

JUN 28 1951

A.E. GOLDSCHMIDT

399 Park Avenue  
New York 22, N.Y.  
June 27, 1951

Engineering Department  
Cadillac Motor Company  
Detroit, Michigan

Gentlemen:

Last year I decided to put a Cadillac engine in my Allard sports car. This engine was re-worked by Mr. Calvin Connell of Detroit Racing Equipment, 13001 Joseph Campau, Detroit, Michigan. The heads were ported and relieved, the crank shaft was hard-chromed, the special steel camshaft with mechanical lifters and special tappets was installed, a dual downdraught manifold was installed, the compression was raised to 8.5:1, a magneto ignition was installed, an eight quart oil pan was installed, and special exhaust headers were made to relieve all possible back pressure.

With this engine I won the International Grand Prix at Watkins-Glen on September 23rd which was written up in Time Magazine on October 2nd, in Look Magazine, and it received a front-page write-up in the New York Herald Tribune as well as in other leading newspapers in the country. As a result of this win, a large number of sports car enthusiasts decided to install Cadillac engines in their automobiles. Later in the year, the car was run in Sebring, Florida in a six hour race and because of a handicap formula based on cylinder capacity, the engine was sleeved down to 270 cubic inches.

In the beginning of 1951, Mr. Briggs Cunningham began his project in West Palm Beach to produce an

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American sports car, and in the building of the three prototypes of this automobile which was written up in the July issue of Mechanix Illustrated, no cost was spared, and after lengthy discussions with the Chrysler Company, Mr. Cunningham decided to install Chrysler engines in his automobile. I believe that this decision was prompted by the fact that the Chrysler engine has a hemispherical combustion chamber which, because of better detonation, allows the raising of the compression to 10:1 and still does not prevent the use of ordinary high-test pump gasoline.

Because of this combustion chamber, and because of a special manifold which was installed on the Chrysler engine, the h.p. on his engine was increased considerably. In order to keep up with these Chrysler engines, we tried to raise our compression to 9:1. Running the Cadillac engine at 9:1 on a dynamometer we found that we could get 6,000 revolutions with 100 octane gas. The use of this gas, however, is not permitted in sports car racing and we therefore tried to run the car on regular high-test gasoline and found that on the dynamometer the engine quit at between 4,800 to 5,000 revolutions because of detonation problems which are due to inherent shortcomings in the Cadillac heads which do not allow enlarging of the valve area sufficiently for much higher compression than 8.5:1.

I have read in various publications, including the latest issue of Popular Mechanix, that the Cadillac Motor Car Company has a new head designed for their automobile for 1952. Since we are in the middle of the road racing season at this time and since I very much doubt that with the present heads we can get enough h.p. out of our engine to compete successfully with the Chrysler engine, I am wondering whether there is any chance of purchasing a set of these new heads from your Company, or whether there is any chance of your Company lending us a set of heads for the races which will definitely show, because of the great stress put on an engine, what alteration, if any, might have to be made for performance improvement. It will be a good test because the Cadillac engine with its new heads will perform against the Chrysler.

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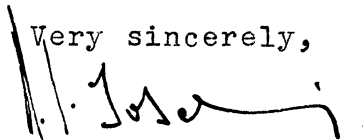
Mr. Frank Burrell in your Engineering Department knows me quite well and I think he will confirm to you that an engine driven by me really gets a work-out.

It is my opinion also that the publicity which your engine would receive in these races would result, indirectly, in sales of your passenger cars. I know that a number of friends in my immediate circle, because of the Chrysler engine performance at Bridgehampton, have sold their Cadillacs and purchased the Chrysler product. I also know that many of the innovations used on the Indianapolis cars are eventually used on passenger automobiles, yet, I believe that a road race is a much truer test of an engine than a track race such as Indianapolis and it is because of this that I am hopeful that you will grant my request.

At the present time my engine is at the Detroit Racing Equipment Company at the abovementioned address. Their phone number is Twin Brooks 3-8969 and I know that Mr. Connell would be glad to bring the engine over to your Engineering Department, run it on your dynamometer, and see how much h.p. increase can be obtained by installing the new heads.

I await your reply and remain.

Very sincerely,



P.S. To give you some further idea of the interest in road racing I suggest you look at the June 29th issue of Life Magazine.

June 29, 1951

Mr. A.E. Goldschmidt  
399 Park Avenue  
New York 22, New York

Dear Mr. Goldschmidt:

Although, of course, the company cannot officially participate in these matters, we cannot help but be interested in seeing Cadillac engines win national competitions, and I have also been very much interested in these races personally. I think you can understand, however, that general policy would simply not permit putting out experimental or advanced engineering parts for such purposes. Again I would like to point out that the stuff which is published in magazines these days is not at all reliable. We are frequently amazed at how far off the beam some of these writers get.

I think that your objective could be very well attained if you would place your car in the hands of Mr. Burrell personally. He is very well informed on the subject of high output engines and could secure the results which you want without in any way tying us in officially in the matter.

Very truly yours,

C.F. Arnold,  
Chief Engineer

or  
cc: F.C. Burrell ✓