



POLÍTICA DE DEVOLUCIÓN PARA REPARACIÓN

Hacemos todo lo posible para ofrecer productos fiables y de calidad superior. Sin embargo, en caso de que su instrumento requiera reparación, envíe la unidad al Centro de Servicio con flete prepago a la siguiente dirección con la dirección de devolución, número de teléfono y / o dirección de correo electrónico.(contacte a FAHSAL SOLUTIONS LLC)



PÓLIZA DE GARANTÍA

El comprobador/diagnosticador de batería B500 está garantizado contra defectos en materiales y mano de obra por un período de un año a partir de la fecha de compra. Esta garantía se aplica a todos los instrumentos reparables que no hayan sido manipulados o dañados por un uso inadecuado, incluida la apertura no autorizada de la unidad. Envíe (embarque) las unidades en garantía que requieran reparación, con el FLETE PREPAGADO, al Centro de servicio junto con el comprobante de compra, la dirección de devolución, el número de teléfono y / o la dirección de correo electrónico, el flete de devolución del equipo reparado también corre a su cuenta.

Made in U.S.A

CEC DECLARATION OF CONFORMITY 2007	
Application of Council Directives)	
EMC Directive 89/336/EEC as amended by 92/31/EEC, 91/263/EEC, 93/88/EEC	
Manufacturer's Name Made in USA to Snap-on Tools specifications Snap-on Tools Corporation 2801 80th Street Kenosha WI 53141-1410	
Equipment Type/Description Battery & Electrical System Analyzer	
Model: Snap-on Tools Model YA2636	
Conformance to EN61000-4-2:2001 (ESD), EN 61000-4-3:2001 (RS) EN 61000-4-4:2001 (EFT)	
The Snap-on Tools Refrigerant Leak Detector was found to meet the requirements described with the specifications of EN 61000-6-1.	
The undersigned hereby declare that the equipment specified above conforms to the above Directives).	
Signature-Technical Specification	May 23, 2007 Date
Tom Smith Full Name	EMC Test Engineer Position
Signature - Manufacturer's Representative	May 23, 2007 Date
Elliot Gerard Full Name	Manufacturing Representative Position 123729



B500

Analizador de baterías y sistemas eléctricos

Para probar baterías de vehículos de 6 V y 12 V individualmente y en paquetes de baterías. También para probar sistemas de arranque y carga de 6 V, 12 V, 24 V y 36 V

Manual de Usuario



INTRODUCCIÓN

El B500 prueba todas las baterías de plomo-ácido de 6V y 12V individualmente o en paralelo y paquetes de baterías en serie.

El probador mostrará la batería o el estado del paquete de baterías como% de capacidad disponible, capacidad nominal (es decir, CCA), estado de voltaje de carga y estado bueno, marginal o de reemplazo.

El B500 también prueba sistemas de carga y arranque de 12 V, 24 V y 36 V, incluido el consumo de arranque, la salida del alternador (cargado / descargado) y la ondulación del diodo.

El B500 cuenta con una salida de impresora inalámbrica por infrarrojos para la impresión remota de los resultados de la prueba. Los datos de prueba de la última prueba realizada se almacenan en la memoria y se pueden revisar cuando se conecta a una batería o cuando se desconecta de la batería en un momento posterior.

Características:

- Tecnología de conductancia patentada
- Muestra el% de capacidad y CCA.
- Prueba todas las baterías de plomo-ácido de 12 V, incluidas AGM y Gel
- Interfaz de impresora IR para impresión remota
- No se necesitan tablas de conversión
- Pruebe las baterías de 100 CCA a 3500 CCA (paquete de baterías)
- Prueba los sistemas de arranque / carga de 6/12/36 V
- Prueba baterías en serie y en paralelo
- Prueba la ondulación del alternador
- Se detecta y muestra una celda defectuosa
- Muestra varias unidades internacionales
- Prueba baterías de 6V
- Encabezado personalizado con nombre de empresa, fecha y hora
- Detección de plomo suelto
- Compensación de temperatura
- Se incluyen adaptadores de poste de latón que cumplen con RoHS
- Múltiples idiomas (inglés, español, francés)
- Protección de polaridad inversa
- Función de apagado automático
- Hecho en EE.UU

PIEZAS DE REEMPLAZO

Descripción	Número de parte
Adaptadores de poste	B555
Maleta de transporte	B556
Manual de instrucciones	B557

ESPECIFICACIONES DEL PRODUCTO

Modelo #	B500 Micro LCD
Nombre	Analizador de sistemas electr.
Rango de tamaño de batería	100 CCA a 3500 CCA
Voltaje de Directa: Rango/Precision	3.0V a 49.9V/ +/- 2% lectura
LCD Display	2 line-16 caracter es
Fuente de voltaje	9V (Batería Interna)
Longitud de cable	2 Pies
Impresora IR	IrDA & IrHP Capacidad
Peso lbs	1.5 lbs
Garantía	2 años

APAGADO AUTOMÁTICO

Si el probador se deja encendido usando la batería interna de 9V (es decir, cuando no está conectado a una batería externa), el B500 se apagará automáticamente después de 3 minutos desde la última entrada del usuario. Esto conservará la vida útil de la batería en caso de que el Comprobador se deje encendido sin darse cuenta.

REPLACE INTERNAL BATTERY:

1. SUSTITUCIÓN DE LA BATERÍA INTERNA DE 9V. El B500 alertará al usuario cuando el voltaje de la batería interna esté bajo y deba ser reemplazado. Cuando esto ocurre, la pantalla lo muestra. Nota: Este mensaje también se mostrará si no hay batería instalada.
2. Para reemplazar la batería: Quite el tornillo en la parte posterior del probador y quite la tapa de la batería. El compartimiento de la batería de 9V se encuentra dentro del probador.
3. Retire la batería levantando con cuidado la batería de 9V y sacándola del compartimiento. Inserte una batería nueva en el soporte de la batería asegurándose de que la batería esté completamente presionada hacia abajo y haciendo contacto con los contactos de la batería.

B500 Controles



UTILITY MENU OPTIONS

The utility menu allows the user to set up the **Date & Time, Company Name, address and phone #** and select the **IR Printer** they will be using.

Setting up the Date and Time:

1. Press the Menu button and **HOLD DOWN** the **NEXT +** button. The display will show **Date Time Setup**. Press **ENTER**.
2. The flashing cursor will blink over day month year format (dd/mm/yy). Scroll up or down to select the desired number.

Setting up the Company Name address & phone #:

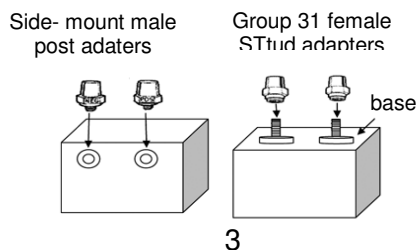
1. Press **NEXT +** to set up the Company Name. Scroll the alphabet letters until the first letter of the company is displayed. Press **ENTER** and proceed until the complete name address & phone # is displayed. Note: "Space" and "Apostrophe" characters are shown at the beginning or end of the alphabet.

Setting up the IR Printer:

1. Press **NEXT +** to select the Techno Tools IR printer that you will be using. Select either HPIr printer #B540 or IrDA printer #B545.

PRIOR TO TESTING

Important: Use stud or post adapters (provided with the B500) when connecting to side mount or Group 31 batteries outside of the vehicle. Or connect battery clips on the base of threaded stud when testing (see Fig. below). Make sure adapters are properly tightened. Connecting the tester directly to threaded studs or bolts will result in false readings. When connecting to batteries inside or outside of the vehicle, rock the clips back and forth to ensure a good connection. **CHECK CONNECTION** may show on the display if a poor connection is detected. Reset clips if necessary.



REVIEWING TEST RESULTS

The B500 stores the last test results in memory for review while **connected** to the test battery **or** at a later time when **disconnected** from the battery. The review prompt will only display if data is stored in the memory and has not been erased.

To review stored data, press the **MENU/ON-OFF** button. If Battery Test data is stored in the memory the display will show the **REVIEW BATTERY TEST**. Press **ENTER** ← to see the Battery Test data.

Press **NEXT +** to review Starter Test data (if stored) and **NEXT +** to review Charging System Test.

USING THE IR PRINTER

The B500 will download test data to Techno Tools IR Printers (part numbers B540 or B545* (Optional)). The user can print both when connected and when not connected to a battery. To print out the last test results:

1. Turn on the B500 by pressing the **MENU/ON-OFF** button. To print, press **NEXT +** until the display shows **PRINT LAST TEST**.
2. Press **ENTER** ←. The display will show the message **ALIGN THE PRINTER**. Align the B500 transceiver located at the top of the tester with the printer's IR receiver. Note: The HPIR printer must be within 18 in. from the tester and remain aligned during entire printout.
3. Press the **ENTER** ← button. The last data stored in the memory will begin to printout on the IR printer. Note: The alignment between the tester and the IR printer must be proper for data to print out.

***Important: Make sure the printer you are using is selected in the Utility Menu (see Utility Menu on page 3).**

CHARGING SYSTEM TEST:

NOTE: Engine must be off before testing charging system.

After completing the starter test, press **NEXT +**. The display will prompt the user **TEST CHARGING SYSTEM**. (*The maximum starter/charging voltage is 36V*). To test the charging system:

1. Press **ENTER←**: The user will be prompted to **START THE ENGINE (ACCESSORIES OFF)**. The tester will automatically detect that the engine has started and will display **ENGINE STARTED PLEASE WAIT**.
2. The display will prompt the user to Press **NEXT +** and **REV ENGINE FOR 15 SECONDS**. After revving, the user will be prompted to **TURN ON ACCESSORY LOADS** (lights & AC or heater) and press **NEXT +** again.
3. The user will be prompted to **REV ENGINE FOR 15 SECONDS again**. After revving the display will show one of the following the test results: (Note some versions will prompt the user to turn off accessory loads after revving and then press **NEXT +**.)

CHARGING SYSTEM IS OK

NO CHARGING: The alternator is not supplying a charging voltage to the battery. Check also for loose, slipping or broken alternator belt

BAD DIODE REPLACE ALTERNATOR: The tester detected **excess ripple** coming from the alternator indicating defective diode(s). If diodes are not replaceable, replace alternator.

BAD DIODE AND/OR CHECK CONNECTIONS: The tester detected low charging voltage that could be caused by a bad diode (although alternator ripple is within normal limits) or high resistance connections. If connections and diode are found to be good, check regulator and replace if necessary.

REPLACE REGULATOR: The tester detected abnormally high alternator output voltage caused by a defective regulator.

Out of Vehicle Test

BATTERY TEST:

1. Connect the B500 to the battery to be tested. “**TECHNO TOOLS B500**” will appear momentarily on the display and then the display will show **IN VEHICLE TEST? PRESS NO (+)**.
2. The display will then prompt the user to **SELECT BATTERY VOLTAGE**. Press the **+ UP** or **- Down** buttons to select the battery or battery pack voltage i.e. 6V, 12V, 24V to be tested.

NOTE: The maximum battery pack voltage for testing is 24V (2-12V batteries in series).
3. Press **ENTER ←**: The display will show the battery’s State of Charge (SOC) and display **GOOD, LOW, BAD CELL REPLACE or SURFACE CHARGE***.
4. Press **NEXT +**: The display will prompt the user **TEST BATTERY**.
5. Press **ENTER ←**: The display will prompt the use to select the units of the battery rating: **CCA/SAE, EN, DIN, EIC or JIS**. Press **+ UP** or **- DOWN** to select desired units.
6. Press **ENTER ←**: The display will prompt the user to select the rated battery size. Press the **+ UP** or **- DOWN** buttons to select the battery’s numerical rating i.e. 550 CCA.
7. Press **ENTER ←**: The display will show **TESTING.....PLEASE WAIT** for a few seconds. The display will then show the % available capacity** and the battery condition as **GOOD, MARGINAL*** REPLACE, RECHARGE & RETEST or BAD CELL-REPLACE**.

*Removing the surface charge may improve the test accuracy when testing **MARGINAL** batteries. To remove surface charge, load the battery for several seconds until the **SOC** voltage drops to 12.8V or less.

**If available capacity is 800 CCA’s or greater the Tester will prompt the user if the battery is an AGM type battery.

***For **MARGINAL** batteries the B500 will prompt the user “**TEMPERATURE ABOVE 32°F?**”

In Vehicle Tests

BATTERY TEST:

Connect the B500 to the battery to be tested. “**TECHNO TOOLS B500**” will appear momentarily on the display and then the display will show **IN VEHICLE TEST? PRESS YES** (←). The display will then prompt the user to **SELECT BATTERY/SYSTEM VOLTAGE**. Press the **+ UP** or **- Down** buttons to select the battery or battery pack voltage i.e. 6V, 12V, 24V, 36V to be tested.

NOTE: When testing the battery in the vehicle, make sure vehicle engine is **not** running and all accessory loads are **off**. If **SURFACE CHARGE** (SOC) is displayed, turn on accessory loads (lights, AC or heater) for 15 seconds with engine off.

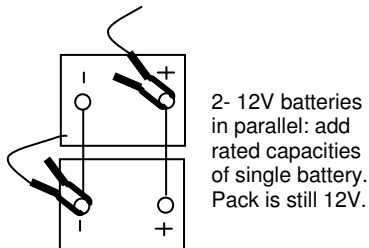
Testing Battery Packs:

The B500 tests battery packs when they are connected to the vehicle as though it is testing a single battery. When testing a battery pack, enter the battery voltage and rating of the pack as a single battery.

Batteries in parallel: For batteries connected in parallel, add the rated capacity of each single battery to determine the rated capacity of the pack. For example two 500 CCA batteries in parallel would have a rating 1,000 CCA (see figure below). The voltage of the pack remains the same regardless of the number of batteries in the pack. The B500 can test batteries in parallel up to 3500 CCA.

Batteries in series: A pack consisting of 2 single 12V batteries in series would have 24V. The rated capacity of the two 12V batteries in series is 1/2 the rating of the single battery. For example two 500 CCA 12V batteries in series would have a rating of only 250 CCA. The B500 can test two 12V batteries in series

IMPORTANT: The B500 determines the condition of the pack as whole but does not determine the condition of the individual battery in the pack. If the condition of the parallel pack is determined to be bad, disconnect the batteries from the pack and check each battery individually.



STARTER TEST:

Note: Before the starter can be properly tested, make sure the battery or battery-pack SOC (state of charge) and battery condition tests GOOD and the engine is OFF.

To test the Starter, scroll to the starter test pressing the **NEXT +** button. The display will prompt the user **TEST STARTER SYSTEM**. To test the starter: Press **ENTER** ←.

1. The display will prompt you to **START ENGINE (ACCESSORIES OFF)**.
2. Crank the engine and if it starts, turn engine off. The Tester will display the voltage drop at the battery while cranking and one of the following messages:

STARTING SYSTEM NORMAL: The starter system is operating properly.

CHECK STARTER: The Starter is drawing excess current. Check starter and starter wires and connections for abnormally high resistance.

RETEST BATTERY & RETEST STARTER: The B500 detected unusually low voltage at the battery during cranking indicating that the battery may need replacing. Retest the battery and retest starter.

