Re-assembly of CH-3 Upper Assembly

1. Remove the set screws and place (1) ER-39 Bearing in the oven and heat to 300° degrees.

2. Apply a 2 ½" wide film of loctite to the shaft near the shoulder on the soft plug side or the short side of the shaft. After the bearing has heated for about 30 minutes and is at temperature, slide the bearing on to the shaft with the set screw end of the bearing toward the end of the shaft. When cool apply loctite to the set screw and tighten.

- **MAKE SURE YOU ARE PUTTING THE BEARING ON THE CORRECT END OF THE SHAFT AND FACING THE CORRECT DIRECTION, IF NOT THE UPPER ASSEMBLY WILL NOT GO TOGETHER CORRECTLY.**

3. Remove the set screws and place (1) ER-39 bearing in the oven and heat to 300° degrees. Apply a 2 ½" wide film of loctite to the shaft starting 3" in from the other end of the shaft where the bearing will set. Have the shaft and bearing standing up on the end the bearing was already installed. Next heat the bearing holder evenly to 325° degrees with a torch or rosebud. When the bearing in the oven is to the right temperature, slide the aluminum bearing holder with a larger ribs facing upward on to the bearing already on the shaft making sure it is all the way down against the lock ring. Quickly take the bearing out of the oven and slide it onto the shaft and into the bearing holder making sure it is the whole way down with the lock ring against the top side of the bearing holder. Then cool the assembly with the water hose. Once cool blow dry and apply loctite to set screws and tighten in place.

4. Install knurled aluminum plug with loctite on knurls. This is a drive plug and must be driven into the long end of the shaft using the old plug to hit with a small sledge hammer so that the new plug is not damaged. Drive in until the plug stops against the end of the shaft.

5. Install 3/8" square key onto the long side of the shaft. Then put a thin film of loctite over the entire diameter of the shaft, including the key. Next put a light film of loctite on the .750 diameter of the propeller dowels where it will lock to the propeller hub. Heat propeller hub with a torch or rosebud to 325° degrees and slide the hub onto the shaft. Once the hub is on the shaft lay the upper assembly on its side making sure the propeller hub stays in place against the shoulder of the bearing. Quickly install the (6) propeller dowels while the prop hub is still hot. Once the propeller hub and dowels are installed cool the assembly with the water hose.

6. Stand the assembly upright on the propeller hub end. Install the key on the pulley side of the shaft and apply a thin film of loctite to the entire shaft area. Heat the pulley evenly to 325° degrees with a torch or rosebud. Then using high temperature gloves, slide the pulley onto the shaft with the deep cup down. Cool evenly with a spray of water from a water hose.

- **BE SURE NOT TO HAVE YOUR FINGERS UNDER THE PULLEY WHEN INSTALLING, TO AVOID HAVING YOUR FINGERS PINCHED BETWEEN THE HOT PULLEY AND THE BEARING HOLDER.**

7. When cool blow the entire assembly dry. Install (2) grease zerks and give the angle hole zerk (5) pumps and (3) pumps to the other fitting.

8. Put a small amount of BB's about 40 into the pulley end of the shaft, and then fill the shaft about ½ full with oil. Coat the soft plugs and shaft end bore with sealant, then coat the outside wall of the soft plug if using the cupped style plug. If you are using the dish style you will need to install the soft plug then more sealant and a second plug. Dish style need to only be slightly flattened to lock into place. The cupped style should be driven in until the seat against the step in the bore.

9. Let the unit set over night for the sealant to cure then flip over and let stand over night again and check for leaks prior to re-installing the assembly.