Beech Aircraft Corporation

OVERHAUL SPECIFICATION

OIL DILUTION SOLENOID VALVE - MODEL C-45G, C-45H, AND SNB-5

OVERHAUL SPECIFICATION 3612

ISSUED April 22, 1953

REVISED August 6, 1953

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E-371

A58

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TITLE OIL DILUTION SOLENOID VALVE - MODEL C-45G, C-45H, AND SNB-5

ISSUED April 22, 1953

WRITTEN BY T. M. Taylor REVISED August 6, 1953

1. SCOPE

1.1 Purpose.- The purpose of this specification is to provide instructions for reconditioning and modifying M-441, AN4078, and 37D6210 oil dilution solenoid valves for use on Model C-45G, C-45H, and SNB-5 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 the pages revised by the current revision.

Page	Date	Description of Revision	Serial Effectivity
1*	8-6-53	To incorporate SNB-5	Record change
2*	8-6-53	To incorporate SNB-5	Record change
3*	8-6-53	To incorporate SNB-5	Record change
4*	8-6-53	To incorporate SNB-5	Record change
5*	8-6-53	To incorporate SNB-5	Record change

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2. APPLICABLE PUBLICATIONS

2.1 Federal.-

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

2.2 Beech.-

08 7008 General Acceptable Quality Standards

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

03-1-58 Replacement of Plunger Assembly, dated July 6, 1945

3. REQUIREMENTS

3.1 Parts Involved:

3.1.1 Parts Not Used.- The following parts will not be re-used and will be disposed of at the direction of the customer.

37A6220	Plunger
40A7875	Plunger
43A9218	Plunger
M-636	Plunger
UA-401939	Plunger
M-640 (on M-441 valves only)	Body
M-735	Gasket
37A6230	Gasket
37A6231	Plug

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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.

M-441	Oil dilution solenoid valve
AN4078	Oil dilution solenoid valve
37D6210	Oil dilution solenoid valve

3.1.3 Parts to be Supplied New.-

M-665	Plunger
37B6227	Body (on M-441 valves only)
37A6230	Gasket
AN913-1	Plug

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 methods listed herein is cause for rejection.

3.2.1 Plunger Assembly.-

(a) Indicated valve leakage where dirt and foreign material in the cup or on the valve seat does not appear to be the cause.

3.2.2 Gasket.-

(a) Indicated leakage from body to end joint.

3.2.3 Ring.-

(a) Indicated leakage into the coil assembly and housing assembly.

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3.3 Reconditioning Operations.-

(a) Disassemble the valve by removing the plug and the four screws and washers. Lift off the body and remove the plunger assembly, spring, and gasket. Use a punch or drill to cut off the pin which locks the end in position in the housing assembly. Replace the body in position on the end and replace the four screws. Using the body for a handhold, unscrew the end from the housing assembly. Again remove the screws holding the body to the end. Remove the cup and body from the end. Remove the nuts, washers, cover, tube, plate and collar. Withdraw the coil assembly from the housing assembly.

(b) Check parts and assemblies for nonrepairable conditions.

(c) Carefully clean and dry all parts.

(d) If not already accomplished, replace the plunger with a new M-665 plunger assembly. Install a new 37A6230 seal and AN913-1 plug and replace the body in M-441 valves with a 32B6227 body.

(e) Recadmium plate the cup and housing in accordance with Specification QQ-P-416.

(f) Recadmium plate in accordance with Specification QQ-P-416 and embrittlement-relieve the spring.

(g) Polish the cover and chase threads if necessary to remove corrosion.

(h) Before reassembly, check the coil resistance with an ohmmeter with a range of at least 0-3 ohms. The characteristics of the coil at 25 degrees Centigrade (77 degrees Fahrenheit) are:

Applied Voltage	9	12	18	24
(Approx.) Amperage	.81	1.08	1.62	2.16
Resistance in ohms	11-12	11-12	11-12	11-12

Any appreciable rise in amperage or drop in resistance indicates a shorted coil and replacement should be made.

(i) Reassemble, test and adjust as outlined in Paragraph 3.5 of this specification.

(j) Lockwire the screws, the plug, and the net.

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3.4 Authorized Repairs.- None

3.5 Test Procedure:-

3.5.1 Valve Adjustment.- The valve lift should be between 1/64 and 3/64 of an inch. This adjustment may be made, if necessary, by slightly tightening or loosening the end in the housing assembly after assembly of the unit. Usually, if the original holes in the end and the housing assembly are properly aligned for insertion of the pin, and the body snugly fastened, no further adjustment will be necessary.

3.5.2 Valve Operation Test.- Connect a 9-volt DC source capable of delivering two amperes to the terminals to check operation. If the valve does not open on 9 volts, the coil assembly is defective or the cup is out of round and binding or not in contact with the core of the housing assembly. After first checking operation as above, the same test should be repeated with 15 pounds per square inch fuel pressure at the "in" connection and the "out" connection open.

3.5.3 Valve Leakage Test.- Apply 15 pounds per square inch fuel pressure to the end connection with the plug removed and "out" connection open. Any leakage shall be cause for rejection.

3.5.4 Body or Coil Assembly Leakage Test.- Apply 25 pounds per square inch fuel pressure to the "in" connection with the plug tightly in place and the "out" connection plugged. No leakage should exist.

4. INSPECTION

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