PEM Nut Thread Damage

Background

A small percentage of KX3 owners are finding that the replacement mounting hardware included with Cooler KX™ heatsinks, won't thread into the two "outer" heatsink mounting holes.

Discussion

The "visible" cause of this malady is that minute amounts of black oxide coating has detached from the original heatsink mounting screws and contaminated the threads of the mating PEM nuts that are machined into the bottom cover sheet metal. At present there's insufficient failure data to suggest what the "root cause" might be.

Corrective Action

1) Determine if your threads are affected. As described in the (proprietary) Cooler KX™ installation guide, refer to tech-note #2 "Indirectly Inspecting PEM Nut Threads" before removing the original factory heatsink. Even better, you could perform this inspection before purchasing a Cooler KX™ heatsink. (In fact, you ought to perform it if you plan to purchase any brand of aftermarket heatsink.)
2) If your KX3 is affected, you'll need to "chase" (clean/repair) the internal threads of the two PEM nuts using a cutting tool called a tap. Refer to tech-note #3 "Chasing (Repairing) PEM Nut Threads" for details.
3) If you don't already own a 4-40 tap and your KX3 has contaminated PEM nut threads, then you might consider purchasing a premium tap and handle/wrench from Simply Better Manufacturing when you place your heatsink order.

References

- www.estainlesssteel.com/gallingofstainless.html – "How to Stop Thread Galling on Stainless Fasteners", by Joe Greenslade

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