



ADVISORY LEVEL: Important
DESCRIPTION: Carb Heat
ENGINE TYPE: R2800 & R3600

Carb heat is a specified requirement but a lot of people don't employ it.

The Bing Carb is located in a fairly warm spot but there have been reports of icing mainly when flying at altitude (15,000 ft plus as was a case in point in Bogotá).

There are several ways to provide heat to the carb:

1) The traditional way can be employed where air is heated via a muff over the exhaust pipe. This warm air can be funnelled, via a plenum and baffles, to direct the warm air over the carb or provide heat to the cabin. If both baffles are closed then the carb receives ambient temperature air. The only disadvantage being the reduced efficiency of a carb receiving warm air during de-icing.

2) Much the same as above but in this case the use of a small oil cooler as a heat exchanger drawing heat from the engine oil in its circulation back from the engine to the oil tank. The heat then being directed to a plenum (as in 1) to be channelled, if and when required, in the same manner, with the same disadvantage. In this case the side benefit being keeping the engine oil cool.

3) See right. In this instance engine oil is diverted to an oil block that is attached to the throat of the Bing carb. The warm circulating oil can be permanently on or diverted to block via a switch in the cockpit. Because the air is not heated there is little if any drop in efficiency. For more information use your search engine using the following key words:



Rotax Bing Electric Carb Heat

Also try this link:

<http://www.ultralightnews.ca/bing/carbheater>

4) In much the same manner as 3) an electric warming element is wrapped around the throat of the Bing carb. For a detailed explanation on how this unit works search for:

Xair electric carb heat

Or try: <http://www.esatclear.ie/~xair/jabiru%20carb%20heat.htm>