STATEMENT ON LEAD IN GASOLINE
PRESENTED BY
J.L. Kimberley, Executive Vice President
LEAD INDUSTRIES ASSOCIATION

BEFORE

California Assembly Transportation Committee
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My name is John L. Kimberley, executive vice president of the Lead Industries Association. I am presenting this statement on behalf of LIA's 62 member companies engaged in the mining, production, manufacturing and fabrication of lead and lead products.

The lead industry's case has been presented here in California in recent months on two occasions. On March 4, Dr. Paul Henshaw spoke before the Air Resources Board and on April 2, I testified before the Assembly Transportation Committee. In both instances we addressed our remarks to Assembly Bill No. 79.

I am pleased to have yet another opportunity to discuss with you Assembly Bill No. 79, as amended in the Assembly on April 24.

Basically, the lead industry's position is unchanged from that presented on April 2. I hope it is more convincing. My conclusions at that time were the following:

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Before final decisions are made or legislative action taken on lead in gasoline, we urge further careful study and development of:

I. Existing methods for reducing undesirable gaseous automobile emissions with systems that are known to work with present gasolines.

II. Techniques and devices that will reduce all particulates, including lead, from auto engine exhausts.

III. Polluting effects, including adverse health effects, if automobiles are forced to use non-leaded gasoline.

In view of grave uncertainties, we feel no action should be taken to restrict or ban the use of lead additives until there are proven benefits or a demonstrated need far more definite than exist today.

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These conclusions were based on the conviction that there neither exists nor is there threatened a hazard to public health and that to proceed as proposed would impose important and unnecessary burdens to no demonstrated advantage. Essentially paraphasing Mr. Rawleigh Warner, Jr., Chairman of Mobil Oil Corporation, to do otherwise than proceed cautiously could lead to:

1. A substantial contribution to inflation.

2. A waste of machines and fuel.

3. A strong likelihood of more air pollution.

4. A lot of disgruntled and disillusioned motorists.

When I was charged by my industry in January to search for the reasons that lead should come out of gasoline and why, I did so with what I hoped was an open mind. In addition to becoming familiar with the entire situation as seen from so many diverse points of view -- automotive - refining - TEL manufacturers -- I was particularly concerned to uncover specific evidence of a threat to human health, now or foreseen. The Lead Industries Association has not been, and is not qualified "first hand" to testify on the details of automotive design or the refining of gasoline. We have seen and cited the evidence from notable authorities that there is no health hazard. We have not been able to uncover any specific evidence that a health hazard exists or is threatened.

The stake of the lead industry of the United States in this matter is large. In 1969 the consumption of lead for gasoline additives was very, very close to 20 percent of the total consumption. Significant as this market is to the lead industry, I will repeat what I said on April 2 that the lead industry will withdraw all objections to the removal of lead in gasoline if we can be convinced that this is necessary to solve automotive emission problems, or if lead's removal is demonstrated as necessary to remove a health hazard to the public.

It has been confusing to hear so much on the theme "lead must come out" in the absence of specific data to demonstrate such a need. Perhaps there is a partial explanation in a document which I picked up during my last visit to Sacramento entitled "Lead in Gasoline" -- Staff Analysis -- Assembly Transportation Committee This document offers several statements as conclusions with which I would like to argue since they may have served as a basis for convictions and questioning. There are also inaccuracies and misleading statements. I should like to cite and discuss several.

This document says: "The Auto manufacturers have supported the removal of lead from gasoline; the oil industry has promised to provide unleaded fuel when it is needed."

I believe that the implication of enthusiastic support is very suspect. My information strongly suggests that the auto industry acted under the pressure of the emission goals projected for 1975 and 1980. They singled out lead for a dramatic statement without giving much more than a promise that removing lead would ease the way for them to meet the later control standards. Certainly the oil companies

did not respond unanimously or even enthusiastically.

Small refiners are faced with huge problems, including the possibility of being forced out of business. But the major companies are saying they can provide non-leaded gasoline -- at a cost -- if the demand is there.

This briefing document starts out with these statements: "The human body has no beneficial use for lead. Yet each year the concentration of lead in the bodies of people living in our metropolitan areas is increasing. Most of the lead in our bones has been assimilated out of the air we breathe."

Each one of these sentences is prejudicial and either misleading or erroneous.

As to the first, it is not known whether or not the human body has beneficial use for lead. Admittedly, no such use has been shown to date. But it is only in recent years that the role of trace metals in biology has been studied and understood. It is now known that metals such as iron are necessary to body functions in amounts of about 6 grams, copper in amounts of about 250 milligrams, zinc in amounts of about 3 grams and so forth. Yet each of these essential metals can also be toxic in excessive amounts. Thus the acknowledged fact that excessive amounts of lead can be toxic does not rule out the possibility that the small amounts of lead normally found in human bodies may perform some necessary function. In fact, research on this very subject is now underway at the National Academy of Science and at Harvard Medical School.

I know of no evidence to support the second sentence that the concentration of lead in people in cities is increasing yearly. Published evidence generally belies that statement. It is true that certain people exposed to unusual -- not normal -- amounts of lead may show increased lead levels in their blood. But in tests among the general public, lead levels are shown to be well within the normal safety range.

On the third statement that says most lead in bones comes from air, I know of nothing to support it. Carefully controlled studies of lead intake by human beings over a number of years have established that the major sources of lead entering the human body are from food and drink -- most of it from naturally occurring sources. And lead excretion from the body generally balances with lead intake.

There are other such inaccurate statements which have incited action against lead.

The document says: "Health officials fear that, if we wait until toxic concentrations are reached, we may be faced with widespread lead poisoning before the situation can be reversed."

No one would stand still for any such development. The statement raises an emotional spectre for which there is no rational basis. I know of no evidence that lead in the ambient air is sustained at levels near the proposed ambient air standard of 10 micrograms per cubic meter of air on a 30-day average. This standard in itself as recommended by the American Industrial Hygiene Association, has a large built-in margin of safety. Further, experience in industrial installations, where the accepted threshold limit value is 200 micrograms per cubic meter of air for a work week has demonstrated that "widespread lead poisoning" does not occur at these levels, or even higher levels that may sometimes be reached under certain work conditions.

In addition, many have said the burden of proof rests with the industry. We of industry have accepted this burden. We have studied lead in gasoline since 1923. Studies have been undertaken and completed around the world.

One study indicates that the lead levels in the blood of natives of Marshall Islands and Brazil -- away from civilization -- were higher than the blood lead levels of police in Los Angeles.

In fact, the health effects of lead are the most studied of any metal, and it has not been found that lead in the atmosphere is a hazard to health.

I would like to comment on one more statement in the briefing document. This says: "Auto manufacturers are doubtful that economically feasible emission control systems can be developed to meet California's 1975 standards if unleaded fuel is not available." And "the automobile industry has requested that no lead be added to gasoline for use in vehicles equipped with advanced emission control devices."

Now, in all the material that I have gone through, I have yet to see spelled out a specific method of demonstrated emission control with unleaded gasoline, economically feasible or not. Nor have I seen any reports of results from so-called "advanced emission control devices" for non-leaded gasoline.

On the other hand, the California Air Resources Board has tested a manifold reactor on a car using leaded gasoline that "meets nearly all of the 1980 proposed federal emission standards." And it comes well within the California goals for 1975.

I trust that you do not have the pre-conceived notion that the only approach to the auto emission problem is by removal of lead additives. There are massive complexities involved in the removal of lead.

It stands to reason that if the emotional drive succeeds to force the automobile public to use non-leaded gasoline, this may well close off one promising alternative to the solution of the automobile exhaust problem. Today the most advanced and demonstrated methods for such emission control work with leaded gasoline. Should leaded gasoline be banned, which would result in 1974 for your Regular gasoline, obviously research on and further development of such compatible with leaded-gasoline systems will be greatly hampered, if not brought to a standstill. The only vehicles which will then utilize leaded gasoline are luxury cars.

The uncertainties about results if non-leaded gasoline is required emphasize the need to be cautious. Dr. Richard D. Cadle of the National Center for Atmospheric Research, and a recognized authority on the composition of the atmosphere, explained his concern in the April 20, 1970 issue of Chemical & Engineering News:

"In connection with any possible health hazard from the lead compounds that automobiles send into the atmosphere, Dr. Cadle believes that there is reason for alarm, but warns that quick solutions could build into problems of an entirely different stripe. He suggests, for example, that gasoline manufacturers who hope to replace leaded alkane gasoline with high-aromatic fuels should look at least twice before they leap.

'It's conceivable that some of these aromatics could lead to the formation of carcinogenic by-products in the combustion process, although I don't know of any hard evidence to support that idea. Nevertheless, aromatic compounds generally are toxic,

irrespective of whether or not they're carcinogenic.

'Also, certain aromatic compounds have been found to be a couple of orders of magnitude more severe as eye irritants than the peroxyalkyl nitrates formed from conventional gasolines. What I'm really saying here is that in the whole area of air pollution control, we shouldn't rush ahead with one solution before trying to anticipate the larger problems it may create.'"

It is felt worth a reminder that Bill No. 79 as we now see it, puts no restriction on the aromatics to which Dr. Cadle refers.

A citizens group in New York has recently said that they would try "to affirm a neglected principle in environmental law, namely that the actual burden of proof for environmental pollution rests with industry, not the people." I submit that the industry has made a demonstration that atmospheric lead poses no threat and that the people -- either here in California or elsewhere -- have not come forward with evidence to upset the industry's demonstration.

It is of interest to report to you on a May, 1970 article in the well-known automotive journal "Motor Trend." The article summarizes the entire situation very effectively -- reviewing it in some detail since last fall and before, and summarizing many of the factors presently under consideration. I do not know Mr. Ethridge, the article's author, nor does he know me nor my advisers. We have never met. It is gratifying to see so many of the same conclusions, as we have tried to clarify, arrived at independently by another. A copy of Mr. Ethridge's article is attached to my testimony for your consideration.

We have argued against Bill No. 79 as amended April 24 and continue that position. However, if our arguments do not prevail I have one suggestion to make which I trust you will find constructive. The bill as now proposed discusses a scheduled phase-out of lead in gasoline. If it develops that this legislation is enacted to control gasoline composition in California I would respectfully suggest that the 1/2 gram per gallon grade, which is scheduled to be dropped as of July 1, 1974, be continued indefinitely at this time.

Since the bill provides that two grams per gallon be permitted in premium gasoline until July 1, 1980 I fear -- with the pressure of higher prices as well as other pressures, -- that the man driving the low compression cars capable of running on regular gasoline will be prone to use the premium grade.

This suggestion is, of course, made with the objective that if action must be taken it should be taken with fairness. At the very least -- and with valve problems promised should non-leaded gas be forced, I think you will not accomplish your purpose. If valve problems develop in massive numbers of older cars, the owners will take the best, nearest and cheapest remedy.

As a last point, I would again invite your attention to the fact that there will apparently be no additional control devices on new cars for at least two and probably more model years. This seems vital to us.

We have raised these points in our conviction that unless it can be more fully demonstrated than to date that lead's removal from gasoline will greatly facilitate the control of noxious emissions, there is no reason for seeking a ban on leaded gasoline.

Finally, I invite your attention once more to the second point in our original request, namely, "we urge further careful study for development of techniques and devices that will reduce all particulates, including lead, from auto engine exhausts.

The overall problem is so close to a satisfactory solution without upheaval that it would be unfortunate to impose the inflationary factors including substantial unemployment without a better reason than would seem to have been found.