



August 2024 Newsletter

Adjusting to the Heat-Summer flying

Summer flying is what most pilots look towards. The freeing feeling of flying without a jacket, warmer pre-flights, reduced icing concerns, you name it. Just like everything else in life, good things come with a price. Colder weather gives us better aircraft performance and shorter take off rolls, hot weather gives us the opposite. To make matters worse, our wonderful Cirrus has an A/C which keeps us nice and cool, and that also hurts our performance.

We are lucky enough to have long runways at our Bedford location and neighboring airports, but what if your favorite restaurant is in an airport with short runways? There are a few factors that we have to take into account. First off, warmer weather reduces our engine performance. As we know, engines need air and fuel to create combustion. That being said, the colder it is, the closer air molecules are to each other, meaning there are more air molecules going into the engine which in turn gives us better performance. Opposite is true when it comes to heat. The hotter it is the more spread air molecules are in turn giving us less air molecules for our engine to use. As you can imagine, the less our engine performs, the more extra work it'll need to do in order to give us what we want. So, if your favorite restaurant is at an airport with a short runway, always calculate your aircraft takeoff roll distance and remember, you can always drive.

Second, not only do we have to worry about the heat, but also the A/C. Yes, it's one of the most desirable features on our airplane but it is also a performance reducer. Per the Pilot's Operating Handbook, the use of the Air Conditioner adds about 300 feet to our ground roll and 400 feet to clear a 50 foot obstacle.

Keeping that and the previously discussed subject in mind, calculating your takeoff performance and turning off the A/C can help you have an understanding of how much runway you need in order to takeoff. Also, knowing how many feet the air conditioner adds to your roll will help you determine if shutting off the A/C will be the best course of action.

References:

Generation 6 SRxx: Pilot's Operating Handbook (POH): Section 5: Performance Data

Generation 7 SRxx: Airplane Flight Manual (AFM): Section 5: Performance Data

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