

# Lightweight Case History

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- Aluminum case R&D:
  - Frankford, 1890's for 30-40 Krag.
  - 7.9mm used by Germans in 1919
  - Cals.30-.45 tested @Frankford in 1926, 1933
  - 5.56mm, 7.62mm, cal.50, 1958-1972
  - Present:ATK
- Problems:
  - Burn-through experienced at high pressures
  - Liners, coatings, ablative materials unsuccessful in resolving problems thusfar

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- **Plastic case R&D**
  - 1950's Frankford, Borg Warner, NOL, Dave Dartik's "Tround"
  - 60's-70's Frankford, AAI, Dynamit Nobel, etc.
  - Recent work with improved plastics
  - **Problems:**
    - Extreme temperature operation
    - Base seal failures
- **Caseless R&D**
  - Frankford, AAI, others 1950's -1970s
  - AAI Recent
  - **Problems:**
    - Handling
    - Breech sealing
    - Weapon cooling
- **Stainless R&D**
- **NSAC Contract, including:**
  - ARDEC, GD OTS CANADA, Clickbond, Fleximation, etc. 2005-present