

## **Maximize Engine Life with Regular ELC Testing**

The first step in understanding the benefits of using Extended Life Coolants is understanding that mechanical problems, contamination and operator error will always affect both engine and cooling system reliability. Although coolant formulations have advanced considerably through the years with the development of Organic Additive Technology, it remains unrealistic to place even an OAT or Extended Life Coolant in a cooling system and expect optimum performance for the life of the engine without regular coolant testing and analysis.

Conventional coolants are a formulation of an ethylene glycol or propylene glycol base and an inorganic inhibitor package composed of phosphates, borates and silicates, among others. These inorganic inhibitors provide corrosion protection by forming a protective layer on the various metals in the cooling system. Regular testing will detect any mechanical problems affecting coolant system operation including, inhibitor depletion rates, when supplemental coolant inhibitors should be added or when the coolant should be changed.

OAT formulations contain carboxylates that protect against corrosion by chemically interacting with the metal surfaces. This chemical reaction extends the life of the coolant, protects aluminum surfaces at higher temperatures and provides better heat transfer. But it doesn't make the system any less vulnerable to the inevitable. Only regular coolant testing and analysis will detect an air or combustion gas leak, electrical ground problems or operator error – all of which can seriously degrade coolant composition and performance.

The Organic Additive Technology (OAT) of Extended Life Coolants differs greatly from that of traditional domestic conventional coolants. To benefit most from this new technology and to maximize engine life minimize cost, implement good maintenance practices that include regular coolant testing and analysis.