

**Procedure I – Functional Shock**

*i Objective*

Designed to represent a shock condition typical of that in operational use. The following conditions are taken directly from Table 516.4 Mil-STD-810E.

*ii Test Conditions*

Min Value (g's)	Peak	Duration (mS)	Qty	Conditions
40G		11	Min samples 2	To be operational. Repeat 3 times for each axis.

*iii Analysis of Results*

- Perform Visual and Functional checks before testing sample.
- Scope plots of Transient shock using appropriate accelerometer.
- Unit should not glitch or fail during or after each test.
- No mechanical failure / functional non-conformance of product.

*iv Results*

Product Code – NV1-4T5GTH-C

Serial Number – 8052700003

- Unit was taken directly from production. Unit was compliant with production standards.
- Unit was tested to above procedure, refer to Appendix A for results
- No mechanical damage or functional failure was observed

Product Code – NV1-4T5GTH-C

Serial Number – 8052130010

- Unit was taken directly from production. Unit was compliant with production standards.
- Unit was tested to above procedure, refer to Appendix A for results
- No mechanical damage or functional failure was observed

**TEST RESULT - PASS**

**Procedure IV – Transit Drop**

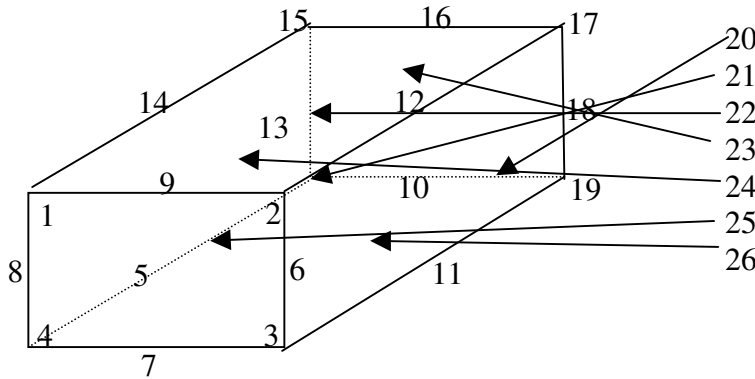
v Objective

Designed to determine the structural and functional integrity of the unit in its packaged condition. The packaged condition in this case is a single unit packed in an outer cardboard box filled with expandable foam.

vi Test Conditions

Using table 516.4 – II, the product should be dropped according to the following:

- Drop height = 122cm
- Total Drops = 26.
- Sample size = 5 max.
- Each corner/edge/ face to be tested = 26.



Use the following table and the diagram above to complete the drop sequence.

Sample No	Serial Number	Surface No
1	8051670013	1
1	8051670013	3
1	8051670013	26
1	8051670013	13
1	8051670013	23
1	8051670013	2
1	8051670013	4
1	8051670013	10
1	8051670013	24
2	8051670014	16
2	8051670014	9
2	8051670014	7
2	8051670014	18
2	8051670014	22
2	8051670014	15
2	8051670014	20

2	8051670014	14
3	8052130008	12
3	8052130008	11
3	8052130008	25
3	8052130008	17
3	8052130008	19
3	8052130008	21
3	8052130008	5
3	8052130008	6
3	8052130008	8

vii Analysis of Results

- Conduct visual and functional tests on each sample prior to start.
- Document impact results (photos if necessary) for each sample.
- No mechanical failure / functional non-conformance of product.

viii Results

## Sample 1

Product Code – NV1-350FF-N3-C

Serial Number – 8051670013

- Unit was taken directly from production line. Unit was compliant with production standards.
- No visible damage to UUT box.
- No visible damage or audible noise of assembly
- Unit PASSED final test

## Sample 2

Product Code – NV1-350FF-N3-C

Serial Number – 8051670014

- Unit was taken directly from production line. Unit was compliant with production standards.
- No visible damage to UUT box.
- No visible damage to assembly.
- Unit PASSED final test

## Sample 3

Product Code – NV1-4T5GTH

Serial Number – 8052130008

- Unit was taken directly from production line. Unit was compliant with production standards.
- No visible damage to UUT box.
- No visible damage or audible noise of assembly
- Unit PASSED final test

**TEST RESULT - PASS**

## Procedure VI – Bench Handling

### ix Objective

Designed to test the ability of the product to withstand typical bench manual handling during operational / servicing use.

### x Test Conditions

- Use a test bench with a thickness of at least 4.25cm
- With unit switched off.
- With the unit sat on its normal side (i.e. with label facing upwards).
- Lift one end of the unit to 100mm above surface of the bench.
- Repeat drop 4 times in total.

### xi Analysis of Results

- Conduct visual and functional tests on each sample prior to start.
- No mechanical failure / functional non-conformance of product.
- Document the results.

### xii Results

Product Code - NV1-4T5GTH-C  
Serial Number - 8052130009

- Unit was taken directly from production line. Unit was compliant with production standards.
- No visible damage to UUT after tests.
- No visible damage or audible noise of assembly after tests were observed.
- Unit PASSED final test

**TEST RESULT - PASS**

**APPENDIX A – PROCEDURE I RESULTS**

**CLIENT:** Lambda UK  
Kingsley Avenue  
Ilfracombe  
Devon  
EX34 8ES

**CERTIFICATE NUMBER** SJ200006-001 Issue 1  
**PROJECT NUMBER** SJ200006/DHG  
**CLIENT'S ORDER NUMBER** 967850, dated 3 October 2005

**INCOMING RELEASE NOTE**

Not released. Delivered on Advice Note 12562

**DATE OF RECEIPT**

10 October 2005

**TEST ITEM(S)**

Power Supply Units:

Type No.	Product Code	Serial Nos.	
NV175-175V-475GTH-C		8052700003	8052130010

**NUMBER OF ITEMS TESTED****TEST SPECIFICATION / ISSUE**

MIL-STD-810E

**DATE OF TEST**

28 October 2005

**TEST(S) APPLIED**

Shock Test (Functional) to MIL-STD-810E, Method 516.4 Procedure I under the following conditions:

Shock type: Terminal peak saw-tooth  
Shock test levels: Peak value: 40g  
Duration: 11ms  
Number of shocks: 3 in each direction of each of the three major orthogonal axes (18 in total)  
Mounting: Units attached to a sub base-plate using built-in bolt locations  
Function tests: The output voltages and currents for each unit to be checked on completion of shocks in each test axis

**RESULT(S) OF TEST**

No damage to any of the test samples was observed. See Continuation Page for tabulated results of test measurements

Approved by  .....

Date ... 17<sup>th</sup> November 2005

R Harris  
Authorised Signatory

TEST HOUSE CERTIFICATE SJ200006-001 Issue 1

CONTINUATION PAGE

**RESULT(S) OF TEST**

NVI-4T56TH-C S/N 8052700003	CH1		CH2		CH3		CH4	
	V	A	V	A	V	A	V	A
Pre-Test	11.9	15	4.74	10	23.83	2.5	11.9	2
Post 6 Shocks	11.89	15	4.95	10	23.95	2.5	11.95	2
Post 12 Shocks	11.92	15	4.77	10	23.87	2.5	11.95	2
Post 18 Shocks	11.89	15	4.77	10	23.83	2.5	11.95	2

NVI-4T56TH-C S/N 8052130010	CH1		CH2		CH3		CH4	
	V	A	V	A	V	A	V	A
Pre-Test	11.92	15	4.82	10	24.01	2.5	11.84	2
Post 6 Shocks	11.92	15	4.83	10	24.03	2.5	11.84	2
Post 12 Shocks	11.92	15	4.82	10	24.06	2.5	11.87	2
Post 18 Shocks	11.94	15	4.82	10	24.05	2.5	11.81	2