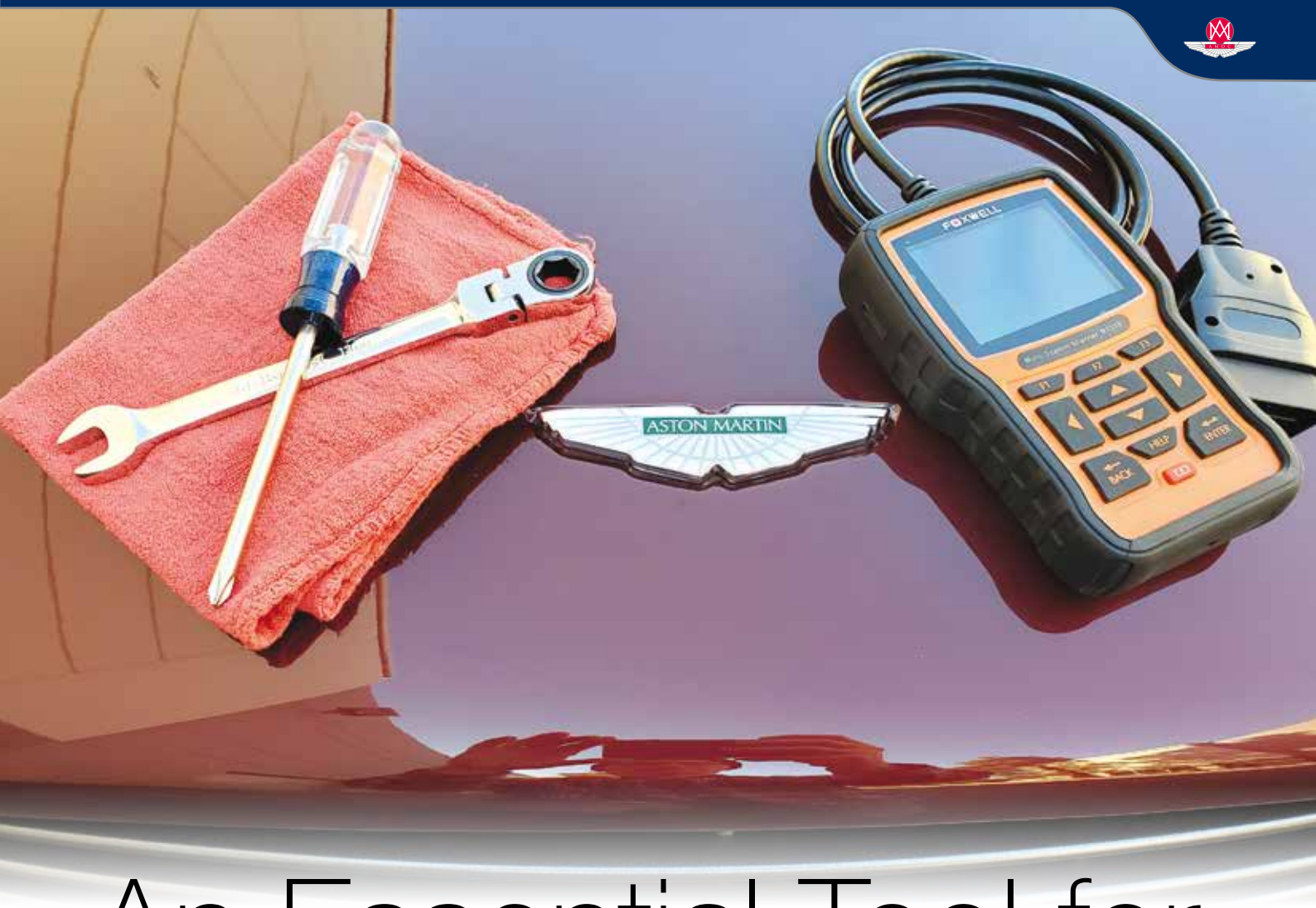


An Essential Tool for Every Toolbox

by Steve McEvoy

Are you missing one of the most essential tools of the modern toolbox? The Gaydon-era Aston Martins (DB9, Vantage, DBS, Rapide, Vanquish, etc.) are mechanical wonders, but what really runs the cars are the computers. My 2005 DB9 coupe has about 13 computer modules that control everything from the engine and transmission to the doors and stereo system. Many of us recoil at the idea of working on our own cars now because of these mysterious black boxes and our lack of knowledge about them.

One of my personal pet peeves out on the internet forums is a near daily occurrence of Aston owners posting that their car has turned on the check engine light and some warning message has appeared like 'Service Emission System'. They post a photo of the message and ask all the other forum members for advice. What usually follows is a wild array of random guesses and home brew advice that ranges from 'ignore it and see if it goes away' to 'tighten the gas cap' to my least favourite 'give it an Italian tune up' (offensive). Most advice given isn't based on any facts. My advice is to 'talk' to your car and ask it what is wrong, rather than talk to a bunch of well-intentioned strangers.

I am here to tell you it is not that scary; you just need the right tool to 'talk' to it. By talking to it you will know a lot more about what is going on with your car and be empowered to better deal with it.

OBDII to the Rescue

All cars built since 1996 have an On-Board Diagnostics port, more commonly known as an OBDII port. This port is our gateway to plug into the car and see what it is thinking. Aston Martins are unique in that they have two OBDII ports. One is for the computers that run the engine, and the other is for all the other modules like the transmission, braking systems, airbag systems, doors, centre console, etc. The V12 engine cars have two engine control computers, one for each bank of six cylinders. You can find the OBDII ports just under the lower edge of the dash in the driver's side footwell. The 'OBDII' port is for

Typical post for help in a Facebook group

The Aston Martin DB9 has two ODBII connections

Aston Martin AMDS laptop connected to a DB9

the engine, transmission and antilock brakes, the 'Body' port is for all the other control modules (doors, stereo, dash, etc.).

To talk to the car you need an OBDII diagnostic tool. Stay with me here, if you can manage to use your Smartphone you'll be able to use an OBDII tool. What makes OBDII nice is that all manufacturers have agreed to use a common language to communicate through the OBDII ports, and most cars share a common set of Diagnostic Trouble Codes (DTCs) that reflect each issue that can arise.

Foxwell NT510 OBDII diagnostic scanner that can talk to an Aston Martin

For example, if the engine module diagnoses that it has a misfiring issue it will set the P0300 error code. Same code for a Toyota Camry or a V12 Aston Martin Vanquish. Manufacturers can develop their own unique DTCs and special functions.

Aston Martin Dealers have the holy grail of OBDII devices, essentially a laptop that connects to the car through both OBDII ports at the same time. They call this the AMDS (Aston Martin Dealer System). The AMDS can talk to the control modules, program them and do all sorts of neat tricks that they can charge you for (like program new keys). I'd cut the dealers *some* slack – the tools are expensive and the technicians have to be trained to use them, so they are due some reward for their investment. But, we can use aftermarket tools to do many (but not all) of the same things.

Many, many generic OBDII tools exist that you can purchase for as little as $40 USD at the local auto parts stores. These cheap, basic tools are known as code scanners, and can essentially plug into the OBDII port and read any DTCs that are present. They will allow you to clear or reset most of them. This is why many users buy one, they just want to stick their head in the sand and reset the 'Check Engine Light' by clearing any DTCs present (ta-da, problem solved!). The problem with a generic OBDII code scanner is that they can only provide the most basic common information, and only about the engine control module. On the V12s they can't even talk to the second engine control module, so you only get half the picture. While a generic OBDII code scanner is okay for a Toyota Camry, you need something a little smarter to get the full story from your Aston.

Inexpensive OBDII code scanner

Several OBDII tool makers have more intelligent OBDII diagnostic scanners that are able to talk to all the Aston Martin modules. They know the special DTCs, and that the V12s have two control modules. While they aren't a full blown AMDS system, they can tell you a lot about what's going on in your Aston. While I don't know all the companies that make OBDII tools that can do this trick, I know several models from Autel and Foxwell Technologies can. (Note: I have no financial gain listing these brands, I am just sharing my experience.) Both companies specifically list certain models of their tools are fully Aston Martin compatible (verify this before purchasing). I personally use a Foxwell NT510. I purchased this amazing little tool for just $179 USD from FoxwellTool.com (also available on Amazon). While not as cheap as a low-end generic tool, it can do so much more. Having one of these intelligent ODBII tools is essential for the modern toolbox.

You can reset the 'Time for Service' message using a Foxwell NT510

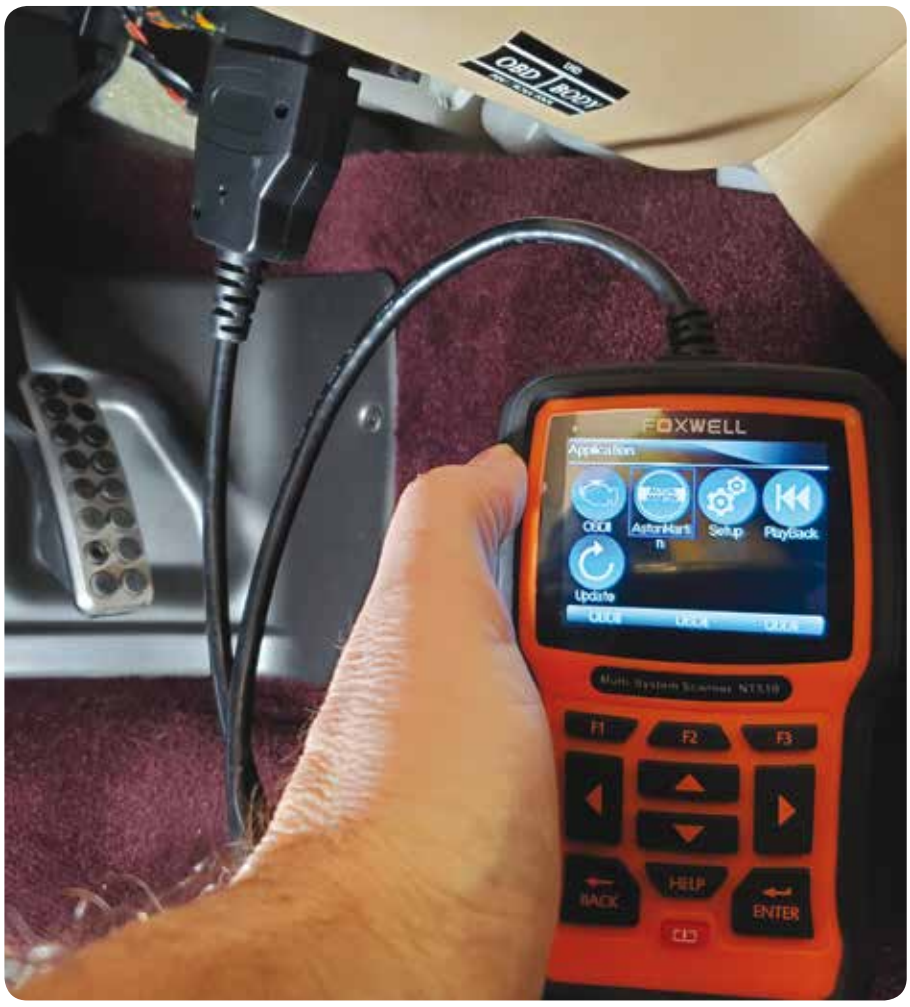
Now What?

With the tool in hand, what can you do with it? You can talk to the modules, ask them what DTCs they might be suffering from, even look at the live data from the hundreds of sensors (engine temperature, transmission gear, wheel speed, interior temperature, all that stuff). The Foxwell system I own can even reset the 'Time for Service' reminder after my annual oil change (it's a special function of the Driver's Information Module).

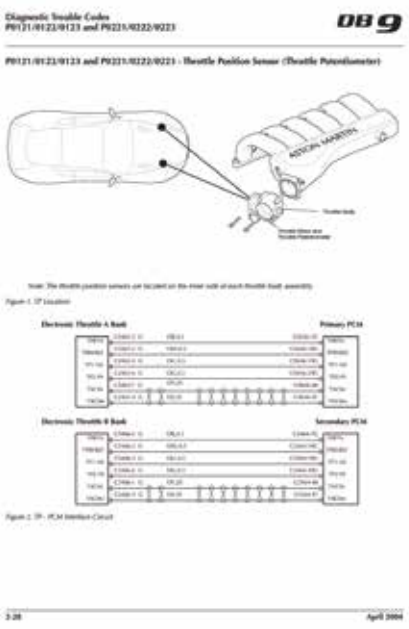
If your Aston turns on the 'Check Engine Light', you can plug in your trusty ODBII tool and ask it to 'Auto Scan' all the modules. It will then talk to each module in turn and collect all the DTC codes, including the special Aston Martin ones. It will present the codes to you in a slightly more user-friendly manner. For example, if you have a P0300, it will also include the text that this is a 'Random Misfire Detected'. It won't tell you why you have a misfire (neither will the almighty AMDS, the technician needs to work it out), but you now have a much better starting point for your troubleshooting. You might get a combination of DTCs, like a P0300 about a random misfire and a second code P0192 'Fuel Rail Pressure Sensor Low Input'. You might then surmise that the misfire could be a symptom of the low fuel pressure and focus your efforts on solving that problem first and then see whether the misfire issue clears afterwards. It's still up to you or the mechanic to work out the problem based on the DTC and the live sensor data you can now access.

[To help with understanding the cause of the DTC codes, Aston Martin created a technical service guide that goes into detail about the potential causes, and remedies, for each DTC code. The idea being you look up the P0300 code in the guide and see what Aston Martin suggests. This is the guide for their trained service technicians and is a great place to look for more understanding. I've posted all I've researched and found about the DTCs all in one place at https://aston1936.com/obdii-code-readers-and-your-aston-martin-db9-collection.

Your new tool and the information it provides you will demystify much of the electronics side of your modern Aston. You can now post an informed question in the forums and groups such as 'My 2005 DB9 Coupe is generating a P0309 code about a misfire on cylinder 9. Has anyone seen that before and how do you resolve?' You're likely to get a much better answer from the 'Interwebs', or at least discover that the issue is serious and you need to not ignore it and take your car to a knowledgeable specialist or Aston Martin dealer that can dig in even deeper to help.



Using the Foxwell NT510 to talk to a DB9


Sample from the Aston Martin DTC guide