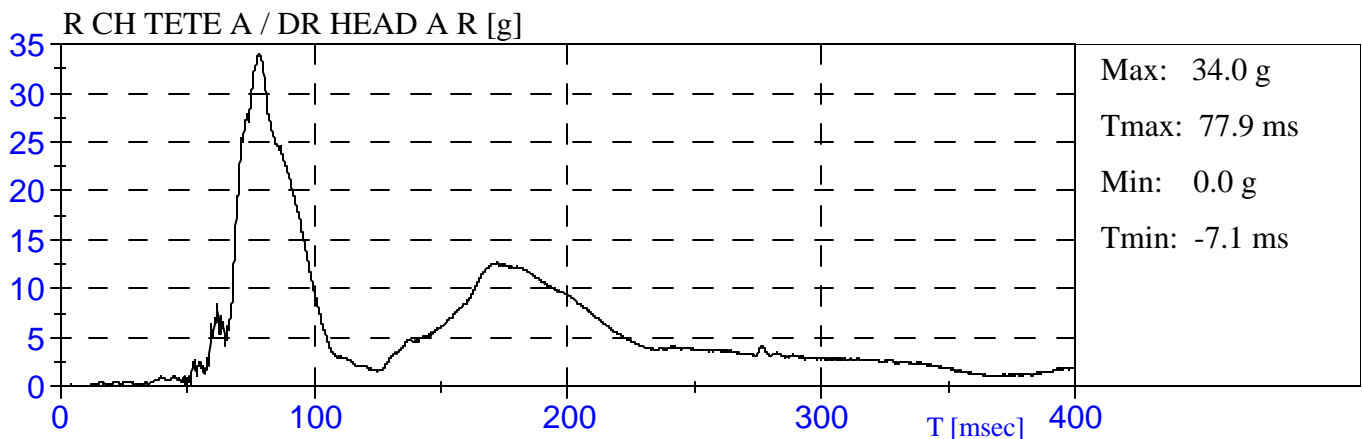
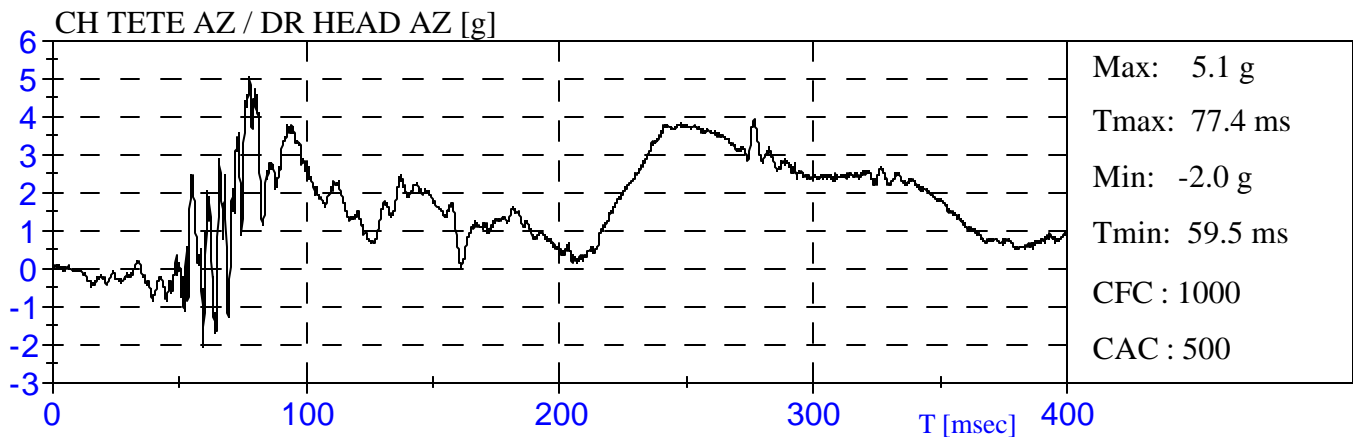
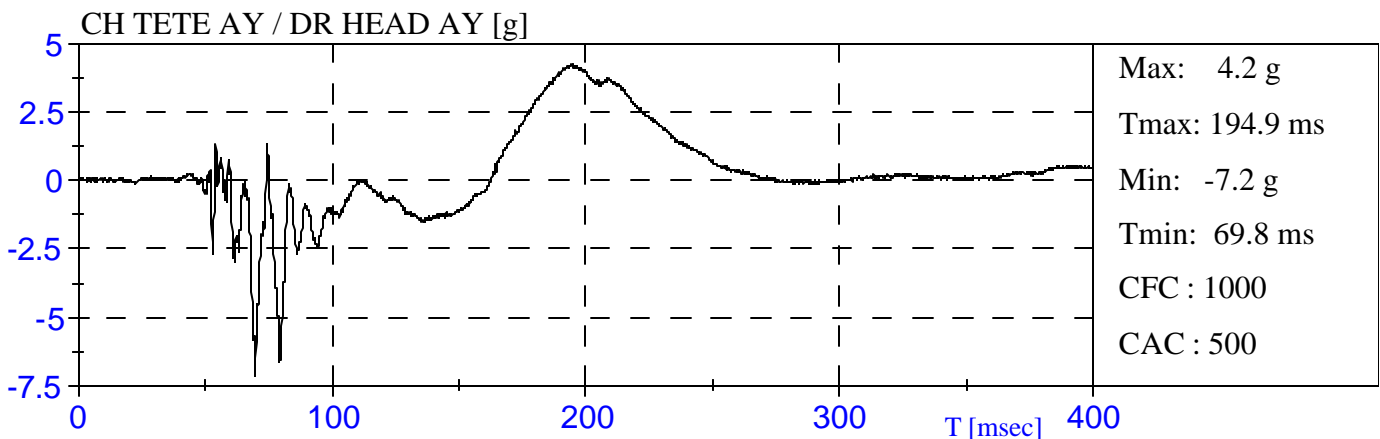
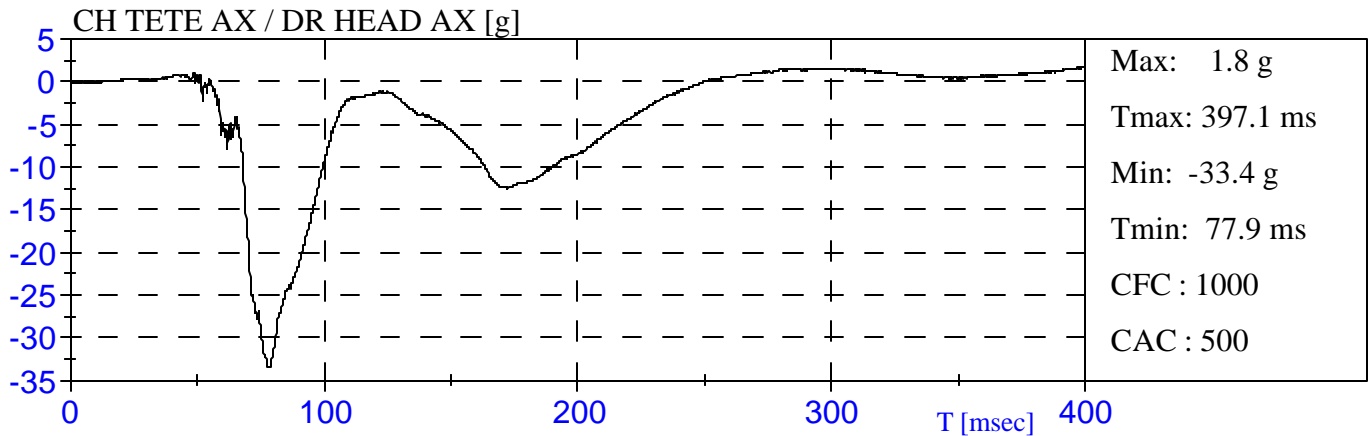
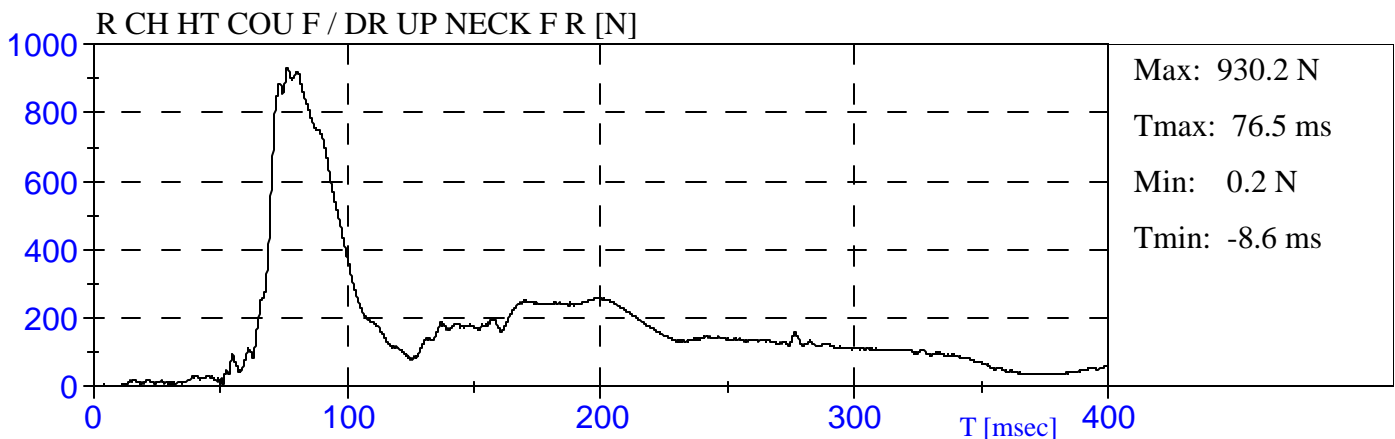
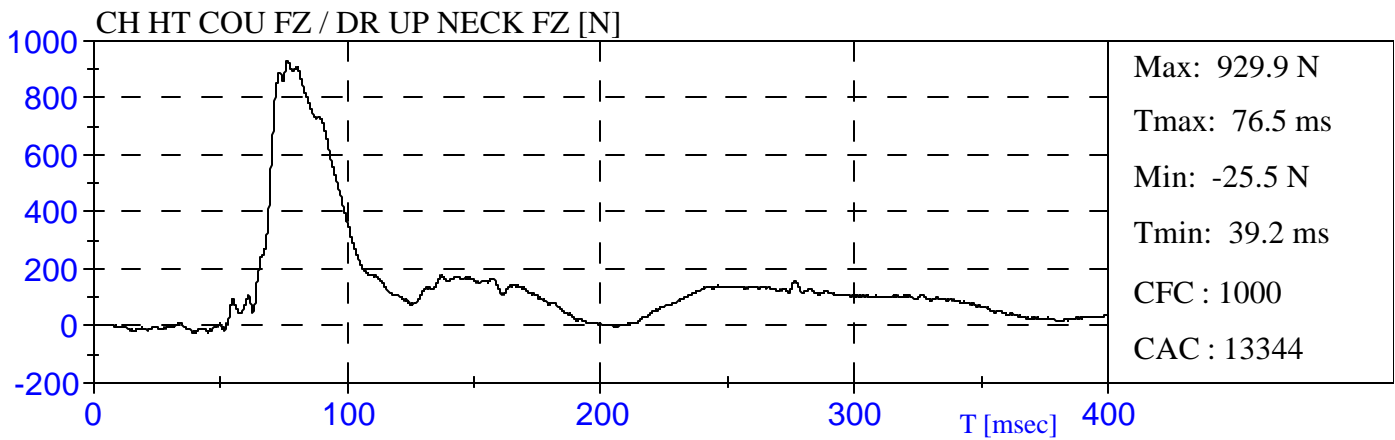
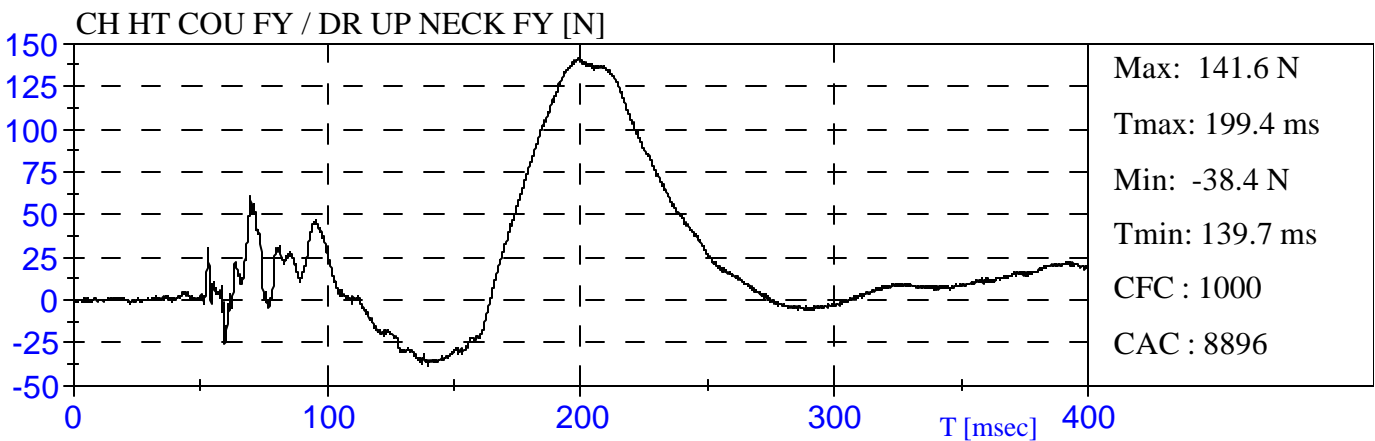
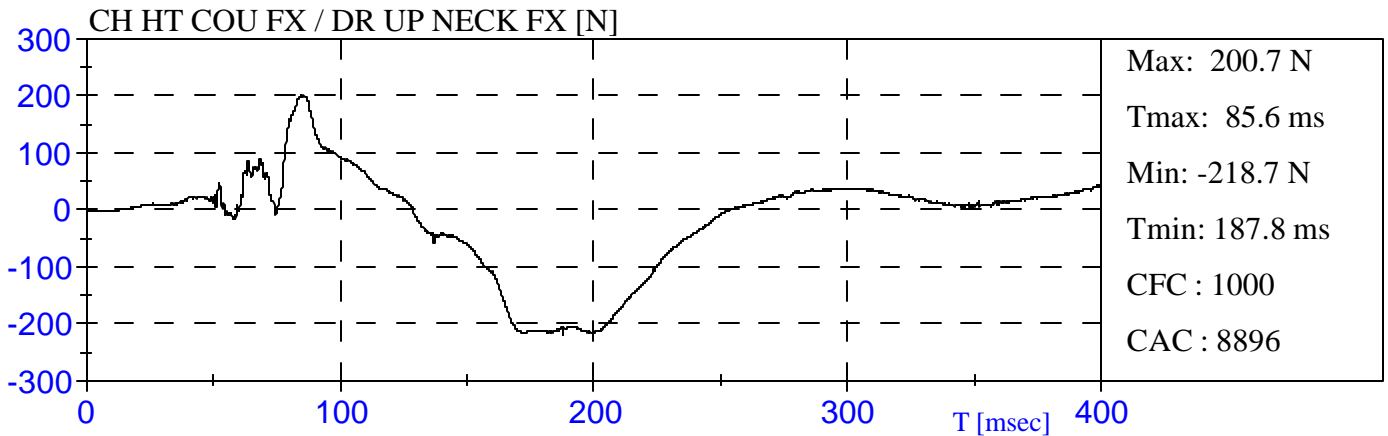
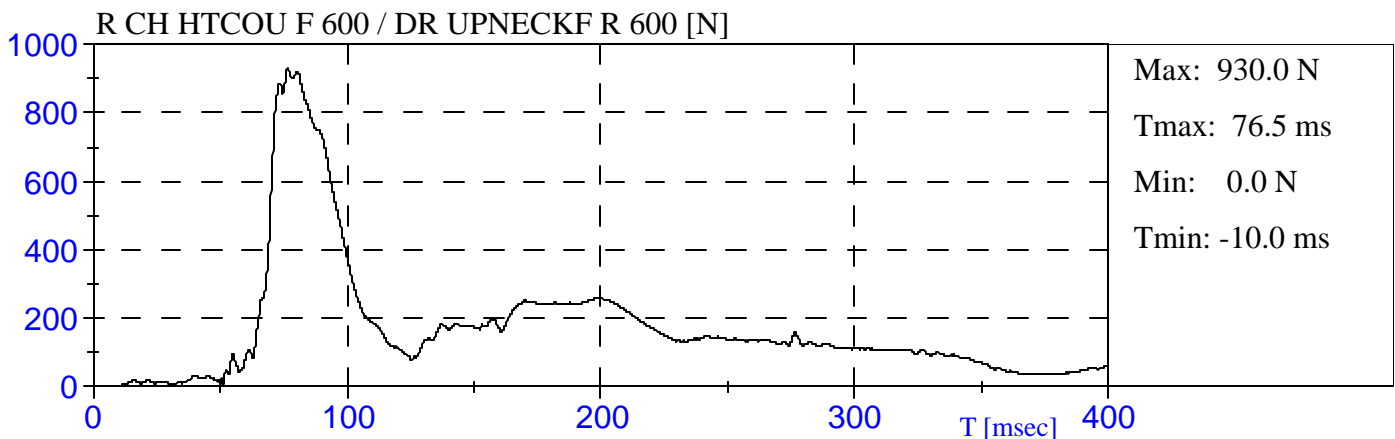
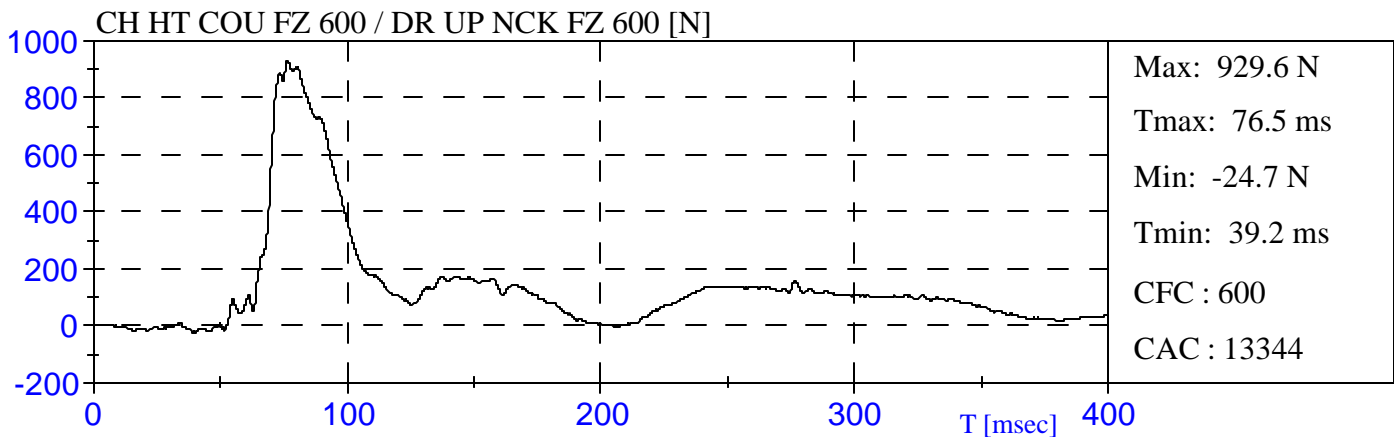
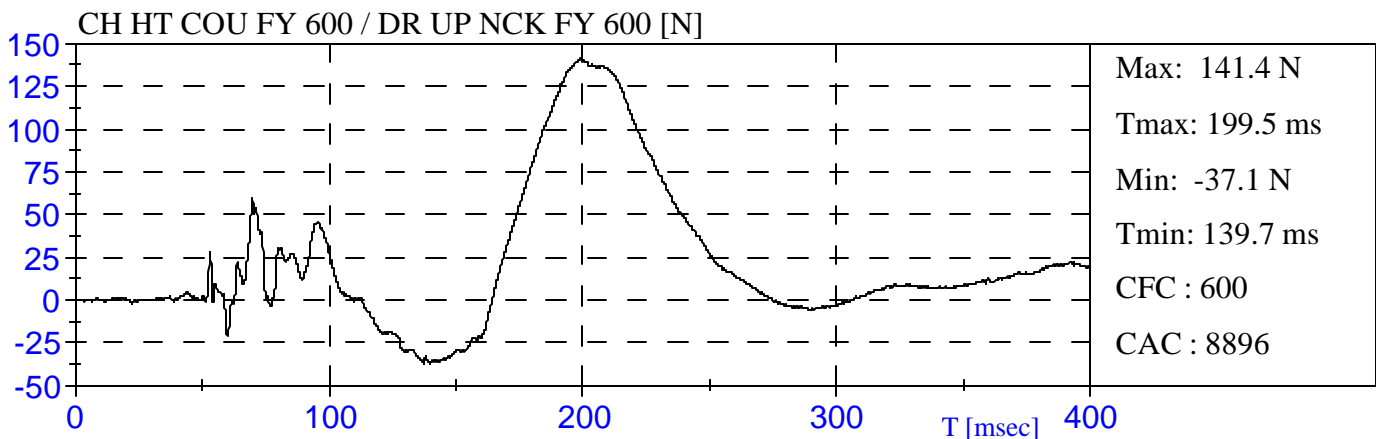
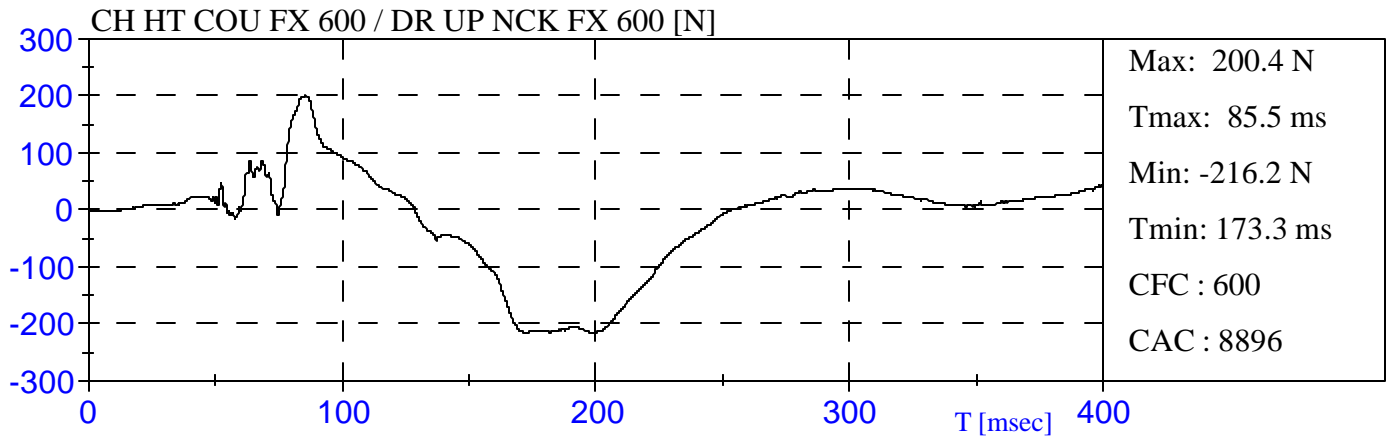
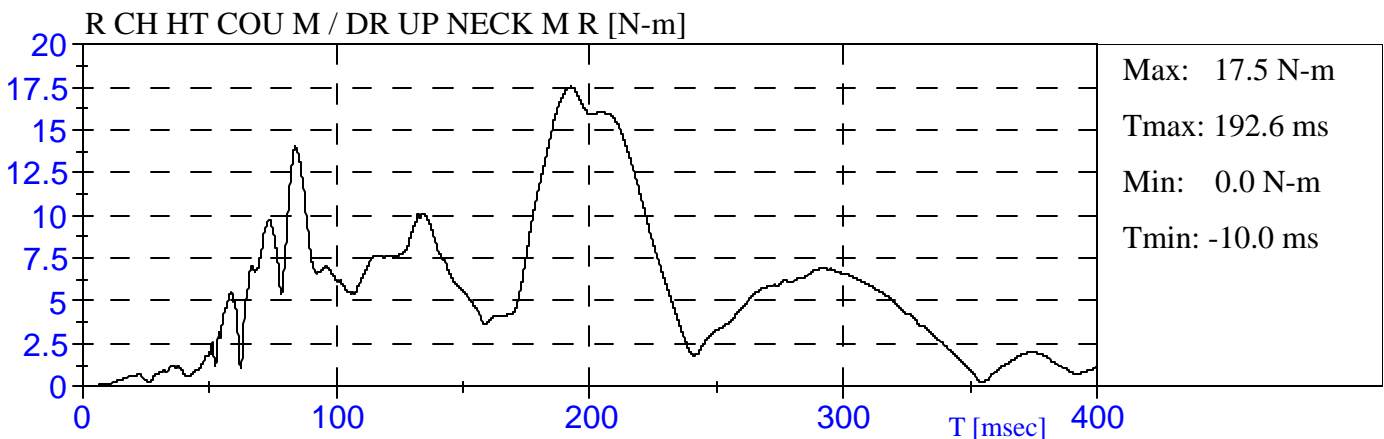
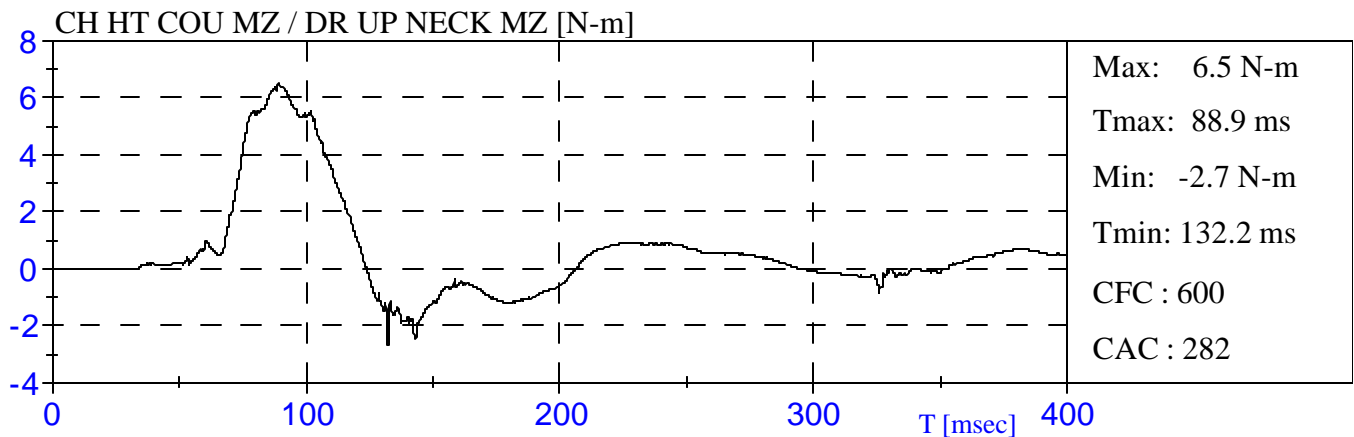
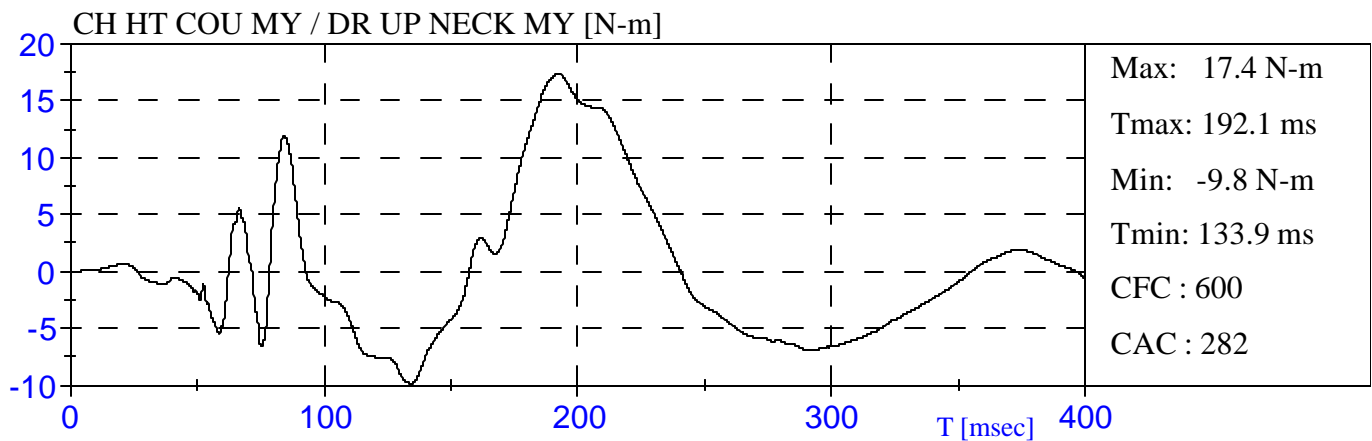
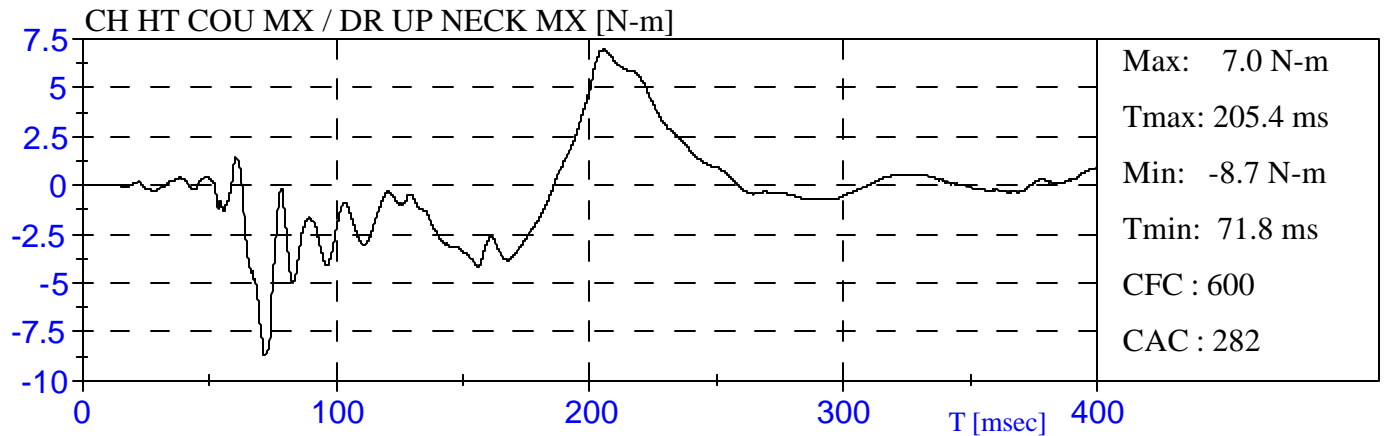


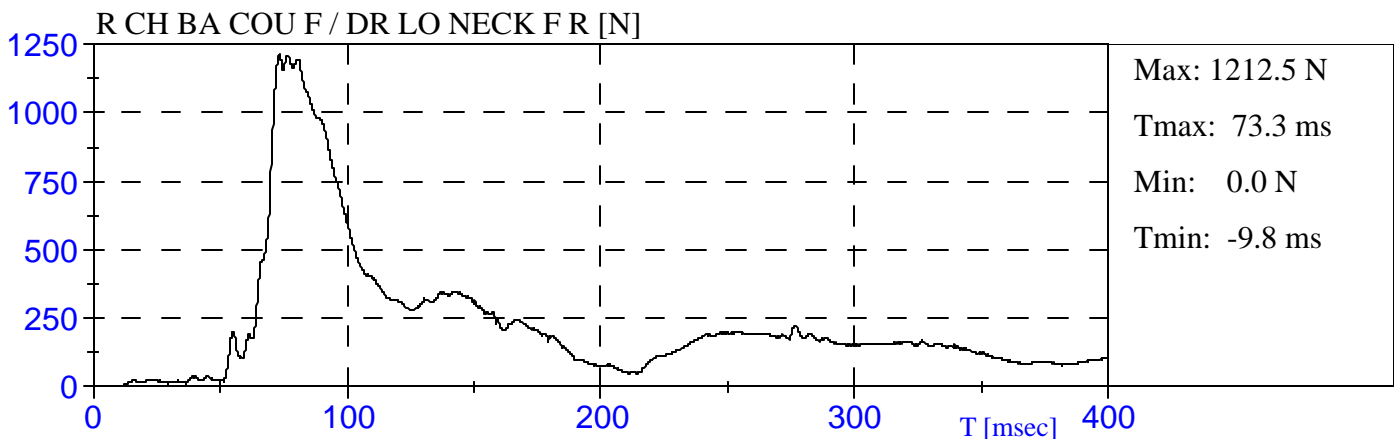
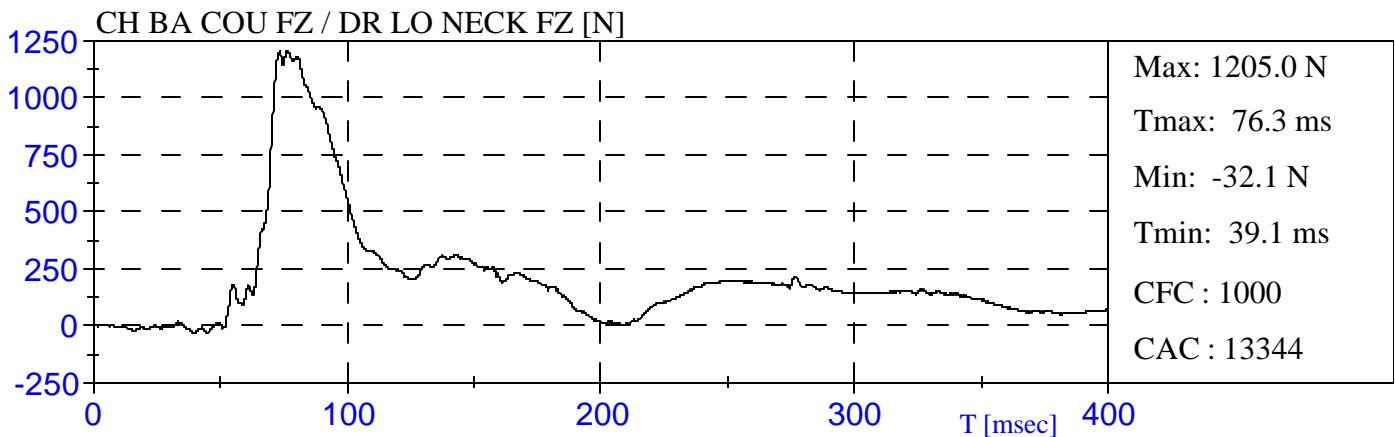
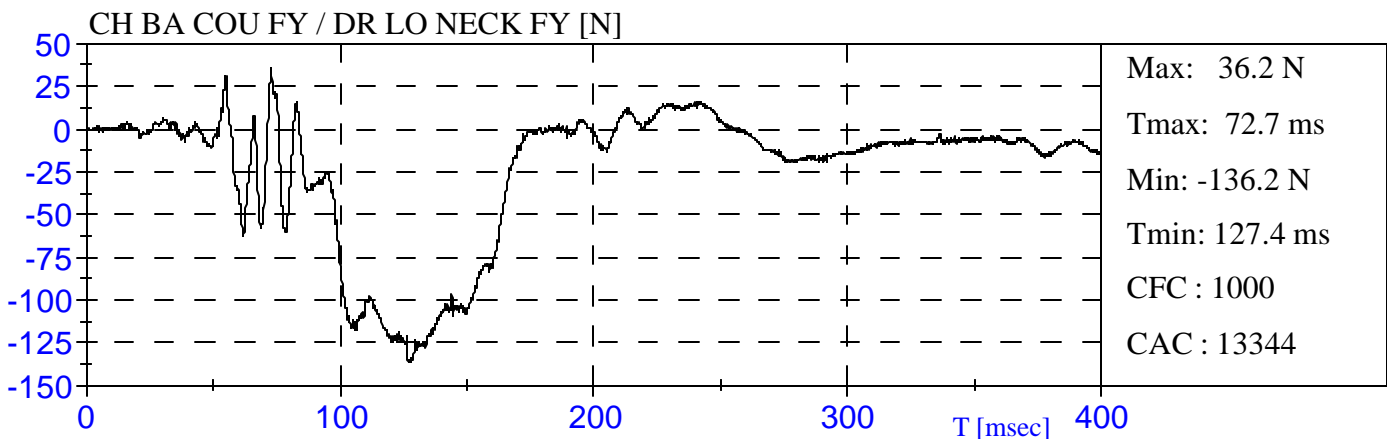
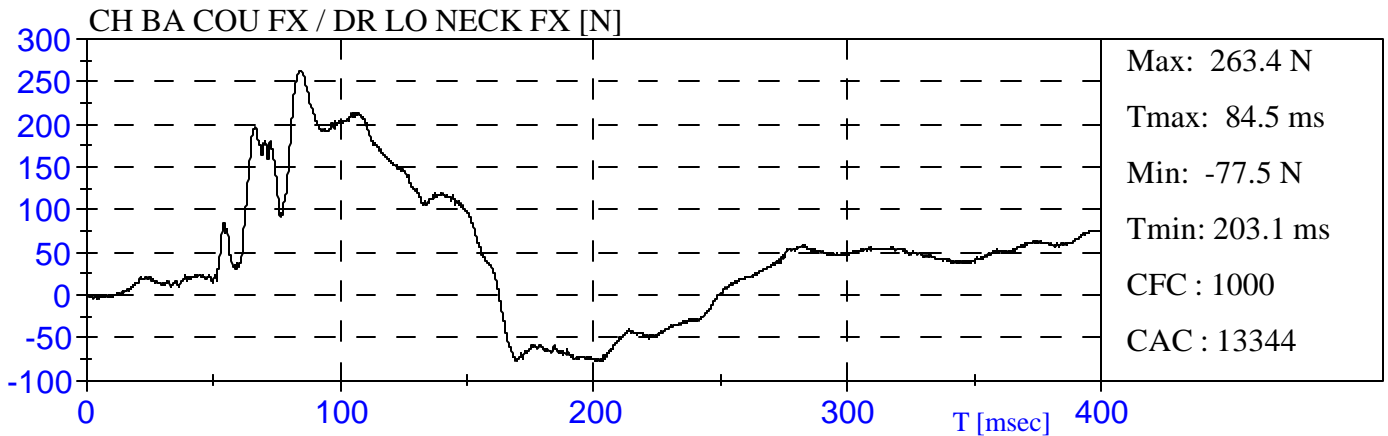
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Type de véhicule Type of Vehicle	SATURN VUE 2002
Numéro de TC Tc Number	TC02-225
Numéro de contrat Contract No	04-5001
Acquisition de données selon Data Acquisition according to	SAE J211/1 MAR 95
Date de l'essai Test date	2004-01-16
Titre du projet Project Title	COLLISIONS DE RECHERCHE FRONTALE DÉCALÉE 40 KM/H - 40% GAUCHE RESEARCH COLLISION TESTS OFFSET FRONTAL 40 KM/H - 40% LEFT
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 centre)	HYBRID III 6Y



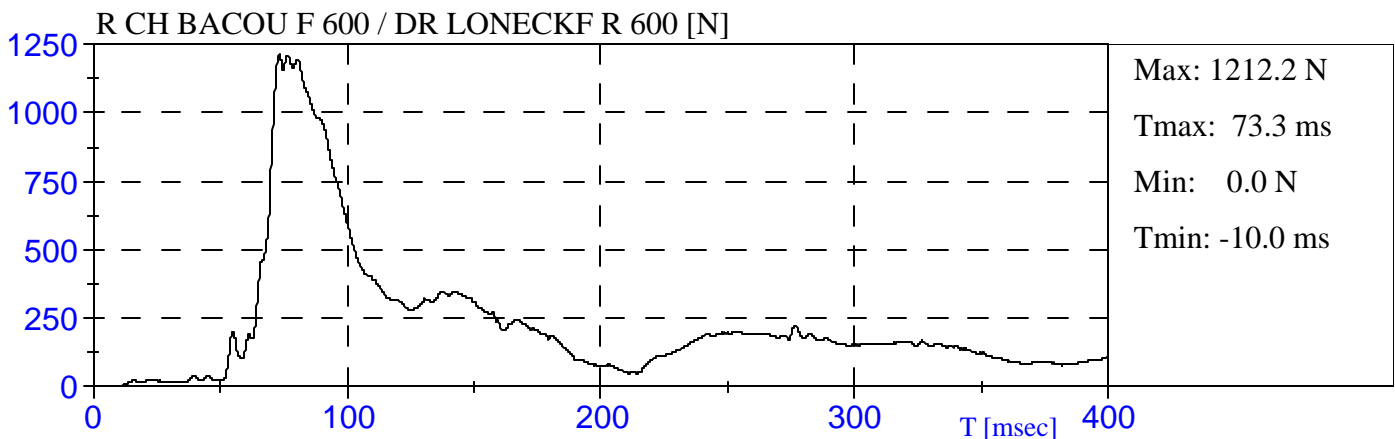
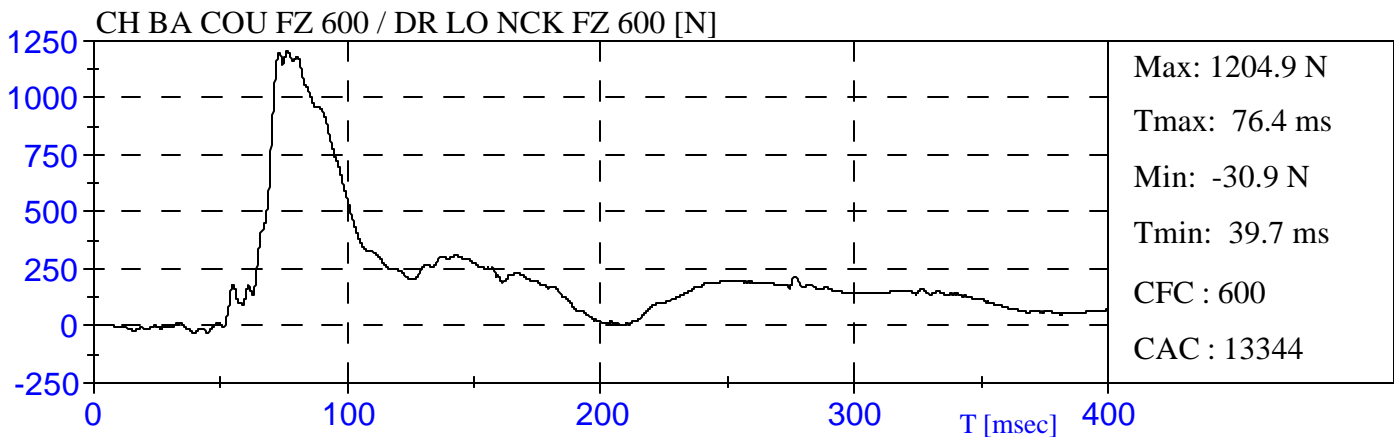
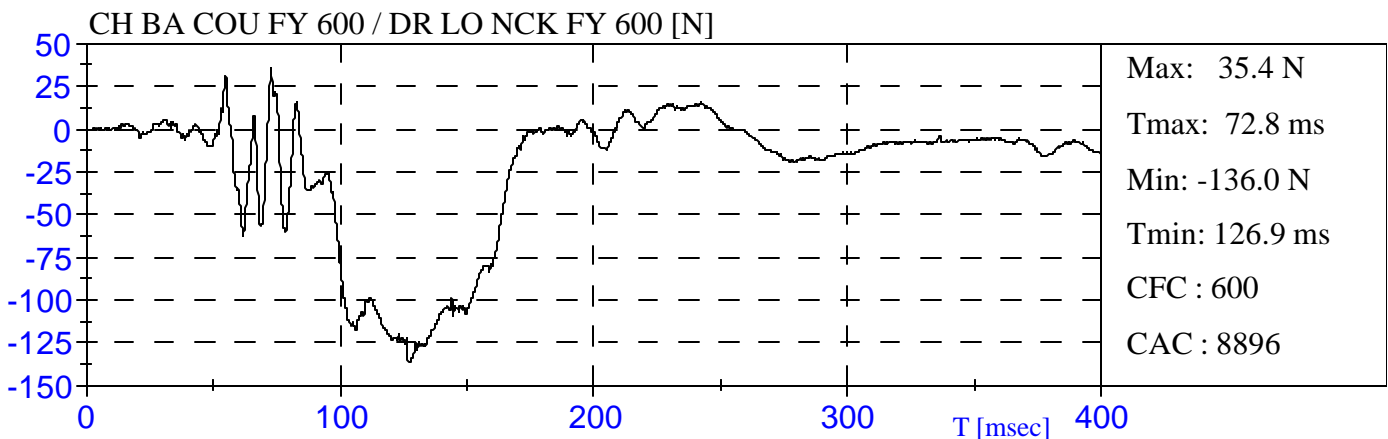
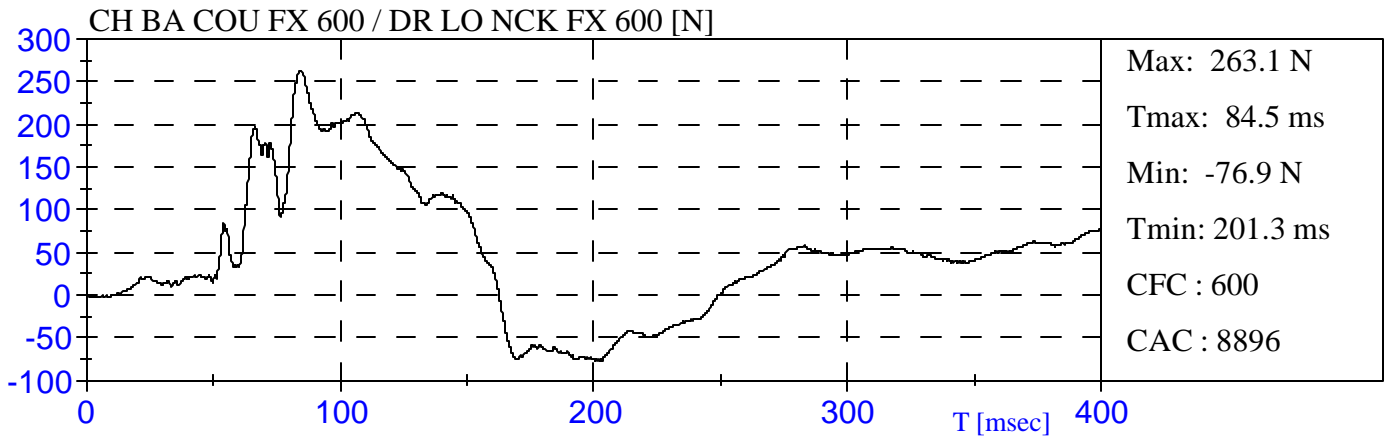




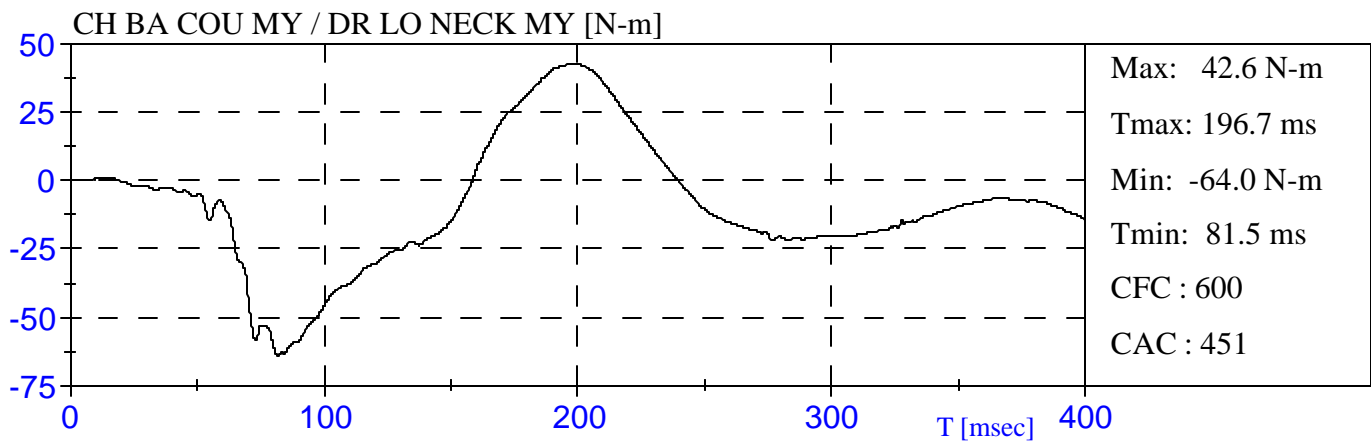
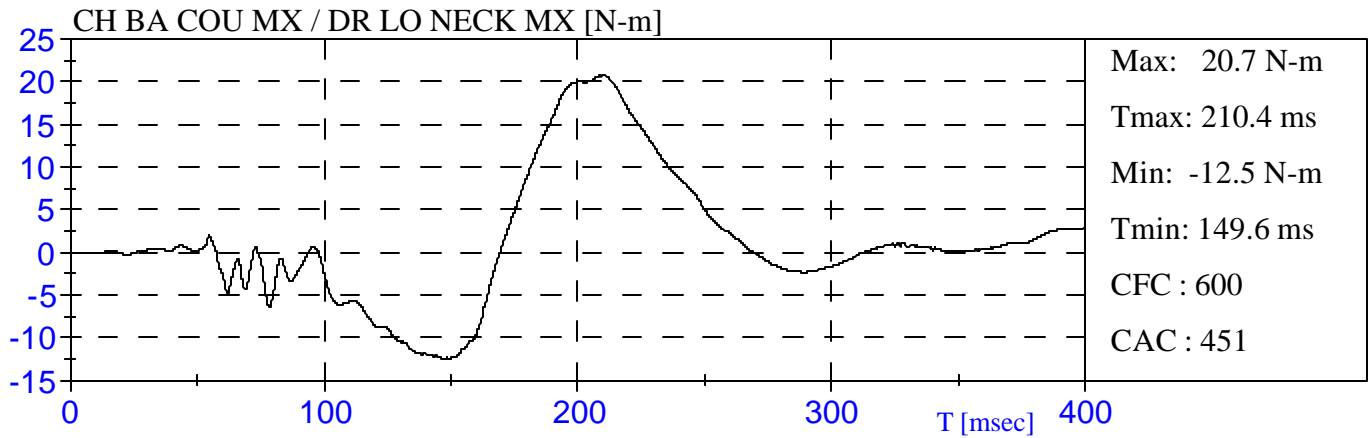


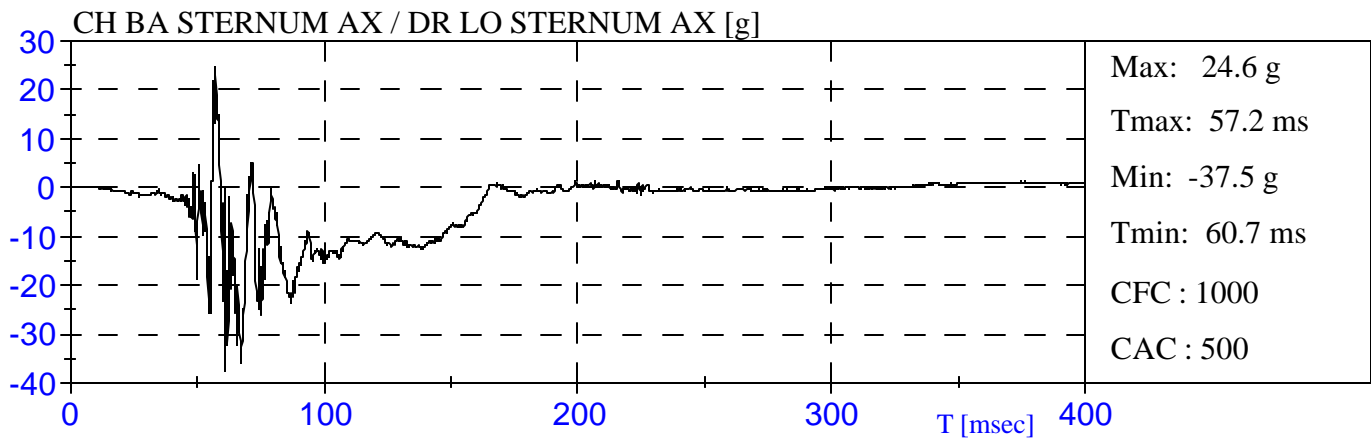
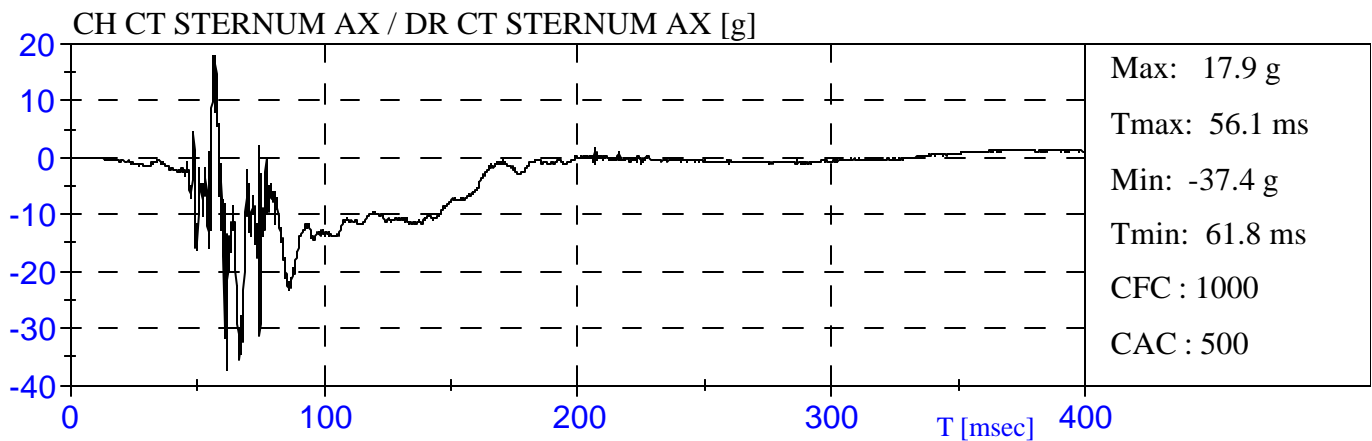
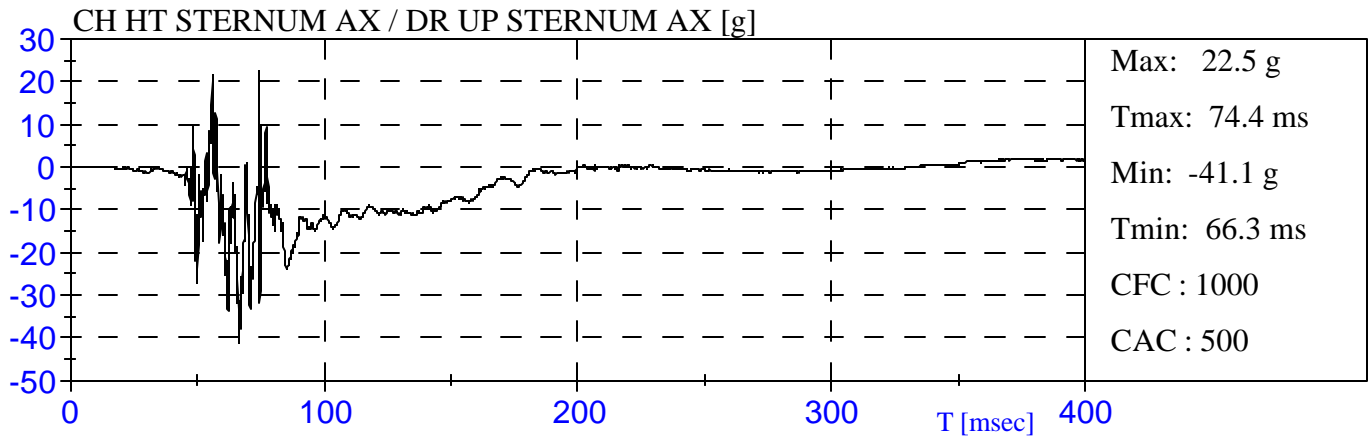


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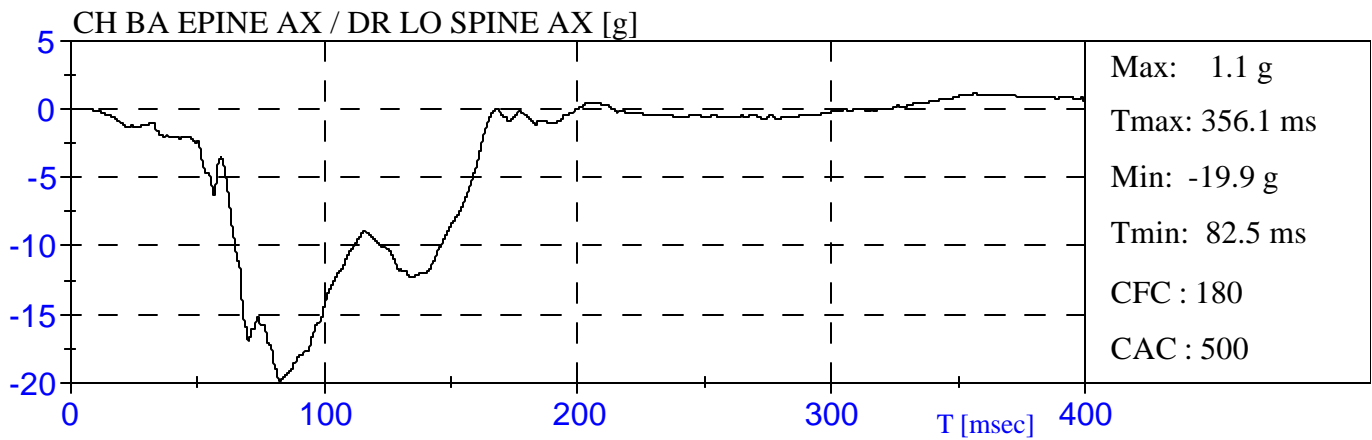
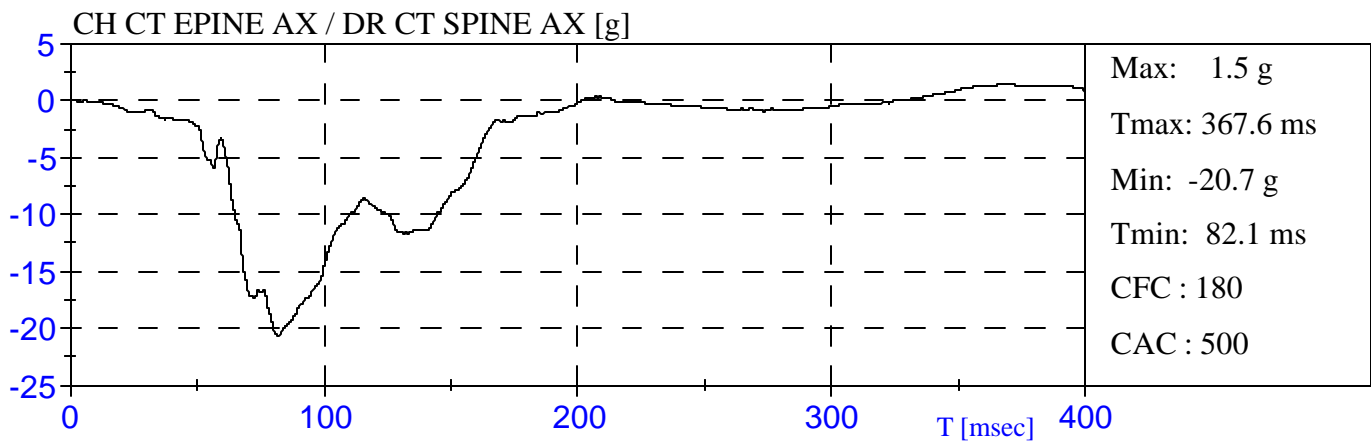
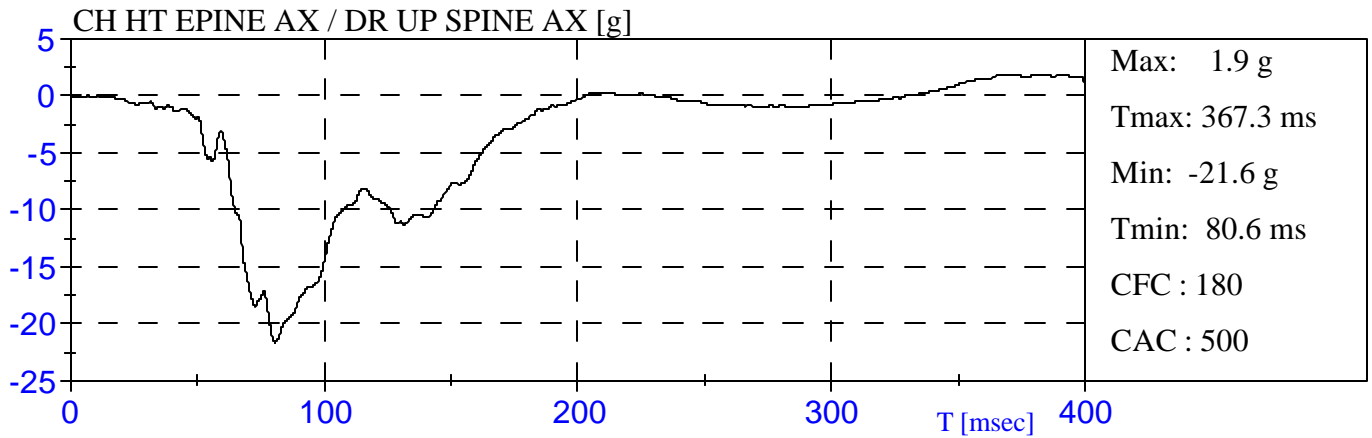


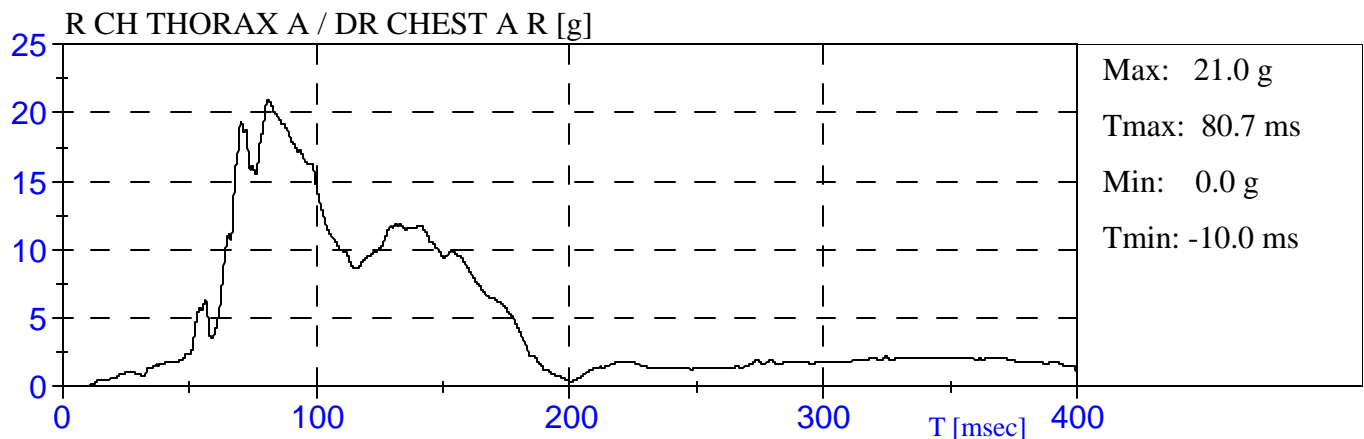
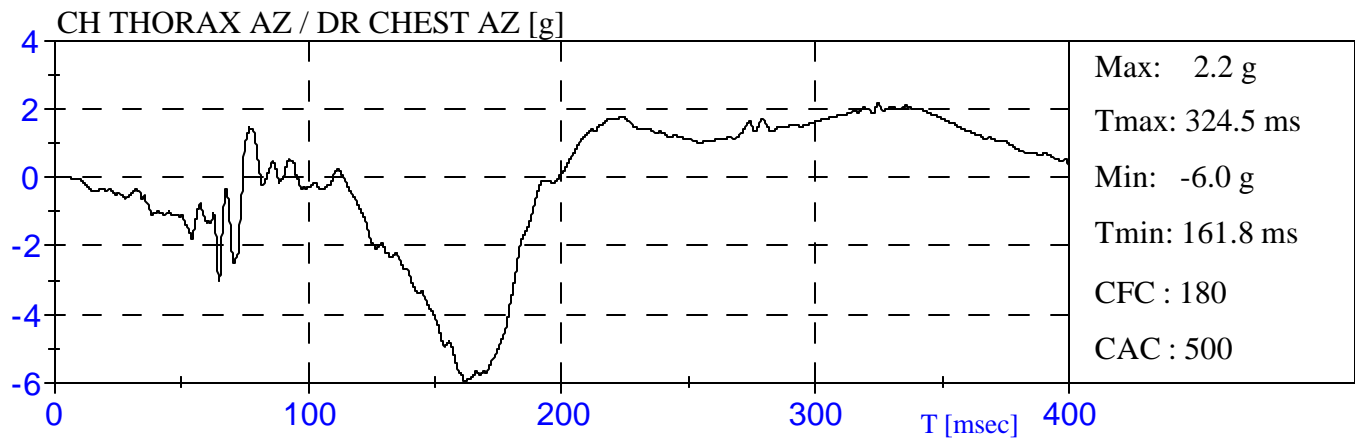
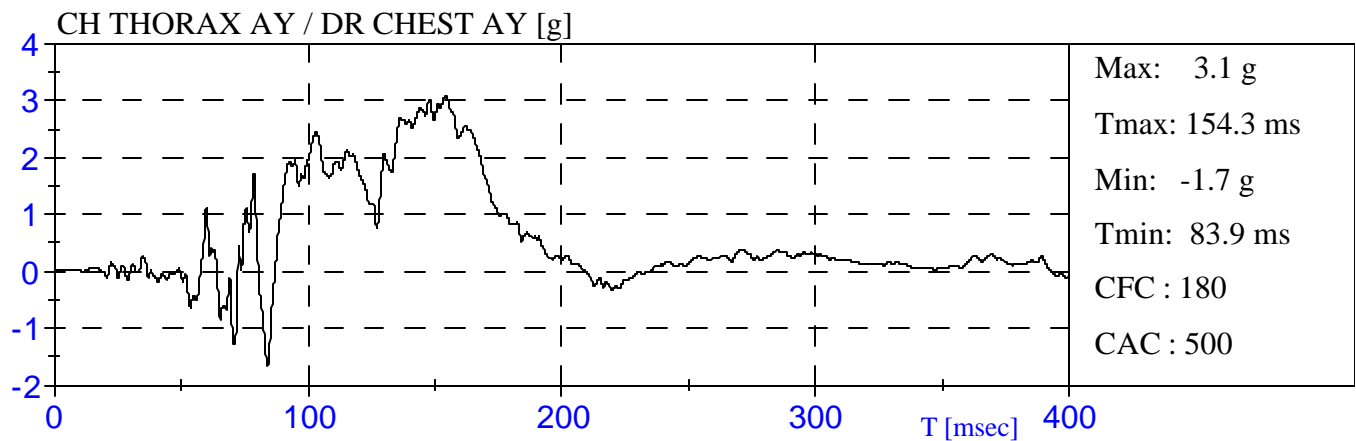
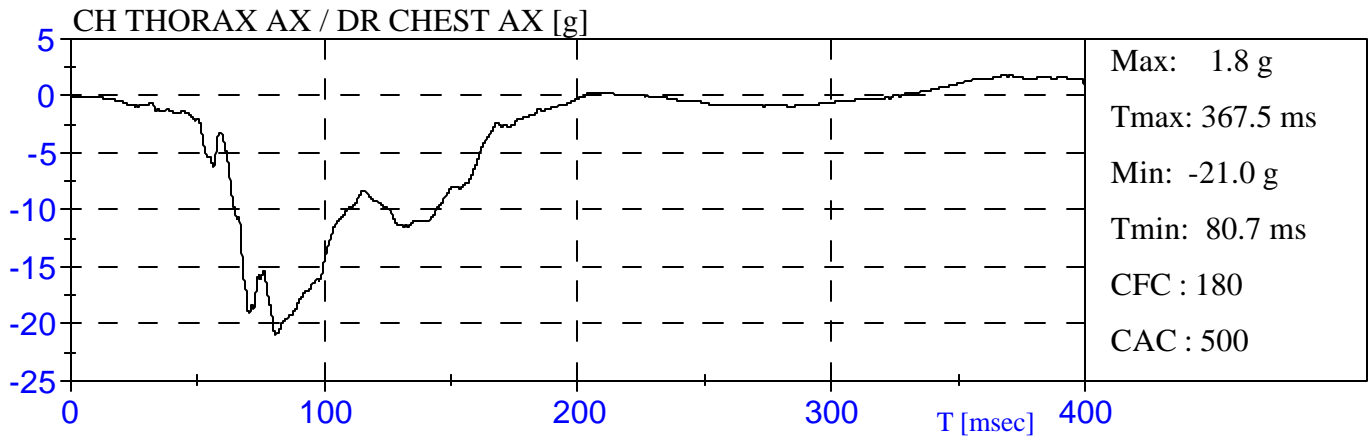
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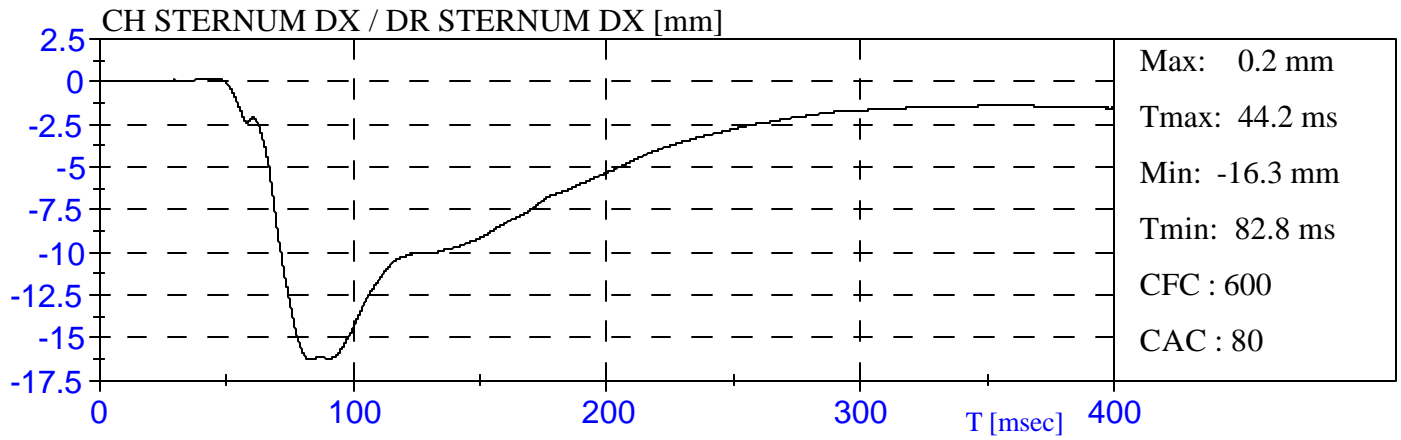


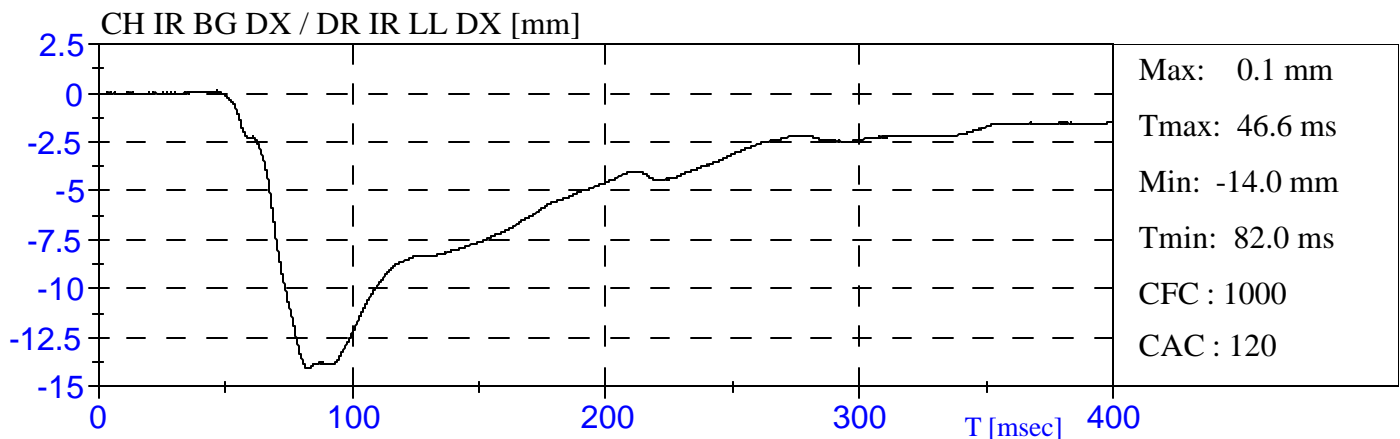
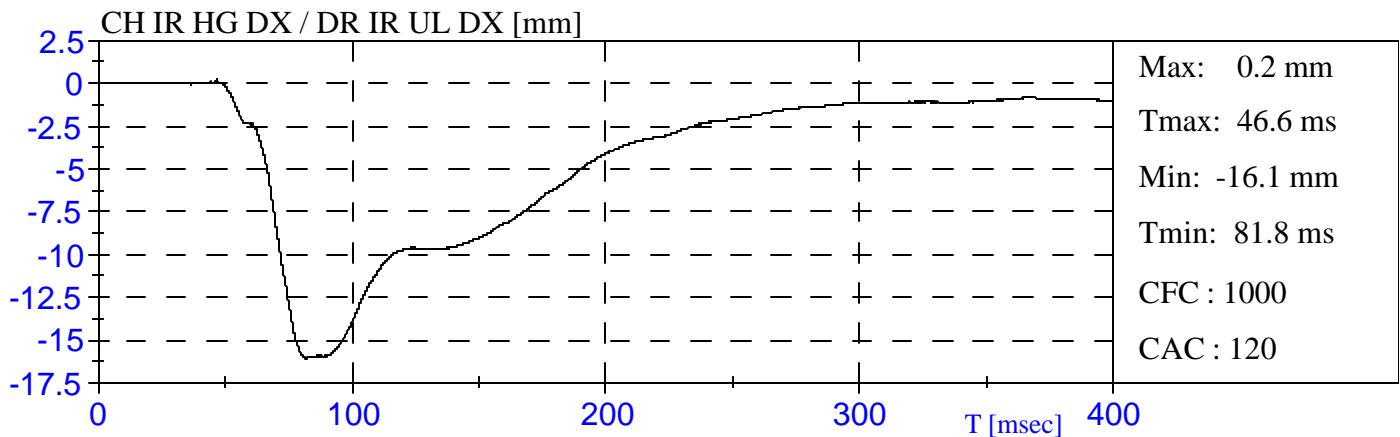
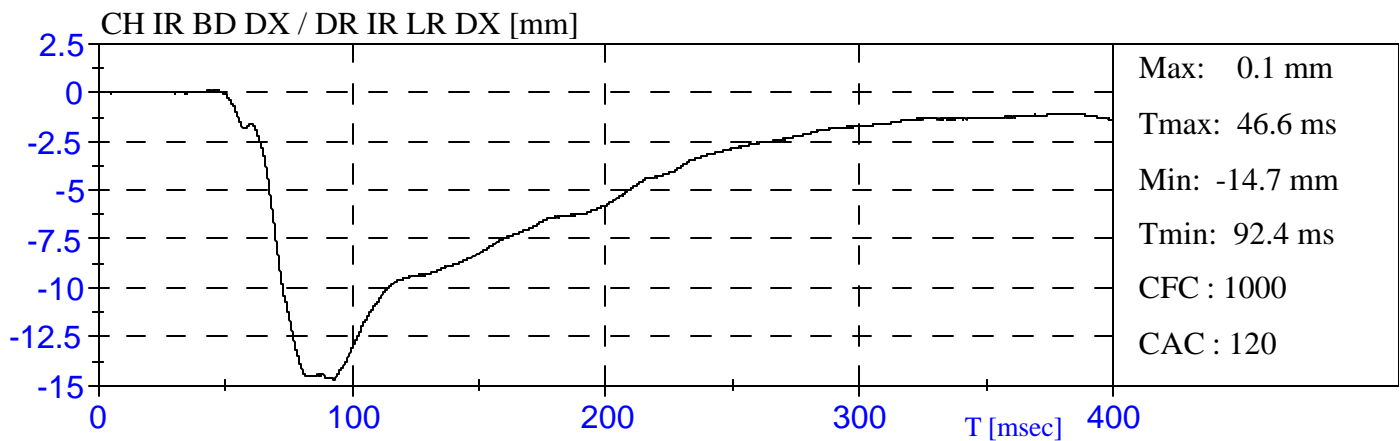
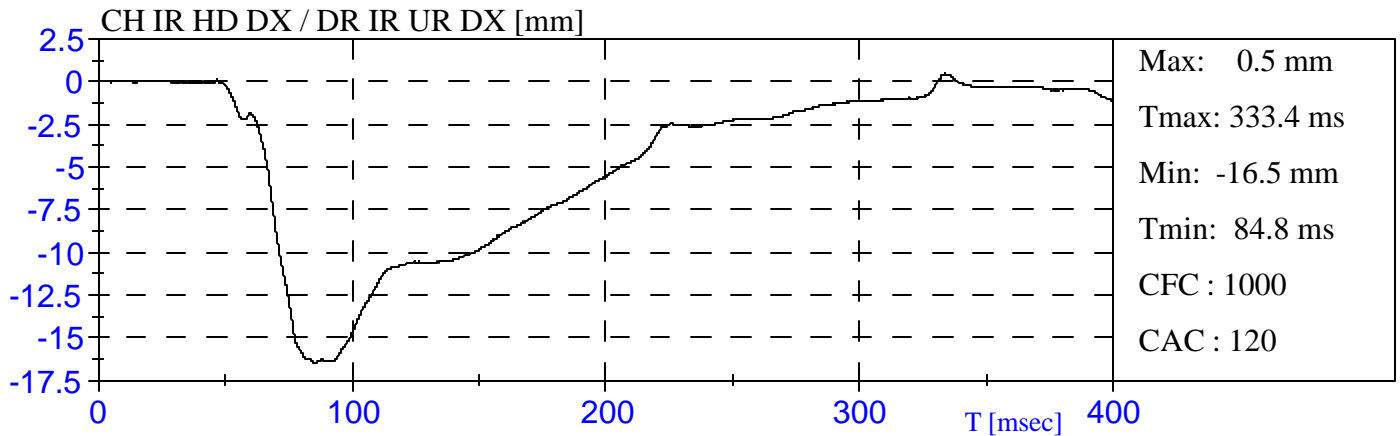
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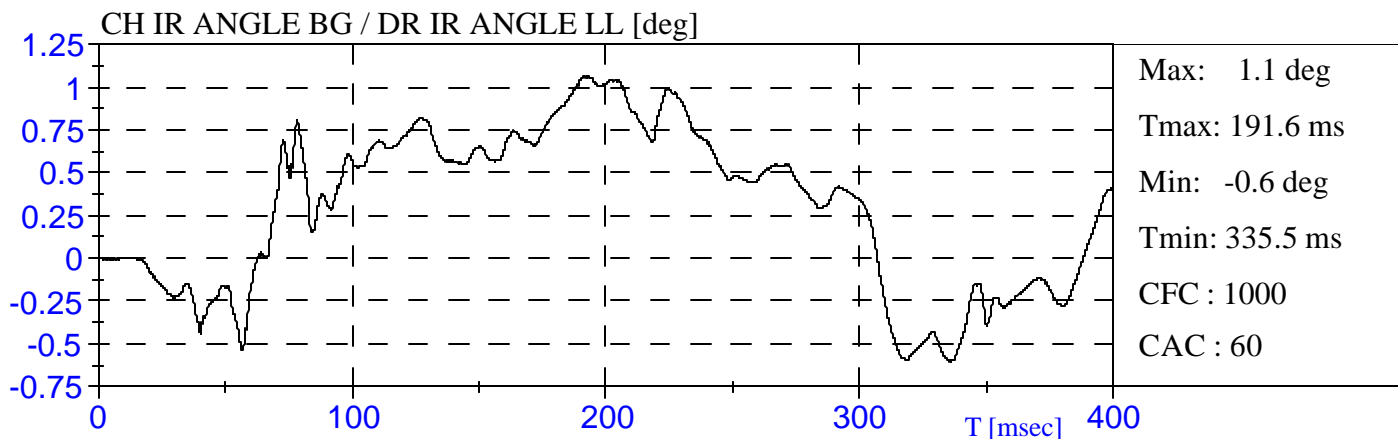
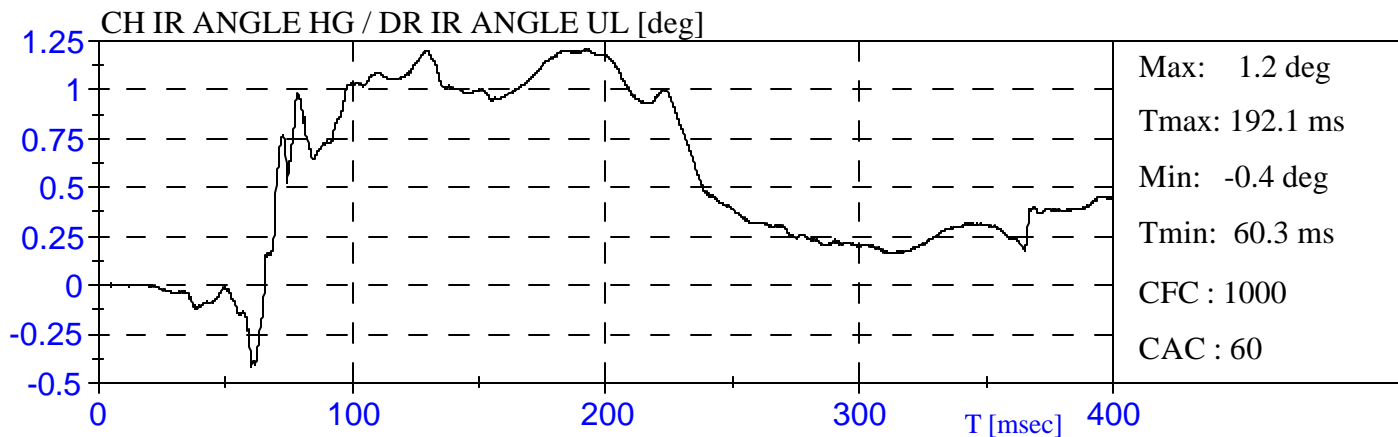
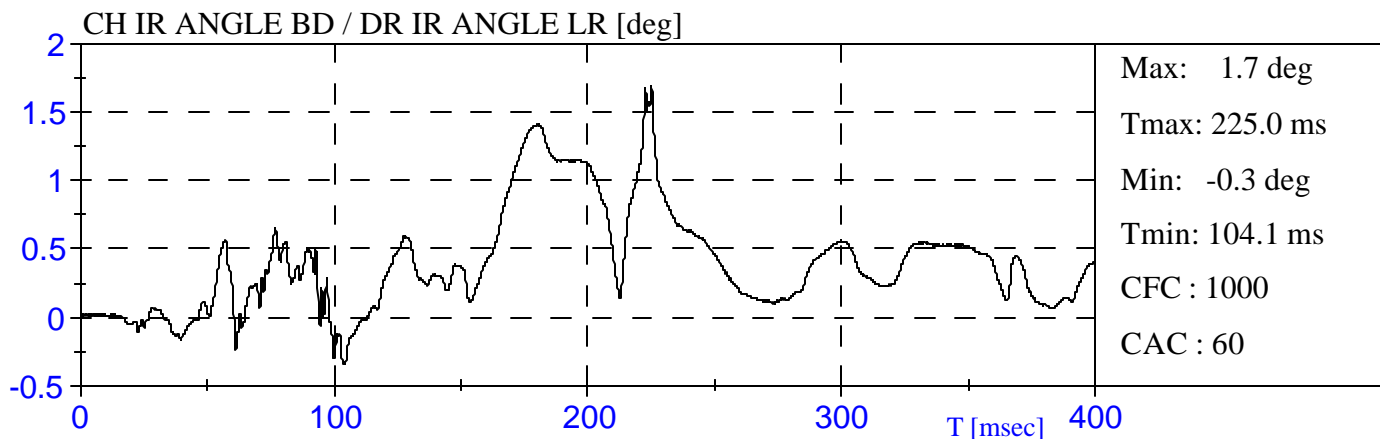
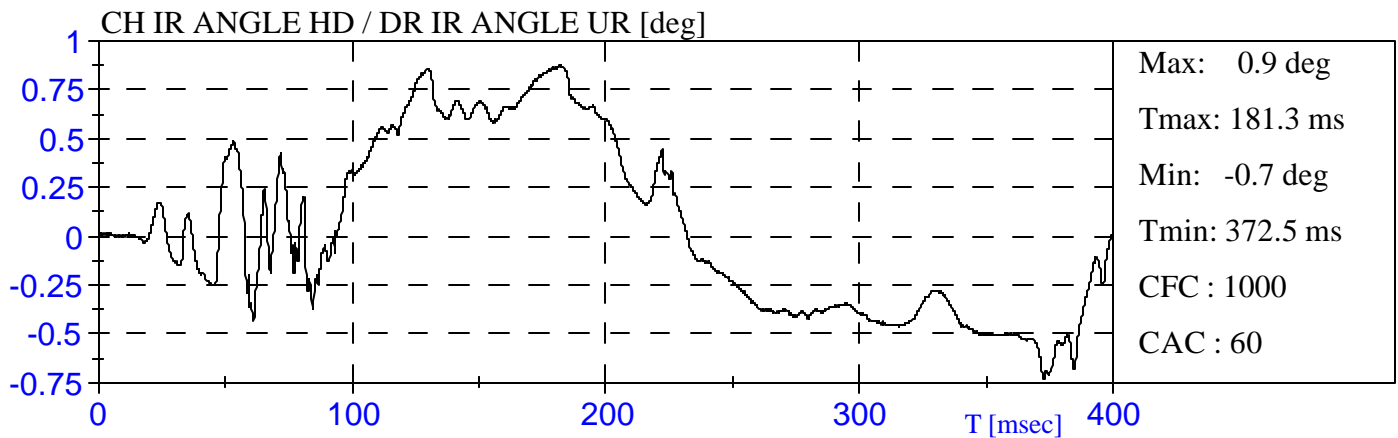


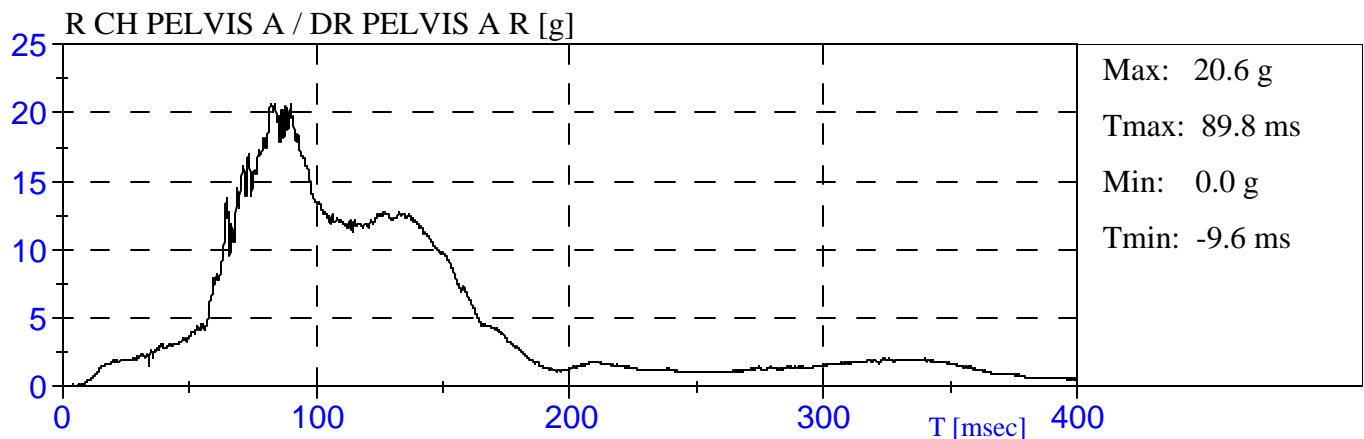
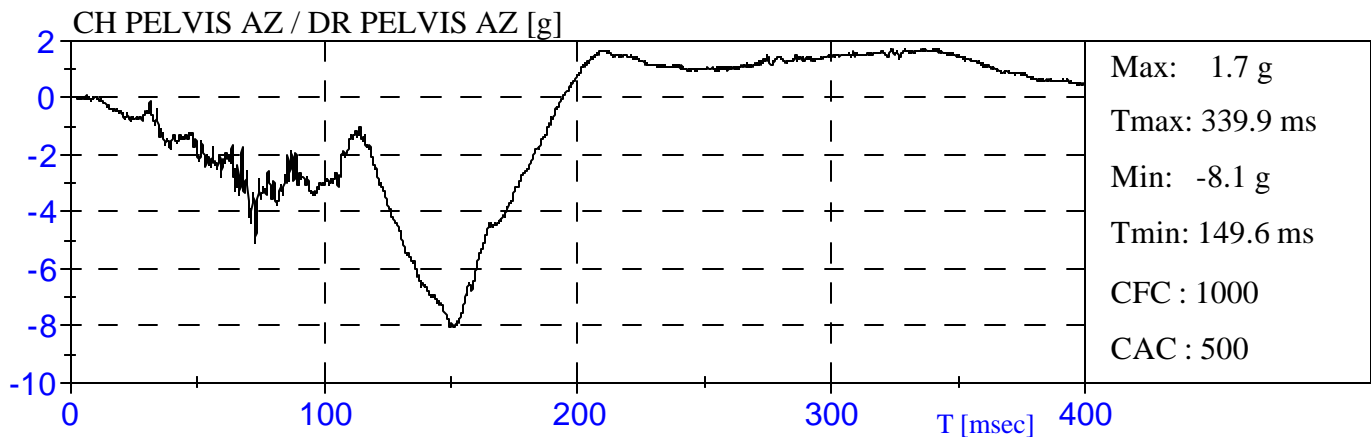
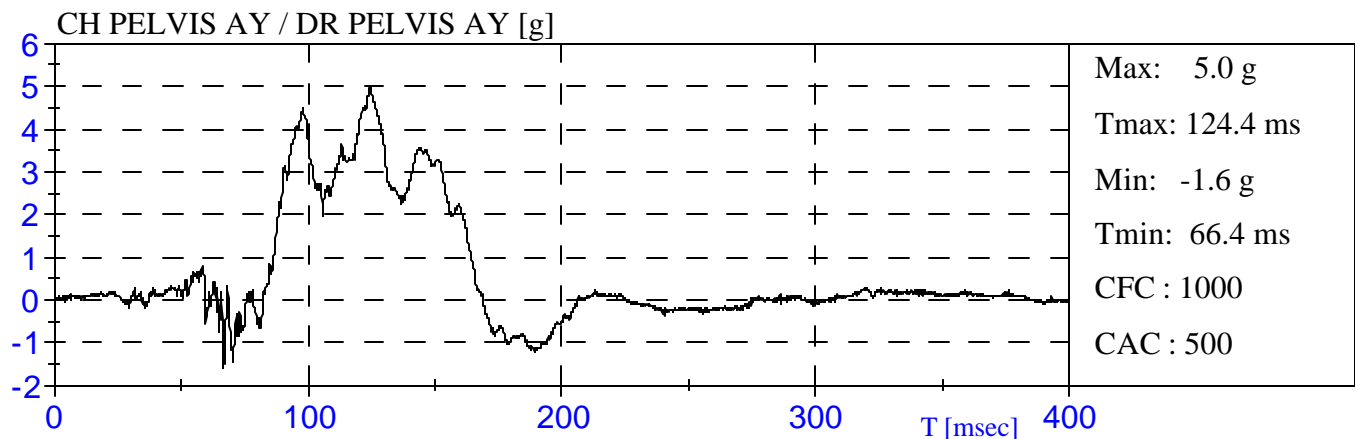
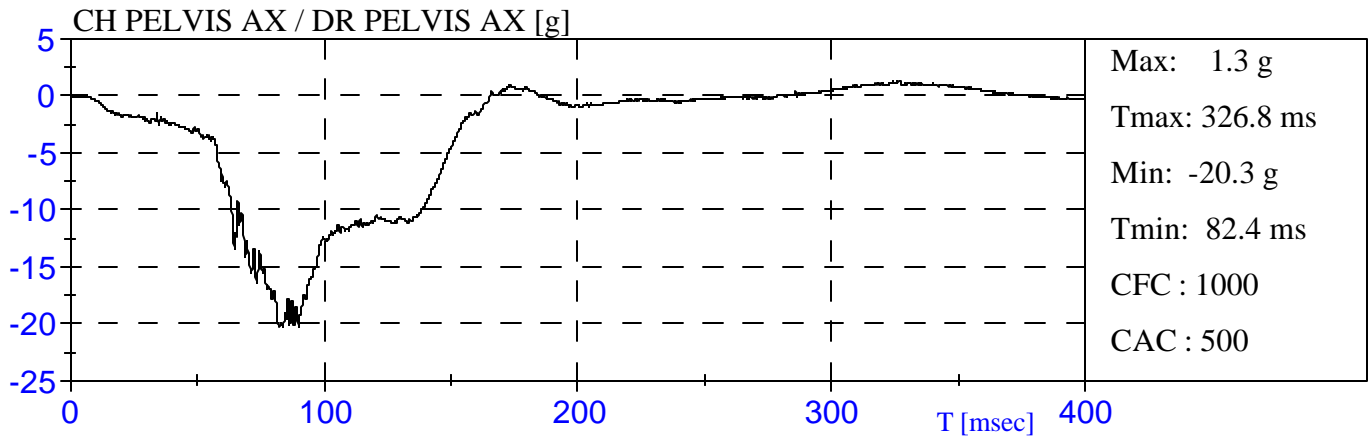


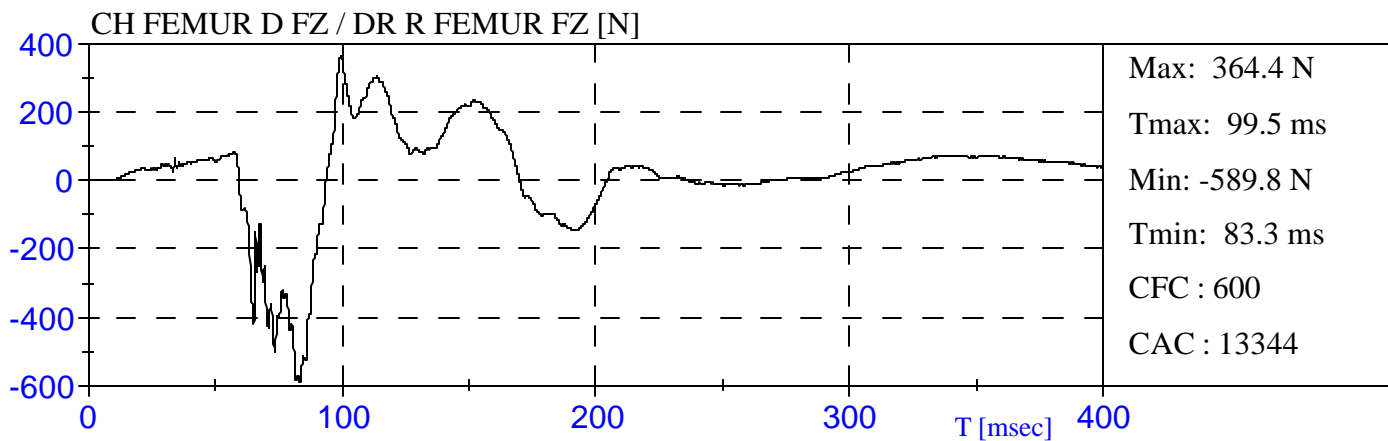
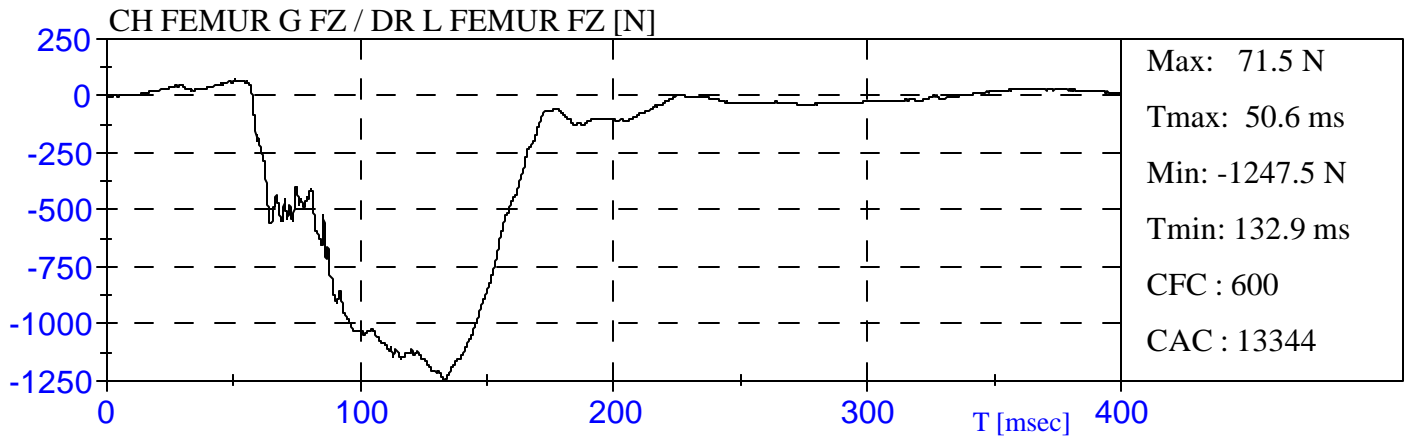
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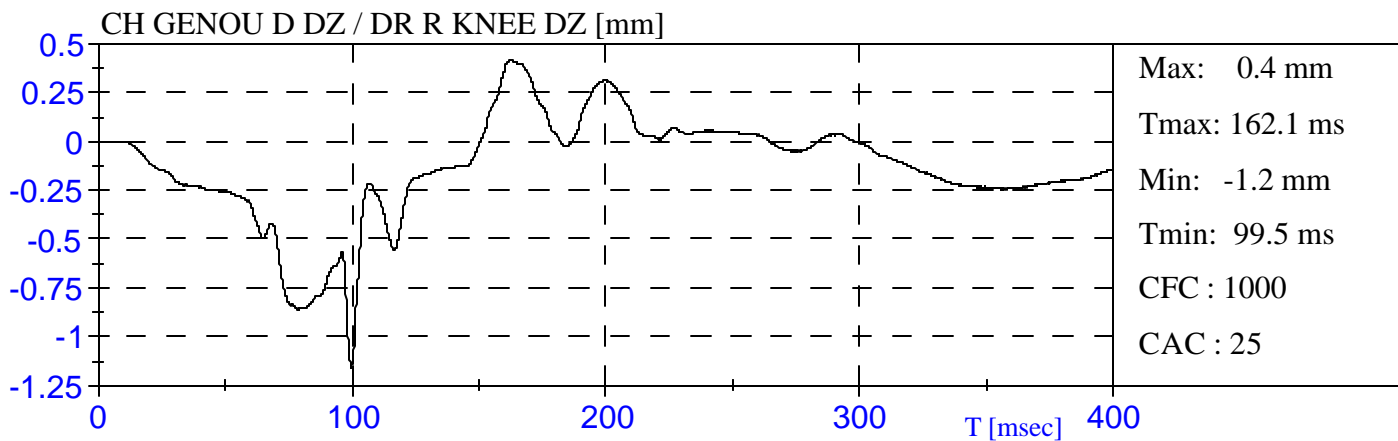
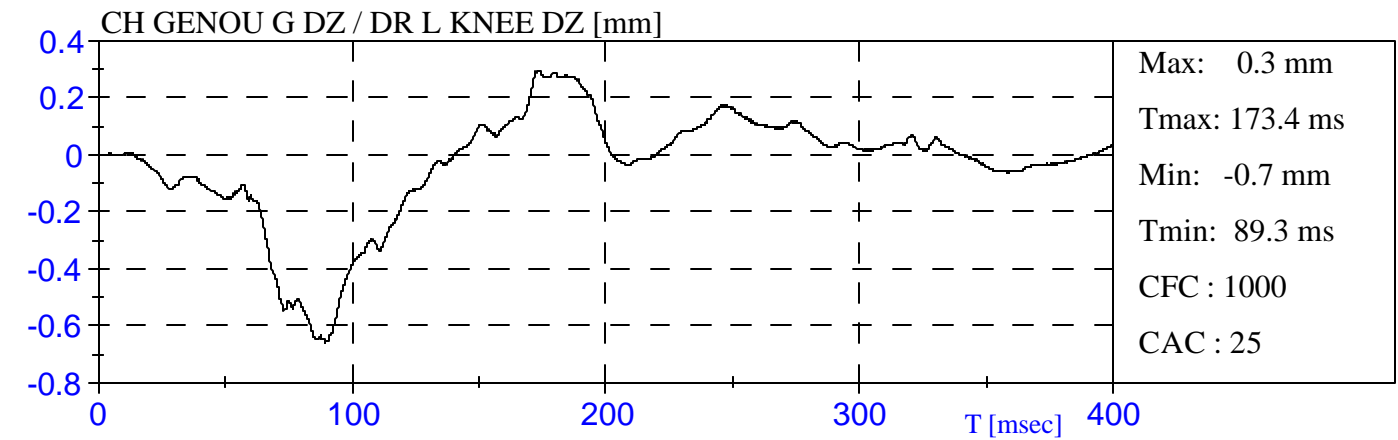


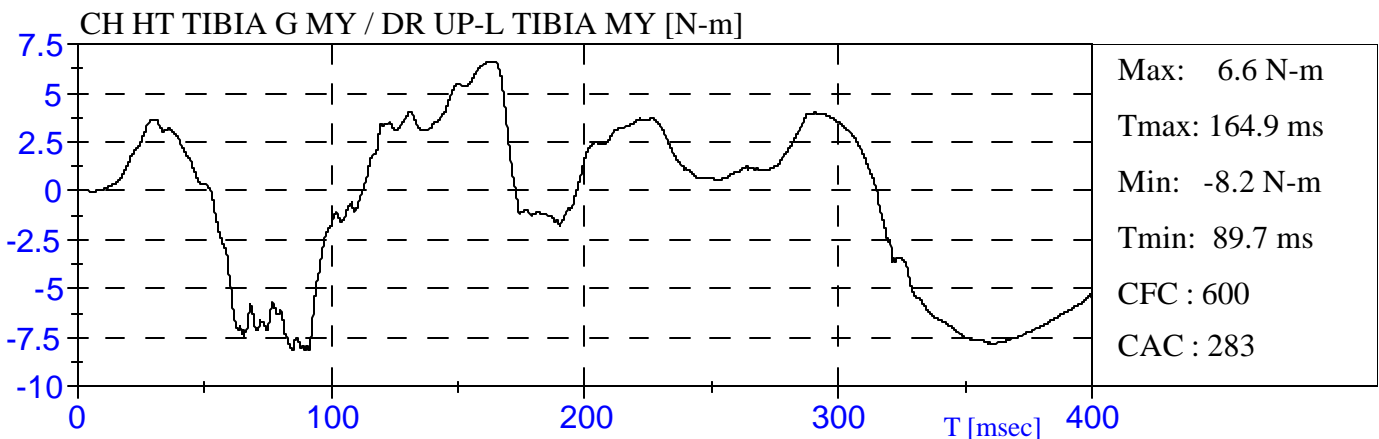
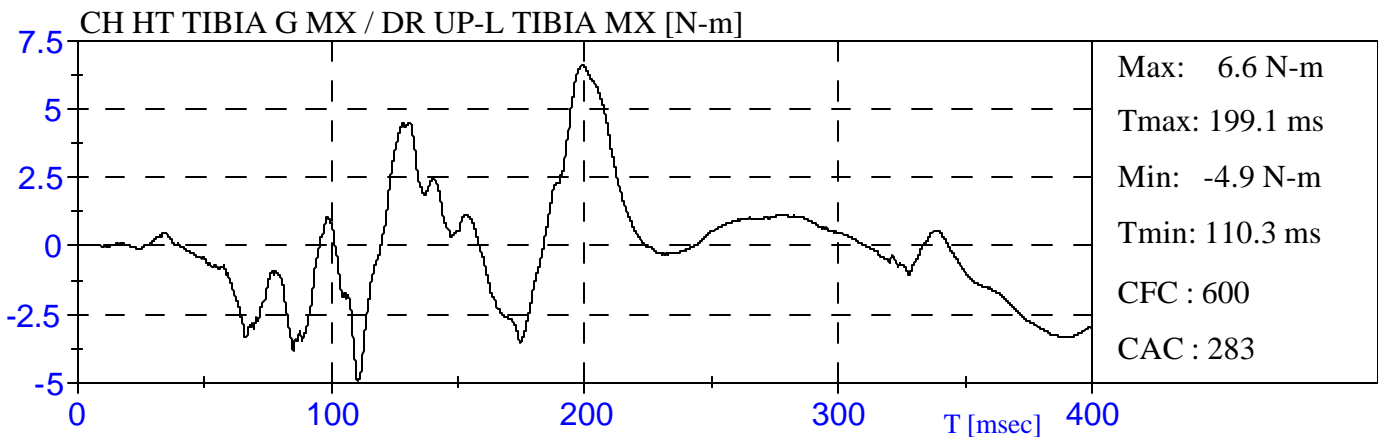
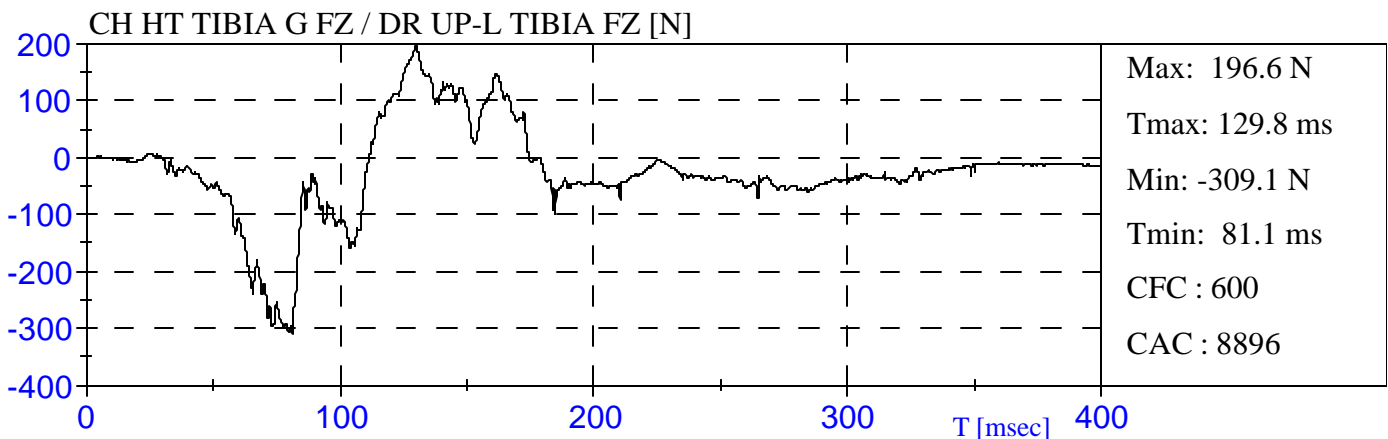
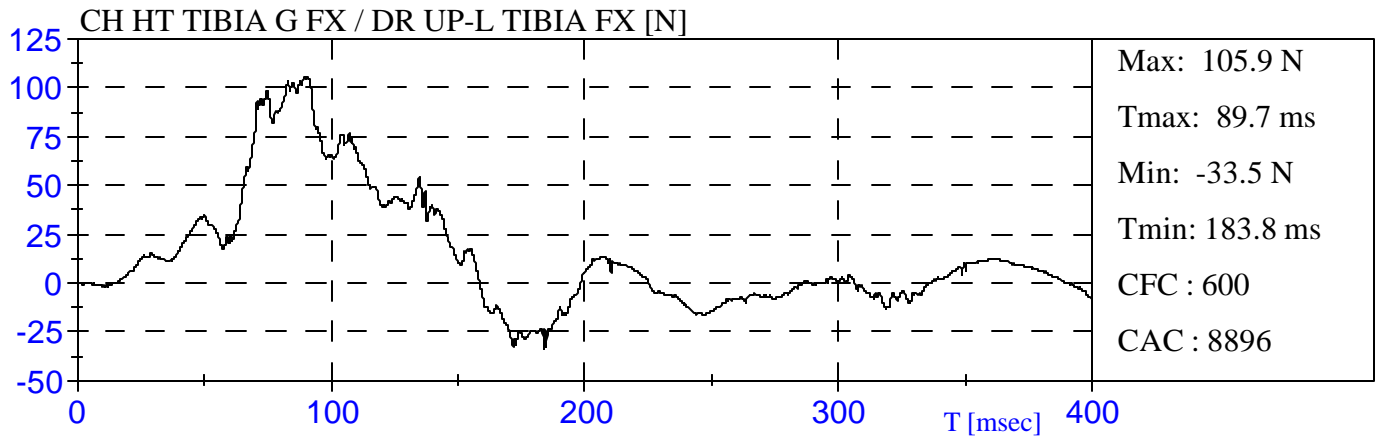


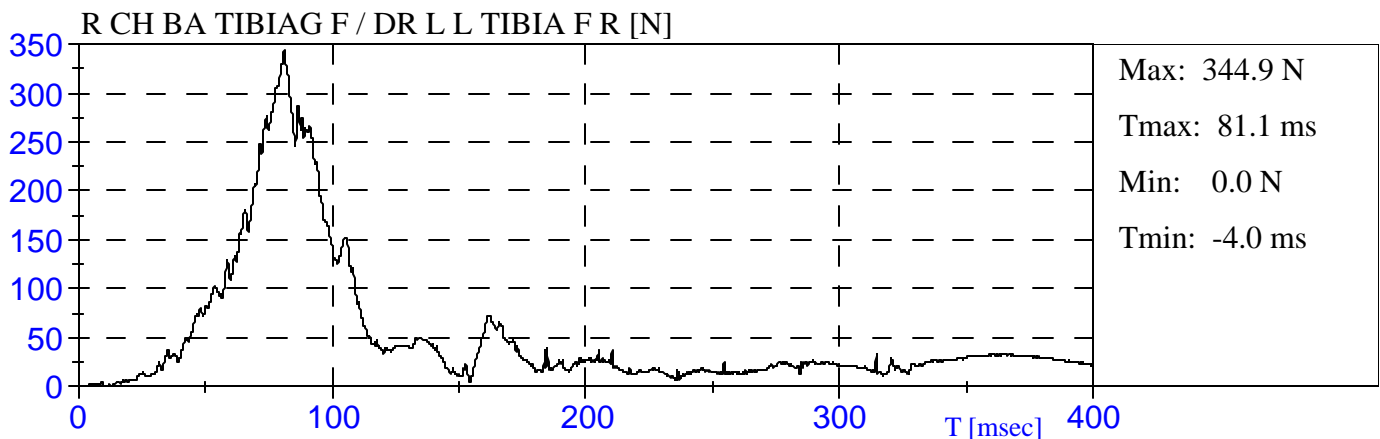
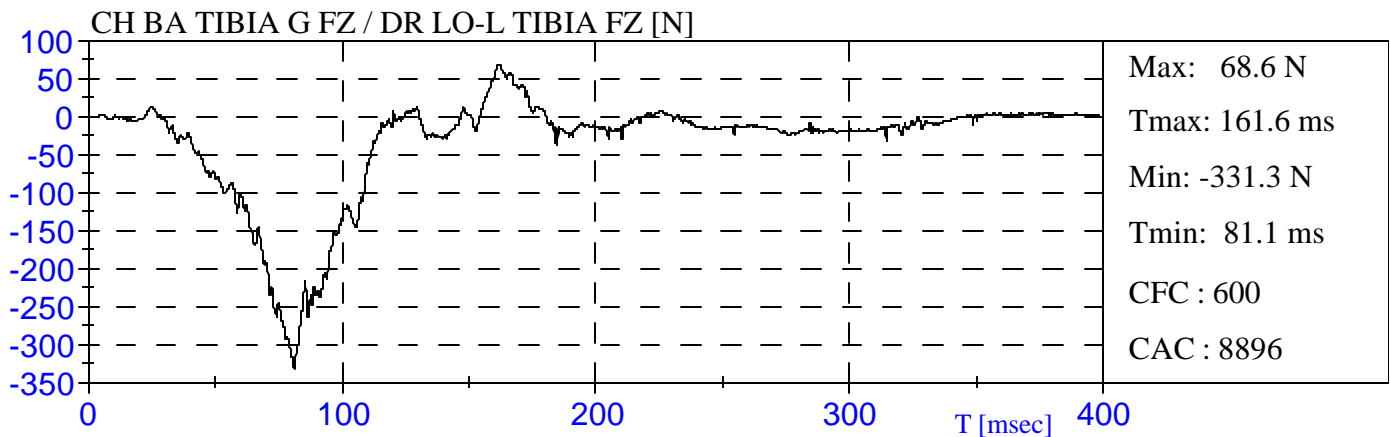
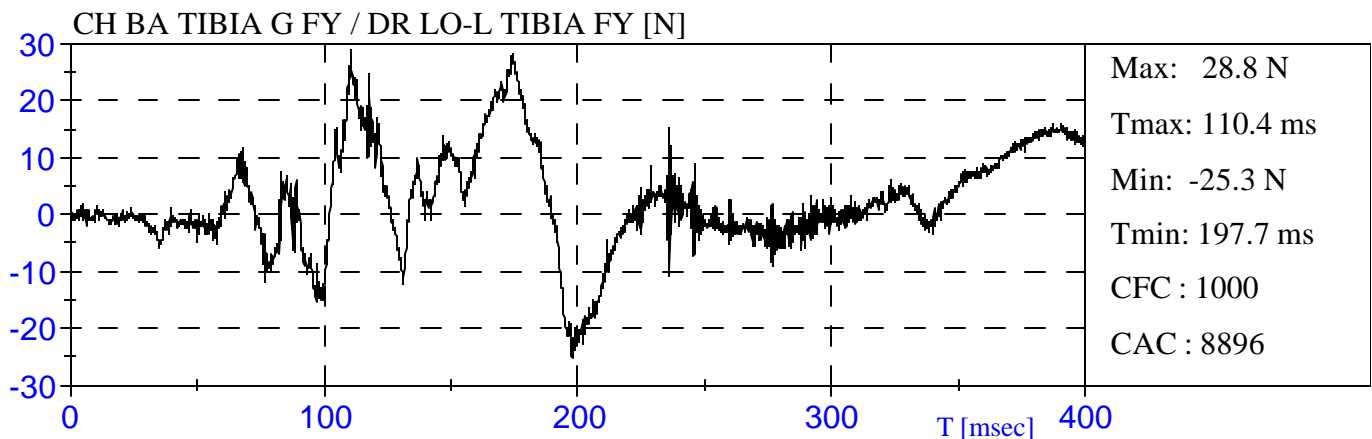
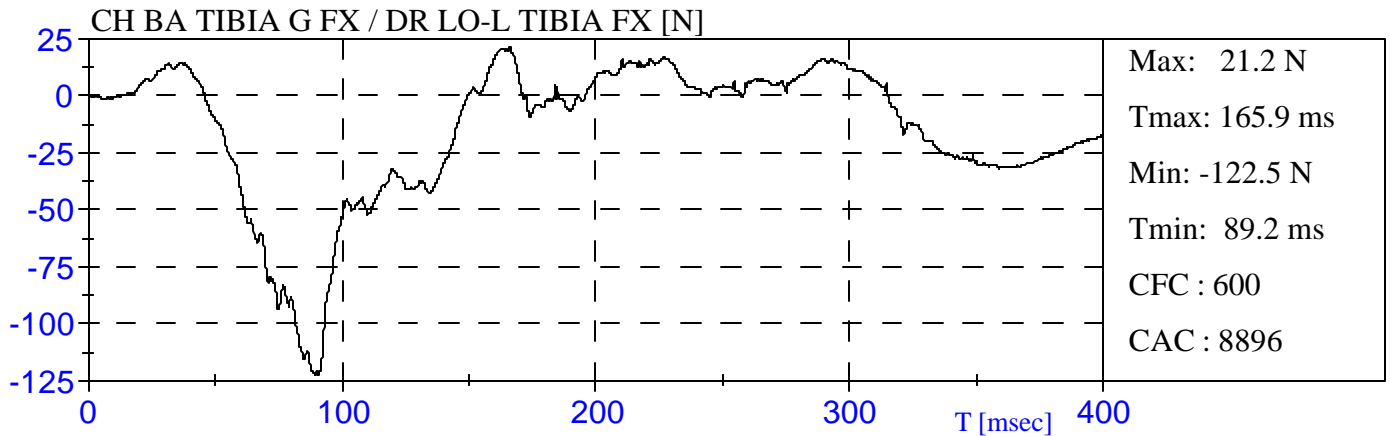
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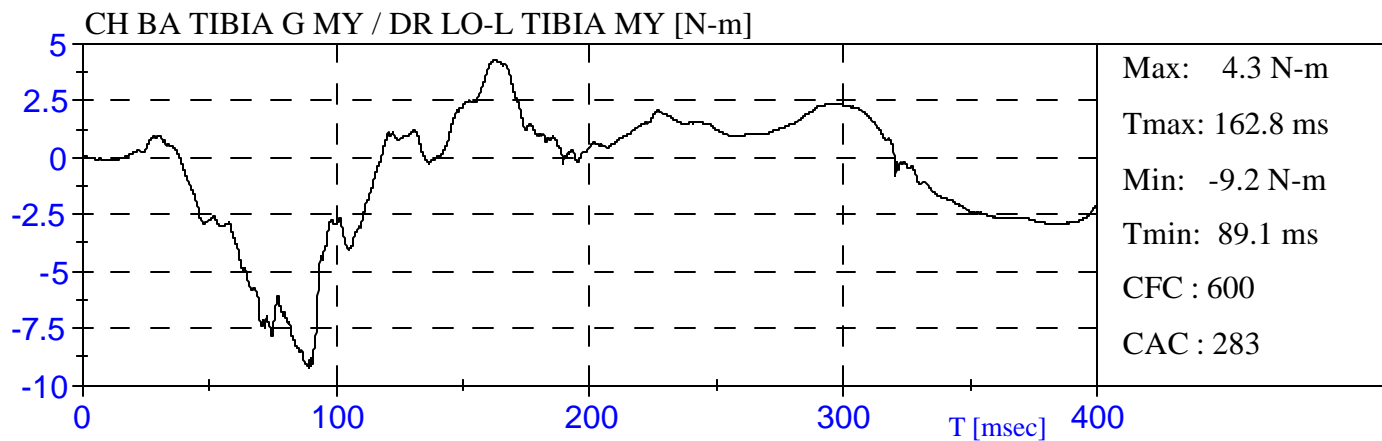
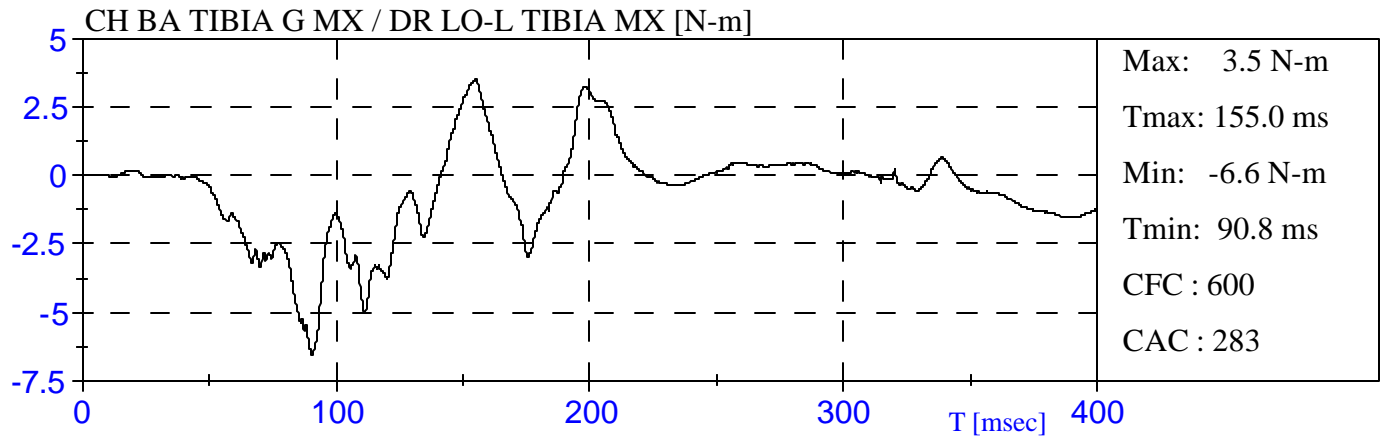


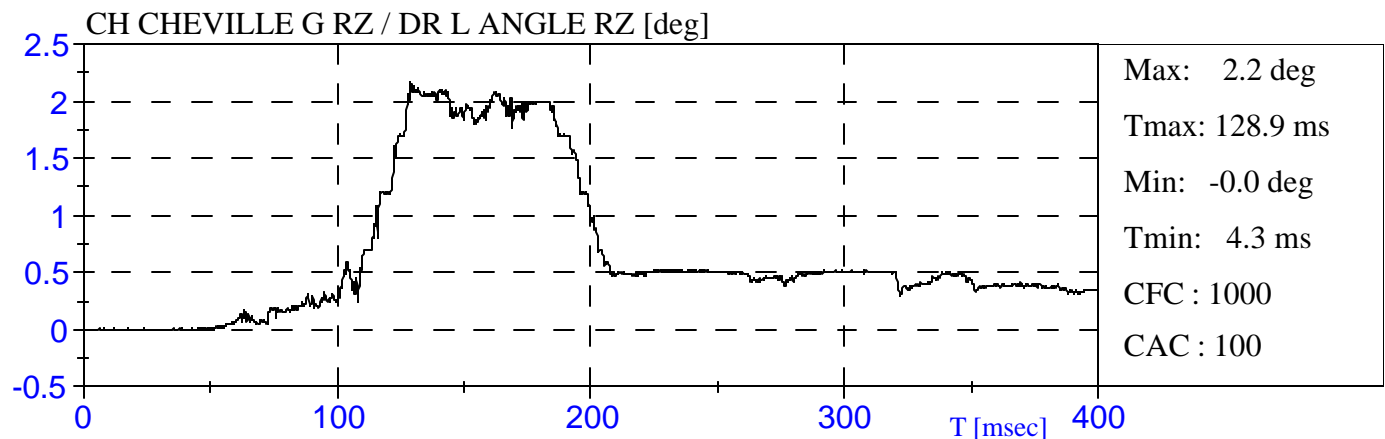
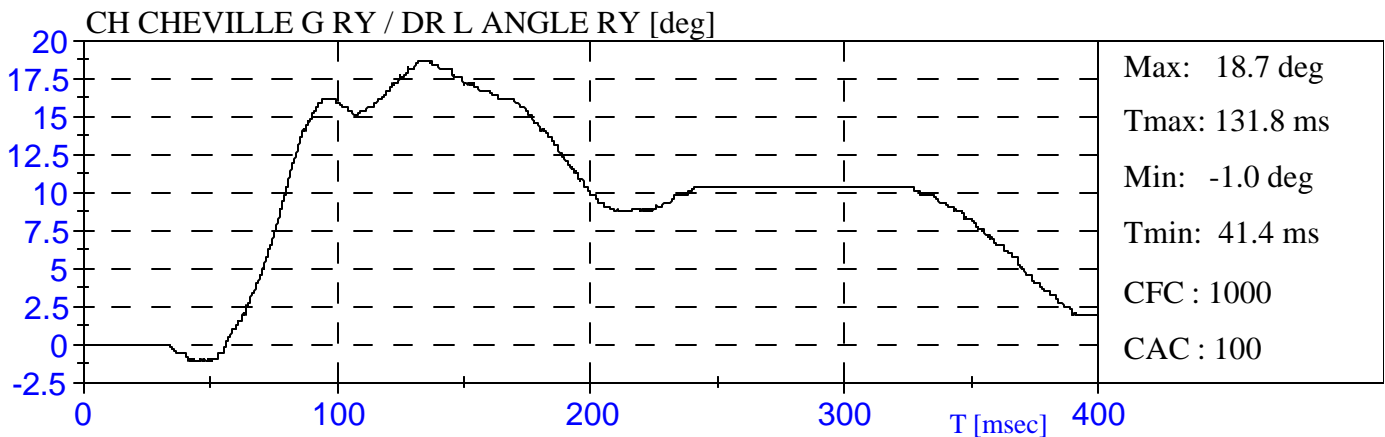
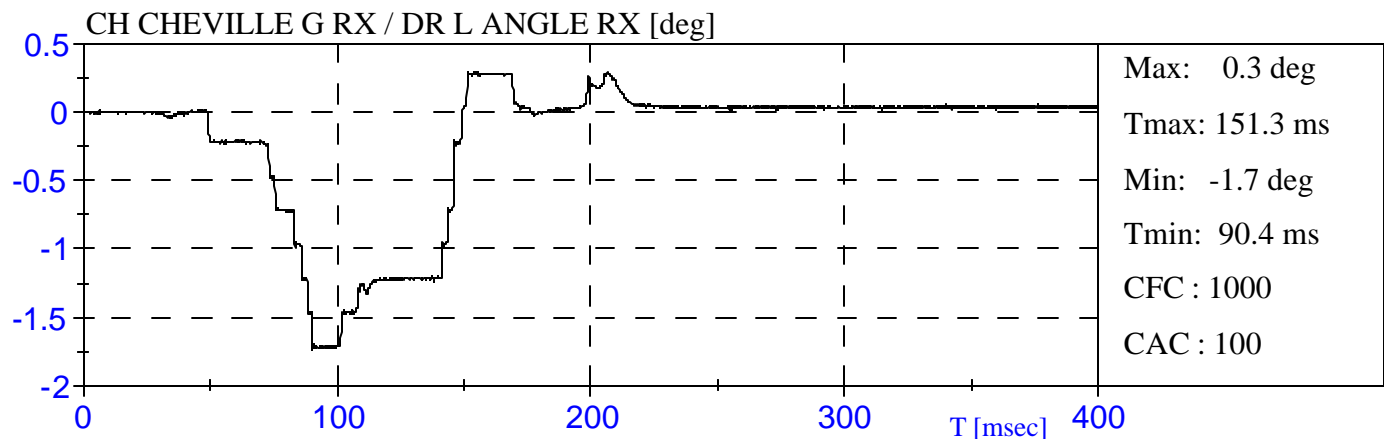
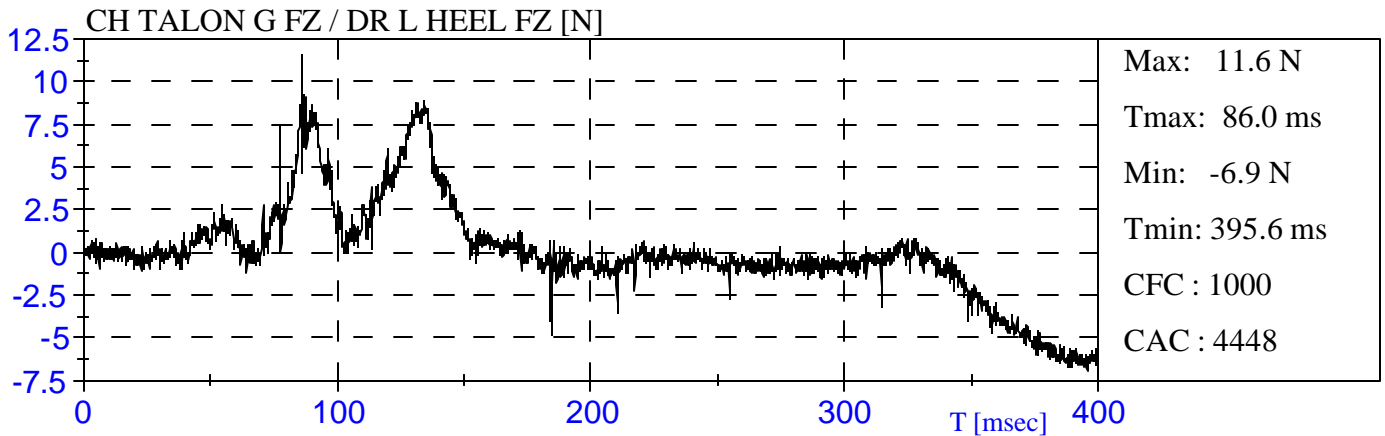


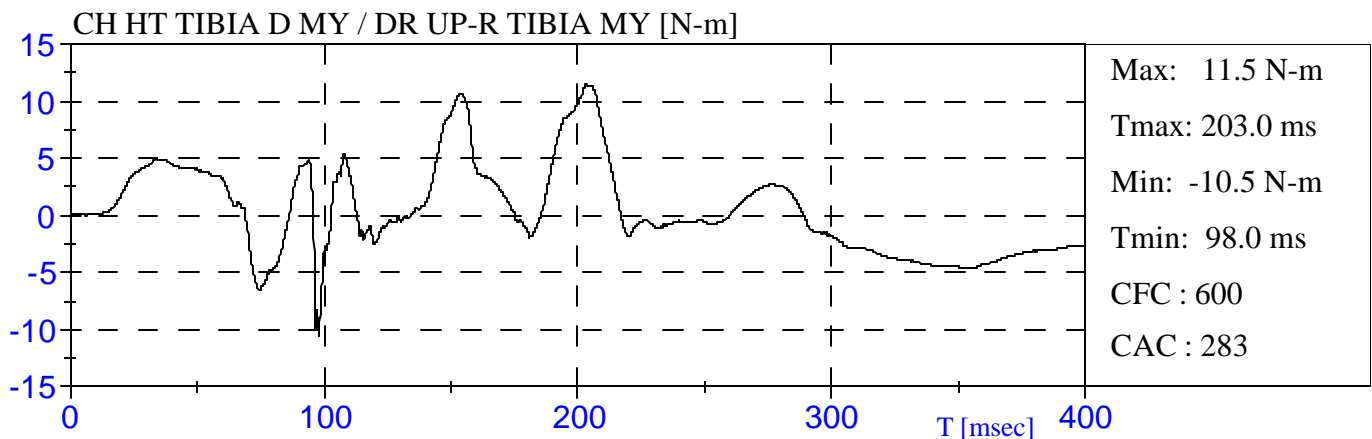
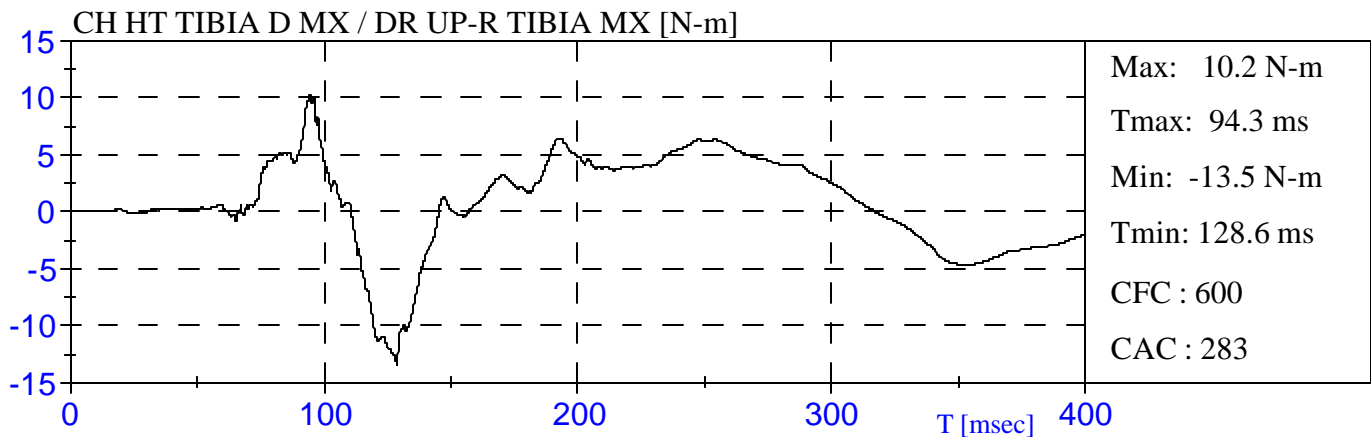
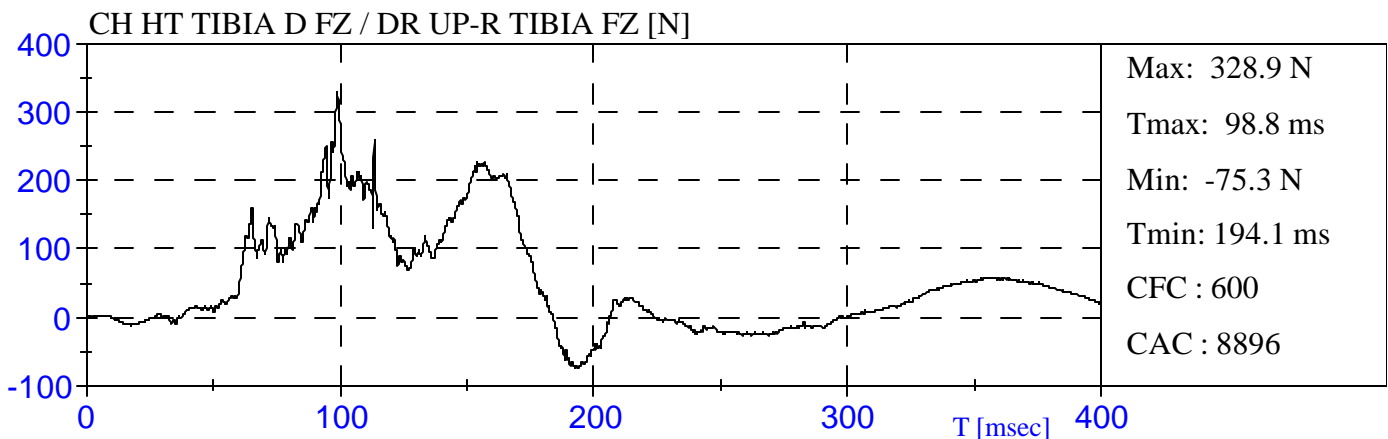
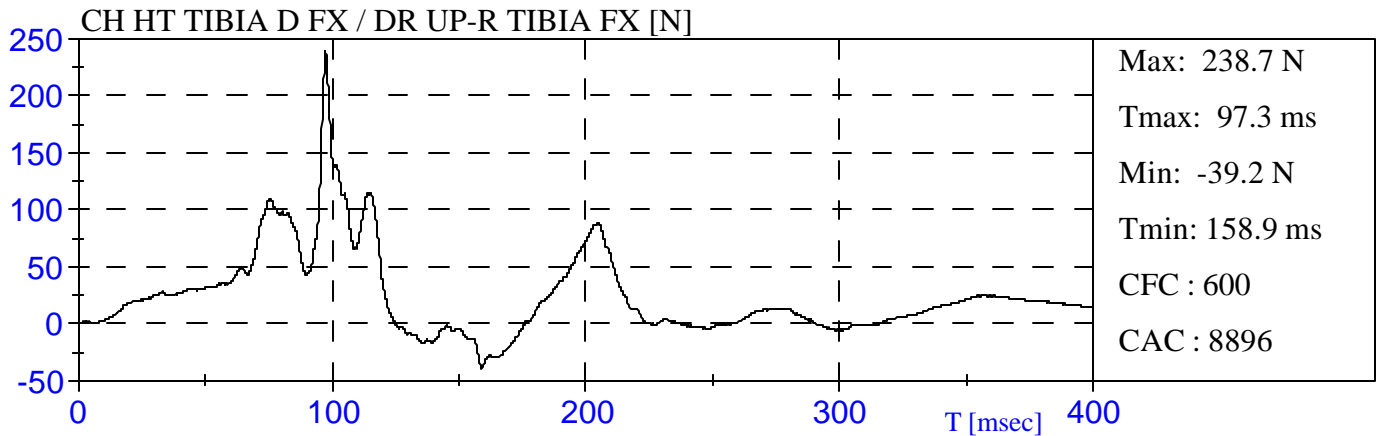


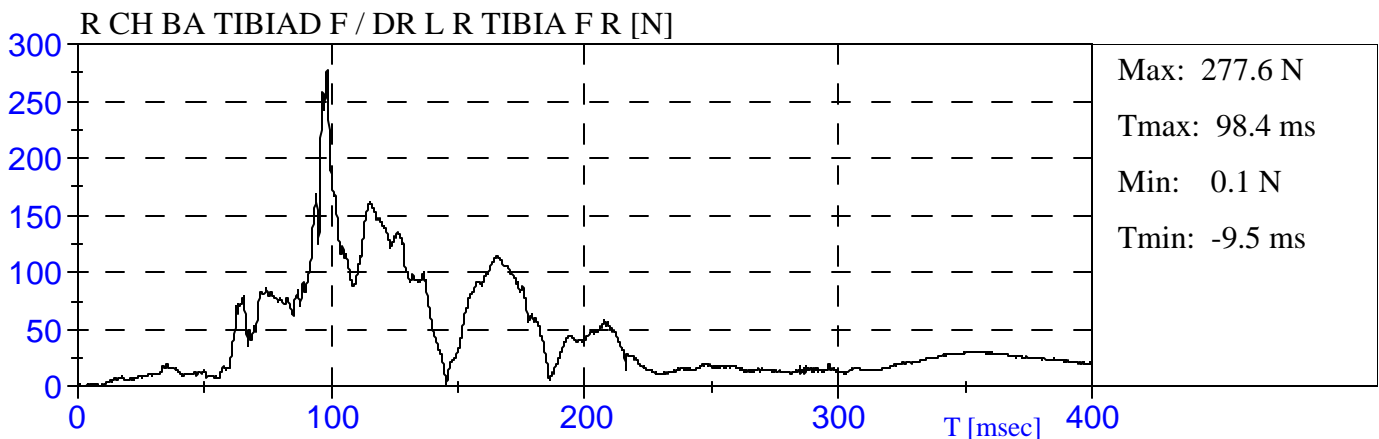
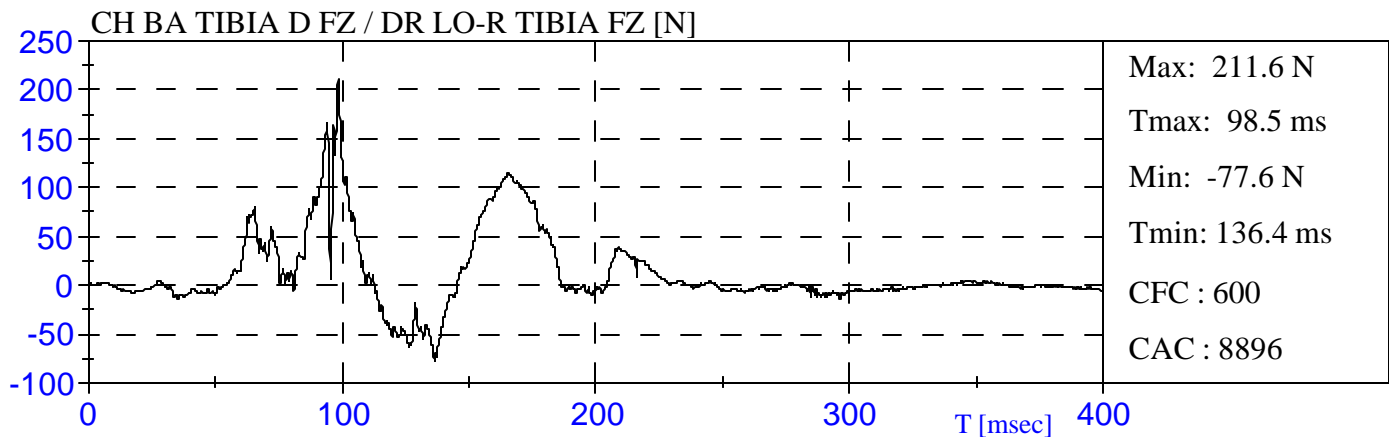
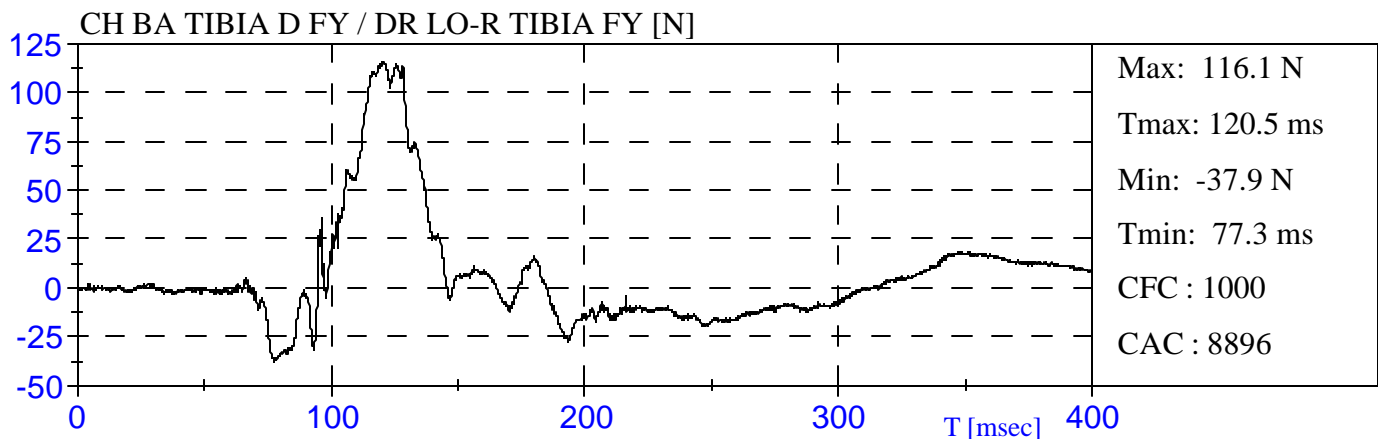
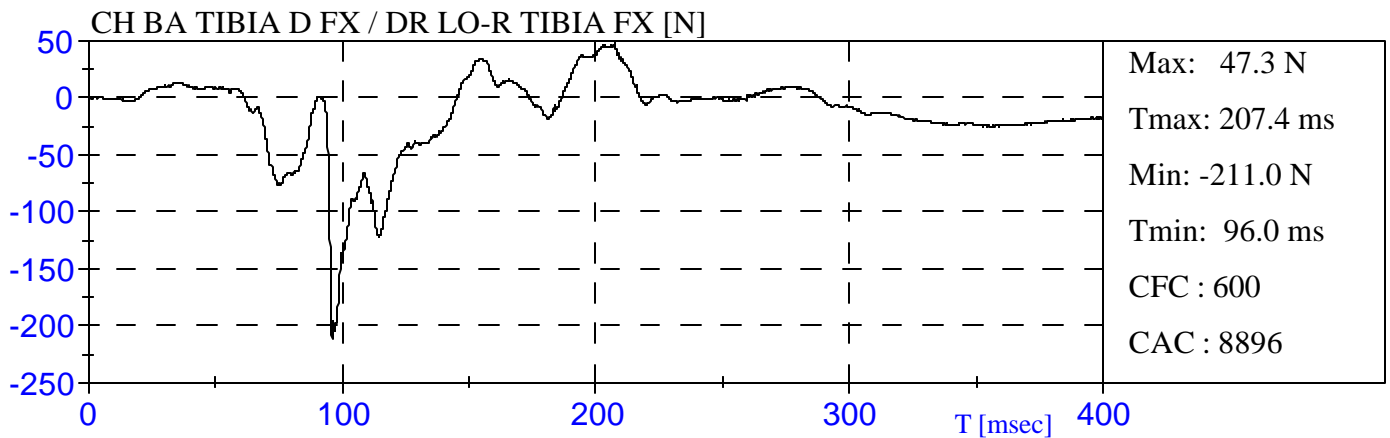




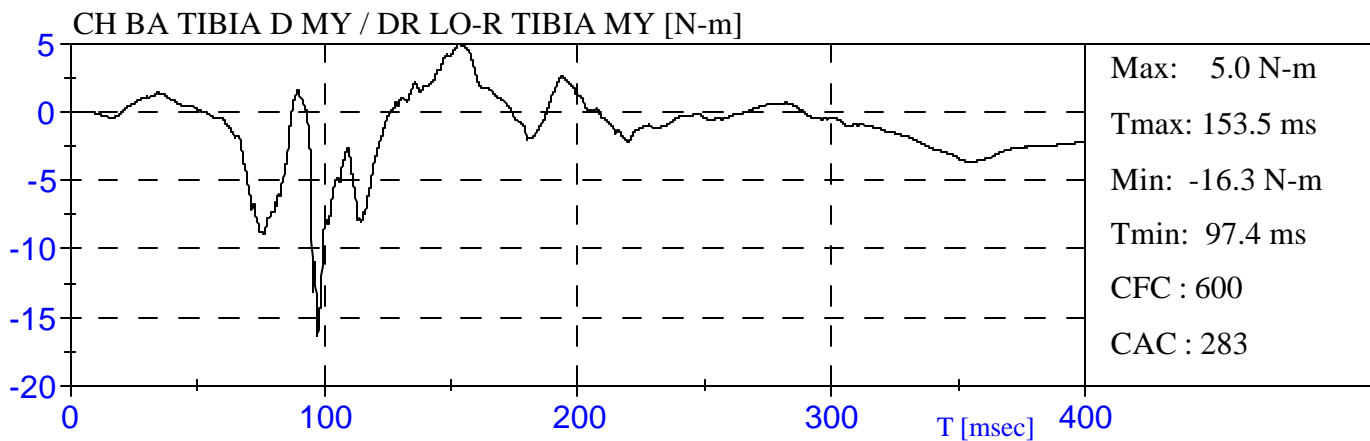
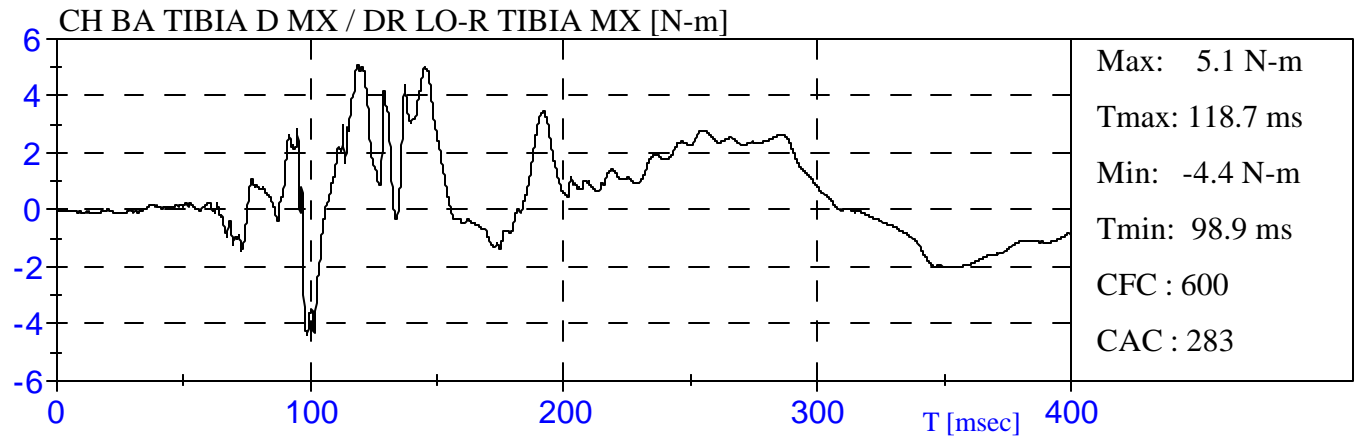


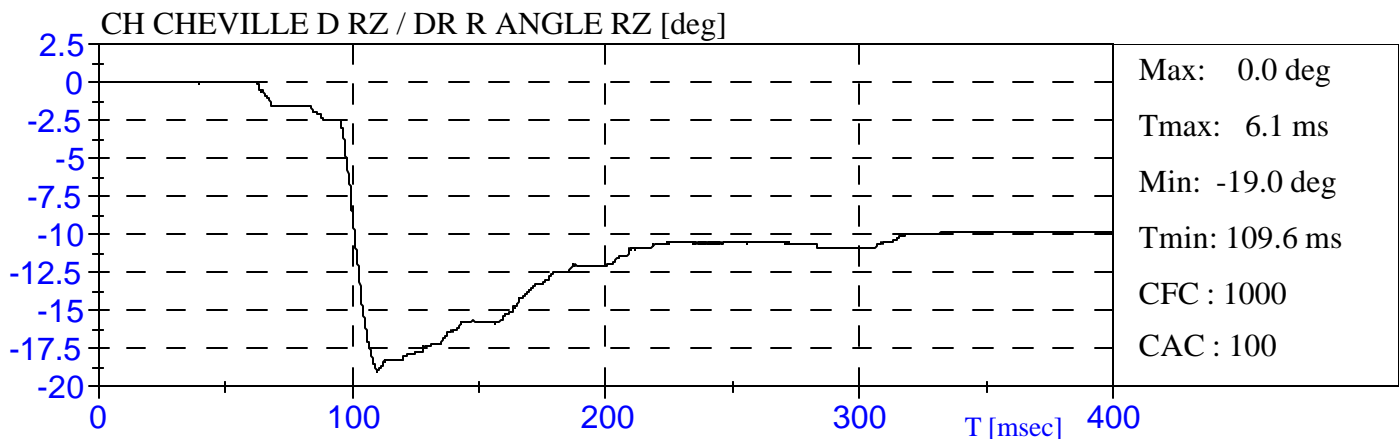
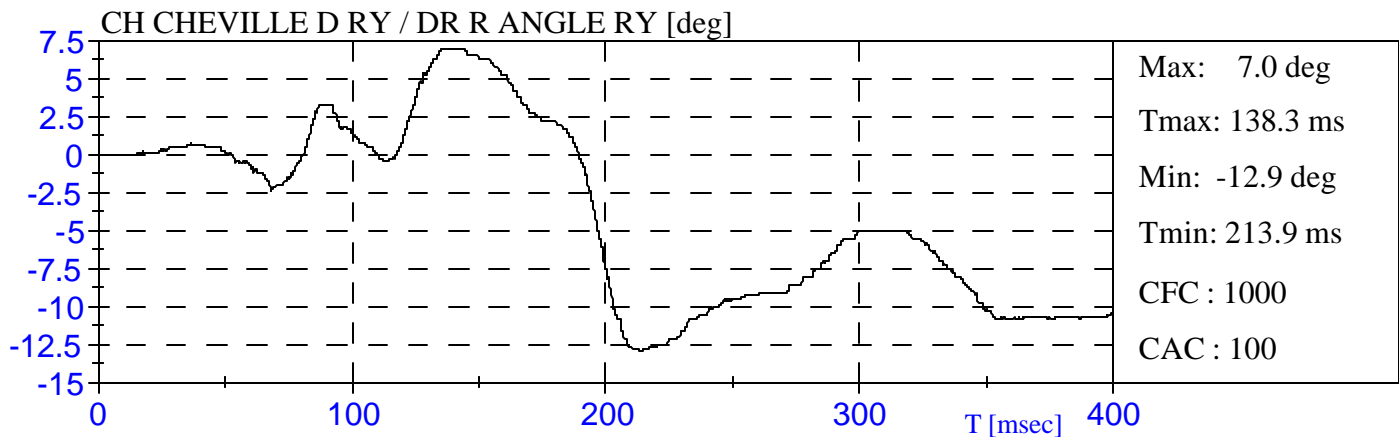
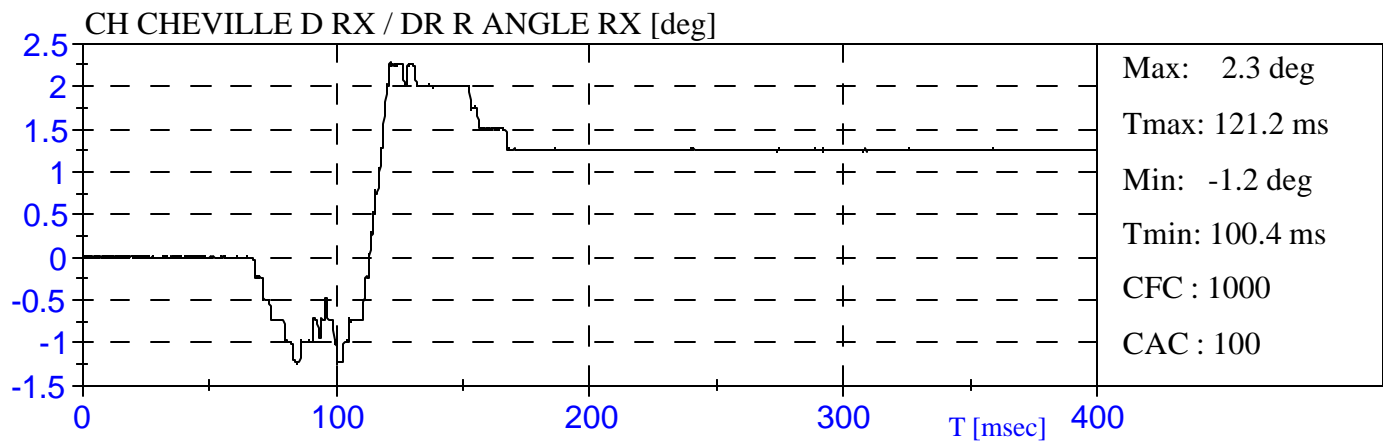
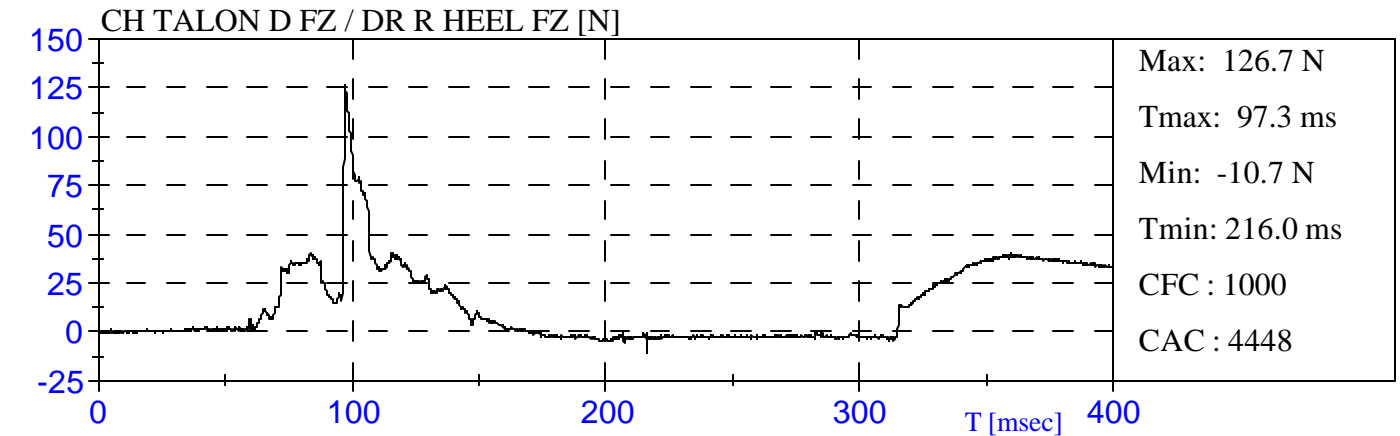


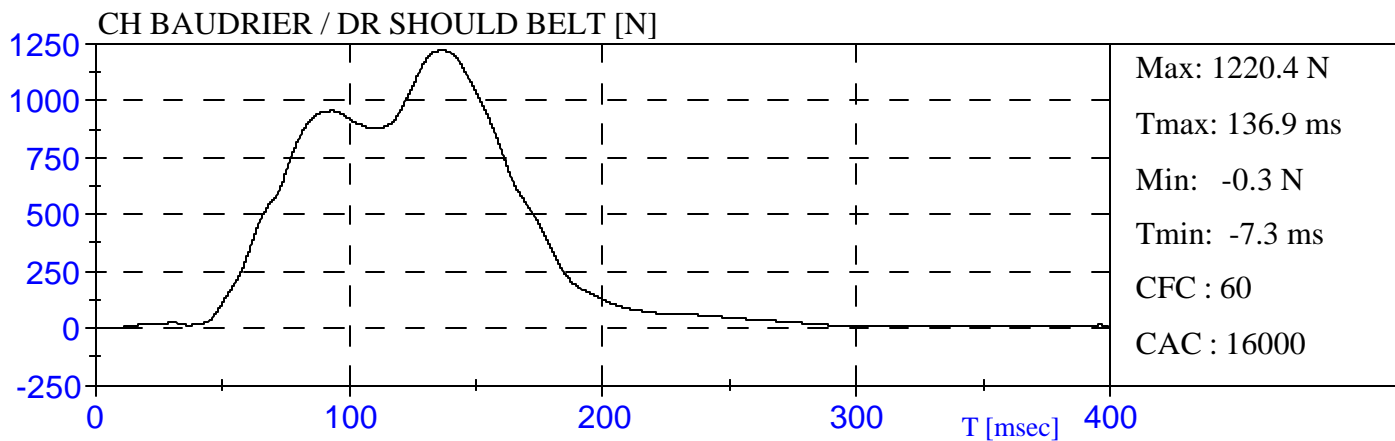
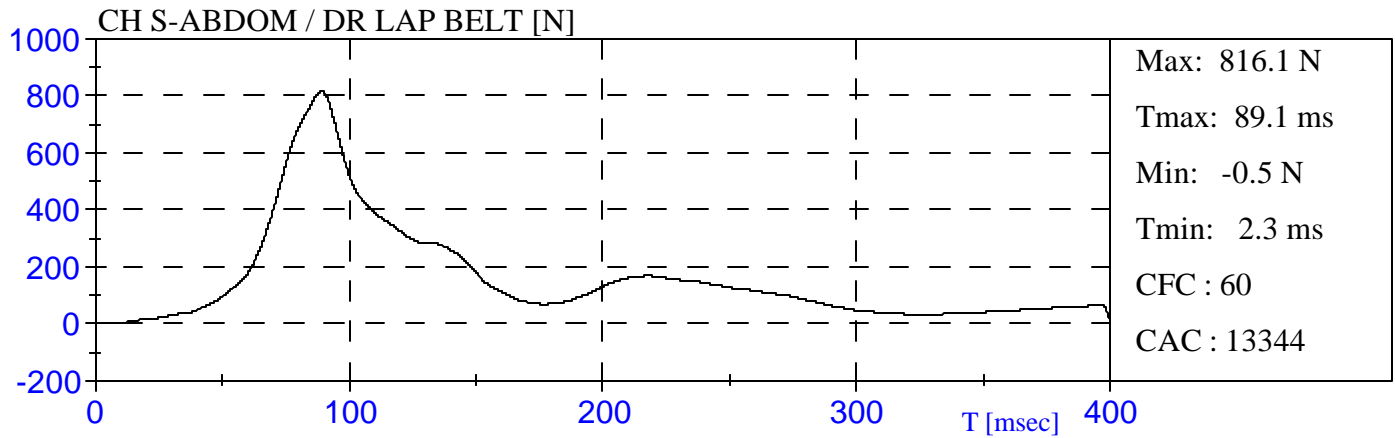




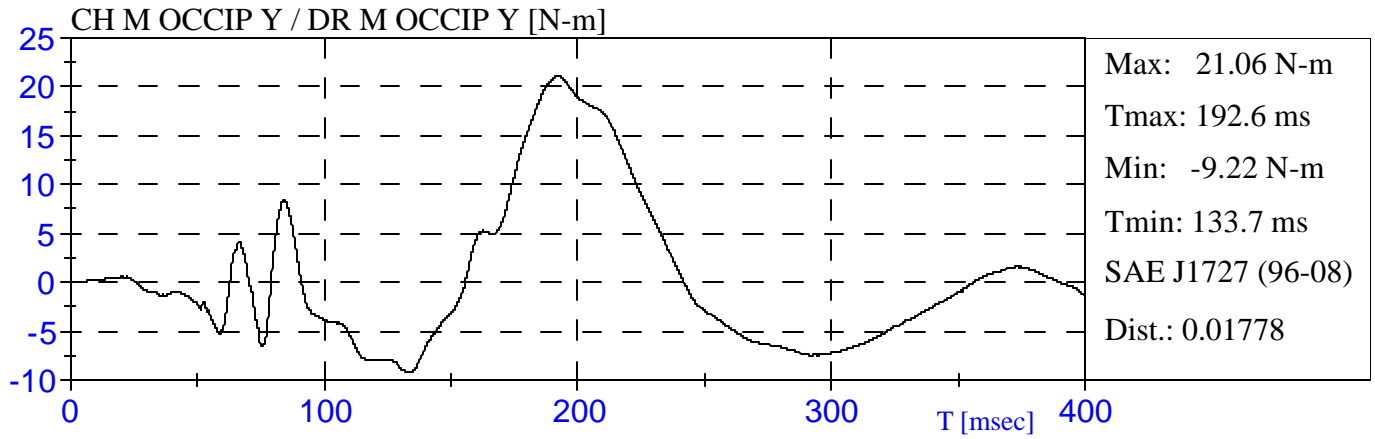
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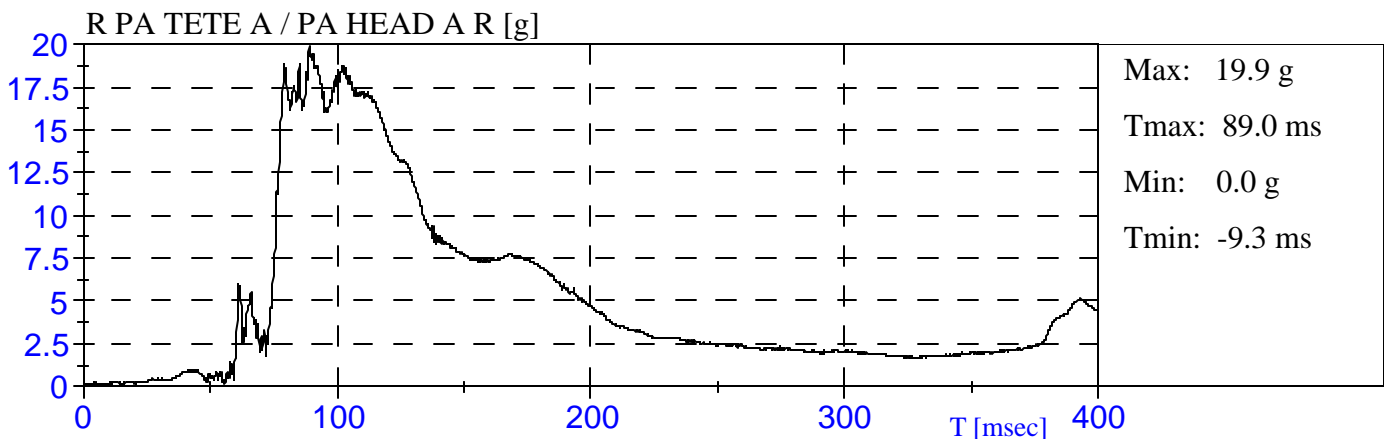
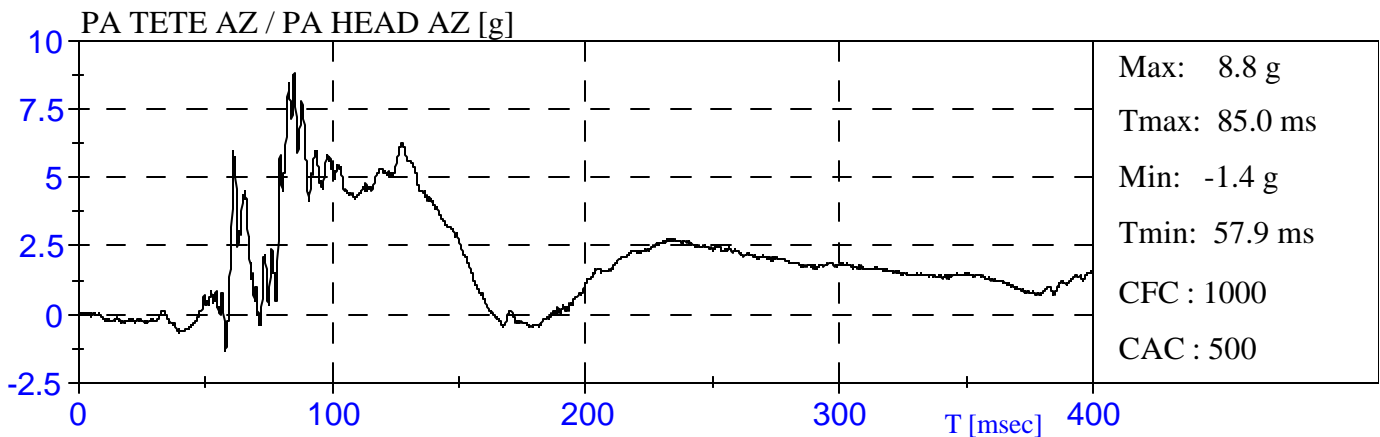
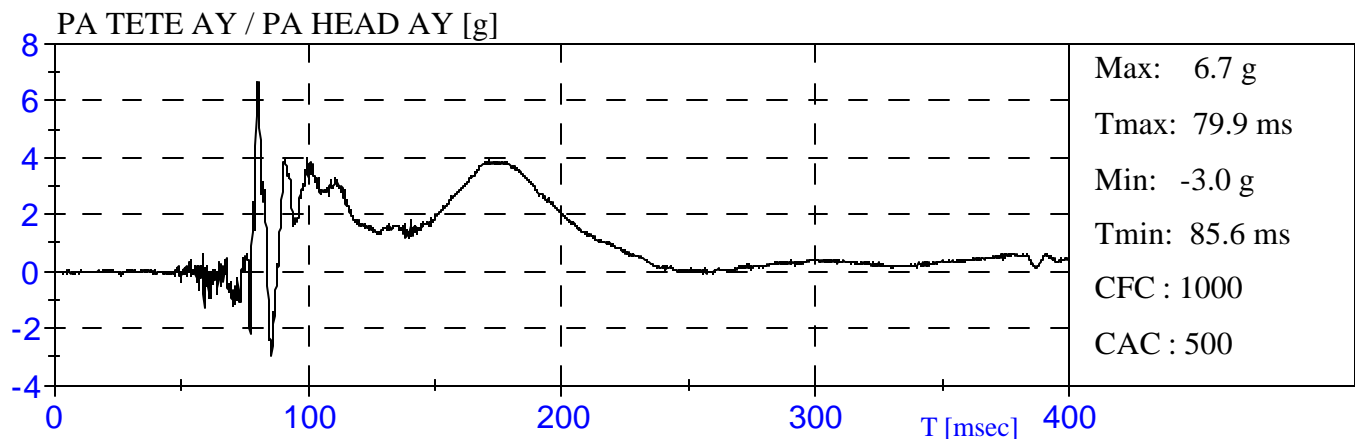
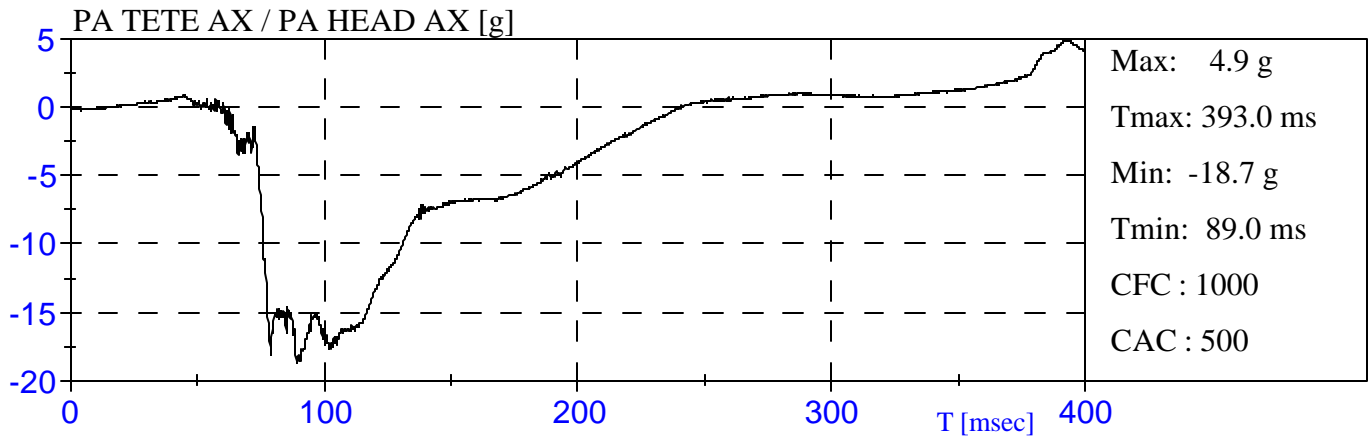


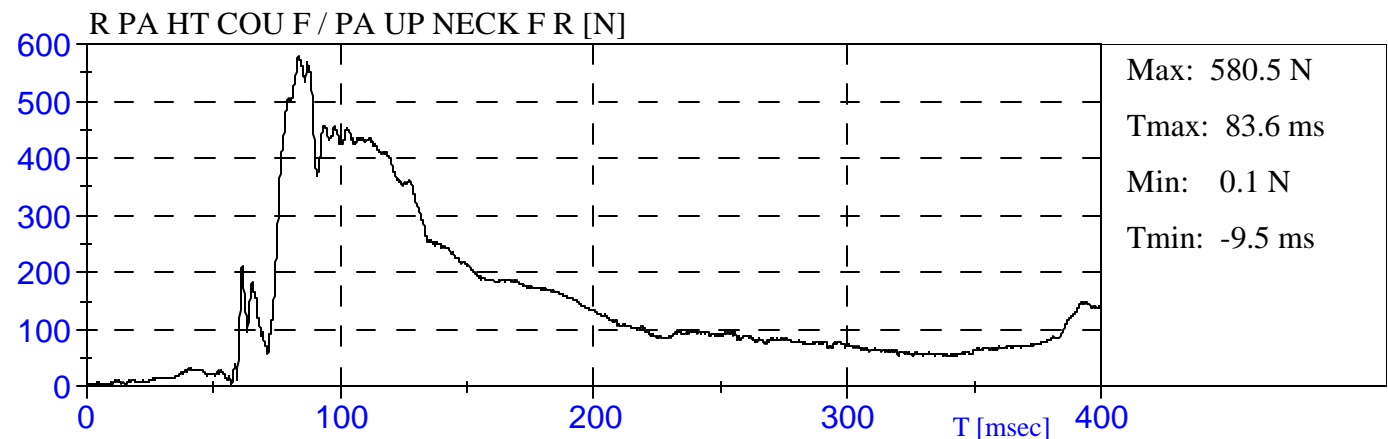
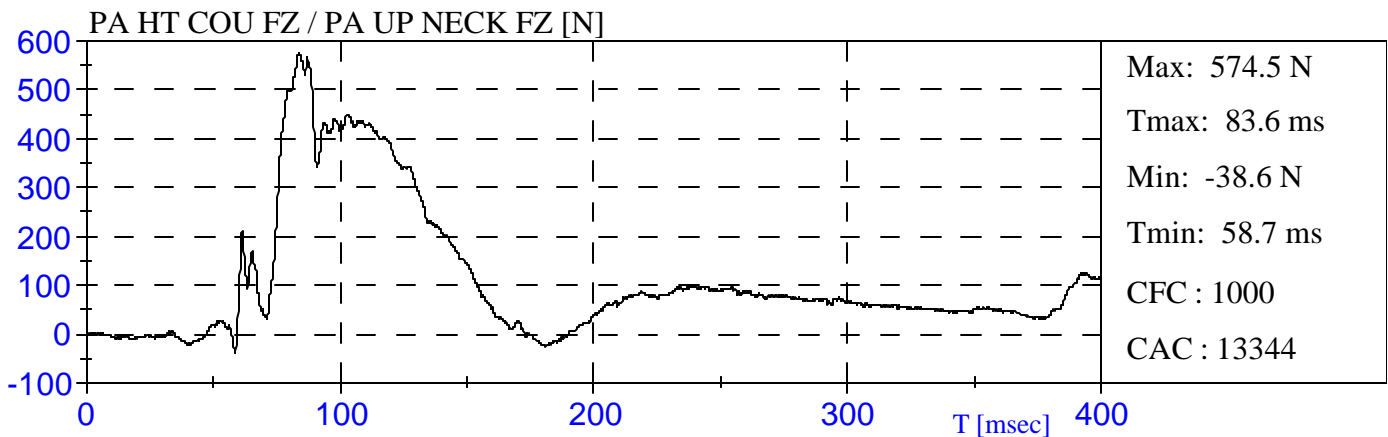
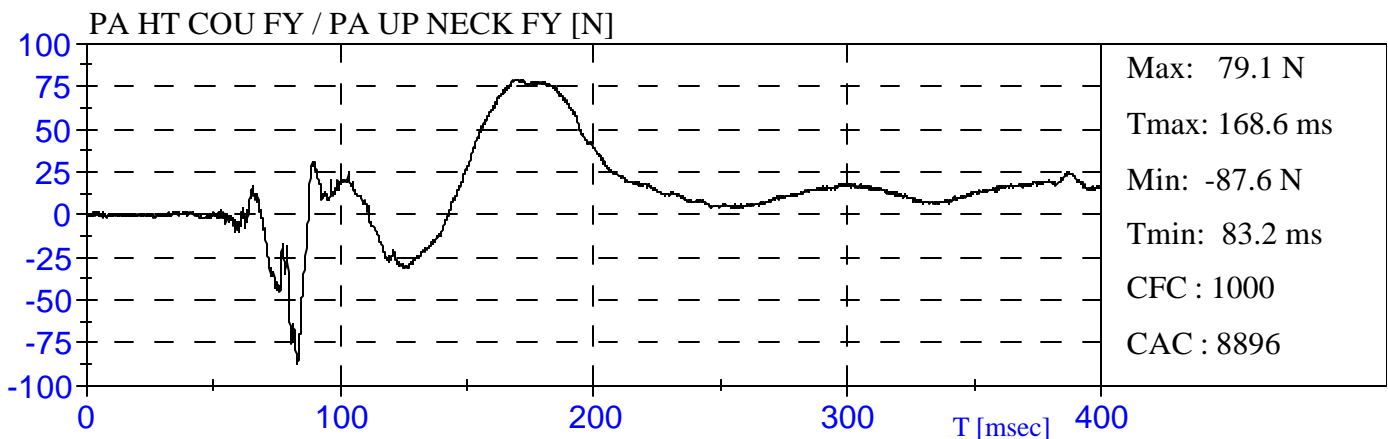
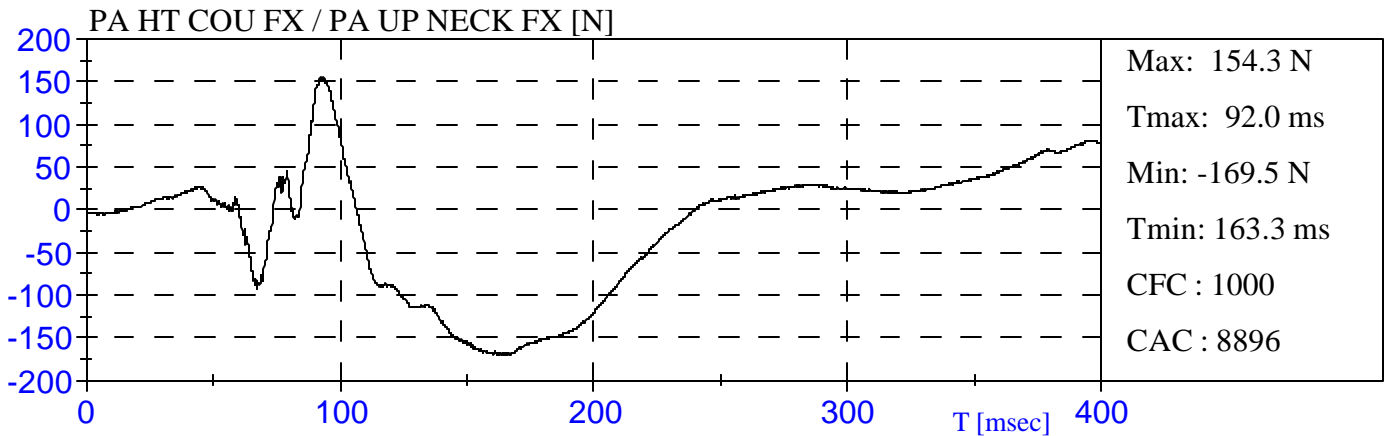


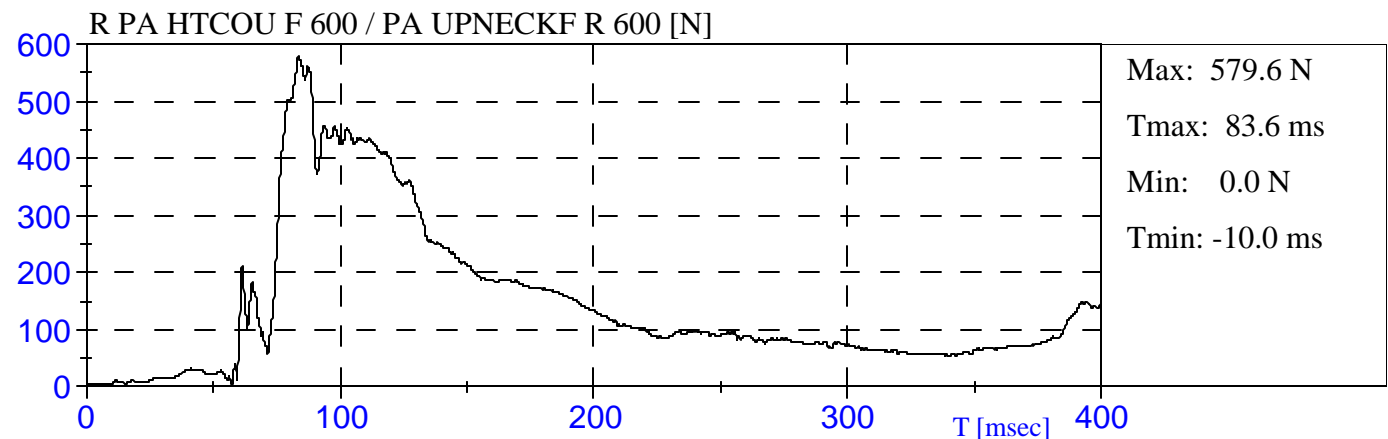
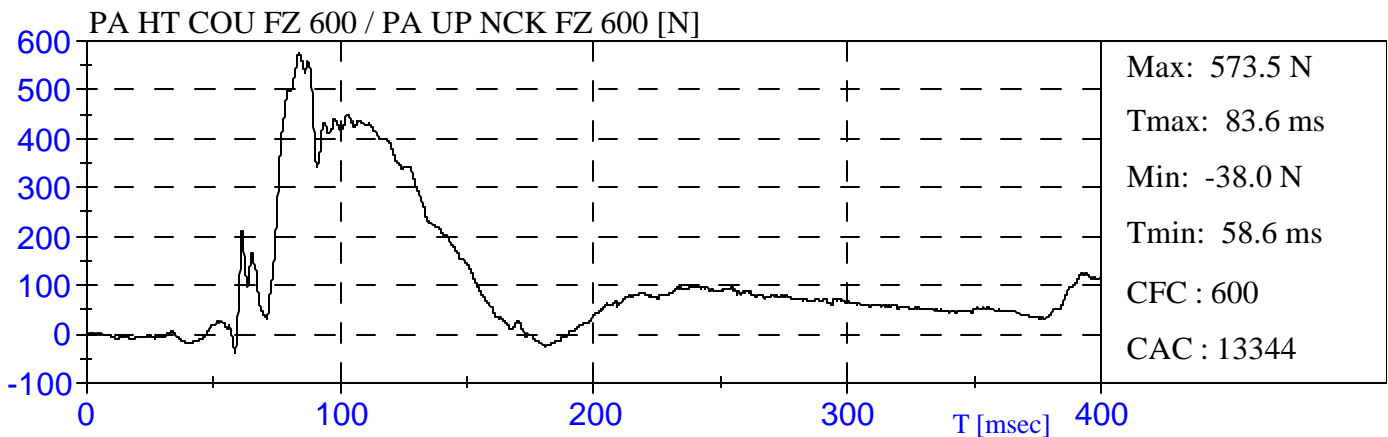
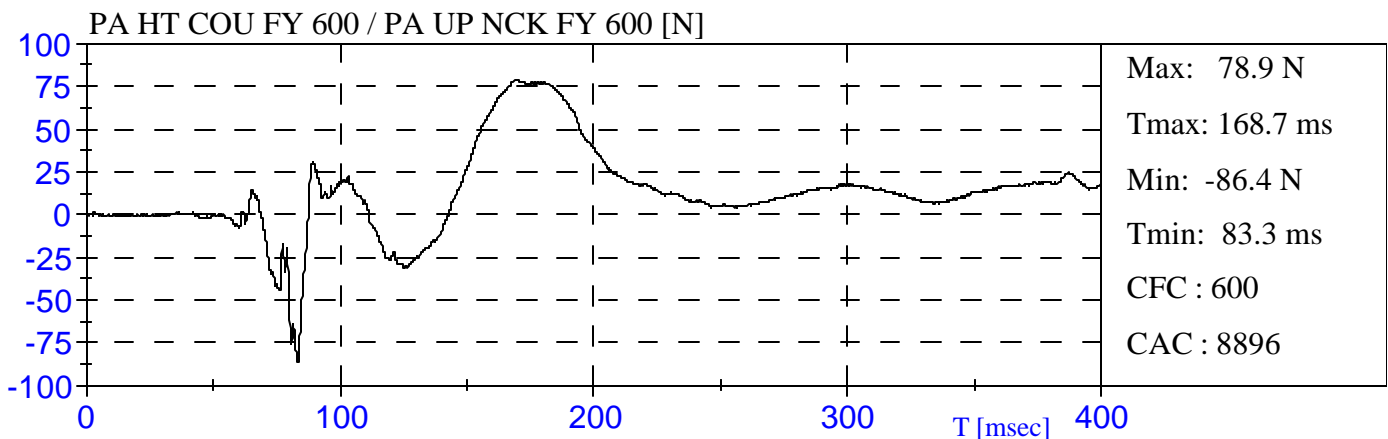
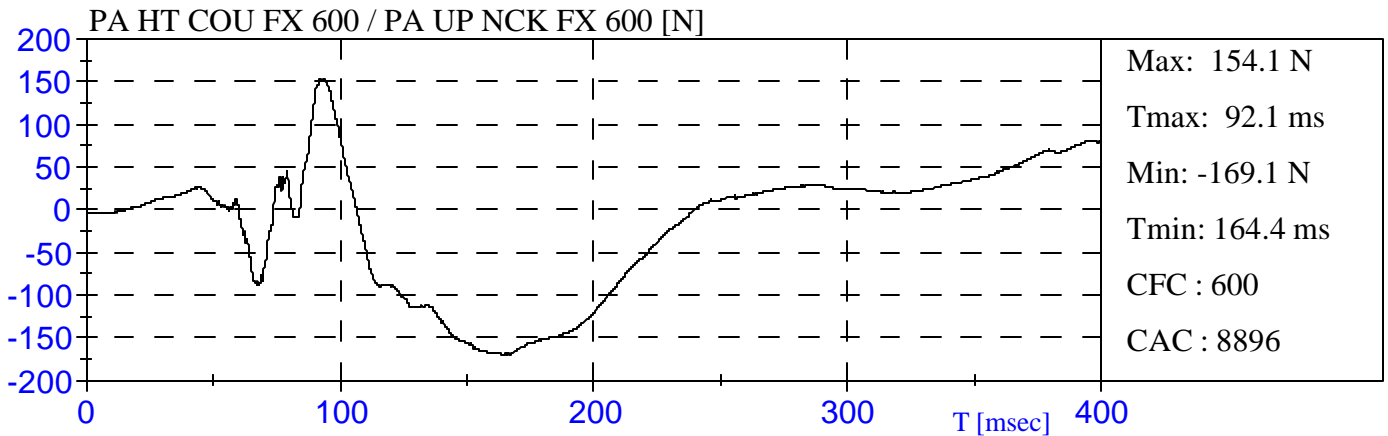


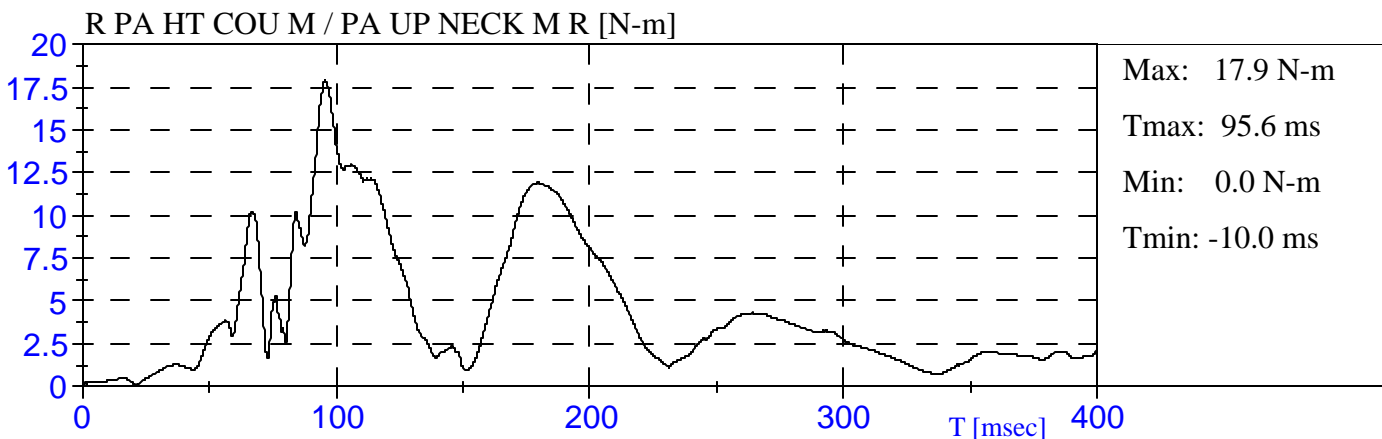
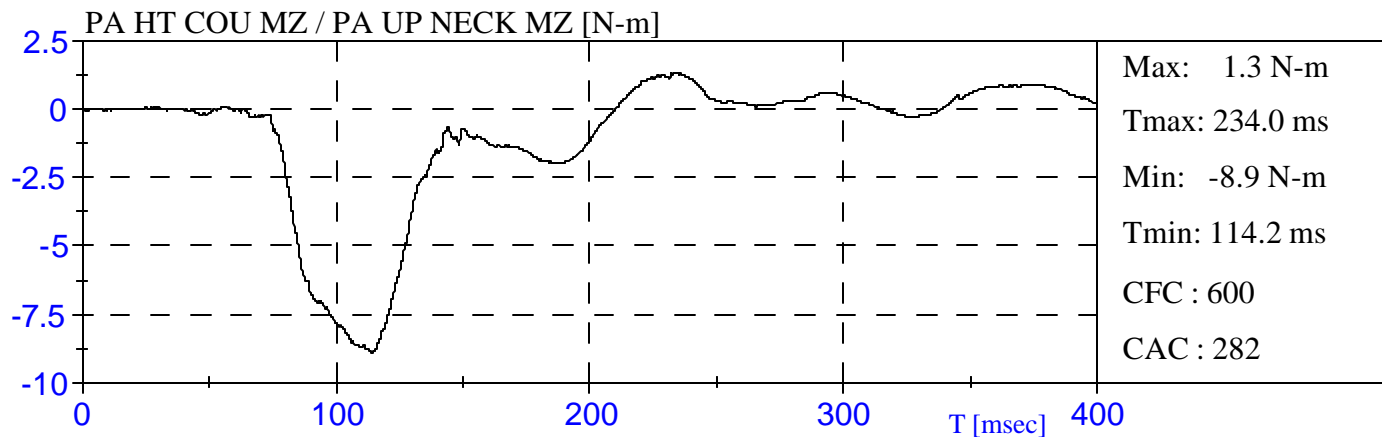
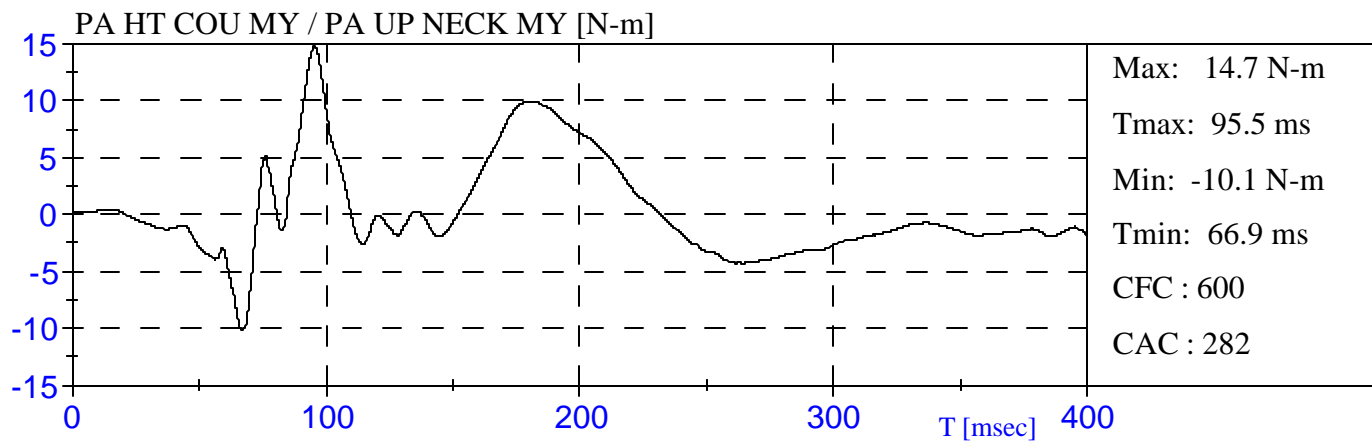
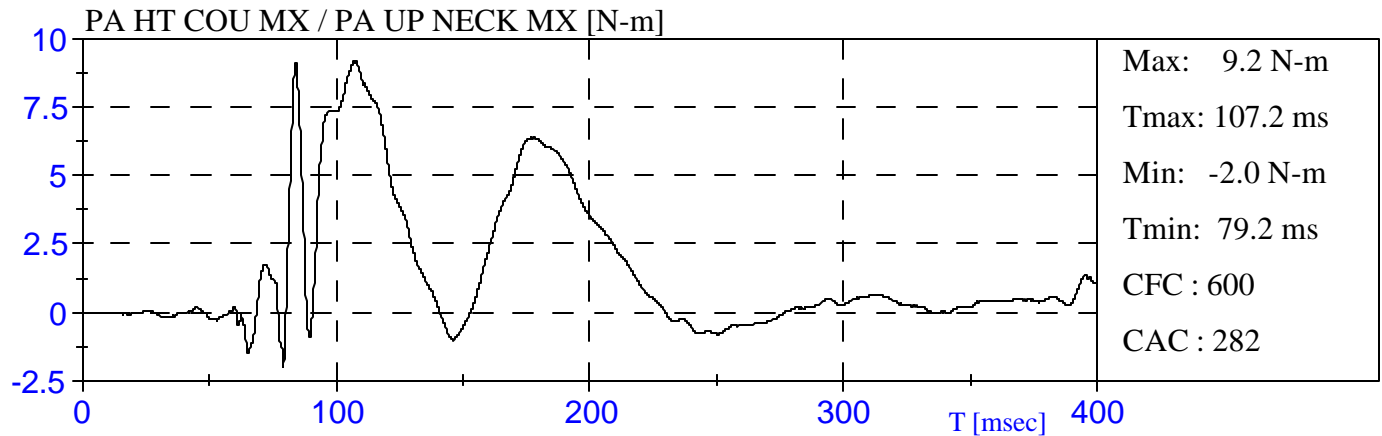
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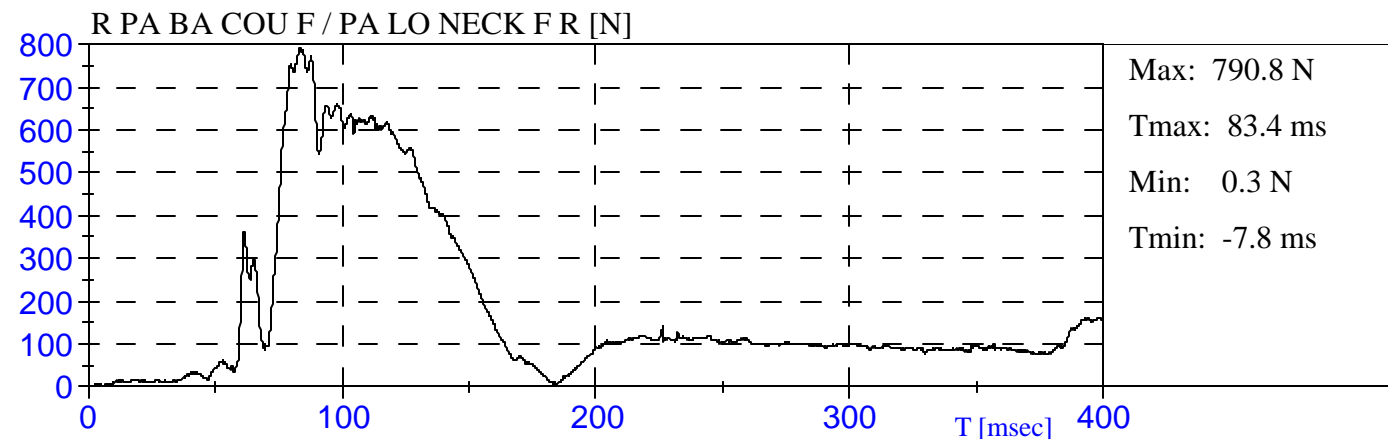
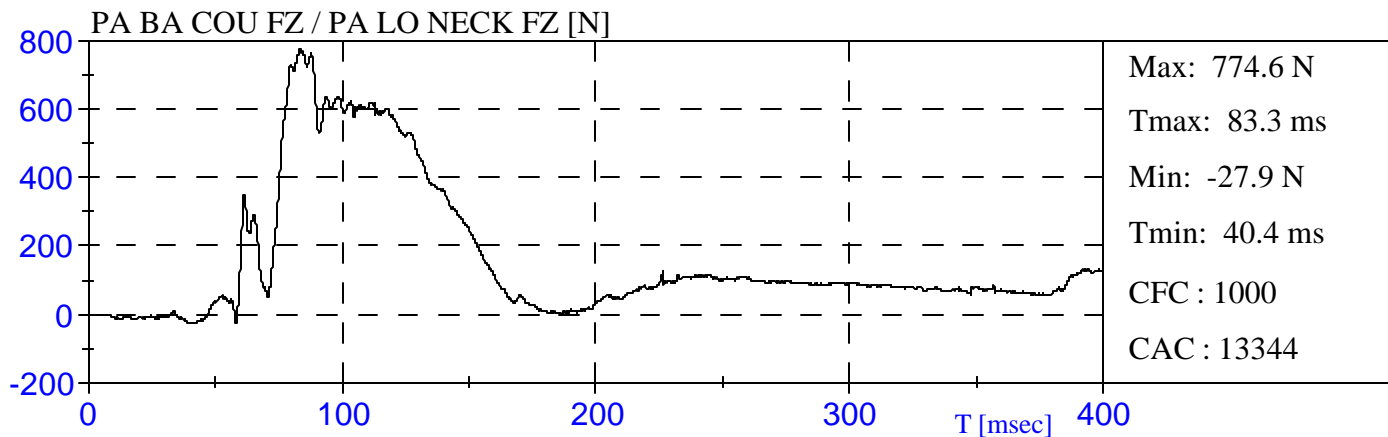
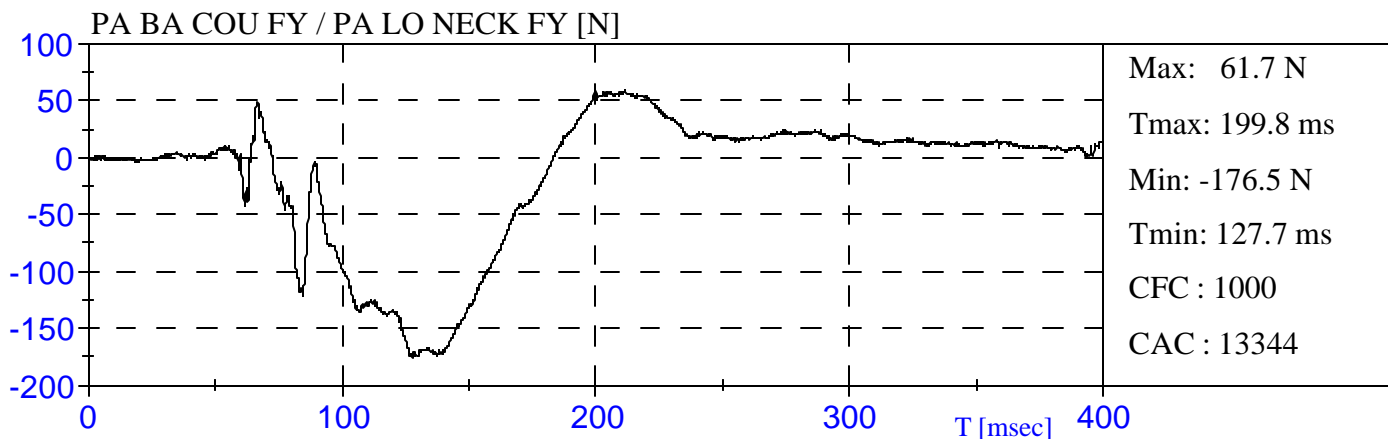
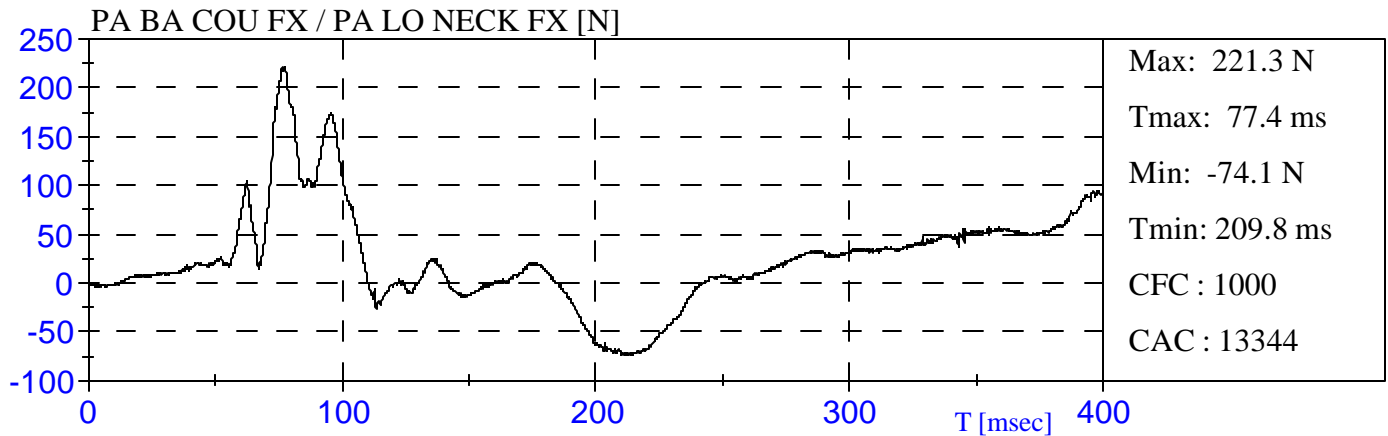


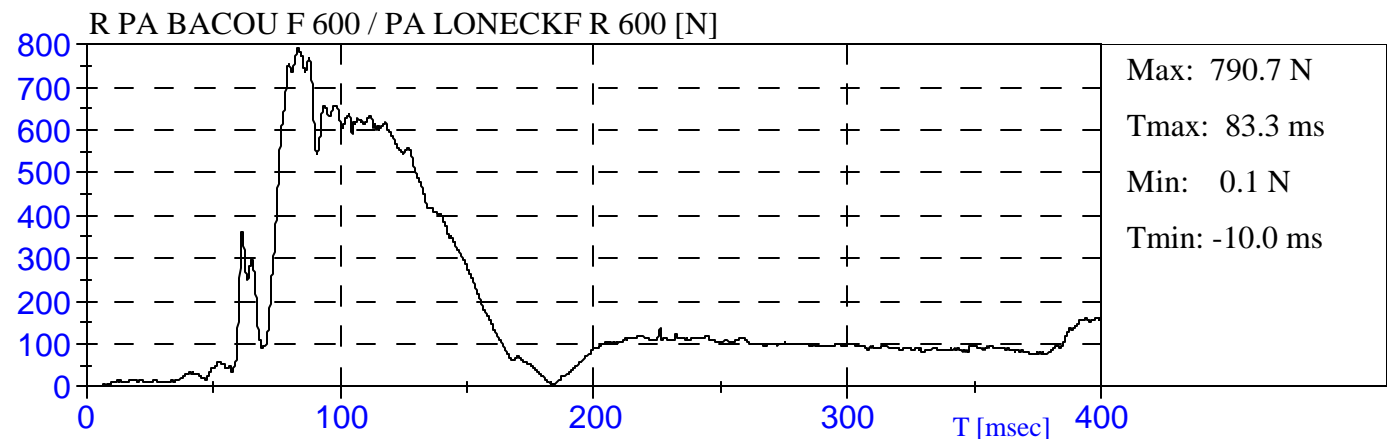
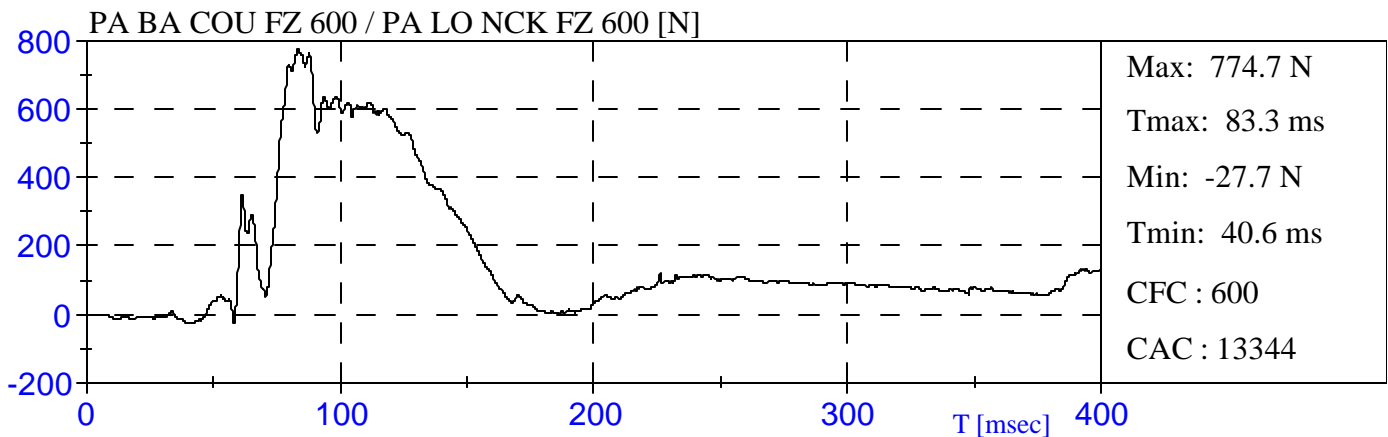
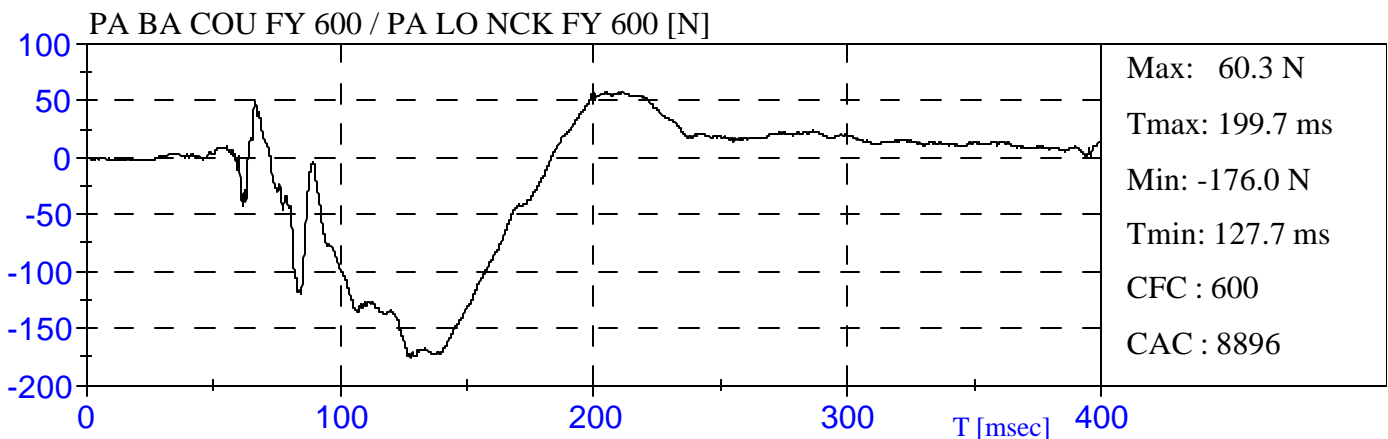
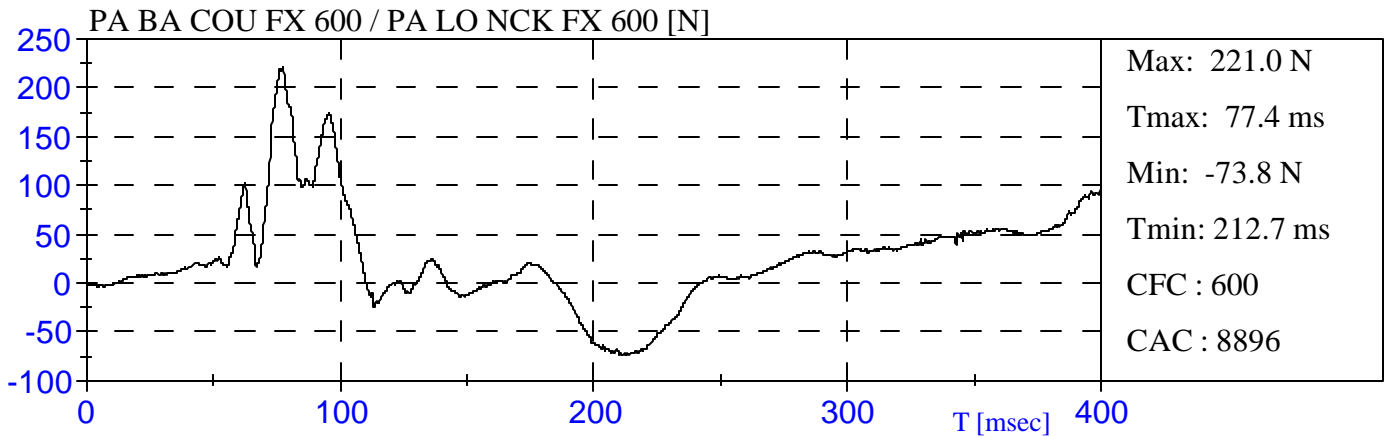




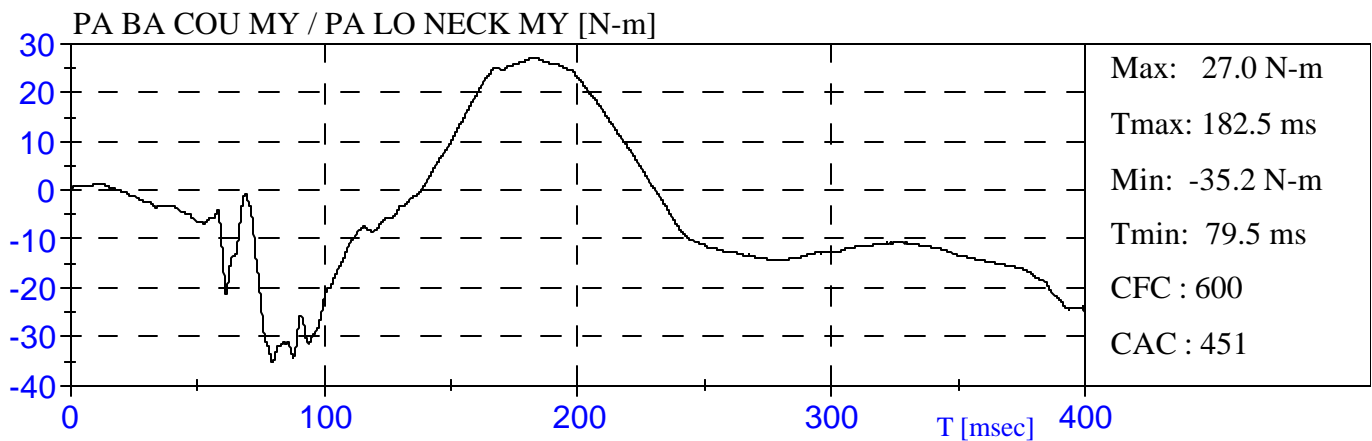
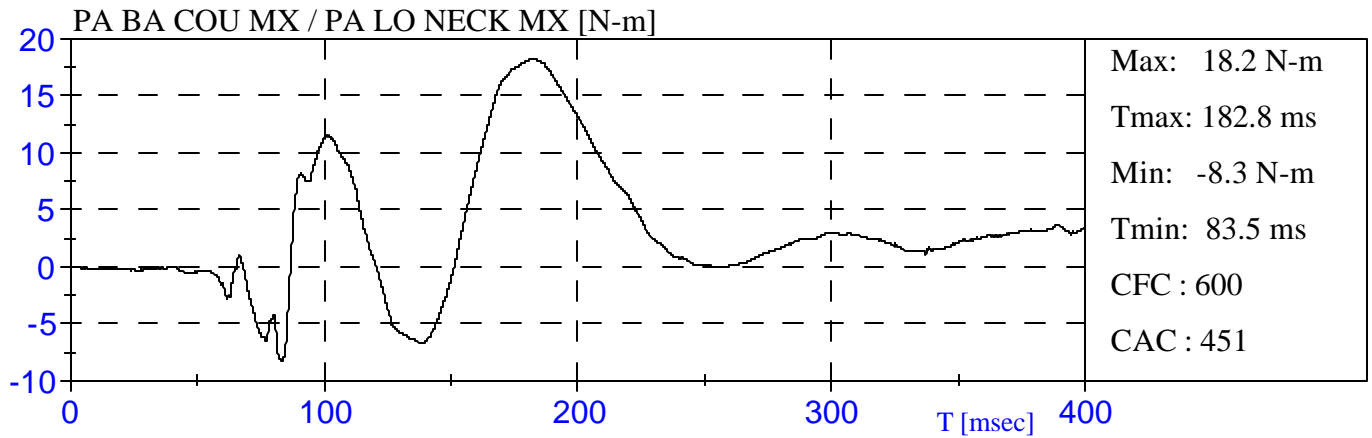


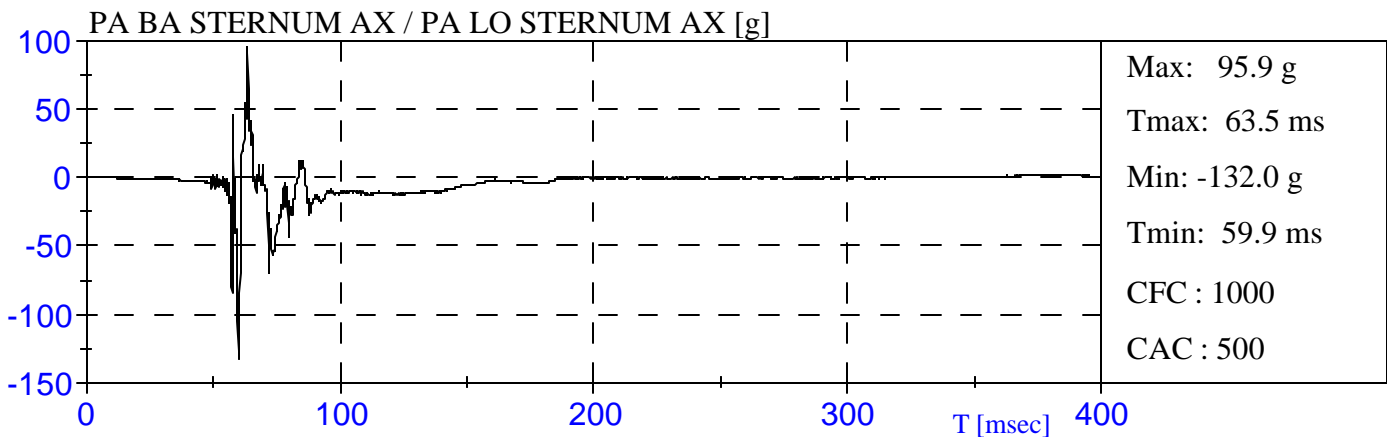
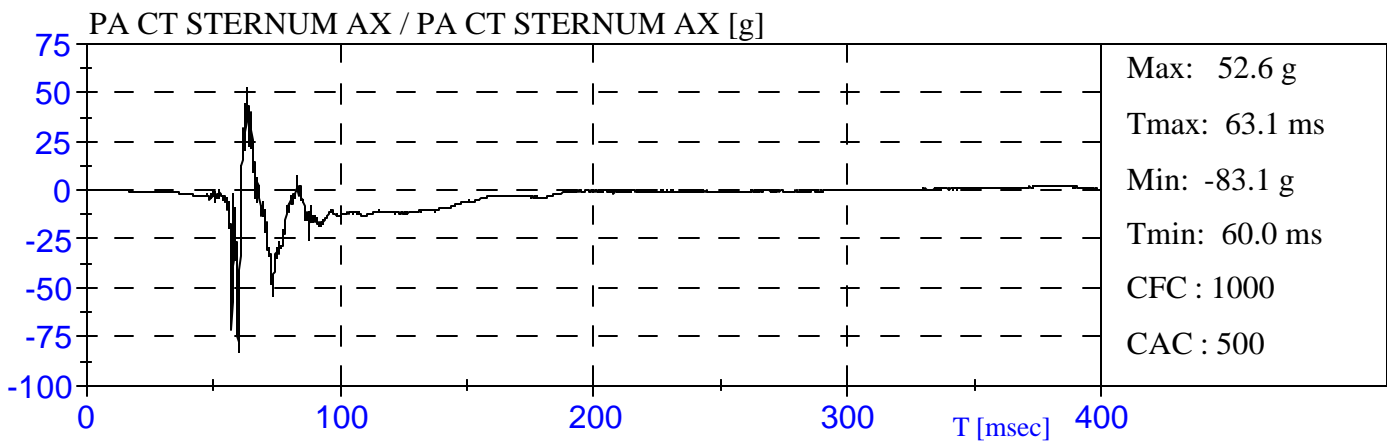
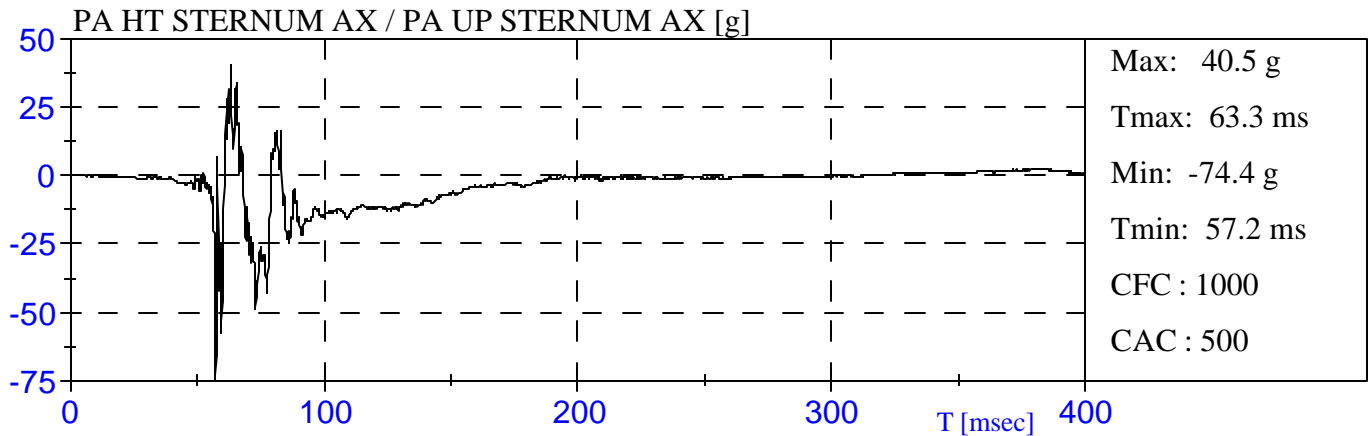


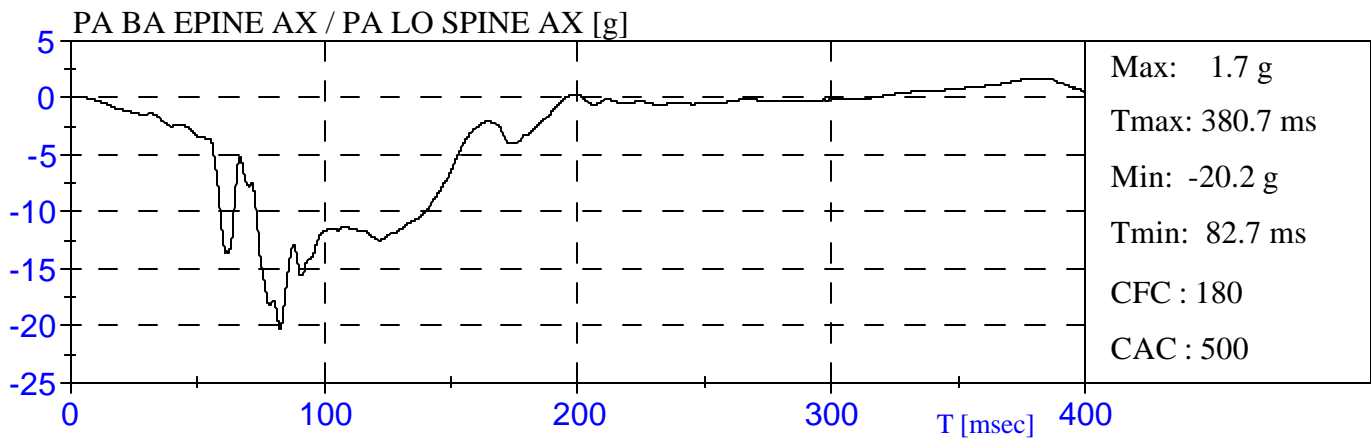
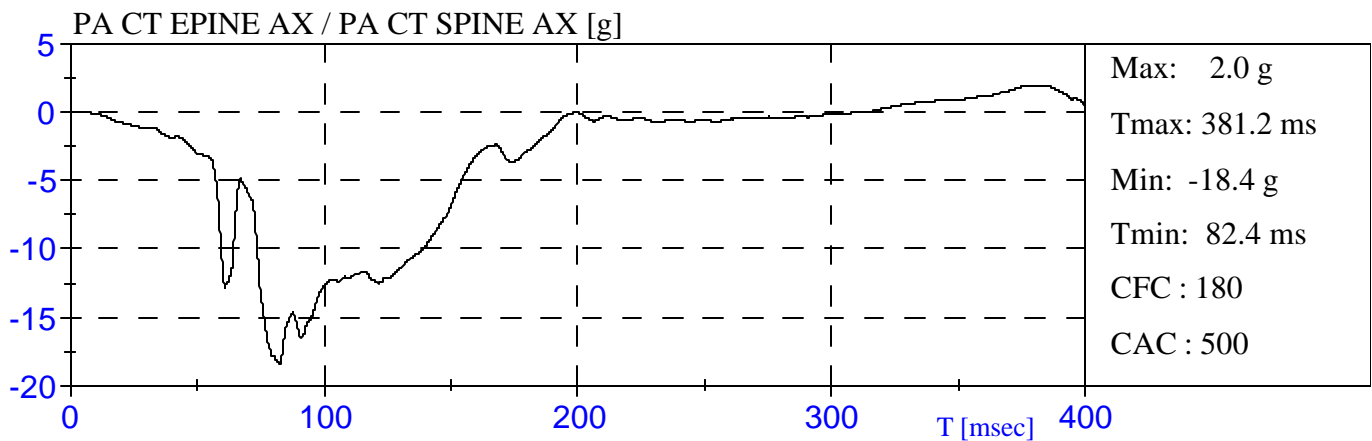
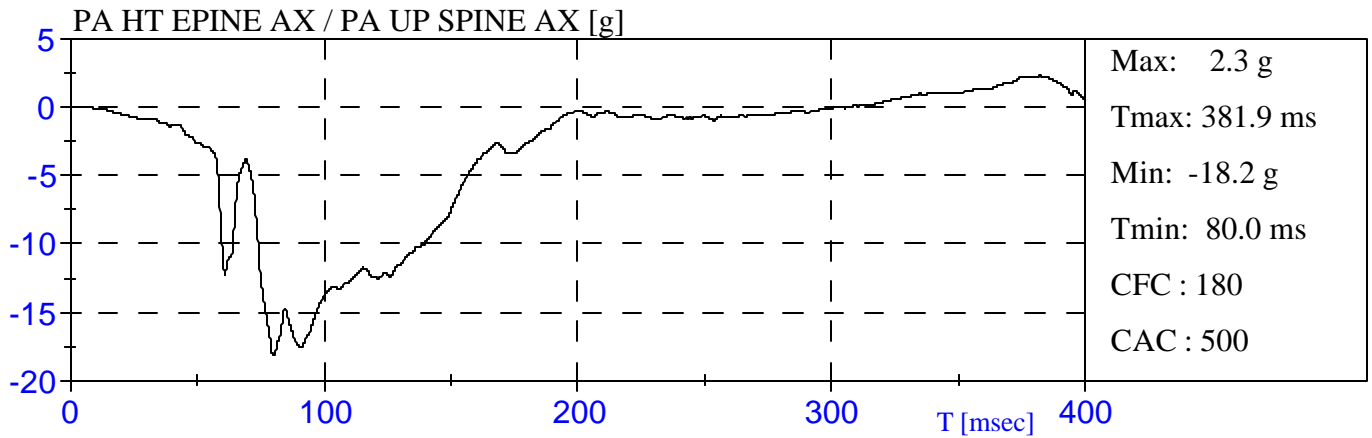


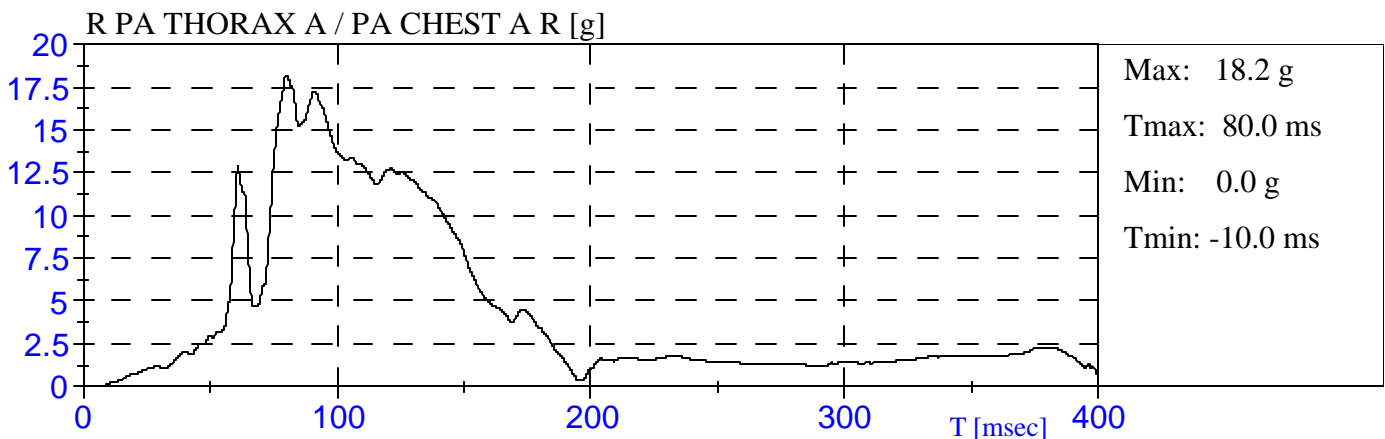
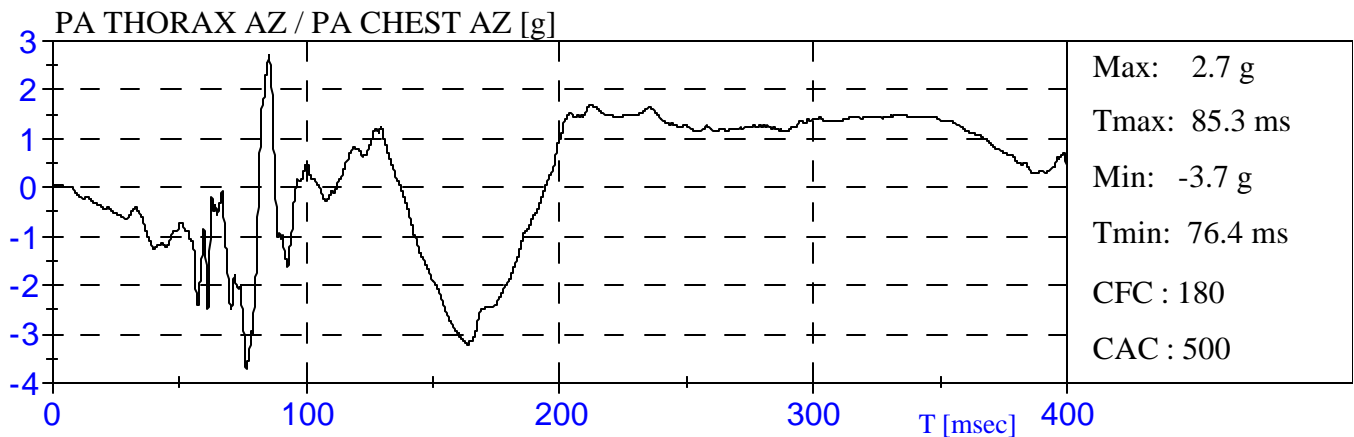
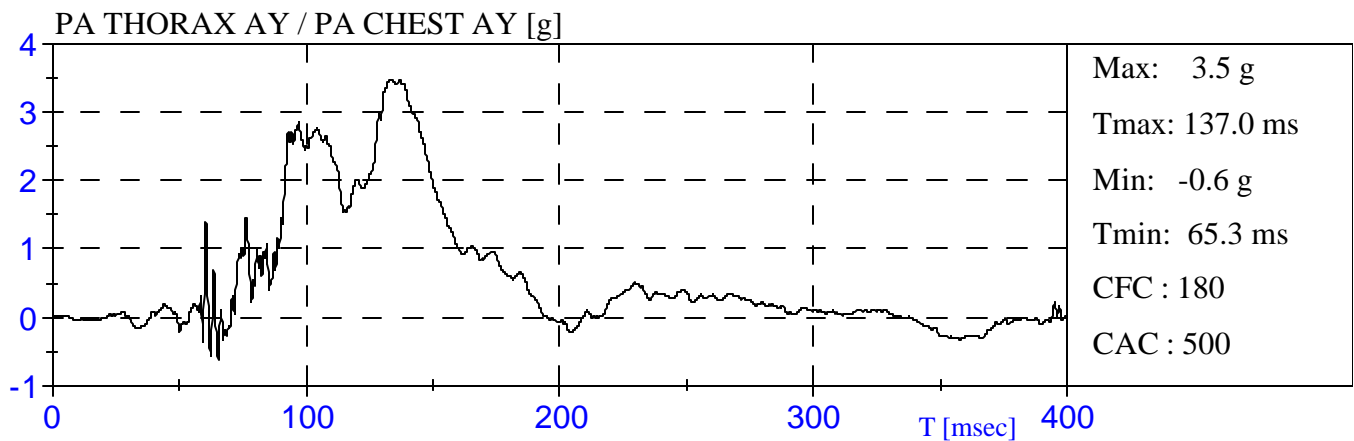
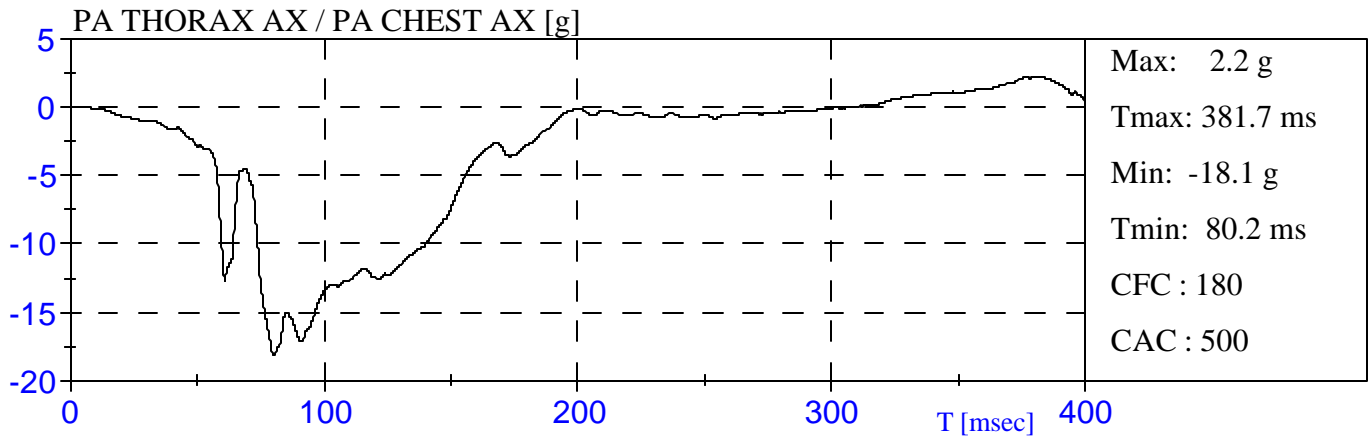


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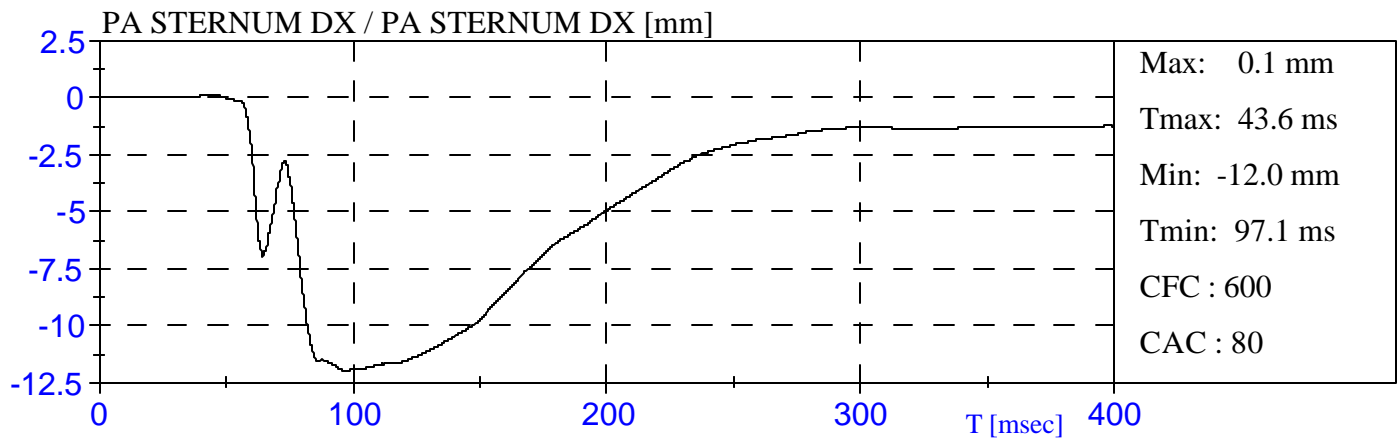


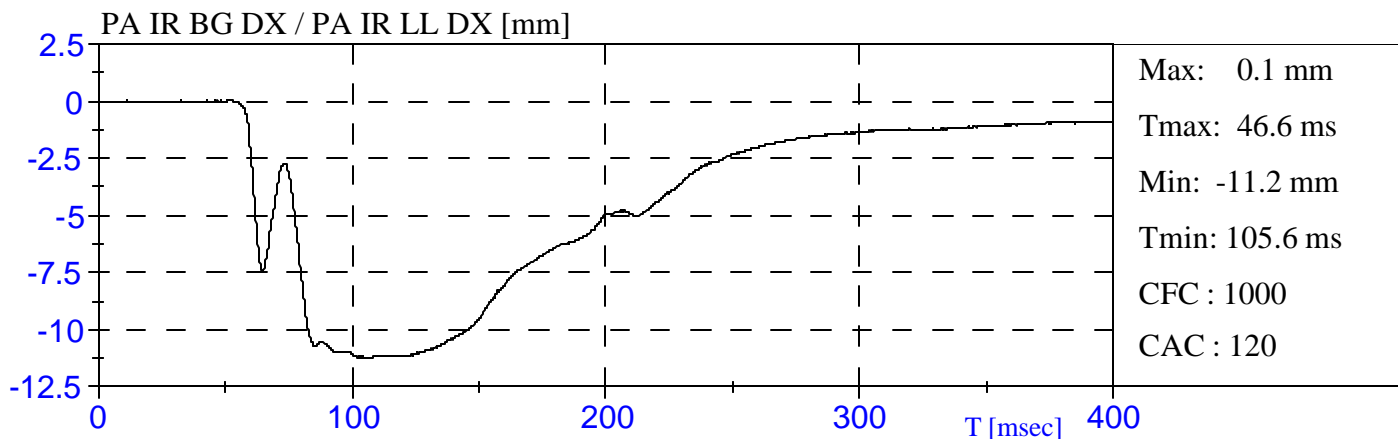
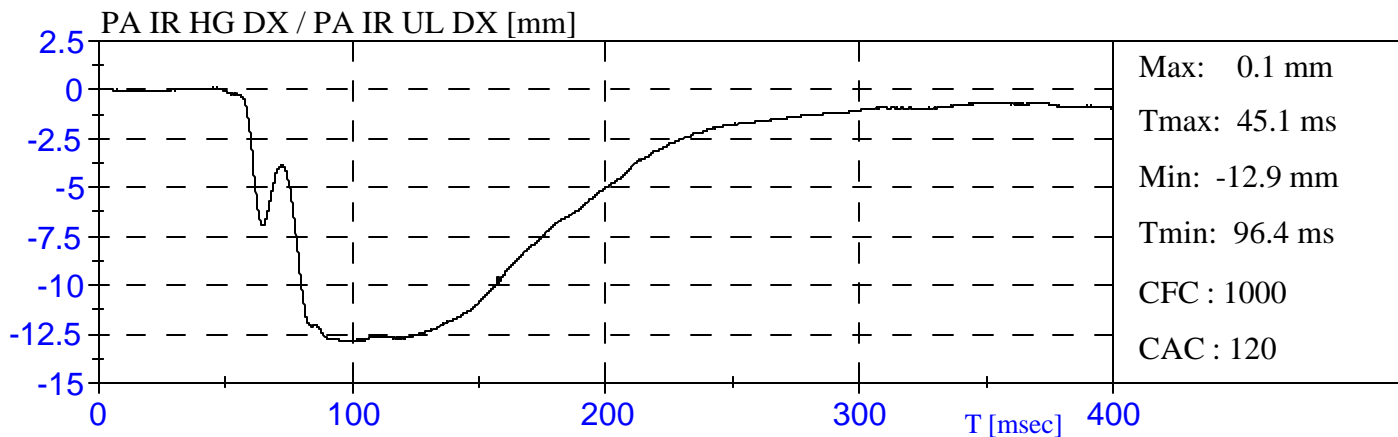
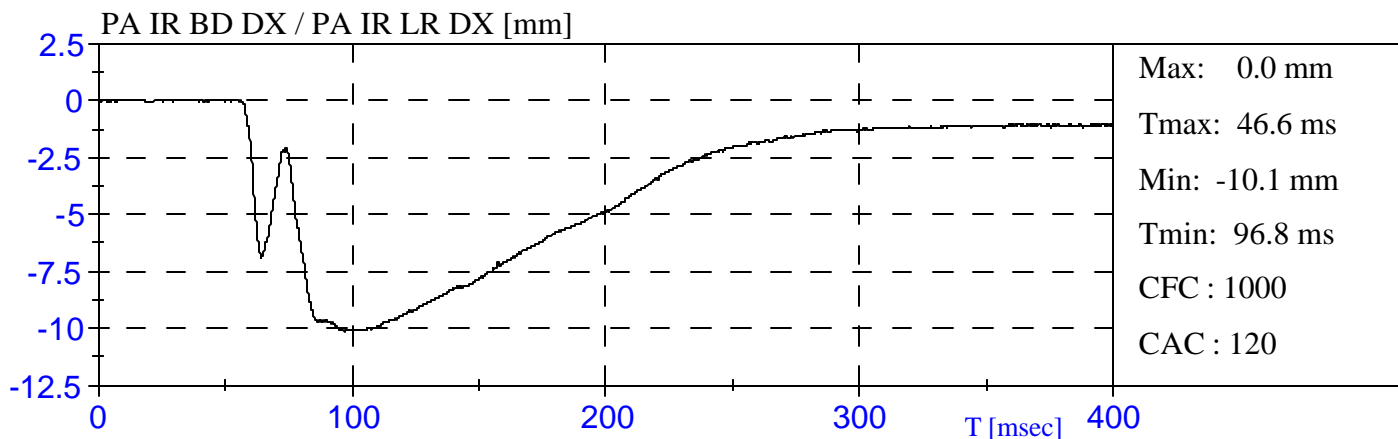
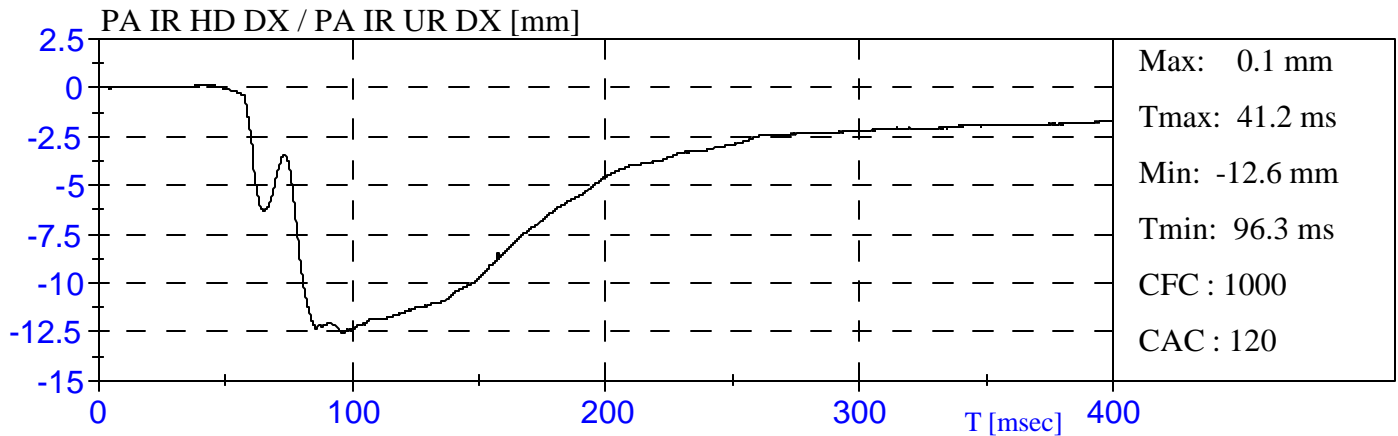


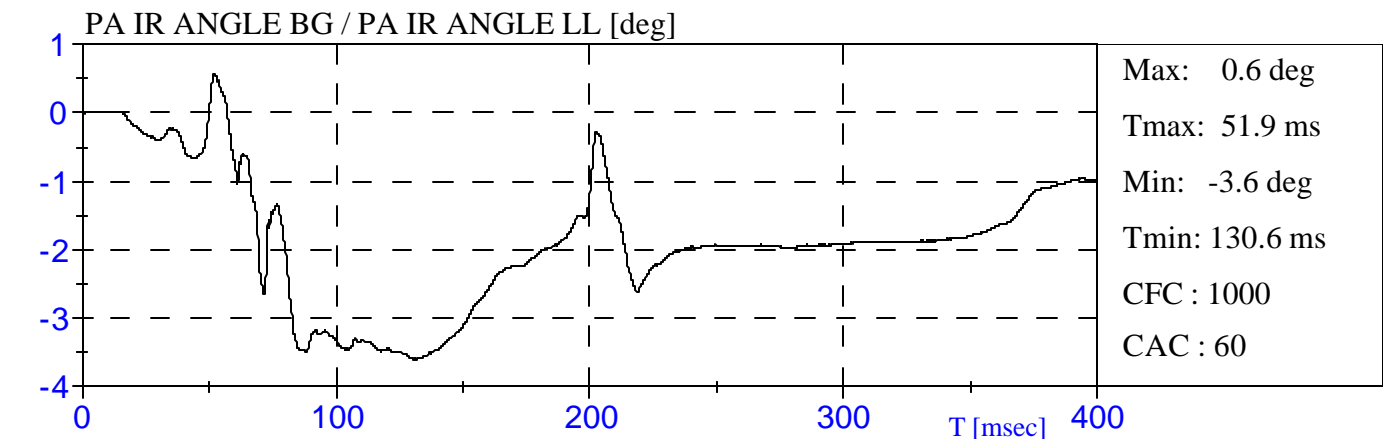
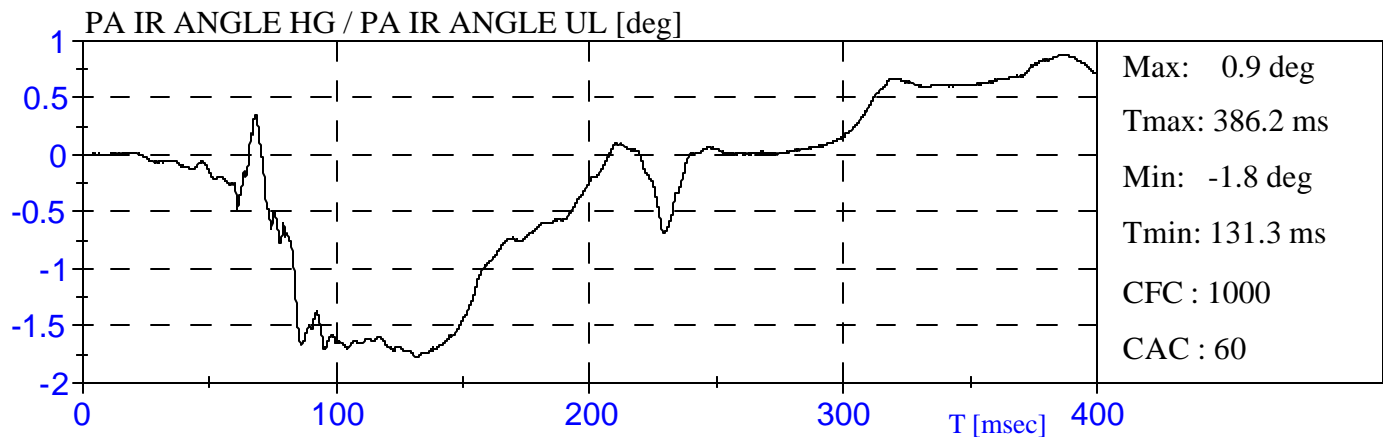
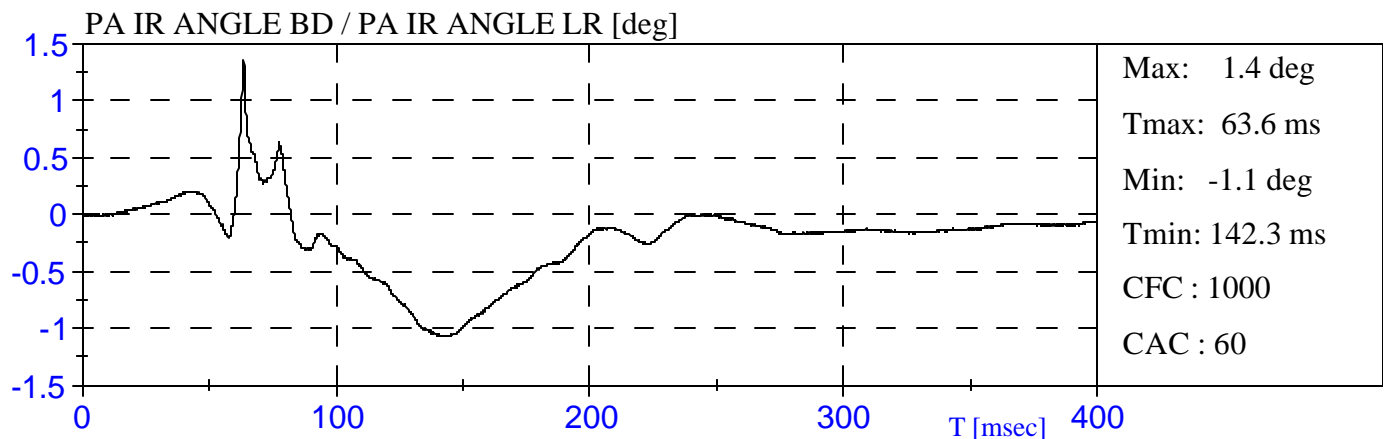
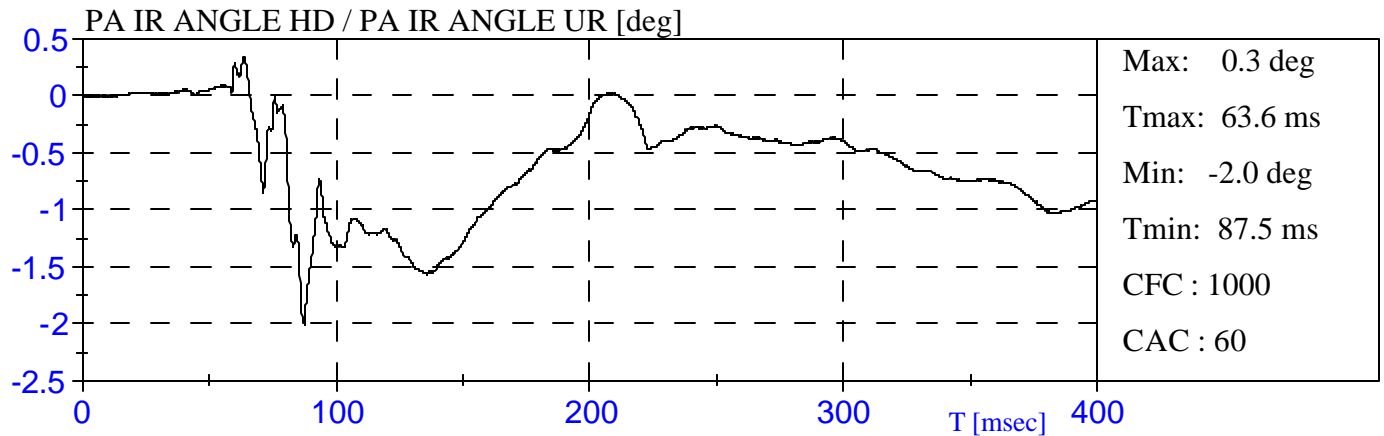


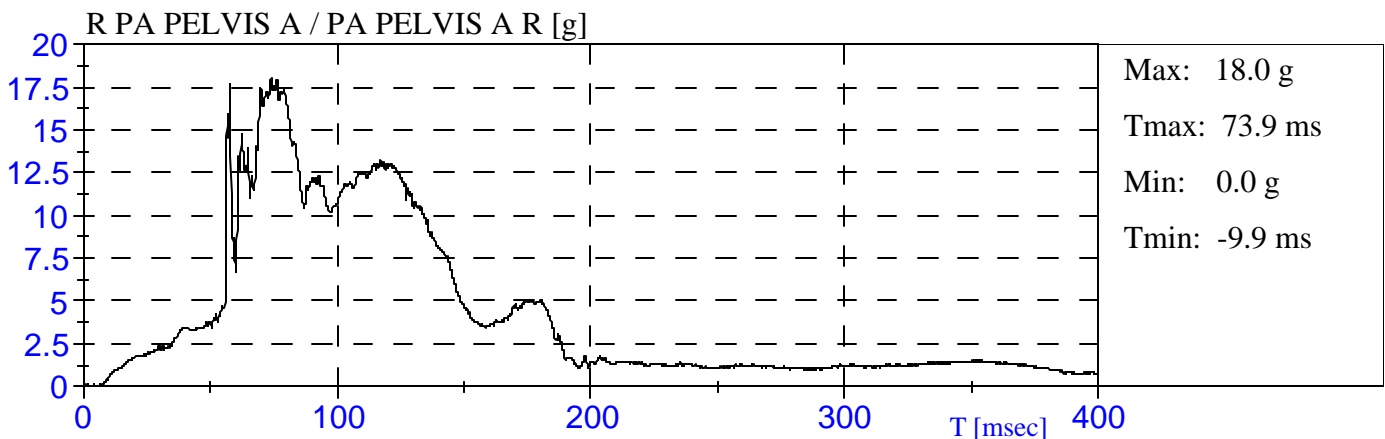
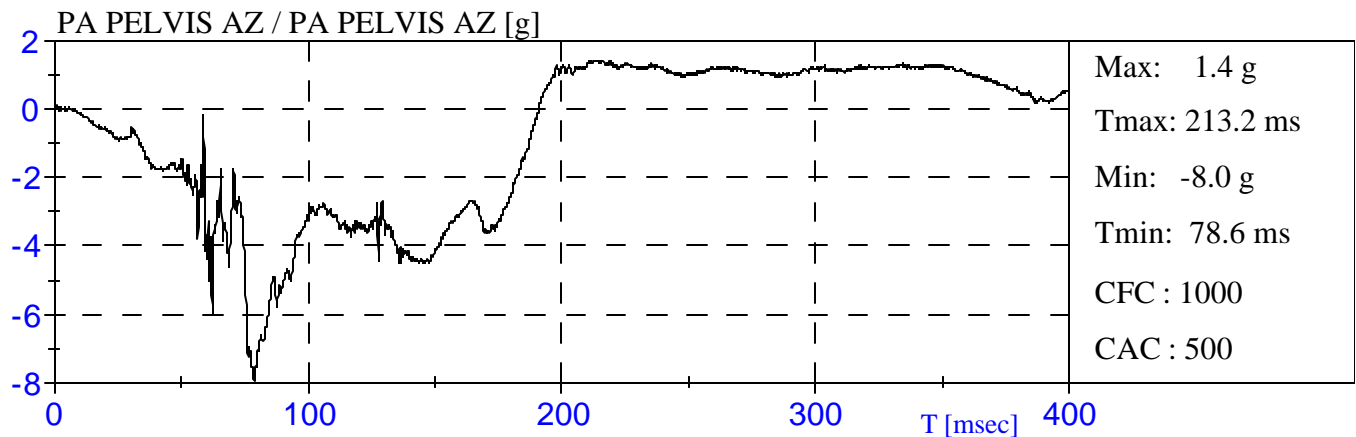
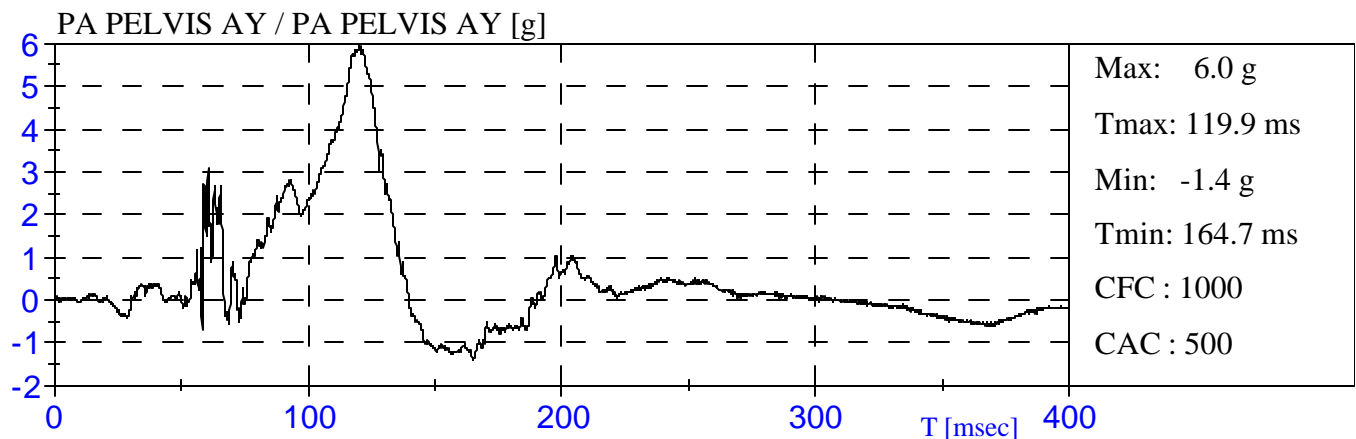
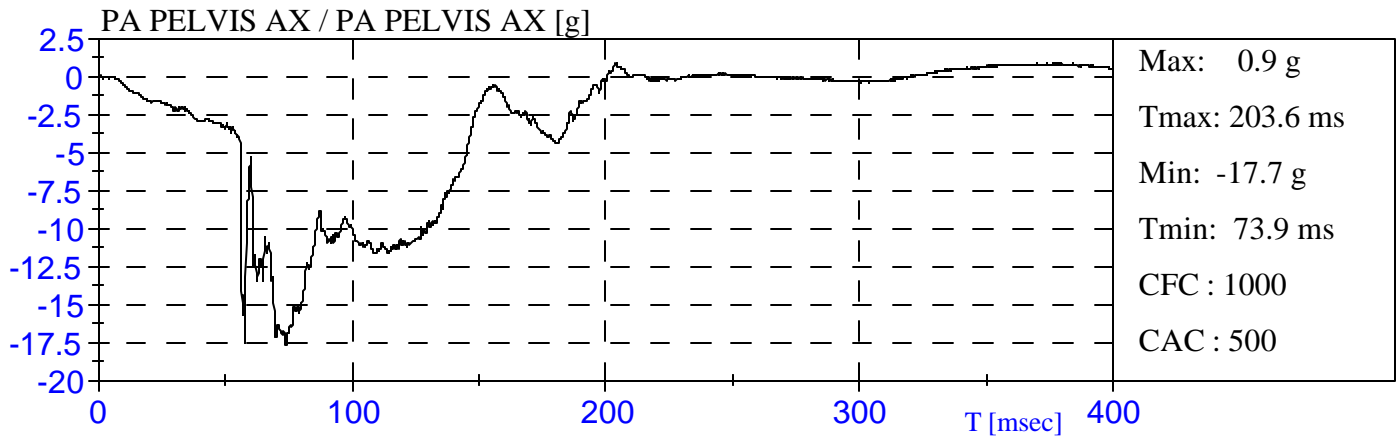


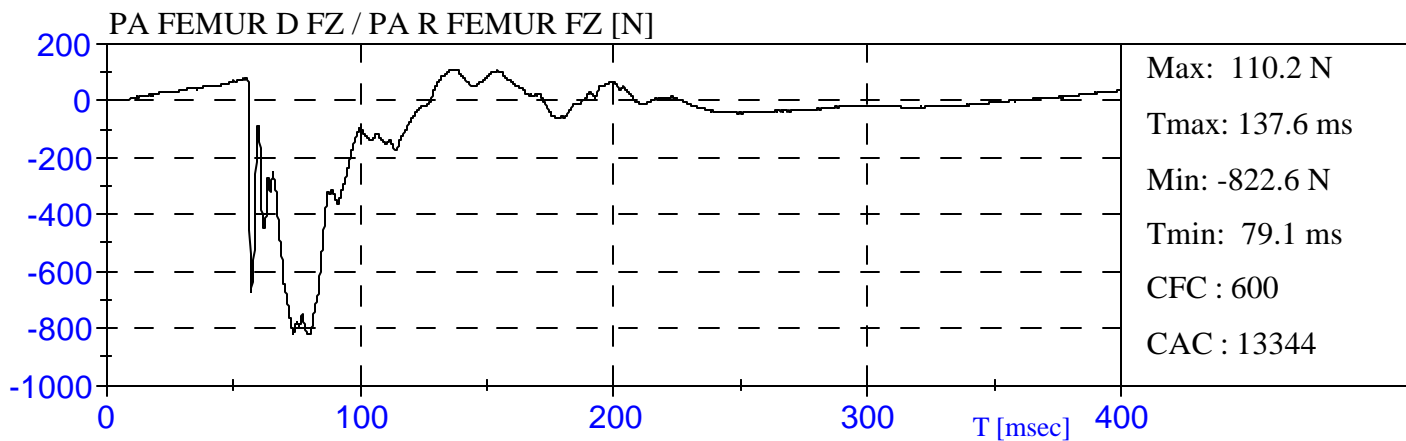
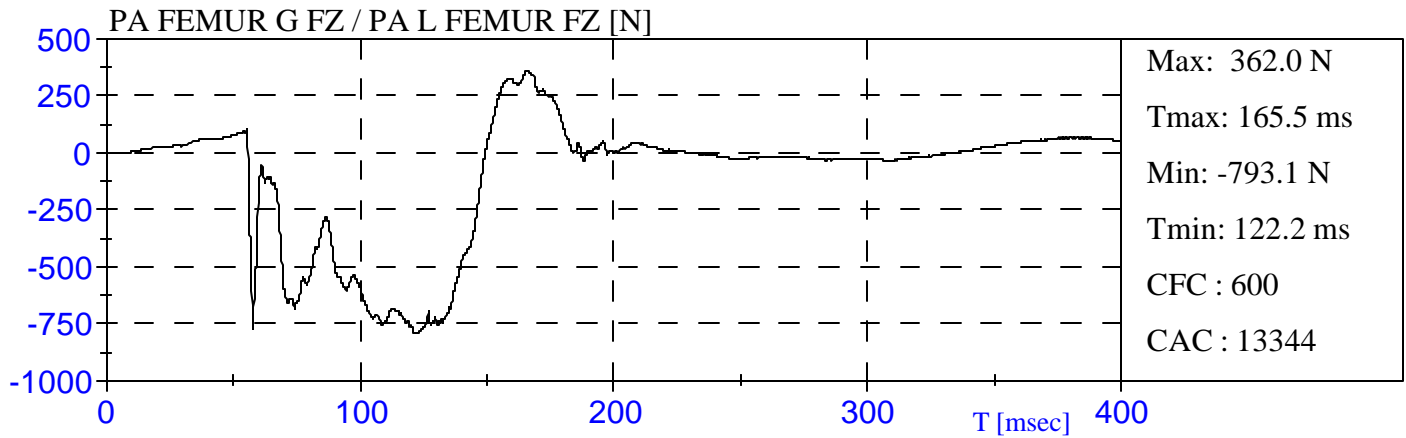
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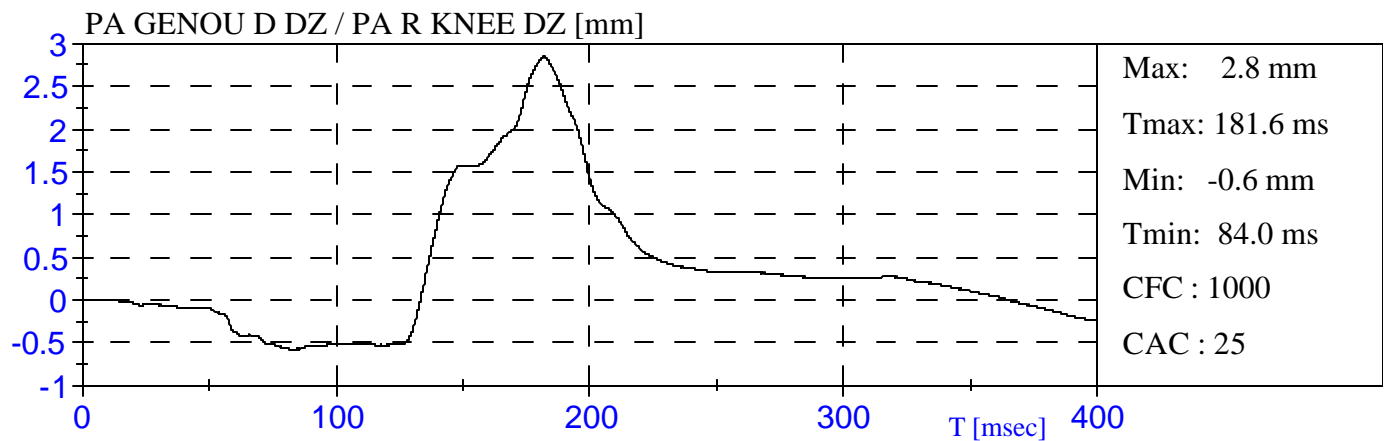
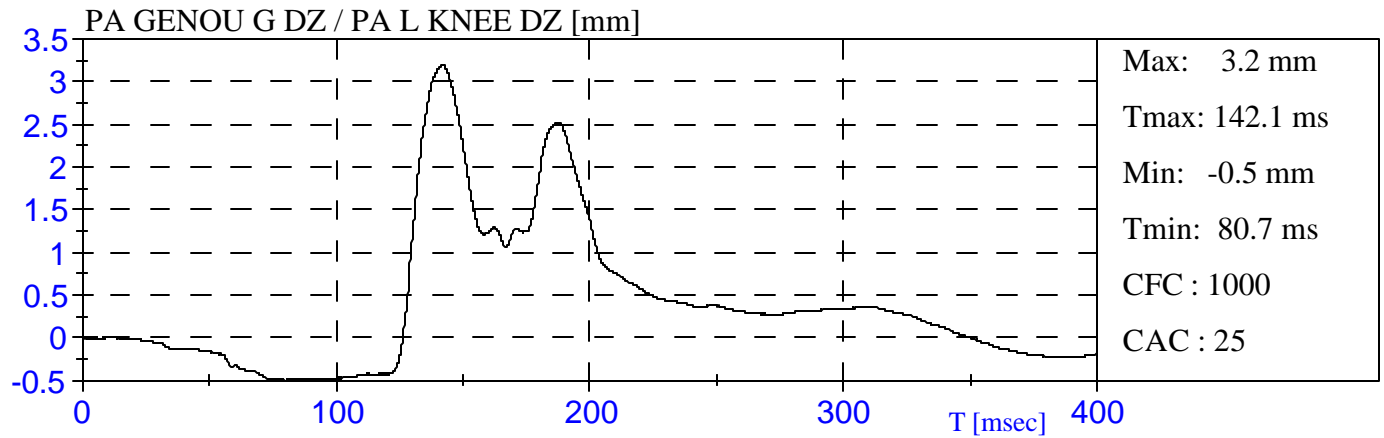


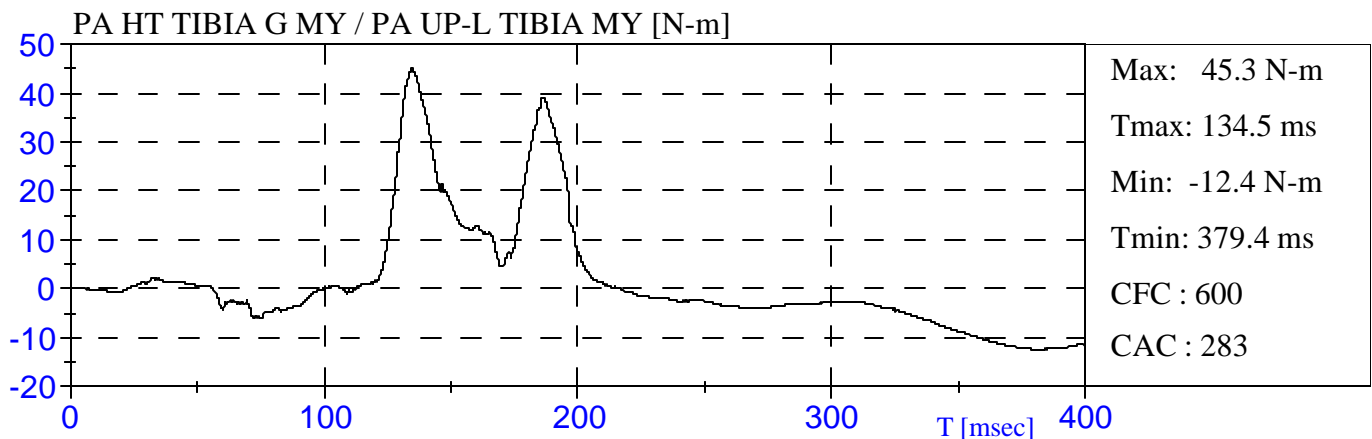
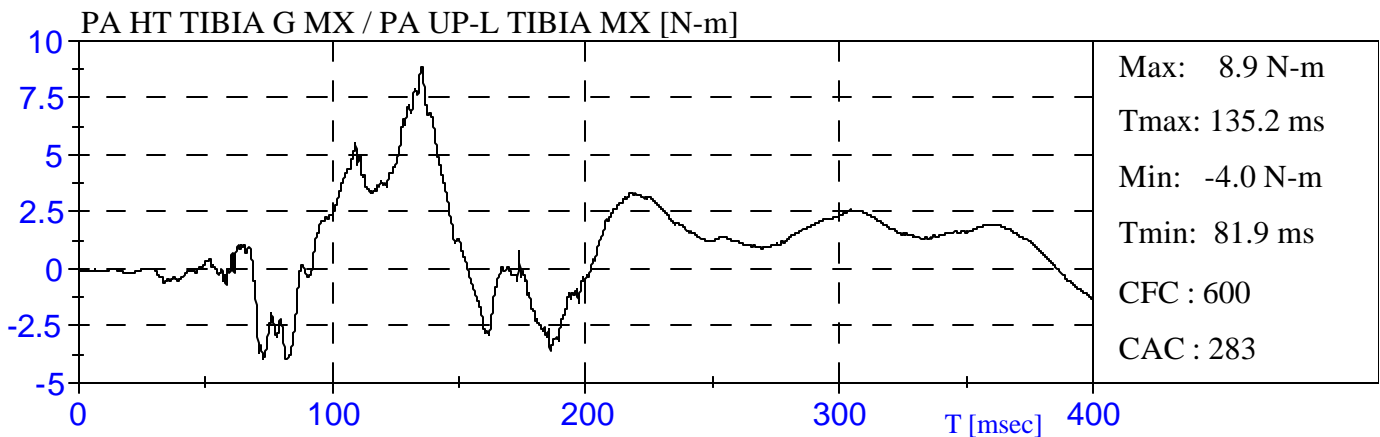
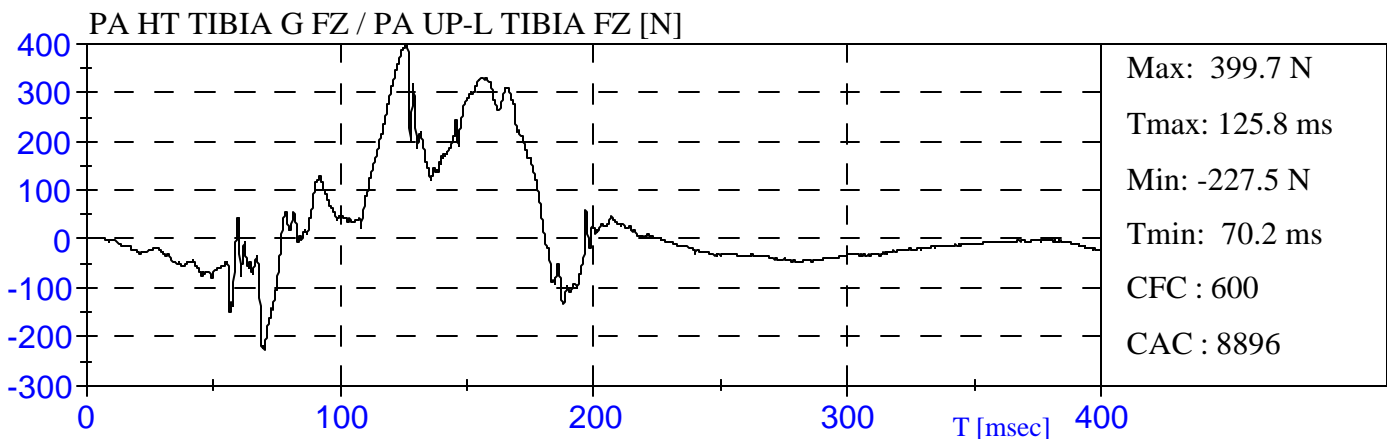
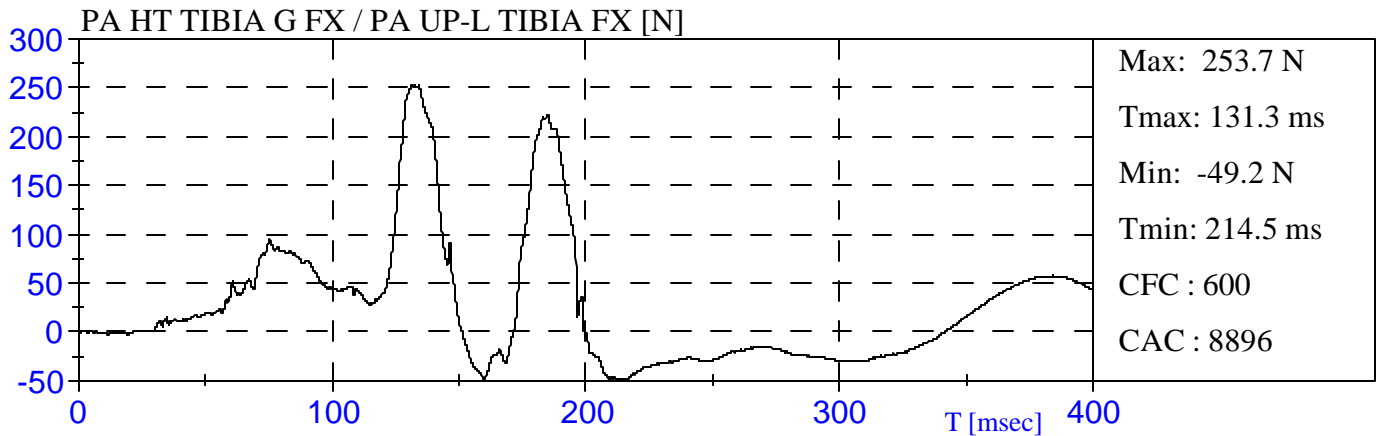


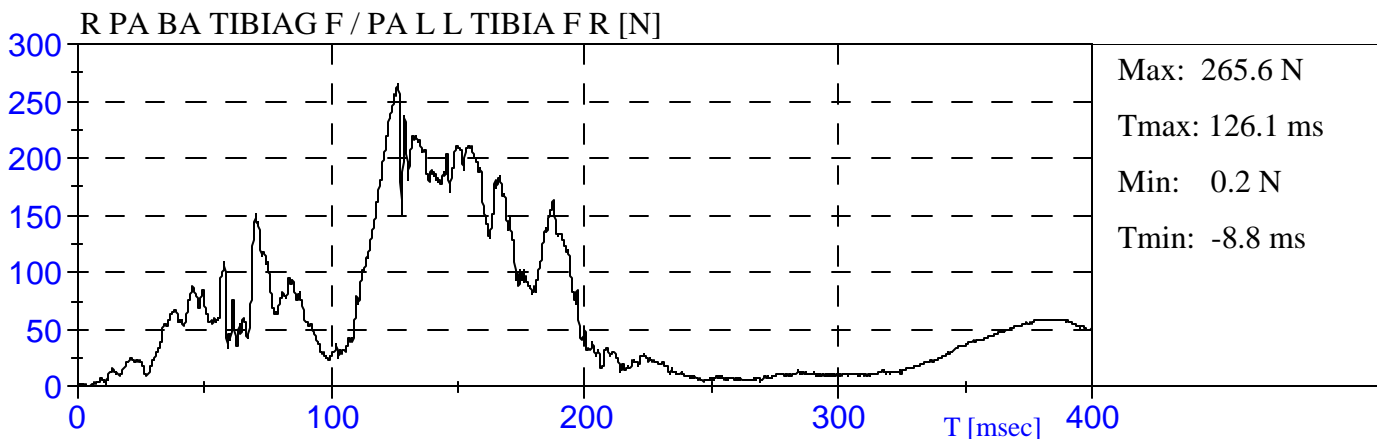
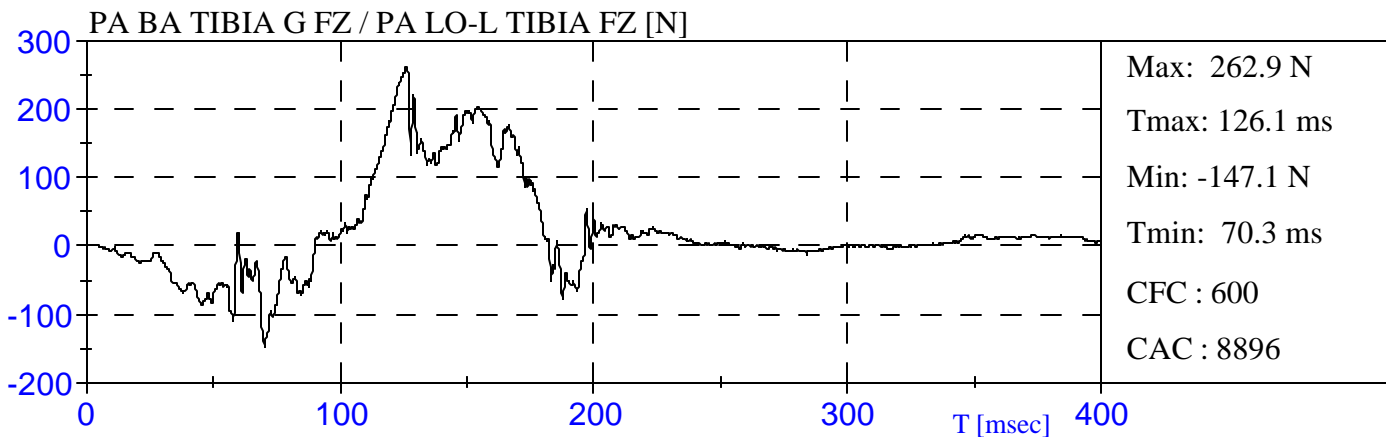
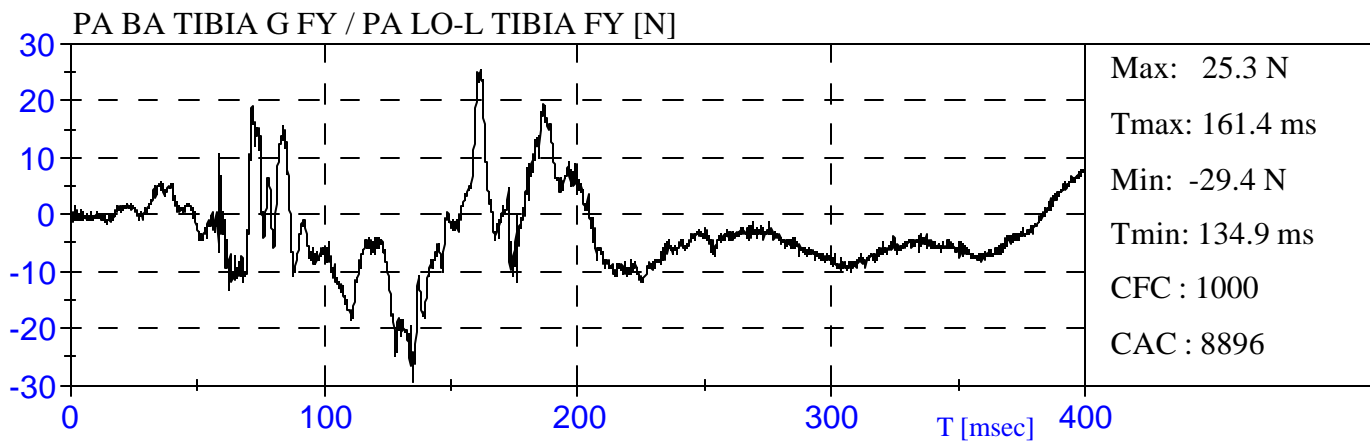
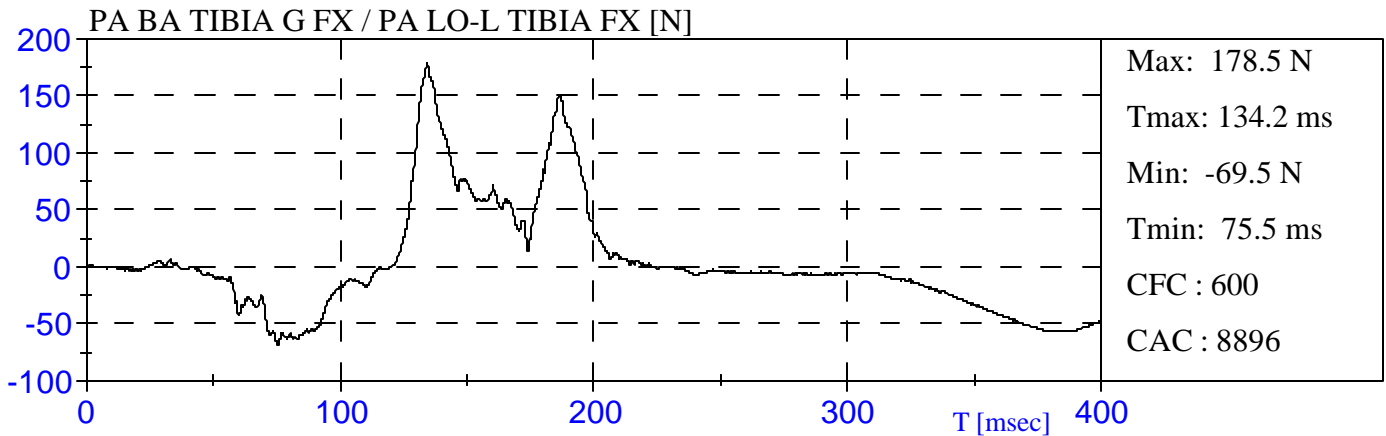


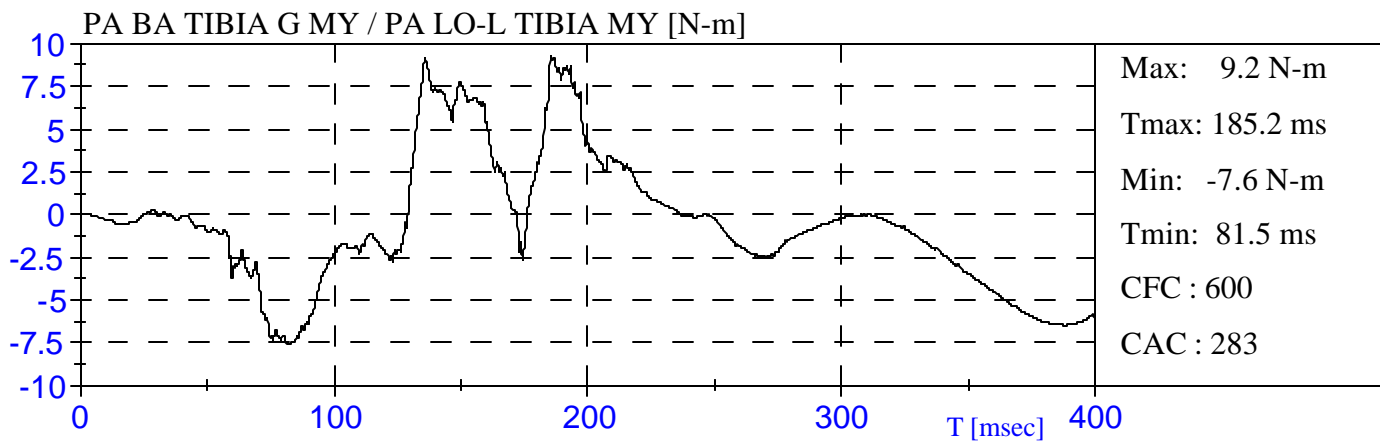
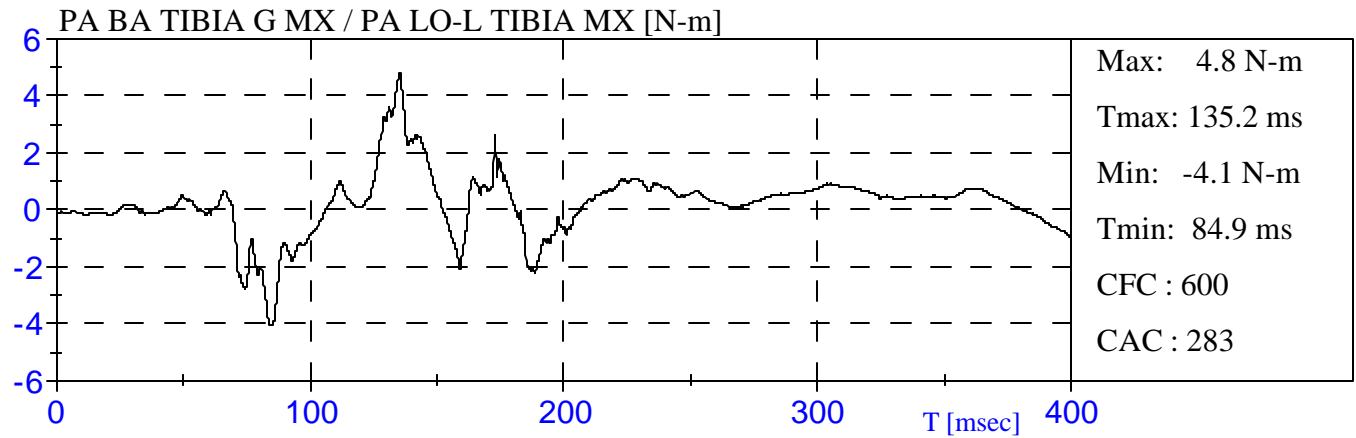




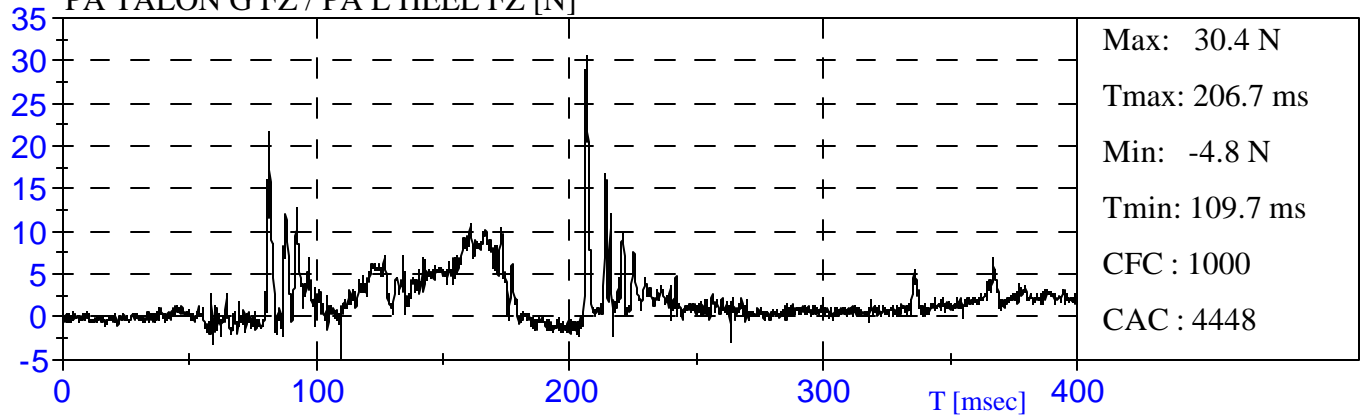




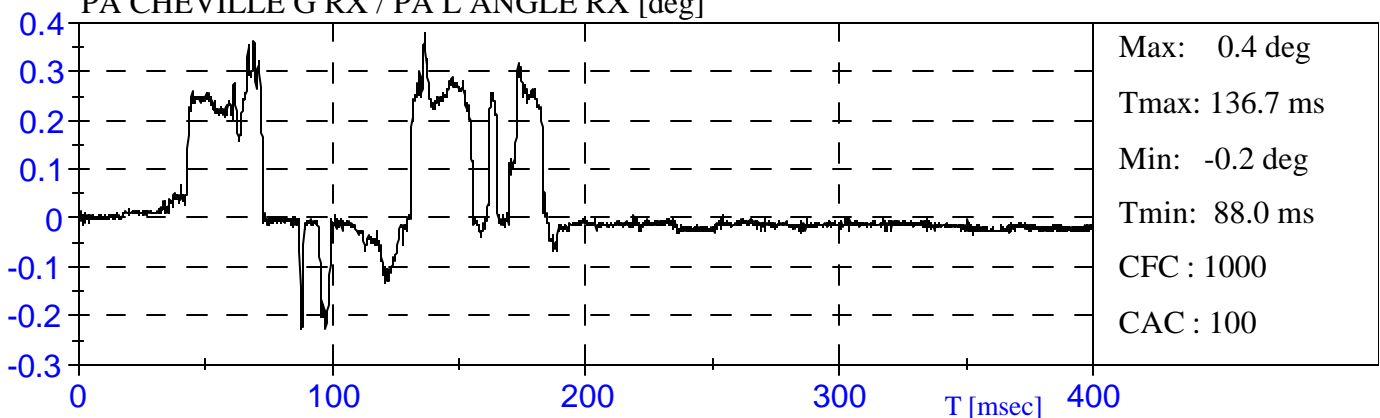




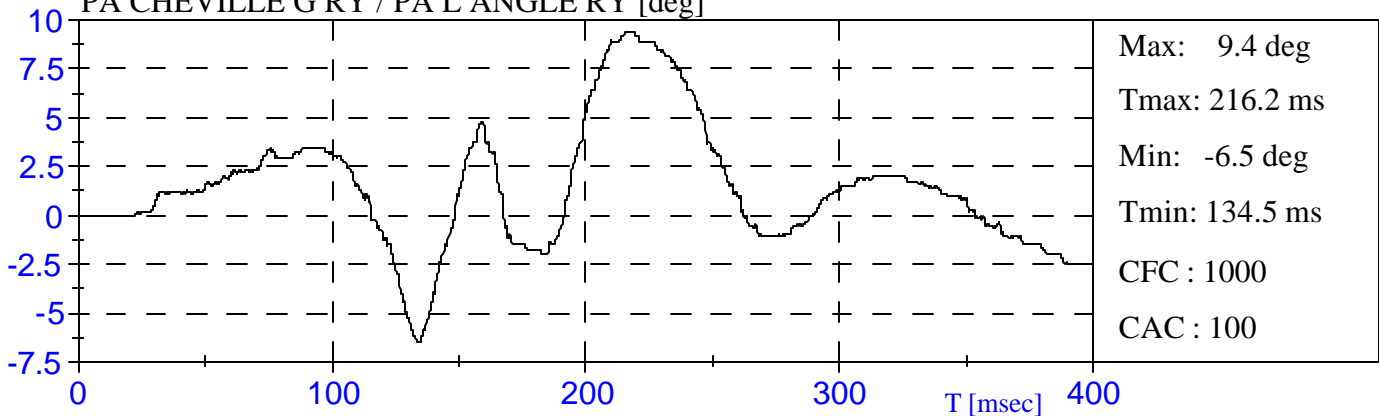
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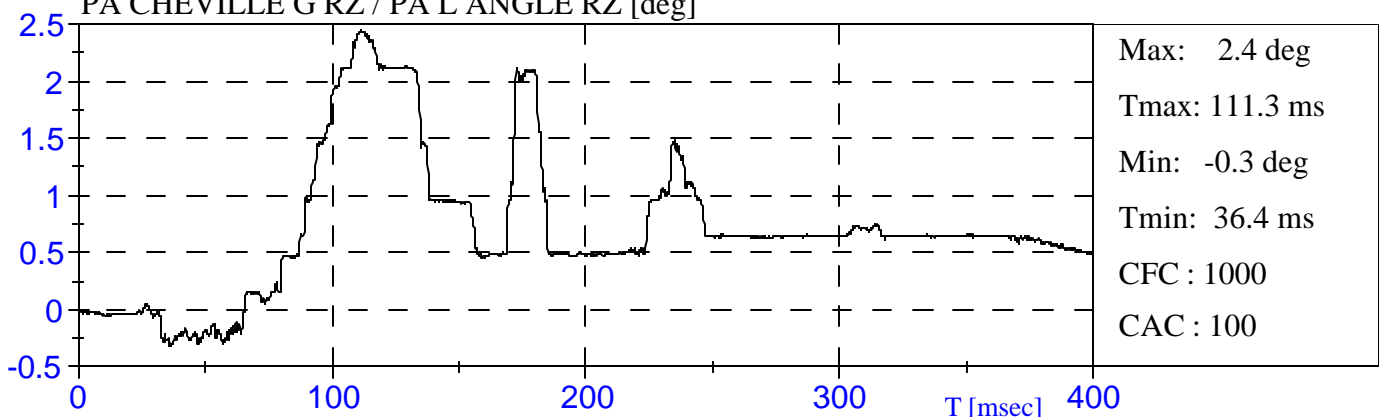
PA CHEVILLE G RX / PA L ANGLE RX [deg]

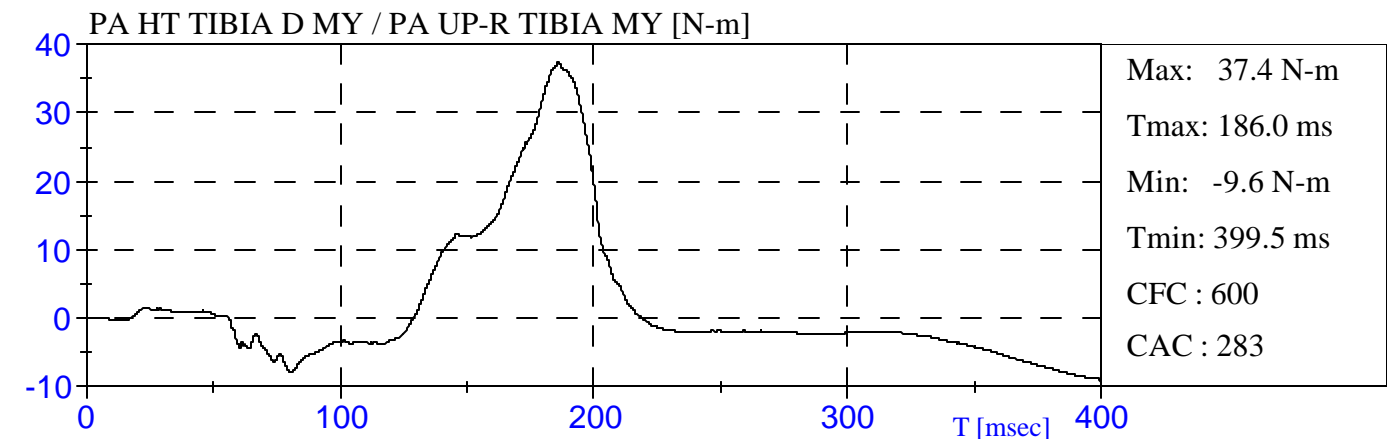
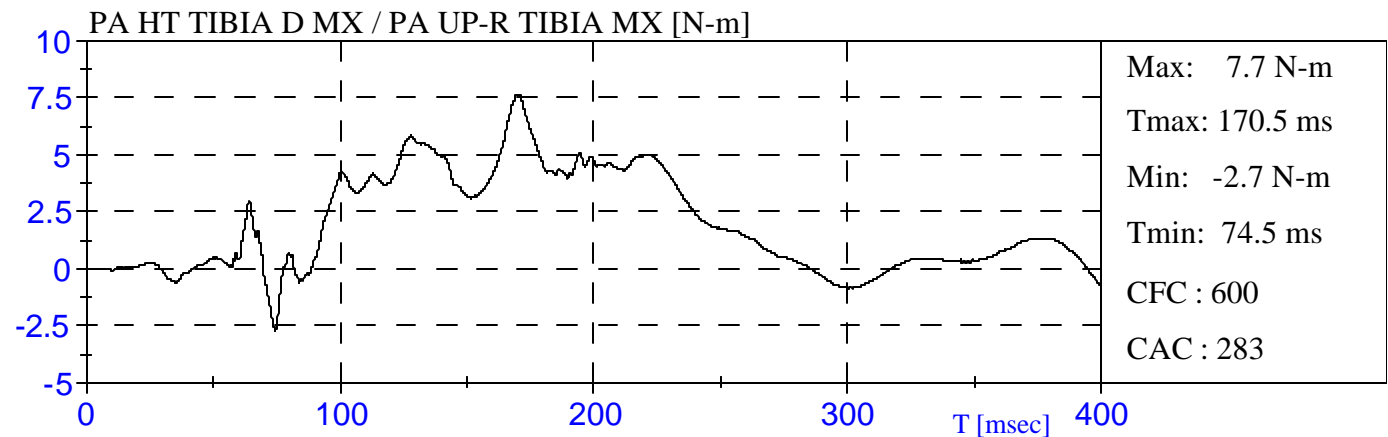
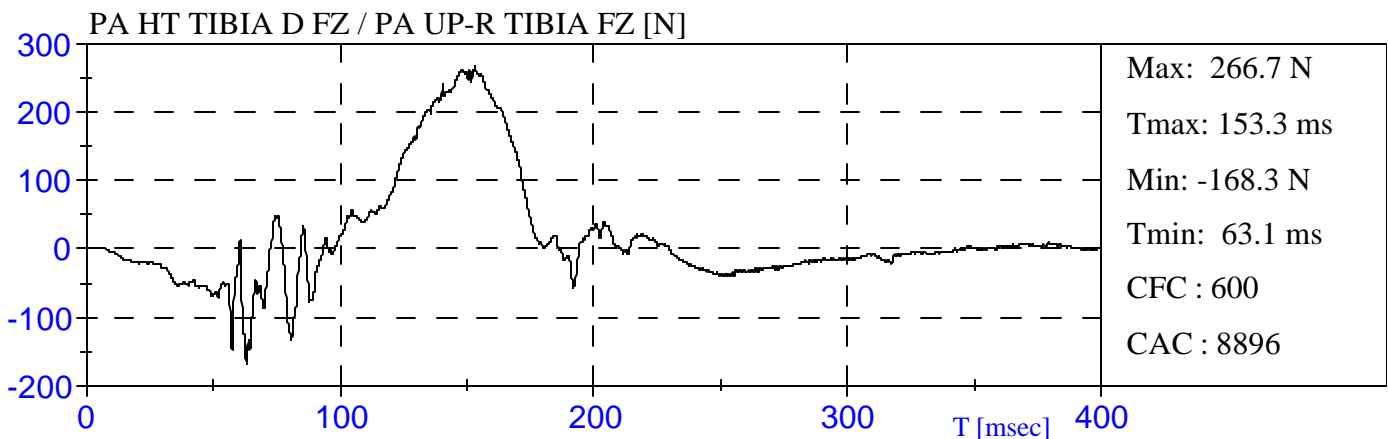
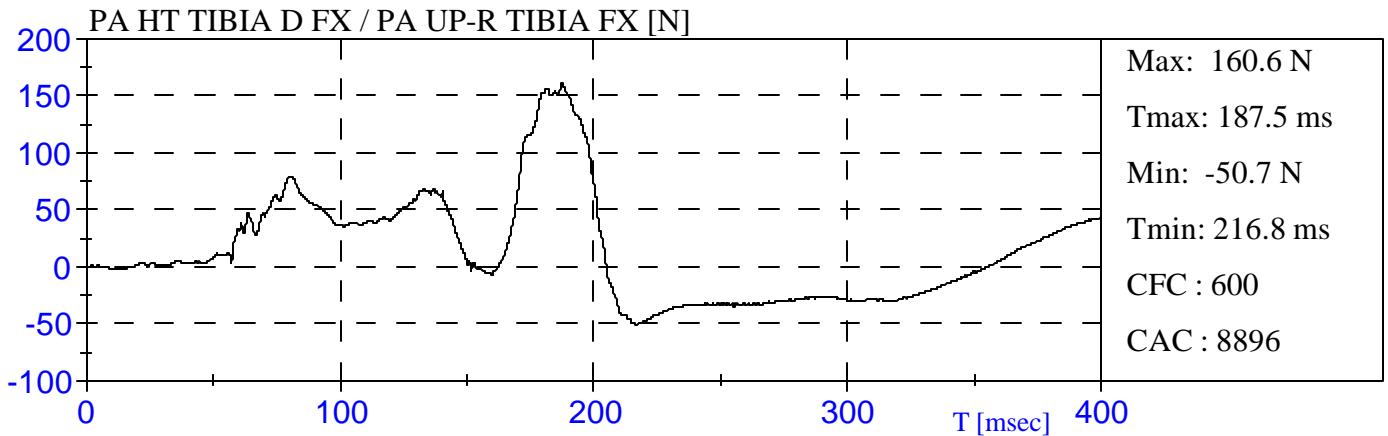


PA CHEVILLE G RY / PA L ANGLE RY [deg]

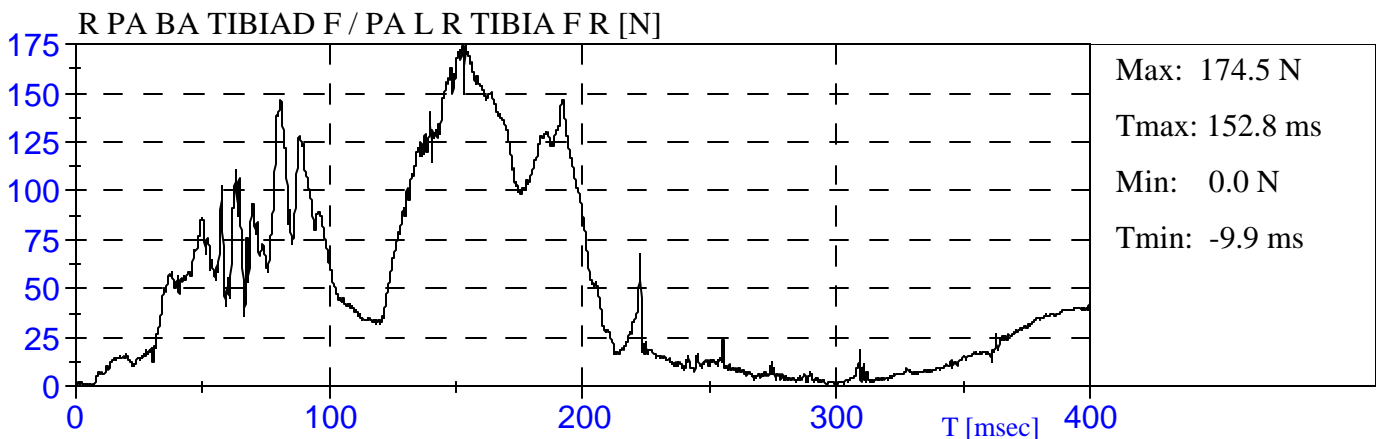
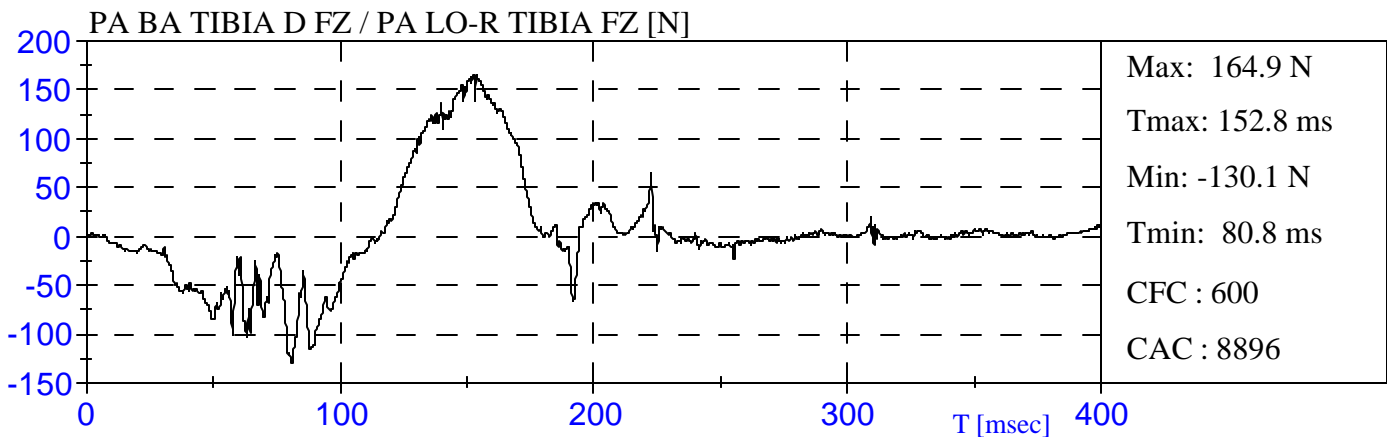
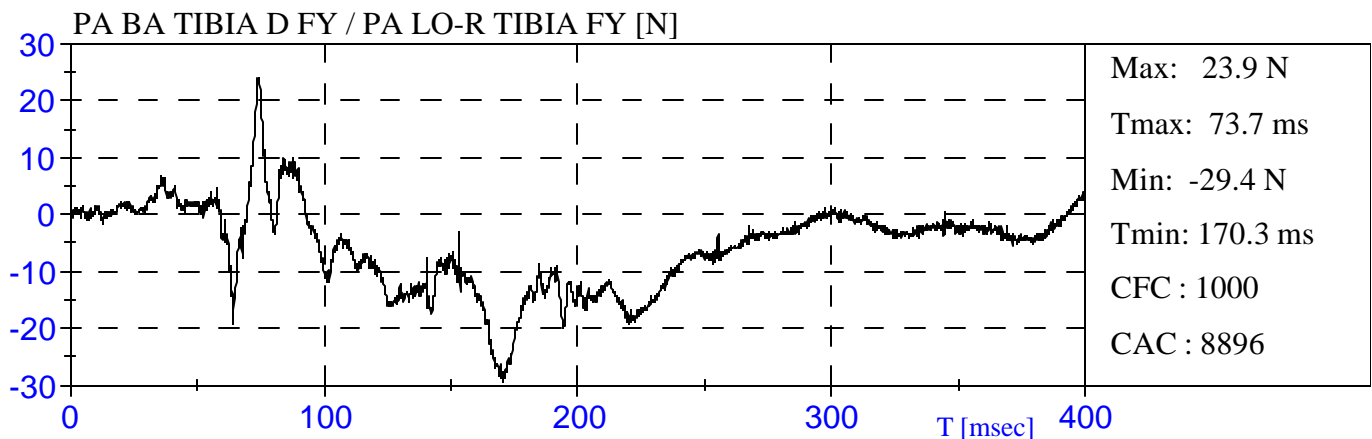
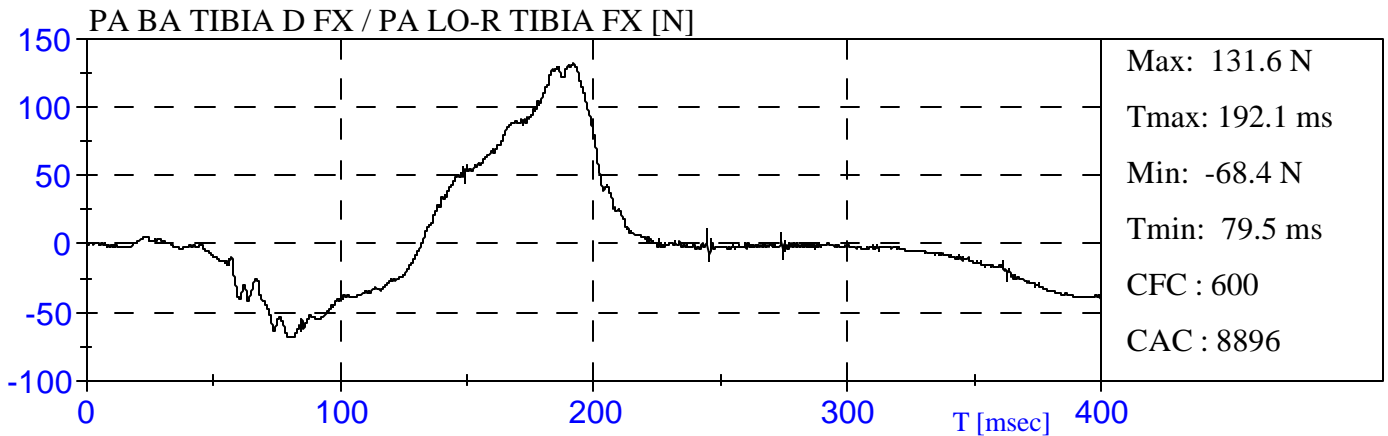


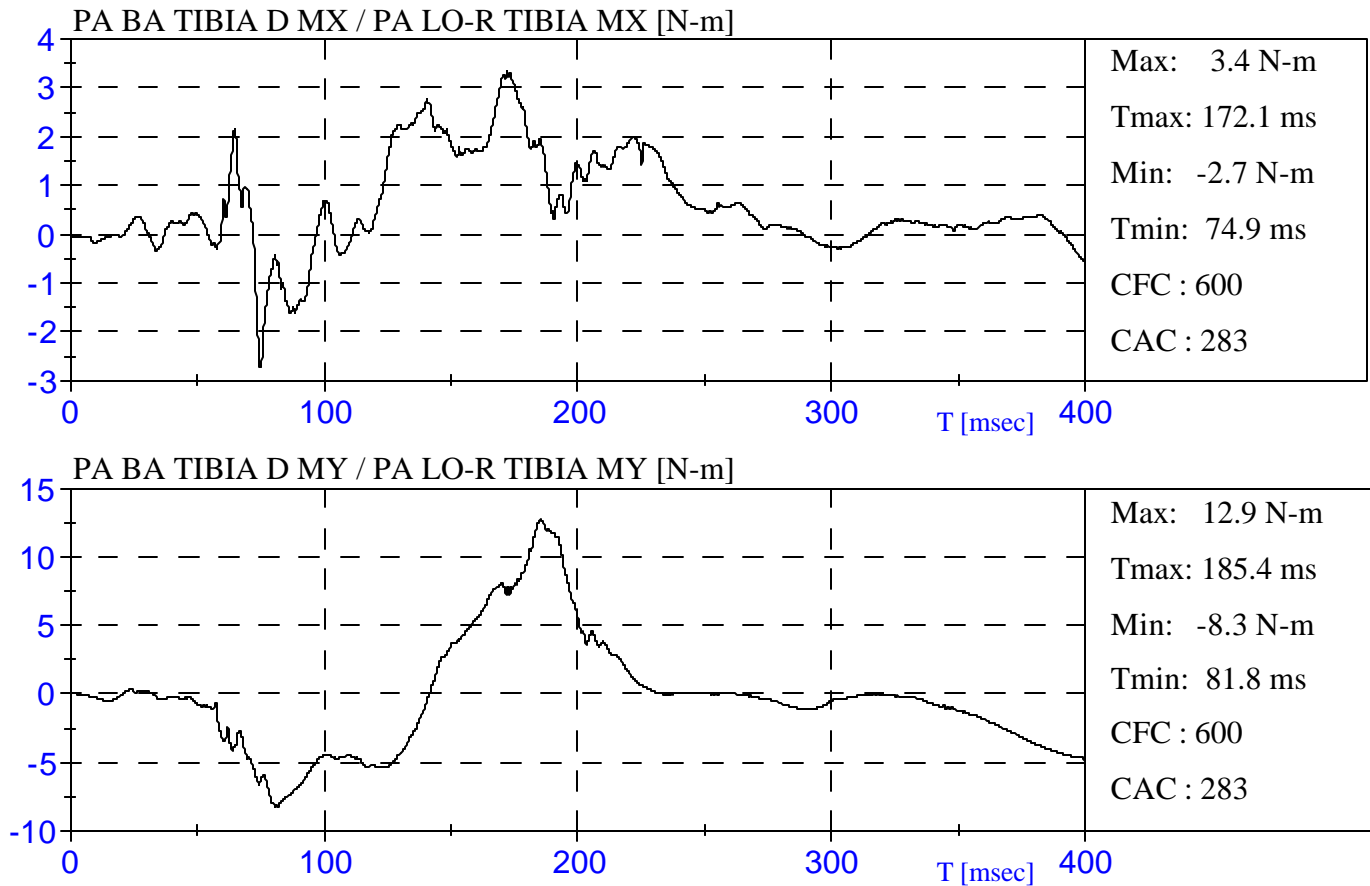
PA CHEVILLE G RZ / PA L ANGLE RZ [deg]

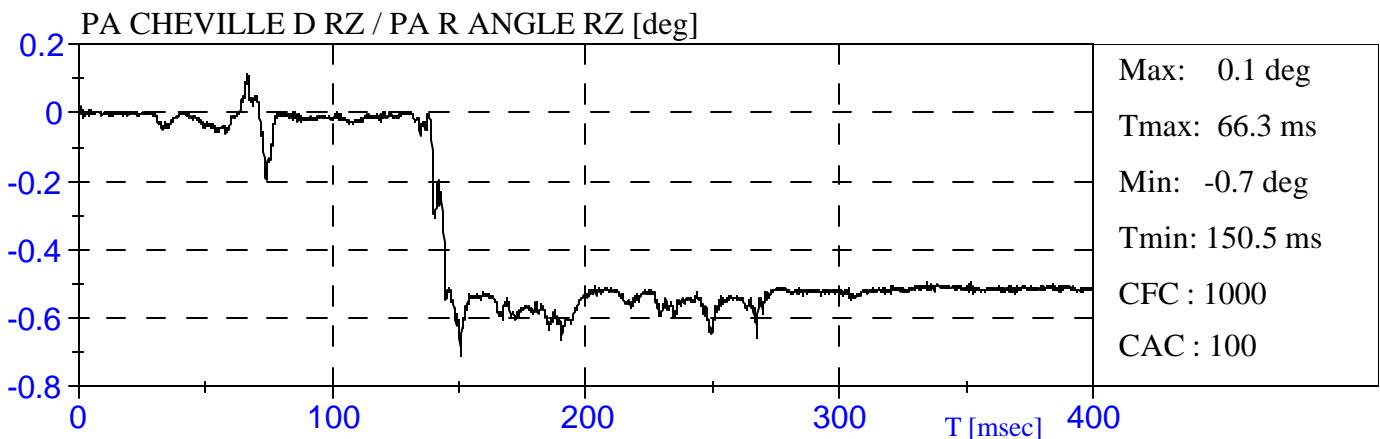
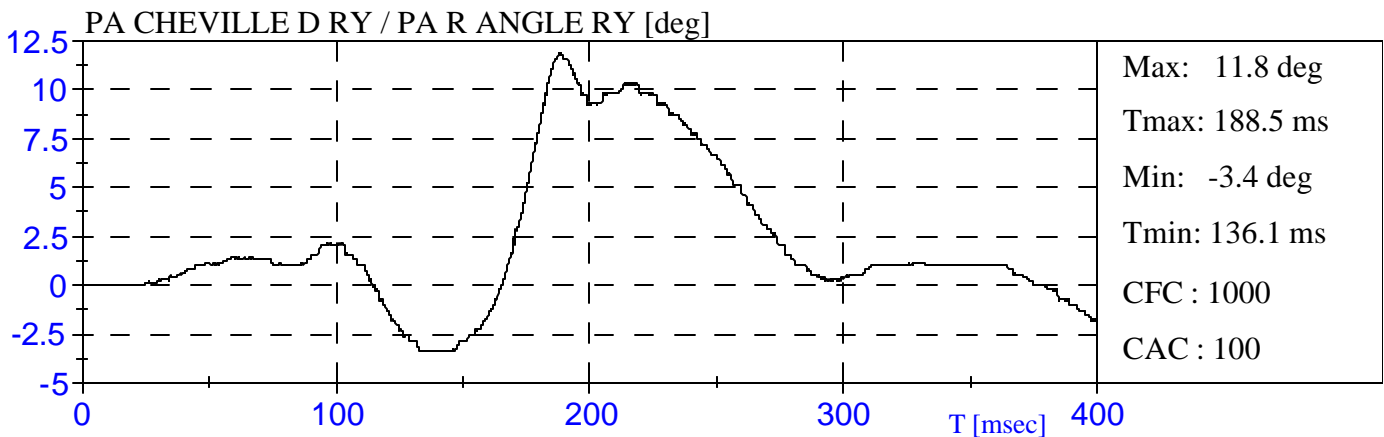
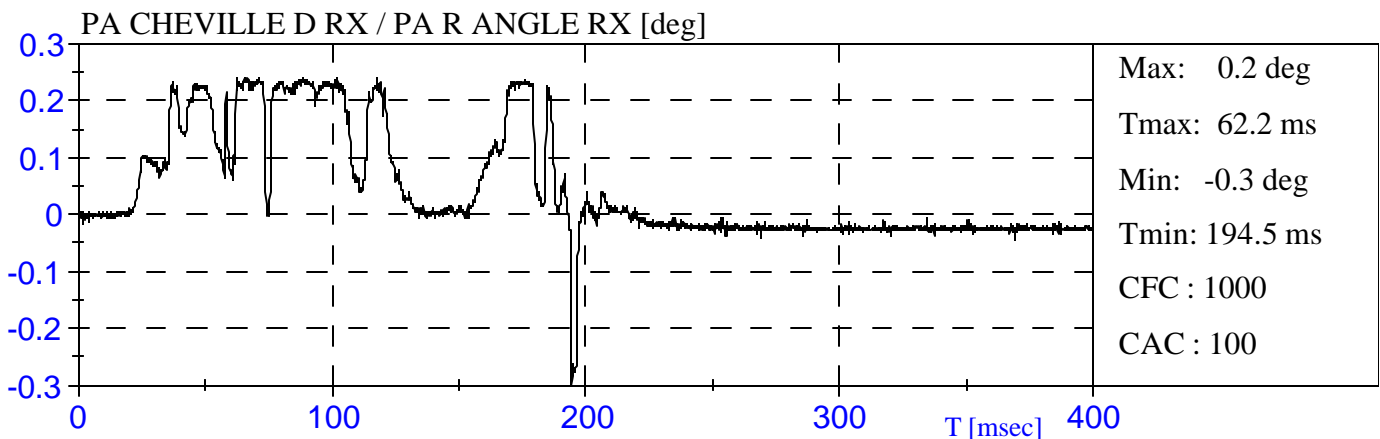
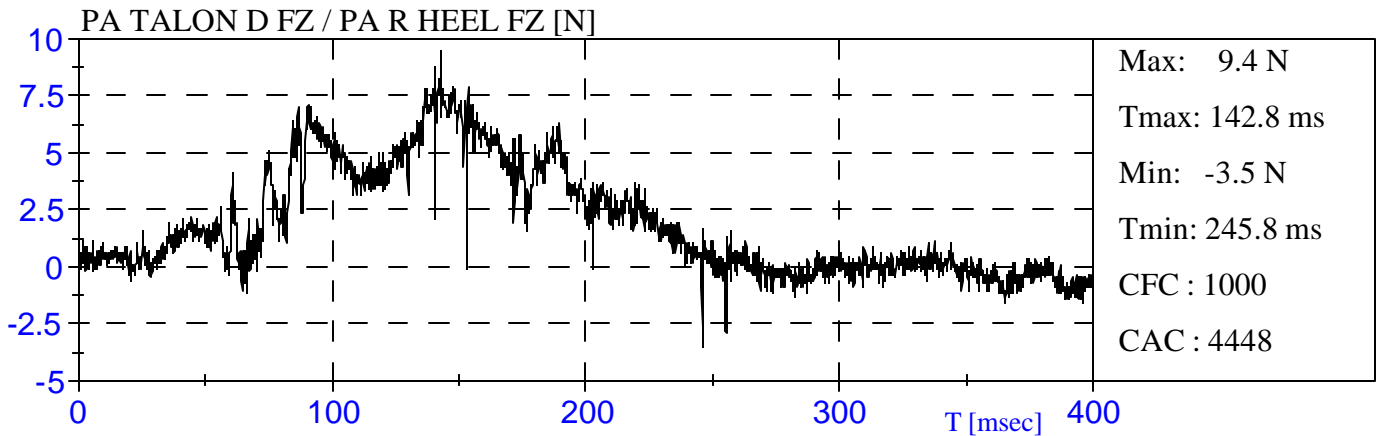


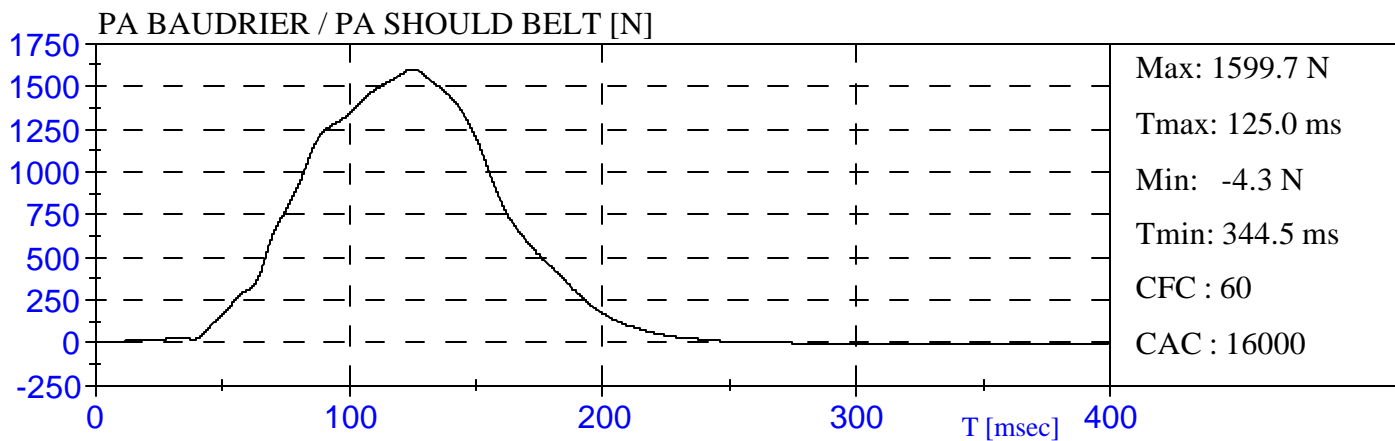
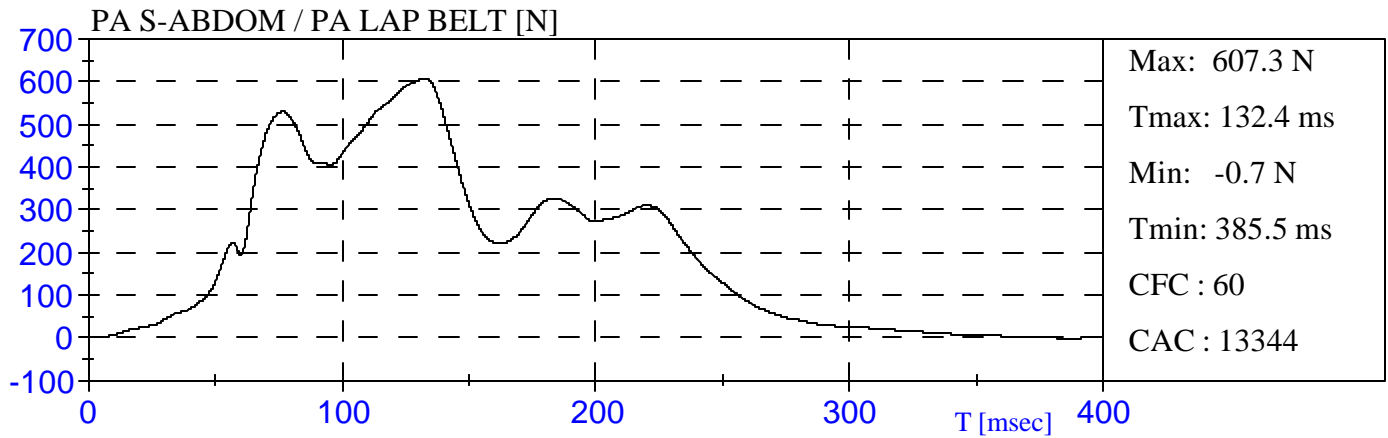


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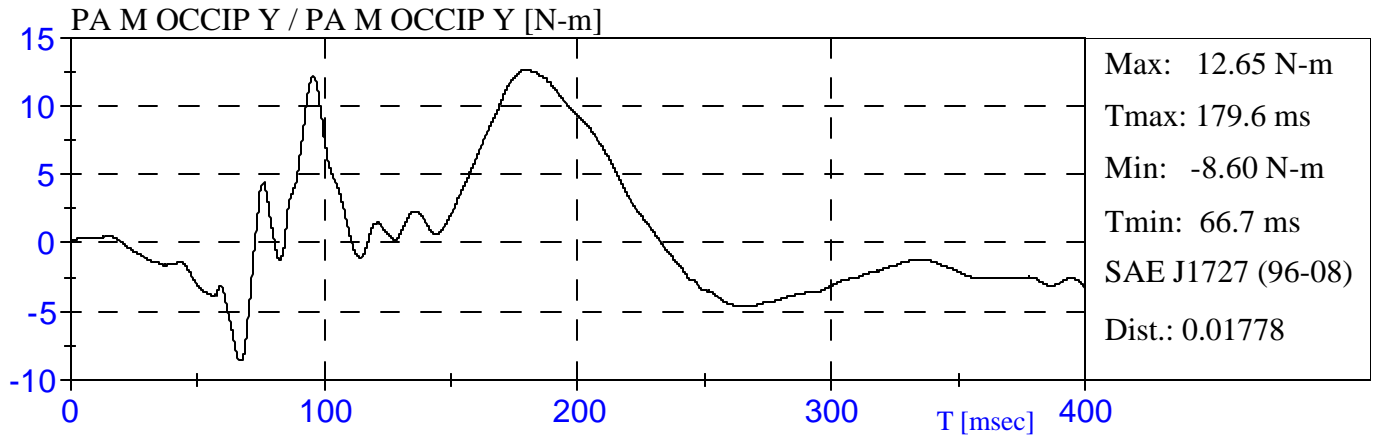


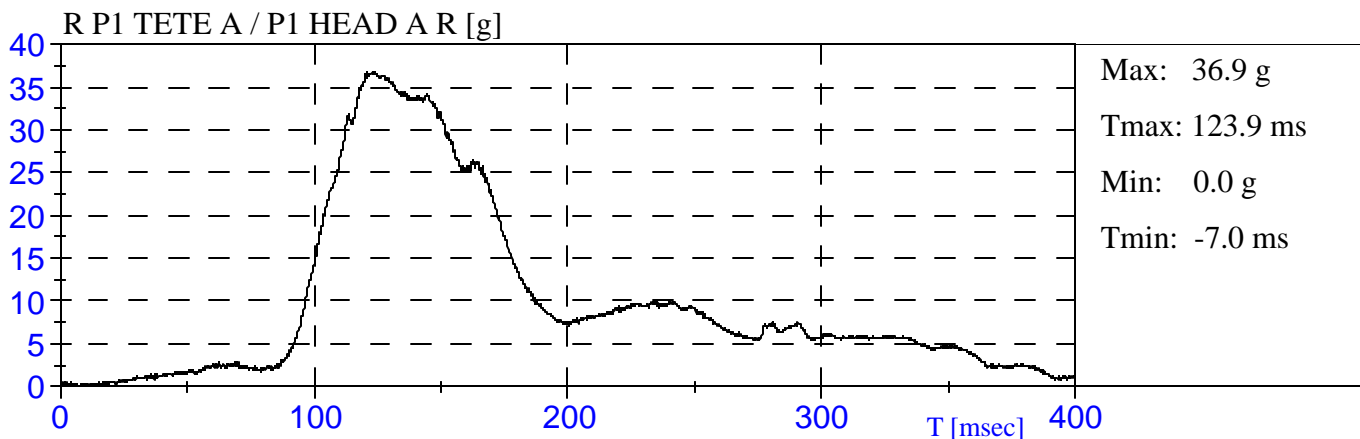
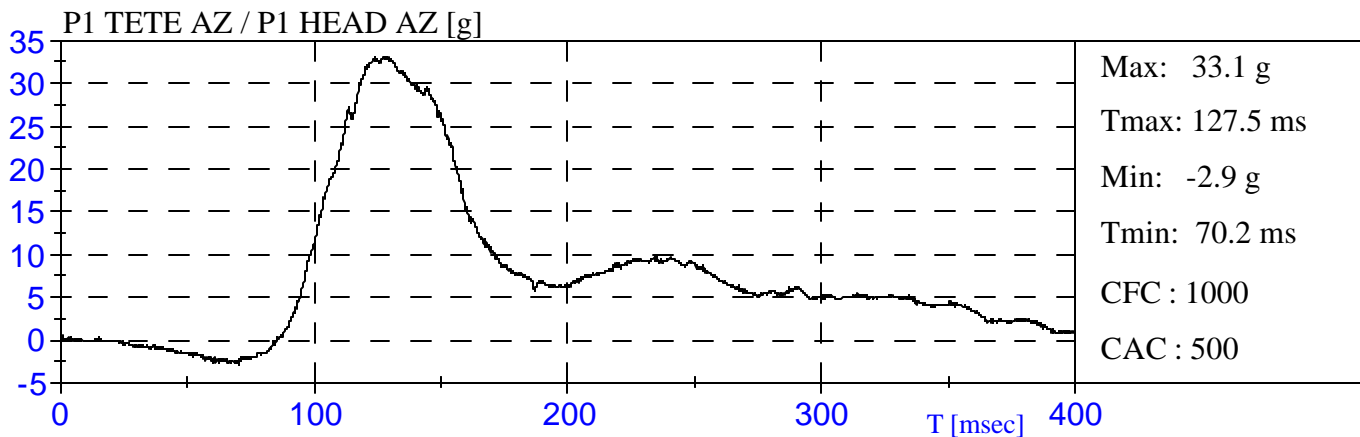
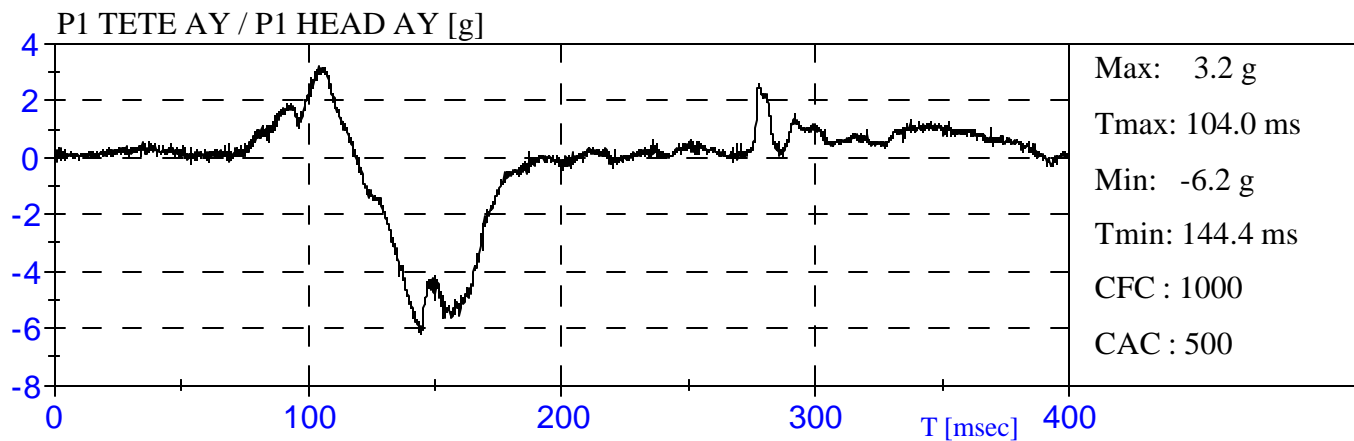
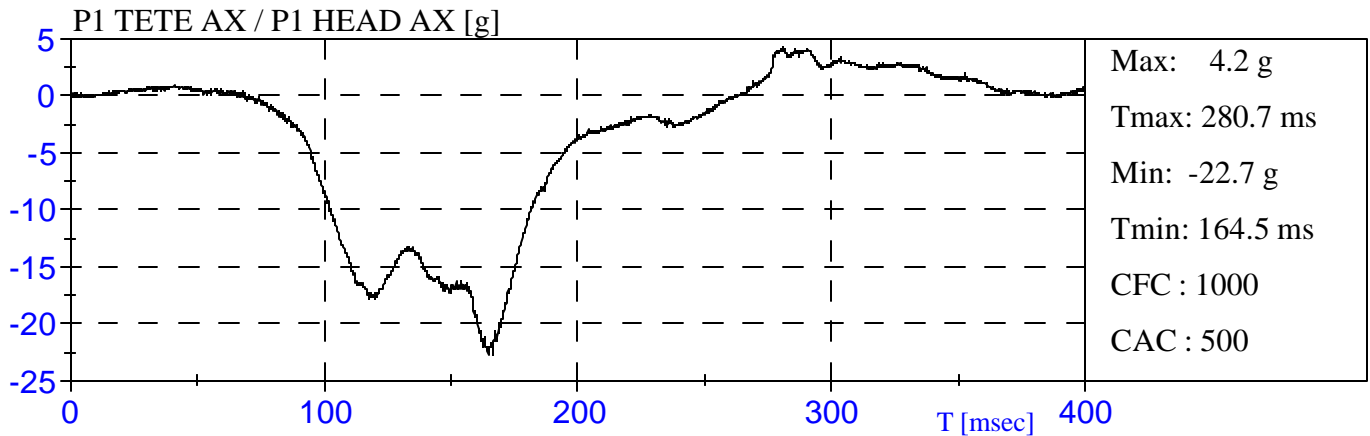
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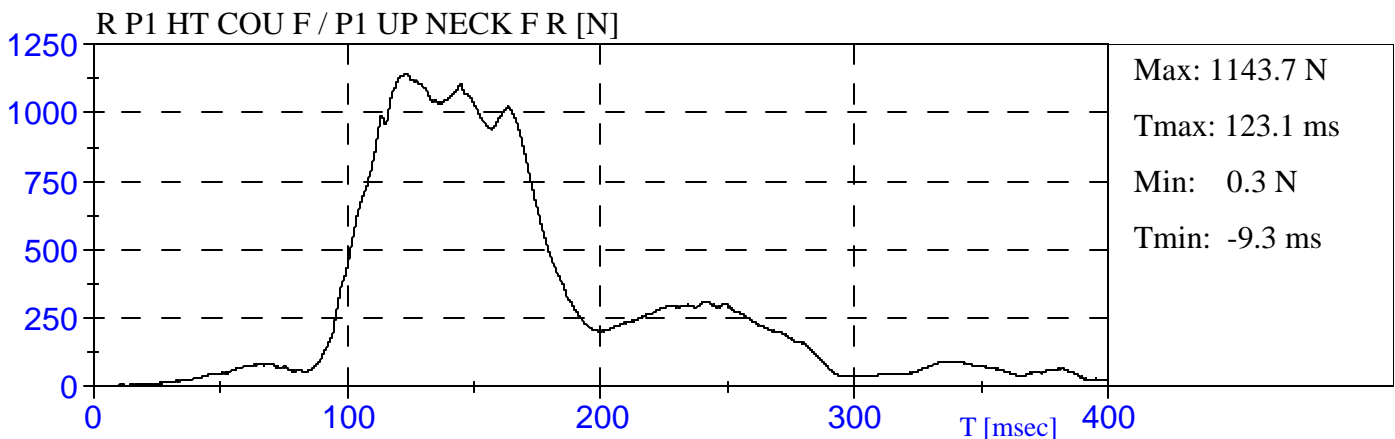
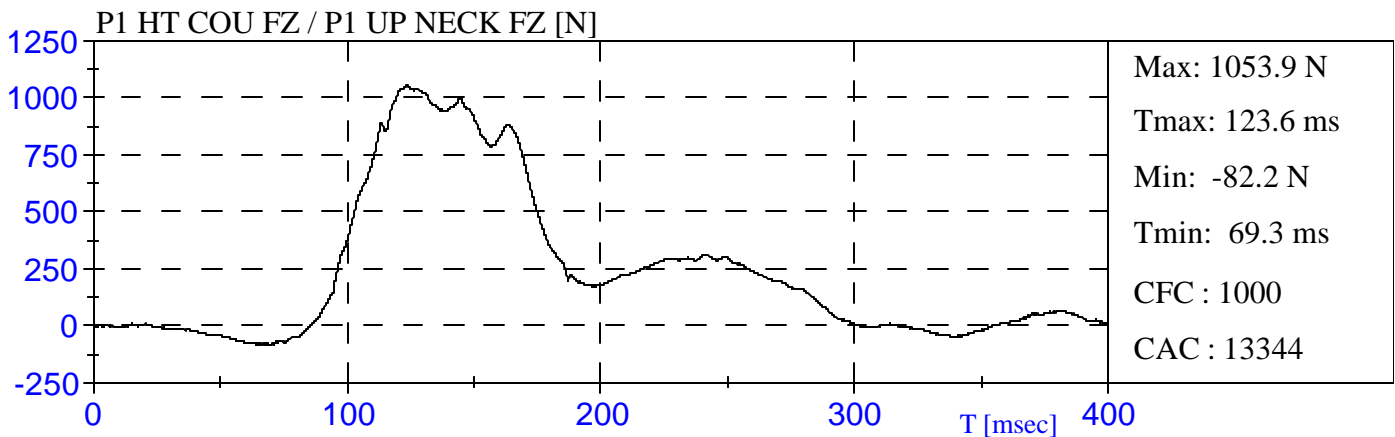
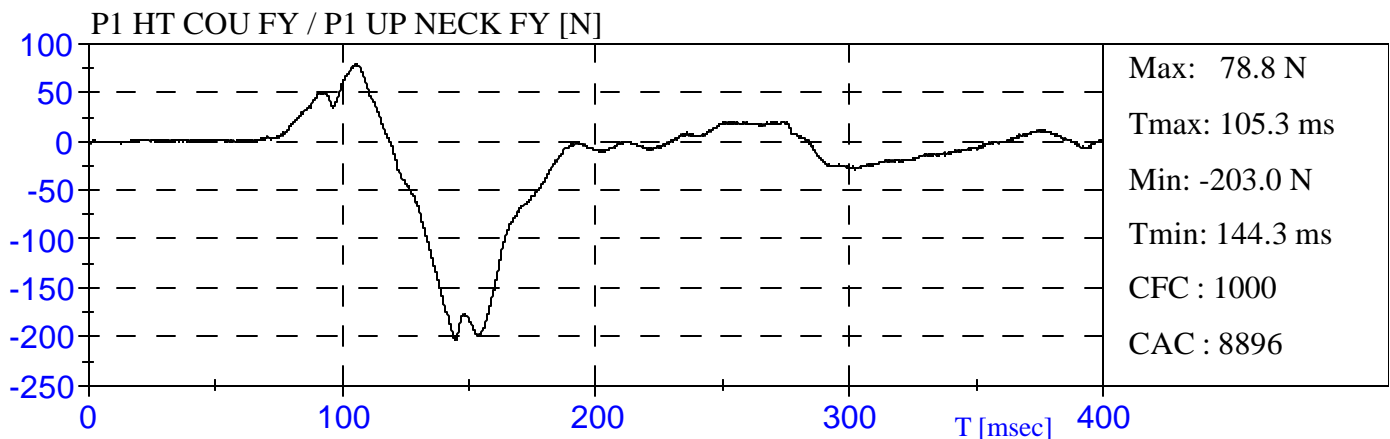
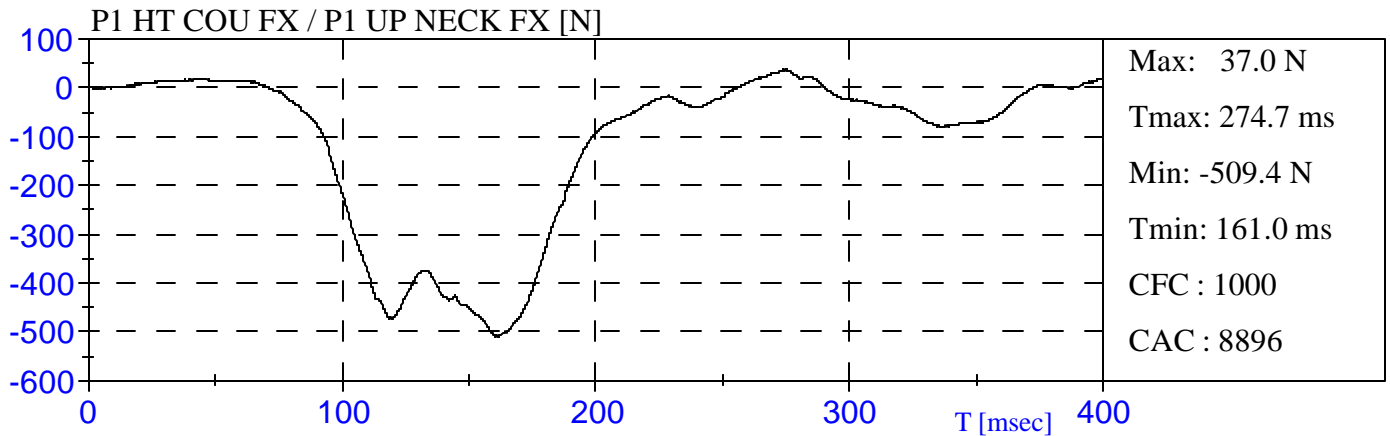




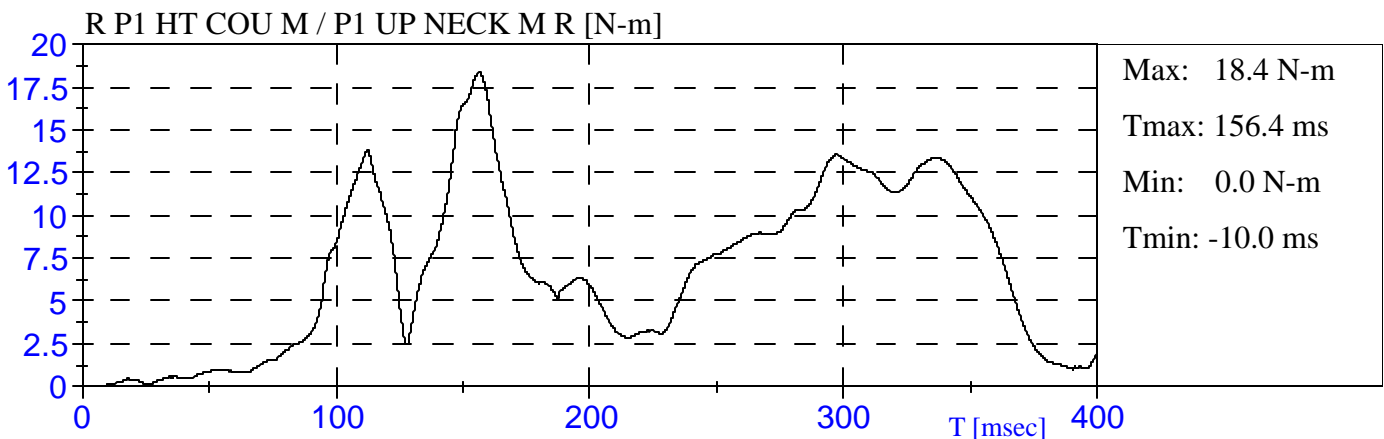
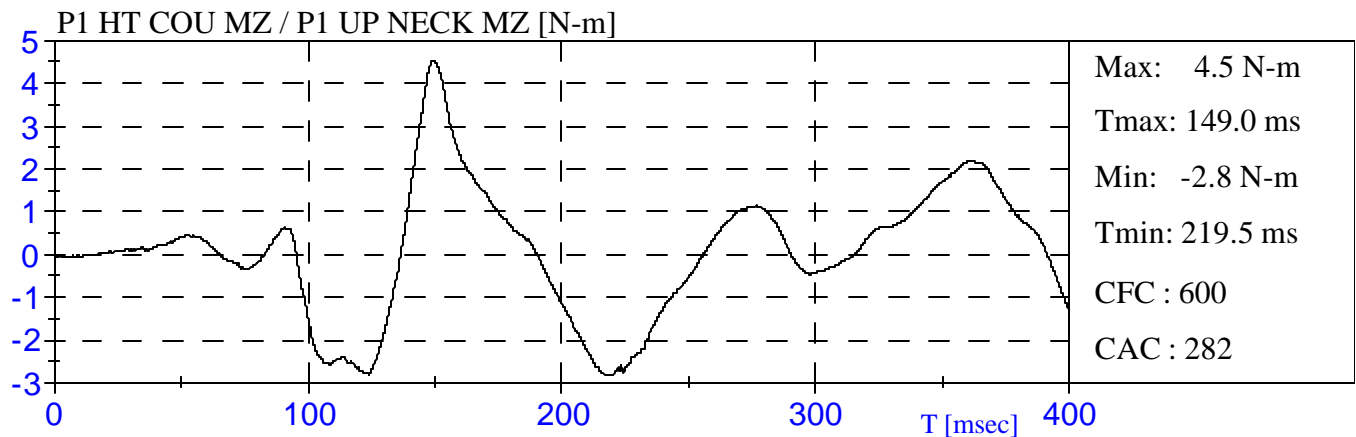
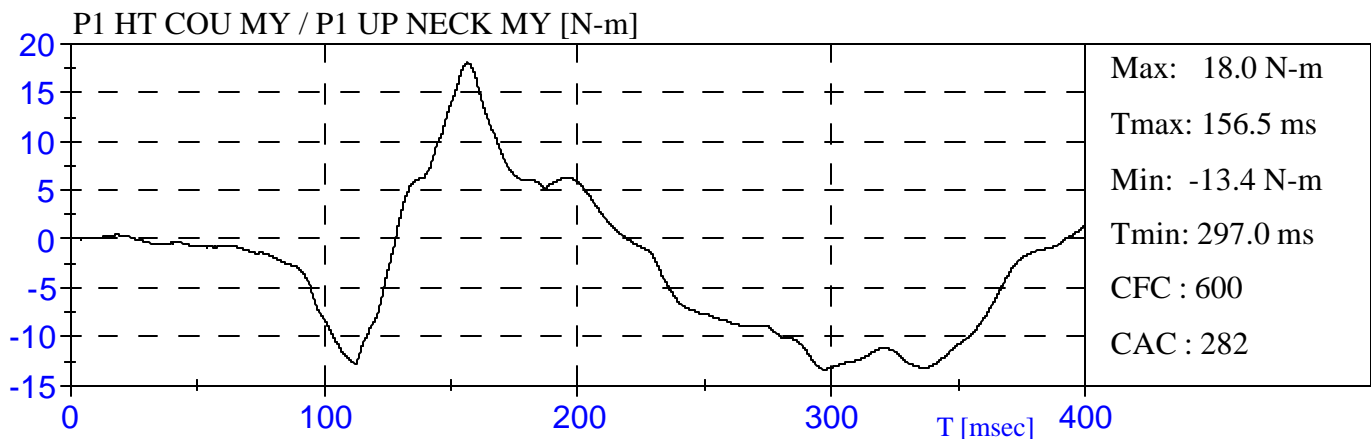
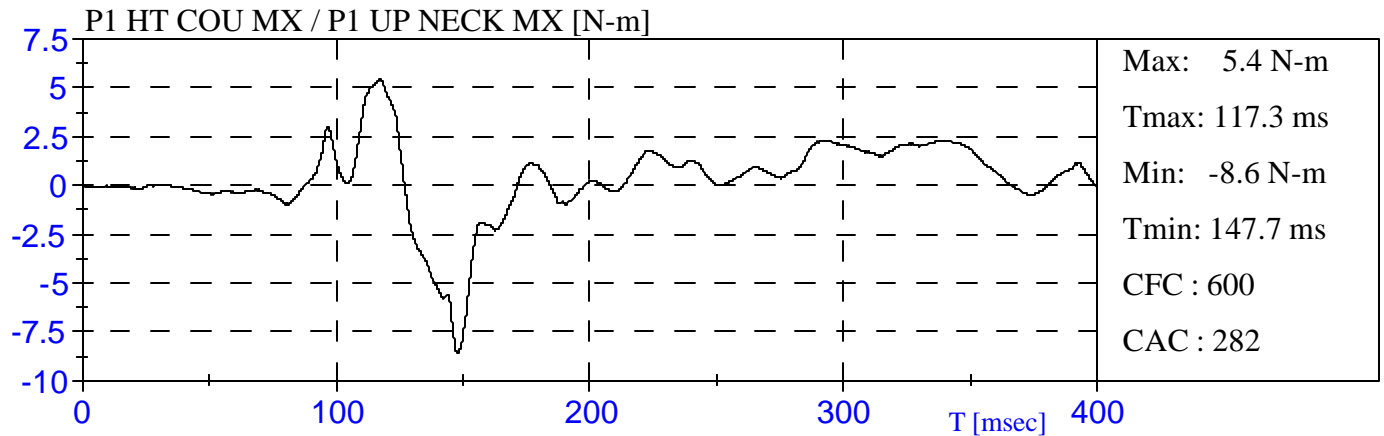
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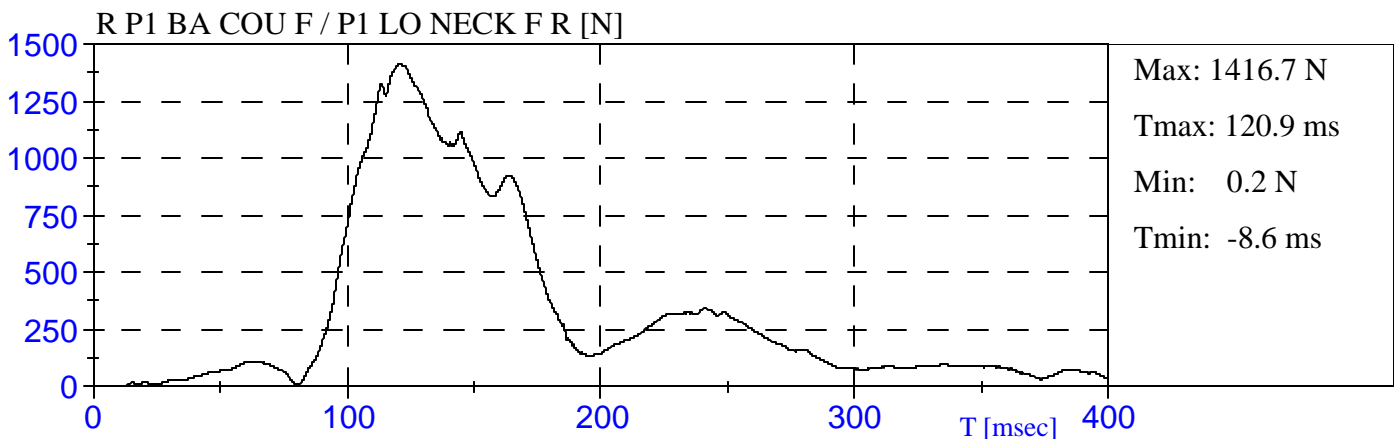
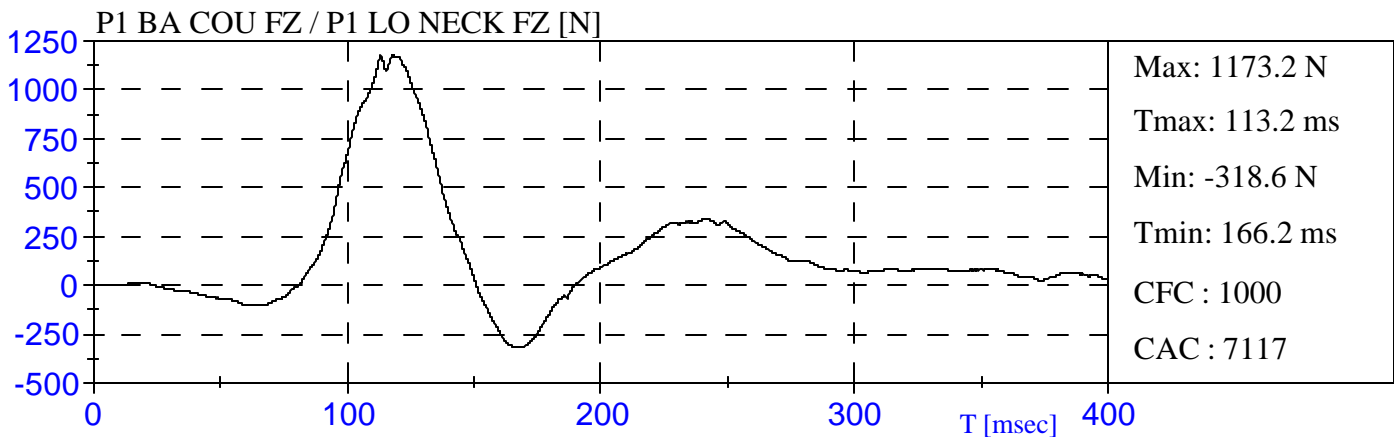
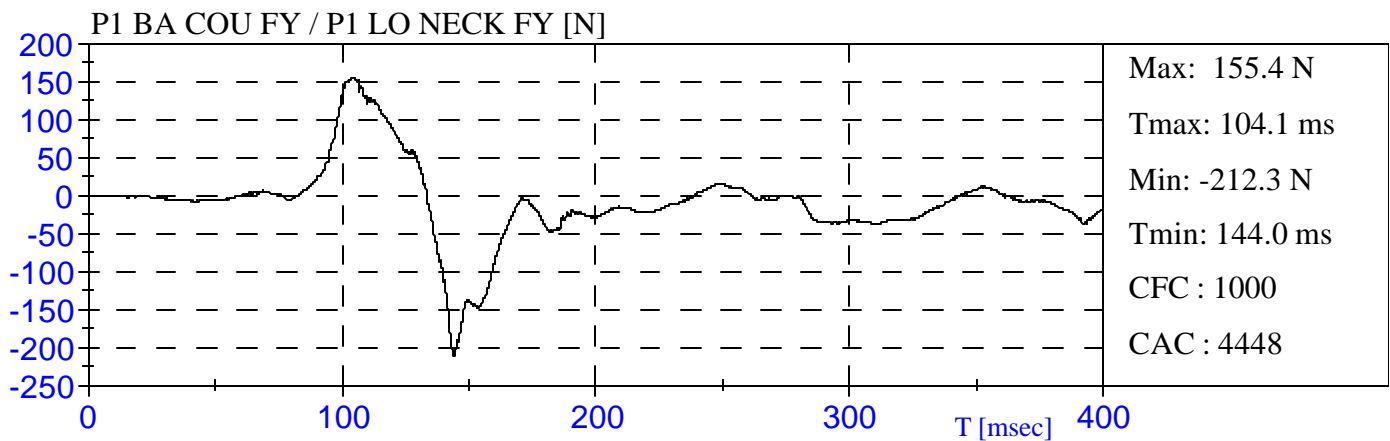
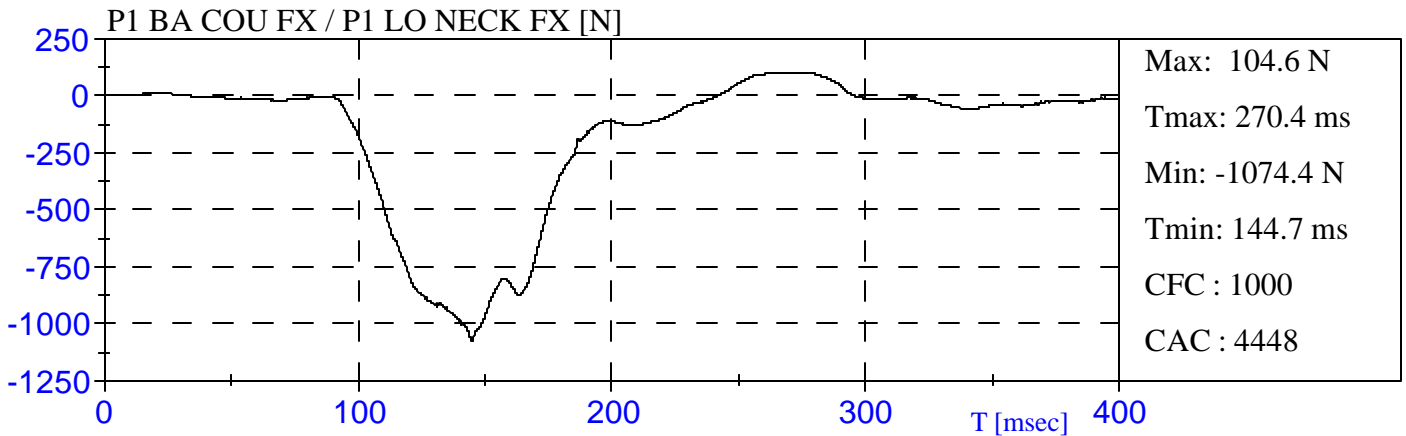


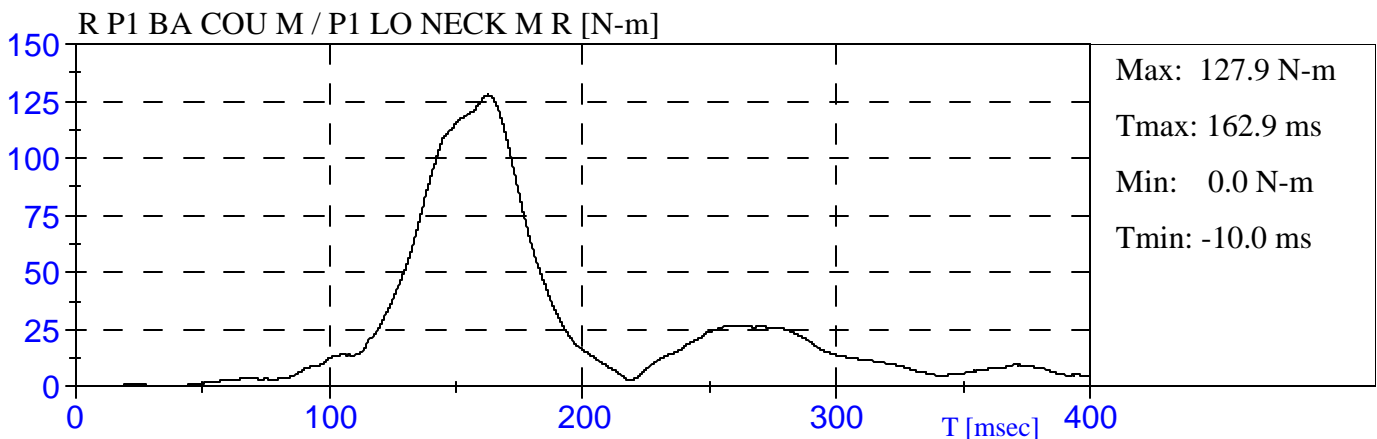
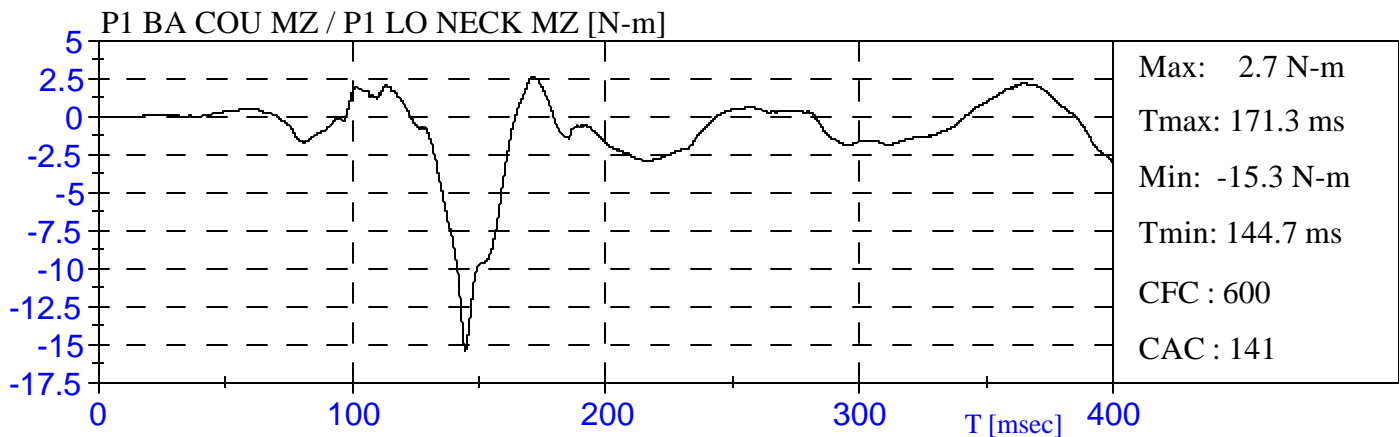
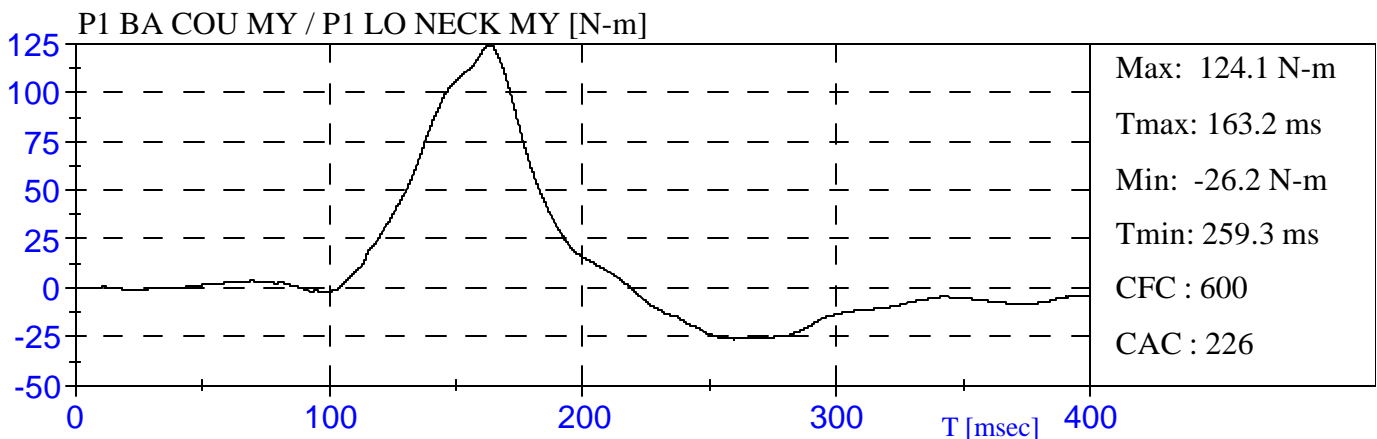
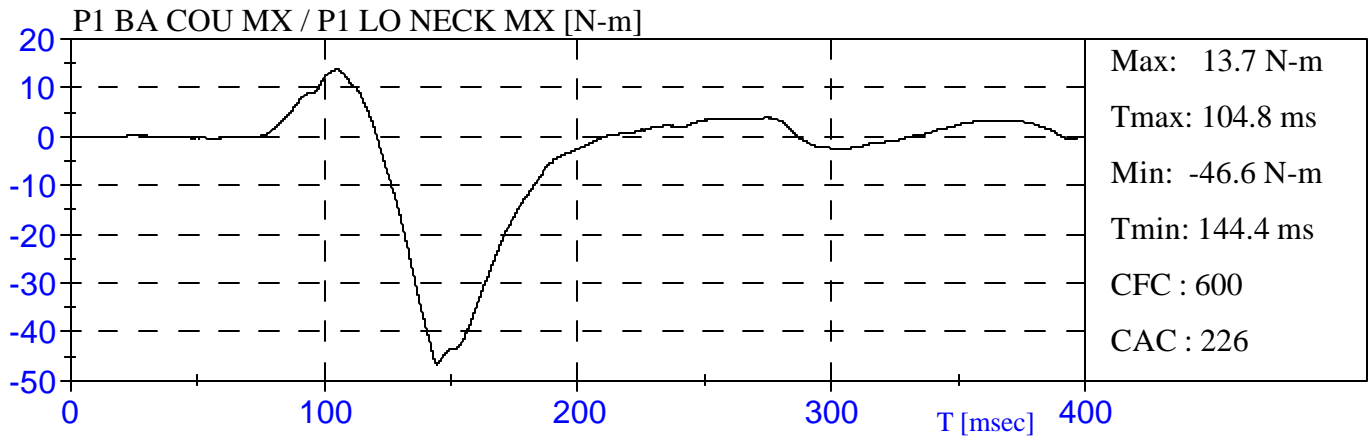


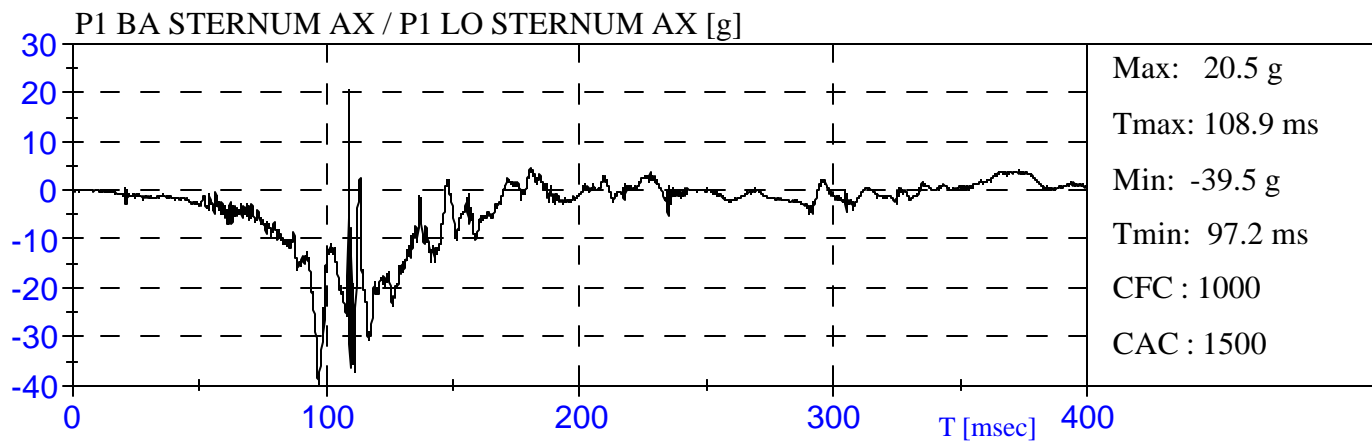
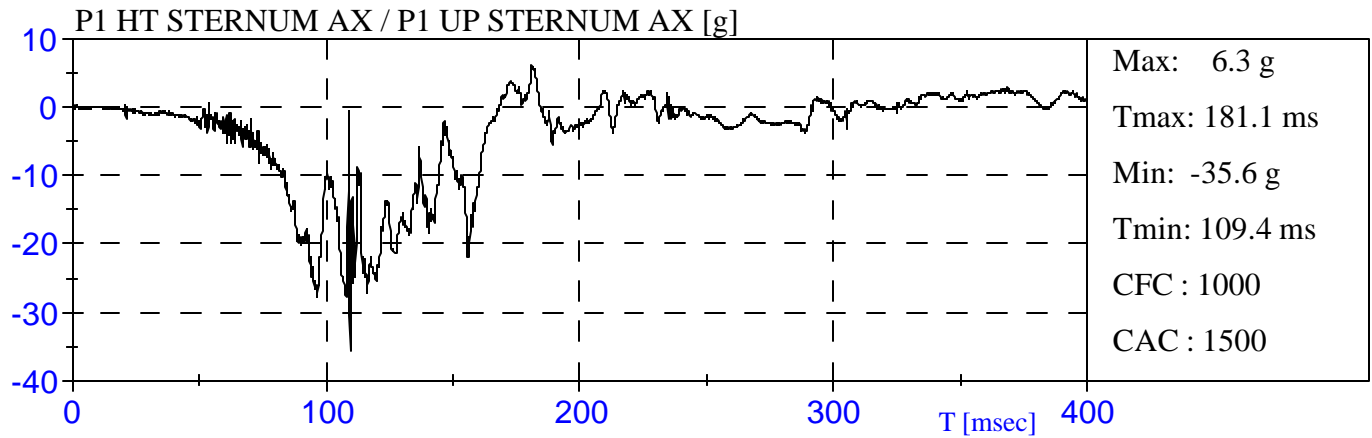


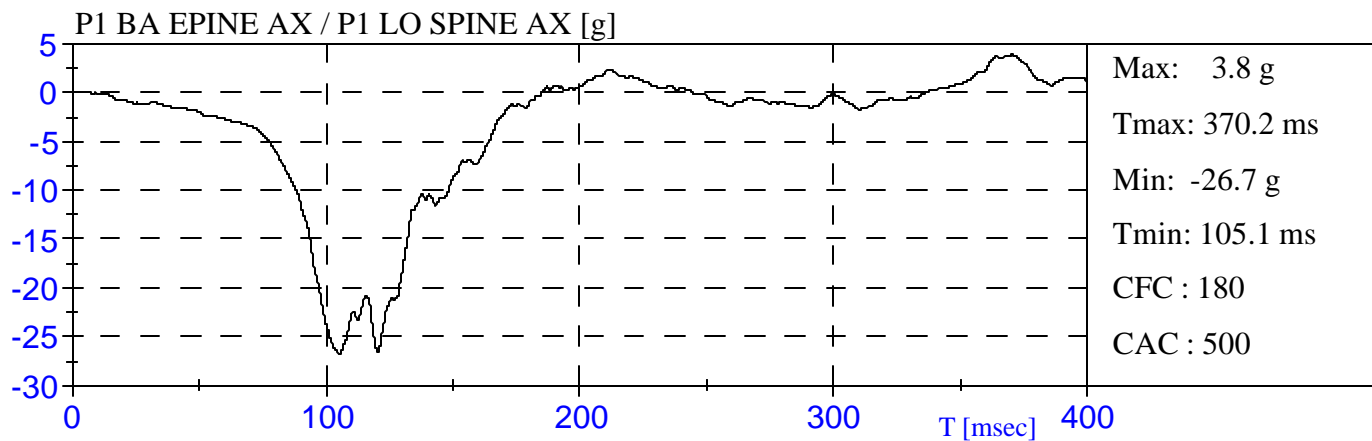
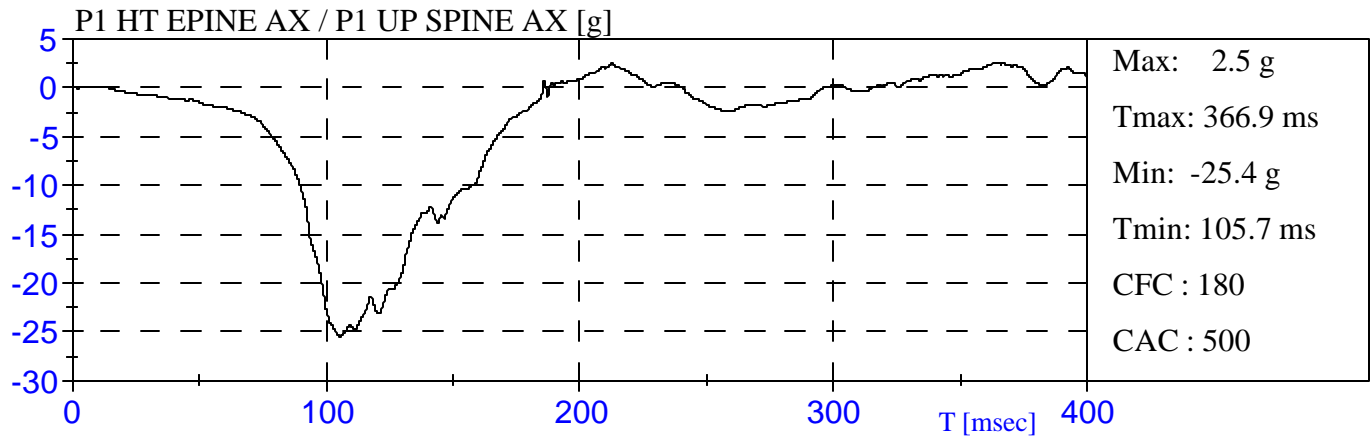
SATURN VUE 2002

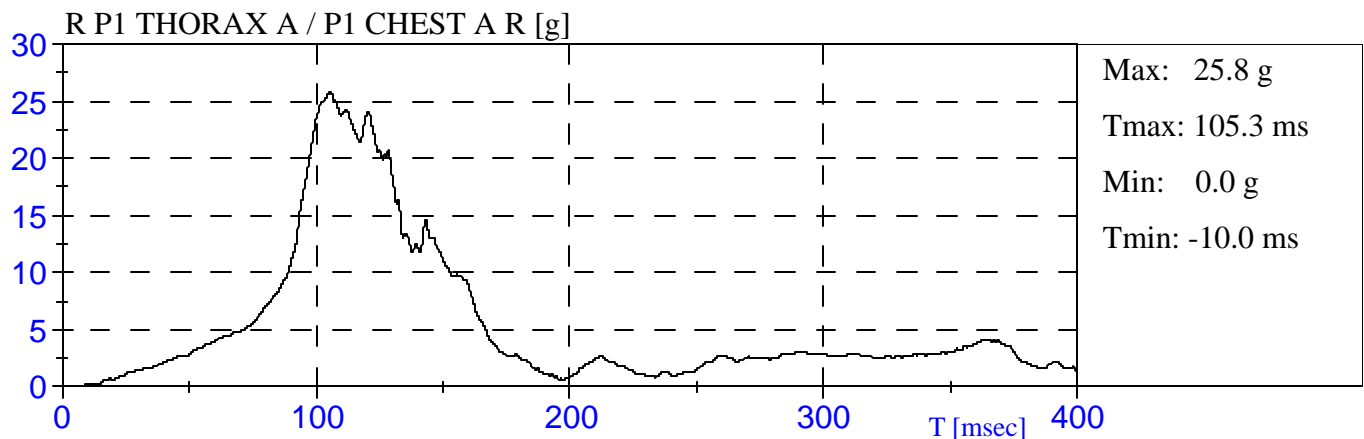
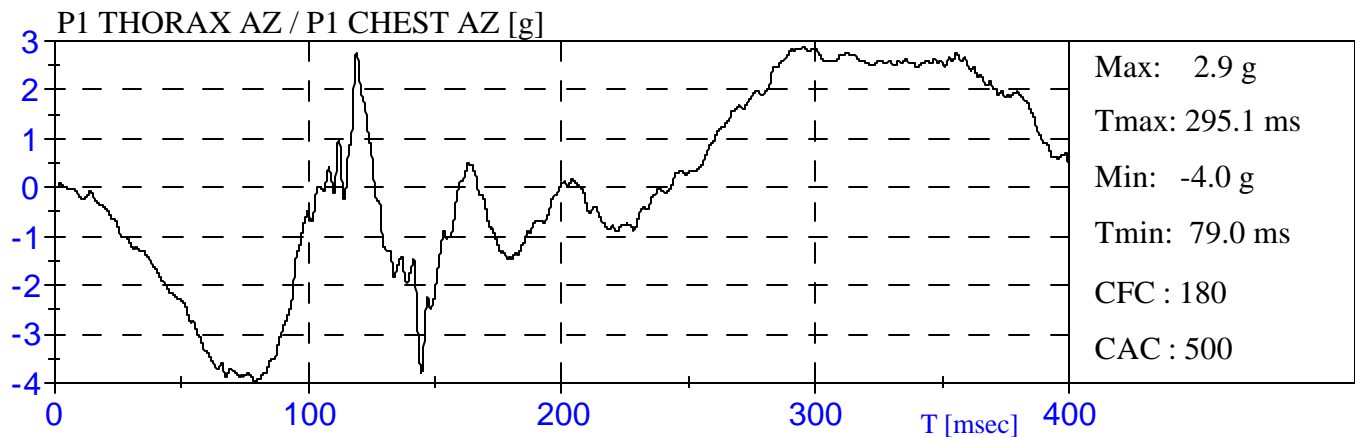
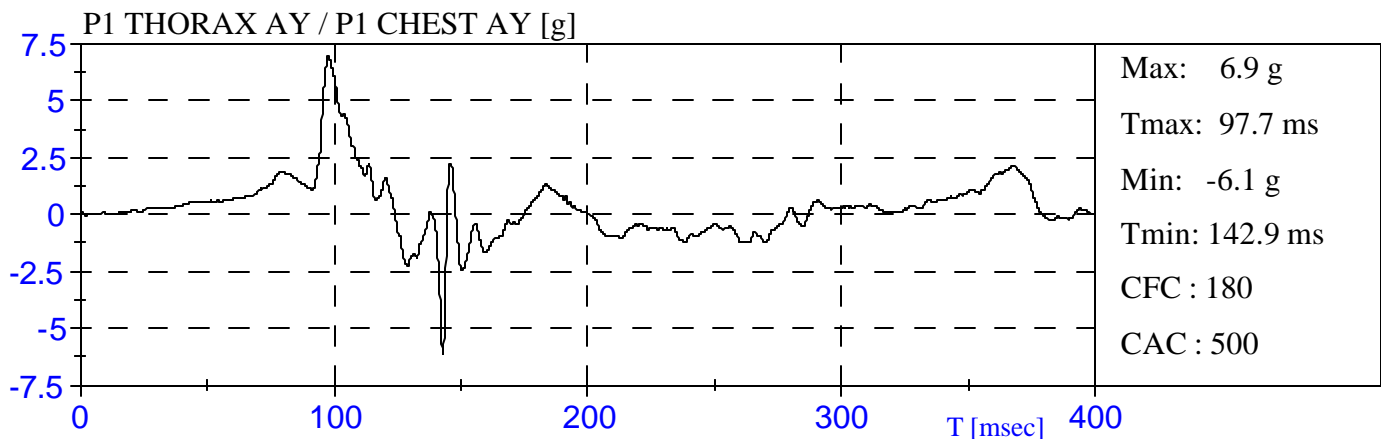
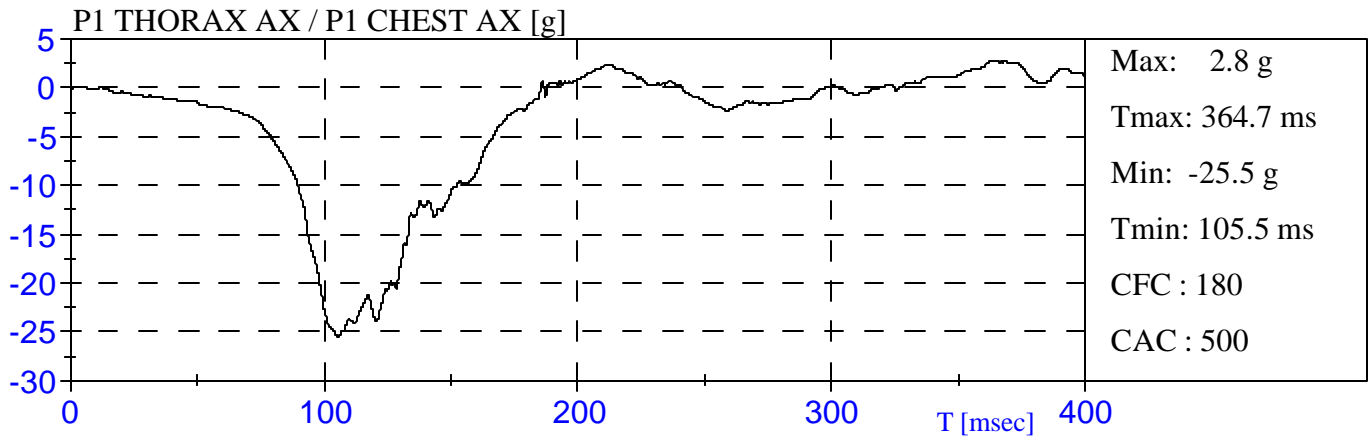




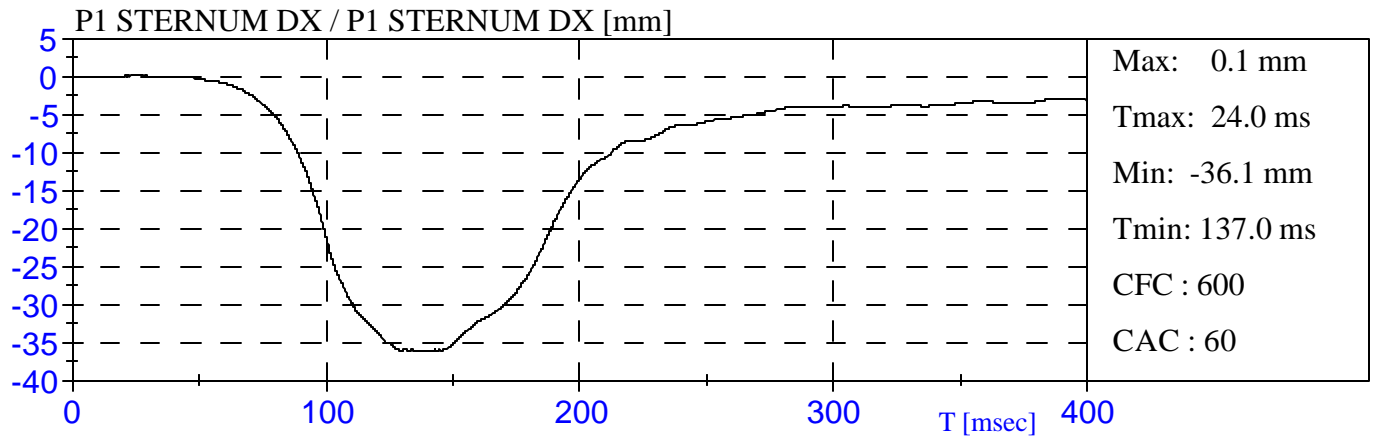


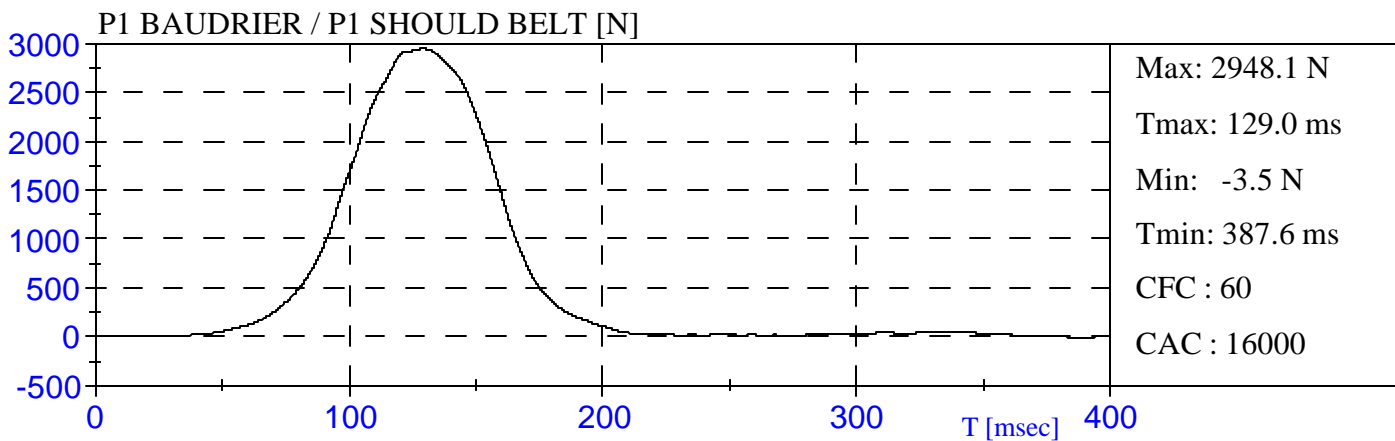
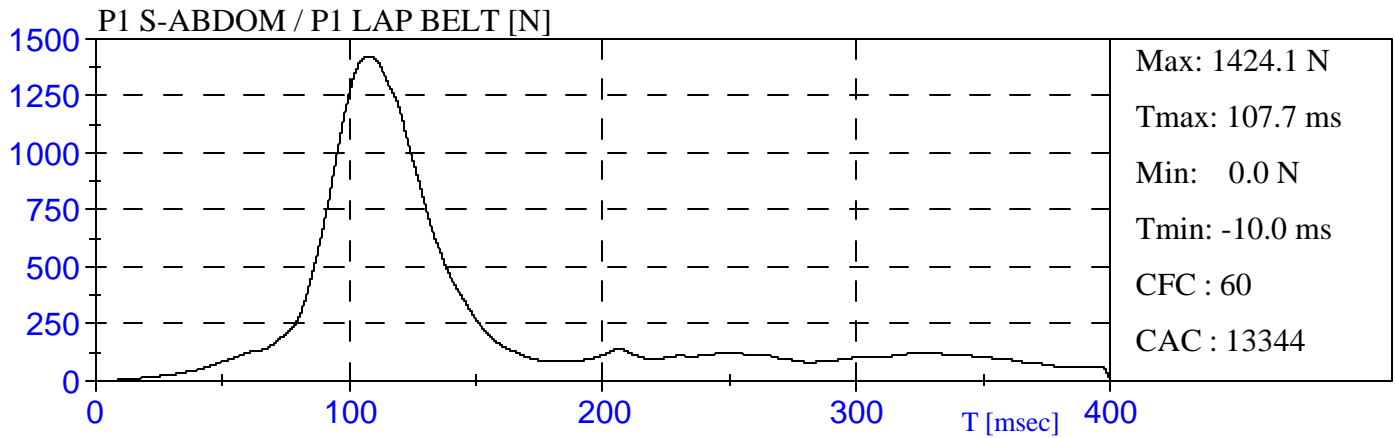




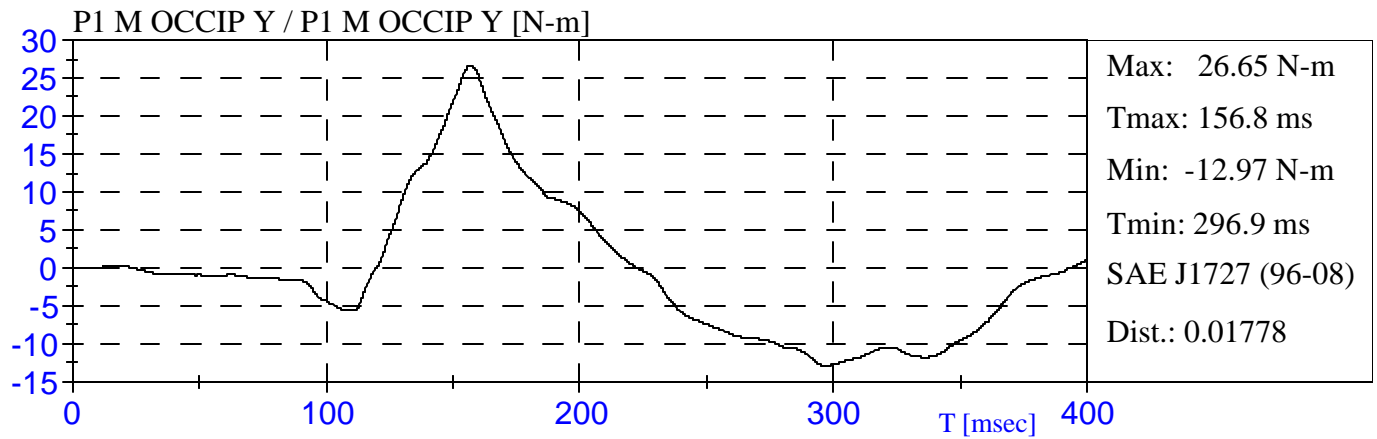


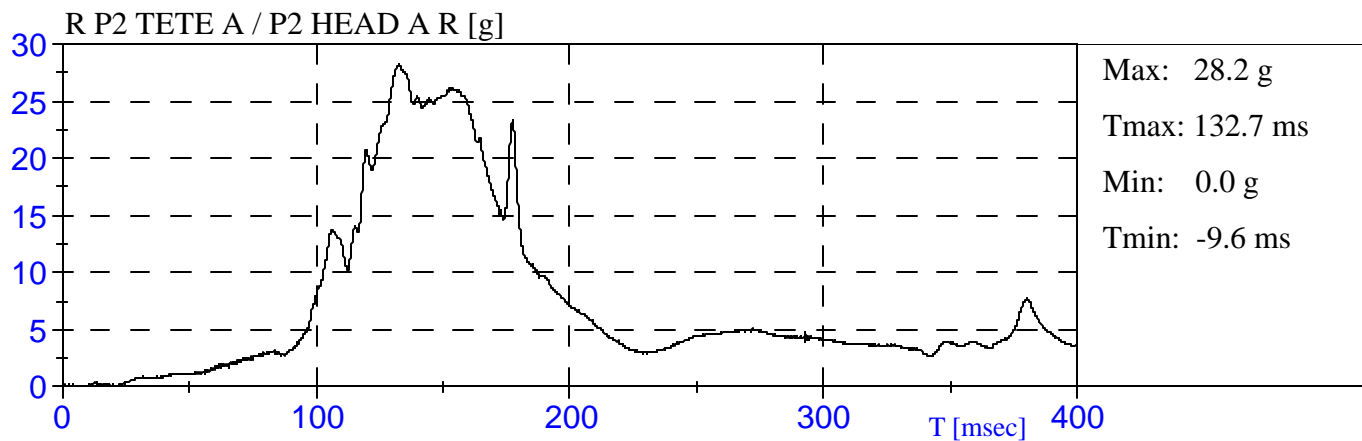
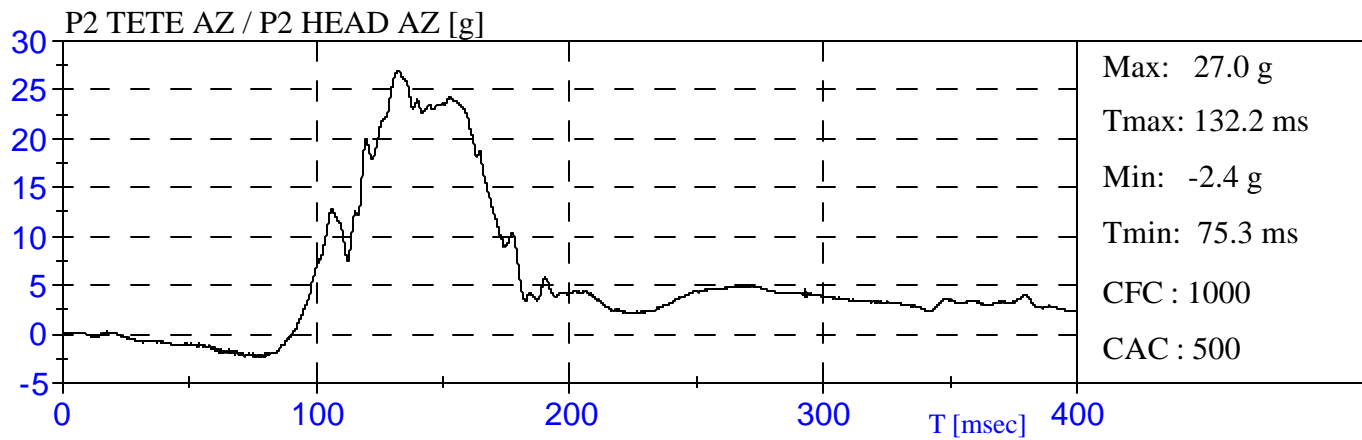
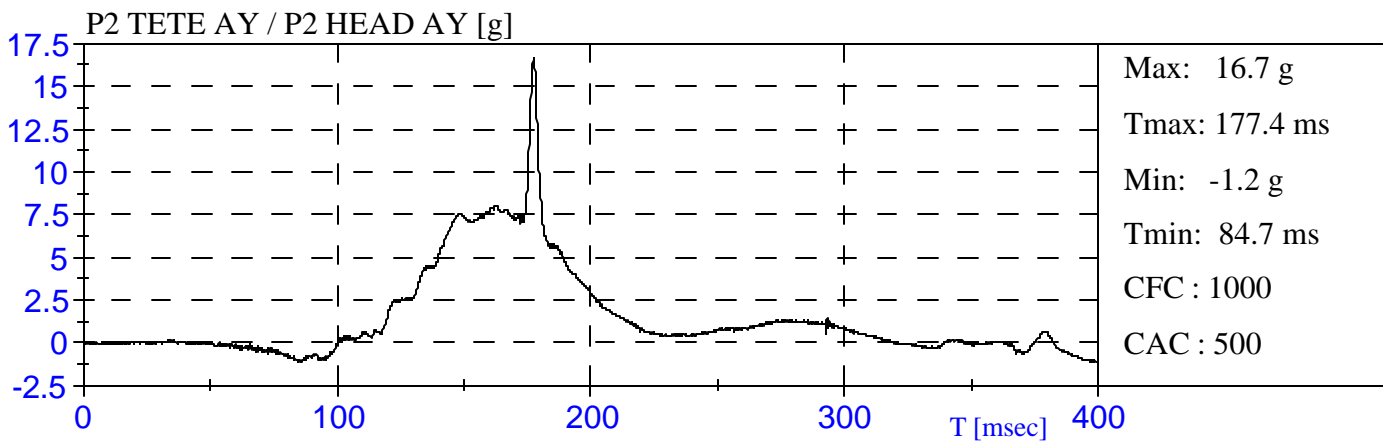
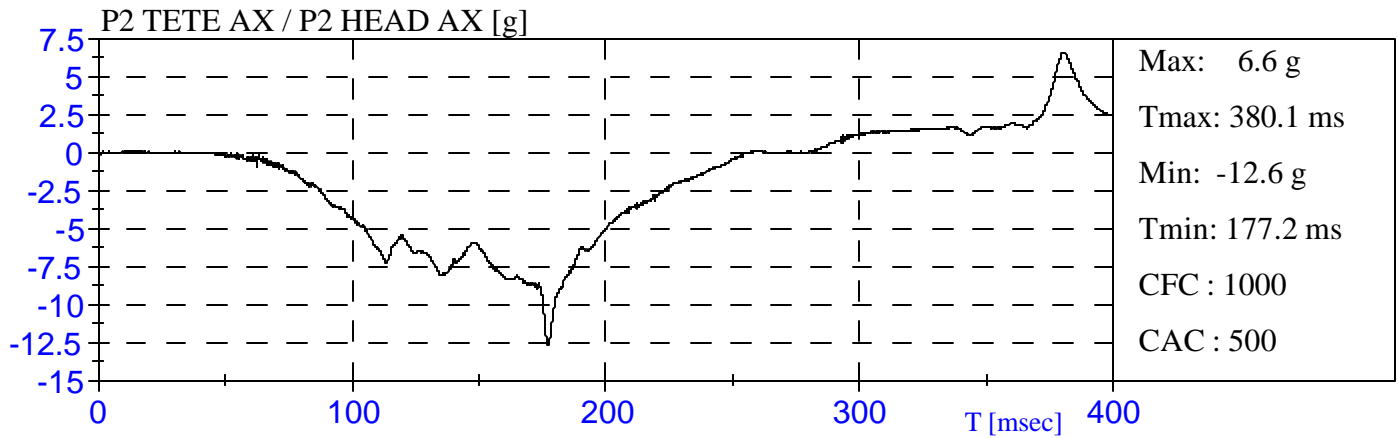
SATURN VUE 2002

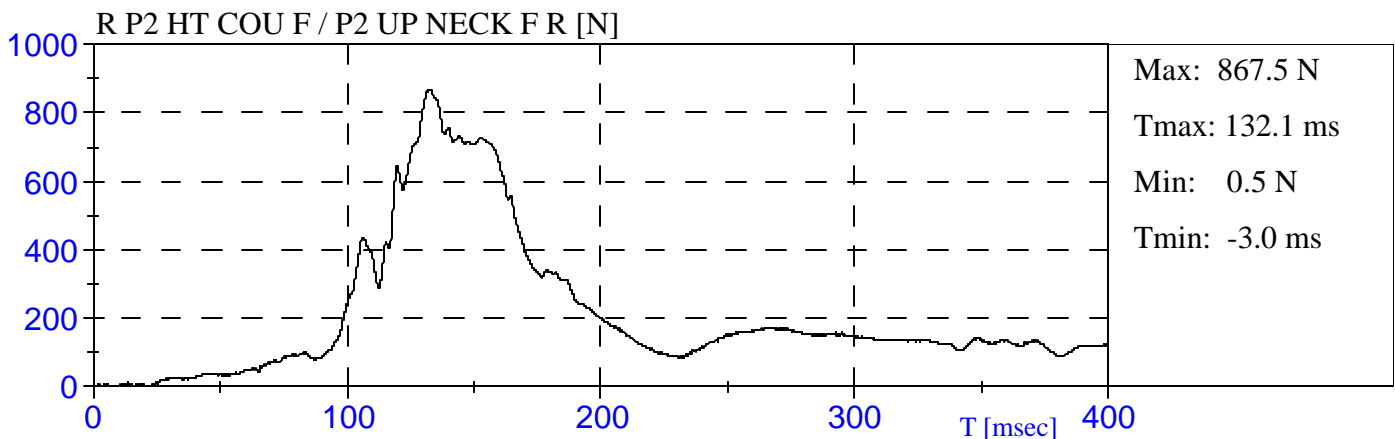
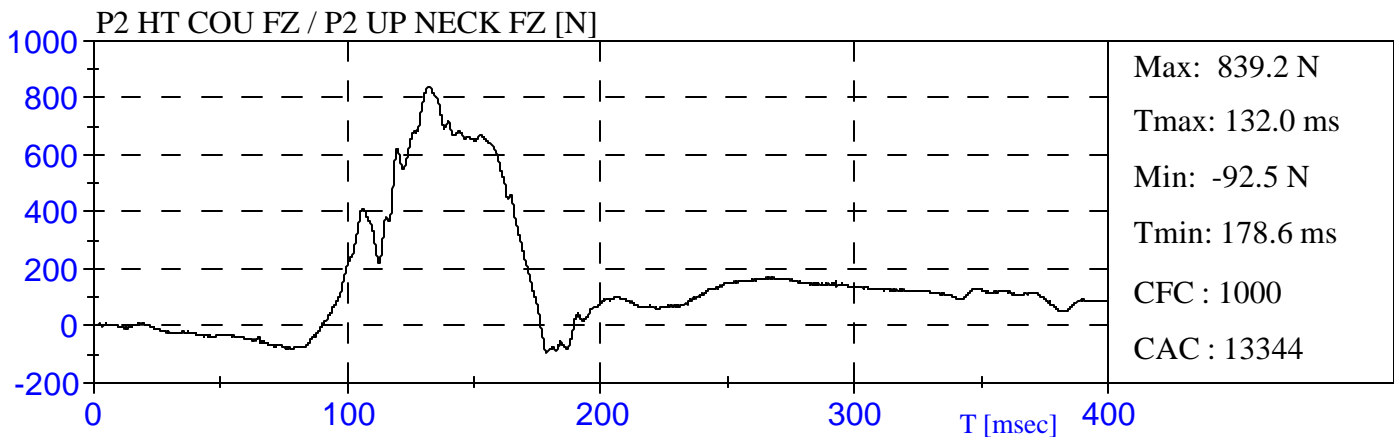
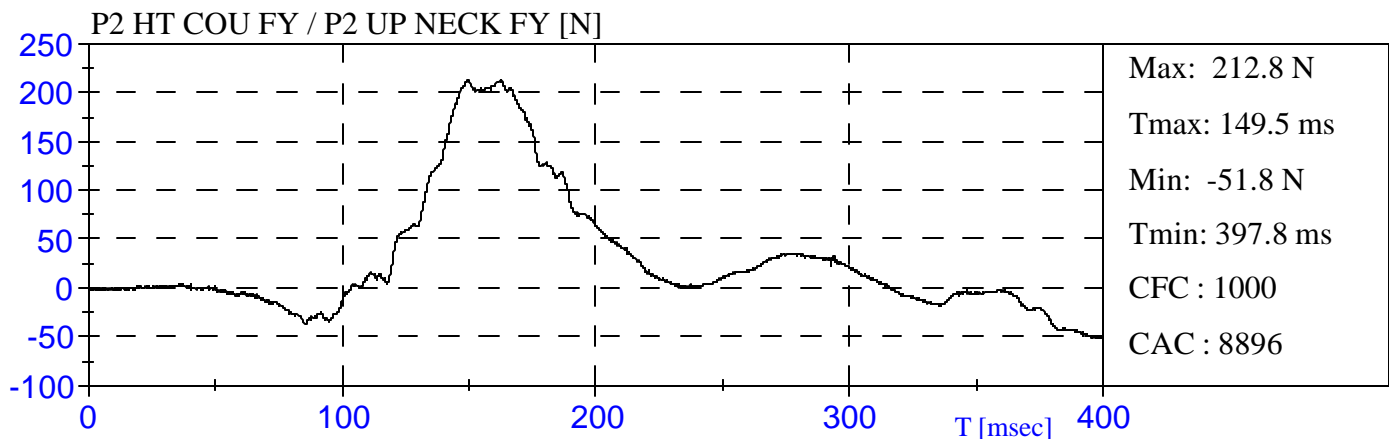
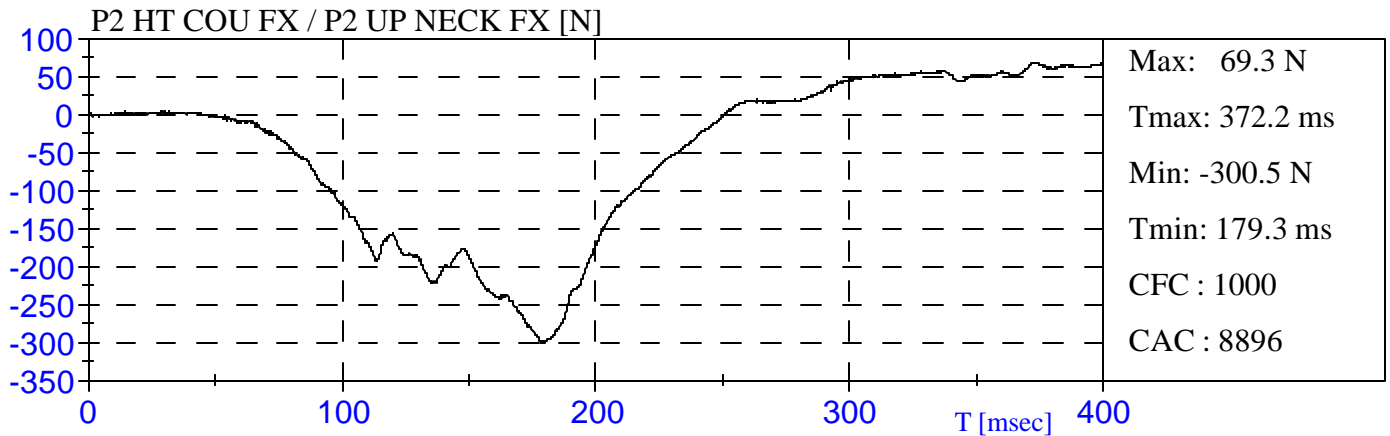


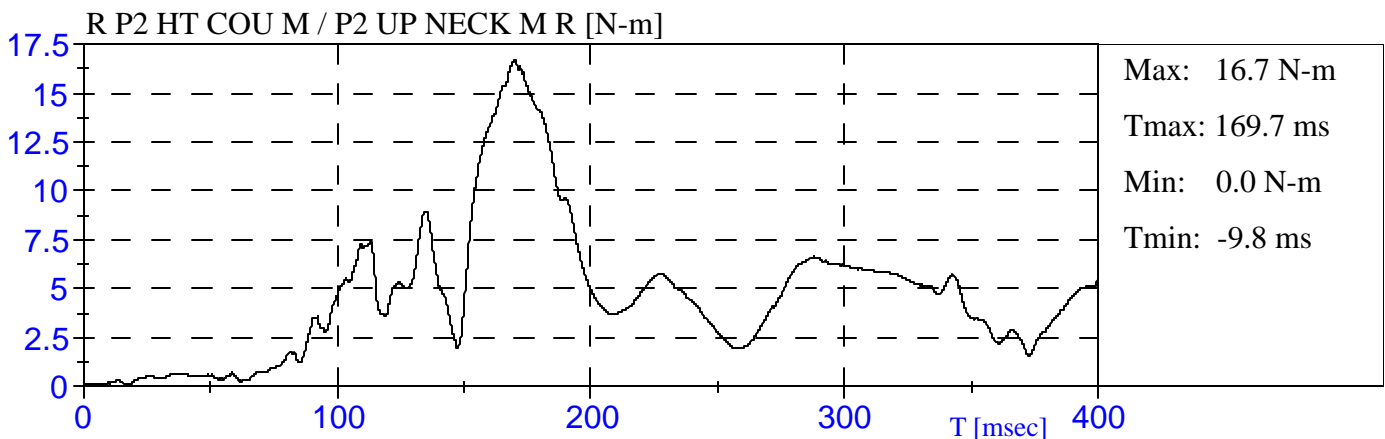
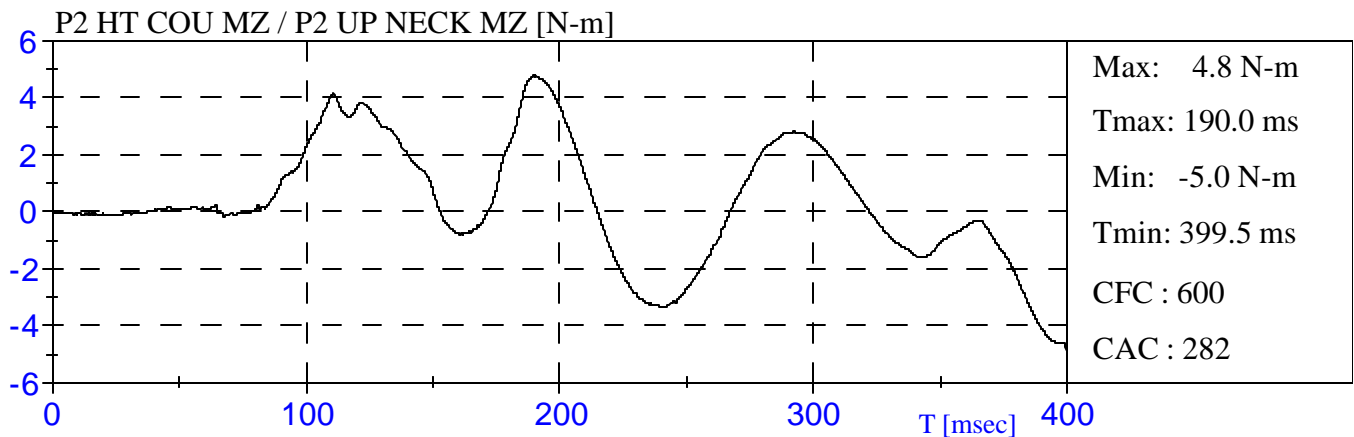
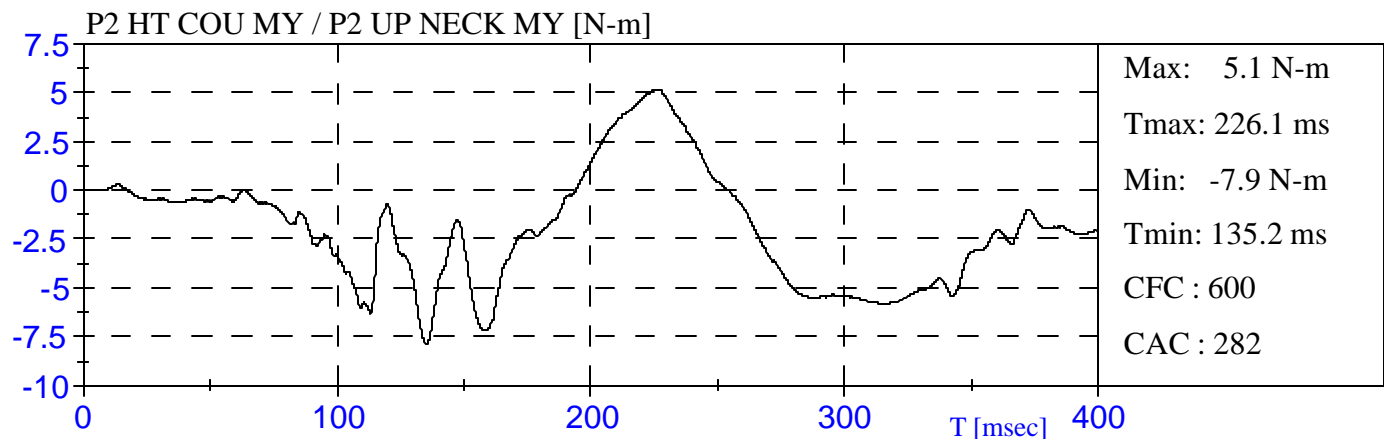
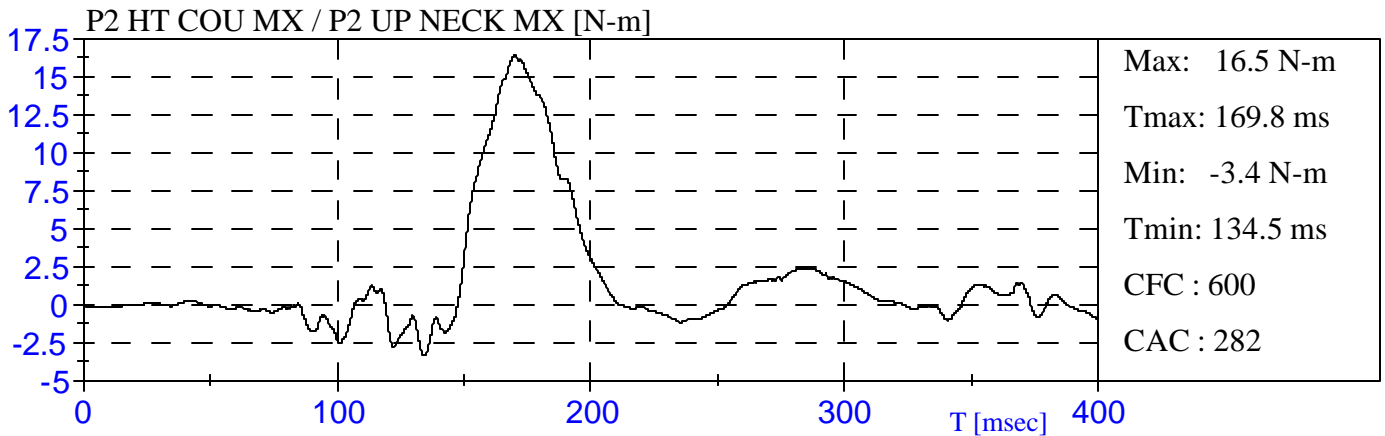


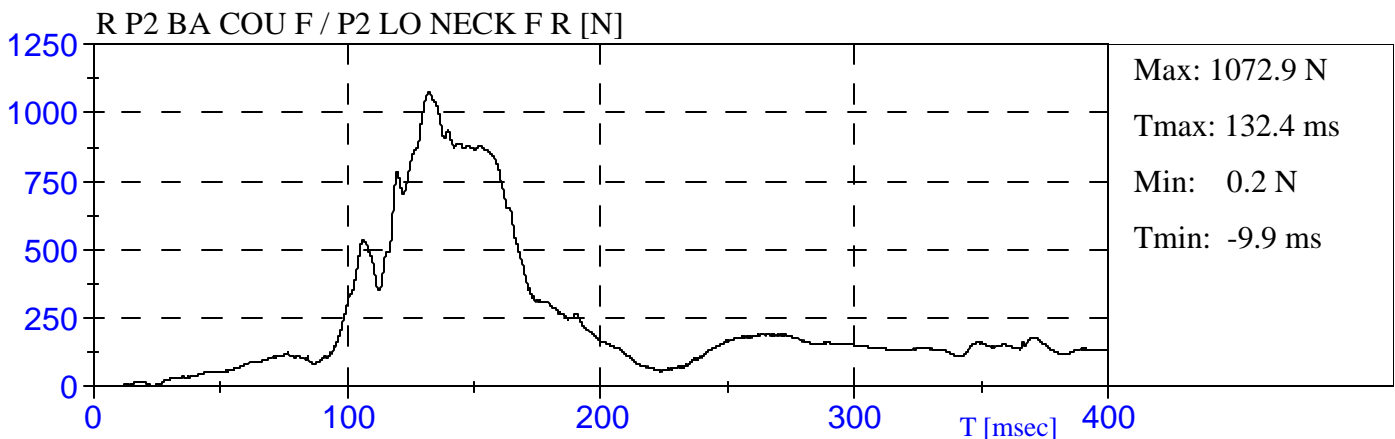
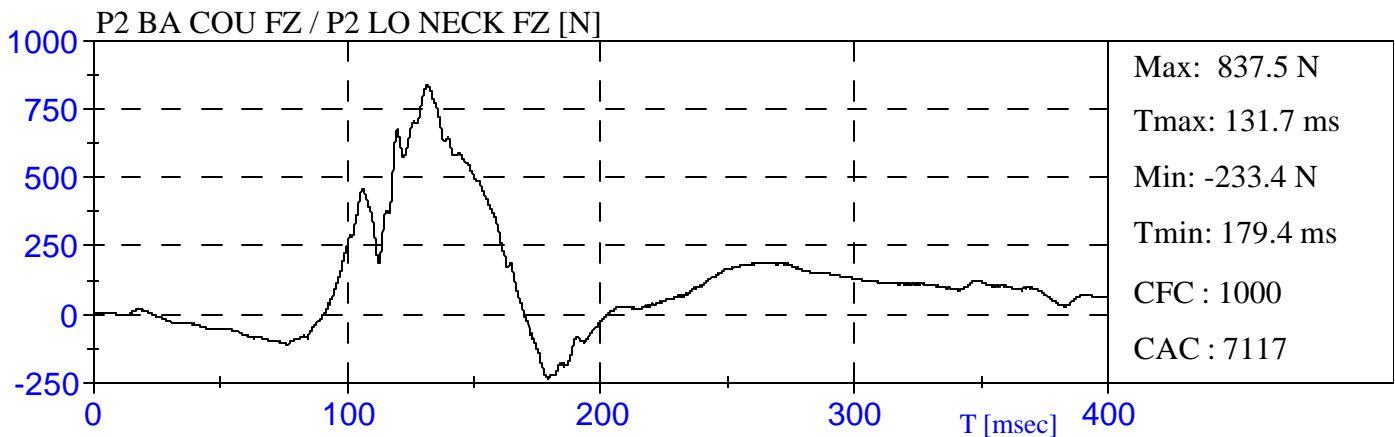
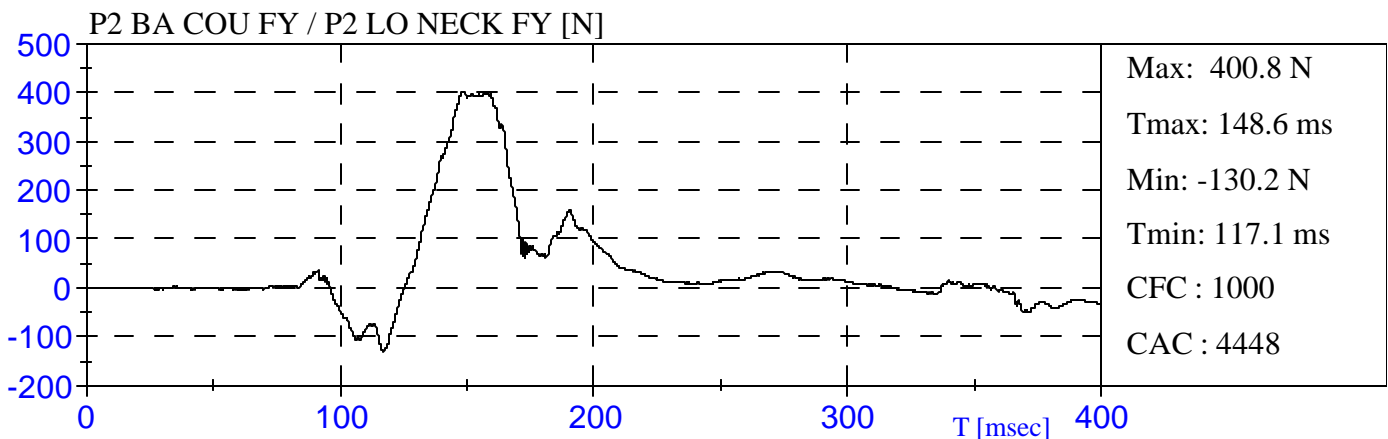
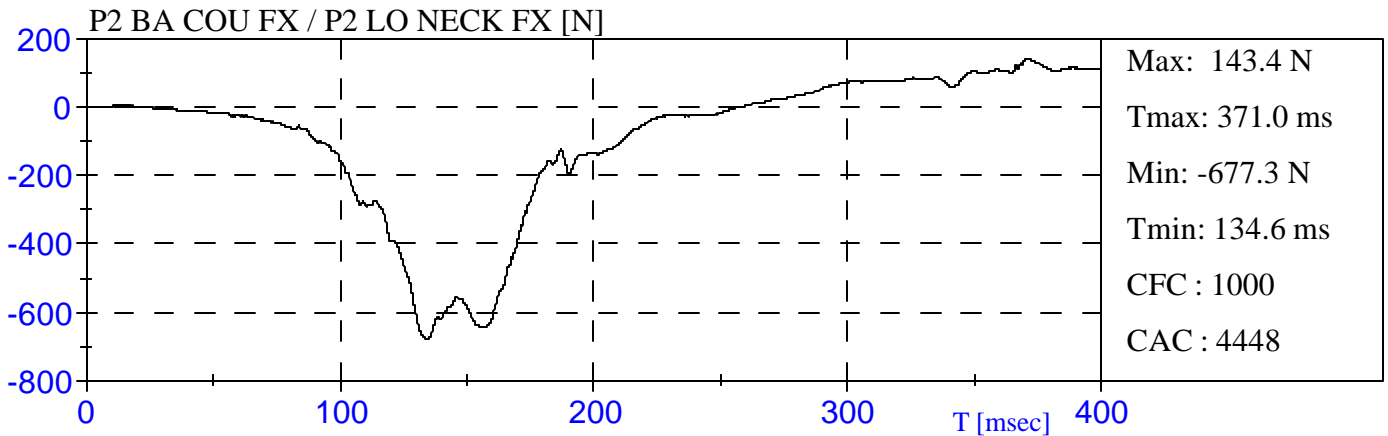
SATURN VUE 2002



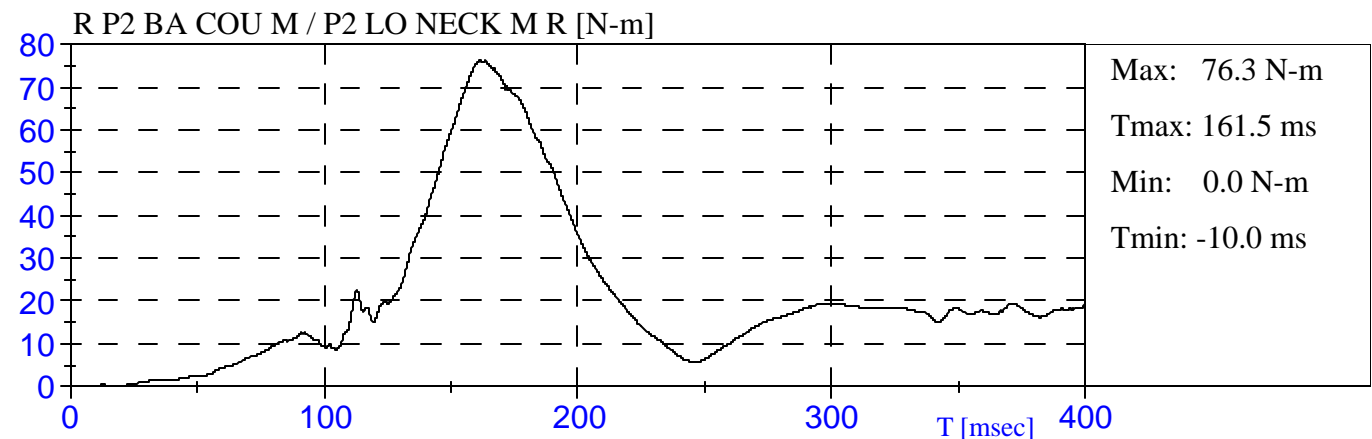
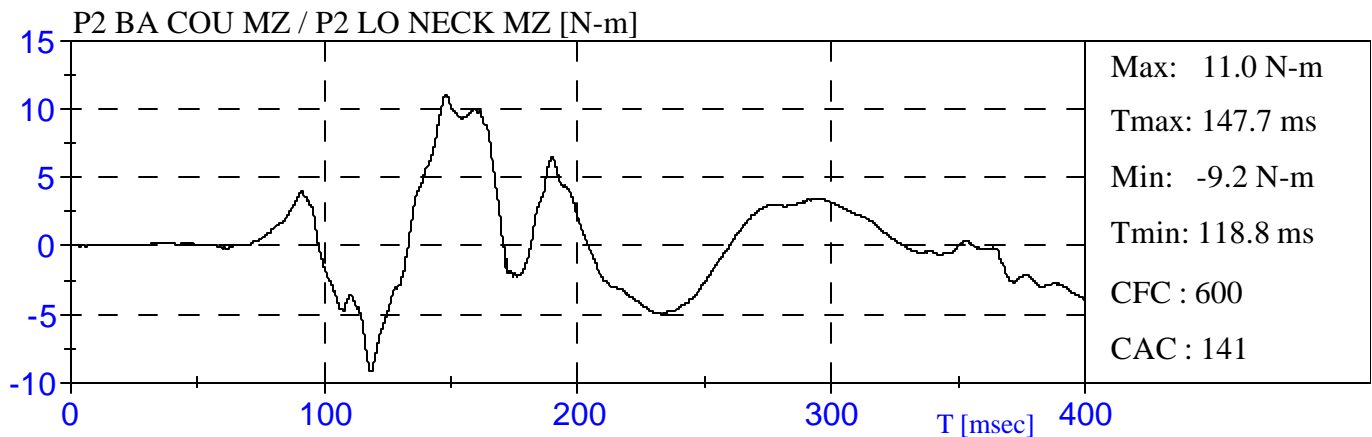
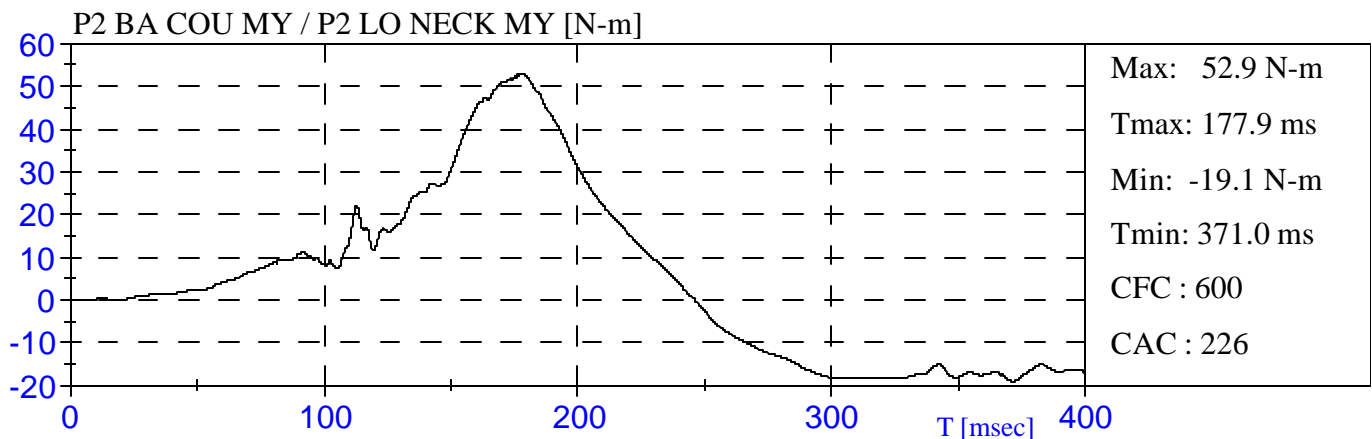
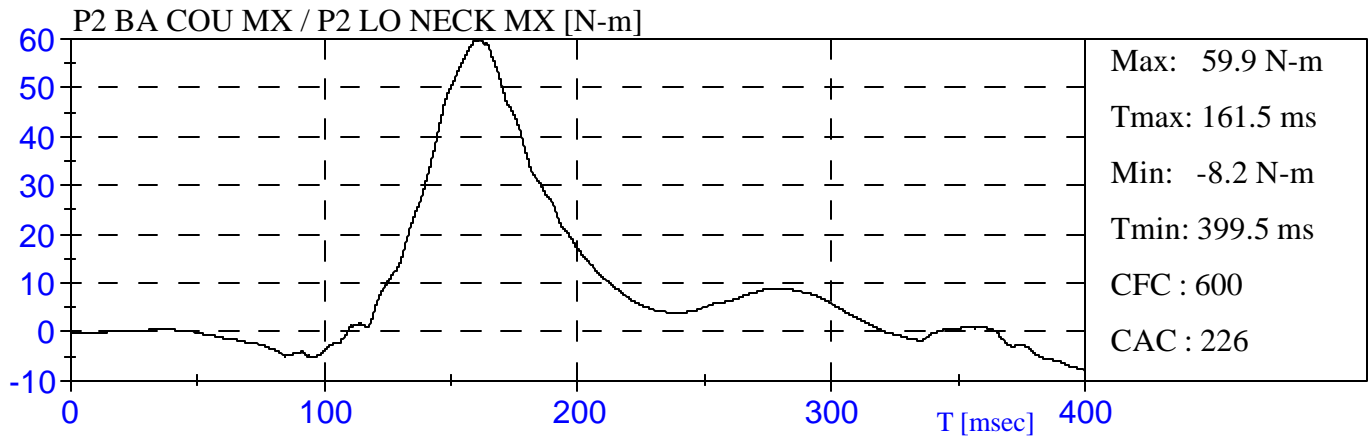


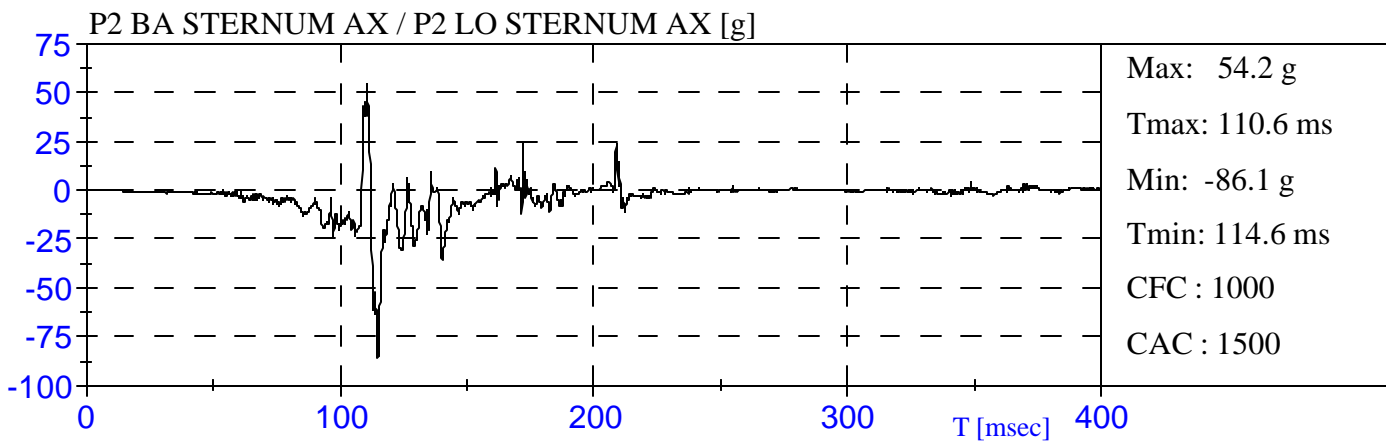
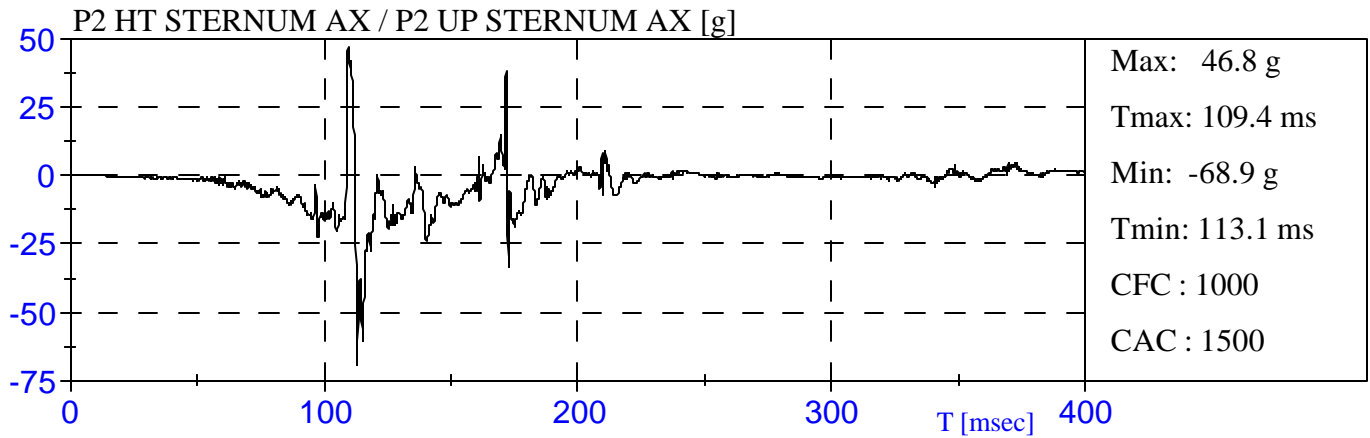


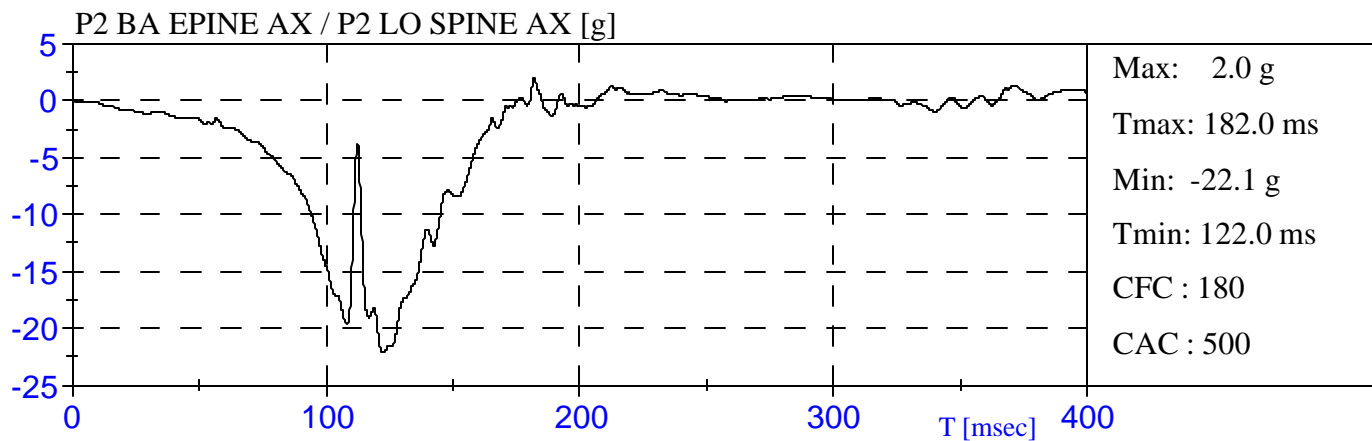
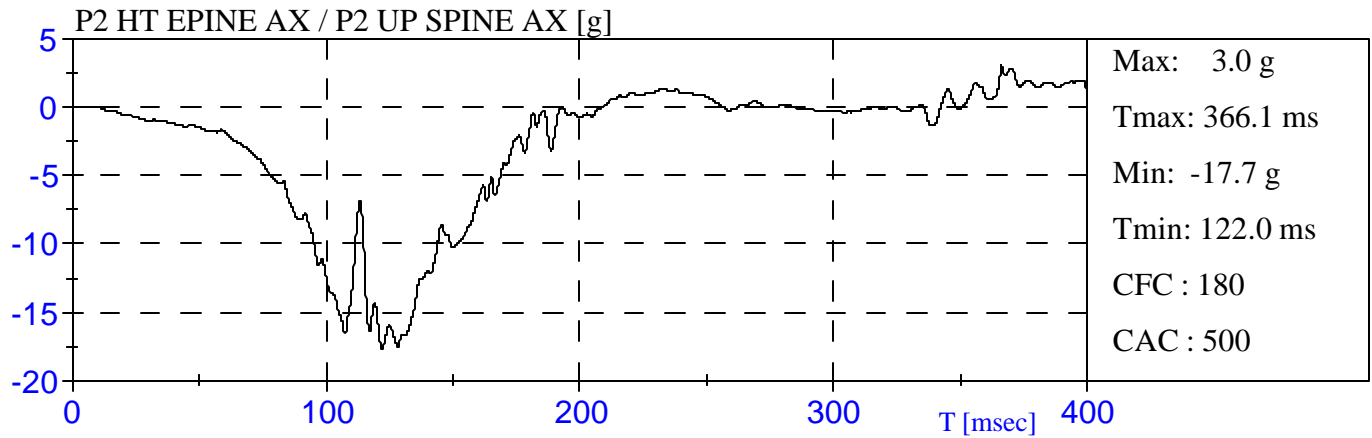


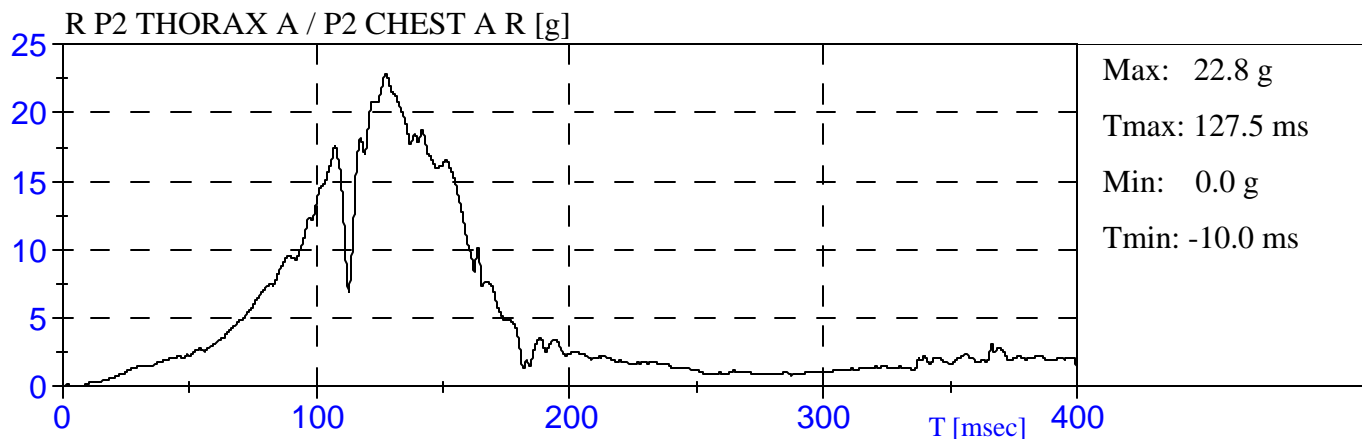
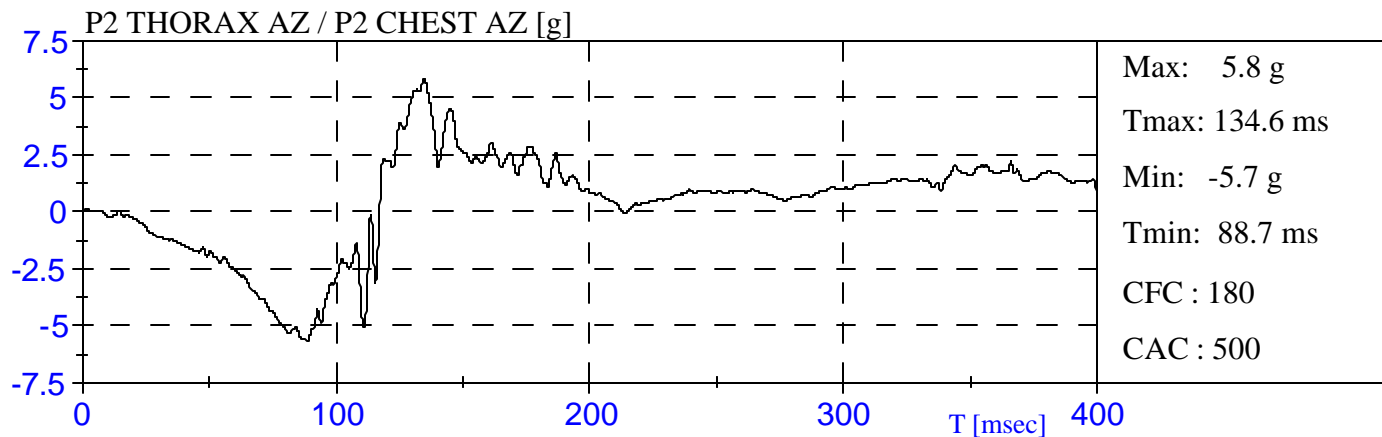
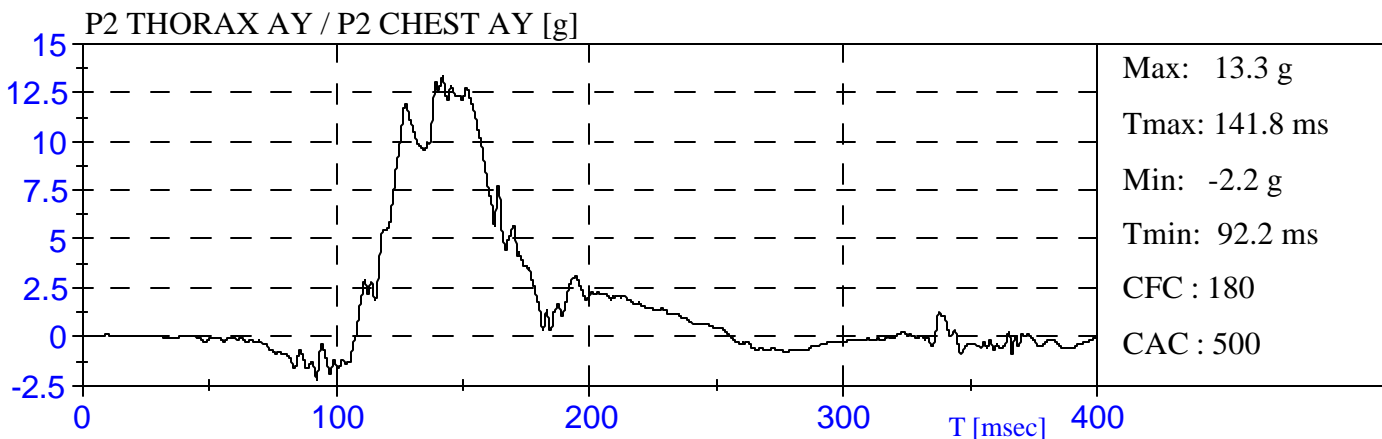
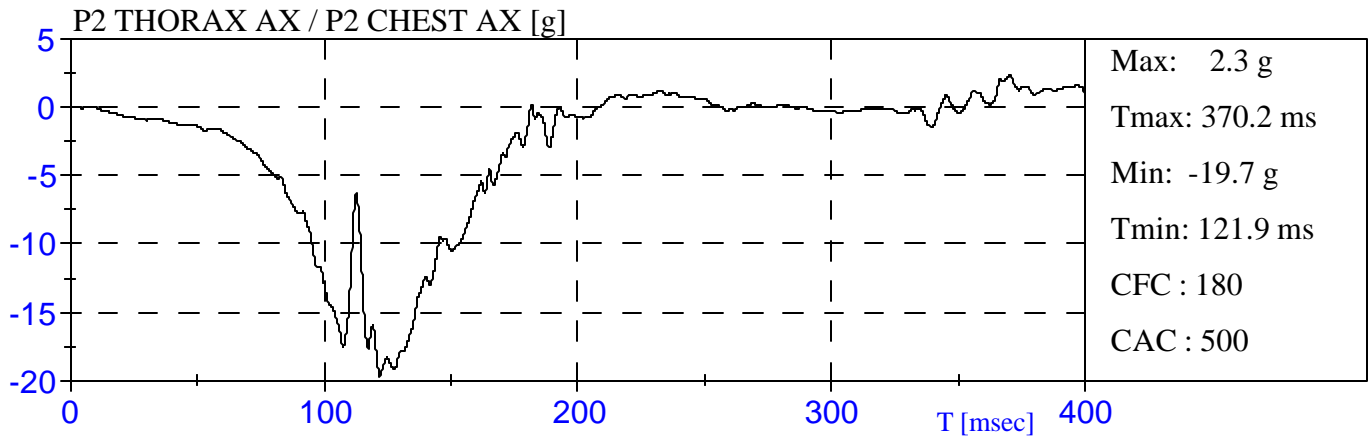


SATURN VUE 2002

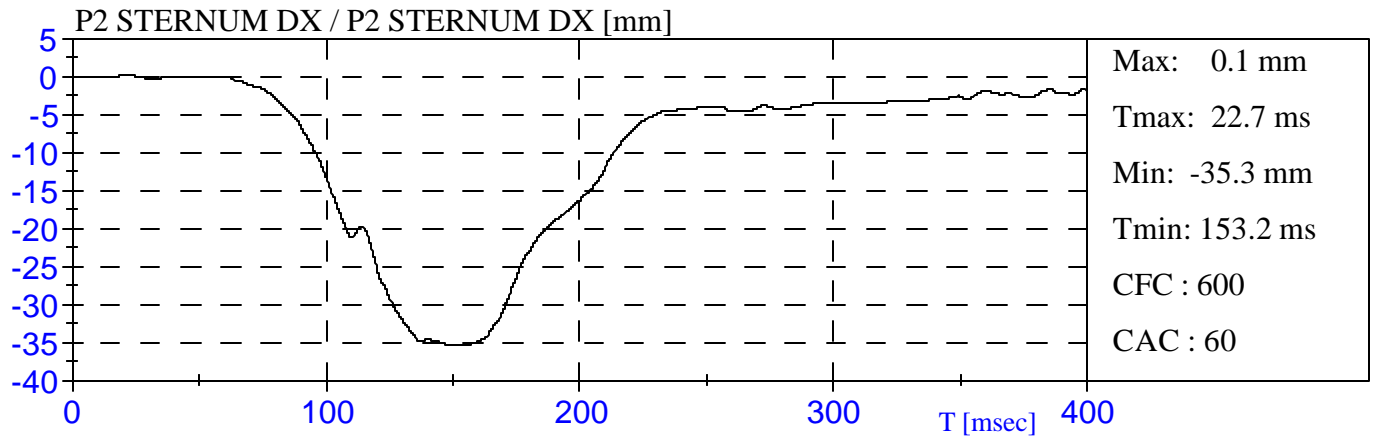


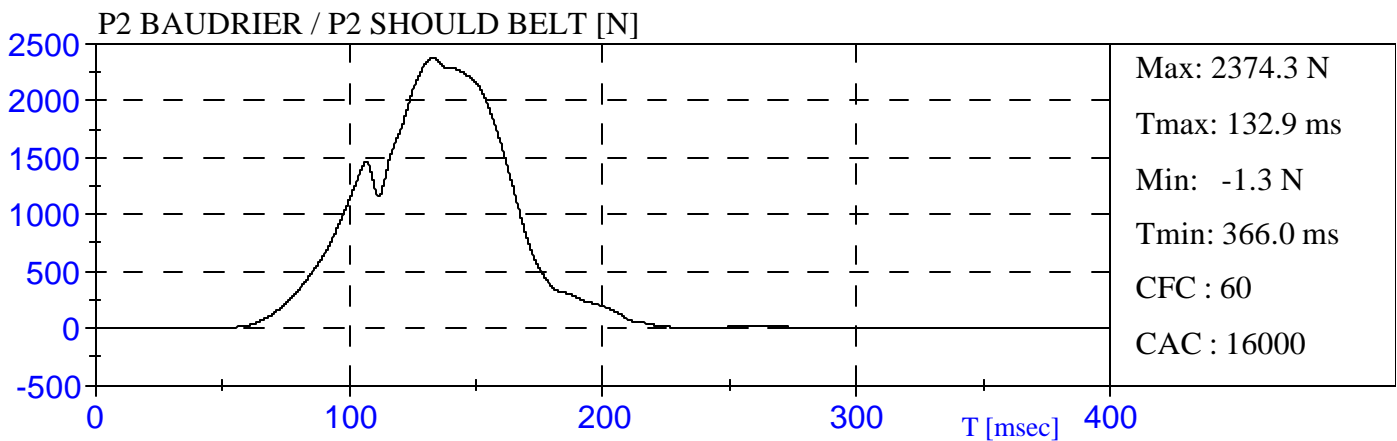
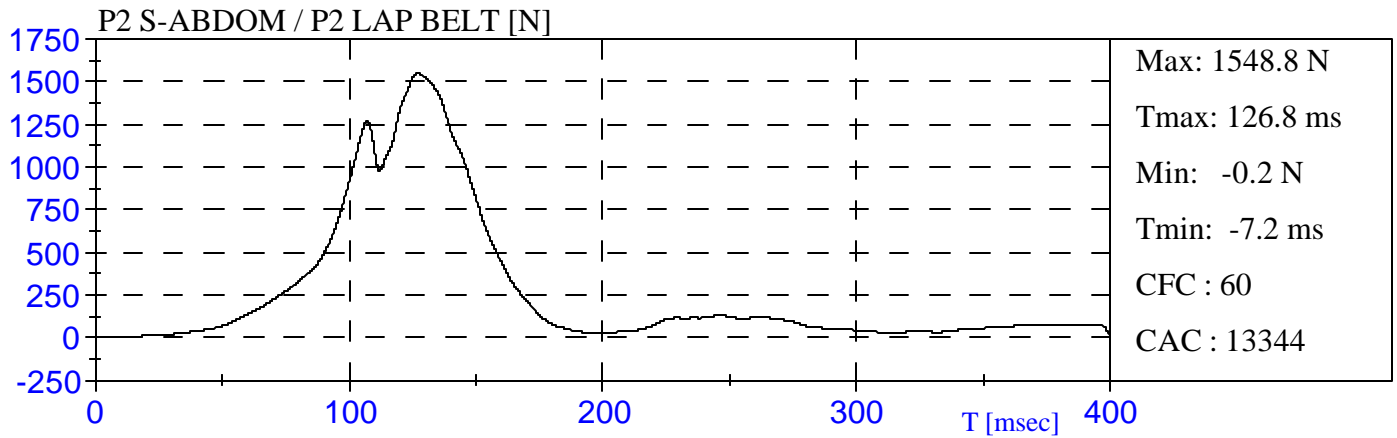




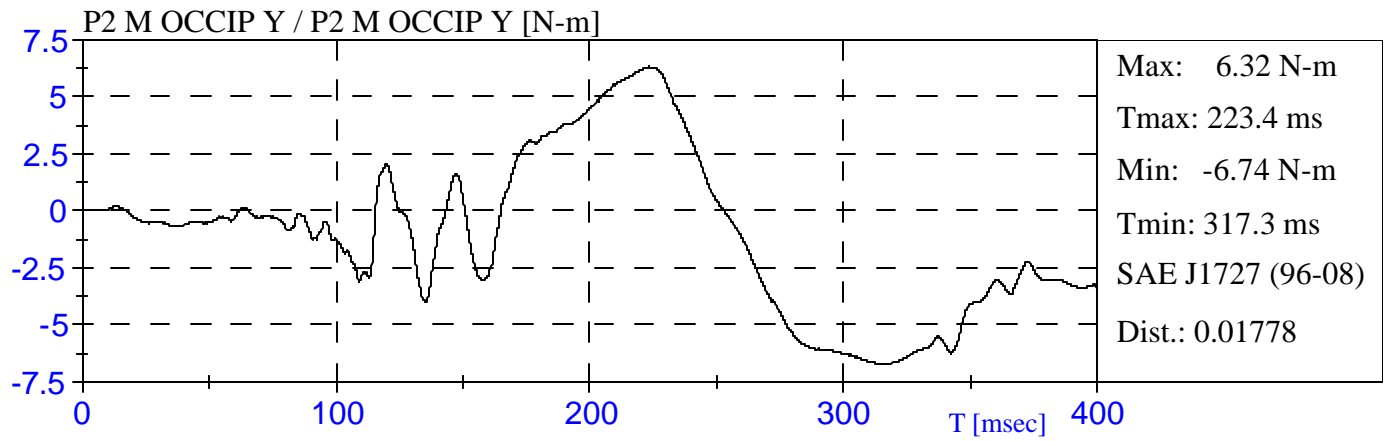


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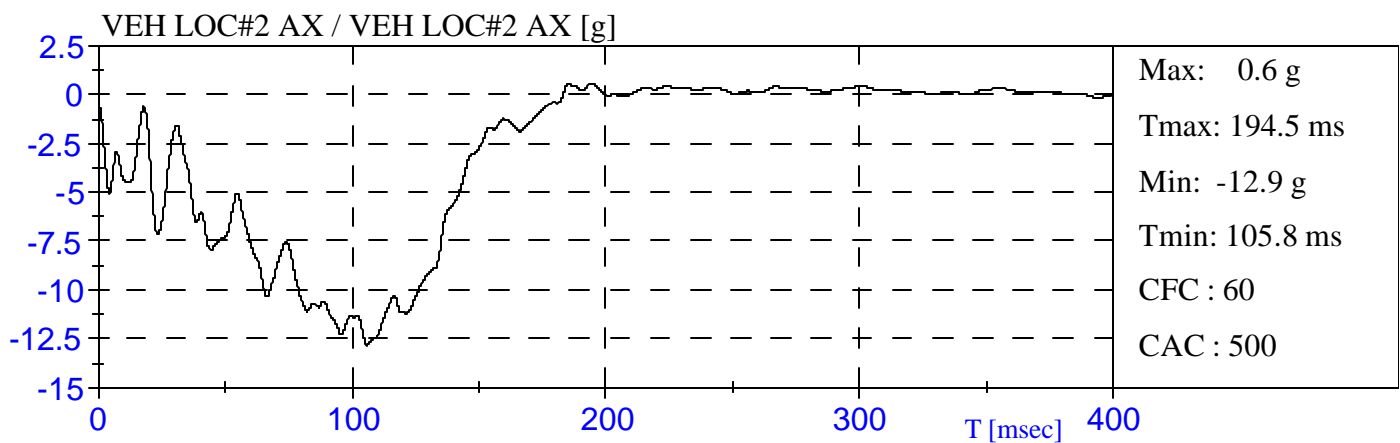
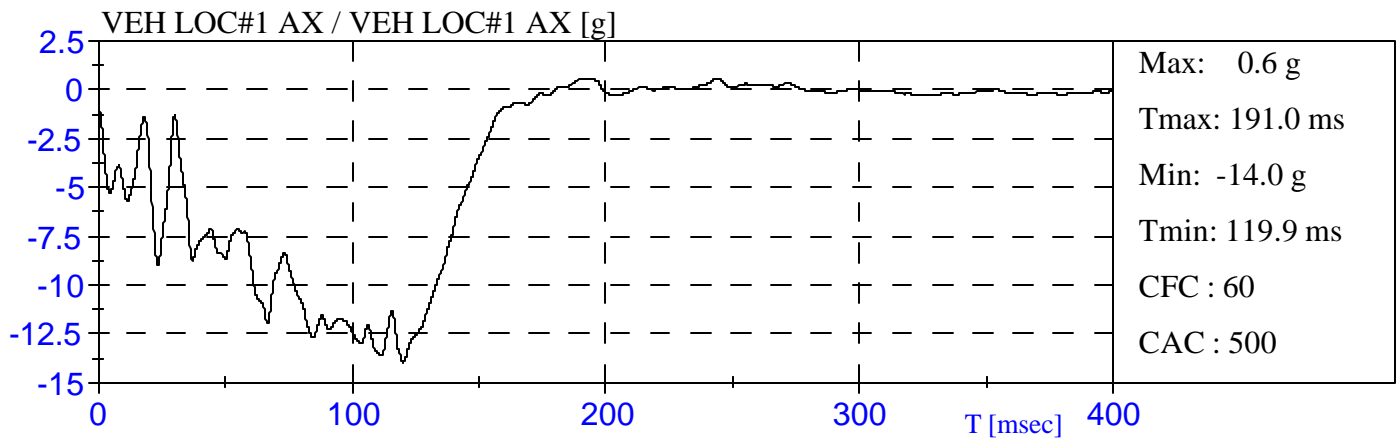




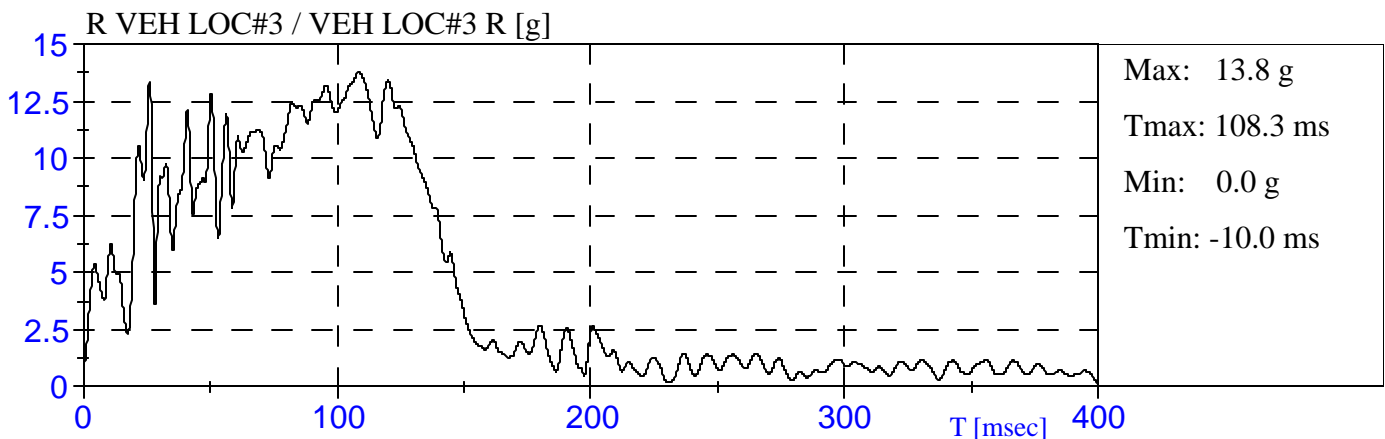
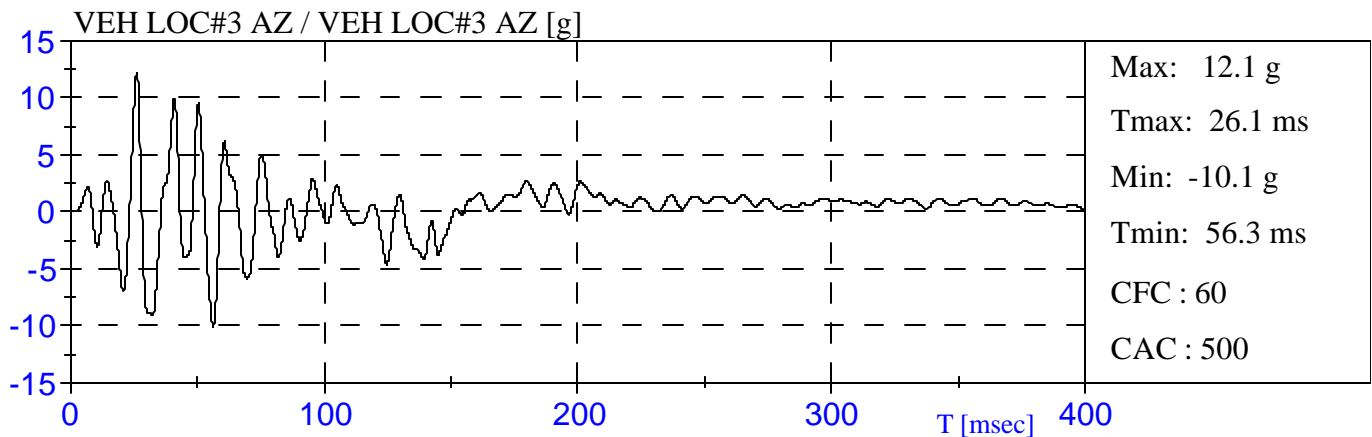
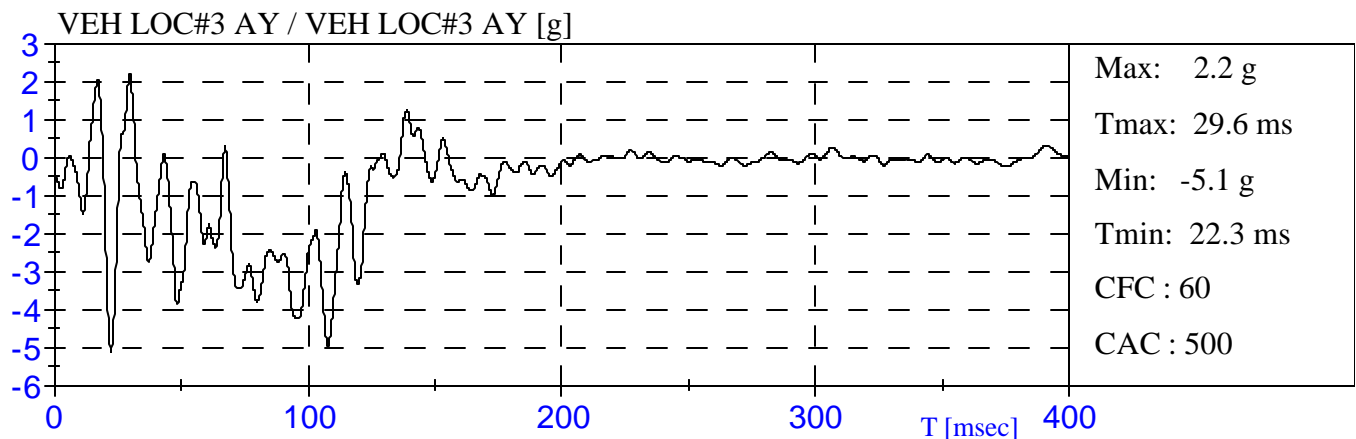
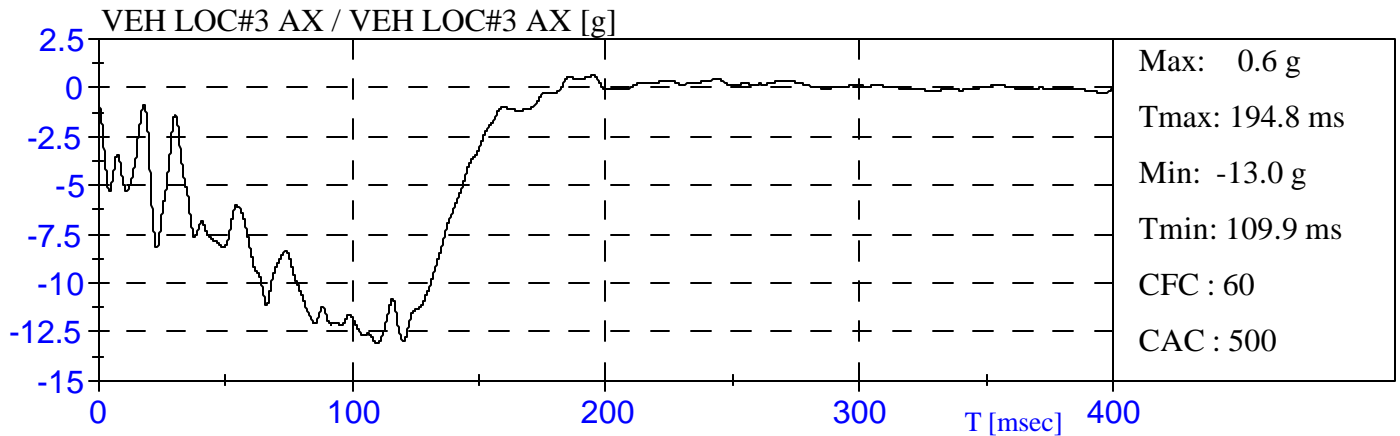
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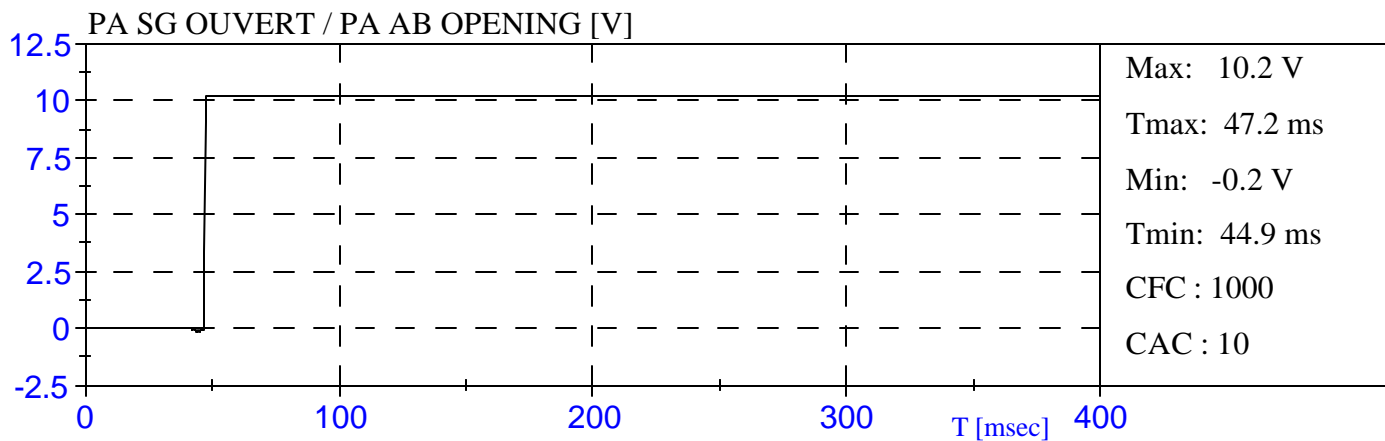
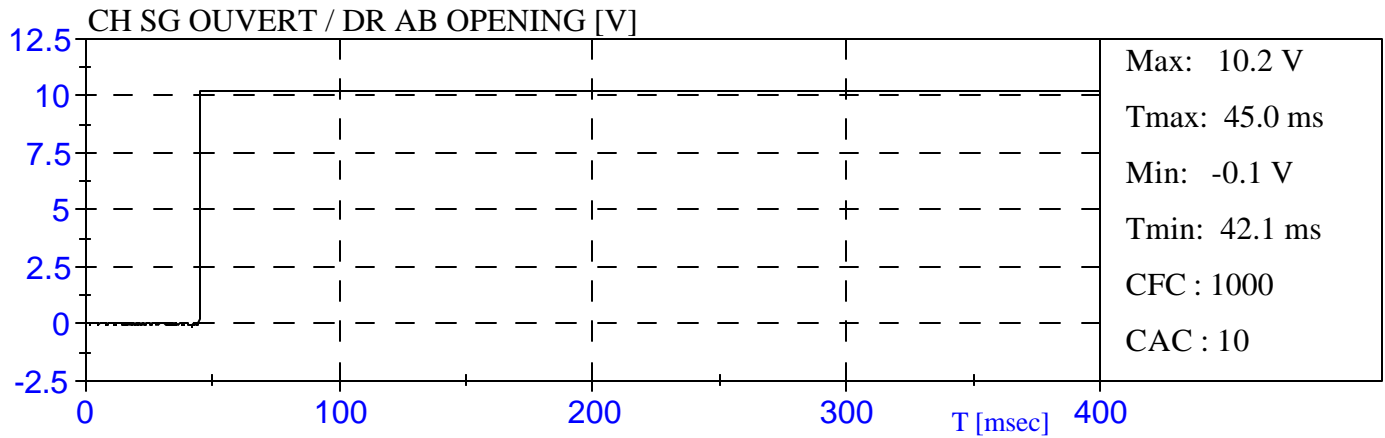


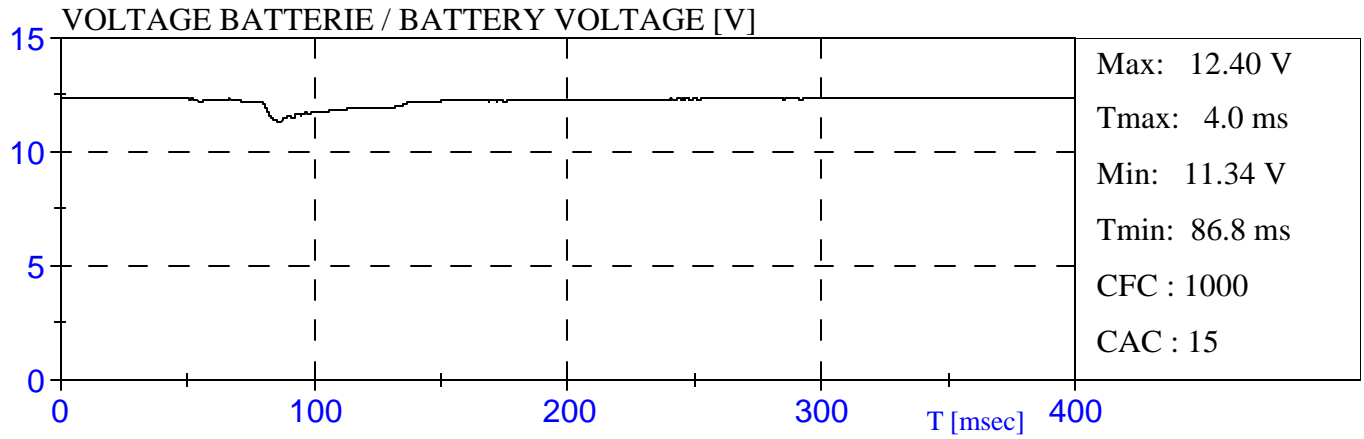
SATURN VUE 2002

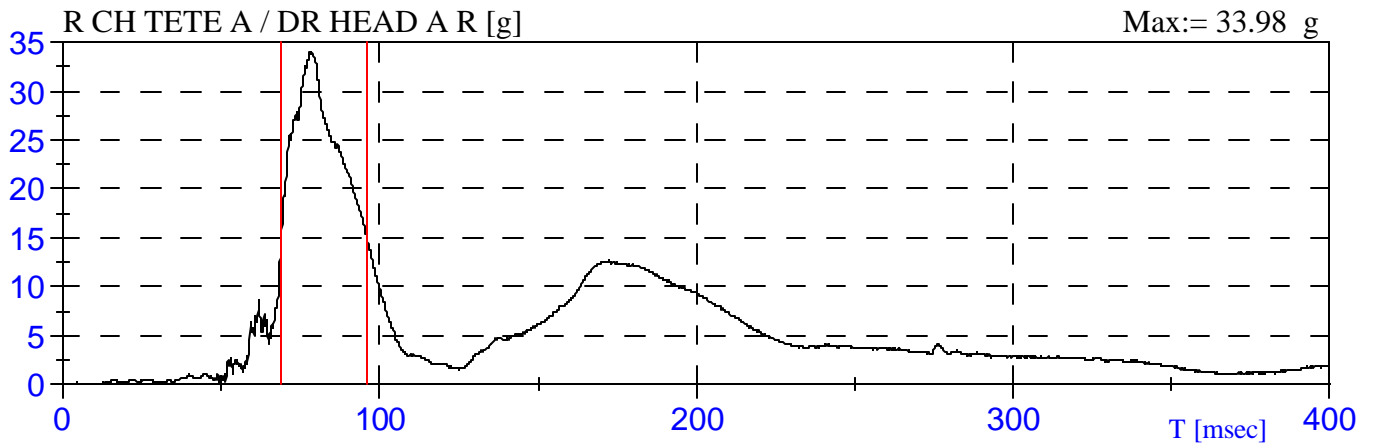


SATURN VUE 2002







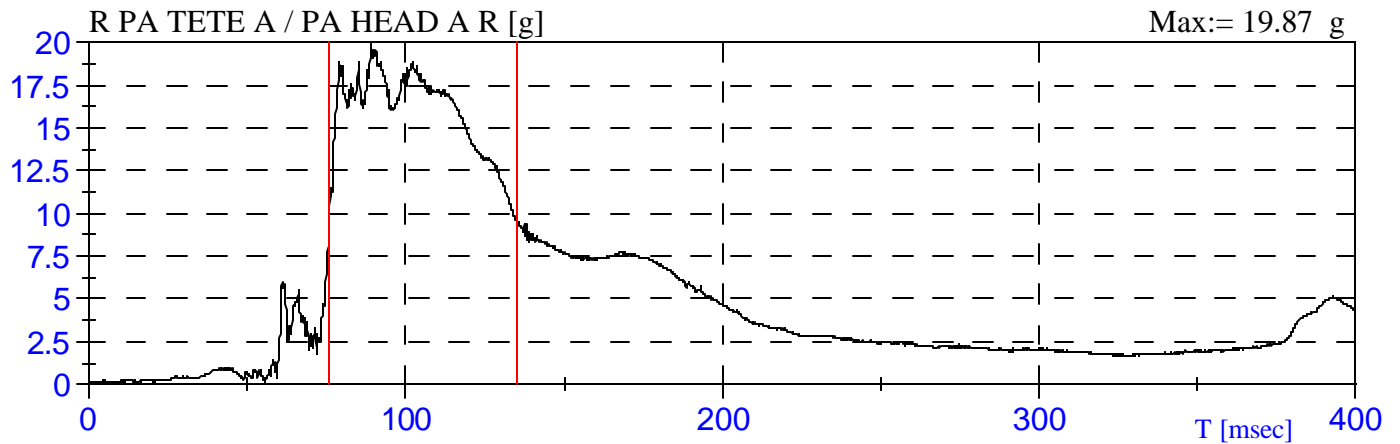


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 85	HIC(36ms):= 85	HIC(15ms):= 67
T1:= 68.9 ms	T1:= 68.9 ms	T1:= 71.0 ms
T2:= 95.9 ms	T2:= 95.9 ms	T2:= 86.0 ms

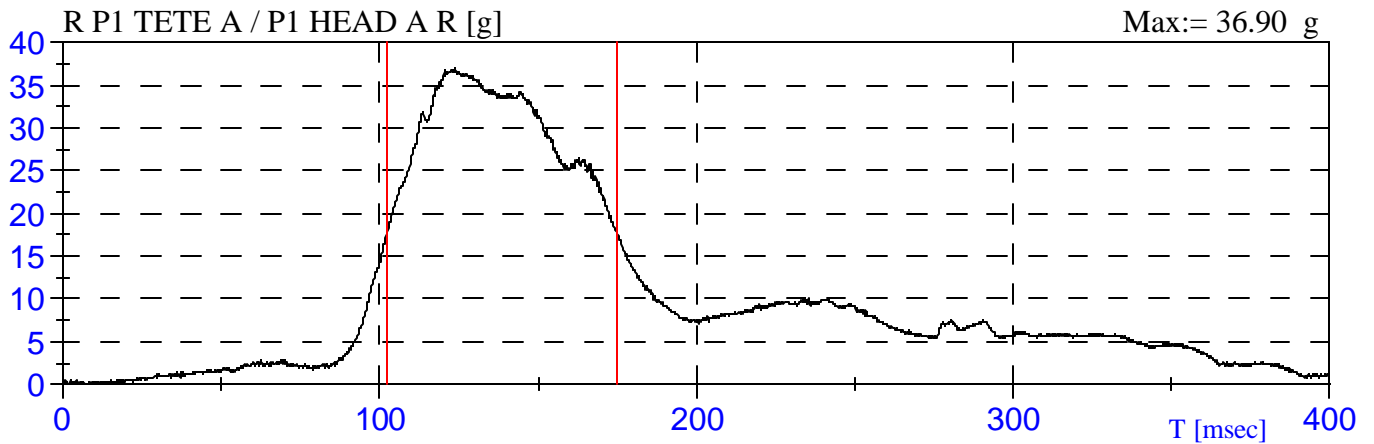
* Selon / According To: SAE J1727 96-08



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

HIC:= 59	HIC(36ms):= 46	HIC(15ms):= 20
T1:= 75.8 ms	T1:= 78.4 ms	T1:= 88.5 ms
T2:= 135.3 ms	T2:= 114.4 ms	T2:= 103.5 ms

* Selon / According To: SAE J1727 96-08

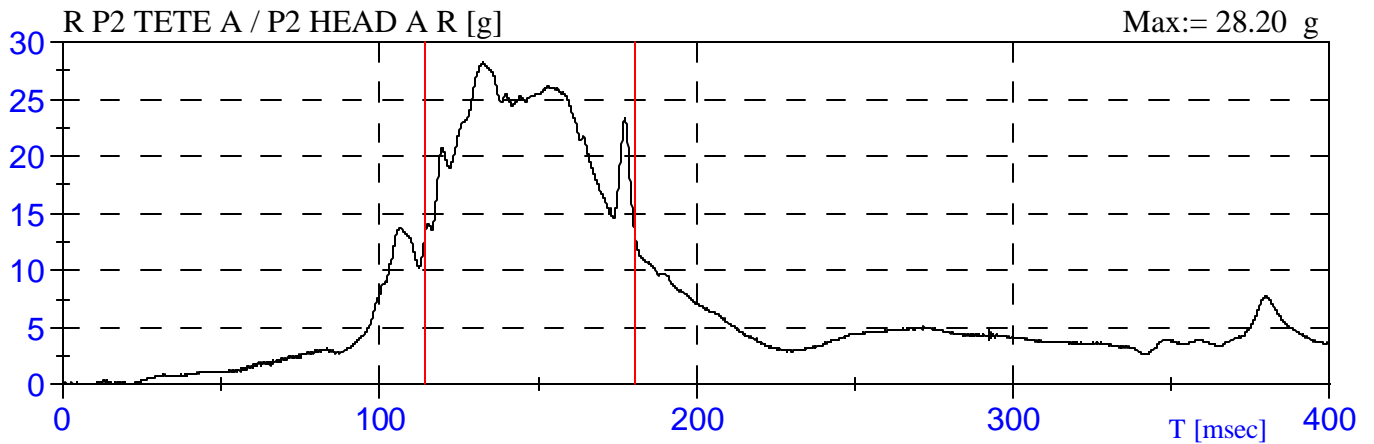


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 347	HIC(36ms):= 249	HIC(15ms):= 116
T1:= 102.2 ms	T1:= 113.7 ms	T1:= 117.7 ms
T2:= 174.6 ms	T2:= 149.7 ms	T2:= 132.7 ms

* Selon / According To: SAE J1727 96-08

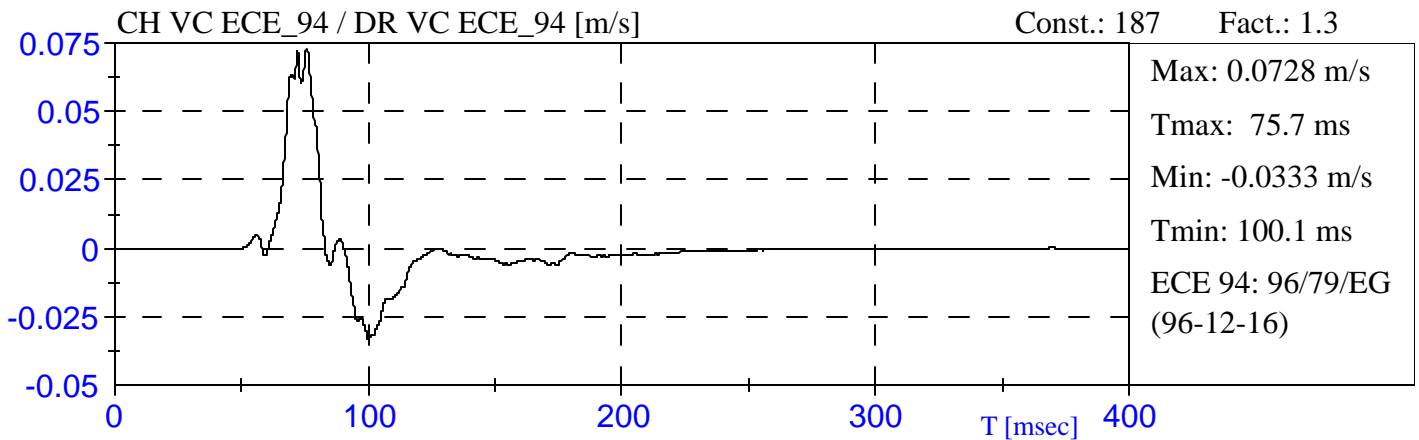
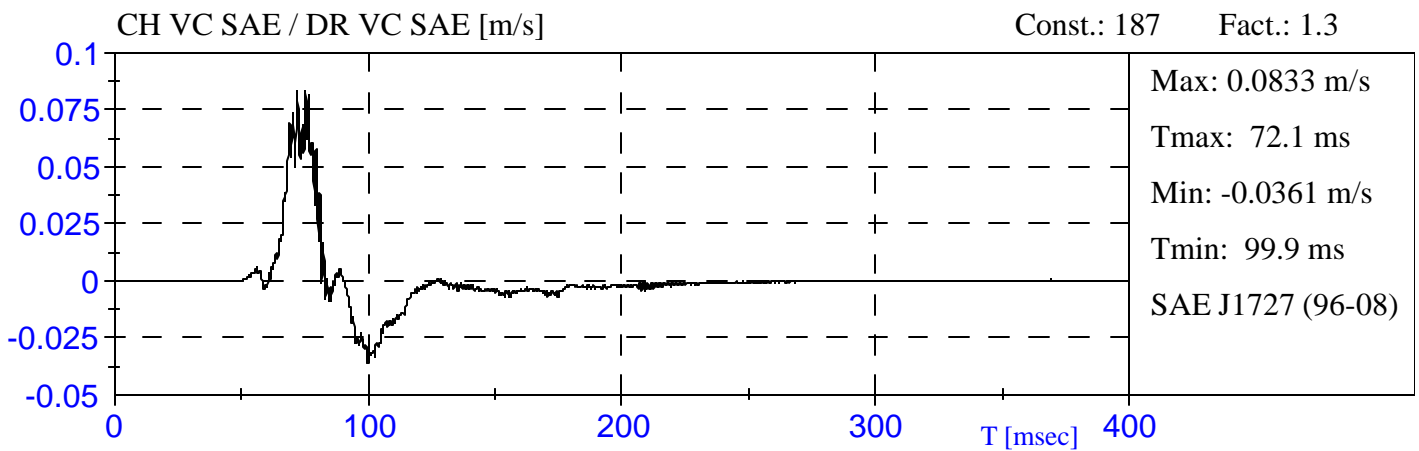
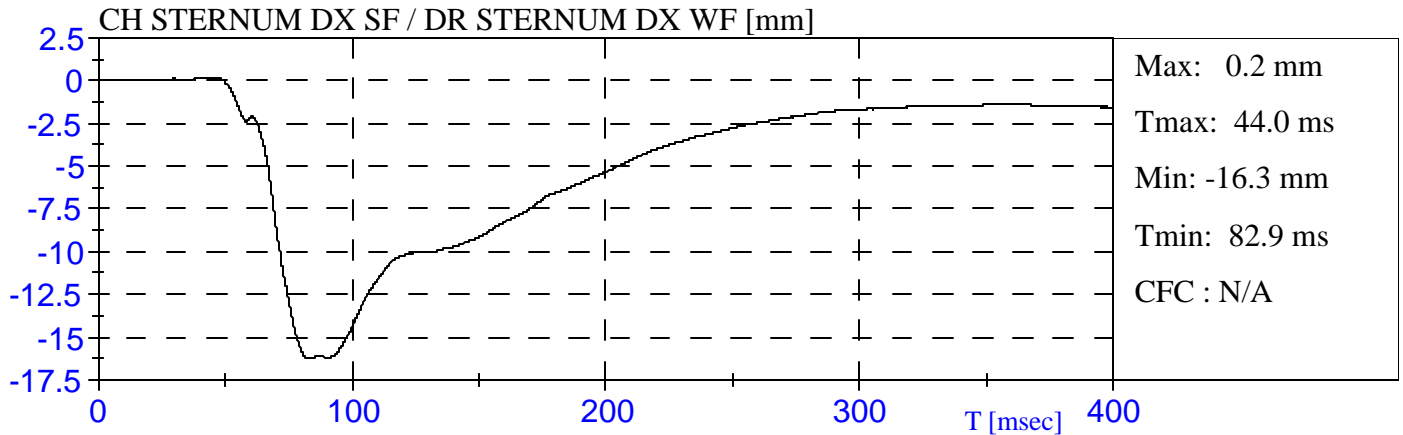


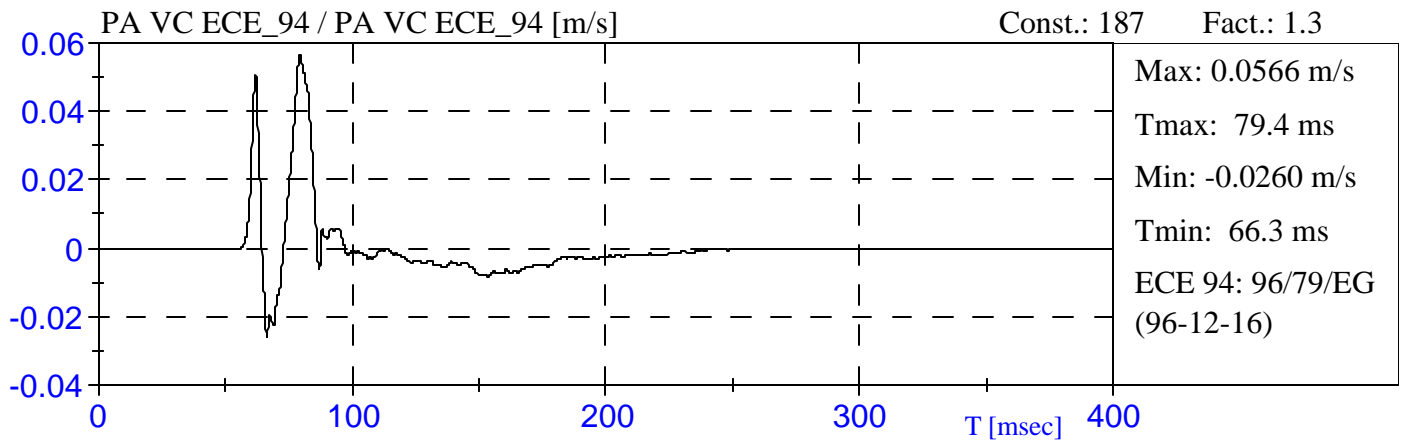
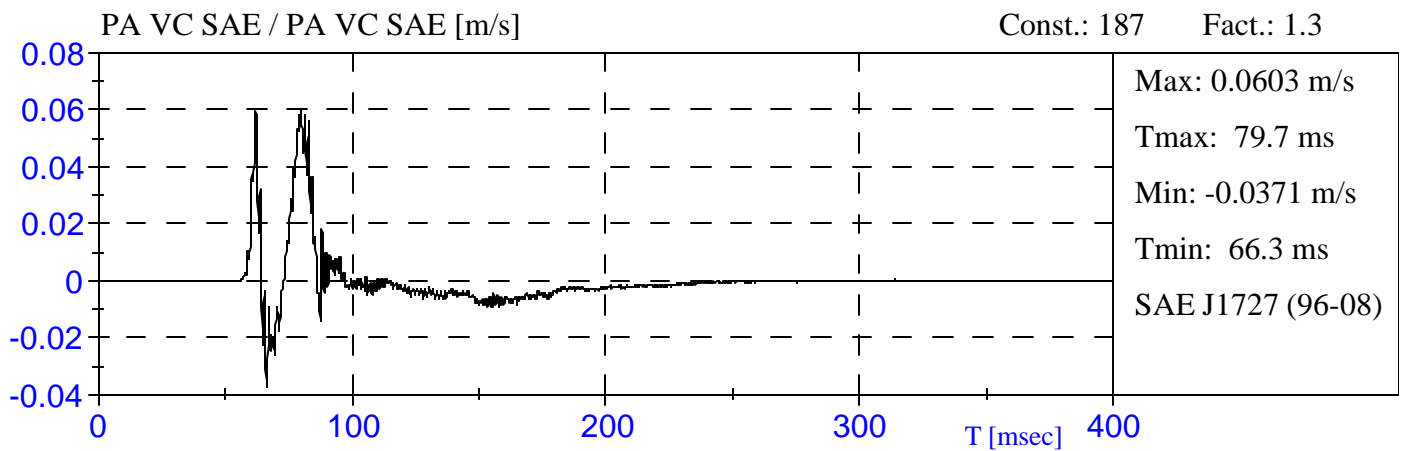
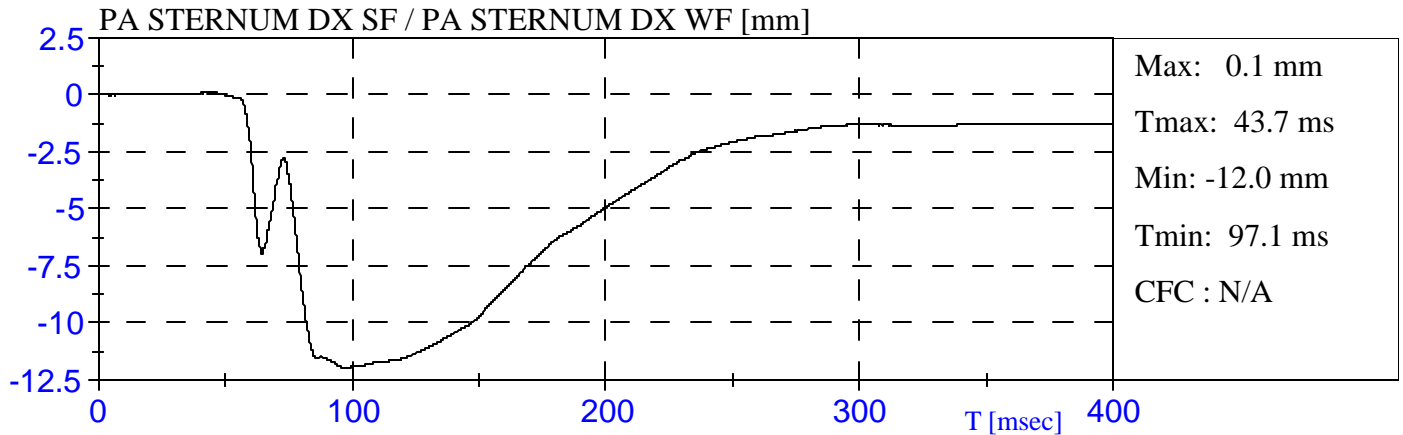
HEAD INJURY CRITERIA (HIC) *

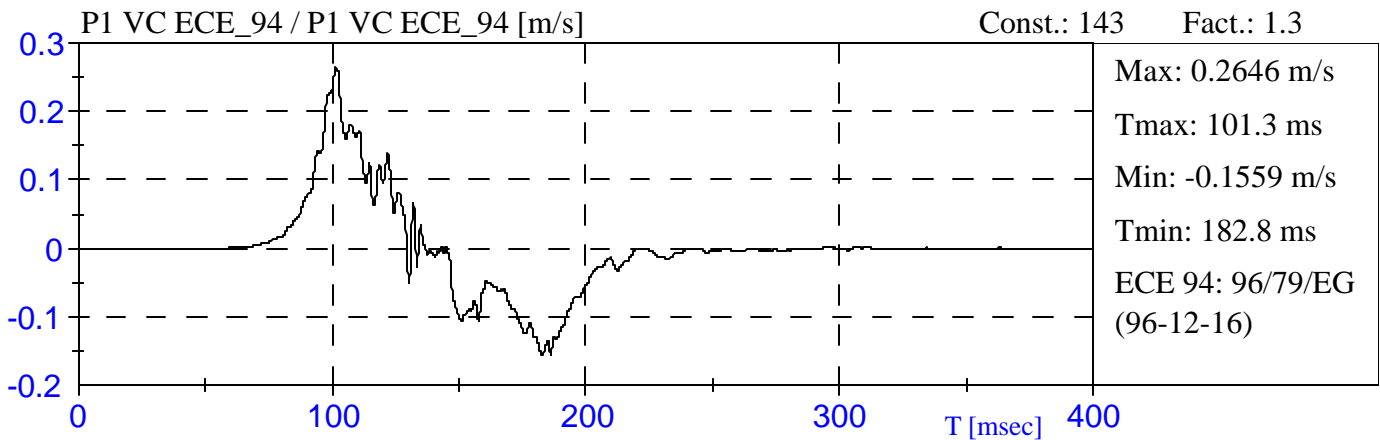
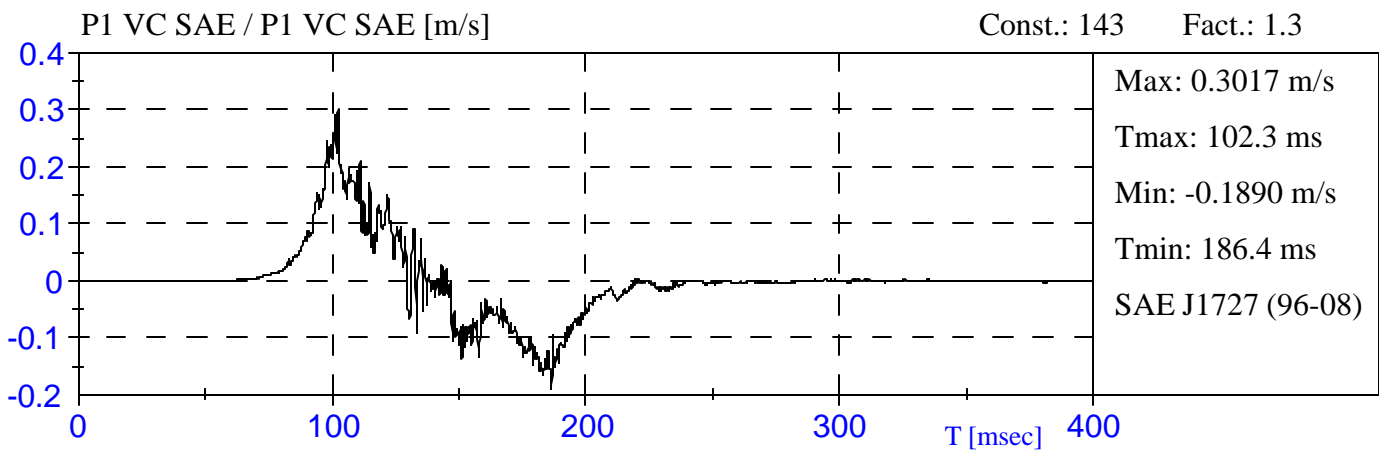
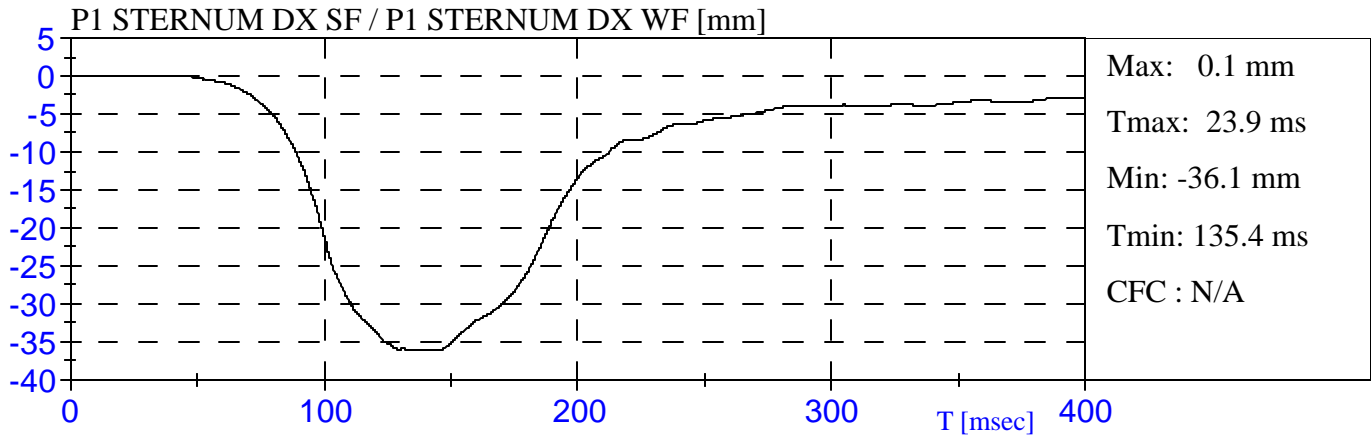
CRITÈRE DE BLESSURE DE LA TÊTE

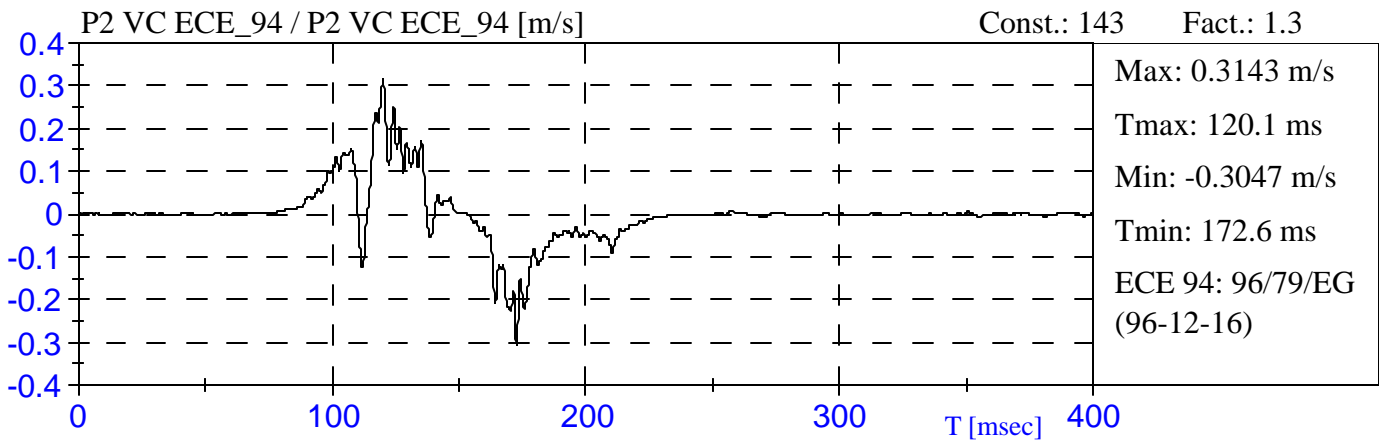
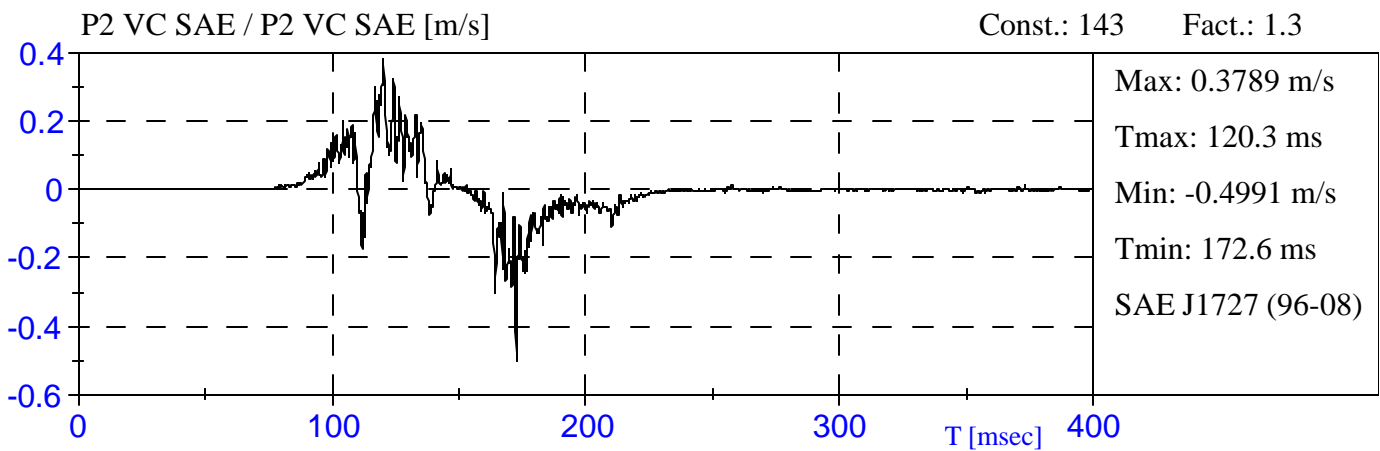
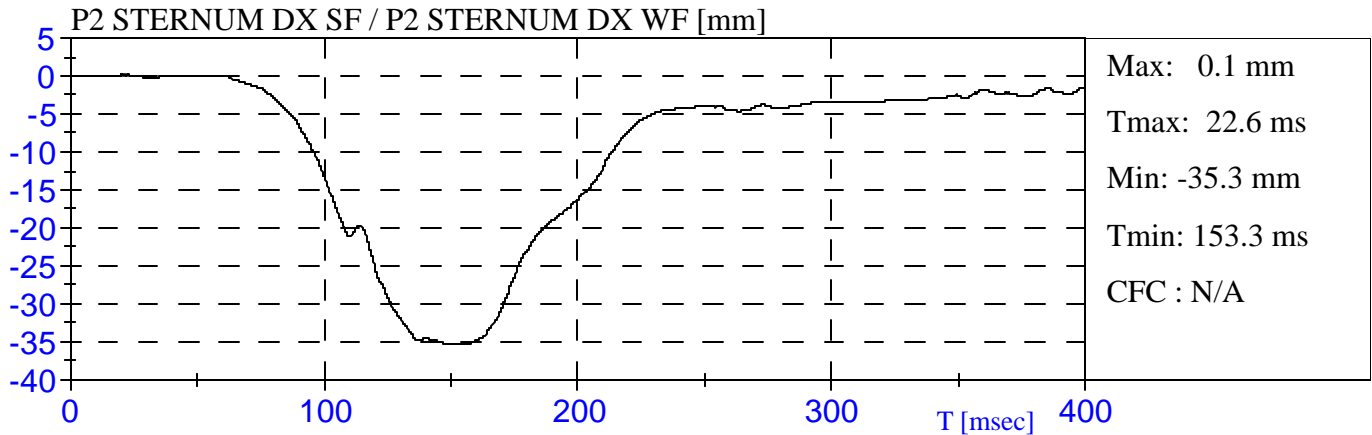
HIC:= 155	HIC(36ms):= 118	HIC(15ms):= 53
T1:= 114.4 ms	T1:= 126.0 ms	T1:= 129.1 ms
T2:= 180.5 ms	T2:= 162.0 ms	T2:= 144.1 ms

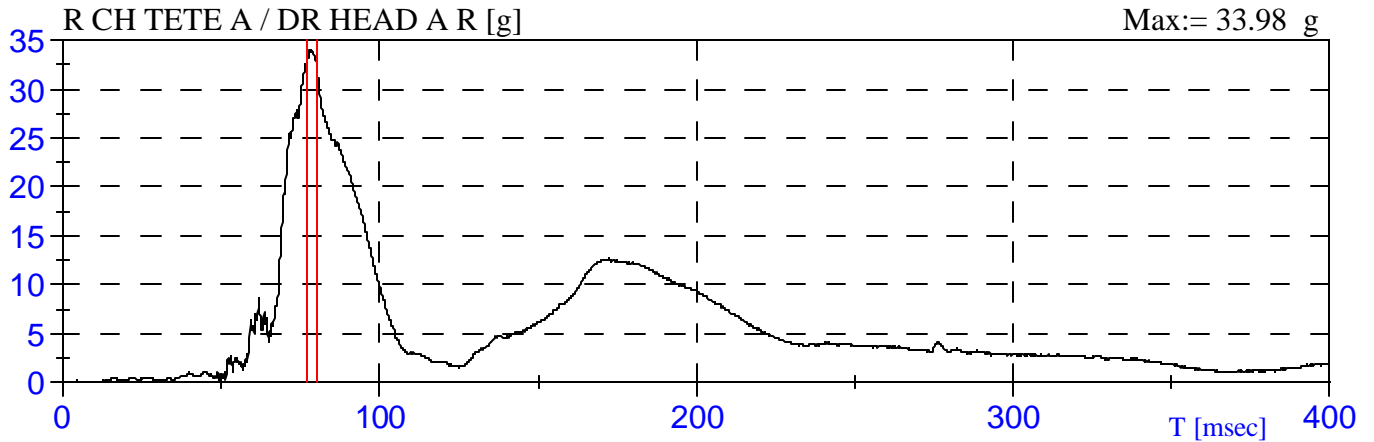
* Selon / According To: SAE J1727 96-08





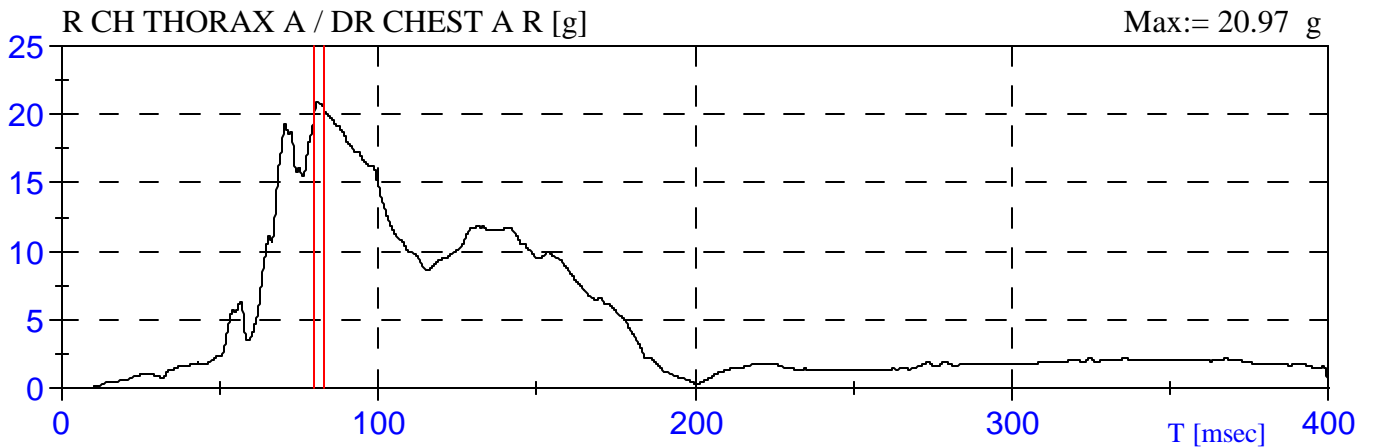






CLIP 3ms *

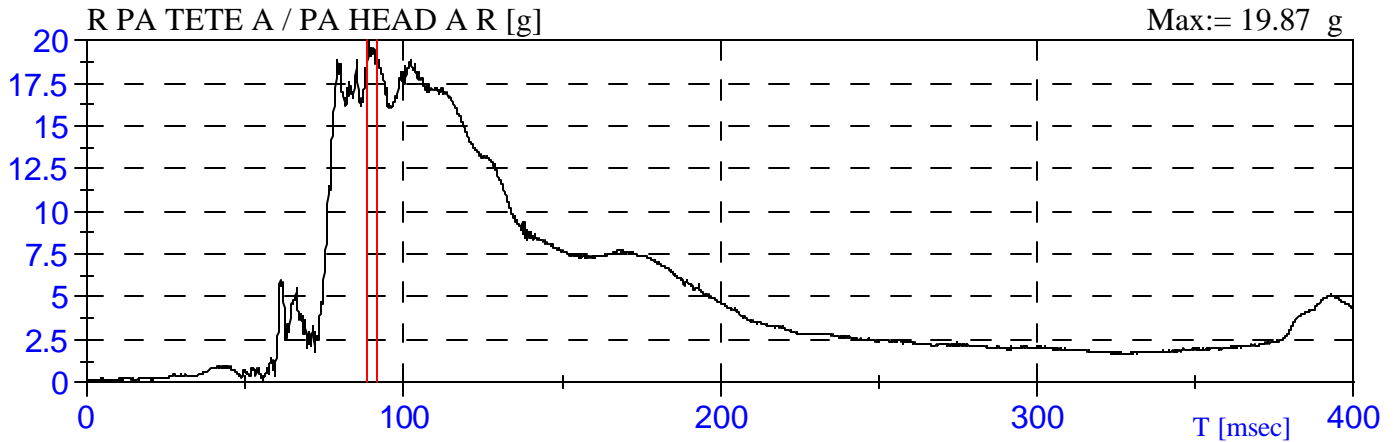
Acc. := 32.67 g	T1:= 76.9 ms	T2:= 79.9 ms
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CLIP 3ms *

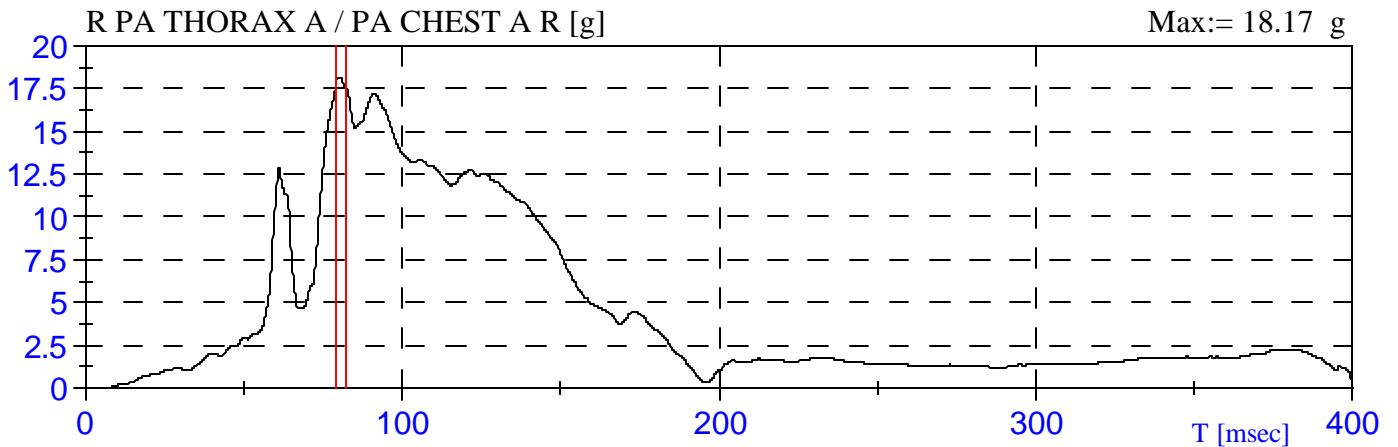
Acc. := 20.24 g	T1:= 79.9 ms	T2:= 82.9 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

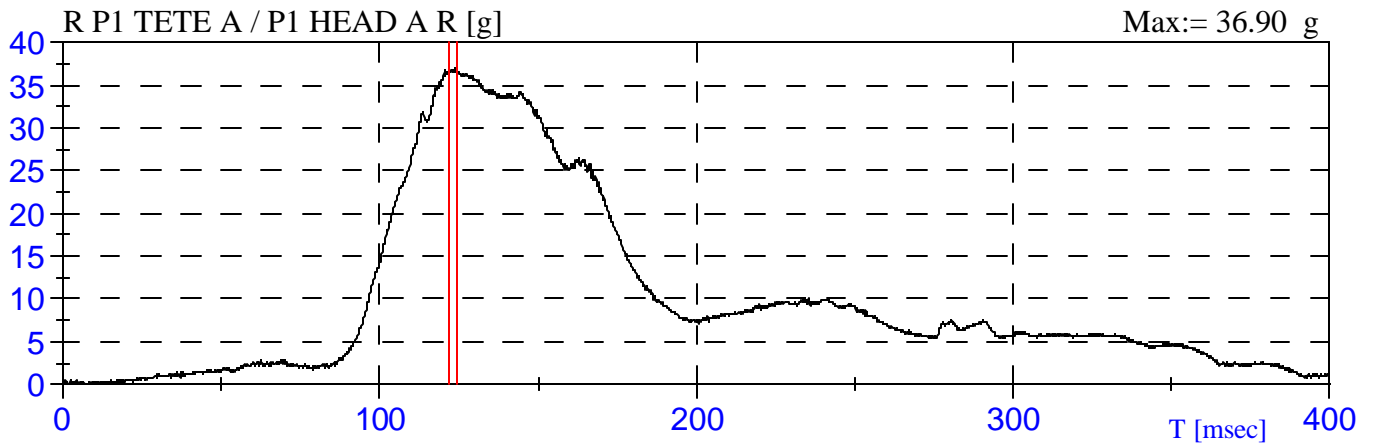
Acc. := 18.63 g	T1:= 88.5 ms	T2:= 91.5 ms
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CLIP 3ms *

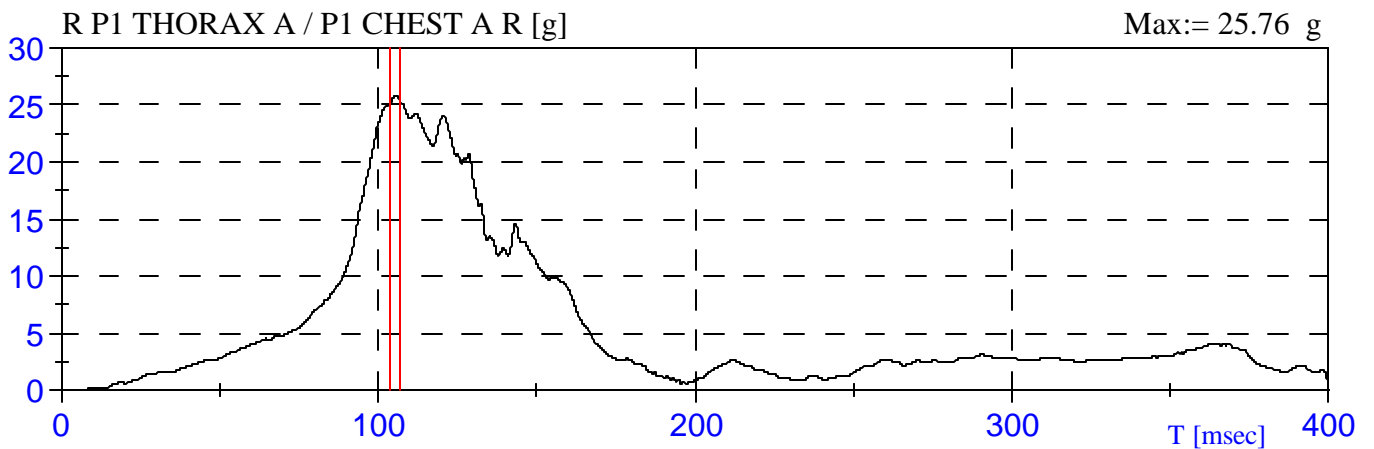
Acc. := 17.55 g	T1:= 78.8 ms	T2:= 81.8 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

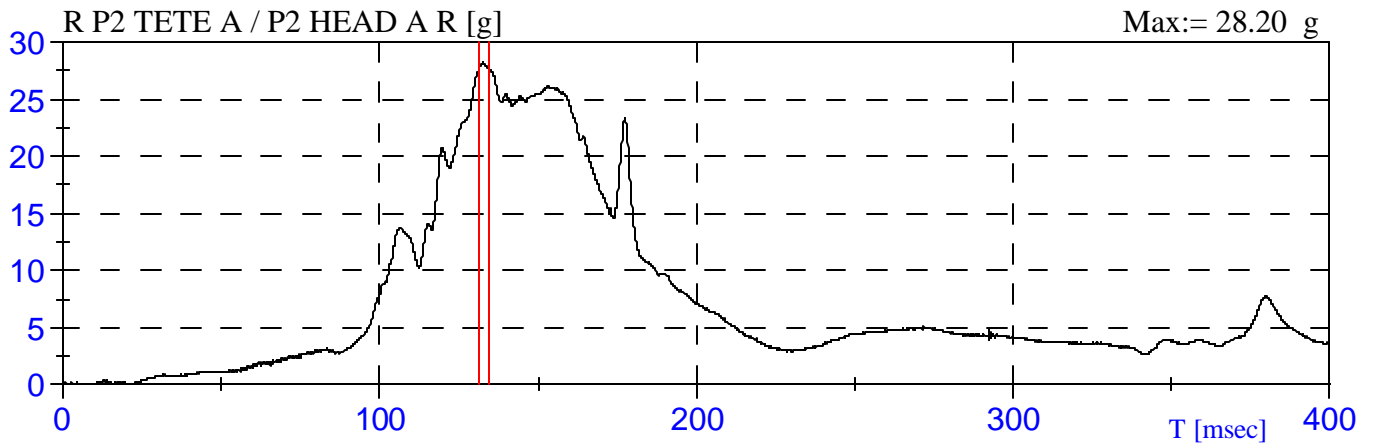
Acc. := 36.43 g	T1:= 121.5 ms	T2:= 124.5 ms
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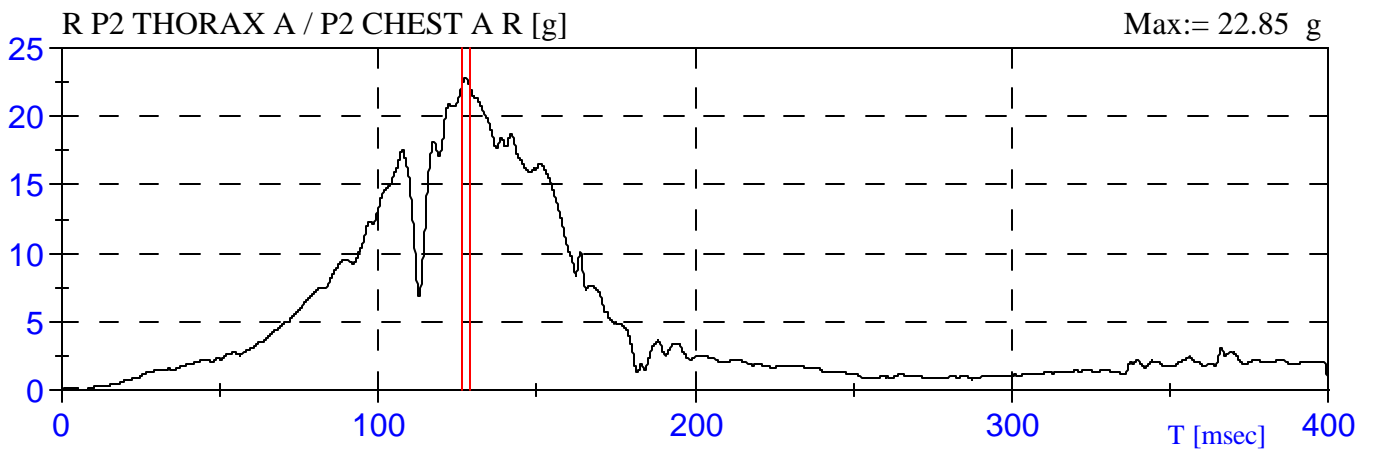
CLIP 3ms *

Acc. := 25.31 g	T1:= 103.8 ms	T2:= 106.8 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95


CLIP 3ms *

Acc. := 27.66 g	T1:= 131.2 ms	T2:= 134.4 ms
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CLIP 3ms *

Acc. := 22.04 g	T1:= 126.0 ms	T2:= 129.0 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	0.081	0.124
BAS / LOWER	0.107	0.150

TI Passager / Passenger

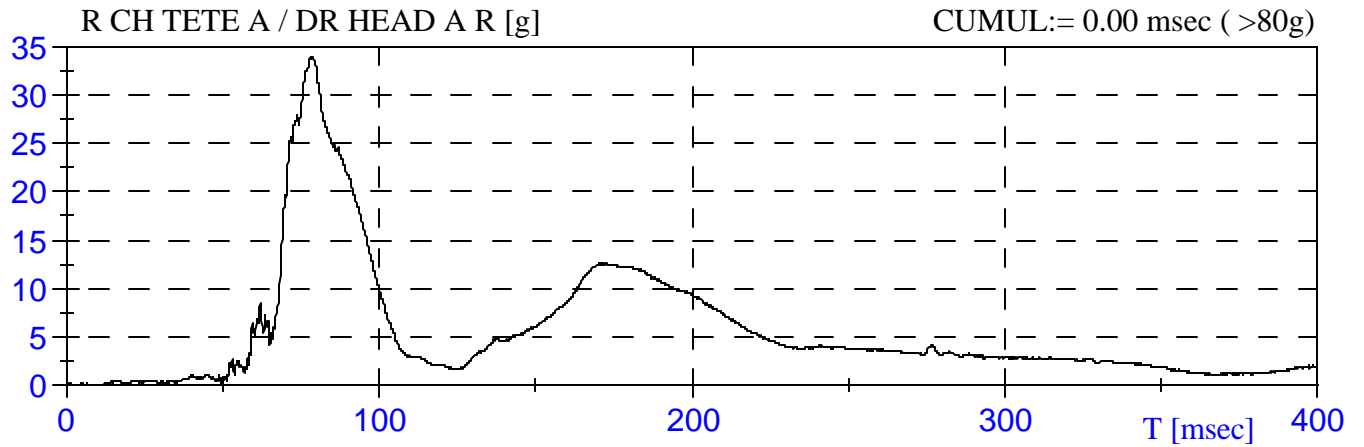
Mc := 115 N-m

Fc := 22.9 kN

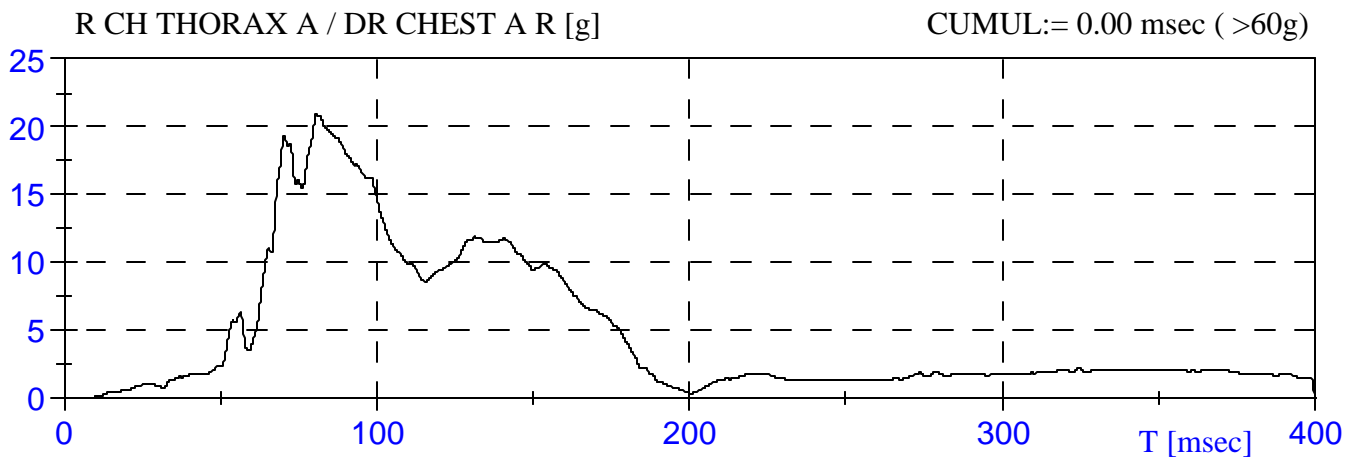
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	0.407	0.327
BAS / LOWER	0.095	0.113

* Selon / According To: SAE J1727 AUG 96

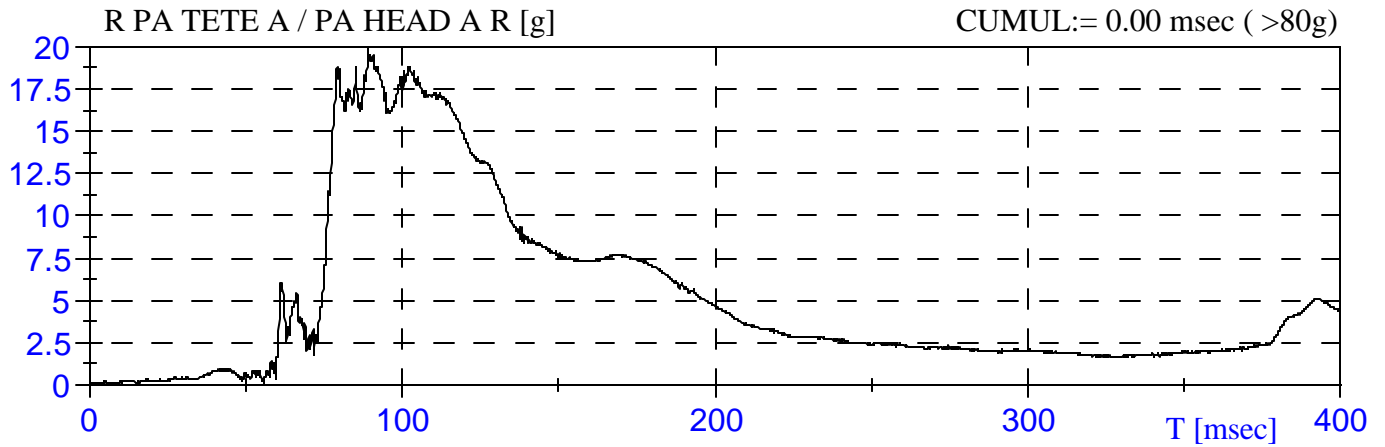
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



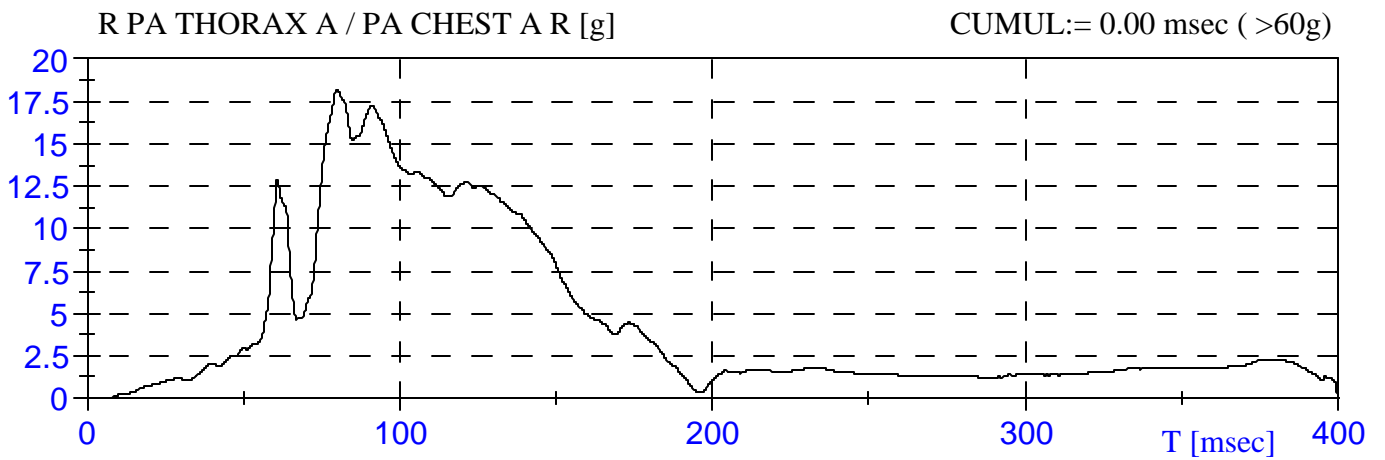
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



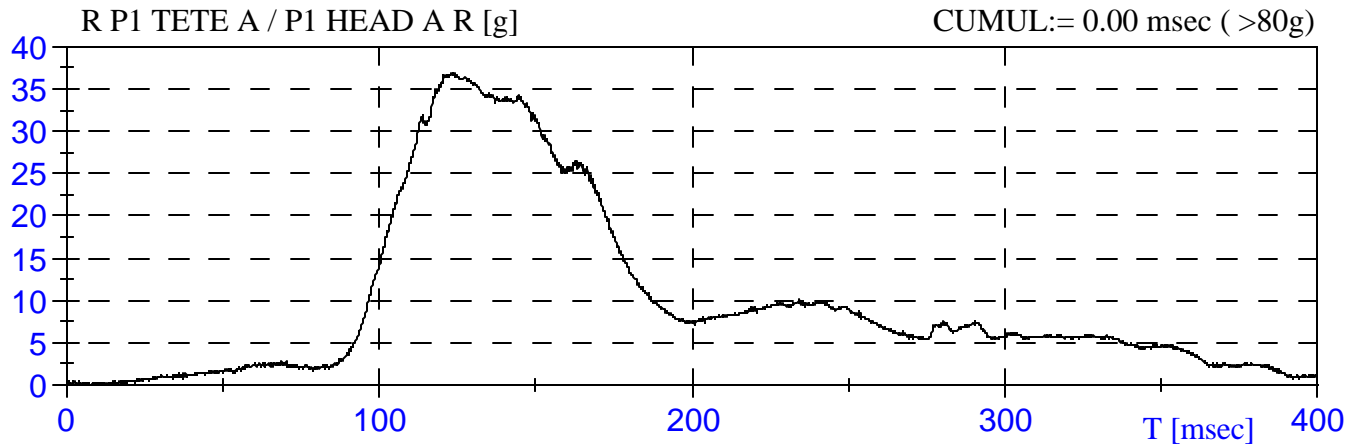
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



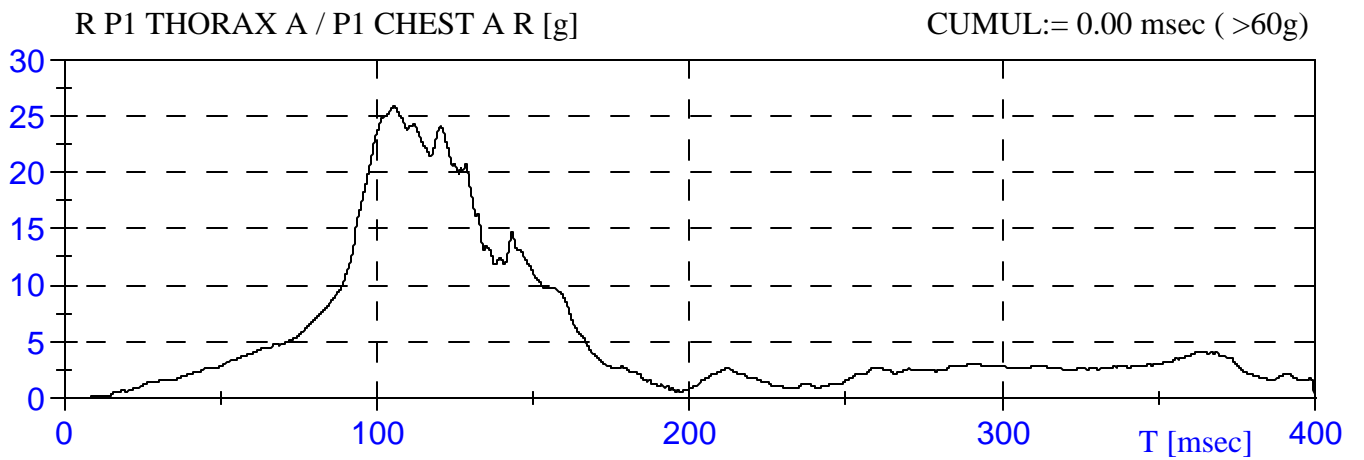
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



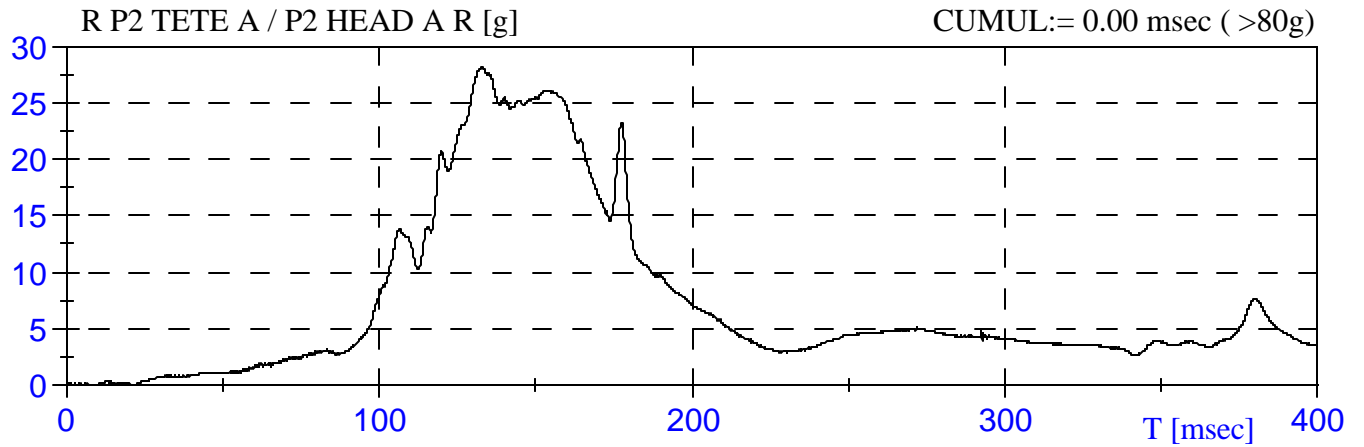
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



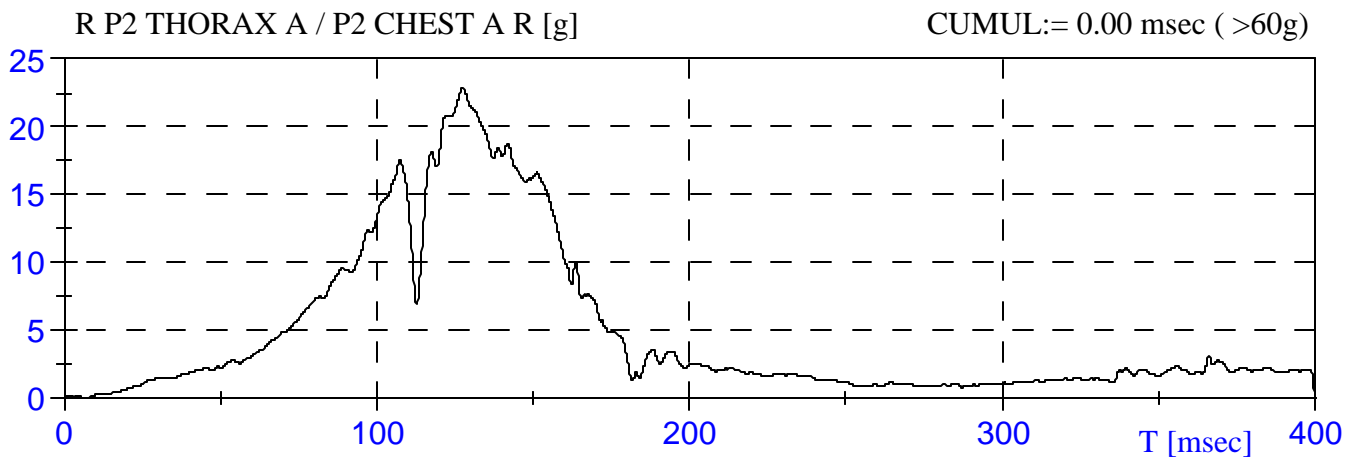
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



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



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



Chauffeur / Driver

$$N_{ij}^* = 0.31$$

Valeurs critiques
 Criticals Values

N te	N ce	N tf	N cf	Tc 4287
0.31	0.04	0.24	0.12	Cc 3880
				Fc 155
				Ec 67

Passager / Passenger

$$N_{ij}^* = 0.18$$

Valeurs critiques
 Criticals Values

N te	N ce	N tf	N cf	Tc 4287
0.16	0.06	0.18	0.09	Cc 3880
				Fc 155
				Ec 67

* Selon / According To: Federal Register 5/2000