

Beechcraft® SERVICE BULLETIN

19, 23, 24

No. 2165, Rev. II
ATA Code 76-10

Kit No. 23-9024-1 S
Kit No. 23-9024-3 S
Kit No. 23-9024-5 S

SUBJECT: ENGINE CONTROLS - REPLACEMENT OF THE MIXTURE CONTROL CABLE ASSEMBLY

SYNOPSIS OF CHANGE: Corrected callout part numbers in Figure 1, Figure 3 and step 14 and updated Service Bulletin format.

REASON: This Service Bulletin is being issued to assure correct alignment of carburetor mixture control arm and replacement mixture cable.

NOTE

If BEECHCRAFT Service Instructions No. 1123 has been accomplished, this Service Bulletin may be disregarded with the following exception: Steps 9, 18, 22 and 23 should be accomplished on all applicable airplanes.

EFFECTIVITY: BEECHCRAFT B19 Sport 150 and B19 Sport 180, serials MB-558 through MB-905; C23 Sundowner 180, serials M-1413, M-1414, M-1416 through M-1418, M-1420 through M-1422, M-1424 through M-1438, M-1440 through M-1446, M-1448 through M-2016 and M-2018 through M-2143; B24R and C24R Sierra 200, serials MC-152 through MC-539 and MC-541 through MC-650.

COMPLIANCE: Beech Aircraft Corporation recommends that this Service Bulletin be accomplished when replacement of the existing mixture control cable becomes necessary.

APPROVAL: Engineering data contained in this Service Bulletin is FAA Approved.

AW-832 O

Issued: January, 1987

Revised: January, 1995

Beech Aircraft Corporation issues Service Information for the benefit of owners and fixed based operators in the form of two classes of Service Bulletins. The first class, Mandatory Service Bulletin (Red Border) includes changes, inspections and modifications that could affect safety or crashworthiness. Beech considers compliance with these Service Bulletins to be mandatory. Beech also issues a Service Bulletin having no border which is designated as either recommended or optional. In the Compliance Section within the Bulletin, in the case of recommended Service Bulletins, Beech feels the changes, modifications, improvements or inspections will benefit the owner and although highly recommended, they are not considered mandatory at the time of issuance. In the case of optional Service Bulletins, compliance with the changes, modifications, improvements or inspections is at the owner/operator's discretion. Both classes are mailed to:

(a) BEECHCRAFT Authorized Outlets.

(b) Owners of record on the FAA Aircraft Registration Branch List and the BEECHCRAFT International Owner Notification Service List.

(c) Those having a publications subscription.

Information on Owner Notification Service or subscriptions can be obtained through any BEECHCRAFT Authorized Outlet. As Mandatory Service Bulletins and Service Bulletins are issued, temporary notification in the Service Bulletin Master Index should be made until the index is revised. Warranty will be allowed only when specifically defined in the Service Bulletin and in accordance with the Beech Aircraft Corporation Warranty Policy.

Unless otherwise designated, Beech Aircraft Corporation Mandatory Service Bulletins, Service Bulletins and BEECHCRAFT Kits are approved for installation on BEECHCRAFT airplanes in original or BEECHCRAFT modified configurations only. BEECHCRAFT Mandatory Service Bulletins, Service Bulletins and Kits may not be compatible with airplanes modified by STC installations or modifications other than BEECHCRAFT Approved kits.

1 of 6

Service Bulletin No. 2165, Rev. II

MANPOWER: The following information is for planning purposes only:

Estimated man-hours: 3 hours.

Suggested number of men: 1 man.

The above is an estimate based on experienced, properly equipped personnel complying with this Service Bulletin. Occasionally, after work has started, conditions may be found which could result in additional man-hours.

MATERIAL: The following parts required for this modification may be ordered through a BEECH-CRAFT Authorized Outlet:

Model/Serial	Part Number	Description	Quantity Per Airplane
B19 Sport 150	23-9024-1 S	Kit - Engine Mixture Control Installation	1 required
B19 Sport 180	23-9024-3 S	Kit - Engine Mixture Control Installation	1 required
C23 Sundowner 180	23-9024-3 S	Kit - Engine Mixture Control Installation	1 required
B24R and C24R Sierra 200	23-9024-5 S	Kit - Engine Mixture Control Installation	1 required

Beech Aircraft Corporation expressly reserves the right to supersede, cancel and/or declare obsolete, without prior notice, any kits or publications that may be referenced in this Service Bulletin.

NOTICE

All BEECHCRAFT kits, unless otherwise designated, are approved for installation on BEECHCRAFT airplanes in original or BEECHCRAFT modified configurations only. BEECHCRAFT kits may not be compatible with airplanes modified by STC installations or modifications other than BEECHCRAFT approved kits.

SPARES AFFECTED: None.

WARRANTY CREDIT: None.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: None.

REFERENCES: None.

PUBLICATIONS AFFECTED:

It is recommended that a note to "See Service Bulletin No. 2165, Rev. II" be made in the following:

BEECHCRAFT 19, 23 and 24 Shop Manual, P/N 169-590015G or subsequent, Section 3;

BEECHCRAFT 19, 23 and 24 Parts Catalog, P/N 169-590012J or subsequent, Figures 159A, 241B, 241D and 241E;

BEECHCRAFT 19, 23 and 24 Parts Catalog, P/N 169-590026E or subsequent, Figures 159, 241, 241A and 241B.

**ACCOMPLISHMENT
INSTRUCTIONS:**

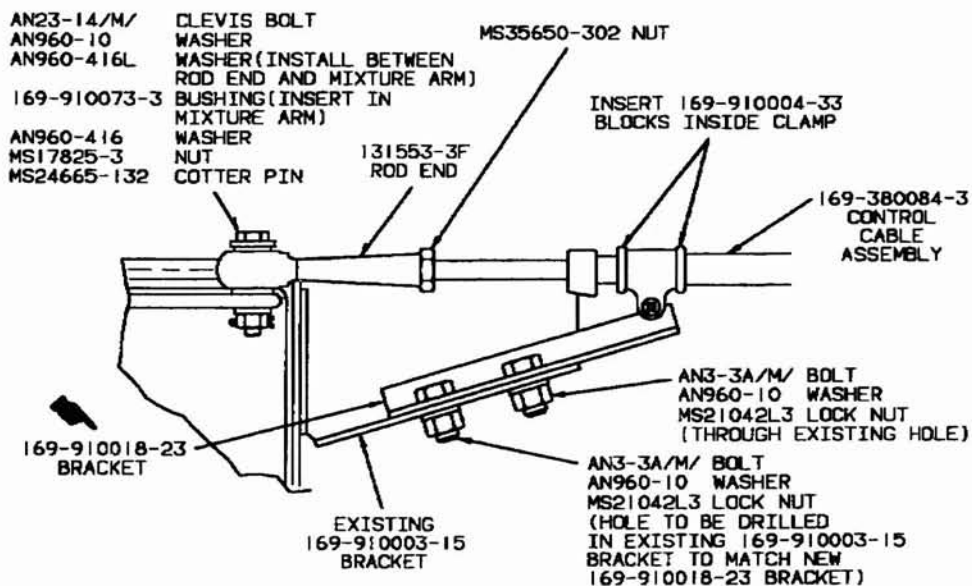
This Service Bulletin shall be accomplished as follows:

1. Remove the engine cowling.
2. Disconnect the mixture control cable from the mixture arm located on the carburetor or injector.
3. Remove the clamp from the existing mixture control bracket assembly and remove the blocks from the clamp. Retain the clamp and attaching hardware.
4. Remove the engine control lever knobs, the control lever lock handle and the engine control quadrant cover located on the power pedestal inside the airplane.
5. Disconnect the mixture control cable assembly from the mixture control lever on the control quadrant.
6. Cut all wire ties from the cable assembly and carefully remove the cable from the engine compartment.
7. With a hole saw or hole punch, enlarge the hole in the firewall for the mixture control cable assembly to 7/8 inch diameter.
8. On B19 Sport 150 airplanes, install the new mixture control bracket (P/N 169-910018-23 by attaching it to the existing bracket as shown in Figure 1.
9. On B19 Sport 180 and C23 Sundowner 180 airplanes, remove the existing cable bracket and install a new P/N 169-910081-1 bracket as shown in Figure 2.
10. On B24R and C24R Sierra 200 airplanes, remove the existing mixture control bracket and install a new 169-910078-3 bracket as shown in Figure 3.
11. Insert the 169-910004-33 blocks supplied with the kit into the clamp removed in Step 3. Refer to the appropriate illustration and attach the clamp to the bracket or plate using the original attaching parts.
12. Lubricate the new cable assembly with an aerosol silicone lubricant and route the new cable assembly in the same manner as the cable assembly removed in Step 6.
13. Remove the rod end and nut from the old cable assembly and install it on the aft end of the new cable assembly. Reconnect the mixture control cable assembly to the mixture control lever using the original attaching parts.
14. Install the P/N 131553-3F rod end and MS35650-302 nut supplied with the kit on the forward end of the new cable assembly.
15. Place the 112413-4 half-ball grommets around the cable assembly on the forward side of the firewall. Place the 112412 grommets around the 112413-4 half-ball grommets and slide this assembly along the cable assembly inserting it into the 7/8 inch hole in the firewall.
16. Install the P/N MS16624-1087 snap ring on the aft side of the firewall around the 112412 grommets.
17. Refer to the appropriate figure and attach the cable assembly to the carburetor or injector mixture arm, assembling the attaching parts as listed. The rod end should be attached to the outboard side of the arm on B19 Sport 180, C23 Sundowner 180 and B24R and C24R Sierra 200 airplanes and on top of the arm on B19 Sport 150 airplanes.
18. Check for full travel of the mixture arm when the mixture control lever is moved from stop to stop. Adjust the rod ends and the position of the clamp on the bracket to permit full travel of the mixture arm with a slight "cushion" (no more than 1/16 inch) at the forward end of travel. The carburetor or injector mixture control arm must reach the full rich stop slightly before the cockpit lever reaches its limit of travel.
19. Tighten the clamp and secure the rod ends with the P/N MS35650-302 nuts.

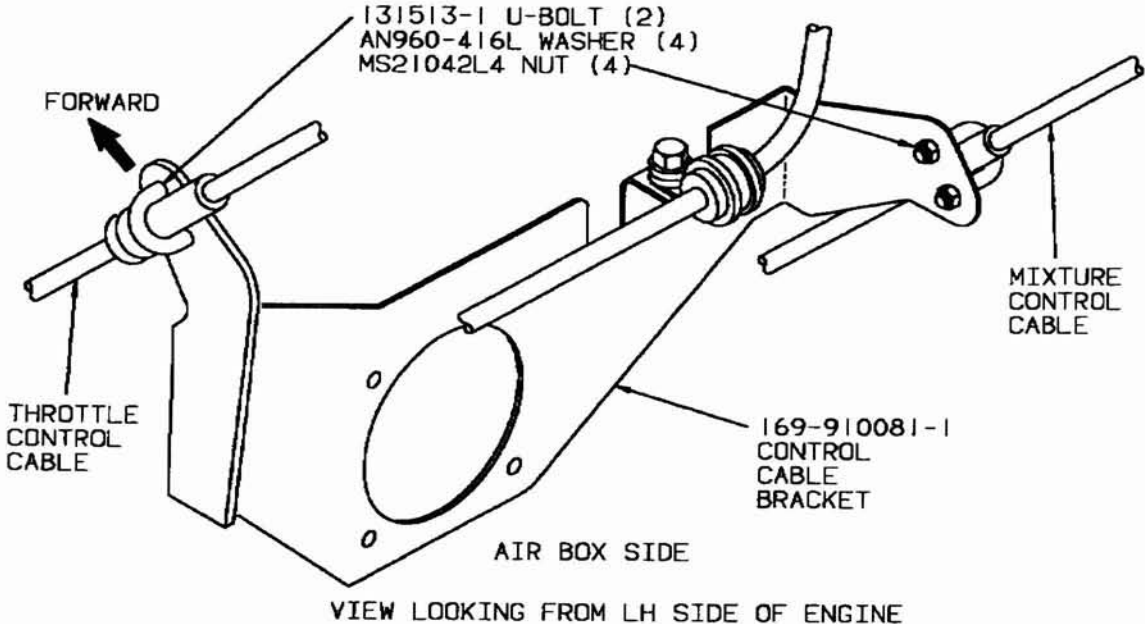
WARNING

Cable end-threads must be visible in the inspection hole of each rod end to ensure sufficient engagement.

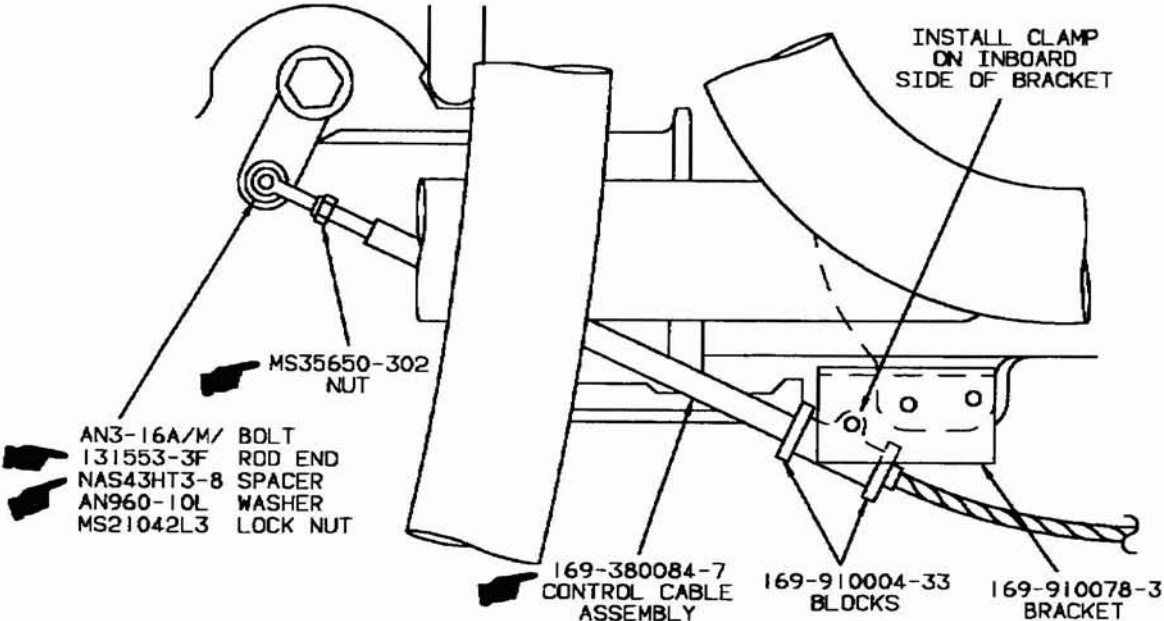
20. Secure the cable assembly with P/N MS3367-1-9 straps. The cable assembly should not interfere with any flight controls or ride on any wiring or antenna cables.
21. Reinstall the engine control quadrant cover, the control lever lock handle and the engine control lever knobs.
22. Reinstall the engine cowling.
23. Ground run the engine prior to flight to ensure the proper operation of the mixture control.



**B19 Sport 150
Figure 1**



B19 Sport 180 and C23 Sundowner 180
 Figure 2



B24R and C24R Sierra 200
 Figure 3

Service Bulletin No. 2165, Rev. II

RECORD COMPLIANCE: Upon completion of this Service Bulletin, make an appropriate maintenance record entry specifying the kit identification number and the kit serial number. It is recommended that the parts list contained in the kit be filed for future reference until the listing of parts has been incorporated into the Parts Catalog.

NOTE

If you are no longer in possession of this airplane, please forward this information to the present owner.