

SPECIAL DEICING CONSIDERATIONS **FOR PART 135**

Let's all face it—FAR part 135.227 has allowed us to depart an airport with frost adhering to the wings, or stabilizing or control surfaces, if the frost has been polished to make it smooth. On February 1, 2010 the FAA eliminated this option for parts 135, 125, and 91 subpart F operations. Now the rule says, in part, "that operators are required to remove any frost adhering to critical surfaces prior to takeoff. Additionally, the rule restructures language in parts 91, 125, and 135 to clarify that aircraft must have functioning deicing or anti-icing equipment to fly under IFR into known or forecast light or moderate icing conditions, or under VFR into known light or moderate icing conditions.

OPTIONS

The FAA identified four alternatives to polishing frost that operators may use to comply with this rule. Those alternatives are: (1) Using wing covers to prevent frost accumulation on wings, (2) waiting for frost to melt, (3) storing the aircraft in a heated hangar, or (4) deicing the wing surface.

Wing covers: Having flown in the interior of Alaska for about 40 years, some of which was under part 135, wing, tail, engine/nacelle, and windscreen covers work extremely well eliminating frost.

DISADVANTAGES: They don't work well during freezing rain and heavy wet snow and if you carry them in your airplane they have to be dried each day. They also take up valuable space in your airplane if you carry them with you. The pilot needs to be careful not to damage vortex generators when removing wing covers with wing vortex generators.

ADVANTAGES: They greatly reduce the time necessary to get frost and snow off of the airplane and get it ready for flight. Works well at remote locations.

Waiting for the frost to melt:

DISADVANTAGES: The temperatures remain below freezing most of the winter so this is not usually a viable option.

ADVANTAGES: You might not have to buy wing, engine, nacelle, windshield and tail covers. This could also be an option in early fall and late spring.

Heated hangar:

DISADVANTAGES: It doesn't work well if you have more airplanes than hanger space. It also doesn't work well away from home.

ADVANTAGES: Works great for not only eliminating frost and ice but also eliminates outside preheating. Preflight's can be done in the comfort of a heated hangar and all that.

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Deicing the aircraft:

DISADVANTAGES: Deicing fluids cost money. Deicing the aircraft also may be cumbersome away from home base. Commercial deicing may be expensive.

ADVANTAGES: Deicing services are commercially available at relatively few Alaska's airports. This would be the easiest method to deice your aircraft, when services are available.

Regardless of how you comply with the new FAR Part 135.227, 125, or Part 91 subpart F requirements you may wish to develop a training program that ensures your aircraft are deiced in accordance with the rule change.

GENERAL CONSIDERATIONS FOR A DEICING TRAINING PROGRAM: (assuming you don't have a FAA approved deicing/anti-icing program authorized by your ops specs)

1. Develop a written company policy on operating your aircraft during ground icing and enroute icing conditions.
2. Develop written procedures for
 - a. Who is responsible for deicing-pilots, mechanics, ramp folks, commercial operations?
 - b. How is the deicing done-fluids, wing covers etc?
 - c. When will deicing be done-anytime there is frozen contamination on the critical flight surfaces?
 - d. Where will deicing be done-at home base, remote locations?
 - e. How will remote location deicing be completed?
 - f. What will be de-iced-address the critical flight surfaces identified in the manuals or POH's for your specific aircraft?
 - g. Does the company use a "5 minute pre-takeoff check outside the cockpit"? If so how is it done?
 - h. If using deicing fluids, who will be responsible for ensuring the necessary equipment is in working condition. Who will be responsible for ensuring deicing fluids are properly prepared for application. If you are using hold over times, who is responsible for maintaining current holdover tables? Refer to the FAA guidelines for application of SAE Type I Fluid Mixtures. Refer also to FAA holdover timetable for estimating durations of effectiveness of Type I glycol application.
 - i. How will deicing problems or deficiencies be identified and tracked?
3. Personnel training requirements:
 - a. Initial training—who will be required to attend i.e. pilots, ground personnel, dispatchers, flight followers etc? How will you address new employees beginning work in between training cycles?
 - b. Recurrent training-how often, who will be required to attend, when and where will the training be accomplished?
4. Record keeping:
 - a. What training records will you keep?
 - b. Who will keep them? Who will audit them and how often?
 - c. Where and how will they be kept?

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5. Deicing links: The following link is a generic aircraft icing course developed by NASA. Take a look at it. (note: If the hyperlink doesn't work then copy and paste the address in your browser)
<http://aircrafticing.grc.nasa.gov/courses.html>.

7. This final rule removing the polished frost language from part 91 subpart F, and parts 135 and 121 can be seen at the following link:

<http://edocket.access.gpo.gov/2009/E9-28431.htm>)

BEST PRACTICES

. **NOTE:** We are asking that you submit your best practices for deicing for inclusion here. We will periodically update this page to share your best practice with other carriers.

The following best practice has been submitted anonymously by an Alaska Air Carrier for your consideration:

BEST PRACTICE #1:

1. Wing, engine, nacelle, wind screen, and tail covers should be used all the time. They must be dry before being put on the aircraft.
2. When a heated hanger is not available and wing covers were not used or ineffective, a mixture of hot water and Type I FDP Fluid (50/50 MIXTURE) can be sprayed on with a portable pressure sprayer. The freezing point of this fluid should be at least 10C (18F) below the OAT. After spraying the mixture all snow and ice must be removed from all surfaces.

BEST PRACTICE #2:

We are waiting on your contribution.

QUESTIONS: If you have questions about a non FAA approved deice program please submit them to us. We will post them here to see if any of the carriers have suggestions or answers for you.

Thanks. The Medallion Foundation.