



MUSTANG GT-350

Ol' Shel, The Snakecharmer, Makes A Good One "Even Goodern!"

BY JIM WRIGHT

FRESH FROM, and flushed with, the considerable successes gained from the mating of an English chassis with hopped-up American V-8, Carroll Shelby has decided to turn his particular talents in the field of hybrid husbandry loose on a product that's a little nearer and dearer to home: Ford's highly successful (in sales), but slightly disappointing (to the purist)

Mustang. The result seems to be all that the aficionados had hoped that the original Mustang would be in the first place. Or, in Ol' Shel's words, "Shucks, it wasn't nothin' 'cept to take a darn good car an' make it even goodern." Pressed even further on the subject he allows as how, "It's a real honest-to-gawd, hair-on-the-chest G-dash-T car." And, as usual, the old

herpetologist knows what he's talking about.

By all indications the Mustang GT-350 won't be wasting any time proving it's a car that can carry its nameplate proudly without once having to feel even the slightest twinge of guilt as it goes happily about dusting off other GT-types (pseudos, would-be's and assorted European varieties).

The GT-350 will be offered only in the fastback body style, but will come in two versions, a standard model and an all-out competition car. The main idea behind the project was to come up with something that would be competitive in Sports Car Club of America's Production Category B amateur racing events. At this writing the car and its options have been accepted by SCCA and it looks like an interesting year coming up on that circuit.

Present planning calls for a production run of 200 cars a month. These will be handled by Cobra dealers across the country. The competition models will be available directly from Shelby's Venice, Calif., plant on a special-order basis only.

The basic Mustangs arrive at Shelby-American, Inc., in a stripped-down condition. Wheel covers, seat belts, the complete rear seat, grille bars and emblem, hood and hood springs, and all exterior side trim (and the holes) are deleted. If the car is marked for competition, the complete interior soft trim, glove box door, all sound and heat control material and all weather strips and seals, front and rear bumpers, front exterior lower apron panel, and all glass windows (except the windshield) along with their door channels and operating mechanisms are also left out.

The finished exterior is clean with the only ornamentation being in the form of painted-on racing stripes running the length of the car over hood, top and deck. A layer of stripes is also carried the length of the rocker panels along with the "Ford GT-350" designation. The stamped, honeycomb grille inset is retained but the heavy bars and large, cast replica of the horse have been discarded in favor of a smaller Mustang-and-tri-color insignia mounted to the left on the grille inset. The hood is molded fiberglass and features competition-type pin locks.

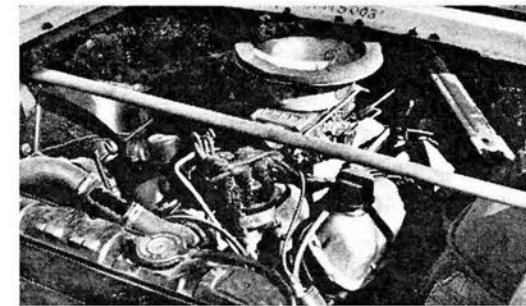
On the interior, the space once occupied by the rear seat now forms a wide flat shelf, dished in the center to mount the spare tire. A Cobra-type

wood-rimmed, aluminum steering wheel replaces the standard unit. Standard instruments are backed up with the addition of a tachometer and oil pressure gauge, both carried in a special housing and nestled in the valley on top of the dash. On the competition model the standard instrument panel is replaced with one carrying full instrumentation. This model also uses plexiglass side and rear windows to cut down on weight.

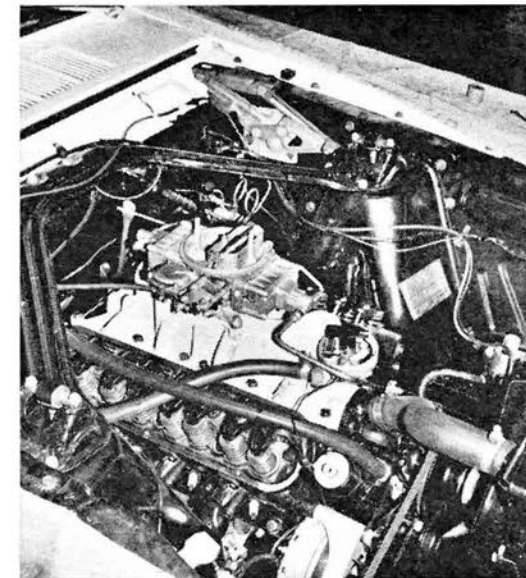
The standard GT-350 noise levels should be about the same as those in the standard high-performance Mustang with just a slight increase in engine noise due to modifications. The competition model, being a race car, is as noisy as the best of them. The comfort level in the standard version goes up a couple of points over the regular Mustang because of the improved driving feel afforded by the smaller diameter steering wheel.

An interesting point is that both the standard GT and the competition GT receive the same chassis modifications. These are the result of extensive track testing, the final results of which showed that once the basic modifications were determined, only the shock absorber settings would have to be changed for competition work. This is easily accomplished through the use of Koni adjustable units which are standard equipment.

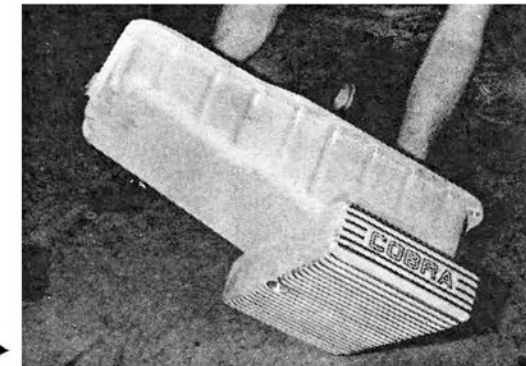
To obtain increased front end cornering power along with a crisper handling feel and quicker response were made. The first, and only physical characteristic, several basic changes, was to relocate the inner pivot of the upper control arm 1 in. lower than that in a standard Mustang. This resulted in an increased camber change (0.6 deg./in. vs. standard 0 deg./in. around design height) and an increase in front roll center height (4.9 in. vs. 2.6 in.). The camber change decreases that amount of front wheel lean induced by body roll by 30% (0.7 deg./deg. of body roll vs. standard 1 deg./deg. of body roll). This means that the front wheels will remain more nearly



BIG HOLLEY 4-barrel carburetor mounts atop cast-aluminum "high-riser" manifold, helps boost Mustang's kick. Air horn fits against opening under hood scoop.



CAST ALUMINUM oil pan increases capacity to 7 qt., is baffled to prevent sloshing.



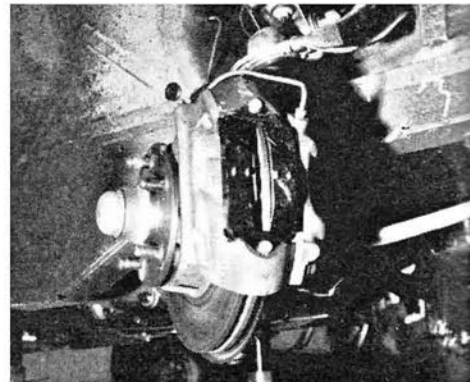
REAL BUCKET seats equip the interior of the competition version of the 350-GT.



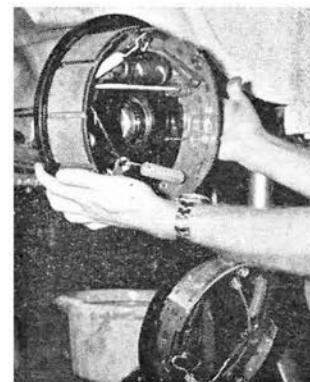
STREET MODEL has normal Mustang seats, Cobra-style steering wheel.



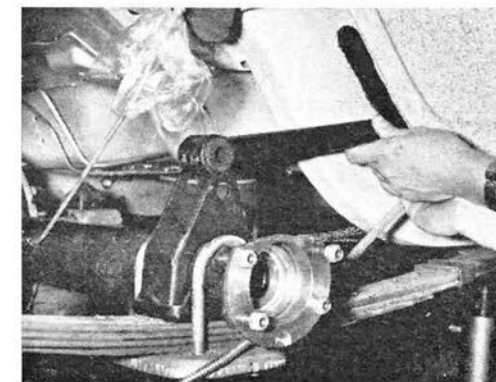
CALIPER DISC brakes are standard equipment for stopping front wheels.



WIDER, metallic-lined drum brakes stop rears.



TORQUE ARMS help stabilize rear axle, prevent spring wind-up on acceleration.



WIDE, BLUE racing stripes and rocker striping decorate the Mustang GT-350. Racing wheels are optional.



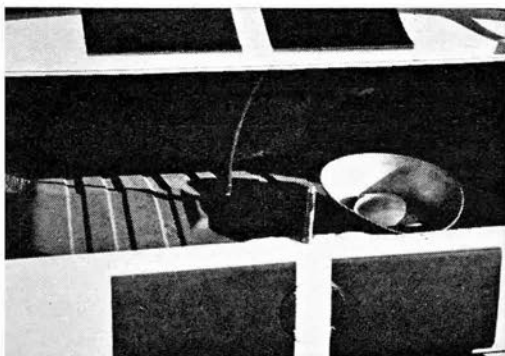
MUSTANG GT-350

vertical to the ground under cornering, thereby improving their cornering power and bite. Raising the front roll center increases the front end portion of the total weight shift under cornering and at the same time automatically decreases, by the same amount, the rear axle weight shift. This allows basic understeer characteristics to be retained but eliminates the tendency of the front end to plow. Increasing roll center height reduced body roll 8%.

Increased directional stability results from a 2° positive caster setting. The 3° angle of the upper control arm is retained to reduce nose dive under hard braking.

Following modern day race car design practices, spring rates are kept rather low with a heavy reliance on good shock control. The spring rate at the wheel is 105 lb. per in.—the same as on HP Mustang.

FUNNEL AROUND quick-fill cap prevents fuel from sloshing into trunk's interior.



BATTERY IN back right corner gives better weight balance.



The HP Mustang steering arms are modified to reduce the overall steering ratio from 21:1 to 19:1. Steering wheel turns are also reduced from 3.5 turns between locks to 3.25. The anti-roll bar diameter is increased from 0.84 in. to 1 in.

The HP Mustang 4-leaf rear springs have been retained but are backed up by a set of torque reaction arms. These arms are mounted on top of the axle tubes, over the center line of the springs, and extend forward to a point in line with the front pivot of the spring forming, roughly, a parallelogram. The location and design of the arms effectively eliminates spring wind-up during hard acceleration or deceleration. They also cut down on rear end side-sway by more positively locating the rear axle.

Chassis modifications are topped off by the use of 15 x 5.5K wheels mounting Goodyear 7.75-15, "Power Cushion" low profile tires. Forged aluminum wheels of Shelby's own design and in rim widths up to 7 in. will be available optionally for either street or competition use.

The brake system consists of Kelsey-Hayes caliper discs on the front with 10.5-in. drums at the rear. The standard lining has been replaced by heavy duty pads in front and metallic at the rear, insuring virtually fade-free operation. For competition work, only a switch of front brake pads is required along with the removal of the disc dust shields, and the addition of cooling ducts at the rear.

A squirt of Cobra venom had also been injected into the reliable Ford 289/271 HP engine. In the standard model the innards remain factory stock—same bore and stroke, valves and cam. The existing intake manifold has been replaced with a newly developed aluminum unit of the high-riser type, mounting a new 4-barrel, center-pivot float, Holley carburetor. A ram effect is gained with the manifold. The carburetor, because of its float design, absolutely will not flood or starve during hard cornering. This combination will be used on both the standard and competition models. The standard oil pan is replaced with a cast-aluminum unit having internal baffling to prevent excessive oil sloshing under hard cornering or other maneuvers. It also increases oil capacity from 5 to 7 qt. (with filter). The cast-iron exhaust manifolds are replaced by tubular steel headers for improved exhaust gasflow and reduction in back pressure.

Straight-through mufflers are used with resonators and the exhaust system terminates just in front of the rear wheels through outward angled pipes. Cast-aluminum Cobra rocker arm covers add a little show. A larger capacity radiator cools the hotter engine.

In addition to those changes, the competition engine also gets the full Cobra treatment inside. This includes ported and polished heads, wilder camshaft, and a few other goodies. There is also some talk about supplying the Weber-carburetored version should the need arise.

At the present, output figures on either of the engines are a little vague. Perhaps optimistic would be a better word. The standard version is rated at 300 @ 6000 with 340 lb.-ft. of torque @ 3400. The competition engine puts out "substantially more."

In the interests of weight-saving, the more familiar Warner T-10 4-speed transmission with aluminum case has been chosen in place of Ford's newer unit. Ratios are 2.36 in first, 1.62 in second, 1.20 in third and direct in fourth. Linkage is standard Ford.

A safety strap has been added to the driveshaft to keep it in place should anything break but otherwise it is identical with the HP Mustang driveshaft.

Rear axle is the conventional hypoid-type with semi-floating axles and straddle-mounted pinion. A choice of either 3.89 or 4.11:1 ratios is available as standard with other ratios being offered optionally. A "No-Spin" locking differential is standard equipment.

Competition options include an engine oil radiator, brake air scoops, 37-gal. fuel tank and safety group which consists of roll bar, shoulder harness, fire extinguisher and flame resistant interior.

The differences and the superiority of the GT-350 over the standard Mustang, or even the HP Mustang, must be sampled to be fully appreciated. They are as great as the differences between any production and sports car. Performance is tremendous (0-60 mph consistently under 6 sec., 130 mph top speed) with cornering and braking power to match. All this comes at a fairly decent price—around \$4500 for the standard model (plus tax and license). As in the case of the horsepower figures, the competition model will be "substantially more!" But as mentioned earlier, the GT-350 is *all* that most of us wanted the original Mustang to be in the first place. ■