



Piper PA-20/-22 Aluminum Wing Strut Instructions for Continued Airworthiness

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THIS MANUAL INCLUDES INFORMATION PROPRIETY TO AIRFRAMES ALASKA AND
SHALL NOT BE USED TO MANUFACTURE OR REPRODUCE ANY PART OR ASSEMBLY
WITHOUT THE PRIOR WRITTEN PERMISSION OF AIRFRAMES ALASKA.



These instructions are to be included in the aircraft Maintenance Material when the Airframes Alaska, LLC. Piper PA-20/22 aluminum wing struts are installed.

The information contained in this manual supplements or supersedes the type design data only in those areas pertaining to this STC. For maintenance practices and procedures, not contained in this document, consult the maintenance material, or other information that was required by the applicable regulations under which this aircraft was type certified.

Record of Revisions

Rev Level	Date	Page	Author	Explanation of Revisions
IR	7/15/2022	-	Jon Earl	Initial Release

Distribution of Changes

A current copy of this manual will be maintained on the Airframes Alaska, LLC. website.

**Introduction:**

The Airframes Alaska, LLC. PA-20/-22 aluminum wing struts are designed to replace the OEM steel wing struts.

Description:

The Airframes Alaska, LLC. PA-20/-22 aluminum wing struts are much lighter weight than the OEM Piper PA-20/-22, and the certified steel sealed struts. Moisture is not allowed to collect internally in the wing struts due to the open-ended design, similar to the 100 and 200 series Cessna wing strut design.

Airworthiness Limitations:

“The Airworthiness Limitations section is FAA approved and specifies maintenance required under 14 CFR, Sections 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.”

Limitations: None

Caution: Powder coating of heat-treated Aluminum struts could alter their strength; therefore powder coating is not acceptable. These aluminum struts must be finished with conventional liquid paint or left in their bare aluminum state only.



Instructions for Continued Airworthiness:

Instruction Criteria

100 Hour / Annual

(100 hour or Annual inspection interval, whichever comes first)

1. **Inspect** – The front and rear strut rivet installation, improper rivet tightness can be detected by the presence of a stain around the head or shop end of the rivet. If rivet loosening is detected contact Airframes Alaska, LLC. for repair for strut(s).
2. **Inspect** – Lift fork thread exposure to ensure no more than 15 external threads are showing beyond the end of the struts. If excess of 15 external threads are showing, re-rig the aircraft so that no more than 15 external threads are present. Ensure the fork threads have a thin coating of Loctite silver grade anti-seize lubricant or equivalent to prevent galling.
3. **Inspect** - The struts for grooves, scratches, and dents. If a groove or scratch exceeds .015 inches in depth and is less than .75 inch from a rivet center, the strut should be replaced. If the groove exceeds .025 inch in depth and is more than .75 inch from a rivet center, the strut should be replaced. If a groove or scratch depth is less than .025 inch in depth and is more than .75 inch from a rivet center, the strut should be repaired by tapering gradually to the original surface and burnishing out to a smooth finish. The local area should be checked with dye penetrant to ensure that no crack has developed. If any dent is deeper than .05 inches in depth the strut should be replaced (DO NOT WELD ON THE STRUT).
4. **Inspect** – Strut fork jam nut tightness and cracks in the strut fork. Tighten jam nut as required. If a crack is found in the fork notify Airframes Alaska, LLC. immediately.
5. **Inspect** – The struts internally while they are attached to the aircraft. Use a mirror and flashlight to look inside both ends of all struts. If significant corrosion is found remove the struts and contact Airframes Alaska, LLC. for possible repairs or replacement.

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