SERVICE INFORMATION LETTER

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SUBJECT: Notification of operational limitations

REGARDING: SZD-56-2 „Diana-2” and SZD-56-3 „Diana-2 FES”

COMPLIANCE: Upon receipt of information

NOTE:

This Service Information Letter (SIL) is an official technical document issued by the manufacturer. Compliance with SIL recommendations within the specified time frame is important for maintaining the airworthiness of sailplane. Please read this document carefully to avoid misunderstandings or errors.

Prepared by:	Approved by:
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Date: 14.04.2026	Date: 14.04.2026
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Revision no	Date	Description of revision	Approved by

INFORMATION

In preparation for service life assessment of the SZD-56-2 "Diana-2" sailplane, static tests of the wing were conducted to calibrate the article of planned fatigue test and to verify the original structure. The same wing is also used in prototypes of the SZD-56-3 "Diana-2 FES" model, built to date as part of the certification process.

The tested load conditions, in two cases corresponding to the upward / downward bending envelopes of the wing, were brought to structural failure, which allowed for the determination of the maximum load capacity / static strength and the corresponding mode of failure.

For both versions, wing failure occurred at load level below the ultimate value, which indicates a reduced safety factor, i.e. a lower than required margin between the verified wing load-bearing capacity (strength) and the maximum loads that can occur in flight (permissible values / limit loads).

Due to design characteristics, an identical wing when used on each of the 2 sailplane variants: powered and non-powered, under comparable flight conditions is subject to different loads : higher values in the motorized version due to the increased mass of non-lifting parts, resulting from heavy batteries mounted in fuselage. Consequently, the achieved test results correspond to different percentages of in-flight loads expected for each version.

The actually demonstrated in test critical loads (at destruction), after reduction appropriate for the methodology of testing composite aircraft structures, for each of the respective sailplane models reached the following values:

Load Case / S-plane model	LC3 (upward bending)	LC2 (downward bending)	Reference / comment
SZD-56-2	140%	150%	original envelope limit loads
SZD-56-3	135%	150%	PtF Flight Conditions limit loads

In face of the detected drawback, remedial measures were identified and submitted to EASA. These involve restricting the existing operational limitations to values that reduce the predicted operational loads to a required safety margin in relation to the test verified strength, as appropriate for each sailplane variant.

Producer strongly recommends that operators of hitherto built SZD-56-2 "Diana-2" and SZD-56-3 "Diana-2 FES" sailplanes adhere to the operating limitations agreed upon with the Agency.

PROPOSED LIMITATIONS

Note: The values given below are for illustrative purposes only, for air operations only those contained in documents approved by the Aviation Authority apply.

- Model SZD-56-2 for SN: 562106002, 562106003, 562107005, 562107006, 562118010

Limitations	*Current*	**Revised**
Maximum in flight weight [kg]	*500*	**297**
Maximum wing ballast [kg]	*248*	**0**
Manoeuvring speed V_A [km/h]	*198*	**157**
Rough air speed V_{RA} [km/h]	*198*	**157**
Flight speed with flap (+14/+21/+28) V_{FE} [km/h]	*212*	**149**
Never-exceed speed V_{NE} [km/h]	*275*	**265**

- Model SZD-56-3 for SN: 562105001*, 563118002, 563119003, 563119004, 563119005, 563120006, 563121007, 563122008, 563122010

Limitations	*Current FC for PtF*	**Revised**
Maximum in flight weight [kg]	*380*	**380**
Maximum wing ballast [kg]	*0*	**0**
Manoeuvring speed V_A [km/h]	*156*	**150**
Rough air speed V_{RA} [km/h]	*148*	**150**
Never-exceed speed V_{NE} [km/h]	*250*	**219**

** modified to SZD-56-3 version*

Airspeeds stated as IAS values.