The primary objective of the 2008-09 holdover time test program was to evaluate the performance of new deicing and anti-icing fluids over the entire range of conditions encompassed by the holdover time guidelines. The objective was met by conducting endurance time tests. The procedure for these tests consisted of pouring fluids onto clean aluminum test surfaces inclined at 10°. The onset of failure was recorded as a function of time in natural snow and artificial conditions, including simulated freezing fog, freezing drizzle, light freezing rain, and rain on a cold-soaked wing. A total of 411 tests were conducted with four fluids.

Changes to the holdover time guidelines for the winter of 2009-10 include:

- Fluid-specific holdover time tables were added for three new fluids: Aviation Shaanxi Hi-Tech Cleanwing II (Type II), ABAX Ecowing AD-49 (Type IV) and Kilfrost ABC-4sustain (Type IV).
- Two fluids, Aviation Xi’an Hi-Tech KHF-II and Kilfrost ABC-II Plus, were removed from the guidelines.
- Three increases and one decrease were made to the Type II generic guideline values; one decrease was made to the Type IV generic guideline values.
- The below -25°C row was removed from the Type II and Type IV holdover time tables. In its place, the below -14 to -25°C row was modified to below -14 to -25°C or LOUT (lowest operational use temperature).
- Frost holdover times were moved from the generic and fluid-specific holdover time tables to a new active frost holdover time table. Reductions were made to some Type II and Type IV frost holdover times.
- A note indicating light freezing rain holdover times can be used in conditions of light snow mixed with light rain was added to all of the holdover time tables.
- The guidance material for operations during ice pellet conditions was expanded and modified.

It is recommended that any new Type I, Type II, Type III or Type IV fluids be evaluated over the entire range of conditions in the holdover time tables.