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SERVICE BULLETIN

ATL-SB-3

Date of Issue: 19 May 2000.

Applicability: Propeller Models: AP308.
Serial Numbers: All up to and including No 32.

Compliance: Initial: At next periodic inspection,
Or within 25 hours.
Subsequent: Nil.

SUBJECT: INSPECTION OF WIRING FOR PITCH CONTROL MOTOR

Reference: Airmaster AP308 Propeller Owner's Manual

Reason

1. A fault has been recorded where the wiring associated with the pitch control motor has contacted the pitch control motor housing causing a short circuit and incorrect operation of the pitch control motor. Depending on where the short circuit is located such a fault could cause the pitch control motor to attempt to travel past its stops, cause the pitch control motor to not operate, or result in damage to electrical components.

Materials and Parts Required

2. Insulating coating substance such as 'Plasti Dip' flexible rubber coating, 'Silastic' silicone rubber sealant or 'Araldite' epoxy adhesive.

Caution: Do not use an acid cure sealant such as some bathroom sealants. Acid cure sealants produce acetic acid as they cure, causing corrosion in aluminium.

3. 0.024in lock-wire.

Action

Disassembly

4. Remove the spinner and the spinner front support.
5. Remove the pitch control motor housing by undoing the six screws and sliding the housing off the pitch control motor assembly.

Inspection

6. Inspect the wiring where it is connected to the two pitch-stop micro-switches for any evidence of possible contact with the pitch control motor housing. Pay attention to:
 - a. The soldered junctions between the wires, the micro-switches and the diodes. None of these junctions should protrude further outboard than the body of the micro-switch.
 - b. The integrity of the plastic coating on the micro-switch assembly; especially check that it completely covers and insulates the soldered junctions.
 - c. Pay special attention to the junction where the wires to the pitch control motors are attached to the cathode lead of the diode (the lead from the end of the diode marked with a ring) in each micro-switch assembly. During manufacture, some of these leads were bent such that insufficient clearance may exist between this junction and the pitch control motor housing. This point is illustrated on the following diagram.

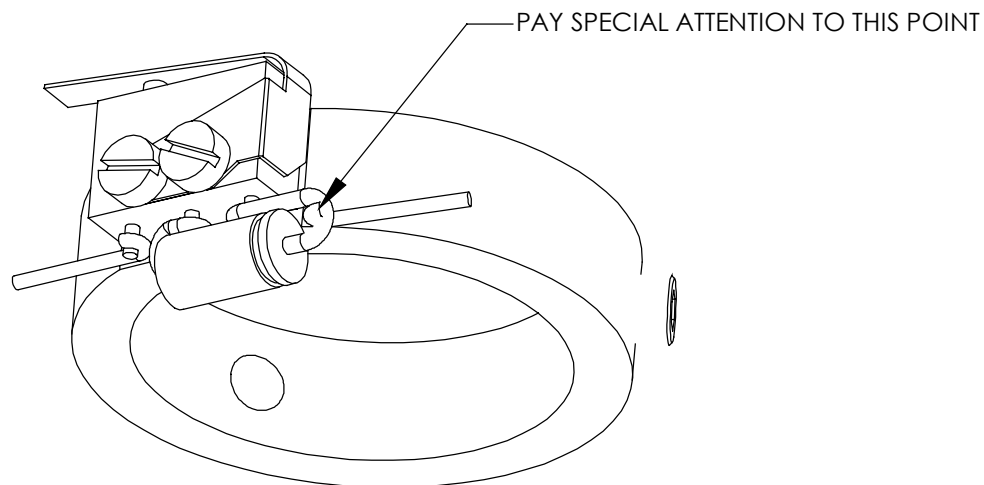


Figure 1 – Detail of Micro-Switch Assembly Wiring

Repair

7. If a fault likely to cause a short circuit is detected during inspection it must be repaired.

Repair may be carried out as follows:

- a. Remove any parts of the soldered junctions that protrude further outboard than the body of the micro-switch by a combination of the following methods:
 - i. With needle nose pliers, gently bend the leads of the micro-switch so that they do not protrude excessively.
 - ii. With diagonal cutting pliers, clip excess lengths of wire or pieces of solder.
 - iii. With a fine file, remove any protruding elements of solder.
- b. Replace the plastic coating where it does not completely cover the junctions. A variety of substances are suitable for this, such as: 'Plasti Dip' flexible rubber coating, 'Silastic' silicone rubber sealant or 'Araldite' epoxy adhesive.
- c. Ensure that the pitch control motor housing slides over the pitch control motor assembly without interfering with any part of the wiring.

8. If any problem is encountered with this repair, or if the customer is uncertain that a satisfactory result can be achieved, the customer should contact Aero Trading Ltd for advice. If required the propeller may be returned to the manufacturer for replacement of the micro-switch assemblies.

Reassembly

9. Refit the pitch control motor housing with the six screws (AN501-A10-12).

10. Replace lock-wire on the six screws.

Note: Lock-wiring may be performed in accordance with the FAA Advisory Circular, 'Acceptable Methods, Techniques, and Practices – Aircraft Inspection and Repair', (AC 43.13-1B).

11. Refit spinner front support and spinner.

Functional Check

12. Conduct functional check of propeller in accordance with Owner's Manual, section 4.1.1.

Recording

13. Record completion of service bulletin ATL-SB-3 in propeller logbook.