

# THE MOTOR OIL

# Bible

Exposing the 3,000 Mile  
Oil Change Myth!

## Did You Know?

- A high efficiency oil filter can reduce engine wear by 70%
- Many synthetic motor oils are not really "synthetic" at all
- Synthetic oil is NOT always a better choice for your engine
- Most synthetic blends are only about 10-20% "synthetic"

**Extending Oil Drain Intervals and ELIMINATING Unnecessary Engine Wear**

**by Michael Kaufman**

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## **"MOTOR OIL BIBLE" (FREE PREVIEW VERSION) PREFACE**

Thank you for reading the *Free Preview Version* of "The Motor Oil Bible". I know you'll find the content useful. Of course, there is considerably more lube & filter information available in the Full Version of the book (another 250+ pages). To get a PDF, MP3 and/or printed copy of the complete book, please visit [www.MotorOilBible.com](http://www.MotorOilBible.com).

### ***So, What's In the FREE Preview Version?***

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In this preview version of "The Motor Oil Bible", you'll find answers to some of the most commonly asked questions regarding motor oil. I've tried to stay focused on those questions people most commonly have, thereby making it possible for many people to get what they need from this book alone – without having to pay for the "upgrade" to the full version of the book.

Of course, that doesn't mean I don't want you to buy my book. I certainly do – but, only if you really need it. "The Motor Oil Bible" contains a TON of information about motor oil and filtration which I believe would benefit a large number of people.

However, many people won't take the time to read that much information, so I've tried to condense some of the answers people are most looking for in this

FREE Preview Version.

If you read this entire preview copy, you'll learn about all of the following:

- **Motor Oil Viscosity**
- **How to Choose the Right Oil for Your Engine**
- **Whether to Use Synthetic or Petroleum Oil**
- **When to Switch, How to Switch & Whether Mixing is OK**
- **How Often to Change Your Oil**

As a bonus, I've also thrown in two additional chapters to help make your oil changes and automotive maintenance easier and more efficient. You'll find them following the above sections.

## **WANT TO KNOW MORE?**

If you decide you are interested in learning more, check out the full Table of Contents listed near the end of this Preview Version. It will tell you ALL of the information contained in the [full version](#) of the book.

## ***Other Informative Lube Sites That I Operate***

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You may also find answers to your lube/filter related questions at one of the following websites that I also operate. Some are newer than others, but all of them offer a wealth of information related to the lubrication and filtration industries. You may find a little information overlap between the various sites, but you will also find content on each site that is complete unique to that site, so be sure to check them all out.

**TheMotorOilSite.com** - Don't forget to drop by [TheMotorOilSite.com](http://TheMotorOilSite.com) on a

regular basis for discussion of automotive lubricants and filters, as well as other automotive issues. The more people we have reading and posting, the more interesting and helpful the forum will be. Most areas of the site can be viewed without registration (which is absolutely FREE), but some areas are restricted to registered members only. So, I hope you'll register for a free account on our system so you can take advantage of all the site has to offer. Again, the address for the motor oil forum is: [www.TheMotorOilSite.com](http://www.TheMotorOilSite.com).

**MotorOilBible.com/blog** – A new blog designed to be a compilation of my own random thoughts and articles along with various lube/filter related articles/news from around the web. In addition, leave your comments on the site to register yourself to win the free gadget giveaway. [www.MotorOilBible.com/blog](http://www.MotorOilBible.com/blog)

**TheMotorOilEvaluator.com** – An additional lube related site that I administrate can be found at [Members.TheMotorOilEvaluator.com](http://Members.TheMotorOilEvaluator.com). This site is an online, interactive, sortable and filterable database of motor oil technical specifications. The purpose of the site is to help people compare motor oils by having a simple way to view the technical specifications for most all of the available oils “side by side”. It also is a free service, so feel free to drop by and take a look.

## ***Why Did I Write “The Motor Oil Bible”?***

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Well, originally, “The Motor Oil Bible” actually started as an informational pamphlet that I used to help educate my customers and potential customers about lubrication and filtration so that they could make a more educated decision regarding whether or not it was in their best interests to purchase my products. Over time, it grew into something considerably more detailed than a simple informational pamphlet. It had become a full-fledged book.

And, yes, in case you did not read this information on the “promo” page for the

book ... I sell oil. I have no intention of trying to hide that fact. It would be ludicrous to do so, and would only detract from my credibility in this area. So, I try to be as open and honest about this fact as possible, although I still have those who are quite skeptical.

I can't exactly blame them, but, quite frankly, I've said on quite a number of occasions that, the longer I spend educating people regarding lubrication and filtration issues, the more amused I am at their expectation of finding useful information from someone who DOESN'T work in the lubrication and/or filtration industry, and hence, would not have a bias in one way or another.

The simple fact is there are VERY few people who really know anything about oil unless there is a reason for them to. The reason is simple. To **really** understand oil and filtration takes a great deal of time, effort and money.

Time to speak with hundreds to thousands of people to get a well rounded view of their experiences with various products and maintenance philosophies. Time to read through hundreds to thousands of technical journals & articles, test procedures, test results, technical specifications, oil industry propaganda, auto industry propaganda. Money to actually pay for those technical journals, industry association dues, test procedure specifics, etc.

What individual that does not work in the oil industry would waste their time? Would you? I doubt it. Your time, money and resources are directed toward other areas. Oil and filters are not "what you do".

The fact that you are reading this book indicates you have an interest in oil and filtration, but is that interest high enough to spend countless hours and hundreds to thousands of dollars satisfying it? Probably not.

So, I wonder, where do people believe they are going to find this magical conglomeration of illumination regarding oil and filtration except from someone

who has a reason to know?

## No APOLOGIES

I make no apologies for selling oil or even a particular brand of oil. Most people who sell a product sell a particular brand or brands because they believe in them. Some people believe in them simply because they believe. Others believe in them because they have studied the alternatives and the industry long enough and well enough to know that they SHOULD believe in a particular brand or brands.

You may find within my book references to the particular oil that I sell, but I won't tell you which one. There will be no blatant push toward that product (nor any links to my website to purchase it). In fact, if you read the Complete Version of "The Motor Oil Bible" carefully, you'll realize that I know this oil that I sell (or any other) is not for everyone. I know that neither synthetic nor petroleum oil is right for everyone.

It depends upon how they drive, what they drive, how long they need to keep it running, how much money they want to spend up front and over the long haul, etc. I am not under the illusion that one brand of oil or even a particular "type" of oil is right for everyone, and my intent is not to "sell" oil by offering this book to anyone.

The truth is, although some people may think that (and they are welcome to their opinion), I'd consider myself a very poor salesman if that was the intent of this book. The fact of the matter is that many of the people I speak with who have read my book choose to use other brands than what I sell for various reasons. I don't waste my time trying to convert them because it is neither in my nor their best interests to do so.

There are also many people who read my book that DO decide to purchase the

particular brand of oil that I sell. However, most of them find a local outlet or do a search on the Internet and come up with another source to purchase their product from. So what. That's not the point of the book, and anyone who thinks it might be, **please do not read "The Motor Oil Bible"** just to check.

Your view is already tainted, so much of what you read in my book will be looked upon from a negative standpoint instead of with an open mind. Hence, there really isn't much point in you reading it.

## **EXTENDED DRAINS ARE DISCUSSED**

I discuss extended oil drain intervals in the full version of this book, fairly extensively (although probably 90% of the 350+ pages of content within the book do NOT specifically discuss extended oil drains). Both the auto AND lubrication industries are moving that direction. Most auto manufacturers are recommending 5-15,000 mile oil drains depending upon the oil type you choose and how you drive. In Europe, 10,000 mile (and further) oil changes have been commonplace for years and are recommended by European auto OEMs such as Mercedes, BMW, Volkswagen and others because European motor oils are typically of higher quality than many US oils.

Even some US based oil manufacturers are now recommending **severely** extended drains for their oils (such as the relatively new Mobil 1 Extended Performance or Castrol Edge products which guarantee 15,000 mile or one year oil changes – for vehicles that are no longer covered by the OEM warranty). Some have recommended/guaranteed these types of intervals for decades, although, in the past, most people have been frightened off by the claims since “nobody else was doing it”.

There are relatively few oils out there that recommend and/or guarantee such severe drain intervals, and, since I discuss extended oil drains in the book, as a means of not only saving you a great deal of money (while NOT sacrificing

vehicle longevity - IF you do it right) but also as a way to protect the environment, it only makes sense that I would refer to these brands by name.

One of those oils happens to be the oil that I sell. I have no intention of NOT mentioning that oil simply because people might think I'm biased. To leave it out would also be biased since they were one of the first companies ever to introduce long drain oils. It would be ridiculous to leave them out of the book because some people might think I'm biased.

## **I'M NOT TELLING**

Again, I want to emphasize that the VAST majority of the book is NOT focused on extended oil drains or the particular oil brand that I sell. Quite frankly, I'm not going to actually TELL you what brand that I sell, although you may figure it out as you read the book. As I said before, I'm not even going to link to my website so that you can buy my oil. You will NOT find a single link to my site within the book.

I'm NOT trying to get you to buy my oil. I DO hope that you'll come to understand lubrication and filtration well enough that you'll be able to recognize just how viable and cost effective long oil drains can be IF you are careful about how you do it.

At the same time, there is a distinct possibility that you or your vehicle may not be good candidates for extended oil drains anyway, in which case, I hope that as a result of reading my book, you'll understand oils and filters well enough to find the BEST oil and filter that fits YOUR needs.

If you ARE one of those for whom extended drains may be a good fit, you MAY end up completely bypassing me in your quest for an extended drain oil or higher efficiency filtration, etc. That's OK with me. I have thousands of customers and make a pretty decent living selling oil. The VAST majority of my

customers got their hands on "The Motor Oil Bible" AFTER they started purchasing and using my oil, so I don't NEED you to purchase my book in order to keep selling oil.

People that have purchased my book have done so because they wanted to better understand oil and filters. If they were already a customer of mine, often they've purchased my book because they wanted to understand how and why my products work so well.

They also have friends that they like to discuss oil with, and they want to be knowledgeable enough to discuss oils and filtration INTELLIGENTLY, instead of just passing on whatever "words of wisdom" they might have received from their Uncle Joe or their Grandpappy (who, incidentally, might both have been EXCELLENT mechanics - but knowing about engines and transmissions does NOT mean you know a hill of beans about oil - even though most mechanics THINK that they are lubrication experts ... just ask them, they'll tell you :-).

Many people are looking for unbiased opinions about extended drains because they want to believe in it, but can't bring themselves to. So, they look for people to support the claims who are UNbiased. Good luck to you, if you are one of those people. The people who are going to tell you extended drains are possible are people who are likely using extended drains themselves and are partial to oils that offer that capability. Therefore, they are biased.

The people who are going to tell you extended drains are **not** possible are either in the business of selling oil and don't like extended drains because they eat into their profits, or they are people who have used conventional oils and conventional drains for years "without a problem", "so why switch now?" That is not exactly an unbiased opinion either - nor is it an educated one.

Anyway, I'm stepping off my soapbox now. You now know that I sell oil. In fact, you know that I sell an extended drain oil. You know that this book began about



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10 years ago as an educational tool for my customers and my potential customers. It's all been fully disclosed, so there's no pretense here.

If it bothers you that I sell oil or the above information has offended you, you are free not to read my book. I won't be heart broken. It's not like the book is all that terribly expensive, so I'm not going to lose sleep over the lost sale. It's not going to keep me from buying a new 35 foot speedboat - I've got more important things to spend my money on.



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## THE MOB: MOTOR OIL VISCOSITY

When speaking of the properties of a motor oil, viscosity is of tremendous importance. Unfortunately, it also an area that is very confusing. The viscosity of an oil refers to its relative resistance to flow at differing temperatures. As has been previously mentioned, an oil must not only be "thin" enough to flow well at low temperatures, it must also remain "thick" enough to maintain adequate protection at high temperatures.

Ideally, an oil will maintain a consistent viscosity over a wide temperature range. The viscosity index of an oil is a measure of its tendency to change viscosity with temperature changes. The higher the viscosity index (VI) the more consistent an oil's viscosity is with temperature changes.

### ***Monograde Oils (Single Viscosity Oils)***

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Monograde oils such as 30 weight oils are designed for consistent temperature applications. For instance, you will find that most older lawn tractors and mowers call for a straight 30 weight oil (SAE 30). This is because it is assumed that these will be operating mainly in warm temperature summer months.

So, if you take a look at their viscosity index, you'll notice that most monograde oils have a low VI number. This implies that as you cool the oil it will thicken

quite a bit. However, this is ok, because the oil is designed to only be used under warm conditions. Cold temperature thickening will not be an issue.

According to SAE J300 standards, to be classified as a certain SAE viscosity, an oil is heated to 100 degrees C (212 degrees F). It's kinematic viscosity at this temperature is measured. If it falls within a certain range it is classified as a particular viscosity. For instance, an SAE 30 oil must have a kinematic viscosity at 100 degrees C of between 9.3 and 12.5 cSt (centistokes).

## ***Multi-Viscosity Oils***

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Multi-viscosity (multi-grade) oils such as 0w30, 5w30, 10w40 and so on are oils, which are designed for applications where temperature changes may be significant. For instance, multi-viscosity oils might be used in northern US climates where temperatures can be -20 degrees F in the winter and +95 degrees F in the summer.

However, that does not mean they cannot be used for applications where the temperature remains more consistent. The fact is, monograde oils are becoming much less common as multi-viscosity oils are being substituted in applications which traditionally called for a monograde oil.

Nevertheless, monograde oils are still used in many super high performance racing applications, construction equipment that is used in only summer months and industrial engines that are kept indoors at a constant temperature all year round.

## **WHAT DO THE NUMBERS MEAN?**

Most people believe that a 5w30 oil is good for cold weather use because it is a "5

weight" oil in cold temperatures and a "30 weight" oil at high temperatures. On the surface this might seem to make a certain amount of sense. Naturally, a "5 weight" oil would flow better than a "30 weight" oil. This would make it ideal for cold temperature operation.

Nevertheless, this is a profound misunderstanding of what the labeling means. The two numbers really have little to do with each other. The final number is based upon the kinematic viscosity at 100 degrees C, as we discussed for monograde oils.

So, if a multi-grade oil, when heated to 100 degrees C, falls within a certain kinematic viscosity it is classified as a certain SAE grade (the last number - like the "30" in 5w30). In other words, the kinematic viscosity of a 5w30 multi-viscosity oil falls within the same range at 100 degrees C as a monograde SAE 30 weight oil does.

A multi-viscosity oil also has to meet a "High Temperature/High Shear" requirement, but I'll talk about that in a minute.

The first number (the "5" in 5w30) is only a relative number which basically indicates how easily it will allow an engine to "turn over" at low temperatures. It is NOT a viscosity reference. In other words, a 10w30 is NOT a 10 weight oil in cold temperatures and a 30 weight oil in warm temperatures.

In fact, since SAE viscosity classifications only apply to an oil at 100 degrees C, it doesn't even make sense to label it as a certain SAE viscosity at any temperature other than 100 degrees C.

Besides, if you thought about it for a second, it wouldn't make sense for a 10w30 oil to be a 10 weight oil in the cold and a 30 weight oil in warm temperatures. What liquid do you know of that gets "thicker" as its temperature increases or

"thinner" as the temperature decreases?

I would venture to say you probably can't come up with one. This holds true for motor oil as well. If a 10w30 was a 30 weight oil at 100 degrees C and a 10 weight oil at cold temperatures, that would mean it "thinned out" as the temperature dropped. That just doesn't make any sense considering what we know about liquids. It just doesn't happen like that.

The fact is that a 5w30 motor oil is thicker in cold temperatures than in warm temperatures, and you can easily test this. Just try pouring a 5w30 oil when it's warm and then try pouring it when it's really cold. It WILL pour more slowly when it's cold, because it is more viscous. However, try pouring a 5w30 oil when it's cold and then try pouring a 20w50 oil at the same temperature. The 5w30 oil will pour MUCH easier than the 20w50 because 5 is less than 20 – the lower the “w number”, the better the cold temp operation.

A 5w30 motor oil will be “thinner” than a 10w30 motor oil when subjected to the same low temperature conditions - because the "W" number is lower. This is an indication of better cold weather performance. In other words, a 5w30 flows better in cold weather than a 10w30 motor oil will. Think of the "W" as a "winter" classification instead of a "weight" classification.

Results from the Cold Crank Simulator (CCS) and Mini-Rotary Viscometer (MRV) tests are used to determine the oil's "W" grade. The better the engine "startability" of the oil at low temperature, the lower the W classification. Each W grade must meet certain "startability" requirements at a specified temperature.

For instance, a 0W grade oil must have a maximum CCS centipoise (cP) value of 6200 @ -35 degrees C as well as a maximum MRV cP of 60,000 @ -40 degrees C. A 5W grade oil must have a maximum CCS cP value of 6600 @ -30 degree C and a maximum MRV cP of 60,000 @ -35 degrees C. The lower the cP value for both

specifications, the better.

Notice that the 0W grade oil is tested at a lower temperature on both tests AND must still have a lower CCS cP value than a 5W oil which is tested at a higher temperature. As a result, a 0w30 will allow your vehicle to start easier on a cold morning than a 5w30 will. Likewise, a 5w30 oil will pump easier in cold temperatures than a 10w30 oil will.

Nevertheless, at 100 degrees C, they all fall within the same kinematic viscosity range. Therefore, they are all classified as SAE 30 weight oils at 100 degrees C. In other words, after your engine has warmed up, a 0w30 and 10w30 motor oil are basically the same viscosity or "thickness" (within a certain SAE specified range).

Of course, although this is true when the oil comes out of the bottle, we'll see in the next section that, depending upon the quality of the oil, the viscosity that comes out of the bottle may not necessarily be the viscosity that you find within your engine after a short period of driving.

## ***The Problem with Multi-Viscosity Oils***

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Multi-viscosity oils provide a great deal more flexibility to protect an engine over a wider temperature range than monograde oils do. Obviously, this should be considered a good thing. However, there is a drawback to multi-viscosity oils. When manufactured from a petroleum basestock, they tend to "shear" back very easily. In fact, this was already alluded to in a previous chapter.

You see, the waxy contaminants within petroleum basestocks crystalize in cold temperatures causing the oil to "thicken" and become hard to pump. So, in order to allow for good flow characteristics at low temperatures, in addition to using

pour point depressant additives, petroleum oils must start with a relatively "thin" basestock.

For instance, let's look at a 5w30 motor oil. In order to flow well enough to meet the 5W classification, a petroleum oil would start with a very thin basestock (maybe one that would be classified as an SAE 20 weight oil by its kinematic viscosity at 100 degrees C). Then, that basestock would be combined with pour point depressant additives.

Remember from the last chapter that these pour point depressants help the basestock maintain its low viscosity even at low temperatures. They counteract the oil absorption that occurs through crystallization of waxy contaminants in the oil. Thus, the oil maintains its viscosity instead of thickening up as the temperature drops.

But, in order to meet the requirements to be classified as an SAE 30 oil, something must be done to assure that this oil won't thin out to its 20 weight basestock viscosity at 100 degrees C. The oil must be "built up" using the long-chain, high-molecular-weight polymers (called Viscosity Index Improvers) discussed earlier.

These polymers expand as temperature increases counteracting the natural thinning action of heating an oil. So, at engine operating temperature (about 100 degrees C), instead of thinning to a 20 weight classification, the oil only thins to a 30 weight classification.

NOTE: Remember, don't let the 5W fool you. It's NOT a viscosity classification. It's a classification to establish that an oil will flow adequately at cold temperatures to protect your engine. The oil is still THICKER at cold temperature than it is at hot temperatures. The oil will thin as the temperature increases. The only question is how much. VI improvers reduce this thinning



action to acceptable levels so the oil can meet both the 5W requirements and the SAE 30 requirements.

Now, let me just say that, the more you think about this issue of viscosity, the more your brain is going to hurt. Just remember that petroleum basestock viscosities are prone to significant change as the basestock is heated and cooled. As it cools, it "thickens" and as it heats it "thins".

To counteract that, petroleum oil manufacturers start with a basestock "thinner" than the "30" in "5w30" (or thinner than the "40" if they're manufacturing a 10w40 oil, etc.) and add pour point depressants so the oil stays as thin as possible in cold weather. Then they add viscosity index improvers that expand with increases in heat so that the oil will not thin out too much to meet the 30 weight classification at 100 degrees C. This is how they meet the multi-grade specification.

Unfortunately, long chain polymers (VI improvers) are more unstable the longer they are. The nature of petroleum basestocks necessitates that they be "built-up" using very long chain polymers. Therefore, these long chain polymers break down fairly quickly. In turn, over a short period of time, a 5w30 petroleum oil may actually "shear back" to a 5w20 (or lower) as these polymers break down. Obviously, this can lead to a decrease in engine protection.

For this reason, to assure at least a minimum amount of protection, the SAE J300 describes another requirement that a multi-viscosity oil must meet in order to be given its multi-viscosity classification. It must maintain a certain cP level on the High Temperature/High Shear (HT/HS) test (ASTM D 4683).

This test must be performed in order to label an oil as a certain multi-grade classification because automobile manufacturers use the physical requirement standards listed in the SAE J300 in order to establish which viscosity grades

should be used in which vehicles. If automotive and lubricant manufacturers are not working off the same play book, it's your engine that's at risk.

But, let's get back to the HT/HS test. If the oil shears back too much on this high temperature test, it cannot be sold as a multi-grade oil. In fact, the test results from this test are very helpful in indicating the quality of the oil. Since they're required for achieving a certain SAE viscosity grade classification, the manufacturing company has the data. Make sure you get it.

The higher the HT/HS number the better because this indicates less shearing. Many petroleum oils tend to have low HT/HS numbers which barely meet the standards set by the SAE J300 specifications, although this isn't always the case.

Moreover, because the petroleum oils are made with a light weight basestocks to begin with, they tend to burn off easily in high temperature conditions which causes deposit formation and oil consumption.

As a result of excessive oil burning and susceptibility to shearing (as well as other factors) petroleum oils must be changed frequently.

## ***The Solution for Multi-Viscosity Oils***

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The good news is, not all multi-viscosity oils shear back so easily. The higher the quality of the basestock, the more shear stable the oil will be, not only because the basestock itself is more shear stable, but also because more stable (shorter chain) viscosity index improvers can be used AND because LESS viscosity index improvers must be used.

Even a higher quality PETROLEUM basestock will make a difference, so if you're looking at an oil, it might be worth checking with the manufacturer to see

if they'll tell you what they are using for a basestock (Group II, II+, III, etc.). The higher the grouping, the better, until you get to Group IV and V which are relatively equal in quality, but are suited better to differing applications.

Group IV (PAO) and V (Ester) synthetic oils contain basically no waxy contamination to cause crystallization and oil thickening at cold temperatures. In addition, synthetic basestocks do not thin out very much as temperatures increase.

So, pour point depressants are, for the most part, unnecessary and higher viscosity basestock fluids can be used which will still meet the "W" requirements for pumpability. In other words, it might be possible to meet 5W requirements with a synthetic basestock that would be classified as a 25 or 30 weight oil at 100 degrees C. Hence, little or no VI improver additive would need to be used to meet the 30 weight classification while still meeting 5W requirements.

In fact, you'll find that some synthetic oil manufacturers actually sell oils that they indicate not only meet a multi-grade specification but also a monograde specification, for instance a 10w30/SAE 30 motor oil. This means that there are NO viscosity index improvers being used in that oil, which allows it to be classified under BOTH multi and mono viscosity grades.

As a result of having heavier weight base oils, little or no pour point depressants and little or no viscosity index improver additives, very little shearing occurs within synthetic oils because the basestocks are not being "propped up" with additives. There simply is no place to shear back to. In fact, this is easy to prove by just comparing synthetic and petroleum oils of the same grade. Synthetics will generally have significantly higher HT/HS numbers. Of course, the obvious result is that your oil remains "in grade" for a much longer period of time for better engine protection and longer oil life.



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## SYNTHETIC OIL FAQs

When making the switch to synthetics or even just deciding whether to make the switch, there are certain questions that often arise. In this chapter I hope to address some of the most common questions you may have that have not yet been answered in the previous chapters of "The Motor Oil Bible".

### ***Is Synthetic Oil Really Right for ME?***

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This really is a useful and valuable question to ask. Even though synthetic oils DO offer higher quality and better engine protection than petroleum oils do, there ARE times when using a synthetic oil just doesn't make much sense. I'd like to give a few examples here of situations where I believe that petroleum oil would potentially be a better option. Then, you can decide whether you still want to make the switch or not.

#### **OLDER VEHICLES**

Obviously, this is a little subjective. Just what constitutes an "older" vehicle? 6 years old? 10 years old? Classic antique? Where do you draw the line?

Well, the truth is there really isn't a hard and fast rule. In fact, where you draw the line may have a lot to do with your risk tolerance and a number of other

factors.

### **Seal Leakage**

Further along in this chapter I'll discuss seal leakage in more detail (hint: synthetic oils do not **cause** leaks, but they may **expose** them). Basically, if you've got an older vehicle, switching to synthetic oil may expose leaky seals and gaskets (or make currently leaking seals and gaskets worse).

So, if you're not interested in spending the money to correct a leaky seal or gasket (and do not have the time or expertise to do it yourself), you may want to stick with petroleum oil and avoid the leaks issue.

### ***If You're Expecting a Miracle - Don't***

If your vehicle doesn't run well now, don't expect that a switch to synthetic is magically going to change that. It won't – at least not likely. If your vehicle's poor performance is primarily the result of build-up in the engine, the switch MIGHT help, but only if you switch to a very high detergency synthetic, and it will still take time to clean it out.

So, if you've got an older vehicle that isn't really running that well, it would be my recommendation NOT to use synthetic oil. Chances are you'll just end up with a poor running, leaky engine with expensive oil in the crankcase. Not a good use of your money.

### **LOW MILEAGE DRIVER**

Three of the greatest benefits that a synthetic oil can offer you are inherently more valuable the more miles you drive. So, if you're only driving 5-10,000 miles each year, chances are synthetic MAY not be a big benefit to you.

### ***Extended Oil Drains***

Generally, extended drain oils don't just have a mileage limiter on their guarantee, but also a time limit. For instance, Mobil 1 EP and Castrol Edge are guaranteed for 15,000 miles OR ONE YEAR, whichever comes first (IF your vehicle is no longer covered by warranty). So, if you're a low mileage driver who only logs 10,000 miles per year or less, you'll still need to change at the end of the year.

Even if running a petroleum oil, you'd likely be safe to change your oil every 3-4 months, which is only 3 or 4 times per year, so you won't be saving yourself a TON of oil changes, and, although your oil change expenses may decrease a bit, it won't be by a significant margin. Thus, it may not be of significant benefit to switch.

### ***Increased Fuel Economy***

Another benefit of using a synthetic oil is increased fuel economy. However, the fewer miles you drive, the less benefit this really offers you. For instance, if moving to synthetic gained you a 3% fuel economy gain (sometimes it's more, sometimes less), your fuel costs averaged \$2.50 per gallon this year and your vehicle gets 20 miles to the gallon your savings aren't going to be huge.

10,000 miles at 20 mpg amounts to 500 gallons of fuel. At \$2.50 per gallon, that's \$1250 for the year. A 3% fuel economy gain would save you \$37.50 for the year. Of course, that covers your cost to switch to synthetic, but it's not as if it's a HUGE savings.

However, if you are a realtor putting 60,000 miles on your vehicle every year, your savings is 6X greater: \$225. Add that to your savings on oil changes and you can begin to see some significant benefit for moving to synthetic. Low mileage drivers just aren't going to gain as much benefit.

Of course, that doesn't make synthetics a BAD choice for low mileage drivers. In

fact, there may be other factors that could make it a GOOD choice. But, the benefits will not likely be AS GREAT for a low mileage driver.

### **Engine Longevity**

One last area that may prove to be less beneficial to a low mileage driver is engine longevity. Synthetic oils protect better, thus providing for longer engine life, which could result in considerable savings with regard to vehicle replacements (especially if an individual uses synthetic lubricants in other areas as well, such as tranny, differentials, etc.)

Of course, the more miles you drive, the more significant that savings is, when calculated annually. If you only drive 10,000 miles per year, even running petroleum oil, your vehicle should be able to make it to the 10 year mark (100,000 miles) before really needing to be replaced.

Moving to synthetic could likely extend that useful life to 20 or 30 years, at least as regards the mechanical (lubricated) parts of your vehicle. However, none of the other components within your vehicle are designed to last the long. So, you'll be nickled and dimed to death fixing ALL of the other NON-lubricated parts of your vehicle. In short, you'll likely need a vehicle replacement at the end of 10 to 15 years anyway, whether you run synthetic or not.

In contrast, someone who logs 30,000 miles each year is in a different position. They'll hit 100,000 miles in a little over 3 years. Running petroleum oil, they may begin to see some degradation in performance at this point. By 150,000 (just 5 years) that degradation may become noticeable enough to warrant a vehicle (or at least engine and transmission) replacement – long before the other components of the vehicle are in need of replacement.

At a minimum, just engine and transmission replacement or rebuild could run 4 to 5,000 dollars or more, depending upon the vehicle. Complete vehicle



replacement could easily run into the tens of thousands.

However, if that same individual was running synthetic oil, chances are the vehicle would have made it 300,000 miles (10 years) or more before the engine and transmission were deteriorating enough to warrant replacement. At this point, many of the NON-lubricated parts would be coming near repair or replacement time anyway. Thus, the vehicle would have lasted at least TWICE AS LONG before needing a replacement, meaning a savings of THOUSANDS of dollars over the course of that 10 year span. Thus, high mileage drivers are really in a much better position to really capitalize on the benefits of synthetic oil.

## **VEHICLE LEASING**

Typically, individuals who lease their vehicles (which is becoming a much more common occurrence) are not high mileage drivers and many of them do not purchase the vehicle at the end of their lease – thus, the condition of the vehicle is not of critical importance.

VERY few vehicles will have any significant degradation in performance over the course of a 3 year lease, regardless of whether petroleum or synthetic oil is used. Thus, the driver will not likely have any frustration over lost performance or repair costs over that period. Moreover, the driver also shouldn't face any penalties when the leased vehicle is turned in due to the condition of the vehicle.

Running synthetic oil in the engine is of little value here, unless for fuel economy savings. And, of course, since most leased vehicles are not driven for high mileage (since there are typically restrictions on annual mileage), fuel economy is likely not as big of an issue for individuals leasing their vehicles.

Lastly, many leased vehicles these days get free or extremely low cost oil changes

from the dealer as part of their agreement. As a result, oil changes cost the driver very little over the course of the vehicle lease. Reducing the frequency of oil changes won't help them much and MAY only cause confusion and aggravation when dealing with the dealership and service technicians who don't typically understand extended drains very well.

In the end, there just isn't much benefit to be had by putting synthetic lubes into the engine or transmission of a leased vehicle.

## **MISTRUST OF EXTENDED OIL DRAINS**

This last issue is also one that comes into play when deciding whether synthetic oils are right for you. There are many who, even having been presented with all of the evidence proving that synthetic oils can be used for extended drains (some for SEVERELY extended drains), will still not be comfortable utilizing extended drains.

For these individuals the benefits of moving to a synthetic oil MAY not be as significant as for those who do choose to utilize extended drains. Of course, if engine longevity and fuel economy are still significant issues for them, moving to synthetic oil might still be a good choice. However, if those are NOT areas where they will benefit significantly from synthetic oils, then the decision to stick with shorter oil drains is just one more reason to stick with petroleum oils.

## **ULTIMATELY, IT'S UP TO YOU**

It's important to spend money where it will get you the most bang for your buck. Synthetic oils cost more up-front. There is no question about this fact. However, in many cases, the long-term gains can significantly outweigh the initial cost differential, resulting in considerable savings over the course of the life of a vehicle.

If you happen to be one of those individuals that will benefit from longer oil drains, better fuel economy or improved engine protection/longevity, then I highly recommend considering the move to a synthetic oil. BUT, if the scenarios listed above describe you, then it might be wise to spend a little more time considering this issue. Synthetic oils MAY not be right for you.

## ***Switching From Petroleum to Synthetic***

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When switching from petroleum oil to synthetic oil, knowing the answers to a few simple questions will help you to be more comfortable with the switch and will make certain that you get the best results for your money.

### **COMPATIBILITY ISSUES**

Synthetic oils, these days, are completely compatible with petroleum oils. This was not always the case, but the widespread use of synthetics now makes that compatibility a necessity.

So, technically, you could even mix your own semi-synthetic oil. However, you will see exponentially better results by using a full synthetic than by going with a semi-synthetic oil. You won't cause any damage - you just won't get the results you're paying and hoping for with a semi-synthetic.

### **WHEN IS IT TOO EARLY TO SWITCH?**

Unless the manufacturer has sent your vehicle from the factory pre-filled with synthetic oil, wait at least 3,000 miles on a gasoline engine and about 10,000 miles on a diesel engine before making the switch to synthetics. This helps make certain that everything is seated properly within the engine which will minimize

the possibility of oil consumption.

Moreover, it allows time to make certain there are no factory defects within your engine that need to be repaired. If you make the switch too early and something goes wrong, you've only provided the dealer with one more excuse to try and deny a warranty claim. You may be in the right, but you might have made your life a little more difficult than was necessary.

## **WHEN IS IT TOO LATE TO SWITCH?**

Any vehicle under 8 to 10 years of age or 100,000 miles is a perfect candidate for a switch, as long as the vehicle is mechanically sound. If, however, the vehicle is more than 8 to 10 years old or over 100,000 miles, there is some debate as to whether you should make the switch. Although the risk is slight, older vehicles have been known to leak around seals and gaskets after the switch from petroleum to synthetic oil.

Personally, I've switched a 10 year old Ford Escort to synthetic oil after 120,000 miles on petroleum oil as well as a GMC Yukon XL with 120,000 miles on it. I saw nothing but increased fuel mileage and improved performance. But, others have not been so happy with the results of switching a high mileage vehicle to synthetic.

It is my opinion that those who had problems are generally much more vocal about their experiences than those who were happy with the switch. This is why we tend to hear so many horror stories about older vehicles switching to synthetics and dealing with seal leakage. My experience has shown that for every person who had a problem there are a hundred more who didn't. You'll have to make your own judgment regarding the switch of an older vehicle to synthetic lubricants.

Why do vehicles sometimes leak when switched to synthetic? Keep reading. You'll find more details on this issue in a further chapter.

## **Is THERE A SPECIAL PROCEDURE FOR SWITCHING?**

If your vehicle is under 20,000 miles, just remove the old filter, drain the old oil, install a new filter and pour in the new oil. You're good to go.

However, if your vehicle is over 20,000 miles and you're switching from petroleum to synthetic oil, I would first recommend that you perform an engine flush to remove any possible deposits within the engine. This will minimize the risk of oil contamination after you make the switch which should help you avoid the possibility of elevated oil consumption. There is a catch, though. Most engine flush products on the market are comprised of very harsh chemicals that have the potential to actually damage engine components.

For instance, many engine flush products are almost entirely kerosene based. It's important to realize that kerosene will certainly clean out engine components, but, it's quite harsh and can have a negative reaction to seals and other engine components. Moreover, it's almost impossible to get ALL of the engine flush OUT of the engine when you drain the old oil to put in the new. As a result, the new oil will be contaminated with kerosene shortening it's useful life and reducing it's effectiveness.

Some engine flush products contain small amounts of kerosene mixed with other ingredients. For instance, AMSOIL's engine flush product contains a small amount of kerosene, but is comprised mainly of the same detergency additives that are used in AMSOIL motor oils, just in higher concentration.

Last I knew there was also an engine flush product manufactured under the Gold Eagle name which didn't contain any kerosene. The bottom line is, just be

careful what you throw into your engine for cleaning purposes.

### ***How to Use an Engine Flush Product***

Most engine flush products are added to the old oil and then the engine is idled for a certain period of time. Just make sure that your engine oil sump is already a half quart low to accommodate the added volume of the engine flush. You don't want to over fill the crankcase.

One way to be sure you've got room for the engine flush is to install a new oil filter to do the flush. This is a good idea anyway because you may end up with a much higher percentage of contaminants in the oil than normal. Your old filter will already be saturated with dirt and debris. A new filter will be much more likely to remove the contaminants from the oil as they are cleaned off of engine components by the engine flush.

Once the car has been idled for the specified period of time, remove your filter and drain the oil while the engine is still warm. This will remove the majority of contaminants from your engine. Then, install a new oil filter and pour in the correct amount of synthetic oil based upon your owner's manual info.

### ***Another Engine Cleaning Solution***

There is another option you could consider. It is not a product I have used, but many individuals that I trust and that are very knowledgeable about lubricants swear by it.

The product is called **Auto-RX** and it is not actually an "engine flush", although it is designed to accomplish the same result, just over a longer period of time. Whereas an engine flush is typically poured into your crankcase and the engine idled for 15-20 minutes, this product is installed with good/new oil and allowed to circulate and clean over a few thousand miles.

Here is a description from the Auto-RX.com website:

**Auto-Rx**<sup>®</sup> is made up of three ester groups. The lanolin ester is the main cleaning agent. Its function is to impregnate the surface of varnish and cooked up deposits. The second is an aliphatic ester. Its function is to provide for better film forming of the host oil, eliminating the potential of dry spots in the oiling system, during the cleaning process. This component is also very resistant to oxidation and is a supplement to the host oil while the contamination is being removed and deposited to the filtration media. The last ester is a biodegradable, polyol ester, which provides extra, extreme pressure capability to the host oil. Utilizing heat, pressure, and flow generated within the oiling system, **Auto-Rx**<sup>®</sup> safely and effectively dissolves deposits. Deposits form slowly over time; they should be cleaned slowly and methodically, as well.

The ester combination provides polarity to the host oil, giving the lubricant an attraction to metal surfaces, reclaiming these surfaces from the contamination. Lubricating oils perform well in clean working conditions. Lubricating oils can either lubricate or clean. They cannot do both well. Detergents in motor oils are added to try and maintain a clean system. They do little to nothing on deposits that have already formed.

Based upon our earlier discussion of ester basestocks, this description holds true to the characteristics that we know esters exhibit. And, since I know a number of trustworthy individuals who've effectively used this product, I am of the opinion that it would likely work well for you.

I make no commissions or anything in regards to this recommendation. I only describe it here as I think it would be a good option to consider for cleaning out an engine prior to putting synthetic in the crankcase.

The website for more info is: [www.Auto-RX.com](http://www.Auto-RX.com) (don't forget the hyphen)

## **WILL OIL PRESSURE DROP AFTER THE SWITCH?**

It is actually possible that your oil pressure may drop slightly after a switch to synthetic oil. However, this normally is a good thing - as long as the drop is not severe. You see, oil flow and oil pressure are two totally different things. Oil flow, in many ways, is more important than oil pressure.

As long as oil flow is good, engine components are getting proper lubrication. If oil pressure drops slightly, it is most likely a result of the fact that the synthetic oil simply has better flow characteristics than your petroleum oil did. This is creating better oil flow throughout the engine and less resistance (which lowers oil pressure).

Nevertheless, if you notice a marked drop in oil pressure, you might want to contact your mechanic just to be sure there are not other issues that might need to be dealt with. It is always better to be safe than sorry.



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## GENERAL MOTOR OIL FAQs

This is a paired down version of the full chapter contained within the full version of "The Motor Oil Bible". The full chapters contains the answers to a number of other Frequently Asked Questions about motor oil.

### ***How to Choose the Right Oil***

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This is probably the number one question that I receive from people. "How do I know what oil to use for MY vehicle?" There are actually a number of preceding questions you need to ask yourself long before you can effectively answer this more general, but extremely important, question.

Motor oil is the most important component of your engine. Without it, your engine dies. With the wrong oil, your engine dies slowly. Getting it right really does matter. Use this guide to help you make the best selection possible so that you can get as much life as possible out of your engine.

### **MOTOR OIL TYPE**

First and foremost, do not overlook the fact that viscosity is not the only criteria critical to proper motor oil selection. You must choose an oil that is matched to your application with regards to it's formulation and design, specifically

basestocks and additives used. For example, if you are running a diesel engine, then you had better be sure the oil you choose is rated for diesel engines. Similarly, if you are running a gas engine, then the oil should be formulated for use in gasoline engines.

Of course, sometimes, an oil can be rated for both gas and diesel use. However, your oil should meet at least the minimum API specifications required for YOUR vehicle. For instance, if your vehicle manual calls for an API SL oil (which is a gas engine oil specification), then your oil should specify that it meets/exceeds that minimum standard (in other words, it should be rated for API SL, SM, ...). It MAY meet other specifications as well, but it MUST, at a minimum, meet the API SL specification.

Likewise, if you are running a diesel engine and your owner's manual specifies that you should only use API CI-4 oils, then you should not use an oil that is only rated for CH-4. This is not a recent enough specification. However, if the oil you are considering indicates that it meets API CJ specs, then you're ok, since "J" comes after "I". API specs are generally "backwards compatible", meaning that the CJ spec also is appropriate for use in vehicles calling for CI, CH, CG, CF, etc. (all PREVIOUS API diesel classifications).

Moreover, some vehicle manufacturers will specify OEM specific ratings that an oil must also meet. This is more common with European vehicles, but is becoming more common with US manufacturers as well. So, if your owner's manual says that your oil is to meet BMW specification XYZ123, then you had better make sure that the oil you're considering indicates that it meets that OEM spec.

## **SYNTHETIC OR PETROLEUM**

This is a question that is actually a relatively critical one IF you have any concern

over how long your vehicle/engine should last. There are plenty of situations that do NOT warrant the use of synthetic oil, and you may very well be in one of those situations, depending upon your vehicle, how you drive, where you drive or how long you intend to keep your vehicle. Of course, it is just as likely that your situation may very well warrant the use of synthetic oil, and the decision regarding which you should choose is not necessarily a simple one.

The truth is, there are MANY variables that affect this decision, not the least of which is just how much trust you put in a synthetic oil to offer enhanced protection and possibly extended oil drains. Some of the many benefits that synthetic oils offer can only be taken full advantage of if you actually trust them to offer those benefits and push the oils beyond what a conventional petroleum oil could accomplish.

By now, if you've read the preceding chapters of this book, you already know what you need in order to make an educated decision in this regard.

## THE VISCOSITY QUESTION

In most cases you can simply go with the manufacturer's recommended viscosity grade. Of course, if you're considering a synthetic oil, it is generally very safe to go to a lesser "w" rating than what is recommended by the manufacturer (although the higher the quality of the synthetic, the more true that statement is). For instance, if the manufacturer recommends a 10w30 viscosity (and isn't already specifying the use of synthetic oil), then you would be safe to use a 5w30 or 0w30 synthetic oil.

Generally (see below for exceptions), if the vehicle manufacturer specifies an XwY viscosity oil (such as 5w30, where "X" is "5" and "Y" is "30"), under most circumstances you should stick with the same "Y" value, but can go to a lesser "X" value to improve cold weather performance and possibly fuel efficiency.

However, in my opinion, you should ONLY do this if you're moving to a synthetic oil and synthetic is NOT already being specified by the vehicle manufacturer.

In other words, if your vehicle manufacturer is calling for a 10w30 SYNTHETIC oil, then, although you MAY be able to go to a 5w30 synthetic oil, I, personally, would not recommend it without some significant investigation into the issue. On the other hand, in nearly all cases, if the vehicle manufacturer is calling for a 10w30 oil and does NOT specifically indicate that you should use a synthetic oil, then, you should be able to EASILY move to a 5w30 synthetic oil, and possibly even a 0w30 synthetic oil with no trouble at all.

If the manufacturer specifies multiple viscosities that can be used in your vehicle but does NOT specify the need to use synthetic oil, then a petroleum oil of ANY of those listed viscosities would be fine, although, the conditions under which the vehicle will be driven would dictate whether to stay at the “high end” or “low end” of the viscosity range listed.

Will you be driving in cold temperatures mostly? Go with a lower viscosity. Congested city driving where engine temps can rise considerably? Heavy towing (same heat issues)? Do you live in a very hot climate? Stay at the higher end of the scale.

All of these and other driving conditions should be taken into account in trying to find the BEST viscosity for your application. However, ANY of the listed viscosities should be adequate, even if using petroleum oil, since the manufacturer is not specifying synthetic as being mandatory.

In contrast, if the vehicle OEM is NOT specifically calling for synthetic, but you're planning on going that direction, then, nearly always, you can safely stick to the lowest “Y” value listed and could even go to a LOWER “X” value. So, for

instance, if the manufacturer said you could use 10w30 or 10w40 in your vehicle, unless your application falls under one of the exceptions below, you could safely stick to an Xw30 oil (using the lowest “Y” value listed) and you could go with a 0w30 or 5w30 oil safely, even though the manufacturer listed only 10w options.

### ***Don't Thicker Oils Offer Greater Protection?***

The cop-out answer is SOMETIMES. Thicker isn't always better - even when using a petroleum oil. Although it is true that heavier viscosity oils (which are generally thought of as being “thicker”) will hold up better under heavy loads and high temperatures, this doesn't necessarily make them a better choice for all applications.

NOTE: When I refer to higher or heavier viscosity oils, I'm referring to the “second” number of a multi-viscosity specification. In other words, a 10w40 would be heavier than a 10w30 because 40 is higher than 30. I'm not making any reference to the “w” rating because this doesn't come into play unless you're referencing cold temperature performance.

You see, on many newer vehicles only 5w30 or 10w30 motor oils are recommended by the manufacturer. If you choose to use a higher viscosity oil than what is recommended, at the very least you are likely to reduce performance of the engine. Fuel economy will likely go down. Engine performance will likely drop.

In the winter months I would highly recommend that you not use a heavier grade oil than what is recommended by the manufacturer. In cold start conditions you could very well be causing more engine wear than when using a lighter viscosity oil. In the summer months, going to a heavier grade is less of an issue, but there are still some things to be aware of.

Moving one grade up from the recommended viscosity is not likely to cause any

problems (say from a 10w30 to a 10w40 oil). The differences in pumping and flow resistance will be slight. Although, as was mentioned, efficiency of the engine will decrease, the oil will likely still flow adequately through the engine to maintain proper protection, and, under certain circumstances (heavy load, high RPM), you MAY see improved protection with this heavier oil.

Moving two grades up from the recommended viscosity (say 10w30 to 20w50) is a little more extreme and could cause long term engine damage if not short term. Here's the thing. Although the oil will still probably flow ok through the engine, it is a considerably heavier viscosity oil. As such it will be more difficult to pump the oil through the engine.

More friction will be present than with a lighter viscosity oil. More friction means more heat. In other words, by going to a heavier weight oil, you may actually be causing more heat build-up within the engine. You'll still be providing adequate protection from metal to metal contact in the engine by going with a high viscosity, but the higher viscosity will raise engine temperatures.

Over the short run, this is no big deal. However, over the long term, when engine components are chronically run at higher temperatures, they WILL wear out more quickly. As such, if you intend on keeping the vehicle for awhile, keep this in mind if you're considering using a heavier weight oil than the manufacturer recommends.

The key is to generally stay away from viscosity grades that are not mentioned in your owner's manual. Sometimes vehicle manufacturers will make reference to the possibility of using a 10w40, 15w40 or 20w50 motor oil, even though they might recommend a lighter weight oil for most situations.

If this allowance is made, you'll be ok using a heavier grade of oil. You'll

probably see a drop in mpg using the heavier oils, but you will not likely cause any long term engine problems. I would recommend, however, to stick with the lower weight recommendations if using a synthetic oil, even if you're running the engine in higher temp climates. I think you know why by now.

If the manufacturer does not make allowance for heavier weight oils, it would be my recommendation that you DO NOT use a heavier weight oil in your engine. Under most circumstances, stick with a viscosity grade that is recommended by the manufacturer. And, if you do choose to use a heavier weight oil, at least make sure that you only move up one grade. Never move up two grades.

### ***Exceptions to the Above Rule***

1. If yours is a racing application, more investigation would be necessary to determine the proper viscosity to be using in your engine.
2. If yours is a heavy duty application where your vehicle is being subjected to EXTREME service such as towing extremely heavy loads, you may want to consider going to one of the heavier recommended viscosities.
3. If you are not comfortable venturing outside of OEM viscosity recommendations, then, by all means stick with what your vehicle manufacturer recommends. OEM viscosity recommendations will be perfectly safe for your vehicle and will make your selection process easy.

### ***Specialized Cases***

It is possible, depending upon how you are using your vehicles or equipment, that a more extreme divergence from the OEM viscosity recommendation might be appropriate. However, if you think this may be the case, before making the decision to diverge entirely from the manufacturer's viscosity recommendation, please do your homework.

## **MOTOR OIL QUALITY COMPARISONS**

Once you've managed to decide the type and viscosity of oil you should probably be using, the question then comes down to determining which of the oils that meet your criteria are the best of the bunch. In most respects, the only way to really make that determination is to check the specs. It's not a perfect technique, since the specs can "lie" in some ways, but, it's the best option you've got. In order to help you with those comparisons, I've implemented a free online oil comparison database that will allow you to quickly and easily compare the specifications for over 650 different motor oils. Sign up for a free account at:

[Members.TheMotorOilEvaluator.com](#)



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"The Motor Oil Bible" ..... a Motor Oil & Filtration Handbook

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## WHY CHANGE OIL – 3,000 MILE MYTH

The necessity of 3,000 mile oil changes is a myth that has been handed down for decades, and, hopefully, by now you've read enough to at least get you thinking. 3,000 mile changes haven't been necessary for over 30 years, but only recently have the US auto industry and their customers begun to realize it on a larger scale.

Obviously, I've already discussed this issue in spurts, throughout much of what you've already read. I'll try not to recover all the same information here. To bring it all together in one place, I may reiterate a few things here, but I'll try to focus mainly on those aspects of extended drain intervals that have not yet been discussed.

In case you haven't guessed already, I'm partial to synthetic oil. There are, of course, a number of instances when petroleum oil will be a better choice, but under many circumstances, synthetic oils provide much more bang for your buck than petroleum oils do - you just have to know how to use them to your benefit.

Personally, I believe the whole point of using a synthetic oil is peace of mind. I like knowing that I can trust the oil in my car to protect my engine. I like knowing that 2-300,000 miles down the road, I won't necessarily have to start looking for another vehicle (unless I'M ready). I also like knowing that when 20,000 miles rolls around, I still have a few thousand miles left to find time to

change the oil.

Hopefully, having already read this far, you are now pretty clear on the differences between synthetic and petroleum oils and, at least in theory, understand that synthetic oils DO have the capability to protect your engine for considerably longer than petroleum oils, especially if they are designed specifically for extended drain use.

However, having been working in this industry for 13 years, I know that there are many people who believe in the CONCEPT of extended drains – they believe it is POSSIBLE and that there are oils and filters out there that they could use to extend their own oil drains, BUT, they just can't bring themselves to take the plunge. Too many years spent believing the myth and building a habit of short oil changes.

So, I'd like to spend a little more time discussing this issue DIRECTLY, as opposed to just touching on it here and there in the midst of other topics.

## ***Mobil 1: The Lion's Share of the Synthetic Market***

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There are a number of oil companies out there that are manufacturing oils which are good for extended oil drain intervals. However, since Mobil 1 still carries a big percentage of the market, I thought I might spend a little time touching on that particular brand first.

Recognizing that they can no longer stick to the age-old 3,000 mile mantra, Mobil 1 now offers three different motor oil lines that are capable of extended oil drains, although not all of them are specifically recommended or guaranteed for longer drains. Interestingly enough, the one Mobil 1 oil that is capable but NOT specifically recommended or guaranteed for extended oil drains is Mobil 1

standard synthetic.

The Mobil Clean 5000 (petroleum) and 7500 (blend) are both recommended and guaranteed for the obvious intervals (5,000 and 7500 miles respectively OR six months, whichever comes first). However, pay close attention to the warranty for these oils.

**Mobil does NOT warranty/guarantee these oils for those intervals if your vehicle is still covered under your vehicle manufacturer's warranty.**

Mobil 1 synthetic oil (NOT the Extended Performance synthetic) has no specific extended drain recommendation or guarantee associated with it, although, clearly it would be capable of offering extended oil drains. Chances are you'd be very safe to run this oil for 10,000 miles or six months, whichever came first, especially if you were using good quality oil/air filtration. You might even be able to go further.

However, since Mobil does not guarantee the oil for these distances, you do so at your own risk. Neither Mobil, nor myself hold any liability for damages to your vehicle that may result from attempting extended drains with their Mobil 1 synthetic oil. Mobil's recommendation is to stick to the vehicle manufacturer's recommended intervals.

## **MOBIL 1 EXTENDED PERFORMANCE**

However, Mobil DOES now offer what many people would consider to be an EXTREME extended drain oil, it's Extended Performance oil. This oil is a full synthetic which is designed and recommended/guaranteed for 15,000 miles or one year, whichever comes first.

It's interesting to note that their website indicates Mobil 1 EP contains "50%

more SuperSyn". Of course, there really isn't any specific information on the Mobil 1 site that really says what SuperSyn is. The best I could find was the following on their faq page ([https://www.mobiloil.com/USA-English/MotorOil/Oils/Mobil\\_1\\_FAQs.aspx#FAQs21](https://www.mobiloil.com/USA-English/MotorOil/Oils/Mobil_1_FAQs.aspx#FAQs21)):

“Mobil 1 with SuperSyn uses high-performance fluids, including polyalphaolefins (PAOs), along with a proprietary system of additives.”

So, whatever “SuperSyn” is, the wording here (“**including** PAOs”) clearly indicates that it is not completely PAO based. Moreover, it seems noteworthy to me that, if SuperSyn is not completely PAO based, then Mobil 1 EP cannot be completely PAO based either. Having 50% more of a blended package means that you've not only got 50% more PAO but also 50% more of whatever is blended with it.

Now, it is possible that the basestock is a blend of PAO and Ester basestocks, but, if that was the case, it's likely that Mobil would say so, as this would be more impressive than the alternative, which is that the basestock is a blend of PAO and Group III basestocks. I can't say for sure which it is, but it seems logical to assume it is probably the latter.

Don't get me wrong. Mobil 1 EP is a very good oil. I don't consider it to be a GREAT oil. However, I do believe that it is entirely capable of the 15k drains that Mobil recommends. It should again be pointed out, though, that:

**Mobil does NOT warranty/guarantee their Extended Performance synthetic oil for the above intervals if your vehicle is still covered under your vehicle manufacturer's warranty. During that period, if you choose to extend your oil drains using Mobil 1 Extended Performance, you're on your own.**

## ***Castrol – Chasing Mobil Hard***

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Castrol has also recognized that they can no longer sit by without entering the “extended drain race”. So, they now offer their new Edge oil, which is, similar to Mobil 1 EP, a 15,000 mile or one year oil.

As with Mobil, they only guarantee and recommend those intervals for vehicles that are out of warranty. The FAQs on the Castrol Edge site ([CastrolEdgeUSA.com](http://CastrolEdgeUSA.com)) indicate that the Edge formulation contains SOME PAO basestock, but they are careful not to indicate that it is 100% PAO. Specifically they say “Castrol EDGE is made from a proprietary combination of base oils, which **includes** PAO”.

They mention nothing about any ester basestocks, so I'm assuming there is no ester in it. Based upon the careful wording of the site, I'm assuming it's a blend of Group III and PAO basestocks. Hard to say for sure.

Either way, it's probably a decent oil, although it would be tough to say for sure - Castrol includes MINIMAL tech data on their spec sheet ([here's the PDF](#)). The only useful spec they offer is the CCS. No pour point, no flash point, no HT/HS, no TBN, no viscosity index ... you get the idea. Pretty lame spec sheet, although not unexpected since Castrol doesn't provide much info on *any* of their spec sheets.

## ***AMSOIL – A Little More Committed***

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AMSOIL is a different animal altogether. Mobil and Castrol have entered the extended drain market in recent years to capitalize on a steadily growing niche of consumers who understand that extended drains are possible and are seeking

out products that offer that capability. AMSOIL, on the other hand, has really been the primary driving force behind this push to extended drains, offering 25,000 mile oils since the early 70's (technically, late 60's).

Although AMSOIL has been a relatively “under the radar” lubricants company that, until the last 5 or 6 years, was little known by most vehicle owners, they have been pushing for extended drains for over 3 decades and have a very loyal following among performance minded consumers. The company actually offers dozens of synthetic lubricants for numerous applications, as well as a very diverse list of oil & air filtration products.

Of course, because AMSOIL sells their products through a multi-level-marketing structure, there are still those who look on AMSOIL's extended drain and high performance claims as “so much rubbish” from a company that “can't sell via traditional means”.

I am not one that takes that perspective, but, the following thread over at [TheMotorOilSite.com](http://TheMotorOilSite.com) might be worth a read to those that do. If you read through the whole thread, you'll find a relatively good discussion involving opinions both for and against AMSOIL's products and their marketing (or just head over to [TheMotorOilSite.com](http://TheMotorOilSite.com) and search for “amway”):

<http://themotoroilsite.com/phpbb/search.php?keywords=amway>

I highly recommend taking a look at the above thread. It's well worth the read for anyone who might be considering AMSOIL but is having trouble getting over an aversion to their marketing methods.

## ***Why Do Many Companies Still Push 3,000 Miles?***

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Now, you may be saying to yourself, “If there are oils out there that will REALLY last for 15,000 miles or more why am I still being told to change my oil every 3,000 miles by so many people who should KNOW whether it's necessary or not? Either someone is lying or someone just doesn't have all of the facts. “

Well, I believe that it is a little bit of both. You've probably heard that 3,000 mile oil changes are necessary from friends, family, possibly your mechanic and definitely your local quick lube operator. The problem is, most of them are just reiterating what they've been told for years - and it has served them pretty well.

Most of them simply do not understand lubricants nearly as well as they think they do. Even those mechanics who are brilliant when it comes to automotive engines are not necessarily experts on lubrication. Lubrication technology is much more involved than most of them thinks.

Nobody can know everything, but in order to give people the most accurate advice, it pays to make sure that you have all of the relevant information.

I believe that there are even a large number of quick lube operators that don't know nearly as much about lubricants as they'd like to think. However, I also believe that some of those same quick lube operators that are telling you to change your oil at 3,000 mile intervals might very well be using synthetic oil for extended oil drain intervals in their own vehicles.

### **WHAT DOES THE INDUSTRY SAY?**

It's sad, but true. Oil companies and many quick lube operations know that synthetic oils are capable of extended drain intervals but are too afraid of lost revenue to admit it. In fact, here are a few quotes from different people in the

automotive and lubrication industries which should illustrate what I mean:

According to GM's Mike McMillan, "Certainly there is technology available to raise the standard and extend the drain interval without compromising engine durability or removing the performance cushion ... Europe is already at a 9,000 mile drain interval and is seriously considering twice that".

Most other auto manufacturers agree. In the May 1996 issue of Lubes 'n' Greases (14 years ago) representatives from the three major US auto makers detailed how lack of knowledge about available lubricant technology led to an unsatisfactory PCMO (Passenger Car Motor Oil) upgrade.

In "GM's Tough Agenda for Lubes," Lubes 'n' Greases reports that extended drains are a customer service issue. "...We're very concerned about engine durability and oil drain intervals particularly as they impact reducing the amount of maintenance our customers are required to perform. Customers want to minimize their vehicle maintenance time and changing engine oil is their single biggest remaining maintenance item. Addressing that issue is very important to us."

In response to this issue, GM has even come out with an oil life monitoring system for many of its vehicles. Although it does not actually test the oil to determine its viability, it does monitor important system information to establish whether the oil is being exposed to conditions that would require a more frequent or less frequent change interval. The system isn't perfect, and it doesn't account for the long drain capability of synthetic oils, especially premium synthetics, but it's at least a step in the right direction.

Even quick lube operations know that the technology exists to extend oil drains well beyond the 3,000 mile mark. Some are embracing extended drain technology as a way to increase customer satisfaction as well as company profits



by working WITH the improvements in lubrication technology, instead of against them.

Dennis Brooks, Vice President of Speedee Oil Change and Tune-Up, implied as much in a statement he made in the November 1996 issue of National Oil & Lube News, a respected periodical in the lubricants industry.

In regard to the extended drain issue Brooks said, "I believe there will be greater potential to move into selling a higher percentage of synthetic oil."

Others in the quick lube industry, however, are running scared. Jim Sapp, Convenient Automotive Services Institute (CASI) president, is quoted in the same article as saying, "For years, Jiffy [Lube] has preached the 3,000 mile or three month oil change interval. And fortunately for us, many motorists take it as gospel. But we need to do more as an industry ... It's not inevitable that intervals will expand to the point where we can no longer stay in business." (In other words, we CAN keep extended drains from becoming common in the marketplace).

In the October 1996 issue of Lubes 'n' Greases, Quaker State CEO Herbert M. Baum suggests, "We need to go on the offensive. Stop fighting with each other and go forward as a group; fight for regular oil changes. We have to build business as a group, and it's the role of our associations to promote the use of our products."

In a September 2001 interview with Lubricants World (a highly respected lube industry journal), Marc Graham, then president of Jiffy Lube International, vehemently opposed extended drains.

Graham said, "There is a significant issue out there that affects anybody that utilizes lubricants, and that is extended drains...Everything we can do to bring

the oil change interval back into a logistical time-frame, the better off we are.”

Of course, Graham makes no mention of premium synthetic oils which provide better protection for longer periods of time than petroleum oils. But in his defense of 3,000 mile changes he does go on to say this:

“Jiffy Lube ... estimates that if we increased one car per day [per shop] in our system, that's \$33 million in revenue...Looking at this from another angle, if we could move our customers to get one more oil change per year it's worth \$294 million for the oil change alone and \$441 million in revenue, when you include the ancillary products and services customers typically buy along with an oil change.”

Of course, since Jiffy Lube is owned by Pennzoil-Quaker State (PQS), it should be of no surprise that what benefits Jiffy Lube, benefits PQS. PQS's bottom line is directly affected by how well Jiffy Lube promotes the 3,000 mile oil change.

The same is equally true of other major motor oil manufacturers who either own lube chains or set up arrangements with quick lubes to offer their products. Shorter drain intervals helps everyone but you, the vehicle owner. You're getting fleeced.

Now, in Marc Graham's defense, he does make one brief statement about his belief that when extending oil drains “past a certain mileage, emissions increase, gas mileage decreases and your engine suffers”, which would seem to indicate that maybe he's concerned about the protection of your engine. And, of course, he's right, but only in regard to petroleum lubricants. If protection of your engine was his main concern he wouldn't have spent three quarters of his interview talking about Jiffy Lube's bottom line profits, now would he?

## HASN'T THE INDUSTRY MOVED FORWARD SINCE THEN?

Unfortunately, not nearly as far as you might expect. Even though many of the quotes above are from as far back as 2001 and even 1996 (and Castrol & Mobil ARE now offering extended drain oils), for the most part, the industry really hasn't moved forward too much, especially the quick lube side of things.

In large part, most quick lubes are still pushing the 3,000 mile oil change, even though most vehicle manufacturers have begun recommending 5,000 plus mile changes for many drivers.

Most lube shops offer synthetic oils, but many still don't push them because petroleum oils are still their bread and butter. Why shoot the "Golden Goose" when she keeps on laying golden eggs?

Of course, the auto industry is moving in the right direction, but that may be relatively self-serving. Vehicles these days are really made quite well and engines and transmissions are quite durable. Using a quality oil at short change intervals could very well extend vehicle life out past 200,000 miles. Using a premium synthetic, even at long drains, could extend vehicle life even further.

However, many auto manufacturers are now recommending PETROLEUM oil change intervals as high as 10,000 miles or more, based on driving conditions and/or the readings of the oil monitoring system. Although, certainly, in SOME instances, oil drain intervals like this MIGHT be possible with petroleum oil, it's unlikely that such practices would be in the best interests of the vehicle owner, who would like to keep the vehicle intact as long as possible.

Thus, auto manufacturers may be "killing two birds with one stone" by recommending the longer drains without much focus on improving the quality of your oil and/or filter before doing so. Not only do they make customers happy by reducing the frequency of scheduled maintenance – primarily oil

changes, they make their pocketbook happy by forcing customers to replace their vehicles sooner than might be necessary, if oil drain intervals were not extended or better lubes and filters were used.

## WANT MORE PROOF?

Even though they are fighting a losing battle, oil companies continue to “fight to the finish”, trying to maintain as much control over customers' oil change intervals as possible.

### **Valvoline**

Take for instance Valvoline's new 300,000 mile engine guarantee. What an excellent marketing strategy. This is a NON-transferable warranty, so, since the vast majority of people sell their vehicles long before they get to 300,000 miles, the chances that anyone will actually take advantage of the guarantee are pretty slim.

In addition, the guarantee is only applicable if you start using Valvoline before 75,000 miles, which is reasonable and understandable, but still limits the availability of the warranty, thereby shrinking the number of potential claims even further. Of course, even customers who can't actually take advantage of the guarantee are impressed by it, so it's smart marketing.

Lastly, the 300,000 mile guarantee is **ONLY** valid if you use Valvoline SynPower and **change it every 3,000 miles**. So, if you want Valvoline to guarantee your engine for 300,000 miles, you've got to buy their \$6/quart synthetic oil and change it every 3,000 miles.

Or, for a 225,000 mile engine guarantee, you could use their Durablend product, and still change it every 3,000 miles. Lastly, you can get a 150,000 mile engine guarantee (which is pretty pointless since just about any modern day vehicle

could make it that far running on the cheapest oil you can find (although I wouldn't recommend that).

The point is, Valvoline is still encouraging super frequent oil changes, even with oils that can easily hold up for longer drains, such as their SynPower product (that could probably last 7500 to 10,000 miles or six months – even though they're not recommending or guaranteeing that).

This not only encourages the continued use of excessive amounts of oil, it also creates FAR more used oil to be disposed of.

### ***Quaker State & Pennzoil***

Valvoline is certainly not the only one. Quaker State and Pennzoil are using a similar marketing strategy. They both offer a 300,000 mile guarantee for your engine, as long as you started using QS or Pennzoil before the engine hit the 48,000 mile mark and as long as you change the oil every 4,000 miles or 4 months, regardless of whether you're using petroleum or synthetic oil.

Their specific guarantee also requires an AIR filter change at every oil change. This is an interesting and lucrative twist. Even a conventional paper air filter is typically good for AT LEAST 7500 miles before it really starts to load up too badly. Often 10-12,000 miles is possible. So, cutting that change interval in half or more adds considerable profit to their bottom line.

There is absolutely no question that oil companies are going to duke it out to the very end trying to convince consumers that frequent oil changes are a necessity for long engine life. The only question is, will you believe them?

## ***So, How Often SHOULD I Change My Oil?***

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Well, quite frankly, this is a sticky subject, and the answer isn't all that cut and dried. However, the following should give you a rough guideline to follow.

Just understand that the suggestions below are only rough guidelines and are not specific recommendations. Every vehicle is unique and the driving habits of every vehicle owner are different. Without speaking with you directly and evaluating both, I could never provide accurate oil drain interval recommendations.

So, follow the recommendations below at your own risk. I am accepting no responsibility for any damage or loss that may or may not result. You've been warned.

### **WARRANTY ISSUES**

Unless you purchased an extended warranty for your vehicle, your original factory warranty is NOT tied to your oil drain intervals. A warranty claim cannot be denied simply for extending your oil drain intervals – only if the manufacture can PROVE that your extended drain intervals caused the problem at hand can they deny the claim – and ONLY that claim or any subsequent claims that are directly related to it.

That being said, just because a dealer/manufacture cannot LEGALLY deny your warranty claim or void your warranty simply because you extended your oil drains, that doesn't mean they won't try to convince you they can. Until you show them that you know your rights, they may push pretty hard.

Personally, I can't stand being pushed around, so I have no problem extending my drains – nor would I have any trouble pushing back against a dealer that

employed such tactics. The reason they do it is because so many vehicle owners DON'T push back. If we stood up for ourselves a bit more, maybe they wouldn't pull those kind of shenanigans.

Nevertheless, if you want to avoid these types of issues, while your vehicle is under warranty, you should simply maintain oil drain intervals that fall within those recommended in your owner's manual.

## **GETTING MORE SPECIFIC**

It's not uncommon for today's vehicle owner's manuals to recommend 7,500 to 10,000 mile oil changes, with no specific requirement to use synthetic oil (at least not in most cases). Personally, I believe that to be too long if you're concerned for the longevity of your engine and are NOT using synthetic oil. Even with the improvements to petroleum oils in recent years, modern day engines are much harder on the oil than ever before.

As a general rule of thumb, if you don't want to get into all the technical discussion but want to stay relatively safe with your drain intervals, those running petroleum oils should take the vehicle manufacturer's recommendation and drop it by about 30% or so (the mileage limit AND the time limit).

Alternatively, if you are running synthetic oil in a vehicle that does not require it, then you can likely take the manufacturer recommendations and increase them by about 30% and you'd be pretty safe. If you choose to run a synthetic oil that's guaranteed for longer drain intervals, you should be able to extend even further.

Of course, if the vehicle manufacturer recommends or requires synthetic oil, then there's likely a reason and you should definitely be using synthetic oil. In that case, again, I'd be careful about using the manufacturer's recommendations as gospel.

They are in business to sell more vehicles, so, to some extent, it's in their best interests for your vehicle NOT to last too terribly long. So, as I said before, if you just want to stick with a basic rule of thumb, drop those recommendations by about 30% and you should be pretty safe and should maintain pretty good engine protection.

Otherwise, if you want a little more detail ...

### ***Petroleum Oil Users***

Obviously, most petroleum oils are not capable of significantly extended oil drains. So, in my opinion, assuming that you've got an engine that is running well and in good condition, you should keep petroleum oil changes to 4-5,000 miles or 4 months, whichever comes first.

Short trip drivers and infrequent drivers typically won't reach 4-5,000 miles before the 4 month limit, but they WILL typically generate considerable water build-up within the crankcase due to condensation. Water within your oil is BAD, causing acid build-up and possible corrosion. This is why such drivers should change their oil at 4 months, rather than waiting for the 4-5,000 mile marker.

The exception to this rule would be individuals that live in very arid climates where condensation would be less of an issue. In that case, it's possible that a 6 month drain interval might be acceptable, even for a low mileage driver.

High mileage drivers (especially those who drive a lot on the highway) could possibly extend their oil drains to 7,500 miles, but that would be pushing it in my opinion. Oil analysis would be the best way to verify whether this is a good idea for you or not. If you're not interested in doing oil analysis, then I'd stick to the 6,000 mile upper limit.



If your engine runs poorly, is relatively old has been poorly maintained, shorter drain intervals may be necessary as your oil may become contaminated more quickly than normal.

### **Synthetic Oil Users**

Off-the-shelf synthetic oils typically don't have much better acid fighting ability than petroleum oils. As a result, the upper TIME limit doesn't change much. I wouldn't push most synthetic oils beyond 6 months, although some of the better oils with TBN values above 9 may be able to go a bit longer.

As far as mileage goes, 8-10,000 miles is about as far as I'd go without oil analysis or a guarantee from the company to back me up. As mentioned earlier, there are some oils on the market that guarantee 15,000 miles or more. Those are a different animal and are designed for long drains. However, synthetics that make no specific mileage claims should be changed at no greater than 10,000 miles.

Here again, arid climates help with condensation, so in these cases, your upper TIME limit might be able to be pushed just a bit. In addition, as with petroleum oil, if you're a high mileage driver who puts a lot of highway miles on your vehicle, you might be able to push the mileage limit a bit as well.

### **Diesel Oil Users**

Some diesel oils are also API rated for gas engine usage. If you can find a diesel oil that also meets the API gas engine specs necessary for your gas powered engine, these oils are generally a little "beefier" than motor oils for gas engines. As a result, you can often push these oils a bit farther in gas engine applications than a similar gas engine motor oil – especially with regards to the TIME limit.

If you're running your diesel oil in a diesel engine, understand that diesel engines are a bit rougher on the oil than gas engines typically are. In addition,

there can be a bit more variation from one diesel engine to another in terms of how hard it is on the oil, so it's a bit difficult to nail down what your drain intervals should be.

Moreover, there are significant differences in drain intervals between passenger car and pickup truck diesel engines as compared with large diesel haulers and construction equipment type engines. So, this is an area that doesn't really lend itself to providing any good "rule of thumb" numbers.

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## CHANGE YOUR OIL THE \*RIGHT\* WAY

Oil changes are generally pain. But, changing your oil doesn't have to be that way, IF you do it right.

This is likely to be the first and only tutorial you've ever read that tells you the RIGHT way to change your oil. Now, before all you backyard and certified mechanics get ready to lynch me for accusing you of incorrectly advising your groupies, hear me out. I think you'll all find this useful.

As is the standard among the hundreds of oil change tutorials that exist on the net, I'm going to provide the basics of what to do, step by step, just in case we've got some folks on this site who've never happened upon any of the hundreds of other online tutorials that exist out there (that way they won't have to go searching for one - this is one stop shopping).

However, in addition to the standard outline, I'm going to embellish a bit on a few of the steps and give you some tips that will make the process a heck of a lot easier and less messy, so stick around. You just might hear some things that you've never heard before.

As a final note regarding this tutorial, I should express a little legaleze:

### ***Don't Blame Me***

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This tutorial is provided for informational purposes only. By reading this tutorial and following it's recommendations you agree NOT to hold me or my company liable, in any way, for any vehicle problems, expenses, loss of profits, injuries or

even death that may result from (or that you perceive to have resulted from) following any of these recommendations.

Obviously, these recommendations are sound and will be safe and effective for anyone that follows them. However, as with ANYTHING, there is always a certain amount of risk involved. You agree to accept that risk entirely yourself, absolving me of any responsibility for any damages that may result from your actions in relation to these instructions.

The truth is, it's sad that I even have to say this - a sad editorial on the state of American society and the litigation happy individuals that have raised costs for EVERYONE on just about every service or product we purchase by way of suing anyone and everyone whenever something bad happens. Get over it people. Life is hard. Things happen. We can't be protected against EVERY mishap, and we can't expect everyone else to be responsible for our own stupid actions.

Ok, I'm done with my rant. Let's change some oil ...

## ***Changing Your Oil the RIGHT Way***

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Before we actually change the oil, there is a little prep work that should be done to make your life as easy as possible. Let's pave the way for an easy oil change.

### **WHAT DO YOU NEED?**

In this section I'm only going to outline the "standard" items that most folks would tell you are necessary to perform an oil change. As we go through this tutorial I'll tell you how you can make some steps considerably easier, cutting your time on task and minimizing your final clean-up.

- **Engine Oil** - Make sure you have the proper quantity, viscosity and type for your vehicle (the complete version of "The Motor Oil Bible" has an

excellent chapter detailing the selection process).

- **Large Funnel** - Unless you don't have room, larger and longer is better.
- **Oil Filter** - In my opinion, "any old filter" will NOT do. The complete version of "The Motor Oil Bible" offers an excellent chapter on oil filters.
- **Filter Wrench/Strap** - A stuck filter is simply a pain in the you know what - have the tool to deal with it ready.
- **Socket Wrench** - Make sure you've got the correct socket size for your vehicle's drain plug.
- **Drain Pan** - Believe it or not, the type can have a significant affect on how easy your oil change is.
- **Jack, Jackstands or Ramps & Chocks** - Keep the vehicle stable and secure - this is probably the MOST important issue, yet often the most overlooked.

Now that we've established the basic items that you need for any oil change - the obvious ones that make it possible to get the job done at all - let's move on to the first steps of our oil change.

## PREPPING THE AREA AND VEHICLE

1. **Get it Level** - One important aspect of doing an oil change is finding a flat, level area to do it. If you set the vehicle on an incline it is possible you may not get all the oil drained out, leaving old oil in the crankcase to contaminate the new clean oil and filter you're about to install. Also, performing an oil change on an incline only increases the chances that the

car might somehow roll or slip off your jack stands or ramps. So, find a level location.

2. **Sweep Up** - You really want a clean area to work. If you'll be laying directly on the ground, leaving little rocks and pebbles and such in the area can be painful on your back. If using a creeper (I'll tell you later about an AMAZING creeper that every DIYer should have), you're just asking for a pain in the backside since most creepers stop cold every time the wheels contact a small rock or pebble. It only takes a second to sweep up the area ahead of time - why not do it?
3. **Raise the Vehicle** - Of course, for some vehicles this may not be a necessity, if you've got some decent ground clearance. For the rest of you, better to give yourself plenty of room to work, rather than make your life more difficult. Either use a heavy duty jack to raise the vehicle, set jack stands and then drop the vehicle onto the stands OR drive your vehicle up onto a set of ramps. Either way, I recommend securely setting a chock BEHIND one rear wheel and IN FRONT of the other rear wheel so the vehicle can't roll in either direction.
4. **Position Tools & Supplies** - You'll only be upset with yourself later if you don't. It stinks to get under the vehicle only to find you've forgotten one of the items that you need to get the job done. Put everything within easy reach so that when you're ready for it, it's there. Drain pan, socket wrench, filter and filter wrench should all be UNDER the vehicle. Oil and funnel should be up above at the engine compartment.

Now that we've got the vehicle prepped and the area clean, we're ready to start the actual oil change. Our prep work will pay off, though, making our job easier and causing less frustration as we go.

## LET'S BEGIN

1. **Warm It Up** - Now that the vehicle is up, start the vehicle and run it for just a few minutes - just long enough to warm up the oil a bit and circulate any debris that might have settled in the oil pan. Since the vehicle is raised, you can easily get underneath and feel the oil filter periodically. As soon as the filter begins to warm up just a bit (not hot enough to burn your hand), shut off the vehicle - the oil is warm enough to drain quickly and contaminants should now be suspended in the oil to be drained out with it.
2. **Release the Vacuum** - In order to allow the oil to drain more quickly, it will help to remove your oil fill cap & loosen your dipstick. In this way, as the oil drains out, air can be pulled in through the fill cap to fill the void, so that there isn't a vacuum created which will keep the oil from draining.
3. **Get Ready to Catch** - Be sure to place your oil drain pan directly underneath your oil drain plug (recognize that, when you initially pull the plug, the oil is going to "shoot" out probably 6 to 10 inches. Then, as the oil drains, the stream will move closer and closer to a straight down trickle and then drip. Thus, your oil pan must be positioned to catch not only the initial "shot" of oil, but also the final drips.

Ideally, I would suggest using a LARGE diameter oil drain pan so that it can easily be positioned to catch the oil stream throughout the entire drain (from shot to drip). Or, even better, an oil pan that has a built in funnel to catch the oil and direct it straight into the pan ([check out this oil drain pan on Amazon](#)). But, what if you DO drip or even, heaven forbid, SLOP oil on the floor? I suggest you don't take the chance. Put something down to catch the slop and make sure it's large enough to catch everything.

A number of years ago I purchased and reviewed a product called the Absorb Mat. What an incredibly useful item. It's a thin, carpet-like mat with a durable, non-penetrable ethylene-vinyl backing. The carpet-like portion of the mat is actually highly absorbent. Just a 3'x5' mat will trap and hold, literally about a gallon of fluid (water, oil, anti-freeze - take your pick). The mat rolls up easily, lays flat when you want it to and can be easily cut into any size/shape you like.

Purchased through the [company website](#), a 3'x5' is only \$22, but shipping is about \$10. You might be able to find them or something similar locally, but [Amazon](#) offers a decent price (\$25) with free shipping.

There are a few other REALLY cool (and relatively inexpensive) products that can SIGNIFICANTLY reduce the time, effort and potential mess associated with the actual draining of your oil. Check out the "Cool Tools" section at the end of this chapter for more info.

4. **Pull the Plug** - If you want the oil out of your engine, you're going to need to pull the plug. So, find the correct socket to fit your drain plug and loosen the plug with your socket wrench. Loosen it just enough so that you can turn it by hand. As you hand loosen the plug, try and hold it tight to the pan, preventing any oil from escaping until the plug is completely de-threaded. Then, quickly pull the plug from the hole and out of the oil stream, being careful not to drop the plug in your oil drain pan or drain funnel.

I would suggest wearing latex or rubber gloves for this part, which will keep the oil off your hands (or take a look at the "Cool Tools" section for some items that will keep your hands COMPLETELY free of any oil). Once the oil has completely drained, replace the plug and tighten until snug, but not over-tight.



- 5. Replace the Oil Filter** - FIRST, place your oil drain pan directly under your filter so that it can catch the oil. THEN, take a screwdriver or hole punch and punch a hole in the very bottom of your filter (if you can get at it). By allowing the oil to drain out of your filter through this hole and directly into the drain pan you should avoid alot of the mess that often is associated with filter removal.

Once ALL the oil has drained out, plug the hole you punched in the filter with a piece of paper towel or something and remove the filter. If it can be done by hand, great, but, in many cases that won't be possible. You'll need some sort of filter wrench or strap to remove a tightly stuck filter. Better yet, get this well reviewed [universal filter wrench](#) to remove all of your stuck filters.

Be sure to check and make sure that the old oil filter gasket isn't still stuck to the engine and clean the plate around the threads to ready it for the new filter.

- 6. Install Your New Filter** - Rub a little oil on the new oil filter gasket and screw onto the threads. Fill the filter about half full with oil to avoid a complete dry start once installed (if your filter installs upside down, obviously this wouldn't be a good idea - oil will go everywhere).

Be VERY careful not to cross-thread the filter - it should screw on very easily. Once the filter gasket touches the engine turn the filter an extra turn, but then back it off 1/8 to 1/4 turn. Don't just use any old filter. A simple change in oil filter can actually reduce engine wear by up to 70% (see SAE Technical Paper 881825) so don't underestimate the value of a good filter. The complete copy of the "[Motor Oil Bible](#)" ebook has some excellent information about oil filtration that you might want to consider reading to help you decide on an oil filter for your vehicle.

7. **Time for the New Oil** - Place your oil funnel into the oil fill location. Begin pouring the new oil into the funnel being sure NOT to overfill. Check your owner's manual for quantity and the viscosity you should use.

Want to know how to select an oil that will best fit your application? Check out the "[Choosing the Right Oil](#)" article on The Motor Oil Bible Blog. Once you know HOW to compare various motor oils, get the specs for comparison: check out [TheMotorOilEvaluator.com](#) for an online, interactive comparison database of over 650 different oils (it's FREE).

8. **Wrapping Things Up** - Once you've added ALMOST the full quantity of oil that your owner's manual suggests, stop pouring and get the vehicle down off your ramps or jacks (be sure to remove your tools and drain pan first). Allow the vehicle to sit for a few minutes. Then, pull the dipstick, clean it, reinsert it (fully) and then remove once more to check your oil level. If the oil level is sitting within the "cross-hatching" on the dipstick, you're good. However, if it's sitting near or below the bottom of the cross-hatching, pour in a little more oil until you get the oil level up to the middle of the cross-hatching.

## ***Cool Tools You Should Know About***

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I've already suggested a few new tools in the oil change outline above, but, there are some that I've left for this section. There are some really unique and high quality items in this section that can take nearly all the hassle out of your oil changes. Simplify your filter changes. Drain your oil directly into any container you want. Eliminate the draining of your oil altogether.

I'm about to SUPER simplify your oil changes, and I guarantee you'll thank me for it.

## SPECTRE EASY ACCESS OIL CHANGE KIT

([Check it out on Amazon](#))

What if you could perform a full oil change without ever having to get under your vehicle – AT ALL?

How convenient would that be? How much time and effort would be saved? How much more likely would it be that your oil would actually be changed ON TIME instead of being put off another day or another month? How much less cleanup would there be?



That is exactly what the Spectre Oil Change Kit could do for you. This is a very well reviewed system that not only relocates your current oil filter to a more convenient location (as can be accomplished with some other similar products on the market) – but also provides a pump system whereby you can pump/drain your old oil into whatever container you like without ever having to get under the vehicle. Pretty slick.

Of course, I'm sure there are those who are reading this section thinking that this is a bad idea because then you never get a chance to get under the vehicle and look things over, check for leaks and loose fittings or hoses, grease those areas that need it, etc. To some extent, of course, you may be right.

It is important for someone to get under your vehicle periodically to check these things out, whether that be you or a mechanic that you pay to do the job. However, even if you still want to slip under the vehicle to check this stuff out,

this system will simplify your life by allowing you to avoid the unnecessary time, effort and inconvenient oil spills and drips that ordinarily accompany an oil change.

No more dropping your drain plug into your drain pan. No more having to contort your body to try and reach (and actually TWIST OFF) a difficult to access oil filter only to end up leaking oil all down your arm and the chassis of the vehicle as you remove the filter. No more transferring of oil from a drain pan to an easier to transport container – just flip the switch and pump the oil directly into whatever transport container you like using the attached drain hose. No more getting burned by hot oil.

Oil changes are now a 5 minute, super clean and easy process, leaving you free to take a few minutes to check things out underneath the car if you like, without having to get yourself all oily and greasy and spend an extra 20-30 minutes just cleaning up after you've already spent a half hour to an hour on the oil change itself.

I told you I'd simplify your oil changes. It doesn't get too much simpler than this, unless you take it to the shop to have it done. ([Check it out on Amazon](#))

## **FUMOTO OIL DRAIN VALVE**

([Check it out on Amazon](#))

Interested in simplifying your oil changes, but still like the idea of getting under the vehicle once in awhile? A couple of years ago I ran across a unique little valve that makes my oil changes SOOOOO much easier. It's called a Fumoto Quick Drain Valve, and it replaces your oil pan plug. This valve is designed so that it's nearly impossible to open unless you INTEND to open it (as at oil change time).

When it comes time for an oil change, rather than unscrewing your oil pan plug (and ending up with oil all over your hands and the plug in your drain pan), you simply open the Fumoto valve, which directs the oil stream right where you want it. Want to be even more precise draining your oil? Get the valve with an additional nipple for attaching a small drain hose.



Using this method, you can actually drain your oil right into a quart or gallon bottle with a lid. Just connect your hose at oil change time, put the other end into the top of your container and open the Fumoto valve. When the oil level reaches near the top of your container, close the valve, pull the hose and put on your cap. Grab another container, put the hose into the top, open the valve and repeat the process.

No mess, no muss, no fuss. Simple. The **Fumoto Valve** costs just \$20 to \$30 for most vehicles, and it's VERY well manufactured. I highly recommend it to anyone who does their own oil changes. I wouldn't be without one for my own oil changes.



Want a cheaper alternative?

Fram makes a similar unit called a **Sure Drain**. Personally, I'm not a big Fram fan (I think their quality has suffered a great deal over the years), and I like how well made the Fumoto Valve is. However, for those who might like a less expensive option, you could try the Sure Drain, which is a similar unit that performs basically the same function as the Fumoto Valve.

Endorsed by ...

Dying to know? [Click Here to Visit Their Website](#)

[Fumoto Valve on Amazon](#) | [Fram Sure Drain on Amazon](#)

## LOOKING FOR MORE?

Check out my post on “The Motor Oil Bible” Blog which offers a number of additional “Cool Tools” to make your oil changes (and possibly other auto repair as well) SO much easier.

[See it by clicking here.](#)

# MotorOilBible.com

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"The Motor Oil Bible" ..... a Motor Oil & Filtration Handbook

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In Conjunction With ::::: [The-Motor-Oil-Evaluator.com](http://The-Motor-Oil-Evaluator.com)

## AUTOMOTIVE MAINTENANCE DONE RIGHT

In this day and age, with vehicles becoming more electronic than mechanical, it can often be difficult to do alot of your own maintenance. However, that being said, there are still numerous vehicle components that you CAN maintain, repair and/or replace yourself, ultimately saving you hundreds or even thousands of dollars.

I highly recommend learning to do some of your own vehicle maintenance, if only so that you have a better understanding of just how your vehicle works, so that, when something goes wrong, you won't be completely in the dark. Let's face it, even if you take the vehicle into the shop, it's nice to at least have *some* clue about what's going on, so that you don't get "taken to the cleaners".

There are a number of excellent resources online to help you in the "understanding" department.

### ***YouTube Videos***

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It's amazing just how helpful a well done video can be when explaining complicated vehicle systems, and there are some terrific videos on YouTube, put out by a number of companies, websites and such.

One such “channel” that has TONS of useful videos regarding just about every automotive maintenance or repair topic under the sun is “[AutoRepairHelp101](#)”. I highly recommend checking them out at:

<http://www.youtube.com/user/AutoRepairHelp101>

### ***Other Useful Sites:***

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Another really useful resource is the Automotive area on the [HowStuffWorks.com](#) website. Lots of really detailed articles with diagrams (many of them animated) and videos to help explain it all. Check them out here:

<http://auto.howstuffworks.com/>

[InnerAuto.com](#) is a good one for static and animated diagrams and descriptions of various automotive systems and components. The site has been commercialized and is now selling auto parts, but all of the diagrams, animations and descriptions are still available on the site through the link below.

[http://www.innerauto.com/Automotive\\_Systems/](http://www.innerauto.com/Automotive_Systems/)

### ***The Ultimate in Auto Repair and Maintenance Help***

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When it comes to doing your own auto maintenance, knowing the basics of how vehicle systems and components operate is tremendously helpful, so the above resources should come in handy. BUT, without detailed instructions regarding what to do, how to do it and in what order to do it, the “big picture” won't do you much good. You need the details related to each specific auto repair project you decide to undertake – otherwise, you'll be up a creek without a paddle.



Chilton and Haynes auto manuals can really come in handy for this purpose, and I've used them in the past. However, they can often leave a bit to be desired, and it's not as if they're super cheap (not that they are all that terribly expensive either, but I have a couple of other options for you that may prove FAR more useful at a very reasonable cost).

## **YOUR PERSONAL, ONLINE AUTO REPAIR LIBRARY**

What I'm referring to are online auto repair help repositories that put all of your auto repair information in one central place – and you get EVERYTHING you really could possibly need: system descriptions and explanations, step-by-step maintenance and repair instructions, detailed diagrams, figures and tables, specifications, torque values, special tool diagrams and descriptions, technical service bulletins (TSBs) from the manufacturer, comprehensive maintenance schedules for your vehicle, etc.

Honestly, just about ANY information you could possibly desire to help you with an auto repair or maintenance project will be conveniently located all in one place – and YOU decide how you want it displayed and/or printed.

If you want the descriptions and step-by-step detail on one sheet with diagrams and figures all together on another sheet, you got it. Want it all printed together, you got it.

Only want to know about a specific system component, no problem. Like to print off the detail of the entire vehicle system that includes that component – done.

## **TAKE YOUR PICK: TWO AWESOME SITES**

There may be others, but the two most prominent online sites that offer this type

of service are [AllDataDIY.com](#) and [eAutoRepair.net](#). I have not personally used the [AllDataDIY.com](#) service, although their demo looks excellent – possibly better than the [eAutoRepair.net](#) system, on which I DO have an account. Much of the primary information seems similar, but it seems that the AllDataDIY system may offer some additional information that the [eAutoRepair.net](#) service does not (although I haven't yet fully confirmed that).

Primarily, what I like better about the [AllDataDIY.com](#) service is that the layout is nicer (more professional looking) and the information seems to load slightly faster. Otherwise, the two services seem to offer very similar functionality.

Pricing may end up being the area that differentiates them most, so here's a rundown of the differences between the two.

[AllDataDIY.com](#) offers the best long term pricing for their subscriptions, currently \$26.95/year or \$44.95 for a 5 year subscription. In contrast, [eAutoRepair.net](#) runs \$29.99/year and there is no option for a discounted multiple year subscription (although I have seen in a couple locations on their site that a 4 year subscription of \$39.99 is available, I can't find a way to actually PURCHASE a 4 year subscription). So, for the long-term, this makes AllDataDIY's service a much better buy.

However, if you just want to test the waters with one of these accounts to see if you believe the information would prove useful, eAutoRepair MAY be the way to go. Although they don't offer discounts for longer subscription durations, they DO offer a couple of shorter duration “trial” runs.

You can subscribe for a week for \$9.99 or for a month for \$16.99. So, you have options available with the eAutoRepair service that are not available with AllDataDIY. Either way, whichever service you go with, I think you'll find that the information they provide is WELL worth the price, IF you will actually be

doing your own maintenance and repair whenever possible.

IF, on the other hand, you just want to know more about how vehicles and their various systems and components function, these services are not likely what you want. Take advantage of the free information sources I listed earlier in this chapter. I think you'll find that they are very helpful.

## MAKE MONEY PROMOTING THESE SERVICES

If you end up utilizing the services above and feel they are worth the subscription price, why not recommend them to others? Contrary to anti-Capitalists around the world, there is nothing wrong with making money (even LOTS of money), as long as you earn it ethically by actually helping meet a need that someone has (not by *pretending* to meet their need and then bailing once you've got their money).

Both [AllDataDIY](#) and [eAutoRepair](#) have affiliate programs available for their services. Not only do they pay between 20 and 40% on all subscriptions, they pay on an ongoing basis, as long as the subscription is maintained (which is only likely if an individual feels the service is worth continuing – so everyone wins).

So, instead of paying out money on advertising themselves, [AllDataDIY](#) and [eAutoRepair](#) allow their affiliates to advertise their services and pay them a commission for doing so. Since I run an affiliate program myself, this makes a lot of sense to me, and I've taken advantage of their program.

I have no problem recommending a service that I find useful, and I'm certainly happy to allow the company to pay me a “finder's fee” for doing so.

To sign up: [AllDataDIY](#) | [eAutoRepair](#)



# MotorOilBible.com

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"The Motor Oil Bible" ..... a Motor Oil & Filtration Handbook

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In Conjunction With ::::: [The-Motor-Oil-Evaluator.com](http://The-Motor-Oil-Evaluator.com)

## ENDORSED & RECOMMENDED BY ...

There are, literally, thousands of individuals that have read and recommend the full 350+ page version of "[The Motor Oil Bible](#)" to friends, relatives, customers, etc. One of them is owner of the website linked to below. Hundreds of mechanics and lubrication specialists believe "The Motor Oil Bible" to be one of the most valuable lubrication and filtration resources ever written for the average vehicle owner.

In fact, following the "sponsor link" below, you'll find *10 pages of comments* given by numerous individuals who were more than pleased with their purchase of "[The Motor Oil Bible](#)" and most of them supplied the following comments without any request from me whatsoever. **NONE of the following readers received any compensation whatsoever for their comments provided below.**

### ***Please Check Out the Book Sponsor's Website***

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The FREE Preview copy that you are currently reading is not only endorsed and recommended by, but also PROVIDED by the owner of the following website.

As my thanks to them for spreading the word about "The Motor Oil Bible" by distributing copies of this FREE Preview version of the book, I highly encourage you to check out the site at the link below:

[Click to Visit the Sponsor's website Now!](#)

## ***Unsolicited & Uncompensated Comments/Testimonials***

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**“THANKS, MICHAEL ... FABULOUS MATERIAL”**

Michael,

For years I have been in the dark about motor oils. Not knowing what the truth was or how to interpret oil test results. After reading the Motor Oil Bible I consider myself an expert on the subject and I am quite often the center of conversation on the subject.

I was able to make an educated decision on the oils to use in my cars and I feel quite confident I have chosen the best.

Thanks, Michael, for this fabulous material.

*~ Ronald C. Berry - Bethel Park, PA  
NOSPAMrcberry@adelphia.net*

**“EXTREMELY INFORMATIVE”**

The Motor Oil Bible was extremely informative, answering the questions I had about how long a car can REALLY go between oil changes, not just what the owners manual says. I changed the oil in my PT Cruiser to a brand of synthetic oil guaranteed to last 1 year or 25,000 miles, and installed a high-quality oil filter.

I immediately noticed increases in gas mileage and power. Now, when I accelerate quickly, I no longer hear the engine struggling. Instead, it sounds smooth. I am only afraid my brakes may not last as long, because my car coasts so well now! I can hardly wait to see the difference when I get my new air filter!

I hope to drive my PT Cruiser for 3 or 4 hundred thousand miles.

*~ David Montane - Decatur, Georgia*

*NOSPAMdavmon@attbi.com*

## **“OUTSTANDING ANALYSIS”**

Outstanding analysis of the functions and relative qualities of motor oil, oil filters, and air filters. This ebook was the basis for my decision to pursue extended-drain motor oil use and premium filtration products. It was a real eye-opener how people are settling for less, handing over their hard-earned cash for inferior protection of what is, for some, their largest investment.

Time will tell if the extended drain, superior filtration program makes my cars (a Chevrolet and a Volvo) last longer...in the mean time I am happy to be doing my part to minimize the hazardous waste problem we are all facing. I have switched to long-life engine coolant as well, and I think OAT (organic acid technology) should be mandatory to reduce our consumption and disposal of ethylene glycol too.

I have especially appreciated the empirical nature of the “Motor Oil Bible” e-book - I didn't feel like Mr. Kaufman made bogus claims to support his thesis ... it's hard to argue with the numbers. The problem I think is that most people just don't care enough about machinery to do a little research on the benefits of long-

life synthetics, and the oil companies/quick-lube companies should be ashamed for pushing us to keep using a marginal product and buy more and more of it just because it's cheaper in the very short run.

We have the technology we need to improve our environment and make our cars last longer ... thanks Mike, for getting the word out. You will always be fighting a battle as long as the auto industry has incentive for our cars to die early. I thought I was the only one who has been thinking about this!

*~ Matthew Smith - Ledyard, CT*

### **“AMAZED AT HOW LITTLE I KNEW”**

I was amazed at how little I actually knew about the “life blood” of my engines! You are providing a great service to all who are lucky enough to find your website. The price you ask is little to pay for the wealth of information you provide. I hope you continue to “flesh out” your most useful work and perhaps provide an updated comparison appendix as you receive more information. I am very pleased!

*~ Ray N. Ward - Warren, PA*  
*NOSPAMrayward@westpa.net*

### **“REALLY IMPRESSED WITH THE INFO!”**

Mike, I was really impressed with the info. in your book!! I am a very meticulous person who loves to learn and know the facts about things, I have done all types of mechanical things my entire life, and would recommend your book to anyone.



~ *Derek Walker - Texas*  
*NOSPAMwhyus@totalzone.com*

## **“BEST BUY I EVER MADE”**

Hi Mike,

Your “Motor Oil Bible” was great!! I downloaded it and feel it was one of the best buys I ever made. Following the information you provided I changed to \*\*\*\*\* Synthetic's on all my vehicle's and boat (351 Ford inboard/outboard).

The conversion in my 454 Chevy Work Horse Fleetwood (Pace Arrow Vision-36 FT.) motor home alone has increased my gas mileage by almost 10% and believe me this is a real benefit. This alone, in a very short time will pay for the "Motor Oil Bible" and the initial expense for all the oil changes. Thanks again for this "must know" information.

~ *William Jesse Mayfield, Sr.*  
*A very satisfied customer!!!*

## **“THIS BOOK IS A 'MUST HAVE'”**

This book is a “must have” for any individual, company, or automotive - truck service provider. The factual and technical data is easy for the layman to understand, and the information is up-to-date.

This work will bring the reader out of the 19th century of refined petroleum lubricants and into the 21st century of engineered lubricants. Don't leave home without it!

*Will Miller - Largo, FL*

*~ NOSPAMnovaeng@tampabay.rr.com*

### **“I COULDN'T PUT IT DOWN”**

I found the ... book very informative. In fact, I couldn't “put it down” until I had finished even though it was well past my ideal bedtime.

This book contains information that every vehicle owner should know.

*~ Richard Morra - Mississauga, ON*

*NOSPAMmorra@idirect.com*

### **“HIGHLY RECOMMEND IT'S PURCHASE”**

I found the motor oil bible to be most informative and instructional. I highly recommend it's purchase.

*~ James Bucci - Boothwyn, PA*

*NOSPAMJBucciJ@cs.com*

### **“ALL THE DETAILED INFO I WAS SEEKING”**

Mike,

This web site and the purchase I made were exactly what I had been looking for.

Most mechanics and articles I had read were very non-committal on the benefits of synthetic motor oils. In fact, their statements seemed to suggest that they knew very little about the topic. The Motor Oil Bible provided me with all of the detailed information I had been seeking.

Thanks!

*~ Doug Carroll - Sandy, Utah  
NOSPAMdoug.carroll@fmr.com*

**“GREAT PRODUCT. HIGHLY RECOMMENDED”**

After seeing all the confusion over oil changes and synthetics on web forums, I've saved the link to the ebook site so that all can learn. Great product; highly recommended reading.

*~ Tim Kessler - Crosby, ND  
NOSPAMtkkessler@yahoo.com*

**“FIRST WORD HE SAID WAS WOW!”**

Good Morning Mike,

I gave you another very happy customer last night. I just happened to be surfing Ebay last night, and ran across a guy who was selling his 1999 Mustang Cobra. In his sales ad he stated how he only used Motorcraft oil and filters. So I told him to check out your oil bible.

He wrote back about an hour or so later, and the first word he said to me was

WOW! He said everyone should have a copy... I just wanted you to know that I truly love your oil bible and am very happy with it, and will continue to pass it along in anyway I can. Thank You once again for ... caring about your customers.

~ *D. M. - CT*

**“WELL WRITTEN. WORTH THE PRICE”**

I would recommend the book to any person interested in car care and saving money. Well written. Well worth the price.

~ *Fred Elias Jr. - Warren, MI*  
*NOSPAMfeslope@bignet.net*

**“A+++! GREAT JOB!”**

I love the Motor Oil Bible ebook and it's contents.

Mike has done a fantastic job with it's contents and I have shared the link with many other coworkers.

A+++! Great job!

~ *Steve McRuiz*

**“WELL WRITTEN WITHOUT BEING TOO HEAVY”**

Mike,

Your work deserves some gratitude from all of us out there in virtual world. It's well written without being too heavy but yet most technical details are there. Keep up your good work.

Tony – Singapore

### **“275,000 TROUBLE FREE MILES”**

I have had the Motor Oil Bible for quite a while. It is a very informative resource and takes the hype and mystery out of selecting quality oils and filters. I have a Toyota with 275,000 trouble free miles thanks to the guidance of the Motor Oil Bible!

### **“MANY MYTHS SHATTERED”**

Great book! All the typical questions answered, and more. I have had my eyes opened to many angles about oil I never suspected mattered. Many myths have been shattered by means of clear, straightforward explanations, and also by personal replies to written inquiries.

Thanks, Michael.

*~ Rolando Lequeux - Boca Raton, Florida.*

### **“ALL THOSE HARD TO FIND FACTS IN ONE PLACE”**

The Motor oil bible had all those hard to find facts in the one place ... so rather than referring people to multiple places you can now use just the one reference.

It's hard to find someone who takes oils seriously, knows enough about oils to give you good advice and to offer unbiased advice. The Motor Oil Bible and Evaluator are good tools for getting both generic and specific info about oils.

*~ Michael Czajka  
Sunshine, Victoria, Australia  
NOSPAMMC1@pobox.com*

### **“ONE OF THE BEST THINGS I HAVE PURCHASED”**

Thank you Mike for your reply. I am not too sharp on computer and I found your MOB in my junk file. Once I approved it and moved it it was fine. I am also very interested in oil and you have answered so many questions for me.

I am using \*\*\*\*\* already, and now I know why it doesn't need as much additives. (for one thing) Thank you again, and put me in your very satisfied customer category. I am only part way through the reading and I am keeping notes on some of it. This is one of the best things I have purchased for myself.

*~ Myron*

### **“WOW ... WHAT A WEALTH OF INFORMATION!”**

I originally purchased Mikes e-book many years ago. I had wanted information on engine oil, but I couldn't find much on the internet.

I stumbled onto the Oil Bible and initially hesitated. I thought that it may just be another internet ploy. I mean, who hasn't be caught up in one yet. Anyway ... after much thought, I went ahead and purchased it. WOW...what a wealth of information! After reading the book I actually felt smart, and I prided myself as an oil guru now.

The best thing about this book is that it opened my eyes to extended oil change intervals. I read with GREAT skepticism! I mean, going over 3k on a oil change is just crazy...right?!

I took a leap of faith and tried it, and I can tell you honestly, that I will NEVER go back to 3k oil changes. Just another big rip off from the oil companies.

I've had 3 trucks since reading Mikes book and have practiced extended oil changes. None of them EVER had any problems related to the engine. That alone was worth the purchase of the book and that doesn't even count the many hours saved doing the oil changes!

Buy the book, soak it in and walk away an oil guru!

### **“ABSOLUTE ESSENTIAL FOR EVERY VEHICLE OWNER”**

"The Motor Oil Bible" is by far the most comprehensive, must-read lube and filter information ever integrated into a simple, easy to read format for the average motorist. But, in no way am I saying this information is only for beginners. Competent mechanics and engineers will benefit as well.

As a Lubrication Specialist and Automotive Engineer with 17 years experience in the auto and lubrication industries (14 of them with a major automotive manufacturer), I believe "The Motor Oil Bible" is an absolute essential for every

vehicle owner. You simply won't find a more complete yet easy to understand resource for learning all you need to know about lubrication and filtration.

~ *David Mann*

## **DEALER TECHNICIAN SAYS: "FACTUAL & INTRIGUING"**

I am a certified dealership technician. After reading your book, I find the material factual and intriguing. Synthetic oil, and extended oil drains are definitely the wave of the future. I wish more people would read this book.

~ *Alex*

## ***Get the Book Now***

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If you're really serious about protecting your vehicle and interested in saving money while protecting the environment at the same time (how often do those two things go together?) I cannot stress to you enough just how useful the information in "[The Motor Oil Bible](#)" will be for you. It really is one of the best available resources for the average motorist to get the facts about motor oil and filters as it relates to protecting their expensive vehicles and guarding their pocketbook from unnecessary expenses.

## ***Check Out the Last Chapter***

---

I hope that you'll take just a few minutes to read the final chapter of this free preview ebook. It contains an important message that I hope you'll read in it's



entirety. In fact, whether you buy my book or not, in the grand scheme of things, is irrelevant, but, the following chapter is probably as relevant as anything you'll ever read.

**If you read it for no other reason, please read it as a favor to me, to repay me for the free information I've just provided you in this book. Thanks a bunch.**



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"The Motor Oil Bible" ..... a Motor Oil & Filtration Handbook

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In Conjunction With ::::: [The-Motor-Oil-Evaluator.com](http://The-Motor-Oil-Evaluator.com)

## TABLE OF CONTENTS FOR THE COMPLETE MOB

The following is a copy of the complete table of contents for the full 350+ page "Motor Oil Bible". Hopefully, between this free preview version and the following table of contents, you'll be able to effectively determine whether the complete book is going to be useful to you.

*Clickable Links:* Bear in mind, since the TOC below was copied from the full version of the book, it is still "linked" to each page of the book – pages that don't exist in THIS book. So, you'll notice while hovering over any of the chapter titles below that they are "clickable". Just know that clicking on any of them won't really do anything.

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## CHRISTIANS STINK AT LOVING PEOPLE

Ok, hopefully, I've gotten your attention. If you happen to be a Christian, please read this before you judge my statement above. If you are not a Christian (and possibly are in complete agreement with the statement above) I hope that you'll read this as well.

No matter who you are, if you believe this chapter has no place in this book (whatever your reasons), I will point out only that this is a FREE offering, from which you have likely already gotten a great deal of useful information. You can easily skip this chapter if you choose to, and your benefit from reading the book will be no less than if this chapter didn't exist at all.

I'm not forcing you to read this, but I encourage you to do so, no matter who you are. The "pay for" version of the book doesn't contain this chapter, since I don't think I have the right to CHARGE people to listen to my political, religious or philosophical ramblings.

In the end, it's up to you whether you choose to read or ignore this chapter, but, I honestly believe what I have to say here could drastically change your life whether you are a Christian or you are one who hates Christians with a passion.

### ***I Happen to BE a Christian, BUT ...***

---

More and more I would like to label myself as something entirely different. The title "Christian" has been dragged through the mud by many who claim the title and yet ignore the cause for which the title stands – to LOVE people (and, at

times in my life, I too have ignored “the cause”).

We spend our lives putting on our “good face” so that everyone can see and admire our “Super Christian” families, and by doing so we unintentionally (and sometimes even **IN**tentionally) give others the impression that they must “clean themselves up” before they can come before God and be accepted by Him.

But that is so contrary to how Jesus lived. In John chapter 8, Jesus was presented with an adulterous woman and the Pharisees said that according to the law she should be stoned. However, instead, Jesus (God Himself) said, “If any one of you is without sin, let him be the first to throw a stone at her”. The Pharisees and the rest of the “mob” walked away without throwing a single stone.

God was compassionate toward the woman, even knowing of her adulterous life. He did not turn her away or dismiss or ignore her. He did not judge her harshly or condemn her. He didn't mock her or get angry with her. He showed her love, and mercy. And **THEN**, having done so, his parting words to her were, “Go now and leave your life of sin”.

## ***God Hates Sin, But He Doesn't Hate You***

---

God hates sin, but not necessarily for the reasons you might think. He hates sin because He knows what it will do to you. He knows how it will derail your life and the good plans that He has for you. He knows that it will create obstacles to the relationship He desires to have with you. Sin, truly, is anything in your life that stands in the way of you having a close, personal relationship with God.

We **ALL** sin, on a daily basis. Some sins may **seem** worse than others, but we all sin, and **ALL** sin separates us from God, which is the last thing that He wants.

As Christians, we often give people the impression, even if unintentionally, that we are somehow better than those who do not follow Christ. Instead of seeing hurting people that need Christ AND our love and support, we often see “dirty”, sinful people that need to “clean up their act”.

We get angry that they often take for granted all that God has given them, even mocking God and Christianity in many cases. We fail to see that they are God's children, just as much as we are, and that they are stumbling around in a dark room full of furniture looking for a light switch – much like we were before we came to know Jesus and God's love for us.

Most of us tripped over a lot of the same furniture, stubbing our toes and bruising our shins along the way, but we now know where the light switch is (most likely because someone else helped us find it).

So, why do we, as Christians, often spend our time criticizing those who are still stumbling, almost to the point of mocking them for not being able to find the light switch on their own, when God never intended it to be that way.

It is our responsibility, as followers of Christ, to lovingly lead people through the darkness to the light switch (Jesus Christ), along the way pointing out and walking WITH them around the stools and end tables that are stubbing their toes and getting in the way.

## **But, Who Wants a Guide They Don't or Can't Trust?**

It's difficult to lead someone anywhere if they don't trust that you know where you're going. It is equally difficult to lead someone who doesn't trust that you have their best interests in mind. This is another area where Christians often get

off track, trying to “do the right thing” by pointing out sin that people should turn away from, but causing more hurt and pain instead of helping hurting people.

Instead of showing people that we care for them as a person, just the way they are, and helping them to see how they are allowing obstacles in their life to derail their happiness and joy, we immediately start pointing out each time they trip or stumble or bump into something, only serving to make them more angry and bitter.

Instead of living the life that Christ called us to, so that people can see the good things that Christ is doing in our lives (and could do in THEIR lives), we live just like those who don't even know Christ, continuing to stumble over the same stools and end tables, even though we can now plainly see them through the light of God's Word.

How stupid is that? That's like having some blind guy sitting in a completely lit room listening to us cussing and swearing as we bump into every piece of furniture in the room. Then, we turn to him and say, “Can I help you get to the door? I know the way.”

What do you think he's going to say? I know what I'd say: “Don't bother. You've just proven that I can find my way around this room as well as you can, and I'm blind. No thanks. I'll find the door myself.”

For whatever reason, many Christians who have the light of Christ available to them to dispel the darkness and reveal the obstacles, choose to keep their eyes closed as they walk through life, clinging to those old habits and sinful desires that have caused them so much grief – because it is what they are comfortable with - it's what they've known for so many years.



As a result, they continue stumbling around running into the same obstacles as everyone else, effectively “proving” to the world that Christ doesn't have anything to offer that they don't already have, when, in fact, that's the furthest thing from the truth.

If people choose to open their eyes (and their hearts) to the light of Christ, there is so much joy and beauty that can come into their life. BUT, God doesn't force His way into your life. You've got to let Him in. If you choose to keep your eyes closed and remain in darkness, God will allow you to do that, as much as it grieves Him.

## ***Christians are People Too***

---

Even with our eyes and hearts wide open, we're still going to screw up from time to time. We are not God – therefore we cannot be perfect (which is why we shouldn't expect others to be either – especially those who don't yet know Christ). We are going to say something stupid or insensitive on occasion. We're going to be selfish or thoughtless sometimes.

I am the first to admit that, even in a fully lit room, I have, on occasion, tripped or stumbled over obstacles that were plainly visible in the room, as I'm sure you have too. I don't always get it right. Nevertheless, the vast majority of the time, I have a pretty easy time avoiding the bigger obstacles in the room, as long as I leave my eyes open and make use of the light available to me.

As a result, my wife's grandfather, who lives in a basement apartment in our home, and is basically blind, trusts me to help him get around. He knows that, generally speaking, I have no trouble getting around a room safely. I can see the obstacles in the way and can easily navigate around them, much easier than he can.

He also knows that I care about his well-being. He recognizes the time and effort that I invest helping him and grandma with the various issues they deal with on a daily basis. He can tell that I do it gladly, and that I don't consider it a burden, but a privilege. Therefore, he knows that I have his best interests in mind – so, when I tell him there is an obstacle in his way, he trusts that I'm telling him the truth and am trying to help him avoid a potentially harmful situation.

But, that can only happen because he trusts that I know where I'm going, AND he trusts that I'm going to lead him somewhere good, because I care about him.

The same is true as regards the relationship between followers of Christ and those who are not yet Christ followers. Too often we put the cart before the horse. We're so concerned about getting all the “obstacles” (sin) out of their life, we don't bother to get to know them and create a relationship that shows that we care about them even in the midst of their sin – just as Jesus did with the woman at the well.

In fact, in many cases, we're so wrapped up in our “Christian” lives that we often don't even notice those who are not already a part of that “circle”. There are so many hurting people out there and all too frequently, we're too wrapped up in ourselves to pay attention.

There are actually a few songs out right now, by some extremely talented artists, that really speak to this issue – that really speak to ME. One is Casting Crowns - “[Does Anybody Hear Her](#)”. Another is Brandon Heath's “[Give Me Your Eyes](#)”. In fact, there are actually a number of other thought provoking songs/videos that I've posted to my [WhyTheCards.com](#) website which explain my thoughts much better than the words on this page could.

## ***Through God's Eyes***

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I want to begin seeing people more through God's eyes than my own. God sees who He made people to be and who they can become – the gifts, talents, abilities and desires that He put in them when He created them. He sees what's beneath all of the mess that they've created in their life. That's how I want to see people.

If you happen to be someone who's seen “Christianity” from the “other side” - the side that ignores you at best and berates you at worst, you have not seen CHRIST, you have seen a flawed individual's messed up interpretation of what Jesus was all about.

God loves you exactly the way you are RIGHT NOW. He has never loved you any less or any more than He does right now, regardless of the good or bad things you may have done up to this point. And, He will never, in the future, love you any more or any less than He does right now, regardless of the good or bad things that you may do in the future.

That is because God's love is completely unconditional. It does not hinge on what you do, it hinges on who He made you to be. You are His creation. It is not possible for Him to love you any more or any less. God doesn't **FEEL** love for you. God **IS** love for you.

## ***He Wants MORE for You***

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Because He loves you so much, once you've accepted His salvation through Jesus Christ and have agreed to allow Him to be Lord over your life, He will begin pointing out issues in your life that are holding you back. Sometimes He will point those things out through circumstances in your life, sometimes through

His Word, sometimes through other people (which can often be tough to receive).

No matter how He points it out, though, He points it out because He knows that if you deal with that issue and get that sin out of your life, you WILL experience more joy, more freedom and more success in your life. Your relationship with Him will become deeper and more meaningful. You will enjoy your life more.

Then, out of your love for God and your belief that He wants and knows what is best for you, you agree to turn away from that sin and fill that area of your life with something life giving and productive.

THAT is how God works. THAT is how Christianity works. Because of God's great love for you, He sent His son Jesus to die to pay for your sin. Because of His great love for you, He calls on His children to love you unconditionally (although that is often difficult for many Christians to do – as it is for most people).

In response to that love, you accept Christ and his payment for your sin, securing your place in God's family and tapping into the power of God's Holy Spirit. The power of the Holy Spirit then exposes to you those things in your life that are keeping you from maximizing your potential, and, in obedience to God and with an understanding that he wants what is best for you, you choose to begin the process of removing that sin from your life (which is NOT an immediate thing – it takes time).

## ***Sin is Still Sin***

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The one thing that I want to make quite clear is that I am NOT saying that Christians should ignore sin or, even worse, accept it. “Tolerance” has become a

code word for accepting anything and everything as “normal” and “acceptable” behavior when much of it truly is sin and is keeping BILLIONS of people from intimately knowing the God of the Universe in a personal way.

I am not condoning behavior which is contrary to biblical teaching. What I am saying is that, I don't believe that it is a Christian's responsibility to point out all the sin in a person's life long before they know God's love and understand why it is so important that we turn away from sin.

Our responsibility is to love people for who they are and where they are NOW. In doing so, we will open the door to being able to lead many people out of darkness and despair into the light and hope of Jesus Christ.

Whether they choose to step into that light is completely up to them. How and when they deal with the sin in their life as a result of making that choice is between them and the God of the Universe. He may involve us in some way to lovingly help lead them through that process, but ultimately, God (through the Holy Spirit) will be the one to point out the sin in their life that He feels is standing in the way of their relationship with Him and their development as a person.

As followers of Christ, we need to be merciful, compassionate and understanding toward those who do not yet know Christ and patient with those who do but who still hang on to sinful patterns and habits in their life. It takes time to effectively walk away from sinful habits and patterns. It is not an overnight process, and, if we imply to new Christians that it should be, we only diminish and discourage their new-found faith.

Jesus Christ is all about loving people where they are so that He can lead them to where God ultimately wants them to be – through a relationship with Him. If we are called to “be like Christ”, then we should also be about loving people

where they are NOW so that we can lead them into a relationship with the God who made them and who loves them unconditionally.

## ***So, What's the Point?***

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If you're a follower of Jesus Christ, I only ask that you consider how your life would be seen by those who do not yet know Christ's love. Do you avoid, ignore or look down on those who don't live by biblical standards of morality? Do you spend a lot of time focused on the sin of others? Do you frequently point their sin out to them or to others? Are you holding non-Christians to a biblical standard that they do not yet know or believe in?

If so, how can they ever get close enough to you to see Christ's love in you? IS Christ's love truly in you if the above is true about you? Jesus had a righteous anger toward those who knew the law and knew God but chose to live their lives in a way that didn't reflect that. BUT, in most cases, Jesus was far more focused on loving people WHERE THEY WERE so that they would be willing to follow Him into a better life than they were living. He was patient with them.

Does that describe you? If not, aren't we called to "be like Jesus"?

If you are NOT a follower of Jesus Christ (a "Christian") or maybe are an individual who despises Christianity and anything or anyone related to it, I only ask that you consider that Christians are people too, and we make mistakes. We don't always treat people as we should, and we sometimes get our eyes too focused on the sin and not enough on the individual – even when our motives truly are to "help" those individuals. We sometimes forget that we are first called to simply love people. God will take care of helping people deal with their sin AFTER they've established a relationship with Him.

If one looks at the whole of history, although there are certainly atrocities that have been done in the name of the Christian faith, there is FAR more good that has been done than there is otherwise. Of all of the humanitarian efforts that you find around the world that are truly focused on meeting people's needs, the vast majority of them are connected to the Christian faith – not atheism, Islam, Buddhism, Scientology or any other religion or cult.

Christianity is the ONLY religion which “breaks the mold”. All other religions focus on how “good” you are. If you live your life “this way”, God or the Gods will accept you. But, we all know how imperfect we are. How could we REALLY ever be good enough by that standard? This IS God we're talking about after all. By this “good works” model it is a constant battle to make sure the “good stuff” in our life outweighs the “bad stuff”. We spend all of our time worrying about the balance of our “life scale”.

Instead, Christianity is the only religion which is truly focused on GOD and not us. Every other religion, REALLY, is focused on US and what WE do to please God or multiple Gods in order to earn our place in “heaven” or something similar. Christianity is completely focused on what GOD did for us and how we should respond to His mercy and love and generosity to us. It is completely unique in that regard. We don't EARN our way to eternal life, it is GIVEN to us.

I think that distinction is critical, and something you should consider before you write Christ out of your life entirely and choose to “follow the pack”. There really IS only one way to God, and Jesus Christ is it. All roads DON'T lead to the same place. Please don't allow a bad experience with an immature or unloving Christian to keep you from knowing the God of the universe in a personal way.

## ***PLEASE Watch This Video ...***

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If you are not entirely, 100% certain of what will happen to you (your soul) when you die, then I implore you to watch the video at the link below. There are some questions that you need to ask yourself (and some questions that you may have for God) that this video addresses very clearly. It's not all that long, but it may be one of the most important videos you EVER watch in your life.

Are you willing to risk an eternity spent separated from the God of the Universe, the one who loved you so much He allowed His son to be brutally murdered for sins that YOU committed, because you didn't have the time or didn't want to be bothered with His message of forgiveness?

Please click on the following link, or, if you're reading a printed copy of this book, please enter the following web address into your browser:

<http://MotorOilBible.com/blog/gods-message/>