

# Indirectly Inspecting PEM Nut Threads

## Required Tools

- 7X Bausch & Lomb “Hastings Triplet” jeweler’s loupe (or a good magnifying glass).
- Medium-size Phillips screwdriver.

## Procedure

**WARNING! WARNING! WARNING!**

**DO NOT REMOVE OR EVEN LOOSEN EITHER OF THE SCREWS SECURING THE PA TRANSISTORS!**

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1. After referring to the photo below and while using the proper tool, remove just the leftmost screw securing the original factory heatsink. (This is **the screw adjacent to the antenna connector.**)



*Photo courtesy of Adrian Ryan, 5B4AIY*

2. **Thoroughly inspect its threads** under a bright light using a 7X jeweler’s loupe (preferably) or a magnifying glass. **They should be black!** If they are shiny, it means the black oxide coating has separated from the screw and is most likely contaminating the internal threads of the PEM nut that’s machined into the case! *Even the tiniest amount of this coating can cause problems.*
3. Attempt to install a pristine 4-40 screw **of the same length** in place of the original screw, using just your fingers. (It should thread into the hole effortlessly.) If it doesn’t, then the high-precision replacement hardware included with Cooler KX™ heatsinks surely won’t.
4. Replace the original screw, but don’t over tighten it. It only needs to be tight enough so it won’t come loose. (There’s very little thermal benefit to be gained from over torquing it, plus you run the risk of damaging the threads.)
5. Assume the condition of this left screw is representative of the condition of the right screw. (It’s a safe assumption since in all cases to date, either both PEM nuts were damaged or both were not.)
6. **Do not** remove any other screws.