

# DID YOU KNOW?

A Flight Options Pilots Safety Committee Publication

DYK 028: Winter Operations: Preflight: Rev. 2

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## **Did You Know About Winter Operations?**

As we move from fall into winter we find ourselves squarely in icing season. The arrival of colder weather on the ground suggests we should all bone up on our winter operations considerations. In this three part series, we will discuss a host of items that need to be considered prior to launching into the cold blue yonder.

### **Part 1: Preflight**

Winter operations require us to use some different aircraft systems we may not regularly use during the warmer weather. There are also different issues regarding flight planning that must be taken into consideration.

#### **Your Aircraft**

Prior to initiating flight into known or suspected icing conditions, crews should carefully preflight their aircraft according to the proper checklists. Included in this preflight should be a careful inspection of the anti-icing and/or de-icing systems.

The operational condition of each system should be verified. Any special fluids required by either primary or backup ice protection systems should be filled to capacity and the function of pumps and other associated components of the system verified. Electrical ice protection systems should be thoroughly verified to be in proper working condition. Systems utilizing bleed air should also be thoroughly checked prior to flight if the manufacturer's checklist allows it. Always observe any operational limitations placed on the preflight of anti-icing and/or de-icing systems to assure a complete and accurate test.

Any aircraft systems that have been placed on the MEL should be reviewed. A careful examination of any associated limitations placed on the aircraft should be accomplished. If the MEL'd system will affect your flight assignments for the day, notify dispatch as soon as possible so they can make other arrangements.

#### **Flight Planning**

It should go without saying, but the first step of a successful mission is a thorough weather briefing. Departure, enroute, arrival and alternate weather should be carefully reviewed. Special attention should be paid to NOTAMS that may affect your flight. Runway closures or braking action reports of poor or worse that are not noted before departure can become extremely embarrassing at best!

Carefully review your performance charts regarding takeoff operations after anti-ice or de-ice application. Some aircraft may require a higher rotation speed to insure proper shearing of the fluid from the wing. This can impose a significant runway length penalty. Add that penalty to a contaminated runway and you may not have enough asphalt or concrete for departure.

Determine any applicable holdover times using all available information if you plan on using anti-ice or de-ice fluid. There may be situations that require you to delay your departure until conditions improve. You may need to wait for the temperature to come up or for precipitation to decrease in intensity so you can even taxi to the runway. Always adhere to the "clean wing" concept.

The condition of runways including departure, destination and alternate (if required) should be determined prior to departure. Remember that Flight Options aircraft are prohibited from operating when the braking action is reported as poor or nil. Taken directly from the latest SOPs:

### **6.1.3.2 Contaminated Runways and Braking Action Reports**

Flight Options aircraft will not takeoff or land on a runway that is reporting “poor” or “nil” braking action from a **reliable and timely** braking action report\*. Crews will not execute 180° turns on a runway contaminated with snow or ice unless there is no other way to enter or depart the runway. During contaminated runway operations crews will utilize the manufacturers’ recommended contaminated runway stopping techniques to ensure safe operations (a passenger pre-briefing is advised).

\*NOTE: **Reliable Braking Action Report.** For the purpose of this guidance a reliable and timely braking action report means a braking action report submitted from a turbojet airplane with landing performance capabilities similar to those of the airplane being operated and the braking action report was received while runway conditions are still consistent with the conditions encountered by the landing aircraft. If runway contamination mitigation is in progress or runway conditions are improving, a “poor” braking action report is not controlling over runway condition reports and trending Mu values.

If you find that the runway you intend to use has contamination issues, inform dispatch so they can get owner services working with the owner to make alternate plans.

Carefully examine your enroute weather. Areas of known or forecast severe icing must be avoided, since none of Flight Options’ aircraft types are approved for flight into severe icing. Pilot reports for your departure, destination and alternate airports can be invaluable, since they convey actual, pilot observed conditions. Also be sure to check for SIGMETs along your routes of flight for the day that forecast severe icing or other weather phenomena that could affect the safety of your flight.

Finally, airport conditions at your point of intended landing and alternate (if required) should be carefully examined prior to departure. Braking action reports for the runway, as mentioned previously, are vitally important safety considerations, but other items need to be considered as well. Braking on the taxiways and ramp areas can be significantly different from the runway and could pose operational limitations. Also pay careful attention to the location and height of snowdrifts or windrows on the airport surface. Depending on your wingspan and height, there could be places you can’t take your aircraft on the airport. It would be very embarrassing if you got your owners to their destination airport only to find out you couldn’t take them to the FBO due to high snow banks or closed taxiways.

### **Using APG and UltraNav to Assure Safety**

You must use APG when required. According to G.O.M. 4.16.2.2, APG is required when operating in IMC conditions or when at mountainous airports with an APG Special Use Visual Procedure. When APG is not required, insure that you use the UltraNav software provided in the electronic flight bags on Flight Options’ aircraft. UltraNav provides excellent guidance on both departure and approach climb. The software allows for performance computations based on the specific aircraft type and its unique operational characteristics. The software will provide the crew with information on departure and approach (missed approach) climb gradient with one engine inoperative. All Flight Options pilots should use the electronic flight bags during their preflight planning to assure the flight can depart and arrive safely and legally.

### **Now You Know!**

**Safe flight operations is a shared responsibility:  
Report compliance issues to [safetycompliance.fo@ibt1108.org](mailto:safetycompliance.fo@ibt1108.org).**