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15. Supplementary Notes (Funding programs, titles of related publications, etc.) Several research reports for testing of de/anti-icing technologies were produced for previous winters on behalf of Transport Canada. These are available from the Transportation Development Centre (TDC). Nine reports (including this one) were produced as part of this winter's research program. Their subject matter is outlined in the preface.					
16. Abstract In recent years, research has been conducted to evaluate the variance in endurance times caused by individual variance in determination of fluid failure. In the winter of 2003-04, testing was conducted with the Intertechnique Ice Detection System (IDES) in an attempt to determine if it could replace the visual determination of fluid failure. Results of testing in 2003-04 were promising, and it was recommended that if improvements could be made to the Intertechnique system, more tests be conducted in the winter of 2004-05. Intertechnique did make improvements to the system and provided the Wing Ice Detection System (WIDS) for testing in 2004-05. Tests were conducted with the WIDS in snow, freezing rain, freezing drizzle and freezing fog in various temperatures from 0°C to -16°C. Type I PG, Type II PG, Type IV PG and Type IV EG fluids were tested in various dilutions. It was found that: <ul style="list-style-type: none"> • Compared to the 2003-04 system, the 2004-05 ice detection system had better results in snow but no significant improvement in simulated precipitation conditions; • The WIDS was better able to replicate visual fluid failure with Type II and Type IV fluids than with Type I fluids, likely due to the mechanisms used to detect fluid failure; • The WIDS was better able to replicate visual endurance times in snow than in freezing drizzle or freezing rain; and • No significant relationship was found between the WIDS ability to replicate visual endurance times and Type II/IV fluid dilution or temperature. <p>Based on the limited number of tests that were conducted, it was concluded that the WIDS is currently not able to replicate a visual determination of failure. Although the Intertechnique ice detection system may be able to replicate visual endurance times in snow with Type II and Type IV fluids, significant resources would be required to get the system to be able to replicate visual endurance times with Type I fluids or in simulated precipitation conditions. It was therefore recommended that resources would be more effective in this area if they went towards training and education programs for test personnel rather than further developing an ice detection system.</p>					
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