



SERVICE BULLETIN

No. 493

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

"DOA EA-1 Approved"

March 25, 1976 M

Subject:

Magnetic Compass Deviation.

Models Affected:

PA-23-250 (6 Place) Aztec

Serial Numbers Affected:

27-3837, 27-3944 to 27-7554092 Inclusive, 27-7554094 to 27-7554159 Inclusive, 27-7554161 to 27-7654018 Inclusive, 27-7654020 to 27-7654024 Inclusive, 27-7654026 to 27-7654036 Inclusive.

Compliance Time:

At the next periodic inspection or Programmed Inspection Event, not to exceed the next fifty (50) hours of operation.

Purpose:

A few field reports have been received concerning excessive magnetic compass deviation when the aircraft landing/taxi light and/or heater are turned on. This condition may become critical during instrument approaches, with the possibility of aborted approaches due to an error in the aircraft's actual heading. It has been determined that the landing/taxi lights and/or heater electrical system wiring may not be properly routed.

This service release provides instructions to check magnetic compass function to ascertain operation of the magnetic compass within acceptable limits, and, if necessary, provides material and instructions to re-wire the aircraft landing/taxi light and heater systems to preclude excessive magnetic compass deviation.

NOTE: It has been determined that north and south magnetic headings are not adversely affected by the magnetic fields produced when the aircraft lights and heater circuit are activated.

Instructions:

1. CAR 3.666 and FAR 23.1327 permits up to 10 degrees compass deviation on any heading; to ascertain acceptable/non-acceptable compass deviation, conduct the following check (NOTE: The following compass deviation check and related log book entry may be accomplished by the pilot in command):

Instructions (Continued):

- a. Situate the aircraft on a heading of 90 degrees on the ground.
 - b. Activate landing light; record compass deviation.
 - c. Activate heater; record compass deviation.
 - d. If b and c, above, is less than 10° deviation on either (90° or 270°) heading, no further action is required other than appropriate log book entry.
 - e. If b, above, is less than 10° deviation, but with c, above, added equals more than 10° deviation, fabricate and locate the following placard in full view of the pilot: "HEATER MUST BE TURNED OFF WHEN READING MAGNETIC COMPASS". Make appropriate log book entry.
 - f. If item b, above, alone exceeds 10° deviation, install one (1) each per aircraft Piper kit number 761 044, Wiring Modification.
2. Installation instructions are contained in Piper kit number 761 044, Wiring Modification.

Material Required:

One (1) each per aircraft Piper kit number 761 044, Wiring Modification as required per Instructions No. 1. f., above.

Availability of Parts:

Your Piper field service facility.

Effectivity Date:

This service release is effective upon receipt.

Summary:

The compass deviation check procedure described in Instructions No. 1. a. through e., above, may be conducted by and at the convenience of the pilot in command. If the modification is required, please contact your Piper field service facility to make arrangements for compliance with the modification provisions of this service release in accordance with Compliance Time, above. Modification material, if required, is available free of charge through your Piper Field Service Facility for a period of time not to exceed twelve (12) months from the issue date of this service release.