

## Fuel Systems

Perhaps even more frustrating is an engine that roars to life only to die suddenly. If the airplane has been flown recently and it is a warm day, one of the most common causes is vapor lock. The pilot should follow the hot-start procedure outlined in the POH to purge the fuel lines of vapor. Other possible culprits include a clogged fuel vent line, which may be obvious upon inspection; an inoperative engine-driven fuel pump, which must be checked by a mechanic; a filled fuel strainer, easily cleaned by the pilot; or water in the fuel system, which the pilot can usually drain.

If the engine runs but excessive black smoke is coming from the exhaust, you need a mechanic. Probable causes are the idle or cruise (depending on where it happens) engine mixture setting being too rich; a continuous primer leak into the intake manifold; or any one of several other kinds of carburetor problems. Finally, if the engine starts and responds appropriately as you increase the throttle but doesn't seem to develop enough power to make the aircraft move forward, shut down the engine, get out, and remove the tiedown chains.