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TECHNICAL NOTE 17: MARRING OF CARTRIDGE CASES

GENERAL:

Cartridges fired in AR-10 and M16 family firearms bear characteristic scratches and marks which shooters sometimes think indicate defects.

FACTS:

The following scratches and marks are typical with ArmaLite patent firearms, from a variety of manufacturers, and do not indicate defects:

1. Light scratches along the length of the cartridge body. Caused by contact with magazine feed lips or another cartridge during feeding.
2. Two dents and related scratches on neck. Caused by neck striking 2 locking lugs during extraction. The Ejector forces the case to the side, causing the contact.
3. Random circumferential scuffing of body. Caused by case brushing past chamber mouth during feeding.
4. Dent on case body or mouth. Caused by case contacting upper receiver during ejection.
5. Circular mark on edge of base, with shiny brass or shaved brass in evidence. Caused by case being pressed into ejector hole, with some burnishing or cutting as the bolt rotates.
6. Scratches or slight rim deformation caused by the extractor snapping over rim, and the energy applied during extraction.
7. Light protrusion of primer metal around the firing pin strike (cratering). Caused by clearance between the firing pin and firing pin hole; varies depending on primer hardness and cartridge pressure.

Other marks, including heavy machine marks pressed into the brass, or repeated case failures or primer punctures, can indicate a flaw in the rifle or use of reloaded ammunition. Contact ArmaLite® if you experience problems.