

**USER MANUAL**

**MODE D'EMPLOI / MANUAL DEL USUARIO**



*Outils de diagnostic / Herramientas de diagnóstico*

**BATTERY TEST**

**EVAP O2 SENSOR TEST**

**OBDII SCANNER DIAGNOSTIC TOOL**

**MP69033 Pro**

**MOTOPOWER** | *DIAGNOSIS  
REPAIR*



# Safety Precautions

*This manual describes common test procedures used by experienced service technicians. Many test procedures require precautions to avoid accidents that can result in personal injury, and/or damage to your vehicle or test equipment. Always read your vehicle's service manual and follow its safety precautions before and during any test or service procedure. Always observe the following general safety precautions:*



When an engine is running, it produces carbon monoxide, a toxic and poisonous gas. To prevent serious injury or death from carbon monoxide poisoning, operate the vehicle **ONLY** in a well-ventilated area.



To protect your eyes from propelled objects and hot or caustic liquids, always wear approved safety eye protection.



When an engine is running, many parts (such as the coolant fan, pulleys, fan belt etc.) turn at high speed. To avoid serious injury, always be aware of moving parts. Keep a safe distance from these parts.



Engine parts become very hot when the engine is running. To prevent burns, avoid contact with hot engine parts.



Before starting an engine for testing or troubleshooting, make sure the parking brake is engaged. Put the transmission in park (for automatic transmission) or neutral (for manual transmission).



Connecting or disconnecting test equipment when the ignition is **ON** can damage test equipment and the vehicle's electronic components. Turn the ignition **OFF** before connecting the device from the vehicle's Data Link Connector.



The vehicle's battery produces highly flammable hydrogen gas. To prevent an explosion, keep all sparks, heated items and open flames away from the battery.

# INTRODUCTION

LCD Screen



Read DTC



Clear DTC



Freeze



I/M



Vehicle Info



Live Data



RT Curve



O2 Sensor



EVAP

MOTOPOWER®

Battery Test

Diagnose Trouble Code

BAT

DTC



Back / Exit



OK

Confirm

Up and Down

# On-Board Diagnostics (OBD) II

## What is OBD?

**On-Board Diagnostics (OBD)** is an automotive electronic system, which is capable of a self-diagnosis, indicating and reporting the possible problem within the vehicle. It gives you or the technician the opportunity to easily access the information about the 'health' of your car and solve the problem.

The OBD II system is designed to monitor emission control systems and key engine components by performing either continuous or periodic tests of specific components and vehicle conditions. When a problem is detected, the OBD II system turns on a warning lamp (MIL) on the vehicle instrument panel to alert the driver typically by the phrase "Check Engine" or "Service Engine Soon". The system will also store important information about the detected malfunction so that a technician can accurately find and fix the problem. Here below follow three pieces of such valuable information:

- 1) Whether the Malfunction Indicator Light (MIL) is commanded on or off.
- 2) Which, if any, Diagnostic Trouble Codes (DTCs) are stored.
- 3) Readiness Monitor Status.

## How Does it Work?

There are multiple sensors in your vehicle and each sensor sends signal to your vehicle's computer the Electronic Control Unit (ECU). The ECU uses the signal/information and adjusts different elements in order.

# DIAGNOSTIC TROUBLE CODES (DTCs)

OBDII Diagnostic Trouble Codes are codes that are stored by the on-board computer diagnostic system in response to a problem found in the vehicle.

These codes identify a particular problem area and are intended to provide you with a guide as to where a fault might be occurring within a vehicle.

OBDII Diagnostic Trouble Codes consist of a five-digit alphanumeric code. The first character, a letter, identifies which control system sets the code. The other four characters, all numbers, provide additional information on where the DTC originated and the operating conditions that caused it to be set.

## DIAGNOSTIC TROUBLE CODES EXAMPLE

SYSTEMS	TYPE OF CODE	DEFINE THE EXACT FAULT CODE IN QUESTION
B = Body C = Chassis P = Powertrain U = Network	0 = Standardised (SAE) fault codes 1 = Manufacturer specific codes	

**P 0 2 0 2**

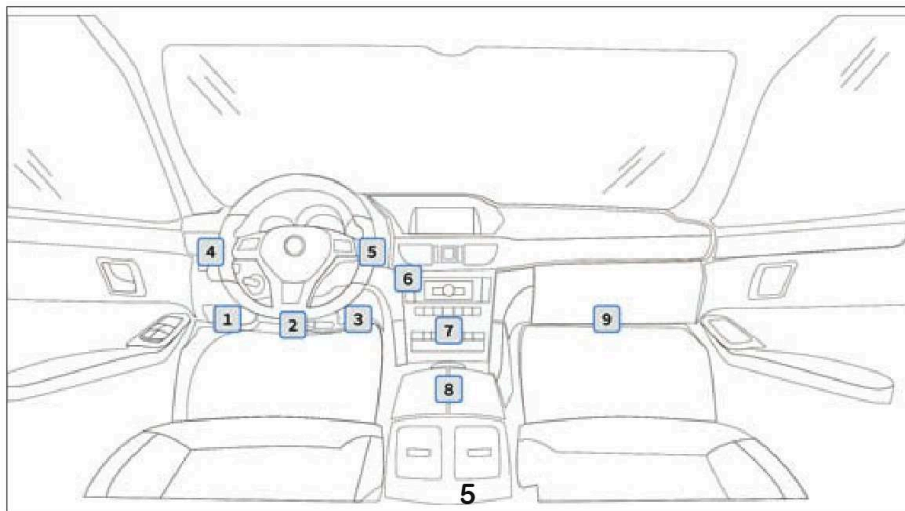
### WHICH OF THE CAR SYSTEMS IS AT FAULT

- |                                       |                                             |
|---------------------------------------|---------------------------------------------|
| 1 = Fuel and Air Metering             | 5 = Vehicle Speed Control and Idle Controls |
| 2 = Fuel and Air Metering             | 6 = Computer Output Circuits                |
| 3 = Ignition System or Engine Misfire | 7 = Transmission Controls                   |
| 4 = Auxiliary Emission Controls       | 8 = Transmission Controls                   |

## Location of the Data Link Connector (DLC)

The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-cavity connector where diagnostic scan tools interface 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 the Data Link Connector is not located under the dashboard, a label should be there revealing its 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.



# Connection

## CODE RETRIEVAL PROCEDURE

**⚠** *Never replace a part based only on the DTC definition. Each DTC has a set of testing procedures, instructions and flow charts that must be followed to confirm the location of the problem. This information is found in the vehicle's service manual. Always refer to the vehicle's service manual for detailed testing instructions.*

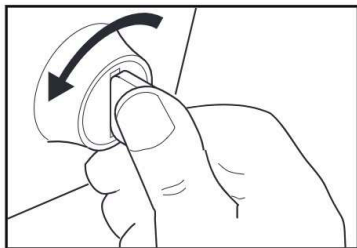


*Check your vehicle thoroughly before performing any test.*

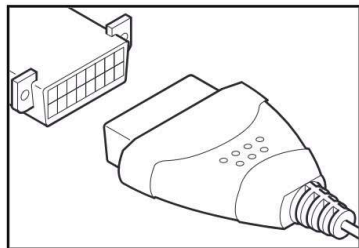


**ALWAYS** *observe safety precautions whenever working on a vehicle. See Safety Precautions on page 1 for more information.*

1. Turn the ignition off.



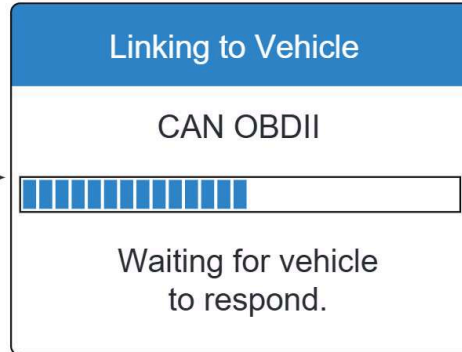
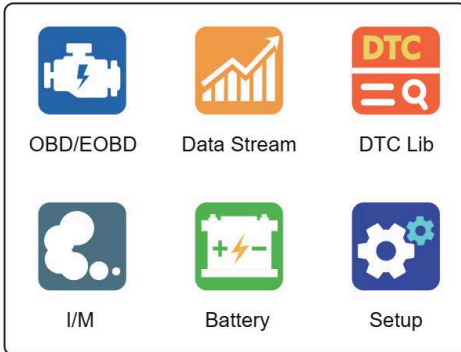
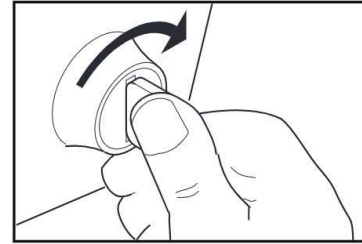
2. Locate the vehicle's 16-pin Data Link Connector (DLC). Connect the Code Reader's cable connector to the vehicle's DLC.



- *If you have problems connecting the cable connector to the DLC, rotate the connector 180° and try again.*
- *If you still have problems, check the DLC on the vehicle and on the Code Reader. Refer to your vehicle's service manual to properly check the vehicle's DLC.*

- After the Code Reader's test connector is properly connected to the vehicle's DLC, the screen will turn on to confirm a good power connection.

3. Turn the ignition on. DO NOT start the engine.
4. Enter the **OBD II** menu to connect the Code Reader with the vehicle's computer.



- The scanner will automatically pair the protocol in seconds.
- ↓
- Press OK button to check the system status.
- ↓
- Press OK button again to enter the OBD function menu.



## FAQ - CONNECTION

- If the **LCD display is blank**, it indicates there is **no power** at the vehicles's DLC.  
Check your fuse panel and replace any burned-out fuses.  
If replacing the fuse(s) does not correct the problem, see your vehicle's repair manual to locate the proper computer (PCM) fuse/circuit. Perform any necessary repairs before continuing.
- If the **connection fails**, it means that the Code Reader is unable to communicate with the vehicle's computer.

### ***Do the following:***

- Turn the ignition key off, wait for 5 seconds and turn the key back on to reset the computer.
- Disconnect the connection and replug the connector to make the connection tightly.
- Make sure your vehicle is OBD2 compliant.

*Most OBD2 won't connect because it has no power. However, if it has power but won't connect, you may want to check its connection to your entire system. In most cases, it can be a cabling problem, or the OBD2 itself isn't working.*

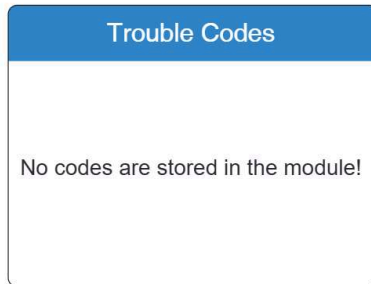
# OBD Functions - Read Codes



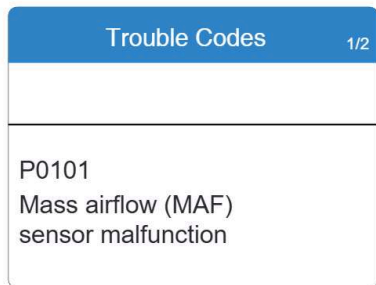
Select Read Codes to detect the fault codes stored in the vehicle's computer.



If there're no fault codes stored in the vehicle's computer.



If there're fault codes detected, the codes will display on the screen directly.



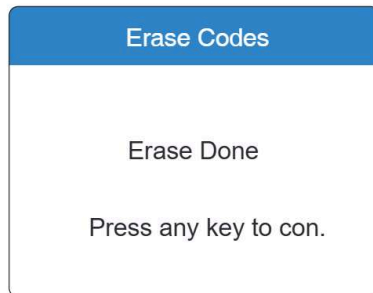
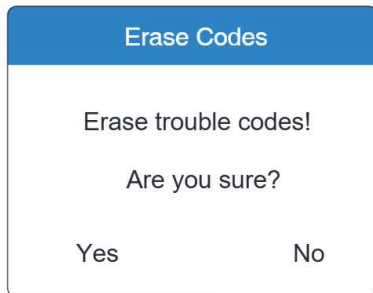
# OBD Functions - Erase Codes



When the Code Reader's ERASE function is used to erase the DTCs from the vehicle's on-board computer, "Freeze Frame" data and manufacturer-specific enhanced data are also erased.



If you plan to take the vehicle to a Service Center for repair, DO NOT erase the codes from the vehicle's computer. If the codes are erased, valuable information that might help the technician troubleshoot the problem will also be erased.



Erasing DTCs does not fix the problem(s) that caused the code(s) to be set. If proper repairs to correct the problem that caused the code(s) to be set are not made, the code(s) will appear again (and the check engine light will illuminate) as soon as the vehicle is driven long enough for its Monitors to complete their testing.

# OBDD Functions - Freeze Frame Data



## What is Freeze Frame Data?

In simple words, whenever the computer detects a fault and illuminates the CEL, it also clicks and stores freeze frame data related to the issue. This data is essentially a snapshot from a number of components and sensors. You can view this information to find the cause of the problem. It is also a legal requirement in some cases to capture and store emission-related information. This captured data is known as freeze frame data.

## How to Read Freeze Frame Data?

Your vehicle talks to you in a language of its own. You will need to understand this language to be able to read freeze frame data. You can search online for specific codes or try the DTC feature.

## How can I Clear Freeze Frame Data Using an OBD2 Scan Tool?

The system will automatically remove DTC data once your vehicle completes a specific number of good trips, i.e: trips without faults. You will also lose freeze frame data if there is no power supply to the PCM. Also, you can manually choose to delete this information by going into the system and delete the data with the scan tool.

# OBD Functions - I/M Readiness



## What is I/M Readiness?

Signals or codes for emission testing which state that all the vehicle's on-board emissions diagnostics have been run.

## How do I check my I/M readiness?

To check if the readiness codes are set, turn the ignition switch to the ON (II) position, without starting the engine. The Check Engine Light will come on for 20 seconds. If it then goes off, the readiness monitors are set. If it blinks five times, the readiness monitors are not set.

MIL Status	ON
Misfire Monitor	OK
Fuel System Mon	OK
Comp.Component	OK
Catalyst Mon	INC
Htd Catalyst	N/A

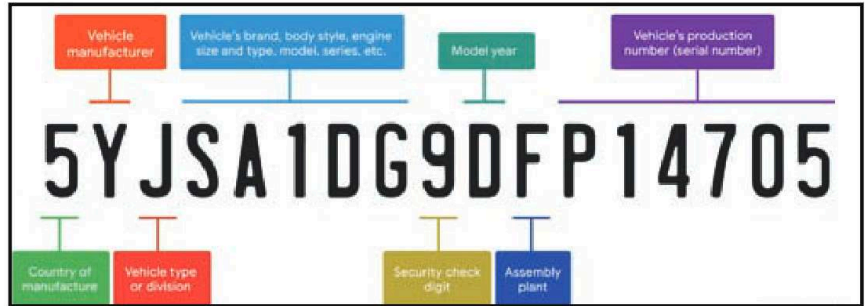
# OBD Functions - View Vehicle Information



## Vehicle Identification Number (VIN)

VIN stands for Vehicle Identification Number. A unique set of 17 numbers and letters, your VIN holds all kinds of information about your car, including the manufacturer, where and when the car was built and information about the car.

Vehicle Identification Number
Calibration Identifications
Calibration Verification Number



*Turn ignition on with engine off. (Press start button to turn ignition on, but don't start the engine.)*

Automatically read VIN. No need to choose car brands. For some old cars, the scanner may not support. These issues include an incompatible scanner tool, bad fuses, damage in the circuit board, ECU, and failed computer.

# OBID Functions - Live Data



## Real-time data view of vehicle operating condition

Live data gives you real-time feedback on some of the functions of your car. These include fuel trim and operating temperature values. This is one of the most useful features of OBD2 scanners.

FUELSYS2	N/A
LOAD_PCT(%)	15
ETC()	95
SHRTFT1(%)	90
LONGFT1(%)	90
SHRTFT2(%)	65

LONGFT2(%)	85
FRP(psi)	45
MAP(kPa)	55
RPM(r/min)	1560
SPEED(mph)	120
SPARKADV	15

# OBD Functions - O2 Sensor Test



## Oxygen sensor - O2 sensor

The O2 Sensor Test function lets you retrieve and view O2 sensor monitor test results for the most recently completed tests from the vehicle's on-board computer.

O2B4S2(V)	12
OBDSUPPORT	OBDII
O2SLOC	S1B-2--S2B
PTO	Act
EQ_RATB2S1	0.018
EQ_RATB2S2	0.018

FRP(psi)	105
FRP(psi)	120
EQ_RATB4S1	0.018
EQ_RATB4S2	0.018

OBD2 regulations require that applicable vehicles monitor and test operation of the oxygen (O2) sensors to identify problems that can affect fuel efficiency and vehicle emissions. These tests are performed automatically when engine operating conditions are within predefined limits. Results of these tests are stored in the on-board computer's memory.

# OBd Functions - O2 Sensor Test



## Evaporative Emission Control System

EVAP smoke testing is a diagnostic procedure used to identify leaks in the evaporative emission control system of a vehicle. It involves introducing a smoke-like vapor into the system to pinpoint any leaks that may be contributing to increased emissions.

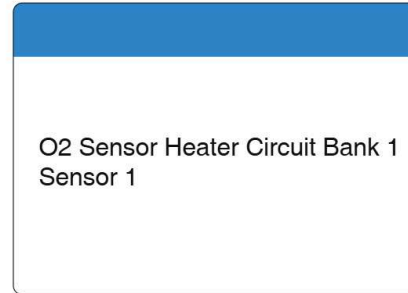
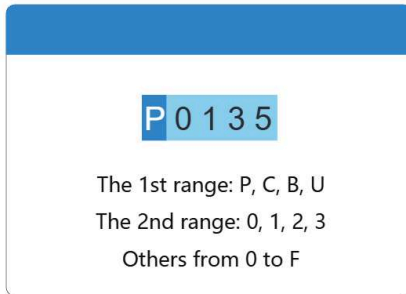
VPWR(V)	11.80
APP_D(%)	6.3

# DTC Library



**Search the DTC definition on the device directly.**

- 1) - Input the codes you would like to check as instruction.
- 2) - Press ENTER button to check the code meaning.

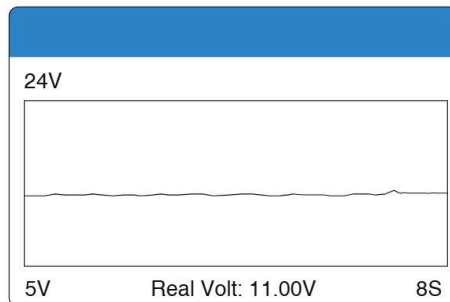
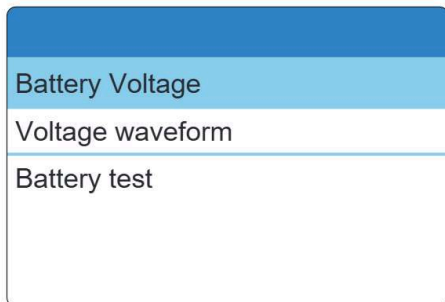


# Battery Test



Check the Battery real-time voltage wave.

Check the Battery Cranking performance .



## Battery Cranking Test

A cranking voltage test measures the battery's ability to supply adequate voltage to the starter motor when the engine is cranked. This test helps determine if the battery and starting system are functioning correctly. Proper voltage levels during cranking are vital for a smooth engine start and reliable vehicle operation.



*Follow the cranking test instructions displayed on the screen and operate step by step.*

# Setting



## Setting

Set the language and Unit of measure.

Language
Unit of Measure

Deutsch
Dutch
English
Español
Français
Italiano
Русский

# Warranty & Service

## ■ Limited Two Years Warranty

THIS WARRANTY IS EXPRESSLY LIMITED TO PERSONS WHO PURCHASE THE PRODUCT FOR PURPOSES OF RESALE OR USE IN THE ORDINARY COURSE OF THE BUYER'S BUSINESS.

MOTOPOWER MP69033 CODE READER IS WARRANTED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR TWO YEARS FROM THE DATE OF PURCHASE.

This warranty does not cover any part that has been abused, altered, used for a purpose other than for which it was intended, or used in a manner inconsistent with instructions regarding use. The exclusive remedy for any automotive meter found to be defective is repair or replacement, and MOTOPOWER MP69041 code reader shall not be liable for any consequential or incidental damages.

## ■ Service Procedures

If you have any questions, please contact your local store, distributor or reseller for assistance.

# FAQ

## ■ Is the Scanner Powered by built-in battery?

No. It doesn't include any battery inside. It's powered by the OBD2 port of the vehicle directly. Just plug into the OBD2 port for operation.

## ■ Why does the screen not turn on when plug-in?

Check your fuses to see if any have gone bad. A blown-out fuse is one of the usual reasons why an OBD2 port isn't communicating. Remember that your car might have more than one fuse box.

## ■ If my OBD2 has power but won't connect, what should I do?

Most OBD2 won't connect because it has no power. However, if it has power but won't connect, you may want to check its connection to your entire system. In most cases, it can be a cabling problem, or the OBD2 itself isn't working. If the problem cannot be solved after reconnection, contact the MOTOPOWER customer service for assistance.

## ■ Does the obd2 scanner support abs, airbag/SRS?

It is able to read and clear check engine information which is part of OBDII system, but it cannot work with non-OBDII systems, including ABS, Airbag, etc.

## ■ Why the detected error codes cannot be erased?

When you find the fault codes, please fix the problem before erasing the codes. If the codes are erased without the problem fixed, the engine fault light may turn on again in the future.

## ■ Check engine light came on, but after hooking this up, it reads no codes. Why it can't find them?

- 1- The scanner is not compatible with the make or model of the car.
- 2- The vehicle is emitting emissions which are higher than the Environmental Protection Agency mandates.
- 3- There were codes erased without the problems being fixed. And the ECM was disabled and prevented from storing codes.

# Specification

- 1- Input Voltage: 8-18Volts DC
- 2- Screen Display: 2.8Inch TFT color LCD
- 3- Working Temperature: -20 to 65
- 4- Storage Temperature: -30 to 70
- 5- Compatibility: compatible with most cars since 1996 US, 2003 EU and 2008 Asian.
- 6- Protocols Supported:
  - 1)- SAE J1850 PWM (41.6Kbaud)
  - 2)- SAE J1850 VPW (10.4Kbaud)
  - 3)- ISO9141-2(5 baud init, 10.4Kbaud)
  - 4)- ISO14230-4 KWP (5 baud init, 10.4 Kbaud)
  - 5)- ISO14230-4 KWP (fast init, 10.4 Kbaud)
  - 6)- ISO15765-4 CAN (11bit ID, 500 Kbaud)
  - 7)- ISO15765-4 CAN (29bit ID, 500 Kbaud)
  - 8)- ISO15765-4 CAN (11bit ID, 250 Kbaud)
  - 9)- ISO15765-4 CAN (29bit ID, 250 Kbaud)

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