

Robinson Joins International Helicopter Safety Team



RHC President Kurt Robinson (fifth from the left) with IHST Executive Committee and Tim Tucker (far right).

Robinson Helicopter President Kurt Robinson joined the Executive Committee of the International Helicopter Safety Team (IHST).

The IHST is a cooperative multi-year effort between government, helicopter associations, and industry whose function is to address issues related to helicopter safety. The IHST's mission is to reduce the international civil helicopter accident rate by 80 percent.

The effort is co-chaired by a member of the US Federal Aviation Administration (FAA) and a member of the Helicopter Association International (HAI). Other participants include AugustaWestland, the American Helicopter Society International, Bell Helicopter, Bristow, CHC Helicopter, Eurocopter, the Flight Safety Foundation, the Helicopter Association of Canada, Shell Aircraft, and Sikorsky Aircraft Corporation.

In September, the Executive Committee held a two-day conference at Robinson's factory in Torrance. Research presented indicated private flights and instructional flying generate the highest number of helicopter accidents.

Kurt Robinson and Tim Tucker, RHC's Chief Safety Instructor, talked about RHC's efforts to promote safety. Kurt discussed features of the R44 and R66 specifically incorporated to enhance safety, including the RPM governor, carburetor heat assist, and bladder fuel tanks. Tucker talked about the origins of RHC's Safety Course and its impact on reducing certain types of accidents.

To assist members of the helicopter industry, the IHST website (www.ihst.org) offers "toolkits" aimed at safety and publishes numerous articles including **"The Top 10 Ways You Can Prevent Helicopter Accidents."**

Production Tops 500 in 2012



R44 Raven II and R66 Turbine wait to be exported.

Robinson Helicopter Company produced 517 helicopters in 2012, a 45 percent increase over 2011's production of 356. The breakdown is as follows: 286 R44s; 191 R66s; and 40 R22s. As in previous years, the majority (70 percent) of sales went to foreign customers.

Based on the backlog of new orders, Robinson anticipates 2013's production to surpass 2012's. The current production rate is set at twelve aircraft per week and with a workforce numbering more than 1300, the company is well positioned to increase production later in the year.

Demand for R66 upgrades, specifically floats and a cargo hook, has been greater than expected, prompting Robinson to make certification of these options a top priority.

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BBC's Richard Hammond Films at Robinson



Hammond describes his R66 flight.

In July, TV personality Richard Hammond, one of the hosts of the BBC's popular *Top Gear* and star of *Richard Hammond's Crash Course*, along with *Crash Course's* executive producer, Tod Mesirow, toured RHC's factory.

Hammond, a pilot and owner of an R44, was eager to see the R66. Lingered in the delivery center where several R66 helicopters were parked, he peeped inside access panels and snapped photos. After the tour, Mesirow suggested Robinson as a venue for a future episode of *Crash Course*.

On *Crash Course*, Hammond has five days to learn a skill of which he has no prior experience. In August, Hammond returned to RHC to film and, in theory, learn to build an R66. After tackling several jobs on the assembly line, Hammond finished up in flight test where he was to fly the aircraft he built (he actually flew R66 S/N 0003).

The show wrapped and while Hammond learned a lot about making helicopters, it's safe to say he'll stick to flying and leave the manufacturing to Robinson.

FAI World Championships

The World Helicopter Championships were held August 21–26, 2012 at Russia's Drakino Airfield outside Moscow. Fifty crews representing eleven countries participated in the week's events. Half of the helicopters flown were Robinson models.

The competition included four compulsory events: Precision Flying, Fender Rigging, Navigation, and Slalom.

The R22 placed second in one event. The R44 placed first in three events, second in one event, and third in three events, as well as scoring the most points in the all around.



R66 Appears in Super Bowl Sunday Commercial



R66 Turbine sits ready for action.

The Super Bowl is an American tradition where viewing the TV commercials is as much a part of the experience as the game. Advertisers pull out all the stops (and their check books) as they vie for the attention of the millions of consumers tuning in. This year Robinson was approached by location scout Kelly Baker on assignment for client Kraft Foods. During a creative briefing with the production company, Baker immediately thought of Robinson when she heard the word helicopter.

The 30-second spot showcased Jell-O's chocolate pudding as comfort food, because nothing masks the bitter taste of defeat quite like the sweet taste of pudding (the San Francisco 49ers lost to the Baltimore Ravens).

The idea behind the tongue-in-cheek advertisement was that Jell-O was the next best thing to winning the coveted Vince Lombardi Trophy. The commercial featured an R66 airlifting a crate of Jell-O destined for San Francisco as a Jell-O executive shouts "Who's the big winner now Baltimore?"

Hollywood magic transformed a Robinson hangar into a Jell-O warehouse. Crates of Jell-O lined the walls and thousands of boxes of Jell-O filled the shelves. Four R66 Turbines sporting the Jell-O logo completed the set.

The production company that included more than 50 crew and cast members arrived at Robinson's factory in mid-afternoon. Filming started at 4:00 p.m. and continued through the night until 7:00 the next morning.

While the R66 did take off and fly, it was special effects that connected the load of Jell-O to the helicopter (FAA approval for the cargo hook is still pending).

Unfortunately, like a lot of budding stars, much of the R66's best scenes were left on the cutting room floor. In Hollywood you have to pay your dues.



Actors, cheerleaders, and the band wait off camera.

FAA Certifies R66 Police Helicopter



The R66 Police Helicopter

On 7 September 2012, Robinson Helicopter Company received FAA certification for its R66 Turbine Police Helicopter. Robinson's R66 police model is specially configured for law enforcement and meets the latest FAA crashworthiness regulations.

The four-place R66 Police Helicopter combines R66 power, altitude performance, and capacity with state-of-the-art surveillance technology. Turn-key ready, the R66 police comes standard with FAA-approved equipment including the FLIR Ultra 8000 thermal imaging camera, a 10-inch fold-down color monitor, the new Spectrolab SX-7 searchlight with a 30-million candlepower high-intensity focusable beam, and a dual audio controller.

Robinson hopes the modest price of \$1,112,000 (as of 15 January 2013) and simplified maintenance schedule will appeal to both large and small police agencies. The first production R66 Police Helicopter was delivered in October 2012 to Southern California's Fontana Police department. Fontana is the lead agency in a four-city alliance and has been using Robinson R44 Police helicopters since 2005.

Performance specifications of the R66 Police Helicopter include a cruise speed of up to 120 kts (138 mph), payload of 800 lbs with full fuel, and a hover ceiling OGE at max gross weight of 10,000 ft.

R22: Thirty-Three-Years Old and Still Flying

R22 Serial Number (S/N) 011 is likely the oldest R22 still in operation with the possible exception of S/N 007 (currently registered to a private owner in Idaho). S/N 001 remains at Robinson's factory and S/N 002 resides at the Smithsonian. Other earlier serial numbers are all retired.

R22 S/N 011 rolled off Robinson's production line in January 1980. In 2007, twenty-seven years later, Jerry Trimble came across an ad in *Trade-A-Plane* for R22 S/N 011. Coincidentally, Trimble, a former Robinson employee, worked on S/N 011 during its final assembly and flew it on its first test flight. Nostalgia

aside, Trimble needed another R22 and bought it.

Today, Trimble Helicopters uses the R22 for flight training and rides. It has accumulated over 10,000 hours and according to Trimble "is still going strong."



Jerry Trimble in R22 S/N 0011.

Fontana's R44 Police Helicopter Earns Its Keep

Eagle 1, a Robinson R44 Police Helicopter operated by California's Fontana Police Department, was instrumental in the capture and arrest of 42-year-old Jay Latu on August 10th in the city of Rialto. After trying to outrun patrol cars, Latu bailed out of the stolen car he was driving and attempted to hide in the evening darkness.

Eagle 1 demonstrated the advantage of air support by using the R44's FLIR (Forward Looking Infrared) camera with heat sensor to detect a hot spot in the bushes lining the street. Air support officers quickly communicated the suspect's location to ground officers and Latu was apprehended and later booked for armed robbery.

El Monte's Air Support Answers Distress Call



El Monte's three R44 Police Helicopters.

Captain Dave Faulkner and Officer Mike Weatherman were on patrol in one of El Monte's three R44 Police Helicopters when they received a distress call from an airplane in the early evening of July 20th.

The officers witnessed the single-engine Cessna, piloted by traffic reporter Mike Nolan with a teenage passenger on board, fall from the sky, strike power lines, and crash in a field just east of the Corona Municipal Airport.

Captain Faulkner quickly set the R44 Police Helicopter down approximately 100 yards from the crash. Officer Weatherman ran to the scene, pulling both pilot and passenger out of the plane before it burst into flames. Officer Weatherman was later honored for his act of courage.

El Monte's Air Support has been operating R44 Police Helicopters since 1998, their first R44 (S/N 0331) topped 10,000 hours last year.

FAA Approves ELOS for R66 Hydraulics

The FAA and representatives from Transport Canada Civil Aviation met at the Robinson factory on February 13th and 14th to witness tests on the R66 hydraulic control system. The tests included flight evaluations of R66 control characteristics and ground tests using a specially-designed test fixture that allowed simulation of critical failures. The FAA required the tests in order to support an Equivalent Level of Safety (ELOS) finding for the R66 hydraulic control system.

One FAA regulation requires hydraulic control systems be designed so an alternate or redundant system is available in the event of a failure (for example, a jam) of a hydraulic control valve. This is often accomplished by incorporating a second valve for each control. However, designs with two valves are more complicated and could potentially have more failure modes than simple, single-valve designs.

During the original FAA certification of the R66, the FAA granted Robinson an exemption from the redundant control valve regulation. The exemption was granted based on the simplicity and reliability of the single-valve design and the fact that the R44 shares the same design, which has accumulated millions of trouble-free flight hours on over 5000 R44 aircraft without a single incident attributed to a hydraulic malfunction. The FAA concluded the exemption was appropriate and would not adversely affect safety.

Several foreign countries do not accept exemptions; therefore, Robinson elected to work with the FAA to establish an ELOS finding. The ELOS involved a rigorous analysis and test program to demonstrate the single-valve design was equivalent in safety to a redundant design. The tests demonstrated pilots could easily break through a jam and maintain normal flight control. These tests were the final step in the ELOS program.

Robinson anticipates obtaining the ELOS and removing the exemption from the R66 hydraulic control system will allow R66 certification in countries that do not accept the exemption.



The R66 hydraulics undergo tests.

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Torrance, CA 90505 USA
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Fax: 310/539-5198
www.robinsonheli.com