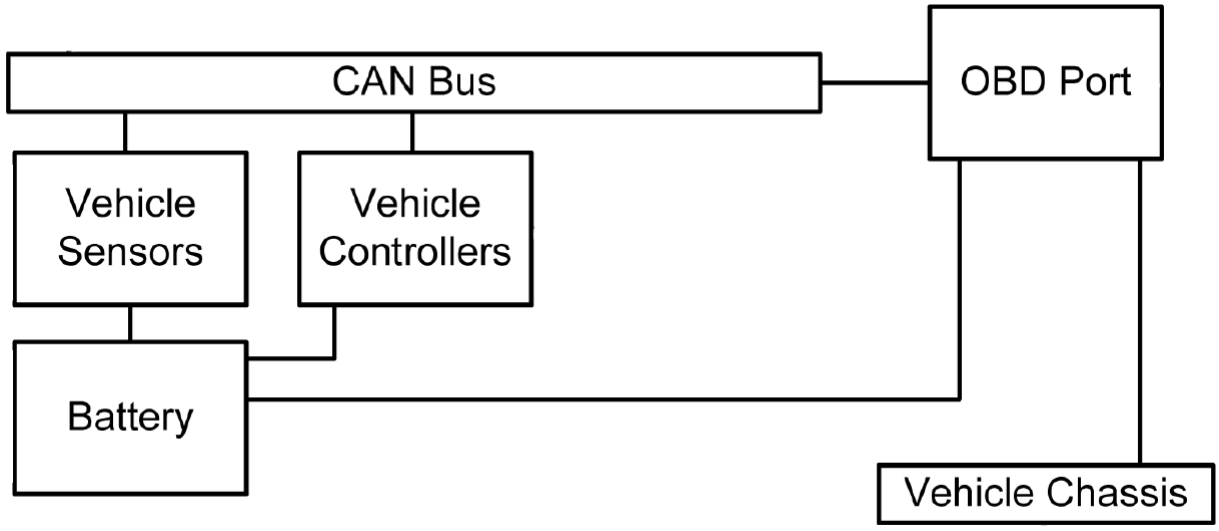
Understanding How the AutoSaver OBD Module Protects Against Corrosion Using the OBD II System

What is the OBD II system?

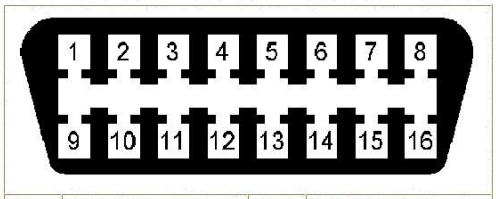
On-board diagnostics (OBD) refers to a vehicle's self-diagnostic and reporting capability. OBD systems provide the vehicle owner or repair technician access to data regarding the status of the various vehicle subsystems. The following image is a schematic that shows the basic components of that make up the OBD system.



The OBD Port

In order to access the OBD II system for diagnostic purposes, the system is equipped with an interface which is called an OBD port or SAE J1962 diagnostic connector. As the image below shows, it has spaces available for sixteen pins. With the exception of certain pins discussed below, OEMs have no discretion, as further discussed below, use of pin locations may vary from one OEM to the next depending on the signal protocol supported by the vehicle.

The SAE standardized hardware interface reserves pin 16 for the battery, pin 4 for chassis ground and pin 5 for signal ground. OEMs may not use these pins for any other purpose without violating the standard (and US federal law). Pins 16, 4 and 5 do not connect to any vehicle system but are there to provide power at the OBD port. Any device plugged into the OBD port that has 16 and 4 or 5 pin connection will power up when connected to the OBD port. **However, Pins 16, 4 and 5 are only for power and will cannot communicate with the CAN bus or any electronic control units in an automobile.**



PIN	DESCRIPTION	PIN	DESCRIPTION
1	Vendor Option	9	Vendor Option
2	J1850 Bus +	10	j1850 BUS
3	Vendor Option	11	Vendor Option
4	Chassis Ground	12	Vendor Option
5	Signal Ground	13	Vendor Option
6	CAN (J-2234) High	14	CAN (J-2234) Low
7	ISO 9141-2 K-Line	15	ISO 9141-2 Low
8	Vendor Option	16	Battery Power

OBD-II Connector and Pinout

The AutoSaver OBD Unit

The AutoSaver OBD unit is a surface mount technology circuit board that relies on Pins 16 and 5 of the OBD port to power up. Once powered up, the device generates a 24 mAmp current which is grounded to the vehicle's chassis through the chassis ground pin 4 on the OBD port, allowing the device to deliver electronic corrosion protection through all the grounded metal components of the vehicle.

While the AutoSaver OBD unit has 16 pins, it only connects to pins 16, 5 and 4 in the OBD port. The remaining pins on the CPU are completely insulated from the circuit board and therefore inert when connected into the OBD port. These dummy pins serve only to ensure a secure fit when the device is plugged into the OBD port. In other words, the device cannot in any way connect to or access any vehicle subsystems or extract vehicle information.