



SAIB: CE-14-23

Date: August 6, 2014

SUBJ: Powerplant; Air Intake

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) is to alert owners, operators, and maintenance technicians of **Piper Aircraft, Inc. (Piper) Models PA-28, PA-32, PA-34, PA-44, and PA-46 series** airplanes of an airworthiness concern, specifically structural deterioration and possible collapse of the air inlet hose. The air inlet hose may be between the air filter and the fuel injector, carburetor or carburetor heat box depending on the airplane model. A collapsed hose reduces airflow to the engine and could result in a rough running engine or a loss of power.

At this time, the airworthiness concern is not an unsafe condition that would warrant an FAA Airworthiness Directive (AD) under Title 14 of the Code of Federal Regulations (14 CFR) Part 39.

Background

In November 2013, a Piper Model PA-28-140 airplane impacted terrain shortly after takeoff. The airplane was destroyed and the pilot who was the sole occupant was seriously injured. Immediately before the accident, the pilot reported a loss of power to the Air Traffic Control Tower. It was discovered during the investigation that the carburetor air inlet hose between the air filter box and carburetor had collapsed. (The air inlet hose is called the carburetor air inlet hose on the Model PA-28-140 airplane.) The collapsed carburetor air inlet hose restricted airflow to the engine and caused the engine power loss. The accident investigation also noted the carburetor air inlet hose had not been approved for the airplane's type design and was an assembly of a silicon hose and an exterior helical support wire.

The Piper part number for the approved carburetor air inlet hose is 99489 according to the Piper Parts Catalog for the PA-28-140, dated April 10, 2013. The approved carburetor air inlet hose is an assembly of a silicon hose with an interior helical support wire and exterior cord, the approved hose is designed to withstand operation in a vacuum of -12 inches of mercury at temperatures from -65 to +500°F. The construction of the approved Piper air inlet hose would have resisted collapse better than the hose installed on the accident aircraft due to the presence of the supporting wire on the inside of the hose.

A review of FAA Accident and Incident data for the Piper Models PA-28 Cherokee, PA-32 Cherokee Six/Lance, PA-34 Seneca, PA-44 Seminole, and PA-46 Malibu airplanes reveals 23 instances of unexplained engine power loss. A collapse of the air inlet hose may have been a contributing factor in these events.

Recommendations:

We recommend that owners, operators and maintenance personnel of Piper Models PA-28, PA-32, PA-34, PA-44, and PA-46 series airplanes inspect the air inlet hose of each airplane's engine(s) within the next 25 hours of time in service to verify that it is an approved Piper part and that it does not exhibit any of the following conditions:

1. Broken or loose cords on external surface.
2. Loose or displaced supporting wire.
3. Signs of wear, perforation, deterioration or collapse.

If an air inlet hose is observed exhibiting any of the conditions listed above or is not an approved Piper part, then replace the hose with an approved Piper part before the next flight. Refer to the appropriate Piper Parts Catalog for approved part number information.

For Further Information Contact

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