



SERVICE BULLETIN

NUMBER: SB 500-34-019, REV C
MODEL: ECLIPSE EA500
SUBJECT: PITOT/AOA PROBE INSPECTION/TEST

1. PLANNING INFORMATION

A. Effectivity

Aircraft Serial Numbers: 000001 through 000189.

B. Reason

This Service Bulletin executes and supplements Harco Labs, Inc, SB-34-10-10-001, Rev F – Pitot/AOA Probe 100435-X-().

Changes in this revision:

- Harco Labs, Inc, SB-34-10-10-001, Rev C – Pitot/AOA Probe 100435-X-() changed to Harco Labs, Inc, SB-34-10-10-001, Rev F – Pitot/AOA Probe 100435-X-().
- Added requirement to send completed Harco Test Procedure P1149 Data Sheet # A-1 or B-1 to Eclipse Aviation along with SB Compliance Record. Refer to paragraph 5, Notifying Eclipse Aviation .

C. Description

This Service Bulletin provides the aircraft effectivity and provides supplemental procedures for the accomplishment of Harco Labs, Inc, SB-34-10-10-001, Rev F – Pitot/AOA Probe 100435-X-().

D. Relevant Publications

Harco Labs, Inc, SB-34-10-10-001, Rev F – Pitot/AOA Probe 100435-X-(). 

SB 500-34-004 – Standby Pitot/Static Probe Upgrade

E. Compliance

For aircraft with Standby Pitot/Static Probes P/N 100564-18: Eclipse Aviation Corporation considers this to be a mandatory inspection/test that must be accomplished and failed probes replaced within 50 hours or 90 days, which ever comes first from the issue date of this SB.

For aircraft with Standby Pitot/Static Probes P/N 100564-15 probes: Eclipse Aviation Corporation considers this to be a mandatory inspection/test that must be accomplished within 10 hours or 30 days, which ever comes first from the issue date of this SB.

NOTE: Replacement of Standby Pitot/Static Probes P/N 100564-15 (accomplishment of SB 500-34-004 – Standby Pitot/Static Probe Upgrade) with Standby Pitot/Static Probes P/N 100564-18 will allow 50 hours or 90 days, which ever comes first from the issue date of this SB for Pitot/AOA Probe replacement.

For aircraft that complied with Harco Labs, Inc, SB-34-10-10-001, Rev B – Pitot/AOA Probe 100435-X-() (Includes Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev C), confirm that the test results meet pass criteria found in Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E.

F. Labor Requirements

The following information is for planning purposes only.

- (1) Estimated labor hours to perform:

Suggested number of personnel: 2



SERVICE BULLETIN

Left and right Pitot/AOA Test: 1 Hour

Total labor hours: 2.0

The above is an estimate based on properly equipped and experienced personnel complying with this Service Bulletin. Actual labor hours may vary depending on workforce experience, concurrent maintenance, discovery of other discrepancies, etc.

(2) Qualification of personnel:

- A person properly authorized under 14 CFR 43 to perform aircraft maintenance.

G. References

Aircraft Maintenance Manual (AMM) P/N 06-117751, latest revision.

EA500 Illustrated Parts Catalog (IPC) P/N 06-117752, latest revision.

Harco Labs, Inc, SB-34-10-10-001, Rev F – Pitot/AOA Probe 100435-X(-). (Includes Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E).

2. MATERIAL INFORMATION

A. Materials

No parts are required for this Service Bulletin. If Pitot/AOA Probe fails test, refer to EA500 Illustrated Parts Catalog (IPC) P/N 06-117752, latest revision for replacement parts.

B. Tooling

The following special tooling/support equipment is required to accomplish this Service Bulletin.

Nomenclature	Specification	Use
K-Type Thermocouple assembly, 4¼ inch knot position	Harco, T1599-425	To test Pitot/AOA Probe Heaters
K-Type Thermocouple assembly, 5¾ inch knot position	Harco, T1599-575	To test Pitot/AOA Probe Heaters
K/J Thermometer	EXTECH Instruments Model 421502 with basic accuracy of minimum 0.1% or equivalent with a display of ###.# .	To test Pitot/AOA Probe Heaters

C. Interchangeability/Intermixability of Parts

None

D. Part Re-identification

None.



SERVICE BULLETIN

3. ACCOMPLISHMENT INSTRUCTIONS

A. Job Set-Up Procedure

NOTE: This supplemental test procedure is to support Harco Labs, Inc, SB-34-10-10-001, Rev F. This includes steps that are not included in the Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E.

- (1) Make aircraft safe for maintenance. Refer to AMM 20-00-01.
- (2) Apply external electrical power. Refer to AMM 24-40-00.
- (3) Press the “WARN/CAUTION” button on the Autopilot Control Panel to silence and acknowledge Crew Alerting System (CAS) messages.
- (4) Press the “PRESS TO CONTINUE” softkey on Left Primary Flight Display (PFD), Multifunction Display (MFD), and Right PFD.
- (5) Using left/right lower knob on MFD, scroll to the ECB synoptic page. Press ECB BY SYSTEM softkey and using outer knob scroll to ICE PROT. Press inner knob to select. Using outer knob scroll to select ECB and press the COLLAR softkey followed by the CONFIRM COLLAR softkey for the following ECBs:
 - ECB - DEICE MANIFOLD HTR (R AFT Bus)
 - ECB - L PITOT HEAT (BATTERY)
 - ECB - R PITOT HEAT (R FWD Bus)
 - ECB - L STATIC HEAT (BATT Bus)
 - ECB - L STATIC HEAT (R FWD Bus)
 - ECB - R STATIC HEAT (L FWD Bus)
 - ECB - R STATIC HEAT (R FWD Bus)
 - ECB - STBY PITOT HEAT (L FWD)
 - ECB - L WINDSHIELD HEAT (L AFT Bus)
 - ECB - R WINDSHIELD HEAT (R AFT Bus)

CAUTION: DURING THIS TEST, THE HEATERS WILL BE COMMANDED ON BY THE SYSTEM. HARM TO PERSONNEL OR EQUIPMENT CAN OCCUR IF TOUCHING THE PROBES OR STATIC PORTS. DO NOT LEAVE ON FOR EXTENDED TIME. ALLOW 10 MINUTES AFTER TEST FOR PROBES AND STATIC PORTS TO COOL.

B. Test Procedure, Supplemental

NOTE: This supplemental test procedure is to support Harco Labs, Inc, SB-34-10-10-001. This includes steps that are not included in the Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E .

- (1) Left Pitot/AOA Probe Test Supplements Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E, Section 3, Line 12 (T1 test).
 - (a) On MFD, scroll to ICE synoptic page by using the lower left/right knob. Press the PITOT/ STATIC softkey to select ON.
 - (b) Using left/right lower knob on MFD, scroll to the ECB synoptic page. Press ECB BY SYSTEM softkey and using outer knob scroll to ICE PROT. Press inner knob to select. Using outer knob, scroll to ECB - L PITOT HEAT (BATTERY) and press the RESET softkey followed by the CONFIRM RESET softkey.
 - (c) Perform Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E starting at Section 3, Line 12.



SERVICE BULLETIN

- (d) After test is complete, collar ECB by using left/right lower knob on MFD, scroll to the ECB synoptic page. Press ECB BY SYSTEM softkey and using outer knob scroll to ICE PROT. Press inner knob to select. Using outer knob, scroll to ECB - L PITOT HEAT (BATTERY) and press the COLLAR softkey followed by the CONFIRM COLLAR softkey.

NOTE: If T4 test is required, perform steps (1)(a) and (1)(b) to power on the pitot/AOA heater, then proceed to Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E, Section 3, Line 21. After T4 test is complete, perform step (d) for turning off power to pitot/AOA heater.

- (2) Right Pitot/AOA Probe Test Supplements Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E, Section 3, Line 12 (T1 test).
- (a) On MFD, scroll to ICE synoptic page by using the lower left/right knob. Press the PITOT/ STATIC softkey to select ON.
- (b) Using left/right lower knob on MFD, scroll to the ECB synoptic page. Press ECB BY SYSTEM softkey and using outer knob scroll to ICE PROT. Press inner knob to select. Using outer knob, scroll to ECB - R PITOT HEAT (R FWD Bus) and press the RESET softkey followed by the CONFIRM RESET softkey.
- (c) Perform Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E starting at Section 3, Line 12 (T1 test).
- (d) After test is complete, collar ECB by using left/right lower knob on MFD, scroll to the ECB synoptic page. Press ECB BY SYSTEM softkey and using outer knob scroll to ICE PROT. Press inner knob to select. Using outer knob scroll to ECB - R PITOT HEAT (R FWD Bus) and press the COLLAR softkey followed by the CONFIRM COLLAR softkey.

NOTE: If T4 test is required, perform steps (2)(a) and (2)(b) to power on the pitot/AOA heater, then proceed to Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E, Section 3, Line 21. After T4 test is complete, perform step (d) for turning off power to pitot/AOA heater.

C. Job Close-Up

- (1) On MFD scroll to ICE synoptic page by using the lower left/right knob, press the PITOT/ STATIC softkey to select AUTO.
- (2) Using left/right lower knob on MFD, scroll to the ECB synoptic page. Press ECB BY SYSTEM softkey and using outer knob scroll to AVIONICS. Press inner knob to select. Using outer knob, scroll to select ECB and press the RESET softkey followed by the CONFIRM RESET softkey for the following ECBs.
- ECB - DEICE MANIFOLD HTR (R AFT Bus)
 - ECB - L PITOT HEAT (BATTERY)
 - ECB - R PITOT HEAT (R FWD Bus)
 - ECB - L STATIC HEAT (BATT Bus)
 - ECB - L STATIC HEAT (R FWD Bus)
 - ECB - R STATIC HEAT (L FWD Bus)
 - ECB - R STATIC HEAT (R FWD Bus)
 - ECB - STBY PITOT HEAT (L FWD)
 - ECB - L WINDSHIELD HEAT (L AFT Bus)
 - ECB - R WINDSHIELD HEAT (R AFT Bus)



SERVICE BULLETIN

- (3) Power down the aircraft by setting the SYS BATT and START BATT switches to OFF and the BUS TIE to OPEN.
- (4) Remove external electrical power. Refer to AMM-24-40-00.
- (5) Replace probes that fail to meet the pass criteria in Harco Labs, Inc, Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E. Refer to EA500 Illustrated Parts Catalog (IPC) for part numbers and AMM 34-10-10 for removal and Installation procedures.
NOTE: Replacement of the failed probes can be delayed for 50 hours or 90 days, whichever comes first from the issue date of this SB for aircraft with Standby Pitot/Static Probes P/N 100564-18.
- (6) Remove all tools, equipment and unwanted material from the work area.
- (7) If all other maintenance is complete, return the aircraft to service. Refer to AMM-20-00-02.

D. Limitations and Procedures

None

E. Parts Disposition

Return defective probes to Eclipse Aviation.

F. Cost

Parts and Labor will be supplied by Eclipse Aviation Corporation at no charge to the aircraft owner. This Service Bulletin must be accomplished at an Eclipse Aviation Service Center or Eclipse Aviation Designated Service Center.

4. RECORD OF COMPLIANCE

Upon completion of this Service Bulletin, make an appropriate maintenance-record entry specifying the Eclipse Service Bulletin number, Harco Labs, Inc, SB-34-10-10-001, Rev F – Pitot/AOA Probe 100435-X-() and Harco Labs, Inc Pitot AOA Probe Internal Tubing Heater Verification Test Procedure P1149, Rev E.

5. NOTIFYING ECLIPSE AVIATION

On completing this service bulletin, the operator/maintainer shall complete the attached Compliance Record and send it and a copy of the completed Harco Test Procedure P1149 Data Sheet # A-1 or B-1 (which ever is applicable to the aircraft) to Eclipse Aviation via regular mail, fax, or e-mail.

MAILING ADDRESS	Eclipse Aviation Corporation ATTN: Customer Care 2503 Clark Carr Loop SE Albuquerque, NM 87106
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