



## SERVICE BULLETIN

AUTOMATIC AIR ENTRY WINDOW INTO THE BALANCE JAR (AIRBOX) FOR ENGINES ROTAX 80HP TURBO CHARGED.

*April 02, 2008*

**SB-Ibis-003**

**OBLIGATORY**

**AIRCRAFT AFFECTED:**

All the aircraft type IBIS (Magic, Urraco, Millennium), 80HP motor with turbo-charged Rotax engine with air inlet window in the Automatic Balance Jar (Airbox).

**REASON:**

1. In some cases It has been observed that the automatic entry window in the Balance Jar (Airbox) when there is a fault in the turbo system the window does not open in order for the system to work normally aspirating, leading to a flaw in the engine system due to the low volume of air entering.
2. At sea level it shows that the turbo system puts 2 inches more of pressure- thus preventing the engine to work normally aspirating even if the vernier cable is completely out (this creates an unnecessary wear of the engine) since the normal operation of the engine should be maximum up to 30 inches in the Manifold.

**SUBJECT:**

Modify the Automatic air inlet in the Balance Jar (Airbox) from the automatic form to a mechanical form through a cable operated from the cockpit.

**COMPLIANCE:**

Immediate.

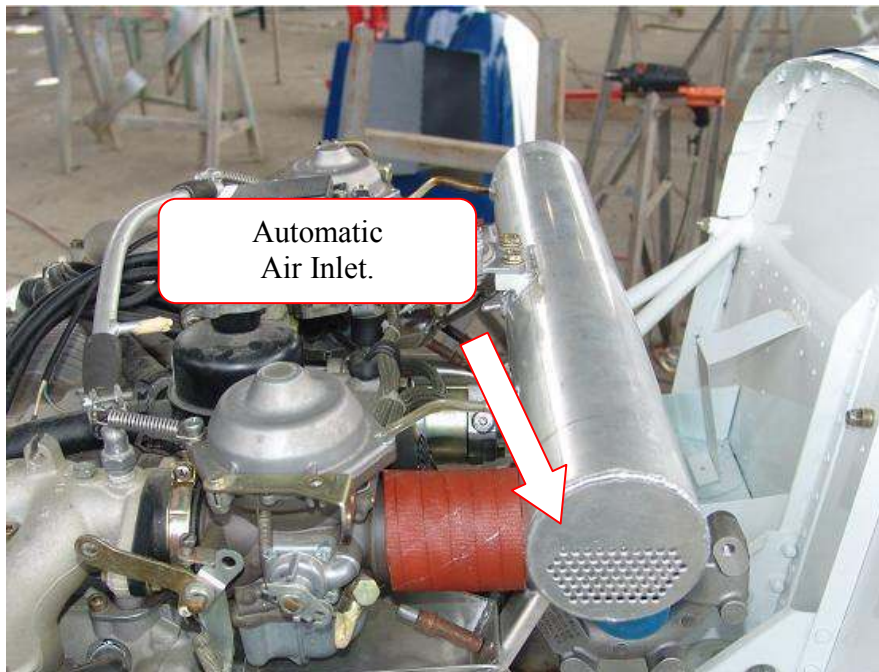
**DANGER:** Failure to comply with these instructions could damage the system, damage the aircraft, cause personal injuries or even death.



**EXECUTION / INSTRUCTIONS:**

**EXECUTION.** Owners of affected aircrafts, service centers, and distribution centers.

**INSTRUCTION.** In the balance Jar (Airbox), where the automatic air inlet is located a modification should be made, this system should be abolished and be replaced by a manual system operated by a cable from inside the cabin.



You must remove the lid where the automatic air inlet is located, in order to realize a new one with a modification, and keeping the same diameter of the balance jar of the Turbo system (Airbox), the modification consists in making an air inlet in the center of the new lid that is activated by a manual cable from inside the cabin. As shown in the illustration.



Modified jar lid to balance the Turbo System (Airbox)



This lid should keep the internal diameter of the Turbo System's balance jar (Airbox) to introduce in it , once this process is done, weld the lid to the balance jar (Airbox) and then adapt a cable in the system to be manually operated from inside of the cabin.



*"Closed" air inlet. Setting to operate the Turbo system Turbo*



*“Open” Air inlet Setting Normally Aspirated*

Once welded the manual air inlet to the balance jar of the Turbo system (Airbox) and the cable placed at the air inlet and adapted to the interior of the cabin, it is ready for operation.

The purpose of this modification is that the time of a failure in the Turbo through a manual operation can be made through a cable from inside the cabin in order for the engine to work as if it were aspirated normally, allowing the system to obtain a larger air inlet.

**Note 1:** This modification besides allowing a greater air intake at time of an emergency caused by the Turbo system can also relieve the pressure put on the turbo at sea level, allowing the system to standardize and operate it as if it were normally aspirated.

**Note 2:** This Turbo system for 80 HP Rotax engine, it is recommended to operate at a height of more than 5,000 feet, due to the nature of the turbo system which is designed to standardize-this means that the engine at the altitude that it is, will maintain the available power as if it were at sea level.

When an aircraft operates normally below 5,000 feet it does not require of this Turbo system because the use of this high specification leads to an increased engine wear, increased fuel consumption and unnecessary extra weight.