	ER Number	AVE-ER-12521
	Date	17/10/2014
	Approval Holder	Jenny Cayzer
	Applicability	Aircraft Seating
Legs Up Flight Hammock Assessment		

Engineering Report

AVE-ER-12521

Revision 0

Legs Up Flight Hammock Impact Assessment for use on an Aircraft Seat

Effectivity

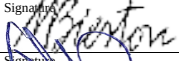
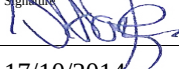
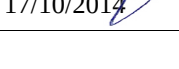
Aircraft Manufacturer **ALL**

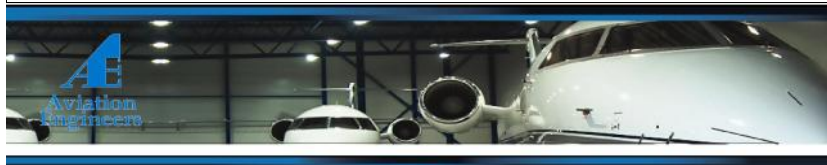
Aircraft Type **ALL**

Component Type **Aircraft Seating**

Special Conditions **Rear Mounted Meal Tray Fitted**

ATA Chapter **25-00**

Compiled Pursuant to regulations CASR 1998 of the Civil Aviation Safety Regulations.	Job Number	AVE-P-12521
	Prepared by M. Berton	Signature 
Jason Hazell (ARN 765973) BEng (Hons) CEng, MRAS 	Checked by J. Hazell	Signature 
	Date	17/10/2014 

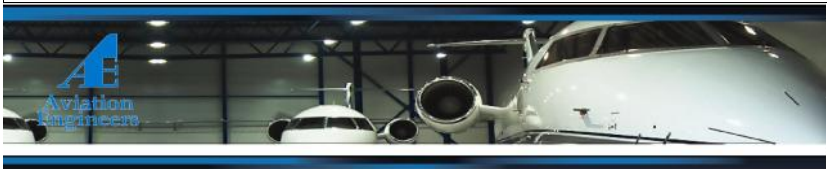
ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

LIST OF REVISIONS

REVISION	DESCRIPTION	ACTION	DATE	APPROVAL
0	Initial Issue	N/A	17/10/2014	A&E 14/006

A vertical bar (change bar) in the margin as shown at the start of this sentence, indicates a change, addition or deletion in the adjacent text for the current revision of that page only. The change bar is dropped at the next revision of that page.

The action column in the list of revisions indicates whether the aircraft or component modified by an earlier issue of this Engineering Order requires additional action.

ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

1 Introduction

1.1 Client Details

Approval Holder Name	Legs up Flight Hammock	Telephone	0401 440 409
Address	-	Fax	-
City/State	Grafton NSW 2460	Web	griftoncayzers@msn.com
Contact Person	Jenny Cayzer	Job Title	Director

1.2 Effectivity

Equipment Type	Manufacturer	Type	Serial Number	Part Number
Legs Up Flight Hammock	Jenny Cayzer	Accessory	N/R	-

1.3 Description of Report

Engineering Report AVE-ER-12521 assesses the Legs Up Flight Hammock to provide advice and supporting evidence to substantiate the applicability of the Legs Up Flight Hammock for the use in RPT aircraft. The following items were considered in the preparation of the report.

- CASA standard flammability report on supplied material sample.
- Structure impact assessment on aircraft seat.
- Impact on cabin interior
- Aircraft egress and evacuation impact
- General aviation safety, cleaning and housekeeping
- Produce aeronautical design standard drawings of the flight hammock and seat interface details
- Statement of compliance to CASA regulations, sub regulations and standards.

The report concludes that the legs up flight hammock poses no structural risk to the seat structure, meal table assembly, meal table arms (with table stowed and deployed) or the seat occupied by the passenger. As a carry on comfort aid, the hammock poses no risk to cabin flammability, egress or cabin safety if its permitted use is as per standard cabin practices and removed from the seat for taxi, take-off and landing.



ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

2 Consequences

2.1 Weight and Balance

The legs up flight hammock does not affect the weight and/or balance of the aircraft. No addition to the aircraft's running record of weight alterations is required.

2.2 Electrical Load Data

The legs up flight hammock is a non-electrical item that has no effect on any of the aircraft electrical interfaces.

2.3 Software Requirements

The legs up flight hammock has no software requirements.

2.4 Publications Affected

The legs up flight hammock has no effect on any of the aircraft systems or operation and as such, no publications are affected.

2.5 Referenced Material

- Speedline Textiles Product Data Sheet Product Code SL-Inflate
- MMPDS
- FAR 25.301 Loads.
- FAR 25.303 Factor of safety.
- FAR 25.305 Strength and deformation.
- FAR 25.307 Proof of structure.
- FAR 25.601 General.
- FAR 25.603 Materials.
- FAR 25.605 Fabrication methods.
- FAR 25.609 Protection of structure.
- FAR 25.613 Material strength properties and material design values.
- FAR 25.785 Seats, berths, safety belts, and harnesses.
- FAR 25.787 Stowage compartments.
- FAR 25.789 Retention of items of mass in passenger and crew compartments and galleys.
- FAR 25.795 Security considerations.
- FAR 25.803 Emergency evacuation.
- FAR 25.807 Emergency exits.
- FAR 25.810 Emergency egress assist means and escape routes.
- FAR 25.853 Compartment interiors.
- FAR 25.1309 Equipment, systems, and installations.
- FAR 25.1529 Instructions for continued Airworthiness.
- Appendix Appendix F to Part 25
- Appendix Appendix H to Part 25 --Instructions for continued Airworthiness

ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

3 Part Requirements

3.1 Test Parts

Item	Part Number	Description	Specifications	Qty
1	-	Legs Up Flight Hammock	70D Nylon Ripstop PU Coated FR Treated	1
2	-	Weighing Scale	Shimano 45kg S/S Spring and Hook	1
3	-	Test Seat	-	1

3.2 Tooling

There are no special tooling requirements related to installing the legs up flight hammock onto the seat.

3.3 Skills

It is recommended that flight crew are briefed on the product to ensure the legs up flight hammock is correctly installed onto the aircraft seat.

3.4 Additional Requirements

There are no additional requirements related to this Engineering Order.

ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

4 Technical Records

4.1 Engineer Order Distribution

Aviation Engineers will supply each revision of this document to the client as it becomes available. Additional copies of this document and/or associated design drawings can be supplied on request. Aviation Engineers does not assume any responsibility for tracking and/or distribution of this document.

The approval holder is responsible for the distribution of this document to the applicable organizations. Aviation Engineers recommends the creation of a distribution list to ensure compliance with these regulations.

4.2 Continued Airworthiness Instructions

There are no special continued airworthiness instructions related to this Engineering Order.

4.3 Publication Change Instructions

The installation has no effect on any of the aircraft systems or operation and as such, no publications are affected.

4.4 Reporting Requirements

The client is responsible for reporting to CASA in accordance with CASR 21.003 if applicable.

ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

5 Flight Hammock Assessment

5.1 CASA Standard Flammability Report

The materials used in the construction of the flight hammock were assessed to the standard of FAR 25.853 Part a (12 second vertical burn). Although not a requirement for carry on personal items, it was necessary to establish the flammability standard of the materials used in the construction of the product. See Appendix A for the test report. The figure shows the material after the burn test.



5.2 Structural Impact Assessment on Aircraft Seat

As the flight hammock attaches to an aircraft seat it was necessary to determine any loads that could be transmitted into the meal table structure and into the seat structure. Tests were carried out on the product to determine the loads that could be generated in the hammock and transferred into the seat frame. The loads were recorded and applied into the meal table by analysis to determine if the hammock would have any detrimental impact on the seat structure.

This section details the test types and procedures, results and assessment conclusions that are drawn from the structural impact assessment on the aircraft seat due to the usage of the Legs Up Flight Hammock

5.2.1 Test Types and Procedure

I. Resting Weight

The resting weight test measured an average weight force transferred from the hammock to the aircraft seat frame when the occupant is at rest with their legs in the hammock. The test was conducted in accordance with the following procedure:

- Secure Shimano 45kg Weighing Scale to support joist positioned above Legs Up Flight Hammock attachment point to seat frame
- Position occupant test subject (65 kg Male used for test) into correct flight hammock seating position
- Loop strap around Legs Up Flight Hammock and occupant legs
- Secure strap to weigh scale support hook
- Tighten strap until weight is transferred fully to weigh scale
- Record resting weight result shown on the weigh scale
- Loosen strap, allowing seat frame to fully support load
- Repeat steps e → g another two times and record the average weight force

Refer to Table 1 below for results of this procedure.

Run #	Weight Force (Kg)	Force (N)
1	6	59
2	7	68.7
3	5.5	54
Average	6.17	60.5

ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

II. Applied Weight

The applied weight test measured an average weight force transferred from the hammock to the aircraft seat frame when the occupant is applying a downwards force into the hammock whilst remaining seated. The test was conducted in accordance with the following procedure:

- Secure Shimano 45kg Weighing Scale to support joist positioned above Legs Up Flight Hammock attachment point to seat frame
- Position occupant test subject (65 kg Male used for test) into correct flight hammock seating position
- Loop strap around Legs Up Flight Hammock and occupant legs
- Secure strap to weigh scale support hook
- Tighten strap until weight is transferred fully to weigh scale
- Occupant applies as much downwards force with legs as possible for 5 seconds
- Record applied weight result shown on the weigh scale
- Loosen strap, allowing seat frame to fully support load again
- Repeat steps e → h another two times and record the average weight force

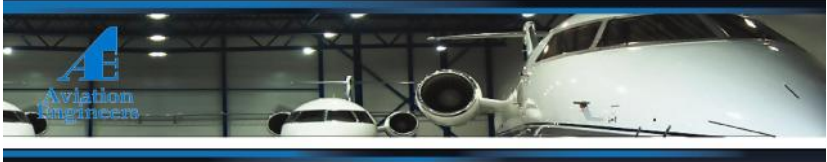
Refer to Table 2 below for results of this procedure.

Run #	Weight Force (Kg)	Force (N)
1	12	117.7
2	12.5	122.6
3	12.5	122.6
Average	12.33	121

III. Stepping Weight

The stepping weight test measured an average weight force transferred from the hammock to the aircraft seat frame when the occupant is applying a downwards force into the hammock with one leg whilst attempting to step out of the seat using the hammock as a step support. The test was conducted in accordance with the following procedure:

- Secure Shimano 45kg Weighing Scale to support joist positioned above Legs Up Flight Hammock attachment point to seat frame
- Position occupant test subject (65 kg Male used for test) into correct flight hammock seating position
- Loop strap around Legs Up Flight Hammock and occupant legs
- Secure strap to weigh scale support hook
- Tighten strap until weight is transferred fully to weigh scale
- Occupant attempts to step out of the hammock using it as a step support
- Record maximum applied weight result shown on the weigh scale
- Loosen strap, allowing seat frame to fully support load again
- Repeat steps e → h another two times and record the average weight force

ENGINEERING ORDER	<i>Job No.</i>	AVE-P-12521
	<i>ER Number</i>	AVE-ER-12521
	<i>Revision</i>	0
	<i>Date</i>	17/10/2014
Legs Up Flight Hammock Assessment	<i>Applicability</i>	Aircraft Seating

Refer to Table 3 below for results of this procedure.

Run #	Weight Force (Kg)	Force (N)
1	22.5	220.7
2	22	215.8
3	22.5	220.7
Average	22.33	219

5.2.2 Structural Assessment

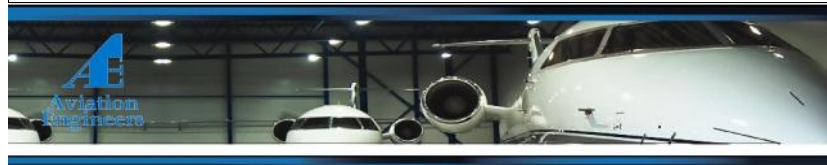
The structural assessment calculates the resultant force applied to the seat frame using the average weight force values from each test procedure.

Assumptions:

- Each tray table arm supports half the total weight force applied from the hammock (Refer Fig 1)
- Loading occurs at maximum moment arm length
- Tray arms are manufactured from 2024-T3 Aluminium
- Static equilibrium is maintained in the seat frame (Rigid Body motion)



Figure 1: Loading Diagram

ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

As not all aircraft seat meal tray arms are of the same design or length a three value range was used to perform the structural calculations, the range (x) was 0.25m, 0.3m and 0.4m respectively. Using these moment arms and known engineering statics equations ($F = ma$, $M = Fx$) the resultant forces on a single arm were calculated and are shown in Table 4 below:

Moment Arm (m)	Rest Moment (Nm)	Applied Moment (Nm)	Step Moment (Nm)
0.25	7.58	15.12	27.4
0.3	9.1	18.14	32.86
0.4	12.1	24.2	43.81

Table 5 below shows the resultant force on both arms.

Moment Arm (m)	Rest Moment (Nm)	Applied Moment (Nm)	Step Moment (Nm)
0.25	15.16	30.24	54.8
0.3	18.2	36.28	65.72
0.4	24.2	48.4	87.62

Table 6 below shows the resultant force under an ultimate load case of a 65kg (637.65 N) human applying their full weight to the tray table arms:

Moment Arm (m)	Ultimate Load Moment (Nm)
0.25	159.4
0.3	191.3
0.4	255.06

The nylon fabric material used for the Legs Up Flight hammock has a Warp Breaking force of 569 N and a Weft Breaking force of 402 N and assuming the tray arms are 2024-T3 aluminium alloy, they will have an ultimate tensile strength of approximately 413.7 MPa. Therefore it can be concluded from the resultant loadings and material strength properties that the Legs Up Flight Hammock will fail before the seat tray arms, and that neither will fail under loadings from the test cases.

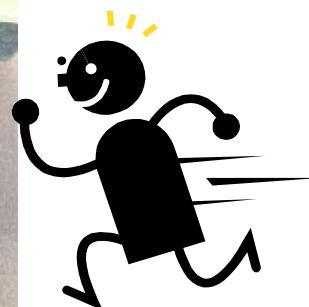
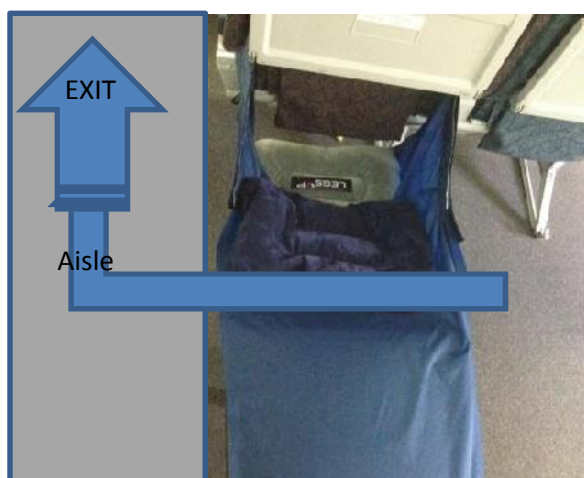
5.3 Impact on Cabin Interior

The aircraft interior space is considered by most airlines to be the point of difference in the marketing of their product and as such, accessories such as the legs up hammock are assessed from a cabin presentation, brand and marketing view point. Passenger comfort and personal space are the key drivers in long haul economy cabins and accessories that can provide a positive point of difference to enhance the flight experience are offered to customers if the safe operation and economy of implementation are positive. Carry on accessories also have a negative impact on the cabin and a risk assessment would need to be carried out by any airline before making any recommendations.

5.4 Aircraft Egress and Evacuation Impact

Any accessories that have an opportunity to restrict egress from a cabin must be assessed to ensure that they meet the regulations. Although this is a carry on product and has no bearing on the civil aviation regulations, an impact on the use and operation is essential to ensure that from a safety point of view, the product has been adequately assessed.

ENGINEERING ORDER 	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating



The following has been assumed as part of the operational effect on the cabin.

- The legs up flight hammock must not be used during taxi, take-off and landing.
- In the event of an emergency the cabin will be prepared by the crew and the legs up flight hammock must be removed and stowed.

5.5 General Aviation Safety, Cleaning and Housekeeping

The legs up hammock provides a pocket type fabric hammock to support the feet and lower legs to enhance passenger comfort. The pocket provides opportunities for the inadvertent storage of all products carried on board and as such may represent a cleaning and housekeeping hazard should the hammock be left on the aircraft at the end of the flight. The airline must consider the methods for disposal in order to protect the cleaners and crew in the clean-up of aircraft at the end of each flight. The recommendation from this report is to remove the cushions from the hammock and remove the hammock from the seat by folding the tails of the hammock into itself. The hammock is to be rolled and disposed of into the standard garbage disposal. The reason for rolling is to ensure that any harmful contents such as needles, used tissues, and hygiene risk items are contained within the hammock for disposal.

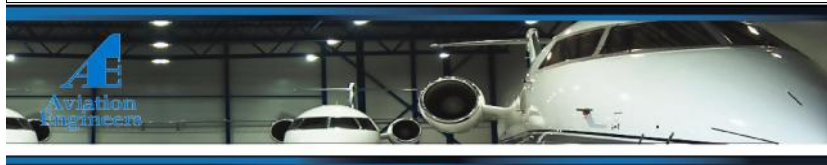


5.6 Design Drawings and Seat Interface

See Appendix B - Drawing set to ensure replication of product on every seat

5.7 Statement of Compliance

See Appendix C - Compliance statement.

ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

APPENDIX A



Test Report Flammability Test Certificate

Customer: Jenny Cayzer

Report No:
(12521-1)

Test:	The Following samples were tested to the requirements of FAR 25.853 (a) { 12 sec. Ignition vertical Burn } as determined by the standards. Transport Category Aeroplanes CH (Amendment 25-72 Effective 20/8/90))	
Conditioning	Samples were conditioned at 20 Deg for 24 Hours	
Flame Height	38mm (1.5 inches)	Flame Temperature: 840-860 °C {Natural Gas}
Quality: Nylon Shade: Blue Batch No: 12521-1		

Test Results:

Material Specs	WARP			Mean	Spec Reqt	Comply
	Test 1	Test 2	Test 3			
Burn Length (mm)	107	92	122	107	200 Max	PASS
Glow and After Glow Time (sec)	0	0	0	0	15 Max	PASS
Flaming Time of Drips (sec)	0	0	0	0	5 Max	PASS

Tested By: Jason Hazell

Signed: 

Test Date: 01/10/2014

Checked By: Brook Degen

Signed: 

Date: 01/10/2014

Aviation Engineers Pty Ltd
ACN 122 764 550
ABN 87 122 764 550
Incorporated in Australia

PO BOX 1185
Ashmore City QLD 4214
Tel: +61 (0)7 5665 7670
Fax: +61 (0)7 3036 5738
www.aveng.com.au

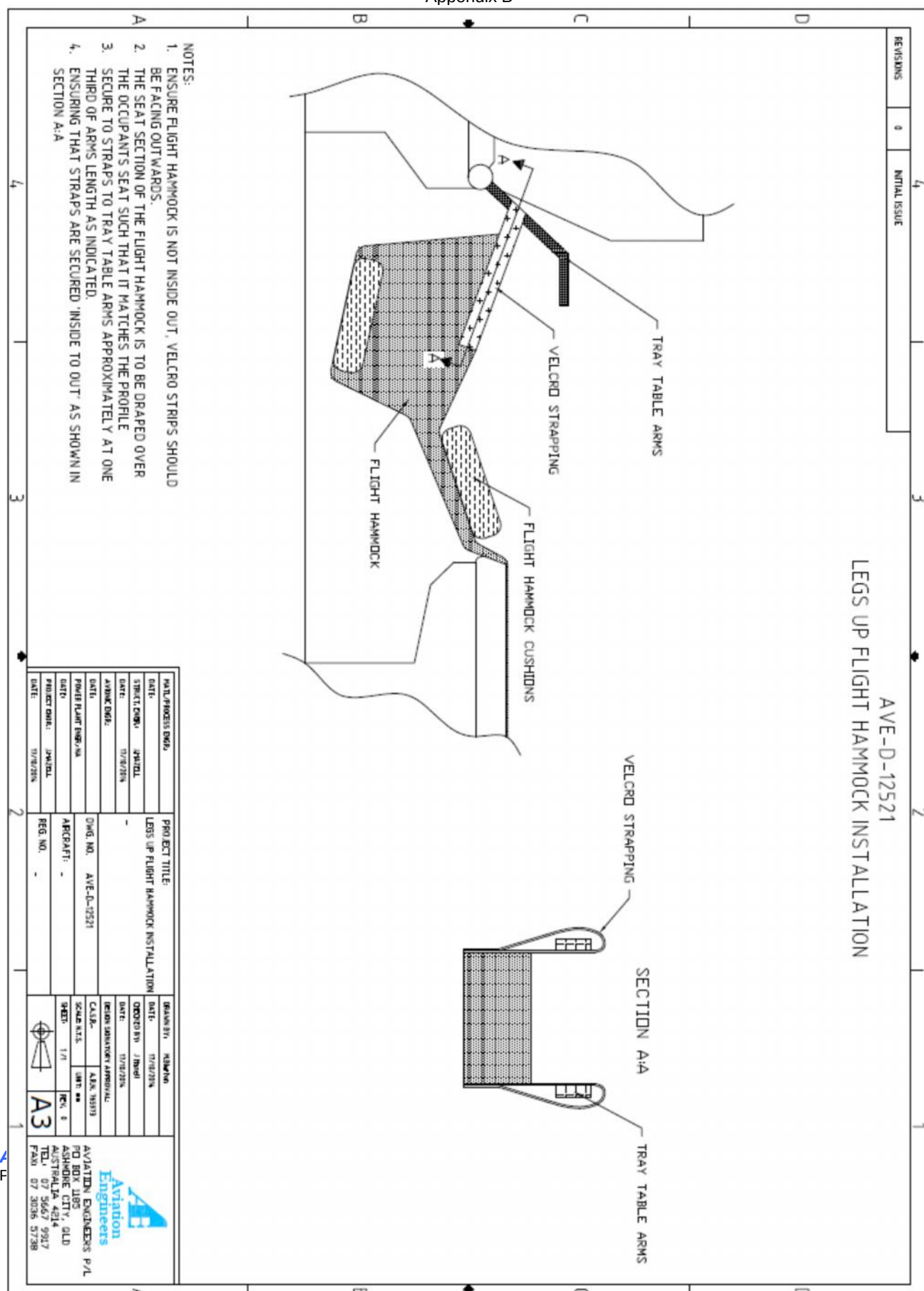


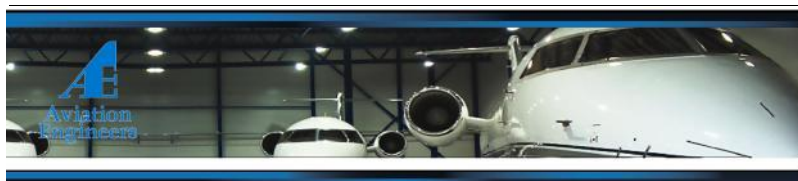
The image shows the Aviation Engineers logo on the left, which consists of a stylized blue 'AE' above the text 'Aviation Engineers'. To the right of the logo is a photograph of a large white commercial airplane, likely a Boeing 747, inside a hangar. The aircraft is viewed from a low angle, emphasizing its size. The hangar's interior structure is visible in the background.

Job No.	AVE-P-12521
ER Number	AVE-ER-12521
Revision	0
Date	17/10/2014
Applicability	Aircraft Seating

Legs Up Flight Hammock Assessment

Appendix B



	ER Number	AVE-ER-12521
	Date	17/10/2014
	Approval Holder	Jenny Cayzer
	Applicability	Aircraft Seating
Legs Up Flight Hammock Assessment		

6 Justification

From a top down assessment of FAR 25, the following sections were found to be applicable to the implementation of the legs up flight hammock into the aircraft cabin. Compliance with the latest Amendments to FAR 25 have been found.

Regulation	Means Of Compliance	Compliance Method					Capability
		D	A	S	I	T	
FAR 25.301 Loads.	Strength requirements were considered using the definition of loads as specified in this regulation. No deflection beyond the OEM design is expected to occur. Refer to FAR 25.307 means of compliance.	X					Structure and mechanical systems
FAR 25.303 Factor of safety.	Since we are dealing with ultimate loads, FAR 25.303 states that “when a loading condition is prescribed in terms of ultimate loads, a factor of safety need not be applied unless otherwise specified”. As the installed item is within the cabin FAR 25.561 was consulted and it does not prescribe a factor of safety for the ultimate loads.	X					Structure and mechanical systems
FAR 25.305 Strength and deformation.	The aircraft seat structure is able to support limit and ultimate loads without detrimental permanent deformation and without failure. The Legs Up Flight Hammock material will fail before any loading reaches a point of possible damage to the aircraft structure. Refer to FAR 25.307 means of compliance	X	X				Structure and mechanical systems
FAR 25.307 Proof of structure.	The Legs Up Flight Hammock is a nylon based fabric, with Warp Breaking force of 569 N and a Weft Breaking force of 402 N. It is assumed that the material of the aircraft seat frame is a 2024-T3 Aluminium Alloy, with an approximate ultimate tensile load strength of 413.7 MPa. Under an ultimate load case of 637.65 N the Legs Up Flight Hammock will fail before the seat frame, preventing any damage to the aircraft structure. Refer to Section 5.2 for testing procedures and results.	X	X				Structure and mechanical systems
FAR 25.601 General.	There are no design features or details of the installation which experience has shown to be hazardous or unreliable. The installation does not affect the design features or details of the aircraft.	X					Structure and mechanical systems

ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

Regulation	Means Of Compliance	Compliance Method					Capability
		D	A	S	I	T	
FAR 25.603 Materials.	The Legs Up Flight Hammock is fabricated from 100% Nylon base fabric, sourced in accordance with ISO 9001, ISO 14001 and Oeko-Tex Standard 100. The fabric is described as 70D Nylon Ripstop PU Coated FR Treated and has been tested in accordance with the following standards, ISO 811, AS 1530.2, AS 1530.3, AS 2001.2.3.1, AS 2001.2.10, AS 2001.2.13, AS 2001.2.16, AS 2755.1 and AS 2755.2.	X					Structure and mechanical systems
FAR 25.605 Fabrication methods.	The fabrication of the nylon fabric used in the unit follows proven industry standard fabrication methods, additionally the materials used in the fabrication are sourced in accordance with ISO 9001, ISO 14001 and Oeko-Tex Standard 100.	X					Structure and mechanical systems
FAR 25.609 Protection of structure.	The Legs Up Flight Hammock is inherently water, corrosion and abrasion resistant due to the base nylon fabric used in its fabrication.	X					Structure and mechanical systems
FAR 25.613 Material strength properties and material design values.	The key material strength properties and design values are as follows: • Breaking Force Warp 569 N AS 2001.2.3.1 • Breaking Force Weft 402 N AS 2001.2.3.1 • Tearing Force Warp 21 N AS 2001.2.10 • Tearing Force Weft 18 N AS 2001.2.10 Additional material properties are available in the material product Data sheet, Speedline Textiles Product Code SL-INFALTE.	X					Structure and mechanical systems
FAR 25.785 Seats, berths, safety belts, and harnesses.	There is no change to the standard operation of seats, berths, safety belts or harnesses as a result of this installation. They are still in accordance with the OEM specifications.	X					Structure and mechanical systems
FAR 25.787 Stowage compartments.	There is no change to the operation of the aircraft stowage compartments as a result of this installation, they are still in accordance with the OEM specifications. The Legs Up Flight Hammock is part of a passenger's carryon luggage, and as such its weight is included in the specified maximum carry on limit.	X					Structure and mechanical systems



ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

Regulation	Means Of Compliance	Compliance Method					Capability
		D	A	S	I	T	
FAR 25.789 Retention of items of mass in passenger and crew compartments and galleys.	There is no change to the OEM design of the aircraft as a result of this installation, and as such the original compliance with retention of items of mass still applies. The Legs Up Flight Hammock is of a negligible mass to present a hazard and will either be stowed or secured to a seat frame preventing hazardous protrusions.	X					Structure and mechanical systems
FAR 25.795 Security considerations.	The following list specifies means of compliance (MOC) with the subsections of this regulation. a) There is no change to the original MOC as a result of this installation b) There is no change to the original MOC as a result of this installation c) (3)Interior design to facilitate searches: Any items stowed in the Legs Up Flight Hammock foot cavity may be viewed from the aisle by an attendant in the same manner as an overhead locker inspection. d) There is no change to the original MOC as a result of this installation e) There is no change to the original MOC as a result of this installation f) There is no change to the original MOC as a result of this installation	X					Structure and mechanical systems
FAR 25.803 Emergency evacuation.	There is no change to the emergency evacuation procedures outline in this regulation as a result of this Installation, except that the following instruction must be followed. • In the event of an emergency the cabin will be prepared by the crew and the legs up flight hammock must be removed and stowed.	X					Structure and mechanical systems
FAR 25.807 Emergency exits.	There is no change to the location or operation of the aircraft emergency exits as a result of this installation, they are still in accordance with the OEM means of compliance.	X					Structure and mechanical systems
FAR 25.810 Emergency egress assist means and escape routes.	There is no change the location or operation of the aircraft emergency egress assist means and escape routes as a result of this installation, they are still in accordance with the OEM means of compliance.	X					Structure and mechanical systems
FAR 25.853 Compartment interiors.	For all subsections of this regulation there is no change to the OEM means of compliance as a result of this installation. Noting that this is not a requirement for carry on personal items the Legs Up Flight hammock was assessed to the standard of FAR 25.853 Part a (12 second vertical	X				X	Structure and mechanical systems



ENGINEERING ORDER	Job No.	AVE-P-12521
	ER Number	AVE-ER-12521
	Revision	0
	Date	17/10/2014
Legs Up Flight Hammock Assessment	Applicability	Aircraft Seating

Regulation	Means Of Compliance	Compliance Method					Capability
		D	A	S	I	T	
	burn test) to establish the flammability standard of the materials used in the construction of the product.						
FAR 25.1309 Equipment, systems, and installations.	There is no change to the operation or functions of the aircraft equipment, systems and installations as a result of this installation, they are still in accordance with the OEM means of compliance.	X					Structure and mechanical systems
FAR 25.1529 Instructions for continued Airworthiness.	There are no special continued airworthiness instructions related to this engineering report. Refer to the manufacturer for maintenance and/or servicing instructions.	X					Structure and mechanical systems

D = Drawing/Data/Review, A = Analysis, S = Similarity, I=Inspection, T = Test

