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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.