



There are many instruments available that can give the pilot carburetor temperature information, many of which are non-TSOd “stand-alone” units for the amateur-builder, in addition to these single instruments (such as those made by Westach) there are several engine information systems (EIS) such as those offered by Grand Rapids, Rocky Mountain and Dynon that offer the option to monitor carb temperature and even include alarms.

One thing more about the use of a carb heat system—I was in the right seat of a DC-3 when we were about to take off into a temperature of -40°F or maybe even colder. I remember thinking that if I were captain, I would have added some carb heat before take-off. Not because carb ice might happen but because I was sure the engine would not like having such cold air pushed into its vitals. As confirmation of this, I am sure that one engine at least made one quick burp as we rolled out for the take-off run. No harm was done but I felt sorry for those poor engines. Not many of us are likely to go flying at -40°F in our little aircraft, but if the occasion arises, may I suggest the addition of some heat for take-off. There will still be lots of power and the wings will develop bags of lift in such cold air.

As I review the above, I am not impressed. I apologize for its shortcomings and hope that it will at least lead to some discussions that will lead to greater enlightenment on the subject.

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Paul Lipps Checks In

Jim Smith of Wichita, KS, has been doing true airspeed (TAS) tests of his ELIPPSE-designed, Fred-Felix-made, three-blade prop on his stock 150-hp, Vans RV-6.

His best speed was at a density altitude of 7,000' where the four-run, GPS-derived, TAS average was 191.6 MPH at 2,741 RPM, with high and low speeds of 193 MPH and 189.5 MPH. His average ROC from takeoff at 1,350' to 10,000' was 800 ft/min at 95 MPH IAS at 1,440 lbs., and a recent ROC test yielded an average of 1,032 ft/min from 2,000' to 10,000' at RPM ranging from 2,300 at 3,000' to 2,175 at 10,000', 1,440 lbs and 95 MPH IAS.

His previously installed two-blade 68-72 prop gave him 191.5 MPH at 3,880' D-Alt at 2,800 RPM in February of last year, and 181 MPH average of two runs at 11,200' D-Alt, 2,700 RPM. elippse@sbcglobal.net ~Paul Lipps

“Low” Altitude performance

	Average Speed	D-Alt	RPM
Old two-blade Prop 68 x 72	191.5 MPH	3,880'	2,800
Elippse three blade Prop	191.6 MPH	7,000'	2,741

“High” Altitude performance

	Average Speed	D-Alt	RPM
Old two-blade Prop 68 x 72	181 MPH	11,200'	2,700
Elippse three blade Prop	180.3 MPH	11,000'	2,655

