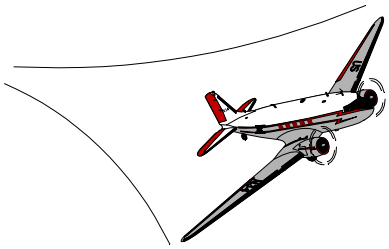
SPECIAL AIRWORTHINESS INFORMATION BULLETIN



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The purpose of this Special Airworthiness Information Bulletin (SAIB) is to provide safety information to DG Flugzeugbau Model DG-400 powered sailplane owners on the following:

- Wing fuel tanks leaking (Technical Note No. 826/3)
- Flight and Maintenance Manual Revision (Technical Note No. 826/6)
- Engine mount cracks due to engine vibration (Technical Note No. 826/11)
- Marking of canopy emergency release and ventilation (Technical Note No. 826/16)
- Replace fuel shut off valve (Technical Note No. 826/14)
- Potential to exceed C.G. limit with thin parachutes (Technical Note No. 826/20, instruction 1)
- Plugged hose at the pneumatic fuel pump (Technical Note No. 826/20, instruction 2)
- Flight and Maintenance Manual revisions (Technical Note No. 826/20, instruction 3)
- Replace wing tip locking pins (Technical Note No. 826/20, instruction 4)
- Inspection of powerplant for vibration damage (Technical Note No. 826/22)
- Vibration damage (Technical Note No. 826/25)
- Replacement of the propeller shaft (Technical Note No. 826/32)
- Failure of Bosch regulators (Technical Note No. 826/33)
- Overloading of airbrakes due to misadjustment of locking forces (Technical Note No. 826/34)
- Use of unleaded fuel, increase of service life manual revision (Technical Note No. 826/35)

Background

The FAA is currently conducting an assessment of foreign airworthiness directives that have been issued by the German Luftfahrt-Bundesamt (LBA) on German type certificated powered sailplanes. The LBA has issued German airworthiness directives on the service difficulty issues listed above. The FAA is currently assessing the need to issue corresponding U.S. airworthiness directives on U.S. type certificated Model DG-400 powered sailplanes. In the interim, the FAA is using this Special Airworthiness Information Bulletin to inform U.S. owners of this model powered sailplane of the service difficulties reported by the manufacturer. If an airworthiness directive is determined to be appropriate, a Notice of Proposed Rulemaking will be issued. The following is a brief description of the main areas of each issue.

Wing fuel tanks leaking (Technical Note No. 826/3)

DG Flugzeugbau has determined that the wing fuel tanks on the Model DG-400 could leak. They advise not using the wing tanks and to only use the fuselage tank.

Flight and Maintenance Manual Revision (Technical Note No. 826/6)

DG Flugzeugbau has flight and maintenance manual revisions for the DG-400 powered sailplane. Topics in these revisions include the engine fuel mixing ratio, canopy emergency release,

powerplant trouble shooting, engine starting without the starter, spark plug replacement and a fuse change in the DEI circuit. For your information, LBA AD 34-155 and this Technical Note are included. The FAA highly encourages you to comply with this Technical Note. The cost is approximately $20.00 U.S. dollars.

Engine mount cracks due to engine vibration (Technical Note No. 826/11)
DG Flugzeugbau has determined that some Model DG-400 powered sailplanes have experienced cracks at the upper rubber shockmounts and in one case at the rear plate of the propeller mount. To correct this, DG Flugzeugbau has issued this Technical Note to correct this problem. For your information, LBA AD 84-157 is enclosed as well as this Technical note. The FAA highly encourages you to determine if this modification has been accomplished on your powered sailplane. DG Flugzeugbau has the parts available to accomplish this modification. The cost is approximately $100.00 and requires approximately 6 hours for inspection and maintenance.

Replace fuel shut off valve (Technical Note No. 826/14)
DG Flugzeugbau has determined that the shut off valve gaskets are deteriorating due to use of automotive (MOGAS) in the Model DG-400. DG Flugzeugbau has issued this Technical Note to correct this problem. For your information, this Technical Note is enclosed. The FAA highly encourages you to determine if this modification has been accomplished on your powered sailplane. DG Flugzeugbau has the parts available to accomplish this modification.

Engine restraining cable may restrict engine extension (Technical Note No. 826/15)
DG Flugzeugbau has determined that the left engine restraining cable or the bowdencable of the rear engine door may catch the engine and block the engine extension. To correct this problem DG Flugzeugbau has issued this Technical Note to replace the restraining cable with an improved version. For your information, LBA AD 85-223 is enclosed as well as this Technical Note. The FAA highly encourages you to determine if this modification has been accomplished on your powered sailplane. DG Flugzeugbau has the parts available to accomplish this modification. The cost is approximately $20.00 and requires approximately 3 hours for inspection and maintenance.

Marking of canopy emergency release and ventilation (Technical Note No. 826/16)
DG Flugzeugbau has determined that there has been an occurrence where the pilot of a Model DG-400 became confused when attempting to jettison the canopy during an inflight emergency. To resolve this potential, DG Flugzeugbau has issued this Technical Note that requires painting the canopy opening lever red and relocating the ventilation operating knob. For your information, LBA AD 86-138 is enclosed as well as this Technical Note. The FAA highly encourages you to determine if this modification has been accomplished on your powered sailplane. If this modification has not been accomplished, the manufacturer has estimated that it will take approximately two hours to accomplish the modification. DG Flugzeugbau has the parts available to accomplish this modification. The cost is approximately $2.00 U.S. dollars.

Potential to exceed C.G. limit with thin parachutes (Technical Note No. 826/20, instruction 1)
DG Flugzeugbau has determined that when using thin parachutes, there is the possibility that the pilots position is behind the position used for calculating the present empty weight C.G. range diagram. DG Flugzeugbau has issued this Technical Note listing corrective procedures to assure the powered sailplane can be operated within the C.G. range. For your information, LBA AD 88-99 is enclosed as well as DG Flugzeugbau Technical Note Number 826/20. The FAA highly encourages you to ensure that this modification has been accomplished on your powered sailplane.

If this modification has not been accomplished, the manufacturer has estimated that it will take approximately one hour to accomplish.

Plugged hose at the pneumatic fuel pump (Technical Note No. 826/20, instruction 2)
DG Flugzeugbau determined that the plugged piece of hose at the pneumatic fuel pump which closes the extra outlet came off on a DG-400. To eliminate this possibility Flugzeugbau has issued this Technical Note to advise checking the hose clamp at the plug and at the pump. This should be checked prior to the next flight and then at 25 hour inspection intervals. For your information, LBA AD 88-99 is enclosed as well as this DG Flugzeugbau Technical Note. The FAA highly encourages you to accomplish this modification on your powered sailplane. If this modification has not been accomplished, the manufacturer has estimated that it will take approximately one hour to accomplish.

Flight and Maintenance Manual revisions (Technical Note No. 826/20, instruction 3)
DG Flugzeugbau has a flight manual revision for the Model DG-400 powered sailplane. Exchange the flight and maintenance manual pages per the change instruction. For your information this DG Flugzeugbau Technical Note lists the manual revisions.

Replace wing tip locking pins (Technical Note No. 826/20, instruction 4)
DG Flugzeugbau determined that there were some occurrences on the Model DG-400 powered sailplanes where the head of the locking pins have failed in shear due to vibration. This can result in separation of the wing tip. To eliminate this possibility, DG Flugzeugbau has issued this Technical Note that requires a corrective action. For your information, LBA AD 88-99 is enclosed as well as DG Flugzeugbau Technical Note Number 826/20. The FAA highly encourages you to determine if this modification has been accomplished on your sailplane. If this modification has not been accomplished, the manufacturer has estimated that it will take approximately one hour to accomplish the modification. A locally purchased adhesive is acceptable for this modification at a cost of approximately $10.00 U.S. dollars.

Inspection of powerplant for vibration damage (Technical Note No. 826/22)
DG Flugzeugbau has determined that some Model DG-400 powered sailplanes have experienced damage to the engine due to vibration. This could cause the drive belt to come off the pulley resulting in loss of engine power. To correct this, DG Flugzeugbau has issued this Technical Note which requires the inspection and maintenance. For your information, LBA AD 90-43 is enclosed as well as this Technical note. The FAA highly encourages you to determine if this modification has been accomplished on your powered sailplane. DG Flugzeugbau has the parts available to accomplish this modification. The cost is approximately $150.00 U.S. dollars and requires approximately 5 hours for inspection and maintenance.

Vibration damage (Technical Note No. 826/25)
DG Flugzeugbau has determined that engine vibration damage has occurred on some DG-400 Models. This Technical Note provides instruction to correct this problem. For your information, LBA AD 94-149 is enclosed as well as this Technical note. Technical Note No. 826/24 mentioned in AD 94-149 consists of DG-400 manual revision pages and is not included in this bulletin. The FAA highly encourages you to determine if this modification has been accomplished on your powered sailplane.

Replacement of the propeller shaft (Technical Note No. 826/32)
DG Flugzeugbau has had one occurrence on the Model DG-400 where the propeller shaft failed resulting in a forced landing. A new shaft with larger toothed surface was designed for the DG-800 and is to be installed in the Model DG-400. For your information, LBA AD 96-243 is enclosed as well as this Technical note. The FAA highly encourages you to determine if this has been accomplished on your powered sailplane. DG Flugzeugbau has the parts available to accomplish this modification. The cost is approximately $460.00 U.S. dollars and takes approximately 5 hours to accomplish.

Failure of Bosch regulators (Technical Note No. 826/33)
DG Flugzeugbau has had several Bosch electrical system regulators fail. Two of the regulators generated smoke in the cockpit impairing flight safety. DG Flugzeugbau recommends exchanging the regulator with the type 4 E 26 listed in the maintenance manual. For your information this DG Flugzeugbau Technical Note and LBA AD 96-242 are included. The FAA highly encourages you to comply with this Technical Note. The cost is approximately $200.00 U.S. dollars and takes approximately 2 hours to accomplish.

Overloading of airbrakes due to misadjustment of locking forces (Technical Note No. 826/34)
DG Flugzeugbau has determined on some DG-400 Models where overloading of the airbrake control has occurred due to incorrect adjustment of the airbrake locking forces. If required, a reinforcement of the airbrake torqued tube in the fuselage and modification of the airbrakes must be done. For your information, this Technical note is enclosed. The FAA highly encourages you to determine if this has been accomplished on your powered sailplane. DG Flugzeugbau has the parts available to accomplish this modification. The approximate cost can range from $300.00 to $1200.00 U.S. dollars and can take from approximately 2 to 5 hours to accomplish.

Use of unleaded fuel, increase in service life, manual revision (Technical Note No. 826/35)
DG Flugzeugbau has issued this Technical Note with service instructions for the use of unleaded fuel and the effects of unleaded fuel on the Model DG-400 fuel system. For your information, this Technical Note which includes a statement extending the service life to 12,000 hrs. and a flight manual revision is enclosed. The FAA highly encourages you to determine if this modification has been accomplished on your powered sailplane.

Additional Information
The FAA has issued the following Airworthiness Directives (AD) on the DG Flugzeugbau Model DG-400. This information is provided to you for your information only.

AD 87-26-09; Accomplish Technical Note No. 826/19 in regard to cracking of electrical terminal connectors.

AD 88-02-02; Accomplish Technical Note No. 826/18, in regard to pinion gear damage causing problems with engine retraction and extension.

Further Information Contact:

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