

# Preventative Maintenance Program



Component or System Type	Recommended Sampling Schedule	Why We Recommend These Sampling Schedules
<b>Engines</b> ( <i>diesel, unleaded gasoline, CNG, etc.</i> )	<b>Annually or just prior to all scheduled oil changes (whichever comes first)</b>	<p><b>Unlike other systems, diesel and gasoline engines produce combustion “blow-by” gases that escape around the piston rings and effect oil life.</b> Combustion gases can add soot, cause acid build-up in the oil and also lead to oil thickening if left unchecked. Depending on engine type and design, oil effects can occur at different rates. Therefore, it’s extremely important to measure these effects through regularly scheduled oil sampling and analysis to safely monitor oil properties and internal engine part wear.</p>
<b>Transmissions, Power Steering Systems and Hydraulic Systems</b>	<b>Annually</b>	<p><b>Though generally much more stable than engines, these delicate systems have closer clearances and operate at much higher pressures.</b> This demands that quality remains more stable vs engine oils. Transmissions, in general, and especially Allison automatic transmissions, are extremely complex and contain many gear, bearings and bushings. It’s very important that transmission and hydraulic fluids be checked annually through oil sampling and analysis to ensure that fluid properties remain stable and that system debris (<i>dirt, dust, water, etc.</i>) remain at a safe level.</p>
<b>Differentials</b> ( <i>rear-ends</i> ) and <b>Gearboxes</b>	<b>Annually</b>	<p><b>Differentials tend to ingest dirt and other materials from the outside of the housing when care is not taken to clean off the area around the fill plug.</b> Dirt in the differential and/or gearbox can result in wear if the foreign material is very hard as in sand. Care must be taken to keep unfiltered systems, such as differentials and gearboxes, clean so that excessive wear does not occur on internal parts.</p>
<b>Coolants</b> ( <i>Main Engine or Generator for RVs</i> )	<b>Annually</b>	<p><b>NRVIA data, collected from hundreds of RV systems, show that cooling system maintenance tends to be neglected more often than oil systems.</b> Clearly, most vehicles do not receive required cooling system maintenance and need to be checked on an annual basis. Our data show that over 60% of all sampled cooling systems have problems that need attention. Some are critical and need immediate evaluation by a qualified cooling system technician.</p>
<b>Aqua-Hot Water Heating System</b>	<b>Annually</b>	<p><b>Typical hot water heating system test kits are simply inadequate for properly monitoring fluid and system conditions.</b> These kits only check for glycol levels and do not check other fluid properties, such as pH, additive levels or contaminants. They also do not check for internal system part wear. Annual analysis will check all of these properties.</p>