Click to prove you're human

Topic: 1967 beetle overheat/generator red light (Read 8817 times) Topic: Hand crank a VW engine (Read 7651 times) The following non-starting conditions are discussed herein -One of the most common laments we hear is, "My Bug won't start! What's the matter!?" We have found that in most cases the problem with a non-starting VW Bug (and most any car, for that matter) boils down to "fuel and spark" - Is sufficient fuel getting from the fuel tank, through the filters, through the fuel pump, past the float needle valve, through the carburetor, and through the intake manifold to the cylinders at the correct fuel-to-air ratio? and Is a good hot spark getting from the battery to the coil and on to the distributor, through the points, rotor, ignition wires and spark plugs, and into the cylinders at the right time? Problems in any of the above areas related to "fuel and spark" can result in an engine that won't start.Condition #1 -- The Starter Motor Doesnt Run and the Engine Will Not Rotate.Following are some possible causes of a starting problem, with references to procedures and/or discussion that may help resolve the problem(s) (yes, problem(s) -- rarely is it only one). (This list is probably not all inclusive.) The battery may be dead. This is the single most likely cause of the starter motor not running and therefore the engine not running. If you have a Volt-Ohm meter, place the leads across the battery terminals with the meter set to volts. A fully-charged battery should read about 12.5V; at any reading lower than about 10V the starter motor will not turn over or will do so very weakly -- and the plugs will probably not fire. The battery terminal connections may be loose or corroded. The grounding straps (including the tranny-to-body strap near the nose of the transaxle) may be corroded/loose/broken. The starter solenoid may be faulty. If the starter clicks but doesn't turn (especially in hot weather), and if it can be freed up with by tapping the solenoid with a hammer and then trying the starter successfully, the solenoid is sticking. The starter motor may be faulty (see below). The ignition switch may faulty. The electrical path for the starter runs from the battery up to the ignition switch and them back to the starter. Any fault in the ignition switch may prevent the solenoid from getting power to operate the starter. If the starter turns fine when the thin wire on the solenoid is shorted to the thick red wire, then you can suspect the ignition switch. See our article on Ignition Switch Replacement. "Fixing the Big Click" (Adapted from a "Sermon" by Bob Hoover. Also includesinput from "Speedy" Jim. Both used with permission.) Condition: Upon turning the key, you get a "click-clunk" from the starter solenoid, and that's all. No starter motor rotation, no engine rotation, nothing. The CLICK itself is your main clue. It tells you power is getting to the solenoid. At that point the decision tree branches. Either the contact bar in the solenoid is worn or corroded or otherwise damaged so that it is not capable of doing its job (which is to connect the battery to the starter) or the solenoid isn't getting enough power to press the contact bar closed. There are some variations on this theme but they have different signatures. For example, CLICK! Whirrrr means the pinion isn't engaging the flywheel whereas CLICK! Groannn means the pinion is binding or the engine is seized or one of half a dozen other things. The Big Click sez the problem is either in the solenoid or that insufficient power is getting to the solenoid. We can test for the latter by using a jumper cable from the battery lead to the spade lug on the solenoid, thereby eliminating about twenty feet of wiring and the possibility of a bad ignition switch. But let me tell you right now this is a very dangerous test. It should only be done when the vehicle is supported on jackstands. Why? Because the engine is liable to start. And if it does, it's liable to run over your ass. So leave the key OFF. That will prevent power from going to the ignition circuit. Better yet, pull the HV lead out of the coil. Then do the test. If you don't know which lead goes to the battery, use your manual to figure it out. And if your solenoid is the later model with the two spade lugs, figure out which one goes to the ignition switch. Note: On closer examination of my solenoid (on the workbench) I found that there are THREE spade connectors on the solenoid. Two of them are really on; with of them is connected to the ignition switch. The third spade connector seems to be an extension of the large bolt to which the wire from the battery connects. Of course this is the connector that's looking at you with the starter installed, which would lead you to believe that it's the connector for the ignition wire - it's not. The starter test can be done by placing a screwdriver between the battery and ignition wire connections on the solenoid. This is very awkward to do - the car has to be raised and the right rear wheel removed to provide access, and you have to crawl under the car to get to the solenoid terminals. We do NOT recommend this method. Bob Hoover says, "DON'T use that ohsokewl trick of shorting the terminals with a screwdriver. Yeah, it works. It also damages the terminals as well as the screwdriver." There are two safer ways to do this. One is to detach the starter-switch lead from the solenoid and replace it with a jumper having a female spade-lug connector on one end and an alligator clip on the other. To complete the circuit, TOUCH (do NOT clip) the alligator clip to the battery cable connector. Do NOT touch the copper stud nor the nut. The arc is enough to damage the threads of the stud and will bugger the nut when you try to remove it. The easiest (and safest) way to conduct this test is the "under-the-seat" method (recommended by). This method is as follows - Lift up (or remove) the rear seat. Locate the two-way splice with the Red/Blk wire coming out of the main harness by the door post, connecting to the Red wire that goes over to a grommet by the battery on its way to the starter. Remove the plastic insulation from this splice. Make a jumper with an alligator clip on one end and any kind of fitting on the other. Connect the alligator clip to the two-wire splice, then touch the other end to the (+) terminal on the battery. If all you get is a "click-clunk," put a test light on the big stud on the starter solenoid - the stud where the battery cable attaches. Put the tester right on the stud, not the cable end. Ground the other lead of the test light. Have someone "click-clunk" it. If the light stays lit during the test, then the starter or the solenoid is no good. If the light goes OUT during the test or never comes on at all, the cable is bad. If the jumper test causes the starter to engage and to crank the engine then the problem is in the wiring or the ignition switch, with the higher probability for the latter. If the jumper test didn't help then you've narrowed the problem down to the solenoid. Fortunately, the fix is pretty simple. Start by removing the battery from the vehicle, then remove the starter, dismantle the solenoid and file the contactor and contacts smooth. You'll need to unsolder a couple of leads to dismantle the solenoid. Use a bit of Solder Wick to get the solder out of the holes. When you reassemble the solenoid be VERY SURE to use RTV or other WATERPROOF sealant. The usual reason for a solenoid to stick is due to rust on the plunger. The proper fix is to remove the starter, dismantle the solenoid and DEAL WITH THE RUST. DON'T go pounding on the solenoid with a hammer! Yeah, this also works. And damages the solenoid in the process. If you just pound on the thing you might jar the plunger loose and you might not. The odds are about 50-50. And of course, you'll only hear about the successful tries. "Speedy" Jim says that if you hear the starter motor running during the jumper test, it is good. Otherwise it will have to be replaced. Condition #2 -- The Starter Motor Barely Turns Over and the Engine Starts With difficulty. May be any of possible causes #1 - 3 above. The starter motor may be faulty. See the Starter Motor Test. Condition #3 -- The Engine Rotates But Will Not Start. This condition may be the result of either no fuel or no spark -- or both. A rotating engine that will not start is mostly likely not receiving fuel and or spark at the point of ignition -- in the cylinders. Possible causes of this are -- No Fuel At the Point of Ignition - The fuel tank may be empty. Fuel may not be reaching the carburetor - No Spark At the Point of Ignition - Note: More detail regarding testing for spark is given at Electrical Troubleshooting. The spark plugs may be worn, faulty or incorrectly gapped. The ignition points may be gapped incorrectly. The timing may be incorrect. The coil may be faulty. The ignition wiring may be faulty. Following are a few quick checks to fault-find the electrical system and find the cause of no spark at the point of ignition. First some system description - There should be a thickish red wire from the generator (D+ terminal) to the rear side of the voltage regulator under the rear seat (also the D+ terminal). There should be a similar thick red wire running from the battery to the front of the voltage regulator (B+) terminal. That's the wire that supplies power to the car. Another red wire is joined to this one (on the front of the regulator) and runs forward to the light switch (which is used by VW as a junction box). Have a look at the light switch from inside the luggage area - the red wire from the voltage regulator comes in from the left side of the car. It then splits into two red wires on the light switch, one runs directly to the fuse panel (for "ignition off" power for interior light, etc.) and another runs to the steering column, then back up to the fuse panel (for "ignition on" power). Some simple tests to see where you have power - Note: A very useful tool here is a 12-volt test globe. This is just a 12-volt bulb in a 18" long (or so) wire with an alligator clip on end and any kind of a metal attachment -- a pointy thing -- on the other. It doubles as both a static timer and a 12-volt tester. The tool is available commercially or you can make your own. It's a tool you will use often. Turn on the ignition but do not start the car. With a volt meter (or the 12-volt tester described above) test between the positive (+) post on the battery and ground (body of the car). A positive test here verifies that the battery strap has a good connection with the body. Now test between the joined red wire at the front of the regulator and ground (the body). If you do not have power at this point, check the battery terminal and red lead attached to that. Now that you know you have power at the voltage regulator, go to the luggage compartment and test between the OTHER end of the red wire on the light switch (the one from the left side of the car), and ground. Now test between the other two red leads on the switch, and ground. If you have power all the way up to this point, you should be able to turn on lights, horn, interior light, brake lights, etc. provided the fuses are OK. Now you need to make sure you have 12 volts to the ignition system, so grab your tester and perform the following tests - With the ignition switched on, connect connect the clip on the tester to any convenient engine case component or the tinware and touch the tip of the tester on the black wire terminal on the coil. The bulb in the tester should be glowing. If so, the coil is getting power like it should. If not, you'll have to find out why not before you can go any further. Note: Black wires in VW-speak means "has power with the ignition switch on"). If you have power to the coil, then check that the points open as you rotate the crankshaft (by hand -- with a 19mm wrench (spanner) on the generator nut). If the points don't open you'll never get a spark (it's the points opening which creates the voltage spike through the coil to produce the spark.) If the points are opening, then the next test is to pull the heavy wire that goes from the coil to the center of the distributor off of the distributor, leaving the other end on the coil. Grasp the the wire with with insulated pliers (an 18000 volt shock is no fun!) and point the loose end close to the engine case or other handy bare metal around the engine. Now get someone to crank the engine using the key - you should see a series of sparks jump the gap between the end of the wire and the ground. If you see good, hot, bright sparks, then the coil is good; if not, you'll have to replace the coil. Now check the plug wires. Reconnect the center wire into the distributor and pull each plug wire off the plug in turn and try the spark test as above. You'll get fewer sparks (one forth as many for each cylinder compared to the distributor center wire) but should still get them. You can use a spare spark plug for this test if you like -- rest the outer side on the engine metal and connect the plug wire to the top of the plug. If you have sparks at the plugs, then you know you have no problem there. If you have sparks from the coil, and if the points are operating properly, then either the plugs or the plug wires that are at fault. If you have fuel at the point of ignition (as determined above), power to the coil, to the distributor, through the points and through the wires to the spark plugs, and if the plugs are firing as they should, the engine should be ready to start. Run the Tune-Up Procedures to further track down the problem. ~~~ Condition #4 -- The Engine Is Hard to Start When Cold. Possible causes: The battery may be low. A faulty battery shows its colors when the weather is cold. The automatic choke may be defective or incorrectly adjusted. If you can sometimes get the engine started after pumping the throttle a number of times (using the accelerator pump to add fuel to the carby throat), then the choke is suspect. See our Automatic Choke Adjustment Procedure. Either the fuel system or the ignition system may be faulty (see above). ~~~ Condition #5 -- The Engine Is Hard to Start When Hot. Some hot starting techniques: If the carburetor is flooding, the hot-start technique is to SLOWLY put your foot to the floor (so the accelerator pump in the carby doesn't flood it with more fuel - it only works when you floor the throttle quickly), and then hold the throttle open (no pumping) while you crank it - it should catch easily. You should also check that the choke is standing completely upright when the engine has been running for a while - if it's leaning over at all then it will cause flooding. If the engine is running lean when hot, it could be a too-small idle jet (in the right side of the carby - it should be a 55 sized jet), or a partial blockage somewhere. Some possible causes of hot starting problems: The air filter clogged. Fuel may not not reaching the fuel pump or carburetor. The battery ground connection may be corroded. The starter motor or solenoid may be worn. The automatic choke may be defective or incorrectly adjusted. Your system may be suffering from vapor lock - Cause: The engine overheats, causing the fuel line, fuel pump and carburetor to heat up. This results in excess vaporization of fuel in the carburetor and/or actual vapor lock in the fuel line or fuel pump. Cure: Wrap the fuel lines on both sides of the pump with aluminum foil. Note: This is a precaution if your car is prone to vapor lock. It won't help much once the problem has already occurred. Pour a little water over the fuel pump to cool and re-condense the fuel, being careful not to splash the distributor. If no water is readily available, hopefully there is some in the windshield washer bottle. It doesn't take much. Hold the throttle open just a bit with the accelerator pedal while you crank. Don't move the throttle at all while cranking, or the accelerator pump with flood the carburetor. The reason for cracking the throttle open it to avoid using the idle jet alone, as this runs the car richer than the main jet, and a rich-hot mixture makes the car flood easily. When the engine catches, hold the throttle still until it clears the excess fuel (revs up smoothly). * * * * * Topic: bug hard to start when engine warm/hot (Read 35124 times) ragged63 wrote: I have a 1969 bug, just installed new motor, have power to the starter (checked with voltmeter) had starter tested (ok) also have power leaving voltgage reg under back seat. but still nothing no sound at all. any help would be great thank you. Louis Can I ask where you had the starter tested? The reason I ask, is that many places like Autozone/Checker/Kragen that offer this service for free, lack the proper end supporting fixture to test many VW starters. Not to mention, that once the low paid counter-person figures this out, they will usually tell you it was OK just to get rid of you . Judging from your post, the engine will simply not turn over? If so, you only have two wires to worry about, and they are both on the starter. The heavy guage cable, is the battery lead. Check it (on both the battery and starter end) for good, clean connection. Secondly, you have the smaller (albeit fairly heavy guage) red wire that actuates the solenoid. Have someone turn the key to "start", while you check the lead end for voltage, from underneath the vehicle. If you have voltage on the solenoid wire, and you're sure that your ground wires are all in order, then the solenoid/starter is at fault. If you have no voltage at this lead upon turning the key, the problem lies either in the wire between the ignition switch and the starter, the ignition switch itself, or the wire between the power source and the ignition switch. It's really just a simple process of elimination._____2% Click to view imageHello all. I recently saved a 67 from a field in central Oregon and I am trying to get it up and going. I have driven the car recently, it was running and driving great, until last night. The car has been in my garage not being used and last night I went to start it and the battery was dead. It was very dark and I had a spare battery laying around, so I through it in the car and tried to turn it over, but that one was dead as well. So, i used my friends car to jump it and when I tried to connect the positive of the jumper cable to the positive on the battery, sparks flew everywhere. I had hooked the battery up wrong (I know, I'm an idiot). Well, after disconnecting it and charging the battery, today I tried to crank it and it will turn over but not start. I'm really hoping I didn't fry anything, but I would love to get some feedback on where to start with this. The fuses look OK, all the lights and everything works (except the radio, turn signals and horn-but they didn't work before this happened). Any ideas? ThanksPage 2 Cantfigureitout03 wrote: Is there something obviously wrong with my wiring? My car won't start. I tried disconnecting the central wire going to the distributer and held it close to the intake to see if I could get a spark and nada. Looks okay. Why is the fuel line sitting on the exhaust? Not a good idea._____Jimbo There is never enough time to do it right the first time, but all the time necessary the second time! TDCTDI wrote: Basically, a whole bunch of fuckery to achieve a look. 67rustavenger wrote: GFY's Xevin and VW_Jimbo! Page 3The distributor grounds to the engine directly through its body to the engine case. The coil negative/points path goes down through the green wire, through the connected wire to the points, through the movable points arm & contact to the fixed points contact & bracket, to the points plate, then to the distributor body either via direct connection as in the case of your 009 or through a flexible ground strap in the case of one with some sort of vacuum advance._____1960 Ragtop w/Semaphores "Inga"Page 4 Cantfigureitout03 wrote: Is there something obviously wrong with my wiring? My car won't start. I tried disconnecting the central wire going to the distributer and held it close to the intake to see if I could get a spark and nada. Looks okay. Why is the fuel line sitting on the exhaust? Not a good idea._____Jimbo There is never enough time to do it right the first time, but all the time necessary the second time! TDCTDI wrote: Basically, a whole bunch of fuckery to achieve a look. 67rustavenger wrote: GFY's Xevin and VW_Jimbo! Skip to main content Reddit and its partners use cookies and similar technologies to provide you with a better experience. By accepting all cookies, you agree to our use of cookies to deliver and maintain our services and site, improve the quality of Reddit, personalize Reddit content and advertising, and measure the effectiveness of advertising. By rejecting non-essential cookies, Reddit may still use certain cookies to ensure the proper functionality of our platform. For more information, please see our Cookie Notice and our Privacy Policy. Topic: Hard start problems (Read 8243 times) bubbabug wrote: I do not have a voltage regulator. What I thought was the voltage regulator is in fact a relay that is functioning as a a hard start relay. Now that explains why the starter is connected to the relay. bubbabug wrote: I have an alternator that I believe has an internal voltage regulator. When I test the alternator with the volt meter, it is getting 12.6 volts. So power is getting to it. I hooked up a wire going directly from the + of the battery to the red wire going to the front of the car. The alternator output (B+) and the wire from the front of the car (B+/30)should all connect to the battery (+). bubbabug wrote: When I turn the key, the starter makes one distinct click, and then that is it. I still have no power for any lights in the car, but I know that the ignition is at least sending a signal to the starter, and the solenoid is receiving electricity to click. Confirm it is not a starter problem by connecting the #50 starter solenoid wire directly to the battery. This should cause the starter to start cranking the engine. Make sure the transmission is in neutral and the parking brake is set. bubbabug wrote: So I'm now researching how to correctly wire the hard start relay. This is what my relay looks like Does that relay indicate if it is 6v or 12v?? The diagram on the side indicates "M" is the post that connects directly to the battery. "A" and the ground (case?) are the trigger. When energized, current from "M" flows out "J" and "B". Test it on the bench to make sure._____AshMan40 ---------- '67 Beetle #1 {project car that never made it to the road } '75 Beetle 1200LS (RHD Japan model) {junked due to frame rot} '67 Beetle #2 {2019 project car - Wish me luck!}Page 2You tested for spark from the coil by disconnecting the HT lead from the coil to the distributor cap and holding it close to a ground (wear rubber gloves!!) while cranking the engine? Should be a nice bluish white spark jumps to ground. If it is a yellowish spark your coil is weak. You can also check resistance between the terminals on the coil- using an ohmmeter or multimeter set to check ohms, touch the two outside terminals on the coil, your meter should show a reading of 3-4.5 ohms or thereabouts. Then touch either of the outside terminals and the center terminal (one that the HT lead going to the distributor plugs into) and you should see around 8500-11,000 ohms. anything higher than these two measurements would indicate a bad coil. Also check the distributor cap, points, condenser etc. Points gap may be way off, that's a distinct possibility._____I'm the humblest guy on this board. 1969 autostick sedan, family owned since new 1600 SP engine Solex 30 PICT 3 carburetor Bosch 113905205AE autostick distributor Topic: Engine with lots of torque (Read 7042 times) Engine Mechanical problem 1969 Volkswagen Beetle 4 cyl Two Wheel Drive Manual 0 I have a 1600cc SP 1969 that I just rebuilt replaced the coil distributor plugs & wires and put electronic ingnition in but will turn over but not start. Any advice would be of great help. Thanks Thursday, June 24th, 2010 AT 8:30 PM The points are little discs. They are under the distributor cap, not on the cap. Where the rotor is (the thing that looks like a pointer on the top of the shaft under the cap) follow the shaft down and you will see a spring loaded arm to one side of the shaft. Those are the points on the end of the arm. As the shaft turns with the engine, 4 high spots (cam) push the arm / points apart at the right time to give a spark, through the rotor, through the cap, to the correct spark plug wire to the correct spark plug. Their condition and gap when they're open are imperitive to make it run properly. You should be able to follow the wire inside the distributor to the point assembly. That wire also goes to the little can on the side, outside the distributor. That is your condenser. The condenser serves as an electrical cushion so when the points open up they don't arc and burn._____*ASE Recertified Master Automotive Tech* 1984 Mexican Beetle -1914cc -L3 Heads 35x32 valves 52cc chambers -0.040" deck for about 9.1:1 Compression -Engle W110 cam -CB Super Stock 1.1:1 Rockers -Stock Heat Exchangers w/ Tri-Mil Muffler -Dual Weber IDF 40s w/ 26mm venturis -034 SVDA Distributor 2013 Chevrolet Volt DD 2005 Pontiac Montana SV6 MAHLE Service Solutions Last edited by Paul Windisch on Thu Oct 15, 2009 4:18 pm; edited 1 time in totalPage 2ok, I've been thinking about this today, and you have the wrong coil in there. you have 1.3 ohms resistance across it, right? you should have about 3 ohms. I just went through the same thing with mine about 2 weeks ago. either you need to get a coil specifically for a vw, or you can do the same thing I ended up doing: install a ballast resistor between the coil and the condenser/points. not enough resistance in the coil means too much power is getting too the points and burning them up. you will have to replace the points ($3-5) and possibly the condenser ($8ish). believe me on this, I already had this experience recently. don't just clean up your burnt points, either. they will come apart on you sooner or later. mine did. on I-15 in the "spaghetti bowl" with my 5 year old in the car. Runs fine now that I learned this lesson. oh, and avoid autozone if you can... their parts are cheap crap._____" Sir, do you think we're being too literal? No, you idiot, he said comb the desert, we're combing the desert!"Page 3I'm just up the hill from you and could lend a hand. I have tools, spare carbs, distributors, coils, etc. you could throw on and try out. PM me if you like. Also, check out this forum: Page 4ok, I've been thinking about this today, and you have the wrong coil in there. you have 1.3 ohms resistance across it, right? you should have about 3 ohms. I just went through the same thing with mine about 2 weeks ago. either you need to get a coil specifically for a vw, or you can do the same thing I ended up doing: install a ballast resistor between the coil and the condenser/points. not enough resistance in the coil means too much power is getting too the points and burning them up. you will have to replace the points ($3-5) and possibly the condenser ($8ish). believe me on this, I already had this experience recently. don't just clean up your burnt points, either. they will come apart on you sooner or later. mine did. on I-15 in the "spaghetti bowl" with my 5 year old in the car. 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1969 vw beetle starter removal. 1969 vw bug starter. 1969 vw bug starter location. 69 vw bug starter. 1969 vw bug won't start. 1972 vw bug won't turn over. 1969 vw beetle battery location.