Autel MS309

Autel MaxiScan MS309 OBD2 Scanner User Manual

Model: **MS309** | Brand: **Autel**

Your essential tool for vehicle diagnostics.

1. Introduction

The Autel MaxiScan MS309 is a compact and user-friendly OBD2/EOBD diagnostic scan tool designed to quickly and efficiently troubleshoot vehicle issues. This device allows you to read and clear diagnostic trouble codes (DTCs), view freeze frame data, check I/M readiness status, and retrieve vehicle information, helping you identify the cause of the Check Engine Light (MIL) and perform basic emission-related repairs.

It is compatible with all OBDII compliant vehicles, including those manufactured in Europe after 2006, Asia after 2009, and America after 1996, supporting all major OBD2 protocols.

2. Safety Information

Always observe the following safety precautions when operating the MaxiScan MS309:

- Do not attempt to operate or service the tool while driving. Always perform diagnostic tests in a safe environment.
- Wear appropriate eye protection (safety goggles) when working around vehicles.
- Keep clothing, hair, hands, tools, test equipment, etc., away from all moving or hot engine parts.
- Ensure the vehicle is parked on a level surface with the parking brake engaged.
- To prevent damage to the scan tool or vehicle, ensure the vehicle's ignition is OFF before connecting or disconnecting the scan tool.
- Do not expose the tool to moisture or extreme temperatures.

3. Product Overview

3.1. Device Layout

The Autel MaxiScan MS309 features a simple design with a clear display and intuitive buttons for easy navigation.



Image: Autel MaxiScan MS309 showing its two main control buttons: ENTER/Exit and SCROLL.

- **LCD Display:** Shows test results, menu options, and operating status.
- **ENTER/Exit Button:** Confirms a selection from a menu list or returns to the previous menu.
- **SCROLL Button:** Scrolls through menu items. Also used to enter the system setup menu when pressed.
- **OBD II Connector:** Connects the tool to the vehicle's Data Link Connector (DLC).

3.2. Key Features

- Reads and clears generic (P0, P2, P3, and U0) and manufacturer-specific (P1, P3, and U1) codes.
- Turns off Check Engine Light (MIL), clears codes, and resets monitors.
- Displays DTC definitions directly on the screen.
- Views freeze frame data, capturing vehicle conditions at the time of an emission-related fault.
- Retrieves I/M Readiness status (emissions readiness) to help pass smog checks.
- Retrieves Vehicle Information (VIN, CIN, CVN).
- Supports CAN (Controller Area Network) and all other current OBD-II protocols.
- No batteries needed; powered via detachable OBD II cable.

4. Setup

4.1. Connecting the Tool

The MaxiScan MS309 is designed for simple plug-and-play operation. It draws power directly from the vehicle's OBDII port.

1. Turn the vehicle's ignition OFF.
2. Locate the vehicle's 16-pin Data Link Connector (DLC). This is usually located under the dashboard on the driver's side.
3. Plug the OBD II cable of the MaxiScan MS309 into the vehicle's DLC. Ensure a firm connection.
4. Turn the vehicle's ignition ON (do not start the engine). The MaxiScan MS309 will automatically power on and begin linking to the vehicle.



Image: The 16-pin OBDII connector of the MaxiScan MS309, ready for connection to the vehicle's DLC.

Once connected, the tool will display "Linking to vehicle" and then "CAN OBDII" or the detected protocol. If a connection error occurs, ensure the ignition is on and the connection is secure.

5. Operating Instructions

After successful connection, the main menu will appear. Use the**SCROLL** button to navigate through options and the **ENTER/Exit** button to select an option or return to the previous screen.

5.1. Read Codes

This function retrieves Diagnostic Trouble Codes (DTCs) from the vehicle's computer (ECU).

1. From the main menu, select "1) Read Codes" and press**ENTER/Exit**.
2. The tool will display any stored or pending codes along with their definitions.
3. Use the **SCROLL** button to view multiple codes if present.



Image: The MS309 displaying a P0303 code, indicating a cylinder 3 misfire.

5.2. Erase Codes

This function clears all diagnostic trouble codes and other diagnostic data from the vehicle's ECU. This will also turn off the Check Engine Light (MIL).

1. From the main menu, select "2) Erase Codes" and press**ENTER/Exit**.

2. A confirmation message will appear. Press **ENTER/Exit** to confirm.
3. The tool will indicate "Erase Done!" once the codes are cleared.



Image: The MS309 screen showing "Erase Done!" after successfully clearing fault codes, and a visual representation of the Check Engine Light turning off.

Note: *Clearing codes does not fix the underlying problem. If the fault is not repaired, the Check Engine Light will likely illuminate again.*

5.3. View Freeze Frame Data

When an emission-related fault occurs, the vehicle's computer records certain operating conditions. This data is called Freeze Frame Data.

1. From the main menu, select "3) View Freeze Frame" and press **ENTER/Exit**.
2. The tool will display various parameters such as engine RPM, vehicle speed, coolant temperature, fuel system status, etc., recorded at the moment the fault occurred.
3. Use the **SCROLL** button to view all available data.

5.4. I/M Readiness Status

The I/M Readiness function checks the operation of the emission system on OBD2 compliant vehicles. It indicates whether the various emission-related monitors on the vehicle have run and completed their diagnosis.

1. From the main menu, select "4) I/M Readiness" and press **ENTER/Exit**.
2. The tool will display the status of various monitors (e.g., Misfire Monitor, Fuel System Monitor, O2 Sensor Monitor).
3. "OK" or "Complete" indicates the monitor has run. "INC" or "Incomplete" indicates the monitor has not yet run.

5.5. View Vehicle Information

This function allows you to retrieve the Vehicle Identification Number (VIN), Calibration ID (CIN), and Calibration Verification Number (CVN) of the vehicle.

1. From the main menu, select "5) Vehicle Info" and press **ENTER/Exit**.
2. The tool will display the available vehicle information.

6. Troubleshooting

If you encounter issues while using your MaxiScan MS309, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Tool fails to power on.	Loose connection; vehicle ignition off; blown fuse in vehicle's DLC.	Check DLC connection; turn ignition ON; check vehicle's fuse box for blown fuses.
Linking error / Communication error.	Incorrect protocol; non-OBDII compliant vehicle; faulty DLC.	Ensure vehicle is OBDII compliant; verify DLC connection; try on another OBDII compliant vehicle.
Codes cannot be cleared.	Ignition not ON; underlying fault still present.	Ensure ignition is ON; repair the fault causing the code before attempting to clear.
Screen is blank or frozen.	Software glitch; power interruption.	Disconnect and reconnect the tool; if issue persists, contact support.

7. Maintenance

To ensure the longevity and optimal performance of your MaxiScan MS309, follow these maintenance guidelines:

- **Cleaning:** Use a soft, damp cloth with mild detergent to clean the exterior of the tool. Do not use abrasive cleaners or solvents.
- **Storage:** Store the tool in a dry, clean environment, away from direct sunlight, extreme temperatures, and excessive moisture.
- **Cable Care:** Avoid bending or twisting the OBD II cable excessively. Do not pull the cable to disconnect the tool; always grasp the connector.
- **No User Serviceable Parts:** The MaxiScan MS309 contains no user-serviceable parts. Do not attempt to disassemble the unit.

8. Specifications

Feature	Detail

Feature	Detail
Display	Backlit LCD, 128x64 pixels
Operating Temperature	0 to 60°C (32 to 140°F)
-20 to 70°C (-4 to 158°F)	Storage Temperature
External Power	8.0 to 18.0 V power provided via vehicle battery
Dimensions (L x W x H)	11.03 cm x 6.95 cm x 2.02 cm (4.34 in x 2.74 in x 0.80 in)
Weight	180 g (0.4 lbs)
Supported Protocols	KWP2000, ISO2000, ISO9141, J1850 VPW, J1850 PWM, CAN



Image: Detailed dimensions of the Autel MaxiScan MS309.

9. Warranty and Support

The Autel MaxiScan MS309 comes with a 1-year hassle-free warranty from the seller. For any product-related inquiries, technical support, or warranty claims, please contact Autel customer service.

Contact Information:

Email: Auteldirect@outlook.com

Please have your product model (MS309) and purchase details ready when contacting support.

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