

Performance Cooling

This article covers the benefits of installing a performance radiator into your Mazda. The biggest question out there is when do I need to look at upgrading my radiator? The stock radiators used in Mazdas are designed for a specific output and capacity. This works fine for the stock application in most cases the stock radiator does the job. When you start making power modifications to your Mazda the requirements of the cooling system need to be looked at.

Test Subject

For an example we will look at the 1988 Mazda Rx-7 Turbo's cooling system. The stock turbo radiator is decent sized and can keep the car cool driving around town and does pretty well when you're just out on your favorite twisty road under some boost. So what happens when you turn up the boost with a performance exhaust system, boost controller, or upgraded turbo? You guessed it, the engine creates more heat. This heat in turn needs to be dissipated by the radiator. If the radiator cannot keep up with the extra temperatures it becomes heat soaked.



The Problem

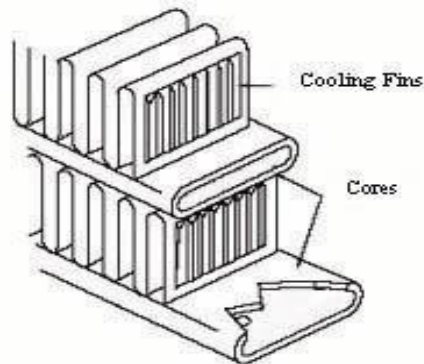
Heat soak or saturation means the stock radiator is not cooling down engine coolant passing through the radiator. This happens because the radiator is not able to dissipate the built up heat into the surrounding air. This in turn makes the coolant warm or hot when it goes back into the engine. If your engine cannot cool down you will lose power and also run the risk of damaging your engine.



Not Getting Any Younger

After 20 years of cooling down the already hot rotary engine most stock radiators are not in the best shape on the inside or the outside. The radiators performance can be affected by things such as mineral deposit build-up on the inside. The factory radiator also uses plastic end tanks, which can deteriorate and become weak and break over time, especially when exposed to lots of heat.

Performance radiators like CorkSport's Power Series radiator address all of these problems. Performance radiators will have more cores which will make the radiator thicker. A core is the tube that passes coolant through the radiator. By making the radiator thicker (more cores) it gives the radiator more surface area on the fins to give the coolant a better chance to cool down before returning to the engine.



Most performance radiators have all aluminum construction including the end tanks. Having metal end tanks costs more but not having to worry about splitting a plastic end tank is worth it when your engine and a long walk home is on the line.

The bottom line is that the ability of a performance radiator to dissipate heat faster and over a longer period of time is greater than that of the stock radiator. The radiator kit itself won't gain you more power, but will allow you to run more stress and power through your engine without worrying about overheating, losing power, and possibly damaging your engine.