



Interagency Aviation TECH BULLETIN



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SUBJECT: Heliwell Mobile Dip Tanks

DISTRIBUTION: Helicopter Operations

BACKGROUND: In May 2007, the issue of snorkels snagging on portable dip sites that supply retardant was recognized and information distributed through Safety Alerts [IA 07-02](#) and [IA 11-02](#). Recent SAFECOM reports have shown snag hazards at portable dip sites, especially those that utilize Heliwells continue to be an issue. (SAFECOMs [11-0723](#), [12-0246](#), [12-0255](#) and [12-0258](#))

DISCUSSION: Efforts are being made by manufacturers to reduce the snag hazards inherent in Heliwells through design upgrades. Older versions found in the cache system retain designs that lend themselves to snagging. Snorkel design can also affect the likelihood of snagging. [SAFECOM 12-0255](#) reports the snorkel snagging outside the top lip of the Heliwell. Assembly instructions indicate optional edge protector pieces can be installed.

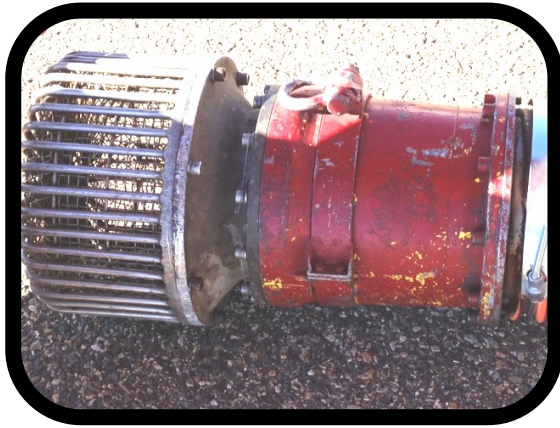
[SAFECOM 12-0246](#) report an event where the bucket cable looped under a flange on the outside of the Heliwell and ultimately ripped the flange off. Investigation revealed that at the time of manufacture, the flange was welded in place inverted. This incorrect orientation presented a bevel at the top and a strait edge at the bottom where the bucket cable was most likely to catch. Assembly instructions state to loosen the bolts after erecting the Heliwell as they are not structural in nature. The bolts themselves are a snag hazard item.

[SAFECOM 12-0258](#) reported a snorkel impacting the outside of the Heliwell and breaking a Plexiglas sight gauge located on the side of the structure. The parts were available at the local hardware store and dipsite personnel made field repairs.



The manufacturer of the Heliwell has been contacted regarding the issues and is cooperating with the recommendations on the following page.

Along with Heliwell design, another factor that can influence snagging, is snorkel design. Below are photographs of two of the snorkel designs being utilized in the field.



RECOMMENDATIONS:

- Personnel should inspect Heliwell components to ensure proper manufacture on Heliwells sent out to the field.
- The cache system should inspect all Heliwells currently in stock to ensure proper manufacture.
- Include Safety Alerts concerning portable dip tanks as part of the assembly instruction package distributed from the cache to provide field personnel with tank safety information.
- Work with the Heliwell manufacturer to develop an edge protector that will not only protect the edge of the Heliwell but mitigate snagging on the edge of the tank as well.
- Language should be changed from “After completing the assembly and you begin filling the tank, you must loosen the bolts on the bottom and top stop blocks” to “After completing the assembly and you begin filling the tank, you *must remove* the bolts on the bottom and top stock blocks”. A sentence reminding personnel to reinstall the bolts prior to disassembly would be warranted.
- Task the Interagency Helicopter Operations Sub-committee (IHOPS) to charter a small working group of helicopter SMEs to develop a checklist of items for tank set up to include: site selection, set up information, safety circle and brush removal requirements, water staging minimums (e.g. trucks should be 300’ away from tanks) and dipsite staffing requirements.
- Work with vendors through the contracting office on snorkel requirements to reduce snagging.

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