AES# ATTS-20
OBD-II Diagnostic Strategies

Our Price: $59.00

Explains how OBDII DTCs can be repaired using a combination of testers and test procedures.

Overview
The book is divided into seven, easy to read chapters:

* The OBD II Vehicle Emissions Test - Outlines the general concepts behind the increasing use of a scan tool emissions test to replace traditional exhaust gas tests. Include MIL control and generic pass-fail test criteria (may vary slightly by test area in actual application).

* Diagnostic First Steps - Describes a logical diagnostic process that includes code retrieval, vehicle baselining, and the relative value of Drive Cycles. Also discusses common DTCs, code setting criteria, and ways to diagnose DTC root causes for common failures.

* Scan Tool Diagnostics - Using common scan tool features and OBD II diagnostic functions.

* Fuel Systems - 20 pages on nothing but fuel related problems and how to diagnose them. Includes low amp probes, pressure tests, fuel circuit voltage tests, and an overview of injector cleaning procedures, written by Jim Linder, the "injector Guru."

* Common Tests, Useful Testers - How to add simple quick test to verify vehicle condition using a vacuum gauge, oscilloscope, temperature probe, and Power Probe.

* Quick Hitters - A gathering of miscellaneous hints and tips to help you put the test results from the previous chapters to use in making a fast, accurate diagnosis. Lots of useful "stuff" in an open, easy to read format.

* Tech Tips - Eight pages of common repair fixes from the Chat for Techs hotline on both domestic and imported vehicles.

HIGH/LOW Voltage Sensor DTCs

Sometimes, we can shortcut a lengthy repair process by pulling a DTC and performing a careful visual inspection of the component and circuit named by the DTC. This is especially true for DTCs stored for shorted and open sensors and sensor circuits.

**Example 1:** If the DTC is for sensor high voltage, make sure the sensor's electrical connector is plugged in and fully sealed.

**Example 2:** If the DTC is for sensor high voltage, look for broken wires, especially where the wire and wire terminal end are crimped together at the sensor connector. Always inspect wiring for chafing or bubbled insulation.

**Example 3:** If the DTC is for sensor low voltage, look for unsecured or improperly routed wiring. Look for signs of chafing or pinching that might create a short to ground.

Never make things more complicated than they need to be.
Keep things simple as possible as long as you can!

If the DTC sends you straight to the problem — and it's a no-brainer then fix the problem with common repair or replacement procedures. Don't look for complicated solutions to simple problems.

Temporarily forget that it's an OBD II vehicle.
Getting Started with the Low Amps Probe

Don’t have a scope yet? That doesn’t mean you can’t begin to use a low amps probe with your DMM to measure average current in a circuit. If the low amps probe has a BNC connector, you’ll need an inexpensive BNC-to-dual banana jack adapter to connect the two. (Some amp probes come with an adapter or you can get one at your local electronics supply store.) Insert the dual banana plugs into the DMM’s VOL and COM ports and connect the probe to the BNC receptacle in the adapter.

With the probe connected to the DMM, select the meter’s millivolt DC scale. (The probe converts current measurements into a millivoltage displayed on the DMM.)

Turn the probe ON and move the probe range selector switch to choose one of the probe’s two measurement scales. The 10mV/A scale is okay for measuring average current with your DMM. (The 100mV/A scale works well when you want a high resolution scope waveform display.)

Zero the probe. For the Fluke probe (left), turn the rotary zero adjust wheel on the probe until the DMM displays zero millivols.

Some probes are zeroed by pressing the zero button.

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