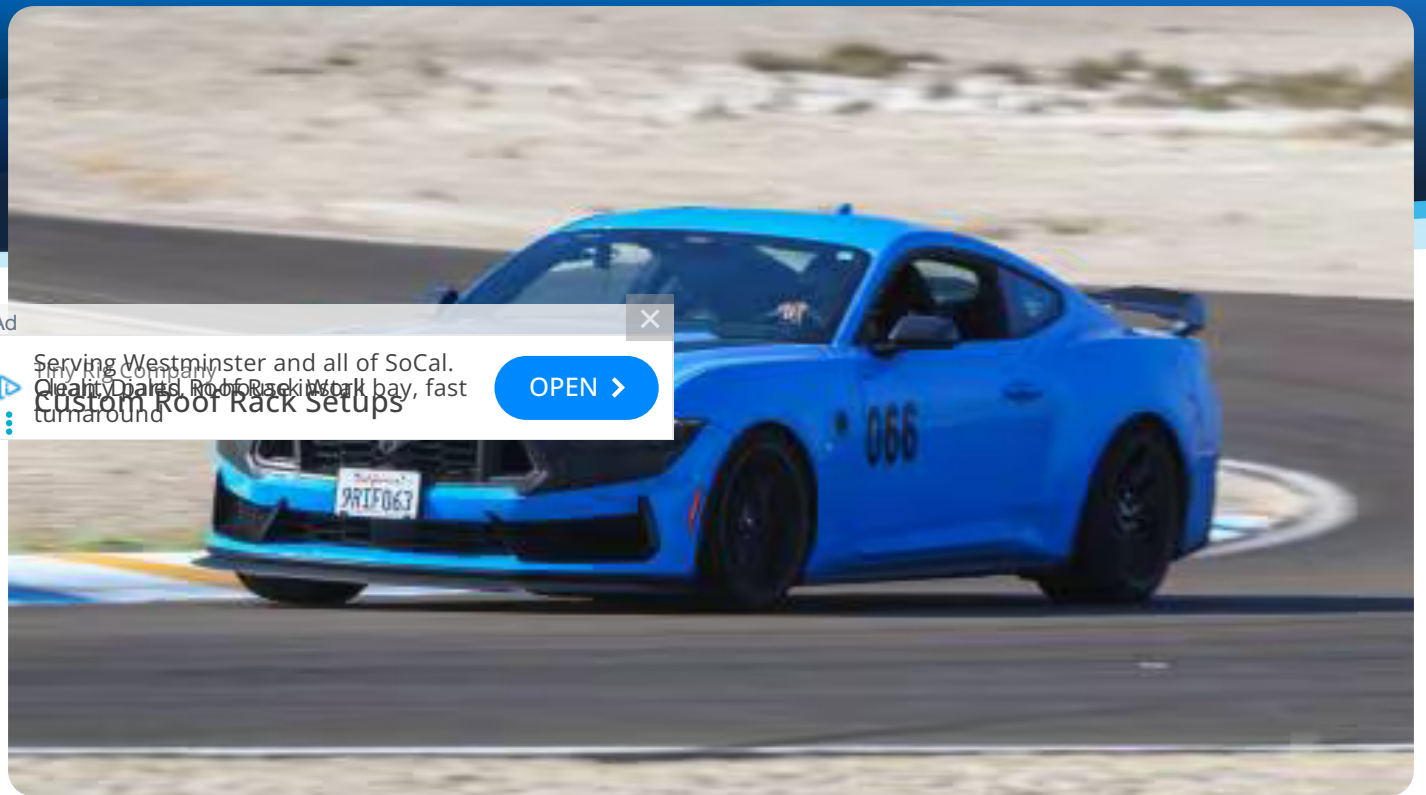




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# I Took Our Ford Mustang Dark Horse to a Track Day. It Had a Meltdown — Literally

A big plume of white smoke signaled a mess of problems for our supercharged Mustang



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written by **Gabriel Vega Cortés** ⓘ



edited by **Steven Ewing** ⓘ

2/20/2026



- After multiple runs at our test track and multiple rounds of racing in Edmunds U-Drags, I took our supercharged Dark Horse out for a track day at Buttonwillow

## Raceway Park.

- It wasn't long before issues cropped up: a rough-shifting transmission, an engine determined to overheat, and a plume of white smoke out the back.
- A trip to the dealer became a months-long warranty process that resulted in the Mustang's spark plugs, oxygen sensors and catalytic converter being replaced.
- Also: The engine was never making full power, so we're going back to the track to retest and re-race the Dark Horse.

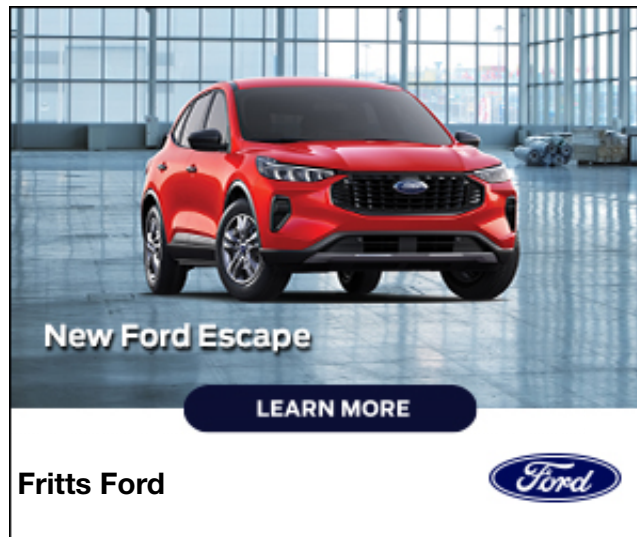
To say that our Ford Mustang Dark Horse has been well used would be an understatement. Since joining the [Edmunds One-Year Road Test](#) fleet in January 2025, our 'Stang visited our test track for performance testing on multiple occasions and raced against dozens of rivals in [Edmunds U-Drags](#). We even [added a Ford Performance supercharger to our Dark Horse](#), giving it a Dodge Challenger Hellcat-beating 810 horsepower.

So you'd think that a casual weekend track day would be a piece of cake for our Dark Horse, right? Boy, was I wrong. A half hour of lapping at Buttonwillow Raceway Park resulted in a multipart mechanical meltdown (literally) and a three-month-long stay at the dealer.

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## What the heck happened?

Buttonwillow is 131 miles north of Edmunds' Los Angeles headquarters. The Circuit is its newest track, with 10 turns spanning 2.5 miles and enough straightaways to let the Dark Horse stretch its legs. Badged car No. 066 — a nod to Edmunds' founding in 1966 — I topped up the supercharger's coolant reservoir, checked the tire pressures, ensured the wheels were torqued to factory specifications, and filled up the tank with a mix of 91 octane fuel and a 32-ounce can of octane booster. With a clean bill of health, the Dark Horse was ready.

This was an ideal track day: sunny and clear, about 60 degrees Fahrenheit. Yet as my first session began, the engine's temperature started to rise, and the 10-speed automatic transmission had a second-long delay between shifts. I did a cool-down lap and brought

the Mustang back into the paddock, where I gave it a once-over and found nothing wrong.

I went back out for a second session, and as I floored the accelerator on a straightaway, a small puff of white smoke appeared in the rearview mirror. All the gauges looked OK. Then a large plume of white smoke trailed the Mustang as I crossed the start/finish line. There were no warning lights in the instrument cluster, but the engine's temperature gauge had climbed yet again.

Back in the paddock, there were no signs of problems. The Mustang idled normally and the fluids all looked good. But being so far from home and without a trailer to use in case of a severe failure, I retired the Mustang after only 35 minutes of track use.

The Dark Horse made it back to LA just fine. But little did I know the extent of the damage that lurked beneath the Mustang's hood. Its meltdown hadn't just been metaphoric, but quite literal — carnage that would take months to repair, with a bill that, had this car and its supercharger not been under warranty, would've soared into the thousands.

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## The beginning of the long wait

A week later, the Mustang's check engine light finally illuminated, and the Dark Horse went to the dealer — the same one that installed the supercharger. A thorough investigation revealed that the Mustang needed new spark plugs, oxygen sensors and a catalytic converter. Thankfully, a compression test showed no damage to the engine itself.

Puzzled, I asked the service adviser what could've caused these issues. After all, the Mustang had just gotten a new set of spark plugs as part of the supercharger install.

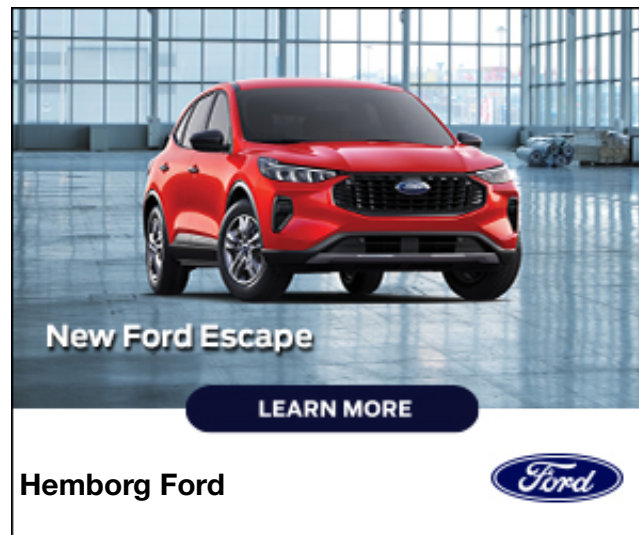
The technicians working on our Dark Horse hadn't yet determined a cause. However, data pulled from the car began to paint a picture. The engine's coolant temperature reached 240 degrees Fahrenheit at some point while the car was traveling 80 mph, indicating it had started to overheat. At this point, the dealer's theory was that the car had been "pushed too hard." Seriously?

Look, I'd love to tell you that I was out ripping the Mustang to its absolute limits and setting

new personal bests during my track time, but that simply wasn't the case. The car never ran well long enough to settle into a nice rhythm. I'd set one fast-ish lap and immediately have to slow down to keep the Mustang's temperatures in check. My best time of the two sessions was 1 minute, 57.2 seconds, meaning I'd left *plenty* on the table.

Thankfully, a follow-up call from the dealer calmed my nerves. Since both the car and the Ford Performance supercharger were under warranty, the dealer decided to start a claim to get most, if not all, of the repairs covered. And while a specific cause for the failures had yet to be determined, we chatted, and the service technician brought up the octane booster I'd added ahead of the track day as a potential source of the issue.

More pressingly, my adviser let me know that since the mechanics had cleared the check engine light, the Dark Horse would need to drive up to 50 miles before the check engine light would come back on. Vehicle testing director Jonathan Elfalan picked up the car, and the light reappeared just 6 miles later. When he dropped the Mustang back off, the dealer told him to expect a lengthy warranty process.



And lengthy it was. 2025 turned into 2026, and the Dark Horse remained at its temporary home with no major progress for weeks at a time. Whenever I'd call the service adviser, he'd happily update me on the warranty process, but mostly, Ford was asking for more photos and information to review the damage before approving the warranty claim. And like before, the cause of the failures still hadn't been determined.

In early February — three months after the initial incident — the call finally came. The car was ready for pickup. Ford covered all of the repairs under warranty. So, what happened, you ask?

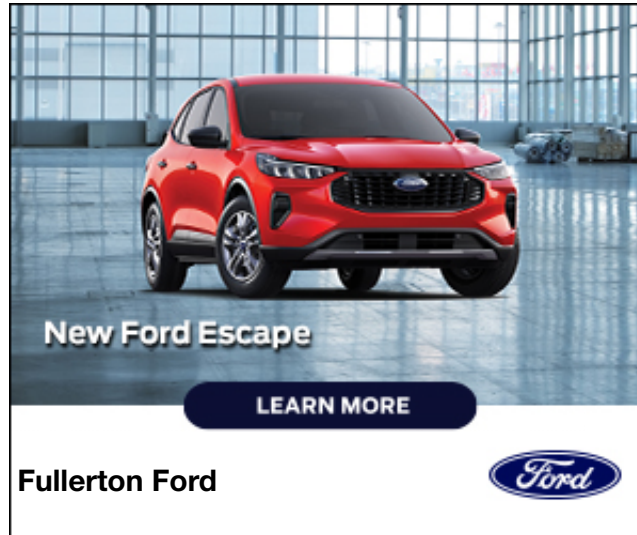


## The meltdown aftermath

It wasn't the octane booster. It wasn't the track time. The culprit was the spark plug gaps — all eight of them, to be exact. See, when installing a Ford Performance supercharger on a Mustang with a 5.0-liter V8, it's essential to adjust the spark plug gaps to account for the engine's new boosted state. And as the notes on the repair invoice show, the gaps hadn't been adjusted correctly during the supercharger's installation.

So, it went something like this: Because the spark plug gaps were too wide and the cylinders had so much additional compressed air from the supercharger, the sparks were unable to jump the gaps and ignite the air-fuel mixture. Then, as the pistons moved up, they pushed all of that unburned fuel out through the exhaust manifold and into the catalytic converter.

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For reference, the inside of a catalytic converter can be anywhere between 1,200 and 1,600 degrees Fahrenheit, so when that unburned fuel hit the scorching hot cat, it ignited, superheated and melted the inner honeycomb structure. This spiked the converter's temperature even higher, subsequently damaging the O2 sensors positioned next to it. Like I said, *a literal meltdown*.

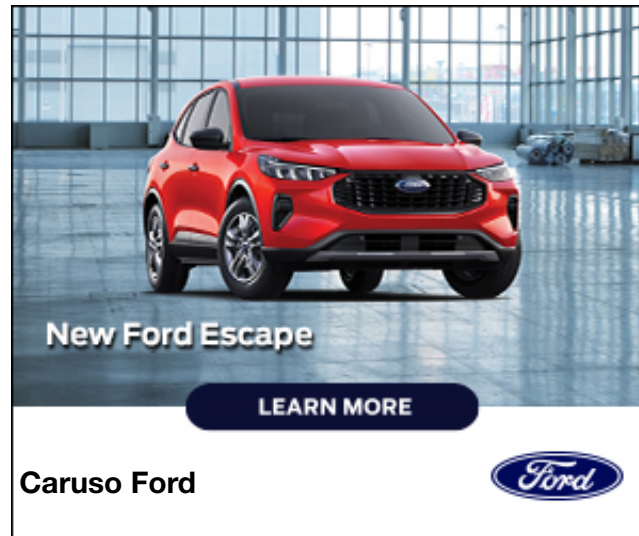
While Ford covered the work under warranty, the dealer mentioned that this damage would've likely cost between \$5,000 and \$6,000 in out-of-pocket repairs, and we got lucky that no other pricey components were damaged in the process.

## **So was the car down on power the whole time?**

When we put our Mustang Dark Horse on a dyno a few months back, it registered 630 hp at the wheels. See, while the kit is advertised for 810 hp, that's only the figure for the engine itself. There's always a loss as power travels through the drivetrain to the wheels. For this setup, a loss of about 18% is the norm, meaning that the Mustang *should've* put out about 665 hp, not 630.

Recalling that day, the dyno operator mentioned the car was running rich, meaning the engine was receiving too much fuel relative to the available air. Which, now understanding the faulty spark plug situation, makes a ton of sense. However, this means that every time we tested, raced or drove this car, it was underpowered.

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As painful as it is to say, this fact essentially invalidates most of the performance tests we've done. On the other hand, it's impressive to note that the Dark Horse won so many U-Drags races with one hand tied behind its back.

Of course, there's only one thing to do: retest and re-race. With a fresh set of Pirelli tires on the way, a track alignment on the horizon, and a full service completed, it's time we find out what our supercharged Dark Horse can truly do.

*Photos by Cali Photography and Keith Buglewicz*

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by **Gabriel Vega Cortés**

Gabriel Vega Cortés has worked in the automotive industry since 2018. In that time, he's tested hundreds of vehicles, covering them in online and print articles, videos and podcasts. He's previously worked at duPont REGISTRY Magazine, Motor1 and Univision Autos. When he's not testing new vehicles, he's either driving his 1987 Porsche 911 on twisty mountain roads or in the garage, ensuring it runs.



edited by **Steven Ewing**

Steven Ewing is Edmunds' director of editorial content. An automotive journalist for more than half of his life, Ewing's been on staff at Winding Road magazine, Autoblog, Motor1.com, CNET, and he was the U.S. correspondent for Top Gear magazine. He's also contributed to publications like Automobile magazine, Car and Driver, The Drive, Jalopnik, Porsche Panorama, and more. Ewing has worked in the automotive industry since 2003. From testing prototype cars in the Arctic Circle to spilling a beer on a Formula 1 driver at the 24 Hours of Le Mans (oops), he's always got an interesting story to tell.

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