V-bars on the flight director and adjustments for takeoff power. Non-Peterson, senior pilot flight own and set takeoff power pre-levers moved forward on their new Sovereign and X replaces aally similar to G5000 and uses M2 is equipped with the Garmin fully upward-curved Cessna-jet. While it’s easy to spot the sion of Cessna’s big midsize 585, the pilot to create a harmonious look with the outside world using the outside world using the new winglets and more efficient pood PW306Cs. Without tak- the original Sovereign’s 5,770-... 47,000 feet, at which cabin alti- Max takeoff weight 30,775 lb. Long-range cruise speed 390 ktas... than the Primus Epic... 5,770-pounds, at which altitude. The cockpit, with a clean, crisp look, is able for certain second-segment... new PW306Ds each producing... is no need to break out the hand-... "It's designed to be continuously... a "dirty" storage area at the side rail, using composite material that won’t scratch or harm a smartphone. The storage area also has fold-in-... 8.5 by 11 inches, however, as texting is a points are available on the Sovereign, and the G5000 will allow the user to tap on the touchscreens for most functions, it doesn’t contain a rotary knob for pilots who are used to that interface. Frequen-... He’s design team wanted to improve comfort while also adding new cockpit amenities... and switches, and thus a cleaner, more streamlined cockpit. Backup air data and information cruisers GH-3000 electronic standby... time in. Aircraft G5000 for the new Sovereign; it’s hard to imagine want-... "Clarity is a platform we plan... "It’s designed to be continuously... because of their appearance. Another improvement attribut-... of nine feet to the Sovereign’s... of nine is typical. People carry small devices now and need an area to... for a PFD for each pilot at the MFD, or on each side of the cockpit. The displays also can be... in cupholder arms, so the area... that it’s hard to imagine want-... "We did a lot of focus studies," she said, "and a lot of people didn’t notice [the conti-... use several G5000 features–... "Clarity is a platform we plan... built, the big jet surge forward but something-... it’s hard to imagine want-... "We did a lot of focus studies," she said, "and a lot of people didn’t notice [the conti-... and more runway) then climbed to... 30,775 lb which is a great 47,000 feet, at which cabin alti-... "It’s designed to be continuously... "It’s designed to be continuously... "It’s designed to be continuously...
limits on the automatic flight control system (AFCS) mode controller, or the autothrottles will follow programmed speeds in the G5000 FMS. It’s easy to tell whether speed is manually set or referencing the FMS; the manual speed shows up as a cyan speed bug on the airspeed indicator, while in FMS mode the speed bug is a magenta triangle. We climbed at 250 knots to 10,000 feet, then 270 knots/Mach 0.7 to FL430.

Even when off, the autothrottles provide protection, both at high and low speeds. The low limit is 0.6 angle-of-attack, in which case the autothrottles will add power, and the high limit is the 305-knot MMO, where the power is reduced to prevent overspeed.

Peterson flight plans 2,200 pounds per hour of fuel for the first hour then 1,600 for the second and 1,500 for the third and subsequent hours. The more powerful engines use about the same amount of fuel as the earlier versions, she said.

I hand-flew the Sovereign to FL430, where we leveled off and spent some time testing out features of the G5000 system, such as setting up holding patterns and inputting a crossing restriction. Instead of having to input a location and bearing and distance from that location, the G5000 needs only the distance before or after a waypoint and the altitude restriction. We didn’t encounter any turbulence, but Peterson said the latest version of the autothrottle software helps smooth out bumps with subtle throttle movements.

On descent, we bumped up against the MMO limit, but the autothrottles kept us from going too fast. And as we descended through 10,000 feet, the system automatically slowed the Sovereign to 250 knots. I hand-flew the ILS to 7,300-foot long Runway 19L. Vref was about 100 knots, although we had dialed in a slightly higher airspeed manually; the software at that point didn’t automatically look up the performance data in the G5000.

At low speeds, the Sovereign is a little lighter on the controls and not quite so trucklike, and we slid down the ILS easily, with my control inputs guided by not only the G5000’s smooth flight director but also by the flight path marker, which I just needed to point at the touchdown point to ensure a proper landing. In retrospect, I would have dialed in a lower speed as I felt we came in a little hot, but I didn’t want to pull the throttles back because I wanted to experience the autothrottles automatically retarding to idle, which they did once we descended below 50 feet. After touchdown, the nose dropped smoothly and I stepped on the powerful anti-skid carbon brakes and engaged the thrust reversers but just at idle power. We still had plenty of runway remaining by the time we stopped.

There is a lot more to the new Sovereign than meets the eye, but it won’t take pilots and passengers long to appreciate all the changes. The Garmin G5000 flight deck, the Clairity cabin management system, the new winglets, more powerful engines and the integrated interior design all combine to elevate the Sovereign into a new class of high-performance, comfortable and capable midsize jets.

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