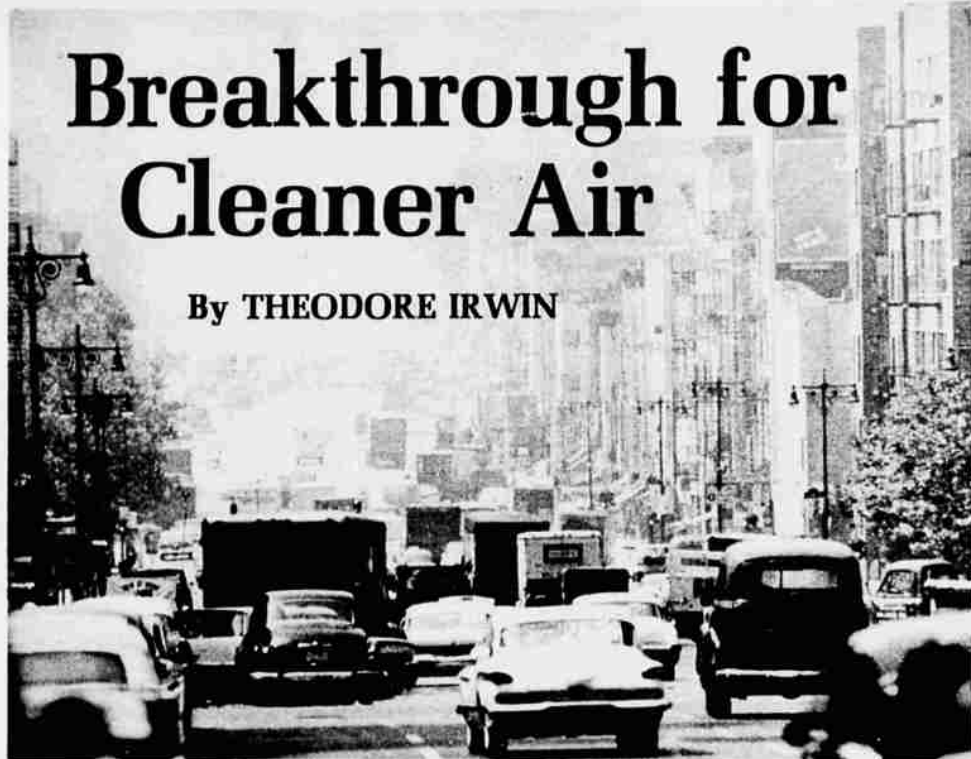


Breakthrough for Cleaner Air

By THEODORE IRWIN



Every new American car is equipped with an ingenious device developed by the auto industry to cut down air pollution and guard your health

IF YOU ARE one of the seven million Americans who will buy a new car this year, you probably won't notice a brand-new contraption called the "blowby" attached to its engine.

But this deceptively simple device, consisting chiefly of a special valve and tubing, will help guard your health by cutting down the noxious fumes released into the air you breathe.

In 1963, for the first time in automotive history, this air-clearing device has become standard equipment on every new U.S. car, truck, and bus. And although motor vehicles are only one source of air pollution, the introduction of the blowby is a major development in the fight for clean air.

The villain that the blowby battles is not the "smoke" you may see as a car starts up. Nor is it carbon monoxide, which is readily dispersed in the air. Its target is gasoline which does not burn, or burns only partly, as it passes out of the crankcase or tail pipe. Especially when idling, your car may fail to utilize all the gasoline de-

livered to the motor. Some of this unburned gas reacts with other substances in the air and forms highly irritating new chemical compounds.

They are so potent they can ruin the nylon stockings of a woman who happens to be close to the exhaust pipe of a car when the driver puts his foot on the gas pedal!

Today, the nation's cars use 60 billion gallons of gasoline a year—about a gallon per person per day—and consumption is increasing at the rate of 4 to 5 percent a year. Unless action is taken, the thousands of tons of gases escaping daily into the air will double in a generation.

Fully aware of the problem, the U.S. auto industry has been pouring millions of dollars into research for the past 10 years. Working in the public interest, the car manufacturers have agreed to exchange information and share patents freely in a cross-licensing arrangement. At least 14 task forces of research engineers have been working steadily to find solutions. Inventors have submitted more than 100 devices and ideas for evaluation by a special committee of the Automobile Manufacturers Association.

Now we have the first breakthrough, the blow-

by, which was developed by several research teams. It collects unburned gases which otherwise would be released into the air as fumes and sends them back through a tube to the engine, where they are burned up. The device reduces air pollution from cars by 25 to 40 percent (depending on how you drive, the size of the engine, and other factors).

"The decision of the automobile industry to install blowby devices is a gratifying development," says Surgeon General Luther L. Terry.

What about older cars? A blowby can be installed on any model by a garage mechanic for about \$10, plus labor. Installation takes about an hour, the same as for a lube job or checkup. Blowbys are especially useful on older cars because they are generally the worst offenders.

Despite the blowby breakthrough, however, scientists still have other problems. For instance, they are trying to come up with an effective contrivance to trap the large volume of annoying vapors escaping from the exhaust system through the tail pipe.

SUCH A FUME DESTROYER should be perfected shortly. Researchers are concentrating on a direct flame or "afterburner" to annihilate both hydrocarbon and carbon-monoxide gases after they leave the engine but before they enter the atmosphere. At least three such devices presently are undergoing rigid tests by the California Motor Vehicle Pollutions Control Board.

Automotive researchers also are studying the importance of evaporation from the fuel tank and carburetor and even are considering basic changes in engine design and operation that would reduce hydrocarbons and carbon monoxide. Most of the big auto producers are now experimenting with such modified engines.

But the motorist, as a health-minded and public-spirited citizen, also can help by giving his car regular maintenance. How much hydrocarbon comes out of a car's tail pipe depends largely on the engine's condition. One bad spark plug can double the volume of escaping hydrocarbons; adjustment of the carburetor should reduce the carbon monoxide emitted by more than half. Moreover, keeping your car in good shape saves you money; that fouled spark plug, for instance, wastes a lot of gasoline.

So, if you notice that the exhaust from your car is black and foul-smelling, you are defiling the air—and wasting money. Black exhaust may mean a dirty filter or faulty carburetor. White or blue exhaust indicates oil either is being pushed past worn piston rings and grooves or is being sucked through worn-out valve guides. Some of this oil carbonizes, causing spark plugs to misfire and increasing cylinder wear. When you find your car acts sluggish or the engine misses as you give it the gas, it's time to see a good mechanic.

"We all have a stake in clean air," Surgeon General Terry reminds us.

COVER:

Times haven't changed much. Boys still want to be 10 feet tall, as these young stilt walkers testify. They were caught under Florida skies by Dennis Hallinan.

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