

PROFESSIONAL PILOT



MAY 2005



US Customs and Border Protection

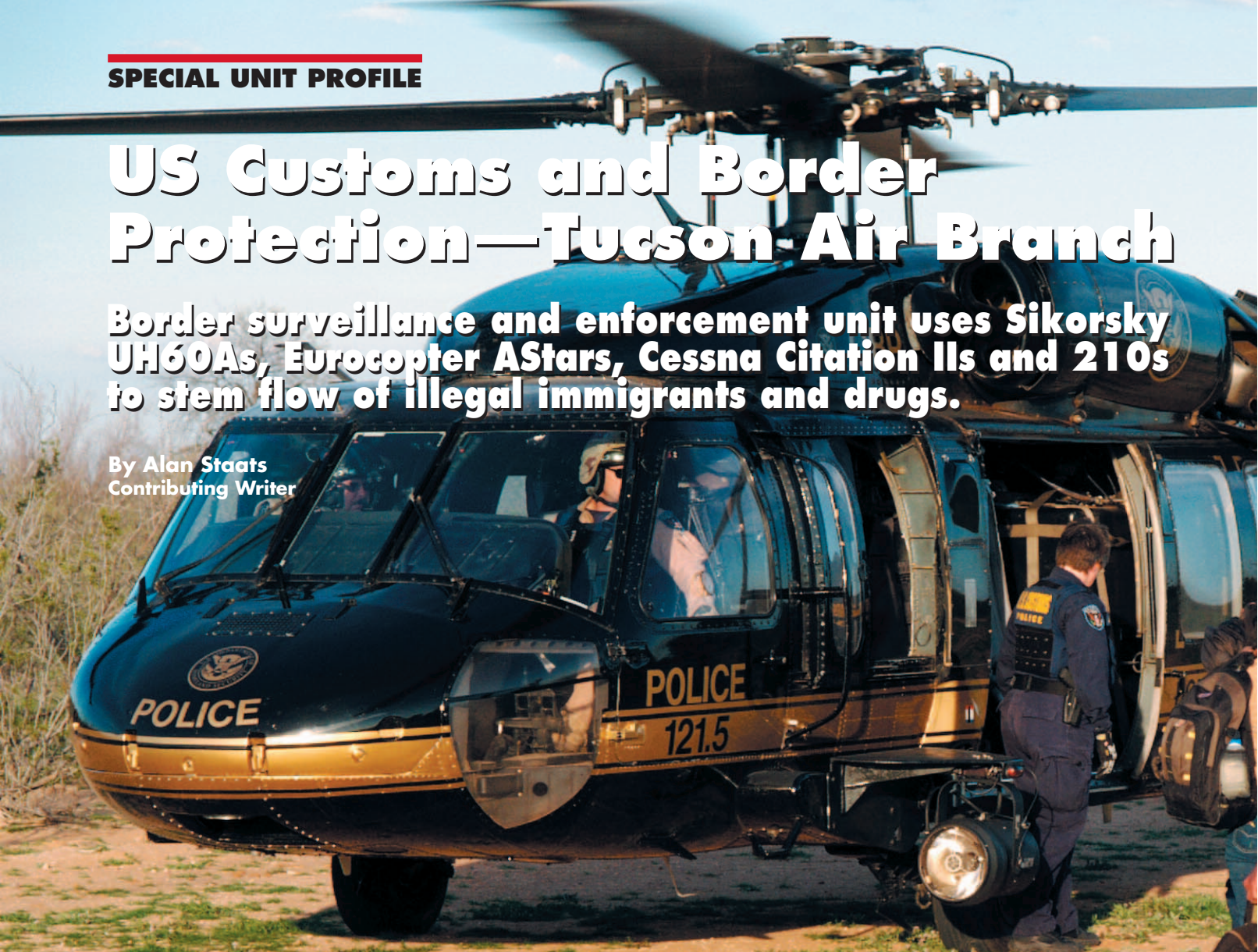
CBP Tucson Air Branch personnel line up with 2 of their Cessna Citation IIs and a Sikorsky UH60A at DMA (Davis-Monthan AFB, Tucson AZ). Shown are (L-R) Pilot Chuck Lines, Deputy Field Dir Peter McNall, Field Dir Martin Vaughan, Av Group Supervisor Daniel Philipps, L3 Vertex Aerospace Supervisor Edwin Nelson and Lead Mechanic Benjamin Kent. In the UH60 are Pilots John Beatty (L) and Wade Koontz.

EBACE Convention

US Customs and Border Protection—Tucson Air Branch

Border surveillance and enforcement unit uses Sikorsky UH60As, Eurocopter AStars, Cessna Citation IIs and 210s to stem flow of illegal immigrants and drugs.

By Alan Staats
Contributing Writer



A war is being fought along the southern border of the US, and it is largely ignored by those on whose behalf it is waged. The war's objectives are simple—to stem the tide of illegal immigrants and narcotics pouring across the border. It's a fight that will never, in all likeli-

hood, be won completely—the numbers of people attempting to enter the country illegally are enormous, and there will always be people willing to take the risks of smuggling drugs.

Customs and Border Protection (CBP) is a unified service—encompassing what were formerly sections of the US Customs Service (USCS), INS Border Patrol and the inspection branch of the former Department of Agriculture—under

the auspices of the Department of Homeland Security.

Countering the flow of drugs into the US has been a high-stakes game ever since cartels developed their tightly-controlled, highly efficient organizations operating with the tacit, if not outright, blessings of their governments. Not only did the cartels move up to larger, faster and more sophisticated aircraft, but the front lines moved—literally—within the continental boundaries of the



Most CBP pilots also serve as aviation enforcement officers when not flying. Here, Pilot Delta leads a group of captured UDAs to the UH60. (Inset L) CBP Pilot Echo puts the UH60 into a hard, low-level bank after a crewmember spots the tracks of possible UDAs. (Inset C and R) Two coyotes try in vain to hide from a pair of CBP agents.

Photos by Alan Staats

US. In response, USCS, the Drug Enforcement Agency (DEA) and the US Coast Guard (USCG) used a growing fleet of assets to fight a war of economic attrition against the cartels, eventually moving the front lines southward into the Caribbean and shutting down, for all practical purposes, supply lines that had been built up over the years. Interdiction and surveillance have since made it much more difficult to fly anything into the US unobserved.

As the airborne Caribbean pipeline became more constricted, and thus less profitable, combined air/land routes through Central America began to thrive, with drugs flown to northern Mexico and then brought overland through ingress points along the Arizona and California borders. As these frontiers were also laced with longtime routes and trails used increasingly by undocumented aliens (UDAs) attempting to sneak across the bor-

der, USCS began upgrading its interdiction infrastructure to meet the new challenge. In 1999, air and marine assets were combined into a single operational entity—CBP Air and Marine Operations (AMO) Command—and an intricate support infrastructure began taking shape.

Repercussions of Sep 11

With the realization that 20 Middle Eastern terrorists could come to the US, take flight training, disappear into the population and subsequently kill thousands of people, a new urgency mandated the resolution of the virtual transparency of the country's southern borders.

Initially, the task of sealing the Mexican-American frontier was seen as relatively simple. The reality is far more daunting. The border checkpoints familiar to most people are located in major cities—vast concrete walls topped with strands of razor wire, and armed guards on patrol. Ten miles east or west of those cities and towns, however, the concrete and razor wire is replaced with 3 strands of barbed wire on a 4-foot fence. One can cross the border between Mexico and the US 10 times in a minute. What prevents literally millions from doing just that is what lies on the US side of the fence—miles of inhospitable terrain, observed and patrolled constantly by a skilled and effective organization, the CBP AMO.

Nevertheless, thousands make the attempt every day—and every day most of these UDAs are caught and thousands of pounds of narcotics are seized. How this is accomplished is a fascinating study of adaptation and experience.

Tucson Air Branch

The Tucson Air Branch, located at Davis-Monthan AFB, has one of the most active and effective missions within CBP. Airborne traffic into the US may have slowed to a trickle, but illegal foot and vehicular traffic has skyrocketed. As a result, Border and Transportation Security (BTS) developed and implemented the Arizona Border Control Initiative (ABCI) starting in Mar 2004.

This initiative created a unified command and funding structure



US CBP Field Director Martin Vaughan oversees the efforts of 80 law enforcement agent, including pilots, who operate in what has become the most active area in the nation in terms of UDA incursions and ground-based drug smuggling.

whose purpose was to slow the number of UDAs and narcotics traffickers moving across the border and ensure that UDAs in distress would receive proper and prompt medical attention.

ABCI provided for increases in the number of Border Patrol agents, including Border Patrol Search Trauma and Rescue (BORSTAR) teams, up to a current staffing level of over 2700.

As a result, Tucson Air Branch is currently equipped with 7 Sikorsky UH60A Black Hawk helicopters and 15 Eurocopter AS350 AStars. On the fixed-wing side, the unit has 5 highly-modified Cessna 550 Citation IIs and 2 Cessna 210s. The AStars and the 210s are based at IWA (Williams Gateway, Phoenix AZ) and provide surveillance and transportation services.

While the exact surveillance capabilities of the Citations are classified, they are able to observe, via infrared (IR) sensors and look-down radar, anything that generates heat or reflects radar emissions. Any data or image generated aboard the Citations can be datalinked, real-time, to assets on the ground or in the air, or to the AMO Command Center at the former March AFB in Riverside CA.

Given that previous CBP efforts have pushed back the airborne drug trade into northern Mexico, many of the Citation operations are conducted in partnership with CBP's counterparts in the Mexican government.

The AStars function primarily as observation and surveillance platforms, utilizing both IR and high-definition video sensors. Again, any data generated can be shared by datalink.

Based roughly 120 nm north of Tucson, the AStars also provide coverage within the northern sectors of the Tucson Air Branch's area of operations, which stretches from the California border to New Mexico, and northward to include Utah, Nevada and parts of Idaho.

When working in concert with the Citations, the AStars provide a low-level standoff platform to augment the data generated by the fixed-wing aircraft with high-definition video and FLIR sensor pods.

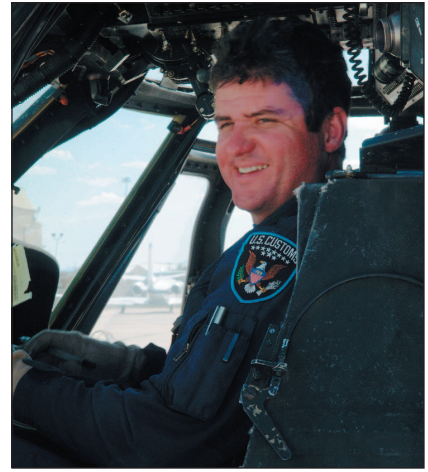
The Cessna 210s serve as mid-level observation aircraft with significantly greater loiter times than the AStars. The 2-man crews can also make use of video and FLIR sensors during observation missions and, like the Citations and AStars, can downlink the data they produce. The 210s also function as relatively rapid transportation, moving crews and personnel as needed.

The workhorse

Of all the aircraft fielded by the Tucson Air Branch, the Sikorsky UH60A is the most highly utilized—and highly visible—presence. Sporting an overall black paint scheme with gold trim, CBP's 1980s-vintage Black Hawks are an



Since passage of the Arizona Border Control Initiative Phase II in late Mar 2005, Supervisor Daniel Phillips has seen the Tucson fleet grow to 7 Black Hawks and 15 AStars (up from 5 and 2, respectively), along with 40 pilots on temporary duty to fly them.



While most CBP pilots are ex-military, increasing crew demands are also being met by new-hires, such as AEO Alpha, whose experience was gained in the civilian sector.

impressive sight. Powered by twin 1400-shp GE T700 engines, they are basic machines—no EFIS, no sophisticated FMS. Only the communications and datalink suite and the GPS nav sensors can be considered nearly state-of-the-art.

The A model UH60's standard 340-gallon fuel tanks are supplemented by a pair of 185-gallon auxiliary tanks mounted in the aft of the cabin. These are plumbed via pumps to feed into the main tanks at the pilots' discretion and command. The combination yields nearly 5 hours of endurance which, in operational terms, means that the 'Hawk can get anywhere within the southern area of operations and spend a significant amount of time on station once it gets there.

There are 2 iterations of flight-crew. One consists of 2 pilots, 2 CBP aviation enforcement officers (AEOs)—who themselves may be rated CBP pilots—and 2 BORSTAR agents. At other times there will be 2 pilots and 4 CBP AEOs.

A day in the life

Tucson Air Branch invited *Pro Pilot* to spend a few days, as the guest of Field Director Martin Vaughan, to observe and fly along on day-to-day operations. Vaughan is a 10,000-hour-plus fixed-wing pilot who signed on with USCS in the 1980s after a stint in corporate aviation flying a Dassault Falcon 10 and (then) Canadair Challenger. He provided unparalleled access to crews and equipment, the only



Each shift starts with a detailed briefing in the dispatch room, during which crews are made aware of areas of increased smuggling activity and the interdiction protocols and aircraft pairings that will be used that day.

Individual mission briefings take place at the aircraft, with each crew member reiterating their responsibilities and anticipated actions.



caveats being that the identities of CBP personnel be protected where appropriate, and that the privacy rights of all UDAs apprehended be respected.

The day begins at the 0700 shift change, with a meeting in the dispatch/radio room of all pilots, AEOs and BORSTAR agents assigned to the unit for that day. The first Black Hawk flight of the day is scheduled to go at 1000—after the meeting the crews study maintenance reports, the previous shifts' activities, reports detailing which of the thousands of motion sensors deployed by Border Patrol ground agents have been tripped overnight, and "human intelligence" (HUMINT) reports of UDA and narcotics activities in their patrol areas. Weapons, body armor and helmets are issued and donned.

Approximately 45 minutes prior to flight time, the crew assembles at the aircraft for a thorough preflight inspection and final briefing, culminating in engine starts and taxiing for departure. The USAF controller works us into his pattern of C130s, A10s and F16s, and we are soon headed south toward the border. As we fly into the rugged Sonoran Desert terrain surrounding the city, the enormity (and difficulty) of the job the CBP crews do is immediately apparent.

Vaughan had explained earlier that "the primary mission [of CBP AMO] is to protect US borders and its critical infrastructure." It's easy to lose sight of how vast the border is, and how open—and thus navigable—the terrain is between the border and the cities. The nature of the Sonoran Desert is that there is water, and thus vegetation. There are washes cut from surrounding terrain, too—in some cases so

deeply as to offer nearly perfect cover from aerial observation. The vegetation also provides places to hide, which UDAs and narcos use to great advantage.

Within 20 minutes, the Black Hawk crew is in an area where serious UDA traffic is moving, and the hunt is on. To even the casual observer the presence of as-yet-unseen UDAs is apparent from the garbage they've left behind. Groups have left tracks leading in and out of the washes as well.

"Signs," AEO Alpha calls out, and the pilot rolls the Black Hawk back over the wash and into a low hover. After a few seconds the rotor wash begins to blow a combination of sand, dust, papers, plastic bags, twigs, leaves and all manner of detritus up, over and ultimately back through the rotor system.

"There's no way around it," AEO Alpha continues. "To do the job you have to get down real low [and then] everything comes blowing up at you. But it does help when we find someone and they just don't want to come out. A couple of seconds of getting sand-blasted by a 200-mph wind and they stand right up, no matter what, and either run or give up."

After winding a mile or so up and down the wash, flying forwards, sideways and backwards with doors open and heads out and down—and never more than 100 feet AGL—it's apparent that the UDAs are either gone or very well hidden. Pilot Bravo flies toward the southwest at around 100 KIAS and 250 ft AGL, occasionally stopping to hover in areas where signs indicate recent UDA transits.

The first capture of the day occurs about an hour into the flight when a

rancher who'd been checking his fence lines calls Border Patrol to report 2 UDAs walking along one of his roads. The rancher had stopped them and told them to sit down by the side of the road, which is precisely where they are when the 2 BORSTARs on board get out and arrest the pair. As the closest Border Patrol vehicle is nearly 20 miles away, both UDAs are thoroughly searched and loaded into the Black Hawk.

After this first pair are dropped off at a dirt road rendezvous with a Border Patrol van, the crew spends an uneventful 45 minutes patrolling on a generally southwest course line. A call from a Border Patrol agent who's been watching a group of UDAs moving north from his hill-top observation point informs the crew that they've entered an area in which the helicopter could perform an intercept and landing. He furnishes GPS coordinates to the pilots and 10 minutes later we're on station, doors open, eyes out.



BORSTAR Agent Stroud using the most effective (in terms of numbers of UDAs apprehended) sensor—the Mark 1 eyeball. More than 520 agents have been added since the passage of ABCI Stage II legislation.



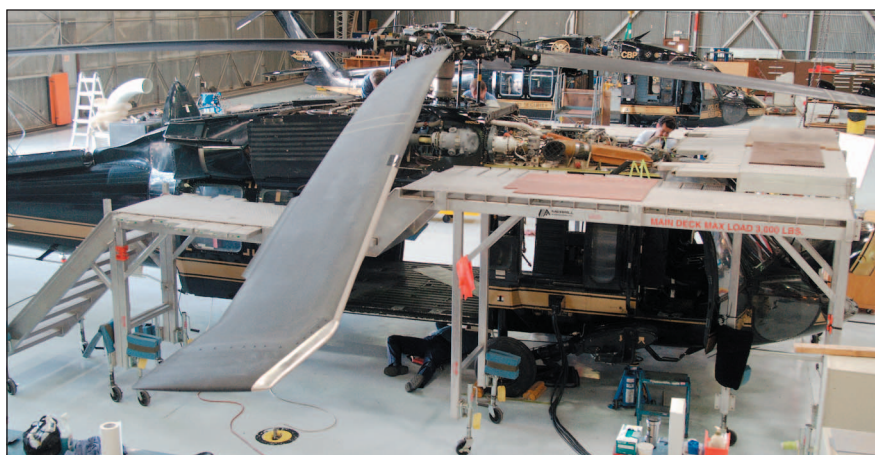
Dir Maintenance Ken Benton oversees a 74-person staff for L3 Vertex Aerospace, the contractor responsible for all CBP maintenance efforts. The Tucson facility also carries out maintenance on all CBP Sikorsky UH60s.

Within a minute the crew has located the first of what turns out to be 12 UDAs—some hiding under trees and bushes, others simply sitting on rocks. A group of 3 young people run off, but the combination of tight jeans and sneakers, rocky terrain and a rather persistent 20,000-lb-plus helicopter directly overhead render the effort futile.

As the Black Hawk circles overhead, the Border Patrol agent directs us to the top of a nearby hill where he thinks the coyotes (guides) are hiding. As the AEOs head up the hill to search for them, Pilot Bravo spots them and begins providing directions to the ground crew. The coyotes are hard to miss in their bright blue jeans and purple shirts, and Pilot Bravo brings the Black Hawk to a low hover over them. At first they won't move, despite a helicopter hovering overhead and a man wearing body armor and a helmet, fielding an automatic weapon and ordering them to stand up and come out.

Incredibly, the older of the 2 coyotes grins and mugs for the camera as I shoot photographs of him from the Black Hawk hovering overhead. By the time we land, however, his grin has faded—the AEOs have discovered and confiscated as evidence a rather large wad of cash he's been hiding in his pants.

After they've been rounded up, searched and cuffed, the UDAs and coyotes are "daisy chained" together and led out, by the Border Patrol agent who had first spotted them, to a waiting vehicle.



At 500 hours, each UH60 undergoes heavy maintenance at the Tucson facility. Airframe and dynamic component wear reflects the geographic location within which each aircraft operates—for Tucson-based aircraft the enemy is sand.

After patrolling fruitlessly for another half hour or so, fuel remaining dictates a return to Tucson. As we reach the southern suburbs of the city a call comes in reporting a fairly large group of UDAs moving through one of the ranches. This time the location is given as a street intersection, and a brief discussion ensues among the crew. It turns out that Pilot Bravo knows precisely where it is, and the UDAs are spotted on the first orbit over the area.

The Black Hawk sets down on what passes for a landing zone in the brush, and the 4-man ground team launches off in pursuit. Once caught, some of this group of 9 UDAs, captured within sight of their initial US destination, claim to have come from as far as Chiapas—a trip of roughly 2200 nm from the southernmost province of Mexico.

Once these UDAs are turned over to the Border Patrol, we fly back to Davis-Monthan AFB, 4 hr 30 min after departure.

Maintenance

Between the morning and afternoon shifts, Vaughan introduces us to the site's Maintenance Mgr, Kenneth Benton, for a glimpse at the process of maintaining such a complex and well-utilized fleet.

Benton is an employee of L3 Communications Vertex Aerospace, which has the contract to provide what company Corporate Communications Mgr Chris Blount describes as "total integrated logistics support" (which includes line maintenance, depot maintenance and material/inventory support) for

the entire CBP fleet. L3 Vertex performs work at a total of 21 CBP locations and depot operations on a fleet that includes not only the Tucson Air Branch aircraft, but Lockheed P3 Orions, Pilatus PC12s, Piper Cheyenne IIIs and Raytheon King Air 200s and C12s.

Benton's staff of 74 handles most work on-site, with facilities for performing hot sections, avionics maintenance, structural repairs, and helicopter blade repair and replacement. As Benton and Lead Mechanic David Hutchens make clear, the technicians face a wide range of maintenance issues within the CBP Black Hawk fleet. They are responsible for both the day-to-day maintenance of the Tucson Air Branch aircraft and the heavy maintenance and 500-hour "teardown" inspections of all 16 UH60As operated by



An L3 Vertex technician checks a small leak on a UH60 main rotor gearbox during a preflight inspection. When it was discovered that the leak emanated from an oil filter locking pin, the transmission was pulled and the pin repaired.



CBP Tucson Air Branch is now operating 15 Eurocopter AS350B2 ASStars with FLIR and low-light TV pods in the southern Arizona border areas. Images generated can be downlinked in real-time to any of CBP's operations centers.



The 5 Cessna Citation IIs operated by CBP Tucson Air Branch have been heavily modified. They are fitted with millimeter wave radar, FLIR and low-light TV sensors to aid both in the hunt for UDAs and in assisting drug interdiction efforts.

CBP. For example, while corrosion is not an issue with the Tucson aircraft, it is with the aircraft operated in Florida, the Caribbean and the Pacific Northwest. Tucson aircraft, though, more than make up for lack of corrosion, at least in terms of maintenance needs, with sand. Actuators, dampers and struts, for example, show more than usual wear because of the environment they fly in.

Removing dust, sand and dirt at the end of a mission is SOP, as are compressor rinses each 30 flight hours and full washes at 50 hours, but the effort is mostly a delaying tactic. So, too, are the benefits of the enhanced air particle separator (EAPS) mounted on the engine intakes.

"It will take most of the sand and grit, and blow it out along with FOD and small birds," Benton says, "but on occasion we'll get a large bird or piece of rock that will make it through and do some damage to the engine."

"We'll get damage," Hutchens continues, "but these are pretty much bulletproof engines."

The engines, along with the entire dynamic system, are removed every 500 hours as part of the heavy maintenance process. During *Pro Pilot's* visit to the facility, 3 UH60s are in various stages of disassembly—2 from the Tucson Air Branch and 1 from another unit. The shop is also performing a complete heavy maintenance cycle on one of the ASStars, in addition to day-to-day inspection and repair work on the Citations.

Benton and his staff are proud of the fact that they have an average maintenance man hour to flight hour ratio of 16.1:1—fully 3 hours per flight hour less than figures published by the US Army for its own maintenance program. The Tucson Air Branch has maintained a dispatch reliability of well over 90% despite the fact that one of their aircraft is the second oldest operational UH60 in existence.

Parts and spares are not too difficult to come by. "I tell the pilots that if something breaks, head for an Army base—they'll have what you need," Benton says. "On the other hand, when we're doing scheduled maintenance, parts availability is largely a matter of priorities. Right now some critical items can be hard to get because of the Army's ongoing mission in Iraq and the large number of Black Hawks they have over there. By and large, though, the Army will bend over backwards to help."

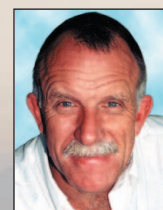
The late shift

Pro Pilot was given the opportunity to fly along on an evening patrol, which lifted off after the requisite briefings, preflight and putting on of helmets and armor, at approximately 1630. Flying almost due south, the crew make their first "blind hit" (a crew member spotting UDAs without cueing from other surveillance sources) when AEO Charlie catches sight of one under a tree. And this is while the helicopter is flying at around 100 ft AGL and moving at over 100 knots.

At this point, Pilot Hammer's warning to me during preflight briefing, that he "sometimes flies very aggressively" and to strap myself in accordingly, proves a worthwhile bit of advice. The roll rate and G-tolerance of the Black Hawk, which in this case is at near gross weight with a full fuel load and 7 on board, is surprising, to say the least. And yes, "Hammer" does fly aggressively but also with great finesse. We drop off the ground crew and the Black Hawk rises into a low orbit of the scene while the UDAs are rounded up, searched and flown in 2 separate groups to Tucson for processing and subsequent return to the Mexican side of the border at Nogales.

Holding the line

The war against drug runners and illegal immigration goes on day after day. As for the crews of the CBP Tucson Air Branch, they are without exaggeration among the best in the business—pursuing their missions with tenacity and ferocity when they have to, and with compassion and humanity when they need to. ✈️



Alan Staats is a Phoenix-based writer and photographer who has covered civil and military aviation for nearly 30 years. A former staff instructor at Columbia University Graduate School of

Journalism, where he taught photography, Staats operates a studio specializing in fashion and automotive photography.