

# JUDSON

RESEARCH AND MFG. CO.  
CONSHOHOCKEN, PENNA.



TELEPHONE: TAYLOR 8-3011  
CABLE: JUDCO

January 12, 1959

Mr. Bruce L. Merikubo  
3650 - 18th Ave. So.  
Minneapolis, Minnesota

Dear Mr. Merikubo:

This is to acknowledge receipt of your letter of January 8th in regards to the Judson supercharger that you have installed on your Volkswagen.

Do not use a multi-viscosity grade oil in the lubricator. Use a No. 10 HD motor oil and in the winter set it to put out one drop every four seconds at idle. It is not necessary to readjust the lubricator to compensate for the extreme cold weather. The amount of oil fed from the lubricator increases as the load on the engine increases and the vacuum decreases. The supercharger can operate with a smaller amount of oil for an extended length of time and until the engine compartment has heated up.

In regards to top speed, as you know, all cars of the same make and model will not have the same performance. Possibly the lack of a greater amount of top speed is due to the particular engine. The only other item that we can think of is that the fuel pump may not be delivering a sufficient volume of fuel to service the engine at a speed in excess of 75 miles per hour. The fuel pump on the Volkswagen engine is actuated by a push rod and when this push rod becomes worn, the capacity of the fuel pump falls off. There is an adjustment to compensate for this wear on the push rod and most Volkswagen dealers have the tool to check it and make the necessary adjustment.

The very bad flat spot described in your letter is either due to extremely cold weather or a leak in the induction system. We suggest that you check the intake manifold carefully for a leak or a crack and to make sure that the intake manifold is not burned through where it joins the heat riser. Extremely cold temperatures will account for a flat spot on a supercharged engine. As the cold charge enters the carburetor it is lowered considerably due to the increased velocity through the venturi. This extreme cold prevents correct atomization of the fuel and will account for a flat spot. If the heat risers have been blocked off we would suggest that they be opened up for the cold weather. The slight drop in compression on one cylinder as described in your letter would not account for this flat spot or a drop in top speed.