

Beech Aircraft Corporation


OVERHAUL SPECIFICATION


FLIGHT CONTROL SYSTEM - MODEL C-45G, C-45H, AND SNB-5

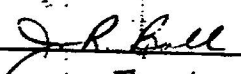
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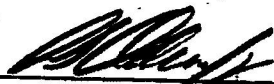
ISSUED March 23, 1953

REVISED August 11, 1953


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TITLE FLIGHT CONTROL SYSTEM - MODEL C-45G, C-45H, AND SNB-5

ISSUED March 23, 1953

WRITTEN BY W. T. Taylor REVISED AUGUST 11, 1953

1. SCOPE

1.1 Purpose.- The purpose of this specification is to authorize the use of reconditioned parts and provide reconditioning instructions for component parts of the complete flight control system as installed in aircraft received for overhaul and instructions for modifications required to adapt them for installation in C-45G aircraft in accordance with Drawings 694-187000, 694-186050, and 734-187940-2; in C-45H aircraft in accordance with Drawings 694-187003, 694-186050, and 734-187940-2; or SNB-5 aircraft in accordance with Drawings 894-187002, 894-186001, and 734-187940.

1.2 Application.- All reconditioning operations and repairs covered by this specification may be accomplished where required without further authorization. Repairs not authorized by this specification cannot be performed without further authorization.

1.3 List of Pages and Revisions.- This specification consists of the pages listed below. An asterisk (*) denotes pages revised by the current revision.

<u>Page</u>	<u>Date</u>	<u>Description of Revision</u>	<u>Serial Effectivity</u>
1*	8-11-53	Incorporate SNB-5	Record change
2*	8-11-53	Incorporate SNB-5	Record change
3*	8-11-53	Incorporate SNB-5	Record change
4*	8-11-53	Incorporate SNB-5	Record change
5*	8-11-53	Incorporate SNB-5	Record change
6*	8-11-53	Incorporate SNB-5	Record change
7*	8-11-53	Incorporate SNB-5	Record change
8*	8-11-53	Incorporate SNB-5	Record change
9*	8-11-53	Incorporate SNB-5	Record change

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TITLE FLIGHT CONTROL SYSTEM - MODEL C-45G, C-45H, AND SNB-5ISSUED March 23, 1953WRITTEN BY *J. Taylor*REVISED August 11, 1953**2. APPLICABLE PUBLICATIONS****2.1 Military.**

MIL-I-6868 Magnetic Particle Inspection Process

2.2 Federal.

QQ-P-416 Cadmium Plating

2.3 Beech.

FS 302 Finish Specification for Overhauled Navy JRB/SNB Airplanes
 FS 370 Finish Specification for C-45G and C-45H Aircraft
 OS 5210 Control Column and Torque Shaft Assembly - Model
 C-45G and C-45H
 OS 5211 Trim Tab Systems
 OS 5215 Control Column and Torque Shaft Assembly - Model SNB-5
 OS 7002 Cleaning Procedures for Reconditioned Aircraft
 OS 7003 Air Frame and Control Antifriction Bearings
 OS 7008 General Acceptable Quality Standards
 OS 7010 Removing Corrosion from Aluminum Parts

3. REQUIREMENTS

3.1 Parts Involved. - For parts involved in addition to those covered by this specification, refer to the overhaul specifications listed below.

OS 5210 Control Column and Torque Shaft Assembly -
 Model C-45G and C-45H
 OS 5211 Trim Tab Systems
 OS 5215 Control Column and Torque Shaft Assembly - Model SNB-5

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E. Taylor

REVISED August 11, 1953

3.1.1 Parts Not Used:

3.1.1.1 Flight Controls Installations 84-187000, 814-187000, 804-187000, 824-187010, 794-187000, 784-187000, 764-187000, 734-187000, 744-187000, 74-187000, and 187000U.

All parts listed on these drawings will not be used and will be disposed of at the direction of the customer except those parts listed in Paragraph 3.1.2.1 of this specification.

3.1.1.2 Toe Brake and Piping Installations 84-187945, 804-187948, and 814-187948.

None of the parts listed on Drawings 84-187945, 804-187948, and 814-187948 toe brake and piping installations will be re-used. They will be disposed of at the direction of the customer.

3.1.2 Parts to be Reconditioned.- The following parts are to be reconditioned in accordance with the instructions contained herein. "Reconditioned" means the disassembly, cleaning, inspection and correction of discrepancies, repair and/or replacement of components, and modifications to incorporate changes in accordance with applicable engineering drawings to assure an operationally safe and serviceable aircraft.

3.1.2.1 Flight Controls Installations 84-187000, 814-187000, 804-187000, 824-187010, 794-187000, 874-187000, 764-187000, 734-187000, 744-187000, 74-187000, and 187000U.

34-184326	Bracket
34-184326-1	Bracket
814-187354	Bracket
814-187354-1	Bracket
18743	Bracket
187171-1	Bracket
187171-4	Bracket
187517	Plate
181786	Control stop
184200-208	Guard
187006	Link
186138	Bellcrank assembly
186160-1	Link assembly

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WRITTEN BY *[Signature]* REVISED August 11, 1953

3.1.2.1 Flight Controls Installations 84-187000, 814-187000, 804-187000, 824-187010, 794-187000, 874-187000, 764-187000, 734-187000, 744-187000, 74-187000, and 187000U.- (Continued)

- 186160-2 Link assembly
- 18732 Link assembly
- 814-187282 Pulley assembly
- 187300 Pulley assembly
- 187300-1 Pulley assembly
- 84-187035 Spacer
- 814-187014 Guard (C-45G only)
- 824-187015 Guard (C-45G only)
- 187096 Cable assembly
- 187097 Cable assembly
- 187007-2 Bolt
- 187059(M) Bolt
- 187132 Pulley
- 18754-1 Pulley
- 18754-2 Pulley
- B.B. 128 - Series 2 Pulley
- AN-210-1A Pulley
- AN-210-2A Pulley
- AN-210-3A Pulley
- AN-210-4A Pulley
- 814-187510 Control column
- 814-187500 Control column
- 804-187500 Control column
- *186170 Bellcrank assembly

*This assembly is a component of the flight control system which is called out on Drawing 186050A.

3.1.3 Parts to be Supplied New:

3.1.3.1 Flight Controls Installation 694-187000.- All parts called out on Drawing 694-187000 flight controls installation will be supplied new for C-45G aircraft except those parts listed in Paragraph 3.1.2.1 of this specification.

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3.1.3.2 Flight Controls Installation 694-187003.- All parts called out on Drawing 694-187003 flight controls installation will be supplied new for C-45H aircraft except those parts listed in Paragraph 3.1.2.1 of this specification.

3.1.3.3 Flight Controls Installation 894-187002.- All parts called out on Drawing 894-187002 flight controls installation will be supplied new for SNB-5 aircraft except those parts listed in Paragraph 3.1.2.1 of this specification.

3.1.3.4 Toe Brake and Piping Installation 734-187940-2.- The 84-187945, 804-187948, and 814-187948 installations will be replaced by 734-187940-2 dual brake system installation on C-45G aircraft. All parts called out on Drawing 734-187940-2 dual brake system installation will be supplied new.

3.1.3.5 Toe Brake and Piping Installation 734-187940-6.- The 84-187945, 804-187948, and 814-187948 installations will be replaced by 734-187940-6 dual brake system installation on C-45H aircraft. All parts called out on Drawing 734-187940-6 will be supplied new.

3.1.3.6 Toe Brake and Piping Installation 734-187940.- The 84-187945, 804-187948, and 814-187948 installations will be replaced by 734-187940 dual brake system installation on SNB-5 aircraft. All parts called out on Drawing 634-187940 will be supplied new.

3.2 Cause for Rejection.- Damage or wear which cannot be corrected by one or more of the authorized repairs listed in Paragraph 3.4 of this specification is cause for rejection.

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TITLE FLIGHT CONTROL SYSTEM - MODEL C-45G, C-45H, AND SNB-5ISSUED March 23, 1953WRITTEN BY *J. Taylor*REVISED August 11, 19533.3. Reconditioning Operations:

3.3.1. Flight Controls Installations 84-187000, 814-187000, 804-187000, 824-187010, 794-187000, 874-187000, 764-187000, 734-187000, 744-187000, 74-187000, and 187000. Components of these flight control systems will be reconditioned in accordance with this specification and reinstalled in Model C-45G aircraft in accordance with Drawing 694-187000; in Model C-45H aircraft in accordance with Drawing 694-187003; or in Model SNB-5 aircraft in accordance with Drawing 894-187002.

3.3.1.1 Brackets 34-184326, 34-184326-1, 814-187354, 814-187354-1, 18743, 187171-1, and 187171-4; Plate 187517; Stop 181786; Guard 184200-208; and Link 187006.

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Restore protective finish as necessary by painting with zinc chromate primer and aluminum lacquer or cadmium plating.

3.3.1.2. Bellcrank Assembly 186138; Link Assemblies 186160-1, 186160-2, and 18632; Pulley Assemblies 814-187282, 187300, and 187300-1.

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Remove corrosion in accordance with OS 7010.
- (d) Recondition bearings in accordance with OS 7003.
- (e) Finish in accordance with FS 370 or FS 302 as applicable.

3.3.1.3 Spacer 84-187035.

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002. Caution must be taken that these parts be kept in pairs, as removed, until assembly.

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3.3.1.4 Guards 814-187014 and 824-187015. - These guards will be reconditioned and used only in C-45G aircraft.

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Remove corrosion in accordance with OS 7010.
- (d) Finish in accordance with FS 370 or FS 302 as applicable.

3.3.1.5 Cable Assembly 187097. -

- (a) Scrap the 187097-1 cable assembly.
- (b) Inspect the 187097-3 eye and AN155-32L barrel for nonrepairable conditions.
- (c) Clean the 187097-3 eye and AN155-32L barrel in accordance with OS 7002.
- (d) Restore protective finish as necessary by painting with zinc chromate primer and aluminum lacquer or cadmium plating.
- (e) Install a new 187097-1 cable assembly.

3.3.1.6 Cable Assembly 187096. -

- (a) Scrap the 187096-1 cable assembly.
- (b) Inspect the 187096-3 eye and the AN155-46L barrel for nonrepairable conditions.
- (c) Clean the 187096-3 eye and the AN155-46L barrel in accordance with OS 7002.
- (d) Restore protective finish as necessary by painting with zinc chromate primer and aluminum lacquer or cadmium plating.
- (e) Install a new 187096-1 cable assembly.

3.3.1.7 Bolts 187007-2 and 187059(M). -

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Restore protective finish as necessary by painting with zinc chromate primer and aluminum lacquer or cadmium plating.
- (d) Magnetically inspect 187059(M) bolt in accordance with Specification MIL-I-6868.

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TITLE FLIGHT CONTROL SYSTEM - MODEL C-45G, C-45H, AND SNB-5ISSUED March 23, 1953WRITTEN BY *J. H. Taylor* REVISED August 11, 19533.3.1.8 Pulleys 187132, 18754-1, 18754-2, B.B. 128- Series 2, AN210-1A, AN210-2A, AN210-3A, and AN210-4A.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Recondition bearings in accordance with OS 7003.
- (d) Finish phenolic surfaces with varnish.

3.3.1.9 Bellcrank Assembly 186170.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Remove corrosion in accordance with OS 7010.
- (d) Recondition bearings in accordance with OS 7003.
- (e) Repair as necessary as authorized herein.
- (f) Finish in accordance with FS 370 or FS 302 as applicable.

3.3.2 Toe Brake and Piping Installation 84-187945, 804-187948, and 814-187948.- None of the components of the 84-187945, 804-187948, and 814-187948 toe brake and piping installations will be reconditioned and used. These installations will be replaced with the 734-187940-2 installation on C-45G aircraft, 734-187940-6 installation on C-45H aircraft, and 734-187940 installation on SNB-5 aircraft.

3.4 Authorized Repairs:

3.4.1 Flight Controls Installations 84-187000, 814-187000, 804-187000, 824-187010, 794-187000, 874-187000, 764-187000, 734-187000, 744-187000, 74-187000, and 187000U:

3.4.1.1 Link Assembly 186160-2.-

- (a) Rework link assemblies not conforming to the "G" revision of Drawing 186160 by milling one of the 186161 end assemblies in accordance with Drawing 186186.

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3.4.1.2 Rudder Ballcrank 186170.-

- (a) When the ^{.254}_{.250} holes are damaged or worn beyond tolerances given on Drawing 186170, remove the 186172 and/or 186172-1 plate assembly and replace it with a new plate assembly.
- (b) When the .189 holes are damaged or worn beyond a maximum diameter of .200, remove the 186174-5 plate and replace it with OS 5201-1 plate. Attach the OS 5201-1 plate with three AN470AD4 rivets using the same approximate locations as the drawing callout for spotwelds. Maintain an edge margin of 3/8 inch from bolt holes to provide clearance from moving parts.

The OS 5201-1 plate is to be the same as 186174-5 plate except the material used shall be .072 24S-T3 aluminum alloy in place of .064 52S-1/2H as specified on Drawing 186174-5.

OS 5201-1 plate is the same as OB A50626-1 plate.

4. INSPECTION

4.1 General.- The parts will be inspected to the general acceptable quality standards of Overhaul Specification 7008.