

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 vacuum system as installed in T-7, T-7C, UC-45B, C-45F, and E-11 aircraft and instructions for modifications required to adapt them for installation in C-45G and C-45H aircraft in accordance with Drawings 694-189790 body vacuum system piping installation and 694-189775 engine section vacuum system installation.

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.

<u>Page</u>	<u>Date</u>	<u>Description of Revision</u>	<u>Serial Effectivity</u>
1	5-12-53		
2	5-12-53		
3	5-12-53		
4	5-12-53		
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6	5-12-53		
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USAF Quality Control

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2. APPLICABLE PUBLICATIONS

2.1 Specifications:

2.1.1 Army and Navy.-

AND 10375 Colors, Fluid Line Identification

2.1.2 Federal.-

QQ-F-416 Plating, Cadmium

2.1.3 Beech.-

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

3. REQUIREMENTS

3.1 Parts Involved:

3.1.1 Parts Not Used.- The following parts will not be re-used in C-45G and C-45H aircraft and will be disposed of at the direction of the customer.

3.1.1.1 Fuselage Vacuum System Installations 84-189695, 824-189695, 804-189695, and 804-189680.- None of these installations will be re-used.

3.1.1.2 Vacuum System Vent Installation 814-189790.- None of this installation will be re-used.

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3.1.1.3 Vacuum System Installations 84-189780, 94-189780, and 814-189780.- No parts of these installations will be re-used 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 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 Vacuum System Installation 84-189780.-

84-189746	Clamp assembly
84-189746-1	Clamp assembly
189777	Tube
189778	Tube
AN6119-2	Suction relief valve
AN6121-2	Oil separator

3.1.2.2 Vacuum System Installations 94-189780 and 814-189780.-

84-189746	Clamp assembly
84-189746-1	Clamp assembly
189777	Tube
189778	Tube
94-189781	Tube
94-189794	Tube
AN6119-2	Suction relief
AN6121-2	Oil separator

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3.1.3 Parts to be Supplied New.- All parts called out on Drawings 694-189790 body vacuum system piping installation and 694-189775 engine section vacuum system installation will be supplied new except those parts listed in Paragraph 3.1.2 of this specification.

3.2 Cause for Rejection.- The specific conditions listed below and 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.

- (a) Scrap all aluminum tubing with worn spots or scratches deeper than 10 percent of the wall thickness of the tubing.
- (b) Scrap all aluminum tubing that is dented so that the inside diameter of the tubing is less than 90 percent of the original inside diameter.
- (c) Scrap all aluminum tubing with bent or cracked flared ends.

3.3 Reconditioning Operations:

3.3.1 Tubes 189777, 189778, 94-189781 and 94-189794.

- (a) Inspect for nonrepairable conditions.
- (b) Clean in accordance with OS 7002.
- (c) Remove corrosion in accordance with OS 7010.
- (d) Re-identify tubing in accordance with AND 10375.

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3.3.2 Clamp Assembly 84-189746 and 84-189746-1.

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

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3.3.3 Oil Separator AN6121-2.-

- (a) Remove oil outlet fitting and screen and clean screen in stanisol or equivalent.
- (b) Flush inside surfaces with stanisol until solvent runs clear.
- (c) Inspect for nonrepairable conditions.
- (d) Make repairs as necessary as authorized herein.
- (e) Air test for leaks. Apply 10 psi pressure with separator submerged in water.
- (f) Finish in accordance with FS 370A.
- (g) Spray interior with a light grade of engine lubricating oil.

3.3.4 Suction Relief Valve AN6119-2.-

- (a) Disassemble.
- (b) Clean all parts in stanisol or equivalent.
- (c) Inspect for nonrepairable conditions.
- (d) Make repairs as necessary as authorized herein.
- (e) Check spring tension. A minimum force of 16 ounces must be required to compress the spring to a length of 1-1/8-inch.
- (f) Assemble.
- (g) Operational test as follows: Using suitable test equipment and a Type B-12A vacuum pump, adjust the suction relief valve until a system suction of 3-1/4 psi is acquired at 2500 rpm pump speed. Adjust the air flow through the system from 4-1/2 to 8 cubic feet per minute. The suction will not vary more than plus or minus 1/4 psi.

3.4.4 Authorized Repairs:

3.4.1 Oil Separator AN6121-2.- Refer to Figure 1 for parts listing.

- (a) Repair leaks by soldering with silver solder in accordance with Specification QQ-S-561, Class 4.
- (b) Straighten slightly bent port fittings to best shop procedure.

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3.4.2 Suction Relief Valve AN6119-2.-- Refer to Figure 2 for parts listing.

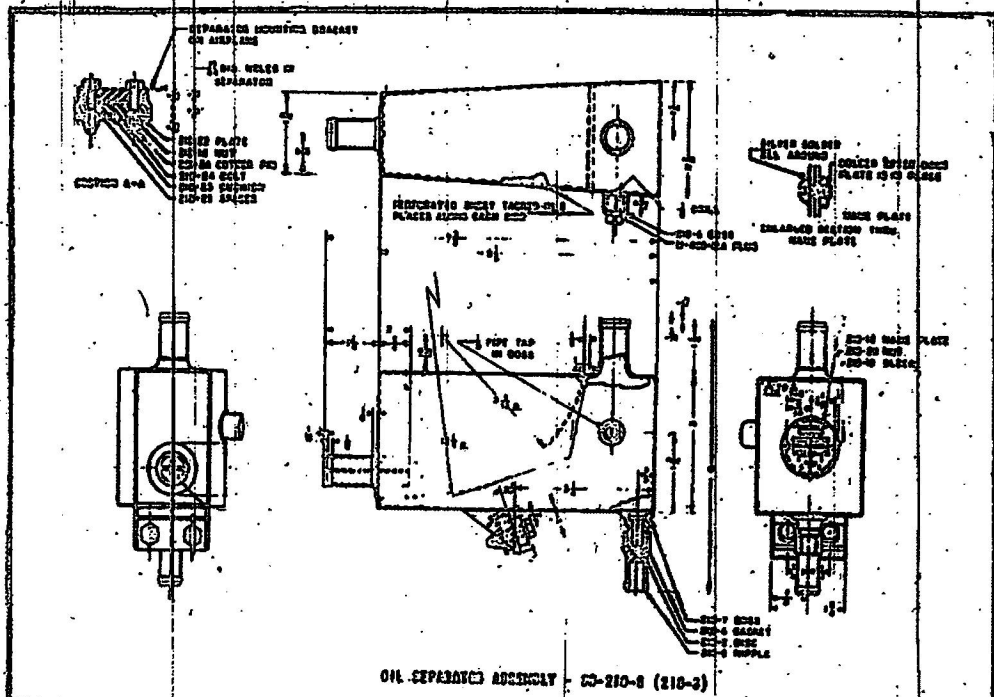
- (a) Repair slight visual wear to the bakelite valve disc and the valve seat by lightly lapping on a flat oil stone or a surface plate using No. 400, or finer, wet or dry sandpaper moistened with stanoisol.
- (b) Repair 215-5 guides that show roughness on the inside surface by lightly honing until smooth.
- (c) Repair broken safety wire lugs by gas welding the lug to the casting and re-drilling the hole. Use rod conforming to Specification QQ-R-566.

4. INSPECTION

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

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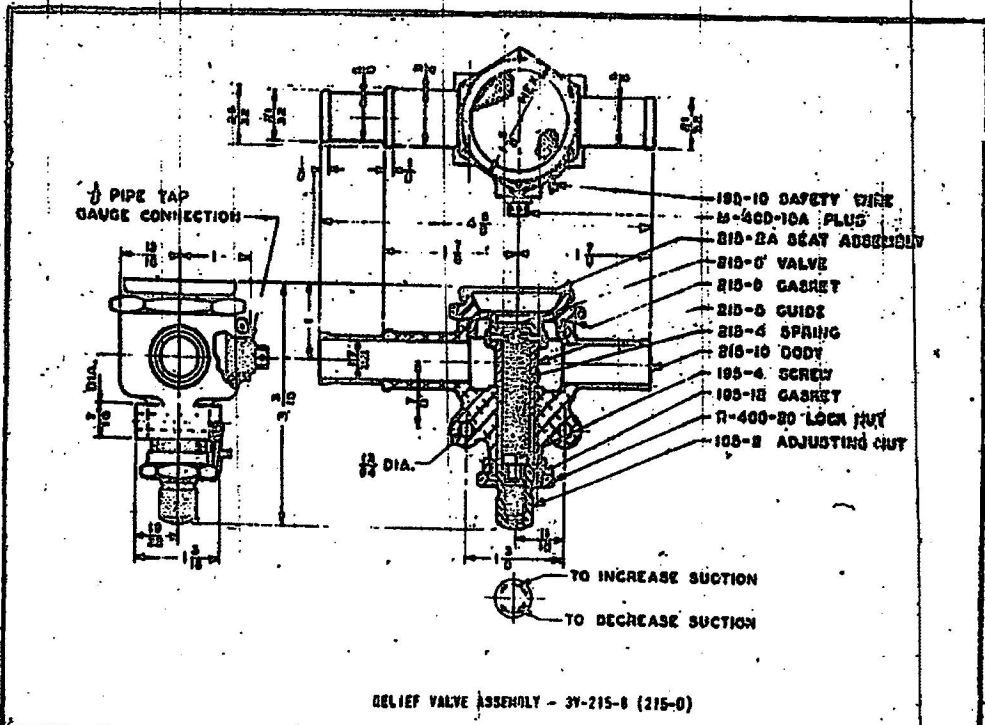
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<u>PART NO.</u>	<u>NAME</u>	<u>QTY. REQD.</u>	<u>PART NO.</u>	<u>NAME</u>	<u>QTY. REQD.</u>
218-8	Oil Separator Assem.	1	218-19	Screw	2
218-7	Oil Outlet Boss	1	218-20	Nut	2
218-4	Gasket	1	218-22	Plate - Bracket	1
218-3A	Strainer	1	218-23	Cushion - Bracket	2
218-8	Nipple	1	218-24	Screw	2
218-6	Boss - Gauge Coin.	1	213-14	Nut	2
M-400-18A	1/8 Pipe Plug	1	291-24	Cotter Pin	2
218-14	Name Plate	1	218-25	Spacer	2

FIGURE 1

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RELIEF VALVE ASSEMBLY - 3V-215-0 (215-0)

PART NO.	NAME	QTY. REQD.	PART NO.	NAME	QTY. REQD.
215-0	Relief Valve Assem.	1	215-9	Gasket	1
215-10	Body	1	215-26	Spring	1
215-5	Guide	1	195-4	Screw	1
215-2A	Valve Seat Assem.	1	195-2	Nut	1
215-3A	Valve Seat	1	195-12	Gasket	1
215-7	Screen	1	R-400-29	Locknut	1
215-8	Retainer	1	M-400-18A	Plug Sq. Hd.	1
215-6	Valve	1	195-10	Safety Wire	1

FIGURE 2

WRITTEN BY <i>D. Fitzpatrick</i>	DATE ISSUED 5-12-53	OVERHAUL SPECIFICATION VACUUM SYSTEM - MODEL C-426 AND C-45H	
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