

S92 helicopter pressure refuelling incident

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Oil and Gas UK (OGUK) [later renamed Offshore Energies UK] has circulated a report of a near-miss incident involving refuelling of helicopters.

The incident occurred when the fuel supply to the aircraft was interrupted and introduced fuel/air mix delivery to the aircraft, which caused the tank vent valves to close and build-up of pressure causing the sponson to rupture.

Please see the Safety Alert below. For further information, please contact media@oeuk.org.uk.

REF:	HSSE/Aviation/2014-02
ISSUE TITLE:	S92 HELICOPTER PRESSURE REFUELLING INCIDENT
DATE:	5 th December 2014
OGUK Directorate	Health, Safety and Employment Issues Directorate
OGUK Owner:	Robert Paterson

INCIDENT DESCRIPTION:

A recent Sikorsky S92A offshore re-fuelling event on the North Sea has served as a reminder for the potential issue that may occur during pressure refuelling when the fuel supply is interrupted and introduced fuel / air mix delivery to the aircraft causing the tank vent valves to close and build-up of pressure - causing the sponson to rupture.

HAZARDS ENCOUNTERED:

- Helideck team observed fuel was not being delivered and took correct action by stopping the refuel and advising the pilots. The refuel was completed using gravity refuel.
- View below showing Sikorsky S92A to illustrate severe damage evident on sponson - which has buckled and ruptured.



Picture courtesy of Bristow Helicopters

LESSONS TO BE LEARNED:

- Closely monitor actual (not estimated) fuel stock levels in transportable & bulk tanks.
- Ensure that sufficient stock available prior to commencing the refuel to avoid losing suction.
- Remain vigilant that sloshing (movement of fuel in the supply tank) can cause loss of suction at a higher fuel level than normal.
- If suction is broken, ensure system is purged of any air prior to next or continued helicopter refuel.
- In all instances, if any anomalies are observed during refuelling operations, stop the refuel and advise the Pilots.

RECOMMENDED ACTIONS:

- Duty Holders of offshore installations including mobile units and vessels should ensure that HLOs and Helideck Crews are made fully aware of this Safety Alert and are instructed to exercise the following **CAUTIONS** when refuelling helicopters, in particular the Sikorsky S92A.

CAUTION: TO PREVENT DAMAGE TO EQUIPMENT, MAKE SURE THE REFUELLING SYSTEM DOES NOT EXCEED 55 PSIG AND 120 GPM.

CAUTION: TO PREVENT AIR FROM ENTERING THE AIRCRAFT FUEL TANKS WHEN PRESSURE REFUELLING; VERIFY THAT THE FUEL SUPPLY TANK CONTAINS AN ADEQUATE AMOUNT OF FUEL PRIOR TO PRESSURE REFUELLING. IF THE FUEL SUPPLY TANK IS LOW OR RUNS DRY PRIOR TO FUELLING COMPLETION, THEN AIR MAY BE INGESTED INTO THE AIRCRAFT FUEL TANK AND CAUSE DAMAGE.

INFORMATION SOURCES:

Notice of this Safety Alert courtesy of BP. If further information is required please contact David MacLean – BP Aviation Technical Advisor.

LINKS:

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