

# Ceramic Coating: Worth the Effort, Price

*Three years later, the ceramic coating on our test bed continues to impress, but it's time for some light cleaning and touchup work.*

by Larry Anglisano

**W**hen contributor Bob Reed had the clearcoat paint finish on his Grumman professionally ceramic coated by NuAero Detailing in Pennsylvania (and more test aircraft coated at other top detailing shops) we were surprised at the huge effort and cost that tagged along with the project. Does the finish really last for several years? Turns out the silicone dioxide—the main ingredient in ceramic coating and a component found in glass—is hard stuff and a good match for standing the test of time on an aircraft's surface.

## THREE-YEAR TEST

We used both the Sapphire V1 Nano and System X Diamond/Renegade products, which for a typical small piston might cost at least \$600 (wholesale) just for the stuff itself. A little goes a long way, but at \$150 per bottle of the

Sapphire, it was a big invoice to coat a big turboprop single.

For this follow-up, we brought the Grumman back to NuAero for Dan Lightner to evaluate the finish by giving it a cleaning. The plane has flown over 800 hours since he applied the original coating, and it didn't take long for Lightner to recognize there wasn't a lot of breakdown. On the other hand, he pointed out that the best results start with a quality paint job like the clearcoat finish on this one.

The areas that broke down the most are the ones you'd expect, including the leading edges, front cowling and the windshield. Still, no abrasive cleaners were needed on these areas and using light pressure with a mild cleaner, unwanted dirt, bugs and debris easily came off (including the belly)—a huge benefit of the coating.

Considering all that, Lightner felt that the finish was at the point

of needing another light coat of ceramic to maintain the base coat put on three years ago. Not surprisingly, it's important not to shortchange the prep-work stage of the application, which includes a thorough dry washing. Next is inspecting the finish to see where any paint correction (removal of surface oxidation) is needed. Once corrected—understanding ceramic coating won't hide paint flaws—a wipe-down with an alcohol/water solution is done to remove any residual contaminants.

Ceramic is best applied by hand, and since it has a flash period, you wait a short amount of time and remove it so it doesn't smear and harden. This application stage is one of the critical steps because you can damage the paint surface when applied incorrectly, especially if the temperature isn't right for curing.

## AVIATION-GRADE CERAMIC

As ceramic coating continues to gain popularity in the automotive world, Lightner stressed that you want to select a product that's made for aircraft and generally approved by major aircraft manufacturers. The System X originally used on our test Grumman has been upgraded by more coatings, offering different levels of protection.

The System X MAX product applied during the touchup is designed to last between five and seven years on well-cared-for high-quality paint finishes. We'll check back in periodically to see how it continues to hold up.

