



October 13, 1997 Rev 1

TECHNICAL NOTE 8: UNIFORMITY OF COLOR ON ALUMINUM PARTS

FACTS:

1. The aluminum parts of all ArmaLite® firearms are finished in tough, long lasting MILSPEC "hard-coat" anodizing.
2. It is very difficult to obtain uniform coloring of aluminum parts because:
 - a. Parts are made of several different alloys of aluminum, each of which may accept anodizing or coloring differently.
 - b. Minor lot to lot differences in a single alloy type may produce color differences. Upper and lower receiver forgings, for instance, start with aluminum billets of different diameters. The different diameters of starting stock are very seldom from the same melt of raw stock.
 - c. Parts made of the same lot may experience slight differences in heat treat, which can result in color differences.
 - d. Identical parts of a single lot which are coated in different vats or lots may accept coating differently, and produce color differences. Identical parts may accept anodizing differently even if coated simultaneously in a single vat, depending on the location within the vat.
3. Other forms of coating, such as soft-coat anodizing or teflon coating are easier to color match than hard-coat aluminum. They are very much less durable, however.
4. ArmaLite® tries to minimize color differences by having major components anodized together, in a single vat, and by selectively matching them by color afterwards.

RECOMMENDATION:

If components are to have matching colors, they should be purchased at the same time, from the same lot.