

1968 American Muscle Car Face-Off

From the Archive: Race driver Sam Posey evaluates Tunnel Port Ford Mustang and Chevrolet Camaro Z/28.

CAR AND DRIVER

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Pony-car fans have more to be excited about today than they've had in 40 years—not only are both the Mustang GT and Camaro SS above the 400-hp threshold, but there's even a horsepower war raging between the V-6 editions. Next week, we'll post comparison tests between both the current eights and the sixes, but for now, enjoy this series of past encounters between two of Detroit's most storied cars.

PONY UP!



Which Ultimate Pony Car Is the 1/4-Mile King?



Camaro vs. Mustang: Complete History of Comparison



Tested: 1993 Pony Car Comparison

The [Camaro](#) and [Mustang](#) first met on these pages in March of 1968, but the clash was part of a six-car showdown—and they finished fifth and sixth, respectively. We knew the two cars had more potential than the relatively wimpy cars Detroit had

given us for that test, so for the July issue that same year we invited both to send us the hottest they had to offer. We had the cars delivered to Lime Rock Park in Connecticut, where we met up with Trans-Am wizard-driver Sam Posey.

From the July 1968 issue of Car and Driver.

The Lime Rock pit straight is a wavy, gray blur. Up front two roaring Holleys are trying to suck a hole in the atmosphere. "A 7000 rpm redline? Christ Almighty, it's gonna burst." But it doesn't, and Sam Posey snaps the shift lever into fourth at seven grand as the speedometer climbs past 110 in one of the absolute wildest street machines ever to come out of Detroit. No question about it: we're in the middle of one of the most beautiful goddam road tests in the annals of mankind.

Trans-Am sedans set up for the road. All right, the six sporty cars we tested (March) *were* exciting examples of the car builders' art—but they weren't mind blowers. They performed well, almost automatically, never making demands on the driver. But that was their shortcoming. A kind of polished lack of character.

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An unsatisfied craving for total driver involvement prompted us to continue our search for that mystical machine. Not a near total fantasy of the Lamborghini Miura or Ferrari 275/GTB-4 sort, but something totally without pretense that might even outperform them. That's asking a lot. Ideally, it should be American. Should we—in the largest automobile producing country in the world—necessarily turn our lust-filled eyes to Europe?

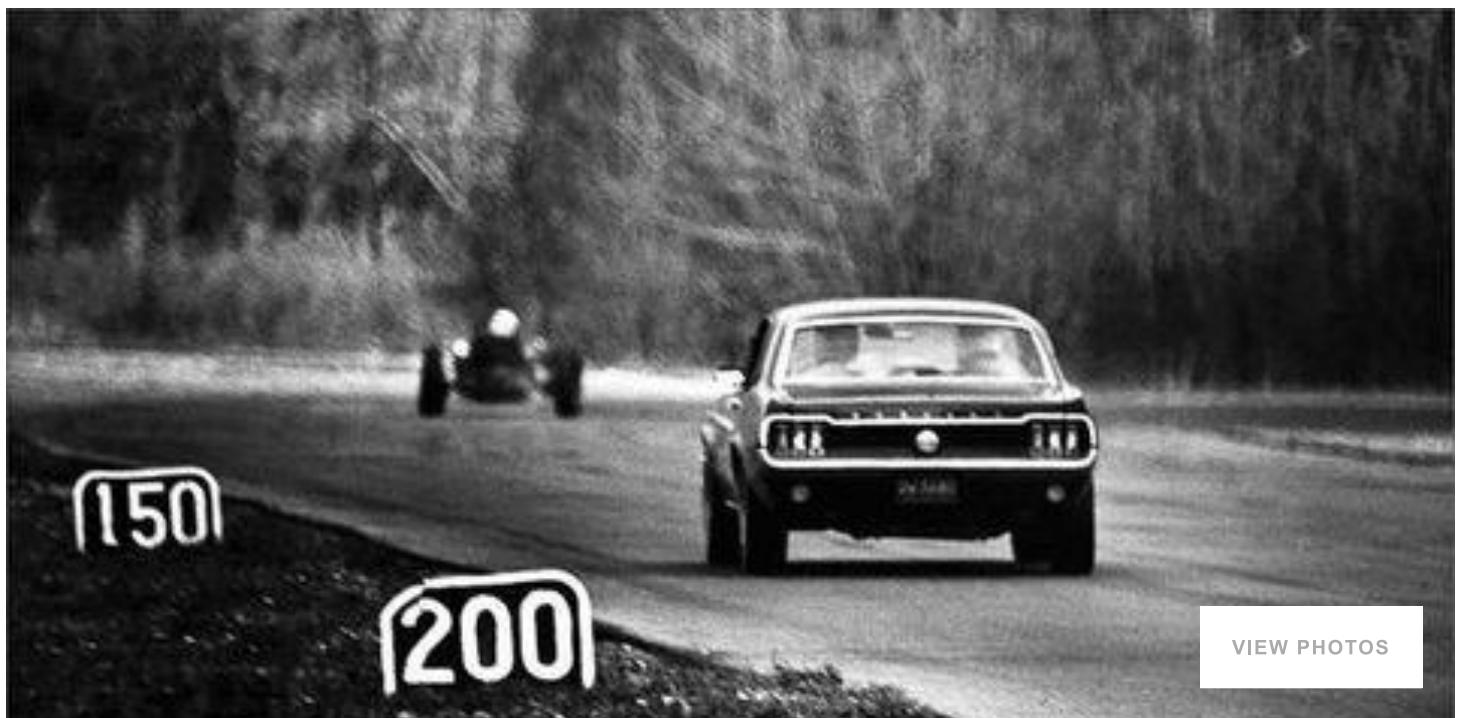
What would it be then? There is always the Corvette, a truly sophisticated GT car, but the Corvette tends to be a glittering boulevard machine with little significant professional competition heritage. The more we thought about it the more we concluded the pure American GT concept is typified by the sporty cars and they *are* racers. Ask anyone who's seen Trans-Am sedans at 170 mph on the banks of Daytona. Now the plot: according to FIA those scrappy Trans-Am machines are Group 2 sedans and that means the manufacturer has to provide at least 1000 copies. We should be able to get one for a road test. Right? While we're at it why just one? Why not get one of each kind and compare them? The Mustang and Camaro are obviously on even terms so it didn't seem quite fair to test a Javelin which has had less than a year of development time. We've gone pretty far in saying we're encouraged by the AMC effort, and the plain fact is that they deserve a little time to sort out their car.



What we wanted for this test were cars that any enthusiast could duplicate with factory parts and yet have performance and handling far beyond the sporty cars. Way, way beyond them. We wanted to wander into the office after the test dazed—surfeited. A night with Jane Fonda, a \$1 million stake to blow at Monte Carlo, Saville Row to turn out an endless stream of four-button brocaded double-breasted waist-coats. Velvet collars, Moet & Chandon, 320-foot steel-hulled diesel yachts. *That's what we wanted. Trans-Am racers for the street.*

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FIA homologation papers were convincing evidence that each manufacturer had an abundance of high performance parts that would result, if everything was done just right, in a blindingly fast, exquisitely responsive street car. But the only way to be assured of the best combination of these delectations was to have the manufacturers supply the cars. That's where the footwork started.



CAR AND DRIVER

C/D has been doing comparison tests for a while and in every test, when we find cars we like and cars we don't, we lay it on the line. In a 2-car test, the second place car is also the last-placed car and it didn't take **Ford** and **Chevrolet** awfully long to come to just that conclusion. Neither one wanted to play unless they could win. There would have to be rules or we'd end up with Mark Donahue's Camaro and Jerry Titus' Mustang—which would be a complete gas—but would miss the point entirely. It would all be pretty simple: any factory installed or dealer available part would be acceptable if it was homologated. We suggested that the engines have the racing two 4-barrel intake system and tuned headers but mufflers would be used at all times. We wanted only factory-available street tires and we wanted the cars supplied with axle ratios as close to 4.10 as possible since both Ford and Chevrolet had homologated this ratio. Of course any homologated suspension parts would be acceptable and 4-wheel disc brakes would be a welcome addition. We warned that we would be on the lookout for cheaters so the engines had better not be bigger than the FIA 305 cubic inch limit and the cars had better not weigh less than the AMA registered curb weights, *not* the 2800-lb. Trans-Am minimum. Everybody agreed, shook hands and went back to neutral—and not so neutral—corners.

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We had the beginning of a splendidly volatile mix, but we needed one thing more, and that would be Sam Posey. Nothing alive can withstand the magic, probing, X-ray eyes of Sam Posey. A fierce, brave racer who has startled his competitors by his absolute fearlessness—and his almost total understanding of how a car behaves under conditions of maximum stress, not to mention his endless pointed stream of talk about it. Yes, Sam Posey was perfect. In awe of nothing, living everything that separates cars from transportation modules, a driver with *brio*—and not aligned

with any factory team. Everything was set. The very walls of the office quivered in anticipation.

In the succeeding days each manufacturer grew more and more up tight about second-place-being-last. Nervous telephone calls between Detroit and New York were unending. Each was afraid the other was going to build a trick car and put the hurt on his innocent, honest-as-it-can-be street car. They would supply an engineer with their car for adjustments, for keeping everyone honest, and—to our howling disappointment—to return each car to its incubating shop in Detroit the very moment the tests were over.

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The first day of testing would be at New York National Speedway where we would do the technical inspection to make sure that nobody had stuffed a 427 or half-thickness steel fenders or any other deceitful devices into *our* cars.

When we arrived the Camaro and Mustang were already parked, nose to tail, on the strip and much to our surprise, Ford Man and Chevy Man were talking to each other in civil tones.

What was going on here? The Camaro was dazzling. All squeaky clean, wearing its black Z/28 hood and deck stripes and front and rear spoilers. Not even any orange peel in its paint. Hell, it was beautiful, but we asked for a street racer, not a contours entry. Up front was the Mustang, looking dusty from the trip, sporting a set of 7-inch-wide American Mag wheels and fat Goodyear donuts the likes of which we'd never seen before. A little rule ingenuity, and we hadn't even started examining the cars yet. Those mysterious tires put over 7.5-inches of rubber on the road and they said "Goodyear" on the sidewalls in great big white letters—just like a race tire. The size marking was F60-15 and the mystery deepened—nobody had ever heard of F60-15 but there they were, big as life. One thing for sure; they made the Camaro's standard E70-15s look like Suzuki tires and we weren't the only ones to notice it.

"Uh, I don't know about those tires," said Chevy Man. *He'd* never heard of their like before. "No problem," said Ford Man leading with the old the-best-defense-is-still-a-good-offense trick. "You can get those real easy. How many do you want?" Along with "how many do you want" he made it clear that, of course, there would be a bill, which slowed us down a bit. What would we do with a bunch of tires that were really too small to be real race tires and yet so big that they would probably rub on the fenders of every street car we could get our hands on? We had no quarrel with their choice of American Mags since the Shelby Mustangs come with 7-inch-wide wheels as standard equipment and the difference between magnesium and steel would

never show up in the test. In fact, the Camaro could have used the 7-inch-wide Corvette wheel if they wanted to since it's available through their dealers, but they chose to stay with the standard wheels to emphasize what a good car the regular Z/28 is. "It's a difference in the basic philosophy of the people who built the cars," said Chevy Man later. "They're racers."

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The simplest part of the tech inspection was determining weight—so that came first. Our worry about the Camaro being a concours entry was reinforced when the scale said 3480 lbs., 260 lbs. over the minimum.

"I was afraid of that," said Chevy Man. "With the power steering and power brakes and the custom interior it got a little heavy. We wanted to make a nice car but now I'm afraid we'll get drubbed."

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On to the scale came the Mustang, watched by a half dozen very suspicious eyes. No reason for suspicion here, though, because the scale balanced out at 3282 lbs., 111 lbs. over its minimum.

O.K., both cars heavy; but with full street trim what do you expect? The Camaro even had a console, for Christ's sake. Underneath, both cars had a very ordinary looking suspension, neither with any sort of radius rods on the rear axle. In fact, the Camaro had the standard Z/28 front and rear springs and anti-sway bar, with the only change being the optional Koni adjustable shock absorbers. The Mustang used the heavy duty 390 GT front springs and anti-sway bar with export Mustang rear springs. Adjustable shock absorbers were used on the Mustang too, Konis in front and Gabriels in the rear.

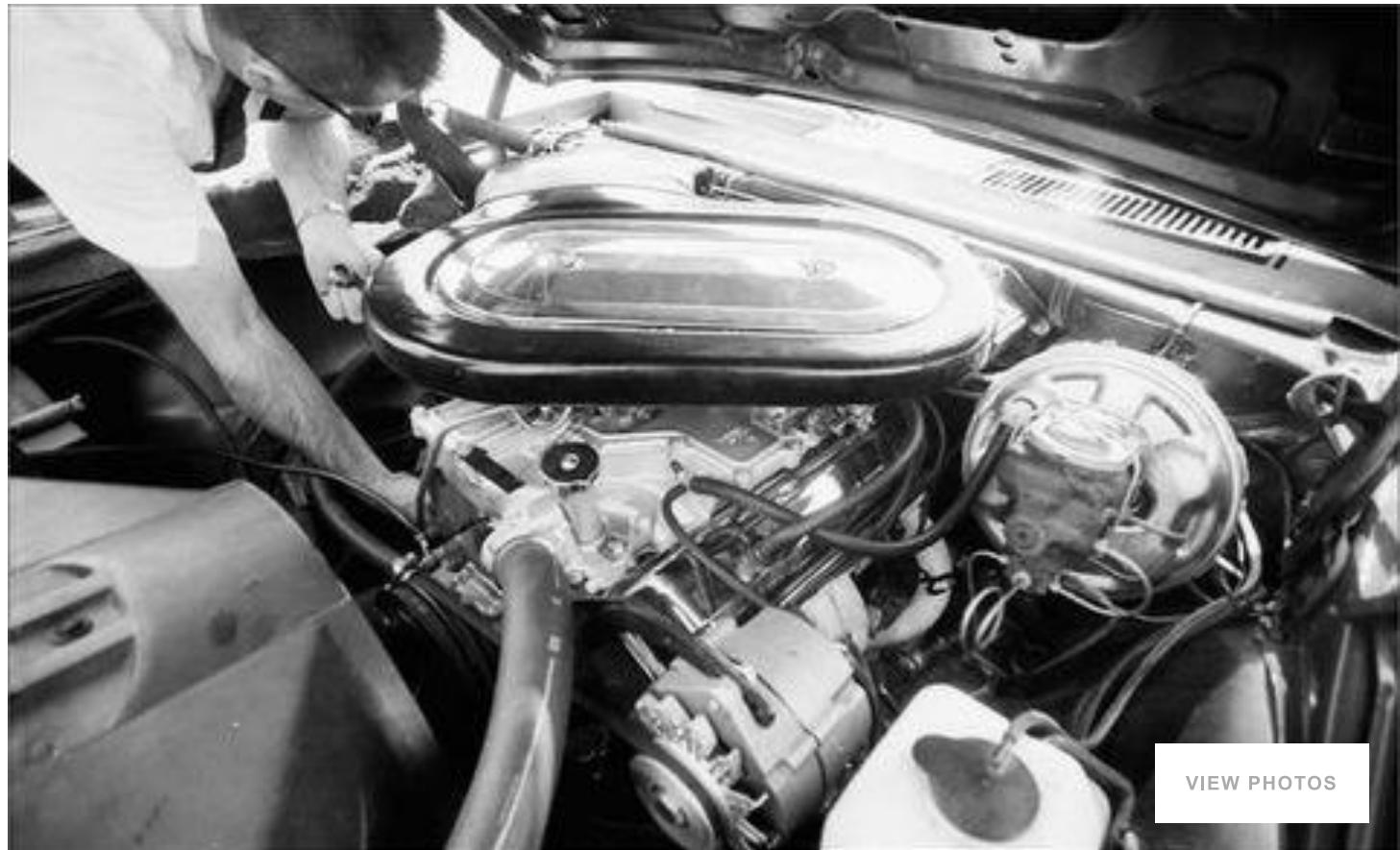
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To cheat in the engine department you'd have to go big; bigger than the allowable 305 cubic inches. Not that there'd be any particular problem in doing that, especially with the Camaro, since the 327 and the 350 look the same on the outside as the 302. To catch cheaters, every drag strip worth its name has a device to measure cylinder displacement without removing the heads and New York National is no exception. We were pleased to find that both the Mustang and Camaro checked out at 302 cubes.

"It's really a pretty standard Z/28 engine," volunteered Chevy Man with some relief and no small pride. "It's got the standard camshaft and pistons so the compression ratio is 11.0 to one. About the only thing we've changed is the intake manifold and carbs, as you can see, and, of course, the dealer available headers."

He was being modest about the intake manifold; it was an arresting sight. It's a huge, single plenum chamber ram-tuned setup, very similar to the one used on Chrysler's NASCAR Hemis except that the Camaro had two 600 cubic-feet-per-minute Holleys mounted on top. "We don't recommend the two-by-four intake system for the street because the carburetors don't have chokes and there's no manifold heat. Really, it's just for racing. Works best in the 4800–7200 rpm range which you don't get to use much on the street. For normal driving the single 4-bbl. works better." The air cleaner for the Camaro was a masterpiece too. All black and chrome, it covered both carburetors and was ducted into the cowl just at the base of the windshield where car speed packs high pressure air. The only other non-standard parts in the Camaro were the optional valve springs, transistor ignition with breakerless distributor, and the heavy duty L-88 clutch and flywheel.

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Camaro: a manifold for serious street racers only.

Compared to the Camaro, the Mustang engine was all business. No chrome air cleaner or valve covers. Just plain old blue paint. Even the headers were kind of pale blue. Right on top was a super tall aluminum, two 4-bbl. inline intake manifold with a pair of 540 cfm Holleys and a paper element air cleaner. There it was, tunnel port fans, right in front of our very eyes. The real thing. "Well, yes, this is your regular 12.5 to one compression ratio, dry deck, tunnel port 302," allowed Ford Man still a bit defensive from the tire discussion. "How many do ya want?" Man, just the name tunnel port makes us stand at attention. It's really a simple idea but only Ford had the initiative to do it. Instead of trying to crowd the intake ports between the push-rods like everybody else, Ford just made the intake port as big as they pleased and

then ran a little tube down through it for the pushrod to move inside of. A great idea. This particular 302 had a fairly tame (by race standards) camshaft and a dual-point distributor without the benefit of transistor ignition. An 8-quart road racing oil sump finished off the package.

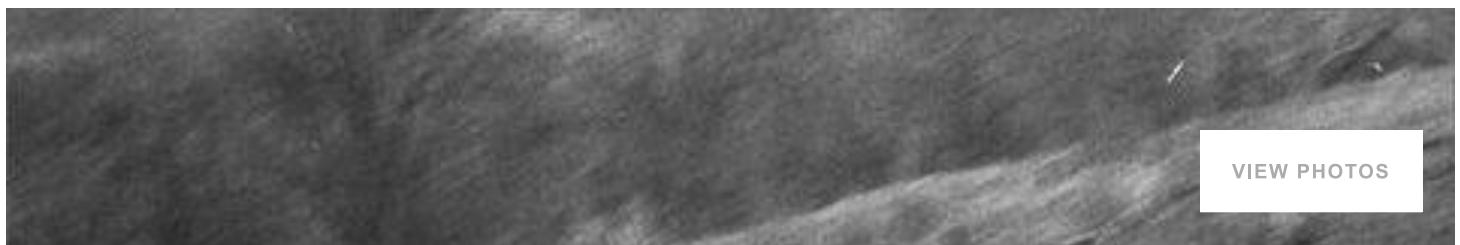
Unfortunately, the Mustang had only a 3.91 axle ratio instead of the 4.10 we had asked for. It was the lesser of two evils. We've never considered Ford's locker rear suitable for the street, and they weren't overjoyed about it themselves, so they equipped the Mustang with their new limited-slip unit which is very similar in principle to what GM and Chrysler use. However, the highest numerical ratio available for that differential is 3.91. The difference between 3.91 and 4.10 is less than 5% and the Mustang's lower profile tires compensated for that difference.

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The *real* testing was scheduled for Tuesday at Lime Rock. Posey had flown back from California on Monday, after finishing third in the Riverside USRRC in his Group 7 Caldwell, and we all arrived at the track almost simultaneously; Sam in his Gullwing Mercedes and us in the lumpy idling test cars. It was a little off-putting. There was Posey having traveled like 3000 miles and we were showing him a pair of what looked like showroom stock sporty cars. "Listen Sam, these are a pair of screaming muthas . . ." "Sam," "Sam?" It took some convincing but we got him out on the track. From then on he never stopped talking—and smiling.

The Camaro had been the quicker of the two the day before at the drag strip, turning standing start quarter miles in 13.77 seconds at 107.39 mph. The Mustang wasn't exactly a stone either, covering the same distance in 13.96 seconds at 106.13 mph. Just for comparison, the Ferrari 275/ GTB-4 we tested (October, '67) was capable of 14.5 second quarters at 100 mph and the 400 hp, 427 Corvette (May, '68) was good for 14.1 seconds at 102 mph.

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CAR AND DRIVER

If there is such a thing as a home track for a race driver, Lime Rock would be that for Posey. Having grown up only five miles away, in Sharon, Connecticut, he spent a good deal of his spare time practicing there. He knows the way around. Since a road test was a whole new deal to Sam he was eager to get on with it, and was just as we suspected—he was ideal, all courage, willingness and technique—and no matter what he was doing, he talked about it. Flat out up the front chute, Sam was talking; through the right hander, wheels to the wall, Sam was talking; tail hung out and wailing, Sam was talking—and all in that same, even, cultivated tone. And all with that almost-uninvolved analytical approach. Posey the scientist at work. It was wild.

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"You see, Lime Rock is a track that puts any big car with a fairly mushy suspension to the test right off. The first time you go through The Hook you suddenly realize you're going to have to do a lot of work to go really fast. It's actually a bumpy, hook-shaped turn that you drive with two apexes and it is, without a doubt, the toughest part of the course. There's just no way you can turn the steering wheel one time and expect it to go through."

We'd covered about half a lap in the Camaro when Posey came to the same conclusion about the steering that we had reached when driving up from New York.

"I like the power steering. I've never seen any reason why you should have to make a big effort to steer a racing car. In fact, it's a good case for as little effort as possible, particularly in a Trans-Am car. Some of these races you have to go 350 or 400 miles by yourself which is pretty formidable. I don't feel any less control because it's easy and it's got all the road feel I'd ever need. The thing is ... all right, for one lap you might get fractionally more road feel from standard steering, but, 10 laps later you're beginning to fight the wheel. You're getting tired and you're not getting so much road feel anymore. You're struggling with the car. This would definitely be the way to go in any prolonged, high speed situation. I like it a lot."

Posey's biggest surprise was the handling.

"It doesn't understeer near as much as I thought it would. You can hang the tail out quite nicely with a little throttle. Of course, it wallows in The Hook but other than that it's really delightful—terrific. Gawd, you could really get away from the cops in this thing."

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The fuzz apparently sticks to Posey like it does to Brock Yates. Of course while he's saying these things we're zapping around Lime Rock in a roaring, tire squealing blur and Sam is banging the inside tires on the edge of the track at every apex and kicking up a cloud of dust on the outside as we come out of every turn. The whole track seems to have changed shape since the first few laps. All the short straights seem shortened dramatically—in fact they look like they're about the length of the hood of the car—and Posey isn't turning in the corners anymore. No Sir, by now he's setting up way before them. Into the main straight. Shifts to fourth at 7000 rpm. The speedometer is past 110 mph. On the brakes at the 200-yard marker for The Hook. Down to third. Power on. Sam is sawing away at the wheel and the Camaro is bellowing and squealing and going around The Hook like it was on a tether. Posey feels that he has the Camaro pretty well sorted out so we pull into the pits to change to the Mustang.



Almost instantly the Mustang starts to an intense, deep-toned idle—the sound you'd expect from an engine that knew it could make over 400 hp from its modest 302

cubic inches and wanted to get on with it. Posey puts on one of his enigmatic grins and pulls out onto the track, immediately commenting on the vastly different feel.

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"This steering is something else—very heavy. Heavier by far than a Trans-Am car. It's even heavy in the straight. I think the chance of doing really well in this car may be fractionally jeopardized by the steering. The lap times will bear close scrutiny."

"Close scrutiny" for God's sake. He talks like that all the time, whether he's leaning on a fender or grooving through The Hook.

"This car has really excellent throttle response, better than the Camaro. The return spring is very stiff but something happens instantly whenever you push the pedal. The brake feels mushy. The free play seems to be three or four inches and then it doesn't want to stop the car."

Posey worried about the apparent lack of brakes so the approaches to the next few corners were devoted to brake testing.



"Christ Almighty, there's nothing there at all. It's just not braking, period. I'd be better off shifting down. That's a real disappointment."

The difference in the brakes was not coming as what you'd call a shocker of a surprise. The day before in tests the Camaro had performed brilliantly, stopping from 80 mph in only 209 feet at 1.02G, but try as we might, the best stop with the Mustang was 248 feet at 0.86G. Both cars had the racing 4-wheel disc system but Ford Man admitted that they were having trouble with caliper flex which gives a spongy pedal and that these brakes were the same as those on Trans-Am cars.

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Posey's reaction to the Mustang's handling was more than just favorable.

"Except for the squealing of the tires, this car handles like a million bucks. The Hook just doesn't present the same problem in this car as it did in the Camaro. It understeers quite a bit but it's very stable. Although the steering effort is greater, it's compensated for by the race suspension, or at least it feels like race suspension, and the racing tires. In fact, I think the tires contribute a lot to my enjoyment of the car. I think we have a definite mismatch here. Ford has taken some considerable advantage with these tires and it would be quite intriguing to see what the Mustang could do with the Camaro's tires. I think this is proving that race tires are, in fact, better for going fast than street tires—and we needn't have come all the way to Lime Rock to see that."

Back into the pits and a discourse on driver environment in the two cars.

"Somehow, I feel more connected to the Mustang than I do to the Camaro. I think the seat has more lateral support. Either that or because it's covered with vinyl instead of cloth like the Camaro, the perspiration is making me stick to the damn thing. It's a shame the prime place in front of the driver in the Mustang instrument panel is reserved for the clock because the fuel and temperature gauges are hidden by the steering wheel rim. The Mustang has a nice big tach but it's difficult to read. The numbers are so close together it looks more like a speedometer and the speedometer has a redline and the tach doesn't—which is kind of a funny situation. I might have gone up to 70 mph in first gear if I hadn't scoped it all out first. In neither car can I begin to see the instruments without taking my eyes off the road but it's hardest in the Camaro."

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CAR AND DRIVER

The instrumentation in the Camaro was almost nonexistent—a speedometer, fuel gauge, a few idiot lights and an accessory tach clamped to the steering column. Inadequate for a high performance car and only slightly worse than their optional instrument package which mounts all the small gauges on the console.

The test session in the Camaro was cut short by preignition in one of the cylinders which, fortunately, only melted part of the spark plug and distorted an intake valve rather than burning a hole in a piston as is normally the case. Had the Camaro been equipped with racing spark plugs it would have been a failure that probably could have been avoided. Even so, the Camaro was very quick while it lasted and Posey was surprised by his best lap time.

"Really? A 1:09.2? That would have put us somewhere in the middle of the Trans-Am grid here last year which is pretty intriguing since it's really a street car.

"There is a tendency for the rear wheels to lock up and the axle to tramp in braking and when I hit the bumps in The Hook it wants to plow straight off the road. The engine has all kinds of torque. I've been shifting at 6700 because there was no reason to go higher.

"The shift linkage is just absolutely terrible. I keep getting hung up in the reverse crossbar whenever I try to get into second. It's far too sensitive."

On the other hand, Posey was not at all surprised when we told him that he got the Mustang down to 1:08.8.

"I could have gone even faster if it wasn't for the brakes. I have to start braking about 100 yards earlier at the end of the straight than with the Camaro. It really sticks in the corners, though—goes through The Hook like a real racing car."

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That only made us more badger-like in our curiosity about the tires. They were obviously wider than what Mustangs are made for since the paint was blistered on each side in front where the tire had been rubbing on the inside of the fender. The first thing we did when we got back to the office was to call Goodyear in Akron. "An F60-15 does not exist," was the official answer. We explained they might not exist, but that we had five of them. And that, in turn, loosened up the Goodyears some. After a lot of mumbling it came out that the tires on the Mustang were experimental, super-

low profile Polyglas jobs that had not been—and maybe never would be—released for production. They did say in a positive tone that they were pretty sore at Ford for letting us see their secret tires.

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CAR AND DRIVER

Mustang: Goodyear tires nobody had ever heard of.

It's a damn shame to have to put either the Mustang or the Camaro in second, which is to say last, place. Both are easily the most exciting machines we've ever driven with price tags less than \$10,000 and by far the best performing street cars ever. But there is a certain inevitability about the results of a comparison test so the Camaro gets the nod. In acceleration, both cars were nearly equal with the Camaro slightly, but consistently, faster. It wasn't much of a contest in the braking test with the Camaro stopping at a rate greater than one G. At Lime Rock the Mustang was a marginal winner but we suspect that with equal tires, the Camaro would have been pretty strong because of its better brakes. In defense of the Mustang, Posey says, "It would have a terrific advantage in a Le Mans start from the pizza parlor because you

can't get the ignition key in upside down." And there's this to say about the Mustang too. Unlike the Camaro, we were allowed to keep the Mustang for several days after the test. It went rumbling and grunting by a Little League baseball game—and broke the whole thing up in the top of the third. The kids *had* to see what that fire-breathing monster was about. And when we passed a house with a GT350 in the driveway along about 7 p.m. the dining room erupted and people poured out windows, doors and chimneys. That's the effect it had. The Mustang even behaved impeccably in one of New York's patented traffic jams. Every kid on the block had to have a ride in it and wives stood around kind of hoping to fill their prom cards. Wild.

Trans-Amers, Mustang v. Camaro. Gawd!
