Easy Car Care

How to Maintain Your Car for

200,000 Miles and Beyond.

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Let me introduce myself:

My dad owned an auto salvage yard while I was growing up. To me it was a wonderful playground. When I finally got a driver's license, I asked my dad about a car. "Son," he said, while pointing in the direction of the junkyard, "take your pick." I chose a 1971 Dodge Demon. I didn't know it then, but the work experience I gained there would shape my career and guide me for the rest of my life.

After high school, I joined the Air Force and spent 16 years as an Aerospace Ground Support Technician.

My favorite job was at Sussex Motor and Coach in Matamoras, PA. I repaired, maintained, and rebuilt classic and antique vehicles. My 15 minutes of fame was the 1955 Lincoln Indianapolis, a concept car we rebuilt. Google it and you will see it has been in countless articles and magazines. Last I heard, it had sold for over $1 ¼ million.

In 2007, after working in a couple of local garages, I decided to start my own shop. My wife Judee and I have discussed hiring help, but it always goes back to not being able to regulate the quality of repairs and being personal with my customers.

Average Car Life:

In the 70s, the typical life of an average automobile was 100,000 miles. That is why the lemon law does not cover any vehicle over 100,000 miles. So when the average consumer's vehicle neared 100,000 miles, it was time to consider replacement.

Welcome to today! New vehicles are made cheaper and lighter, but also more reliable and long-lasting. The auto manufacturers want you to believe that a 100,000-mile life is still the standard to replace a vehicle.

In my personal opinion, being an auto owner and driver myself, is that most vehicles today can last **200,000 miles**, when properly maintained. This is not 100%, even with the best designing, manufacturing, and maintenance procedures - premature aging and failures can and do happen.

This booklet is designed to help you reduce the cost of ownership, while also increasing the normal life of your vehicle.

Vehicles today are more complex than cars of decades ago but remain basically the same. Electronics have made driving safer and vehicles more dependable but regular maintenance is still vital.

Engine Oil:

This is the first item for good reason - this is the life blood of the engine. Regular oil and filter change is needed not only to remove any contaminants in the oil, but also to renew the viscosity (5w30, 0w20, etc.) of the oil and additive package.

I recommend synthetic oil and filter by Amsoil.

Amsoil XL with Amsoil Filter:

10,000 Miles or 1 year, whichever comes first.

Amsoil Signature with Amsoil Filter:

15,000 – 25,000 Miles* or 1 year, whichever comes first.

*Not all vehicles can use a 25,000-mile filter. You may be limited to a 15,000-mile filter.

This is a general guideline. Consult our website at: themotoroilpro.com to get Amsoil's recommendations for your particular vehicle. Or:

Call us at Fetch & Fix for specific recommendations.

Check Your Engine Oil Level Periodically Between Changes.

Transmission Fluid:

This is a misrepresented and misunderstood fluid. Like motor oil, it does lose its viscosity and wears out. The transmission is not as harsh an environment as the engine, so it does last longer because it takes less abuse than engine oil.

Transmissions today have changed in many ways. One important fact is many transmissions today do not allow the filter to be changed. **This makes it even more important to maintain the fluid**.

Don't be fooled by a label around the dipstick stating the transmission fluid is a lifetime oil. Remember how the manufacturers want you to replace your vehicle at 100,000 miles? If the transmission fluid does not get changed, the vehicle most likely will not get more than 100,000 miles before problems arise. With that mileage and no previous fluid changes, a rebuilt or new transmission is inevitable.

I recommend fluid and filter replacement every **30,000 miles**.

Heat is the main reason transmissions and transmission fluids fail. If you are towing or working your vehicle, be sure to change your fluid more frequently. An external transmission fluid cooler is an option as well.

Air Filter:

Air filters are another misunderstood and underappreciated item.

Compare the inexpensive air filter with a premium filter and you will see the premium filter will have more pleats and is thicker than the cheaper filters.

The air filter is the first line of defense at keeping engine wear to a minimum. Yes, the air filter will help reduce engine wear. Cheap or dirty filters can allow dirt to enter the engine intake - the dirt from there enters into the oil and damages the engine.

I recommend the best filter you can afford and it should be changed no less frequently than every 30,000 miles.

If you have a high-performance engine or drive in dusty conditions, change it more frequently.

Cabin Air Filter:

These filters are fairly new to automobiles. When manufacturers first started using the cabin air filter, they were optional on some cars. Just about every car today has a cabin air filter.

This filter is a pleated filter and can come with or without carbon impregnated in it.

All air entering the vehicle, whether it's from the outside or it's recirculated, **goes through this filter**. A/C, heat and ventilated air go through this filter as well.

If the outside air is moist, this filter can hold some of that moisture - under the right conditions, **mold can grow**. Do you want to be breathing that in?

We recommend a carbon impregnated filter, if available.

Replacement is recommended every 15,000 miles or every year.

Tire Rotation:

This is an inexpensive way to extend the life of your expensive tires.

Every corner of your vehicle wears tires differently. **Alignment, worn suspension parts, and/or steering components will wear a tire prematurely**. The longer a tire is left in one position, the more wear particular to that position will occur.

Some vehicles wear tires prematurely due to poor vehicle design.

I believe regular tire rotations can **double the life of a tire** compared with not rotating at all.

We recommend rotation every 7,500 miles.

Alignment:

We recommend an annual suspension and steering component check with an alignment. If these components fail they can destroy tires before you know anything is wrong. An annual check will help protect your expensive tires.

Differential fluid, transfer case fluid:

These fluids are grouped together only because the recommendation for replacement is the same.
The differentials and transfer cases are built heavy and strong.

Drive components come with varied set-ups and fluid requirements. Some front differentials and transfer cases use the fluid from the transmission.

For separate components that have their own reservoir, **recommended fluid replacement every 50,000 miles.**

Fuel Filter:

I wasn't sure if I wanted to include the fuel filter. Many new cars have done away with them.

A filtering screen is added to in-tank fuel pumps and not replaced until the fuel pump is serviced. I don't care for this design, but it is becoming the standard.

If your vehicle has a fuel filter, is does exactly what you would think - it filters out impurities from your fuel.

We recommend fuel filter replacement every 30,000 miles or every 3 years, whichever comes first.

Brake Fluid:
A fluid that even professionals cannot agree about! Brake fluid is a non-compressible fluid that applies hydraulic pressure to your brake caliper or brake cylinder.

Brake fluid is hygroscopic which means it absorbs moisture from the air. The master cylinder can leak air which allows moisture to enter the brake fluid.

Moisture presents a few problems. 1: moisture can lower the boiling point of the fluid and can cause decreased braking ability, or even a brake failure.
2: Moisture can cause corrosion in the internals of the brake system: lines, calipers, master cylinder, abs pump, etc.

We recommend brake fluid replacement every 60,000 miles or every 5 years.

Antifreeze: For older vehicles using the conventional green antifreeze, **we recommend changing every 2 years or every 24,000 miles.**
The **new coolants** can last much longer, some up to **150,000 miles or 5 years.** Don't buy into the idea of one coolant for all vehicles - the universal coolant can cause mechanical issues. The problems they create are not immediate, so it can take years for them to be an issue and it is hard to prove the coolant caused the problems. My opinion on coolants is to use a coolant designed specifically for your vehicle. **We stock over a dozen different coolants so we have the right coolant for all cars we service.**

The **Timing Belt** is very important and we recommend strictly sticking to the **manufacturer's recommendations**. We do recommend, when replacing the timing belt, to have a complete kit installed with pulleys, tensioner, water pump and new antifreeze.

A new type of engine is becoming the industry standard: **GDI** or Gas Direct Injection engines. Their use in 2008 was about 2% of vehicles; in 2016 the total was over 50%.

The reason for their use is they increase MPG and power and decrease emissions.

There are some unique issues with this engine however. Carbon build-up on the valves and intake, piston rings seizing, and injectors sticking to name a few things.

With proper maintenance, you can expect to get a full life from the vehicle. There are a number of products sold that claim to combat the problems but proof of effectiveness is not available. **We use a cleaning program that has been tested with documented proof of its effectiveness.**

By researching the issues and solutions available, we have designed a maintenance program. The program includes synthetic oil change with injector cleaner yearly or at **10,000 miles**. Carbon cleaning will be performed every **30,000 miles.** This maintenance cleans the valves and intake, lubricates the rings, cleans and lubricates the injectors, along with other benefits.

Spark Plugs: Spark plugs have been used in cars for over a hundred years. The engine pulls in air and fuel. The mixture explodes when the spark plug ignites. New plug designs are built using metals that can withstand repeated high heat and can last for over 100,000 miles. Copper plugs which are still being used have a lower tolerance and need to be replaced more often.

We recommend following your manufacturers guidelines for replacement mileage.

There is one final area I would like to discuss.

The longer your car feels new the easier it is to maintain it properly. Knob break? Replace it. Fix any issues when they happen and your car will feel new and the resale value of it will increase as well.

Keep it clean. Take out garbage after the drive.
Keep your car washed.
Wax at least once a year. Wax the headlights too. That will help prevent the yellow haze.

After years of searching for, but not finding a software program to alert you when maintenance is due, we designed and programmed our own. The use of this program will allow us to perform all maintenance in only 2 visits a year. This means less days of your car in the shop. For example, why not do a PA Inspection, Oil Change, Air Filter, Rotate, and replace the Cabin Air Filter all in the same day?

It allows us to look ahead and see maintenance costs for 1, 2, or even 3 years in the future.
Using inspections in the program will also help us plan ahead for brakes and tires.

Fetch & Fix sends all repairs and maintenance we do here at the shop to “Carfax.” Do you need a record or want to show potential buyers how well your car has been maintained? Show them the Carfax.

Manual Service Due Record

Owners Name:

Year	Make	Model	Mileage
Service	**Frequency**	**Last Completed**	**Next Mileage Due**
Oil			
Trans Fluid	30,000		
Air Filter	30,000		
Cabin Filter	15,000 1 Year		
Tire Rotation	7,500		
Alignment	1 Year		
Differential	50,000		
Transfer Case	50,000		
Fuel Filter	30,000 3 Years		
Brake Fluid	60,000 5 Years		
Antifreeze			
Fuel Clean, Lube	10,000		
GDI Clean	30,000		
Spark Plugs			
Timing Belt			

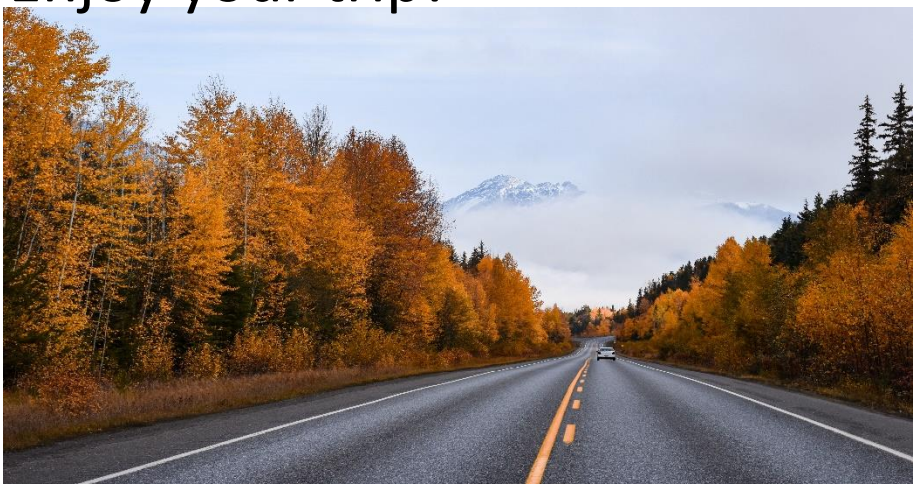
Maintenance Completed Record

Owners Name:

Year	Make	Model	Mileage
Service	**Frequency**	**Mileage Completed**	**Date Completed**
Oil			
Trans Fluid	30,000		
Air Filter	30,000		
Cabin Filter	15,000 1 Year		
Tire Rotation	7,500		
Alignment	1 Year		
Differential	50,000		
Transfer Case	50,000		
Fuel Filter	30,000 3 Years		
Brake Fluid	60,000 5 Years		
Antifreeze			
Fuel Clean, Lube	10,000		
GDI Clean	30,000		
Spark Plugs			
Timing Belt			

Complete and return to Fetch and Fix

Enjoy your trip!



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