

Using Your \$15,000 Aircraft Oven

“This engine really cooks!” is no euphemism.

By Jim Weir

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People have been cooking picnics on hot automobile engines for quite a while. One day while munching on a greasy hamburger and soggy fries at the next town's airport restaurant (the classic \$50 hamburger), the thought hit me that maybe an airplane engine might make a pretty good stove for a picnic lunch or dinner.

Immediately departs the artistic chef from my mind and in struts the square-corner engineer. How hot does the engine get? Where do we measure the temperature? How strong do the lashings on the cookery pan have to be? And how do we keep from hotting up a part of the engine that we'd rather not melt?

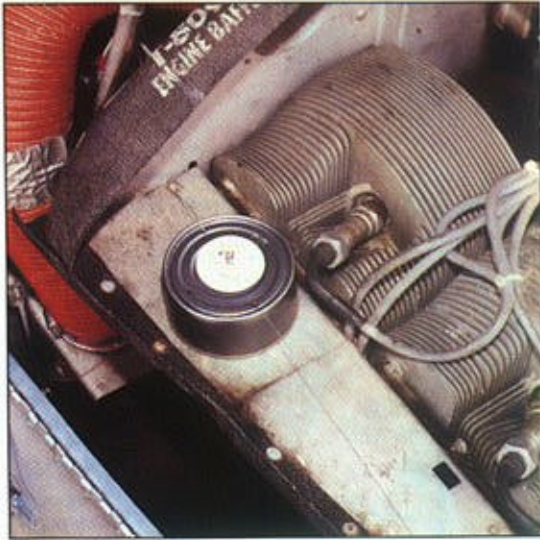
If we are going to keep from interfering with the airflow over the cylinders (*coolus interrup-*

tus), then we had best keep that cookery pan away from the cylinder's cooling fins. If we are going to keep the hot engine oil fumes from making Chicken Kiev taste like Chicken 10W30, then the cookery pan needs to be on *top* of the engine. And, to regulate temperature, we probably need to find both a hot spot and a warm spot to either cook the meal or just keep it warm.

Hot Spots

In your homebuilt, you will have to find your own place in the cowl to cook, but there are two perfect spots in the Cessna 182 that meet all of these criteria, just as there will be optimum spots

in your airplane's cowling where you can cook. The 182's hot spot(s) are on top of the engine baffle between the head of the aft cylinder(s) and the cowling. There are two of these spots: one on the port side and one on the starboard side of the engine. The warm spot is on the forward side of the firewall just above the carburetor.



A recording thermometer on top of a tuna can lashed to a baffle confirms sufficient heat in the \$15,000 oven.

Testing

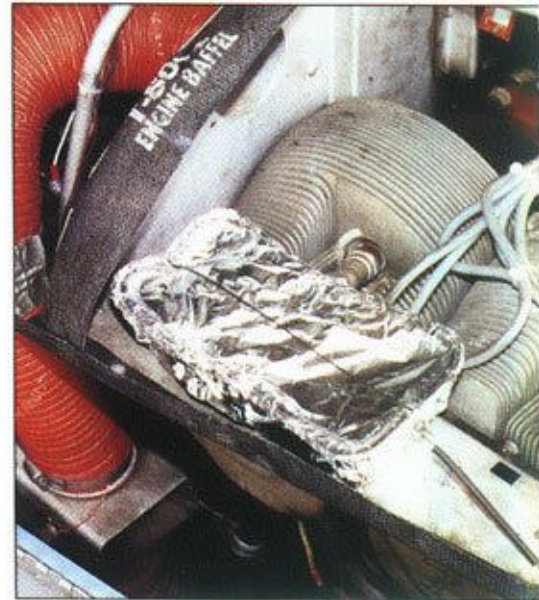
So, how hot do these two places get? And how do you measure them? I used a Temperature Unit Normalized Apparatus—Convective And Normal (TUNACAN) to simulate the cookery pan and two thermometers mounted to the tuna can to take measurements. One of the thermometers is the continuous-reading device described by me in this magazine a few years ago, and the other one is a peak-reading mechanical thermometer that is held by a magnet to the tuna can.

These measurements showed that the temperature on both the baffle and the firewall stabilized about 5 minutes after takeoff and didn't vary more than 25°F until on the taxiway after the flight. The baffle was running at 200°F and the firewall was almost exactly 75° cooler at 125°F.

Mechanically, the only thing you have to make for the engine baffle is a tiedown mechanism. I made one by using two existing screw

holes and putting a solder lug under each screw. A piece of safety wire looped through the forward lug and over the cookery pan connects with a spring fastened to the back lug. For the firewall, you have to make an L-bracket to support the pan. There are a few dozen screws already holding things to the back of the firewall. Simply pick up the drill pattern and use the existing hardware to hold the L-bracket to the firewall. Use the same solder lug/spring/safety wire arrangement to fasten the pan to the bracket.

Once a good location is found, the cooking pan, covered with foil, is secured. A tensioning spring was used in this installation.



Cookin'

As for the cookery part, I don't have space here to give you recipes, but a few guidelines are in order.

—Use a thin aluminum pan for your cookery (you will need to bend it around a bit to get it into the engine).

—Wrap everything you are cooking in a double thickness of aluminum foil.

—"Dry" recipes (those cooked without a lot of sauce, oil or butter) do a lot better than a recipe that sloshes around.

—Cover the pan and the wrapped recipe inside with a top sheet of aluminum foil.

—Put a little water (a teaspoon or less) in the pan to keep the bottom of the food from burning.

—Note that the temperatures in the pan are well below regular oven temperatures. However, the flight times are usually longer, so it is a balancing act between low temperature and long

cooking times. A little precooking at home is usually called for.

Bon appétit!

KP

Continental Chicken
and
Lycoming Lasagna
with
Piper's Pickled Peppers

Recipes are from:
"Kitchen Survival for the Suddenly Single"
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As noted in the lecture (or magazine article), aircraft engines get hot enough to cook on. These recipes are modifications of standard recipes from my book. Enjoy!! Jim

CONTINENTAL CHICKEN

Actually, a modification of a stroganoff recipe using chicken and shrimp instead of beef. Very tasty.

1 lb.	Chicken, boned and cubed
½ lb.	Small cocktail shrimp
¼ cup	Diced onion
1 tsp.	Fresh chopped garlic
8	Mushrooms, quartered
1 can	Cream of mushroom soup
½ pint	Sour Cream
2 Tbsp.	White wine
1 tsp.	Black pepper
1/8 tsp.	Ground Nutmeg
1 Tbsp.	Butter
1 Tbsp.	Olive Oil
2 cups	Flavored croutons or bread cubes

Before you fly:

Brown the chicken in the butter and olive oil over medium heat. When the chicken has been browned (about 5 minutes) put in the onion, garlic, and mushrooms. Continue to heat until the onion turns transparent (about another 5 minutes). Remove from stove and allow to cool. When cool, and just before flying, mix in all the rest of the ingredients (except croutons). Pour into your airplane cookery pan and cover with aluminum foil. Serve over croutons. Note—the

chicken-onion-'room-garlic mixture may be done well in advance and left in the refrigerator for a day or so if you wish.

Flight time on the hot part of the engine should be about two or three hours. If you are flying longer than this, experiment with adding water so that it doesn't overcook—say about a Tablespoon for every hour over three.

LYCOMING LASAGNE

To die for when going on an aircraft camping trip

1 lb.	Ground beef (or chili grind)
½ lb.	Pork sausage
¾ cup	Chopped onion
1 tsp.	Fresh chopped garlic
1 lb.	Canned stewed tomatoes
1 lb.	Canned tomato sauce
2 Tbsp.	Brown sugar
¾ lb.	Shredded mozzarella cheese
1 tsp.	Dry basil
2 pint	Cottage cheese
1 Tbsp.	Dry parsley
1 tsp.	Salt
1 tsp.	Dry oregano
½ lb.	Lasagna noodles
2 Tbsp.	Parmesan cheese

Before you fly:

Lightly brown the ground beef and pork sausage together over medium heat (10 minutes). Add the onion and garlic and continue to brown for another 10 minutes until well browned. Drain the grease from this mixture (you might try a turkey baster with a strainer -- it works for me). Mix in the tomatoes, the sugar, the basil, the oregano, and the salt and continue simmering until the mixture has the consistency of spaghetti sauce (about an hour). This mixture may be made in advance and kept in the 'fridge if you want.

Just before you fly:

Cook the lasagna noodles according to the instructions on the package. Mix together cottage and mozzarella cheeses. In your engine cookery pan, put down a thin layer of the meat sauce, then a layer of noodles, a layer of cheeses, and a layer of meat sauce. Continue until all ingredients have been used, finishing up with a layer of meat sauce sprinkled with Parmesan cheese. Cover with aluminum foil.

Flight time is the same as for the chicken above; use more tomato sauce instead of water for longer flight times.