



Technology & Development Status Report

Aviation Program

FY 2003



Date Last Edited: 1-6-2004

Date Completed: 09-30-2003

PROJECT: Helicopter Accessories **CENTER:** SDTDC
Number: 1E11P83 **PROGRAM LEADER:** Carl Bambarger
SPONSOR: WO-F&AM **Project Leader:** Carl Bambarger
Proposer: Johnson, WO-NIFC

PROJECT OBJECTIVES

The primary goal of this project is to develop/integrate new equipment and techniques to enhance the effectiveness of Forest Service helicopter operations. Secondary goals are to provide engineering expertise and support to obtain Supplemental Type Certificates on helicopter equipment, as required, and to prepare standards and publications relating to the Forest Service helicopter mission.

This project supports the continued monitoring of helicopter accessories that have been previously implemented, follow-up field problems to ensure that related Forest Service standards are of maximum benefit to field managers, and amend and modify as needed. The project provides for investigation of improved foam and retardant delivery systems hardware for helicopters, and SDTDC participation in national and Regional workshops and training sessions. The project provides support to analyze, investigate and document field identified equipment or suggested improvements to procedures.

Changes to objectives:

SIGNIFICANT ACCOMPLISHMENTS

- The 3000 lb cargo swivel specification has been re-done. The specification is updated to reduce variation. New cargo swivels will have a maximum weight of 5 pound, a reduction of almost 1 pound over other existing units.
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- The 3000 lb cargo net specification has been updated. The specification reduces the variation in some of the aspects of the construction. New nets procured under this specification will have an improved tagging system. The specification specifies only one method of attachment using a small cable. Many good nets have been disposed of due to the loss of the identification tag.
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- The 3000 lb leadline specification has been updated. The new specification changes the hook used on the cable to that which has been used by the cargo swivel for the last 10 years. The old cables are not to be retired due to this change, but may be replaced through attrition. Also improved is the location of the identification tag. The specification locates the tag on a small cable and will be included in the swage at the hook end.
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- A retrofit program for the existing cargo swivels (ones with a spring gate on the hook) was developed. The program provides 4 years to retrofit the existing swivels with the new hooks (hooks similar to those that have been procured on cargo swivels for the last 10 years). The existing swivels are not a safety issue, which is why the retrofit is planned for 4 years. However, several lost loads have been attributed to the spring gate hooks in the last few years. San Dimas is establishing a retrofit contract with a supplier. San Dimas offers, to anyone interested, to manage the retrofit; or will provide the specification to those interested in proceeding with their own effort. Those interested in participating with the retrofit at San Dimas can contact the Aviation Program Leader.

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- Development of the 300-pound cargo swivel has focused on the use of commercially available equipment (rigging and hoisting equipment). Unfortunately this has not yielded acceptable results. The use of swivels available in recreational climbing, while acceptable in many ways, are too expensive for use and still require the incorporation of a ring of an appropriate size for the helicopter belly hook. The Center is examining a custom design in FY2004.
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- This project is being combined with Aviation Technical Services in FY 2004

Output:

Planned: Technical services, as needed throughout the year.

Development of 300 lb cargo swivel

Respecification of 3000 lb cargo swivel, 3000 lb cargo net

Actual:
