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Villeneuve

Flight test report



Manufacturer **Ozone Gliders** Certification number PG_0188.2008 Address 2, Queens Drive Date of flight test 14. 11. 2008

LA46LN . UK

Representative Russell Ogden Place of test

Glider model Viper 2 24 Classification C

Trimmer yes: closed

Test pilot Dupont Philippe Thurnheer Claude **Harness** Sup'Air - Access S Gin Gliders - Genie III M

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Total weight in flight (kg)	80		105	
1. Inflation/Take-off	С			
Rising behaviour	Smooth, easy and constant rising	Α	Overshoots, shall be slowed down to avoid a front collapse	С
Special take off technique required	No	Α	No	Α
2. Landing	Α			
Special landing technique required	No	Α	No	Α
3. Speed in straight flight	В			
Trim speed more than 30 km/h	Yes	Α	Yes	Α
Speed range using the controls larger than 10 km/h	Yes	Α	Yes	Α
Minimum speed	Less than 25 km/h	Α	25 km/h to 30 km/h	В
4. Control movement	С			
Max. weight in flight up to 80 kg				
Symmetric control pressure / travel	not available	0	not available	0
Max. weight in flight 80 kg to 100 kg				
Symmetric control pressure / travel	Increasing / 45 cm to 60 cm	С	not available	0
Max. weight in flight greater than 100 kg				
Symmetric control pressure / travel	not available	0	Increasing / 50 cm to 65 cm	С
5. Pitch stability exiting accelerated flight	0			
Dive forward angle on exit	not available	0	not available	0
Collapse occurs	not available	0	not available	0
6. Pitch stability operating controls during accelerated flight	0			
Collapse occurs	not available	0	not available	0
7. Roll stability and damping	Α			
Oscillations	Reducing	Α	Reducing	Α
8. Stability in gentle spirals	Α			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α
9. Behaviour in a steeply banked turn	В			
Sink rate after two turns	12 m/s to 14 m/s	Α	More than 14 m/s	В
10. Symmetric front collapse	С			
Entry	Rocking back greater than 45°	С	Rocking back less than 45°	Α
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in 3 s to 5 s	В
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Entering a turn of less than 90°	Α	Dive forward 0° to 30° / Keeping course	Α
Cascade occurs	No	Α	No	Α
With accelerator				
Entry	not available	0	not available	0
Recovery	not available	0	not available	0

	Dive forward angle on exit / Change of course	not available	0	not available	0
Deep stall achieved Yes A Vers A Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward angle on exit Change of course Change of course A A Dive forward of 1s 30° A Classade occurs No No A A Changing course less than 45° A 12. High angle of attack recovery A No A No A Cascade occurs No No A No contains a secure occurs of the firm and angle on exit A Collapse occurs (wher than collapses) No Collapse A No collapse B Rocking back Cereater than 45° C Less than 45° A No A Change of course (wher than collapses) No Most lines tight A No A No A Change of course (where than collapses) C Cereater than 45° C Less than 30° No A No A No A Spontaneous re-inflation	Cascade occurs	not available	0	not available	0
Ne	11. Exiting deep stall (parachutal stall)	A			
Dive forward of 10 30° A Dive forward 0° 10 30° A Changing course less than 45° A Changing course less than 35° A Spontaneous in less than 35° A No Change course occurs (when the collapse occurs of the than collapses) A No collapse A N	Deep stall achieved	Yes	Α	Yes	Α
Change of course Changing course less than 45"	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
No	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
1. High angle of attack recovery	Change of course	Changing course less than 45°	Α	Changing course less than 45°	Α
Recovery Cascade occurs No	Cascade occurs	No	Α	No	Α
Cascade occurs No A No A 13. Racovery from a developed full stall C Dive forward angle on exit Dive forward 30" to 60" B Dive forward 30" to 60" B Collapse No collapse A No collapse A Coscade occurs (other than collapses) No No A No A Rocking back Greater than 45" C Less than 45" A No A Line tension Most lines tight A No A No A Line tension Most lines tight A No A No A Less than 560° 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 occurs No A No A Change of course until re-inflation / Maximum dive forward or roll angle occurs So 16 to 180° / Dive or roll angle of to 45° / Dive or roll angle occurs B 90° to 180° / Dive or roll angle occurs B 90° to 180° / Dive or roll angle occurs C	12. High angle of attack recovery	Α			
13. Recovery from a developed full stall Dive forward 30" to 60" B Dive forward 30" to 60" B Dive forward 30" to 60" B Collapse A No collapse A Interession A Most lines tight A Most lines tight A No thin 50% collapse A Interession A No thin 50% collapse A Interession A Spontaneous re-inflation A No A N	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
Dive forward angle on exit	Cascade occurs	No	Α	No	Α
Collapse No collapses A Line tension A Wost lines tight A No collapses A No collapse or course until re-inflation / Maximum dive forward or langle Collapse or course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation or the opposite side occurs Less than 360° / Dive or roll angle of Course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle or course until re-inflation / Maximum dive forward or langle or course until re-inflation / Maximum dive forward or langle langle or course until re-inflation / Maximum dive forward or langle langle or course until re-inflation / Maximum dive forward or langle langle or course until re-inflation / Maximum dive forward or langle la	13. Recovery from a developed full stall	С			
Cascade occurs (other than collapses) No A No A Rocking back Greater than 45" C Less than 45" A Line tension Most lines tight A Most lines tight A 14. Asymmetric collapse C C With 50% collapse C C Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45° To 645° Sophaneous re-inflation A Spontaneous re-inflation A Re-lindation behaviour Spontaneous re-inflation A Spontaneous re-inflation A Collapse on the opposite side occurs No A No A Visit occurs No A No A Visit occurs No A No A Cascade occurs No A No A Re-lindation behaviour Spontaneous re-inflation A Spontaneous re-inflation A Twist occurs No A No A No A No A No A No A	Dive forward angle on exit	Dive forward 30° to 60°	В	Dive forward 30° to 60°	В
Rocking back Greater than 45° C Less than 45° A Line tension Most lines tight A Most lines tight A A Most lines tight A A Less than 45° A A Less than 45° A A Less than 45° A A Less than 50° / Dive or roll angle C S T	Collapse	No collapse	Α	No collapse	Α
Line tension Most lines tight A Most lines tight A 14. Asymmetric collapse C Change of course until re-inflation / Maximum dive forward or loil angle Less than 90° / Dive or roll angle A Less than 90° / Dive or roll angle A Less than 90° / Dive or roll angle A Spontaneous re-inflation A Spontaneous re-inflation A Spontaneous re-inflation A Clade and a spontaneous re-inflation A Spontaneous re-inflation A No A A Clotal change of course on the opposite side occurs No A No A	Cascade occurs (other than collapses)	No	Α	No	Α
14. Asymmetric collapse C With 50% collapse Less than 90° / Dive or roll angle of 15° to 45° 165° to 45°	Rocking back	Greater than 45°	С	Less than 45°	Α
With 50% collapse Change of course until re-inflation / Maximum dive forward or langle of roll angle of course until re-inflation / Maximum dive forward or langle roll angle of course Less than 90" / Dive or roll angle 15" to 45" A Spontaneous re-inflation A No A No A No A Visit Course Course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle of course until re-inflation / Maximum dive forward or langle roll angle of course until re-inflation / Maximum dive forward or langle reposite side occurs 90" to 180" / Dive or roll angle reposite side occurs 80" to 60" Spontaneous re-inflation A Spontaneous re-inflation A Spontaneous re-inflation A Spontaneous re-inflation A No A Rol <	Line tension	Most lines tight	Α	Most lines tight	Α
Change of course until re-inflation / Maximum dive forward or roll angle 15" to 45" 45" 45" 45" 45" 45" 15" to	14. Asymmetric collapse	С			
15° to 45°	With 50% collapse				
Collapse on the opposite side occurs			Α		Α
Collapse on the opposite side occurs	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Twist occurs No A No A Cascade occurs No A No A With 75% collapse Change of course until re-inflation / Maximum dive forward or roll angle 90° to 180° / Dive or roll angle angle B 90° to 180° / Dive or roll angle 45° to 60° Change of course until re-inflation / Maximum dive forward or roll angle A Spontaneous re-inflation A Spontaneous re-inflation A Collapse on the opposite side occurs No A No A No A Cascade occurs No A No A No A Chaige of course until re-inflation / Maximum dive forward or lail angle not available 0 not available 0 Re-inflation behaviour not available 0 not available 0 not available 0 <td>Total change of course</td> <td>Less than 360°</td> <td>Α</td> <td>Less than 360°</td> <td>Α</td>	Total change of course	Less than 360°	Α	Less than 360°	Α
Cascade occurs No A No A With 75% collapse With 75% collapse Change of course until re-inflation / Maximum dive forward or loil angle 90° to 180° / Dive or roll angle be 15° to 45° B 90° to 180° / Dive or roll angle 45° Change of course until re-inflation A Spontaneous re-inflation A No	Collapse on the opposite side occurs	No	Α	No	Α
With 75% collapse Change of course until re-inflation / Maximum dive forward or loll angle of collangle of course until re-inflation behaviour 90° to 180° / Dive or roll angle and to 60° to 60° to 60° C Re-inflation behaviour Spontaneous re-inflation A Spontaneous re-inflation A Spontaneous re-inflation A Collapse on the opposite side occurs A No A No A Collapse on the opposite side occurs No A No A Cascade occurs No A No A Cascade occurs A No A No A With 50% collapse and accelerator A No A No A With 50% collapse and accelerator Total change of course until re-inflation / Maximum dive forward or roll angle not available 0 not available 0 not available 0 Re-inflation behaviour not available 0 not available 0 not available 0 Collapse on the opposite side occurs not available 0 not available 0 Collapse of course not available 0 not available 0 Collapse of course not available 0 not available 0 Cascade occurs not available 0 not available 0 Change of course until re-inflation / Maximum dive forward or lal angle not available 0 not available <td>Twist occurs</td> <td>No</td> <td>Α</td> <td>No</td> <td>Α</td>	Twist occurs	No	Α	No	Α
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Spontaneous re-inflation Less than 360° A Spontaneous re-inflation A Spontaneous re-inflation A Spontaneous re-inflation A Spontaneous re-inflation A Sepontaneous re-inflation A Cotlapse on the opposite side occurs No	Cascade occurs	No	Α	No	Α
roll angle 15° to 45° to 60° Re-inflation behaviour Spontaneous re-inflation A Spontaneous re-inflation A Spontaneous re-inflation A Spontaneous re-inflation A Dess than 360° A Less than 360° A Collapse of course No A No	With 75% collapse				
Total change of course Less than 360° A Less than 360° A No			В		С
Collapse on the opposite side occurs No No A No A No A No Cascade occurs No No A No A No A No A No Cascade occurs No No A No A No A No A No A No A Cascade occurs No No A	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Twist occurs No No A No No A No A No A Mith So% collapse and accelerator Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour not available 0 not	Total change of course	Less than 360°	Α	Less than 360°	Α
Cascade occurs No No A No No A No No A No Mith 50% collapse and accelerator Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course not available n	Collapse on the opposite side occurs	No	Α	No	Α
With 50% collapse and accelerator Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Change of course not available not a	Twist occurs	No	Α	No	Α
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour not available not available	Cascade occurs	No	Α	No	Α
Re-inflation behaviour Re-inflation behaviour Rotal change of course Rotal course until re-inflation / Maximum dive forward or roll angle Rotal change of course until re-inflation / Maximum dive forward or roll angle Rotal change of course Rotal change Ro	With 50% collapse and accelerator				
Total change of course not available 0 not ava		not available	0	not available	0
Collapse on the opposite side occurs not available 0 not avail	Re-inflation behaviour	not available	0	not available	0
Twist occurs Cascade occurs With 75% collapse and accelerator Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course not available	Total change of course	not available	0	not available	0
Cascade occurs With 75% collapse and accelerator Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs not available not a	Collapse on the opposite side occurs	not available	0	not available	0
With 75% collapse and accelerator One available	Twist occurs	not available	0	not available	0
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour not available not available 0 not available 0 not available 0 course not available 0 not	Cascade occurs	not available	0	not available	0
roll angle Re-inflation behaviour Re-inflation behaviour not available not av	With 75% collapse and accelerator				
Total change of course not available ont availabl	•	not available	0	not available	0
Collapse on the opposite side occurs not available not available o not	Re-inflation behaviour	not available	0	not available	0
Twist occurs not available 0 not available 0 not available 0 15. Directional control with a maintained asymmetric collapse A A 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin More than 50 % of the symmetric control travel A 16. Trim speed spin tendency not available 0 Not available 16. Trim speed spin tendency	Total change of course	not available	0	not available	0
Cascade occurs not available 0 not available 0 15. Directional control with a maintained asymmetric collapse A A Yes A 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin More than 50 % of the symmetric control travel A More than 50 % of the symmetric control travel A More than 50 % of the symmetric control travel A Tes A More than 50 % of the symmetric control travel A	Collapse on the opposite side occurs	not available	0	not available	0
15. Directional control with a maintained asymmetric collapse Able to keep course Able to keep course Yes A Yes A Yes A Yes A A Amount of control range between turn and stall or spin More than 50 % of the symmetric control travel A More than 50 % of the symmetric control travel A A A A A A A A A A A B A B A B B	Twist occurs	not available	0	not available	0
collapse Able to keep course Yes A Yes A 180° turn away from the collapsed side possible in 10 s Yes A Amount of control range between turn and stall or spin More than 50 % of the symmetric control travel A More than 50 % of the symmetric control travel A A A A A A B A B Control travel A A Control travel	Cascade occurs	not available	0	not available	0
180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin More than 50 % of the symmetric control travel A More than 50 % of the symmetric control travel 16. Trim speed spin tendency A		A			
Amount of control range between turn and stall or spin More than 50 % of the symmetric control travel A More than 50 % of the symmetric control travel 16. Trim speed spin tendency A	Able to keep course	Yes	Α	Yes	Α
symmetric control travel control travel 16. Trim speed spin tendency A	180° turn away from the collapsed side possible in 10 s	Yes	Α	Yes	Α
	Amount of control range between turn and stall or spin		Α		Α
Spin occurs No A No A	16. Trim speed spin tendency	A			
	Spin occurs	No	Α	No	Α

17. Low speed spin tendency	A			
Spin occurs	No	Α	No	Α
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than 90°	Α	Stops spinning in less than 90°	Α
Cascade occurs	No	Α	No	Α
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	Α	Changing course less than 45°	Α
Behaviour before release	Remains stable with straight span	Α	Remains stable with straight span	Α
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Cascade occurs	No	Α	No	Α
20. Big ears	Α			
Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Behaviour during big ears	Stable flight	Α	Stable flight	Α
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
21. Big ears in accelerated flight	0			
Entry procedure	not available	0	not available	0
Behaviour during big ears	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit	not available	0	not available	0
Behaviour immediately after releasing the accelerator while maintaining big ears	not available	0	not available	0
22. Behaviour exiting a steep spiral	С			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	Α	720° to 1080°, spontaneous recovery	С
Sink rate when evaluating spiral stability [m/s]	12		14	
23. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	Α	Yes	Α
Stall or spin occurs	No	Α	No	Α
24. Any other flight procedure and/or configuration described in the user's manual	Α			
Procedure works as described	Yes	Α	Yes	Α
Procedure suitable for novice pilots	Yes	Α	Yes	Α
Cascade occurs	No	Α	No	Α
25. Comments of test pilot				
Comments			The steep spiral can stay neutral if you pass more then 14m/s	