



# Oil and Coolant Analysis Service

## Frequently Asked Questions

### Why does the NRVIA<sup>1</sup> offer fluid (oil and coolant) analysis services?

Well, let's say you own a motorized RV, perhaps a large Class-A diesel pusher. You probably already know that the engine, automatic transmission and generator contribute a large portion to the overall cost of the RV. In fact, the engine and transmission are absolutely essential to moving the RV around the country and once you arrive at your destination, the generator offers all the comforts of home. So, why take a risk of anything going wrong with these critical components when it's so easy and economical to get the data you need to ensure that they remain reliable. Oil and coolant analysis allows you and your service tech to effectively "see inside" your engine, transmission, and generator. Oil and coolant analysis adds a whole new level of diagnostics that you just can't get any other way. **Think of it as "Healthcare for RVs".**

Internal parts depend on oils and coolants to remain stable between service intervals. Oil and coolant analysis tells you when your oils and coolants experience any signs of early breakdown or contamination. Not only do we check them for signs of thermal breakdown, mechanical breakdown or contamination; but, we also check for any indication of internal part wear. Oil and coolant analysis allows you to detect anything that might need your attention long before they can result in road calls, expensive repairs or lost travel time. Knowing the condition of your oils and coolants, through periodic sampling and analysis, improves the overall reliability of your motorhome.

**NRVIA's fluid (oil and coolant) analysis service brings you the peace of mind that only comes with knowing for sure that your RV's engine, transmission, and generator remain as reliable and worry free as possible.**

### How does oil and coolant analysis affect my normal service intervals?

Most service intervals (also known as Preventive Maintenance or "PM" schedules) call for oils and coolants to be changed based on accumulated mileage, accumulated hours or elapsed time (typically calendar months). Changing oils and coolants

is "generally" a good idea but very often it's not the most economical method of maintaining your RV engine, transmission or generator.

Let's say you've changed your oils or coolants too soon. If there's still plenty of life left in them, that's like throwing money down the drain. On the other hand, if you fail to change them when they're worn out or contaminated, you take the chance of getting into some serious problems that can put your RV in the shop and drain your wallet. If you're changing oils and coolants without having them analyzed, you



are, without a doubt, missing out on some pretty important information that could make a real difference in your plans.

Oil and coolant analysis is a **very useful diagnostic tool** that offers you and your service technician a whole new level of understanding. It allows you to see inside the equipment and determine the true condition of your engine, transmission and generator. It improves your ability to assess these critical RV systems for wear and contamination that could lead to early failures if left unchecked. Oil and coolant analysis enables you to observe systems at a "microscopic level". This greatly improves your ability to learn about issues that need your attention so you can have them fixed at the earliest opportunity, long before serious problems occur. You'll know when oils and coolants begin to break down or become contaminated and you'll be able to see internal part wear issues if they exist.

**In short, oil and coolant analysis increases your ability to detect minor problems and schedule repairs, if needed, before they result in breakdowns, repairs and lost travel opportunities. You just can't get that when just draining and replacing your RV oils and coolants.**

### What will the oil analysis tell me?

Oil analysis measures additive levels, wear metals, contaminants (such as water or internal coolant or fuel leaks), soot levels, viscosity, oxidation, and nitration. First, the oil is checked for viscosity loss (*thinned out oil*) and thermal breakdown (*too much heat*). We also check for signs of fuel and coolant caused by faulty injectors or leaking head gaskets and we check for nitration that may indicate improper fuel/air mixtures. We can tell all of that from the analysis plus we can detect the early stages of wear on internal parts. **Periodic oil**

<sup>1</sup> NRVIA = National RV Inspectors Association ([www.nrvia.org](http://www.nrvia.org))

analysis enables you to find these problems in the early stages long before real damage occurs.

Your NRVIA certified inspector offers advanced oil analysis. Advanced testing is designed to give you data that allows you to tell if your current oil service intervals are correct. In essence, the data will show if you're changing your oil too soon or running it too long between service intervals.

There are (3) reasons why this is so important. First, it allows you to find problems if they exist. Secondly, the Advanced Oil Analysis allows you to save money by safely extending your service intervals. **In fact, some Class-A "Diesel Pusher" (DP) owners are already running up to 25,000 miles between engine oil changes.** Third and last, let's say you purchased a used Class A motorhome that includes a heavy duty Allison automatic transmission. Advanced testing can tell you whether or not you're running an Allison approved "long life" fluid. Also, if the transmission fluid test shows that you're running an older technology transmission fluid, you'll have the data you need to support changing your transmission over to a long life Allison (TES-295 Approved) product. This will save you even more in reduced transmission service over the life of your motorhome.

### What will the coolant analysis tell me?

Coolant analysis measures glycol content, additive levels, Freeze Point, Boiling Point, total hardness and dissolved solid levels (mineral content). These tests tell you everything you need to know to fully evaluate your engine cooling system. We'll tell you if a coolant change is needed and why we think it's necessary.

### What if I can't tell the inspector much about the oils or coolants that are currently in the RV?

Don't worry if you don't know much about the oils or coolants used in your RV engine, transmission or generator. That's often the case, especially when customers are purchasing a used motorhome and especially if there aren't any maintenance records. In fact, the oil and coolant information is even more important if the seller doesn't have maintenance records. Even though some information is missing on the report, the information you'll receive is still very valuable. The RV Inspector may ask if you know the oil and coolant manufacturers and brand names. If you don't have that information, don't worry, we can still tell whether or not you may have any real issues with the engine transmission or generator. Once you begin to know your oil and coolant information, the analysis will tell you how much longer you can safely run them.

### Will I receive test reports?

Yes. Your detailed test reports will be emailed directly to your mail in basket or, if you don't have email, we'll send the report to your mailbox through the US Postal Service. The reports will show level of Severity. The reports are "user friendly" and color-coded so it's easy to spot problems (if any exist). Color codes indicate overall Severity of the sample (from 0 to 4). A Severity rating of with 0 indicates that everything is OK and no maintenance is required. On the other hand, a Severity Rating of 4 indicates immediate action is necessary. The color on the Severity rating scale matches the data; so, it's easy to spot the problem (test result) that led to the overall Severity Rating. The report lists comments and recommendations that instruct you on what was found and what you should do about it.

**Note:** Once you receive the report and if you have specific questions, we offer a toll free Customer support number at 877-251-8315. This number is staffed by lab<sup>2</sup> professionals who route your call to the Analytical Department where your question will get prompt attention.

### I'm sold. So, how do I get this service added to my RV inspection?

Just call your NRVIA certified inspector and have him/her add fluid (oil and coolant) analysis to your upcoming inspection. Your NRVIA certified inspector will draw the necessary samples and send them in to the contracted lab for analysis. Your reports will be on the way to you in no time.

### One last thing ..... If I want to continue this service, how often should I have it done?

The chart below shows the recommended sampling intervals for your RV's engine, transmission and generator. Just let us know when you're due for sampling and we'll send a certified inspector to draw the samples and submit them for analysis. Then, just keep a copy of the report in your historical maintenance file. We'll maintain it electronically in our database.

RV SAMPLING RECOMMENDATIONS		
Component	Sample Type	Recommendation
<b>ENGINE</b>	Oil	Every scheduled oil change
	Coolant	Annually (at start of travel season)
<b>TRANSMISSION</b>	Oil (fluid)	Annually (at start of travel season)
<b>GENERATOR</b>	Oil	Every scheduled oil change
	Coolant	Annually (at start of travel season)

<sup>2</sup> NRVIA certified inspectors use JG Lubricant Services ISO Certified laboratories ([www.jglubricantservices.com](http://www.jglubricantservices.com)).