

Ford Sets Industry Pace with Its Aluminum-Filled F-150

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when compared to a sheet of similar size of steel."

And adding to the difficulties in using aluminum are issues with manufacturing, he said, adding that you can't simply spot-weld aluminum to a frame. The metal has to be pig-welded, Vaughn said – not as easy as spot welding.

And then there is the issue of metal "dislike," Vaughn said, adding that you can't just bolt an aluminum frame using steel bolts because that causes a galvanic reaction, which in turn causes the steel bolt to corrode into the aluminum thread.

If that happens, he said, good luck trying to unscrew the thread. "It can also be difficult to manufacture aluminum in the shape you need," Vaughn said.

"But I will say that we've come a long way from the old Cobra that had an aluminum body. That was hand-hammered,

which is very labor-intensive."

Vaughn said he's not surprised that Ford was the first company to expand the use of aluminum in trucks.

"Ford is not an aluminum virgin," Vaughn said. "I've worked with them on aluminum parts in the past when I was with Eaton – mainly on air conditioner compressors."

Adding aluminum to the frame is difficult, Vaughn said, because of the strength issues. By the time the frame is strong enough, you've used so much metal that it becomes a matter of size. Aluminum is used for frames on semi-trailers, where size isn't as critical a factor as with pickups.

But, Vaughn said, if a car company can use more aluminum in a vehicle to lighten the weight without compromising the vehicle's strength, it's a good move.

Vaughn said he's heard rumors that Chrysler will have an aluminum truck by 2018. He noted that *The Wall Street Journal* re-

cently wrote an article stating that GM is looking to go bigger with aluminum in trucks as well.

So Ford's action, he said, has set off a chain reaction and a search for technology that will make these designs possible from a financial and manufacturing point of view.

Aaron Tait, senior salesperson and application consultant for Modular Aluminum Technologies in Clarkston, said he believes other automakers will use aluminum more now that Ford has set an example.

"A lot of this manufacturing technology didn't exist 10 or 15 years ago," Tait said.

"So if the head engineer got his start before that, he's not going to naturally think aluminum. And, to be fair, there isn't the 200-year history of working with aluminum that we have with steel."

In fact, Tait said, his biggest battle with clients is getting them past their preconceptions of what can and can not be

done with aluminum.

"People tend to go along with the way things are done until there comes a time when someone comes up with something better," Tait said.

"Someone had to be the first and that turned out to be Ford. My overall feeling is that if aluminum is going to get bigger, it'll happen here in Michigan because we have the infrastructure, the educational facilities and we still manufacture things."

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Mustang Featured in 'Need for Speed' Movie

To movie director Scott Waugh, few cars epitomize the action movie hero car better than the Ford Mustang.

Waugh directed the upcoming movie, "Need for Speed," and helms a new co-branded ad for the film and the all-new 2015 Ford Mustang that debuted during the Daytona 500.

The ad features scenes from the movie, where protagonist Toby Marshall tries to get his life back on track in the new Mustang with a voice-over that sets up the premise of the movie.

"Do you really think that if you've been set up, accused and convicted, a new car can put it all behind you?" is asked. "Depends on the car!" is the answer.

The director selected a modified Mustang GT as the ideal mount for Marshall in the film, inspired by the long-running video game series from Electronic Arts.

Marshall is portrayed by Emmy award-winning actor Aaron Paul as he drives across the country trying to avenge the death of a friend and seek redemption for himself.

"The best movie cars combine tons of power, rear-wheel drive, great handling and the ability to be easily flung around corners," Waugh said.

"As we've seen hundreds of times over the years – from 'Bullitt' to 'Gone in Sixty Seconds' – Mustang fits the bill perfectly, and it's really a car that represents American culture at its best, which is why we chose it for Toby's ride in 'Need for Speed.'"

Raised in a stunt family, Waugh followed his father into the business and learned to drive when he was just 12 years old. As a veteran stunt driver and coordinator, Waugh knows how to create visually compelling action scenes. His resumé includes work on numerous vehicle-focused movies such as "Speed" and "The Italian Job."

"Cinema is a visual medium that has to appeal to the eyes and ears," Waugh said. "Translating the visceral experience of speed to the big screen involves much more than just driving past the camera quickly. The car really needs to be the epitome of horsepower, and it doesn't hurt if it looks good, too."

"This is the first time anyone will get to see the new Mustang in a film, and 'Need for Speed' embodies the spirit of what Mustang is all about," said Ford Car Marketing Manager Steve Ling. "We hope the movie gets the audience really excited about what automobiles are all about, to understand the passion that goes into creating Mustang."

The ad also marks the official launch of the #InaMustang social media campaign, said Mustang spokesperson Alan Hall. "Fans everywhere are invited to share stories of where they could, would and want to go 'in a Mustang,'" he said.

Stories, videos and photos can be submitted at <http://ford.com/inamustang>.

Ford will bring these stories to life through partnerships with influential content creators across social and film networks, said Hall.

For the "Need for Speed" Mustang, Ford designers and engineers developed a custom wide-body kit with unique lighting, and put a high-output supercharged V8 engine under the hood of the silver-and-blue hero car.

This unique Mustang looks fast even when parked, Hall said, but truly comes to life on the silver screen under Waugh's direction.

Being the ideal mount for the Toby Marshall character goes beyond Mustang's performance attributes, however, Waugh said.

The pony car earned icon status over the past five decades because people like the way it makes them feel as much as they like to get behind the wheel.

"Few cars inspire the sort of passion Ford Mustang does," says Ling. "For nearly 50 years, Mustang has inspired a feeling of freedom and optimism with

fans around the world."

DreamWorks Studios' "Need for Speed" will open in theaters throughout North America on March 14.



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