Inno word

STATE AIRCRAFT UNIT
VICTORIA

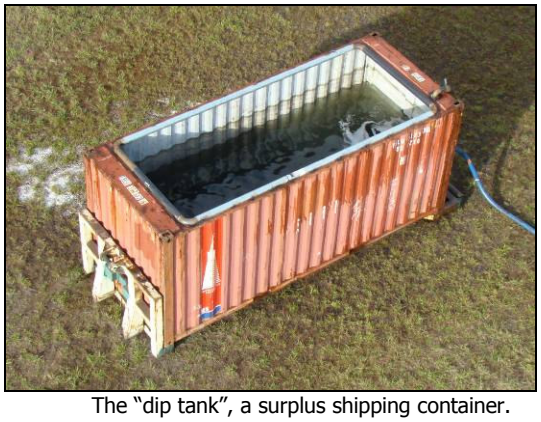
Operation Doughnut
Portland Airport 3rd. April 2009.

Introduction

During the recent Mt Richmond Stanley Road wildfire problems were encounted gaining access to suitable water sources for helicopter hover-filling.

As a result a helicopter prototype "dip tank" was manufactured by a local transport operator on advice from both Agencies, and the SAU and was christened as "Operation Doughnut".

The 'dip tank' was operationally trialled at the Portland Airport on Friday 3rd April 2009 using two helicopters fitted with an underslung bucket and a fixed belly tank.



The "dip tank", a surplus shipping container.

Background

The ability to access natural and man made water points is limited within the region. Private plantation water supplies are restricted because of capping on most of the constructed water tanks.

Preliminary discussions had already occurred early in the 08/09 fire season between all parties and various conceptual solutions had been discussed to provide water in remote areas.

Agency discussions indicated that a local company, TRANSPACIFIC Industries Group LTD. Portland, had expressed interest in assisting with providing development support and equipment to produce a prototype unit.

Several circumstances on Thursday 2nd April 2009 restricted the ability of the helicopters to sustain hover filling operations for the next day.

A quickly convened joint SAU, CFA and DSE project was undertaken to follow up on one "initial concept" using an old shipping container with the top removed for helicopter hover filling.

Comments

The selection of a shipping container was based on the portability of the unit and various truck combinations that could load and transport the "dip tank".

"Hook truck" TRANSPACIFIC Industries Group LTD. Portland

The design incorporated a series of safety features for the helicopters. A key feature was the construction of a rounded bump stop on the exposed rim of the container to prevent any snagging of snorkels and bucket suspension lines and inadvertent

punctures in the wall of the bucket. A considerable amount of sealant was used to water proof the doors and flooring of the "dip tank".

Image shows filling of the dip tank, sealant on the floor and around the doors and the cylindrical bump stop fitted to the rim.

The "dip tank" has a total capacity of 34,000 litres, for the purposes of the trial and capability assessment only it was filled with 24,000 litres.

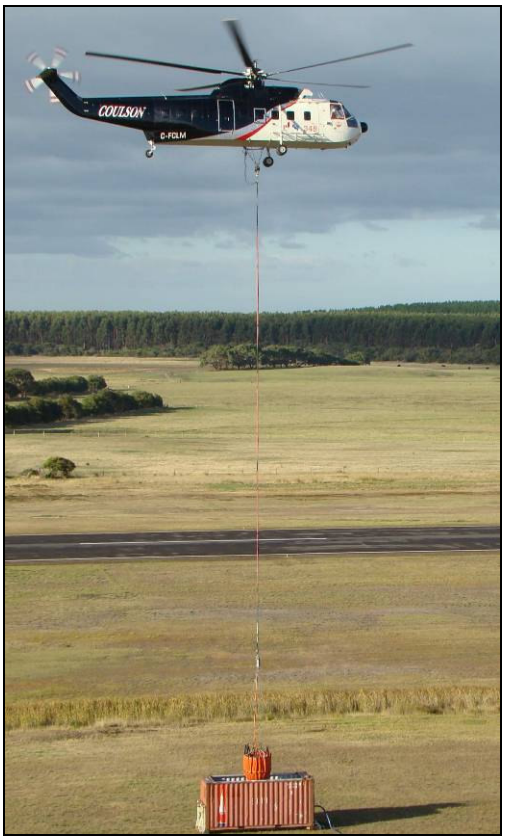
The purpose of the lower capacity and surface level within the "dip tank" was to evaluate the performance of the Power Fill II Bambi Bucket in a restricted environment. Both the bucket and the "dip tank" were successful.

The "dip tank" can be supported by either trucks fitted with bulk liquid carrying trailers or a series of 1000,000 litre re-locatable heavy duty bladders which can be maintained by bulk liquid carrying trailers.

As a result of the operational trial several improvements were developed and will be incorporated into the prototype and subsequent units. New features will include the provision of concentric rings on the outside of the"dip tank' indicating the volume at various levels within the tank, these indicators would be replicated on the inside as an additional guide.

Additional filling points will be installed to ensure the unit has the capacity to support the operation of several high volume Type 1 helicopters in a sustained operation. Multiple outlet points are to be installed so the 'dip tank' can be quickly decommissioned and relocated.

As a result of the operational trial "dip tank" has been authorised for operational use.



Helitack 347 fills from the "dip tank".

Helitack 332 fills from the "dip tank".

Acknowledgements

- Peter Novotny, Region 5, Country Fire Authority Victoria.
- Kevin Wilson, South West Area Department of Sustainability & Environment Victoria.
- Peter Salmon, TRANSPACIFIC Industries Group LTD. Portland, Victoria.
- State Aircraft Unit, Victoria.