Flight test report

Manufacturer	**Dudek Paragliders**	**Certification number**	PG 106.2007
Address	ul. Centralna 2U 86-031 Osielsko Poland	**Date of flight test**	03/10/2007
		Place of test	Villeneuve
Representive	none		
Type of glider	**Synthesis 34**		
Trimmer	**Closed trimmer**		

Classification C

Test Pilot	Alain Zoller	Claude Thurnheer
Harness	Sol - Slider L 46cm	Advance Bi-pro
Total weight in flight	135 kg	165 kg

	Min weight		**Max weight**	
1. Inflation/Take-off				
Rising behaviour	Smooth, easy and constant rising	A	Smooth, easy and constant rising	A
Special take off technique required	No	A	No	A
2. Landing				
Special landing technique required	No	A	No	A
3. Speed in straight flight				
Trim speed more than 30 km/h	Yes	A	Yes	A
Speed range using the controls larger than 10 km/h	Yes	A	Yes	A
Minimum speed	Less than 25 km/h	A	25 km/h to 30 km/h	B
4. Control movement				
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	not available	0	not available	0
Max. weight in flight greater than 100 kg				
Symmetric control pressure/travel	Increasing, Greater than 65 cm	A	Increasing, Greater than 65 cm	A
5. Pitch stability exiting accelerated flight				
Dive forward angle on exit	Dive forward less than 30°	A	Dive forward less than 30°	A
Collapse occurs	No	A	No	A
6. Pitch stability operating controls during accelerated flight				
Collapse occurs	No	A	No	A
7. Roll stability and damping				
Oscillations	Reducing	A	Reducing	A
8. Stability in gentle spirals				
Tendency to return to straight flight	Spontaneous exit	A	Spontaneous exit	A
9. Behaviour in a steeply banked turn				
Sink rate after two turns	12 m/s to 14 m/s	A	More than 14 m/s	B
10. Symmetric front collapse				
Entry	Rocking back less than 45°	A	Rocking back greater than 45°	C
Recovery	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
Dive forward angle on exit	Dive foward 0°to 30°, Keeping course	A	Dive foward 0°to 30°, Keeping course	A
Cascade occurs	No	A	No	A
With accelerator				
Entry	Rocking back less than 45°	A	Rocking back greater than 45°	C
Recovery	Spontaneous in 3 s to 5 s	B	Spontaneous in less than 3 s	A
Dive forward angle on exit	Dive foward 0°to 30°, Entering a turn less than	A	Dive foward 0°to 30°, Keeping course	A
Cascade occurs	No	A	No	A
11. Exiting deep stall (parachutal stall)				
Deep stall achieved	Yes	A	No	A
Recovery	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
Dive forward angle on exit	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
12. High angle of attack recovery				
Recovery	Spontaneous in less than 3 s	A	not available	0
Cascade occurs	No	A	not available	0
13. Recovery from a developed full stall				
Dive forward angle on exit	Dive forward 0°to 30°	A	Dive forward 30°to 60°	B
Collapse	No collapse	A	No collapse	A
Cascade occurs (other than collapse)	No	A	No	A
Rocking back	Less than 45°	A	Less than 45°	A
Line tension	Most line tight	A	Most line tight	A
14. Asymmetric collapse				
With 50% collapse-Maximum dive forward or roll angle				
Change of course until re-inflation	Less than 90°, Dive or roll angle 0° to 15°	A	90° to 180°, Dive or roll angle 45° to 60°	C
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
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
With 75% collapse-Maximum dive forward or roll angle				
Change of course until re-inflation	Less than 90°, Dive or roll angle 45° to 60°	C	90° to 180°, Dive or roll angle 45° to 60°	C
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
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
With 50% collapse and accelerator-Maximum dive forward or roll angle				
Change of course until re-inflation	Less than 90°, Dive or roll angle 15° to 45°	A	90° to 180°, Dive or roll angle 45° to 60°	C
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

	Twist occurs	No	A	No	A
	Cascade occurs	No	A	No	A
	With 75% collapse and accelerator-Maximum dive forward or roll angle				
	Change of course until re-inflation	90° to 180°, Dive or roll angle 60° to 90°	C	90° to 180°, Dive or roll angle 45° to 60°	C
	Re-inflation behaviour	Spontaneous re-inflation	A	Spontaneous re-inflation	A
	Total change of course	Greater than 360°	C	Less than 360°	A
	Collapse on the opposite side occurs	No	A	No	A
	Twist occurs	No	A	No	A
	Cascade occurs	No	A	No	A
15. Directional control with a maintained asymmetric collapse					
	Able to keep course	Yes	A	Yes	A
	180° turn away from the collapsed side possible in 10 s	Yes	A	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
16. Trim speed spin tendency					
	Spin occurs	No	A	No	A
17. Low speed spin tendency					
	Spin occurs	No	A	No	A
18. Recovery from a developed spin					
	Spin rotation angle after release	Stops spinning in less than 90°	A	Stops spinning in less than 90°	A
	Cascade occurs	No	A	No	A
19. B-line stall					
	Change of course before release	Change of course less than 45°	A	not available	0
	Behaviour before release	Remains stable with straight span	A	not available	0
	Recovery	Spontaneous in less than 3 s	A	not available	0
	Dive forward angle on exit	Dive forward 0° to 30°	A	not available	0
	Cascade occurs	No	A	not available	0
20. Big ears					
	Entry procedure	Standard technique	A	Dedicated controls	A
	Behaviour during big ears	Stable flight	A	Stable flight	A
	Recovery	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
	Dive forward angle on exit	Dive forward 0° to 30°	A	Dive forward 0° to 30°	A
21. Big ears in accelerated flight					
	Entry procedure	not available	0	Dedicated controls	A
	Behaviour during big ears	not available	0	Unstable flight	C
	Recovery	not available	0	Spontaneous in less than 3 s	A
	Dive forward angle on exit	not available	0	Dive forward 0° to 30°	A
	Behaviour immediately after releasing the accelerator while	not available	0	Stable flight	A
22. Behaviour exiting a steep spiral					
	Tendency to return to straight flight	Spontaneous exit	A	Spontaneous exit	A
	Turn angle to recover normal flight	Less than 720°,spontaneous recovery	A	Less than 720°,spontaneous recovery	A
	Sink rate when evaluating spiral stability [m/s]	20 m/s		25 m/s	
23. Alternative means of directional control					
	180° turn achievable in 20 s	Yes	A	Yes	A
	Stall or spin occurs	No	A	No	A
24. Any other flight procedure and/or configuration described in the user's manual					
	Procedure works as described	Yes	A	Yes	A
	Procedure suitable for novice pilots	Yes	A	Yes	A
	Cascade occurs	No	A	No	A
Comments of test pilot					
	Comments	Impossible to make big ears full speed accelerate (Reflex Profil)		B-line stall impossible to make	

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