

HP 3D Printing Accelerates Blazin Rodz' Custom Build



Blazin Rodz is unlocking innovation and driving efficiency by leveraging HP's Multi Jet Fusion 3D Printing technology to rapidly produce dozens of precision-crafted, custom components for its bespoke vehicles.



Blazin Rodz 1970 Chevrolet Chevelle, aka "Doughboy"

INDUSTRY

Automotive

SECTOR

Custom Fabrication

OBJECTIVE

Leverage 3D printing to create both prototypes and production-ready components for high-performance classic and exotic custom vehicles

APPROACH

Utilize 3D scanning and HP Multi Jet Fusion technology to rapidly and cost-effectively produce both decorative and functional components with precision and efficiency

TECHNOLOGY AND SOLUTIONS

HP Multi Jet Fusion technology
HP Jet Fusion 5200 3D Printing Solution

MATERIAL

HP High Reusability PA 12, enabled by Evonik

Introduction

"What would we need to do to start a car company and get attention right out of the gate? I said we have to be different," says Blazin Rodz Partner/Owner

Riccardo Salatino. “We have to do something that no one has ever seen and no one has done before. Doughboy was the answer.”



Blazin Rodz offers bespoke custom car services that fuse cutting-edge engineering with bold design to deliver one-of-a-kind automotive masterpieces. Based in Orange County, California, and powered by the expert team at Blazin Rodz, they specialize in building everything from reimagined classics to high-performance exotics. Whether it is a coach-built restomod or a modern hypercar with handcrafted details, Blazin Rodz brings their customers' vision to life with precision and a relentless pursuit of excellence. Every build is meticulously documented, ensuring clients are part of the journey from concept to ignition.

Tuned for the Spotlight

“I have worked on a number of automotive shows and series,” says Chad Greulich, Television Producer. “I took a look at what the Blazin Rodz team was doing, and I came away very encouraged and excited to help tell their story. What I saw as the hook was for young guys 35 and under, who were utilizing new technologies - including additive manufacturing - in ways that had never been leveraged before.”

The Blazin Rodz custom car series on Roku TV and Amazon Prime follows the team as they push the boundaries of automotive design and fabrication in Orange County, California. Created by Chad Greulich, one of the minds behind American Chopper, the show captures the team's quest to build million-dollar custom cars at breakneck speed with cutting-edge technology and raw craftsmanship. With their sights set on unveiling the Doughboy Chevelle at SEMA in one year's time, the crew brings passion, precision, and plenty of drama to every build. It's not just about the cars, it's about proving that their innovative approach is the future of custom automotive culture.



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Blazin Rodz's Doughboy, a 1970 Chevrolet Chevelle, was crafted to debut at the 2024 SEMA Show as the ultimate fusion of drag-strip aggression and GT-level dynamics, with the polished elegance of a modern supercar. Spearheaded by Blazin Rodz team members Riccardo Salatino, Scotty Zimmerman, Waylon Jeffery, and Spenser Tanner, the build set out to shatter expectations and showcase the bleeding edge of custom car innovation.

Built entirely in-house using state-of-the-art 3D printing, CNC machining, and handcrafted fabrication, Doughboy packs many unique features. Its thunderous twin-turbo 540ci Brodix big block engine delivers 2,800 horsepower and was shifted 15 inches rearward for optimal weight distribution. The powerplant is paired with a custom Art Morrison chassis with a Blazin Rodz touch. From its billet fuel cell that doubles as a rear diffuser to its carbon-fiber widebody and gleaming 24-karat gold-plated brakes, every element was meticulously designed to deliver both performance and visual impact.

Problem

Fueled by the ambition to unveil Doughboy at the 2024 SEMA Show, Blazin Rodz took on the nearly impossible: completing a build of immense complexity in just twelve months, a process that usually stretches three to five years. By harnessing cutting-edge digital tools, optimizing their workflow, and committing to nonstop, in-house fabrication, the team brought every detail from concept to completion under one roof. Their achievement wasn't merely a race against the clock, it was a bold declaration of what's possible when technology, talent, and tenacity converge in the world of custom car innovation.

Muscle Era Mindset

Traditionally, custom car parts are fabricated through a hands-on, precision-driven process that blends craftsmanship with mechanical expertise. Builders start by designing the part by hand or using CAD software, then select raw materials like steel, aluminum, or composites based on strength and performance needs. Fabrication techniques such as metal stamping, CNC machining, welding, and manual shaping are commonly used to bring the design to life. Skilled fabricators may also use lathes, mills, and plasma cutters to achieve exact tolerances. Once shaped, parts are often finished with grinding, polishing, or powder coating to enhance durability and aesthetics.

"Even with Doughboy, there's a lot of times where we look back and question why we spent so much time and money fabricating a given part," says Salatino. "Why didn't we just design and 3D print it? We would have saved two weeks worth of time. Multiply the savings over dozens of parts and the impact is profound."



Creating custom car parts using traditional fabrication methods is a time-intensive and costly endeavor, often requiring hundreds of hours of skilled labor and specialized equipment. Depending on the complexity of the part, fabrication can take anywhere from several days to several weeks, especially when precision shaping, welding, and finishing are involved. Costs vary widely but typically range from a few hundred dollars for simpler components to several thousand for intricate or structural parts. Labor alone can run \$150-\$200 per hour, and that doesn't include materials like billet aluminum, specialty steels, or composites, which can significantly drive up the price.

Solution

"I don't really know of many shops that are using additive manufacturing the way we are," says Blazin Rodz Chief Designer, Waylon Jeffery. "Especially with the Chevelle, we had no time to really iterate parts, so we had to make sure they were correct the first time around. I can't just see if a part is going to fit, I have to know it will fit."

HP's Multi Jet Fusion (MJF) 3D Printing technology is revolutionizing the way fabricators approach custom automotive components, offering unmatched speed, accuracy, and creative flexibility. By eliminating the need for time-consuming tooling and labor-intensive processes, MJF technology allows builders to go straight from CAD design to functional parts, slashing production time and expenses. It excels at producing lightweight, highly complex shapes and integrated features that traditional fabrication often can't accommodate. The resulting parts boast consistent mechanical strength and a clean finish, making them ideal for everything from functional brackets and ducts to detailed interior trim and aerodynamic elements.

HP MJF technology Shifts Innovation into High Gear

HP Additive Manufacturing Solutions don't just streamline workflows and reduce costs, they open the door to bolder innovation and mass customization in modern car design.

"When we began working with HP Additive Manufacturing Solutions, we really didn't know what to expect," says Jeffery. "We were new to it, and had no experience with 3D printing bumpers. We were so worried about like, dude, what if you're washing the car and it just cracks or something? We had no idea."



Blazin Rodz custom components
for Doughboy

Blazin Rodz harnessed HP MJF technology to fabricate over 75 custom components for Doughboy, their groundbreaking 1970 Chevelle build. By integrating HP's additive manufacturing into their workflow, the team rapidly prototyped and produced complex parts like radiator ducts, heat exchanger outlets, tail light housings, and even interior elements such as the dash and center console. This digital-first approach allowed Blazin Rodz to reverse-engineer components from 3D scans and bring them to life with precision and speed—making it possible to complete the entire vehicle in just one year.

Result

“It really comes down to time because if you’re building a car with a \$400,000 budget and it takes 3-4 years, you’re probably not making money,” says Salatino. “From a business perspective, my goal is to build cars in a timely manner and ultimately, turn a profit.”



Blazin Rodz Doughboy front bumper - 3D printed with HP MJF

HP MJF technology Shifts Innovation into High Gear

Blazin Rodz leveraged 3D printing to produce a fully functional front bumper for Doughboy—complete with integrated air ducts—for a fraction of the typical \$80,000 it would have cost using traditional fabrication methods. By bypassing the need for complex tooling, molds, and manual labor, the team was able to rapidly prototype and manufacture the part in-house with precision and repeatability. This not only slashed production time and cost but also allowed for design features that would have been prohibitively expensive or impossible to achieve through conventional techniques. The result was a high-performance, lightweight component that exemplified the power of digital manufacturing in modern custom car building.

“I think there’s this perception that additive manufacturing is more for cosmetic things versus functional, and from the outside, that’s what really impressed me,” says Greulach. “Some of the pieces and components that Waylon and the team have designed are unbelievable.”

HP’s MJF technology saved Blazin Rodz several weeks in the development of Doughboy by dramatically accelerating the design-to-production cycle. Instead of waiting for traditional tooling, molds, or outsourced machining, the team was able to rapidly prototype and manufacture radiator ducts, interior panels and over 70 other custom parts in-house, directly from CAD files. This digital workflow allowed for faster iteration, immediate fitment testing, and seamless integration of complex geometries, all of which would have taken significantly longer using conventional methods. As a result, what would typically be a multi-year build was completed in just twelve months, an achievement made possible by the speed and flexibility of HP’s MJF technology.

The Fast Track to What's Next



"We have a customer who contacted us because he saw the Chevelle. He loved what we did, our style and how we were using additive manufacturing," says Salatino.

Blazin Rodz plans to expand its use of additive manufacturing in future projects to push the boundaries of custom car design, performance, and production efficiency. Building on the success of Doughboy, the team aims to integrate HP's MJF technology into every stage of their workflow, from rapid prototyping and functional part production to low-volume manufacturing of bespoke components. This approach allows them to reduce lead times, lower costs, and unlock new levels of design freedom, enabling more radical concepts and faster delivery for clients. "He was blown away," says Jeffery. "This guy's kind of like a big hitter in our industry. You nail this guy as a customer and it's like, oh, wow, you got him? Even though we're new, he was absolutely impressed by the build process and how we're going about building his car. Never seen anything like it."

Driving Innovation with HP's Additive Manufacturing Solutions

Blazin Rodz is poised for long-term success by fusing heritage and innovation—building classic-inspired hypercars that blend vintage soul with cutting-edge performance.

As they continue to blur the line between factory precision and aftermarket creativity, Blazin Rodz sees 3D printing not just as a tool, but as a cornerstone of the next generation of automotive craftsmanship.



Laser-etched Dynamat



By uniting their visionary design with cutting-edge digital manufacturing and strategic industry partnerships, Blazin Rodz is set to reshape the landscape of custom car culture. Ongoing collaboration with SEMA has the potential to extend their credibility in the custom automotive world while also keeping them at the forefront of industry trends and recognition. By expanding into the digital marketplace through a partnership with a well-known online reseller, they plan to offer their signature 3D printed components, made with HP's MJF technology, to a global audience. With the trifecta of design, alliances, and technology, Blazin Rodz is poised to push the boundaries of custom fabrication, reshaping what's possible in the world of bespoke automotive design.

To learn more about how HP Additive Manufacturing is helping the team at Blazin Rodz build state-of-the-art, custom hypercars, visit <https://blazinrodz.com/>

In addition to myriad other benefits, HP Additive Manufacturing Solutions enhance creativity while reducing the time and cost of making automotive parts. While Blazin Rodz is pushing the limits of what is possible with additive manufacturing, original equipment manufacturers (OEM's) have taken note and are poised to follow suit.

To learn more about HP's MJF technology, and how it helps automotive companies unlock innovation, save money, and get to market faster, visit <https://www.hp.com/go/Transportation>

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