



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

# Memorandum

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Subject: ACTION: Review and Concurrence, Equivalent Level of Safety Finding Number ACE-04-05 to §23.473(b) for Thrush Model S2RHG-T65 Landing Weights

Date: July 26, 2004

From: Manager, Atlanta Aircraft Certification Office, ACE-115A

Reply to: Cindy Lorenzen  
Attn of: ACE-115A

To: Manager, Standards Office, ACE-110

## **BACKGROUND**

An equivalent level of safety finding (ELOS) to 14 CFR Part 23.473(b) was granted for the Thrush Aircraft, Inc. (formerly Ayres Corporation) Model S2RHG-T65 when it was first certified on Type Certificate A4SW in 1988. The previous equivalent level of safety finding was granted for a design landing weight of 7,635 pounds. Thrush Aircraft, Inc. has recently applied for certification approval of a higher design landing weight of 8,800 pounds with the maximum gross weight remaining the same as previously certified at 10,500 pounds.

## **DISCUSSION**

The Thrush Aircraft, Inc. models on Type Certificate A4SW are restricted category agricultural or fire fighting airplanes with hoppers. The hoppers are designed with a quick dump capability. A previous equivalent level of safety finding to §23.473(b) was granted for these airplanes and it states the following: "This finding establishes a design landing weight of 7635 lbs. for the S2RHG-T65. It is based on a quick hopper dump which reduces the airplane weight to below this design landing weight."

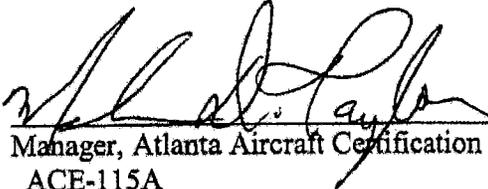
§23.473(b) requires the design landing weight to be at least 95 percent of the maximum weight or at least the design maximum weight less the weight of 25 percent of the total fuel capacity. The quick dump capability of the hoppers on the Thrush airplanes allows the airplane weight to be reduced to below the design landing weight quickly in an emergency situation.

**CONCLUSION**

The quick hopper dump capability of these airplanes provides an equivalent level of safety to the intent of §23.473(b) by allowing the airplane weight to be reduced quickly to a weight at or below the design landing weight. The increase in the design landing weight of the Model S2RHG-T65 to 8,800 pounds is more conservative than the originally approved ELOS at a design landing weight of 7,635 pounds since it is a higher percentage of the maximum gross weight of 10,500 pounds.

**ACO Recommendation:**

The Atlanta ACO recommends that an equivalent level of safety finding for §23.473(b) be granted for the Thrush Model S2RHG-T65 and any other models with quick hopper dump capability on Type Certificate A4SW. This ELOS is applicable for models where a quick hopper dump will reduce to the airplane weight to at or below the design landing weight.

  
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Manager, Atlanta Aircraft Certification Office,  
ACE-115A

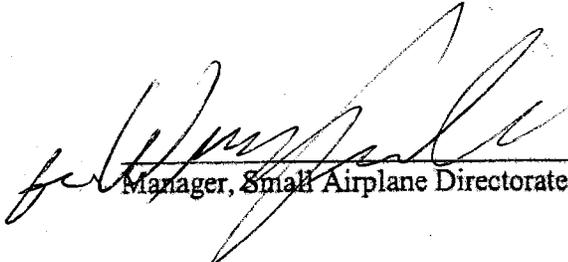
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Concur:

  
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Manager, Standards Office, ACE-110  
Small Airplane Directorate

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Concur:

  
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Manager, Small Airplane Directorate, ACE-100

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