THE WARNER AIRCRAFT CORPORATION 20263 HOOVER AVENUE DETROIT, MICH.

SERVICE LETTER A-5

July 22, 1937

To help eliminate a probable resonance period at cruising r.p.m., we have found it advisable to relocate all propellers in the hubs of all Super Scarab engines.

We suggest that, at your earliest convenience, you have the following check and propeller installation made:

- 1. Remove propeller from engine.
- 2. Clean crankshaft taper and inspect for cracks.
- 3. Remove propeller from hub and relocate in hub so that propeller is as close as possible to right angles to the crankshaft throw. (When key in crankshaft faces down the propeller should be in horizontal position.)
- 4. With propeller reinstalled in hub, the hub should be lapped to taper as follows:
 - a. Remove crankshaft key.
 - b. Lap hub to taper with light grinding compound (Clover #1-A compound), being sure to have a tight fit at the rear bearing surface of the taper. The taper should bow be cleaned of all compound. Next a small amount of compound should be placed on the front bearing surface only of the taper and the hub lapped again to give a medium fit at the front bearing surface of the taper. Only 5 or 6 turns are needed to give a medium fit. The taper should next be cleaned and made ready for the propeller installation by replacing the crankshaft key and oiling taper.
- 5. The propeller should be balanced with hub attached and reinstalled.

After the above work is completed, we ask your cooperation in filling out the attached questionnaire, stating by whom the work was done, and mailing it to the Warner Aircraft Corporation, Detroit, Michigan.

Yours very truly,

THE WARNER AIRCRAFT CORPORATION