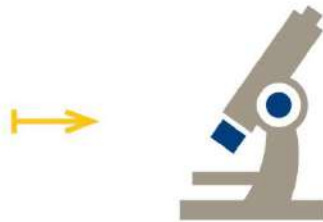




Take regular samples representative of normal operating conditions. Send them to Enluse Laboratory for testing and analysis.



Enluse Laboratory processes the sample. Testing is completed, results are analyzed, recommendations are made and a report is generated.



Enluse Laboratory emails the results to the customer. The customer evaluates the recommended course of action.



Customer takes action and performs the necessary maintenance.



Harsh operating conditions, extreme load variations and the high-euro costs involved in equipment replacement make fluid analysis a necessary part of doing business in the construction industry. Routine testing identifies small problems before they become major failures allowing you to meet the demands of your customers on time. Maximize asset reliability and regain control of your production schedules with an effective fluid analysis program. It costs so little to protect so much.



The heavy-duty equipment required by most construction applications is often exposed to extreme, uncontrollable environmental factors for long periods of time, yet is still expected to maintain maximum performance levels. Contamination and wear are imminent and when left unchecked, can halt production in a heartbeat. Monitoring the condition of both the fluid and the unit identifies wear-causing contaminants and their effect on component performance. Monitoring the condition of coolant along with engine oil creates a clearer picture of what's occurring in the engine. Base sampling frequency on the unit's criticality to production, as well as the costs involved in replacement or repair.

DIESEL ENGINES

Diesel engines are the power units for your business and without power, all work stops. It is imperative to monitor wear, contamination and the oil's properties to insure these engines do not fail prematurely. Unscheduled downtime is far more costly than the cost of repairs. Monitoring the condition of the coolant and the fuel along with the oil puts all of the pieces of the puzzle together to tell a clear story. Choose the testing regime below that meets your maintenance and financial goals for your fluid analysis program.

TEST PACKAGES - OIL

BASIC - Monitors both the unit and the fluid for wear and contamination

- 24 Metals by ICP
- Viscosity @ 100°C
- % Fuel Dilution
- % Soot
- % Water

ADVANCED - Safely extend oil drain intervals by determining the fluid's suitability for continued use

- All Basic Package Tests
- Base Number
- Oxidation/Nitration

TEST PACKAGES - DIESEL FUEL

BASIC - Detects problems causing fuel filter plugging and determines the fuel's impact on fuel filter life

- 24 Metals by ICP
- Pour Point
- Water and Sediment
- Bacteria, Fungi and Mold
- Thermal Stability

ADVANCED - Determines if the product in bulk storage tanks complies with required supplier specifications

- All Basic Package Tests
- Viscosity
- PPM Sulfur
- API Gravity
- Flash Point
- Cetane Index
- Cloud Point
- Distillation
- * Additional testing available

TEST PACKAGES - COOLANT

BASIC - Basic testing monitors the corrosive attributes of the coolant itself – acidic or alkaline – in addition to chemical or mechanical attack on metal – additive or inhibitor present:

- Visual (color, oil and/or fuel contamination, foam magnetic/non-magnetic precipitation and odor)
- pH
- Glycol
- Freeze Point
- Boil Point
- Nitrite
- TDS (Total Dissolved Solids)
- Specific Conductance
- Carboxylic Acid Pass/Fail (Shell, Chevron or Cat ELC only)
- SCA Number
- Total Hardness
- Corrosion, Contaminant and Inhibitor Metals (Iron, Copper, Aluminum, Lead, Tin, Zinc, Silver, Calcium, Magnesium, Silicon, Phosphate, Boron, Molybdenum, Sodium, Potassium)
- ELC Basic Coolant Analysis Additive (Benzoate, 2-Ethylhexanoic acid, Sebacic acid, Octanoic acid, p-Toluic, MBT, TT Z, BZT)

ADVANCED - Advanced testing identifies possible sources of problems detected in Basic Coolant Analysis such as combustion gas leaks, air contamination, electrical ground problems, localized overheating, chemical breakdown or other contamination sources inside or outside the system. It includes all tests in Basic Coolant Analysis plus:

- Contaminants (Chloride and Sulfate)
- Inhibitors (Nitrite and Nitrate)
- Degradation Acids (Glycolate, Formate, Acetate and Oxalate)

GEAR SYSTEMS

Although contamination by dirt and water should be closely monitored in manual transmissions, differentials, final drives and planetaries, the biggest concern for these systems is the type of wear occurring.

TEST PACKAGES

BASIC

- 24 Metals by ICP
- % Water by Crackle
- Viscosity @ 40°C or 100°C

ADVANCED

- 24 Metals by ICP
- % Water by Crackle
- Viscosity @ 40°C or 100°C
- Acid Number
- Oxidation
- Particle Quantifier (PQ) – ferrous density

HYDRAULICS

Hydraulic systems, including automatic powershift transmissions, require the fluid's viscosity to be low enough to minimize friction loss, yet high enough to prevent fluid leakage and provide satisfactory protection against wear, and should have good oxidation stability to prevent sludge from forming.

TEST PACKAGES

BASIC

- 24 Metals by ICP
- % Water by Crackle
- Viscosity @ 40°C or 100°C

ADVANCED

- 24 Metals by ICP
- % Water by Crackle
- Viscosity @ 40°C or 100°C
- Acid Number
- Oxidation
- ISO Par

