Carburetor Icing Advisory:

The engine in this aircraft has a carburetor.

It is subject to icing when the ambient temperature and the dewpoint temperature are nearly the same and in certain modes of flight.

Please reference and review the following in order to mitigate the effects of carburetor icing. Do not takeoff if the carburetor heat is ineffective during the run-up check.

https://www.faasafety.gov/gslac/alc/libview_chapter.aspxid=10520&chapter=En+Route

Carburetor Ice

Three categories of carburetor ice are:

- ***Impact ice*** - Formed by impact of moist air at temperatures between 15 and 32 degrees F on airscoops, throttle plates, heat valves, etc. Usually forms when visible moisture such as rain, snow, sleet, or clouds are present. Most rapid accumulation can be anticipated at 25 degrees F.

- ***Fuel ice*** - Forms at and downstream of the point where fuel is introduced, and occurs when the moisture content of the air freezes as a result of the cooling caused by vaporization. It generally occurs between 40 and 80 degrees F, but may occur at even higher temperatures. It can occur whenever the relative humidity is more than 50 percent.

- ***Throttle ice*** - Forms at or near a partly closed throttle valve. The water vapor in the induction air condenses and freezes due to the venturi effect cooling as the air passes the throttle valve. Since the temperature drop is usually around 5 degrees F, the best temperatures for forming throttle ice would be 32 to 37 degrees F although a combination of fuel and throttle ice could occur at higher ambient temperatures.

In general, carburetor ice will form in temperatures between 32 and 50 degrees F when the relative humidity is 50 percent or more. If visible moisture is present, it will form at temperatures between 15 and 32 degrees F. A carburetor air temperature (CAT) gauge is extremely helpful to keep the temperatures within the carburetor in the proper range. Partial carburetor heat is not recommended if a CAT gauge is not installed. Partial throttle (cruise or letdown) is the most critical time for carburetor ice. The recommended practice is to apply carburetor heat before reducing power and to use partial power during letdown to prevent icing and over cooling the engine.

To prevent carb ice:

- Use carb heat ground check
- Use heat in the icing range
- Use heat on approach and descent (see next page)

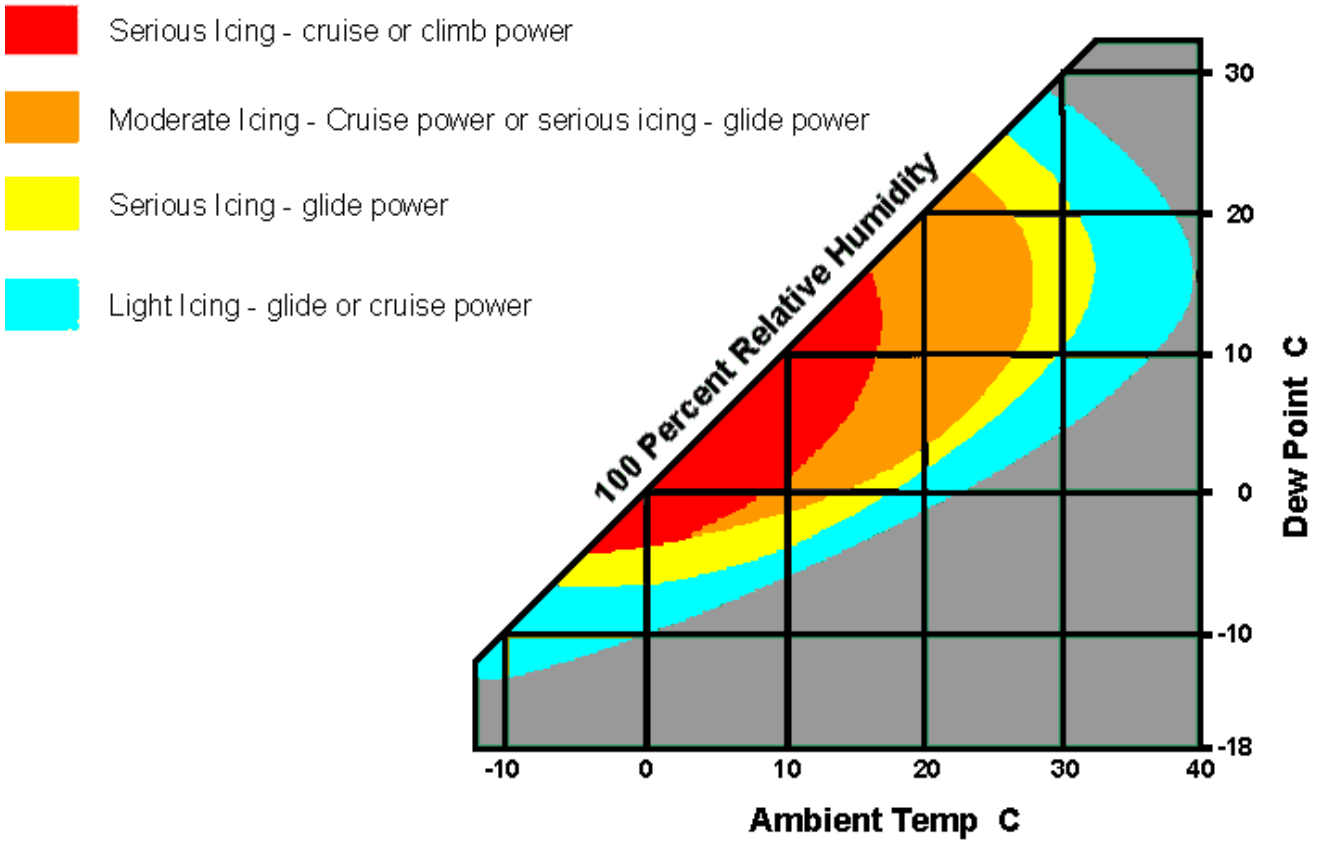
Warning signs of carb ice include:

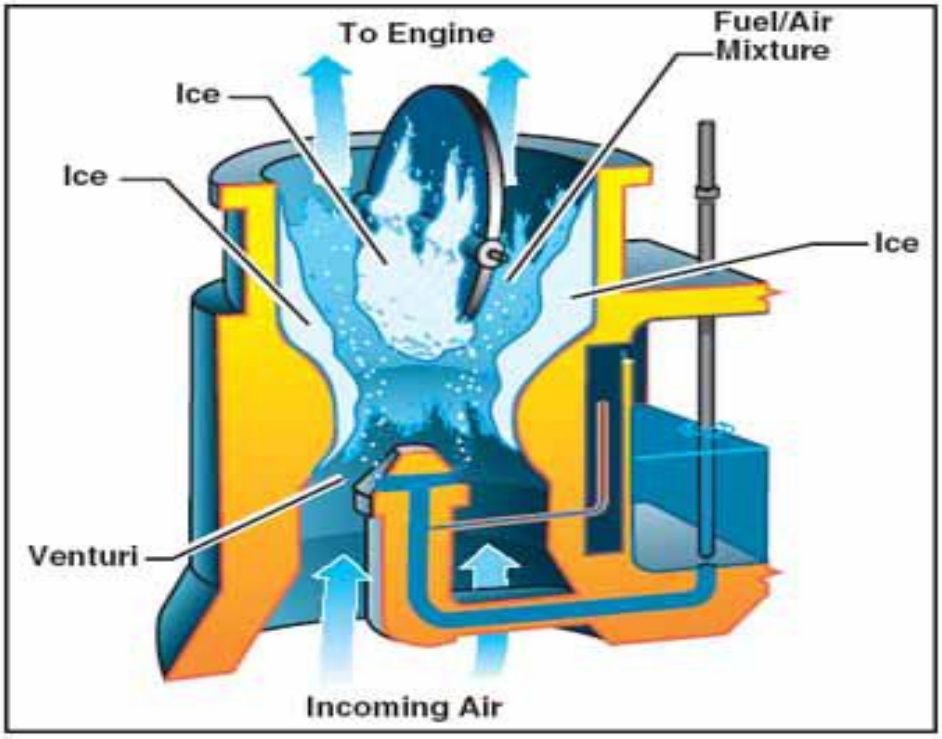
- Loss of rpm (fixed pitch)
- Drop in manifold pressure (constant speed); rough running

Pilot response to warning signs should be:

- Apply full carb heat immediately (may run rough initially for short time while ice melts)

In the chart below, the curves encompass conditions known to be favorable for carburetor icing. The severity of this problem varies with different types, but these curves are a guide for the typical light aircraft. Light icing over a prolonged period may become serious. When you receive a weather briefing, note the temperature and dewpoint and consult this chart.


Serious Icing - cruise or climb power
Moderate Icing - Cruise power or serious icing - glide power
Serious Icing - glide power
Light Icing - glide or cruise power
100 Percent Relative Humidity
30
20
10
0
-10
-18
Dew Point C
-10
0
10
20
30
40
Ambient Temp C


To Engine
Fuel/Air Mixture
Ice
Ice
Ice
Venturi
Incoming Air