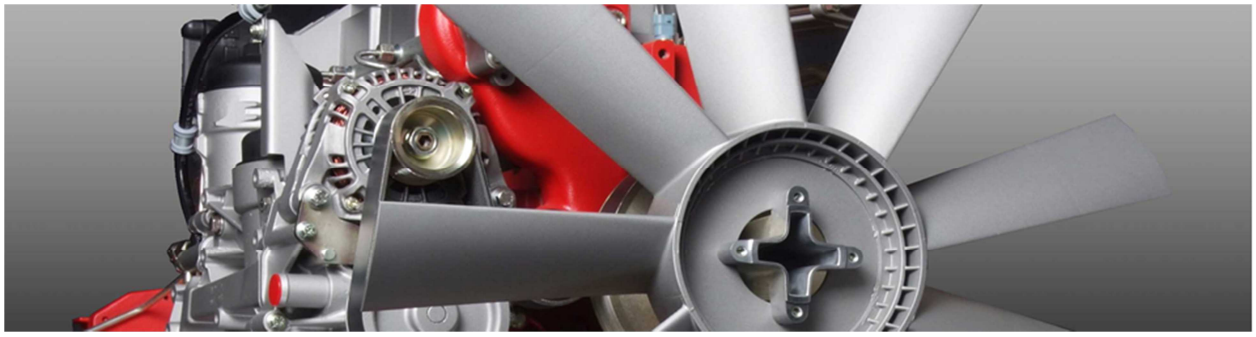

Failure Analysis Training Agenda

Version: 9.0.0

This course provides in depth coverage of failure analysis relating to diesel engines and their associated components.

Day 1

- Introduction
  - Course outline
  - Define failure analysis
- Documentation
  - Failure notification form
  - Recording initial observations
  - Documenting inspection and findings
  - Documenting conclusions
  - Documenting causal parts
- Disassembly
  - Order of disassembly
  - Break-away torque
  - Organization
- Photography
  - Focus
  - Lighting
  - Layout

Day 1 continued

- Failure mode: Dusting
    - Define and discuss dusting
    - Causes
    - Path of entry
    - Typical damage
- Failure mode: Overheat
    - Define and discuss overheat
    - Causes
    - Typical damage

Day 2

- Failure mode: Lack of lubrication
    - Define and discuss lack of lubrication
    - Causes
    - Typical damage
- Failure mode: Oil quality
    - Define and discuss oil quality
    - Causes
    - Typical damage
    - Oil analysis
- Failure mode: Defect in workmanship
    - Causes
    - Typical damage
- Failure mode: Improper combustion
    - Define and discuss improper combustion
    - Causes
    - Typical damage
- Failure mode: Storage
    - Define and discuss storage
    - Causes
    - Typical damage
- Failure mode: Overspeed
    - Define and discuss overspeed
    - Causes
    - Typical damage

Day 2 continued

- Accessory Failures
    - Starter
    - Turbocharger

Day 3

- Hands-on
    - Disassembly
    - Document damages
    - Photograph relevant damages
    - Present conclusion
    - Complete and submit failure notification form
    - Discuss

Day 4

- Hands-on
    - Disassembly
    - Document damages
    - Photograph relevant damages
    - Present conclusion
    - Complete and submit failure notification form
    - Discuss

Day 5

- Hands-on
    - Disassembly
    - Document damages
    - Photograph relevant damages
    - Present conclusion
    - Complete and submit failure notification form
    - Discuss
    - Course completion