LEAD INDUSTRIES ASSOCIATION, INC.
292 MADISON AVENUE
NEW YORK 17, N. Y.

Text of a paper delivered for Barry H. Stuart, President,
Stuart Motors, Inc., of Kalamazoo, Michigan

(delivered by Bruce Fader, LIA Staff)

Telegram from Mr. Stuart, received Monday morning:

REGRET TO INFORM YOU AFTER WORKING FULL CREW AROUND THE CLOCK THIS LAST WEEK, VEHICLE STILL NOT READY TO SHOW. HOPE YOU HAVE NOT BEEN INCONVENIENCED.

BARRY STUART

STUART MOTORS, INC.

I am very sorry that you will not have the chance to meet Barry Stuart himself or to see the new automobile he has designed and built. It is a remarkable car. And this is to be expected because Mr. Stuart is a remarkable young man. Long before the current "compact" craze came into being, Barry Stuart was convinced that small cars were what the people wanted. He had an agency to sell the English-made Ford Anglia. And he did very well at it. So well, in fact, that he became the largest distributor in the State of Michigan. When he was not given a franchise to sell the Ford Falcon, he first looked into other small foreign cars and, not being satisfied with the possibilities, decided to build a car himself. The result was the Stuart Electric.

He likes to point out that it is the first basically new car designed and built in the United States for several decades.

What is it like? Well, there is a picture and description of it on one of the bulletin boards at the entrance to this room. Time magazine has described it this way:

Presented at the 34th Annual Meeting,
Lead Industries Association, Inc.
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Look Ahead with Lead

"Designed to sell for around $1600, the Stuart is a boxy but commodius fiberglass creation driven by a four horsepower motor, will hold two adults, two kids, and lots of groceries. It will go 40 miles at a safe-and-sane 35 miles per hour on its small boat-trailer-size wheels, and its eight 6-volt batteries may be charged overnight simply by plugging the whole thing into the garage socket."

Essentially it is cheap, roomy, reliable transportation of the type that will appeal to families who have two or more cars and to industrial plants, drugstores, pizza palaces and others who must make deliveries at minimum cost.

It would be stretching things a bit to say that Mr. Stuart's wish that he has not inconvenienced your association is anything but a wish. But we forgive him because he is hard at work on an interesting changeover. You'll notice that his wire said "working full crew around the clock" and you may be surprised to learn that this all-out schedule is due to a model changeover - even though the first model has not yet been mass-produced.

As originally conceived, the car would have had a steel frame, a plastic body — and you may be interested to know that the body is so designed that it partially acts as its own shipping container and has precisely the right dimensions so that 24 cars fit neatly into a boxcar . . . I point this out because the Stuart is not the product of simple tinkering in the garage — the car also embodies 650 pounds of lead acid batteries and a four horsepower motor.

In the new design now going into production, most of this description still applies, but there has been one significant change: There will be no steel frame.

The car will be built of plastic and aluminum honeycomb material of the sort used in missiles. There is only one other car in the world which uses a design approaching this in advanced engineering and that car is the Lotus Elite, a $5700 sport-racing car built in England.

Barry Stuart was willing to make such a change right at the beginning of his production run for two reasons: First, he will be able to make the car somewhat lighter and can thus expect better mileage and performance. Second, he feels that this change will extend the car's useful life from about ten years to about 20 to 25.

This, of course, makes the car a more attractive proposition from a cost standpoint. You are aware that a conventional car costs

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about 8 to 11 cents per mile to operate, including depreciation and insurance. You may be surprised to learn that the Stuart costs only about 4 cents a mile under the most conservative kind of cost estimating. Fueling the car — from the electric socket — costs less than 1 cent a mile.

Another reason that he was unwilling to stop work to come to our annual meeting is that he is developing a backlog of industrial orders faster than he anticipated. That is why he is working around the clock. He said on the phone that he has been disappointed in orders from individuals. Though intensely interested, many people feel that the whole idea of electric automobiles needs to be proved out — at least in this generation — and that they will not buy a new car of this sort until they have seen it and driven it. The problem is understandable. Mr. Stuart's solution has been to announce that he is willing to finance the car on a 1/3 down payment.

Coming back to the durability and economy of the new car, there have been a few minor engineering changes to be instituted along with the "frameless" construction. One of these is the use of zinc coated hardware throughout the body. As soon as production schedules are being met, he expects to do away with the steel wheels and drums now used and switch to a zinc-aluminum alloy for these. Again, weight saving is a factor since this will reduce the car's weight by about 75 pounds. But his main consideration is the longer life that can be expected.

What will all this mean in terms of lead consumption? The batteries now planned for the Stuart, batteries designed for golf-cart service, have a two to three year life. Thus, each Stuart will require about 650 pounds of batteries every three years. Now by this time next year Mr. Stuart expects to have about 300 to 500 of these cars on the road. By 1967 he expects that about 10 per cent of the whole passenger car market — about 8 or 9 million cars a year by then — will be of the size and type of the Stuart and he estimates that his company will fill about 10 to 50 per cent of that market with electrics.

In addition, there will be a good foreign market for electric cars. His company is already a party to ten joint ventures in foreign markets. These range from complete assembly plants and allied manufacture to sales and maintenance centers in foreign countries. His opinion is that the bulk of these outlets will prefer batteries made in the United States.

We hope that Stuart Motors is successful in reaching these goals.

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