DHV TESTREPORT EN926-2:2005

ADVANCE ALPHA 6 28

Type designation  Advance Alpha 6 28
Type test reference no DHV GS-01-2163-15
Holder of certification ADVANCE Thun AG
Manufacturer ADVANCE Thun AG
Classification A
Winch towing Yes
Number of seats min / max 1 / 1
Accelerator Yes
Trimmers No

BEHAVIOUR AT MIN WEIGHT IN FLIGHT (85KG)

Test pilots
Beni Stocker

Inflation/take-off
A
Rising behaviour
Smooth, easy and constant rising
Special take off technique required No

Landing
A
Special landing technique required No

Speeds in straight flight
A
Trim speed more than 30 km/h Yes
Speed range using the controls larger than 10 km/h Yes
Minimum speed Less than 25 km/h

Control movement
A
Symmetric control pressure Increasing
Symmetric control travel Greater than 60 cm

Pitch stability exiting accelerated flight
A
Dive forward angle on exit Dive forward less than 30°
Collapse occurs No

Pitch stability operating controls during accelerated flight
A
Collapse occurs No

Roll stability and damping
A
Oscillations Reducing

Stability in gentle spirals
A
Tendency to return to straight flight Spontaneous exit

Behaviour in a steeply banked turn
A
Sink rate after two turns Up to 12 m/s

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (125KG)

Test pilots
Sebastian Mackrodt

Inflation/take-off
A
Rising behaviour
Smooth, easy and constant rising
Special take off technique required No

Landing
A
Special landing technique required No

Speeds in straight flight
A
Trim speed more than 30 km/h Yes
Speed range using the controls larger than 10 km/h Yes
Minimum speed Less than 25 km/h

Control movement
A
Symmetric control pressure Increasing
Symmetric control travel Greater than 65 cm

Pitch stability exiting accelerated flight
A
Dive forward angle on exit Dive forward less than 30°
Collapse occurs No

Pitch stability operating controls during accelerated flight
A
Collapse occurs No

Roll stability and damping
A
Oscillations Reducing

Stability in gentle spirals
A
Tendency to return to straight flight Spontaneous exit

Behaviour in a steeply banked turn
A
Sink rate after two turns 12 m/s to 14 m/s
**Symmetric front collapse**
- **Entry**: Rocking back less than 45°
- **Recovery**: Spontaneous in less than 3 s
- **Dive forward angle on exit**: Dive forward 0° to 30°
- **Change of course**: Keeping course
- **Cascade occurs**: No

**Symmetric front collapse in accelerated flight**
- **Entry**: Rocking back less than 45°
- **Recovery**: Spontaneous in less than 3 s
- **Dive forward angle on exit**: Dive forward 0° to 30°
- **Change of course**: Entering a turn of less than 90°
- **Cascade occurs**: No

**Exiting deep stall (parachutal stall)**
- **Deep stall achieved**: Yes
- **Recovery**: Spontaneous in less than 3 s
- **Dive forward angle on exit**: Dive forward 0° to 30°
- **Change of course**: Changing course less than 45°
- **Cascade occurs**: No

**High angle of attack recovery**
- **Recovery**: Spontaneous in less than 3 s
- **Cascade occurs**: No

**Recovery from a developed full stall**
- **Dive forward angle on exit**: Dive forward 0° to 30°
- **Collapse**: No collapse
- **Cascade occurs (other than collapses)**: No
- **Rocking back**: Less than 45°
- **Line tension**: Most lines tight

**Asymmetric collapse 45-50%**
- **Change of course until re-inflation**: Less than 90°
- **Maximum dive forward or roll angle**: Dive or roll angle 0° to 15°
- **Re-inflation behaviour**: Spontaneous re-inflation
- **Total change of course**: Less than 360°
- **Collapse on the opposite side occurs**: No
- **Twist occurs**: No
- **Cascade occurs**: No

**Asymmetric collapse 70-75%**
- **Change of course until re-inflation**: Less than 90°
- **Maximum dive forward or roll angle**: Dive or roll angle 15° to 45°
- **Re-inflation behaviour**: Spontaneous re-inflation
- **Total change of course**: Less than 360°
- **Collapse on the opposite side occurs**: No
- **Twist occurs**: No
- **Cascade occurs**: No

**Asymmetric collapse 45-50% in accelerated flight**
- **Change of course until re-inflation**: Less than 90°
- **Maximum dive forward or roll angle**: Dive or roll angle 0° to 15°
- **Re-inflation behaviour**: Spontaneous re-inflation
- **Total change of course**: Less than 360°
- **Collapse on the opposite side occurs**: No
- **Twist occurs**: No
- **Cascade occurs**: No

**Asymmetric collapse 70-75% in accelerated flight**
- **Change of course until re-inflation**: Less than 90°
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum dive forward or roll angle</td>
<td>Dive or roll angle 15° to 45°</td>
</tr>
<tr>
<td>Re-inflation behaviour</td>
<td>Spontaneous re-inflation</td>
</tr>
<tr>
<td>Total change of course</td>
<td>Less than 360°</td>
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<tr>
<td>Collapse on the opposite side occurs</td>
<td>No</td>
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<td>Twist occurs</td>
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<td>Cascade occurs</td>
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<td>Twist occurs</td>
<td>No</td>
</tr>
<tr>
<td>Cascade occurs</td>
<td>No</td>
</tr>
<tr>
<td>180° turn away from the collapsed side possible in 10 s</td>
<td>Yes</td>
</tr>
<tr>
<td>Amount of control range between turn and stall or spin travel</td>
<td>More than 50 % of the symmetric control travel</td>
</tr>
<tr>
<td>Trim speed spin tendency</td>
<td>Stop spinning in less than 90°</td>
</tr>
<tr>
<td>Low speed spin tendency</td>
<td>Stop spinning in less than 90°</td>
</tr>
<tr>
<td>Recovery from a developed spin</td>
<td>No</td>
</tr>
<tr>
<td>Spin rotation angle after release</td>
<td>Stopping in less than 90°</td>
</tr>
<tr>
<td>Change of course before release</td>
<td>Changing course less than 45°</td>
</tr>
<tr>
<td>Behaviour before release</td>
<td>Remains stable with straight span</td>
</tr>
<tr>
<td>Recovery</td>
<td>Spontaneous in less than 3 s</td>
</tr>
<tr>
<td>Dive forward angle on exit</td>
<td>Dive forward 0° to 30°</td>
</tr>
<tr>
<td>Cascade occurs</td>
<td>No</td>
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<td>Yes</td>
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<td>Amount of control range between turn and stall or spin travel</td>
<td>More than 50 % of the symmetric control travel</td>
</tr>
<tr>
<td>Big ears</td>
<td>Dedicated controls</td>
</tr>
<tr>
<td>Behaviour during big ears</td>
<td>Stable flight</td>
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<tr>
<td>Recovery</td>
<td>Spontaneous in less than 3 s</td>
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<td>Dive forward angle on exit</td>
<td>Dive forward 0° to 30°</td>
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<tr>
<td>Behaviour immediately after releasing the accelerator while maintaining big ears</td>
<td>Stable flight</td>
</tr>
<tr>
<td>Behaviour exiting a steep spiral</td>
<td>Spontaneous exit</td>
</tr>
<tr>
<td>Tendency to return to straight flight</td>
<td>Spontaneous exit</td>
</tr>
<tr>
<td>Turn angle to recover normal flight</td>
<td>Less than 720°, spontaneous recovery</td>
</tr>
<tr>
<td>Sink rate when evaluating spiral stability [m/s]</td>
<td>14</td>
</tr>
<tr>
<td>Alternative means of directional control</td>
<td>180° turn achievable in 20 s</td>
</tr>
<tr>
<td>Stall or spin occurs</td>
<td>Yes</td>
</tr>
<tr>
<td>Any other flight procedure and/or configuration described in the user's manual</td>
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**ADVANCE ALPHA 6 28**

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- **Type test reference no**: DHV GS-01-2163-15
- **Holder of certification**: ADVANCE Thun AG
- **Manufacturer**: ADVANCE Thun AG
- **Classification**: A
- **Winch towing**: Yes
- **Number of seats min / max**: 1 / 1
- **Accelerator**: Yes
- **Trimmers**: No

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**BEHAVIOUR AT MIN WEIGHT IN FLIGHT (85KG)**

- **Inflation/take-off**: A
- **Special take off technique required**: No
- **Rising behaviour**: Smooth, easy and constant rising

**BEHAVIOUR AT MAX WEIGHT IN FLIGHT (125KG)**

- **Inflation/take-off**: A
- **Special take off technique required**: No
- **Rising behaviour**: Smooth, easy and constant rising

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**Test pilots**

- Beni Stocker
- Sebastian Mackrodt

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**Behaviour in a steeply banked turn**

- **Sink rate after two turns**: Up to 12 m/s
- **Tendency to return to straight flight**: Spontaneous exit

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**Symmetric front collapse**

- **Entry**: Rocking back less than 45°
- **Recovery**: Spontaneous in less than 3 s
<table>
<thead>
<tr>
<th>Scenario</th>
<th>Forward Angle</th>
<th>Course Change</th>
<th>Cascade</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symmetric front collapse in accelerated flight</td>
<td>0° to 30°</td>
<td></td>
<td>No</td>
<td></td>
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<td>Exiting deep stall (parachutal stall)</td>
<td></td>
<td></td>
<td>No</td>
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<td></td>
<td>No</td>
<td></td>
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<tr>
<td>Directional control with a maintained asymmetric collapse</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Trim speed spin tendency</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
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</table>

**Additional Notes:**
- **DHV Testreport LTF 2009 :: Advance Alpha 6 28**
- [Link to DHV Testreport](http://www.dhv.de/db1/source/technictestreport2.php?item=-27...)
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Low speed spin tendency

- Spin occurs: No
- Recovery from a developed spin:
  - Spin rotation angle after release: Stops spinning in less than 90°
  - Cascade occurs: No

Change of course before release:
- Changing course less than 45°
  - Changing course less than 45°
  - Spontaneous in less than 3 s

Dive forward angle on exit:
- Dive forward 0° to 30°
  - Spontaneous in less than 3 s

Cascade occurs: No

Big ears

- Entry procedure: Dedicated controls
- Behaviour during big ears:
  - Stable flight
  - Spontaneous in less than 3 s

Dive forward angle on exit:
- Dive forward 0° to 30°

Cascade occurs: No

Big ears in accelerated flight

- Entry procedure: Dedicated controls
- Behaviour during big ears:
  - Stable flight
  - Spontaneous in less than 3 s

Dive forward angle on exit:
- Dive forward 0° to 30°

Behaviour immediately after releasing the accelerator while maintaining big ears:
- Stable flight

Behaviour exiting a steep spiral

- Tendency to return to straight flight:
  - Spontaneous exit
  - Less than 720°, spontaneous recovery
- Sink rate when evaluating spiral stability [m/s]: 14

Alternative means of directional control

- 180° turn achievable in 20 s: Yes
  - Yes

Stall or spin occurs: No

Any other flight procedure and/or configuration described in the user’s manual

No other flight procedure or configuration described in the user’s manual