



INFORMATION LETTER

Gen-11-121  
4 October 2011

**TO: All owners and operators of Bell Helicopters**

**SUBJECT: OPERATION OF BELL AIRCRAFT NEAR VOLCANIC ACTIVITY.**

This letter supersedes info letter GEN- 80-13.

Decisions on operation of rotorcraft in areas subject to volcanic ash conditions are the responsibility of the Operator. Given the dynamic conditions associated with particulate-laden environments such as volcanic ash, Bell Helicopter is not able to provide specific guidance in determining whether or not to fly in these conditions. Sufficient flight threshold data for volcanic ash-laden environments is not available.

In general, turbine engines can be adversely affected by the contamination of inlet air. Flight into a plume or cloud of volcanic gas and/or particulate which contains little or no oxygen will cause the engine to cease operating since oxygen is required for combustion. Solid deposits from any number of sources can accumulate, blocking air flow and causing loss of power. Contamination of engine oil can lead to engine malfunction and/or failure from abrasive wear.

Flight and airworthiness conditions must be determined on a case by case basis by the Operator. Generally, Bell Helicopter advises Operators to avoid flight through any type of particulate clouds. In the event that flight through particulate clouds and, consequently, contamination occurs, Bell Helicopter considers the cleaning and lubrication frequencies reflected in the maintenance manual are not adequate and recommend the following actions should be taken:

Helicopters exposed to higher than normal amounts of dust which might contain sulfur, while parked or in storage, should be thoroughly washed daily using medium to low water pressure. All greasable bearings should then be lubricated.

Helicopters exposed to ash/dust during flight should be inspected for erosion after each flight, paying particular attention to engine compressor blades, oil cooler blower blades, main and tail rotor blades, etc.

In addition, all fuel, oil and pneumatic filters should be checked for contamination. If contamination is found, the filters should be replaced or cleaned if applicable.

Operators should also be aware that due to its consistency, some volcanic ash dust has the ability to pack and particular attention should be paid to areas susceptible to build-up. These areas include engine compressor blades, oil cooler blower and radiators, fuel control and governor air circuits, pitot systems, particle separators, air filters, bleed valves, etc. Any build-up should be removed prior to next flight.

Please refer to the applicable engine manufacturer publications for additional maintenance that may be required.

For any questions regarding this letter, please contact:

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