

Mustang FR500 is Ford's "Ultimate" Performance Parts Car

LAS VEGAS, Nev., Nov. 3, 1999 –

Calling it "our ultimate performance parts project," Dan Davis, director, Ford Racing Technology, unveiled the Ford Mustang FR500 to media and industry officials here today at the Specialty Equipment Market Association (SEMA) Show.

The FR500 is the result of a challenge from Davis to Ford Racing Technology engineers to "create the ultimate high-performance Mustang," while creating a showcase for current and future products available through the Ford Racing Performance Parts catalog.

"What we're revealing today is a performance parts story, wrapped up in a car," said Davis, who was joined in the unveiling by Ford Taurus NASCAR star and FR500 test driver Rusty Wallace. "We saw this as a great opportunity to demonstrate the engineering expertise at Ford Racing Technology and to energize our people by challenging them to show the world what they think would be 'their' best Mustang."

Davis said the project included several key objectives, including an opportunity to broaden the line of Ford Racing performance parts for the 4.6-liter, 4V modular engine. This was an area that has lagged behind the performance parts program's long-time staple – parts for the 5.0-liter pushrod engine, which is no longer offered in the Mustang.

"We decided to further that objective, along with several others," Davis said. "We wanted a car that would satisfy a Mustang enthusiast's dream checklist of performance modifications; a car that would be well engineered and very well balanced; and a performance benchmark to outperform the manual transmission Corvette.

"Our interim goal with the FR500 was to get everything right, including its performance, and to have all the parts designed so that they would be reproducible at a reasonable cost. What we've done is take a lot of the racing knowledge we have here and integrated a lot of it into what is our version of the ultimate Mustang."

Davis described the entire project as "a very big business experiment for us," and said Ford Racing Technology wasn't sure how many of the pieces on the FR500 would eventually end up in the Performance Parts catalog.

"We will measure success by how many of the parts or systems end up being produced and offered for sale," Davis said. "Because that will mean that there's a strong demand for them.

"That end result will come about after feedback from media, suppliers and especially our customers," he said. "Once we do market research, we could end up producing just a few of the parts, or there could be enough of a demand that we could do a limited run of the car. The initial idea is to start offering parts as the market demands them."

Here's a closer look at the Mustang FR500:

Under the hood:

- A 4.6-liter, 4V aluminum block, enlarged to 5.0-liter displacement by using spray bore technology.
- High-flow 4-valve cylinder heads with more radical cam profiles
- Variable geometry magnesium intake manifold

- Dual 80mm mass air sensors
- Dual 70 mm throttle bodies
- High-flow stainless steel tubular headers

Powertrain:

- Dual-disc Valeo clutch
- Tremec T56 six-speed transmission
- Metal matrix composite drive shaft
- Torsen TR2 limited slip differential
- 4.10:1 ratio, 8.8-inch ring and pinion gears

Performance ... the raw numbers

:

- 415 horsepower @ 6800 rpm
- 4.6-second 0 to 60 time
- 12.7-second quarter mile
- Top speed is about 175 mph
- Performance numbers gained on street tires

Exterior of the car:

- All carbon-fiber:
 - hood
 - front fascia
 - front fenders
 - rocker panels
 - rear deck lid
 - rear fascia

Interior of the car:

- FR500 leather seat trim covering production seats
- FR500 racing-style steering wheel
- 200 mph speedometer/9000 rpm tach
- JBL Traffic Pro CD Audio/CD-ROM; AM & Dual FM tuner; voice-prompt navigation system

Suspension, etc.:

- In the rear is the Cobra's IRS with some tuning modifications to suit this car's performance and balance

- Different spring rates and shock valving
- Ride height is one inch lower
- Rear brakes are 13-inch Cobra discs fitted with LS single-piston calipers
- The rear wheels are 18 x 10-inch FR500 prototypes with BFGoodrich G-Force T/A KD 295/35 ZR 18 tires.
- Up front the MacPherson strut system was replaced with a bolt-on double A-arm suspension. It consists of a rear upper arm from a Lincoln LS and a fabricated lower arm.
- Springs and shocks are similar in design to the Lincoln LS, but have rates and valving unique to the FR500
- This setup moves the front axle 5 inches forward, giving the FR 500 a wheelbase of 106.3 inches ... versus 101.3 for the stock configuration
- It's also one of the keys to achieving a 50/50 weight distribution
- Other factors include... moving battery to trunk and fabricated tubular #2 crossmember
- The front brakes have 14-inch Brembo rotors with four-piston Brembo calipers
- The front wheels are 18 x 9-inch FR500 prototypes with BFGoodrich G-Force T/A KD 265/35 ZR 18 tires.