GENERAL

2 location of data link connector dlc autel scanner

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When you're tackling a vehicle's diagnostic issues, the first step is always to connect the scanner to the car's on board computer. For Autel scanners, the most common way to do this is via the Data Link Connector (DLC), also known as the OBD II port. But did you know that most modern cars actually have **two common locations** where the DLC can be found? Knowing where to look saves you time, frustration, and often the need for a professional diagnosis.

In this guide, we'll walk you through every detail you need to locate the DLC in your vehicle, how to use it with an Autel scanner, and troubleshooting tips if the connection isn't working. Whether you're a DIY enthusiast, a seasoned mechanic, or just curious about automotive diagnostics, this article will give you a clear, step by step roadmap.

What Is a Data Link Connector (DLC)?

The Data Link Connector is the interface that lets a diagnostic scanner communicate with a vehicle's Engine Control Unit (ECU) and other electronic modules. In the United States, the DLC follows the OBD II standard, which guarantees a 16 pin, standardized plug that can be used with any compatible scanner.

Key functions of the DLC include:

- Reading and clearing trouble codes
- Monitoring real time sensor data
- Performing bi directional tests (e.g., controlling a solenoid)
- Accessing manufacturer specific data streams

Because the DLC is the gateway to the vehicle's entire diagnostic ecosystem, locating it correctly is critical for any Autel scanner to function properly.

Why Knowing the DLC Location Matters for Autel Scanners

Autel scanners are designed to interface with the vehicle's OBD II system. If you plug the scanner into the wrong port or a non standard connector, the scanner may fail to detect the vehicle or may read incorrect data. Here are a few reasons why the correct DLC location matters:

1. Signal Integrity – The OBD II port is engineered to provide a clean, low noise connection. Using a non standard port can introduce interference.
2. Power Delivery – The DLC supplies 12 /V (or 5 /V in some cases) to the scanner. A faulty port may not provide sufficient power.
3. Manufacturer Compatibility – Some automakers use proprietary connectors or additional shielding. Knowing the exact location ensures you're using the right cable and adapter.
4. Time Efficiency – When you know the two common locations, you can quickly locate the port and start diagnostics, which is especially valuable in a busy workshop.

Common DLC Locations in Modern Vehicles

While the OBD II standard specifies a 16 pin connector, the physical placement of this port varies across

manufacturers and models. Below are the two most frequent locations you'll encounter:

1. Under the Dashboard, Near the Driver's Seat

Most cars place the DLC on the underside of the steering column or under the dash, just below the steering wheel. To find it:

- Look for a rectangular opening or a small, recessed panel.
- Feel for a 16 pin connector that's slightly recessed.
- Some vehicles cover the port with a removable plastic cap.

2. Under the Driver's Seat or Near the Center Console

In many SUVs, vans, and larger vehicles, the DLC is located under the driver's seat or in the center console area. This placement keeps the port out of sight and protects it from debris.

- Remove the seat cushion or lower the seat to access the port.
- Check for a small, rectangular opening on the floor or console.
- In some models, the port is tucked into a recessed area behind the center console.

Other less common locations include:

- Under the steering wheel (especially in older models)
- Near the glove compartment
- In the rear of the vehicle (rare, but found in certain luxury cars)

Step by Step Guide to Finding the DLC in Your Vehicle

Gather Your Tools

Before you start, make sure you have:

- Autel scanner and cable (or an OBD II adapter if your scanner uses a different connector)
- Flashlight or work light (to illuminate hidden ports)
- Multimeter (optional, for checking voltage if the scanner doesn't power up)
- Vehicle service manual (for model specific details)

Locate the OBD II Port

Follow these steps to find the port in most vehicles:

1. Check the driver's side floor – Look for a rectangular panel or a small opening. This is often the most common spot.
2. Inspect the steering column area – Some cars hide the port behind a removable cover near the steering wheel.
3. Look under the seat – Lift the seat cushion or lower the seat to reveal a hidden port.
4. Consult the owner's manual – Many manufacturers include a diagram of the OBD II location.

Confirm the Port Matches Autel Scanner Requirements

Once you find the port, ensure it's a standard 16 pin OBD II connector:

- Check the pin arrangement – it should match the standard 16 pin layout.
- Verify the port is not a proprietary or 4 pin connector.
- Use the Autel scanner's cable or adapter if the port is non standard.

If you're unsure, consult the Autel scanner's user manual or contact their support for the correct cable type.

Using Autel Scanners with Different DLC Types

Standard 16 Pin OBD II

Most vehicles use the 16 pin OBD II connector. Autel scanners designed for this standard will automatically detect the vehicle once plugged in. The scanner will:

- Read standard OBD II codes (P codes, C codes, B codes, and U codes)
- Display live data such as engine RPM, coolant temperature, and oxygen sensor readings
- Perform manufacturer specific functions if the scanner supports the vehicle's make

Proprietary Connectors

Some manufacturers, especially in Europe and Asia, use proprietary connectors. If your vehicle has one of these, you'll need an adapter that converts the proprietary plug to the 16 pin OBD II format. Autel offers a range of adapters for:

- BMW, Mercedes Benz, Audi, and other German brands
- Toyota, Honda, Nissan, and other Japanese brands with unique connectors
- Ford and GM vehicles with non standard DLCs

Always verify the adapter's compatibility before purchase.

Common Issues and Troubleshooting

Loose Connection

A loose or dirty connector can cause intermittent communication:

- Check that the scanner's plug is fully seated in the port.
- Clean the port and plug with a dry cloth or compressed air.
- Inspect for bent pins or debris.

Wrong Port

In some vehicles, there are multiple ports labeled OBD II. The scanner may not work if you plug into the wrong one:

- Double check the pin layout against the standard.
- Use the vehicle's service manual to confirm the correct port.
- Try both common locations if the first one fails.

Signal Interference

Electrical noise can corrupt data transmission:

- Use a shielded cable or an adapter with built in shielding.
- Ensure the vehicle's battery is fully charged.
- Check for other active electrical systems (e.g., aftermarket audio systems) that might be causing interference.

Advanced Tips for Professional Technicians

Using a Diagnostic Cable Extension

In some cases, the OBD II port is located far from the driver's seat, making a direct connection inconvenient. An extension cable allows you to:

- Keep the scanner in a convenient location.

- Reduce cable strain and wear.
- Maintain a clean workshop environment.

Mapping the Vehicle’s CAN Network

For complex vehicles with multiple CAN buses, advanced Autel scanners can map the network topology. This helps in:

- Identifying which modules are connected to which bus.
- Diagnosing communication issues between modules.
- Performing selective resets or updates on specific modules.

To map the network, use the scanner’s “Network Map” function, which automatically scans all buses and displays a visual representation.

Frequently Asked Questions (FAQ)

A: Verify that the plug is fully seated, check for a correct 16 pin port, and ensure the vehicle’s ignition is on.

A: Yes. The OBD II port supplies 12 /V, which powers the scanner’s internal electronics.

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