



Lubrication Services

Natural Gas Engine Inspection

Service Data Sheet

Description

During this **Expertise Service**, ExxonMobil engineers:

- Inspect, report, and document the condition of the internal components of 2 cycle and 4 cycle natural gas engines
- Perform complete engine inspections during engine overhaul periods or conduct partial inspections concurrent with component replacement or repairs
- Conduct inspections in response to abnormal analysis reports
- For Mobil Planned Engineering Customers (PES), conduct borescope inspections during preventive maintenance (PM) periods

Application

ExxonMobil engineers work with local plant maintenance and engineering personnel to:

- Perform planned natural gas engine inspections to document engine and lubricant performance at regularly scheduled overhaul or maintenance periods or after a failure
- For Mobil PES customers, include engine inspections as part of program objectives
- Photograph critical engine components during inspection
- Report findings and recommendations to local personnel for prompt corrective action
- Compare findings with previous inspection data and industry established performance for similar equipment in an equivalent type of service
- Review data with equipment builders and get their input as appropriate
- Document the value of the service and the potential



value of implementing recommendations and corrective actions

- Present and distribute the completed report to plant management

Potential Benefits

Potential benefits could include the following:

- Reduced unscheduled downtime
- Increased productive capacity of the engines
- Lower maintenance labor costs
- Reduced lubricant consumption
- Reduced level of engine parts replacement
- More effective maintenance control
- Safety and environmental improvements

Deliverable

Engineering Service Report outlining conditions found, recommended corrective actions, improvements to operational or maintenance procedures, and the value of the service to the customer. The report will include photographs and borescope pictures as appropriate.

Common Opportunity Areas

- Overfeeding of lubricant to power cylinders
- Inappropriate air/fuel ratios
- Poor fuel quality (liquids or other contaminants)
- Wrong lubricant
- Lack of optimum oil and water temperatures
- Engine unbalance (load)
- Detonation
- Excessive blow-by
- Worn valve guides (4-cycle)
- Inadequate oil drain periods and filtration practices

Safety, Health and Environment

ExxonMobil engineers:

- Are attuned to the hazards of handling, storage, and use of petroleum products
- Coordinate efforts through designated plant personnel.
- Strictly observe the site's safety rules and ExxonMobil's safety practices
- Verify equipment electrical and mechanical lockout, proper tagging and potential explosion hazards prior to working on or inspecting equipment
- Provide recommendations to reduce the hazards associated with spill, leakage and fire
- Provide applicable product safety data (MSDS) for lubricants supplied by Exxon and Mobil
- Are available to support company-required safety training
- For Mobil PES customers, work with plant personnel to integrate safety and health parameters into program objectives

www.exxonmobil.com

© 2002 Exxon Mobil Corporation
© The ExxonMobil logotype, Mobil and PES are trademarks of Exxon Mobil Corporation or one of its subsidiaries.

ExxonMobil
Lubricants & Specialties