GENERATOR THRUST BEARING FOR OPERATION AS SYNCHRONOUS CONDENSER

A generator thrust bearing is provided for use when the generator is disconnected from the turbine and operated alone as a synchronous condenser. It holds the rotor in the correct axial position and prevents floating.

This bearing is essentially a half ring, with a babbitt lined face on each side, projecting into a groove machined in the generator rotor shaft. The ring is mounted on the upper half of the generator outboard bearing and is held in place by tap bolts. Oil for lubrication is supplied from the main bearing oil chamber and is led through suitable drilled passages (shown in the illustration) to radial distributing grooves in the babbitted faces.

In order to install this thrust bearing and prepare the unit for operation as a synchronous condenser, the following changes are necessary:

1. Remove the coupling bolts and coupling spacer from the main coupling between the turbine and generator.

2. Remove the pipe plug from the oil passage in the generator O.B. bearing. This plug is located at point "A" in the illustration.

3. Install the generator thrust bearing ring. Since this ring is used in the upper half only, it can be readily installed by removing the bearing pedestal cover.

4. Install blanks in the oil piping to isolate the turbine bearings but still supply oil to the generator bearings. The necessary blanks to be installed are indicated on the oil system diagram.

It is of utmost importance to note that this generator thrust bearing ring must be removed before operating the generator connected to the turbine.

The following list has been compiled to facilitate ordering spare and renewal parts by item number and name together with the serial number of the turbine.

Item No.	Name
1	Thrust Ring
2	Tap Bolt
3	Locking Strip
4	Sealing Strip

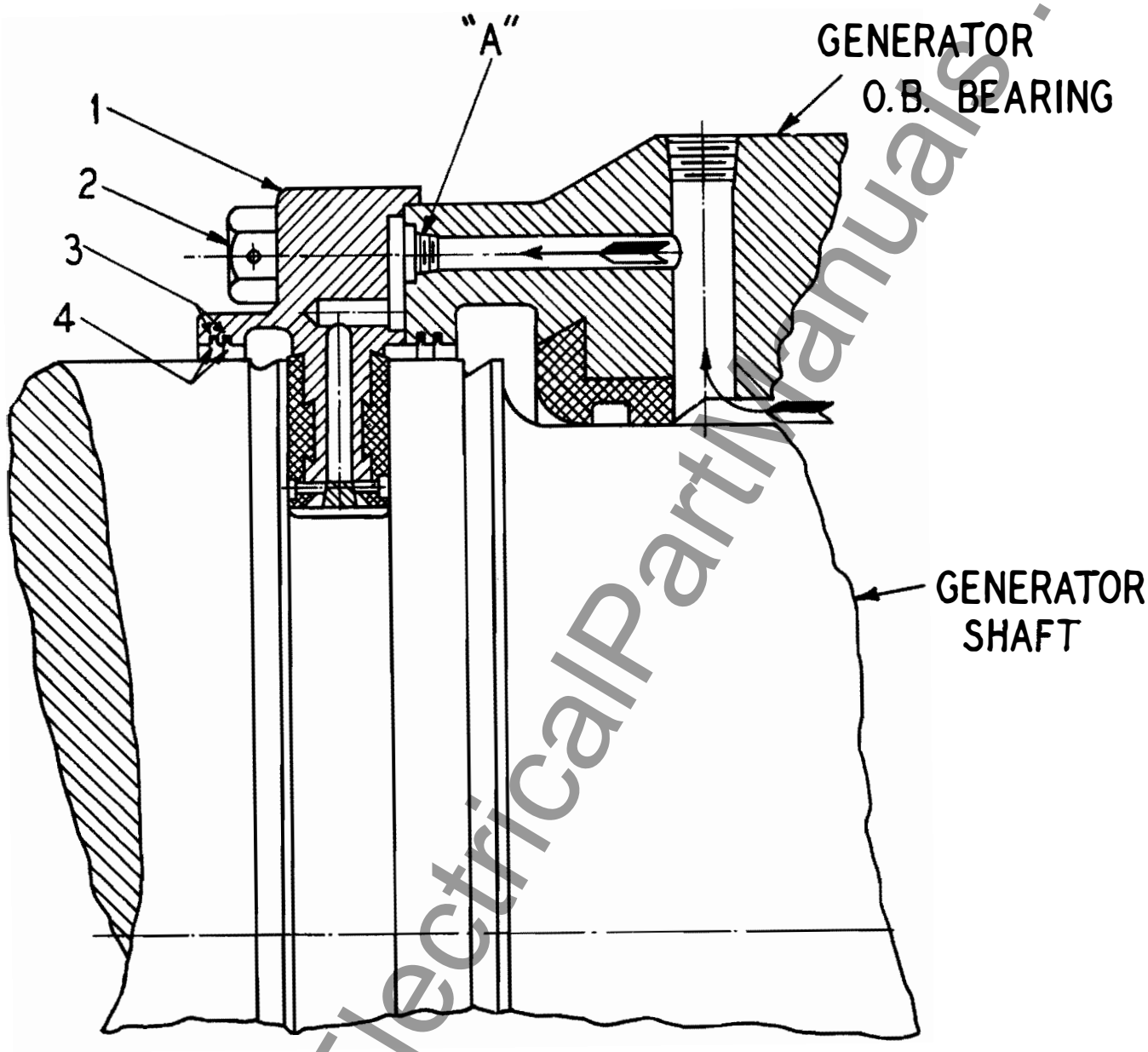

Fig. 1