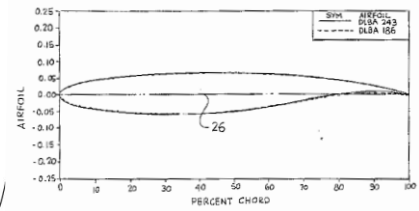
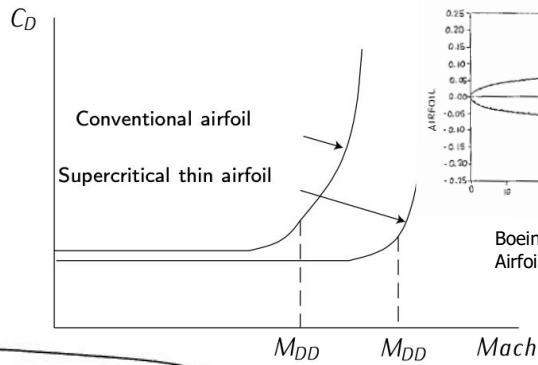


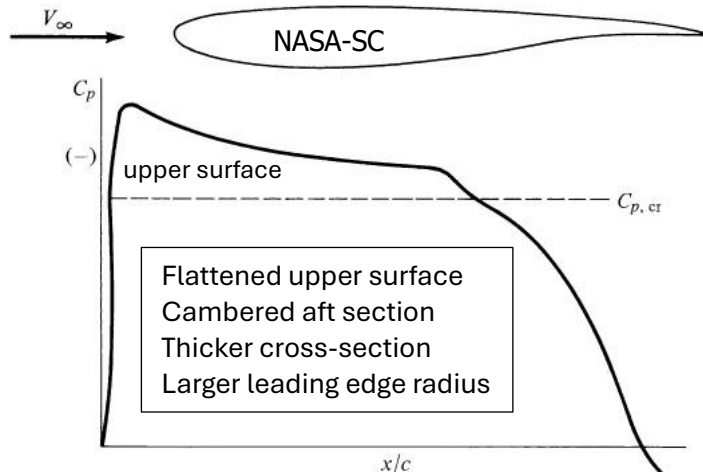
(KEY CONCEPT) [C-2-5]

NASA-SC (Supercritical) Airfoil:

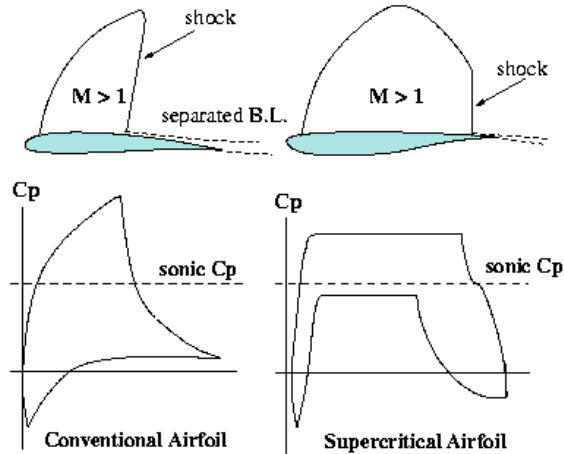
- Higher (or "**delayed**") critical Mach number (M_{cr}) and drag divergence (M_{DD}),
- Develop shock waves further aft than traditional airfoils, and thus,
- Greatly reduce shock-induced boundary layer separation.



Boeing (MD) C-17 Globemaster III
Airfoil Section (US Patent 4858853)



Flattened upper surface
Cambered aft section
Thicker cross-section
Larger leading edge radius



Boeing (MD) C-17 Globemaster III (US Patent No: 4,858,853, McDonnell Douglas Corporation, 1987)
Drag divergence sketch (source: Manuel Soler Arnedo "Fundamentals of Aerospace Engineering" 2020)
Supercritical airfoil sketch (source: J.D. Anderson "Fundamentals of Aerodynamics" 2016)

Lined area for notes, consisting of multiple horizontal dashed lines.