

Bloodhound LSR, the 1,000mph car, starts high-speed tests in October

Enlarge / Bloodhound LSR, wearing the tire-shod wheels it used for low speed testing. For high-speed runs, the car will use solid metal wheels instead.

reader comments

47 with 33 posters participating, including story author

Share this story

On Tuesday, we have some rare good news from England. Bloodhound LSR, the land-speed-record car designed to reach 1,000mph, will finally get to travel to South Africa to begin high-speed testing. Until now, the rocket- and jet-powered machine had only been able to test at low speed—if 210mph (338km/h) can be considered low speed—on a runway in the United Kingdom. But in October, the team will take it to a specially prepared stretch of the Hakskeen Pan in South Africa and begin to stretch Bloodhound's legs.

It has been quite an up-and-down ride for the land-speed effort. The project was started by Richard Noble, who set a land-speed record in 1982 with Thrust 2 and then spearheaded the Thrust SSC car that broke that record (and the sound barrier on land) in 1997 with RAF Wing Commander Andy Green behind the wheel. The Bloodhound is equipped with a Rolls-Royce EJ200 jet engine (from a Eurofighter Typhoon) and a hybrid (solid-fuel, H₂O₂ oxidizer) rocket from Nammo that together will provide more than 47,000lbf (20,900kN).

Together, they will power the car to speeds normally reserved for aircraft (and the occasional rocket sled).

But land-speed records aren't easy. Not only do you need to design and build a car capable of that speed, you also have to find somewhere suitable to run it. The place that the team chose—as detailed in our earlier feature on the effort—is located in a dry lakebed in the Kalahari Desert in South Africa's Northern Cape Province, near the border with Namibia. More than 300 local volunteers helped prep part of the Hakskeen Pan, clearing 37 million pounds (16,500 tonnes) of rocks from an 8.5-square-mile (22km²) stretch to create a suitable track.

In fact, it's 12 suitable tracks, each one 10 miles (16km) long by 1,640 feet (500m) wide. That's because Bloodhound will chew up the surface of the dry lake as it crosses at high speed. The hardness of the track surface has also resulted in a little redesign of the car; it will use narrower wheels than originally planned, which will cut aerodynamic drag somewhat.

Enlarge / The Hakskeen Pan in South Africa.

Bloodhound LSR

However, the biggest challenge of all isn't to do with engineering or site prep—it's coming up with the funds to make it all happen. At the end of 2018, things looked extremely bleak, and the car looked destined for life in a museum. But in March of this year, it was bought by British businessman Ian Warhurst.

"I'm thrilled that we can announce Bloodhound's first trip to South Africa for these high-speed testing runs," Warhurst said in a press release. "This world land-speed-record campaign is unlike any other, with the opportunities opened up by digital technology that enabled the team to test the car's design using computational fluid dynamics (CFD) and that will allow us to gather and share data about the car's performance in

real time. In addition, we're running the car on a brand new surface. The wheels have been designed specifically for this desert lakebed, but it will still be vital to test them at high speeds before making record-speed runs."

<https://arstechnica.com/?p=1533389>