



Department of the Interior

Lessons Learned



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Subject: Boats & Planes Don't Mix

Area of Concern: Floatplane Operations

Distribution: All Aviation Users

Discussion: On August 11, 2010 an aircraft equipped with Whipline straight floats attempted to take off from the water when it struck the wake of a passing boat. The boat had previously crossed in front of the aircraft's departure path causing the pilot to abort the take off and the boat operator to take evasive action. As the boat departed, the pilot initiated another take off and while on the step, struck the boat's approaching wake. The pilot experienced a sharp sound and jolt when the left forward portion of the float struck the boat's approaching wake. Soon afterwards, the aircraft struck the boat's following wake resulting in a softer impact. The aircraft successfully lifted off and completed a 3 hour survey. Fortunately, the aircraft was already scheduled to land at an FBO to complete its required 100 hour maintenance inspection. Upon securing the aircraft, the pilot noticed the front left diagonal float brace had failed. Further investigation revealed the attachment point of the brace at the float fitting was bent 90 degrees and one of the two attachment points had completely failed.

Figure 1



Figure 2



Subject: Boats & Planes Don't Mix

Engineers at Wipaire are aware of a similar failure that occurred on at least one other Husky aircraft resulting from an impact outside the anticipated maximum service loads. As a result, Wipaire Engineers are in the process of revising the strut (PN 21A02000-223) that will strengthen the attachment area. Unfortunately, this may result in transferring impact loads to the airframe.

Lessons Learned: Boats and airplanes don't always mix. Avoiding boat wakes, especially those from vessels at higher speeds must be practiced at all times. A thorough pre-flight inspection of all float attachment points should be conducted to look for evidence of fracture, fatigue, and corrosion. If you experience a significant impact from a wake or other object in the water, the decision to continue the take off or abort will depend on a variety of factors as the stress in that area will increase as a result of the increased drag as the aircraft comes off the step. Either in the air or on the water, a visual inspection (if possible) should be completed and landing options addressed immediately following the inspection. It's imperative you and your passengers review egress procedures, prepare appropriate survival equipment (i.e. life vests, etc.), and notify someone of your location and intentions **before** you land in case the strut fails.

The Whipline service manual requires an inspection of the floats every 50 hours. Struts and attachment fittings are required to be inspected every 100 hours. Excellent mission planning and aircraft management afforded the agency to simultaneously complete the mission and comply with scheduled maintenance requirements.

FINANCIALS:

Item	Description	Cost
Labor	Removed and replaced forward strut assembly	\$210.00
Labor	Removed forward left-hand and right-hand strut attach fitting, checked left and right hand forward fuselage attach points by Dye Penetrant Checking, reassembled.	\$240.00
	Strut Assembly Forward Painted	<u>\$368.20</u>
Total Cost:		\$818.20



/s/ Keith C. Raley

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