02-JUL-2008

Date: Time:



Type: Sikorsky S-92A Owner/operator: CHC Australia Registration: VH-I OH MSN: 920036 Fatalities: 0 / Occupants: 16 Fatalities: Other fatalities: 0 Aircraft damage: Minor Location: near Broome, WA - 🔤 Australia Phase: En route Offshore Nature: Departure airport: Offshore Installation Destination airport:Broome, WA Narrative:

The helicopter had been flying at 6000 feet asl for approximately 90 minutes when there was a red MGB OIL PRES warning message followed by the audio warning "Gearbox Pressure...Gearbox Pressure." The MGB oil pressure was less than 5 psi and decreasing and the MGB oil bypass switch was activated approximately seven seconds after noticing the low oil pressure warning.

The PF, who was the first officer, commenced an immediate descent. The captain elected to continue the non-flying pilot duties to carry out the emergency checklist and to focus on the diagnosis of the problem. It was the flight crew's understanding that the MGB would fail in a progressive manner rather than suddenly. Since the "less than 5 psi" condition coincided with the illumination of the red MGB OIL PRES warning message, the crew did not initially consider the low pressure to be a secondary indication of an impending gearbox failure. In addition, there were no other secondary indications detected and the MGB oil temperature remained below 80°C. This led the crew to respond as if they were in a "land as soon as possible" condition. The rapid drop in oil pressure was so different to their simulator training that they initially believed they had experienced a sensor or indicator problem. However, through collaboration, the pilots realized that the warning and oil pressure indication did not come from a single sensor, eliminating that possibility.

As the crew approached the only suitable landing area nearby, the rate-of-descent was increased and the pilots carried out a landing without further incident approximately seven minutes after the first warning. The captain indicated that if they had been flying over water, and there had been no other secondary indications, he would have continued flight toward land at an altitude of 200 feet agl and an airspeed of 80 knots.

The initial visual examination by CHC maintenance personnel and a Sikorsky field representative revealed that two of the three MGB oil filter bowl studs had fractured and the filter bowl had partially separated from the MGB causing a total loss of oil. One of the failed studs had been repaired on 09 June 2008.

A boroscope inspection was subsequently carried out to assess the condition of the internal MGB components. Following this inspection, it was determined that the helicopter was safe to fly to

the maintenance base. The MGB was subsequently removed and shipped to Sikorsky on 20 July 2008. The MGB was disassembled, refurbished at a Sikorsky-approved overhaul facility, then returned to service and installed on another helicopter. Based on the information available at the time, the Australian Transport Safety Bureau (ATSB) chose not to investigate and the FDR/CVR data was not retrieved or analyzed.

A similar filter stud failure occurred in Canada on 12 March 2009, with fatal consequences.