

SERVICE INFORMATION LETTER

SIL SSP-007

Initial allocation: 09th January 2017

Aircraft Type: All airplanes (both gliders and motorised aircraft) used for acrobatic flying and equipped with SCHROTH restraint systems, P/N 4-01-(), 4-02-(), 4-03-(), or 4-04-().

System: Restraint systems P/N: 4-01-(), 4-02-(), 4-03-(), and 4-04-().

Subject: Restraint systems with SCHROTH rotary buckles, in particular SCHROTH rotary buckle types SL 10.xx and SL 12.xx.

Applicability: SCHROTH harness restraint systems used for acrobatic flying (aerobatic).

Further Applicable Documents: SCHROTH CMM 25-04-01, latest issue.

Background:

This Service Information Letter has been issued to advise acrobatic aircraft operators of potential issues with some SCHROTH harness restraint systems if used for acrobatic flying. Affected restraint systems use various SCHROTH rotary buckle types, particularly buckle types SL 10.xx and SL 12.xx.

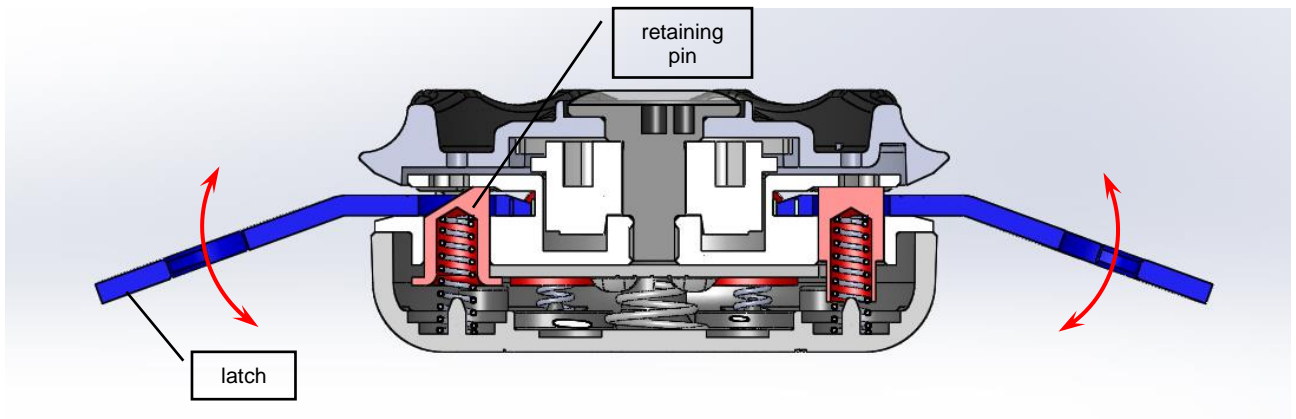
It has been noted that in some cases it is possible that an individual latch of the restraint system could be unfastened from the buckle without prior activation of the release mechanism.

Investigation has shown that this effect is caused by certain patterns of load changes that typically occur during acrobatic flying in combination with very tightly attached belts. Such operating conditions may result in unusually high abrasive wear of the retaining pins and/or the latches which, in turn, creates the conditions for an inadvertent release of an individual latch.

Further Explanation of Cause:

Due to the typical load changes during acrobatic flying the latches may be induced to move as indicated by the red arrows in Picture 1.

This movement may gradually push down the retaining pins which are responsible for latching the individual straps of the restraint system. Due to the continuous load that may be applied to the straps during acrobatic flying, the spring force may not be sufficient to push the retaining pin back into the correct locking position. In some cases the retaining pin could be moved so far out that a strap may become unfastened.



Picture 1: buckle assembly

Corrective Action

For use in acrobatic airplanes (both gliders and motorised aircraft) SCHROTH Safety Products GmbH limits the permissible buckle variants to approved buckle types with special configurations for acrobatic flying.

Any restraint systems with buckle types other than those with permissible configurations must not be used for any regular or occasional acrobatic flying.

Any restraint systems with buckle types approved for acrobatic flying are subject to a maximum lifetime of 5 years from the date of manufacture if regularly or occasionally used for acrobatic flying. Such restraint systems must be replaced after 5 years regardless of whether the use for acrobatic flying continues or not.

Buckle type and date of manufacture identification



Buckle Type in this example is SL 10.8
The date of manufacture in this example is 21/15 (week 21 in 2015)

List of common buckle types

SL 10.0	Buckle must not be used for acrobatic flying.
SL 10.5	Buckle must not be used for acrobatic flying.
SL 10.3	Buckle must not be used for acrobatic flying.
SL 10.0A	Buckle must not be used for acrobatic flying.
SL 10.5A	Buckle must not be used for acrobatic flying.
SL 10.3A	Buckle must not be used for acrobatic flying.
SL 12.0	Buckle must not be used for acrobatic flying.
SL 12.5	Buckle must not be used for acrobatic flying.
SL 12.3	Buckle must not be used for acrobatic flying.
SL 12.0A	Buckle must not be used for acrobatic flying.
SL 12.5A	Buckle must not be used for acrobatic flying.
SL 12.3A	Buckle must not be used for acrobatic flying.

SL 10.02	Buckle can be used for acrobatic with a lifetime of max. 5 years.
SL 10.52	Buckle can be used for acrobatic with a lifetime of max. 5 years.
SL 10.32	Buckle can be used for acrobatic with a lifetime of max. 5 years.
SL 12.02	Buckle can be used for acrobatic with a lifetime of max. 5 years.
SL 12.52	Buckle can be used for acrobatic with a lifetime of max. 5 years.
SL 12.32	Buckle can be used for acrobatic with a lifetime of max. 5 years.

If your buckle type is not listed above or you are not sure, please contact SCHROTH Safety Products GmbH Customer Support.



Im Ohl 14
59757 Arnsberg, Germany
Phone: +49 (0)2932 9742-134
E-mail: aerospace@schroth.com
CAGE: C1624

Contact information:

SCHROTH Safety Products GmbH
Customer Support
Im Ohl 14
59757 Arnsberg, Germany
Tel: +49 (0) 2932-9742 134
Fax: +49 (0) 2932-9742 42
E-Mail: aerospace@schroth.com