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SERVICE BULLETIN

IMPORTANCE	High
AREA AFFECTED	Nose gear
SB SERIAL NUMBER	Cheetah/004/222011

SUBJECT: Nose gear hairline cracks

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1) Planning Information

1a) Affectivity

Cheetah XL / XLS aircraft with old style (design) Nose gear assemblies.
Aircraft involved in out landings (rough terrain unpaved or non asphalt runways)
Training Schools and aircraft involved in high landing cycle Vs airframe hour duty cycles.

1b) Reason

Two Aircraft reported finding hairline cracks on the nose gear fork. These aircraft is involved in nature reserve operations and regularly encounter rough terrain landings.

1c) Description

The operator reported two small hairline cracks forming in the area where the strut is welded to the fork. see figure 1

Figure 1



1d) Compliance

Immediate compliance:

OLD STYLE front fork

- 1) Remove the front fork Spat (if installed)
- 2) Clean the affected area in order to better the inspection
- 3) Utilising a bright light, inspect the indicated area **see figure 2**
- 4) If no cracks were found assemble the removed parts
- 5) Continue further operation
- 6) Inspect every 50 normal landings (with Spats)
- 7) Inspect every time with hard landings (with Spats)
- 8) **Include this inspection in your pre-flight if no spats are fitted. This is normally the case with aircraft being utilized as per point 1b**

Figure 2



1e) Man power

2 people if spats are installed advisable (one person could do this comfortably)
1 person if no spats are installed

1f) Weight and balance

Weight and balance is not effected

1g) Publications effected

- 1) 100 hour / Annual inspection checklist. (for A&P approved personnel use)
- 2) Pre-flight inspection checklist.

2) Material information

2a) Replacement parts

If cracks are found, do not continue operation, contact the factory with immediate effect. Parts or repairs will be discussed.

2b) Required tooling

Ring open end set
Strong light (Mag light)
Cleaning chemicals (sunlight liquid) water and rag

2c) Required special tooling

Locking wire (0.32 Inch) and wire twisting pliers (if Spats are installed.)

3) Accomplishment procedures

3a) General information

This area is normally not easily accessible if the aircraft is equipped with a nose wheel spat. The very best inspection (recommended) is to have the nose gear removed for a total strip down inspection. Rainbow Aircraft will assist in this procedure if chosen by the Owner / operator.

3b) Work instructions

If nose gear Spat installed.

- 1) Lift the nose gear off the floor and stabilize the aircraft in order to remove the nose gear wheel.
- 2) If the nose gear is off the floor and aircraft is sturdy, Cut the locking wire on the axle bolts
- 3) Remove the nose gear bolts on both sides.
- 4) pay particular attention to the spacers between the Spat and the wheel bearing as these will fall out when the bolts are removed.
- 5) With the bolts removed slide the spat up as far as possible
- 6) Continue by turning the wheel to one side as far as possible.
- 7) Clean the affected area in order to see if any hairline cracks did form.
- 8) Inspect the affected area with the strong light.
- 9) After inspection aircraft can be returned to normal.

If no nose gear spat is installed

- 1) Clean the affected area in order to see if any hairline cracks did form.
- 2) Inspect the affected area with the strong light.
- 3) After inspection aircraft can be returned to normal.

3c) Final Inspection

- 1) Make sure that the nose gear bolts were tightened and wire locked where applicable
- 2) Make sure all spacers and washers were correctly installed.
- 3) Always check for free movement of nose gear and wheel spin.

4) Feedback

Rainbow Aircraft would Kindly request your feedback. Please acknowledge that you have received this Alert SB as we need to determine that all aircraft has been successfully completed. If you know of any other Cheetah flyers, please inform them of this SB as well. This co-operation will also further improve our customer after sale service.

Information required: Cheetah registration number, aircraft hours, findings on the tie rod flanges. Send to soutdelange@gmail.com. General Manager
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