CABS
Cockpit Air Bag System

The Cockpit Air Bag System (CABS) is the first application of air bag technology in any aircraft cockpit worldwide.

CABS is the culmination of years of research into aircrew survivability. It now brings the proven protection of supplemental inflatable restraints into the aircraft cockpit. CABS protects the aircrew during a crash by cushioning the head and upper torso and preventing strikes against the cockpit interior.

KEY FEATURES
- Inflatable restraint system technology makes a life-saving difference in aircraft cockpits
- Installed in OH-58D Kiowa Warrior helicopters
THE NEED FOR CABS – HUMAN TOLERANCE TO INJURY

A crash that exceeds human tolerance deceleration limits and maintains 85 percent of the cabin height is defined as “survivable.”¹

– About 80 percent of helicopter accidents are “survivable,”² but...
– About 30 percent of all fatalities occur in these “survivable” accidents²
– More than 50 percent of fatalities in these “survivable” accidents are caused by head strikes²

CABS mitigates most of these preventable head and neck injuries and has been credited with saving 10 Army Aviators lives in OH-58D aircraft crashes.³

CABS FEATURES

The complete CABS system consists of two forward and two lateral air bag modules plus the electronic crash sensor unit, weighing approximately 21 to 23 pounds total per aircraft.

AIR BAG MODULES

May be tailored for any aircraft installation

ELECTRONIC CRASH SENSOR UNIT

– Senses crash dynamics in three axes
– Fail-safe, fault-tolerant design
– Programmable deployment thresholds
– Built-in test/fault isolation
– Maintenance-free internal backup power source
– Crash data recording capability

HUMAN BENEFITS OF CABS

– “Survivable” conditions (based on test dummy measurements) demonstrated increased descent rates
  • From 720 ft/min (220 m/min) up to 1,800 ft/min (549 m/min) for OH-58S
  • Projected reductions in aviation pilot fatalities
  • 30 percent for light helicopters⁷

Without CABS – a potentially fatal cyclic head strike

With CABS – reduced flail protects against head strike

– 30 to 40 percent fewer major injuries on average ⁴,⁵

Reduced personal suffering and increased confidence and morale will help aviator retention and force conservation.

SYSTEM PERFORMANCE

– Environmental: MIL-STD-810
– EMI: MIL-STD-461
– ESD, EMV, EMC: ADS-37A-PRF
– HERO: MIL-STD-464
– Temperature (operating): -25.6° to 131° Fahrenheit (-32° to 55° Celsius)

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