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POWERTRAIN ENGINEERING
July 19, 1989

To: Mr. R. J. Girolami

JUL 25 1989

cc: Mr. M. L. Nelson (PMC)

Subject: Advertising Claims for Fuel Additive Duralt®

I have reviewed test results for the fuel additive, Duralt®, beginning in 1983. Over the last six years, the PMC people have periodically shared new test results with myself and others in Ford, both through meetings and direct mail. At the same time, they have followed suggestions for further testing they could conduct which might further validate the positive results they were experiencing with the use of their product.

Their tests include both substantial fleet experience as well as statistically valid, controlled experiments conducted by credible, independent testing organizations (including Ricardo, ECS, SWRI, and NIPER Labs). A summary of their data was published by the SAE this year (SAE Technical Paper #890214, "A Broad-Spectrum, Non-Metallic Additive for Gasoline and Diesel Fuels: Performance in Gasoline Engines").

In summary, I conclude that there is sufficient data to support the following advertising claims for the use of Duralt® as a fuel additive in the amounts prescribed by the manufacturer.

In gasoline engines it:

1. Reduces hydrocarbon exhaust emissions about 10% in nearly new engines, and by an average of 60% in inspection-type tests in vehicles that have accumulated at least 20,000 miles.
2. Reduces the octane requirement increase (ORI) by about 70% (up to 6 octane numbers in U.S. cars) at the recommended treatment level.
3. Increases the road octane number by about 0.5.
4. Reduces fuel consumption by about 1-1/2% in newly-tuned automobiles to about 8% in less well-tuned autos.
5. Reduces combustion chamber deposits.
6. Allows conversions of engines from leaded to unleaded gasoline without loss in performance.
7. Reduces exhaust valve recession in engines prone to the problem.

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