



# CASE STUDY

CTRL UL101 Troubleshooter "Ultrasonic Leak Detection Check"  
CTRL Part No. B00033 / Boeing Tool Tag SPL-1473

An example Investigation and Finding on a B777 NLG  
by an Operator

One of our customer's B777 aircraft was placed on AOG due to multiple write ups of the nose gear strut's nitrogen pressure being low. There were no fluid leaks noted and no obvious signs where the strut was leaking nitrogen.



## TROUBLESHOOTING

- No leaks could be found, so all components associated with the stabilizer trim pressure switch and plumbing were replaced. Ref Boeing IPC 27-48-04-01 and the photo
- After 24 hours, the struts pressure was again low. The aircraft was placed on AOG. Again, no leaks could be detected using traditional methods. It was a serious condition and if not corrected, could have resulted in a complete loss of NLG pressure and a hard landing if the aircraft had been in operation

## THE FAULT & CORRECTION

- Using the UL101 test equipment, the complete stabilizer trim pressure switch and plumbing system was investigated. An air leak was found with the manifold assembly. This part had been previously replaced to rectify the fault and therefore was determined to be defective from stock. A replaced part being the source of the leak was unexpected, and without the UL101's ease of use, it would not have been easily found.
- Although the aircraft experienced extended AOG downtime, the operator found and confirmed the defective part as the cause of the leak by using the UL101. This saved further troubleshooting time and eliminated the need to ask the operator's specialist Landing Gear Technicians from its home base to investigate and rectify the fault, which would have delayed the aircraft further.

The rectification work was able to be performed by the satellite technicians and the aircraft was returned to operational service as soon as possible. The UL101 test equipment effectively paid for itself through this one event.

The UL101 Ultrasonic Leak Detection Equipment easily inspected all the joints and unions of the system, demonstrating its versatility.

**The UL101 Ultrasonic Leak Detection Equipment is a necessity for all operators and airlines maintenance teams, and is endorsed by Boeing.**

*Compiled by Jonathan Rumble, Ansett Aircraft Spares & Services, with many thanks to the support of the North American operator who supplied the information.*



### INDUSTRY

Commercial Aviation



### CTRL EQUIPMENT

UL101 Aviation Troubleshooter (p/n B00033)



### PART NUMBER

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