

# Fluid Analysis

## What to Expect

As part of your RV inspection, you chose to have fluid analyses performed on the oils and coolants used to lubricate and cool the driveline and generator components. Below are some of the things you can expect to learn from the analyses!

- You may find there's no need to spend up to \$250 (or more) to change the oil or coolant in the main engine and/or generator because your fluid analyses show they're still viable!
- You may find that the transmission fluid is still in good condition and that maintenance is not necessary. This could save you up to \$600 (or more)!
- Or, you may find there's no need for any maintenance on any of these main RV systems. That translates to, not only big savings, but a great feeling of peace as you proceed with the purchase!

You may find all these things; but, on the other hand, the analyses may find "issues". You may discover that the previous owner did a poor job of maintaining these systems or that there are issues that need attention prior to the purchase. The bottom line is that the pre-sale fluid analyses will reduce the overall risks of major repair bills or, worse yet, expensive road calls and lost vacation time. Fluid analysis can tell you all these things and more.

So, whether you chose an inspection level that included fluid analysis or you elected to add it on, you can consider yourself among an elite group of savvy buyers who've taken advantage of this tremendous opportunity. You'll get to "peek inside" the RV's engine, transmission, generator and/or cooling systems.

Fluid analysis is used across the country by most all major large truck and bus fleets. Our laboratory, JG Lubricant Services, is a leading provider of fluid analysis to many different industries. They work on everything from "high end" sport cars and motorcycles, to RVs, fire, municipal and construction equipment, school buses and Over the Road (OTR) truck fleets. JG Lubricant Services works with all these different industries; but, independent of the industry

served, they strive to deliver top notch data that supports increased fleet reliability and vehicle "uptime" and they do it through the proven science of fluid analysis.

Fluid analysis has become an integral part of NRVIA inspections. But, even more than that, it is one of the most important things you can do to ensure that your pre-purchase inspection, is going to yield maximum protection against "high cost" repairs.

Depending on RV type, fluid analysis allows you to "take a look" inside the engine, transmission, generator and/or cooling systems.

Fluid analysis gives you that extra measure of protection you need when you take off in your new investment.

It can give you peace of mind and help to

ensure against potential "high cost" repairs or equipment failures. **No doubt, you've made the right choice in including fluid analysis as part of your pre-purchase inspection.**



### A "Blood Test" for Your RV

**We call it "healthcare for RVs".** Why? Because it's really very similar to getting an annual checkup or having your blood drawn by your healthcare provider.

Fluid analysis can alert you to early signs of excessive wear, it can find such things as fuel or coolant leaking internally into your oil systems or it can find signs of oil leaking into your coolants. If anything serious is going on inside the engine, transmission, generator and/or cooling system, the best way to determine it is through scientific fluid analysis.

## How to Get the Most from Your Fluid Analysis

You can help by gathering important information about the fluids present in the systems of the used RV that you're evaluating. This includes things like oil and coolant manufacturers and brand names along with coolant types and oil and viscosity grades. It's important to gather this information so that your NRVIA certified inspector can enter it on the fluid analysis inspection forms. Don't be afraid to ask the RV dealer or the owner, if you're working with an individual. They may, or may not, know the answer; but, if they know this information, you'll maximize the impact of the fluid analysis. If oil and coolant types are known, the lab may be able to recommend that they can keep running and thereby save you money. This can really mean big savings!

Consider the cost of engine oil changes, transmission fluid changes and cooling system flushes. These maintenance items can cost hundreds of dollars and quickly add up to a lot of added expenses that may not be in the budget. Wouldn't it be nice to know if the oils or coolants could be run longer and delay changes for another 6 months to a year? When it comes to the condition of the oils and coolants in the used RV, you can't tell by smelling the fluid, rubbing it between your fingers or letting a local lube shop look at it. Only scientific fluid analysis can properly evaluate oil and coolant condition, just like a blood test. If the lab determines your oils and coolants are OK and that they can be run longer, that can mean an improved budget for those really important things (fuel, groceries, park entrance fees, campground fees, a night out on the town, new carpet, new sunglasses and fancy hat, new collar for the dog, you name it).

**OK, so how can I help?** Well, it's really very simple. Below are a few questions to ask of the seller. Here's what we need, if the seller can provide you with the information.

**Note:** *If this data is unavailable, the report will show the words "missing information" under product (fluid) information. Even though fluid analysis is still very valuable in terms of finding issues like internal part wear or system contamination, it can be even more valuable if our lab can determine the details of the oils and coolants used in the systems*

- **What oil is currently installed in the main engine crankcase** (product manufacturer, product brand name, and viscosity grade)? See footnote 1 below.
- **What oil is currently installed in the generator engine crankcase** (product manufacturer, product brand name, and viscosity grade)? See footnote 1 below.

<sup>1</sup> Grade means Viscosity Grade. Typically SAE 15W-40 for diesel engines or SAE 5W-30 for gasoline engines.

- **What fluid is currently installed in the automatic transmission** (product manufacturer, product brand name, and viscosity grade)? Note: The viscosity grade will be "No Grade".
- **What coolants are currently installed in the main engine and generator cooling systems** (product manufacturer, type (conventional or long life) and brand name)? Most green or light green colored coolants are conventional (ethylene glycol) coolants whereas long life fluids are typically pink or orange colored.

Through your help and the help of the seller, the lab can deliver a more thorough report showing whether or not the fluids can safely be run longer. Again, that alone can potentially offer significant savings!

Below is a handy form you can fill out and return to your NRVIA certified inspector and here are a couple of ways to get him/her the information.

- **Scanner** - If you have a scanner available, just fill it out, scan it, and insert the scanned image into an email and send it to your NRVIA certified inspector.
- **Smartphone** - Use your Smartphone to take a picture of the completed form insert the image into an email and send it to your NRVIA certified inspector.

**Note:** *If you don't have a scanner, email or Smartphone, call your NRVIA certified inspector and give him/her the information over the phone. The inspector will add your information into the fluid analysis database so the lab has the information prior to testing the fluids.*

**Sample Form** (can you help by filling in the blanks)?

Sample Point	Product (Fluid) Manufacturer	Fluid Brandname	Grade <sup>1</sup>
Engine Oil			
Generator Oil			
Transmission Fluid			No Grade
Main Engine Coolant			N/A
Generator Engine Coolant			N/A
N/A = not applicable			

**Note:** *If you just cannot determine the details about your oil or coolants, then please just enter the word "Unknown" in the applicable box. Also, tell the inspector to enter the word "Unknown" on his/her fluid inspection forms. This will allow the lab to enter "Unknown" on the report. That way, the report won't show the words "Missing Information" which will help with historical records on your RV systems.*