

SERVICING INSTRUCTIONS

Hartzell Hydro-Selective Propellers Models HC-12X20-1 and HC-12X20-2

30 Hour Service and Inspection

1. Inspect visually hub parts closely for possible fatigue cracks which may be developing. In case of doubt remove propeller and inspect steel parts with magnetic machine.
2. Check blades for looseness in hub. The blade tip should rock about 1/8 inch and be free to move in hub. The latter can be tested by taking hold of the counterweights and rocking them fore and aft slightly. If the blades appear too loose the clamp bolts can be tightened one or two castellations. Torque to 20 foot pounds. DO NOT FREEZE BLADES ON HUB BY OVERTIGHTENING CLAMP NUTS.
3. Check clamp gaskets for leakage of oil. In case one is pushed out from between the clamps, unloosen clamp bolt and push gasket back or replace. Use gasket compound. Care should be exercised to insure that the blade pitch is not changed. A scribe mark at the clamp end is available for reference. Tighten bolts to 20 foot pounds and check blades for freedom to move in hub and also for tightness in clamps. The blades should withstand at least 2000 inch pounds moment without slipping in the clamps. This can be checked by using a wood board with a cut-out to fit the blade profile at an inboard station (18 inch) as a lever and applying 50 pounds at a distance of 40 inches. (Pad the cut-out to avoid marring the blade surface.)
4. Grease blade bearings with zerk gun. Use a low temperature tacky grease conforming to Government ANG-3, ANG-15, A3560B or N1413 specifications. The following trade greases are recommended:
 - (a) New York and New Jersey Lubricant Co. F-926 (Excellent for temperatures down to -15°.)
 - (b) SOHIO 30F or Superflo XX (good to -15°F.)
 - (c) Texaco 67 (Temperature range -65° to +175°F.)
 - (d) Beacon WS-517EP Lubricant. (Temperature range -65 to +175F.)Care should be exercised when pumping grease into the zerk fitting, else excessive pressure will bow out the gaskets. Grease should be added until it starts coming out around the joint between the clamp and hub. Unless the bearings are kept flooded with grease they will become rough and eventually cause the propeller to stick.
5. Check tightness of A-7 linkscrew and also wear between screw and link A-70. Linkscrew A-7 must be tight in clamp C-3, else it will work and possibly break. Torque to approximately 30 foot pounds. Safety with wirelock A-70 in such a way that wire tends to tighten screw. Replace screw if badly worn.
6. If excessive oil leaks from piston-cylinder assembly the "O" ring should be replaced.

7. Check oil leaks in valve system. If oil leaks out valve stem, replace "O" ring. Oversize rings can be employed if necessary by installing AN6227-11 instead of -10 as specified.
8. Check wear in valve lever system. Replace pins or lever if worn excessively.
9. Check blade for visible defects. If tips are badly eroded, cracked or otherwise damaged they should be repaired.

100 Hour Inspection

Tear down assembly. Inspect all parts for wear and cracks. Assemble, grease, and install according to instructions.