MUSTANG vs BARRACUDA
THE BATTLE OF THE FASTBACKS

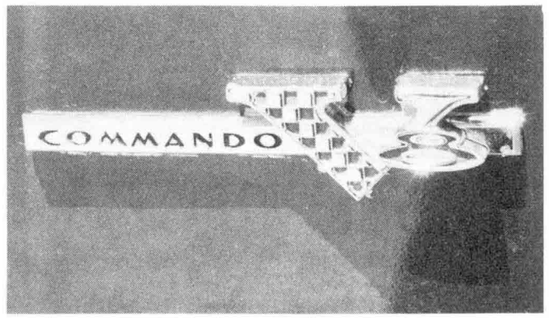
BY THE S&C STAFF

THE Ford Mustang 2 + 2 and Plymouth Barracuda, both reasonably priced, fastback-roofed sports coupes, top the "Most Desirable Cars" list of 1965. They boast the most HTP (Head Turning Power) of any domestically manufactured sporty-type car, including the expensive Corvette Sting Ray. Because of long lists of optional equipment, both the Barracuda and Mustang can be tailored to please the all-out performance aficionado or the executive who desires a quiet-running, self-shifting, sporty-type car for home-to-station transportation.

Because these two cars are so closely matched as far as performance and economy options, roof lines, appearance and price go, we thought a comparison road test would be a natural. However, with the strikes and backlogs of orders for high performance Barracudas and Mustangs, we found it almost impossible to locate suitable test cars. For our strip and handling performance tests, we utilized Chrysler and Ford test track facilities in Michigan.

We spent a couple of days at Chelsea wringing out a prototype Barracuda known as "Big Red" and repeated the scene at Dearborn with a High Performance Mustang coupe. As the track testing was done before the '65's were publicly introduced, it was almost impossible to get these cars through the front gates and onto local roads. We were forced to wait until high performance models were delivered to New York City before we could complete our comparison report.

The local Public Relations cars were not as well equipped as the ones tested in Michigan, but both had been fitted with the latest optional engines. The Barracuda was less than desirable as it was packed with air conditioning, standard optional Heavy Duty suspension, street gears and Torqueflite transmission. The Mustang came complete with big engine four-speed, and an unlocked 3.50 to 1 rear. John Healy, chief competition technician for Tasca Ford Sales in East Providence, Rhode Island, fine tuned the Mustang before it was unleashed to the Press for road testing. However, by the time we picked it up, it was showing signs of fatigue!



"Big Red", Chrysler Corporation's prototype Formula S Barracuda, displays its excellent road manners while negotiating a turn on the "torture" course.

The Barracuda had never been touched by genuine mechanics, just prepped by dealership service center men! Both cars were deposited at Pacers Auto in Oceanside for maximum performance tuning, before any acceleration and economy figures were recorded. Owners Charlie Dodge and George Snizek, who need no introduction to our drag-minded readers, checked the valves, carbs, ignition systems and suspensions, and broke in the tires for us on their private test strip!

High Performance 271 hp Mustang 2 + 2 is equally at home on road circuit or drag strip. Ultra-flexible 289 engine can be souped to well over 300 hp using FoMoCo goodies.

Both the Barracuda and Mustang offer enough engine options to satisfy all types of buyers. To start the ball rolling, let's see what's available on the 1965 Barracuda. The 1965 Barracuda is availale with two Sixes and two V-8's, backed up by three-speed and four-speed manual transmissions and the dial-a-win Torqueflite automatic shifter. As the 170 and 225 cubic-inch Slant Sixes are of little interest to performance-minded buyers and remain basically unchanged for 1965, we will not go into any of their specifications. However, by adding a few goodies and some pin point tuning, a 225 Slant Six can be made to perform as well as most small V-8's!

The mild optional V-8 is of standard overhead valve design and has a bore of 3.625 inches and a stroke of 3.312 inches. With a total displacement of 273 cubic

inches, this engine is rated at 180 brake horsepower at 4,200 rpm and 260 foot pounds of torque at 1,600 rpm. Horsepower per cubic inch is .659.

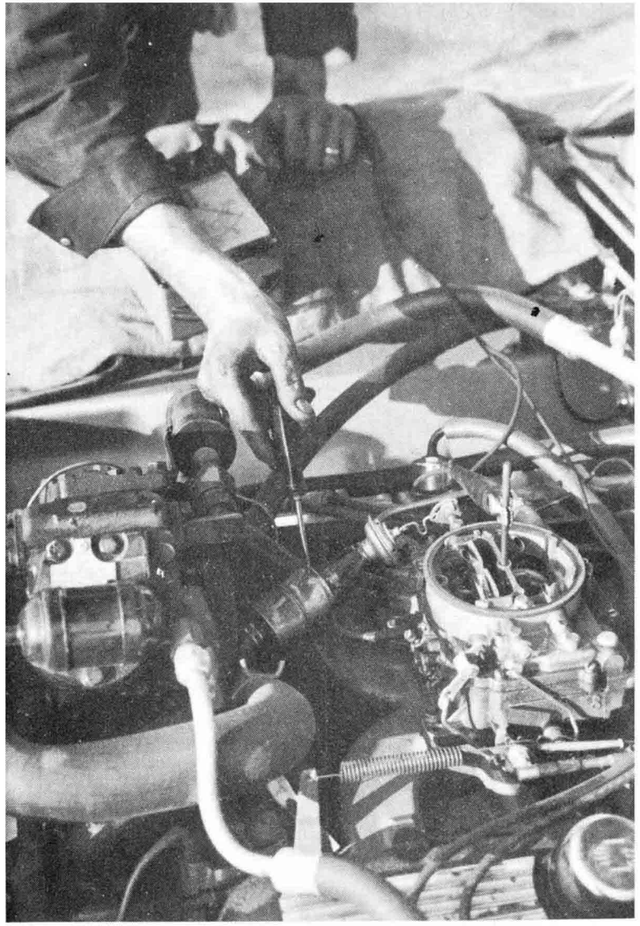
Breathing through an economically-jetted two-barrel carburetor, the 8.8 to 1 compression engine offers good economy and snappy performance. However, its single exhaust system, highly restrictive exhaust manifolding and mild cam make this engine unsuitable for any type of competition-even a stop light Grand Prix! By installing duals and headers, a good cam, hot ignition and adequate carburetion (all except duals and headers are available from MoPar dealers), you can perk up the performance of this mild-mannered V-8.

All standard shift models are built with clutch assemblies that work fine as long as you redline your tach at 3,000 rpm! All it takes are a few power shifts at high revs to render the clutch useless. Chrysler uses a miniature version of the old Ford flathead Auburn-type clutch for all the V-8 models. The best bet is to purchase an old Dodge Gyromatic Six clutch assembly, vintage 1951-'52, beef it up with additional springs and bolt it up to the engine. That's how we solved the problem on our Modified Production V-8 Dart.

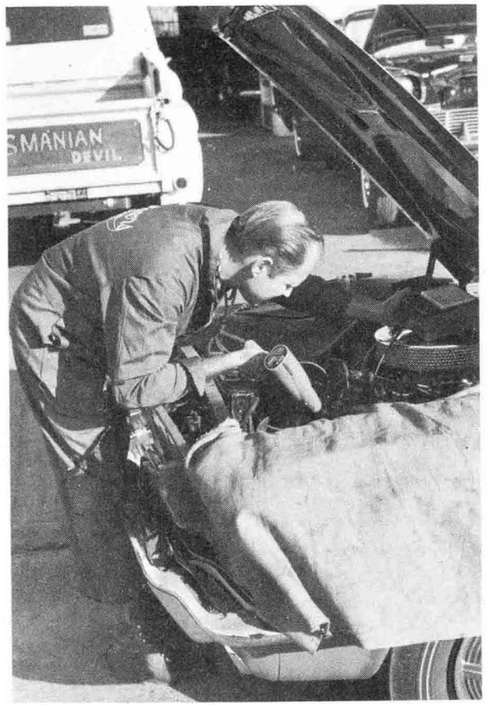
The top-line performance engine is a 273 cubic inch V-8 which shares the same block and most of the internal components with the standard V-8. Known as the Commando 273, this engine can be easily identified by chrome finned and black crackle finished valve covers, chromed air cleaner, chromed oil filler cap and vents. Responsible for the boost from 180 to 235 horsepower are a Carter AFB four-barrel carb on a tuned manifold, 10.5 to 1 high compression domed pistons, a high-lift, high overlap cam, solid lifters, a dual-point distributor and a low backpressure single pipe exhaust system with a rectangular tip and an exposed resonator. This exhaust

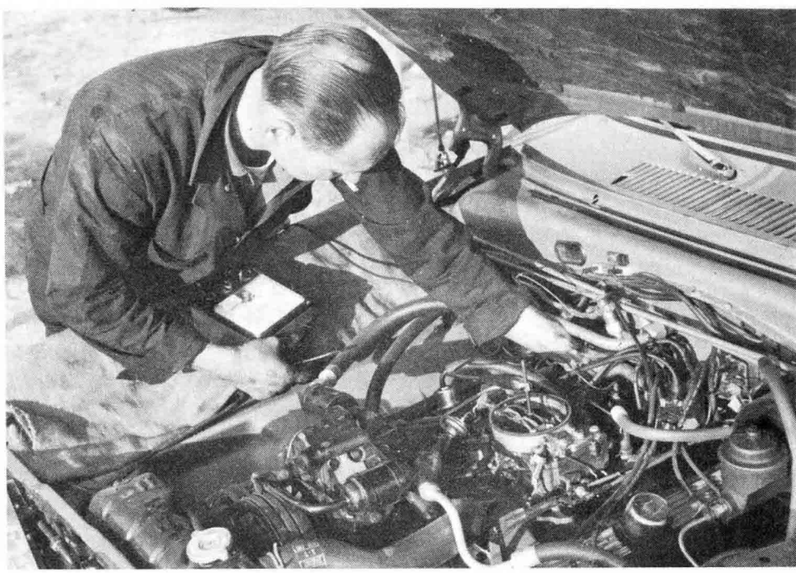
Rectangular exhaust tip, stripes and assorted strips of burnt rubber indicate this fastback is powered by the new HP mill.

Here's "smoking proof" that Mustangs are not available with limited slip rears! New GT will have Detroit Auto locker.



Charlie Dodge and George Snizek tuned both local test cars at their well-equipped speed shop. George, left, points out a trouble spot under the Barracuda hood. Fuel filter and steel lines conducts heat and cause percolation and vapor lock. Charlie, below, puts the timing light on the potent 271 hp mill. Both engines run large single quad carbs.





Charlie, above, tuned the Commando 273 mill to the best of his ability, but could not bring back the horses lost to the air conditioning and power steering units. Scott Harvey, left, Chrysler engineer and top rallye driver demonstrates the art of lifting all four wheels at full throttle! The Formula S Barracuda makes use of the suspension he designed for his championship Valiant.

system makes the Barracuda sound like a genuine Grand Prix racer!

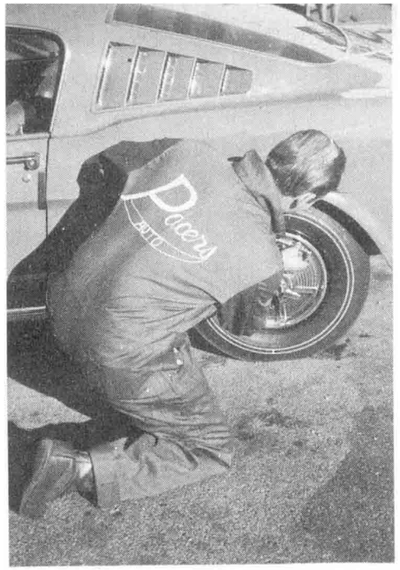
Corporation engineers were shocked when they discovered that the combination of a new cam, four-barrel carb, etc. made such an impressive difference in the actual dyno horsepower of the 273 engine. All hot engine pieces can be bolted on the standard 273, but it's mandatory to install the high compression pistons to take maximum advantage of the cam and carb.

Here are the Standard and Commando V-8 cam specifications. INTAKE STD 273: opens-14 degrees, closes-46 degrees, duration-240 degrees, lift-.395-inch. INTAKE COMMANDO 273: 14 degrees, 54 degrees, 248 degrees, . .415-inch. EXHAUST STANDARD 273: opens-58 degrees, closes -2 degrees, duration-240 degrees, life-.405-inch, overlap 16 degrees. EXHAUST COMMANDO 273: 56 degrees, 12 degrees, 248 degrees, 425-inch, 26 degrees. As you can see, the high performance

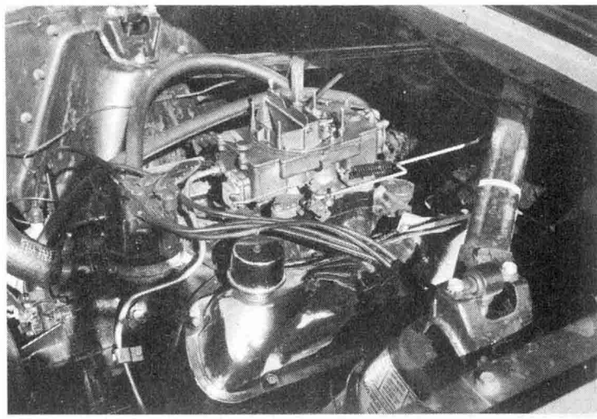
Formula S machine is extremely stabile at high speeds when equipped with special suspension setup and racing shoes.

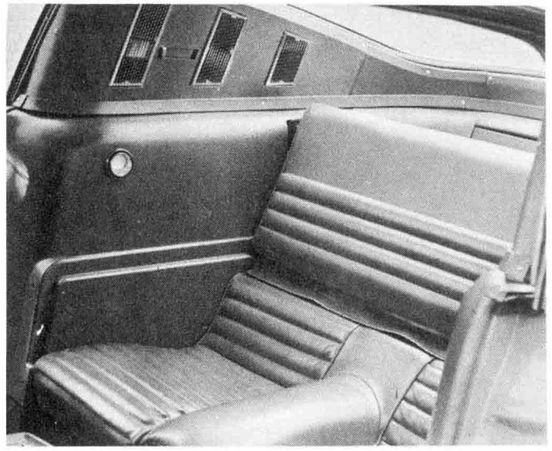
SPECIFICATIONS

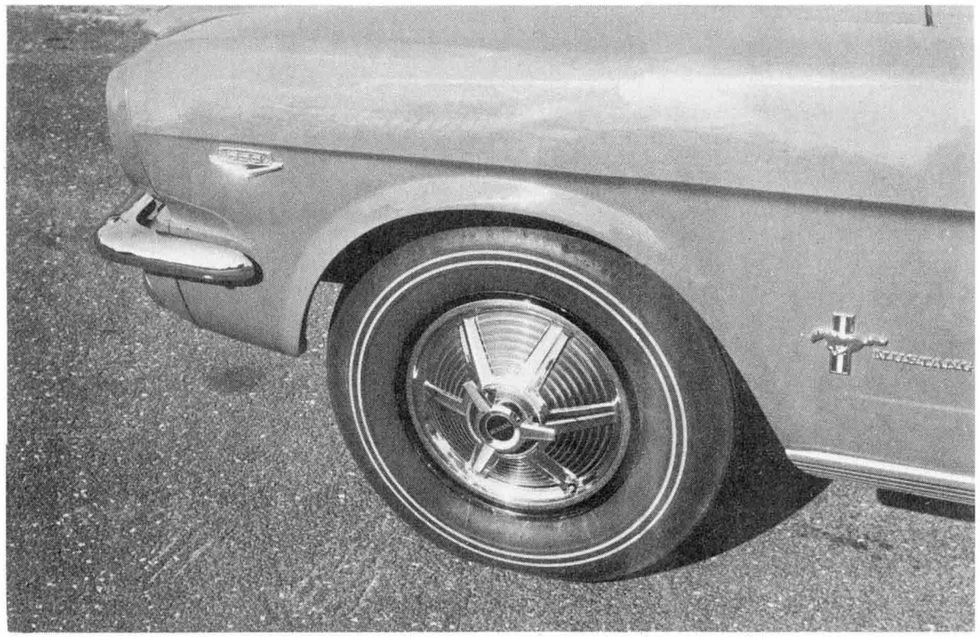
	HP MUSTANG	FORMULA S BARRACUDA
ENGINE	OHV V-8	OHV V-8
DISPLACEMENT	289 cubic inches	273 cubic inches
COMPRESSION	10.75 to 1	10.50 to 1
HORSEPOWER	271	235
GEARBOX	four-speed, all-synchro	four-speed, all-synchro
REAR END	4.11 to 1 Detroit Auto	3.55 to 1 Sure-Grip
WEIGHT	3,050 lbs.	3,150 lbs.
WHEELBASE	108 inches	106 inches
TRACK F/R	56 in./56 in.	55.9 in./55.6 in.
PERFORMANCE		
0-30 mph	2.9 seconds	3.1 seconds
0-45 mph	3.2 seconds	4.6 seconds
0-60 mph	7.2 seconds	8.5 seconds
1/4 mile e.t/mph	15.4/90 mph	16.5/85 mph
TOP SPEED	110 mph	109 mph



Charlie, above, experimented with rear tire pressures during the acceleration tests, but all was in vain. Mustangs can not be ordered with factory installed lockers. Photo below shows the big four-barrel atop the 271 hp mill.

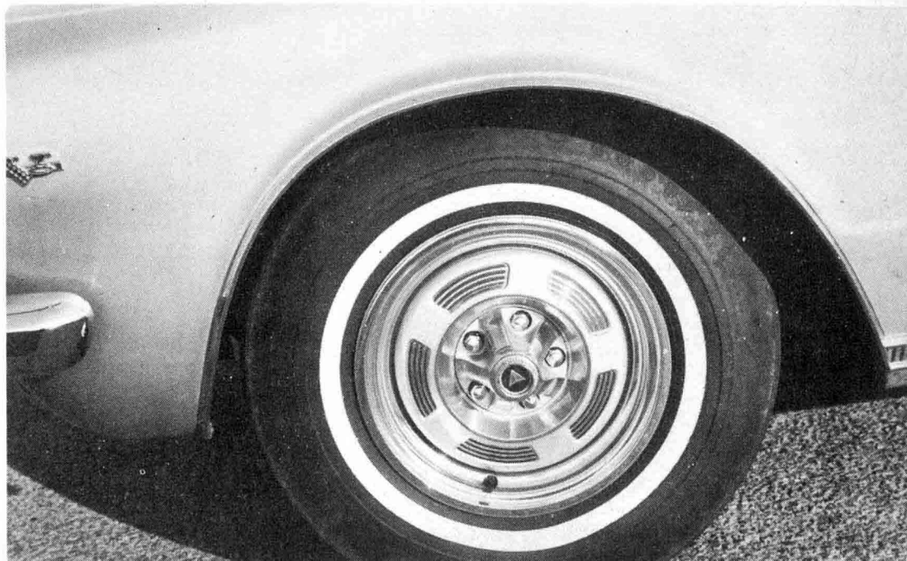


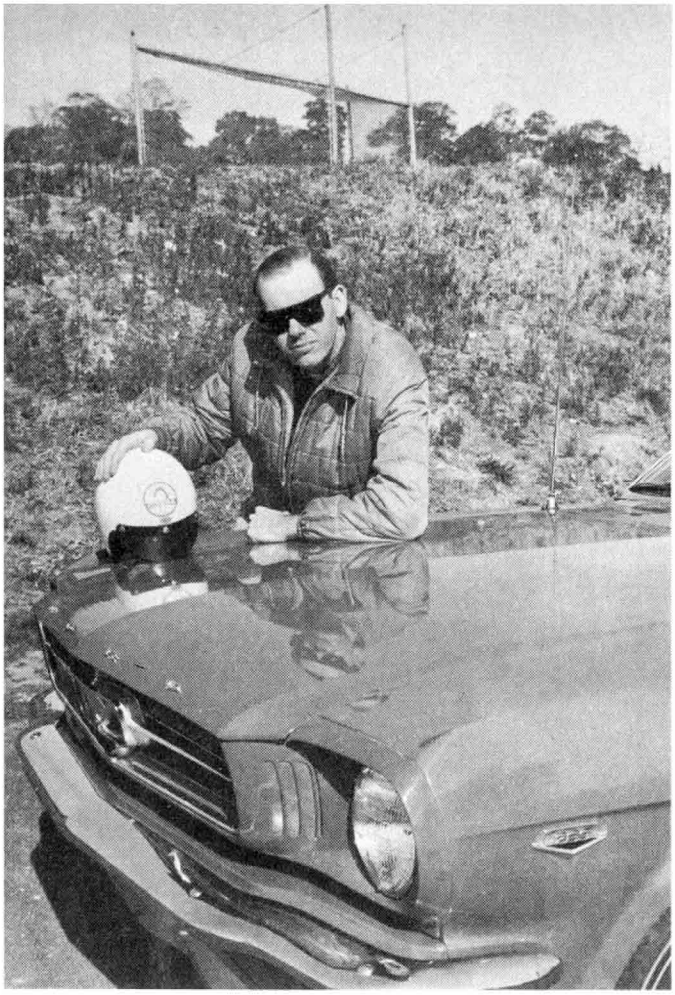




Mustang interior, above, left, and Barracuda interior, left, offer similar features. Barracuda cockpit is roomier and plusher than Mustang's offering. Mustang sports adjustable vents instead of quarter windows. Because of the roll down quarter windows, it's very easy to remove luggage from the Barracuda's surf board-sized storage area.

Local test Mustang, left, was equipped with standard 14-inch wheels and U.S. Royal performance tires. Barracuda, below, sported Goodyear street tires, 14-inch wheels and optional ($35) wheel covers with exposed chrome lugs. All Formula S machines come through with Goodyear Blue Streak *shoes* as standard.

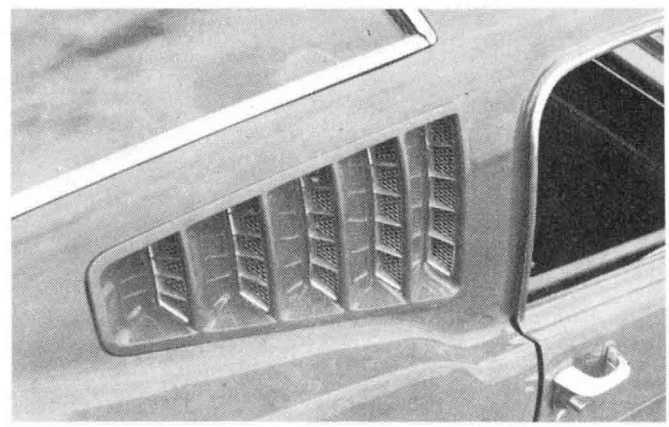




MUSTANG vs BARRACUDA

cam is not really wild, and can be lived with in a street car used for everyday transportation.

Ford Motor Company also offers a complete lineup of economy and performance engines for the Mustang. The new Six with its ultra-beefy seven-main bearing lower end is a fine economy engine, but at present has little or no competition potential. If geared extremely low, a Six-cylinder Mustang will really haul off the line. However, the average enthusiast (*Continued on page* 58)



High-style vents are strictly functional, as they take the place of quarter windows. Rear seat passengers found the lack of windows quite annoying. Editor Marty Schorr takes a breather after almost burning the Mustang's right rear tire bald! It looks like Ford thinks Total Performance should end at the four-speed! Dealer-installed locker is available.

Wide angle lens accentuates the width of the front end. Fiberglass front end parts will be available for the '65 drag season.

CORVAIR SOUP-UP, continued

engine and replaced the Corvair oil pump gears with cogs from a Chevy 409 oil pump. This setup insures that extra oil will be pumped up to the galleries at high rpm. He also drilled the oil galleries out so there is a direct path to the mains. These little modifications can be be described as life insurance! Just for the record, finned aluminum pans that hold two extra quarts of oil are available from most accessory houses for under $40.

Now that you have the extra power, what are you going to do with it? To take maximum advantage of the power increases, you must be able to translate horsepower into actual road performance. The stock Corvair clutch is fine for Uncle Joe's trips to the Social Security office, but not for Mr. Average Joe Rodder's trips through the Chrondeks! Thomas installed a Schiefer bronze-faced aluminum flywheel with a matching Schiefer clutch assembly in his hot drag Corvair. All the big clutch-flywheel boys make up units for hot Corvairs, so you shouldn't have any problems in that department.

That's the basic Corvair picture. If your wallet is big enough, you can go the Dick Griffin or Mike Jones routes. Make no bones about it, the Corvair may be an economy-type engine, but it loses all economy ties when the stroker crank and other goodies go in. Just like any other engine, the Corvair can easily consume $1,000 worth of speed goodies!

If you're going to try and coax that last pony out of your "pancake" Six, don't forget to spend some time taking care of cooling problems. If you build a real high revver, you'll have to cut the fan pulley ratio down or else you'll lose it up around 10,000 (fan) rpm. When you cut the ratio down, make sure you provide suitable ventilation in the form of scoops with direct ducts to the engine, or else you'll be in hot water!

Remember, as far as souping is concerned, the sky's the limit. Just like its big V-8 brother, the Corvair reacts quite favorably to any degree of souping. You can go over 200 cubic inches with a stroker kit, add a supercharger and end up with approximately 250 horsepower. If you can afford it and plan to run on the track only, then go to it. Otherwise you can rework the heads, add four carbs, big valves, a good cam, gutty pipes and some aluminum accessories and have a real ball on the road.

If you have some money left over, give the suspension a real going over. Before you apply for a big fat loan here's a parting note—no matter what you do to the Corvair, it'll never be "King of the White Castle." In its biggest form it's lacking at least 150 cubic inches, 100 horsepower and two cylinders. . . . 'Nuff said!

FASTBACKS, continued

will not even consider this engine when purchasing a Mustang.

There are two FoMoCo V-8's available in the Mustang, which help make this car extremely enjoyable to drive. Both displace 289 cubic inches and sport horsepower ratings of 225 and 271. With a bore of 4.00 inches and a stroke of 2.87 inches, the 289 is a natural for a big stroker crank. Shelby-built Cobra-Mustangs will be available with 325 cubic inch stroked 289's.

The milder 225 hp version has a four-barrel carburetor, single exhaust system and a mild lift-overlap hydraulic lifter cam. It replaces last year's 210 hp 289 and 164 hp 260 engines. Available with either three or four-speed manual transmissions or the new beefy Cruise-O-Matic automatic shifter, this engine option lists for under $200 over the Six. It is an excellent engine with plenty of spunk for quick acceleration or over the road performance. It is the engine for the performance-minded buyer who can't be bothered with noisy lifters, adjusting valves on Sunday, or driving a hairy torquer in city traffic during the week.

The Cobra-type 271 hp engine is the top line powerplant available from the factory in 1965. It's basically the same engine as the HP 289 introduced late in 1963. It features a block with beefier main bearing webs, a sturdier crank with special rods and notched (for valve clearance) high compression pistons, tuned headers with more sweep and larger cross sections than the stockers, dual pipes and low restriction mufflers, a 10½-inch semi-centrifugal clutch assembly (which should be ordered with the 225 hp version), a centrifugal advance dual-point distributor, a wild life-overlap solid lifter cam and a big four-barrel carburetor.

This engine is available only with the all-synchro four-speed Ford T&C transmission. However, limited amounts of 271 hp Mustangs have been spotted with modified Fairlane 289 Crusie-O-Matic transmissions. With four-speed transmission and Heavy Duty suspension the 271 hp engine package retails for just under $450 over the standard Six. It's a lot of money, but it's a lot of engine!

Much speed equipment is available for this engine from Ford dealers via Carroll Shelby and other sources. Everything from Weber carbs to a finned oil pan can be had for his high rev stormer.

As actual performance is dependent on rear axle ratios, let's see how the Mustang and Barracuda stack up. Both cars utilize hypoid, semi-floating rear ends. Standard rear gearing on the Formula S (fancy suspension rally-model) Commando V-8 model is 3.23 to 1, with 2.93's and 3.55's being optional. According to dealer listings, there are no gear sets available for drag racing. The Sure-Grip limited slip differential is available as optional on all Six and V-8 models. If you are planning to drag a Barracuda, check the Dart Dodge listings, as we recently purchased a 3.90 to 1 gear set for our Modified Production Dart. If you want to go the wild gear route, it might pay to adapt a full size MoPar rear end. There are all kinds of wild Sure Grip ratios available for the full size rears.

The high performance Mustang uses a beefier-than-stock rear with big axles and healthy gear sets. For maximum street, strip and road course performance, Ford lists ratios from 3.50 to 4.56 to 1. The 3.50's

or 3.89's are perfect for four-speed street models. Ford has a lot of competition background with the 271 hp engine, and their optional parts list proves it. The only rub is that there is no effective limited slip or locking differentials available from the factory on the Mustang. Without a locker, there's no way of transmitting the torque to the asphalt.

Equa-Lock units are fine for non-performance engines, but the torque of the 271 hp 289 or the 425 hp 427 just destroys the facings on the clutch plates. It's mandatory to order (dealer installed) a Detroit Automotive locking differential, if you want to take maximum advantage of the engine's output. The Detroit Automotive gear-type locker is used on all factory drag Thunderbolts, Mustangs, Falcons, etc. There are no clutch plates to wear out. Retail price of the unit runs close to $100 uninstalled! Ford really goofed on this one!

The Barracuda makes use of the basic Valiant suspension. Up front there are independent, non-parallel control arms watched over by torsion bars and direct-acting tubular shocks. Bringing up the rear are five-leaf semi-elliptic springs, a solidly-mounted rear end and direct acting tubular shocks. Models powered by V-8 engines are equipped with slightly beefier suspensions.

The model tested in New York was equipped with the Commando V-8 and the beefier suspension. "Big Red," the prototype Barracuda put through its paces on the course in Chelsea was equipped with the new Formula S competition package. Besides the Commando V-8, this package includes firm ride Oriflow front and rear shocks, oversize front torsion bars, recalibrated rear springs and a much needed front sway bar. Disc brakes will be available by the time this issue is on sale.

Also included in the competition package, which is designed primarily for rallye and sports competition, are Blue Streak tires designed by Chrysler and manufactured by Goodyear. They have a new tread design for superior cornering and road bite, and mount on special 5½-inch wide steel wheels. These 6.95 x 14 Blue Streaks have a cord angle of 29 degrees (36 degrees are standard) which make them more responsive to steering touch.

The Mustang makes use of independent SLA front suspension with high mounted spring towers with coils and double acting tubular shocks. An anti-roll stabilizer bar keeps everything in line. In stock Ford trim, a Mustang will not ride as well as a stock Barracuda.

The optional Special Handling Package, which is standard on 271 hp models, consists of HD springs and shocks, quick steering, 14-inch tires and a beefy sway bar. The package retails for $39 on standard Six and V-8 Mustangs. The anti-roll bar measures .840-inch in diameter compared to .690-inch for the stock model. Stiffer springs account for the 438-foot pounds front roll rate and the 340-foot pounds rear roll rate. The jounce rebound ratio is improved on the optional shocks.

The 21.0 to 1 quick steering ratio results in 3.5 turns lock to lock. Big 15-inch wheels with 5½-inch wide rims are available for special racing applications, but can't be recommended for street use. Firestone Super Sport tires on 15-inch wheels retail for $51 per set of five over the standard 14-inch tires on 271 hp models.

Although both top performance models, the prototype Formula S Commando V-8 and Mustang 2 + 2, were outfitted with the latests, most potent power plants and all syncho four-speed transmissions, limited-slip rears, it was hard to compare them as far as acceleration went. The factory Barracuda was equipped with 3.55 to 1 gears, while the specially prepared Mustang boasted 4.11's. Even if both cars had the exact horsepower engines, weight, etc., the difference in gear ratios would have made the difference. Both engines are high revvers and can take advantage of low dragging gears. The Barracuda took 1.3 seconds longer to reach 60 mph and 1.1 seconds longer to tour the quarter. Complete acceleration and quarter-mile figures can be found in the Performance

Chart.

Our New York test cars could not match the performance of the factory cars because of obvious reasons. The Barracuda was hampered with Torqueflite, 2.93 to 1 Sure-Grip gears and air conditioning, while the Mustang sported 3.50 to 1 unlocked gears. Full throttle acceleration with the Mustang produced one almost bald right rear tire and a cockpit full of smoke! Mustang shifts were made at 6,300 rpm, while Formula S Barracuda shifts were popped at 5,900 rpm. We didn't bother to clock the automatic Barracuda, because of its *optional* equipment!

Because of the gear ratios of our factory test cars, it didn't pay to even think about fuel economy. Anyone buying a car of that nature, with four-on-the-floor and big gears, is not interested in economy. However, we did manage to record figures with our local models. The Torqueflite Barracuda registered a low of 12 mpg around town and a maximum high of 17 mpg on the open road. This works out to an average of 14.5 mpg. The four-speed Mustang with 3.50's registered 10 around town and up to 15 on the road. This works out to an average of 12.5 mpg. I'm sure most enthusiasts will gladly part with an extra two mpg to reap the benefits of the Mustang's 271 hp!

Both top line V-8's are extremely responsive and are well suited for competition. More equipment is available from the factory and commercial speed parts houses for the FoMoCo engine, but I'm sure Chrysler engineers will be spending a lot of time in the dyno labs working on the 273.

As far as handling and roadability go, the Formula S Barracuda and the HP Mustang are just about equally paired. The Barracuda weighs slightly more, is longer by a few inches and is slightly wider than the Mustang. The Mustang has a wider track, less overhang and is a real flat cornering bear. Tight cornering with the Mustang produced some body lean, but the anti-roll sway bar kept things under control at all times.

Because of its increased front and rear roll rates and recalibrated shocks, our hot Mustang handled like a thoroughbred sports car. We had no problems inducing and controlling four wheel drifts with the quick steering, excellent four-speeder and 4.11 gears. The Mustang adhered to the track as if it were glued.

We did not find the Heavy Duty suspension and quick steering really objectionable in our around town car. It did, however, take a while to get used to the muscle power required to turn the wheel, but from then on in it was pure pleasure. The Mustang was enjoyable to drive on the street, as the noise emitted by its solid lifters is music to the ears of a performance buff. However, once you go the 4.11 route, the car becomes a bit too hairy for the street and open road. You find yourself constantly revving over 3,500 rpm to keep up with road traffic. Once you start cruising at 3,500-4,000 rpm, the noise starts to get to you!

The Formula S Barracuda negotiated the tough turns on the Chelsea track as though it was born and bred on the course. Even with its narrow track and overhang, the Barracuda leaned little in corners and displayed excellent road manners at all times. However, we didn't like the slow manual steering (5.3 turns lock to lock). We were sort of glad when we discovered that our local test car was equipped with Chrysler's excellent power steering. We realize that full time power steering is a hindrance on the race course or for any type of performance driving, but you can't beat it on the street!

Both the Barracuda and Mustang were equipped with stock brakes. Front disc brakes are optional on both these models at nominal costs, but they were not available when we conducted our test program. Panic stops proved that both cars had average to better-than-average braking systems. Nose diving and swerving during panic applications were moderate. Considering the power and speed potential of these cars, we recommend disc binders over any type of optional drum brakes. Mustang front discs retail for approximately $50 when installed at the factory.

Summing it up, we find the 271 hp Mustang to be a superior performing car. A lack of performance gears and 36 less horsepower are two strikes against the Barracuda. The Mustang also suffers because of the lack of a good, factory-installed limited slip differential. As far as economy goes, the Barracuda has a slight, insignificant edge over the Mustang.

When you place the Mustang and Barracuda side by side, you immediately see that the Barracuda is a more finely detailed automobile. The paint, body panel fit and overall workmanship of the Barracuda is far superior to that of the Mustang. The Barracuda's interior is extremely luxurious, with all components neatly finished in either chrome, pile carpeting or plush imitation leather. We found the Barracuda buckets far more comfortable for long trips. There's more headroom and overall interior space in the Barracuda than

in the Mustang fastback.

The Mustang boasts functional, adjusted-from-the-interior, rear quarter panel vents, while the Barracuda offers conventional roll down windows. An optional defroster is available for the big Barracuda rear window to prevent dangerous fogging. You can squeeze five in the Barracuda, while the Mustang is a genuine 2 plus 2 (as long as the second two are children).

Both cars are priced competitively and offer more features than do many cars in higher priced brackets. I would spend as much time as possible with both before buying, as we can't cut and dry recommend the best one. However, make up your mind post haste, as dealers are backed up to the roof with orders for these fastbacks.

TIGER MAKER, continued

On the single-four barrel version, hood clearance posed some problems. A flat chromed air cleaner without a silencer replaces the taller conventional housing, with hardly any noticeable increase in sound.

On the three two-barrel version, each of the carbs is equipped with a porous polyurethane ring filter that can be washed out in gas when strip conditions get a little dusty.

All of the three two-barrel 421's now come through with mechanical progressive linkage, an improvement which was first on the list of "modifications to make" in years past. There are separate return springs on the center and end carburetors. This poses no problem when you floor the throttle for drag style shifting, but when you want to feather the throttle during hard cornering, the hard spot signifying the opening of the end carbs is very noticeable. Milt Schornack showed us a very simple way of curing the problem, or at least reducing it. You simply knock off one of the return springs from its catch, (the one from the front carburetor), and the hard spot disappears. It is also helpful to carefully align the throttle cable and provide a bit of extra lubrication.

Jetting varies with gearing, track and weather conditions. For instance, with a 4.11 gear and mild-to-cool weather, .073-inch jets are used for the end carbs and .071-inch jets for the center. This can vary down to .069 inch jets all around. Larger needle and seat replacements are not needed, since the factory delivers the car with them. Could it be that the factory's proving ground program is catching up to drag findings of former Bobcat packages? Blocked heat riser gaskets are available and help considerably on hot days for performance running. However, on cooler days they can really delay warm up. You will probably be better off with steel shims that can be pulled out quickly after a day's run at the strip.

The improved breathing begins with the squared-out ports of the intake manifold. The hydraulic lifters are lashed out, and special fiber lock nuts used to secure the adjustment. The result is an increase of several hundred rpm, quite useful to say the least. Keep in mind that GM's rac-