**Things To Know About A Radiator**

An automotive engine cooling system is now an essential part of the automobile industry. With the increasing horsepower of the recent brand new monster cars, improvement of radiator performance has become a matter of concern. Recent advancements and developments forced the engine cooling systems to find new ways to increase performance and efficiency. Also, to comply with the environmental pollution standards, fuel consumption must be reduced. During the engine operation, a radiator pulls out the excess heat and maintains the engine temperature. Thus it improves the engine efficiency. Now let's have some in-depth knowledge about the functionalities of a radiator and how it influences the performance.

**What is a radiator?**

The lifetime of a car engine mostly depends on the radiator and its intelligence. In simple terms, radiators are heat exchangers. If this heat is not minimized, issues like knocking, piston deformation, engine burn, and other failures can occur. The functionalities of a radiator are driven by a liquid called an engine coolant. This engine coolant passes through the engine blocks and extracts the heat. Then it passes through the engine radiator where it loses heat to the atmosphere and moves back to the engine. The whole circulation is processed by a water pump. The attached axial fan forces the air to pass through the radiator which adds more efficiency to the process.

**Coolant & its functions**

Wondering what a car coolant exactly is? Coolant distributes the heat and provides antifreeze protection to an engine, allowing it to perform at its best. Internal combustion engines generate energy by burning fuel. The engine captures some of this to move the car forward. The remaining energy converts into heat. A part of this heat passes out by the exhaust. And remaining part stays in the engine blocks.

**Any alternative to a coolant?**

Now let's clear the confusion which most people have in their minds. Can water be used as a radiator coolant? The answer is, yes, you can fill your radiator with water only when there is an emergency. Engine coolant contains antifreeze which is denser than water. So it can give better performance than water. Besides, mixing radiator coolant with the remaining water is a bad idea. Diluting with water decreases the boiling point and the coolant stops working efficiently. So, using appropriate engine coolant is highly recommended.

**Maintenance of radiator coolant**

Another doubt is when is the right time to change the radiator coolant? Well, it varies from car to car. Radiator coolant needs to be washed at least every 50,000 miles in usual cases. But some new models may need coolant servicing at every 10,000 miles. It is important to drain out the coolant and refill it because the combustion process removes rust particles that can clog up the cooling system. Taking advice from the car manufacturer is the best possible way to find a solution for this.

**Reasons behind overheating**

Before jumping into the steps of recovering an overheated engine, we need to know why do engines overheat? There are multiple reasons. There might be something wrong with the cooling system and the heat fails to escape the engine compartment. Also, failures like cooling system leak, faulty radiator fan, broken water pump, or clogged coolant hose can cause overheating of a car engine.

**How to defend an overheating issue?**

To relieve engine stress, turn off the air conditioner right away. Shift the dial up to maximum heat. This will assist to draw heat away from the engine, preventing it from overheating until you can pull over to a safe spot. Another way is to pull over to the side of the road and turn off the engine. Allow at least 15 minutes for the engine to cool. Keep watching the temperature monitor, when the engine cools, it should return to normal. Sometimes lack of radiator coolant can also cause overheating. In this case, adding some coolant or water may give a temporary solution. While doing these, never forget to contact the nearest car mechanics for a better solution.

**Possible precautions**

Just a few easy precautions can prevent your engine from overheating. It is said that take care of your car, and it will take care of you. Some easy and effective ways to save your vehicle engine are to flush the coolant at regular intervals, stay up to date with the radiator maintenance, and use the proper coolant recommended by your manufacturer. Routine checkups can also help you identify and address any possible radiator or engine problems before they become more serious.

Thinking about the safety of a car engine, some popular vehicle models like the Mazda CX-3, Mazda CX-5, Mazda CX-30, and many other models have installed an indicator on their cars. If the temperature meter shows a high temperature, then the engine is probably too hot. At this moment, the temperature warning light illuminates and the vehicle loses power, or you hear a loud banging or pinging noise. Examine the cooling system if the engine continues to overheat regularly. Quick repair is mandatory in this case. Otherwise, the engine might be severely damaged.

So, overall this is the concept of a car engine radiator and the additional terms related to this. A car is a valuable asset for every consumer. So, proper maintenance is a must. You may have a primary level of knowledge about your vehicle. But it is always better to consult with your manufacturer about any issues regarding your desired car.