

Please read and save these instructions. Read through this owner's manual carefully before using product. Protect yourself and others by observing all safety information, warnings, and cautions. Failure to comply with instructions could result in personal injury and/or damage to product or property. Please retain instructions for future reference.



DIGITAL BATTERY ANALYZER

FOR CUSTOMER SERVICE

Technical Question?

CALL 1-866-458-2472
customerservice@oem-tools.com

UNPACKING

After unpacking the unit, inspect carefully for any damage that may have occurred during transit. Check for loose, missing, or damaged parts. If any damage is observed, a shipping damage claim must be filed with the carrier. DO NOT use the OEMTOOLS® 24359 Digital Battery Analyzer if broken, bent, cracked or damaged parts (including labels) are noted. Any Digital Battery Analyzer that appears damaged in any way, operates abnormally or is missing parts should be removed from service immediately. If you suspect that the Digital Battery Analyzer was subjected to shock load (a load that was dropped suddenly, unexpectedly, etc.) Immediately discontinue use until it has been checked by a factory authorized service center.



⚠ WARNING

The following safety information is provided as a guideline to help you operate your Digital Battery Analyzer under the safest possible conditions. Any tool or piece of equipment can be potentially dangerous to use when safety or safe handling instructions are not known or not followed. The following safety instructions are to provide the user with the information necessary for safe use and operation. Please read and retain these instructions for the continued safe use of your Digital Battery Analyzer. Failure to follow instructions listed below may result in serious injury. In addition, make sure that anyone who uses the equipment understands and follows these safety instructions as well.

Explanation of Safety Signal Words

⚠WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION: Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTES: Provide clarity and helpful information.

Thank you very much for choosing an OEMTOOLS® Product!

For future reference, please register your new tool at www.oem-tools.com and complete the owner's record below:

Model: _____ **Purchase Date:** _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it. This product is designed for certain applications only. OEMTOOLS® cannot be responsible for issues arising from modification. We strongly recommend that this product is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the product until you have first contacted customer service to determine if it can or should be performed on the product.

⚠WARNING: This product can expose you to chemicals which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



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! IMPORTANT INSTRUCTIONS AND SAFETY RULES

1. Know your product. Read this manual carefully. Learn the product's applications and limitations, as well as potential hazards specific to it. The use of this product is simple and straightforward if you follow the instructions. When operating this product, use common sense and only use this product for its intended purpose.
2. Maintain labels and nameplates on this product. These carry important information. If unreadable or missing, contact OEMTOOLS® for a replacement.
3. Maintain this product with care. Keep it dry and clean – and free from brake fluid, oil, and grease (if applicable).
4. Check for damage. Check your product regularly. If part of the product is damaged, it should be carefully inspected to make sure that it can perform its intended function correctly. If in doubt, the part should be repaired. Refer all servicing to a qualified technician. Consult your dealer for advice.
5. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the product's operation.
6. DO NOT use a damaged product. Tag damaged products "DO NOT USE" until repaired. If damaged, have the product serviced before using. Many accidents are caused by poorly maintained products.
7. Service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could create a risk of injury.
8. When servicing a product, use only identical replacement parts. Use of unauthorized parts or failure to follow maintenance instructions could create a risk of injury.
9. Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one product may become hazardous when used on another product.
10. Keep work area clean and well lit. Cluttered or dark work areas invite accidents.
11. Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Keep the work area free of obstructions, grease, oil, trash, and other debris. DO NOT use this product in a damp or wet location.
12. Keep children away from the work area. Never let a child handle this product without strict adult supervision.
13. Store this product out of the reach of children and untrained persons. This product may be dangerous in the hands of untrained users.
14. DO NOT operate this product if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, DO NOT attempt to operate.
15. Use safety equipment. Eye protection should be worn at all times when operating this product. Use ANSI approved safety glasses. Everyday eyeglasses are NOT safety glasses. Dust mask, non-skid safety shoes, hard hat or hearing protection should be used in appropriate conditions.
16. Wear proper apparel. Loose clothing, gloves, neck-ties, rings, bracelets or other jewelry may present a potential hazard when operating this product. Keep all apparel clear of the product.
17. DO NOT overreach. Keep proper footing and balance at all times when operating this product.
18. Keep away from flammables. DO NOT attempt to operate this product near flammable materials or combustibles. Failure to comply may cause serious injury or death.
19. Avoid accidental fire and/or explosion. DO NOT smoke near engine fuel and battery components.
20. We believe the information contained herein to be reliable. However, general technical information is given by us without charge and the user shall employ such information at their own discretion and risk. We assume no responsibility for results or damages incurred from the

use of such information in whole or in part. Always refer to specific instructions and technical information supplied by vehicle manufacturer.

21. The manufacturer declines any and all responsibility for property damage or injury if said damage is the result of unskillful handling by the operator or of failure to observe the basic safety rules set forth in the instruction manual.
22. The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

PRODUCT DESCRIPTION

The OEMTOOLS® 24359 Digital Battery Analyzer is a safe, fast, simple, and portable battery, starting and charging system analyzer.

PRODUCT SPECIFICATIONS

Battery CCA:	200-1200
Voltage Testing Range:	7-15VDC
Maximum Power Consumption:	.5W
Operating Temperature:	14 – 122 Degrees Fahrenheit
Testing Standards:	SAE, DIN, EN, IEC, CA, JIS
Tests:	Internal Resistance

SPECIFIC SAFETY INSTRUCTIONS AND WARNINGS

Thoroughly read and understand all instructions in this product manual before using this product. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

!WARNING: Always wear safety glasses and gloves!

OPERATION INSTRUCTIONS

A. BATTERY TEST

1. Before you test a battery in a vehicle, turn off the ignition, all accessories and loads. Close all the vehicle doors and the trunk lid.
2. Determine which post of the battery is grounded (connected) to the chassis. Connect NEGATIVE (black) clip to vehicle chassis or engine block away from the battery. Connect POSITIVE (red) clip from battery tester to POSITIVE (POS, P, +) ungrounded post of battery. Do not connect clip to carburetor, fuel lines, or sheet metal body parts. Connect to a heavy gauge metal part of the frame or engine block.

NOTE When disconnecting, remove clip from vehicle chassis FIRST, then remove the clip from the battery terminal.

3. Connect the tester to a vehicle battery, the screen will come on and display "BATTERY TEST". The battery voltage will also be displayed with "XX.XX V". Press the "Enter" button to go to the next step.
4. The screen will show "BATTERY TYPE" selection. Press the "◀▶" button to select the battery type: REGULAR LIQUID, AGM BATTERY or VRLA/GEL BATTERY. Press "Enter" button to confirm choice.
5. The screen will show "RATING STANDARD". Press the "◀▶" button to select the battery standard:
SAE, DIN, IEC, EN, or CA (MCA)
SAE: United States Standard
EN: European Standard
DIN: German Standard
IEC: International electrical science and technology association
CA (MCA): Normal starting current or maritime starting current
Press the "Enter" button to confirm the choice and go to next step.
6. The screen will show "RATING CAPACITY". Press the "◀▶" button to select the battery capacity of CCA. With each press of the button, the value will increase or decrease 5 units
This tester's testing range:



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SAE: 40~1200CCA

EN: 40~1150CCA

DIN: 25~675CCA

IEC: 30~775CCA

Press the "Enter" button to confirm the input value of the battery capacity and begin the test.

7. The screen will show the message, "TESTING". The test result will display after 2 seconds.
8. If the display reads "BATTERY CHARGED?" press the "◀▶" button to select "YES" or "NO". Press the "Enter" button to confirm your choice and proceed to the next step.

NOTE the Tester will judge the battery status & decide whether to show this Step or not, it doesn't appear every time.

9. When the test is completed, the display shows the actual available CCA. Press the "▶" button to see the SOH (STATE OF HEALTH) as a percentage. The test results are as following:
 - a. "GOOD PASS"
The battery is good and capable of holding a charge.
 - b. "GOOD RECHARGE"
The battery is good but needs to be recharged.
 - c. "RECHARGE RETEST"
Battery is discharged, the battery condition cannot be determined until it is fully charged. Recharge and retest the battery.
 - d. "BAD REPLACE"
The battery will not hold a charge. It should be replaced immediately.
 - e. "TEST ERROR"
The tested battery is bigger than 1200CCA. Or the clamps are not connected properly. Please fully charge the battery and retest after excluding both previous reasons. If reading is the same, the battery should be replaced immediately.
10. Press "ENTER" return to step 4 to continue testing or remove the test clamps from the battery terminal to end test.

B. STARTING SYSTEM TEST

1. Connect the tester to a vehicle battery; the tester will be in default "BATTERY TEST" mode. Press the "◀▶" button once to enter "SYSTEM TEST". The voltage, "XX.XX V" will appear on the screen. Press the "Enter" button to go to next step. The screen will show "TURN OFF LOADS START ENGINE".
2. Turn off all vehicle accessory loads such as lights, air conditioning, radio, etc. and then start the engine. Wait for the tester to detect the cranking voltage.
3. When the engine is started and test complete, one of the three results will be displayed along with the actual voltage reading measured.
 - a. "CRANKING VOLTS NORMAL"
The system cranking voltage is in a good range.
 - b. "CRANKING VOLTS LOW"
The cranking voltage is below normal limits; troubleshoot the starter with manufacturers recommended procedure.
 - c. "CRANKING VOLTS NOT DETECTED"
The cranking voltage is not detected, retest. Press the "Enter" button to go to next step.

C. CHARGING SYSTEM TEST

1. The screen will show "PRESS ENTER FOR CHARGING TEST" Press the "Enter" button to begin charging test. The screen will show "MAKE SURE ALL LOADS ARE OFF". This is for testing alternate idle voltage. Press the "Enter" button to go to next step. The screen will show results. One of the three results will be displayed along with the actual voltage reading measured.
 - a. "ALT. IDLE VOLTS NORMAL"
The system is showing normal output from the alternator. No problem is detected.
 - b. "ALT. IDLE VOLTS LOW"
The alternator is not providing sufficient current to the battery. Check the belts to ensure the alternator is rotating with engine running. If

the belts are slipping or broken, replace the belts and retest. Check the connections from the alternator to the battery. If the connection is loose or heavily corroded, clean or replace the cable and retest. If the belts and connections are in good condition, troubleshoot the alternator with the manufacturers recommended procedure.

- c. "ALT. IDLE VOLTS HIGH"
The voltage output from the alternator exceeds the normal limits of a functioning regulator. Check to ensure there are no loose connections and the ground connection is normal. If there is no connection issue troubleshoot the alternator/regulator with the manufacturers recommended procedure. The normal high limit of a typical automotive regulator is 14.7 volts +/- 0.05. Check manufacturer specifications for the correct limit, as it will vary by vehicle type and manufacturer.
2. With the engine at idle, press "ENTER" for the charging system with accessory loads test. The screen will show "TURN ON LOADS AND PRESS ENTER". Turn on the blower to high (heat), high beam headlights, and rear defogger. Do not use cyclical loads such as air conditioning or windshield wipers. Note: When testing older model diesel engines, you may need to run up the engine to 2500 rpm for 15 seconds.
3. Press the "ENTER" key to test the charging system with accessory loads. One of the three results will be displayed along with the actual testing measured.
 - a. "ALT. LOAD VOLTS NORMAL"
The system is showing normal output from the alternator. No problem detected.
 - b. "ALT. LOAD VOLTS LOW"
The alternator is not providing sufficient current for the systems electrical loads and the charging current for the battery. Check the belts to ensure the alternator is rotating with the engine running. If the belts are slipping or broken, replace the belts and retest. Check the connections from the alternator to the battery. If the connection is loose or heavily corroded, clean or replace the cable and retest. If the belts and connections are in good working condition, troubleshoot the alternator with the manufacturers recommended procedure.
 - c. "ALT. LOAD VOLTS HIGH"
The voltage output from the alternator to the battery exceeds the normal limits of a functioning regulator. Check to ensure there are no loose connections and that the ground connection is normal. If there are no connection issues, troubleshoot the alternator/regulator with the manufacturers recommended procedure.
4. Press "ENTER" when charging system test is complete. Turn all accessory loads and engine off. Press "ENTER" to return to step 1 or remove the test clamps from the battery posts after completion of testing to end test.

D. ADJUST DISPLAY BRIGHTNESS

1. Connect the Battery Tester to a vehicle battery.
2. The tester defaults to BATTERY TEST display.
3. Press "▶" button three times to get to the LCD BRIGHTNESS display.
4. Press "Enter" button to show LCD Brightness in percentage.
5. Press the "◀▶" button to adjust the LCD brightness.
6. Press "Enter" button to save the setting and return to LCD BRIGHTNESS display.

PRODUCT MAINTENANCE

1. Always store the Digital Battery Analyzer in a well-protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements.
2. Keep the Battery Tester clean for better and safer performance.
3. Clean clamps and case after each use to prevent corrosion from battery fluid.

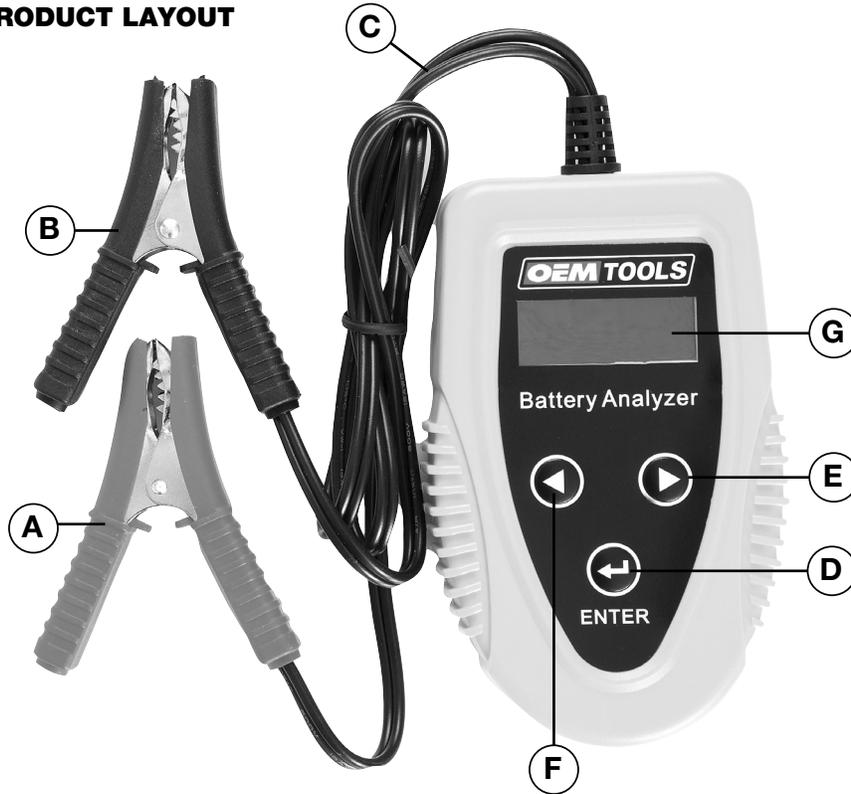
DISPOSAL

At the end of the useful life of the Digital Battery Analyzer, dispose of the components according to all state, federal, and local regulations.



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PRODUCT LAYOUT



PARTS LIST

Figure	Description	Qty.
A	Positive Battery Clamp (Red)	1
B	Negative Battery Clamp (Black)	1
C	Lead Set	1
D	Menu Button	1
E	Increase Button	1
F	Decrease Button	1
G	Display	1

WE STAND BEHIND OUR TOOLS. OEMTOOLS® 90 DAY WARRANTY

If within 90 days from the date of purchase of this OEMTOOLS product, you find any defect in material or workmanship, through normal usage, return it to the place of purchase or to OEMTOOLS® for repair or replacement at our discretion. In order to obtain this service, send your tool and proof of purchase (transportation pre-paid) to:

OEMTOOLS® Q.A. Dept., 3580 E. Raines Road #3, Memphis, TN 38118.

We will not be responsible for lost or damaged goods during transportation; please insure your package. If our inspection verifies the defect, we will repair or replace the product, or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

OEMTOOLS® does not provide warranty for products labeled other than OEM® or OEMTOOLS®. OEMTOOLS® will not provide any warranty for products subjected to abnormal use. Abnormal use includes (but is not limited to) abuse, accident, alteration, neglect, and unauthorized or unreasonable use or repairs. This warranty does not cover bits, blades, files, batteries, or calibration. We recommend that you maintain your tools and sharpen or replace blades, bits, files, and batteries as necessary. OEMTOOLS® reserves the right to make any changes in construction or design at any time without any obligation in incorporating such changes to tools or equipment previously sold.

OEMTOOLS® makes every effort to ensure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship. This warranty does not apply to damage due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance.

We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Please contact us at customerservice@oem-tools.com or call us at 901-370-1101 for additional information or questions.

Thank you for your purchase.

CONTACT US

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