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Book Descriptions:

car battery manual

Practice FIFO First In, First Out. Batteries slowly lose their charge, and good stock rotation stops batteries going flat in storage and makes sure that the customer buys a good battery. On the back of the battery there is a label showing the expected period before the battery will require recharging. This makes it easy to identify the oldest and newest batteries in stock. Please use the recharge date to ensure that the oldest batteries leave your stock first. Recharge date is only an indication of recharge period as self discharge is subject to storage conditions. To avoid damaging terminals that stand proud of the lid. If it is broken, air will enter and cause the battery to lose charge. Upright handles are more likely to be damaged. The voltage should be worse case higher than 12.25V ideally higher than 12.4V at the time of installation. All safety precautions should be undertaken prior to recharging batteries. If a battery has been recharged, the recharge date on the back label should be updated by 6 months after second recharge date by physically notching the label. Note a maximum of two recharges are allowed prior to sale, and product should not be sold a maximum of 9 months after the expiry of first recommended recharge date. Do not use acid from old batteries. Fill each cell one after the other and complete the filling in one operation. If it is below 12.50V, charge the battery. Examples are testers supplied by Midtronics or Bosch. The results can be misleading until the battery has undergone some service use. However, if the levels are below the tops of the separators, top up with distilled or deionised water until the separators are just covered. Do not use bottled Mineral water impurities within the water will increase water loss and battery self discharge. Failure to do this will result in a greatly reduced battery life for the new battery that has been fitted. <http://smilemeyer.com/userfiles/3-pole-manual-transfer-switch-which-will-switch-the-neutrals.xml>

- **car battery manual, car battery manual disconnect switch, car battery manual charger, car battery manual transmission, car battery charger user manual, dead battery car manual, car battery charger manual pdf, car battery tester manual, panasonic car battery manual, exide car battery manual, car battery manual, car battery manufacturers, car battery manufacturers usa, car battery manufacturers list, car battery manufacturers uk, car battery manufacturing date, car battery manufacture date, car battery manufacturing process, car battery management system, car battery manufacturing code, car battery manufacturers in us, car battery manufacturing, car battery manufacturing companies, car battery manufacturers, car battery manufacturing, car battery manufacturers usa, car battery manufacture date, car battery manufactured date, car battery manufacturer china, car battery manufacturing code, car battery manufacturing date.**

When batteries are joined in series, the negative terminal of one battery is connected to the positive terminal of the other, giving a total voltage of 24 Volts. The Amperehour capacity of the system is the same as that of the individual batteries. When batteries are joined in parallel, the positive terminals of the 2 batteries are connected together, and the negative terminals of the 2 batteries are also connected together. The voltage of the system remains unchanged at 12 Volts, but the Amperehour capacity of the system is double that of the individual batteries. This will ensure that the battery gives a good life. The life of a battery regularly discharged by 50 percent is about 5 times that of a battery regularly discharged to 100 per cent. For example, a load of 4A for 10 hours will discharge a battery by 40Ah. If this represents 50 per cent state of charge, we would recommend a 80Ah battery. Switch off all electrical loads and remove the ignition key from the car. Note On some

cars, the doors will lock when the battery is disconnected so this is why the key should be removed from the car. Also switch off any nonfactoryfitted alarms. If not, turn the ignition key to the auxiliary position. Install a Computer Memory Saver CMS. This can result in the loss of memory settings; please refer to the vehicle handbook. If a CMS is used, the connector will still remain live after it has been disconnected. To prevent the connector shorting against the car, place an insulator such as a rubber glove over the connector. Some batteries have holddowns at both the sides and ends. Only the ones used for securing the battery on the vehicle need to be checked. If there is severe corrosion which might affect the stability of the battery or has affected other parts of the engine compartment, have the vehicle checked by an authorised distributor. Refer to the vehicle handbook or service manual. Refer to the vehicle handbook or service manual.<http://www.kktravel.com.kh/userfiles/3-mdqx-sc-manual.xml>

These should be tight enough to secure the battery and not allow it to move. Smear lightly on the terminals. It is still recommended for hardrubber batteries. Do not use grease. Do not charge on constant current chargers or boost chargers. There are no removable ventplugs or manifolds. The battery is able to vent gases through breathing holes, and so it is not strictly sealed. See Section B. The sections below give details for different types of charger. If these are below the tops of the separators, top up with distilled or deionised water to the tops of the separators. Do not fill to a higher level before charging, but adjust the levels after charging. See Section D. See below for the correct charging conditions depending on your type of charger. See Section D. This results in customers returning batteries saying that they have charged the battery but that it is still not holding charge. Do not charge AGM batteries on a constant current charger. If this is not possible, charge batteries in series. We do not recommend charging batteries in parallel because it is not possible to control the amount of current passing through each battery. To obtain a stable voltage, the battery should not have been used or charged for a minimum of 3 hours before checking the voltage. If you cannot set the recommended rate, extend or reduce the charging time on a pro rata basis. In this case, monitor the current and adjust as necessary during the charge. Charging may reduce further its potential life. The current cannot be set and will fall as the battery stateofcharge increases. A minimum of 24 hours is normal. The current falls as the battery stateofcharge increases, and the battery temperature is monitored to make sure it does not overheat. Examples are Midtronics and Bosch testers. These will give an immediate decision on about 80 per cent of batteries in service, including flat ones. In the remaining 20 per cent of cases, the batteries need recharging before testing.

It is also easier, quicker and safer. Any CCA or state of health reading from the test CANNOT be a reliable guide as to the specification of the battery. All Yuasa branded batteries sold into the market and regularly audit tested to ensure conformance to the relevant standard. The information of which standard the battery is rated is currently held within the ETN number e.g. 550 034 050 This currently makes it unclear to the customer to what rating the battery is capable of meeting EN1 or EN2 without access to the listing. The clear advantage of these devices is that they are portable, easily operated, no sparking risks from carrying out traditional high rate load "drop" test and deliver results in just a few seconds. Even significantly different readings can be obtained between different brands of tester. Expanded plates give a higher reading than a cast plate, as the cast plate has a full frame construction for improved conductivity. The grid size can be reduced and made thicker to access the active materials toward the bottom of the plate. This design difference for example has a difference on the conductance readings where the tester correlates to the CCA reading based on a standard formula. The testing of new batteries is more complex as testing under the EN50342 standard requires the battery to be conditioned after a number of cycles which alter the conductance of the paste and hence causes more variation in tester data produced. The testers effectiveness on a deeply discharged battery is less effective as although a good starting current figure can be indicated and the vehicle will start, it does not indicate that the 20 hour capacity of the

battery may be as low as 1030%. It is suggested that if this is suspected, the battery should be tested after the lights have been left on for 15 minutes without the engine running. To obtain a stable voltage, the battery should not have been used or charged for a minimum of 3 hours before checking the voltage.

For example, discharge a 600A battery at 300A. Observe the voltage during this time and record the voltage after 15 seconds. You will find the CCA in the Battery Specifications section of the Catalogue or on the label. Use an approved, calibrated tester. This means that in normal vehicle applications in temperate climate operation, it is not necessary to add water. See Section D for details about how to do this. As explained above, it should not be necessary to add water unless the battery has encountered exceptional conditions. Refer to Section F for information about removing the battery from the vehicle. Modern cars have electrical accessories that slowly discharge the battery even when the ignition key has been removed. Some accessories such as alarms, trackers, and phones can cause a battery to become discharged in a few weeks. See Section G. The Leisure Battery range is recommended for these applications; standard vehicle batteries are not suitable. Always recharge immediately after use. Charging batteries regularly on a nonvehicle charging system may result in a higher rate of waterloss. See Section G. The Leisure Battery range is recommended for these applications; standard vehicle batteries are not suitable. This could result in the battery not giving its predicted output when required even though the battery appears to be fully charged. Always recharge immediately after use. Charging batteries continuously on a nonvehicle charging system may result in a higher rate of waterloss. See Section G. Conventional sources of power for example are soon overtaxed by frequent engine starting. The experts at your workshop will be pleased to advise you further, as the cheapest battery is not always the best choice. It should also be remembered that, for safety reasons, batteries fitted in the passenger compartment must be vented properly. Most drivers probably do not give it a thought until they have a breakdown or their vehicle refuses to start.

The best solution is to have a regular battery check performed at a Bosch Car Service workshop. It makes more sense to spend a few minutes in the workshop than to wait around for hours for a breakdown service to turn up. But it is not always the actual battery that is the problem. Other components may also be the cause of failure. In other words Replacing the battery will not automatically solve the problem if your vehicle refuses to start. This will also be the case if the battery used is too small. So it is best not to use unnecessary equipment seat heating, radio, etc. in winter. The following points must be noted to avoid short circuits For further information on battery chargers from Bosch, useful accessories and charging car batteries, check out our selection of Battery Chargers. Onebutton operation makes incorrect use virtually impossible and the terminals remain deenergized if they are incorrectly connected to the posts. This means you can charge your car battery without any risk and, if required, without removing it from the vehicle. Our advice Store it in a cool place. We look forward to hearing from you. As a battery ages it loses its charge. If you do not start you car for several days you may find that the battery is dead or too weak to turn over the engine. Using a manual car battery charger is one way to charge the battery under these circumstances. Unlike automatic chargers, however, you must keep an eye on the charger and disconnect it from the battery once the battery is fully charged. Position the battery charger near the front of the vehicle and close to an electrical outlet. Step 2 Connect the positive cable of the battery charger to the positive battery post. The red positive cable on your car connects to the positive battery post. The battery chargers positive cable is usually red with a red clamp. Step 3 Clamp the negative cable of the battery charger to the car frame or engine block, away from the battery.

This prevents sparks around the battery. Do not clip to fuel line, carburetor or sheet metal. The negative cable must clamp onto a heavy gauge metal part of the engine block or frame. Step 4 Turn the voltage switch to the voltage of your battery; either 6volts or 12volts. Step 5 Watch the charge

gauge on the battery charger. The gauge either has a needle that rotates through a charging scale or a series of lights that glow from red to green. When the needle reads a fullcharge or the indicator lights are green, turn off the charger power switch. Unplug the charger power cord from the wall outlet. Remove the negative cable of the charger from the vehicle and then the positive cable. Start the vehicle and put away the battery charger. Tip If necessary, pull the battery out of the vehicle and set it near the charger. This may be necessary if the vehicle is in the driveway far away from an electrical outlet. For safety, connect a jumper cable to the negative battery post and then connect the negative charger cable to the other end of the jumper cable. Warning Keep your face away from the battery when making the negative cable connection. References Battery Chargers Owners Manual About the Author This article was written by the It Still Works team, copy edited and fact checked through a multipoint auditing system, in efforts to ensure our readers only receive the best information. To submit your questions or ideas, or to simply learn more about It Still Works, contact us. How to Charge an Instant Power Battery. How to Adjust a Headlight on a Mazda 3 Troubleshooting 12 Volt Auto Battery. How to Use a Trickle Charger How to Use a Battery Tender to Charge a. Review our cookie policy.Charges 12V lead acid batteries in vehicles up to 1.2L. Easy to read LED indicators clearly show charger status. Polarity check ensures a safe battery connection. Convenient storage locations for battery clips and AC plug.

Related Article You should know which terminal to remove first if you have to remove the battery, which terminal to hook up first on the charger, how long to charge a dead car battery and more. It is very easy to get a good shock if the battery does have some juice. Before you even get started, if you have to remove the battery from the vehicle to charge it, be sure you have the tools for the job. Some batteries are easily accessible; however, some are under or in the fender and some may even be in the trunk or under the seat depending on the make and model of your vehicle. If you have anything on, it could cause the battery to arc while you are working with it. This is always the black cable unless someone replaced the cables with the wrong colors.If the battery terminals and posts have a lot of acid buildup, wear eye protection and a mask so the airborne corrosion does not contact your eyes, nose and mouth. Don't touch your face until after you've washed your hands. If any of the cells looks low, add distilled water only; and take care to not overfill the battery. Most batteries today are "maintenancefree" so you won't be able to open them to check the acid level. Find a Meineke Shop Nearby Basic instructions for most chargers include The same battery will take about 6 hours to fully charge if the charge rate is 10 amps. The lower the opencircuit voltage in the battery and the more coldcranking amps, the longer it will take to charge the battery. In this case, bring your battery or your vehicle with your battery to a local Meineke Car Care Center and we will change your vehicle's battery. For tips on how to keep your battery in top condition, please follow the links below. Regular testing and inspection will help to maximise battery life.

A routine inspection at least once a month is recommended to maintain optimum performance. Use the following as a guide when examining your battery Most batteries have a State of Charge Indicator on top of the battery that will give you an on the spot diagnosis of the battery condition. However, a more reliable way to check is with a voltmeter to determine the stabilised voltage or if the vent caps are removable a hydrometer to determine the specific gravity SG of the electrolyte. A charged Century battery will have a stabilised voltage above 12.5 volts and an SG reading above 1.240. A dirty battery can discharge across the grime on top of the battery casing. These should be clean, tight and free of corrosion. This usually indicates the battery has been overheated or has been overcharged. If topping up is required, do not over fill as the fluid levels will rise when the battery is fully charged and may overflow. Top up using distilled or demineralised water and never fill with sulphuric acid. This gives you a snap shot of the battery's condition and whether the battery needs to be charged or replaced. The vehicle may still start the engine although the indicator outlines to

replace the battery. If the State of Charge Indicator advises Replace Battery it is important that the battery is replaced as the electrolyte levels may be below the plates which can lead to an internal explosion. Check the state of charge or voltage regularly. Should the voltage drop below 12.5V, recharge the battery. It is important to check the battery completely before reconnecting to electrical devices. They can inspect and test your battery and provide you with professional advice and assistance. Suitable hand, eye and face protection and protective clothing must be worn. If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by poisons information centre or doctor, or at least 15 minutes.

If skin or hair contact occurs, remove contaminated clothing and flush skin or hair with running water. Dispose of residue as chemical waste or as per local requirements. Seek immediate medical assistance. Flames, sparks, burning cigarettes or other ignition sources must be kept away at all times. Exercise caution when working with metallic tools or conductors to prevent short circuits and sparks. Due to the increased electrical demands on the battery, little warning is given before failure. Preemptive battery replacement can help eliminate many of the costs and problems associated with a flat or end of life battery. Before testing a battery, it is important that the battery is fully charged. Even a slightly discharged battery can give a false reading and deem the battery faulty when all that is required is a recharge. There are many different types of testing equipment available. A digital battery tester is the preferred option as they are safe, easy to use and offer a quick diagnosis of the condition of the battery. Fixed and adjustable load testers, voltmeters, hydrometers and discharge testers can also be used, however correct training is required prior to using any of these testers to prevent personal injury or damage to the vehicle. The state of charge of a lead acid battery can be determined by the specific gravity SG of the electrolyte its density compared to a reference such as water. The SG can be measured directly with a hydrometer or indirectly by the stabilised voltage with a voltmeter. Please note the temperature of the acid affects the result. Microprocessor controlled digital battery testers are easy to use, very safe and can help determine early battery failure. The tester works by transmitting a small signal through the battery that uses measurements of conductance or resistance impedance to indicate battery condition. Most models provide battery, starting and charging tests. Printer options enable results to be given to the customer.

This load however does create a spark risk if leads are connected to corroded or loose terminals. If the voltage reads above 9.6 volts the battery is ok. For example a battery that has a CCA rating of 600 should be tested at 300CCA for 15 seconds. If the result is under 9.6V the battery is not good and may not crank the engine. It is always recommended that you check the individual manufacturer's specifications. The biggest concern with this type of tester is the time it takes to perform the test. The amount of energy necessary for complete recharge depends on the depth of discharge, rate of recharge and temperature. Typically 110% 150% of the discharged amperehours depending on battery type must be returned to the battery to achieve full recharge. It is highly recommended to wear PPE Personal Protection Equipment including safety glasses, chemical resistant gloves and overalls. When choosing a battery charger, it is important to select a charger that delivers the specified charging voltage and current to suit the battery type. Flooded, Absorbed Glass Mat AGM and Gel battery types require different charging specifications to provide optimum performance and service life. Always keep inside the parameters outlined in the below table. Failure to do so can result in permanent damage to the battery. For example if you want to charge a 100Ah battery, the recommended charger current for this battery would be 10 Amps. Slow charging is the best way to recharge a lead acid battery. Fast charging a lead acid battery by increasing the recommended amperes may cause undue stress and shorten battery life. This coefficient factor can be between 110% to 150%. The constant charge and discharge eventually leads to failure. Components corrode over time, electrical shorts occur and vibration causes damage; all eventually causing failure. Overcharging and undercharging of a battery will also have a bearing on battery life.

Overcharge condition may be due to incorrect voltage setting, low voltage caused by heat or internal defects, or old age deterioration. This can indicate overcharging or overfilling. This can cause failure from vibration. This can also cause failure. A low Specific Gravity reading of 1.220 or less in all cells indicates a discharged battery and it must be charged before further examination and testing can occur. The discharged condition may be due to a problem in the electrical system slipping alternator belt, faulty regulator or alternator, high resistance due to corrosion. Internal shorts may also be due to manufacturing defects or shorts through the ageing process or vibration damage. The usual warning is a slower than normal battery ability to crank the engine. It's good public relations and if the battery is near failure, it may avoid the inconvenience of a roadside breakdown. Always use an approved battery clamp to limit vibration. Century batteries are built tough, using robust internal components to resist damage through abrasion and puncture from vehicle vibration. It's impossible to know exactly when a battery might fail. A slow starting engine is sometimes an indication. Regular battery checks are always advised. Battery failure can be attributed to various factors, however the causes of failure fall under two distinct categories manufacturing and nonmanufacturing faults. Century's stringent quality assurance and inspection processes demanded by leading vehicle manufacturers ensure genuine manufacturing faults in Century Batteries are negligible. They are often attributed to a problem with the vehicle's electrical system, its operation or the battery application. Over time this leads to a point where the battery will no longer be able to start a vehicle. High temperature will accelerate the degradation rates. Check our easy to follow guide.

June 2018 This article contains According to the latest studies by the German Automobile Club ADAC, in 2017 about 40% of breakdowns were due to the battery. The reasons for this include the increased electrification of vehicles. A regular battery check by a specialist workshop is therefore advisable in order to detect an imminent battery failure before a final breakdown occurs. In an ideal case, an open circuit voltage of about 12.8 V is measured with a Multimeter. If the voltage falls below 12.4 V, the battery should be recharged as soon as possible. A continuous low charge damages the battery due to sulfation. Due to aging and wear the capacity of the battery to deliver high currents gradually decreases. In addition, the lower the charge determined by measuring the open circuit voltage, the lower the possible current which can be delivered during the starting process. Among other things, the determination of the SOH takes into account the cold start capability CCA, the residual capacity Ah and the charge acceptance CA. To obtain reliable test results, especially with regard to the SOH, it is essential to use modern test devices which are adapted for the new battery technologies. In principle Connect the red cable to the positive terminal and the black cable to the negative terminal. The sequence for connection and disconnection does not matter. To connect the testing device to a battery which is located in the trunk or the passenger compartment, the battery terminals there and not the starting aid contacts in the engine compartment must be used, as the resistance of the cable which is installed in the vehicle would affect the measurement. Connect to the battery terminals on the battery and not the starting aid contacts in the engine compartment, as the resistance of the cable which is installed in the vehicle will affect the measurement.

The device uses a different test algorithm for each battery type, so that an incorrect setting would produce an incorrect measurement value. In addition, for some test devices it is important to know whether the test is being made on a battery installed in the vehicle, or whether it is outside of the vehicle. Common standards are DIN, EN, IEC, JIS and SAE. Details of the testing standard can be found after the details of the cold start current on the battery label. How to do it! This removes any surface tension before the measurement. This is how to safely charge the battery. Battery Testing Testing the battery Stepbystep Testing of a conventional starter battery can be carried out more quickly than a check of an AGM battery. There is not always a free choice. StartStop Consequences of the wrong battery A normal starter battery in a car with a startstop system. These can be the

consequences. Please turn it on so that you experience this sites full capabilities. Further details are available in our Privacy Policy [here](#). Wondering how long it takes to charge a car battery. Not sure if you need to disconnect a car battery to charge it If you forget to turn your lights off when you park your car, or you leave your car parked for a long period of time, you might come back to find that the battery doesnt have enough charge left to start the car. Find out how below. A conventional charger isn't suitable for these types of batteries and you'll need a smart charger instead. If youre not sure what kind of charger your battery might need, pop into one of our stores and we can help you out. If they look dirty or corroded, youll need to clean them before charging your battery. Although charging a car battery while still connected or in situ is possible, its always a good idea to disconnect the battery before charging after a quick clean.

Always disconnect the negative usually black lead first and reconnect it last, otherwise you could end up getting a nasty shock when you touch the positive terminal. The terminals are usually connected to the battery by a clamp, which is loosened or tightened by a bolt on the side. Undo the terminals negative first, remember! and move them to one side. Plus, remember that if you disconnect your car battery, you might need to reset your radio, seat positions and dashboard settings, so make sure youve got the security codes if you need them! Keep the charger as far from the battery as the cables will allow, and never leave the charger on top of the battery while its charging. Connect the clamps of the charger to the terminals on the battery, matching positive to positive and negative to negative. Then, plug the charger in. Some chargers will turn off automatically when the battery is charged, but others will need to be disconnected. Check the manual for your individual charger to find out how long it will take and what you need to do. The other option is to invest in a smart battery charger, which will assess the condition of the battery and tailor the charge cycle to fit, automatically switching to a maintenance charge rather than overcharging the battery. Then, reconnect the car battery positive first and negative last, remember! and away you go! If youre using a smart charger, there will be an indicator to show you when the battery is charged. Keep the charger away from the battery, and make sure you dont leave anything on top of the battery. Halfords can check your battery for free and advise if a replacement is required. To take a look at our range of chargers, [click here](#). If you need a new car battery then take a look [here](#). For a free battery check, you can book [here](#) or head to your local store or autocentre. August 10, 2020 [What If I Replace Just One Tire](#). August 3, 2020 [Can I Replace Run Flat Tires with Regular Tires](#).