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FAA-PMA FACILITY #PQ111NM

# Service Bulletin Fuel Systems

Bulletin No.: MSA-9  
Date: 10/10/95

## SUBJECT: CARBURETOR NOZZLE REPLACEMENT

### SECTION I - PLANNING INFORMATION

#### A. EFFECTIVITY:

All aircraft with Teledyne Continental Motors (TCM) C-75, C-85, or C-90 engines having carburetor part number 10-4240, 10-4252, 10-4252-1, or 10-4457 installed.

#### B. REASON:

Precision Airmotive Corporation has received sporadic reports from operators who are experiencing engine richness or roughness after installing the one-piece venturi into their carburetors.

**NOTE:** If you have installed the one-piece venturi and are not experiencing any of these conditions you are not affected by this bulletin and no corrective action is required.

#### C. DESCRIPTION:

In some instances it appears that installation of the one-piece venturi increases the sensitivity of the main fuel nozzle and alters its fuel atomization characteristics. This condition results in engine roughness with an apparent rich mixture.

Extensive testing has shown that an improved main fuel nozzle which incorporates an atomizer type design will correct the symptoms described above. This nozzle is currently available from Precision Airmotive as part of a kit, P/N 666-948 or P/N 666-950 depending on engine model and carburetor part number.

If you have experienced any of the above symptoms or have any questions regarding this bulletin please contact Precision Airmotive at 1-206-353-8181.

**NOTE:** Improper installation of the one-piece venturi can also result in the symptoms described above. It is very important to install the venturi using the proper tools and the procedure described in the overhaul manual. In addition, there are a number of other conditions that can result in a rich running carburetor, for example a leaking primer system, an improperly adjusted float, leaking bowl gasket, improper installation of the fuel nozzle, etc. Therefore it is important to verify that the carburetor is assembled per the overhaul manual and that the rest of the fuel system and air induction system are operating properly.

**D. COMPLIANCE:**

Recommended if symptoms exist as described in Section 1C of this bulletin

**Note:** Teledyne Continental C-75, C-85 or C-90 engine installations using 10-4240 or 10-4457 should order the kit P/N 666-948.

Teledyne Continental C-90 engine installations using 10-4252 or 10-4252-1 should order the kit P/N 666-950.

**E. APPROVAL:**

Technical aspects FAA approved

**F. MANPOWER:**

No additional time if accomplished during carburetor overhaul, approximately .5 hours if accomplished after carburetor is removed from engine.

**G. MATERIAL AVAILABILITY:**

The following conversion kits are available from parts distributors.

666-948      Kit, Nozzle Conversion

666-950      Kit, Nozzle Conversion

The 666-948 Kit consists of the following parts:

47-852      Nozzle Assembly  
 16-222      Gasket, Nozzle  
 16-A107     Gasket, Power Jet  
 16-B75      Gasket, Body  
 78-A110     Washer, Body Screws (4 ea.)  
 82-11       Cotter Pin, (Float Pin)

The 666-950 Kit consists of the following parts:

47-853      Nozzle Assembly  
 16-222      Gasket, Nozzle  
 16-A107     Gasket, Power Jet  
 16-B75      Gasket, Body  
 78-A110     Washer, Body Screws (4 ea.)  
 82-11       Cotter Pin, (Float Pin)

To perform the conversion during overhaul, the nozzle assembly is available by itself, or as a component of the major overhaul kit

H. TOOLING:

Not affected.

I. REFERENCES:

Aircraft Carburetors & Parts Manual, Form #MSAFSM dated March 30, 1993.

J. WEIGHT AND BALANCE:

Not affected.

K. PUBLICATIONS AFFECTED:

None.

SECTION II - ACCOMPLISHMENT INSTRUCTIONS

A. Remove carburetor from aircraft.

B. Follow the procedures in the Aircraft Carburetor Service Manual to disassemble the carburetor as required to access the main fuel nozzle.

C. Replace the main fuel nozzle, reassemble carburetor, and torque per manual instructions.

D. After modification has been accomplished, stamp the carburetor nameplate as follows:

10-4240: Add "-1" after the part number (i.e. 10-4240 will become 10-4240-1)

10-4252: Add "-2" after the part number (i.e. 10-4252 will become 10-4252-2)

10-4252-1: Add "2" after the part number (i.e. 10-4252-1 will become 10-4252-12)

10-4457: Add "-1" after the part number (i.e. 10-4457 will become 10-4457-1)

E. Install, adjust and verify proper operation of the carburetor in accordance with the applicable engine/airframe maintenance and operation manual(s).

F. Make an appropriate log book entry indicating conversion of the carburetor.

SECTION III - WARRANTY INFORMATION

A. Operators who have installed a Precision Airmotive one piece venturi in their carburetor and have experienced the symptoms described in Section I, may be eligible for a no-charge warranty kit. Those seeking warranty consideration need to call the Precision Airmotive toll-free Venturi Hotline at (800) 838-8181 or (206) 353-8181 for further information. If warranty is approved, a no-charge kit will be shipped to you. (Note: In order to receive warranty, you must be able to provide documented proof that a genuine Precision Airmotive venturi was installed in the carburetor)

