

DECLARATION of CONFIRMITY

PARAGLIDERS HARNESS

PH

Air Turquoise SA, having thoroughly assessed the sample mentioned hereunder, declare it was found
:conform with :all requirements defined by the following norms

European Standard EN1651 September 1999

European Standard EN12491 September 2001

Airworthiness requirements for hang gliders and paragliders LTF 2009 as published in NfL 91/09

Declaration conformity number: PH_147.2015

TEST SAMPLE DATA

Manufacturer name: SUNGLIDER
Contact person: Sung Choi
Street: 298-3 Maesan-Ri, Opo-Eup
Post code / place: Gwangju City, Gyeonggi
Country: Korea Zip:464-893

Harness manufacturer name: Control SP
Harness manufacturer size: one size
Serial number of the test sample: C050315101
Harness type: ABS
Maximum certified pilot weight (kg): 110
Harness protector type: n/a
Harness weight (kg) : 4.8

Volume reserve parachute container (cm3) Min: 10000 Max: 15000

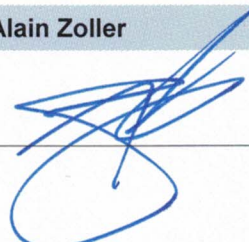
Atmosphere [°C] [Hum] [hPa]: 23.;54;1020.4

Test responsible: Alain Zoller
Inspection place: Villeneuve
Sample reception date: 05.05.2015

Place of declaration: Villeneuve

Date of issue: 02.06.2015

Director management: Alain Zoller

Signature: 

Present declaration's scope only extends to the conformity of a given sample, on a given date and in a given place – as mentioned here above.

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A. STRUCTURAL STRENGTH TESTS

A test plan was set up in order to execute the different tests in an efficient order. The table below summarizes this test plan together with the applicable standards and results

Test ID	TESTED ?	Standard Ref.		TEST setup	Anchoring		Forces		Min. Test duration [sec]	Result
		EN 1651	LTF		Attach -ment points	Dummy	Req. Load in g	Min. force [N]		
R0	✓	5.3.2.1		Default flying position	2 main attachment points	Hip fixated	6g	6000	10	POSITIV
R1			4.2.1.a				9g	9000		n/a
R2	✓	5.3.2.2					15g	15000	5	POSITIV
R3			4.2.1.b	Default, landing position	2 main att. points	Hip fixated,	6g	6000	10	n/a
R4	✓	5.3.2.7				landing conf.	15g	15000	5	POSITIV
R5			4.2.1.a rescue	Rescue	2 rescue att. Pnts.	Hip fixated	9g	9000	10	n/a
R6	✓	5.3.2.4					15g	15000	5	POSITIV
R7			4.2.1.b rescue			Hip fixated, landing conf.	6g	6000	10	n/a
R8	✓	5.3.2.3		One riser	ONE main att.	1 central hip fixation	6g	6000	10	POSITIV
R9			4.2.1.d	Towing	2 main att. + 2 tow att.	None	3g	3000	10	n/a
		5.3.2.5					5g	5000		
R10	✓	5.3.2.6		Default, Negatif	One main att.	Head fix.	4.5g	4500	10	POSITIV
R11			4.2.1.c	Upside down	2 main att. downw.	Head fix.	6g	6000	10	n/a
R12			4.2.1.c rescue	Upside down rescue	2 rescue att. downw.		6g	6000	10	n/a

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B. PARAGLIDER HARNESS BACK PROTECTORS

Shock impact tests have to be executed on these harnesses in order to prove the damping characteristics of it. Most paraglider harnesses are equipped with a protection device that damps the shock on the pilot's spine during a hard landing

Test ID	TESTED ?	Standard Ref.:	TEST setup	Anchoring		Impact				Result
		LTF		Attach-ment points	Dummy	Max. tolerated peak impact in g	Max Peak impact measured	Impact duration of +38 g (if any) recorded:	Impact duration of +20 g (if any) recorded:	
PRO		5.1.1	Default flying position	Test dummy is attached to the harness like a pilot in flight. +20-25°		+50g				n/a
TECT										
1										
PRO		5.1.1	Default flying position	Test dummy is attached to the harness like a pilot in flight. +20-25° with rescue		+50g				n/a
TECT										
1										
PRO		5.1.1	Default flying position	Test dummy is attached to the harness like a pilot in flight. -5-10°		+50g				n/a
TECT										
1										
PRO		5.1.1	Default flying position	Test dummy is attached to the harness like a pilot in flight. -5-10° with rescue		+50g				n/a
TECT										
1										

C. RESCUE DEPLOYMENT RESISTANCE TEST

The deployment of the rescue system has to be ensured in all circumstances of flight. This test is to verify whether the force needed to deploy is in between reasonable limits

Test ID	TESTED ?	Standar d Ref.	TEST setup	Anchoring		Force for single hand deployment			Result
		Attach- ment points		Dummy	Min.	Max. force	Resistance measured [N]		
					force	[N]			
					[N]				
RRDT		6.1.5	Default flying position	Test responsible is attached to the harness like a pilot in flight.		20 N	70 N	-17.0	n/a
	(no dummy required)								

D. RESCUE DEPLOYMENT STRAP STRENGTH TEST

The connection between handgrip and inner container has to have sufficient load capacity/structural strength in any situation that may arise during normal use. During this test is verified, whether this connection fulfill the requirements

Test ID	TESTED ?	Standard Ref.		TEST setup	Minimum force [N]	Min.	Breaking resistance measured [N]	Result
		LTF	EN 12491			Test duration [s]		
RRST		6.1.8	5.3.2	Connection strap in tensile testing machine	700N	10	-17.0	n/a

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End of declaration

INSPECTION REPORT

PH_147.2015

HARNESS STRUCTURAL STRENGTH TEST

Test ID 0

Manufacturer name: SUNGLIDER

Harness manufacturer name: Control SP

Test place & date: Villeneuve

Test responsible: Alain Zoller

Atmosphere [°C] [Hum] [hPa]: 23.;54;1020.4

Maximum certified pilot weight [kg]: 110

Standard EN 1651

Test standard §: 5.3.2.1 (EN)

Test setup: Default flying position

Anchoring:

Attachment points: Both main riser attachments (3, 4)

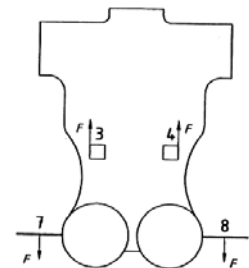
Dummy: Default, hip fixed (7, 8)

Required load in g : 6

Minimum load [N]: 6000

Required test load in kg: 673

Min. duration [s]: 10



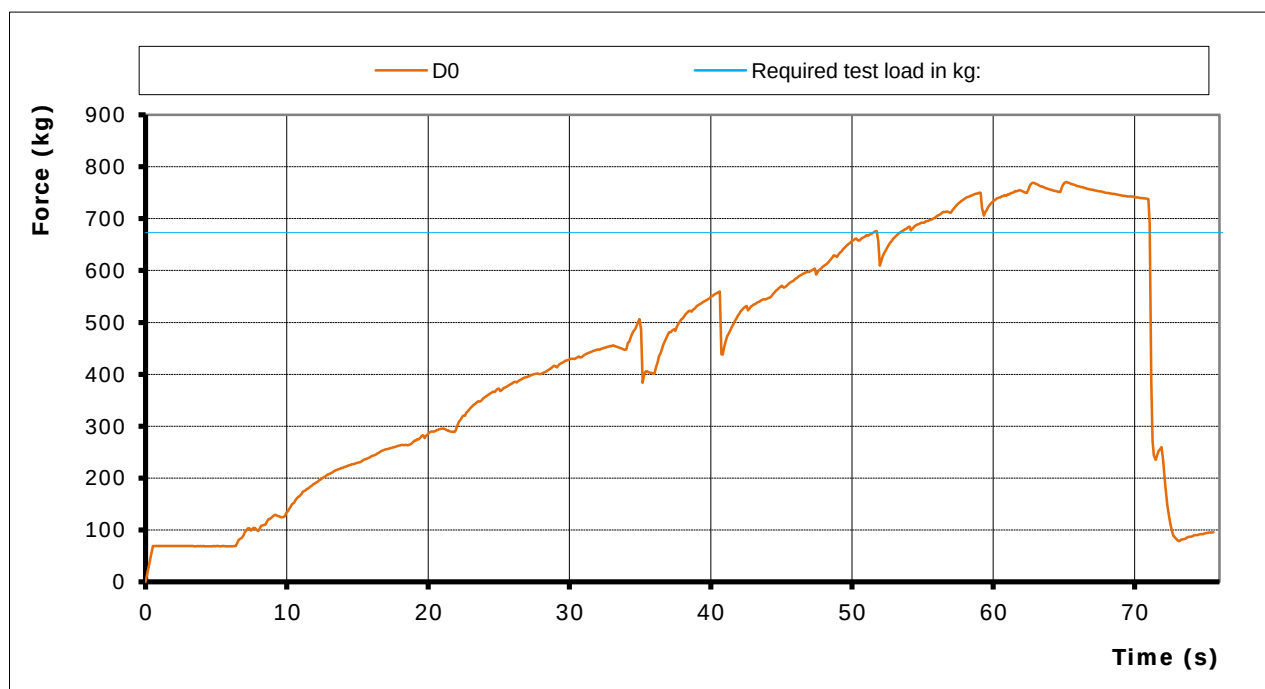
Results

Duration of maintained min. load [s]: 10.21

Any signs of structural failure after this test: No visible failure

Test result: POSITIV

Graph: D0



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HARNESS STRUCTURAL STRENGTH TEST

Test ID 2

Manufacturer name: SUNGLIDER

Harness manufacturer name: Control SP

Test place & date: Villeneuve

Test responsible: Alain Zoller

Atmosphere [°C] [Hum] [hPa]: 23.;54;1020.4

Maximum certified pilot weight [kg]: 110

Standard EN 1651

Test standard §: 5.3.2.2

Test setup: Default flying position

Anchoring:

Attachment points: Both main riser attachments (3, 4)

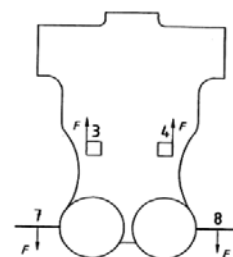
Dummy: Default, hip fixed (7, 8)

Required load in g: 15

Min load [N]: 15 000

Required test load in kg: 1682

Min. duration [s]: 5



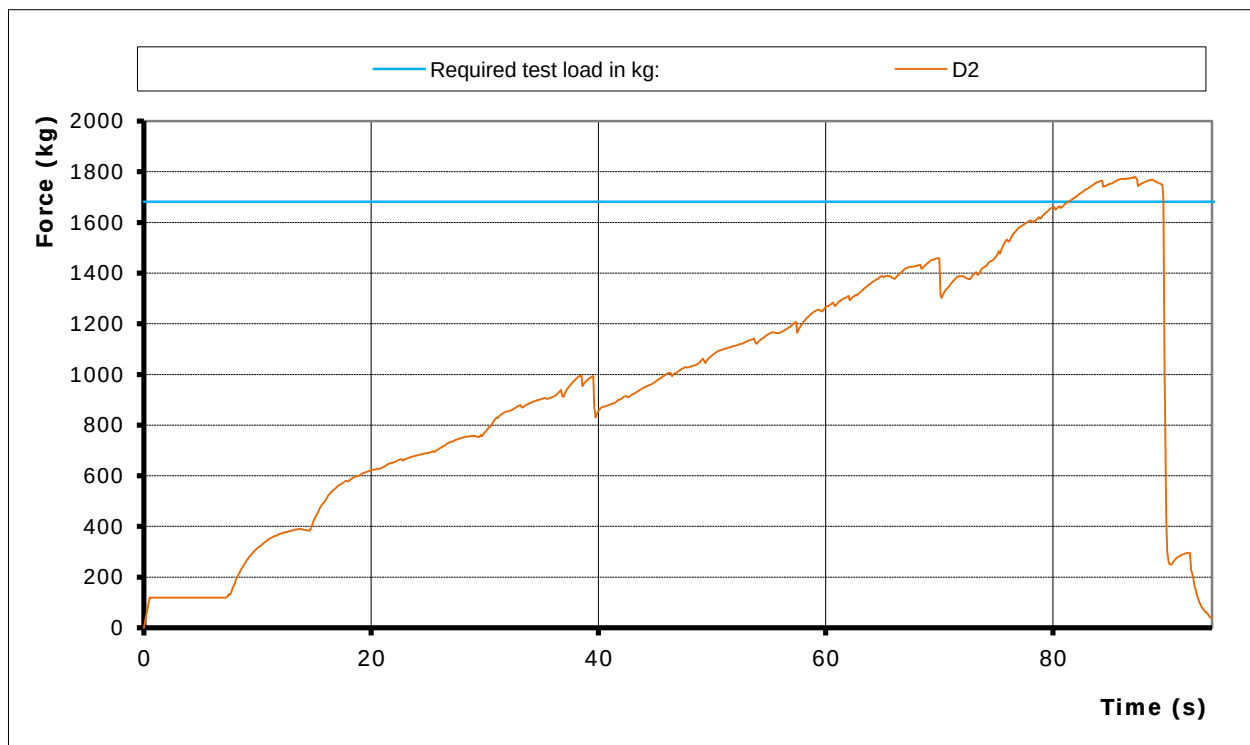
Results

Duration of maintained min. load [s]: 7.04

Any signs of structural failure after this test: No visible failure

Test result: POSITIV

Graph: D2



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HARNESS STRUCTURAL STRENGTH TEST

Test ID 4

Manufacturer name: SUNGLIDER

Harness manufacturer name: Control SP

Test place & date: Villeneuve

Test responsible: Alain Zoller

Atmosphere [°C] [Hum] [hPa]: 23.;54;1020.4

Maximum certified pilot weight [kg]: 110

Standard EN 1651

Test standard §: EN 5.3.2.7

Flying position before landing: seat

Test setup: board (11) in landing position, leg straps (10) closed.

Anchoring:

Attachment points: Both of the main riser attachments attached (3 and 4);

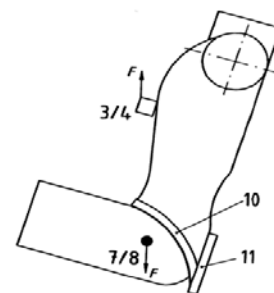
Dummy: Default, hip fixed (7, 8)

Required load in g: 15

Min load [N]: 15000

Required test load in kg: 1682

Min. duration [s]: 5



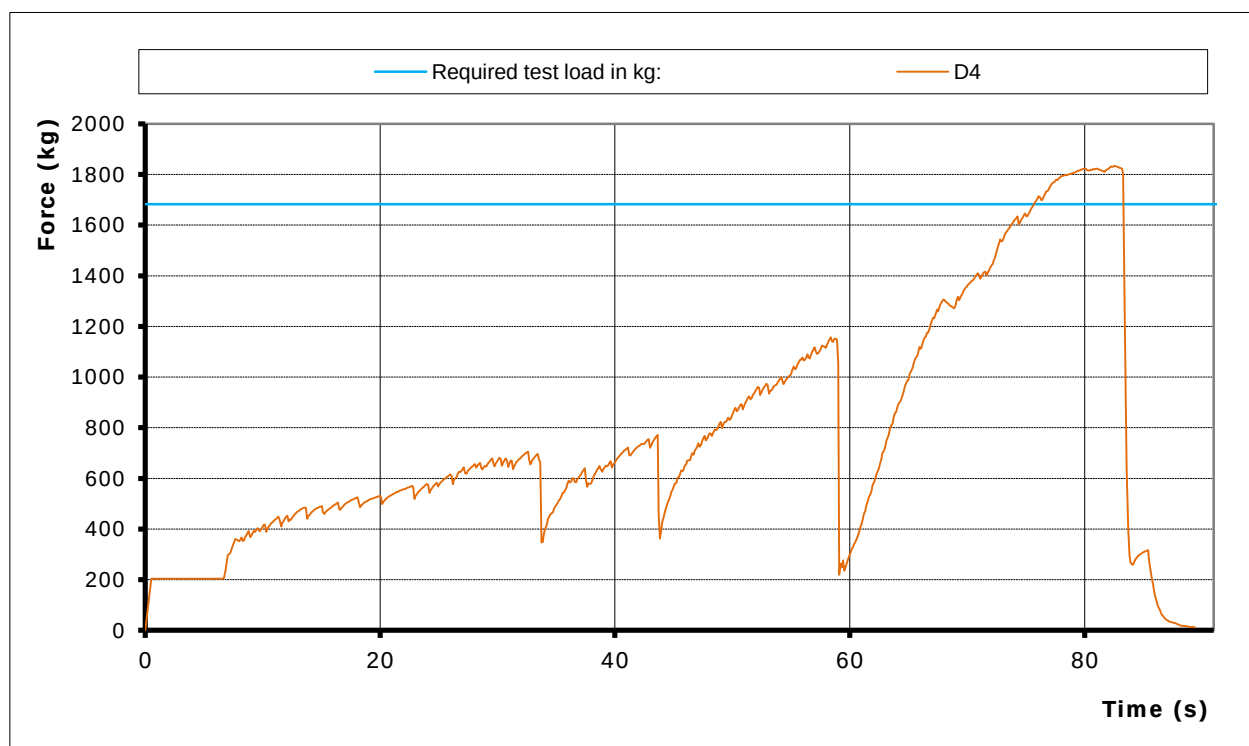
Results

Duration of maintained min. load [s]: 6.70

Any signs of structural failure after this test: No visible failure

Test result: POSITIV

Graph: D4



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HARNESS STRUCTURAL STRENGTH TEST

Test ID 6

Manufacturer name: SUNGLIDER

Harness manufacturer name: Control SP

Test place & date: Villeneuve

Test responsible: Alain Zoller

Atmosphere [°C] [Hum] [hPa]: 23.;54;1020.4

Maximum certified pilot weight [kg]: 110

Standard EN 1651

Test standard §: 5.3.2.4

Test setup: Rescue attachments

Anchoring:

Attachment points: Rescue riser attachments (1,2)

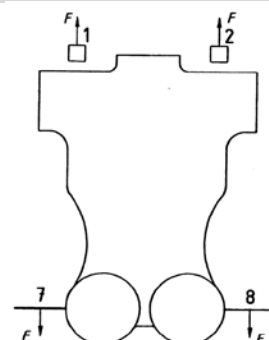
Dummy: Hip fixed (7, 8)

Required load in g: 15

Min load [N]: 15000

Required test load in kg: 1682

Min. duration [s]: 5



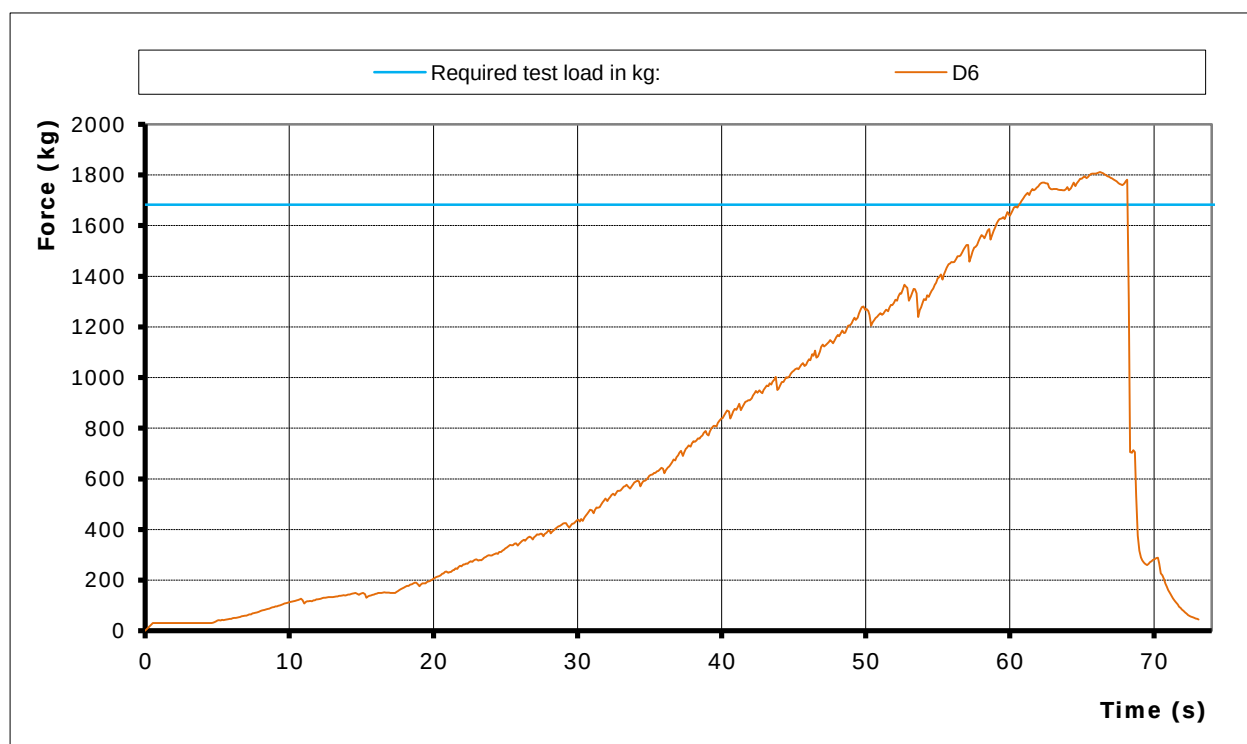
Results

Duration of maintained min. load [s]: 10.25

Any signs of structural failure after this test:

Test result: **POSITIV**

Graph: D6



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HARNESS STRUCTURAL STRENGTH TEST

Test ID 8

Manufacturer name: SUNGLIDER

Harness manufacturer name: Control SP

Test place & date: Villeneuve

Test responsible: Alain Zoller

Atmosphere [°C] [Hum] [hPa]: 23.;54;1020.4

Maximum certified pilot weight [kg]: 110

Standard EN 1651

Test standard §: 5.3.2.3

Test setup: Only one riser attached

Anchoring:

Attachment points: One main riser attachments (3)

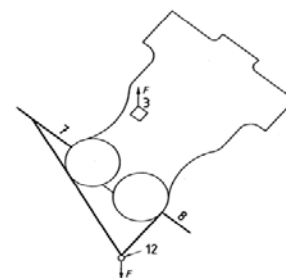
Dummy: Hip fixed (7, 8 -> 12)

Required load in g: 6

Min load [N]: 6000

Required test load in kg: 673

Min. duration [s]: 10



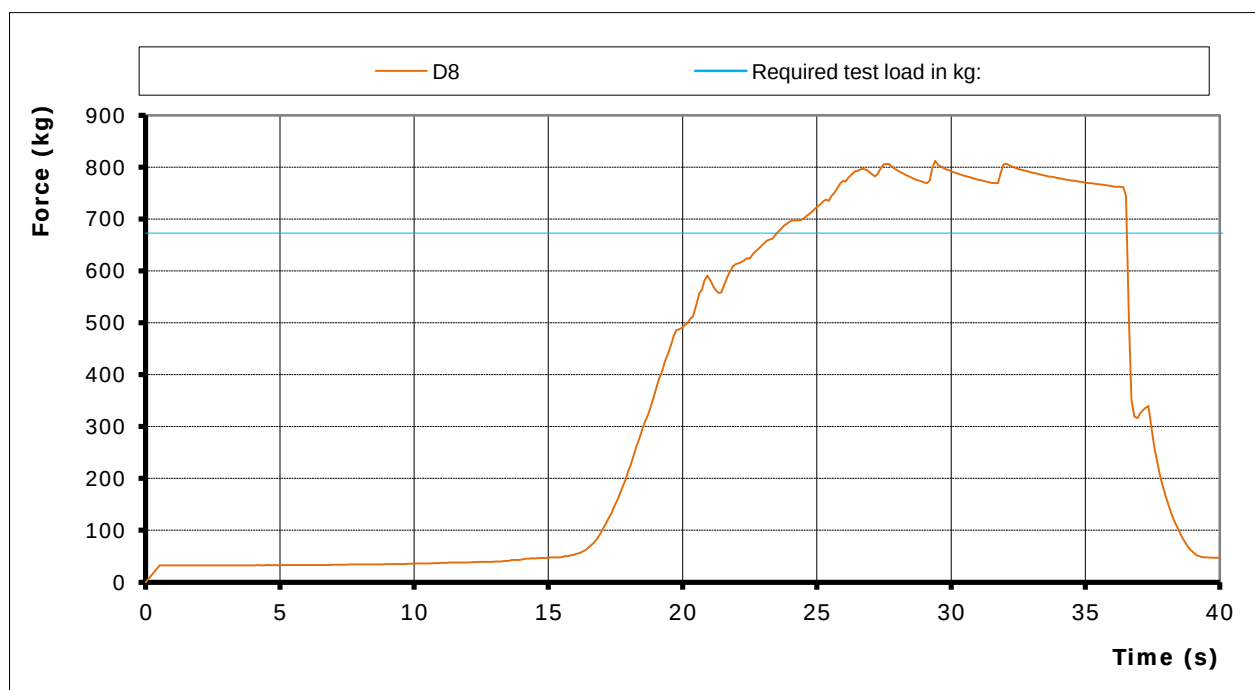
Results

Duration of maintained min. load [s]: 10.60

Any signs of structural failure after this test: No visible failure

Test result: POSITIV

Graph: D8



INSPECTION REPORT

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HARNESS STRUCTURAL STRENGTH TEST

Test ID 10

Manufacturer name: SUNGLIDER

Harness manufacturer name: Control SP

Test place & date: Villeneuve

Test responsible: Alain Zoller

Atmosphere [°C] [Hum] [hPa]: 23.;54;1020.4

Maximum certified pilot weight [kg]: 110

Standard EN 1651

Test standard §: 5.3.2.6

Test setup: Normal flying position in NEGATIF

Anchoring:

Attachment points: ONE of the main riser attachments attached downwards(3 or 4);

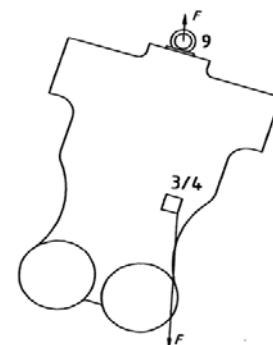
Dummy: Dummy anchored at the head position (9)

Required load in g: 4.5

Min load [N]: 4500

Required test load in kg: 505

Min. duration [s]: 10



Results

Duration of maintained min. load [s]: 11.01

Any signs of structural failure after this test: No visible failure

Test result: POSITIV

Graph: D10

