

**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 wing flap mechanism 157810 and 84-157760 as installed in T-7, T-7C, T-11, UC-45B, and C-45F aircraft and instructions for modifications required to adapt them for installation in C-45G & C-45H aircraft in accordance with Drawings 894-157810-1 or 404-157810, respectively.

**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	3-12-53		
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APPROVED:

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USAF Quality Control

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PROJECT ENGINEER <i>R. B. [unclear]</i>		WING FLAP MECHANISM - MODEL C-45G & C-45H	
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## 2. APPLICABLE PUBLICATIONS

### 2.1 Specifications:

#### 2.1.1 Federal.-

QQ-P-416 Cadmium Plating

#### 2.1.2 Specs.-

FS 370A Finish Specification for Model C-450 and C-45H  
OS 1611 Flap Motor and Mechanism Assemblies  
OS 7002 Cleaning Procedures for Reconditioned Aircraft  
OS 7003 Air Frame and Controls Antifriction Bearings  
OS 7008 General Acceptable Quality Standards  
OS 7012 Instrument Cleaning

## 3. REQUIREMENTS

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

OS 1611 Flap Motor and Mechanism Assemblies

3.1.1 Parts Not Used.- The parts listed below will not be reused in C-450 or C-45H aircraft and will be disposed of at the direction of the customer.

#### 3.1.1.1 Flap Mechanism Installations 187810 and 84-187760.-

187780 Bracket  
187781 Bracket  
187787-2 Tube  
184312 Bracket  
187757 Switch

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**3.1.1.1 Flap Mechanism Installations 187810 and 84-187760.- (Continued)**

187820	Bracket
84-187804	Bracket
187838	Bolt
187837	Boot assembly
187820-1	Bracket
188009	Bushing
187671	Bracket assembly

**3.1.1.1.1 Mechanism Assembly 187759 Left- and Right-Hand:**

**3.1.1.1.1.1 Box Assemblies 187761R and 187761L.-**

18776-3	Gasket
187761R-5	Plug
187761L-2	Plug

**3.1.1.1.1.1.1 Gear Assembly 187767.-**

187768	Shaft Assembly
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**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 Wing Flap Mechanism Installations 187810 and 84-187760.-**

187830	Wing Flap mechanism assembly
84-187750	Wing flap mechanism assembly
187787-1	Tube
187786	Traveling stop guide tube
187831	Tube

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3.1.2.2 Wing Flap Mechanism Installations 187810  
and 84-187760.- (Continued)

187756-1 Bracket  
 187756-3 Bracket  
 187788 Guard  
 188562 Sprocket  
 187785 Chain  
 187753-1 Housing  
 187753-2 Housing  
 188851-2 Guard  
 187773 Housing  
 187800 Rheostat assembly  
 406807 Rheostat assembly  
 187779-1 Guard  
 187779-2 Guard

3.1.2.1.1 Mechanism Assembly 187759 Left- and Right-Hand.-

187761L Box assembly  
 187761R Box assembly  
 187762 Screw assembly

3.1.3 Parts to be Supplied New:

3.1.3.1 Wing Flap Mechanism Installation 894-187810.-

894-187820 Bracket  
 894-187820-1 Bracket  
 187837 Bolt assembly  
 187838 Bolt  
 694-187837 Bolt assembly  
 404-187889 Spacer  
 188009 Bushing

DRAWN BY <i>E.M. Farquet</i> CHECKED BY <i>P. Farquet</i> APPROVED BY <i>[Signature]</i> DATE ISSUED 3-12-53		<b>OVERHAUL SPECIFICATION</b> <b>WING FLAP MECHANISM - MODEL C-433 AND C-451</b>	
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3.1.3.1.1 Mechanism Assemblies 894-187758 and 894-187759:

3.1.3.1.1.1 Box Assemblies 894-187760 and 894-187761.-

18776-3 Gasket  
894-187760-2 Plug  
894-187761-2 Plug

3.1.3.1.1.1.1 Gear Assembly 894-187767.-

894-187768 Shaft assembly

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 and the specific conditions listed below will be cause for rejection.

3.2.1 Mechanism Assembly 187759 Left- and Right-Hand:

3.2.1.1 Screw Assembly 187762.-

- (a) 187776 screw, 187763 housing, 187778 dust shield, 187805 ring, and 187828 spacer will be scrapped when wear between 187776 screw and 187763 housing causes an end play in excess of .020.
- (b) 106561 universal will be scrapped when worn to cause end play in excess of .010.
- (c) AN271-B10 universal joints will be scrapped when worn to cause end play in excess of .010.

3.2.1.2 Box Assemblies 187761R and 187761L.- The 187761R and 187761L shaft assemblies will be scrapped when 187752-2 universals are worn to cause end play in excess of .010.

3.3 Reconditioning Operations:

3.3.1 Mechanism Assemblies 187759L and 187759R.- (Modify these assemblies to conform to Drawings 894-187758 and 894-187759 as indicated in Paragraph 3.3.1.1 of this specification.)

DESIGNED BY <i>B. W. August</i>	DATE ISSUED 3-12-53	OVERHAUL SPECIFICATION		
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**3.3.1.1 Box Assemblies 187761R and 187761L.-**

- (a) Inspect for nonrepairable conditions.
- (b) Remove cover, clean and degrease in accordance with OS 7002.
- (c) Recondition bearings in accordance with OS 7003.
- (d) Inspect shaft assemblies 187761R and 187761L for nonrepairable conditions.
- (e) Finish housing and cover in accordance with FS 370A.
- (f) Rework the 187767 gear assembly to conform to Drawing 894-187767 by replacing the 187768 shaft assembly with 894-187768 shaft assembly.
- (g) Install the 18776-3 gasket and the 894-187760-2 and 894-187761-2 plugs new.
- (h) Assemble the 187761L box assembly in accordance with Drawing 894-187760 and the 187761R box assembly in accordance with Drawing 894-187761.
- (i) Parts will be repaired as necessary as authorized herein.

**3.3.1.2 Screw Assembly 187762.-**

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Disassemble screw assembly.
- (d) Recondition bearings in accordance with OS 7003.
- (e) Repair parts as necessary as authorized herein.
- (f) Strip and cadmium plate 187762-4 shaft in accordance with Specification QQ-P-416.
- (g) Clean and repack universals with MIL-G-3278 grease. Lubricate screw in accordance with Drawing 187762.
- (h) Assemble screw assembly in accordance with Drawing 187762.
- (i) Finish 187778 dust shield in accordance with FS 370A.

**3.3.2 Tubes 187787-1 and 187831.-**

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.

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3.3.2  Tubes 18787-1 and 18783.- (Continued)

- (c) Strip and cadmium plate in accordance with Specification QQ-P-416.
- (d) Repair as necessary as authorized herein.
- (e) Finish in accordance with FS 370A.

3.3.3  Tube 187786; Brackets 187756-1 and 187756-3; Sprocket 188562; and Guards 187788, 188851-2, 187779-1, and 187779-2.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Strip and cadmium plate in accordance with Specification QQ-P-416.

3.3.4  Chain 187785.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Repair as necessary as authorized herein.

3.3.5  Housings 187753-1, 187753-2, and 187773.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Repair as necessary as authorized herein.

3.3.6  Rheostat Assemblies 187800 and 406807.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7012.
- (c) Lubricate in accordance with Drawing 187800.
- (d) Functional test and calibrate to 734-183802 flap indicator assembly.
- (e) Repair as necessary as authorized herein.

3.4  Authorized Repairs:

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**3.4.1 Mechanism Assemblies 187764L and 187764R:**

**3.4.1.1 Box Assemblies 187764R and 187764L.-**

- (a) Repair 187764L and 187764R shaft assemblies in which the .189 holes are elongated or oversize by reaming the holes to .250 - .254. Ream the 187831 or 187786-1 tube to match and install AN4-10 bolt, AN960-416 washer, AN310-4 nut and AN380-2-2 pin.

**3.4.1.2 Screw Assembly 187762.-**

- (a) Repair elongated or oversize .250 - .254 holes in 187762-4 tube and AN271B-10 universal by reaming to .3165 - .3125 and installing AN5-11 bolt, AN960-516L washer, AN320-5 nut, and AN380-2-3 pin.
- (b) Replace damaged or missing rubber boots on 106561 universals with 306587 leather boots. Remove retainer rings and all portions of damaged boot before installing leather boot.
- (c) Replace damaged or missing rubber boots on AN271B10 universals with 187837 leather boots. Remove retainer rings and all portions of damaged boot before installing leather boot.
- (d) Remove and scrap all 106561 universals which are not zinc or cadmium plated.
- (e) It is permissible to drill a new hole through the 187763 housing approximately 90° from the existing taper pin hole when replacing 106561 universals. The existing taper pin hole need not be plugged or filled.

**3.4.2 Tubes 187787-1 and 187831.-**

- (a) Repair elongated or oversize .189 holes in the 187787-1 and 187831 tubes by reaming to .254 - .250. Ream the 187764L or 187764R shaft assembly to match and install AN4-10 bolt, AN960-416 washer, AN310-4 nut, and AN380-2-2 pin.

**3.4.3 Chain 187785.-**

- (a) Repair damaged chains by replacing the damaged section. A maximum of three repair links per chain assembly may be used.

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3.4.4 Rheostat Assembly 187800.-

(a) Replace frayed or damaged 187807 wire assembly.

3.4.5 Rheostat Assembly 406807.-

(a) Replace frayed or damaged 187807 wire assembly.

(b) Substitute G-106337 rheostat for defective G-407079 rheostat. Refer to Figure 1 for modifications necessary to make this substitution.

4. INSPECTION

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

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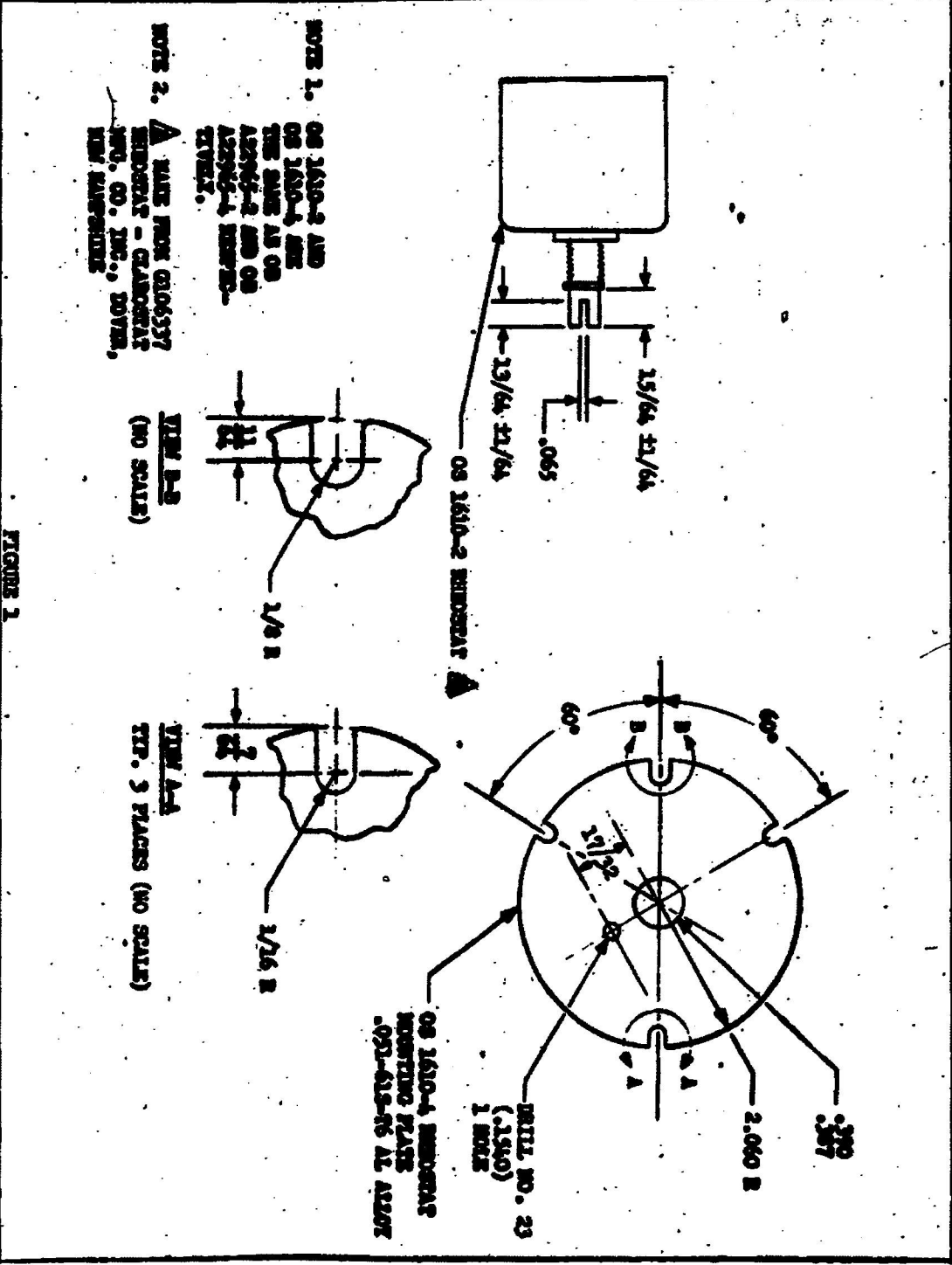


FIGURE 1