

**September 3<sup>rd</sup> 2019**

**Maintenance Advisory MA E-04.2**

**Affects: E-04.8 Whip Antenna E-04 ELT**

**RE: Care of plastic parts**

***The plastic parts of the ELT are a blend of polycarbonate and ABS plastic. Injection molded plastic forms many invisible cracks as the material rapidly cools in the mold. There are a number of chemicals especially volatile organic compounds that can attack the bond between these cracks. We have had issues with the whip antenna and ELT case cracking when subjected to cleaning solutions or other substances that will attack injection molded ABS/Polycarbonate plastics bonds. PC/ABS blends are chemically resistant to aliphatic hydrocarbons, weak mineral acids and weak organic acids, but not to alkalis, aromatic and halogenated hydrocarbons, ketones and esters. Polycarbonate is sensitive to hydrolysis because it is a polyester. Alcohol based compounds are common to some strong cleaning solutions, some of which can damage the bond on PC/ABS injection molded plastics especially when subject vibration. For example, Extreme Simple Green® Aircraft & Precision Cleaner contains these chemicals. Hydrocarbons will also attack injection molded ABS/Polycarbonate.***

***Use only water or a mild soap solution to clean the plastic parts used in the ELT. Never paint the antenna, use any hydrocarbon-based product or plastic protector products such as Armor All on the plastic parts.***