



CASE STUDY

Pinpointing a Nitrogen Leak in a Boeing 777-300ER Nose Landing Gear with the UL101 Aviation Troubleshooter (p/n B00033; Boeing Tool Tag SPL-1473)

Scenario

A U.S.-based operator's Boeing 777-ER was placed on AOG due to multiple write-ups of the nose gear strut's nitrogen pressure being low. There were no visible fluid leaks noted, and there were no obvious outward signs that 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 (refer to Boeing IPC 27-48-04-01 and attached photo).

After 24 hours, the strut's 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 nose landing gear pressure and a hard landing if the aircraft had been in operation.



The Fault & Correction

Using the UL101 Aviation Troubleshooter, 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 in another state. The fault was rectified, keeping the aircraft from further delays.



INDUSTRY

Commercial Aviation



CTRL EQUIPMENT

UL101 Aviation Troubleshooter (p/n B00033)



PART NUMBER

CTRL Part No. B00033 / Boeing Tool Tag SPL-1473



Fairhope Aerospace 14560 Greeno Road, Fairhope, AL 36532
www.fairhopeaero.com | sales@fhaero.com | +1 (251) 928.8800