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.
19. 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.

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 ___________ ________ is a unit located in the exhaust system usually close to the engine, which causes chemical changes in the exhaust gases.
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.
8. Most engines are equipped with an ________ containing 3 to 7 quarts of oil.
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 an ________.
18. Electronic hand-held testers, called ________ are needed to access stored diagnostic trouble codes and view sensor and system data.
20. ________ is a design that combines the body with the structure of the frame.
21. After the invention of electric, steam, and gasoline propulsion systems, people used ________ which are vehicles that moved under their own power.
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.