



CertifiedMasterTech.Com - **Presents:** A Mechanics Secrets Revealed!

The Untold Truth About Automotive Repairs.

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Chapter 1

Introduction

I should have known I was in for trouble from my first day in the business. I was 16 years old and working at a gas station in New Jersey.

The state of New Jersey only has full service gas pumps. You are not allowed to pump your own Gas.

My first job in the automotive business, I was a petroleum transfer engineer or better known as a gas pumper. Sounds simple enough but it wasn't.

After about an hour into my first day the station owner came over to me and stated you must ask everyone that comes in for gas if they want there engine oil checked.

If they say yes pull the stick and tell them it's a quart low even if its not.

Tell them oil is \$2.50 a quart installed. Add the money to the fuel charge. Walk up to vehicle proudly displaying the oil bottle and act like your pouring the oil in.

Do not actually put oil in the vehicle. Take the top off and fake pour the oil in. Recheck the dipstick and tell them it's now filled to its proper level.

It being my first day and only being 16 years old I complied with the large owners wishes.

I will never forget how innocence was lost on that day. I went from being a good kid to aiding and assisting a known thief.

This was also the first time anybody used intimidation tactics on me. The owner of the shop was a real big guy About 6'4 300lbs and was a master at the art of intimidation.

He would get real close to you and stare right in your eyes looking right into your soul with a very stern look and would speak loud and angry.

He used this technique on his employees, customers and even his wife that worked in the office.

Very few people had the courage to say no to him. He made a lot of money and retired at age 50 from this small gas station and 3 bay shop using these techniques.

One day my own father came in for gas and as I pumped it the owner came up and started yelling at me.

My dad got out of his car and used the same techniques of intimidation right back on the owner. He was shocked and backed down real fast.

Few people stood up to this guy and if you did he would instantly back down for a variety of reason I would later come to understand and I will explain in detail in this book.

Well after a few days of pumping gas and not pulling the oil scam I was fired. The owner counted on making this extra 2.50 per vehicle and would not tolerate any gas pumper that refused to apply his technique.

The owner of this gas station also had 3 mechanics working for him. They all had no problem using a variety of scams on their lifeblood the customer.

I remember hearing them talk about it with no remorse. They would say things like she has plenty of money or her father is loaded with cash.

Whenever someone got ripped off they had a way of justifying it to themselves so they could sleep at night.

The owner of this shop would support and encourage the thievery that was going on by awarding under the table cash bonuses to his motley crew.

I was determined to be a mechanic and I was hoping that my first experience with this gas station was an isolated incident.

So I trained hard and spent a lot of money in training and tools to be a mechanic.

As I progressed through the years as a mechanic, service advisor, service manager and service director I found that most automotive repair shops were like the first one I had seen (rotten to the core).

I don't want to scare you or make you think there is no hope of finding a trust worthy repair center.

Some reliable honest people are in this business. And that is what this book is about. You will learn how to find the good shops and how to scare the hell out of the shops that try and screw you over.

In most cases a dishonest shop is also lacking in other areas besides truth and honesty.

You will find that if a shop doesn't care about customer satisfaction and fair business practices.

The same shop will also not care about EPA regulations and shop safety requirements (OSHA) mandated by state and local governments either.

These deficiencies can easily lead to a shop closing its doors and also a possibility of heavy fines or even jail time for the owner.

It is very easy for an informed customer to blow the whistle on a bad shop.

How easy. Just google OSHA or EPA regulations they can point you in the direction of people that would be very interested in your anonymous tip.

In the next chapter I want to go over the ground floor basics of how this business works.

Because when you understand this foundation and it's principals the rest of the book and the techniques explained in the book will be easily understood.

It will also be much easier to apply the solutions that this guide provides to the common auto repair shop rip-offs and scams you will be faced with.

This next chapter may seem a little dry but I promise the book picks up speed quickly.

Chapter 2

How the auto service business works

I am going to give you a condensed overall view of how the automotive service business works. This broad picture will give us a starting point.

I will then go into more detail about each item in the following chapters so that your education will be complete by the time you read the last sentence.

The automotive service business is configured in a way to assure that the shop owner makes money no matter what happens. The way the shop charges the customer is based on an hourly rate.

This rate is usually set at a very high number, some were between \$50- \$120 an hour depending on what part of the country your in and economic factors in your area.

Parts of New York City and Upscale areas of California are even breaking the \$120.00 an hour mark. If you are in a high wage area you can guarantee the shops hourly rate is near the top of this scale.

The labor charges assigned to your repair are based on this hourly rate. The time charged for any given job are supposed to be obtained from a standardized labor guide.

I will get into this later in the book on how this Labor guide works and how the shop can use this against you. Or even worse not follow any standard guide and charge what ever they want.

Now lets start out by using \$120.00 an hour as a base line measurement.

For example If you need a water pump replaced and the job pays 2.0 hours then the labor charge would be \$240.00 plus parts, taxes, shop supplies and disposal fees.

You can see how this system is designed to charge you the maximum on any given repair.

Now here is the evil part. The mechanic gets paid on average of only about \$20 an hour out of the shops hourly charge. The mechanic works on a method of payment called flat rate.

This means that if the job pays 2 hours the mechanic gets \$40.00. If the job takes 3 hours to complete the mechanic still gets \$40.00 if the job takes 10 minutes he still gets the \$40.00.

Mechanics use a popular reference to describe this. Sometimes you eat the bear and sometimes the bear eats you.

Explained this means sometimes you beat the flat rate time and win. And sometimes the job takes longer than the labor time allows, due to various reasons like broken bolts and lack of experience and you lose money on the job.

Using the real world example above if the mechanic replaces your water pump and it takes him 20 minutes he still gets paid his \$40.00.

This motivates him to rush through the job as fast as humanly possible and move on to the next job and do the same thing over and over again.

Rushing like this the mechanic is most likely to take short cuts reducing the quality of the repair. The mechanic is concentrating on the money he can make instead of the cars he can fix.

In some cases mechanics are competing for the next job sitting in the parking lot. The first mechanic done his task gets first crack at the next task.

It is very easy to get greedy and push yourself beyond your ability to perform quality repairs.

Sometimes this can result in a comeback where the customer must once again return for a repair often related to the first repair.

Again the shop tries to turn this in their favor by saying the comeback is unrelated to the original repair and charges you a second time.

The repair center benefits from this on an accelerated scale. Using this same example the shop made \$240.00 in labor and paid the mechanic \$40.00 and walked away with just a labor profit of about \$200.00 in 20 minutes.

Then they mark up the price of the parts on average of cost plus 30% and tack on shop supplies and disposal fee's to make their grand total of profit to about \$350.00 in 20 minutes.

Next they will multiply this by adding more mechanics and repeating the process from open till close. Hence why most shops are open late and run 6 to 7 days a week.

As a side note a mechanic can make over \$100,000 a year and pile up a bunch of poorly done jobs in the process. The top guns of these mechanics apply a technique of their own known as the stick and move.

They chow down on as many jobs as they can for as long as they are able (the stick). Then they reach the saturation point where their comebacks and complaints reach a point that stops them from receiving enough new jobs to pull down the big bucks.

Then they move, on to greener pastures. So first they stick the shop owner and customers and they move to another shop and do it again.

I have worked with technicians that made a science out of the stick and move. You would think mechanics like this would run out of places to work, in their area but its not true.

The fact is that the automotive repair business has so much turn over at all levels from management down to the oil changers that all is forgotten in just a couple of years. The shop can't remember who did what or why.

They only remember hey we made a lot of money when that guy was here. That's why I know of mechanics that will return to the scene of the crime and will wind up working for the same shop they pulled the stick and move on just a few years back.

Now once again I ask you not to lose hope and faith in finding a good mechanic just as I did when I talking about finding a good repair center.

I am a good honest mechanic and I have worked with plenty of other skilled trustworthy people I am proud to have met.

To set the record straight I have never pulled the stick and move. I also have never made more than \$60,000 a year in the last 23 years in the business.

If you're wondering what I'm doing now, I stated in my sales letter that I am now working for local government fixing ambulances and police cars for a modest salary. I have been doing this for 2 years and it feels great to be free of the flat rate system. I work an hour and I get paid an hour.

So if we sat down me you and the crooked shop owners along with the questionable mechanics this is what they would say in their defense.

The shop owner would say but I have overhead. And He is right. The shop owner pays for the building, advertising and equipment also all the bills associated with that.

My answer to this is so does a doctor. A doctor pays for an office, x-ray equipment and medical supplies and so on.

But a doctor doesn't tell their patients they have cancer when they don't just to get the bills paid.

The mechanic will say well I have to pay for tools and the job is hard work.

I agree with him. But you don't replace unneeded parts and recommend bogus services like a power steering flush just to recover your investment in your tools.

In review of this chapter we have determined that the shop holds the potential money to be made above all other aspects of the business including customer satisfaction and employee health and well-being.

The shops tendency to lean toward greed can also give us an advantage during negotiations in their attempt to secure our long-term business.

The repair center looks at your vehicle as worth x amount of dollars in service sales over its lifetime. The more miles on the vehicle the greater the potential for large expensive repairs.

The older the vehicle and the more miles on it, the better for the service center. This is truer today than ever before.

Back in the 70's a vehicles life span was considered to be 7 years and 100,000 miles. Today a vehicles life span has been upped to 10 years 175,000 miles.

A vehicle near the end of its life cycle can be very costly to maintain. Factory original parts start failing at an accelerated rate. And its also common place now a days to try and exceed the vehicles life expectancy. This is possible but expensive.

Mechanics and shop owners have a nickname for vehicles near the end of their life cycle. The term is called a gravy boat.

Which in layman terms is an all you can eat buffet for the mechanic and shop owner. When a vehicle is old and has high miles everywhere you look you can find repairs to recommend to the vehicles owner.

In most cases the owner will justify the increased repair costs by saying well I can repair this old car for a thousand dollars but I can't buy a new car for that. Well this a slippery slope.

The vehicle is most likely on the road to nickel and dimming you to death.

Lets for example say you go whole hog and replace the engine for the cost of about \$4,000 dollars. The new engine is still surrounded by old parts.

Transmission, suspension, brake components, steering, heating and air conditioning systems can continue to provide high repair costs even though you just installed a new engine.

So make sure you think it through before approving that high dollar repair on that older vehicle.

Don't forget that I would be happy to review your vehicles needed repairs and provide you with my unbiased opinion.

Together we can figure out if keeping your old vehicle in service makes dollars and cents.

Sometimes an unbiased third party opinion can help you step back and make an informed decision instead of making an emotional decision.

People get very attached to their vehicles and they become like family members.

The repair center counts on this and uses it against you when they negotiate. The shop is not beyond saying the car is worth putting the money into even if its not.

If the vehicle is going to nickel and dime you the shop gets all that money over the following months and years.

If you get a newer car he stands to loose money by not seeing you as often.

Now we are going to head on to chapter 3.

We will learn how to use the shops techniques against them and prove to the shop they better treat you right because you know how this business works.

Chapter 3

Know how the business works and use this in your favor

Lets start off with a different real world example of a common automotive repair. Lets say your battery light comes on and you take your vehicle to a service center of your choice.

The repair center says you need an alternator. This is believable but we are going to ask lots of questions right from the start and condition the repair center to adjust their thinking when it comes to selling us service repairs.

An educated consumer is the repair shops worst nightmare.

You never want to have a repair recommended to you and just say go ahead and do it. If you do this the service advisor will see you as an easy mark.

And we are not, we are educated on how the business works and we will prove it to the service sale representative.

So again the service advisor states we need an alternator replaced on the vehicle. The first question we ask is how was this determined.

The proper answer to this question is that it was diagnosed on a charging system tester. We can get slick on them and ask what kind of tester did they use.

The industry standard test equipment for the operation is a VAT 40 tester but other equipment can be used.

Now at this point the service advisors mind is changing about his next move because he was not expecting these questions.

The answer to the question of what kind of tester did they use is not important. Asking the question was the important part.

Next we will ask about the price and ask the sales person to give you a break down of parts and labor. Most people would just ask how much and provide a yes or no answer. But you are not most people and money is important to you.

So the service advisor says the labor is \$130.00 and the part is \$150.00. Our first question is how did you determine the labor charge. The proper answer is by using a standard labor guide.

There are few different brand name labor guides. The most popular labor guides are Chilton's and Mitchell's. So if the service advisor says I used Chilton's this is an acceptable answer.

Next we ask how much the job pays in hours and what is the shop per hour labor charge.

Lets say the service advisor states that the job pays 2.0 hours and their labor rate is \$65.00 an hour making a total labor charge \$130.00.

Lets respond by saying this price sounds high. Once again we are training the shop that we expect a lot of service for a little amount of money.

At this point we have two choices we can ask to physically see the labor guide or we can move on since we have laid the groundwork for fair pricing.

Lets say we want to push the labor issue. When you are looking at the labor guide you want to verify a few things. The labor guide is laid out very nicely. The headline is your year, make and model of your vehicle.

Labor times vary greatly from year, make and model. You want to verify the service advisor is looking up the labor times on your specific vehicle and not a different vehicle that has higher labor time for replacing the alternator.

Next down on the list is the repair operation replace alternator in this case. To the right of the repair operation is the specific labor time assigned to this operation. Below is an example.

1997 Chevrolet Blazer	Labor Hours
Alternator Replacement	2.0
Includes diagnosis	
Add with 4wd	0.2

In the above example we do not have four wheel drive so our labor time is 2.0 hours

Now we feel confident that the labor time quoted is reasonable and customary. Now its time to ask about the parts. Using the same repair as an example.

The repair shop should give us the option of purchasing a new or remanufactured alternator.

If your vehicle will be with you long term then new is the way to go. If you want to save money or your vehicle is older then remanufactured will be ok. Some shops

will recommend what is best for them as far as their profit margins or bonuses from their parts supplier.

If you go with the remanufactured alternator make sure you ask about the parts warranty. The standard warranty would be 90days but one year and lifetime warranties are offered by some remanufactures.

Keep in mind you should also ask if the alternator fails and is covered under warranty is the labor time covered as well. This will be up to the individual repair shop.

But again by asking these questions we are controlling the shop instead of them controlling us.

So now we are ready to ask the burning parts questions. How did you arrive at this price for parts you ask the sales person?

The right answer is we have a standard parts mark up of 30% or the cost of the part plus 30%.

You then verbally confirm the parts price. So a remanufactured alternator will cost me \$145.00 and is guaranteed for 90days parts and labor.

Wow that sounds high is your response. At This point the service advisor is thinking twice at recommending things you don't need because he considers you very price motivated.

Now once again we can move on from here or attempt to verify pricing on the part. Lets be tough and break out the cell phone or use the shops phone to check this alternator price.

Lets call your most common parts store in your area. AutoZone, Pep boys, Western Auto any large chain will do. Ask for a price quote for a remanufactured alternator for your 1997 Chevy blazer.

Make sure you ask about the warranty period so you can compare apples to apples. Now remember to compare price we have to add 30% to what ever AutoZone quoted to us.

The shop does have the right to make some money on parts. If the prices match up or are close we know the shop is being fair.

Now the last question to ask about parts as it relates to alternators, is the old alternator used as a core. A core is when the shop returns the part to the supplier to be remanufactured for resale.

Core charges apply to alternators, starters, power steering pumps, compressors, axle shafts, Rack and Pinion steering gears, and anything else that has the word remanufactured in its title.

At this point the service advisor is blown away that you know what a core charge is and is thinking you are a veteran of this business.

We also ask this question because if the old part is returned to the parts house then no disposal of old parts is required and no disposal fees should be charged.

I will get more into shop supplies and disposal fees later in this book. For this repair no disposal fees or shop supplies should be charged because they are not throwing anything away and no shop supplies are being used.

If you feel confident that the charges seem fair then you can approve the repairs to be completed. But I would ask for two things in return.

First a detailed written estimate. This will protect you against finding a different price when you return to pick up the vehicle.

Next notify the shop that you want to be contacted if any thing changes about the price. This should prevent them from slipping in any surprise extras.

Below is an example of a written estimate

Customer Name Here	Parts	Labor	Total
1997 Chevrolet Blazer Alternator replacement	\$145.00	\$130.00	\$275.00
		Tax: \$ 16.50	
		Grand Total: \$291.50	

This is a basic example of the standard sales negotiation in the automotive service business.

If your repair center throws you a curve ball you can always contact me and I will give you advice. I will even call the shop in your behalf if you need me to

Chapter 4

Secrets on verifying needed repairs

I am sure you have heard this line before from your friendly neighborhood repair center. While we were working on your car we noticed that other repairs are needed.

In most cases this is not the shop being nice and looking out for your best interest or for your safety but instead a way of increasing the shops A.R.O.

Average repair order is the measurement of total sales per repair order. The shops goal is to increase the amount each person pays on every visit. The shop uses this to keep track of their employees to measure their performance on the art of up selling.

The mechanic and service advisor work together on this project because it also increases the amount they both make.

The way it works is the mechanic finds profitable repairs to be done like a brake job and brings it to the service advisors attention.

The commission based service advisor then hard sells this repair as a needed safety repair.

I can't help but break into a story about one of the sharpest most evil service advisors I ever met. This man would go through your vehicle and find out as much as he could about the vehicle owner.

He would look for bank statements past due bills and any thing he could get his hands on to find out what your financial position was. He would go through the trunk, the glove box under the seats he was relentless.

One time he came out to my bay and started going through a vehicle and I asked him what he was doing. His reply was making us money. Then He yelled out bingo. I said what did you find.

He said the best thing of all a baby seat and baby toys. He then said this vehicle needs brakes. I said I didn't look at the brakes yet. He said it didn't matter what it needed it only mattered what they were getting.

Now in this case the brakes were about 25% remaining so selling brakes to this person didn't hurt anyone. But the service advisor asked about the baby to set up the sale for family safety reasons.

If the customer hesitated to buy, the service advisor would explain it was for the safety of the baby and how if she performed an emergency stop the vehicle would take longer to stop with worn brakes and he was looking out for her baby. This guy was a shark and pulled down more than \$100,000 a year just for selling service.

I tell you this story so you can be on guard if you run into a shark. The shark will start asking you personal questions while you are waiting for the vehicle to be brought into the shop.

Not because he cares about you. He is trying to paint a picture of you so he can find the button he needs to push to make a sale. And don't forget to clean out the inside of your car including the glove box. You must protect yourself!

Now how to defend against the mighty shark. Lets use a common scenario as an example. You bring your vehicle into a chain type service center for an oil change.

The mechanic talks with the service advisor and he starts clicking away on his calculator. Then he calls you over and says you need front brakes and an air filter. Lets start by asking questions and controlling the negotiations.

First we should ask if we can go to the vehicle and be shown what is needed. Even if you don't know what you're looking at you still want to act like you do know what you're looking at.

If the service advisor says your not allowed in the shop for insurance reasons or safety reasons this is a red flag that they may be hiding something. The shop may have policies against customers being aloud in the shop but you still have the right to inspect the needed repairs.

If the shop flat out refuses to show you then instruct them to just finish the oil change and you will get a second opinion from another shop. Even the most cold hearted service advisor will have trouble pointing to what he knows is an obviously good part and calling it bad.

If they take you out to the vehicle ask to see the air filter and try to verify its out of you're vehicle and it does look dirty.

The service interval for air filters is about once a year or every 20,000 miles depending on your driving conditions. If the filter looks dirty and it's been awhile then approving the air filter replacement should be ok.

But don't forget to ask for a part and labor breakdown. Usually the shop will install the air filter for free and just take their 30% profit on the part.

Now onto the brakes you want to ask how bad are the brakes. Opinions vary on when brakes should be replaced. My preference on my own vehicle is 15-25% remaining. 25% remaining could mean 5,000 miles left of safe driving.

You can start buy asking if the brakes are metal to metal meaning that there is no brake pad remaining and the brakes are at 0 %.

Using the above term also notifies the shop you know about brakes and may not be the easy sale they thought you were.

His next response is important. If he says the brakes are 30% worn or higher you can wait on the repair.

If he says they are 25 % or lower ask if you would be able to see the brakes. On some vehicles you can look right through the wheel and see the brake pads. Some vehicles the wheel has to be pulled off which is no big deal.

You can also use these guidelines on brake pad wear. On average you can get about 35,000 – 45,000 miles from a set of brake pads.

The more city driving or stop and go driving you do the faster the brakes will wear. For example a taxicab may need brakes every 25,000 miles due to severe stop and go driving.

So if the shop is recommending brakes on your car and it's been 35,000 miles since its last brake job then you probably need them.

If they show you the brakes and your wheels are covered with worn brake dust and the brake pad looks thin about a quarter inch or less lets talk about doing a brake job.

I will go more in depth about common scams in the next chapter but for now lets get a price on the brake job. This is different than our earlier examples with water pumps and alternators.

Brake jobs are sold in a package price form to compete with other shops. Brake jobs are easy to perform and have a large profit margin so shops work hard for the coveted brake job.

The price may vary from model to model but a fair price for a front brake package on a car or light truck is around \$110.00 – \$175.00.

When in doubt go for a second opinion. Many chain shops offer a free brake inspection if you buy a brake job or low cost brake inspections if they are not needed.

This will give you a chance to compare notes from the 2 shops and see if the stories match.

Do not tell the second shop about the first shop they do not need to know this information.

What do you do when the same scenario happens and you dropped your car off for that oil change because you didn't have time to wait and you get a call from the service advisor at home or work?

You do what you can; you ask a lot of questions without asking to see it. This is not as effective but you can still protect yourself by asking does it really need that air filter or if the brakes are metal to metal and how much is remaining.

Use your best judgment thinking about your past service history. If you had an air filter put in 1 month ago and brakes replaced 8,000 miles ago then just say no thanks.

I would say by now you can see my main defense against auto service rip-offs is to ask a lot of questions.

The shop does not get challenged often and a lot of questions can make them unwilling to take the chance of ripping you off. Because an educated consumer can cause them a lot of trouble.

The service advisor usually goes for the easy target. Let me tell you another story about the shark service advisor I mentioned before. He would mostly prey on women but would go for any body he considered weak.

One trick he used was to take the customer out to their car during write up. He would walk over to the front of the car and ask them to pop their hood. Most women and some men didn't know how to do this.

He would use the expression the blood is in the water to describe this repair, after the customer was gone and the job was being dispatched.

Sometimes trying to be funny he would get on the shop intercom and announce the blood is in the water. Meaning the shark was circling his prey and getting ready to feast on the weak.

So read this book a couple of times and chat with me via e-mail and we will make you strong with education and knowledge.

Chapter 5

Common auto repair scams and rip offs

This is one of those chapters that could be a book in itself.

I will try to strike a balance between being brief yet thorough. First a few facts I dug up on the Internet.

The Consumer Federation of America states, auto repair rip-offs are consistently one of the top five most frequently reported consumer complaints.

National figures indicate \$20 billion is spent annually on unnecessary or faulty car repairs.

The California Bureau of Automotive Repair receives around 25,000 automobile repair complaints a year.

Since the only people who file complaints are those who know or suspect they have been ripped off, the actual number of auto repair fraud victims in California is probably much higher.

With that said, I have personally seen so many different ways to rip people off in this business that it is hard to pick out the most common because each shop has its favorite.

You can see that 1 shop will push a certain service on almost every vehicle that comes in for repairs.

So I will concentrate on the most common scams and rip offs that I have seen and heard about in my 23-year career in the automotive service retail business.

If you feel that a scam was pulled on you and you do not see it listed here please e-mail me your story and I will review it and check it out.

If it turns out to be a scam I can then post it as an update in my monthly newsletter.

To get started on the most common scams we have to talk about a few different rip offs as related to brake jobs.

Brake job scams are so popular that whole franchise businesses have been built around them and specialize in just doing brake jobs.

These companies have recognized the pure profit potential from performing brake service.

Brake scams are easily sold to the UN educated consumer do to the safety factors involved. We all no the importance of being able to stop the vehicle in emergency situation.

Once again the shop uses this to their advantage and sells you unneeded services in the name of safety.

The most common brake service scam is the complete brake system overhaul.

I will use a specific example to show you how this works. You go into a chain store to have your brakes checked.

Maybe you heard some brake squeal or brake noise that concerned you.

So you bring your 1999 Chevy blazer that has 75,000 miles on it to a shop to have the brakes checked. Lets say it really needs front brakes and the pads are worn down to below 20% remaining.

The shop could do a standard brake job or a hang and turn as we call it. A hang and turn is replacing the brake pads and resurfacing the rotors.

This service would retail for around \$110.00 but the shop would prefer to make more. So they recommend a brake system overhaul.

The brake system overhaul will mean different things to different shops. In most cases they are talking about overhauling the brake calipers by replacing the seals in the calipers.

A caliper seal kit is very cheap in parts cost and very high in labor costs. The seal kit usually has about 3 or 4 rubber seals in it and cost the shop about \$3.00

They then charge you \$20.00 for the kit and another 2.0 hours per caliper to install the seals. But here is the scam part.

The caliper seals are internal and it's hard to verify that they were actually replaced. The outer seal known as the dust seal is usually the only seal that will get replaced during this unneeded service.

The mechanic then throws away the remainder of the brand new seals. The shop usually includes a brake system flush in this service, which I will attack in a moment.

The first issue to address is do we really need a caliper overhaul. In most cases no we don't. Why is this true? The manufacturers make fantastic calipers from the factory.

The reason being it is an extremely important safety related part. The manufacture must be sure their vehicle meets stopping distance requirements.

They must also be sure that the calipers are over engineered to last for the life of the vehicle. The manufacture cannot afford to go to court for lawsuits on brake system failures.

Now with this being said do calipers ever need to be overhauled? Yes on rare cases this is the case. But there are warning signs that the service is required.

The Number one sign that a caliper is failing is a strong brake pull. To explain, this is when the vehicle pulls right or left during braking only.

The harder you brake the harder it pulls to one side. This is because a caliper is binding on one side or the other. Equal braking force is not be applied.

Tell tale sign # 2 is if the red brake warning light is illuminated on the dash. This can indicate the brake fluid is low and may be caused by a brake fluid leak from a caliper.

In any case the way the caliper service should be addressed is to replace both front calipers at the same time. I do not trust the individual mechanic to overhaul my calipers.

I would rather replace both front calipers with either new or remanufactured calipers. This way you are assured you have reliable calipers installed.

Some remanufactured calipers come loaded with new brake pads and now you have new calipers and brake pads that the mechanic can just bolt on. This requires very little skill from the mechanic and makes for a very reliable repair.

Very often you will find that the shop will recommend brake hoses and complete brake fluid change along with your brake overhaul.

Once again the factory uses high quality hoses and parts in the brake system to prevent deaths and law suites. But if your car is 10 years old and has over 100,000 miles they may need to be replaced.

This is were you start asking questions and ask to the see the needed parts. When brake hoses go bad they start to deteriorate and crack on the outside.

This is highly visible and easy to confirm. In rare cases the hoses will fail internally and cause a brake pulling condition that may be mistaken for binding caliper. But again the vehicle would pull hard in one direction when braking only.

Now onto the brake system flush. Some shops just throw this in with the brake job like fries with a burger. It is an easy sale and increases profit on a simple brake repair.

The brake system flush is the complete replacement of the hydraulic brake fluid. Brake fluid changes are not recommended by the manufacturer because the brake fluid system is a sealed system that requires very little service.

Once again the manufacture makes a very reliable hydraulic braking system not because they love you but because they don't want to go to court for killing people and its bad for sales if that happens.

Is a brake system flush ever required? Yes sometimes it is needed. When it is needed it can usually be traced back to fluid contamination. That is when somebody opens your master cylinder reservoir to check the fluid level and either lets dirt or moisture get in the system.

I have also seen a few times were someone will add something other than brake fluid to the reservoir and cause massive failure to the hydraulic system. When this happens the fluid will turn pitch black and the brake system seals may be damaged.

So to review this scam, in most cases we just need a simple standard brake job (hang and turn). The shop may try to super size our order and recommend the overhaul or brake system flush. This book focuses on protecting you and we accomplish this by asking educated questions.

If an over haul is recommended ask why, and explain that the car stopped straight and good and if caliper service was needed wouldn't you have a tell tale sign something was wrong. Like a brake pull or red brake warning light on in the dash.

Stress that if a standard brake job cannot be performed that you may have to go for a second opinion.

At this point the shop would not want to miss the profit from a standard brake job and also would not want to risk another shop pointing out there scam attempt.

Through out this book I am exposing you to the insider terminology used in this business. When negotiating with your shop use these terms in your conversations.

The service advisor or service manager will know that they are talking to an educated consumer and will adjust their thinking accordingly.

On to the next scam the good old tune up. In the mid 90's the tune up service started to change due to technology changes in the automotive industry.

This is one case where the manufacturer has taken your side as opposed to what was good for the repair shop.

In the seventy's and eighty's tune up items like fuel filters and spark plugs required changing every 30,000 miles. With the frequency and profit margins so high once again we saw whole businesses built around just this repair.

On modern vehicles from the mid 90's on up we saw the common deployment of platinum tipped spark plugs and canister type fuel filters.

The manufacturer did not do this for your benefit but instead to meet increasingly tougher fuel economy and emission standards. This did as a side effect help the consumer.

Platinum spark plugs can go up to 100,000 miles before replacement is required. Canister type fuel filters can go as long as 60,000 miles before changing them is needed.

This doubles the life span of these tune up items. Check your owner's manual to see when tune up parts are recommended to be replaced.

The repair centers always considered maintenance tune-ups as a gravy job. This term means easy to complete and high profit margins to be had.

With the advent of fuel injection and increasingly reliable computer control systems the shop finds it harder to make profits in the tune up business.

But the repair centers have come up with other slick services to sell you to replace the less needed tune up.

The most popular up sell service is the fuel injection cleaning service. The service is rarely required and not recommended by the manufacturer in most cases.

The reason is that the improvement of the fuel filter system efficiency has reduced the amount of dirt and debris that will be distributed through the fuel system.

Also believe it or not gas companies have improved the quality of their product. In the instant of plus and super grade fuels system cleaners are included in the gas. Does this mean you never have to clean the fuel system?

Well yes and no. If the vehicle develops a rough running condition coupled with turning on the service engine soon lamp there may be a fuel system malfunction.

Fuel injectors by and large are very dependable but I have seen just a few cases where injectors have failed.

Again this is not common but can happen. The fuel injection service should not be performed if there is no drivability condition present in the vehicle.

The best way to protect your fuel system is never run your vehicle below a quarter of a tank.

The bottom of the tank contains almost all the dirt and sediment. When you hit a quarter tank go ahead and fill up this can eliminate fuel system troubles.

The next service that the shop will bring to your attention to replace the profit they lost on selling tune-ups is the throttle body service.

The throttle body is where the air enters the engine. This is another service not recommended by the manufacturer.

The shop may show you how dirty and carboned up the throttle body is and use this to sell you the service. This not a good reason to perform this service.

The manufacturer is aware that carbon will develop in this area and have placed a compensation program in the vehicles computer and air induction system.

This program adjusts a part known as the iac valve (idle air control) to compensate for the deposits.

Does mean the throttle body never has to be cleaned. The answer is unfortunately no.

The throttle body may get so dirty that the vehicle will not be able to compensate for it. But we will use the tell tail signs to figure out when this service is needed.

If the vehicle runs and idles fine and no problems exist then do not approve the service.

If it's not broken then don't let them fix it. When this service is needed the vehicle will idle poorly and maybe surge and stall.

Also a hesitation just off idle may be noted like when you are taking off from a stoplight.

This service is becoming a shop favorite because it is so easy to do and they can get \$60.00 to \$100.00 for the service and parts is just some spray cleaner.

Before I move on to the next common scam I wanted to share a story about the fuel injection service.

I worked for a Chevrolet dealer in New Jersey that bought a piece of equipment called a engine vac. This machine says it will clean fuel injectors plus remove carbon deposits from cylinders and valves.

The machine claims to restore power and fuel economy to your engine. The engine vac machine connected to the fuel system and pressurized cleaning solution was fed into the engine while it was running.

The service sold for \$110.00. The dealership spent \$2000.00 on the machine and the service was not selling well.

They put a poster up on the wall from engine vac that explained to the customer all the wonderful things the machine did.

The service advisor would take the customer over to the poster and use the poster to help sell the service. Still the sales were low. The dealership implemented a bonus plan to the mechanic and service advisor.

For every engine vac service sold the mechanic and service advisor would split a \$20.00 under the table cash bonus. The dealer would take money out of petty cash and hand over the ten-dollar bills to the mechanic and advisor.

The effect this had on the service department personnel was nothing short of amazing.

Suddenly every car that came in needed a motor vac service.

The evil part of this story is that the machine was very hard to hook up to the vehicle so the mechanics put a twist tie on the connection hose and would fake the whole service.

If the customer was watching they would see the connection hose attached to their vehicle and the vehicle was running but it was not really connected.

The service was a complete scam. \$110.00 for no services rendered.

I would actually hook the machine up to the vehicle and perform the service as engine vac specified.

I never felt any improvement in power nor found a customer that had increased fuel economy. Even if you followed the service by the book it was a complete scam. Buyers Beware.

Ok onto the next scam. The oil change game. You may know that the most common service in the automotive service retail business is the simple oil change.

I want you to learn how the repair facility views this common service so you can protect yourself.

There are many kinds of shops that perform this service. Dealerships, chain stores, quick lube centers, independent shops and mobile services.

They all view the service as an opportunity to up sell you something else.

The profit margin on an oil change service is very small. The shop considers this an acceptable loss because it provides them an opportunity to look your vehicle over very carefully.

The shop calls this an at bat. And sometimes they strike out but most of the time they hit a homerun.

Being under your vehicle and then in the engine compartment to refill the oil provides them with all the opportunity needed to work up a nice big list.

Even the quick lube centers that do not even have qualified technicians are selling services like coolant flushes transmission fluid changes fuel injection cleaning and more.

It cracked me up when they started selling windshield services where they would apply a rain shedding product and new wiper blades for about \$75.00.

When I say that quick lube centers do not employ qualified technicians I am being truthful.

These shops pay a very low hourly rate and therefore are unable to find a certified technician to work for \$7.00 - \$9.00 an hour.

This could spell trouble for some customers. An oil change is a simple operation but if done incorrectly major engine damage can result.

Quick story I had a friend of the family go into a quick lube and they sold her an air filter.

When replacing the air filter the oil changer wiped out the air box and got distracted and left the rag in side and under the air filter.

When he started it up the rag got sucked into the engine and bent an intake valve.

The shop did pay to have the engine fixed but the car never ran the same again. A flat rate mechanic at a dealership repaired the engine cutting corners and the car had multiple problems after the engine service.

Most mechanics are not as good at putting engines together as the factory is. Even if they are not cutting corners. It takes a lot of skill and knowledge to perform engine work properly.

Lets hit a few more common up sells from the oil change service. The repair shops like to sell coolant flushes. This will be coming to an end soon due to the now wide spread use of extended life coolants.

Starting in the late 90's General motors starting using a new red coolant called dexcool.

The recommended service interval is every 100,000 miles. Now all of the major manufacturers are using some kind of extended life coolant. So check your owner's manual for service intervals.

If you have a vehicle with the old green coolant (ethylene glycol) it is recommended to change your coolant every 30,000 miles.

So don't approve the service until you check your owner's manual. Remember the shop recommends it for them not for you.

Next since they are under your vehicle they could not help but notice you need shocks or struts replaced. They love this repair again because it's quick and easy with a high profit margin.

Shocks are replaced on as needed basis. When shocks or struts are worn out the vehicle has a poor ride as in it bounces up and down excessively.

When shocks are bad you can get choppy wear on your tires (they look like stop signs). Shocks and struts are fluid or gas filled.

If they leak they will leave a trail of oily film on the shock or strut body. The standard shock and strut test is push down on the vehicle front and rear bumpers separately and hold it down and then release it.

The vehicle should return smoothly to its original height. Not bounce up and down like a bobble head doll.

Time for another real life story. I knew a mechanic that kept a squeeze ketchup bottle filled with lightweight oil in his toolbox. He would squirt it on shocks, struts around valve covers on master cylinders and what ever he felt like selling that day.

The service advisor would bring the customer out and show them the wet spots and how important it was to have the repairs done today to avoid getting stuck somewhere.

You can protect yourself against this old trick by performing a pre service trip inspection. I will explain this in the next to last chapter of the book when I teach you how to act like you know about cars.

What else will they find wrong. Well since they are in the engine compartment they couldn't help but notice that you need belts and hoses replaced.

First we will talk about belts. Most modern cars have one large belt called a serpentine belt.

This one belt drives all the accessories like the alternator, water pump, a/c compressor and power steering pump.

In the old days they would have 2 or 3 belts but now they have just one belt to do the job.

The down side is the belt breaks you loose all your accessories.

If you keep driving without this belt your engine could over heat because the water pump is not turning and not pushing the coolant through the engine.

Yep replacing the belt is a gravy job. Very easy and quick to do and could cost over \$150.00 bucks.

When a serpentine belt is recommended for replacement ask why. If the answer is because it has cracks this not good enough.

The industry formula for cracked belts is 10 light cracks per inch indicate the belt should be replaced.

Light crack's spread out over the whole belt may mean the belt still has life left in it.

The cracks develop on the face of the belt or the ribbed side. The strength of the belt is on the back or smooth side of the belt.

If the belt is frayed or damaged from hitting something ask to see it and replace as needed.

Use this rule of thumb when deciding to replace the belt. An average serpentine belt will last for about 50,000 miles or more.

Ford for some reason uses a very high quality serpentine belt that can last for up to 1000,000 miles or more.

So take a look at the belt and if you approve the replacement of the belt ask for the old belt and through it in a bag and put it in your trunk for emergencies. It's always nice to have a spare for emergency use.

Coolant and heater hoses are up next. On modern vehicles hoses are better quality than they were in the 80's.

It has been a long time since I have seen a blown hose. I remember putting hoses on vehicles every 50,000 miles or so.

But I have seen modern vehicles with 200,000 miles on them and still have the factory original hoses on them.

The invention of the extended life coolant has also seemed to extend the life of the hoses that carry the coolant. So how can you tell its time for hose replacement?

A visual inspection and feeling a cool hose is about the only way.

When a hose is going bad it swells up like a small snake that just ate a big rat. And when you feel the lump are it feels spongy as compared to the rest of the hose.

So if your vehicle has high mileage and hoses are recommended ask your questions on why are they bad and then ask to see them.

The last service scam to address is the transmission fluid change and the transmission service. The difference between the two services is a fluid change is just changing the fluid.

A transmission service is when you pull the transmission pan off and replace the fluid and the transmission filter and clean the pan itself.

The quick lube centers usually have a transmission-flushing machine that they hook up and it just changes the fluid.

Most manufacturers do not recommend this service because your leaving the dirty filter inside the transmission and not cleaning the pan so the new fluid is only clean for the short term.

As it circulates around the dirty filter and pan it makes the fluid dirty again.

I personally would not approve just a fluid change or a transmission fluid flush.

Next we have the full transmission service.

I used to believe whole-heartedly in the trans service as recommended by the manufacturers guidelines in the owners manual.

But my thinking has recently changed.

The following is just one mans opinion. I worked for a large fleet leasing company that had 3,000 ford Taurus's and 3,000 Chevy Lumina's.

They would run the vehicles to 100,000 miles and then send them to auction. This fleet company performed an interesting case study.

They took half of the Taurus and Lumina fleet and performed trans services every 30,000 miles and the other half they left alone and never changed the fluid or filters.

At the end of the 100,000-mile test there were more transmission failures on the serviced transmissions then on the vehicles that had no trans services performed.

In fact twice as many failures.

When the leasing company brought the study to the attention of ford and Chevrolet representatives the results were assigned to human error.

That is when the transmissions were serviced the rushing flat rate technician would botch the job and actually cause a problem as opposed to solving a problem.

So after studying these results that came around in the late 90's I decided since I was servicing my own transmission and human flat rate error would not occur.

I would stick to the recommended transmission service intervals on my own personal vehicle.

As for the general public that is visiting the chain stores you will have to use your own judgment.

After talking with some tech's about this subject we swapped stories and came up with a few possibilities.

When you do a transmission service and you are cleaning the pan there is a magnet on the bottom of the pan. This little magnet is very important.

It pulls the metal particles out of the transmission fluid and reduces the wear to the unit.

When I walked around some shops I saw a lot these magnets on peoples tool boxes to hold small screwdrivers and single edge razor blades.

I realized that on a few occasions I forgot to put the magnet back in the trans pan after removing and cleaning the metal off the magnet.

When ever I forgot to install this I would take the pan back down and do the right thing.

But by all the magnetic tool holders I saw that I recognized as transmission pan magnets.

I realized many mechanics are leaving the magnet out and are causing premature transmission failure by doing this.

So if you decide to service the transmission make sure only a trusted mechanic is performing the service and the magnet is back in the pan

A transmission overhaul can be one of the most expensive jobs a vehicle can through at you.

Transmission overhauls can be from \$1,100 – \$4,000 dollars depending on your make and model.

Lets do a brief review this chapter. Your vehicle will need to have oil changes on a regular basis there is no getting around this fact.

The trick in protecting yourself against UN needed repairs is being ready to ask questions.

Always keep in mind the shop and the mechanic are going to try and make money off of you.

Your job will be to cut through the bull and find out what is really needed. We talked about if its not broken then doesn't fix it.

In fact we learned that the more the mechanic touches your vehicle the more chances he will have to screw something up or break things that were not broken.

Human error can cause additional problems and reduce the dependability of your vehicle.

If you go in for your regular oil change and your vehicle was running fine be suspect when approached about tune up items and fuel system services.

Chances are if these things needed to be done there would be a tell tale sign like a service engine soon light on or a rough running and stalling condition.

Also sit down with your owner's manual and read the recommended maintenance items as related to your current mileage.

You do not want to approve services that are not recommended by your manufacture.

I will get into the owners manual in more depth in upcoming chapters but for right now I can tell you the maintenance recommended in the owners manual is already near overkill.

Do not go even further and approve services that are early or not recommended at all.

Chapter 6

How to verify Pricing

I touched on this subject in the beginning chapters but I want to go a little more in depth about the subject of pricing and make you aware of some tools that are available to the public.

When you understand where the prices come from and how they are determined you are better able to negotiate with the repair center and protect yourself.

I want to talk about the standard guides. The automotive industry has standardized pricing guidelines for parts & labor charges.

The 3 most popular standard guides are Chilton's, Mitchell's and All Data. You can arm yourself with the same tools the shop uses

There are no free labor guides that I know of online, but at Alldata.com you can get a subscription to your make and model of car for about \$30.00.

It includes all the repair information, if you decide you want to fix your own car. Which is the best way to avoid scams and rip-offs. It also includes vehicle specific TSBs, part numbers, prices and labor times to do a particular job.

I use it myself and I have found it to be an invaluable source of information. The TSB section stands for Technical Service Bulletins.

These are published by the vehicle manufacturer and identify inherent or common problems found by the manufacture during the warranty period of the vehicle.

I know it may seem overkill to spend another \$29.95 at this point and you do not have to! You can still protect yourself by asking questions and being proactive about the repair process.

I just wanted to make you aware that there is a do-it-yourself service that provides complete vehicle specific pricing information. Some people enjoy taking things to the next level and using all the tools available to them.

The subscription pricing of (\$29.95 a year) enables you to freely access all of the information for a single vehicle based upon the Year, Make, Model and Engine* configuration. They also have access for \$12.95 for one month if you enter the coupon code 1MOTR2587.

(Example: 1995, Ford, Mustang, V8-302 5.0L HO) select the desired vehicle, complete the registration information, and provide the necessary credit card transaction information through the secure site to immediately have access to the comprehensive automotive, sport utility, minivan and light truck database!



***Please Note!** It is very important that you use care while selecting the engine type. Please check any necessary references or locations

(Example: registration card, owners manual or under hood label) to ensure that you are aware of the correct engine identification before making your selection.

All-Data provides a free demo of how their system works and I recommend you check it out. [Here is a link to All-Data.](#)

Lets move on to a common curve ball as related to automotive service labor.

Now what happens when the repair is not so straightforward and we do not know what is wrong with the vehicle?

Now we have to pay for diagnosis, which has no set labor time or standard pricing

In the event of the need for "exploratory surgery," the phrase "time and material" comes in. Let's draw a hypothetical situation to illustrate what "time and material" means.

You're in a repair shop for a drivability problem. It seems as if your car has a mind of its own.

You step on the gas and the car stalls (then again, sometimes it doesn't). The auto technician is perplexed; he can't go right to the problem.

You ask how much it will cost to fix it? He says I can't give you an exact price. This one is going to be charged on a time and material basis.

The technician will now embark on a diagnostic quest in an effort to locate and isolate the problem.

The time will be logged and you will be charged the shop's labor rate per hour, as well as the cost of any needed materials, until the problem is found (or until you tell them to stop).

If the problem is highly technical and requires a high rate of skill, then many shops charge the "Skilled Labor Rate."

This rate is higher than the regular rate because the job requires the services of a highly skilled diagnostician.

The number one way to protect yourself in this situation is to only approve 1 hour of diagnosis at a time.

This puts you in control of the time and money scenario. After each hour of labor passes demand a full report of the diagnostic tests that were used and what results were found.

Before approving the next hour of diagnosis find out what they plan to do in the next hour and if they are getting close to finding an answer to the problem.

Make sure the shop understands you refuse to write them a blank check and that you do not have unlimited funds to spend on diagnosis.

I have seen customer's use this approach so well that the shop gets tired of asking for more money every hour.

The shop then actually kicks in some free diagnosis to get to the bottom of the problem and complaint.

Another reason the shop will kick in this free labor is because they may know the technician has not been faced with this complaint before and is actually learning new diagnostic skills in the process of working on your vehicle.

When the diagnostic time starts piling up you want to make it clear to the shop that you are not interested in paying for the technicians training.

Now verifying Parts pricing is included in the All Data solution stated above.

But if you decide not to go hole hog and get a subscription to all –Data there is a free way to just verify parts pricing.

This is very important when negotiating with your repair center. Sometimes the shop will get greedy and try to overprice the parts on the job.

First we inquire from the shop what parts are needed on the repairs.

Its best to take notes on the subject. We then ask for brand names and warranty information so we are comparing apples to apples.

We then take our list of parts to the computer and go to autozone.com this web site is free and you can use it as often as you like.

The first step is a simple point and click system to choose your vehicle make, model and year.

Then you can go to the parts catalog that is divided into system sections. Lets say we need a fuel pump and fuel filter price.

We click on fuel system and then pick our parts out of the sub categories that are listed in alphabetical order.

This next tip is convenient if you have a large list of parts to check on. Simply go down the line of needed parts and put them in the shopping cart.

For example when you click on fuel pump select the brand name that your shop is using and add it to your cart. Then go to fuel filter and do the same.

Now proceed to the check out and you have your total parts list.

You can save this or print it out and even e-mail this to your repair center.

You do not have to pay for the parts at AutoZone you just go through the check out procedure up to the point when they ask for payment and then you close it out.

This gives you a reference point to compare the repair shops part pricing. The prices quoted on autozone.com are full blown retail.

You can count on your shop getting wholesale pricing from their parts suppliers.

When you get down to it the shop is buying the parts for wholesale and reselling them to you for the retail price.

Again the shop has the right to make money we just want to make sure they are being fair about the process.

Chapter 7

Get your vehicle fixed on time and on budget

This chapter can get a little rough but we are dealing with a rough business. It is my job to arm you so that you can adequately defend yourself.

The methods I am about to talk about do not have to be used, just know they are available to you. Some people have a timid personality and are not comfortable with kicking ass and taking names.

Which is ok with me. I wish the whole world was a rose garden but when it comes to the auto business you are dealing with a tough crowd.

You may have to at times put on your metaphorical boxing gloves and duke it out, or be trampled by out of control auto service bills.

Lets start at the write up process when we are telling the shop about what we want. This discussion sets the tone for the repair process and must take place before you sign the repair order.

You should also be prepared to walk out of the shop and have a back up plan and back up repair shop if the answers are not to your liking.

If you are going in for preventative maintenance the process should be straightforward and simple.

Requesting up front pricing and completion times should not be difficult for the shop to answer. If they seem noncommittal explain that time and money is important to you.

If you have called ahead to schedule an appointment make sure the shop is able to honor the commitment.

Explain that you understand that things happen and if they have fallen behind and cannot follow through with the appointment you will understand and will try them again on another day.

To often the shop gets greedy and will misinform you to get you to leave the vehicle even though the chances are slim to none on completion.

The shop may even start the repairs to assure the car is tied up.

So make it clear when you need the vehicle back and why. Tell the shop you unfortunately must hold them to their time and cost estimate due to the vehicles importance to upcoming activity's.

You can even push the issue by explaining that you will need a rental car provided by the shop if your vehicle is not completed on time.

This will often push you to the front of the line. You do have the option to get this in writing but this will some times push the shop to far.

An even more effective way of confirming this promise is requesting the name of the person who makes the promise and sealing the deal with a handshake and a smile.

If you want to play nice guy you can be apologetic and restate how sorry you are to push the issue but missing this upcoming event is not an option.

When your car is running good and you are just going in for regular maintenance you can push the time of completion and cost issues full force.

Remember that rental cars are cheap and good customers are priceless.

If you have a break down, or your vehicle may need some extended diagnosis you will have to more flexible.

But still don't be afraid to ask when they think the vehicle may be completed and if they will have the time to commit to your repair.

And you still must ask for up front pricing on diagnosis. Remember we will never leave a blank check on the table.

Resolving Disagreements Over The Bill

If the charge is much higher than the estimate, or if the work was done without your authorization and you feel that you have been overcharged, question the bill.

Have the shop write out the reasons for the difference in cost, and keep this written explanation together with the work estimate, final bill, and other paperwork.

Make sure the mechanic returns your old parts. (The mechanic may return some parts, such as alternators and brake shoes, to the parts supplier for a refund, so you may not be able to get all of them.)

Even if you are unsatisfied with the mechanic's explanation of the difference between the estimate and the final charge, or feel you have been cheated, pay the bill, making clear that you do not agree to it.

Also explain the detailed steps you plan on using to get satisfaction. This can start even the toughest shop to start negotiating. But if they want to play hardball we can do that also.

You can then file a complaint with the Attorney General's Office and/or file a small claims court lawsuit against the mechanic. You can find your states Attorney General office in your phone book or you can google it.

If you refuse to pay a repair bill, even a bill in dispute the mechanic has the legal right to keep your car until you pay.

We must take the high road at all times to assure the law will be on our side.

Even if you feel cheated, you should not pay with a check so you can regain possession of your car and then stop payment on the check.

This is against most State laws and your vehicle may still be repossessed.

If you suspect that the repair shop has violated the law and your consumer rights and you can't get them to resolve the problem to your satisfaction, your next step should be to take your car to another repair shop.

Give the second mechanic a copy of your itemized parts and labor receipt and request an inspection of the alleged repairs and parts.

Get this report in writing. If you notice the same problem with your car is recurring, or find a new problem that should not have arisen, you will be in a better position to negotiate a refund from the first mechanic if you get a second mechanic's opinion of the work done in writing.

If you have an auto repair problem that the shop will not correct, your States Attorney General's Consumer Protection office and the Better Business Bureau both offer a complaint resolution process to help resolve your problem.

For more information, contact:
Federal Trade Commission
Consumer Response Center
Washington, DC 20580
202-326-2222
TDD: 1-866-653-4261

Other Resources available to you:

The main office of your local American Automobile Association (AAA) motor club, listed under AAA in the telephone directory.

Or

Your state Attorney General
Office of Consumer Protection
Your state capital

Many Attorneys General have toll-free consumer hotlines. Check with your local directory assistance.

The FTC works for the consumer to prevent fraudulent, deceptive and unfair business practices in the marketplace and to provide information to help consumers spot, stop and avoid them.

To file a [complaint](#) or to get [free information on consumer issues](#), visit www.ftc.gov or call toll-free, 1-877-FTC-HELP (1-877-382-4357); TTY: 1-866-653-4261.

The FTC enters Internet, telemarketing, identity theft and other fraud-related complaints into [Consumer Sentinel](#), a secure, online database available to hundreds of civil and criminal law enforcement agencies in the U.S. and abroad.

No one likes to be forced to take action but you should also consider that you are most likely not the only person having trouble with this repair shop.

You will be doing your civic duty and help other consumers avoid this repair shop by getting the word out.

Yes its time for another quick story. I worked for an auto dealer that had a tendency for playing hardball with its customers.

They had an exclusive area franchise and considered themselves the only game in town.

If you decided to try another dealership of this brand you had to drive more than an hour to get there.

This cornering of the local market was used by the dealership against its customers.

The owner would get excited when customers would get irate and would usually

handle the complaints in person, which is very unusual.

He had a complete service department staff to handle such matters. But he enjoyed it so much he would push everyone aside and handle the consumer directly.

He had a saying to use on the irate customer when they threatened to sue. He would say me and my teams of lawyers have deep pockets and live for litigation, see you in court.

This man meant it. I remember so many days when the owner and selected service department staff would dress up and go to court.

The good news was he lost as much as 50% of the time. When he came back from his losing court cases he was chewing nails and veins were popping out of his head. This man hated to lose.

On one occasion we had a customer take a different route.

The customer made a big picket sign and took off from work and picketed the building from open till close.

This picketers wife would take over so he could have lunch and bathroom breaks.

Well after 2 days the owner finally got a court injunction to stop the picketer.

The picketer was removed with great force by local police (kicking and screaming comes to mind).

The funny part of the story was the dealerships employees were all pulling for the picketer.

The owner treated his employees worse then his customers. I could write a whole book just about this one dealership.

The dealership was crammed with so much inventory there was no employee parking.

I had to park a mile away at the city ball field and walk to work in -30 wind chills and heavy nor'easter snowstorms.

I worked there 2 years because I enjoyed working on the exclusive product line and didn't want to drive the hour and 15 minutes to the next closest same brand name dealer.

Chapter 8

Make your mechanic happy to see you and assure he is doing his best possible work to your vehicle.

Finally we have come to an all-good news chapter. We have found an auto repair center we like and also a good technician that does reliable efficient repairs.

You have truly found the golden egg and the eye of the storm.

We want to form a long lasting relationship with this shop and its employees.

The trick here is quite simple you can bring donuts to the shop and be friendly with everyone you meet and act genuinely happy that your car needs work and that you get to visit the shop again.

But the number one way to assure the mechanic is happy to see you and will perform his best possible repairs to your vehicle is to tip him with cold hard cash.

It is best to pull him aside and do this in private if possible.

You can ask his boss if you could speak to him about your vehicle or maybe a family members vehicle that you would also like to start sending into this repair center.

When you tip the mechanic tip him good like a ten or twenty dollar bill, the first time. And then alternate small and large tips on your next visits.

Remember most mechanics will resist taking the tip. For one they are not use to being tipped and for two they may not think it is fair to you.

Do your best to make him feel comfortable about taking the tip.

Explain to the mechanic that it would make you happy to tip him because you appreciate his honesty and integrity in a business were this is rare.

I know you have already paid a lot of money for the repairs but the mechanic only has received a modest share of this and has done all the hard work.

The return on your money is only as far away as your next visit.

When you come back to this mechanic he will continue to be on your side and this will save you money on unneeded repairs and poorly done repairs.

When I did repairs for the general public I always gave it my all. This is just my nature and the way I do things.

I was only tipped a hand full of times in a twenty-year period. And I remember each one like it was Christmas day.

Not only did I feel my hard work and dedication to quality repairs was appreciated but it was also nice to have some unexpected pocket money that the wife didn't know about that I could spend on myself.

The effect these tips had on me really surprised me.

When I saw the tipping customer I would light up like a candle. Yeah! The person that appreciates my hard work is back.

And you could be sure I didn't want to let them down by screwing something up or taking short cuts to move onto the next job.

When you are dealing with a shop that has multiple mechanics hold off on tipping until you have determined whom the top mechanic is in the shop.

One way to tell is strike up conversations about the mechanics with the service advisors and service managers.

Also shops with multiple mechanics usually display the mechanics certifications and schooling certificates in the shop office or waiting area.

Match the heavily certified technicians up with nametags and track the person's performance on your vehicle.

When you find a winner stick with him. Request from the shop that you would like this particular mechanic to work on your vehicle.

The shop in most cases is flattered along with the technician that you value this person's skills and dedication to quality repairs.

In my opinion bonding with the technician is very worthwhile. Bonding with the service advisor and the service manager is much easier but in most cases is a waist of time and effort.

For the most part these positions attract harden professionals that will smile at you but couldn't care less about your bill or your vehicle.

Chapter 9

How to confirm the repairs were actually done and no scams and rip-offs were pulled on you

I know what your thinking asking for the old parts back is my solution to this problem. Yes it is but I have a twist up my sleeve and I want to talk about asking for the old parts back in more depth.

The problems with asking for the old parts back are many. Number one what you are really saying is I don't trust you, right to your shops face.

Another problem is if you ask for the old parts back from lets say a tune up you may get six old spark plugs and a smelly fuel soaked fuel filter.

You do not want to carry around a wet fuel filter. And when it comes to the old spark plugs they could be out of anybody's vehicle.

And some times the part numbers on the old spark plugs is hard to read on very old plugs. If you can read the part number you can call a parts store to verify the spark plug part number belongs in your vehicle.

When you are talking about getting the old parts back when the repair is brake job, trust me you do not want the old brake pads back.

They are in most cases unidentifiable and very dirty and dusty. Plus there is no readable part Number to verify if they are off of your vehicle.

So again they could be off someone else's car. (Quick story) I remember one time my sister had her car repaired when she was out of town.

She was driving and her check engine light came on. She called me in a panic. I told her to take it to a chain store and hope for the best but to ask for the old parts back.

The shop said the vehicle needed an o2 sensor and my sister confirmed the light was out and received the old part.

When she got back in town I asked to see her old part, it was not an o2 sensor but an egr valve off of a large diesel engine. Definitely not from her little economy car gas engine.

When I looked under her car the old original o2 sensor was still in the exhaust stream.

To make a long story short the shop just cleared the codes and let her go after confirming with her she was heading back to her home state.

Two things to learn from this. One if you have out of state tags tell the shop you just moved to the state your in and have not changed your tags yet.

The shop knows that if you are a transient customer that they will never see you again and can give you the royal screw over with no problems.

The second lesson is if you ask for the old parts back know what the part looks like.

Have the shop show you the old part on the car before they remove it so you can confirm it is the part quoted in the repair estimate.

Ok here is my twist on this ask for the old parts problem.

Don't ask for the old parts but instead ask for the boxes from the new parts that were installed. Now confirming part numbers with a third party parts store is easy.

You will not have to deal with dirty smelly old parts.

You still have the trust issue to get around but we can be creative on this subject. We can tell the repair shop we collect automotive boxes for your box collection.

Yes they will think your weird but they will not think that you don't trust them.

Or tell them you want the new boxes so when you need those parts again you know the correct part numbers.

Its funny when even a known felon will get mad at you when you do not trust him.

When it comes to larger more expensive parts you can tell the shop you want to save the box for warranty purposes just in case the new part fails.

This will make it easier for both you and the shop to receive credit should there be a parts warranty issue in the future.

Let me give you an example of this. Lets say you have a few year old Chevrolet and it needs a fuel pump.

A new Delco fuel pump is around \$400.00 because it comes as a one-piece unit along with the fuel tank sending unit.

It is not uncommon to have a new fuel pump fail shortly after replacement. This is called infant mortality in the parts world.

If you saved the box it came in a credit from the parts house is a snap.

If you don't care what the shop thinks of you, which is ok because you're the one paying the bill.

Ask for both the old parts back inside the new boxes. This is the most effective way of confirming the parts were actually installed on your vehicle.

Just to make this very clear it is your right as a consumer to ask for your old parts back. This is true in all 50 states in the U.S.

The only time this plan will not work is if there is a core charge on the old part.

As I explained earlier some parts are returned to the parts supplier for remanufacturing purposes.

When cores are returned to the parts vender for rebuilding they are returned in the new boxes

It is still your right to receive the old parts back but you will have to pay the core charge.

The core charge can be a very small fee. It can also go in the other direction costing almost as much as the new part.

So ask your shop what the core charges are up front before you request all the old parts and new boxes.

Chapter 10

Learn about the repair order

Auto Repair Law In most states

Most states have no comprehensive statute specifically governing auto repairs. However, the Deceptive Trade Practices/Consumer Protection Act includes some sections, which deal with auto repairs.

Under this law, it is illegal to:

Knowingly make a false or misleading statement about the need for parts or repair service.

State that work has been done or parts were replaced when that is not true.
Represent that goods are original or new, when in fact they are second-hand or refurbished.

Example repair order document:

You may be asked to sign both the authorization to inspect and the authorization to commence repair work at the same time.

The authorizations may be on the same piece of paper, but they should require a separate signature.

Read each one carefully before signing. The authorization to commence repairs should also include the date and time that you signed the form.

If you decide to have repairs made, make sure the initial work order clearly specifies all of the following information:

The repair work to be done.

The specified fee for the specified work which includes the price for the parts, the price for the labor, the fee for storage, and any other charges.

This should include an indication of whether the replacement parts will be new or rebuilt.

Also whether there will be a charge for the "core" of parts such as alternators or starters, which you may wish to keep.

The date by which repairs will be completed.

The terms of any warranty, including the duration of the warranty, the parts and labor warranted, and the exclusions of the warranty.

Also an indication of whether the repairs will be paid for in cash, by check, by credit card, or through any another form of financing.

If the repairs are to be financed, the terms of payment, including the loan approval from the financing company and the amount of the down payment, the dates for payment, all financing terms including the amount financed, the annual percentage rate, the monthly payment, and the number of monthly payments.

Include indication that all parts, which will be replaced or removed from the vehicle during the repair, will be saved and placed in a plastic bag in the trunk of the vehicle.

Or else that they will be identified and exchanged for new parts;
Your signature approving the commencement of repair work and the method of payment.

The above is the legal explanation of the repair order document that I could find on the Internet pertaining to nation wide state laws. Each state is different in its requirements on repair documentation.

I want to tell you a story about how the tables were turned against a dealership I worked for and how the customer used the repair order document to get \$4,000.00 worth of free repairs to there vehicle.

In the state of New Jersey you must sign a release on the repair order to approve repairs over the phone.

This shrewd customer did not sign this area and it was unnoticed by the service department staff.

The customer had left the vehicle at the dealership for a major engine failure diagnosis.

The service advisor called the customer on the phone and provided the estimate. The customer verbally approved the repairs.

The dealership completed the repairs but the customer refused to pay because they did not sign the release for verbal authorization.

The dealer refused to release the vehicle to the owner.

They all went to court with their lawyers. The customer won hands down in a 20-minute court battle because of this unsigned fine print.

The dealership released the vehicle as per the court order.

The dealership learned from this costly mistake and redesigned its repair order and required both the customer and service advisor to sign this area of verbal authorization.

The repair order documents design intent is to level the playing field and provide protection to both the repair center and the consumer

If not filled out properly this document can be used with great legal force against both parties.

Next time you go in for auto service take a few minutes to read all the fine print and understand its contents. You may be surprised on what you learn.

In most cases people sign these standard documents without reading them first. We get in the habit of thinking it will be ok to due so.

Another part of the document to point out is the mechanic lien area.

This short paragraph states that the shop has the right to hold the vehicle until complete payment is received.

This also includes storage charges. It is a good idea to be aware what the storage charges are at the repair center you are doing business with.

At some repair centers this price can be outrages like \$100.00 a day just to have your vehicle sitting in the lot.

If you are going to protest the bill and leave your vehicle there while doing so be aware the storage charges may wind up totaling more than the bill.

Sometimes it is better to pay the bill get your vehicle out of the repair center and fight about the bill afterwards.

Make note if you plan to fight the bill make the shop aware of this before payment is rendered. The shop in some cases will negotiate before the process escalates.

Chapter 11

Learn about recommended maintenance

I want to start this chapter out with a recent personal story. I moved across the country to secure my new government job. This was actually about two years ago.

I got to town before my tools arrived and the long trip put me past due for my recommended maintenance on my newer truck that now had about 6,000 miles on it.

My owner's manual states to change the engine oil every 3,000 miles or three months.

My manual states failure to comply with this could void my warranty and I know this is not true and I will explain why in this chapter.

I decided to go to the local dealer and explain to them I was a certified master technician without my tools and needed an oil change.

The dealer service advisor wrote me up and I waited for the vehicle in their state of the art customer conference room.

While I was in the waiting area I read the sales flier of what was to be included in my \$34.95 oil change.

Boy all kinds of good stuff. I was tempted to go outside and watch the mechanic perform the service.

But I was comfortable and decided to relax, have some coffee and watch TV.

This was a mistake and against my better judgment.

I do strongly recommend that you watch the mechanic perform the service when waiting for your vehicle.

Even if you don't know what your watching. The mechanic may not like it but that's to bad it is your right to watch.

This usually keeps the mechanic honest. As in he is less likely to skip things like checking tire pressure and filling fluids.

Well I received a page that my vehicle was done and to proceed to the cashier.

I paid my bill and my truck was pulled up to the drive through. I decided to check the service right there.

Oh my god the horror. Nothing in the flier was done except just the oil change and they screwed that up also.

They overfilled the engine oil by more than a quart, which is bad for the engine.

They did not lube the front end; they did not top off the fluids, check the tire pressure or even fill my washer fluid.

They even crossed threaded the oil fill cap and broke it.

My blood pressure went through the roof. I went to the service advisor and asked to see the service manager.

To my surprise he pointed to the service managers office, instead of trying to handle the complaint, as a good service advisor should do.

I knocked on the service manager's door and he yelled what in a very aggressive manner.

I entered and introduced myself and said I just moved to town and was looking for a reliable dealer and was interested in being a long-term customer of this establishment.

I explained to the service manager my disappointment on how my simple oil change was completely botched. He said why and I went down the long list.

He got defensive and put on his angry face and said what makes you so smart.

I explained my expertise in the field and why I didn't do the service myself.

He went out to my near new vehicle and I showed him every last detail that went wrong on the simple service.

After a few more attempts to get tough on me which I immediately used against him he surrendered and agreed the service was done horribly.

There was no defending anything because the poor service was so obvious.

He stated his lube guy was a trainee and he would have the service straightened out by his best master tech and refund my money.

He lived up to his promise but I was there for about 5 hours total.

I know this was a long story but I wanted you to understand I know what you face as a customer and as a mechanic.

To me this chapter is the most important in the book.

So lets start out with the owner's manual. My owner's manual threatens to void my warranty if I do not perform the recommended service on time.

Well let's look at what is recommend. In my manual (yours may be different) it states that for normal driving an oil change is due every 3,000 miles or 3 months.

Then you keep reading and it says for fleet vehicles oil changes are needed every 4,500 miles or 6 months. What are they talking about with fleet vehicles?

I called the 800 number and asked for the official explanation, which is high mileage use or long trips equaling more than 9,000 miles a year would be considered fleet type use.

Well to me this is what normal driving is.

So according to the manufacturer my vehicle should be serviced under the fleet maintenance schedule.

Everybody I know puts more then 9,000 miles a year on his or her vehicle.

The national average for miles put on a single vehicle has risen from 10,000 miles in the 80's to 15,000 miles a year in the 90's to present day. So most of the nation should be on the fleet schedule along with me.

I added up the price difference between the 2 schedules in my own personal service manual.

Over a 75,000-mile 5-year period the price difference or savings by going with the fleet schedule was around \$500.00 dollars by increasing the miles and time between services.

But even more important than the money was that this means less visits for service.

As we have learned every time you avoid a service appointment you are avoiding scams and rip-offs overcharges and poorly done work.

These items together are priceless over a five-year period.

What did the manufacturer mean about voiding my warranty. Well I have seen this first hand.

The manufacturer will not honor the warranty if the vehicle was abused. Using the fleet schedule is not abuse it's what is recommended on my vehicle.

The dealer and manufacturer will have the burden of proof to claim neglect.

This is very difficult and usually only happens under extreme neglect, like when the engine oil looks like tar from lack of oil changes.

Now this is important I am not saying to not service your vehicle regularly.

I am saying do services only when it is needed. Owner's manuals are different for every vehicle.

Study your manual and how it relates to your driving conditions and stick to what is really recommended.

I was changing my own personal oil way too much.

The point was driven home at my newest job. The government fleet I work for has 2,800 pieces of equipment.

The cars and light trucks get their oil changed every 6 months or 4,500 miles. Services are almost never late due to a high tech notification system.

When the vehicle is due, it comes in for service!

After a 5 year 100,000 mile study there were no engine failures in the entire fleet. To me this means 4,500 miles or 6 months is good for me also.

Now on your vehicle I stress to study the owners manual and see what is best for you and your vehicle.

Vehicle owner's manuals are not usually user friendly. The manufacturer probably does this on purpose.

A confused owner will most likely put their trust in the dealer to guide them in needed maintenance and repairs.

This is like putting the fox in charge of the hen house.

The dealer will put you on the schedule with the most frequent service intervals and push you towards over servicing your vehicle.

The maintenance section is usually toward the back of the manual.

I recommend reading this section four to five times or until it is completely understood.

Do not be afraid to call the customer assistance line and ask questions.

The price for this little used information service was added to the price of the vehicle that you purchased.

The customer assistance hot line is important to the manufacturer. Do to the fact they are trying to build brand loyalty and future sales by providing courteous friendly customer service

Become an authority or expert on the required maintenance of your specific vehicle and know what is needed before you go in for service.

When the service advisor starts throwing up-sell services at you and you shut him down with facts and knowledge you will change the shops attitude about selling you services you don't need.

Chapter 12

Basic Automotive skills

Learning some basic automotive skills will make you feel more confident about going in for auto service. The service writer or service manager will instantly recognize this confidence.

A consumer that understands the vehicle and how the auto service business works is usually passed over when it comes time to apply the rip offs and scams.

Just like a lion out hunting the shop goes after the weak for an easy kill. But also like the lion when the shop gets hungry enough it may attack even the strong.

This is when we will break out everything we have learned and make the shop sorry they came after us.

In this chapter my goal is to teach you about the technical aspects of the automobile.

In my research about the subject and how to deliver the information I found two FREE premium websites that let you learn as much or as little as you want.

You can learn at your own pace as in the material is in bite size sections. The links to these sites are to follow in this chapter.

When I went through the material I noticed two key factors were missing.

So before I provide the links to these web sites I want to hit the basic principal of opening your hood and what you will see when the hood is open.

It very important to demonstrate this ability to you repair shop to change the way the shop thinks of you during the service procedure

The number 1 essential skill is to learn how to open your hood. Your owner's manual explains how to do this in detail. But the basics are that there is a primary and secondary latching system.

This is to prevent the hood from flying up into the windshield while driving.

If the primary release is triggered or fails the secondary latch will catch the hood striker and hold it down.

To open the hood both the primary and secondary latches must be released.

The primary release is inside the vehicle usually to the left of the driver and down toward the foot well.

The secondary release is harder to find. In most cases the hood will have to be lifted up slightly to see the secondary release and is usually located towards the center of the hood.

Again your owner's manual will give exact details to the location and operation of the latches.

You could also roll in to your local brand dealership and ask a sales person to show you how to open the hood (even if you didn't buy the car there).

When you get the hood open take your time and look around and get familiar with the easy stuff first.

Things like fluid reservoirs are clearly labeled and marked. Your owner's manual has a detailed break down of the location of these critical fluid locations and instructions on how to confirm proper levels.

Find your washer fluid, power steering fluid, brake fluid; coolant reservoirs engine oil dipstick and transmission fluid dipstick.

On the next page is a picture of a modern engine out of the vehicle so things are easier to see. This is an example of what engines look like these days.

Inside the vehicle things can get hard to see because they really pack the engine in on the latest models.

You may be able to find pictures of your exact engine in your vehicle by going to google and searching for your model vehicle plus the key words engine picture.

Here is a general picture of a modern day engine courtesy of the good people at



Chrysler. Photo courtesy [DaimlerChrysler](#)

2003 Jeep® Grand Cherokee Engine. The yellow handle on the upper right side is the engine oil dipstick.

The industry standard is yellow for engine oil and red for transmission fluid.

On the front of this engine we can see the engine drive belt and the pulley's are your engine accessories, like your alternator, a/c compressor, power steering pump and belt tensioner. Also the idler pulley's that support the drive belt rotation.

The largest pulley in the center is the crankshaft pulley that actually drives the belt and all the other accessories.

I would like to make you aware of the best FREE web site I know of for learning about how the engine operates. <http://auto.howstuffworks.com/engine.htm>

This site is 100% free and really makes learning the basics easy. You can study up on this topic and appear knowledgeable to your repair shop staff.

The how stuff works web site is amazing and can teach you more then just how engines work.

The start page for the FREE automotive section is located at the following link <http://auto.howstuffworks.com> the free articles section is impressive. I have listed just a few of the available topics you can research at the above link.

- [How Air Bags Work](#)
- [How Air-Powered Cars Will Work](#)
- [How Anti-Lock Brakes Work](#)
- [How Automatic Transmissions Work](#)
- [How Automobile Ignition Systems Work](#)
- [How Automobiles Work](#)
- [How Biodiesel Works](#)
- [How Brakes Work](#)
- [How Camshafts Work](#)
- [How can I measure the drag on a car?](#)
- [How Car Computers Work](#)
- [How Car Cooling Systems Work](#)
- [How Car Engines Work](#)
- [How Car Financing Works](#)
- [How Car Insurance Works](#)
- [How Car Steering Works](#)
- [How Car Suspensions Work](#)
- [How Car Washes Work](#)
- [How Cars Work](#)
- [How Catalytic Converters Work](#)
- [How Champ Cars Work](#)
- [How Child Car Seats Work](#)
- [How Clutches Work](#)
- [How Convertibles Work](#)
- [How Crash Testing Works](#)
- [How CVTs Work](#)
- [How Diesel Engines Work](#)
- [How Diesel Two-Stroke Engines Work](#)
- [How Differentials Work](#)
- [How Disc Brakes Work](#)
- [How do 30 pounds of air in your tires hold up 2 tons of car?](#)

This free training might be time consuming but it is not only interesting but can make you appear very knowledgeable to your repair shop.

Remember from the beginning of this book that a knowledgeable consumer is a shops worst nightmare.

This is your first and best line of defense against un needed repairs, rip-offs and scams.

Now that you know where this site is you can refer back to it when your vehicle is having a problem in any area.

The how stuff works web site breaks down every system on the vehicle and explains in detail how it works.

Next: Get to know the lingo

I wanted to provide a glossary of terms so when you are talking to the repair shop you can use the same language they use and gain instant respect.

While I was doing some research on the subject I found an amazing **FREE** glossary of automotive terms.

Looking at it I realized it would take me months or years to create my own glossary of terms.

So I respectfully gave up this task and I will just give you the quick link. This takes you directly to the best glossary of terms I have seen.

Study the terms and definitions and you will be an automotive expert.

You will be able to refer back to this resource whenever your shop uses a term you may not understand.

The free link is below

<http://autorepair.about.com/cs/generalinfo//blglossary1.htm>

This complete glossary is provided by www.autorepair.about.com and is not **part of this book**. This glossary is provided free of charge at the above web site and requires an Internet connection.

Chapter 13

Actual case studies of the program at work

Before I tell you about the actual stories of people I have helped and the details of their problems and solutions, I would like to review some strategies for women motorists.

My wife has been proof reading and editing the book for me. She has told me that even though I have tried to strike a balance in the presentation that I have leaned toward the side of how a man would handle the service situation.

So we discussed this at great length and decided to add a section for the female motorist.

Service department personnel treat women differently and I don't want to act like it's not true when it is true.

I wish I could say that automotive repair shops treat everyone the same, but I can't.

Women can be considered easy targets for auto repair rip-offs and scams.

Most shops will see a woman as an easy sell because of a lack of automotive knowledge and an increased need for a feeling of safety.

This is most definitely one of those situations where women must work harder than men to get the same treatment.

Your automotive knowledge base must be very strong and your automotive vocabulary strong as well.

Women can win this battle just like men. Go back to last chapter and click on the two links provided for the free educational materials.

Learn at your own pace, but take the time to learn the information provided.

My wife tells me that I must provide an alternative method to the kick ass and take names approach that I recommend.

She says that women will not be comfortable at getting tough with the hardened career service managers and service writers.

The alternative is knowledge about the subject being addressed by the

service center.

You won't have to yell or get tough when you know the material being negotiated.

When I was on the debate team in high school the women on the debate team had the advantage. This was in most cases due to their superior verbal skills and public speaking confidence.

This can be the case as well when negotiating with the shop, but being prepared to debate is the key.

Case Study # 1

I have been providing technical support on the internet for about 2 years. My first success story came just 3 weeks into the project.

A women doctor had taken her infinity Qx in for service for an intermittent lack of power and rough running. The dealership had charged two hours of check out time and said they had isolated the problem.

The service advisor called my customer and stated the problem was in the ignition system and that the distributor needed replacement along with the spark plugs and ignition wires.

The repairs totaled out to be around \$800.00. The doctor approved the repairs and the vehicle was completed the same day.

When the customer was headed home the vehicle started acting up the same exact way as before the completed repairs. The vehicle owner returned to the dealer and left the vehicle a second time.

This time the dealer had the vehicle for 3 days before calling the customer with a new estimate. The report from the dealer was that the fuel system was now the cause of the vehicles problems.

The dealer provided an estimate for a fuel pump, fuel filter and fuel pressure regulator totaling \$1500.00. This is when the customer contacted me and I reviewed the case.

What I didn't like about this story was first they said it was the ignition system and replaced just about all the components in that system. And now they change the story and say the fuel system is the cause and want to replace almost all the parts in the fuel delivery system.

In most cases when you have a vehicle breakdown the problem can be

traced to a single component failure. The chances of multiple parts failing at the same time are very rare.

In fact when the manufacturer is paying for the repairs under warranty the standard rule is one part per complaint. In this case the dealer was pulling out their parts shot gun and replacing a total of six different components.

Me and the vehicle owner emailed back and forth several times and she asked me to call the dealer. I spoke with the service advisor and explained who I was and my automotive background.

I explained to the service advisor how the customer's money was completely wasted on the first \$800.00 repair and the parts replaced at that time were not properly diagnosed.

Then we started discussing the new estimate and I questioned why it needed 3 separate fuel system components.

How did they know it needed a fuel pressure regulator? The advisor stated the fuel pressure regulator was needed to address a low fuel pressure condition.

Then I asked why is the fuel pump in need of replacement. The advisor stated the same reason that the fuel pressure was low.

A quick lesson for you is that the fuel pump is mounted in the fuel tank and provides fuel pressure to the fuel rail, the fuel pressure regulator and then the fuel injectors so if the pump is not providing pressure, the other components cannot be tested. I explained this to the advisor.

He agreed the fuel pressure regulator was recommended but not tested.

At this point I demanded a complete refund of the first repair and only to approve the fuel pump repair after this was confirmed.

He said he couldn't do that. So I spoke the service manager. He agreed that the dealership did not handle the diagnosis properly but he was not in the business of giving money back.

I then spoke to the service director and went through all the details of the poorly diagnosed suv.

After reviewing the case they decided to refund the labor and diagnosis from the first repair and install the fuel pump at no additional labor charge.

The owner was just paying for parts. We approved the fuel pump and fuel

filter replacement but not the fuel pressure regulator.

The vehicle was fixed and a fuel pressure reading confirmed good fuel pressure at the injectors and no additional repairs needed.

The customer was charged for parts only. The parts total from the two repairs was \$900.00.

The labor charge for the two repairs would have totaled \$1400.00 to the vehicle owner but was not charged as per our negotiations.

The owner was very happy about the problem being repaired and saving the \$1400.00. I was glad I could help but I wasn't happy because the vehicle only needed a fuel filter and fuel pump replaced to fix the problem.

The SUV got a distributor, ignition wires, and platinum spark plugs that it didn't need. I did not get involved soon enough to prevent this from happening.

Case study # 2

This next customer had a common complaint of the a/c not blowing cold air. They took their Chevy Cavalier into a local chain store and asked for an estimate to repair the a/c.

The shop provided a whopper of an estimate for replacing almost every component in the a/c system.

The shop wanted to replace the a/c compressor and almost all of the parts that attached to the compressor.

The customer got me involved before any repairs were approved. After making some notes on what the vehicle owner was told I called the repair shop.

The service advisor notified me that the compressor had internal damage and spread metal through the system. This was believable and I have seen this happen before.

But I decided to ask a few questions before I recommended the owner approve the repairs.

I asked the shop what the pressure readings were on the high and low side. The advisor stated he would find out and call me back.

Two hours later he called back and notified me that the system was empty and the freon had leaked out. The red flag went up.

When an a/c system is empty the compressor will not come on and testing is not possible.

The procedure would be to test charge the system and with the compressor running to properly diagnose the failure.

I asked him how he determined the compressor was bad and spread metal through the system without having run the compressor. He said he would call me back.

When he called back he stated that his technician was familiar with this make and model vehicle and that compressor failures are common on this type of vehicle.

At this point I called the customer and recommended to move the vehicle to another shop. I informed the vehicle owner that this shop did no diagnosis and was planning on replacing all the parts and hoping the vehicle would be fixed.

The customer agreed and moved the vehicle to an a/c specialty repair shop.

I decided to tell this story because the results are funny to me. The a/c repair shop test charged the system and found a leaking evaporator.

This was the one part that the first shop left out of the estimate. The first shop would have replaced all of those good parts and left the one bad part remaining.

Why did they leave the evaporator out of the estimate? The reason is that the evaporator is hard to replace. The first shop was only interested in doing the easier repairs and hoping it would fix the problem.

Now the car is fixed and the owner avoided replacing \$1500.00 of un needed a/c components.

Case study # 3

This next case was a problem with a 2002 Toyota corolla. Yes even Toyotas can have mechanical problems.

In this case the vehicle owner notified me that her engine was leaking oil and wanted to know if this would be covered under warranty.

The vehicle warranty was 3 years or 36,000 miles which ever came first. The customer had 36,125 miles on the vehicle, just over the warranty limit. I was

surprised that the vehicle was having this problem because Toyotas are very well built.

I did some research and found out that the vehicle had brand new technology in the engine compartment. This vehicle had the first year for a new engine know as the vvti (variable valve timing).

I used all data to research TSB's (technical service bulletins). The very first bulletin was about engine oil leaks from the front timing cover.

I called the customer and asked if the oil leak was from the right side of the vehicle. The customer put some cardboard under the vehicle and confirmed the next day that it was on the right side.

I faxed over a copy of the TSB and the owner took her vehicle to the dealer. The dealership performed the repairs under warranty even though it was technically out of warranty by miles.

As a side note the dealer has some lead way when it comes to warranty coverage. If the vehicle is out of warranty but close the dealer can still cover the repairs under a grace period clause provide by the manufacture.

The dealer can do this for customer satisfaction and brand loyalty reasons. Most dealers will not do this unless you ask.

If they refuse to offer you a slight grace period you can call the manufacture and explain that if they assist you, the next time you buy a car it will be their brand because of the support received.

Back to the Toyota story. The owner of the vehicle picked up the car and the oil leak was fixed.

The customer was looking at her receipt and the repairs did not match the repairs that I sent her in the TSB. I had her fax me a copy of the receipt.

The warranty paper work stated that the dealer replaced the cylinder head gasket and not the timing cover seal that had been updated by Toyota.

I called the dealer to find out why the receipt did not match the repair. I wanted to make sure that the redesigned timing cover seal was installed on this vehicle to avoid future problems.

The service advisor's honesty surprised me.

He stated that the timing cover seal was replaced with the updated part

number but they had charged Toyota to replace the head gasket because the head gasket operation paid more labor from Toyota.

So what this meant was the dealership was actually stealing from the factory.

When I went back to the customer and told her the story she asked me to drop it and not get the dealer in trouble because as far as she was concerned the car was fixed properly. The customer felt that looking out for Toyota was not her concern.

I agreed to drop it but I wanted to tell you the story. If the dealer cannot scam you they can still scam the factory. The dealerships lust for money knows no boundaries.

This is a good time to touch on warranty repairs and the relationship between the dealer and the manufacture.

I have worked at dealers that scammed the manufacture worse than they did the customers.

This affects all of us as in the manufacture takes these loses in account when pricing new vehicles and passes the cost on to the consumer at the point of sale on new vehicles.

I have worked for dealerships that pushed the manufacture to the point of the dealership being audited by the factory.

This process is very interesting and I wanted to share it with you.

When A dealership performs warranty repairs the factory requires the dealership to turn in the old parts for inspection.

Yes the manufacture uses the same techniques I recommended earlier in the verifying the repairs chapter.

The factory doesn't trust the dealership either.

When the dealer's warranty claims exceed what the factory considers normal an audit is performed.

The manufacture will send out a factory representative to review warranty claims and old parts.

The dealership is then responsible to pay any charge backs that the factory feels is necessary.

If the dealership refuses to pay, then the franchise is pulled and the dealer is out of the new car business.

Closing Thoughts

As we come to the end of this book I wanted to restate that you can find honest automotive repair shops out there. I have focused on the negative stories and the bad repair shops in an effort to educate and protect you from auto repair rip-offs and scams.

With some effort and knowledge you can find the good repair shops and develop a long-term relationship with this repair center.

On your quest for the honest mechanic you will no doubt run into a few bad ones. This is when you can refer back to this book or go to the how stuff works web site or the complete glossary and arm yourself with the education to keep the shop honest.

While learning about the mechanical side of your vehicle you may decide to perform some diagnosis and repair on your own. This is why I created the [YouFixCars.com website](http://YouFixCars.com). Here you will find all kinds of information to support the do it yourself mechanic. Or just stop by to learn more about your car!

Thanks for reading my first book!

Mark