## **EmissFire Detector**

by Automotive Test Solutions

Due to the technical sophistication of to-day's engines and engine management systems, the mechanical condition of an engine may be overlooked as a possible cause of a driveability problem. The EmissFire Detector allows the user to locate a cylinder misfire using only two points of contact—a venturi sensor in the tailpipe and an inductive pickup around an ignition wire. It will then give active misfire counts and cylinder misfire percentages in minutes. The EmissFire Detector will also identify and alert the technician to problems such as random miss, steady miss, bank 1 miss or bank 2 miss.

These misfires can have many possible causes, but the misfiring cylinder will be known. The identified spark plug is then removed and a compression hose with a pressure transducer is inserted into the spark plug hole. Several pieces of data can be collected from this simple test, and the EmissFire Detector's automated software will inform the user of the cylinder's mechanical condition and whether camshaft timing is good or not. Actual camshaft timing



can be determined, with accuracy to within three crankshaft degrees. If the cylinder pressure test indicates a mechanical problem, the EmissFire Detector checks the cylinder in three states—cranking, idle and snap throttle—to identify valve spring, piston ring, intake valve, exhaust valve and valve guide problems.

