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COVER PHOTO

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Cover Story -King Air Market Report by Chip McClure

74 Feature -Volunteering While Vacationing by MeLinda Schnyder

14 Feature -**Register Now!** King Air Gathering 2024

14

18

Ask the Expert -

Pressurization Basics by Tom Clements





32 Advertising Index

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It Finally Adds Up

by Chip McClure

COVER STORY



he King Air market makes sense again!

At first, it doesn't seem like it to those of us who live and breathe the Beechcraft King Air market daily because we have had years of conditioning that created what we consider "normal." But when you look at it logically, the market today makes more sense than ever before.

The "Old Normal"

The "old normal" had values for King Airs that had become very compressed, meaning that within both the individual model markets and the overall market, values were actually very close together.

The top of the market is obviously the perch of Beechcraft's flagship aircraft, the King Air 350/360.

One of the oddest areas of market compression existed between the very popular King Air B200 and the King Air 350. A few years ago, it had reached a point where the King Air



The market a few years ago had King Air 350/360s selling at a price so close to model B200s that it made sense for some to acquire the 350 for the roomier cabin.

"The King Air B200 dominated the 'old normal' market because of the sheer number of airplanes ... It is the single most prevalent block of turbine aircraft in history ... "

> 350/360s were so close to B200 prices that we were advising B200 clients to take advantage of the narrow delta and purchase a 350 instead! The King Air 350 series is a LOT more airplane than the King Air 200 series. The most notable difference is that the 350 has a spacious interior that comfortably seats eight adults. I often hear people bring up that the 200 has seven seats, but two people are facing each other and have very little leg room and one is sitting on the side-facing potty, which is not ideal. Since the B200 and the 350 are typically flown single pilot, an additional passenger may occupy the co-pilot seat. In addition to the roomier interior and eight captain's chairs (instead of five or six captain's chairs in the B200), the King Air 350/360 has a higher gross weight and useful load.

> The downside, especially for an owner/pilot, is that the 350 series necessitates a type rating to fly due to its higher gross weight.

The combination of the type rating requirement and corporate owners being less concerned about value retention at resale had caused King Air 350 values to soften compared to other models. As buyer's reps, the best buys we made prior to the pandemic were in the 350/350i markets.

The lower end of the King Air 350 market also kept a cap on the micro-market for the King Air 300. Those who know me know that I have always been a huge fan of the King Air 300, partly because the model was always a lot of airplane for the money. Most people didn't know what the 300 was, so lower buying pressure allowed the nicest King Air 300 to suffer under a value cap of about \$2 million because early King Air 350s could be purchased for around \$2 million. It didn't make sense to pay over \$2 million for a 1980s vintage King Air 300 when you could get a 1990s vintage 350! Especially since both require that dreaded type rating. This artificial cap on the King Air 300 market created some great buying opportunities and nice ones often sold for less than comparable Blackhawk B200s, sometimes as low as non-Blackhawk B200s!

The King Air B200 dominated the "old normal" market because of the sheer number of airplanes that were manufactured. It is the single most prevalent block of turbine aircraft in history, with over 1,300 built between 1981 and 2008.

The B200 market became the standard by which other King Airs were valued, meaning the King Air 90 series values directly depended upon the B200 values. As with the King Air 300 market, the market and values of 90 series King Airs were artificially capped by B200 values on the upper end and that cap caused the values of King Air 90s to be very compressed. A 2000 C90B didn't sell for a lot more than a 1990 C90! There were two pet markets in the 90 series - the King Air F90 and the C90GT. Those two aircraft were also micro-markets, and as a result the lower buying pressure meant that good deals were often available, even in an already compressed market. The depressed resale values of the later model King Air 90 series like the C90GT/GTi/GTx, drove potential buyers into other models such as the King Air 250 and the Cessna Citation M2. This would become a major factor in Textron Aviation's decision to >









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"There are two different realities – what King Airs were worth prior to the 2020 pandemic and what they are worth today." discontinue the original model King Airs, a sad day for sure and one that doesn't seem as logical in the "new normal."

The "New Normal"

To be honest, I HATE that phrase but I don't know how else to describe it. There are two different realities – what King Airs were worth prior to the 2020 pandemic and what they are worth today.

Even though it has taken folks like me a little while to accept the "new normal" of King Air values, the market makes more sense. The current market's increased demand and buying pressures have caused the values of previously depressed, niche market airplanes like the King Air F90 and King Air 300 to increase to levels that actually make sense. The rarity of available options has caused those hidden gems to be sought out. The same pressure has also caused a sensible equilibrium to be found between the major models.

The "new normal" for the King Air 350/360 market is that those models sell for considerably more than a comparable B200/250/260 and those aircraft sell for significantly more than a C90B/GT/GTi/GTx. In addition to the models having a more sensible spread in values, there are also no deals to be found in the niche markets.







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I avoid quoting differences in values, either actual or percentages, because there are far too many factors that affect those numbers. However, I feel it is necessary to give a couple of data points to paint a clearer picture of the King Air market as it stands today.

We were fortunate enough to represent buyers in 2023 for a 2023 King Air 260 (with 10 hours) and a 2023 King Air 360 (with 30 hours); the delta between those two airplanes was nearly \$1 million. We've also recently represented buyers of a 2001 King Air B200 and a 2001 King Air 350. These aircraft had modifications including G1000 NXi avionics and the 350 had -67 Blackhawk engines, but if you adjust for the differences, you'll come up with a delta of about \$700,000. At the lower end, you may see a difference of \$500,000, which should give you a good idea of the spread between a King Air B200/250/260 and a similar King Air 350/360. When you look at the differences between these aircraft models, it makes perfect sense because the King Air 350/360 is much more aircraft.

We also represented a legacy client in purchasing a 2001 G1000 NXi Blackhawk C90B. He originally wanted a second B200 to join the first one we purchased for him five years ago, but he decided the C90B would do everything he needed for – you guessed it – about

" ... expect a jump of\$500,000 to \$1 million asyou go up from model tomodel in the King Air line."

\$700,000 less than a comparable King Air B200. It's odd that in recent history we would be involved in purchasing two 2023 models and three 2001 models, but it does give us an excellent opportunity to lay out the differences in values with good data points.

"If you plan on selling, I predict now is the time."

In summary, you can expect a jump of \$500,000 to \$1 million as you go up from model to model in the King Air line.

I'm still getting used to this "new normal," but it does make sense.

What's Ahead

This article was written focused on where the "new normal" was at the beginning of the year. I realize that everyone wants to know not how we got here but where we go from here! It's an election year and we're already seeing the telltale signs that uncertainty unleashes upon a market – buyers are unsure of what will come. As a result, the market is softening across the board. If you plan on selling, I predict now is the time. I think the summer months will bring a slowdown as people "fly them instead of buy them" and combined with the negativity and uncertainty the looming election brings, it will only get worse. Regardless of what your aircraft will sell for today, I suspect it will be more than it will bring in July or August.

In the long run, values are likely to rebound. Good news is coming for many aircraft buyers, but you'll have to grab the next issue of King Air magazine to find out what that is!

Chip McClure has been in the aviation industry for over 20 years. He and his wife Amy founded Jet Acquisitions in 2015; the firm exclusively represents turbine aircraft buyers and specializes in King Airs, as well as all models of current production turboprops and jets.



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FEATURE



GATHERING

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his year's King Air Gathering (KAG) promises to be better than ever, with organizers incorporating input from previous attendees. King Air Nation and co-host BLR Performance Innovation will be providing an event you won't want to miss full of top-notch educational seminars, prominent keynote speakers, specialized breakout sessions by King Air model series, an afternoon at the airport to see other King Airs and demonstrations, evening social events and planned activities for your companion. The gathering, being held at The Greenbrier, a National Historic Landmark located near White Sulphur Springs, West Virginia, is Wednesday, May 15 through Saturday, May 18, and is expected to be a sold-out event!

The Greenbrier resort has been operating since 1778 and has been dubbed as "America's Resort" due to hosting 28 U.S. presidents. It sits on 11,000 acres providing a variety of offerings from championship golf courses and other outside activities, historical tours, spa services, a fitness center and more.

You can book your room by going to *https:// kingairnation.com/gathering-2024.* On this site, you will also find more detailed information about the KAG, including the agenda. If you'd rather make the room reservations by telephone, call 888-335-5056 and press option 2.

NEXRAD SEMINAR (WEDNESDAY) DR. DAVID STRAHLE

A favorite among KAG attendees, Dr. Strahle, will discuss the proper interpretation of NEXRAD images and how to apply the information in-flight and during advanced preflight planning. He will also present a NEXRAD update including recent critical changes to the data link. You won't want to miss his seminar from 10 a.m. to 5 p.m. on Wednesday, May 15.



Dr. Strahle is known as the "Father of Datalink" due to a research paper he wrote in 1969 describing the far-reaching benefits of transmitting ground based weather radar to aircraft which resulted in initiation of the Datalink program. He has continued

to support Datalink by speaking at national aviation meetings and conferences.

Dr. Strahle is also a fellow King Air 200 owner/pilot.

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KAG KEYNOTE SPEAKER HASARD LEE

Hasard Lee is a U.S. Air Force fighter pilot who began his career flying the F-16 and was selected as the "Top Instructor Pilot of the Year" for the Air Force's largest F-16 Combat Wing. As a flight commander, he led his pilots into combat during one of the most intense periods during the war in Afghanistan. There he flew over 80 combat missions and became the only fighter pilot to ever fly two different types of jets into combat on the same day while supporting troops under fire.



Lee will take KAG attendees on a journey through his life stories and how he applied principles from "The Art of Clear Thinking," his book that reached No. 2 on the Wall Street Journal's bestseller list. His keynote address promises to be thought-provoking and inspiring. KAG attendees will fly into Greenbrier Valley Airport (LWB) conveniently located just minutes from The Greenbrier. The airport offers airline service, as well as general aviation facilities. There is no need to make your own arrangements with the FBO. When you register for the King Air Gathering, please fill out the information about your aircraft and indicate that you intend to fly into the FBO. Our events team will follow up with pertinent information before the event.

Don't miss the opportunity to join with other King Air owners and pilots while educating yourself about all things King Air. Make plans now to attend King Air Gathering 2024. Go to https://kingairnation.com/ gathering-2024 to register.

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Pressurization Basics

by Tom Clements

keep observing a disturbing lack of knowledge and understanding of an aircraft's pressurization system. Let me try to set the record straight ... or at least straighten it out a little bit. I will use the numbers associated with a member of the King Air B200-series. However, what I write, with minor modifications, will apply to any pressurized airplane.

Differential Pressure (ΔP, "Delta P")

Differential pressure is simply the difference between inside and outside absolute pressures. In engineering parlance, the Greek letter Delta (Δ) is commonly used to indicate the difference between two measurements. So, expressed as a formula: $\Delta P = PCABIN - PAMBIENT$.

If a positive amount of ΔP exists, the airplane is pressurized with more pressure inside than outside, just like a party balloon. The doors and windows are trying to be pushed open and the structures must be strong enough to withstand these forces. This is the reason why pressurized airplanes are heavier than their unpressurized predecessors. So, like that party balloon, we push more air in than is let out and the airplane becomes pressurized, right? When doing a test in the maintenance run-up area, yes, that is correct. In a great majority of our flights, however, it doesn't work that way. In most cases, we set the pressurization controller for a cabin altitude that is higher than the field elevation from which we departed, right? And then after takeoff the cabin climbs to that altitude, right? Well anytime the cabin is climbing, it is decreasing its pressure and the fixed-volume cabin is therefore *losing* air, not gaining air. The pressure inside the cabin is indeed decreasing but why we are getting pressurized is because it is *not decreasing as fast as the ambient pressure outside the cabin*. Here's an example: Let's say we depart from sea level and the cabin climbs to 10,000 feet while the airplane climbs to 25,000 feet. PCABIN goes from 14.7 psia (SL) to 10.1 psia (10,000 feet) but PAMBIENT goes from 14.7 psia (SL) to 5.5 psia (25,000 feet). So ΔP went from 0 psid (14.7 – 14.7) to 4.6 psid (10.1 – 5.5).

In a King Air B200 the maximum certified ΔP is 6.5 psid (pounds per square inch differential). As in everything that is mechanical in nature, there must be some tolerance and the allowable tolerance in maximum ΔP is plus or minus 0.1 psid. In other words, when running on the maximum ΔP relief, any ΔP between 6.4 and 6.6 means that your King Air is doing what it was designed to do. Of course, Beechcraft marketeers, seeing that the maximum is 6.6, were quick to put that figure in the sales brochures.

The Pressurization Controller

The purpose of the pressurization controller is merely to be a governor of cabin altitude. Within its capabilities it will make the cabin climb or descend to a newly selected cabin altitude value at the rate the rate knob is set for and then keep the cabin at that altitude the best it can. Just like a propeller governor cannot always maintain the selected RPM - for example, propeller speed decreases on landing as the governor causes the blades to flatten as far as they can go - likewise the pressurization controller cannot always maintain the selected cabin altitude. Two things will prevent this: First, the cabin can never be higher than the airplane. That would cause a negative differential pressure – ΔP would be a negative number since PCABIN is less than PAMBIENT – and negative ΔP is prevented by dedicated relief valve portions contained identically within both the outflow and safety valves. Second, the cabin cannot maintain the selected altitude if doing so would cause maximum attainable ΔP to be exceeded. That "maximum attainable ΔP " is often not the maximum certified ΔP , as I will explain.

To maintain the cabin at any selected altitude, all that must occur is for total air mass inflow to equal total air mass outflow. In the B200, as in most all pressurized airplanes, the incoming flow is regulated to be as constant as possible, and all control of cabin altitude and rates of climb and descent are accomplished by varying the outflow through the outflow valve. Of course, what exits through the outflow valve is not the total outflow ... we must consider the contributions of all the little and big leaks. Here's where the conceptualization gets tricky. How much mass flow exits through the leaks depends upon ΔP . If there is a low ΔP , then the "push" that causes air to flow through the leak hole is small and hence the flow is small. But when ΔP is large, then the mass flow across the leak is also large, even though the leak size has not changed.

Let me apply some numbers to an example. Suppose that both the left and right inflow systems – the Bleed

Air Flow Control Packages or Flow Packs – were pumping in 7 pounds per minute (ppm) of air, for a total of 14 ppm. To keep the cabin from climbing or descending, a total outflow of 14 ppm must be taking place. If, at 6.5 psid, the leaks accounted for a total of 5 ppm, that means that the Outflow valve would be positioned by the controller to allow 9 ppm to escape (14 ppm in, 5 + 9 ppm out) ... we're in balance and the cabin is holding its altitude, maintaining a constant cabin pressure.

Now let's make the leaks add up to 20 ppm at 6.5 psid. (Don't ask me how we got to 6.5, because we won't be staving there, as you'll see.) Since now, even with the outflow valve totally closed, there is more air exiting (20) than entering (14) a net loss of cabin air is taking place and the cabin must be losing air molecules, losing pressure and hence climbing. As the cabin climbs while the airplane flies level, ΔP is decreasing and hence the mass flow through the leaks is also decreasing. As the cabin goes up and ΔP goes down, eventually a perfect balance will be reached, wherein the leaks total 14 ppm, equal to the inflow. At that point, the cabin stops climbing. But now you see two common but incorrect indications: First, the cabin is higher than the altitude you've dialed into the controller, and second, your maximum attainable ΔP is well below the correct 6.5 psid value.





Within its capabilities, the pressurization controller will keep the cabin at the set altitude the best it can.

vertical velocity indicator (VVI), more than torque or fuel flow, when I reduce power significantly. You may need to push the power levers back up a bit to keep supplying enough inflow to prevent the cabin from ascending. On the other hand, if you need to come down steeper, it's time for landing gear extension and maybe, if it's not overly turbulent, approach flaps too. Remember that the maximum allowable load factor limit is reduced when flaps are extended.

Even the relatively small portion of air that is bled from the engine's compressor for cabin pressurization and heating in a King Air typically causes the engine to run about a 10 to 20 degrees hotter ITT than if the bleed air were shut off and allowed to remain in the engine. That explains why leaving the bleed air valve switches closed sometimes allows more takeoff power to be achieved.

Outflow

The pressurization control system is made by Honeywell Aerospace. Honeywell is the name that has survived from a long line of company acquisitions and mergers. The control system we use evolved from the very first installations used on



B-29s in the latter days of World War II. The company that designed and manufactured that system was Garrett AiResearch. So even today, most of us say it is an AiResearch control system.

The system is mechanical, using springs and vacuum. Electricity plays a minor role. In the King Air, the system uses electric power primarily for dumping: Opening a normally-closed solenoid valve that permits vacuum to suck open the safety valve and thereby create an opening (hole) so large that cabin pressure quickly equalizes with ambient pressure. In fact, the reason that a total loss of electric power in flight always leads to a lack of pressurization is not because the control system fails. No, it is because the inflow of air ceases. (Electric power is needed to keep the flow packs open.)

Somewhat surprisingly, since it is rather complex, the AiResearch control system is quite reliable. The problem with an airplane that cannot maintain the cabin altitude selected is very rarely due to a bad controller. Instead, it almost always is caused by too little inflow or too much outflow or a combination.

Troubleshooting Pressurization Problems

You have discovered that your pressurization is not working as it should. For example, you cannot reach 6.4-6.6 psid ΔP , or you see the cabin starting to climb even though the power levers have been only slightly reduced. How can you find what's wrong? How can you help your mechanic reduce his troubleshooting time? Here are some ideas that pilots can do in flight. Mechanics have their own and, sometimes, more accurate procedures to use.

First, you can make sure the controller is functioning properly in this manner: In level flight, set the controller's cabin altitude for 3,000 or 4,000 feet below you. For example, fly at 10,500 feet with the cabin set for 7,000 feet. Now zoom up to 11,500

and then dive down to 9,500 without changing engine power. Does the cabin stay level as it should? Next, back in level flight, dial the cabin up to, say, 9,000 feet. Does it start climbing? Twist the rate knob to the minimum setting. Does the cabin rate of climb decrease to almost nothing? Now spin the rate knob to maximum. Does the cabin climb like a homesick angel? Next, dial the cabin down to a lower altitude and check the rate control again as it descends. In almost all cases, you will find that the controller is working perfectly. As I wrote above, it is a surprisingly robust piece of gear. By doing this test with a small difference between airplane and cabin altitude, ΔP is very low and thus the effect of excessive leaks or weak inflow will also be low.



Second, on a deadhead leg – so that passengers' ears will not be subjected to uncomfortable pressure fluctuations – force ΔP to the maximum attainable by dialing the cabin altitude down to sea level while you are up high, typically above FL180. When the cabin stops descending, note the indicated ΔP . (Write it down or, better yet, take a picture.) You have forced ΔP to its maximum attainable value and if it is not within 0.1 psid of the ΔP gauge's redline, then you have identified a problem.

Move the left bleed air valve switch to the center, Envir Off, position. (It doesn't matter which side you do first, but we'll start with the left.) Take a video of the cabin VVI while you do this or at least note and record the peak cabin climb that takes place. Maybe it hits a peak, say, of 1,600 fpm. What should next happen is that the cabin will stop its climb, go into a descent, and



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return to the exact altitude where it began. The King Air should be able to maintain maximum ΔP even with only one flow pack supplying air. Can yours do that? It is not at all uncommon to find the cabin will not descend back to where it started. Let's assume that is what we see here ... the cabin does not recover back to its starting altitude but keeps climbing at an ever-decreasing rate. This means either the still-operating flow pack is weak - lack of inflow - or the leaks are excessive - too much outflow - or a combination of both. When we finish this little test, we will know what the problem is.

Turn the left bleed air valve switch back on and give plenty of time for the situation to return to normal operation, with the cabin altitude and ΔP the same as they were when you began the test. An occasional flow pack is balky to reopen. Give it time. You will know it reopens when the cabin VVI shows a downward surge. ITT will also increase a little and torque will decrease a little.

Once everything is the same as it was initially, switch off the right side's environmental bleed air and record or film those results. Let's suppose that this time the peak cabin climb is 600 fpm and the cabin quickly reverses the climb and descends back to the original altitude. Before reading further, take a moment to think about these results and see if you can determine why there is a difference.

Tick-tock-tick-tock. Ok, got your answer?

The answer is that the right flow pack is much weaker than the left. We lost less air when we turned off the right pack and it, when operating alone, was not strong enough to overcome the cabin's leaks. Yet we lost a lot of air when we terminated the left pack's flow and it overcame the leaks just fine and was able to maintain full pressurization when operating by itself.

But even one or two strong flow packs may not be able to supply enough air to overcome massive leaks. So how do we complete this test and determine how badly your airplane leaks?

We start by turning back on the right pack and giving plenty of time for things to return to normal, at the maximum attainable ΔP . Now we turn both bleed air switches off simultaneously. (If you have three-position switches – as all of the 200- and 300-series do – make sure you go only to the center, not bottom position. You don't want to lose the inflation pressure for the door seal.) Observe the peak on the cabin VVI.

If it is less than 2,500 fpm, then you have an airplane that meets Beech's specifications. Congratulations! Sadly, a leak rate this low is exceedingly rare to find. You have a one-in-a-thousand, exceedingly tight, airplane. More typically, you will see a leak rate of 3,500 to 5,000 fpm. Realize this, too: If the combination of weak inflow and excessive outflow prevents your airplane from attaining the proper maximum ΔP of 6.4-6.6 psid, then this check will not be valid since you have not attained the "push" that would exist if you could get to the proper maximum ΔP . To better explain: If you can only get 5.0 psid maximum and the peak leak rate at that ΔP is 4,000 fpm, perhaps it would be 5,500 fpm at 6.5 psid.

My personal criteria for deciding that a King Air's pressurization system is satisfactory looks at two things:

First, can either side's flow pack alone maintain full ΔP when at cruise power? Second, can I pull both power levers back to the gear horn's setting, with both flow packs operating, and not have the cabin start to climb? If both of these are true, then I see no reason to spend money and time on overhauling flow packs and/or finding and sealing cabin leaks.

I hope this presentation of basic rules of pressurization will help you better understand your system and troubleshoot problems when they arise.

Watch a complete tutorial on how to perform flow pack, leak rates and altitude checks in your King Air at *https://www.youtube.com/watch?v=WAzgeLnfa11*

King Air expert Tom Clements has been flying and instructing in King Airs for over 50 years and is the author of "The King Air Book" and "The King Air Book II." He is a Gold Seal CFI and has over 23,000 total hours with more than 15,000 in King Airs. For information on ordering his books, contact Tom direct at *twcaz@msn.com*. Tom is actively mentoring the instructors at King Air Academy in Phoenix.

If you have a question you'd like Tom to answer, please send it to Editor Kim Blonigen at *editor@blonigen.net*.



FEATURE



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Best Friends Animal Sanctuary in southern Utah is the nation's largest no-kill sanctuary for companion animals. They offer daily volunteer shifts working with dogs, cats, horses, pigs, rabbits and other injured and orphaned animals. Photo credits: Best Friends Animal Society



Volunteering While Vacationing Tips for finding ways to give back

by MeLinda Schnyder

he first time we volunteered at Best Friends Animal Sanctuary in Kanab, Utah, the staff at the nation's largest no-kill sanctuary for companion animals tasked me and my husband with socializing a litter of puppies that had recently been dumped. The goal was to show them some love and help get them comfortable being handled, one of the first steps toward making them adoptable.

Whether this was a marketing ploy or simply what needed to be done that day, it worked. When our half-day volunteer shift ended, we signed up to come back the next day – our last before leaving the area to continue exploring Utah's national parks. Our next assignments at the sanctuary were walking dogs and cleaning food bowls. We have taken several more trips to Utah and have made time to volunteer while there. My husband always chooses to spend time in Dogtown, doing anything from walking dogs and scooping poop to reading books to a skittish canine that eventually calmed down enough to be touched. I've also taken shifts in Cat World, petting felines recovering from surgery and prepping food.

Prior to our experiences at Best Friends Animal Sanctuary, I assumed most organizations weren't interested in or equipped to take transient volunteers. I knew you could take entire vacations dedicated to volunteering, but I didn't realize there were so many options requiring as few as a couple of hours. It's quite amazing how well Best Friends integrates volunteers daily, making those of us spending our time there feel like we have truly helped the animals as well as the nonprofit's staff. Volunteering while vacationing isn't something we work into every trip, but what a worthy goal that would be.

"It's an honorable thing to leave a place just as you found it. But taking that a step further and sharing a bit of your time and talent to leave that special place in even better shape demonstrates a true appreciation for a community and leaves you connected in a way you never could have imagined otherwise," Elisabeth Silverthorne, executive director of the Beach Food Pantry, said in marketing materials devoted to volunteerism in the Outer Banks of North Carolina.

Starting with my experience at Best Friends, I've provided some examples below of the types of volunteer work you might find no matter your destination.

Animal Welfare

A majority of the 1,600 animals living at the 3,700-acre Best Friends Animal Sanctuary in southern Utah's Kanab Canyon are dogs and cats, though there are separate areas for other animals including horses, pigs, parrots,



Best Friends Roadhouse and Mercantile in Kanab, Utah, allows sleepovers with furry sanctuary residents and staying there also supports Best Friends Animal Society's nation-wide efforts to create compassionate no-kill communities. Photo credit: Best Friends Animal Society rabbits and wild animals ranging from birds to reptiles and rodents. Minimum age to volunteer varies by area, with the Bunny House and Parrot Garden starting at 8 years old with an adult.

In addition to the hands-on work with the animals that I mentioned above, there are needs such as making toys and treats or doing upkeep on the grounds and buildings. Depending on the time of year, volunteer slots can fill up quickly. Shifts can be scheduled as far as one year in advance. Get more information and see the calendar of available shifts at *bestfriends.org/ volunteer/animal-areas*.

If you're able to book well in advance, you might find availability among the cottages and seasonal RV sites that can be rented at the sanctuary. Six miles away in the town of Kanab, the 40-room Best Friends Roadhouse and Mercantile supports the sanctuary and caters to travelers bringing their pets or planning sleepovers with a sanctuary resident. There's a fenced dog park, pet-grooming station and rooms designed for people and their furry friends.

I also recommend taking one of the many free walking or driving tours offered by the sanctuary, especially on your first visit. The sanctuary grounds are within Angel Canyon and the folks at the welcome center and gift shop can offer tips on beautiful hikes within the canyon. Regardless of your destination, it's very likely there's an animal shelter near your vacation spot. Check online ahead of time to see if they take drop-in volunteers or if you can sign up in advance for structured volunteer times. Tell them how much time you have and ask what activity would help them the most. When we had a fourhour gap between arriving on the island of St. John in the U.S. Virgin Islands and when our room would be ready, we left our bags at the property and asked for directions to the animal care center in Cruz Bay. The staff there was happy to have a few extra hands to walk dogs and it gave us a chance to stretch our legs while seeing the island.

Trail Tending

Most communities with trails for hiking, biking, running or riding horses will also have an agency that relies on volunteers to build and maintain those trails you enjoy as a visitor. A simple Google search can help you find these groups. They typically offer large events – such as the annual park-wide cleanup organized by the Yosemite Climbing Association in Yosemite National Park each September – as well as small group outings for trail stewardship.

For example, the Mariposa Trails nonprofit organizes day-long projects including repairing signage and



Lake Tahoe, straddling the border of California and Nevada, is an example of a community offering tourists ways to leave their vacation destination better than how they found it. The League to Save Lake Tahoe organizes cleanups and larger ecosystem restoration projects. Photo credit: League to Save Lake Tahoe

> The California Central Coast community of Avila Beach gives vacationers a way to give back on their own schedule. Lodging and attraction partners offer a free beach cleanup kit that includes a collection bag, a glove, a marine debris checklist and a tote bag as an appreciation gift. Photo credit: Highway 1 Road Trip

clearing vegetation from trails on national public lands on the western slope of the Sierra Nevada Mountains between Yosemite and the population centers of Mariposa County. Farther west, just off Highway 101 in Morgan Hill, California, the Santa Clara Valley Open Space Authority offers volunteers projects such as trail maintenance, habitat restoration, fencing and cleanups regularly on Saturday mornings nearly year-round. They are posted at *openspaceauthority.org*. No training or prior experience is required, and volunteers can be as young as 14 with an accompanied adult.

Beach Cleanup

Similarly to trails, most beach communities rely on volunteers to keep the beach clean and safe. Search online for the city, county or region you're traveling to and the words "beach cleanup" to find events and efforts to join.

Vacationers along California's Central Coast can ask for a cleanup kit available at most Avila Beach and Cambria Beach lodging properties as well as some attractions. The free kit includes a collection bag, a glove, a marine debris checklist and a tote bag as an appreciation gift. The idea is that you'll spend an hour or two enjoying the beach while picking up plastics that can be harmful to marine life and litter on the sand. These do-it-yourself kits are one element of the larger Travel for Good stewardship program coordinated by Highway 1 Road Trip, a destination marketing organization. Check out *highway1roadtrip. com/stewardship-travel* for more information, from wildlife viewing tips that promote safe engagement to other stewardship activities for you and your family.

Community Building

Another way to find ways to give back is to search the website of the destination marketing organization that represents the place you're visiting. Some will have links and event listings, while others will go as far as having a list of places to volunteer.

One example is the Outer Banks Visitors Bureau, which represents the towns, villages and attractions along 100-plus miles of shoreline making up the Outer Banks of North Carolina. The area is known for its beaches and, among other National Park Service sites, the Wright Brothers National Memorial, honoring Wilbur and Orville Wright's historic Dec. 17, 1903, flight in Kill Devils Hill.

With just 37,000 year-round residents and more than 100 nonprofit organizations, the community relies on volunteers who come to the Outer Banks as tourists. Through a recent initiative to connect visitors to these opportunities, you will see a volunteer tab on OuterBanks.org that lists dozens of organizations and events taking volunteers. Activities range from working a couple of hours at the local food bank or animal shelter to spending time at a nonprofit attraction or joining beach and land cleanup efforts.

The visitors bureau hopes that by getting involved with local nonprofits, you'll come away with a deeper appreciation for the community and a greater sense of responsibility to protect and preserve the area while visiting.

Another example is Lake Tahoe, whose tourism is largely tied to natural resources – the largest freshwater lake in the Sierra Nevada and the largest alpine lake in North America. The community has a campaign to promote responsible tourism and both the Visit Lake Tahoe and North Lake Tahoe destination marketing organizations promote ways to get involved on their websites.

Many opportunities are available June through September, from workdays coordinated by the Tahoe Rim Trail Association to beach, stream and trail cleanups and citizen science such as aquatic invasive species identification via the League to Save Lake Tahoe. Find an extensive list of ways to get involved with the league's Keep Tahoe Blue initiative at *keeptahoeblue*. *org/volunteer*.

If the concept of being a voluntourist is new to you, I challenge you to start by planning to volunteer on one vacation this year. Hopefully the feeling of giving back to a community you're visiting makes you want to incorporate volunteering into more vacations.



VALUE ADDED



Banyan Air Service Dedicates Crew for Gogo AVANCE Installations

Banyan Air Service, a Fixed Base Operator (FBO), announces a dedicated program to complete Gogo Business Aviation AVANCE installations on small- to large-cabin aircraft with minimal downtime.

Banyan has arranged a skilled crew at its master technician facility in the heart of South Florida at Fort Lauderdale Executive Airport (KFXE) to facilitate the increased level of upgrade demand for AVANCE system installations. The Banyan complex offers service options available 24 hours a day for near-immediate availability to meet any schedule.

Gogo is migrating its network technology to LTE (longterm evolution) in early 2026 and once that is completed, customers with a legacy ATG system (ATG 1000, 2000, 4000, 5000) who do not upgrade to AVANCE will lose their Gogo inflight connectivity. Banyan has this dedicated crew to help meet the increased demand anticipated for AVANCE upgrades.

As an authorized Gogo Business Aviation dealer since 2014, Banyan's skilled aviation technicians have installed more than 60 AVANCE L3 and L5 systems since the systems were introduced in 2017.

"With dozens of AVANCE installations under our belt on aircraft ranging in all sizes and models, we have extensive experience with Gogo system upgrades," said Banyan Director of Avionics Danny Santiago. "Operators can turn to us for competitive pricing, minimum downtime and for exceptional service from the No. 1 FBO in the U.S. according to the 2023 Professional Pilot PRASE Survey."

Operators flying with one of Gogo's legacy ATG systems who upgrade to AVANCE will see an immediate improvement in performance, with an additional boost when the network transition to LTE is complete.

Customers who currently have a legacy ATG system and upgrade to AVANCE can take advantage of Gogo rebates that range from \$25,000 to \$50,000.

For more information about upgrading your Gogo AVANCE system, contact Banyan at www.banyanair. com.

New NBAA Tool Provides Customs Info of GA Airports

The National Business Aircraft Association (NBAA) has created a valuable resource for its members that details critical port-of-entry information at more than 300 general aviation (GA) airports across America.

The new GA Airport Fact Sheet tool collates hundreds of airport fact sheets created and distributed by U.S. Customs and Border Protection (CBP). These fact sheets include office hours, service hours for entrance and clearance, contact information, permission to land procedures and key information about the inspection process for GA aircraft entering the U.S.

"One of the biggest issues clearing customs for the GA community is that no two ports of entry are exactly alike. There are many nuances in the procedures and processing standards at each airport, and that can be challenging when clearing customs, especially if you regularly use different airports as your entry point to the U.S.," said Brian Koester, CAM, NBAA director, flight operations and regulations.

"These CBP facts sheets are a great way to document the expectations at each GA airport, and NBAA is happy to contribute its part to give business aviation operators an easy-to-use, one-stop resource where you can access the fact sheets while CBP creates its own online tool," Koester added.

NBAA will update the archive regularly as CBP revises and releases new fact sheets. The tool is planned to be a temporary resource and will redirect users to CBP's official website once it is active.

"The business aviation community is grateful to CBP for creating these important fact sheets and bringing



much-needed transparency to general aviation processing standards and procedure," said Koester. "NBAA will continue to support and promote CBP's GA fact sheets and every other initiative that enhances the safety, security and integrity of our industry and the National Airspace System."

For further information on national general aviation processing standards and procedures, contact GASupport@cbp.dhs.gov.



ADVERTISING INDEX

1st Source Bank12	Elliott AviationInside Back Cover	More Company21
AvFab27	Factory Direct Models8	Pilots N Paws32
Banyan15	Garmin Inside Front Cover	Precision Aviation Group22
BeechMedic LLC32	Ice Shield/SMR Technologies	Select Airparts8
Blackhawk Modifications9	Innovative Solutions & Support13	Stevens Aerospace & Defense SystemsBack Cover
BLR Aerospace 23	Kadex Aero Supply LTD31	Vac-Veterans Airlift Command17
Butler Avionics	King Air Academy29	
CenTex Aerospace7	King Air Nation19	
Cleveland Wheels & Brakes21	Marsh Brothers Aviation6	



Pilots N Paws[®] is an online meeting place for pilots and other volunteers

who help to transport rescue animals by air. The mission of the site is to provide a userfriendly communication venue between those that rescue, shelter, and foster animals; and pilots and plane owners willing to assist with the transportation of these animals.

Joining is easy and takes just a minute of your time.

www.pilotsnpaws.org



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