Flight test report

Manufacturer Mac Para Technology Address 1.maje 823, P.O.Box 26 756 61 Roznov p. R.

Czech Republic

Representive None Type of glider Pasha 3 38 Open trimmer Trimmer

PG 113.2007 Certification number Date of flight test 26/10/2007 Villeneuve Place of test

Alain Zoller

Advance - Bi Pro 2



Classification B

Test Pilot Claude Thurnheer Harness Advance Bi-pro

195 kg Total weight in flight 120 kg

| | | Min weight | Max weight |
|------------------|--|--|--|
| 1. Inflation/Ta | | | max noight |
| | Rising behaviour Special take off technique required | Smooth, easy and constant rising No A | |
| 2. Landing | | | |
| 3. Speed in st | Special landing technique required | No A | A No A |
| o. opeeu iii si | Trim speed more than 30 km/h | Yes A | Yes A |
| | Speed range using the controls larger than 10 km/h | Yes | Yes A |
| | Minimum speed | 25 km/h to 30 km/h | B Less than 25 km/h A |
| 4. Control mo | | | |
| | 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 | not available | o not available |
| | Symmetric control pressure/travel | not available | 0 not available 0 |
| | Max. weight in flight greater than 100 kg | | |
| Buch stabil | Symmetric control pressure/travel | Increasing, Greater than 65 cm | Increasing, Greater than 65 cm A |
| b. Pitch Stabil | ity exiting accelerated flight Dive forward angle on exit | not available | 0 not available 0 |
| | Collapse occurs | | 0 not available 0 |
| 6. Pitch stabil | ity operating controls during accelerated flight | | |
| | Collapse occurs | not available | 0 not available 0 |
| . Roll stabilit | y and damping | Dadusias | Deducing |
| Stability in | Oscillations gentle spirals | Reducing | Reducing A |
| o. Glability III | Tendency to return to straight flight | Spontaneous exit | Spontaneous exit A |
| . Behaviour | in a steeply banked turn | , | , |
| | Sink rate after two turns | More than 14 m/s | B More than 14 m/s B |
| 0. Symmetric | c front collapse | 5 1: 1 1 1 1 15 | |
| | Entry | Rocking back less than 45° Spontaneous in less than 3 s | 3 |
| | Recovery Dive forward angle on exit | Spontaneous in less than 3 s Dive foward 0°to 30°, Keeping course | |
| | Cascade occurs | No A | |
| | With accelerator | | |
| | Entry | | 0 not available 0 |
| | Recovery | | 0 not available 0 |
| | Dive forward angle on exit Cascade occurs | | 0 not available 0 not available 0 not available 0 |
| 11. Exiting de | ep stall (parachutal stall) | not available | That available |
| ŭ | Deep stall achieved | Yes A | Yes A |
| | Recovery | Spontaneous in less than 3 s | |
| | Dive forward angle on exit | Dive forward 0°to 30° | |
| | Change of course Cascade occurs | Changing course less than 45° No A | |
| 2. High angle | e of attack recovery | , | T TO T |
| · · · | Recovery | Spontaneous in less than 3 s | not available 0 |
| | Cascade occurs | No A | not available 0 |
| 3. Recovery | from a developed full stall | Div. (| Diversity of the second of the |
| | Dive forward angle on exit Collapse | Dive forward 30° to 60° E No collapse | |
| | Cascade occurs (other than collapse) | No A | • |
| | Rocking back | Less than 45° | |
| | Line tension | Most line tight | Most line tight A |
| 4. Asymmeti | | | |
| | 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° | Less than 90°, Dive or roll angle 0° to 15° A |
| | Re-inflation behaviour | Spontaneous re-inflation | |
| | Total change of course | Less than 360° | · · |
| | Collapse on the opposite side occurs | No A | |
| | Twist occurs | | No A |
| | Cascade occurs With 75% collapse Maximum dive ferward or roll angle | No A | No A |
| | With 75% collapse-Maximum dive forward or roll angle Change of course until re-inflation | 90° to 180°, Dive or roll angle 15° to 45° | B 90° to 180°, Dive or roll angle 15° to 45° B |
| | Re-inflation behaviour | Spontaneous re-inflation | |
| | Total change of course | Less than 360° | |
| | Collapse on the opposite side occurs | No A | |
| | Twist occurs | No A | |
| | Cascade occurs With 50% collapse and accelerator-Maximum dive forward or | No A | No A |
| | Change of course until re-inflation | and the second s | 0 not available 0 |
| | Re-inflation behaviour | | 0 not available 0 |
| | Total change of course | not available | 0 not available 0 |
| | Collapse on the opposite side occurs | not available | 0 not available 0 |

| | Twist occurs | not available | 0 | not available | 0 |
|-----------------|---|---|-----|--|-----|
| | Cascade occurs | not available | 0 | not available | 0 |
| | With 75% collapse and accelerator-Maximum dive forward o | r roll angle | | | |
| | Change of course until re-inflation | not available | 0 | not available | 0 |
| | Re-inflation behaviour | not available | 0 | not available | 0 |
| | Total change of course | not available | 0 | not available | 0 |
| | Collapse on the opposite side occurs | not available | 0 | not available | 0 |
| | Twist occurs | not available | 0 | not available | 0 |
| | Cascade occurs | not available | 0 | not available | 0 |
| 15. Directiona | al control with a maintained asymmetric collapse | | | | |
| | Able to keep course | Yes | Α | Yes | Α |
| | 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 | More than 50 % of the symmetric control travel | Α | More than 50 % of the symmetric control travel | Α |
| 16. Trim spec | ed spin tendency | more than so 70 or the symmetric control travel | - 1 | more than 60 % of the cynments control travel | |
| To: Thin Spec | Spin occurs | No | Α | No | Α |
| 17 Low spee | d spin tendency | 110 | , , | 110 | / \ |
| III. LOW Spec | Spin occurs | No | Δ | No | Α |
| 18 Recovery | from a developed spin | | , · | | -/\ |
| io. Recovery | Spin rotation angle after release | Stops spinning in less than 90° | Α | Stops spinning in less than 90° | Α |
| | Cascade occurs | No | A | No | A |
| 19. B-line sta | | NO | А | INO | А |
| 19. B-line Sta | | Observe of second less than 450 | | and any Salata | _ |
| | Change of course before release | Change of course less than 45° | Α | not available | 0 |
| | Behaviour before release | Remains stable with straight span | Α | not available | 0 |
| | Recovery | Spontaneous in less than 3 s | Α | not available | 0 |
| | Dive forward angle on exit | Dive forward 0° to 30° | Α | not available | 0 |
| | Cascade occurs | No | Α | not available | 0 |
| 20. Big ears | | | | | |
| | 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 3 s to 5 s | В |
| | Dive forward angle on exit | Dive forward 0° to 30° | Α | Dive forward 0° to 30° | Α |
| 21. Big ears i | n accelerated flight | | | | |
| • | 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 | not available | 0 | not available | 0 |
| 22. Behaviou | r exiting a steep spiral | | J | | |
| | Tendency to return to straight flight | Spontaneous exit | Α | Spontaneous exit | Α |
| | 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] | 19 m/s | ^ | 25 m/s | |
| 23 Alternativ | re means of directional control | 10 11/10 | | 20 11//0 | |
| 23. AILCITIALIV | 180° turn achievable in 20 s | Yes | Α | Yes | Α |
| | Stall or spin occurs | No | A | No No | A |
| 24 Any other | | | А | INU | А |
| 24. Any other | r flight procedure and/or configuration described in the us | | _ | not oveilable | 0 |
| | Procedure works as described | not available | 0 | | 0 |
| | Procedure suitable for novice pilots | not available | 0 | not available | 0 |
| | Cascade occurs | not available | 0 | not available | 0 |
| Comments of | • | | | | |
| | Comments | no | | B-line stall impossible | |
| | | | | | |



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