US NTSB CITES LACK OF BIRD STRIKE RESISTANT WINDSHIELD REQUIREMENTS IN FATAL CRASH OF HELICOPTER IN LOUISIANA

On 24th November the US National Transportation Safety Board released a final report on a fatal crash involving a transport-category helicopter caused by a bird strike. The Board said the lack of requirements for bird strike-resistant windshields contributed to the crash, and called on the FAA to develop such requirements.

On 4th January a dual-engine Sikorsky S-76C++ helicopter (N748P), registered to and operated by PHI, Inc., crashed into marshy terrain near Morgan City, Louisiana approximately seven minutes after takeoff from Amelie, Louisiana, on a charter flight to an oil rig in the Gulf of Mexico. Both pilots and six of the seven passengers were killed in the crash.

The aircraft had reached level cruise flight at 850 feet above mean sea level and at 135 knots when the cockpit voice recorder recorded a loud bang, followed by sounds consistent with rushing wind and a power reduction on both engines. The aircraft crashed several seconds later. Feathers and other bird debris were collected from the canopy and windshield of the aircraft. Laboratory analysis identified the remains as coming from a female red-tailed hawk; the average weight of such a bird is 2.4 pounds.

Investigation revealed that the impact of the bird on the canopy just above the windshield near the engine control quadrant likely jarred the fire extinguisher T-handles out of their detents and moved them aft, pushing both engine control levers into or near the flight idle position, reducing fuel to both engines. The pilots were probably disoriented from the broken windshield and rushing air and were unable to react in time to maintain control of the helicopter.
The helicopter was originally equipped with laminated glass windshields that complied with European bird-strike resistance standards. PHI replaced the windshields with lighter-weight, aftermarket cast acrylic windshields that did not have any bird-strike resistance standards.

The NTSB determined that the helicopter crashed because of the sudden loss of power to both engines following the bird strike and the subsequent disorientation of the crewmembers. Contributing to the accident, the Board said, were the lack of FAA regulations and guidance requiring helicopter windshields to be resistant to bird strikes, the lack of protections that would prevent the T-handles from inadvertently dislodging out of their detents, and the lack of a master warning light and audible system to alert the flight crew of a low-rotor speed condition.

Recommendations were issued to the FAA dealing with, among other things, the design of S-76C++ fire extinguisher T-handles and engine control quadrants, and similar designs of other helicopters, and of audible low-rotor alarm systems; certification standards for helicopter windshields; and simultaneous dual-engine power loss training for helicopter pilots.