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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>Operators are interested in forced air as an alternative approach to deicing, predominantly because of the possibility of achieving an increased spray distance and improved distribution of Type II/IV fluids over the aircraft wing. There are various ways it may be used, including with Type I and Type II/IV fluids. Over the past five years, APS Aviation Inc. (APS) has worked with Transport Canada, the Federal Aviation Administration and the Society of Automotive Engineers G-12 Equipment Subcommittee Forced Air Working Group to develop this technology. This work has included the development of test procedures for both Type I and Type II/IV testing.</p> <p>In January 2004, APS assisted in forced air testing that was conducted with six Type IV fluids and two models of deicing trucks in Rochester, New York. APS measured in-situ viscosities of fluids applied with forced air assist and compared them to in-situ viscosities of fluids applied conventionally. The viscosities of fluids applied with forced air assist were found to be lower than the viscosities of fluids applied conventionally. This may have been the result of the forced air equipment setup, as these results were not seen in previous test sessions.</p> <p>It is recommended that testing be conducted to investigate the equipment setup variables and to establish a fixed equipment setup. Distance between the air spray and fluid spray, distance between the nozzle and the test surface, nozzle opening, orientation of the nozzle and nozzle type should be examined. Once the equipment setup has been fixed, it is recommended a new Type II/IV test procedure be prepared and testing with the new procedure be conducted to determine if any fluids meet the requirements for certification.</p> <p>If no Type IV fluids are deemed to be suitable for use with forced air assist, Type II and/or Type III fluids should be tested. Although they have shorter holdover times than Type IV fluids, Type II and Type III fluids also have lower initial viscosities that will be less influenced by the shearing of a forced air assist application.</p>					
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