

## South Africa Combats Crime with R44 Raven II Police Helicopters



Two of the six Raven II Police Helicopters purchased by the South Africa Police Service.

**SOUTH AFRICA** hosts the 2010 Football/Soccer World Cup, and preparations are underway by the South African Police Service (SAPS) to assure the safety of the thousands of fans who will attend the world's most popular sporting event. Acknowledging the country's high crime rate could affect attendance, officials are taking steps to create a safer environment. To that end, the government budgeted almost \$200 million dollars for security measures that include buying six Robinson R44 Raven II Police Helicopters to augment the SAPS's current fleet of 33 helicopters.

The SAPS procured the helicopters through Robinson dealer National Airways Corporation in Lanseria, South Africa. Each R44 Police Helicopter is outfitted with a FLIR Ultra 8000 Thermal Imaging System, 15-20 million candlepower Spectrolab SX-

5 searchlight, moving map technology, and other essential law enforcement equipment. The R44s will provide police commanders with better situational awareness of crowds and venue sites than is possible with just ground patrols. With the FLIR Ultra 8000 systems, the SAPS can expand their dusk-to-dawn operations and observe situations otherwise not visible at night. Moving map technology improves police response times by enabling flight crews to direct ground units to locations using the fast-

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The Raven II Police Helicopters are each equipped with FLIR system, searchlight, and moving map.

## R44 Surpasses R22 in Total Aircraft Produced



**W**hen helicopter serial number 12435 receives its air worthiness certificate, the R44 will surpass the R22 in the total number of aircraft manufactured by Robinson since the company started. The jet-black metallic and copper-trimmed R44 Raven II will go to UK-based Sloane Helicopters, a longtime Robinson dealer.

Development of the R44 began in 1985. It received its FAA Type Certificate in December 1992, and Robinson delivered the first

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## R44 Pilots Set World Record

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Photo Credit: Kama Larsen

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# Robinson Helipad Reduces Real Estate Developer's Commute

A real estate developer with projects in a half dozen southern U.S. states, Will Adkins logs plenty of flight hours scouting locations, visiting job sites, and showing properties to clients. Commuting by car to and from the airport consumed time he would rather spend at home. To remedy the situation Adkins installed a Robinson Rooftop Helipad at his home in Cornelius, North Carolina. Now, with his R44 Raven II nearby, Adkins flies to and from the airport as his travel needs require.

Adkins' home sits on a one acre lot fronting Lake Norman, which has a shoreline of 500 miles and covers over 32,000 acres. From Adkins' home, the regional airport is a 35 minute drive around the lake, but only a 10 minute flight by helicopter.

While many helicopter operators face contentious battles with neighbors and zoning commissions when seeking to install helipads, Adkins' experience was free of animosity. It helped that Lake Norman is zoned for over-the-water aviation and is home to many seaplanes. By installing the helipad on the piers of a converted boat dock, it conforms to the lake's regulations governing aviation. The only authorization Adkins needed was a building permit.



Photo Credit: Adkins Aviation

*Installed on a converted boat dock, the helipad is located over the water.*

Much lighter than steel or concrete, a Robinson aluminum helipad is ideal for installations added to structures not originally designed to accommodate a helipad, like Adkins' boat dock.

Installing the helipad involved removing the roof over the dock and reinforcing the existing structure with steel beams to support the 1600-pound helipad and the weight of a Raven II. Next, the 24 deck



Photo Credit: Adkins Aviation

*Will Adkins' R44 Raven II stands ready for action on a Robinson helipad.*

plates were secured in place, resulting in a 400-square-foot deck that meets the FAA's recommended size for a helipad. Finally, the deck's seams were sealed with caulk to make the helipad watertight, an important process considering its marine location.

The helipad sits 15 feet above the water surface. Stairs and a sliding door provide access from the walkway below. There are no limitations on the helipad in regards to the number of takeoffs and landings, and its over-the-water location provides clear approach and departure paths.

The helipad and the R44 Raven II at his home make traveling easier for Adkins. He flies between 5 - 12 hours a week in the summer and somewhat less during the winter months. Saving a half hour here and there adds up to a significant amount of time in a year and makes the helipad well worth it to Adkins.



Photo Credit: Adkins Aviation

*The helipad as seen on approach from the cockpit of Will Adkins' R44 Raven II.*

## R44 Police Helicopter Extends Sheriff's Patrol Area



*Officers from the Monterey County Sheriff's Department with their R44 Police Helicopter.*

With its new Raven II Police Helicopter the Monterey County Sheriff's Department can now patrol even the most remote areas of the county. Previously, the sheriff's department was capable of patrolling only 66 percent of the county's 3,300 square miles.

As the primary law enforcement helicopter for the Sheriff's Tactical Airborne Response (STAR) program, the R44 supports patrol operations, SWAT units, and other law enforcement missions. The helicopter is equipped with a FLIR Ultra 8000 Thermal Imaging Camera, moving map technology, searchlight, public address/siren, and 10-inch color display.



## Pilot Flies R44 to Safety After Losing Tail Rotor

Richard Hayes of Southern Lakes Helicopters did some remarkable flying when he piloted his Raven II to a safe landing after the helicopter's tail rotor was destroyed.

Hayes was flying with doors off at about 4500 feet and 100 knots on a venison recovery operation in New Zealand's Fiordland National Park when something exited the helicopter and destroyed the tail rotor and tail rotor gear box.



Photo Credit: Hellworks, New Zealand

Little remained of the tail rotor and tail rotor gear box following the accident.

Feeling a "thump" reverberate through the airframe, Hayes reduced airspeed to about 70-80 knots and tried the pedals to no effect. Still in control of the cyclic and collective and knowing he could steer the aircraft as long as he continued forward, Hayes decided to fly until he found a suitable place to land.

Located in the southwest corner of New Zealand's South Island, Fiordland National Park is a rugged land characterized by steep fiords, snow-capped mountains, unbroken forests, and lack of clear, flat areas.

The R44 was lightly loaded so it didn't require a lot of power and, more importantly, after the tail rotor's demise, the R44's empennage remained intact.



Photo Credit: Hellworks, New Zealand

The R44 Raven II's tail rotor was destroyed, but the empennage remained intact.

The R44 features a large vertical stabilizer to equalize the torque of the main rotor and to help control the helicopter in the event of a tail rotor failure - the scenario Hayes faced. Without the empennage and tail rotor, the helicopter would have spun uncontrollably.

For 30 minutes Hayes nursed the crippled helicopter along, then about 10km east of Te Anau Aerodrome, Hayes saw an agricultural airstrip and decided to set the aircraft down. At 40 knots he executed a running landing, skidding 45 meters and stopping without injuring himself or further damaging the helicopter.

Coincidentally, the previous week Hayes conducted running landings under conditions simulating a tail rotor failure as part of the New Zealand CAA Annual Competency Check Ride. Check ride requirements prepare pilots for virtually any situation. This practice enabled Hayes to land the crippled helicopter safely and, until now, had resulted in Hayes having flown 25,000 hours without an accident.

### Safety Tips for Doors-Off Flying

Before removing any doors for ventilation, pilots should review [Safety Notice 30](#) that strongly recommends pilots never fly with the left door(s) removed. Fatal accidents have occurred when an object has blown out the left door and struck the tail rotor.

When flying with doors off, especially the left door(s), take the following precautions

- **Always stow loose items securely within the cabin.** Many times the problem is caused by an object that becomes loose during the flight.
- **Preflight the person sitting in the left seat.** Make sure nothing (e.g., pens, pencils, glasses, etc.) is in the shirt pockets, and ensure cell phones and pagers are removed from waist belts.
- **Tell passengers to keep their heads and extremities within the helicopter's cabin.** Injuries can occur, particularly at high airspeeds.
- **When reinstalling doors, be sure to install the cotter pins in the door hinges.** Doors have come off in-flight due to missing pins.

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## R44 Surpasses R22

production R44 in February 1993. Since its introduction the R44 has become the best selling helicopter in the world.

There have been several models of the R44: Astro (1993), Raven (2000), and Raven II (2002). (When the Raven II debuted, the Raven was designated the Raven I.) Significant product improvements include hydraulic power controls, fuel-injected engine, and air conditioning, which is an option exclusive to the Raven II.



Frank Robinson pilots R44 serial number 0001 during a test flight at the Torrance Airport, circa 1990.

The R44 has played noteworthy roles in several aviation records. In 2000, Jennifer Murray flew an R44 when she became the first woman to fly solo around the world in a helicopter. Her R44 is displayed at the Smithsonian National Air and Space Museum in Washington D.C. In October 2002, Quentin Smith and Steve Brooks piloted an R44 Raven II to the North Pole, the first piston-powered helicopter to make the journey. Three years later, they took a Raven II to the South Pole - marking another first for a piston-powered helicopter.

R44s are flown throughout the world for a variety of purposes including leisure, tourism, business, flight training, property development, and utility line inspection.



Along the R44's assembly line, Robinson employees build new R44 helicopters.

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## South Africa Combats Crime with R44 Police Helicopters

est routes. Also, the mere presence of a police helicopter is an effective crime prevention tool.

The easy maintenance requirements and low operating costs of the R44s will allow the SAPS to utilize these helicopters for pursuit and patrol missions on a regular basis. A standard part of the SAPS pilot's training includes 100 hours in a Robinson R44, making the pilots familiar with the helicopter's flight characteristics and operations. Their experience will allow the SAPS to bring the new helicopters online quickly.

While the R44 Raven II Police Helicopters will play integral roles in the security effort for the World Cup, they are also part of a sustained effort to create a safer environment that will continue to benefit the citizens of South Africa long after the World Cup concludes.



Moving map technology reduces response times.



The FLIR system enables police to see in the dark.

## Pilots Set World Speed Record for Coast-to-Coast Flight

Pilots Johan Nurmi, Charles Martin, Dane Larsen, and Travis Reid established a new world record for making the fastest coast-to-coast round trip in an R44 Raven I. They flew from San Diego, California to Savannah, Georgia in two days and 22 hours (70 hours total), which is 18 hours faster than the previous record.

They departed San Diego's Brown Field at 4:55 p.m. Saturday 5 April, flew to Hilton Head Airport, and then returned to Brown Field at 2:55 p.m. on Tuesday 8 April. For record purposes, a nonstop flight is one where the clock runs continuously even during stops for fuel and food. The Fédération Aéronautique Internationale, the governing body for air sports and aeronautical world records, ratified the record on 30 April 2008.

## ROBINSON 2009 CALENDAR

Robinson is accepting photos for its 2009 calendar. Prints, slides, or digital files are all welcomed. Send as many photos as you wish. Please include a description of where the photo was taken and the photographer's name. Deadline is 22 September 2008.

High-resolution files (600 dpi at 9" x 12") are required. Acceptable file types are TIF or JPEG. For information on how to send large files, email [pr@robinsonheli.com](mailto:pr@robinsonheli.com).



In September, Mattel Toys will issue the R44 Clipper II as a Matchbox Sky Busters die-cast toy. For information, watch the Robinson website: [www.robinsonheli.com](http://www.robinsonheli.com).



Photo Credit: Karma Larsen

The world record helicopter team: Johan Nurmi, Travis Reid, Charles Martin, and Dane Larsen.

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