



Notes

- 1 Seal inhibitor surface to nozzle seat with silicone RTV.
- 2 Chamfer inside edge of holes and inside edge of casing end 0.015".
- 3 Bond dowel to support disc and Rod-grain with epoxy adhesive.
- 4 Tap 1/8 NPT.
- 5 Lubricate o-rings and mating surfaces with silicone grease.
- 6 Coat inside of casing/inhibitor tube with epoxy adhesive. Allow to cure completely overnight at RT or 1/2 hour at 150F (65 C).
- 7 Coat Tube-grain end inhibitor surface (propellant side only) with epoxy adhesive.
- 8 Throat inlet to be well-rounded contour, typical 0.25" rad.
- 9 Alloy steel socket head cap screws, 180 ksi UTS.
- 10 Stainless steel (300 series) machine screw. Reduce head diameter to 0.264".

Materials

Propellant: RNX-57 or RNX-71V.
 Casing: 6061-T6 aluminum alloy or equivalent.
 Nozzle: SAE 1018 mild steel, 12L14 steel alloy, or equivalent.
 Bulkhead: 6061-T6 aluminum alloy or equivalent.
 Inhibitor/casting tube: posterboard, multilayered as required to achieve nominal diameter (close sliding fit).
 End Inhibitors: Posterboard or equivalent, 0.025" thickness.
 Support Disc: Hardwood or equivalent.

**PARADIGM SOLID ROCKET MOTOR
J-Class**

Design: R. Nakka
Rev: NC-1 (Jan.2008)
Date: Nov.2005