

**Effect of the Johnson Gasoline Additive
on Emissions**

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**Test and Evaluation Branch
Emission Control Technology Division
Environmental Protection Agency**

Background

Mr. Edward Johnson contacted the Test and Evaluation Branch requesting evaluation of a fuel additive he had developed. To support claims concerning the additive, he supplied laboratory test data indicating significant reductions in carbon monoxide emissions. On the basis of that data an offer was extended to Mr. Johnson to test his additive at the Ann Arbor EPA facility.

Test Program

The test vehicle was a 1970 Chevrolet equipped with a 350 CID engine and an automatic transmission. The fuel used for the baseline tests was Indolene HO (unleaded).

The additive material is a processed white oil, heated, chilled and aerated, mixed with a small quantity of an ether and an aromatic oil and further aerated. One ounce of additive was used per gallon of gasoline.

Test Results and Conclusions

While slight reductions in HC and NOx were indicated during the EPA testing, they were of a magnitude which does not allow determination of whether normal vehicle and test variability or the additive was responsible for the changes. The reduction measured for carbon monoxide was much less than that shown in the data supplied by Mr. Johnson.

Johnson Additive
1970 Chevrolet 350 CID
Mass emissions in gm/mi

	HC	CO	NOx	MPG
Baseline	2.13	12.6	3.37	13.7
	1.91	14.1	3.41	13.7
Avg.	2.02	13.4	3.39	13.7
Additive	1.80	12.7	3.45	13.5
	1.77	12.5	3.20	14.1
	2.00	13.9	2.50	12.5
Avg.	1.86	13.0	3.08	13.4
% Change from Baseline	-8%	-3%	-9%	-2%