AIRBUS A320neo

Real-time, in-flight damage detection. Designed for the Pratt & Whitney GTF commercial engine family, the MetalSCAN online oil debris sensor is integrated into the engine lubrication system.

Application

MetalSCAN MS1000 is the proven industry-leading, real-time, online bearing and gear condition indication for aircraft propulsion systems. First applied to USAF F-22 Raptor fifth generation stealth tactical, MetalSCAN has become the preferred solution for Prognostics and Health Monitoring (PHM) for military as well as commercial aircraft engines and gearboxes, including the Airbus A220, Airbus A320neo and Embraer E-Jet E2 family. In each case MetalSCAN is a key technology for enabling the application of effective in-flight protection and Condition Based Maintenance (CBM) for critical propulsion and drive-train components.

The Pratt and Whitney powered version of the A320neo aircraft family is fitted with twin PW1100G-JM geared turbofan engines. Each engine is fitted with a MetalSCAN MS1227 oil debris sensor to monitor the entire suite of bearings and gears within the engine. The MetalSCAN sensor mounts directly into the lube system before the oil tank. Signal conditioning, including both ferromagnetic and non-ferromagnetic particle counting, limit exceedance warning and trend monitoring are performed within the engine-mounted PHAM.