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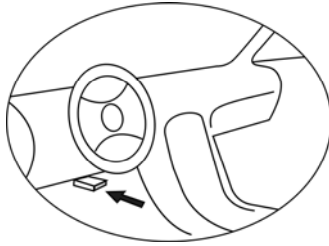
1. Safety Precautions and Warnings

To prevent personal injury or damage to vehicles and/or the service tool, read this instruction manual first and observe the following safety precautions at a minimum whenever working on a vehicle:

- All maintenance and repair work must be carried out by qualified technicians.
- Don't connect or disconnect any test equipment while the ignition is on or the engine is running.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Operate the vehicle in a well ventilated work area: Exhaust gases are poisonous.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline/chemical/electrical fires nearby.
- Keep the scan tool dry, clean, free from oil/water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.

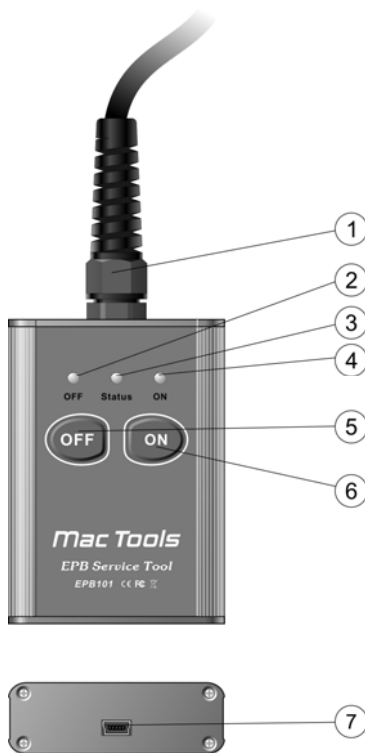
2. Location of the Data Link Connector (DLC)

The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-cavity connector where the service tool interfaces with the vehicle's on-board computer. The DLC is usually located 12 inches from the center of the instrument panel (dash), under or around the driver's side for most vehicles. If Data Link Connector is not located under dashboard, a label should be there telling location. For some Asian and European vehicles, the DLC is located behind the ashtray and the ashtray must be removed to access the connector. If the DLC cannot be found, refer to the vehicle's service manual for the location.



3. Using the EPB Service Tool

3.1 Tool Description



- ① **OBD II CONNECTOR** -- Connects the service tool to vehicle's Data Link Connector (DLC).
- ② **OFF LED** -- A yellow LED indicates status of brake system after the command "Start brake pad change" is sent.
- ③ **STATUS LED** -- A green LED indicates communication status between the service tool and vehicle's control unit, and status of trouble codes.
- ④ **ON LED** -- A red LED indicates status of brake system after the command "End brake pad change" is sent.

- ⑤ **OFF BUTTON** -- Sends command to vehicle's control unit to open brake pads.
- ⑥ **ON BUTTON** -- Sends command to vehicle's control unit to close brake pads.
- ⑦ **USB PORT** – Connects the service tool to a computer with the USB cable supplied for software updates.

3.2 Specifications

- 1) Operating Temperature: 0 to 70°C (32 to 158 F°)
- 2) Storage Temperature: -40 to 85°C (-40 to 185 F°)
- 3) Power: 8 to 18 Volts provided via vehicle battery
- 4) Dimensions:

Length	Width	Height
85 mm (3.35")	60 mm (3.36")	20mm (0.79")
5) NW: 0.18kg (0.40lb), GW: 0.21kg(0.46lb)		

3.3 Accessories Included

- 1) **User's manual** -- Instructions on tool operations
- 2) **CD software** -- Contains programs that are used to update the tool and etc.

3.4 Power

The power of the service tool is provided via the vehicle Data Link Connector (DLC). Follow the steps below to power on the service tool:

- 1) Find DLC on vehicle.
 - *A plastic DLC cover may be found for some vehicles and you need to remove it before plugging the OBD2 cable.*
- 2) Plug OBD II cable to the vehicle's DLC.


3.5 Vehicle Coverage

The EPB101 Electronic Parking Brake Service Tool is specially designed to work with Audi A5 from 2007, Audi A6 from 2004, Audi A8 from 2004, Passat from 2005, BMW with Automatic Engine START/STOP system from 2004 to 2007, Mercedes S221 from 2004 and E211 and E219 from 2003 to 2005 that are equip with EPB system.

4. Brake Pad Change

4.1 Connecting to the Vehicle

CAUTION: Don't connect or disconnect the service tool with ignition on or engine running.

- 1) Turn the ignition off.
- 2) Locate the vehicle's 16-pin Data Link Connector (DLC).
- 3) Plug into the OBDII cable to the vehicle's DLC.
- 4) Turn the ignition on.
- 5) Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission).
- 6) Hold brake pedal, and press the parking switch  in your vehicle to release hand brake.
- 7) The service tool starts to detect connected control module, and the **STATUS LED** flashes at a frequency of 5Hz (5/s).
- 8) When it links up with the control module, it reads the trouble codes EPB of system. If no codes are found, the **STATUS LED** illuminates constantly; if any codes are detected, the **STATUS LED** flashes at a frequency of 1Hz (1/s).

If the service tool fails to communicate with the vehicle's control module, or to read codes, the STATUS LED keeps flashing at a frequency of 5Hz (5/s).

- ✓ Verify that the ignition is ON;
- ✓ Check if the service tool's OBD II connector is securely connected to vehicle's DLC;
- ✓ Turn the ignition off, wait about 10 seconds, and turn the ignition back on;

- ✓ Make sure the hand brake is released;
- ✓ Check if the service tool is compatible with the vehicle;
- ✓ Check if the vehicle is equipped with EPB system.

If the STATUS LED still keeps flashing at a frequency of 5Hz (5/s), please contact your local distributor or the manufacturer.

4.2 Changing Brake Pads

- 1) Press **OFF** button to send the command “Start brake pad change” to the control module. The **OFF LED** flashes at a frequency of 5 Hz (5/s). When the control unit starts to open the pads, the frequency changes to 1Hz (1/s).

If the OFF LED keeps flashing at a frequency of 5Hz (5/s),

- ✓ Verify that the ignition is ON;
- ✓ Check if the service tool’s OBD II connector is securely connected to vehicle’s DLC;
- ✓ Turn the ignition off, wait about 10 seconds, and turn the ignition back on;
- ✓ Make sure that hand brake is released;
- ✓ Check if the service tool is compatible with the vehicle;
- ✓ Check if the vehicle is equipped with EPB system.

If the OFF LED still keeps flashing at a frequency of 5Hz (5/s), please contact your local distributor or the manufacturer.


- 2) When the brake is completely opened, the **OFF LED** illuminates constantly.
- 3) Replace brake pad.
- 4) When finished pad change, press **ON** button to send the command “End brake pad change” to vehicle’s control module. The **ON LED** flashes at a frequency of 5 Hz (5/s). When the control unit begins to close the pads, the frequency changes to 1Hz (1/s).

If the ON LED keeps flashing at a frequency of 5Hz (5/s),

- ✓ Verify that the ignition is ON;
- ✓ Check if the service tool’s OBD II connector is securely connected to vehicle’s DLC;

- ✓ Turn the ignition off, wait about 10 seconds, and turn the ignition back on;
- ✓ Make sure that hand brake is released;
- ✓ Check if the service tool is compatible with the vehicle;
- ✓ Check if the vehicle is equipped with EPB system.

If the ON LED still keeps flashing at a frequency of 5Hz (5/s), please contact your local distributor or the manufacturer.

- 5) When the brake is completely closed, the **ON LED** illuminates constantly.
- 6) The service tool sends a command to vehicle's control unit to clear trouble codes, and the **STATUS LED** flashes at a frequency of 5Hz (5/s). If codes are cleared, the **STATUS LED** illuminates for about 2 seconds.
- 7) The service tool re-reads troubles codes, and the **STATUS LED** flashes at a frequency of 5Hz (5/s). If no codes are found, the **STATUS LED** illuminates constantly; if any codes are detected, the **STATUS LED** flashes at a frequency of 1Hz (1/s).
- 8) Turn ignition off to disconnect the service tool from the vehicle.
- 9) Turn the ignition back on. Open and close the parking brake by pressing parking switch  in the vehicle to verify if the new brake pads work properly.

IMPORTANT:

For BMW vehicles, you do not need the EPB service tool before installing new brake pads. EPB service procedures for BMW are different from the above mentioned. Follow instructions below to service BMW EPB system.

- 1) Refer to your vehicle service manual to change the brake pads. When brake pads are replaced, the brake pad indicator light on instrument panel illuminates.
- 2) Connect the tool the vehicle's DLC.
- 3) Turn the START-STOP button in your vehicle to ON position.
- 4) The service tool starts to detect connected control module, and the **STATUS LED** flashes at a frequency of 5Hz (5/s).
- 5) When it links up with the control module, it reads the trouble codes EPB of system. If no codes are found, the **STATUS LED**

illuminates constantly; if any codes are detected, the **STATUS LED** flashes at a frequency of 1Hz (1/s).

- 6) Press **ON** or **OFF** button to reset the brake pad indicator light and to clear trouble codes. The **STATUS LED** flashes at a frequency of 5Hz (5/s). If codes are cleared, the **STATUS LED** illuminates for about 2 seconds.
- 7) The service tool sends command to the control module to re-read troubles codes, and the **STATUS LED** flashes at a frequency of 5Hz (5/s). If no codes are found, the **STATUS LED** illuminates constantly; if any codes are detected, the **STATUS LED** flashes at a frequency of 1Hz (1/s)
- 8) Turn the **START-STOP** button to **OFF** position, and disconnect the tool from the vehicle.
- 9) Start the engine to verify if the brake pad indicator light is reset.

5. Warranty and Service

5.1 Limited One Year Warranty

Mac Tools warrants to its customers that this product will be free from all defects in materials and workmanship for a period of one (1) year from the date of the original purchase, subject to the following terms and conditions:

- 1) The sole responsibility of Mac Tools under the Warranty is limited to either the repair or, at the option of Mac Tools, replacement of the service tool at no charge with Proof of Purchase. The sales receipt may be used for this purpose.
- 2) This warranty does not apply to damages caused by improper use, accident, flood, lightning, or if the product was altered or repaired by anyone other than the Manufacturer's Service Center.
- 3) Mac Tools shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the service tool. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.
- 4) All information in this manual is based on the latest information available at the time of publication and no warranty can be made for its accuracy or completeness. Mac Tools reserves the right to make changes at any time without notice.

5.2 Service Procedures

If you have any questions, please contact your local store, distributor or visit our website at www.mactools.com.

If it becomes necessary to return the service tool for repair, contact your local distributor for more information.