



LASERNET FINES[®]-ONLINE

REDUCE MAINTENANCE COSTS,
ELIMINATE MACHINERY DOWNTIME

LOCKHEED MARTIN
We never forget who we're working for[®]



PREVENTATIVE MAINTENANCE AT A FRACTION OF THE COST OF REPLACEMENT

The LaserNet Fines®-Online (LNF-O) system provides real-time data about machinery health by detecting, counting, classifying, and trending fluid contamination using advanced laser imaging and image-processing software. The LNF-O system reduces the time and effort it takes to analyze fluid debris by sending data to any laptop or remote monitoring station.

The LNF-O system can be used with all types of machinery and equipment. It is perfect for high-value or remote equipment, including:

- Turbine engines
- Marine propulsion thrusters
- Earth-moving equipment
- Inaccessible equipment
- Wind turbines
- Large diesel engines
- Deck machinery
- Instant analysis in oil, water or gas



The LNF-O system is a lightweight, self-contained sensor that instantly analyzes the engine's oil samples.

A Low Risk, Affordable Solution That Will:

- Reduce critical asset downtime
- Reduce routine oil sampling and replacement time
- Reduce scheduled maintenance
- Provide easier access to data



U.S. Navy Photo

Ideal for Dynamic Conditions



U.S. Navy Photo

High-value Systems and Equipment

Lockheed Martin
Mission Systems and Training
300 M Street, SE
Washington, D.C. 20003
<http://www.lockheedmartin.com/laser-sensor-systems>



U.S. Navy Photo

DISTINCTIVE FEATURES OF THE LNF-O SYSTEM

- Only online particle counter/classifier able to measure viscosity
- Handles up to 10 million particles/ml
- Ability to process dark oils (up to 1.5% soot)
- American Society for Testing and Materials (ASTM) D7596 Certified
- Traceability to NIST SRM 2806 – no need for periodic calibration

ADDITIONAL FEATURES OF THE LNF-O SYSTEM FULLY REALIZES MANY BENEFITS

- Oculus™ Real-time Data Collection
- Visualization
- Trending
- Analysis
- Report Generation
- Archival Software Tool

LNF-O SPECIFICATIONS MEET INDUSTRY STANDARDS AND ENSURE ROBUST OPERATION

- Joint Oil Analysis Program (JOAP) Certified
- Detects Wear Particles 4-100 µm
- Provides ID, Size and Trend Data
- Meets MIL-S-901D Shock Spec
- Meets MIL-STD-167-1 Vibration Spec
- Temp: -40 degF to +185 degF
- Input Pressure up to 3000 psi
- Interface: RS232, Ethernet, USB, IRDA
- National Electrical Manufacturer's Association (NEMA) 4 Case
- Fluid Viscosities up to ISO 350
- Naval Ships Technical Manual (NSTM) 541-7.4.2 and NSTM 262