UnitedDynamics
Aerospace & Defense

Technologies and Solutions yet to be imagined.

08013: KC-135 TEMPERATURE SENSOR (FAN AIR VALVE)

The Fan Air Valve is an integral part of an aircraft's Environmental Control System and air management. High temperature and high pressure Engine Bleed Air is used for internal cooling of the engine, cross-starting another engine, engine and airframe anti-icing, cabin pressurization, pneumatic actuators, and pressurizing the hydraulic reservoir, to name a few.

The valve is pneumatically actuated and temperature controlled, and consists of four sections: actuator, servo regulator, valve body, and temperature sensor.

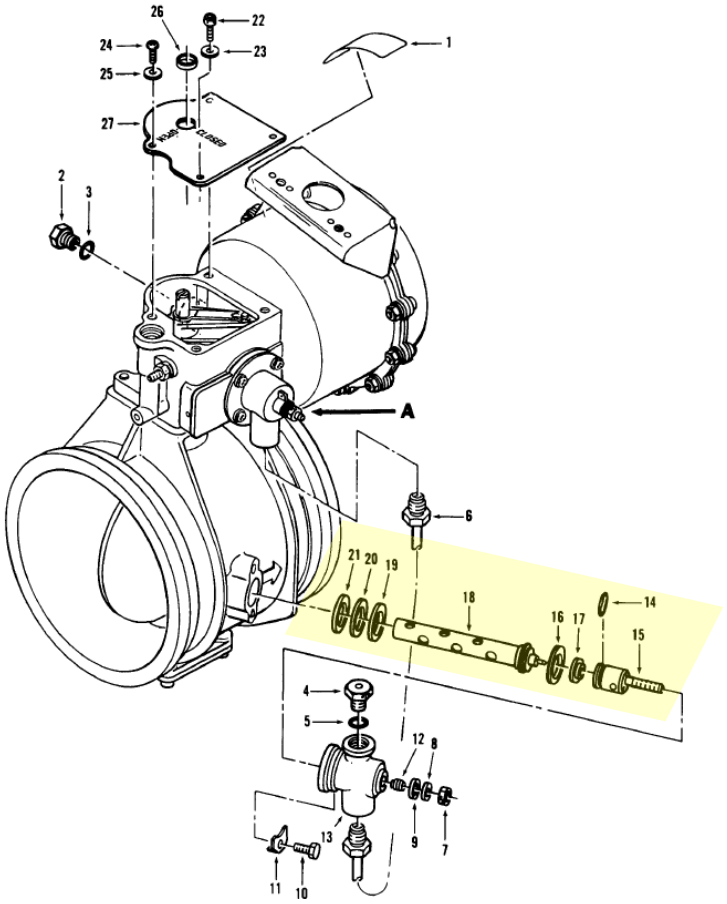
The temperature sensor section enables the action of the butterfly plate to close at low temperatures and open at high temperatures. At high temperature, the heated oil causes the bellows to expand and strokes the poppet off the seat. This action results in a very low chamber pressure, causing the spring in the actuator housing section to hold the butterfly plate fully open.

As air flow causes oil temperature to decrease, the bellows contract and cause the poppet of the temperature sensor section to be positioned close to the seat.

United Dynamics engineered a form, fit, function, and interface (F3I) temperature sensor that operates at a maximum of 540 degrees Fahrenheit.

Originally produced by Honeywell, United Dynamics completed First Article Testing of the unit at Tinker AFB in September 2009.

TECHNICAL SPECIFICATIONS



HUBZone Historically Underutilized Business Zone CERTIFIED

AS 9100 REV D INDEPENDENTLY CERTIFIED

ISO 9001 :2015 INDEPENDENTLY CERTIFIED

GOLD BOEING SUPPLIER

NAICS: 332510 332710 332721 332722 332911 332919 332991 332999 333415 333612 333613 333999 334418 334419 334513 334514 334519 335999 336411 336412 336419 339999 541330 541420 811310

For more information, please contact:

United Dynamics, Inc. | 41001 Wolverine Road | Shawnee, OK 74804 | 405-275-8041

UnitedDynamics Aerospace & Defense

www.united-dynamics.com