

**BERTRANDT INGENIEURBUERO GMBH**

Lab in -> Kruemke 1 - Tappenbeck  
In ARP -> Blohmstr 10 Hamburg  
38479 / 21079  
Germany

**FOR THE ATTENTION OF**

Dennis GALLUN Test Engineering  
Stephan PICKER Laboratory Manager  
Alexander-Christian REHM Certification  
Christian RODE Department Manager  
Guido WINKLER Validation Engineer  
Torsten ZERWEK Quality Assurance Manager

**CERTIFICATE PREPARED BY**  
NUNEZ Cesar

**YOUR QUALITY RESPONSIBLE DEPUTY**  
NUNEZ Cesar

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+33 6 77 98 01 23

**DATE**  
24/05/2017

**OUR REFERENCE**  
SUR2017.0021 Ind. B

**ARP-ID of the External Shop**  
142398

**TYPE of External Shop**

Independent

**Attestation letter for Qualification on Test Methods**

Dear Madam, Dear Sir,

We herewith inform that the couples <Test Methods / External Shop> as detailed in the Appendix have been either registered or modified in the Official Airbus Qualified Test Methods List (QTML) Database.

The latest valid status of all qualified <Test Methods / External Shop> couples is published by regular QTML reports:

- On Airbus homepage for Suppliers (<http://www.airbus.com/tools/airbusfor/suppliers/>) - Only Independent Labs.
- On Airbus Supply Portal A2QS - All External Shops.

A qualified couple is not linked to a specific product. It is the proof that the External Shop is meeting the requirement of the AP5262: Qualification Process of Couples <Test Method / External Shop>.

We remind you that the maintenance of your Test Methods Qualification depends on your monitoring on quality and technical aspects and is surveyed by Airbus on a regular basis, every year or every 2 years.

- On a quality aspect: we kindly ask you to indicate us any modification which could have a quality impact.
- Concerning technical requirements:
  - \* We kindly ask you to participate at least every 2 years to the PTP organized by Exova for the tests you perform on Airbus Products (see Appendix for details on next PTP participation requirements).  
You can find all necessary information about PTP participation process on the website: <https://ptp.exova.com>.  
In case of PTP results out of tolerances, the couples qualification can be downgraded to an authorisation to proceed or withdrawn and the PTP participation frequency is reduced to one year, subject to acceptance by Airbus of your Root Cause Analysis and associated Corrective Actions.
  - \* On the other hand, you shall supply at least every 2 years the results of your Internal Homogeneity Studies per Test Families.

Airbus reserves the right to withdraw or suspend the qualification at any time for specific reason, e.g.

- Any major incident(s) detected on one or several Test processes
- Lack in quality
- Evidence non-compliance with the AP5262
- Loss of Airbus Supplier Approval
- Stop of the Business

Yours faithfully,

**NUNEZ Cesar**  
**TM Qualification Engineer - TM PO Central Team**  
**Your Quality Responsible Deputy**



**MALHOMME Muriel**  
**TM Qualification Manager - TM PO Central Team**  
**Your Quality Responsible**



Appendix: Matrix of qualified Couples <Test Methods / External Shop>

## APPENDIX: Matrix of qualified Couples <Test Methods / External Shop>

We hereby declare the External Shop:

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**Qualified or Authorised to proceed for the following Test processes:**

Test Standard(s) *	Test label	Complex.	Qualif. Status	Next PTP part. **	Remark
	Random vibrations test		Qualified		Several metals and plastics
	Other test - Specify in Remark		Qualified		Operational Shocks and Crash Safety RTCA - DO-160_Section 7.2.2 Operation Shocks Alternate Test Procedure
	Other test - Specify in Remark		Qualified		Operational Shocks and Crash Safety RTCA - DO-160_Section 7.3.1 Crash Safety Test Procedure 1 (Impulse)
	Other test - Specify in Remark		Qualified		Operational Shocks and Crash Safety RTCA - DO-160_Section 7.3.2 Crash Safety Alternate Test Procedure (Impulse)
	Other test - Specify in Remark		Qualified		Operational Shocks and Crash Safety RTCA - DO-160_Section 7.3.3 Crash Safety Test Procedure 2 (Sustained)
	Other test - Specify in Remark		Qualified		Vibration RTCA - DO-160_Section 8.5.1 Standard Vibration Test Procedure-Fixed Wing Aircraft- Sinusoidal
	Other test - Specify in Remark		Qualified		Vibration RTCA - DO-160_Section 8.5.2 Standard Vibration Test Procedure-Fixed Wing Aircraft- Random
	Other test - Specify in Remark		Qualified		Vibration RTCA - DO-160_Section 8.6 High-Level, Short Duration Vibration Test Procedure
	Other test - Specify in Remark		Qualified		Vibration RTCA - DO-160_Section 8.7.1 Robust Vibration Test Procedure-Fixed- Wing Aircraft - Sinusoidal
	Other test - Specify in Remark		Qualified		Vibration RTCA - DO-160_Section 8.7.2 Robust Vibration Test Procedure-Fixed- Wing Aircraft - Random
	Other test - Specify in Remark		Qualified		Operational Shocks and Crash Safety RTCA - DO-160_Section 7.2.1 Operational Shocks
	Sine vibrations test		Qualified		Several metals and plastics
	Other test - Specify in Remark		Qualified		Icing - DO160 Plastics / Metall alloys
	Shock test		Qualified		Several metals and plastics

## APPENDIX: Matrix of qualified Couples <Test Methods / External Shop>

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**Qualified or Authorised to proceed for the following Test processes:**

Test Standard(s) *	Test label	Complex.	Qualif. Status	Next PTP part. **	Remark
	Combined climatic and mechanic testing		Qualified		
	Modal analysis		Qualified		
	Other test - Specify in Remark		Qualified	Humidity - DO160 Plastics / Metall alloys	
	Other test - Specify in Remark		Qualified	Temperature Variation - DO160 Plastics / Metall alloys	
	Other test - Specify in Remark		Qualified	Operational Low / High Temperature - DO160 Plastics / Metall alloys	
	Other test - Specify in Remark		Qualified	Low/High Survival Temp - DO160 Plastics / Metall alloys	
	Other test - Specify in Remark		Qualified	Waterproofness - DO160 Plastics / Metall alloys	
	Other test - Specify in Remark		Qualified	Fluid Susceptibility - DO160 Plastics / Metall alloys	
	Other test - Specify in Remark		Qualified	Salt Fog - DO160 Plastics / Metall alloys	
	Other test - Specify in Remark		Qualified	Vibration "(Program Specific Technical Notes)A350: V00RP0730936, V71RP0832860 and TN524.5071-05"	

\* Unless otherwise specified, last issue of the standard shall apply.

\*\* Next PTP participation year is given for information - It is the External Shop's responsibility to check every year on the PTP Website (<https://ptp.exova.com/>) which kits are proposed.