

## LM1600 Value Packs

### LM Reduced Emissions (Wet)

GE Aero Energy offers both water and steam injection systems for reducing NOx and other exhaust gas components that can be installed on existing field units. Conversions include on-engine modifications as well as package and control system modifications.

### LM Dry Low Emissions

For LM1600 field units operating either with no emissions suppression or with water or steam injection, GE Aero Energy offers conversion to Dry Low Emissions (DLE), which reduces NOx and CO emissions down to 25ppm without the need for water or steam injection.

### MetalSCAN

For all LM Series gas turbines, GE offers a real-time oil debris monitoring system. MetalSCAN monitors the accumulation of mass of ferrous material in the fluid lines and initially warns the operators of any abnormal activity. Once certain thresholds have been attained, MetalSCAN triggers an alarm to indicate significant wear component damage. This sensor provides early warning of bearing and gear damage, reducing the occurrences of unplanned outages.

### Fuel System Upgrades

GE Aero Energy can convert any type of fuel system including single to dual fuel, fuel additions such as naphtha, and single fuel to single fuel. Complete system conversions include on engine hardware changes, package piping and wiring, controls software modifications, fuel pump skids and all associated F&ID hardware.

### Vibration System Upgrades

As older model vibration monitoring systems are phased out of production, maintenance and spare parts become increasingly difficult to obtain. GE can upgrade older systems to the latest available vibration monitoring systems, and possibly integrate the display into the customer's HMI computer.

### Remote Monitoring and Diagnostics

GE Aero Energy offers Remote Monitoring and Diagnostic Services to enable aeroderivative turbine plant operators to improve availability, reliability, operating performance, and maintenance effectiveness. Monitoring of key parameters by factory experts leads to early warning of equipment problems and avoidance of expensive secondary damage. Diagnostic programs seek out emerging trends and alert monitoring personnel, enabling proactive intervention to avoid forced outages and extended downtime. GE is currently monitoring over 50 LM series gas turbine installations worldwide.

### Liquid Fuel Treatment Systems

GE Aero Energy offers centrifugal liquid fuel treatment systems for use with all LM series gas turbines, Avon and GG4 gas turbines. These systems significantly improve the quality of the fuel entering the gas turbine.

### Inlet Filtration Systems

Undersized or improperly designed inlet filtration systems can result in restricted power output due to increase drops, higher maintenance costs, and reduced availability of the unit. GE Aero Energy can replace and upgrade existing inlet filtration systems to mini-mize air inlet problems.

### Halon to CO2 Fire System Conversion

GE Aero Energy offers replacement fire protection systems utilizing CO2 in place of Halon. Halon is becoming expensive procure and may no longer be allowed in certain geographic areas. In addition, many older fire protection systems use panels and components that are no longer manufactured, making replacement parts difficult to find or unavailable.

### Water Wash Systems

GE Aero Energy offers portable water wash systems that can be rolled into place and used to water wash gas turbines. This portable systems is especially useful for multiple unit sites.

### Lube Oil Chip Detectors and Oil Monitoring System

For all LM series gas turbines, GE offers an electronic chip detector system, or a lube oil monitoring system that continuously monitors the number of metallic and non-metallic particles in the gas turbine lube oil. Both of these systems allow early detection of potential bearing problems.

### Fuel Heating System

For improved performance, GE offers both gas and liquid fuel heating systems for all LM series gas turbines.

