



Volare Carburetors LLC

FLIGHT SAFETY Service Bulletin

Bulletin No. SB-3

Revision: Original

Date: February 6, 2009

Subject: HA-6 ACCELERATOR PUMP PLUNGER

1. **Applicability:** *This FLIGHT SAFETY Service Bulletin (SB) applies to HA-6 model float carburetors manufactured (by Volare Carburetors LLC (“Volare”), and its predecessors Precision Airmotive Corporation, Facet Aerospace Products Company, and Marvel-Schebler (Borg Warner) that are equipped with accelerator pumps, hereinafter referred to as Volare.*
2. **Reason:** Reports of accelerator pump plunger retaining clips separating from pump stems have occurred. This condition renders the accelerator pump inoperative and may result in limited throttle movement.
3. **Background:** The attached photos show pump stems having severe wear above the retaining clip groove (Figs 1 & 2). Normal stems (Figs 4 & 5) are shown for reference. Volare is not aware of instances of such advanced wear in stems manufactured by Volare. The rough surface-finish (center, Fig. 1) and wide clip grooves (outer stems, Fig. 3,) are not similar to design specifications of stems manufactured by Volare.
4. **Indications of a separated retaining clip:** No accelerator pump output, hard starting, weak or rough acceleration and/or limited throttle movement, or any combination of the above.
5. **Compliance:** Except for carburetors manufactured or serviced by Volare on or after March 4, 2008, or carburetors known to be equipped with accelerator pump plungers and retaining clips supplied by Volare on or after March 4, 2008, to maintain flight safety each owner of a HA-6 model float carburetor equipped with an accelerator pump having accumulated more than 1000 hours time in service must:
 - a. PRIOR TO EACH FLIGHT until compliance with paragraph “5(b)” occurs, inspect the carburetor for abnormal limitation of the throttle. At full throttle, the throttle lever stop must contact full throttle stop on the carburetor body. With fuel supplied to the carburetor, a steady stream of fuel must spray from the accelerator pump discharge nozzle each time the throttle is moved towards the full throttle position. (Note: It may be necessary to remove the air filter or air box to accomplish this inspection. Accomplish all work in accordance with approved data.) and;

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b. Within 25 hours of operation after the date of this FLIGHT SAFETY Service Bulletin or prior to March 15, 2009, whichever comes first, remove the bowl cover and inspect the accelerator pump stem. No discernable wear in the clip groove is permitted. Replace any stem exhibiting a rough surface finish, a non-standard groove/head configuration and/or wear in the clip groove, however slight, with a NEW plunger assembly (part number is carburetor model dependent), a NEW pump rod guide, part number 88-92 and a NEW clip, part number 78-A295 supplied by Volare on or after March 4, 2008.

6. **Instructions:** Remove the bowl cover in accordance with Instruction E-1001 contained in Volare Float Replacement Kit 666-1002. Discard all brass, white plastic, or foam floats. Do not assemble and/or approve for return to service any Volare (or its predecessors') carburetor having any float other than a solid, blue epoxy float part number 30-860. See Volare SB-2. (Lycoming Service Bulletin No. 582 also requires floats to be part number 30-860).

Comply with paragraph 5(b). Insert the retainer clip into the GROOVE (not onto the stem beside the groove as doing so will stretch and deform the clip) and snap it into place. Insure that the float setting is correct per the float installation instructions. Install parts and torque and safety the cover screws and test the carburetor in accordance with instructions contained in the appropriate Carburetor Service Manual (MSAFSM).

7. **Identification/Marking:** Upon completion of this Flight Safety Service Bulletin, stamp the letters "AP" in letters 1/8 inch tall (nominal) on the side of the carburetor flange below the idle mixture needle approximately midway between the upper and lower bolt holes (Fig 6).
8. **Service and Parts Availability:** To encourage compliance with this Flight Safety Service Bulletin, a plunger, rod guide, retaining clip, float bowl gasket and tab washers will be supplied at a discount of 50% off normal list price when the inspection and parts replacement is accomplished at the Volare factory.

9. **Voiding of Warranty and Waiver of Liability:** An owner's failure to inspect and, where necessary, replace the accelerator pump plunger and retaining clip in accordance with this bulletin, or operation of a carburetor containing an excessively worn accelerator pump plunger or operation of a carburetor in which the retaining clip has separated from the pump stem, **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 responsible for installation of UNAUTHORIZED parts in Volare's aviation carburetors 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 modified and/or altered aviation carburetor. An owner's purchase of a solid, blue epoxy float constitutes an agreement to not install that float in any carburetor containing UNAUTHORIZED parts (as set forth in SB-1). Owners of carburetors containing UNAUTHORIZED parts assume all responsibility for the



operation of such carburetors recognizing that such operation may result in engine malfunction, damage, injury or death. As Volare stated in SB-1:

- a. Volare **expressly disclaims any and all responsibility and liability** for any aviation carburetor containing UNAUTHORIZED parts to the extent permitted by law.
- b. The installation of UNAUTHORIZED parts in Volare Float Carburetors constitutes a **complete and total waiver** to the extent permitted by law of any and all rights the operator may have had to hold Volare responsible or liable for the malfunction or failure of such a modified and/or altered aviation carburetor.
- c. To the extent permitted by law, the owner, operator and/or overhaul facility or repairer responsible for installation of UNAUTHORIZED parts in Volare Float Carburetors 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 modified and/or altered aviation carburetor.

10. 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 FLIGHT SAFETY Service Bulletin is essential to protect against failures with unacceptable consequences. Volare strongly warns owners of the inherent risks involved in operating an airplane with an excessively worn accelerator pump plunger regardless of the manufacturer of such a plunger and strongly encourages owners to comply with this FLIGHT SAFETY Service Bulletin.



Note: Rough Surface finish



Fig 1

Three bad Accelerator Pump Stems.

Note: Wear from Retaining

Clip



Fig 2

Close up showing wear from Retaining Clip.

Center Stem is Good

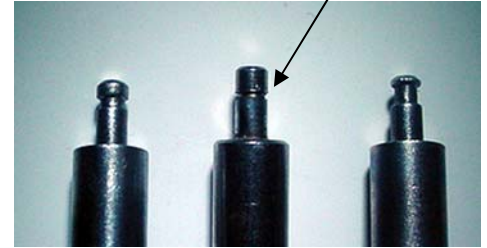


Fig 3

Machining differences among different stems



Fig 4

Two good accelerator pump Stems, one with clip still installed.

Note: Retaining Clip groove is pristine



Fig 5

Close up detailing lack of wear on good stems.

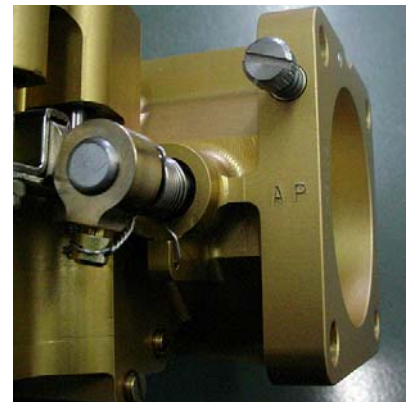


Fig 6

Stamp Flange with 'AP' in location shown after compliance with this service bulletin SB-3.

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