

# TESTORI AERO SUPPLY COMPANY PRESENTATION

Sirone September, 2018

# TESTORI AERO SUPPLY COMPANY OVERVIEW

## BRIEF HISTORY

TESTORI AERO SUPPLY (TAS) has been created in 2002 by a team of professionals already active and operating in the aviation market since many years before.

TAS has been able, since its creation, to provide to its Customer the complete range of products from raw material to final products, meaning, as final products, ready made seat covers, curtains, carpets, seat cushions and plastic parts depending on Customer needs and requests.

TAS is currently serving most of the Italian Airlines and has a variety of Customers worldwide.

TAS is currently one of the major manufacturer of products for cabin interiors worldwide and holds several Design and Production certificates recognized by International Aviation Authorities.

Testori Aero Supply holds the following certifications

- DESIGN ORGANIZATION certified in accordance with EASA PART 21J
- PRODUCTION ORGANIZATION certified in accordance with EASA PART 21G
- MAINTENANCE ORGANIZATION certified in accordance with EASA PART 145

All TAS EASA (European Aviation Safety Agency) Certifications have been endorsed by UAE GCAA (United Arab Emirates General Civil Aviation Authority).

- Additionally TAS holds also a ISO 9001:2008 and En 9100 Certification

# TESTORI AERO SUPPLY COMPANY OVERVIEW

## TESTORI AERO SUPPLY OFFICES IN THE WORLD

Testori Aero Supply has several offices and agents in the world



# TESTORI AERO SUPPLY COMPANY OVERVIEW

**COMPANY LEGAL ADDRESS:**  
TESTORI AERO SUPPLY SRL  
VIA F. PETRARCA, 22  
20121 MILANO (MI)  
ITALY

**COMPANY ADDRESS:**  
TESTORI AERO SUPPLY SRL  
VIA DON G. BRAMBILLA, 19  
23844 SIRONE (LC)  
ITALY

**PHONE NR:** +39 031/852853

**FAX NR:** +39 031/3574996

**E-MAIL ADDRESS:** [info@testoriaerosupply.com](mailto:info@testoriaerosupply.com)

# TAS DESIGN ORGANIZATION STRUCTURE

**Testori Aero Supply (TAS) holds a Design Organization Approval DOA certified under EASA PART 21 J and has got the approval number EASA.21J.0350.**

Testori Aero Supply (TAS) holds a Design Organization Approval number EASA.21J.0350.

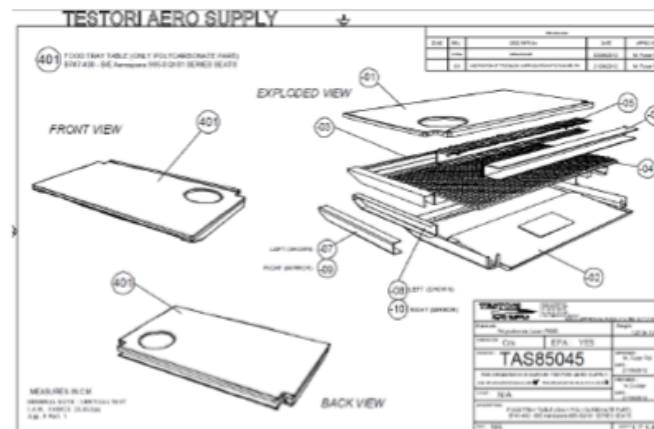
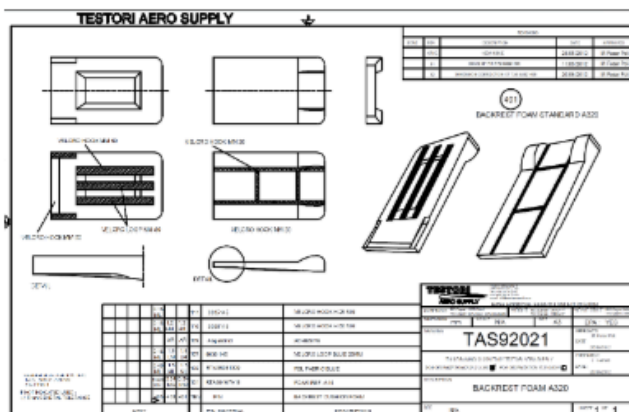
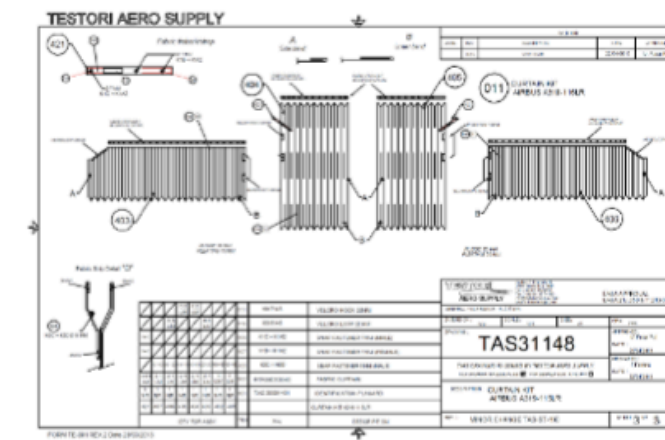
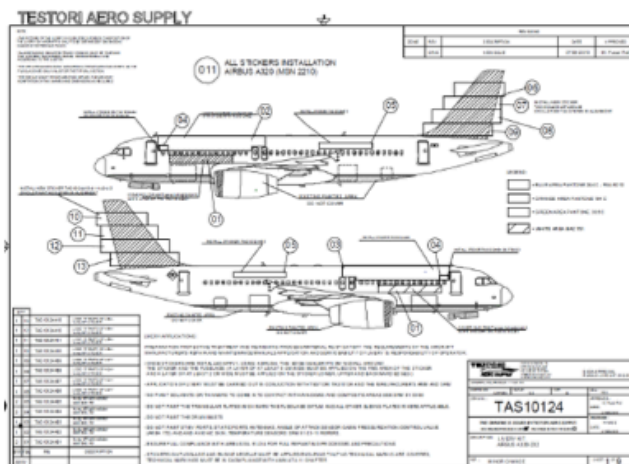
Among its Design Certification privileges Testori Aero Supply is classified as company approved to:

- Classify changes to type design and repairs as “major” or “minor” design
- Approve minor changes to type design and minor repairs to aircraft related to cabin interiors
- Design Major Changes and STC to type design and repairs to aircraft related to cabin interiors
- Issue information or instructions approved under TAS DOA authority

More specifically TAS is authorized to design minor and major changes related to the following items

- Seat covers replacement ( fabric and leather )
- Seat cushion foams replacement
- Carpets and Curtains replacement
- Seat Food Tray tables, polycarbonate fairings and plastic parts in general replacement
- Interior/Exterior Placards replacement
- Ashtray replacement
- Cabin interior seat layout changes
- Emergency equipment layout modification
- Additional equipment installation to comply with EU-OPS 1 standards
- Stretcher and medical kits installation/removals
- Escape path marking ( fluorescent type) removal installation
- Exterior Livery design

# TAS DESIGN ORGANIZATION STRUCTURE



# TAS DESIGN ORGANIZATION STRUCTURE



Terms of Approval 21J.350  
 Issue 7, 02 August 2013

TESTORI AERO SUPPLY S.r.L.

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European Aviation Safety Agency

## Terms of Approval

Design Organisation Approval Certificate  
 EASA.21J.350

- Scope of approval**  
 This Design Organisation Approval has been granted for:  
 - designing in accordance with the applicable type-certification basis and environmental protection requirements:  
   • changes and repairs to aircraft related to cabin interiors  
   • minor changes to aircraft related to external livery  
 - showing and verifying the compliance with the applicable type-certification basis and environmental protection requirements, and  
 - demonstrating to the Agency this compliance.
- Categories of products**  
 Large and small aeroplanes, large and small rotorcraft
- List of products**  
 [Not applicable]
- Privileges**  
 (a) The holder of this design organisation approval shall be entitled to perform design activities under Part 21 and within its scope of approval.  
 (b) Subject to point 21.A.257 (b) the Agency shall accept without further verification the following compliance documents submitted by the applicant for the purpose of obtaining:  
   1. a supplemental type certificate  
   2. a major repair design approval  
 (c) The holder of this design organisation approval shall be entitled, within its terms of approval and under the relevant procedures of the design assurance system:  
   1. to classify changes to type design and repairs as "major" or "minor";  
   2. to approve minor changes to type design and minor repairs.  
   3. to issue information or instructions containing the following statement: "The technical content of this document is approved under the authority of DOA ref. EASA.21J.350".
- Limitations**  
 [See in 1, above]  
 No structural design changes are admitted, except minor calculation for design changes related to scope of approval.

Date of issue: 02 August 2013

Roger SIMON  
 Design Organisation Manager

TE.DOA.00031-002



# TAS DESIGN ORGANIZATION STRUCTURE

## ANNEX #2 – CATEGORY OF PRODUCTS – TERMS of APPROVAL

### Design Organisation Approval Certificate EASA.21J.350

1. **Scope of approval**  
This Design Organisation Approval has been granted for:
  - designing, in accordance with the applicable type-certification basis and environmental protection requirements, Minor and Major changes (as Supplemental Type Certificates), and Minor and Major repairs to small and large airplane and helicopters related to cabin interiors, for which *Testori Aero Supply S.r.l.* is not type-certificate holder, including but not limited to cabin re-configurations, seat cushions, seat covers, curtains, carpets, markings, emergency equipments, PSU, class dividers, partitions, escape path markings, galley items such as ovens/coffee makers installation/relocation/replacement, with associated mechanical/structural (excluding primary structure) and electrical interfaces;
  - Minor Changes and Repairs to small and large airplane and helicopters related to exterior livery, for which *Testori Aero Supply S.r.l.* is not type-certificate holder
  - showing and verifying the compliance with the applicable type-certification basis and environmental protection requirements, and
  - demonstrating to the Agency this compliance.
2. **Categories of products**  
Large and Small aeroplanes and rotorcrafts
3. **List of products**  
Not applicable (not a T.C. Holder)
4. **Privileges**
  - (a) The holder of this design organisation approval shall be entitled to perform design activities under Part 21 and within its scope of approval.
  - (b) Subject to 21.A.257(b), the Agency shall accept without further verification compliance documents submitted by the holder of this design organisation approval for the purpose of obtaining:
    1. a supplemental type-certificate; or
    2. a major repair design approval.
  - (c) The holder of this design organisation approval shall be entitled, within its terms of approval and under the relevant procedures of the design assurance system:
    1. to classify changes to type design and repairs as "major" or "minor";
    2. to approve minor and major changes to type design, and minor and major repairs;
    3. to issue information or instructions containing the following statement: "The technical content of this document is approved under the authority of DOA ref. EASA.21J.350;"
5. **Limitations**  
The Terms of Approval are limited to the following:  
No structural design change are admitted, except minor calculation for design changes related to scope of approval.



# TAS PRODUCTION ORGANIZATION STRUCTURE

**Testori Aero Supply holds a certification as Production Organization POA certified under EASA PART 21 G and has got the approval number IT.21G.0014**

**Among its Production Certification privileges Testori Aero Supply is classified as:  
C2 – Parts**

**Testori Aero Supply is approved to manufacture following parts related to cabin interior**

## **Cabin Interior / Components**

- Seat cushions
- Leather and fabric seat cover
- Headrest
- Curtains
- Precut carpets
- Wall panels

## **Cabin Interior / Poliurethanic foams**

- Bottom cushions
- Backrest cushions
- Headrest cushions

## **Cabin Interior / Plastic (polycarbonate) components**

- Food tray tables
- Escutcheons
- Fairings in general

# TAS PRODUCTION ORGANIZATION STRUCTURE

**Additionally TAS has a laboratory certified to conduct following tests**

- Flammability vertical test 12 sec, in accordance with FAR/CS-25.853 Appendix F, Part I (a) (1)(ii) - (Flammability Test);
- Flammability vertical test 60 sec, in accordance with FAR/CS-25.853 Appendix F, Part I (a) (1)(i) - (Flammability Test);
- Flammability test in accordance with FAR/CS-25.853 Appendix F, Part II (Flammability of Seat Cushions- Combination Test);
- Smoke emission test in accordance FAR/CS 25.853 (d) Appendix F, Part V - (Smoke Density Test);
- Toxicity and smoke emission test in accordance with AIRBUS ABD 0031 - (Toxicity and Smoke Density);
- BSS7230 Flammability, Properties of Aircraft Materials, Determination of
  - BSS7238 Test Method for Smoke Generation by Materials on Combustion
  - BSS7239 Test Method for Toxic Gas Generation by Materials on Combustion

# TAS PRODUCTION ORGANIZATION STRUCTURE

  
**Ente Nazionale per l'Aviazione Civile**

**ITALIA**  
 Stato Membro dell'Unione Europea  
 (Member State of European Union)

**Certificato di Approvazione di Impresa di Produzione**  
 (Production Organization Approval Certificate)

**IT.21G.0014**

Ni sensi del Regolamento (CE) n.216/2008 del Parlamento Europeo e del Consiglio e del Regolamento (UE) n. 748/2012 della Commissione attualmente in vigore e subordinatamente alle condizioni specificate di seguito, l'ENAC, autorità competente dell'Italia, certifica:  
 (Pursuant to Regulation (EC) n.216/2008 of the European Parliament and the Council and to Commission Regulation (EU) n.748/2012 for the time being in force and subject to the conditions specified below, the ENAC, competent authority of Italy hereby certifies):

**TESTORI AERO SUPPLY S.r.l.**  
 Sede Legale: **Via Don G. Brambilla 19, 23844 Sirone (LC)**  
 (Address)

in quanto impresa costruttrice in conformità dell'allegato (Parte 21), Sezione A, Capitolo G del Regolamento (UE) n. 748/2012, autorizzata a costruire prodotti, parti, componenti elencate nel prospetto di approvazione allegato e a rilasciare i relativi certificati utilizzando i riferimenti che precedono.  
 (as a production organisation in compliance with the Annex (Part 21), Section A, Subpart G of the Regulation (EU) 748/2012, approved to produce products, parts and appliances listed in the attached approval schedule and issue related certificates using the above references)

**Condizioni**  
 (Conditions)

- L'approvazione è limitata a quanto specificato nelle condizioni di approvazione allegato, nonché  
 (The approval is limited to that specified in the enclosed Terms of Approval, and)
- La presente approvazione è subordinata al rispetto delle procedure specificate nel manuale di impresa di produzione approvata, nonché  
 (This approval requires compliance with the procedures specified in the Production Organisation Exposition, and)
- La presente approvazione è valida finché l'impresa di produzione approvata rimane conforme all'allegato (Parte 21) del Regolamento (UE) n. 748/2012, e non approvata in tal modo che l'approvazione prodotta rimanga in conformità con le norme (parte 21) del regolamento (UE) n. 748/2012)
- Fino al rispetto delle suddette condizioni, la presente approvazione rimane valida, con durata illimitata, fino a rinuncia, sostituzione, sospensione o revoca. (Subject to compliance with the foregoing conditions, this approval shall remain valid for an unlimited duration unless this approval has been surrendered, suspended or revoked)

Data del primo rilascio: 24 Settembre 2004  
 (Date of original issue) September 24<sup>th</sup> 2004  
 Data della presente revisione: 11 Gennaio 2016  
 (Date of the revision) January 11<sup>th</sup> 2016  
 Revisione n.: 5  
 (Revision n.) 5

Il Direttore (Head of)  
 Direzione Operazioni Nord  
 Ing. Riccardo PERRONE

 **ITALIA** **Condizioni di approvazione** **IT.21G.0014**  
 (Terms of Approval) (Page 2 of 2)

Il presente documento è parte dell'approvazione dell'impresa di produzione numero IT.21G.0014 rilasciata a:  
 (This document is part of Production Organisation Approval Number IT.21G.0014 issued to:)

**TESTORI AERO SUPPLY S.r.l.**

**Sez. 1: NATURA DELL'ATTIVITA'**  
 (Sec. 1: Scope of Work)

PRODUZIONE DI (Production of)	PRODOTTI / CATEGORIE (Products / Categories)
C2 PARTI Parts	Interiori / Interni di cabina Interiors / Cabin Interiors

Per ulteriori dettagli e limitazioni, si veda il manuale dell'impresa di produzione, sezione 0, par. 0.5.2  
 (For details and limitations refer to the Production Organisation Exposition, section 0, par. 0.5.2)

**Sez. 2: STABILIMENTI**  
 (Sec. 2: Locations)

23844 SIRONE (LC)	Via Don G. Brambilla 19
04100 LATINA (LT)	Via S.S. Pontina Km 80,740
DUBAI (U.A.E.)	Unit B-04 Dubai Industrial City Shaikh Mohammed Bin Zayed Road Jebel Ali, P.O. Box n. 333426 DUBAI UAE

**Sez. 3: PREROGATIVE**  
 (Sec. 3: Privileges)

L'impresa di produzione è autorizzata ad esercitare, alle condizioni dell'approvazione e conformemente alle procedure del manuale dell'impresa, i privilegi definiti al punto 21A.161, fatte salve le seguenti condizioni:  
 (The Production Organisation is entitled to exercise, within its Terms of Approval and in accordance with the procedures of its Production Organisation Exposition, the privileges set forth in 21A.161, subject to the following)

Prima dell'approvazione del progetto del prodotto si può emettere un modello 1 AESA unicamente per fini di conformità;  
 (Prior to approval of the design of the product an EASA Form 1 may be issued only for conformity purposes)

Data del primo rilascio: 24 Settembre 2004  
 (Date of original issue) September 24<sup>th</sup> 2004  
 Data della presente revisione: 11 Gennaio 2016  
 (Date of the revision) January 11<sup>th</sup> 2016  
 Revisione n.: 5  
 (Revision n.) 5

Il Direttore (Head of)  
 Direzione Operazioni Nord  
 Ing. Riccardo PERRONE

# TAS MAINTENANCE ORGANIZATION STRUCTURE

**Testori Aero Supply (TAS) holds a Maintenance Organization Approval number IT. 145.0385.**

**Among its Certification privileges Testori Aero Supply is classified as company approved to:**


- Perform maintenance on C6 Equipments and in particular to cabin interior components

More specifically TAS is authorized to perform maintenance on the following items

- Seat covers ( fabric and leather )
- Seat cushion foams
- Carpets
- Curtains
- Seat Food Tray tables,
- polycarbonate fairings
- plastic parts in general
- Water transfer technology on plastic/composite
- Painting of plastic and composite parts

# TAS MAINTENANCE ORGANIZATION STRUCTURE

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 **Repubblica Italiana**  
Stato membro dell'Unione Europea  
(A Member of the European Union)

**ENTE NAZIONALE PER L'AVIAZIONE CIVILE**

**CERTIFICATO DI APPROVAZIONE  
DELL'IMPRESA DI MANUTENZIONE**  
(Maintenance Organisation Approval Certificate)

**RIFERIMENTO (reference): IT.145.0385**

In conformità al Regolamento (CE) No 216/2008 del Parlamento europeo e del Consiglio e del regolamento (UE) N. 1321/2014 della Commissione attualmente in vigore e fatta salva la condizione di seguito specificata, l'Ente Nazionale per l'Aviazione Civile certifica:  
(Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council and to Commission Regulation (EU) No 1321/2014 for the time being in force and subject to the condition specified below, the Ente Nazionale per l'Aviazione Civile hereby certifies):

**Testori Aero Supply S.r.l.**  
**Sede Legale (Legal Address)**  
Via Don G. Brambilla, 19 - 23844 Sironè (LC) - Italy

In quanto impresa di manutenzione rispondente alla sezione A dell'Allegato II (parte 145) del regolamento (UE) N. 1321/2014, autorizzata ad eseguire la manutenzione di prodotti, parti e pertinenze elencate nella Specifica delle Abilitazioni allegata ed a rilasciare i relativi certificati di rimissione in servizio utilizzando i riferimenti che precedono, nonché, quando previsto, a rilasciare raccomandazioni e certificati di revisione dell'aeronavigabilità in seguito a una revisione del cui al punto M.A.901, lettera I) dell'allegato I (parte M) del medesimo regolamento per gli aeromobili elencati nella Specifica delle Abilitazioni allegata.  
(as a maintenance organisation in compliance with Section A of Annex II (Part-145) of Regulation (EU) No 1321/2014, approved to maintain products, parts and appliances listed in the attached approval schedule and issue related certificates of release to service using the above references and, when stipulated, to issue recommendations and airworthiness review certificates after an airworthiness review as specified in point M.A.901 (I) of Annex I (Part M) to the same Regulation for those aircraft listed in the attached approval schedule.)

**CONDIZIONI**  
(Conditions)

- La presente approvazione è limitata a quanto specificato nella sezione relativa allo scopo dell'approvazione del manuale dell'impresa di manutenzione approvata di cui alla sezione A dell'Allegato II (Parte 145), e  
(This approval is limited to that specified in the scope of work section of maintenance organisation exposition as referred to in Section A of Annex II (Part-145), and)
- La presente approvazione è subordinata al rispetto delle procedure specificate nel manuale dell'impresa di manutenzione approvata, e  
(This approval requires compliance with the procedures specified in the approved maintenance organisation exposition, and)
- La presente approvazione è valida fin tanto che l'impresa di manutenzione approvata è conforme all'Allegato II (Parte 145) del Regolamento (UE) N. 1321/2014,  
(This approval is valid whilst the approved maintenance organisation remains in compliance with Annex II (Part-145) of Regulation (EC) No 1321/2014.)
- Fatto salvo il rispetto delle suddette condizioni, la presente approvazione rimane valida per una durata illimitata, fino a rinuncia, sostituzione, sospensione o revoca.  
(Subject to compliance with the foregoing conditions, this approval shall remain valid for an unlimited duration unless the approval is surrendered, superseded, suspended or revoked.)

Data del primo rilascio:  
(Date of original issue) 11/01/2017

Data della presente revisione:  
(Date of the revision) 08/05/2017

Revisione n.:  
(Revision No) 2


Firma:  
(Signed) Il Direttore della Direzione Operazioni Nord Ovest  
Riccardo Perrone

Per l'autorità competente:  
(For the Competent Authority) Ente Nazionale per l'Aviazione Civile

BOLOASSOLOINACQO VRT3KLE  
AUT. DIREZ. REG. ENTRATE LAZO  
NUMERO 135047/98 DEL 30/1/1998

Mod.3-145 AESA versione 3 (EASA Form 3-145 Issue 3) Ottobre 2015

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 **SPECIFICA DELLE ABILITAZIONI  
DELL'IMPRESA DI MANUTENZIONE**  
(Maintenance Organisation Approval Schedule)

**Riferimento (reference): IT.145.0385**

**Impresa (Organisation): Testori Aero Supply S.r.l.**  
**Base Sironè**  
Via Don G. Brambilla, 19 - 23844 Sironè (LC) - Italian  
**Base Dubai**  
Shaikh Mohammed Bin Zayed Road, - 333x26 Dubai () - United Arab Emirates

Classe (Class)	Abilitazioni (Rating)	Limitazioni (Limitation)
COMPONENTI DIVERSI DA MOTORI COMPLETI O APU - (COMPONENTS OTHER THAN COMPLETE ENGINES OR APUs)	D6 Equipaggiamenti - (Equipment)	Secondo Capability List riportata nel Manuale Approvato (As per Capability List detailed in Approved Manual)

La presente approvazione è limitata ai prodotti, parti e pertinenze ed alle attività specificate nella sezione relativa allo scopo dell'approvazione del manuale dell'impresa di manutenzione approvata.  
(This approval schedule is limited to those products, parts and appliances and activities specified in the scope of work section of the approved maintenance organisation exposition.)

**Riferimento del Manuale dell'impresa di manutenzione:**  
(Maintenance Organisation Exposition reference) TAS-MOE-A01, Iss. 0

Data del primo rilascio:  
(Date of original issue) 15/11/2016

Data dell'ultima revisione approvata:  
(Date of last revision approved) 21/04/2017

Revisione n.:  
(Revision No) Rev. 4

Firma:  
(Signed) Il Direttore della Direzione Operazioni Nord Ovest  
Riccardo Perrone

Per l'autorità competente:  
(For the Competent Authority) Ente Nazionale per l'Aviazione Civile

Mod.3-145 AESA versione 3 (EASA Form 3-145 Issue 3) Ottobre 2015

# TESTORI AERO SUPPLY ISO 9001 AND EN 9100 CERTIFICATION



**CERTIFICATO N.  
CERTIFICATE No.** 25206/12/S

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI  
IT IS HEREBY CERTIFIED THAT THE QUALITY MANAGEMENT SYSTEM OF

**TESTORI AERO SUPPLY S.R.L.**

VIA PETRARCA, 22 20123 Milano (MI) ITALIA

NELLE SEGUENTI UNITÀ OPERATIVE // IN THE FOLLOWING OPERATIONAL UNITS

VIA DON G. BRAMBILLA, 19 23844 Sironè (LC) ITALIA

È CONFORME ALLA NORMA // IS IN COMPLIANCE WITH THE STANDARD  
**ISO 9001:2015**

PER I SEGUENTI CAMPI DI ATTIVITÀ / FOR THE FOLLOWING FIELD(S) OF ACTIVITIES

PROGETTAZIONE E PRODUZIONE DI PRODOTTI TESSILI PER INTERNI DI MEZZI DA  
TRASPORTO.

DESIGN AND PRODUCTION OF TEXTILE PRODUCTS FOR INTERIORS OF MEANS OF  
TRANSPORT.

La validità del presente certificato è subordinata a sorveglianza periodica annuale / semestrale ed al riesame completo del sistema di gestione con periodicità triennale  
The validity of this certificate is dependent on an annual / six monthly audit and on a complete review, every three years, of the management system  
L'uso e la validità del presente certificato sono soggetti al rispetto del documento RINA. Regolamento per la Certificazione di Sistemi di Gestione per la Qualità  
The use and validity of this certificate are subject to compliance with the RINA document: Rules for the Certification of Quality Management Systems

Prima emissione First issue	08.02.2012	Data revisione Revision date	13.09.2018
Data scadenza Expiry Date	19.11.2018		

Fabrizio Freil  
Milan Management System  
Certification Head

*Fabrizio Freil*  
**RINA Services S.p.A.**  
Via Corsica 12 - 16128 Genova Italy



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**IONet**  
THE INTERNATIONAL CERTIFICATION NETWORK  
www.ionet-certification.com

CISQ, the association of the world's first class  
certification bodies, is the largest provider of management  
system certification in the world.  
(CISQ is composed of more than 30 bodies and counts  
over 150 subsidiaries all over the globe)

Per informazioni sulla validità  
del certificato, visitate il sito  
www.rina.org

For information concerning  
validity of the certificate, you  
can visit the site  
www.rina.org

Per i requisiti della norma non  
applicabili al campo di applicazione  
del sistema di gestione  
dell'organizzazione, riferirsi alle  
informazioni documentarie relative.

Reference is to be made to the  
relevant documented information  
for the requirements of the  
standard that cannot be applied to  
the Organization's management  
system scope

IAP:04



**CERTIFICATO N.  
CERTIFICATE No.** ASI/28/12/S

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI  
IT IS HEREBY CERTIFIED THAT THE QUALITY MANAGEMENT SYSTEM OF

**TESTORI AERO SUPPLY S.R.L.**

VIA PETRARCA, 22 20123 Milano (MI) ITALIA

NELLE SEGUENTI UNITÀ OPERATIVE // IN THE FOLLOWING OPERATIONAL UNITS

VIA DON G. BRAMBILLA, 19 23844 SIRONÈ (LC) ITALIA

È CONFORME ALLA NORMA // IS IN COMPLIANCE WITH THE STANDARD  
**AS9100D / EN 9100:2018**

È VALUTATO SECONDO LE PRESCRIZIONI DELLA NORMA EN 9104-01:2013 E DEL REGOLAMENTO TECNICO ACCREDITA RT-18  
ASSESSED ACCORDING TO EN 9104-01:2013 STANDARD AND TO THE REQUIREMENTS OF ACCREDITA TECHNICAL REGULATION RT-18

PER I SEGUENTI CAMPI DI ATTIVITÀ / FOR THE FOLLOWING FIELD(S) OF ACTIVITIES

PROGETTAZIONE E PRODUZIONE DI PRODOTTI TESSILI  
PER INTERNI CABINA DI AEROMOBILI DA TRASPORTO PUBBLICO.

DESIGN AND PRODUCTION OF TEXTILE PRODUCTS  
FOR CABIN INTERIORS OF AIRCRAFT FOR PUBLIC TRANSPORT.

La validità del presente certificato è subordinata a sorveglianza periodica annuale / semestrale ed al riesame completo del sistema di gestione con periodicità triennale  
The validity of this certificate is dependent on an annual / six monthly audit and on a complete review, every three years, of the management system  
L'uso e la validità del presente certificato sono soggetti al rispetto del documento RINA. Regolamento per la Certificazione di Sistemi di Gestione per la Qualità nel settore aerospaziale secondo la norma EN 9100  
The use and validity of this certificate are subject to compliance with the RINA document: Rules for the Certification of Quality Management Systems for the aerospace sector according to EN 9100 scheme

Prima emissione First issue	08.02.2012	Data scadenza Expiry Date	19.11.2018
Data di revisione Review date	21.06.2018	Data entrata in vigore Issue date	20.11.2015

Paquale Fattore  
Milan Management System  
Certification Head

*Paquale Fattore*  
**RINA Services S.p.A.**  
Via Corsica 12 - 16128 Genova, Italy



CISQ is a member of  
**IONet**  
THE INTERNATIONAL CERTIFICATION NETWORK  
www.ionet-certification.com

CISQ, the association of the world's first class  
certification bodies, is the largest provider of management  
system certification in the world.  
(CISQ is composed of more than 30 bodies and counts  
over 150 subsidiaries all over the globe)

Per informazioni sulla validità  
del certificato, visitate il sito  
www.rina.org

For information concerning  
validity of the certificate, you  
can visit the site  
www.rina.org

Per i requisiti della norma non  
applicabili al campo di applicazione  
del sistema di gestione  
dell'organizzazione, riferirsi alle  
informazioni documentarie relative.

Reference is to be made to the  
relevant documented information  
for the requirements of the  
standard that cannot be applied to  
the Organization's management  
system scope

IAP:04  
IAP:21

# EXAMPLES OF TAS CAPABILITIES

- **TAS CAN PROVIDE THE FOLLOWING SERVICES:**
  - REPLACEMENT OF C CLASS SEAT COVERS (LEATHER/FABRIC)
  - REPLACEMENT OF Y CLASS SEAT COVERS ( LEATHER/FABRIC)
  - REPLACEMENT OF CARPET
  - REPLACEMENT OF CURTAINS
  - REPLACEMENT OF CLASS DIVIDERS NON TEXTILE LAMINATE DECOR
  - REPLACEMENT OF PARTITIONS NON TEXTILE LAMINATE DECOR
  - REPLACEMENT OF SIDE WALL PANELS NON TEXTILE LAMINATE DECOR
  - REPLACEMENT OF AFT COATROOMS LAMINATE DECOR
  - REPLACEMENT OF F/A SEAT COVERS
  - REPLACEMENT OF SEAT CUSHION FOAMS ( BOTTOM, BACKREST, HEADREST) at the moment only on aircraft/seats certified iaw TSO C39b
  - REPLACEMENT OF FOOD TRAY TABLES
  - REPLACEMENT OF FAIRINGS
  - REPLACEMENT OF PLATIC PARTS
  - ENGINEERING SERVICES



# SEAT COVERS REPLACEMENT

## TESTORI AERO SUPPLY PRODUCTION CAPABILITY

TAS has the full capability to manufacture the seat covers in his own facility in Sirone that is equipped with cutting tables and sewing machines.

All materials used in the production processes are tested iaw Flamability requirements as prescribed by the Minor Changes in TAS laboratory.

TAS production facility is capable to manufacture either fabric either leather seat covers.

In case of production high loads TAS has qualified subcontractors working under TAS Quality System



# CLASS DIVIDERS LAMINATE DECOR REPLACEMENT

## TESTORI AERO SUPPLY PRODUCTION CAPABILITY

TAS has limited production capabilities of laminate decor replacement on class dividers/partitions/sidewall panels/coatrooms and monuments in general.

TAS will provide ready made cut laminate decor kits for the different class dividers installed on Customer aircraft. The modification kits will be then applied on the class dividers/partitions/side wall panels/coatrooms and monuments in general.

Based on instructions given in TAS related Minor Change and the work can be performed directly on board by an approved EASA/FAA Part 145 Maintenance Crew.

Take note that laminate decor replacement is a standard maintenance action contained in the CMM, except for side wall panels.

On the side wall panels the laminate decor replacement with heat adhesive self activated sheets is a quite complicate task that requires a special equipment with heating lamps and some vacuum features.

Additionally on the side wall panels it is required a lot of preparation work consisting in cleaning and degreasing the side wall panel surface. The preparation can be performed at TAS facilities while the new laminate application no.

TAS has selected a subcontractor of proven experience able to perform the laminate application task.

TAS personnel will supervise all the side wall panels recovering process

# CARPET AND CURTAINS REPLACEMENT

## TESTORI AERO SUPPLY PRODUCTION CAPABILITY

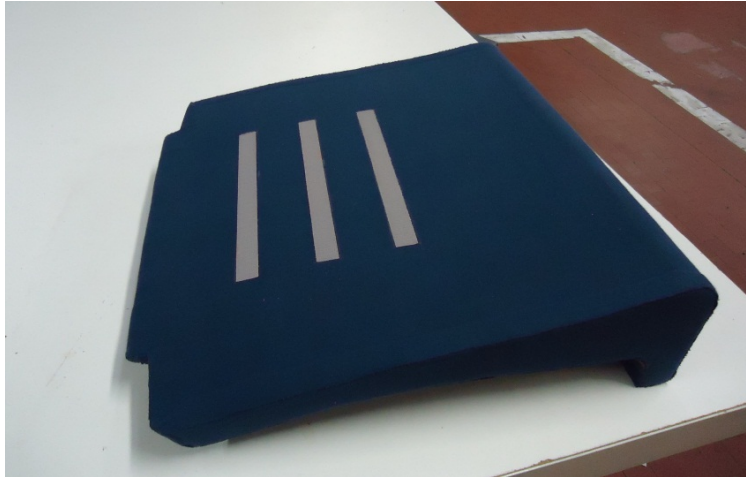
TAS has the full capability to manufacture the ready made carpets in his own facility in Sirone that is equipped with cutting tables and sewing machines, besides carpets in rolls.

All materials used in the production processes are tested iaw Flamability requirements as prescribed by the Minor Changes in TAS Laboratory



# SEAT CUSHION REPLACEMENT

## TESTORI AERO SUPPLY PRODUCTION CAPABILITY



TAS has the full capability to manufacture the seat cushions in his own facility in Sirone in case of small productions and or sampling while at subcontracted facility where are located Computerized Cutting Machines can be manufactured heavy productions. Material selected for seat cushions contains a high percentage of graphite to improve fire resistance capabilities and reduce the weight of the cushion when compared with the old one.

Additionally no more FBL is needed

All materials used in the production processes are tested iaw Flamability requirements as prescribed by the Minor Changes in TAS laboratory

# FOOD TRAY TABLE REPAIR REPLACEMENT

## TESTORI AERO SUPPLY PRODUCTION CAPABILITY

TAS is approved by EASA ( through ENAC Italian National Aviation Authority ) to manufacture and/or repair Food Tray tables and plastic parts for aircraft seats under its EASA Part 21G and/or PART 145 privilege  
Manufacturing is performed in the Testori Aero Supply Plant of Latina and Dubai  
Food tray tables will be manufactured using self extinguishing polycarbonate parts with honeycomb pan inside.  
All materials used in the production processes are tested iaw Flamability requirements as prescribed by the Minor Changes in TAS laboratory





# COSMETIC PLASTIC PARTS REPAIR - REPLACEMENT

## TESTORI AERO SUPPLY PRODUCTION/REPAIR CAPABILITY

TAS is approved by EASA (through ENAC Italian National Aviation Authority) to manufacture Food Tray tables and plastic parts for aircraft seats under its EASA Part 21G and Part 21J privileges.

Manufacturing is performed in the Testori Aero Supply Plant of Latina and Dubai

Food tray tables will be manufactured using self-extinguishing polycarbonate parts with honeycomb pan inside.

All materials used in the production processes are tested in accordance with flammability requirements as prescribed by the Minor Changes in TAS laboratory.



# FLAMMABILITY LABORATORY SERVICES

Testori Aero Supply, among its facility in Sirone ( Italy) has a flammability laboratory certified to conduct following tests

- Flammability vertical test 12 sec, in accordance with FAR/CS-25.853 Appendix F, Part I (a) (1)(ii) - (Flammability Test);
- Flammability vertical test 60 sec, in accordance with FAR/CS-25.853 Appendix F, Part I (a) (1)(i) - (Flammability Test);
- Flammability test in accordance with FAR/CS-25.853 Appendix F, Part II (Flammability of Seat Cushions- Combination Test);
- Smoke emission test in accordance FAR/CS 25.853 (d) Appendix F, Part V - (Smoke Density Test);
- Toxicity and smoke emission test in accordance with AIRBUS ABD 0031 - (Toxicity and Smoke Density);
- BSS7230 Flammability, Properties of Aircraft Materials, Determination of
- BSS7238 Test Method for Smoke Generation by Materials on Combustion
- BSS7239 Test Method for Toxic Gas Generation by Materials on Combustion



# FLAMMABILITY LABORATORY SERVICES



# ENGINEERING SERVICES

Testori Aero Supply, despite the DOA specific services as per capability list shown before, can support its Customers with highly specialised professional skills in case of need of Project Management and/or cabin modification, cabin revamping campaigns.

# TESTORI AERO SUPPLY RESEARCH AND DEVELOPMENT

## **Testori Aero Supply, starting from 2014, has created a new research and development department**

In 2015 TAS has decided to launch a project to develop a component test method similar to that outlined the FAA/DOT/AR-05/5,1 but applicable to multilayer non monolithic cushions.

TAS has applied to participate to a European Commission programme for research and innovation named **Horizon 2020** and has submitted the project “ **Development of replacement method for all kind of 16g dynamically tested aircraft seat cushions**”

TAS, classified as Executive Agency for Small and Medium-sized Enterprise (EASME) according to European Commission standards, has presented the project in the program section dedicated to business innovation research for transport.

TAS approach to the 16g multilayer non monolithic cushions replacement project has been developed in cooperation with Milan Politecnico and with the support of GEVEN, an Italian aircraft seat manufacturer.

The project has been evaluated by a panel of experts appointed by the European Commission and has been accepted as innovative project eligible to receive a founding by the European Union.

TAS and the European Commission have signed the grant agreement number 711347 on January 2016.

Subsequently, TAS has signed with EASA (European Aviation Safety Agency) a TAC (Technical Advice Contract) to receive technical guidance during the project.

**The TAC number P-EASA.TAC.0049 has been approved by EASA in september 2018**

# TESTORI AERO SUPPLY RESEARCH AND DEVELOPMENT

In 2016 Testori Aero Supply, together with Politecnico of Milan, has launched a new project on 16 multilayer seat cushions to be installed on business, first class and VIP seats both for liners and executive jets that has been financed by Regione Lombardia and is currently in progress.

In march 2018 a new project on flammability similarity on leather seat covers has been launched with the aim to find an alternative method to overcome the required Oil Burn Test currently required by AC 25.853-1 whose last revision is dated sept.. 1986

Project has already been preliminarily discussed with EASA and will be submitted to European Commission in late oct. 2018 in order to get financing among the European Commission programme for research and innovation Horizon 2020

# CONCLUSIONS

AS ILLUSTRATED IN THE PREVIOUS SLIDES TESTORI AEROSUPPLY IS WILLING TO SUPPORT CUSTOMER CABIN ENGINEERING IN BOTH IN TERMS OF PROJECT MANAGEMENT BOTH IN TERMS OF PROJECT PREPARATION AND DEVELOPMENT.