



JanAero Devices Division

Fort Deposit, Alabama

Service Bulletin

#A-102

B-Series Heaters

42D36 Switch Series

-Technical Portions are FAA Approved-

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

PREFACE: Aircraft installations using JANITROL B-SERIES HEATERS (B1500, B2030, B3040, B4050) have experienced field failures of the 42D36 Combustion Air (C/A) Pressure Switch due to over adjustment and consequent de-coupling of the pressure sensing spring. This SERVICE BULLETIN is to require users to check and adjust their C/A switch by the proper procedure.

1. PLANING INFORMATION:

The attached chart (TABLE 1) depicts the correct setting data for the 42D36 Series C/A Switches. Consult your JANITROL HEATER MANUAL or Aircraft Owners Manual for exact switch model applicable to your aircraft heater.

1.1 It is required that users check and, if necessary, adjust the setting of the 42D36 C/A Switch within the next 30 days after date of this Bulletin and at every succeeding required 100 Hour inspection period.

1.2 DATA

EFFECTIVITY - all B-series Heaters as noted in this Bulletin

DESCRIPTION - check and adjust Switch, replace as required

COMPLIANCE - within next 30 days and every 100 hours thereafter

MATERIAL - none required

TOOLING - no special tools required

WEIGHT & BALANCE - not effected

2. PROCEDURE:

2.1 Locate the C/A Switch on your Heater and disconnect sense lines to isolate unit as installed in aircraft or remove unit from Heater for bench test as is most practical for your given installation.

2.2 Connect an adjustable air pressure line that can be controlled in a range of zero to 5 inches of water pressure and a water manometer to the high pressure port of the C/A Switch as shown in Figure 1 of this Bulletin. NOTE: the switch must be tested at 45° position from vertical (Figure 2) or as mounted in the aircraft. The manometer used must be graduated in 0.1 in. W.G. increments maximum and be zero set at the start of the test.

- 2.3 Connect an ohmmeter (analog) or continuity tester across the switch terminals to determine the exact instant of switch closing.
- 2.4 Apply air pressure allowing it to build very slowly from zero and observe the reading at the instant of switch closing (continuity). The switch should close at the values shown in TABLE 1 (settings are in inches of water pressure as indicated on a water manometer). Pass or fail criteria shall be the tolerance shown in TABLE 1 (eg: 0.5 + / - 0.1 shall require that the switch "make" at a maximum of 0.6 in. W.G. rising pressure and "break" at a minimum of 0.4 in W.G. falling pressure).
- 2.5 Make several trials to insure switch repeatability and reduce or lower the pressure very slowly to read accurate results. NOTE: the switch has a differential pressure tap that must be open to atmosphere during the test.
- 2.6 Adjust the switch to attain repeatable readings as necessary - turning the adjustment screw clockwise increases the setting and counter-clockwise decreases the setting. Apply glyptal or torque seal to screw once final setting is attained.

3.0 PASS/FAIL CRITERIA:

- 3.1 If the switch cannot be set within the limits per Paragraph 2.4 or exhibits erratic operation per Paragraph 2.5, the switch must be rejected and replaced.

ADVISORY NOTES:

- 1) Field problems associated with the 42D36 Switch de-coupling may result in possible fuel puddling if the Heater Drain Line is not clear. Please consult your Aircraft Owners Manual for proper installation and maintenance.
- 2) Periodic 100 Hour Inspections of the Switch can be easily accomplished in conjunction with already required Heater inspections per AD # 82-07-03.

TABLE 1

MODEL	MAKE SETTING	BREAK SETTING	TYPE
42D36	0.5 +/- 0.1		N.O.
A42D36	0.5 +/- 0.1		N.O.
B42D36	0.5 +/- 0.1		N.O.
C42D36	1.5 +/- 0.1		N.O.
D42C36	2.5 +/- 0.3	5.0 +/- 0.3	N.C.
E42D36	4.0 +/- 0.3	3.5 +/- 0.3	N.O.
F42D36	OBSOLETE --	-- SEE L42D36	
G42D36	0.5 +/- 0.1		N.O.
H42D36	5.0 +/- 0.3	4.8 +/- 0.3	N.O.
J42D36	1.5 +/- 0.1		N.O.
K42D36	0.5 +/- 0.1		N.O.
L42D36	3.5 +/- 0.3	3.2 +/- 0.3	N.O.
M42D36	2.0 +/- 0.25		N.O.

FIGURE 1

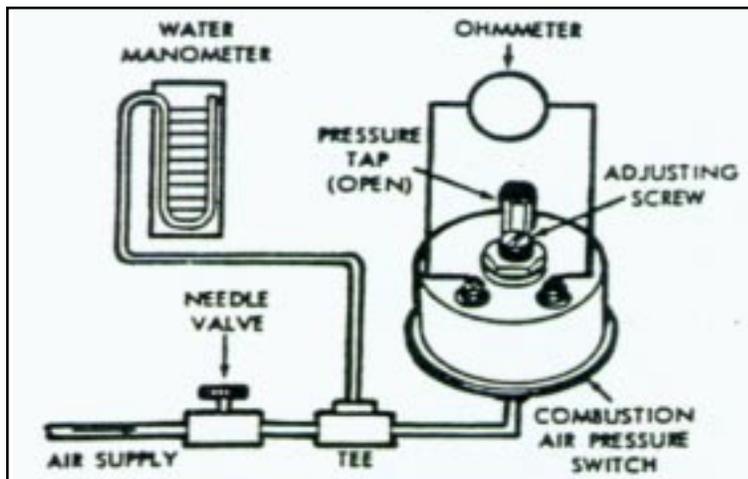


FIGURE 2

