

OVERHAUL SPECIFICATION

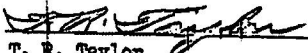
TAIL WHEEL SHOCK ABSORBER ASSEMBLY -
MODEL C-45G, C-45R, SNB-5, AND SNB-5P

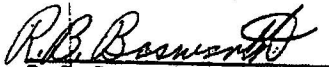
Overhaul Specification 8012

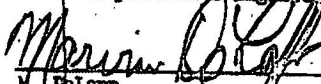
ISSUED February 13, 1953


REVISED March 4, 1954


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TITLE TAIL WHEEL SHOCK ABSORBER ASSEMBLY - MODEL C-45G,
C-45H, SNB-5, AND SNB-5P ISSUED February 13, 1953
WRITTEN BY T. R. Taylor REVISED March 4, 1954

1. SCOPE

1.1 Purpose.- The purpose of this specification is to authorize the use of reconditioned parts, to provide reconditioning instructions for component parts of the 188600 tail wheel shock absorber assembly as installed in aircraft received for overhaul, and to provide instructions for the modifications required*to adapt them for installation in C-45G, C-45H, SNB-5, and SNB-5P aircraft in accordance with Drawing 404-188612.

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 the pages revised by the current revision.

Page	Date	Description of Revision	Serial Effectivity
* 1	3-4-54	Record revision	Record change
* 2	3-4-54	Add Para. 2.1.3 Add portion Para. 3.1.2 from Page 3	Record change
* 3	3-4-54	Add 734-188620 adapter to Para. 3.1.2; Add Para. 3.3 and portion 3.31 from Page 4	Record change
* 4	3-4-54	Add portion Para. 3.34 from Page 5	Record change
* 5	3-4-54	Add Para. 3.3.5	Record change
* 6	3-4-54	Add Para. 4.2.3	Record change
7	4-16-53	Incorporate C-45H	Record change
8	4-16-53	Incorporate C-45H	Record change

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TITLE TAIL WHEEL SHOCK ABSORBER ASSEMBLY - MODEL C-45G,

C-45H, HNB-5 AND HNB-5P

ISSUED February 23, 1953

WRITTEN BY T. R. Taylor

REVISED March 4, 1954

2. APPLICABLE PUBLICATIONS

2.1 Specifications

2.1.1 Military

MIL-L-6868 Magnetic Inspection
 MIL-P-6871 Plating; Chromium

2.1.2 Federal

QQ-P-416 Plating; Cadmium (Electro-Deposited)

2.1.3 Air Force-Navy Aeronautical

AN-QQ-A-696 Anodic-Films; Corrosion - Protective (For)
 Aluminum Alloys

2.1.4 Beech

PS 302 Finish Specification for Overhauled Navy HNB-JRB
 Airplanes.
 PS 370A Finish Specification for Models C-45G and C-45H
 PS 2441 Special Protective Oil
 OS 7002 Cleaning Procedures for Reconditioned Aircraft
 OS 7008 General Acceptable Quality Standards
 OS 7010 Removing Corrosion from Aluminum Parts

2.3 Technical Orders.- Compliance with this specification consti-
 tutes compliance with the technical orders listed below:

03-25E-1 Wheels, Brakes and Struts - Air-Oil Shock
 Absorber Struts, dated August 27, 1945
 03-30-4A Air and Hydraulic Equipment - Identification,
 Disposition, and Use of Hydraulic Packing Rings,
 dated March 10, 1948

3. REQUIREMENTS

3.1 Parts Involved:

3.1.1. Parts Not Used.- All parts listed on Drawing 788600, tail wheel
 shock absorber assembly, will be disposed of at the direction of the customer
 except those parts listed in Paragraph 3.1.2 of this specification.

3.1.2 Parts to Be Reconditioned.- The following parts are to be re-
 conditioned in accordance with the instructions contained herein. "Recondi-
 tioned" means the disassembly, cleaning, inspection and correction of discre-
 pancies, repair and/or replacement of components, and modifications to

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TITLE TAIL WHEEL, SHOCK ABSORBER ASSEMBLY - MODEL C-45G,

C-45E, 8HB-5, AND 8HB-5P

ISSUED February 13, 1953

WRITTEN BY T. H. Taylor

REVISED March 4, 1954

3.1.2 Parts to Be Reconditioned.- (Continued)

incorporate changes in accordance with applicable engineering drawings to assure an operationally safe and serviceable aircraft.

188601	Cylinder assembly
188602	Piston assembly
188608	Metering pin
188613	Packing nut
188615-1	Bushing
188615-2	Bushing
734-188620	Adapter
188616	Washer
AN286-1	Fitting
AN286-3	Fitting

3.1.3 Parts to Be Supplied New.- All parts called out on Drawing 404-188612 tail wheel shock assembly will be supplied new except those parts listed in Paragraph 3.1.2 of this specification.

NOTE: The 734-188623 packing nut is made from the 188613 packing nut and will not be supplied new.

3.2 Cause for Rejection.- The following specific conditions as well as damage or wear which cannot be corrected by one or more of the authorized repairs listed in Paragraph 3.4 of this specification are cause for rejection.

3.2.1 Cylinder Assembly, 188601:

- (a) Damage to the cylinder that will cause the piston head to bind in movement.
- (b) Corrosion of the inner wall of the cylinder that cannot be cleaned up by methods described herein.

3.2.2 Piston Assembly, 188602:

- (a) Nicks, scratches, and corrosion of the finished surface of the piston tube that cannot be cleaned up by methods described herein.

3.3 Reconditioning Operations:3.3.1 Cylinder Assembly, 188601:

- (a) Inspect for nonrepairable conditions.

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TITLE TAIL WHEEL SHOCK ABSORBER ASSEMBLY - MODEL C-45G,

C-45H, SNB-5, AND SNB-5F

ISSUED February 13, 1953

WRITTEN BY T. R. Taylor

REVISED March 4, 1954

3.3 Reconditioning Operations: (Continued)

- (b) Magnetically inspect in accordance with MIL-I-6868.
- (c) Sandblast outside and clean in accordance with OS 7002.
- (d) Chase threads to clean.
- (e) Bore 1.875 \pm ~~0.0020~~ ^{0.0020} inside diameter of 188601-2 tube to remove corrosion, scratches, scores, or galling. Maintain tolerances given in Paragraph 4.2.1 of this specification.
- (f) Re cadmium plate in accordance with Specification QQ-P-416.
- (g) Repair as necessary as authorized in Paragraph 3.4.1 of this specification.
- (h) Prime and paint in accordance with FS 370A for C-45H and C-45H or FS 302 for SNB-5 as applicable.
- (i) Oil in accordance with FS 2441.

3.3.2 Piston Assembly, 188602:

- (a) Inspect for nonrepairable conditions.
- (b) Magnetically inspect in accordance with MIL-I-6868.
- (c) Degrease and clean in accordance with OS 7002.
- (d) Chase threads to clean.
- (e) Buff and polish 188602-2 tube to remove nicks, scratches, or corrosion.
- (f) Repair as necessary as authorized in Paragraph 3.4.2 of this specification.
- (g) Assemble the new 188605 head to piston assembly as shown on Drawing 404-188612.

3.3.3 Packing Nut, 188613:

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Machine to conform to Drawing 734-188623.
- (d) Identify part as 734-188623.

3.3.4 Metering Pin, 188608; Bushing, 188615-1 and 188615-2; Washer, 188616; and Fitting AN286-1 and AN286-3:

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

TITLE TAIL WHEEL SHOCK ABSORBER ASSEMBLY - MODEL C-450,

C-45H, SSB-5, AND SSB-5P ISSUED February 13, 1953

WRITTEN BY F. R. Taylor REVISED March 4, 1954

3.3.5 Adapter, 734-188620:

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Remove corrosion in accordance with OS 7010.
- (d) Strip and anodize in accordance with AN-QR-A-696, if anodic film is damaged.

3.4 Authorized Repairs:

3.4.1 Cylinder Assembly, 188601:

- (a) Repair oversize or out-of-round $.4375 \pm .0005$ diameter hole in 188601-4 cap by reaming to $.5625 \pm .005$. Press in OS 8012-1 bushings (two required) flush at both ends of hole. See Figure 1. Holes that are within the tolerances listed in Paragraph 4.2.1 of this specification are acceptable as is.
- (b) Repair threads that are stripped, torn out, or have oversize pitch diameters by filling with low temperature silver braze. Redrill if necessary and tap to print dimensions. Remove excess braze. Pitch diameters that are within the tolerances given in Paragraph 4.2.1 of this specification are acceptable as is.

3.4.2 Piston Assembly, 188602:

- (a) Nicks, scratches and corrosion of the finished surface of the 188602-2 tube that cannot be cleaned up by buffing and polishing will be removed by grinding the $1.500 \pm .000$ outside diameter of the 188602-2 tube to preplate dimension and rechromium plating in accordance with Specification MIL-P-6871. The 188602-2 tube may be ground to $1.490 \pm .000$ minimum if necessary. Extra chromium necessary to meet print dimensions is acceptable.
- (b) Repair oversize or out-of-round $.4375 \pm .005$ diameter hole in 1886-2-4 cap by reaming oversize diameter to $.5781 \pm .0005$. Press OS 8012-2 bushing in place. See Figure 2. Holes that are within tolerances given in Paragraph 4.2.2 of this specification are acceptable as is.
- (c) Repair threads that are stripped, torn out, or have oversize pitch diameters as described in Paragraph 3.4.1 (b) of this specification. Pitch diameters that are within the tolerances given in Paragraph 4.2.2 of this specification are acceptable as is.

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TITLE TAIL WHEEL SHOCK ABSORBER ASSEMBLY - MODEL C-45G,
C-45H, SUB-5 AND SUB-5P ISSUED February 13, 1953
 WRITTEN BY T. R. Taylor REVISED March 4, 1954

4. INSPECTION

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

4.2 Acceptable Standards:

4.2.1 Cylinder Assembly, 188601.-

- (a) 1/2-20-NF3 threads with $.4675 \begin{smallmatrix} +.0025 \\ -.0000 \end{smallmatrix}$ pitch diameter may have a pitch diameter to $.4675 \begin{smallmatrix} +.0075 \\ -.0000 \end{smallmatrix}$.
- (b) 10-32 NF3 threads with $.1697 \begin{smallmatrix} +.0014 \\ -.0000 \end{smallmatrix}$ pitch diameter may have a pitch diameter to $.1697 \begin{smallmatrix} +.0070 \\ -.0000 \end{smallmatrix}$.
- (c) 2-7/16-18-NF3 threads with $.4014 \begin{smallmatrix} +.0051 \\ -.0000 \end{smallmatrix}$ pitch diameter may have a pitch diameter to $.4014 \begin{smallmatrix} +.0065 \\ -.0000 \end{smallmatrix}$.
- (d) 1/8 pipe threads with threads less than basic N.P.T. pitch diameter may have a basic N.P.T. pitch diameter.
- (e) $1.875 \begin{smallmatrix} +.0020 \\ -.0000 \end{smallmatrix}$ inside diameter of -2 tube may run to $1.875 \begin{smallmatrix} +.0040 \\ -.0000 \end{smallmatrix}$ inside diameter provided the .0650 minimum wall thickness is maintained.
- (f) $.4375 \begin{smallmatrix} +.0015 \\ -.0005 \end{smallmatrix}$ diameter hole of 188602-4 cap may have a $.4375 \begin{smallmatrix} +.0015 \\ -.0005 \end{smallmatrix}$ diameter.

4.2.2 Piston Assembly, 188602.-

NOTE: Sub-paragraphs a, d, and f above also apply to the piston assembly.

4.2.3 Adapter, 734-188620.-

- (a) Finish callouts on Drawing 734-188620 for O-ring grooves must be maintained. Finish callouts in other areas may be disregarded, and slight pitting is acceptable.

DETAIL OF OS 8012-1 BUSHING (2 REQD)
 BREAK SHARP EDGES
 MATL XA130 CHROMIUM CO STEEL
 HT TR 125000 TO 155000 PSI
 CD PLATE PER QQ-P-716 TYPE I CLASS C
 THIS PART SIMILAR TO MRB A25919-1

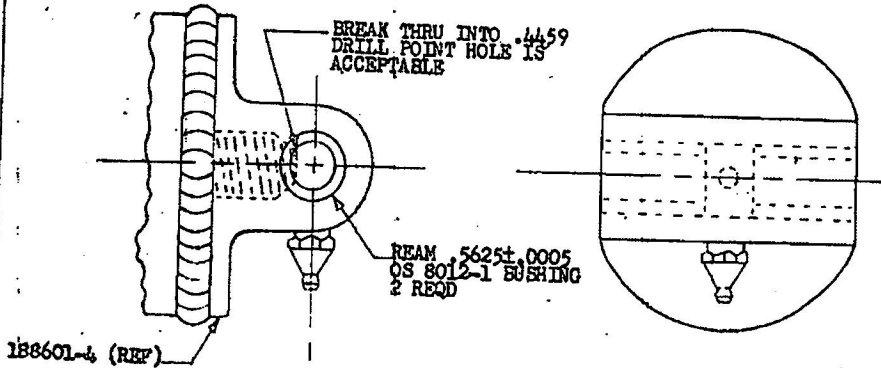
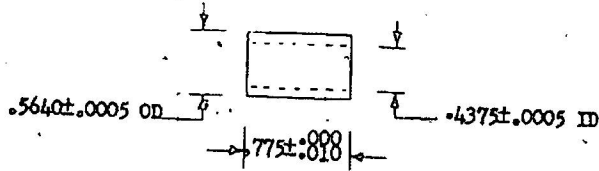


FIGURE 1

WRITTEN BY <i>M. D. Davis</i>	DATE ISSUED 2-13-53	OVERHAUL SPECIFICATION TAIL WHEEL SHOCK ABSORBER ASSEMBLY - MODEL C-45G, SNB-5, SNB-5P & C-45H	
PROJECT ENGINEER <i>R. B. ...</i>	DATE REVISED 4-16-53		
APPROVAL <i>[Signature]</i>			PAGE 7

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DETAIL OF OS 8012-2 BUSHING (1 REQD)
 BREAK SHARP EDGES
 MATL X4130 CHROMIUM NO STEEL
 HT TR 125000 TO 155000 PSI
 CD PLATE PER QQ-P-416 TYPE I CLASS C
 THIS PART IS SIMILAR TO MRB A25919-2 AND CO 90607

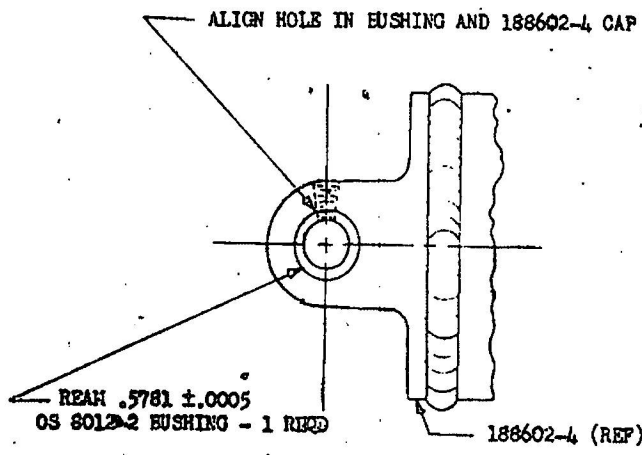
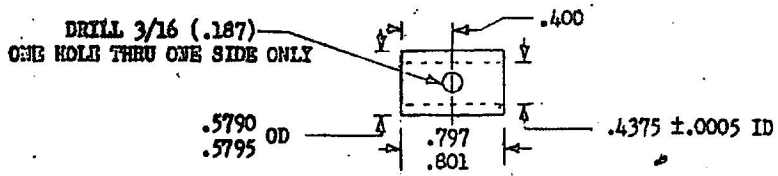


FIGURE 2

DRAFTED BY <i>M. D. Quinn</i> CHECKED BY <i>R. B. Quinn</i> APPROVAL <i>[Signature]</i> APPROVAL <i>[Signature]</i>	DATE ISSUED 2-22-53 DATE REVISED 4-16-53	OVERHAUL SPECIFICATION TAIL WHEEL SHOCK ABSORBER ASSEMBLY - MODEL C-450, SNB-5, SNB-5P & C-45H		
Veesh Oilerall CORPORATION Wichita, Kansas		OVERHAUL SPECIFICATION NO. 8012	PAGE 8	

