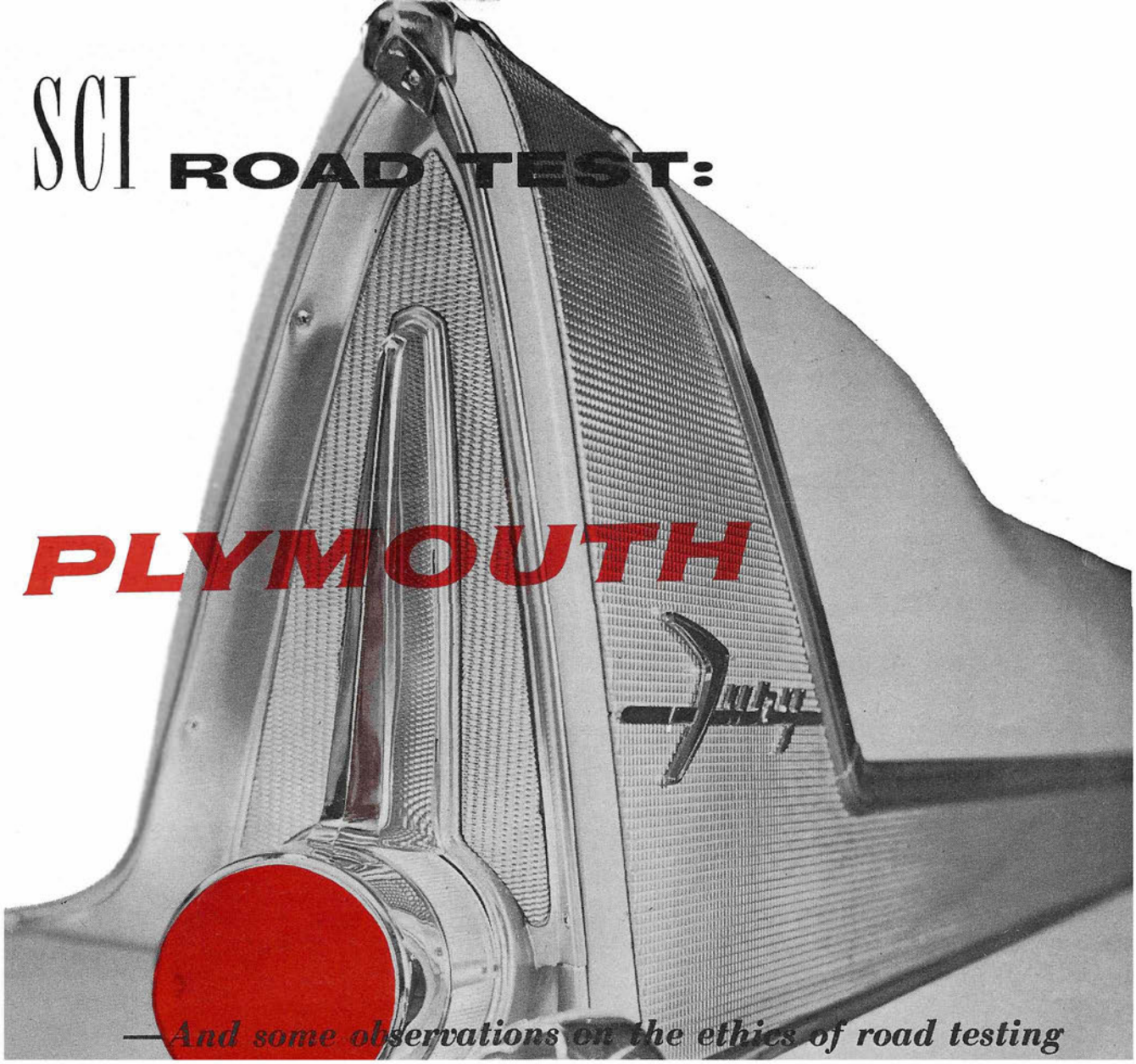
SCI ROAD TEST:



PLYMOUTH

—And some observations on the ethics of road testing

AMONG SPORTS CAR fans there is a small, vocal minority who believes with blind and sincere passion that "if it's foreign it's better." This reverse chauvinism is not limited to Americans. Fangio once told me, "It's the same everywhere. In a machine shop in Italy you pick up a gear and comment on its fine workmanship. As often as not someone whips out a similar part and says with awe, 'But look at *this* gem. *It* was made in Germany.' Or in America."

Those of us who have lived closely with cars of all kinds all our lives and who have test-driven most of the cars made on both sides of the Atlantic for years are in a rare position to make accurate critical evaluations. For years we have cut Detroit to ribbons on many counts. It's not at all unlikely that America's automotive critics and the readers who support them have had more than a little influence on the upward evolution of the Detroit product, even as Uncle Tom McCahill has suggested once or twice. However, "even" Detroit can build a good car, and the majority of SCI's readers do not, we feel sure, jump to the conclusion that only negative evaluations of Detroit products are truthful and that positive findings are lies.

But apparently some of our readers do. In our report of the 1957 Plymouth Fury we said, "It's very difficult to adjust to the fact that here is a big Detroit sedan that can easily out-corner many *bona fide* sports cars." This statement inspired an impassioned letter published in a recent issue of SCI accusing me and/or SCI of getting paid off by Detroit. The writer evidently failed to note that in the report we:

1. Criticised severely and extensively the '57 Fury's very poor low-speed torque and urged radically different camming of the engine.

2. Criticised severely the functioning of the stick-shift transmission and warned potential Fury purchasers to beware of defects in that area.

3. Warned buyers to beware of noisy, bad-fitting rear-axle hub tapers.

4. Pointed out that while the brakes were good in Detroit terms, they faded rapidly.

If it's assumed that the reporting of good features involves a pay-off from Detroit, it might be assumed with equal logic that candid discussion of defects involves a penalty. Following this line of reasoning – or of fantasy, which it is – SCI would *owe* money to Plymouth.

We were challenged for praising the Fury's cornering qualities and for suggesting that they could be compared with those of sports cars. So with the '58 Fury we conducted a test that would make our evaluation of cornering ability as completely objective as possible. How do you go about doing this? Well, there are some road courses in the country that are true equalizers – that are so tight, in fact, that 4.9 Ferraris are at a disadvantge and the odds are all in favor of small cars. One of the tightest courses of all and one of the greatest equalizers is Paramount Ranch: 1.8 miles; 11 bends. The official lap record is held by Ken Miles in a

Three people who wrung out the Golden Commando-powered Fury: Al Papp, Race Coordinator for the CSCC; Griff Borgeson; at the wheel, Eric Hauser, well-known West Coast driver who turned a lap at Paramount Ranch in only 1:55.

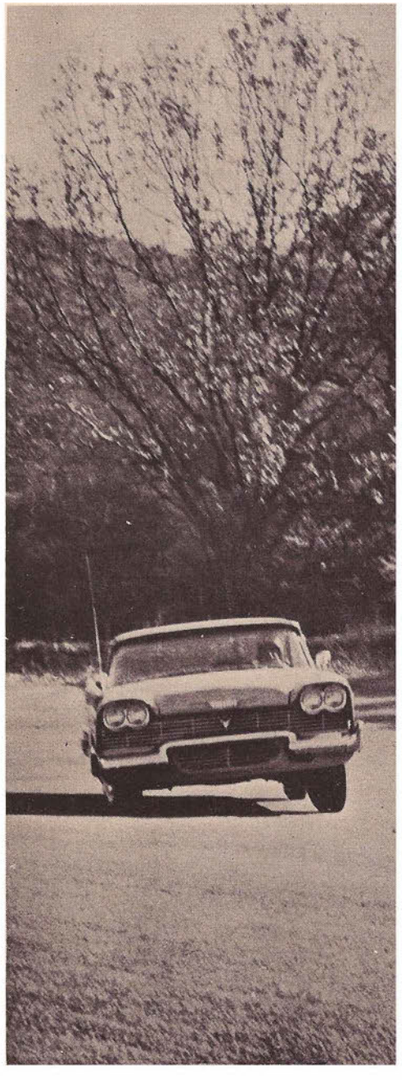
Porsche-Cooper. Plenty of big cars have been tried there but their potential speed is of little avail and the smaller, more nimbly-cornering cars have the advantage. With the gracious cooperation of Paramount's management SCI was granted full use of the course for wringing out the '58 Fury.

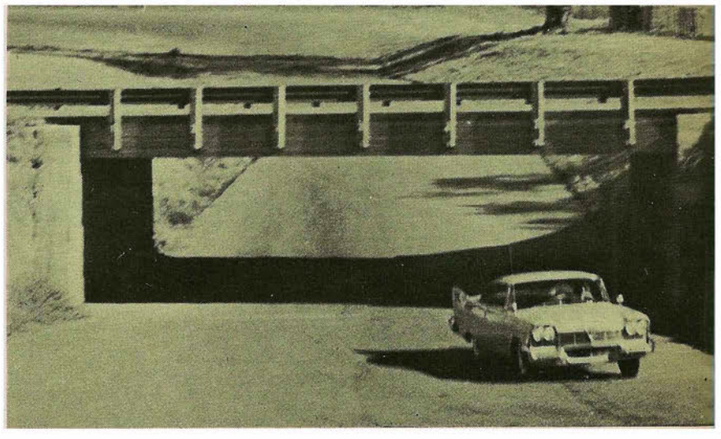
Our test car had the 350 cu. in. Golden Commando engine and 4000 miles on the odometer. It was so far from being properly prepared that the brakes required major adjustment. We fixed the brakes, raised the tire pressure to just 30 pounds, and called the car ready.

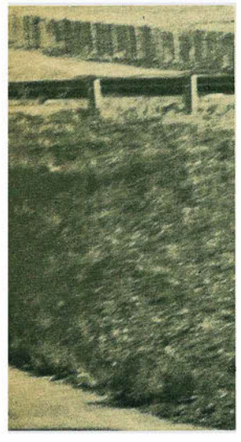
I am only moderately adept at fast driving and my best laps were 2:05. Eric Hauser, prominent west coast driver, made two practice laps and cut a 1:55. His words of praise for the Fury's handling paralleled our own in the '57 Fury test report. With further practice Hauser could no doubt prune some seconds from his 1:55 time. The streets brake linings faded rapidly; with the optionally available harder linings you could go deeper into the turns and cut the time even more. Other obvious preparational touches would help, too. Hauser's 1:55 was observed and timed by Al Papp, race coordinator of the CSCC. Papp also lapped the course in the Fury. He owns and drives imported sports cars. He pronounced the Fury one of the best-cornering cars in his experience. Beyond that, he stated, it felt outstandingly secure when he extended it fully in the turns.

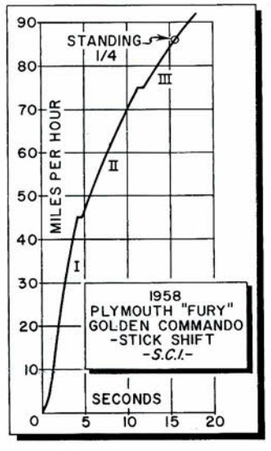
Hauser's off-the-cuff 1:55 is more than competitive with a great many of the lap times turned by sports cars at Paramount. The *winning* Porsche Super Speedster in the Third Paramount Road Race, for example, averaged 1:54 for six laps. A *winning* M-B 300SL in the fourth race averaged 1:47 for ten laps. The large number of also rans were, of course, slower. The '58 Fury, prepared for racing, should be capable of getting quite close to that 1:47. Just how close is implicit in the official times of big Detroit stockers clocked at a recent USAC stock car event held on this same course. And as you read these figures remember that Miles' sports car lap record is just over 1:36.

Chuck Stevenson's Ford lapped in 1:36,92. Chuck is a *great* driver. But many other top pro drivers in other Detroit makes did almost as well. Jerry Unser's Ford: 1:37.52. Troy Ruttman's Ford: 1:38.23. Jimmy Reece's Pontiac: 1:38,84. Johnny Mantz' Merc: 1:39.00. Johnny Parsons' Olds: 1:40.24. Sam Hanks' Merc: 1:40.29.









Corner #10, above, is a really tight one. Despite the fair-sized roll angle, the Fury hangs on well without any sudden surprises. At right, the Fury enters turn #2 at 80 mph.

Ken Purdy's "The Big, Fast Four" in last December's SCI stated what is about to be repeated here. For a long, long time nearly the total world supply of performance iron came from Europe. But big changes have taken place recently in domestic machines . . . not just in power plants but in chassis design as well. The lap times achieved by the carefully prepared Detroit stockers at Paramount can obviously be equalled by a Fury-specification Plymouth with similar preparation.

This means a lot to all of us who want machines that work. Not because we plan to go racing in big family cars, but because many of us own them because we need to or choose to, and the car that grips the road securely is a safer car and a more satisfying one to drive.

Now some of our readers are likely to claim that SCI is evaluating the American car against the European and stating that the home product is the best. This is *not* the correct interpretation. SCI brings its readers important information on sports cars, light cars, and performance cars — *all* of them, regardless of where they're made.

In this connection it's our job to report on the literally fantastic progress made in U.S. chassis design in the last very few years. We do not say that Detroit is now "better" than Europe, any more than we say that the 300SL's cornering is "better" than that of the Lancia 2.5 GT. We *do* say that Detroit is catching up (and in some cases *has* caught up) with good European practice. This is a point worthy of recognition and rejoicing.

It's obvious, of course, that the best-handling 4000-lb. car in the world will never match the total, easy perfection of the best-handling 2000-lb. car. The uncanny thing is that any car as ungainly, as unsuited to agile performance as the current, standardized, bulky Detroit package nevertheless *can* be agile, fast, graceful and secure.

Most European cars have their own individualistic road manners. The differences between most American cars are slight, but the Plymouth (and the Fury in particular) stand out distinctly from most of their compatriots. Anybody is a fool to drive a car at its limits on the open, public road, but on a closed race course you can do it with optimum safety. Hours of extending the Fury at Paramount proved to us that here is a car that always does just what you want it to do. Pushed to its limit on fast, sweeping Turn One it never pushes at the front or swings out at the rear. As you increase speed it sets up a very gradual, very gentle slide, staying

(Continued on page 53)

PLYMOUTH FURY HARDTOP COUPE — 1958
STANDARD SHIFT
PERFORMANCE

TOP SPEED:

Two-way average	114 mph
Fastest one-way run	115 mph

ACCELERATION:

From zero to	Seconds	(1957)
30 mph	2.7	2.8
40 mph	3.6	4.1
50 mph	5.7	6.3
60 mph	7.7	8.5
70 mph	9.9	10.7
80 mph	13.5	15.2
90 mph	17.2	21.7
Standing ¼ mile	15.5	
Speed at end of quarter	86 mph	

SPEED RANGES IN GEARS:

I	0-45 mph
II	9-75 mph
III	14-top

SPEEDOMETER CORRECTIONS:

Indicated	Actual
30	30
40	39
50	48
60	57
70	65
80	75
90	84
100	91

FUEL CONSUMPTION:

Hard driving on test	7 mpg
Average driving (under 60 mph)	12 mpg

BRAKING EFFICIENCY:
(10 successive emergency stops from 60 mph, just short of locking wheels)

Stop	Per cent	Comment
1	85	
2	84	
3	80	
4	60	
5	58	Pulling to side
6	57	
7	56	Pulling badly
8	53	
9	46	Pedal on floor
10	42	

SPECIFICATIONS:

POWER UNIT:

Type	90° V8, wedge combustion chambers
Valve Arrangement	Pushrod ohv, hydraulic tappets
Bore & Stroke	4.06 x 3.37 in (103.2 x 85.7mm)
Stroke/Bore Ratio	0.83/1
Displacement	350 cu in (5740cc)
Compression Ratio	10.0/1
Carburetion by	Dual 4-barrel
Max. Power	305 bhp @ 5000 rpm
Max. Torque	370 lb-ft @ 3600 rpm

DRIVE TRAIN:

Transmission ratios	
I	2.30
II	1.55
III	1.00
Final drive ratio	3.73
Final drive options	3.36; limited—slip differential
Axle torque taken by	Rear springs

CHASSIS:

Wheelbase	118 in
Front Tread	61 in
Rear Tread	60 in
Suspension, front	Longitudinal torsion bars
Suspension, rear	Longitudinal leaf springs, outboard of frame
Shock absorbers	Oriflo telescopic, 1 in dia
Steering type	Manual: Worm & ball-bearing roller Power: Recirculating ball
Steering wheel turns L to L	Manual: 4.8; Power: 3.5
Brake type	Center-plane, 11 x 2 in.
Brake lining area	184 sq in
Tire size	8.00 x 14

GENERAL:

Length	206 in
Width	79 in
Height	54 in
Weight, test car (half-tank of fuel)	3830 lbs
Weight distribution, F/R	55/45
Fuel capacity	20 U. S. gallons

RATING FACTORS:

Bhp per cu. in	0.87
Bhp per sq. in piston area	2.94
Torque (lb-ft) per cu in	1.06
Pounds per bhp — test car	12.6
Piston speed @ 60 mph	1615 fpm
Piston speed @ max bhp	2815 fpm
Brake lining area per ton (test car)	96.0 sq in
Mph per 1000 rpm	20.9

PLYMOUTH FURY

(Continued from page 21)

poised and perfectly balanced throughout the curve, maintaining secure adhesion far beyond any speed most motorists have ever attempted in cornering or ever will. Because the Fury can be wound out to an actual 85 mph in second gear, top gear can be used at Paramount for just a few seconds on the short main straight, and the rest of the course is negotiated in the lower cog. In tight, slow hairpins the Fury refuses to break loose at either end under really savage acceleration. Remarkably enough the Fury combines this cornering ability, this extreme road-safety factor, with an exceptionally comfortable ride.

(But the acid test of handling is to take an automobile and drive it over a thin layer of freshly-frozen sheet ice at comparatively high-speed. The New York and Connecticut parkway system is at best adequate, if the temperature is in the fifty-to-seventy range and the area is about four days removed from precipitation. Under any other conditions you're better off at home.)

We took the Fury that we were testing on the East Coast out on a road just like this and drove it for three hours. We made it a point to sustain the posted speed (posted for clear weather). The Fury clung to the road like it was part of the concrete, even on sharp turns and steep hills. Only once did it tend to lose traction on all four wheels simultaneously, and we had to push the car to make it slide even then. Recovery was immediate.

Perhaps instrumental to this excellent handling was the judicious use of the One and Two buttons of our Torqueflite transmission. Descending a hill in the number Two gear allows the Fury to hold a constant speed without brake: the number One button halts the car gently but firmly, even on a sheet-ice downgrade. This option is well worth the money.

All of which goes to prove that as well as being *very* quick, fierce and endowed with a savage, brute power, the Fury is *safe*. And unless you're over eight feet tall and one day removed from the heat of the Sahara, you'll be as comfortable as in your own drawing room.

But the car is not perfect. Our number one criticism is aimed at its brakes. These follow the near-universal Detroit trend of decreasing adequacy. Hauser faded them out almost totally in one fast lap at Paramount and they behaved poorly in our standard ten-stop fade test, after which they retained a permanent chatter. Although identical to those on our '57 Fury test car, they performed worse because they were punished more severely. Our only other important criticism is one that applies to nearly all current Detroit production: the package is irrationally large.

The new Golden Commando engine has everything in torque, in pulling power, that last year's power plant lacked. While the former engine performed downright dully at low engine speeds, the new "B" or Golden Commando power unit has a remarkably flat torque curve from its 3600 rpm peak down to very low revs.

(Continued on page 61)

PLYMOUTH FURY

(Continued from page 53)

It also permits, for example, the ascent of a steep grade in top gear at 20 mph with total smoothness and without a trace of lugging. This is particularly notable for a dual four-throat carb engine with the simplest sort of log-type manifold. Among the several factors that go into providing this smoothness and high torque are increased displacement, new combustion chamber design, venturi-shaped intake ports and extremely short, roomy exhaust passages.

This new engine, while in essence "just another Detroit V8," embodies a mass of detail improvements, both in terms of manufacturing efficiency and engineering quality. It is much lighter than its predecessor; fifty pounds are saved in the interchangeable cylinder heads alone. For minimum distortion and maximum sealing, the number of cylinder-head bolts has been increased from ten to seventeen per head, with five bolts spaced symmetrically around each cylinder.

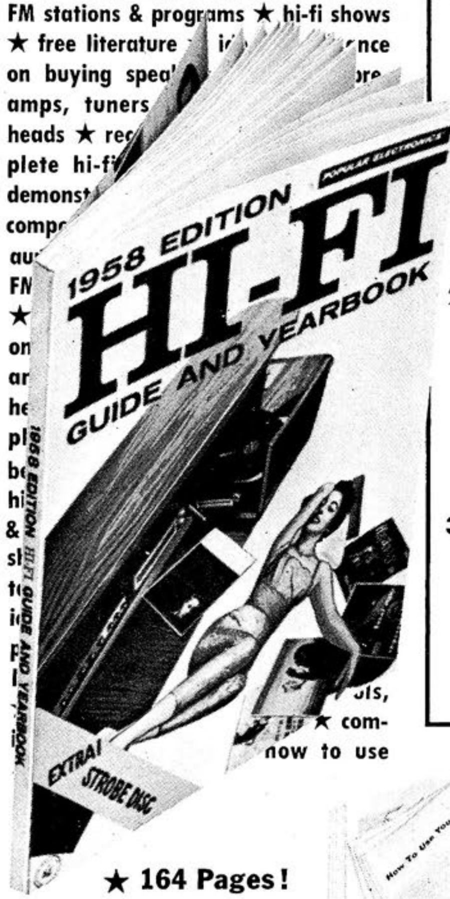
The crankshaft's main and rod journals have been enlarged to give a journal overlap of 13/16 in., and increased main and rod bearing areas of 25 and 28 percent respectively. A torsional vibration damper is fitted and the crank-rod-piston assembly is dynamically balanced. The pistons and their two compression rings are tin coated to prevent scuffing during break-in.

Hydraulic tappets are standard and they operate light, tulip-head valves through tubular steel pushrods and pressed steel rocker arms. The tappets do not pump up until far beyond the 5000 rpm horsepower peak. Both intake and exhaust valves are made of heat resistant high-alloy steels and they rotate automatically, in the interest of lengthened valve life. The newly designed intake manifold is relieved of the secondary function of tappet-chamber cover and is merely an open series of branches without excess cast iron — another weight-saving feature. The tappets can be removed without pulling the intake manifold — typical of a large number of good service features designed into the B engine. The four-throat carbs appear to be greatly simplified and greatly improved over those on the '57 Fury, which were known to fail to furnish fuel on sharp curves and steep grades.

The '58 Fury's manual shift transmission is smoother in its operation than that of the '57. It's still on the heavy side, though, and requires prior engagement of a synchronized gear if clashing is to be avoided on engagement of low or reverse. But its crossover (fore and aft motion in the neutral position) and up and down shifts between second and high are smoother. This transmission has undergone two re-designs dictated by increasingly powerful engines. In the course of making the gear teeth huskier, low's ratio has gone from 2.58 to 2.50 to 2.33, and second's from 1.83 to 1.68 to 1.55. In the '58 Fury with 3.73 axle gears it is possible to wind out to 54 mph in low and 85 in second.

Rear axles for the Fury have undergone a similar beefing-up, with the result that the choice of optional final drive

(Continued on page 63)



PLYMOUTH FURY

(Continued from page 63)

ratios now has dropped to two. They are 3.73 for the stick job and 3.36 for the TorqueFlite torque converter transmission.

Our '58 test Fury was not equipped with optional Constant-Control recirculating-ball power steering, but none of its several robust drivers missed this. Caster action in the test car was extremely strong, perhaps even excessive. This might be due to incorrect caster adjustment although the effect might be due entirely to fixed king pin inclination. The steering is smooth and positive but somewhat heavy and slow.

When you buy merely a Fury you do not get our test car. The basic Plymouth has the 318 inch engine that powered last year's Fury, but with one two-throat carb. The regular '58 Fury comes with the same engine, a camshaft change, a pair of dual four-throats, and heavy duty springs and shocks. The Golden Commando Fury has the H.D. suspension, plus the new 350 inch engine with dual four-barrels.

It is more than an exciting car. It's a kind of car that Detroit has produced few of in the last 20 years. It's a car with a really strong personality. It's a taut feeling vehicle that does not see-saw on rubber-bushed suspension. Yet its ride cannot conceivably be called harsh. It is extremely fast and responsive to the driver's touch. It moves with authority and grace. It is sleek but it has its bestial side. Like the old *kompressor* Mercedes, the engine emits an animal moan when you floor the throttle. But its built-in fury is entirely on the driver's side; it has no sneaky little vices that appear when the chips are down, aside from its brakes.

As for sheer *go,* it far outstrips the already hot '57 Fury.

Griff Borgeson

SUPERSPORTS

(Continued from page 18)

Taylor's advice could have been well heeded, as it turned out. The difference in one-off and production is considerable, and is compounded by the fact that problems involved in powerplant manufacture are not the same as other consumer items of a less durable nature.

Controlled-atmosphere brazing (the proper term for the process) of steel parts to replace castings, die castings and manually welded parts dates from about 1929, when General Electric went into hydrogen-electric oven research. Since that time, fabrications weighing from fractions of an ounce to 400 pounds have been fused at the 2000°F temperature. A variety of useful gadgets is included in this list . . . from freon-filled bug bombs to end plates of Oerlikon cannon and jet turbine parts. And the brazing technique, when applied to engine blocks, is advantageous in respects other than weight-saving, as we shall see.

(Continued on page 64)