



Interagency Aviation Safety Alert



No. IA 07-02

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Subject: Retardant Dip Tanks

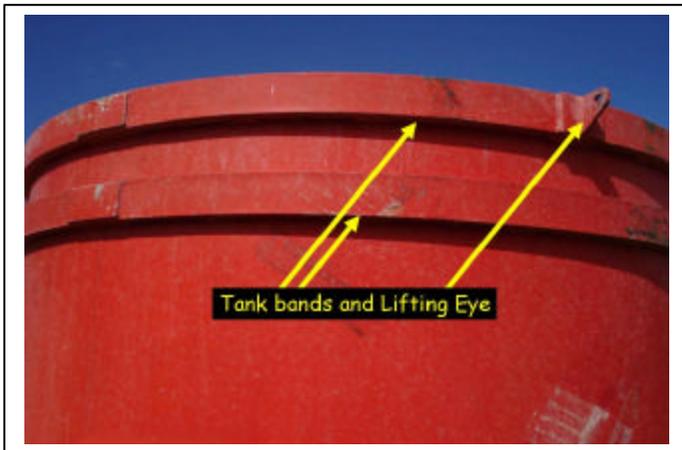
Area of Concern: Fire Suppression Operations

Distribution: Helicopter Flight Crews, Helicopter Managers, Dip Site Managers, Type 1 and 2 ICTs, and Unit Aviation Officers

Discussion: Recent investigations and a review of the SAFECOM database have found that three “systems” have contributed to incidents and accidents with retardant dip tanks; the flight crew, the tank, and the snorkel/bucket. Each system presents a unique hazard to dip tank operations.

In May 2007 a Bell 206L-4 had the bucket snag on the lip of a tank, requiring the dip site manager to pry it off with a shovel. The bucket snagged on a clamp that was holding PVC around the top of the tank.

In October 2006 a Type-1 helitanker was severely damaged while attempting to hover-dip from a 5000-gallon portable retardant tank (PRT) when the snorkel inadvertently became lodged on the lip (ring) that surrounds the tank’s frame.



Portable Retardant Tanks. The frame of portable retardant tanks (PRT) may have lift rings, tank bands (aka collars), or other structural components that can “catch” snorkels and water buckets. All PRTs should be inspected, and any structural hazards mitigated, prior to use.

Snorkels. There are several FAA approved designs for “pond snorkels” that are currently in service. The USFS and DOI are working with the helicopter operators to make them aware of potential design hazards with their snorkels.

Flight Crews. Flight crews must understand, and be vigilant of, the potential hazards when snorkeling or dipping from PRTs. Modifying PRTs reduces, but does not eliminate, the risk of snagging something. Whenever possible, *before operations begin*, flight and ground crews should review what to do if a snorkel or bucket becomes snagged. This may involve landing the helicopter, **releasing the bucket, or calling for ground assistance.**



RECOMMENDATIONS:

- 1) Inform all helicopter flight crews and Incident Command Teams of the snagging hazard presented by certain dip tank frames.
- 2) Inspect all portable retardant tanks prior to use for protrusions and snagging hazards.
- 3) Ensure that there are NO rings or protrusions around the perimeter of the tank that a snorkel or bucket can “catch”. Remove the hazard or shield it from the snorkel/bucket assembly.
- 4) Review Helicopter Dip Tank Capabilities and Users Guide, available on line at: http://fsweb.mtdc.wo.fs.fed.us/php/library_card.php?p_num=0657%201306P
- 5) **If hazardous tank assemblies are found**, require the vendor or the appropriate authority (if government owned) to provide appropriate modifications before use.
- 6) If the parts can't be removed or the hazard can't be otherwise mitigated by shielding/wrapping, **remove the tank from service**.
- 7) If contracted, **ensure that the contracting officer is informed** of tanks that are removed from service.

By taking a few precautions and maintaining a high degree of situational awareness we can avoid...



/s/ Robert Galloway

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