Diamond Aircraft Industries
G.m.b.H.
N.A. Otto-Straße 5
A-2700 Wiener Neustadt
Austria

SERVICE INFORMATION No. SI F4-002

NOTE: SI's are used only:
1) To distribute information from DAI to our customers.
2) To distribute applicable information/documents from our suppliers to our customers with additional information.
Typically there is no revision service for SI's. Each new information or change of that will be sent along with a new SI.

I. TECHNICAL DETAILS

1.1 Airplanes affected:

All DA 40 F airplanes

1.2 Subject:

EASA Safety Information Bulletin No.: 2009-04

1.3 Reason:

The EASA has published a Safety Information Bulletin addressing the inspection and modification of the affected carburetors according to Lycoming Mandatory Service Bulletin No. 582A.

1.4 Information:

For detailed technical information refer to EASA Safety Information Bulletin No.: 2009-04 and Lycoming Mandatory Service Bulletin No. 582A which are applicable without any further additions or restrictions.

II. OTHERS

The FAA EASA Safety Information Bulletin No.: 2009-04 and Lycoming Mandatory Service Bulletin No. 582A are attached to this SI.

In case of doubt contact Volare Carburetors LLC or Diamond Aircraft Industries GmbH.

EASA Safety Information Bulletin

SIB No.: **2009-04**
Issued: **06 February 2009**

Subject: **Volare Carburetors LLC (formerly Precision Airmotive, Facet Aerospace and Marvel-Schebler) Carburetor Float Failures.**

Ref. Publications: Federal Aviation Administration (FAA) Special Airworthiness Information Bulletin (SAIB) CE-06-33R1 dated 12 April 2006; Precision Airmotive Mandatory Service Bulletin MSA-13 dated 30 January 2008; and Lycoming Service Bulletin (SB) 582A dated 10 October 2008.

Description: The FAA published the referenced advisory document to alert owners, operators, repair facilities and mechanics of service difficulties with certain Volare Carburetors LLC (formerly Precision Airmotive, Facet Aerospace and Marvel-Schebler) float type carburetors. The reported conditions were the result of fuel leaking into the carburetor float, a damaged or worn float, or a damaged or worn float valve. This condition, if not corrected, can lead to loss of power due to an overly rich fuel mixture.

To address these concerns, Precision Airmotive, who manufactured these carburettors until early 2008, issued Mandatory Service Bulletin MSA-13, recommending the modification of all affected carburetors by replacing brass and advanced-polymer floats with a new foam float.

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Over the past few years, there have been similar incidents reported in Europe, some of which resulted in an emergency landing and consequent loss of the aircraft.

After reviewing the available information and pending an ongoing investigation to confirm adequate reliability of the new foam floats, EASA supports the recommended actions contained in the referenced advisory documents. This SIB is published to ensure that all owners and operators of affected aircraft, registered in European Union Member States or associated countries, are aware of these recommendations.

Applicability: All Volare Carburetors LLC (formerly Precision Airmotive, Facet Aerospace and Marvel-Schebler) float type carburetors. These carburetors are know to be installed on, but not limited to, Lycoming, Teledyne Continental and Franklin reciprocating

engines, which are known to be installed on, but not limited to, aircraft certificated or validated under Part (CS, JAR, FAR) 23 or equivalent standard.

Note: This safety concern does not apply to carburetors containing floats manufactured by other FAA-PMA approved sources.

Contact:

For further information contact the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail: ADs@easa.europa.eu.

Copies of any related Precision Airmotive or Volare service publications may be obtained upon request from:

Volare Carburetors LLC, P.O. Box 44, 211 Chase Street, Gibsonville, North Carolina 27249, United States of America, telephone +1 336-449-5054.
No website is known to exist for Volare Carburetors at this time.

A copy of Lycoming SB 582A (containing Precision Airmotive MSA-13) can be downloaded at http://www.lycoming.textron.com/support/publications/service-bulletins/pdfs/SB582A.pdf

652 Oliver Street
Williamsport, PA 17701 U.S.A.
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MANDATORY

SERVICE BULLETIN

DATE: October 10, 2008

Service Bulletin No. 582A
(Supersedes Service Bulletin No. 582)
Engineering Aspects are
FAA Approved

SUBJECT: Reprint of Precision Airmotive MANDATORY Service Bulletin No. MSA-13

MODELS AFFECTED: All Lycoming engines equipped with any Marvel-Schebler, Facet, Precision, or Volare carburetor model.

TIME OF COMPLIANCE: Within the next 30 days from the receipt of this Service Bulletin and at 30 day intervals until either the brass or advanced polymer float has been replaced with new foam float Precision P/N 30-860, 30-862 or 30-864.

Precision Airmotive MANDATORY Service Bulletin No. MSA-13 is reprinted in its entirety as follows. Lycoming requires compliance with all elements of this Service Bulletin and with the additional notes listed below.

This reprint is current at the time Lycoming Service Bulletin No. 582A is issued. However, when complying with this Service Bulletin, insure that compliance is in accordance with the latest revision of Precision Airmotive MANDATORY Service Bulletin No. MSA-13.

NOTE

For affected carburetors shipped from Lycoming as spares or as engine components, contact Volare Carburetors. Contact information for Volare is:

Volare Carburetors LLC
P.O. Box 44
211 Chase Street
Gibsonville, NC 27249
Phone: (336) 449-5054

General Aviation Manufacturers Association

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PRECISION AIRMOTIVE LLC
14800 40th Avenue NE
MARYSVILLE, WASHINGTON 98271
FAA-PMA FACILITY #PQ111NM

MANDATORY Service Bulletin Fuel Systems

Bulletin No.: MSA-13

Date: 1/30/08

SUBJECT: REPLACEMENT OF CARBURETOR FLOATS WITH NEW FOAM FLOATS

NOTE: This service bulletin supersedes and replaces Service Bulletin MSA-1

SECTION 1 - PLANNING INFORMATION

A. **EFFECTIVITY:**
All aircraft with Precision Airmotive/Facet/Marvel-Schebler Float Carburetors, which contain floats manufactured by Precision Airmotive or Facet. This bulletin does not apply to carburetors containing floats manufactured by other FAA-PMA approved sources. Continued airworthiness instructions for those non Precision Airmotive/Facet floats should be obtained from the manufacturer.

B. **REASON:**
Service difficulties inherent with the brass and the advanced polymer floats currently approved for use by the FAA on Precision Airmotive/Facet/Marvel-Schebler carburetors and the introduction and service history of a new foam float have led to the release of this bulletin.

In the case of the brass floats, several service issues are known. For example, because of the long life of these carburetors there have been instances where the float hinge point has been allowed to wear to the point where the float pontoons can contact the walls of the float bowl. This can lead to a hole in the float which will allow fuel to enter the float and thereby reduce the buoyancy of the float, which could lead to flooding or poor idle performance (and possible engine stoppage at idle). In addition, over time the brass floats can also develop leaks through the seam, allowing fuel to enter the float and thereby reducing the buoyancy of the float.

In the case of the advanced polymer floats, there is also a possibility of leaks through the welded seam. This allows a portion of the float to fill with fuel and thereby reduce the buoyancy of the float, which could lead to flooding or poor idle performance.

In the vast majority of incidents, the condition was identified by flooding or poor idle performance on the ground. In some cases, there were no operational difficulties at all. In many of these cases there was sufficient service history to indicate that the carburetor had not been overhauled by a qualified repair station within 10 years as required by Service Bulletin MSA-3, and/or had not been properly repaired after prior reports of flooding.

Precision Airmotive has developed and incorporated a new foam float, and there is now sufficient service history and test data to conclude that the new floats will not develop these same service issues.

C. **COMPLIANCE:** The carburetor must be inspected within 30 days and at 30 day intervals until the float is updated. Prior to December 31, 2008, all carburetors not already in compliance must be updated to use the current foam float, part number 30-860, 30-862, or 30-864 depending upon application. If the carburetor shows any signs of flooding, the float should be replaced immediately.

SECTION 2 - ACCOMPLISHMENT INSTRUCTIONS

A. **INSPECTION:**
Within the next 30 days the carburetor should be inspected to determine if a new foam float has been installed. The new floats have been in production since November of 2005. If your carburetor has been replaced or repaired since that date, use one of the following methods to verify that the carburetor contains a new foam float.

1. If the carburetor was manufactured, overhauled, or rebuilt by Precision Airmotive the nameplate will have a box titled "IC" with a number. If the "IC" number is 15 or higher, the carburetor contains a new foam float.

2. If the carburetor was overhauled or repaired by a third party, the paperwork should be reviewed to determine if a new foam float, part number 30-860, 30-862, or 30-864 was installed.

The carburetor should also be inspected for signs of flooding (see SIL MS-12). Carburetors that show signs of flooding should be removed and sent to a qualified repair station for repair and replacement of the float.

This inspection should be repeated every 30 days until the float has been replaced by a new foam float.

NOTE: As required by Service Bulletin MSA-3, all carburetors must be overhauled every 10 years or at engine TBO whichever comes first. If the carburetor in question does not meet these requirements, it should be removed and sent for overhaul immediately. The float should be replaced as a part of the overhaul.

B. **ACTION:**
If the carburetor does not contain a new foam float it should be removed and sent to a qualified repair station prior to December 31, 2008 to be updated with a new foam float, in accordance with the current release of overhaul manual #MSAFSM. Alternatively, the carburetor may be replaced with a new, overhauled, or rebuilt carburetor that contains the new foam float.

C. **IDENTIFICATION:**
Carburetors that have been manufactured, overhauled, or rebuilt by Precision Airmotive, are identified with an IC number of 15 or higher when they contain the new foam float. For all other carburetors, the letters "FF" should be stamped on the nameplate once it has been verified that the carburetor contains float part number 30-860, 30-862, or 30-864. Repair stations that install these floats should stamp the letters "FF" on the nameplate when the update is done.

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