

SAMPLE TEXT

The Mystery Of
Basic Automotive Repairs
Solved!

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INTRODUCTION



This book is for mechanics, home mechanics, shop mechanics, men mechanics AND women mechanics. Every new driver should have a copy of this handy book in the glove compartment of their car! It thoroughly covers some of the major components and services every car needs at one time or another. It contains detailed information on how to change the oil in your car, and when to change the oil. There's a chapter explaining how to change your cars tire, cleaning and/or replacing the headlights, and a lot more important services and information. My lady friends, and readers, empower yourself with a book like this. This book will give you all the information you need to take care of your car, and then some. If you can fix your own car you'll save a significant amount of money, you'll know it was done, and done right, and you can also feel good and say, "I did it myself!"

I will walk you through the most common automotive procedures. I know some of you veteran mechanics know everything about vehicles, and you don't need any assistance. That's great, you are more than welcome to read something else, but for those people that don't know, or have never attempted some, or any, of these procedures, this book will be of great value to you. Each chapter will go over one, of several common automotive procedures, in detail. Anyone can perform these procedures safely, and easily, if you follow along step-by-step.

I had an inquiry about this, and my other books, concerning the content. The comment was, "Why would a person need such a book, as this one, when they can simply Google it?" My answer to them is, "You never know what you will get by "Googling it". Google will give you hundreds, if not thousands, of hits that match your inquiry, but you have no idea who is behind each website. I have had part of my work copied, and pasted, into a website of someone I don't know, that has never opened the hood of an automobile. They had no idea what was written, let alone any right to advise someone working on their car! Here, you will get solid, legitimate, correct information that you can rely on. "

Every procedure in this book I have performed myself multiple times. I take the photo's as I perform the work. With the extra tips and tricks, I provide for you, you will know this is the

real deal. Links in this book are for products I know, and use.

Each chapter has an overview of what the topic is about explaining how it works, or what it does. I feel that to replace, or repair a part on your car you should know what the part is used for, or what it does for your car, rather than just explaining how to do it. I suggest that you read through the chapter before performing the service just so you will know exactly what you're getting into ahead of time.

If you already know what the part does, and you just need the instruction to replace it, then you can skip down through the introductory section right to the step-by-step instructions.

Before we get started working I want to let you in on a cool deal. Some of you may already know this, but I am surprised how many people don't. When you're getting your tools together for a project, and you realize you don't have a certain tool, you may be able to rent the tool.....for free! For me it was spring compressors. How often am I going to use spring compressors? Not very much, so what a waste of money that would be if I had to purchase a set. Then, I found out about renting tools from O'Reillys auto parts store! They have a mat on the counter top with a list of their tools they rent, or you can ask the sales guy/gal. So you pick out the tool you need to rent, they bring it out and open it up so you and the clerk both see that all the parts are there and in working condition. Very likely dirty, but hey, they are rentals. So you pay the rental fee, I think the spring compressors were about \$35. Here's where it gets cool...when you are done using the tool, put it all back in the box (I wipe the tools down. It's my way of saying thank you.), take it back to O'Reillys and they'll look in the box and if all is the same as when you took it, they give you your money back!! All of it. They immediately gave me a credit to my debit card for the \$35. If you don't bring it back, well then, you don't get your money back obviously. Or if you bring it back with parts missing, no money back, obviously again. I think it's really awesome of O'Reillys to do this, so let's not mess it up people. Use it, don't abuse it, and bring it back.

Now, let's get on with it...

JUMP STARTING



Jump starting a car is easy business, if you know what your doing. You'll need to jump start your battery when you've left the lights on all night, or the interior lights on all night, or when your battery is getting old (average battery life span=2yrs). The battery can also go dead if you have an alternator that has gone bad. You can also have symptoms of a dead battery when your starter is failing.

If you're not sure if it's the battery or the alternator that has gone bad, you can test the alternator. The alternator has a specific job. When you turn the key in the ignition and the engine starts, the alternator is supposed to take over and power everything. While it's powering everything it is also recharging the battery for the next start-up. It's a pretty cool set-up, until the alternator goes out. When the alternator goes bad, after you turn the key and the engine starts running, the alternator does NOT take over and the vehicle runs off the battery only. The battery isn't designed to run a vehicle, and the alternator is not recharging it, it drains it fast. When the battery is totally drained, your car dies. It doesn't take long for your car to die when your alternator is bad.

Use caution when performing this test!! Remove any loose clothing that may get caught up in the moving engine parts, pull long hair back! If the engine gets a hold of your hair, it's a tug of war that you won't win! Use a tool with a rubber handle to avoid a possible shock.

You can check if your alternator is bad by loosening the ground wire on your battery just enough so you can easily pull it off, yet it is still in contact with the post. Start the car. Use a rubber handled tool to avoid a shock, and remove the negative cable from the battery. If the car immediately dies that means the alternator is bad, or going bad, because the car was running off the battery instead of the alternator. Replace the alternator. If you remove the negative battery cable and the car keeps on running, then the alternator is fine and it's doing its job.

A starter motor going out can present like a dead battery as well. When the starter is going out it won't turn the engine as quickly as usual. Have you had to turn the key more than once to get your car to start lately? Does it sound like the starter is slow? If you answered yes to

either of these it may be your starter going out and not a dead battery. You can buy a battery tester and the local auto parts store for a few bucks to check if the battery is in good condition before tearing apart the starter.

Now back to the dead battery jump...

Caution: electric sparks are far more common than shocking yourself on a battery. Never touch the negative battery post and the positive battery post at the same time, this will cause an electric spark, and shock. Don't touch the positive and the negative with any object that is metal.

There are two methods for jumping starting your battery. One is to use a stand alone charger set to the jump start option. Setting it to jump start allows the charger to give its full power to the battery instead of merely charging it which is a far lower amperage.



There are also compact battery starters that can be purchased now-a-days for a reasonable price (under \$30) that plugs into your lighter socket. The lighter socket keeps it charged up so when your battery dies you just unplug it from the lighter socket and hook it up to your battery and start the car. Pretty handy little deal.

The most common way people jump a dead battery is with another car and jumper cables. The universal sign for "I need a jump" is to hold your jumper cables in your hand. I've never had a problem finding a jump. You should always have jumper cables in your trunk. When your preparing to jump start your car it is important that the clamps on the jumper cables do not come into contact with each other during the process. A good way to avoid this is to hook

one clamp to the other clamps cable (see photo).



Not all batteries are located under the hood. Do you know where the battery is located on your car? Make sure you have the location of the battery before asking for a jump. Looking for it can prove daunting.

- The Chrysler Sebring has stowed the battery in the front left wheel well! To remove the battery you must remove the tire, or struggle getting the panel off and sliding the battery past the tire, which is nearly impossible. Thank goodness someone thought ahead and routed an accessory positive terminal up so it is in the engine area for a jump start. It is a red cap in the right side of the engine compartment when looking at the engine.
- Corvette, the older models, secured the battery behind the drivers seat in a box that can be accessed by opening the lid of the compartment which may have carpeting covering it.
- Remember Volkswagen has their engine in the back instead of the front so you may want to look there for the battery.

Assuming you have found a person willing to jump start your car with theirs, follow along with the steps outlined below:

1. Pull the cars up so they are side-by-side (battery side nearest the other car and vice versa), or nose to nose. Do NOT allow the vehicles to touch during this procedure. And you should not touch both vehicles at the same time while performing this procedure.



2. Turn the engine off on the donor car (I'm assuming your car is already off, it's dead right).
3. Make sure the jumper cables are laid out in a fashion that the clamps don't touch each other on either end of the jumper cables.
4. Take one end of the jumper cables and hook the red cable to the positive post on the donor car. Attach the black cable to the negative battery post on the donor car.
5. Now take the other end of the jumper cables, without letting the clamps touch! And attach the red clamp to the positive post on the dead battery.
6. Attach the black clamp to any part of the vehicle that is grounded. IE: A metal frame part, a metal screw, a metal mounting bracket, anywhere that the cable will not become entangled when the engine starts up, and where it can get a good ground.
7. Now, start the donor car. After the donor car is started, try starting the dead car. If it's a large engine it may not start right away. If it does not start right away, just turn the key off and let the donor car idle for a minute, or two, to get the dead battery charged a bit. Then try again. If you are still getting nothing check your ground connection on the dead car, maybe try using a different, better, ground for the clamp.
8. Once the vehicle starts the jumper cables can be removed in the same fashion as you put them on. When removing the cables be very aware of loose clothing, and hair, because the engines are running now with all the parts moving. You don't want any dangling items to get caught up by one of the engines. Remove the black ground clamp from the dead vehicles ground, remove the red clamp from the dead batteries positive post, remove the black clamp from the donor vehicle negative post and lastly remove the red clamp from the donor cars positive post.

Removing the clamps in this order reduces the chance of an electric spark, or a shock.

THIS IS THE END OF THE SAMPLE

Thank you for reading!