

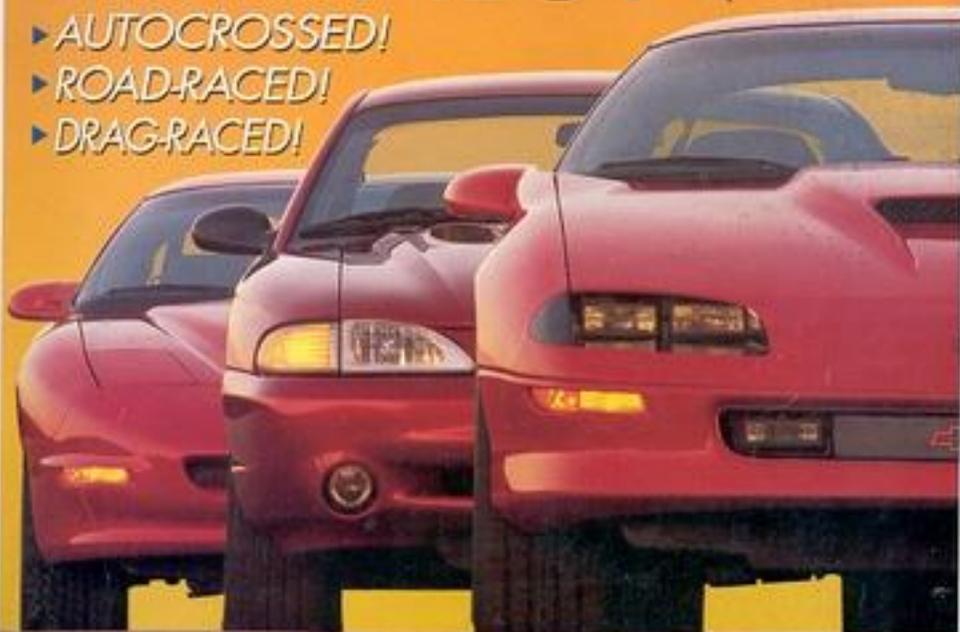
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CAR AND DRIVER

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MUSCLECAR TRIATHLON

- ▶ AUTOCROSSED!
- ▶ ROAD-RACED!
- ▶ DRAG-RACED!



• Firebird Formula WS6 • Mustang Cobra • Camaro Z28 SS

SUPERCAR TESTS: Dodge Viper, Nissan Skyline GT-R.
PLUS: GMC Sonoma, Jag XJ6 LWB, Pontiac Grand Am,
Range Rover 4.6, Subaru WRX, 40,000-mile Dodge Neon.



COVER

CAR AND DRIVER

STORY



MUSCLE-CAR TRIATHLON

On the street, the strip, and the racecourse with 915 horsepower.

BY DANIEL CHARLES ROSS

PHOTOGRAPHY BY AARON KLEY



Seriously fast cars are a staple of life around here, but when we have 915 horsepower on hand divided among just three cars, a comparison test begs us to come out and play. No one has to ask us twice.

The faces are probably somewhat familiar to you. We tested an early Firebird Formula WS6 in August, the Chevrolet Camaro Z28 SS in October, and the Ford Mustang Cobra in September. All three cars compete for the same enthusiast dollars and, not surprisingly, with the same horsepower.

The Cobra, fitted with a DOHC all-aluminum 4.6-liter V-8, kicks out 305 ponies through a five-speed stick. Both General Motors products have been

massaged by aftermarket powerhouse SLP, which now does work as a factory supplier. The results are the ram-air Formula WS6 and Z28 SS also boasting 305 hp apiece, channeled through six-speed manual transmissions.

Rather than reinvent the road-test wheel, we thought we'd compare these guys in a triathlon where we let the wild horses roam. Owners of these limited-edition steeds, we reasoned, would likely seek driving challenges of greater import than mere stoplight races. We wondered: How would these high-energy lightning bolts fare on a real drag strip? Which one can get through a serpentine SCCA SOLO II course the fastest? Whose lap times would be the quickest on a real road-racing circuit?

We asked a few of our friends to help

us find out. Local hero Scott Kalitta (yes, that Kalitta—his father is drag-racing pioneer Connie) joined us for the drag strip component. The 33-year-old NHRA champion has 42 quarter-mile runs above 300 mph (the best being 308.96 mph in 4.726 seconds), and he's the current points leader in the NHRA Top Fuel category.

Diminutive fireball Al Chan is a GE plastics engineer who last year won the SCCA Central Division SOLO II Super Stock championship in a Corvette. He showed us the finer points of the cone course.

Finally, SCCA veteran Neil Hanne-mann brought his 14 years of experience and two driver's championships to the two-mile road-racing circuit of Grattan Raceway in central Michigan.

Our goal: to see which of these tri-athletes has the muscle to be the best all-around choice for street or combat.

THE DRAG STRIP



Go Fast or Go Home

The original pony cars, of which these three are the current and lineal descendants, offered a lot of horsepower for very little money. They were meant to go fast in a straight line. It's true that today's pony cars can corner without scraping their door handles on the curb from excessive body roll, and are probably better road-racers than drag cars. But for straight-line, tire-smoking accelerative thrills, the big-cube, high-horsepower V-8s still rule the street and the strip. The strip we chose was Milan Dragway, not far from our Hogback Road command center.

Properly launching a car down a drag strip is a lot more difficult than doing it in the street. Rpm, clutch engagement, shift technique, and timing all play crucial roles, though waiting on a stoplight is not unlike waiting on the Chrondek "Christmas tree"



'The Camaro has very good power, and it's fast to the redline.'

—Scott Kalitta,
NHRA Top Fuel points leader

lights. In pro drags, there is no girlfriend or boy-Friday riding shotgun. Come to think of it, neither of those passengers showed up for our testing, either.

Who did show up was Scott Kalitta, the reigning points leader in NHRA Top Fuel dragster competition. Kalitta lined up at

the starting lights against our technical director, Frank Markus. Frank has performance-tested roughly 250 cars over the last four years, which has given him plenty of practice in the standing-start drag.

First up was a run pitting Ford against Chevy, with Markus driving the Mustang





and Kalitta the Camaro. By the second run, both drivers' times were in the 14s at nearly 100 mph. Getting a grip on wheel-spin and focusing on shift points was key to success. Scott Kalitta was having some trouble getting the Camaro's range, but he quickly found its core. "It has very good power," he said, echoing our impressions, "and it's fast to the redline." Kalitta was launching the Z28 SS in the 1500-to-2000 rpm range, and on the other end was sometimes hitting the rev limiter just a hairs-breadth from the final timing lights rather than risk a shift.

In the Mustang, Markus found that feathering the clutch at about 2000 rpm worked best. Following standard C/D procedure, he didn't speed-shift like most street warriors do. Evidently those hundreds of test days left their mark on Markus, as he set the Mustang's fastest time of the day with a run of 14.073 at 99.04 mph.

Switching cars, Kalitta liked the Mustang better than the Camaro. "This car seems like it's a lot more controllable

down the racetrack." In gearchanges, he thought the Mustang was not so erratically loose, offering a smoother transition.

Now in the Z28 SS, Markus was still taking no prisoners. His first run in the Camaro would be the best of the day—13.851 seconds at a swift 101.58 mph.

For pure drag racing, Kalitta liked the dynamics of the Pontiac Firebird Formula WS6, even though the car turned out to be

the slowest. With its softer suspension settings, he said, the car naturally is better at transferring its weight rearward during acceleration, smoothing out the initial tail-wagging, and hooking up on its own, without the need to shift or lift. All of us felt the Firebird seemed down on juice. "It doesn't appear to have as much power out there in the middle compared to the Camaro," Kalitta concurred.

He was correct. After 18 runs down the 1320 feet, the WS6's best showing of the day was set in Markus's 14th run—14.329 seconds at 97.79 mph.

In acceleration runs at our usual track, Chrysler proving grounds in Chelsea, all three cars had gone comfortably above the century mark in the quarter-mile test. What happened? A dragster's gooey tires, hot from a pre-run burnout, achieve reasonable launch bite on the rubber-streaked drag-strip launch pad. But the street tires on our cars are designed to grip clean pavement the best, and Chelsea's strip is as clean as a Swiss subdivision.

In our normal test regimen, the Firebird took 14.1 seconds to trip the lights at 102 mph, with the Cobra right alongside at 14 flat at 102. But the Camaro, at Chelsea and at the drag strip, was the clear victor. The Z28 SS took top honors for straight-line acceleration, clocking 13.6 seconds at 106 mph. Street or strip, that's really getting with the program.



Drag Strip	engine	SAE net power/torque	transmission/axle ratio:1	curb weight, pounds	acceleration, sec *				best drag-strip 1/4-mile time, seconds	
					0-60 mph	0-100 mph	0-130 mph	1/4-mile	Kalitta	C/D
CHEVROLET CAMARO Z28 SS	pushrod 16-valve V-8, 350 cu in (5733cc), iron block and aluminum heads	305 bhp @ 5500 rpm/ 325 lb-ft @ 2400 rpm	6-speed/ 3.42	3497	4.0	12.2	24.1	13.6 @ 106 mph	14.360 @ 90.41 mph	13.851 @ 101.58 mph
FORD MUSTANG COBRA	DGHC 32-valve V-8, 281 cu in (4601cc), aluminum block and heads	305 bhp @ 5800 rpm/ 300 lb-ft @ 4800 rpm	5-speed/ 3.27	3395	5.4	13.5	25.6	14.0 @ 102 mph	14.354 @ 97.26 mph	14.073 @ 99.04 mph
PONTIAC FIREBIRD FORMULA WS6	pushrod 16-valve V-8, 350 cu in (5733cc), iron block and aluminum heads	305 bhp @ 5400 rpm/ 335 lb-ft @ 3200 rpm	6-speed/ 3.42	3427	5.5	13.7	29.3	14.1 @ 102 mph	14.760 @ 95.35 mph	14.329 @ 97.79 mph

* measured by standard C/D testing procedures



The Loneliness of SOLO II

In a SOLO II autocross event, the driver is alone on the course, and he races against the clock. Our clocks were set to see how SOLO II star Al Chan would stack up against Don Schroeder, *C/D*'s senior technical editor.

SOLO II is tough. The course, which can be set up in any large parking lot, consists of a diabolical collection of increasing- and decreasing-radius turns and straightaways, marked by traffic cones. Our circuit was four-tenths of a mile long, with 15-foot-wide lanes and 45 feet

separating each cone. Those cones really seem close together when you're reaching speeds of 80 mph, and every one you send flying like a bowling pin adds two precious seconds to your time. So a severe premium is placed on car control, both in actual vehicle setup and in the driver's own self-control. In a fast car, a SOLO II run is a banzai lunge; you surf between the traffic-orange markers on an adrenaline wave.

We were surprised to find that the Mustang Cobra was the easiest car to manage in this event. Initially, it put its power down well but with too much front-end roll and a lot of understeer, especially in throttle-on conditions such as when exiting a corner. Chan said, "The car rewards a patient approach. One needs to be precise and easy on the car during turn-in to get

the front to bite. The throttle modulates nicely, though, with no flat spots."

The Cobra, as well as the other two cars, tended to plow through the tight autocross corners, so we experimented with tire pressure adjustments. "Setting the fronts at 40 psi makes the car more pitchable, balanced," Schroeder noted. It reduced the car's tendency to harvest cones like a John Deere in a cornfield. "This car forces more discipline," Chan confirmed, after collecting three. Best time: 47.796 seconds clean, set by Chan.

The autocross is set up to be part drag strip, part roadcourse, so a competitive car will have power as well as poise. The Firebird has both these characteristics, but they need refinement, as its longer lap times prove. Small motions at speed in the WS6 felt more exaggerated than in the Cobra or Camaro. "A Muzak version of the SS; softer turn-in response, and less ferocious under power," Chan said.

The Firebird's brakes were judged the best for the task, however. Chan said he liked the way they feel. "After some seat time, you feel like you can max-brake or feather the pedal confidently." As with the Cobra, the Firebird's softer suspension settings allowed more body roll than with the Camaro, but the Pontiac was easily managed at combat speed. "The Firebird's body takes a moment to roll," Schroeder commented, "and this requires extra time to compensate in cornering. Otherwise, this car is quite competent out here. The claimed 10 pound-feet of extra torque over the SS is not that obvious, though you rarely use max torque out here, anyway."

The Firebird's handling was judged



'The Firebird is a Muzak version of the SS: softer turn-in, less power.'

—Al Chan,
1994 SCCA SOLO II
Super Stock champ



Above: We optimized tire pressures by using a tire pyrometer to measure temperature across the tread surface.

adequate for the task. Varying tire pressures met with indifferent results. We started with the tires set to 42/35 psi and bumped them up to 46/39 without a detectable improvement or degradation in performance. The Firebird's best time: 48.220 seconds, set by Chan.

The Z28 SS dashed through the cone field like Barry Sanders through an inert defense. "Power range feels stronger for autocross," Chan observed. "More nervous, obviously more powerful," Schroeder added. "More roll control, too. You really have to watch the brakes when turning to avoid unintended oversteer."

The SS's larger anti-roll bars and Bilstein shocks are uniquely well suited to autocrossing. Together, they allow very little body roll in corners (of which there are many in SOLO II), and this helps the car make quick, clean changes in direction. Stiff shocks ride badly, and they can upset

a chassis in bumpy curves out in the real world; on a smooth parking-lot autocross course, there are no such penalties.

With front/rear tire pressures set at 42/35 psi, the Camaro "pivots nicely with right-now throttle, which helps in getting around corners," Chan remarked. "Steering is faster, and the car is more tossable." After we dropped back to 40/32, Chan exclaimed, "It's fun to smoke those

tires! Thing is, it slows your times."

The Camaro's blend of power and poise resulted in a best-run time of 47.725, set by you-know-who. Heck, he *is* the champion, after all.

In this event, the pack was separated by less than half a second, but autocross events are usually won or lost by hundredths of a second. The Camaro was the clear winner.

Autocross	dimensions, inches			weight % F/R	roadholding,* 300-ft skidpad, g	best lap time, SCCA 2112-ft course, seconds, Chan/C/D
	wheel- base	length	width			
CHEVROLET CAMARO Z28 SS	101.1	193.2	74.1	56.5/43.4	0.89	47.725/48.347
FORD MUSTANG COBRA	101.3	182.5	71.8	56.8/43.2	0.85	47.796/48.802
PONTIAC FIREBIRD FORMULA WS6	101.1	195.6	74.5	56.9/43.1	0.85	48.220/48.324

* measured by standard C/D testing procedures





Time to Uncork the Horsepower

Grattan Raceway Park is about 10 miles outside of little Belding, Michigan, near Grand Rapids. Two miles of serpentine asphalt, which includes 10 turns, wind up and down hills and in between ponds stocked with pike. In addition to the natural challenge of this park-like setting, you can crest a hill and come upon a gaggle of Canadian geese strolling defiantly across the racetrack.

We took the cars to Grattan to assess their mettle with Neil E. Hannemann, the 1992 and '94 SCCA World Challenge driver's champion (and as this is written, first in the points for '95 in a Touring Class enduro Eagle Talon). To put a little icing on his cake, his day job is program manager of Viper GTS-R factory race-car development. I took a few turns behind the wheels, too.

The roadcourse experience is almost identical to the autocross—except the speeds are higher, the lap times are longer, and the corners are typically farther apart. We discovered all three of our steeds to be better suited to this place than to either the drag strip or the cone circuit, because we were free to really flex their suspension muscles as well as uncork the horsepower and bang through the gears. Walter Mitty, your ship just came in.

So, how did our ponies perform?

The Firebird Formula WS6, with its softer suspension, exhibited the most vigorous body motions on Grattan's high-energy surfaces. It failed to put power to the ground adequately through Grattan's twisty bits, instead falling into either understeer or excessive wheelspin, or both, without much in between. In addition, Hannemann reported, "It's possible to get transient oversteer on turn-in [and] the breakaway slide is not linear. The car goes away too quickly, and the recovery isn't as easy as in the Mustang."

The Firebird was plagued with significant rear axle tramp on hard braking just after topping the hill on Grattan's back straight, and while the anti-lock braking system worked well initially, repeated combat laps produced the earliest brake fade of the three—and an eventual glowing of an ABS idiot light. In the hard

turns immediately following the yump, the rolling body would often contact the outside rear tire, producing scary tire sounds. We used fifth gear on the front straight to achieve a solid 115 mph. Best lap in the Firebird: 1:37.65, clocked by Hannemann.

The Mustang Cobra again made a good showing, though there was disappointment in the car's driver seat and pedal placement. The seat is too soft and lacks the lateral support needed for racing. Hot-lapping in the Mustang turned the steering wheel into a stressed member, as the driver used it to hold himself in the seat. Awkward pedals on different planes turned the old heel-and-toe proposition into a heel-and-ankle deal.

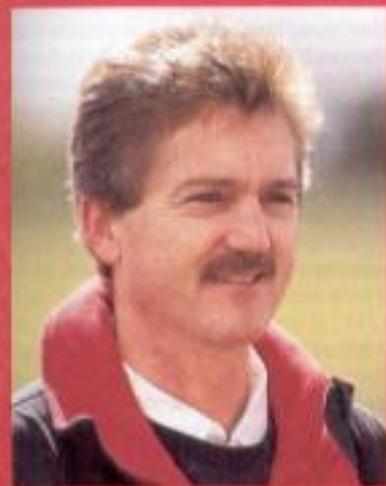
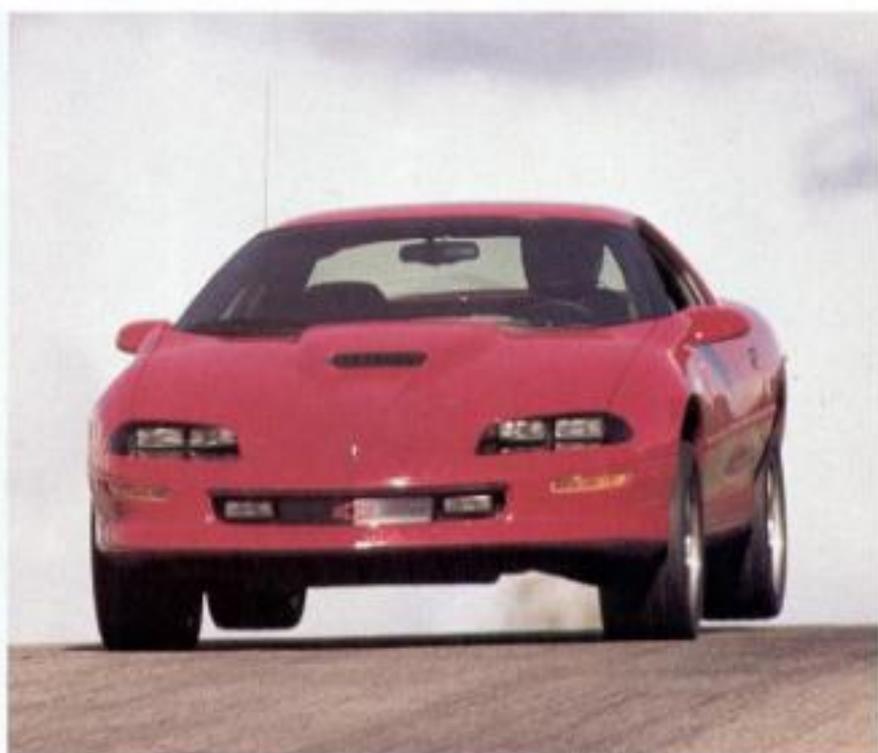
In the end, however, the pony from Dearborn was judged to possess the best overall handling in our sweaty roadcourse microcosm. It managed cornering transi-



tions with aplomb from apex to exit. The throttle could be used to push the nose out or draw it in as needed without upsetting its admirable overall balance. When the Cobra ultimately did surrender to understeer, the breakaway was as forgiving and linear as a Frisbee landing gently in the park. "The only weakness in the chassis is a little too much understeer," Hannemann said, "but that was probably the compromise to get the transitions so good."

The Cobra was straight-line fast as well as smooth in corners, topping out at about 120 mph in fourth gear and generating the same quality of race-car-like engine and exhaust noise as the faster Camaro. Even so, it scored the slowest tours. Best lap: 1:39.58, by Hannemann, almost two seconds behind the Firebird.

Just as it did on the street, the Z28 SS's heavy-duty suspension provided hard jolts on the older rougher pavement of Grattan. Coming out of corners, it had the least front-end grip, due in no small part to the extraordinary torque it could bring to bear in the rear. The car generally sticks like eggs in a cheap skillet around most of the Grattan circuit, though it required the same



'Only weakness in the Mustang chassis is a little too much understeer.'

—Neil E. Hannemann,
1994 SCCA World
Challenge champ

attention a real race car would. Overall handling was higher-strung than either the Cobra or Firebird (okay, yeah, I spun it once, okay?), but its turn-in was quite precise. Here too, rear axle tramp rattled our molars on back-straight, over-the-hill braking maneuvers.

Hands-down, the Z28 SS was judged the most race-car-like, right down to its well-bolstered bucket seat. It consistently topped out at or above 120 mph in fifth gear. Best lap (and overall fastest time): 1:36.00, achieved by the ringer from Chrysler. For the record, my times trailed the pro's by about two seconds in the Camaro and Mustang. But the performance gap widened to 2.69 seconds in the Firebird, which corroborates our impression that it was the least forgiving of the three.

Roadcourse	suspension		brakes, front/rear	tires	top speed,* mph	braking,* 70-0 mph, feet	handling course, min:sec. Hannemann/C/D
	front	rear					
CHEVROLET CAMARO Z28 SS	ind, unequal-length control arms, coil springs, anti-roll bar	rigid axle located by 2 trailing links, 1 torque arm, and a Panhard rod; coil springs; anti-roll bar	vented disc/vented disc; anti-lock control	BFGoodrich Comp T/A, P275/40ZR-17	162	163	1:36.00/1:38.04
FORD MUSTANG COBRA	ind, strut located by a control arm, coil springs, anti-roll bar	rigid axle located by 4 trailing links and 2 leading hydraulic links, coil springs, anti-roll bar	vented disc/vented disc; anti-lock control	BFGoodrich Comp T/A, P245/45ZR-17	153	175	1:39.58/1:41.16
PONTIAC FIREBIRD FORMULA WS6	ind, unequal-length control arms, coil springs, anti-roll bar	rigid axle located by 2 trailing links, 1 torque arm, and a Panhard rod; coil springs; anti-roll bar	vented disc/vented disc; anti-lock control	Goodyear Eagle GS-C, P275/40ZR-17	158	171	1:37.86/1:40.34

* measured by standard C/D testing procedures



The real world is full of danger and uncertainty. That's why it's called the real world. (Don't confuse it with MTV's "The Real World," which is the real stage world.) The real world where our three sporty triathletes competed held little danger and no uncertainty about who won.

Third Place Pontiac Firebird Formula WS6

Despite a mammoth 5.7-liter V-8 that pumps out a rated 305 horsepower through a six-speed manual, none of our test team felt the Firebird was giving its all. Hard braking resulted in early fade, and the relatively soft suspension never left us feeling completely comfortable at combat speed.

Street performance is as important as strip performance in this crowd, and again, the Firebird wasn't full of fire. Its 5.5-second 0-to-60-mph time put it just a microclick behind the Mustang Cobra but 0.6 second behind the Camaro SS; it trailed the Chevy to 100 mph by 1.5 seconds.

The Firebird picture improves somewhat once the track dust is brushed from the floor mats. On real roads, the Firebird

rides better than the SLP-tweaked Chevy. We quarreled with the bucket seats for being too soft in the high-energy events, but around town they'll be as comfortable as new gloves and should perform just fine. And remember, the Firebird costs less than the Cobra or the Z28 SS.

On paper, the Firebird claims the same horsepower and 10 pound-feet more torque than the Camaro. It also has the same gearbox and axle ratio and is 70 pounds lighter. Its third-place performance makes us doubt those power claims.

Second Place Ford Mustang Cobra

It's true that Ford has toned down the Mustang Cobra, but it hasn't yanked out all of its sharp teeth. This attractive pony car has grown up from a boisterous youth, winding up well to the conservative right on today's muscle-car scale.

Ford has successfully opted for refinement in all of the Cobra's behaviors. As a result, it's the best daily-driver muscle car in the test. Its DOHC 32-valve V-8 is the smallest but highest-tech of the engines

here. It convincingly makes as much horsepower but less torque than the 5.7-liter powerhouses, and the car turned into a dam near the same performance, thanks to its lighter weight. True, it was slower than the Camaro and only marginally quicker than the Firebird in several areas, but it accomplished these things while remaining the one car we would most want to drive home at the end of a long day.

Its popularity derived from a well-tuned suspension, which seems to work much better in this Cobra than on past GTs. It provides excellent ride quality without seriously hampering handling performance. The four-cam engine and tuned exhaust make all the correct power-car sounds, and to the editorial eye this is probably the most attractive Mustang so far. The performance compromises made to ensure its all-around civility are bitter-sweet reasons for a second-place finish.

First Place Chevrolet Camaro Z28 SS

The Camaro wins this test, and it wins it going away. It was the quickest, three-

The Real World	price, base/as tested	acceleration, seconds			emergency lane-change maneuver, mph	interior sound level, dBA				fuel tank, gallons front	
		street start, 5-60 mph	top gear, 30-50 mph	top gear, 50-70 mph		idle	full throttle	70-mph cruising	70-mph coasting		
CHEVROLET CAMARO Z28 SS	\$24,119/ \$28,770	5.7	12.5	11.5	60.3	57	87	75	73	15.5	53
FORD MUSTANG COBRA	\$25,310/ \$28,645	5.8	9.7	10.0	59.1	46	80	74	73	15.4	50
PONTIAC FIREBIRD FORMULA WS6	\$22,964/ \$24,858	6.1	12.9	13.1	59.3	51	87	74	74	15.5	53



3 PONTIAC FIREBIRD FORMULA WS6



Highs: Good ride quality for a brute, cheapest of the pack.

Lows: Performance comes up short, seats too soft for combat.

The Verdict: Spend a little more money if you need a little more performance.

2 FORD MUSTANG COBRA



Highs: The leader in muscle-car refinement, with excellent performance and chassis poise.

Lows: Pricy sticker, tall seats that lack support.

The Verdict: A grown-up pony car for mature hot-rodders.

1 CHEVROLET CAMARO Z28 SS



Highs: Rocket-sled acceleration, earth-magnet handling, boy-racer engine sounds.

Lows: Punishing ride, hefty sticker, boy-racer engine sounds.

The Verdict: If muscle is what you're after, look no further.

fastest, and the best handler in every one of our measured performance tests. It's a terrific race car right out of the Cosmoline, needing only a roll cage to complete the terrorist transformation begun by SLP.

Starting with galvanizing street performance, the SS chalked up a 0-to-60-mph clocking of 4.9 seconds, smack dab in Corvette ZR-1 territory at half the price. Acceleration is blindingly fast and accompanied by the quality of engine and exhaust sounds responsible for the phrase "Chevy Thunder." On the street, however, the din is tiring.

Beefier suspension tuning is a double-edged sword. On a racing surface, the car is planted extremely well. It offers a level of handling we associate with race cars. Hence, the downside—extremely harsh ride. Some of us enjoyed the rough-and-tumble street handling the SS offers, but we weren't in it for the life of a car loan, either.

You'll want to know your mission—and your budget—before you step up from standard-issue pony cars to any of these three wild horses.

interior volume, cubic feet			fuel economy, mpg	
front	rear	trunk	EPA city	EPA highway
53	29	13	17	25
50	33	11	18	26
53	31	13	17	25