

Service Bulletin SB-4

June 22, 2004

Procedures specified in this service bulletin must be accomplished in accordance with accepted methods of aircraft maintenance and applicable government regulations. Appropriate log book entries must be made.

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SUBJECT

This service bulletin describes a swage cracking problem in McFarlane Part Number MC600-72 and MC600-120 vernier mixture controls and requires removal and replacement of controls with an affected lot number. Non-compliance could result in loss of mixture control authority and subsequent loss of engine power.

BACKGROUND

MC600-72 and MC600-120 are vernier mixture controls eligible for installation on many Cessna, Piper, Raytheon, Mooney, Maule and Univair (Stinson) carbureted single engine aircraft. The controls consist of a vernier housing that contains the vernier mechanism, a flexible conduit that guides the inner-wire to the carburetor, and an inner-wire. The inner-wire is attached to the carburetor's mixture arm, and the vernier housing is typically mounted in the instrument panel. The conduit is attached to the vernier housing by a swage. Recently, during production, cracks were detected in the swage that attaches the conduit to the housing. Upon further investigation it was concluded that the cracks may be present in previous production lots of these mixture controls.

The cracks in the swage joint will not affect the functioning of the control in most cases, but in extreme cases involving unusual loading of the mixture control and complete detachment of the conduit from the housing, some loss or complete loss of mixture control authority could occur, although there have been no reports of service difficulties involving either of these part numbers. McFarlane Aviation has changed the design in the area of the swaged joint to prevent cracking in current production parts. Due to the difficulty of detecting the cracks, McFarlane Aviation is requiring the removal and replacement of all controls with the affected lot numbers even though many of the MC600-72 and MC600-120 controls in service do not have cracks.

It should be noted that this bulletin does not apply to any McFarlane vernier controls other than the MC600 series solid wire type mixture controls. It does not apply to any McFarlane mixture or propeller controls manufactured with a threaded rod end.

PART NUMBERS AFFECTED

MC600-72 and MC600-120 Mixture Controls shipped prior to 6/9/04. This includes all MC600-72 controls with lot numbers 8873, 8989, 9579, 9812, 10301, 10776, 10830, 11142 or 11557; and all MC600-120 controls with lot numbers 9111, 9489, 10310 or 11697.

IDENTIFICATION METHODS

1. Search the aircraft's maintenance records for an entry indicating the installation of the affected part numbers and lot numbers listed above.
2. Visually inspect the vernier mixture control housing label. Look for the affected part numbers and lot numbers listed above.

COMPLIANCE

Compliance is mandatory at the next scheduled maintenance for all installations of the affected parts. A qualified aircraft mechanic must perform the accomplishment instructions.

APPROVAL

Technical portions are FAA approved.

ACCOMPLISHMENT INSTRUCTIONS

- 1) Remove the affected control from the aircraft.
- 2) Replace the affected control with a new MC600-72 or MC600-120 as applicable. Verify that the new control has a lot number greater than 11697. Install the new control per Drawing 1390 titled "McFarlane Aviation MC600 Series Solid Wire Vernier Fuel Mixture Control Installation Instructions" that is included with the new control or available from www.mcfarlaneaviation.com.

MATERIAL PRICE AND AVAILABILITY

The following are available from McFarlane Aviation (prices subject to change without notice):

Part Number	Description	Price
MC600-72	Mixture Control	\$123.97
MC600-120	Mixture Control	\$135.52

CREDIT INFORMATION

McFarlane Aviation will replace, at no cost, any MC600-72 or MC600-120 with a Lot Number listed under "Part Numbers Affected" section above, and will pay \$35 for removal and replacement of the control. For replacement and compensation for installation costs up to \$35, the old control or just the aluminum housing section of the control must be returned. McFarlane will also pay ground shipping for both the new control and the return of the old control. Contact McFarlane Aviation for further credit and return details.

DISTRIBUTION

This service bulletin has been distributed to various aviation publications and to all customers for whom McFarlane Aviation has sales records indicating the purchase of affected parts. All McFarlane Aviation service bulletins may also be found at www.mcfarlaneaviation.com. Please forward this urgent information to the current owner or operator of the affected aircraft. For further information or questions call (800) 544-8594 or (785) 594-2741. All persons are free to copy this information if it is copied in its entirety with no alterations or additions.

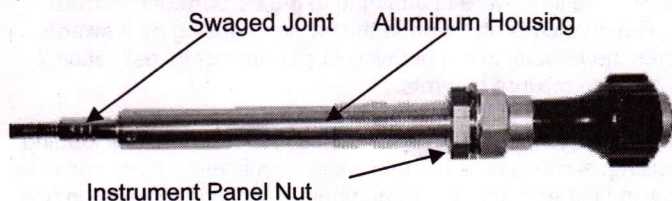


Figure 1: Mixture control housing with red knob.

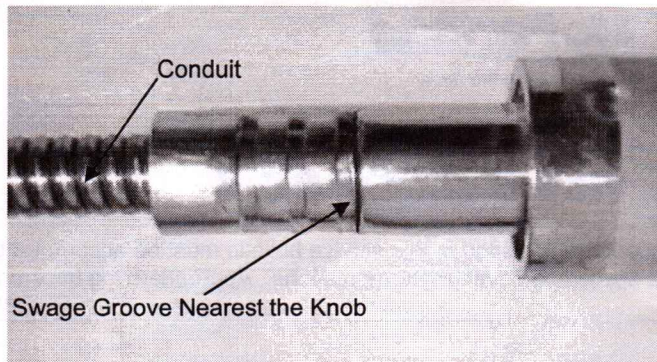


Figure 2: Close up of a swage joint.

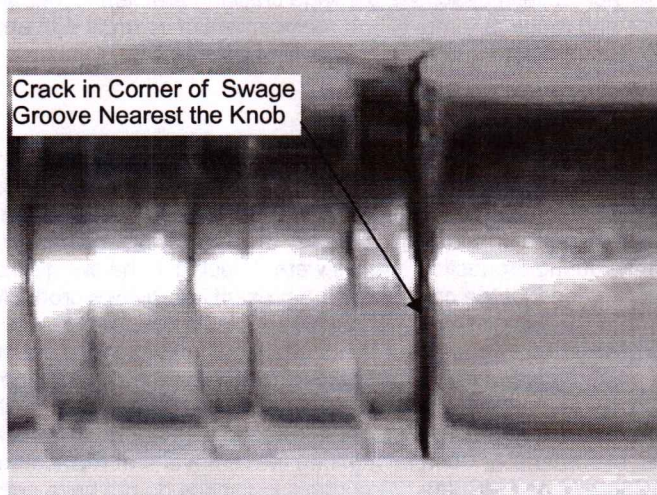


Figure 3: Close up of a severe crack.