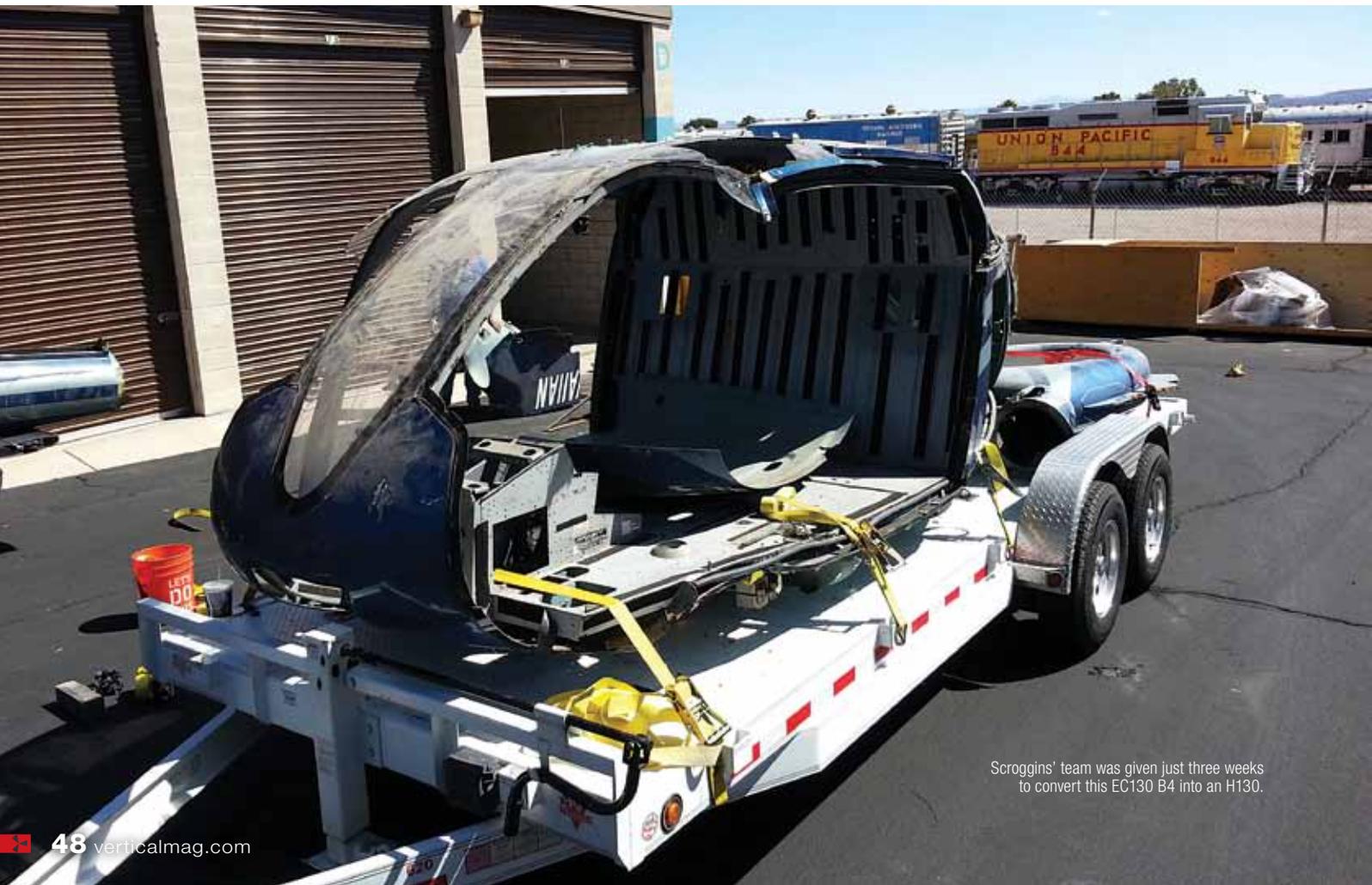


Scroggins Aviation's JW001 mockup is ready for its close up on the set of Jurassic World.



Scroggins' team was given just three weeks to convert this EC130 B4 into an H130.

JURASSIC COPTER

Movie magic brought dinosaurs back to life on the big screen in blockbuster movie *Jurassic World*, but it also revived the wreck of an Airbus Helicopters EC130 B4 for a final starring role.

Story by Lindsay Hughes | Photos courtesy of Scroggins Aviation

Earlier this summer, moviegoers flooded theaters to see the newest installment in the *Jurassic Park* franchise, *Jurassic World*. One of the most fast-paced action sequences of the blockbuster film sees the dinosaur theme park's helicopter "JW001" getting knocked out of the sky by dinosaurs and sent down in a ball of flames with the park owner at the controls. As most viewers kept their eyes peeled on the attacking dinosaurs, rotorheads may have been a little distracted by the beautiful blue Airbus Helicopters H130 spinning to its death by dino. While they may be relieved to learn it wasn't a real aircraft that met this unhappy fate, the story of how the helicopter sequences were filmed is almost as interesting as the movie itself.

Scroggins Aviation, a mockup and effects company based in Las Vegas, Nev., specializes in the restoration and modification of airframes and cockpits for film and television use. All interior shots of the H130 seen in *Jurassic World* were filmed using the airframe of a heavily modified Airbus Helicopters EC130 B4 that Doug Scroggins bought out of a storage unit in Boulder City, Nev.

"I work with the studio and the production company and they basically tell us what they want and then it's my job to go find it or make it," Scroggins told *Vertical*. "Our company's a fabrication company. We make stuff, we mold stuff, we shape, we can do just about anything. We can build stuff fresh from scratch if we had to."

In the case of *Jurassic World*, Scroggins was given photos of an EC130 B4 that would be used for exterior shots and was hired to create an interior that could be modified to accom-

modate film equipment. The helicopter that Scroggins bought to fill that requirement had an accident on Jan. 5, 2006, in Hawaii, and was being kept among piles of junk in a storage unit. The EC130 B4 Scroggins purchased had severe structural damage to the airframe. Scroggins' job was to make it look like a sleek helicopter that a booming theme park would use to fly executives.

"I placed it on my trailer and trucked it to the shop, we start assessing it, and find out, man this thing's a mess," said Scroggins. "We started ripping the helicopter apart, doing all the damage repairs. With no left hand pillar we had to totally fabricate one . . . so when we started building the helicopter up, we made it into a B4 model."

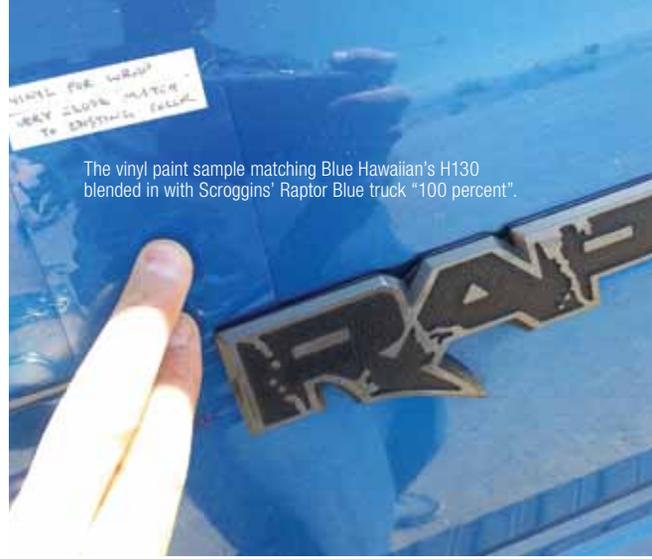
Exterior shots of the helicopter in flight were filmed in Hawaii, where production hired local tour operator Blue Hawaiian to pose one of its helicopters as JW001. Coincidentally, upon further inspection, Scroggins' wrecked helicopter turned out to have once been a Blue Hawaiian helicopter. Scroggins, now feeling lucky about his find, started to think that this would be an easy build. All he had to do was restore a Blue Hawaiian helicopter back to its former glory, without many major modifications — a lot of the interior components were still intact.

Scroggins explained that he had anticipated work to include doing all the repairs, and building it up to be mounted on a gimbal. He describes it as "essentially just a massive, heavy restoration job." Then, things got a little more complicated.

"Production, about halfway into shooting the film, decided to use the [H130] T2 model," said Scroggins.

The abrupt change came when filming a scene with a real

With help from Garmin, JW001 was equipped with real H130 instrument bezels for the T2 panel. The center panel control heads were made using a 3D printer.



The vinyl paint sample matching Blue Hawaiian's H130 blended in with Scroggins' Raptor Blue truck "100 percent".



JW001 was once an EC130 B4 registered to tour operator Blue Hawaiian.

Blue Hawaiian EC130 B4 sitting on a helipad. The character played by lead actress Bryce Dallas Howard needed to step out of the helicopter after having a conversation with the pilot, and because of the way the scene was blocked, production discovered that Howard would be required to exit the helicopter on the right side of the aircraft through a sliding door. This necessitated a switch from using the tour operator's B4 to its much newer H130 (formerly EC130 T2) model.

"If you watch the movie, you see the guy that runs the park in the purple shirt — he's flying it from the left side. When he turns his head around, he needs to be able to look at her on the right side of the helicopter," explained Scroggins. "He can't look at her from behind; she would have to slide over all those seats. So it was easier for her to step out on the right side with a sliding door on the right side. That's why the T2 came into play."

The last-minute change gave Scroggins and his team just three weeks to convert their EC130 B4 into a sleek, new H130.

"If anyone knows what an EC130 B4 and T2 look like, they know the difference between the two. They're basically different animals because everything on the inside is extremely different. They're not even close," said Scroggins.

The challenge in recreating an H130, Scroggins explained, is that with such a new helicopter, spare parts are nearly impossible to find. Even calls to Airbus couldn't get him H130 seats

for interior shots — nearly everything needed to be made from scratch. The unique metal doors on the H130 were one source of grief during the conversion.

With no possible leads to acquire the real thing, a local connection with Las Vegas tour operator Sundance Helicopters gave Scroggins an opportunity to mold custom H130 door panels. In a true reflection of the company's commitment to the accuracy of its machines, Scroggins took a trip in the middle of the night to Sundance to create the molds he needed.

"We actually pulled the doors [off] at one in the morning, two different days. . . . Everyone on the team was nervous to have pulled off a \$60,000 door. We laid it on a table that was covered with furniture pads and we pulled out a big tub of skin silicone that looks like clear snoot. It's rubberized, so we put it over the door and it hardens," he said.

From there, more modifications included building replica front seats (the helicopter's back seats remained B4), and installing a real H130 instrument panel.

"The center panel control heads were made from scratch thanks to our 3D printer," Scroggins said. "Most of the instruments we purchased used from suppliers, but Gamin did come through and helped us with the G500 bezels to give the finishing touches to the panel."

At the last minute, the team was also informed that production wanted additional flight controls on the right side of the



That's a wrap on the set of *Jurassic World*. Scroggins says that everything his company does is "movie magic".

helicopter. Just a day and a half before production, Scroggins' team in Vegas had to take the collective and the cyclic from another wrecked EC130 that happened to be in their shop and transfer it into JW001 on location in New Orleans, La. Another challenge came in the form of a last-minute paint job. Scroggins had already painted the exterior of his helicopter to match the older EC130 B4 Blue Hawaiian aircraft, which are darker than the bright metallic blue on the company's H130s that now needed to be mimicked. When Scroggins was delivered a new vinyl paint sample to match, his appropriately named truck presented itself as a solution.

"When they gave me the sample color chip I look at it and I'm like 'that's a pretty blue,'" said Scroggins. "I'm thinking to myself, 'You know what? That looks like the color blue of my truck,' and I go to the back of my truck and I lay it right next to my truck on the tailgate, and on the back of my tailgate it says Raptor. So I snap a shot with the vinyl right next to it and that color blends in 100 percent — not 99 percent, 100 percent — [and] we paint the whole helicopter Ford Raptor blue, ironically enough."

JW001 was shot against a green screen, while mounted on a moving gimbal so that changes in altitude could be reflected on the real artificial horizon that was installed in the helicopter. During a scene in which an actor is seen shooting a minigun from inside the aircraft, tracking dots were placed onto the helicopter's upper cowling and where the tail boom mounts, so that a special effects team could create flight-like movements using Scroggins' airframe, which didn't even leave the ground.

"It's all movie magic, everything we do is movie magic. We make it look like what it really isn't," said Scroggins. "I'm really excited about it; it was a really fun project. There were those moments where I was stressing at the last moment, we were doing an average of 15 to 18 hour days at a time, but everyone on the team stayed focused."

Scroggins, who comes from an aviation background, said aircraft mockups come in handy for studios when flying a real aircraft doesn't make sense financially, or would pose safety threats.

"No one in their right mind is going to use a real helicopter and have it placed on a gimbal, because accidents can happen. Production generally won't do it, it's just too risky, so they rely on companies like us where we have an experienced team of fabricators to build the mockup for them," said Scroggins. "It's a team effort. Everyone that works in my shop brings something to the table."

In addition to *Jurassic World*, Scroggins' work can be seen in *Terminator Genisys* and in upcoming movies including *Captain America: Civil War*.

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