



# FAA

# Airworthiness Concern Sheet

<b>Date:</b> December 30, 2010	
<b>Full Name</b> Gregory K. (Keith) Noles <b>Title</b> Engineer <b>Organization</b> Atlanta Aircraft Certification <b>Department</b> Airframe, ACE-117A <b>Address</b> 1701 Columbia Ave. <b>City State ZIP</b> College Park, GA 30337 <b>Telephone Number</b> 404-474-5551 <b>E-mail</b> gregory.noles@faa.gov	<b>Make, Model, Series, Serial No.:</b> Aircraft Parts and Development Corporation, FS2000/FS2001/FS2002/FS2003 Corp., Lavia Argentina S.A. (Laviasa), Piper, Maule and Taylorcraft aircraft with sealed wing lift struts (see below for more detail)
	<b>Reason for Airworthiness Concern:</b> Unsealing of Sealed Wing Lift Struts, especially by venting during powder coating process

### FAA Description of Airworthiness Concern

The FAA has issued the Airworthiness Directives (ADs) in Table 1 requiring actions on the wing lift struts to reduce the potential for fatigue or corrosion leading to in-flight separation of the wing. Each AD requires installation of sealed struts or permanent sealing of vented struts as terminating action for their respective inspection requirements.

**Table 1**

AD	Type Certificate Holder
<a href="#">73-22-02</a>	Aircraft Parts and Development Corporation
<a href="#">98-15-18</a>	Maule Aerospace Technology Corp.
<a href="#">99-01-05</a>	The New Piper Aircraft, Inc. FS2000/FS2001/FS2002/FS2003 Corp Lavia Argentina S.A. (Laviasa)
<a href="#">99-26-19</a>	The New Piper Aircraft, Inc. (Piper)
<a href="#">2008-04-09</a>	Taylorcraft, Inc. Taylorcraft 2000, LLC

Powder coating processes are used on certain aircraft parts to provide a protective coating. Sealed struts must be vented as part of the powder coat application, effectively violating the intent of the listed ADs to require either repetitive inspections or permanently sealed strut assemblies. The FAA has issued Safety Alert for Operators (SAFO) 10018 discussing the topic.

If undetected, venting of sealed lift struts could eventually lead to corrosion and / or cracking of the lift struts, and result in a potential safety of flight hazard such as wing separation.

The following is a reference-only list of affected aircraft models. See the ADs in Table 1 for further details on applicability.

- *Aircraft Parts and Development Corporation:* A-9 , A-9A, and A-9B
- *FS2000/FS2001/FS2002/FS2003 Corp.:* AE-1, HE-1, J5 series, L-4 series (Army), L-14, PA-12 series, PA-14
- *Lavia Argentina S.A. (Laviasa):* PA-25 series
- *Maule:* Bee Dee M-4, M-4 series, M-5 series, M-6 series, M-7 series, M-8 series, MT-7 series, MX-7 series, MXT-7 series
- *Piper:* E-2, F-2, J2 series, J3C series, J3F series, J3L series, J4 series, L-18C (Army), L-21 series (Army), NE-1 and NE-2 (Navy), PA-11 series, PA-15, PA-16 series, PA-17, PA-18 series, PA-19 series, PA-20 series, PA-22 series, TG-8, XLNP-1
- *Taylorcraft:* 19, A, BC series, BCS series, BF series, BFS series, BL series, BLS series, F19, F21 series, F22 series, L-2 series (Army)

**Request for Information (Proposed Alternate Inspection/Repair Procedures, Cost Impact, etc.):**

The FAA is soliciting additional information from Associations and Type Clubs in accordance with the Small Airplane Directorate AD Manual Supplement. We are particularly interested in all powder coating processes or other actions that might be used on lift struts and cause them to be unsealed. We are also especially interested in documentation where the process has actually been used. This and any additional information such as service problems, proposed alternate inspection/repair procedures, cost impact, etc. should be returned in writing to the FAA (address listed above). All comments or replies need to be as detailed as possible and include specific examples to illustrate the comments/concerns.

This Airworthiness Concern Sheet (ACS) is intended as a means for FAA Aviation Safety Engineers to coordinate airworthiness concerns with aircraft owner/operators through associations and type clubs. At this time, the FAA has not made a determination on what type of corrective action (if any) should be taken. The resolution of this airworthiness concern could involve an AD action or an SAIB, or the FAA could determine that no action is needed at this time. The initial Risk Assessment for this concern does not indicate that an Airworthiness Directive would be considered, however, the existing AD could require revision or supersedure to ensure safety and proper compliance. The FAA's final determination will depend in part on the information received in response to this Airworthiness Concern Sheet.

The FAA endorses dissemination of this technical information to all manufacturers and requests association and type club comments.

**Attachments:**

- ADs in Table 1 available at [http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgAD.nsf/Frameset?OpenPage](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAD.nsf/Frameset?OpenPage)
- SAFO 10018 available at [http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/safo/all\\_safos/media/2010/SAFO10018.pdf](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safos/media/2010/SAFO10018.pdf)
- Risk Assessment
- Contact List

**For Further Information Contact:**

*Aircraft Parts and Development Corporation and Taylorcraft:* Andrew McAnaul, Aerospace Engineer, Ft. Worth ACO, FAA San Antonio MIDO-43, 10100 Reunion Pl., San Antonio, TX 78216; phone: (210) 308-3365; fax: (210) 308-3370; email: [andrew.mcanaul@faa.gov](mailto:andrew.mcanaul@faa.gov)

*Lavia Argentina S.A. (Laviasa):* Sarjapur ("Naga") Nagarajan, Project Officer, FAA Central Regional Office, 901 Locust St., Room 301, Kansas City, MO 64106; phone: (816) 329-4145; fax: (816) 329-4090; email: [sarjapur.nagarajan@faa.gov](mailto:sarjapur.nagarajan@faa.gov)

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**Attachments:** \*SDR(s)  \*A/IDS  \*SL(s)  \*SAIB  \*FAASR/\*NTSBSR  \*AD  \*AMOC  \*RA

**Notification:** FAA  \*AOPA  \*EAA  Type Club  \*TC Holder  Other: Repair Station groups

**Response Requested 01/30/2011:** Emergency (10 days)  Alert (30 days)  Information (90 days)

\*Service Difficulty Reports (SDRs); Accident/Incident Data System (A/IDS); Service Letter (SL); Special Airworthiness Information Bulletin (SAIB); Federal Aviation Administration (FAA)/National Transportation Safety Board (NTSB) Safety Recommendation (FAASR/NTSBSR); Airworthiness Directive (AD); Alternate Method of Compliance (AMOC); Risk Assessment (RA); Aircraft Owners & Pilots Association (AOPA); Experimental Aircraft Association (EAA); Type Certificate (TC)