

Allison Transmission Maintenance

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Annual fluid analysis is vital to ensuring the optimum “health” and overall reliability of your Allison transmission. NRVIA certified inspectors are specifically trained to pull transmission fluid samples and submit them for analysis.



Most, if not all, Class A motorhomes, built over the last 20 years, were equipped with an Allison heavy duty automatic transmission. Your motorhome may have either the Allison 2000MH Series (*front wheel drive*) or the Allison 3000MH or 4000MH Series transmissions (*rear wheel drive “pushers”*). Older 3000 Series models were designated as “MD3000” and older 4000 Series transmissions were designated as “HD4000”. Still older transmissions were designated as “AT500”, “MT600”, “HT700” or “V700” models. **No matter your Allison model, annual fluid analysis and proper fluid and filter maintenance are critical to maintaining your Allison transmission such that it remains as “worry free” and reliable as possible.**

- **Fluid Recommendations:** Allison specifies the use of Allison TES¹-295 approved fluids for all models.
- **Filter Recommendations:** Allison specifies the use of Genuine Allison filters for all models. Allison 2000

Series transmissions are equipped with (1) spin-on filter with no need to change the pan filter. Allison 3000 Series (MD) transmissions and Allison 4000 Series (HD) transmissions are equipped with (2) filters (Main and Lube) that are accessed through filter covers on the underside of the transmission. The two filters are exactly the same and are sold as a kit that includes (2) filters along with replacement gaskets and O-rings.

Note: Fluid and filter service recommendations are available at <http://allisontransmission.com/parts-service/fluid-filter-calculator>.

Fluid and fluid filtration are critical to the proper operation of the transmission and are an integral part of the overall transmission system. Filter design (*space claim, materials, micron sizes and Beta ratings*) are controlled by Allison Engineering. Filters are designed to provide clean fluid operating environments that allow the transmission to perform as designed and remain as durable and reliable as possible for a “very long” period of time. Filter media, the main “filtering” part of the filter element, are designed to limit large particles that can potentially interrupt oil films or clog orifices and lead to damage of other components within the transmission system (*bearings, bushings, thrust washers, gear teeth and valves*). Filters are like police officers in that they “Serve and Protect” and remove the “bad guys”; but, don’t often receive the attention they deserve. **Monitoring of these critical systems can only be accomplished through annual fluid analysis.**

Healthcare for Your RV: Let’s imagine you watched a late-night infomercial advertising a new diet that promises health improvements and lowers the risks of potential medical issues down the road. You start the

¹ TES = Transmission Engineering Specification

diet and follow it religiously. Besides weight reduction, what other changes are occurring? Are there improvements in LDLs, HDLs, triglycerides, or blood glucose. You can bet your doctor is interested in this information and requires it to properly assess the diet's overall effect on your health. Ask yourself this. "Would my doctor start me on a new diet and just hope it works?" Or, would he or she make their determination based on solid scientific data from blood testing. Transmission maintenance is no different. Only annual fluid analysis can determine the true conditions within your RV's transmission system. Think of it as "health care" for your RV. After all, your Allison transmission represents a large part of the total cost of the RV driveline. Don't take chances on the health of your transmission by simply changing oil or filters on an arbitrary calendar or mileage basis. That's like throwing out the baby with the bathwater. If you're just changing transmission fluid and not doing fluid analysis on the used fluid, you're throwing away useful and valuable data that could have been used to properly assess the overall ongoing "health" of your Allison transmission system.

Allison Engineering considers the transmission fluid and filters to be a "system" that is designed to work as a team to maintain the system and deliver the designed performance and durability. Aftermarket fluids and filters, available through many various retail outlets and maintenance facilities, may claim to be the world's best; but, let's make them prove it. We like to say, "In God We Trust, all others must show data.

- **Contamination:** Consider the effects of contamination. You might have purchased the "world's best transmission fluid". But, if it happens to get contaminated you could have serious issues that could even lead to a transmission failure and vehicle downtime or towing costs. Contamination can be properly assessed through annual fluid analysis.

Certified NRVIA inspectors offer **Advanced Fluid Testing** through JG Lubricant Services who provide us with specially designed test kits that properly assess every aspect of your Allison transmission. But, wait, there's more! Testing is not just for your Allison transmission. Our test kits from JG Lubricant Services are "multi-use". We can use them to test and properly assess your RV's engine oil, differential oil, and power steering fluid and/or hydraulic fluid. Our fluid testing includes

viscosity, oxidation resistance, wear metal analysis, additive metals analysis and we look for signs of fluid contamination.

NRVIA certified inspectors can also offer an Ultimate Analyses on your Allison transmission. This analysis is used to assess the filtration system. Testing includes all of the testing included in our Advanced oil tests plus Particle Count and ISO Cleanliness Code. These additional tests compare your fluid cleanliness to Allison filter media size for properly assessing the overall "health" of the transmission fluid and filtration system.

Why not get in the practice of having annual fluid analysis done on your Allison transmission. It's easy and your NRVIA certified RV inspector is trained to the samples for you. But, hey, don't stop there, go ahead and have us pull samples of your other fluids while we're there. **We can pull samples on the engine oil, engine coolant, generator oil and generator coolant.**

Fluid Analysis Savings: We see annual fluid analysis as "low cost insurance". Just as the doctor requests that you come in for annual checkups and blood work, annual fluid analysis on your RV transmission, engine and generator permits you to properly assess the health of your RV systems and eliminates the guess work when you're just changing fluids according to time or mileage. It saves you money by eliminating unnecessary maintenance and you'll enjoy "peace of mind" by knowing the true condition of your RV oils and coolants. Fluid analysis can tell you for sure what's going on inside these important systems.