HOT GAS INITIATOR

A Hot Gas Initiator provides a method of converting one signal transmission method into another. Typical conversion types as part of an Emergency Escape System include:

- Hot gas (i.e. from an Ejection Seat System) to a detonating signal (i.e.: to an attached Shielded Mild Detonating Cord (SMDC), Flexible Confined Detonating Cord (FCDC), Confined Detonating Cord (DCD) or Rapid Deflagrating Cord Transfer Line (RDCTL))
- Detonating signal to hot gas
- Hot gas to a deflagrating signal (i.e. HGI to attached RDCTL)

APPLICABLE SPECIFICATIONS

Operating Temperature: \(-65^\circ\text{F} \text{ to } +200^\circ\text{F}\)
Leak Rate: \(1 \times 10^{-5} \text{ cc/sec. Air at } 1.0 + 1 \text{ Atmosphere}\)
Vibration: 5-2,000 Hz sinusoidal vibrations at 10 g’s maximum amplitude per MIL-STD-810, Method 514.1, Procedure I
Shock: 10 shocks of 15 g’s maximum acceleration in 8 milliseconds maximum, exceeding 8 g’s for 11 milliseconds maximum, per MIL-D-23615
High Temperature: \(+200^\circ\text{F} \pm 5^\circ\text{F for 1 hour per MIL-D-21625}\)
Low Temperature: \(-65^\circ\text{F} \pm 5^\circ\text{F for 1 hour per MIL-D-21625}\)
Sand/Dust: \(.3 \pm .2 \text{ gm./ft.} 3 \text{ dust concentration, with a maximum air velocity of } 1,750 +/- 250 \text{ fpm and } +145^\circ\text{F maximum per MIL-STD-810, Method 510}\)
Salt Fog: 48 hours at \(+95^\circ\text{F} +/- 2.5^\circ\text{F per MIL-STD-810,Method 509}\)
Icing: \(-65^\circ\text{F to } +100^\circ\text{F} +/- 5^\circ\text{F at 90% RH, then returned to } -65^\circ\text{F and functioned, per MIL-D-23615}\)
Platform Use & Heritage: F-15, F/A-18, B-1B, Scorpion, Improved CFS w/Inerts

Drop 6 feet onto a steel plate at least 2 inches thick, over concrete per MIL-D-21625; 40 feet onto a steel plate over reinforced concrete per MIL-D-21625

Temperature/Humidity Cycling in two and three week segments from \(-80^\circ\text{F to } +160^\circ\text{F at 90% RH per MIL-D-21625}\)