



Eric Alleyne
Air Safety Investigator
National Transportation Safety Board
Office of Aviation Safety - Eastern
Region

Sr. Manager, Accident Investigations: Seth D. Buttner
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Aircraft: N370NC AS350 B2
Subject: Damage assessment of the tail boom

This information was gather during the examination of N370NC and sent via email to the NTSB regarding the damage assessment of N370NC.

“After looking at the photos of N370NC (AS350 B2, S/N: 4379), the wrinkled skin damage observed at the bottom forward portion of the of the tailboom, and then to the adjacent right hand side of the tailboom, is very similar to several other cases where the tailboom structure has been subjected to loads above the design loads. With that, the tailboom has been permanently deformed and the structural strength of has been compromised. In our history, this type of damage has been a result of a hard landing event. Whether it was on the last flight, or an earlier previous flight, a harder than normal landing causes the tail boom to whip down and form a small kink in the skin, just aft of the main fuselage attachment frame (tail boom junction frame) similar to what is seen in these photos on N370NC. Since the tailboom carries all of the tail rotor loads to the main fuselage, each time there is a takeoff and landing, a ‘kink’ that may not have been too noticeable initially can propagate and become more pronounced through each takeoff and landing cycle, to the point it is unsafe to fly.”