

Evaluation of a Filtron Urethane Foam  
Air Filter Element

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Test and Evaluation Branch  
Emission Control Technology Division  
Environmental Protection Agency

## Background

The Filtron Products Company of Van Nuys, California, contacted the Office of Air and Water Programs to request a laboratory and engineering evaluation of a urethane foam air filtration element. Supplied with the request was a test report prepared by Scott Research Laboratories of San Bernardino, California, indicating significant reduction of exhaust emissions. A confirmatory test program was conducted by the Test and Evaluation Branch of the Emission Control Technology Division.

## Device Description

The device is a urethane foam air filter element designed as a replacement for an OEM paper filter element. The cost of the element is apparently about twice the cost of an OEM paper element.

## Test Program

A 1971 Ford Galaxie 500, 351 CID, from the EPA fleet was used for the test. Four tests were conducted, two with a new OEM air filter and two with the Filtron urethane foam filter. All testing was performed in accordance with the 1975 Federal Test Procedure as outlined in the November 15, 1972, Federal Register.

All tests were conducted using the standard dynamometer inertia loading of 4500 pounds and Indolene Clear as the test fuel.

## Test Results

The test results are presented in the Appendix of this report. These results are summarized below:

### Summary of Emission Results % Change from Baseline

	Filtron Filter
HC	5% decrease
CO	2% decrease
CO <sub>2</sub>	0 change
NO <sub>x</sub>	5% increase
Fuel Economy	1% improvement

## Conclusions

The Filtron air filter did not cause either a significant reduction in exhaust emissions or a marked improvement in fuel economy.

APPENDIX

Filtron Filter Test Program - 1975 FTP

<u>Baseline-OEM Filter</u>					Fuel
<u>Test No.</u>	<u>HC</u>	<u>CO</u>	<u>CO<sub>2</sub></u>	<u>NOx</u>	<u>Econ.</u>
					<u>MPG</u>
16-1097	2.44	10.6	686.6	3.46	12.3
16-1100	2.42	14.7	677.4	3.69	12.3
Average	2.43	12.7	682.0	3.57	12.3
 <u>Filtron Filter</u>					
16-1106	2.33	12.1	682.2	3.77	12.4
16-1112	2.26	12.8	676.9	3.89	12.5
Average	2.30	12.5	679.6	3.83	12.4