



NATIONAL TRANSPORTATION SAFETY BOARD

Eastern Region – Ashburn, Virginia

SUMMARY of FINDINGS

As a part of this investigation, several entities, including the operator, who are party to the investigation, were notified to obtain information regarding the diffuser. The following is a summary of these conversations and findings:

The vane assembly was marked with FAA PMA number: 23051119AL Rev. F, Serial number: AEC12-070, FAA-PMA II9D9

Initial exam of the separated vane assembly by the NTSB Materials Laboratory revealed a possible manufacturing issue. As a result, a search into the diffuser's maintenance and manufacturing history was conducted. Per the serial number, the diffuser was traced back to the ALCOR Engine Company. ALCOR was purchased by Timken, then sold to EXTEX. EXTEX was then purchased by Kaman (helicopters), who kept the EXTEX name. EXTEX sold/shipped the diffuser to Action Aircraft Overhauled Engines, Dallas, Texas, on April 5, 2006. According to a representative of EXTEX, ALCOR used several subcontractors to make diffusers. EXTEX conducted a search on the diffuser's manufacturing history, but due to their 10-year document retention policy, were unable to provide any additional manufacturing information.

FAA AVP -100 and the FAA Southwest Manufacturing Inspection Office (MIO) were also contacted. They were unable to find any additional manufacturing data on the vane assembly.

Action Aircraft Overhauled Engines was contacted and they provided a 2-page work order for the compressor repair for which Air Evac was the customer. The work order did not indicate the diffuser being installed, but a review of the compressor logbook provided by the operator revealed an entry by Action Aircraft Overhauled Engines on April 7, 2006. The diffuser, which was zero-timed, was installed in the compressor on/around April 7, 2006, and sent to Air Evac. A review of the accident helicopter's engine logbook revealed that the diffuser had not been removed/repared since it was installed on that date. According to the operator, the engine total time at the time the diffuser was installed was 8,429.0 Hours. At the time of the accident, the engine had accrued a total time of 14,192.1 hours. At the time of the accident, the diffuser had accrued a total of 5,763.1 hours since new.

Leah D. Read, Sr. ASI