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Flight test report: EN

## AIR TURQUOISE SA certified by

ISO 9001 BUREAU VERITAS



Manufacturer	Niviuk Gliders / Air Games S.L.	Certification number	PG_0523.2012
Address	C. Del Ter, 6 – Nave D 17165 La Cellera de Ter Girona Spain	Date of flight test	11. 05. 2012
Representative	Nef Olivier	Place of test	Villeneuve
Glider model	Koyot 2 24	Classification	Α
Trimmer	no		

•	Dupont Philippe Sup'Air - Access S 62		Thurnheer Claude Advance - Progress Light 82	
1. Inflation/Take-off	Α			
Rising behaviour	Smooth, easy and constant rising	А	Smooth, easy and constant rising	А
Special take off technique required	No	А	No	А
2. Landing	Α			
Special landing technique required	No	А	No	А
3. Speed in straight flight	Α			
Trim speed more than 30 km/h	Yes	А	Yes	А
Speed range using the controls larger than 10 km/h	Yes	А	Yes	А
Minimum speed	Less than 25 km/h	А	Less than 25 km/h	А
4. Control movement	Α			
Max. weight in flight up to 80 kg				
Symmetric control pressure / travel	Increasing / greater than 55 cm	А	not available	0
Max. weight in flight 80 kg to 100 kg				
Symmetric control pressure / travel	not available	0	Increasing / greater than 60 cm	А
Max. weight in flight greater than 100 kg				
Symmetric control pressure / travel	not available	0	not available	0
5. Pitch stability exiting accelerated flight	Α			
Dive forward angle on exit	Dive forward less than 30°	А	Dive forward less than $30^\circ$	А
Collapse occurs	No	А	No	А
6. Pitch stability operating controls during accelerated flight	Α			
Collapse occurs	No	А	No	А
7. Roll stability and damping	Α			
Oscillations	Reducing	А	Reducing	А
8. Stability in gentle spirals	Α			
Tendency to return to straight flight	Spontaneous exit	А	Spontaneous exit	А
9. Behaviour in a steeply banked turn	Α			
Sink rate after two turns	12 m/s to 14 m/s	А	12 m/s to 14 m/s	А
10. Symmetric front collapse	Α			
Entry	Rocking back less than 45°	А	Rocking back less than 45°	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	A
Cascade occurs	No	А	No	А
With accelerator				

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FactorySportaneous in less than 3 a. Dire forward 0 to 30° / KeepingA Sportaneous in less than 3 a. Cascade occursA Dire forward 0 to 30° / KeepingA11. Exting deep stall (parachutal stall)ANoADeep stall achievedRoANoABaccoverySportaneous in less than 3 a. Cascade occursANoADire forward 0 to 30° / KeepingANoANoACascade occursChanging occurse less than 4 a. Sportaneous in less than 3 a. AASportaneous in less than 3 a. AACascade occursChanging occurse less than 6 a. Cascade occursCascade occursANoA12. High angle of attack recoveryAASportaneous in less than 3 a. ASportaneous in less than 3 a. ANoACascade occursNoANoANoACascade occursNoANoAACascade occursNoANoAACascade occurs (other than collapses)NoANoACascade occurs (other than collapses)NoANoAACascade occurs (other than collapses)NoANoAACascade occurs (other than collapses)NoANoAACascade occurs (other than collapses)NoANoAACascade occursNoANoAAACascade occursNoAN					
Dive forward 0 to 30' / Keeping Cascado accursDive forward 0' to 30' / Keeping Cascado accursNo<	Entry	Rocking back less than 45°	А	Rocking back less than 45°	A
Course     Course     Course       T1. Exting deep stall (parachula stall)     A     Ves     No     A       Deep stall achieved     Yes     A     Spontaneous in less than 3 s     A     Spontaneous in less than 3 s     A       Dive forward ongle on out     Dive forward 0 'to 30'     A     Dive forward 0 'to 30'     A     No     A       Cacade occurs     No     A     No     A     No     A       Cacade occurs (other than collapses)     No     A     No     A     No     A       Cacade occurs (other than collapse     A     Mostins instint     A     Less than 90'' Di		1	А	1	A
H   Exiting deep stall (parachutal stall)   A     Deep stall achieved   Yes   A   Yes   A     Recovery   Spontaneous in less than 3 s   A   Dive forward 0'to 30"   A   No	Dive forward angle on exit / Change of course		A		A
Deep Sail achieved     Yes     A     Yes     A     Yes     A       Recovery     Dive forward 0" to 30"     A     Dive forward 0" to 30"     A     Dive forward 0" to 30"     A       Change of course     Changing course less than 45"     A     Changing course less than 45"     A       Cascade occurs     No     A     No     A       Cascade occurs     No     No     A     No     A       Cascade occurs     No <td< td=""><td>Cascade occurs</td><td>No</td><td>А</td><td>No</td><td>А</td></td<>	Cascade occurs	No	А	No	А
Recovery     Spontaneous in less than 3 s     A     Spontaneous in less than 3 s     A       Dive forward 0 for 30 <sup>10</sup> A     Dive forward 0 for 30 <sup>10</sup> A       Change of course     Changing course less than 45 <sup>10</sup> A       Cascade occurs     No     A     No     No       21 High angle of attack recovery     Spontaneous in less than 3 s     A     Spontaneous in less than 3 s     A       Cascade occurs     No     No     A     No     No     A       13. Recovery from a developed full stall     A     Cascade occurs (other than collapses)     No     No     No     No     No     Rocking back     Less than 45 <sup>10</sup> A       14. Asymmetric collapse     A     Less than 45 <sup>10</sup> A     Most lines dight     A       14. Asymmetric collapse     A     Less than 30 <sup>10</sup> / Dive or roll angle 0 <sup>10</sup> / Dive or roll angle 0 <sup>10</sup> for 30 <sup>10</sup> A     Spontaneous re-inflation / Maximum dive forward 0 <sup>10</sup> for 30 <sup>10</sup> for 30 <sup>10</sup> A       10 angle occurse until re-inflation / Maximum dive forward 0 <sup>10</sup> for 30 <sup>10</sup> A     Spontaneous re-inflation / Maximum dive forward 0 <sup>10</sup> for 30 <sup>10</sup> for 30 <sup>10</sup> A       10 angle occur	11. Exiting deep stall (parachutal stall)	Α			
Dive forward of to 30"     A     Dive forward 0" to 30"     A     Changing course less than 45"     A       Changing course less than 45"     A     Changing course less than 45"     A       12. High angle of attack recovery     A     A     Spontaneous in less than 3 s     A       Recovery     Spontaneous in less than 3 s     A     Spontaneous in less than 3 s     A       Cascade occurs     No     A     No     A       Cascade occurs     No     A     No     A       Cascade occurs (other than collapses)     No     A     No collapse     A       Collapse     A     Spontaneous re-inflation     A     No     A       Cascade occurs (other than collapses)     No     A     No     No     A       Change of ourse     Less than 45"     A     Less than 45"     A     Less than 45"     A       Change occurse unit re-inflation / Maximum dive forward 0" to 30"     Cascade occurs     A     No     A     No     A       Calapse on the oppoite side occurs     No     A     No     A     No<	Deep stall achieved	Yes	А	Yes	А
Change of course     Changing course less than 45"     A     Changing course less than 45"     A       Cascade occurs     No     A     No     A       Recovery     Spontaneous in less than 3 s     A     Spontaneous in less than 3 s     A       Cascade occurs     No     No     No     No     A       Dive forward angle on exit     Dive forward 0" to 30"     A     Dive forward 0" to 30"     A       Cascade occurs (other than collapses)     No     No     A     No collapse     A       Cascade occurs (other than collapses)     No     A     No     A     No     A       Chaing of ourse until re-inflation / Maximum dive forward or long of ourse until re-inflation / Maximum dive forward or to 16 15"     A     Less than 360"     A     Less than 360"     A       Collapse of the opposite side occurs     No     No     No     No     A       Collapse of the opposite side occurs     No     No     A     Less than 360"     A       Collapse of the opposite side occurs     No     No     No     No     A       Collapse of the o	Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Casacale occursNoANoA12. High angle of attack recoverySpontaneous in less than 3 sASpontaneous in less than 3 sACasacale occursNoANoA13. Recovery from a developed full stallAUse forward 0" to 30"ADive forward 0" to 30"ACollapseNo collapseANo collapseANo collapseACollapseNo NoANoNoANoRecovery from developed full stallALess than 45"ALess than 45"ACollapseNoANoNoANoCascade occurs (other than collapses)NoANoNoARobid sollapseLess than 45"ALess than 90" / Dive or roll angle 0"AInternationChange of courseLess than 90" / Dive or roll angle 0" to 15"ALess than 90" / Dive or roll angle 0"ACollapse on the opposite side occursNoANoANoCollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACollapse occursNoANoANoCollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoA <td>Dive forward angle on exit</td> <td>Dive forward 0° to 30°</td> <td>А</td> <td>Dive forward 0° to 30°</td> <td>А</td>	Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
12. High angle of attack recovery   A     Recovery   Spontaneous in less than 3 s   A   Spontaneous in less than 3 s   A     Cascade occurs   No   A   No   A   No     13. Recovery from a developed full stall   A   Dive forward 0° to 30°   A   Dive forward 0° to 30°   A     Cascade occurs (other than collapses)   No   Collapse   A   No collapse   A   No collapse     Cascade occurs (other than collapses)   No   Less than 45°   A   Less than 45°   A   Less than 45°   A     14. Asymmetric collapse   A   Hyth 50% collapse   A   Hyth 50% collapse   A   Less than 90° / Dive or roll angle 0°   A   Less than 30°   A <td>Change of course</td> <td>Changing course less than <math>45^\circ</math></td> <td>А</td> <td>Changing course less than 45°</td> <td>А</td>	Change of course	Changing course less than $45^\circ$	А	Changing course less than 45°	А
Recovery Cascade occursSpontaneous in less than 3 sASpontaneous in less than 3 sANo13. Recovery from a developed full stallADive forward of to 30°ADive forward of to 30°ADive forward of to 30°ACollapseNoANoNoANoACollapseNoANoANoARocking backLess than 45°ALess than 45°ALess than 45°A14. Asymmetric collapseAChange of course until re-inflation / Maximum dive forward or rol angle of courseLess than 90° / Dive or roll angle of 0° to 15°ASpontaneous re-inflationACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoA-Collapse on the opposite side occursNoA<	Cascade occurs	No	А	No	А
Cascade occursNoANoA13. Recovery from a developed full stallADive forward of to 30°ADive forward 0° to 30°ACollapseNo collapseANo collapseACascade occurs (other than collapses)NoANoALine tensionKost lines tightALess than 45°ALine tensionAMost lines tightALess than 65°A14. Asymmetric collapseAHHHHChange of course until re-inflation / Maximum dive forward of to 15°Collapse of roll angleASportaneous re-inflationACollapse of the opposite side occursSportaneous re-inflationANoAACollapse on the opposite side occursNoANoAACollapse on the opposite side occursNoAN	12. High angle of attack recovery	Α			
13. Recovery from a developed full stall   A     Dive forward 0" to 30"   A   Dive forward 0" to 30"   A     Oxelapse   No collapse   A   No collapse   A     Cascade occurs (other than collapses)   No   A   No   A     Rocking back   Less than 45"   A   Less than 45"   A   Most lines tight   A     14. Asymmetric collapse   A   Most lines tight   A   Most lines tight   A     14. Asymmetric collapse   A   Less than 90" / Dive or roll angle 0"   A   Less than 90" / Dive or roll angle 0"   A     15. Action behaviour   Spontaneous re-inflation   A   Less than 90" / Dive or roll angle 0"   A     Callapse on the opposite side occurs   No   A   No   A     Cascade occurs   No   A   No   A     Vist occurs   No   A   No   A     Cascade occurs   No   A   No   A     Callapse of the opposite side occurs   No   A   No   A     Calcal change of ocurse   Less than 90" / Dive or roll angle 15" to 45"   A   Less than	Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward of to 30°ADive forward 0° to 30°ADive forward 0° to 30°ACollapseNo collapseANo collapseANoRocking backLess than 45°ALess than 45°ALine tensionMost lines tightALess than 45°A14. Asymmetric collapseAKess than 45°AKess than 45°AVith 50% collapseAKess than 50° / Dive or roll angleALess than 90° / Dive or roll angleAChange of course unit re-inflation / Maximu mi ve forwardCess than 300°ALess than 300°ACollapse on the opposite side occursNoANoAACollapse on the opposite side occurs<	Cascade occurs	No	А	No	А
Collapse No collapse A No collapse A   Cascade occurs (other than collapses) No A No A   Rocking back Less than 45° A Less than 45° A   Line tension Most lines tight A Most lines tight A   Mith 50% collapse A Less than 30° / Dive or roll angle 0° A Less than 30° / Dive or roll angle 0° A   Collapse Collapse Less than 360° A Less than 360° A Less than 360° A   Collapse or the opposite side occurs No A No A No A   Collapse No A No A No A   Collapse on the opposite side occurs No A No A   Change of course until re-inflation / Maximum dive forward or roll angle 0° A No A   Collapse of course until re-inflation / Maximum dive forward or roll angle 0° / Dive or roll angle 0° A No A   Collapse of course until re-inflation / Maximum dive forward or roll angle 0° / Dive or roll angle 0° A Less than 90° / Dive or roll angle 0° A   Collapse of the opposite side occurs No A No A No   Collapse on the opposite side occurs No	13. Recovery from a developed full stall	Α			
Cascade occurs (other than collapses)NoANoARocking backLess than 45°ALess than 45°ALine tensionAMost lines tightA14. Asymmetric collapseA-With 505's collapseChange of course until re-inflation / Maximum dive forward of of la rigleLess than 90° / Dive or roll angle 0° 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°ARe-inflation behaviourSpontaneous re-inflationANoALess than 360°ACollapse on the opposite side occursNoANoANoACollapse of courseNoANoANoACascade occursNoANoANoAWith 75% collapse-Less than 90° / Dive or roll angle 0° 15° to 45°ANoAChange of course until re-inflation / Maximum dive forward of Il angle of courseLess than 90° / Dive or roll angle 0° 15° to 45°ANoAChange of courseLess than 90° / Dive or roll angle 0° 16° to 45°ANoAACollapse of the opposite side occursNoANoAACollapse of the opposite side occursNoANoAACollapse of the opposite side occursNoANoAACollapse of the opposite side occursNoANoAAChange of courseLess than 360°ANoA	Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Rocking back Line tensionLess than 45°ALess than 45°ALine tensionMost lines tightAMost lines tightA14. Asymmetric collapseAWith 50% collapseChange of course until re-inflation / Maximum dive forward of of to 15°Less than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoACascade occursNoANoACascade occursNoALess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACollapse and acceleratorLess than 360°ALess than 90° / Dive or roll angle 0° 15° to 45°ACollapse and acceleratorLess than 360°ANoACollapse and acceleratorLess than 90° / Dive or roll angle 0° 16° to 45°ALess than 90° / Dive or roll angle 0° 16° to 45°ACollapse on the opposite side occursNoANoA<		No collapse	А	No collapse	А
Line tensionMode lines tightAMost lines tightA14. Asymmetric collapseAWith 50% collapseAWith 50% collapseCChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0°ALess than 90° / Dive or roll angle 0°ATotal change of courseLess than 300°ALess than 300°ALess than 300°ACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoAChange of course until re-inflation / Maximum dive forward or orl angle 15° to 45°Less than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ACollapse on the opposite side occursNoANoAACollapse on the opposite side occursNoANoACollapse on the opposite side occurs </td <td></td> <td></td> <td>А</td> <td></td> <td>А</td>			А		А
14. Asymmetric collapse   A     With 50% collapse   Change of course until re-inflation / Maximum dive forward or or loi angle 0° to 15°   A   Less than 90° / Dive or roll angle 0° to 15°   A     Re-inflation behaviour   Spontaneous re-inflation   A   Spontaneous re-inflation   A     Total change of course   Less than 300°   A   Less than 300°   A     Collapse on the opposite side occurs   No   A   No   A     Cascade occurs   No   A   No   A     Change of course until re-inflation / Maximum dive forward or roll angle   Less than 90° / Dive or roll angle   A   Less than 90° / Dive or roll angle   A     Re-inflation behaviour   Spontaneous re-inflation   A   Spontaneous re-inflation   A     Total change of course   Less than 90° / Dive or roll angle   A   Less than 90° / Dive or roll angle   A     Re-inflation behaviour   Spontaneous re-inflation   A   Less than 90° / Dive or roll angle   A     Total change of course   Less than 300°   A   Less than 90° / Dive or roll angle   A     Total change of course   Less than 90° / Dive or roll angle   A   No   A   No			А		А
With 50% collapse   Change of course until re-inflation / Maximum dive forward or 10 to 50°   A   Less than 90° / Dive or noll angle 0°   A     Re-inflation behaviour   Spontaneous re-inflation   A   Less than 360°   A     Total change of course   Less than 360°   A   Less than 360°   A     Collapse on the opposite side occurs   No   A   No   A     Collapse on the opposite side occurs   No   A   No   A     Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°   A   Less than 90° / Dive or roll angle 15° to 45°   A     Re-inflation behaviour   Less than 360°   A   Spontaneous re-inflation   A   Spontaneous re-inflation 40     Total change of course   Less than 360°   A   Less than 360°   A     Collapse on the opposite side occurs   No   A   No   A     Collapse and accelerator   No   A   No   A     Change of course until re-inflation / Maximum dive forward or 10° 10° roll angle 0° to 5°   A   No   A     Collapse on the opposite side occurs   No   A   No   A   No   A     Colla		Most lines tight	А	Most lines tight	А
Change of course roll angleLess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAChange of course until re-inflation / Maximum dive forward or lol angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationALess than 360°ALess than 360°ATotal change of courseLess than 360°ALess than 360°ALess than 360°ACollapse on the opposite side occursNoALess than 360°AATwist occursNoANoANoACollapse and acceleratorLess than 360°ALess than 360°AChange of course until re-inflation / Maximum dive forward or roll angleLess than 360°ANoACollapse and acceleratorLess than 360°ALess than 360°AACollapse on the opposite side occursNoANoANoACollapse on the opposite side occursNoANoAACollapse on the opposite side occursNo<		Α			
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Total change of courseLess than 360°ALess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACollapse and acceleratorLess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0° 0° to 15°ARe-inflation behaviourSpontaneous re-inflationANoACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoALess than 90° / Dive or roll angle 0° 0° to 15°ALess than 360°ACollapse on the opposite side occursNoANoANoACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACollapse and acceleratorLess than 30° / Dive or			A		A
Collapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 75% collapseLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°AChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 90° / Dive or roll angle 15° to 45°ANoATotal change of courseNoANoATwist occursNoANoANoTwist occursNoANoANoTwist occursNoANoAATwist occursNoANoAAChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0' to 15°ALess than 90° / Dive or roll angle 0' to 15°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationACollapse on the opposite side occursNoANoATotal change of courseNoANoATotal change of courseNoANoATotal change of courseNoANoACollapse and accelerator	Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Twist occursNoANoACascade occursNoANoAWith 75% collapseLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°AChange of course until re-inflation / Maximum dive forward or langleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 300°ALess than 300°ACollapse on the opposite side occursNoANoACascade occursNoANoACollapse and acceleratorLess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°AChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0° 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°ACollapse on the opposite side occursNoANoANoCollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoAChange of course until re-inflation / Maximum dive forward or 16° to 45°Less t	Total change of course	Less than 360°	А	Less than 360°	А
Cascade occursNoANoAWith 75% collapseCascade occurs until re-inflation / Maximum dive forward or 15° to 45°Less than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationALess than 360°ALess than 360°ATotal change of courseLess than 360°ALess than 360°ALess than 360°ACollapse on the opposite side occursNoANoACascade occursNoANoACascade occursNoANoACascade occursNoANoAChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0° 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°ARe-inflation behaviourLess than 360°ALess than 360°ASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ANoACollapse and acceleratorNoANoAATotal change of courseNoANoAACollapse on the opposite side occursNoANoACollapse and acceleratorLess than 90° / Dive or roll angle 15° to 45°ANoACollapse on the opposite side occursNoANoAChange of course until re-inflation / Maximum dive forward or roll angle <td>Collapse on the opposite side occurs</td> <td>No</td> <td>А</td> <td>No</td> <td>А</td>	Collapse on the opposite side occurs	No	А	No	А
With 75% collapse   Less than 90° / Dive or roll angle   A   Less than 90° / Dive or roll angle   A     Re-inflation behaviour   Spontaneous re-inflation   A   Spontaneous re-inflation   A     Total change of course   Less than 360°   A   Less than 360°   A     Collapse on the opposite side occurs   No   A   No   A     Collapse on the opposite side occurs   No   A   No   A     Cascade occurse until re-inflation / Maximum dive forward or roll angle of course until re-inflation / Maximum dive forward or roll angle of course until re-inflation / Maximum dive forward or roll angle of course until re-inflation / Maximum dive forward or roll angle of course until re-inflation / Maximum dive forward or roll angle of to to 15°   A   Less than 90° / Dive or roll angle of to to 15°   A     Re-inflation behaviour   Less than 90° / Dive or roll angle of to to 15°   A   Less than 90° / Dive or roll angle of to to 15°   A     Re-inflation behaviour   Less than 90° / Dive or roll angle of to to 15°   A   Less than 90° / Dive or roll angle of to to 15°   A     Re-inflation behaviour   Less than 90° / Dive or roll angle of to to 15°   A   Less than 90° / Dive or roll angle of to to 5°   A     Collapse on the opposite side occurs   No   A   No	Twist occurs	No	А	No	А
Change of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0' to 15'ALess than 90° / Dive or roll angle 0'AChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0'ALess than 90° / Dive or roll angle 0'ACollapse on the opposite side occursSpontaneous re-inflationALess than 90° / Dive or roll angle 0'ATotal change of courseLess than 30° / Dive or roll angle 0'ANoACollapse on the opposite side occursNoANoACurst occursNoANoANoWith 75% collapse and acceleratorLess than 90° / Dive or roll angle 15° to 45°ACollapse on the opposite side occursNoANoACollapse on the opposite side occursSpontaneous re-inflationALess than 30°ACollapse on the opposite side occursNoALess than 360°ACollap	Cascade occurs	No	А	No	А
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Total change of courseLess than 360°ALess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 50% collapse and acceleratorLess than 90° / Dive or roll angle 0°ALess than 90° / Dive or roll angle 0°AChange of course until re-inflation / Maximum dive forward or oll angleLess than 90° / Dive or roll angle 0°ALess than 90° / Dive or roll angle 0°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoAAChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0AChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0ANoChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0ANoChange of courseLess than 360°ALess than 90° / Dive or roll angle 0ASpontaneous re-inflation ACollapse on the opposite side occurs <t< td=""><td></td><td></td><td>A</td><td></td><td>A</td></t<>			A		A
Collapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 50% collapse and acceleratorEss than 90° / Dive or roll angleALess than 90° / Dive or roll angleAChange of course until re-inflation / Maximum dive forward or of langleLess than 90° / Dive or roll angleALess than 90° / Dive or roll angle 0°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 75% collapse and acceleratorLess than 90° / Dive or roll angleAChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angleAChange of courseLess than 90° / Dive or roll angleANoAChange of courseLess than 90° / Dive or roll angleASpontaneous re-inflationACollapse on the opposite side occursNoANoAChange of courseLess than 90° / Dive or roll angleASpontaneous re-inflationChange of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoACollapse on the opposite side occursNo <td< td=""><td>Re-inflation behaviour</td><td>Spontaneous re-inflation</td><td>А</td><td>Spontaneous re-inflation</td><td>А</td></td<>	Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Twist occursNoANoACascade occursNoANoAWith 50% collapse and acceleratorLess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0°AChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0°ARe-inflation behaviourSpontaneous re-inflationALess than 360°ALess than 360°ATotal change of courseLess than 360°ALess than 360°ALess than 360°ACollapse on the opposite side occursNoANoACourseNoANoANoCascade occursNoANoAWith 75% collapse and acceleratorLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°AChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationALess than 360°ALess than 360°ACollapse on the opposite side occursNoANoAACollapse on the opposite side occursNoALess than 360°ACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoA <td>Total change of course</td> <td>Less than 360°</td> <td>А</td> <td>Less than 360°</td> <td>А</td>	Total change of course	Less than 360°	А	Less than 360°	А
Cascade occursNoANoAWith 50% collapse and acceleratorChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 75% collapse and acceleratorLess than 90° / Dive or roll angle roll angleALess than 90° / Dive or roll angle 15° to 45°AChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationACollapse on the opposite side occursLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoA<	Collapse on the opposite side occurs	No	А	No	А
With 50% collapse and acceleratorLess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 75% collapse and acceleratorLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourLess than 90° / Dive or roll angle 15° to 45°ANoAWith 75% collapse and acceleratorLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourLess than 360°ANoAATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoACascade occursNoANoAACascade occursNoA <t< td=""><td>Twist occurs</td><td>No</td><td>А</td><td>No</td><td>А</td></t<>	Twist occurs	No	А	No	А
Change of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 75% collapse and acceleratorLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationAOtal angleSpontaneous re-inflationALess than 90° / Dive or roll angle 15° to 45°AChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 360°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoATwist occursNoANoACascade occursNoANoAAble to keep courseYesYesA <td< td=""><td>Cascade occurs</td><td>No</td><td>А</td><td>No</td><td>А</td></td<>	Cascade occurs	No	А	No	А
roll angle0° to 15°to 15°to 15°Re-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 75% collapse and acceleratorLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoATwist occursNoANoACascade occursNoANoAAble to keep courseYesAYesA	With 50% collapse and accelerator				
Total change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 75% collapse and acceleratorLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoASpontaneous re-inflationACollapse on the opposite side occursNoANoACollapse on the opposite side occursNoANoATwist occursNoANoATotal change of courseNoANoACollapse on the opposite side occursNoANoATwist occursNoANoAACascade occursNoANoAACascade occursNoANoAAAble to keep courseYesAYesAYesA	Change of course until re-inflation / Maximum dive forward or roll angle		A		A
Collapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAWith 75% collapse and acceleratorNoANoAChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoACollapse occursNoANoATwist occursNoANoATotal change of courseNoANoACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAAble to keep courseYesAYesA	Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Twist occursNoANoACascade occursNoANoAWith 75% collapse and acceleratorEss than 90° / Dive or roll angleALess than 90° / Dive or roll angleAChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angleALess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angleARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoATotal change of courseNoANoACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoAAble to keep courseYesAYesA	Total change of course	Less than 360°	А	Less than 360°	А
Cascade occursNoANoAWith 75% collapse and accelerator	Collapse on the opposite side occurs	No	А	No	А
With 75% collapse and acceleratorChange of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoA <b>15. Directional control with a maintained asymmetric collapse</b> AYesAYes	Twist occurs	No	А	No	А
Change of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ARe-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoA <b>15. Directional control with a maintained asymmetric collapse</b> AYesAYesAYesAYesA	Cascade occurs	No	А	No	А
roll angle15° to 45°15° to 45°Re-inflation behaviourSpontaneous re-inflationASpontaneous re-inflationATotal change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoA <b>15. Directional control with a maintained asymmetric collapse</b> AYesAYes	With 75% collapse and accelerator				
Total change of courseLess than 360°ALess than 360°ACollapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoA <b>15. Directional control with a maintained asymmetric collapse</b> AYesAYes			A		A
Collapse on the opposite side occursNoANoATwist occursNoANoACascade occursNoANoA15. Directional control with a maintained asymmetric collapseAYesAYes	Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Twist occursNoANoACascade occursNoANoA15. Directional control with a maintained asymmetric collapseAANoAAble to keep courseYesAYesA	Total change of course	Less than 360°	А	Less than 360°	А
Cascade occursNoANoA15. Directional control with a maintained asymmetric collapseAAVesAAble to keep courseYesAYesA	Collapse on the opposite side occurs	No	А	No	А
15. Directional control with a maintained asymmetric collapseAAble to keep courseYesAYesAYes	Twist occurs	No	А	No	А
collapse   Able to keep course Yes A Yes A	Cascade occurs	No	А	No	А
		Α			
$180^{\circ}$ turn away from the collapsed side possible in 10 s. Vas. A Vas	Able to keep course	Yes	А	Yes	А
Too turn away norm the conapsed side possible in to s Tes A Tes A	180° turn away from the collapsed side possible in 10 s	Yes	А	Yes	А
Amount of control range between turn and stall or spinMore than 50 % of the symmetric control travelAMore than 50 % of the symmetricA	Amount of control range between turn and stall or spin		A		A

16. Trim speed spin tendency	Α			
Spin occurs	No	А	No	А
17. Low speed spin tendency	Α			
Spin occurs	No	А	No	А
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than 90°	А	Stops spinning in less than 90°	А
Cascade occurs	No	А	No	А
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	А	Changing course less than 45°	А
Behaviour before release	Remains stable with straight span	A	Remains stable with straight span	A
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Cascade occurs	No	А	No	А
20. Big ears	A			
Entry procedure	Dedicated controls	Α	Dedicated controls	А
Behaviour during big ears	Stable flight	Α	Stable flight	А
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	А
21. Big ears in accelerated flight	Α			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	A	Stable flight	A
22. Behaviour exiting a steep spiral	Α			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	А
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	А
Sink rate when evaluating spiral stability [m/s]	11		15	
23. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	А	Yes	А
Stall or spin occurs	No	А	No	А
24. Any other flight procedure and/or configuration described in the user's manual	0			
Procedure works as described	not available	0	not available	0
Procedure suitable for novice pilots	not available	0	not available	0
Cascade occurs	not available	0	not available	0
25. Comments of test pilot				
Comments				