

MOONEY AIRCRAFT INC.  
SERVICE LETTER 20-45  
(F.A.A. Approved)

DATE: 2-18-59

SUBJECT: Kit-Replacement of hinge Bearing Bracket for Control Surfaces.

MODELS AFFECTED: M20 & M20A--Serials 1002 thru 1364.

PARTS LIST: 4003-3 Hinge Bearing Bracket -17  
AN 970-3 Washer(2 per Hinge Bracket) 28  
8389 Shim--(1 per each outboard Elevator Hinge Brkt) ~~2~~  
Fabric Patches (6)

INTRODUCTION:

Reference is made to Mooney Service Letter 20-44 which calls for an inspection of the rudder, elevator and aileron hinges and for replacement of weak or damaged hinge bearing brackets. If it is necessary to replace one bearing bracket on a control surface, then a set of brackets must be installed on that surface. A set of hinge bearing brackets is defined as follows: for the rudder(2 upper), for the elevator(2 outer) and for the aileron (all three).

INSTRUCTIONS:

1. Install AN 970-3 Washers (2) with each new hinge bearing bracket, one at each attach bolt between bracket and structure except at the tip elevator hinge where P/N 8389 shim should be used in place of the inboard washer.
2. Rudder
  - a) Remove fabric covering small "D" shaped cutout in plywood at trailing edge on right hand side at each of the upper hinges. Do not remove gap tape or lower hinge bolt.
  - b) Replace hinge bearing bracket (2) and re-cover access openings with fabric patch (use Butyrate Dope).
3. Elevator
  - a) Remove fabric covering small "D" shaped cutout in plywood at trailing edge on underside at each of the outboard hinges. Do not remove gap tape or inboard hinge bolt.
  - b) Replace hinge bearing bracket (2)(see item 1 for use of shim at tip hinge bracket) and recover access opening with fabric patch(use Butyrate Dope).
4. Aileron
  - a) Remove counter balance weight fairing and two access plates at trailing edge of Wing.
  - b) Disconnect control tube and remove aileron.
  - c) Check clearance between aileron gap strip and existing hinge bearing bracket. If this clearance is not approximately 1/16 inch, the gap strip may have to be dimpled at the hinge to allow clearance for heavier replacement bracket.
  - d) Replace hinge bearing bracket (3).