OPTICAL PARTICLE CLASSIFICATION TESTING

Optical Particle Classification (OPC) is an effective method for determining the particle count and the level of contamination in a lubricating system. OPC testing is ideal for wheel motors, differentials, transmissions, gear boxes, wheel hubs, and final drives.

OPC combines the standard oil analysis techniques of:
- Particle counting
- Advanced shape classification

Why is OPC one of the most current and effective analysis methods?
- Intrinsically accurate particle counting
- Particle shape recognition
- Good reproducibility
- Ability to measure samples with very high particle concentration

PARTICLE COUNTING
Thousands of images are processed to obtain good counting statistics. Particles are analyzed and quickly differentiated by size. Using the direct imaging capability of the latest equipment, the exact particle size of the contaminant is quickly determined.

ADVANCED SHAPE CLASSIFICATION
The OPC method classifies particles greater than 20 ɥm by using a neural network. An algorithm is used to sort particles into many categories.

Cutting: Adhesive wear
Fatigue: Metal stress that leads to wear particles
Severe Sliding: Shearing between moving surfaces
Non-metallic: Non wear metal contaminants
Fibers: Fibrous materials

MAINTENANCE SOLUTIONS
Once a maintenance technician has the results from the lab to determine the particle count and the level of contamination in a lubricating system, a course of action can be taken such as:
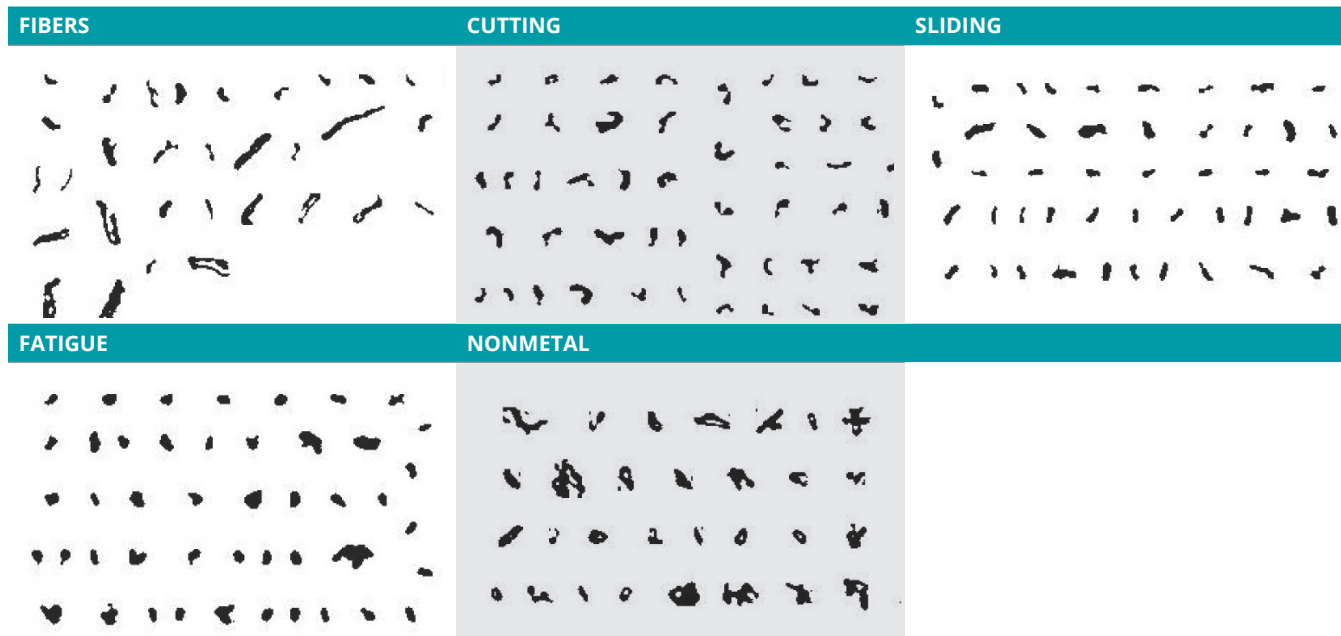- Adjusting or optimizing oil change intervals.
- Modifying their maintenance schedule.
- Doing further testing to determine root cause of contamination.

FLUID ⬤ LIFE
EQUIPMENT RELIABILITY SERVICES

OPTICAL PARTICLE CLASSIFICATION TESTING

FIBERS

CUTTING

SLIDING

FATIGUE

NONMETAL

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ALL WAYS RELIABLE.