

Cooling system

Task 1. Read the text Cooling system.

When fuel is burned inside an engine a huge amount of heat is generated. This heat is managed by the engine cooling system. Cooling systems are filled with a chemical coolant anti-freeze that has a higher boiling point and a lower freeze point than water.

In the past, this was usually a green colored fluid. However, many manufacturers now use long-life coolants, which may be orange red blue or yellow. Coolant is forced into the bottom of the engine by a water pump usually driven by either a timing belt or serpentine belt. The coolant then flows around the walls of the cylinders, removing heat generated through the burning of fuel. The coolant flows through the passages in the cylinder head gasket into the cylinder head again removing heat from the top of the cylinders. The thermostat valve keeps the coolant trapped inside the cylinder head until the coolant temperature reaches a preset level at which the engine runs most efficiently. At this point, the thermostat opens to allow coolant to flow into the radiator. As air passes over the radiator, heat is transferred from the radiator to the air, lowering the temperature of the coolant so that the cycle can start over. A heater hose normally connected right before the thermostat carry some of the hot coolant to the heater core. The heater core is used to provide heat to the cabin of the vehicle just like the radiator. As cool air passes over the heater core heat is transferred from the coolant to the air reducing the coolant temperature and heating up the air entering the cabin. The coolant from the heater core then re-enters the cooling system to pass through the engine again.

Task 2. Match the words with definitions.

A. serpentine belt B. heater hose C. thermostat D. coolant E. cooling system

1. is a system in a motor vehicle that keeps the engine cool.
2. is a liquid substance used to prevent overheating and it lubricates the water pump.
3. is a rubber hose that leads from the engine block to the heater core.
4. is a device used to help the liquid in the cooling system warm up the engine.
5. is a flat rubber belt that winds through pulleys and turns accessories on the front of the engine.

Task 3. Mark the sentences as True or False.

1. Cooling systems are filled with a chemical coolant oil.
2. Coolant is forced into the bottom of the engine by a crankshaft usually driven by either a timing belt or serpentine belt.
3. The heater core is used to provide heat to the cabin of the vehicle just like the radiator.