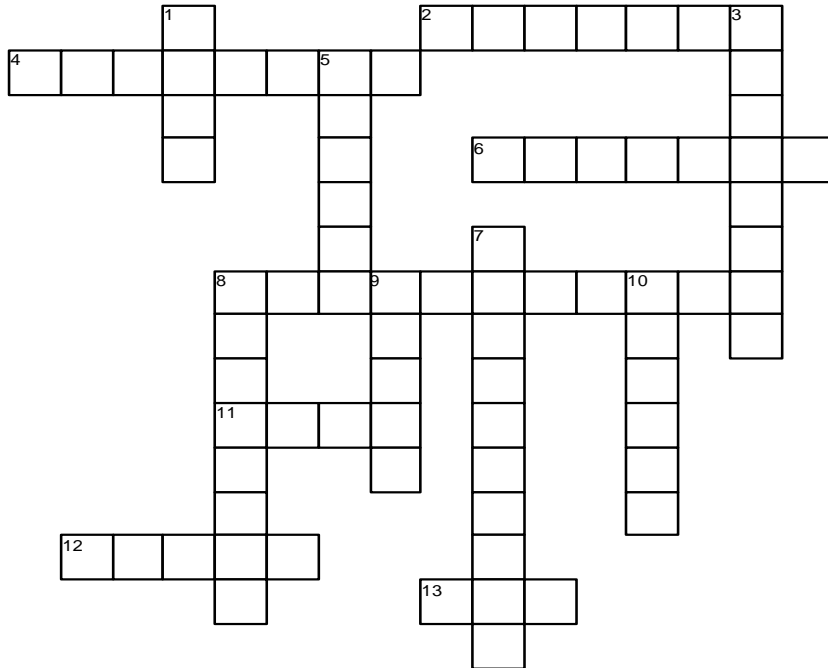


## Automotive Electrical and Engine Performance 9th Edition Chapter 26 - Engine Condition Diagnosis



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### ACROSS

- 2 \_\_\_\_\_ compression test: A test that measures the pressure in the cylinders while the engine is running, helping to identify weak cylinders.
- 4 \_\_\_\_\_ compression test: A test that measures the relative differences in compression among the cylinders to identify weak or failing cylinders.
- 6 \_\_\_\_\_ compression test: A test performed while the engine is running to assess the pressure in the cylinders during operation, helping identify mechanical problems.
- 8 \_\_\_\_\_ test: A diagnostic test used to measure the pressure within the cylinders during compression, helping identify issues with valves, piston rings, or head gaskets.
- 11 \_\_\_\_\_ vacuum test: A diagnostic test that measures the intake manifold vacuum while the engine is idling, indicating the engine's mechanical condition.
- 12 \_\_\_\_\_ balance test: A diagnostic procedure that disables one cylinder at a time while monitoring the drop in engine speed, helping to identify weak or non-functioning cylinders.
- 13 \_\_\_\_\_ compression test: A variation of the compression test where a small amount of oil is added to the cylinder to help seal the piston rings, used to differentiate between valve and ring problems.

### DOWN

- 1 \_\_\_\_\_ pressure: The resistance to exhaust gases leaving the engine, typically caused by a clogged or restricted exhaust system, which can reduce engine efficiency.
- 3 \_\_\_\_\_ vacuum test: A test that measures the vacuum created in the intake manifold while the engine is being cranked, used to assess engine condition.
- 5 \_\_\_\_\_ test: A diagnostic procedure that measures the intake manifold vacuum to assess the engine's mechanical and operational condition.
- 7 \_\_\_\_\_ exhaust: A condition where the exhaust system is blocked, causing increased back pressure and reduced engine performance.
- 8 \_\_\_\_\_ leakage test: A diagnostic test that introduces compressed air into the cylinder to detect leaks in the valves, head gasket, or piston rings by measuring the percentage of air leakage.
- 9 \_\_\_\_\_ test: A test in which a piece of paper is held near the tailpipe of an idling engine; uneven exhaust pulses that draw the paper inward may indicate a burned valve.
- 10 \_\_\_\_\_ of mercury (inch Hg): A unit of pressure measurement used in vacuum tests to assess engine performance.