



## Power Systems

1404 East South Blvd.

Montgomery, AL 36116

(334) 286-8551 (334) 286-1992 FAX

www.kellyaerospace.com

# Service Letter

Letter No. 033

Issue Date: July 15, 2009

## UNAPPROVED REPAIR PRACTICE (PEENING AROUND THE MIXTURE SHAFT BEARING BORE)

### INTRODUCTION:

Volare' Carburetors, LLC (formerly Precision Airmotive/ Facet/ Marvel Schebler/ Borg Warner) issued Service Bulletin SB-11 on June 17, 2009, the subject of which is "Unapproved Repair Practice" on or pertaining to all float carburetors manufactured by Volare' and/or it's predecessors. The service bulletin describes conditions observed by Volare' in float style carburetors that have been returned to them for various reasons including repair and overhaul. Volare' has observed a "peening" repair in and around the mixture shaft bearing bore. This style of repair is not approved by Volare' nor is it listed in the overhaul manual as an approved repair. KAPS overhauled or repaired float style carburetors **will never have a "peening" repair** around mixture shaft bearing bore area. When repair is necessary, KAPS will apply an FAA approved brass bushing repair in the area shown in Fig. 3 of the Volare' SB-11. For this reason, **the Volare' Service Bulletin SB-11 is not applicable to float style carburetors overhauled/repared by KAPS at any time.**

Kelly Aerospace Power Systems desires that Volare's service bulletin SB-11 be complied with to enhance safety in those aircraft or rotorcraft that may use float style carburetors, however, **only** for those which the service history shows that a repair/overhaul has been performed **by facilities other than KAPS** or if the repair/overhaul **history is unknown.**

This service letter is intended to reduce confusion for customers utilizing KAPS overhauled/repared float style carburetors and compliance with Volare' SB-11. If you have a float style carburetor with a clear history of overhaul/repair by Kelly Aerospace Power Systems, no action need be taken regarding Volare's Service Bulletin SB-11.

### COMPLIANCE:

At the next carburetor disassembly or sooner if an excessively rich mixture indication is experienced.

### EFFECTIVITY:

All float style carburetors overhauled/repared at any time by Kelly Aerospace Power Systems..

*All questions, information, or requests pertaining to flight safety service bulletin SB-11 must be forwarded to Volare' Carburetors, LLC, Product Support Dept. (336) 449-5054.*

*Questions regarding this service letter? Contact KAPS Customer Service at (334) 286-8551.*

## PROCEDURE:

### CAUTION:

The removal of an airworthy part from a complete installation without symptom or cause may present a hazard to owners, operators, and property. Beyond normal maintenance, NEVER open or disturb the carburetor without documented cause.

### NOTE:

Any repair or overhaul activity may be accomplished using Kelly Aerospace Power Systems FAA/PMA approved components and spare parts. All KAPS FAA/PMA approved parts are interchangeable with Precision Airmotive/ Facet/ Marvel Schebler/ Borg Warner original parts.

1. Observe Volare' Carburetors SB-11 in it's entirety and determine if you are affected, the appropriate compliance time, and what may be your course of action. (*Noted as Attachment A of this service letter.*)
2. Examine the aircraft or engine logbook entries or other aircraft documentation to ascertain whether your carburetor has been overhauled by KAPS. If positive identification is made, it is advisable to make an appropriate logbook entry stating that "Volare' Carburetors, LLC Service Bulletin SB-11 is not applicable, refer to Kelly Service Letter 33.
3. If positive identification can not be made, comply with the intent of Volare' Carburetors Service Bulletin SB-11 by following the instructions therein. Assure a proper logbook entry of compliance is made per the instructions in the Volare' Service Bulletin.

For reference, please see the Volare' Carburetors, LLC Service Bulletin SB-11 included as "Attachment A" to this service letter. ***For information concerning the use of KAPS FAA/PMA parts refer to KAPS Service Letter 028 and FAA SAIB NE-08-40 dated Aug. 8, 2008.***

## WARRANTY STATEMENT:

No warranty or other participation is applicable to this service publication. Acknowledgment and understanding of this service letter is fully the responsibility of the service facility and/or the owner of the affected product. Issuance of this service letter in no way constitutes an implied or expressed warranty of any kind.

This publication does not imply or state any responsibility for the workmanship of any person or entity performing work or maintenance on any model carburetor, fuel system, engine, or aircraft. ***The proper use of FAA/PMA approved airworthy parts in no way constitutes a total waiver of liability for any party.*** All parties retain liability, including product liability to the extent of their responsibilities under applicable law.

## CONTACT INFORMATION:

If you have any questions concerning this service information letter, please contact Kelly Aerospace Energy Systems Technical Support at 888-461-6077. Or write:

**Kelly Aerospace Product Support  
2900 Selma Highway  
Montgomery, AL 36108, USA**

## ATTACHMENT A (SL 033)



### Volare' Carburetors, LLC

125 Piedmont Avenue  
Gibsonville, N.C. 27249, USA

### Service Bulletin: SB-11

Revision: Original  
Date: June 17<sup>th</sup>, 2009

### SUBJECT – UNAPPROVED REPAIR PRACTICE

1. **Applicability:** *All float carburetors manufactured by Volare Carburetors LLC (“Volare”), and its predecessors Precision Airmotive Corporation, Facet Aerospace Products Company, and Marvel-Schebler (Borg Warner) (hereinafter “Volare”)*
2. **Reason:** Volare is issuing this Service Bulletin to help owners, operators, over-haulers, and repairers of Volare Float Carburetors become aware of an unapproved repair practice.
3. **Background:** During tear down inspection of carburetors at the factory service center, numerous examples of improper repairs are being found. The areas around the top and bottom of the mixture control shaft bearing bore are peened. A number of such cases have been observed. The practice appears to be prevalent at one repair station, at least.

It is believed that the object of the peening is to reduce clearance between the mixture control shaft and its bearing bore. However, such repairs are unauthorized because of the adverse consequences described below.

Fact: Peening the area around the bearing bore causes the mixture shaft loads to bear on small, upset metal projections which will wear away quickly. Thus, the repair will be short lived. Additionally, an airtight seal between the mixture control shaft and the throttle body is imperative. If the seal is compromised and outside (ambient) air enters the float bowl, an excessively rich fuel/air mixture will occur. The rough surface can prevent the necessary airtight seal.

Examples of unauthorized peening of the mixture shaft bore are shown in Figures 1 & 2 on page 2, (Fig. 1 bottom view, Fig. 2 top view). Figure 3 shows a properly repaired mixture shaft bore. The factory can make such repairs. If the mixture shaft bearing bore has inadequate metal remaining, contact Volare' to have the bore properly repaired.

## ATTACHMENT A (SL 033)

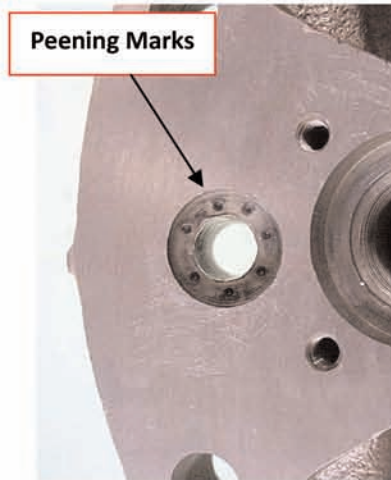


Figure 1: Peened Example

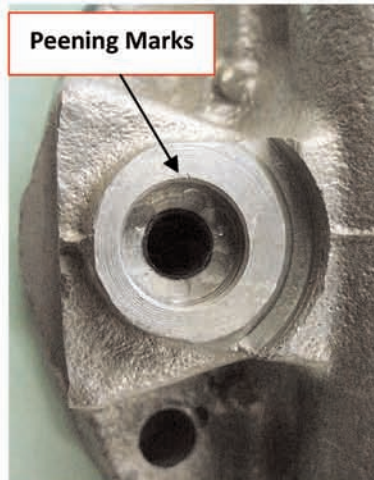


Figure 2: Peened Example



Figure 3: Proper Bushed Repair

4. **Compliance:** At the next carburetor disassembly or sooner if an excessively rich mixture is experienced:
  - a. Examine the mixture shaft bearing bore and area around it. If unauthorized repairs have been accomplished, the mixture shaft bearing bore is oversized, or the sealing surfaces are damaged, send the carburetor to Volare for repair.
5. **Voiding of Warranty and Waiver of Liability:** An owner's/operator's failure to inspect and where necessary replace or repair a carburetor body in accordance with this bulletin, or operation of a carburetor which is non-compliant with this bulletin, or operation of a carburetor in which other than genuine Volare approved parts are installed, **voids any otherwise applicable warranty and constitutes a complete and total waiver** to the extent permitted by law of any and all rights the owner, operator and/or service facility or repairer may have had to hold Volare responsible or liable for the malfunction or failure of such an aviation carburetor. The owner/operator and/or service facility or repairer that makes an unauthorized repair or modification or returns a carburetor that is non-compliant with this service bulletin to service shall bear the sole responsibility and full liability for any **damages of whatever nature, injury, or death** arising from any malfunction or failure of such a non-compliant aviation carburetor.
6. **Safety First:** Volare is a customer-service oriented company committed to technical innovation in pursuit of aviation safety. While Volare has no authority to compel owners to act responsibly and take prudent action to insure their own safety and the safety of others, Volare believes compliance with this Service Bulletin is important to protect against failures with unacceptable consequences. Volare strongly warns owners of the inherent risks involved in operating an airplane with an improperly repaired/modified carburetor and strongly encourages owners to comply with this Service Bulletin.