



ATTACHMENT 8

EMERGENCY FLOTATION SYSTEM GROUP FACTUAL REPORT

NTSB No. ERA18MA099

**Record of conversation for the interview with the TEMSCO maintenance
manager and an A&P mechanic
(1 Page)**

Record of Conversation: Ron Gile and Dave Conway, TEMSCO Helicopters Inc.

Date: August 16, 2018

Present: Chihoon Shin (NTSB)

Mr. Shin stated the purpose of the conversation was to learn about Mr. Gile's and Mr. Conway's experiences with the Dart Aerospace (formerly Apical) emergency floatation system for the AS350-series helicopter. Mr. Gile is the maintenance manager for TEMSCO's Juneau, Alaska base. Mr. Conway is an A&P mechanic at the Juneau base and is knowledgeable on the Dart emergency floatation system on the AS350-series helicopter.

Mr. Gile and Mr. Conway stated the following:

When performing the 36-month inspection for the emergency float system, a person is in the cockpit to activate the system by pulling the activation handle ("trigger"). They will notify everyone in the hangar that an inflation test would be performed, that a loud "boom" would be heard, and for people to keep distance from the helicopter. Prior to performing the test, the float covers will be unsnapped to ensure the float inflation does not damage the covers. Mr. Conway stated he had pulled the trigger during a previous 36-month inspection. From their experience, when the trigger is pulled, a loud "boom" was heard, followed by inflation of all six bags. They stated that a "hissing" noise would be heard until "everything equalizes." Mr. Conway recalled the trigger was not very difficult to pull and that pulling the trigger could be done with two fingers. Adjustments to the cable mechanism allows for a certain amount of [cable] play, but the cable can't be rigged "too tight". They had an event in the past where the cables were rigged "too tight" and when weight was subsequently added to the helicopter, the float system inflated due to flexure of the airframe causing tension in the cables and activation of the system. They've also had a pilot accidentally activate the system when the pilot's jacket got caught on the trigger when attempting to exit the helicopter.

Mr. Gile stated that TEMSCO have had Apical floats for 18 or 19 years and they perform 1 or 2 inflation tests (36-month inspection) every year. They had experienced high pull forces on the trigger before, but it was unusual to experience high pull forces on the trigger. In the one instance Mr. Conway recalled with high pull forces on the trigger, they found a "bad" cable that would not activate one of the reservoir valves, and he believes they found binding within the cable; they ended up having to activate the cylinder at the valve assembly itself and replaced the "bad" cable. They recalled experiencing high pull forces on the backup manual cable release on a different manufacturer's emergency float system; this system had an electrical squib for the primary activation method but the backup manual cable release to activate the system had to be tested. They found a crimp in the cable on this backup manual cable release.

Mr. Conway stated the installation of the Apical emergency float system was usually performed by TEMSCO, but they have had installations of the system performed by a completions center. They noted that when they upgraded the floats from the P/N 20326-300 to the -700 floats, or the -300 to the -1300 floats, the system came with a new style of trigger. Mr. Conway felt the installation instructions were vague in terms of installing and securing the pull cables to the airframe. Mr. Conway stated he knew the junction box was always on the left-hand frame, so they had to ensure the cable installation did not impinge on the flight controls when the pull cables were routed from a right-seated pilot cyclic stick. Mr. Conway stated the cable routing was usually "workable" depending on the avionics installed.

To Mr. Gile's knowledge, they have not had to use the emergency float system for an emergency ditching on the water.