



Rainbow SkyReach (Pty) Ltd


Hangar 27, Springs Airfield, Springs
P O Box 3408, 1544 Dalview
South Africa

Tel: +27 (0)11 817 2298

Fax: +27 (0)11 817 2297

E-mail: info@fly-skyreach.com

Web: www.fly-skyreach.com



Publication date: 24th August 2018

SERVICE BULLETIN

IMPORTANCE	CRITICAL
AREA AFFECTED	PERFORMANCE & OPERATING LIMITATIONS
SA/B NUMBER	CH 007-08-2018
EFFECTIVE DATE	29 AUGUST 2018

TABLE OF CONTENTS:

1. Applicability:	2
2. Subject:	2
3. Purpose:	2
4. Background:	2
5. Discussion:	2
6. Required action:	3
7. Approved personnel:	4
8. Effective date:	4
9. Contact:	4

1. Applicability:

All Cheetah-XLS/BushCat aircraft within the serial number range:

CH-001 to CH-049	Not affected
CH-050 to CH-053	Affected
CH-054	Not affected
CH-055 onwards	Affected

2. Subject:

Stall speed reduction by means of vortex generators, in order to maintain compliance with 'Light-Sport aircraft' (hereafter LSA) definitions.

3. Purpose:

This mandatory service bulletin ensures that all aircraft are able to achieve stall speed values as required by local LSA definitions, and removes maximum mass limitations which had been imposed by the preceding safety directive.

4. Background:

During the course of EASA/ASTM proof-of-compliance flight tests which were conducted in early 2018 it was found that the Cheetah XLS/BushCat aircraft exhibited higher stall speeds than those originally published in the approved flight manual. Additionally, longitudinal stability issues were also found for certain flight regimes. The stall speeds that were found at maximum take-off weight (hereafter MTOW) did not comply with the LSA definition in most registration territories. The longitudinal stability issues that were found were a general safety-of-flight concern. In June 2018 a service alert (SA/006/06-2018) was published in which the findings from stall speed testing and longitudinal stability testing were published. These findings resulted in reduction of the allowable CG envelope, as well as a reduction in maximum operating mass for various countries of operation, based on local LSA stall speed requirements. Rainbow SkyReach have since undertaken to resolve these issues, and this service bulletin contains the first of several modifications which aim to resolve the adverse findings.

5. Discussion:

In order to maintain compliance with LSA definitions calibrated stall speed requirements must be met. The findings mentioned in section 4 showed stall speeds (at maximum all-up masses of 560kg and 600kg) higher than those previously determined. For some territories these new stall speeds were still within limits for a maximum take-off mass of 560kg, however non-compliance with the LSA definition in most territories would cause an immediate withdrawal of airworthiness certificate. In order to prevent this, the maximum all-up mass was reduced to ensure that stall speeds fell within the allowable limits.

Installation of vortex generators, in the manner described by the referenced installation literature, results in a substantial stall speed reduction, with minimal loss in cruise performance. The achieved stall speed reduction has allowed the values for maximum all-up weight (hereafter MTOW) to return to the figures originally published. These figures are shown in the updated pilot operating handbook (hereafter POH).

6. Required action:

All aircraft must be fitted with vortex generators in the manner described by the referenced installation literature at or before their next service interval. Two methods affixing the vortex generators to the wing are available: The first makes use of silicone-epoxy glue for all vortex generators mounted to the wing, and a self-adhesive for the vortex generators mounted to the top of the windscreen. The second method uses self-adhesive vortex generators for both cases. The installation literature, as well as an installation video for both of these methods can be found on the SkyReach website:

<http://www.fly-skyreach.com/service-bulletins/>

Upon completion of the installation, the work done must be noted in the aircraft maintenance logbook (or equivalent document), and the relevant operating manual updates must be conducted:

For 'BushCat' labeled aircraft an updated aircraft operating manual (pilot operating handbook) has been published. Operators are required to download and print this revised manual, and replace their existing operating manual with the new version.

For 'Cheetah XLS' labelled aircraft an operating manual amendment document has been published. A new manual has not been published for Cheetah XLS aircraft due to the lack of records for existing documentation. Operators are required to make use of the amendment document to amend their existing manuals.

The revised operating manual for 'BushCat' labeled aircraft can be identified by its document number:

BCPH-NT-012-000

The amendment to the operating manual for 'Cheetah XLS' labeled aircraft can be identified by its document number:

OMCH/007/08-2018b

Both manuals can be downloaded from the link above.

Flight operations conducted before carrying out this service bulletin must be done in accordance with the existing operating manual, and not the updated manual.

7. Approved personnel:

This work prescribed in this service bulletin may only be carried out, and signed off by persons with the following qualifications:

- In South Africa: RAASA Approved Person (AP), SACAA Aircraft Maintenance Engineer (AME) or higher, or person approved by the manufacturer.
- In USA: FAA Light sport repairman (LSRM) or higher, or person approved by the manufacturer.

In the case of owner/kit built aircraft the kit builder is also approved to conduct the installation, if his/her country of registration allows.

8. Effective date:

This notice takes effect as of the 29th August 2018.

9. Contact:

Questions and/or comments regarding this safety alert should be directed to Rainbow SkyReach (Pty) Ltd on:

Phone: +27 11 817 2298

Email: info@fly-skyreach.com