

SNEAK PEEK: HIGH-TECH PISTON ENGINES EMERGE

FLYING®

THE WORLD'S MOST WIDELY READ AVIATION MAGAZINE / APRIL 2012

CIRRUS SR22

Most Sophisticated Single ... Ever



**Father and Son Fly
the Alaska Highway**

**New Tools for
Crosswind Control**

\$4.99 / FLYINGMAG.COM



**Why to
Turn Off**
That Can-Do
Attitude p.26



2012 CIRRUS SR22: Five Seats Just the Beginning

>>> BY ROBERT GOYER

**Why this
homegrown
speedster
is the most
sophisticated
single ever**

BACK IN THE 1960S, the launches of a new model year's airplanes used to be big things, because there were often important changes to the model lineups of the big three and their less established competitors. Sometimes the upgrades were minor, like new interior options, and sometimes they were substantial, like new engines or avionics makeovers.

The launch of the 2012 Cirrus SR22 is noteworthy thanks to a couple of new features but even more so because, in aggregate, this is the year that the SR22 has really arrived at the top of the heap.

As a journalist, I've learned over the years that it's not wise to speak in absolutes. Any time you say that any airplane is the "most" anything, get ready for a hearty helping of crow, as there's surely some model somewhere in history that you've forgotten that is even more than what you blithely claimed in the first place. But in this case, I'll



break my unofficial rule and come right out and say it: The 2012 Cirrus SR22 is the most sophisticated single-engine civilian airplane ever built and by a long shot.

While this statement could probably have been said of the SR22, with its remarkable suite of avionics and safety capabilities, for the past couple of years, the addition this year of a fifth seat option and a very capable satellite communications system with global weather, voice calling, texting and e-mail seals the deal. The rest of the market is playing catch-up.

It's not every airplane I fly that I get the chance to test by flying it hard over the course of many days. When I do I seldom learn entirely new things about the airplane. It's more like getting to know a new friend. You get little insights here and there that add up to a sense of the character that feels somehow more authentic. That's how it was

>>> The 2012 edition of the SR22 — the turbocharged version, the SR22T, is shown here — is the culmination of several years of improvement to everything from the landing gear to the ice-protection system. Opposite: This year's model features the option for a three-place bench seat in back with a 60-40 split, allowing a great deal of flexibility in loading the airplane by folding down part or all of the seat backs.

with the latest SR22 I got to fly. I'm still flying it and I'm still feeling it.

For those pilots who think they know the SR22 based on a flight seven or eight years ago or, worse yet, word of mouth, I'd urge them to rethink what they know about what has become far and away the most popular high-performance piston-powered airplane in the world. Today's SR22 is a very different animal from the one Cirrus launched amidst much fanfare and controversy some 11-odd years ago.

While the basic outline of the 2012 airplane looks nearly identical to that 2001 model, the truth is that Cirrus has over the years updated nearly every bit of the airplane. In some cases, as with the adoption of LED exterior

lights, those upgrades might be considered minor, while others, like with the all-new wing on the G3 and the launch of the Perspective cockpit, were clearly major improvements.

Five Seats: Big Deal?

How significant a feature is the five-seat option? Let's put it into context.

First, the five-seater is not a new airplane but simply an option that Cirrus is offering on all of its models. The latest edition of the SR22, which Cirrus refers to simply as the 2012 model, is the first to have the option for a fifth seat, but buyers can get that option even on an SR20.

In order to get a fifth seat in there, Cirrus didn't have to change the

airframe. It instead modified the interior side panels, making them slimmer and more tapered. This created a number of extra inches of effective width in back, which allowed Cirrus to perform a bit of magic by creating a bench seat with an extra small seat in the middle.

Whether or not this is a big deal depends on the customer. It's unlikely that many existing late-model Cirrus owners will be trading in their current rides for a five-seater, unless, that is, they have a need for a five-seater like the new SR22, a four-plus-one. The new option does allow room for five, but not for five adults. You can seat four adults and a small child, or two adults up front and a couple of midsize children and a smaller child in back. For three super-midsized kids, it might be a squeeze in back, but it's doable and legal, and for short trips, sometimes that's enough.

Though it's a common approach in



the auto industry, the way that Cirrus designed the rear seating in the 2012 model is new by light-airplane standards. The seat backs are divided into two sections in a 60-40 split. Either or both can be folded forward, and while they don't lie quite flush with the lower seat surface, they provide a fairly flat space on which to lay soft bags or, if you lay both forward, even larger items like bicycles. (We remind pilots to carefully secure all bags and other objects in any open-space baggage compartment, such as that in the SR22.) So you can fold down the smaller side and be left with two seats, or the larger one and be left with one seat in back. The layout gives you a tremendous amount of real loading flexibility.

It came in handy on a few trips. For the first trip, which took us out to central Florida for a gathering, it was just Cirrus sales representative Adam Hahn and I. For that flight, which we completed

nonstop at an average groundspeed of 230 knots, we simply tossed our duffels in the baggage area and put our flight bags on the back seat, loading it as we would any other Cirrus.

On the way back, however, our needs were very different, and the new seating option was a godsend. We had, in addition to Adam and myself, a passenger who would be riding back to Austin, Texas, with us plus all of his stuff, including his bags and some work materials. The load meant we could fuel only to the tabs, and the fact that we'd be flying into a stiff headwind meant that we were going to need to make two fuel stops, one in Destin, Florida, and a second one in Louisiana — our eventual choice due to weather, timing and scheduling need was Baton Rouge. It was a long

trip, but one that we accomplished in comfort. And the views along the Gulf Coast were gorgeous, which made the headwinds just a little easier to take.

Our stop in Baton Rouge underscored the utility and safety available. We had originally intended to go to a small town in central Louisiana (served by a nice small-town airport) for an early-evening business meeting, but things weren't looking promising. On the XM's radar we could see bands of moderately powerful thunderstorms making their way east, moving across our intended destination. There were big breaks in the bands, so traversing them wouldn't be a problem, but the forecast at our destination, which we derived using a forecast from a nearby regional airport, again via XM, was for storms upon our

arrival. From the right seat Adam used the Global Connect phone (through his headsets and without disturbing my flying) to call his contact and let him know our plans had changed because of the weather. On the other side of the MFD, I was busy finding an alternate, Baton Rouge, which was clear and forecast to be so. I called the en route controller, negotiated the change in flight plan and entered it all into the Perspective flight management system using the keypad.

Our arrival at KBTR was in the dark, and there were multiple taxiway closures there, so I flipped on the EVS to taxi while flipping back and forth between that and SafeTaxi to make sure we were where we wanted to be on the airport.

A couple of weeks later, I flew the new SR22 on a third trip, up to Dallas Love for Heli-Expo. I had a number of bulky items, including a couple of large trophies for presentations at the show,



>>> The three-place rear bench provides plenty of room for two adults and a child or three kids with auto-style shoulder harnesses for each occupant.

so I folded down the rear seats and treated the SR22 like a station wagon.

To accommodate the new seating layout, Cirrus did some things differently in back, including relocating the headset jacks so they're no longer plugged into the back of the console — where the plugs can be accidentally bent or broken if a heavy bag is laid atop them. Cirrus also added automotive-style inertial reel shoulder harnesses to all three positions in back, a big safety upgrade for those rear seats' occupants. Also new are improved anchors for car seats, smart for an area that's likely going to be used by folks with kids in child seats. The overall effect is a cleaner, sleeker rear seating area that makes for improved comfort, loading flexibility and safety.

Communications Breakthroughs

If you're worried about cell phones and texting breaking into the pilot's last bastion of privacy, namely the cockpit, worry away, but there's not much you can do about it. It's coming. As far as I'm concerned, I welcome it wholeheartedly. There are things that voice calling, e-mail and Internet can do to improve the safety of flight that we've only begun to dream of. With the new

SR22, I got a chance to witness firsthand some of those capabilities.

In addition to the five-seat option, the SR22 offers a brand-new communications option, called Perspective Global Connect. The system offers global weather, satellite phone piped through the audio panel (more on that in a bit), texting through the MFD and even e-mail.

The weather available through Global Connect is similar to XM WX, but you can get it anywhere in the world (though products vary by geographic location). There's also a big difference in price. While XM costs a reasonable flat fee for whatever usage you want, Global Connect is pricier. Then again, it does more than XM, which is an always-on receiver that simply listens for the latest XM updates beamed down from the system's geostationary satellites — it's just available in North America. Global Connect, on the other hand, makes use of the Iridium satellite system, which provides global coverage.

This means that wherever in the world you are, you've got coverage. You can specify the weather coverage area you want to receive. Whereas with XM you get all of its data all the time, with





>>> The X-Edition interior is reminiscent of a luxury sports car, with two-tone leather, contrast stitching, carbon fiber trim and suedelike headliner.

Global Connect, you can specify only what you need, so there’s much less data getting sent down, which can help lower the cost. (Plans and rates vary; check with Cirrus for detailed pricing information.) In North America there’d be little reason to use anything but XM, but in other parts of the world, Global Connect will be a must-have option. Even in the States, the ability to make voice calls, text and e-mail will make it a popular choice as well.

I tried every function of Global Connect. It all worked right off the bat every time. I texted my wife, “Guess what, honey, I’m texting from the plane!” I didn’t really have much else to say. Ever the smart aleck, my wife texted right back, “How do I know that?” With no built-in camera phone, she had me there. Then again,

electronic tracking is part of the Global Connect feature set, so there really was a way to prove it. Pressing my point, I “dialed” our home number on the keypad of the Perspective avionics suite. She picked up the phone, answering apprehensively, apparently leery of the long, strange number that must have popped up on our home phone’s caller ID. I was clearly in an airplane, she admitted, and confirmed the voice quality was very good. She sounded great. A few moments later, trying her patience, I e-mailed her, promising I’d stop aerially harassing her soon. She responded with a quick “Love you” and my test was done.

Host of Features

There are groundbreaking features galore on this airplane, all of which we’ve

written about in recent years and many of which Cirrus came up with through innovative initiatives with its partners. Chief among these is Garmin, with whom Cirrus has been working from its inception. Innovative Garmin products include the Perspective avionics suite with 12-inch displays, integral alphanumeric keypad, the industry-leading GFC 700 dual-channel digital autopilot, active traffic, synthetic vision, enhanced vision system, and envelope and hypoxia protection via Garmin’s ESP system. This is not to mention a host of non-Garmin-related features, like single-lever (no prop lever) mechanical power control, the whole-airplane recovery parachute system (WARPS), the high-performance fixed-gear design approach, the incredibly roomy interior, the built-in O2, the approved flight into known icing anti-icing system, air conditioning, air-bag seat belts and more.

Flying in the SR22

Cirrus puts these features together in a very satisfying package. The airplane is beautiful to look at, true, but it’s also a pleasure to fly, and not just for the excellent true airspeeds, fine climbing ability, great visibility and comfortable seats. While the first few years of Cirrus airplanes felt less substantial and solid than I would have liked, the latest models are solid on the ground and in the air. The redesigned gear feels better than ever; the factory turbocharged Continental TSIO-550 is a smart choice; the control feel on the side yoke is tighter and more positive than ever; the environmental controls are better designed and more effective, and the soundproofing is better than ever. The result is a comfortable ride in an airplane with a lot of capability.

The features add to the airplane’s utility and the peace of mind that it brings, and FIKI is just one of those. On my flight back from Dallas to Austin last week, there was a front moving through the area with forecasts of widespread ice from the surface through around 15,000 feet. The morning of my flight, visibility was low — around 300 overcast with a mile and a half visibility at Love Field, with temperatures in the low 40s and

rain falling. The evening before, Dallas had gotten some snow flurries. The tops were reported at around 5,000 feet, which is less than 10 minutes of climbing in the clouds if I could get a climb directly to that level or higher, not a given going out of Dallas. Airplanes 50 miles north were reporting only light to moderate rime ice in the clouds, but having the known ice protection on the SR22 made the go/no-go an even easier decision than it otherwise would have been. I loaded up the windscreen and wings with

the new Corvalis, the Beechcraft Bonanza is the SR22’s only in-production high-performance rival. Cirrus has capitalized on the dearth of competition by holding prices and adding features. There are still a couple of desirable options buyers will be asking about and that Cirrus isn’t offering: fadec, which no one has yet, and the G2000 touch-screen control avionics suite. Cessna has announced G2000 on its four-seat Corvalis TTx, which Cessna has not yet started delivering. Is the SR22 loaded with bells and



>>> Performance is stellar, with 200-plus-knot cruise speeds at less than 18 gph. The factory turbocharged Continental is reliable, smooth and simple to manage.

fluid and headed out. There was, as I suspected, no ice at all, but even if there had been moderate ice, it would have been a nonissue on that day under those conditions. And that’s not to mention the synthetic vision, which I love having when the weather is low, the excellent autopilot, the envelope protection and, yes, the chute. It all adds to the SR22’s safety and utility.

The SR22 has the high-performance piston single market largely to itself these days. With Mooney on an extended production hiatus and with Cessna not yet up and running with

whistles? No, it’s not, and I say that because the term implies that the airplane’s features are somehow frivolous. This is not the case. Sure, there are available features that pilots don’t need and that are unrelated to safety, like air conditioning and voice calling, but for every quality-of-life feature, there are three or four safety innovations, from WAAS to envelope protection, that make the point clearly: Innovation, not just with Cirrus but in light GA, is all about safety and utility, the two traits in any airplane that will always be hot commodities. ✈

Cirrus SR22T

The Cirrus SR22T flown for this report was outfitted with the five-seat interior, the Perspective avionics suite with 12-inch displays, Garmin SVT synthetic vision, Jeppesen electronic charts, SafeTaxi, Perspective Global Connect with SMS and voice calling, as well as global weather, WAAS, GFC 700 auto-pilot, active traffic, FIKI, five-place oxygen, front AmSafe seat-belt airbags, air conditioning and more.

| | |
|---|---|
| Base price | \$544,900 |
| Mid-spec price | \$650,000 |
| Price as tested | \$746,190 |
| Engine | Continental TSIO-550-K, 315 hp twin-turbocharged, dual intercoolers |
| TBO | 2,000 hrs |
| Propeller | Hartzell composite 3-blade, constant speed |
| Seats | 5 |
| Length | 26 ft |
| Height | 8 ft 11 in |
| Wingspan | 38 ft 4 in |
| Wing area | 144.9 sq ft |
| Wing aspect ratio | 10.1 |
| Wing loading | 23.5 lbs per sq ft |
| Max takeoff weight | 3,400 lbs |
| Empty weight | 2,490 lbs |
| Useful load, as tested | 910 lbs |
| Max usable fuel | 92 gal |
| Full fuel payload | 358 lbs |
| Payload 3 hr 45 min trip with 45 min reserve: | 555 lbs |
| Ceiling | 25,000 ft msl |
| Max rate of climb | 1,300 fpm |
| Never exceed speed (VNE) | 200 kias |
| Max structural cruise (Vno) | 177 kias |
| Max cruise @ 25,000 feet | 214 ktas |
| Range @ 55% power | 1,046 nm |
| Range (no wind) at max cruise | 900 nm |
| Stalling speed, flaps up | 69 kcas |
| Stalling speed, full flaps | 58 kcas |
| Takeoff | 822 ft |
| Takeoff over 50 ft | 1,257 ft |
| Landing | 1,141 ft |
| Landing over 50 ft | 2,344 ft |