

Boeing Aircraft Corporation

OVERHAUL SPECIFICATION

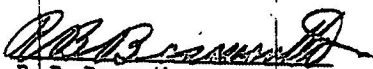
FUEL SYSTEM - MODEL C-45G AND C-45H

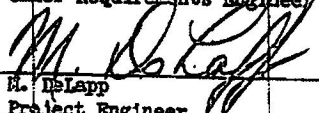
Overhaul Specification 9201

ISSUED June 1, 1953

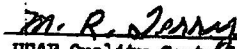
REVISED May 5, 1954


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TITLE FUEL SYSTEM - MODEL C-45G AND C-45H

ISSUED June 1, 1953

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1. SCOPE

1.1 Purpose.- The purpose of this specification is to authorize the use of reconditioned parts and provide reconditioning instructions for the complete fuel system as installed in T-7, T-7C, UC-45B, C-45F, and T-11 aircraft and instructions for modifications required to adapt them for use in C-45G and C-45H aircraft.

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	5-5-54	Record revision	Record change
2	6-1-53		
3	6-1-53		
4	6-1-53		
5	6-1-53		
6	6-1-53		
7	6-1-53		
8	6-1-53		
9	6-1-53		
* 10	5-5-54	Add Para. 3.3.5	Record change
* 11	5-5-54	Add Para. 3.4.3	Record change

3. APPLICABLE PUBLICATIONS

2.1 Federal.-

QQ-P-416 Cadmium Plating

2.2 Beech.-

FS 370A Finish Specification - Model C-45G and C-45H
 OS 7002 Cleaning Procedures for Reconditioned Aircraft
 OS 7007 Sheet Metal Repairs
 OS 7008 General Acceptable Quality Standards
 OS 7010 Removing Corrosion from Aluminum Parts

2.3 Technical Orders.- Compliance with this specification constitutes compliance with the technical orders listed below.

05-90-1 Types C-2 and C-3 Fuel Pressure Signal Assemblies, dated January 27, 1948

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 9210 Fuel Tanks

3.1.1 Parts Not Used:

3.1.1.1 Fuel System Installations 84-189600 and 804-189600.- All parts of the 84-189600 and 804-189600 fuel system installations will be disposed of at the direction of the customer except the parts listed in Paragraph 3.1.2 of this specification.

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3.1.1.2 Baggage Compartment Tank Installations 84-18400 and 18440.- All parts of the 84-18440 and 18440 baggage compartment tank installations will be disposed of at the direction of the customer except the parts listed in Paragraph 3.1.2 of this specification.

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 Fuel System Installation 84-189600.-

- 189605 Left and right center section rear fuel tank assembly
- 189604 Left and right center section main fuel tank assembly
- 189600U Left and right main fuel tank assembly
- 189721U Left and right rear fuel tank assembly
- 189620-4 Fuel tank cap assembly
- 189620-5 Fuel tank cap assembly

3.1.2.1.1 Center Section Rear Fuel Tank Installation 189720.-

- 107464 Turnbuckle Assembly
- 189651-1 Strap
- 189651-2 Strap
- 189653 Spacer

3.1.2.2 Fuel System Installation 804-189600.-

- 189721U Left and right rear fuel tank assembly
- 189600U Left and right main fuel tank assembly
- 189620-4 Fuel tank cap assembly
- 189620-5 Fuel tank cap assembly

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3.1.2.2.1 Facelle Fuel System Installation 84-189324.-

- Type C-3 Fuel pressure warning unit - Specification 94-35215
- Type C-2A Fuel strainer
- 189322P Block
- 189746 Fitting
- 189324 Plug

3.1.2.3 Baggage Compartment Tank Installation 84-184400.-

- 84-189723 Door
- 84-189719 Fastener
- 84-189612 Tube assembly
- 84-189718 Strap assembly

3.1.2.4 Baggage Compartment Tank Installation 18440.-

- 84-189719 Fastener
- 84-189718 Strap assembly
- 84-189612 Tube assembly
- 184402 Tank installation
- 18971 Fuel tank
- 18970 Fuel tank
- 18441 Cover installation

3.1.3 Parts to be Supplied Now:

3.1.3.1 Fuselage Fuel System Installation 694-189700; Center Section Rear Fuel Tank Installation 694-189720; Enduro Section Fuel Piping Installation 694-189730 and Main Fuel Tank Installation 694-189710.-

All parts called out on the above fuel system installation drawings will be supplied now except the parts listed in Paragraph 3.1.2.1 through 3.1.2.2.1 of this specification.

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3.1.3.2 Baggage Compartment Fuel Tank Installation 694-184400.
 All parts called out on Drawing 694-184400 baggage compartment fuel tank installation are to be supplied new except the parts listed in Paragraphs 3.1.2.3 and 3.1.2.4 of this specification,

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 is cause for rejection.

- (a) Tubing that is dented to the extent that the inside diameter at the damaged area is less than 90 percent of the original inside diameter;
- (b) Tubing that is scratched to a depth exceeding 10 percent of the wall thickness.
- (c) Tubing with damaged flared ends or damaged or stripped threads in end fittings.

3.3 Reconditioning Operations:

3.3.1 Fuel System Installation 84-189600:

3.3.1.1 Fuel Tank Cap Assembly 189620-4 and 189623-5.- Recondition and modify to conform to Drawing 694-189620 as follows and reinstall in accordance with Drawings 694-189604 and 694-189605.

- (a) Inspect for nonrepairable conditions.
- (b) Disassemble and scrap the 108059 gasket and the 189627 plate.
- (c) Strip and cadmium plate the 189622 handle, 189023 spicher, 189620-7 ring and 189626 clip in accordance with Specification QQ-P-416.
- (d) Finish 189624 lug and 189621 casting in accordance with FS 370A.
- (e) Reassemble in accordance with Drawing 694-189620. Install the following parts new.

- 108059 Gasket
- 109615-2-080 Chain
- 694-189621-4 Plate assembly to replace 189627-4 plate on 189620-4 cap assembly

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3.3.1.1 Fuel Tank Cap Assembly 189620-4 and 189620-5.- (Continued)
 694-189621-6 Plate assembly to replace 189627-5
 plate on 189620-5 cap assembly
 694-180097 Placard

3.3.1.2 Center Section Rear Fuel Tank Installation 189720:

3.3.1.2.1 Turnbuckle Assembly 107464.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Strip and cadmium plate 107463 eye in accordance with Specification QQ-P-416.

3.3.1.2.2 Strap 189651-1 and 189651-2.-

- (a) Inspect for nonrepairable conditions.
- (b) Repair as necessary as authorized herein.
- (c) Remove rivets, strip and cadmium plate in accordance with Specification QQ-P-416.
- (d) Replace rivets in accordance with Drawing 18965.

3.3.1.2.3 Spacer 189653.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean as necessary by sanding with fine sandpaper.
- (c) Finish with one coat of varnish conforming to Specification MIL-V-6893.

3.3.2 Fuel System Installation 804-189600:

3.3.2.1 Fuel Tank Cap Assemblies 189620-4 and 189620-5.-
 Refer to Paragraph 3.3.1.1 of this specification.

3.3.2.2 Nacelle Fuel System Installation 84-189320:

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APPROVAL <i>Richard S. ...</i>	DATE REVISED	Beech Aircraft CORPORATION Wichita 1, Kansas	OVERHAUL SPECIFICATION NO. 9201	PAGE 6
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3.3.2.2.1 Fuel Pressure Warning Unit Type C-3.-- Recondition as follows and install in accordance with Drawing 694-189679 engine section instrument piping installation.

- (a) Disassemble as necessary to facilitate inspection of all parts.
- (b) Inspect all parts for nonrepairable conditions.
- (c) Clean all parts in a solution of equal parts of naphtha and trichlorethylene.
- (d) Polish contact points with No. 0000 crocus cloth.
- (e) Install new lead wires.
- (f) Reassemble.
- (g) Calibrate and test the pressure warning unit as follows:

Connect the terminal to a 24 volt AC or DC power source with a two-candle power lamp in series. Connect the fuel side of the pressure warning unit to an adjustable pressure supply and a pressure gage. Vent the air opening to the atmosphere.

Remove the screw plug and washer from the base of the instrument and back off the slotted set screw until it is disengaged from the diaphragm. Replace the screw plug and washer.

Apply 5 psi pressure to the fuel side of the pressure warning unit. Slowly release the pressure, setting the contact points so the light flashes on at 2 psi.

Check the adjustment by applying 15 psi pressure to the fuel side of the pressure warning unit and slowly releasing it. The light should flash on at 2.0 to 2.25 psi and should remain lighted when pressure is reduced to zero. Light tapping of the pressure warning unit shall not cause the light to flicker as the pressure is reduced from 0.2 of a pound below the operation point to zero.

Connect a pressure supply with a gage to the air connection on the warning unit. Apply a pressure of 15 psi. During a period of one minute there shall be no leak.

Connect the supply and gage to the fuel connection of the pressure warning unit and apply a pressure of 30 psi. During a period of one minute there shall be no leak.

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3.3.2.2.1 Fuel Pressure Warning Unit Type C-3.- (Continued)

Recheck the unit by applying pressure to the fuel side of the pressure warning unit up to 15 psi. Note the pressure and note the pressure at which the signal goes on. The two pressures must not differ more than .15 psi.

3.3.2.2.2 Fuel Strainer Type C-2A.-

- (a) Inspect for nonrepairable conditions.
- (b) Scrap the existing fuel drain cock.
- (c) Clean parts in accordance with OS 7002. Use a soft bristle brush to remove imbedded particles from the screen assembly.
- (d) Strip and cadmium plate the screen assembly and the cover clamp in accordance with Specification QQ-P-416.
- (e) Install a new 35A1709 cover gasket and K1700B-2 drain cock in accordance with Drawing 694-189730.
- (f) Test the strainer assembly for leaks as follows:
 Plug all ports except the inlet port. Apply 1 psi air pressure to the strainer assembly and submerge in water. After submersion apply 25 psi air pressure and check for leaks.

3.3.2.2.3 Block 189322P.- Recondition as follows and install in accordance with Drawing 694-189679, engine section instrument piping installation.

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002. Care must be taken that these parts be kept in matched sets.

3.3.2.2.4 Fitting 189746 and Plug 189324.- Recondition as follows and install in accordance with Drawing 694-189679.

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

3.3.3 Luggage Compartment Tank Installation 84-184400:

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3.3.3.1. Door 84-189723.-

- (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 370A.

3.3.3.2 Fastener 84-189719.-

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

3.3.3.3 Tube Assembly 84-189612.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Replace color code markings in accordance with Specification AND 10375.

3.3.3.4 Strap Assembly 84-189718.-

- (a) Inspect for nonrepairable conditions.
- (b) Clean all parts in accordance with OS 7002.
- (c) Repair as necessary as authorized herein.
- (d) Strip and cadmium plate 84-189718-8 and 84-189718-10 straps in accordance with Specification QQ-P-416.
- (e) Remove corrosion from the AN155-16S barrel by buffing.

3.3.4 Baggage Compartment Tank Installation 18440:

3.3.4.1 Fastener 84-189719.-

Same as Paragraph 3.3.2.3.2 of this specification.

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- 3.3.4.2 Strap Assembly 84-189718.-
Same as Paragraph 3.3.2.3.4 of this specification.
- 3.3.4.3 Tube Assembly 84-189612.-
Same as Paragraph 3.3.2.3.3 of this specification.
- 3.3.4.4 Cover Installation 18441.- This installation will be modified to conform to Drawing 894-184410.

- (a) Inspect parts for nonrepairable conditions.
- (b) Scrap the 814-184037 and 814-184037-1 panel assemblies, 18441-16 bracket, 18441-28, 18441-30, 18441-32 and 18441-36 angles.
- (c) Clean in accordance with OS 7002.
- (d) Remove corrosion in accordance with OS 7010.
- (e) Repair as necessary as authorized herein.
- (f) Radius out the 18441-13 and 18441-19 angles and elongate the existing 1-1/4 inch hole in the 18441-2 flange in accordance with Drawing 894-184410.
- (g) Install new 894-184410-28, 894-184410-30, 894-184410-32, and 894-184410-36 angles in accordance with Drawing 894-184410.

3.3.5 Strap Assembly, 18965-1 and 18965-2.- Recondition in accordance with Paragraph 3.3.1.2.2 of this specification.

3.4 Authorized Repairs:

- 3.4.1 Fuel System Installation 84-189600:
 - 3.4.1.1 Center Section Rear Fuel Tank Installation 189720:
 - 3.4.1.1.1 Strap 189651-1 and 189651-2.-
 - (a) Straighten parts in accordance with shop practice.
- 3.4.2 Baggage Compartment Tank Installation 18440:

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3.4.2.1 Cover Installation 18441.-

- (a) Sheet metal repairs may be accomplished in accordance with OS 7007.
- (b) Replace all damaged nut plates.

3.4.3 Strap Assembly, 18965-1 and 18965-2.-

- (a) Strap assemblies which have the end attaching hole cracked or damaged may be repaired by trimming a maximum of 5/8-inch from the damaged end or ends of the strap. The total length of the strap may be reduced not more than 1-1/4 inch. Straps repaired in this manner may be used with AN 155-168 turn-buckles.

4. INSPECTION

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