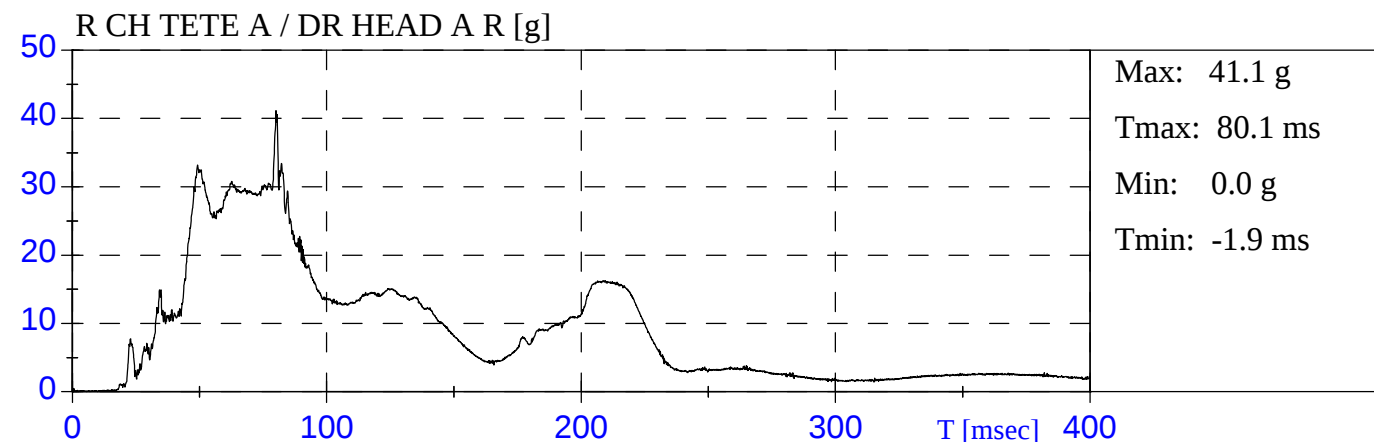
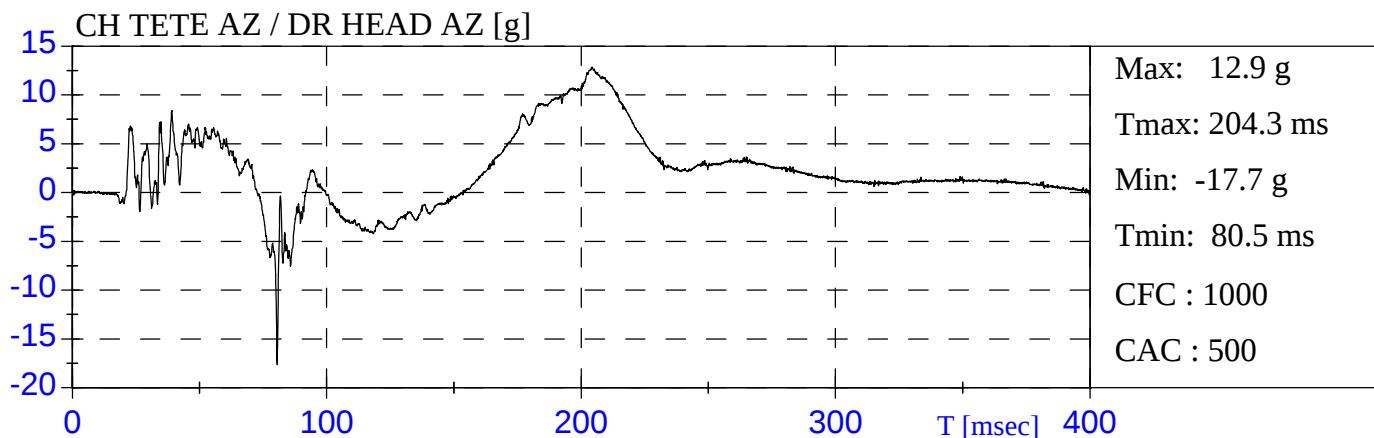
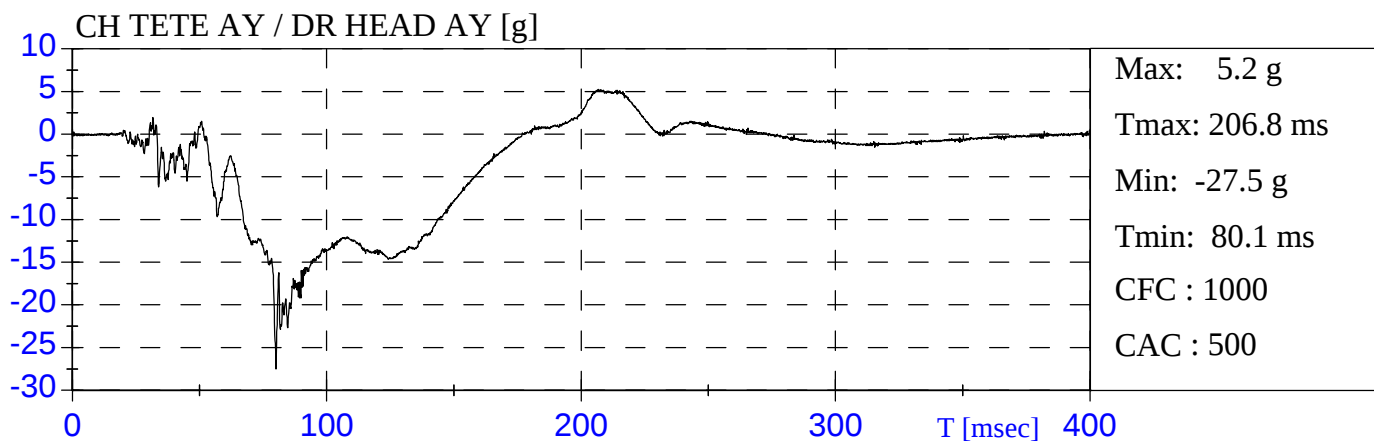
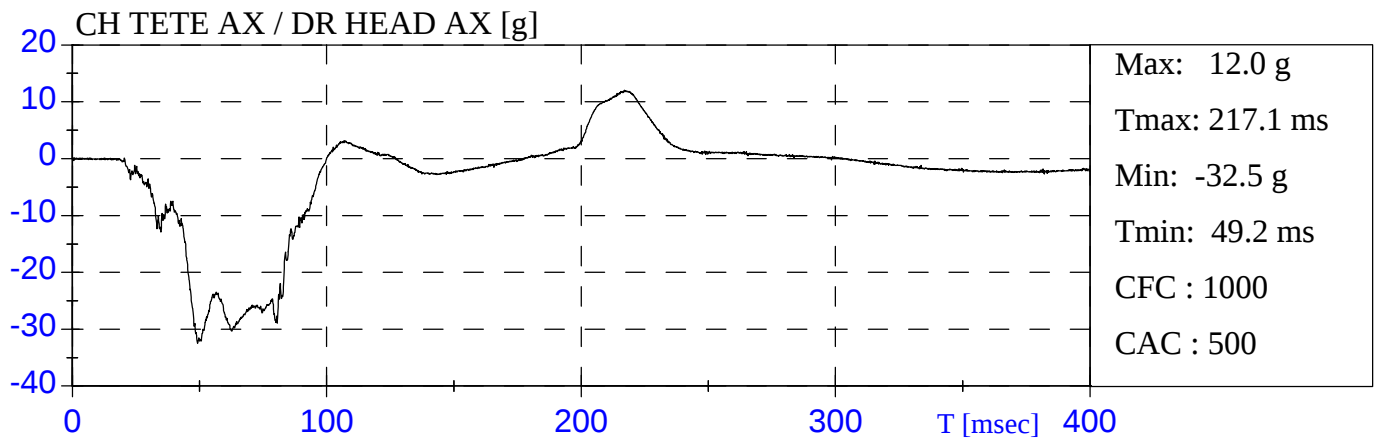
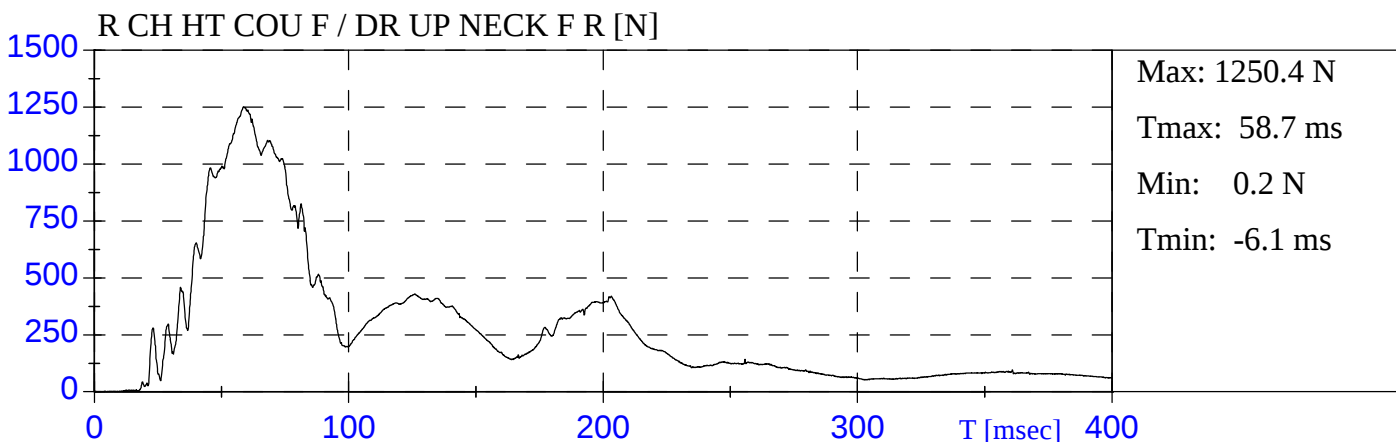
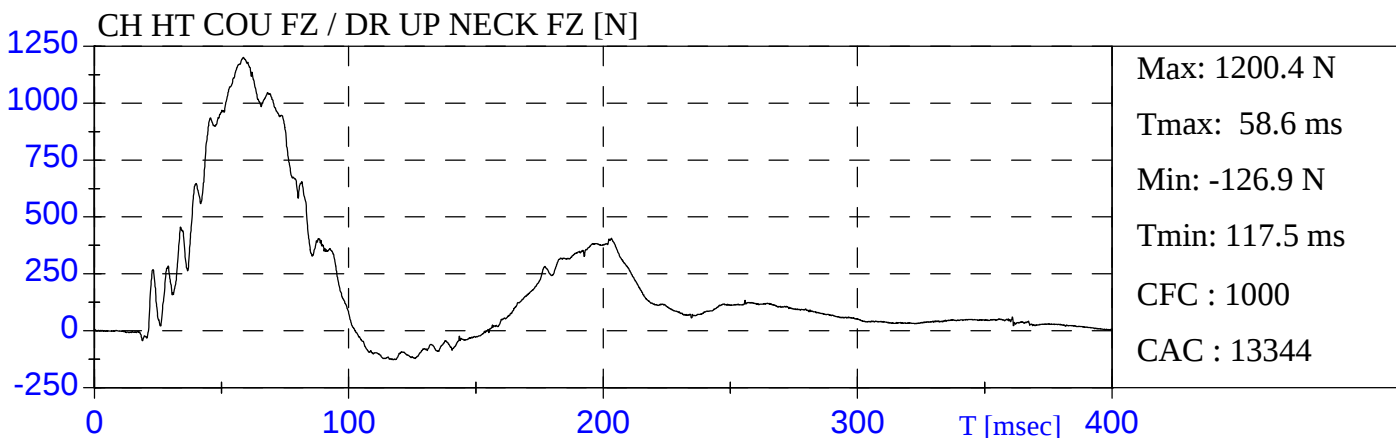
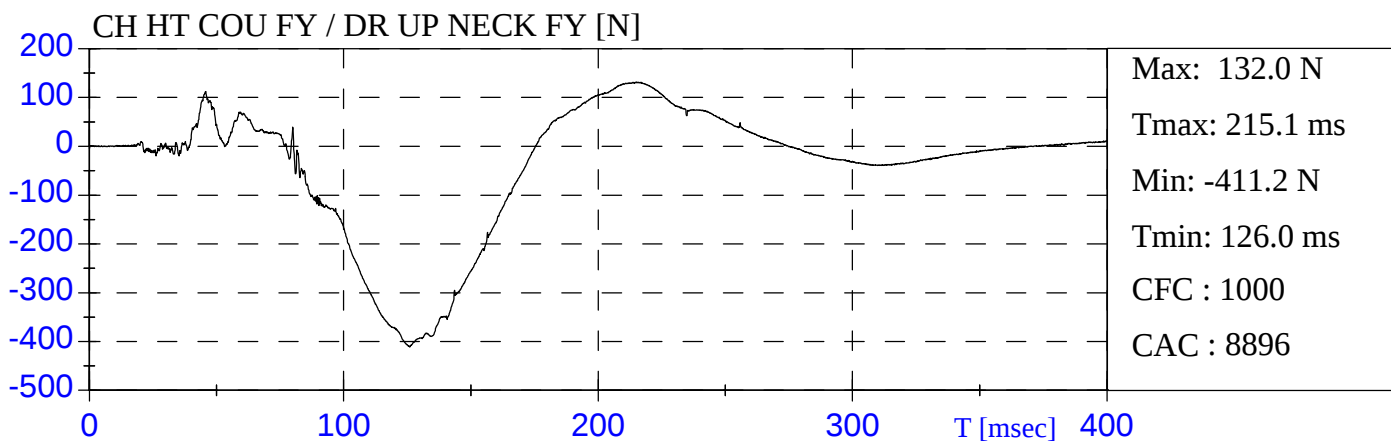
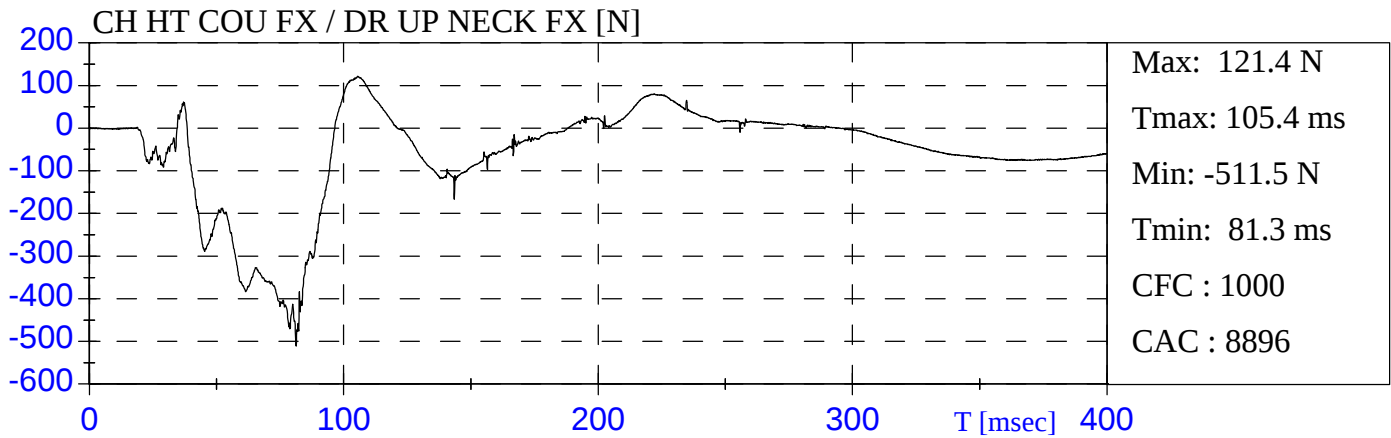




Nom du client Client Name	TRANSPORT CANADA
Type de véhicule Type of Vehicle	NISSAN MURANO 2004
Numéro de TC Tc Number	TC04-127
Numéro de contrat Contract No	04-6008
Acquisition de données selon Data Acquisition according to	SAE J211/1 MAR 95
Date de l'essai Test date	2004-03-31
Titre du projet Project Title	COLLISION DE RECHERCHE COLLISION FRONTALE RESEARCH COLLISION TEST FRONTAL CRASH
MANNEQUIN / DUMMY	
Chauffeur Driver	HYBRID III 5% F IR
Passager Passenger	HYBRID III 5% F IR
Passager 1 (arrière gauche) Passenger 1 (rear left)	HYBRID III 6Y
Passager 2 (arrière centre) Passenger 2 (rear center)	HYBRID III 6Y





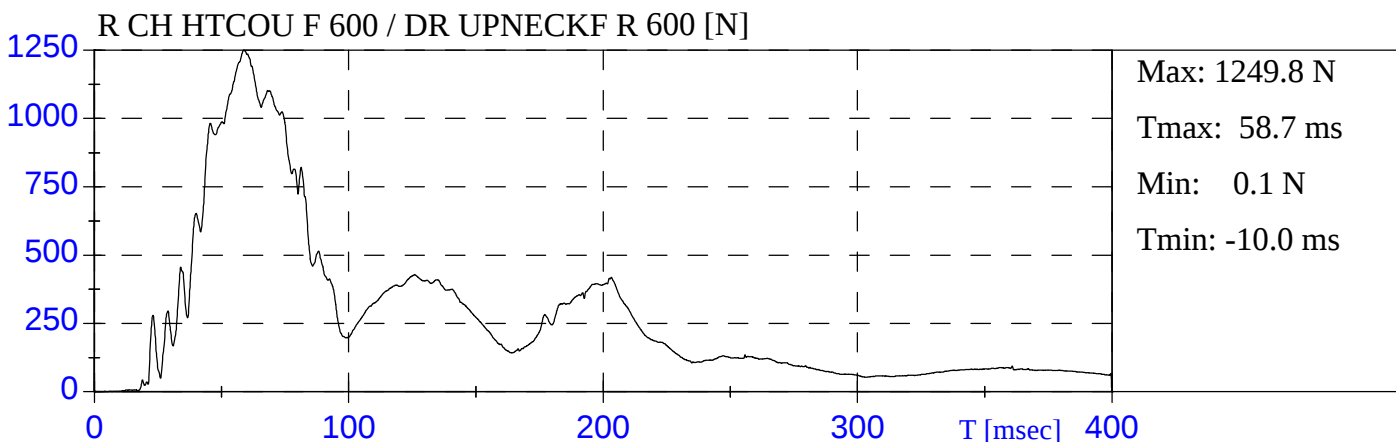
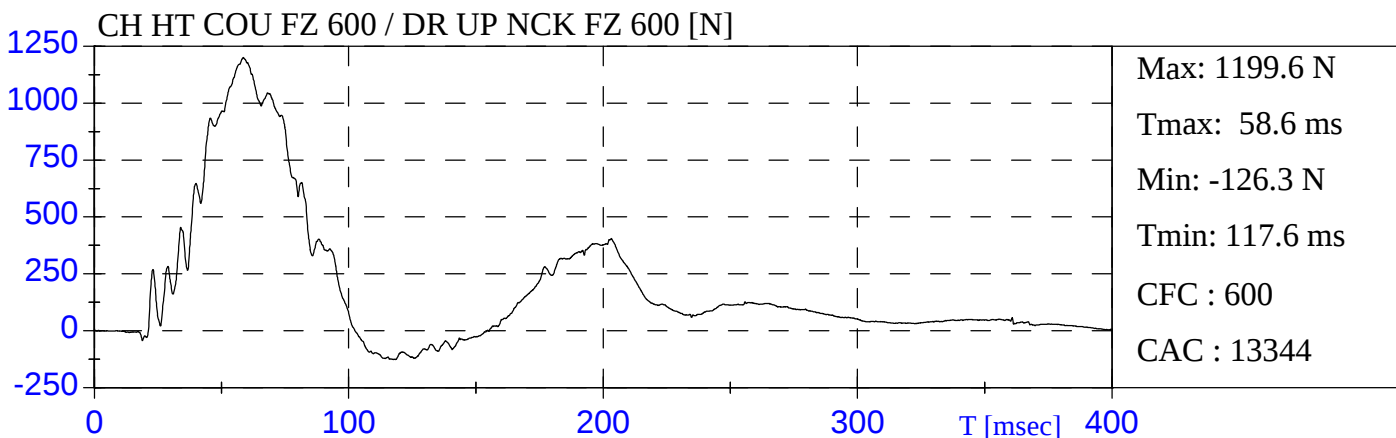
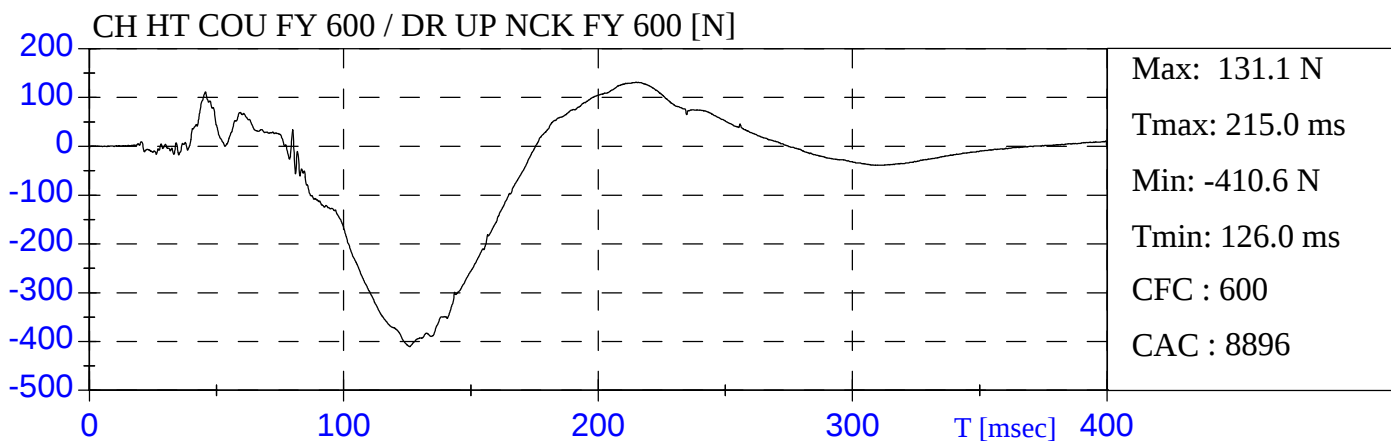
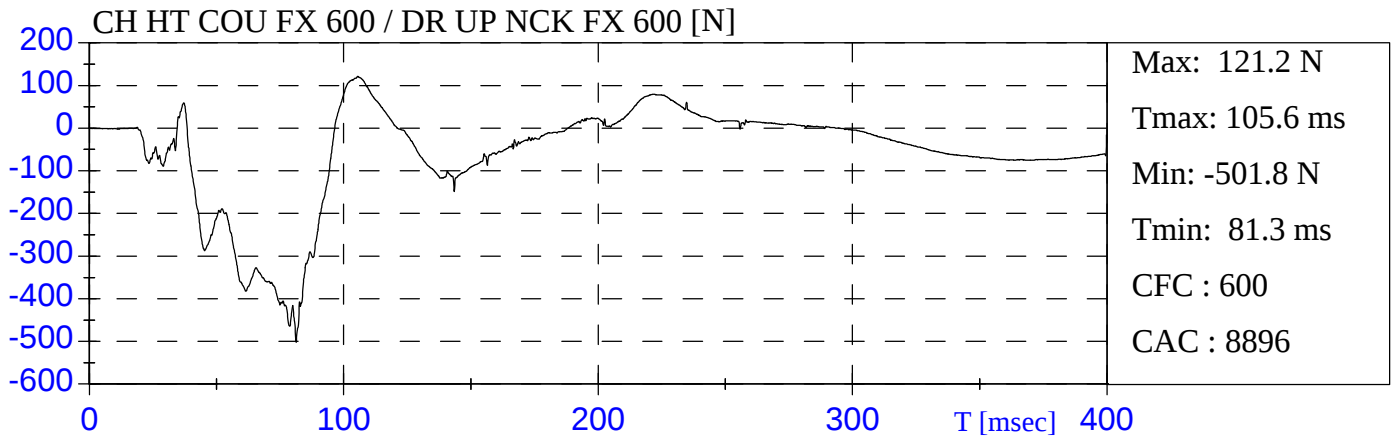


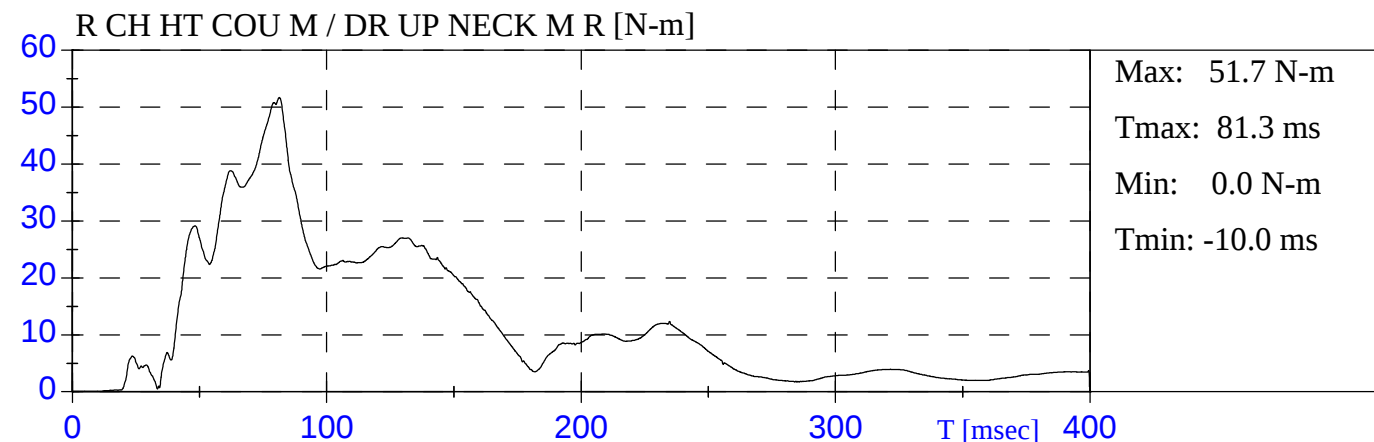
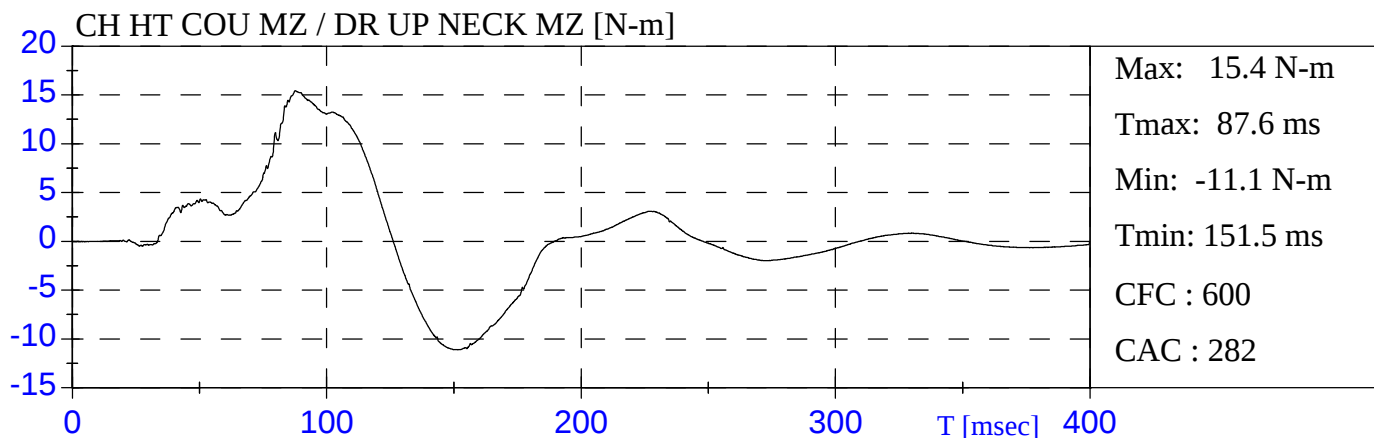
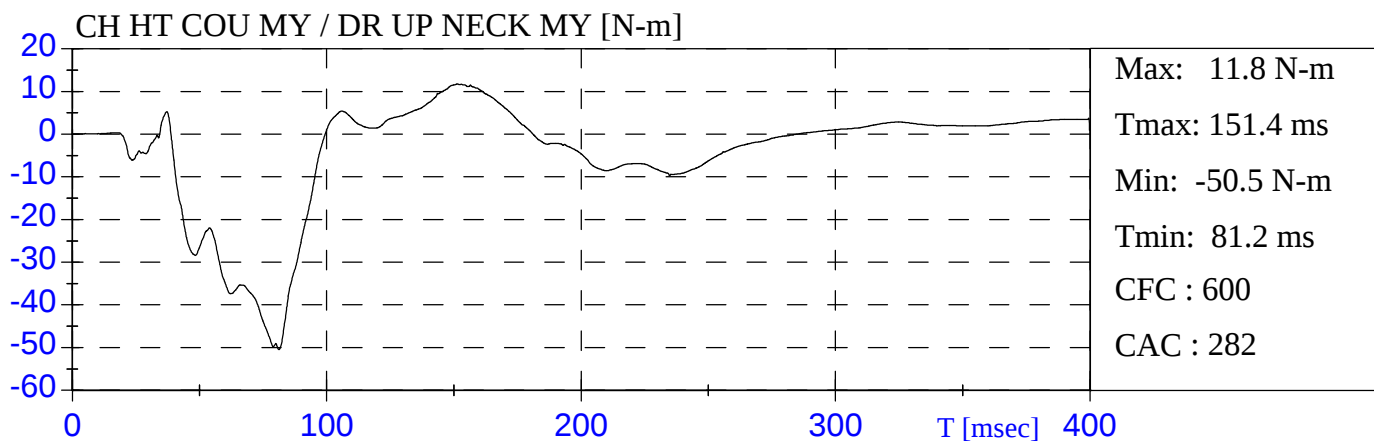
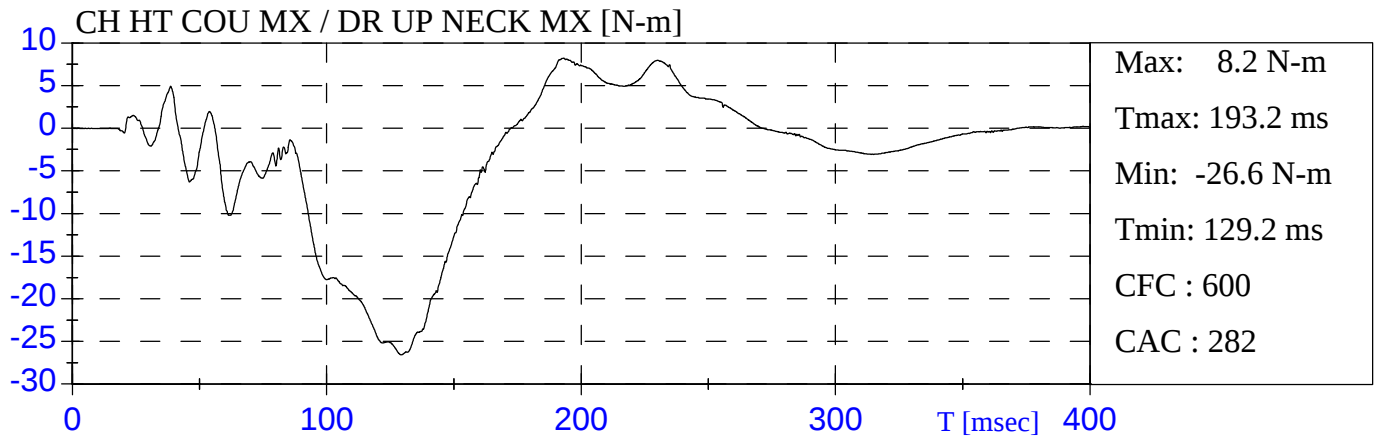
COLLISION FRONTALE
FRONTAL CRASH

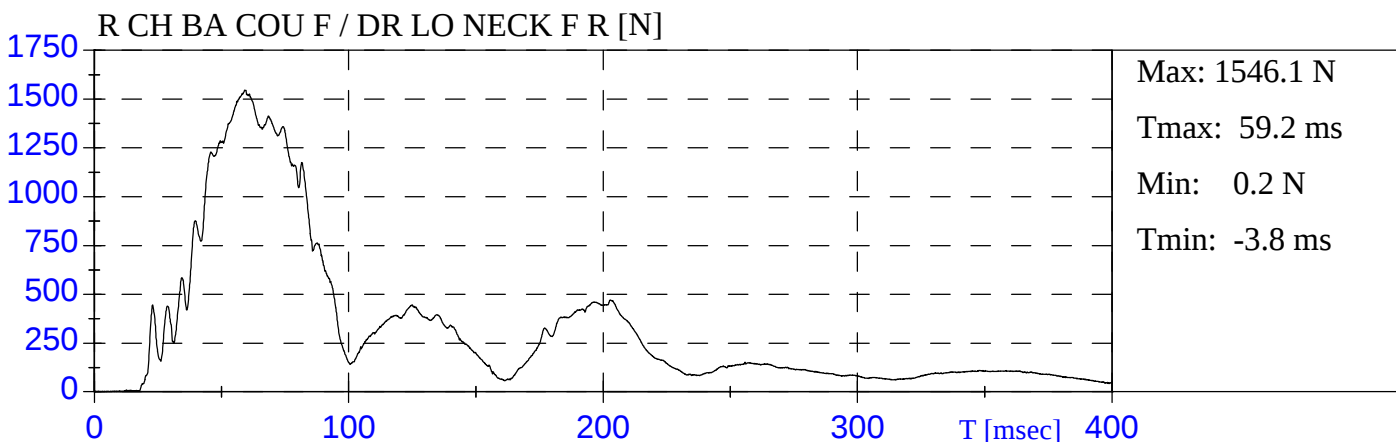
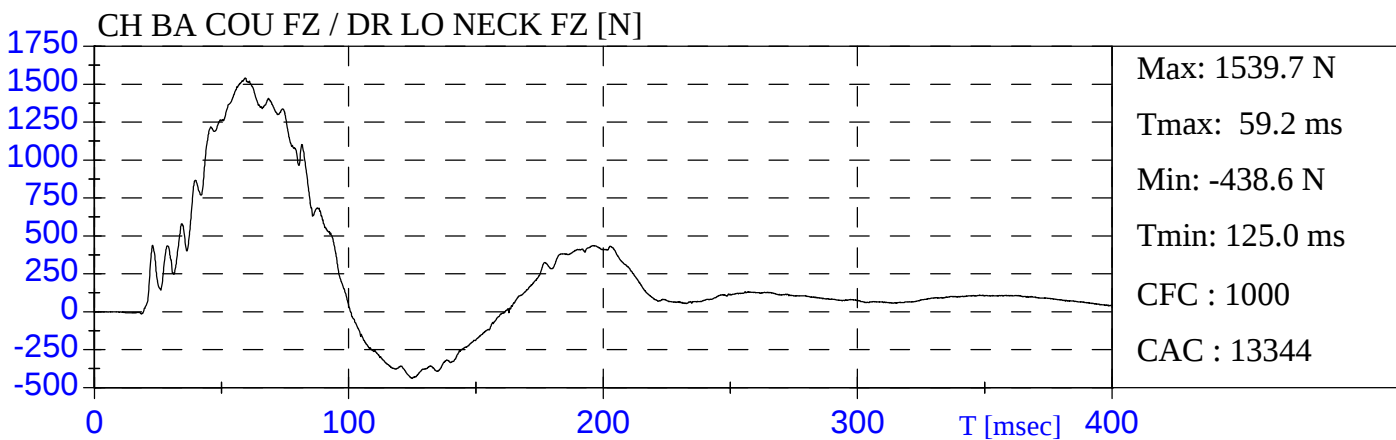
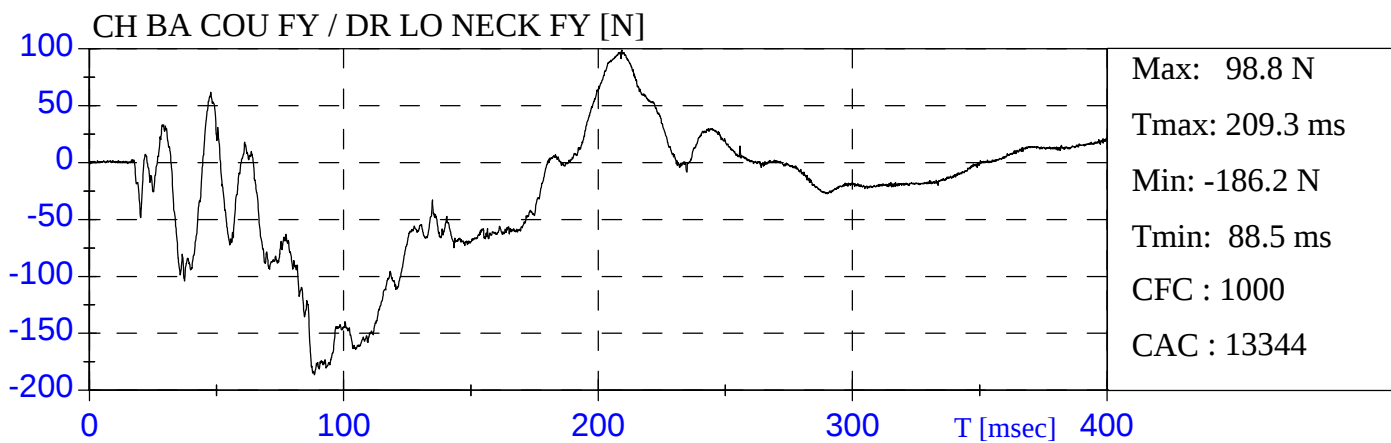
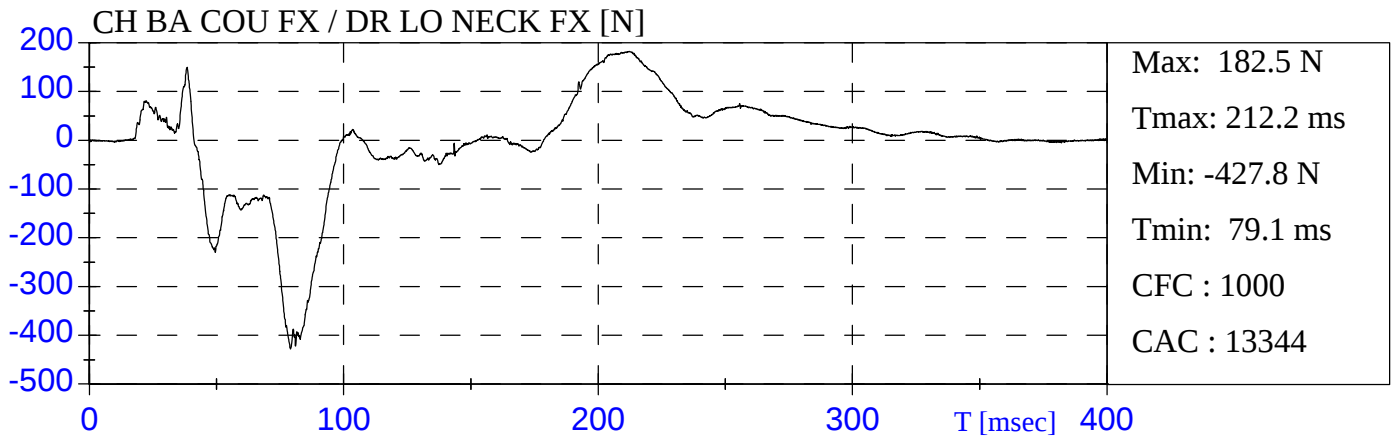
Date: 2004-03-31

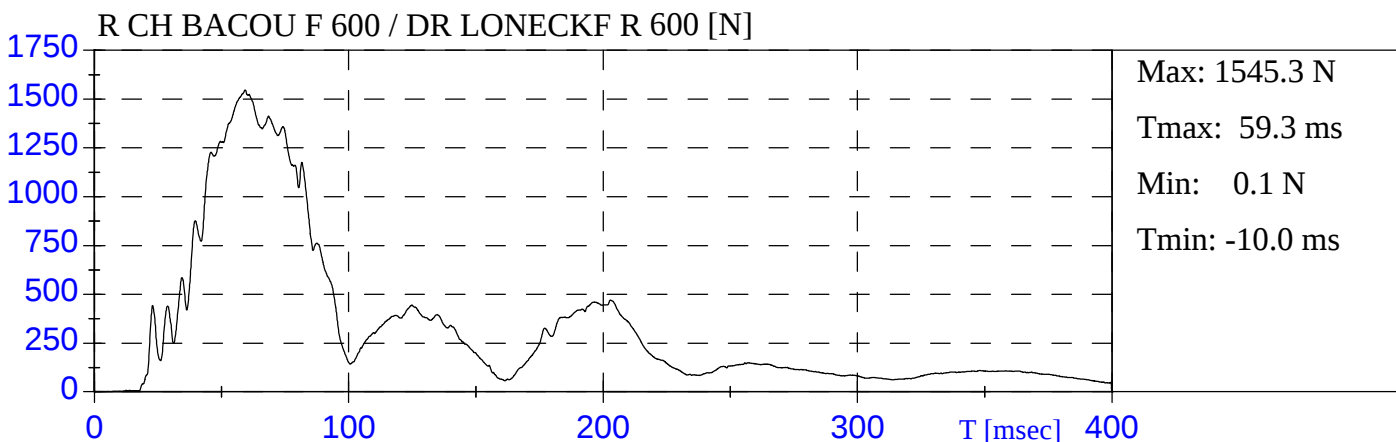
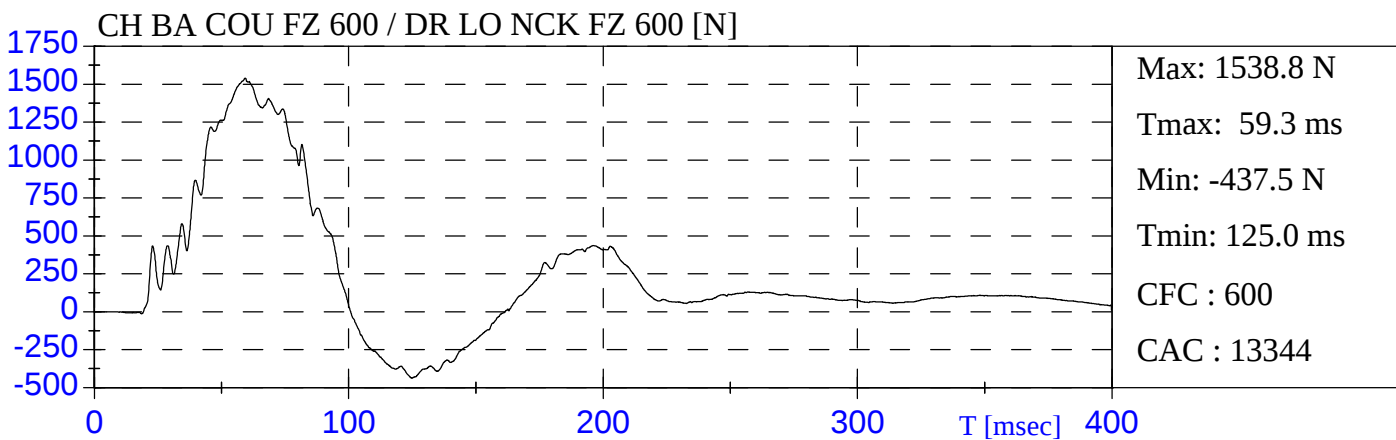
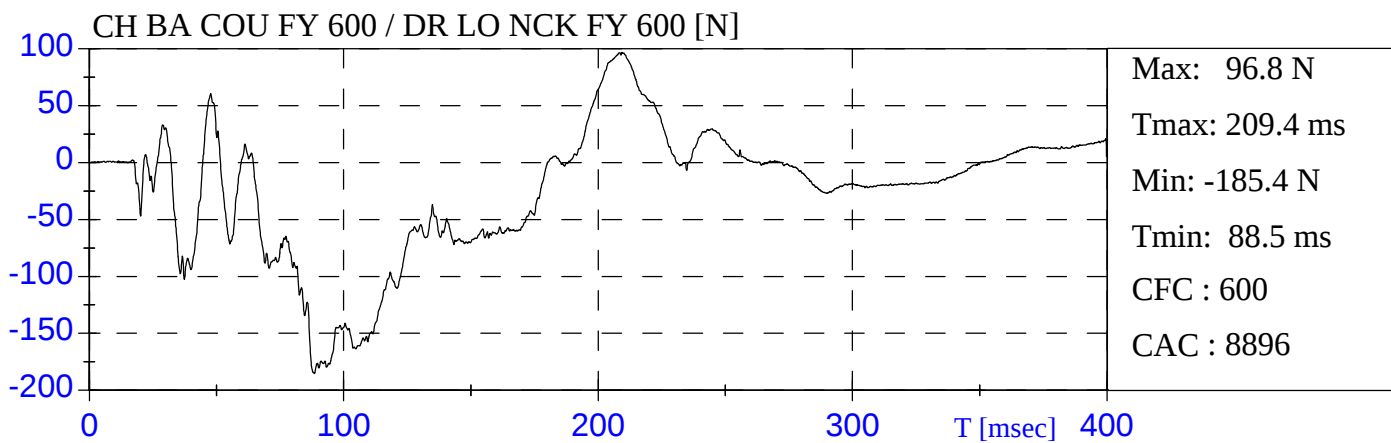
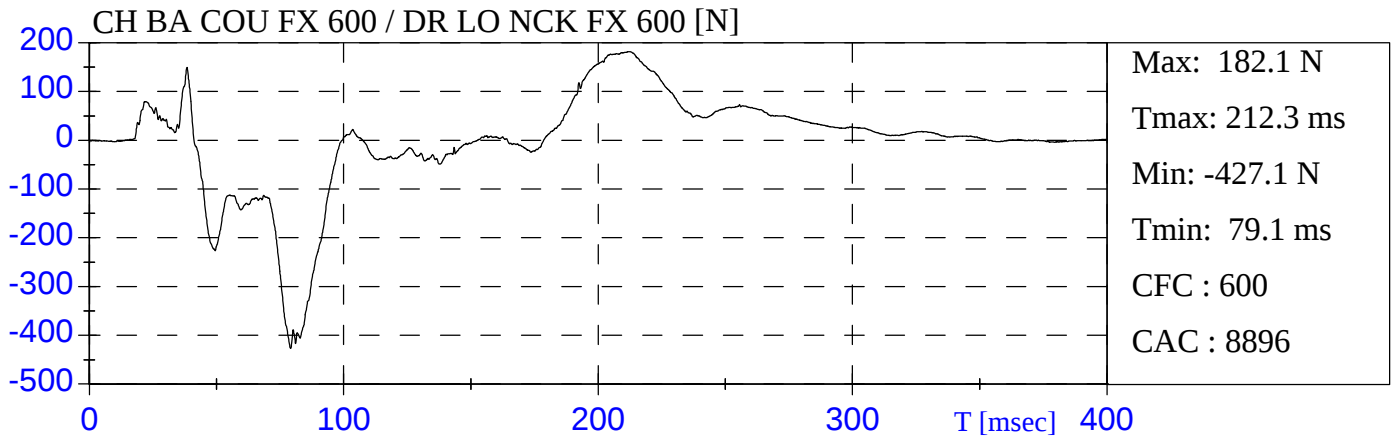
NISSAN MURANO 2004

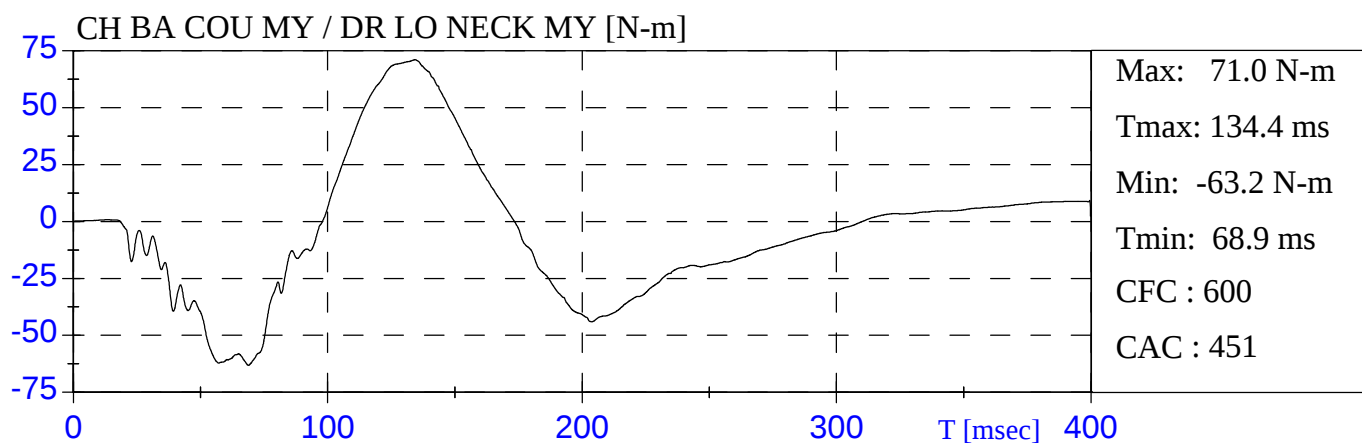
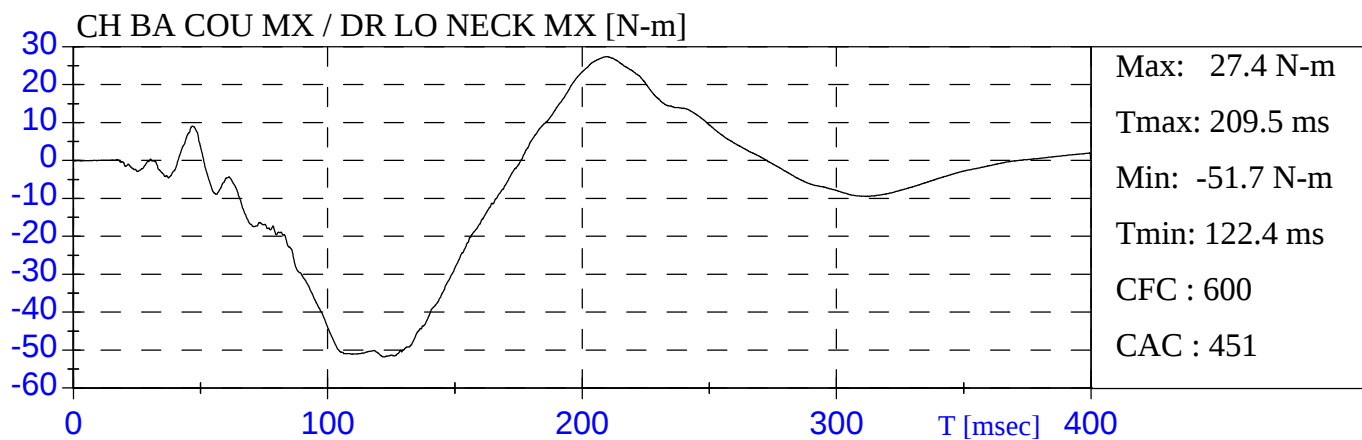
N° TC / TC No.: TC04-127

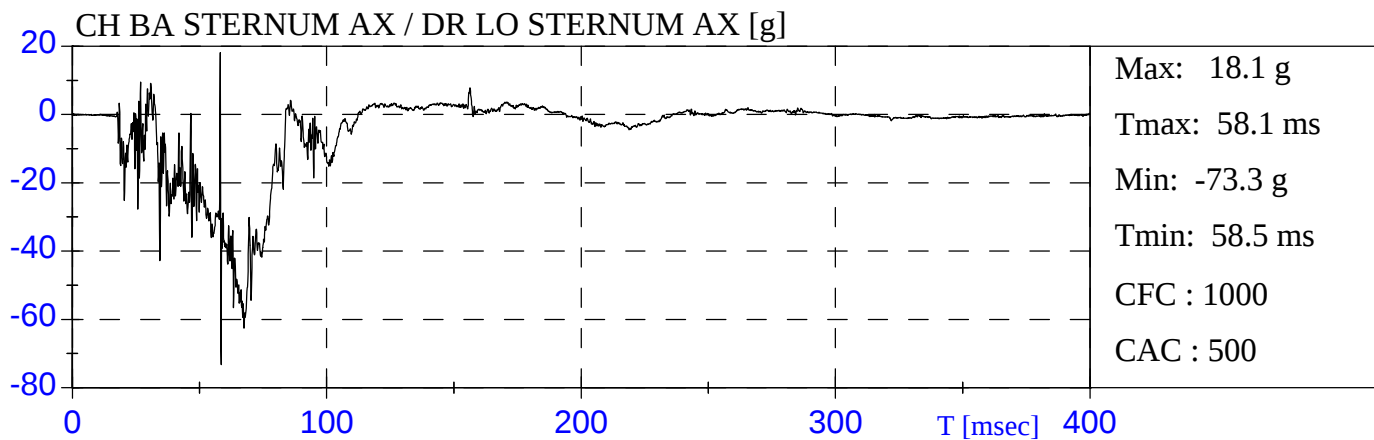
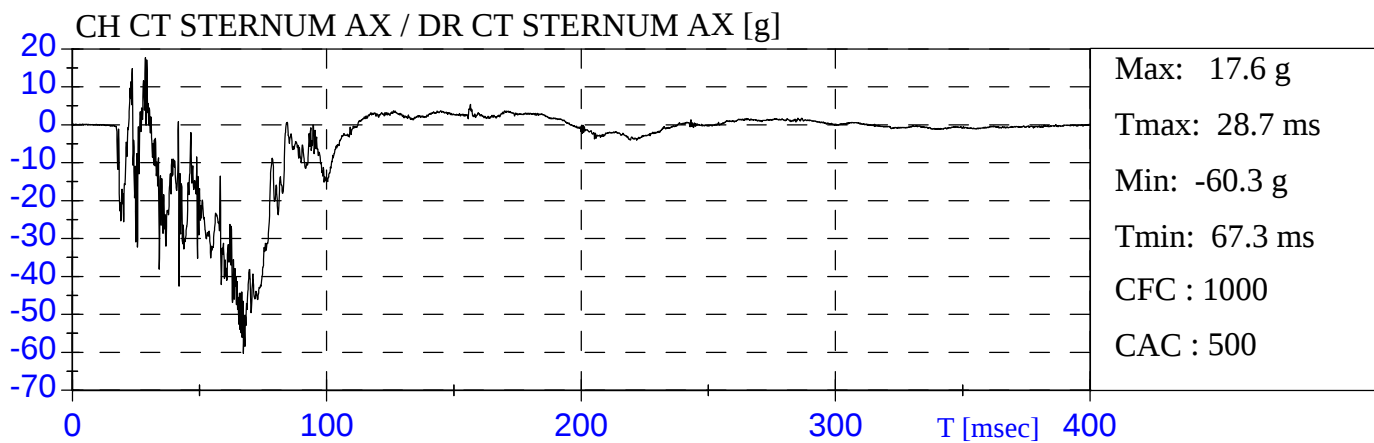
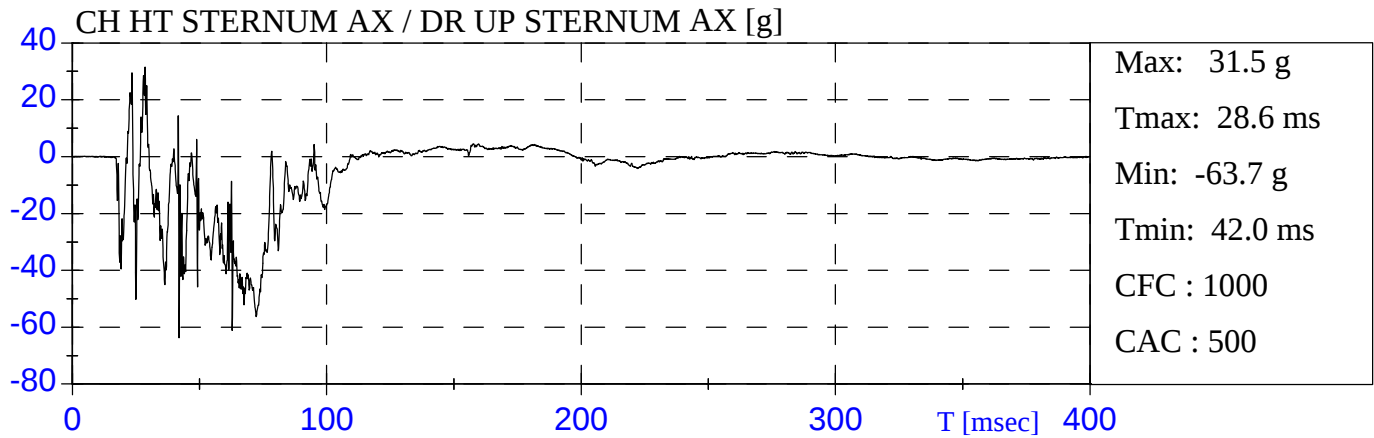


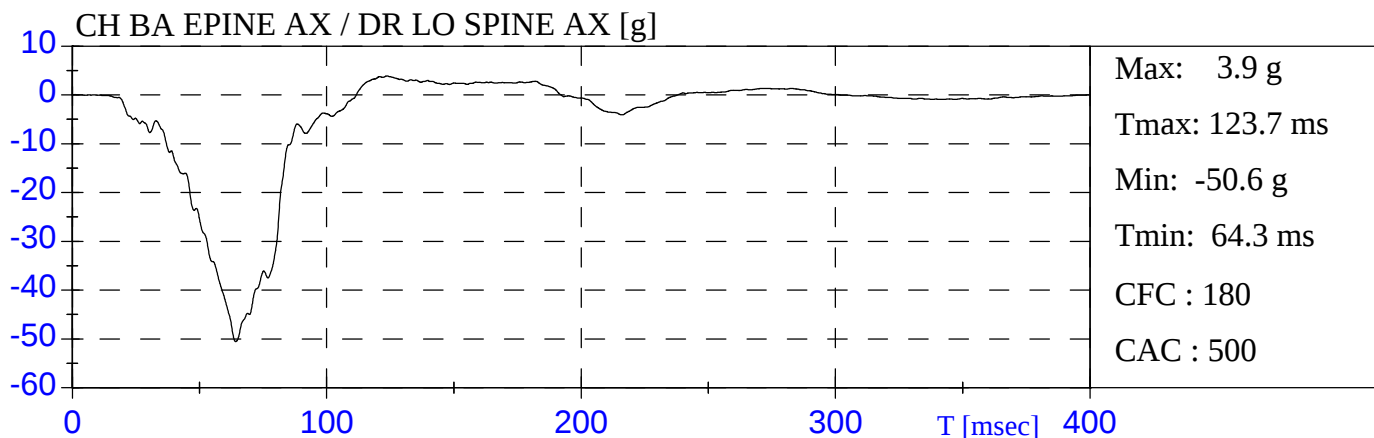
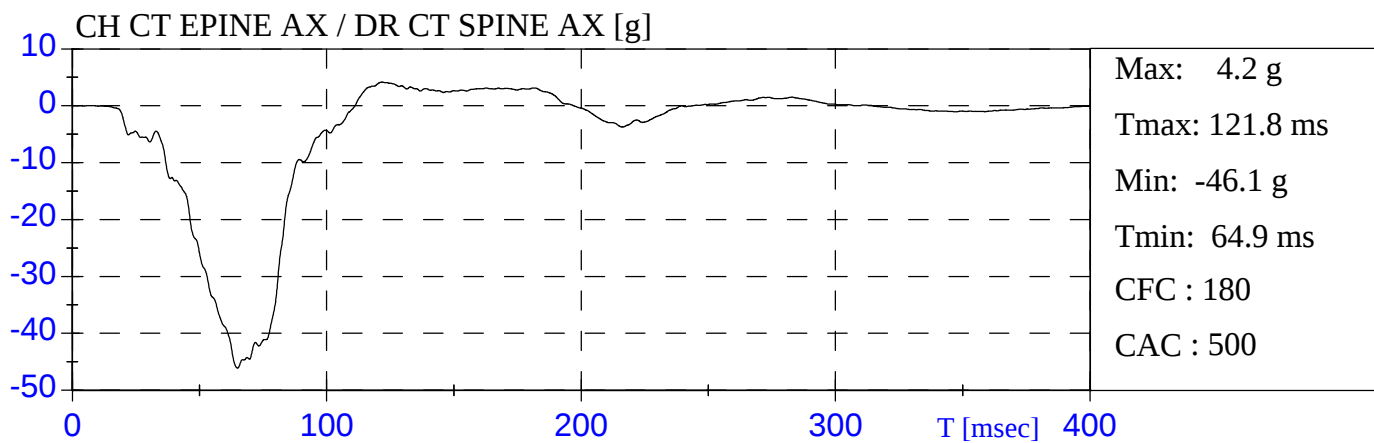
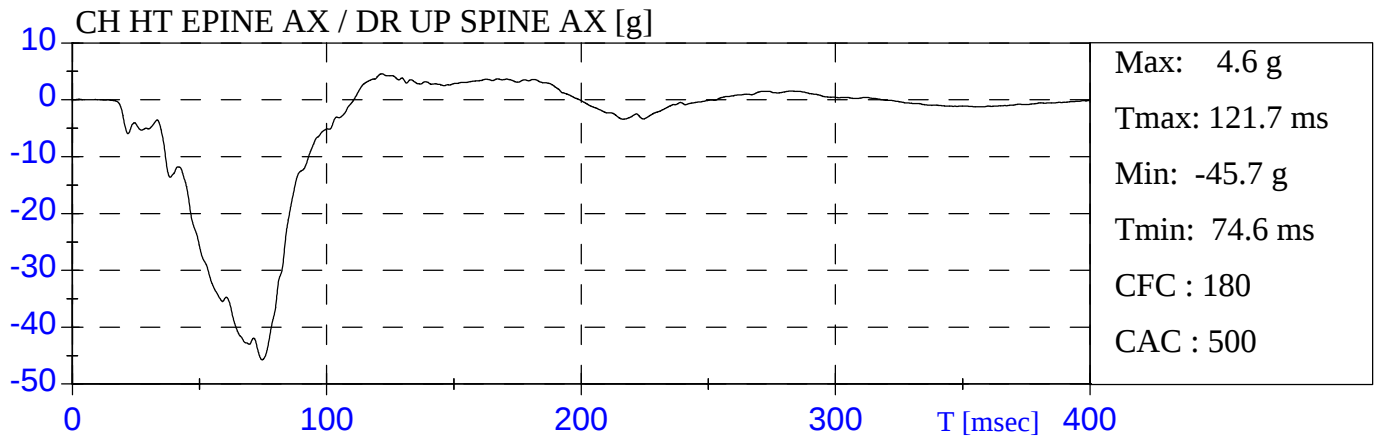






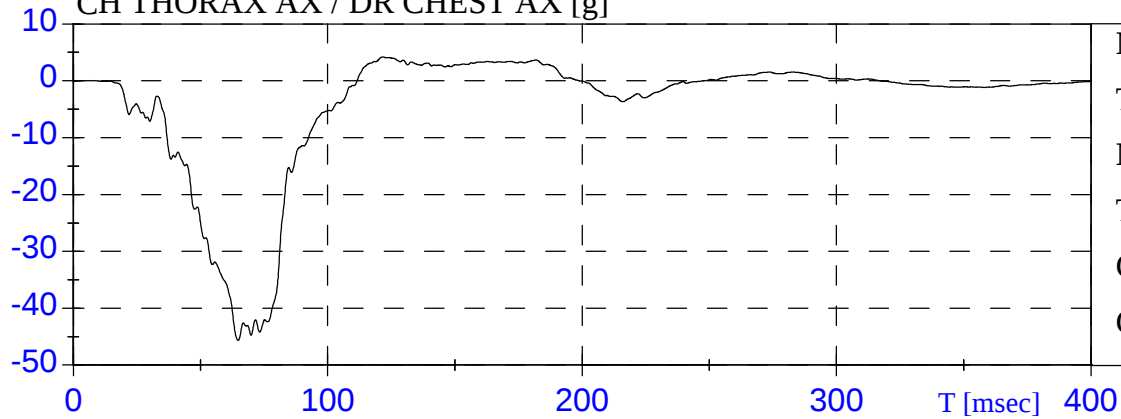






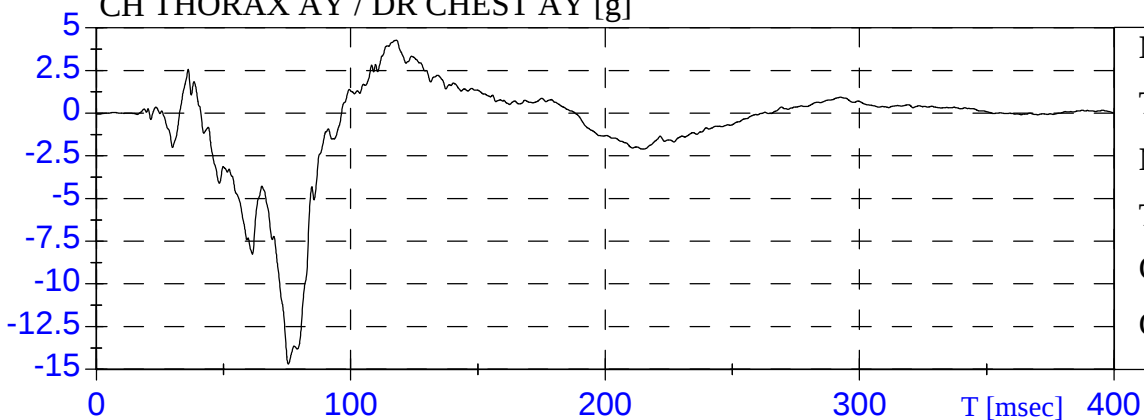


CH THORAX AX / DR CHEST AX [g]



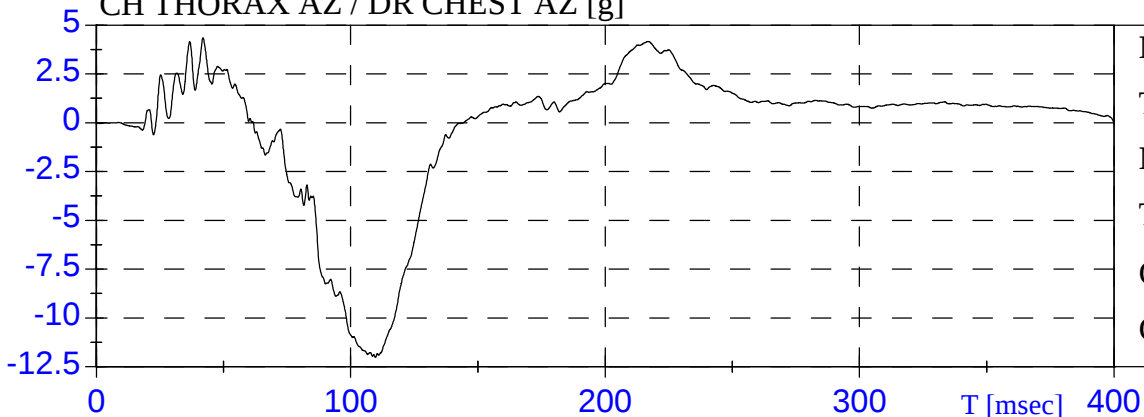
Max: 4.2 g
Tmax: 121.7 ms
Min: -45.7 g
Tmin: 64.8 ms
CFC : 180
CAC : 500

CH THORAX AY / DR CHEST AY [g]



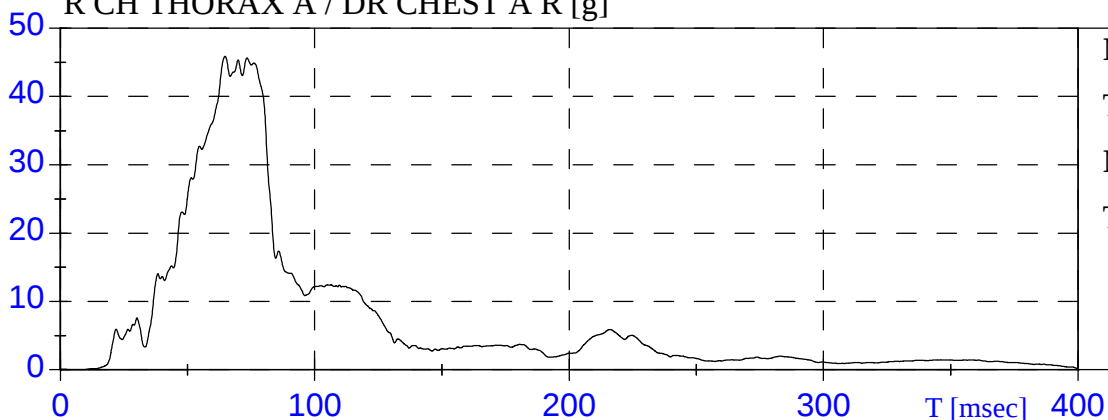
Max: 4.3 g
Tmax: 118.0 ms
Min: -14.7 g
Tmin: 75.5 ms
CFC : 180
CAC : 500

CH THORAX AZ / DR CHEST AZ [g]

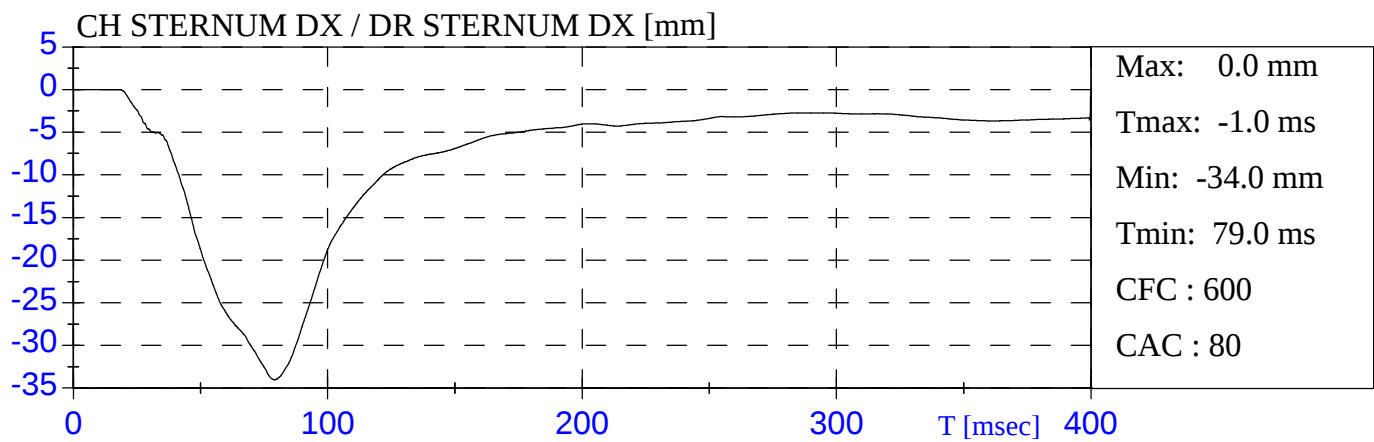


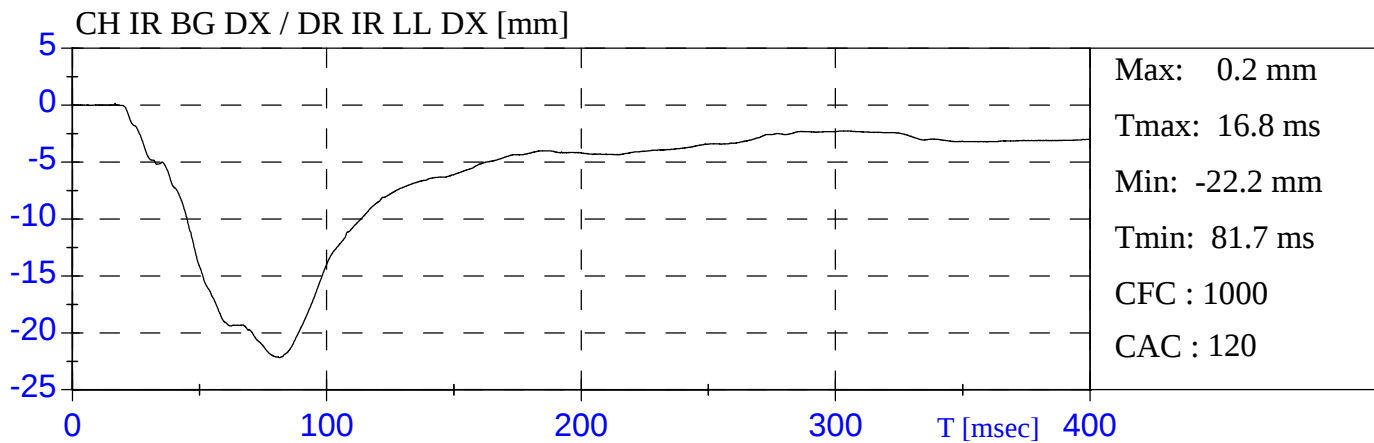
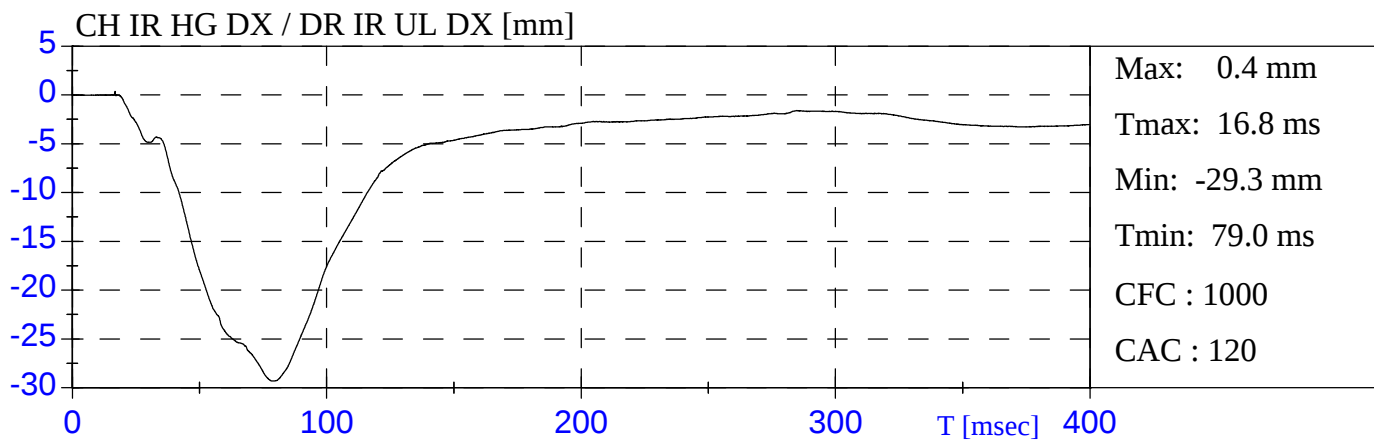
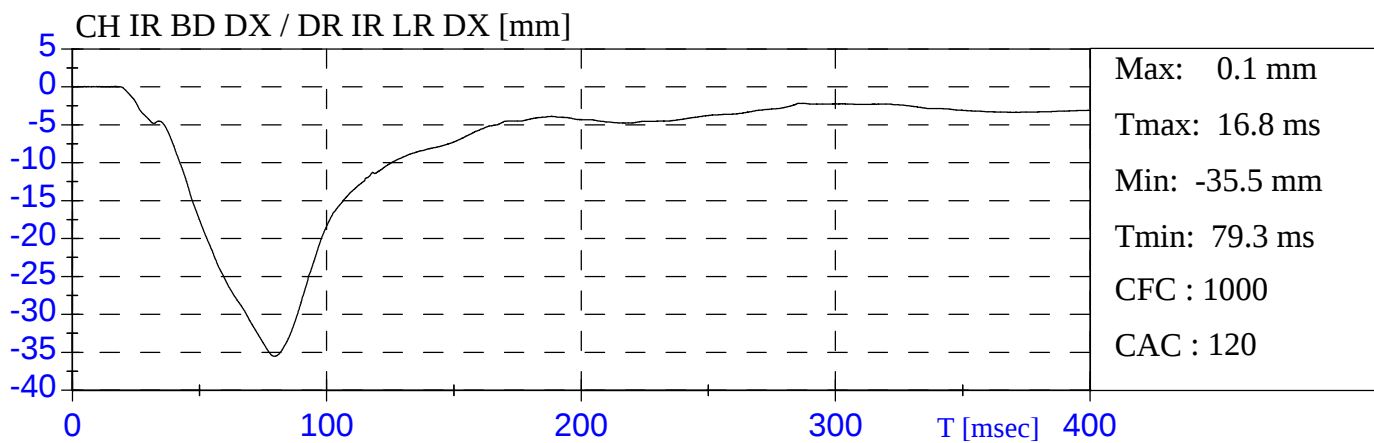
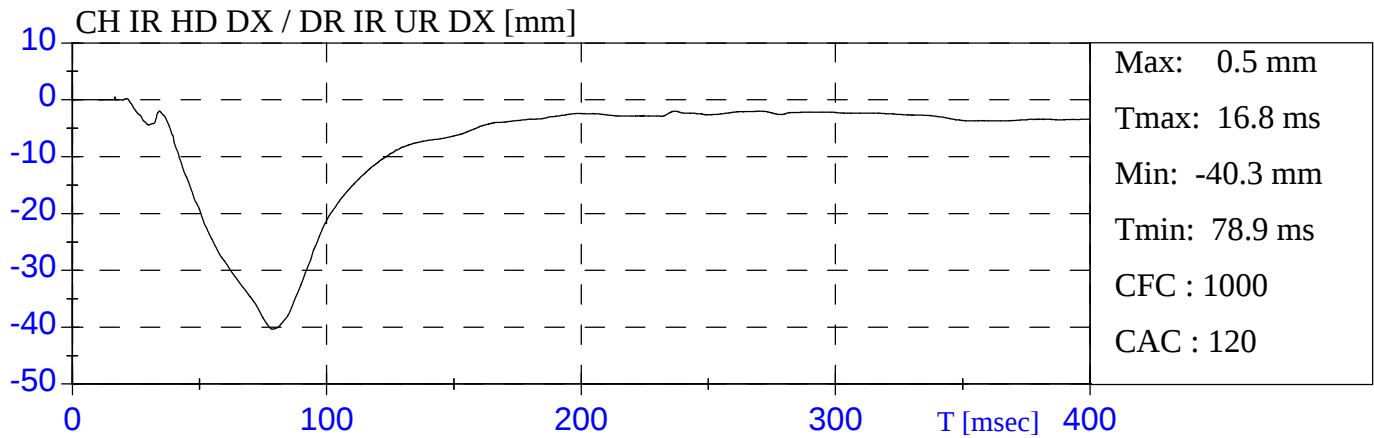
Max: 4.4 g
Tmax: 41.9 ms
Min: -12.0 g
Tmin: 109.7 ms
CFC : 180
CAC : 500

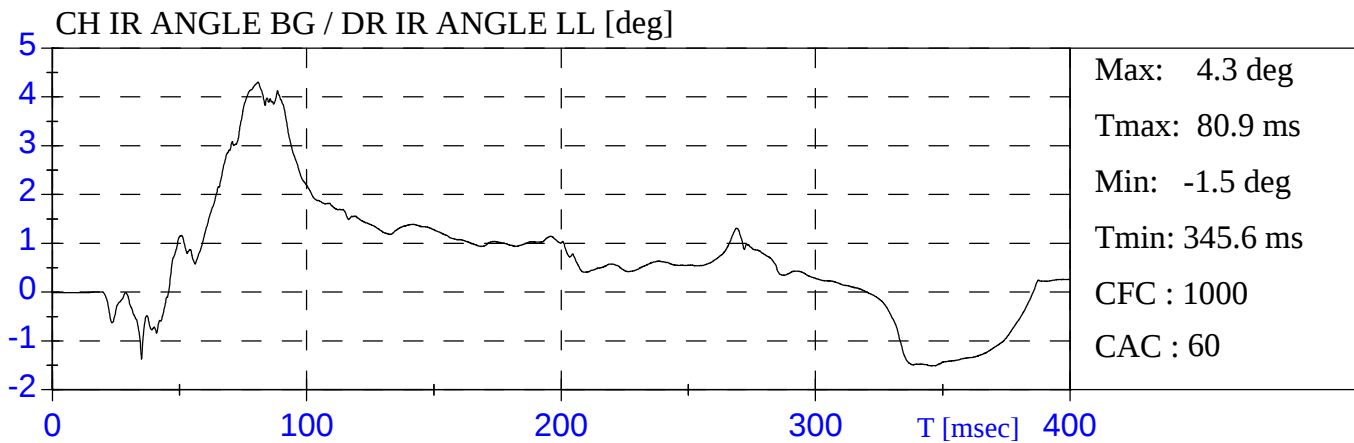
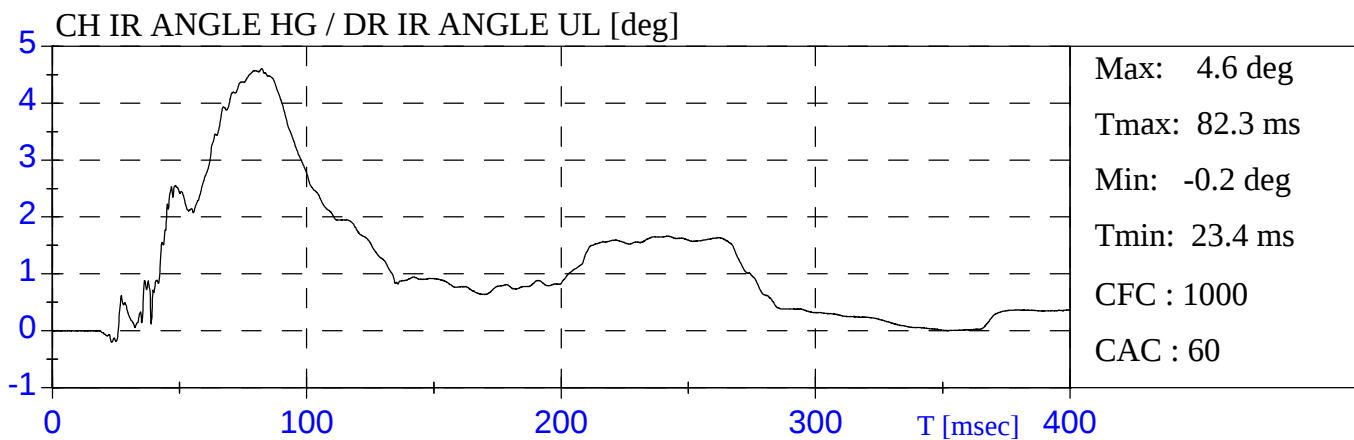
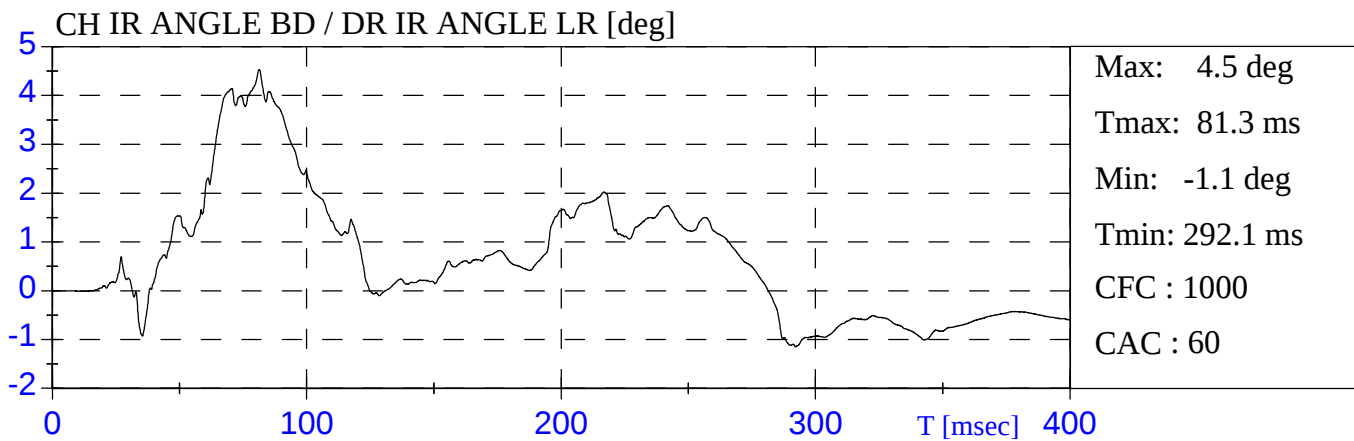
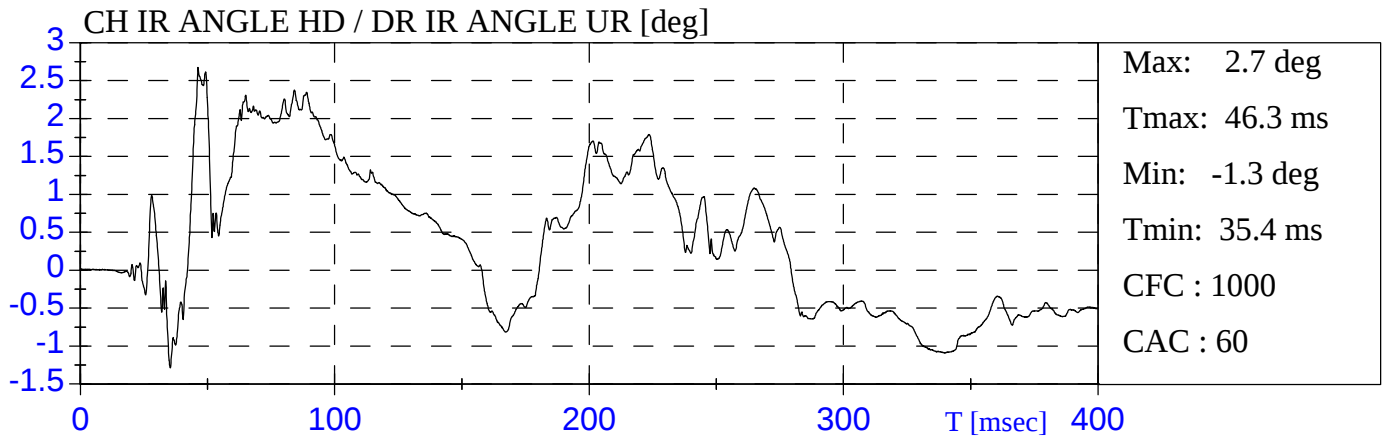
R CH THORAX A / DR CHEST A R [g]



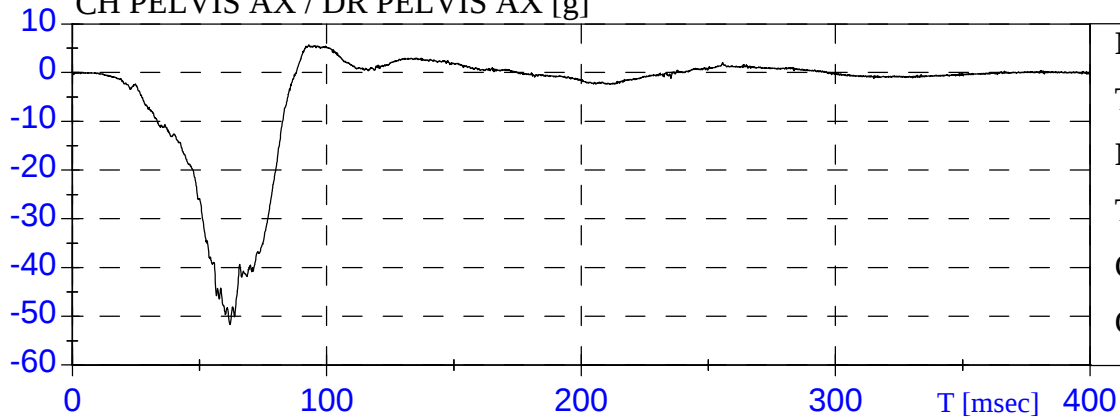
Max: 45.9 g
Tmax: 64.8 ms
Min: 0.0 g
Tmin: -10.0 ms





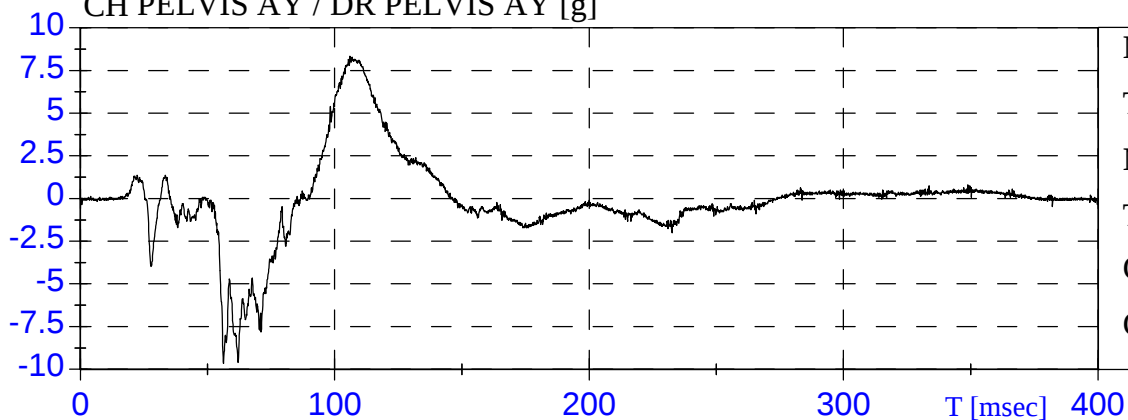


CH PELVIS AX / DR PELVIS AX [g]



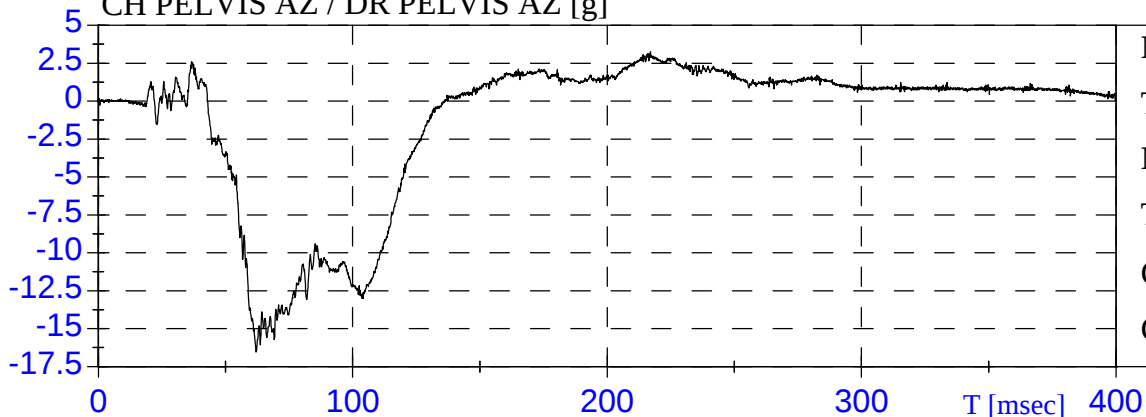
Max: 5.7 g
Tmax: 92.9 ms
Min: -51.7 g
Tmin: 61.9 ms
CFC : 1000
CAC : 500

CH PELVIS AY / DR PELVIS AY [g]



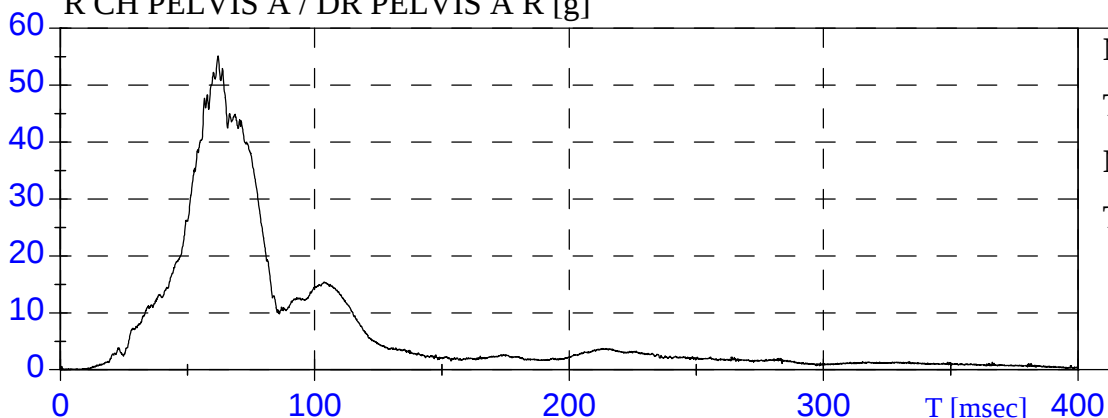
Max: 8.3 g
Tmax: 106.0 ms
Min: -9.7 g
Tmin: 56.3 ms
CFC : 1000
CAC : 500

CH PELVIS AZ / DR PELVIS AZ [g]

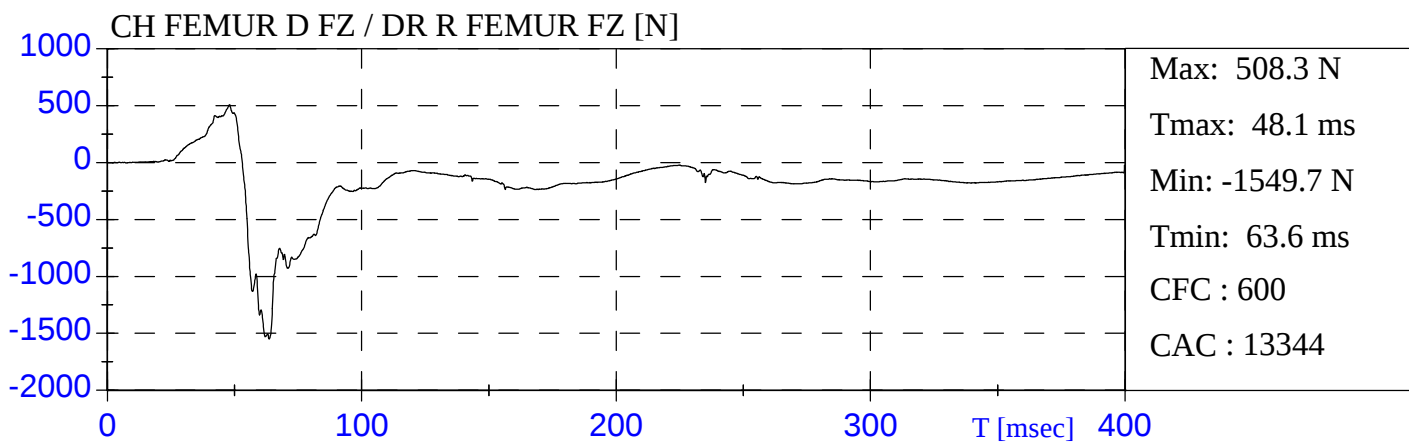
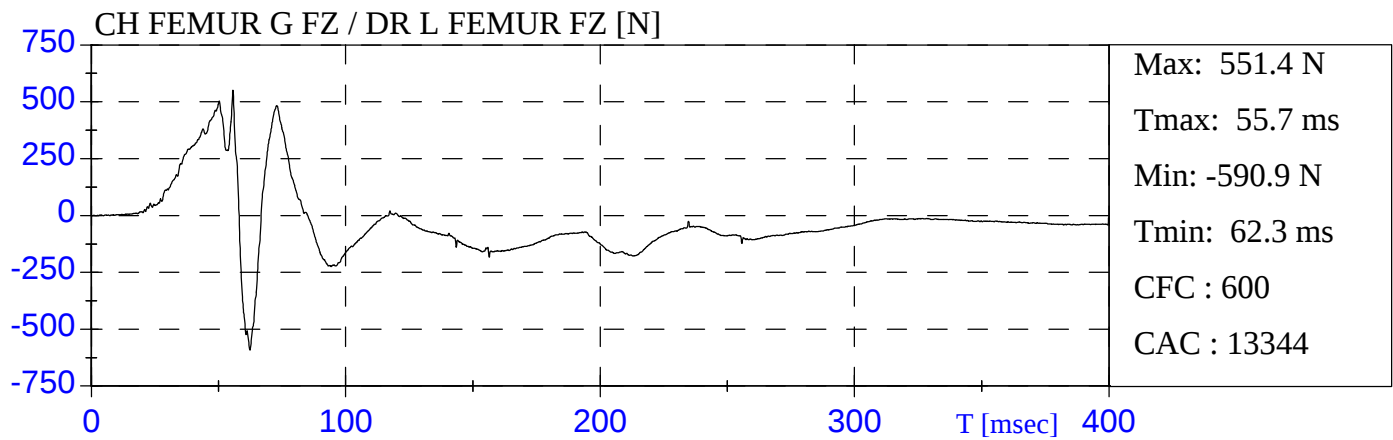


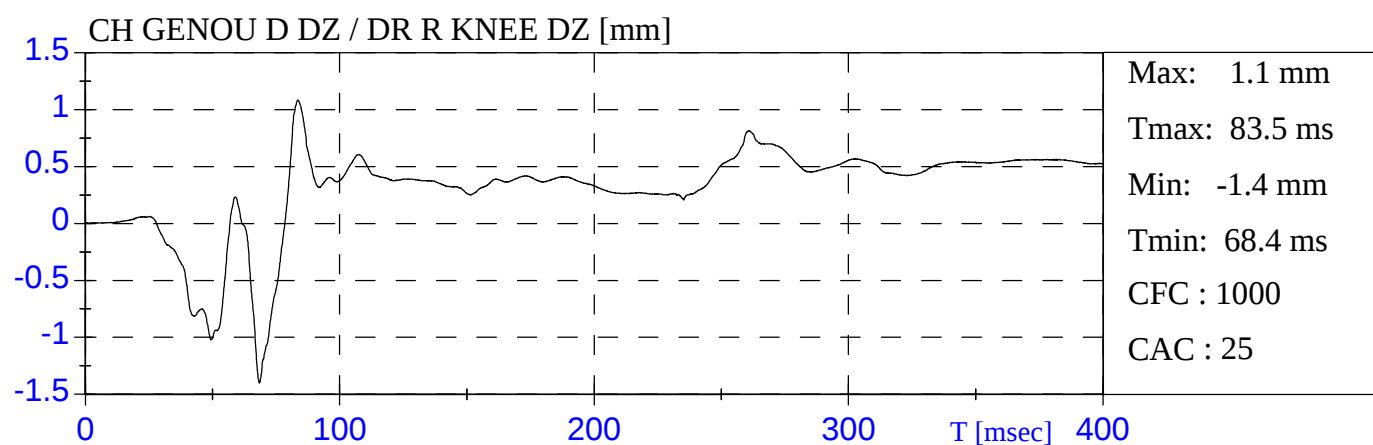
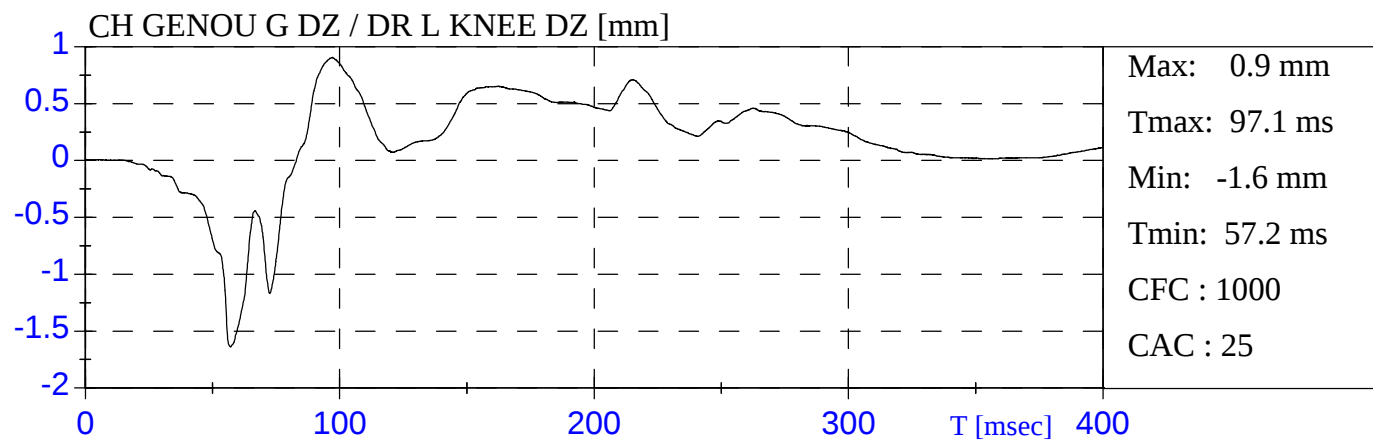
Max: 3.3 g
Tmax: 217.1 ms
Min: -16.5 g
Tmin: 62.0 ms
CFC : 1000
CAC : 500

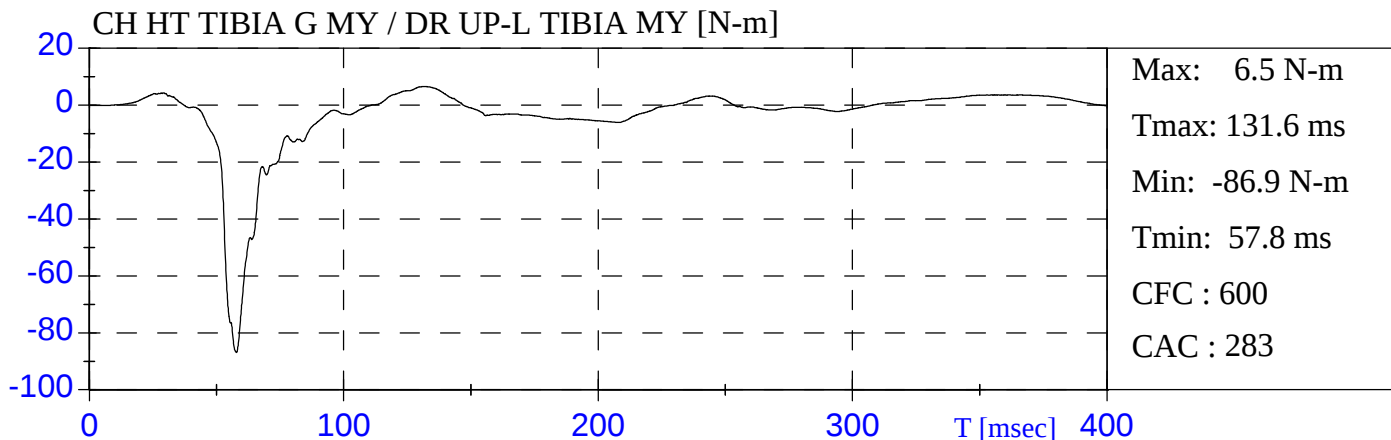
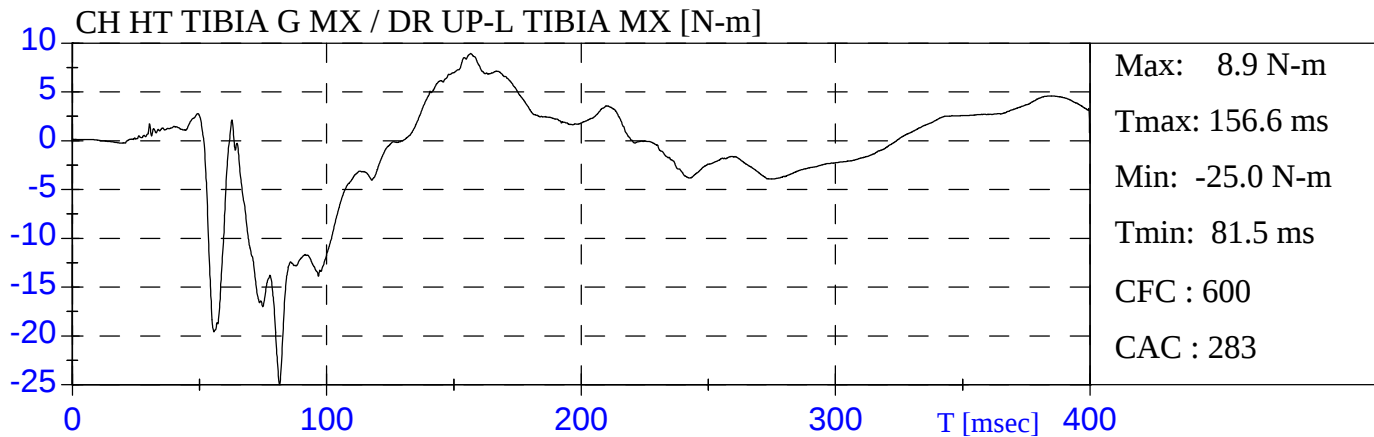
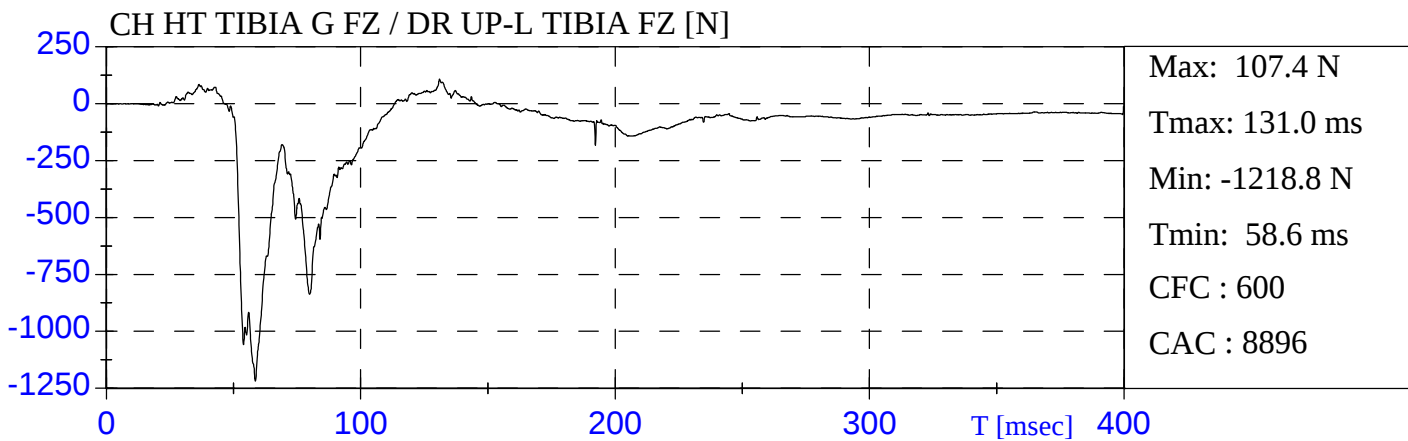
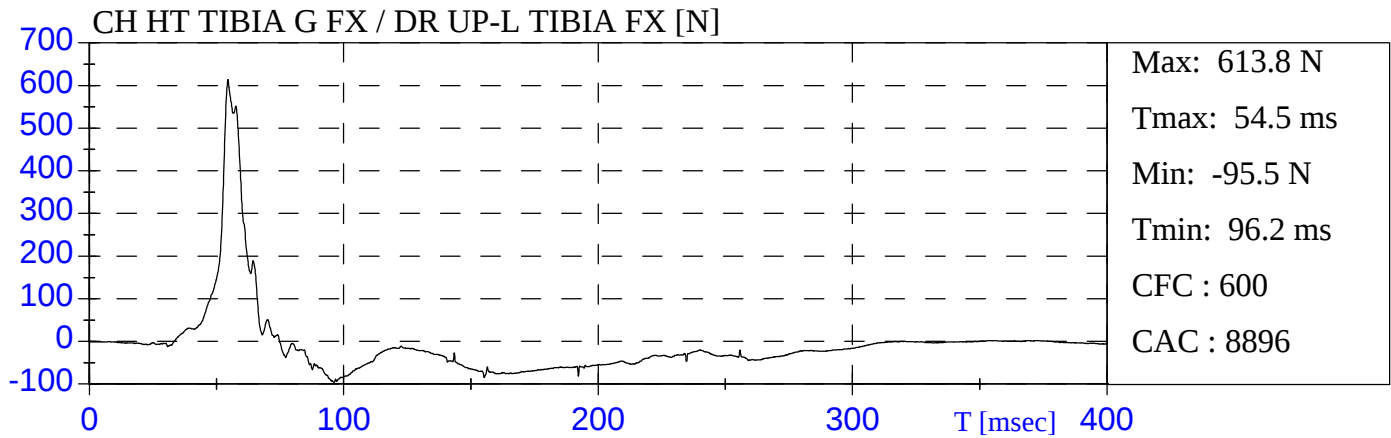
R CH PELVIS A / DR PELVIS A R [g]

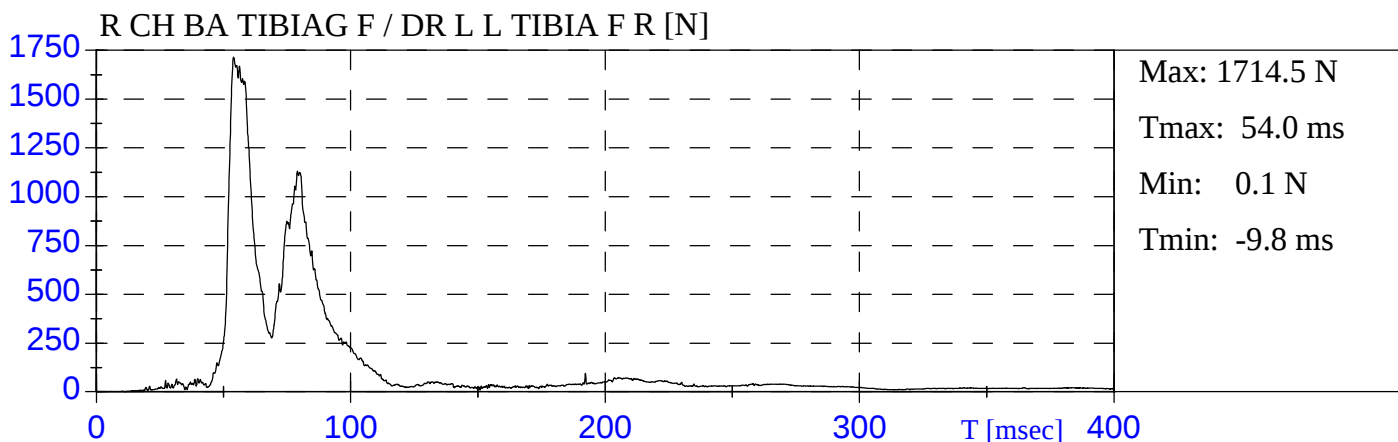
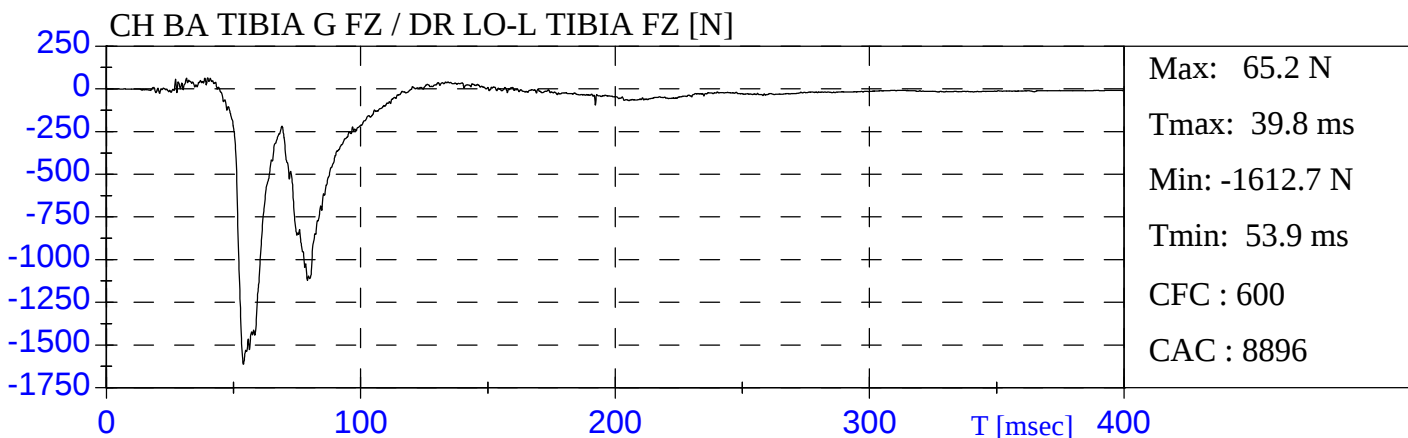
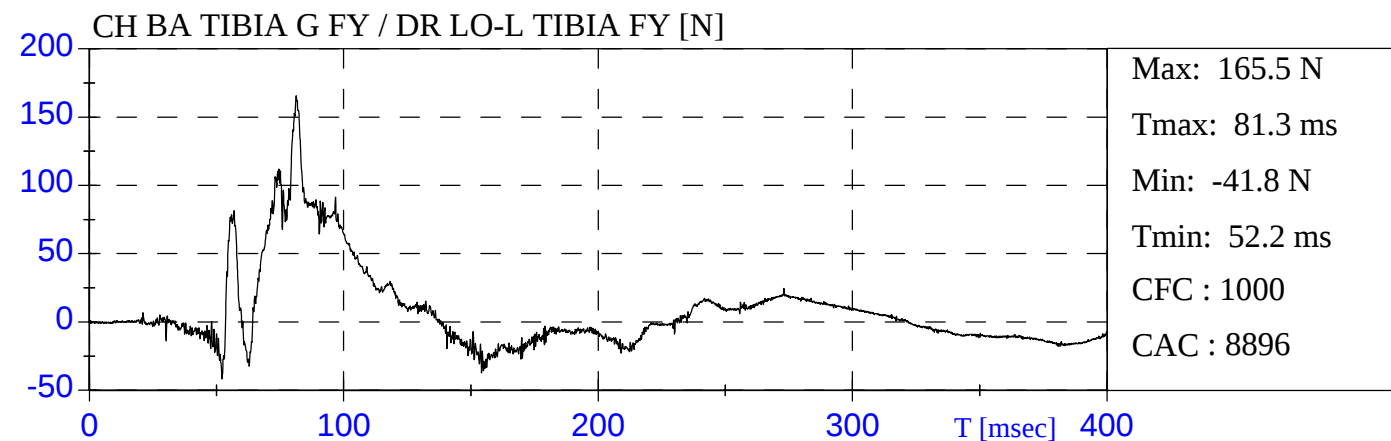
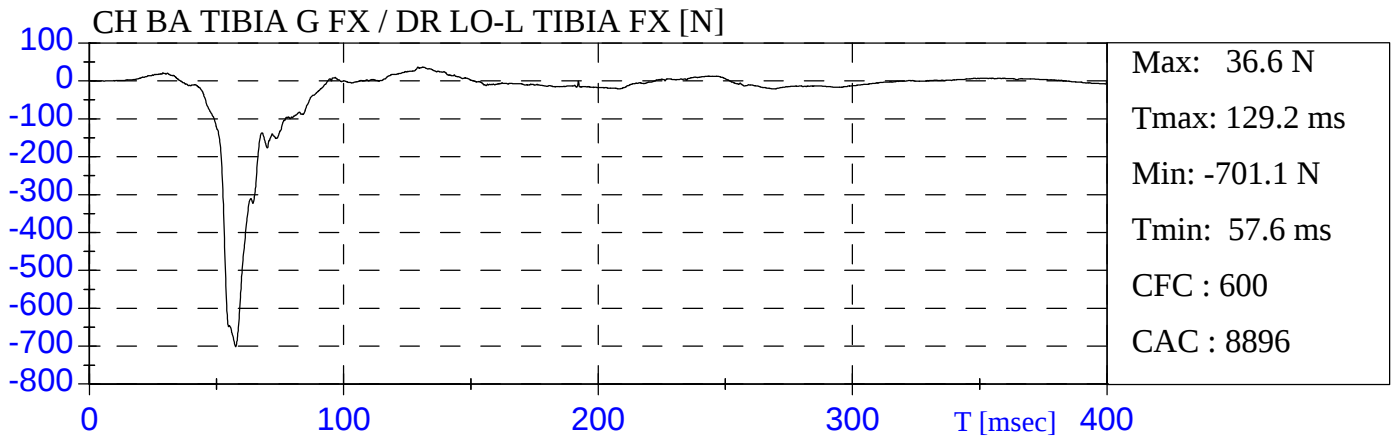


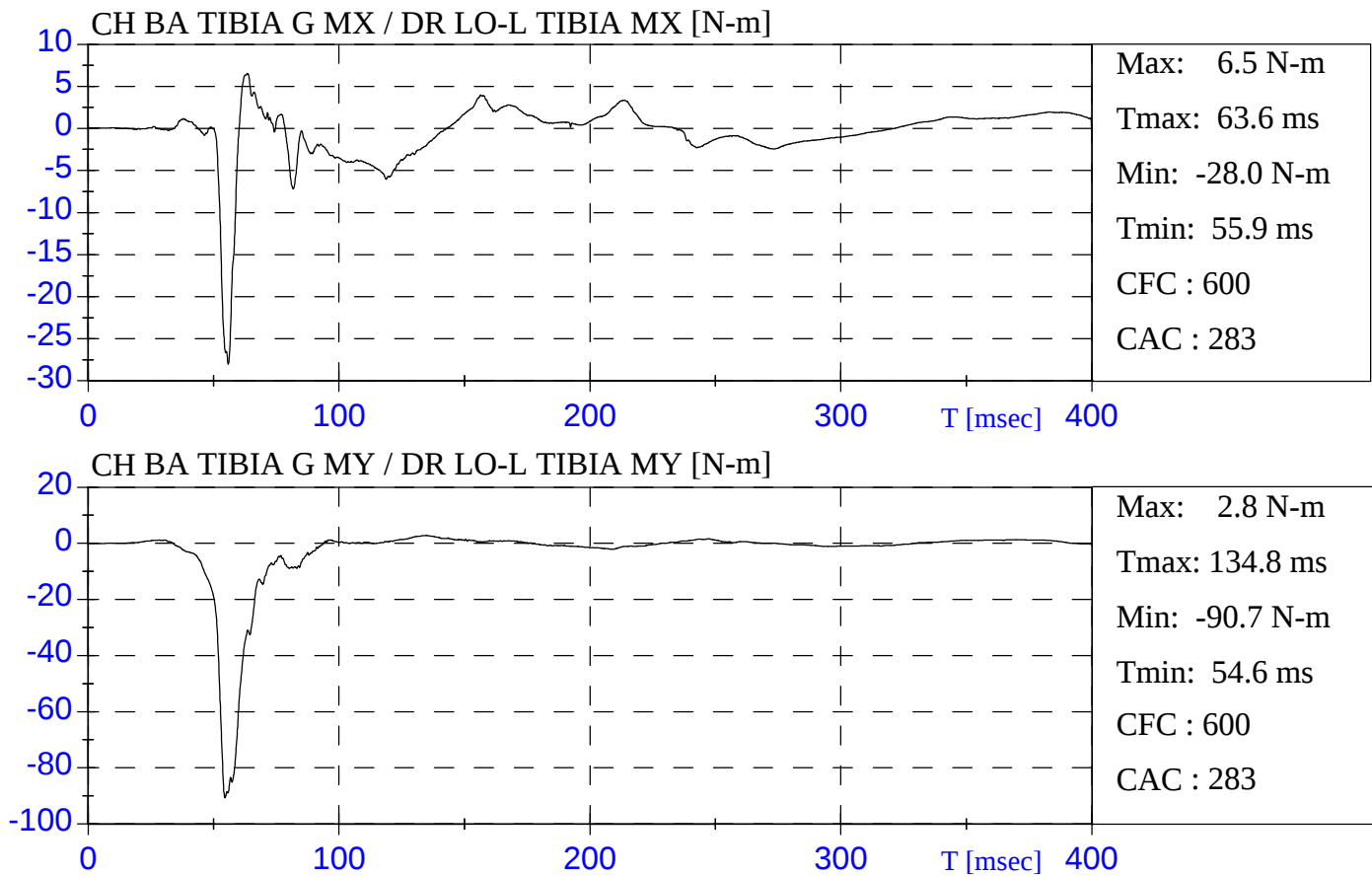
Max: 55.1 g
Tmax: 61.9 ms
Min: 0.0 g
Tmin: -10.0 ms

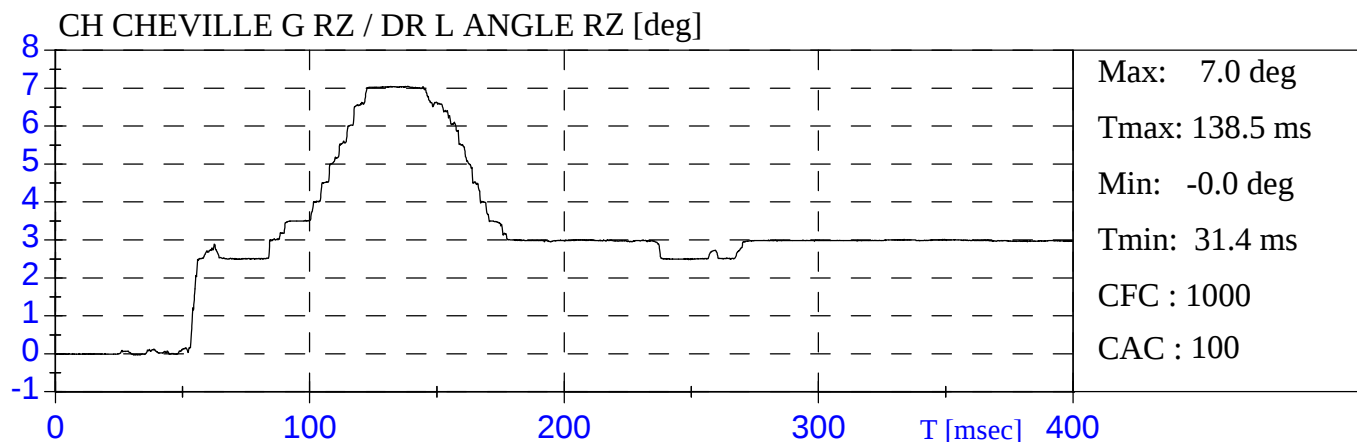
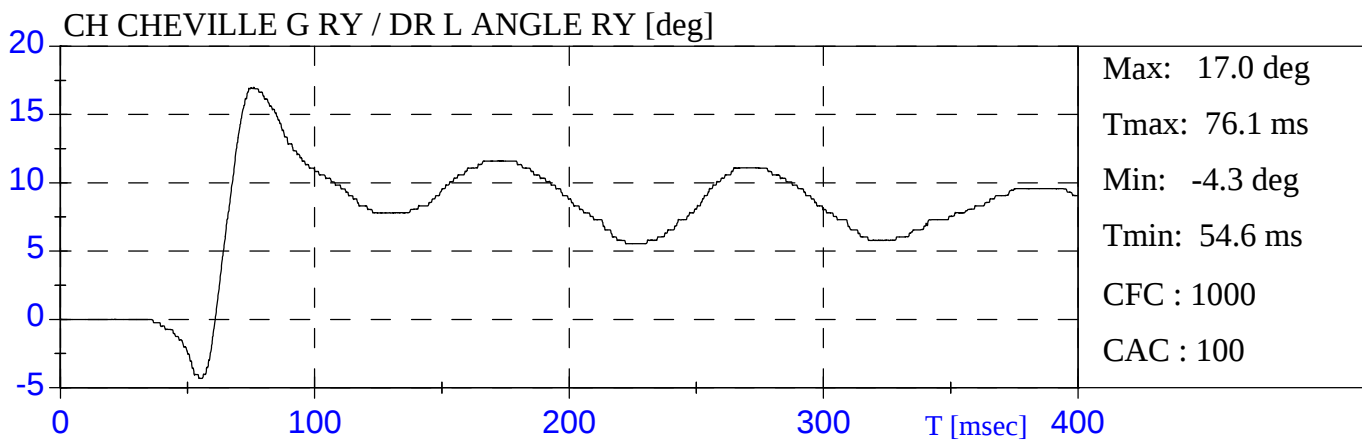
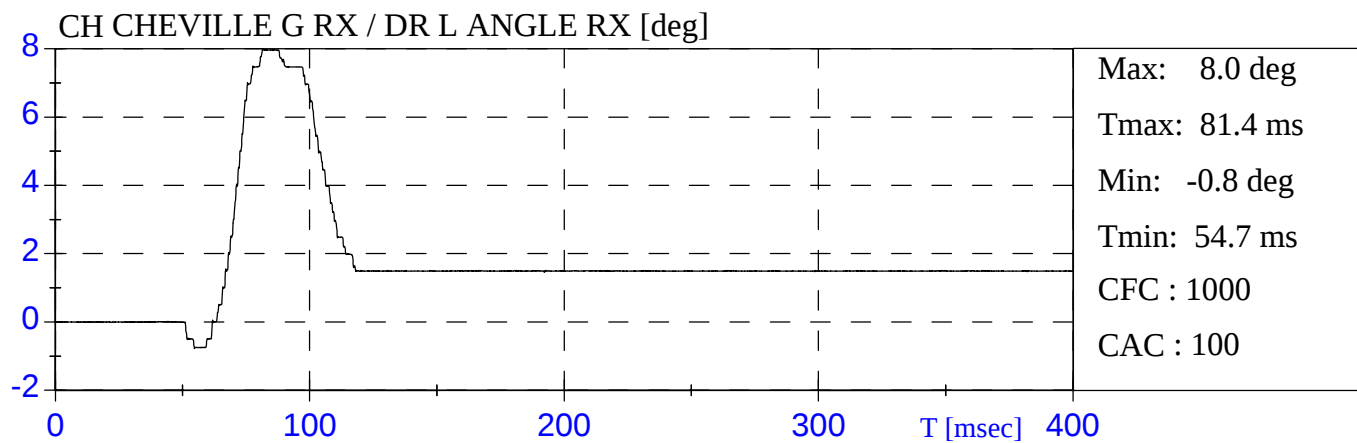
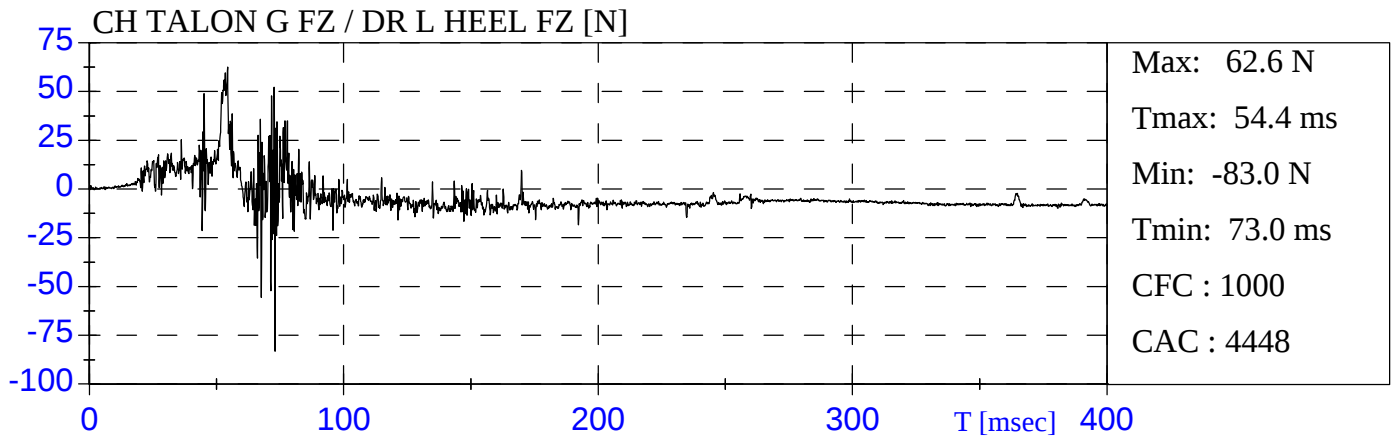


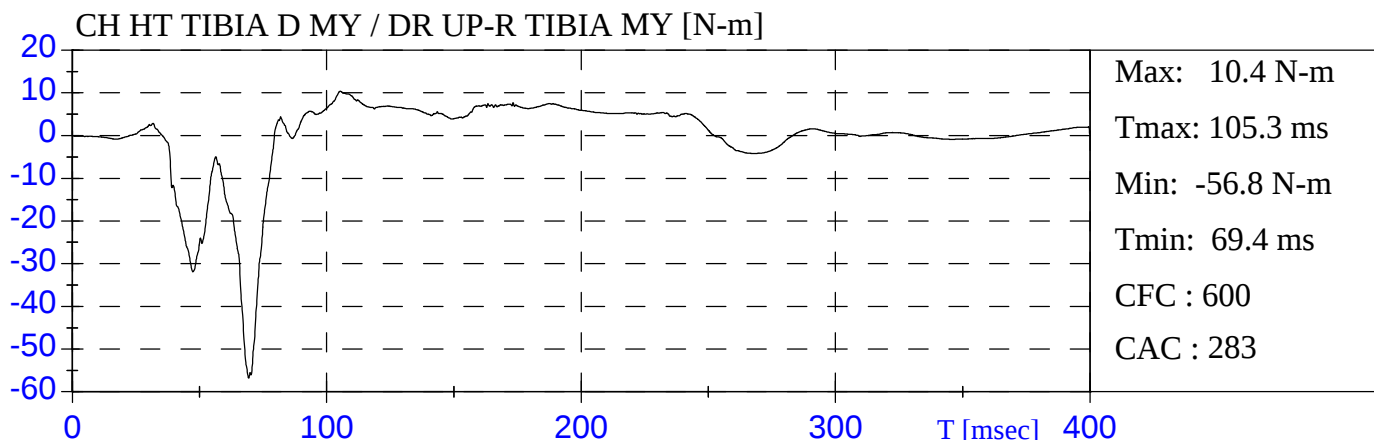
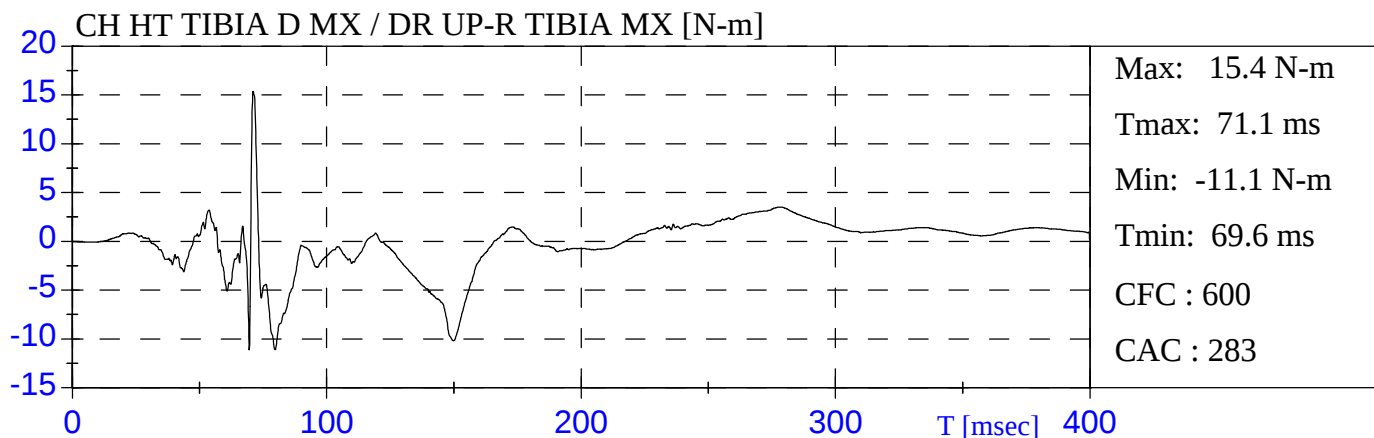
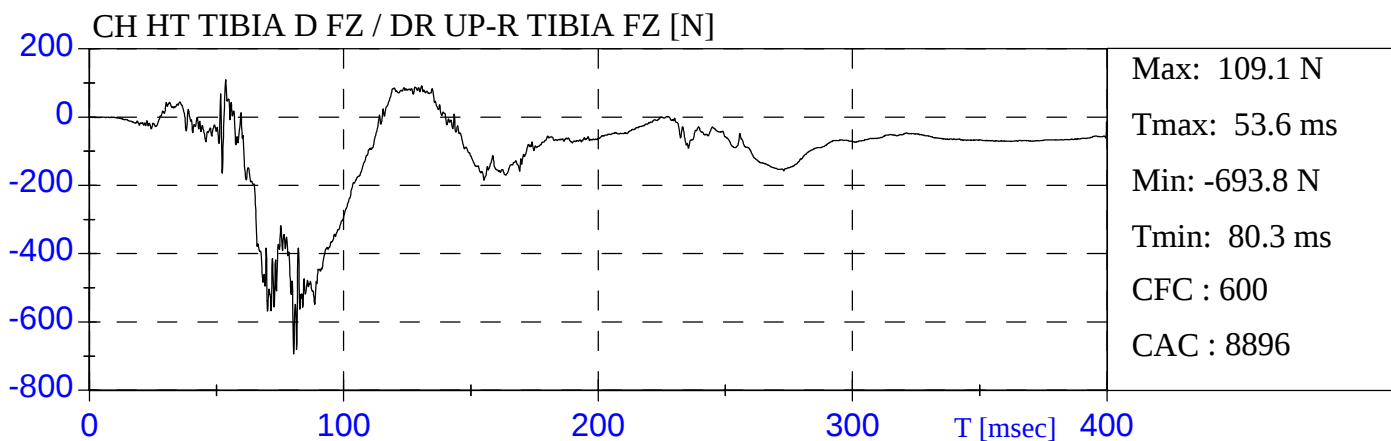
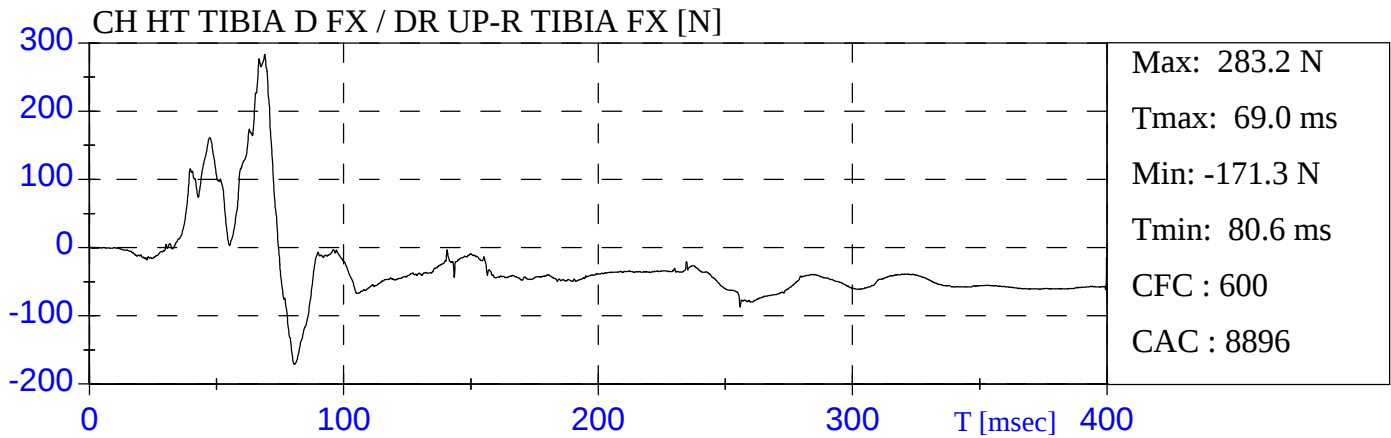


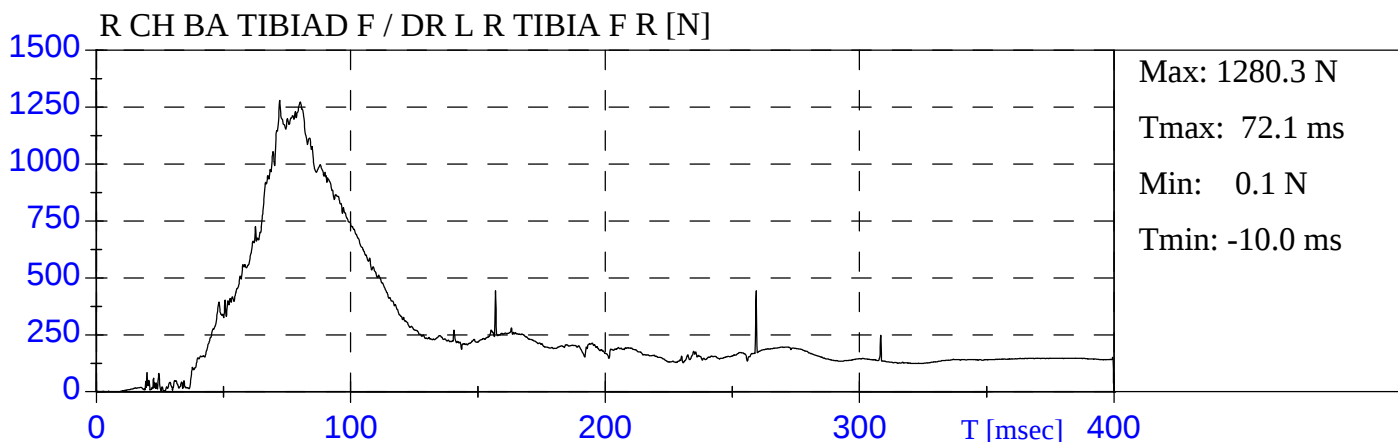
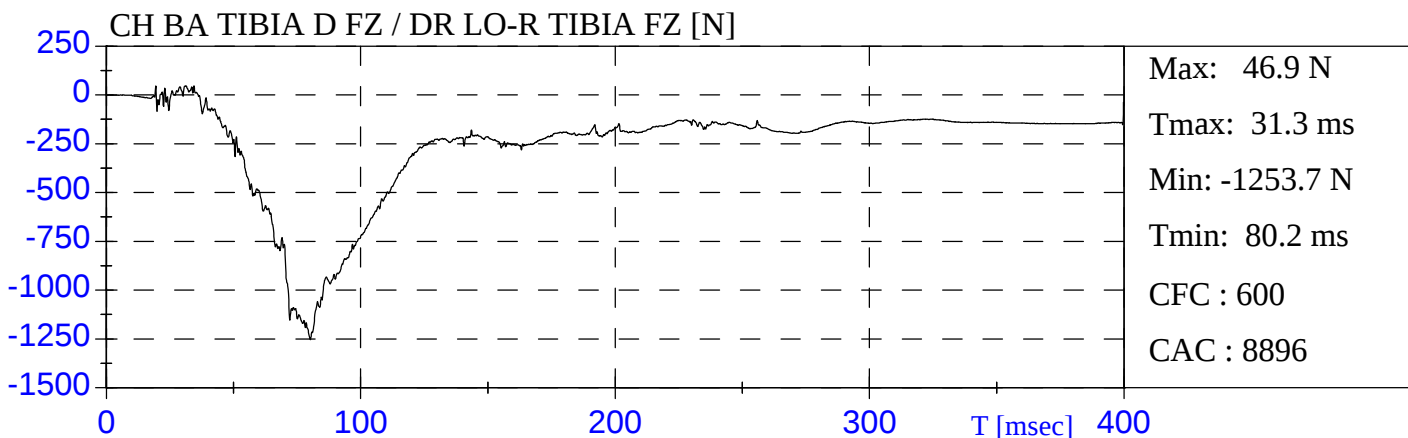
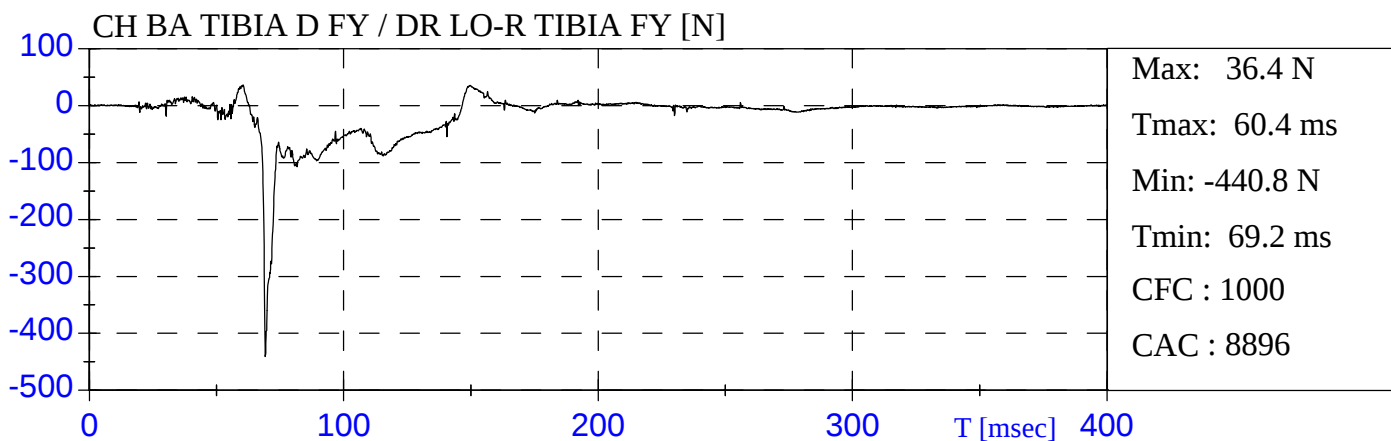
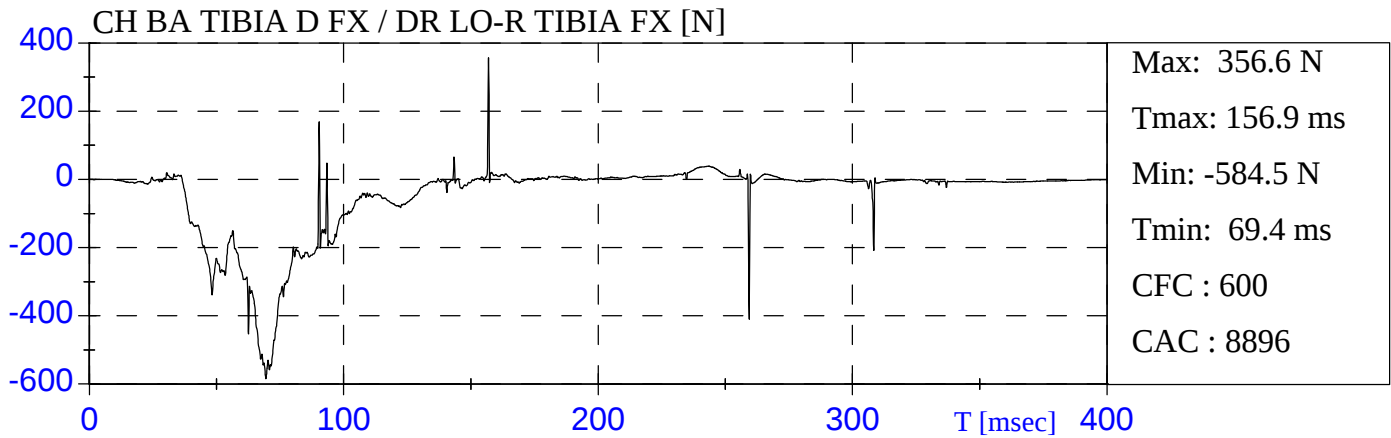


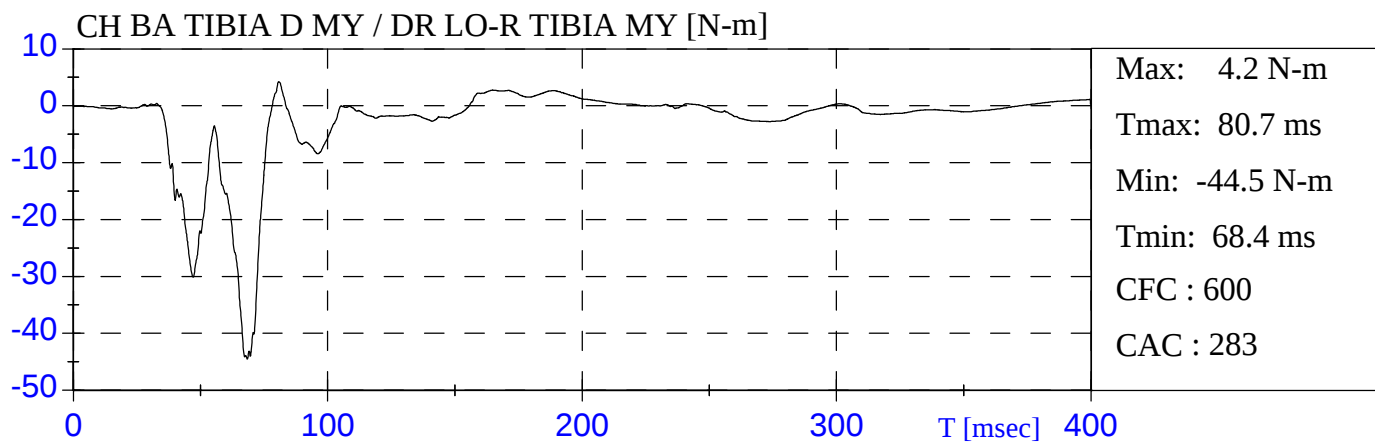
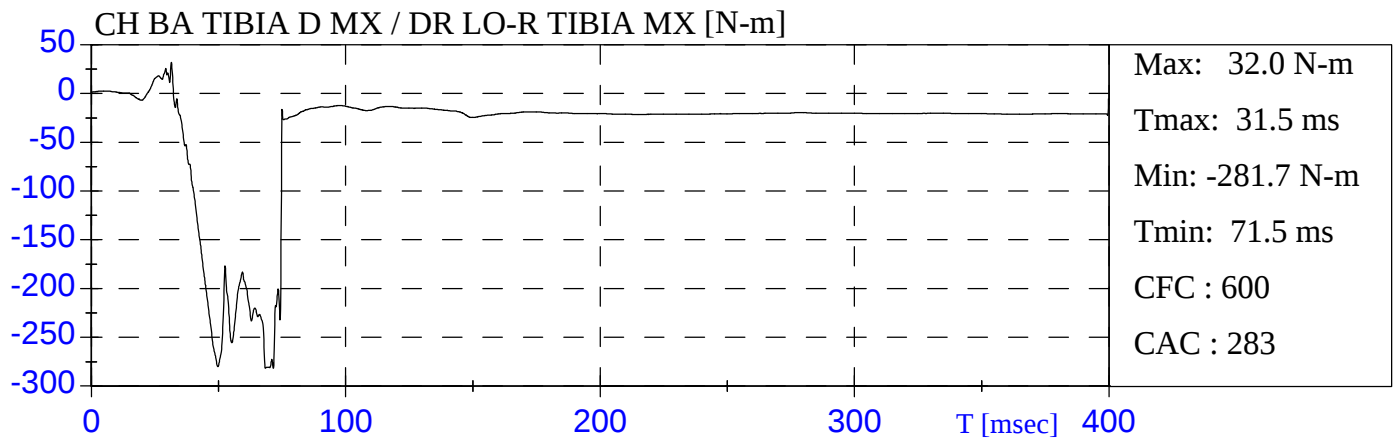


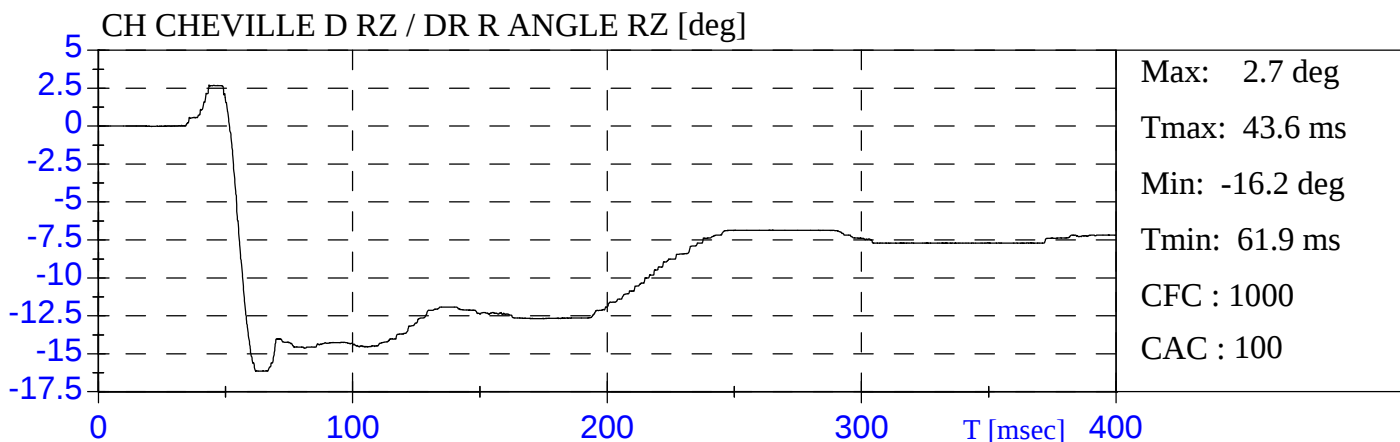
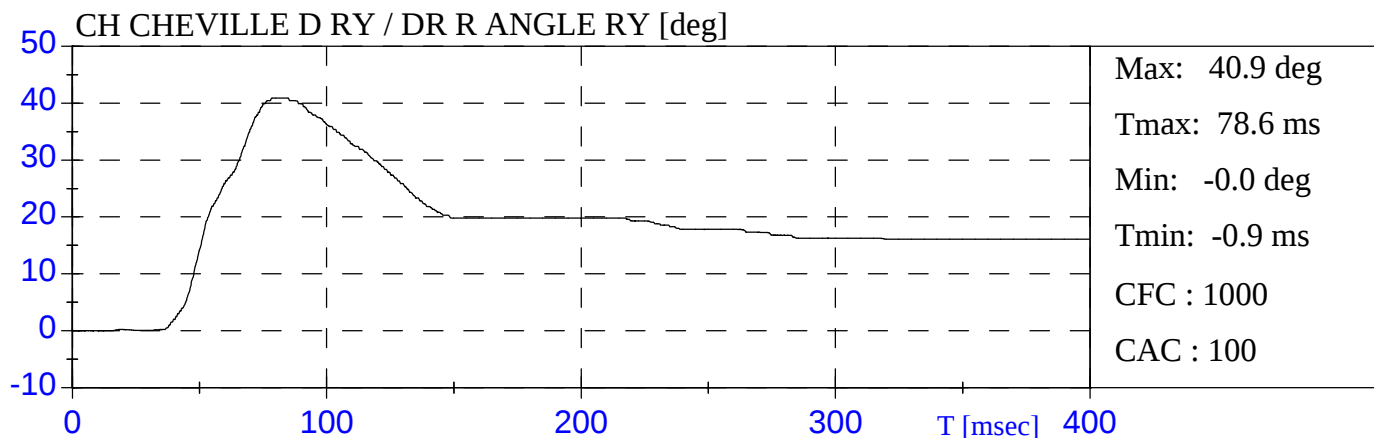
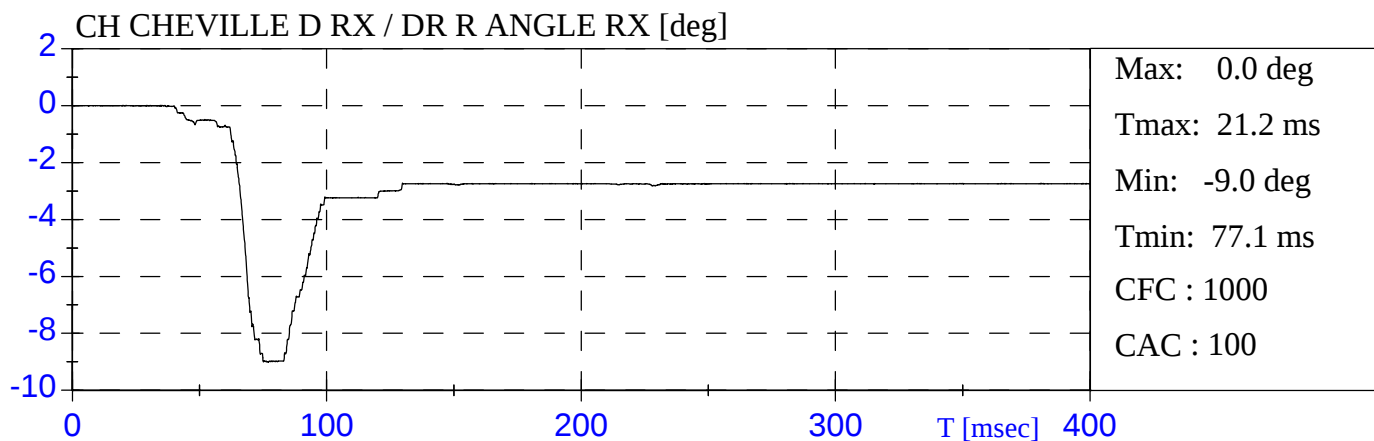
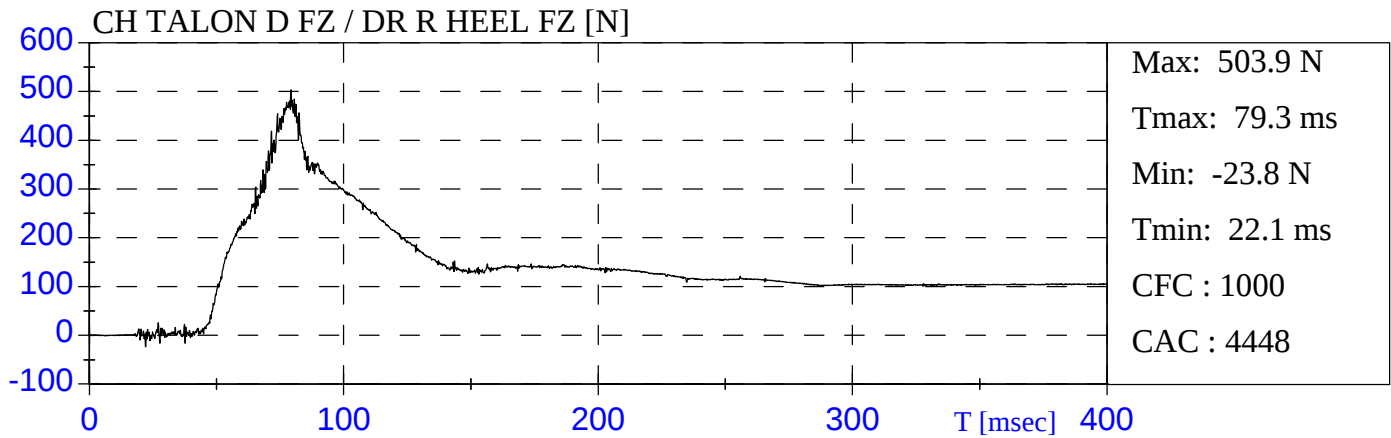


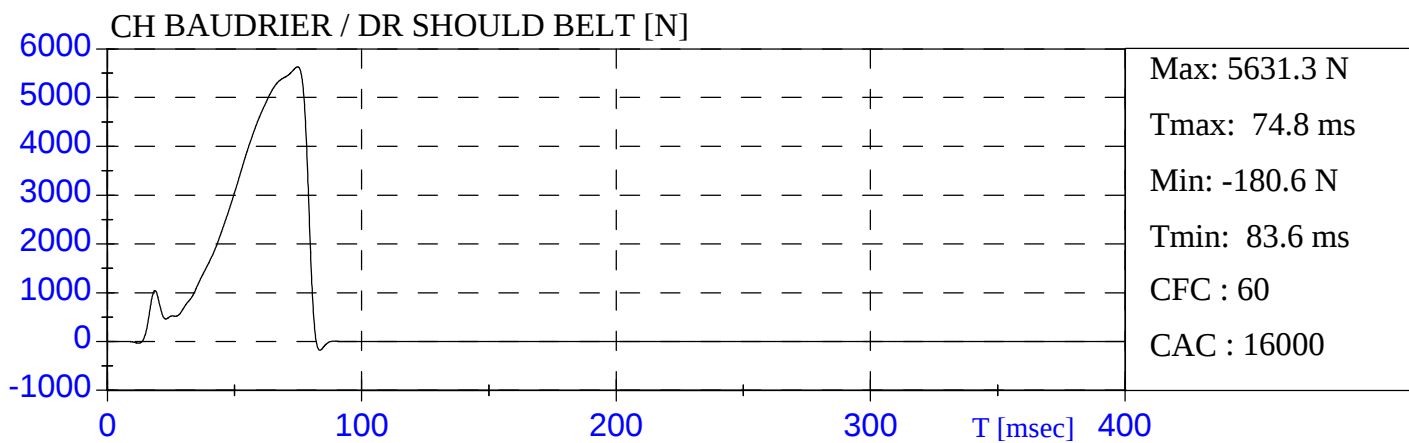
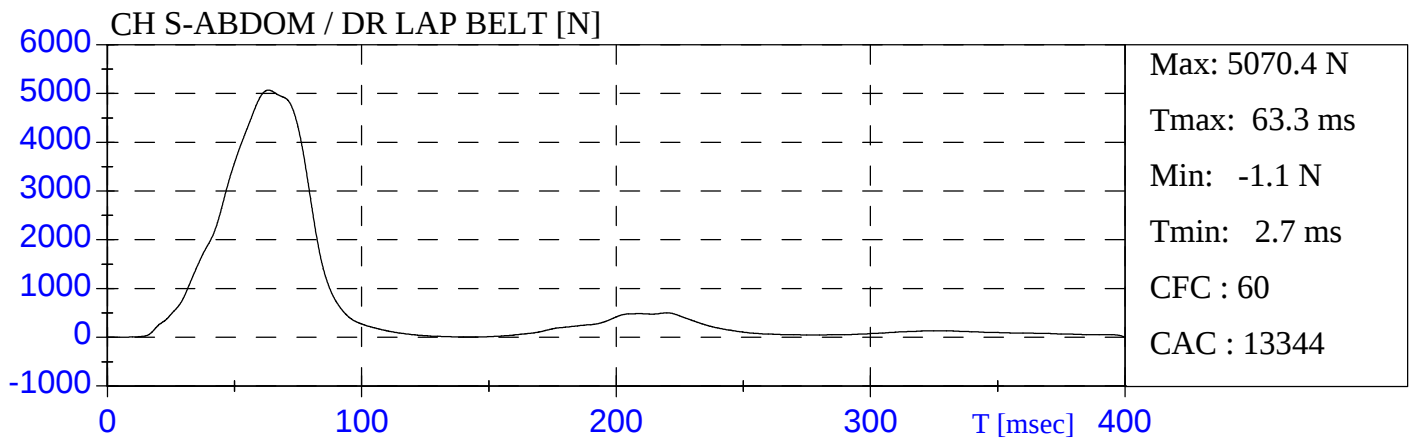


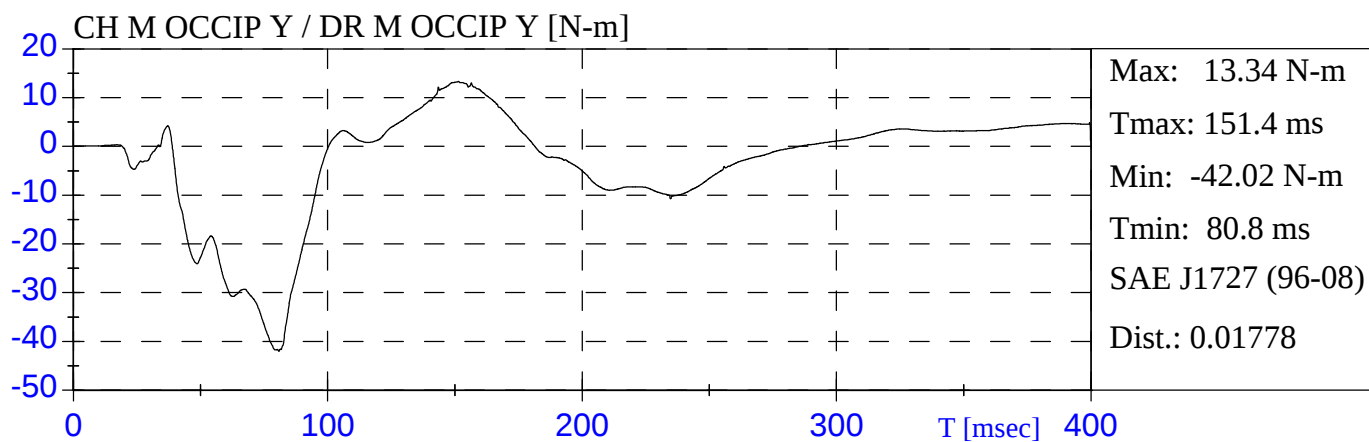


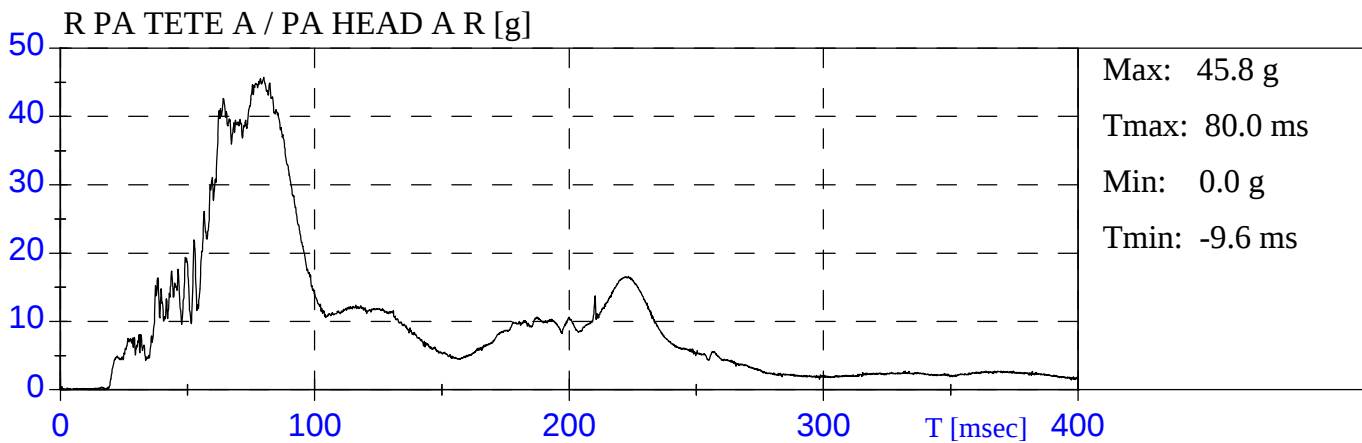
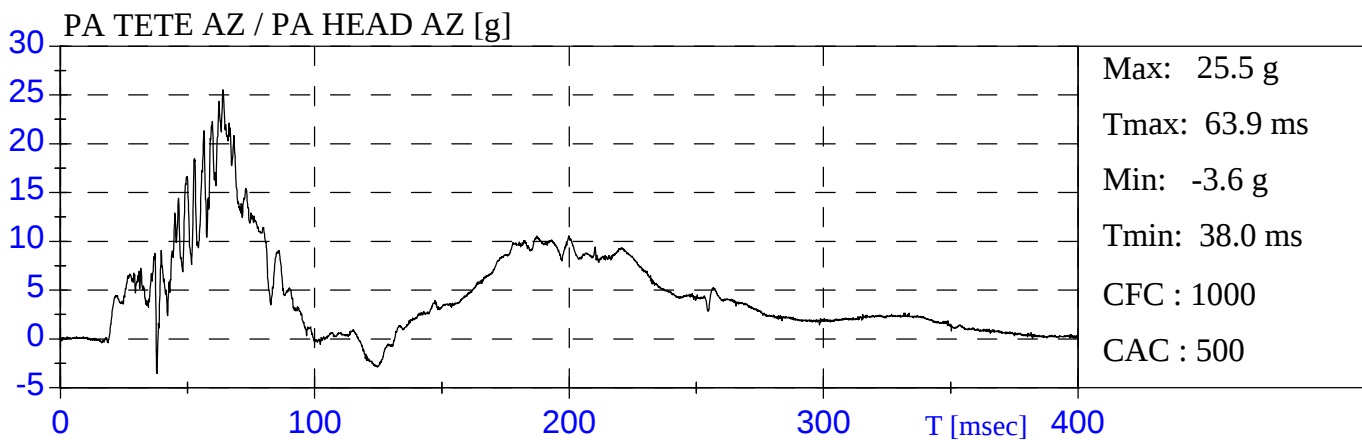
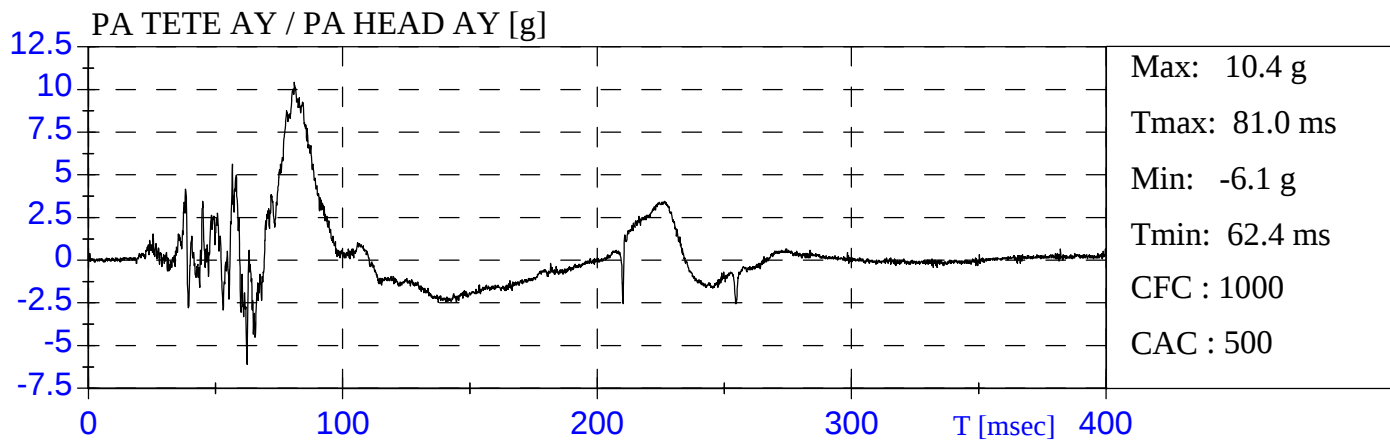
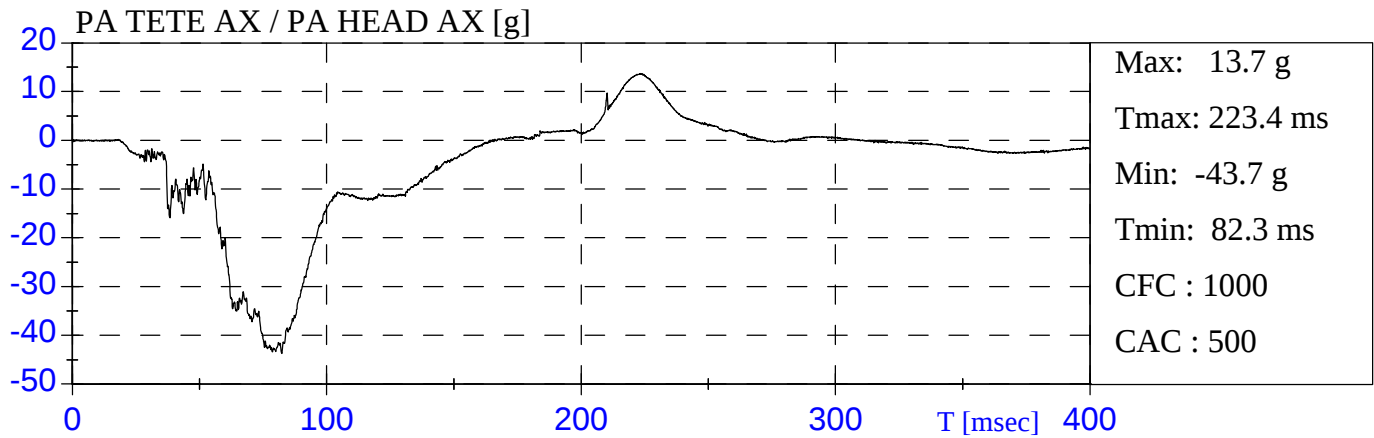


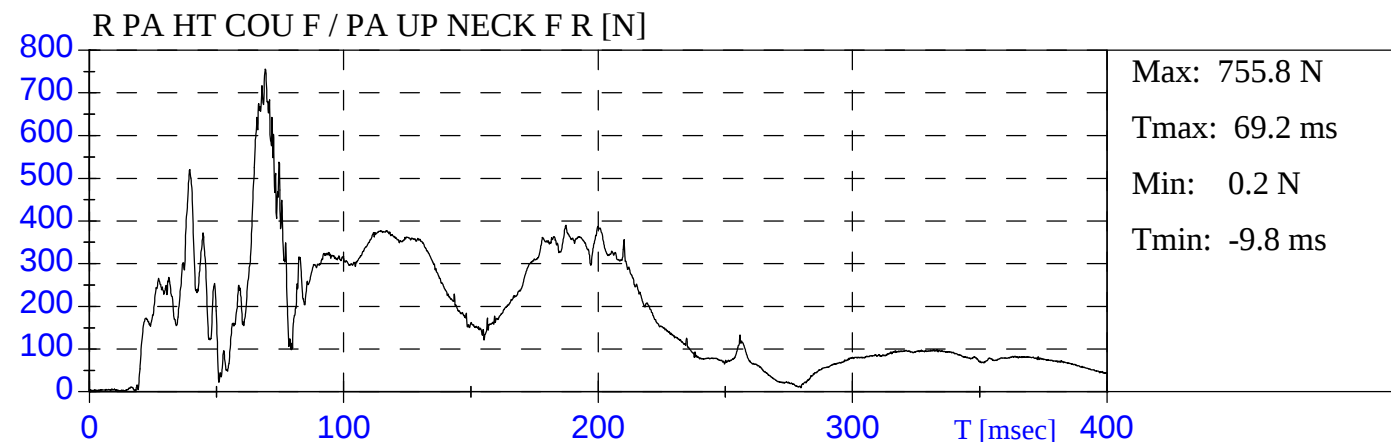
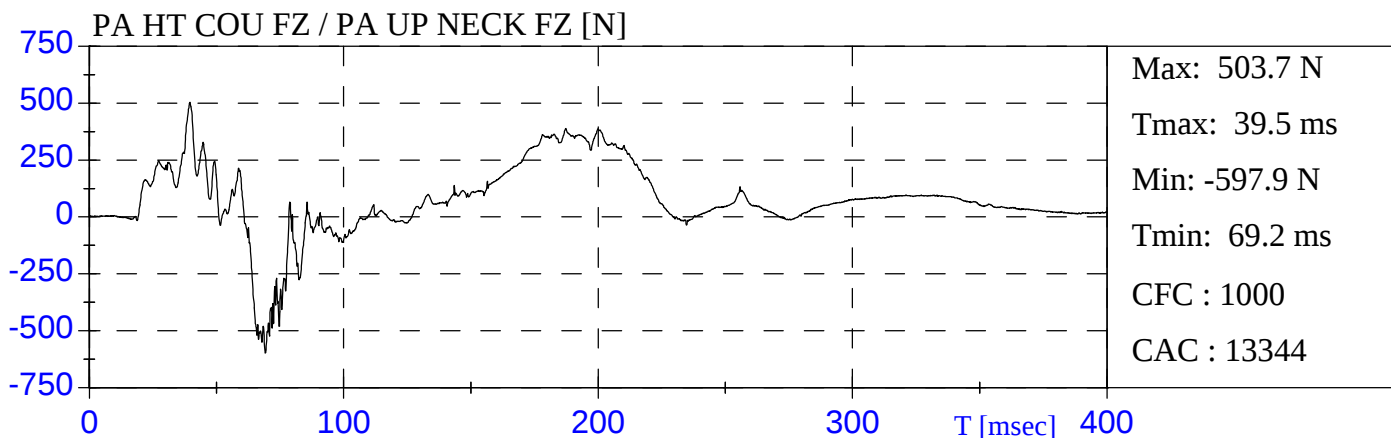
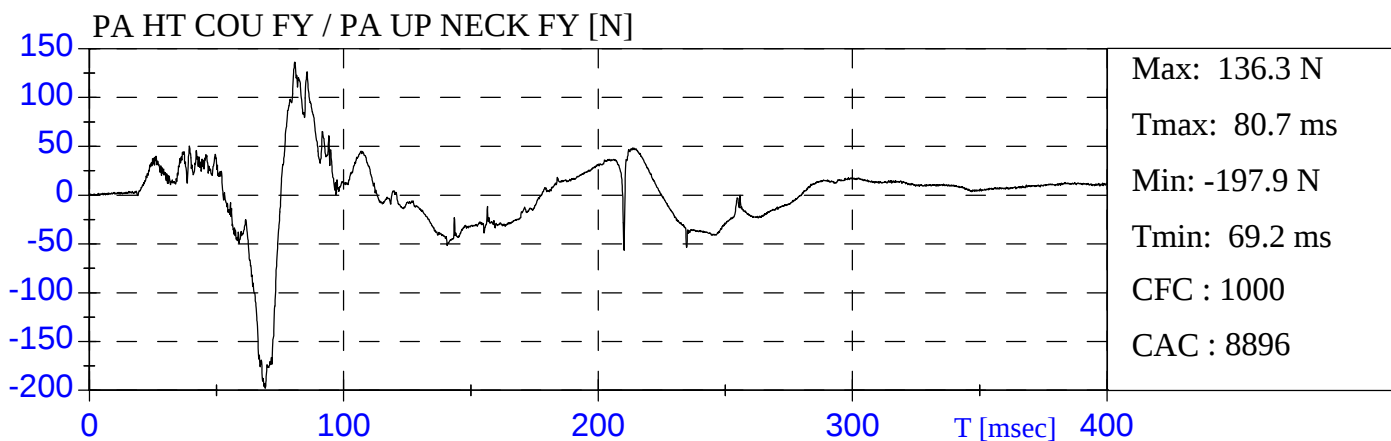
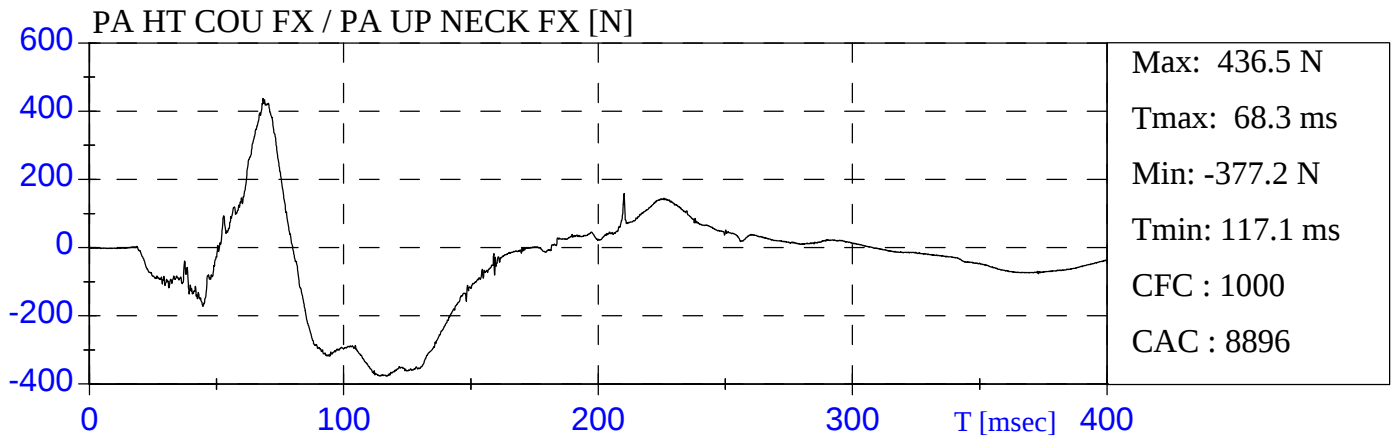


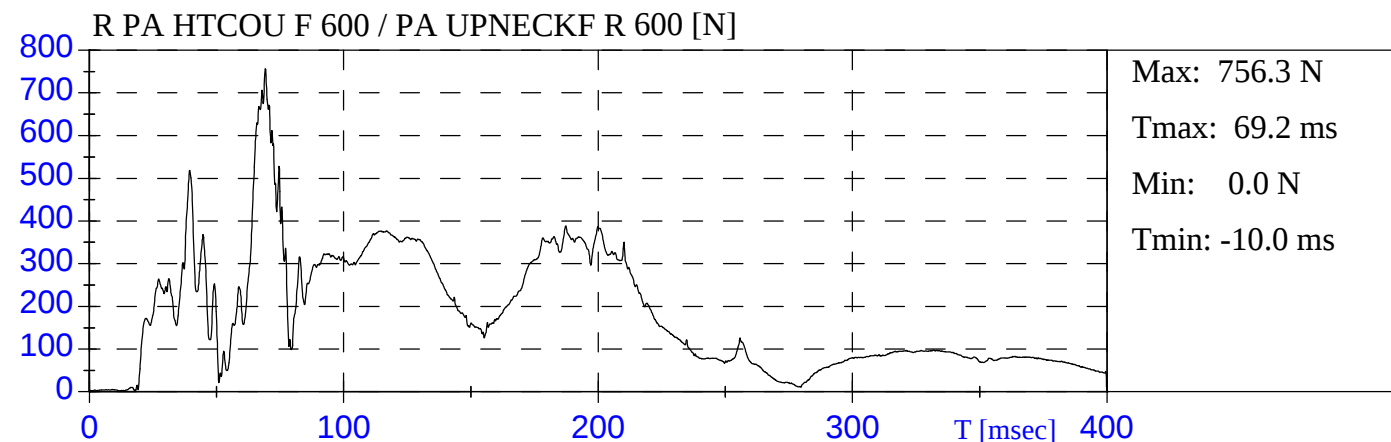
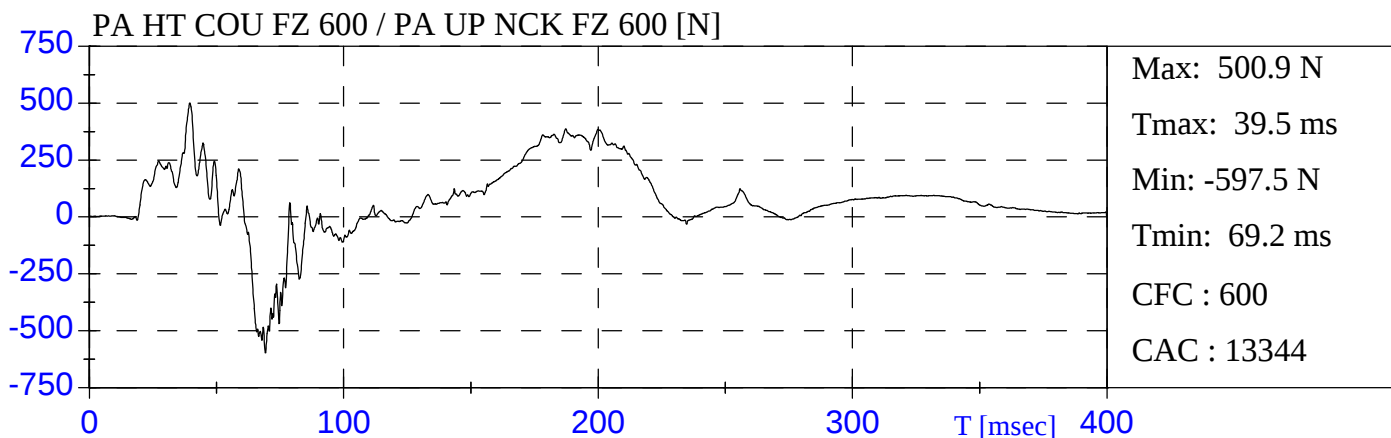
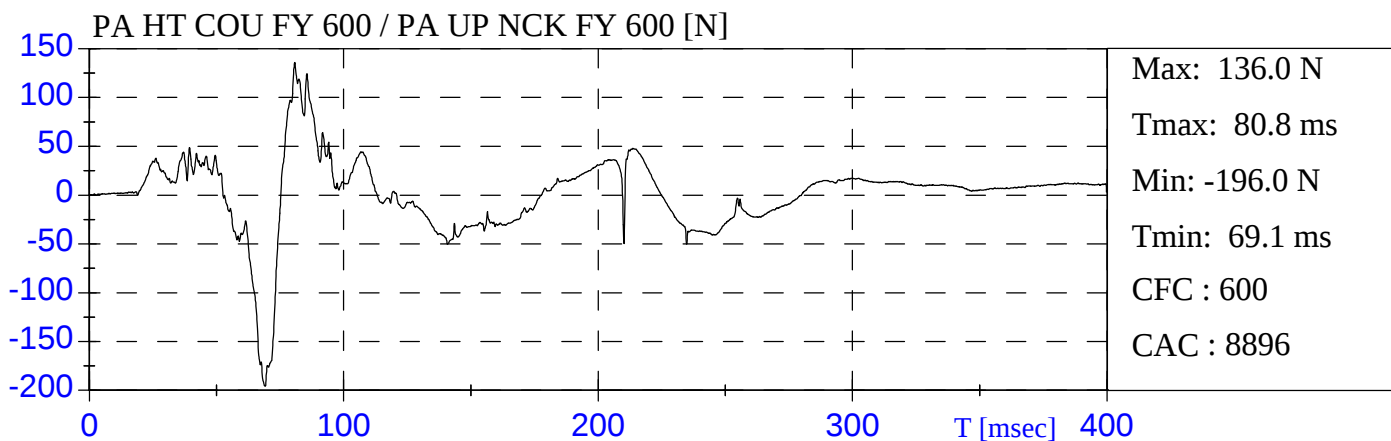
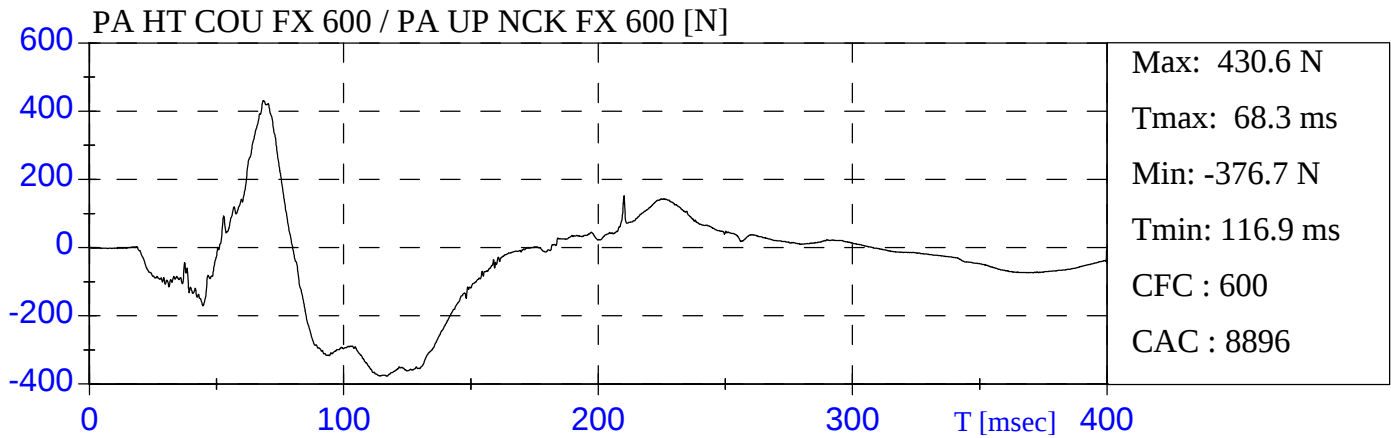


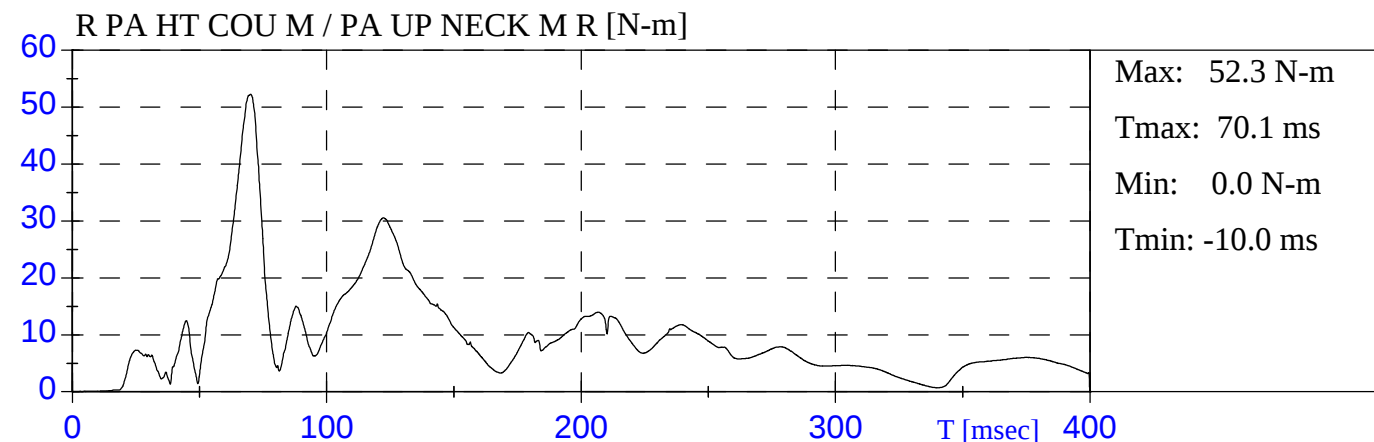
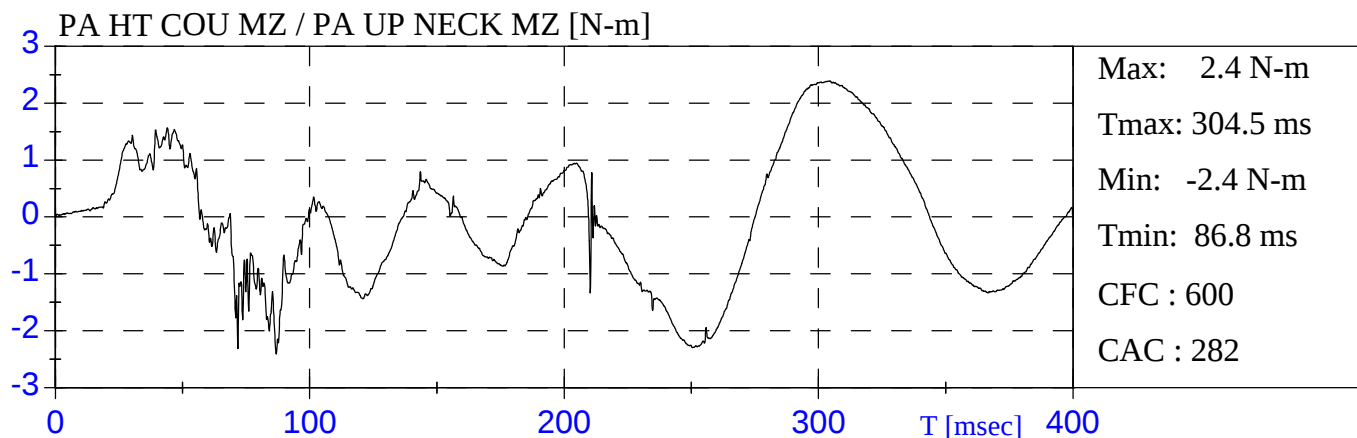
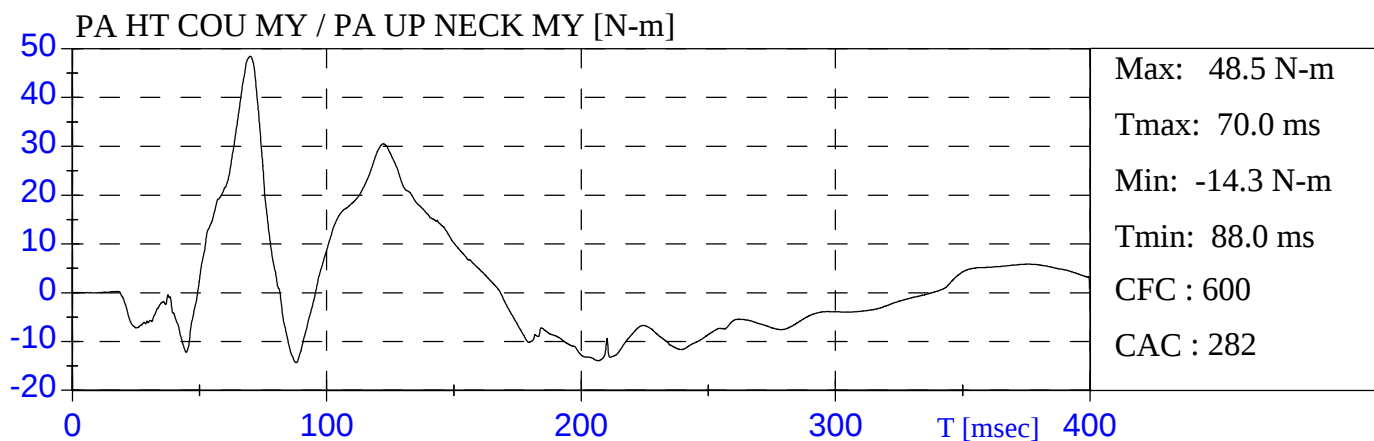
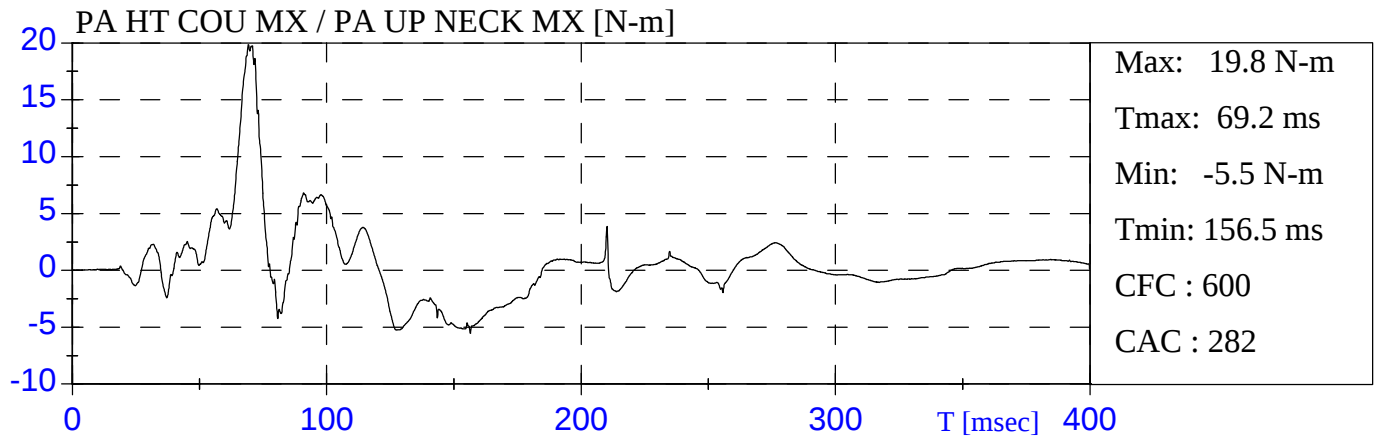


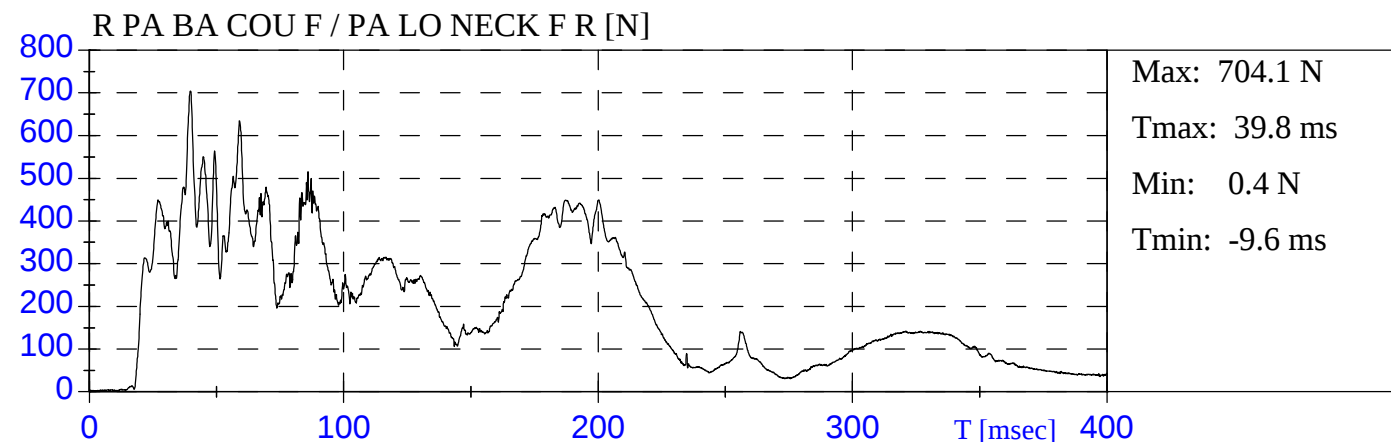
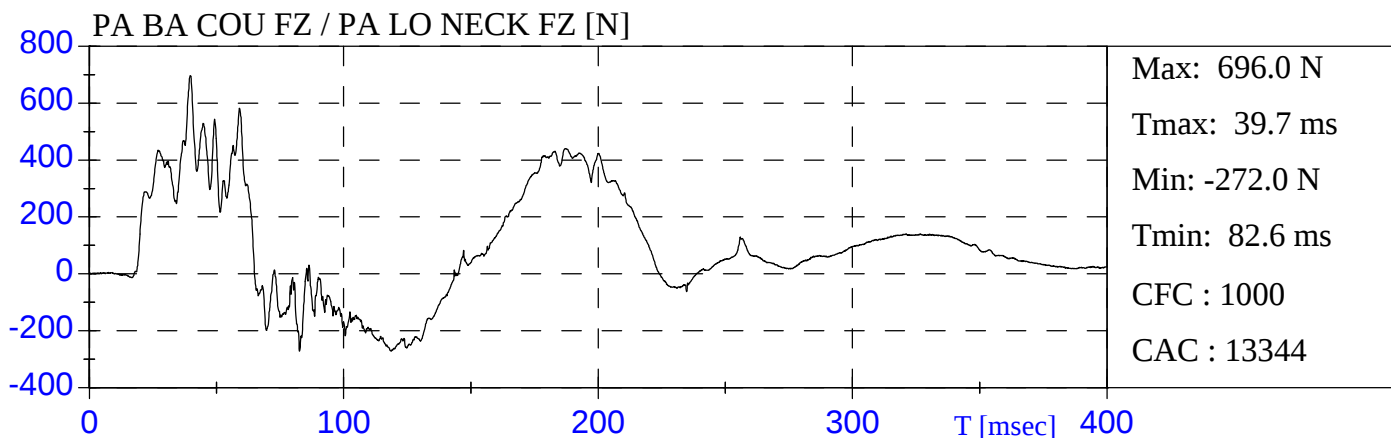
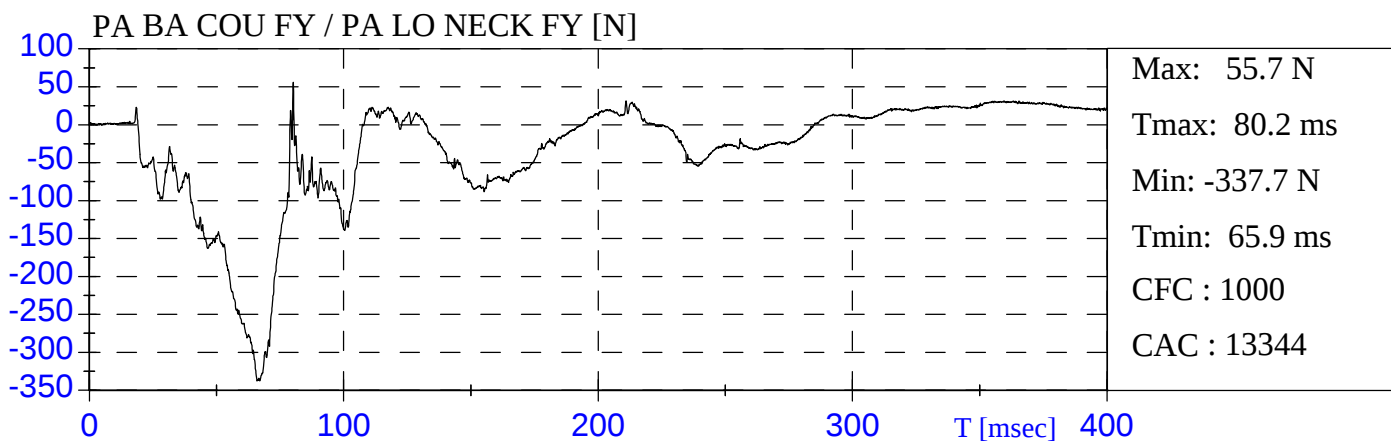
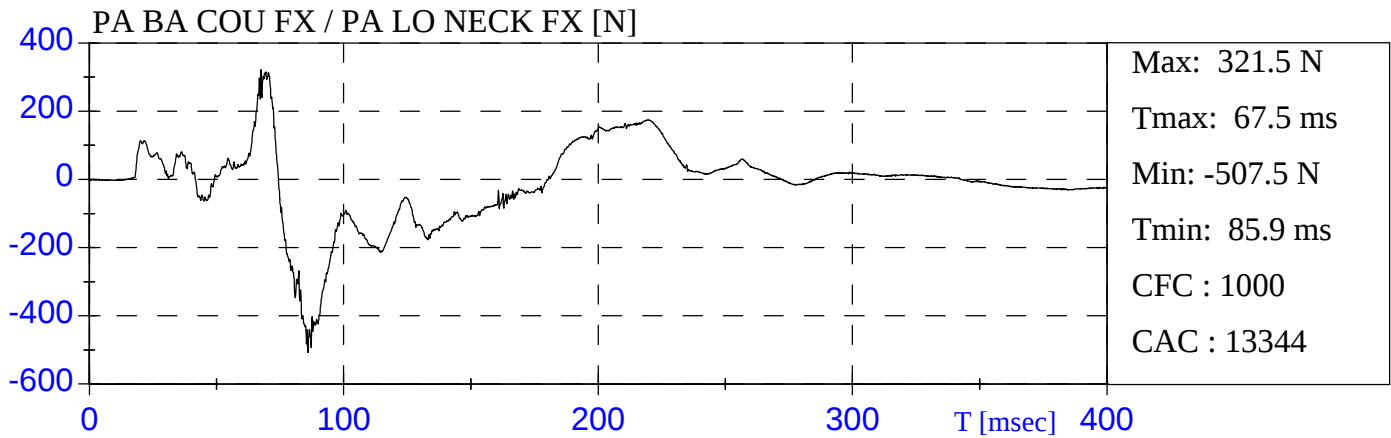


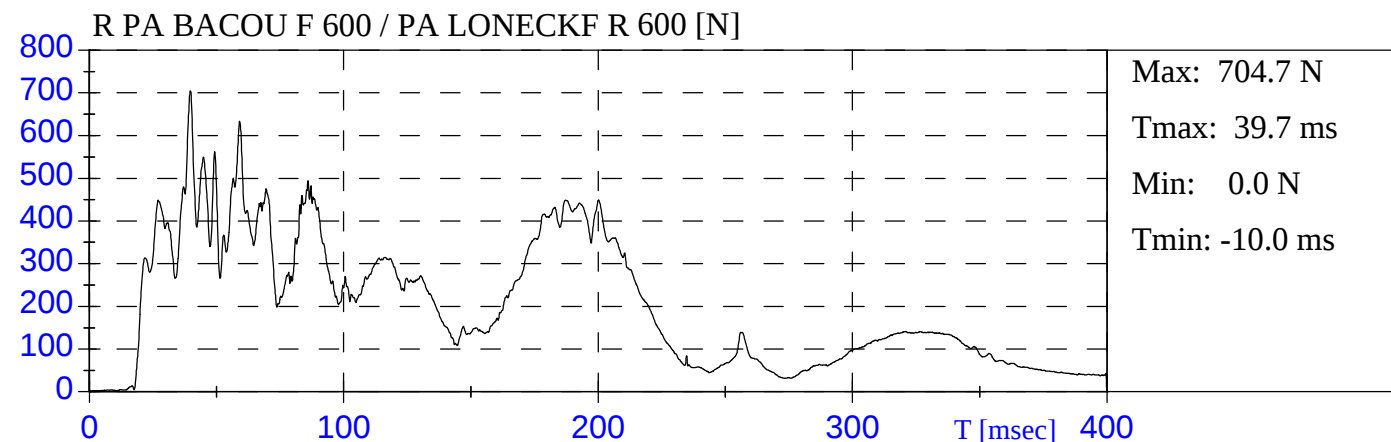
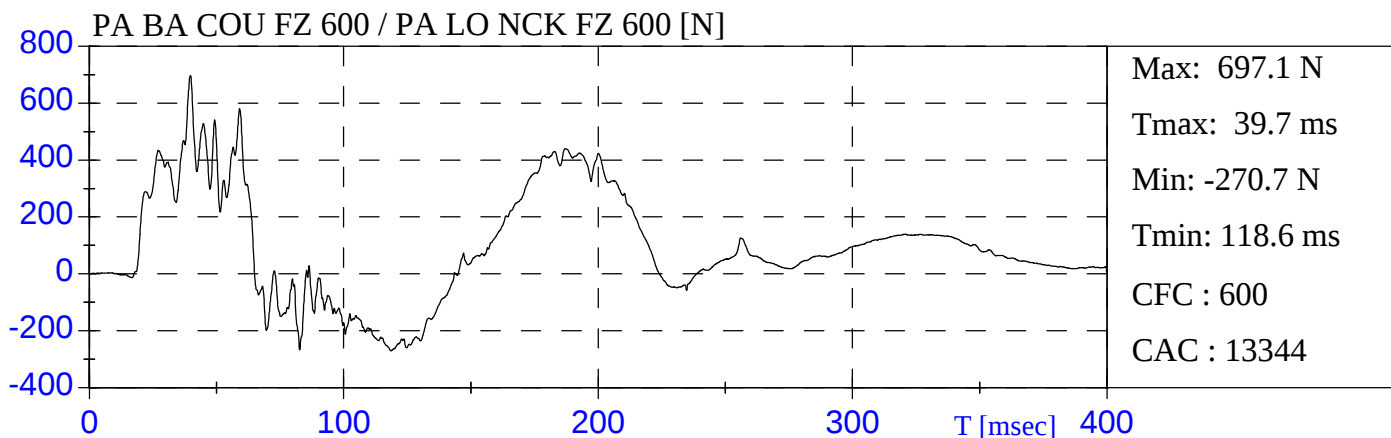
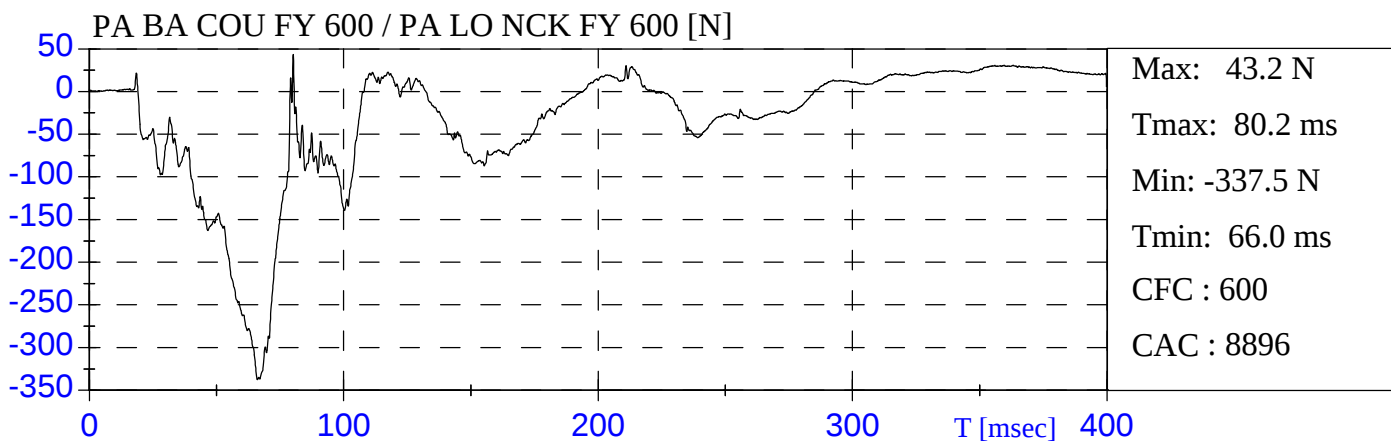
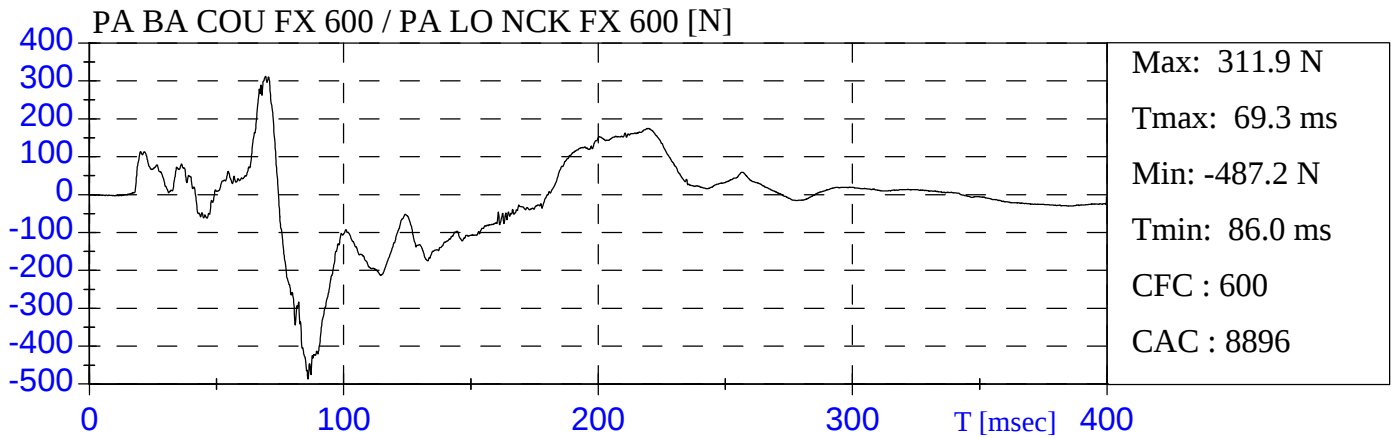


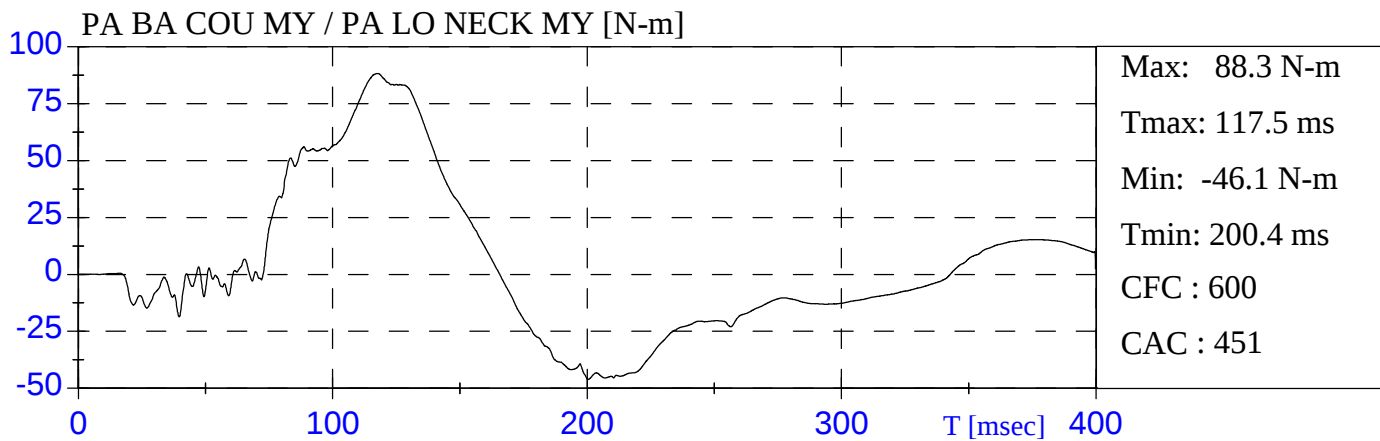
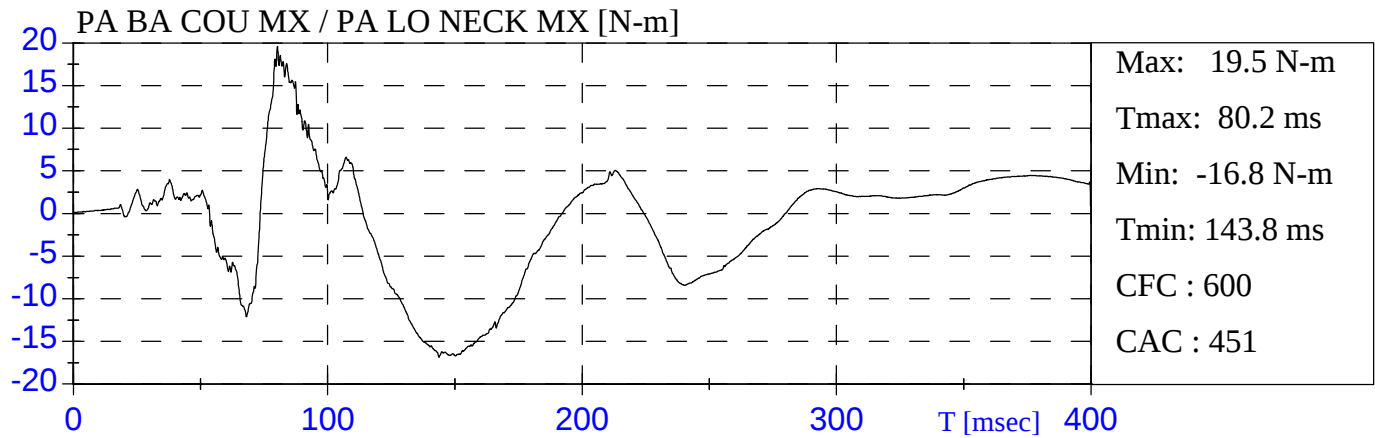


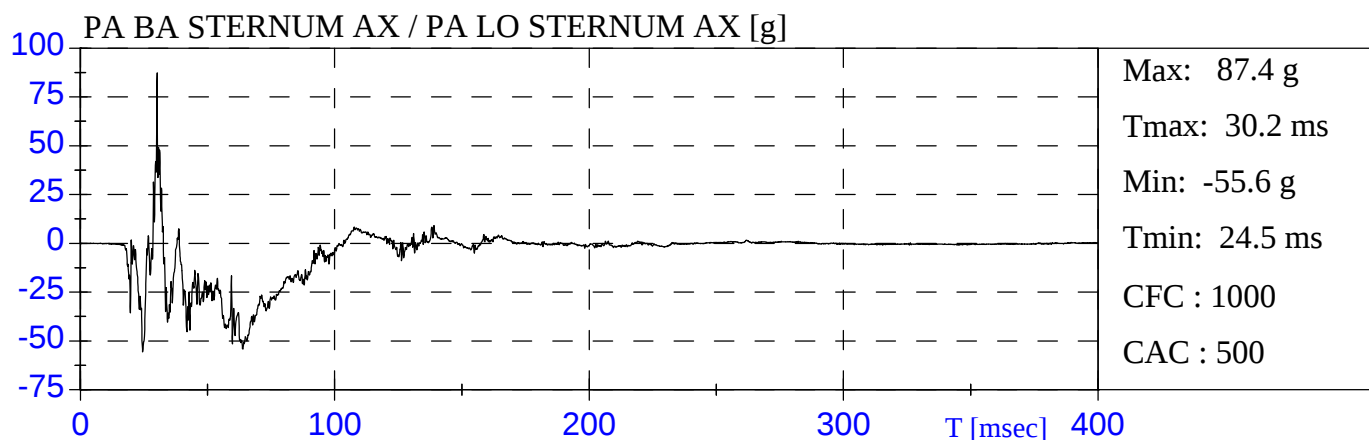
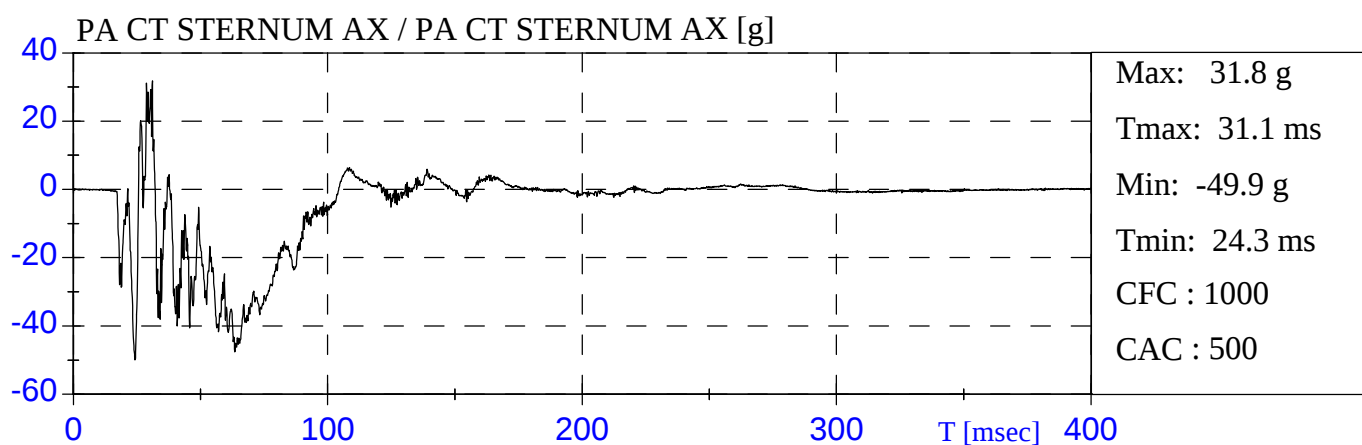
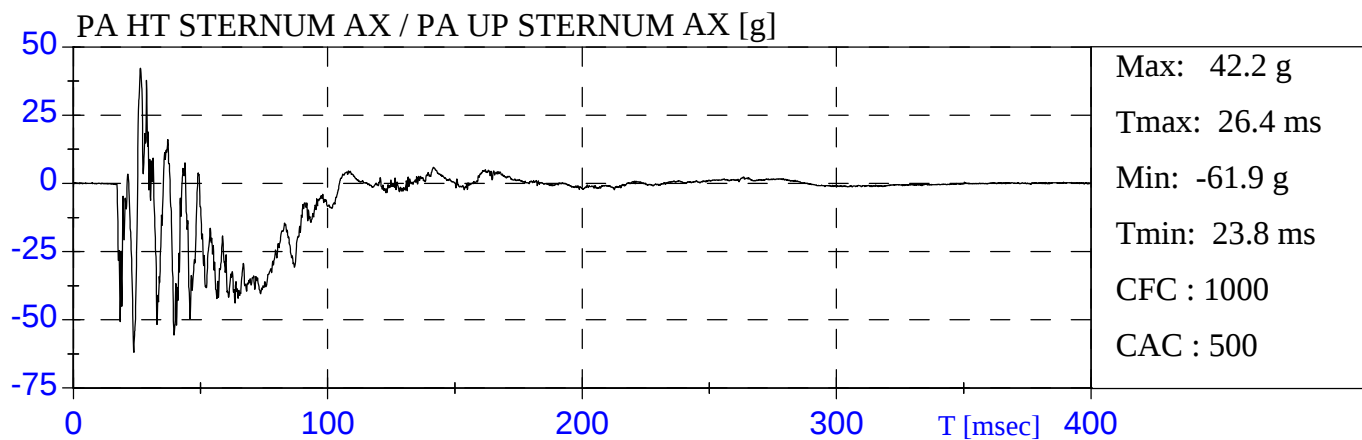


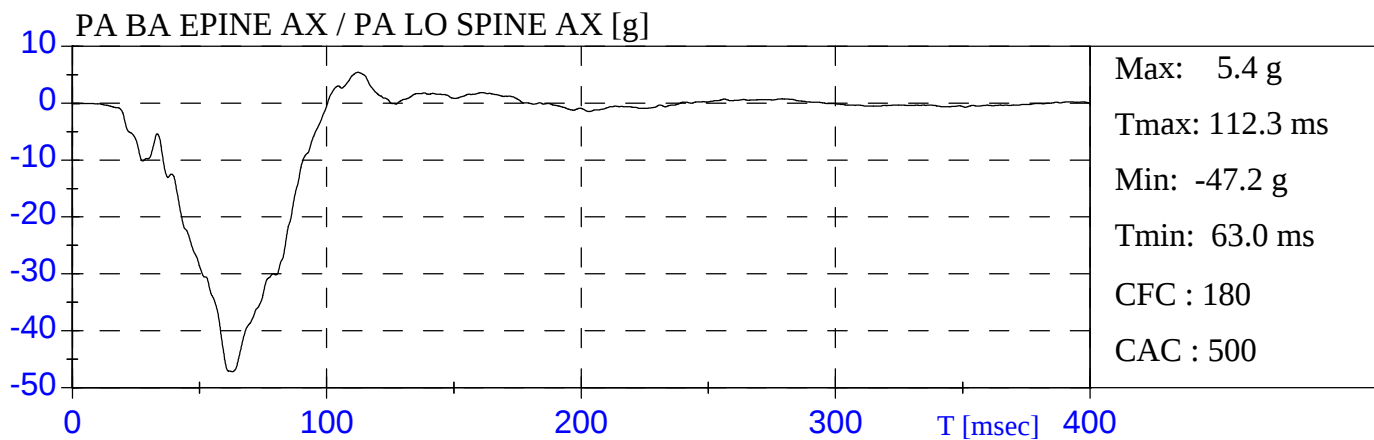
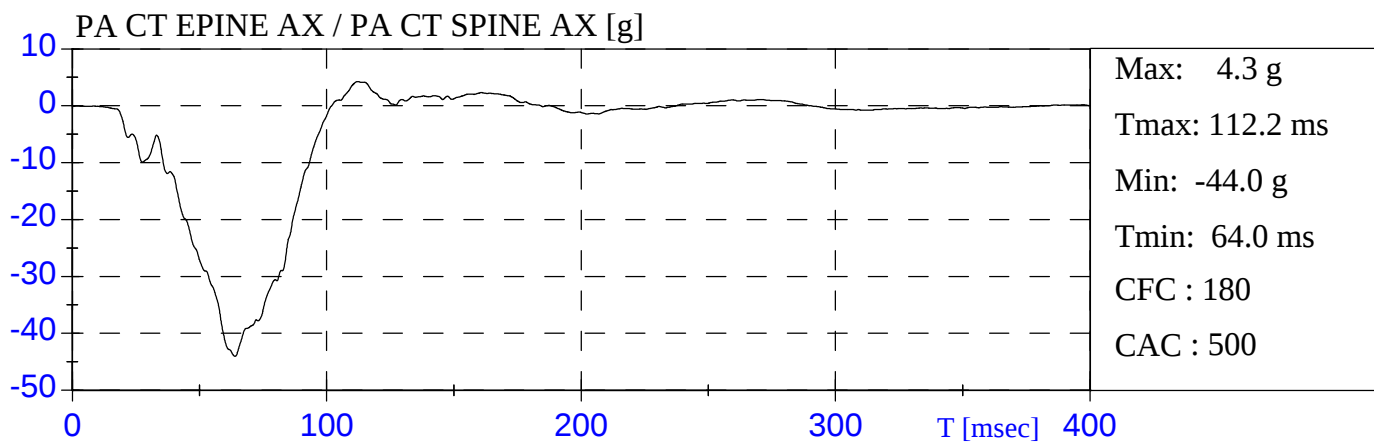
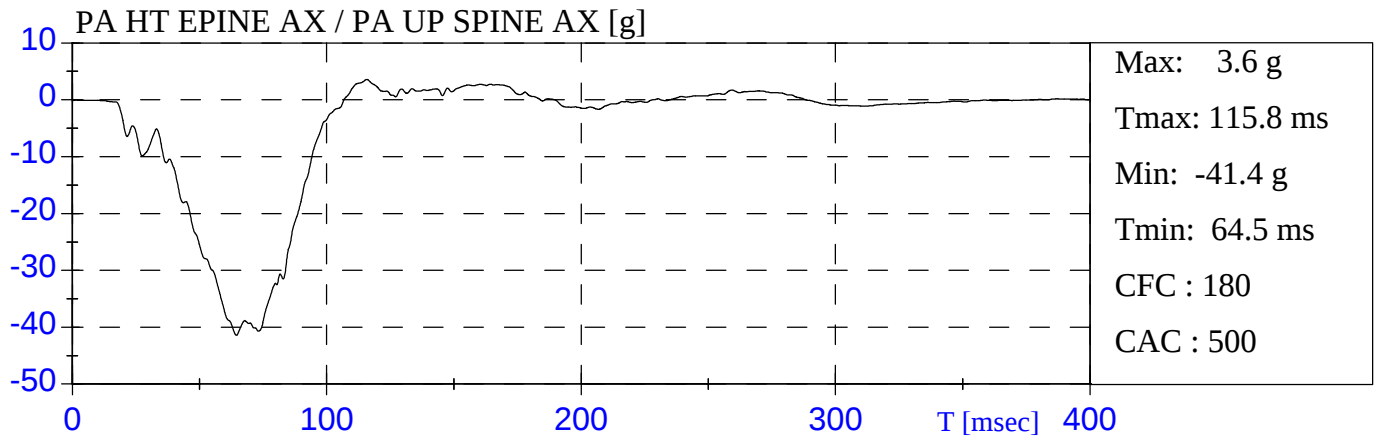


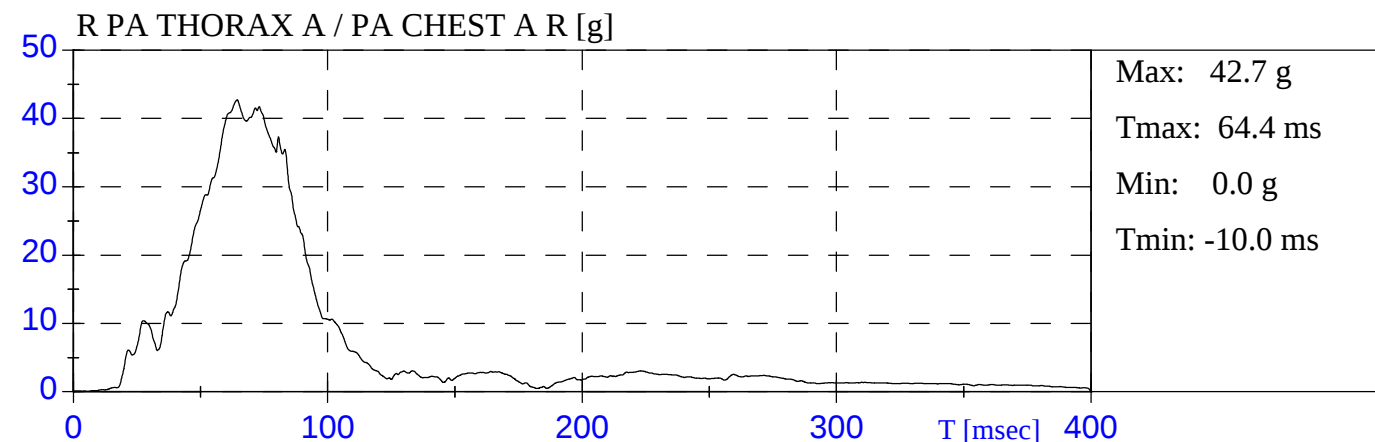
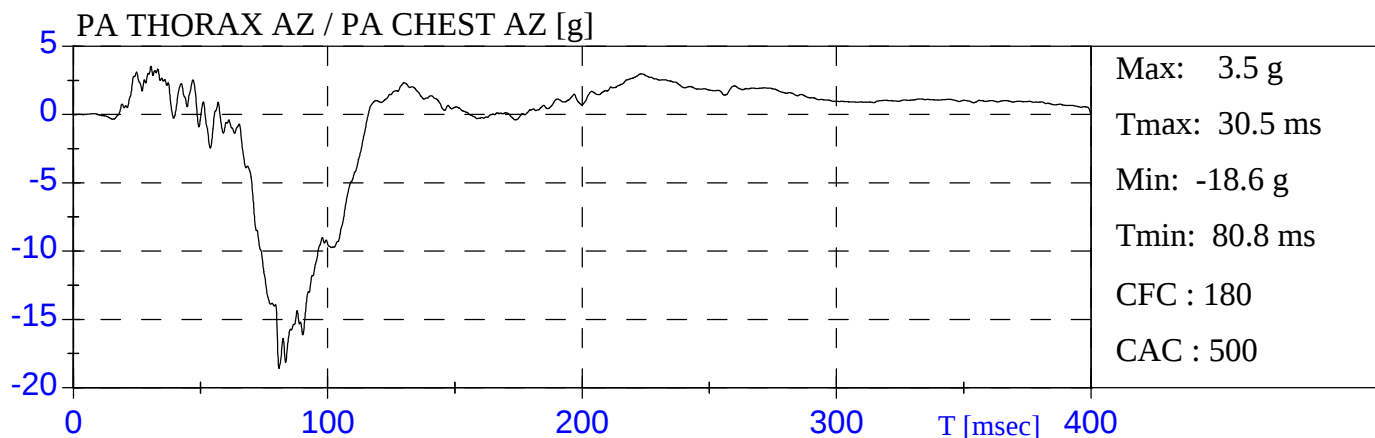
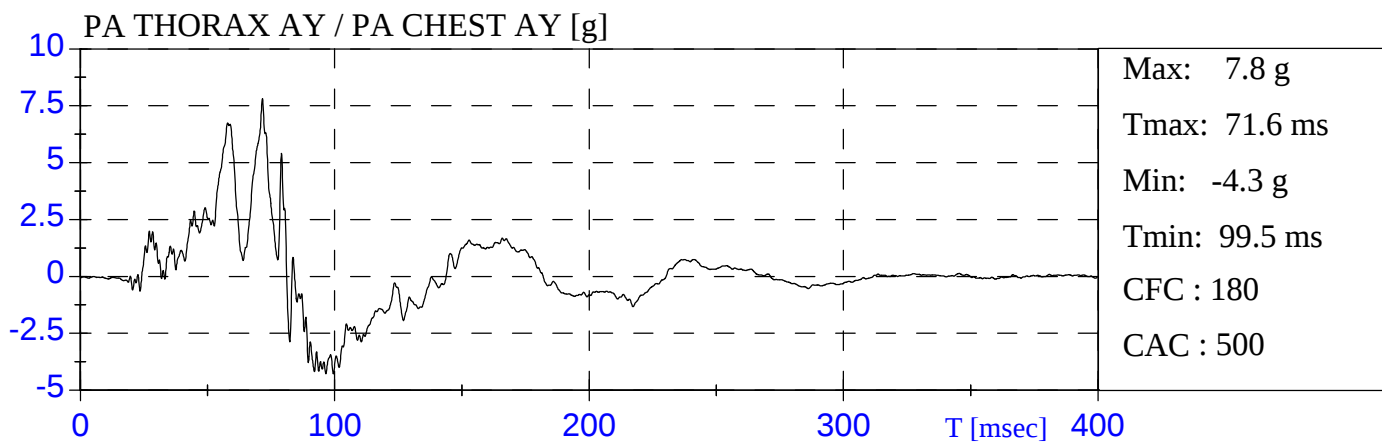
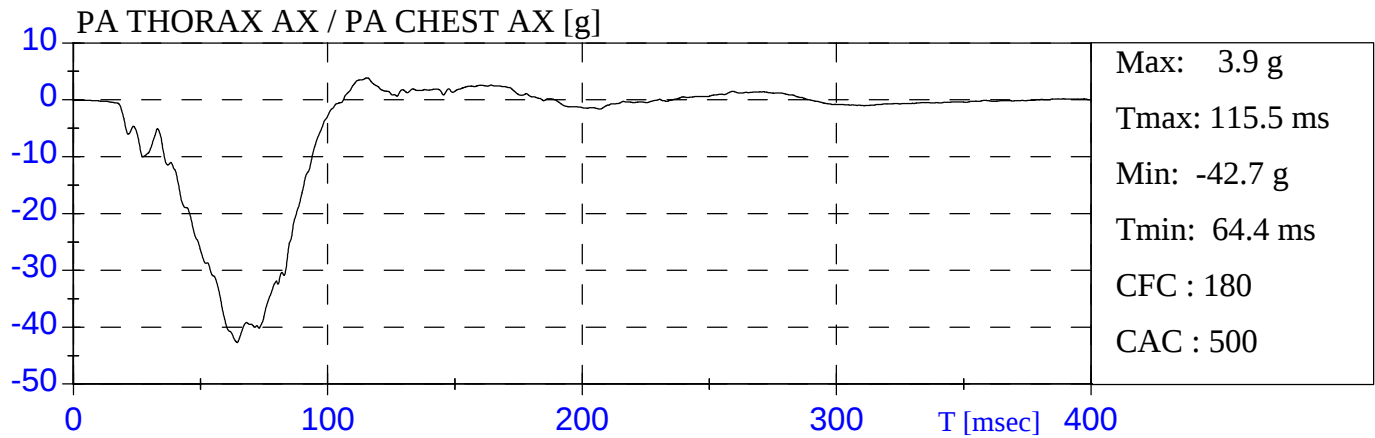












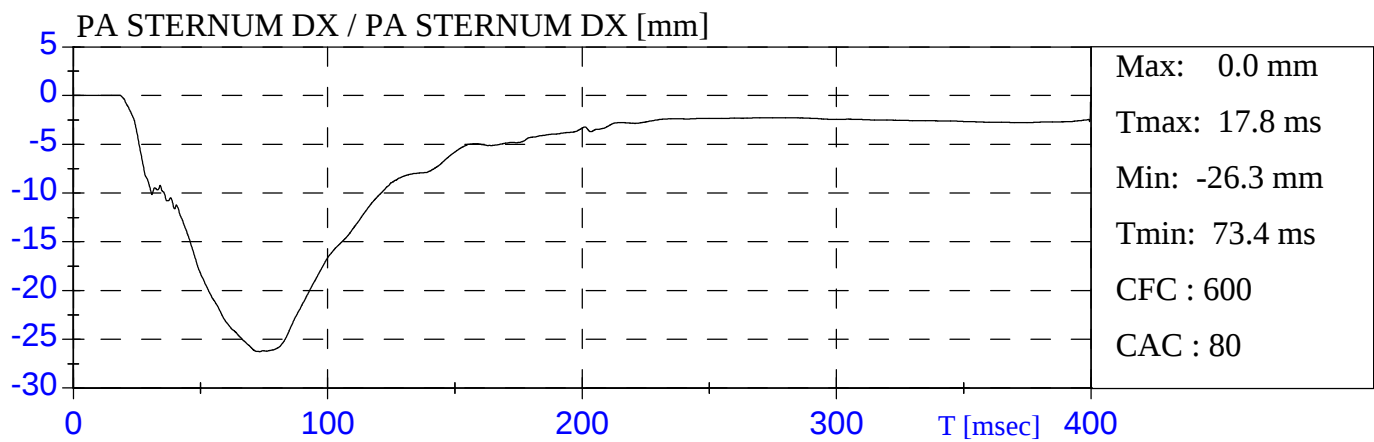


COLLISION FRONTALE
FRONTAL CRASH

Date: 2004-03-31

NISSAN MURANO 2004

N° TC / TC No.: TC04-127





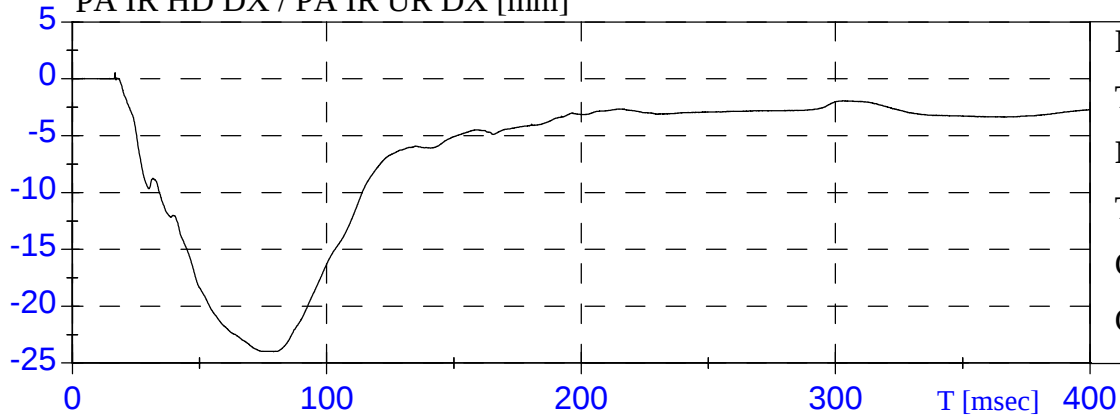
COLLISION FRONTALE
FRONTAL CRASH

Date: 2004-03-31

NISSAN MURANO 2004

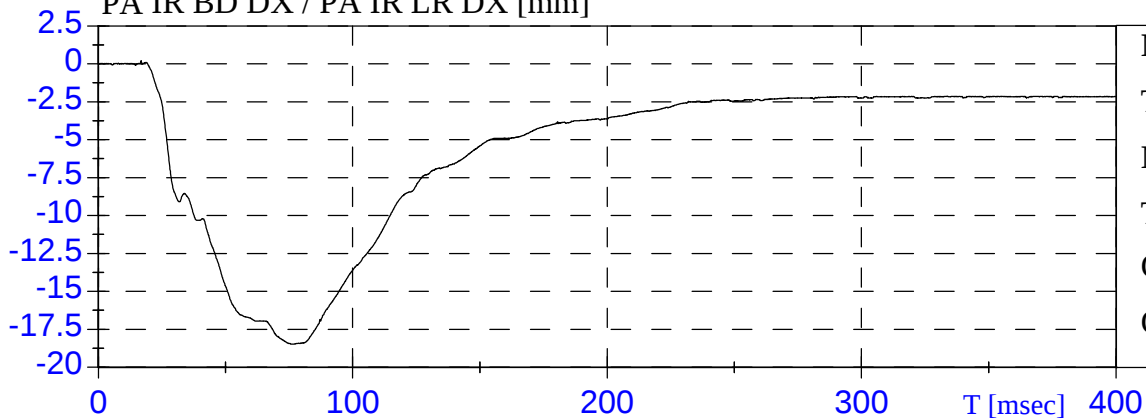
N° TC / TC No.: TC04-127

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



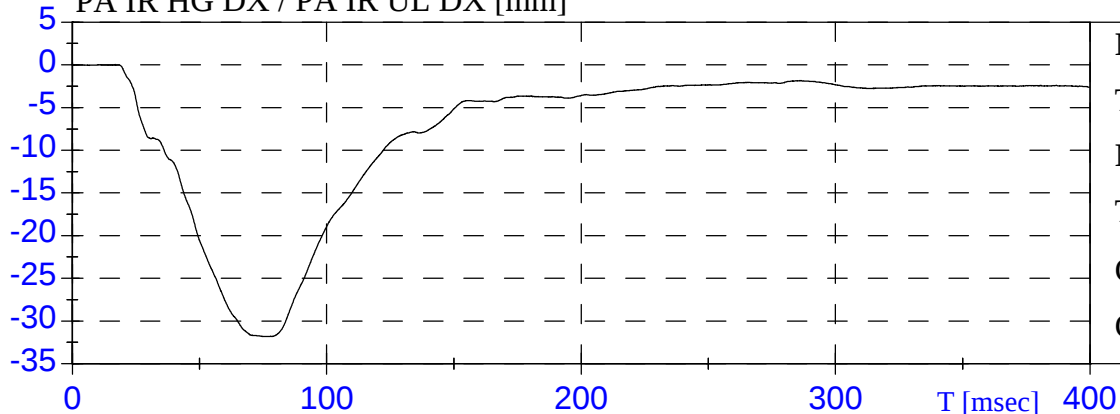
Max: 0.5 mm
Tmax: 16.8 ms
Min: -24.0 mm
Tmin: 79.2 ms
CFC : 1000
CAC : 120

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



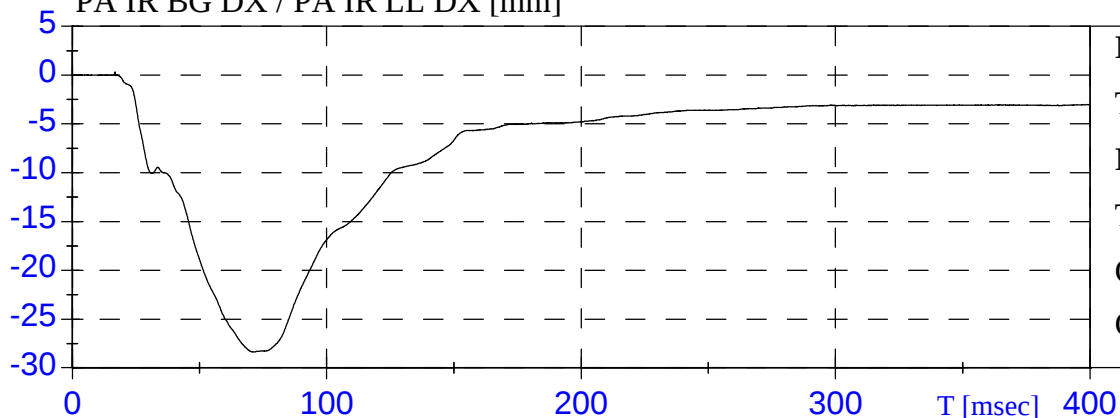
Max: 0.2 mm
Tmax: 16.8 ms
Min: -18.5 mm
Tmin: 75.8 ms
CFC : 1000
CAC : 120

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

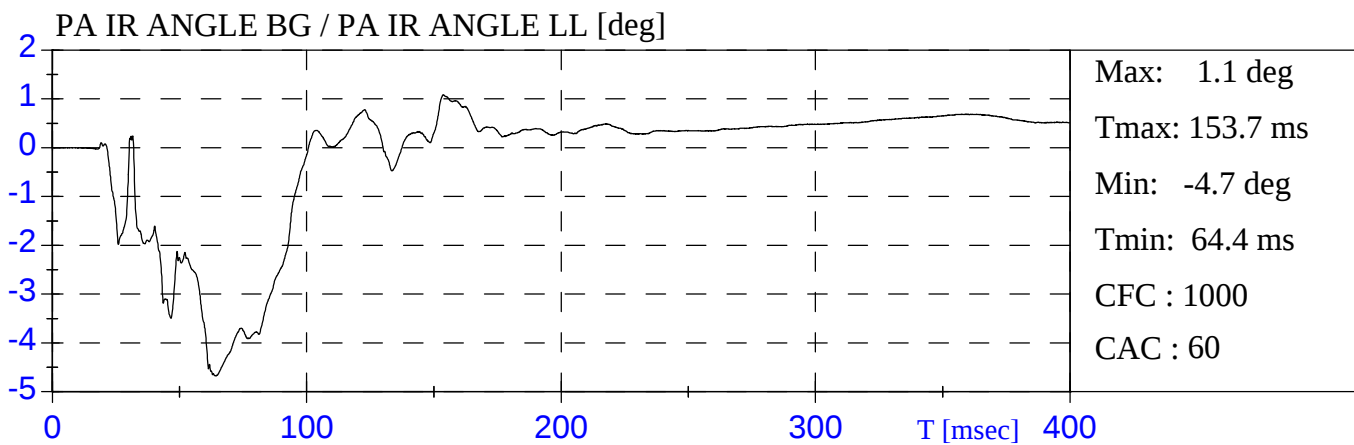
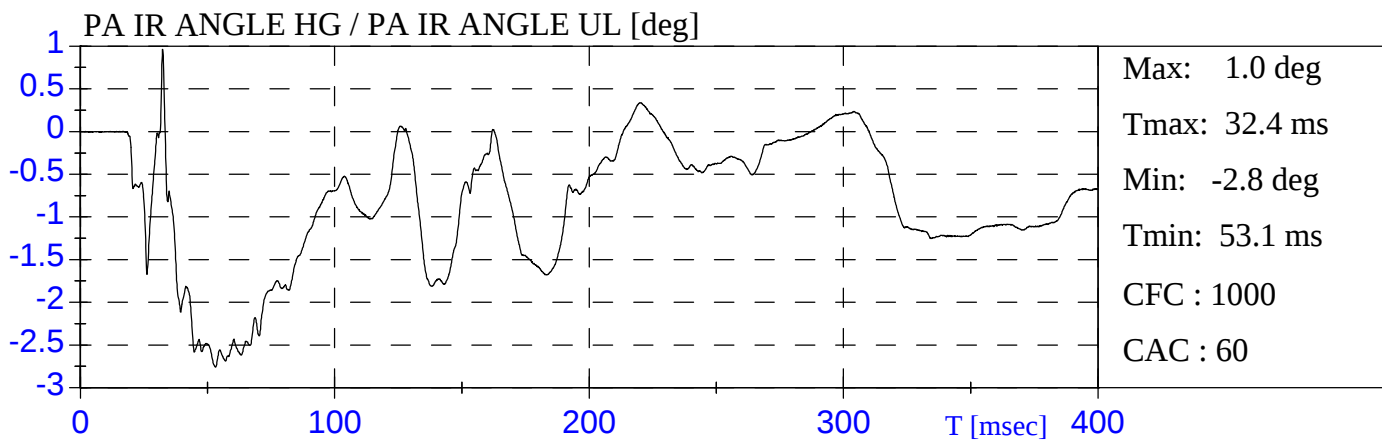
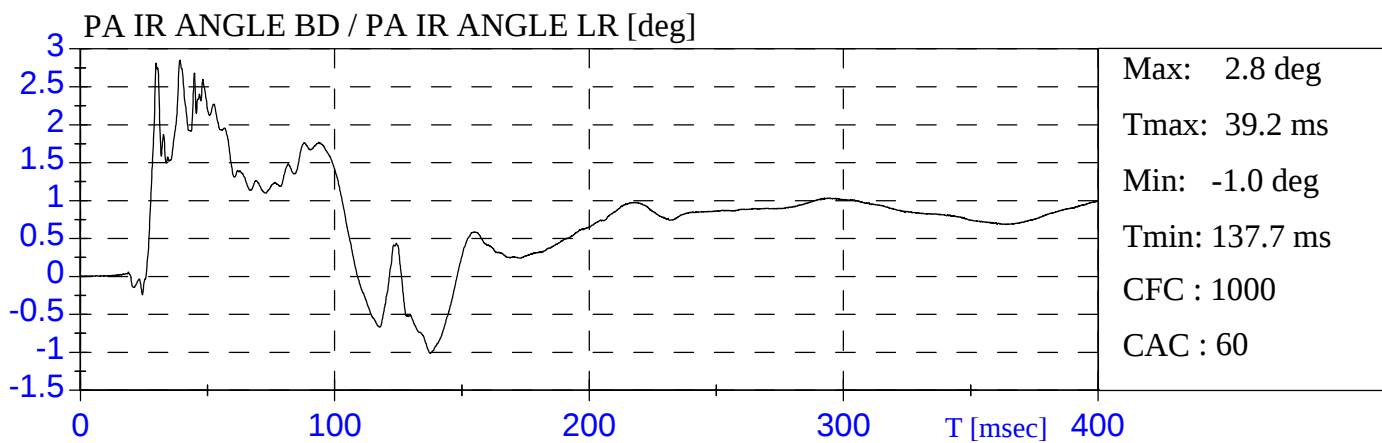
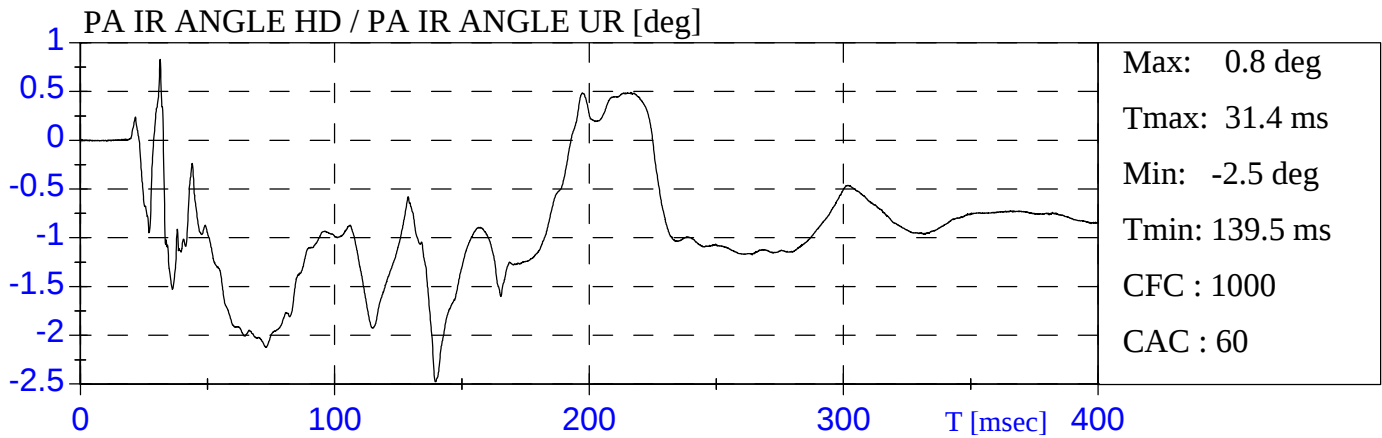


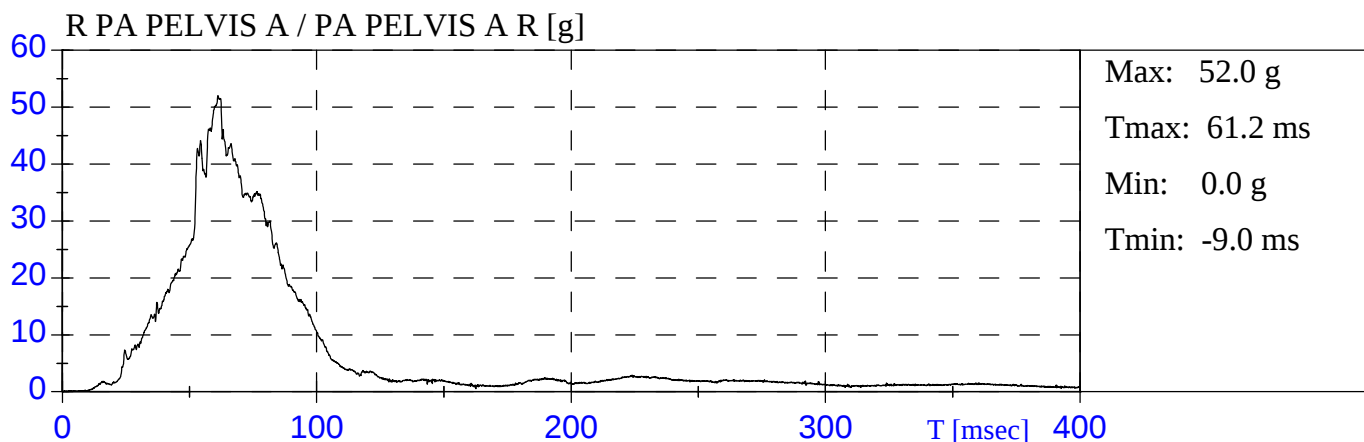
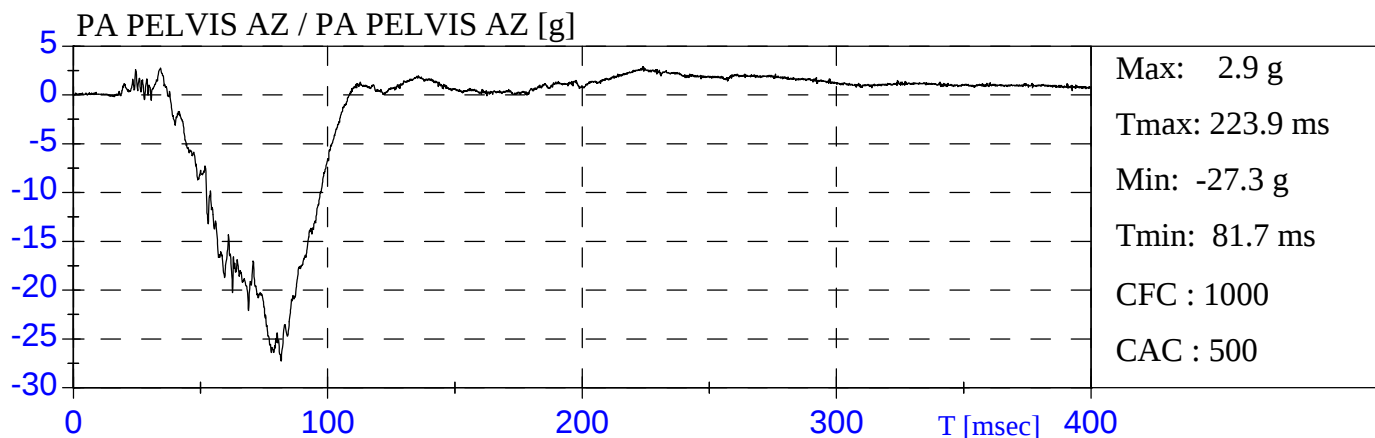
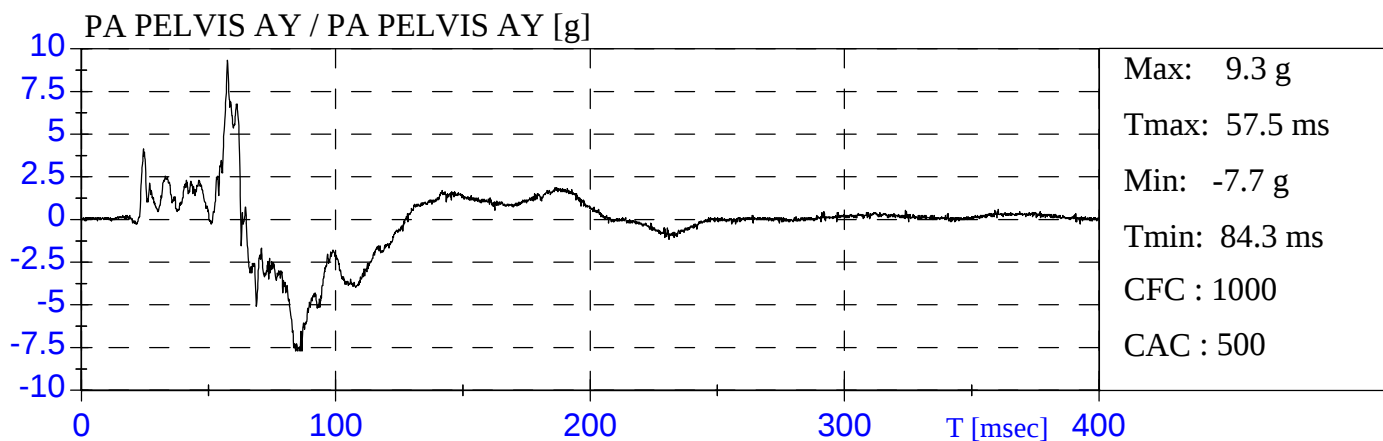
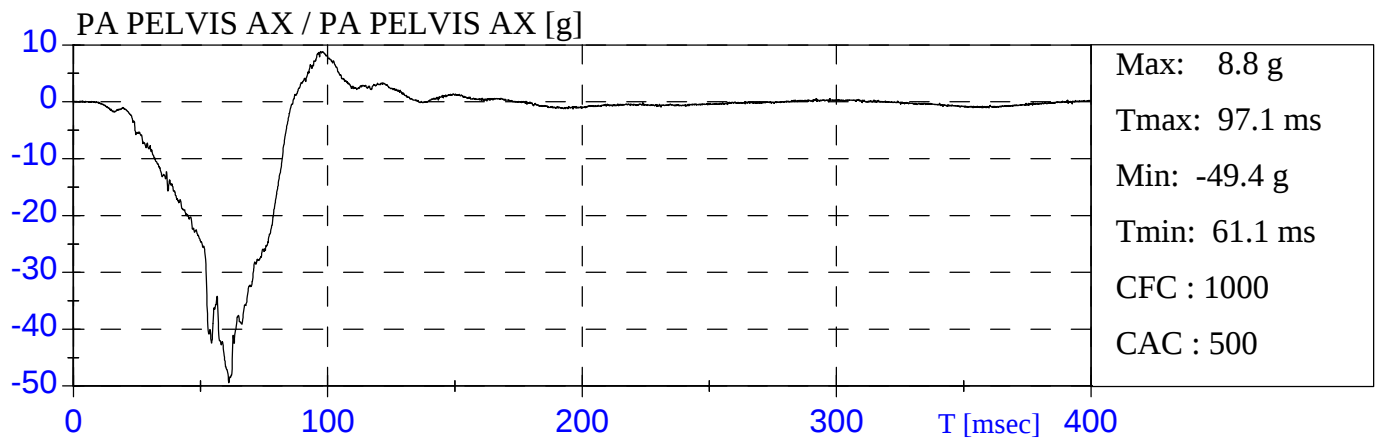
Max: 0.1 mm
Tmax: 16.8 ms
Min: -31.8 mm
Tmin: 77.1 ms
CFC : 1000
CAC : 120

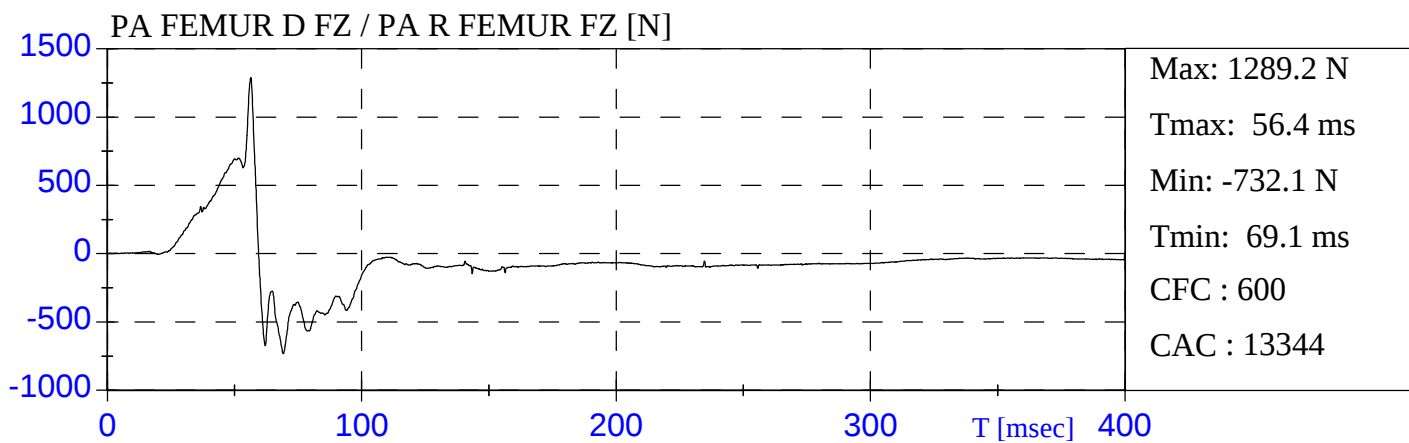
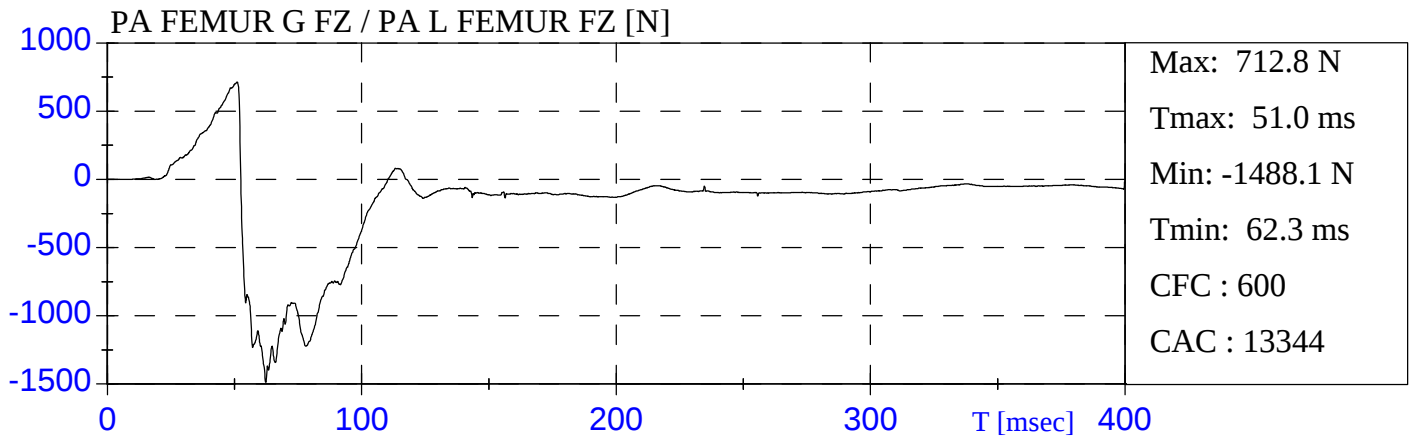
PA IR BG DX / PA IR LL DX [mm]



Max: 0.3 mm
Tmax: 16.8 ms
Min: -28.4 mm
Tmin: 71.2 ms
CFC : 1000
CAC : 120

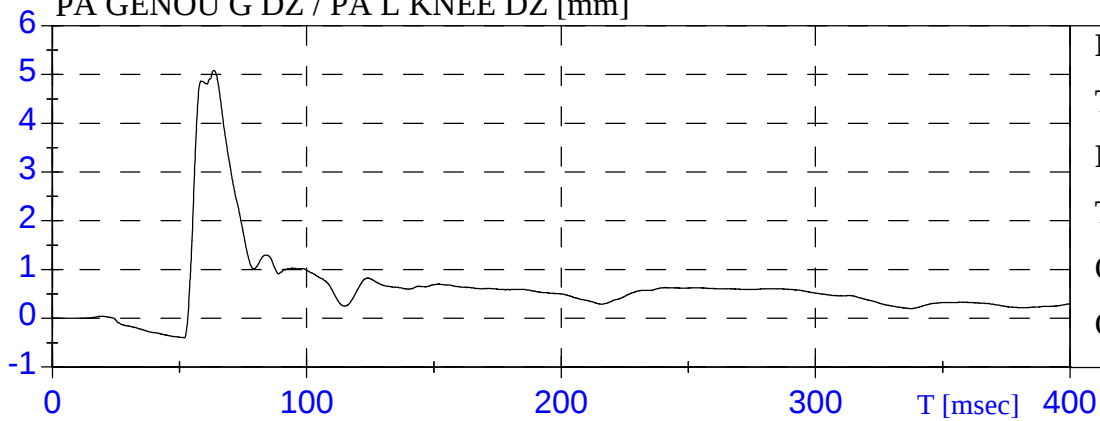




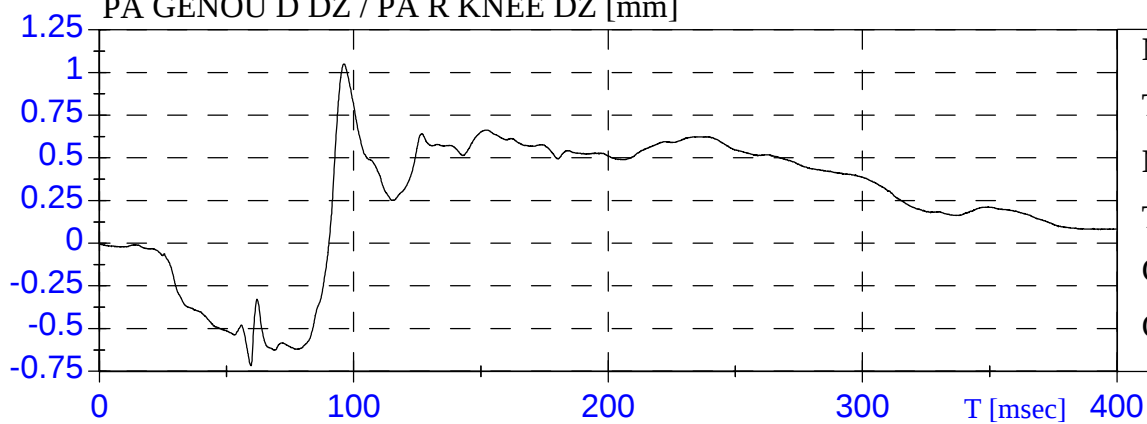


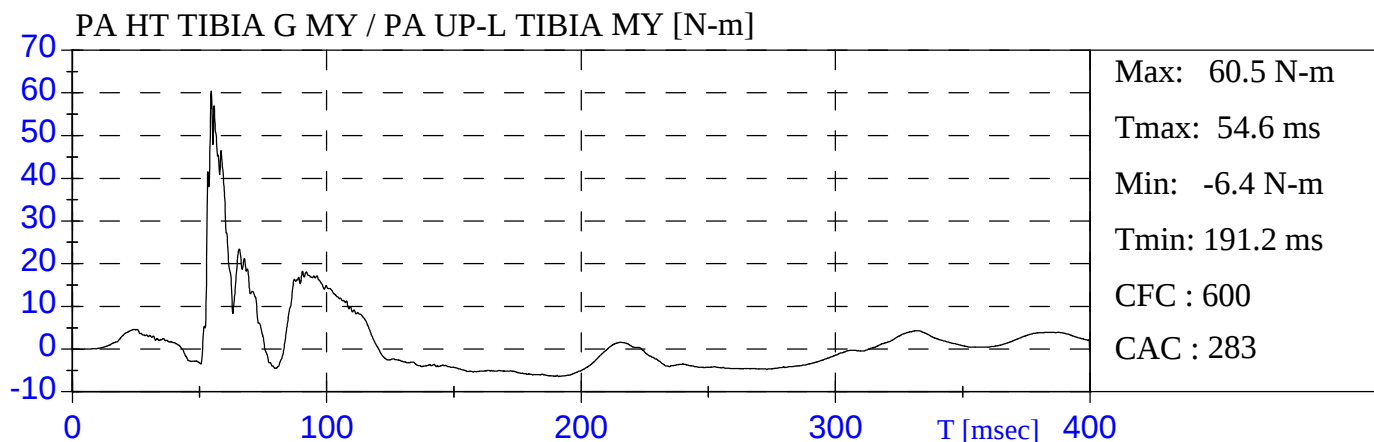
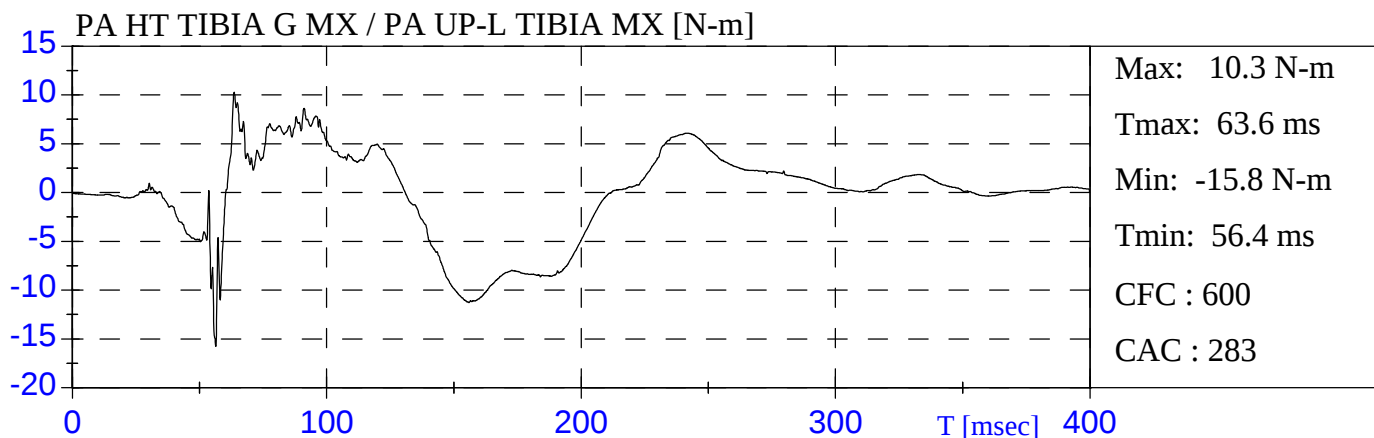
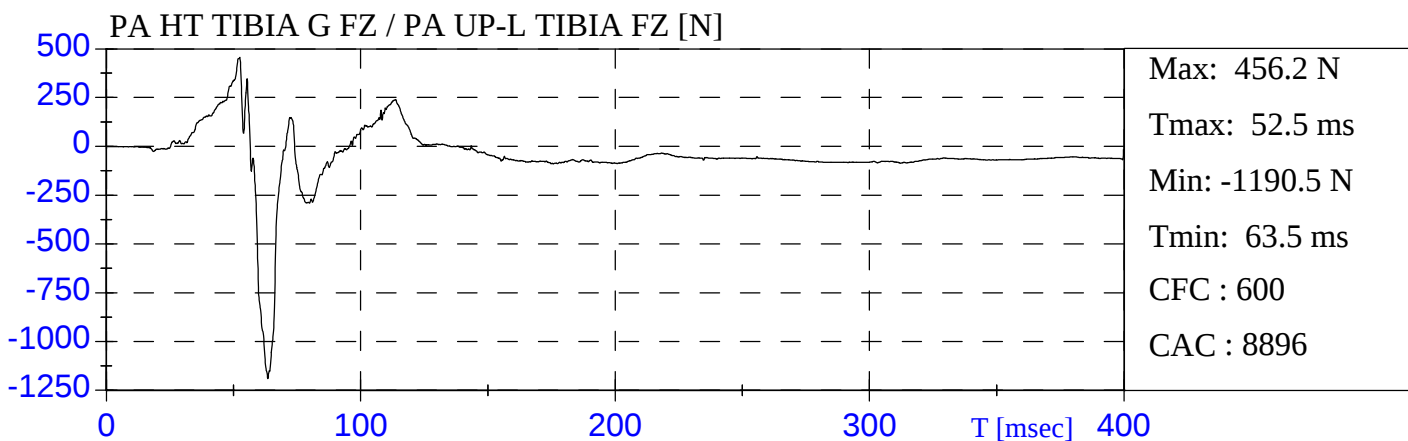
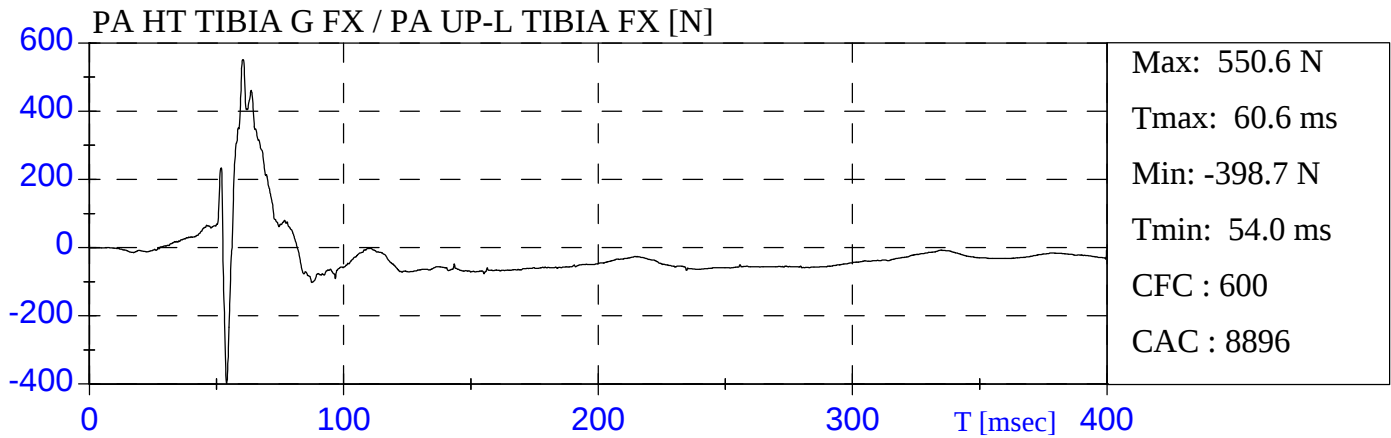


PA GENOU G DZ / PA L KNEE DZ [mm]



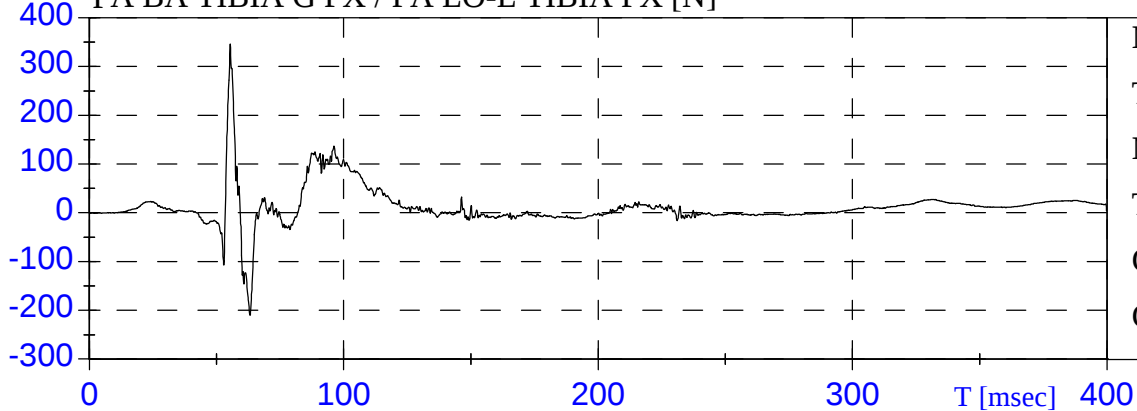
PA GENOU D DZ / PA R KNEE DZ [mm]





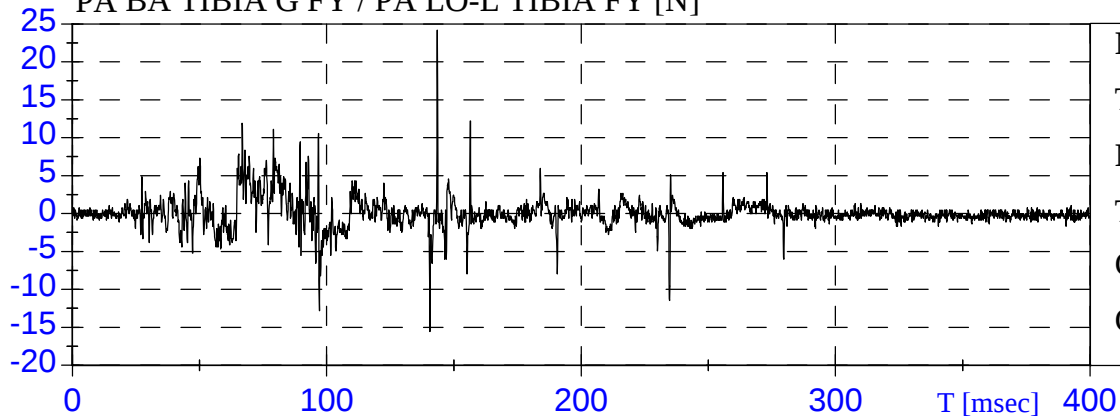


PA BA TIBIA G FX / PA LO-L TIBIA FX [N]



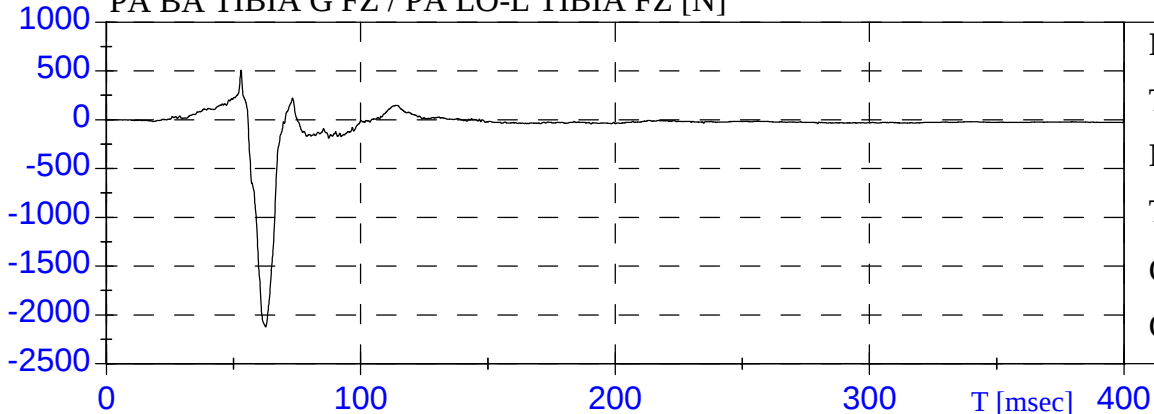
Max: 345.9 N
Tmax: 55.4 ms
Min: -209.8 N
Tmin: 63.2 ms
CFC : 600
CAC : 8896

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



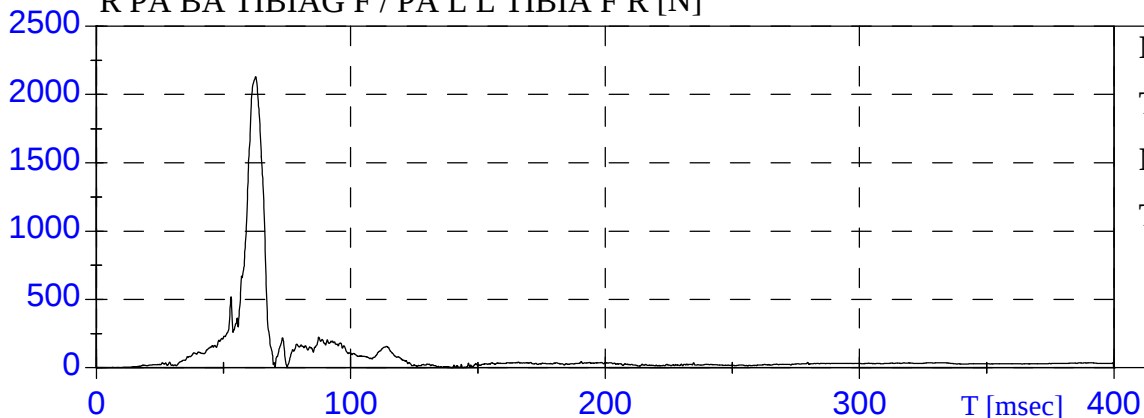
Max: 24.2 N
Tmax: 143.5 ms
Min: -15.6 N
Tmin: 140.6 ms
CFC : 1000
CAC : 8896

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

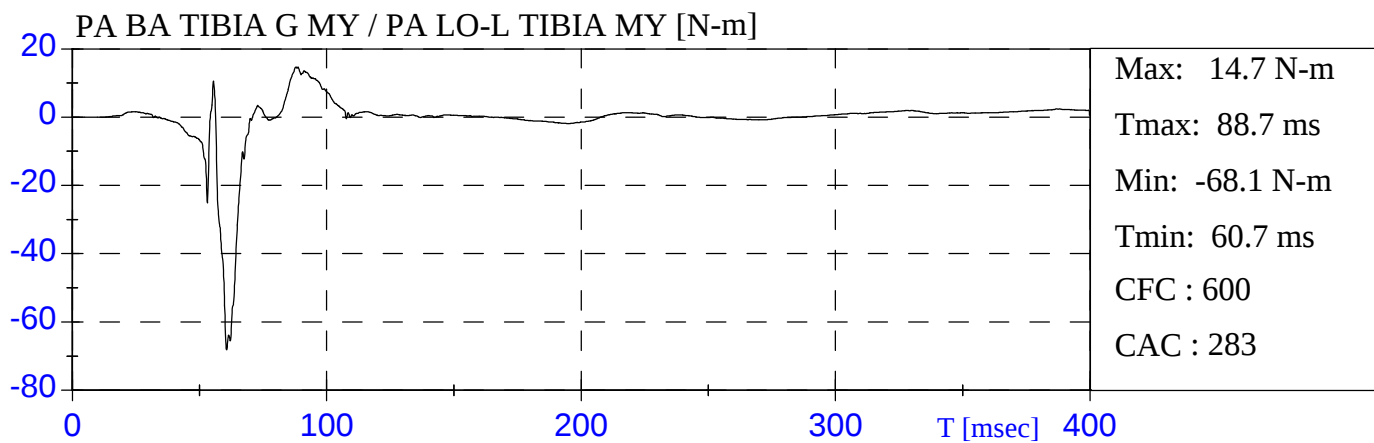
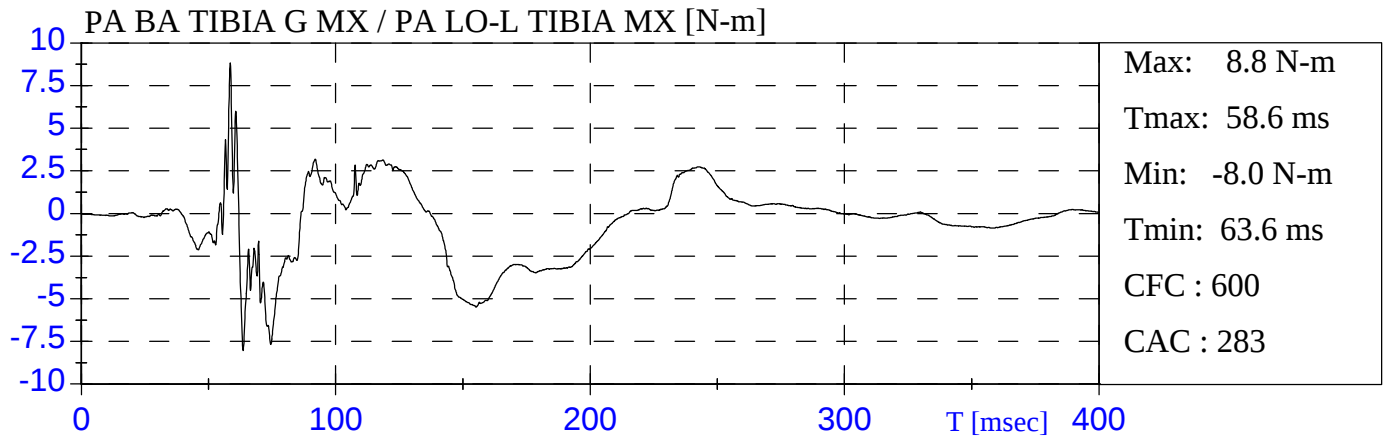


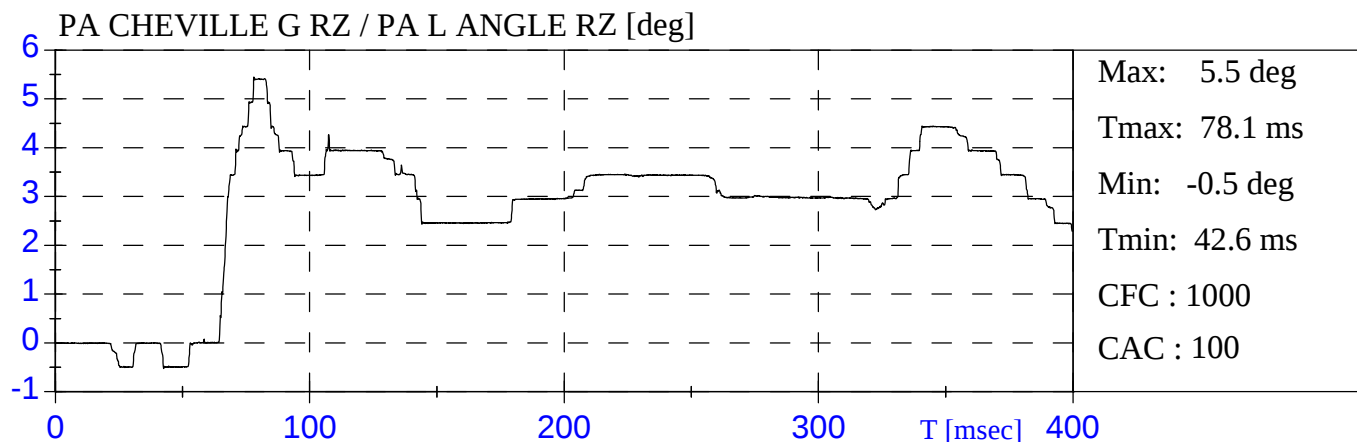
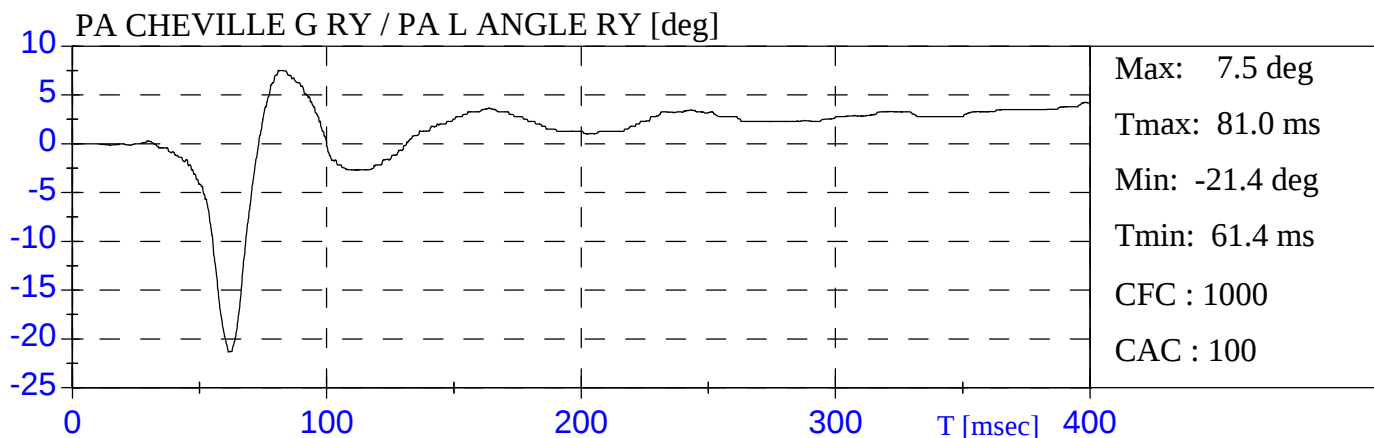
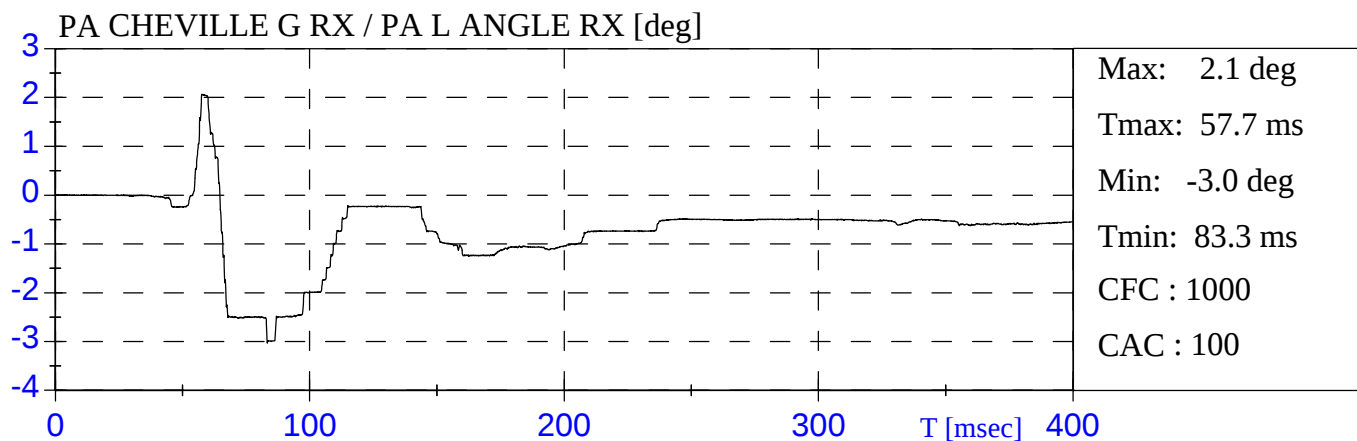
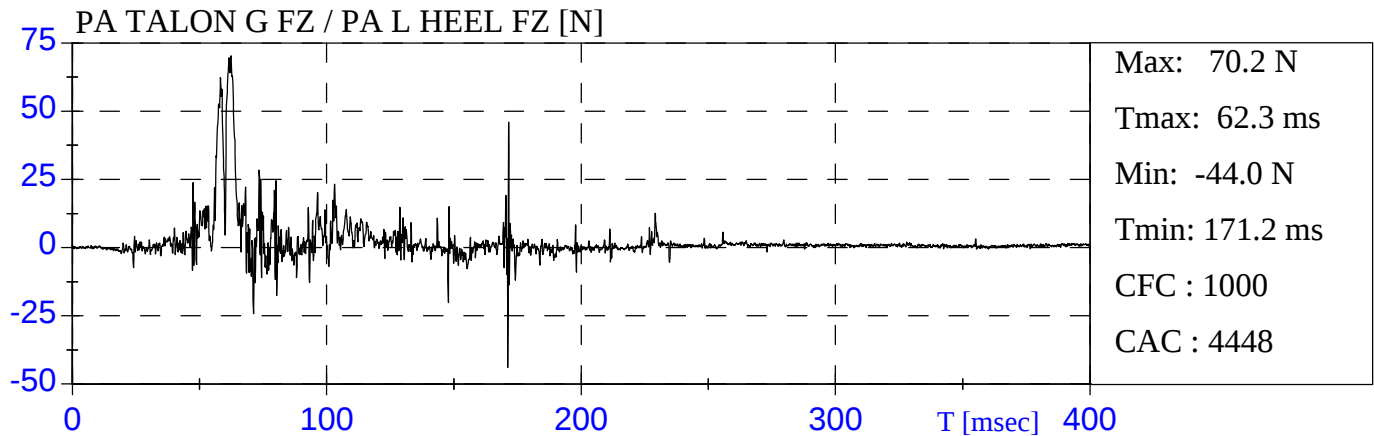
Max: 509.0 N
Tmax: 53.0 ms
Min: -2121.8 N
Tmin: 62.7 ms
CFC : 600
CAC : 8896

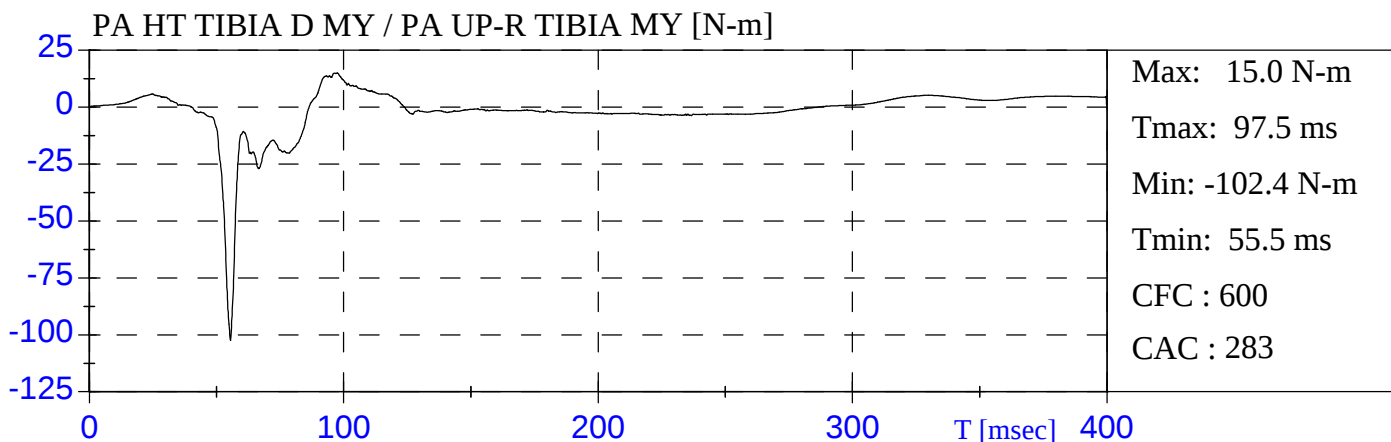
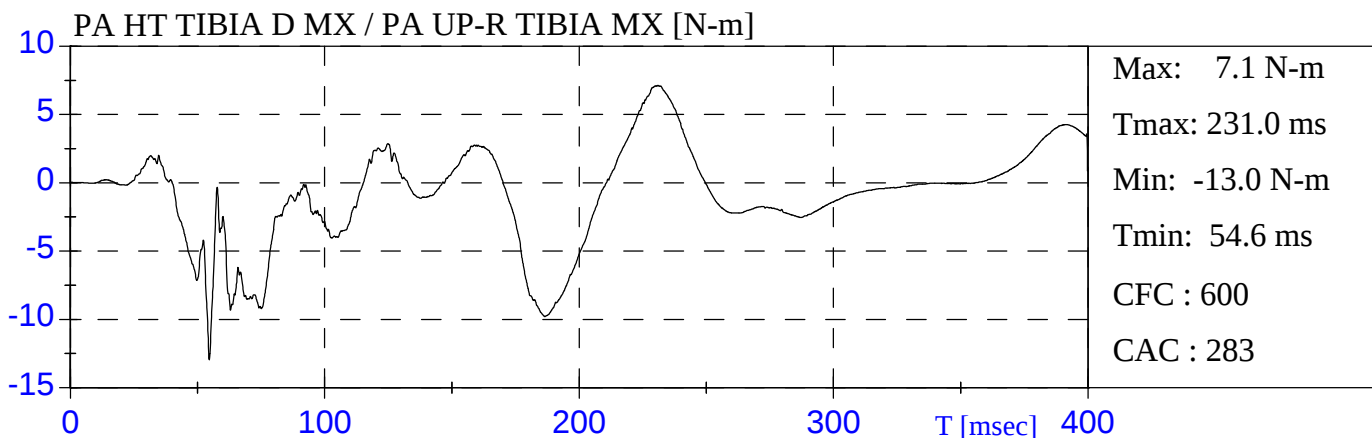
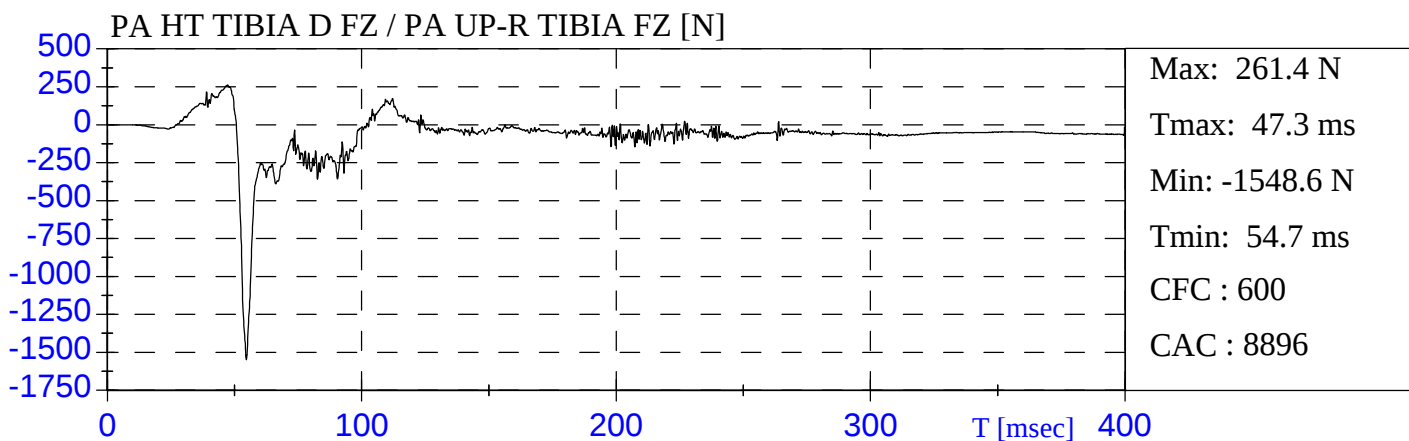
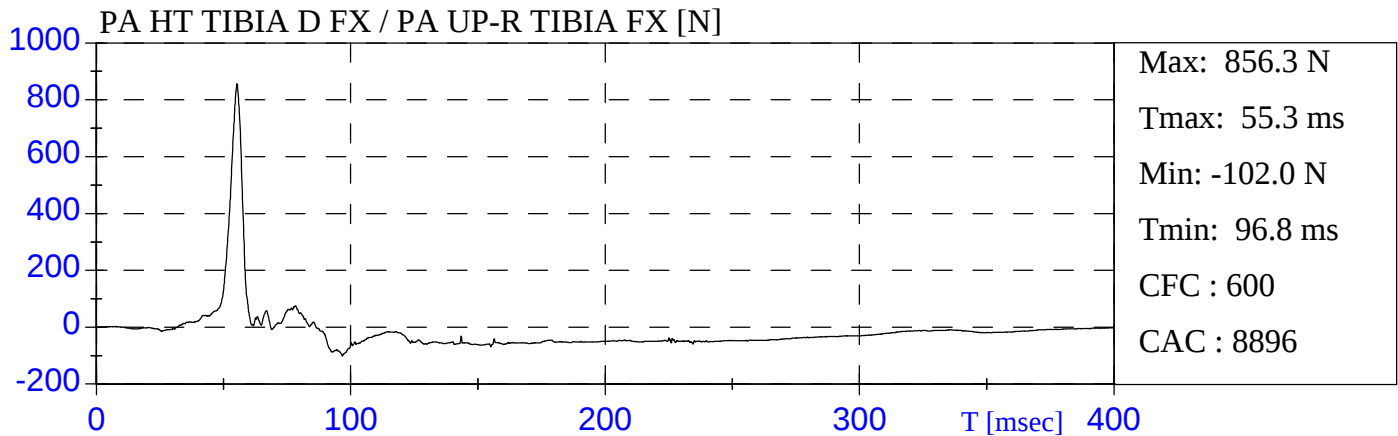
R PA BA TIBIAG F / PA L L TIBIA F R [N]

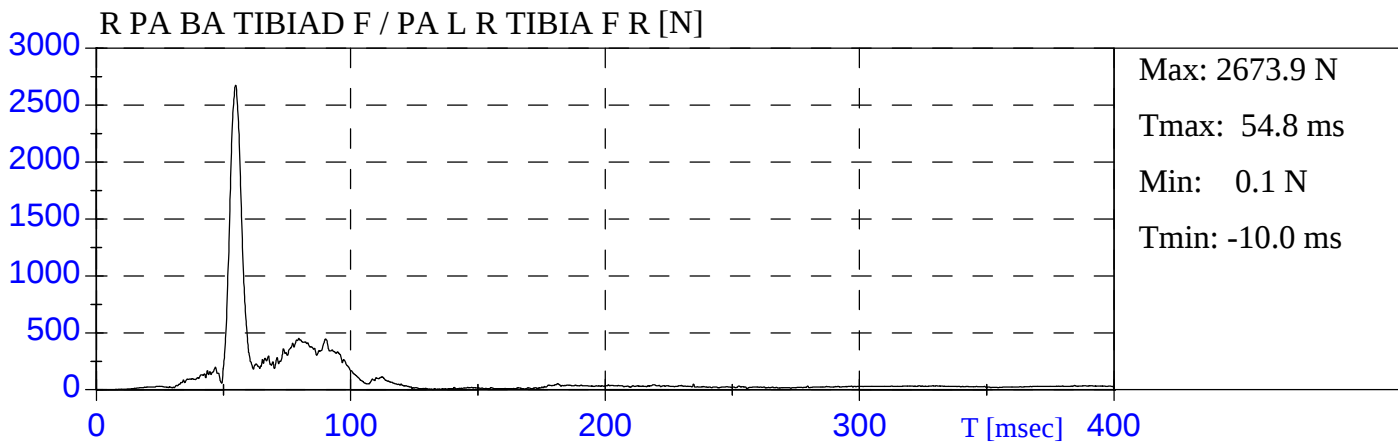
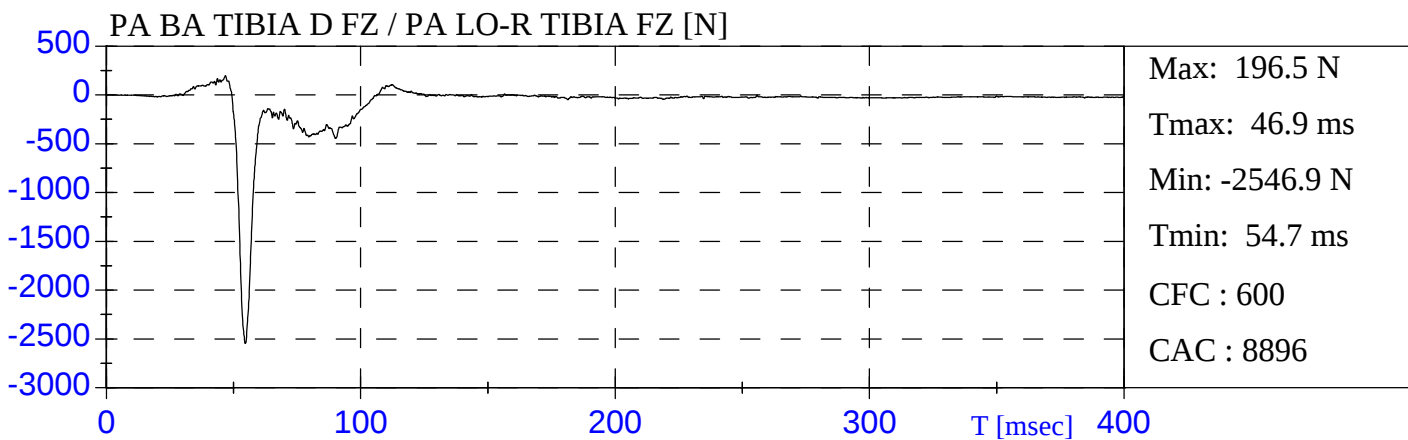
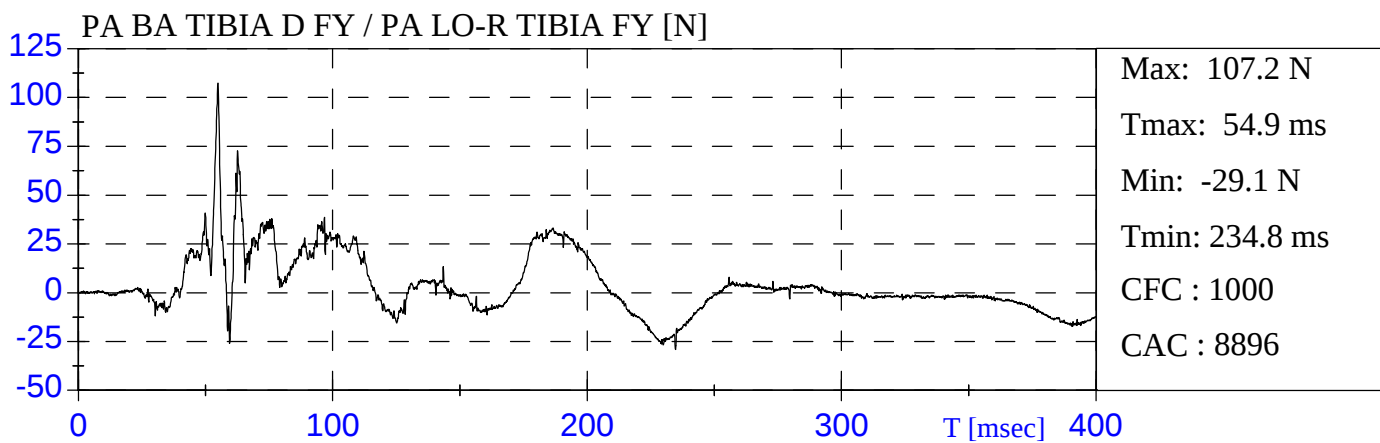
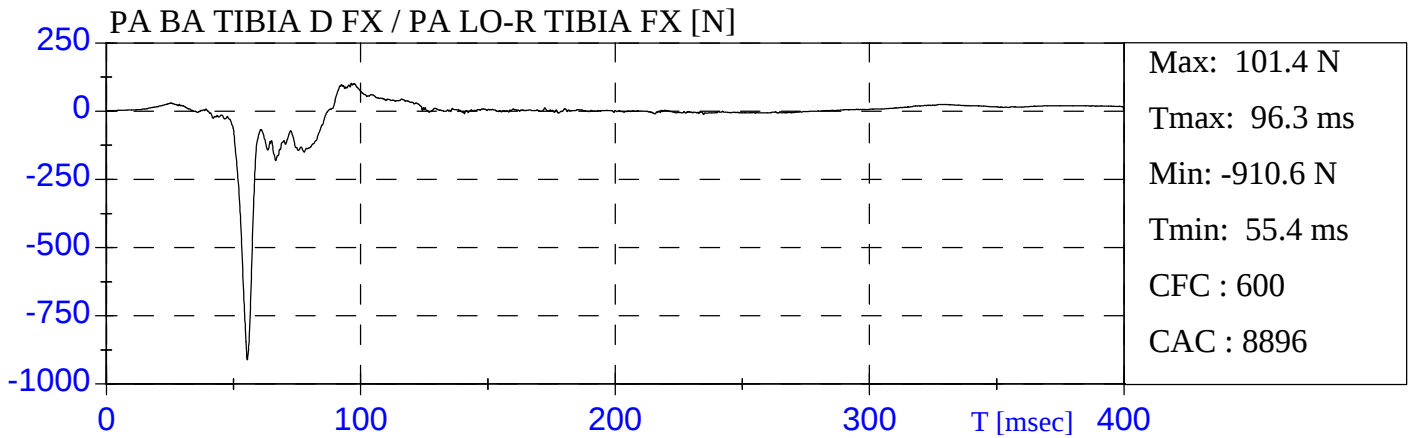


Max: 2130.1 N
Tmax: 62.7 ms
Min: 0.1 N
Tmin: -9.2 ms

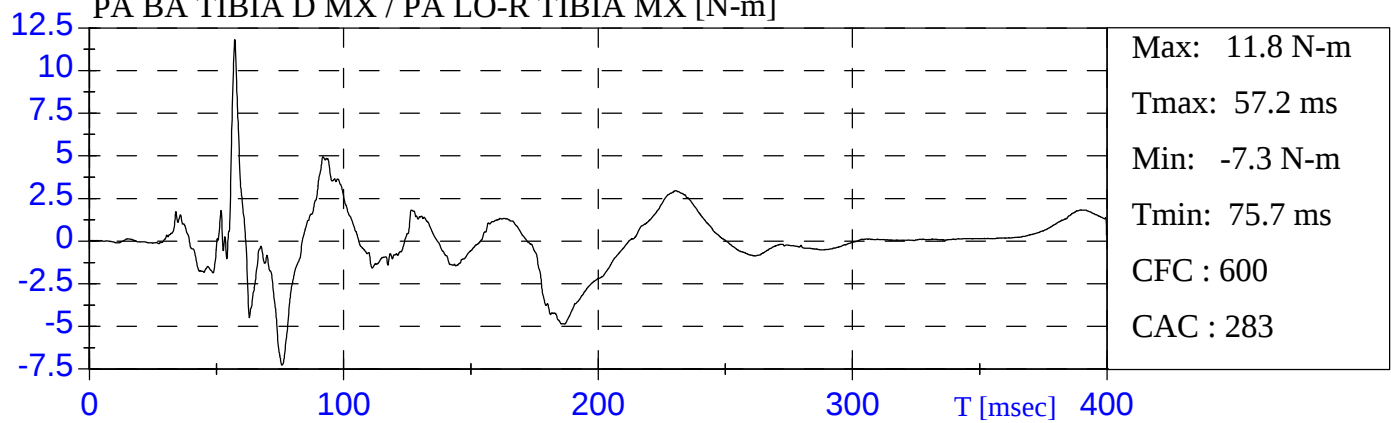




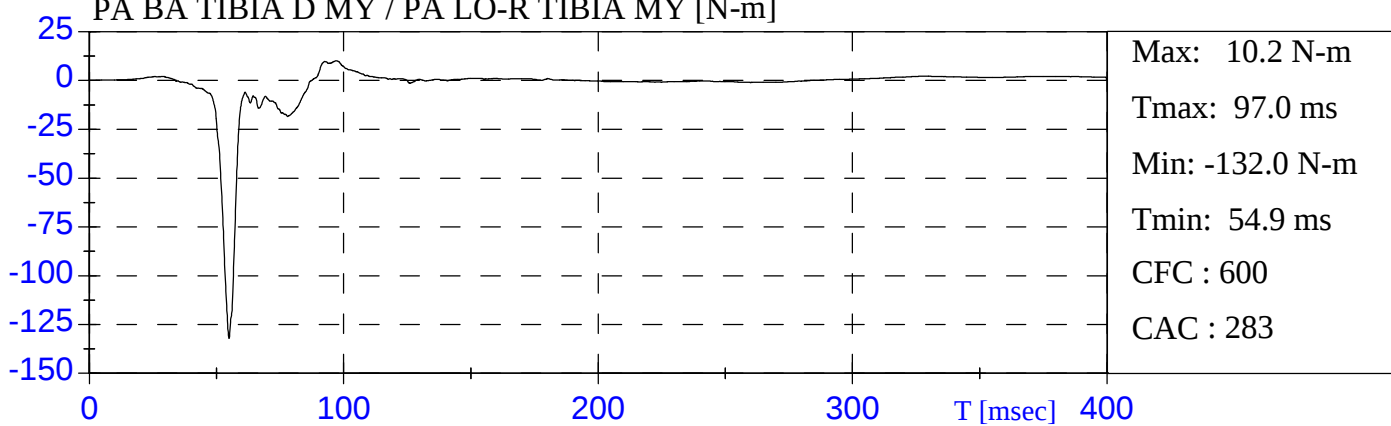


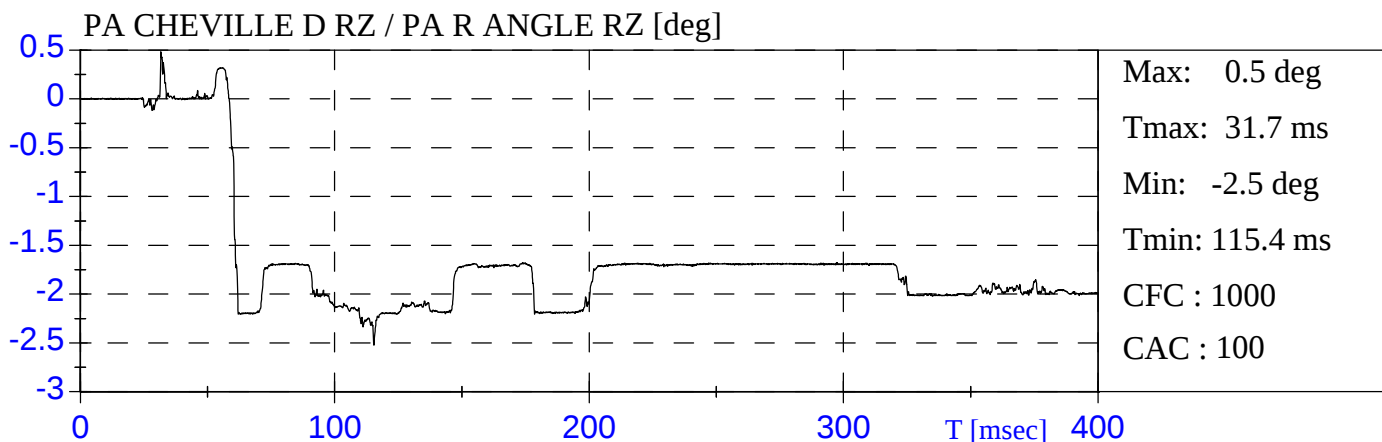
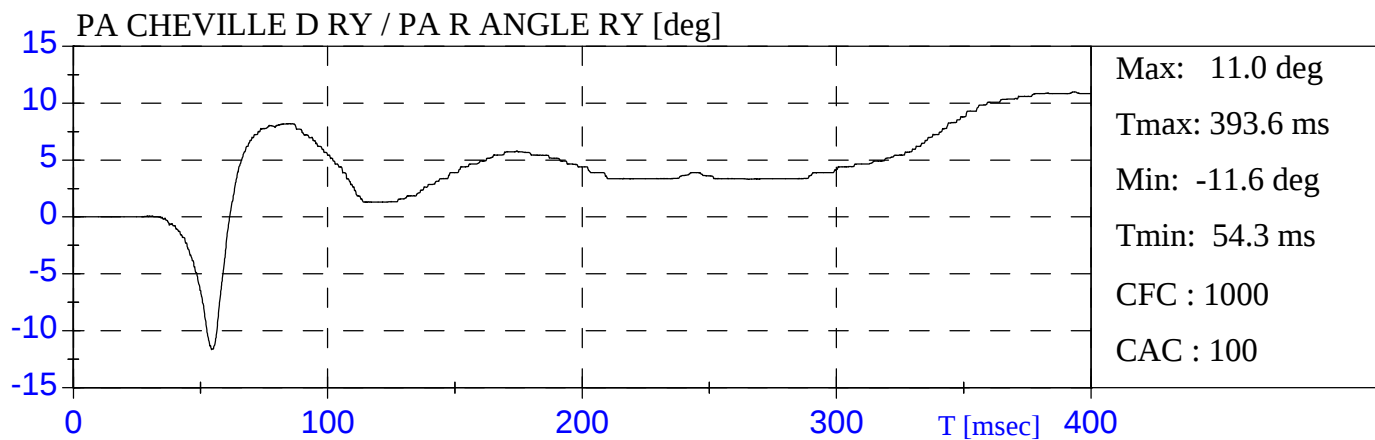
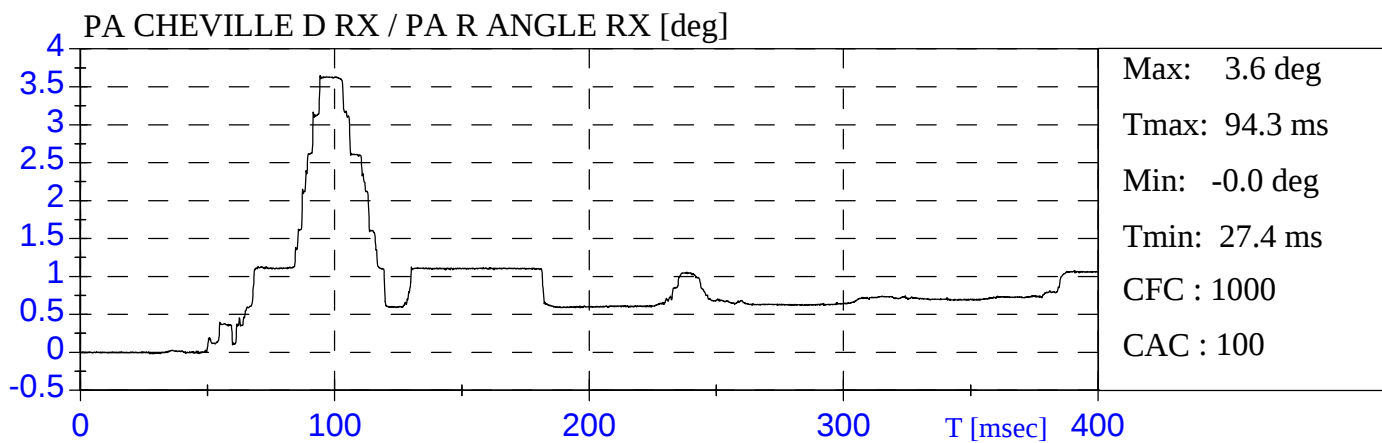
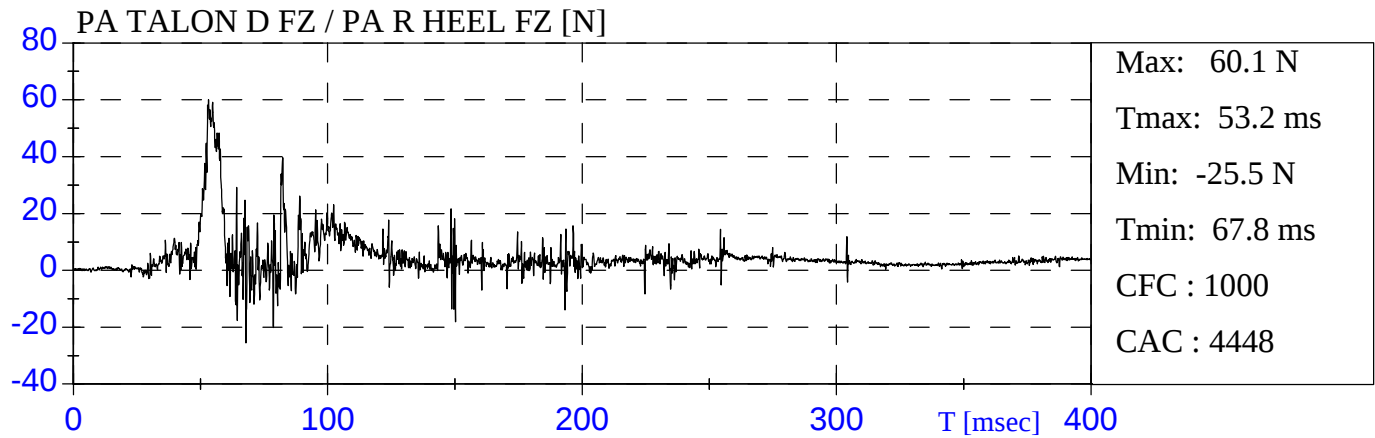


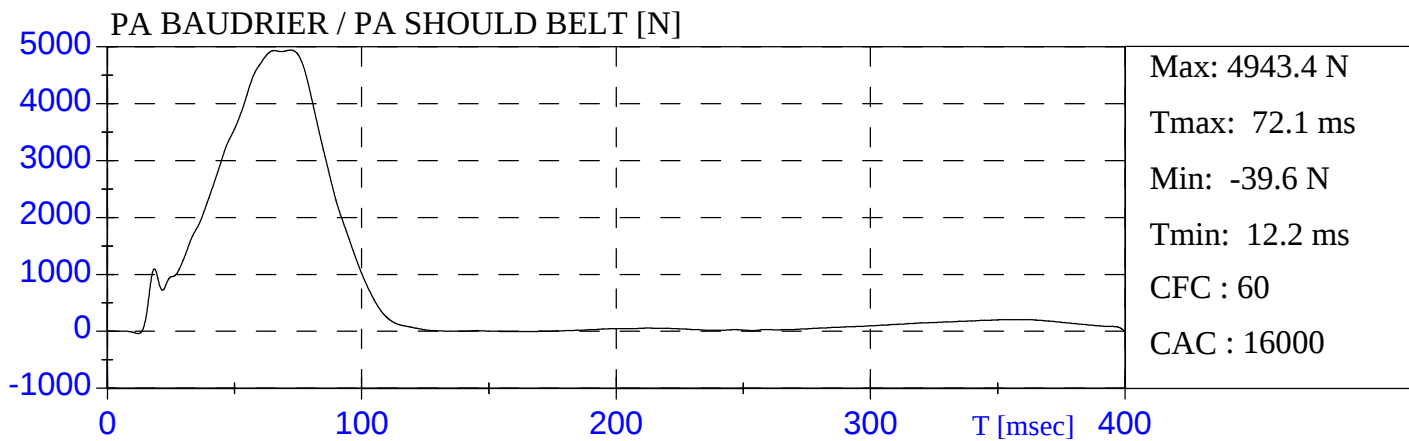
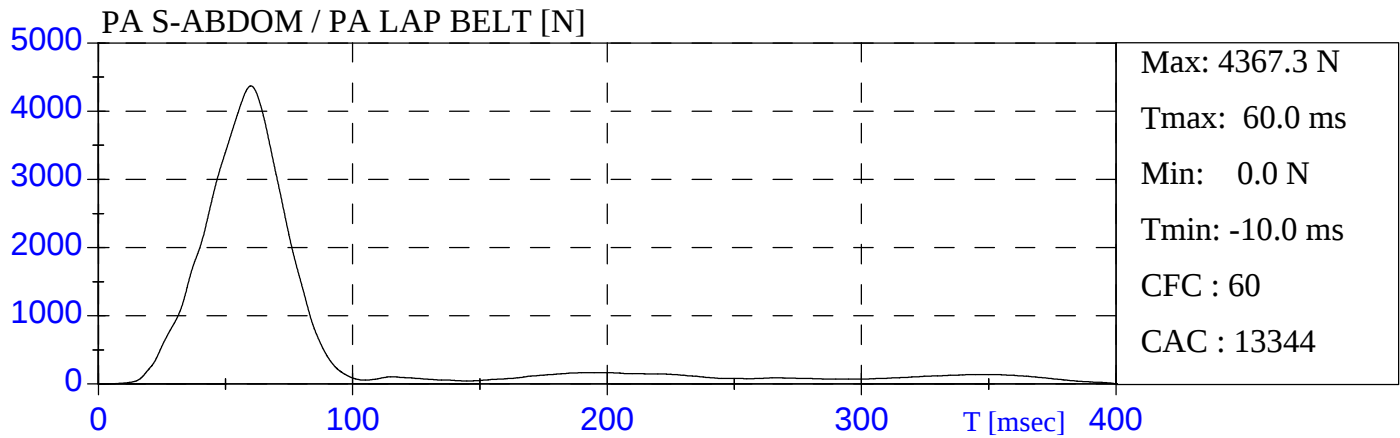
PA BA TIBIA D MX / PA LO-R TIBIA MX [N-m]

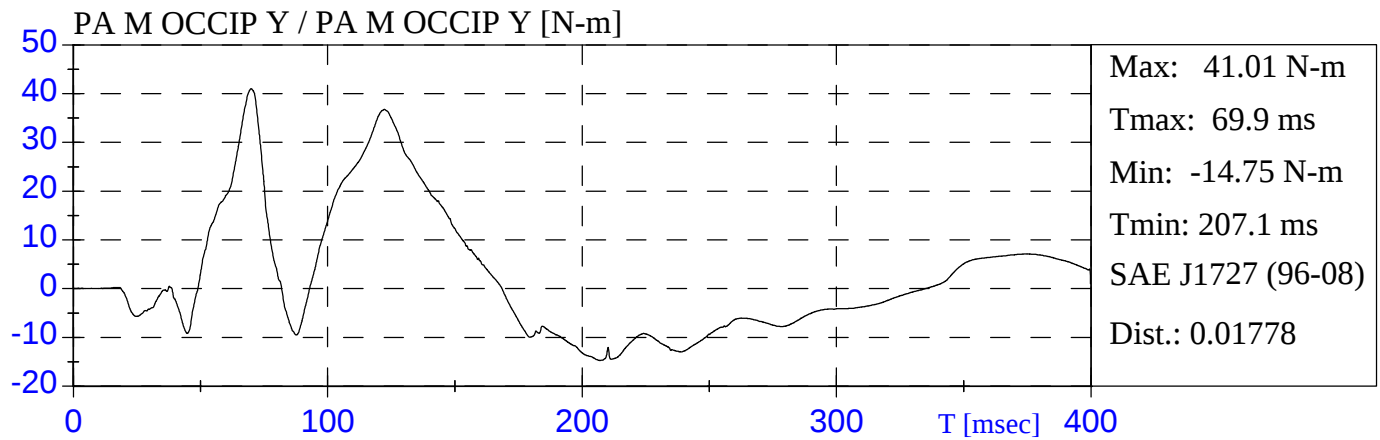


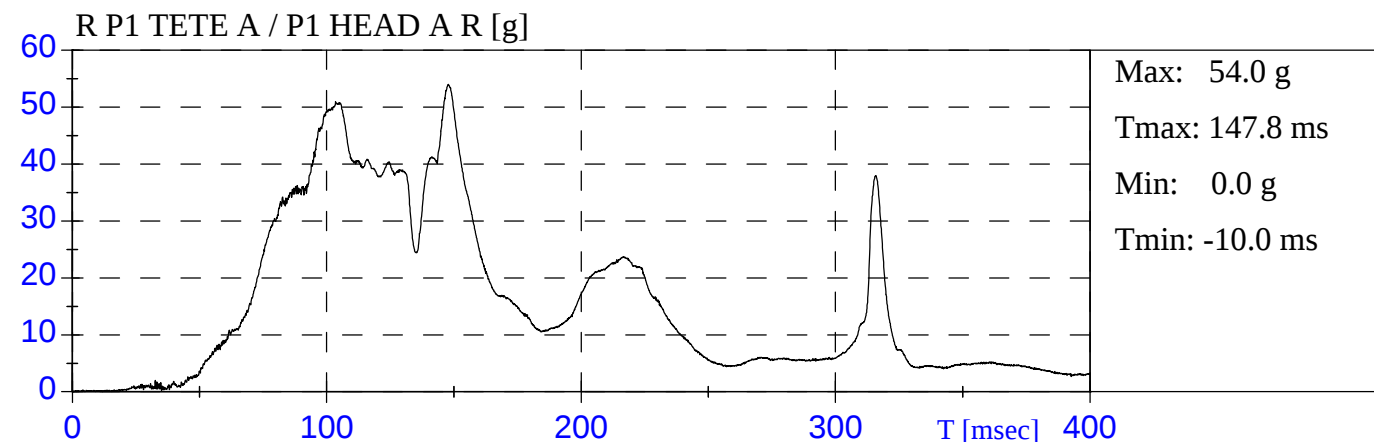
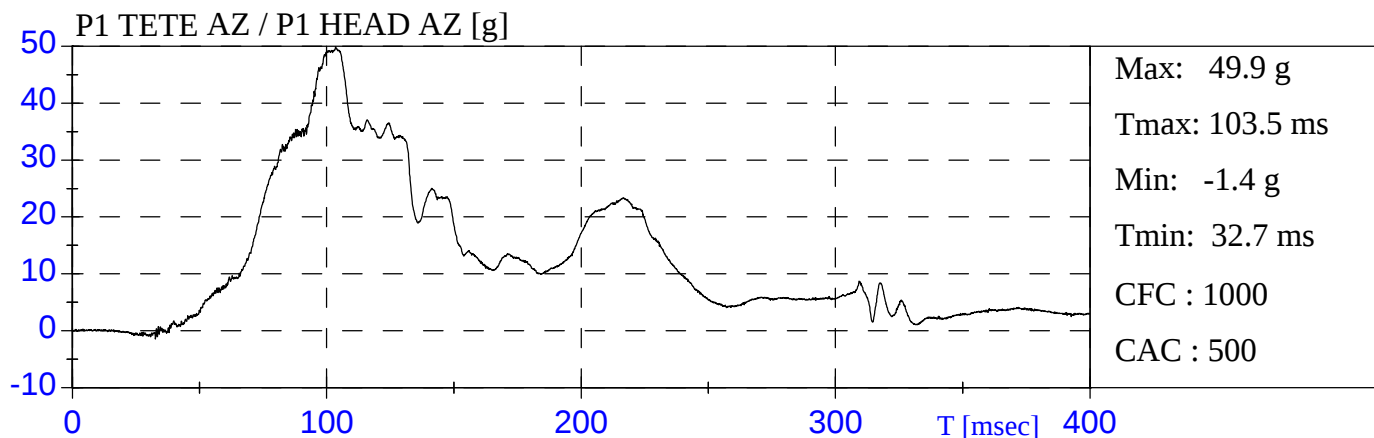
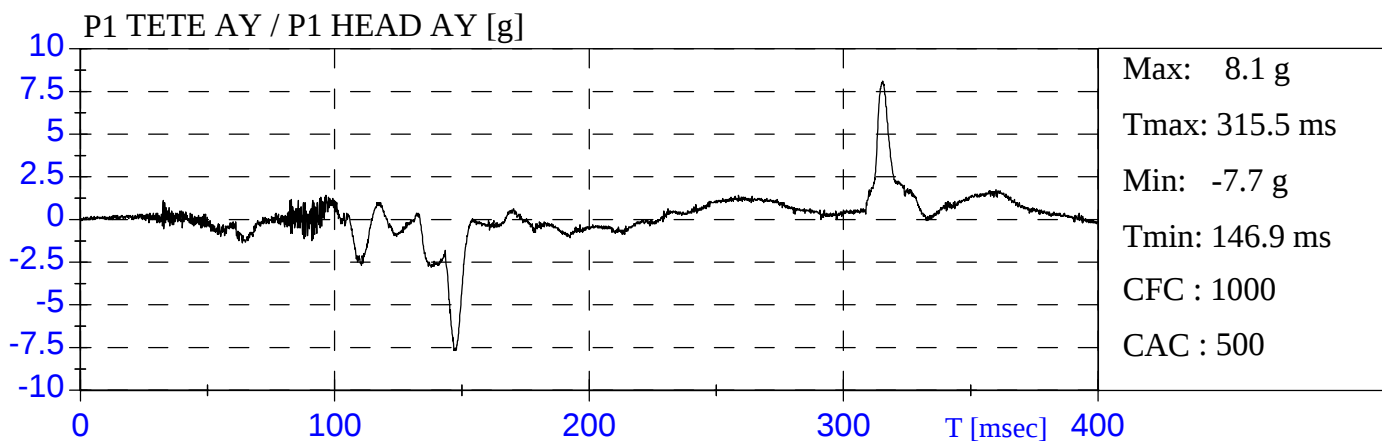
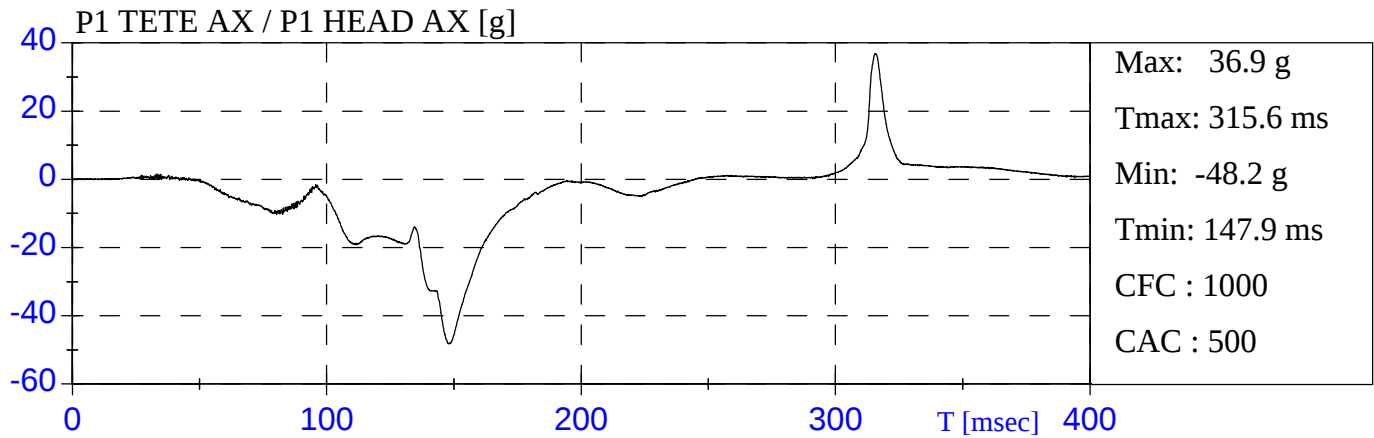
PA BA TIBIA D MY / PA LO-R TIBIA MY [N-m]

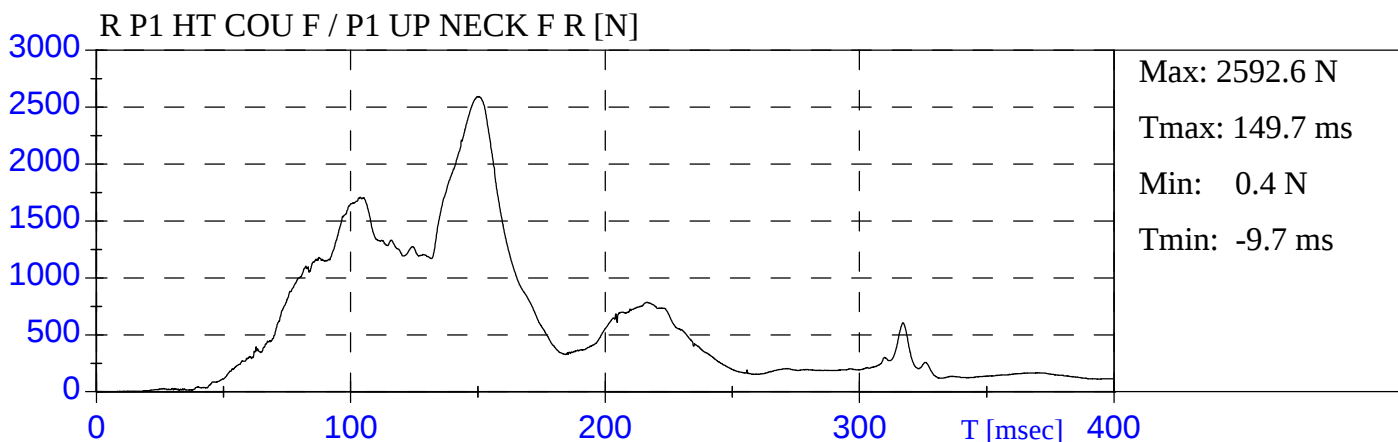
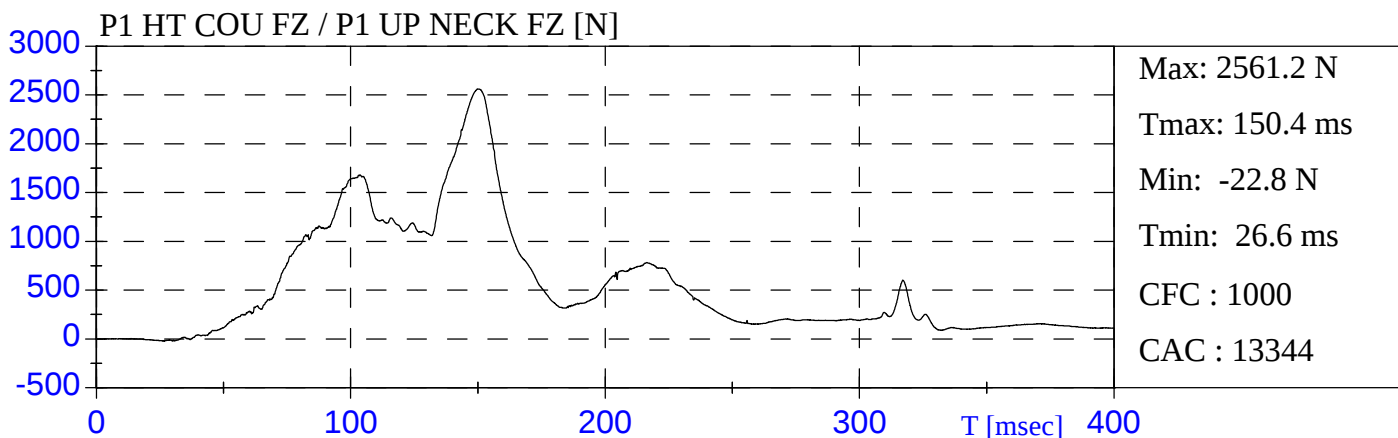
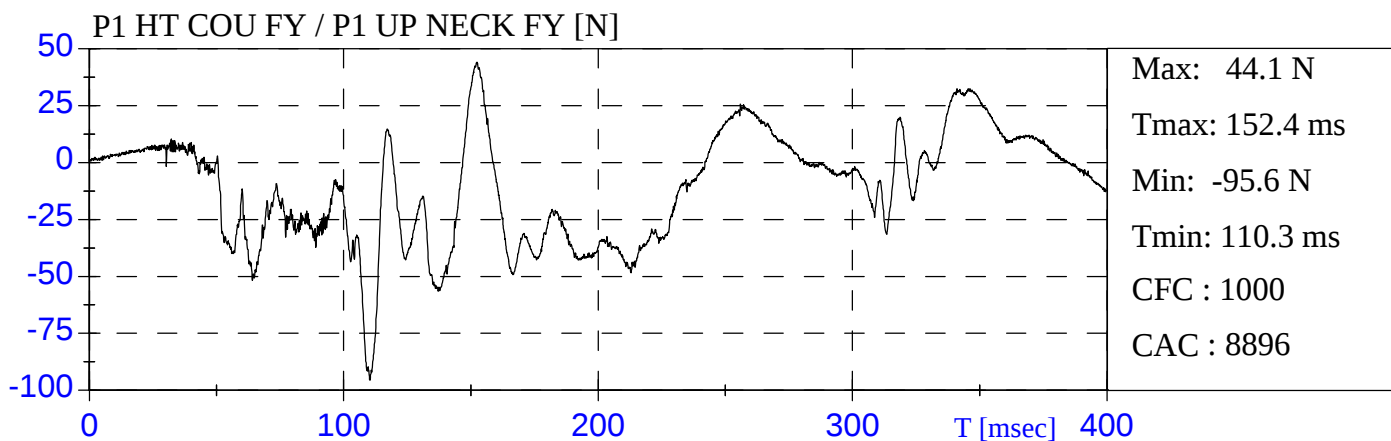
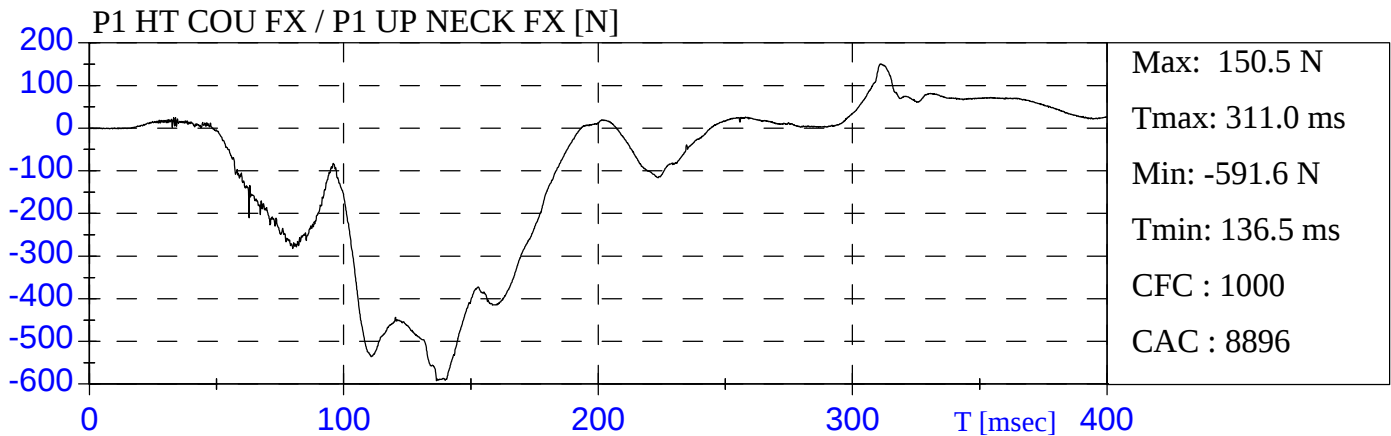












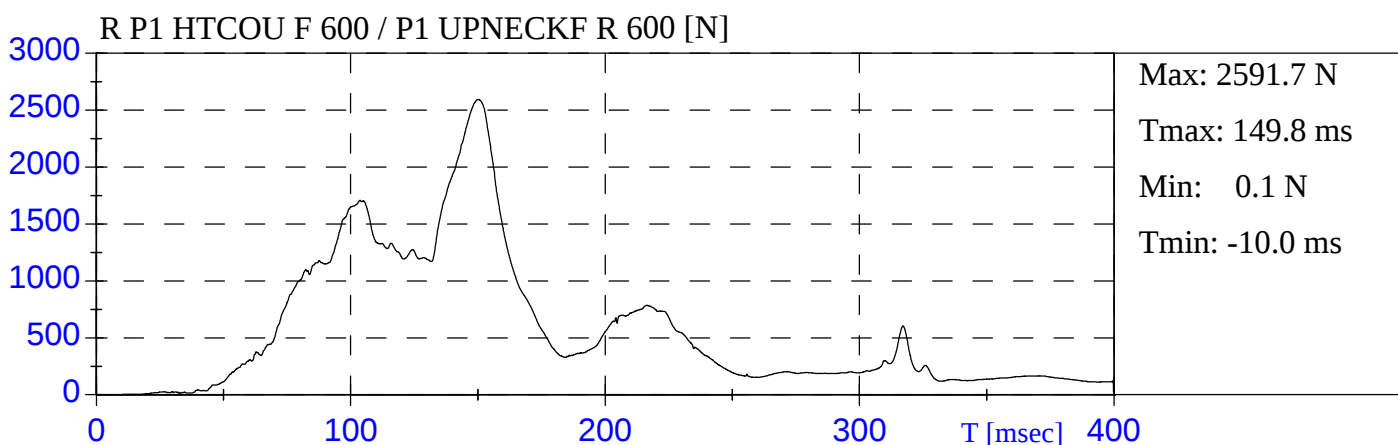
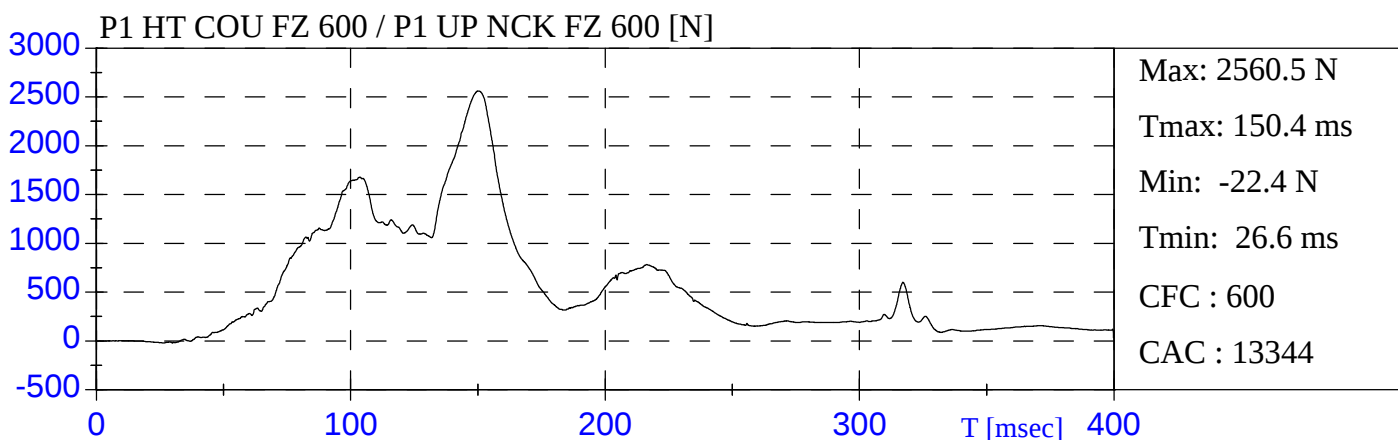
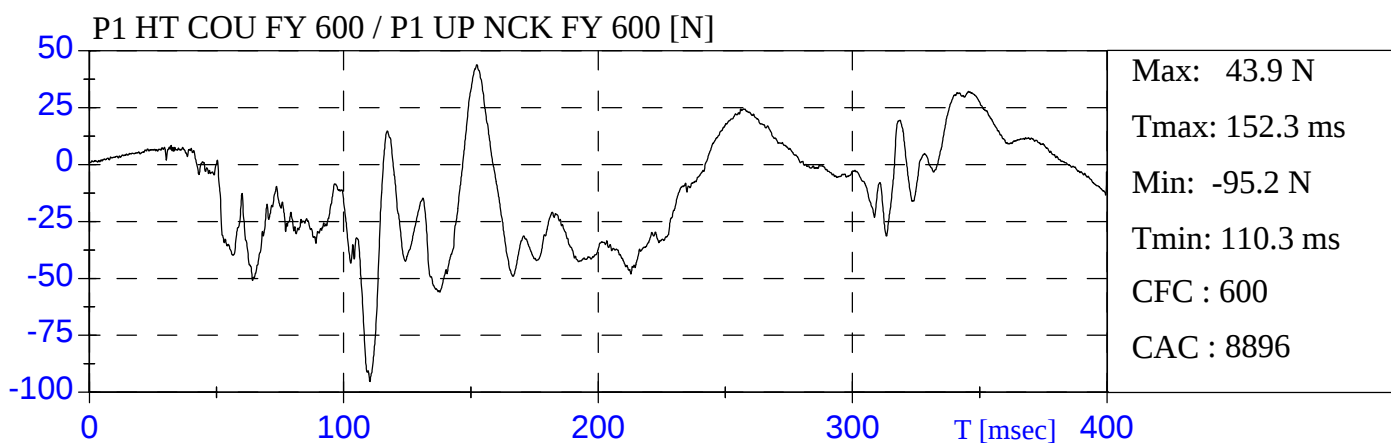
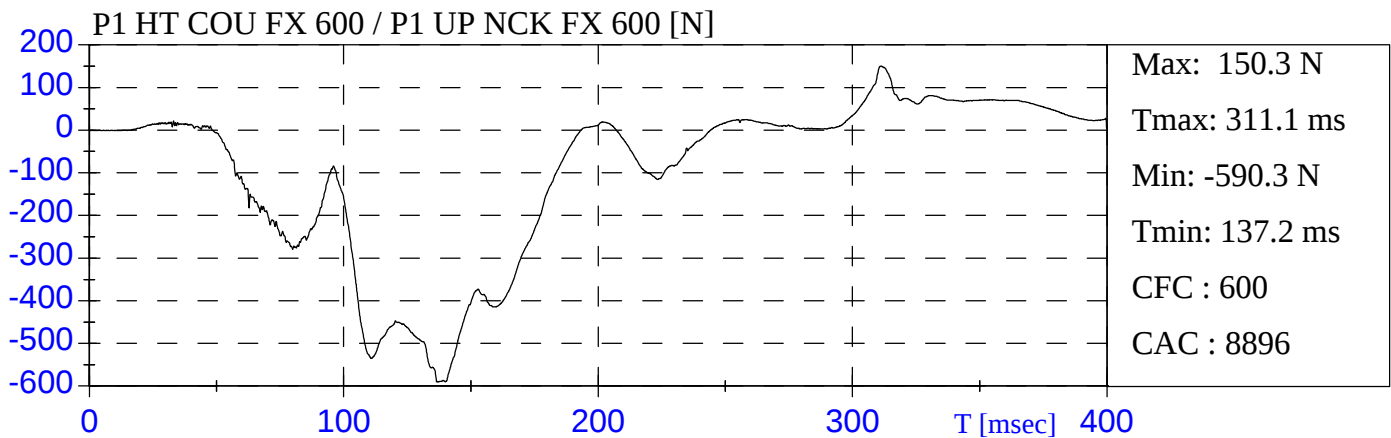


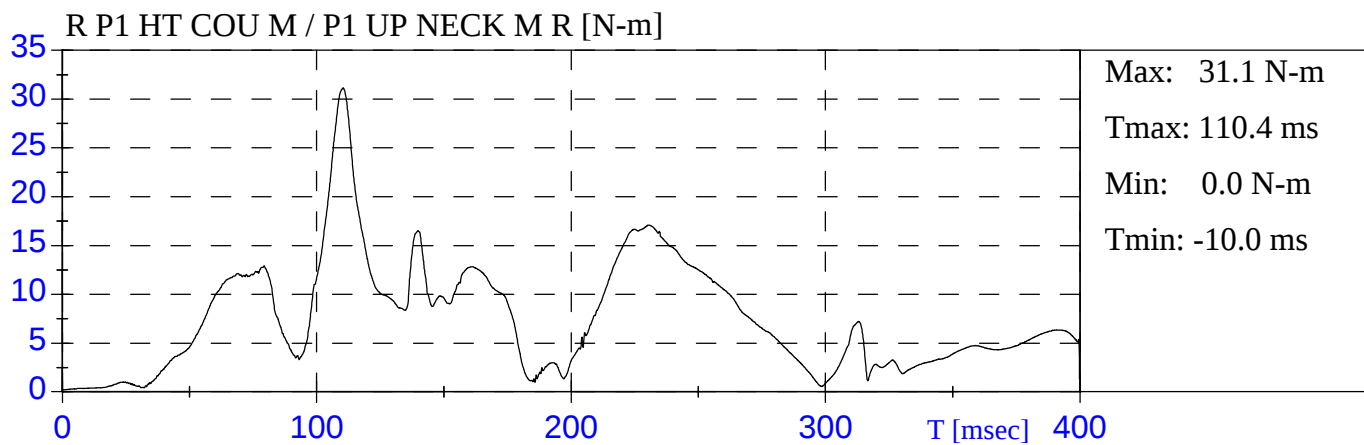
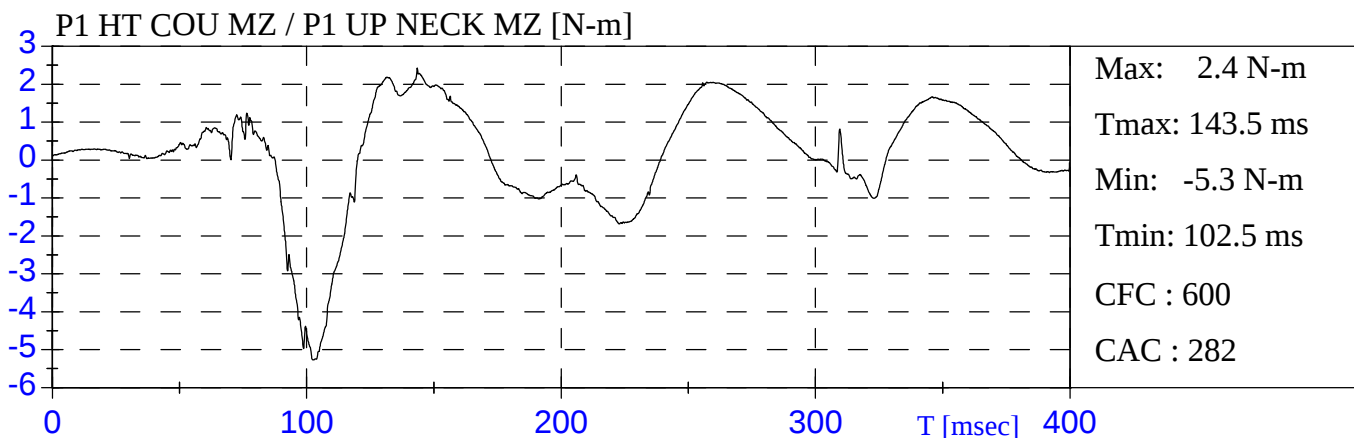
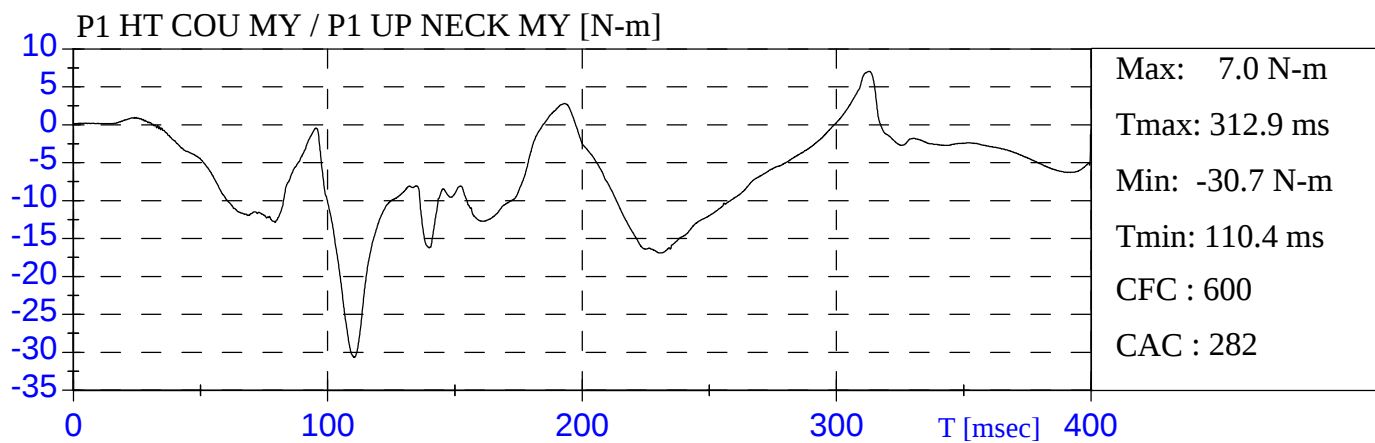
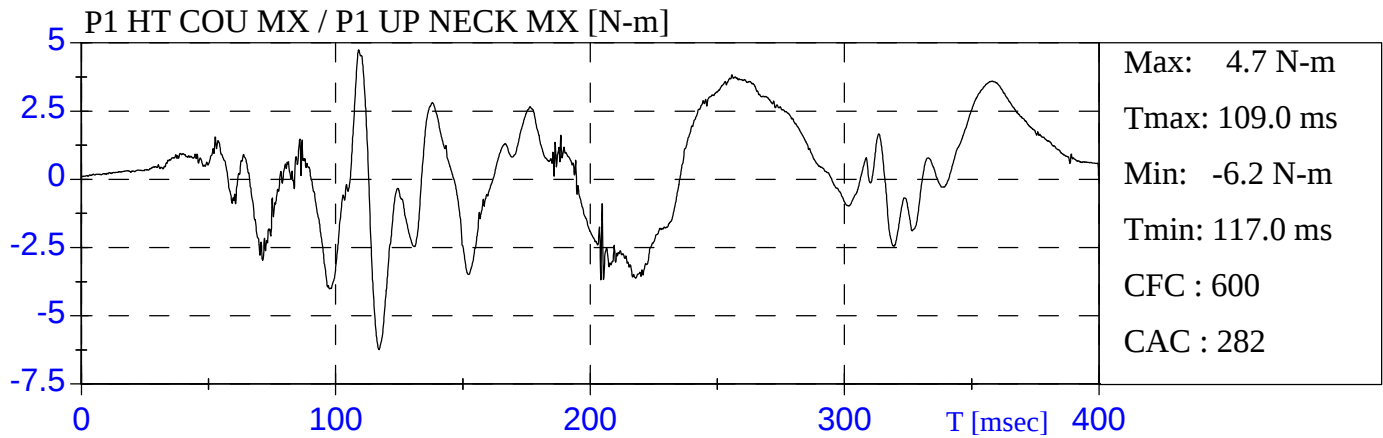
COLLISION FRONTALE
FRONTAL CRASH

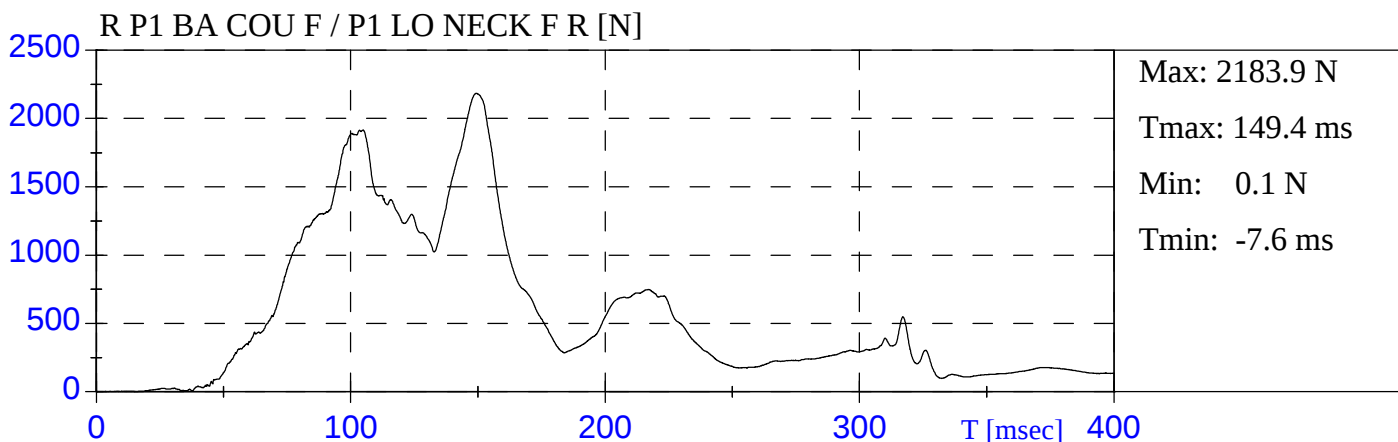
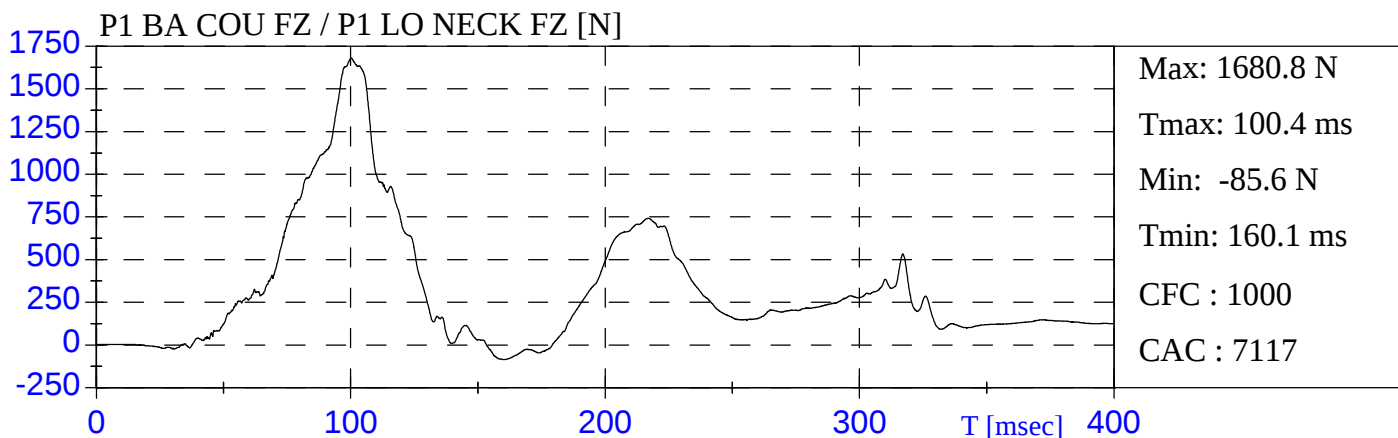
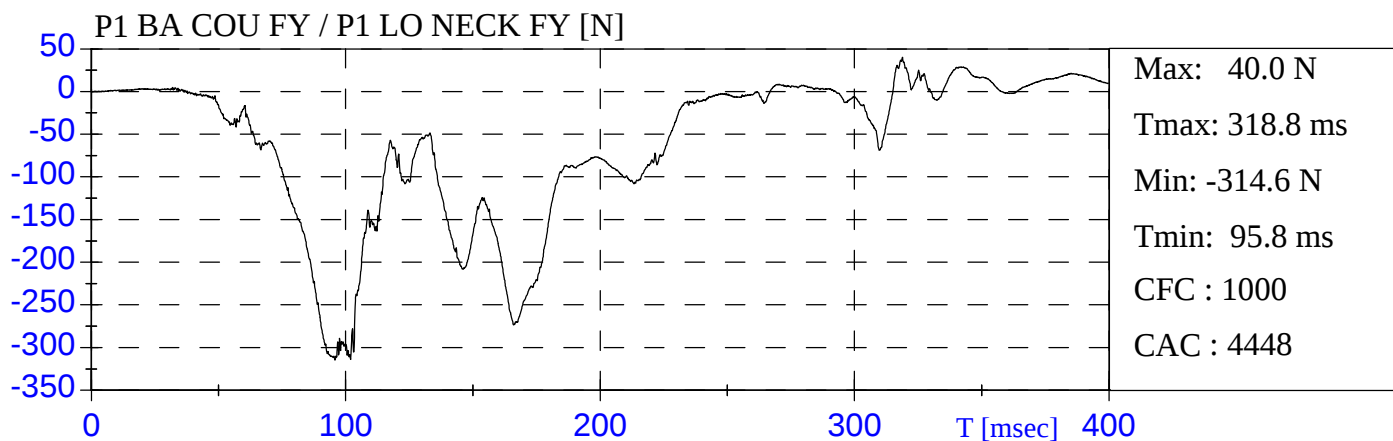
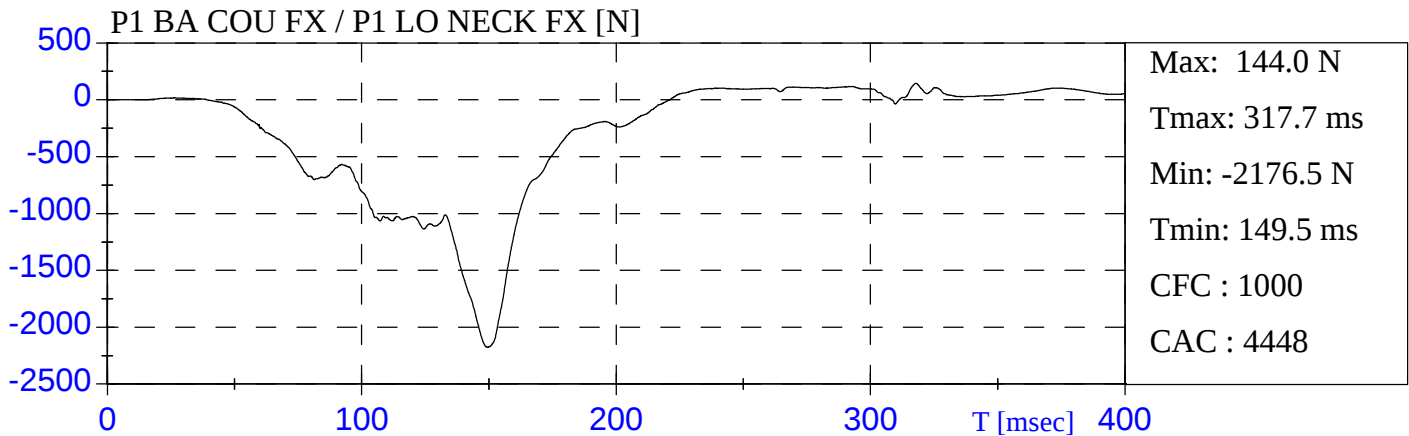
Date: 2004-03-31

NISSAN MURANO 2004

N° TC / TC No.: TC04-127







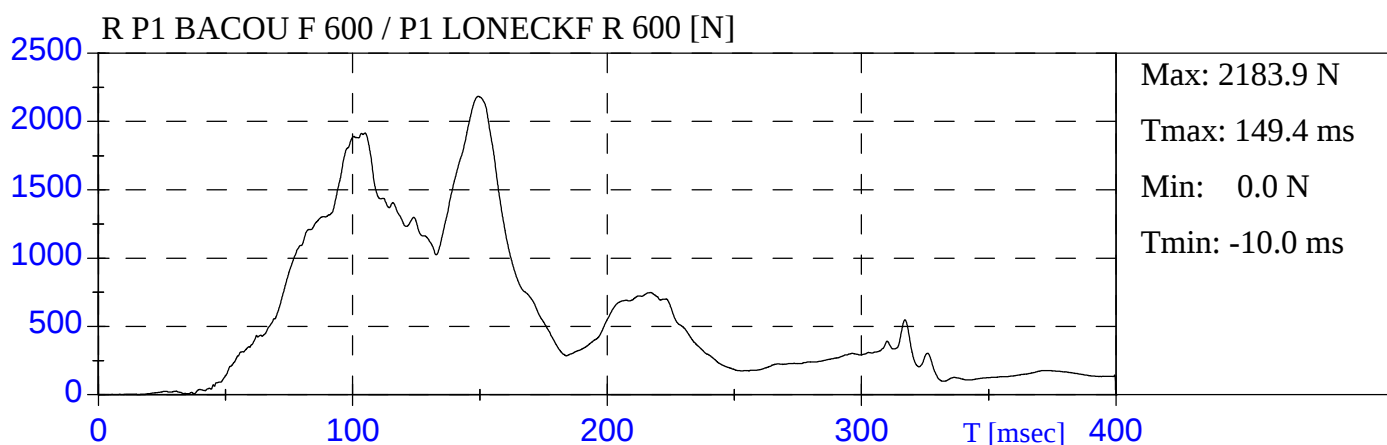
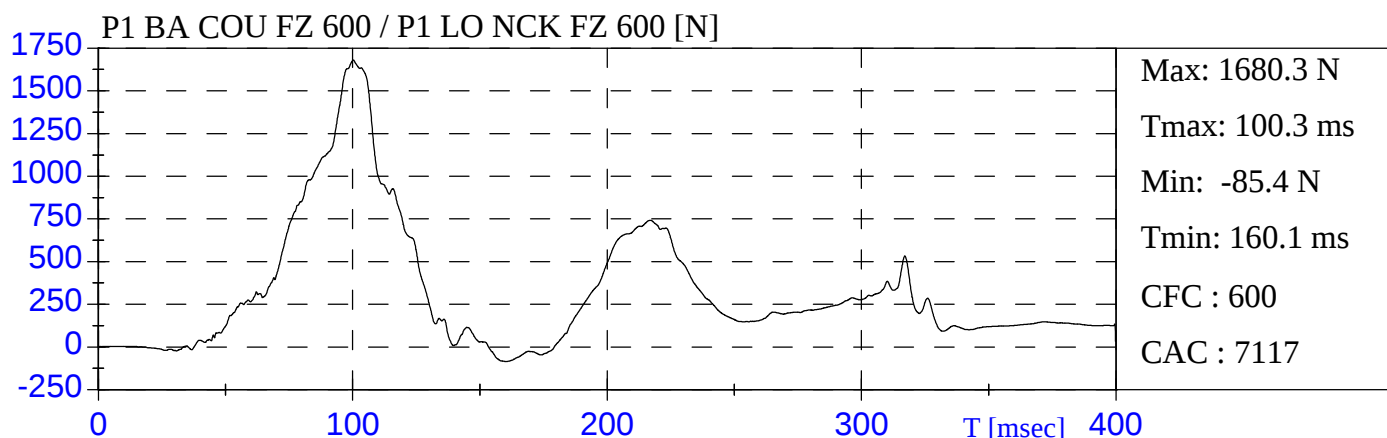
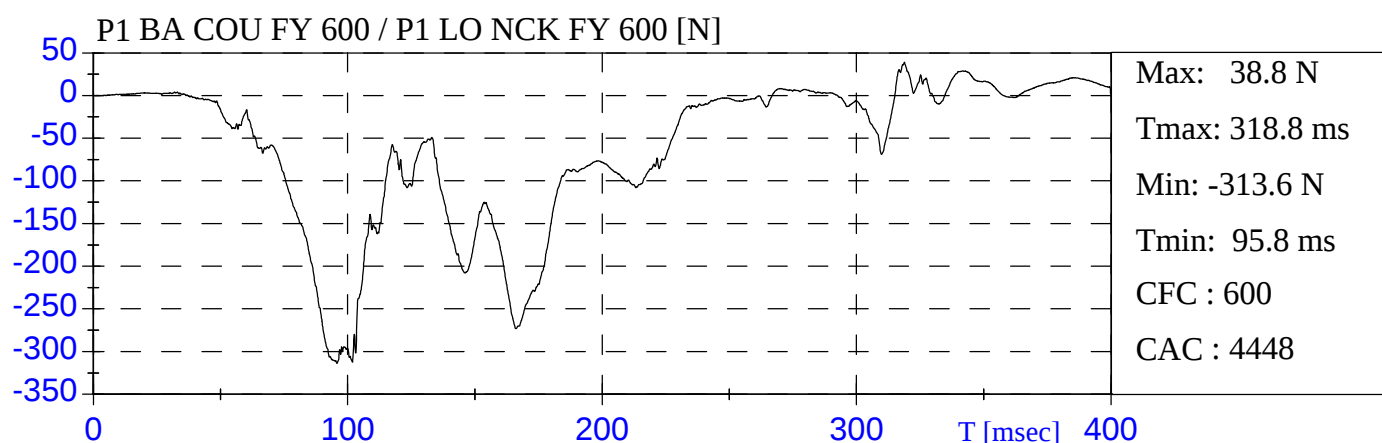
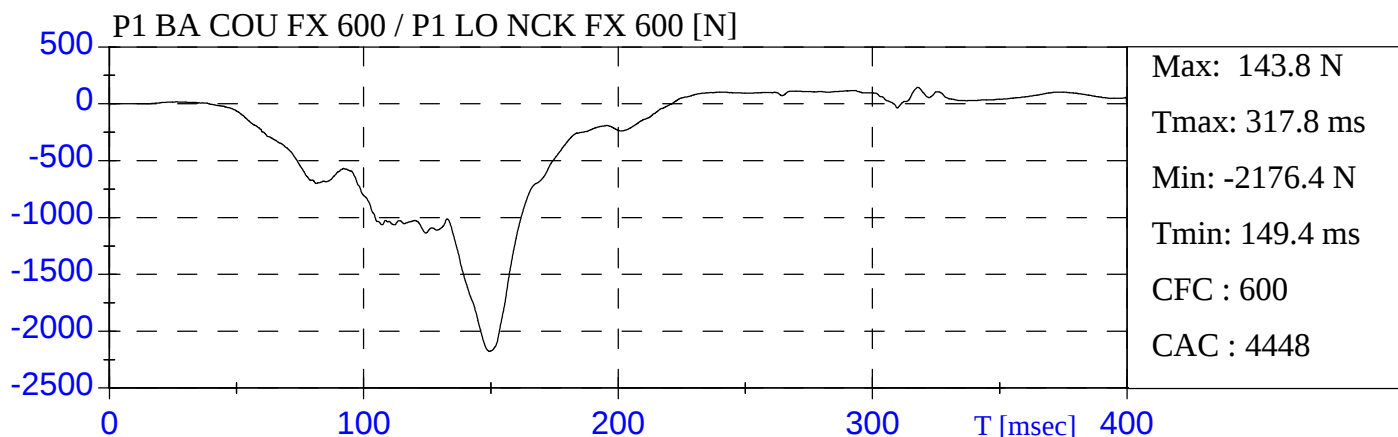


COLLISION FRONTALE
FRONTAL CRASH

Date: 2004-03-31

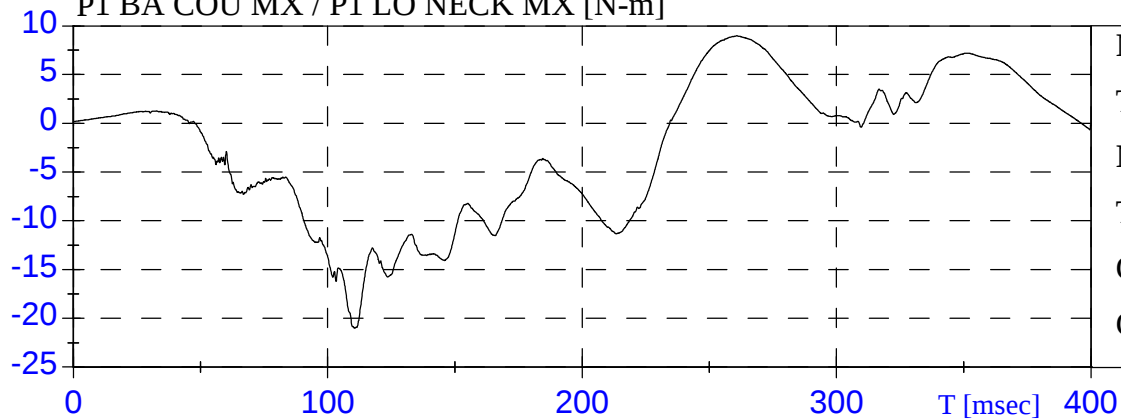
NISSAN MURANO 2004

N° TC / TC No.: TC04-127



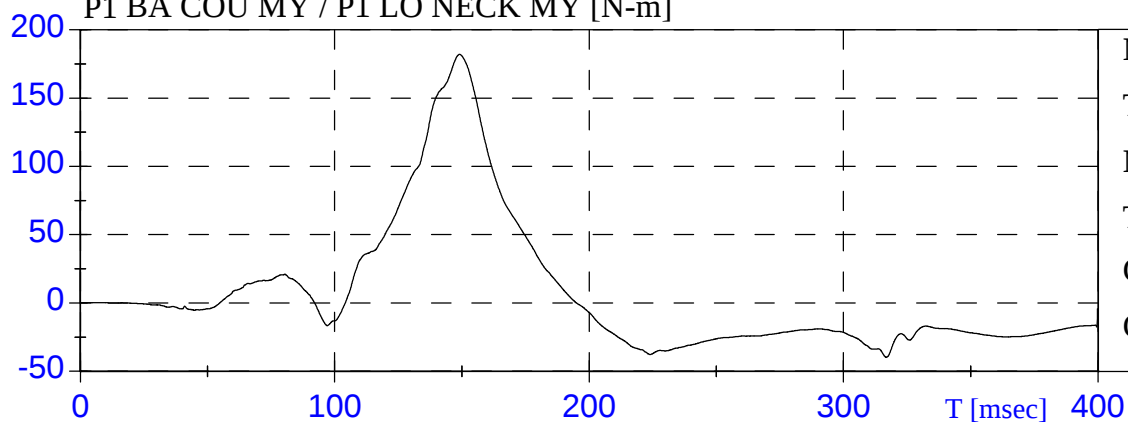


P1 BA COU MX / P1 LO NECK MX [N-m]



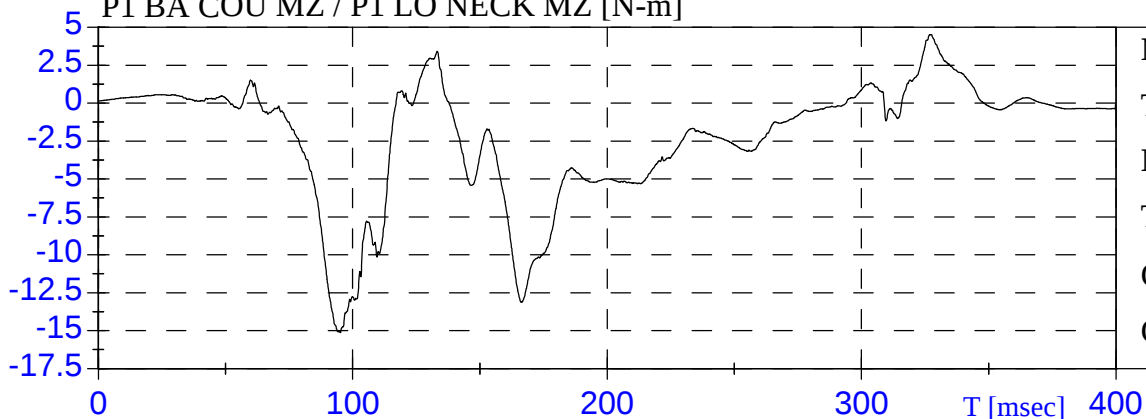
Max: 9.0 N-m
Tmax: 260.9 ms
Min: -21.0 N-m
Tmin: 110.6 ms
CFC : 600
CAC : 226

P1 BA COU MY / P1 LO NECK MY [N-m]



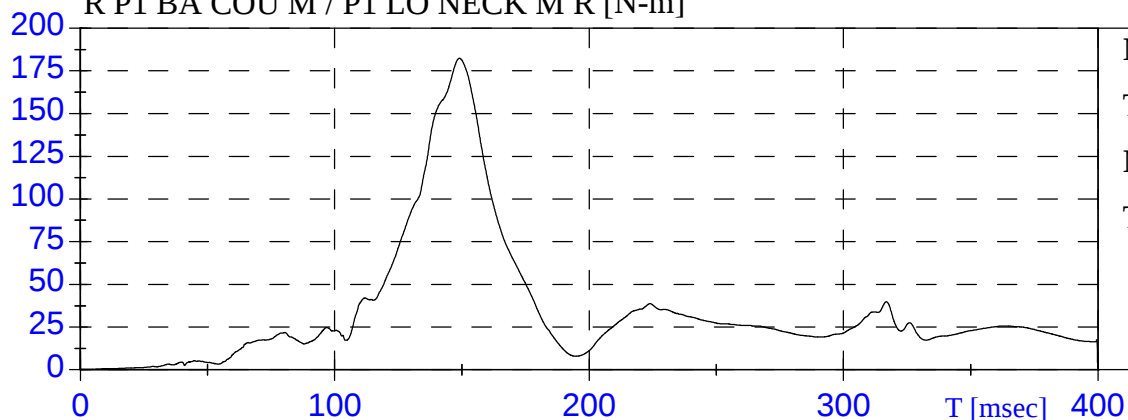
Max: 181.9 N-m
Tmax: 149.1 ms
Min: -39.7 N-m
Tmin: 316.8 ms
CFC : 600
CAC : 226

P1 BA COU MZ / P1 LO NECK MZ [N-m]

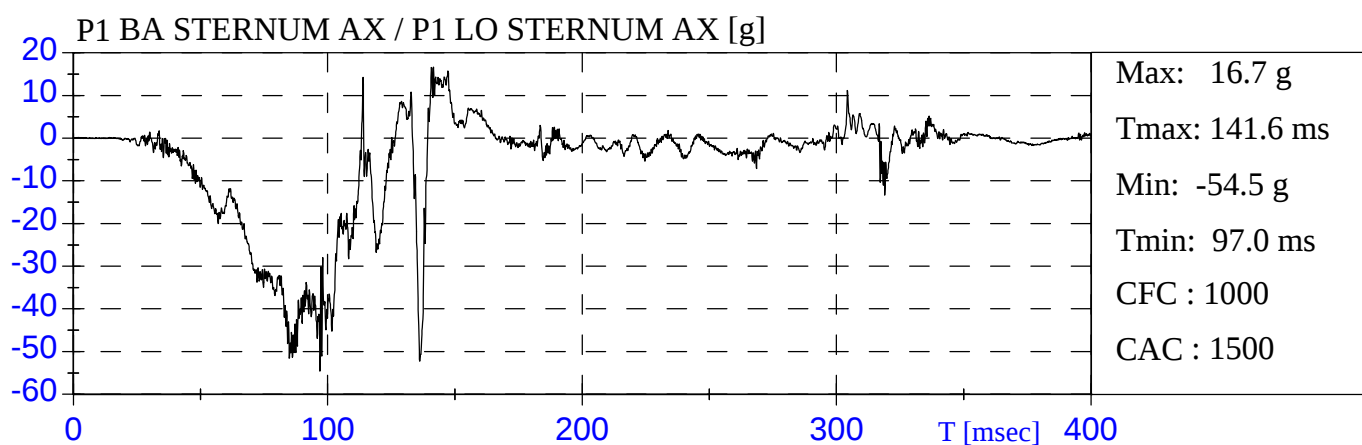
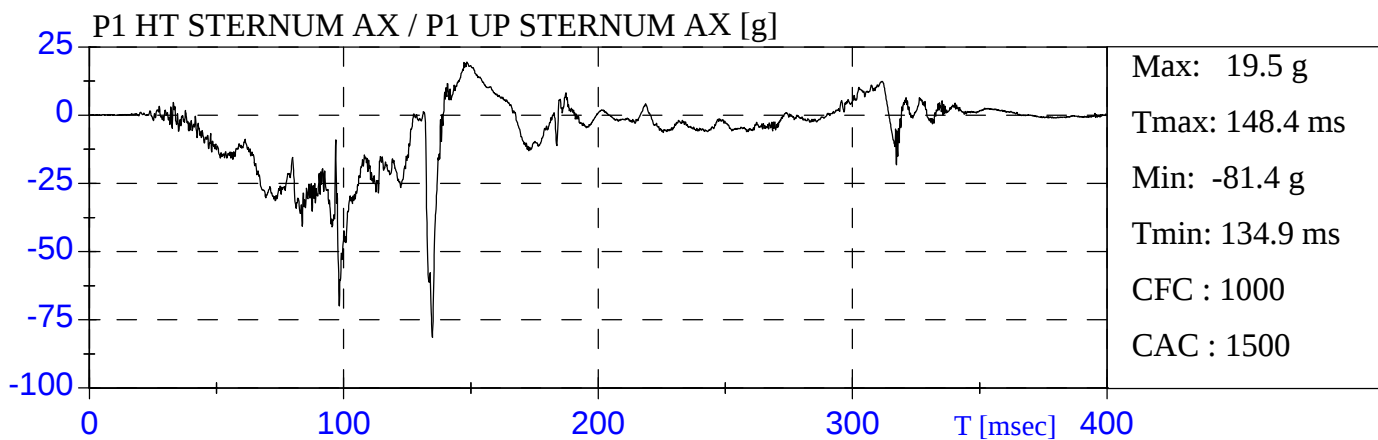


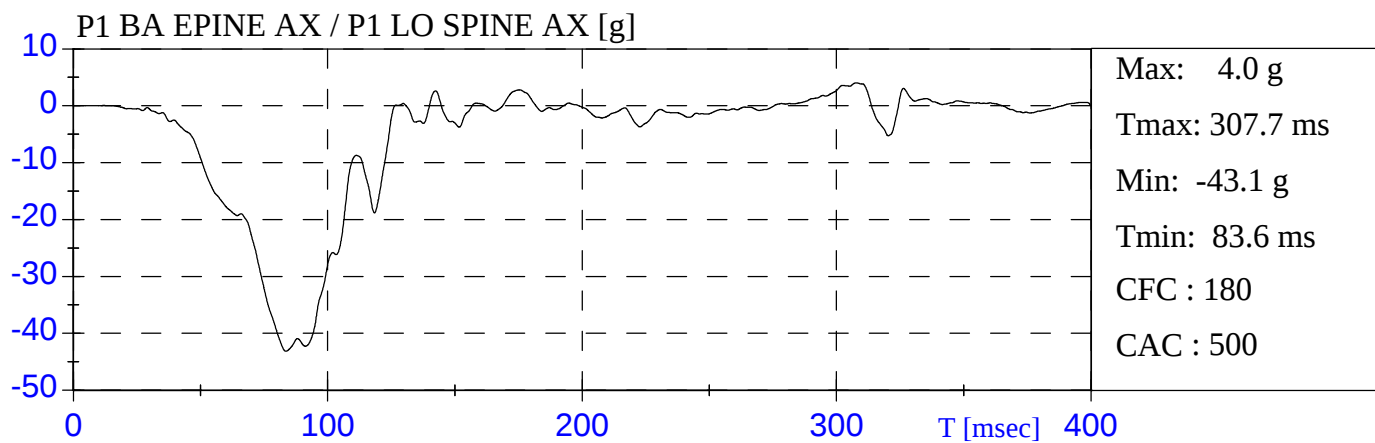
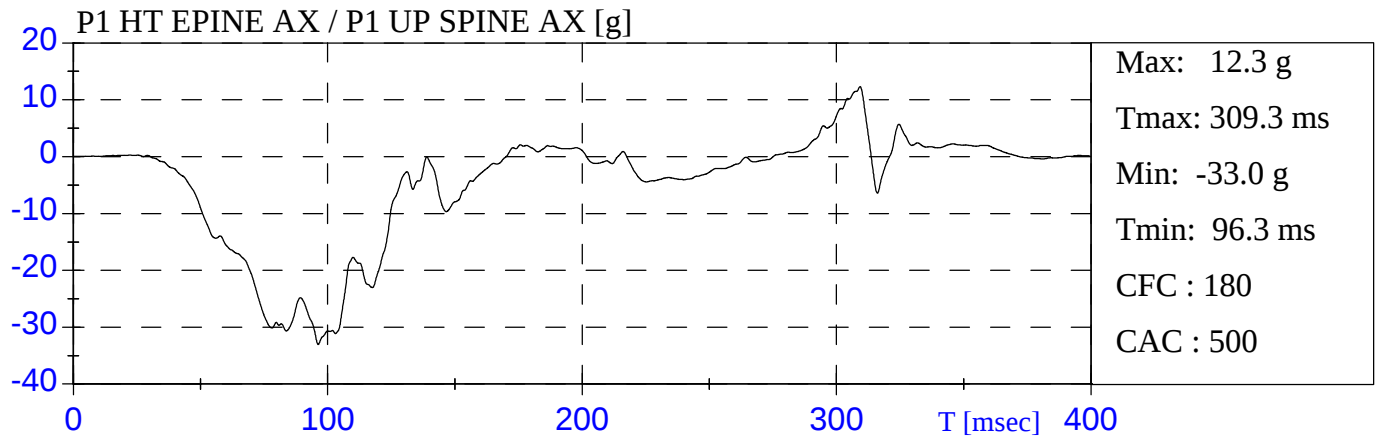
Max: 4.5 N-m
Tmax: 327.4 ms
Min: -15.1 N-m
Tmin: 95.1 ms
CFC : 600
CAC : 141

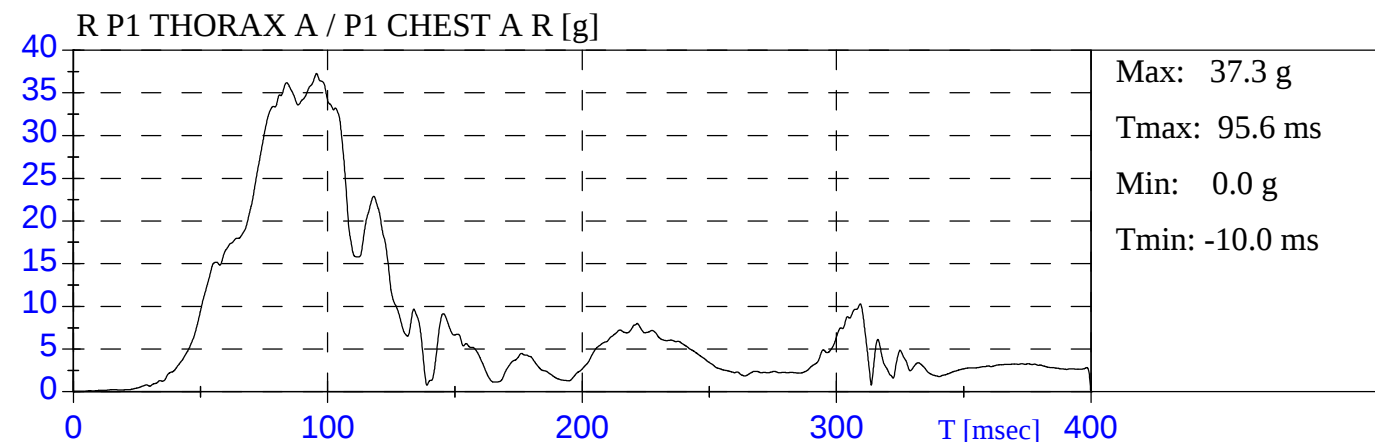
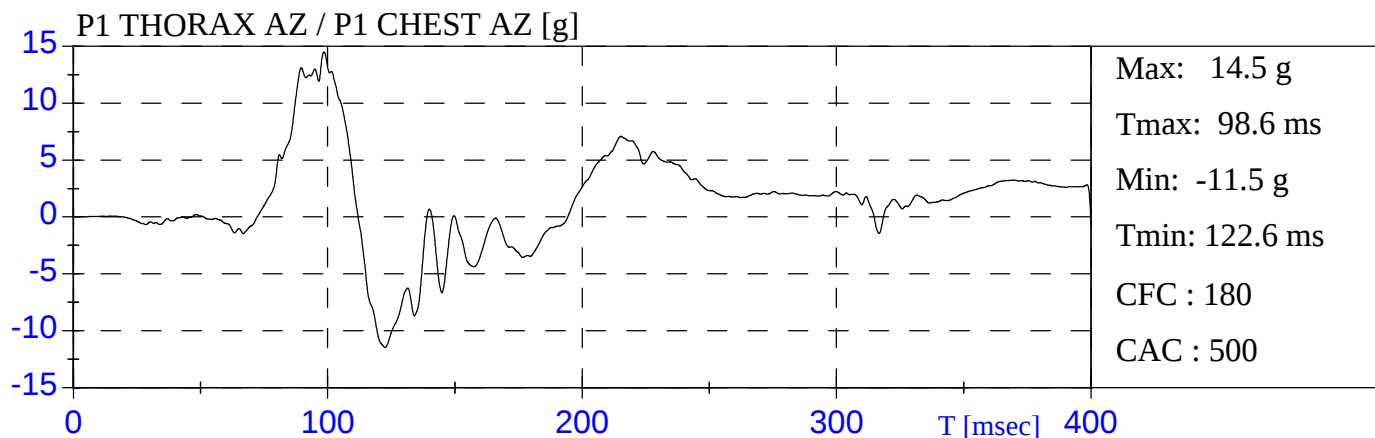
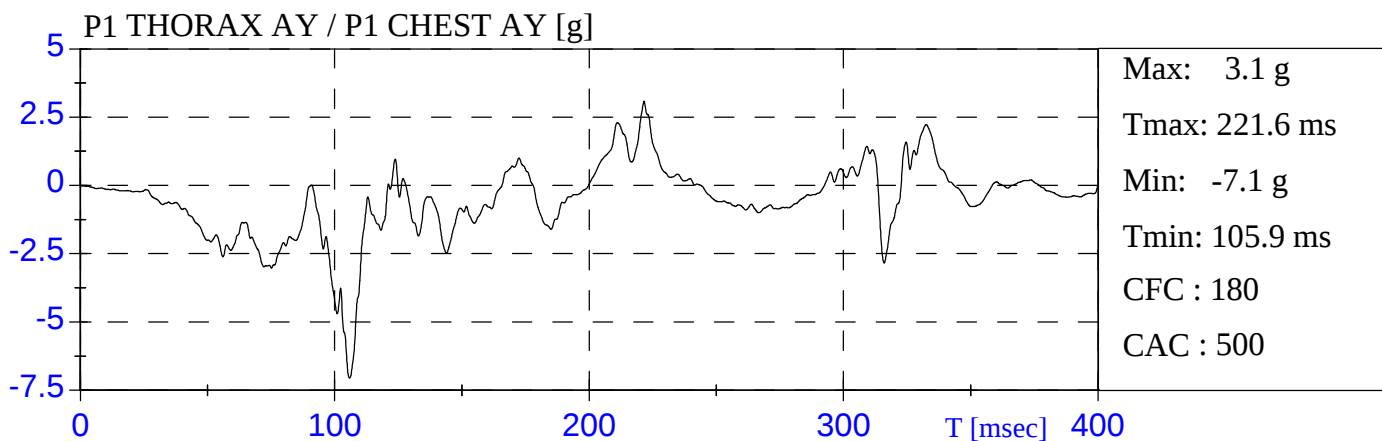
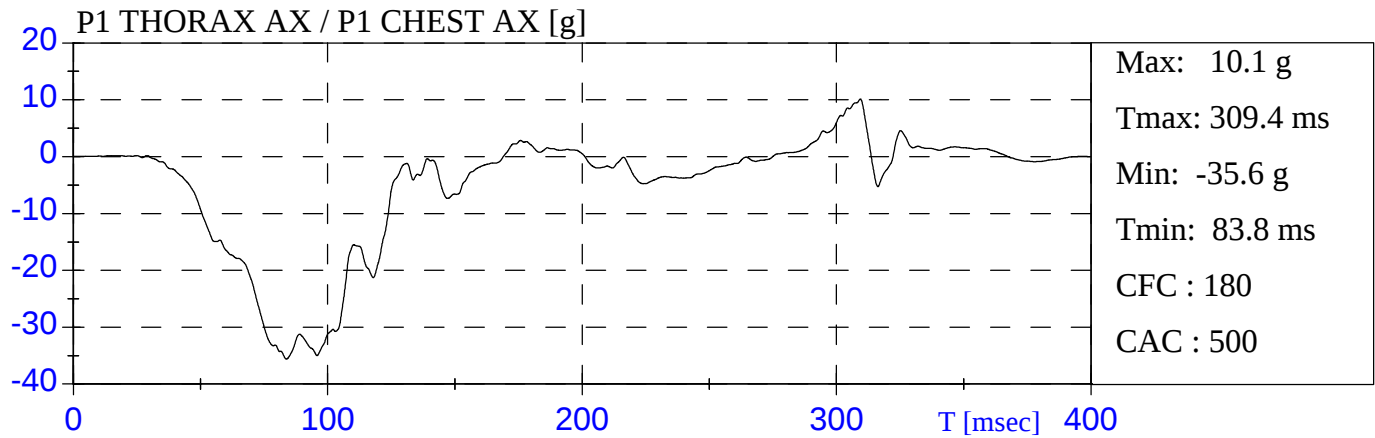
R P1 BA COU M / P1 LO NECK M R [N-m]

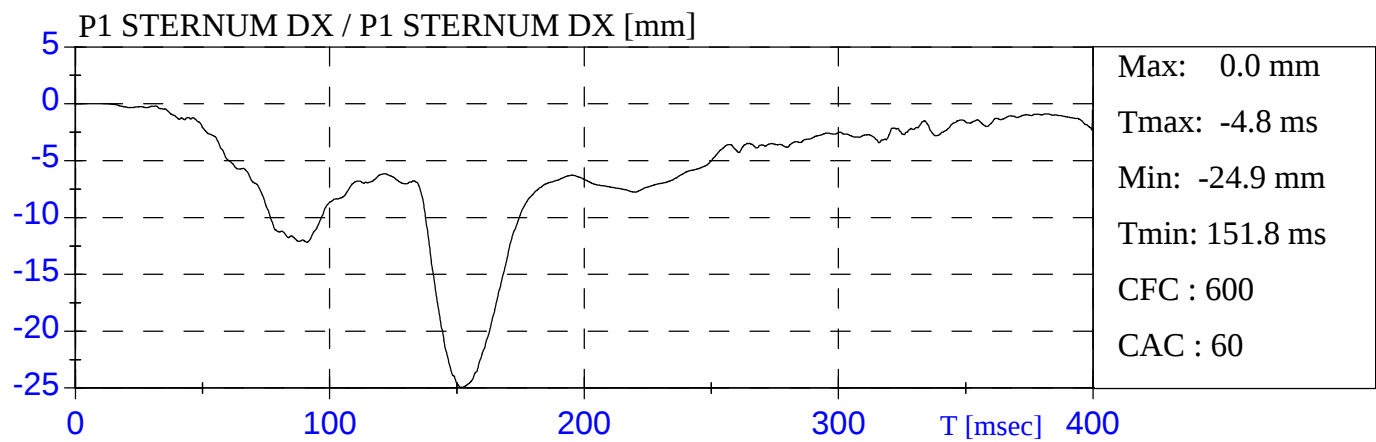


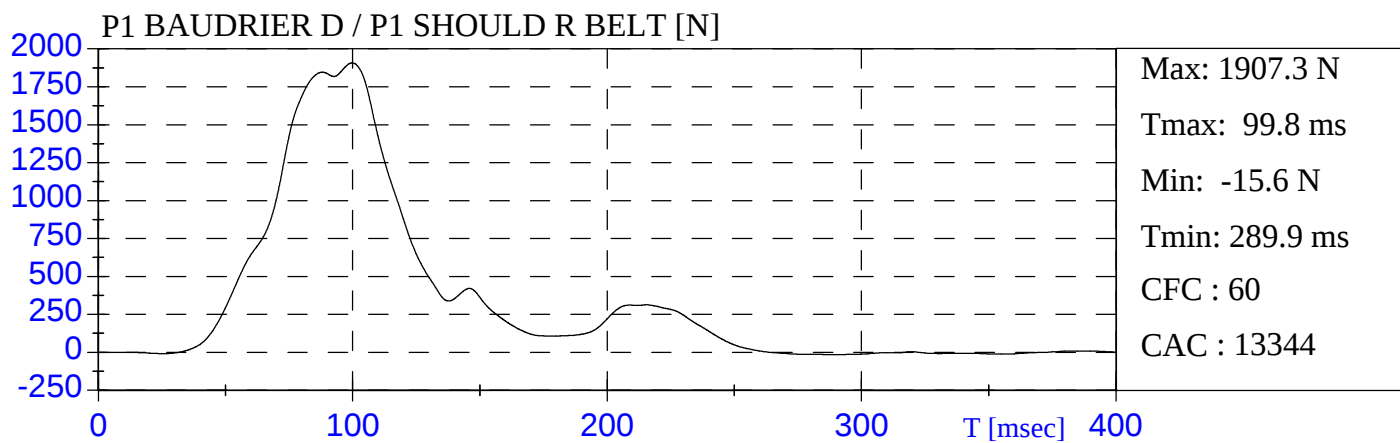
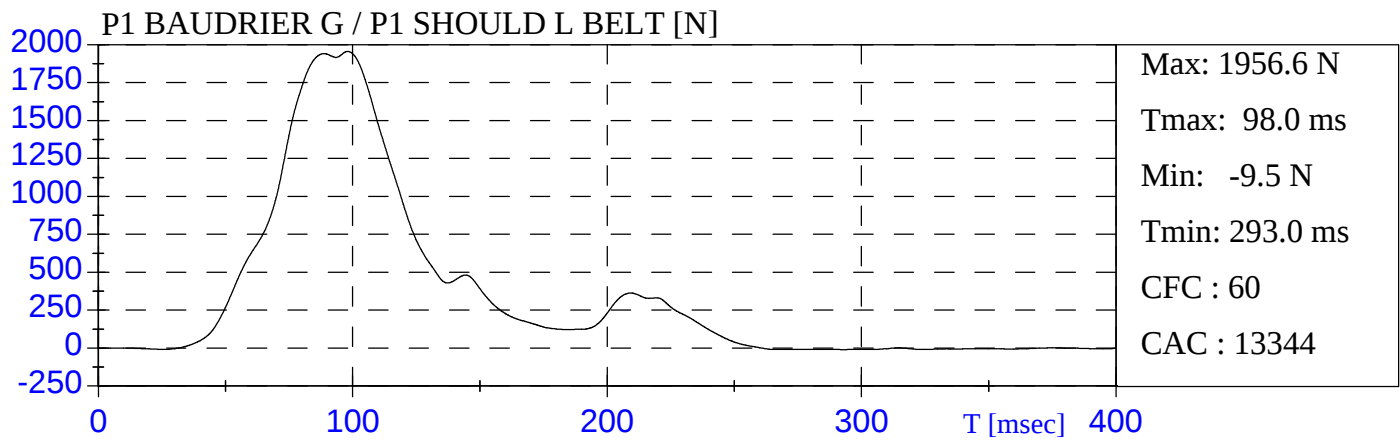
Max: 182.4 N-m
Tmax: 149.1 ms
Min: 0.0 N-m
Tmin: -10.0 ms

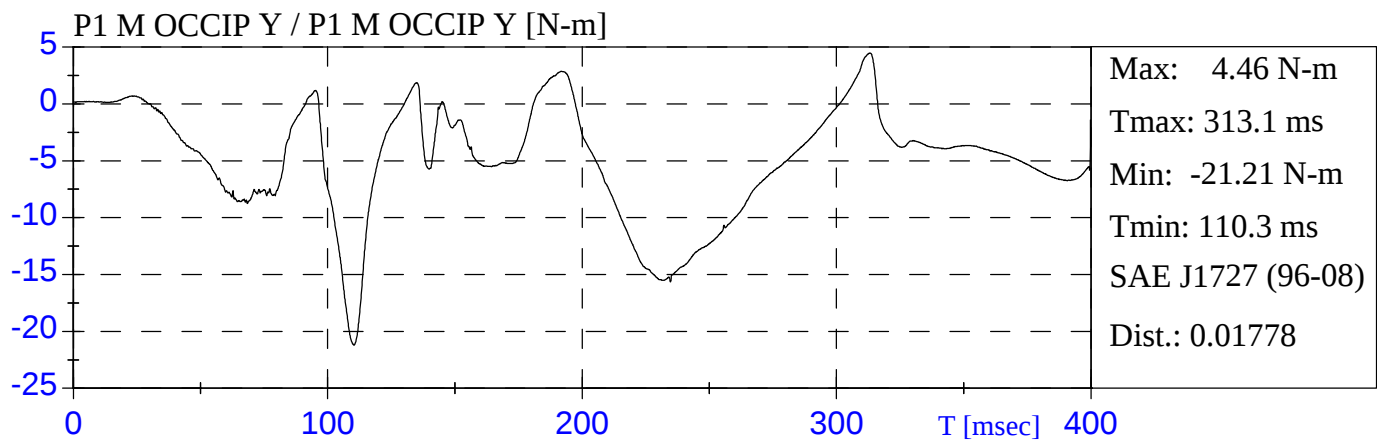


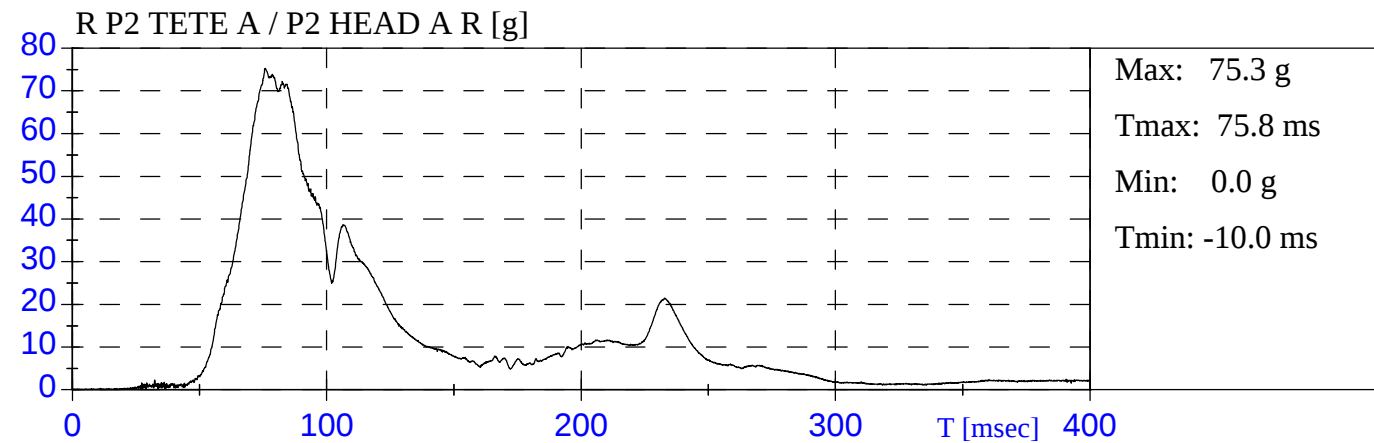
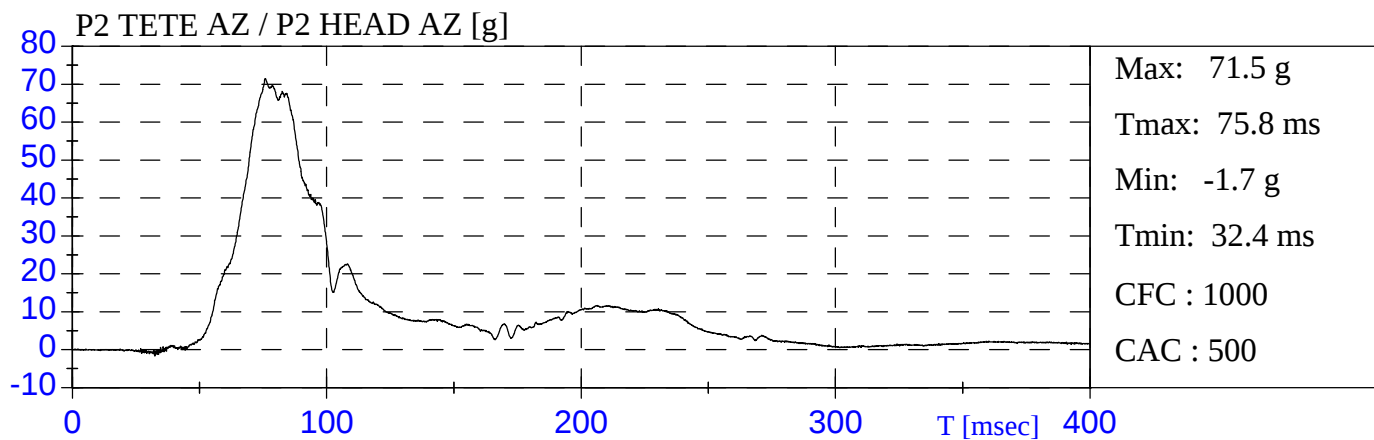
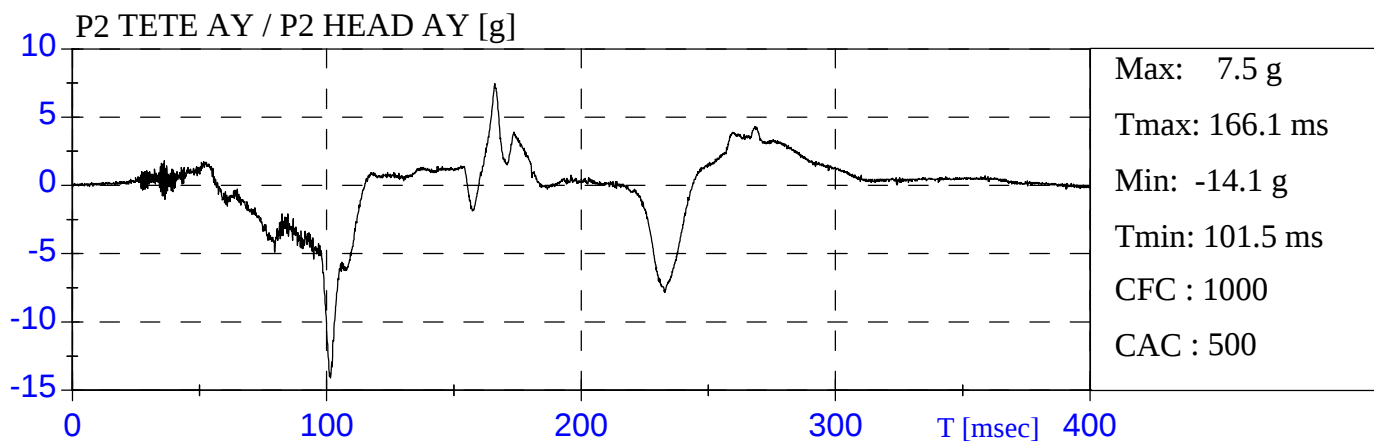
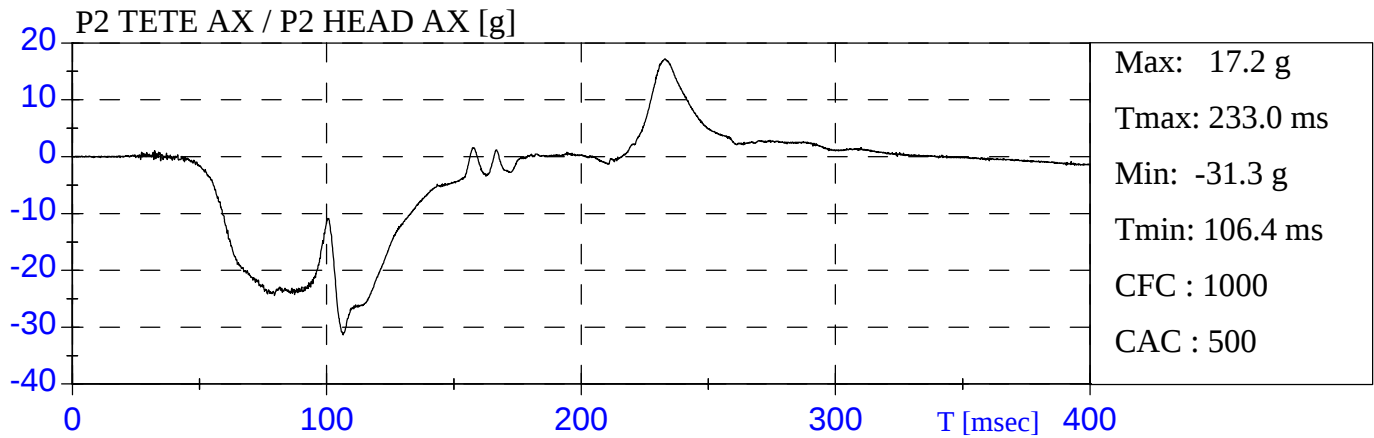


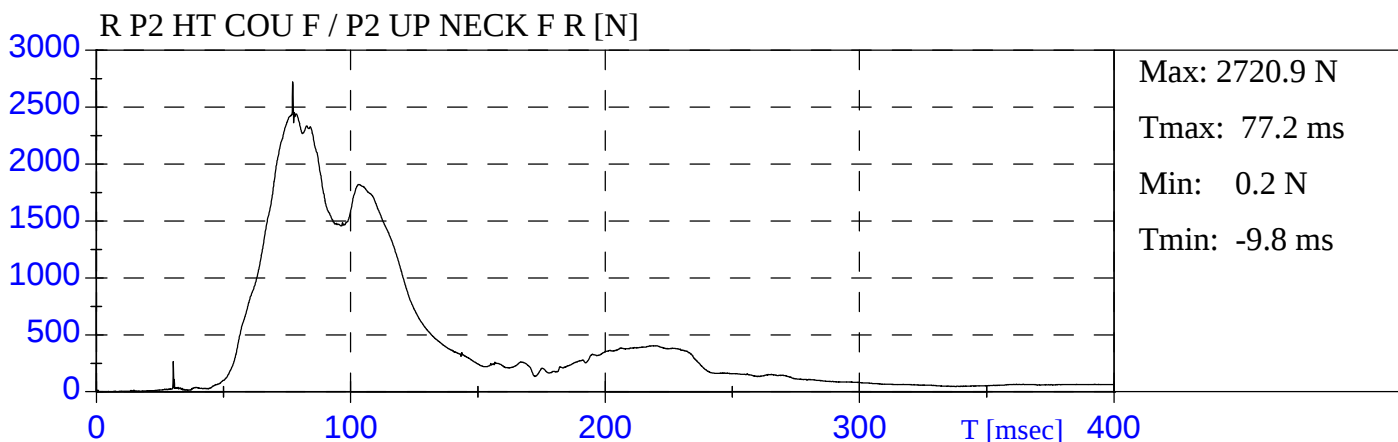
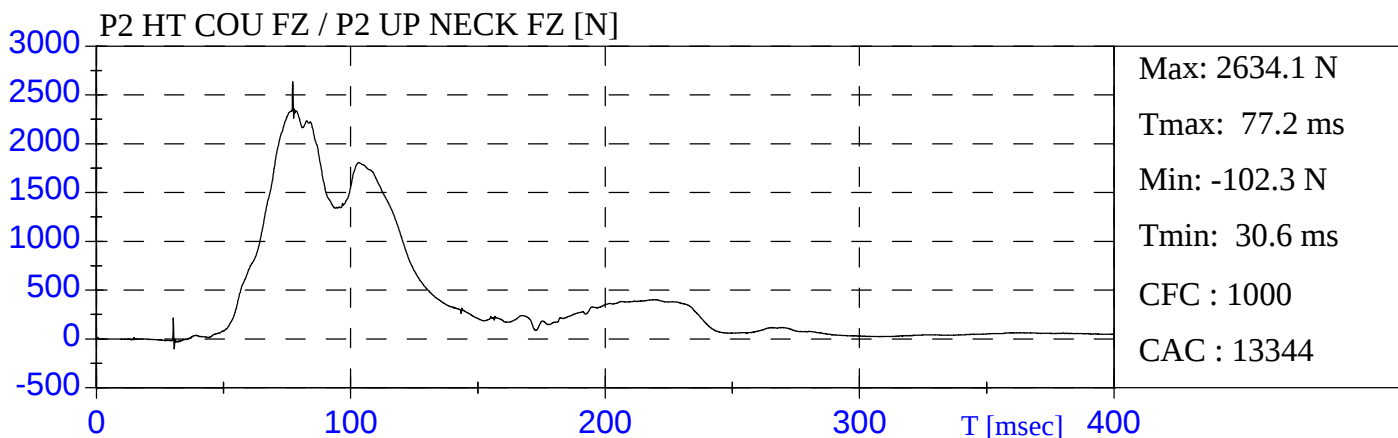
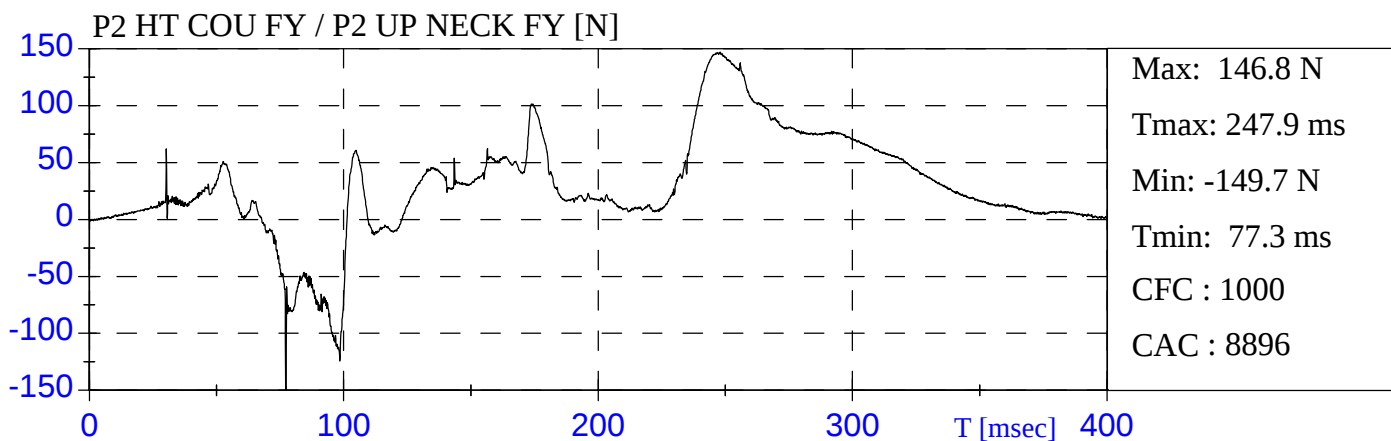
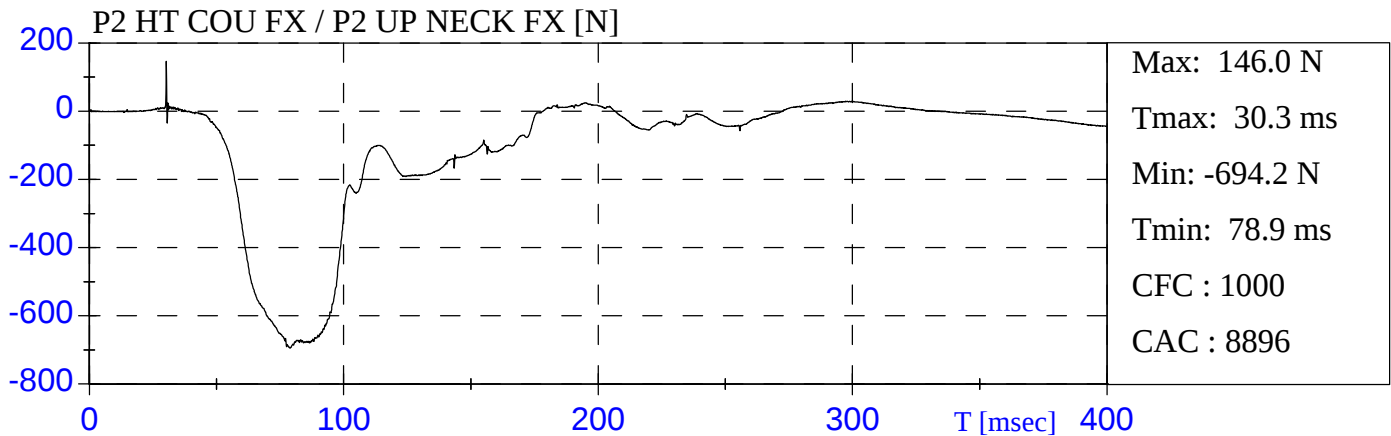


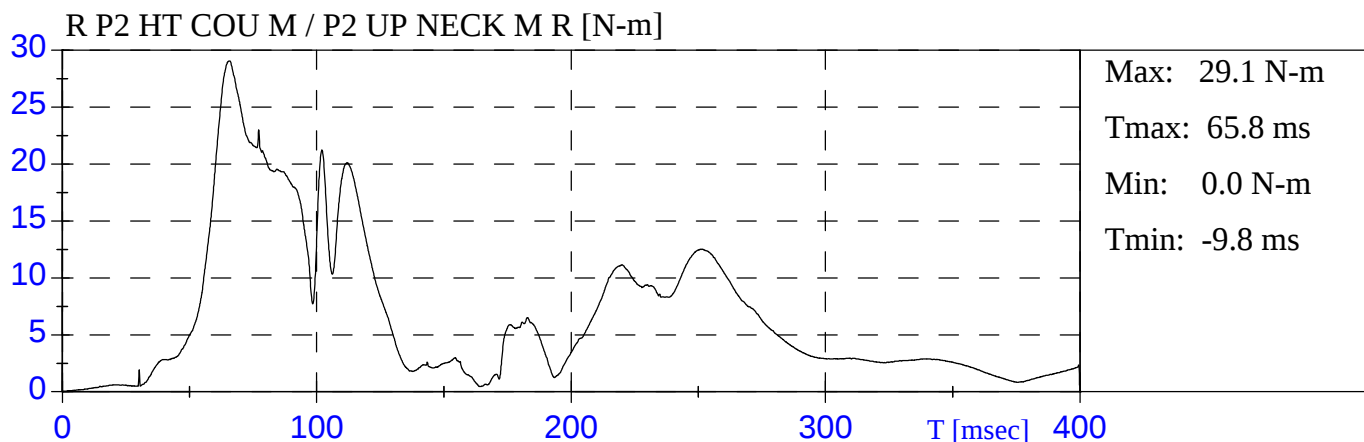
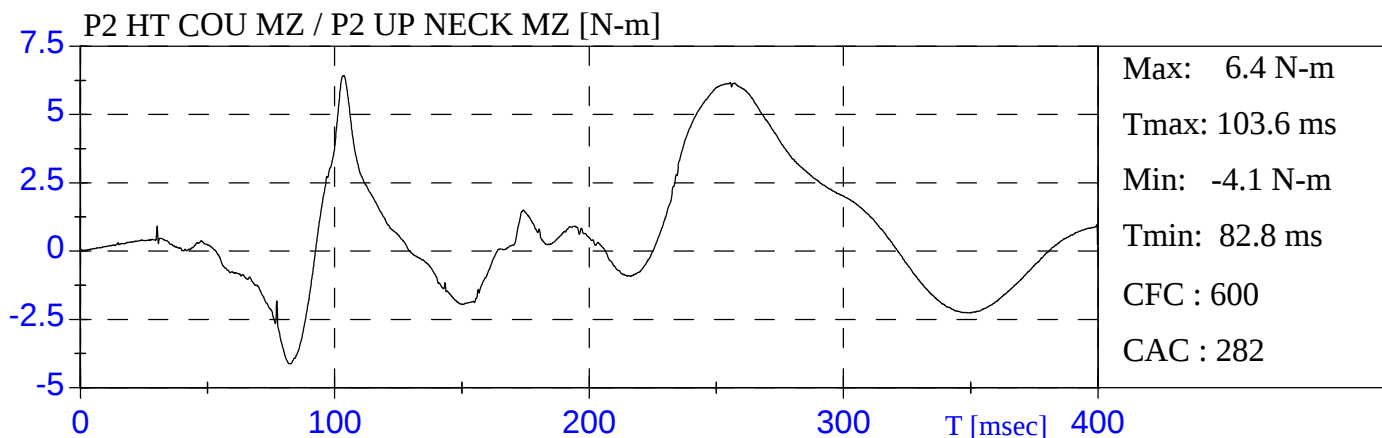
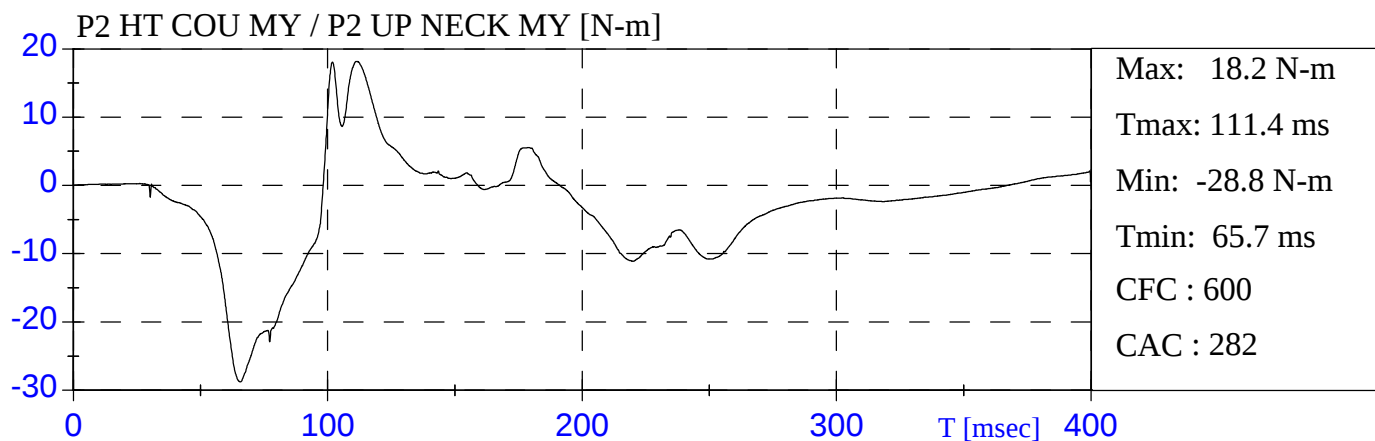
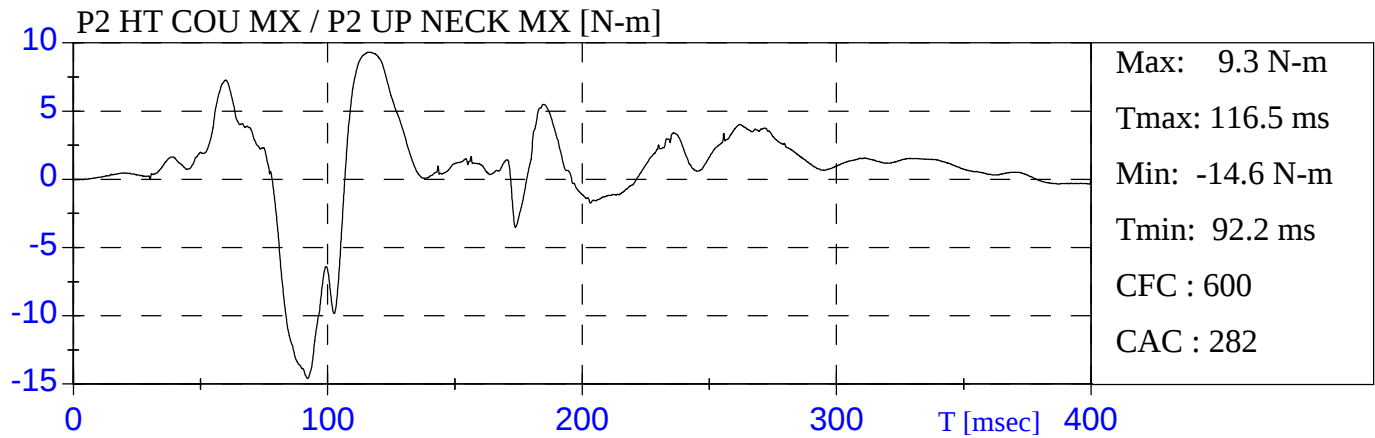


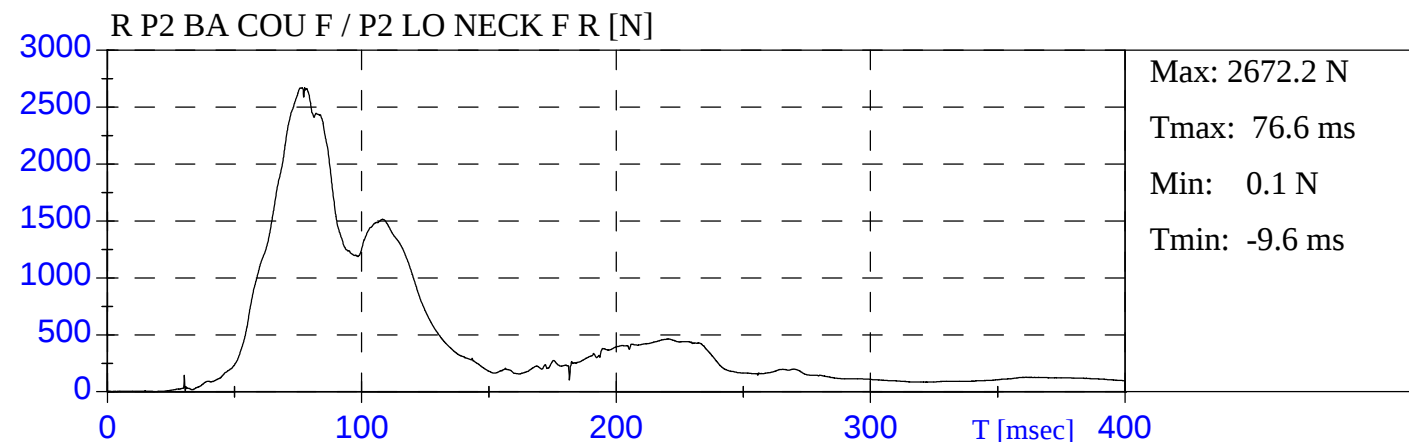
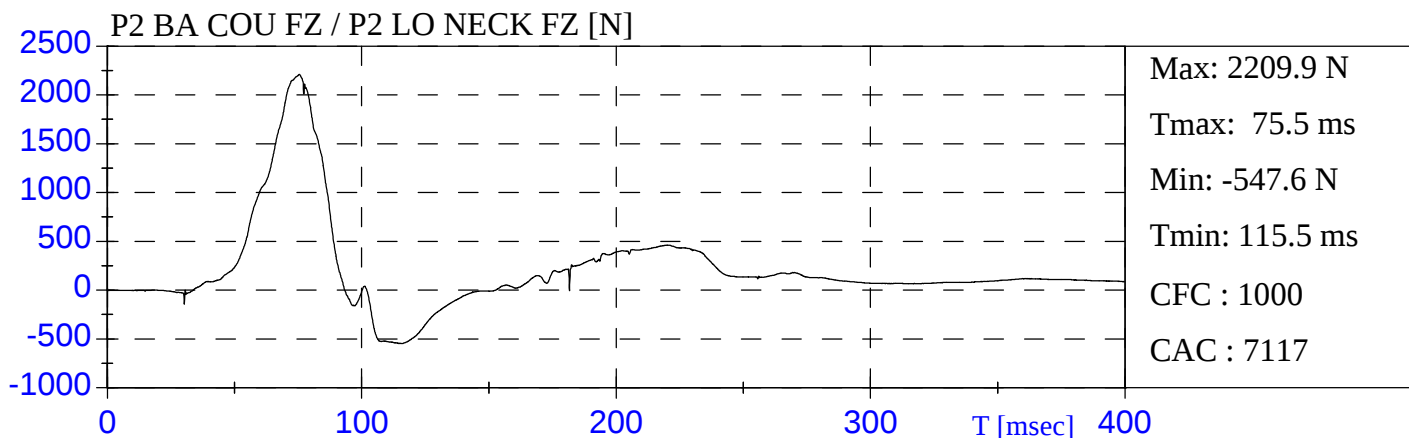
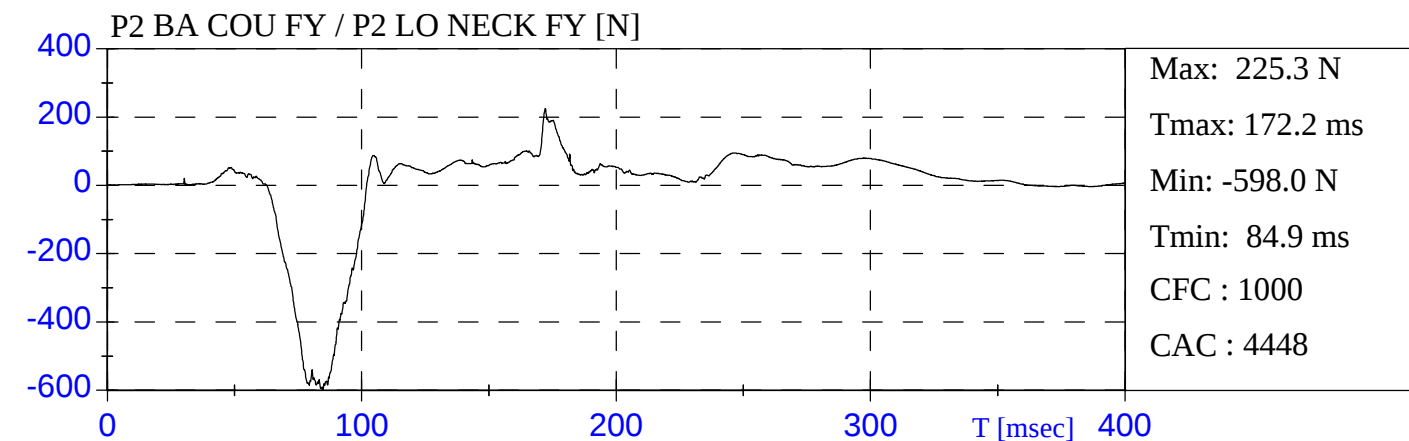
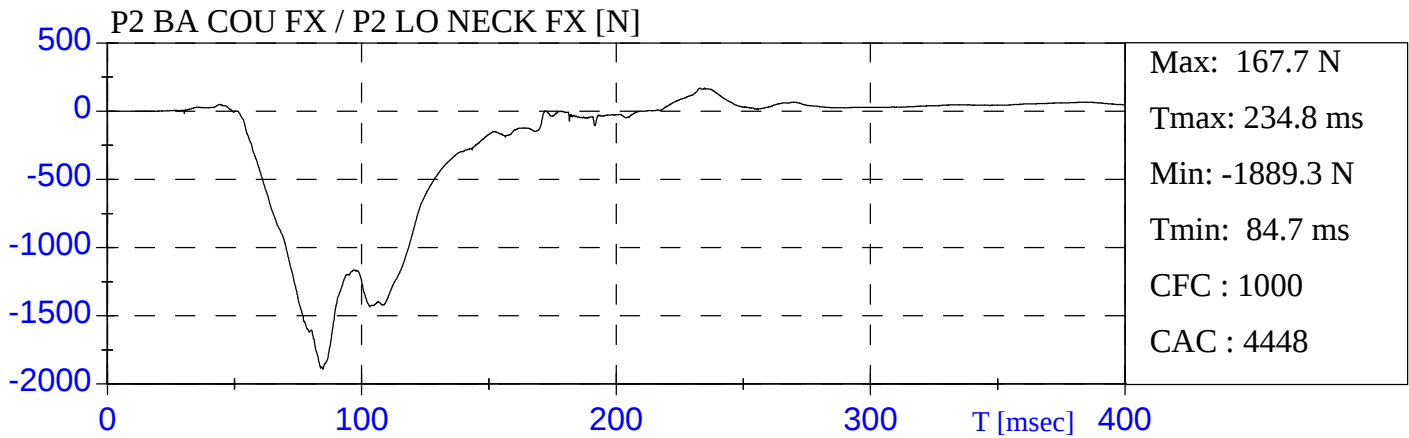


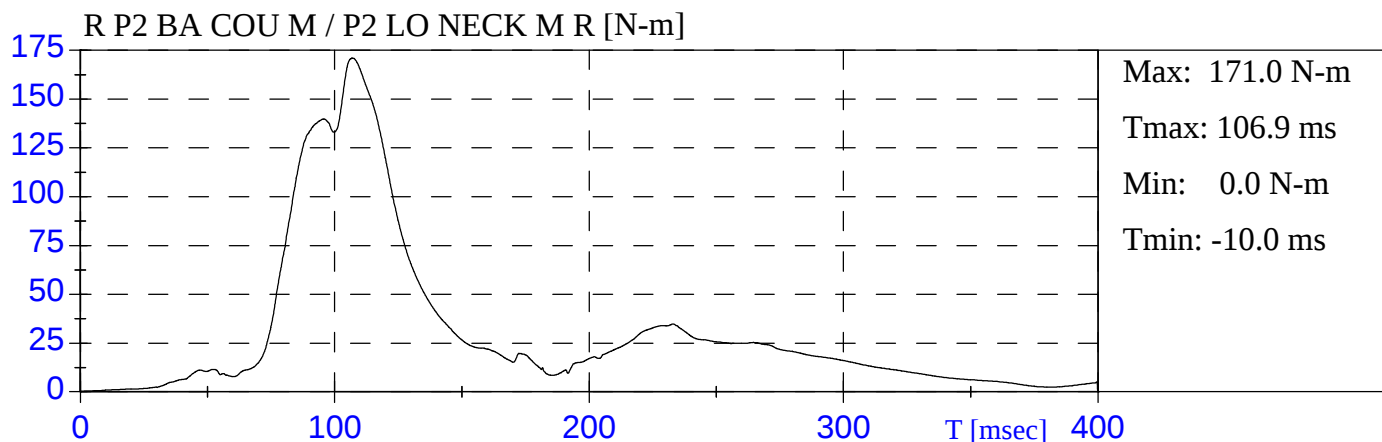
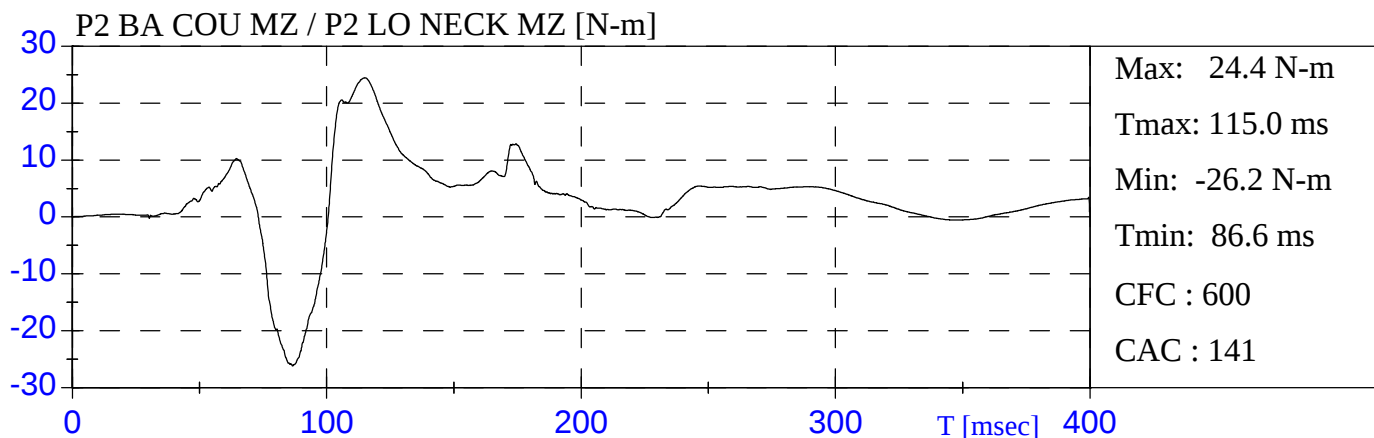
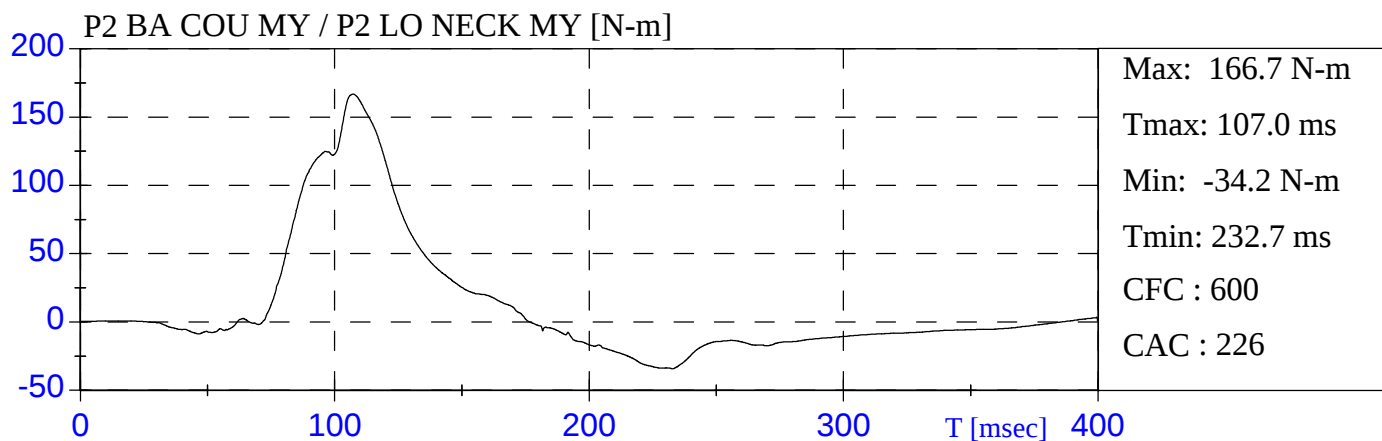
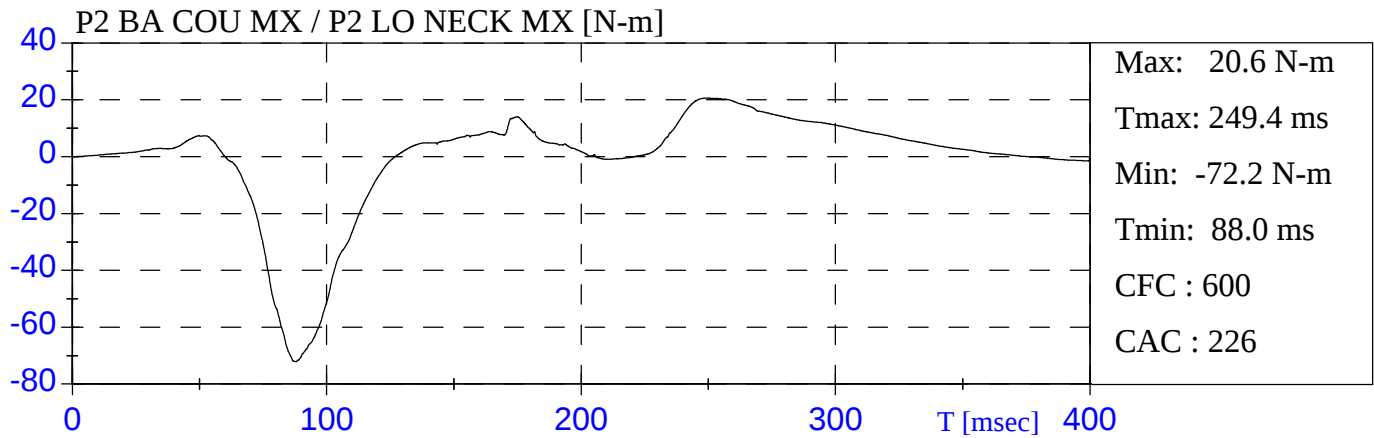


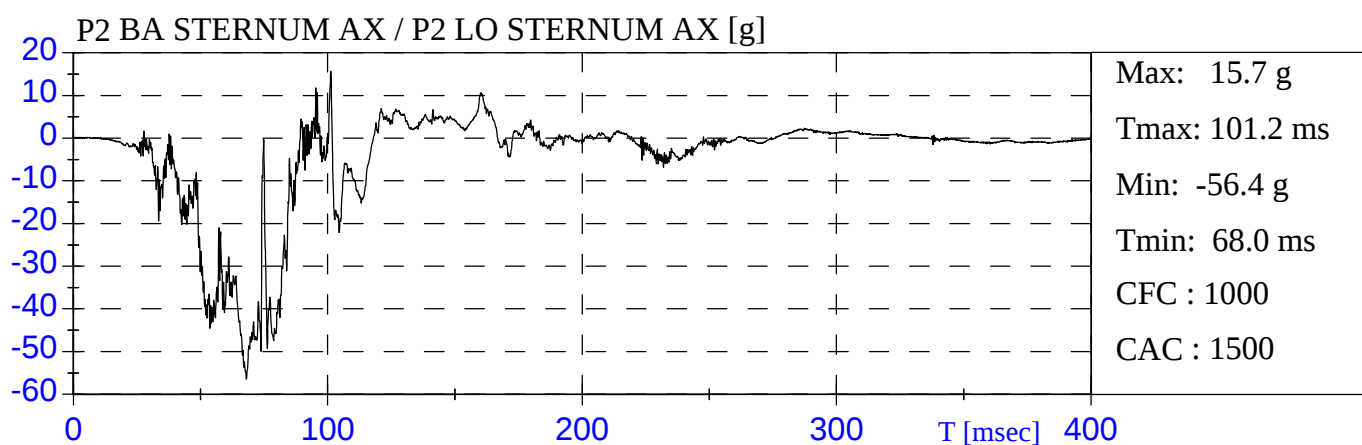
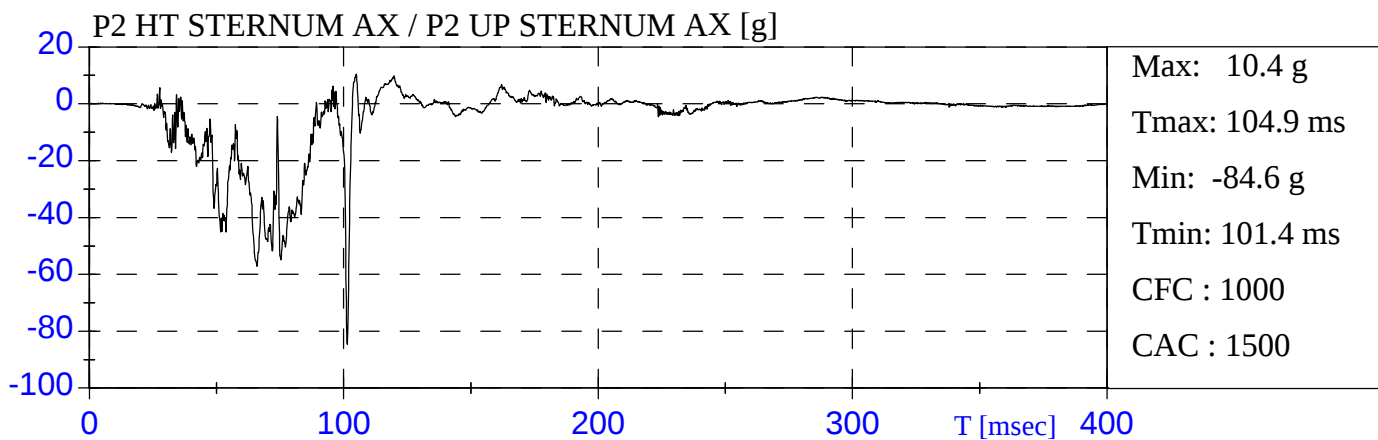


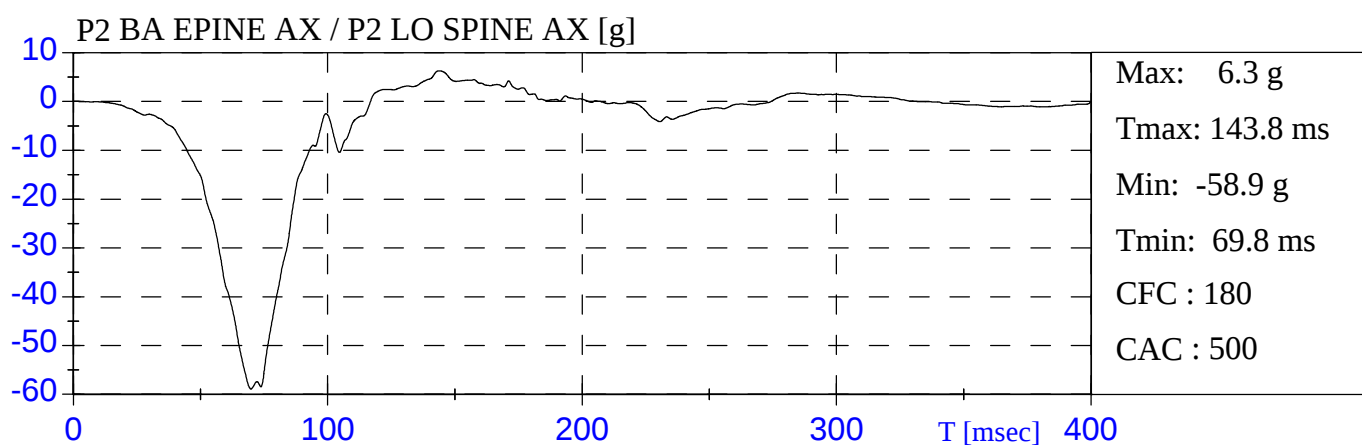
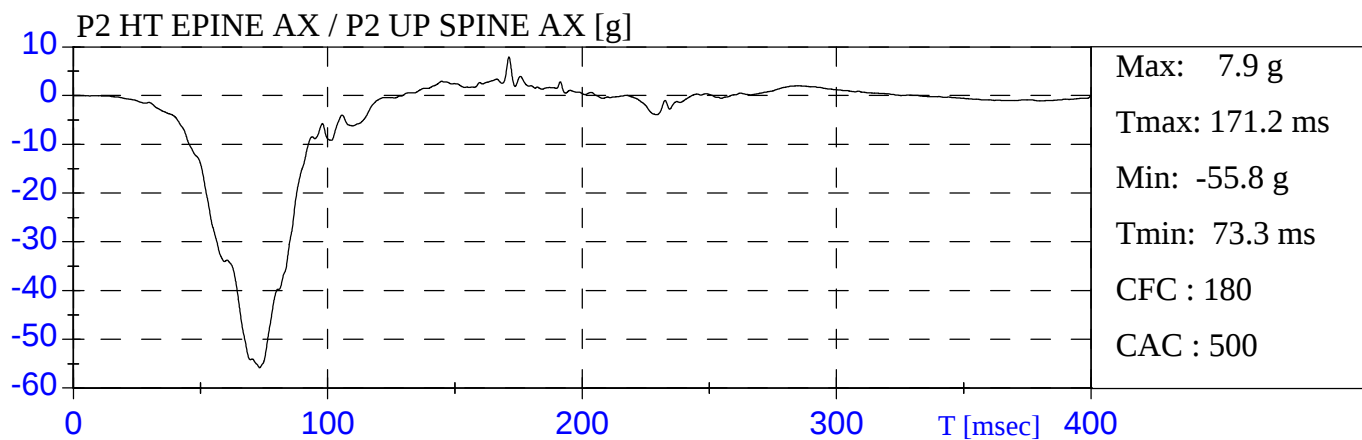


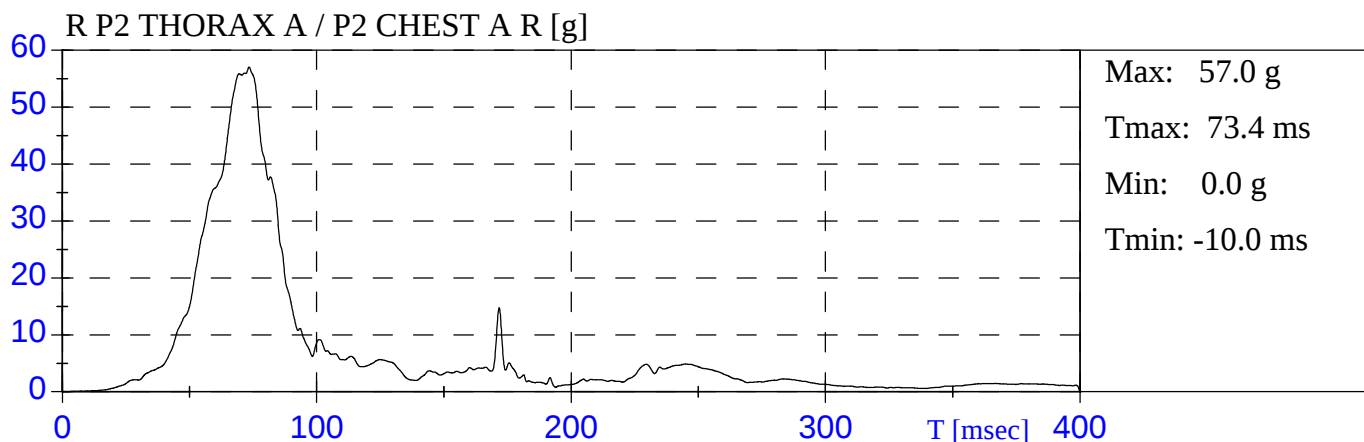
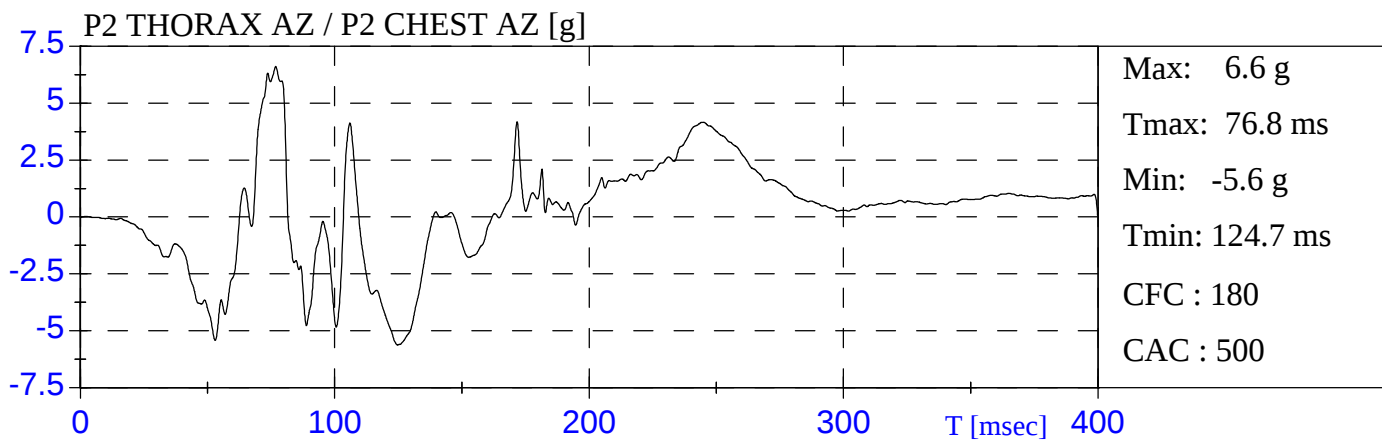
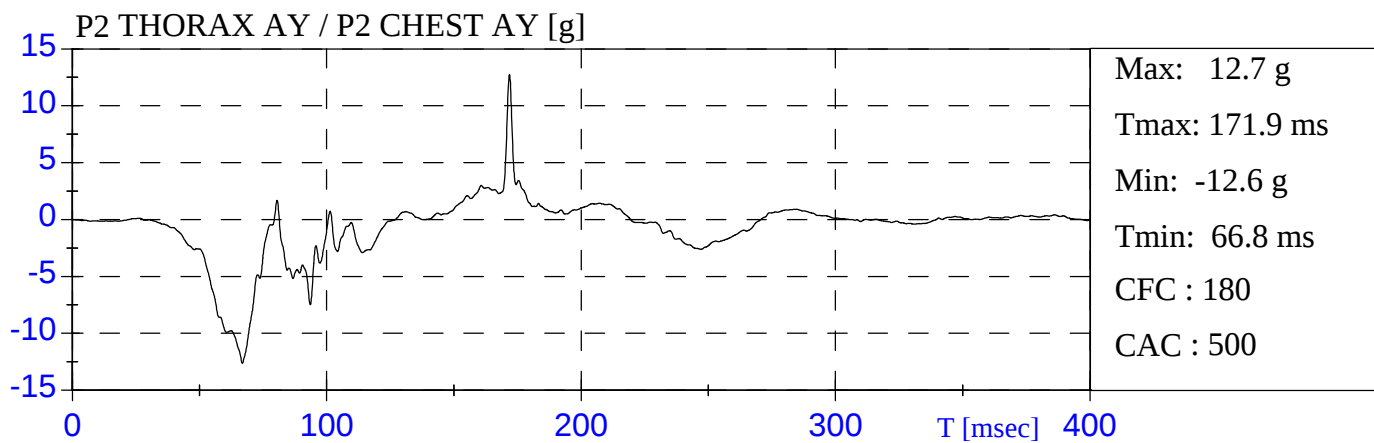
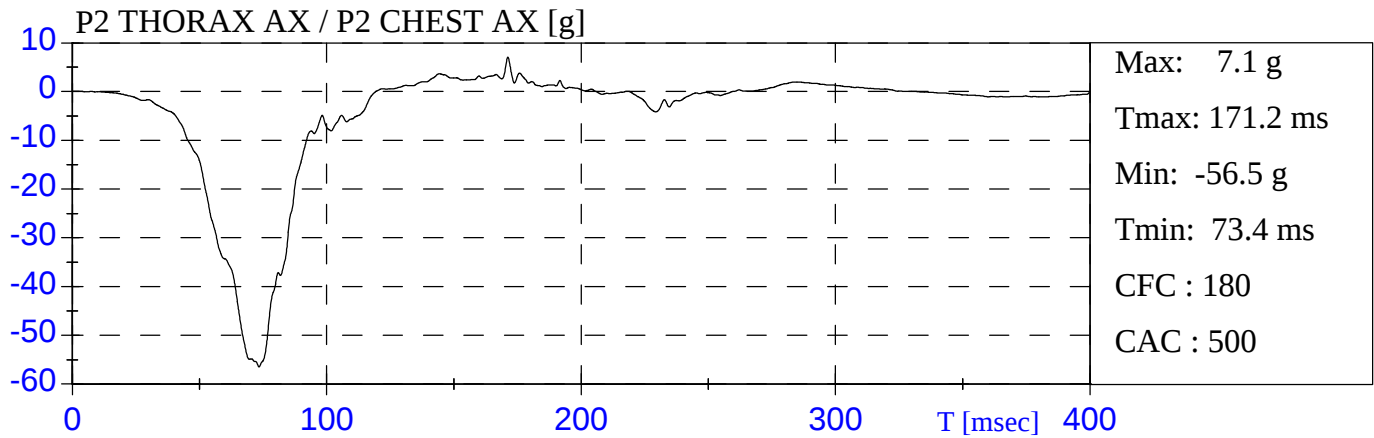


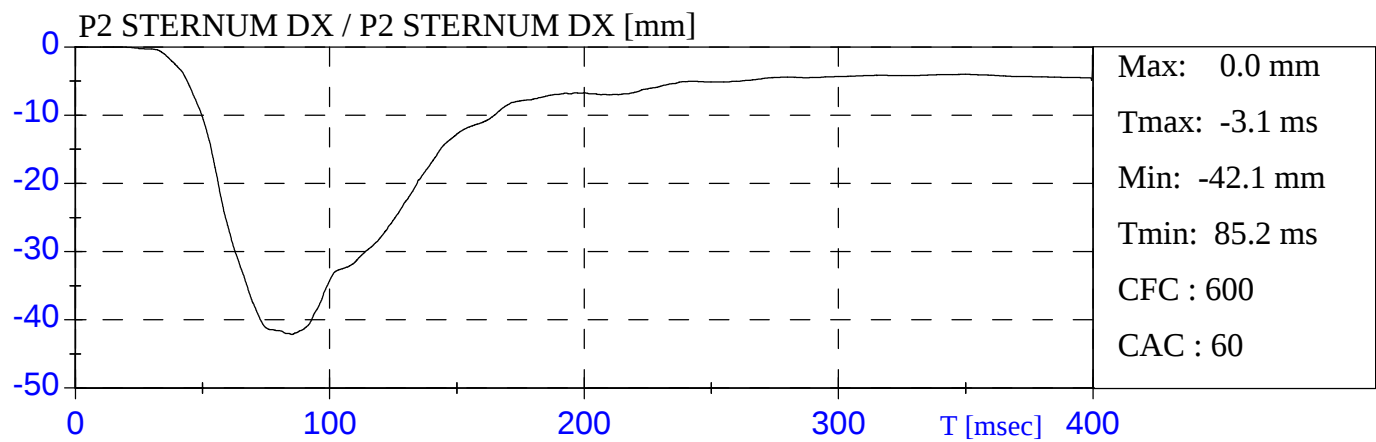


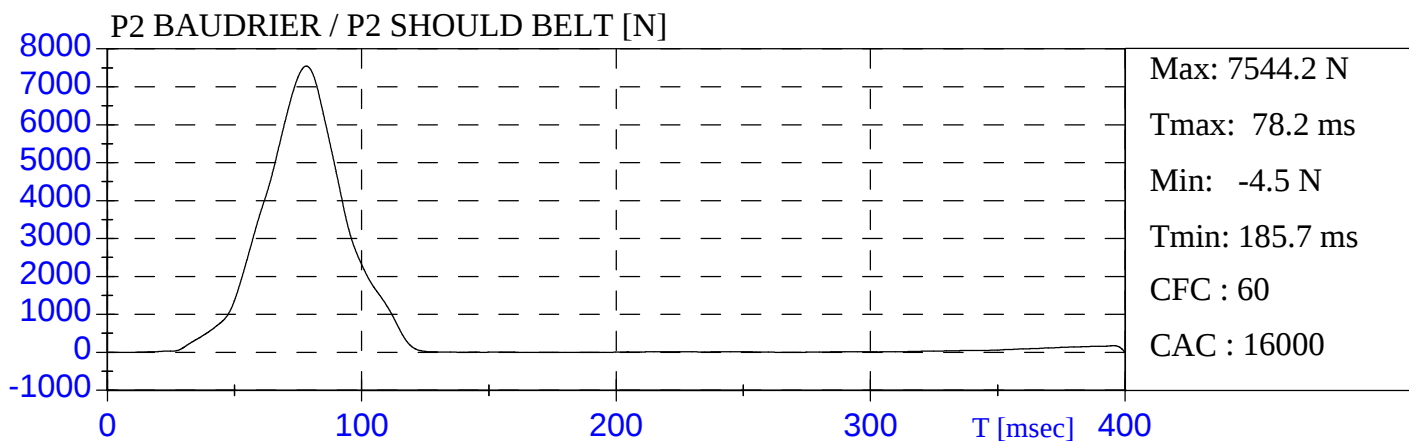
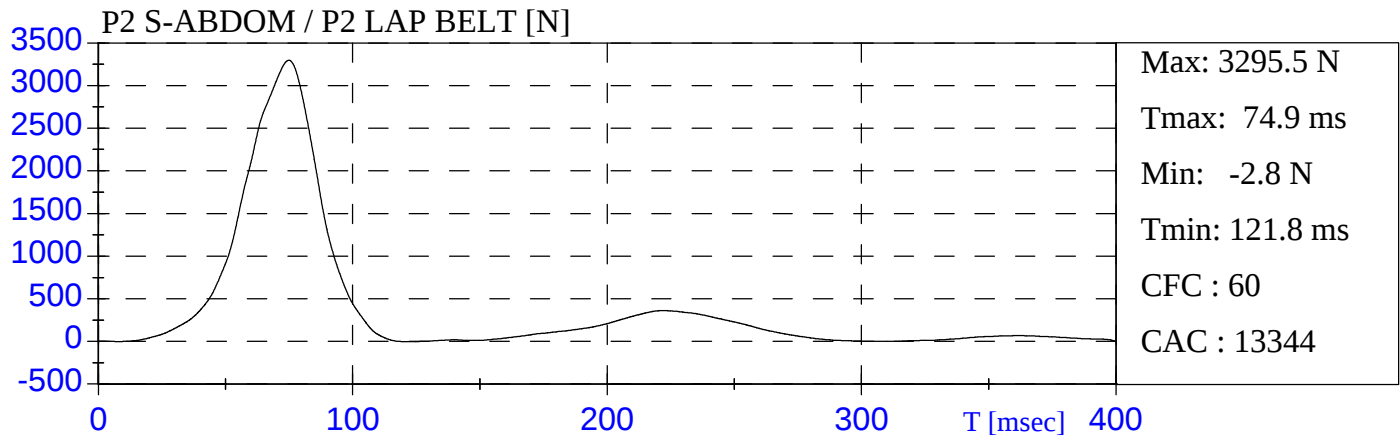


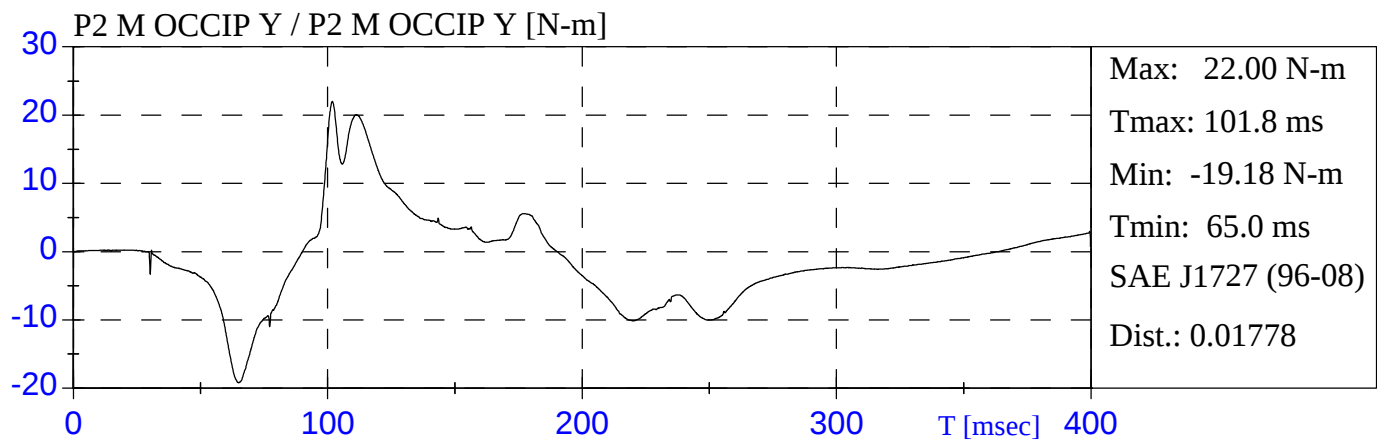












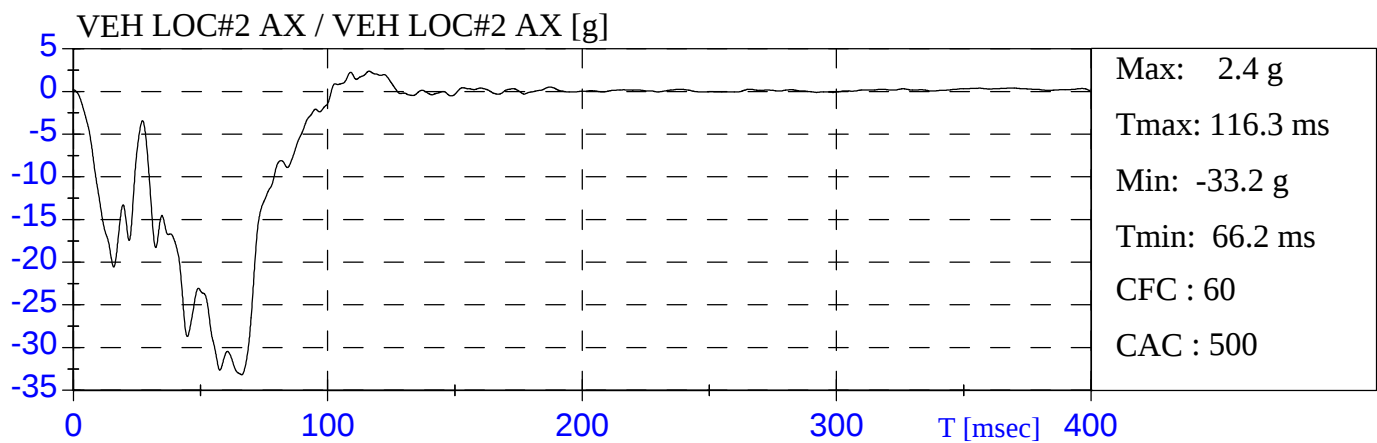
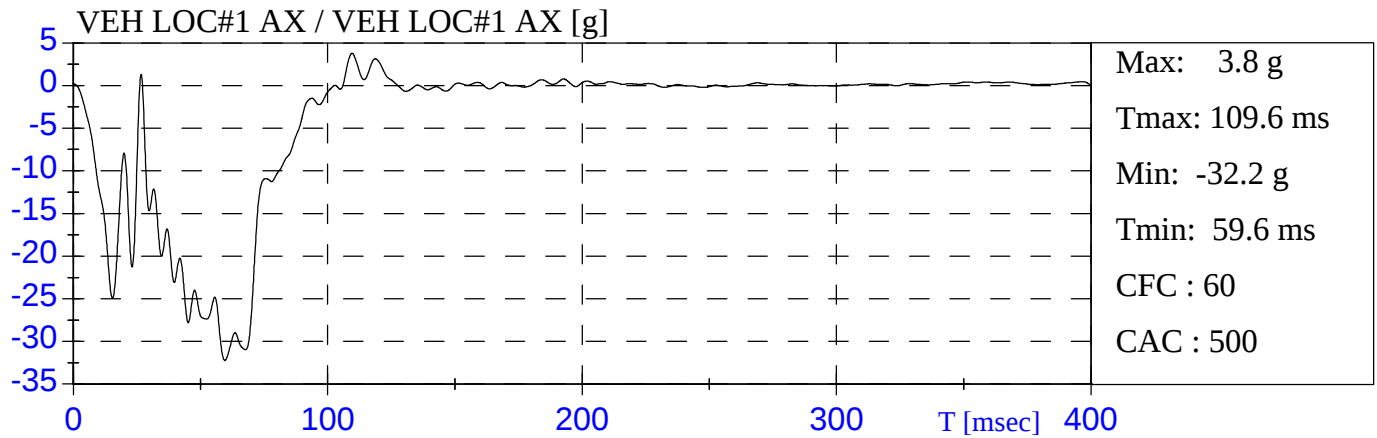


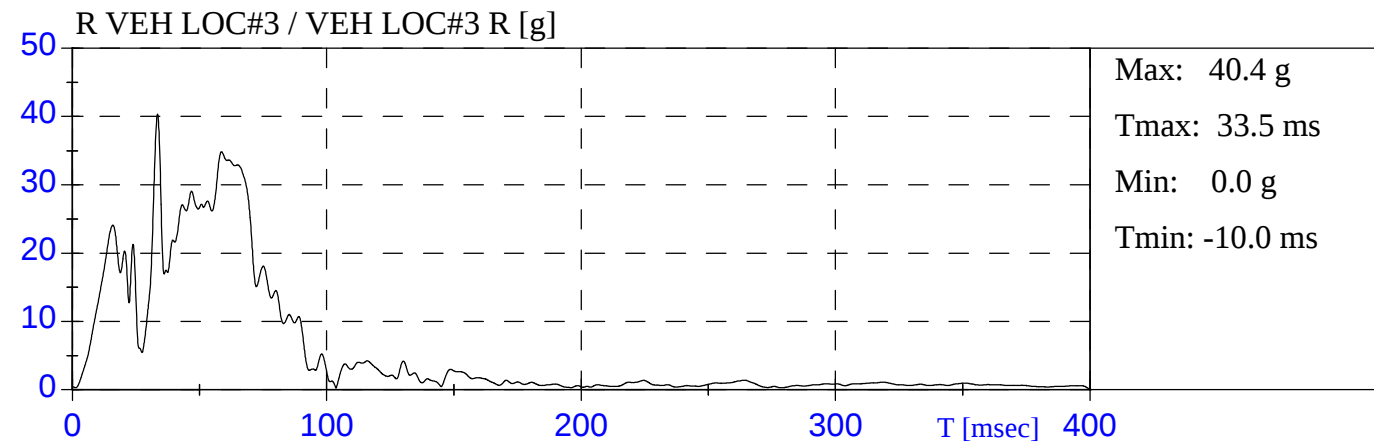
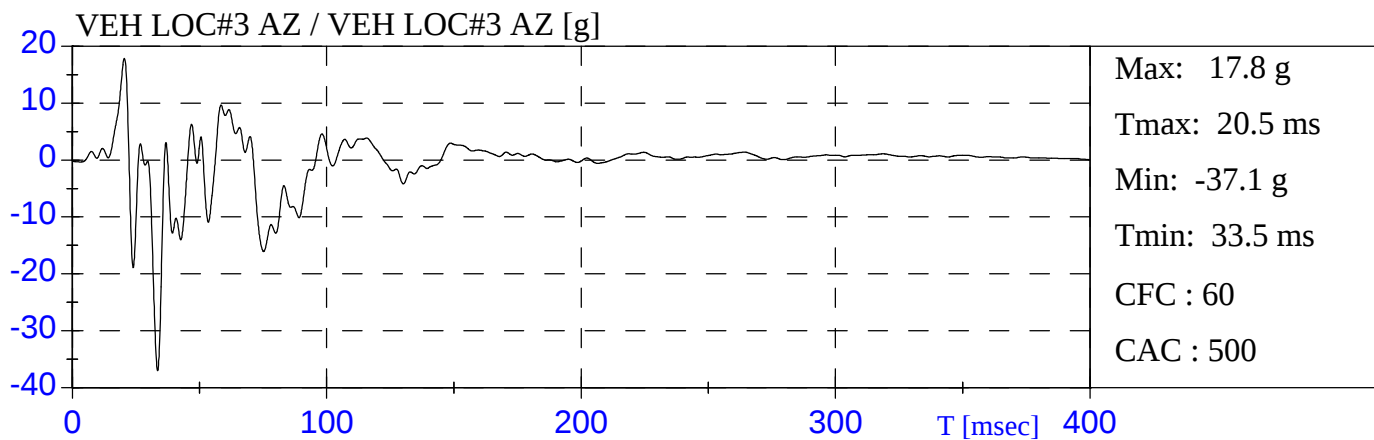
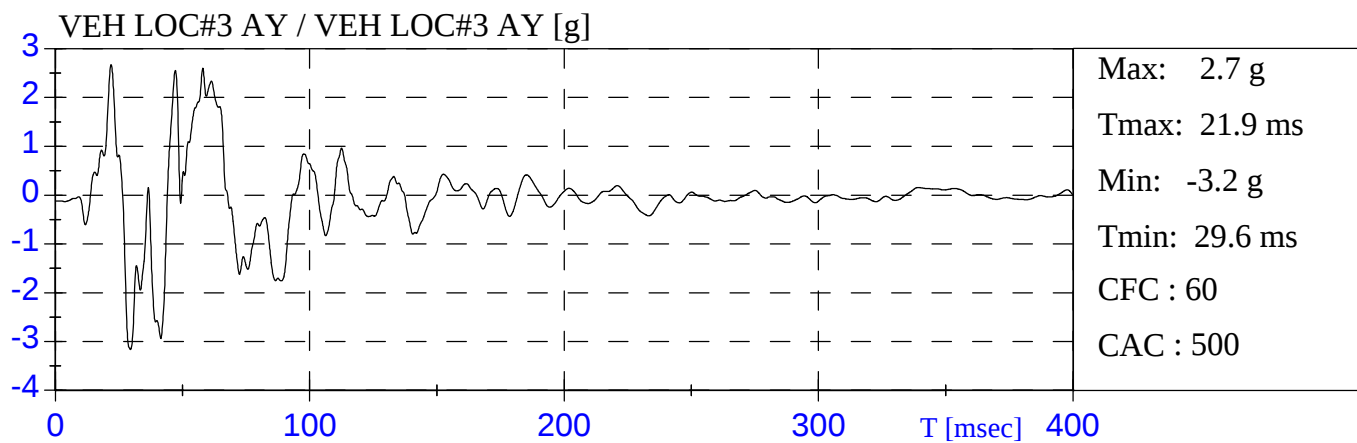
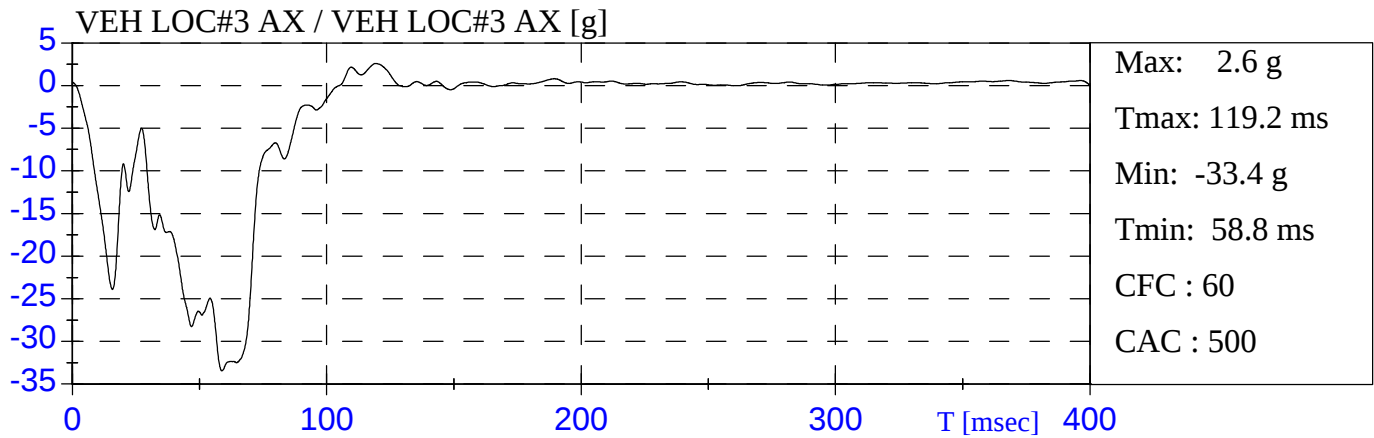
COLLISION FRONTALE
FRONTAL CRASH

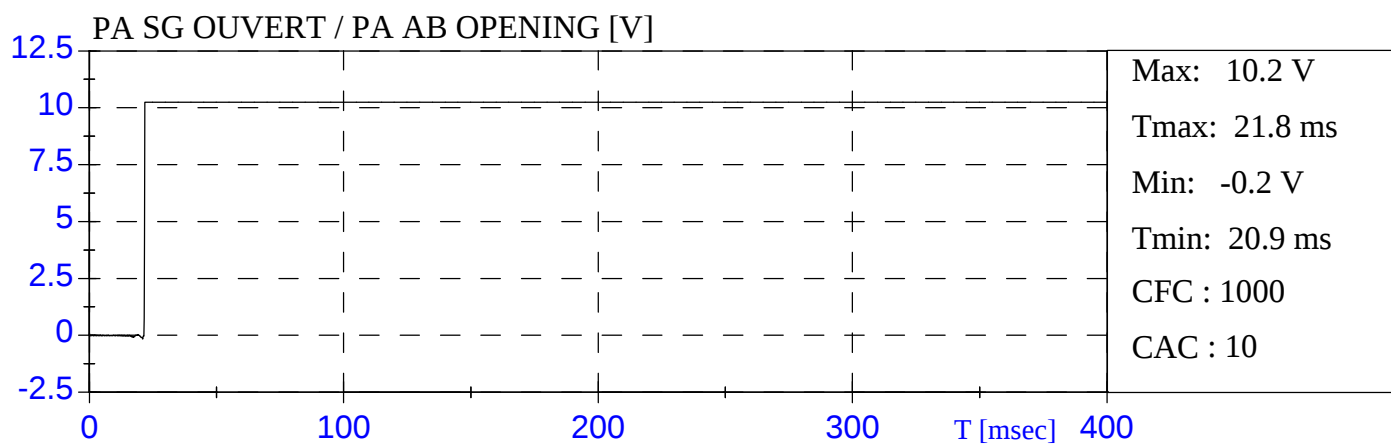
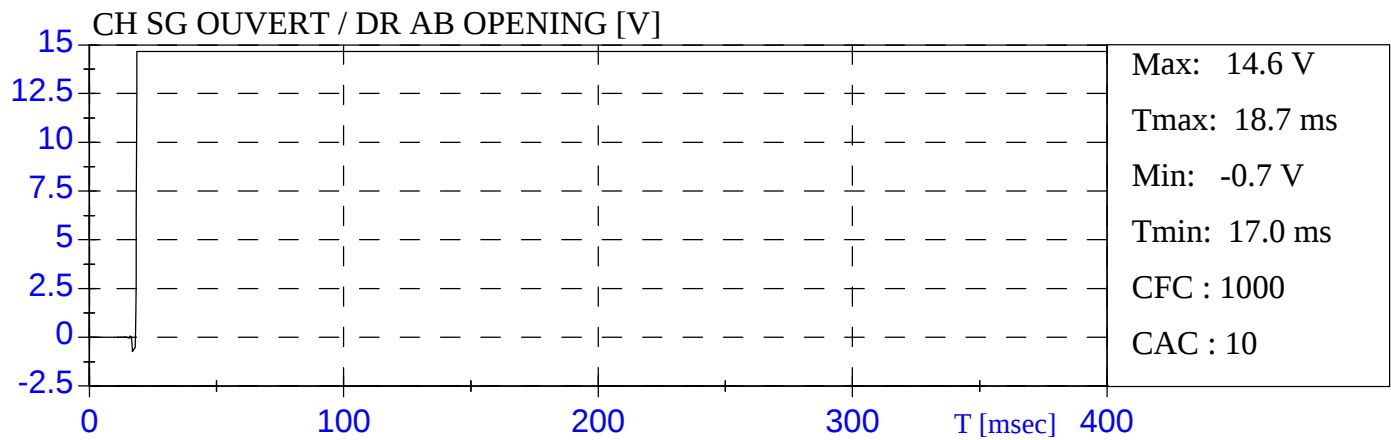
Date: 2004-03-31

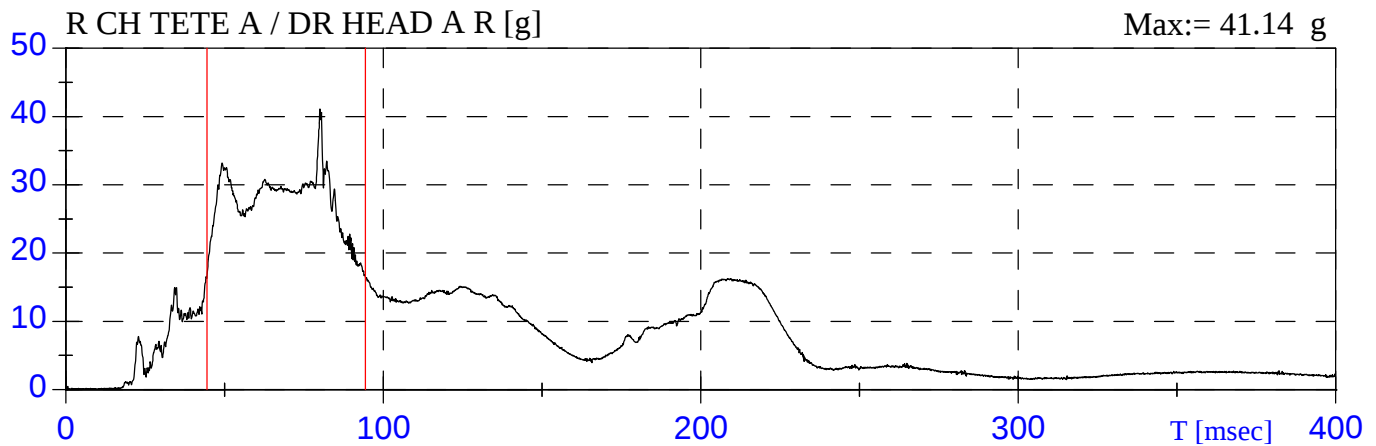
NISSAN MURANO 2004

N° TC / TC No.: TC04-127







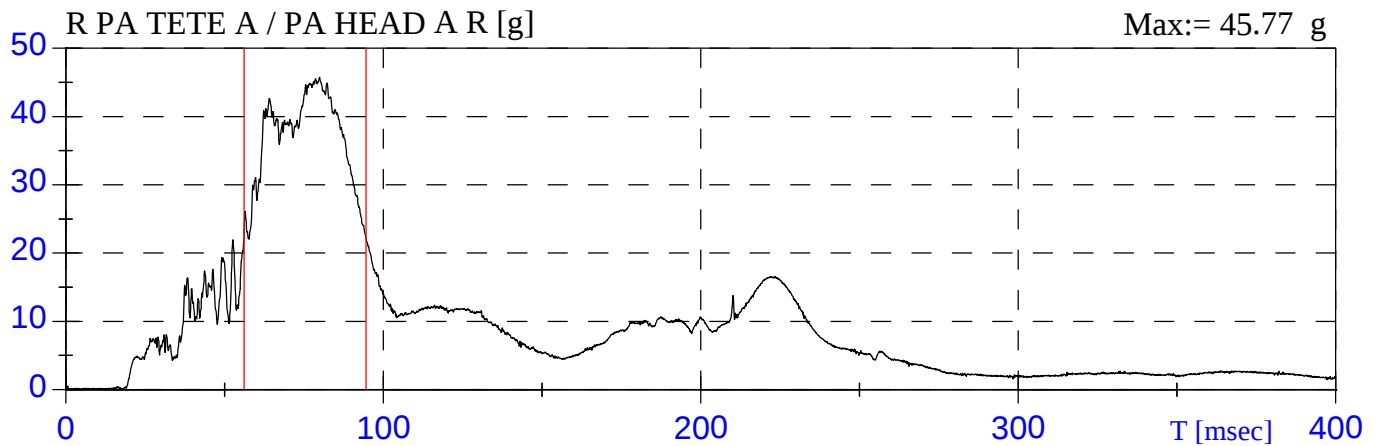


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 199	HIC(36ms):= 173	HIC(15ms):= 79
T1:= 44.5 ms	T1:= 47.5 ms	T1:= 68.3 ms
T2:= 94.4 ms	T2:= 83.5 ms	T2:= 83.3 ms

* Selon / According To: SAE J1727 96-08

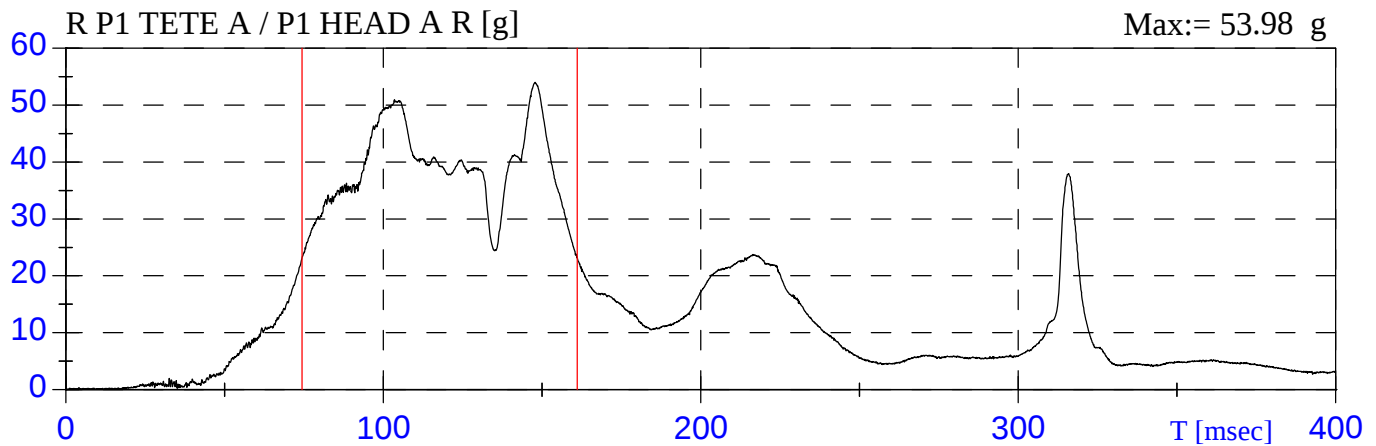


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 318	HIC(36ms):= 317	HIC(15ms):= 176
T1:= 56.1 ms	T1:= 58.1 ms	T1:= 71.9 ms
T2:= 94.6 ms	T2:= 94.1 ms	T2:= 86.9 ms

* Selon / According To: SAE J1727 96-08

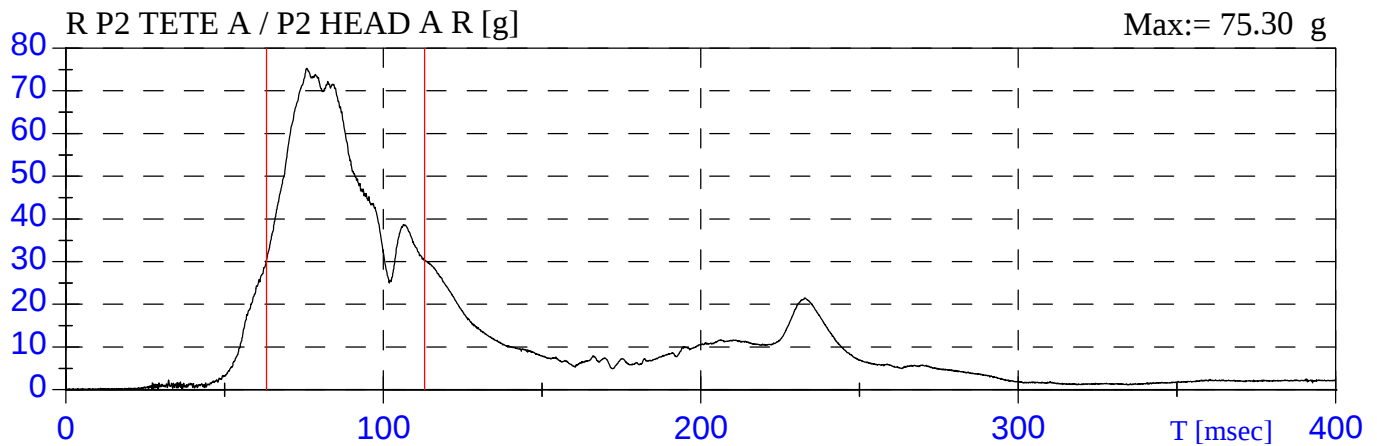


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 803	HIC(36ms):= 428	HIC(15ms):= 230
T1:= 74.4 ms	T1:= 93.9 ms	T1:= 94.8 ms
T2:= 161.1 ms	T2:= 129.9 ms	T2:= 109.8 ms

* Selon / According To: SAE J1727 96-08

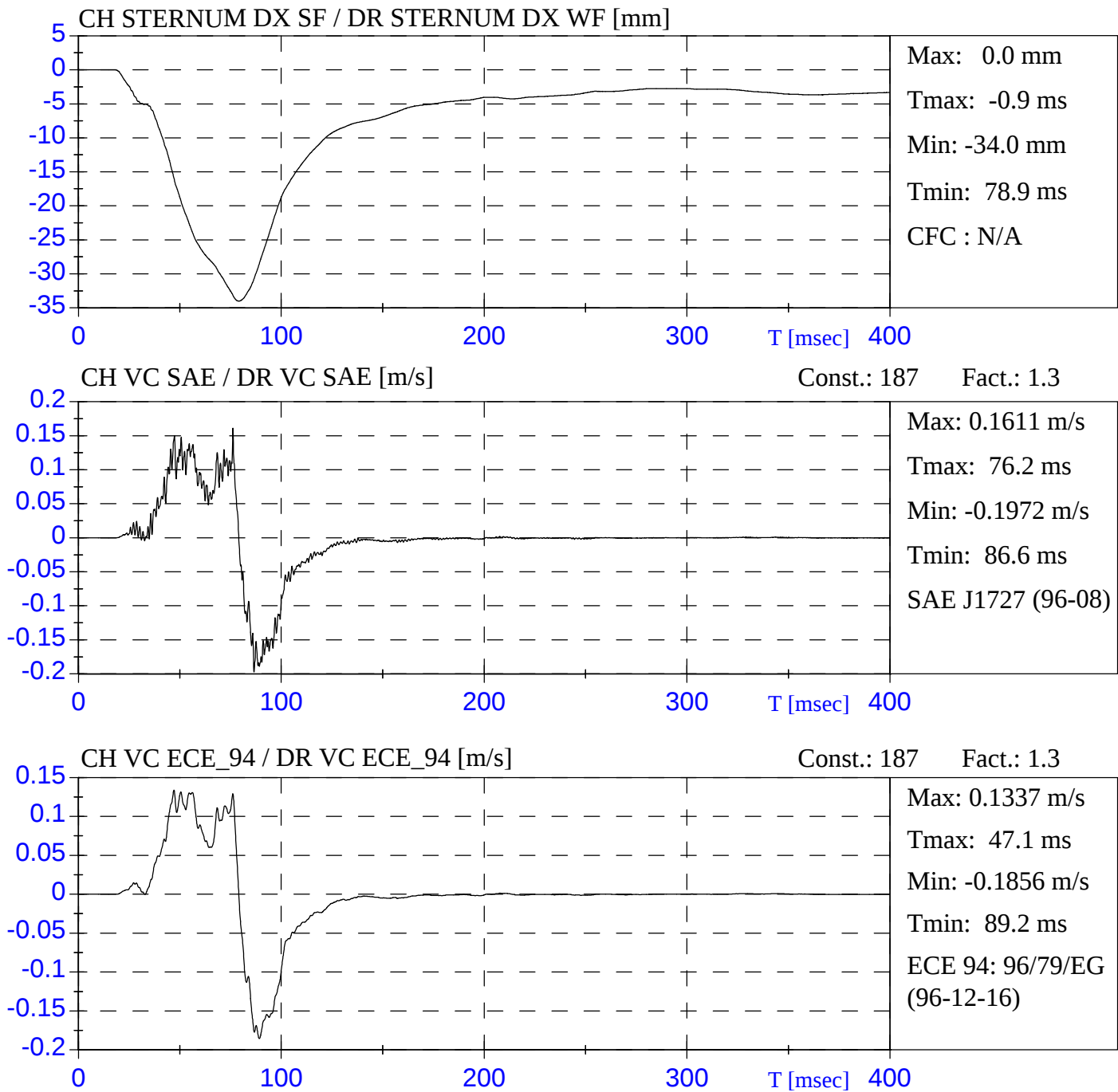


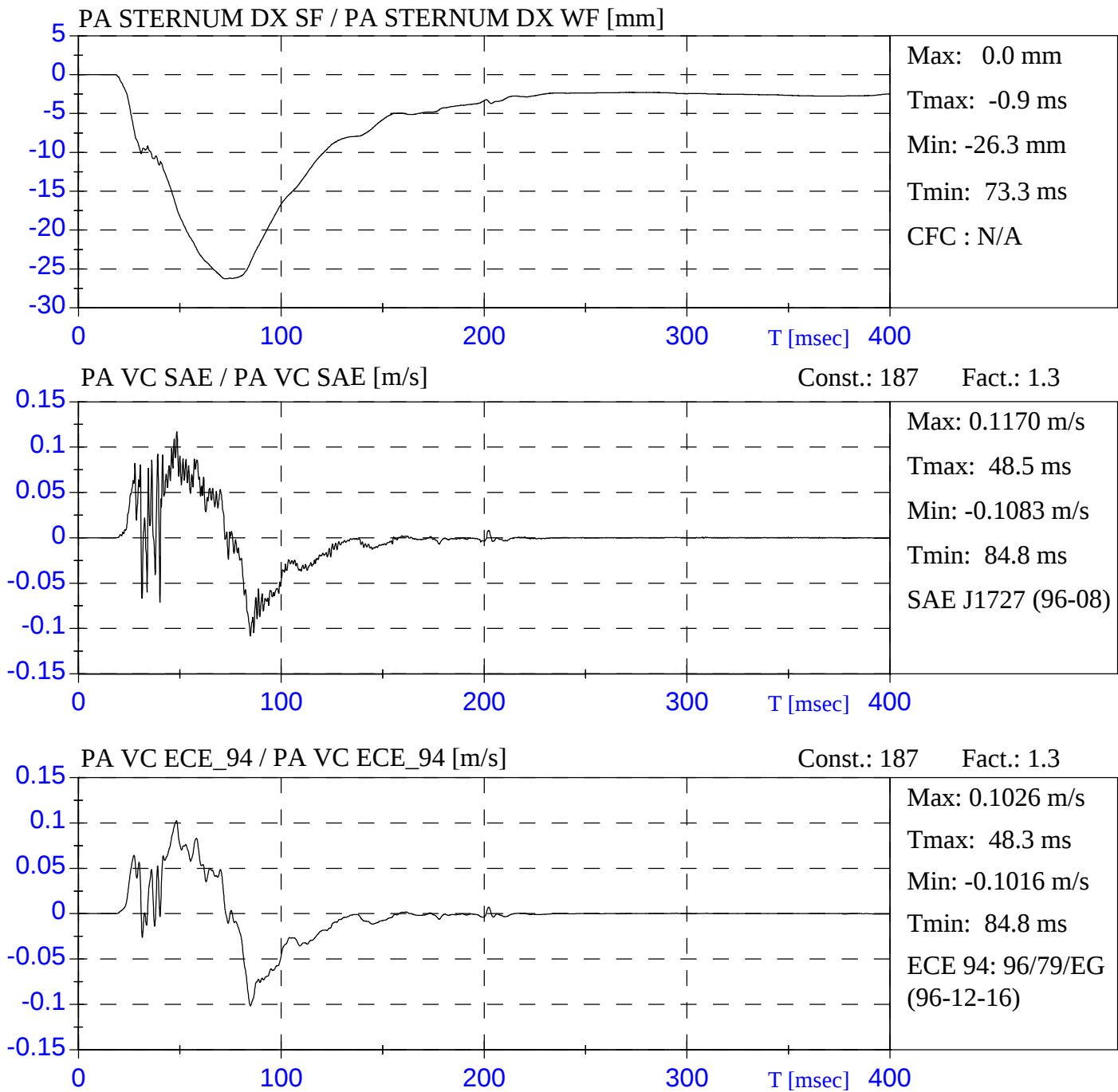
HEAD INJURY CRITERIA (HIC) *

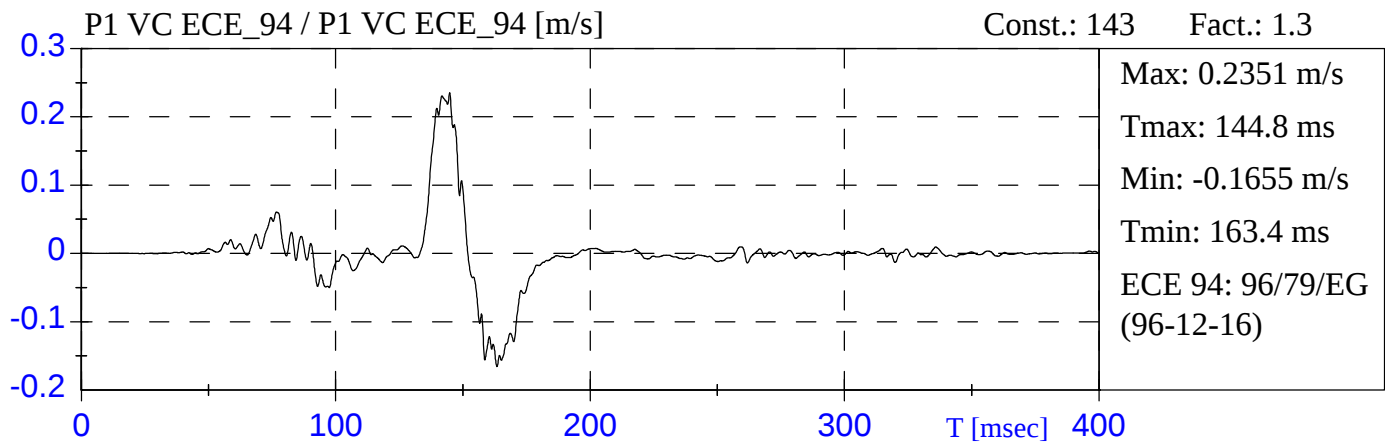
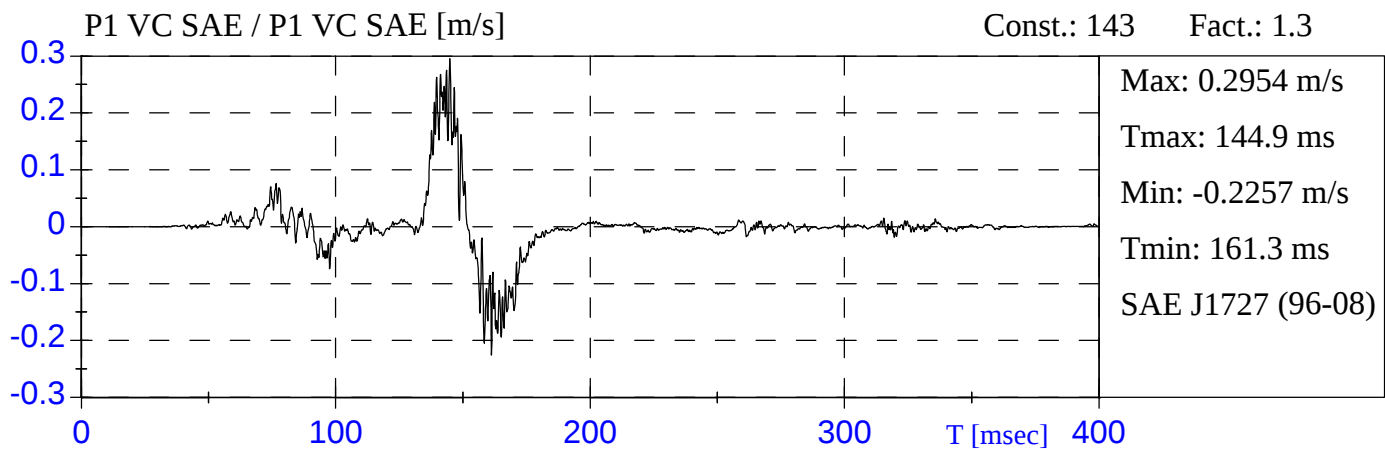
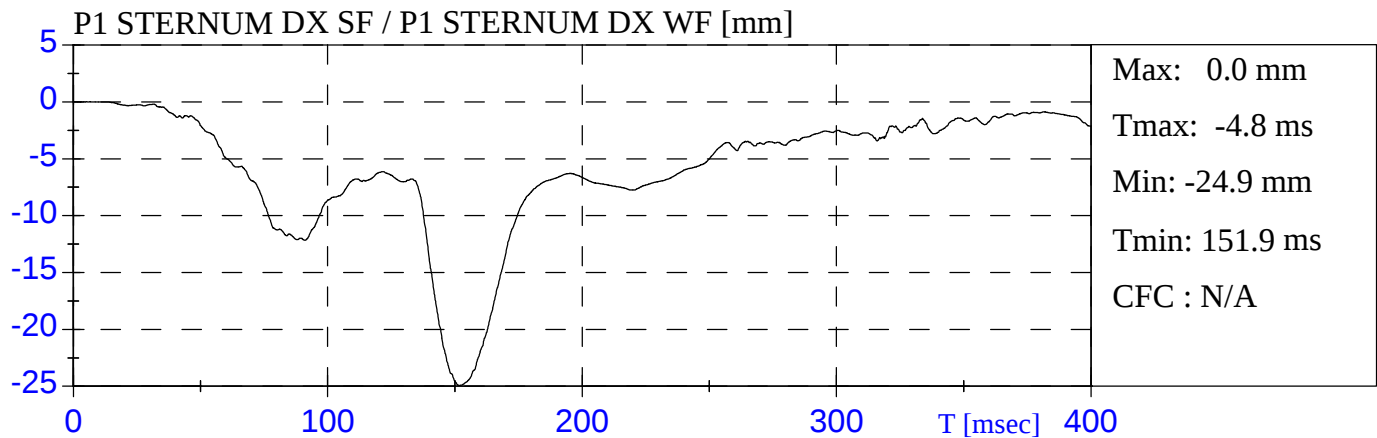
CRITÈRE DE BLESSURE DE LA TÊTE

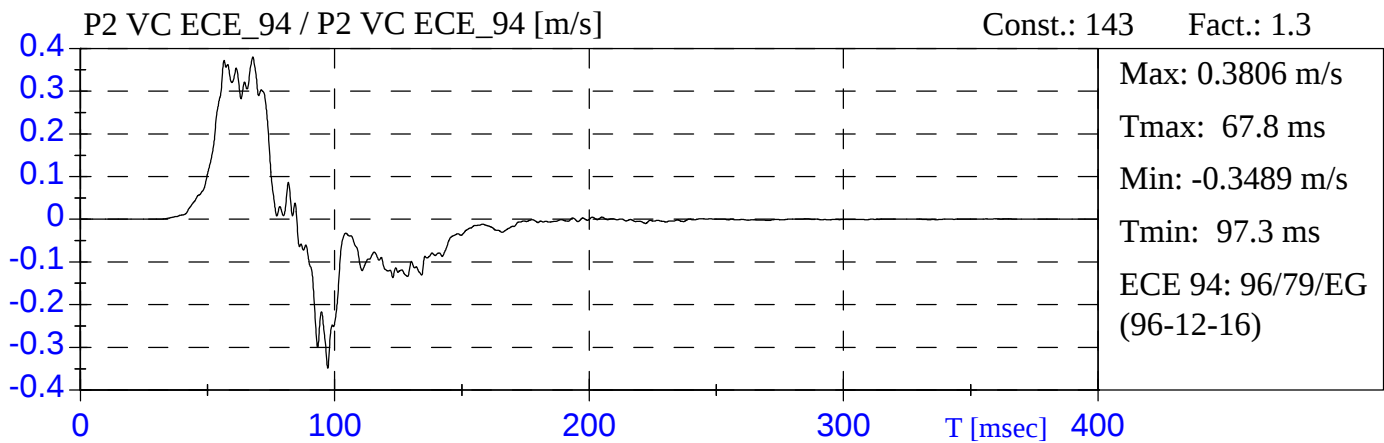
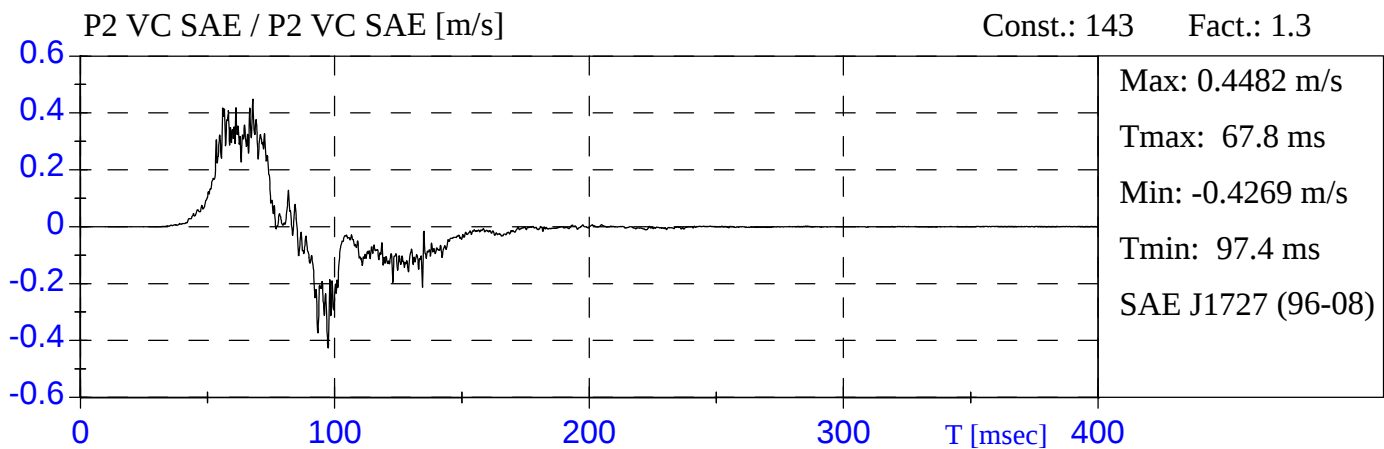
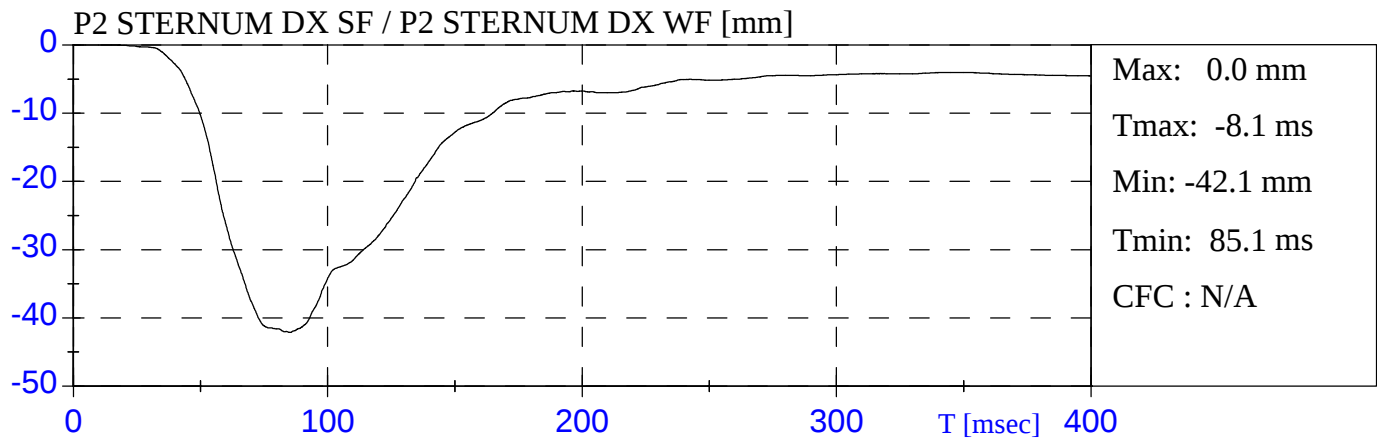
HIC:= 908	HIC(36ms):= 903	HIC(15ms):= 637
T1:= 63.2 ms	T1:= 64.6 ms	T1:= 72.0 ms
T2:= 113.0 ms	T2:= 99.4 ms	T2:= 87.0 ms

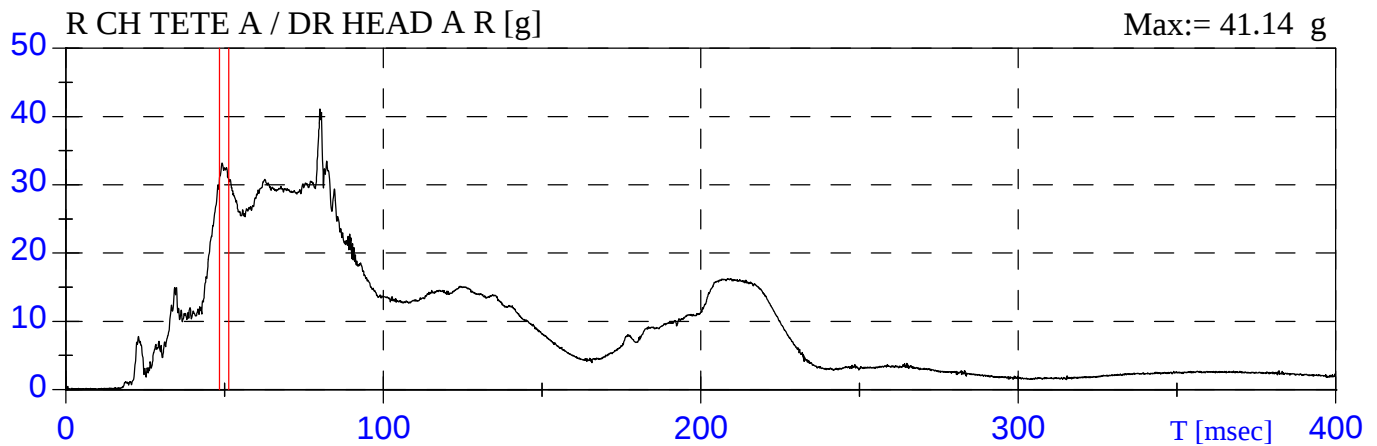
* Selon / According To: SAE J1727 96-08





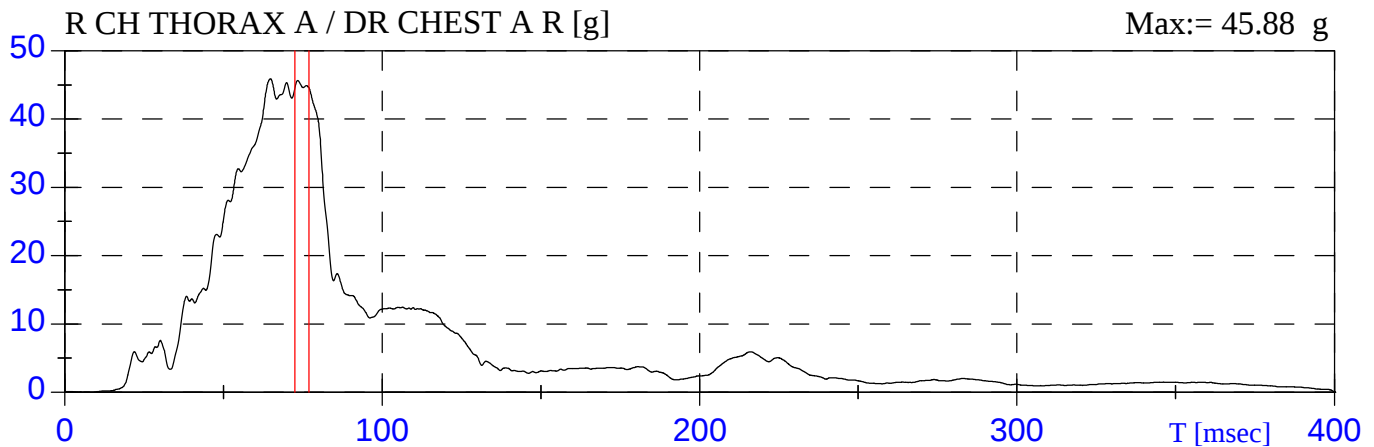






CLIP 3ms *

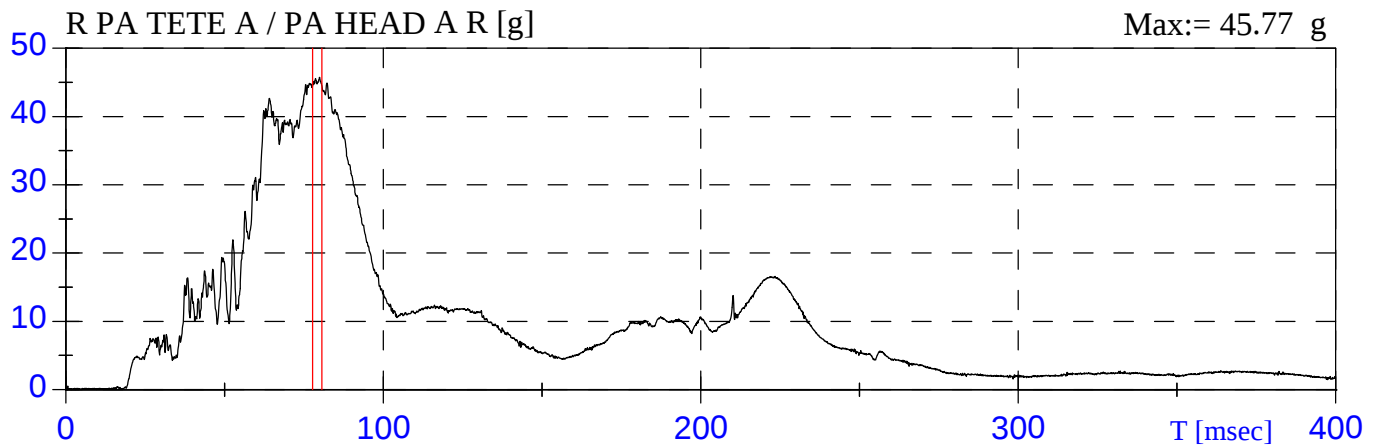
Acc. := 30.55 g	T1:= 48.4 ms	T2:= 51.4 ms
-----------------	--------------	--------------



CLIP 3ms *

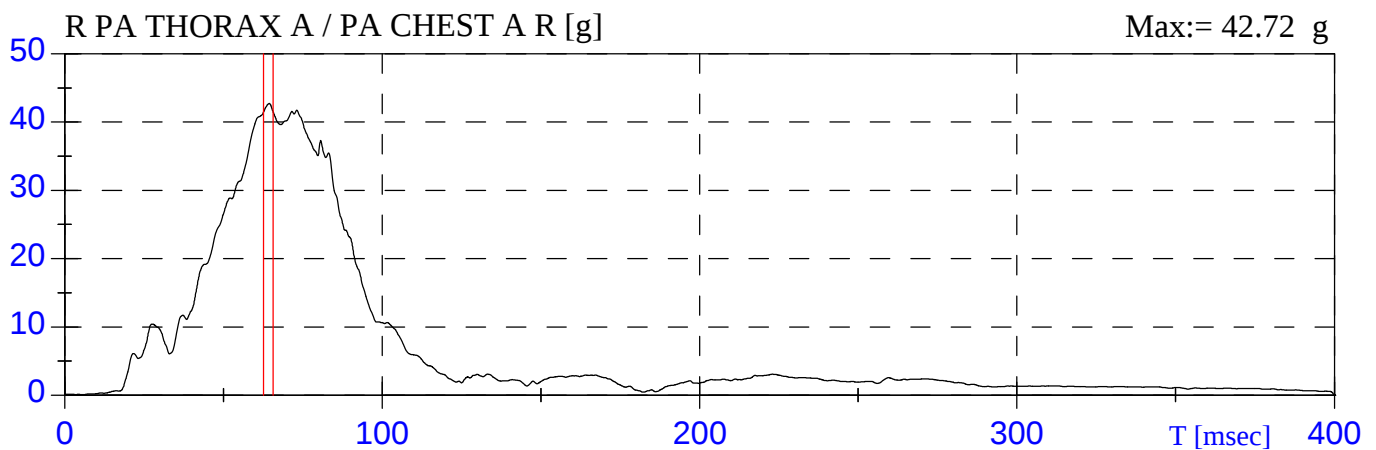
Acc. := 44.60 g	T1:= 72.5 ms	T2:= 76.9 ms
-----------------	--------------	--------------

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



CLIP 3ms *

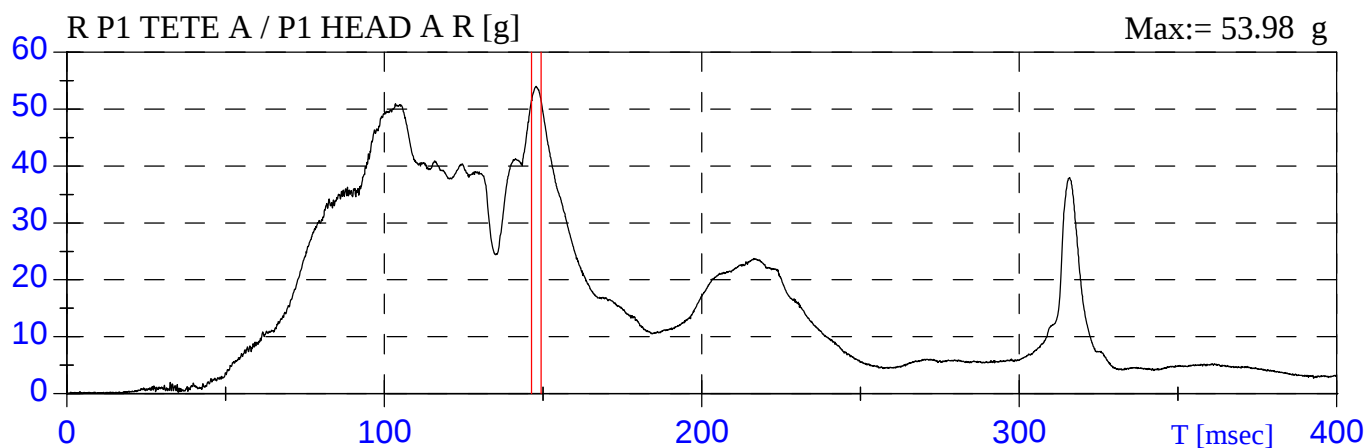
Acc. := 44.48 g	T1:= 77.7 ms	T2:= 80.7 ms
-----------------	--------------	--------------



CLIP 3ms *

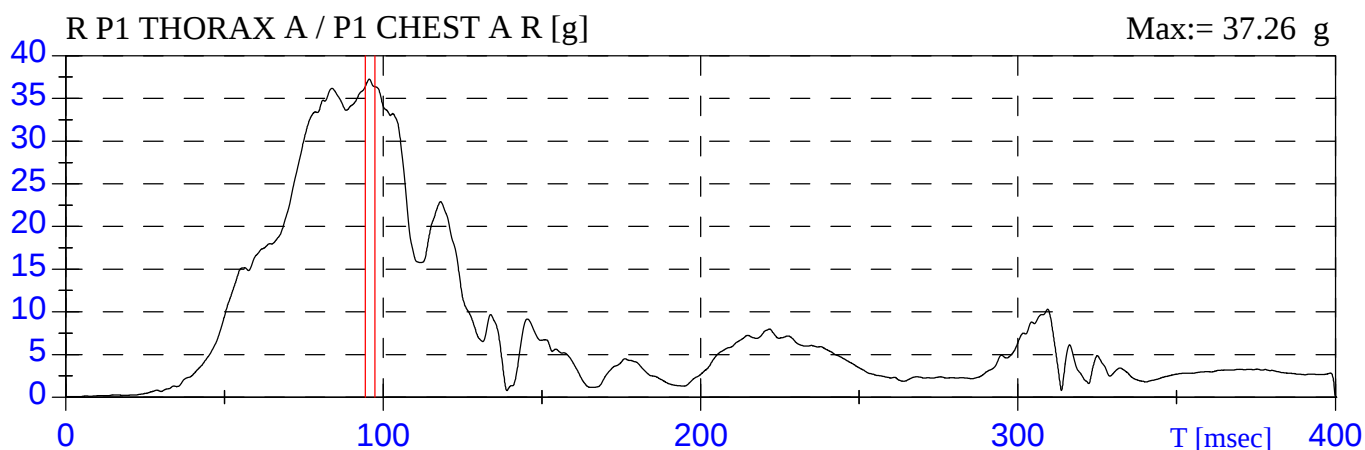
Acc. := 41.48 g	T1:= 62.7 ms	T2:= 65.7 ms
-----------------	--------------	--------------

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



CLIP 3ms *

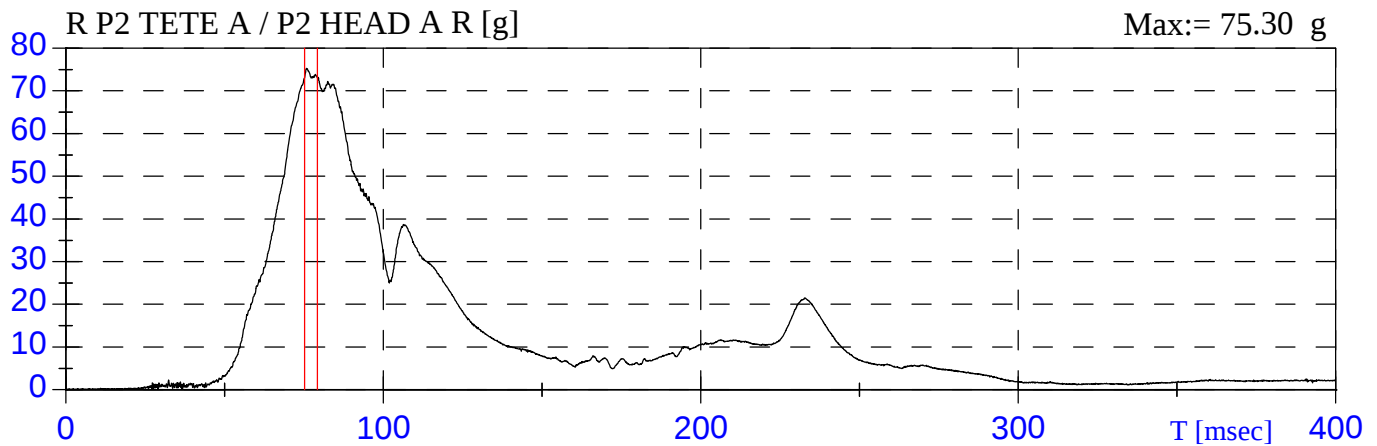
Acc. := 51.47 g	T1:= 146.4 ms	T2:= 319.4 ms
-----------------	---------------	---------------



CLIP 3ms *

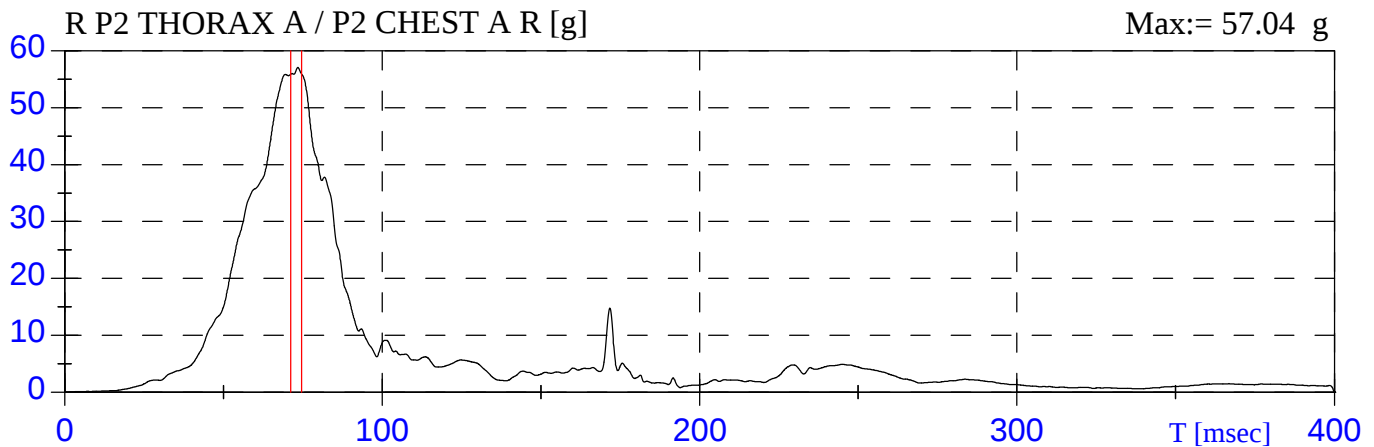
Acc. := 36.38 g	T1:= 94.4 ms	T2:= 97.4 ms
-----------------	--------------	--------------

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



CLIP 3ms *

Acc. := 73.04 g	T1:= 75.2 ms	T2:= 79.3 ms
-----------------	--------------	--------------



CLIP 3ms *

Acc. := 55.88 g	T1:= 71.2 ms	T2:= 74.6 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	0.820	0.520
BAS / LOWER	0.889	2.515

* Selon / According To: SAE J1727 AUG 96

INDEX DU TIBIA *

TIBIA INDEX *

TI Passenger / Passenger

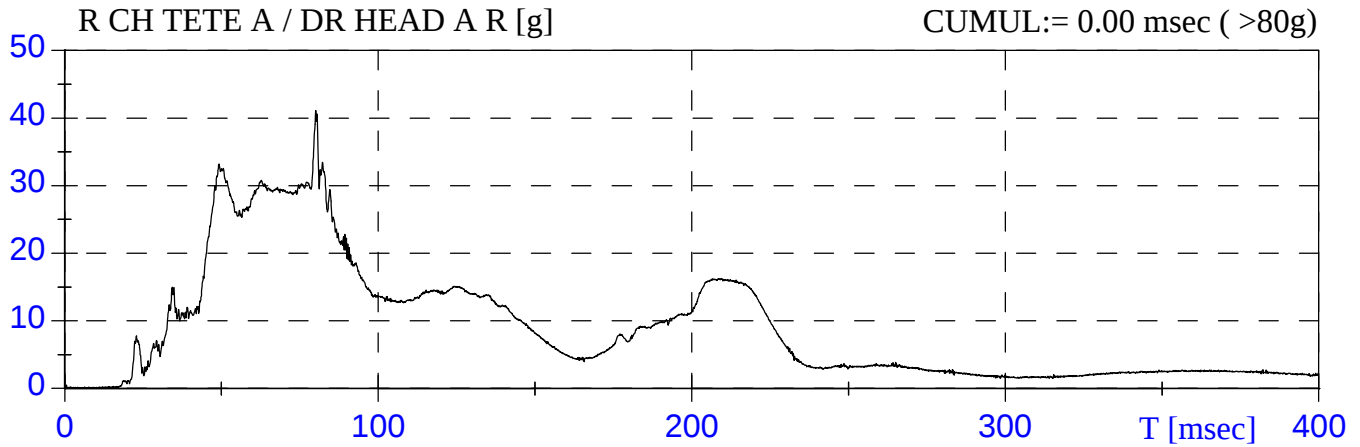
Mc := 115 N-m

Fc := 22.9 kN

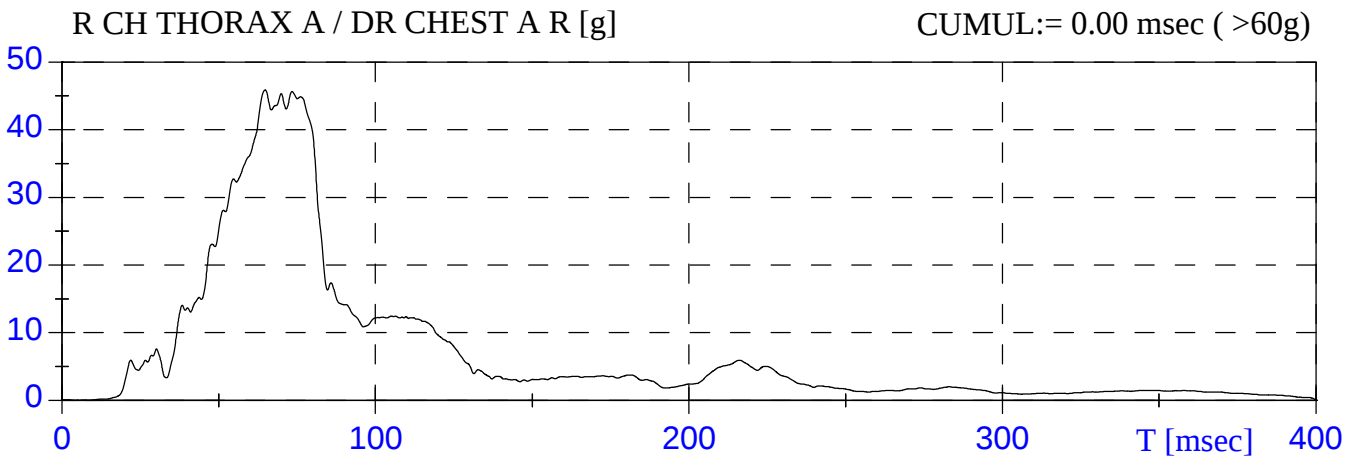
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	0.542	0.951
BAS / LOWER	0.675	1.259

* Selon / According To: SAE J1727 AUG 96

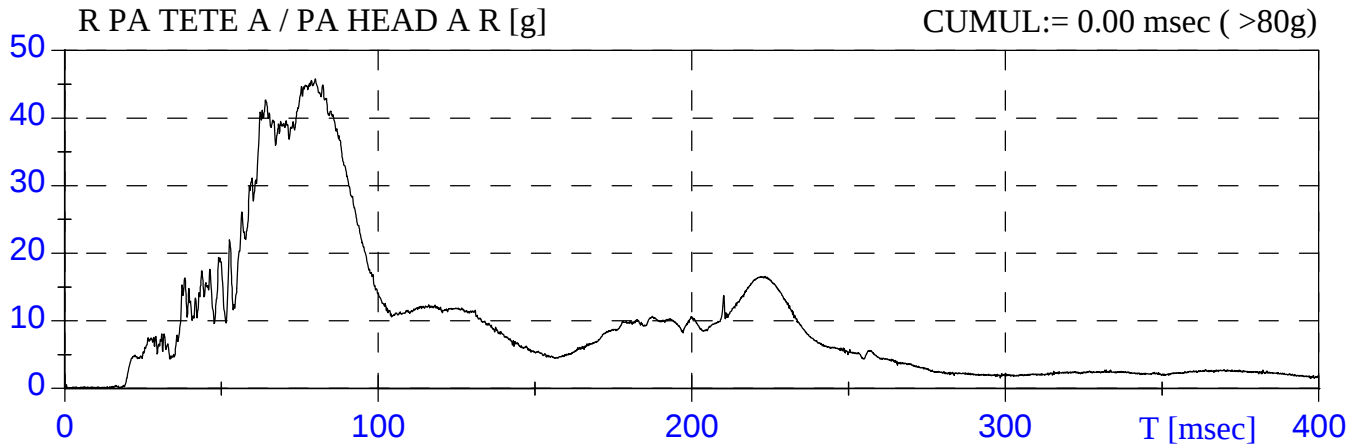
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



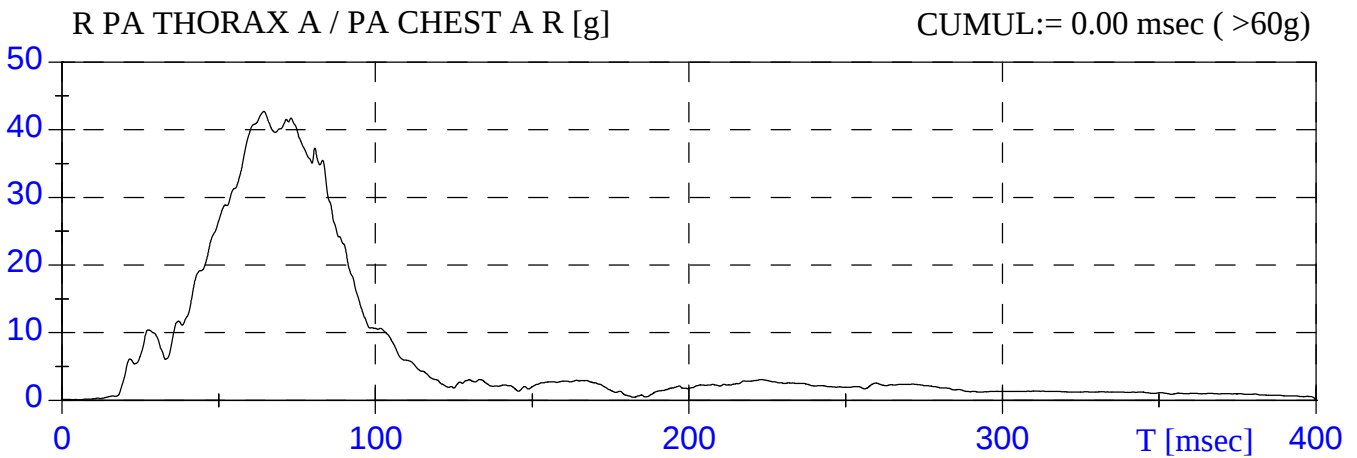
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



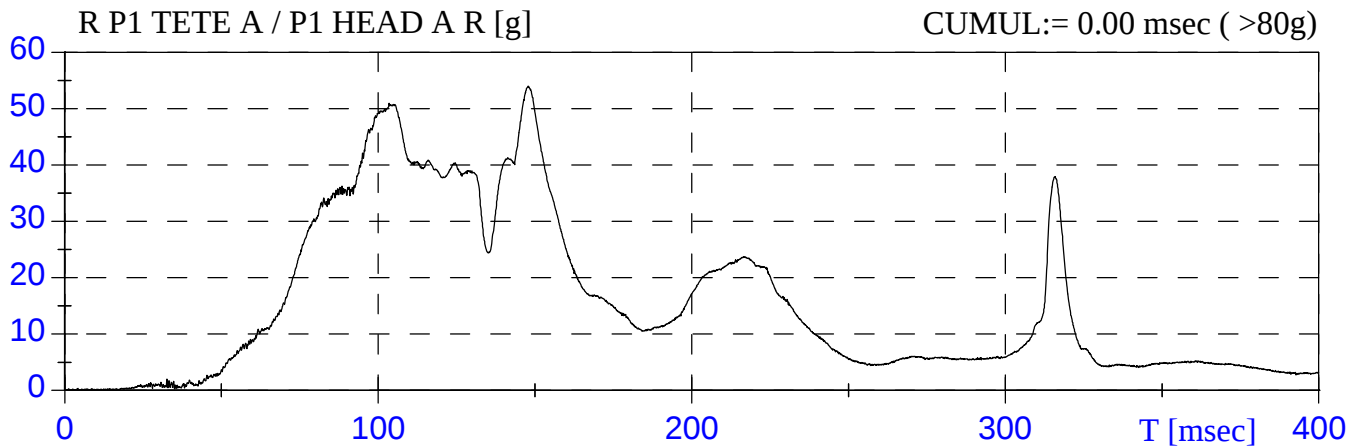
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



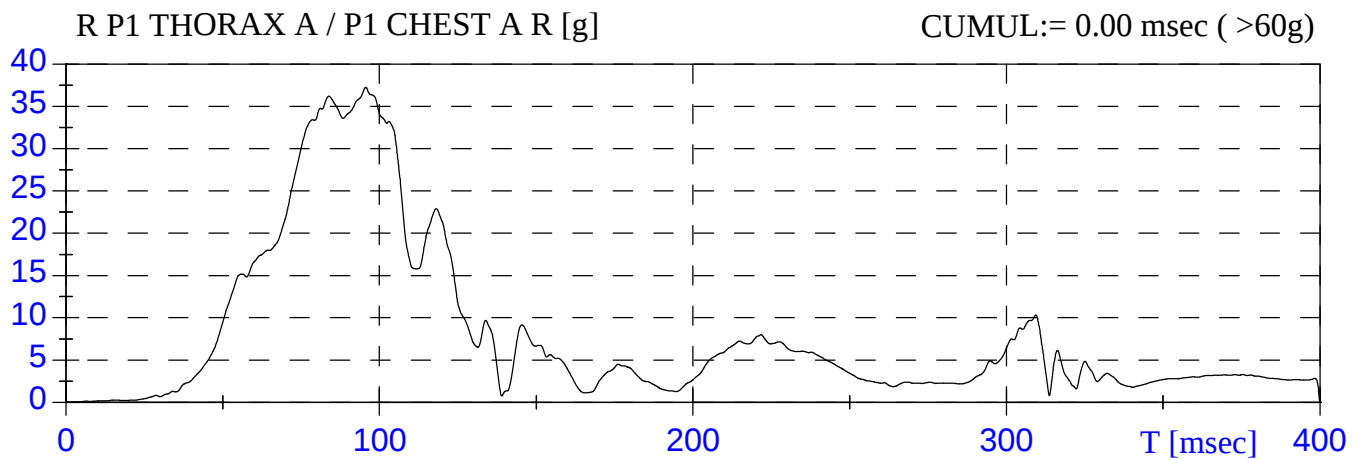
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



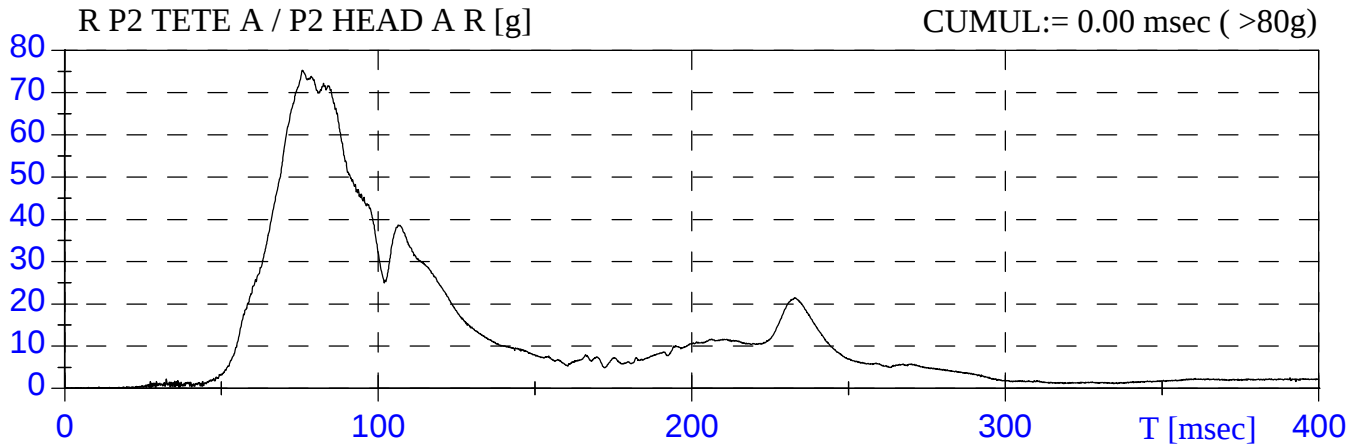
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



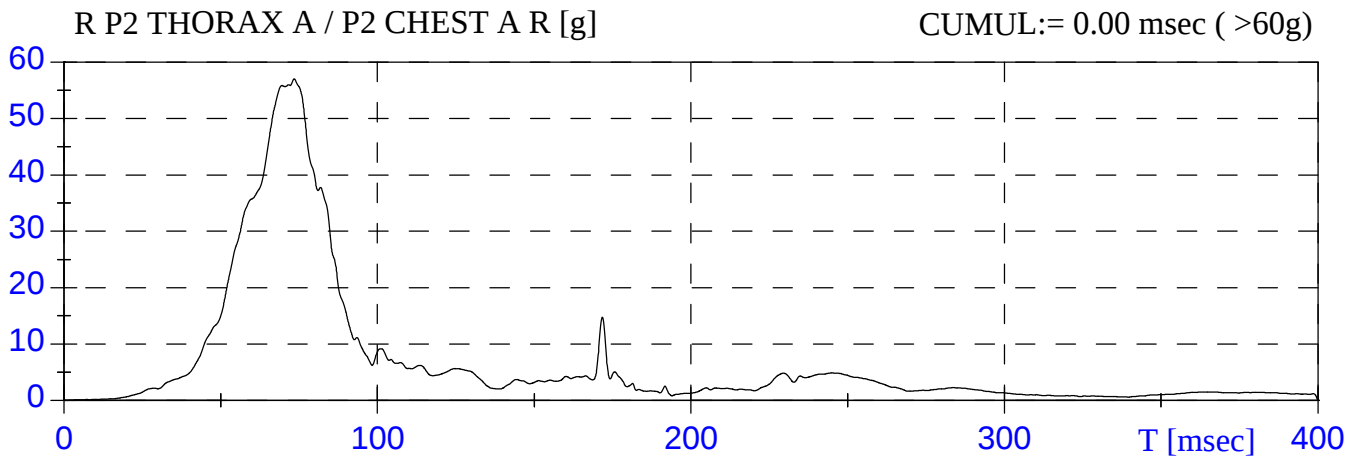
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



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



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



Chauffeur / Driver

$$N_{ij}^* = 0.78$$

Valeurs critiques
Criticals Values

N _{tf}	N _{te}	N _{cf}	N _{ce}	Tc	4287
				Cc	3880
0.14	0.78	0.09	0.03	Fc	155
				Ec	67

Passager / Passenger

$$N_{ij}^* = 0.42$$

Valeurs critiques
Criticals Values

N _{tf}	N _{te}	N _{cf}	N _{ce}	Tc	4287
				Cc	3880
0.21	0.29	0.42	0.20	Fc	155
				Ec	67

* Selon / According To: Federal Register 5/2000

Chauffeur / Driver

$$N_{ij}^* = 0.78$$

Valeurs critiques
Criticals Values

N _{tf}	N _{te}	N _{cf}	N _{ce}	Tc	4287
				Cc	3880
0.14	0.78	0.09	0.03	Fc	155
				Ec	67

Passager / Passenger

$$N_{ij}^* = 0.42$$

Valeurs critiques
Criticals Values

N tf	N te	N cf	N ce	Tc	4287
				Cc	3880
0.21	0.29	0.42	0.20	Fc	155
				Ec	67

* Selon / According To: Federal Register 5/2000



COMMENTAIRES / COMMENTS

CH BAUDRIER: N'est pas valide à partir de 79.4 ms

DR SHOULD BELT: Is not valid from 79.4 ms