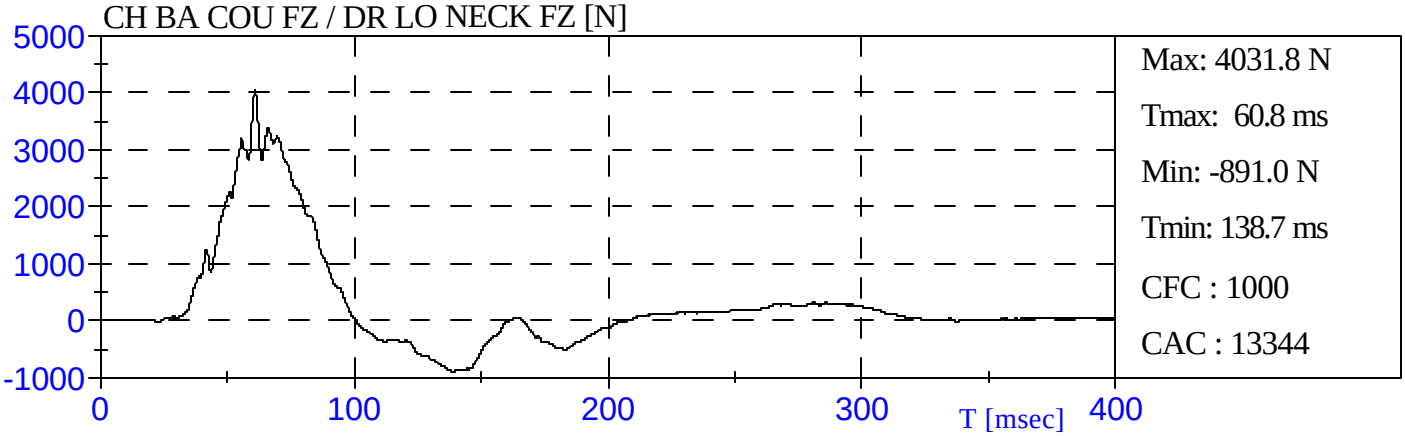
CH BA COU FX / DR LO NECK FX [N]



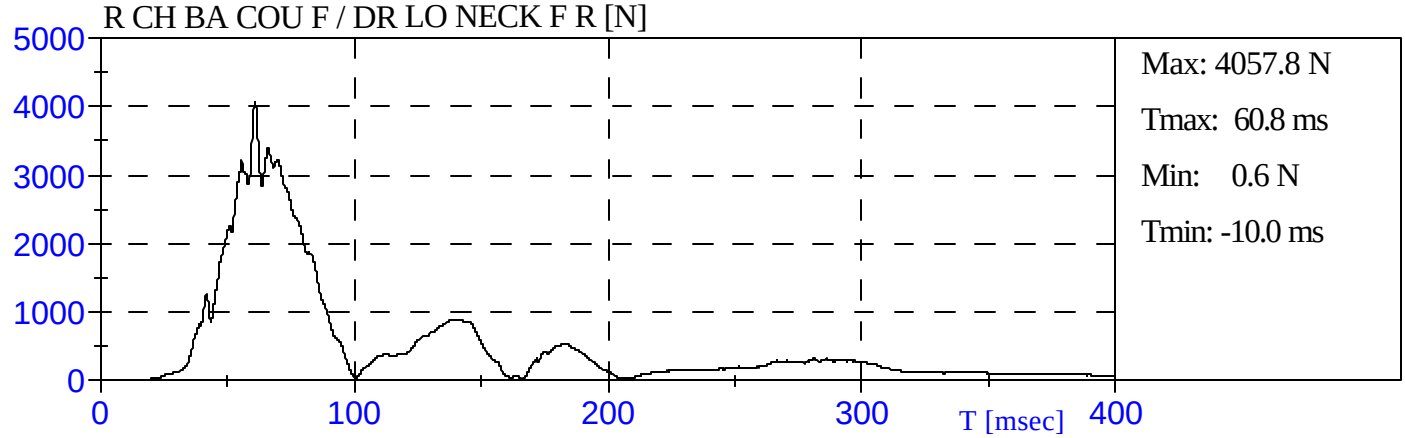
CH BA COU FY / DR LO NECK FY [N]



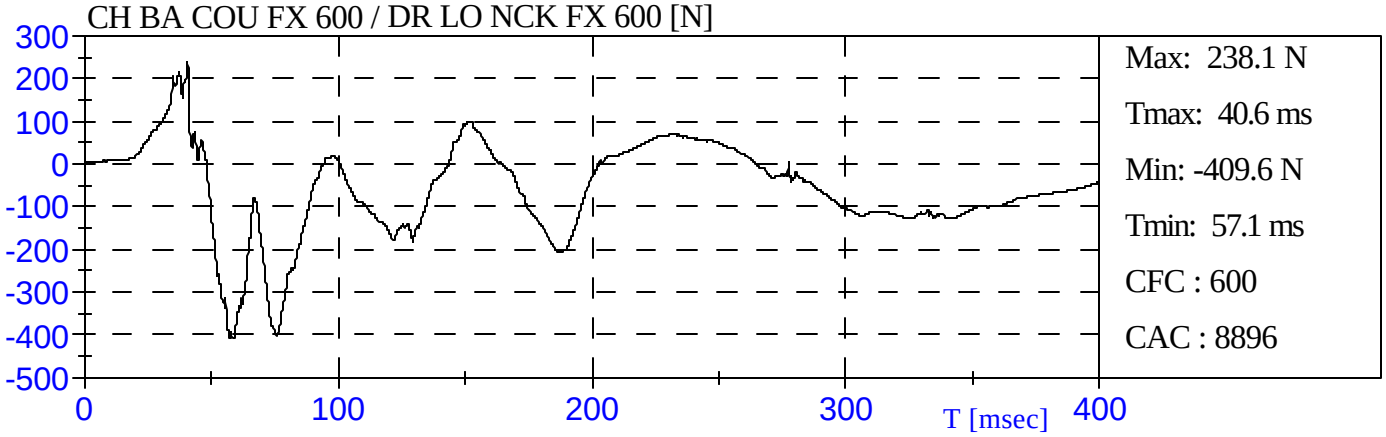
CH BA COU FZ / DR LO NECK FZ [N]



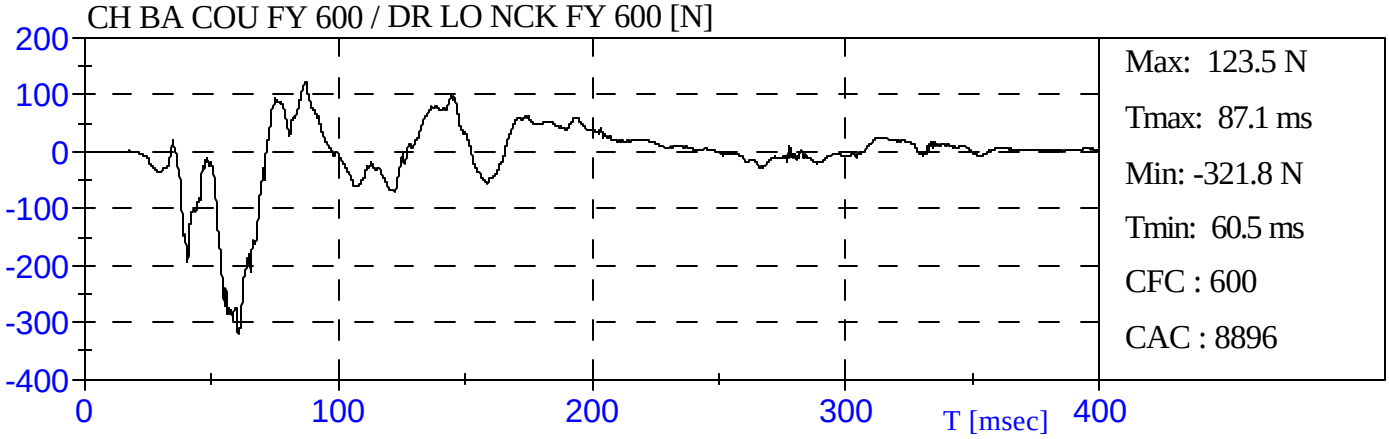
R CH BA COU F / DR LO NECK F R [N]



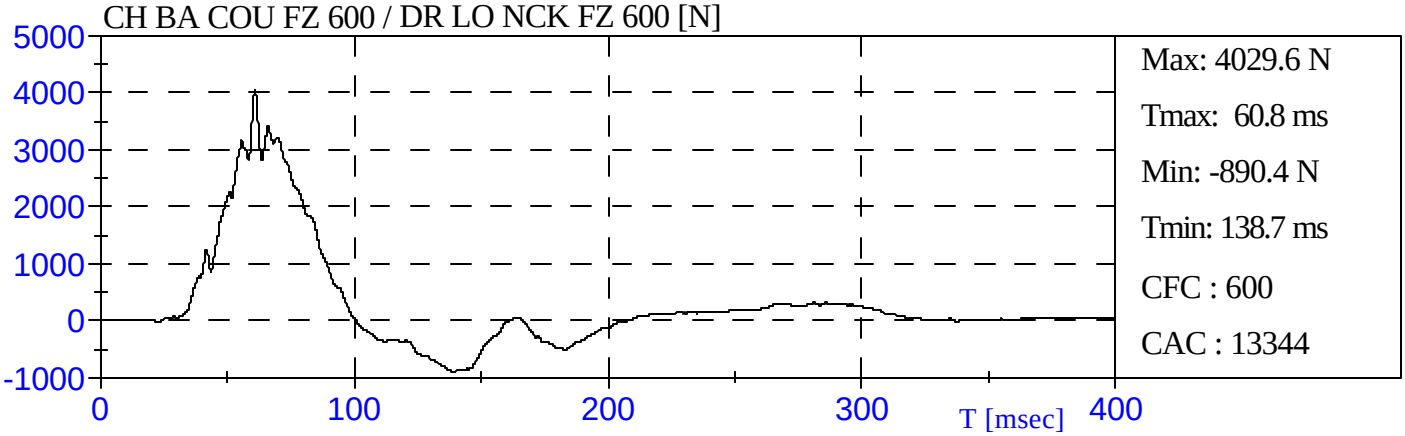
CH BA COU FX 600 / DR LO NCK FX 600 [N]



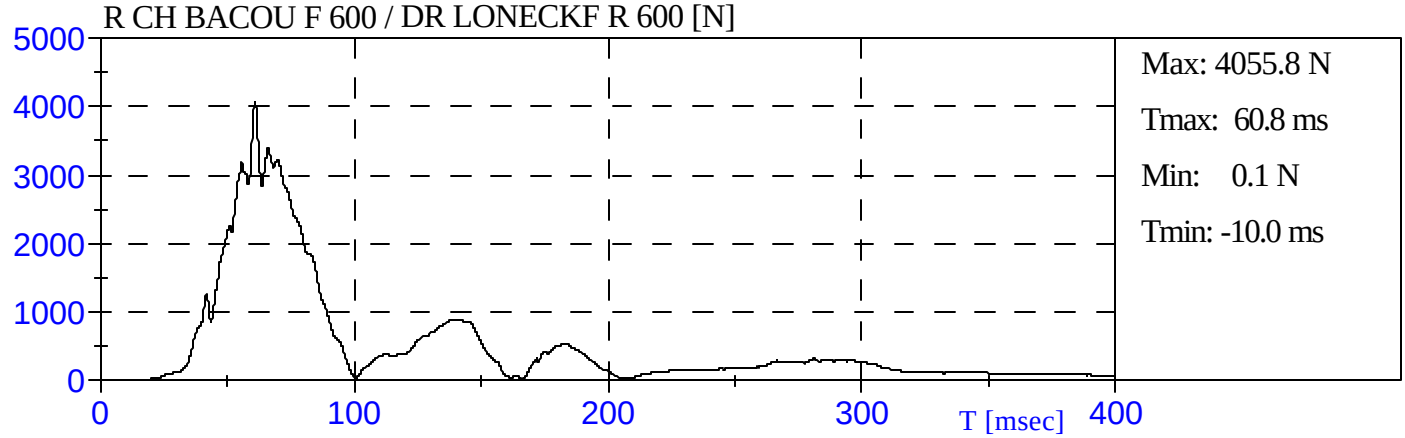
CH BA COU FY 600 / DR LO NCK FY 600 [N]

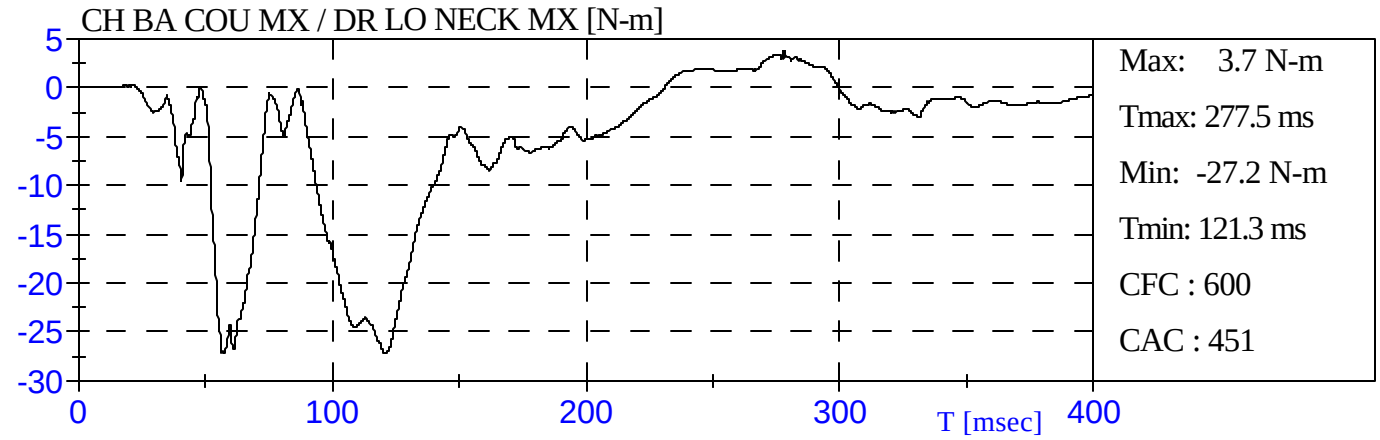


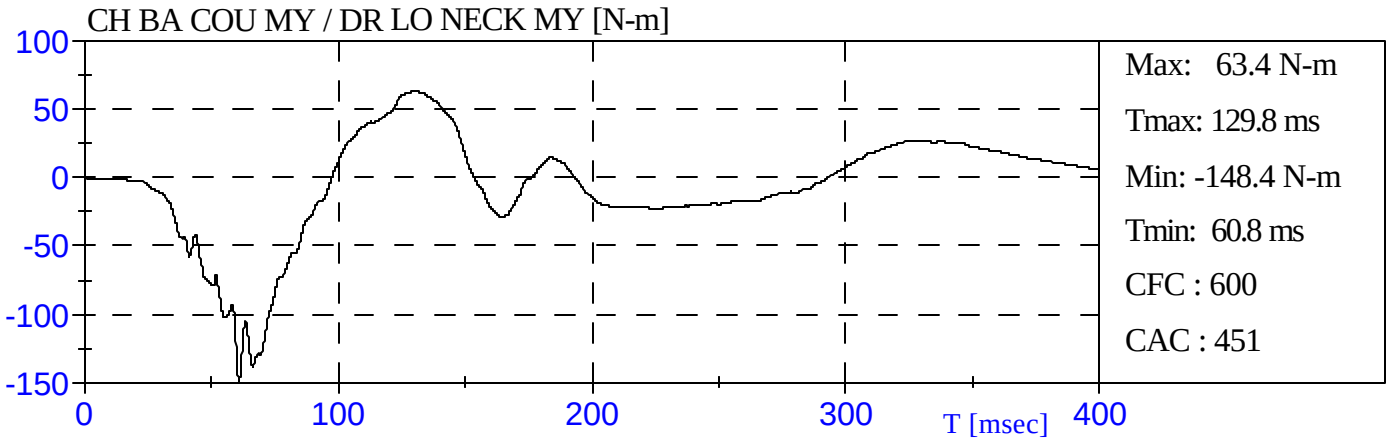
CH BA COU FZ 600 / DR LO NCK FZ 600 [N]



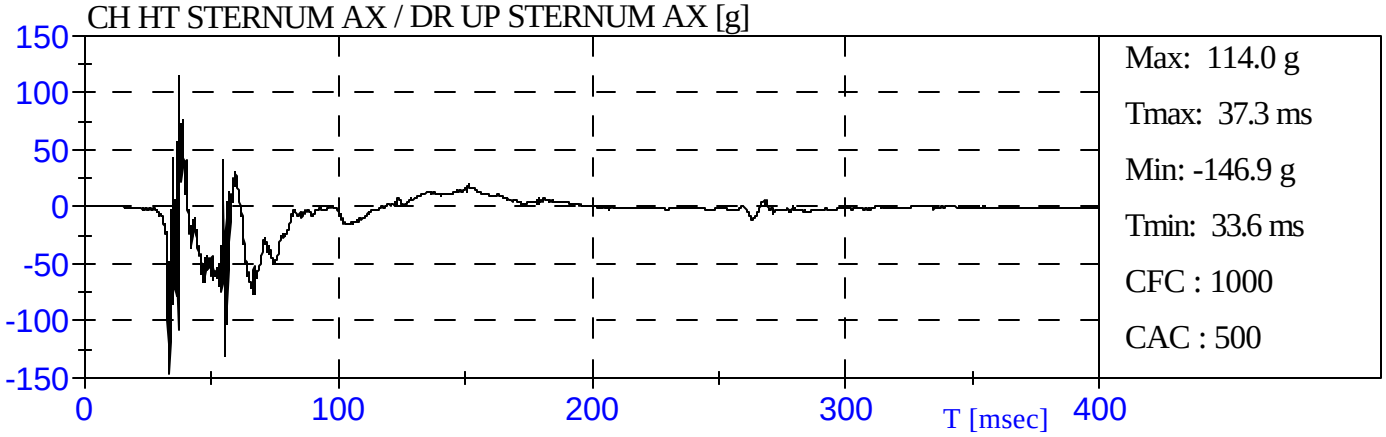
R CH BACOU F 600 / DR LONECKF R 600 [N]



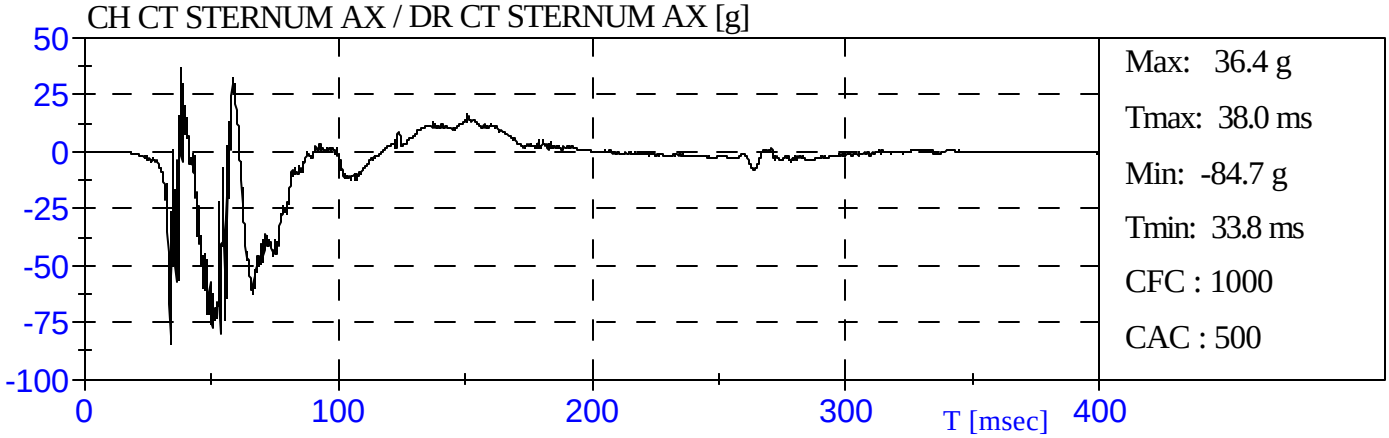

CH BA COU MX / DR LO NECK MX [N-m]
5
0
-5
-10
-15
-20
-25
-30
0
100
200
300
400
T [msec]
Max: 3.7 N-m
Tmax: 277.5 ms
Min: -27.2 N-m
Tmin: 121.3 ms
CFC : 600
CAC : 451


CH BA COU MY / DR LO NECK MY [N-m]
100
50
0
-50
-100
-150
0
100
200
300
400
T [msec]
Max: 63.4 N-m
Tmax: 129.8 ms
Min: -148.4 N-m
Tmin: 60.8 ms
CFC : 600
CAC : 451

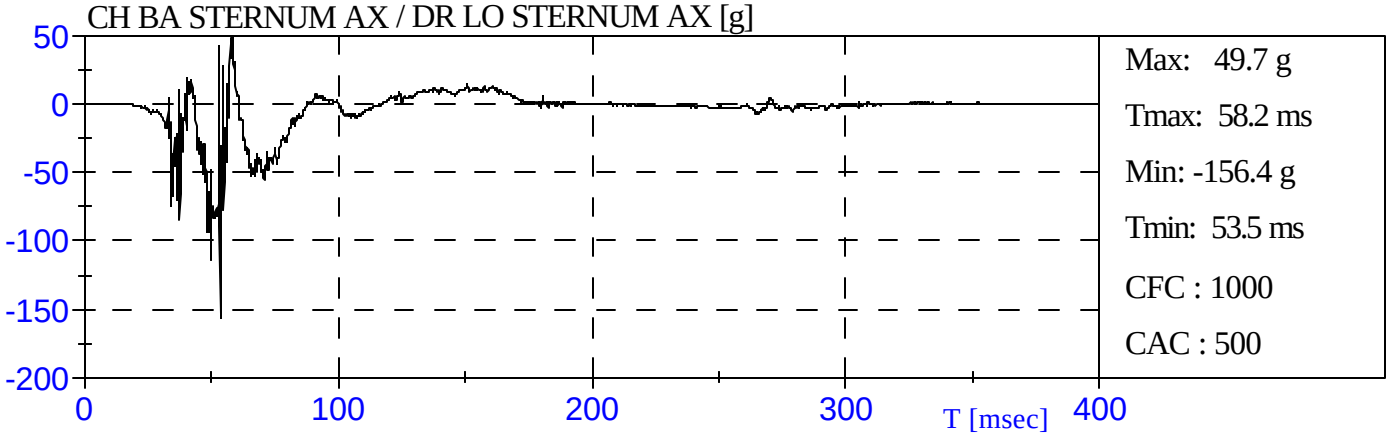
CH HT STERNUM AX / DR UP STERNUM AX [g]



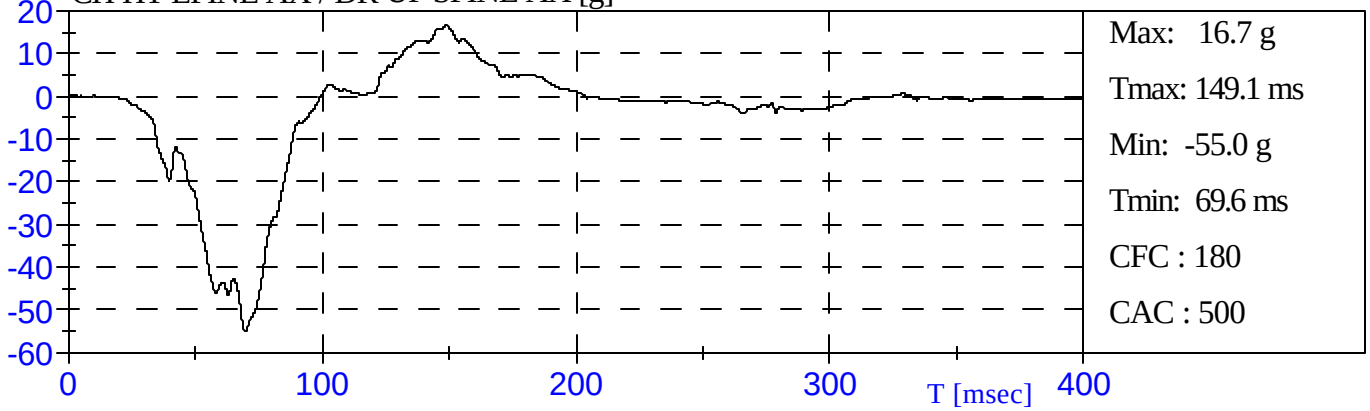
CH CT STERNUM AX / DR CT STERNUM AX [g]



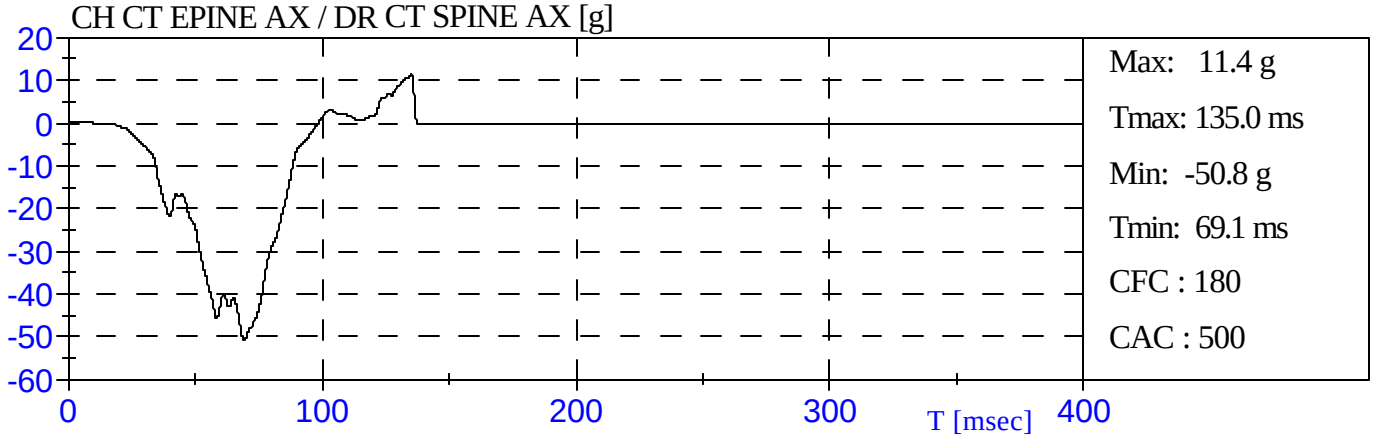
CH BA STERNUM AX / DR LO STERNUM AX [g]



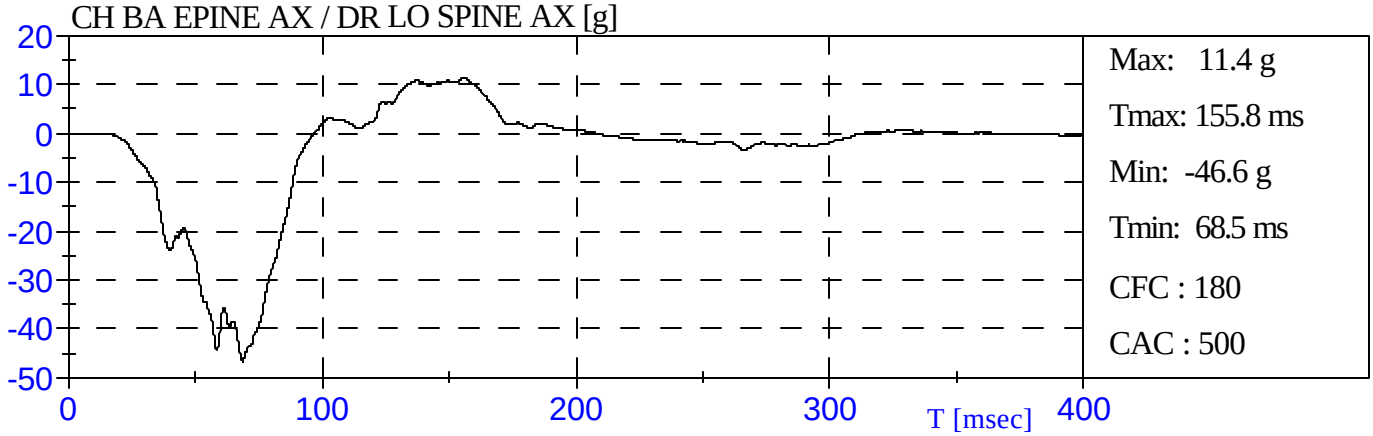
CH HT EPINE AX / DR UP SPINE AX [g]



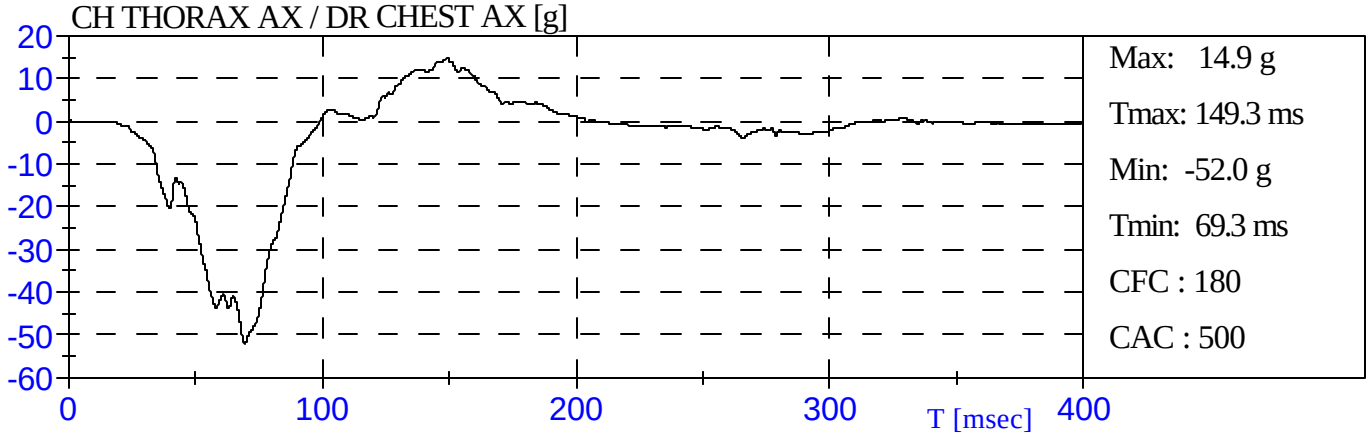
CH CT EPINE AX / DR CT SPINE AX [g]



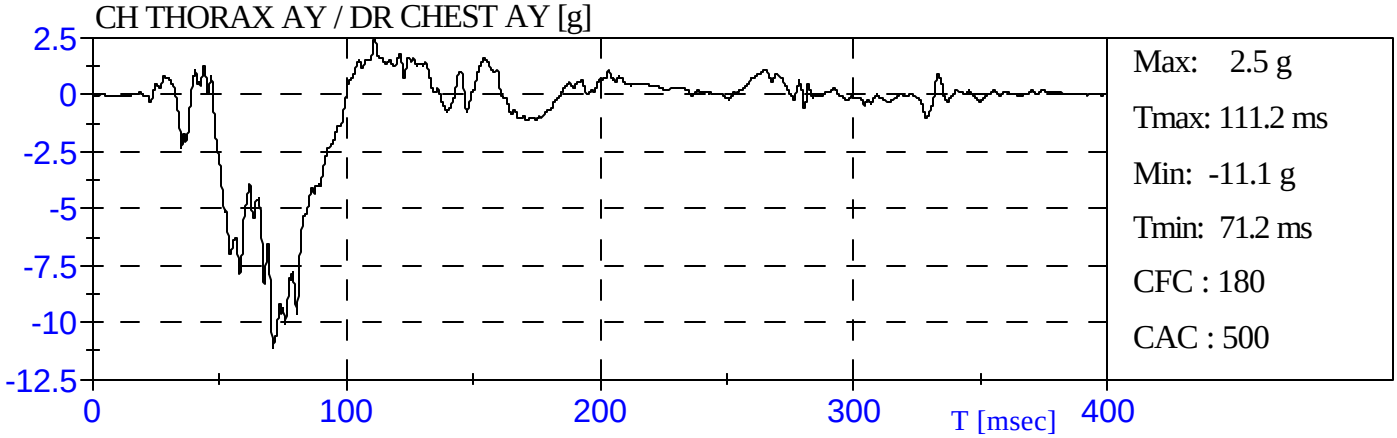
CH BA EPINE AX / DR LO SPINE AX [g]



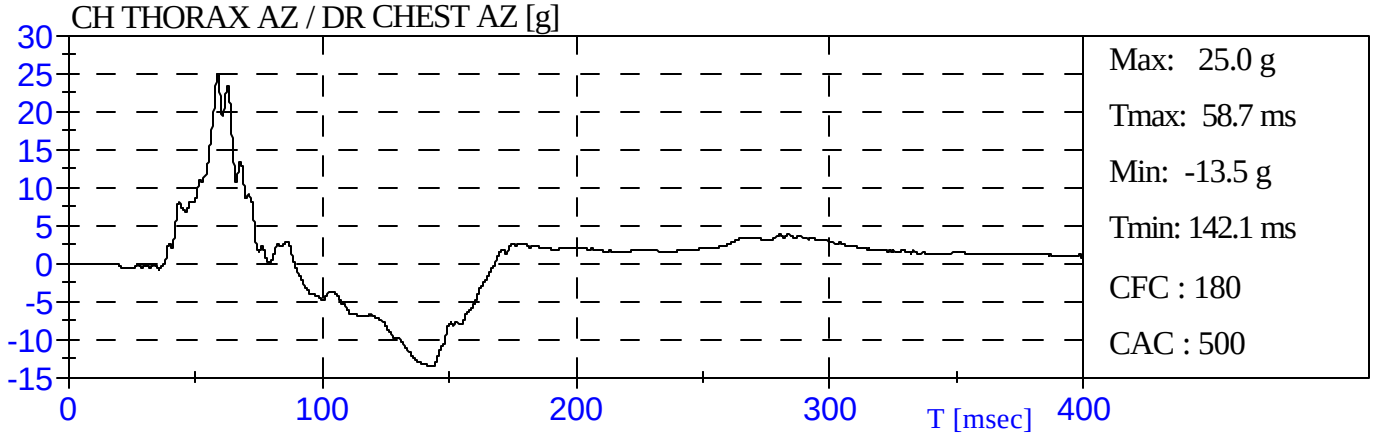
CH THORAX AX / DR CHEST AX [g]



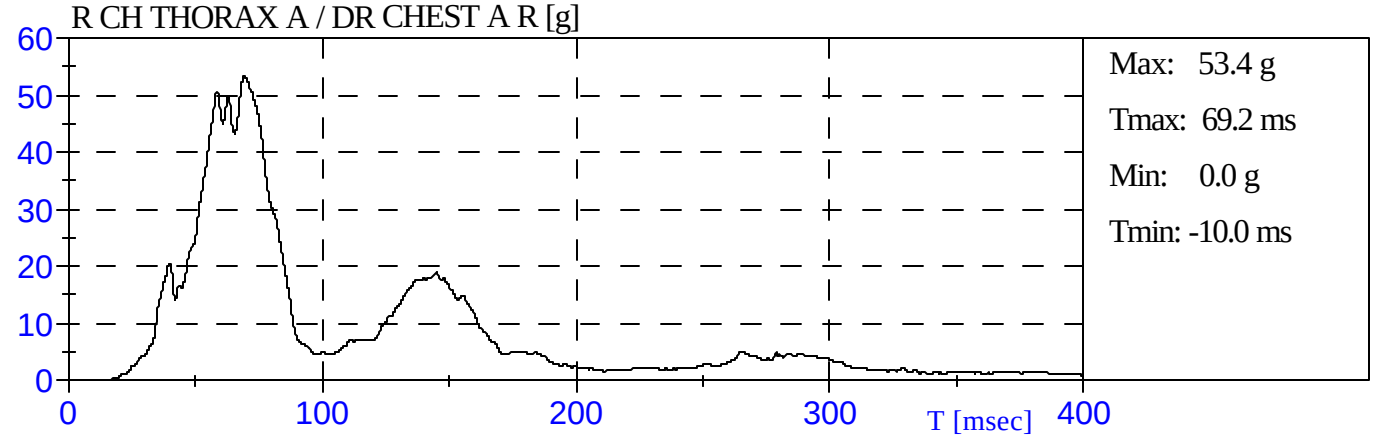
CH THORAX AY / DR CHEST AY [g]

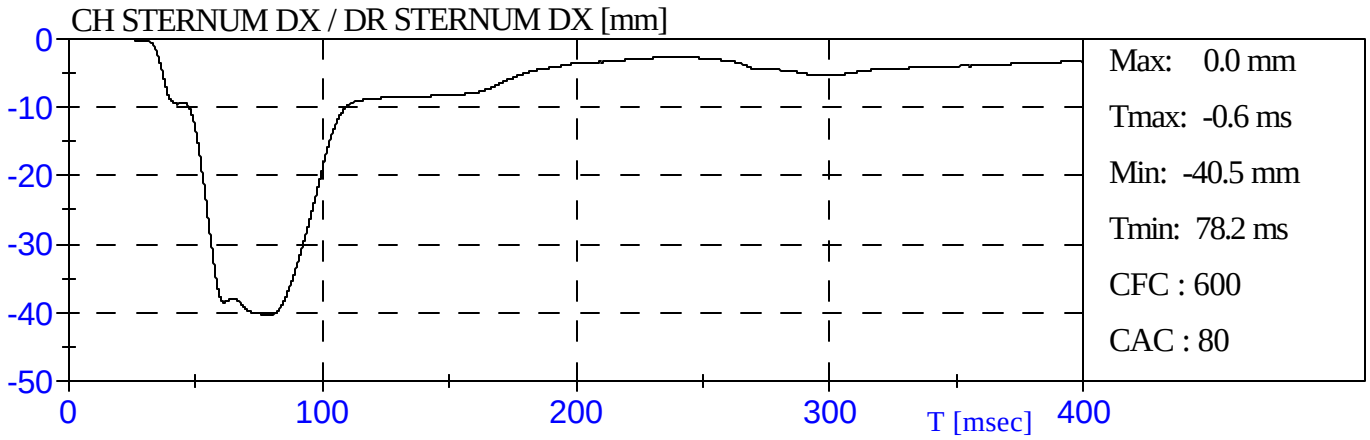


CH THORAX AZ / DR CHEST AZ [g]

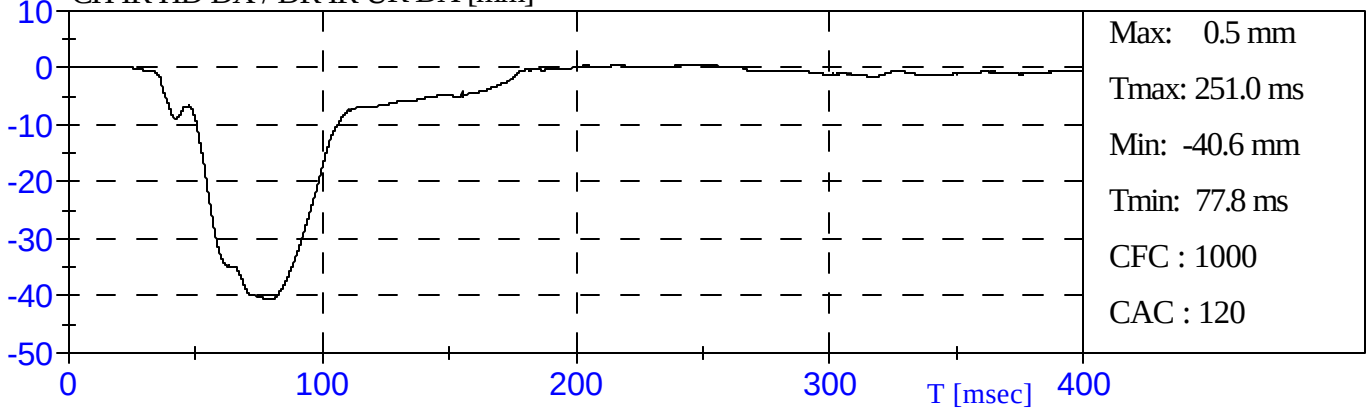


R CH THORAX A / DR CHEST A R [g]

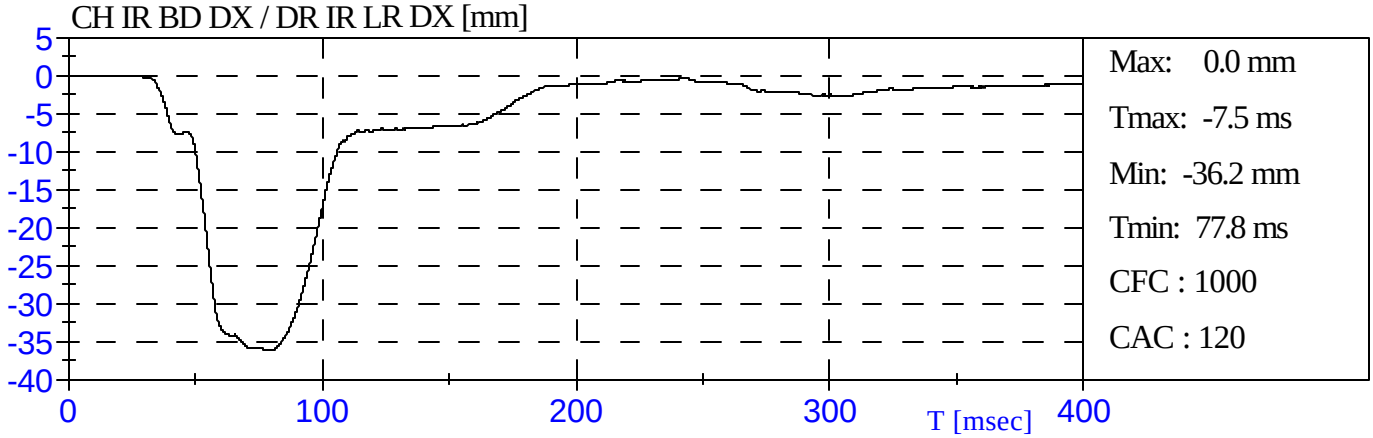



CH STERNUM DX / DR STERNUM DX [mm]
0
-10
-20
-30
-40
-50
0
100
200
300
400
T [msec]
Max: 0.0 mm
Tmax: -0.6 ms
Min: -40.5 mm
Tmin: 78.2 ms
CFC : 600
CAC : 80

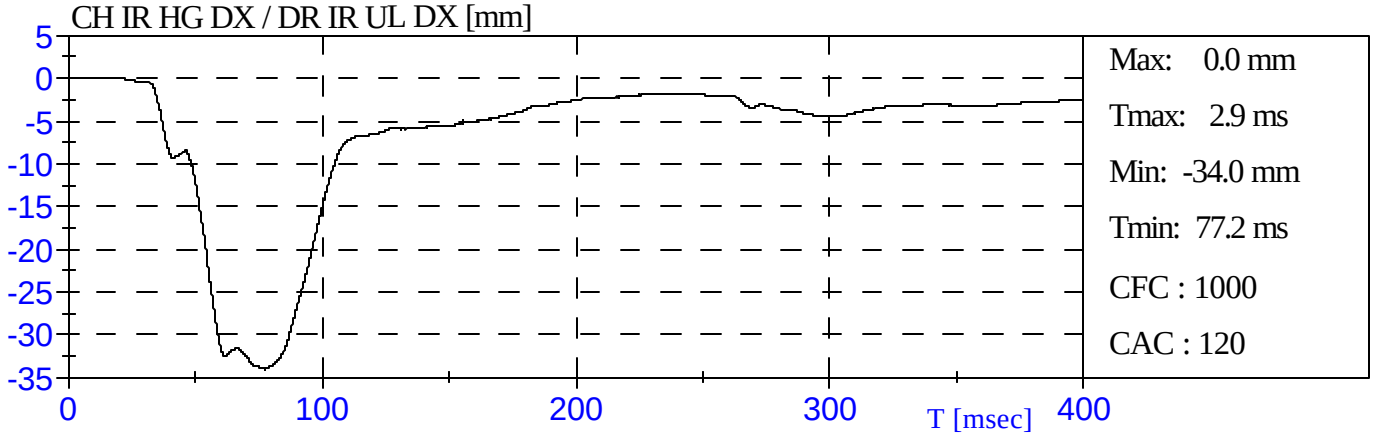
CH IR HD DX / DR IR UR DX [mm]



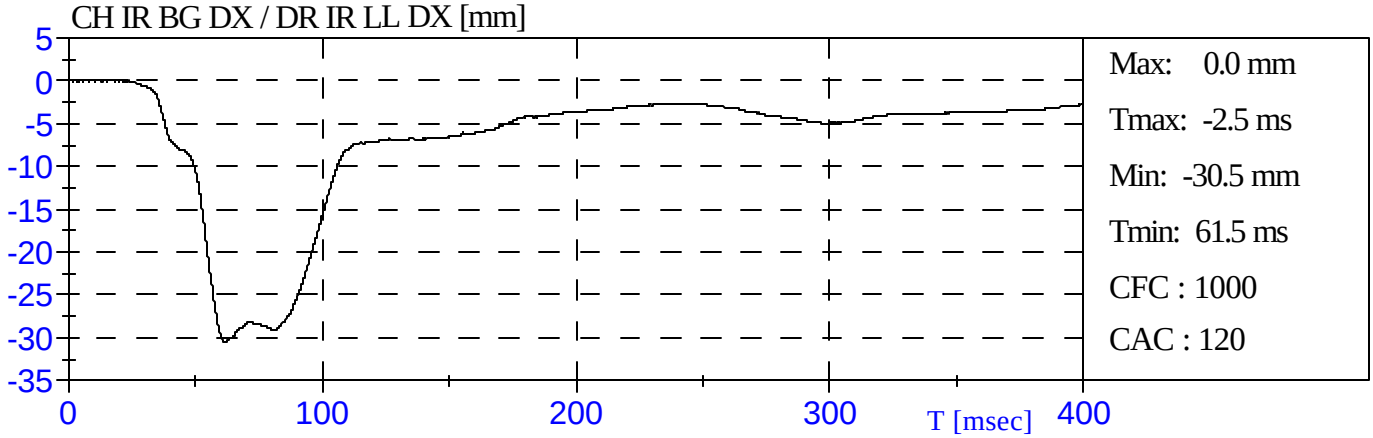
CH IR BD DX / DR IR LR DX [mm]



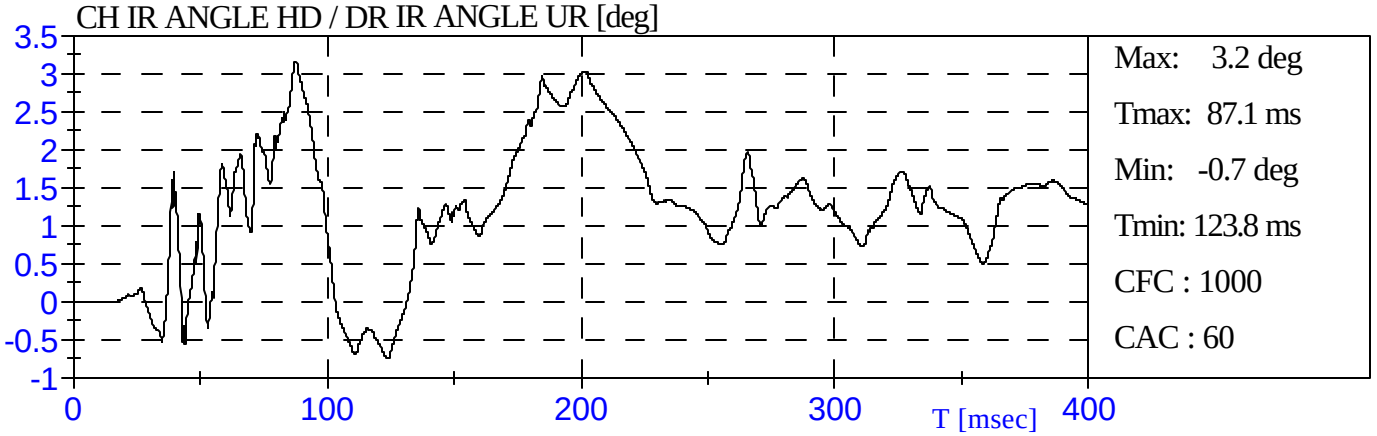
CH IR HG DX / DR IR UL DX [mm]



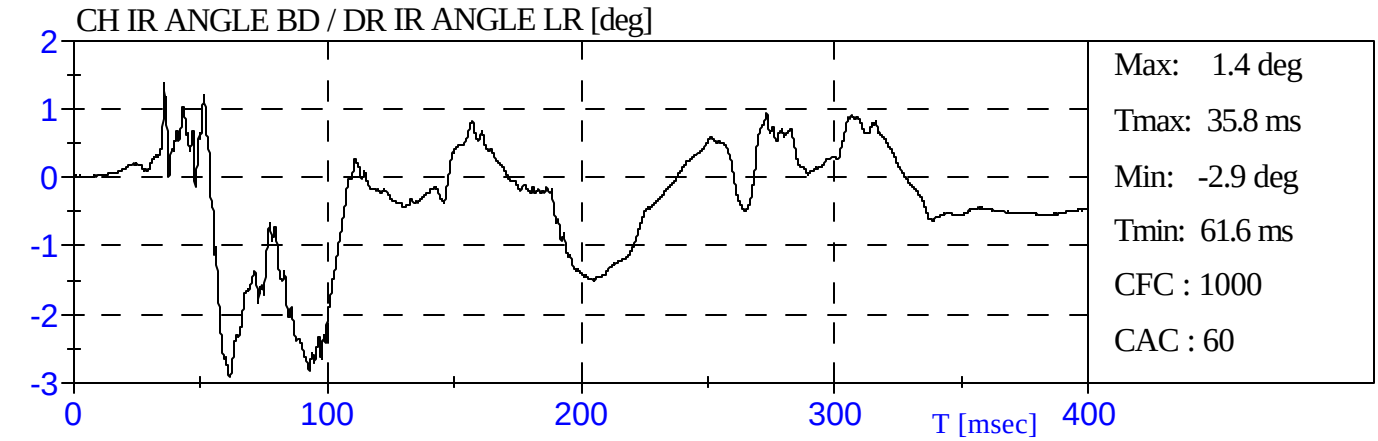
CH IR BG DX / DR IR LL DX [mm]



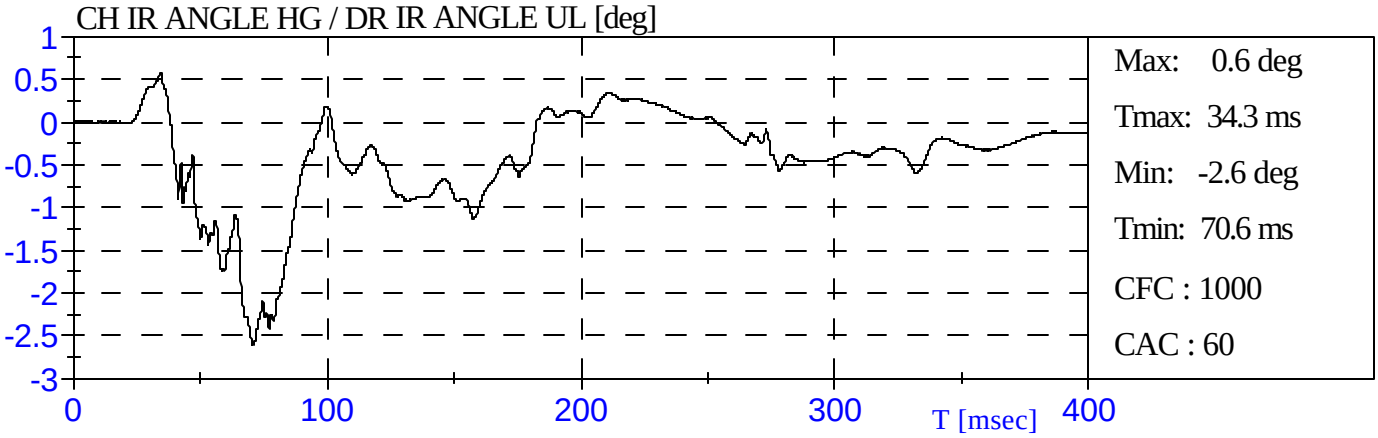
CH IR ANGLE HD / DR IR ANGLE UR [deg]



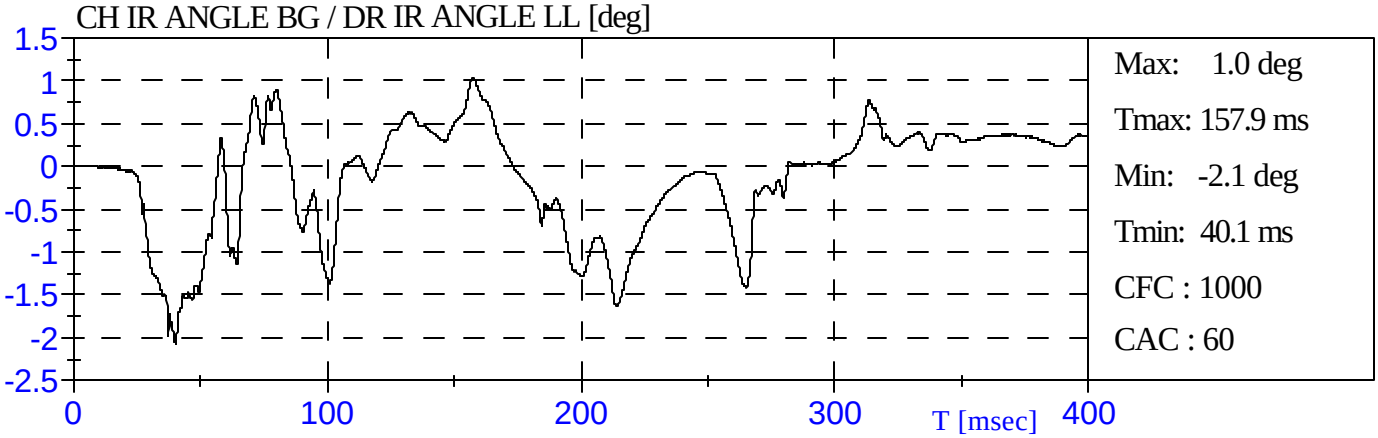
CH IR ANGLE BD / DR IR ANGLE LR [deg]



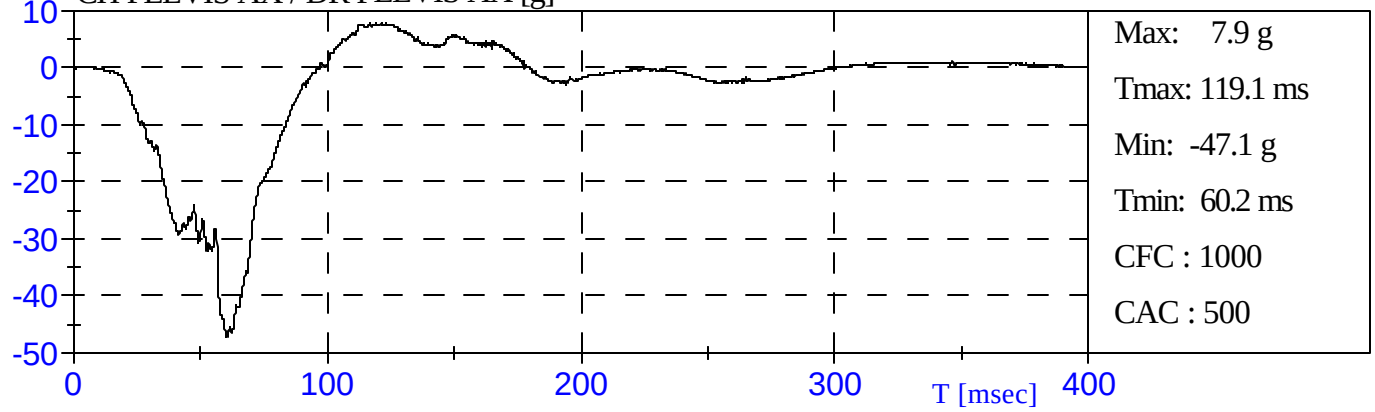
CH IR ANGLE HG / DR IR ANGLE UL [deg]



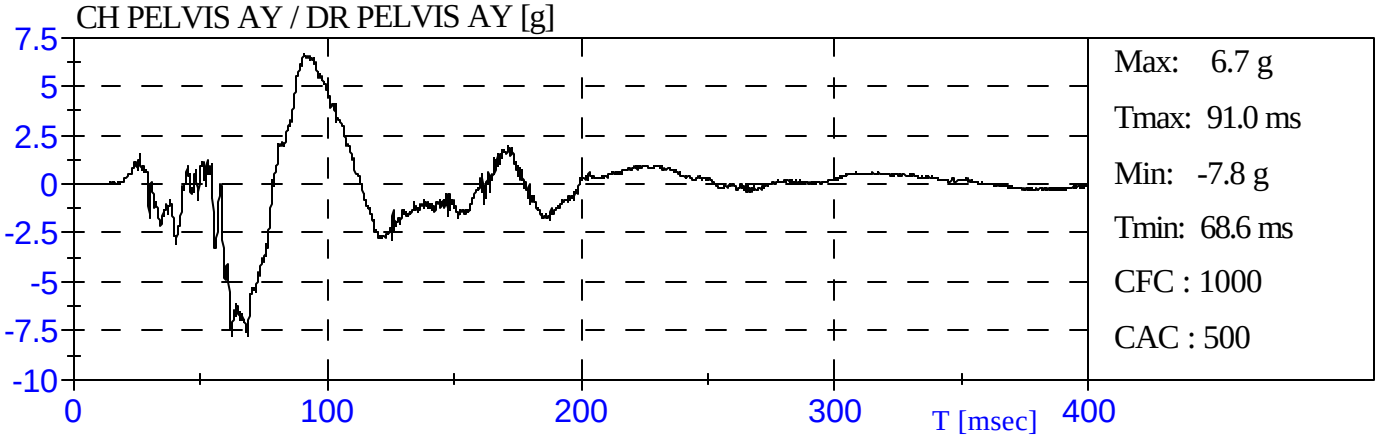
CH IR ANGLE BG / DR IR ANGLE LL [deg]



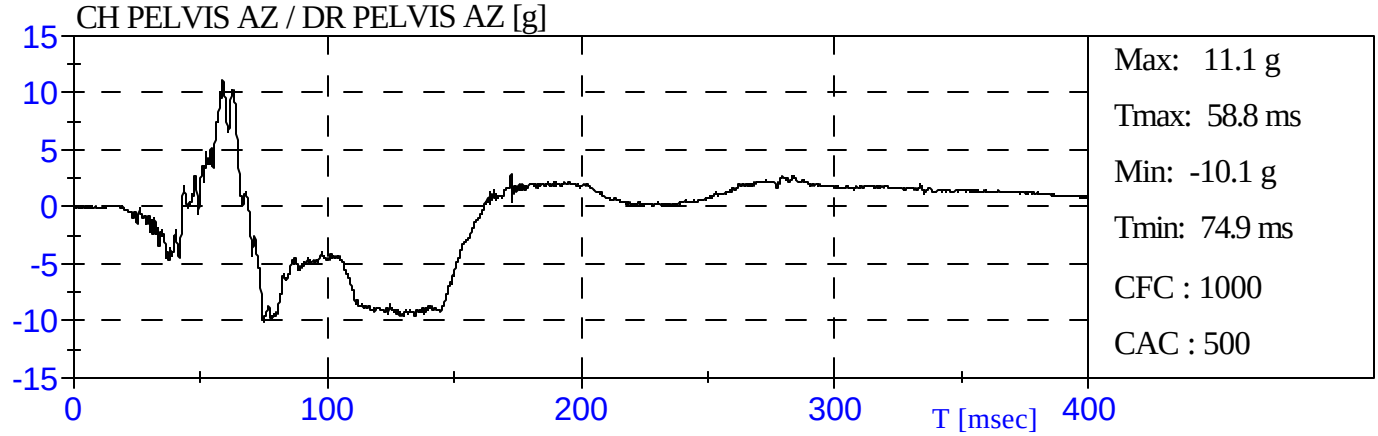
CH PELVIS AX / DR PELVIS AX [g]



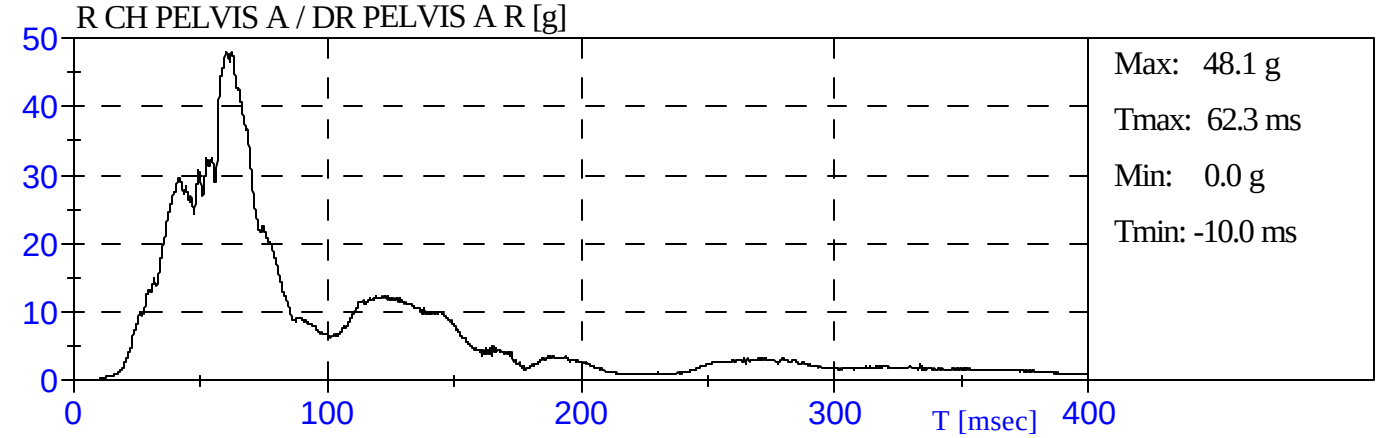
CH PELVIS AY / DR PELVIS AY [g]

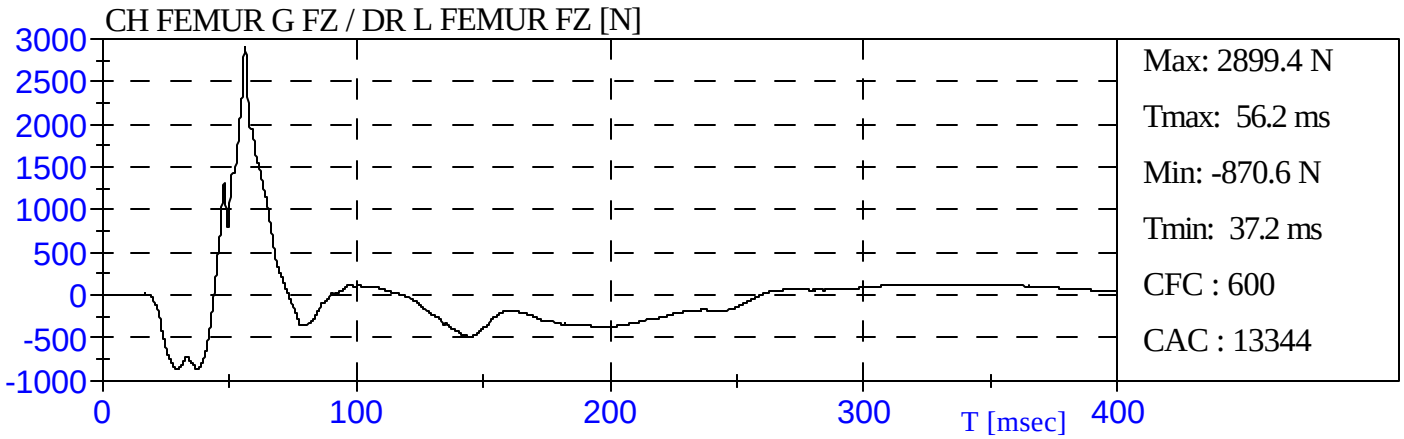


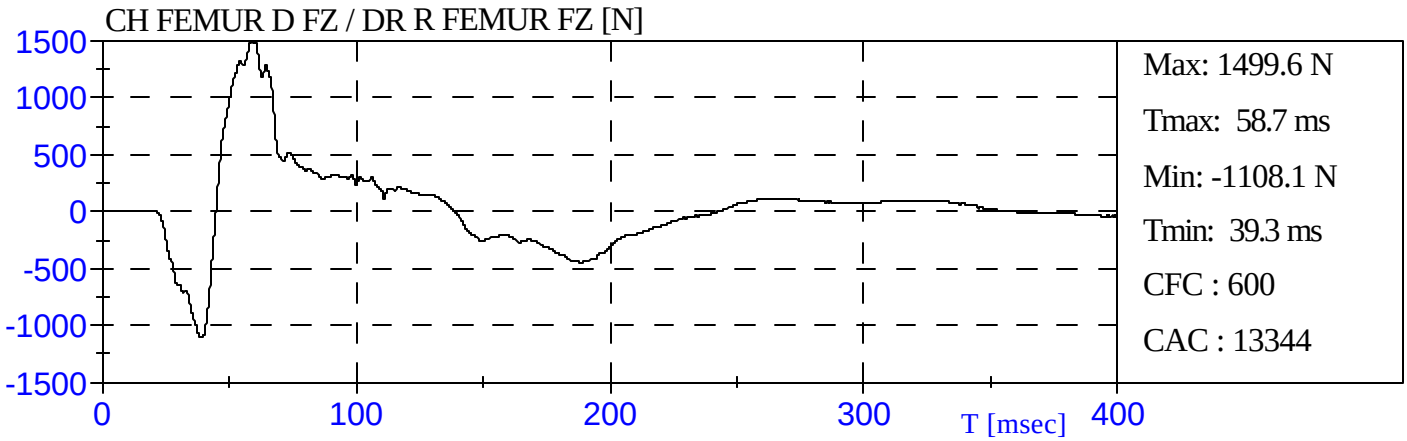
CH PELVIS AZ / DR PELVIS AZ [g]



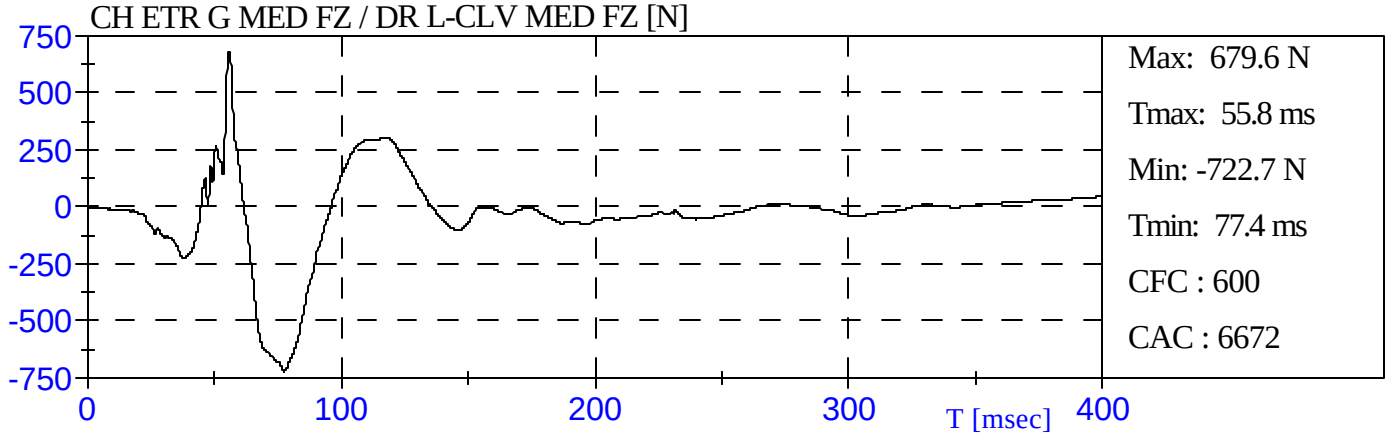
R CH PELVIS A / DR PELVIS A R [g]




CH FEMUR G FZ / DR L FEMUR FZ [N]
3000
2500
2000
1500
1000
500
0
-500
-1000
0
100
200
300
400
T [msec]
Max: 2899.4 N
Tmax: 56.2 ms
Min: -870.6 N
Tmin: 37.2 ms
CFC : 600
CAC : 13344


CH FEMUR D FZ / DR R FEMUR FZ [N]
1500
1000
500
0
-500
-1000
-1500
0
100
200
300
400
T [msec]
Max: 1499.6 N
Tmax: 58.7 ms
Min: -1108.1 N
Tmin: 39.3 ms
CFC : 600
CAC : 13344

CH ETR G MED FZ / DR L-CLV MED FZ [N]



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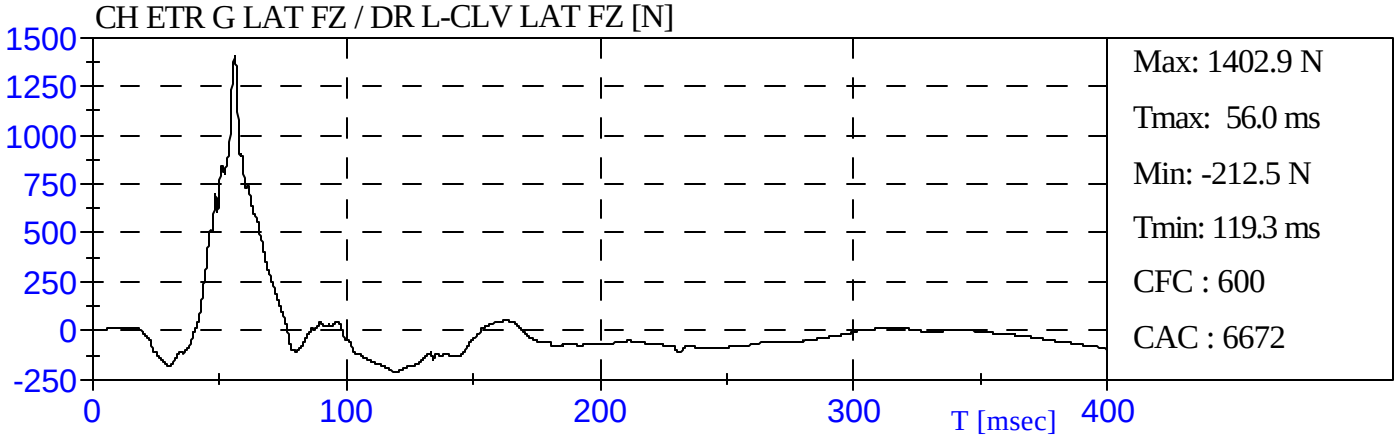

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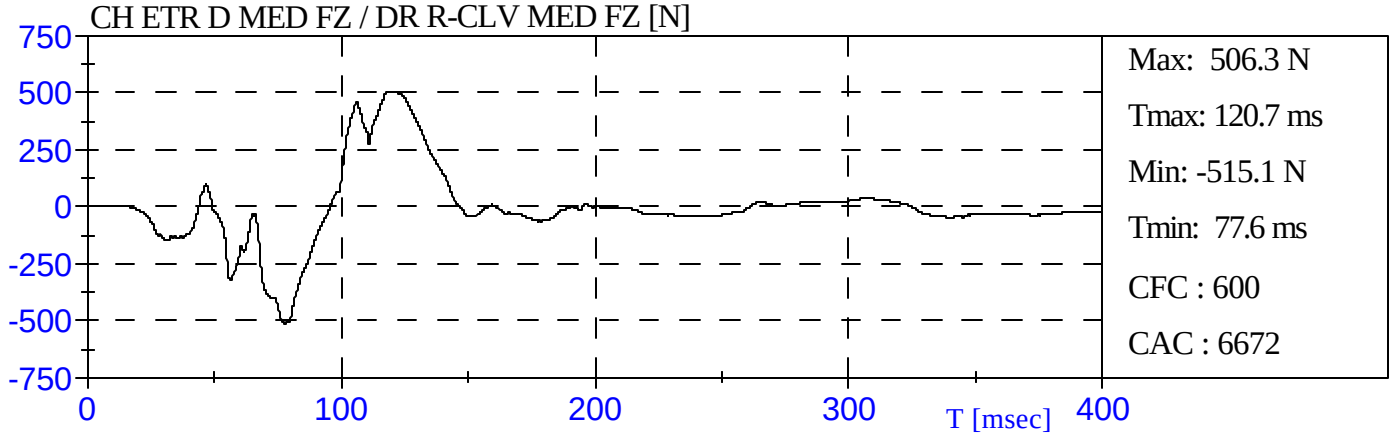
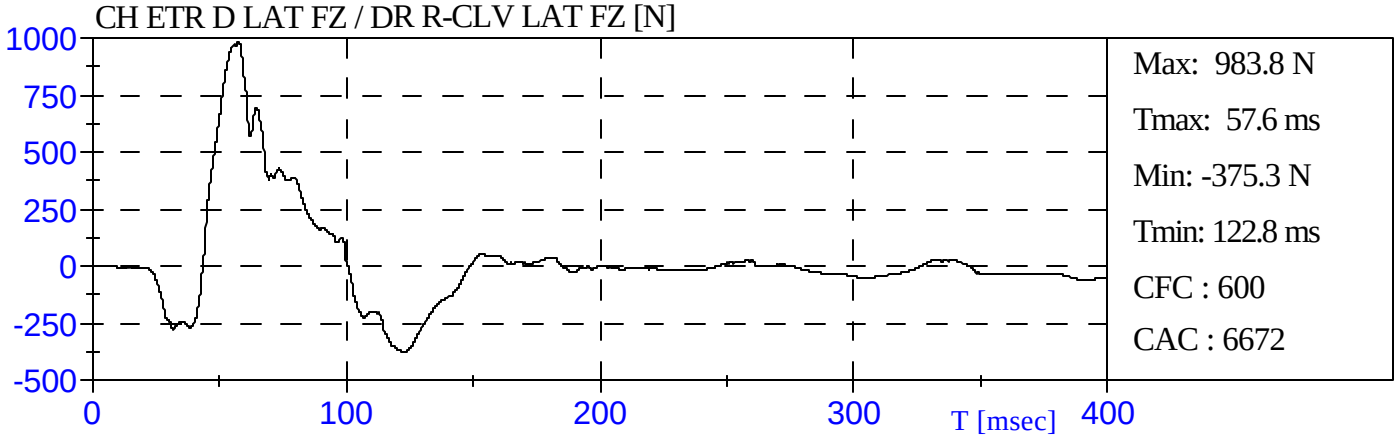
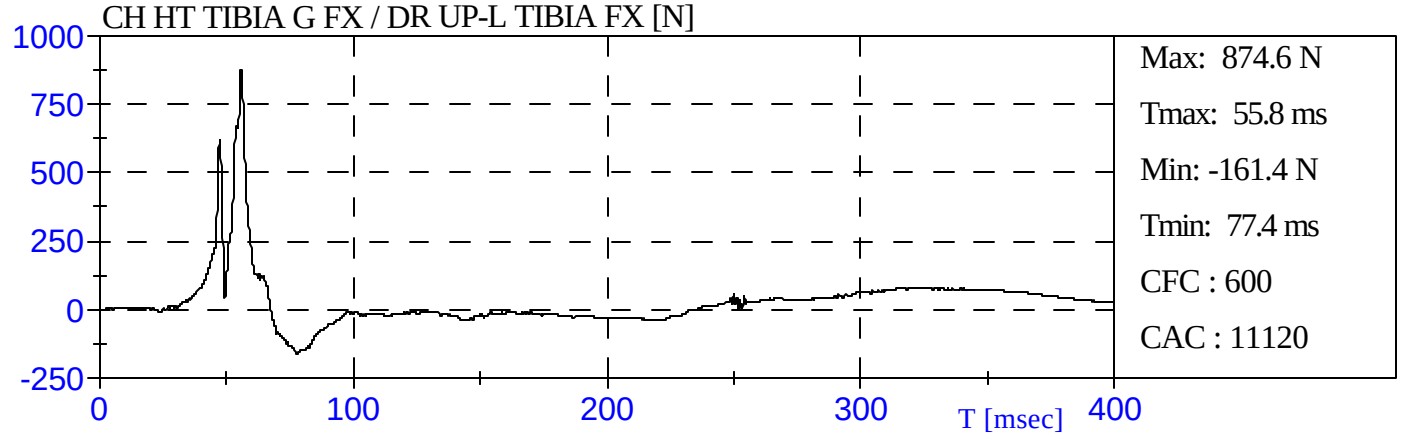


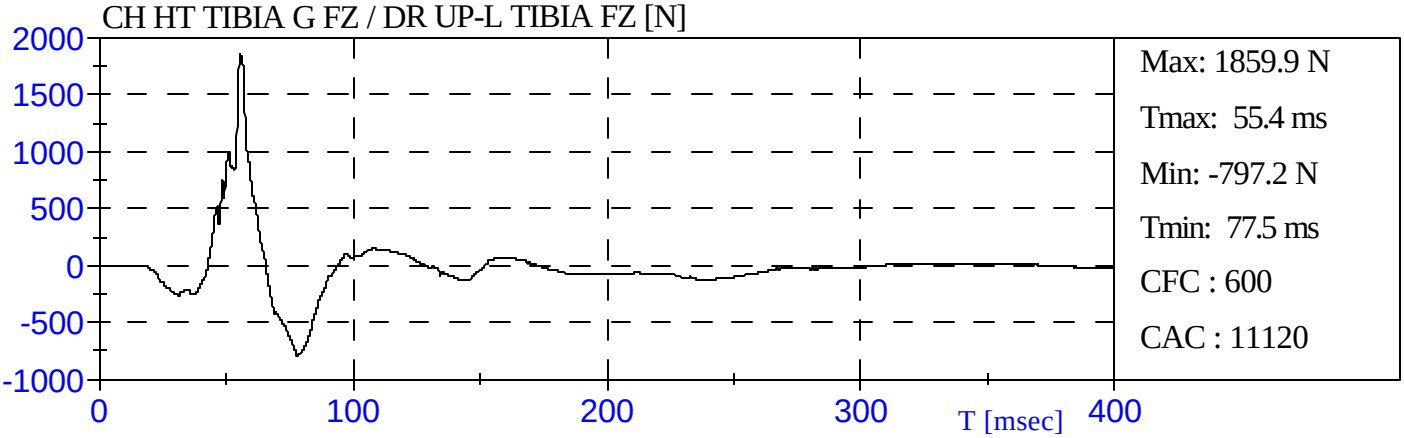
CH ETR D LAT FZ / DR R-CLV LAT FZ [N]



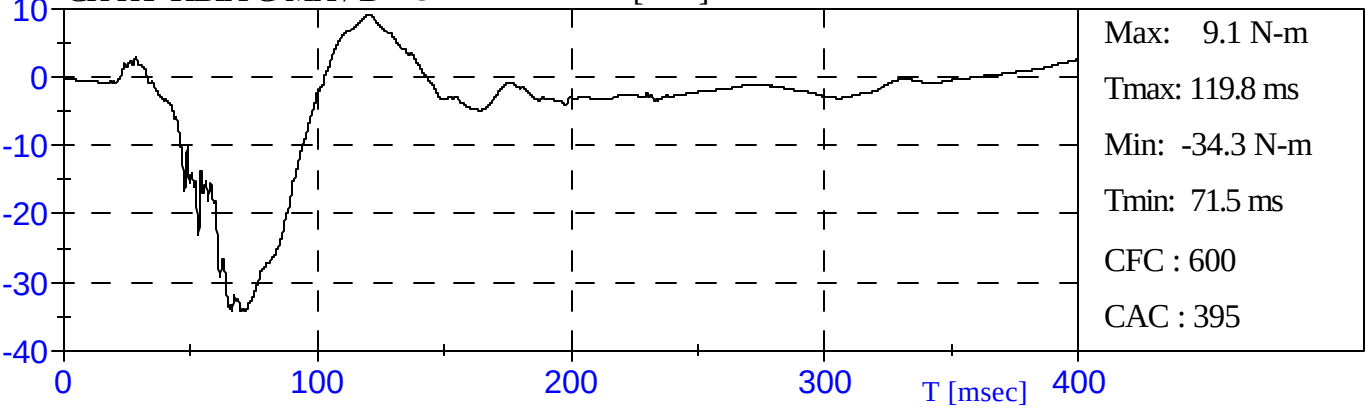
CH HT TIBIA G FX / DR UP-L TIBIA FX [N]



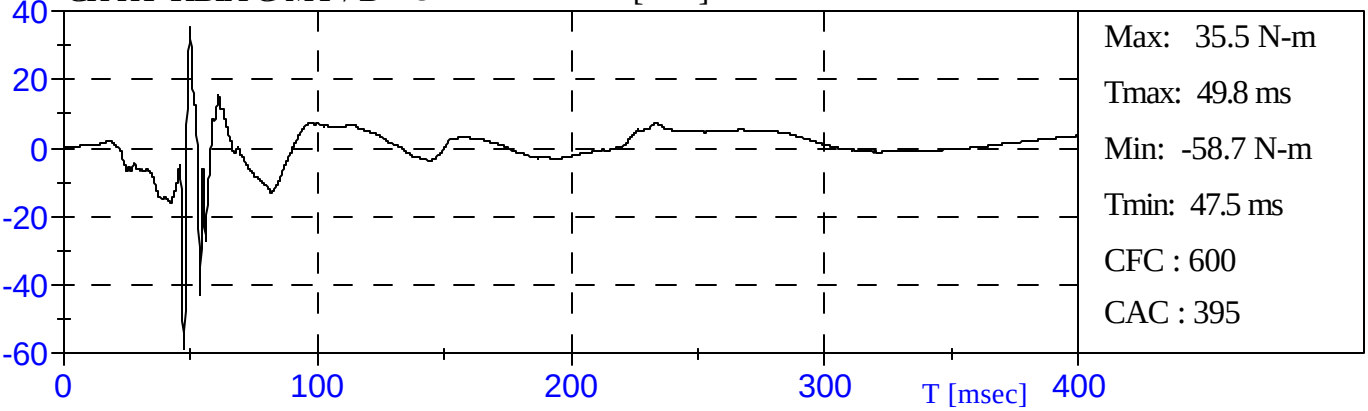
CH HT TIBIA G FZ / DR UP-L TIBIA FZ [N]



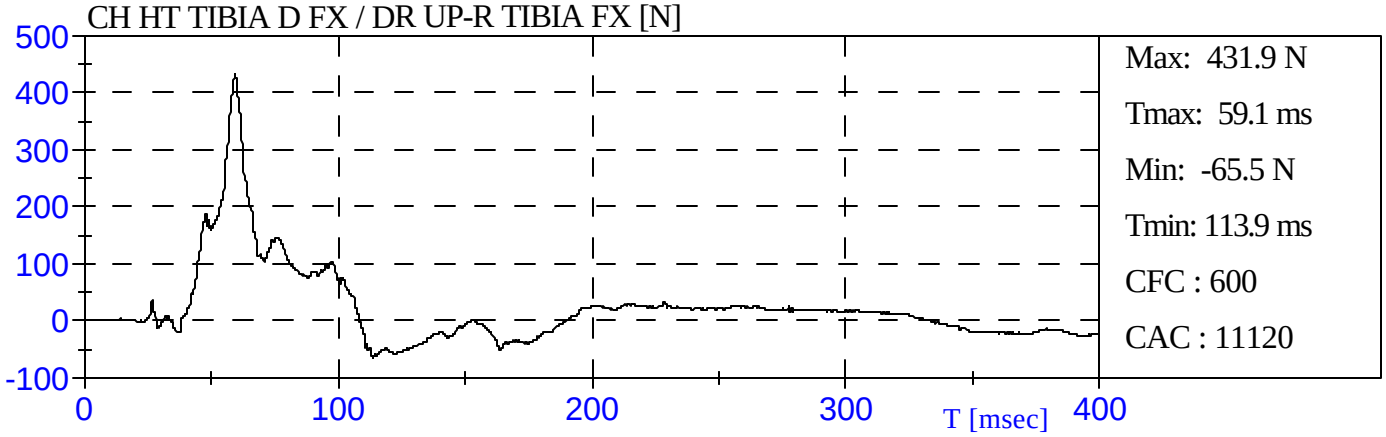
CH HT TIBIA G MX / DR UP-L TIBIA MX [N-m]



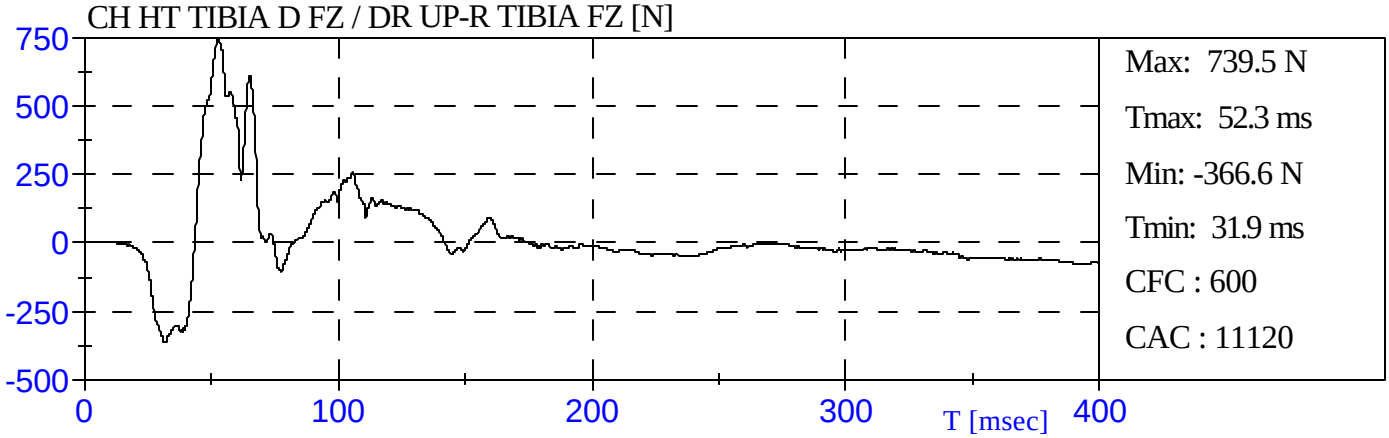
CH HT TIBIA G MY / DR UP-L TIBIA MY [N-m]



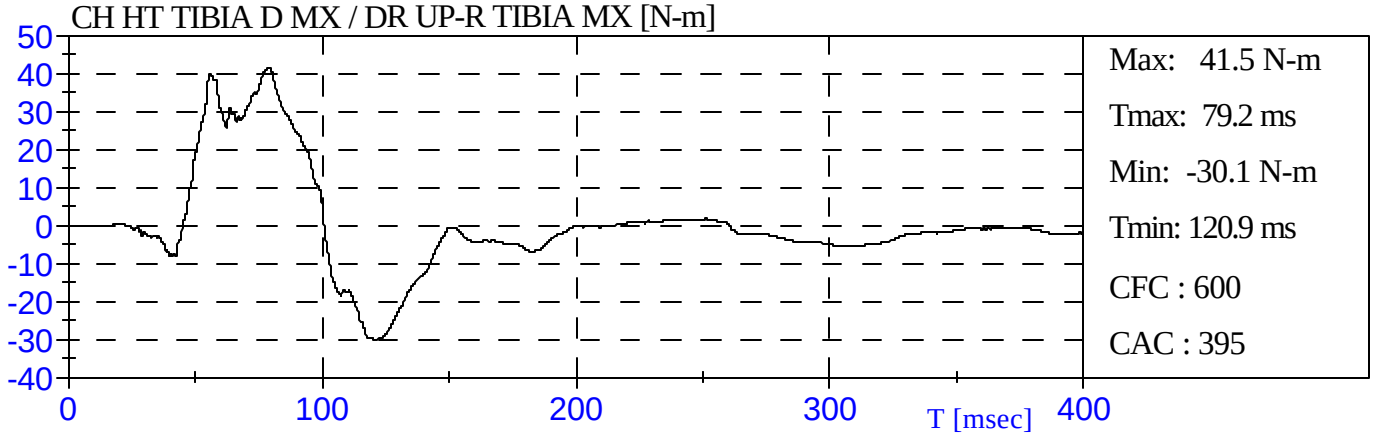
CH HT TIBIA D FX / DR UP-R TIBIA FX [N]



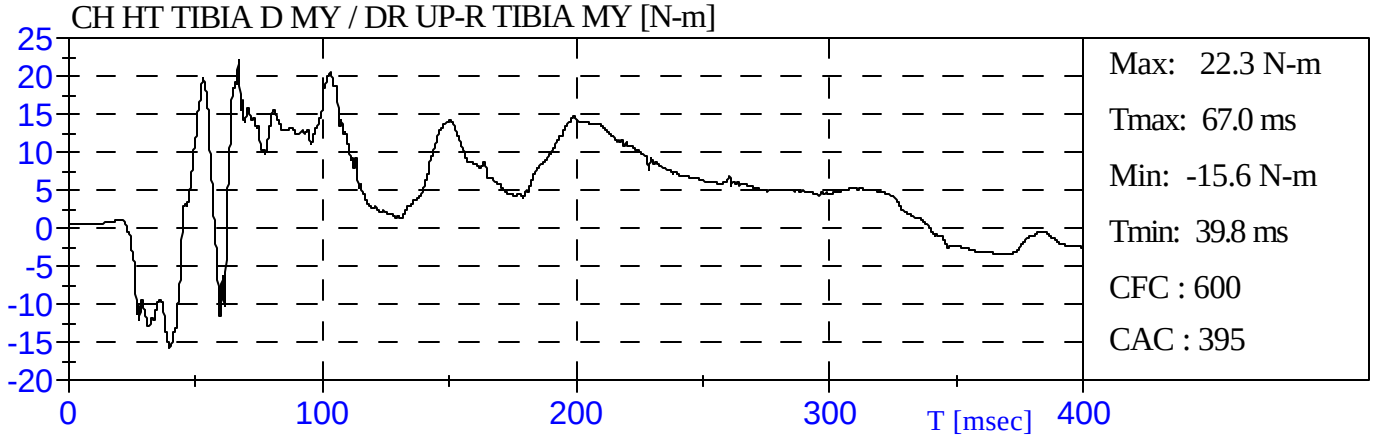
CH HT TIBIA D FZ / DR UP-R TIBIA FZ [N]



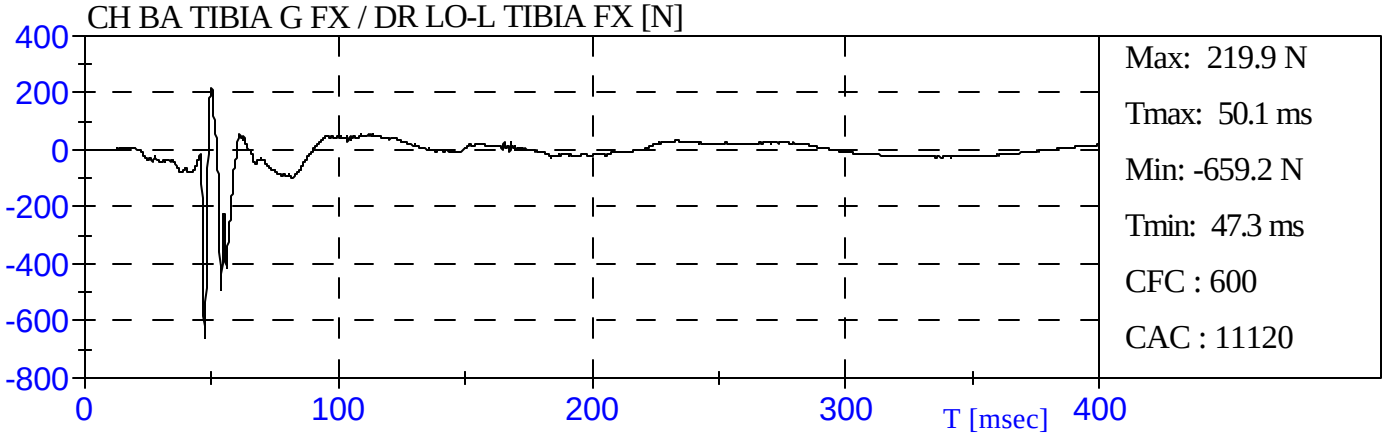
CH HT TIBIA D MX / DR UP-R TIBIA MX [N-m]



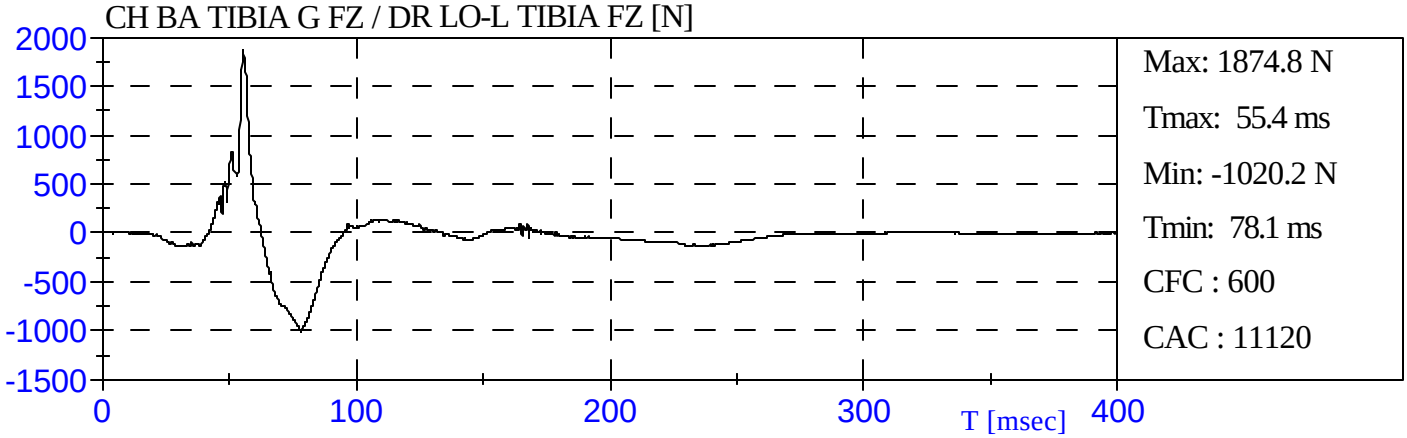
CH HT TIBIA D MY / DR UP-R TIBIA MY [N-m]



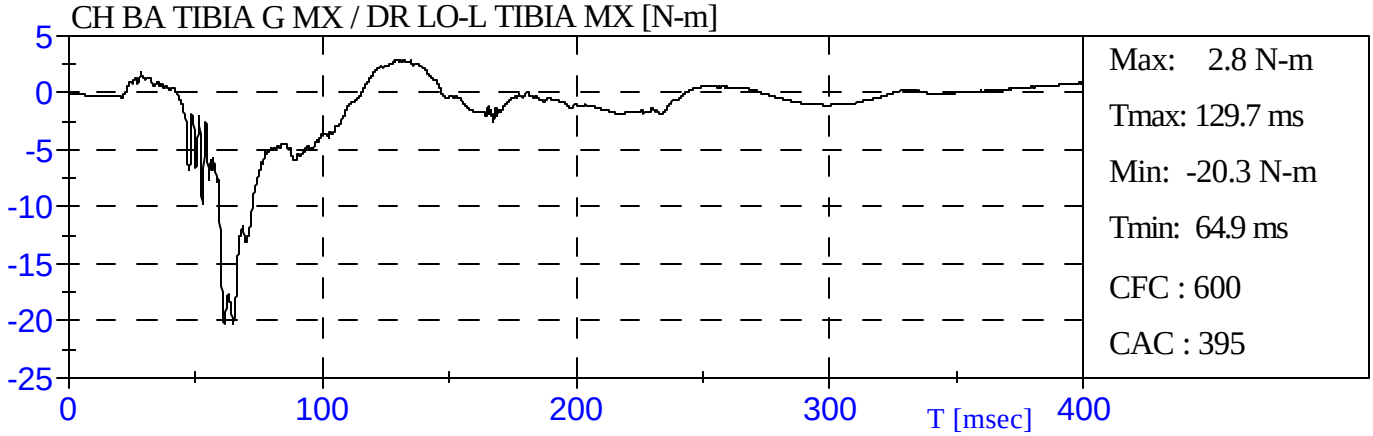
CH BA TIBIA G FX / DR LO-L TIBIA FX [N]



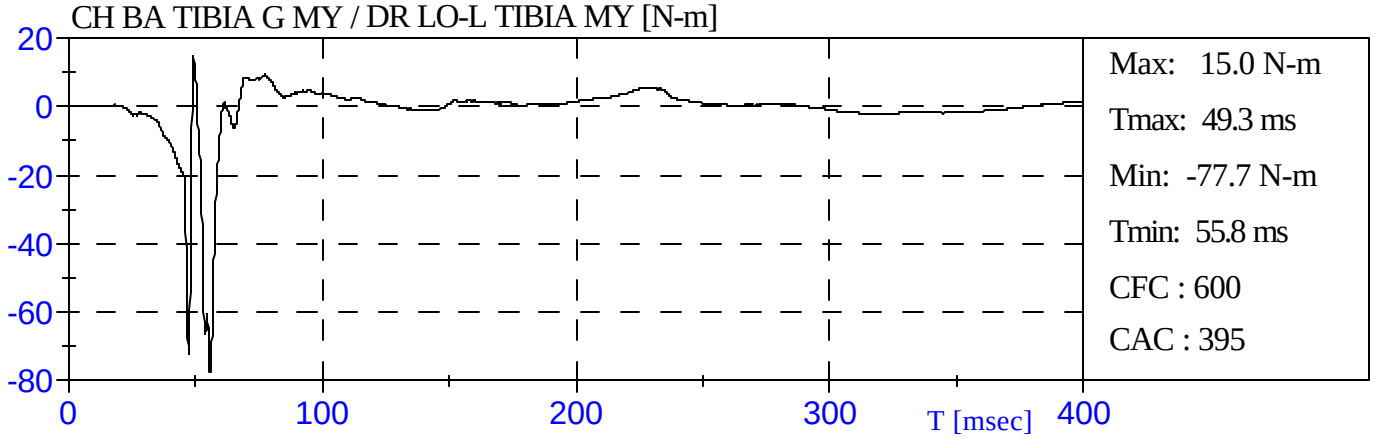
CH BA TIBIA G FZ / DR LO-L TIBIA FZ [N]



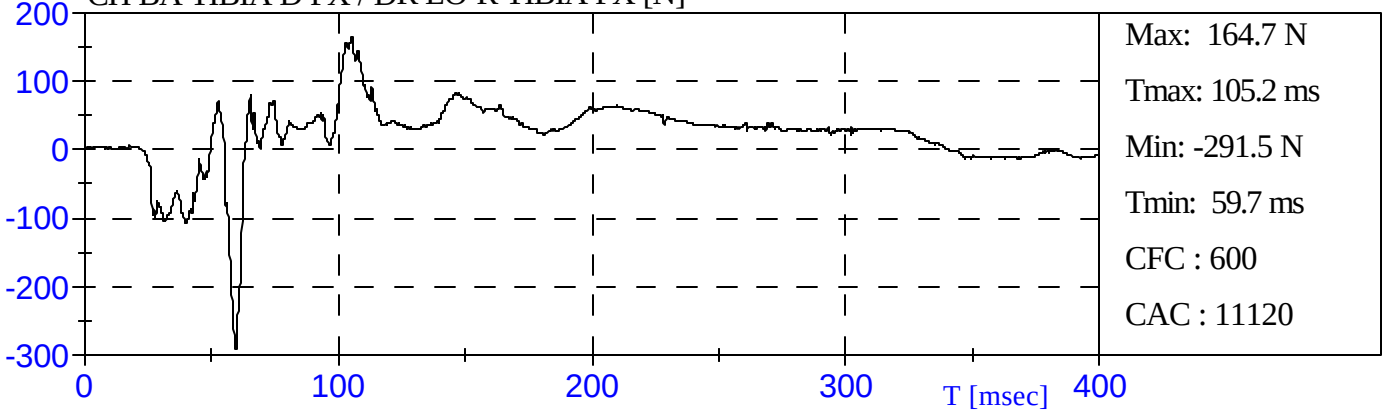
CH BA TIBIA G MX / DR LO-L TIBIA MX [N-m]



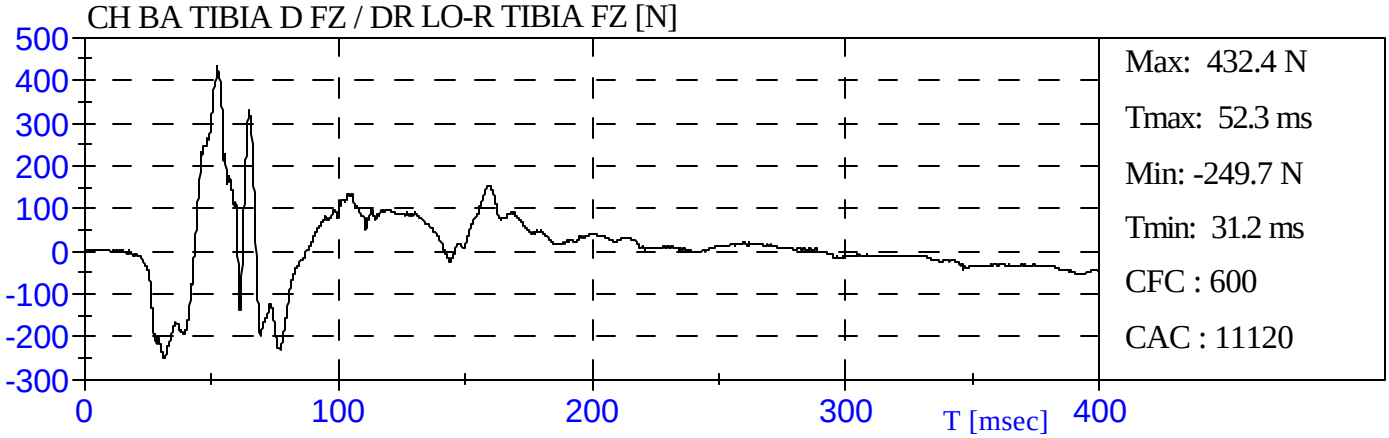
CH BA TIBIA G MY / DR LO-L TIBIA MY [N-m]



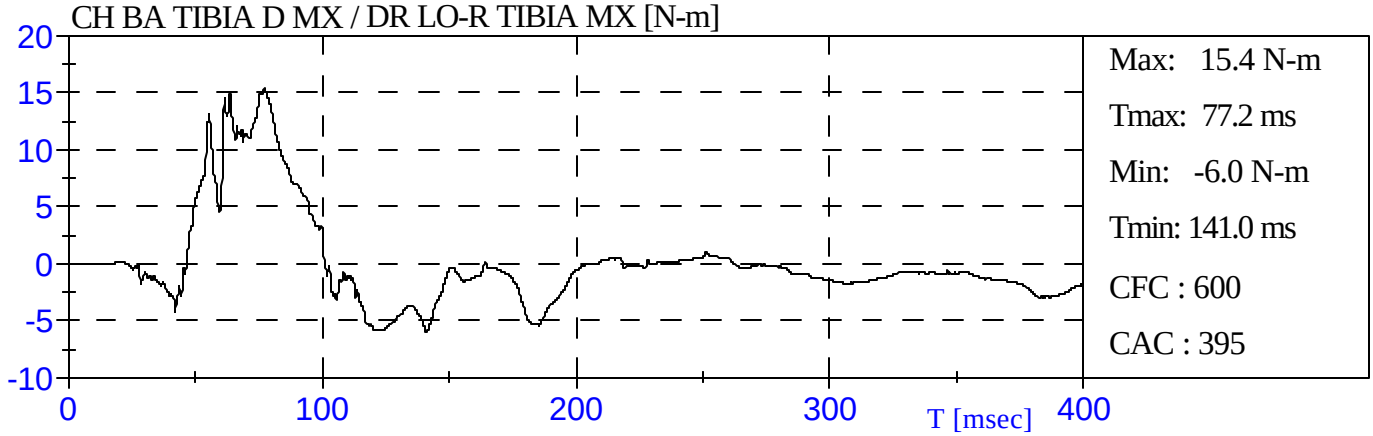
CH BA TIBIA D FX / DR LO-R TIBIA FX [N]



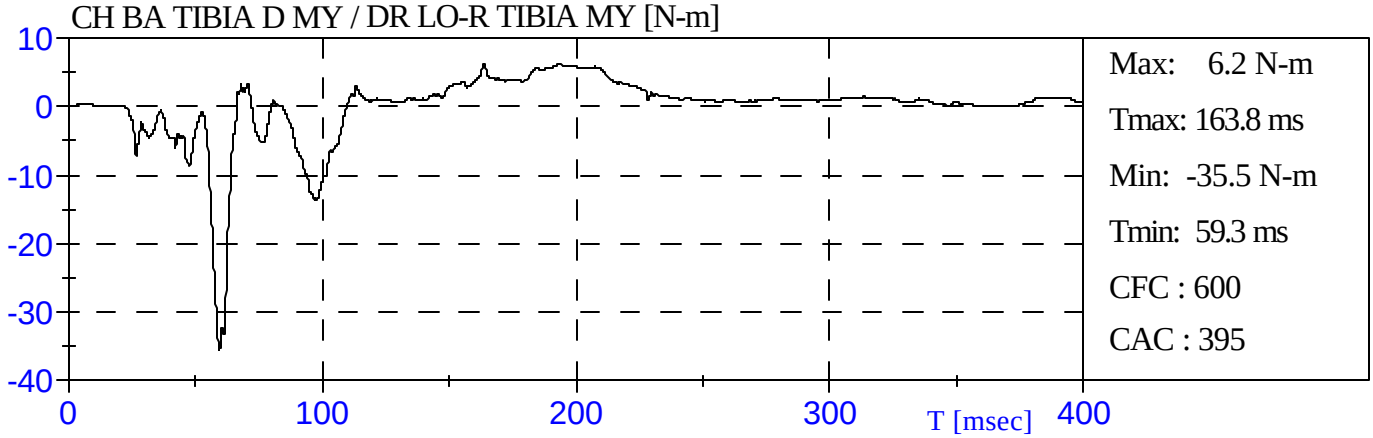
CH BA TIBIA D FZ / DR LO-R TIBIA FZ [N]



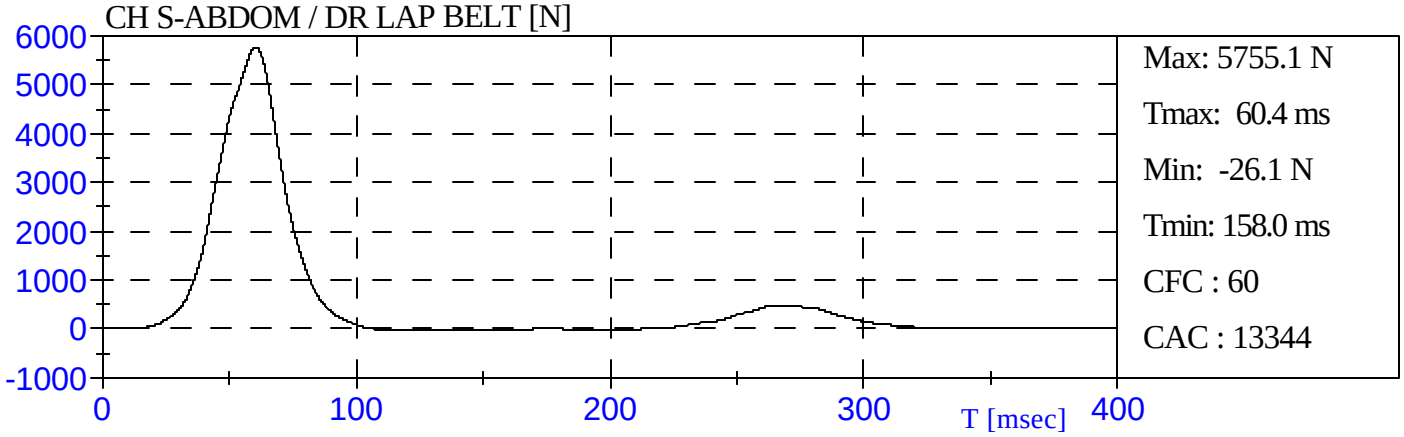
CH BA TIBIA D MX / DR LO-R TIBIA MX [N-m]



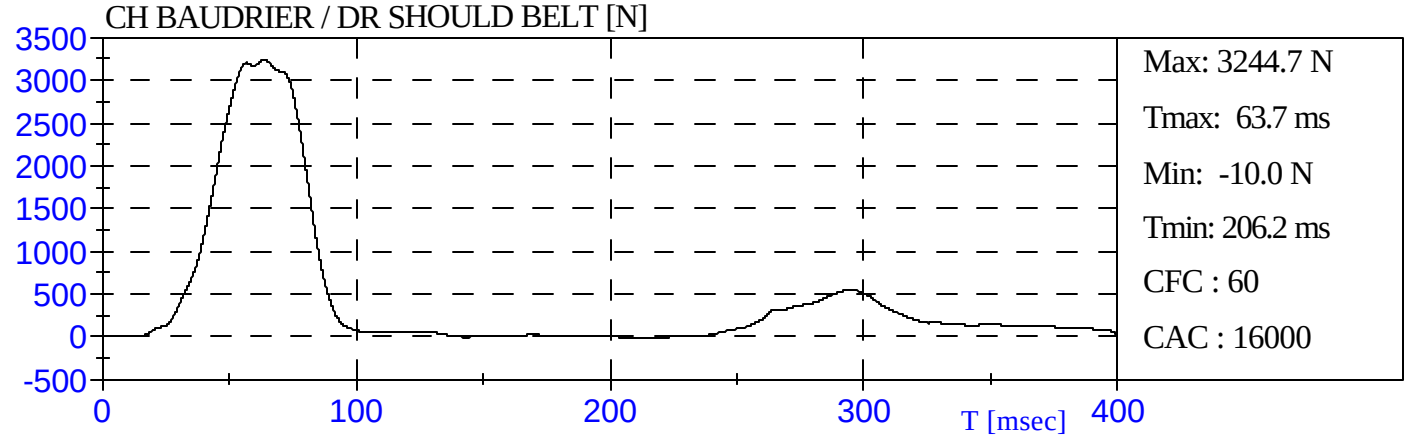
CH BA TIBIA D MY / DR LO-R TIBIA MY [N-m]

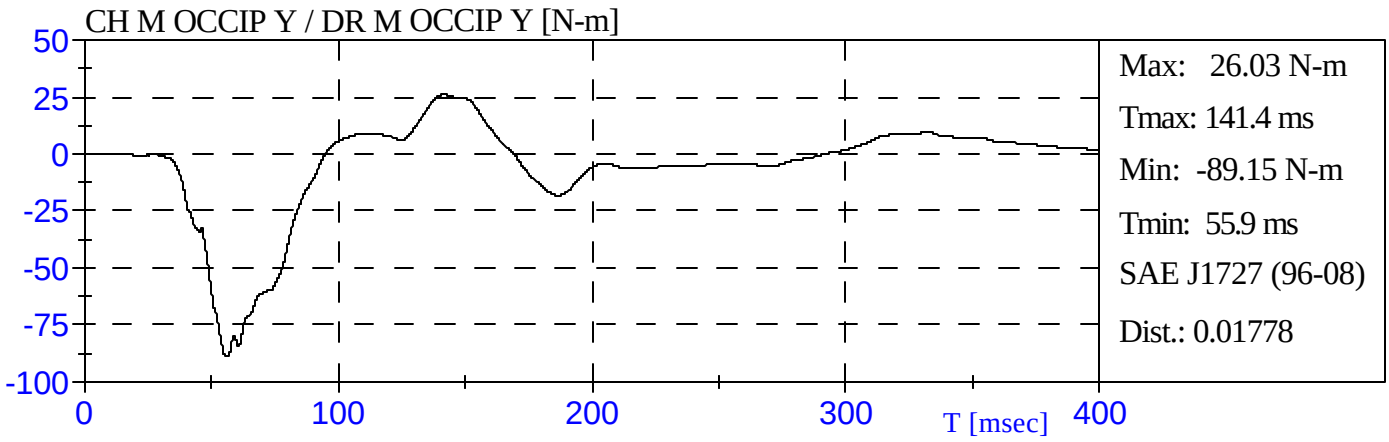


CH S-ABDOM / DR LAP BELT [N]

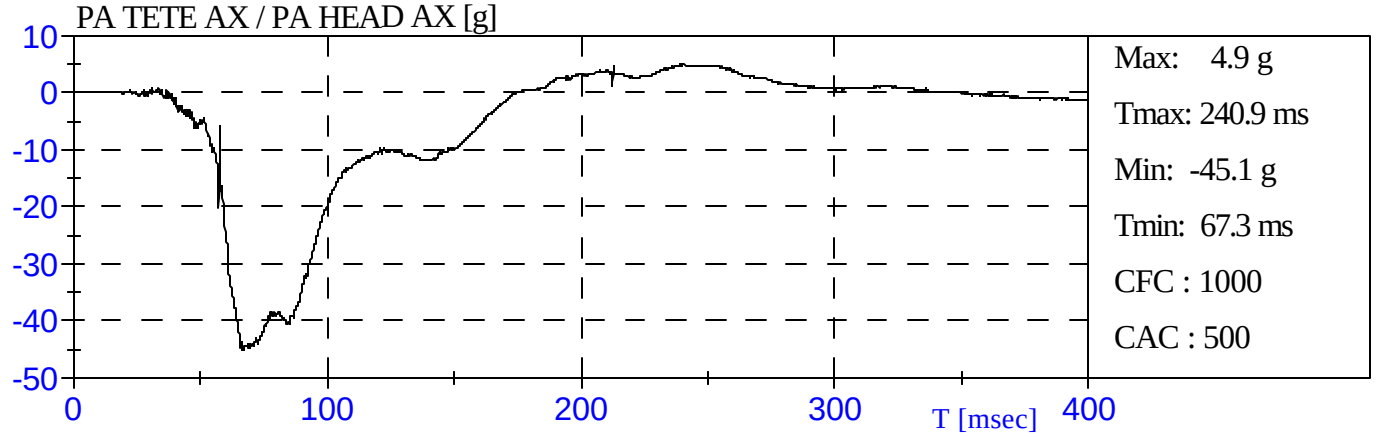


CH BAUDRIER / DR SHOULD BELT [N]

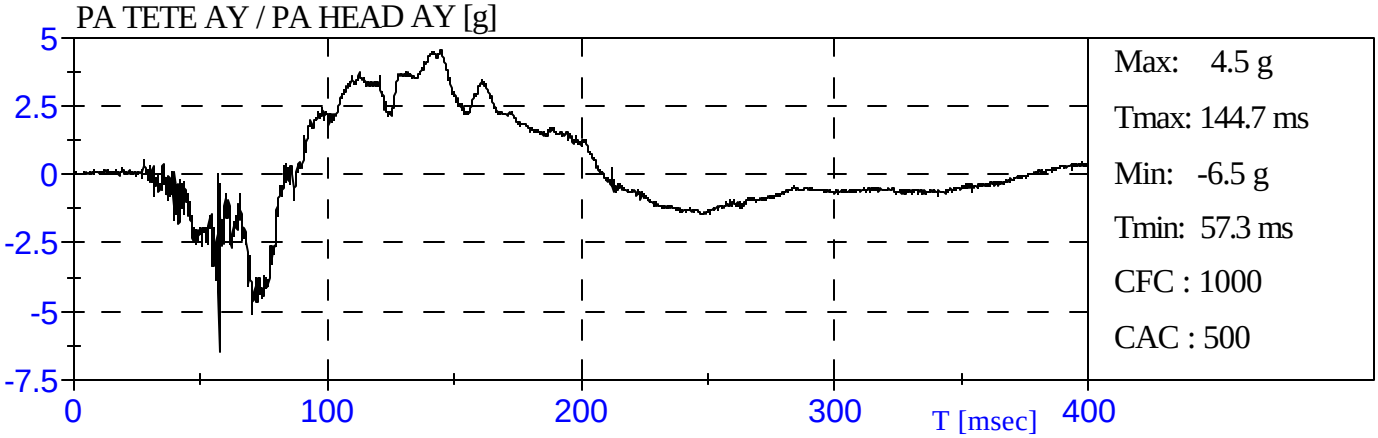



CH M OCCIP Y / DR M OCCIP Y [N-m]
50
25
0
-25
-50
-75
-100
0
100
200
300
400
T [msec]
Max: 26.03 N-m
Tmax: 141.4 ms
Min: -89.15 N-m
Tmin: 55.9 ms
SAE J1727 (96-08)
Dist.: 0.01778

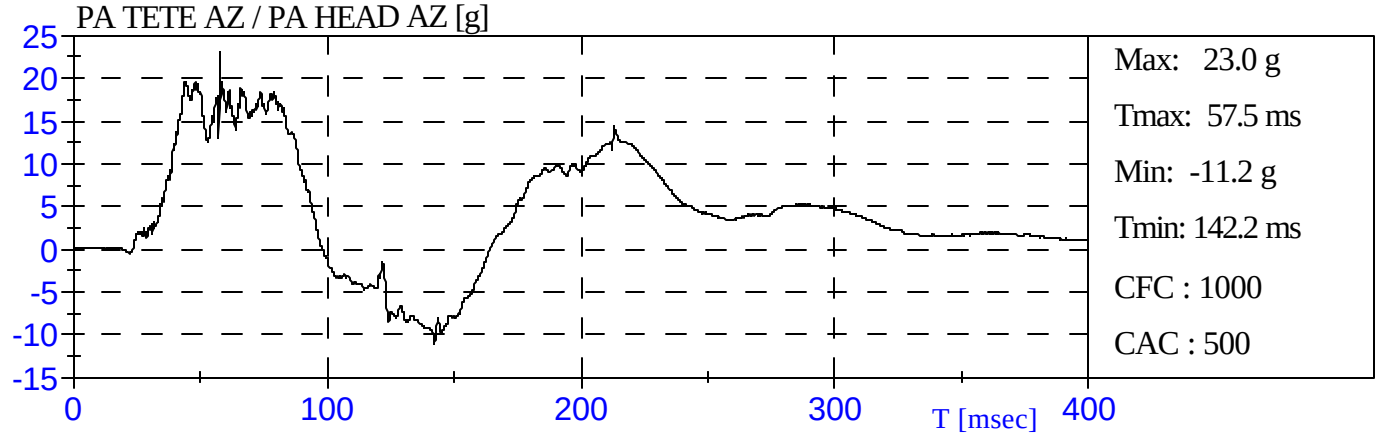
PA TETE AX / PA HEAD AX [g]



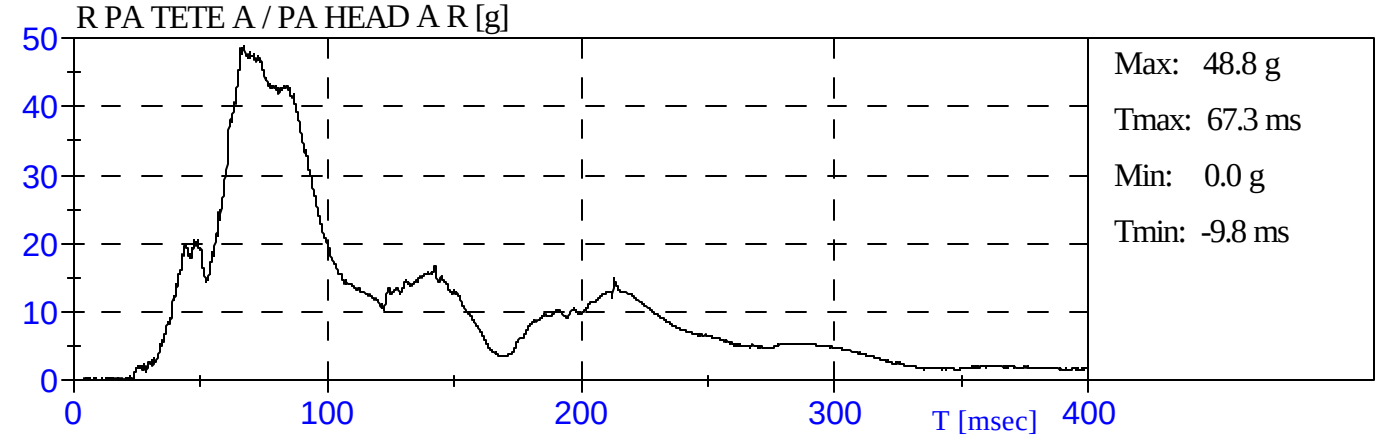
PA TETE AY / PA HEAD AY [g]



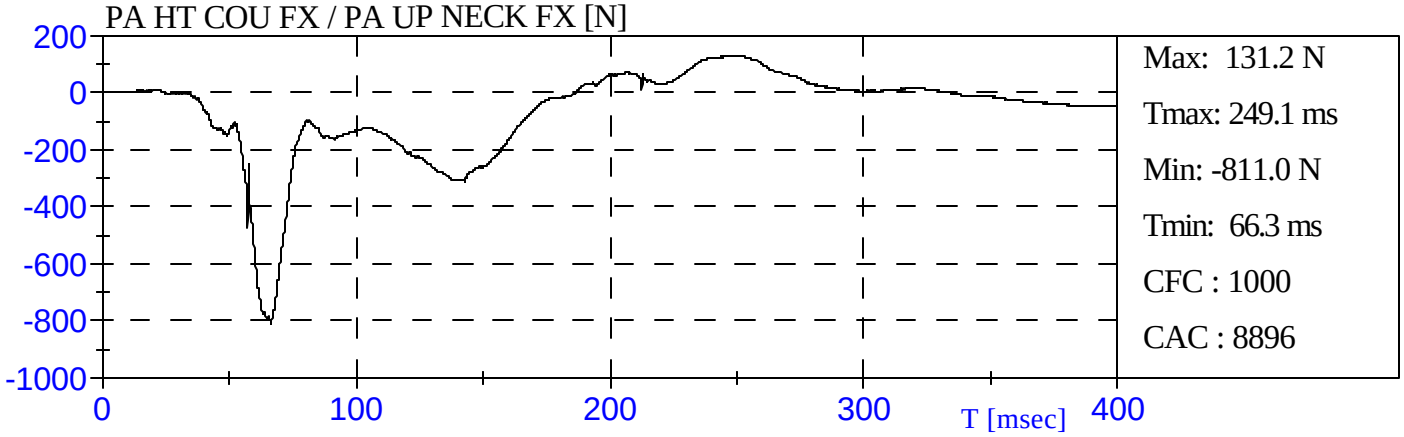
PA TETE AZ / PA HEAD AZ [g]



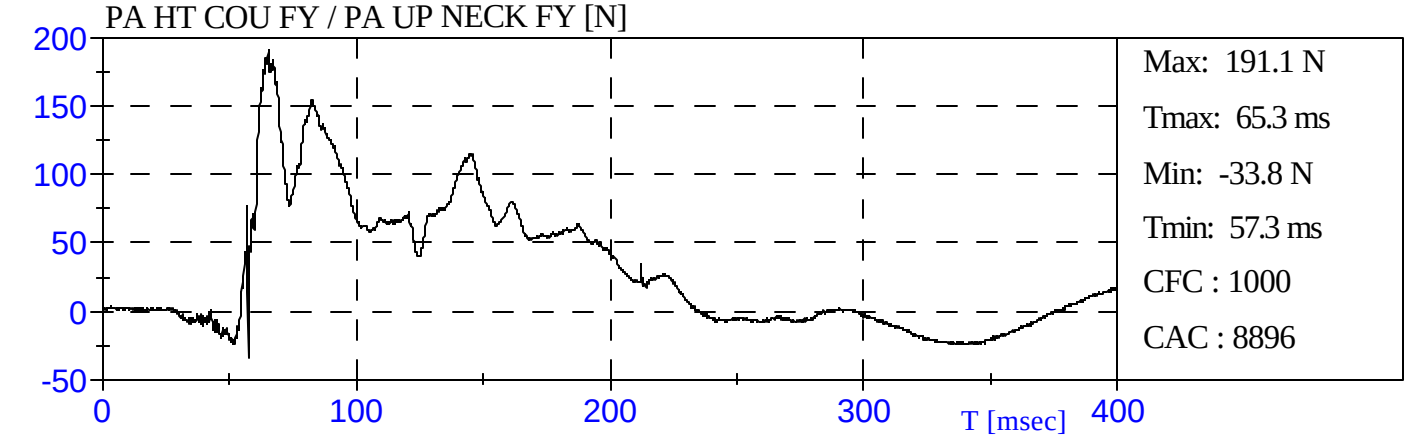
R PA TETE A / PA HEAD A R [g]



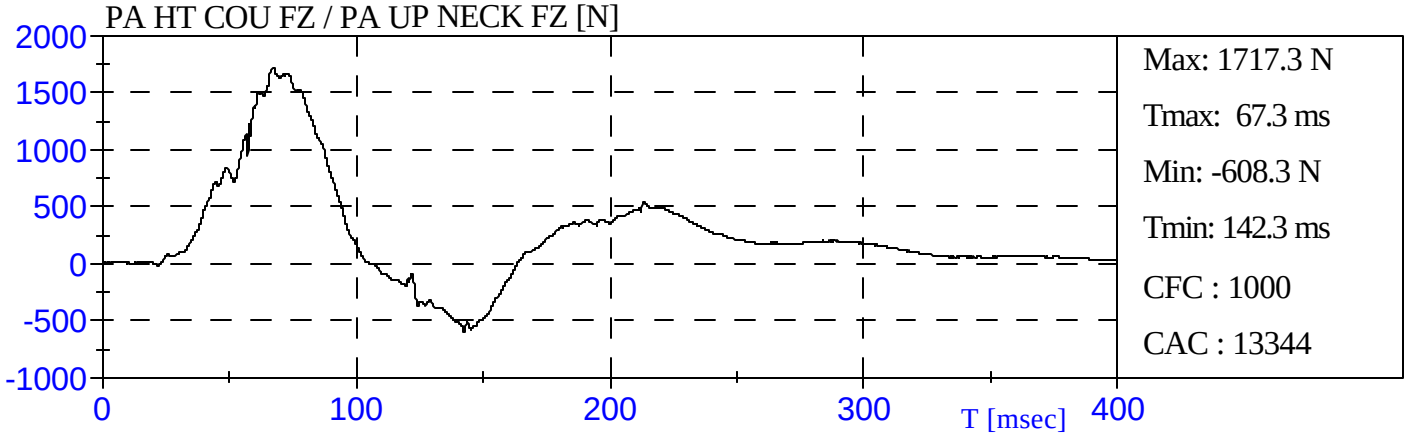
PA HT COU FX / PA UP NECK FX [N]



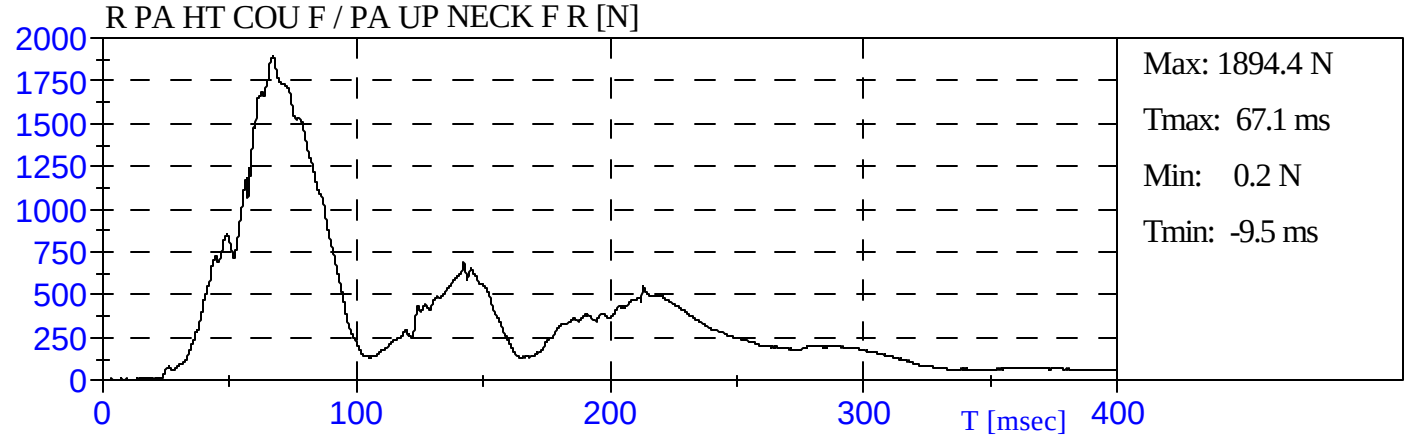
PA HT COU FY / PA UP NECK FY [N]



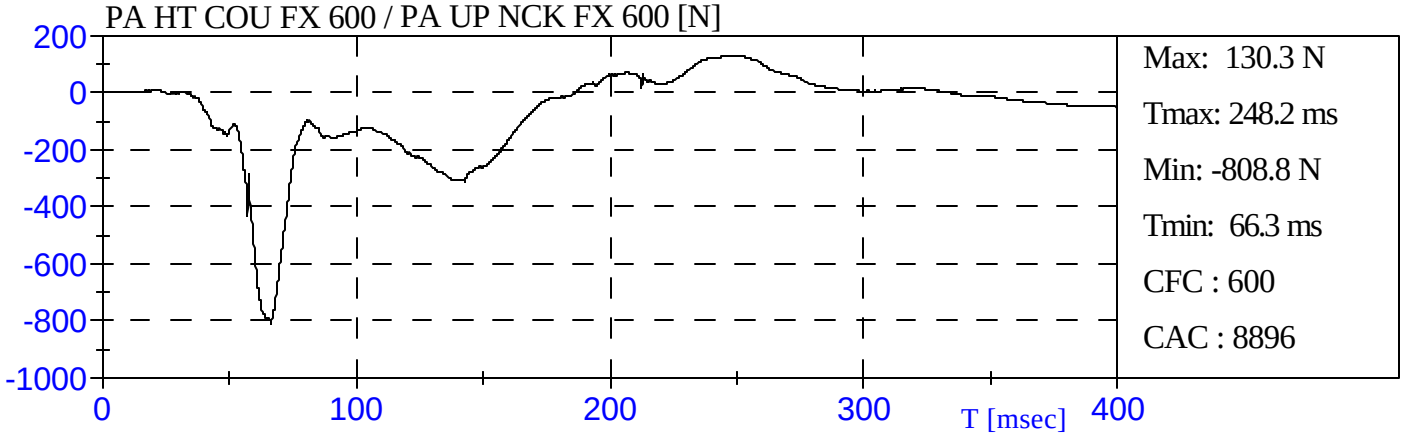
PA HT COU FZ / PA UP NECK FZ [N]



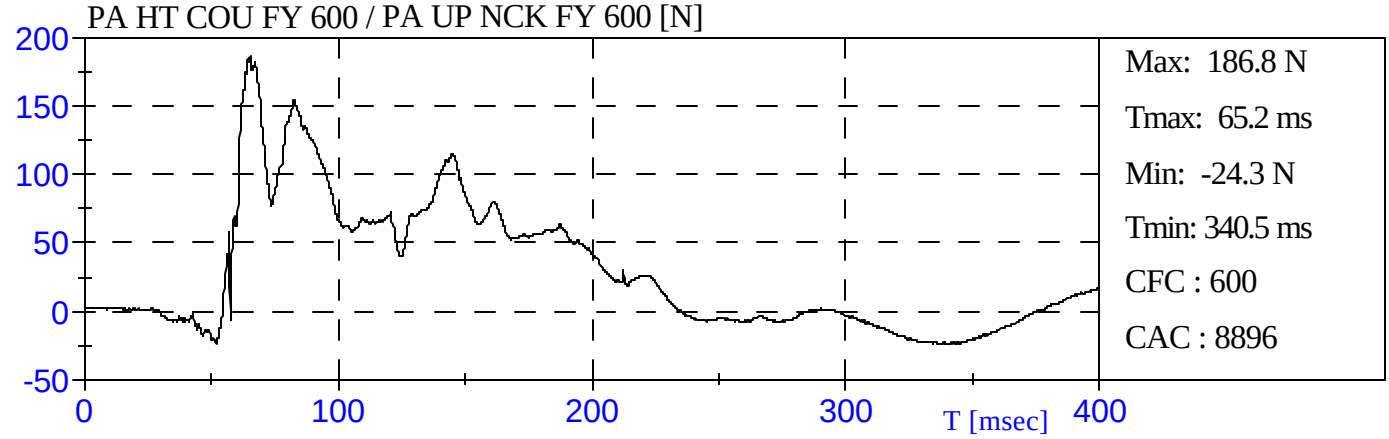
R PA HT COU F / PA UP NECK F R [N]



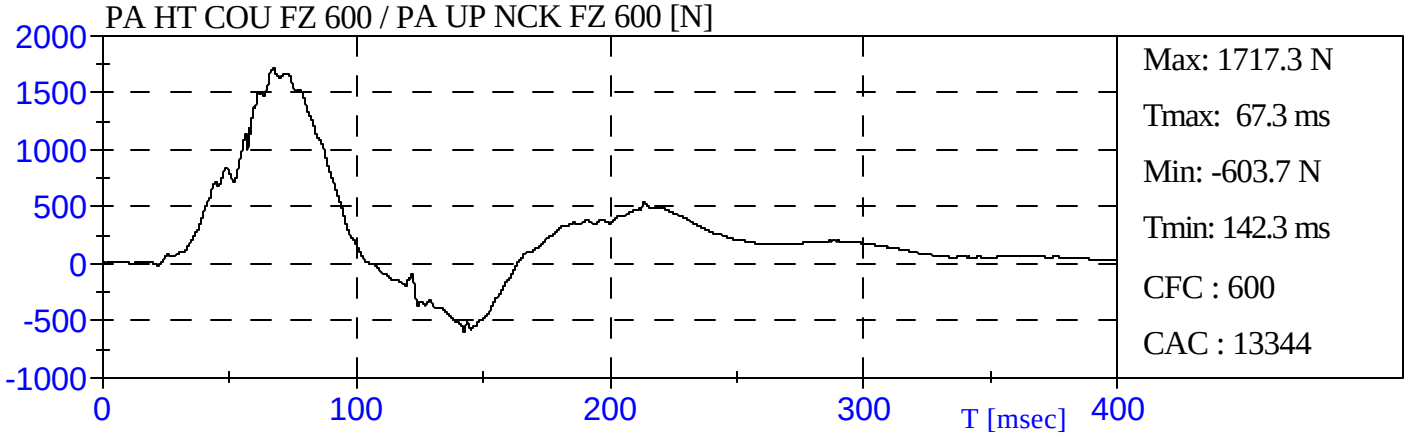
PA HT COU FX 600 / PA UP NCK FX 600 [N]



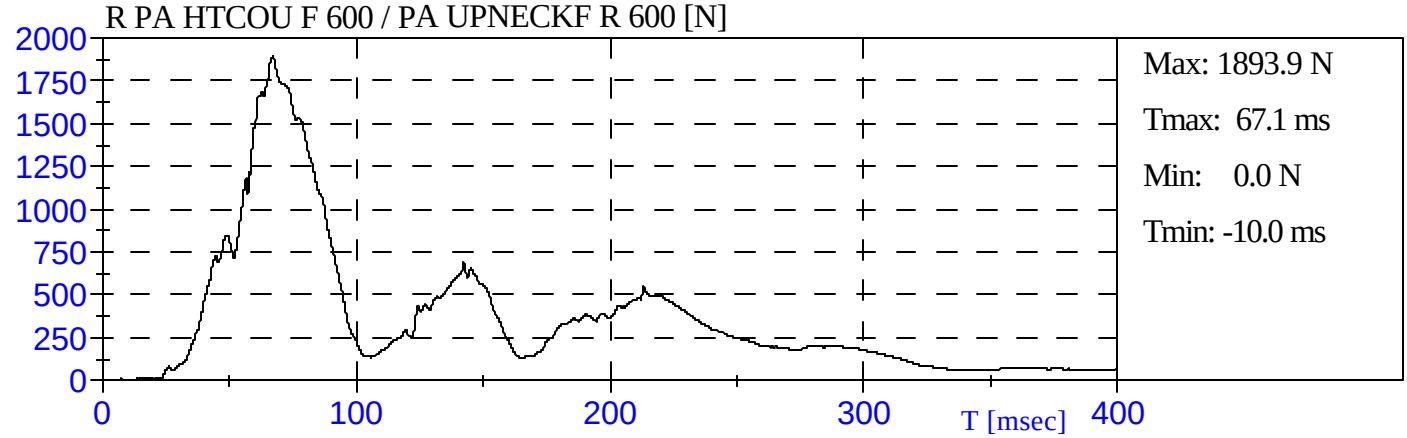
PA HT COU FY 600 / PA UP NCK FY 600 [N]



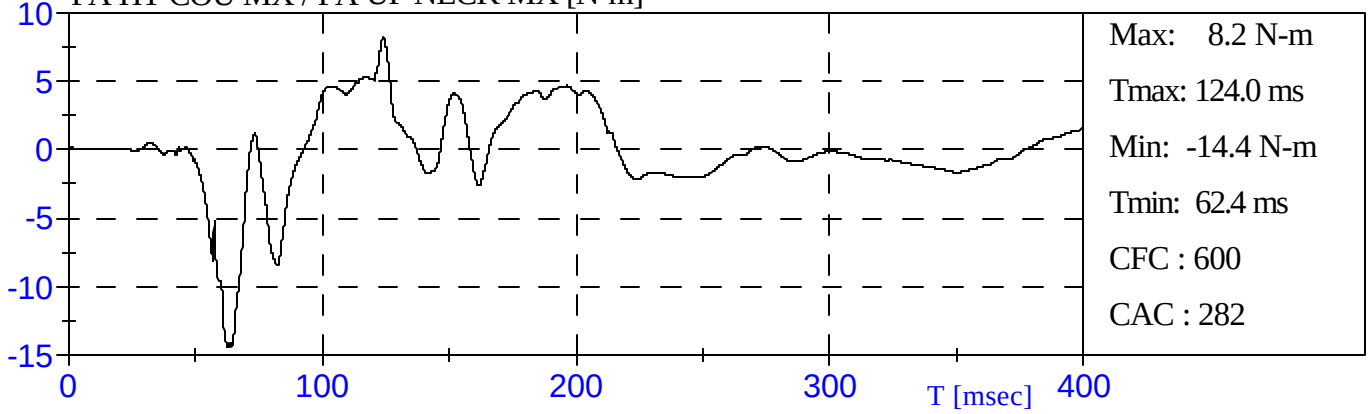
PA HT COU FZ 600 / PA UP NCK FZ 600 [N]



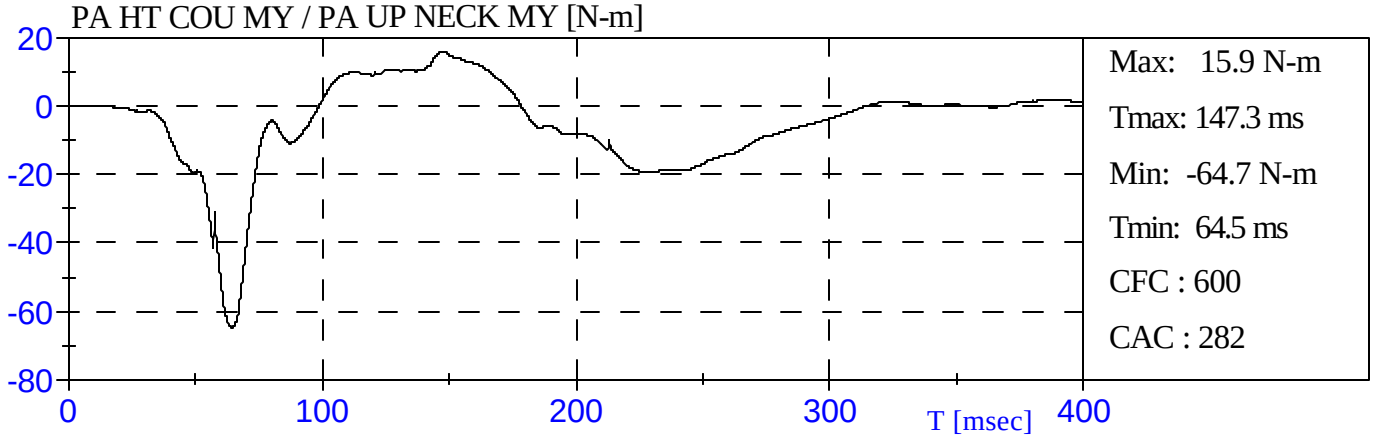
R PA HTCOU F 600 / PA UPNECKF R 600 [N]



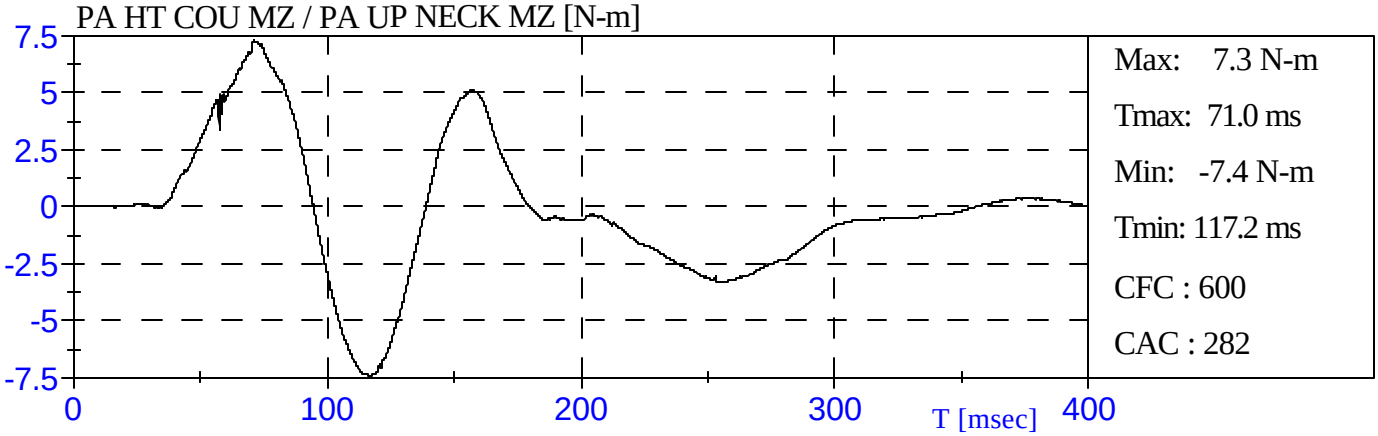
PA HT COU MX / PA UP NECK MX [N-m]



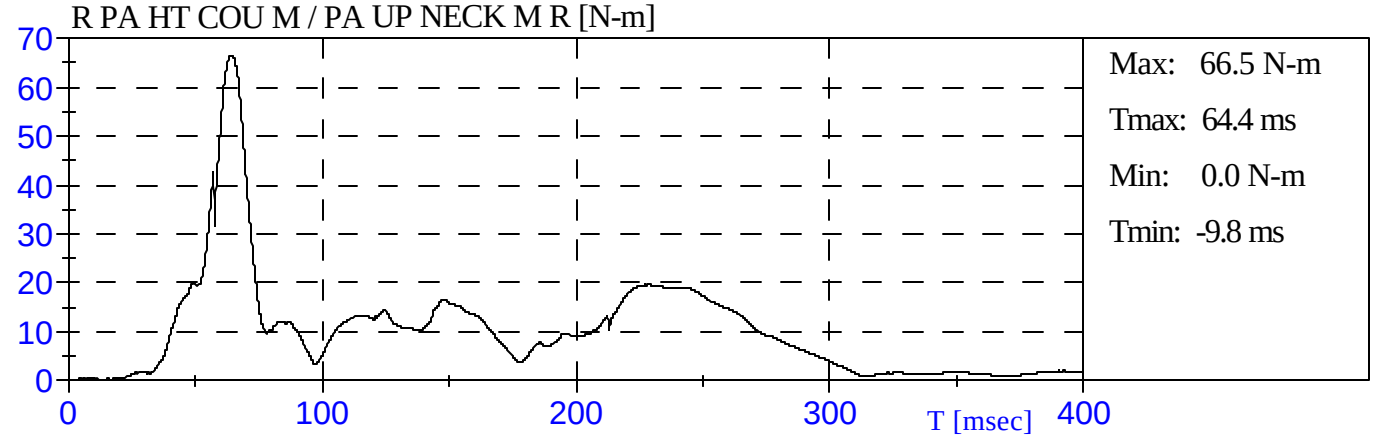
PA HT COU MY / PA UP NECK MY [N-m]



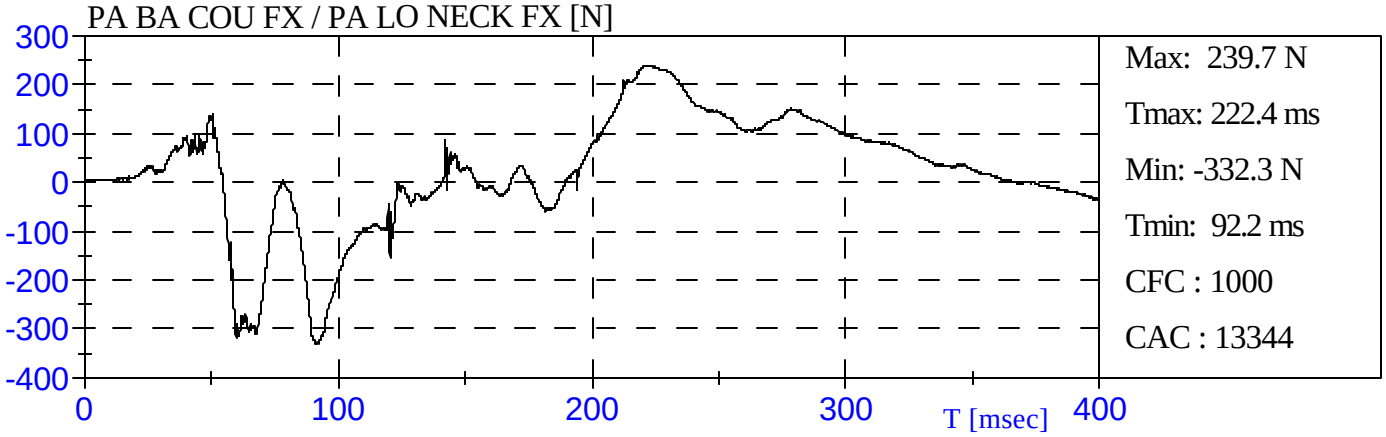
PA HT COU MZ / PA UP NECK MZ [N-m]



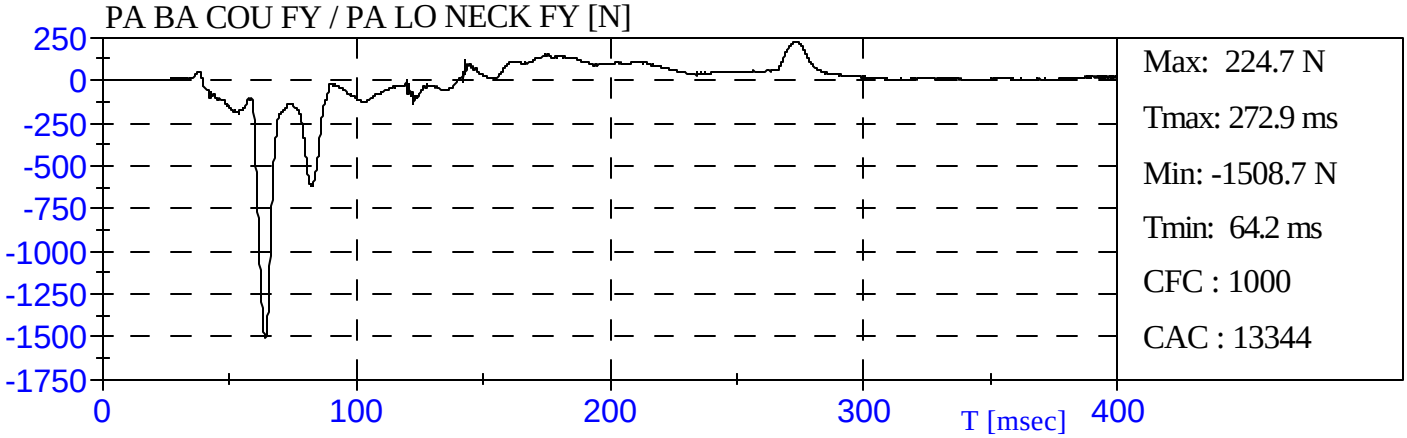
R PA HT COU M / PA UP NECK M R [N-m]



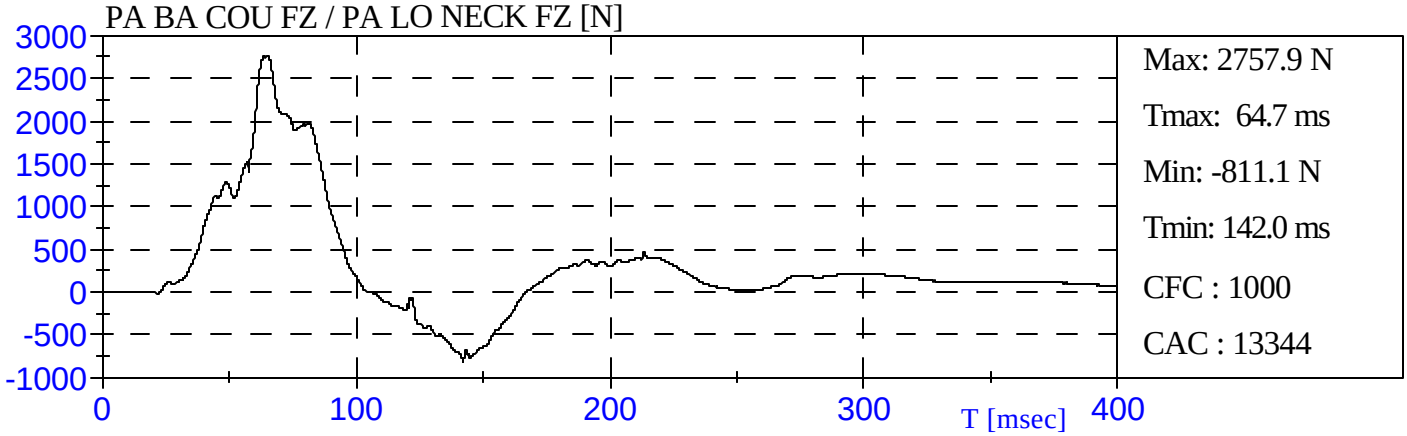
PA BA COU FX / PA LO NECK FX [N]



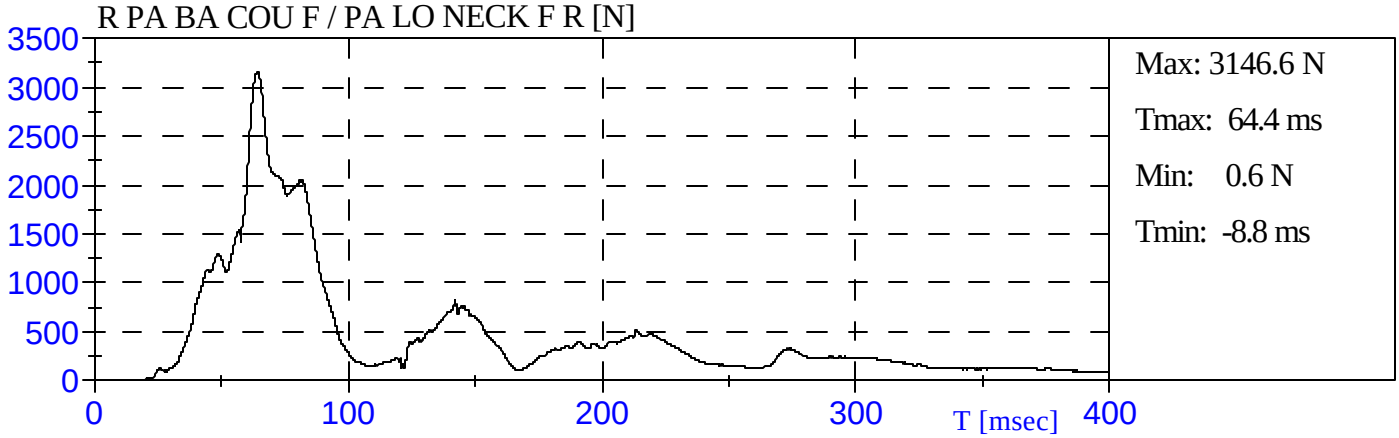
PA BA COU FY / PA LO NECK FY [N]



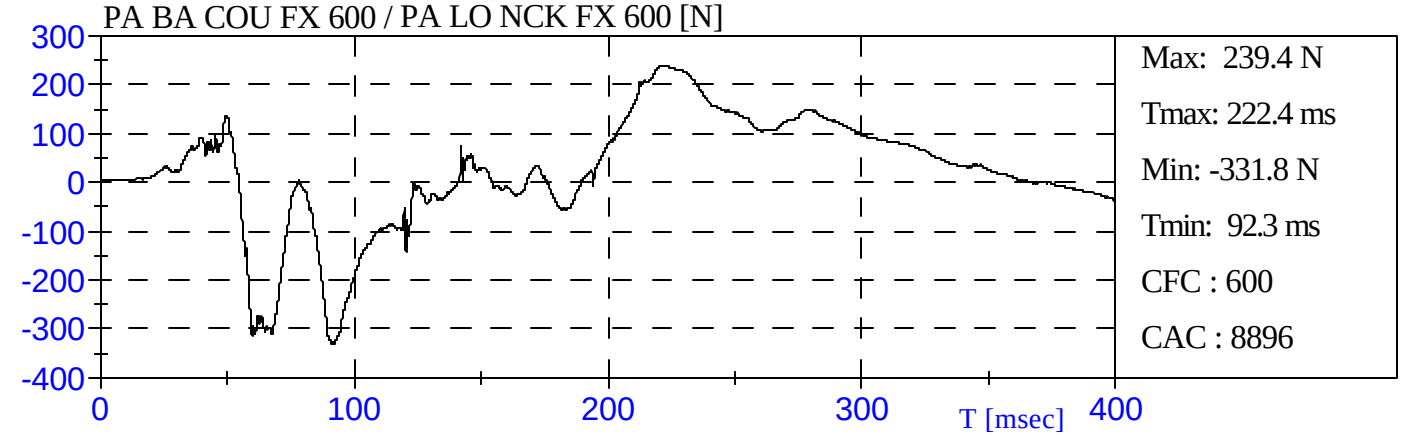
PA BA COU FZ / PA LO NECK FZ [N]



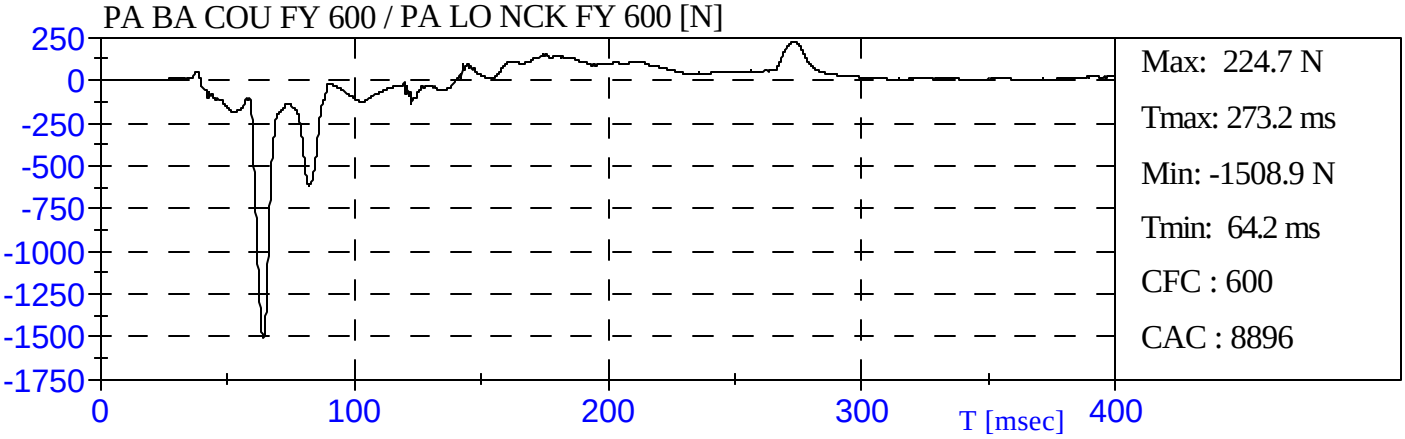
R PA BA COU F / PA LO NECK F R [N]



PA BA COU FX 600 / PA LO NCK FX 600 [N]



PA BA COU FY 600 / PA LO NCK FY 600 [N]



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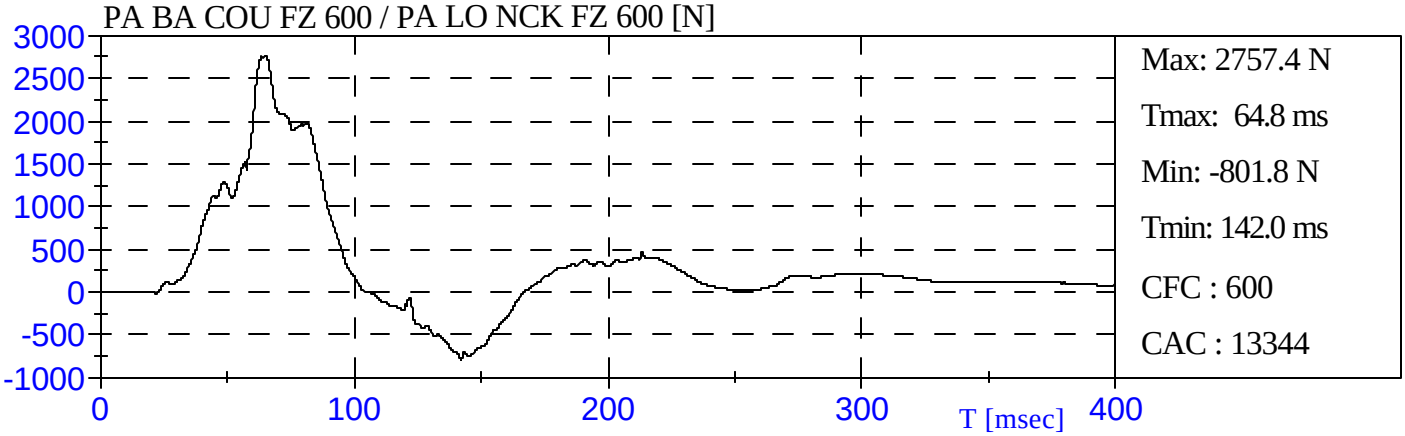
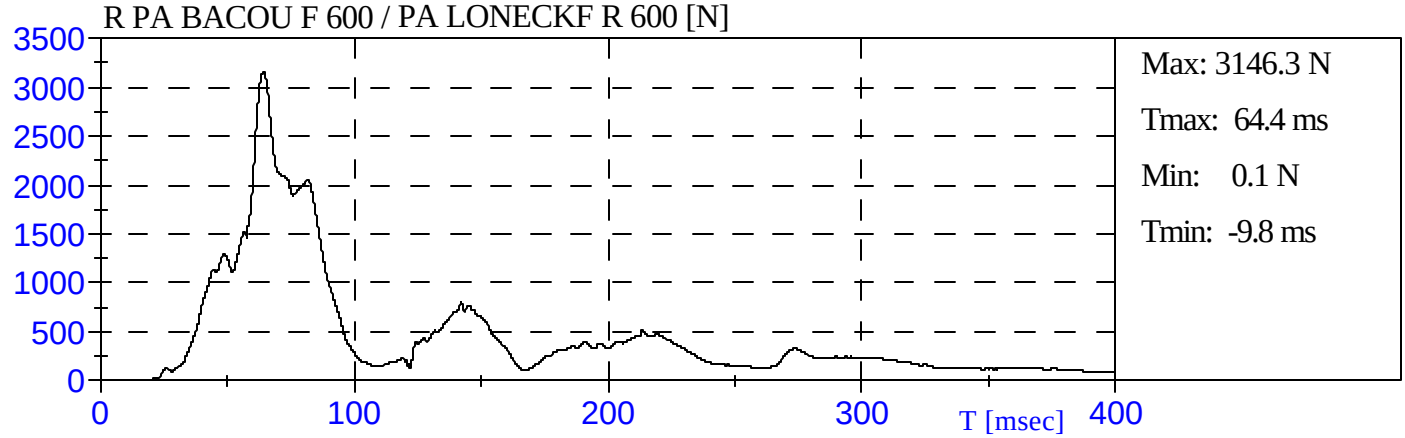
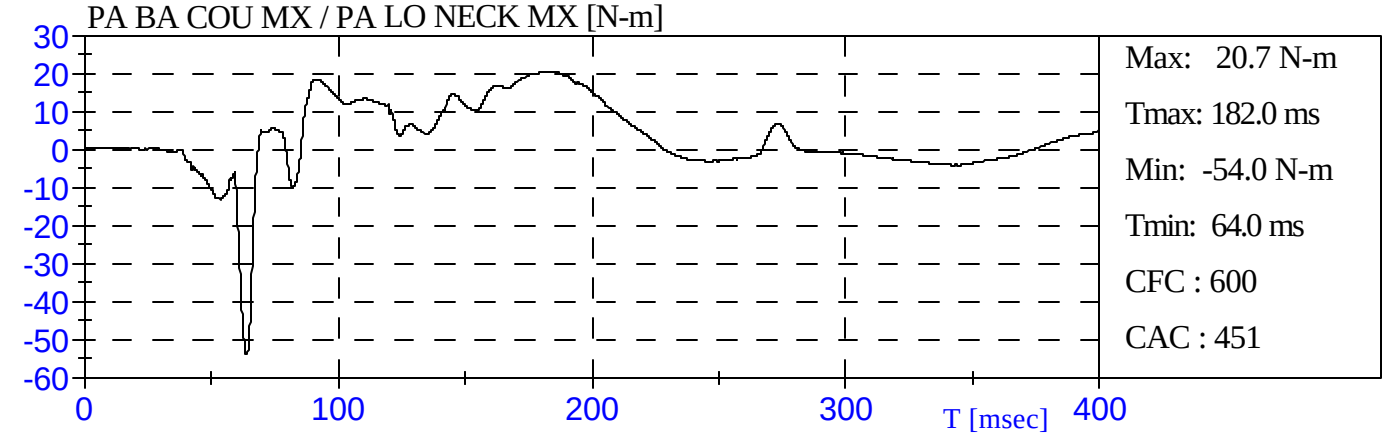


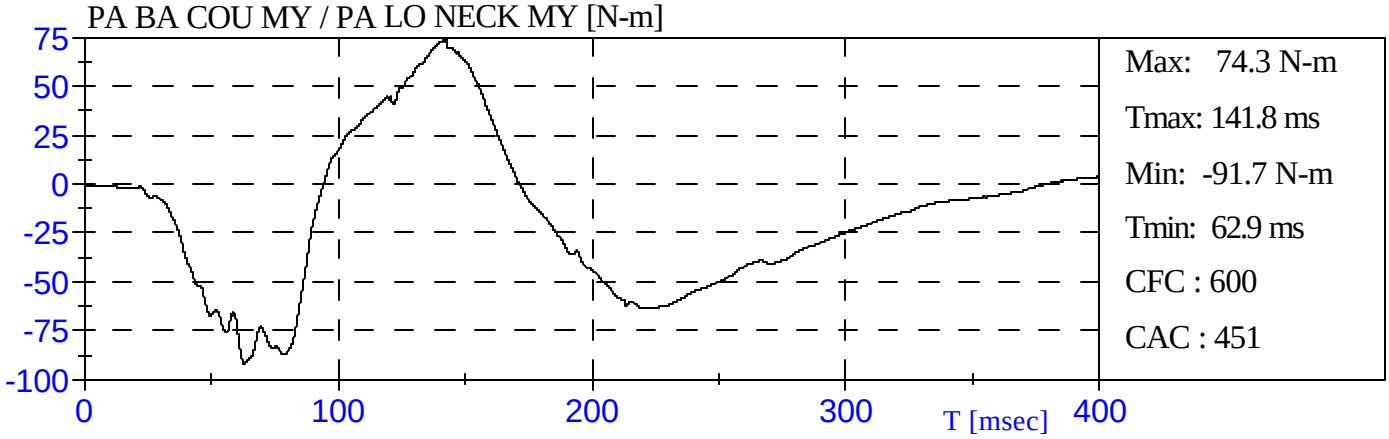
R PA BACOU F 600 / PA LONECKF R 600 [N]



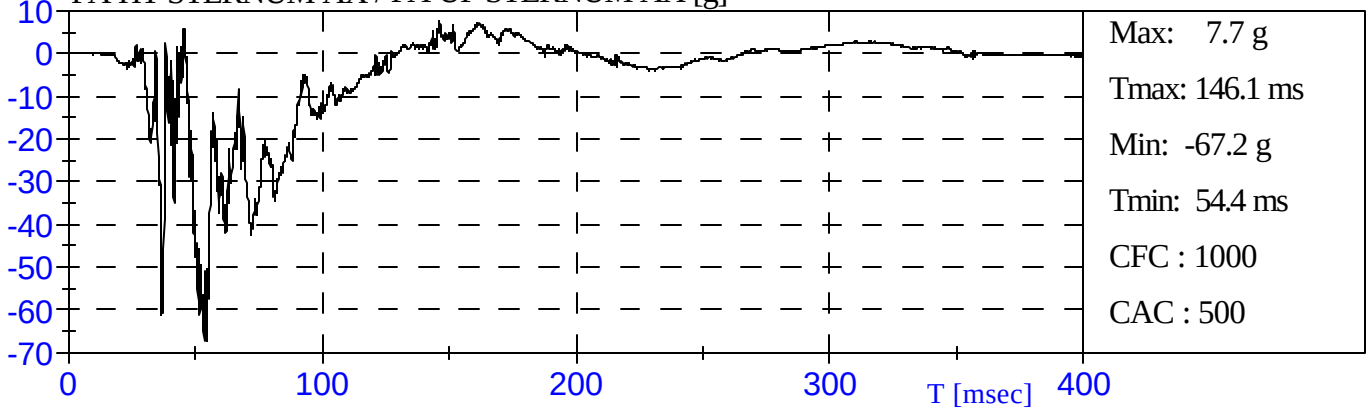
PA BA COU MX / PA LO NECK MX [N-m]



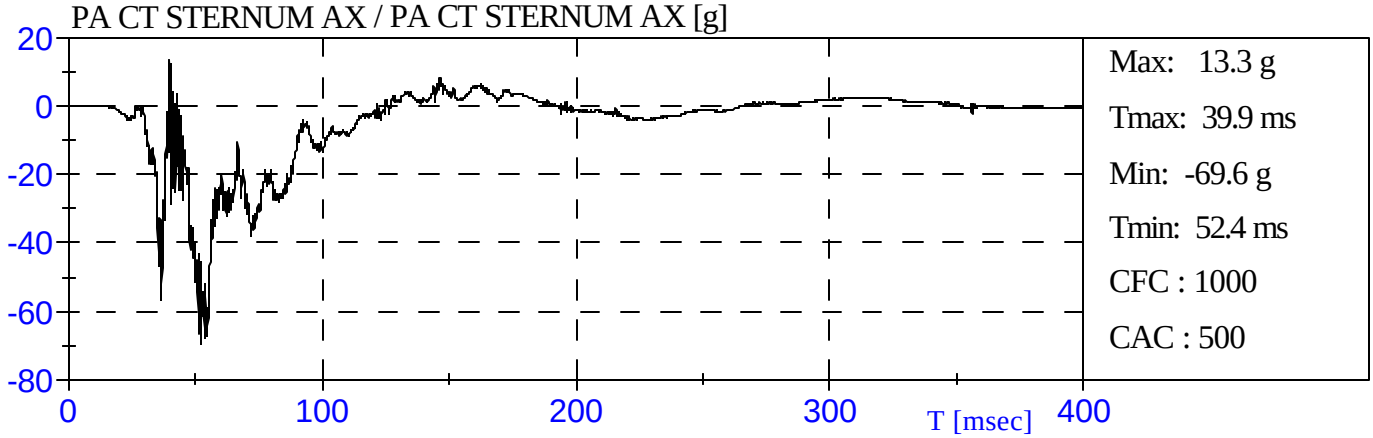
PA BA COU MY / PA LO NECK MY [N-m]



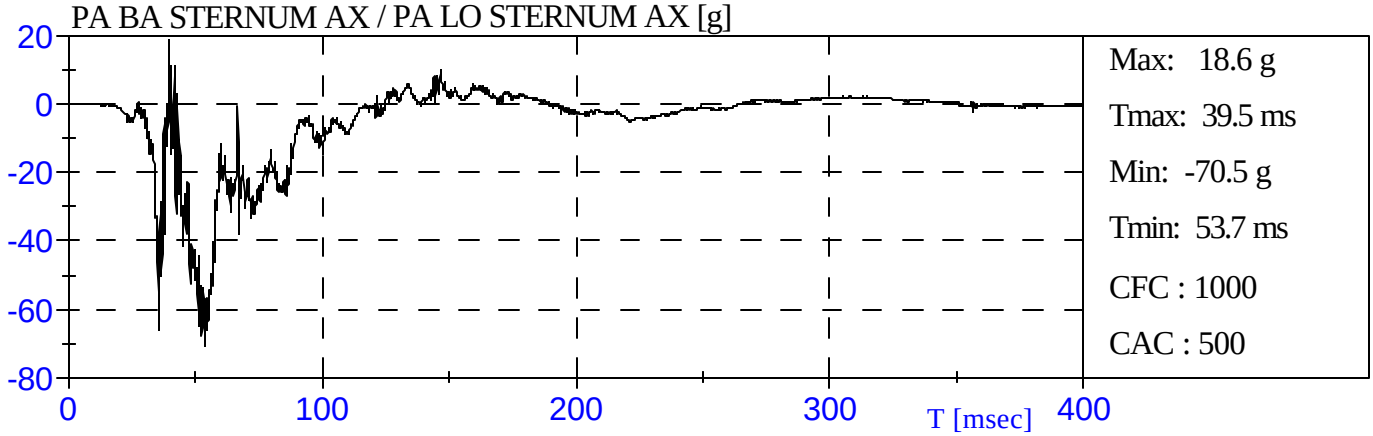
PA HT STERNUM AX / PA UP STERNUM AX [g]



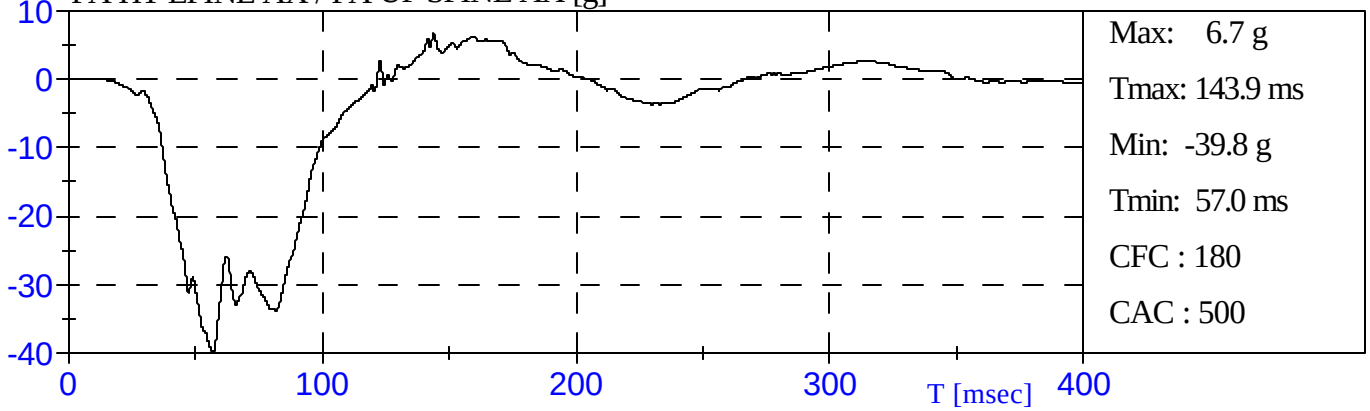
PA CT STERNUM AX / PA CT STERNUM AX [g]



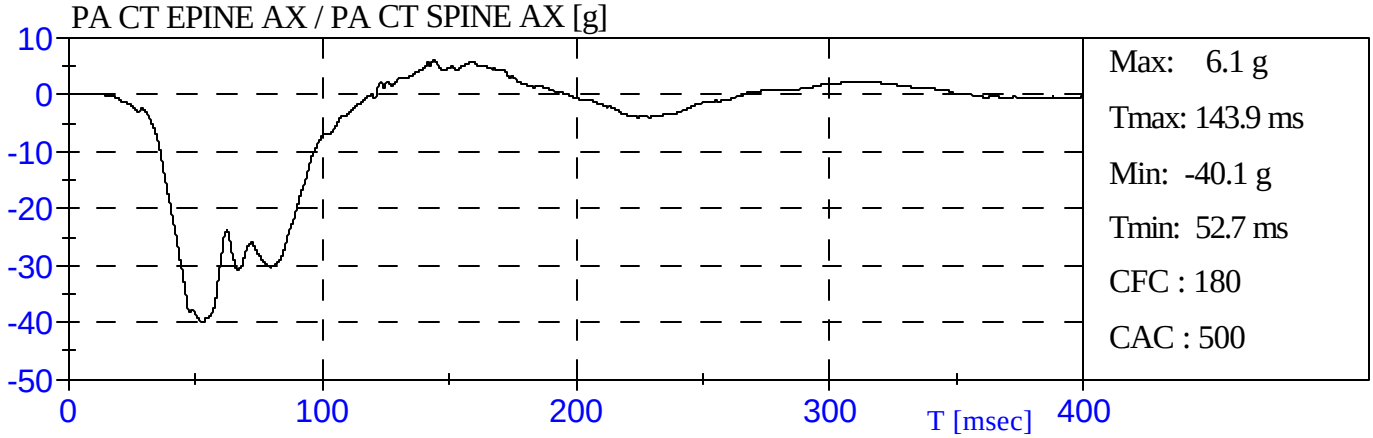
PA BA STERNUM AX / PA LO STERNUM AX [g]



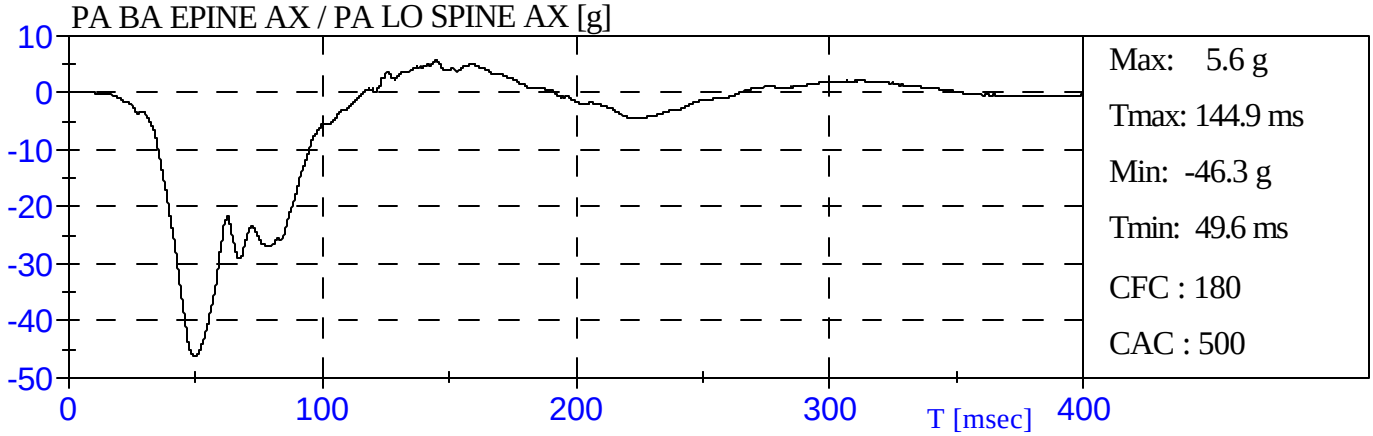
PA HT EPINE AX / PA UP SPINE AX [g]



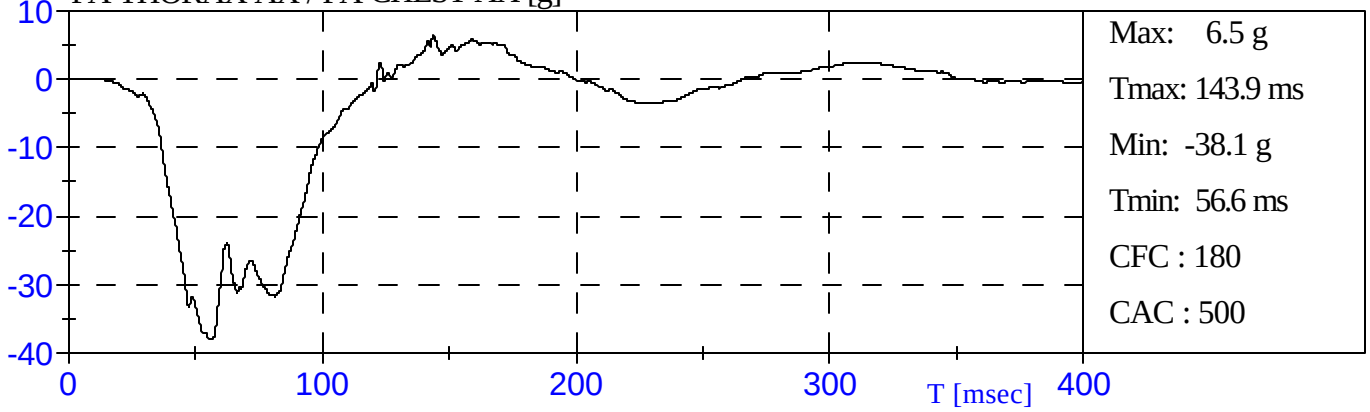
PA CT EPINE AX / PA CT SPINE AX [g]



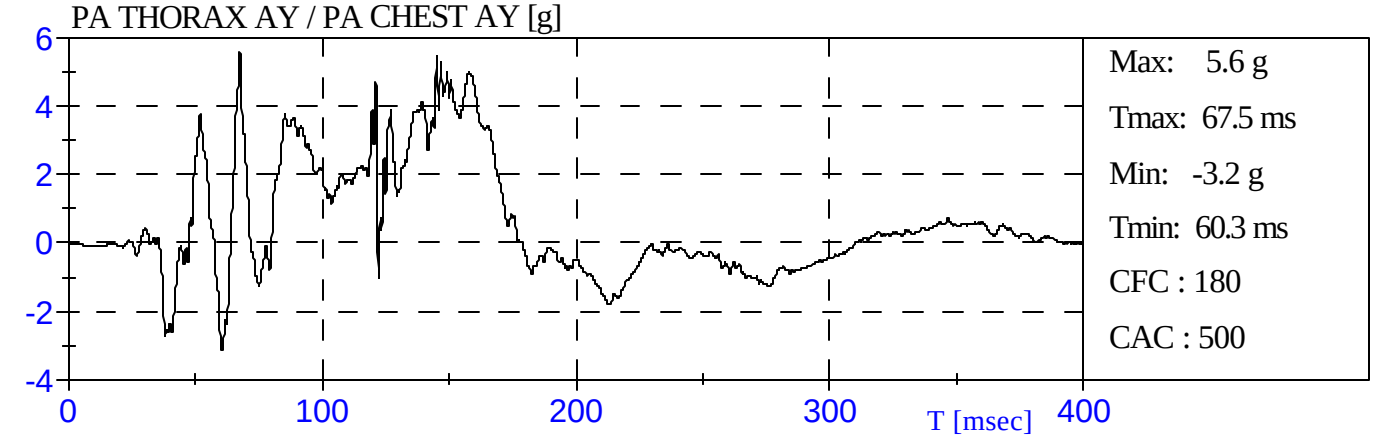
PA BA EPINE AX / PA LO SPINE AX [g]



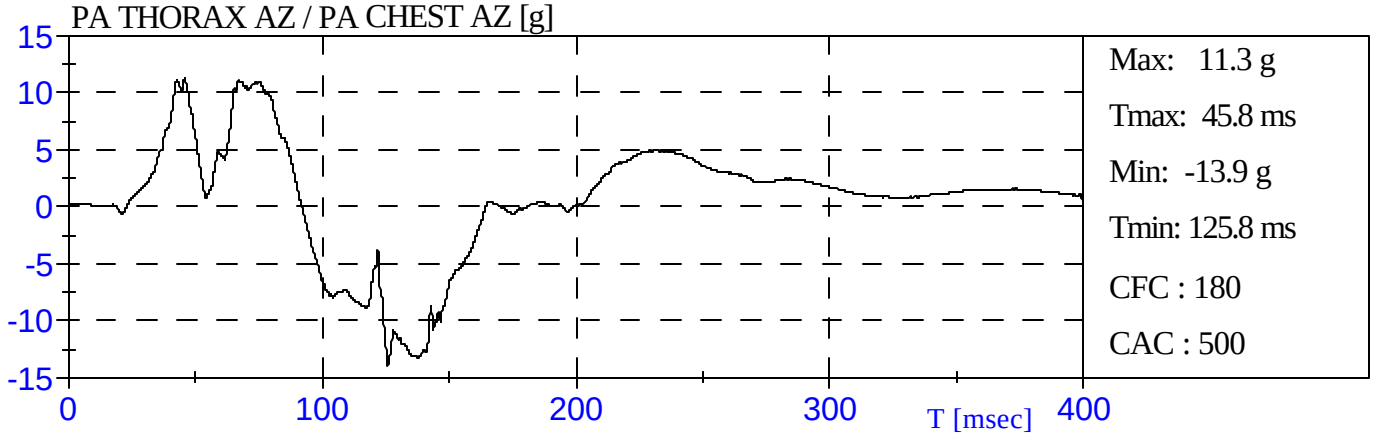
PA THORAX AX / PA CHEST AX [g]



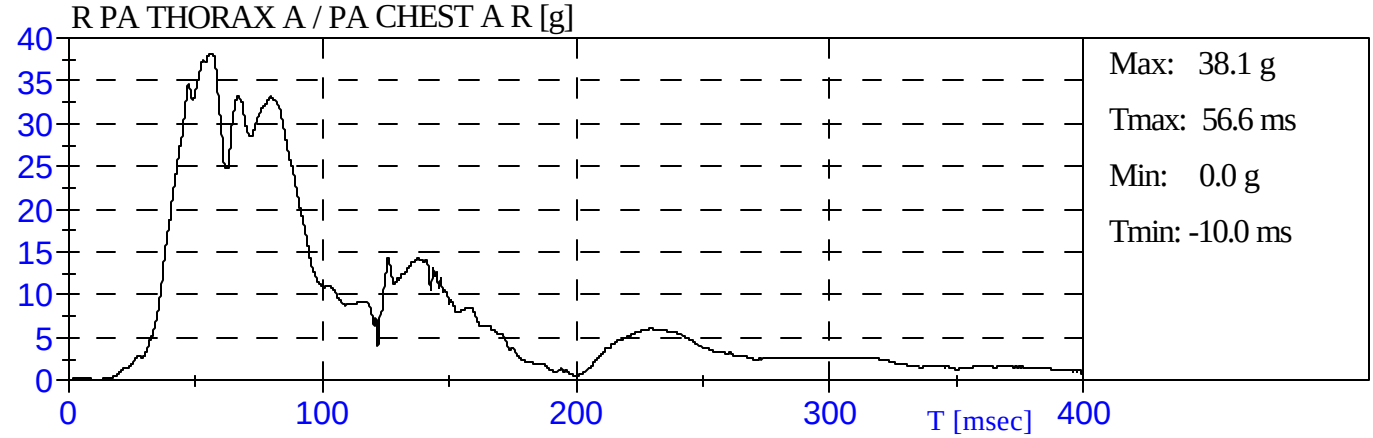
PA THORAX AY / PA CHEST AY [g]

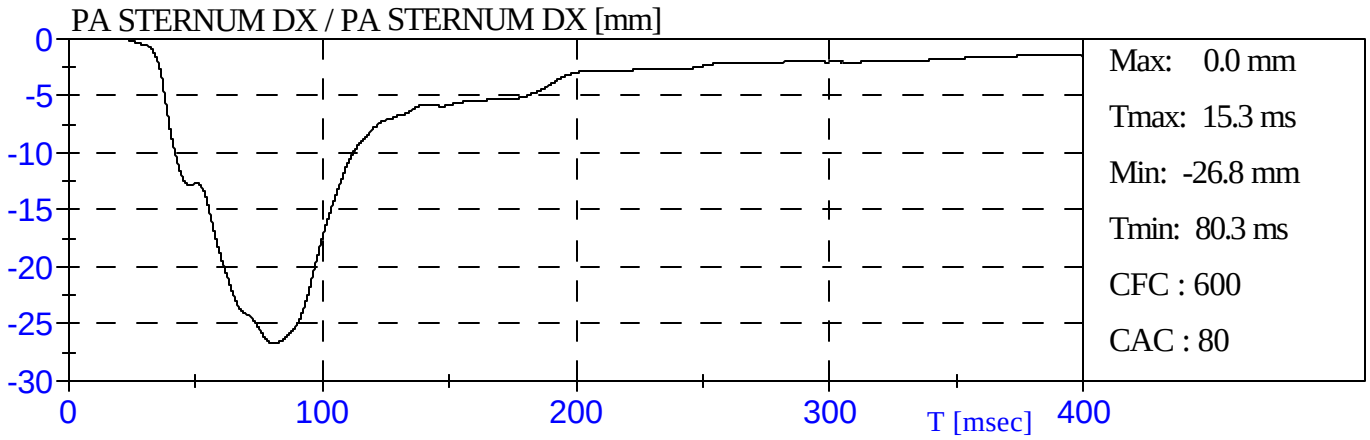


PA THORAX AZ / PA CHEST AZ [g]

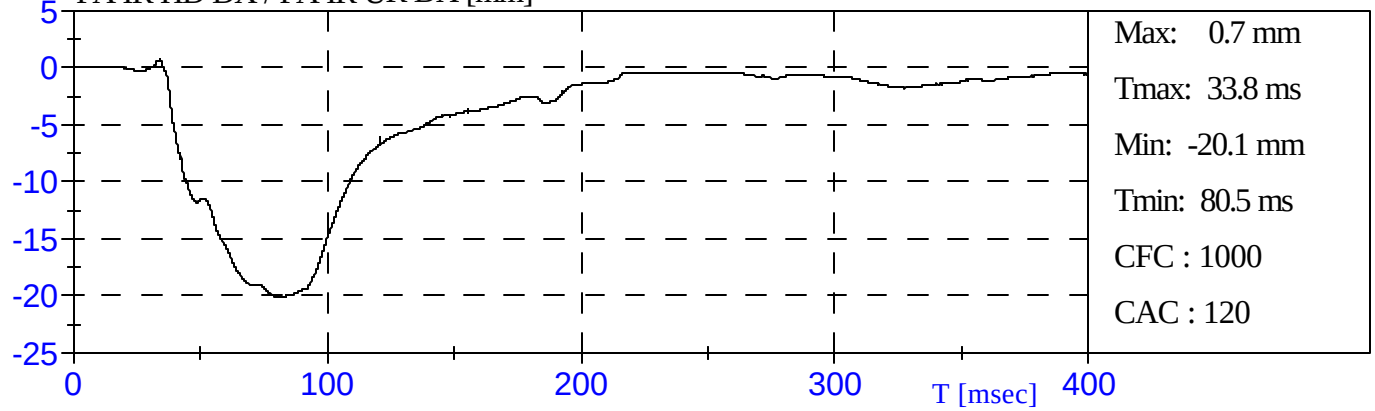


R PA THORAX A / PA CHEST A R [g]

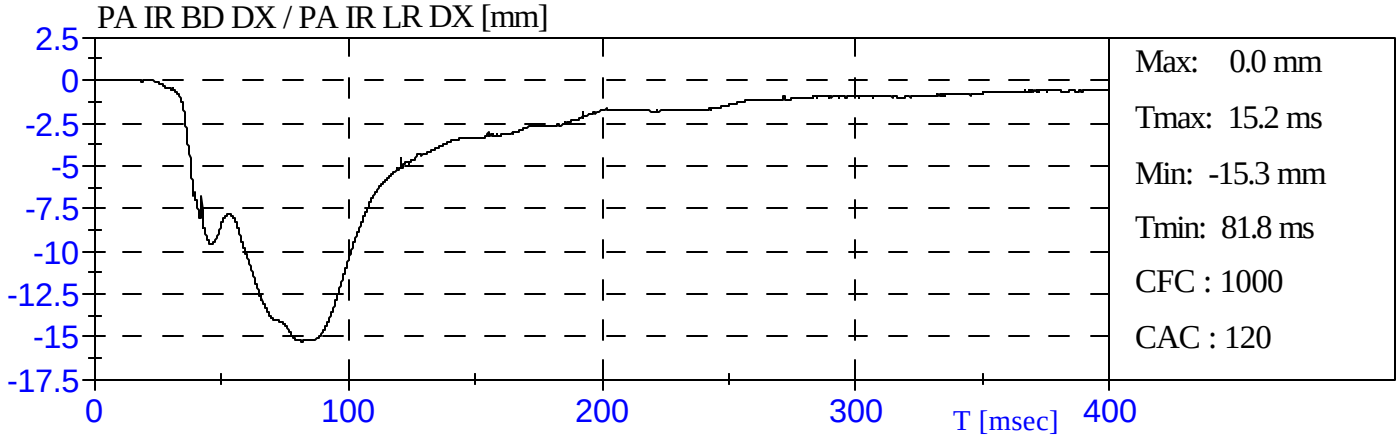



PA STERNUM DX / PA STERNUM DX [mm]
0
-5
-10
-15
-20
-25
-30
0
100
200
300
400
T [msec]
Max: 0.0 mm
Tmax: 15.3 ms
Min: -26.8 mm
Tmin: 80.3 ms
CFC : 600
CAC : 80

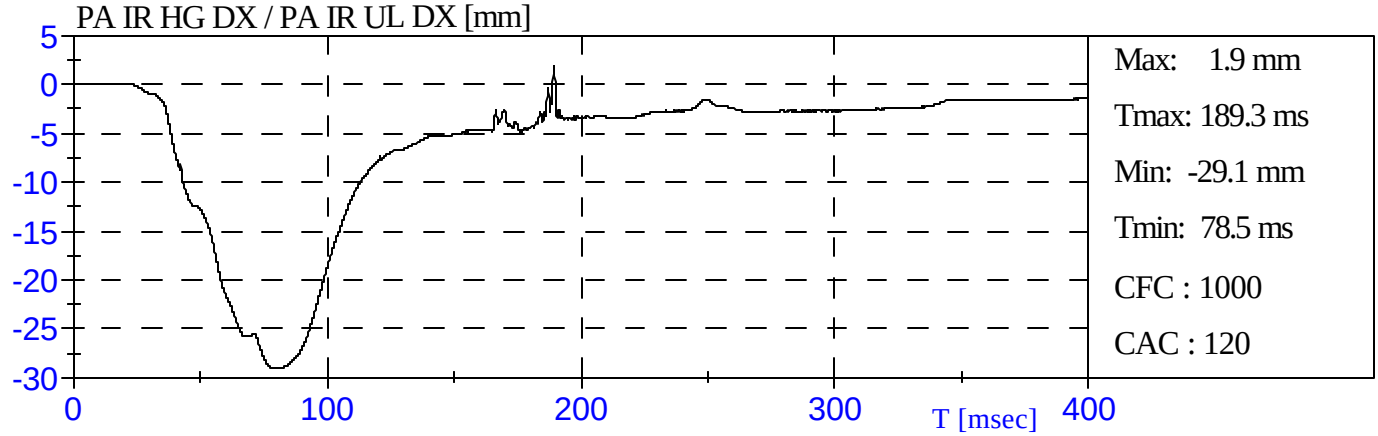
PA IR HD DX / PA IR UR DX [mm]



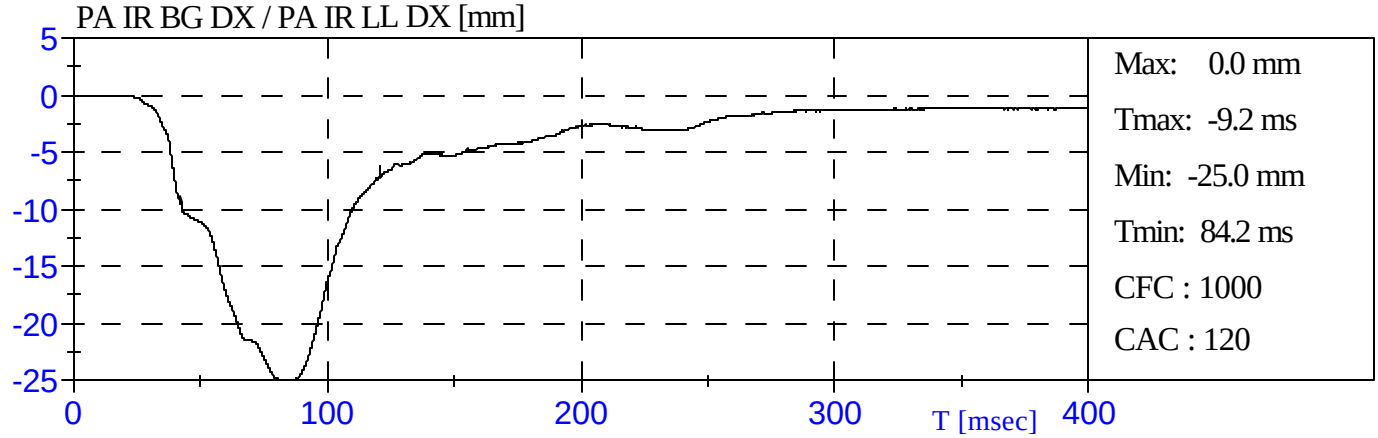
PA IR BD DX / PA IR LR DX [mm]



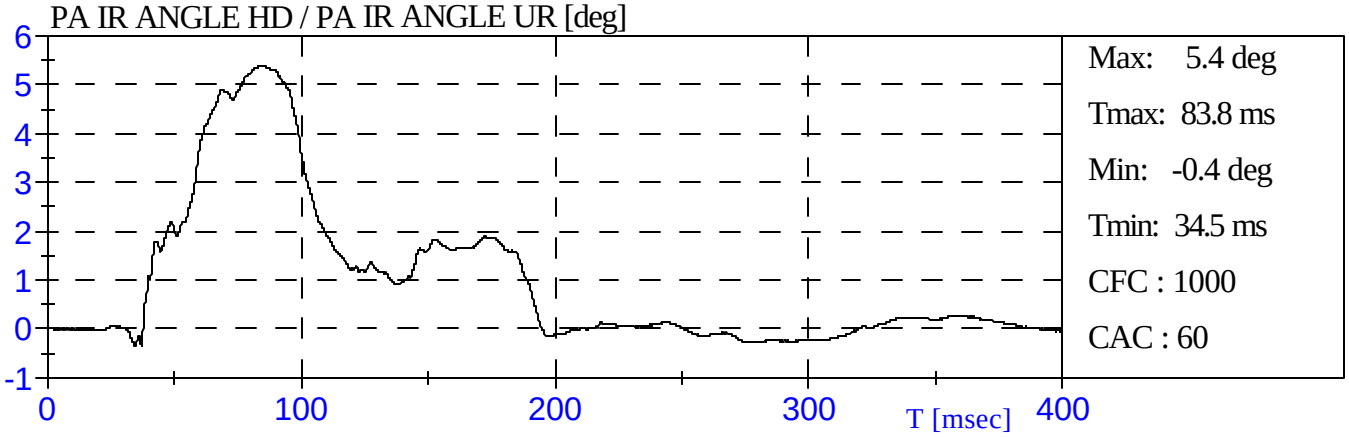
PA IR HG DX / PA IR UL DX [mm]



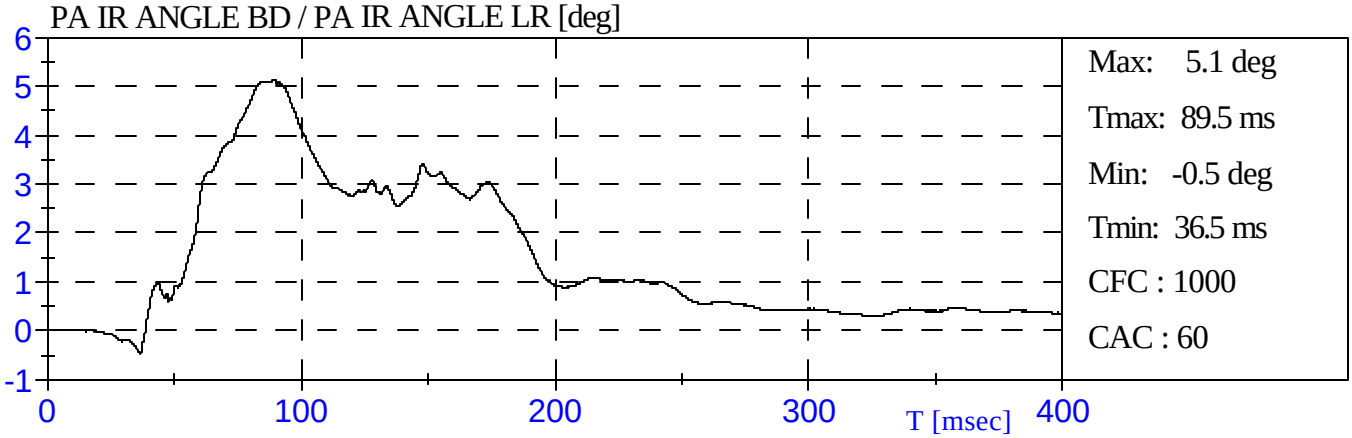
PA IR BG DX / PA IR LL DX [mm]



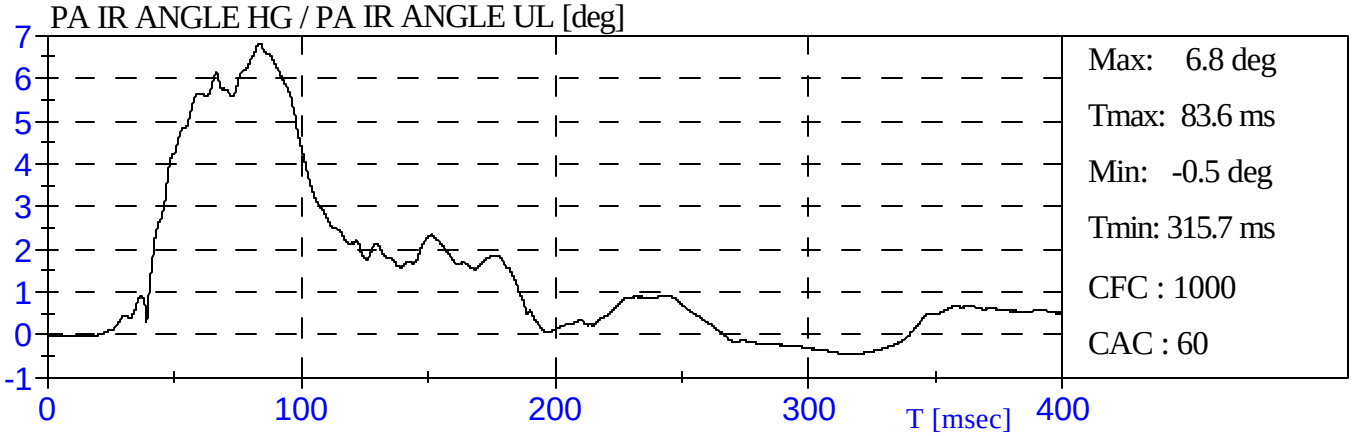
PA IR ANGLE HD / PA IR ANGLE UR [deg]



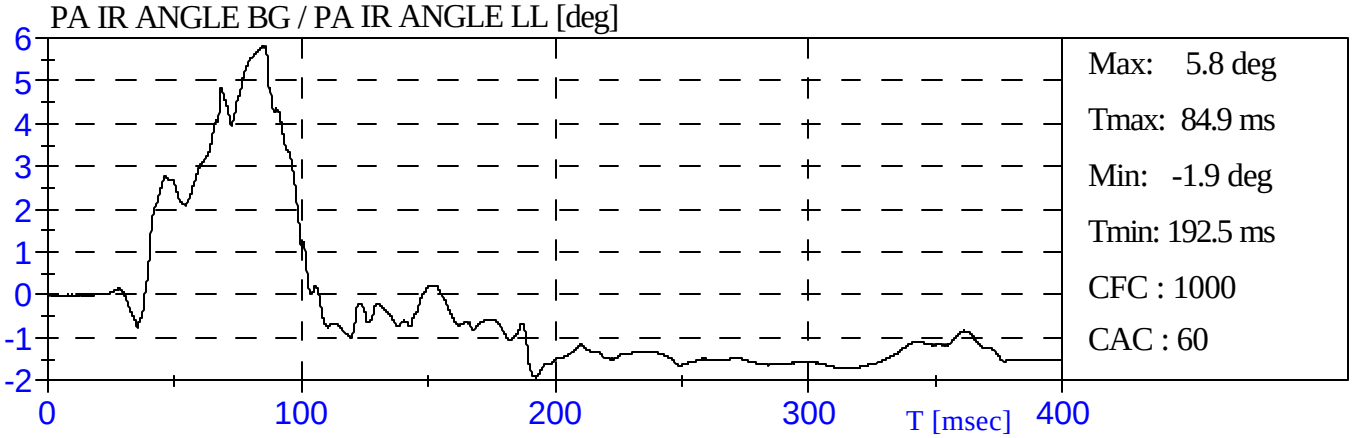
PA IR ANGLE BD / PA IR ANGLE LR [deg]



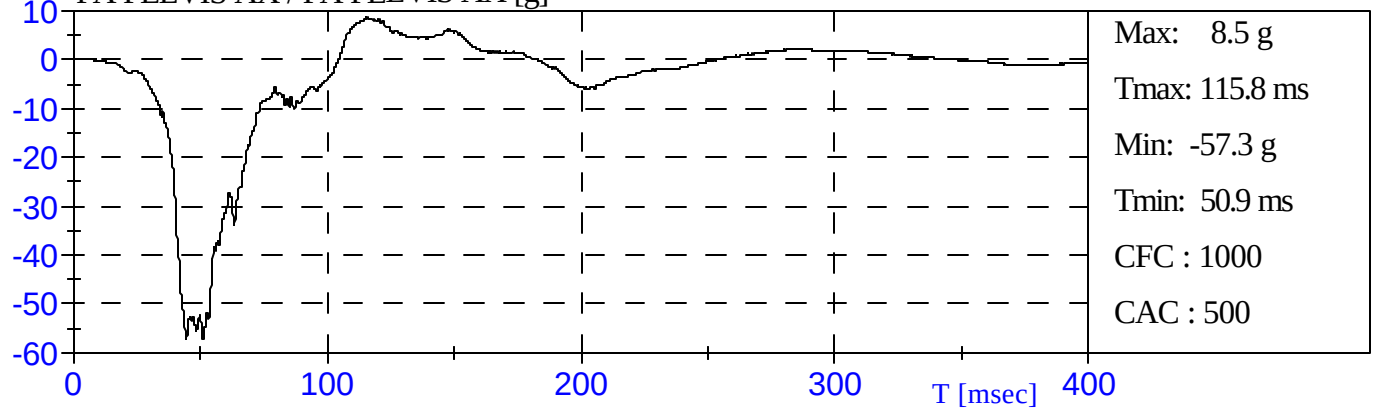
PA IR ANGLE HG / PA IR ANGLE UL [deg]



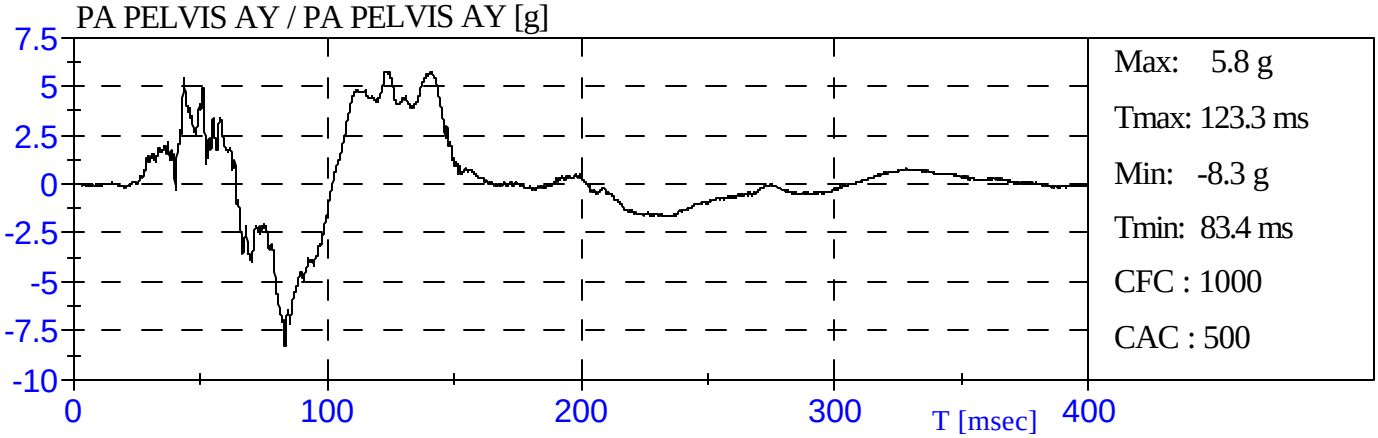
PA IR ANGLE BG / PA IR ANGLE LL [deg]



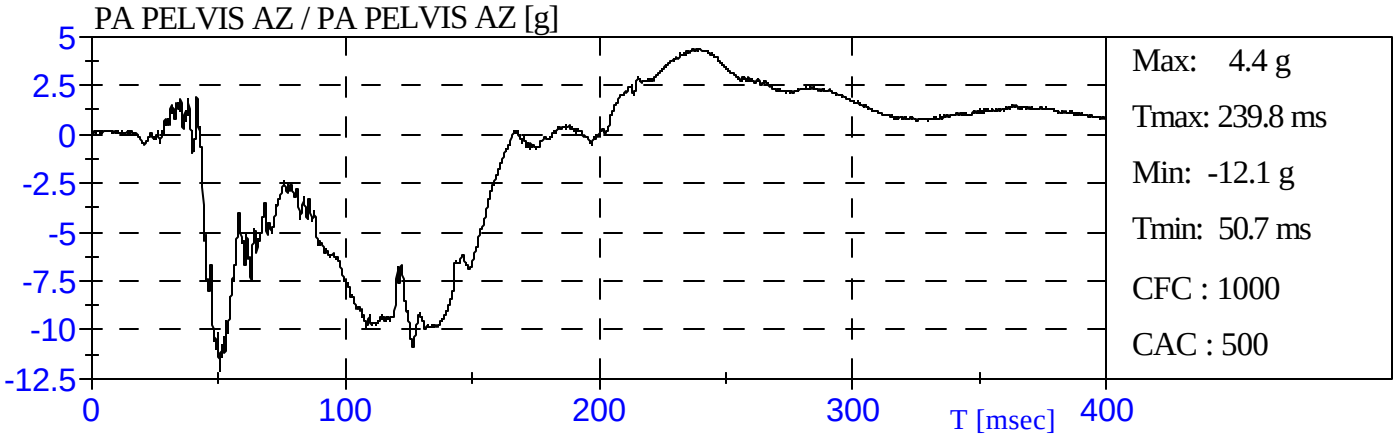
PA PELVIS AX / PA PELVIS AX [g]



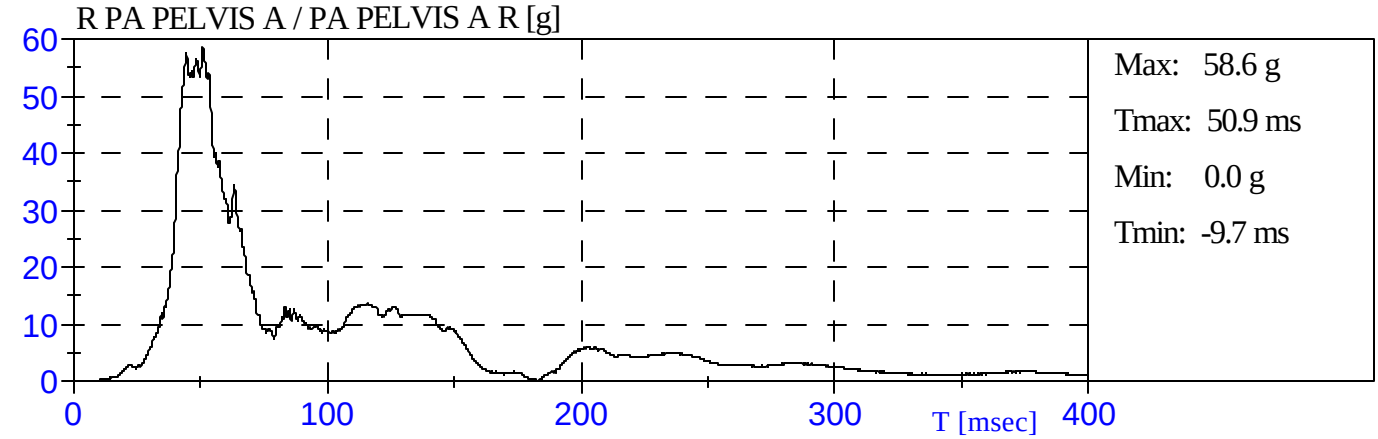
PA PELVIS AY / PA PELVIS AY [g]



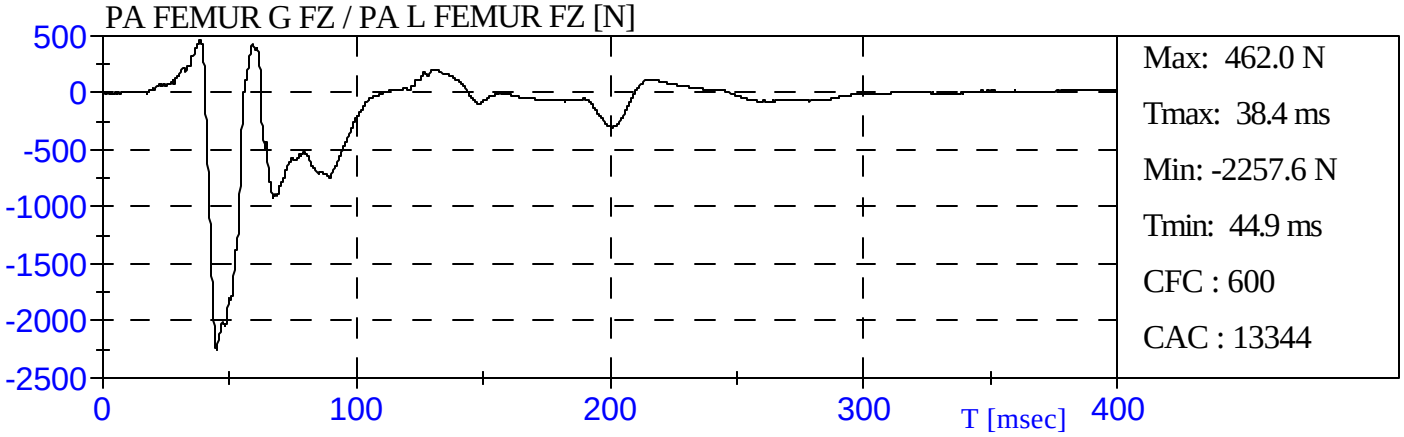
PA PELVIS AZ / PA PELVIS AZ [g]



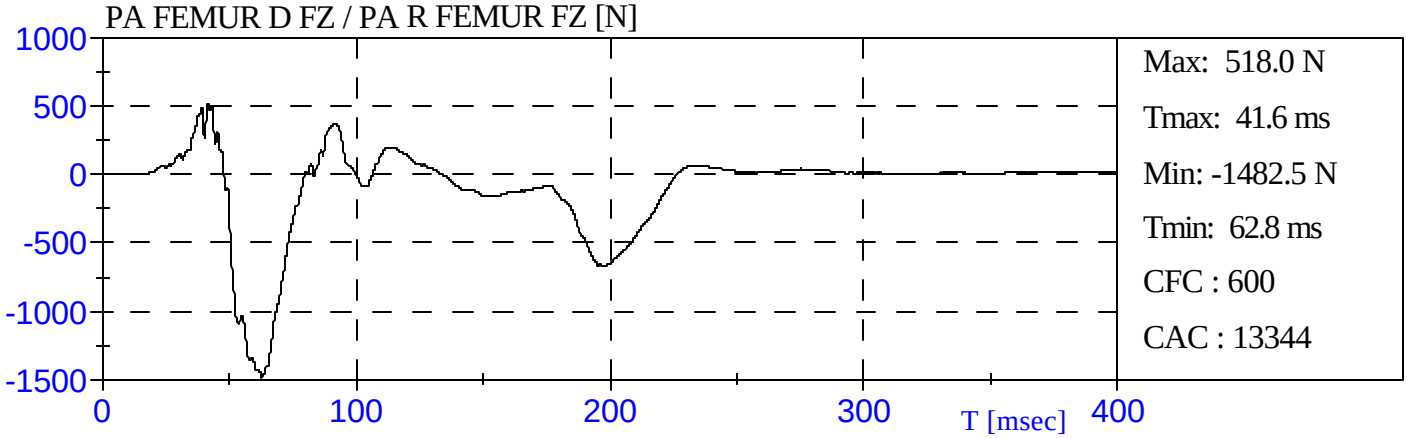
R PA PELVIS A / PA PELVIS A R [g]



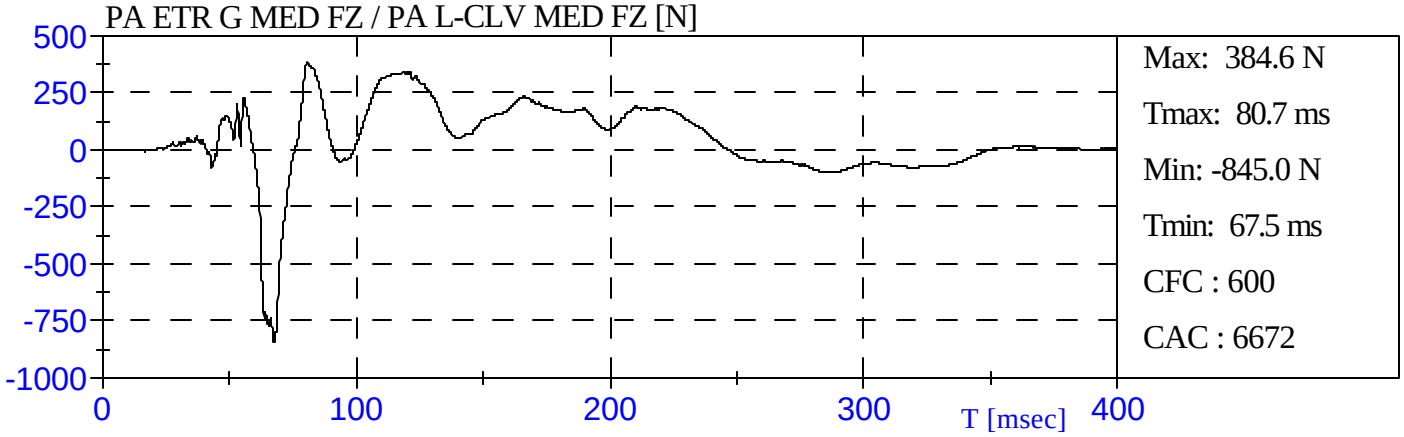
PA FEMUR G FZ / PA L FEMUR FZ [N]



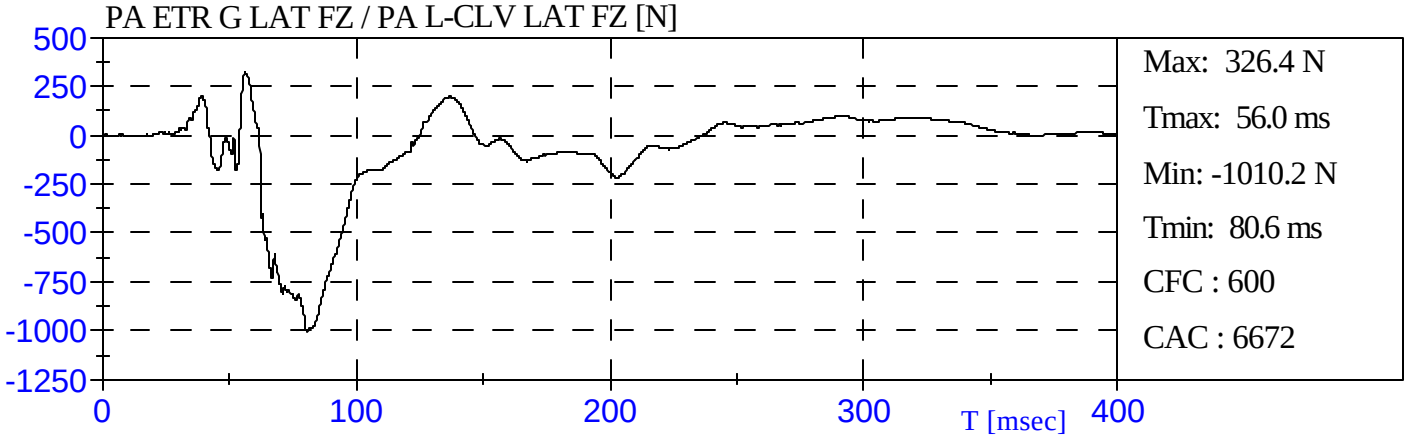
PA FEMUR D FZ / PA R FEMUR FZ [N]



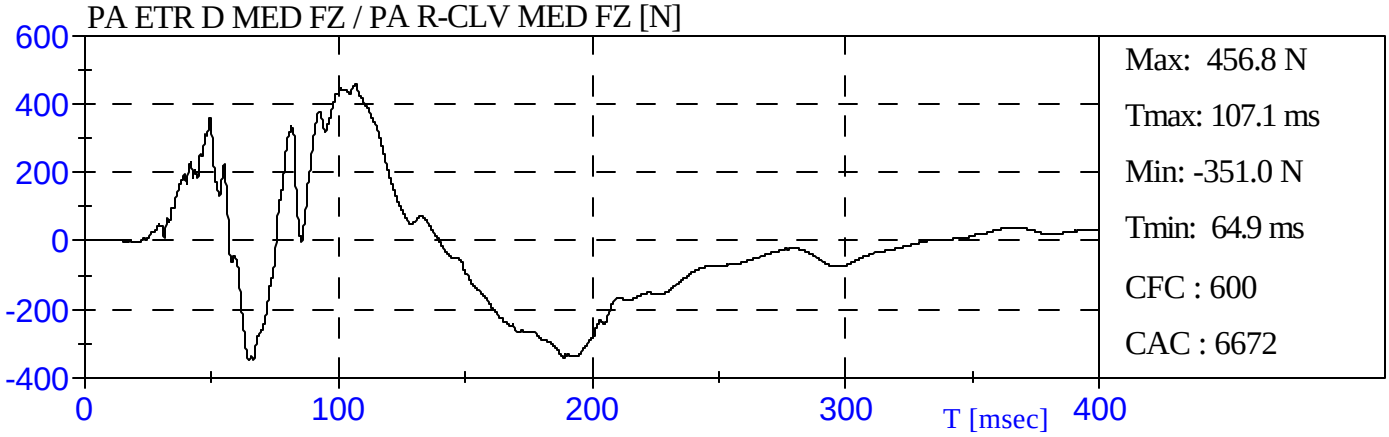
PA ETR G MED FZ / PA L-CLV MED FZ [N]



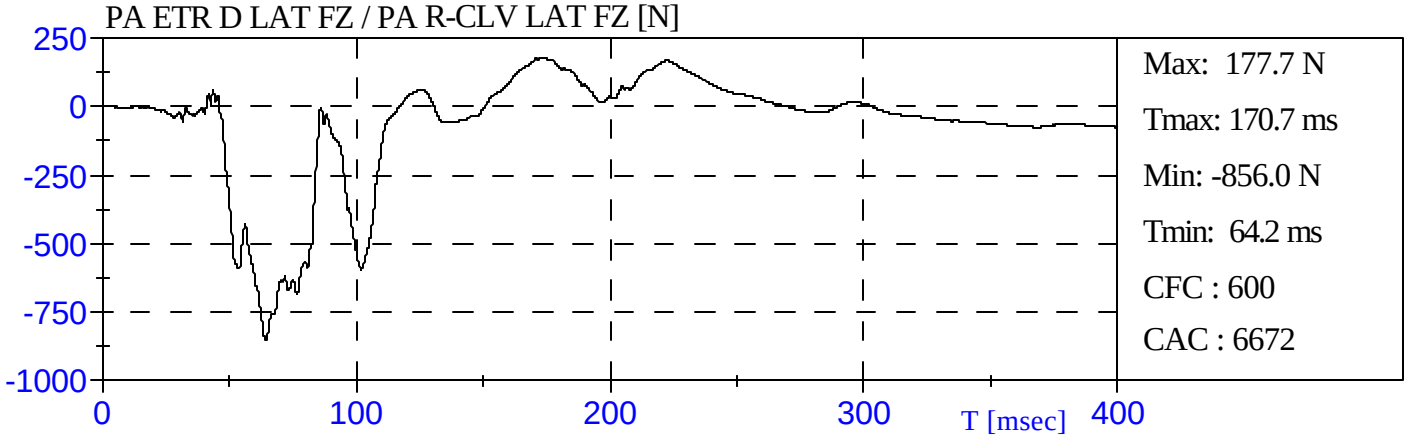
PA ETR G LAT FZ / PA L-CLV LAT FZ [N]



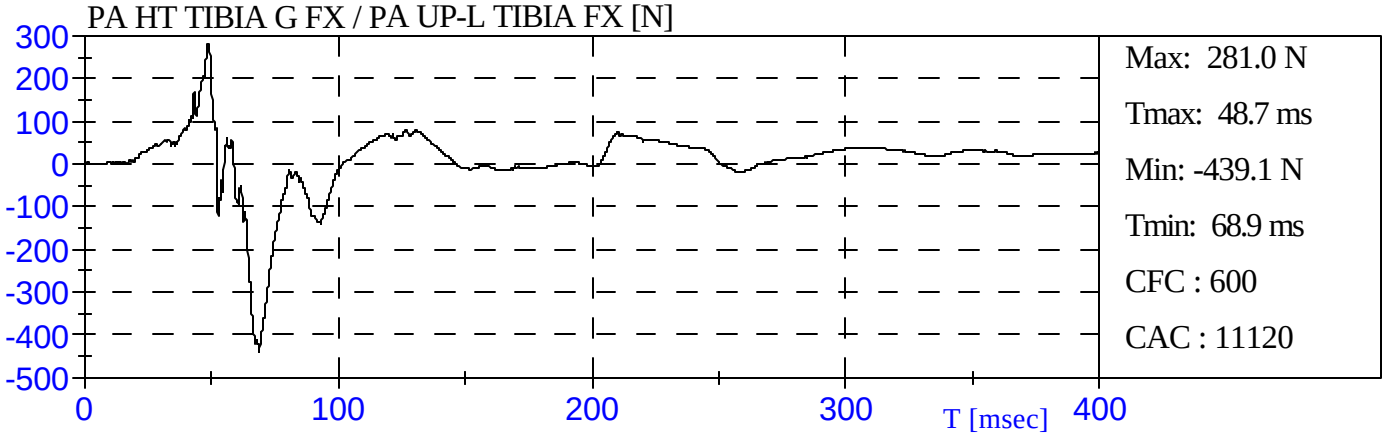
PA ETR D MED FZ / PA R-CLV MED FZ [N]



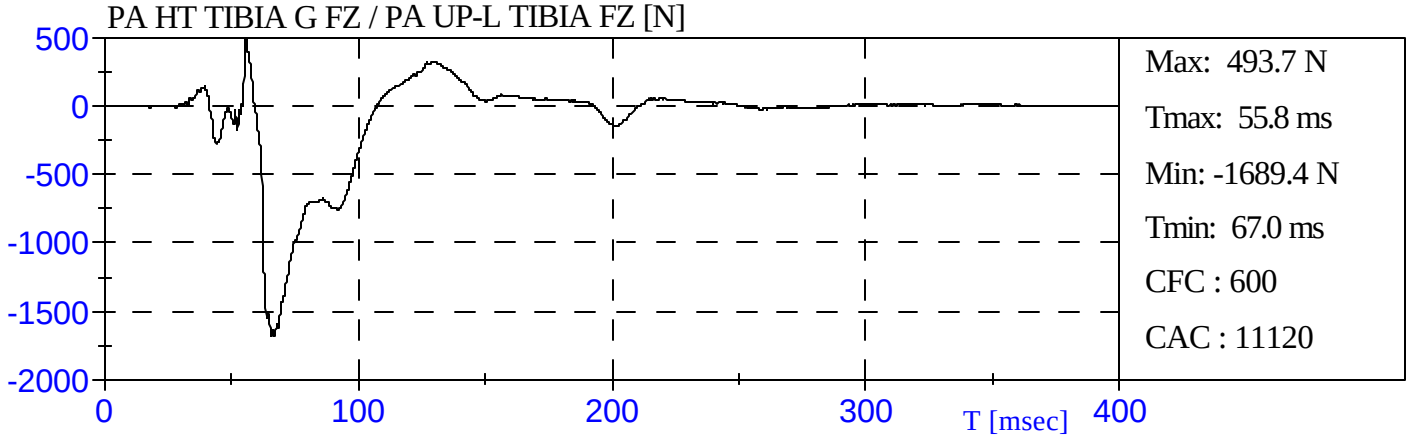
PA ETR D LAT FZ / PA R-CLV LAT FZ [N]



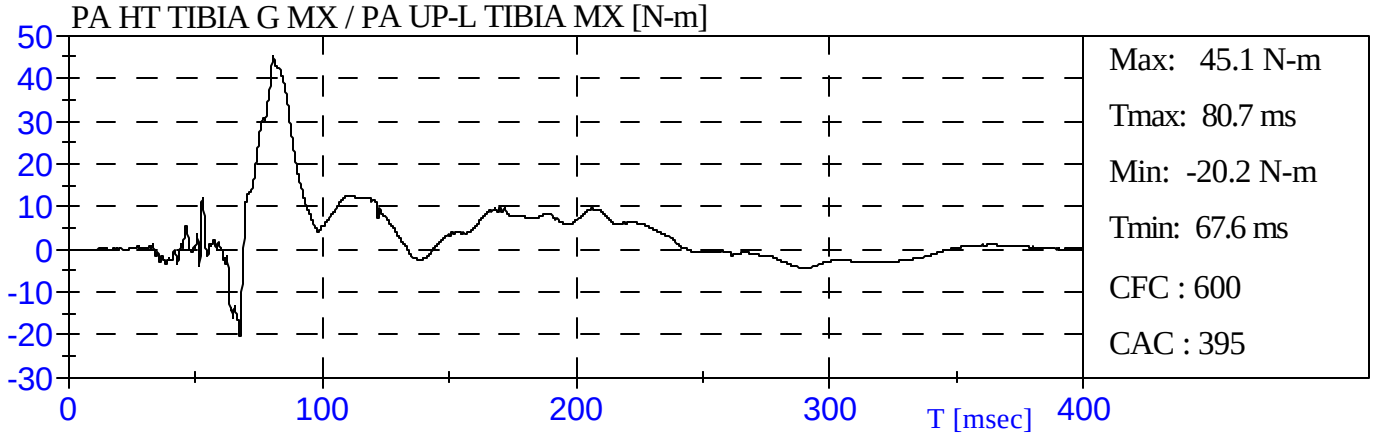
PA HT TIBIA G FX / PA UP-L TIBIA FX [N]



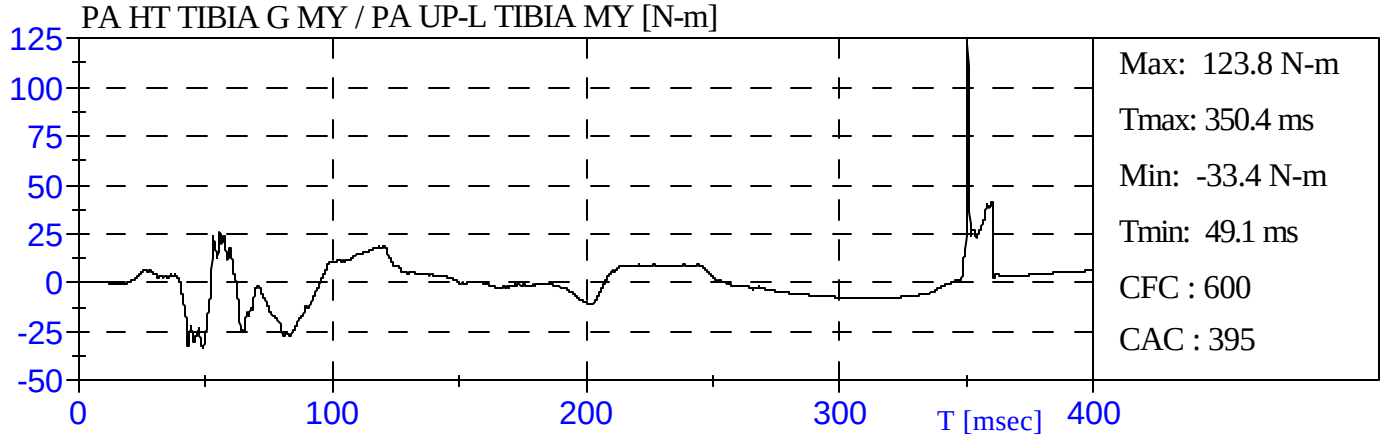
PA HT TIBIA G FZ / PA UP-L TIBIA FZ [N]



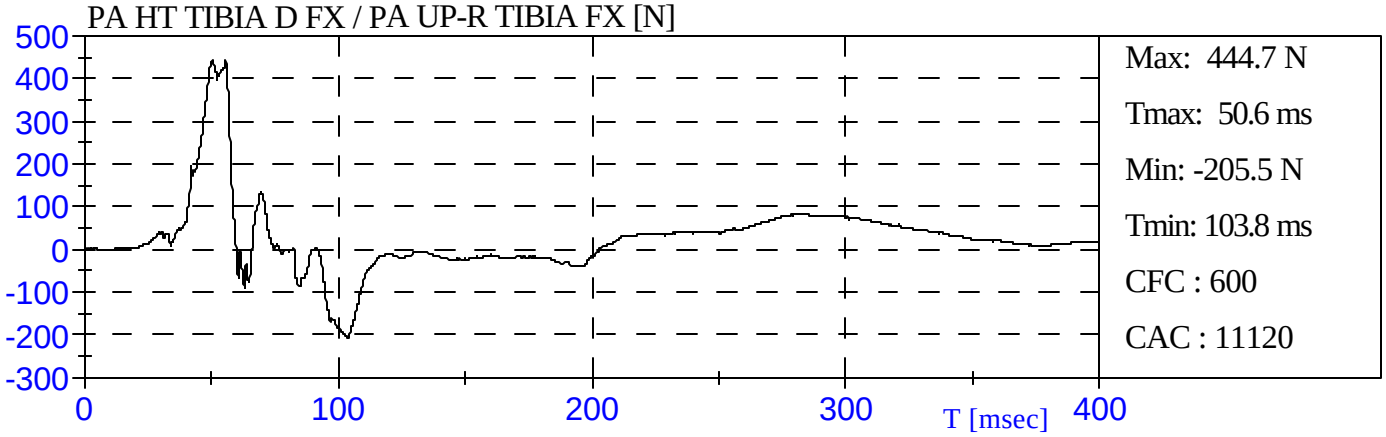
PA HT TIBIA G MX / PA UP-L TIBIA MX [N-m]



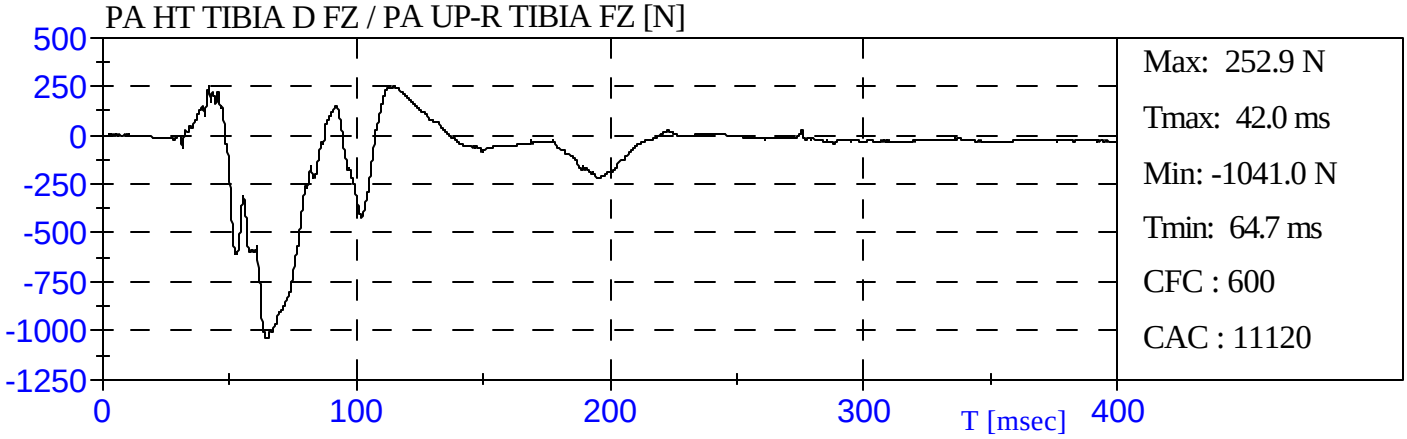
PA HT TIBIA G MY / PA UP-L TIBIA MY [N-m]



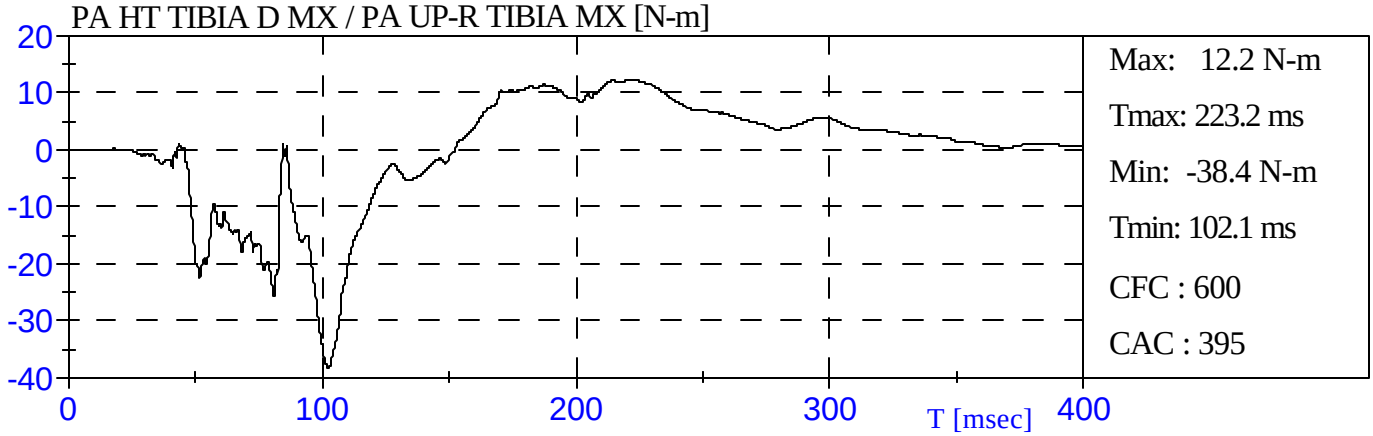
PA HT TIBIA D FX / PA UP-R TIBIA FX [N]



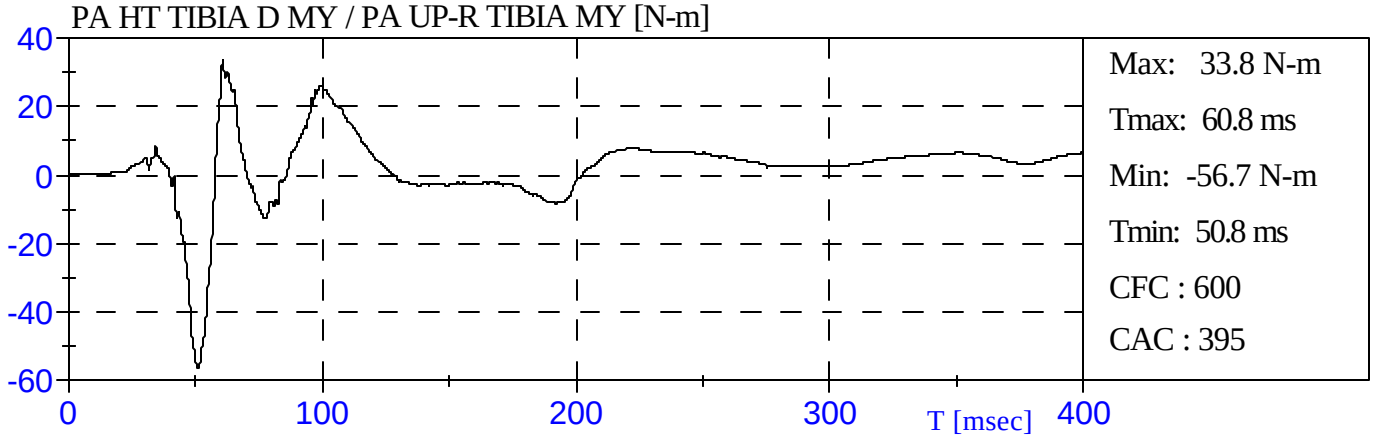
PA HT TIBIA D FZ / PA UP-R TIBIA FZ [N]



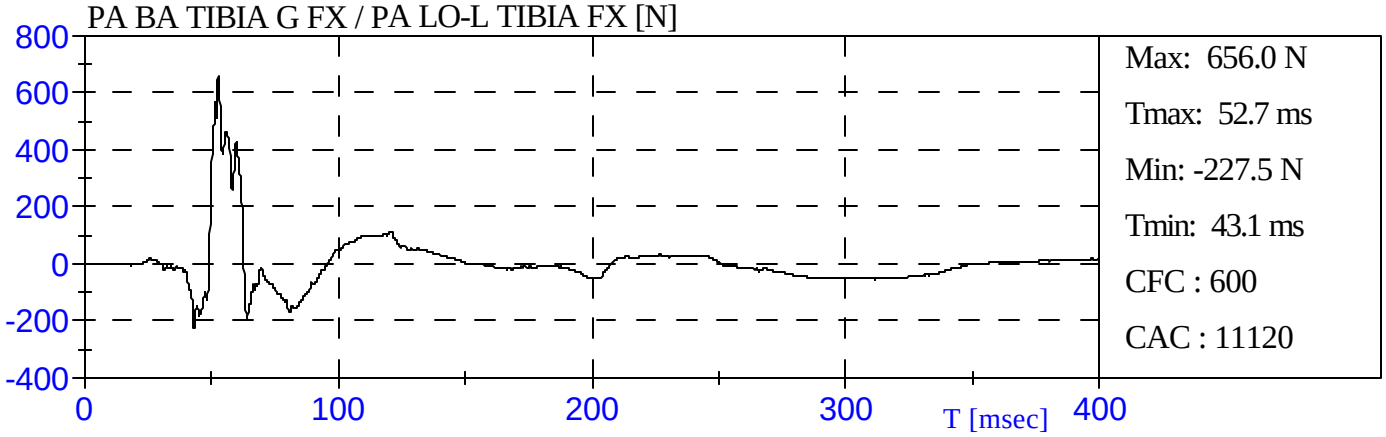
PA HT TIBIA D MX / PA UP-R TIBIA MX [N-m]



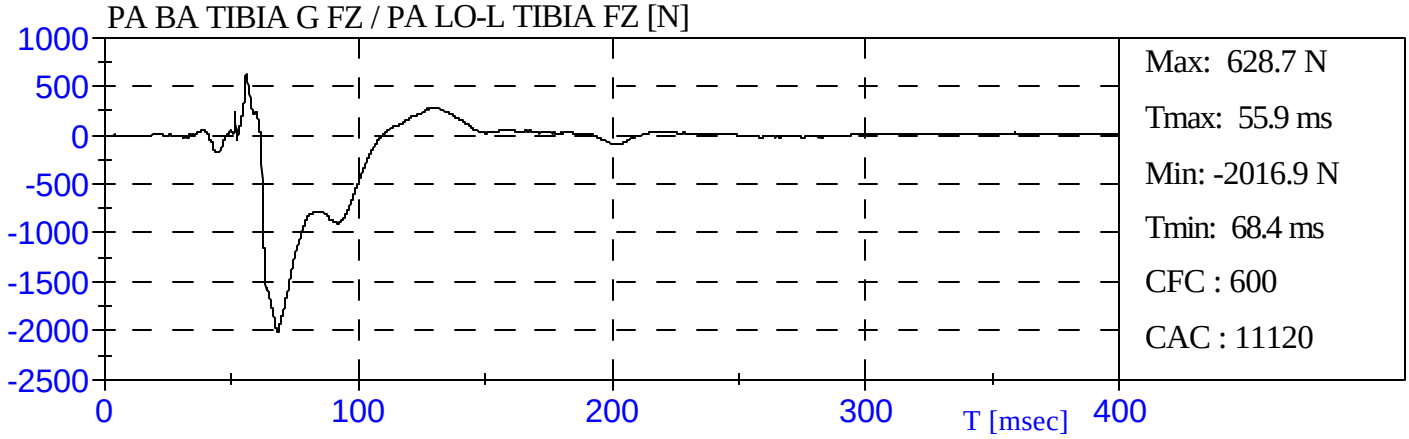
PA HT TIBIA D MY / PA UP-R TIBIA MY [N-m]



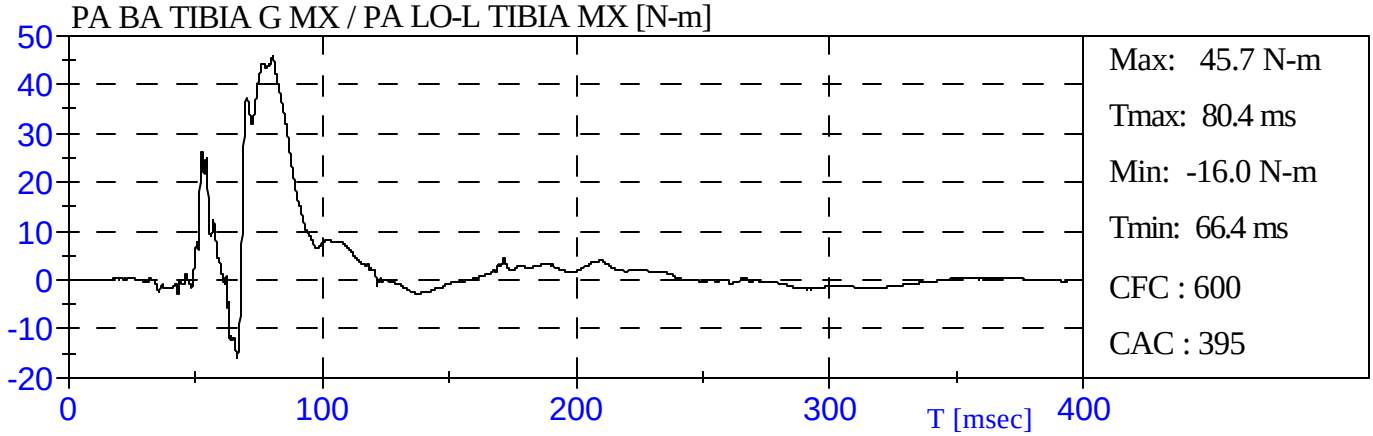
PA BA TIBIA G FX / PA LO-L TIBIA FX [N]



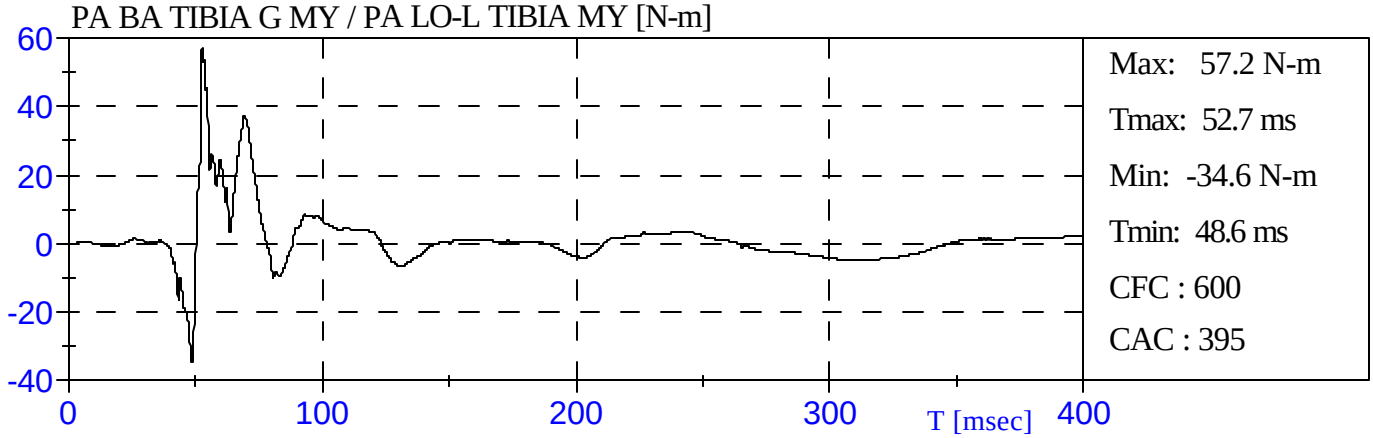
PA BA TIBIA G FZ / PA LO-L TIBIA FZ [N]



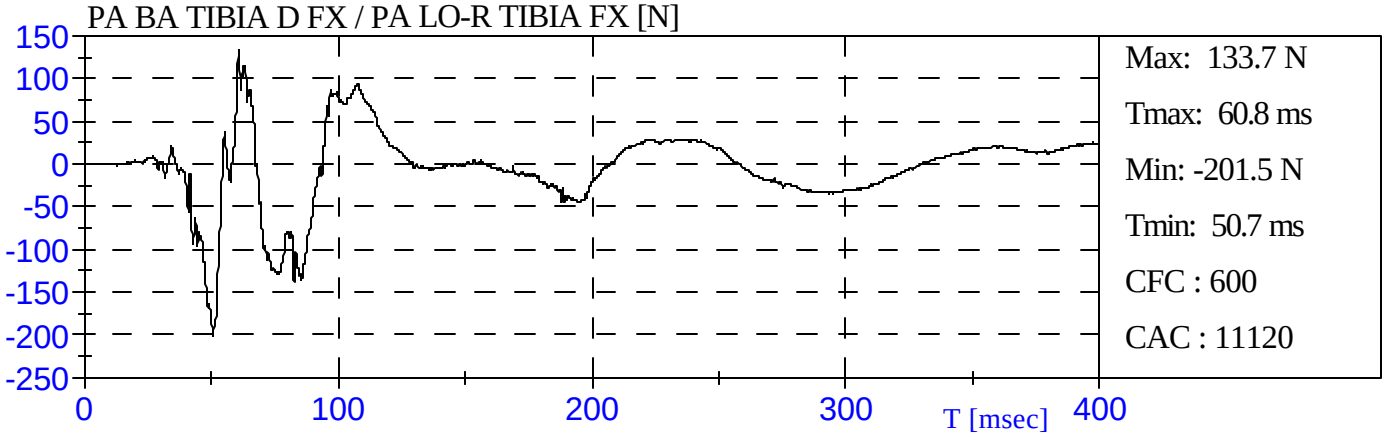
PA BA TIBIA G MX / PA LO-L TIBIA MX [N-m]



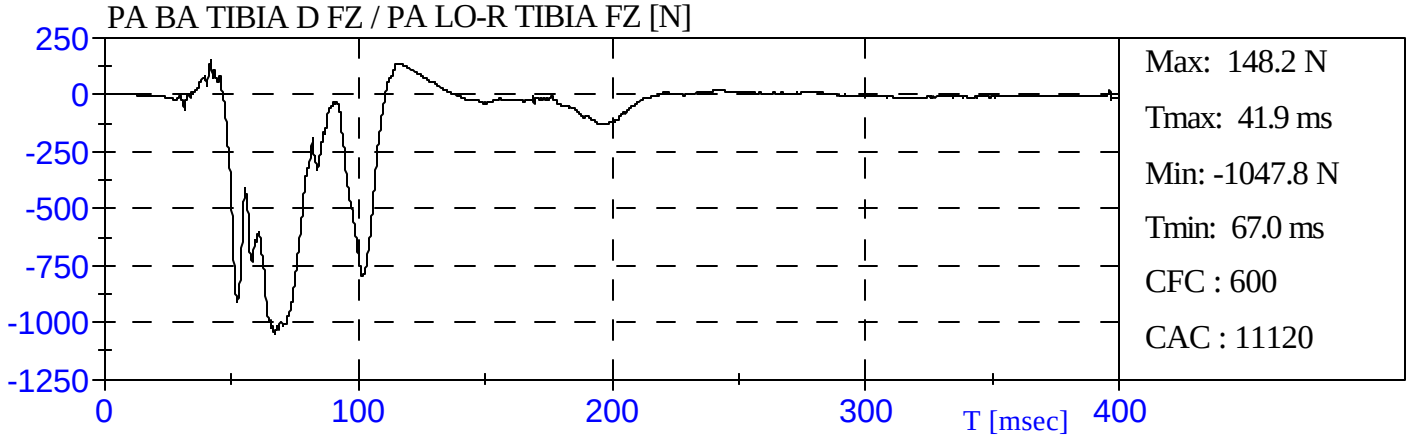
PA BA TIBIA G MY / PA LO-L TIBIA MY [N-m]



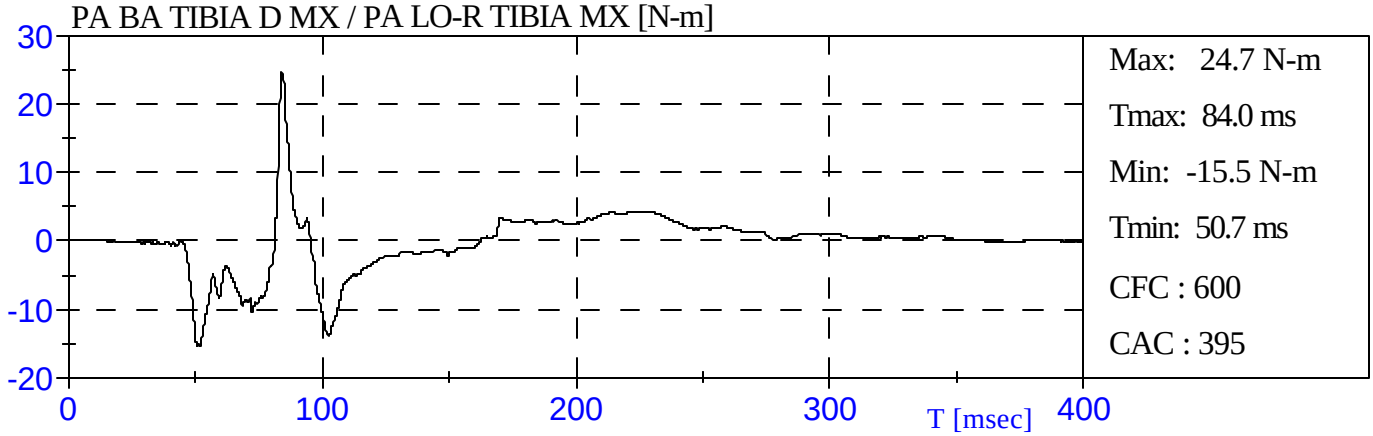
PA BA TIBIA D FX / PA LO-R TIBIA FX [N]



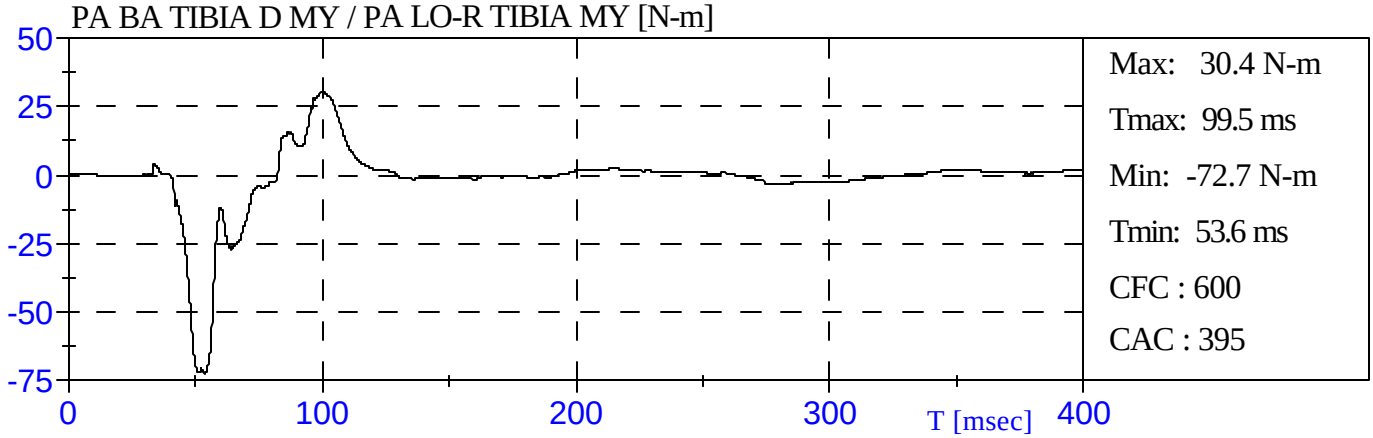
PA BA TIBIA D FZ / PA LO-R TIBIA FZ [N]



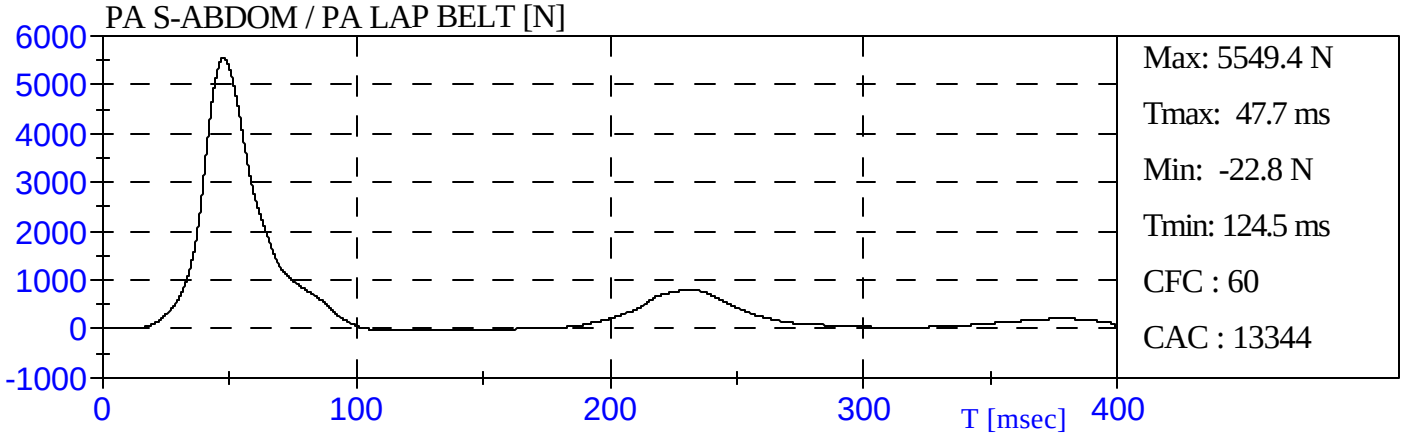
PA BA TIBIA D MX / PA LO-R TIBIA MX [N-m]



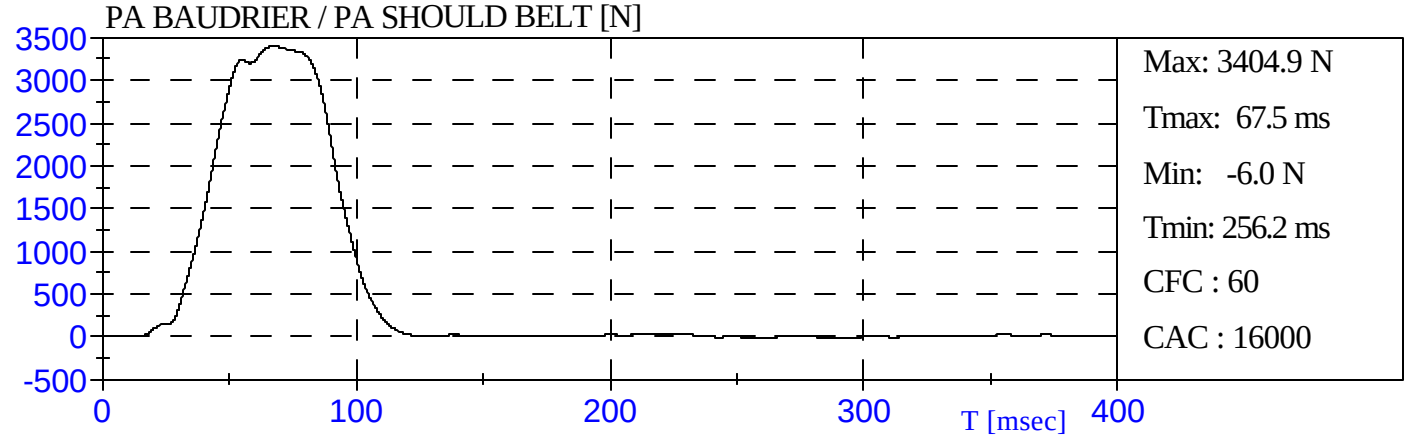
PA BA TIBIA D MY / PA LO-R TIBIA MY [N-m]

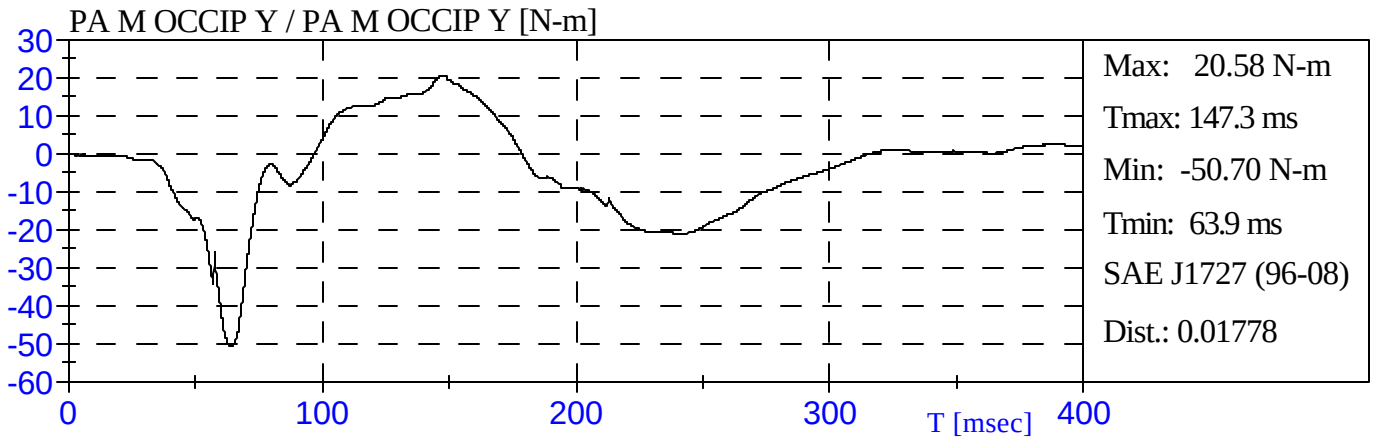


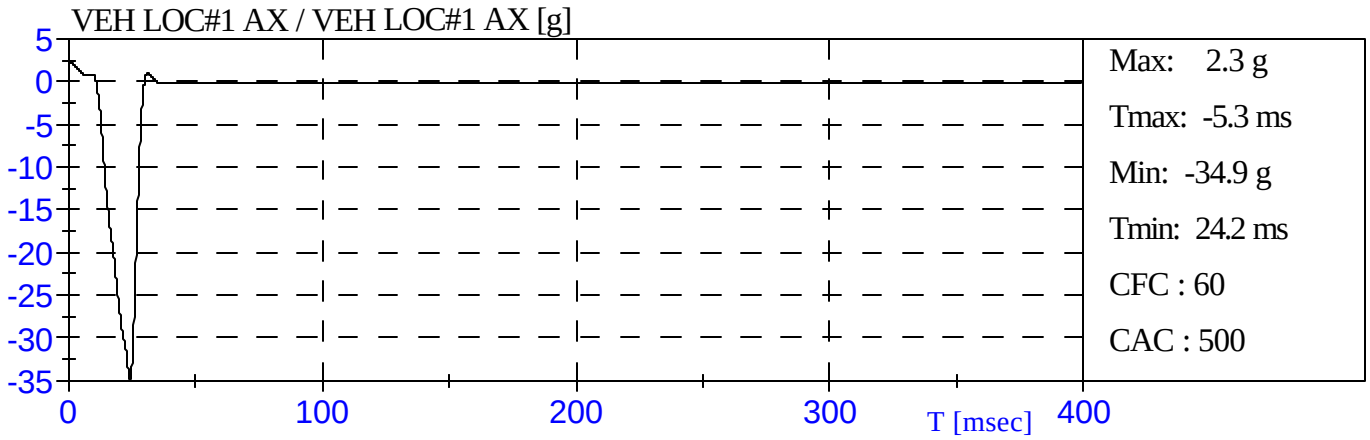
PA S-ABDOM / PA LAP BELT [N]

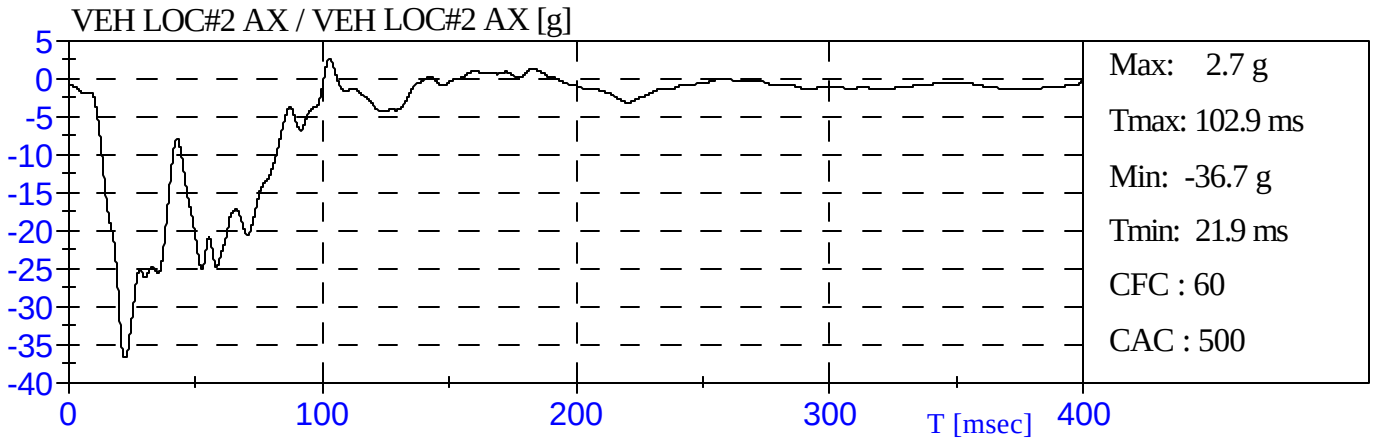


PA BAUDRIER / PA SHOULD BELT [N]

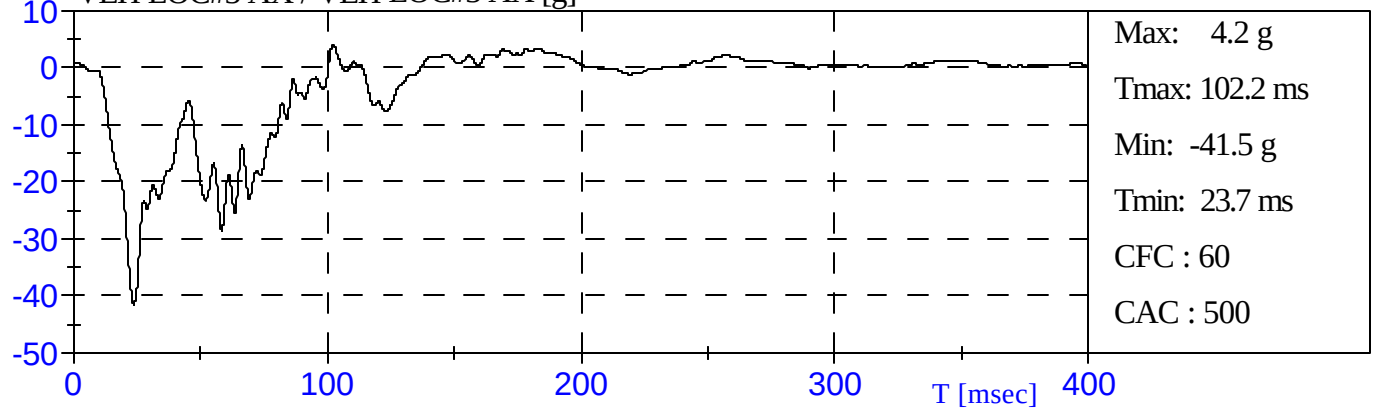



PA M OCCIP Y / PA M OCCIP Y [N-m]
30
20
10
0
-10
-20
-30
-40
-50
-60
0
100
200
300
400
T [msec]
Max: 20.58 N-m
Tmax: 147.3 ms
Min: -50.70 N-m
Tmin: 63.9 ms
SAE J1727 (96-08)
Dist.: 0.01778

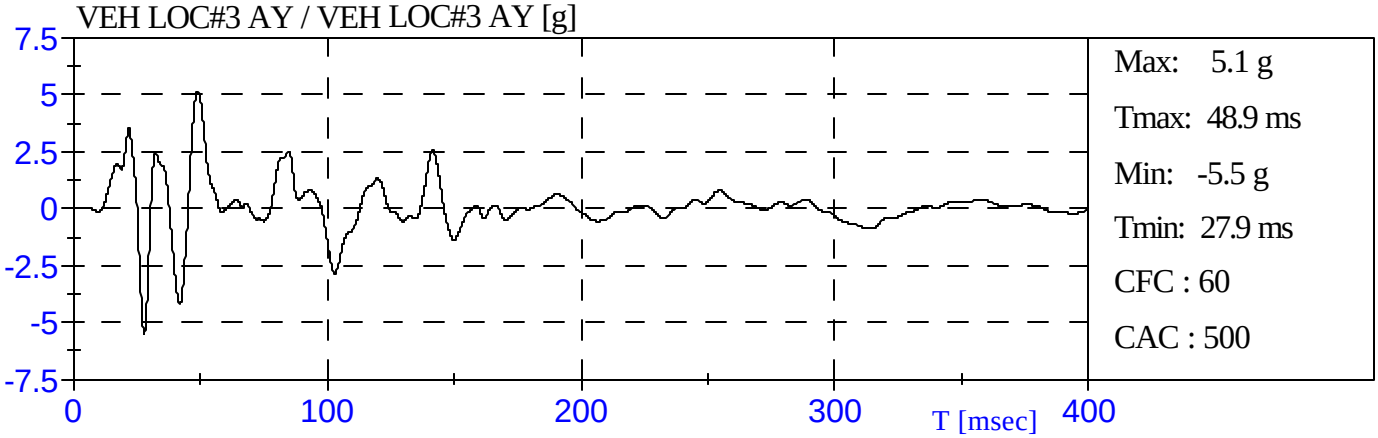

VEH LOC#1 AX / VEH LOC#1 AX [g]
5
0
-5
-10
-15
-20
-25
-30
-35
0
100
200
300
400
T [msec]
Max: 2.3 g
Tmax: -5.3 ms
Min: -34.9 g
Tmin: 24.2 ms
CFC : 60
CAC : 500


VEH LOC#2 AX / VEH LOC#2 AX [g]
5
0
-5
-10
-15
-20
-25
-30
-35
-40
0
100
200
300
400
T [msec]
Max: 2.7 g
Tmax: 102.9 ms
Min: -36.7 g
Tmin: 21.9 ms
CFC : 60
CAC : 500

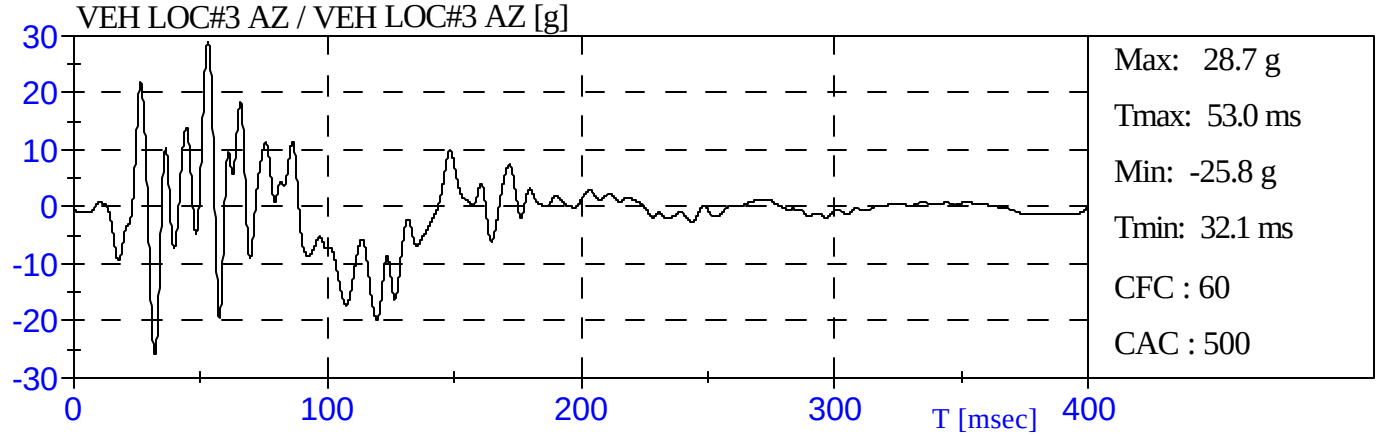
VEH LOC#3 AX / VEH LOC#3 AX [g]



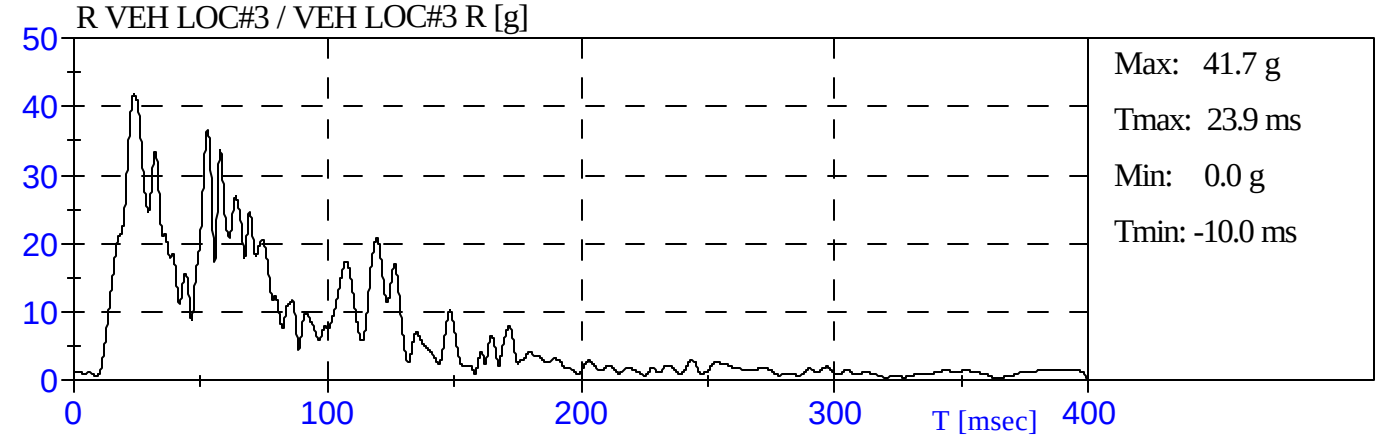
VEH LOC#3 AY / VEH LOC#3 AY [g]

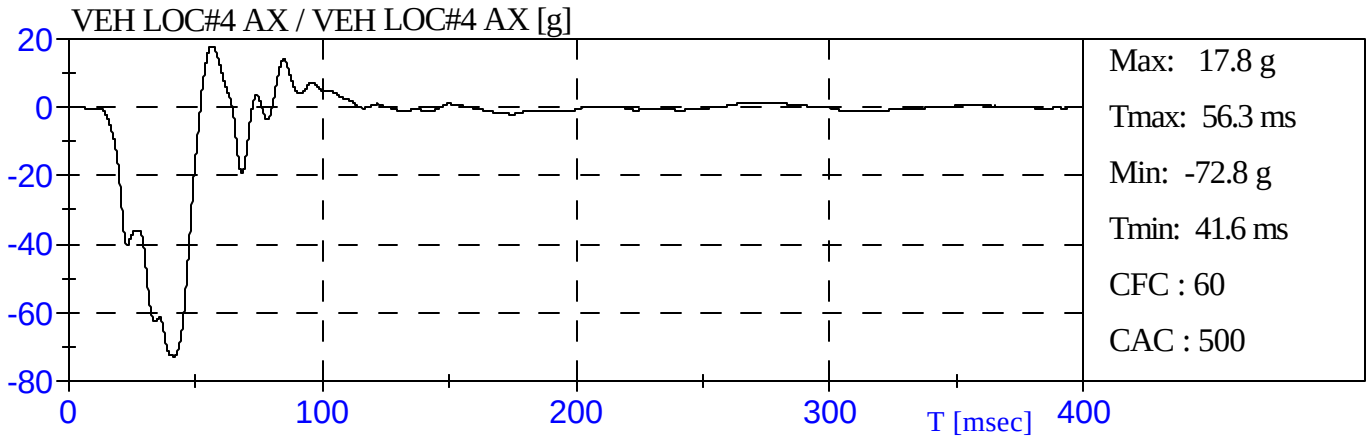


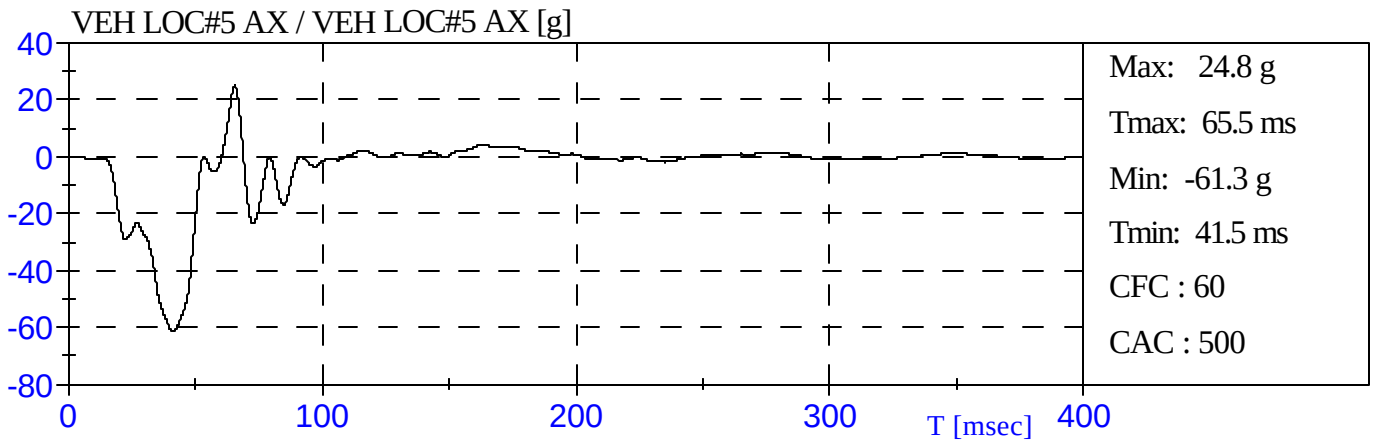
VEH LOC#3 AZ / VEH LOC#3 AZ [g]



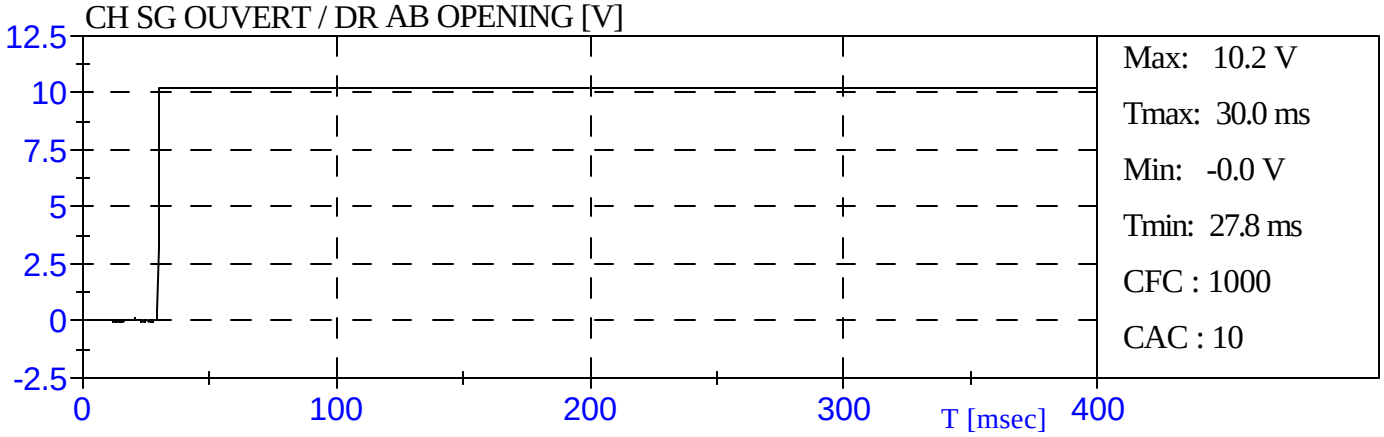
R VEH LOC#3 / VEH LOC#3 R [g]



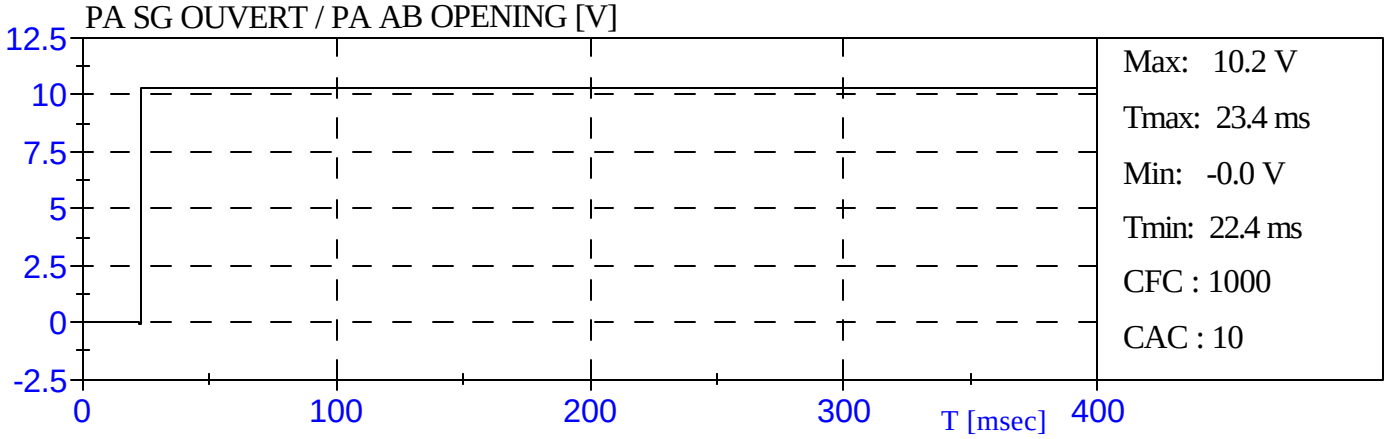

VEH LOC#4 AX / VEH LOC#4 AX [g]
20
0
-20
-40
-60
-80
0
100
200
300
400
T [msec]
Max: 17.8 g
Tmax: 56.3 ms
Min: -72.8 g
Tmin: 41.6 ms
CFC : 60
CAC : 500


VEH LOC#5 AX / VEH LOC#5 AX [g]
40
20
0
-20
-40
-60
-80
0
100
200
300
400
T [msec]
Max: 24.8 g
Tmax: 65.5 ms
Min: -61.3 g
Tmin: 41.5 ms
CFC : 60
CAC : 500

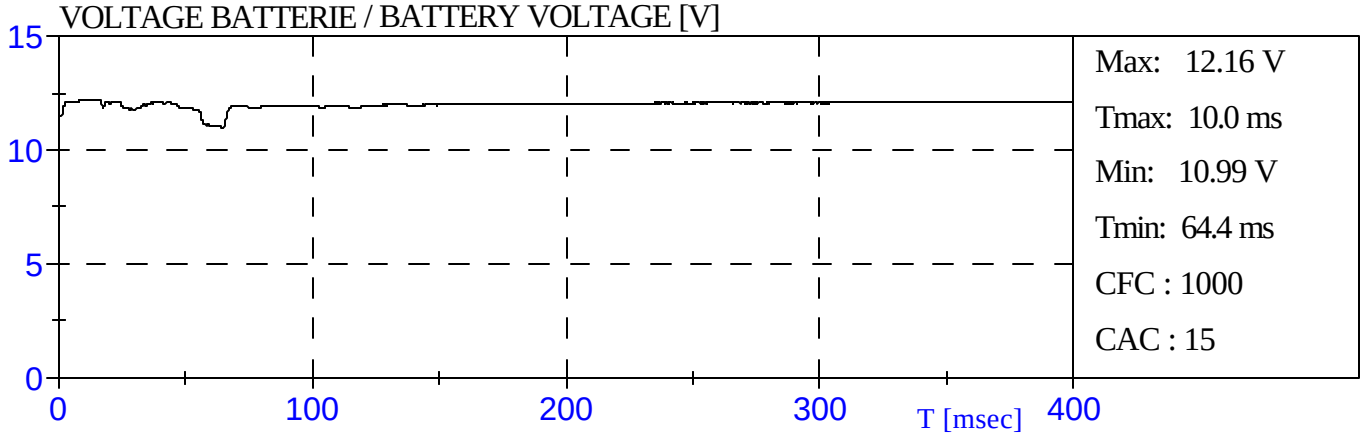
CH SG OUVERT / DR AB OPENING [V]



PA SG OUVERT / PA AB OPENING [V]



VOLTAGE BATTERIE / BATTERY VOLTAGE [V]



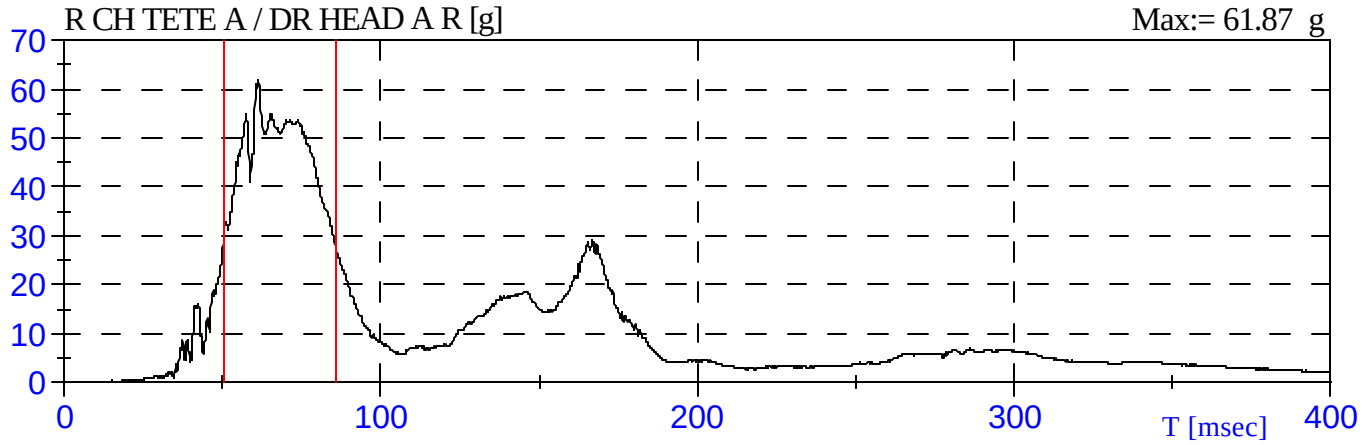
PMG Technologies

HIC

DODGE DAKOTA 2003

Date: 2003-03-11

Nº TC / TC No.: TC03-215



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

HIC:= 527	HIC(36ms):= 527	HIC(15ms):= 316
T1:= 50.2 ms	T1:= 50.2 ms	T1:= 60.0 ms
T2:= 85.6 ms	T2:= 85.6 ms	T2:= 75.0 ms

* Selon / According To: SAE J1727 96-08

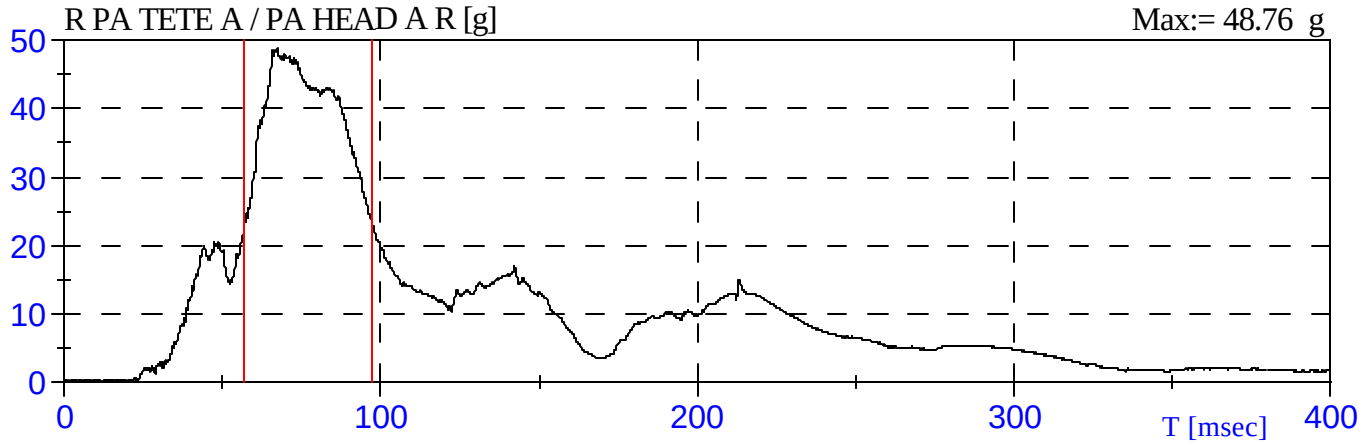
PMG Technologies

HIC

DODGE DAKOTA 2003

Date: 2003-03-11

Nº TC / TC No.: TC03-215

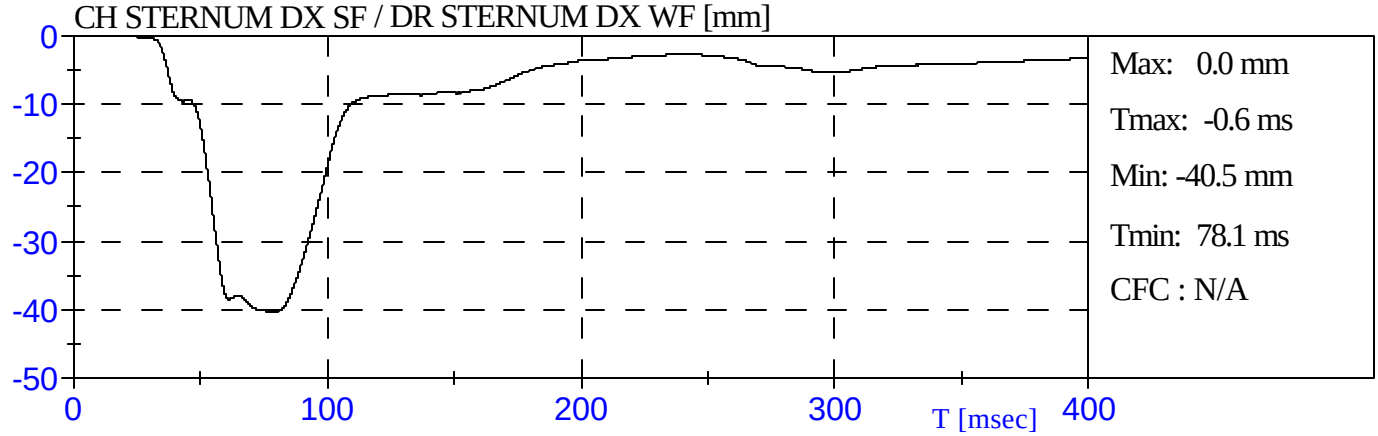


HEAD INJURY CRITERIA (HIC) *
CRITÈRE DE BLESSURE DE LA TÊTE

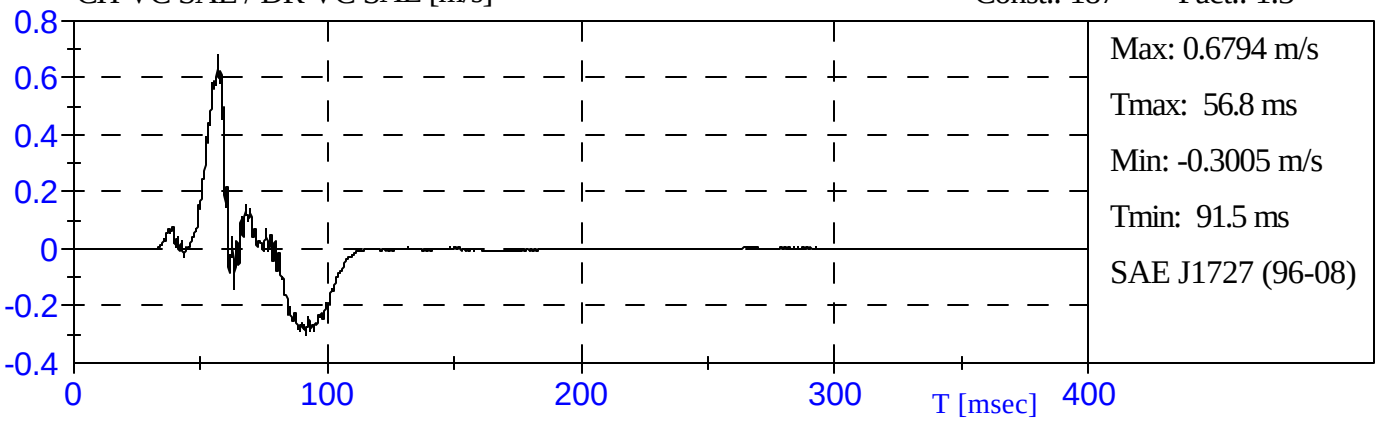
HIC:= 391	HIC(36ms):= 389	HIC(15ms):= 214
T1:= 57.1 ms	T1:= 59.0 ms	T1:= 64.4 ms
T2:= 97.0 ms	T2:= 95.0 ms	T2:= 79.4 ms

* Selon / According To: SAE J1727 96-08

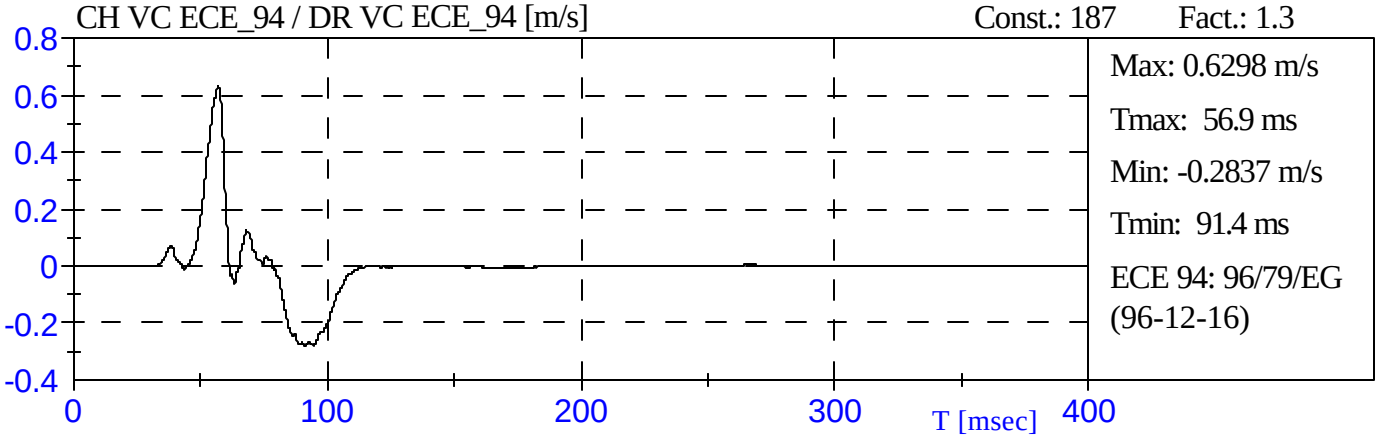
CH STERNUM DX SF / DR STERNUM DX WF [mm]



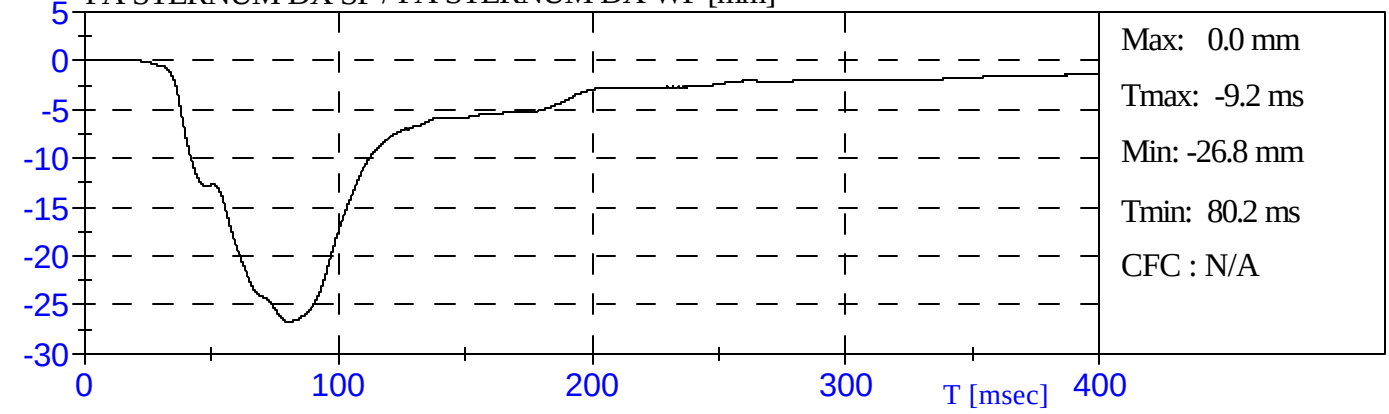
CH VC SAE / DR VC SAE [m/s] Const.: 187 Fact.: 1.3



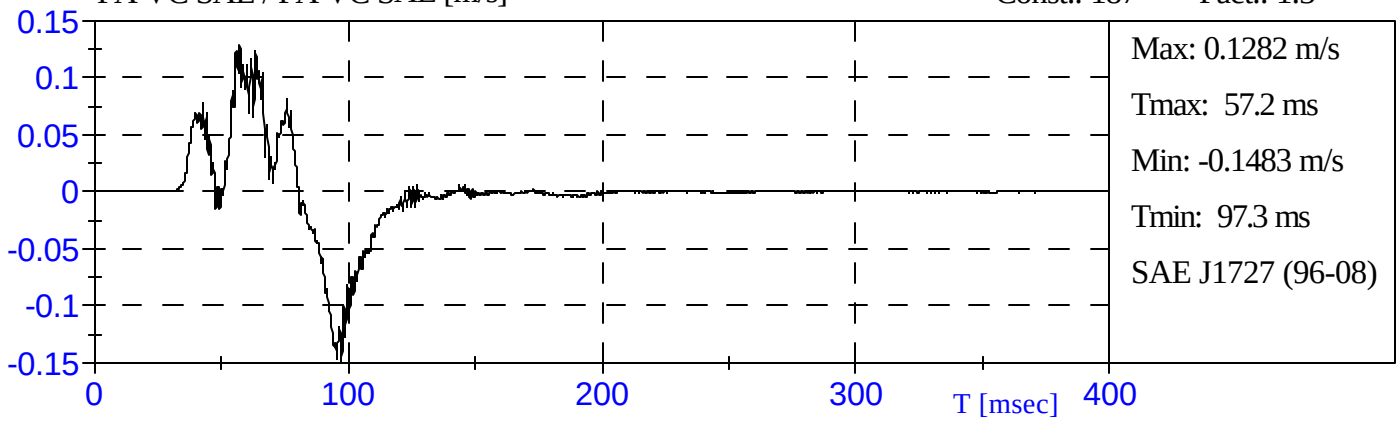
CH VC ECE_94 / DR VC ECE_94 [m/s] Const.: 187 Fact.: 1.3



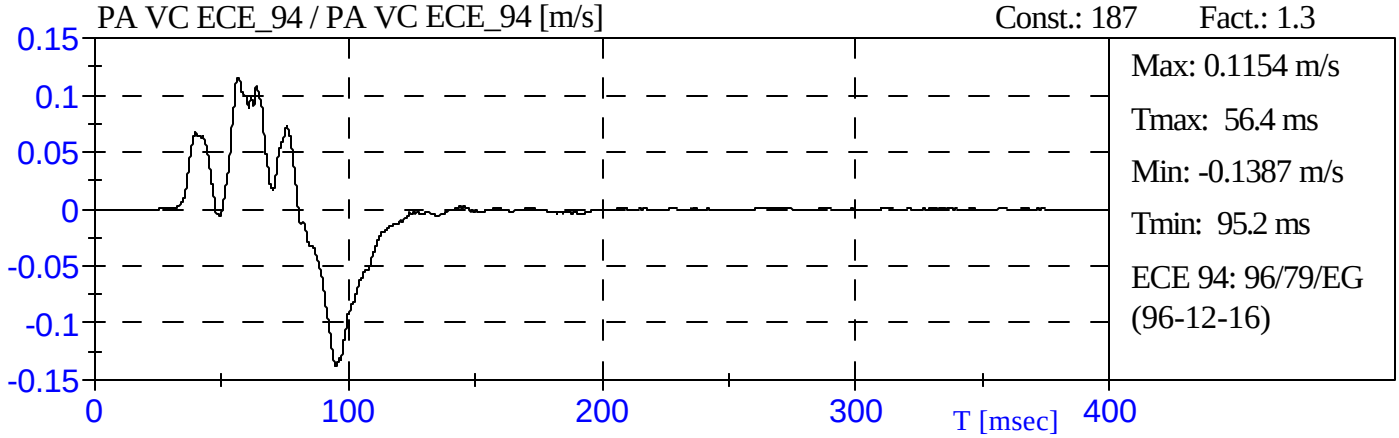
PA STERNUM DX SF / PA STERNUM DX WF [mm]



PA VC SAE / PA VC SAE [m/s] Const.: 187 Fact.: 1.3



PA VC ECE_94 / PA VC ECE_94 [m/s] Const.: 187 Fact.: 1.3



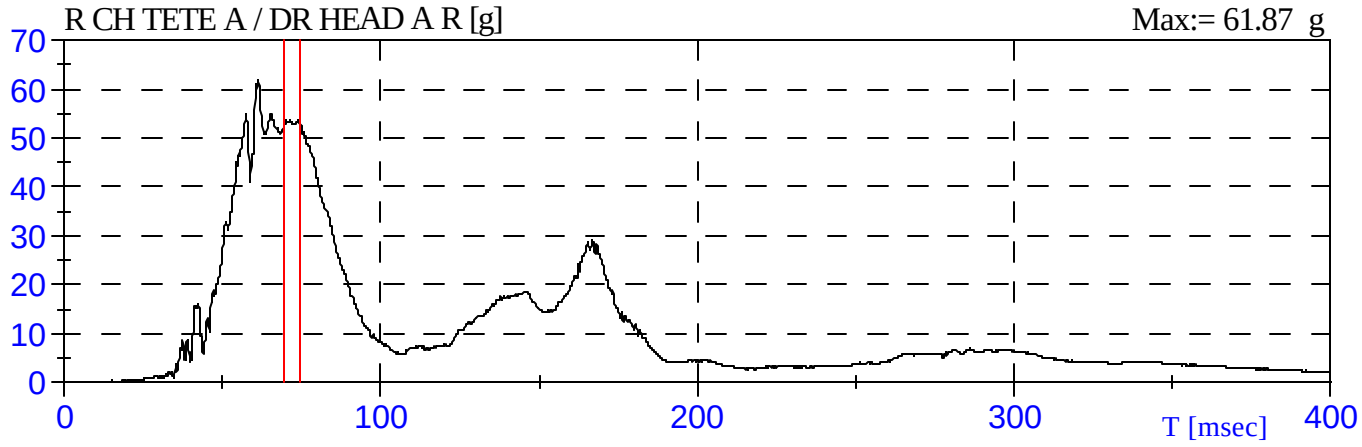
PMG Technologies

CLIP 3ms

DODGE DAKOTA 2003

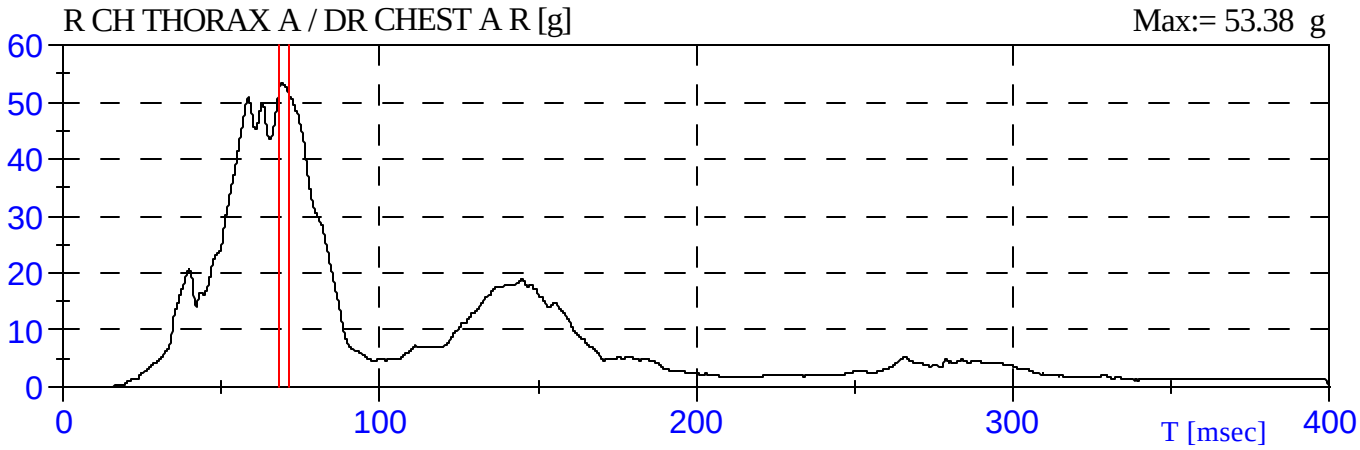
Date: 2003-03-11

Nº TC / TC No.: TC03-215



CLIP 3ms *

Acc. := 52.64 g	T1:= 69.6 ms	T2:= 74.4 ms



CLIP 3ms *

Acc. := 51.65 g	T1:= 68.1 ms	T2:= 71.1 ms

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

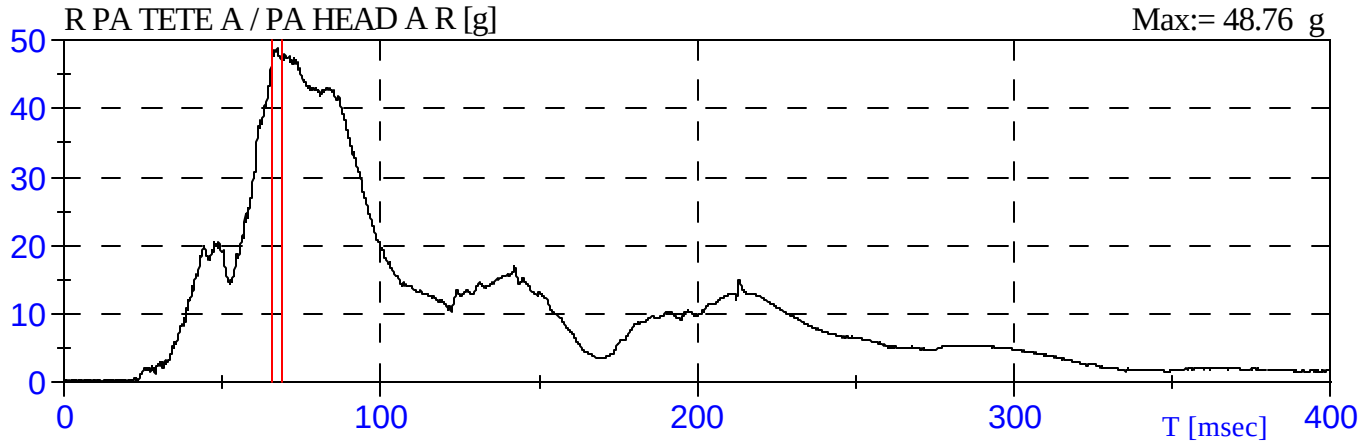
PMG Technologies

CLIP 3ms

DODGE DAKOTA 2003

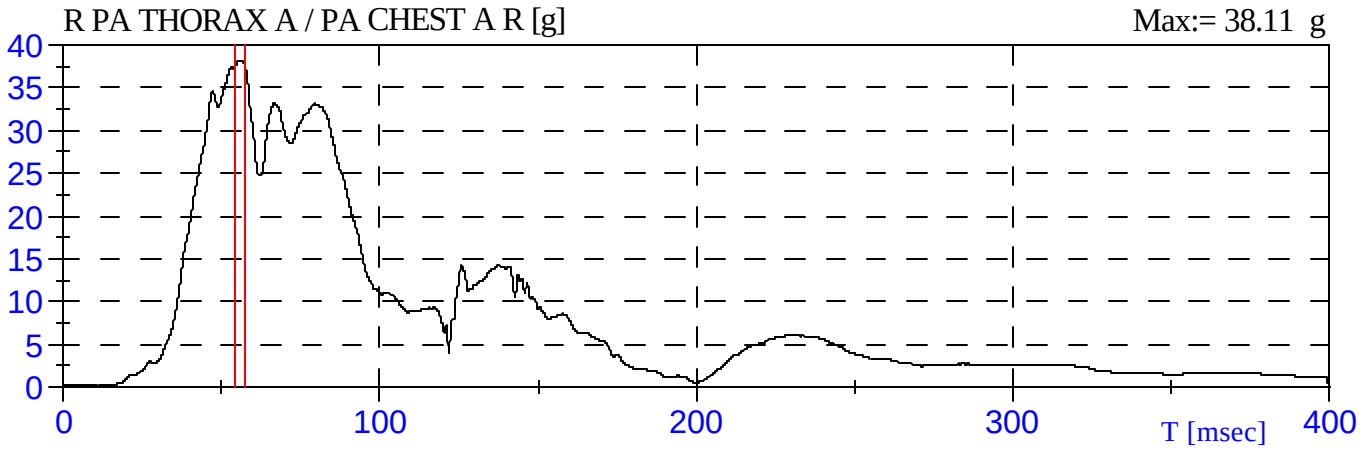
Date: 2003-03-11

Nº TC / TC No.: TC03-215



CLIP 3ms *

Acc. := 47.28 g	T1:= 65.5 ms	T2:= 68.5 ms



CLIP 3ms *

Acc. := 37.50 g	T1:= 54.5 ms	T2:= 57.5 ms

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

INDEX DU TIBIA *
TIBIA INDEX *

TI Chauffeur / Driver Mc := 115 N-m Fc := 22.9 kN

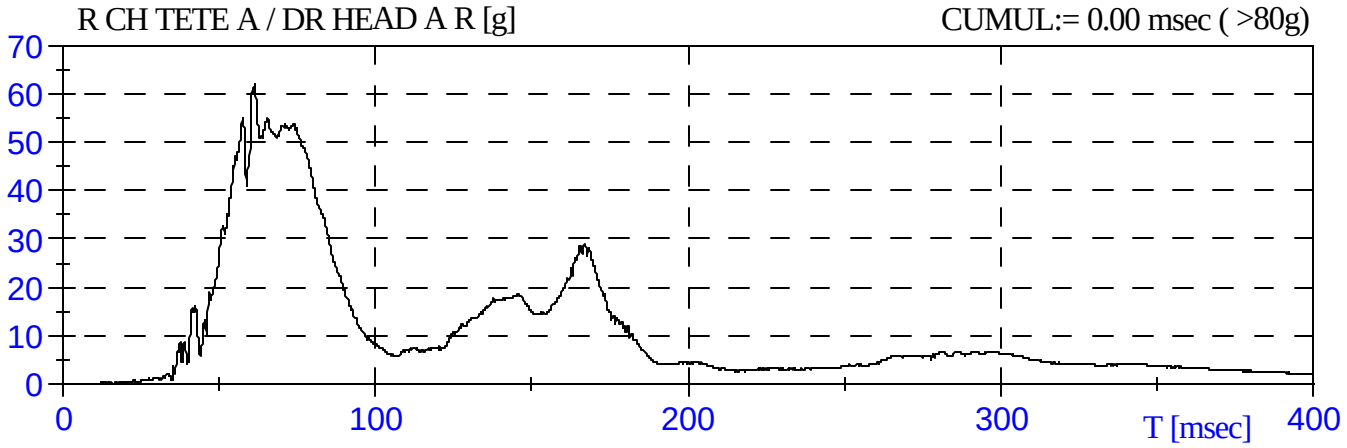
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	**0.550**	**0.390**
BAS / LOWER	**0.756**	**0.321**

TI Passager / Passenger Mc := 115 N-m Fc := 22.9 kN

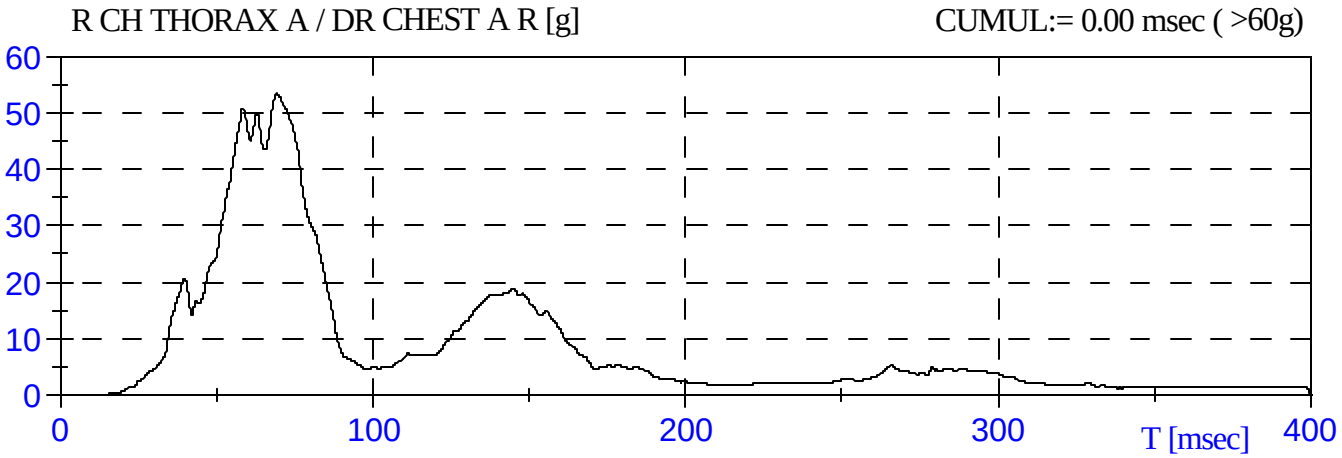
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	**1.077**	**0.544**
BAS / LOWER	**0.547**	**0.679**

* Selon / According To: SAE J1727 AUG 96

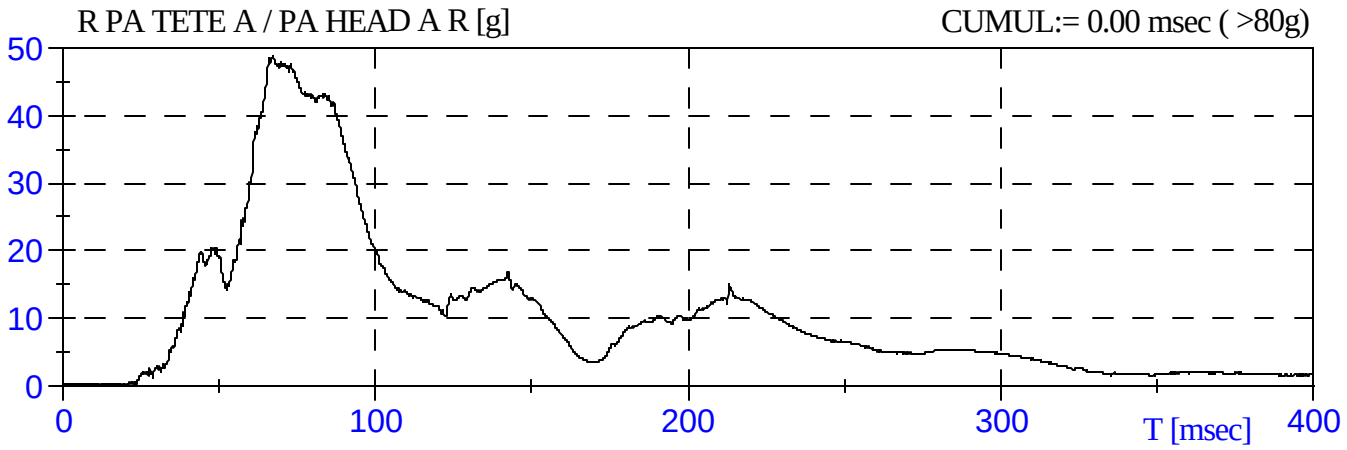
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



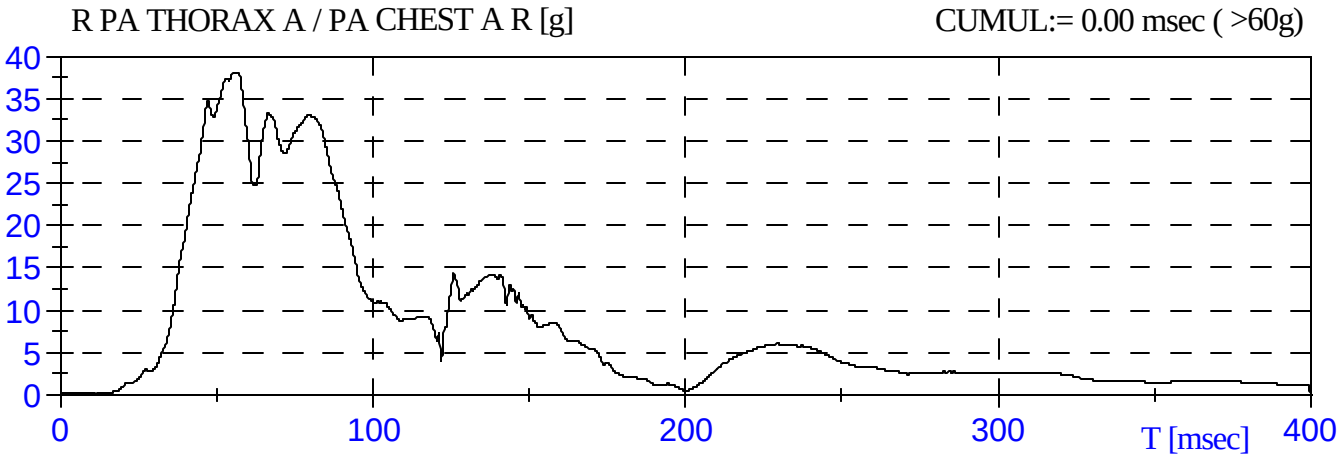
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



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



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



Chauffeur / Driver

N ij* = 1.94

Valeurs critiques
Criticals Values

N te	N ce	N tf	N cf	Tc 4287 Cc 3880 Fc 155 Ec 67
1.94	0.35	0.11	0.33	

Passager / Passenger

N ij* = 1.12

Valeurs critiques
Criticals Values

N te	N ce	N tf	N cf	Tc 4287 Cc 3880 Fc 155 Ec 67
1.12	0.02	0.09	0.28	

* Selon / According To: Federal Register 5/2000

COMMENTAIRES / COMMENTS

CH CT EPINE AX:	N'est pas valid à partir de 136.3 ms.
VEH LOC#1 AX:	N'est pas valid à partir de 27.6 ms.
PA IR HD,BD,HG,BG:	Transitoires réparés de 37.9 à 39.0 ms et 64.5 à 65.5 ms.
DR CT SPINE AX:	Is not valid from 136.3 ms.
VEH LOC#1 AX:	Is not valid from 27.6 ms.
PA IR UR,LR,UL,LL:	Glitchs removed from 37.9 to 39.0 ms and 64.5 to 65.5 ms.