1218950- 01

Test Results

Roof Carrier Load Test H903D2

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Jason Brooks
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Test Date(s) 18/01/2019

Test Objective / Method / Specification No

ECE R17-Pulse Section 5.15 / Annex 9 - Luggage Retention Test, was used to perform a dynamic test on Roof Carrier Rack.

A Vecta Roof Rack System with simulated ladders and wooden boards was positioned on the HyGe Sled and accelerated to 30mph (48.4kph)

Three cross bars were positioned across the simulated roof, the two end cross bars had wooden boards and two simulated ladders connected to them. They carried a mass of 151kg.

Boards = 80kg

Ladders = 35 & 36kg

Specimen Description / Part No(s)

A roof rack, ladders and boards were supplied by The Hubb Systems

Prepared By:

Andy Haynes

Project Test Engineer

Approved By:

C Harper

Principal Engineer

Date: 23/1/19

1105

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Results Summary

The subject was tested in accordance with the test specification ~~with~~ without deviation. The acceptance criteria of the test specification were:	Met	✓	Not Met		See comments	

Test Results Detail

The system satisfied the requirements of test as all test objects and contents remained on the simulated roof.

For Acceleration Graph, see Appendix 1

For Test Photographs, see Appendix 2

Test Equipment

MIRA HyGe Pneumatic Reverse Accelerator Facility

DTS Data PRO Acquisition unit

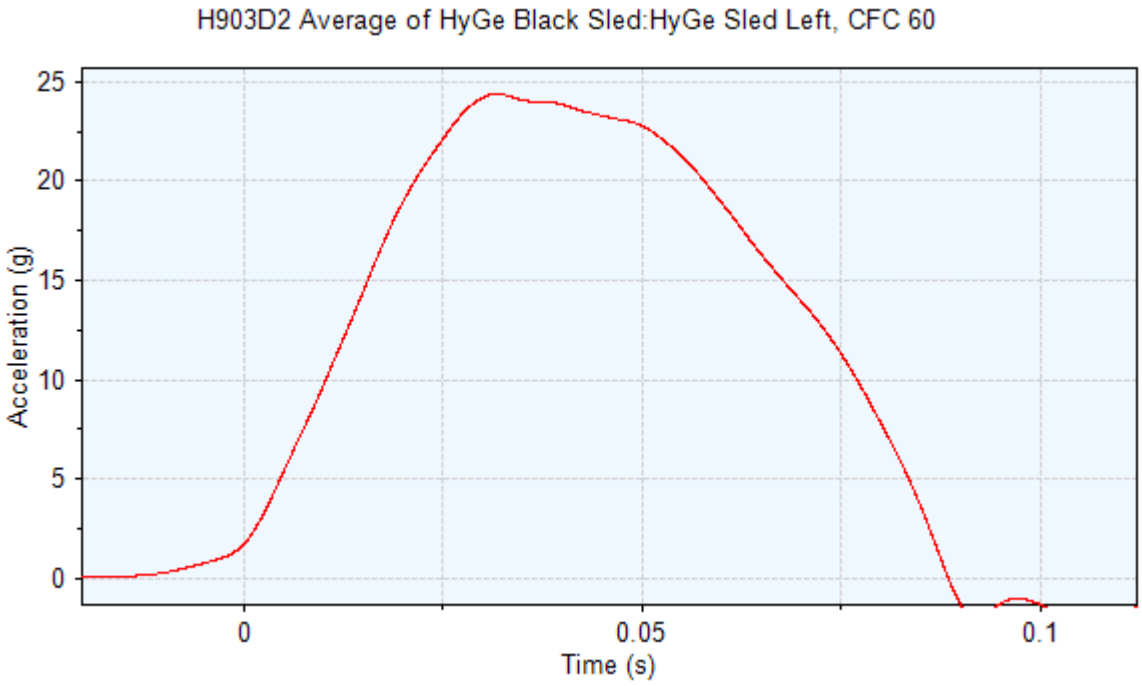
High Speed Cameras

Instrumentation – see Appendix 3

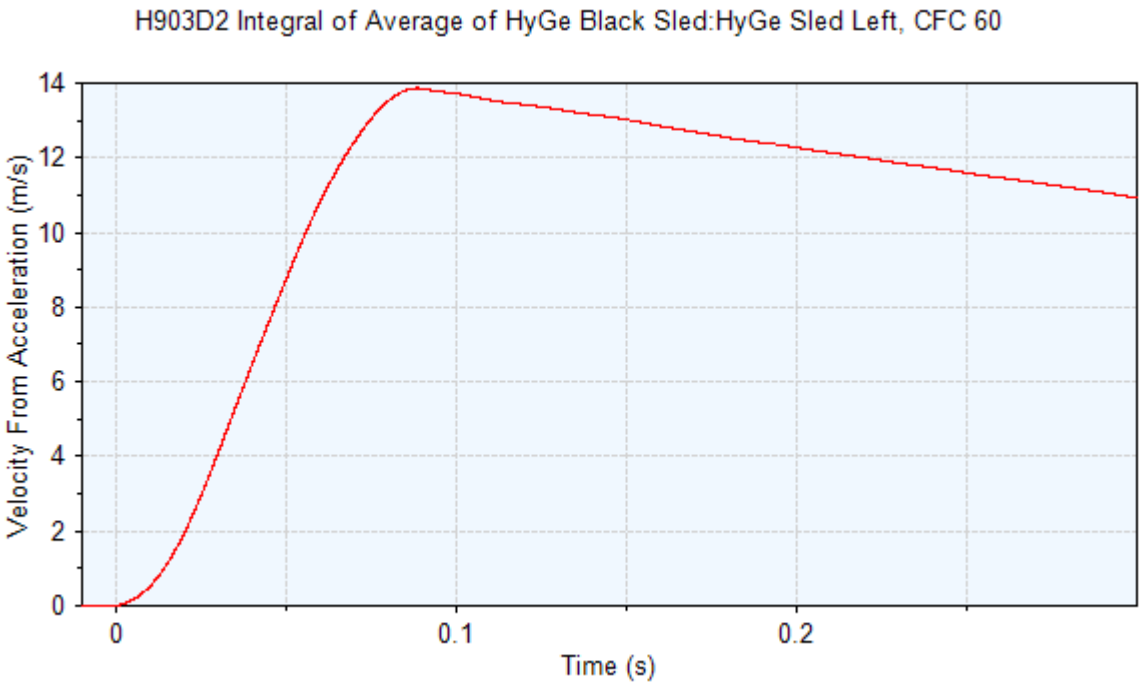
Attachments

All high-speed video, instrumentation data, calibration details and still photographs were supplied to Hubb Systems via a secure data transfer site.

Appendix 1 Acceleration Plot



24.3 g peak



Maximum velocity = 13.8m/s

Appendix 2 Test Photographs

Photo 1 – Pre-Test
Overhead view

Photo 2 – Pre-Test

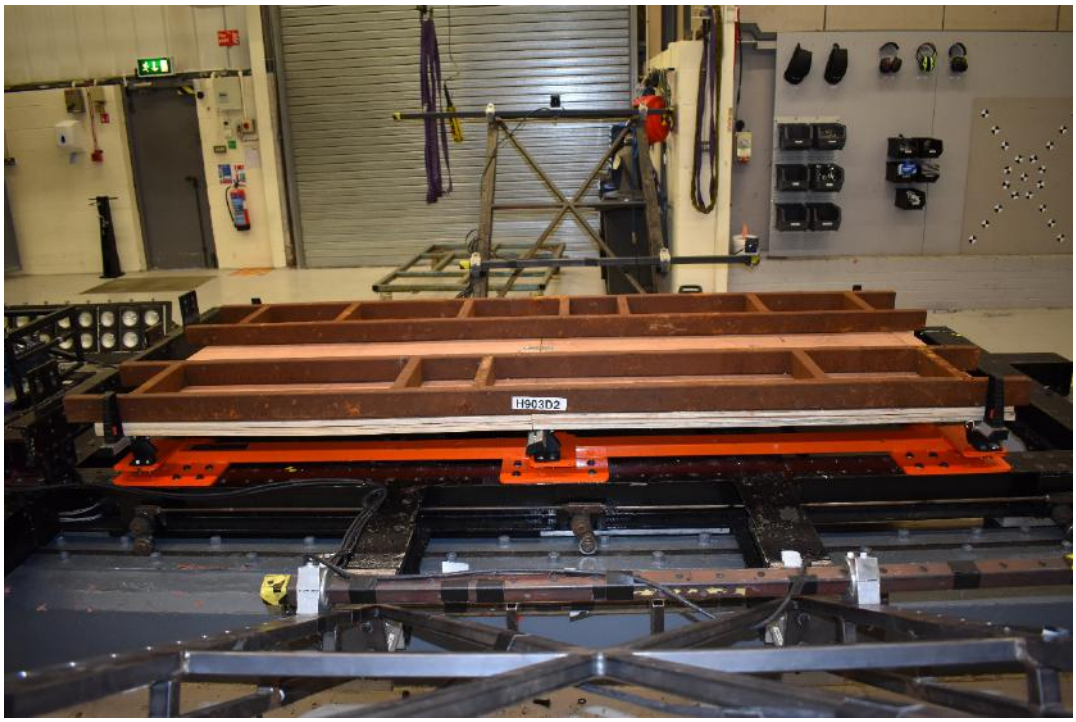


Photo 3 – Post-Test

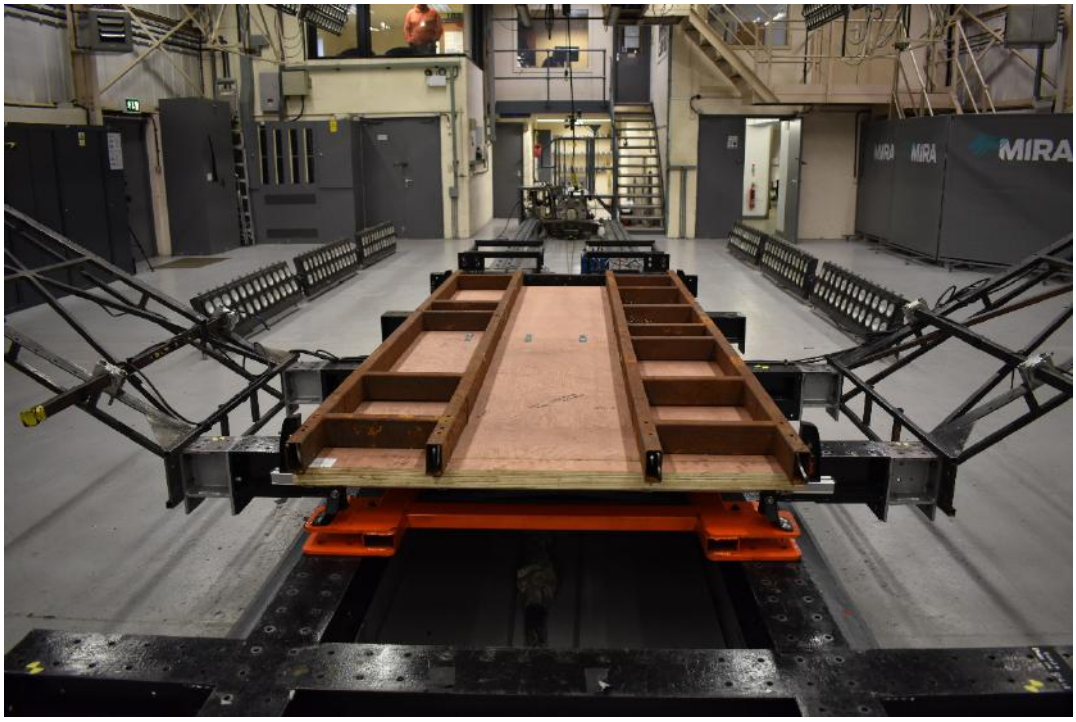


Photo 4 – Post-Test

Appendix 3 Quality Assurance of Measurements

The test equipment is checked on a regular schedule to traceable standards in an International Assurance of Measurements (QAM) procedure. Each item of equipment is issued with a QAM number.

The numbers for the equipment used in these tests were:-

Description	QA Number	CAC	Due on
Weigh scales	31413	2000kg	26/06/18

Test Setup Name	H903D2
Test Description	ECE17
Test Id	H903D2
Report Date	18 January 2019
Channel Calibration List	

Location	Sensor Axis	Serial No	Cal	Next Cal
HyGe Sled Right	200g Accelerometer (SLED)	013906	1.2340 mV/g	26/06/2019
16SLEDRI0000ACXP	9B00001806258001(Dallas)	Endevco	26/06/2018	
HyGe Sled Left	200g Accelerometer	013901	1.2560 mV/g	06/09/2019
14SLEDLE0000ACXP	060000067C280901(Dallas)	Endevco	06/09/2018	

End of Report