

The Auto Dealer's Original Fixed Operations Resource

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Fixed ops



CHOOSING THE RIGHT PARTNERS

Do You Have What It Takes to Repair Aluminum?

Shifting Your Thinking About Work Schedules

Considering a Cosmetic Reconditioning Program?

"Lifetime Fluids"

“LIFETIME FLUIDS”

TILL WHOSE DEATH DO US PART?

BY RON MCELROY

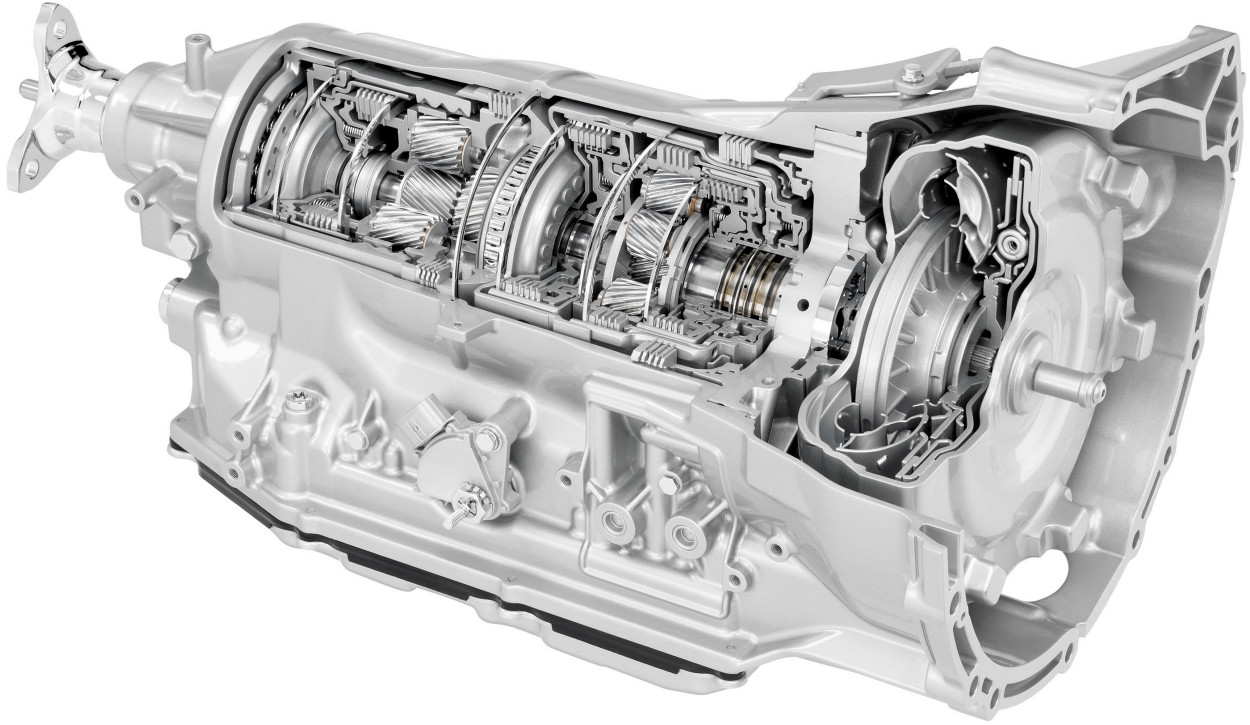
There are a few things in life that we can count on . . . death, taxes and nothing lasts forever -- especially in the automotive world. For the most part, we all share the same basic needs: a job, food, shelter and reliable transportation -- usually in the form of an automobile.

As we go through life, we discover that we have little control over death and taxes. Getting something to last forever seems to be up for debate, at least in the automotive industry. This is what the term “Lifetime Fluids” implies. Is this a reliability factor? And whose lifetime is the manufacturer talking about? Our lifetime? The lifetime of the car? The lifetime of the transmission? Or the lifetime of the fluid? Is it subject to the terms of the warranty? If so, what’s the OEM’s drivetrain warranty? And how about fluid service requirements? Do they refer to normal or severe operating conditions as a determining factor?

What first appeared to be an exciting new fluid service discovery has raised a multitude of important yet unanswered questions. The most important of which is this: Are “Lifetime Fluids” a product of technology or a marketing strategy?

“Lifetime Fluid” -- although this buzzword sells cars for the OEMs, at what expense to the dealerships? And are new car owners now stuck with a ticking time-bomb?





**“IT’S ESTIMATED THAT OVER 13 MILLION
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Technology has made major improvements to the internal combustion engine over the last 15-20 years. These innovations have increased efficiency, extended Service intervals and improved performance and reliability. For instance, with the advent of fuel injection as opposed to carburetors, oil change intervals have doubled. The common 3,000 mile interval has been replaced with a 5,000- to 6,000-mile oil change for most cars.

But not all so-called improvements go as planned and sometimes recalls are

necessary to make adjustments. For instance, GM’s extended oil change interval via the dashboard warning light. They discovered that the algorithm that sets off the service oil light was not aggressive enough to prevent lubrication failure and the resulting damage to their engines before they were out of warranty. This is a good example of what most of have learned by experience. If we test our oil and change it before the additives are depleted (regardless of what the owner’s manual says) we can expect our vehicle’s engine to last well over 200,000 miles.

Technology has also transformed the transmission, downsizing it into a smaller, lighter mechanism with improved efficiency and performance. But what about reliability? It’s estimated that over 13 million automatic transmissions fail every year and most of these failures occur in vehicles with perfectly running engines. So why don’t transmissions last as long as engines? After all, they are an integral component of the drivetrain and are usually covered under the same OE warranty as the engine.

There are several basic reasons why transmissions are stressed more severely today than those from the past and why we’re seeing so many transmissions fail. First, they’re more complex, having morphed from 4-speed to 6- and now even 8-speed capabilities. And new fuel-efficient transmission designs including the Continuously Variable Transmission (CVT) and the Dual Clutch Transmission (DCT) require unique fluid technologies to meet their increased performance requirements. They’re smaller and lighter despite increased engine horsepower.

Today's transmissions are subjected to higher torque and -- most importantly -- they often experience an increase in operating temperatures. The Automatic Transmission Rebuilders Association (ATRA) estimates that 90% of all transmission failures are due to overheating of the transmission fluid. Perhaps the number one culprit is failed automatic transmission fluids due to OEMs marketing and promoting "Lifetime Fluids". Automatic Transmission Fluid (ATF) is the most complex of all lubricants and is often transmission specific. It must reduce friction to prevent wear, yet at the same time, it must allow a certain level of adhesion so clutch materials can properly engage. (Plus a host of other requirements.)

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ATFs contain a wide variety of chemical compounds including anti-wear additives, rust and corrosion inhibitors, detergents, dispersants and surfactants, kinematic viscosity and viscosity index improvers and modifiers, seal swell additives and agents, anti-foaming additives and anti-oxidation compounds to inhibit oxidation and boil-off, cold-flow improvers, high temperature thickeners, gasket conditioners, pour point depressant and petroleum dye. In other words, there's a whole lot more going on between the gears.

Despite all the intense demands and requirements of ATF to provide proper performance and protection, many



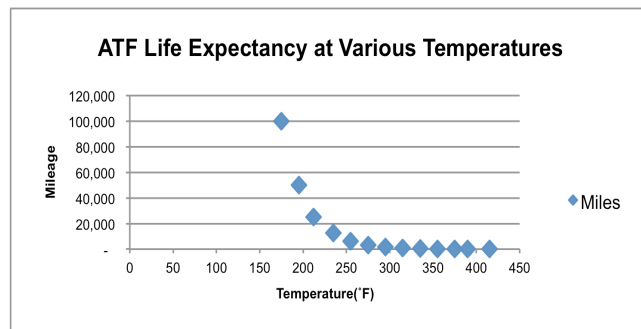
OEMs insist that their ATF (as well as brake and power steering fluid) is formulated so that the owner never needs to change the fluid. They refer to them as "Lifetime Fluids". But does anyone really believe a car will last forever -- especially if you don't change the fluids? Or, have these car makers discovered a new fluid alchemy; one that defies everything we know about tribology and fluid maintenance?

"Friction" and "Heat" are the dynamic duo that drives the oxidation rate of vehicle fluids. The normal operational temperature for transmission fluids is approximately 170° Fahrenheit.

At this temperature the fluid's service life under "normal driving conditions" should reach or exceed 100,000 miles. But what about severe driving conditions; after all, most vehicles fall into this operational category. For every 20° increase in the fluid's operating temperature, the resulting rate of oxidation doubles, thereby cutting the fluid's service life in half. The following chart clearly demonstrates the vulnerability of ATF when subjected to operating temperatures above 170°.

The approximate life expectancy of ATF at various temperatures can be seen here:

Temperature	Mileage
175 F	100,000 miles
195 F	50,000 miles
212 F	25,000 miles
235 F	12,500 miles
255 F	6,250 miles
275 F	3,125 miles
295 F	1,562 miles
315 F	781 miles
335 F	390 miles
355 F	195 miles
375 F	98 miles
390 F	49 miles
415 F	less than 30 minutes!



The operating temperature limits of ATF clearly show why shorter fluid maintenance intervals are strongly recommended for vehicles operated under severe driving conditions (most cars). When the fluid exceeds 300° damage may occur. The metals in the transmission, depending on how severely they are overheated, may warp and become distorted.

“SO WITH ALL OF THIS DATA SHOWING THAT TRANSMISSIONS NEED SERVICING TO MAINTAIN PERFORMANCE AND RELIABILITY, AND TO MEET THE EXPECTED CONVENTIONAL SERVICE LIFE STANDARD, WHY ARE THE OEMS SHIFTING FROM A REGULAR PREVENTATIVE MAINTENANCE SCHEDULE TO PROMOTING A SEALED TRANSMISSION WITH A “LIFETIME FLUID” THAT NEVER REQUIRES SERVICING?”

The industry consensus is that fluids are good for the lifetime of the fluid and nothing more. Once a fluid is dirty and worn out it must be changed. So with all of this data showing that transmissions need servicing to maintain performance and reliability, and to meet the expected conventional service life standard, why are the OEMs shifting from a regular preventative maintenance schedule to promoting a sealed transmission with a “Lifetime Fluid” that never requires servicing? Could it have something to do with an OEM offering FREE SERVICE during the warranty period of the vehicle and lifetime fluids are just another way for them to lower their costs?

It's interesting to note most OEMs offer similar models across the board in both price points and performance. So then, what's the new paradigm shaping car



sales? New car sales are often driven by J. D. Power Consumer Satisfaction Surveys. The survey results clearly show that drivers want cars that they don't need to service or maintain. Hence, sealed mechanical systems and lifetime fluids.

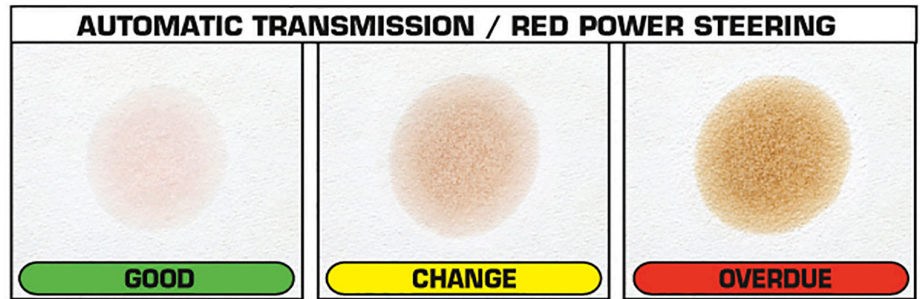
The cost of ownership is another major factor. How much will it cost to perform required maintenance to satisfy the vehicle's warranty? The program is great for the warranty period and the first owner will rave about the low maintenance car for which he received four free oil changes and maybe a brake job. These marketing programs dramatically reduce maintenance costs for both the auto manufacturer and the driver -- at least until the warranty runs out. It's a scientific fact that fluid preventative

maintenance prolongs the service life of a vehicle. Therefore, no-maintenance practices are more likely market-driven than engineering-driven. And this is where the rubber meets the road. SO -- as Service providers, what is our responsibility to our customer and to the dealership? Whether they are leasing or buying, do we owe it to our customers to qualify their driving habits and the way they operate their vehicle in terms of “normal” or “severe”? Do we use fluid diagnostic tools to evaluate and show them when fluid services are needed and tell them benefits of servicing fluids before they become depleted? Or, do we just pass the buck. No servicing, “LIFE-TIME FLUID” – “SEALED SYSTEM”, regardless of the fact that the service is warranted and that it's good business for the dealership to do so.

One of these scenarios is manifesting into a class action lawsuit against one OEM for allegedly misrepresenting that certain models of their vehicles with automatic transmissions supposedly do not need to have the ATF replaced during the life of the vehicle. The OEM coins this term “lifetime” fluid. According to the lawsuit the “key selling feature” of these vehicles has been its Service and Warranty program, which “promises to ‘maximize vehicle safety, reliability and resale value by minimizing breakdowns resulting from wear, and minimizing cost and inconvenience.’” It’s further alleged that failure to replace the transmission fluid leads to sudden and premature catastrophic failure of the transmission and that the owners are forced to shell out the cost of repair / replacement despite express instruction that replacing the fluid was not “necessary”.

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Previous to “Lifetime Fluids” OEM “time / mileage” Service recommendations were the industry standard. But replac-



ing fluids too late leads to premature component wear and damage that may lead to expensive repairs or shorten the useful lifetime of the vehicle. Replacing fluids before they’re needed costs consumers millions of dollars each year and can be considered environmentally taxing. With the advent and proliferation of “fluid-science” and “instant lubricant diagnostics” tools, the landscape of preventative maintenance has significantly changed to include fluid condition as a qualifying standard for recommending fluid services.

“That’s why we’re now testing the fluids for our customers and showing them the actual condition of their vehicle’s vital fluids” said Todd Renfro, Service Director for the Buchanan Auto Stores, “so they can make an informed decision on the preventative maintenance of their cars. We see using fluid diagnostics technology to identify the condition of specific fluids to be an excellent method to install and maintain integrity with our clientele.”

A crackdown and investigation was recently conducted by the California Bureau of Automotive Repair (BAR) that focused on Service providers performing unwarranted fluid services. The BAR’s initial position on Service recommendations was taken directly from OEM vehicle owner’s manuals. Any services performed outside these OEM specifications were suspect. Aftermarket associations including Automotive Maintenance and Repair Association (AMRA/MAP), California Automotive Business Coalition (CalABC), Automotive Oil Change Association (AOCA) and industry chemical and tool manufacturers presented white papers and scientific

documentation to the BAR supporting their Service recommendations. The aftermarket demonstrated that the fluid service recommendations being offered to consumers were in their best interest, regardless of whether they were in alignment with OEM recommendations. Consumer benefits include prolonging the vehicle’s useful service life, maintaining performance, maintaining efficiency, reducing breakdowns and reducing overall repair costs over the vehicle’s service life.

So how about “Lifetime Fluids”? Once again, does anyone really believe that a car will last forever – especially if you don’t change the fluids? Are we really expected to buy into and sell “To Infinity and Beyond” as the famous Disney character says?

You’re in the automotive Service industry. Your Dealership relies on your Fixed Operations Departments to generate profits and instill trust, confidence and loyalty in your customers. You are there to provide them with the services they need to maintain their vehicle’s performance, reliability and service life -- INCLUDING FLUID SERVICES. After all, that’s why they came to you in the first place.

Ron McElroy is CEO and Founder of Fluid Rx Diagnostics by Magna-Guard, Inc. He has received two “Best New Product Awards” and four “Product Innovation Awards” for creating and bringing to the automotive market innovative new products that have revolutionized the way we integrate aftermarket electronics into OEM systems and that have changed the dynamics of performing fluid preventative maintenance services.