

Anywhere Map®

Fly With Confidence

Ken Hespe knows the importance of having reliable gear on board. Before he and his granddaughter Madison were zipping along in their Mooney, Ken was landing A4 Skyhawks on the pitching decks of the USS Intrepid. Nowadays he flies up and down the east coast doing, among other things, Angel Flights. Ken relies upon Anywhere Map XP with XM WX® and Pocket Plates® to keep his flights smooth and predictable.

"The Anywhere Map system brings unmatched navigation and weather avoidance capability to our Mooney", says Ken. "Using the Anywhere SST™ solid-state tablet, we can go to any altitude and see the weather nearby or clear across the country. Many days, Anywhere Map makes the difference between going and staying home."

Whether his passenger is an angel on the way to another hospital visit, or his own little angel with the curly hair, Anywhere Map gives Ken the confidence to fly them safely. Of course, smooth landings are Ken's job and Madie doesn't cut him any slack. "You aren't in the Navy anymore, Poppy", she'll say. Well, I guess we all drop one in now and then.

\$695

\$1495

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AIRFRAME&POWERPLANT

creased efficiency, and absence of high-altitude misfire reported by its customers using fine-wire plugs, RAM recommends them to all its customers. Study after study has proven that fine-wire plugs offer a cost-per-hour savings over massive-electrode plugs. Yet, few general aviation pilots seem willing to spend the up-front cash needed to equip their engines with these plugs.

Short- and long-reach factors

There are four variables that play into choosing the correct plug. There's the massive-electrode/fine-wire choice

performance (low-compression) cylinders. Therefore, the spark plug boss—a boss is a steel-threaded insert that's installed in the aluminum head to prevent wear in the head—must have more depth than the boss in low-compression heads. Typically, the threads on the electrode end of a long-reach spark plug are five-eighths inch deep and the threads on the electrode end of a short-reach plug are three-eighths inch deep.

However, like most rules there are exceptions. Textron Lycoming Service Instruction 1042X—Lycoming's service publication on spark plugs—warns some operators: "The same engine model may use short- or long-reach

Plated threads
on top and bottom
of the plug
prevent seizing.

Aluminum oxide
insulator has
excellent thermal
properties to
resist cracking.

The anatomy of a spark plug

Plugs typically have
two layers of
corrosion protection.

Silicon carbide
resistor prevents
wear from voltage
drain for prolonged
plug life.

Copper core ensures
efficient heat
transfer and
maximum electrical
conductivity.

Nickel alloy electrodes
provide excellent
resistance to spark
and heat erosion.

mentioned previously. Then there are a few others.

Aviation spark plugs are referred to as either *long reach* or *short reach*. Before I explain what those terms mean it's important for you to understand that aircraft engine cylinders vary widely. High-compression cylinders used on high-performance engines must withstand higher combustion pressures during operation so the aluminum heads of these cylinders are beefier and thicker than those of lower-

spark plugs." Lycoming engines that require long-reach spark plugs can be identified by a patch of yellow paint on the cylinder fins between the spark-plug hole and the rocker cover. Short-reach plug applications do not have paint identifying marks. The latest Teledyne Continental Motors (TCM) service information on spark plugs is in Service Information Letter 03-2B.

Installation of the wrong reach plug will create big problems. If a long-reach plug is installed in a short-reach cylin-