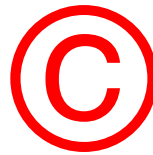


WHAT YOUR MECHANIC  
**DOESN'T**  
WANT YOU TO KNOW  
AN INSIDE LOOK AT THE AUTOMOTIVE REPAIR INDUSTRY



By  
AUSTIN C. DAVIS

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# AUTHOR'S SOAPBOX

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Congratulations on your first step toward *worry free car repair*. My name is Austin Davis, and my family has been in the auto repair industry for over 60 years. I am not out to “get” auto mechanics or badmouth the industry that has been my livelihood. I would like to inform you of some areas that I think the public should be aware of. What you tell the service writer or mechanic could—and sometimes does—get used against you. How you act or communicate with the service advisor can have a positive or



negative effect on your bill. I don't want to scare you into thinking that you are the cause of your high repair bills, but I would like to show you some common mistakes made by customers every day, and help you find out if you are making them too.

I must admit that I personally do not work on cars. My main title is *customer service rep*, or in the industry, *Service Advisor*. I am the guy who decides what service you need, when you need it, and how much it will cost you.

I am responsible for your overall satisfaction, including comments and complaints. I am also responsible to ensure the shop makes a profit. My duties include keeping you happy (at least until you pick up your car). Most of the shop/service advisors that I know work on commission and are very good at selling you “extra” service. Ever wonder why you get a phone call from them trying to sell you something you didn’t even bring the car in for? Do you really understand why **you need** this service or *what it is they are even talking about?*



I am always amazed when I talk to people and find out that they do not know what service their car just had at the repair shop. Ironically they will always remember to the penny how much it cost them, but cannot remember if it was a brake problem or a leaking water pump that cost so much. Has this been the case with you? Do you authorize work by the amount of money the mechanic wants to charge you and not by the importance of the work itself?

This book was designed for the average car owner, and no formal technical training is needed on your part. I have been asked by many of my customers to publish my advice and my opinions so that those who do not know me can benefit as well. I do not like to see people get taken advantage of, especially in my industry, and anything I can do to prevent that from happening is a worthwhile endeavor.

This book may not make the top ten lists by its appearance, but looks aside,



let's learn something about your car and how to maintain it. I will hit on key points, general observations, specific examples, and all-purpose rambling (I like to ramble) to get my points across. During the course of this book we will assume a domestic, average car with a gasoline engine for my examples. Wherever possible I will give links to recommended products our services that I feel deserve your attention. So let's get started—and thank you in advance for your concern for your car and for supporting me.

# THE DATING GAME

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## **PAY ATTENTION TO FIRST IMPRESSIONS**

Picture yourself on a first date.

Imagine that you are a woman and are picked up for a date by a man whose hair is dirty, his shirt is torn, and his car looks like California after an earthquake. You've got an absolute slob on your hands. He had better be very entertaining, because that first impression is permanently implanted in your brain. You probably won't have a good date, because that image will haunt you all night long.



If you like the person enough to contemplate a long-term relationship, this aspect of their personality will certainly be something you will want to consider. Well, hopefully you and your repair shop will also be able to establish a long-term relationship—and even though YOU don't have to bunk with him, your car will. So don't leave your car, *a huge investment in your life*, in the hands of a slob. I know it is a repair shop and it gets dirty, and yes, many of the employees have to get dirty to do their jobs. I won't eat in a

dirty restaurant, or take my kids to a school riddled with graffiti. Let's face it, cleanliness plays a major role in our lives, and your auto garage should not be an exception.

Don't think that because the shop is a little dirtier than or not as fancy as some of the other shops that you will get a better price. I know of a few shops in my city that are very dirty looking inside and out *and* they charge a higher hourly rate than most other shops. A new customer of mine told me the other day that the reason she visited a competitor was because they "looked cheap." She soon found



out that looks can be deceiving, and she felt over-charged for service that she had requested. Customers who don't know what to look for may perceive this shop to be a "good ole boy" repair shop where the mechanics spend all their time working on cars and not on cleanliness. I have heard this is true in certain ethnic restaurants, that the ones with the best food have the dirtiest kitchens. Where's the logic there? So do you believe the service from these shops will be less expensive than the clean and fancy shop with the neon signs and the well-kept lawn? Probably not!



We are looking for a shop that we can call home for a long time. You should feel comfortable in this shop while wearing white tennis shoes or new penny loafers. A clean shop will attract clean and well-educated mechanics, service writers, and any other shop personnel. Dirty shops attract dirty people. We are looking for honest, outgoing, and easy-to-deal-with people who will bend over backwards to please us. These quality people are not working at shabby, out-dated, or untidy shops.



## **SCRUTINIZE THE OTHER CLIENTELE**

The second thing to look for is the average year and condition of the cars in the parking lot and in the service bays. If the trend is average-to-poor quality, 10 to 12-year old vehicles, then the shop may not be competent in servicing your just-out-of-warranty “baby.” I don’t want someone to experiment on my car, because they have not yet worked on one that is similar to what I am driving. All cars are not created equal, and you don’t want a mechanic to use you and your car as a training lesson.

- *Did you have trouble finding a parking spot?*

- *Was the entrance clearly marked?*
- *Did you encounter a grease-covered, overweight, ball capped, cigarette smoking "service advisor?"*

If you continually see the same cars parked outside or some cars that don't appear to have been moved in a while (there's grass growing out of this one!), then I would be cautious about doing business there. When I see old abandoned vehicles in the parking lot I usually suspect that the shop "got stuck" with the vehicles.



So why is that a negative mark against the shop? Why would customers just leave their vehicles with the shop indefinitely? The first thought that comes to mind is that the repair bills were more than the car owners could afford, or the repair costs were more than originally estimated. This could have happened because of communication problems between customers and the service writer, or it could be a sign of blatant dishonesty on the part of a service writer who over-padded the bill.

The second thought is that the shop might advertise "loss leaders" to lure

people into making more repairs than the vehicle is actually worth. I got stuck with a car once when I placed an ad for a very cheap oil change and attracted a few people who wanted the service and a few other things fixed too. When one of the cars was repaired, the owner didn't come pick it up. After a few days we mailed out registered letters to the address given when the repair order was written. A few weeks went by before we got an unclaimed returned receipt. We couldn't just sell the car or keep it as our own vehicle. We then had to hire a title company to do the necessary paper work and send letters



to any recorded lien holder. You can imagine that this whole process took a lot of time and was a big hassle. The car wasn't worth a whole lot of money to begin with, but by now we were racking up storage charges and title search fees on top of the repair costs. After about three months we got a call from the lien holder of the vehicle who picked up the car. It appears that the owner was past due on his car payment. This sort of thing happens—and where did this vehicle sit while all of this was going on? You guessed it... in our storage yard, growing grass and collecting leaves.

These situations I've described can happen to any shop owner (even me!), but an informed customer should expect these events to be rare occurrences and not regular practice. If you frequently spot abandoned cars at your repair shop, look for suspicious business practices that would purposefully attract these customers or instigate vehicle forfeiture.

### **OBSERVE THE ENVIRONMENT**

Take a good hard look around; this place is going to be home to your car from time to time. Did you see any fire extinguishers, or just pinup girl



calendars? It is not too uncommon to have a small gasoline fire under the hood of a customer's car that started while we were working on the car. A small gasoline fire can quickly turn into a large fire and severe damage can happen to your car. Why should you care about the placement or the shop's possession of fire extinguishers? I have heard many stories from other shops that a small fire broke out like above, and the shop blamed the fire on the customer's vehicle, and the shop wanted the customer to call the insurance company to claim the damage. Also, if they do not have fire extinguishers properly displayed what

other state or local fire and safety laws are they not complying with? You will not think this is important until a fire under the hood belongs to your car.

How about the lighting? Most new cars are so complex that the mechanic has to read a very large and very detailed service manual just to do the basic repairs to today's vehicles. Does the lighting in the work area allow the mechanics to see well enough to read the manuals properly, and to work under your hood without breaking something else? Is the service desk littered with ashtrays and



coffee cups, and maybe cigarette butts leading the way out the door?

By the way, it is a proven fact that you are often treated the way you expect to be treated. What I mean is, the clues you give us about you and your preferences may determine the type of service we think you expect. If you are pleasant to deal with and your car is immaculately clean when it arrives in our shop, you'd better believe that it will be immaculately clean when you pick it up. If the mechanic has to sit on pizza boxes and dirty clothes to start the car, he's not going to bother wiping his handprints off of the hood.

Sometimes my mechanics really put up a fight about working on a dirty or smelly car. They are actually insulted that they are expected to sit for hours doing tedious wiring under the dashboard, and the carpets are filthy, littered, and smell horribly. Ashes, coffee spills, and five-day-old McDonald's bags are the norm for some people...but if this describes your car, expect your bill to be padded for the added time and inconvenience caused when the mechanic has to spend time cleaning house for you before he can work for me. This is bad *karma* man!

Today's cars are too complicated to repair and diagnose while you wait, making the "waiting" room a thing of the past. We do have a nice lounge in our shop, but we've changed the name to *customer conference room*.

Mechanics often must open or remove the glove box in order to gain access to a part. Take a good look in your glove box or center console. Would you want some stranger digging through it? We have to enter the trunk to get to the gas tank. Is there anything in your trunk that you would be embarrassed about? One of my college friends left some intimate Polaroid's in her glove box when she had her car repaired. Although her repair shop never mentioned anything, she was so embarrassed about what they *might* have seen that she never went back

to that mechanic again. I wouldn't want to lose a good customer over something unrelated to how I do my job, and you wouldn't want to ruin a good relationship with the honest, professional mechanic that you finally found.

### **MAKE SURE THEY ARE QUALIFIED**

We are now talking about computers, oxygen sensors, and emissions testing in most states. Today's vehicles require a mechanic with a major degree in automobiles and a minor in customer psychology. Books and machines fill our service bays, and our top



mechanics are continually returning to school for the latest news and technology. Look for evidence of continuing education—and if you don't see any, ask. Our customer waiting room is filled with plaques and acknowledgments from manufactures and vendor training courses. The plaques don't necessarily mean the mechanics are qualified, but if a shop has these certificates I would think they would display them.

You probably have better things to do than to wait for your car repair. If you live close to the shop and it is early in the morning, or you don't need the

vehicle back that same day, call the shop in advance and ask if they would give you a ride back home. I don't like it when a customer arrives unannounced and wants a ride home and also wants their car ready today. I won't tell you that I would charge this person more, but I will make sure we get paid for our time and inconvenience...get my hint?

Reminder: Advanced notice that you are bringing your car in does not make the repair go faster, it just insures your place in line. We cannot do a two-day job in one day because you called ahead. Two days turnaround



time for most common repairs should be expected. If you get your car back that same day...and it runs great...and the shop picked you up...you may have found the shop you've been looking for.

### **FIND OUT WHAT IS AVAILABLE IN-HOUSE**

Does the shop offer all basic repair services, or do they specialize in just brakes and alignments? If so, I wouldn't trust them to work on my vehicle outside of their expertise—even if they did have the right tools and equipment, which they probably don't. Also, smaller shops or discount



centers often hire low-skilled employees.

You need to find a general mechanic shop that can handle most of your vehicle's needs. A good question to ask would be, "What services does your shop *not* provide?"

Does the shop have its own in-house parts department? If not, they will have to stop work to go get even basic parts or wait on delivery by the vendor. Such delays could be a major factor in the overall repair time—and you'd better have a ride home tonight. Most small independent shops



(not dealerships) do not stock the basic stuff like nuts and bolts, wire, and fuel filters. I have been to other repair shops and have seen cars and the mechanics sit and wait for a thirty-cent bolt to arrive before the work could be completed. If you use a small shop without a parts inventory on the premise, be prepared for unexpected delays.

If your car develops a problem on Sunday, it would be nice to know if you can drop it off on Monday morning and get a ride to work, or if you need to start looking for a buddy to pick you up. If your car isn't ready that same

day, don't assume you are the *only* customer whose work is behind. When things go wrong it usually affects a few cars. Don't get too angry at the shop if something out of their control happened. I have had days where half of my mechanics are on jury duty, sick, or need to leave early for some reason or another. For whatever reason things happen, you and the shop should be prepared for it. I have five loaner cars that I let my frequent customers use free-of-charge when things like this happen to me. What does your shop do? Has this ever happened to you? Did you get angry at the shop? Did this happen on a



Friday afternoon? Murphy's Law says that it will always happen on a Friday and just before an out of town trip you had scheduled.

### **KNOW HOW TO TOW**

Does the shop have towing service available 24 hours a day? Make sure that you get their after-hours number so that you will be prepared for any breakdowns. If they do have to tow your car at night or on weekends, find out how/where it will be stored until the shop opens for business. If the towing company is different company than the repair shop, make sure to tell

them that you are a customer of the repair shop, and not just someone who looked up their number in the phone book. Also, you want to convey to the tow truck dispatcher that you WILL be with your car on the side of the road waiting for the driver to come to your rescue. Go ahead and allow them to place you on hold while the dispatcher reaches the driver on the radio and gets his exact location and ETA. Waiting on the side of the road in rush hour traffic, in the heat or in the rain, for someone you do not know and who may not know you are waiting with groceries in the car (and you have to go to the bathroom) is not



fun! Does the shop take responsibility for your car when they pick up your car? Find out.

Get the name and/or unit number of any persons providing towing services for you. Document the time and condition of the vehicle as the tow truck driver is loading your car. A good tow truck driver will walk around the vehicle prior to towing and document any body damage. I would encourage you to walk around the vehicle with the driver and have him sign the tow slip that your car was received in good condition. You should sign it as well. You might not

get a copy of the towing invoice at that time, and that is normal. The shop you are using will usually have an account with the tow company and the shop might mark up the invoice a few bucks to cover their related costs. It is worth a few bucks if the shop is going to be liable for your car and store it until they are able to repair it.

### **DON'T ASSUME YOUR CAR IS SECURE**

What type of insurance does the shop have? Most shops have signs that read "not responsible for fire or theft to your vehicle." Did you leave your gun

in the car? I live in Texas, and there are a lot of guns in cars. Did you leave your cell phone out in the open, or that five-dollar bill that you found under your seat? Remember the

Make sure to take any valuable personal items out of the vehicle. Don't try to hide them in the trunk, under the seats, or in the glove box!

glove box and trunk example earlier; don't give anyone the opportunity to steal from you. Some of the things we have to do to gain access to certain

parts of your car would floor you.

Don't think that your diamond bracelet is safe under the back seat because we might have to remove the seat to get to the speakers.

So what type of liability does the shop have if you leave your vehicle over the weekend for repairs? Most repair shops have you sign a work order before beginning repairs to your vehicle. In many cases you are signing over your right for vehicle repossession due to nonpayment. This form *also* releases the shop for any liability for your vehicle, even from fire and theft. I would not like to sign this work order in a shop that I felt was unsatisfactory, or does not have adequate protection. Is the building protected by a security system? Are the customer vehicles left outside at night or locked up in the shop? If I were to



get a call one morning informing me that *my* car has been stolen and used in a robbery, I would want the shop or their insurance company to be responsible.

The few times that our shop has been vandalized, the only items of real value that were stolen were the mechanics' tools and a few radios out of customers' cars. Our shop lost virtually nothing except the damage to the building for entry, but even I have to admit that we have been very lucky. On the one occasion that a customer's truck was stolen from inside our locked shop, our insurance

company covered replacement of the vehicle, and our shop paid the deductible. The owner of the truck remained our customer until he moved out of the city. In most shops however, your insurance company would be your only source of compensation. Believe me—I felt silly enough calling my customer and telling him that his truck was stolen from my shop; I would not want to also have to tell him that I was not insured and he was on his own.

Use your best judgment, but don't settle for a shop just because they are close, inexpensive, offer free gifts, or

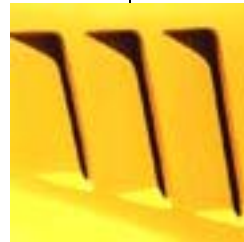


whatever. We are in search of quality and a long-term relationship from a responsible vendor. I have had customers come back to my shop to remove their personal items from the car after they found out that the car was going to spend the night. I actually like to see that happen. It sure takes liability off of my shoulders and I can concentrate on repairing the car.

### **UNDERSTAND THAT ACCIDENTS HAPPEN**

Even with all of our safety measures, continuous training, hands-on management, and seasoned

professional staff, Murphy's Law is still alive and well in our industry too. Over the decades we have been in business, we have caught customers' cars on fire, dropped them from the lifts, backed into them, scratched the paint, and had them broken into on our parking lot during broad daylight. We've even wrecked a few of them. Sorry Ms. Jablowski. Accidents happen, but we have always repaired the vehicles at our expense, and supplied the customers with a free rental vehicle while the repairs were being made. These things happen to first-time customers as well as the seasoned customer.



The only precaution you can take against freak accidents is to make sure the shop is as careful and prepared as possible.

Ask some basic questions:

- *How long do you expect my vehicle to be here? The longer it is out of your hands increases the chance that freak accidents can happen.*
- *If you have to keep my car overnight, where/how will it be stored?*
- *Does your insurance company cover my car while it's in your care?*

## ASK FOR A TOUR

A quick tour of the facility will be an excellent way to gather most of the information you now know to look for (i.e., lighting, grease on floors, etc.; refer to previous chapter.), and will offer you the opportunity to ask some of the questions we've mentioned. When my shop is bidding for a new fleet account, we invite the company for a tour of our shop and to ask any questions they might have before we start to do their repair work. This helps us get a feel for what it is they want us to do for them, but we also get a chance to show off what we have to offer. Individual customers seldom

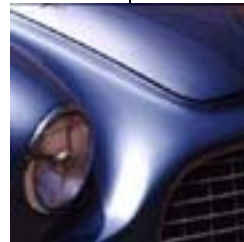


take the time to choose vendors this wisely.

What is the attitude of the owners and employees? Do they want to cater to only one specific need? At my shop, when we say we want your business, we mean all of your business. We want you to use our body shop, our tow trucks, and our parts department. Our goal is to spoil you rotten! If for some reason you visit another shop after having done business with me, I want you to come running back for my service. Once you become accustomed to taking your car to a shop with this kind of attitude, it will be



hard for you to get in the groove at another shop, and that is exactly what a good shop owner wants. If *your* mechanic knows that you are willing to let him do all the maintenance to your car, he will probably bend over backwards to keep you as a customer. I do have a few customers that get certain work performed by my shop and have other shops do the rest of the work. If your mechanic knows you won't buy tires from him, he might not take the extra time to inspect the shocks and struts for wear as well. Personally, if I feel you bounce around from shop to shop trying to save a buck, I won't go out of my way to give



you the personalized attention that I would give the other cars in the shop that I know want my full attention.

### **DO NOT GET HUNG UP ON PRICE**

This is the hardest part for most people. Believe it or not, sometimes the higher-priced establishments can save you money in the long run. If you are calling from the phone book asking for a price quote on—let's say a water pump—don't choose a mechanic on the basis of the lowest quoted price. If you call me to ask how much we charge to replace a water pump, you should first be prepared

with the basic information about your car, what type of engine you have, and the model and year of the vehicle. I would automatically include antifreeze, hose clamps, and taxes in my quote and usually add an additional ten percent to the quote for insurance. You might call me a week later and get a different price for the same quote. The whole idea about an estimate is to give you an approximation of cost. If you do come in to my shop, I should try to stay as close to the estimate that I gave you. I make mistakes too. If I start tearing into your car and realize that there is no possible way I can do the job for



what I said I could, you will scream and kick and call me a liar. Not really, but we might both have to compromise somehow. Did you tell me the right engine size and model when you called me? Did you call at the end of the day when we are the busiest checking out our customers? I am usually the one that will have to adhere to the estimate that I gave you, and yes I too make mistakes.

I get a kick out of people who call me for a price quote on something that they don't know anything about. If you do not know what an idler pulley does or where it is found on the car,

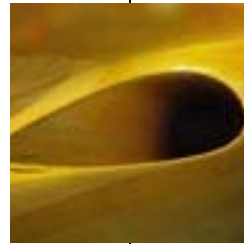
how can you describe it to someone else? After asking the caller a few questions, I usually find out that their car is in another repair shop and they don't want to pay for whatever it is their car needs. They hit the phone book to find a cheaper price. I really feel sorry for these people because most of the time I suspect they are being taken advantage of and were told something vague about what repairs the car needs. Sometimes I know deep down inside that the part they want a quote on is probably not the problem with their car, but trying to convince them of that is tough.



If you really think you are being taken advantage of and don't want to deal with the shop any more, pay them for their "written diagnosis" and find another shop for a second diagnosis. DO NOT call around for a price comparison unless you are very sure of the diagnosis first, and have a feeling that the price given by the shop is WAY out of line. If you are going to penny pinch and fight for the cheapest repair possible, then re-read this book from the beginning.

Most of our customers greet us with a smile as they hand us their key and their credit card. They know they will

get quality, hassle-free car repair at a fair price. This outstanding service all comes with a price. Someone has to keep the place clean, pay the insurance, update all the very expensive machines and books, and hire the most competent people available to use that equipment. You will pay for it, *but* the goal is to get your car serviced well and feel good about it. The goal should not be to bargain shop, because most bargains eventually come with a higher price. Give up that new dress you had on lay-a-way--you need reliable transportation to make a living!



If it sounds too good to be true, ask for details. You can bargain shop for sporting goods and canned food, but do yourself a favor and search for quality in health care and auto repair. Did I make my point clear? Don't pay for things needlessly, pay for things you need.

### **BE WARY OF LOSS-LEADER SPECIALS**

These are advertisements for services at irresistibly low prices that are designed to entice you into the shop. Once there, the shop will need to sell extra services to make up for the

“freebie” service that brought you in the door.

You will usually end up paying more for the add-on ticket items than you would have at a reputable shop. Unfortunately, the customer with the 12-year-old car in poor condition who wants a \$29.95 tune-up that will “cure” the car's major problems will be taken



advantage of the most. Why? These people are on a strict budget and will try very hard to find the cheapest price available regardless if it will actually help solve their repair problem or not. They will usually bounce around from shop to shop in search of a low price and in the long run will probably end up paying a higher price for all of these services.

# YOU HAVE THE KEYS TO GOOD SERVICE

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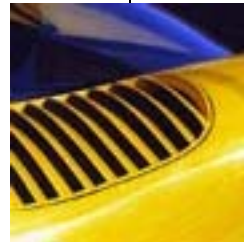
## **BRING THE RIGHT ATTITUDE**

When you bring your car in for service, bring along a winning attitude. Most of the customers who come in to the shop have had their day altered by car trouble; they are late for work and not very happy about it. As a shop owner, this really brings me down. Most of the people I meet during the course of my day are unhappy. Anything you can do to help remedy this problem will win you big points in



the eyes of the shop. I have a customer who brings us hot donuts every time she brings her car in for service. Would you believe she expects to *wait* for her car to be finished? Would you believe we try to do everything we can to make that happen for her? Definitely try this! A dozen donuts is a lot less expensive than a rental car and the hassle that comes with obtaining one for the day while we work on her car.

The ways you present your problem and your attitude have a big impact on how the repair shop employees will treat you during the course of the day. If you make the situation easy for us, we will do everything we can to do the same for you. If you walk in our doors with a bad attitude and a demanding voice, you won't win the Customer of the Day award (and the Customer of the Day gets his car fixed first!) The service writer and the mechanics are just doing their job; let's see how we can make this visit easy on everyone.



## **RELATE ALL RELEVANT INFORMATION**

Let's learn to part with the keys and any information that might be helpful to the person who is working on your car. Tell the service writer everything you know, but don't cloud the story with information not related to the car. In other words, don't make him try to pick important clues out of a drawn-out scenario about the shopping trip you were on to buy presents for your child's birthday party when the car started acting up again before you could pick up the cake, which wasn't the right one you ordered, even though your best friend recommended this bakery and the car was making a

such-n-such noise, and now you have to go back in two hours to pick up the cake *again*, and you know, the car did this before too... (p.s. we hear this a lot)

Important information does include:

- *Did someone attempt the repair prior to your bringing it to the shop?*
- *Did the attempted repair help or hinder the problem in any way?*
- *How long has the problem been going on, and what have you been doing to temporarily fix the problem?*
- *Is the problem showing itself right now? If so, take the service writer for a test drive and let him/her*



*experience the problem before you leave the building.*

### **DO NOT DIAGNOSE THE PROBLEM YOURSELF**

When your car makes a strange noise or does something out of the ordinary, do not play doctor! You do your job in finding a dependable and honest repair shop, and we will do ours. You make the complaint and we will make the diagnosis.

Don't think you are "weird" if you make noises or dramatize the mishaps of your car. You are helping the service writer make a diagnosis in less



time, thus saving yourself valuable and expensive diagnostic time. If your car made a noise, repeat it for the service writer. An informed service writer and mechanic could save you time and agony. It is usually the guy who is quiet and does not attempt to replicate the sounds that looks silly to me. When a customer tries to reproduce a noise I will make the noise along with them to comfort them in their time of car repair silliness. A lot of customers tell me "you probably think I am crazy, but..." "That light really does come on", or "my car died ten times on the way over here but runs fine when you drive it now."



So go ahead, have fun and make all the noises you want.

### **BE AS DESCRIPTIVE AS POSSIBLE**

Pretend you are writing a personal ad to describe your car's problems. This is how I would write my ad for my car:

1992 Ford Explorer, black, is experienced and well taken care of, sometimes slow to warm up. Adventurous and likes to explore new places. Rugged but prefers smooth, well-traveled roads. Looking for a companion to get my motor running. Please no front-end problems or idle surges, no more fix-a-flat.

You would put so much thought into describing yourself in such a scenario, including your likes and dislikes, why not put the same emphasis on how your car feels when you step up to the service counter? This is an example of a typical customer to service writer conversation in my shop:

**TOPIC OF CONVERSATION:**

1994 Toyota Camry dies while driving.  
Had 30,000-mile maintenance performed at the dealer, and new tires installed by a local tire store.

**This is how it goes:**

*Customer: My car dies. Would you look at it and tell me what is wrong? I had this problem with another car and I think it's the fuel pump.*

*Shop: Does your car die while you are driving, when you are stopped, or at idle?*

*Customer: Usually when I am at a stop sign.*

*Shop: Does it give you any warning or does a warning light appear on the dashboard before it dies?*

*Customer: No, it just dies.*

Shop: *How do you get it started again?*

Customer: *I have to wait 20-30 minutes before it will restart.*

Shop: *During that time does the engine turn over when trying to restart, or do you turn the key and nothing happens?*

Customer: *Nothing happens, I hear a click noise when I turn the key and that's all.*

Shop: *Does the car lose all electrical power, such as the headlights, radio, or dash lights?*

Customer: *Yes, all electrical power is*

*gone when this happens, I usually cycle the key on and off 4 or 5 times and the 6<sup>th</sup> time the car will start.*

Shop: *How old is the battery in your car?*

Customer: *It's the original battery, and the other day I had to get a jump-start from a neighbor, but I don't know why.*

This conversation takes place everyday at our shop, and probably all over the country. The first "no-no" was for the customer to diagnose the car herself. She just gave the shop an expense account. A fuel pump replacement on this car would be

about \$500, and she left the shop with that number in her head--and in theirs. This customer should have left the diagnosis up to the expert. If I repaired this car for, let's say, \$250 that would be a deal, right? She thought it was that \$500 fuel pump thing that she had heard about. I can't say that this person would have been taken advantage of elsewhere, but in this situation an \$89 battery fixed the problem. Not only was the repair inexpensive for the customer, it saved the mechanic a few hours of needless testing. Give as much information to the shop as you can, and make sure they are asking you questions. If they



don't ask questions find another shop! You probably know as much about your teeth as you do your car. Would you want your dentist to pull your #4 molar on your diagnosis?

During the course of our example conversation, I knew to look at the battery, the cables, and the alternator connections first. A few extra minutes at the service counter saved me a lot of time chasing a bogus fuel pump problem. My time is your time, and I make my living on time spent working on your car! We bill by the hour, and to check out the fuel pump and its components would take about an

hour or so at \$65.00 an hour. Do you still want to diagnose the problem yourself? This is usually a guy-thing, but

the customer in the above true scenario was an intelligent, professional lady.

# GETTING SERVICE TO FIT

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## **ASSESSING THE PHONE CALL**

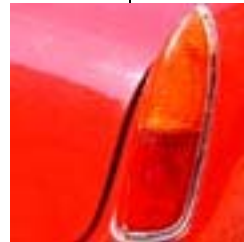
You have now left your vehicle at the repair shop, and the last thing you heard was, “we’ll call you.” Let’s say you took your car in because you heard a funny noise in the brakes and you also needed an oil change. An hour or two later, you get a call from the repair shop. They tell you your 1991 Honda Accord will need a front brake job, two tires, and a timing belt, all for \$589.56. Since you said you just wanted the shop to look at the brakes



and change the oil, you now sense something fishy. Could these guys be crooks? Did they see my Polaroid pictures in the trunk? Hopefully the shop is doing their job correctly and honestly, and performing a generalized inspection to your vehicle for safety and maintenance-related items.

For the shop to inspect the brakes they had to remove the wheels, thus a tire inspection was gratis. The shop also made note of the mileage of your

vehicle, and suspects that the timing belt is original. The vehicle manufacturer recommends the timing belt be replaced at 60,000 miles. If the timing belt breaks, the car stops and you are on foot. Major engine damage could also occur. The timing belt on most cars is not accessible for visual inspection, so good maintenance records could help you make the decision to replace the belt or give it a few miles. Not sure if your car has a timing belt? [Gates Belts.com](http://GatesBelts.com) has a great part locator on their Website.



In this example the shop did a great job. Worn out tires can be a safety issue, and depending on the pattern of the tire wear, could indicate worn parts or alignment problems. There is usually no way to tell with the naked eye if your car is out of alignment; so periodic front-end alignments are needed. A front-end alignment should always be performed when there is a tire wear problem or when replacing the tires due to normal wear and tear. Symptoms of out-of-alignment are: pulling to one side, uneven or premature tire wear, and looseness or excessive play in the steering wheel. Shimmy, vibrations, or bouncing are

usually not caused by an alignment problem.

A broken timing belt could cost you a tow bill, a good walk to a pay phone for help, and possible internal engine damage that can cost big bucks and take days to repair. The timing belt is not visible and should be replaced by the mileage on the car and not what the belt looks like. If the owners manual says to replace the timing belt at 60,000 miles then don't wait any longer. If you bought the car second hand and do not have the invoice for the timing belt replacement my advise would be to have it replaced at the



mileage the manufacture recommends and not to take a chance on replacement by the previous owner.

If you are on a serious budget, you might ask the shop “what do I have to have today, and how much time do I have left on the remainder of the work?” If the shop says that you have been on thin ice too long, park the car and take the bus! I mean it! All car owners should have a car repair fund or allowance set aside for situations like this.



Most repair shops that I know of do not possess a crystal ball to see into your car's future, so do not hold them accountable for making precise time estimates for how long things will last if you neglect them. I get asked everyday, "if I don't replace the timing belt today how many miles do you think I can get out of it?" In 1987 the makers of the space shuttle fuel rocket o-rings were probably asked the same question.

A few good questions to ask in this situation would be:



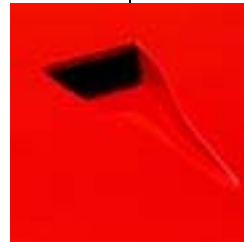
- *Are the replacement tires the same as my old ones, and do they have the same warranty?*
- *What is the expected tread life?*
- *Do they come with road hazard warranty? Road hazards are anything that may be found on the road and can cause damage to the tire (i.e., nails, screws, sometimes curbs, etc).*
- *When replacing the timing belt should I replace the other belts too? The remaining fan belts have to come off to gain access to the timing belt. You have already paid the mechanic to remove them; this*

*would be a great time to have them replaced as well if needed.*

- If it is time for a front brake job, you should have them look at the rear brakes as well. You need to know what percentage of the rear brake lining is left, and when you should have them looked at again. You might as well take advantage of the down time now if the back brakes are worn out and have them replaced too. I would hate to have to come back to the shop a week later for something that could have been taken care of then.*

Let the repair shop do their job. My primary goal as a shop owner is to

keep your car running and keep you happy. Hopefully, you will tell your friends about the wonderful service you get at the great shop you've found.



### **DON'T GO TOO FAR**

Ask questions and show an interest in understanding what type of work will be performed on your car, but know when to stop. Most service advisors are very busy talking to customers, the mechanics, the parts vendor, and preparing work orders, etc. His/her time is valuable, and the more time spent selling you the job and

answering your questions, the more your repair bill could be. What I mean is, your repair bill could be "padded" to justify the extra time spent with too many questions, comments, or phone calls to the service advisor. Most people like to be helpful and answer your questions, but there is a line drawn in the sand between good communication and pestering, and you should know where it is.

The price that competitors will quote over the phone is often cheaper than the actual repair—just to get you in the door. They know you are calling for a price comparison, and will deliberately adjust their initial quotes to get your business. Although there is nothing wrong with doing this, the shop may adjust the prices back up once they have won your confidence, or until you start calling other shops for more price comparisons. Sometimes the customer is his own worst enemy.

When Ms. Smith comes into the shop, all of the service advisors run for cover. Although she is nice and friendly, she spends far too much time at the service counter with silly questions and annoying, non-productive phone calls to check the status of her vehicle. Before her ticket is even written, a 10% "hassle tax" has been padded onto her bill. Don't be a Ms. Smith! If you are Ms. Smith please be sure to bring a few dozen hot fresh donuts.

## **BE READY TO AUTHORIZE NEEDED WORK**

Don't tell the shop you will call them back after you call around for price comparisons, then an hour later call with an authorization for repair and expect the car to be ready that evening. In most cases when the shop calls you for an authorization for repair, they are literally standing by the phone waiting on your approval. If you say, "I'll call you back," or if you are not available to grant authorization, you just lost your place in line. The mechanic goes to the next job, performs his diagnosis, and goes to the phone for an approval. If that customer gives immediate

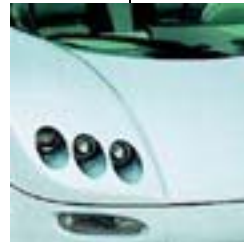


authorization, you just got bumped a day. The shop is unhappy because your car is "torn down" and in the way, and they had to change the work schedule for you. You will be unhappy because 1) your car will not be ready today, and 2) now it is not even drivable!

Mechanics work by the hour, and when they are bouncing around the shop from car to car, it cuts into their profit structure, and someone will pay for it. Doctors fill their office with over-scheduled appointments to alleviate unprofitable down time. One last minute cancellation could cost the

doctor \$75; so they make sure they have a replacement waiting.

Feel comfortable about the shop, and discuss any upfront pricing and expected delivery time when the work order is written. I will sometimes give upfront estimates, if possible, to make the repair time faster. Suppose I test drove the car with you before you left the property and heard the noise you were trying to describe to me at the service counter. I determined that the front brakes were making the noise and suspect that they will have to be replaced. My estimate was \$300 and you said, "Yes, I think you are right



about the brakes causing the noise and I'm okay with the estimate." The repair of your vehicle would go very smoothly. I know what the problem is and have your approval to repair as needed (within limits). You will probably get your vehicle that same day, and since I did hear the noise that was troubling you, your vehicle will be repaired properly.

### **COOPERATE AND COMMUNICATE**

Make it easy for the shop to repair your car, as you would expect them to make it easy for you to get the repairs done in the first place. Some

customers are their own worst enemy. If you would like to have your old car parts when the job is completed, tell me up front. I will not dig in the trashcan when you pick up your car. If you are not going to trust me, tell me that upfront and I will do everything possible to please you.

The goal is to have your car ready **when** we say it will be ready, and as close to the original estimate as possible (it was only an estimate), so be understanding if things are not exactly to the "T"—in this business close



is pretty darn good enough. The repair does not always go as planned—bolts and wires break, the vendor sends the wrong part, or the "right" part does not fit what they say it will fit. The final repair bill could be adjusted to allow for extra time spent on the repair that was not controllable by the shop. And do not feel the shop is after an extra buck. Usually they will not charge you the *actual* extra time it took to do the repair, but just a portion to help defray the cost.

Cars of today are very difficult to repair, and the engine compartments are very tight. Things break, get pulled loose, or just come apart (sometimes from mechanical error and sometimes just from use and age). If we feel our shop is responsible for the breakage, we will repair it at no charge to the customer. Sometimes we feel that the damage was unavoidable and will bill the customer some of the cost of the repair, but usually not all of the labor time involved.



## **FINDING OUT YOUR CAR'S STATUS**

It has been hours since you heard from the shop about the status of your vehicle, and you are starting to get nervous. You decide to call the shop for an update. "Hi, this is Austin, is my car ready yet?" Unless you are on a first name basis with the shop, and have been for sometime, this won't get you very far. Instead try, "Hi, this is Austin Davis with the black Ford Explorer brought in this morning for a tune up. I am not pushing, but thought I would check on the status." I usually know you better by the color and type of vehicle you drive than by your name.

The “squeaky wheel gets the grease” customer usually gets just that. If you rush the shop faster than they can keep up, you will get the grease on your wheel... the **steering wheel** that is, because you did not give them time to clean up their mess. Let them know when you are expecting your car, and have a ride planned to their shop accordingly. If there is a problem, and they are working as fast and efficiently as they can, you still might need to call a cab. Placing more than one or two phone calls for a status check will probably not solve things. If the mechanic, by some chance, finishes the repair just minutes before closing



time and does not have time to recheck the work or do a simple test drive, you will probably leave with your greasy car unhappy. The shop has a bitter taste in their mouth because you disrupted their work schedule. If you can get one-day service in your town, be thankful, be happy, be cooperative, and be a repeat customer.

A good shop usually has a lot of business. The shop does not get paid until you pick up your vehicle; therefore, they want to deliver it to you as soon as they can. The shop is also dealing with other customers and



promised delivery times as well. When you drop off your car, ask the shop when you should expect their call, and when you should call them for an update.

If you really need your car that evening, ask the shop up front if it's probable that you'll get the car back today, or if you should make other arrangements. It makes life much easier to know early in the day what you will be doing for transportation rather than waiting till closing time on a Friday.



Bigger shops will have some type of transportation to loan you if you really need it, but you will probably have to ask for it. At my shop we have five cars available to *loan* to customers when:

- *They are good customers who maintain their vehicles and have all their repairs done by us. We want the work, and are willing to take a little extra risk to loan them a car so we can work on theirs.*
- *We are so busy that we want your business, but can't get to it today. As long as you have transportation, it takes some heat off of us. We can do a better job for all of our*

*customers when we aren't so rushed.*

- You have a warranty problem (i.e., the water pump we installed last week broke today), you are mad at*

*us, and you don't have a ride home. Please borrow our car and we will call you when we are finished with your car.*

# MAINTAINING YOUR VEHICLE

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## **YOUR CAR / YOUR BODY**

Your car is like your body. We all need sleep, exercise, and proper diet to live a normal, healthy life. If we neglect one of these guidelines, we are sure to experience adverse effects. How can you learn how to take good care of your car?

Read the owner's manual and familiarize yourself with everything about your car. (Or check our Maintenance Guide online at



[www.trustmymechanic.com](http://www.trustmymechanic.com)) Make notes of any recommendations or tips the manufacturer has to offer. I meet a lot of people who have no idea their cars were equipped with certain accessories.

Another reason to develop this familiarity is to know if a specific item worked before you take it in for service. For example, the mechanic was working under the dash to repair a short in the radio. You discover a day or two later that the cigarette lighter

does not work. Did it work *before* the short was repaired? Check the air conditioner and the heater operation before and after a repair. Something could have been moved during the repair that will affect the heater, but since it is summer you would not know for a few months. When winter arrives you might have to pay the shop to undo whatever it was that *they* did to hinder the operation in the first place. If there was anything that was recommended by the shop that was *not* repaired, make sure you know exactly what it is and what the consequences are of not having it repaired at that time.



When your car makes a strange noise, runs bad, or leaks fluid, don't wait to get it checked out. It is a good idea to really look your car over now and then. Push and pull all of the buttons, and make a mental note of what those buttons do and if they work properly. If you own a mini van, you should know where to add the rear windshield washer fluid. If you live in colder climates, you should use windshield washer fluid that has an anti freeze additive. Don't stop inside the car—inspect the paint finish for fading or scratches.

Open the hood and look around, read the labels glued on and around the hood. Most owner's manuals will have an under hood picture and reference guide to major components. Go ahead and touch them (with the engine off please!) I just want you to be able to open the hood and look around at this point. Get to know the car's major options, such as:

- *Is it front wheel drive and does it have anti-lock brakes (ABS)? If so, is it four-wheel ABS or two-wheel ABS? Two wheel ABS refers to the rear wheels only that have the "no skid" capability. Four wheel ABS means just that, all four wheels are*



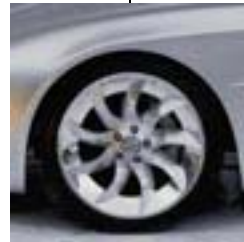
*controlled by an onboard computer system that will prevent the wheels from skidding during heavy emergency braking.*

- *Does your car have an electric cooling fan for the radiator? Some cars have two electric fans under the hood: one for the radiator and one for the air conditioner. The cooling fan blows or draws air across the radiator to help cool the engine and help the air conditioner cool the cabin. If this fan is not working properly the vehicle will usually overheat, and the air conditioner will not be as cold at stops and at very slow speeds.*

*When the vehicle is moving there is usually sufficient airflow across the radiator to cool the engine.*

- Do you have a Safety Restraining System (SRS), usually an air bag system, and does it include the passenger side? Will the air bag deploy in a side impact? Can you disable the air bag system if you want to?*
- What specific type of oil and transmission fluid should you use?*

Most of these questions can be answered in the owner's manual. If you don't have the owner's manual,



ask for one at the dealer—and consider it the Bible for your car.

Where was your car built? Some cars have a sticker on the driver's door that will tell you the date of manufacture, location of assembly, tire size and tire information, and vehicle weight.

The vehicle identification number (VIN) is located on the driver's door and the driver's side lower corner of the windshield on the dash. If the first letter begins with "J" it was built in Japan, the number "1" is the USA—these are the two major suppliers for the US. My personal preference for Japanese cars

is to have a “J” as the first letter in the VIN. Japanese cars can be assembled in the States and still be a “Japanese car”. The “J” will mean that the majority of the vehicle was manufactured and assembled in Japan. Unfortunately, my experience has been that the Japanese still build better quality cars than we “assemble” in the US.

### **UNDERSTANDING THE BASICS**

What do you really need to know about the gasoline engine and how it works? Hum, well let’s see; do you really care about that? A gasoline



engine needs three main ingredients to operate. Gas (duh), is the major ingredient. A spark and a contained area to compress the spark and the gas are the other two.

Think of it as an explosion under your hood. The piston goes up and compresses the fuel and the spark plug ignites it. The piston is violently forced down from the exploding fuel and sucks in new fuel to repeat the process. This happens hundreds of time a minute, hence R.P.M. (revolutions per minute). This is how many times the explosion cycle occurs in a single minute.

It is fascinating to think that this routine is happening under your hood as you drive, and that this explosion process is the driving force of everything on and in your vehicle. The motor turns belts and belts turn alternators for electricity, air conditioners, power steering pumps, water pumps, air pumps, and much more. There you have it. That is as technical as I will get in this book. If you need to get more technical go here: [Autoeducation.com](http://Autoeducation.com)

Now let's get on to the good stuff about saving money and having the guts to walk into a repair shop and yell



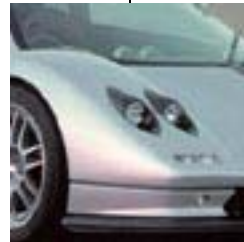
at the top of your lungs "I am not going to pay a lot for this muffler!"

### **BUT MY CAR RUNS FINE**

I hear, "But my car runs fine!" quite often. I say, "Great! It is supposed to." Just because your car does not have any obvious signs of an ailment doesn't mean that you should neglect its maintenance. Let's face it, things wear out and get misadjusted or misaligned over time, and vital parts of the vehicle should be inspected and or replaced as needed.



Some customers get accustomed to the slow decline in their car's overall performance—and they have no idea of a problem growing under the hood. I sometimes test drive vehicles with the customer and point out things that they don't acknowledge. They might be concerned with a new rattle or squeak that just appeared, but have no idea that the vibration, which has gone on for the last two months, was from a tire that was about to burst. And most of the time, they are still more concerned about some silly rattle than the tire that could pose a serious safety issue.

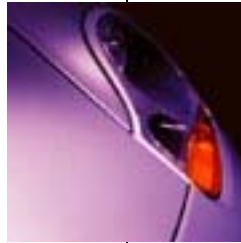


I take 5-10 test drives a day and I will find something wrong with the car 90% of the time. Even after my mechanics and the service writers say the cars are fixed, I will find other things wrong just by driving the car to lunch. Who besides me checks the wiper blades when it is not raining? Murphy's Law again says that the wiper blades are always bad when it is raining but when you take your car in for service it is always sunny and the worn out wiper blades are the farthest thing from your mind. I am no fun to take on a road trip; I analyze and diagnose shimmies, noises, and rattles even from the back seat.

## KEEPING UP WITH PREVENTIVE MAINTENANCE

The best thing for your pocket book and for the well being of your vehicle is to take your car to a reliable shop to get the oil changed. Leaving - yes **leaving** your vehicle for an oil change gives the shop time to test drive and generally inspect your car.

You should have your oil changed every 3,000 miles or 3-4 months, these are opportunities for a qualified mechanic to peek over your car's major vital parts. Oil change ads in the newspaper are loss leaders anyway, so don't think you are going to get your oil changed and be out of there for



\$12.95. I will bet they'll find something to sell you. Those newspaper ads cost a lot of money to print, and there is no profit in an oil change for \$25--let alone \$12. I would rather pay a little over a period of time to a qualified, honest mechanic for proper maintenance than one large sum for drastic last minute repairs due to neglect and oversight. If the shop that you trust tells you to replace a tire, don't wait! Have them replace it and be done with it.

Shops use a term called PM (preventive maintenance). PM can consist of many things. First and

foremost is changing the oil and filter and lubrication of the undercarriage. Rotation of tires; brake, belt, hose inspection; and testing antifreeze protection are the basics. Wreckers tow numerous vehicles in because they won't start, and the major cause is loose or dirty battery terminals. Battery terminals and battery water level should be checked during an oil change, but the quick lube places are too fast and inexperienced to provide proper PM service. The quick lube people check the fluids and air filter because this is about all they are qualified to repair. No offense to them, but take a look at the people



who are performing the repairs. Do they look and behave like they are capable of doing much more than oil changes? These mechanics are usually part-time school kids or backyard mechanics working their way up the mechanic ladder of life. If you visit these places very often do you see the same mechanics? The service writer is usually the owner and they will remain because these places are profitable, but the mechanics will usually only stay a few months until a better paying job comes along.

Changing fluids on a car is pretty easy, fast, cheap, and very profitable for the shop. They do a good job of showing you the “dirty/bad” fluid that is in your car and the harm it is doing and so on. They have a nice check out list of the things that are profitable for them to replace or repair, but not necessarily what *should* be checked during a PM visit. They too are in the business of making money. Does your dentist check your eyesight? No, he provides a service he was trained for. Also, don't classify all mechanics as the same. A mechanic is only as good as his capability will allow him to be. Would you rather be inconvenienced



a few hours every 3-4 months taking your car in to a full service repair shop, or hassled every 6-8 months because something that should have been caught during a PM broke on the way out of town with the kids in the car? Believe me, it will cost you much more than cleaning the battery terminals. Do you go to the express doctor or dentist? The people who know what they are doing take longer in their diagnosis, and usually charge more than the others, but isn't it worth it? Take a deep breath, I know it's just an oil change, but it could be much more.

## TAKE ADVANTAGE OF THE PM VISIT

The brand of oil is not as important as the type and weight of the oil. You should consult your owner's manual for the proper oil specification. You should also ask the shop to call you if they see any other maintenance items that need to be addressed. If you confront the shop with *I want an oil change only* and a nothing else attitude, they will probably wait until you come pick up the car to tell you the air filter and the antifreeze need to be changed. Has this ever happened to you? The shop did not call and tell you earlier in the day that your air filter was dirty and needed to be changed



desperately, but they told you this when you arrive at the end of the day and they now don't have time to pick up the proper filter for your car. You will have to make a special trip back to the shop for a very inexpensive part, and it might be due to the fact that you scared the heck out of the shop and no one wanted to call you and have their head bitten off when they tried to sell you something. Like I said, they will probably always find something to sell you, but you should now know to ask questions and find out if the sell is justified. The price of the oil change is basically irrelevant as

to the quality of the service you should receive.

### **BRAKES CAN BE THE SQUEAKY WHEEL**

Some customers complain about their squeaky brakes. A certain amount of high-pitched brake noise is considered "normal" these days because of the harder semi-metallic brake pads that are used on cars now. In my experience, the smaller cars like Honda and Toyota seem to have the most trouble with this. Squeals heard the first few stops in the morning when the brakes are cold and somewhat damp from dew, and squeals that are



heard the last few feet while coming to a stop are usually nothing to worry about.

Semi-metallic brakes are made of bits of metal shavings in place of the asbestos material that has been banned by the U.S. government. These semi-metallic brakes have great stopping power and have a long wear life, but can cause a high-pitched squeal that drives car owners crazy and frustrates mechanics who can't get it to go away to please their customers.

## WHEN ARE BRAKE SQUEALS NOT A PROBLEM?

Some brands of semi-metallic pads are inherently noisier than others because of the ingredients used in the manufacture of the friction material. Think of it this way, the longer life pads or pads that claim to have more stopping power usually contain more metallic material. Yes, they will last longer and could enhance braking but the chance of causing a squeal noise is very high. The squealing noise that might be caused from use of these pads does not affect braking performance and does not indicate a brake problem.



Brake squeal is caused by vibration between the brake pads, rotors, and calipers. Having the brake rotors refinished or trued (machining a small layer of the metal away from the brake rotor to make it smooth and "true" again), and a thin layer of a silicone compound placed on the back of the brake pads, are a great way to reduce the squeal - if the semi-metallic pads are the culprit of the noise and not due to a worn out brake pad.

The brake rotor is the round metal object that the brake pads squeeze together like the white part of an Oreo

cookie. The rotor is metal and has a smooth slick finish, and the brake pads are made of metal shavings and also have a smooth somewhat slick finish. The more metallic material found in the pad the greater the chance for noise, and vice-versa.

The other type of brake pad is called organic. There is no metallic material used in this kind of brake pad. Organic style brake pads can only be used on vehicles that are specifically designed to use them. Improper use of organic pads on a vehicle designed to use semi-metallic can severely reduce stopping ability. Organic pads are



softer than semi metallic and usually do not have a squeal problem. Unfortunately due to shorter life expectancy, inability to stop larger vehicles, and the addition of substances like asbestos in their construction, they are not very widely used.

### **WHEN ARE SQUEALS SIGNALING A PROBLEM?**

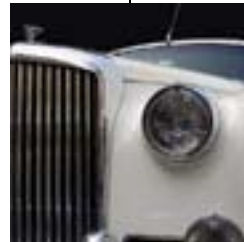
Sometimes brake squeals are an indication that maintenance is required. Some common conditions that cause brake noise are:

- *Heat cracked or worn "un-true" rotors*



- *Rough finish on resurfaced rotors*
- *Loose fitting brake pads in the caliper*
- *Lack of silicone compound on back of brake pad*
- *Missing springs or anti-rattle clips that should be on the caliper or pad*
- *Improper tightening sequence of lug nuts or caliper hardware*

Most GM cars are equipped with a small thin piece of metal attached to the brake pad to act as a warning indicator when the pad material is getting low and the brake pads should be replaced. This inexpensive warning device can be deceiving though,



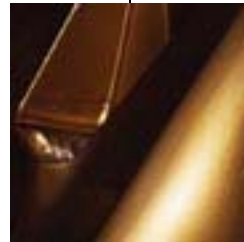
because this warning noise is present when the brakes are not depressed. When the brakes are applied, the warning noise goes away because the indicator has now been forced against the brake rotor and is not able to vibrate which causes this whistling noise.

If you hear brake noises other than a squeal, it could mean your brake pads are worn out and need to be replaced. If your brake pedal feels different than normal or if you've noticed any change in the way your vehicle brakes (pulls to one side when braking or requires more pressure on

the brake pedal), have the brake system inspected at once.

### **WHAT SHOULD I DO ABOUT SQUEAKY BRAKES?**

What can you do as a customer to reduce the chance of squealing brakes? First of all, noisy brakes should always be inspected to make sure there isn't a problem with the braking system. If the pads have worn down to the point where metal-to-metal contact is occurring, your vehicle may not be able to stop safely, and you may damage the brake rotors or drums to the point where they have to



be replaced. Sometimes a few harder-than-normal stops can "de-glaze" the brake pads and help reduce the squealing noise for a while.

There are many aftermarket brake pads that claim to be "quiet" or have been "designed" for import and front wheel drive vehicles that you can choose from. Personally, I have had the best luck replacing the brake pads on small vehicles like Honda and Toyota with original equipment pads from the dealership rather than using aftermarket brands. It is usually more expensive to purchase these pads from the dealership, but the quality is

much better. I am an independent shop owner and my whole business philosophy is to buy as little as possible from dealerships, but after trying many squealing aftermarket brake pads, I have learned my lesson and pay the extra money.

## DASHBOARD WARNING LIGHTS

The instrument panel on most cars is absolutely cluttered with warning indicator lights and buzzers. These lights are color-coordinated so that different colors indicate the severity of the potential problem. As you start the car, all of the lights should come on,



and as the computer verifies each component is working properly, the light is turned off. You should only be concerned with lights that remain on for several minutes after the car has been started.

**Treat dash lights like traffic signals.** A

**Red Warning light** indicates an immediate danger. Pull over, turn off the car immediately and assess the problem. Symptoms that usually cause red warning lights are engine over-heating, low oil pressure, transmission over-heating, low battery voltage, and brake failure.

**Red lights** can also indicate a safety issue, so proceed with caution as you maneuver to stop the vehicle. Unfortunately, when the red light is illuminated **the problem is at its peak**. It can be a matter of seconds before permanent engine damage occurs.

Some common things to look for when a **red light** comes on are:

- *Low anti-freeze, engine oil, and transmission fluid levels*
- *Low brake fluid*
- *missing belts*
- *Faulty alternator that is not charging the battery or a bad battery*



A **Yellow Warning light** means "Proceed with caution." The onboard computer system has indicated a potential problem and is alerting the driver. This computer system resets and re-tests all sensors and indicators each time the car is started. The computer system is capable of correcting some minor abnormalities, but if the light continues to come on after multiple starts, it is probably sensing something that would imply a visit to the diagnostic mechanic is in order.

Some common things that may cause a **yellow light** to come on, but will

probably require an experienced technician to diagnose are:

- *Anti-lock brake systems*
- *Safety restraint systems, such as air bags*
- *Emissions components*
- *Computer-related problems, such as faulty sensors*

If you are driving your car and a **yellow light** comes on, ask yourself these questions:

1. *Did you notice problems when starting the car? (Slower to start than normal ...etc)*

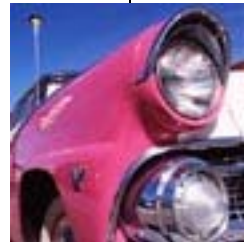
Keep a "running condition and dash light" log in your car to help the mechanic pin point the root of the problem. I have a customer who keeps such an accurate log. I can diagnose the problem correctly with the help of her log and by taking her along on my initial test drive. I can do my diagnosis usually without opening the hood to her car. This saves me time and she saves money on a diagnostic charge. This customer can also hold me to my warranty time period, because she had this particular complaint written in her log book

2. *What is the over-all running condition of the car? Is the engine misfiring or not performing like normal? Are there any new noises from under the hood? Turn off the radio and listen closely as you drive the car.*
3. *Do you notice any odors, such as a rotten egg smell, or see visible smoke from the tail-pipe or from under the hood?*

Make sure to note the exact

location and wording of the light that has been coming on, because Murphy's Law dictates that the light will suddenly not come on when you take it in to the repair shop.

In some cars, "engine" is the more serious red light, whereas others use "check engine," which is a yellow caution light. If the mechanic thinks you are seeing a yellow "check engine" light, and your car is indicating a red "engine" danger light, this could be a costly mistake for both of you. Why? You could be having a serious over heating problem and the mechanic is assuming you are having



a less serious caution light illuminating. The mechanic then might give you the "green light" (no pun intended) to proceed with your out of town road trip with the kids. Yikes!

### **COMMUNICATION OF THE PROBLEM**

Intermittent dash warning lights can be a pain and hard to diagnose! Diagnosing the problem in some cases will require the light to be on while the mechanic performs the diagnostic test. If the light is not on when you bring the car to the shop, you might be wasting your time and the mechanic's. If you are somewhat of a do-it-yourself type of person and

would like to use the same diagnostic tools as the pros do [click here](#) for a free 30 day trial of this powerful, yet INEXPENSIVE software.

## **FRONT END ALIGNMENTS**

Vibrations, shimmy, and shaking felt in the steering wheel are usually not a sign of needing a front end alignment. A front end alignment, or four wheel alignment as it is commonly referred to these days due to the fact that the rear end of the vehicle can also be adjusted, does just what the name implies align, or line up the direction of



the wheels so the vehicle is pointed in a straight line.

Caster, camber, and toe are terms used to describe the direction of the wheel in relation to the body of the vehicle. The front of the tire can be pointed in toward the center of the vehicle thus "toed in." When the front of the tire is pointed outward, it is referred to as "toed out." Both of these problems can quickly wear down the tread of a tire and can cause a "pull" in one direction of the front end. The top of the wheel can also lean in toward the center of the vehicle or lean out away from the vehicle,

causing a camber problem. This situation can also cause tire wear and a pull to one direction in the front end. Caster measures the relationship of the left and right wheels to each other. If one wheel is farther forward or back from the other wheel, then there is a caster problem. Caster will usually not cause tire wear, and this problem is commonly found on wrecked vehicles.

So what causes shimmy and shakes in the front end? The biggest culprit is an out-of-balance or out-of-round tire. As the tread on the tire wears, it will need to be re-balanced to evenly distribute



the weight of the tire and the wheel. To do this, small lead weight is attached to the outside of the wheel and a machine is used to spin the tire and wheel to check balance. Tires should be balanced and rotated every 12,000 miles (approximately every four oil changes) to ensure even tire wear and extend tread life. Out-of-round means the tire has worn unevenly and cannot be balanced. An out-of-round tire will have to be replaced. I have even seen new tires that were out-of-round due to a manufacturing defect.



Want to know **the best place to buy quality tires at great prices?** [The Tire Rack](#)

They will drop ship direct to your mechanic. How convenient is that!

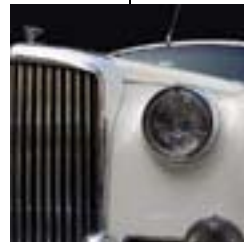
Hitting a curb or large pot hole can cause the wheel weights to come off, and sometimes the weights sling off the wheel at high speed if they were not installed properly. Out-of-round or out-of-balance will not cause a pull in the front end, but will definitely cause shakes and shimmies. If you can drive out of a shake or shimmy by varying the speed of the car, it is a good clue that you have an out-of-balance problem. A simple way to check tire

balance: if the shimmy is present at one speed, but better or not present at a different speed, then a balance problem is likely. An out-of-round tire or a bent wheel will usually produce a wobble or shimmy at all speeds, and replacement of the tire or wheel is usually the cure.

Regular tire rotation is the best way to extend the life of a tire. Ask your mechanic which way to rotate the tires depending on how the tread is wearing. Crossing tires in an "X" pattern is usually the standard way to rotate most tires, but moving the front tires to the back in some cases is

recommended to place the best tires on the front. The majority of the stopping power of the vehicle comes from the front brakes, so the best tires should stay on the front for safety. Caution: Some tires are "directional" and must stay on one side of the vehicle, due to the fact that the tire was made for the tread to only travel in one direction.

A vibration or shaking that is felt in the steering wheel only when the brakes are applied is not a front end alignment problem, but a brake problem. Have the brakes inspected and make sure to tell your mechanic



about the shaking that you feel in the steering wheel when you apply the brakes. This vibration may not be felt by the mechanic on a quick test drive around the block, so be specific. During this brake inspection, it would also be a great time to rotate the tires since you are already paying the labor to remove the wheels.

I have developed a quick and easy to use maintenance schedule that can help keep you up-to-date on the items mentioned above. These schedules are free for you to view and print out from our Website

[www.trustmymechanic.com](http://www.trustmymechanic.com)

## CONSIDERING EXTENDED WARRANTIES

Extended warranty contracts *usually* don't pay for themselves. In my experience I have found that most of the contracts that I had to make a claim on paid very little—if any—of the repair cost. Most of the contracts will list excluded items, and unfortunately those items are usually what will fail. The parts that are covered by the contract are not parts that have the problems. I find a lot of the contracts list a lot of covered parts, but most of the parts on the list are not applicable for the cars on the road today.

Read the list of covered parts. If you do not know, or have not heard of most of the names listed, then it is probably a bunch of hype to make the contract sound highly technical and impressive to the layman.

The other day a customer showed me the extended warranty contract that she was considering and I could only find four items that pertained to her car that would be covered. She would still have to pay a deductible for each claim, and the policy proved to not be a good deal for her. Take a copy of the policy to your mechanic and get their opinion. The mechanic is the one that will be talking to the claims department anyway, so you might as well find out if your mechanic would want to do business with the warranty company before you buy. I personally do not like to talk

to the warranty company on the phone. They ask me questions that I am sometimes not in a position to answer, like “what was the cause of the brake master cylinder failure.” If I knew that, I could design one that would not fail in the first place. They usually want me to negotiate my prices to “fit” their pay policy, and tell me what parts they will pay for and what parts are not covered. The overall feeling that I get when I do business with most of these extended policies is not a very pleasant one for me. I will accept them from my loyal and regular customers, but if you are a first time customer and want me to



make a claim for you, I might pass on the job.

The list sounds great and fills the page, but there is no real protection for the consumer. If a covered part does fail, the shop has to call the claim office and talk to a representative and give an estimate. This sounds easy, but it can become a bartering game between the shop and the claims officer about what the parts cost, or the shop's labor rate, or any other part that was damaged by the failure of the covered part. This can take some time and will not be very rewarding for

the shop, and eventually for the customer.

There will be a deductible to pay by the customer, and on some large claims the warranty company might send out an independent appraiser for on-site inspection before giving the authorization to repair. I have seen the warranty company pay for a broken water pump but not pay for the broken timing belt that was caused by the faulty water pump in the first place. In this scenario the warranty company paid \$120.00 and the customer paid \$290.00 to cover the cost of the timing belt. Remember,



you are dealing with an insurance company and they hate to pay claims!

I think it is better to put the money that you would have spent on the contract in a “car repair” mutual fund account and hope you don't have to dip into it very often. If you are buying a Jaguar or BMW or something along those lines, then I might consider buying the extended warranty, but if you are buying a Honda Accord, then I think you will be wasting your money.

(P.S. From my experience, a Honda Accord is one of the best cars to own. They are well built and reliable, as well

as relatively inexpensive to purchase and maintain.). If you own a BMW or Jaguar you might need my next issue *When Your Car Repair Bills Exceed Your Mortgage*.

If your heart is still set on buying an extended warranty contract I can recommend these [1Source AutoWarranty](#), and [Warranty Gold](#)

### **DEALER WARRANTY PERIODS.**

“My car is still under warranty and I have to take it back to the dealer for repair.” I hear this all the time.



Granted if the dealer is willing to repair your vehicle for free please take advantage of it. You do not have to take you car back to the dealer for anything if you don't want to. Oil changes and other minor maintenance items can be performed by anyone, and your warranty will not be jeopardized in any way. If you have a legitimate and possibly costly complaint, you should take the vehicle back to the dealership for repair. You do not have to return to the dealership where you originally purchased the vehicle. A Honda is a Honda regardless of where you buy it. Honda Motor Corporation is the manufacturer

and they will honor the warranty at any dealer. In my hometown there are many dealerships of the same manufacture and some are better than others in quality, and speed of their service. I have customers who will not take their car back to the dealer for warranty work and would rather pay me to fix the problem than for them to be hassled at the dealership for a minor repair that will take two days to fix.

I recently took my new car back to the dealer for a recall that I had received in the mail. I have to say that some of the recalls are just plain stupid and I



have opted not to honor the recall. I got one recall for the cigarette lighter element jiggling its way out of the socket and possibly starting a fire while I am waiting for it to get hot enough to light my cigarette. Now what on Earth are these people thinking? For one, I don't smoke and two would I really waste my time to correct this one in a million chance that this would occur to me? I took my car in for a more serious recall and the dealer took it upon itself to repair some other work they felt was also needed. I did not tell them anything else besides the fact that I was bringing my car in for the recall about the wheels coming off while on

the freeway. I did feel that this was important and I wanted to take advantage of this recall. A great source for recall information is [Alldata.com](http://Alldata.com). When I picked up my vehicle (two days later, mind you) I saw on the invoice that they had also replaced all of the window moldings because “they have noticed a problem in a few other cars like mine with their window moldings”. At first I was happy. These guys are looking out for me, and it did not cost *me* anything. What was I supposed to be mad about? Well, they accidentally left one of the rear doors open all night long and ran the battery down with



the dome light staying on. I had to wait (and my ride from work) on the parking lot for a mechanic to charge my battery. The dealership had not cleaned up their mess off the floor and the windows all had handprints on them now. I still got something for free so I should be happy right? On my way home I kept hearing a hissing noise coming from the back seat area. The new moldings that they had so joyfully replaced did not fit the rear door properly and were causing an annoying air leak! Man was I upset. All I wanted was some silly wheel lock thing and I got way more than that. I am still not real sure they even put on



the recalled part in the first place. If you have a dealership that you are happy with and they do quality work please bring them some donuts because you found a gold mine. The service advisor is usually the one that is doing the good job for you at the dealership and just like an independent shop; when you find a good one let them know you will be a loyal customer as long as you are treated fairly and with respect. Speaking with the general manager will usually not solve the problem and could actually infuriate you more. Service advisors are usually commission people and love to see you ask for



them by name when you drive up to the service counter.

### **JOINING AN AUTO CLUB**

Some towing services or auto clubs may actually cost you more money than they save you. I have not been a big fan of auto clubs simply because they are acting as a middleman. They give you a discount by becoming a member of their organization, but someone has to pay for that discount. The tow truck that brought your car into the shop did so at a discounted price to the auto club, and the shop

“gave you” the auto club's discount...  
so everyone worked for a discount?

I feel there is often some coercion going on and I don't want to be a part of it. How can shops make an honest living giving discounts to every customer that comes in their door? If there are enough customers, then I suppose this would work out on the economy of scale, but I personally feel there is a tendency to be dishonest or to do work that might not be needed to help offset the given discount.



This is my personal opinion only. If you travel by car a lot and are in remote areas of the country, maybe the use of their road side assistance would come in handy, but the few times I have broken down on the side of the highway it was only a matter of minutes before two or three tow trucks were begging for my business. I would guess by the time I called the auto club and gave my location, a tow truck would have appeared on its own. The best advice I could give would be to carry a cellular phone in your car for emergencies.

# BAD THINGS HAPPEN TO GOOD CAR OWNERS

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## **OH NO, MY CAR WON'T START!**

I get tons of e-mails each week that ask this very simple question. Unfortunately when asked that way it is all but simple. Okay so what happens when your car won't start? A gasoline engine needs three key ingredients to operate: 1) fuel (there has to be something to burn), 2) a spark to ignite the fuel, and 3) some way for the fuel to meet the spark and ignite a fire--this is the compression. Compressing fuel in



a confined cylinder inside the engine, then introducing a spark from a spark plug will produce a small explosion. This explosion process is what generates horsepower. For a great illustration on this process [Click Here](#)

So before you call the mechanic and tell him your car won't start, ask yourself this question first: "What is missing in the equation (fuel, spark, compression)?" You went out to your

car today and the car won't start...how? Suppose the engine won't turn over. When I say the engine won't turn over I mean when you turn the key, the engine goes ...blank... (nothing is happening). The radio and the lights may still be functioning fine.

What are the things that cause the engine to turn over? The battery and the starter are the two most important. If the headlights are on and are bright, then we could probably assume the battery is up to snuff and doing its job. The starter takes electricity from the battery and turns the engine over to start the piston explosion process I

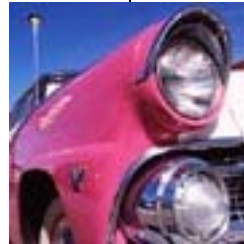


described earlier. So in this case, there is probably a problem with the starter, or something is hampering the electricity from the battery to the engine or starter (maybe burned or damaged wiring or a bad ground connection).

The other type of "no start" occurs when the engine turns over like it is trying to start but will not start. So the battery and the starter are doing their jobs, but we are lacking one of the main exploding ingredients. Is there fuel? Look at the gauge first (we still get cars towed in to the shop that are simply out of gas!) Do you have

compression? Does the engine sound like it is turning over fully, or does the engine sound like it is turning over too fast or too slow? A broken timing belt or timing chain will cause the engine to turn over very easily and very fast because the compression process is not taking place.

Is there spark? This is not as easy as it sounds to determine, and can require some tools and experience to test. Now you probably don't care to "do it yourself" from here on out, but at least you have ruled out the battery, the starter, and a lack of fuel in the tank. This little bit of effort on your part saves



the mechanic a lot of time trying to guess what happened and why, and you might actually find the problem yourself.

Is the car in PARK? I have been to many roadside assists only to find out the car is still in DRIVE. The engine will only start in park and neutral. Do you have an anti-theft device, and is it working properly? If it is a stick shift, do you have the clutch pedal depressed? Are the front tires up against the curb? Sometimes it is very hard to turn the key if the front tires are in a bind on a curb, or if the car has rolled back a bit after it was placed in PARK. If this is the

case, you can turn the steering wheel real hard to the right, or try to physically move or rock the car forward to release the key. If you still have trouble it is time to call the tow truck. When you call the shop to inform them your car is on its way into their shop, you should be specific in the nature of the "no start" you've experienced. Saving your mechanic time should save you money.

### **REPLACING YOUR CAR BATTERY**

Replace your car battery with the same size and the same or better cranking ability as your old one. Ask



about the warranty, and the other shops that are able to warranty the battery should you be away from home.

Find a battery that is designed for your car and is maintenance free.

Maintenance free means you should not have to add water to the battery, but corrosion will still build up on the terminals and should be cleaned from time to time. Dirty battery cables can cause your car to act strangely and sometimes not start. [Click here to see example pictures](#). Don't be surprised if the battery just gives out without any warning. Usually the battery will give

you a warning before it leaves you totally stranded, but I have seen cases where a fairly new battery just quits.

[Click here to see a great place for ALL types of batteries](#)

Do not jump-start your car—or anyone's car for that matter—unless you know *exactly* what you are doing and *only* as a last resort. The onboard computer systems can be severely damaged by a sudden electrical spike, and that can cost BIG bucks. Don't do it! Politely call them a tow truck to handle the problem. You will be doing everyone a favor.



## **BUYING NEW TIRES**

I tell my customers to buy their tires at Discount Tires, a nationwide chain store. They have reasonable prices and an excellent warranty. I do stock one brand of reasonably priced, good tires at our shop, but the warranty on them is only through my shop.

Chances are, if you have an on-the-road tire problem... you'll probably be far away from home when it happens. Especially if you travel away from home often, tire road hazard coverage should be a more important consideration than price when purchasing tires.

Proper tire inflation, rotation, and balancing are crucial—not only for the life of the tire, but also for the safety of you and your family. I recommend a tire rotation and balance every three oil changes, which should be approximately every 12,000 miles. A front-end alignment should be performed when purchasing new tires, and would be advisable every 15,000 to 20,000 miles or as needed. As I've mentioned before, your car can be out of alignment without any noticeable symptoms (shimmying, shaking, pulling) and can cause premature tire wear or failure. Update: **The best place to buy quality tires at**



**great prices?** [The Tire Rack](#) they will drop ship direct to your mechanic. How convenient is that!

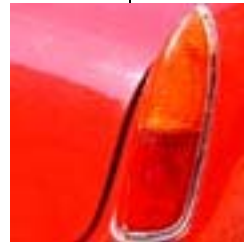
### **DEALING WITH TRANSMISSION SHOPS**

This section should be easy: **Ask questions, ask questions!** In the transmission business, there is a lot of room for the shop to, well... be dishonest. Some transmission shops in my area are trustworthy and very good at what they do. Now let's define what is good, and what is bad. Just as I've stressed throughout the book, you need to find someone you can trust and believe.



You will probably only set foot in the transmission shop once during the life of your car. Thank God for that. Most car transmissions are made to last the life of the vehicle if *properly maintained and serviced regularly*. Most automatic transmissions have a filter that should be replaced, the fluid changed periodically. Check the owner's manual for service interval, but a good rule of thumb is to change the filter and the fluid every 25,000 miles under normal conditions.

What are normal conditions you ask? The owners manual will usually list what they feel is normal and severe driving



conditions in the scheduled maintenance section of the manual. I have found that the term “severe driving condition” usually refers to having the air conditioning on while the engine is running. If this was the case, it might suggest that you service the transmission every 30 days to avoid premature wear and internal damage. The manufacturers do a great job at protecting their rears from lawsuits, and will sometimes be a little too protective, so also ask your mechanic for his opinion.

If you are in need of transmission work, you should ask your repair shop if they

do transmission repairs in house or subcontract the work to another shop. If your regular repair shop is willing to send the car to their transmission shop, let them do it for you.

My shop does not do automatic transmission repairs in-house. We have used the same transmission shop for 25 years, and for the most part have had good experience. We mark up the price of the transmission work just enough to cover the cost of handling and the overall hassle we go through to get transmission repairs for our customers. Trust me; we do not make a great deal of profit doing this. We



do this for our good customers. The customer who has been down the transmission shop road before knows he/she does not want the hassle.

As I write this portion of the book, I think of the three cars that we have at the transmission shop right now that were supposed to have been ready two days ago. Who does the customer call/complain to? Not the transmission shop. My shop is also the one you bring the car back to for any warranty problems that you might have with your transmission. It is nice to know that the shop that you *regularly* do your repair business with is the

middleman for you. Our transmission shop will always back us in a questionable warranty situation, and we have much more *pull* than you would as a one-time customer.

If you are calling around for price quotes on transmission work, I wish you luck. I have called around my area to check out what the competition is doing, and even *I* cannot figure out what these guys are doing.

Especially when it comes to transmission work—do not go on price alone. Not until your car is in the transmission shop and your transmission



is on the floor and torn apart in many pieces will they give you the exact total. I can tell you, after many phone calls in my area, there is a big difference in price, almost double in some shops! Once these guys get your transmission on the floor and you signed that work order we talked about earlier, you are at their mercy.

I really liked talking to the transmission shops that were honest and up front about their pricing, and what they would *probably* find inside the transmission of my 80,000 mile car that had never been serviced and had been making this strange noise for the

last couple of weeks. If it is going to cost \$1,400 dollars, tell me now. Do not sway me in at \$800 dollars and work me up to \$1,600 dollars later. This is what usually happens. If you need transmission work, get the worst-case scenario up front so you will not be disappointed in the end.

*Things to look for at a transmission shop:*

- Look in the parking lot for vehicles that appear to be abandoned. I always wonder how many of these cars came in on those inexpensive loss-leader ads, and the final bill ended up being so much that the*

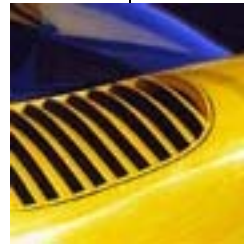


*owner had to forfeit ownership of the car—or just left it rather than pay.*

- What is the average age of vehicle in the parking lot? If most of the cars are 10 to 15 years old, they might not be qualified to work on your newer model. I want my mechanic to be experienced with cars just like mine.*
- Do you see any company vehicles that you recognize? Companies that are well established usually have a fleet manager who is in charge of maintaining the company's vehicles. Most fleet managers go by price first and*

*warranty second, and overall quality is not as important as getting the cars back on the road fast and cheap. The fleet manager wants to keep his/her budget under control, and keep the vehicles on the road. Government or city vehicles in the parking lot tell me that the shop was the low bidder, and will probably do the least amount of work just to get those vehicles back on the road.*

My best advice to you when it comes to transmissions is to maintain your transmission and service it as needed to hopefully avoid having to deal with transmission shops. Be sure to read the



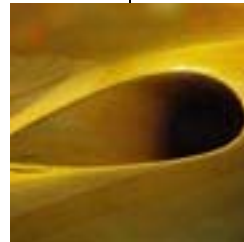
myths and wisdom section for another side note on this subject.

### **I NEED TO FLUSH THE RADIATOR**

When a customer comes to me with this question, the first question that comes to mind is **WHY** do you want to do this? Red flags go up in my head when customers ask me a "how do I..." question. Some people not only like to diagnose their car problems themselves, but they want to perform the operation as well. This **can** be a great thing, but only if the diagnosis was correct. If it was not correct you just wasted your time and money. So

my question back to the customer would be "what is the problem you are experiencing, and why do you think this operation will solve the problem?" Boy do I get a blank stare then!

"Flushing" a radiator sounds like a wonderful thing to have done periodically to your vehicle, but what does it actually do? You probably have a mental picture of this **high powered** jet blast of water mixed with some kind of detergent that removes all the gunk that has accumulated in the radiator, and after doing this procedure your car will not only run "cooler" but... "Better", *right? I mean this*

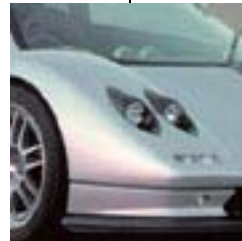


gunk has probably been the source of your "engine robbing performance" in your mini van for months, right? I hate to put a damper on your parade, but we need to talk.

Most radiators today are small, made of light weight aluminum, and crammed so tightly in the front of the car you can barely see it let alone "flush" it. The neck of the radiator (where you pour in the antifreeze) is usually angled in such a way that it is impossible to pour in the antifreeze or even **SEE** the antifreeze for that matter. The inside of the radiator is made up of a honey comb maze of rows, or "sipes"

that sends the hot antifreeze on a long meandering journey from left to right of the radiator. Air is being forced through fins on the outside of the radiator to cool down the antifreeze inside the radiator.

Ok, I hope you are still with me because here is the answer to the question. Where does dirt and sediment accumulate in the radiator, at the top or the bottom? The bottom of the radiator will trap the majority of the rust, dirt and sediment. You can try as hard as you want to, but you will not be able to remove enough of this compacted material to do any real

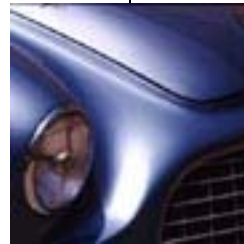


significance in engine performance. The way the radiator is designed internally prevents the access of any high pressure action that you might be able to insert into the small opening of the radiator neck located at the top of the radiator.

At my shop the term "flushing" the cooling system has been replaced with "draining and refilling" the cooling system. Removing the lower radiator hose, or if equipped use the radiator drain cock to drain out the old antifreeze and replace with the new fluid is essentially "draining and refilling the cooling system." This of course will

only remove any minor surface debris along with the old contaminated fluid, and will probably NOT cure any over-heating complaints you might have been experiencing. Calcium and rust build up within the pipes are the main causes of radiator stoppages, and will cause an over-heating complaint. If this is the case, removal of the radiator from the car for disassembling and rebuilding, or replacing the radiator are really the only two viable options.

Yes, there are many "radiator flush" additives on the market, but most are not to be used in aluminum radiators (which all newer vehicles are



equipped with), or just flat out don't work. There are very few (ok, *probably* only one or two) problems with a motor vehicle that can be solved by the contents of a can.

So, in a nut shell...draining and refilling your radiator with new antifreeze every two to three years WILL help maintain and extend the life of your vehicle, but will probably NOT have an impact on the way it drives, overall fuel economy, cure a major over-heating problem, or improve handling in wet weather on winding roads. Ask your mechanic to inspect the radiator and heater hoses, and test or replace the radiator cap



when replacing the antifreeze. I have put together some easy to follow maintenance schedules with more recommendations with explanations that are available on our Website [www.TrustMyMechanic.com](http://www.TrustMyMechanic.com).

### **“MY HEATER IS NOT HOT, WHY?”**

I feel for you, the heater in your car (like the air conditioner) is a wonderful comfort item, and it can be very costly to repair if and when it fails. Before we get into repairing it, let me explain briefly what the heater core does. The heater core works in conjunction with your engine's cooling system. The



function of the cooling system is to remove heat from the engine, and it does this for the most part by sending the heated anti-freeze to the radiator located in the front of the car. The position of the radiator allows outside air to blow across the radiator thus cooling the antifreeze. The anti-freeze is then sent back to the engine. Hot anti-freeze is circulated throughout the cooling system by the radiator and heater hoses. Think of the heater core as a small radiator located inside the dashboard of your vehicle. [Click here to see samples of heater cores.](#)

Antifreeze is constantly being circulated throughout the engine, radiator, and yes even the heater core regardless of whether you have the heater dashboard switch on. When the heater is turned on by the driver, a diverter door opens to the heater core area in the dashboard. A small fan (commonly referred to as the a/c fan or blower) blows air across the hot heater core into the duct work of the dashboard and into the interior of your car. When the heater core leaks (it leaks antifreeze of course) it will usually leak inside the car on the passenger floorboard under the carpet. If your heater isn't working properly, or if you



smell a sweet odor, investigate the passenger-side floorboard for signs of antifreeze leakage. A leaking heater core may also cause a greasy film on the inside of the windows.

So what causes the heater core to leak in the first place? Usually the main culprit is rust build up caused from lack of cooling system flushes. Anti-freeze acts as a lubricant and rust inhibitor as well as a temperature controlling substance. Anti-freeze should be flushed and replaced periodically to keep the cooling system in good working order. Rusty antifreeze is usually a sign of a coolant leak

somewhere in the cooling system that has allowed air to enter the system. It may be a leaky radiator hose, water pump, heater core, radiator, etc. Rust build up can be just as damaging to the radiator and other internal engine parts. How do you stop the antifreeze from leaking onto the floorboard?

Obviously you can replace the leaking heater core itself, which is the correct fix and is what your mechanic recommended. You can also try a can of radiator stop leak additive to see if it will patch the hole (this might be an acceptable temporary repair), or you can cut off the flow of antifreeze to



the heater core all together. There are two heater hoses that are attached to the heater core from under the hood. [Heater Hoses](#) These hoses can be cut and blocked off with a hose clamp, or a small hose splice can be inserted between the two hoses to create a loop thus avoiding the heater core all together. This works great to temporarily repair a leaking heater in the summer time.

Another cause of a heater that is not leaking but is not heating properly can be a faulty thermostat. The thermostat is calibrated to keep the antifreeze inside the engine at a constant

temperature. A faulty thermostat might not allow the engine temperature to get hot enough to heat the antifreeze. Thermostats generally do not need periodic replacement unless there is an under- or over-heating situation. When replacing the thermostat, make sure to install the proper heat range recommended by the manufacturer. Proper engine temperature plays a vital role in fuel economy and overall running condition of the engine, as well as regulating cooling system temperature.



Low antifreeze levels or poor circulation of antifreeze throughout the cooling system will hamper heater performance as well. If there is not enough hot antifreeze to circulate and deliver to the heater core, heater efficiency will be greatly reduced. If you suspect a problem with your heater, first check the anti-freeze level in the radiator and make sure the fluid is in good shape and of proper color (either green or orange/red if you're using one of the new extended life products on the market).

To check antifreeze color, dip some out and look at it in a glass container.

(We use an antifreeze hydrometer, which is basically an expensive turkey baster.) When you are looking at the antifreeze *in* the radiator, you can only see the top surface color, and it will usually look okay even if it's not.

If low or contaminated fluid is not the problem, feel the two heater hoses going from the engine to the heater to make sure they are hot (the engine needs to be at normal operating temperature). If the heater hoses are not hot, inspect the radiator hoses for internal cooling system blockage. With the engine at normal operating temperature, the upper radiator hose



should be very hot, and the lower radiator hose should be just slightly less hot. If there is a substantial temperature variation, a blockage or restriction is probably present. A faulty thermostat and a radiator or heater core that is full of calcium deposits or rust build up are a few causes of cooling system restrictions.

### **REPAIR OLD OR BUY ANOTHER?**

I get asked often by customers when is it time to buy another car. Seems some people have a "problem" with a \$300 a month new car payment, but they are perfectly comfortable with

paying the same, if not more, on monthly repair bills and accept the inconveniences that comes with them. I don't know what "drives" people to a high mileage goal. I hear customers comment "This car *has* to go another 20,000 miles" or brag about how many miles they are *determined* to put on their vehicles. "I am going to drive this vehicle 180,000 miles whether it likes it or not". Now if this is a challenge for you, by all means take it, but I can think of many other challenges less costly. Granted, some cars *will* last a long time and do so with relatively low maintenance cost, but this is not the norm.



How does one know when to throw in the shop rag and get a new car? Well, I don't have a crystal ball bearing, but I can provide some helpful guidelines to assist you in your evaluation process.

**First:** Perform an evaluation of your vehicle yourself using our used car check out list from our Website: [Used Car Check List](#). The check out is self explaining and easy to use. If you have a concern or a potential problem you might uncover with an item on the list, have your mechanic inspect it during the next step.

**Second:** Determine what future maintenance cost will or could be. Again, use our maintenance schedules on the Website [Maintenance Schedules](#), to help you forecast costly maintenance items. Print out the maintenance schedules that are closest to your current mileage and the *next* higher mileage schedule. Take your car to the mechanic (hopefully the mechanic that you regularly visit and have a good relationship with) and pay them to inspect all the items on the two schedules. The cost of these inspections should be fairly inexpensive (Would be about \$100 at my shop),



and the information they will provide will be more than worth the expense. Add up all recommended repair costs plus all previous repairs during the year. Divide this number by 12 to determine your average repair cost for the given year. This number will not however include any breakdown or unexpected repairs.

**Third:** How much is your car worth? Trading in your vehicle for a new car is the easiest, but will not bring in the most money for you. The new car dealer will pay you a *wholesale* (The lowest price) price for your car, and in doing this you are leaving money on

the table. Selling your vehicle to an individual at a *retail* price will require a little more work on the part of the seller, but there can be much greater financial gain in doing so. To get free (no obligation) quotes on late-model used cars & trucks, click on [Autobytel](#), [Carsmart](#) , [Carbot](#) and [The BIGlot.com](#). Biglot.com is a great place for new and used car prices, SUV'S and Marine. Make sure you're not missing out on a better deal -- get quotes from **all** these services! They are free to use, and could possibly help you get more money for your car, so why wouldn't you? I recommend going to see and test-drive your



competition before you set a price on your car. Take along the used car check list and evaluate the competition just as you did your car. How does your car compare? Could you place a higher price on your car after your evaluation, or is your competition in better shape?

Another helpful site is [KellyBlueBook](#) where you can obtain loan, trade in, and retail values for comparables. This book is commonly used as the standard in vehicle base values, but you can always add or subtract from that number things like overall appearance, well kept maintenance



records, upgrades (stereo equipment, tires and wheels, bug shields...etc) and customer added items.

**Fourth:** How much will your next car cost, and how will you pay for it? Now that you have determined your yearly repair costs, the value of your current vehicle, and a possible sales price you must calculate the monthly payment of the new car. Paying a larger down payment on the new car will lower the monthly payment. How much of the sale of your current car can you use as a down payment on the new car? When buying the new car be sure to take advantage of rebate incentives

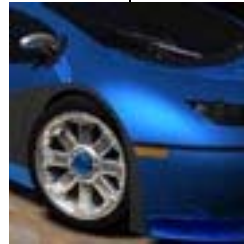


and low or zero interest on certain models the factory is trying to move out. Keep in mind you are replacing a vehicle that you **know** will be incurring future repair costs, so don't take on more money debt than you can handle. Hopefully you have a month or two before these expected repair bills will be required, so you will have some time to price shop the new car, and have time to sell your current vehicle.

### **FOR CAR BUYERS**

**First:** Do your homework. Learn all you can about dealer tricks because they

can quickly erase any discounts or other savings that you think you're getting. New car dealers spend millions of dollars training their sales people to get more money out of customers, and if you don't know the tricks they use, you could be over charged by thousands of dollars. **Find out the dealer's real cost** on the new car (it's typically less than invoice) and the prices that smart shoppers are paying for that car, then research any other items you might want (loans, extended warranties, car alarms, stereo equipment [CarToys.com](http://CarToys.com) etc.). Shop around for competitive auto loans (or lease [Canadian Lease Take Over](#))



rates at banks, credit unions and lenders on the Web. When you find a great interest rate, get pre-approved at that lender before you start negotiating with dealers. If a dealer can beat the rate you found, let him finance the car -- on a "simple interest" contract only. Otherwise, stick with your pre-approved loan. Some great lender Websites to obtain free no obligation quotes are: [Full Spectrum Lending](#), [My Pay Day Loan](#), [GetAFreeQuote.com](#), [PeopleFirst.com](#), [E-Loan](#)

When your homework is done and you're ready to buy, you start the

negotiating process -- where new car dealers quote prices and you make counter-offers. If you've done your homework properly, this process should result in less haggling -- and lower prices. To make dealers compete (and drive the price down), use the Internet to get at least 6 price quotes before you start negotiating with any dealers. When you get to the contract stage, make sure the dealer doesn't slip any hidden charges into your loan or lease. (This is known as "payment packing.") Some items that are commonly added or "packed" are dealer prep (the manufacturer pays the dealer to clean up and make ready the vehicle—not



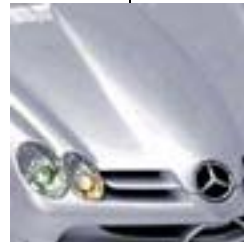
you). Dealer hold-back, this is an amount set aside for the car buyer as an incentive to buy. This can sometimes be "Heldback" by the dealer without you knowing about it. If a rebate or any other incentive is offered to the buyer, it belongs to you not the dealer. These additional charges will sometimes be lumped into the overall car price can sometimes be hard to spot. To avoid this rip-off practice, calculate your own monthly payments first, so you have a good idea of what the monthly finance number should be. Finally, always negotiate the price of the new car, not the monthly payment. It is too

easy to “pack” the monthly number.

### **Money Saving Resources, Free Quotes**

[TrustMyMechanic.com](http://TrustMyMechanic.com) has searched the Web to find the BEST prices on new and used cars, buying, selling and leasing resources. These resources are listed below, along with direct links to their sites.

**New Car & Trucks - Free Quotes.** Are you looking for a new car or truck? Get free (no obligation) quotes from the following new and used car buying services, then use those quotes to convince other dealers to lower their prices. If the other dealers can't beat



the lowest Internet quote, you may have found the best possible deal on that car. For **free no obligation** quotes on new cars & trucks, click on [Cars.com](http://Cars.com), [CarsDirect.com](http://CarsDirect.com), [Autobytel.com](http://Autobytel.com), [Stoneage.com](http://Stoneage.com), [Canadian new car prices and buyer's checklist](#), [Free Canadian New Car Prices](#) [1StopAutoPrices](#) and [FordDirect](#). To make sure you're not missing out on a better deal, get quotes from all eight (yes, do all eight) services!

**Some things to consider:** In my opinion I would replace your current vehicle if your average yearly repair bills are

more than ten percent of the price of the new car you would like. These four steps are just a guide to help you remove the *emotion* tied to selling your current car and buying the new one. After doing these steps you might find that you are not in the "money pit" and the maintenance schedules and check list gave you an easy way to forecast and plan for up coming repair expenses.

### **USED CARS HISTORY REPORTS.**

Don't buy any used car or truck without checking its history first. Has it ever been salvaged, in a flood or a



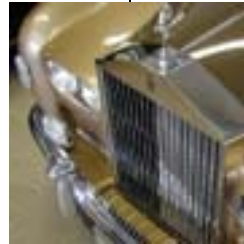
major accident? Has the odometer been rolled back? Find out in seconds when you order a free [Carfax Record Check](#) Report online. Start with a free [Lemon Check](#) to see if a vehicle has a lemon (buyback) history. Click Here for [Carfax](#).

### **LEASING PROBLEMS OR QUESTIONS?**

Are you stuck in a lease? Do you want to purchase an existing lease at a huge discount? Don't know if leasing is right for you? Try these great sites for leasing information  
[Lease Trader](#) , [Leaseguide](#)

## **PERSONAL CREDIT REPORTS.**

If you don't know what your credit report looks like, get a copy of it before you apply for financing. This will give you a chance to correct any mistakes that may be in your credit file. Why is this important? Because "blemishes" on your credit will prevent you from getting the lowest possible interest rate on a loan. Never agree to a higher interest rate at the dealer without checking your credit report first



to see if the higher rate is justified. (And shop around for a better rate, of course.) You can get copies of your credit report by clicking on [OnlineCreditInfo.com](http://OnlineCreditInfo.com) [Equifax](http://Equifax) [True Credit Reporting](http://TrueCreditReporting) all offer free 30-day trial memberships in their credit monitoring services, and Equifax offers a low-cost alternative that gives you online access to your credit report (for 30 days) without signing up for a long-term service.

# SOMETIMES THERE'S A MONKEY WRENCH IN YOUR DAY

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## PREPARING FOR EMERGENCIES

What should you have in your car for emergencies? I have a flashlight, disposable camera, fire extinguisher, pencil and paper, and a jacket during winter. If you are ever involved in an accident, you should take pictures of the scene and *anyone* who is involved or is a witness.

Do not store gas in a container in your trunk or anywhere in the car. Duh! But, you'd be surprised.

Also, don't waste your money on a glass breaking hammer that is supposed to save your life in the event you cannot open the door and you are forced to break the glass to exit. You'll have to first, remember where you placed the hammer and second, be able to reach it! What are the chances?

The camera will be a valuable asset if you need to document location, angle of impact, or the severity of the collision. Take as many pictures as you can of your car and the others involved. Get as many witnesses as you possibly can, and get a police report, even *if it is a minor fender bender*. It is a good idea to have a flashlight on hand and pen

and paper to take names of witnesses. Do not leave the scene of the accident until dismissed by the officer, and be proactive in seeking out witnesses.

You should have the name and phone number to the towing service that your shop uses; call them as soon as you can. You can usually tell the police to contact your towing service on their radio. The tow truck driver could be a good asset to have on your team at this point. They see accidents all the time, and they might be able to assist you with the police or just give you some comfort in the situation. If you



have ever been in a serious accident, you know what I mean...you will want some comfort.

If you are injured and need to go to the hospital, tell the police (if you are able) that you want your towing company to remove your vehicle. After that, don't worry about the car, go get well! People stress out about an accident a little too much when it comes to their car. Your car will usually sit in storage or an impound facility until your insurance company asks for it to be moved to a repair shop, or until they send someone to look at the damage. Don't worry about the



storage bill or who is going to pay what at this point in the game. Once your car has been entered into the insurance company's computer system, they will tell you what to do next. Do not go out on your own and get the car out of storage without first telling your insurance company—unless you *really* know what you are doing.

Call your insurance agent *now*, don't wait till you have an accident, and ask if you have rental car coverage. This type of coverage is usually very inexpensive, and is sometimes not

automatically included in full coverage policies. Your car may be in the repair shop for weeks getting put back together, or while you and your insurance company negotiates the total loss value of your vehicle.

Do not sign the release until you have your settlement in writing and you are satisfied. Show me the money!

### **AFTER AN ACCIDENT**

What should you do after your car has been in an accident?

What if the repair shop you use does not have a body repair facility, but you have called *their* towing company for assistance? Insurance companies will usually allow you to transfer your vehicle from one location to the repair

facility of your choice one time at no additional expense to you.

If your car has been towed to a storage facility and you need it towed to the repair shop, the insurance company will usually pick up the tab for the second tow charge. So, if you do not have a body repair shop already picked out (which you should the day you get your new car) then you will have a day or so to find one that you like.

If your car was damaged beyond repair (a total loss) then it really does *not* matter if your car is at a storage



facility or at the repair shop. The insurance company will send out a claims adjuster to see the damage to your vehicle. If it is a total loss and they want to settle with you:

1. *Be sure to agree upon a price of the claim and get it in writing!*
2. *Find out **how much** and **when** they will pay you before you release your vehicle to them.*

Once you sign the vehicle release, the car belongs to them and you just lost your bargaining power. The insurance company will have to pay storage each day your car sits on the storage lot; so your agent will want that car

removed as soon as possible. When the car is gone and there are no storage charges accruing, the insurance company has no burning desire to settle the claim quickly and fairly.

I tell my customers not to release their totaled vehicle to the insurance company unless they are COMPLETELY satisfied with the settlement number they have agreed upon, and they have a check in their hands. You might think your insurance company is your friend and will be on your side, and you are right as long as you are paying them! I have seen many



people get more money than the insurance company was initially willing to allow because they were able to show recent repair receipts, other comparable vehicles in the newspaper or on the internet, or they just held out a day or two until the insurance company finally compromised. Do not be unreasonable, greedy, or petty...but do not allow them to take advantage of you either. Research the reasonable value of the vehicle on your own and make informed decisions.

I am not out to get insurance companies, but they do a great job of taking money over the years and when you ask them for money once in (hopefully) 5 to 10 years, you should be able to expect them to be fair.

I get lots of thank you letters from customers who do this and they are amazed at the fact that they don't have to settle for what their insurance company tells them is fair. I had one customer call me and tell me she got well over a thousand dollars more than what the insurance company said they would give her, just because I told her to look on the Internet for cars that



were like hers with the same mileage, etc. and get an average price. If you just had \$300 worth of tires installed and a new set of floor mats—those assets should be added to the value as well. If you are in a rental car at the insurance company's expense, tell them you will return it when you get your check. I have to admit that this bit of information alone is worth much more than the price of this book! What if the damage was not enough to total the vehicle and your insurance company wants it fixed, but at their approved shop? Most big insurance companies will have shops that they consider to be “preferred.” These

shops usually give discounts to the insurance company because of the large volume of business that they bring to the shop.

The preferred shops are often on a direct pay program with the insurance company and can write their own estimates, which can save time. To retain their preferred status, the shop will have to comply with all state and local E.P.A and O.S.H.A regulations, local fire codes, and worker safety laws—and that is a lot to say for most body shops. I know of numerous shops that cut corners for profit, such as “somewhat illegal” outside painting



practices, or not properly disposing of hazardous waste.

In addition to these benefits, body shops can lose their preferred status for shoddy workmanship and numerous customer complaints, so they tend to be very customer oriented. It is my recommendation that you use your insurance company's preferred body shops if possible. If there is a problem, you can fall back on the insurance company as an advocate. If you have a friend, neighbor, or just want to use another body shop, then by all means take your car there. You might want to tell the shop that the

insurance company wanted you to take the car somewhere else just so they *know* you went out of your way to give them business. If your insurance company still wants you to take it to their preferred shop, you might ask the insurance company if it is legal for them to “direct” you to a shop. In Texas the insurance company is not supposed to tell you where you can get your car repaired. Once the insurance company knows you know that information, they will usually get off your back. I do sometimes have to remind insurance companies of this law, and you may have to also. For a



fast free insurance quote click here:

[Great rates!](#)

### **MY MOTOR BLEW! NOW WHAT?**

First off, I would NOT let the dealer install a complete motor; this is NOT their line of work. Replacing a car engine in some cases requires 15 or more hours of labor. You can easily see that 15 hours at a dealership labor rate can quickly skyrocket the overall price of the job. Contrary to popular belief, big jobs like this performed by dealership "type" mechanics are usually not very profitable for the shop. In the time it takes to install a motor, the mechanic and the shop could

have performed many other more profitable jobs (like brake work, tune ups, etc.) With this in mind, most dealerships will "politely" over price the job so you WON'T want them to do the work!

If your motor needs to be replaced and you live in a big city, you might want to look at buying a used engine from a salvage yard (junk yard).

[junk-yard-hotline.com](http://junk-yard-hotline.com) ,  
[autobodypartsonline.com](http://autobodypartsonline.com) ,  
[Uneedapart.com](http://Uneedapart.com)

In Houston there is a company that buys used, low mileage Japanese motors and transmissions in huge



container shipments. I can buy motors from this company very cheap, and they offer a 90-day warranty to boot. A Japanese motor with 30K (as long as there is oil in it) will last a long time, so it is not like you are buying a used, worn out engine. There are a few Websites that offer used low mileage Japanese motors and transmissions like

[Japaneseusedengines.com](http://Japaneseusedengines.com) ,  
[Soshinusa.com](http://Soshinusa.com) and  
[Noyanusa.com.com](http://Noyanusa.com.com)

I had read somewhere a few years ago about a supposed law in Japan that requires engine replacement at 30,000 miles. I did some research on

the Internet to see if there was some truth to the story, and Cheston with Soko America told me this:

*There is no such law "requiring" engine replacement at a certain mileage. That is a urban myth propagated by importers and car owners who simply don't know or understand the situation in Japan. The high taxes (annually assessed), insurance premiums, gas costs, and especially the safety inspection/registration (occurs biennial) combine to keep turnover of vehicles high. For example, the Safety inspection for your typical car (say Camry/Accord type) can typically cost \$2,000....each time!*



*New vehicles have a 3 year grace period before they are required to submit for the Safety Inspection. In other words, for a 10 year old car, you will have already paid over \$8,000, in just Safety Inspection fees! Don't forget, gas over in Japan is also typically four times the cost of here in the U.S. Mileage is kept low on the vehicles as EVERYONE (unless your fabulously rich and patient) uses alternative transportation to get around. Most folks use the trains for local and medium distance traveling/commuting.*

*Far distances are taken by airplane and local transportation done by*



*either bicycle or bus. In that society, your car tends to be a status symbol more than anything else. I hope this sheds a little more light for you!*

Yes it did Thanks Cheston

Visit the Soko America Website for for great deals on Japanese motors and transmissions. [Soshinusa.com](http://Soshinusa.com) Call a few salvage yards and see what they have to offer. If the first salvage yard you call does not have an engine that you are interested in, ask them to run it on the "hotline." The hotline is a communication system that connects all salvage yards together by telephone. The hotline can save you



lots of time and frustration. You might be able to find a good but wrecked motor of your car type with low mileage.

Once you find a used engine with a salvage yard you are comfortable doing business with, you will then need a mechanic to install it. If you have a regular repair shop that does your maintenance, you should ask them if they are interested in installing a used motor that you furnish. You might tell the shop where you found the motor and give them the information (the salvage yard will deliver it to the shop for free)...let the shop make a small

markup on the motor just to be fair. The main reason you should let the shop make a small markup on the motor is to let them share in any liability or warranty issues that could occur.

The last thing you want is to be in the middle of a warranty issue and have the salvage yard blame the repair shop for an installation problem, and the repair shop pointing fingers at the salvage yard for selling you a bad motor. Trust me; you do not want to be in the middle of this situation. Doing some of the leg work on your own might help insure you get a motor that has a bright future, where as the repair



shop might order the motor from the first salvage yard that says they have one, or says they have the "cheapest" one. Hopefully you are using a trusted and honest repair shop, but they could be very busy doing other things and not have time to search through salvage yards for your motor, so I would take on that task myself.

Hopefully you might find the time to visit and inspect the motor and the condition of the car it came out of before you purchase. You might even be able to start and at least listen to the engine to make sure it doesn't make noise or have any obvious

smoke bellowing from the tail pipe while you are at the salvage yard. It will be well worth a 10 percent markup to hold the repair shop liable for the entire job by their warranty policy.

The last motor job I did like this was on a Toyota 4Runner. A fast lube place forgot to put oil in the engine after they drained the old oil out, and my customer was in the same boat we're talking about now. She paid the lube center to change her oil, so they paid for her new engine. If a new motor is needed, call around and see what you find...remember junk yards LOVE



cash...and CASH talks, so feel free to negotiate.

Some prevention tips to remember:

- *Check the under-hood fluids regularly*
- *Try to park in the same spot to help identify any fluid leaks*
- *Change the oil and filter every 3,000 miles*
- *Stop the engine immediately when noise or overheating is occurring*
- *When possible, as I mentioned previously in this book, leave your vehicle at a full service repair shop for oil changes so they have time to look over the car for potential problems on a regular basis.*

# MYTHS AND MECHANICAL WISDOM

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**MYTH:** FUEL INJECTORS NEED TO BE  
CLEANED PERIODICALLY.

**WISDOM:** Not necessarily the case. Most vehicles today are equipped with electronic fuel injection systems, and they do a good job of keeping themselves clean. Today's fuels are cleaner-burning than they used to be, and vehicle manufacturers are making their fuel injectors more efficient and trouble free.

We rarely see problems with the actual fuel injectors. If your car runs poorly and the mechanic thinks the injectors need to be cleaned, that should tip you off as to the diagnosing ability of that mechanic. If you want to clean the injectors periodically for general maintenance, that is just fine.

**MYTH: TURN OFF THE AIR  
CONDITIONER BEFORE  
STARTING THE CAR.**

**WISDOM:** Not anymore. The computer on today's vehicles will turn the air compressor on only after the vehicle has been started and ready to accept the additional load. Remember the dashboard warning light story earlier? The computer system will test all the vital sensors and components on the vehicle before it will provide these creature comforts to the passengers. This action is also reversed: when the computer senses the engine may be overheating, the

first thing to usually be shut down by the computer is the air conditioning you are enjoying. The air conditioner does cause an additional load on the engine while the computer is allowing the air compressor to operate. Turning the air conditioner on and off will probably just wear out the switch.

**MYTH: YOU NEED TO PUT GAS  
ADDITIVES IN YOUR CAR.**

**WISDOM:** Gas additives are usually more of a preventive item and not made to actually fix a problem. Most gas

additives that I have seen on the over-the-counter market really don't do much of anything. In my opinion use a good name brand of fuel from a clean local station (when possible) and experiment with their grades of fuel. Take a vacation on the money that you will save from not using their top grade of gas and not using a fuel additive.

**MYTH: PREMIUM FUEL IS BETTER.**

**WISDOM:** Premium fuel usually means it contains higher octane and some detergents. If your vehicle runs okay on

regular grade fuel, by all means use it. Some vehicles will clatter or “ping” on fuel with minimal octane ratings, but this is rare. I use the cheapest grade fuel that is offered by a **major** refiner. I do not purchase fuel from convenient stores or from a lesser-known brand name unless I have no other choice. If I do get a tank of “bad” gas I want the refiner or the pumping station to take responsibility. Gas additives and octane boosters are a big business, and that industry does a great job convincing consumers that their cars

need them to run smoothly. I will admit that once in a while I will suggest to a customer that they try a gas additive in a car that “pings” due to low octane fuel. These additives do not cause any harm, so if you think your vehicle runs better when you use them, do not quit on my account.

**MYTH: SERVICING AN AUTOMATIC TRANSMISSION WILL CORRECT SHIFTING PROBLEMS.**

**WISDOM:** If your vehicle has high mileage (> 80,000 miles) and regular transmission

servicing has *not* been maintained, I would not recommend replacing the fluid and filter. The fluid that has been in the transmission has become dirty and gritty. This gritty fluid acts like liquid sandpaper and provides needed friction for the worn internal parts. Changing the fluid and replacing the filter removes this friction. Clutches can slip on new slick fluid. You might actually be doing more harm than good. If you are not experiencing a problem, have over 80,000 miles and have *not* kept up regular maintenance on the

transmission, my advice would be to leave the transmission fluid and filter alone. If you are experiencing a problem, such as:

1. *Slipping*
2. *Hard or erratic shifting*
3. *Slow to shift when engine is cold (first thing in the morning)*

Seek the advice of a qualified transmission shop before allowing your regular mechanic to service the transmission.

We have had two or three cars that drove in with these

symptoms and had to be towed out to the transmission shop after servicing. The old fluid was gritty due to metal shavings caused by normal wear and tear and was acting like liquid sandpaper. This “sandpaper” was producing the friction needed for the transmission to pull itself. When we changed the filter and replaced the old fluid with new slick shiny fluid the clutches and gears inside the transmission had nothing to grab onto. Sometimes even the best of us learn lessons the hard (and expensive) way.



**MYTH: ONE SPARK PLUG IS BETTER THAN ANOTHER.**

**WISDOM:** Will ten matches light a candle faster than one? The whole idea of a spark plug is to ignite the fuel and to remove heat from the cylinder. Some spark plug manufactures claim their plugs last longer and are more efficient than others. Platinum type spark plugs do tend to last a little longer than normal plugs, but they cost twice as much.

I personally cannot say that these fancy spark plugs are any better at igniting fuel

than the regular spark plugs we have been using for years. Most of the new cars today are equipped with platinum spark plugs from the factory. This of course increases the price of the average tune up considerably. Like the fuel scenario above, if there is a problem I want the plug manufacturer to be responsible. Just like the gas additive example, if you feel they help your vehicle run better by all means use them.

**MYTH: 100,000 BEFORE MY REGULARLY SCHEDULED MAINTENANCE.**

**WISDOM:** I hope you do not believe this one. The key word here is **scheduled**. Did you ever need to go to the doctor and didn't already have a scheduled appointment?

We get vehicles in for poor running conditions and the diagnosis is worn out spark plugs, or a dirty fuel filter. Our response to the customer is usually; "you did not make it till your scheduled appointment." Things wear out and fuel filters get dirty and

restricted. The claim that your vehicle will not require maintenance before 100,000 miles is absolutely false and misleading in my opinion. If by some remote chance that your vehicle did make it to 100,000 miles, how much would your *scheduled maintenance* repair bill be? Bring lots of donuts that day!

**MYTH: ENGINE OIL IS ENGINE OIL.**

**WISDOM:** It may look and feel the same, but it is not worth the chance. Quality name brand oil does not cost

much more than economy oil. The real difference in the many brands of oil is the weight.

The number stamped on the bottle is what is really the most important. The weight or viscosity of the oil is displayed as 5w30, 10w40, and so on, the “w” meaning weight. These oils are multi-weight oils, and their viscosity (thickness) changes with temperature changes in the engine. Some oils are single weight oil like 30w and 40w. The larger the number—the thicker the oil.

You should consult your owner’s manual for the proper type of oil to use. As a rule of thumb, the older, high mileage vehicles should use higher weight oil, and newer vehicles should use thinner multi-weight oils. And again, use the brands that you are familiar with, even if they cost a little more.

**MYTH: I NEED MY CAR CHECKED OUT BY THE COMPUTER.**

**WISDOM:** If there were a “computer” that you could plug into your car that told you everything that was wrong,

you would not need people like me.

We use a wide array of useful electronic tools and instruments to diagnose and repair your vehicle, but a computer that exactly pinpoints the problem is still a few years away. Today's cars are very complex and loaded with sensors, in addition to usually two or three on board computers that perform many different tasks. Proper diagnosis

takes time and can usually not be performed while you wait.

Our diagnostic "computers" can give us pages of useful information about your vehicle and what has happened in the past. This will aid us in repairing the problem. Sometimes this diagnostic procedure can go relatively smooth, and sometimes this part of the repair can take hours just to arrive at the right diagnosis.

# THEY ALL LIVED HAPPILY EVER AFTER

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I hope you are now driving home in your newly repaired vehicle, and commenting to yourself about how those new tires made such a dramatic difference in handling. You should also feel relieved to know that you do not have to make the timing belt decision again for another 50,000-70,000 miles. The steering wheel and floorboard are clean and free of grease or paper floor mats (your mechanic did protect your floors,



didn't he?) The air still smells like the evergreen tree deodorizer you have hanging from your rear view mirror and not like cigarette smoke from the service advisor. You probably won't get a thank you letter or phone call from the shop or the mechanic, and you will probably not go out of your way to thank them either. You did your job as an educated customer wanting good honest auto repair and the shop fulfilled your need.

The shop has a lot of incidental costs that have occurred during the course of your visit that you may not be aware of. The waste oil from your car had to be hauled off and a manifest of its proper disposal recorded. The tires had to be hauled off to a special dump or recycle site and record of disposal also kept. Most of the brake part cleaners are carcinogenic and require proper respirator equipment, and the old brake parts can contain asbestos material that can also be harmful to the mechanic and the environment.



The high cost of insurance and equipment that is needed to service today's vehicles can put most small repair shops out of business. The ballpoint pen with their logo that you took from the service counter and the handful of business cards and the freebie key chain all start to add up. Of course these costs are added to your final invoice total, but you should realize that these things really do affect the bottom line. You should feel good about your repair, and that the shop obeyed the environmental laws and disposed of your old parts accordingly. The world is dirty enough without having your old motor oil used

as weed killer on the abandoned vehicles at the “other” shop.

If you think you got the service you paid for and deserved, let someone know about it. If you are unhappy about the repairs, talk to the shop first. I think you will find that an honest shop will do whatever it takes to keep you as a customer. You don't have to write long letters or contact the local news, just show your concern to the shop owner or service writer.

If you have problems, do not stop payment on your check or credit card without first trying to resolve the matter with the shop owner. Stopping the



payment can get you in a lot of trouble by having the shop repossess your vehicle in retaliation. In Texas, as in most states, the law is on the side of the mechanic, so do not try to take the law in your own hands.

Remember, the service writer is probably on commission of some sort, so he really wants you to come back and be happy. He will usually get some kind of monetary incentive for customer satisfaction and positive feedback. If you have positive comments to make, you might receive even better service the next time you visit the shop.

# ABOUT THE AUTHOR

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Austin Davis is President of a successful, family-owned independent auto repair business in Texas. With his father, he manages a business established by his grandfather in 1937 built on the principles of hiring and retaining first-class mechanics along with providing honest and reliable service to families and businesses throughout the lives of each of their vehicles.

Over the years, Austin has been dismayed to hear from his new customers about negative experiences they have



had with his industry colleagues who weren't being, well... honest. In response, Austin has applied one of his many entrepreneurial talents to write this e-book, *What Your Mechanic Doesn't Want You to Know*.

Austin also writes and distributes a complementary newsletter to respond to a series of frequently-asked questions from car owners looking for candid answers to various concerns they have. To subscribe to his free newsletter, go to [www.trustmymechanic.com](http://www.trustmymechanic.com).



# RECOMMENDED LINKS

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## **BUYING AND SELLING CARS**

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[CarsDirect.com](http://CarsDirect.com)

America's #1 way to buy and sell cars.

[FordDirect](http://FordDirect)

Get a fast free quote on a new Ford--Cool site!

[Racing Secrets](http://Racing Secrets)

Want to learn how to go fast?

[New Car Prices](http://New Car Prices)

Fast and Free way to find new car prices

[Cars.com](http://Cars.com)

Free no obligation new car quote

[CarsDirect.com](http://CarsDirect.com)

Free no obligation new car quote

[Autobytel.com](http://Autobytel.com)

Free no obligation new car quote

[Stoneage.com](http://Stoneage.com)

Free no obligation new car quote

[Canadian new car prices and buyer's checklist](http://Canadian new car prices and buyer's checklist)

Free no obligation new car quote

[Free Canadian New Car Prices](http://Free Canadian New Car Prices)

Free no obligation new car quote

[Car prices.com](http://Car prices.com)

Free car prices

## **ALTERNATIVE CAR AND TRUCK SOURCES**

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[FreeCarSource.com](http://FreeCarSource.com)

Drive a luxury sports car for FREE. This program is very popular and really works!

[Onlineauctions.com](http://Onlineauctions.com)

Buy your dream car CHEAP from a government auction

## **BOOKS/ADVICE/SOFTWARE/MANUALS**

### [AutoEducation.com](http://AutoEducation.com)

Want to know how your car works? Need do-it-yourself help? This is a great site filled with helpful information.

### [MagazineCity.com](http://MagazineCity.com)

Save on Automotive & Motorcycle Magazines!

### [MotorBooks.com](http://MotorBooks.com)

Click here for Automotive Repair Manuals  
Motorcycle Repair Manuals

### [Alldata](http://Alldata)

The best online auto repair manuals, technical service bulletins, recall information and lots more. **Free 30 day trial.** This is a must have for the DIY person.

## **EXTENDED WARRANTY CONTRACTS/CREDIT REPORTS**

### [Warranty Gold!](#)

Free no obligation quote  
[1Source AutoWarranty](#)

Free no obligation quote  
[OnlineCreditInfo.com](#)

Free no obligation quote  
[Equifax](#)

Free no obligation quote

## **USED CAR HISTORY REPORTS**

### [Record Check](#)

Free no obligation quote  
[Lemon Check](#)

Free no obligation quote to see if a vehicle has a lemon (buyback) history.  
[Carfax.](#)

Free no obligation quote

## **FINANCING/LEASING**

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[Autolease.com](http://Autolease.com)

If you are thinking of leasing a car? Look here FIRST

[Carlender.com](http://Carlender.com)

The Internet's Premier Source for Automobile Loans

[LeaseTrader.com](http://LeaseTrader.com)

Tired of your Lease? You are not alone. Transfer your Lease on LeaseTrader.com, the online lease marketplace.

[Swapalease.com](http://Swapalease.com)

Looking to trade up to a luxury car or SUV? Try buying out an existing lease for peanuts!

[Lendingtree.com](http://Lendingtree.com)

Get free fast quotes from the lending leader.

## **USED JAPANESE MOTORS AND TRANSMISSIONS**

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[Soko America](http://SokoAmerica.com)

Great prices on used Japanese low mileage motors and transmissions. We ship anywhere in the USA.

[JapaneseUsedEngines.com](http://JapaneseUsedEngines.com)

Used Japanese Motors and Transmissions

[Noyanusa.com](http://Noyanusa.com)

Japanese Used Engines and Transmissions

## **CAR PARTS AND ACCESSORIES**

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[Autobodypartsonline.com](http://Autobodypartsonline.com)

Auto body parts and car accessories online.

[Auto-car-radiators.com](http://Auto-car-radiators.com)

Save on auto radiators

[Uneedapart.com](http://Uneedapart.com)

Online used, new, aftermarket, auto, truck, & motorcycle parts locator service

[AutoBarn.com](http://AutoBarn.com)

Great prices on all your auto part and car accessories.

[AutoPartsGiant.com](http://AutoPartsGiant.com) Lowest price on  
auto parts guaranteed

[Dial-A-Clutch.com](http://Dial-A-Clutch.com)

for Standard Clutches. From BWM parts to  
truck parts.

[JcWhitney.com](http://JcWhitney.com)

Chilton's Total Care Manuals from J.C.  
Whitney

[PartsAmerica.com](http://PartsAmerica.com)

Online auto parts catalog, car accessories  
and store locator service

[RestoreClassics.com](http://RestoreClassics.com)

Parts you need to restore the classics

[StreetBeatOnline.com](http://StreetBeatOnline.com)

Car and truck accessories at awesome  
prices.

[Racerwheel.com](http://Racerwheel.com)

Projector Headlamps for your street racing  
ride available.

[Bargain.com](http://Bargain.com)

Save up to 70% at Bargain.com!

[PerformanceProducts.com](http://PerformanceProducts.com)

Click to Save 15-50% on Select Auto Parts  
& Accessories

[Autoaccessory.com](http://Autoaccessory.com)

The Internet's auto accessory super store

[TheTireRack.com](http://TheTireRack.com)

The BEST place online for great prices on  
all brand name tires. Have them drop  
shipped to your mechanic.

[Quadratec.com](http://Quadratec.com)

for the 4X4 enthusiast!

[Bikebandit.com](http://Bikebandit.com)

anything with motorcycles!

## **TOOLS**

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[Toolking.com](http://Toolking.com)

Save Big On All Dewalt Tools

## **OTHER CAR RELATED PRODUCTS**

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### [Batteries.com](http://Batteries.com)

Find all of your batteries and mobile accessories at batteries.com!

### [AutoEngineLube.com](http://AutoEngineLube.com)

Kit Will Save Your Engine! Engine pre-lube kit reducing wear up to 60%. 30 day money back guarantee!

### [Brembo.com](http://Brembo.com)

Upgrade your braking system.

### [Cartoys.com](http://Cartoys.com)

Anything you can think of, and GREAT process too.

## **NON-AUTOMOTIVE LINKS**

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### [YourFreeDVDs.com](http://YourFreeDVDs.com):

Your Source for FREE DVDs!

### [Employment911.com](http://Employment911.com)

BLAST your job posting to over 4,000 job sites. Gives you FREE resume searching!

### [LowerMyBills.com](http://LowerMyBills.com)

Call your loved ones for only 4.5 cents per minute at. No hidden fees, no monthly charges!

### [LowerMyBills.com](http://LowerMyBills.com)

Cut your debt in half!

### [Gamefly.com](http://Gamefly.com)

Rent Video Games Online - FREE 10 Day Trial! Xbox, PS2 & Gamecube Games – Cancel Anytime –

### [eTronics.com](http://eTronics.com)

Anything electronic at great prices.

### [Millionbuys.com](http://Millionbuys.com)

Great prices on all home audio and car stereo equipment and more!

Are you looking for the BEST car wax available? Your vehicle's paint is under constant attack by the sun's UV rays, industrial fallout and acid rain. Left unprotected your car's paint will suffer irreversible damage. Car waxes do not provide the long term protection necessary to guard against this type of damage. Most

**DON'T WAX YOUR CAR  
UNTIL YOU READ THIS!**

car waxes are made from inexpensive carnauba waxes and we all know what happens when wax gets hot - it melts!

Once the wax gets hot, it becomes sticky and starts attracting and holding dirt and pollutants next to your car's paint. Even the car wax manufacturers suggest you reapply their products at least once per month. Who has time for this? Clearly waxing is not the answer!

On Sale Now! [www.5starshine.com](http://www.5starshine.com)