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## 1. Safety Precautions and Warnings

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

- Always perform automotive testing in a safe environment.
- 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.
- Put blocks on drive wheels and never leave vehicle unattended while running tests.
- 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 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.
- Don't connect or disconnect any test equipment with ignition on or engine running.
- Keep the scan tool dry, clean and free from oil, water and grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.

## 2. Product Information 2.1 Tool Description



- LCD DISPLAY -- Indicates test results. Backlit, 128 x 64 pixel display with contrast adjustment.
- ② Y BUTTON -- Confirms a selection (or action) from a menu. When a DTC's definition covers more than one screen, it is used to move down to the next screen for additional data.
- ③ N BUTTON -- Cancels a selection (or action) from a menu or returns to the menu. It is also used to set up the unit when being pressed and held for at least 3 seconds.

- ⑤ ★DOWN SCROLL BUTTON -- Moves down through menu and submenu items in menu mode. When more than one DTC is retrieved, moves down through the current screen to the next screens for additional DTCs and definitions.
- OBD II CONNECTOR -- Connects the scan tool to the vehicle's Data Link Connector (DLC).

## 2.2 Specifications

- 1) Display: Backlit, 128 x 64 pixel display with contrast adjustment
- 2) Operating Temperature: 0 to 50°C (32 to 122 F°)
- 3) Storage Temperature: -20 to 70°C (-4 to 158 F°)
- 4) External Power: 8.0 to 15.0 Volts provided via vehicle battery
- 5) Dimensions:

Length	Width	Height
178 mm (7.00")	95 mm (3.75")	34 mm (1.35")

6) NW: 0.70kg (1.54lb), GW: 1.0kg(2.20lb)

#### **2.3 Accessories Included**

- 1) User's Manual -- Instructions on tool operations
- 2) **OBD2 cable** -- Provides power to tool and communicates between tool and vehicle
- 3) USB Cable -- Used to upgrade the scan tool
- 4) Carry Case -- A nylon case to store the scan tool when not in use.

#### 2.4 Navigation Characters

Characters used to help navigate the scan tool are:

- 1) "▶" -- Indicates current selection.
- 2) "↓" -- A flashing down arrow indicates additional information is available on the next screen.

- 3) "↑" -- A flashing up arrow indicates additional information is available on the previous screen.
- 4) "pd" -- Identifies a pending DTC when viewing DTCs.

## 2.5 Keyboard

No solvents such as alcohol are allowed to clean the keypad or display. Use a mild nonabrasive detergent and a soft cotton cloth. Do not soak the keypad as the keypad is not waterproof.

#### 2.6 Power

The external power of the scan tool is provided via the vehicle Data Link Connector (DLC). Just follow the steps below to turn on the scan tool:

- 1) Connect the OBD II Cable to scan tool.
- 2) 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.
- 3) Plug OBD II Cable to the vehicle's DLC.

## 2.7 Product Setup

The scan tool allows you to make the following adjustments and settings:

- 1) Contrast Adjustment: Adjusts the contrast of the LCD display.
- 2) **Display Test:** Tests the LCD display.
- 3) Keyboard Test: Tests the keyboard.

#### To enter the setup menu mode

1) From the keyboard: Press and hold the N button for at least 3 seconds until the System Setup menu shows up. Follow the instructions to make adjustments and settings as described in the following setup options.



2) From the Main Menu: Use the UP/DOWN Scroll Buttons to select System Setup and then press the Y button. Follow the instructions to make adjustments and settings as described in the following setup options.



#### **Contrast Adjustment**

1) From the **System Setup** menu, use the **UP/DOWN** scroll buttons to select **Contrast**, and press the **Y** button.



From the **Contrast** menu, use the **UP/DOWN** scroll buttons to increase or decrease the contrast.



- 2) Press the Y button to save your selection and return to previous menu.
- 3) Press the N button to return to previous menus.

#### **Display Test**

#### The Display Test is used to check the LCD display.

1) From the **System Setup** menu, use the **UP/DOWN** scroll buttons to select **Display Test** and press the **Y** button.



2) Press the Y button again to start test. Look for missing spots in the solid black characters.



3) When completed, press the N button to return.

## **Keyboard Test**

The Keyboard Test is used to verify that the keys are functioning properly.

1) Use the UP/DOWN scroll buttons to select Keyboard Test from System Setup menu, and then press Y button.



2) Press any key to start test. When you press a key, the key name should be observed on the display. If the name does not show up, then the key is not functioning properly.



3) Double press N to return to the previous menu.

#### 2.8 Vehicle Coverage

The MaxScan VAG405 VW/AUDI Code Scanner is specially designed to work with most Volkswagen and Audis sold worldwide of 1990 or newer models. If a VW/AUDI has a 16-pin "OBD-II style" Data Link Connector (DTC), the code reader will certainly work. If it has an old-style 2x2 Data Link Connector (DTC), then it depends on whether there are 4 or 3 wires connecting to the pins. If there are 4 wires, each connecting a pin, then it will work. If there are only 3 wires, leaving one pin disconnected, then it will not work.

For VW/AUDI with old-style 2x2 Data Link Connector (DTC), you need to have a 2x2 cabling adapter which is not included in this product package.

# 3. Operating Instructions

## **3.1VW/AUDI Diagnostics**

#### **Reading Codes**

# CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

- 1) Turn the ignition off.
- 2) Locate the vehicle's 16-pin Data Link Connector (DLC).
- 3) Plug the OBDII connector to the vehicle's DLC.
- 4) Turn the ignition on. But do not start the engine.
- 5) Press the Y button. The Main Menu will be observed on the display.
- 6) Use the **UP/DOWN** scroll buttons to select **VW/AUDI** from the menu and press the **Y** button.



7) Use the **UP/DOWN** scroll buttons to select the system from the **Select System** menu and press the **Y** button.



- If the scan tool fails to communicate with the selected vehicle's ECU (Electronic Control Unit), a "LINK ERROR!" message shows up on the display.
- $\checkmark$  Verify that the ignition is ON;
- ✓ Check if the scan tool's OBD II connector is securely connected to the vehicle's DLC;
- $\checkmark$  Verify that the module is supported;
- ✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from step 5.
- If the "LINK ERROR" message does not go away, then there might be problems for the scan tool to communicate with the module being tested. The most common cause is that the scanned module is not supported on the vehicle.
- The numbers (01, 02, 15, 03, 08, etc) in front of the system names refer to the physical addresses assigned to the systems, not the sequence of the systems to be arranged.
- 8) Select **Read Codes** from the **Select Function** menu and press the **Y** button.



- If there are no Diagnostic Trouble Codes present, the display will indicate "NO CODES ARE STORED IN THE MODULE!"
- If there are any Diagnostic Trouble Codes present, the DTC number and its definition will show on the LCD display.
- The subcode, the communication protocol, the sequence of the DTC currently being observed and the total number of codes detected will be observed on the upper right hand corner of the display.

- When a DTC's definition covers more than one display screen, use the Y button, as necessary, to view any additional information.
- If the DTC definition is not available, an advisory message prompting you to refer to the vehicle service manual will be observed on the display.
- If more than one DTC is found, use the **UP/DOWN** scroll buttons, as necessary, until all the codes have been shown up.

## **Erasing Codes**

CAUTION: Erasing the Diagnostic Trouble Codes may allow the scan tool to delete not only the codes from the vehicle's on-board computer, but also "Freeze Frame" data and manufacturer specific enhanced data. Further, the I/M Readiness Monitor Status for all vehicle monitors is reset to Fail status. Do not erase the codes before the system has been checked completely by a technician.

 If you decide to erase the DTCs, use the UP/DOWN scroll buttons to select Erase Codes from Select Function menu and press the Y button.



- If the scan tool is not connected or no communication is established with the vehicle yet, then refer to **Reading Codes** from 1 to 7 at Paragraph 3.1.
- 2) A warning message comes up asking for your confirmation.



- 3) If you do not want to proceed with erasing the codes, press the N button to exit. A message of "command cancelled" will show up.
- 4) If you do wish to proceed to erase the codes, then press the Y button.
- 5) If the codes are cleared successfully, an "ERASE DONE!" confirmation message will show on the display. Press any button to return to the previous menus.
- 6) If the codes are not cleared, then an "ERASE FAILURE!" message will appear. Press the N button to return to previous menus.

#### **Viewing ECU Information**

1) To view **ECU Information**, use the **UP/DOWN** scroll buttons to select **ECU Information** from **Select Function** menu and press the **Y** button.



• If the scan tool is not connected or no communication is established with the vehicle yet, then refer to **Reading Codes** from 1 to 7 at Paragraph 3.1.



- If there is no ECU Information available, a warning message shows on the display.
- 2) Press the N button to return to previous menus.

#### **Readiness Test**

Important: The Readiness Test function is used to check the operations of the Emission System on OBD2/EOBD compliant vehicles. It is an excellent function to use prior to having a vehicle inspected for compliance to an emissions program.

- "Pass" -- Indicates that a particular monitor being checked has completed its diagnostic testing.
- "Fail" -- Indicates that a particular monitor being checked has not completed its diagnostic testing or the monitor is not supported on that vehicle.
- 1) Use the UP/DOWN scroll buttons to select Readiness Test from Select Function menu and press the Y button.



- If the scan tool is not connected yet, then refer to **Reading Codes** from 1 to 7 at Paragraph 3.1.
- 2) Use the **UP/DOWN** scroll buttons, as necessary, to view the status of the following monitors:
  - EGR Sys.-- EGR System Monitor
  - O2 Sensor(s) -- O2 Sensors Monitor
  - Catalyst -- Catalyst Monitor
  - EVAP Sys. -- Evaporative System Monitor
  - Heated O2 --O2 Sensor Heater Monitor
  - Sec Air Inject -- Secondary Air Monitor
  - A/C -- A/C system Monitor
  - Catalytic Conv. -- Catalytic Convertor Monitor

Readines	
EGR Sys. Heated O2 O2 Sensor(s) A/C Sec. Air Inject EVAP Sys.	Pass Pass Pass Pass Pass Pass Fail

3) Press the N button to return to previous menus.

## **3.2OBDII/EOBD Diagnostics**

## **Reading Codes**

CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

- 1) Turn the ignition off.
- 2) Locate the vehicle's 16-pin Data Link Connector (DLC).
- 3) Plug the OBDII connector to the vehicle's DLC.
- 4) Turn the ignition on. But do not start the engine.
- 5) Press the Y button. The Main Menu will be observed on the display.
- 6) Use the **UP/DOWN** scroll buttons to select **OBDII/EOBD** from the menu.



 Press the Y button. A sequence of messages showing the OBDII/EOBD protocols will be observed on the display until the vehicle protocol is detected.

- If the scan tool fails to communicate with the vehicle's ECU (Engine Control Unit), a "LINK ERROR!" message shows up on the display.
- $\checkmark$  Verify that the ignition is ON;
- ✓ Check if the scan tool's OBD II connector is securely connected to the vehicle's DLC;
- ✓ Verify that the vehicle is OBDII/EOBD compliant;
- ✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from step 5.
- If the "LINK ERROR" message does not go away, then there might be problems for the scan tool to communicate with the vehicle. Contact your local distributor or the manufacturer's customer service department for assistance.
- 8) After the vehicle protocol is displayed on the screen, press any key or wait about 2 seconds for the **OBDII/EOBD DIAG**. menu to come up.
- 9) Use the **UP/DOWN** scroll buttons to select **Read Codes** from the menu and press the **Y** button.



- If there are no Diagnostic Trouble Codes present, the display will indicate "NO CODES ARE STORED IN THE MODULE!"
- If there are any Diagnostic Trouble Codes present, the Fault Codes and Pending Codes will be reported on the display.



- The DTC number will appear on the upper left hand corner and its definition will show on the body of screen.
- The type of code (Generic or Manufacturer specific), the vehicle protocol, the sequence of the DTC currently being observed, the total number of codes detected and the module ID will be observed on the upper right hand corner of the display.
- If the code being displayed is a pending code, the **Pd** icon will be observed next to the DTC number on the upper right hand corner of the display.
- When a DTC's definition covers more than one display screen, use the Y button, as necessary, to view any additional information.
- If the retrieved DTCs contain any manufacturer specific or enhanced codes, you will be prompted to refer to the CD DTC library or the vehicle service manual to view the DTC definitions.
- 10) If more than one DTC is found, use the **UP/DOWN** scroll buttons, as necessary, until all the codes have been shown up.

#### **Erasing Codes**

1) If you decide to erase the DTCs, use the **UP/DOWN** scroll buttons to select **Erase Codes** from the **OBDII/EOBD DIAG.** menu and press the **Y** button.



- If the scan tool is not connected or no communication is established with the vehicle yet, then refer to **Reading Codes** from 1 to 8 at Paragraph 3.2.
- 2) A warning message comes up asking for your confirmation.



- If you do not want to proceed with erasing the codes, press the N button to exit. A message of "command cancelled" will show up.
- 4) If you do wish to proceed to erase the codes, then press the Y button.
- 5) If the codes are cleared successfully, an "ERASE DONE!" confirmation will show on the display. Press any button to return to previous menus.
- 6) If the codes are not cleared, then an "ERASE FAILURE!" message will appear. Press the N button to return to previous menus.

#### **3.3Oil Service**

- 1) Turn the ignition off.
- 2) Locate the vehicle's 16-pin Data Link Connector (DLC).

- 3) Plug the OBDII connector to the vehicle's DLC.
- 4) Turn the ignition on. But do not start the engine.
- 5) Press the Y button. The Main Menu will be observed on the display.
- 6) Use **UP/DOWN** scroll button to select **Oil Service** from the menu, and press the **Y** button.



- If the scan tool fails to communicate with the vehicle, a "LINK ERROR!" message shows up on the display.
- $\checkmark$  Verify that the ignition is ON;
- ✓ Check if the scan tool's OBD II connector is securely connected to the vehicle's DLC;
- ✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back on.
- If the "LINK ERROR" message does not go away, then there might be problems for the scan tool to communicate with the vehicle. Contact your local distributor or the manufacturer's customer service department for assistance.

#### A. Automatic Vehicle Detect

1) Use UP/DOWN scroll button to select All, and press Y button.



• All option can be used to detect all VAG vehicles before and after 2000 automatically.

#### **Automatic Services Detect**

The Auto Detect function is used to detect services automatically.

2) Use **UP/DOWN** scroll button to select **Auto Detect** and press **Y** button to confirm.



3) Wait a few seconds till the following screen shows.



4) Use **UP/DOWN** button to select oil type that your vehicle uses and press **Y** button.



- Different vehicle supports different oil service functions, so the displayed functions vary from one vehicle to another.
- 5) Select the oil service function that your vehicle supports and press **Y** button. Wait a few seconds while the scan tool is performing service resetting.



6) A message "RESET OK" comes up, indicating oil service reset is completed.



7) If the vehicle can not be detected automatically, following screen shows. You need to perform oil service setup manually.



8) Wait a few seconds or press any key to start reading channel data.

Manual
Reading Channel Data
-Please Wait-

9) Use UP/DOWN button to change set value.



- x/x to the upper right part of the screen indicates total number of supported service channels and the sequence of current channel.
- 10) Use N button to move to next setup screen.



- Different vehicle supports different oil service channels, so retrieved channel numbers vary from one vehicle to another. Normally, a vehicle supports 1-5 channels.
- "Current Value" is the value of the most recent setup retrieved by the scan tool. If you change your mind after making new setups, it can be used to reset all changed values to the original ones. Write down this value before making any changes.
- 11) Use UP/DOWN scroll button to select Save and press Y button to save your settings.



- If you want to continue to set values, use UP/DOWN scroll button to select Back and press Y button to return to continue setup. If you want to cancel all setups, use UP/DOWN scroll button to select Exit and press Y button, or simply press N button to exit.
- 12) Wait a few seconds till the "RESET OK!" message comes up. Press any key to return to **Main Menu**.



#### **Resetting Longlife Oil Service**

The Longlife Oil function is used to reset long life oil service.

1) Use **UP/DOWN** scroll button to select **Longlife Oil** from the menu, and press **Y** button.



2) Use UP/DOWN scroll button to select Service Reset from Longlife Oil menu, and press Y button.



3) Press any key to return to Longlife Oil menu.



 To set oil type, use UP/DOWN scroll button to select Set Oil Type from Longlife Oil menu, and press Y button.



- 5) Use **UP/DOWN** scroll button to select the oil type your vehicle uses.
- 6) Press any key to return to **Longlife Oil** menu.



 To view oil type, use UP/DOWN scroll button to select View Oil Type from Longlife Oil menu, and press Y button.



8) View oil type on screen and press any key to return to Lifelong Oil menu.



#### **Resetting Non Longlife Oil Service**

The Non Longlife Oil function is used to reset non long life oil service.

 To reset non longlife oil service, use UP/DOWN scroll button to select Non Longlife Oil from the Oil Service menu, and press Y button.



2) Use UP/DOWN scroll button to select Service Reset from Non Longlife Oil menu, and press Y button.



3) Press any key to return to previous menu.



#### **Setting Inspection Interval**

The **Set Insp. Interval** function is used to set oil service interval of different channels.

1) Use UP/DOWN scroll button to select Set Insp. Interval, and press Y button.



2) Wait a few seconds till the following screen shows.



3) If the oil service reset is not automatically performed by the scan tool, the following screen appears. You need to perform manual setup.

Manual
Reading Channel Data
-Please Wait-

4) Use UP/DOWN scroll button to change set value.



5) Use N button to move to next setup screen.



6) Use UP/DOWN scroll button to select Save and press Y button to save your settings.



7) Press any key to return to Main Menu.



• If you want to continue to set values, use UP/DOWN scroll button to select **Back** and press Y button to continue to change set values. If you want to cancel all setups, use UP/DOWN scroll button to select **Exit** and press Y button, or simply press N button to exit.

#### **B. Manual Vehicle Selection**

1) If you want to select vehicle manually, use UP/DOWN scroll button to select Oil Service from Main Menu, and press the Y button.



2) Use **UP/DOWN** scroll button to select vehicle make, and press **Y** button to confirm.



3) Use **UP/DOWN** scroll button to select vehicle model year, and press **Y** button to confirm.



4) Use **UP/DOWN** scroll button to select the oil service function that your vehicle supports.



5) Wait a few seconds till the following screen appears.



- If a message "Service reset failed!" comes up, repeat the procedure from Step 3 or use Auto Detect to detect service automatically.
- If the message "Service reset failed!" does not go away,
- $\checkmark$  Verify that the ignition is ON;
- ✓ Check if the scan tool's OBD II connector is securely connected to the vehicle's DLC;
- ✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back on.
- If the scan tool still fails to perform oil service reset, contact your local distributor or the manufacturer's customer service department for assistance.

## 4. Warranty and Service

## 4.1 Limited One Year Warranty

Autel warrants to its customers that **this prod**uct 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 Autel under the Warranty is limited to either the repair or, at the option of Autel, replacement of the scan 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) Autel shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the scan 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. Autel reserves the right to make changes at any time without notice.

## **4.2 Service Procedures**

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

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