

NTSB Identification: DFW07CA065

14 CFR Part 91: General Aviation

Accident occurred Tuesday, February 06, 2007 in Vicksburg, MS

Probable Cause Approval Date: 05/29/2007

Aircraft: **McDonnell Douglas 600N**, registration: **N451DL**

Injuries: 2 Uninjured.

NTSB investigators used data provided by various entities, including, but not limited to, the Federal Aviation Administration and/or the operator and did not travel in support of this investigation to prepare this aircraft accident report.

The helicopter landed hard following a loss of engine power during cruise flight. The pilot was en route to refuel his single-engine turbo-shaft powered helicopter. The pilot stated in the Pilot/Operator Accident/Incident Report (NTSB form 6120.1) that the aircraft was in cruise flight at an indicated airspeed of 115 knots while at 500 feet above ground level when the engine lost power without warning. The pilot added that following the loss of engine power, he immediately entered autorotation and landed on a logging road surrounded by tall trees. The aircraft sustained structural damage to the tailboom and main rotor blades during the forced landing. The helicopter came to rest in the upright position. A detailed investigation was conducted on the fuel system by a Federal Aviation Administration inspector and a representative from the helicopter manufacturer. Their investigation revealed that a fuel transfer check valve located in the aft section of the fuel tank that receives fuel from the forward section of the fuel tank, was found stuck in the closed position, which resulted in fuel starvation to the engine.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:

The loss of engine power due to fuel starvation as result of a fuel transfer check valve stuck in the closed position. A contributing factor was the lack of suitable terrain for the forced landing.

Full narrative:**NTSB Identification: DFW07CA065**

The 3,337-hour commercial helicopter pilot reported a loss of engine power during cruise flight while en route to refuel his single-engine turbo-shaft powered helicopter. The pilot stated in the Pilot/Operator Accident/Incident Report (NTSB form 6120.1) that the aircraft was in cruise flight at an indicated airspeed of 115 knots while at 500 feet above ground level when the engine lost power without warning. The pilot added that following the loss of engine power, he immediately entered autorotation and landed to a logging road surrounded by tall trees. The aircraft sustained structural damage to the tailboom and main rotor blades during the forced landing. The helicopter came to rest in the upright position. The pilot and his passenger were not injured and were able to egress the helicopter unassisted. A detailed investigation was conducted on the fuel system by a Federal Aviation Administration inspector and a representative from the helicopter manufacturer. Their investigation revealed that a fuel transfer check valve located in the aft section of the fuel tank, which receives fuel from the forward section of the fuel tank, was found stuck in the closed position, which resulted in fuel starvation to the engine. Weather at the time of the accident at the nearest weather reporting station located approximately 16 miles south of the site of the mishap was reported as clear skies, visibility 10 miles, winds at 210 degrees at 17 miles per hour, with a temperature of 17 degrees Centigrade.