

Instructions: Temperature Sensor in Thrust Bearing Using the Babbitt Method for Case Style B

EI 180 Revision F

(Reference: Document 1444226)

NOTE: For easier installation, sensors may be purchased with babbitt already applied to the tip of the sensor case. Contact Minco and ask for AC212978B1.

1. Suggested Installation Procedure

Install a case style B temperature sensor into a thrust bearing following the steps below.

1. Use a #10 bit to drill a 0.194" (4,9 mm) diameter axial pilot hole through the babbitt layer and bearing shoe in the desired location.
2. Counterbore a hole in which to seat the sensor:

Hole Identification	Hole Diameter	Hole Depth
Pilot hole	0.194" (4,9 mm)	Through
Counterbore hole	0.260" ±.005 (6,60 mm ±0,13)	Babbitt layer

3. Mill a groove in the back of the bearing shoe to channel the leads/cable. The groove should start at the pilot (through) hole and continue to where the leads/cable exit the bearing. Choose an appropriate groove width and depth to accommodate the leads/cable of the sensor(s) being installed.
4. Break or chamfer the corners from drilling and milling to remove sharp edges.
5. Thoroughly clean the machined surfaces and the sensor case so they are free of oil, shavings, etc.
6. Insert the leads/cable. **DO NOT** pull the leads/cable to seat the sensor case in the hole.
 - A. Insert the leads/cable of the sensor in the 0.260" (6,60 mm) diameter counterbored hole.
 - B. Extend the leads/cable through the pilot (through) hole in the bearing shoe. Carefully draw the leads/cable through the hole, making sure they are not kinked or damaged.
 - C. Gently guide the case into the hole and push it into place. The case flange seats on the bearing shoe when the sensor is properly placed. **DO NOT** pull the leads/cable to seat the sensor case in the hole.
7. Fill the hole above the sensor with babbitt (shavings or small pieces). Use enough babbitt to cover the end of the sensor case and extend slightly above the bearing surface after melting.

- Use a small gas flame to melt the edge of the babbitt layer surrounding the sensor tip. If needed, add babbitt to fill the hole flush to, or slightly above, the bearing surface.



DO NOT allow the flame to contact the sensor case.



DO NOT concentrate the flame in one place for any length of time.



KEEP THE FLAME MOVING.



NOTE: The babbitt must be melted to fusion-bond to the sensor case but must not be heated to a temperature that will damage the sensor. The sensor can withstand temperatures up to 572°F (300°C) for short periods of time.

- Scrape off excess babbitt and dress to create a smooth, unbroken surface.
- Lay the leads/cable flat in the bottom of the milled groove in the bearing shoe.
- Pot the leads/cable in the groove using epoxy or other suitable potting compound compatible with the bearing shoe material, temperature, and service conditions.

2. Drawing

Although the illustration below depicts a temperature sensor in a thrust bearing, this installation procedure can be used with other types of bearings and with equipment other than bearings.

