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DHV TESTREPORT LTF 2009

NOVA ION 3M LIGHT

Type designation NOVA Ion 3M light
Type test reference no DHV GS-01-2107-14
Holder of certification [NOVA Vertriebsgesellschaft m.b.H.](#)
Manufacturer [NOVA Vertriebsgesellschaft m.b.H.](#)
Classification B
Winch towing Yes
Number of seats min / max 1 / 1
Accelerator Yes
Trimmers No



BEHAVIOUR AT MIN WEIGHT IN FLIGHT (90KG)

Test pilots



Harald Buntz

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (110KG)



Sebastian Mackrodt

Inflation/take-off

A

A

Rising behaviour Smooth, easy and constant rising
Special take off technique required No

Smooth, easy and constant rising
 No

Landing

A

A

Special landing technique required No

No

Speeds in straight flight

A

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

Yes
 Yes
 Less than 25 km/h

Control movement

A

A

Symmetric control pressure Increasing
Symmetric control travel Greater than 60 cm

Increasing
 Greater than 65 cm

Pitch stability exiting accelerated flight

A

A

Dive forward angle on exit Dive forward less than 30°
Collapse occurs No

Dive forward less than 30°
 No

Pitch stability operating controls during accelerated flight

A

A

Collapse occurs No

No

Roll stability and damping

A

A

Oscillations Reducing

Reducing

Stability in gentle spirals

A

A

Tendency to return to straight flight Spontaneous exit

Spontaneous exit

Behaviour in a steeply banked turn ⚠

A

A

Sink rate after two turns 12 m/s to 14 m/s

12 m/s to 14 m/s

Symmetric front collapse

A

A

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

Rocking back less than 45°
 Spontaneous in less than 3 s
 Dive forward 0° to 30°
 Keeping course
 No

Symmetric front collapse in accelerated flight

A

A

Entry Rocking back less than 45°
Recovery Spontaneous in less than 3 s

Rocking back less than 45°
 Spontaneous in less than 3 s

Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Change of course	Entering a turn of less than 90°	Keeping course
Cascade occurs	No	No

Exiting deep stall (parachutal stall)

A

A

Deep stall achieved	Yes	Yes
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Change of course	Changing course less than 45°	Changing course less than 45°
Cascade occurs	No	No

High angle of attack recovery

A

A

Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Cascade occurs	No	No

Recovery from a developed full stall

A

A

Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Collapse	No collapse	No collapse
Cascade occurs (other than collapses)	No	No
Rocking back	Less than 45°	Less than 45°
Line tension	Most lines tight	Most lines tight

Asymmetric collapse 45-50%

A

A

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

Asymmetric collapse 70-75%

B

A

Change of course until re-inflation	90° to 180°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No

Asymmetric collapse 45-50% in accelerated flight

A

A

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

Asymmetric collapse 70-75% in accelerated flight

B

A

Change of course until re-inflation	90° to 180°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No

Directional control with a maintained asymmetric collapse

A

A

Able to keep course	Yes	Yes
180° turn away from the collapsed side possible in 10 s	Yes	Yes
Amount of control range between turn and stall or spin	More than 50 % of the symmetric control travel	More than 50 % of the symmetric control travel

Trim speed spin tendency

A

A

Spin occurs	No	No
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Low speed spin tendency

A

A

Spin occurs	No	No
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Recovery from a developed spin

A

A

Spin rotation angle after release	Stops spinning in less than 90°	Stops spinning in less than 90°
Cascade occurs	No	No

B-line stall

A

A

Change of course before release	Changing course less than 45°	Changing course less than 45°
Behaviour before release	Remains stable with straight span	Remains stable with straight span
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Cascade occurs	No	No

<u>Big ears</u>	A	A
Entry procedure	Dedicated controls	Dedicated controls
Behaviour during big ears	Stable flight	Stable flight
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
<u>Big ears in accelerated flight</u>	A	A
Entry procedure	Dedicated controls	Dedicated controls
Behaviour during big ears	Stable flight	Stable flight
Recovery	Spontaneous in 3 s to 5 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	Stable flight
<u>Behaviour exiting a steep spiral</u>	A	A
Tendency to return to straight flight	Spontaneous exit	Spontaneous exit
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	Less than 720°, spontaneous recovery
Sink rate when evaluating spiral stability [m/s]	14	14
<u>Alternative means of directional control</u>	A	A
180° turn achievable in 20 s	Yes	Yes
Stall or spin occurs	No	No
<u>Any other flight procedure and/or configuration described in the user's manual</u>	No other flight procedure or configuration described in the user's manual	