HARTZEL PROPELLER COMPANY
PIQUA, OHIO

BULLETIN NO. 10 (SEABEE) August 2, 1950

SUBJECT: INSTRUCTION AND SERVICING THE HC-12X20-2, -3/8427 PROPELLER

1. Attention is again drawn to the importance of adequate inspection and maintenance procedures. Some operators report that after they had established a daily inspection and servicing routine of the propeller, operational and maintenance difficulties vanished. One operator advises that he greases the blade bearings daily, with excellent operational results. While daily greasing may seem superfluous, there is a strong argument in favor of adequate greasing.

2. Unless the blade bearings are kept submerged in a waterproof grease, the following chain of events may result:

   (a) Water may get into the blade root mechanism and cause the blade to tighten up on the pilot tube. Also , the blade bearings and hub parts may rust, which will increase the friction and lower the fatigue strength of the hub.

   (b) If one blade becomes tight, the piston of the hydraulic actuating mechanism will tend to “cock” when the pitch is changed. If the “cocking” is pronounced and the condition is allowed to continue over a protracted period of time, the guide pins which support the piston in the cylinder may break off. Oil will then start to leak past the “O” rings. Also, the propeller may be rough due to unequal pitch between the two blades.

3. It is recommended, therefore, that an adequate greasing and inspection routine be established. Add grease as often as necessary to insure that the blade bearings are flooded. Check whether the blades are tight by pulling and pushing the counterweights back and forth with the pitch control pulled out.

4. If, upon pulling and pushing one counterweight, the piston can be “cocked” appreciably or if the “O” rings leak oil excessively, the propeller and piston should be pulled and the 3 guide pins inspected. This type of check should be made once a month or 50 hours, whichever occurs first.

5. Recommended greases are listed in a bulletin dated September 4, 1947; also in the service manual, 3rd and 4th printings.