

April 14, 1939

Dr. Ralph Greene
Medical Director
Eastern Air Lines, Inc.
210 LeBlond Bldg.,
Coral Gables, Florida

Dear Doctor Greene:-

Your letter of April 6th addressed to the Atlanta office of the Ethyl Gasoline Corporation has been referred to me for reply.

I have no doubt that from time to time employees of your company have had occasion to come in contact with gasoline under a variety of circumstances. No doubt many of them are familiar with the type of burns which result from prolonged contact of the skin with gasoline, especially when the clothing overlying the skin has been soaked. If this is the case, I am sure you will be in position to issue proper warnings to your men against undue contact of the skin with gasoline. As a matter of fact, no special precautions are necessary, and no additional first-aid procedures are necessary in the case of men who come in contact with leaded gasoline. It is true that all containers used for the carriage of leaded gasoline are marked to indicate that tetraethyl lead has been added to the gasoline. It is also true that warnings are issued against spillage and against unnecessary contact with the skin. Despite these warnings, all of the experimental and clinical evidence of the past fifteen years indicates that there is no greater danger associated with the handling of leaded gasoline than in the handling of ordinary gasoline of similar quality. During this entire period of years, there has never been a case of lead poisoning, and no evidence has been obtained that lead in the concentration in which it occurs in gasoline can be absorbed through the skin in measureable quantities. We have found some evidence that modern high octane gasolines are somewhat more irritating to the skin than were the former types of gasoline which were largely straight-run petroleum distillates. There is no evidence that its irritating effect is due to the presence of lead. As a matter of fact, the concentrated lead compound is less irritating to the skin than is ordinary gasoline. It is our opinion that the products of various cracking processes, and particularly certain unsaturated compounds, induce these irritating effects.

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In any case I can assure you that you need have no anxiety that any of the men will suffer from lead poison as a consequence of their work in handling gasoline containing the customary concentrations of tetraethyl lead. After a good many years of experience, it is my opinion that it is not possible to handle commercial leaded gasoline in any manner so as to absorb a sufficient amount of lead to cause lead poisoning. Despite this opinion we do not consider it advisable to give up the use of warning signs to personnel engaged in handling leaded gasoline. Our purpose in maintaining these warnings, however, is not the avoidance of lead poisoning which we do not fear, but is rather the encouraging of every possible precaution against unnecessarily careless handling of leaded gasoline. As a matter of fact the United States Public Health Service had this same idea in mind in the original formulation of the precautions, and it was their feeling that if the public and gasoline handlers could be led to exercise greater care in the handling of gasoline, a very considerable advantage would be obtained in relation to the public health and more particularly in the avoidance of damage to the skin, regardless of the type of gasoline involved.

I trust this provides a suitable answer to your question. I suggest that you formulate your rules for your employees in exactly the same fashion that you would if you were dealing with non-leaded gasoline. However, if there are any questions which you would like to raise before doing so, I should be glad to reply to them as well as I can. For your further information, I am sending you herewith a copy of an article by one of my associates on gasoline dermatitis. I believe this will interest you in connection with the statements which I have made above.

Very truly yours,

RAK:ls

Robert A. Kehoe, M.D.

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