TECHNICAL DATA DHV TESTREPORT LTF DHV TESTREPORT EN DATASHEET PARTS LIST OPERATING INSTRUCTION





DHV TESTREPORT EN926-2:2005

NOVA ION3 XXS

Type designation NOVA Ion3 XXS Type test reference no DHV GS-01-2100-13

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 (55KG)

Test pilots Ines Sattler



BEHAVIOUR AT MAX WEIGHT IN FLIGHT (80KG)



Expert Beni Stocker

<u>Inflation/take-off</u>	Α	А
Rising behavior	ur Smooth, easy and constant rising	Smooth, easy and constant rising
Special take off technique require	ed No	No
<u>Landing</u>	A	A
Special landing technique require	ed No	No
Speeds in straight flight	A	A
Trim speed more than 30 km/	h Yes	Yes
Speed range using the controls larger than 10 km/	h Yes	Yes
Minimum spee	ed Less than 25 km/h	Less than 25 km/h
Control movement	A	A
Symmetric control pressur	re Increasing	Increasing
Symmetric control trave	el Greater than 55 cm	Greater than 60 cm
Pitch stability exiting accelerated flight	A	A
Dive forward angle on ex	it Dive forward less than 30°	Dive forward less than 30°
Collapse occur	rs No	No
Ditab stability assessing assetuals desire	1	:
Pitch stability operating controls during accelerated flight	Α	Α
Collapse occur	rs No	No
•	rs No	No A
Roll stability and damping		
Roll stability and damping	A	Α
Roll stability and damping Oscillation	A s Reducing	A Reducing
Roll stability and damping Oscillation Stability in gentle spirals Tendency to return to straight fligh	A s Reducing	A Reducing
Roll stability and damping Oscillation Stability in gentle spirals Tendency to return to straight fligh	A Seducing A ht Spontaneous exit A	A Reducing A Spontaneous exit
Roll stability and damping Oscillation Stability in gentle spirals Tendency to return to straight fligh Behaviour in a steeply banked turn Sink rate after two turn	A Seducing A ht Spontaneous exit A	A Reducing A Spontaneous exit B
Oscillation Stability in gentle spirals Tendency to return to straight fligh Behaviour in a steeply banked turn Sink rate after two turn	A S Reducing A The Spontaneous exit A S 12 m/s to 14 m/s A	A Reducing A Spontaneous exit B More than 14 m/s
Oscillation Stability in gentle spirals Tendency to return to straight flight Behaviour in a steeply banked turn Sink rate after two turn Symmetric front collapse Entre	A Seducing A ht Spontaneous exit A	A Reducing A Spontaneous exit B More than 14 m/s
Roll stability and damping Oscillation Stability in gentle spirals Tendency to return to straight fligh Behaviour in a steeply banked turn Sink rate after two turn Symmetric front collapse	A Spontaneous exit A Is 12 m/s to 14 m/s A Ty Rocking back less than 45° Ty Spontaneous in less than 3 s	A Reducing A Spontaneous exit B More than 14 m/s A Rocking back less than 45°

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Cascade occurs	s No	No
Symmetric front collapse in accelerated flight	A	В
Entry	Rocking back less than 45°	Rocking back less than 45°
	Spontaneous in less than 3 s	Spontaneous in 3 s to 5 s
Dive forward angle on exi	t Dive forward 0° to 30°	Dive forward 0° to 30°
Change of course	Entering a turn of less than 90°	Entering a turn of less than 90°
Cascade occurs	s No	No
Exiting deep stall (parachutal stall)	A	А
Deep stall achieved	I Vac	Yes
	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exi		Dive forward 0° to 30°
_	Changing course less than 45°	Changing course less than 45°
Cascade occurs		No
High angle of attack recovery	Α	A
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Cascade occurs	/ Spontaneous in less than 3 s s No	Spontaneous in less than 3 s No
	1-	1-
Recovery from a developed full stall	Α	Α
Dive forward angle on exi		Dive forward 0° to 30°
	No collapse	No collapse
Cascade occurs (other than collapses)		No
_	Less than 45°	Less than 45°
Line tension	Most lines tight	Most lines tight
Asymmetric collapse 45-50%	Α	Α
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 15° to 45°
Re-inflation behavious	r Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	s No	No
Twist occurs	s No	No
Cascade occurs	s No	No
Asymmetric collapse 70-75%	В	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 behaviou	r Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	• No	
	3 140	No
Twist occurs		No No
Twist occurs Cascade occurs	s No	
Cascade occurs Asymmetric collapse 45-50% in accelerated	5 No 5 No	No No
Cascade occurs Asymmetric collapse 45-50% in accelerated flight	s No s No	No No
Cascade occurs Asymmetric collapse 45-50% in accelerated flight Change of course until re-inflation	A Less than 90°	No No A Less than 90°
Cascade occurs Asymmetric collapse 45-50% in accelerated flight Change of course until re-inflation Maximum dive forward or roll angle	A Less than 90° 2 Dive or roll angle 15° to 45°	No A Less than 90° Dive or roll angle 15° to 45°
Cascade occurs Asymmetric collapse 45-50% in accelerated flight Change of course until re-inflatior Maximum dive forward or roll angle Re-inflation behaviour	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation	No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation
Cascade occurs Asymmetric collapse 45-50% in accelerated flight Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360°	No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°
Cascade occurs Asymmetric collapse 45-50% in accelerated flight 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	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No	No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No
Cascade occurs Asymmetric collapse 45-50% in accelerated flight Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No No	No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°
Cascade occurs Asymmetric collapse 45-50% in accelerated flight 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 Twist occurs Cascade occurs	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No No	No No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No
Asymmetric collapse 45-50% in accelerated flight 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 Twist occurs Cascade occurs	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No No	No No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No
Cascade occurs Asymmetric collapse 45-50% in accelerated flight 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 Twist occurs Cascade occurs	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No No No	No No No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No
Asymmetric collapse 45-50% in accelerated flight 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 Twist occurs Cascade Occurs Cascado Occurs	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No	No No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No
Asymmetric collapse 45-50% in accelerated flight 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 Twist occurs Cascade occurs Asymmetric collapse 70-75% in accelerated flight Change of course until re-inflation Maximum dive forward or roll angle	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No	No No No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No
Asymmetric collapse 45-50% in accelerated flight 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 Twist occurs Cascade occurs Asymmetric collapse 70-75% in accelerated flight Change of course until re-inflation Maximum dive forward or roll angle	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No No No Dive or roll angle 15° to 45° The state of the sta	No No No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No No Dive or roll angle 15° to 45°
Asymmetric collapse 45-50% in accelerated flight 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 Twist occurs Cascade occurs Asymmetric collapse 70-75% in accelerated flight Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No No B Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360°	No No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No Dive or roll angle 15° to 45° Spontaneous re-inflation
Asymmetric collapse 45-50% in accelerated flight 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 Twist occurs Cascade occurs Asymmetric collapse 70-75% in accelerated flight Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course	A Less than 90° Dive or roll angle 15° to 45° r Spontaneous re-inflation Less than 360° No No B 190° to 180° Dive or roll angle 15° to 45° r Spontaneous re-inflation	No No No No A Less than 90° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°

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<u>Directional control with a maintained</u> asymmetric collapse	A	A
Able to keep course	e Yes	Yes
180° turn away from the collapsed side possible in	1 Yes	Yes
10		
Amount of control range between turn and stall o	r More than 50 % of the symmetric control travel	More than 50 % of the symmetric control travel
rim speed spin tendency	Α	A
Spin occur	s No	No
ow speed spin tendency	A	A
Spin occur	s No	No
Recovery from a developed spin	A	A
Spin rotation angle after release	s Stops spinning in less than 90°	Stops spinning in less than 90°
Cascade occur	s No	No
3-line stall	A	A
Change of course before release	e Changing course less than 45°	Changing course less than 45°
Behaviour before release	Remains stable with straight span	Remains stable with straight span
Recovery	y Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exi	t Dive forward 0° to 30°	Dive forward 0° to 30°
Cascade occur	s No	No
<u>Big ears</u>	В	В
Entry procedure	Dedicated controls	Dedicated controls
	s Stable flight	Stable flight
Behaviour during big ear	•	
Recover	y Spontaneous in 3 s to 5 s	Spontaneous in 3 s to 5 s
	y Spontaneous in 3 s to 5 s	Spontaneous in 3 s to 5 s Dive forward 0° to 30°
Recover Dive forward angle on exi	y Spontaneous in 3 s to 5 s	· ·
Recover Dive forward angle on exi big ears in accelerated flight	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30°	Dive forward 0° to 30°
Recover Dive forward angle on exi Big ears in accelerated flight	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A Dedicated controls	Dive forward 0° to 30°
Recover Dive forward angle on exi Big ears in accelerated flight Entry procedure Behaviour during big ear	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A Dedicated controls	Dive forward 0° to 30° A Dedicated controls
Recover Dive forward angle on exi Big ears in accelerated flight Entry procedure Behaviour during big ear	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A e Dedicated controls s Stable flight y Spontaneous in 3 s to 5 s	Dive forward 0° to 30° A Dedicated controls Stable flight
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Recovery Dive forward angle on existing ears in accelerated flight Entry procedure Behaviour during big ears Recovery Dive forward angle on existing ears Behaviour immediately after releasing the accelerator while maintaining big ears	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A e Dedicated controls s Stable flight y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° e Stable flight	Dive forward 0° to 30° A Dedicated controls Stable flight Spontaneous in less than 3 s Dive forward 0° to 30°
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Recovery Dive forward angle on existing ears in accelerated flight Entry procedure Behaviour during big ears Recovery Dive forward angle on existing after releasing the accelerator while maintaining big ears Behaviour exiting a steep spiral Tendency to return to straight flight	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A e Dedicated controls s Stable flight y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° e Stable flight s	Dive forward 0° to 30° A Dedicated controls Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight
Recovery Dive forward angle on existing ears in accelerated flight Entry procedure Behaviour during big ears Recovery Dive forward angle on existing after releasing the accelerator while maintaining big ears Behaviour exiting a steep spiral Tendency to return to straight flight	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A e Dedicated controls s Stable flight y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° e Stable flight s A t Spontaneous exit t Less than 720°, spontaneous recovery	Dive forward 0° to 30° A Dedicated controls Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight A Spontaneous exit
Recovery Dive forward angle on existing ears in accelerated flight Entry procedure Behaviour during big ears Recovery Dive forward angle on existing after releasing the accelerator while maintaining big ears Behaviour exiting a steep spiral Tendency to return to straight fligh Turn angle to recover normal fligh Sink rate when evaluating spiral stability [m/s	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A e Dedicated controls s Stable flight y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° e Stable flight s A t Spontaneous exit t Less than 720°, spontaneous recovery	Dive forward 0° to 30° A Dedicated controls Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight A Spontaneous exit Less than 720°, spontaneous recover
Recovery Dive forward angle on existing ears in accelerated flight Entry procedure Behaviour during big ears Recovery Dive forward angle on existing after releasing the accelerator while maintaining big ears Behaviour exiting a steep spiral Tendency to return to straight fligh Turn angle to recover normal fligh Sink rate when evaluating spiral stability [m/s	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A Dedicated controls Stable flight y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° a Stable flight A t Spontaneous exit t Less than 720°, spontaneous recovery 1 14	Dive forward 0° to 30° A Dedicated controls Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight A Spontaneous exit Less than 720°, spontaneous recover
Recovery Dive forward angle on existing ears in accelerated flight Entry procedure Behaviour during big ears Recovery Dive forward angle on existing after releasing the accelerator while maintaining big ears Behaviour exiting a steep spiral Tendency to return to straight flight Turn angle to recover normal flight Sink rate when evaluating spiral stability [m/s]	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A Dedicated controls Stable flight y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° a Stable flight A t Spontaneous exit t Less than 720°, spontaneous recovery 1 14 A St Yes	Dive forward 0° to 30° A Dedicated controls Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight A Spontaneous exit Less than 720°, spontaneous recover 14
Recover Dive forward angle on exi Big ears in accelerated flight Entry procedure Behaviour during big ears Recover Dive forward angle on exi Behaviour immediately after releasing the accelerator while maintaining big ears Behaviour exiting a steep spiral Tendency to return to straight fligh Turn angle to recover normal fligh Sink rate when evaluating spiral stability [m/s Alternative means of directional control	y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° A e Dedicated controls s Stable flight y Spontaneous in 3 s to 5 s t Dive forward 0° to 30° e Stable flight s A t Spontaneous exit t Less than 720°, spontaneous recovery 1 14 A s Yes s No	Dive forward 0° to 30° A Dedicated controls Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight A Spontaneous exit Less than 720°, spontaneous recove 14 A Yes

by jursaconsulting

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