

# Federal Aviation Administration

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## **Airworthiness Directive**

### **► Federal Register Information**

#### **▼ Header Information**

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [63 FR 1335 NO. 6 01/09/98]

Docket No. 97-ANE-16; Amendment 39-10270; AD 98-01-06

RIN 2120-AA64

Airworthiness Directives; Precision Airmotive Corporation Carburetors

**PDF Copy (If Available):**

#### **▼ Preamble Information**

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

**SUMMARY:** This amendment supersedes an existing airworthiness directive (AD), applicable to Precision Airmotive Corporation carburetors, that currently requires the inspection of those carburetors equipped with a two-piece venturi at each annual inspection to determine if the primary venturi is loose or missing, and requires the replacement of a two-piece venturi with a one-piece venturi within 48 months after the effective date of the existing AD. This amendment eliminates the requirement to install a one-piece venturi, and allows the installation of a one-piece venturi on affected carburetors as an optional terminating action; or, requires repetitive inspections of a two-piece venturi on affected carburetors. This AD also adds an additional carburetor model, and requires the installation of a new fuel nozzle on certain carburetors when a one-piece venturi is installed. This amendment is prompted by service difficulty reports describing engines that fail to attain rated power, run rough, or experience power loss after installation of a one-piece venturi in accordance with the existing AD, and by incidents of forced landings of aircraft powered by engines modified to comply with the existing AD. The actions specified by this AD are intended to prevent disruption of fuel flow to the engine resulting in failure to attain rated power, power loss in flight, and

forced landings.

**DATES:** Effective February 13, 1998.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of February 13, 1998.

**ADDRESSES:** The service information referenced in this AD may be obtained from Precision Airmotive Corporation, 3220 100th Street SW., Building E, Everett, WA 98204; telephone (206) 353-8181, fax (206) 348-3545. This information may be examined at the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA 01803-5299; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Richard Simonson, Aerospace Engineer, Seattle Aircraft Certification Office, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW, Renton, WA 98055-4056; telephone (425) 227-2597, fax (425) 227-1181.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding airworthiness directive (AD) 93-18-03, Amendment 39-8688 (58 FR 50843, September 29, 1993), which is applicable to Precision Airmotive Corporation (formerly Facet Aerospace Products Corporation and Marvel-Schebler Corporation) Model MA-3A, MA-3PA, MA-3SPA, and MA-4SPA carburetors equipped with two-piece venturis, was published in the **Federal Register** on August 1, 1997 (62 FR 41321). That action proposed to require repetitive inspections of two-piece venturis, and to allow installation of one-piece venturis as an optional terminating action for those repetitive inspections provided certain conditions are met.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

One commenter (the manufacturer) states that the AD should not allow indefinite repetitive inspections, with no end date for accomplishment of the terminating action (i.e. installation of a one-piece venturi), since the terminating action is necessary and there has been no sound technical basis established for abandonment of the required date for compliance. The FAA does not concur. The FAA has determined that the terminating action should be optional, based upon the engines reported running rough with the one-piece venturi. Continued repetitive inspections of the two-piece venturi or replacement with a one-piece venturi will provide an acceptable level of safety.

The commenter also states that by allowing the reinstallation of two-piece venturis, non-serviceable parts might be used, particularly since the manufacture of these parts was discontinued in the late 1980s. If reinstallation of a two-piece venturi must be allowed, the commenter believes that this option should be viewed as an Alternative Method of

Compliance (AMOC) and not as an option within the AD itself. The FAA does not concur. The FAA has determined that the risk of installing non-serviceable two-piece venturis is no greater than installing any other non-serviceable parts. Obviously, if there are no serviceable two-piece venturis available, the operator must continue operation of the one-piece venturi and install a new fuel nozzle in accordance with paragraphs (c), (d), or (e), as applicable, of this AD. Since the options of installing a two-piece venturi and maintaining continuing inspections, or installing a new fuel nozzle on carburetors with one-piece venturis when engines run rough or do not obtain rated power both result in equivalent levels of safety, the FAA has determined that both options should be presented in the AD instead of relegating the installation of a two-piece venturi to an AMOC.

Two commenters concur with the AD as proposed.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

The FAA estimates that 30,000 carburetors installed on aircraft of U.S. registry will be affected by this AD, that it will take approximately 2 work hours per engine to accomplish the required actions, and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$75 per carburetor. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$5,850,000.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

#### **List of Subjects in 14 CFR Part 39**

Air Transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:  
Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing Amendment 39-8688 (58 FR 50843, September 29, 1993) and by adding a new airworthiness directive, Amendment 39-10270, to read as follows:

#### ▼ Regulatory Information

**98-01-06 PRECISION AIRMOTIVE CORPORATION:** Amendment 39-10270.  
Docket 97-ANE-16. Supersedes AD 93-18-03, Amendment 39-8688.

Applicability: Precision Airmotive Corporation (formerly Facet Aerospace Products Corporation and Marvel-Schebler Corporation) Model MA-3, MA-3A, MA-3PA, MA-3SPA, MA-4SPA carburetors installed on but not limited to Textron Lycoming O-235, O-290, and O-320 series engines, and Teledyne Continental Motors A-65, A-75, C-75, C-85, C-90, C-115, C-125, C-145, O-200, and O-300 series engines. These engines are installed on, but not limited to, normally aspirated reciprocating engine powered aircraft manufactured by Cessna, Piper, Raytheon, and Mooney.

**Note 1:** This AD applies to each carburetor identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For carburetors that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent disruption of fuel flow to the engine resulting in failure to attain rated power, power loss in flight, and forced landings, accomplish the following:

(a) For Precision Airmotive Corporation Model MA-3A, MA-3PA, MA-3SPA, and MA4-SPA carburetors:

(1) If not previously accomplished, prior to further flight, inspect the carburetor to determine if a two-piece venturi is installed. Carburetors that have the letter "V" stamped or etched on the lower portion of the data plate, or that have a black, yellow, or blue data plate showing the Precision Airmotive Corporation name and logo, or that have a black Facet Aerospace Products data plate with a serial number beginning with 750, are already equipped with a one-piece venturi and no further action is necessary provided the engine does not subsequently run rough or experience power loss.

(2) If a two-piece venturi is installed, inspect the carburetor at each annual, 100-hour, or progressive inspection, to determine if the primary venturi is loose or missing. If either

of these conditions is found, prior to further flight, repair the carburetor by installing a serviceable two-piece venturi or by installing a one-piece venturi in accordance with Precision Airmotive Service Bulletin (SB) No. MSA-2, Revision 1, dated November 11, 1991, Revision 2, dated December 28, 1993, or Revision 3, dated October 10, 1995. Installing a one-piece venturi constitutes terminating action for the repetitive inspection requirements of this paragraph.

(3) If a one-piece venturi is already installed, or installed in accordance with subparagraph (2) of this paragraph, and the engine subsequently runs rough or experiences power loss, accomplish either of the following:

(i) Modify the carburetor in accordance with paragraphs (c), (d) or (e) of this AD, as applicable; or

(ii) Install a carburetor containing a two-piece venturi and resume the repetitive inspections required by paragraph (a)(2) of this AD.

(b) For Precision Airmotive Corporation Model MA-3 series carburetors: at the next annual, 100-hour, or progressive inspection, whichever occurs first, after the effective date of this AD, inspect the carburetor to determine if the primary venturi is loose or missing. If either of these conditions are found, prior to further flight, repair the carburetor by installing a serviceable two-piece venturi, or replace the entire carburetor with a serviceable carburetor. Repeat this inspection at each annual, 100-hour, or progressive inspection.

(c) For Precision Airmotive Corporation Model MA-3SPA series carburetors with part numbers (P/N) 10-4894 or 10-4115-1, installed on Teledyne Continental Model O-200A series engines modified on or after the effective date of this AD by installing a one-piece venturi, install a new fuel nozzle in accordance with Precision Airmotive SB MSA-7, dated September 30, 1994, at the time of installation of the one-piece venturi.

(d) For Precision Airmotive Corporation Model MA-3SPA series carburetors with P/Ns 10-4895, 10-4439, or 10-3237, installed on Teledyne Continental Model O-300 or C-145 series engines modified on or after the effective date of this AD by installing a one-piece venturi, install a new fuel nozzle in accordance with Precision Airmotive SB No. MSA-8, dated July 10, 1995, at the time of installation of the one-piece venturi.

(e) For Precision Airmotive Corporation Model MA-3SPA series carburetors with P/Ns 10-4240, 10-4252, 10-4252-1, or 10-4457, installed on Teledyne Continental Model C-75, C-85, or C-90 series engines modified on or after the effective date of this AD by installing a one-piece venturi, install a new fuel nozzle in accordance with Precision Airmotive SB No. MSA-9, dated October 10, 1995, at the time of installation of the one-piece venturi.

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle Aircraft Certification Office.

**Note 2:** Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Seattle Aircraft Certification Office.

(g) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the inspection requirements of this AD can be accomplished.

(h) The actions required by this AD shall be done in accordance with the following Precision Airmotive Corporation SBs:

<b>DOCUMENT NO.</b>	<b>PAGES</b>	<b>REVISION</b>	<b>DATE</b>
MSA-2 Total Pages: 3.	1-3	1	November 11, 1991
MSA-2 Total Pages: 3.	1-3	2	December 28, 1993
MSA-2 Total Pages: 4.	1-4	3	October 10, 1995
MSA-7 Total Pages: 3.	1-3	Original	September 30, 1994
MSA-8 Total Pages: 3.	1-3	Original	July 10, 1995
MSA-9 Total Pages: 3.	1-3	Original	October 10, 1995

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Precision Airmotive Corporation, 3220 100th Street SW., Building E, Everett, WA 98204; telephone (206) 353-8181, fax (206) 348-3545. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) This amendment becomes effective on February 13, 1998.

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#### ▼ Comments

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