

SUPERSEDES SERVICE LETTER NO. 20-131A DATED 2/25/66

SUBJECT: Electric Gear Actuator and 950162 Bracket

MODELS AFFECTED: M20C, Serial Numbers 2663, 2808, 2816, 2825, 2863, 2913, 2920, 2930, 2945, 2961, 2969, 2971, 2998, 3008, 3018, 3021, 3040, 3056, 3065, 3136, 3146, 3198, 3216, 3225, 3226, 3248, 3332, and
 M20E, Serial Numbers 309, 431, 461, 494, 528, 529, 536, 538, 544, 545, 551, 553, 554, 558, 571, 573, 577, 579, 580, 582, 584, 586, 589, 599, 602, 604, 606, 615, 620, 627, 637, 639, 641, 646, 650, 652, 653, 654, 657, 658, 668, 669, 675, 690, 694, 718, 720, 726, 730, 731, 737, 744, 747, 752, 756, 758, 761, 766, 772, 781, 782, 785, 809, 812, 813, 836, 838, 843, 845, 849, 856, 857, 873, 882, 886, 887, 892, 893, 900, 906, 915, 917, 921, 922, 942, 952, 977, 980, 1049 equipped with Electric Gear.

TIME OF COMPLIANCE:

1. Replace Dukes actuator P/N 4196-00-1A within the next 15 hours.
2. Replace 4196-00-1B actuators at next annual inspection or prior to November 1, 1966, whichever comes first.

INTRODUCTION: All Dukes actuators P/N 4196-00-1A must be replaced within the next 15 hours of service after the effective date of this bulletin with Dukes actuators P/N 4196-00-1C. Upon installation of the Dukes actuator P/N 4196-00-1C, install Mooney bracket 950162 on the forward end of the actuator motor.

Dukes actuators P/N 4196-00-1B must be replaced as indicated in item two entitled "Time of Compliance" with Dukes actuator P/N 4196-00-1C.

Lack of compliance with this bulletin may result in the inability to operate the gear electrically or manually.

INSTRUCTIONS:

1. Place aircraft on jacks.
2. Remove 310124-501 access panel.
3. Remove present actuator and install 4196-00-1C actuator per Mooney drawing 950090.
4. It will also be necessary to file 950099 bracket in the vicinity of the actuator ball screw gear housing to provide a clearance fit. Zinc chromate after filing if necessary. See attached sketch.
5. Install 950162 bracket on forward edge of actuator motor per Mooney drawing 950090 (if not installed).
6. Attach 950132-1 cable assembly to 950162 bracket per Mooney drawing 950090.
7. Rig gear per 950090 gear installation drawing. Also, these instructions may be found in the latest issue of the M20C, D and E Service and Maintenance Manual. Review all applicable Service Bulletins and Instructions for compliance.

8. Test gear to see that it operates properly, both the electrical and the manual emergency system. When the emergency release handle is in the most aft position, the disengage arm at the actuator drive connector box should be full forward. When the emergency release handle is in the most forward position, the disengage arm should be full aft. Proper adjustment should be made at the actuator drive connector arm for correct cable length. Check current drain of actuator motor with 0 to 50 amp ammeter. Current drain should not exceed 28 amps at 12.5 volts.
9. Install 3 10124--501 access panel.
10. With gear down and locked, remove jacks.
11. Flight test installation. Check both electrical and emergency system during flight.
12. Return 4196-00-1A and 4196-00-1B actuators for credit. All actuators received on or before December 10, 1966 will be replaced at no charge if the unit is not damaged. (Parts only. Labor not included.) Any damaged actuators will be charged to the customer at the price of replacement parts needed to repair damage. This will be determined by Dukes. All actuators received after December 10, 1966 will be billed the exchange cost.

NOTE: Do not manually retract gear. Use electrical retraction only.

COMPLIANCE: Fill out the compliance card enclosed in the kit and return to Mooney Aircraft, Inc. for our records.

SERVICE BULLETIN KIT NO. 20-131B

PARTS LIST

Dukes 4196-00-1C Actuator	1
Amp 35762 Knife Disconnect	4
950090 Shts. 1, 2, and 3	1 ea.
950162 Bracket	1
AN500AD6--5 Screw	2
AN742--3 Clamp	2
AN3--3A Bolt	2
AN960--10 Washer	4
AN365--1032 Nut	2

These kits may be ordered from your local Mooney distributor. Direct factory orders will not be accepted

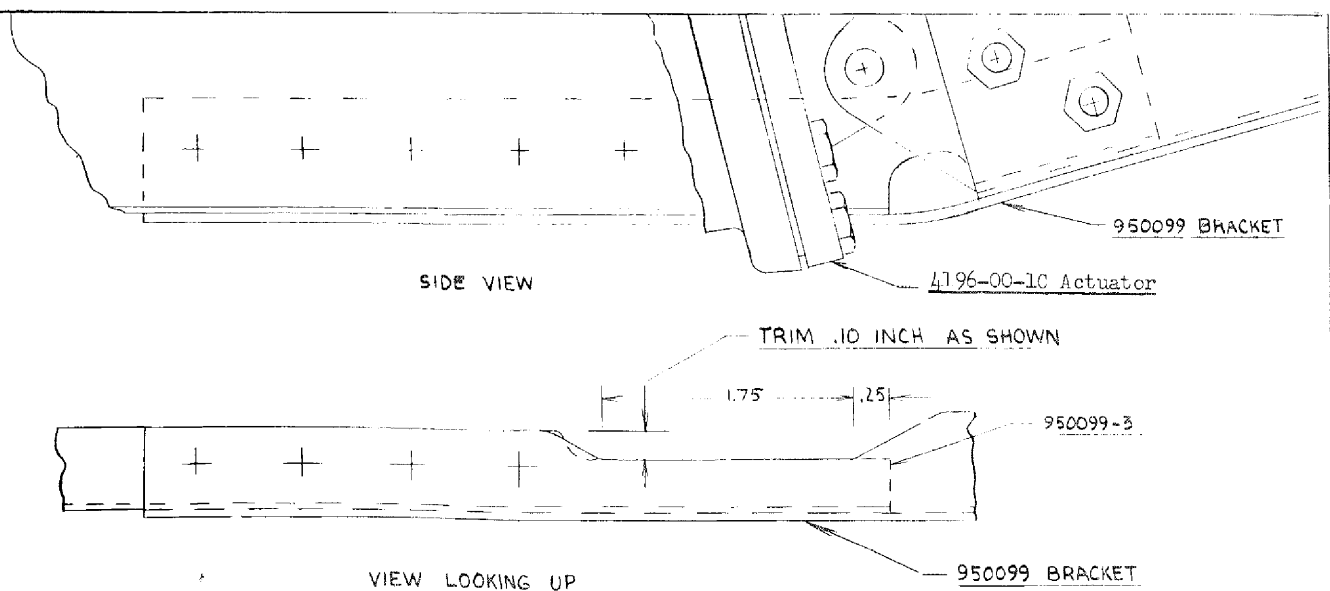


FIGURE 1
SERVICE BULLETIN M20-131B