



ATTACHMENT 7

EMERGENCY FLOTATION SYSTEM GROUP FACTUAL REPORT

NTSB No. ERA18MA099

**Record of conversation for the interview with the Heli-Express director of
maintenance
(2 Pages)**

Record of Conversation: Luc Lacasse, Heli-Express

Date: June 12, 2018

Present: Chihoon Shin (NTSB), Emily Gibson (NTSB), Tom Armstrong (Transport Canada), Luc Lacasse (Heli-Express)

During the telephone conversation Mr. Shin welcomed participants and asked Mr. Lacasse if he was okay with Transport Canada participating in the conversation in which he agreed. Mr. Shin stated the purpose of the conversation, which was to gain more information from Heli-Express on the anomalies of the float system that were reported to Dart Aerospace in 2014. Mr. Shin explained that Dart Aerospace had mentioned the two incidents were 1) an event where only a single cylinder discharged and 2) another event where a single cylinder discharged an unspecified amount of time after the first cylinder discharged; and we were seeking clarification into these incidents.

Mr. Lucasse stated the following:

In the 2012-2013 timeframe there were two inflation tests on two different helicopters. During both tests one side deployed completely and the other side partially deployed. Only one of the cylinders had discharged.

He stated during the first event, when the cables were installed, the rigging was “done fast”. He stated the inflation test for the first anomaly was possibly due to the rigging not having been completed properly. For the second event, the cables were installed and rigged “by the book” but during the inflation test, the floats on one side deployed completely while the floats on the other side only partially deployed. For the second test, cables from aircraft Charlie Charlie India (CCI) were used. He stated that when the cables crimped, they had a hard time deploying the floats. They replaced the cables every 36 months but at the time, a few years before, it was not required to be replaced at the time of inflation test.

Mr. Lucasse stated they had never attempted to measure pull forces on the trigger but said that high forces was required to pull the trigger to deploy the floats. He said it was common knowledge to the pilots that they needed to take their hand off the collective in order to use two hands to activate the floats. He said for certain flights they fly “not too high” above the water to begin with, so needing two hands to activate the float system was not the best option. He stated that they do not install the sheer pin on the trigger. Because there is already a lot of force needed to pull the trigger, they do not install the sheer pin to ease the task for the pilot. There was also a concern that the shear pin could hit the pull cable. When asked if the shear pin was installed during the aforementioned 36-month inflation tests, he stated he was “98% sure” the pins were not installed. He said the pilots pull the trigger carefully during the 36-month test. They first used the Dart floats in 2006, and when the first 36-month test came due in the 2009-2010 timeframe, a pilot broke the trigger handle on the cyclic.

When asked about installation, Mr. Lucasse stated that they do the installation themselves. He mentioned that during the first test he was not involved in the float system installation, but he was for the second test.

He could not recall any difficulties in the installation. He stated they install and remove the float system often. He said they install, re-install, remove, and rig and that their procedures are straight forward.

He stated that the difficulties in high forces on the trigger could be the drag force in the cables. If the cables are not straight you would experience some rubbing of the cable near the junction box. He said you must align the brackets, so the cables do not rub in their sheaths.

When asked what components they remove, he stated that previously they left the fixed provisions- the cables, junction box, and the trigger handle on the cyclic on the helicopter but the float bags were

removed and sometimes the bottles. He said they currently move the entire kit from one helicopter to another as certain contracts require the helicopter to be equipped with floats. The kits they use are the non-life raft versions (the -400 and -700 part numbers of the kit).

Mr. Lucasse said they still currently use the Dart float kit but at the moment they are not installed on a helicopter. The last time they had installed a kit on a helicopter was about two weeks ago.

When asked to clarify the 36-month inspection, whether it was based on a set calendar time or cumulative installation calendar time, he stated they track the floats based on cumulative installation calendar time. This was the reason that the test was last done in 2013. He stated they had previously tracked the float kit using a set calendar time, and that they would perform the 36-month test even if the float system was not used on a helicopter. Mr. Lucasse said the next 36-month test still had a few months to go in the cumulative installation calendar cycle, so it could be a few years before the 36-month inspection was due again.

When asked if there was a process to report problems to Dart, he said as the Director of Maintenance (DOM) they were transparent. He said recently there was a problem with one of their other kits and last week Dart sent 2 engineers out to take a look. However, this recent incident was concerning a different system and not the floats.

Mr. Lucasse stated he was not the DOM at the time of the 2013 inflation test, but they had contacted Dart engineers to check the system after the test. He said the probably mentioned the high forces to them and that it was discussed a lot at the time of the test. The chief pilots take the pilots into the cockpit during these tests, so they can see how hard it is to pull to deploy the floats.

Mr. Lucasse stated that he has 3 videos on 2 different aircraft that he is willing to share. One video was a test from 2012 and one was from 2013.

Mr. Lucasse stated Heli-Express had 2 Dart floatation kits and 8 AS350 helicopters.