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7. Author(s) George Balaban			8. Transport Canada File No.		
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15. Supplementary Notes (Funding programs, titles of related publications, etc.) <p>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. This project was co-sponsored by the Federal Aviation Administration.</p>					
16. Abstract <p>This report documents the feasibility of using wind tunnel and Falcon 20 tests to examine the fluid of contaminated de/anti-icing fluids from aircraft wings. Full-scale aircraft tests using the NRC Falcon 20 research aircraft have been conducted by APS since 1997 to study the effect of freezing precipitation on de/anti-icing fluids. Wind tunnel testing at the NRC wind tunnel in Ottawa complemented the Falcon 20 tests for the first time during the winter 2006-07. The purpose of the testing was to study aerodynamic flow off of de/anti-icing fluids from aircraft wings.</p> <p>The wind tunnel controlled environment proved to be a very good test platform to study the effects of freezing precipitation on de/anti-icing fluid. The wind tunnel tests showed that it is possible to simulate indoor takeoff runs with freezing rain, ice pellet and snow contamination. The feasibility of Falcon 20 testing has been demonstrated over the past 10 years of testing.</p> <p>Additional testing is recommended to simulate takeoff runs with different airfoils and lower rotation speeds. The freezing precipitation dispersion and distribution requires further refinement. The low-light environment encountered in the wind tunnel was challenging for the photographic documentation of the testing. Better lenses and flashes could optimize the results.</p>					
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