

SERVICE BULLETIN

Beech

TITLE: FLIGHT CONTROLS - FLAP FLEX SHAFT (CABLE) ASSEMBLY INSPECTION/REPLACEMENT

1. Planning Information

A. Effectivity

- (1) Airplanes

NOTE

All airplanes that have complied with Safety Communique No. 182 must still comply with this Service Bulletin because the suspect lot of affected cables has been expanded.

- (a) Civil

Beech Model A36 Bonanza, Serials E-3302 through E-3398;

Beech Model B36TC Bonanza, Serials EA-652 through EA-677;

Beech Model 58 Baron, Serials TH-1936 through TH-1988 and TH-1990 through TH-1996.

Those airplanes that have installed any P/N 12527Y-63.31 (left-hand), 12163Y-63.31 or 12163Y-1 (right-hand) Flap Flex Shaft Assembly or any P/N 45-521212 (any dash number) Flap Actuator Assembly purchased from Raytheon Aircraft Company (RAPID) and shipped between March 1, 2000 and June 30, 2001 for any of the following Models: 35 (except for D-1 through D-837), A35, B35, C35, 35R, D35, E35, F35, G35, H35, J35, K35, M35, N35, P35, S35, V35, V35TC, V35A, V35A-TC, V35B, V35B-TC; 35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, E33C, F33, F33A, F33C, G33; 36, A36, A36TC, B36TC; 95-55, 95-A55, 95-A55A, 95-B55, 95-B55A, 95-C55, 95-C55A, D55, D55A, E55, E55A; 95, B95, B95A, D95A, E95; 58, 58A, 58P, 58PA, 58TC, 58TCA; 56TC, A56TC; Airplanes conforming to Type Certificate No. 5A3, B45 (T-34A Export Version), B45 (T-34A variants Manufactured by Fuji Heavy Industries, Ltd.).

- (b) Military

Those airplanes that have installed any P/N 12527Y-63.31 (left-hand), 12163Y-63.31 or 12163Y-1 (right-hand) Flap Flex Shaft Assembly or any P/N 45-521212 (any dash number) Flap Actuator Assembly purchased from Raytheon Aircraft Company (RAPID) and shipped between March 1,

Exported under the authority of license exception: TSU. "These commodities, technology or software were exported from the United States in accordance with Export Administration Regulations. Diversion contrary to U.S. law prohibited."

Raytheon Aircraft Company (RAC) issues Service Information for the benefit of owners and fixed base operators in the form of two classes of Service Bulletins. The first class, Mandatory Service Bulletins (red border) includes changes, inspections and modifications that could affect safety or crashworthiness. RAC also issues Service Bulletins with no red border which are designated as either recommended or optional in the compliance section within the bulletin. In the case of recommended Service Bulletins, RAC feels the changes, modifications, improvements or inspections will benefit the owner/operator and although highly recommended, Recommended Service Bulletins 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) RAC Authorized Service Centers.
- (b) Owners of record on the FAA Aircraft Registration Branch List and the RAC International Owner Notification/Registration Service List.
- (c) Those having a publications subscription.

Information on Owner Notification Service or subscription can be obtained through any RAC Authorized Service Center. 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 RAC Warranty Policy.

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



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Hawker



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2000 and June 30, 2001 for any of the following Models: 95-B55B (T-42A); Airplanes conforming to Type Certificate No. 5A3, YT-34 (A45T), T-34A (A45), B45 (T-34A Export Version), B45 (T-34A Manufactured by Canadian Car and Foundry), B45 (T-34A variants Manufactured by Fuji Heavy Industries, Ltd.), B45 (T-34A Assembled by Fabrica Militar de Aviones, for Argentina Military Service), T-34B (D45); T-34C (34), 34C (34), T-34C-1 (34).

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

(2) Spares

The following Spares sold through Raytheon Aircraft Company (RAPID) and shipped between March 1, 2000 and June 30, 2001: All spares stock with P/N 12527Y-63.31 (LH), P/N 12163Y-63.31 (RH) or P/N 12163Y-1 (RH) Flap Flex Shaft Assemblies that have a manufacture date between January 2000 and April 2001, inclusive. Also, all spares stock with P/N 45-521212 (any dash number) Flap Actuator Assemblies with Flap Flex Shaft Assemblies that have a manufacture date between January 2000 and April 2001, inclusive.

NOTE

The Flap Flex Shaft Assemblies are identified on the actuator end with a paper identification label that carries the manufacture date in the form of month/year (i.e. XX/2000 or XX/00 for year 2000 and XX/2001 or XX/01 for year 2001).

B. Reason

This Mandatory Service Bulletin is being issued to provide instructions for inspection and replacement, if necessary, of each Flap Flex Shaft Assembly. Raytheon Aircraft has received four reports of Flap Flex Shaft Assembly separations leading to an asymmetric flap situation. Raytheon Aircraft issued Safety Communiqué No. 182 in regards to this matter.

C. Description

This Mandatory Service Bulletin is being issued to inspect for, and replace as necessary, any Flap Flex Shaft Assemblies that have a manufacture date between January 2000 and April 2001, inclusive.

D. Compliance

An Airworthiness Directive will be requested on the matter covered by this Service Bulletin.

(1) Civil Airplanes

Raytheon Aircraft Company considers this to be a mandatory modification and it must be accomplished as soon as possible after receipt of this Service Bulletin, but no later than the next 25 flight hours or 90 days which ever comes first.

(2) Military Airplanes

For compliance information on military airplanes affected by this Service Bulletin, contact the appropriate headquarters.

E. Approval

The engineering data contained in this Service Bulletin is FAA approved.

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F. Manpower

The following information is for planning purposes only:

Estimated man-hours for inspection of Flap Flex Shaft Assembly: 1.5 hours.

Suggested number of men for inspection of Flap Flex Shaft Assembly: 1 man.

Estimated man-hours for replacement of a single Flap Flex Shaft Assembly: 5 hours.

Estimated man-hours for replacement of both Flap Flex Shaft Assemblies: 6.5 hours.

Suggested number of men for replacement of Flap Flex Shaft Assembly: 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.

G. Weight and Balance

None.

H. Electrical Load Data

Not changed.

I. Software Accomplishment Summary

Not applicable.

J. References

Raytheon Aircraft Safety Communiqué No. 182;

The appropriate Section of the applicable airplane Pilot's Operating Handbook and Airplane Flight Manual, Airplane Flight Manual, Shop Manual and/or the appropriate Chapter of the applicable airplane Maintenance Manual;

Beechcraft Debonair/Bonanza 33 Series Shop Manual, 33-590011-1C17 or subsequent revision;

Beechcraft Bonanza 35 Series Shop Manual, 35-590096B19 or subsequent revision;

Beechcraft Bonanza 36 Series Shop Manual, 36-590001-3B15 or subsequent revision;

Raytheon Aircraft Beech Bonanza Series Maintenance Manual, 36-590001-9A22 or subsequent revision;

Raytheon Aircraft Beech Baron 55 and 58 Shop Manual, 55-590000-13E18 or subsequent revision;

Beechcraft Turbo Baron 56TC and A56TC Shop Manual, 96-590003-5B5 or subsequent revision;

Beechcraft Baron 58P and 58TC Maintenance Manual, 102-590000-5A23 or subsequent revision;

Beechcraft Travel Air 95 Series Shop Manual, 95-590001-1C6 or subsequent revision;

Beechcraft Mentor Model B45 Maintenance Manual, 115090-1-1 or subsequent revision;

USAF Series T-34A (Beechcraft Mentor 45) and NAVY Model T-34B (Beechcraft Mentor D45) Aircraft Handbook Maintenance Instructions, T.O. 1T-34A-2 / NAVAER 01-90KDB-502 or subsequent revision;

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Raytheon Aircraft Beech Turbo Mentor T-34C (U.S. NAVY) Maintenance Manual, 92-37867 or subsequent revision;

Beechcraft Turbo Mentor T-34C-1, 34C Maintenance Manual, 104-590025-5B2 or subsequent revision;

Army Model T-42A (Beech Model B55B Baron) Aircraft Organizational, Direct and General Support Maintenance Manual, 96-590022 B or subsequent revision;

Beechcraft Mandatory Service Bulletin No. 2460, Rev. I, November, 1993; (FLIGHT CONTROLS - INSPECTION OF FLAP DRIVE CABLE/FLAP DRIVE MOTOR COUPLING CONNECTION)

K. Publications Affected

None.

L. Interchangeability of Parts

Not applicable.

M. Warranty Credit

(1) Civil Airplanes

Warranty credit for labor and parts to the extent noted under MANPOWER and MATERIAL will be allowed on all affected airplanes.

Filing a warranty claim for the Inspection:

Please file a "W3 labor type" warranty claim against the Safety Communiqué No. 182. When filing the claim, reference "SB01-182" in the Service Bulletin field.

Filing a warranty claim for the Replacement (if needed):

Please file a "W4" part type warranty claim against this Service Bulletin (SB 27-3478). When filing the claim, reference "SB27-3478" in the Service Bulletin field. A RAPID PO# will be required.

Removed and/or purged Flap Flex Shaft Assembly(ies) MUST be returned to the Raytheon Warranty Department before any credit will be allowed. Return the removed and/or purged Flap Flex Shaft Assembly(ies) to the address below:

Raytheon Aircraft Parts Inventory And Distribution Company (RAPID)
Attn.: Warranty Hold Area
715 E. 13th St.
Andover, Kansas 67002
1-888-727-4344
316-676-5000

Warranty coverage offered in this Service Bulletin will expire 6 months from the last day of the month this Service Bulletin is issued. After that date, the owner/operator assumes the responsibility for compliance cost. Raytheon Aircraft Company reserves the right to void warranty coverage in the area affected by this Service Bulletin until the date the Service Bulletin is accomplished by a Raytheon Aircraft Company Authorized Service Center.

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All warranty work must be accomplished by a Raytheon Aircraft Authorized Service Center rated to perform maintenance on the specific model of Beech Airplane.

All warranty reimbursements are handled through Raytheon Aircraft Company Authorized Service Centers. The owner/operator should arrange for an Authorized Service Center to perform the work and the Authorized Service Center must submit the standard Raytheon Aircraft Company warranty claim.

(2) Military Airplanes

For warranty information on military airplanes affected by this Service Bulletin, contact the appropriate headquarters.

2. Material Information

A. Materials - Price and Availability

Contact a Raytheon Aircraft Authorized Service Center for information.

B. Industry Support

Not applicable.

C. Airplanes

The following parts required for this modification may be ordered through a Raytheon Aircraft Authorized Service Center or RAPID:

Part Number	Description	Quantity Per Airplane
P/N 12527Y-63.31 (P/N FABEE11AZ1**)	Flap Flex Shaft Assembly (Left-hand) *	1
P/N 12163Y-63.31 or P/N 12163Y-1 (P/N FABEE11BZ1**)	Flap Flex Shaft Assembly (Right-hand) *	1
* Flap Flex Shaft Assembly that does not have a manufacture date between January 2000 and April 2001, inclusive. ** Part Number (P/N) of SS White Technologies Inc. of Piscataway, NJ.		

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

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The following materials may be obtained locally:

Part Number	Description	Quantity Per Airplane
MIL-PRF-23827C (MIL-G-23827)	Grease, Aircraft and Instrument, Gear and Actuator Screw	As Required

D. Spares

Not applicable.

E. Reidentified Parts

None.

F. Tooling - Price and Availability

Not applicable.

3. Accomplishment Instructions

This Service Bulletin shall be accomplished as follows:

NOTE

Should any difficulty be encountered in accomplishing this Service Bulletin, contact Raytheon Aircraft Company at 1-800-429-5372 or 316-676-3140 for commercial aircraft, and appropriate headquarters for military aircraft.

A. Airplane

WARNING

Observe all Warnings and Cautions contained in the aircraft manuals referred to in this Service Bulletin.

Whenever any part of this system is dismantled, adjusted, repaired or renewed, detailed investigation must be made on completion to make sure that distortion, tools, rags or any other loose articles or foreign matter that could impede the free movement and safe operation of the system are not present, and that the systems and installations in the work area are clean.

NOTE

Refer to the appropriate Section or Chapter of the applicable airplane manual for information needed to accomplish this inspection and replacement procedure.

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- (1) Determine if airplane has production effectivity or spare replacement effectivity.
 - (a) If airplane has production effectivity, proceed to step 3.
 - (b) If airplane has spare replacement effectivity, proceed to step 2.
- (2) Inspect the applicable airplane logbook(s) to determine if any Flap Flex Shaft Assemblies or Flap Actuator Assemblies have been replaced since March 1, 2000, inclusive.
 - (a) If none of the assemblies have been replaced during this time frame, proceed to step 17.
 - (b) If any of the assemblies have been replaced during this time frame, proceed to step 3.
- (3) Remove all power from the airplane and disconnect the battery. Display warning notices prohibiting reconnection of airplane electrical power. Refer to Section 2 and 13 of the applicable airplane Shop Manual and/or Chapter 24 of the applicable airplane Maintenance Manual.
- (4) Place the airplane on jacks. Refer to Section 2 of the applicable airplane Shop Manual and/or Chapter 7 of the applicable airplane Maintenance Manual.
- (5) Open the inboard main landing gear doors using the landing gear emergency hand crank. Refer to the appropriate Section of the applicable airplane Pilot's Operating Handbook and Airplane Flight Manual or the appropriate Section of the applicable Airplane Flight Manual.
- (6) Gain access to each (right-hand and left-hand) Flap Flex Shaft Assembly. Locate each Flap Flex Shaft Assembly and reposition the dust boot at the actuator to gain access to the paper identification label attached to each Flap Flex Shaft Assembly. Refer to the appropriate Section of the applicable airplane Shop Manual and/or the appropriate Chapter of the applicable airplane Maintenance Manual.

NOTE

The Flap Flex Shaft Assemblies are identified on the actuator end with a paper identification label that carries the manufacture date in the form of month/year (i.e. XX/2000 or XX/00 for year 2000 and XX/2001 or XX/01 for year 2001).

- (7) Inspect and verify the manufacture date of each Flap Flex Shaft Assembly to ensure that each Flap Flex Shaft Assembly has a manufacture date that is not between January 2000 and April 2001, inclusive.
 - (a) If the manufacture date on the paper identification label is not between January 2000 and April 2001, inclusive, that Flap Flex Shaft Assembly is not affected and does not need to be replaced. If neither of the Flap Flex Shaft Assemblies are affected, perform step 9 then proceed to step 11.
 - (b) If the manufacture date on the paper identification label is between January 2000 and April 2001, inclusive, that Flap Flex Shaft Assembly is affected and must be replaced. If either of the Flap Flex Shaft Assemblies are affected, proceed to step 8.
- (8) Replace the applicable Flap Flex Shaft Assembly(ies). Refer to Section 4 or 9 of the applicable airplane Shop Manual and/or Chapter 27-50 of the applicable airplane Maintenance Manual. Lubricate each Flap Flex Shaft Drive Ends, as required, using MIL-PRF-23827C (MIL-G-23827) Grease.

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NOTE

A retainer has been added to the flap cables where they join the flap gearbox. This retainer was incorporated on production airplanes and added by Beechcraft Mandatory Service Bulletin No. 2460, Rev. I to prior airplane serials. Refer to Beechcraft Mandatory Service Bulletin No. 2460, Rev. I for airplane effectivity.

- (9) Reconnect the airplane battery, remove warning notices prohibiting reconnection of airplane electrical power and restore power. Refer to Section 2 and 13 of the applicable airplane Shop Manual and/or Chapter 24 of the applicable airplane Maintenance Manual.
- (10) Verify proper operation of flaps. Refer to Section 4 or 9 of the applicable airplane Shop Manual and/or Chapter 27-50 of the applicable airplane Maintenance Manual.
- (11) Perform a landing gear retraction check. Refer to the appropriate Section of the applicable airplane Pilot's Operating Handbook and Airplane Flight Manual or the appropriate Section of the applicable Airplane Flight Manual.
- (12) Remove all power from the airplane and disconnect the battery. Display warning notices prohibiting reconnection of airplane electrical power. Refer to Section 2 and 13 of the applicable airplane Shop Manual and/or Chapter 24 of the applicable airplane Maintenance Manual.
- (13) Install, as applicable, all dust covers, spar covers, panels/doors, floorboards, and seats assemblies removed in step 6. Refer to the appropriate Section of the applicable airplane Shop Manual and/or the appropriate Chapter of the applicable airplane Maintenance Manual.
- (14) Remove the airplane from jacks. Refer to Section 2 of the applicable airplane Shop Manual and/or Chapter 7 of the applicable airplane Maintenance Manual.
- (15) Reconnect the airplane battery, remove warning notices prohibiting reconnection of airplane electrical power and restore power. Refer to Section 2 and 13 of the applicable airplane Shop Manual and/or Chapter 24 of the applicable airplane Maintenance Manual.
- (16) Ensure all work areas are clean and clear of tools and miscellaneous items of equipment.
- (17) Make the appropriate logbook entries.
- (18) Return airplane to service.
- (19) Return the removed Flap Flex Shaft Assembly(ies) for credit to Raytheon Aircraft Company. Refer to the WARRANTY CREDIT section.

B. Spares

Purge from spares stock the following Spares purchased from Raytheon Aircraft Company (RAPID) and shipped between March 1, 2000 and June 30, 2001: Purge all P/N 12527Y-63.31 (LH), P/N 12163Y-63.31 (RH) or P/N 12163Y-1 (RH) Flap Flex Shaft Assemblies that have a manufacture date between January 2000 and April 2001, inclusive. Purge also, all P/N 45-521212 (any dash number) Flap Actuator Assemblies with Flap Flex Shaft Assemblies that have a manufacture date between January 2000 and April 2001, inclusive. Replace purged spares stock with Flap Flex Shaft Assemblies that do not have a manufacture date between January 2000 and April 2001, inclusive. Ensure that all P/N 45-521212 (any dash number) Flap Actuator Assemblies, that were purchased from Raytheon Aircraft Company (RAPID) and shipped between March 1, 2000 and June 30, 2001, do not have Flap Flex Shaft Assemblies that have

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a manufacture date between January 2000 and April 2001, inclusive. Return for credit all purged spares stock to Raytheon Aircraft Company. Refer to the WARRANTY CREDIT section.

NOTE

The Flap Flex Shaft Assemblies are identified on the actuator end with a paper identification label that carries the manufacture date in the form of month/year (i.e. XX/2000 or XX/00 for year 2000 and XX/2001 or XX/01 for year 2001).

C. Record of Compliance

Upon completion of this Service Bulletin, make an appropriate maintenance record entry.