

GE Druck



• Tool kit includes ultrasonic tone generator

AGE 1401

Aerospace Tool Kit



GE Druck has a worldwide reputation for pressure measurement, we can measure leaks in most applications around the world but, to date, we have not provided assistance to our customers to find and repair these leaks.

In the aviation industry, measuring/locating /repairing leaks can be a real operational problem on mandatory serviceable systems.

Ultrasonic detection technology has existed for many years and has been used widely in industrial predictive maintenance applications. Ultrasonic technology has slowly been developed over the years but the Space Shuttle requirement to monitor the external fuel tank O-Rings advanced this technology significantly. GE Druck has further developed this technology for use in the aerospace industry. GE Druck will have the worldwide distribution rights for the GE DRUCK AEROSPACE TOOL KIT.

Aviation applications for the aerospace tool kit include:

- 1. Cabin Pressure leaks
- 2. Cockpit/passenger windows
- 3. Emergency oxygen system
- 4. Fuel system leaks
- 5. Pitot static systems
- 6. ECS and hot air ducts
- 7. Emergency Rafts , Life Rafts etc
- 8. Nitrogen systems
- 9. Tyres
- 10. Passenger /freight door seals
- 11. Canopy seals etc.

Technology Overview

The most common use of ultrasonic noise detection is to locate leaks in pressurised systems. When air escapes through an orifice, the flow becomes turbulent. This vortex of air has an ultrasonic signature. This ultrasonic noise is characteristically identified as a "rushing" sound with very few discernable single audio tones. The Ultrasonic detector is specifically tuned to listen for this vortex tone.

There are many factors involved in this type of ultrasonic leak detection, such as the pressure within the vessel under test, hole shape, hole size, humidity, temperature etc.

Detection of leaks within high-pressure systems can be relatively simple. However, low-pressure systems require an addition technique. Very small leaks in fuel system "bag tanks" and welded seams etc can be too small to be detected using the ultrasonic vortex signature however, the leak can be amplified by adding a low viscosity liquid to the seam or joint. Small bubbles are generated at the location of the leak, these micro bubbles burst provoking ultrasonic emissions that are easily detected by the GE Druck AEROSPACE TOOL KIT.

In addition to the leak detection application, we have placed a ultrasonic tone generator in the tool kit. The tone generator can be used to detect problems on passenger/freight door seals, emergency exit doors and cockpit window systems.

Full details for this application are available on the product CD.



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