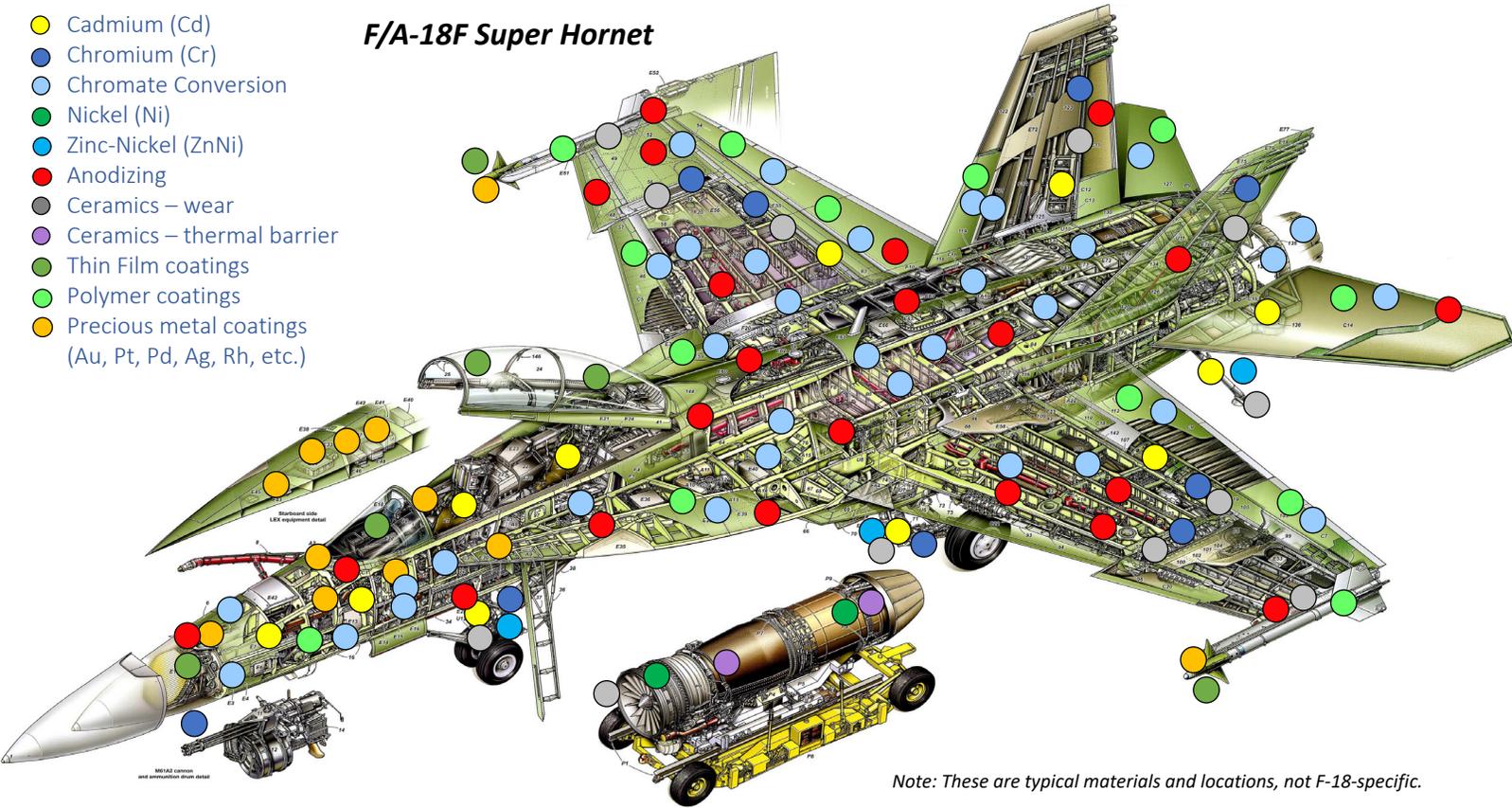


F/A-18F Super Hornet

- Cadmium (Cd)
- Chromium (Cr)
- Chromate Conversion
- Nickel (Ni)
- Zinc-Nickel (ZnNi)
- Anodizing
- Ceramics – wear
- Ceramics – thermal barrier
- Thin Film coatings
- Polymer coatings
- Precious metal coatings (Au, Pt, Pd, Ag, Rh, etc.)



Note: These are typical materials and locations, not F-18-specific.

Chromium

Hard chrome plating – Wear and corrosion-resistance – hydraulics, landing gear, other highly stressed components

Chromate conversion – Aluminum structure and skin – corrosion and paint adhesion on structural components, fasteners exposed parts

Chromate primers – Skin panels, structural components, areas exposed to harsh environments, and enhance corrosion resistance when used in conjunction with chromate conversion coatings

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Nickel

Nickel Plating – Hardness, wear, corrosion resistance for engine components, bearings, electronics, etc. where durability is critical

Electroless Nickel Plating – hardness, wear, corrosion resistance for complex-shaped components such as manifolds, gears, valves

Cadmium

Zinc-Nickel

Cadmium Plating – Corrosion protection of steel parts, fasteners, electrical connectors, lubricity, low electrical resistance

Zinc-Nickel Plating – Alternative to cadmium, non-toxic, higher performance

Anodizing

Sulfuric and Chromic Acid Anodizing – Used on almost all structural components, skin panels, etc. – hard, erosion, corrosion-resistant finish, improves paint adhesion

Ceramics

Thermal Spray – Abrasion, hardness, wear, corrosion resistance for landing gear, hydraulics, engines and to protect turbine engine hot section components from melting

Polymers

Paint and Specialized Coatings – Primers, topcoats, sealants for corrosion prevention and other functions

Thin Film

Thin Film Coatings – Optical applications, inc. lenses, windows, optical detectors, visible and infrared transmission, abrasion resistance

Precious Metals

Gold & Other Coatings – Mission-critical systems, electronics, avionics, radar, circuit boards, connectors – (Au, Pt, Pd, Ag, Rh, etc.)