

American Drivers Turn To Smaller, Better Engines

Tom Krisher, AP Auto Writer

DETROIT (AP) — Back when gas was cheap, Americans bought cars with V-8 engines like the Big Block, Cobra Jet and Ramcharger. Acceleration was all that mattered, even in family cars that never made it to full throttle.

The 427-cubic inch Chevrolet Tri-Power was the siren song of the gearhead, sending Corvettes roaring down the highway at up to 140 mph.

But now, thanks to government regulation and gas-price gyrations, the motors that move the nation's cars and trucks are shrinking.

Whether they drive hulking pickups or family sedans, Americans are increasingly choosing smaller engines that use less fuel, especially four-cylinder models that offer more horsepower than was possible just a few years ago.

More than half the new cars and trucks sold in the U.S. through May had four-cylinder motors. That's up from 36 percent in 2007, and it's the highest sales percentage since 1998, when the J.D. Power and Associates consulting firm started keeping track.

The smaller engines are helping to change America's gas-guzzling ways. The government now requires automakers to build more fuel-efficient cars and trucks. Drivers are eager to save money on gas, which recently flirted with \$4 a gallon and is still pricey at an average of \$3.53. Also, people have embraced cars with downsized engines because new technology has made them just as fast as older cars with bigger motors.

"You can take away my V-8, but don't take my acceleration," said IHS Automotive analyst Rebecca Lindland. "We're willing to embrace a technology that doesn't make us compromise performance."

In general, car shoppers can pick from three types of engines: four-, six- and eight-cylinders. More cylinders usually produce more horsepower but also burn more fuel.

Until recently, each engine type had dedicated fans. Pickup drivers, who tend to haul heavy loads, favored brawny V-8s. Sedan drivers generally opted for six cylinders if they wanted snappy acceleration or four cylinders if they preferred fuel savings.

Decades ago, when gas was cheap, buyers usually went for bigger engines to get more power. Back then, noisy "fours" clattered down the highway inside compacts or wimpy midsize cars. Some drivers complained that four-cylinder cars didn't have enough power to merge safely onto busy highways.

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That began to change in the 1990s, when Honda and Toyota refined their fours, making them quieter and more powerful. In 2005, gas prices spiked after Hurricane Katrina knocked out refineries. The steeper prices made fuel-efficient cars more popular and forced Detroit's truck-obsessed automakers to spend more money improving their smaller engines.

Small engines got another boost in 2007, when the government began raising gas mileage minimums, eventually requiring new cars and trucks sold in the U.S. to average 54.6 mpg by 2025. The shift toward smaller engines gathered more momentum in 2008, when gas spiked again — above \$4 a gallon.

Because of technology advances, many four-cylinder engines are more powerful than V-6s from only a few years ago. For example, today's Hyundai Sonata midsize car has a 2.4-liter four with 198 horsepower, 45 more horses than the base V-6 in a 2006 Ford Taurus.

Mileage was important for Meagan Sherwood of Milan, Mich., when she bought a new four-cylinder Hyundai Veloster. The property manager traded a V-6-powered Jeep Wrangler for the funky hatchback, which gets up to 32 mpg in city and highway driving. The Jeep, she says, got around 13.

"I was filling up twice a week on a 15-gallon tank with the Jeep," Sherwood said. "Now I fill up once a week with a 10-gallon tank."

Sherwood said she would only go back to a larger engine if she and her husband start a family and need more space.

To boost the efficiency and power of small engines, companies have introduced all kinds of technology:

- Direct fuel injection is more common. It mixes air and gas in the chamber that surrounds the piston, helping produce more power, more efficiently.
- Many small engines now have turbochargers, which force high concentrations of air into the piston chamber, allowing more gas to be sent in and offering extra acceleration or hauling capacity whenever drivers step on the pedal.
- Engineers have made cars more aerodynamic. Also, some vehicles shut off their engines automatically at stoplights. They can run pumps and other devices off the battery rather than a belt that sucks power from the engine.

Even as they become more powerful, smaller engines are helping lower gas consumption. So far this year, consumption is down 5 percent from the same period a year ago, according to government data.

Part of the drop is because people drive fewer miles in a weak economy. But engines play a key role. The average new car goes about four miles farther on a gallon than in October 2007, said Michael Sivak, a research professor at the University of Michigan Transportation Research Institute.

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In March, the average mileage of new cars hit a record 24.1 mpg, dropping slightly since then.

The improvements become more striking when drivers compare engines. Four-cylinder engines averaged 26.4 mpg this model year, compared with an average of 16.1 mpg for eight-cylinders, Sivak said. If gas were at \$4, the average driver would save roughly \$1,300 a year by switching to a car with the smaller engine.

Hyundai was so confident in its four that it stopped offering a V-6 in the 2011 Sonata. Chevrolet and Ford are doing the same on the new Malibu and Fusion, which go on sale later this year.

In fact, eight out of 10 midsize cars sold this year had four-cylinder engines, according to the Edmunds.com automotive website. Just a decade ago, the majority of midsize cars — normally the biggest segment of the market — had V-6 engines.

In the heyday of the muscle car, automakers tried to stuff the biggest engine they could into smaller cars. Now it's the opposite. Companies are putting smaller engines in larger vehicles, even in Ford's F-Series pickup truck, the nation's top-selling vehicle.

In 2011, Ford began offering V-6s, including a turbocharged engine, in the F-150 after years of selling only V-8s. Now nearly 60 percent of F-150s are sold with V-6s, and Ford expects that to increase. The V-6 turbo gets 18 mpg in combined city-highway driving. The V-8 gets 14.

It didn't take long for Colorado real estate agent Dan Murphy to switch to a smaller truck engine.

A year ago, he bought a Ram pickup with a V-8, only to find that the mileage was awful when towing his 19-foot boat through the mountains. The Ram, he said, got only 4 mpg at one point, costing him a fortune.

So he traded it for an F-150 with a turbo V-6. On a recent trip pulling the boat to Utah, his Ford got over 17 mpg.

"Once you drive this, there's no way you're going back to a V-8," he said.

At Fiat of South Atlanta, the trend toward smaller engines is driving up sales of the 500 mini-car, which until February had been selling slowly.

"We've had several people trade in Ford Tauruses, not a bad mileage car," said sales manager James Tharp. "People will say in a heartbeat, 'These gas prices are killing us.'"

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