



FEDERAL AVIATION ADMINISTRATION
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From: Aviation Maintenance Human Factors Program Manager, AAR-100

To: Aviation Maintenance TCRG, POC: Les Vipond (AFS-300)

Subj: GENERAL AVIATION ALASKA MAINTENANCE ACCIDENTS

Ref: (a) Aviation Maintenance TCRG recommendation (01/22/03)

An Alaska general aviation pilot has a higher probability of being in an aviation mishap than a pilot from the continental United States (National Transportation Safety Board data). To extend the general aviation pilot analysis, this requirement will investigate whether maintenance errors are a contributing factor or a direct causal factor to accidents to a greater degree in Alaska than in the rest of the country. If the National Transportation Safety Board data indicates maintenance errors have a greater contribution to accidents in Alaska when compared to the rest of the United States, additional analyses will be conducted to determine whether the lack of training and experience, lack of maintenance resources, or non-pilot issues such as extreme climate, aging aircraft, and operational tempo were causal factors.

1) The project will be executed as follows:

- i. Review the last 10 years NTSB and FAA General Aviation (GA) accident and incident data for the U.S. to determine the leading maintenance factors that contribute to GA accidents and incidents with particular emphasis placed on human error.
- ii. Compare the Alaska data to the rest of the United States to determine if there are any significant differences between the two regions.
- iii. Determine if maintenance errors are a contributing factor or a direct causal factor to accidents to a greater degree in Alaska than in the rest of the country. If data indicates maintenance errors have a greater contribution to accidents in Alaska when compared to the rest of the United States, determine the particulars.

- Error classification factors present in Alaska may include: 1) Extreme climate, 2) Limitations on Parts and equipment availability, 3) Aging aircraft fleet, 4) Severe operational demands, 5) General lack of other maintenance resources, and 6) lack of training and experience.
- iv. Quarterly (December, March, July, and September) research progress status reports.
 - Informal e-mail reports from the program manager aviation maintenance human factors to Les Vipond (Aviation Maintenance TCRG representative).
 - v. Report to be published in the AAR-100 aviation maintenance human factors FY04 program review. Grantee will submit an annual report using AAR-100's Productivity Report website (<http://www.hf.faa.gov/report/>)

Deliverables:

Final report containing:

- a. Quantitative data identifying patterns of maintenance errors in Alaskan general aviation and the continental United States.
- b. Recommendations for reducing general aviation accidents in Alaska by changing maintenance-related tasks and/or procedures.

Schedule:

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| 07-31-03 | Review NTSB and FAA General Aviation accident (NASDAC) database from 1990 to present to determine the leading maintenance factors that contribute to GA accidents with emphasis on human error. |
| 07-31-03 | Compare Alaska data to the rest of United States to determine if there are significant differences between the two regions. |
| 07 -31-03 | Determine if maintenance errors are contributing factor or a direct causal factor to accidents to a greater degree in Alaska than in the rest of the country. |
| 02-28-04 | Submit final report to AAR-100 for review |

W.K. Krebs