Oxygen Sensors
Chapter 32

ACROSS
2. The _______ numbers are determined from the signals by the oxygen sensor.
4. A _______ oxygen sensor is made of zirconium dioxide, an electrically conductive material capable of generating a small voltage in the presence of oxygen.
8. If an oxygen sensor reads low as a result of a factor besides a lean mixture, it is often called a _______ indication.
12. ___________ is exposed to the exhaust stream.
13. The wrong type of ___ sealer on a valve cover gasket gives off harmful silica fumes during the curing process.
14. When the O2S reads high as a result of other factors besides a rich mixture, it is often called a _______ indication.
15. ___________ is exposed to outside air and is the signal electrode.

DOWN
1. Some vehicle manufacturers such as GM have the PCM apply 450 mV to the O2S signal wire, this voltage is called _______.
3. Another name for the signal electrode is the _____________.
5. Automotive computer systems use a sensor in the exhaust system to measure the oxygen content of the exhaust, these sensors are called _________.
6. The checking and adjusting of the PCM is called ______-______ operation.
7. The fast heating, called ____________, helps improve fuel economy and reduces cold-start exhaust emissions.
9. ______-____ oxygen sensors have been used since 1992 on some Hondas.
10. The ______ oxygen sensor does not produce a voltage but rather changes resistance due to the presence of oxygen in the exhaust.
11. When the PCM alone is determining the amount of fuel needed, it is called ______-______ operation.