

Can Mercury's Daytona Image Maker Deliver? 428 STREET CYCLONE



GREAT TORQUE and tremendous traction of Goodyear's new Polyglas tires made Cyclone fastback clear winner in dragstrip competition with 427-cid Cougar. Cougar had no limited-slip axle, and wasted much of its torque spinning right rear tire. Cyclone bit and pulled to quarter-mile times in low 14-sec. bracket.

PHOTOS BY PAUL E. HANSEN

CAR LIFE
ROAD TEST



MERCURY HAD A PERFORMANCE image, once, back in the dear dead days of the flathead V-8. Then came limbo, the middle-aged Merc.

But now, with Mercury stock car racers winning the Daytona 500 and the Atlanta 500, look who's got a new performance image. For the salesmen, it's great, but the question remains: Do Mercurys off the showroom floor benefit from the Mercurys in NASCAR racing?

Sometimes they do, and sometimes they don't. The street Cyclone, starting point for the stock car racers, gains in performance as well as performance image. Equipped with the latest version of the 428-cid V-8, the handling package that comes with the engine, a beefed-up automatic transmission and disc front brakes, the Cyclone, got it.

The engine, advertised as the Cobra Jet, is the key to the Cyclone's performance. For a while, Mercury had two big engines, a 428 cid that was just a humdrum production engine made bigger, and a 427 cid, the genuine racing engine tamed down. Neither was quite the answer on the production line or in daily use. The Cobra Jet is a mixture of the two: the regular, mass-production 428 block and internals, with the race-bred 427 cylinder heads and manifold, topped by a huge four-barrel carburetor. The 427 used at Daytona is no longer being built for production cars.

The Cyclone is a big, heavy car, but the Cobra Jet is more than enough for the job. Quarter-mile runs were in the low or mid-14s, in the Supercar class, and trap speed at the end of the quarter was in the high 90s. The Cyclone would reach 60 in 6.2 seconds. The 428 Cyclone is one of the quickest full-size production cars on the market today.

In anticipation of complaints from owners of other Supercars, the Cyclone had a few little advantages. The test car was fitted with a 3.91:1 rear axle ratio. The 428 was turning close to peak revs by the end of the traps, which means the gearing was close to ideal—for the dragstrip. Other places, it's a nuisance. The extra low gearing means the engine is running fast all the time. The driver with a sensitive ear or an eye for the tachometer will reach for the console-mounted gearshift almost automatically, to make sure that the car is in top gear, not second. It will be in high; the transmission doesn't make mistakes. But the gearing is so low that top gear sounds like second.

There are some practical disadvantages, too. High engine speeds equal low gas mileage, even with a light foot on the throttle. True, the man who buys a big-engine, high-performance car, and doesn't flinch at the \$306 tag on the Cobra Jet package, isn't likely to be worried about the gas bill.

But engine life might be involved, if the car were run hard enough, long enough. High ratio gearing was one of the reasons the first imports went through engines like Sherman through Georgia. They weren't designed for open American roads, and the handcrafted little gems just ate their tiny hearts out. The 428 is a strong engine, but even NASCAR racers take unplanned lunch breaks. At 70, the engine was turning almost 4000 rpm. A lower numerical gearset would be worth the slight loss in acceleration.

The Cyclone was also aided by its tires, Goodyear's new Polyglas, a combination of bias plies and a fiberglass belt under the tread. Goodyear claims that the use of cross plies and a tread belt gives the advantages of standard and radial tires, at the same time. They certainly worked on the Cyclone.

Horsepower at the flywheel makes for nice advertising, but in real life the power is delivered to the pavement. If the tires won't deliver, the car won't go. The Polyglas tires delivered all the horsepower, right from the start.

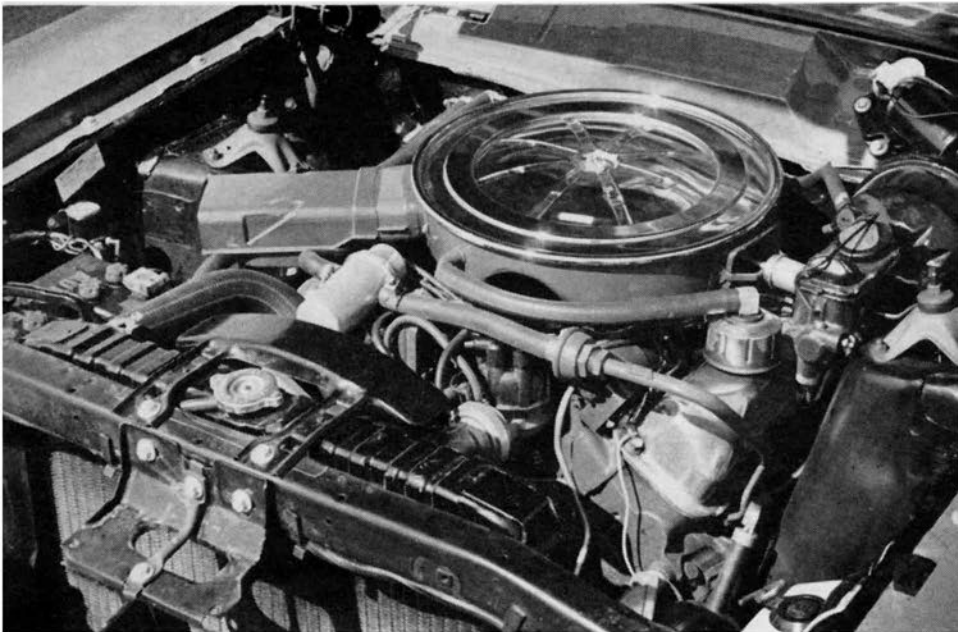
That's not an attempt to damn with faint praise. All the traction in the world won't help a weak engine. The Cyclone is one of the few cars that comes with tires to match power. Some Supercars would look better in acceleration tests if full power didn't go up in tire smoke. It might be fairer to say that other cars are handicapped, rather than that the Cyclone's tires give it an advantage.

Stronger springs and shock absorbers are part of the Cobra Jet package, and the handling kit would almost be worth the price without the engine. The 428 is heavy, as all big V-8s are; it sits between the front wheels, as all American V-8s do; and the Cyclone understeers, with more steering lock required to keep the car on course, as all domestic, front engine cars do. But someone, or some design group, knows what handling is, and the Cyclone has it. The understeer can be quickly corrected, either by simply turning the wheel, or by applying more power. The Cyclone can be balanced, and kept balanced, at cornering forces far beyond what normal driving could demand. In terms of cornering power, predictability and controllability, the Cyclone rates very high for a full size car, and higher than at least one Pony-car.

Braking, with power assisted discs in front and drums in back, was very good, embarrassingly so. When the Cyclone was first delivered, the brakes worked fine, but the rear axle leaped and bounded uncontrollably. Bolts attaching the axle housing to the rear springs were loose. The bolts were tightened and the test resumed with a

CYCLONE'S SUPERIORITY carried over from dragstrip to road course. Cyclone, with handling package that accompanies Cobra Jet engine, displayed near-neutral handling, high cornering power and almost perfect controllability during all-out, maximum-effort cornering tests: Race car handling in a street car—a fine accomplishment.





COBRA JET 428-cid engine gave Cyclone plenty of pizzazz. This package replaced no-longer-produced 427-cid street engine. Cobra Jet engine has same speed-producing components as race-sired 427, but uses cheaper standard block.

CYCLONE

continued

Mercury engineer as a passenger. On the first stop, the decelerometer registered 30 ft./sec.², close to one G and much higher than can be reached by most cars.

Stop after stop, the Cyclone dug in

and shut down. All four tires stayed on the ground, and the car came to a halt in a straight line. The Cyclone has braking power to go with the engine. That's praise few cars have earned.

The Cobra Jet's automatic transmission *could* do with some refinement. Shifts at full throttle are quick and sharp, as they should be, but the transmission doesn't know when to ease up. Ordinary starts in traffic have that same snap. Unnecessary, if not exactly unpleasant.

Driving the Cyclone in everyday traffic was pleasant, with several minor drawbacks. The dragstrip gearing was one, but the extra noise and impression of busyness soon wears off. More of a bother as the miles roll by is the throttle. It feels like early power steering, that is, as if the foot pedal is connected to some mysterious gadget, which in turn attaches to something else, which finally gets the message to the carburetor. Not so much just plain stiff as stiff, springy and vague. The Cyclone needs a heavy foot, literally. For full power, when merging into traffic on the expressway, the driver plants his foot on the pedal, braces himself against the seatback, and stomps. When the slack has been taken up and the spring or whatever stretched out, the car surges ahead, right into

1968 MERCURY CYCLONE



DIMENSIONS

Wheelbase, in.....	116.0
Track, f/r, in.....	59.0/59.0
Overall length, in.....	203.5
width.....	73.8
height.....	54.5
Front seat hip room, in.....	26.0 x 2
shoulder room.....	58.0
head room.....	38.1
pedal-seatback, max.....	40.5
Rear seat hip room, in.....	58.0
shoulder room.....	58.3
leg room.....	34.1
head room.....	36.8
Door opening width, in.....	42.5
Trunk liftover height, in.....	33

PRICES

List, FOB factory.....	\$2918
Equipped as tested.....	\$3875
Options included: 428 Cobra Jet V-8; Handling package, power assisted disc brakes, steering; limited-slip rif. GT package, Polyglas tires, Select-Shift trans.	

CAPACITIES

No. of passengers.....	5
Luggage space, cu. ft.....	17 1
Fuel tank, gal.....	20.0
Crankcase, qt.....	4
Transmission/dif., pt.....	26/5
Radiator coolant, qt.....	20.5

CHASSIS/SUSPENSION

Frame type: Unitized.	
Front suspension type: Independent by s.l.a., telescopic shock absorbers and coil springs.	
ride rate at wheel, lb./in.	119
antiroll bar dia., in.....	0.85
Rear suspension type: Hotchkiss live axle, multileaf, telescopic shock ab- sorbers.	
ride rate at wheel, lb./in.	146
Steering system: Recirculating ball gear, linkage boost power assist, parallelogram linkage behind front wheels.	
overall ratio.....	21.6:1
turns, lock to lock.....	3.5
turning circle, ft. curb-curb.....	41.5
Curb weight, lb.....	3740
Test weight.....	4060
Distribution (driver), % f/r.....	55.2/44.7

BRAKES

Type: Disc front, duo-servo drums rear.	
Front rotor, dia. x width, in.....	11.37 x 1.84
Rear drum, dia. x width.....	10.0 x 2.0
total swept area, sq. in.....	361.0
Power assist: Integral vacuum.	
line psi at 100 lb. pedal.....	1200

WHEELS/TIRES

Wheel rim size.....	14 x 5.5J
optional size.....	none
bolt no./circle dia. in.....	5/4.5
Tires: Goodyear Polyglas.	
size.....	F70-14
normal inflation, psi f/r.....	28/28
Capacity @ psi.....	5600 @ 28

ENGINE

Type, no. of cyl.....	ohv 90° V-8
Bore x stroke, in.....	4.13 x 3.98
Displacement, cu. in.....	428
Compression ratio.....	10.7:1
Fuel required.....	premium
Rated bhp @ rpm.....	335 @ 5600
equivalent mph.....	109
Rated torque @ rpm.....	445 @ 3400
equivalent mph.....	66
Carburetion: Holley 1x4.	
throttle dia., in./sec.....	1.52/1.56
Valve train: Hydraulic lifters, push- rods and overhead rocker arms.	
cam timing	
deg., int./exh.....	18-72/82-28
duration, int./exh.....	270/290
Exhaust system: Dual with branched headers.	
pipe dia., exh./tail.....	2.25/2.25
Normal oil press. @ rpm. 40-60 @ 5500	
Electrical supply, V./amp.....	12/42
Battery, plates/amp. hr.....	78/80

DRIVE TRAIN

Transmission type: Three-speed auto- matic with torque converter	
Gear ratio 3rd (1.00:1) overall. 3.91:1	
2nd (1.46:1).....	5.71:1
1st (2.46:1).....	9.62:1
1st x t. c. stall (2.10:1).....	21.8:1
Shift lever location: Console.	
Differential type: Hypoid.	
axle ratio.....	3.91:1

that hole in the traffic. About as soon as the car begins to go, the driver must be ready to back off; once underway, the Cyclone picks up speed at a great rate. The sound keeps the drivers in front of the Cyclone alert, though.

Stability at highway speeds is quite good. With a crosswind, the car hunts slightly. The fastback shape is known to be good and clean, so this may be tire feel. Pure radials feel squirmy, at first, and the belted bias ply may have the same characteristic. It isn't really unstable, simply an illusion caused by the sidewalls flexing on the tread.

Engine quirks aren't there. Many high horsepower engines, even the big-inch ones, trade power and smoothness at idle and low speed for more horsepower at high speed. The Cobra Jet is strong all the time. The idle has just enough rump-rump to make the guy in the other lane respectful. There is so much torque at low speed, in fact, that with the Cyclone in gear at 800 rpm idle, the brake must be held down or the car moves smartly away.

Interior appointments are contemporary extra-cost options. Two soft separate seats in front (not genuine buckets because they provide no lateral support) are comfortable for hours at a time. The seatbacks rake enough to put the driver a nice distance from



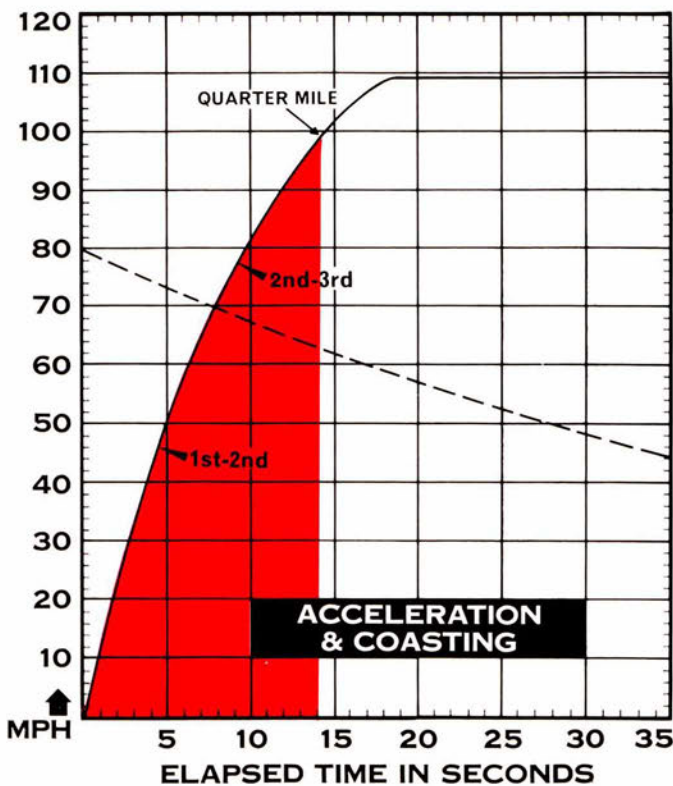
CYCLONE INTERIOR scored high marks for comfort and functionality. Instruments were readable, though lack of oil pressure and water temperature gauges with high-performance engine was discomforting and potentially dangerous.

the wheel without losing touch with the pedals. The test Cyclone did not have a tilting or adjustable wheel, and it wasn't missed. The rear seat will fit for only a short trip. Small people might be able to last all day, but when

they emerged, they'd likely be wedge shaped.

The instrument panel is attractive, and furnishes all the information the driver needs. The panel is covered with real test-tube wood. Even tree

CAR LIFE ROAD TEST



CALCULATED DATA

Lb./bhp (test weight).....	12.1
Cu. ft./ton mile.....	42.0
Mph/1000 rpm (high gear).....	19.5
Engine revs/mile (60 mph).....	3040
Piston travel, ft./mile.....	2030
CAR LIFE wear index.....	61.1
Frontal area, sq. ft.....	22.4

SPEEDOMETER ERROR

30 mph, actual.....	29.4
40 mph.....	40.4
50 mph.....	50.6
60 mph.....	60.97
70 mph.....	71.71
80 mph.....	82.11
90 mph.....	92.87

MAINTENANCE

Engine oil, miles/days.....	6000/180
oil filter, miles/days.....	6000/180
Chassis lubrication, miles.....	36,000
Antismog servicing, type/miles . .	change PCV valve/12,000, clean air pump lines/12,000, check engine tune/12,000
Air cleaner, miles.....	replace/36,000
Spark plugs: Autolite.	
gap, (in.).....	0.032-0.036
Basic timing, deg./rpm.....	6/600
max. cent. adv.,	
deg./rpm.....	24-29/4000
max. vac. adv.,	
deg./in. Hg.....	16-22/16
Ignition point gap, in.....	0.014-0.018
cam dwell angle, deg.....	26-31
arm tension, oz.....	17-21
Tappet clearance, int./exh.....	0/0
Fuel pressure at idle, psi.....	5
Radiator cap relief press., psi.....	15

PERFORMANCE

Top speed (6000), mph.....	117
Test shift points (rpm) @ mph	
2nd to 3rd (5800).....	77.6
1st to 2nd (5800).....	46.0

ACCELERATION

0-30 mph, sec.....	2.7
0-40 mph.....	4.0
0-50 mph.....	4.8
0-60 mph.....	6.2
0-70 mph.....	7.7
0-80 mph.....	9.7
0-90 mph.....	12.1
0-100 mph.....	14.6
Standing 1/4-mile, sec.....	14.4
speed at end, mph.....	99.44
Passing, 30-70 mph, sec.....	5

BRAKING

Max. deceleration rate from 80 mph	
ft./sec. ²	30
No. of stops from 80 mph (60-sec. intervals) before 20% loss in deceleration rate.....	8
Control loss? None.	
Overall brake performance. very good	

FUEL CONSUMPTION

Test conditions, mpg.....	10.2
Normal cond., mpg.....	10-13
Cruising range, miles.....	200-260



BEST ELAPSED time for Cyclone was 14.18 sec., with two people and full test gear aboard. Deep gearing (3.91:1 rear axle) was perfect for quarter-mile work. Cobra Jet was turning around 5300 rpm through the traps. Maximum engine speed was 5600-5800 rpm, and strong powerplant was still pulling hard at these lofty speeds.

CYCLONE

continued

wood is spurious decoration and the laboratory substitute looks as good without the bother. The tachometer is located in plain sight, for once, and it's the proper size, with legible numbers. The fuel gauge is the only other instrument. It's too big, or at least bigger than it needs to be. The condition of everything else—engine temperature, oil pressure—is signalled by a small set of warning lights. That's an assumption. None of the lights came on during the test, and nothing caught fire or fell off, so presumably the warning lights would warn if called upon to do so.

Driving over rough roads produced no worse than the thump of tires in chuckholes. The Cyclone is solid, and quality control is thorough. Again, all cars should come that way from the factory, but they all don't. Fords, in particular, have been prone to rattle this model year, but Mercurys aren't, for reasons unknown.

The fastback body attracts comments, almost all favorable. Styling a big fastback is quite a challenge. There

may be more than mere good looks involved. Mercury's fling at racing was as sudden as it was successful. Before the season started, parent Ford Motor Co. announced that Ford Division would compete in stock car races, and Mercury would run at the dragstrips. The intent, presumably, was to avoid last season's intramural battles, in which brotherhood was forgotten and Ford and Mercury teams ran each other into the ground.

Then came Daytona, and Mercury arrived with top-flight drivers and cars that were more than competitive. Something had happened. Those who know won't say, but one group of those who do say claims that Mercury Division heads felt they needed some wins in the big time and persuaded the corporate powers. Another version is that the Mercury body shell, in particular the front fenders and hood, has a cleaner aerodynamic shape at racing speeds than Ford fronts and that the Mercury shape was needed to keep the prizes in the family. FoMoCo has been experimenting with aerodynamics for several years, and it might even be that streamlining was the reason for

that attractive roofline, and that the good looks were an accident. Unlikely, but it's possible.

The claim that racing improves the breed is as old as racing. In the Cyclone's case, there's merit to it. The engine parts were tested on the idol of the age, the computer. They ran in races and broke. The engineers put the racing experience to use, and the engines don't break any more. Some of the exotic parts were changed, but there's a lot of racing engine in the Cobra Jet.

The suspension, too, is a big improvement over Mercury systems of pre-racing days. The work could have been done on the proving grounds, but it could also be no one would have bothered. The body shape, as noted, may be based on past races, and adopted for this season's races.

Added up they make the Cyclone good. If the Cyclone owner's neighbor wanders up, as one of ours did during the test, and asks, "Is that the car that won the Daytona 500?" the owner can say, as the tester did, "Sure did."