

New device cuts gas engine air pollution

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Two U.S. scientists say they've developed a light-weight, relatively inexpensive way of reducing unburned hydrocarbon air pollutants from gasoline engines.

Researchers Marcus Ashford and Ronald Matthews of the University of Alabama say when you start your car on a hot summer day, barely 20 percent of the gasoline injected into the engine vaporizes and powers the engine. The rest becomes part of the engine's emissions of unburned hydrocarbon air pollutants.

On a cold winter day, they said, the waste and pollution is much worse. Multiply by 230 million cars in the United States and the picture is much, much worse.

Their so-called on-board distillation system targets the root cause of such waste: gasoline's relatively low volatility, or ease in changing from a liquid to a gas. High-volatility components are separated from gasoline and stored for use after startup, until the engine and other components warm and become more efficient.

The system would add about five pounds to a car's weight and less than \$100 to its cost when in full production, the scientists estimate.

The research is to appear in the Sept. 15 issue of the journal *Environmental Science & Technology*.

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