



**Notes**

- 1 Seal inhibitor surface to nozzle seat with silicone RTV.
- 2 Chamfer inside edge of holes and inside edge of casing end 0.4 mm
- 3 Bond dowel to support disc and Rod-grain with epoxy adhesive.
- 4 Tap 1/8 National Pipe Thread (NPT), or equivalent.
- 5 Lubricate o-rings and mating surfaces with silicone grease.
- 6 Coat inside of casting/inhibitor tube with epoxy adhesive. Allow to cure completely overnight at RT or for 1/2 hour at 65C.
- 7 Coat Tube-grain end inhibitor surface (propellant side only) with epoxy adhesive.
- 8 Throat inlet to be well-rounded contour, typical 7 mm rad.
- 9 Alloy steel socket head cap screws, 1.25 GPa. UTS.
- 10 Stainless steel (300 series) machine screw. Reduce head diameter to 5.9 mm.
- Support Disc: Hardwood or equivalent.

**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, 0.65 mm thickness.  
 Support Disc: Hardwood or equivalent.

**PARADIGM SOLID ROCKET MOTOR  
 J-Class**

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