POLARIS™ Laboratories

Identifying Petroleum Contamination Early Saves Rubber Seals and Hoses

TECHNICAL BULLETIN

Petroleum contamination in your cooling system is an indication that a breech has occurred between the cooling system and the oil or fuel system. When left unchecked, petroleum contamination can seriously damage and deteriorate rubber seals and hoses and lead to combustion gas leaks that can eventually cause severe metal pitting.

Visual inspection of your cooling system should be performed at every preventive maintenance interval. Contamination by petroleum products is visually evident as they float on top of the coolant. The color of the contamination can then help in distinguishing between oil and fuel contamination whereas its odor is helpful in determining from where the contamination is entering the system.

Contaminants that appear black or grey in color indicates engine oil contamination. Typically, red is an indication of contamination by transmission fluid and a light yellow or clear contaminant is a sign of hydraulic fluid contamination. However, it is important to note that transmission fluids are not always red - some are blue or clear. Also, not all hydraulic fluids are yellow or clear - some are blue or red.

A diesel or gasoline odor indicates fuel contamination while a sulfur-like odor could be an indication of gear oil contamination. Once the contamination and how it is entering the system has been identified and corrected, the system should be purged of all contaminated coolant and cleaned with a product specifically designed to remove petroleum products before new coolant is introduced to the system.