

FIGURE 30-4 This is what was found when removing an air filter from a vehicle that had a lack-of-power concern. Obviously the nuts were deposited by squirrels or some other animal, blocking a lot of the airflow into the engine.



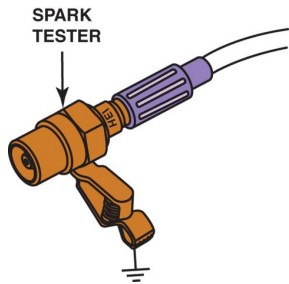
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FIGURE 30-5 Using a bright light makes seeing where the smoke is coming from easier. In this case, smoke was added to the intake manifold with the inlet blocked with a yellow plastic cap and smoke was seen escaping past a gasket at the idle air control.



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FIGURE 30-6 A spark tester connected to a spark plug wire or coil output. A typical spark tester will only fire if at least 25,000 volts is available from the coil, making a spark tester a very useful tool. Do not use one that just lights when a spark is present, because they do not require more than about 2,000 volts to light.



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FIGURE 30-10 Step 8 is very important. Be sure that the customer's concern has been corrected.

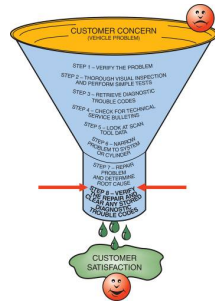


FIGURE 30-11 A TECH 2 scan tool is the factory scan tool used on General Motors vehicles.

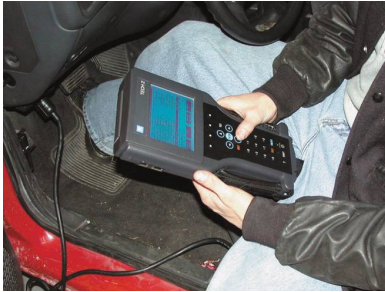


FIGURE 30-12 Some scan tools use pocket PCS which make it very convenient to use.



FIGURE 30-16 A typical OBD-II data link connector (DLC). The location varies with make and model and may even be covered, but a tool is not needed to gain access. Check service information for the exact location if needed.



FIGURE 30-17 The first step in the reprogramming procedure is to determine the current software installed using a scan tool. Not all scan tools can be used. In most cases using the factory scan tool is needed for reprogramming unless the scan tool is equipped to handle reprogramming.



FIGURE 30-18 Follow the on-screen instructions.



FIGURE 30-19 An Internet connection is usually needed to perform updates although some vehicle manufacturers use CDs which are updated regularly at a cost to the shop.

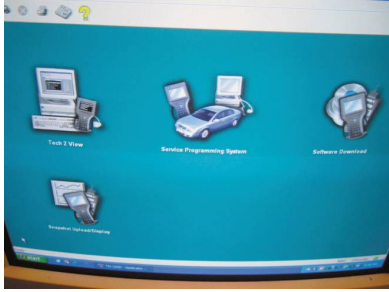


FIGURE 30-20 Connecting cables and a computer to perform off-board programming.



FIGURE 30-21 The J2534 pass-through reprogramming system does not need a scan tool to reflash the PCM on most 2004 and newer vehicles.

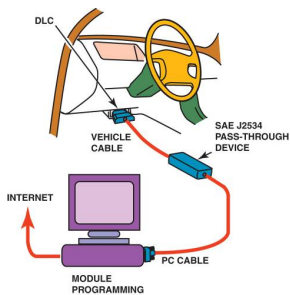


FIGURE 30-22 A typical J2534 universal reprogrammer that uses the J2534 standards.

