

**FOR IMMEDIATE RELEASE**

## **Data Systems & Solutions and Carl Zeiss SMT Ltd Exceed 100 JetSCAN® Units Milestone**

CARLSBAD, CA – March 25, 2008 – Data Systems & Solutions, LLC (DS&S), a wholly-owned subsidiary of Rolls-Royce plc, recently achieved a milestone for the JetSCAN® program with more than 100 units deployed or soon to be installed.

There are currently 107 JetSCAN® jet engine health monitoring systems in use or in the installation process in 18 countries, serving customers that include 13 air forces, notably among them the U.S. Air Force, as well as the U.S. Navy. In addition, two original manufacturers of jet engines, Rolls-Royce and GE Aviation, use JetSCAN® systems in their production processes.

The JetSCAN® hardware and diagnostic software uses sophisticated oil debris analysis to generate predictive data that prevents on-wing failure for a variety of gas turbine and jet engines used in civilian and military aircraft. The fully integrated system combines scanning electron microscopy and X-ray analysis technologies with unique knowledge from the engine manufacturer to achieve its advanced capabilities.

DS&S distributes and installs the JetSCAN® Scanning Electron Microscope / Energy Dispersive X-ray systems and software manufactured by Carl Zeiss SMT Ltd. and related software applications and services for both civil and defense aviation. DS&S also provides comprehensive operator training and total customer technical support from engine health centers in Carlsbad, California, or Bristol, U.K.

“The bearings and gearboxes of a modern gas turbine are under enormous stress, and the results of failure can lead to expensive maintenance and disruption to operations or worse,” said John Clinton, DS&S JetSCAN® system program director. “The JetSCAN® system’s unique predictive capability enables the operator to improve on-wing life while reducing the risk of in-service failures. It enables the user to see increasing risk and remove an engine from service before a failure can occur. We’ve had proven success in military programs, reducing the number of in-flight shutdowns and reducing bearing-related class ‘A’ mishaps to zero.”

The JetSCAN® system records the number of particles from the magnetic chip detector or filter, as well as each particle’s chemical composition, size and shape. By combining that data with specific knowledge about the engine and the materials within the engine, the system indicates the location, type and rate of wear that is occurring. This information, together with the quantity of material present, allows a failure risk to be calculated and trended by individual engine, and the likely failure modes to be determined.

“The data we have indicate the JetSCAN® system has demonstrated a remarkably high level of accuracy in identifying impending bearing failures since users introduced it as a risk-mitigation tool for their engines. As a result, the users have been able to eliminate the previous practice of removing engines for the sole purpose of visually inspecting bearings that are susceptible to wear,” concluded Clinton.



DS&S uses JetSCAN® software to produce unique predictive failure data for civilian and military aircraft engines.

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Dirk Stenkamp, member of the board at Carl Zeiss SMT, states: "JetSCAN<sup>®</sup> is an extraordinarily successful example for adding customer value by the intelligent combination of market-leading analysis technology, based on our ZEISS Scanning Electron Microscopy technology, and customized system and software automation developed jointly with DS&S. We are very grateful for the outstanding partnership with DS&S."

## Notes to Editors:

1. The JetSCAN<sup>®</sup> system is an automated scanning electron microscope system with energy dispersive X-ray analysis capability. It analyzes oil-carried debris from magnetic chip detectors and filters. The system was jointly developed with Carl Zeiss SMT (formerly LEO Electron Microscopy Limited of Cambridge, UK), a world leader in software-controlled analytical scanning electron microscope systems, to meet the needs of global aviation gas turbine operators. Data Systems & Solutions provides comprehensive and continual technical support and extensive user training in conjunction with global service support. JetSCAN<sup>®</sup> is a registered trademark of Carl Zeiss SMT.
2. Data Systems & Solutions is a world-class supplier of high-integrity and safety-critical systems and services that increase the availability and drive down the in-service cost of high value assets, such as aircraft, in the energy, defense, civil aerospace, marine power and process industries. With more than 600 employees working from offices in the Czech Republic, France, the United Kingdom and the United States, DS&S applies its domain expertise and core competencies in software engineering, predictive services and information management to protect, control and optimize reliability and availability, while ensuring safe and profitable operations.

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