Clean Sky 2’s TAMI project makes on-ground leak testing more efficient, ecological and faster

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Clean Sky 2’s TAMI project (Tests for leakage identification on Aircraft fluid Mechanical Installations) has recently completed the successful leak testing of aircraft systems in a real environment at Airbus Defence and Space (ADS) in Seville. As part of Clean Sky 2’s Airframe technology platform, TAMI is contributing with ADS and the Core Partner project PASSARO to develop technologies compatible with Eco-Design requirements and objectives.

TAMI is contributing to the Future Leakage Identification Systems (FUGAS) project, which aims to develop theoretical models, simulations and methods for the identification of leaks in aircraft systems. TAMI project coordinator [TQC Ltd UK](http://www.tqc.co.uk/) provide specialised automation solutions for industry, with particular expertise in leak testing.

Within the TAMI project, TQC designed and built a versatile test bench with the ability to apply several contemporary leak testing methods on aircraft gas fluid systems (e.g. fire extinguisher, oxygen supply, rudder booster), fuel tanks and fuel systems in order to detect and quantify leakages. The TAMI test procedures are configurable, supporting test pressures of 0-200 bar (0 - 3000 psi) and volumes from 0.5 cm3 to 4000 litres.

Of particular interest to the Topic Manager at ADS was the application of the tracer gas method. This involves pressurising the fluid system under test with air and a small dose of helium, sufficient for a ‘sniffer’ to detect close to a leak point.

Currently, many of the leakage tests on aircraft systems are performed using the fluid for which the system is designed. Some of these system fluids, like hydraulic fluid and fuel, are costly, highly polluting and toxic. The TAMI leak test methods are cleaner and cheaper.

The tests at ADS validated the TAMI bench as a compact unit that can be used flexibly to test a range of aircraft systems. Notably, these methods demonstrated the feasibility to make on-ground leak testing more efficient, ecological and faster in aircraft assembly and maintenance, reducing costs, time to market and toxic wastes in line with the aims of Clean Sky.

For more details visit <http://tqc.co.uk/news/news-TAMI.php>