

APPLICATION GUIDE

F-35 LIGHTNING II

Real-time, in-flight damage detection. Designed for the F-35's F135 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 drive-train components.

All three variants of the F-35 aircraft are fitted with a single F135 engine produced by Pratt & Whitney. Each engine is fitted with a MetalSCAN MS1324 oil debris sensor to monitor the entire suite of bearings and gears within the engine. The MetalSCAN sensor mounts directly to the outlet of the lube oil pump 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 FADEC.



Head Office

1011 Polytek Street
Ottawa, ON K1J 9J3
Canada

Nova Scotia

65 John Savage Ave. #5,
Dartmouth, NS B3B 2C9
Canada

Newfoundland

146A Glencoe Dr.
Mount Pearl, NL A1N 4S9
Canada

Europe

Info.eu@gastops.com

Asia

Info.ch@gastops.com