

SAE G-12 FLUIDS SUBCOMMITTEE MEETING
MONTREAL, OCTOBER 2016
AS5900 STANDARD UPDATE

LABORATOIRE INTERNATIONAL
DES MATÉRIAUX ANTIGIVRE



ANTI-ICING MATERIALS INTERNATIONAL LABORATORY

Eric Villeneuve, AMIL Sponsor SAE AS5900

AS5900 Update

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Standard Test Method for Aerodynamic Acceptance of SAE AMS1424 & 1428 Aircraft De/Anti-icing Fluids

AS5900 Update

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- Revision B was issued in 2007. Editorial and General changes were made since 2007. The main goal for Revision C was to edit and improve the wording, formatting and esthetic aspect of the current document. No technical changes were made.
- A ballot for Revision C was initiated on April 18th 2016.
- The ballot was **approved** and Revision C was **published** on October 26th 2016.
- Revision C is now the **active** document.

AS5900 Update – Revision C

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- Some editorial changes
 - ▣ General improvement of wording and formatting
 - ▣ Updated tables and figures
 - ▣ Information removed from the Scope, placed in a new section (General Information), to reduce scope and correspond to SAE guide document

AS5900 Update – Revision C

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- Removed NOTE: These test methods are based on glycol-based fluids, additional testing may be required for non-glycol-based fluids.

- Note has been replaced by :

NOTE: No additional testing is required for non-glycol fluids at this time. For more information about non-glycol fluids please refer to AMS1424.

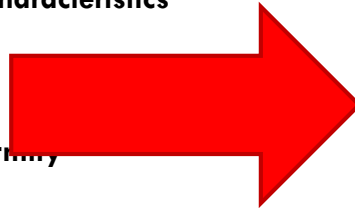
AS5900 Update – Revision C

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□ Reorganisation of section 4

4. TEST FACILITY REQUIREMENTS

- 4.1 Test Duct Description
 - 4.1.1 Dimensions
 - 4.1.2 Tolerances
 - 4.1.3 Design Features
- 4.2 Test Duct Gas Flow Core Characteristics
 - 4.2.1 Test Gas
 - 4.2.2 Temperature Range
 - 4.2.3 Temperature Stability
 - 4.2.4 Temperature Spatial Uniformity
 - 4.2.5 Velocity Range
 - 4.2.6 Turbulence
 - 4.2.7 Velocity Spatial Uniformity
 - 4.2.8 Relative Humidity
- 4.3 Test Facility Thermal Stability
 - 4.3.1 Test Duct
 - 4.3.2 Test Facility
- 4.4 Test Facility Drainage
- 4.5 Instrumentation
 - 4.5.1 Temperature and Relative Humidity
 - 4.5.2 Test Duct Gas Pressures
 - 4.5.3 Test Duct Gas Velocity and Turbulence
- 4.6 Example Facility



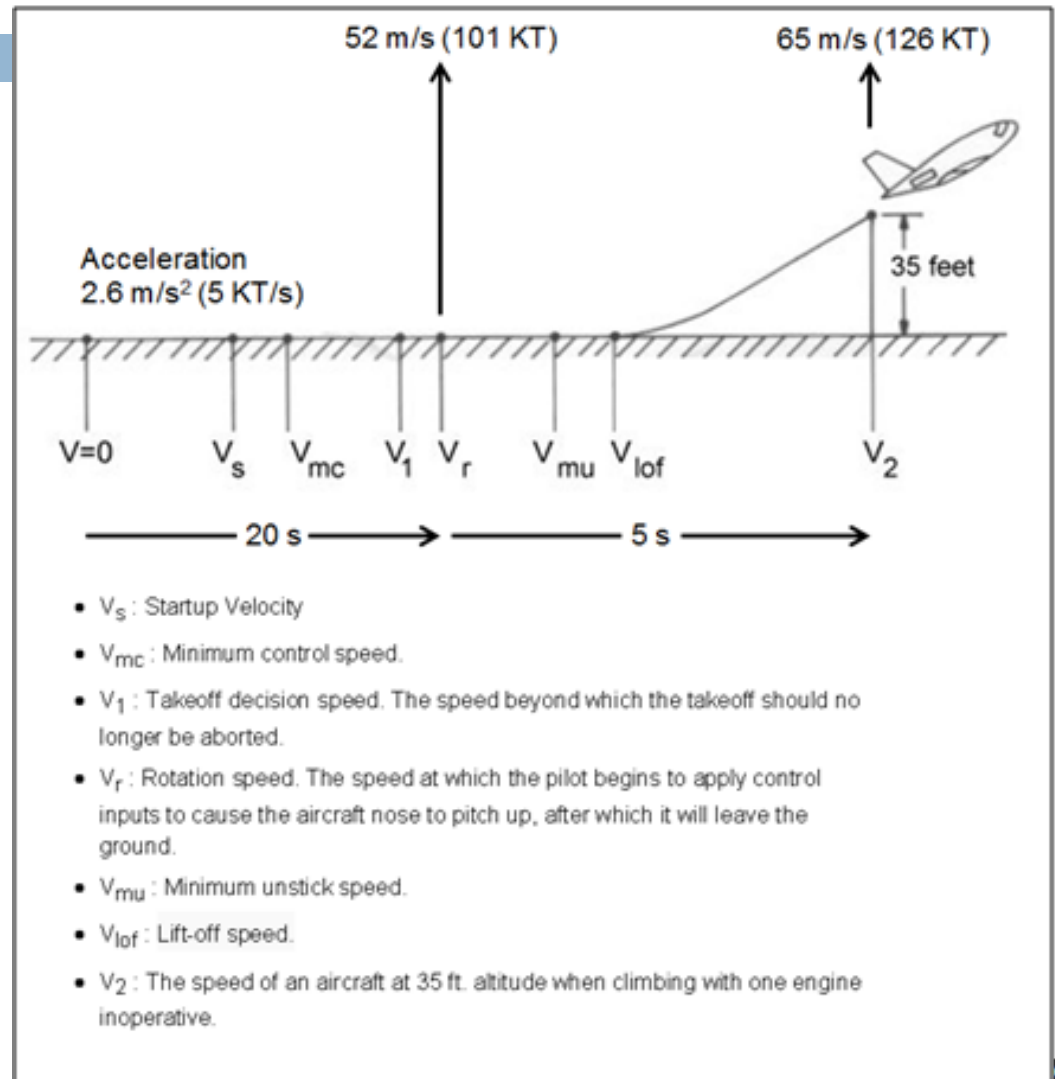
4. TEST FACILITY REQUIREMENTS

- 4.1 Calibration and Test Equipment
- 4.2 Test Duct Description
 - 4.2.1 Material
 - 4.2.2 Dimensions
 - 4.2.3 Tolerances
 - 4.2.4 Design Features
- 4.3 Test Duct Gas Flow Core Characteristics
 - 4.3.1 Test Gas
 - 4.3.2 Gas Temperature
 - 4.3.3 Gas Pressures
 - 4.3.4 Gas Velocity
 - 4.3.5 Relative Humidity
- 4.4 Test Fluid Temperature Measurement
- 4.5 Test Facility Drainage
- 4.6 Example Facility

AS5900 Update – Revision C

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- Figures which explain the speeds for the tests



AS5900 Update – Collateral Effect

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- **Thank you for your participation (Vote, comments, suggestions)**
- Modification in AMS1424, under section 3.5.3 :

*“A fluid is acceptable for use on large transport type jet aircraft or on lower takeoff rotation speed commuter aircraft if it meets the criteria defined in **6.3** of AS5900. Also see **1.2.1**.”*

In AS5900 Revision C, section **6.3** is now section **7.3**.

- **Other Documents?**

AS5900 Update – Contact

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Comments or suggestions?

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