

IN THE MATTER OF  
RADIATOR SPECIALTY COMPANY ET AL.

COMPLAINT, DECISION, FINDINGS, AND ORDERS IN REGARD TO THE ALLEGED VIOLATION OF SEC. 5 OF AN ACT OF CONGRESS APPROVED SEPT. 26, 1914

*Docket 5790. Complaint, June 27, 1950—Decision, Dec. 4, 1952*<sup>1</sup>

Where a corporation and its two officers, engaged in the interstate sale and distribution of a gasoline additive designated as "Nu-Power" and "Nu-Power Upper Cylinder Lubricant"; and also of its "Nu-Power Tune-Up Solvent", supplied with a "Vacuumatic Injector"; in advertisements and pamphlets, leaflets, and copies of testimonial letters and on labels on containers—

- (a) Falsely represented that "Nu-Power Upper Cylinder Lubricant", used as directed, would increase mileage obtained from gasoline and oil, add motor power and improve engine performance, create faster pick-up, and cause smoother motor idling;
- (b) Falsely represented that it would keep spark plugs cleaner, free sticky valves, reduce gas knocks and ping, supply requisite lubrication for valves, valve stems, upper cylinders and piston rings; and keep valves and rings free;
- (c) Falsely represented that it would lengthen the life of spark plug and valves, reduce friction and prevent wear, protect metal surfaces, cause quicker starting, and increase compression; and
- (d) Falsely represented that it was a special combination of heat-resisting oils and would prevent wear and scuffing of cylinder walls;

With tendency and capacity to deceive a substantial portion of the purchasing public into the erroneous belief that such representations were true and thereby induce its purchase of their said product:

*Held*, That such acts and practices, under the circumstances set forth, were all to the prejudice and injury of the public and constituted unfair methods of competition in commerce and unfair and deceptive acts and practices therein.

As respects a formal stipulation executed by respondent Blumenthal, president of the corporate respondent, on May 12, 1944, and accepted by the Commission, namely, as Stipulation No. 03215, 38 F. T. C. 819, in which respondents admitted, among other things, that the fuel value or energy of gasoline was not affected by the addition of "Nu-Power", that tests had not conclusively demonstrated that a 25% increase in mileage might be obtained by its use, that it would not keep spark plugs clean or eliminate knocks from motor ping; and agreed, in the event of a future complaint and formal proceedings that such stipulation might be received as evidence of the prior use by respondent corporation of the acts and practices referred to: such stipulation was relevant and was received in evidence.

<sup>1</sup> "Decision", etc. announcing failure of appeal, and fruition of initial decision, dated June 9, 1953.

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In the aforesaid connection, despite respondents' assertions that there had been no violations of said stipulation, partly because of the change in the formula of "Lubrizol", the asserted effective solvent ingredient of "Nu-Power", the weight of the testimony was to the contrary and to the effect that "Nu-Power" would have none of the qualities or virtues ascribed to it no matter what quantity or formula of "Lubrizol" was used in its composition.

In said general connection, it was realized that the proceeding was not brought specifically to enforce the terms of the stipulation, which was a link in the chain of evidence, pertinent to be considered in the premises and to receive the weight which was its due, especially concerning the admissions against interest therein contained.

In considering the test made by four experts of the Bureau of Standards, who testified at the instance of the Commission—without interest in the outcome of the proceeding, insofar as known to or observed by the examiner and the four witnesses who testified for respondents, the examiner noted that the latter were all officers or employees of the corporation which made the aforesaid patented product "Lubrizol"—the main and active ingredient of respondents' "Nu-Power"—and from which, as its sole supplier, respondent corporation had for years purchased the same, and the interest of respondents' witnesses in retaining the business of respondents' customer, as reflected in their testimony.

In further appraising the testimony of the experts of the Bureau and that of the witnesses testifying for respondents, involving tests which were highly technical in character and, as respects the latter, the absence of any allowance, in connection with various infinitesimal measurements, for many imponderables and for normal range of experimental errors; it was concluded that even under the selected conditions, reduced gasoline consumption was not significant, and that remaining conclusions were likewise not sufficient, on the basis of actual tests or otherwise, to justify to the public the broad, unequivocal and unqualified claims set out in behalf of the product.

As respects the charges of the complaint with regard to respondents' other product, namely its "Nu-Power Tune Up Solvent": there was a total failure of proof, no tests were made, and inconclusive expressions of opinion wholly failed to substantiate the same; and while the product was composed essentially of the same or similar active ingredients as the "Nu-Power Upper Cylinder Lubricant", the formulae differed as did the method of application and use.

Before *Mr. James A. Purcell*, hearing examiner.

*Mr. Jesse D. Kash* for the Commission.

*Mr. Maurice A. Weinstein*, of Charlotte, N. C., for respondents.

## COMPLAINT

Pursuant to the provisions of the Federal Trade Commission Act, the Federal Trade Commission, having reason to believe that Radiator Specialty Company, a corporation, and I. D. Blumenthal, Herman Blumenthal, and Edward F. Morgan, individually and as officers of

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Radiator Specialty Company, a corporation, hereinafter referred to as respondents, have violated the provisions of said Act, and it appearing to the Commission that a proceeding by it in respect thereof would be in the public interest, hereby issues its complaint stating its charges in that respect as follows:

PARAGRAPH 1. Respondent Radiator Specialty Company is a corporation organized, existing and doing business under and by virtue of the laws of the State of North Carolina and respondents I. D. Blumenthal, Herman Blumenthal and Edward F. Morgan, individuals, are President, Vice-President and Secretary, respectively, thereof. The individual respondents have dominant control of the advertising policies and business activities of said corporate respondent, and all of said respondents have cooperated with each other and have acted in concert in doing the acts and things hereinafter alleged. Respondents' office and principal place of business is located at 1700-1900 Dowd Road, Charlotte, North Carolina.

PAR. 2. Respondents are now and have been for more than a year last past engaged in the sale and distribution of a solution, for mixing or blending with gasoline when gasoline is to be used as a motor fuel, called Nu-Power and also called Nu-Power Upper Cylinder Lubricant, and another solution called Nu-Power Tune-Up Solvent with which is supplied a device called a Vacuumatic Injector.

The respondents cause, and have caused, each of their said products, when sold, to be shipped from their factory or said place of business in the State of North Carolina to the purchasers thereof at their respective residences located in various other States of the United States and in the District of Columbia. The respondents maintain, and at all times mentioned herein have maintained, a course of trade in each of said products, in commerce, among and between the various States of the United States and in the District of Columbia. Respondents' volume of business in each of said products in commerce is and has been substantial.

PAR. 3. (a) Respondents' directions for the use of Nu-Power are to add 4 ounces thereof to each 10 gallons or less of gasoline; to "Pour in Tank—It Mixes Itself." Directions for Nu-Power Upper Cylinder Lubricant are to "use regularly in proportion of 4 ounces to each 5 gallons of gasoline \* \* \* particularly while breaking in a new car. If car is in excellent condition, use 4 ounces to each 10 gallons of gasoline."

The formula for Nu-Power is the same as the formula for Nu-Power Upper Cylinder Lubricant; viz, "Latus 22, 308 lbs., and Lubrizol 506, 82 lbs."

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(b) Respondents' directions for applying Nu-Power Tune-Up Solvent with the Vacuumatic Injector are as follows:

Just attach the Injector to the carburetor throat, remove the spark plug and in its place insert the correct size Adaptor. (Three Adaptors are furnished to fit all spark plug openings). With the motor running at smooth idling speed, an accurately measured amount (2 ounces) of Nu-Power Tune-Up Solvent is slowly atomized, full strength, directly into the cylinder. Each cylinder is treated individually, thereby insuring results not possible with any other method. This treatment should be given every 5,000 miles.

The formula for Nu-Power Tune-Up Solvent is: "Drip Oil, 5 lbs.; Latus 22, 84 lbs.; Lubrizol, 10 lbs.; Shell Penetrating Oil, 1 lb.; and Black Dye."

PAR. 4. In the course and conduct of their said business and for the purpose of inducing the purchase of their said product called Nu-Power and Nu-Power Upper Cylinder Lubricant respectively, hereinafter referred to as Nu-Power, and their product Nu-Power Tune-Up Solvent, in commerce, respondents have made many statements and representations relative to their value and effectiveness by means of advertisements in the form of pamphlets, leaflets, copies of testimonial letters, and labels on the containers thereof. Among and typical of the statements and representations contained in said advertisements concerning the said product Nu-Power are the following:

Nu-Power \* \* \* INCREASES Gasoline Mileage and Improves Engine Performance.

Create Faster Pick-Up.

Develop Better Pull.

Keep Spark Plugs Cleaner.

Free Sticky Valves.

Reduce Gas Knocks and "Ping".

Achieve Greater Economy of Operation.

INCREASE MILEAGE—PEP—POWER.

Nu-Power UPPER CYLINDER LUBRICANT \* \* \* For A SMOOTHER, MORE POWERFUL MOTOR \* \* \* with increased gasoline and oil mileage.

INSTANT LUBRICATION FOR VALVES, \* \* \* valve stems, upper cylinders and piston rings—parts that motor oils can't reach.

Keeps Valves and Rings Free.

Lengthens Spark Plug and Valve Life.

Reduces Friction \* \* \* Prevents Wear.

Protects Metal Surfaces.

Smoother Idling.

Improves Pick-Up.

Quicker Cold-Weather Starting.

Increases Power and Compression.

\* \* \* assures easy starting. \* \* \*

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Nu-Power Upper Cylinder Lubricant is a special combination of heat resisting oils \* \* \*.

\* \* \* prevents wear and scuffing of cylinder walls \* \* \*.

Among and typical of the statements and representations contained in said advertisements concerning Nu-Power TUNE-UP SOLVENT are the following:

Continually Raises Compression.

Insures Quicker Starting.

PAR. 5. By the use of the statements and representations hereinabove set forth and others similar thereto, not specifically set out herein, respondents have represented and now represent, directly or indirectly, that their product Nu-Power, when used as directed, increases the mileage obtained from gasoline and oil; causes a motor to be more powerful and improves engine performance; creates faster pick-up; causes smoother idling; keeps spark plugs cleaner; frees sticky valves; reduces gas knocks and ping; supplies the necessary lubrication for valves, valve stems, upper cylinders and piston rings, which are parts that oils do not reach; keeps valves and rings free; lengthens the life of spark plugs and valves; reduces friction and prevents wear; protects metal surfaces; causes quicker starting; increases compression; is a special combination of heat-resisting oils and prevents wear and scuffing of cylinder walls.

Through the use of the aforesaid statements and representations and others similar thereto, not specifically set out herein, concerning their product Nu-Power Tune-Up Solvent, respondents have represented, and now represent, that when used as directed, said product raises compression and insures quicker starting.

PAR. 6. The aforesaid statements and representations are false, misleading and deceptive. In truth and in fact, the use of the product Nu-Power, as directed, or otherwise, will not increase the mileage obtained from oil or gas, will not increase the power or improve the engine performance or result in faster pick-up or smoother idling to any significant degree. In the ordinary sense spark plugs become fouled because of deposits accumulated in the operation of the engine and sticky valves are also ordinarily caused by these deposits. This product will not prevent the accumulation of such deposits and accordingly will not keep the spark plugs cleaner nor free sticky valves caused by such deposits. Its use will not reduce gas knocks or pings. Valves, valve stems, upper cylinders and piston rings are adequately lubricated by the oiling systems of automobile engines and the additional use of this product will not result in any benefit to such parts. Said product will not keep the valves and rings free nor will it lengthen the life of

spark plugs or valves. Friction and resulting wear on engine parts are caused by the rubbing of moving parts. This product added to gasoline enters the combustion chamber and is practically all burned during the power stroke of the engine. It consequently would have little effect as a lubricant in reducing friction and preventing wear. Nu-Power is not effective in protecting metal surfaces. The ease of starting an engine is ordinarily determined by the volatility range of the gasoline. The volatility of Nu-Power is such that it can have no effect upon the starting quality of gasoline and consequently its use will not cause engines to start easier or quicker. The heat resisting properties of the oils in this product are not as great as ordinary lubricating oil and from the standpoint of its lubricating value is not as great as lubricating oil. Scuffing and unusual wear of the cylinder walls are usually not caused by lack of lubrication and when they occur are generally caused by poor materials and methods of manufacture. Under these conditions this product would not be of value in preventing wear and scuffing of the cylinder walls.

The product Nu-Power Tune-Up Solvent, used as directed or otherwise, will not raise compression or insure quicker starting.

PAR. 7. The aforesaid false, misleading and deceptive statements and representations made by respondents have had and now have the tendency and capacity to deceive and mislead a substantial portion of the public into the erroneous belief that such representations were and are true and to induce a substantial portion of the public to purchase respondents' said products because of such erroneous belief.

PAR. 8. The aforesaid acts and practices of respondents, as herein alleged, are all to the prejudice and injury of the public and constitute unfair and deceptive acts and practices in commerce, within the intent and meaning of the Federal Trade Commission Act.

#### DECISION OF THE COMMISSION

Pursuant to "Decision of the Commission and Order to File Report of Compliance," dated June 9, 1953,<sup>1</sup> the initial decision in the instant

<sup>1</sup> Said Decision of the Commission, follows:

The initial decision of the hearing examiner having been filed in this proceeding on May 2, 1952, and counsel for respondents having seasonably filed a notice of respondents' intention to appeal therefrom and having filed in addition a motion for an extension of time within which to file an appeal brief; and

The Commission, on November 7, 1952, having duly entered an order the effect of which was to extend to December 3, 1952, the time within which an appeal brief may have been filed; and

No appeal brief having been filed within the time so provided and hence no matters having been presented for determination by the Commission:

Therefore, pursuant to Rules XXII and XXIII of the Commission's Rules of Practice, the initial decision of the hearing examiner, a copy of which is hereto attached, did on December 4, 1952, become the decision of the Commission; and, accordingly:

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matter of hearing examiner James A. Purcell, as set out as follows, became on December 4, 1952 the decision of the Commission.

## INITIAL DECISION BY JAMES A. PURCELL, HEARING EXAMINER

Pursuant to the provisions of the Federal Trade Commission Act, the Federal Trade Commission on June 27, 1950, issued and subsequently served its complaint in this proceeding upon respondents Radiator Specialty Company, a corporation, and I. D. Blumenthal, Herman Blumenthal and Edward F. Morgan, individually and as officers of the corporate respondent, charging them with the use of unfair and deceptive acts and practices in commerce in violation of the provisions of said Act. After the issuance of said complaint and the filing of joint answers by the corporate respondent and two of the individual respondents, I. D. Blumenthal and Herman Blumenthal, hearings were held at which testimony and other evidence in support of the complaint and in opposition to the allegations of said complaint were introduced before the above-named Hearing Examiner theretofore duly designated by the Commission, and said testimony and other evidence were duly recorded and filed in the office of the Commission. Thereafter, the proceeding regularly came on for final consideration by said Hearing Examiner on the complaint, the answer thereto, testimony and other evidence, proposed findings as to the facts and conclusions presented by counsel in support of the complaint and counsel for the respondents, oral argument thereon not having been requested; and said Hearing Examiner, having duly considered the record herein, finds that this proceeding is in the interest of the public and makes the following findings as to the facts, conclusion drawn therefrom, and order:

## FINDINGS AS TO THE FACTS

PARAGRAPH 1. Respondent Radiator Specialty Company is a corporation, existing and doing business by virtue of the laws of the State of North Carolina; respondents I. D. Blumenthal and Herman Blumenthal, individuals, are President and Vice-President, respectively, of the corporate respondent, and as such have dominant control of the advertising policies and business activities of the said corporate respondent. All of said respondents have cooperated with each other and acted in concert in doing the acts and things hereinafter

*It is ordered,* That the respondent, Radiator Specialty Company, a corporation, and the respondents, I. D. Blumenthal and Herman Blumenthal shall, within sixty (60) days after service upon them of this order, file with the Commission a report in writing setting forth in detail the manner and form in which they have complied with the order contained in said decision.

found. Respondent's office and principal place of business is located at 1700-1900 Dowd Road, city of Charlotte, North Carolina. Named as a respondent in the complaint was one Edward F. Morgan, individually and as Secretary of the corporate respondent, but approximately one year prior to issuance thereof he severed his connection as Secretary and one J. J. Duckworth now serves in his place and stead. Therefore, the order herein will provide for dismissal of the complaint as to said Morgan and, while J. J. Duckworth will not be mentioned *eo nomine* therein, said order will be effective as to all officers, present and future, of the corporate respondent.

PAR. 2. Respondents are now and have been for more than a year last past engaged in the sale and distribution of a solution for mixing or blending with gasoline, when gasoline is to be used as a motor fuel, designated as "Nu-Power" and also as "Nu-Power Upper Cylinder Lubricant," as also another solution called "Nu-Power Tune-Up Solvent" with which is supplied a device called a "Vacumatic Injector," causing said products to be shipped from their place of business in the State of North Carolina to the purchasers thereof in various other States of the United States and in the District of Columbia, maintaining at all times herein mentioned a constant course of trade in commerce between the several States.

PAR. 3 (a) Respondents' directions for the use of Nu-Power are to add 4 ounces thereof to each 10 gallons or less of gasoline; to "Pour in Tank—It Mixes Itself." Directions for Nu-Power Upper Cylinder Lubricant are to "use regularly in proportion of 4 ounces to each 5 gallons of gasoline . . . particularly while breaking in a new car. If car is in excellent condition, use 4 ounces to each 10 gallons of gasoline."

The formula for Nu-Power is the same as the formula for Nu-Power Upper Cylinder Lubricant; viz, "Latus 22, 308 lbs., and Lubrizol 506, 82 lbs."

Prior to the year 1947 "Lubrizol 506" was changed to "Lubrizol 509" now currently in use, 30% or 40% thereof being the active ingredient described as a halogenated hydrocarbon, the remainder being a diluent vehicle of petroleum oil or solvent. "Lubrizol 509" comprises about 20% of Nu-Power and thus the active ingredient of "Lubrizol 509" constitutes approximately 8% of the Nu-Power product.

(b) Respondents' directions for applying Nu-Power Tune-Up Solvent with the Vacumatic Injector are as follows:

Just attach the Injector to the carburetor throat, remove the spark plug and in its place insert the correct size Adaptor. (Three Adaptors are furnished to fit all spark plug openings.) With the motor running at smooth idling speed, an accurately measured amount (2 ounces) of Nu-Power Tune-Up Solvent is



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slowly atomized, full strength, directly into the cylinder. Each cylinder is treated individually, thereby insuring results not possible with any other method. This treatment should be given every 5,000 miles.

The formula for Nu-Power Tune-Up Solvent is: "Drip Oil, 5 lbs.; Latus 22, 84 lbs.; Lubrizol, 10 lbs.; Shell Penetrating Oil, 1 lb.; and Black Dye."

PAR. 4. In the course and conduct of their said business and to promote and induce the purchase of their Nu-Power and Nu-Power Upper Cylinder Lubricant in commerce, respondents have, by means of advertisements, pamphlets, leaflets, copies of testimonial letters and labels on product containers, made many statements and representations concerning these products, typical of which are the following:

Nu-Power \* \* \* INCREASES Gasoline Mileage and Improves Engine Performance.

Creates Faster Pick-Up.

Develop Better Pull.

Keep Spark Plugs Cleaner.

Free Sticky Valves.

Reduce Gas Knocks and "Ping".

Achieve Greater Economy of Operation.

INCREASE MILEAGE—PEP—POWER.

Nu-Power UPPER CYLINDER LUBRICANT \* \* \* For a SMOOTHER, MORE POWERFUL MOTOR \* \* \* with increased gasoline and oil mileage.

INSTANT LUBRICATION FOR VALVES, \* \* \* valve stems, upper cylinders and piston rings—parts that motor oils can't reach.

Keeps Valves and Rings Free.

Lengthens Spark Plug and Valve Life.

Reduces Friction \* \* \* Prevents Wear.

Protects Metal Surfaces.

Smoother Idling.

Improves Pick-Up.

Quicker Cold-Weather Starting.

Increases Power and Compression.

\* \* \* assures easy starting. \* \* \*.

Nu-Power Upper Cylinder Lubricant is a special combination of heat resisting oils \* \* \*.

\* \* \* prevents wear and scuffing of cylinder walls \* \* \*.

Among and typical of the statements and representations contained in said advertisements concerning Nu-Power TUNE-UP SOLVENT are the following:

Continually Raises Compression.

Insures Quicker Starting.

PAR. 5. By use of the foregoing statements respondents represent that Nu-Power and Nu-Power Upper Cylinder Lubricant, when used as directed, will: Increase the mileage obtained from gasoline and oil; add motor power and improve engine performance; create faster pick-

up; cause smoother motor idling; keep spark plugs cleaner; free sticky valves; reduce gas knocks and ping; supply requisite lubrication for valves, valve stems, upper cylinders and piston rings; keep valves and rings free; lengthen the life of spark plugs and valves; reduce friction and prevent wear; protect metal surfaces; cause quicker starting; increase compression; is a special combination of heat-resisting oils, and will prevent wear and scuffing of cylinder walls.

Referring to Nu-Power Tune-Up Solvent, respondents represent that such product, when used as directed, raises motor compression and insures quicker starting.

PAR. 6. At the outset of considering the testimony herein had concerning the truth or falsity of respondents' representations, the record shows that on May 12, 1944, a formal stipulation was tendered by the corporate respondent, executed by respondent I. D. Blumenthal, its president, accepted by this Commission and designated "Stipulation No. 03215," wherein respondents admit use of the following representations concerning their product "Nu-Power" manufactured according to the formula then in use:

\* \* \* builds up your gasoline \* \* \*

Do not confuse Nu-Power with tune-up oils. It is a concentrate that increases mileage as much as 25% regardless of the quality of gas used.

Keeps spark plugs clean.

Nu-Power Eliminates Gas Knocks and "Ping."

Respondents therein admitted, among other things, that the fuel value or energy of gasoline is not affected by the addition of Nu-Power; that tests have not conclusively demonstrated that a 25% increase in mileage may be obtained by use of Nu-Power; that Nu-Power will not keep spark plugs clean or eliminate knocks or motor "ping," and agreed, upon the basis of their admissions, to forthwith cease and desist from use of the representations hereinabove recited and further:

\* \* \* in the event the Commission should issue its complaint and institute formal proceedings against Radiator Specialty Company as provided herein, this stipulation as to the facts and agreement to cease and desist, if relevant, may be received in such proceedings as evidence of the prior use by Radiator Specialty Company of the acts and practices herein referred to.

The Hearing Examiner ruled that the stipulation was relevant and received same in evidence. Respondents asserted there had been no violation of the stipulation, partly because of the change in formula of "Lubrizol," the asserted effective solvent ingredient of Nu-Power Upper Cylinder Lubricant as now in use, from "Lubrizol" as used in Nu-Power at the time the stipulation was executed.

(NOTE.—"Lubrizol" is a patented chemical product, rights to which are owned by the Lubrizol Corporation. In the past ten years its

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formula has been changed two or three times by increasing the chemical constituents thereof to improve its solvent properties and, when such changes are effected, the name or designation of the product is changed. We deal here with "Lubrizol 506" as charged in the complaint, although "Lubrizol 509" is the designation used to indicate the product currently in use. However, the chemical constituents of the product have remained the same throughout its existence, the only changes being quantitative increases of such chemicals.)

Despite respondents' assertions that there have been no violations of said stipulation, the weight of the testimony is to the contrary and that Nu-Power would have none of the qualities or virtues ascribed it no matter what quantity or formula of "Lubrizol" was used in its composition, and, in fact, the claims would be false and misleading even though Nu-Power were used in its pure and unadulterated state, let alone as diluted in proportion of four ounces to each five gallons of gasoline, as recommended.

It is realized that this proceeding is not brought specifically for enforcing the terms of the stipulation or that the stipulation, without more, is sufficient to sustain all of the charges of the complaint. The stipulation is a link in the chain of evidence which is pertinent to be considered herein and to receive the weight which is its due, especially concerning the admissions against interest therein contained.

Reviewing the testimony and exhibits received during the course of the hearings:

Nu-Power and Nu-Power Upper Cylinder Lubricant are identical and the terms are used interchangeably herein.

Testimony was adduced in support of the charges of the complaint through experts from the U. S. Bureau of Standards and in opposition through several experts on behalf of the respondents. Such testimony, as to each group of experts, was based upon actual tests of Nu-Power and upon their independent expert knowledge. The tests were highly technical in character, and to conduct an exhaustive and detailed analysis thereof in this decision would entail unwarranted length and serve no good purpose, so therefore only the pertinent testimony and conclusions expressed by the witnesses will be considered and the examiner's appraisal thereof expressed.

These two groups of witnesses were made up of the following: The four witnesses who testified at the instance of the Commission were all experts in the employ of the U. S. Bureau of Standards who were not, so far as known to or observed by the examiner, in any wise interested in the outcome of this proceeding. The four witnesses who testified for respondents were all officers or employees of the Lubrizol Corporation and were, respectively, its Vice-President, its Chief Chemist, its

Head of Mechanical Testing Department and its Personnel Director in Charge of Sales Department. When it is borne in mind that Lubrizol Corporation is now, and has been from the time Nu-Power was first marketed, the sole supplier of the main and active ingredient of Nu-Power, to wit, "Lubrizol 506" and "Lubrizol 509," it is apparent that all of respondents' witnesses are, to a greater or lesser extent, interested that Lubrizol Corporation retain the business of its customer, Radiator Specialty Company, and to this end render such aid as was possible by attempting to substantiate the respondents' representations. As a fact, Lubrizol Corporation appeared to regard the charges of the complaint as a direct reflection on the product "Lubrizol," so much so that during his testimony on one occasion the examiner found it necessary to caution an officer of Lubrizol Corporation that it was not here on trial and that he was injecting himself and his company into the proceedings, to which admonition respondents' counsel tacitly agreed by observing:

I am sure Mr. Winch does not realize. His feeling is, of course, that the manufacturers of the main component of our product feel like they are (on trial).

While it is not found that any of respondents' witnesses have exceeded the bounds of propriety in giving their testimony, the examiner avails of his discretion to consider all of the surrounding circumstances in arriving at his decision.

*Jesse T. Duck* testified that he has a Bachelor of Science degree from Union University, Jackson, Tennessee, and that he has taken a number of graduate courses in automotive engineering, including the basic engineering course in automotive engines, courses in fuel, combustion. He is an automotive engineer. He has been engaged in testing fuels and engine components for the Bureau of Standards for eight years and previous to that, had been in other test work for the Bureau of Standards five years.

Nu-Power Upper Cylinder Lubricant was tested by this witness to determine its effect, if any, on power, gasoline mileage, acceleration and factors related thereto. The engine that he used to make these tests was a Ford V-8. It was coupled directly to an electric dynamometer, a device for measuring the torque and power output of an engine. A load was placed on the engine electrically, the amount of the load measured by means of a scale and, by use of appropriate formula, it was possible to transform its scale readings into power. The engine set up was also equipped with a volumetric fuel-measuring device by which the amount of fuel used during any specified time was measured.

He measured the power of the engine before any Nu-Power was added to the fuel and made tests for speed and load on the dynamom-

eter adjusted to simulate road operation, at various speeds at 30, 40, 50, and 60 miles per hour, and measured the fuel consumption by use of appropriate calculations. These readings were translated into the equivalent mileage of a car on the road.

After completing the tests on the engine not using Nu-Power in the fuel, he repeated the tests, using Nu-Power as directed on the bottle of Nu-Power, four ounces to ten gallons, and the directions on the bottle of Nu-Power Upper Cylinder Lubricant, four ounces to five gallons, and in these tests, he used three ounces to five gallons, which was half-way between the most and the least called for in the directions.

Upon completion of this step, the engine was run four days at the speed and load that was equivalent to 40 miles per hour and again repeated the test in which Nu-Power was used in the fuel. This test was run with six ounces to ten gallons. Using another sample of Nu-Power Upper Cylinder Lubricant, he used four ounces to ten gallons.

Before any tests were made it was determined that the engine was operating under steady conditions, that is, it was warmed up, so that it would give consistent results.

Horsepower was computed from the dynamometer scale readings and also specific fuel consumption was determined by use of appropriate formulas. The power of the engine was the same at each speed with and without Nu-Power added to the fuel.

These tests failed to disclose increased power or increased miles per gallon of fuel caused by the addition of Nu-Power over fuel without Nu-Power.

The tests further demonstrated that use of Nu-Power would not cause a quicker pickup; that there was no apparent difference in the idling characteristics of the engine with or without Nu-Power; that Nu-Power did not show an increase in the mileage obtained from gasoline when it was added thereto.

The witness considered, and so testified, that the use of but one engine for the making of comparative tests is recognized as acceptable procedure with respect to the results secured and testified to, and does not believe that additional tests could be performed which would show more conclusive results.

As a result the tests conducted by the Bureau of Standards experts showed:

- (1) That power of the engine was not increased and the miles per gallon remained the same with or without the use of Nu-Power;
- (2) Pick-up of an engine is dependent entirely upon power, *ergo*, increased pick-up could be occasioned only by increased power; that the use of Nu-Power does not increase power and therefore cannot impart a quicker pick-up or improve the pick-up of an engine in anywise;

(3) The engine used in the tests was a laboratory motor in good mechanical condition which had been run some 40,000 miles. The particular test, being to determine the motor's idling characteristics, disclosed that it idled smoothly both with and without Nu-Power, the addition of the latter showing no apparent difference.

(4) No economy was shown by the use of Nu-Power when used according to directions supplied by respondents.

(5) There was no apparent difference in the smoothness of operation during the tests.

(6) The tests disclosed no apparent difficulty in starting the motor, no difficulties in this particular were encountered and there were no differences in starting either with or without the use of Nu-Power. The celerity with which a motor starts is determined principally by fuel properties and proper vaporization thereof to engender an explosive mixture, a condition frequently adversely encountered in cold weather. The boiling point of the components of Nu-Power is so low that it will not evaporate in a cold engine and therefore is not an aid in starting. In fact, given an engine in good condition with clean upper cylinders, good fuel, carburetion, and hot spark, nothing additional is required to insure prompt starting.

(7) Speaking generally on the subject of motor lubrication: Although there are different systems in use, the majority have the same characteristics, and oil reaches the valves, valve stems, piston rings and upper cylinders. Oil from the crankcase lubricates the cylinder walls and oil vapor lubricates the lower parts of the valve stems, although some systems provide for direct forced lubrication of valve stems, but this is the exception. In the opinion of the expert so testifying it would be a disadvantage to introduce lubricant into the upper cylinder of a motor, and he knows of no manufacturer of automobiles who recommends this procedure.

(8) On the subject of carbon deposits: In the opinion of the witness who ran the tests at the Bureau of Standards, carbon deposits are of very minor importance in the average automobile. During the tests, which were of sufficient duration, said the witness, to accord Nu-Power a fair test on this phase, the engine accumulated a considerable deposit of carbon despite the fact Nu-Power was used as directed throughout the tests, and because of this had to operate the engine at high load to retrieve the power it had at the start of the tests. In other words, it was necessary occasionally to run the engine at high speeds to clear away carbon deposits and thus increase engine power. Witness further stated his opinion to be that, to the best of his knowledge and experience, no carbon deposits, whether new or old, can be removed by any solvent, which general statement applies to Nu-Power;

