

Smaller Engines Make Inroads in U.S. Auto Market

Small, fuel-efficient 4-cylinder engines that used to be called "four bangers" are the power plant of choice for 55.8% of the new vehicles sold or leased at retail in the U.S. market during the first half of 2013, according to research data provided by the *Power Information Network(R) (PIN)* from J.D. Power. That's up 1.7 percentage points from the sales mix of 4-cylinder engines in 2012.

Consumers are demanding better fuel economy from their vehicles due to higher gas prices at the pump, and they also are lured by better performing powertrains that still offer oomph through direct injection and turbocharging.

Eco-friendliness also is a concern. Automakers are adding a larger percentage of smaller, more fuel-efficient powertrains (PIN defines small engines as 3-, 4- and 5-cylinder blocks) in compacts, midsize vehicles, and even light trucks to meet the federal government's upcoming stricter Corporate Average Fuel Economy (CAFE) requirements (54.5 mpg by 2025).

Recently, J.D. Power compiled some of the changes in powertrain penetration tracked since 2008. Following are a few of the more interesting details about the brands or nameplates that offer the most 4-cylinder engines in its lineup and which brand is working on 3-cylinder engine options:

- In 2008, there were five nameplates with more than 90% small-engine penetration in the U.S. market. Today, there are 11.

- Five years ago, 10 nameplates did not even have engine options smaller than 6-cylinders. Today, only three brands in the U.S. market do not offer small engine choices in their lineups.
- Four brands have 100% small-engine penetration in the U.S. market: [Mini](#), [Smart](#), [Fiat](#), and [Scion](#).
- [Volkswagen](#), [Subaru](#), [Hyundai](#), and [Kia](#) have well above 90% small-engine penetration.
- GM's [Buick](#) brand did not even offer a 4-cylinder engine in 2008, but now the brand has more than 50% in its sales mix.
- Among the Premium brands, [Audi](#) has the highest 4-cylinder penetration, followed by [BMW](#), which did not offer a single 4-cylinder engine in 2008.

Changeover to Smaller Engines Rises Dramatically during Past 5 Years

During the 5-year period between 2008 and 2013, the percentage of 4-cylinder engines has increased by 13.1 percentage points in J.D. Power's PIN retail sales mix, while the percentage of 6-cylinder engine installations has dropped by 7.8 percentage points from 2008. In addition, sales of vehicles with those larger V-8 engines have dropped 4.9% since 2008.

In the future, smaller powertrains may take other configurations. Only one auto brand in the U.S. market--Smart--sells models equipped with 3-cylinder engines, although the number of brands offering these small engines is about to expand. Ford will soon offer a 1-liter, 3-cylinder EcoBoost engine in the [Fiesta](#) sub-compact car, and *The Detroit News* reported recently that General Motors is planning to introduce 3-cylinder engines in cars in the United States during the next few years as well