

Title	Mechanical testing of T8210
Report no.	280 474
Customer	FLIR Systems AB
Contact person	Ramona Ahlepil
Address	Box 7376 SE - 187 15 TÄBY
Assignment carried out by	Anders Herbner
Order	By mail

Kista, 30 March 2017

INNVENTIA AB



Anders Herbner
Project manager



Torben Jacobson
Checked by

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<i>Customer:</i> FLIR Systems AB	<i>Contact person:</i> Ramona Ahlepil
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<i>Type of tested object:</i> T8210	<i>Accredited testing according to standard:</i> <input checked="" type="checkbox"/> IEC 60068-2-6 2008 Sine <input checked="" type="checkbox"/> IEC 60068-2-27 2008 Shock <input type="checkbox"/> IEC 60068-2-31 2008 Rough handling shocks <input type="checkbox"/> IEC 60068-2-57 1999 Time History <input type="checkbox"/> IEC 60068-2-64 2008 Random <input type="checkbox"/> GR-63-CORE 2006 Seismic
<i>Testing level according to:</i> Customer	<i>Testing date:</i> 28 March 2017
<i>Remarks:</i> No visual remarks	<i>Testing carried out by:</i> Anders Herbner

Testing carried out at the following levels of severity:

Direction X	Direction Y	Direction Z
Sine 10-58 Hz, 0.15 mm 58-500 Hz, 2 g 5 sweep cycles, 1 oct/min	10-58 Hz, 0.15 mm 58-500 Hz, 2 g 5 sweep cycles, 1 oct/min	10-58 Hz, 0.15 mm 58-500 Hz, 2 g 5 sweep cycles, 1 oct/min
Shock 25 g, 6 ms Half sine ±500 shocks	25 g, 6 ms Half sine ±500 shocks	25 g, 6 ms Half sine ±500 shocks

Results and remarks during testing

Fastening to the vibration table and placing of accelerometers see photo 1-3, page 3-4.

Equipment used during test see page 5.

Diagrams see page 6-10.

Final inspection and functional test by FLIR Systems AB.

Photos

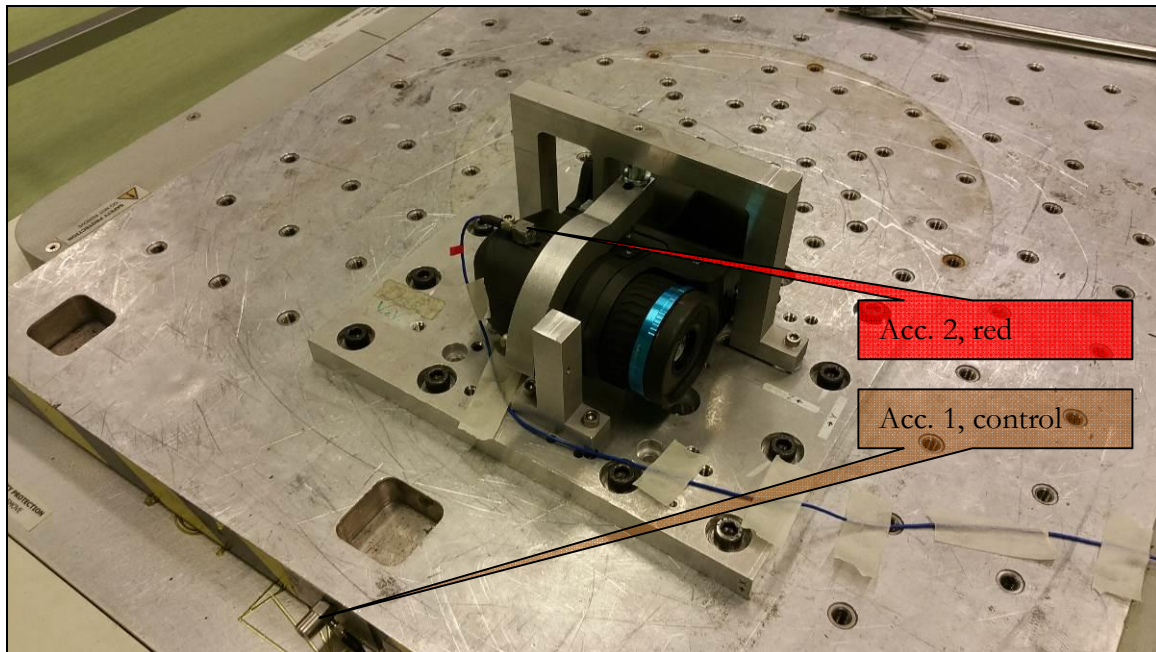


Photo 1: X-dir

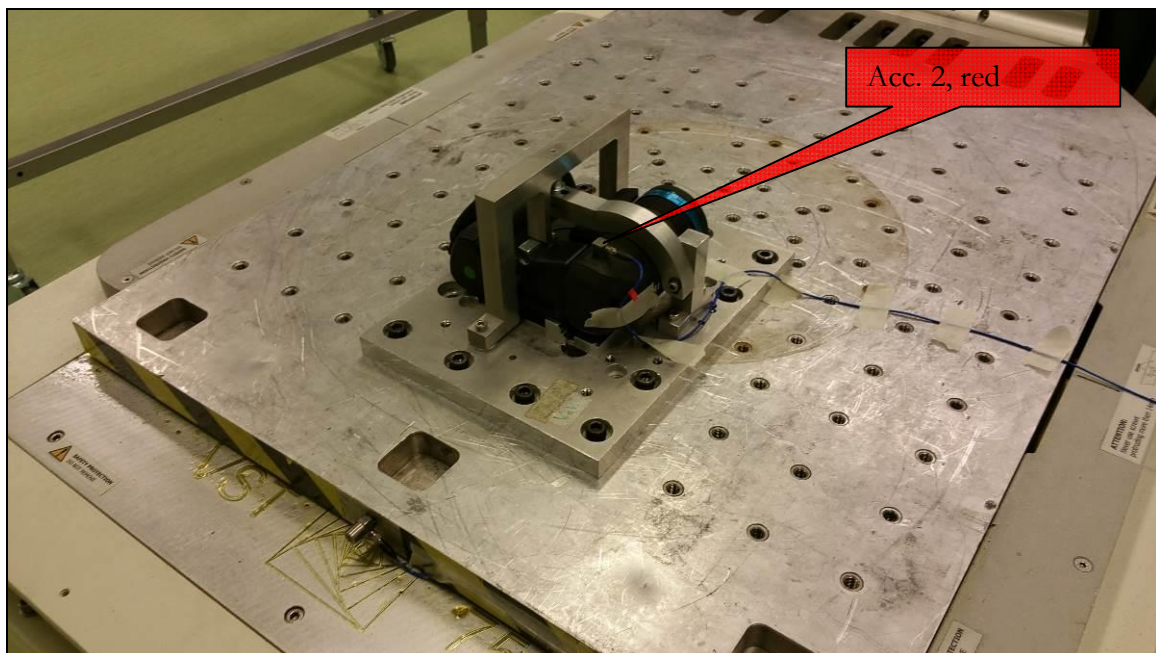


Photo 2: Y-dir

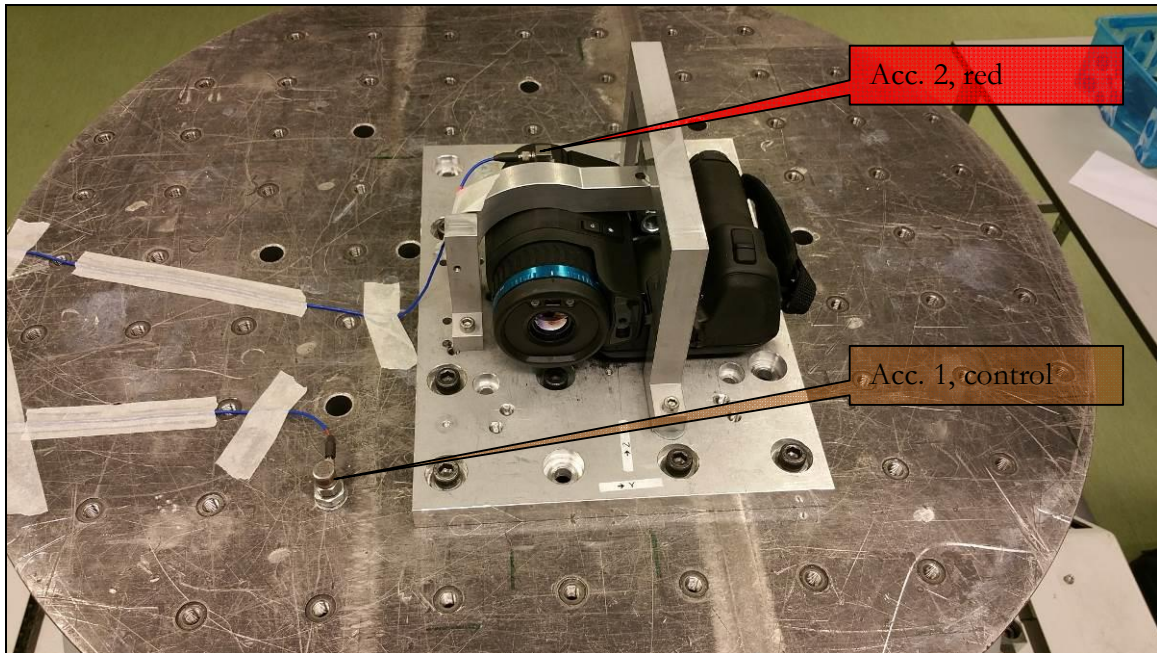


Photo 3: Z-dir

Vibrator and Control equipment

IMV J260 MSK nr: 3707	<input checked="" type="checkbox"/>	IMV K2 S/N: 51000078	<input checked="" type="checkbox"/>
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Accelerometer

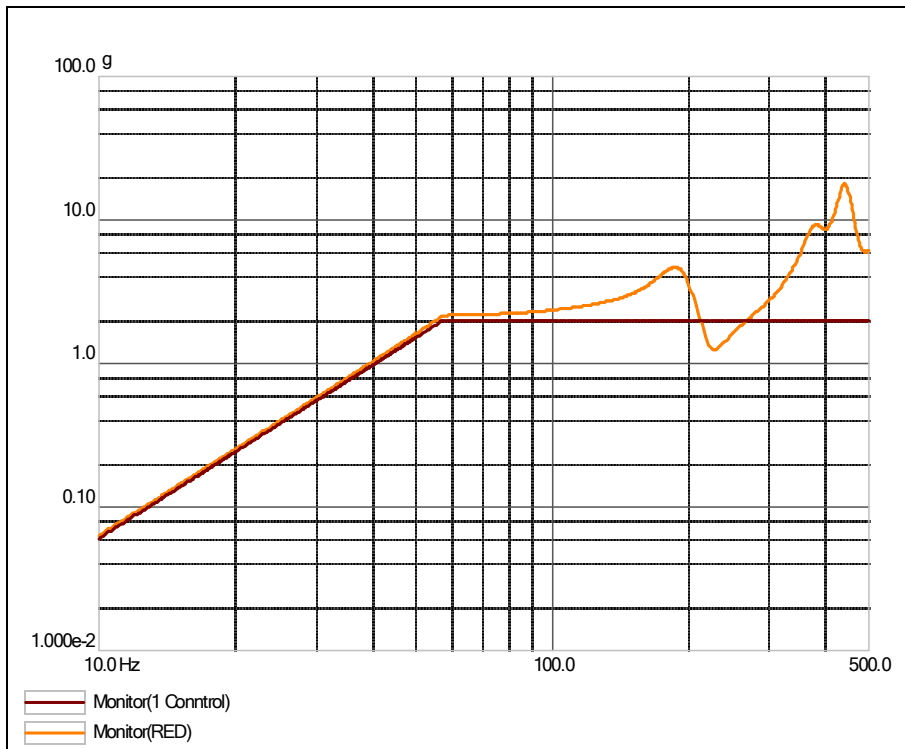
Kistler	Sn: 2039733 (hor)	<input checked="" type="checkbox"/>	Sn: 2039734 (ver)	<input checked="" type="checkbox"/>	
B&K 4507-001	Sn: 30630 (red)	<input checked="" type="checkbox"/>	Sn: 30719 (ora)	<input type="checkbox"/>	Sn: 30632 (yel) <input type="checkbox"/>
	Sn: 30720 (gre)	<input type="checkbox"/>	Sn: 30634 (blu)	<input type="checkbox"/>	Sn: 30087 (pur) <input type="checkbox"/>
	Sn: 30088 (gra)	<input type="checkbox"/>			

All equipment is traceably calibrated 2017-01, and the total inaccuracy for the acceleration level is better than $\pm 4\%$.

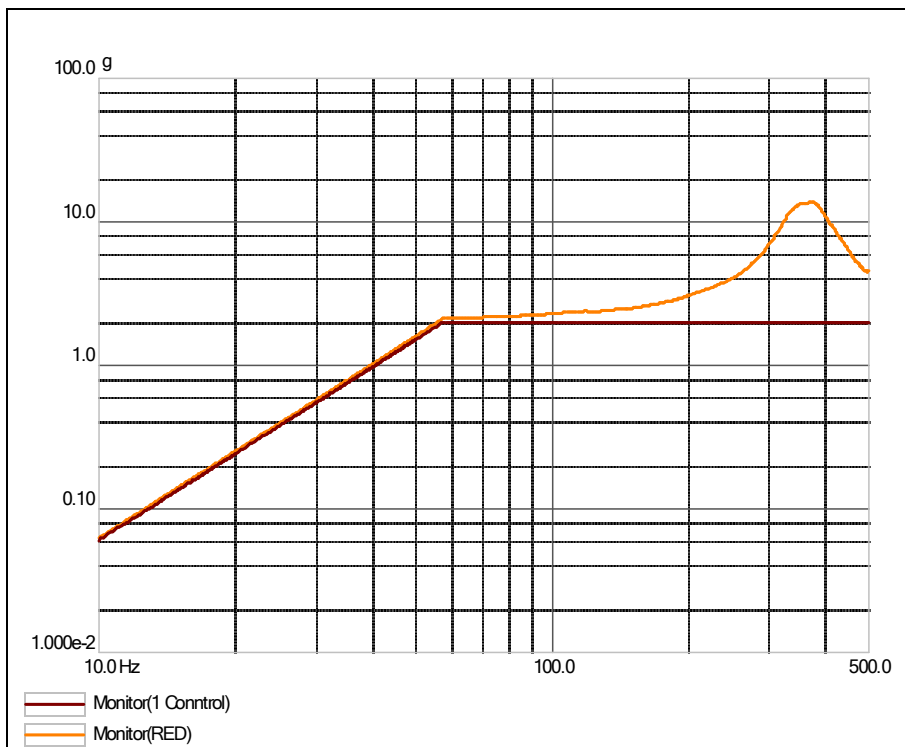
Uncertainty of measurement:

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA Publication EA-4/02.

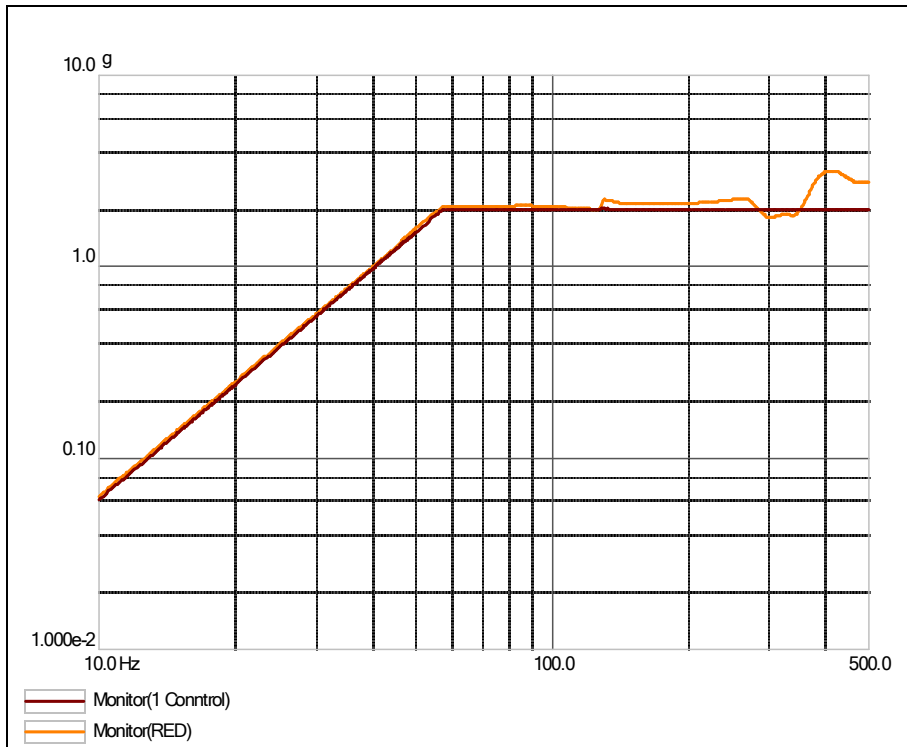
Diagrams



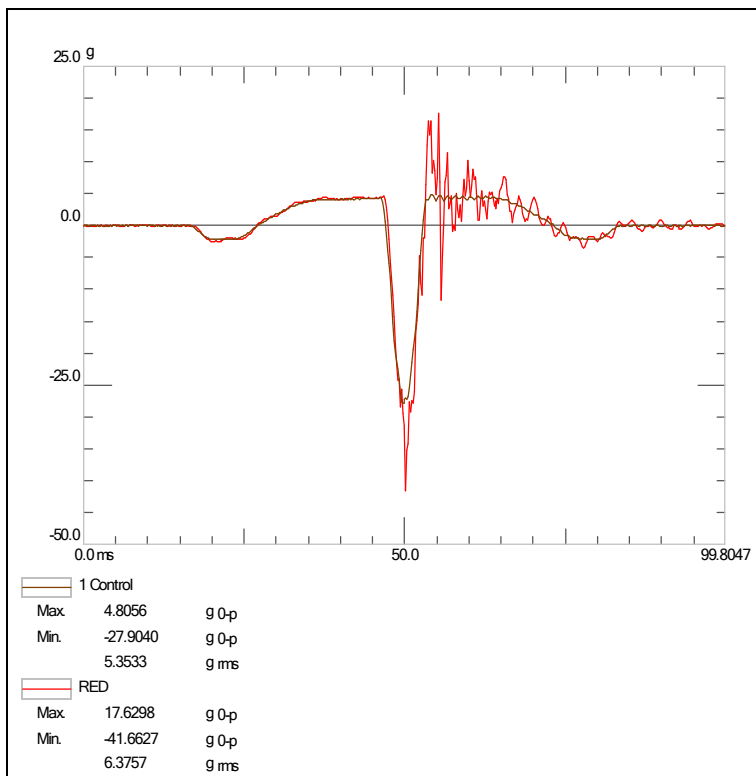
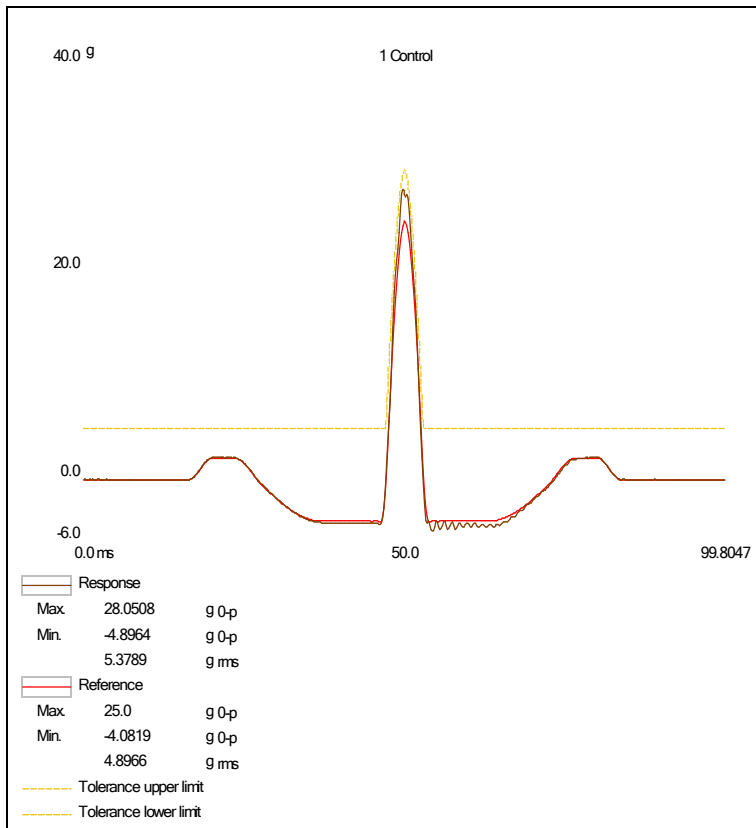
Sine X-dir



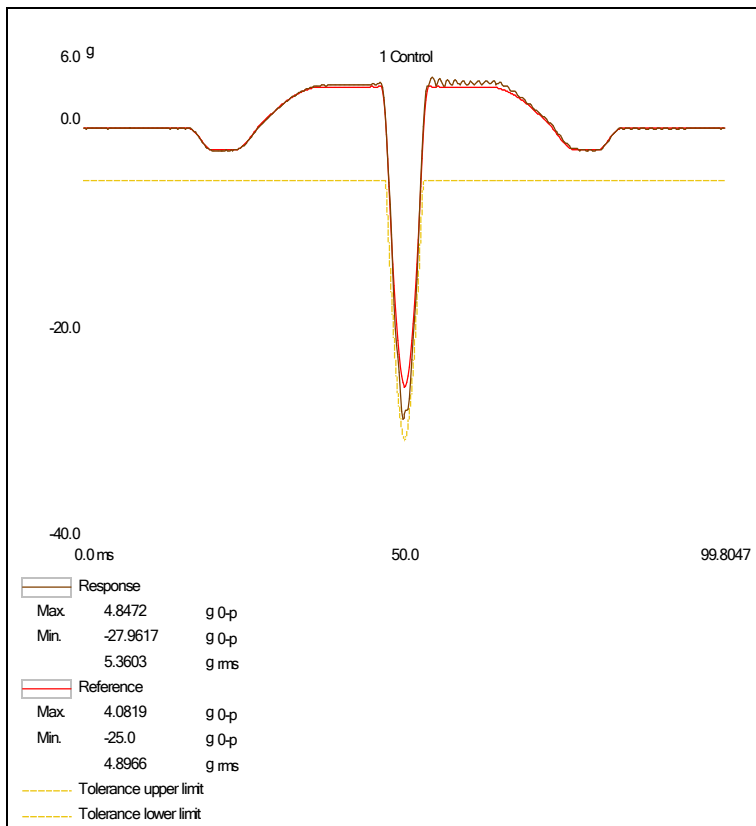
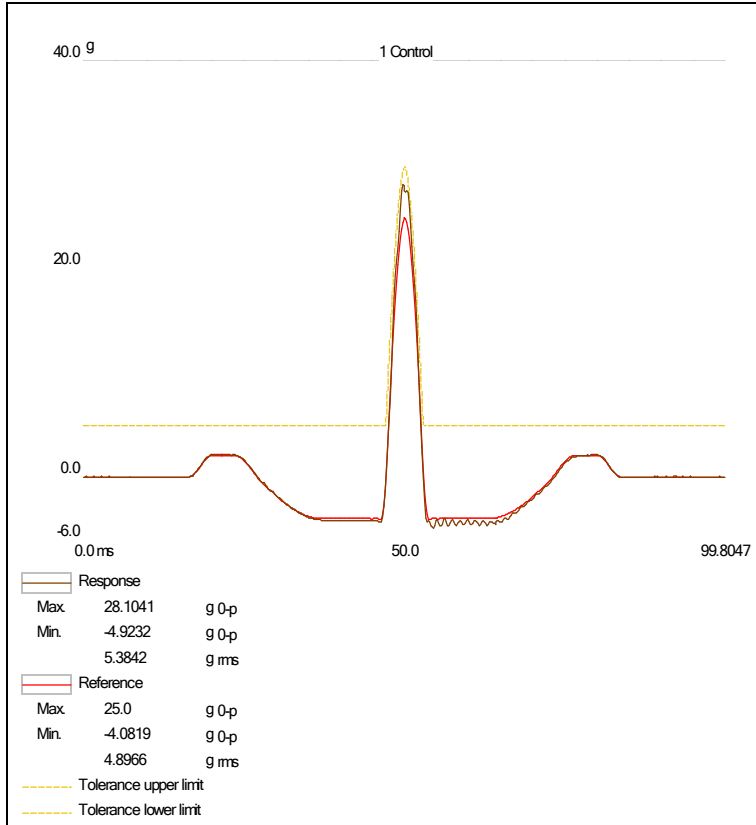
Sine Y-dir



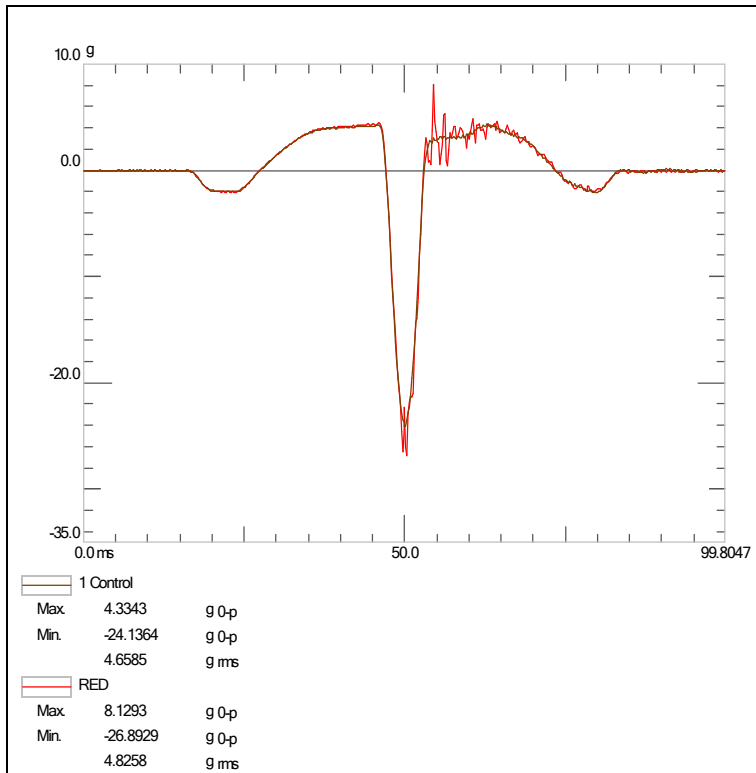
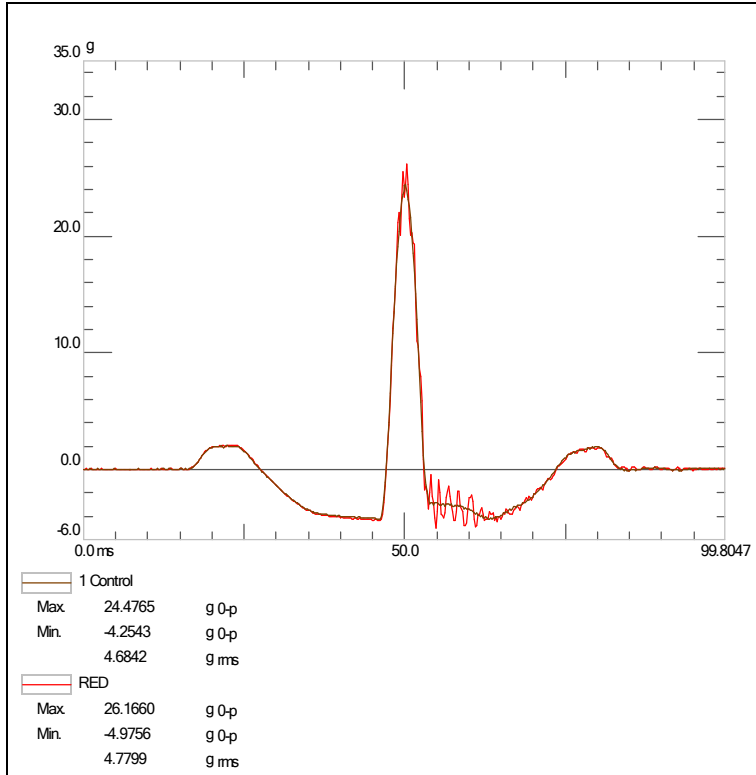
Sine Z-dir



Shock X-dir



Shock Y-dir



Shock Z-dir