



QUICKLOOK REPORT

56 km/h (35 mph) Frontal Validation Testing

2010 Mazda3 I Sport 4-Door Sedan NHTSA No. MA5401

May 7, 2009

Injury Reading	Driver, 50th Percentile Male					Passenger, 5th Percentile Female			
	Units	Limit	Value	t ¹	t ²	Limit	Value	t ¹	t ²
HIC 15		700	186.6	73.2	88.2	700	283.1	58.9	73.9
Nij		1	0.21	100.9	Nte	1	0.46	71.0	Nte
Upper Neck Force Z (Tension)	Newtons	4170	792.8	79.2		2620	835.2	62.7	
Upper Neck Force Z (Compression)	Newtons	4000	-58.2	141.1		2520	-232.6	97.4	
Upper Neck Moment Y (Flexion)	Newtons	310	45.4	66.2		155	21.8	142.4	
Upper Neck Moment Y (Tension)	Newtons	135	-19.3	100.7		67	-20.2	71.0	
Chest Deflection	MM	76	-15.7	51.3		52	-22.8	60.9	
Femur Force, Left	Newtons	10008	-217.3	20.3		6805	-2537.0	49.4	
Femur Force, Right	Newtons	10008	-739.4	62.6		6805	-3049.2	58.8	

Test Particulars				
Metric Units		English Units		
Units	Value	Units	Value	
Vehicle Impact Velocity	km/h	56.36	mph	35.02
Vehicle Curb Weight	kg	1327	lbs	2925
Vehicle Test Weight	kg	1506	lbs	3320
As Delivered Vehicle Width	MM	1750	Inches	68.9
As Delivered Vehicle Wheelbase	MM	2640	Inches	103.9
As Delivered Vehicle Length	MM	4575	Inches	180.1

Standards Measured Post-Test	
212 - Windshield Periphery Retention	Yes
219 (Partial) - Windshield Zone	Yes
301 - Fuel System Integrity	Yes

	Vehicle Safety Features	
	Driver	Passenger
Pre-tensioners	Yes	Yes
Load Limiters	Yes	Yes
Adj. Belt Anchors	Yes	Yes
ABS	Yes	
ADLs	No	

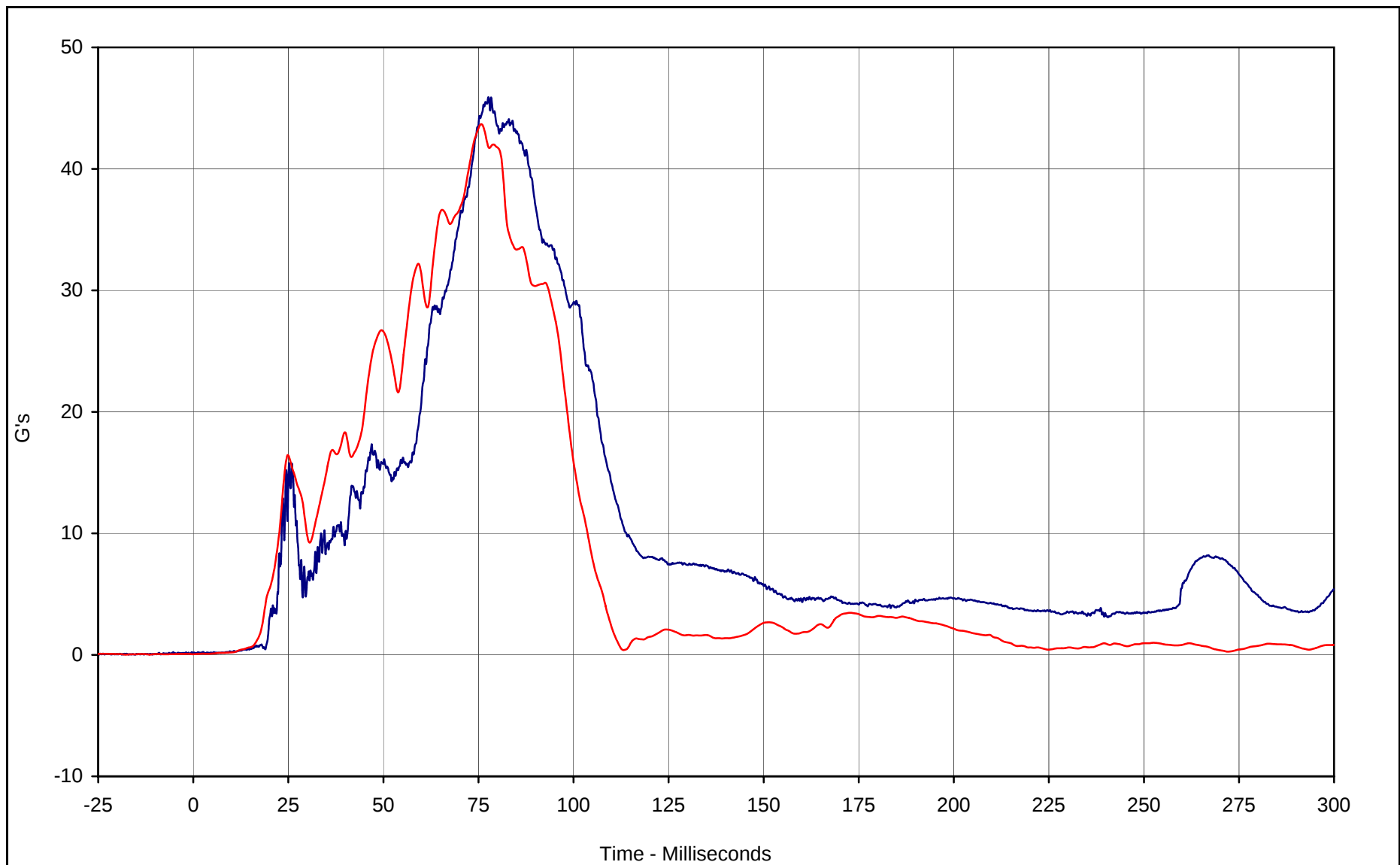
	Airbag Deployment			
	Driver (P1)		Front Pass. (P2)	
	Deployment	Mount	Deployment	Mount
Front	Yes	St. Whl	Yes	Dash
Knee	N/A	N/A	N/A	N/A
Side Torso	No	Seat	N/A	N/A
Side Curtain	No	Header	No	Header

Test Vehicle Doors	
Disable ADLs Using Owners Manual	No
Doors Locked (Pre-Test)	No
Doors Latched (Post-Test)	Yes

Comments: _____

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TR-P29001-06-NC



Curve Description	CURNO	Type	Units	Max	Time	Min	Time	SAE Class
Driver Head Resultant Primary	001	RES	G's	45.9	77.6	0.1	0.8	1000
Driver Chest Resultant Primary	013	RES	G's	43.7	75.7	0.0	0.0	180

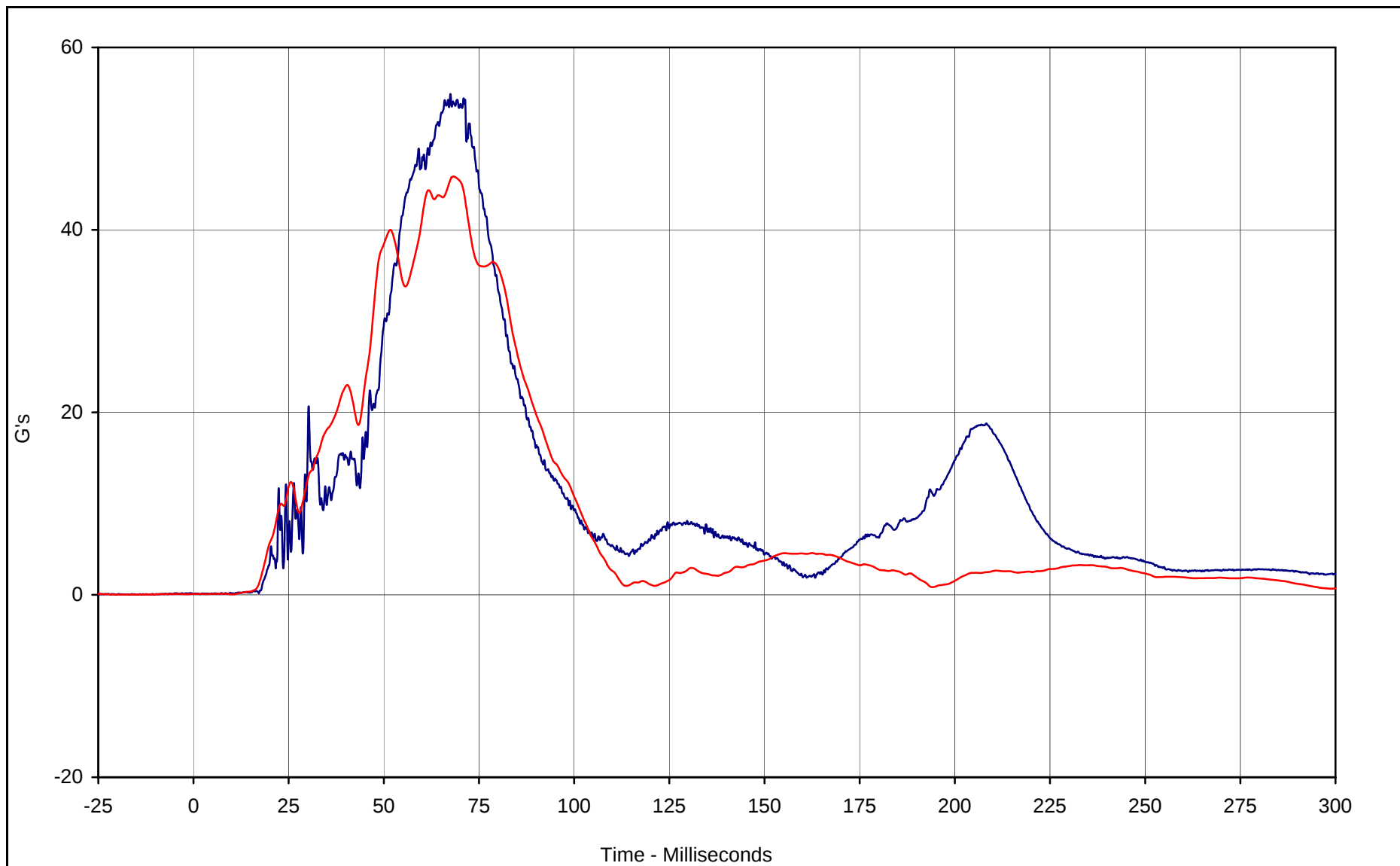


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Curve Description	CURNO	Type	Units	Max	Time	Min	Time	SAE Class
Passenger Head Resultant Primary	045	RES	G's	54.9	67.5	0.1	1.6	1000
Passenger Chest Resultant Primary	057	RES	G's	45.8	68.3	0.0	10.4	180

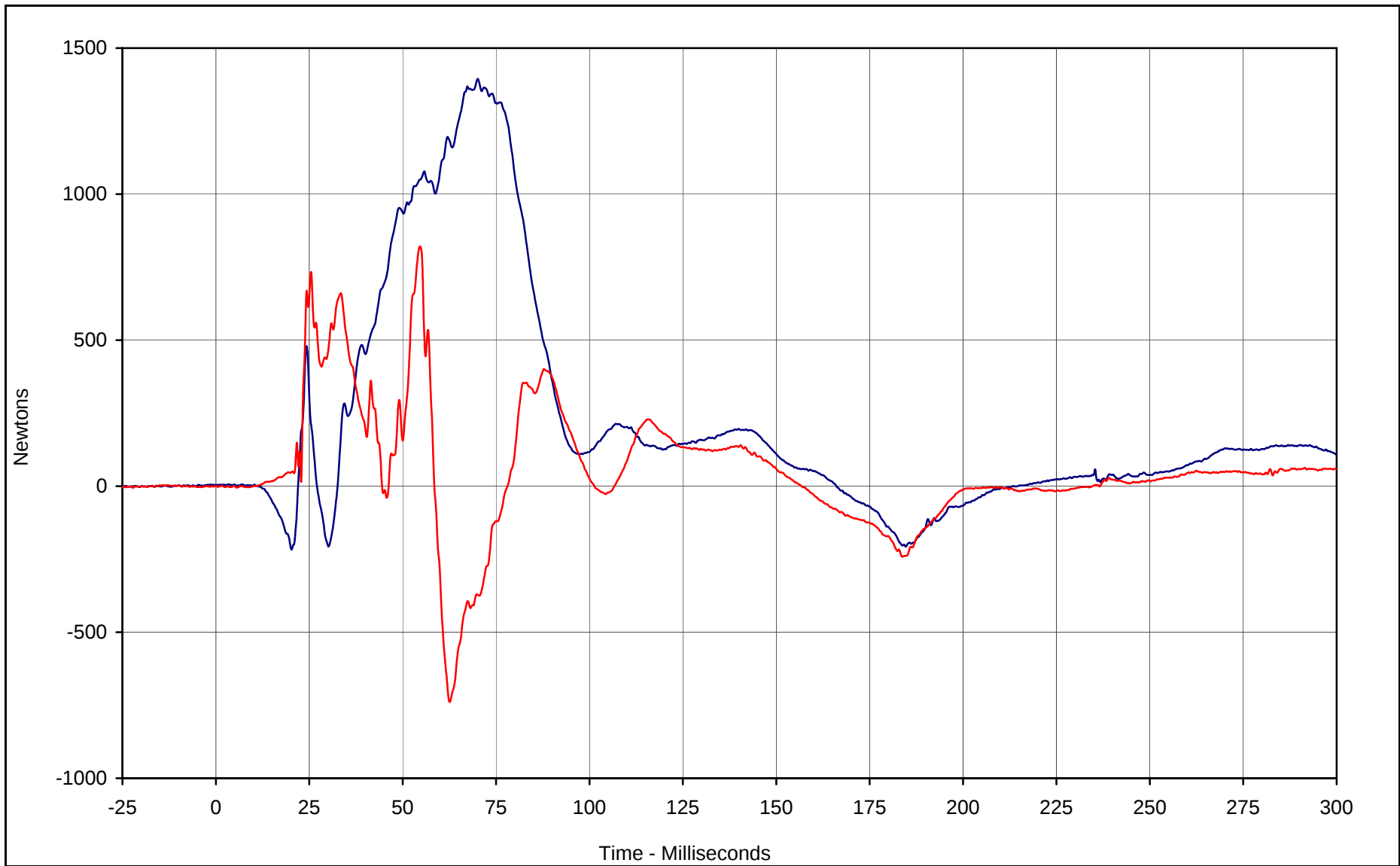


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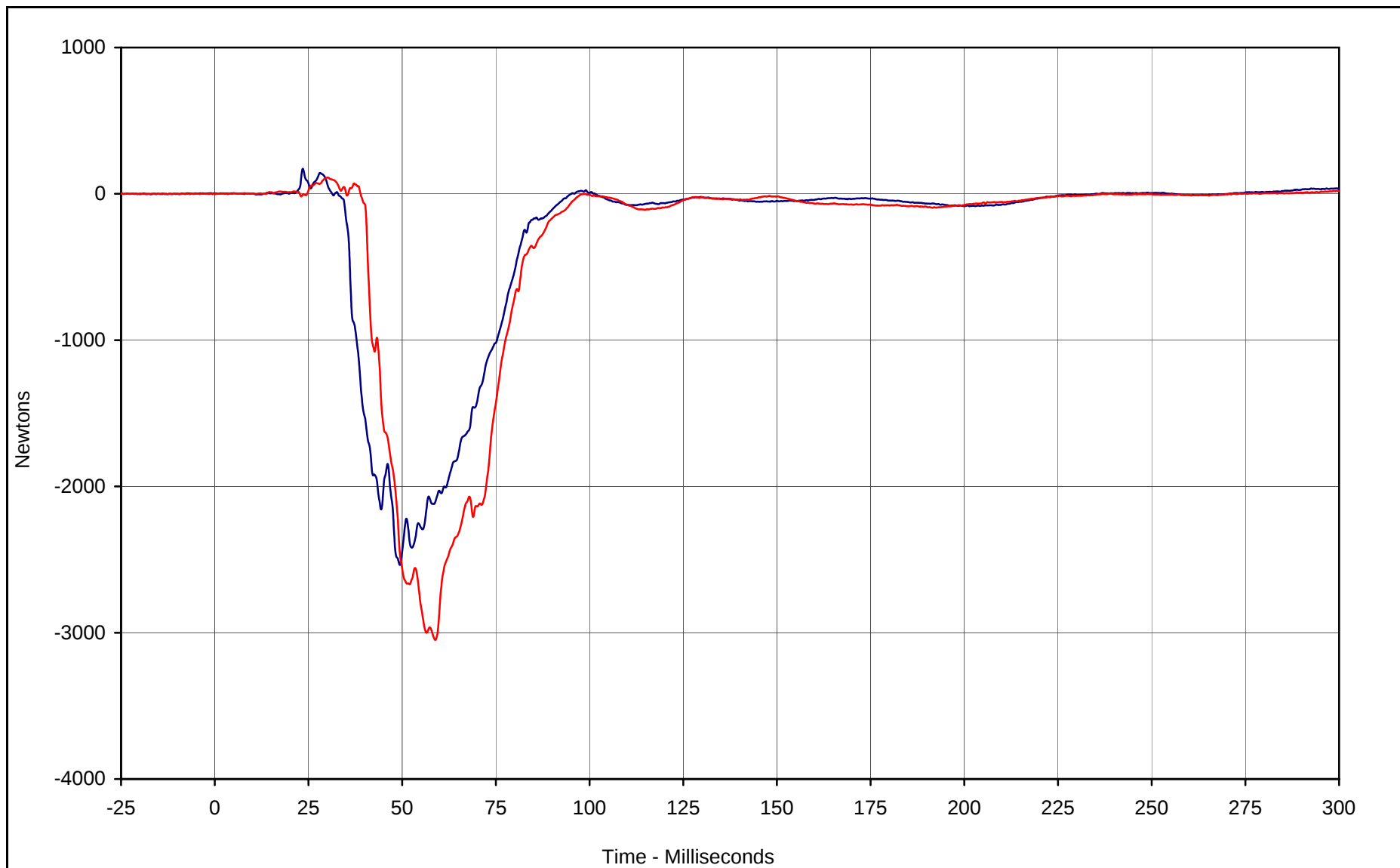


Curve Description	CURNO	Type	Units	Max	Time	Min	Time	SAE Class
Driver Left Femur Force Z	023	FIL	Newtons	1394.9	70.1	-217.3	20.3	600
Driver Right Femur Force Z	024	FIL	Newtons	820.9	54.6	-739.4	62.6	600

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Curve Description	CURNO	Type	Units	Max	Time	Min	Time	SAE Class
Passenger Left Femur Force Z	067	FIL	Newtons	172.3	23.5	-2537.0	49.4	600
Passenger Right Femur Force Z	068	FIL	Newtons	112.1	30.1	-3049.2	58.8	600

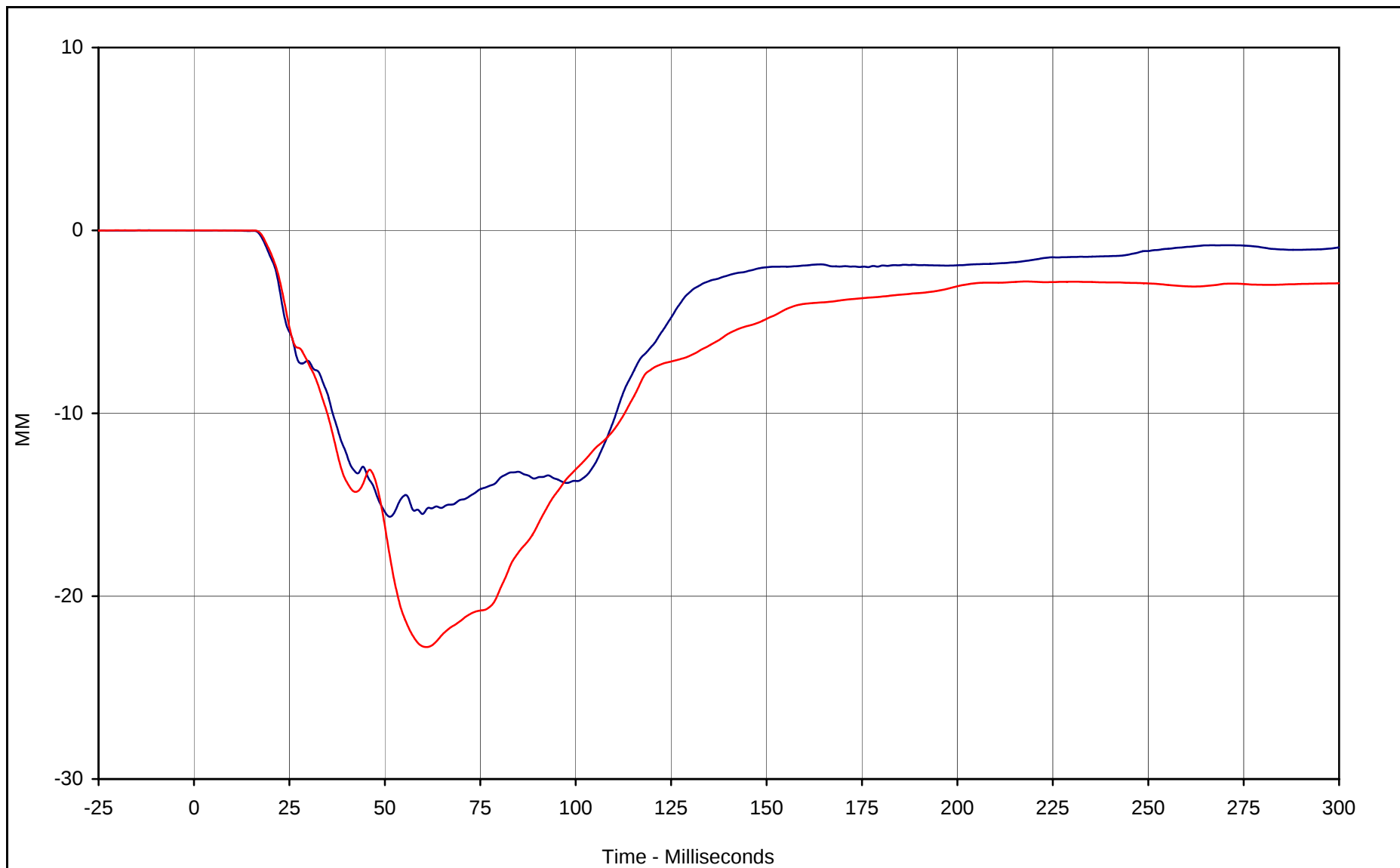


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Curve Description	CURNO	Type	Units	Max	Time	Min	Time	SAE Class
Driver Chest Deflection	019	FIL	MM	0.0	5.5	-15.7	51.3	180
Passenger Chest Deflection	063	FIL	MM	0.0	5.4	-22.8	60.9	180

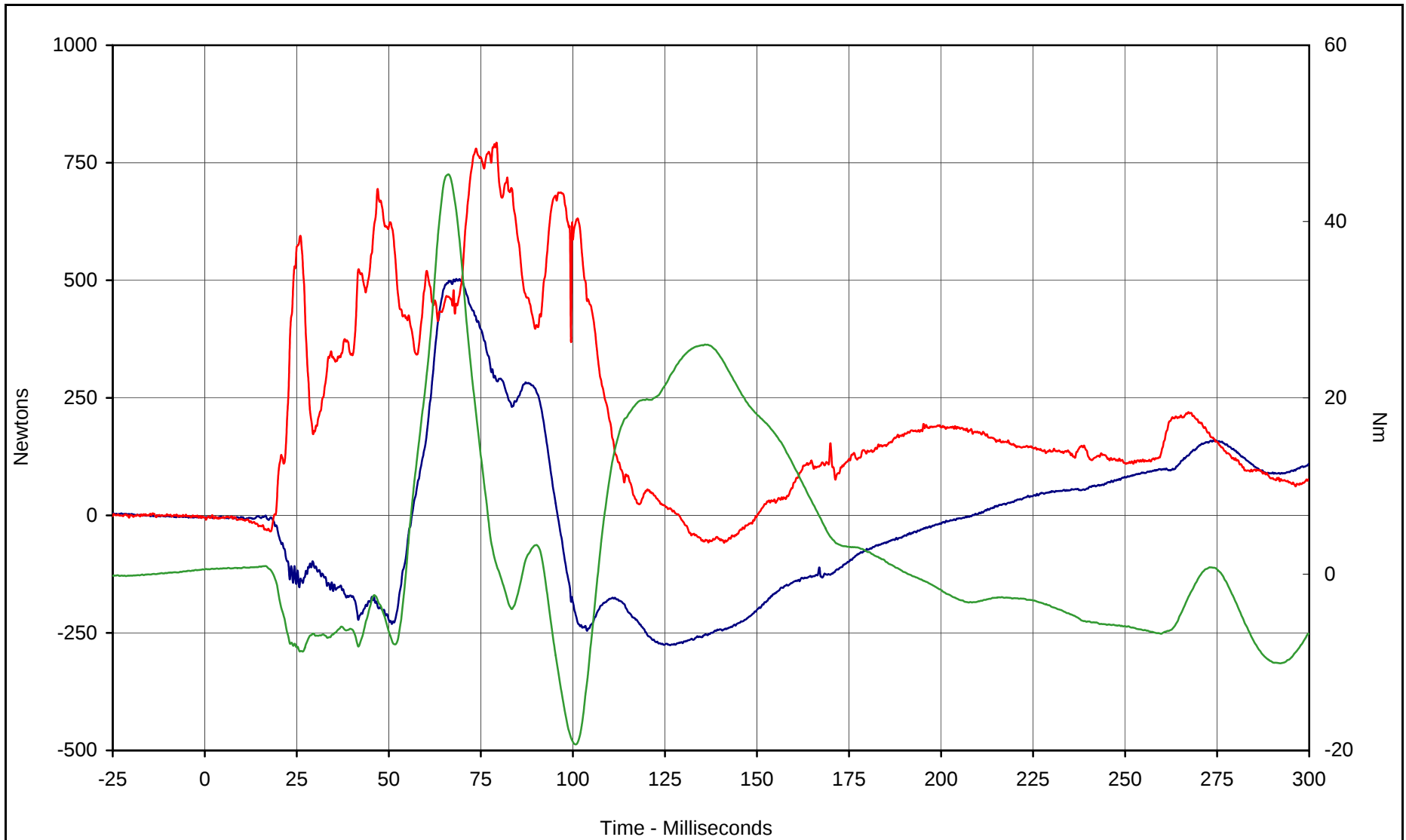


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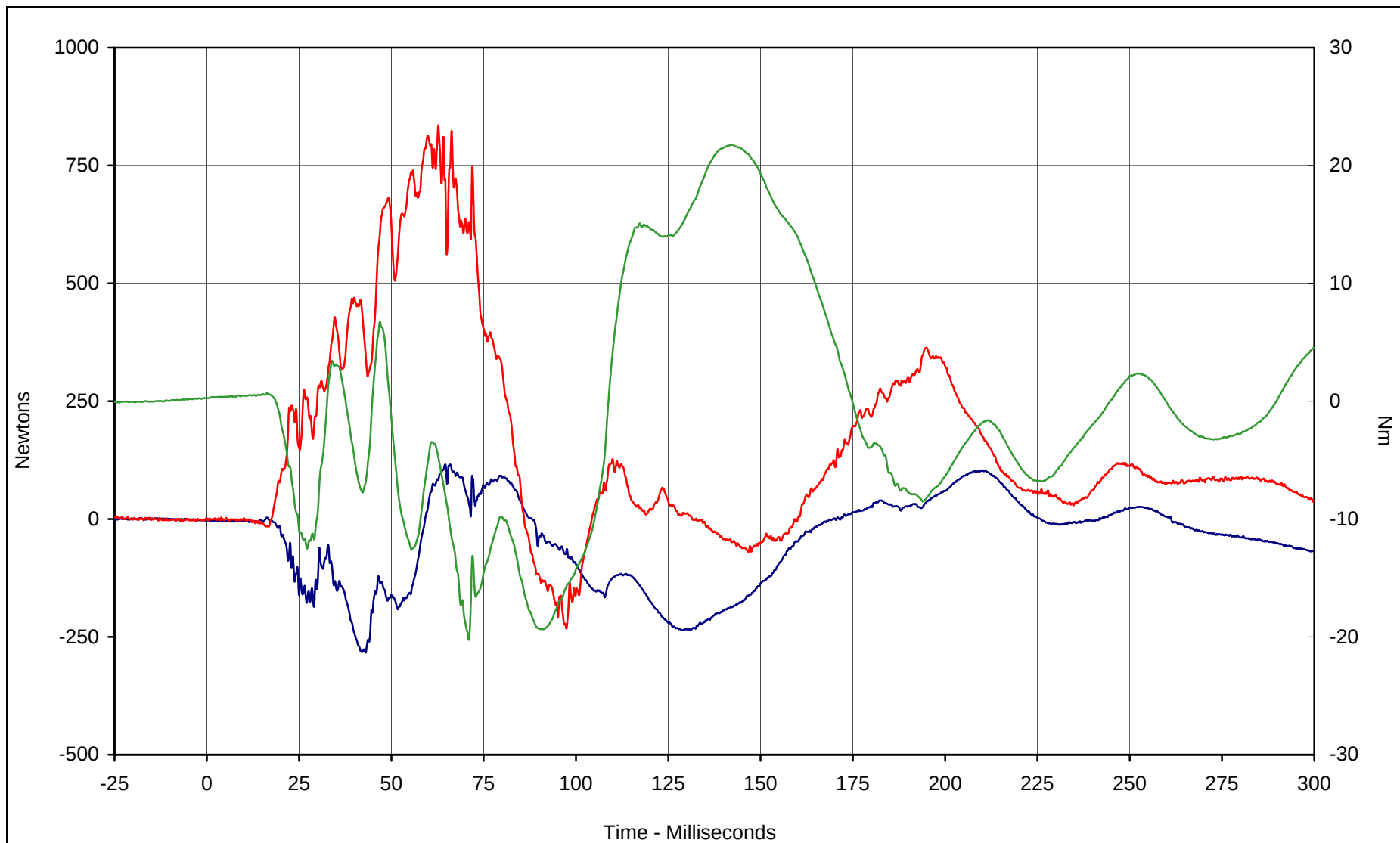


Curve Description	CURNO	Type	Units	Max	Time	Min	Time	SAE Class
Driver Upper Neck Force X	007	FIL	Newtons	503.0	68.3	-276.2	126.5	1000
Driver Upper Neck Force Z	009	FIL	Newtons	792.8	79.2	-58.2	141.1	1000
Driver Upper Neck Moment Y	011	FIL	Nm	45.4	66.2	-19.3	100.7	600

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Curve Description	CURNO	Type	Units	Max	Time	Min	Time	SAE Class
Passenger Upper Neck Force X	051	FIL	Newtons	115.9	64.6	-283.7	43.0	1000
Passenger Upper Neck Force Z	053	FIL	Newtons	835.2	62.7	-232.6	97.4	1000
Passenger Upper Neck Moment Y	055	FIL	Nm	21.8	142.4	-20.2	71.0	600

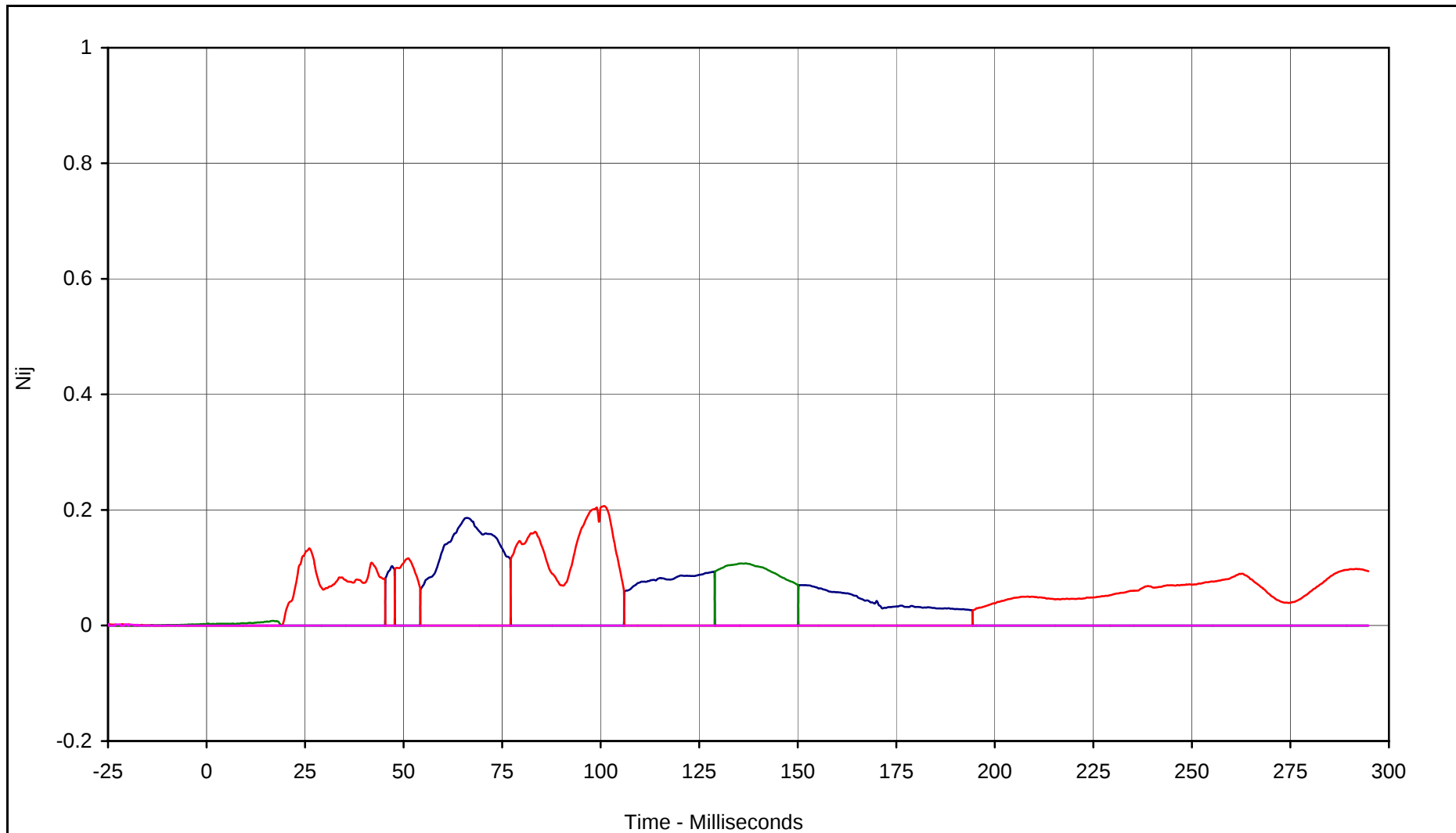


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Curve Description	CURNO	Type	Units	Max	Time	Min	Time	SAE Class
Driver Nij - Ntf		Calc	Ntf	0.19	66.1			
Driver Nij - Nte		Calc	Nte	0.21	100.9			
Driver Nij - Ncf		Calc	Ncf	0.11	136.8			
Driver Nij - Nce		Calc	Nce	0.00	-26.0			

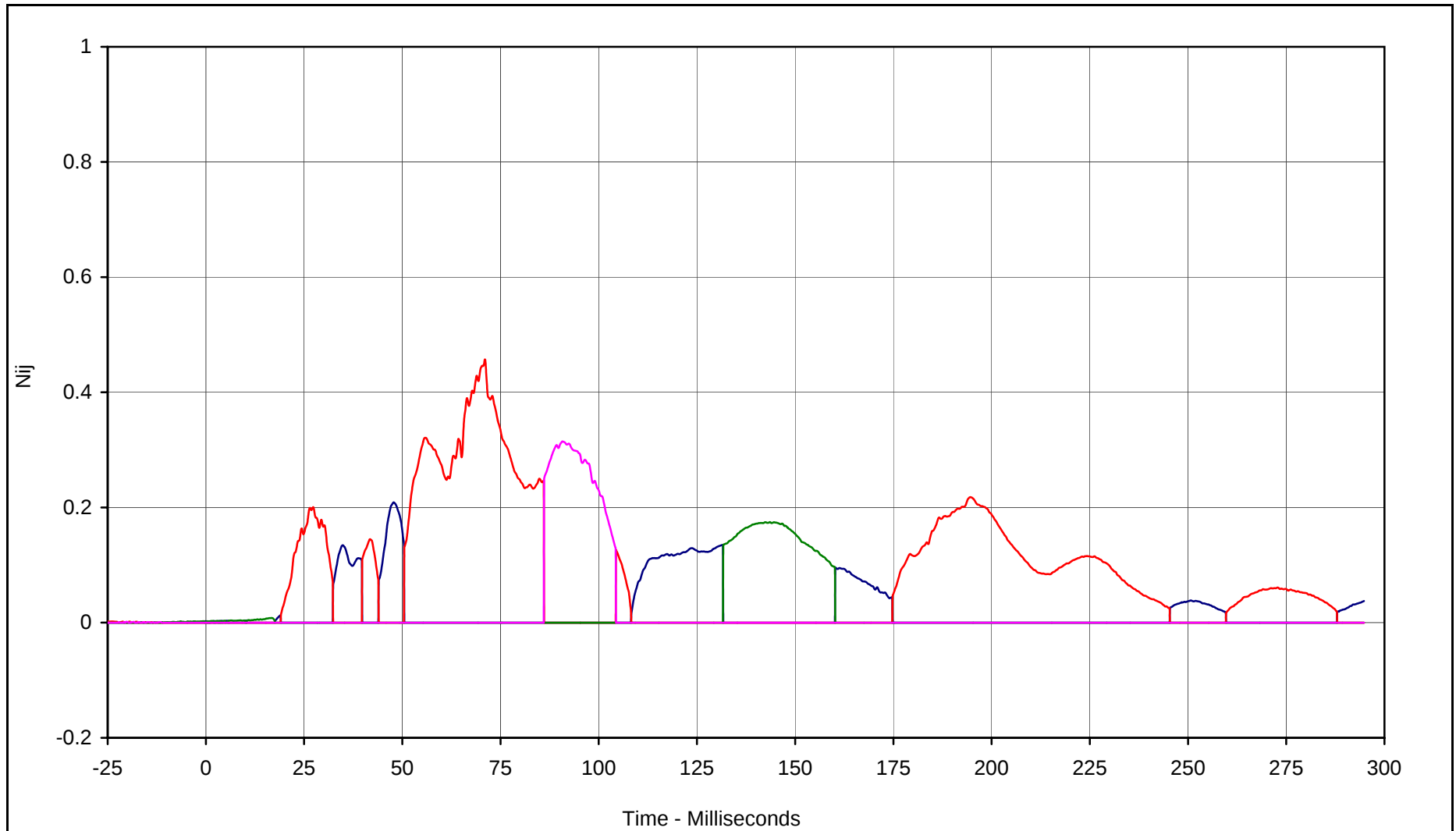


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Pass Nij - Ntf		Calc	Ntf	0.21	47.8			
Pass Nij - Nte		Calc	Nte	0.46	71.0			
Pass Nij - Ncf		Calc	Ncf	0.17	143.6			
Pass Nij - Nce		Calc	Nce	0.31	90.8			



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