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DHV TESTREPORT EN926-2:2014

PHI SONATA 18

Type designation PHI Sonata 18
Type test reference no DHV GS-01-2357-18
Holder of certification [Papesh GmbH](#)
Manufacturer [Papesh GmbH](#)
Classification A
Winch towing Yes
Number of seats min / max 1 / 1
Accelerator Yes
Trimmers No

BEHAVIOUR AT MIN WEIGHT IN FLIGHT (55KG)

Test pilots



Sophia Putzer

Expert Harald Buntz

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (75KG)



Beni Stocker

Inflation/take-off	A	A
Rising behaviour Smooth, easy and constant rising		Smooth, easy and constant rising
Special take off technique required No		No
Landing	A	A
Special landing technique required 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 speed Less than 25 km/h		Less than 25 km/h
Control movement	A	A
Symmetric control pressure Increasing		Increasing
Symmetric control travel Greater than 55 cm		Greater than 55 cm
Pitch stability exiting accelerated flight	A	A
Dive forward angle on exit Dive forward less than 30°		Dive forward less than 30°
Collapse occurs No		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
en : Verhalten beim Verlassen einer vollständigen Steilspirale	A	A
en : Erstes Ansprechen des Gleitschirms (die ersten 180°) Drehgeschwindigkeit		en : unmittelbare Verringerung der Drehgeschwindigkeit
Tendency to return to straight flight en : selbstständiges Ausleiten (G-Kraft abnehmend, Drehgeschwindigkeit abnehmend)		en : selbstständiges Ausleiten (G-Kraft abnehmend, Drehgeschwindigkeit abnehmend)
Turn angle to recover normal flight Less than 720°, spontaneous recovery		Less than 720°, spontaneous recovery
Symmetric front collapse	A	A
Entry Rocking back less than 45°		Rocking back less than 45°
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 Keeping course		Keeping course

Cascade occurs No	No	No
en : Faltleinen wurden benutzt no	no	no
en : Symmetrischer Frontklapper mindestens 50% Flügeltiefe	A	A
Entry Rocking back less than 45°	Rocking back less than 45°	Rocking back less than 45°
Recovery Spontaneous in less than 3 s	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°	Dive forward 0° to 30°
Change of course Entering a turn of less than 90°	Entering a turn of less than 90°	Entering a turn of less than 90°
Cascade occurs No	No	No
en : Faltleinen wurden benutzt no	no	no
en : Symmetrischer Frontklapper im beschleunigten Flug mindestens 50% Flügeltiefe	A	A
Entry Rocking back less than 45°	Rocking back less than 45°	Rocking back less than 45°
Recovery Spontaneous in less than 3 s	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°	Dive forward 0° to 30°
Change of course Entering a turn of less than 90°	Entering a turn of less than 90°	Entering a turn of less than 90°
Cascade occurs No	No	No
en : Faltleinen wurden benutzt no	no	no
Exiting deep stall (parachutal stall)	A	A
Deep stall achieved Yes	Yes	Yes
Recovery Spontaneous in less than 3 s	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°	Dive forward 0° to 30°
Change of course Changing course less than 45°	Changing course less than 45°	Changing course less than 45°
Cascade occurs No	No	No
High angle of attack recovery	A	A
Recovery Spontaneous in less than 3 s	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Cascade occurs No	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°	Dive forward 0° to 30°
Collapse No collapse	No collapse	No collapse
Cascade occurs (other than collapses) No	No	No
Rocking back Less than 45°	Less than 45°	Less than 45°
Line tension Most lines tight	Most lines tight	Most lines tight
en : Kleiner einseitiger Klapper	A	A
Change of course until re-inflation Less than 90°	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°	Dive or roll angle 15° to 45°
Re-inflation behaviour Spontaneous re-inflation	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course Less than 360°	Less than 360°	Less than 360°
Collapse on the opposite side occurs en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs No	No	No
Cascade occurs No	No	No
en : Faltleinen wurden benutzt no	no	no
en : Großer einseitiger Klapper	A	A
Change of course until re-inflation Less than 90°	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°	Dive or roll angle 15° to 45°
Re-inflation behaviour Spontaneous re-inflation	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course Less than 360°	Less than 360°	Less than 360°
Collapse on the opposite side occurs en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs No	No	No
Cascade occurs No	No	No
en : Faltleinen wurden benutzt no	no	no
en : Kleiner einseitiger Klapper im beschleunigten Flug	A	A
Change of course until re-inflation Less than 90°	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°	Dive or roll angle 15° to 45°
Re-inflation behaviour Spontaneous re-inflation	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course Less than 360°	Less than 360°	Less than 360°
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Twist occurs No	No	No
Cascade occurs No	No	No
en : Faltleinen wurden benutzt no	no	no
en : Großer einseitiger Klapper im beschleunigten Flug	A	A
Change of course until re-inflation Less than 90°	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°	Dive or roll angle 15° to 45°
Re-inflation behaviour Spontaneous re-inflation	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course Less than 360°	Less than 360°	Less than 360°
Collapse on the opposite side occurs en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs No	No	No

Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no
<u>Directional control with a maintained asymmetric collapse</u>	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
<u>Trim speed spin tendency</u>	A	A
Spin occurs	No	No
<u>Low speed spin tendency</u>	A	A
Spin occurs	No	No
<u>Recovery from a developed spin</u>	A	A
Spin rotation angle after release	Stops spinning in less than 90°	Stops spinning in less than 90°
Cascade occurs	No	No
<u>B-line stall</u>	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 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°
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	Stable flight
<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		