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SUBJECT: INSTALLATION OF IMPROVED THROTTLE AND MIXTURE CONTROL HOUSING CLAMPS, REINFORCEMENT OF ENGINE CONTROL MOUNTING BRACKET, AND CHANGE OF THROTTLE CONTROL RIGGING.

AIRCRAFT AFFECTED: Part I of this rework is to be accomplished on all Model 23 airplanes prior to Serial M-519 except M-1 through M-6, M-9, M-53, M-73, M-100, M-179, M-208, M-254, M-255, M-281, M-305, M-329 through M-331, M-340 through M-347, M-360, M-361, M-402, M-406, M-433, M-436, M-468, M-482, M-483, M-504, M-507, M-508, M-511, and M-514 through M-517.

Part II of this rework is to be accomplished on all Model 23 airplanes prior to Serial M-538 except M-4, M-9, M-53, M-100, M-179, M-254, M-255, M-305, M-330, M-340, M-342, M-345, M-346, M-347, M-360, M-402, M-406, M-433, M-436, M-468, M-482, M-483, M-504, M-505, M-507, M-508, M-511, M-515, M-516, M-517, M-519, M-520, M-521, M-523, M-524, M-526, and M-529 through M-536.

Part III is applicable to the same Model 23 airplanes on which Part I is performed through Serial M-481.

REASON FOR CHANGE: To insure positive retention of the throttle and mixture control housings, to prevent possible breakage of the engine control mounting bracket, and to improve throttle rigging.

ACCOMPLISHMENT: Within ten flight hours after receipt of this bulletin.

DESCRIPTION OF CHANGE: Part I consists of removing the existing mixture control housing clamp and securing the housing with a threaded phenolic block and steel clamp. Part II consists of rerigging the throttle control cable on the carburetor throttle arm. Part III consists of installing a reinforcing plate within the engine control mounting bracket and replacing the present throttle control housing clamp with a threaded phenolic block and steel clamp.

PART I.

1. Remove the clamp and attaching parts securing the mixture control housing at the carburetor.
2. Position an AN743-13 support clamp bracket on the aft left hand side of the engine control mounting bracket as shown in Figure 1. Drill a .139 - .148 inch diameter hole in the engine control mounting bracket through the upper attaching hole in the AN743-13 bracket.
3. Attach the AN743-13 bracket to the engine control mounting bracket with an AN515-6R6 screw, MS20365-632C nut, and an AN960-6L washer. Do not tighten the screw completely at this time.
4. Place two -35 blocks around the mixture control housing, slip a PP561-DS-4 clamp over the blocks and push an AN3-7A bolt through the clamp and AN743-13 bracket.
5. Rotate the AN743-13 bracket until the -35 blocks contact the engine control mounting bracket, then tighten the AN515-6R6 screw and drill a .139 - .148 inch diameter hole in the engine control mounting bracket through the lower attaching hole in the AN743-13 bracket.
6. Install an AN515-6R6 screw, MS20365-632C nut, and an AN960-6L washer at the lower attaching hole of the AN743-13 bracket.
7. Secure the -35 blocks and the PP561-DS-4 clamp to the AN743-13 bracket with the AN3-7A bolt and an MS20365-1032 nut. Use AN960-10 and AN960-10L washers as required to obtain the 1.32 inch dimension shown in Figure 1.
8. Check the mixture control for full travel and adjust the position of the -35 blocks on the housing, if necessary.

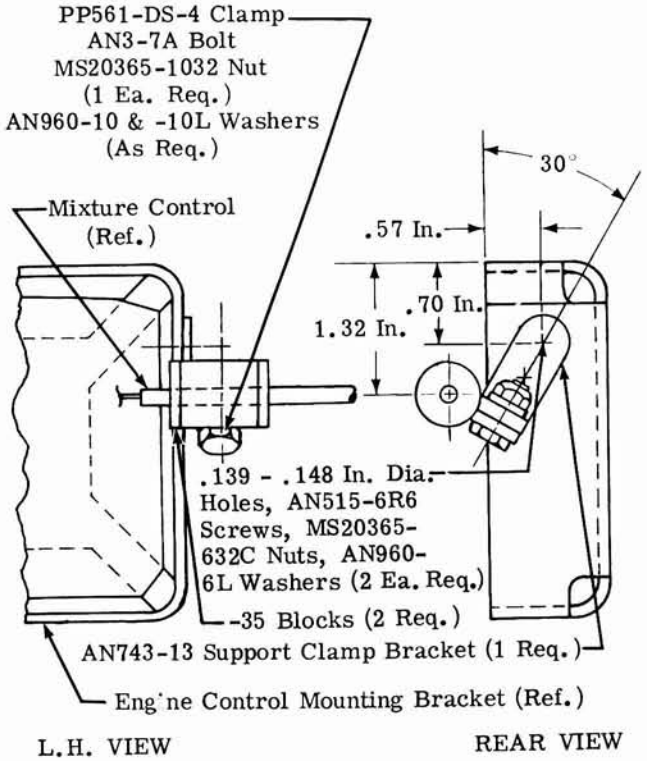

Figure 1

PART II

1. Disconnect the throttle control cable from the lower hole in the carburetor throttle arm.
2. Drill out the center hole in the carburetor throttle arm to .257 - .267 inch diameter.
3. Reconnect throttle cable to center (drilled) hole.
4. If Part III is not applicable, adjust throttle control and landing gear warning horn (Steps 6 and 7, Part III) as required.

PART III

1. Remove the clamp and attaching parts securing the throttle control housing at the carburetor.
2. Position a 169-910002-29 plate (shown in Figure 2) over the outside edges of the engine control mounting bracket by aligning the .193 - .201 inch diameter hole in the plate with the corresponding hole in the bracket.
3. Bend the top and bottom edges of the -29 plate as necessary for a good fit within the bracket and drill six .165 - .174 inch diameter holes in the bracket through the holes in the plate.
4. Position the -29 plate within the bracket as shown in Figure 2 and secure the plate to the bracket with six AN515-832-6 screws and six MS20365-832 nuts.
5. Place two -33 blocks around the throttle control housing. Secure the blocks at the .193 - .201 inch diameter hole in the engine control mounting bracket with a PP561-DS-4 clamp, AN3-6A bolt, AN960-10 washer, and an MS20365-1032 nut.

NOTE

On airplanes incorporating the optional simulated retractable landing gear installation, both the existing and the new throttle control housing clamps are located on the aft right hand side of the engine control mounting bracket. However, the throttle control housing can be secured with the same attaching parts described in Step 5.

1. -29 Plate (1 Req.)
2. Engine Control Mounting Bracket (Ref.)
3. .165 - .174 In. Dia. Holes, AN515-832-6 Screws, MS20365-832 Nuts (6 Ea. Req.)
4. -33 Blocks (2 Req.)
5. PP561-DS-4 Clamp (1 Req.)
6. AN3-6A Bolt, AN960-10 Washer, MS20365-1032 Nut (1 Ea. Req.)

Figure 2

6. Check throttle control for full travel and adjust the position of the -33 blocks on the housing, if necessary.
7. On airplanes equipped with the simulated retractable landing gear installation, turn on the battery master switch, place the landing gear switch in the up position, and check to see that the landing gear warning horn sounds when the throttle is placed in the idle position. If necessary, change the position of either the warning horn switch or the switch actuator to obtain proper operation of the horn.

Upon completion of this modification, an appropriate compliance note should be entered in the aircraft log book. Also, it is requested that the attached compliance card be completed and returned to Beech Aircraft Corporation.

The following is a preliminary listing of parts for this improvement change, and is provided with this service information for reference and familiarization purposes. It is suggested that this list be placed in your files for reference when reordering parts, until such time as the listing of parts is incorporated in the airplane parts catalog.

QUANTITY	PART NUMBER	NOMENCLATURE
	PART I	
1	AN743-13	Support Clamp Bracket
2	AN515-6R6	Screws
2	MS20365-632C	Nuts
2	AN960-6L	Washers
2	169-910002-35	Blocks
1	PP561-DS-4	Clamp
1	AN3-7A	Bolt
1	MS20365-1032	Nut
1	AN960-10	Washer
1	AN960-10L	Washer
	PART II	
	No new parts required.	
	PART III	
1	169-910002-29	Plate
6	AN515-832-6	Screws
6	MS20365-832	Nuts
2	169-910002-33	Blocks
1	PP561-DS-4	Clamp
1	AN3-6A	Bolt
1	MS20365-1032	Nut
1	AN960-10	Washer