

Automotive Technology 7th Edition
Chapter 73: Oxygen Sensors
Matching Quiz

Name: _____

Date: _____

Matching: Choose the item in column2 that best matches each item in column 1.

- | | | |
|----------------------------|--|-----------|
| 1. Oxygen Sensor (O2S) | A. The amount of fuel delivered to an engine is determined by prerecorded data in the PROM when the oxygen sensor is not yet providing usable signals. | 1. _____ |
| 2. Zirconia oxygen sensor | B. These are placed on the inner and outer surfaces of the thimble in an oxygen sensor. | 2. _____ |
| 3. Narrow-band sensor | C. A sensor that informs the PCM whether the exhaust is rich or lean only, by switching voltage at 0.45V. | 3. _____ |
| 4. Thimble design | D. The time it takes for a planar design wide-band oxygen sensor to achieve closed loop. | 4. _____ |
| 5. Platinum electrodes | E. A sensor made of zirconium dioxide (ZrO ₂) that generates a small voltage in the presence of oxygen. | 5. _____ |
| 6. Open-loop operation | F. Measures the oxygen content in the exhaust system. | 6. _____ |
| 7. Closed-loop operation | G. A design shape of the sensing element in a typical zirconia oxygen sensor. | 7. _____ |
| 8. Fuel trim | H. The PCM's checking and adjusting of the air-fuel mixture based on rich and lean signals from the oxygen sensor. | 8. _____ |
| 9. Wide-band oxygen sensor | I. A sensor capable of supplying air-fuel ratio information to the PCM over a much broader range (e.g., 10:1 to 23:1). | 9. _____ |
| 10. Light-off time (LOT) | J. Numbers determined from the oxygen sensor signals that indicate adjustments needed to the fuel delivery. | 10. _____ |

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Answer Key

Answer Key:

1. F
2. R
3. C
4. G
5. B
6. A
7. H
8. J
9. I
10. D