Flight Test Protocols

Conducting your personalized flight tests isn't difficult, but it does require some precision and some safety considerations. This is especially true for the first flight after some major modification or repair affecting the powerplant, fuel system, controls, etc.

How do you know if it's a major mod? If it requires a FAA Form 337 to be completed is a good yardstick. If a 337 is required, it's a major modification by the FAA's definition, though it may not rise to the level of affecting some critical system. Nevertheless, you definitely should carefully consider the conditions under which you test-fly the aircraft after it emerges from the shop.

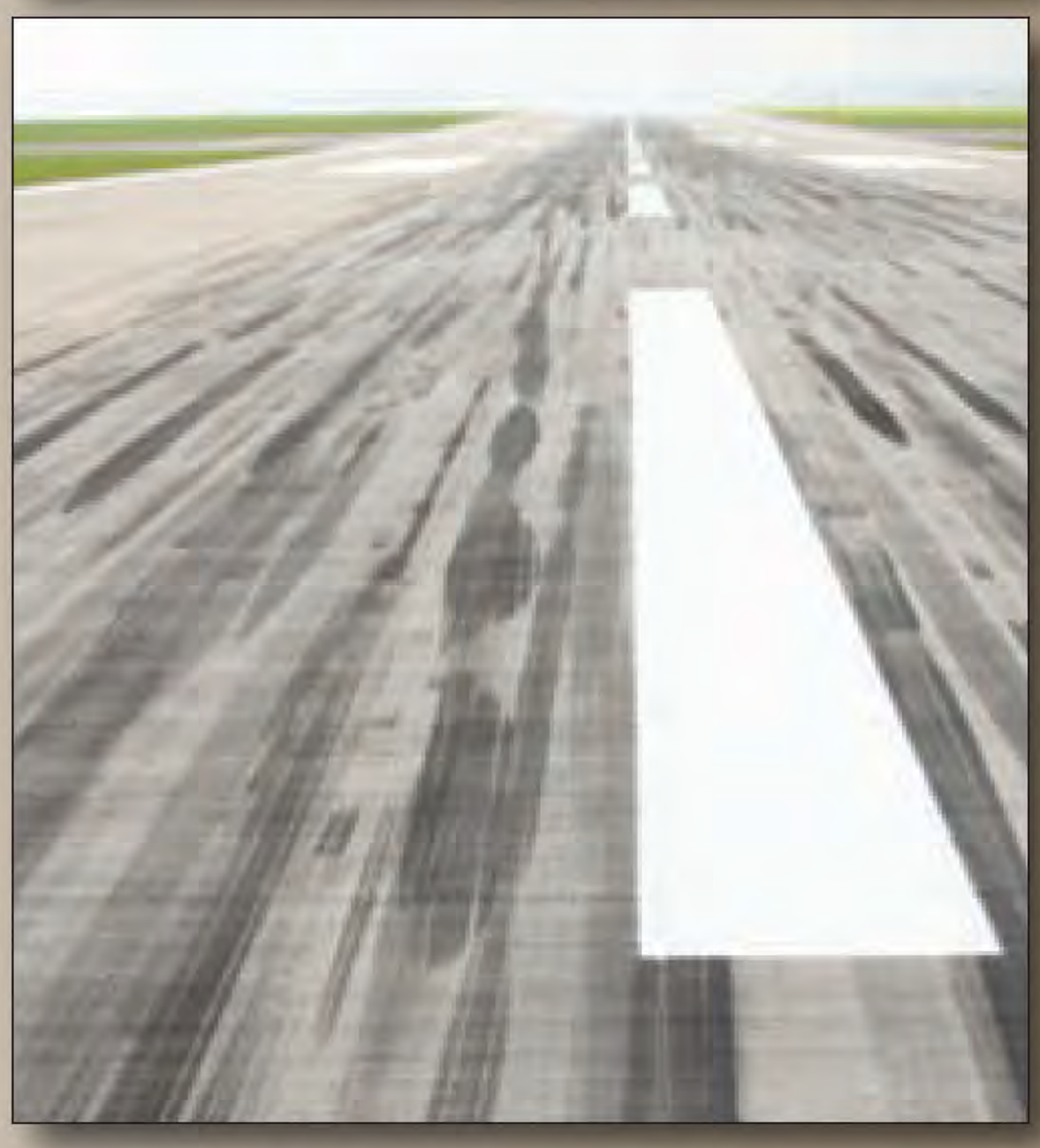
Here are some ideas for you as you put together your flight test plan:

TEST FLY IN OPTIMAL CONDITIONS

Unless you're specifically trying to determine the maximum crosswind in which you're proficient and comfortable, conduct your tests in calm wind conditions. Remain safely in visual meteorological conditions (VMC) for all flight tests. Test your airplane in smooth air...early morning and evening twilight are frequently best.

CARRY AN OBSERVER/RECORDER

Take along another pilot to observe performance and record data. Don't try to write things down as you're flying the airplane. If for some reason you can't take along an observer, tie a voice recorder into your headset and read performance data as you fly. You can transcribe the audio after you land.



AVOID TRAFFIC AREAS

Conduct flight tests away from other traffic. Break off any test or maneuver if another airplane gets even close. This is another reason to carry an observer/recorder along—to help you watch for other traffic.

USE THE LONGEST RUNWAY AVAILABLE

Don't fall into the trap of using a short field to determine what your airplane's short-field performance actually is. Use runway distance remaining markers and/or the runway stripe counting technique to measure actual performance, but do so on a very long runway.