

Lead-free Solder (continued ...)

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Hi all

Friend of mine also in the electronic service business just called me to tell of a conversation he had in the pub last night with one of his friends. Turns out this guy is a washing machine service engineer with his own business of many years. He told my friend that from a business point of view, he is delighted with lead-free solder, because in the last year or so it has boosted his profits significantly. This is because of the number of bad joints that he now sees on items such as solenoids. He is firmly convinced that the lead-free solder, being a harder material that doesn't stick well in the first place to items with a large thermal inertia, cannot take the vibration that a washing machine subjects it to. This seems altogether reasonable to me.

Just this morning, I have repaired a NAD CD player that would play for anything between 5 and 45 minutes, before randomly failing. No amount of physical provocation would bring on the fault, nor correct it when it occurred. It would need to be left off for about a half hour before it would play again. Just for sport, I tried a laser, but of course, that wasn't it. I then took the board out, and went over it with a headband magnifier. I then found two perfect cracked-right-round joints on a connector. The joints had that traditional lead-free straight-sided volcano like shape. Once these had been attended to, and the original laser put back in, everything was fine.

Is it just me, or does anyone else have concerns for the wider implications of this nonsense technology that has replaced a mature and reliable technology in the dubious name of that new great (and some would say false) god, "Green" ? If washing machines can vibrate these joints into submission, I sincerely hope that the exemptions that the avionics and automotive electronics industries currently enjoy, never get rescinded ...

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