



APV Engineering & Testing Services
 1521 Hume Highway
 Campbellfield, Victoria, 3061
 A.B.N. 26 148 189 468

Telephone: 613 9355 5533
 Facsimile: 613 9357 4362

DoTRS TFI#: 2741

NATA Accreditation No. 593
 Accredited for compliance with ISO/IEC 17025

TEST REPORT

Test Facility: Component Laboratory

Test Title / Description: Dynamic Sled Testing to AS/NZS 8005:2013

Test Report: 1090

Test Date: 28/05/2019

Customer: Ben Cohen Gazit
 Alideal Ltd.
 Tel-Aviv 6110103, IL

Submitted by:

[Signature] 4/06/2019

José de Freitas
 Test Engineer
 e-mail: jose.defreitas@apvcorporation.com

Authorised by:

[Signature] 17/06/2019

Ted Kieca
 APV-T Authorised Signatory
 e-mail: ted.kieca@apvcorporation.com

Amendment Records		
Issue No.	Date	Issue Details
1	04/06/2019	Original Issue



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Test Centre Work Order No: 02233

Report/Test No: 1090

Sample Part No: See Below

Number of Samples: 4

Type of Test: Dynamic Impact Sled Test

1.0 Aim:

To evaluate the dynamic performance of the NapUp head support as per to AS/NZS 8005:2013

2.0 Samples:

Shot No.	Test	Child Restraint
W1-4938	Base Line with P6 dummy	Safe-N-Sound Max Guard
W1-4939	P6 Dummy with NapUp head support	Safe-N-Sound Max Guard
W1-4940	Base line with P3 Dummy	Safe-N-Sound Millenia sict
W1-4941	P3 Dummy with NapUp head support	Safe-N-Sound Millenia sict



NapUP head Support

3.0 Test Method:

- Frontal Impact Test as per AS/NZS 3629.1:2010, and verified as per AS/NZS 8005:2013 cl.11.3
- All tests conducted in Type B Mode

4.0 Sled Calibration:

NS1-4937 (50.6 km/h, 28.6g)

Refer to Appendix B for Dynamic Rig Calibration Graph

5.0 Test Equipment:

Dynamic Sled – SBL0016

P3 Child Dummy

P6 Child Dummy

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6.0 Test Results:

Refer to “Summary of Results” on Sheet No. 5

7.0 Sample Disposal:

Samples returned to customer for further evaluation

8.0 Data Supplied To The Customer:

- One soft copy of the test report
- One copy of high speed videos

Tested By:

José de Freitas
 Martin Mansour

Title:

Test Engineer
 Test Engineer

Date Tested:

28/05/2019

Reported By

José de Freitas

Title:

Test Engineer

Report Date:

04/06/2019

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TEST REPORT

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Summary of Results

Section 11 (Play Tray, Play Devices and Other add-on Accessories)			
Shot No.	Dummy	Resultant Peak Head Acceleration	Observations
W1-4938 (Base line test)	P6	68.4g	<ul style="list-style-type: none"> - The resultant peak head acceleration measured in the test with the NapUp was not higher than the measured in the test without the NapUp. - The device did not make contact with the dummy's throat region - After dynamic test there were no visible signs of harmful breakage
W1-4939 (NapUp test)		61.9g	
W1-4940 (Base line test)	P3	81.5g	
W1-4941 (NapUp test)		71.4g	

Conclusion:

- The test results demonstrated that wearing the NapUp head restraint device decreased the maximum head deceleration during the dynamic crash test with P6 and P3 Child Dummy.
- In the case of the P6 Dummy, which represents a 6 year old child, the difference was a decrease of 10% in head deceleration when compared to the baseline results without the NapUp device.
- In the case of the P3 Dummy, which represents a 3 year old child, the decrease in deceleration was 12% when compared to the baseline results without NapUp device.
- Such decreases in head deceleration during crash events can reduce the risk of neck injury of an occupant.
- During crash testing, the NapUp device did not come into contact with the Dummy's throat region and did not present any harmful breakages.
- The NapUp device does not represent any risk to the occupants during crash events.

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Test Photos

W1-4938 Pre-test Photos



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W1-4938 Post-test Photos



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W1-4939 Pre-test Photos



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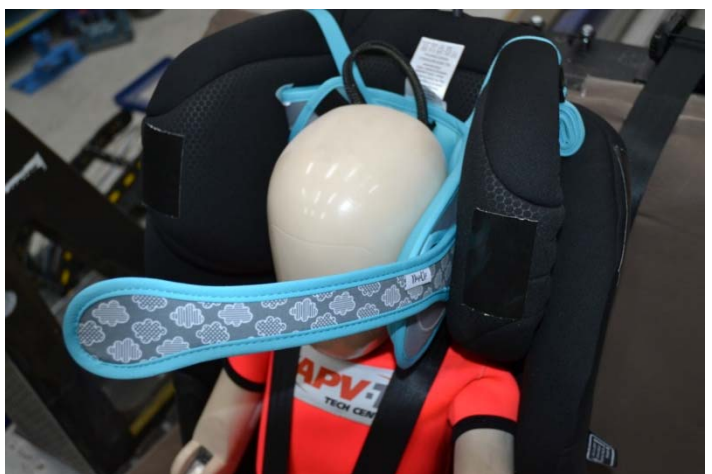
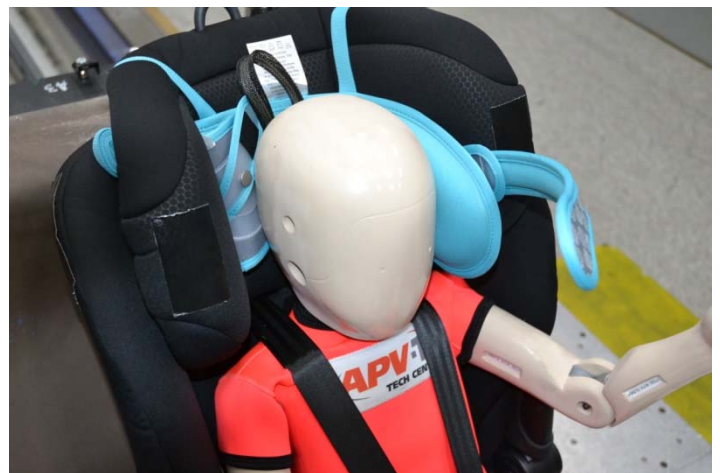
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W1-4939 Post-test Photos



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W1-4940 Pre-test Photos



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W1-4940 Post-test Photos



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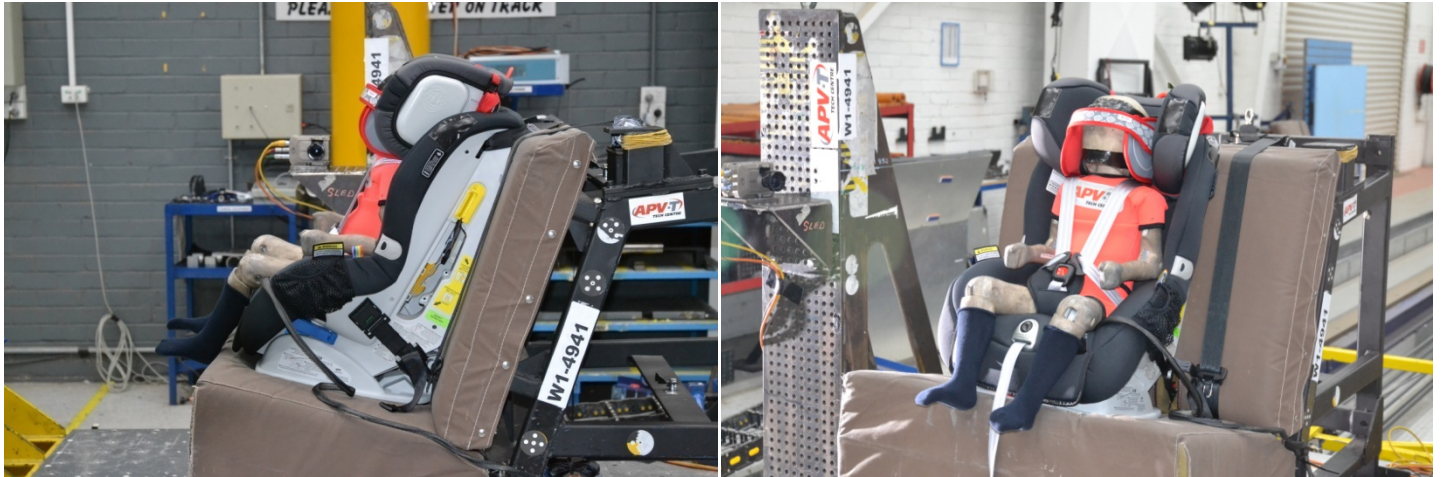
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W1-4941 Pre-test Photos



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W1-4941 Post-test Photos



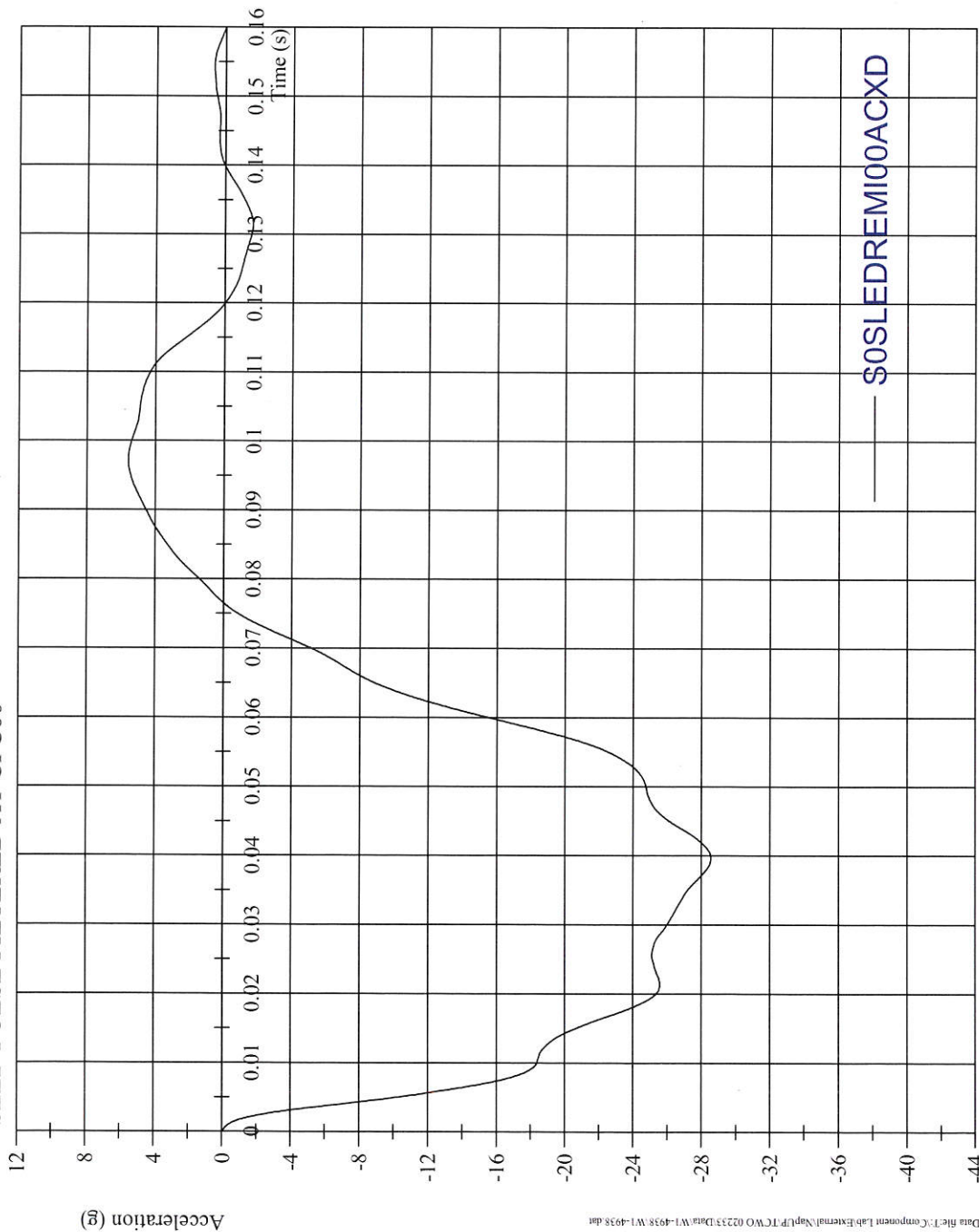
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CHILD SEAT
TEST NO: W1-4938

OPERATOR: JD/MM
DATE: 28/05/2019

SLED PULSE FILTERED AT CFC60



TEST REF NO:	TCWO 02233
OBJECTIVE:	Other
CAL REF RIG:	NS1-4937
DUMMY:	P6
TUBE NO:	R1 - R6
OLIVE SIZE:	48.0 X 2, 47.5 X 4
OLIVE PENE:	315 mm
SEPARATION:	No
SLIP (SEAT ADJUSTER):	5 mm
SLIP (HARNES ADJUSTER):	4 mm
PEAK ACC:	-28.6g at 0.040s
IMPACT VEL:	50.2km/h
CONFORMANCE:	Yes / No / N/A*

*Note: N/A denotes development only

CUSTOMER: Alldeal LTD

COMMENT: Base Line test using Type B child seat, with P6 dummy

APPROVED: *[Signature]*

DATE: 28/05/2019

OPERATOR: JD/MM

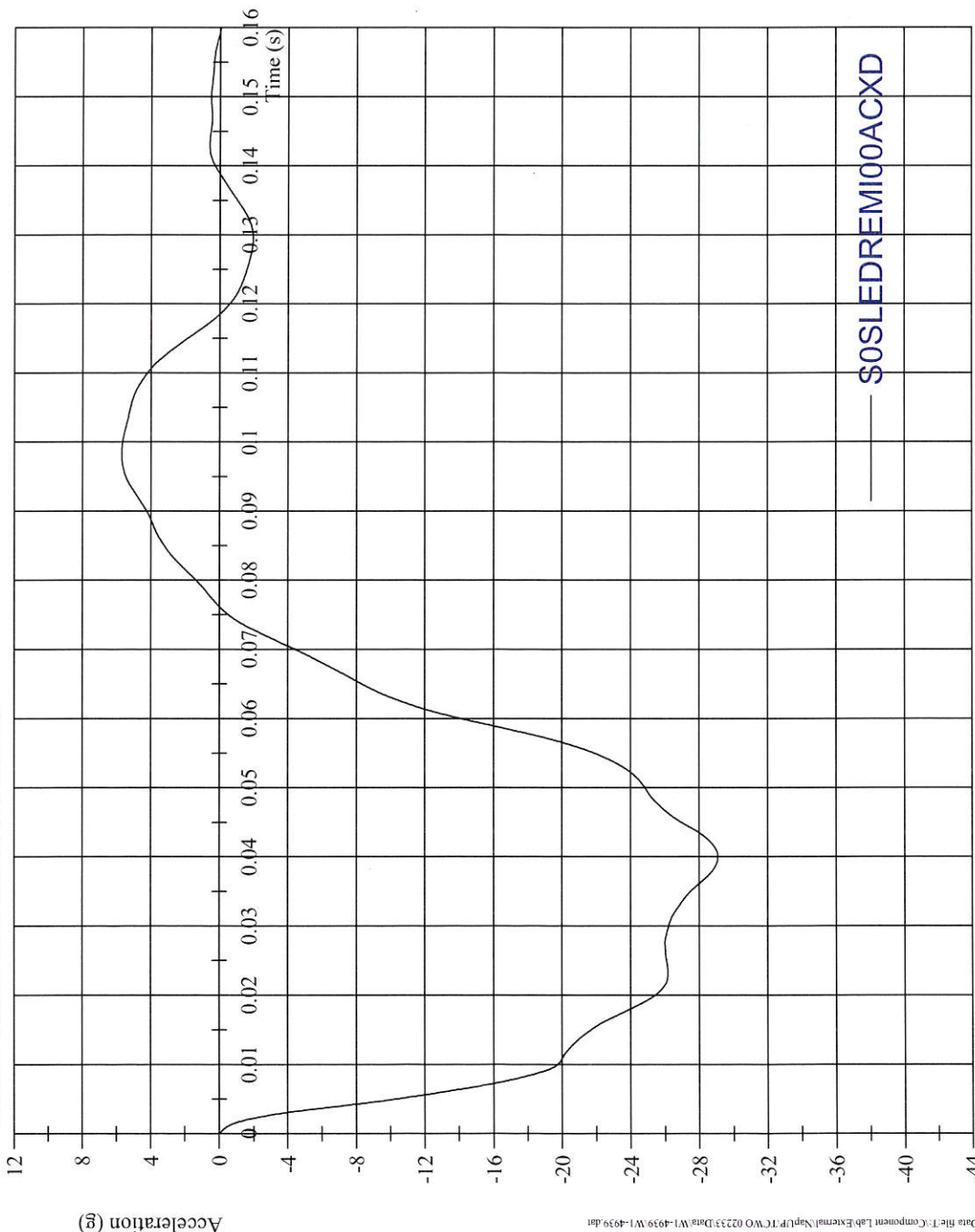
DATE: 28/05/2019

CHILD SEAT

TEST NO: W1-4939



SLED PULSE FILTERED AT CFC60



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TEST REF NO:	TCWO 02233
OBJECTIVE:	Other
CAL REF RIG:	NS1-4937
DUMMY:	P6
TUBE NO:	R7 - R12
OLIVE SIZE:	48.0 X 2, 47.5 X 4
OLIVE PENE:	305 mm
SEPARATION:	No
SLIP (SEAT ADJUSTER):	5 mm
SLIP (HARNES ADJUSTER):	2 mm
PEAK ACC:	-29.1g at 0.040s
IMPACT VEL:	50.5km/h
CONFORMANCE:	Yes / No / N/A*

*Note: N/A denotes development only

CUSTOMER: Alldeal LTD

COMMENT: Test using Type B child seat, with P6 dummy fitted with NapUp head support

APPROVED: *[Signature]*

DATE: 30/05/2019



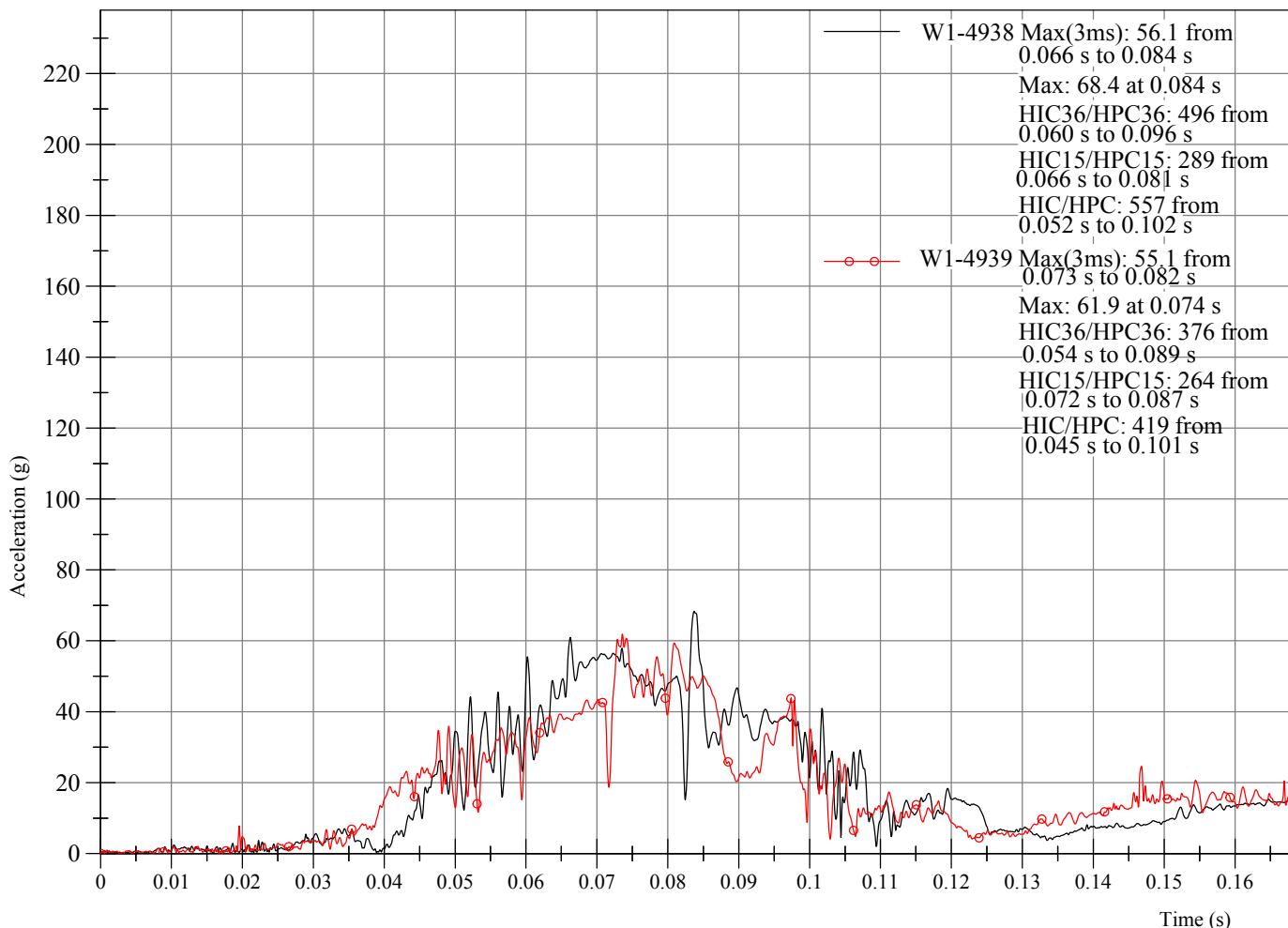
Base line test using Type B child seat, With P6 dummy

Test no: W1-4938

Test using Type B child seat, + P6 dummy fitted with NapUP head support

Ref no: W1-4939

Resultant head acceleration, cfc 1000



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Test Data: T:\Component Lab\External\NapUP\TCWO 02233\Data\W1-4938\W1-4938v1

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Pulse: AS/NZS 1754:2013

Dummy: TNO 6-year, Front Mid Position





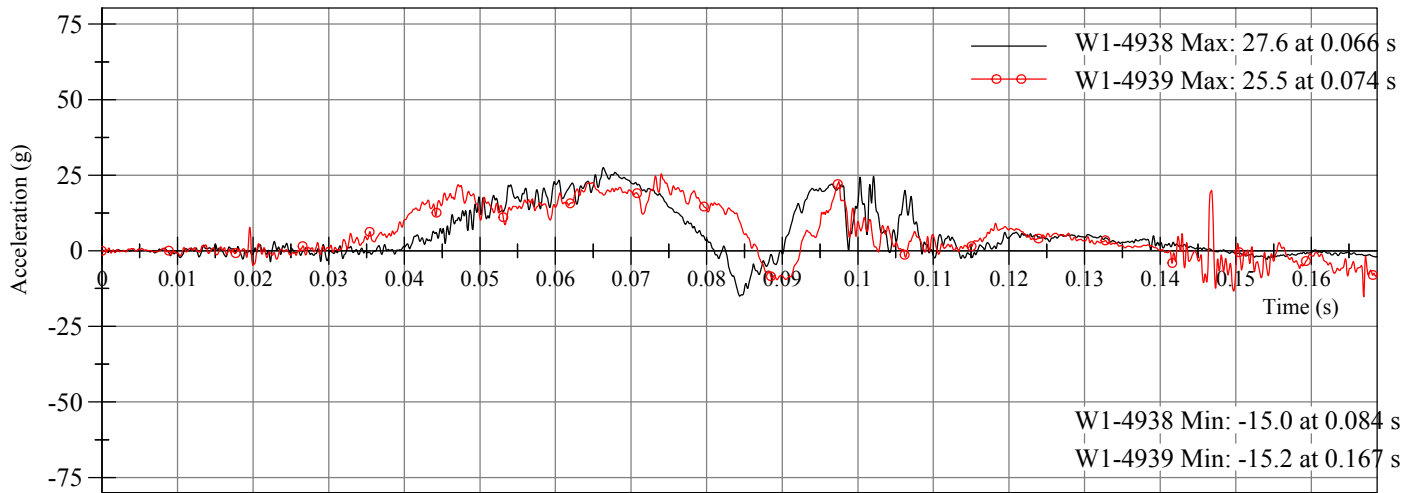
Base line test using Type B child seat, With P6 dummy

Test no: W1-4938

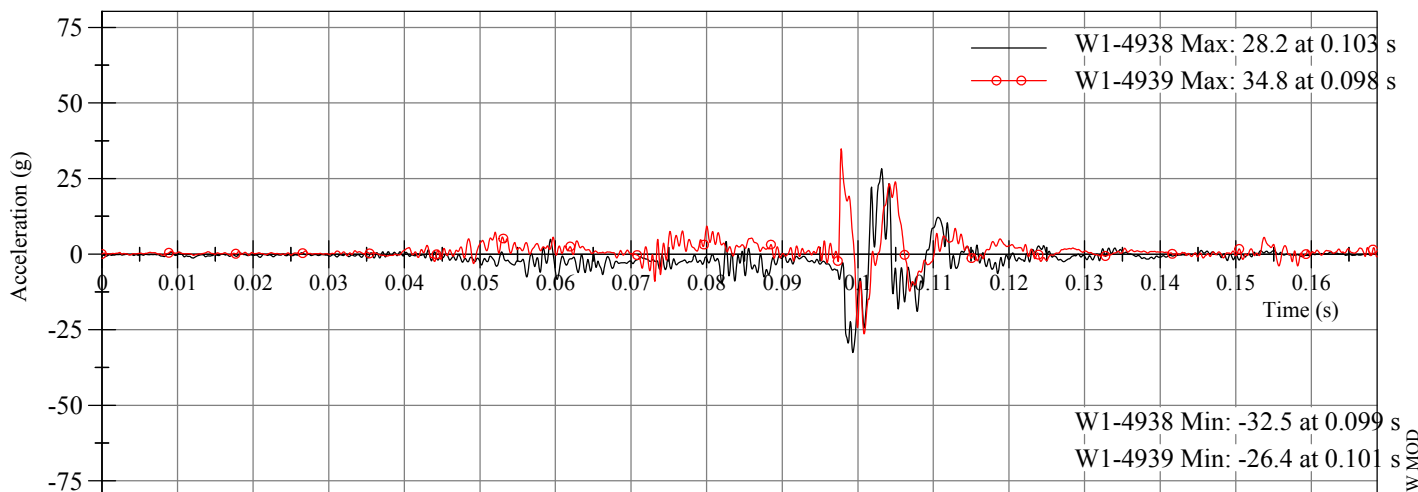
Test using Type B child seat, + P6 dummy fitted with NapUP head support

Ref no: W1-4939

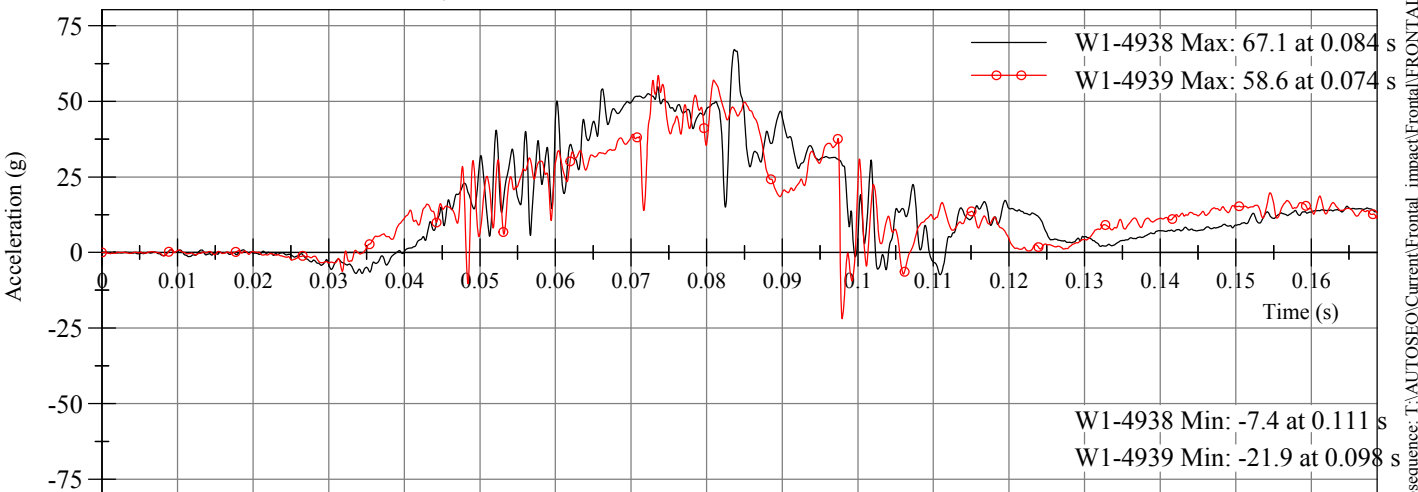
Horizontal head acceleration, cfc 1000



Lateral head acceleration, cfc 1000



Vertical head acceleration, cfc 1000



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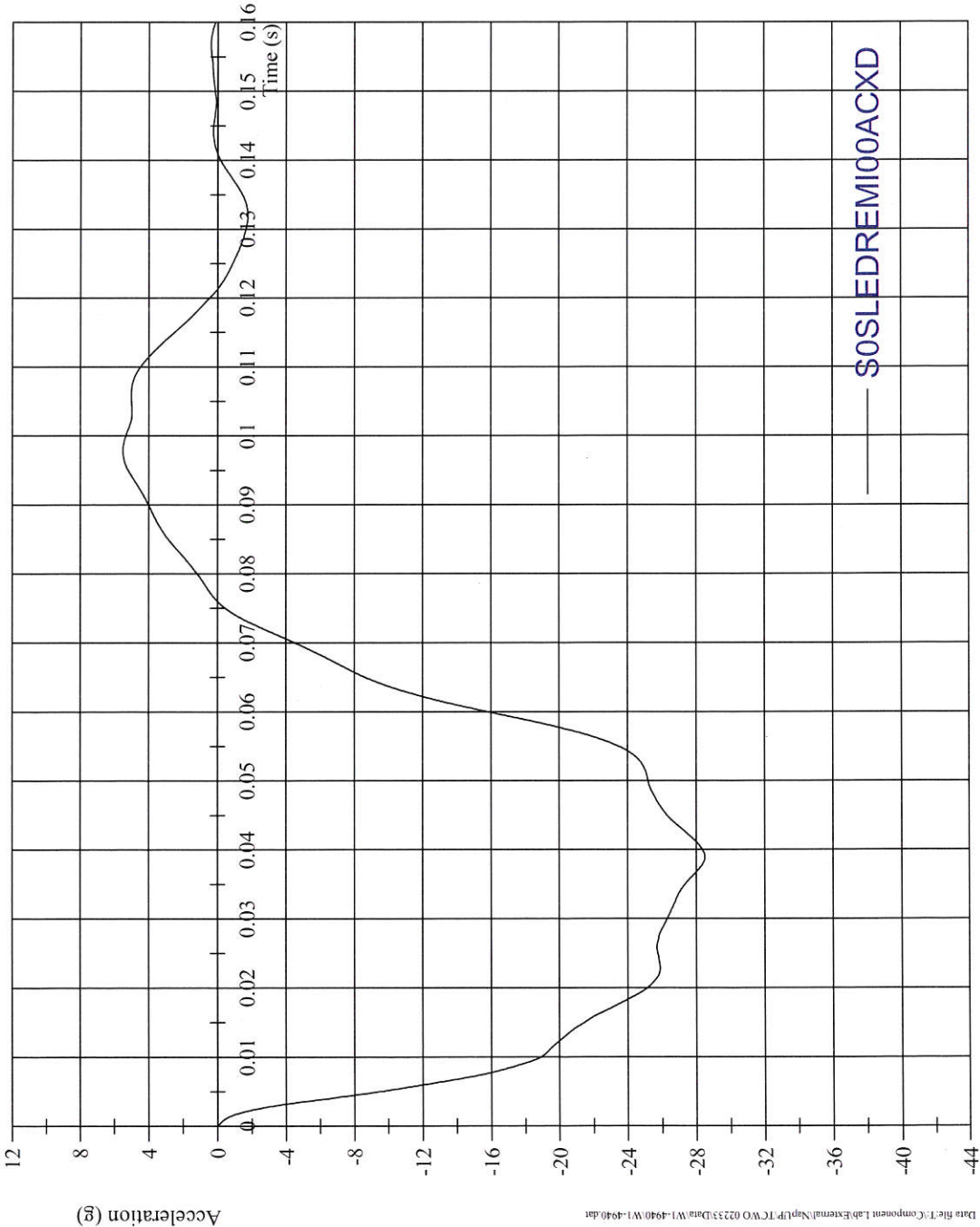
Pulse: AS/NZS 1754:2013

Dummy: TNO 6-year, Front Mid Position



	CHILD SEAT TEST NO: W1-4940	OPERATOR: JD/MM DATE: 28/05/2019
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SLED PULSE FILTERED AT CFC60



TEST REF NO:	TCWO 02233
OBJECTIVE:	Other
CAL REF RIG:	NS1-4937
DUMMY:	P3
TUBE NO:	R13 - R18
OLIVE SIZE:	48.0 X 2, 47.5 X 4
OLIVE PENE:	320 mm
SEPARATION:	No
SLIP (SEAT ADJUSTER):	3 mm
SLIP (HARNES ADJUSTER):	2 mm
PEAK ACC:	-28.5g at 0.039s
IMPACT VEL:	50.6km/h
CONFORMANCE:	Yes / No / N/A*

*Note: N/A denotes development only

CUSTOMER: Alldeal LTD

COMMENT: Base Line test using Type B child seat, with P3 dummy

APPROVED: 

DATE: 30/05/2019

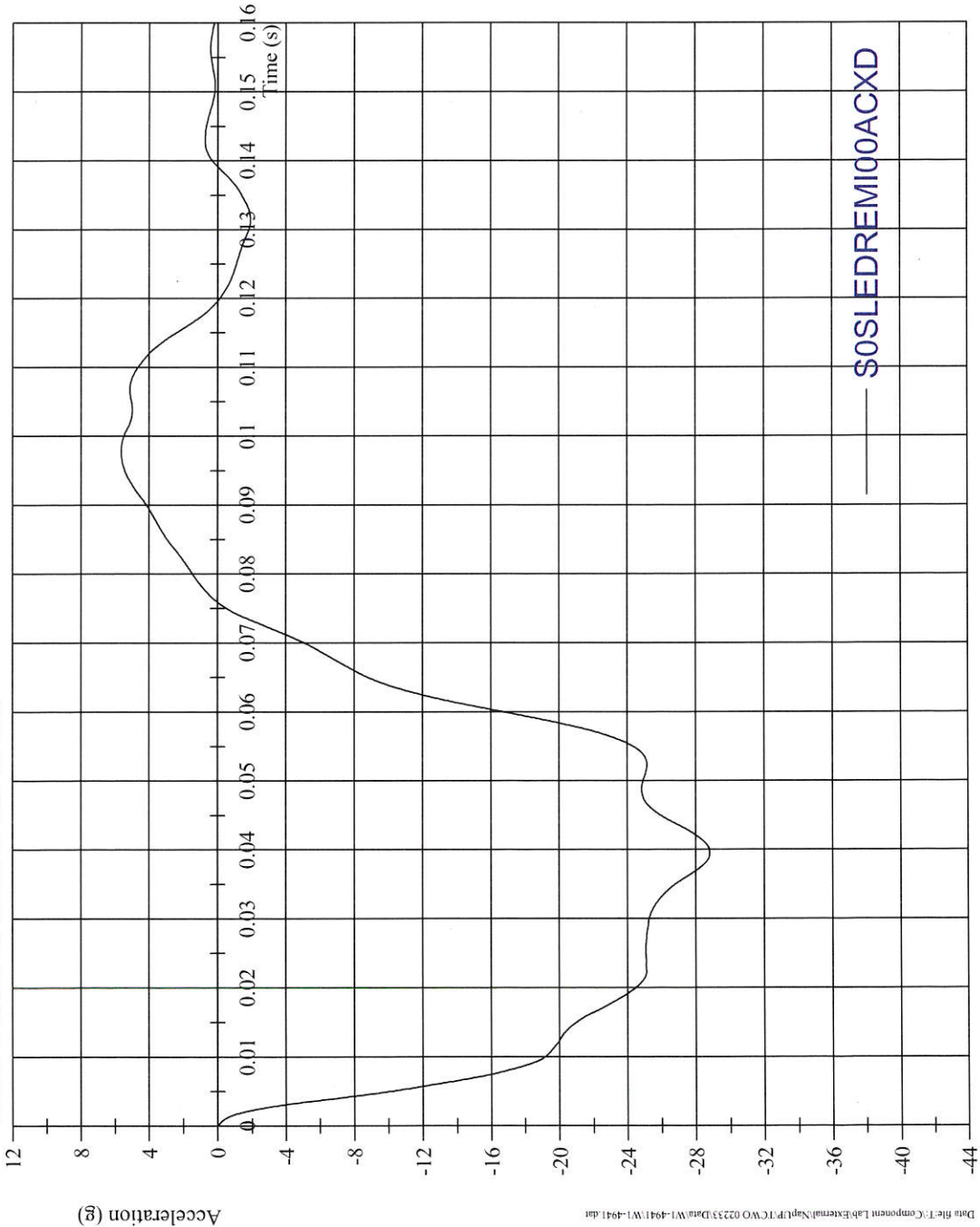
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OPERATOR: JD/MM
DATE: 28/05/2019

CHILD SEAT
TEST NO: W1-4941



SLED PULSE FILTERED AT CFC60



TEST REF NO:	TCWO 02233
OBJECTIVE:	Other
CAL REF RIG:	NS1-4937
DUMMY:	P3
TUBE NO:	R19 - R24
OLIVE SIZE:	48.0 X 2, 47.5 X 4
OLIVE PENE:	320 mm
SEPARATION:	No
SLIP (SEAT ADJUSTER):	3 mm
SLIP (HARNES ADJUSTER):	2 mm
PEAK ACC:	-28.8g at 0.040s
IMPACT VEL:	50.6km/h
CONFORMANCE:	Yes / No / N/A*

*Note: N/A denotes development only

CUSTOMER: Allideal LTD
COMMENT: Test using Type B child seat, with P3 dummy fitted with NapUp head support

APPROVED: *[Signature]*
DATE: 30/05/2019



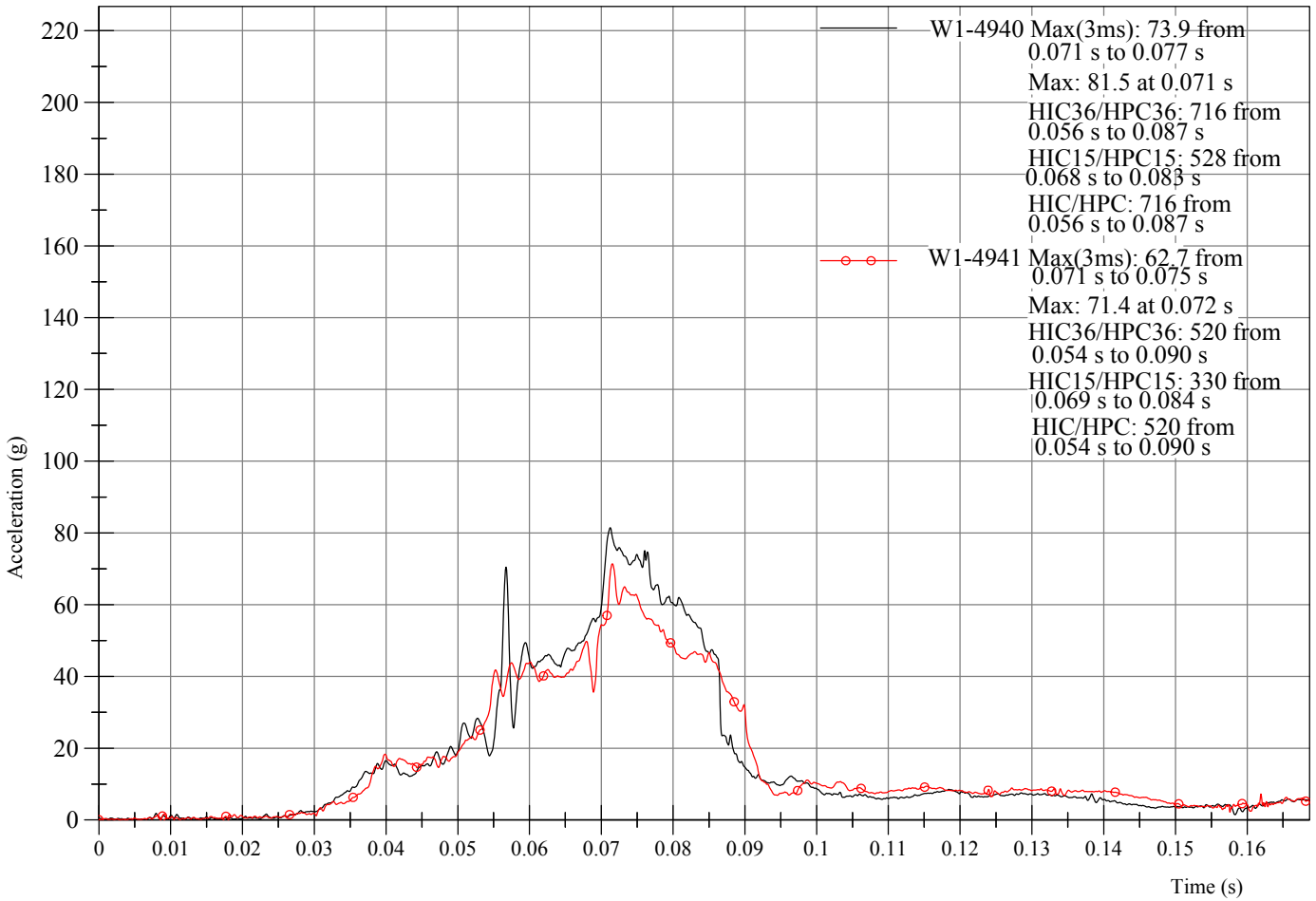
Base line test using Type B child seat, With P3 dummy

Test no: W1-4940

Test using Type B child seat, + P3 dummy fitted with NapUP head support

Ref no: W1-4941

Resultant head acceleration, cfc 1000



RefData: T:\Component Lab\External\NapUP\TCWO 02233\Data\W1-4941\W1-4941.v1

TestData: T:\Component Lab\External\NapUP\TCWO 02233\Data\W1-4940\W1-4940.v1

Autosequence: T:\AUTOSEQ\Current\Frontal_impact\Frontal_20101129_DW.MOD

Pulse: AS/NZS 1754:2013
 Dummy: TNO 3-year, Front Mid Position





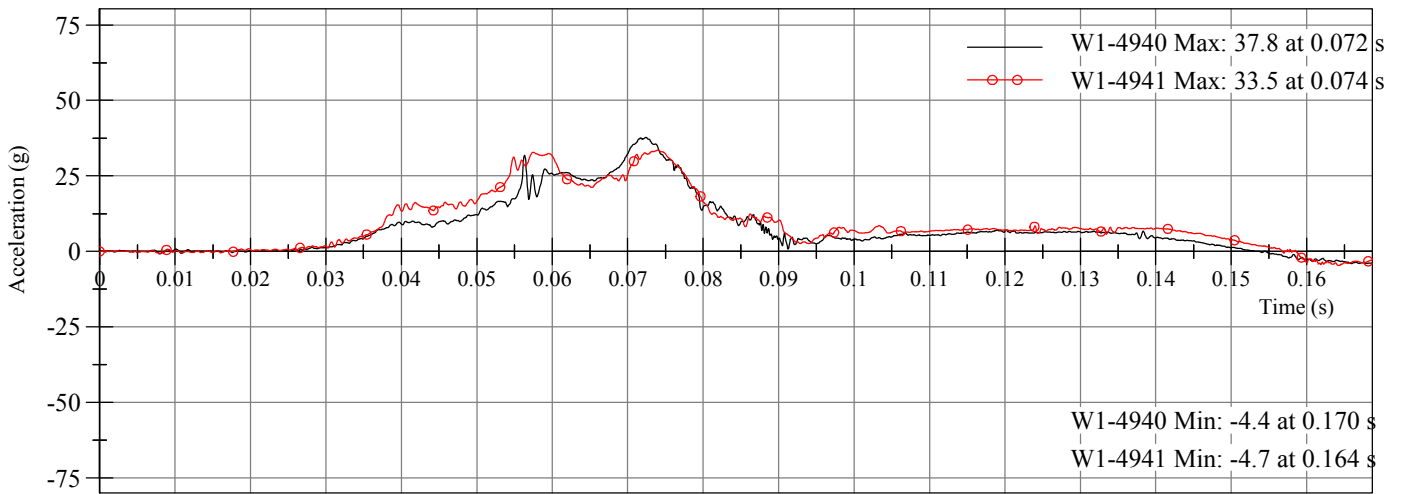
Base line test using Type B child seat, With P3 dummy

Test no: W1-4940

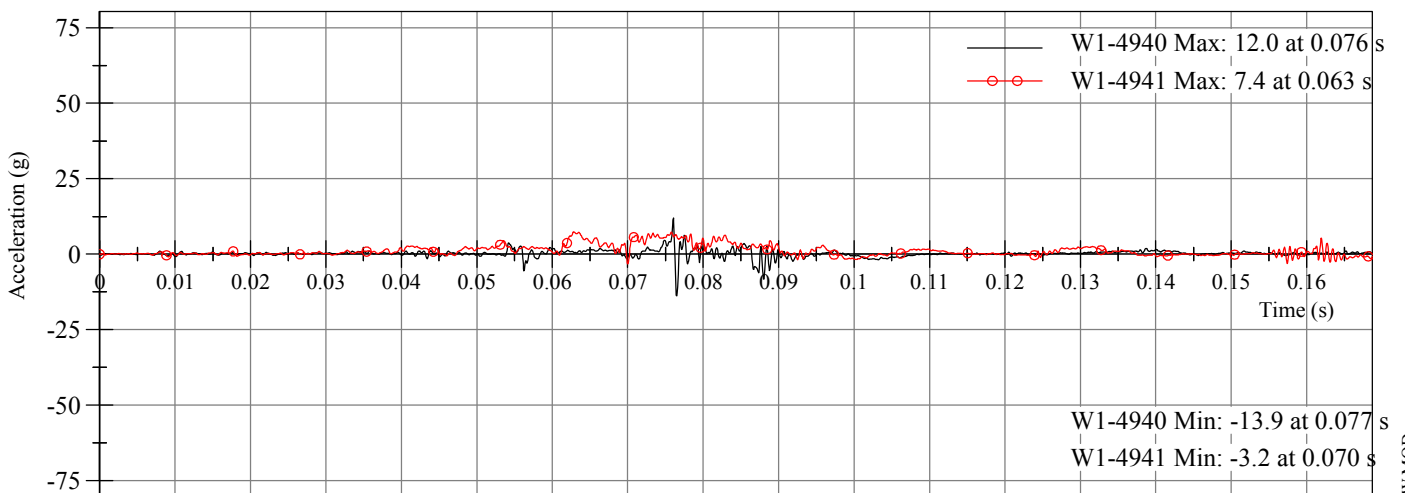
Test using Type B child seat, + P3 dummy fitted with NapUP head support

Ref no: W1-4941

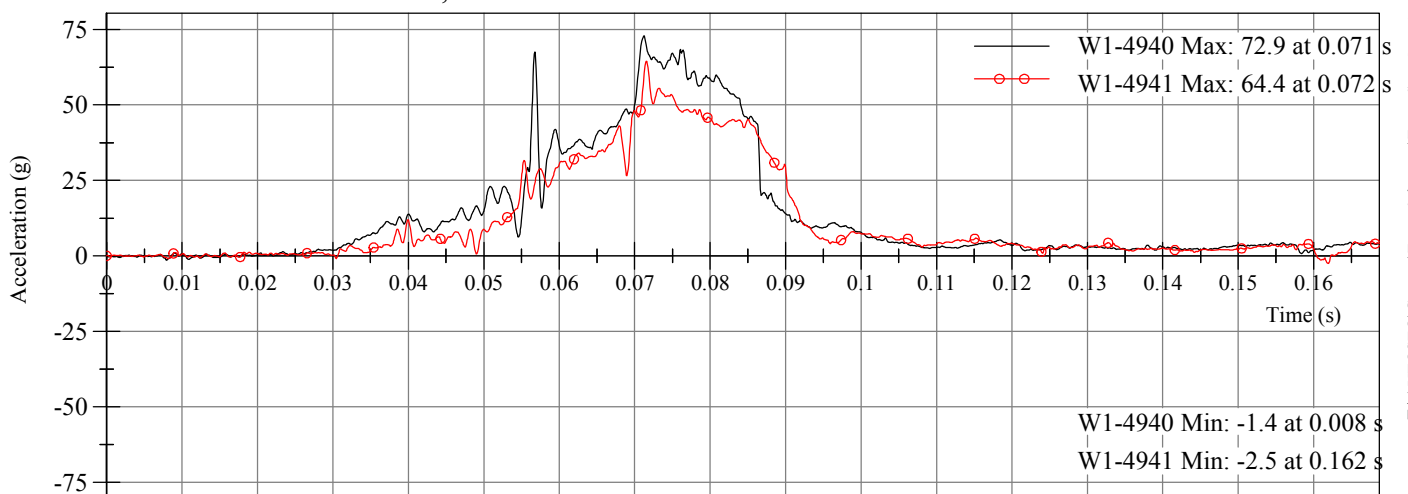
Horizontal head acceleration, cfc 1000



Lateral head acceleration, cfc 1000



Vertical head acceleration, cfc 1000



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Autosequence: T:\AUTOSEQ\Current\Frontal_impact\Frontal_20101129 DW MOD

Pulse: AS/NZS 1754:2013

Dummy: TNO 3-year, Front Mid Position





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Appendix B

Dynamic Rig Calibration Graph

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1	04/06/2019	Original Issue



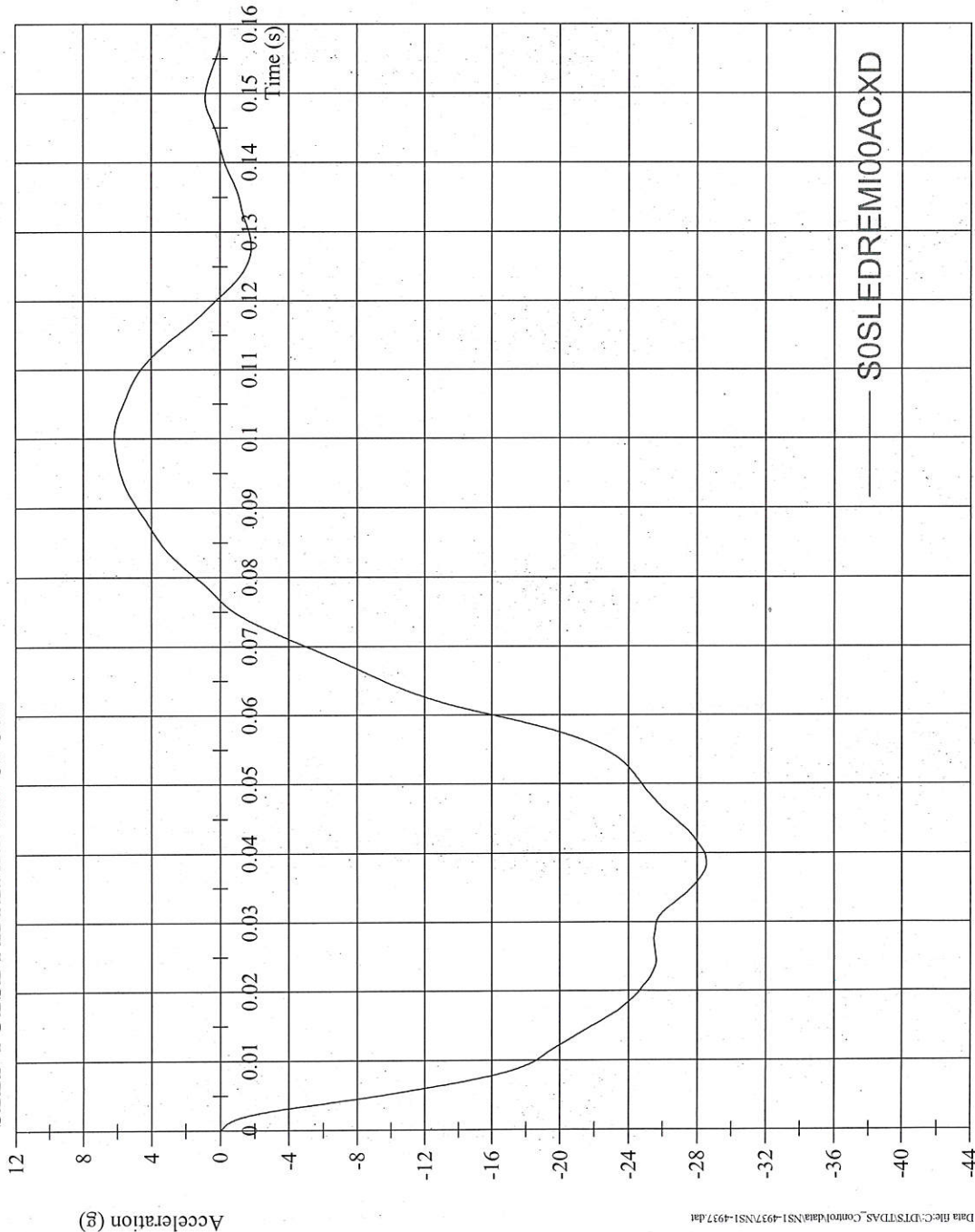
RIG CALIBRATION

TEST NO: NS1-4937

OPERATOR: JD / MM

DATE: 27/05/2019

SLED PULSE FILTERED AT CFC60



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ACCELEROMETER NO:	C16930
TUBE NO:	R55 - R60
OLIVE SIZE:	48.0 X 2, 47.5 X 4
OLIVE PENE	325
PEAK ACC:	-28.6g at 0.039s
IMPACT VEL:	50.6km/h

APPROVED: *[Signature]*

DATE: 27/05/2019

COMMENT: Rig Cal to AS/NZS 1754:2013 – Frontal Impact