



**NATIONAL TRANSPORTATION SAFETY BOARD**  
**Office of Aviation Safety**  
**Washington, D.C. 20594**

**September 3, 2019**

**EMERGENCY FLOTATION SYSTEM GROUP FACTUAL REPORT**  
**ADDENDUM #1**

**NTSB No: ERA18MA099**

**A. ACCIDENT**

Operator: Liberty Helicopters, Inc.  
Aircraft: Airbus Helicopters AS350 B2, Registration N350LH  
Location: New York, New York  
Date: March 11, 2018  
Time: 1908 eastern daylight time

**B. GROUP**

Group Co-Chair:	Chihoon Shin National Transportation Safety Board Washington, District of Columbia
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Member: Tom Armstrong  
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## LIST OF ACRONYMS

CFR	<i>Code of Federal Regulations</i>
EDT	eastern daylight time
FAA	Federal Aviation Administration
NJ	New Jersey
NTSB	National Transportation Safety Board
NY	New York
VMC	visual meteorological conditions
65NJ	Helo Kearny Heliport

## C. SUMMARY

On March 11, 2018, about 1908 eastern daylight time (EDT), an Airbus Helicopters (formerly Eurocopter) AS350 B2, N350LH, was substantially damaged when it impacted the East River and subsequently rolled inverted after the pilot reported a loss of engine power near New York, New York (NY). The pilot egressed from the helicopter and sustained minor injuries. The five passengers did not egress and were fatally injured. The scheduled 30-minute, doors-off aerial photography flight was operated by Liberty Helicopters, Inc. on behalf of FlyNYON, under the provisions of 14 *Code of Federal Regulations* (CFR) Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the flight which originated from Helo Kearny Heliport (65NJ), Kearny, New Jersey (NJ) about 1850 EDT.

The accident helicopter remained submerged within the East River until it was recovered on March 12, 2018. On March 12-15, 2018, portions of the emergency flotation system installed on the accident helicopter was examined and documented. On April 10-11, 2018, the emergency flotation system was examined further; the right valve and the activation pull cable assemblies were removed and retained for additional examination. On May 8, 2018, the right valve and the activation pull cable assemblies were disassembled and examined. On June 29, 2018, testing on an exemplar emergency flotation system was performed using different cross-feed hose configurations.

#### **D. DETAILS OF THE INVESTIGATION**

##### **1.0 FLOAT AND LIFE RAFT INFLATION TEST REPORT**

On April 18, 2019, the NTSB received from the FAA a copy of Apical Industries, Inc. Report No. AI350-24 Revision A, titled “Inflation Test Plan & Report Float Kit with Liferrafts [sic]”, dated May 25, 2006. The report documented testing of Apical float and life raft kit part number 20326-600. The float actuation mechanism used a mechanical handle mounted on the cyclic control and the float and life raft kit was installed in accordance with Installation Instruction II350-600 and Master Document List MD350(1) and MD355(1). The report stated that one float inflation test was performed using the cyclic-mounted mechanical handle and two life raft inflation tests were performed. Two sets of tests were conducted: one test was performed on April 26, 2006 and a second test was performed on May 25, 2006. The two test sets were conducted on different helicopters. The float inflation test listed seven different test failure criteria, one of which stated: “float inflation handle requires more than 25 [pounds] to activate.” According to the test report, the force required, at the float inflation handle, to activate the system was measured to be 21 pounds and 25 pounds, respectively for the two tests. Additionally, it was noted that “one valve opened slightly ahead of the other due to the slow pull for accurate pull force measurement.”

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