



February 4, 2003

## **TECHNICAL NOTE 42, The ArmaLite M-16 Magazine Grading System**

**BACKGROUND:** ArmaLite uses a standard grading system when purchasing AR-15™ or M-16 Magazines. The grading system is based on key physical characteristics, not appearance. (The condition of the magazines finish, normally Dry Film Lubricant (DFL), is a poor indicator of magazine condition because magazines can be easily “repainted” with it. Ugly magazines may well work, and pretty magazines may not work.) This Technical Note requires familiarity with Technical Note 41, Field Testing of M-16 Magazines.

### **GRADES:**

#### **ArmaLite Grade 1 (AL-1A OR AL-1B), new or near new and should work.**

- a. **AL-1A. New, unused aluminum or GI plastic** (Thermold or Orlite only) magazines in ORIGINAL wrap except for Cooper or Sanchez, which are AL2 or below.
- b. **AL-1B. Slightly used but successfully inspected and tested** in accordance with ArmaLite’s Technical Note 41, Field Testing of M-16 Magazines. They may show signs of vertical scratching produced by insertion into the magazine well. They should fall free of the rifled when the magazine catch is pushed. All floorplate tabs are present, and the magazine spring is undamaged. Feed lips are undamaged and the guide rib (the front and largest rib pressed into the magazine box) shows an undamaged chisel shaped stake inward at the top. (Damage is evidenced by a triangular-shaped surface pressed outward from the spherical rib bottom by much firing.)

#### **ArmaLite Grade 2 (AL-2), used, in good condition and should work.**

- a. **Used, untested.** Feed lips and guide rib are undamaged, the magazine shell is undented, no floorplate tabs are missing, and the magazine falls free of the rifle when the magazine catch is depressed. The magazine spring is undamaged. Cooper or Sanchez springs are not considered AL2 unless supplied with green followers.
- b. **Tested Cooper or Sanchez.** Quality problems with at least some lots of Cooper and Sanchez magazines require these magazines must be tested as required for grade AL1. After these tests, they will still be graded AL2. Cooper and Sanchez magazines require green followers. (Note: M-16 magazine floorplates are removable, and it’s very possible to mix floorplates during reassembly. The marks on the floorplate therefore are not a good indication of quality.)

**ArmaLite Grade 3 (AL-3): used, include visible damage but successfully tested** in accordance with Technical Note 41 and should work. Bent feed lips, dented shell, missing or damaged floorplate tabs, and damaged guide rib top.

**ArmaLite Grade 4 (AL-4): used, untested, and include visible damage** that suggest that the magazine may not work. Bent feed lips, dented shell, missing or damaged floorplate tabs, damaged guide rib top. Upgrade to AL-3 by testing.

**ArmaLite Grade 5 (AL-5): proven unreliable in test or use.** Must be discarded or repaired by parts replacement.

All efforts to repair or upgrade magazines by parts replacement must be made in accordance with BATF guidance. All parts may be replaced, but they cannot be replaced in a single repair session.