



## ECONOMY RUN VS. ROAD TEST

### *Lead Feet do not a Mileage-Master Make*

IF OUR MAIL is any indication, it would seem that road testers are in a never-ending competition with the readers. No matter what test figure is published, someone with the same car is certain to inform us that he has gone one better (or one worse, in some cases). We believe that such interest is a healthy thing and fortunately the anguished cries tend to balance each other out. For every reader who is willing to swear that he can hold one foot on the brake and still beat our quarter-mile time, there is another who is equally convinced that the factory has furnished us a specially tuned hot rod for the acceleration tests.

We all must face the fact that identical cars do not necessarily perform that way. There will be a variation in performance capabilities, depending

upon the engine's tune, atmospheric conditions and driver response. In short, there is no all-around standard performance for any one model of car. Even the various auto magazines may differ widely in test reports—sometimes after testing the same car. Who's right? The answer must be that test figures are only an indication of the sort of car under consideration, that they point a direction and are rarely the ultimate.

The one test figure that seems to be subject to the most variation and consequently open to argument is fuel consumption. Every driver follows his personal habits and the results between a series of testers can be so different that there is little correlation. We publish a normal range of miles per gallon, which should take in the

high and low of the average driver, and occasionally we quote specifics from different types of driving.

Because of that chronic point, we thought it would be enlightening to compare some of our road test mileage figures with the results of the Mobil Economy Run, which is one controlled test that measures fuel economy for almost every American car. Obviously, Economy Run results should be better than our road test figures, if for no other reason than that these drivers are really trying. We learned how hard they try during last year's run (*What Price Economy?* July 1963).

The thing that makes a comparison of the two sets of figures feasible is that the run conditions are surprisingly realistic; the cross-country route meanders over varied highways while the

average speeds required are not far off the figures that a vacation driver might register. Last year's run, from Los Angeles to Detroit, covered 2373 miles, had terrain that ranged from 640 to 9010 ft. elevation, and carried an overall speed minimum of 43.77 mph. The cars are kept so stock that it is painful, and the drivers battle traffic, fight headwinds, and curse upgrades with but one thought in mind—get that mileage. Usually, they do.

It seems safe to conclude that the Economy Run results are truly a high score, something a motorist might shoot for in his own car. Although we don't try for all-out economy in our tests, let's see how (and possibly why) some of our figures stack up against comparable run cars.

We called the Valiant V-100 (December '62) "a practical economy car," rating its gas mileage range from 18-22 mpg. The 170-cu. in. engine, automatic transmission version we

used was almost identical to the car that competed in the run, even to the 3.23:1 rear axle ratio. The run car recorded 26.26 mpg, proving that its mileage potential is there, even if we failed to tap it.

Our Chevrolet Biscayne V-8 was a stick-shift, option-free, 2-door model, with which we came really close to the mileage set up by the experts. We do admit to a slight advantage. The nearest Economy Run counterpart was a Bel Air model, equipped with Powerglide, power steering and power brakes. Both cars had the standard 3.08:1 differential, and the 283-cu. in., 195-bhp engine. We averaged 17 mpg overall, dipped to 16, received as high as 19 mpg and came away feeling that the mileage was better than we had expected. In competition, the run car posted 20.97 mpg, which seems to indicate that if a motorist is willing to sacrifice the power accessories and hold car weight to a minimum (as in

our test machine), getting good mileage becomes considerably easier. We won't try to say that the stick shift made an appreciable difference over Powerglide economy (although it could make some) because automatics today are infinitely more efficient than those of a few years ago which suffered relatively high power losses.

We feel that our Pontiac Tempest V-8 test hit the mark with considerable accuracy, in spite of our not trying for economy. With the 326-cu. in. V-8 putting out more than enough power, we said that "high performance is so easily attained that our staff had a difficult time recording the best possible fuel economy. On short hops, with light traffic, the usual figure was 15-16 mpg. However, on trips, and driving steadily at an indicated 65 to 70, we learned that 18-19 mpg is possible. We would say that an overall average of 20 mpg would just be possible with the 2.91 axle ratio and a





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careful, light-footed driver." The Tempest V-8 in the Economy Run pulled off 21.13 mpg, and it was equipped with a 2.69:1 axle ratio, a decided advantage over the 2.91 on which we estimated and much better than the 3.09:1 axle on our test Tempest. When the facts are balanced out, it appears as though we did better in the economy department than we realized.

We tested a Plymouth Sport Fury in February 1963, recording a range of 13-16 mpg, and an average of 13.7 mpg during all test drives. The nearest thing to it in run competition was a Plymouth Savoy that notched off 21.04 mpg. Once again, our figure is not as bad as it appears on the surface. The differences in the two cars are extreme. The run car was equipped with Plymouth's standard V-8 of 318 cu. in. and 230 bhp, a 2-barrel carburetor and a 2.76:1 rear axle. Our test Fury went to the other extreme: the 383-inch, 330-bhp engine with a 4-barrel carburetor and 3.23:1 rear end to insure outstanding acceleration. Judged solely on the basis of the difference in rear axle ratios, our test car didn't stand a

chance of coming close to the Savoy's economy. And when the engine size disparity is taken into account, we did well to come out as we did. The figures should pretty much decide anyone who thinks he can order the extra-hot engine, use it when he feels like it, and achieve good fuel economy the rest of the time. It may not be impossible, but it is definitely improbable.

Much the same comparison can be drawn from our Pontiac Grand Prix test. Of the various power train combinations available, we tested the 389-cu. in. Tri-Power engine, which means there were three carburetors aiding in the 313-bhp output. Differential ratio was 3.23:1. We commented that, "fuel economy with the Tri-Power turned out to be pretty low; probably because our test drivers couldn't resist opening up those other two carburetors much of the time and/or because the center instrument had a too-high float setting. Our minimum was 10 mpg, our maximum—on freeway cruising—was 13."

It wasn't a notable excursion into good mileage, and two Pontiacs in the '63 run showed us up. A Catalina de-

livered 19.38 mpg; a Star Chief, 19.27. They followed the expected pattern. Both carried the standard axle ratio—2.69—an economy gear that is highly effective on cars with Pontiac's kind of power. Both had 389-cu. in. engines with a single two-barrel carburetor. The Catalina was rated at 267 bhp, while the Star Chief had the slight economy disadvantage of 283 horses.

Still with Pontiacs, we really took a beating during our Catalina test (July 1963). We picked a 4-door sedan with 2.69:1 rear end, 389-cu. in., 267-bhp engine, power steering and power brakes—the same basic equipment in the same model car that squeezed out 19.38 mpg during the Economy Run. Our best tankful was only 12.1, and we calculated a range of 11-14 mpg for most drivers. How did the run driver add 7.2 mpg to our score? The answer comes from the run's specialized driving technique, so total concentration and steady driving are two of the keys that will pay a motorist in mileage dividends.

Our best Ford parallel must be a comparison of a Galaxie 500/XL Sports Hardtop, which we tested, with

**DRAG-RACING STARTS** are all right for the drag strip (Riverside Raceway, here) but do little other than waste fuel on the street. Car testing, then, cuts fuel economy.







**SOFT-PEDAL DRIVING** on the Mobil Economy Run gives drivers a chance to extract maximum mileage from the cars. Mobil employees act as directors to help traffic flow.



**FUEL FOR** run cars is measured into special tanks, then corrected to a specific temperature.



**REFUELING IS A** crucial time for Economy Run contestants, so a crowd always gathers to watch the process. USAC judges carefully watch and control filling, compute results.

a Ford 300, which competed in the run. The 300 series, of course, is Ford's least expensive full-size line and is somewhat lighter in weight than the Galaxie. The 300 that competed was equipped with the 260-cu. in., 164-bhp V-8 driving through a 3.25:1 rear axle. Our Galaxie had the same rear end ratio, but the 289-cu. in., 195-bhp engine, a bored-out version of the 260. We had the 3-speed Cruise-O-Matic while the run car carried the 2-speed Ford-O-Matic, which could be considered a bit more economical because of its thrifter take-off ratio.

The contestant Ford's official score was 18.75 mpg. We weren't far behind, averaging 15.8 for the duration of the test, and up to 17 mpg on some tanks. With our slightly larger engine and heavier car we shouldn't have done nearly as well, but another factor enters the picture; the 300 fitted with the small V-8 is actually so underpowered that it must perform more than its fair share of work to maintain decent performance. The slightly larger, more powerful, engine not only provides improved performance but equivalent economy.

There were other car-to-car comparisons that could be made for the 1963 model year, but the point should be clear by now. The chances of ac-

tually achieving Economy Run mileage figures as a matter of routine are virtually non-existent. If the driver wants to work at careful, conservative driving, it is possible to come respectably close. And in spite of everything, some cars just want to deliver better economy than others, regardless of how carelessly they are driven. Finally,

if economy is an important factor in your selection of a car, take a look at how the '64s in this year's Economy Run (April 3-9) fare and choose your mileage. However, don't complain to us if the salesman talks you into the fuel-drinking full-drag version of the economy special that you really wanted. ■

## FIVE RULES FOR GOOD MILEAGE

**1** Don't treat the green light in traffic the same as the drag strip starter's signal. In other words, avoid full-throttle take-offs. They can cut fuel economy down to around 5 mpg—and it is quickly reflected in the overall average.

**2** Try steady cruising for a change, rather than taking each trip as a racing challenge. Countless tests have shown that the driver who constantly speeds up and slows down, cutting in and out of traffic, doesn't reach his destination significantly quicker. Also, his economy may drop as much as 50% below that of the steady driver.

**3** Drive ahead of your car. Watch for changing situations in traffic, cars slowing that will affect your driving. Time the traffic signals in an effort to hit the green. The object is to be prepared for slowdowns, making them and all other maneuvers as gently as possible. Sudden braking is a major and generally avoidable fuel-waster.

**4** High speed is a fine way to squander gasoline. If you must drive at 70 or above, be prepared to pay the price in fuel. And remember that headwinds have a marked effect. Slow down if possible until the wind shifts or car direction is altered.

**5** Finally, keep the car in good tune. Spark plugs, ignition points and carburetion are all areas of concern for economy. Proper tire inflation is important; too little pressure increases rolling resistance, makes the engine perform more work, decreases gas mileage.