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APPLICATION GUIDE

EUROFIGHTER TYPHOON

Real-time, in-flight damage detection. Designed for the Eurofighter Typhoon's EJ200 engine, 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 aircraft engines and gearboxes, including the F-22 Raptor, F-35 Lightning II and Eurofighter Typhoon multirole fighter. 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 drivetrain components.

All versions of the Eurofighter Typhoon aircraft are fitted with twin EJ200 engines produced by Eurojet multi-national consortium comprised of Rolls-Royce, MTU, ITP and Avio. Each engine is fitted with a MetalSCAN MS1220 oil debris sensor to monitor the entire suite of bearings and gears within the engine. The MetalSCAN sensor mounts directly to the engine accessory gearbox. Signal conditioning, including both ferromagnetic and non-ferromagnetic particle counting are performed by a standalone enginemounted conditioning unit, and limit exceedance warning and trend monitoring are performed by the airframe mounted Engine Monitoring Unit (EMU).

