

Service Bulletin

Fuel Systems

Bulletin No.: RS-84

Date: 12-14-84

Revised: _____

Subject: BENDIX FUEL INJECTOR SYSTEM, MODIFICATION OF: RSA-7DA1 PARTS LIST 2524624-4
OR -5 TO PARTS LIST 2524624-6

1. PLANNING INFORMATION:

A. EFFECTIVITY:

<u>Model No.</u>	<u>Parts List Number</u>
RSA-7DA1	2524624-4 2524624-5

B. REASON:

To incorporate an air temperature compensator instead of an air density compensator to improve service life.

C. DESCRIPTION:

Replace automatic mixture control assembly P/N 2524635-B with automatic mixture control assembly P/N 2524936-A.

D. COMPLIANCE:

Operating Activities: Information only.

Overhaul Activities: Must comply at next repair or overhaul prior to return to service.

E. APPROVAL:

F. MANPOWER:

No additional man-hours required to accomplish during overhaul.

G. MATERIAL AVAILABILITY: TBA

<u>Part No.</u>	<u>Qty.</u>	<u>Nomenclature</u>	<u>Availability</u>
2542037	1	Bellows Assembly	Bendix Distributors

1. PLANNING INFORMATION: (Continued)

H. TOOLING:

Not affected.

I. WEIGHT AND BALANCE:

Not affected.

J. REFERENCES:

Beech Aircraft Bulletin.
Bendix Bulletin RS-83.

K. PUBLICATIONS AFFECTED:

Bendix RSA-7DA1 Component Maintenance Manual Form 15-633A, dated October 1, 1982.

2. ACCOMPLISHMENT INSTRUCTIONS:

A. Remove and disassemble automatic mixture control P/N 2524635 in accordance with the overhaul manual. Reassemble the AMC assembly using bellows assembly P/N 2542037 instead of bellows assembly P/N 2537980.

B. Adjust temperature compensating unit as follows:

- (1) Soak the temperature compensating unit at the test temperature for at least one hour before adjustment.
- (2) Assemble bellows needle assembly into venturi housing. Assemble needle sleeve and two shims P/N 2537445 into venturi housing.
- (3) Install master block, with packing in place, on test fixture P/N 2550540.
- (4) Check test fixture for accuracy and leakage as follows:
 - (a) Close air bleed valve (Figure 1). Open the vacuum valve (32, figure 1) slightly until several inches of water show on manometer "B." Allow sufficient time for vacuum to purge air from the test fixture and master block. The reading on manometers "A" and "B" should be zero. If manometers "A" and "B" do not return to zero, a leak in the test circuit is indicated. Find and correct leak before proceeding.
 - (b) Open air bleed valve fully. Adjust valve (32) until a reading of 15 inches water is shown on manometer "A." The 60 inch manometer "B" should indicate a reading equal to the value stamped on the master block (normally 18.4 to 18.5 inches water). If the value stamped on the master block cannot be obtained on manometer "B," an obstruction or leak is indicated in the test circuit.

2. ACCOMPLISHMENT INSTRUCTIONS: (Continued)

- (5) After checking the system for leakage and accuracy, remove the master block. Install temperature compensating control assembly on the test fixture per Figure 2. Make sure packing is in place. Do not overtighten holddown nuts or the packing will distort and cause an air leak.

NOTE: The venturi slots and channels into the suction chamber of the venturi are to be left open during calibration.

- (6) Adjust pressure regulator until water manometer "A" registers a constant 15 inches. Water manometer "B" must register the value specified by the latest applicable test specification corrected for the ambient temperature per Figure 3.
- (7) If the level of water manometer "B" falls outside the specified limits corrected for temperature, adjust the needle by loosening locknut and rotating the bellows retainer either clockwise or counterclockwise. Tighten the locknut.

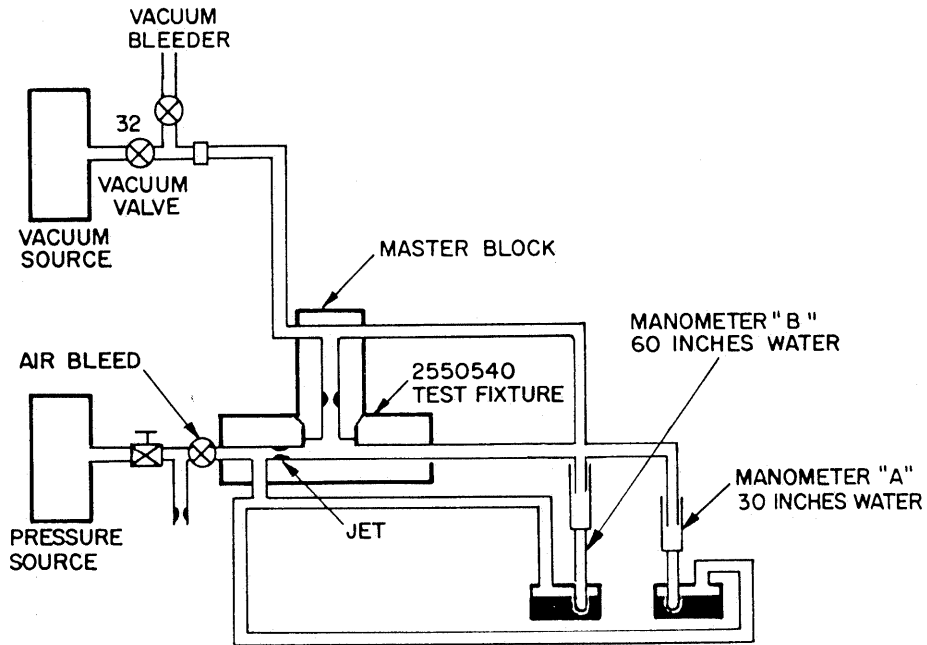
NOTE: After final adjustment of the temperature compensating unit, the bellows anchorage must allow additional minimum adjustment range of one complete revolution clockwise and counterclockwise to provide for any future readjustment. This must include full thread engagement of the locknut.

C. Use Test Specification 11087-01 (figure 3) for AMC test calibration.

D. Identification:

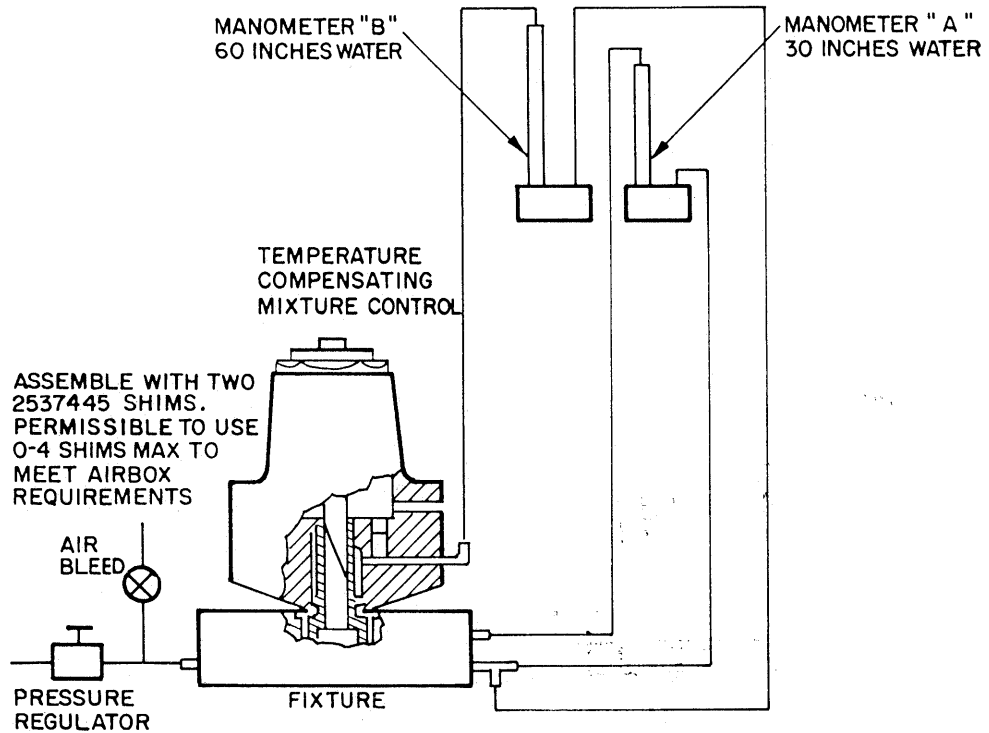
- (1) All modified RSA-7DA1 Fuel Injectors must be reidentified.
- (2) If the identification plate is reused it is permissible to overstrike or reidentify the unit by installing a new plate, and reidentify as follows:
 - (a) Transfer the exact model number from the old identification plate.
 - (b) Reidentify the fuel injector with Parts List Number 2524624-6, less any changes not incorporated during previous overhauls.
 - (c) Transfer the exact basic number less any changes not incorporated during previous overhauls.
 - (d) I.C. - this block should be left blank.
 - (e) Transfer the exact serial number from the old identification plate.

2. ACCOMPLISHMENT INSTRUCTIONS: (Continued)



LA-8240

Hook-up to Determine Fixture Accuracy and Detect Leakage
Figure 1



LA-8241

AMC Test Hookup
Figure 2

3. MATERIAL INFORMATION:

<u>A.</u>	<u>New P/N</u>	<u>Qty.</u>	<u>Nomenclature</u>	<u>Old P/N</u>	<u>Disposition</u>
	2542037	1	Bellows Assembly	2537980	A or B

NOTES: A. If serviceable, retain for use on controls other than RSA-7DA1.

B. Scrap.

PARTS LIST: 2524936

AUTOMATIC MIXTURE CONTROL FLOW TEST LIMITS

<u>AMBIENT TEMPERATURE</u> <u>OF</u>	<u>CALIBRATION VALUE</u> <u>"H2 O</u>
42.6 - 47.5	16.5
47.6 - 52.5	16.6
52.6 - 57.5	16.7
57.6 - 62.5	16.8
62.6 - 67.5	16.9
67.6 - 72.5	17.0
72.6 - 77.5	17.1
77.6 - 82.5	17.2
82.6 - 87.5	17.3
87.6 - 92.5	17.4
92.6 - 97.5	17.5
97.6 - 102.5	17.6

RAR (SERVICE ONLY) WITHIN .2"

Calibration Test Sheet - AMC
Figure 3



K. R. Dettweiler
Manager of Service