How to check fuses in car with multimeter

Automobiles contain many different types of circuits. Each circuit uses electrical wires to carry both power and signal information to other components. Over time, these wires can become damaged due to misuse, accidents and component failure. These failures can cause both short circuits and open circuitsboth of which render the wires unusable. The hardest part of fixing a wire involves locating the defective onea process with which a multimeter can help. Multimeters are designed to test different parts of a circuit to locate the problem. Disconnect the wires at their corresponding components at both ends using a screwdriver. Connect a jumper wire between one wire end and the car frame. Connect the red positive probe of the multimeter to the other end of the same wire; connect the multimeter's black probe to the car frame. Set the multimeter to measure resistance; it should read zero resistance. If the meter reads "Open Circuit" or some other very high reading, the wire is bad and requires replacement. Remove the jumper wire, and retest the wire. With the jumper wire removed, no part of the wire should contact the car frame. In this case, the meter should read "Open Circuit. Repeat this process for each wire. Reconnect all of the wires except for the wires connecting to the end equipment. Set the multimeter to read voltage. Connect the positive wire to the positive red probe, and connect the black probe to a metal part of the car frame. Write down the voltage reading. Consult an auto manual for the correct voltage needed at the device to which you originally connected the wires. Compare the measured reading with the ideal voltage as prescribed by the manual. If they are the same or close, the wire is fine. Otherwise, you must replace the wire. William Kinsey lives in Concord, N. He started writing articles in March , which have appeared on Autos. He also currently owns and operates Sophisticated Curves, an online fashion mall that caters to the needs of plus size women. Step 1 Disconnect the wires at their corresponding components at both ends using a screwdriver. Step 2 Set the multimeter to measure resistance; it should read zero resistance. Step 3 Remove the jumper wire, and retest the wire. Step 4 Reconnect all of the wires except for the wires connecting to the end equipment. Things You'll Need Screwdriver, This article was co-authored by Ricardo Mitchell. Ricardo has over 10 years of electrical and construction experience and his partners have over 30 years of relevant experience. This article has 11 testimonials from our readers, earning it our reader-approved status. This article has been viewed , times. Sometimes these fuses require testing to check that they are still in good working order. Testing fuses can be done using a multimeter, and doing so is both fast and easy to learn. Before you test a fuse with a multimeter, turn off the equipment and remove the fuse by pulling it straight out of its slot. Turn the meter to ohms, then touch the positive and negative leads together and check the reading. Next, put one lead on each end of the fuse and check the reading. If the reading is close to the one you got when you touched the positive and negative leads, the fuse is fine. Did this summary help you? Yes No. We've been helping billions of people around the world continue to learn, adapt, grow, and thrive for over a decade. Every dollar contributed enables us to keep providing high-quality how-to help to people like you. Please consider supporting our work with a contribution to wikiHow. Log in Social login does not work in incognito and private browsers. Please log in with your username or email to continue. No account yet? Create an account. We use cookies to make wikiHow great. By using our site, you agree to our cookie policy. Cookie Settings. Learn why people trust wikiHow. Download Article Explore this Article parts. Tips and Warnings. Related Articles. Article Summary. Part 1 of Understand fuses. Fuses are really just wires that are designed not to last, but their purpose is to prevent damage to more valuable electrical equipment or prevent fires especially in homes caused by power surges. If too much power runs through the fuse, it will "burn out," quite literally, and open the circuit, preventing the current from flowing through the circuit. There are several varieties of fuses, but their differences are primarily in appearance. Here is a description of the two you are most likely to see: The cartridge fuse is a cylindrical fuse that has been common in a wide variety of devices for many years, from homes to small electronic devices. They have metal contact or terminal points on either end and consist primarily of a tube that contains the wire. They vaguely resemble the plug of a power cord, with two metal prongs emanating from a plastic housing that contains the wire. Previously, most vehicles also contained small glass cartridge fuses. Blade fuses plug conveniently into banks, and relatively little space is required to house a large number of them together. Learn how a multimeter works. Multimeters measure AC and DC voltage, electrical resistance, and the flow of current. For testing a fuse, you can either use it to measure the continuity which tests if the circuit is complete or the ohms which tests resistance. When testing resistance in a circuit, the meter will transmit a small quantity of electricity from its own battery and then measure the amount that passes through the circuit or object. Understand why you must test fuses. Testing fuses is the simplest way to examine what is going on in the electrical systems of your car or home, and for that reason, it is a vital skill to possess. It is easier to test fuses than it is to test other electrical equipment. Other components in your car or home involve complex wiring

systems that run on for some length. In addition, most car parts can only be tested at repair shops, and to do so will usually cost quite a lot of money. Testing fuses with a multimeter is comparatively simple to do, and the equipment involved is cheap and easy to operate. Many types of fuses allow for visual confirmation that the fuse is still functional. They are made clear so that you can see if the wire remains intact. If the translucent area is blackened, it is usually because the fuse has burned out. However, some fuses will create that blackened stain after only slightly overheating, and that may have even been the result of an unnoticed incident weeks or months earlier. If a device is not working, you should test the fuses. If the fuses are all still working, there is likely a more serious problem and it may be time to call on an expert. Part 2 of Turn the equipment off and remove the fuse. Make sure the device, equipment, or vehicle is turned off before the fuse is removed. To remove the fuse, simply pull it straight out of the slot. Turn the meter on and set it to measure continuity. Turn the dial on the multimeter so it points to the continuity setting, which looks like 5 curved vertical lines. Put one lead on each end of the fuse and look at the display. Because the fuse is little more than a single wire—and no complex parts to worry about—it does not matter which side receives the positive or negative lead. Test the fuse. Listen for the multimeter to beep continuously as you hold the probes against the fuse. Then put the probes on either side of the fuse and check if the reading is similar. If it is, then the fuse works properly. If the multimeter reads "Open" or "Not complete," it means the fuse is broken. Ricardo Mitchell. When a fuse is broken, it reads the circuit is not complete, so it reads an open line. Not Helpful 0 Helpful 3. What should I do if I have a circuit that reads 0 ohms but continually blows fuses? Well, your circuit is putting out too much power for your multimeter to read. I would recommend lowering your power source's output through resistors or adding additional places for electricity to flow. Not Helpful 10 Helpful Yes, you can, provided that the source is cut-off from the fuse itself. Not Helpful 7 Helpful Oleg Ivanchenko. The rating of the fuse determines the maximum amount of amperage that could go through it, the resistance ohms do not matter as long as it's not OL. Not Helpful 6 Helpful The meter will read OL if the fuse is bad. Any reading other than OL or a blank screen tells you the fuse is good. Not Helpful 16 Helpful What do I do if the reading is A reading of So if you get Not Helpful 8 Helpful 8. Why is a blown fuse showing v when I use a voltmeter on both ends of the fuse? This is because the blown fuse allows there to be a voltage differential between the two sides. A good fuse would have shown zero volts. Not Helpful 0 Helpful 4. Unanswered Questions. Using a test light to check a fuse that appears not to work but changing the connection to a positive source touching the same fuse and the test light goes on. If a fuse blows does that mean there's problem with the amp? Include your email address to get a message when this question is answered. By using this service, some information may be shared with YouTube. Household installations these days shouldn't really be protected by just fuses. Modern circuit breakers and protective devices are fuse-less and much safer. Consider having an old fuse installation upgraded to modern standards. Helpful 1 Not Helpful 0. Regarding car fuses, most cars use a colored 'blade' type fuse, and looking at the top of the fuse in situ in the fuse box will show that the metal strip that runs along the visible top of the fuse will either be intact fuse good or broken fuse blown. Never test a fuse on equipment that is still on. Helpful 0 Not Helpful 2. Never replace a blown or suspect fuse with one of a higher rating. The rating ensures that the current can pass through the wiring safely. Always replace a fuse with the same rating as or a lower rating than the old one. Helpful 0 Not Helpful 0. Related wikiHows How to. How to. About This Article. Co-authored by:. Co-authors: Updated: November 18, Article Summary X Before you test a fuse with a multimeter, turn off the equipment and remove the fuse by pulling it straight out of its slot. Italiano: Testare un Fusibile con un Multimetro. Nederlands: Een zekering testen met een multimeter. Thanks to all authors for creating a page that has been read , times. This article really helped me on how to test a fuse and hopefully save me hundreds of dollars in repairs by just replacing a blown fuse. Rated this article:. Scott Basham Apr 25, Great stuff, many thanks. Eloy Pol Mar 24, Thanks a lot. Bill Hinton Jul 3, James Kennedy May 25, Feb 22, Exactly what I wanted. Thanks a million. Dave K. Nov 23, Anonymous Oct 4, Anonymous May 30, Obi Alex Jul 26, Nathan Sean Cantra Jul 19, More reader stories Hide reader stories. Did this article help you? Cookies make wikiHow better. By continuing to use our site, you agree to our cookie policy. David Wright Jun 1, Share yours! More success stories Hide success stories. Related Articles How to. By signing up you are agreeing to receive emails according to our privacy policy. Follow Us. X Help us do more We've been helping billions of people around the world continue to learn, adapt, grow, and thrive for over a decade. Let's do this! One way of checking the electrical circuits is to use a simple test lamp connected between the circuit live wires and earth, but this method only indicates if there is an electrical supply to the particular point you are checking. A more accurate way of checking circuits is to use a test meter which will indicate the level of voltage reaching the component and also check the resistance of the circuit or

component. You can buy meters designed especially for car applications at accessory shops. The most useful type are those known as multi-meters which, as the name suggests, provide a number of different functions for checking car electrics. The current used on cars is direct current DC and multi-meters can check current, voltage and resistance readings. They may also include other settings for measuring engine speed and dwell angle. Always remember to zero the meter before each test, particularly when measuring low resistances. Do not use a moving needle test meter for checking electronic components or you could overload and damage them. Instead, use a digital meter. You can use a multi-meter for checking voltage, current and resistance. Some also allow you to check the dwell angle and engine speed. Always remember to connect the meter probe correctly. Check battery voltages by connecting the meter to the two terminal posts. Test resistance in the HT circuit by probing both ends of the lead. Record alternator or dynamo current output using a meter connected across a shunt wire. Test voltage to the coil or any other circuit by connecting one side of the meter to the circuit and the other side to earth. When using a multi-meter the first thing is to make sure that you connect the meter leads the right way round. This depends on the polarity of your car. If your car uses a negative earth system you should attach the lead marked negative or - to the body. Check in your car handbook for the polarity of your car. Make sure that the appropriate lead makes good contact and that there is no rust or paint in the contact area to upset the meter readings. Clean the connection if necessary with wet-or-dry paper. When working in the engine bay it is best to connect the lead to the battery earth terminal. Before checking other circuits it is a good idea to make a check on the battery itself to make sure it is performing properly. Set the meter to the appropriate scale volts , then connect the meter leads across the battery terminals not the lead connections. You should get a reading of between 11 volts low charge and slightly over 12 volts full charge , depending on the battery's state of charge. If the reading is less than 10 volts, suspect a fault in one of the battery cells. Move the earth lead to a point on the car body and take the voltage reading again. It should be the same as the first reading. A lower reading means there is a poor contact between the earth lead and the car body or battery terminal. Repeat the process, this time connecting one meter lead to the earth terminal and the other to the live lead connection at the starter solenoid. A low reading here indicates a poor connection between the live battery terminal and the starter motor solenoid. If any low readings are found on the battery leads, correct them now before checking other circuits on the car. Clean up any suspected dirty or loose connections and test the voltages again. When the tests all give the same reading as that across the battery you can then use the reading as a reference for readings made on the other circuits. Many instruments are supplied with power that passes through a voltage stabilizer. If several instruments are showing erratic readings it could be due to a fault in the stabilizer. To check the voltage stabilizer, connect the meter to the stabilizer output terminal and switch on the ignition. The meter should read around 10 volts although it might pulsate slightly because of the regulator. Any lower or higher means the stabilizer needs replacing. The petrol tank sender unit uses a variable resistor , which you can check for continuity by using the resistance scale on the multi-meter. Disconnect the wire to the sender unit and connect the meter between its terminal and a suitable earth point. If the sender unit circuit is complete, there should be a definite reading on the meter. To make a complete check make individual readings with the tank full, half full and empty. The three readings should fall in progression with more or less equal gaps between them. If two of the readings are very close together it is likely that some of the resistor tracks have shorted out, giving false readings on the gauge. When checking the low-tension circuit remember the contact breaker points have to be closed to complete the circuit. If the coil uses a ballast resistor the voltage at the input terminal will be lower usually around 6 to 8 volts due to the action of the resistor. To check the coil starting voltage, connect a lead between the coil points terminal and earth. Operate the starter briefly to bypass the ballast resistor. The value should be around 12 volts. Remove the lead. If the value did not rise to this level there is a fault in the low-tension circuit or the solenoid terminal connections. You can check the points by measuring any voltage drop across them. Connect the meter between the points terminals on the coil and earth. With the contacts closed, turn the meter to read on the low volt scale. The reading should ideally be in the zero to 0. Any more than 0. Turn the meter to the high volt scale and open the points. The voltage should be the same as that on the input side of the coil. A zero reading may be because of a fault with the distributor and you can check this by disconnecting the distributor lead. If the reading is still zero there is a fault in the coil, but if it rises there is a fault with the distributor. You can use the resistance setting of the meter to check for problems with high-tension leads. If the car has an intermittent misfire, you may be able to trace it to one of the leads. Find out which type of lead is fitted. Carbon leads have a resistance in the 10,, ohm range. Copper-cored leads have a very low resistance but may be fitted with resistive plug caps for radio suppression and these have a

resistance of around 10, ohms. Disconnect each lead from the spark plug and distributor cap and hold the meter lead probes to the central core at each end. Make sure the meter reads correctly. To check the HT lead insulation hold one probe to the central core of the lead and the other to the insulating plastic. If the lead is in good condition there should be no movement on the meter scale. Measuring the current output from a dynamo or alternator is more difficult with a multi-meter because the current levels produced by the generator are too great to be directly handled by most meters. The Video Course teaches you everything about modern cars. Modern cars have a large amount of electrical equipment which can go wrong and so need checking. Set the meter to volts to check the battery voltage across the terminals. Measure the resistance along an HT lead by setting the meter to ohms and probing each end of the lead. Set the meter to amps and connect it across a shunt to measure the current output from a generator. Measure voltages by setting the meter to volts and probing the circuit with the other probe earthed. Engine Block 18 minutes. Every part explained There's ridiculous detail on every part. Clearly and easily explained. All modeled in 3D We've created the most detailed 3D model ever produced so we can show you everything working. Start watching. Super detailed explanations in the video course 15 hours of pro-quality, HD content with subtitles. Ignition System. If the starter does not turn the engine although the car battery is in good condition, the fault may be a simple mechanical one or it may be an electrical one in the starter-motor circuit. Electrical systems. If your car's instrument panel includes an ammeter , it will tell you how well the charging system is working - the difference between the charge going into the battery and the power being used from it. If there is trouble without an obvious cause in any electrical component, test the circuit to find the cause. Today there are a lot of electrical and electronic components that need to be checked. It is useful to have test leads or some kind of multimeter. This way you can check the status of the fuse box in your home or vehicle. It is necessary to mention that fuses can deteriorate when you least expect it. Below you can learn how to check a fuse with a multimeter. It is also necessary to look inside the fuse. In this case, learning to look inside the fuse can save you the trouble of using a multimeter to test your fuses. It will also be much easier to detect a good fuse and separate one that is blown. In this case, checking whether a fuse is blown using sight only may not be sufficient. So it is very useful to use a multimeter and get rid of all the doubts. So, here the objective is to perform an electrical test and test what has happened with a fuse. First of all, you must have the continuity mode in your multimeter. Most of the best multimeter now have this mode of use. Then, one of the probes must be placed at one end of the fuse. Of course, the other probe of your multimeter must also be placed at the other end of the same fuse. Here the main objective is to detect whether the fuse is in good condition or not. So, in continuous mode, the multimeter should beep to indicate that there is continuity. If you can test that there is continuity then the fuse is not blown. In other words, it means that no connection is damaged or broken. On the contrary, it could be that the multimeter indicates a high level of resistance without making a sound. So, when this happens, the main reason is that the fuse is already blown and therefore not useful. Additionally, you can also use the ohmmeter of a multimeter if it does not have a continuity mode. So, you must select the ohmmeter and place each waveform at each end of the fuse. If the fuse is not damaged, then the ohmmeter reading should below. Conversely, if the fuse is damaged or blown then the reading will be very high. Here, checking if a fuse is good will allow you to save a lot of common contingencies. However, a good fuse is not always available so you should learn how to test the status of a fuse. You can use a multimeter or simply detect at a glance if a fuse is completely blown. Checking a fuse with a multimeter is always useful although there are other ways. Here you should make sure of the main aspect that a fuse counts. It is not very difficult to detect a blown fuse. Sometimes the main connector of the fuse is melted or simply broken. Usually, when a blown fuse has a broken connector, there is nothing left to do. Conversely, a fuse is fine if the internal connector is not melted in any of its parts. This connector must be completely in condition from one side to the other of the fuse. Additionally, you must have a new fuse to replace the blown fuse. Of course, there are a lot of fuses available on the market. So, you should also make sure that the new fuse is the same type as the old one. Especially to be able to test a fuse with a multimeter you must use the continuity mode on your multimeter. Then you must connect each of the multimeter probes to each end of the fuse. If you can detect continuity on your multimeter, then it means the fuse is good. On the other hand, you can test whether a coil relay is in good condition or just not anymore. To do this, you must also have a digital multimeter with 7 functions. In this case, you will need to use the resistance mode between each pole of the relay. Here the readings must be zero ohms in the corresponding pole of all the contacts. At the same time, the contacts in that area should also be viewed as an infinite resistance reading if you locate the probes in the corresponding pole. You can then continue after energizing the relay. You will hear a clicking sound when the relay

is energized. So you will have to repeat the procedure using your multimeter. Here the resistance of the NC and NO contacts must be adequate. You can also test the solid-state relays with your multimeter. In this case, you need to have the diode reading to test this type of relay. The multimeter will read the voltage applied to the relay. When a relay is not working, then the meter will read zero or OL. Conversely, a relay that is in good condition should give a result of 0. To extend the life of a given relay, you must keep them cold for as long as necessary. In this way, you will be able to extend the life of these components. At the same time, solid-state relays are usually cheaper and easier to fix. After testing the fuses in your home, you will be safer from there. Checking a fuse with a multimeter is always an option. Here you can test that the circuits are in good condition. So it is important to purchase a digital multimeter, as you will probably need it to test a fuse. In this way, all the fuses in your home will be in good condition. Also, it is a way to detect and prevent possible electrical problems in your home. We hope this learning guide helps you. I co-founded and write for GadetsSpy and help teach people about new tech and Gadgets. Last Updated on February 9, So the important thing here is: Consider the voltage of a fuse Measure the number of ohms Checking fuses In a fuse box Measuring resistance if a fuse is blown Check the current state of the circuits. Conclusion References. About Gadgets Spy. The most fundamental points we measure are voltage and also current. A multimeter is also fantastic for some basic sanity checks and also troubleshooting. Is your circuit not working? Does the button work? Place a meter on it! The multimeter is your very first protection when fixing a system. In this tutorial we will certainly cover measuring voltage, current, resistance and also continuity. Every fixer must understand their way around a multimeter, which has just north of a zillion makes use of for testing electronic parts and also circuits. This tutorial is mostly addressed for novices who are beginning out in electronics as well as have no concept exactly how to make use of a multimeter as well as how it can be useful. A multimeter is a measurement device definitely needed in electronics. It integrates three necessary attributes: a voltmeter, ohmeter, as well as ammeter, as well as sometimes continuity. The tool allows you to comprehend what is going on in your circuits. A bunch of multimeters have a continuity check, leading to a loud beep if 2 points are electrically attached. This is valuable if, for example, you are developing a circuit and also connecting cables or soldering; the beep indicates every little thing is connected as well as absolutely nothing has actually come loose. You can likewise utilize it to make certain two things are not connected, to help prevent brief circuits. Quite a few multimeters additionally have a diode check function. A diode is like a one-way shutoff that only lets electricity flow in one direction. The precise function of the diode check can differ from one type to another. If your DMM has a diode check feature, checked out the manual to learn precisely how it functions. Advanced models may have other features, such as the capacity to measure and determine various other electrical elements, like transistors or capacitors. Because not almost all multimeters have these attributes, we will not cover them in this tutorial. This setup is made use of to measure direct current DC voltage in points like batteries. This setting is utilized to measure the voltage from alternating current sources, which is virtually anything that connects into an outlet, in addition to the power coming from the electrical outlet itself. The lower the number, the easier it is for the current to flow with, and also the other way around. Continuity: Usually signified by a wave or diode sign. This simply examines whether or not a circuit is total by sending a very little quantity of current via the circuit and also seeing if it makes it out the other end. This setup is usually signified with the battery symbol. At the really standard degree you have the device itself, in addition to 2 probes, which are the black as well as red wires that have plugs on one end as well as steel suggestions on the various other. Each setting might also have various number values, which exist to measure various toughness of voltages, resistances, as well as amps. So if you have your multimeter collection to 20 in the DCV area, it will certainly measure voltages up to 20 volts. Additionally, measuring anything over 10 amps might blow a fuse or destroy the multimeters too. Your measurement tool could have entirely different ports for measuring amps, while the various other port is specifically simply for voltage, resistance, and also continuity, however many less expensive multimeters will share ports. The COM probe is traditionally black however there is no distinction in between the red probe and black probe apart from color. Two probes are connected right into 2 of the ports on the front of the unit. The probes have a banana kind port on the end that links into the multimeter. Any type of probe with a banana plug will certainly work with this meter. This enables various kinds of probes to be made use of. Mostly all portable electronics make use of straight current , not alternating current. Squeeze the probes with a little stress versus the positive and negative terminals of the AA battery. You might measure DC voltage or AC voltage. The V with a straight line indicates DC voltage. The V with the wavy line suggests AC voltage. Pointer: to measure voltage you have to connect your multimeter in parallel with the component you wish to measure the voltage. Putting the

multimeter in parallel is putting each probe along the leads of the component you desire to measure the voltage. So, you ought to select an array with the selection knob that can read the 1. So you need to select 2V in the situation of this multimeter. Start by switching on it, plugging the probes right into their corresponding ports as well as then establishing the selection knob to the greatest number value in the DCV area, which in my situation is volts. Next off, position the black probe on the unfavorable end of the battery as well as the red probe on the favorable end. Have a look at the analysis on the display. Right here, you can see that we have an even more exact analysis that floats in between 1. So if I were to establish the knob to millivolts 0. All the same, you may be asking why you would certainly need to test the voltage of something to begin with. Nevertheless, if it were to check out 1. In a much more practical scenario, you can do this kind of measuring on a car battery to see if it may be dying or if the generator which is what bills the battery is spoiling. An analysis between Furthermore, begin your automobile up and rev it up a bit. Nothing negative. The meter will just present a 1. This is the meter attempting to inform you that it is overloaded or out-of-range. Attempt transforming the multimeter knob to a the next greatest setting. Precisely why does the meter knob read 20V and also not 10V? This will certainly allow you to check out from 2. Therefore the 20V max range as opposed to 99V max array. Plug the red probe right into the best port and turn the selection knob to the resistance section. Then, connect the probes to the resistor leads. Normal resistors have shade codes on them. There are a lot of online calculators that are simple to utilize. However, if you ever locate yourself without internet accessibility, a multimeter is really handy at measuring resistance. Then hold the probes against the resistor legs with the very same amount of stress you when pressing a trick on a key-board. In this situation, the meter checks out 0. There is no injury if this occur, it just means the variety knob requires to be adjusted. In case the multimeter checks out 0. Keep in mind that measuring resistance is not ideal. Temperature can influence the checking out a whole lot, Likewise, measuring resistance of a device while it is literally installed in a circuit can be very challenging. The bordering elements on a circuit board can greatly influence the reading. The mockup normally resembles with a basic clock escaping of a AA battery. On the silver lining, the cable going from the battery to the clock is separated. We merely put our two probes in between that break to finish the circuit again with the red probe linked to the source of power , just this moment our multimeter will certainly read out the amps that the clock is pulling, which in this instance is around 0. If you require to see whether an electrical outlet is working, utilize a non-contact tester rather. To measure current you need to keep in mind that parts in series share a current. So, you require to connect your multimeter in collection with your circuit. The multimeter acts as if it was a cord in your circuit. If you separate the multimeter, your circuit will not function. In the example below, the very same circuit of the previous example is used. The multimeter becomes part of the circuit. Switch off the power supply! To examination the continuity of a cord, you just require to attach each probe to the cord pointers. Continuity is a wonderful means to check if two SMD pins are touching. If your eyes can not see it, the multimeter is generally an excellent 2nd testing resource. When a system is not working, continuity is one even more point to assist repair the system. A continuity examination tells us whether two points are electrically connected: if something is continuous, an electric current can stream easily from one end to the other. This might show anything from a blown fuse or negative solder joint to an inaccurately wired circuit. One of one of the most typical blunders with a brand-new multimeter is to measure current on a bread board by penetrating from VCC to GND. This will right away short power to ground through the multimeter creating the bread board power supply to brown out. As the current hurries through the multimeter, the internal fuse will certainly heat up and after that shed out as mA flows with it. It will happen in a split 2nd as well as with no actual audible or physical indicator that something is incorrect. Keep in mind that measuring current is carried out in collection interrupt the VCC line to the breadboard or microcontroller to measure current. This is since the internal fuse is broken and acts as a busted cord or open. To alter the fuse, locate your convenient dandy mini screw chauffeur, as well as start taking out screws. The elements as well as PCB traces inside the multimeter are made to take various amounts of current. You will damage as well as potentially wreck your multimeter if you accidentally press 5A with the mA port. There are times where you require to measure high current gadgets like an electric motor or burner. Do you see the two areas to place the red probe on the front of the multimeter? But if you make use of the 10A port to measure current, you run a much reduced risk of blowing the fuse. The compromise is level of sensitivity. As we discussed above, by utilizing the 10A port and also knob setup, you will just be able to read down to 0. Most of systems utilize greater than 10mA so the 10A setting and also port functions all right. Really feel free to begin utilizing it to answer many questions. A digital multimeter will respond to many questions concerning electronic devices. A multimeter is an important tool in any kind of electronics laboratory. Contents 1 The

Introduction 2 What is a multimeter as well as why do you require one? The electrical system in a car can be one of the most annoying systems to find the problem of something with. Sometimes, however, the problems in the electrical system is something simple such as a bad battery or fuse. If it is a bad battery, try to use best battery tender to maintain it. It is a tool to recharge your battery. In this article, we will teach you how to check a fuse to see if it is bad or not using a automotive multimeter. This should be one of the first things you do if you are having issues with a specific area of your car because it is the easiest and a lot of times is the problem which will save you a headache if you just start there. First, though before explaining how to test a fuse with a automotive multimeter we will cover what a fuse is. A fuse is simple a wire normally surrounded by some plastic that completes a circuit when plugged in. Most fusses have two prongs with a small wire running between them. When the fuse is plugged into where it goes these prongs touch another piece of wire and complete the circuit. It is that simple. The thing is a fuse is designed to break through if something goes wrong. This is because when the fuse breaks or blows, it will protect the more expensive part of getting damaged. A fuse blows when to much power runs thru it. This extra power causes the metal wire to burn up breaking the circuit. When the circuit breaks the extra power cannot get to the main part that can not handle the extra power. In cars, there are normally fuses in two spots. There is a fuse box under the hood with all kinds of fuses in it, and there is also sometimes some fuses under the dash on the passenger side. Knowing where your fuses are is important if you want to check them. Some of the fuses are a different color, and each color indicates how much power it can handle. The bigger fuses though are normally a dark gray though and not a color. On the small fuses, you can normally see thru the colored plastic, and this allows you to see if it is blown or not without testing it. Also, blown fuses may have discoloration which is a sign that it is bad and needs to be replaced. The big fuses though you can not see the wire, however, so these you will have to test if you think something is wrong with it. Read on to learn how to do this. The first step before testing a fuse with a automotive multimeter is making sure that the car is off and the keys are not in the ignition. This will help keep you safe when pulling the fuse out and also protects the car. The next step is to locate the potential bad fuse. To do this, you go to the fuse box and look at the diagram or in the owners manual and find the one that corresponds to the system you are having trouble with. For example, if your power door locks aren't working, then you will want to pull the fuse that goes with that. Then to pull the fuse, you do literally what it is called, and that is pulled straight up on the fuse. You want to make sure you pull straight up because you don't want the prongs getting bent or damaged as you pull the fuse out. Once you got the fuse pulled you can visually inspect it. If it is a clear plastic you can try to see if the connection seems broken. If you can't see the wire through, then it is time to get the multimeter out. To use the multimeter you first have to turn it on and get the probes out. You then can set the multimeter to ohms. This will measure the resistance of the fuse. You can then touch the probes together. This gives you a baseline reading and will tell you roughly the number you will get once you put the probes on the fuse. Once you have an idea of the reading, you should expect you can connect the probes to the fuse. To do this, you just have to touch one probe to one prong and the other to the other prong. This will give you a reading. If the reading is close to what it was when the two probes touched, then the fuse is fine. If it does not give a reading, then that means the fuse is blown. This is because the current it is trying to send thru the fuse is not making it back thru. To make sure the fuse is blown you can change the multimeter set to the setting to measure the current which is the arrow with a line. You can then touch the probes to the prongs on the fuse in the same way. If it beeps continuously, then the fuse is fine, but if it does not emit a sound, then the fuse is blown. Either test is a sufficient way to see if a fuse is blown. If the fuse is blown, then it is pretty simple to replace it. You just have to buy another fuse that is the same and plug it in. If the fuse is not blown, then you will have to dig deeper into your electrical problems which can be frustrating. That is why it is good to start with testing the fuse first because for most people it will only take a couple of minutes to test the fuse. Another thing to remember if it isn't the first fuse that you test is to make sure to look at the diagram closely and that you test all the fuses that go to a particular system. Sometimes a system may have more than one fuse, so you need to make sure you test them all with the multimeter to rule out one being blown. So now you know how to test a car fuse with a automotive multimeter. It is an easy task, and pretty much any multimeter can do it successfully. You can either use the resistance or ohm feature on your multimeter to check the fuse, or you can use the continuity setting to test the flow of current. Either one will work and will give you a reliable reading on if the fuse is blown or not. Also, don't forget you can visually check the fuse to which might be able to save you more time in finding out if your car fuse is blown or not. Your email address will not be published. Save my name, email, and website in this browser for the next time I comment. Car Maintenance And Repairs. Mike Cross.

Updated Oct 17, Life is too short to drive with stock audio. Leave a Reply Cancel reply Your email address will not be published. Recent Post. A majority of all used US imports have either been in accidents, been stolen, been flooded, salvaged and rebuilt and shipped to Europe or are subject to open recalls. For 30 years, CARFAX has been collecting data on US vehicles from thousands of sources and has helped millions of used car shoppers reduce their risk of getting stuck with a vehicle that has costly hidden problems. For more than 30 years, CARFAX has been helping millions of used car shoppers make better purchase decisions and avoid expensive hidden problems. In addition, CARFAX has helped used car dealers around the world to build trust with their customers and sell their American cars with confidence. With more than 14 billion records, CARFAX has built up its database with the help of its partners and sources, including government offices, law enforcement agencies, service and repair shops, car dealerships, insurance companies and many more. In addition to publicly available information, CARFAX has collected information from many independent reliable sources. Thanks for the service, the price was absolutely worth. Immediately to the Internet, paid with credit card and in 10 minutes I had the report. Vehicle imported from California to Lithuania. For some weeks "Babs" is now with us and we have a lot of fun with the car. Buying Used American Cars? Search by VIN. Instant Access. We offer you unique vehicle history to help you make better purchase decisions. Trusted by millions of users. Worldwide market leader. The most popular blog articles How to detect mileage rollback? Mileage rollback is one of the most occurring types of fraud in the selling process of used cars. However, there are ways to detect mileage fraud. Even though odometer fraud is difficult to detect for the untrained eye, it is not an impossible task. Import a car from the USA. There are a few advantages to buying a American used car. Check the Service History of a Car. How important is the service history of a car? CARFAX takes a look at these questions and explains the importance of the service history of a car, as well as where you can find the complete history of service records. Make a VIN Search. After all, not all of us have been taught by our parents how to fix things such as a blown fuse, so it is quite normal for people to ring up an electrician for such a simple task. Simply put, a fuse is a device that is used to keep electrical devices from damage and harm. They protect such devices, and their users, in various situations such as fires, overloading, or overheating, all of which can cause severe and permanent damage to the device. The primary function that a fuse performs is that it limits the amperage of a device. This is accomplished by having a section of higher resistance or by having a section that has a lower melting point as compared to the rest of the device. When some external damage occurs to the electrical device, the fuse stops working, cutting off the circuit, which makes the device stop working and keeps it from incurring further damage. There are several types of automotive fuses, here are a few of the most popular ones :. These are the most common automotive fuses and are manufactured and used by almost all car companies. They come in various ampere ratings and they generally range from amps. The standard blade fuses have an estimated dimension of 19 x 5 x 18 mm and can be found in various places in your car such as underneath your dashboard. They are transparent or at least translucent to help you see if the fuse has burnt out or not, since the purpose of these fuses is to burn out at their specified amperage. They can be easily recognized by the two blades which plug into the fuse panel of your car. These fuses are similar to the standard blade fuses but are a little smaller. They also have a similar ampere capacity, going from amps. These are also similar to the standard blade fuse but are a little bigger. They can usually be found under the hood of your car in the fuse box present there. They have dimensions of 30 x 9 x 35 mm and can handle higher ampere levels, going from 20 to amps. They are necessary for controlling high power operations such as starters. Glass Tube Fuses â€" These fuses come in all different sizes, dimensions, shapes, and ampere ratings. They are almost completely obsolete now, however, and are usually found in old cars. They can be identified by the metal caps present on both ends of the tube, with a wire that runs down the centre of the tube. Voltage is measured in Volts V and the term recognises Italian physicist Alessandro Volta, who invented the voltaic pile. According to fluke. The amount of difference expressed in volts determines how much potential energy exists to move electrons from one specific point to another. The quantity identifies how much work, potentially, can be done through the circuit. Amperage is another term that is often used by electricians. In essence, it means electrical current and is measured in amperes or amps. Fuses have many different uses, some of which have been mentioned above. Simply put, fuses are sacrificial devices which are used to interrupt the flow of current in a circuit. This happens because the fuses contain a metal wire or strip that melts away when there is too much current flowing through the circuit. After the wire or strip has melted, the fuse must be replaced or rewired to get the circuit working a

1tac.com
2002 chrysler town and country heater problems

gain. Fuses provide protection against overloading, short circuits, or device load, etc. There are thousands of different types of fuses, but they all essentially perform the same function. Now that we know the basic terminology, we finally come to the steps to test a fuse using a multimeter. We received this article from a car audio fan and long time fan of 4AG. Car thieves will break into almost any [â€¦]. A subwoofer is a speaker designed to play low-frequency sounds, and is often responsible for the low thumping bass that can be [â€¦]. Of course, before you use an [â€¦]. Lets make some sense out of this question. A single din or a double din? There are a few things to think [â€¦]. Standard Blade Fuse These are the most common automotive fuses and are manufactured and used by almost all car companies. Mini Blade Fuse These fuses are similar to the standard blade fuses but are a little smaller. Maxi Blade Fuse These are also similar to the standard blade fuse but are a little bigger.