



SUBJECT: INSPECTION OF FLAP HINGES

MODELS AFFECTED: All Mooney M20C - 2923 thru 20-1149  
M20D - 253 & on  
M20E - 587 thru 21-1163  
M20F - ALL thru 22-1208  
M20G - ALL

TIME OF COMPLIANCE: As soon as practical within the next 25 hours of operation, and annually thereafter.

INTRODUCTION: There have been reports of corrosion at the outboard flap hinges on aircraft operated around sea coast areas. Special attention is being called to this problem because corrosion present in this area can escape detection during routine inspections due to the hinge fairing covering a major portion of the hinge.

Since the issuance of Service Bulletin M20-186, it has been discovered that the flap upstop bolt at wing station 147.75 is a modified AN3C bolt which is a stainless steel bolt. Under certain environmental conditions, this can cause an undesirable galvanic couple with the aluminum flap hinge and can increase the probability of corrosion.

- INSTRUCTIONS:
1. With flaps lowered use adequate lighting and inspect all exposed portions of the hinges on flap and wing for evidence of a blistered or scaly appearance.
  2. With the aid of a thin blade knife or equivalent, probe between the flap hinge and flap hinge fairing where possible. If hidden corrosion is present a powdery or flaky residue will be in evidence, and disassembly is required. (NOTE: Check original flap rigging prior to proceeding.)
  3. Remove the flap, flap fairing, and flap hinge. (Close out rivets at trailing edge of wing must be removed to remove the hinges.)
  4. Inspect the hinge, hinge fairing, trailing edge rib, and adjacent structure to determine the extent of hidden corrosion. Treat the corroded parts per Advisory Circular.

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43.13-1. If the corrosion is moderate to extensive, replacement of corroded parts is required.
5. If corrosion is found and clean up work is performed, all reinstalled parts, whether they are cleaned up or new, should be coated with zinc chromate primer prior to installation.
6. Remove the two (2) original flap upstop bolts (modified AN3C) at wing station 147.75 and replace with NAS 428-3-7.  
NOTE: The modified AN3C bolts should be replaced even if no corrosion is found in steps 1 and 2.
7. After the hinges are installed, reassemble the wing trailing edge with AN470AD4 or MS20470AD4 rivets.
8. Install the flap and adjust the upstop bolt to obtain the flap position as determined in step 2. If the AN315-3R position lock nut is in good condition, it may be reused.

(Re: Mooney Service and Maintenance Manual Section 6-6 Paragraph 3.)