



JANAERO DEVICES

Fort Deposit, Alabama

Service Bulletin

#A-103

B-Series Heaters

Replacement of 42D36 Switch Series

-Technical Content is FAA Approved-

JANITROL B-SERIES AIRCRAFT HEATERS 42D36 COMBUSTION AIR PRESSURE SWITCH

PREFACE: Aircraft installations using JANITROL B-SERIES HEATERS have experienced field failures of the 42D36 Combustion Air (C/A) Switch due to over adjustment and consequent de-coupling of the pressure sensing spring. This SERVICE BULLETIN is to supersede previous SB# A-102, dated September 1994, and recommends upgrade with a new Switch (P/N 94E42) at the next required Inspection/Overhaul Period. The new 94E42 Switch had been redesigned to eliminate the noted failure mode of the old Switch and upgrade older technology Heaters..

1. PLANNING INFORMATION:

The attached chart (TABLE 1) shows the setting data of the previous 42D36 Series C/A Switches and the supersedure to the new 94E42 Series Switches. Consult your JANITROL HEATER MANUAL for exact switch model applicable to your aircraft Heater.

1.1 SB #A -102 required that users check/adjust the setting of the 42D36 C/A Switch at the next required inspectionperiod (see following paragraph regarding FAA AD-NOTE #96-20-07 and required inspection /overhaul period).

1.2 FAA AD-NOTE #96-20-07 on these same B-Series Heaters requires periodic inspections to assure the integrity and airworthiness of the Combustion Tube in each Heater. The initial period for new Heaters and overhauled with new tube is 500 hours and every 100 hours thereafter. Units failing the required periodic inspection require a major overhaul including replacement of the Combustion Tube. It is at this point of inspection/overhaul that upgrade of the Switch to new production specifications is recommended (see preface).

1.3 DATA

EFFECTIVITY - all B-series Heaters

DESCRIPTION - replace 42D36 Switch with 94E42 Switch

COMPLIANCE - next major overhaul or inspection period

MATERIAL - 94E42 Switch **

TOOLING - no special tools required

WEIGHT & BALANCE - not effected

** - consult Factory or Distribution for price and availability

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2. PROCEDURE

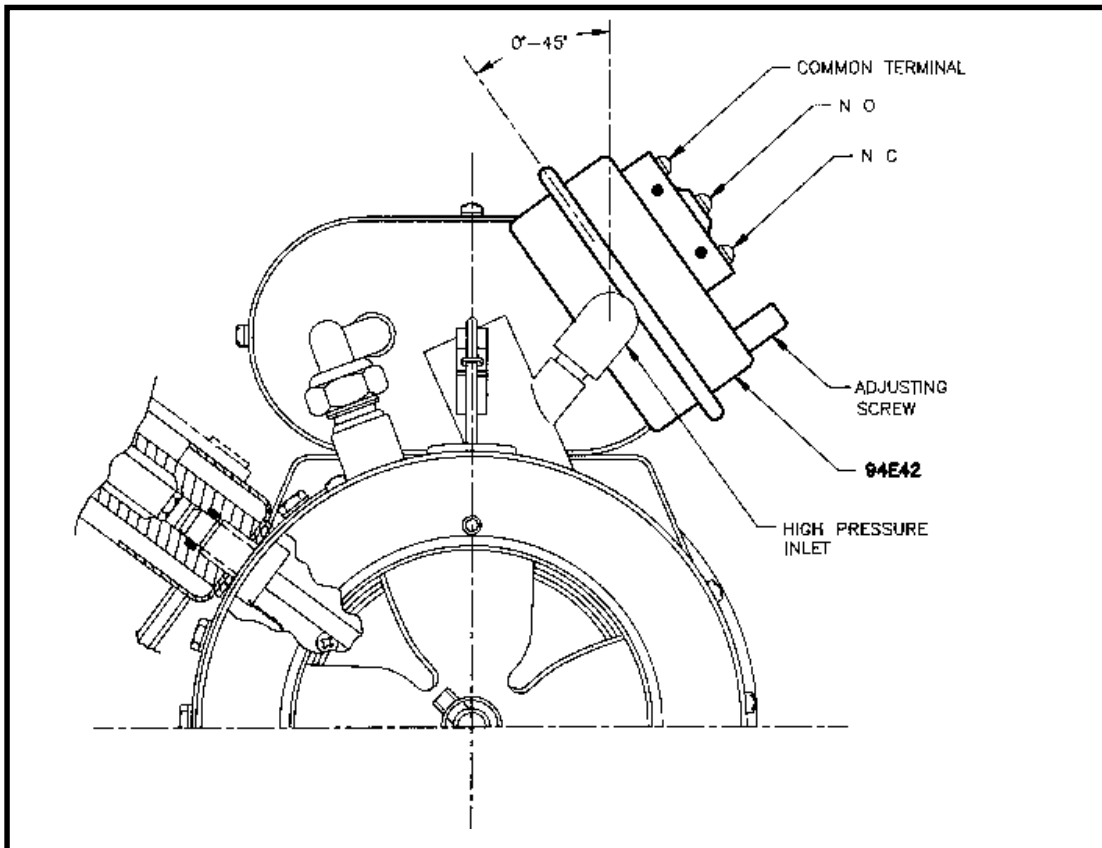
- 2.1 Locate the C/A Switch on your Heater and disconnect sense lines and electrical wires from the Switch. Mark connections as installed in the aircraft and remove the unit from the Heater.**
- 2.2 Install the new 94E42 Switch in place of the removed 42D36 Switch and reconnect all electrical wires and sense lines exactly as previously connected - combustion air inlet to HIGH pressure port and sense line to LOW pressure port. NOTE: the new 94E42 C/A Switch mounts as shown in Figure 1 of this Bulletin and has the high pressure port and adjusting screw reversed from the old 42D36 Switch - that is intentional.**
- 2.3 Connect an ohmmeter (analog) or continuity tester across the switch terminals and verify the contacts are open as installed.**
- 2.4 Turn on your Heater and observe the continuity of switch closing. The new 94E42 Switch is factory preset to close at required make/break points and requires no adjustment at installation.**
- 2.5 Make several trials to insure switch repeatability and insure the absence of leaks at connection points. NOTE: the switch is a differential pressure device and the Heater exhaust must be open to atmosphere during the test.**
- 2.6 The 94E42 Switch on all B1500, B2030, B3040, and B4050 Heaters should be checked periodically as required by JANITROL Maintenance Manual 24E25-1 and can be adjusted to attain repeatable readings as necessary - turning the adjustment screw clockwise increases the setting and counter-clockwise decreases the setting. Reapply glyptal or torque seal to the setting screw once final setting is attained.**

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TABLE 1

MODEL	MAKE SETTING	BREAK SETTING	DIFFERENTIAL	NEW SWITCH
42D36	0.5 +/- 0.1		0.3 +/- .07	94E42-1
A42D36	0.5 +/- 0.1		0.3 +/- .07	94E42-2
B42D36	0.5 +/- 0.1		0.3 +/- .07	94E42-3
C42D36	1.5 +/- 0.1		0.3 +/- .07	94E42-4
E42D36	4.0 +/- 0.3	3.4 +/- 0.2		94E42-6
F42D36	OBSOLETE - SEE L42D36			
G42D36	0.5 +/- 0.1		0.3 +/- .07	94E42-7
H42D36	5.0 +/- 0.3	4.4 +/- 0.3		94E42-8
J42D36	1.5 +/- 0.1		0.3 +/- .07	94E42-9
K42D36	0.5 +/- 0.1			94E42-10
L42D36	3.5 +/- 0.3	2.9 +/- 0.3		94E42-11
M42D36	2.0 +/- 0.25		0.3 +/- .07	94E42-12

FIGURE 1



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