

Moisture problem in your traps

Solution

I have heard rumors of this problem for years. It only happens on a very small percentage but these are the ones we hear about. It is still a large number.

In my experience, the solution is to completely separate the traps from outside elements. Water which gets inside the trap doesn't actually change the trap much.

A trap uses the coil for the inductor inside, and the metal tube outside, which forms the capacitor portion, to allow resonance. The values are set for the particular band in use. If either value changes, the trap frequency changes, which changes the swr for a given frequency. The swr curve stays the same, except the entire swr curve slides up or down in frequency away from the original tuning.

I have seen pictures of very old models which had a blue plastic covering, much like heat shrink. I think the purpose was to prevent water contact with the outer tube. Whenever water coats the outer tube, the dielectric property of the capacitor changes, and shifts resonance. The plastic coating thus prevents a shift in frequency. I don't know if this was the intended use, why it stopped shipping, or when.

When I was younger, I received a can of 'antenna wax' at our christmas party. I thought it was a joke at the time, and so did everyone else. It works by repelling water from the metal surface, and keeps capacitive changes to a minimum.

So, sealing the trap up with sealant should work fine. I would only do one trap at a time, on the driven element, and look for a frequency shift. If is does not shift, it should work fine. I have two inch heat shrink available also. PVC tubing has been used also. Also, I would put some rice inside the trap before sealing, to absorb any residual moisture.

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> Do you know if they fixed the trap moisture problem in this TH-3 jrs? I
> just
> saw a review page and ALL them were complaining SWR issues and trap seal
> leaking. Bad part I am unsure if these were newly made antenna reports or
> back 20yrs? A couple outright said they bought in the 80's. But there were
> quite a few listed complaints.
Secondly is there any reason we can't seal the thing where the
> tube passes thru the end caps with silicone?
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