Automotive Background And Overview
Chapter 1

ACROSS
1. After the coolant picks up the heat from the engine, it flows through a ______ which cools the coolant by releasing the heat into the air.
6. The Monroney label is the sticker on the vehicle that lists the __________ _______ _______.
8. The warning lamp is called the _______ _______ _____ and is labeled "Check Engine" or "Service Engine Soon."
9. The design where the valves were located in the engine block is called _______ _______ design because the cylinder head simply covered the combustion chamber and included a hole for the spark plug.
10. An engine driven _______ forces the oil under pressure through an oil filter, then to passages in the block and head called oil galleries, and then to all of the moving parts.
12. Vehicles with a separate frame and body are usually called _______ vehicles.
13. The _______ _______ _______ is designed to prevent gasoline fumes and vapors from being released.
16. The _______ is a mixture of antifreeze and water to provide corrosion and freezing protection.
17. Coolant is circulated by a _______ _______ _______ _____ through passages in the cylinder block and head called water jackets.
18. Most engines are equipped with an _______ containing 3 to 7 quarts of oil.
20. _______ is a design that combines the body with the structure of the frame.
21. Electronic hand-held testers, called _______ _______ are needed to access stored diagnostic trouble codes and view sensor and system data.

DOWN
2. The air is filtered by a replaceable _______.
3. The on-board diagnostic system is currently in the second generation and is called _______.
4. _______ _______ is the engine design where the valves are placed in the cylinder head.
5. The _______ _______ _______ system meters about 3% to 7% of the exhaust gases back into the intake where the gases reduce the peak combustion temperature and prevent the oxygen and nitrogen from the air from combining to form oxides of nitrogen.
7. Some systems use a _______ _______ to regulate the flow of gases created in the crankcase of a running engine, which are routed back into the intake manifold.
11. _______ construction usually consists of channel-shaped steel beams welded and/or fastened together.
14. The temperature of the coolant is maintained by using a _______ _______ located in the coolant passage, which opens to allow coolant to flow to the radiator or closes until the coolant is hot enough to need cooling.
15. After the air is filtered, it passes through a throttle valve and then into the engine through a _______.
19. Electronic hand-held testers, called _______ _______ are needed to access stored diagnostic trouble codes and view sensor and system data.
22. The frame or _______ of the vehicle is used to provide the support for the suspension and steering components as well as the power train.