



Let's get crawling

August 13, 2019

Myles Cartelli, who works in weapons fabrication services at the Laboratory, eases his modified 1994 Jeep Wrangler into a riverbed, using the four-wheel drive to dig through the mud and rocks and into the water. After creeping out of this obstacle, it's time to tackle an even more difficult one. Heavy duty, flexible tires crawl onto a series of boulders, with Cartelli easing the vehicle's chassis over the rocks while allowing the Jeep's customized differential and lifted stature to flex without having the 40-inch tires rub along the fenders.

"I've always been into big trucks and dirt bikes, anything mechanical," Cartelli says. "Back in the early 2000s, this sport of rock crawling started getting a little more popular. A few of my buddies started modifying their four-wheel-drive vehicles, and with my skills in welding and fabrication, I knew I could do the same. And that's how it started, this evolution into modifying and customizing these vehicles for off-road trails."

Off-road rock crawling is an extreme form of off-road driving, one that uses customized vehicles to overcome natural obstacles. For Cartelli, it's both the driving of these vehicles and their customization that he enjoys equally.

Myles Cartelli hard at work in his shop at home.

A lifelong fascination with fabrication

Long before he started modifying and driving four-wheel drive vehicles, Cartelli knew he wanted to be a fabricator.

"My dad was an ironworker here at Los Alamos," he recalls. "He started up here in 1975 building racks for the underground tests at Nevada. My dad worked with this heavy equipment operator who used to have a horse stable on North Mesa. He had a little stick welder in that stable. I started helping them with repairs using that stick welder when I was about 12 years old."

Upon graduating in 1996, Cartelli's father encouraged him to go to the union hall and sign up for a position as an apprentice ironworker.

"To my surprise, they put me to work the very next day," says Cartelli with a grin. "I started off by helping to build a library in Santa Fe, tying rebar. The day after that, I reported to the Laboratory, where I started work as one of three apprentices, learning about the basics of structural welding, heavy fabrication, rigging of big machines and some of the other crazy stuff we seem to have around here. I've been at Los Alamos ever since."

It's about form and function

“Along with my own builds, I have helped several people customize their rigs for extreme off-road trails,” he notes. “I have worked on all kinds of vehicles, from trucks and Jeeps to off-road tube-chassis buggies. Lifting a vehicle changes how it steers, so I typically have to build custom parts so that the vehicle steers like it did before it was modified.”

For Cartelli, each modification build is a learning experience. “Every time I strike that arc to something, it seems like I come up with a more efficient way to execute a certain process,” he says. “My builds are intended to create a highly functional vehicle that looks killer. There's a real art to it.”

> [Learn more about Cartelli's off-roading enthusiasm](#)

Los Alamos National Laboratory

www.lanl.gov

(505) 667-7000

Los Alamos, NM

Managed by Triad National Security, LLC for the U.S Department of Energy's NNSA

