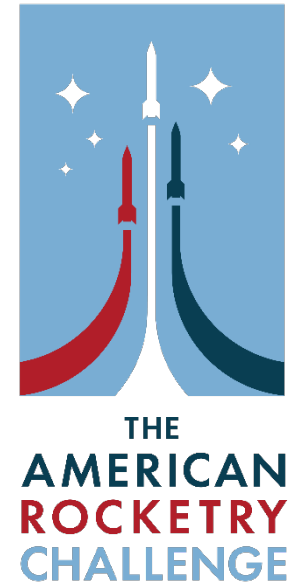




Typical Component Parts for an ARC Rocket and Where to Find Them



Rocket component part ARC vendors:

Estes Industries: <https://estesrockets.com/edu-tarc/>

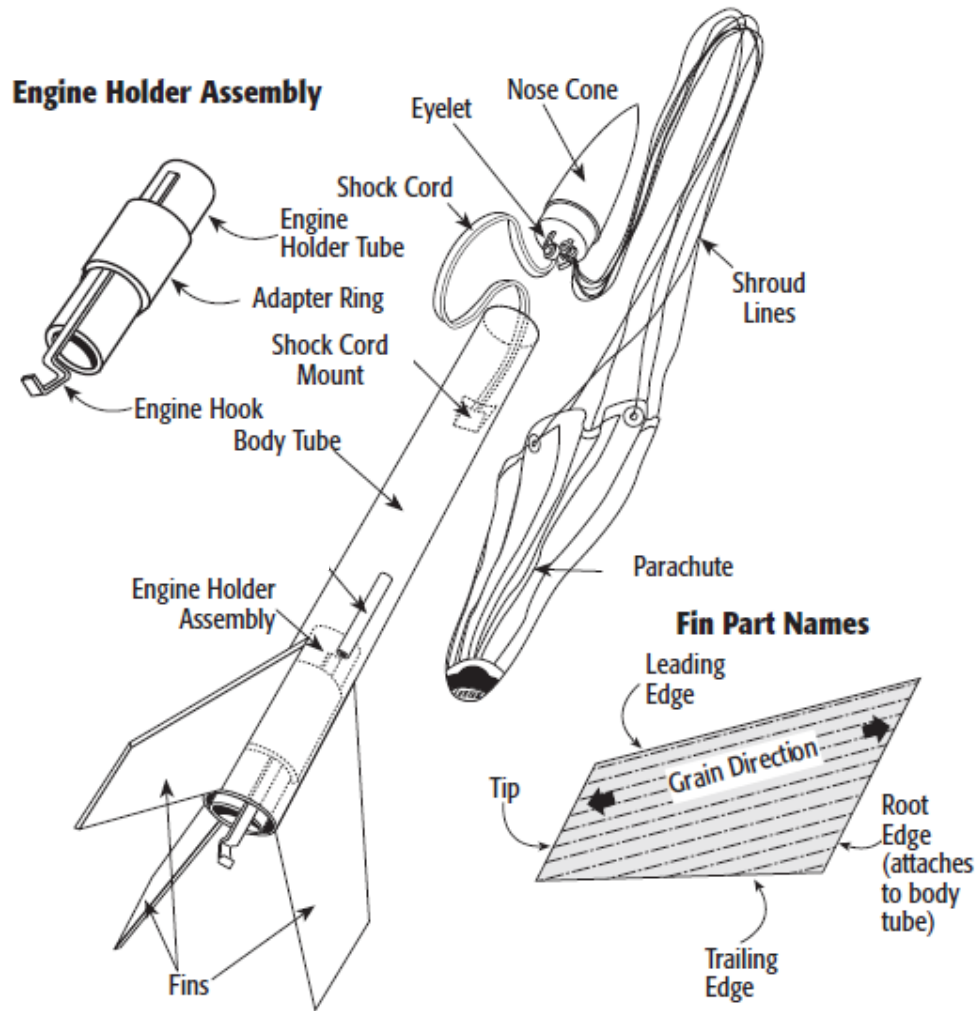
Apogee Rockets: <https://www.apogeerockets.com> (see the “TARC supplies” section)

Balsa Machining Service (BMS): https://www.balsamachining.com/tarc_parts.pdf

eRockets: <http://www.erockets.biz/parts-for-rockets>

Aerospace Specialty Products (ASP): <https://www.asp-rocketry.com>

Model Rocket Nomenclature



Main Body Tube - typical choices are:

T-70/BT-70: 2.22 inch (56mm) outside diameter: Apogee (available with or without 3 fin slots); BMS (available with or without 4 fin slots); ASP (non-slotted)

T-80/BT-80: 2.60 inch (66mm) outside diameter: Apogee (available with or without 3 fin slots); BMS (available with or without 4 fin slots); Estes or ASP (non-slotted)

Shock Cord: 2-foot "200-400-pound" (breaking strength) Kevlar cord (available from Apogee, BMS, or eRockets) wrapped around engine mount, with 2-3 feet of ¼ inch sewing elastic tied to the end which is then tied to a screw eye in the transition piece to the egg capsule

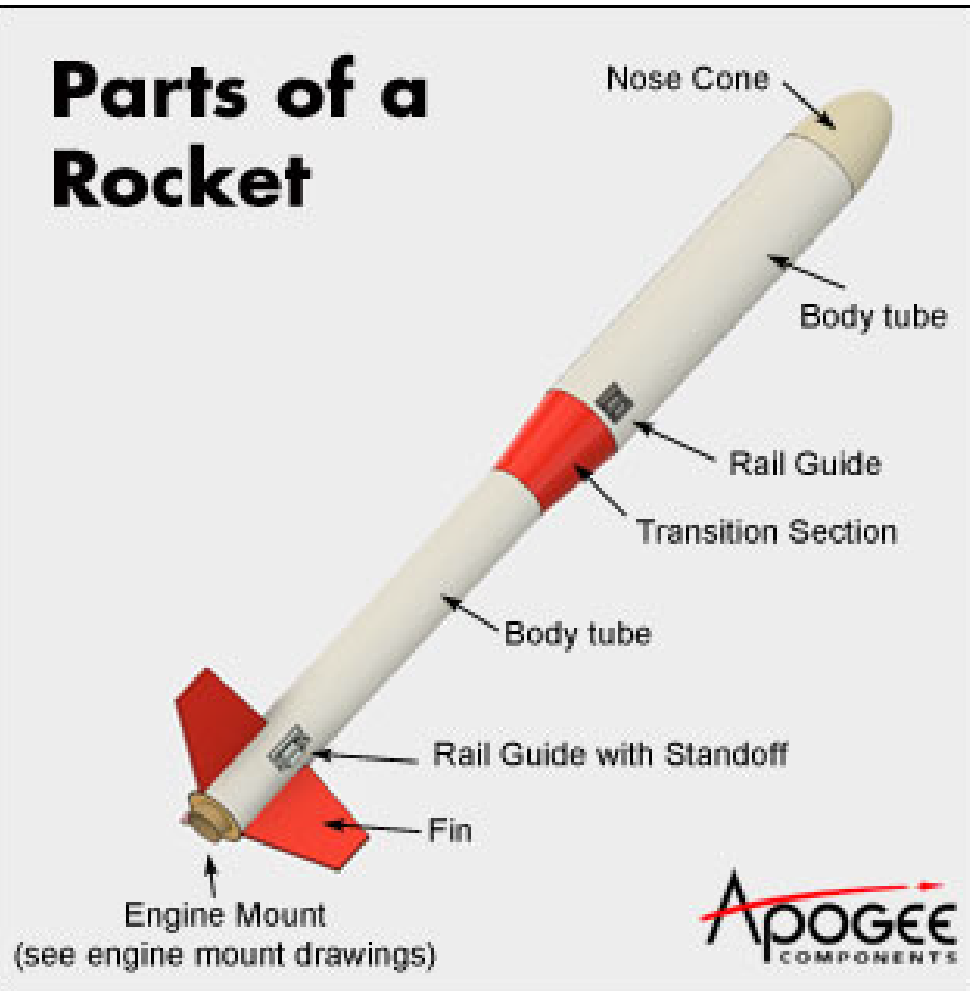
Parachute: typical choice is nylon cloth parachutes

Sunward brand from Apogee; Topflight brand from BMS, ASP, or eRockets; or Semroc brand from eRockets

Parachute protection

9 x 9-inch reusable flameproof cloth blanket (Sunward, Madcow or Dinochutes brands) (Apogee and eRockets); Topflight brand (ASP)
Disposable flameproof paper wadding (Estes)

Parts of a Rocket



Nose Cone:

For T70 tubes: BNC70AJ or BNC70BB (BMS balsa); PNC-56A (Apogee plastic); or ASP (Balsa)

For T80 tubes: BNC80BB (BMS balsa) or PNC80BB (BMS plastic); NC-80B (Estes plastic); PNC-66A (Apogee plastic); or ASP (balsa)

Transition Section:

If upper and lower body tubes are the same diameter, transition section is cylindrical:

NB70 (for T70 tubes), NB80 (T80 tubes) (both BMS); "Semroc" brand balsa nose blocks (eRockets); balsa bulkheads (ASP)

If one tube is T-80 and the other is T-70, transition section is conical:

balsa TA7080 (BMS or ASP); blow mold plastic 70-80 transition (Apogee)

Fins: typical choices are 1/8-inch thickness balsa or 1/16 to 1/8 inch thickness plywood

Multiple precut shapes with through-the-wall tabs that fit in slotted body tubes (Apogee and BMS); or buy sheets of balsa at local craft store and cut your own

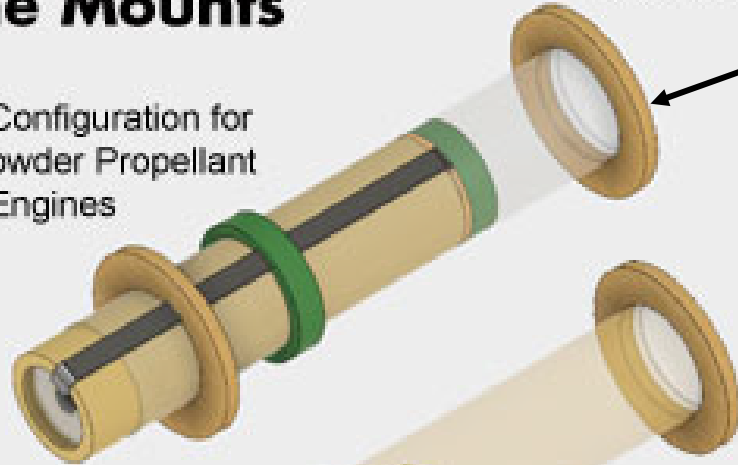
Rail Guide or Button: "1010" or "10/10" size

Buttons that screw on are available from Apogee, ASP, BMS, or eRockets; glue-on rail guides available from Apogee

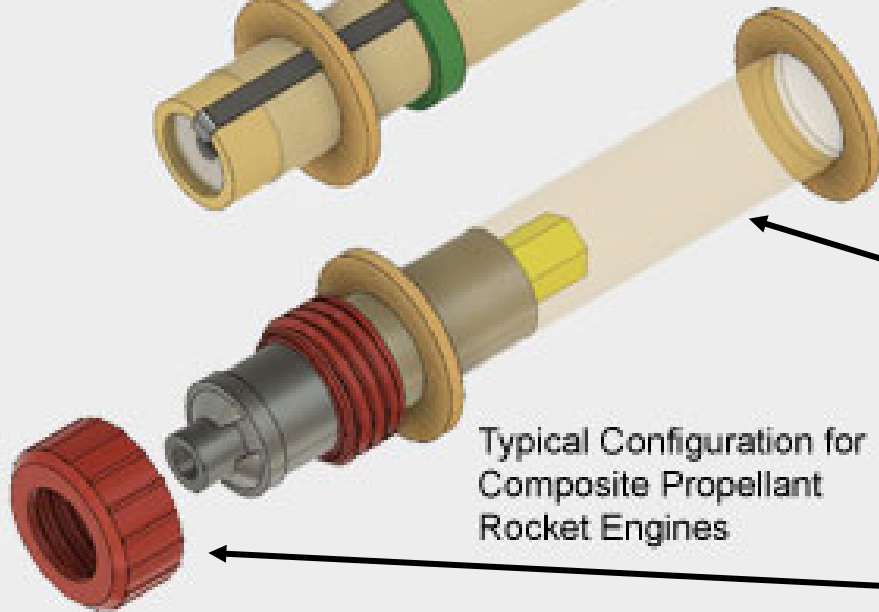
Variations on Engine Mounts



Typical Configuration for Black Powder Propellant Rocket Engines



Typical Configuration for Composite Propellant Rocket Engines



Centering rings (use plywood types):

For 24mm engines in T70: CR5070W (BMS); or from Apogee or ASP
For 24mm engines in T80: CR5080W (BMS); or from Apogee or ASP
For 29mm engines in T70: CR52H70W (BMS); or from Apogee or ASP
For 29mm engines in T80: CR52H80W (BMS); or from Apogee or ASP
For two 24mm engines clustered in T70: M2T5070W (BMS)

Engine Mount Tube:

For 24mm engines: T50 (BMS or ASP); BT-50 (Estes or Apogee)
For 29mm engines: T52H (BMS); 29mm motor mount tube (Estes or Apogee); T-29 tube (ASP)

Engine Retainer:

Engine hook for Estes engines: 2.75" for D12, 3.75" for E12. Available from Apogee, BMS, or Estes. 4.9" for Estes 29mm engines available from ASP
Screw-on cap type for Aerotech & Cesaroni engines: Estes 24mm or 29mm plastic retainer sets (Estes, Apogee, or eRockets)