

# Diamond DA42 Twin Star



*First new light twin  
in decades, and it's got  
diesel power, too.*

**BY RICHARD L. COLLINS**

**PHOTOGRAPHY BY JIM BARRETT**

FOLKS WHO SAY THERE IS NOTHING NEW IN GENERAL AVIATION HAVEN'T been watching Diamond Aircraft. That company's new Twin Star is about as revolutionary as an airplane can be and still have wings and a tail. It marks the rebirth of the light twin but with a unique airframe and super-efficient turbo-diesel engines that run on jet-A.



Back in the olden days when there were many piston twins in production, there was always a good argument between Piper Twin Comanche and Beechcraft Bonanza salesmen. The airplanes were close in performance and sold for about the same money, but offered the choice of having all of the power in one engine or divided between two. Now pilots shopping for a half-million dollar new airplane have the same choice, single or twin, thanks to the Twin Star.

The four-place cabin of the Twin Star is not built exactly like the one on the DA40 Diamond Star single, but it's dimensionally the same. The rapid taper of the fuselage aft of the cabin is the same on both airplanes, and back at the tail end the twin has a big ventral fin and more rudder in acknowledgement of the possibility of asymmetric thrust.

The engine nacelles on the Twin Star are intricate and are unlike nacelles on other twins. That's because the engines within are different. They are four-cylinder, in-line, turbo-diesel, liquid cooled, electronically controlled and geared Centurion 1.7 engines from Thielert in Germany. There are a lot of firsts for certified light propeller airplanes in the Twin Star's powerplants.

The engines are rated at 135 horsepower, which is less than other light twins that came before. The previous low in power per side was 150 hp, on the first Apaches, and that wasn't enough. But the Twin Star is different, and 135 horses do okay.

Because of the high vibration levels inherent in a diesel the engine mounts are gentle and soft, meaning you can move the engine about a bit with your hand when the airplane is at rest. And when you look out at the spinner in flight you can see that the engine does move about in the cowling in turbulence. The result of this specially designed mounting system is an airplane that is exceptionally smooth as well as quiet.

The props are from MT, three blades each, and I never thought I would say a propeller is cute, but these are. You might even say they are perky looking. The crankshaft to propeller gear ratio is 1.69:1. The engines and props are managed automatically by an electronic engine control unit (ECU), which basically does the same things as a full authority digital engine control unit (fadec) on a gasoline engine in a car or airplane. This ECU doesn't involve itself in ignition because there are no spark plugs, but it handles fuel injection as well as prop rpm and

has dual channels for redundancy.

On takeoff, the props turn at 2300 rpm to 2400 rpm and at cruise they are likely at 2000 to 2200 rpm. With the props at 2300 the crankshaft would be turning 3887 rpm. There is no indication of rpm or manifold pressure on the panel. Power is set to a percentage readout with the single power lever for each engine. There are no prop or mixture controls.

The reason the prop rpm is not an absolute for takeoff or cruise is that in a diesel engine the only thing that the ECU can control is the amount of fuel injected, and that establishes power output. The ECU then adjusts prop pitch for the proper rpm to absorb the power. The ECU system looks at a lot of other parameters, such as ambient air pressure and air temperature, and makes a determination of how much fuel to put through and what rpm the props should be set at to get the percentage of power called for by the pilot. There is a whole lot going on with the ECU, but all the pilot has to do is set the power levers for the desired percentage of power and the engine and propellers take care of themselves.

The engine power charts are a little convoluted because of induction air temperature considerations, but basically the en-

gines will make 100 percent power to about 6,000-foot density altitude with 90 percent available to 10,000 and 75 percent to 14,000. The ECU makes the determination of maximum available power based on everything it is seeing. Because of the way the ECU operates, power does not change in a linear fashion with altitude or air temperature, as it does in a typical avgas-burning engine. The maximum certified altitude of the airplane is 18,000 feet.

Liquid cooling was common in aircraft piston engines until World War II, when the lighter weight and greater simplicity of air cooling won out. However, with new technology liquid handling systems and improved liquid-to-air heat exchangers, many of the disadvantages of liquid cooling are gone, but the advantages remain. Liquid cooling provides a much more uniform operating temperature, and when power is reduced in descent, for example, a thermostat controls cooling flow in the engine to maintain an even temperature. If you don't believe that liquid cooling systems have improved, try to remember the last time there were any problems with the cooling system in your car, and that should be the norm in the Twin Star, too.

The Centurion diesel engines are not overhauled, they are replaced. The certified replacement time is now 1,000 hours, but that is projected to increase to 2,400 hours as the fleet gains experience. The replacement cost, about \$25,000 U.S. each now depending on the dollar to Euro exchange rate, will be in relation to 2,400 hours, so early owners won't be penalized if they need engines before the time is extended to 2,400 hours. In other words, you will pay by the hour and at today's rates that is about 20 bucks an hour for engines. The props are additional. By comparison, my single Continental runs about \$28 per hour (with good luck) including the prop. Renewing a pair of air cooled avgas engines of similar power may cost less, but \$20 for engine replacement is a pretty good deal.

The Centurion engines are a Thielert aircraft adaptation of ones used in Mercedes automobiles in other parts of the world. Thielert recently bought Superior Air Parts to become more of a factor in the North American aircraft engine market.

One thing needs to be said about the automotive background of the engines. This has been done before, most recently with the Porsche-powered Mooney. Porsche created an aircraft version of its fa-

mous flat six air-cooled auto engine, but in the Mooney it did not endure. There were probably many reasons the Porsche aircraft engine did not hold up, but probably the most important is that it was not originally designed for continuous operation at near maximum power, as is the norm in an airplane. Any diesel is different than a spark ignition engine and must be more rugged by design, so the Centurions hold promise to adapt well to aviation use.

Though the Centurion engine is derived from an automotive diesel, only jet-A fuel is approved by the FAA. In Europe the engines are approved for either diesel fuel or jet-A, but U.S. standards for diesel fuel are not as consistent as in Europe. Avgas can never be used, and Twin Star pilots will need to be vigilant to make sure jet-A gets pumped into the tanks because it would be an easy mistake for any line crew to make.

Diamond has flown the Twin Star with conventional Lycoming engines to offer an alternative to those who don't want the diesels, but that product is not now in active development.

Any diesel engine will be heavier than a gasoline engine because the diesel must endure much higher internal pressures,

and the Centurions are. They weigh in dry at just under 300 pounds each, about 66 pounds more than a 180 Lycoming. And to the dry weight you must add the cooling fluid and lubricating oils. The Twin Star empty weight is over 300 pounds more than a Turbo Seminole, and much of that extra weight is in the powerplants.

One new item on the Twin Star preflight is the requirement to check the fluid level in the gearbox. That's done through a little door in the front of the cowl and one of those elusive sight gauges on the gearboxes.

The Twin Star is available with a TKS ice protection system that is approved for flight in icing conditions. The airplane I flew didn't have this, but there's a removable glove on the leading edge that would come off so the TKS panels would fit into the leading edges of the wings without any airflow disturbance.

When the preflight is done the next step is to gain entry to the cockpit. If you are a rock climber it might seem natural. The step is high off the ground and from there to the wing is another good stretch. For best results, some thought needs to be given to which foot goes first. Once up

■ **Garmin's G1000 flat panel avionics system is standard in the Twin Star. Note the single key switch used to start either engine, with the large toggle switches on either side that turn the electronic engine control systems on or off. Moving the switch to off while in flight automatically shuts down the engine and feathers the propeller.**





on the wing you step back down into the cockpit. The canopy is hinged at the front and there is plenty of maneuvering room as you enter. The rear seats are accessed through a separate canopy. Baggage goes in the nose and aft of the rear seats.

The seats are comfortable and the Garmin G1000 panel is becoming familiar because it is in so many new airplanes. The Twin Star still has a Bendix/King KAP 140 autopilot but this will soon be replaced by the G1000 integrated flight control system.

The glareshield is a touch on the high side, but the actual location of the G1000 is such that a bifocal user who uses the bottom part of the glasses for instrument panel viewing will find this location very comfortable. The big flat-panel displays are mounted relatively lower than I have seen in any other application. The reason this is possible is the control sticks which are mounted on the floor. Yes, I said control sticks. Not many—I can't think of any—propeller twins have had sticks, but this airplane is different in more ways than one.

Starting the Centurion diesel is a non-event. The engine control unit switch is turned on, a glow plug "on" light illuminates on the G1000, and when that light goes out the key is moved in the direction of the engine in question and it just seems to start running. Vroom vroom, in other words.

If you are used to high-performance singles, there's not much to learn about airspeeds in the Twin Star. It's a 270-horsepower airplane with a maximum

takeoff weight of 3,927 pounds and a wing area of 175.3 square feet. The biggest difference is in span, all 44 feet of it on the Twin Star, so be careful taxiing. Still, whatever speeds work in a similar single work here.

Before we roll down the runway, a word about performance. As the Twin Star was being developed, and in some early reports on it, the performance numbers given were spectacular, a little too spectacular for an airplane of this weight and horsepower. No, it won't climb 1,500 feet per minute at max weight but it will do better than 1,100. No, it won't cruise at 200 knots but it will get close to 170 at light weights. As with all developing airplanes, before it flew, superlatives were coaxed out of computers. But reality almost always turns out to be a little heavier, and slower, than the computer predicted.

The engine runup is simple—press and hold the two ECU buttons, which prompts the system to go through a check of itself. Once that is done, the other standard takeoff checklist items are accomplished and it is time to go.

Takeoff acceleration in the Twin Star seems slightly better than in a single of like weight and horsepower. That is probably because the static thrust is stronger when it's delivered through six-prop blades instead of three. Also, the diesels produce more torque than gasoline engines of similar horsepower.

VMC minimum engine out control air-speed is low at 67 knots, and the blue

line, best single-engine rate of climb speed, is 81 knots. This is a pretty big airplane to fly on 135 horsepower, so an engine failure right at takeoff would best be handled by an abort. Because the airplane stalls at less than 61 knots, the single-engine certification requirement, no minimum single-engine rate of climb is required as it is on twins with a higher stalling speed. However, once the airplane is cleaned up and a few hundred feet above the ground, a good pilot should be able to get it back around for a landing.

Were an engine to fail, the next step is simple and is unique to the Twin Star. Dead foot identifies the dead engine. That's because you are pushing on the opposite rudder pedal to counteract the asymmetric thrust of the operating engine. Put the dead engine ECU switch in the "off" position and the system completes the shutdown and feathering procedure. It's quick, too. So long as you pick the correct switch it'll take care of the shutdown/feather process in the blink of an eye when compared with a pilot using the propeller control and mixture levers to do the job. The ECU has sensors to tell it not to feather the prop when you shut it down on the ramp after a flight.

With both engines running the best climb speed is 79 knots, but that feels way too slow to me. Just climbing in what felt like a normal manner, I was indicating 110 knots, 90 percent power, climb rate at 700-800 feet per minute. As is so often the case on demo flights, the airplane was light—

two people and 17.6 gallons of fuel—so the performance I saw was more akin to the end of a flight than the beginning.

Taking off to explore a twin with but 17.6 gallons of fuel on board might seem like cutting it close, but the Twin Star is remarkably efficient. At one point I was cruising at low altitude, about 4,500 feet, burning a total of 10 gallons an hour with the true airspeed just under 150 knots. At a mid-cruise weight the airplane will true in the mid-160s at 12,000 feet on just over 12 gallons per hour.

Standard fuel capacity in the Twin Star is 52 gallons and with that, and some reserve, it's just over a three hour and down airplane. Optional fuel is a total of 74 gallons, so with that and a fuel flow of 12 gallons per hour it would be good for five hours with a reserve. The highest cruise fuel flow shown is at 90 percent power and is 14.3 gallons per hour. It is quite common to run diesels at high percentages of power. That's the way they run on things like generators.

While the fuel discussion is in gallons, it should really be in pounds when comparing the Twin Star with avgas airplanes. Jet fuel weighs 6.7 pounds per gallon so, for example, at max cruise the Twin Star is burning just over 95 pounds per hour. To see an example of the efficiency of this airplane, fly any of the high-performance singles at 95 pounds per hour and compare the true airspeed to the Twin Star's. Twins of the past have not compared favorably with singles on efficiency but this one does.

Diesels have better specific fuel consumption than piston engines, especially turbocharged piston engines. The spec on this Thielert is .36 pounds of fuel per

hour to develop one horsepower. That is apparently an average, for in the Diamond specs the SFC is .39 at 90 percent power and .33 at 60 percent power. Typical avgas engines have an SFC of between .45 and .49, so you can see how much more efficient the Centurion engine is. The Twin Star is as quiet and smooth as any airplane with propellers. In fact, the cabin is not unlike that found in a jet. It's really a serene place to fly or ride.

There are some pitch trim changes when reconfiguring the airplane, but they are not major. The dirty stall was tame enough with good warning and an instant recovery with the relaxation of back pressure.

When you get to engine out work in the Twin Star, it is a typical light twin and all the "be careful" caveats apply. It takes a lot of push on the rudder to make it go straight with an engine shutdown. The rudder pedal force can be trimmed away but the rudder trim is a bit too sensitive, so this won't go smoothly at first. Do mind the airspeed. The flaps up stalling speed and VMC are close, so it will be important to stay safely above these speeds.

There's a requirement to use the rudder in normal flying, too. The slip/skid indicator on the G1000 will frequently tell you that what you feel is correct. Some rudder is needed whenever there is a power or speed change. Again, this can be trimmed away.

The ECUs are pretty aggressive and if you don't move the power levers exactly together, a slight asymmetric thrust will be noticeable. Also, the ECUs do not yet synchronize the props so you might hear something there. However, out of synch props are not as noticeable here as on conventional

■ **Thielert uses an automotive four-cylinder diesel as the basis for its Centurion 1.7 engine that powers the Twin Star. The turbocharger, liquid cooling system and gearbox are all integrated into this compact package that is projected to have a 2,400 hour service life when reaching maturity.**



## 2006 Diamond DA42 Twin Star

The airplane flown for this report was equipped with a Garmin G1000 glass cockpit and a Bendix/King KAP 140 autopilot. This is currently standard equipment, though the certification of the Garmin autopilot is in progress and that will be available on the airplane soon. An approved TKS ice protection system is available for \$39,900. Performance figures are from the manufacturer and are for standard conditions at sea level and maximum weight unless otherwise noted.

Standard equipped price . . .	<b>\$469,800</b>
Engine . . . <b>Thielert turbo-diesel, 135 hp</b>	
Engine life (projected to be increased to 2,400 hours) . . . . .	<b>1,000 hrs</b>
Propellers . . . . .	<b>MT, three blade, constant speed, 73.6 in dia</b>
Seats . . . . .	<b>4</b>
Length . . . . .	<b>.28.1 ft</b>
Height . . . . .	<b>8.2 ft</b>
Wingspan . . . . .	<b>.44.0 ft</b>
Wing area . . . . .	<b>175.3 sq ft</b>
Wing aspect ratio . . . . .	<b>.11</b>
Max ramp weight . . . . .	<b>3,935 lbs</b>
Max takeoff weight . . . . .	<b>3,927 lbs</b>
Standard empty weight . . . . .	<b>2,778 lbs</b>
Useful load . . . . .	<b>1,157 lbs</b>
Max usable fuel, standard . . . . .	<b>52 gals/348 lbs</b>
Max usable fuel, optional . . . . .	<b>74 gals/496 lbs</b>
Payload, 74 gallons . . . . .	<b>661 lbs</b>
Wing loading . . . . .	<b>22.4 lbs/sq ft</b>
Power loading . . . . .	<b>14.5 lbs/hp</b>
Best rate of climb airspeed . . . . .	<b>79 kts</b>
Max rate of climb . . . . .	<b>1,132 fpm</b>
Max operating altitude . . . . .	<b>18,000 ft</b>
Engine out minimum control speed (VMC) . . . . .	<b>67 kts</b>
Best single-engine climb spd . . . . .	<b>81 kts</b>
Single-engine rate of climb . . . . .	<b>160 fpm</b>
Single-engine climb gradient . . . . .	<b>.118 ft/nm</b>
Single-engine service ceiling (estimated) . . . . .	<b>7,000 ft</b>
Never exceed speed . . . . .	<b>194 kts</b>
Max cruise, 90-percent power, 10,000 ft . . . . .	<b>164 kts</b>
Fuel flow at max cruise . . . . .	<b>14.3 gph/95.8 pph</b>
Endurance, max cruise, no reserve, 74 gal . . . . .	<b>5.1 hrs</b>
Maneuvering speed . . . . .	<b>124 kts</b>
Stalling speed, flaps up . . . . .	<b>64 kts</b>
Stalling speed, flaps down . . . . .	<b>57 kts</b>

## Single to Twin in the Twin Star



*The transition won't be automatic.*

Back in the '70s getting a multi-engine rating was one of the three or four logical steps in learning to fly, and there were around a dozen light twins in regular production. But somehow I skipped the multi-engine rating back then, and I have been happy flying single-engine airplanes ever since.

So when Mac asked me to give my take on the Diamond Twin Star—which, by all accounts, is a very different kind of twin—I was anxious to give it a try. After all, here we have an airplane that in terms of acquisition cost is comparable with the latest high-performance singles. It's not quite as fast, but it's got better range, it's roomy, with great avionics, leather seats and lots of room for bags.

So when I went flying in the Twin Star with Diamond's Jeff Owen in Central Florida during the Sun 'n Fun Fly-In, my goal was not to do an exhaustive flight report. I just wanted to get a good feel for how the experience of flying this next-generation twin was different from flying a Cirrus, Mooney or Columbia.

The technology and the systems of the Diamond twin will not shock someone transitioning from another technologically advanced airplane. Because it's a twin, you've got a few extra levers, buttons and gauges (for fuel, power, electrics and the like). In spite of (or, perhaps, because of) all that, the level of knowledge and expertise required of a Twin Star pilot is very comparable to that needed to fly a high-tech single. I was comfortable with the systems, if not an expert on them, within a very short time.

But what about the flying qualities?

Well, with both engines running, all the

regular phases of flight—takeoffs, climbs, turns, pattern work, stalls and landings—were about as easy as in a Cirrus, or my Cherokee Six for that matter.

On the other hand, I found that the Twin Star, despite its high-tech engines and avionics, has all the same kinds of aerodynamic limitations as other light twins. A good performer with two engines, the Twin Star is a poor performer on one engine. Single-engine climb, for example, is an operation that requires both patience and good technique.

The "technique" part is required because, when you shut down and feather one engine, you need to use rudder, a lot of rudder, and a little bank, to keep the ball close to centered. So an engine failure at or just above V1 would be just as much of an emergency event in this airplane as it would be in a Cessna 310 or a Seneca. Nothing about the Twin Star's design has changed that fact appreciably.

With one notable non-aerodynamic exception: The single-power-lever fuel engines eliminate some of the complexity of engine control and make managing an emergency engine shutdown a much simpler affair.

Regardless, pilots transitioning to the Twin Star will have to take the multi-engine part of the training very seriously. I came away from my 90 minutes in the left seat feeling as though the vast majority of my work in transitioning to the airplane would be in learning to fly it on one engine instead of two.

It wouldn't be a long process to learn to do that proficiently, just a critical one.

—By Robert Goyer

twins. Maybe the ECUs keep them closer together than mere mortals do.

The faster you fly the Twin Star, the heavier the roll control forces become. That's natural. It definitely has more feeling on the controls of a transport than a sporty airplane. Most airplanes with control sticks have relatively light control forces, so my past experience with sticks may be coloring my impression of the forces. The stick forces are not unpleasant, but they are there and they might be more noticeable because of the control sticks.

The landing gear can go out at 194 knots, the VNE red line airspeed, approach flaps at 137 knots, and full flaps at 111 knots. There are no speed brakes, but because of the liquid cooling you can do whatever you wish with the power, and with the gear extension speed the same as the red line, quite rapid descents are possible if your ears can take it.

Eighty knots feels good on final. Any glidepath adjustments requiring power can be quite precise, and when on final the treat is yet to come. The gear is a trailing link and this does wonders for a pilot's ability to land smoothly. I landed softly on a familiar runway and made the same turnoff that I make in my single with moderate braking in both cases.

With 52 gallons of fuel, the standard-equipped airplane would have about 800 pounds left for cabin load. That would be reduced by about 150 pounds with 74 gallons of fuel. A topped-off TKS system would take away another 94 pounds, but there are not a lot of other options to eat away the pounds.

For now, the Twin Star airframe is built in Austria and the airplane is assembled at Diamond's London, Ontario, facility. There are 132 of the airplanes flying and the one that I flew was the first delivered in the U.S. Diamond is ramping up to deliver 65 airplanes in North America this year so the Twin Star, which will draw a crowd on any ramp, will become an ever more common sight. Diamond is also aggressively developing a service network for the airplane. A neat service feature is that when something goes awry a laptop can be plugged into the airplane and it will tell you what needs to be replaced.

The Twin Star is definitely a new shape in the sky, and from a powerplant standpoint it flies alone. Individuals and businesses are ordering the airplanes for transportation, and it'll be a good trainer for future airline pilots because of the glass cockpit and jet-like engine controls. ✈

## An Airline Guy Tries on a New Diamond

As I trotted onto the edge of the ramp at the Plant City Airport in Florida, I soaked in the view of the Diamond Twin Star. There was no doubt in my mind that I was also trotting onto the edge of new technology. The smooth, white contours of the Twin Star gave the airplane a futuristic look. The 408,000 pound B-767-300 that I fly for my day job had almost no visual comparison to the technology that I was seeing in an airplane that was less than one percent of that weight.

My first thought was, "Have I really been *that* out of touch with general aviation?"

I had an excuse however. Before Diamond Aircraft Industries began its production of conventional aircraft, the company had its origins in motorglider production in Vienna, Austria. It was no wonder that I couldn't help but draw similarities between the Twin Star and the high-performance gliders that I have flown. The narrow taper at the waist of the fuselage was the most striking similarity. As I peered into the open cockpit hatch, the shape and recline of the seats gave unspoken mention to gliders. Glider seats are designed to maximize space, visibility and comfort. As I was to discover later, these attributes were also part of the Twin Star's cockpit. The tandem canopies over both the cockpit and the passenger seats had another strong resemblance to gliders. In addition, the flight controls are operated with an ergonomically designed stick.

John Kellner, my demo flight instructor, and I stepped onto the wings and slithered into our seats. I wished that my rear end could feel as comfortable in the seat of a 767 on a nine-hour flight to Europe as it did in the Diamond.

I scanned the cockpit to orient myself. We pulled the canopy down to its designed ventilation position, which is about five degrees from full closed. Starting the diesel engines was no more complicated than turning on the master, throwing a bat-ball toggle switch and turning one key. No prop levers, no mixture controls, no juggling. The fuel system took all the fun out of it.

When the temperatures and oil pressures were verified in the green range, I moved the throttle slide levers forward. The airplane began a gentle roll toward the taxiway.

Although we had a 15-knot crosswind that seemed to bother me more than it bothered John, the airplane tracked straight down the runway with only a small amount of aileron input. We rotated at 75 knots to a very comfortable climb angle. The Twin Star was light and responsive. The choppiness that we encountered during the climb had very little effect on the airplane's attitude. When I found a hole in the broken layer and climbed through it into smooth air, the controls allowed for hands-off flying.

After a few turns, slow flight and a power-off stall that got as close as this airline pilot wanted to get into buffeting, John failed the right engine. In almost an instant, I was staring at a completely feathered prop. I had done absolutely nothing. What happened to the old, "Mixture . . . props . . . throttles?" The engine control unit had done all the dirty work. Again, we were cheating. Although in all fairness, had the engine actually quit on its own without John just turning off the switch, I would have had to reach all of six inches in front of

me and turned the switch off myself, and then the prop would have feathered. The single-engine climb rate seemed respectable for a 135-horsepower engine.

With the right engine up and running, we descended toward the field. Because of Sun 'n Fun activities, numerous airplanes were dotting the sky. I was grateful for the visibility afforded by the Twin Star.

After a little coaching from John, we were over the threshold. Despite the crosswind, I managed to touchdown with

minimal impact. It certainly wasn't my experience with the airplane that allowed for that performance. I smiled, happy not to have embarrassed myself in front of the GA world.

The only major complaint that I had with the airplane is directed at the PFD system, and it is probably because of my lack of familiarity. Even though the 767 has CRT screens, they are separate for the ADI, the HSI and the engine instrumentation. Data is not compacted into only one display unit. On the Twin Star, I found myself staring at the backup steam gauges most of the time. I also found it difficult to read the small displays of engine instrumentation at a quick glance, and it wasn't because of my over-40 eyes. The displays seemed cluttered.

My only other complaint for the Twin Star is the four-place seating capacity. Two more seats would be a nice feature. But then again, if six seats were involved, the airplane would probably lose its sexy contours and its competitive price.

I'm not in a position to predict whether diesel engines may become a larger part of GA technology, but it is obvious that Diamond Aircraft is trying to make it work. When I asked Jeff Owen, the director of sales, why nobody else was entering the diesel market, he said, "Somebody had to, and I'm glad it was us." Jeff continued with a discussion on how technology in GA powerplants had developed very little in the last several years. The diesel engine application in modern GA airplanes is the future. Jeff may be right. You certainly can't argue with the way the engines slurp fuel.

In any case, this airline guy was grateful for the opportunity to try on a new Diamond. I thank the company and its staff for the experience.

—By Les Abend

