

Explanation of OBD II

Automotive On Board Diagnostics

Introduction

OBD, or On-Board Diagnostics is a system that allows for analysis of conditions with engine management and maintenance in motor vehicles. A connector is fitted to the vehicle allowing, a compatible diagnostic instrument or laptop computer to interface with the vehicle's electronics. The first version was OBD, or OBD I. Vehicles manufactured later than 1996 are fitted with OBD II connectors.

The connector

There is no international standard connector for OBD II. Australian vehicles use a 16-pin connector with a unique pin configuration (shown in Fig 1.)

Where is the connector located?

The connector must be located within one metre of the driver and must not require any tools to be revealed. Look under the dash and behind ashtrays and other accessory panels to find your OBD II connector.

The three flavours of OBD II

While the parameters, or readings required by OBD II regulations are uniform, vehicle manufacturers had some latitude in the communications protocol they used to transmit those readings to scanners. Naturally, each felt they had the best way, so there are three different OBD II communications protocols in use.

What communications protocol does my vehicle use?

J1850 VPW—The connector should have metallic contacts in pins 2, 4, 5, and 16, but not 10.

ISO 9141-2—The connector should have metallic contacts in pins 4, 5, 7, 15, and 16.

J1850 PWM—The connector should have metallic contacts in pins 2, 4, 5, 10, and 16.

If your vehicle has this style connector, but doesn't have these pins populated, you probably have a pre-OBDII vehicle. To add some confusion, even having the connector with the contacts shown above is not a guarantee of OBD II compliance. This style connector has been seen on some pre-1996 vehicles that were not OBD II compliant.

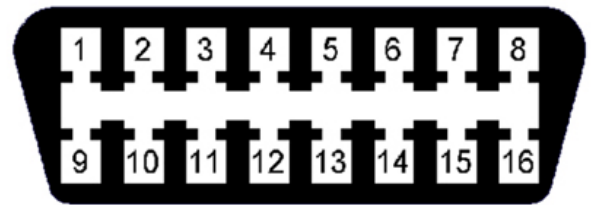


Fig 1. OBD II connector pinouts

Pin 2	1850 Bus+
Pin 4	Chassis Ground
Pin 5	Signal Ground
Pin 6	CAN High (J-2284)
Pin 7	ISO 9141-2 K Line
Pin 10	J1850 Bus
Pin 14	CAN Low (J-2284)
Pin 15	SO9141-2 L Line
Pin 16	Battery Power