MOONEY AIRCRAFT CORPORATION

SERVICE BULLETIN

NUMBER: M20-205B

BOX 72 • KERRVILLE, TEXAS 78028

THIS BULLETIN IS FAA APPROVED

DATE: 5-3-78

(This Service Bulletin supersedes S.B. M20-205A.)

SUBJECT: INSPECTION OF CONTROL WHEEL SHAFTS FOR POSSIBLE FATIGUE CRACKS

MODELS & S/N AFFECTED: M20, M20A, M20B, M20C thru 20-1237, M20D, M20E, M20F thru 22-1439, and M20G airplanes, certificated in all categories with over 1,000 hrs. time in service.

COMPLIANCE: MANDATORY compliance within 30 days of notification, unless already accomplished within the last 250 hours time in service and thereafter at intervals not to exceed 500 hours time in service from the last inspection.

INTRODUCTION: To prevent possible failure of the control wheel shaft due to cracking with associated crack growth, accomplish the following inspection:

a) Remove the right hand and left hand control wheel and inspect the aft two inches of the control wheel shaft for cracks (particularly at the attachment hole for the wheel). Use visual and dye penetrant inspection method, aided by at least 10 power magnification. (Reference Figure 205-1 for details of hardware).
b) Replace or repair any cracked shaft, per the appropriate paragraphs which follow.
c) Reinstall the right hand and left hand control wheels.
d) Repair or replacement of parts as indicated below will permit discontinuance of inspection.

REPLACEMENT: Remove existing control shaft and install new shaft using existing hardware. Ream or drill new shaft to match existing control wheel as required.

NOTE: Taper ream .516 inches per ft. (No. 1 Brown & Sharpe)

Old P/N	New P/N
710005-1	710072-501
710005-2	710072-502
710005-503	710072-503
710005-505	710072-505
710005-506	710072-506
710005-507	710072-507
710005-508	710072-508

(LIMIT REPAIR TO A/C BUILT AFTER 1968. S/N 690001 & ON; ALL PREVIOUS A/C WILL REQUIRE SHAFT REPLACEMENT.)

REPAIR KIT M20-205

a) Cut off damaged end of control shaft back to end of machined surface (1.15 in. or 1.65 in. reference).
b) Insert 900000-1 or 900000-3 bushing into control wheel. Match drill or taper ream -1 or -3 bushing to control wheel. Reinstall existing taper pin and hardware to attach control wheel to bushing.
c) Insert control wheel and bushing into control shaft (1.75 inches).
With the aileron blocked in the neutral position, place a straight edge over the top of both control wheels for alignment; reference Service and Maintenance Manual, Flight Controls Section.
d) Drill (2) .190/.194 dia. holes thru the control shaft and bushing as shown in Figure 205-2. (CAUTION: MOVE TUBES OR WIRES INSIDE OF SHAFT CLEAR BEFORE DRILLING.)
e) Install 2 (ea.) AN3-11A bolts, AN960-10L washers and AN363-1032 nuts. Torque 12 to 15 in-lbs.

SERVICE BULLETIN KIT NO. S.B. 20-205-1 or -3:

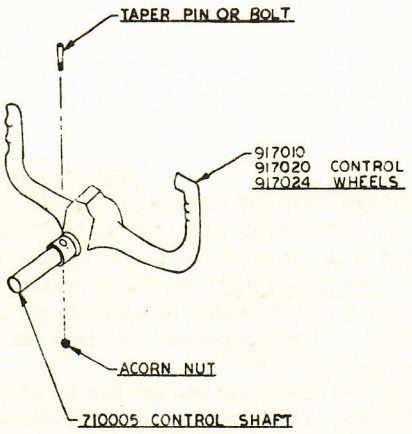
-1 Kit	-3 Kit
900000-1 Bushing	900000-3 Bushing . . . . . 1 ea.
AN3-11A Bolt	**AN3-11A Bolt** . . . . . .2 ea.
AN960-10L Washer	**AN960-10L Washer** . . . . . 2 ea.
AN363-1032 Nut	AN363-1032 Nut . . . . . .2 ea.

NOTE: 900000-1 bushing used on 710005-1, -2, -503 (Optional equipment), -507 and -508 (ream .190/.194 dia. hole to .249/.252 dia. for use on -507 and -508).

900000-3 bushing used on 710005-505 and -506.

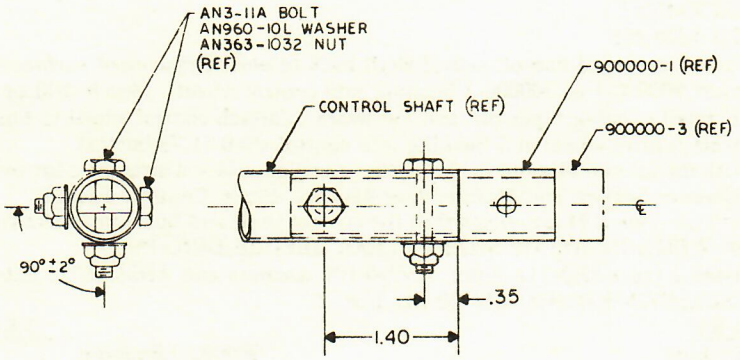
COMPLIANCE: Upon compliance with this Service Bulletin, please fill out the enclosed card and specify findings of inspection and disposition. This information should also be entered in aircraft log book. Mail card to Mooney Aircraft, Kerrville, TX.

FIG. 205-1



NOTE: This repair effective for aircraft built after 1968 S/N 690001 & on. Not approved for aircraft manufactured prior to above.

FIG. 205-2



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