

RAMS

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Airworthiness Directive: 128

Date: June 26, 2002

Subject: Aileron push pull tubes / Rear lift struts with adjustable lower end

Compliance: Mandatory

Models Effected: **Aileron push pull tubes:**

All S-6 Models, S-7, all S-12 models, S-14, S-17,
S-18, (assembled or under construction)

Rear lift struts with adjustable lower end:

All airplanes with rod ends for adjustment at the lower end of the rear lift
struts (assembled or under construction)

Aileron push-pull tubes:

An S-12 experienced a disconnection at one aileron push pull tube. The male rod end was pulled out of the threaded push pull tube end fitting. This caused loss of control over one aileron in flight. The pilot was able to land the airplane safely.

An inspection revealed, that the male rod end was only engaged about 3 threads due to error in assembly. The manual calls for minimum engagement of at least 6 full threads.

The disconnection occurred at the wing bell crank.

Before next flight or during final assembly of unfinished airplanes:

1. Visually inspect all rod end connections in the control system for proper assembly (thread engagement of at least 10 full threads), for presence and security of stop nuts as per assembly and parts manual for your airplane. Also, feel the connection for existence of play.

If you find loose connections or insufficient thread engagement, disconnect and visual inspect condition of threads. Replace worn parts with new parts.

2. Re-adjust the long aileron push pull tubes (from fuselage bell crank to wing bell crank's) and the short aileron push pull tube's (from wing bell crank to aileron), so the rod ends connected to the wing bell crank's are turned all the way in and tightened against the push pull tube end fitting. Reference Figure 1 on next page. **NOTE:** The S-7 does only use the short push pull tube.

IMPORTANT: Retain position of bell cranks and ailerons according to rigging instructions for your airplane (refer to assembly manual).

If it is not possible to turn the rod end all the way in and to retain aileron and bell crank positions, as per rigging instructions, add stop nuts to the rod ends and turn push pull tubes in as far as possible for a minimum of 10 full threads engaged.

3. After work is completed, check control system for proper operation through the full range of travel. Visual inspect each connection for free movement, binding or interference. Check for proper control surface deflection.

The stop nuts are available through our parts department. Order: 1/4" Plain Nut AN 345-416.

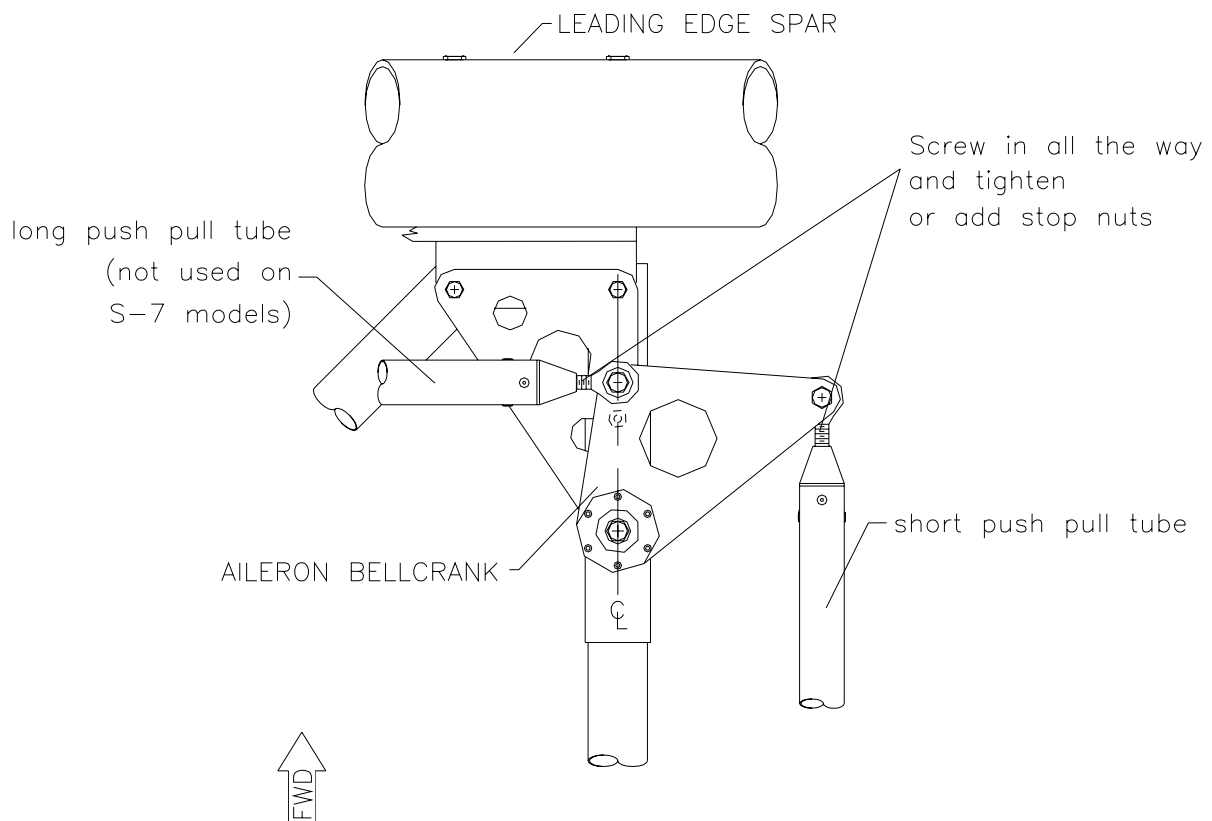


Figure – 1 Aileron bell crank wing mounted

Rear lift struts with adjustable lower end:

1. Inspect connection of rod end and adjuster end at lower rear strut attach for thread engagement of at least 10 full threads. Visually inspect condition of threads. Replace worn parts with new parts.
2. Add and tighten stop nut during reassembly (refer to Figure 2). Retain and check wing wash out as per assembly manual. Note: Figure 2 is for larger strut shown. Smaller strut fitting is of square block design.

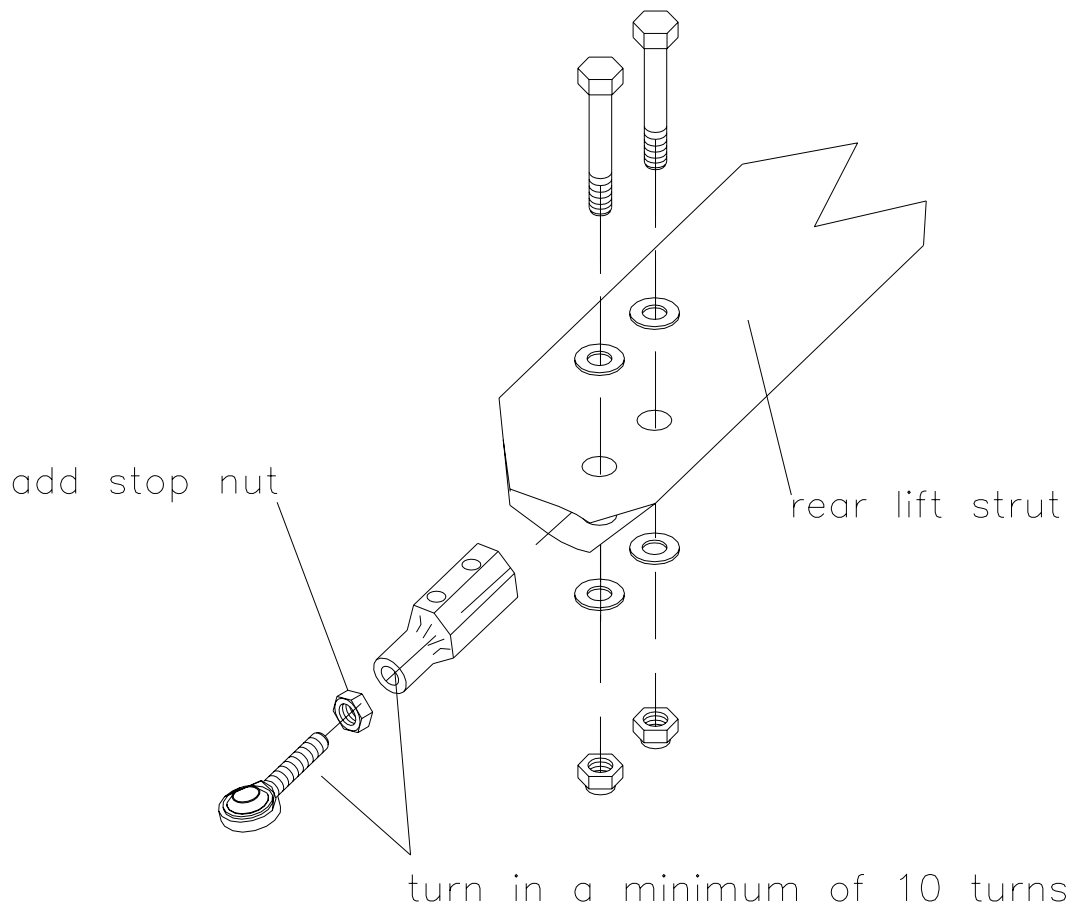


Figure – 2 Lower end of adjustable rear lift strut

The stop nuts are available through our parts department. Order: 3/8" Plain Nut MS35650-3382.

Thank you for your attention to this matter. Hopefully we have not inconvenienced you to any great degree.

Fly safe.