



Bigger and bigger inches prove nothing. The new limit should encourage developments in cylinder head and combustion chamber design, fuel injection, supercharging, and other performance techniques.

**MORE REALISTIC HORSEPOWER RATINGS** are likely soon, under a new SAE correction code for dynamometer tests. Current power and torque figures are "corrected" to 60° F. air temperature, sea level atmospheric pressure, and dry air humidity. These conditions aren't representative of average air under a car's hood on the road — and thus give an abnormally high output rating. The new SAE test code specifies correction to 85°, atmospheric pressure at 800-foot altitude, and 50 per cent relative humidity. This is much closer to true conditions. Compared with the old code, the new correction will reduce horsepower and torque figures by 6.6 per cent. An engine that rates 300 hp today would rate 280 hp under the new code. Detroit engineers seem to want the new system. The Engineering Advisory Committee of the A.M.A. is recommending its adoption. But the advertising men are holding out. They don't want anything that'll cut their claims.

**WHAT WAS THIS 483-CUBIC-INCH** experimental engine in Ford's 172-mph '62 Galaxie (see *Ford at Bonneville*, p. 60)? Word is that this engine was being prepared for the 1963 Super/Stock models — before NASCAR and NHRA officials announced the new seven-liter (427-cubic-inch) limit. It's a development of the current "406," but with longer stroke, overbore, larger ports, experimental cam, and the new dual four-barrel carburetion system. Horsepower is upwards of 500 — and the lower end held up under an average 5300 rpm for 500 miles on the Bonneville record runs. Too bad — you'll probably never be able to buy one of these engines!

## Forecasts,



Two experimental styling studies from different divisions of Ford Motor Company, the Mercury Marauder (above) and Thunderbird Italien, will make the auto show circuit this year. If public acceptance of the Marauder's one-piece tonneau, plush interior, and brighter trim seems to warrant it, these items may well go into production. Likewise with the T-Bird's new roof, which would be a natural addition to Ford's fastback family.



**FORD'S WASN'T THE ONLY MONSTER ENGINE** in Detroit laboratories before the seven-liter limit. Chevrolet and Pontiac were reported to have mills in the 450-500-cubic-inch range in the works last summer. They used current cylinder blocks, recored for larger bores, with ultra-long-stroke cranks. Everybody was relieved when the seven-liter limit was announced. In fact, it was the urging of factory officials that started NASCAR and NHRA thinking about the limit.



Willy's new "Jeep" Wagoneer comes in two- and four-door versions, offers such options as automatic transmission plus four-wheel drive plus independent front suspension. Available also are power steering, power brakes, power take-off, winch, and snowplow. The Wagoneer uses the sophisticated and highly efficient overhead-cam six-cylinder Tornado engine, which puts out 140 hp at 4000 rpm. Built as a rugged go-anywhere vehicle, this wagon was engineered and styled for maximum passenger comfort. It seats six, and the rear seat folds down for more cargo area. With an overall length of 183.6 inches, this new "Jeep" is as much at home in the wilderness as on the street.

**PONTIAC PROBABLY WON'T ADOPT** the Mickey Thompson aluminum hemispherical cylinder heads in the 1963 model year. Word from inside is that Pontiac engineers will concentrate on "tuning" the valve gear to extend the useful rev range of the 421-inch engine this year. Valve float starts on current models at around 6400 rpm — where many Chevy, Ford, and Dodge-Plymouth engines can wind beyond 7000 to shift. This is a serious handicap on the drag strip (though not on the NASCAR tracks). Much work is being done on cam design, pushrods, and valve springs to improve the situation.

**OLDSMOBILE ENGINEERS DECIDED** against adopting the Buick V-6 engine for the F-85 this year, though it was offered. But latest word is that the 1964 models will definitely have it — but with more cubic inches.

**HOW MUCH HORSEPOWER DOES IT TAKE** to push a streamliner 309 mph? Word is that the 302-cubic-inch domehead Chrysler engine in the Summers Brothers' streamliner hit

834 hp at 7300 rpm on straight alcohol on the Wilcap dynamometer! That's well over two hp per cubic inch with a GMC blower.

**GM'S BUICK DIVISION IS TRIMMING DOWN** its "weight" to earn more profit for the corporation in future years. Huge production facilities developed in the mid-1950s to produce up to 800,000 cars a year are now a tremendous overhead burden in this new market that de-emphasizes the medium-priced, semi-prestige car. Buick doesn't build half that many cars today. So overhead is being trimmed by selling factory buildings, converting tools, and modernizing existing facilities. Result is bound to be a bigger profit margin in the future.

**FORD ENGINEERS ARE EXPERIMENTING** with high-performance exhaust manifolds cast in aluminum instead of iron. Pontiac has been using high-temperature aluminum alloy for their racing exhaust headers for several months with no trouble. They can stand the heat for short bursts on the drag strip, but wouldn't be adequate for long-distance track racing. Reason for the aluminum is obvious: The huge cast-iron



*Lincoln Continental's "Lido" styling study has a vinyl-covered top, rich redwood burl panels on its seat-dividing console, door panels, and glove box. The front seats are individually adjustable, with seat upholstery and headliner made of a new and luxurious fabric (details of which weren't disclosed at presstime). This is another of the Lincoln-Mercury show cars.*

## Facts and Rumors

headers weigh a lot — and the weight is up in front, where it hurts traction. Pontiac reduced total header weight from 63 pounds in cast iron to 22 pounds in aluminum. The latest Ford iron headers weigh over 80 pounds together — should save over 50 pounds in aluminum. Look for them in production by next spring.

**THERE'S A SLIGHT UPTREND** in compression ratios on the 1963 models, reversing a steady downtrend for the last three years. Oil industry men think this may reduce sales of the new "sub-regular" gasoline grades like Sunoco 190, Gulf-tane, Philtane, etc. And they say the new top-horsepower models really need another half-point-higher octane in premium fuels — which could cost the oil industry up to \$250 million in new refining equipment.



*Dodge's top-of-the-line "880" series keeps its heavy flavor this year, but it looks like a changed car through face lifting. A massive new grille, different hood stampings, and altered tail lights (inset) give it an identity completely separate from the smaller Dodge models. This car is still essentially half Chrysler, half Dodge, sharing the usual Chrysler Corp. blocks and accessories. In a sense, it fills the void left by the demise of the DeSoto and gives Dodge a good medium-priced model.*

**GM OFFICIALS AREN'T SO ENTHUSIASTIC** about the "no-maintenance" car as Ford and Chrysler. The GM feeling seems to be that the car owner should be expected to give some regular maintenance attention to his investment, and should keep in close touch with his dealer and service shop. Ford and Chrysler opinion leans more toward the idea that the factory designers owe it to the customer to simplify his maintenance problems as much as possible. It'll be interesting to see how this trend evolves.

**THE BIG PONTIAC 389-421-CUBIC-INCH BLOCK** will soon be put on a weight-reducing program. When this basic engine was modified for the 326-cubic-inch version used in the new Tempest, foundry coring was changed to give some thinner walls in the castings. Weight was reduced substantially. The big engine will get the same treatment, possibly before '64 model introductions. And this, in turn, will be the signal for possible "389" and "421" options in the Tempest. Word is that it's just a matter of time before Pontiac offers a Super/Stock version of the Tempest. Most parts of the large and small engines are interchangeable, and they both have the same engine mounts.

**A NEW FORD ORGANIZATIONAL PROGRAM** attempts to give pure science and research developments a more direct path into the engineering department. The new realignment creates three new departments: the scientific laboratory, the applied research office, and the product research office. All of them work together under one head. The lab does the basic research that may or may not have direct product application. The applied research office tries to apply these developments to manufacturing programs. The product research people try to apply them to cars. In the former setup, these functions were handled by separate departments — sometimes by duplicate departments in each corporation division — apparently with inadequate contact between them. There was much wasted effort. The new plan will focus this effort.

**TOMORROW'S WINDSHIELD WIPERS** may be operated by hydraulic motors, fed from the power steering pump. Adoption of the new Trico hydraulic wiper motors by Lincoln and Thunderbird has created much interest in the new idea. There are a couple of important advantages: The torque of the motors, operating at 60 to 200 pounds' oil pressure, is so high that snow and ice can't stop the wiper. The motor never wears out and rarely gives trouble. There's no power drain on the battery. And the hydraulic motor is actually cheaper than the electric drives on some cars.

**SEAT BELTS ARE NOW REQUIRED** in all postal vehicles, and a recent decree from the Post Office Department says they *have* to be used. This is the first time belts have been mandatory, but many drivers previously installed them themselves.

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