

**SUBJECT: Scan Tool Discussion**

Dear Authorized Service Dealer,

Diagnostic scan tools can be classified into two categories: OEM (original equipment manufacturer) and aftermarket. In an effort to aid our customers, Alliant Power has compiled a list of the most common diagnostic scan tools currently available for light and mid-range diesel vehicles. With changing technology and vehicle models it is difficult to know which tools will provide the best value for your investment. A good starting point to determine the answer is to compare the most commonly used tools.

**OEM**

An OEM diagnostic scan tool can be defined as a tool designed by the manufacturer to be used on the vehicles or engines they produced. These tools have often been thought of as being available only to dealers; very expensive, and a luxury to have. These tools are now readily available to independent DSCs (diesel service centers), priced comparably and are a necessity to perform specific functions. OEM tools have the ability to install software upgrades and reflash various control modules the vehicle may have. These software upgrades come from the manufacturer as soon as they are released, may update the tool itself and can address run-ability concerns or vehicle operation issues. OEM tools also offer a wide range of diagnostic tests and parameters that are more specific to the make-up of the vehicle and its operating systems.

**Aftermarket**

Aftermarket scan tools are made by various suppliers and are typically known for their ability to work on multiple brands of vehicles and engines. While this “one size fits all” approach appears to be economically appealing to DSCs that work on multiple brands of vehicles, the tools are not always the most accurate. In many cases aftermarket tools may not read all parameters and perform the necessary tests to correctly diagnose as the manufacturer intended.

Many of these tools are limited in their programming abilities, but can have different modules or software added to give them functionality similar to the OEM. These modules and software updates are made available at the discretion of the tool manufacturer.

### Comparison Table

Below is a comparison table of the most popular OEM and aftermarket tools we have seen and their functions. Not all vehicle makes are represented on this table and many of the aftermarket tools listed will work on other manufacturers that are not listed.

Function	Ford IDS	StarScan	DRB III	Vetronix Tech2	Navistar Service Maxx w/ Nav-Link	Snap-On Verus	OTC Pegisys	Hickok NGS Mach II	Bosch Vetronix Mastertech	Hickok NGS	Snap-On Modis	OTC Genisys
Chrysler®		X <sup>2</sup>	X <sup>3</sup>			X	X		X		X	X
Ford®	X					X <sup>5</sup>	X	X	X	X <sup>10</sup>	X	X
GM®				X		X	X		X		X	X
Navistar®					X	X	X <sup>6</sup>					X <sup>6</sup>
CAN	X	X		X <sup>4</sup>	X	X	X	X	X		X	X
Graphing	X	X	X	X	X	X	X	X	X	X	X	X
Global OBD	X	X	X		X	X	X	X	X	X	X	X
Read DTC's	X	X	X	X	X	X	X	X	X	X	X	X
Clear DTC's	X	X	X	X	X	X	X	X	X	X	X	X
Live Data	X	X	X	X	X	X	X	X	X	X	X	X
BI Directional	X	X	X	X	X	X	X	X	X	X	X	
Lab Scope	X <sup>1</sup>				X	X	X	X			X	X
Multimeter	X <sup>1</sup>		X			X	X	X	X	X	X	
Reprogram/Flash	X	X	X	X	X	X <sup>5</sup>	X <sup>7</sup>	X <sup>8</sup>	X <sup>9</sup>			
OEM Updates	X	X	X <sup>3</sup>	X	X							
Read PIDs	X	X	X	X	X	X <sup>5</sup>	X	X	X	X	X	X
Sensor Function	X	X	X	X	X	X <sup>5</sup>	X	X	X	X	X	X

Blue denotes OEM scan tool

1. With optional VMM
2. Covers Chrysler vehicles model year 2006 and beyond
3. Covers Chrysler vehicles up to 2005 only
4. With optional Candi module
5. With downloadable IDS software from Motorcraft® website
6. With optional heavy duty package from OTC
7. Must purchase J2534 pass through device and OEM vehicle calibrations
8. With downloadable software from Motorcraft website
9. Supports GM controller reprogramming only
10. No longer supported by Ford or Hickok - must upgrade to NGS Mach II for Hickok support

When comparing the tools listed, the aftermarket scan tools seem to be the better investment because they work on multiple brands of vehicles. But a closer look shows they do not offer OEM updates and have limited abilities when it comes to reflashing. The ability to receive OEM updates directly from the manufacturer and accurately reflash the vehicles control systems serve a key role in a technician's ability to diagnose a customer complaint quickly and accurately.

### Example

A 2006 Ford F-250 with a 6.0 L Power Stroke® is in your shop for a rough running complaint. You install your aftermarket scan tool on the truck and find multiple injector faults stored in the DTC log. After your typical diagnostic tests you determine the problem is with the injectors. The customer gives you the “ok” to remove the injectors for testing and inspection. The injectors are tested and found to have solenoid stiction issues, but after flushing on a test stand they operate within specifications. You reinstall the injectors and send the customer on his way. One month later the same customer calls back and says he is experiencing the same problem. The customer returns the truck to your shop and the diagnostic tests find similar faults set as the last time you looked at the truck. At this point it would seem obvious to tell the customer he needs a new set of injectors. The customer is unhappy with having to spend this much money on such a new truck and decides he would like a second opinion. He takes his truck to the local Ford dealer. The dealership uses the OEM diagnostic tool on the truck and determines the FICM (Fuel Injection Control Module) does not have the latest calibration and a new calibration is available. The new calibration addresses a rough running condition similar to what the customer complaint is. The dealer installs the new calibration, calls “THEIR” customer and says the truck is ready to go in good running condition for a fraction of the price your shop quoted.

By not having the proper tool, you have lost a customer. The financial impact is not limited to this one lost sale. Your reputation will be damaged as this lost customer shares his experience with his colleagues. It is understood aftermarket scan tools on many applications can be as effective as the OEM. Today’s vehicle systems show a trend that OEM tools have an advantage over aftermarket. A question to ask is: do you want other repair facilities to have an advantage over yours? Ultimately the decision of which scan tool you’ll use in your shop is up to you. As fast as technology changes on today’s vehicles so do the abilities of the aftermarket tools. Before buying a new scan tool for your shop take your time and consider what your shop needs that scan tool to do. If it’s more important for your tool to work on as many brands of vehicles as possible then an aftermarket tool may be the best fit. If your shop is more specialized and really wants to offer the same tests and abilities as an OEM shop then you should have an OEM tool. At the end of the day the “all in one” tool has not yet arrived. Until it does, it is your responsibility to determine which tool will fit your needs best.

For more information visit

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