FIREBIRD 400

How does Pontiac's latest performer measure up to the tried and true GTO? Roger Huntington has the answer...

PONTIAC HAS BEEN the last one to jump into the new "ponycar" pool with their new Firebird—but it looks like they might've made the biggest splash yet. At least as far as performance goes. When Ford introduced the "Mustang" concept a couple of years ago the idea was a compact, inexpensive sports-type car with long-hood styling, good fuel economy and *medium* performance. Their high-performance 289 (271 hp) was the strongest engine option.

But things have been changing in the last few months. A lot of young buyers who would normally choose the more conventional "supercars" like the GTO, Fairlane GT, Olds 4-4-2, etc. have been looking at the ponycars. They're 200 to 400 pounds lighter than the supercars, have shorter wheelbase and better weight transfer, promise better performance with a given amount of engine. So the demand quickly grew for big-inch, high-HP engine options in these cars.

It's all happened within the last few months. The new '67 Ford Mustang and Mercury Cougar were introduced with the 390 4-barrel engine option. Plymouth's all-new Barracuda was delayed 'til November, but bowed with a 383 4-barrel option that put them right in the same league with Ford. Chevrolet's Camaro was announced last fall with a top engine of 350 cubes and 295 hp. After the Barracuda came in with a 383 engine Chev officials realized that the competition was too hot to fight with their 295-hp engine. So a few weeks ago they announced that the Camaro would be available in January with the 396 engine (with or without 3-speed Turbo-Hydramatic transmission). They rated 325 hp with small-valve heads, hydraulic cam, standard exhaust headers and medium-size 4-barrel. This still kept them right on the edge of GM's unofficial "10 lbs. per HP" limitation for passenger cars.

And now we have the Firebird. Like I said, it looks like it might be the quickest of the lot. It uses virtually the same chassis and body shell as the Camaro, so the weight is similar at a little over 3400 lbs. with the big engine and full tank of gas. (All these big-engine ponycars weigh in the 3300 to 3400 lb. range.) But the new Firebird 400 uses the same engine as used in the GTO. This carries the new '67 big-valve heads (2.11-inch intakes and 1.77 exhausts), a strong hydraulic cam with 273 degr. intake duration and .410 lift, and the huge Rochester Quadrajet carb with 9.4 sq. in. of effective venturi area. Pontiac engineers have cut the rating from 335 to 325 hp to fit the combination under the 10-lbs.-per-HP limitation. But this is definitely a GTO engine, and it's just as strong.

And there seems little question that this engine delivers more *honest* HP to the flywheel than any of the other big-inch options in the '67 ponycars—(even though most of them are advertised around 325 hp, except the Barracuda at a fictitious 280 hp). We recently tested a Firebird 400 prototype at Motor City Dragway near Detroit. It had the standard 325-hp engine with no more tuning than a modest increase in spark lead. The air cleaner was left on. The car had 3.90 rear end gears, with close-ratio Muncie 4-speed (2.20 low). Exhausts were closed, running through stock mufflers, and we used the standard Firestone Wide Oval street tires with full inflation. This was strictly street trim, the way you would drive the car every day.

We were surprised to get a best time of 14.03 e.t. at 103.56 mph!! And this wasn't any fluke time. The average times for 12 consecutive runs were about 14.15 e.t. at right around 103 flat. And I might also mention that these runs were made with shifts at 5200 rpm—where the lifters started to act up. A simple adjustment of the rocker nuts, to bring the lifter plungers out to the end of their travel, would extend this useable rev range to around 5800. And allow perhaps slightly better times. We also tried a few 0-60 mph runs against the calibrated speedometer. These were hard to get because of wheelspin. But it looked like around *5.5 seconds*, as far as I could determine. And don't forget this is *street trim*!

We ran an interesting performance comparison when we were testing the Firebird at Motor City Dragway. The same day we were checking out a '67 GTO with the optional Ram Air engine. This car was in complete showroom trim, with just a check of the ignition timing, just like the Firebird. It had closed exhaust and Wide Oval street tires. The transmission was the close-ratio Muncie 4-speed, like the test Firebird; but the GTO had 4.33 rear end gears, which come standard with the Ram Air engine. The shift point on the GTO was also limited to 5200 by the lifters.

The best time achieved with the GTO was a 14.12 e.t. at 100.00 mph flat. Most of the runs were in the 14.20's at 98-99 mph. This made the Firebird 400 roughly 1/10th second quicker on e.t. and 3 or 4 mph faster on trap speed—using the standard GTO engine against the Ram Air engine in a GTO.

The differences would be attributed to the 250 lbs. or so difference in weight, the better weight distribution of the Firebird due to the engine and passengers being set back on the wheelbase—(which would improve off-the-line traction)—and apparently the reduced frontal area of the small Firebird cut the wind resistance enough to pick up 1 or 2 mph in trap speed. You can do your own speculating. I'm not sure.

Anyway that Firebird 400 with a standard GTO engine was quicker out there than the '67 GTO with Ram Air engine. Take it for what it's worth.

Compare these times with some of the recent published road tests of the other big-engine ponycars. Their quarter-mile e.t.'s have been falling usually in the low 15's or high 14's, at terminal speeds from 92 to 96 mph. Even allowing these other cars, say, 14.5 e.t. at 99 mph, with better gearing and tuning—it still seems obvious that the Firebird 400 engine is inherently a little stronger, inch for inch. My slide rule says it would take roughly 330 to 340 honest horses at the flywheel to pull 3600 lbs. gross weight to 103 mph in the quarter-mile. Apparently the 400 engine is delivering its advertised HP, and then some. And it's also apparent that the true output of some of the other big ponycar engines is down closer to 300 hp.

This difference should be obvious by studying the spec tables. The Firebird-GTO engine has consider-

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ably bigger ports and valves than the other engines. And the breathing capacity of that huge Quadrajet carb is streets ahead of any of the other more conventional 4-barrels in the field. In fact Pontiac engineers have deliberately *reduced* the carburetion capacity in the medium speed range—by increasing the spring load on the secondary air valves so they don't start to open 'til between 3500 and 4000 rpm. This keeps you on the two small front barrels for optimum torque and response in the medium speed range between 2000 and 4000. The Quadrajets used on heavier cars start to open the secondary air valves (with full throttle) at around 2000 rpm. But the lighter Firebird tended to buck and surge with all this carburetion in the mid range. But don't worry about the top end. Those secondaries are wide open by the time you reach peak power at 4800 rpm. And your acceleration performance proves that you have both mid-range torque and top-end horsepower.

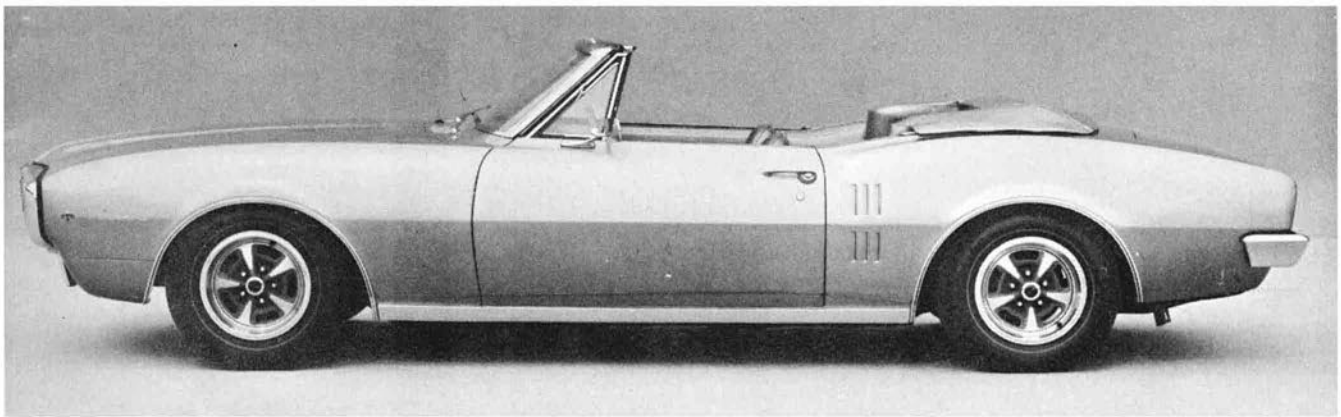
This new Firebird 400 looks like a pretty good bet in the '67 "stoplight Grand Prix." A few Mopar street hemis might get it; but I wouldn't count on the other supercars and ponycars to do the job—until they get more carburetion and porting, or somehow cut their weight. And if the standard 400 engine isn't enough for you, Pontiac will install the GTO Ram Air engine on the assembly line by March or April. This has the cold air scoop in the hood, and the kit uses a 301-degr. cam and stiffer valve springs to get 6000-rpm shift points. Pontiac rates the Ram Air engine 325 hp in the Firebird; but it's the same engine they call 360 hp in the GTO. (This business of Detroit HP ratings is getting pretty weird these days!) With this extra power the Firebird 400 might turn e.t.'s of 13.5 and terminal speeds up to 110 mph in street trim! The Mopar street hemis couldn't even handle that.

It's risky to speculate on the drag strip future of the car in the NHRA stock classes. With the factory shipping weight of 3175 lbs. and HP rating of 325, it would fall in their new B/Stock class, where the break is 9.50 lbs. per HP. Here it would run against the supercars like GTO's, 4-4-2's, etc. with 350-360 hp engines and weights in the 3400-lb. bracket. But will NHRA officials buy the low HP rating, especially on the Ram Air option? They may "factor" the car into A/S. We'll have to wait and see. I know one thing: Detroit's new policy of more conservative HP ratings—(to appease highway safety critics in Washington)—is making headaches for drag racing officials who have been classifying stock cars on a basis of advertised HP. This system may have to be changed completely in the next year. (The AHRA may have the answer, as they classify "stock" cars only on a basis of cubic inches, carburetion, and whether hydraulic or solid lifters. Advertised HP and shipping weight aren't considered.)

Anyway this car looks awfully tough on the street, whether or not it runs in a favorable stock class on the drag strip. And this is probably the most important thing to the biggest share of young buyers. You've got to be able to hold your own at the stoplight, or you're done.

For those buyers who can't afford to spend quite as much, and who are satisfied with a little less punch, there are a number of other interesting Firebird models available. Each has its own specific model name and body emblems and trim. The standard Firebird uses the 230-cu. in. overhead-camshaft Six rated 165 hp. This is primarily an economy package, and uses a 3.08 axle ratio with stick shift and 2.56 with the optional Buick-built 2-speed torque converter. Gas mileage is slightly fantastic. If you want a little more we have the Firebird Sprint. This uses the power pack version of the OHC Six, rating 215 hp at 5200 rpm with a 4-barrel carb, high compression, hotter hydraulic cam and special exhaust headers. This uses 3.55 axle gears with manual shift, or 3.23 with the 2-speed automatic. You can also order the Saginaw 4-speed with 3.11 low gear with this package. The car gives an excellent compromise between economy and performance: Mileages over 20 mpg with quarter-mile times in the low 16's at over 85 mph. This is an American Jaguar at half the price—let's face it.

Then we have the "Firebird 326." This model is based on the small 326-cu.in. V-8 engine with low compression and 2-barrel carb, rated 250 hp. It comes with 3.23 gears with stick shift and 2.56 with the 2-speed automatic. If you order a 4-speed you get the wide-ratio Muncie with 2.52 low gear. This model is again designed for the economy-performance compromise.



It's about 120 lbs. heavier than the Sprint Six, so the acceleration performance is about the same. Gas mileage is a little less, but this is compensated by more low-end torque for more responsive city driving—(due to the extra cubies). It's a real nice package. And if you want a little more just order the Firebird "HO" model. This uses a 4-barrel high-compression version of the 326 engine rated 285 hp at 5000 rpm. Also 3.36 gears with manual and 3.23 with the 2-speed automatic. You can see how Pontiac engineers push the gearing a little at the same time they push the power—so you can twist the engine enough at sane road speeds to *use* the extra power. This HO model should get you quarter-mile times in the 15's at over 90 mph.

We've already discussed the exotic Firebird 400. In standard form this comes with the Chevy all-synchro 3-speed manual trans with 3.36 rear end gears. The 4-speed option is the Muncie with wide ratios (2.52 low). Or the close-ratio gears are available on special order. Perhaps the best transmission news is that the GM 3-speed Turbo-Hydramatic is optional, with 3.08 gears as standard. Or with any of these transmissions you can order optional 3.23, 3.55, or 3.90 gears for just the cruising or acceleration performance you want. Also the Firebird 400 package comes standard with heavy-duty suspension and Firestone Wide Ovals. It's a tremendous car.

And of course there is that arm-long list of options that Pontiac always offers with their cars—front disc brakes, special rally wheels, hood tachometer, power steering, power windows, air conditioning, ski racks, tonneau cover, heavy-duty radiator, limited-slip differential, etc. And you can get it all either in the standard coupe body or the new convertible.

Looks like Pontiac may have scooped the industry again on a new performance model. The pony-car concept is not new—but the way this one *goes* is! ■